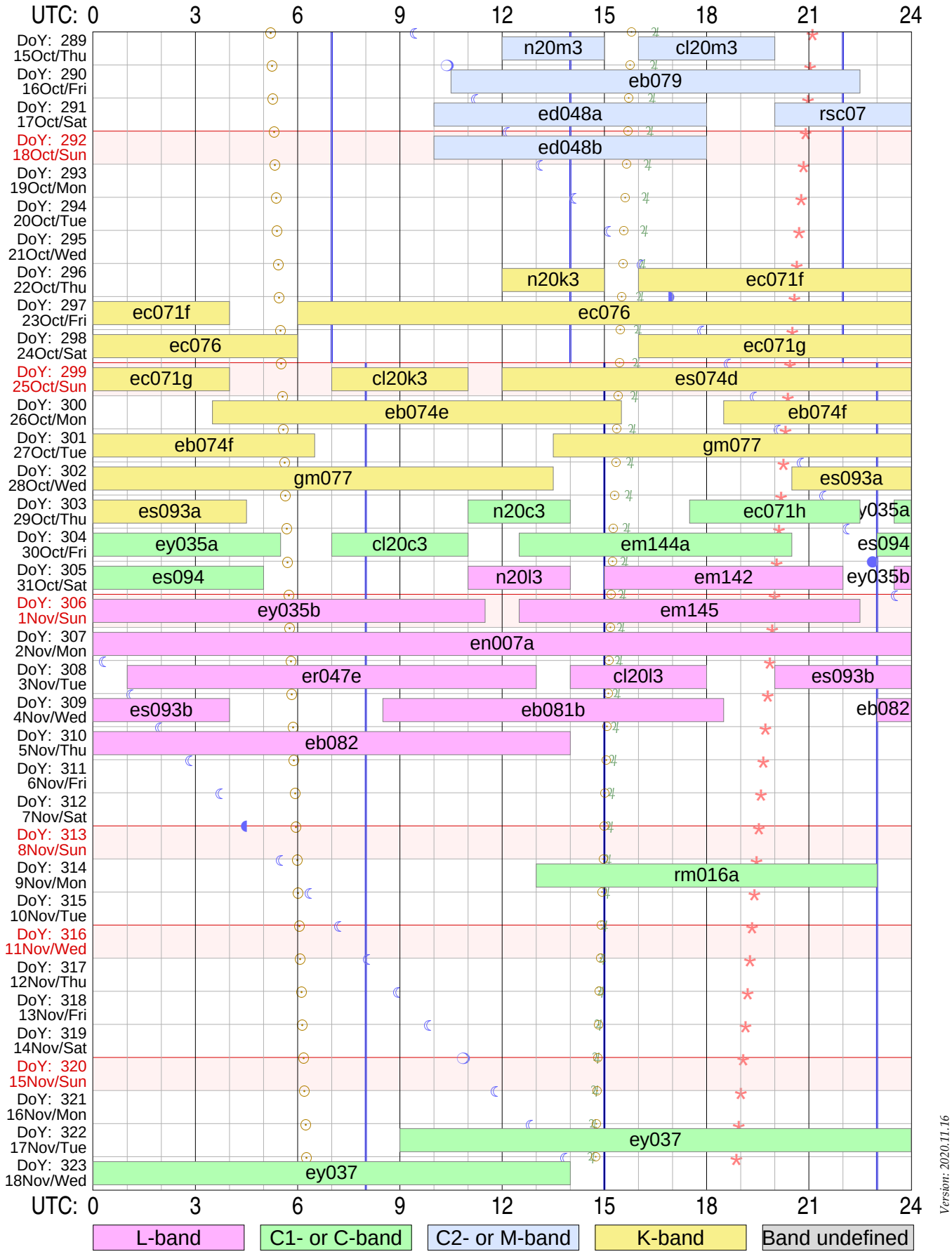
Tr VLBI plan for Oct/Nov 2020



Sky events at Tr: ⊙ Sunrise & sunset ☾ Transit of Moon ♃ Transit of Jupiter * Transit of Aries (0h ST)

Vertical lines in blue mark operator shift times at Tr

Total observing time: 338.0 hours in 34 experiments scheduled

Strona zostawiona celowo pusta

EVN Experiments
Oct 2020

Uytkownik ftp dla logw i schedulw RA: `grt`
`ftp://webinet.asc.rssi.ru`
Przykad dla log files: `cd GRT_log_files/2014_09/2014_09_01_raks08ak`
Przykad dla sched files: `cd schedule/grtsched/RAKS/rk08ak`

Year	Date			UTstart		UTstop		Exper.	xxComment				
2020	D	M	DoW	hh	mm	hh	mm	name		Nr	Corr		~TB
289	15	10	Czw	12	00	15	00	n20m3	"M"	1	EVN	4	0.35
289	15	10	Czw	16	00	20	00	cl20m3	"M"	2	EVN	0	0.00
290	16	10	Pia	10	30	22	30	eb079	"M"	3	EVN	2	1.38
291	17	10	Sob	10	00	18	00	ed048a	"M"	4	EVN	1	0.46
291	17	10	Sob	20	00	24	00	rsc07	"M"	5	EVN	6	3.69
292	18	10	Nie	10	00	18	00	ed048b	"M"	6	EVN	1	0.46
296	22	10	Czw	12	00	15	00	n20k3	"K"	7	EVN	1	1.38
296	22	10	Czw	16	00	24	00	ec071f	"K"				
297	23	10	Pia	0	00	4	00	ec071f	"K"	8	EVN	5	11.06
297	23	10	Pia	6	00	24	00	ec076	"K"				
298	24	10	Sob	0	00	6	00	ec076	"K"	9	EVN	1	11.06
298	24	10	Sob	16	00	24	00	ec071g	"K"				
299	25	10	Nie	0	00	4	00	ec071g	"K"	10	EVN	5	11.06
299	25	10	Nie	7	00	11	00	cl20k3	"K"	11	EVN	0	0.00
299	25	10	Nie	12	00	24	00	es074d	"K"	12	EVN	6	0.35
300	26	10	Pon	3	30	15	30	eb074e	"K"	13	EVN	1	11.06
300	26	10	Pon	18	30	24	00	eb074f	"K"				
301	27	10	Wto	0	00	6	30	eb074f	"K"	14	EVN	1	11.06
301	27	10	Wto	13	30	24	00	gm077	"K"				
302	28	10	Sro	0	00	13	30	gm077	"K"	15	EVN	6	5.53
302	28	10	Sro	20	30	24	00	es093a	"K"				
303	29	10	Czw	0	00	4	30	es093a	"K"	16	EVN	1	7.37
303	29	10	Czw	11	00	14	00	n20c3	"C"	17	EVN	7	0.69
303	29	10	Czw	17	30	22	30	ec071h	"C"	18	EVN	1	4.61
303	29	10	Czw	23	30	24	00	ey035a	"C"				
304	30	10	Pia	0	00	5	30	ey035a	"C"	19	EVN	1	5.53
304	30	10	Pia	7	00	11	00	cl20c3	"C"	20	EVN	0	0.00
304	30	10	Pia	12	30	20	30	em144a	"C"	21	EVN	2	7.37
304	30	10	Pia	23	00	24	00	es094	"C"				
305	31	10	Sob	0	00	5	00	es094	"C"	22	EVN	1	5.53
305	31	10	Sob	11	00	14	00	n20l3	"L"	23	EVN	7	0.69
305	31	10	Sob	15	00	22	00	em142	"L"	24	EVN	8	3.23
305	31	10	Sob	23	30	24	00	ey035b	"L"				
306	1	11	Nie	0	00	11	30	ey035b	"L"	25	EVN	0	5.53
306	1	11	Nie	12	30	22	30	em145	"L"	26	EVN	6	4.61
307	2	11	Pon	0	00	24	00	en007a	"L"	27	EVN	9	11.06
308	3	11	Wto	1	00	13	00	er047e	"L"	28	EVN	5	5.53
308	3	11	Wto	14	00	18	00	cl20l3	"L"	29	EVN	0	0.00
308	3	11	Wto	20	00	24	00	es093b	"L"				

```
309  4 11 Sro   0 00   4 00  es093b   "L"  30 EVN 9  3.69
309  4 11 Sro   8 30  18 30  eb081b   "L"  31 EVN 2  4.61
309  4 11 Sro  23 00  24 00  eb082    "L"
310  5 11 Czw   0 00  14 00  eb082    "L"  32 EVN 8  6.91
```

Plik pdf tego dokumentu jest dost/epny w sieci pod adresem:

`http://paulo.astro.uni.torun.pl/~pw/VLBI/schedules/oct20.pdf`

n20m3tr

Network Monitoring Experiment

PI: *Olga Bayandina*

```
Address:  JIVE
Observing mode:

Schedule for TORUN     (Code Tr )                                   Page   2
               Network Monitoring Experiment
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                  Early    Disk   TPStart
Stop UT                   LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------
 --- Thu  15 Oct 2020   Day 289 ---
 Next scan frequencies:  6655.49  6655.49  6655.49  6655.49  6663.49  6663.49  6663.49  6663.49
                         6671.49  6671.49  6671.49  6671.49  6679.49  6679.49  6679.49  6679.49
 Next BBC frequencies:    753.49   753.49   753.49   753.49   761.49   761.49   761.49   761.49
                          769.49   769.49   769.49   769.49   777.49   777.49   777.49   777.49
 Next scan bandwidths:      4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00
                            4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00

12 00 00  3C345        14 52 11  66.9 113.9 -1.9     -45.6     0        0   12 00 00
12 10 00  ---          15 02 12  68.2 117.5 -1.7     -43.9   600       19   12 00 01

12 11 00  3C345        15 03 13  68.4 117.8 -1.7     -43.7    53       19   12 11 00
12 20 00  ---          15 12 14  69.5 121.4 -1.5     -41.8   540       37   12 11 01

12 21 00  3C345        15 13 14  69.7 121.8 -1.5     -41.6    53       37   12 21 00
12 30 00  ---          15 22 16  70.8 125.7 -1.4     -39.4   540       54   12 21 01

12 31 00  3C345        15 23 16  70.9 126.2 -1.3     -39.1    53       54   12 31 00
12 40 00  ---          15 32 17  72.0 130.5 -1.2     -36.5   540       71   12 31 01

12 41 00  3C345        15 33 18  72.1 131.0 -1.2     -36.2    53       71   12 41 00
12 50 00  ---          15 42 19  73.1 135.7 -1.0     -33.0   540       89   12 41 01

12 51 00  3C345        15 43 19  73.2 136.3 -1.0     -32.7    53       89   12 51 00
13 00 00  ---          15 52 21  74.1 141.6 -0.9     -29.1   540      106   12 51 01

13 09 00  J2031+1219   16 01 22  23.1 100.3 -4.5     -37.2   332      106   13 09 00
13 10 00  =2029+121    16 02 22  23.3 100.6 -4.5     -37.2    60      108   13 09 01

13 11 00  J2031+1219   16 03 22  23.4 100.8 -4.5     -37.2    54      108   13 11 00
13 20 00  =2029+121    16 12 24  24.7 102.7 -4.3     -36.9   540      126   13 11 01

13 21 00  J2031+1219   16 13 24  24.9 102.9 -4.3     -36.8    54      126   13 21 00
13 30 00  =2029+121    16 22 26  26.2 104.9 -4.2     -36.5   540      143   13 21 01

13 31 00  J2031+1219   16 23 26  26.3 105.1 -4.2     -36.4    54      143   13 31 00
13 40 00  =2029+121    16 32 27  27.6 107.1 -4.0     -36.0   540      160   13 31 01

13 41 00  J2031+1219   16 33 27  27.8 107.3 -4.0     -35.9    54      160   13 41 00
13 50 00  =2029+121    16 42 29  29.1 109.3 -3.8     -35.5   540      178   13 41 01

13 51 00  J2031+1219   16 43 29  29.2 109.6 -3.8     -35.4    54      178   13 51 00
14 00 00  =2029+121    16 52 31  30.5 111.6 -3.7     -34.9   540      195   13 51 01
```

```
Schedule for TORUN     (Code Tr )                                Page   3
               Network Monitoring Experiment
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Thu  15 Oct 2020   Day 289 ---

 Next scan frequencies:  6584.49  6584.49  6584.49  6584.49  6648.49  6648.49  6648.49  6648.49
                         6712.49  6712.49  6712.49  6712.49  6776.49  6776.49  6776.49  6776.49
 Next BBC frequencies:    682.49   682.49   682.49   682.49   746.49   746.49   746.49   746.49
                          810.49   810.49   810.49   810.49   874.49   874.49   874.49   874.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

14 04 00  J2139+1423   16 56 31  23.0  96.5 -4.7     -38.0   193      195   14 04 00
14 10 00  =2136+141    17 02 32  23.9  97.7 -4.6     -37.9   360      288   14 04 25

14 11 00  J2139+1423   17 03 32  24.0  97.9 -4.6     -37.9    54      288   14 11 00
14 20 00  =2136+141    17 12 34  25.4  99.8 -4.5     -37.7   540      427   14 11 01

14 21 00  J2139+1423   17 13 34  25.5 100.0 -4.4     -37.6    54      427   14 21 00
14 30 00  =2136+141    17 22 35  26.9 102.0 -4.3     -37.4   540      566   14 21 01

14 31 00  J2139+1423   17 23 36  27.0 102.2 -4.3     -37.3    54      566   14 31 00
14 40 00  =2136+141    17 32 37  28.3 104.1 -4.1     -37.0   540      705   14 31 01

14 41 00  J2139+1423   17 33 37  28.5 104.4 -4.1     -36.9    54      705   14 41 00
14 50 00  =2136+141    17 42 39  29.8 106.4 -4.0     -36.5   540      844   14 41 01

14 51 00  J2139+1423   17 43 39  29.9 106.6 -3.9     -36.5    54      844   14 51 00
15 00 00  =2136+141    17 52 40  31.2 108.6 -3.8     -36.0   540      984   14 51 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.M256

   Setup group:    6         Station: TORUN            Total bit rate:   256
   Format: VDIF              Bits per sample: 2        Sample rate:  8.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
           5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   8  Setup file default.  Used with PCAL = off
 LO sum=   6655.49  6655.49  6655.49  6655.49  6663.49  6663.49  6663.49  6663.49
           6671.49  6671.49  6671.49  6671.49  6679.49  6679.49  6679.49  6679.49
 BBC fr=    753.49   753.49   753.49   753.49   761.49   761.49   761.49   761.49
            769.49   769.49   769.49   769.49   777.49   777.49   777.49   777.49
 Bandwd=      4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00
              4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00
  Matching frequency sets:   8

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
  barrel=roll_off


======== Setup file: sess320.M2048

 Setup group:   22         Station: TORUN            Total bit rate:  2048
 Format: VDIF              Bits per sample: 2        Sample rate: 64.000
 Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

 Disk used to record data.
```

```
  1st LO=   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
            5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:  25  Setup file default.  Used with PCAL = off
  LO sum=   6584.49  6584.49  6584.49  6584.49  6648.49  6648.49  6648.49  6648.49
            6712.49  6712.49  6712.49  6712.49  6776.49  6776.49  6776.49  6776.49
  BBC fr=    682.49   682.49   682.49   682.49   746.49   746.49   746.49   746.49
             810.49   810.49   810.49   810.49   874.49   874.49   874.49   874.49
  Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
              32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
   Matching frequency sets:  25

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)             (J2000)             (Date)            (mas)

* 3C345             16 41 17.606229   * 16 42 58.809967     16 43 39.015698       0.79
  J1642+3948        39 54 10.81492    * 39 48 36.99399      39 46 35.45561        0.59
  1641+399          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J1642+39          GSFC 2016a X/S astro solution,  53724 observations.

  2029+121          20 29 32.681260   * 20 31 54.994267     20 32 53.370948       0.01
* J2031+1219        12 09 28.75299    * 12 19 41.34015      12 24 03.92963        0.02
  J2031+12          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,   4314 observations.

  2136+141          21 36 37.412147   * 21 39 01.309269     21 40 00.702923       0.00
* J2139+1423        14 10 00.62101    * 14 23 35.99216      14 29 21.27720        0.00
  J2139+14          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  53632 observations.
```

eb079tr

Gas properties of HMYSOs II

PI: *Anna Bartkiewicz*

Address: Torun Insitute of Astronomy

Observing mode: MKV, 32Mb/s

Schedule for TORUN (Code Tr) Page 2

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
Next scan frequencies:		6023.83	6023.83	6023.83	6023.83	6031.83	6031.83	6031.83	6031.83	
		6036.08	6036.08	6036.08	6036.08	6044.08	6044.08	6044.08	6044.08	
Next BBC frequencies:		723.83	723.83	723.83	723.83	731.83	731.83	731.83	731.83	
		736.08	736.08	736.08	736.08	744.08	744.08	744.08	744.08	
Next scan bandwidths:		4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
		4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
10 30 00	3C345	13 25 53	54.3	91.5	-3.3		-51.4	0	0	10 30 00
10 40 00	---	13 35 54	55.8	93.6	-3.1		-51.2	600	19	10 30 01
10 40 45	3C345	13 36 39	55.9	93.8	-3.1		-51.2	39	19	10 40 45
10 50 45	---	13 46 41	57.4	96.0	-2.9		-51.0	600	39	10 40 46
10 54 45	J2048+4310	13 50 42	26.0	51.6	-7.0		-40.3	107	39	10 54 45
10 56 30	=2046+429	13 52 27	26.2	51.9	-6.9		-40.4	105	42	10 54 46
10 56 30	W75N	13 52 27	26.9	53.8	-6.8		-41.3	-17	42	No stop
10 59 45	---	13 55 42	27.3	54.3	-6.7		-41.6	178	48	10 56 31
10 59 45	J2048+4310	13 55 42	26.6	52.4	-6.9		-40.8	-17	48	No stop
11 01 30	=2046+429	13 57 28	26.8	52.7	-6.9		-41.0	88	52	10 59 46
11 01 30	W75N	13 57 28	27.5	54.6	-6.7		-41.7	-17	52	No stop
11 04 45	---	14 00 43	27.9	55.1	-6.6		-42.1	178	58	11 01 31
11 05 30	J2048+4310	14 01 28	27.2	53.3	-6.8		-41.4	28	58	11 05 30
11 07 15	=2046+429	14 03 14	27.5	53.5	-6.8		-41.5	105	61	11 05 31
11 07 15	W75N	14 03 14	28.2	55.5	-6.6		-42.3	-17	61	No stop
11 10 30	---	14 06 29	28.6	56.0	-6.5		-42.6	178	68	11 07 16
11 10 30	J2048+4310	14 06 29	27.9	54.0	-6.7		-41.9	-17	68	No stop
11 12 15	=2046+429	14 08 15	28.1	54.3	-6.7		-42.0	88	71	11 10 31
11 12 15	W75N	14 08 15	28.9	56.2	-6.5		-42.8	-17	71	No stop
11 15 30	---	14 11 30	29.3	56.7	-6.5		-43.1	178	77	11 12 16
11 16 15	J2048+4310	14 12 15	28.6	54.9	-6.6		-42.4	28	77	11 16 15
11 18 00	=2046+429	14 14 00	28.8	55.2	-6.6		-42.6	105	81	11 16 16

Schedule for TORUN (Code Tr) Page 3

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 16 Oct 2020 Day 290 ---										
11 18 00	W75N	14 14 00	29.6	57.1	-6.4		-43.3	-18	81	No stop
11 21 15	---	14 17 16	30.0	57.6	-6.4		-43.6	177	87	11 18 01
11 21 15	J2048+4310	14 17 16	29.2	55.7	-6.5		-42.9	-17	87	No stop
11 23 00	=2046+429	14 19 01	29.4	56.0	-6.5		-43.1	88	90	11 21 16
11 23 00	W75N	14 19 01	30.2	57.9	-6.3		-43.8	-18	90	No stop
11 26 15	---	14 22 17	30.6	58.4	-6.3		-44.1	177	97	11 23 01
11 27 00	J2048+4310	14 23 02	29.9	56.6	-6.4		-43.5	28	97	11 27 00
11 28 45	=2046+429	14 24 47	30.1	56.8	-6.4		-43.7	105	100	11 27 01
11 28 45	W75N	14 24 47	31.0	58.8	-6.2		-44.3	-18	100	No stop
11 32 00	---	14 28 03	31.4	59.3	-6.2		-44.6	177	106	11 28 46
11 32 00	J2048+4310	14 28 03	30.5	57.3	-6.4		-44.0	-17	106	No stop
11 33 45	=2046+429	14 29 48	30.7	57.6	-6.3		-44.1	88	110	11 32 01
11 33 45	W75N	14 29 48	31.6	59.5	-6.2		-44.8	-18	110	No stop
11 37 00	---	14 33 04	32.0	60.0	-6.1		-45.1	177	116	11 33 46
11 37 45	J2048+4310	14 33 49	31.3	58.2	-6.3		-44.5	28	116	11 37 45
11 39 30	=2046+429	14 35 34	31.5	58.5	-6.2		-44.7	105	119	11 37 46
11 39 30	W75N	14 35 34	32.3	60.4	-6.1		-45.3	-18	119	No stop
11 42 45	---	14 38 50	32.8	60.9	-6.0		-45.6	177	126	11 39 31
11 42 45	J2048+4310	14 38 50	31.9	59.0	-6.2		-45.0	-17	126	No stop
11 44 30	=2046+429	14 40 35	32.1	59.2	-6.1		-45.1	88	129	11 42 46
11 44 30	W75N	14 40 35	33.0	61.2	-6.0		-45.7	-18	129	No stop
11 47 45	---	14 43 50	33.4	61.7	-5.9		-46.0	177	135	11 44 31
11 48 30	J2048+4310	14 44 36	32.6	59.9	-6.1		-45.5	28	135	11 48 30
11 50 15	=2046+429	14 46 21	32.9	60.1	-6.0		-45.6	105	139	11 48 31
11 50 15	W75N	14 46 21	33.8	62.1	-5.9		-46.2	-18	139	No stop
11 53 30	---	14 49 36	34.2	62.6	-5.8		-46.5	177	145	11 50 16
11 53 30	J2048+4310	14 49 36	33.3	60.6	-6.0		-45.9	-17	145	No stop
11 55 15	=2046+429	14 51 22	33.5	60.9	-6.0		-46.1	88	148	11 53 31
11 57 00	3C345	14 53 07	67.0	114.2	-1.8		-45.4	-35	148	11 57 00
12 04 30	---	15 00 38	68.0	116.9	-1.7		-44.2	415	163	11 57 01
12 09 45	J1925+1227	15 05 54	24.8	102.6	-4.3		-36.9	138	163	12 09 45
12 11 30	=1923+123	15 07 39	25.0	103.0	-4.3		-36.8	105	166	12 09 46
12 11 30	G45.467	15 07 39	25.6	106.3	-4.1		-36.0	-21	166	No stop
12 14 45	---	15 10 55	26.1	107.0	-4.1		-35.8	174	172	12 11 31

Schedule for TORUN (Code Tr) Page 4

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
12 14 45	J1925+1227	15 10 55	25.5	103.7	-4.3		-36.7	-21	172	No stop
12 16 30	=1923+123	15 12 40	25.8	104.0	-4.2		-36.6	84	176	12 14 46
12 17 15	G45.467	15 13 25	26.5	107.5	-4.0		-35.7	24	176	12 17 15
12 20 30	---	15 16 41	26.9	108.3	-4.0		-35.5	195	182	12 17 16
12 20 30	J1925+1227	15 16 41	26.4	104.9	-4.2		-36.5	-21	182	No stop
12 22 15	=1923+123	15 18 26	26.6	105.3	-4.1		-36.4	84	185	12 20 31
12 22 15	G45.467	15 18 26	27.2	108.7	-3.9		-35.4	-22	185	No stop
12 25 30	---	15 21 42	27.6	109.4	-3.9		-35.3	173	192	12 22 16
12 25 30	J1925+1227	15 21 42	27.1	106.0	-4.1		-36.2	-21	192	No stop
12 27 15	=1923+123	15 23 27	27.3	106.4	-4.1		-36.2	84	195	12 25 31
12 28 00	G45.467	15 24 12	28.0	110.0	-3.9		-35.1	23	195	12 28 00
12 31 15	---	15 27 28	28.4	110.7	-3.8		-34.9	195	201	12 28 01
12 31 15	J1925+1227	15 27 28	27.9	107.3	-4.0		-36.0	-21	201	No stop
12 33 00	=1923+123	15 29 13	28.2	107.7	-4.0		-35.9	84	205	12 31 16
12 33 45	J1825-0737	15 29 58	18.7	133.2	-2.9		-26.2	-21	205	12 33 45
12 35 30	=1822-076	15 31 43	18.9	133.6	-2.9		-26.0	84	208	12 33 46
12 35 30	G24.148	15 31 43	17.7	131.4	-3.1		-27.0	-18	208	No stop
12 38 45	---	15 34 59	18.0	132.1	-3.0		-26.7	177	214	12 35 31
12 38 45	J1825-0737	15 34 59	19.3	134.3	-2.9		-25.7	-18	214	No stop
12 40 30	=1822-076	15 36 44	19.4	134.8	-2.8		-25.5	87	218	12 38 46
12 41 15	G20.237	15 37 29	16.0	136.1	-2.9		-25.1	18	218	12 41 15
12 44 30	---	15 40 45	16.4	136.8	-2.8		-24.8	195	224	12 41 16
12 44 30	J1825-0737	15 40 45	19.9	135.7	-2.8		-25.0	-27	224	No stop
12 46 15	=1822-076	15 42 30	20.1	136.1	-2.7		-24.8	78	228	12 44 31
12 46 15	G24.148	15 42 30	18.9	133.9	-2.9		-25.9	-18	228	No stop
12 49 30	---	15 45 46	19.2	134.7	-2.8		-25.5	177	234	12 46 16
12 49 30	J1825-0737	15 45 46	20.4	136.9	-2.7		-24.4	-19	234	No stop
12 51 15	=1822-076	15 47 31	20.6	137.3	-2.7		-24.2	86	237	12 49 31
12 52 00	G20.237	15 48 16	17.1	138.6	-2.7		-23.9	18	237	12 52 00
12 55 15	---	15 51 31	17.4	139.3	-2.6		-23.5	195	243	12 52 01

Schedule for TORUN (Code Tr) Page 5

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
12 55 15	J1825-0737	15 51 31	21.0	138.3	-2.6		-23.8	-27	243	No stop
12 57 00	=1822-076	15 53 17	21.1	138.7	-2.6		-23.6	78	247	12 55 16
12 57 00	G24.148	15 53 17	20.0	136.5	-2.7		-24.7	-18	247	No stop
13 00 15	---	15 56 32	20.3	137.2	-2.7		-24.3	177	253	12 57 01
13 00 15	J1825-0737	15 56 32	21.5	139.5	-2.5		-23.2	-19	253	No stop
13 02 00	=1822-076	15 58 18	21.6	140.0	-2.5		-22.9	86	257	13 00 16
13 02 45	G20.237	15 59 03	18.2	141.1	-2.5		-22.6	18	257	13 02 45
13 06 00	---	16 02 18	18.5	141.9	-2.4		-22.2	195	263	13 02 46
13 06 00	J1825-0737	16 02 18	22.0	140.9	-2.4		-22.4	-27	263	No stop
13 07 45	=1822-076	16 04 04	22.2	141.4	-2.4		-22.2	78	266	13 06 01
13 07 45	G24.148	16 04 04	21.1	139.1	-2.5		-23.4	-18	266	No stop
13 11 00	---	16 07 19	21.4	139.9	-2.5		-23.0	177	272	13 07 46
13 11 00	J1825-0737	16 07 19	22.5	142.2	-2.3		-21.8	-19	272	No stop
13 12 45	=1822-076	16 09 04	22.7	142.6	-2.3		-21.6	86	276	13 11 01
13 13 30	G20.237	16 09 49	19.2	143.7	-2.3		-21.2	18	276	13 13 30
13 16 45	---	16 13 05	19.4	144.5	-2.3		-20.8	195	282	13 13 31
13 16 45	J1825-0737	16 13 05	23.0	143.6	-2.2		-21.1	-27	282	No stop
13 18 30	=1822-076	16 14 50	23.2	144.1	-2.2		-20.8	78	285	13 16 46
13 18 30	G24.148	16 14 50	22.1	141.7	-2.4		-22.1	-19	285	No stop
13 21 45	---	16 18 06	22.4	142.5	-2.3		-21.6	176	292	13 18 31
13 21 45	J1825-0737	16 18 06	23.5	144.9	-2.1		-20.4	-19	292	No stop
13 23 30	=1822-076	16 19 51	23.6	145.3	-2.1		-20.2	86	295	13 21 46
13 24 15	G20.237	16 20 36	20.1	146.3	-2.1		-19.8	18	295	13 24 15
13 27 30	---	16 23 52	20.3	147.1	-2.1		-19.4	195	301	13 24 16
13 27 30	J1825-0737	16 23 52	23.9	146.4	-2.0		-19.6	-27	301	No stop
13 29 15	=1822-076	16 25 37	24.1	146.8	-2.0		-19.4	78	305	13 27 31
13 29 15	G24.148	16 25 37	23.1	144.4	-2.2		-20.7	-19	305	No stop
13 32 30	---	16 28 53	23.4	145.2	-2.1		-20.2	176	311	13 29 16
13 32 30	J1825-0737	16 28 53	24.4	147.6	-2.0		-18.9	-19	311	No stop
13 34 15	=1822-076	16 30 38	24.5	148.1	-1.9		-18.7	86	314	13 32 31

Schedule for TORUN (Code Tr) Page 6

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
13 35 00	G20.237	16 31 23	20.9	149.0	-2.0		-18.4	18	314	13 35 00
13 38 15	---	16 34 39	21.2	149.8	-1.9		-17.9	195	321	13 35 01
13 38 15	J1825-0737	16 34 39	24.8	149.1	-1.9		-18.1	-28	321	No stop
13 40 00	=1822-076	16 36 24	24.9	149.6	-1.8		-17.9	77	324	13 38 16
13 40 00	G24.148	16 36 24	24.0	147.1	-2.0		-19.2	-19	324	No stop
13 43 15	---	16 39 39	24.3	148.0	-1.9		-18.7	176	330	13 40 01
13 43 15	J1825-0737	16 39 39	25.2	150.4	-1.8		-17.4	-19	330	No stop
13 45 00	=1822-076	16 41 25	25.3	150.9	-1.8		-17.1	86	334	13 43 16
13 45 45	G20.237	16 42 10	21.7	151.7	-1.8		-16.9	18	334	13 45 45
13 49 00	---	16 45 25	22.0	152.5	-1.7		-16.4	195	340	13 45 46
13 49 00	J1825-0737	16 45 25	25.6	152.0	-1.7		-16.5	-28	340	No stop
13 50 45	=1822-076	16 47 11	25.7	152.4	-1.7		-16.3	77	343	13 49 01
13 50 45	G24.148	16 47 11	24.8	149.9	-1.8		-17.7	-19	343	No stop
13 54 00	---	16 50 26	25.1	150.8	-1.8		-17.2	176	350	13 50 46
13 54 00	J1825-0737	16 50 26	25.9	153.3	-1.6		-15.8	-19	350	No stop
13 55 45	=1822-076	16 52 11	26.1	153.7	-1.6		-15.5	86	353	13 54 01
13 56 30	G20.237	16 52 57	22.5	154.4	-1.6		-15.3	18	353	13 56 30
13 59 45	---	16 56 12	22.7	155.3	-1.5		-14.8	195	359	13 56 31
13 59 45	J1825-0737	16 56 12	26.3	154.8	-1.5		-14.9	-28	359	No stop
14 01 30	=1822-076	16 57 57	26.4	155.3	-1.5		-14.7	77	363	13 59 46
14 05 15	J2048+4310	17 01 43	51.9	81.3	-3.8		-54.6	62	363	14 05 15
14 07 00	=2046+429	17 03 28	52.2	81.6	-3.8		-54.7	105	366	14 05 16
14 07 00	W75N	17 03 28	53.3	84.1	-3.6		-54.4	-19	366	No stop
14 10 15	---	17 06 44	53.8	84.7	-3.5		-54.4	176	372	14 07 01
14 10 15	J2048+4310	17 06 44	52.7	82.2	-3.7		-54.8	-19	372	No stop
14 12 00	=2046+429	17 08 29	52.9	82.5	-3.7		-54.8	86	376	14 10 16
14 12 00	W75N	17 08 29	54.1	85.0	-3.5		-54.5	-19	376	No stop
14 15 15	---	17 11 45	54.5	85.6	-3.5		-54.6	176	382	14 12 01
14 16 00	J2048+4310	17 12 30	53.5	83.2	-3.6		-55.0	26	382	14 16 00
14 17 45	=2046+429	17 14 15	53.8	83.5	-3.6		-55.0	105	385	14 16 01

Schedule for TORUN (Code Tr) Page 7

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
14 17 45	W75N	17 14 15	54.9	86.0	-3.4		-54.6	-19	385	No stop
14 21 00	---	17 17 31	55.4	86.7	-3.4		-54.7	176	392	14 17 46
14 21 00	J2048+4310	17 17 31	54.3	84.1	-3.5		-55.1	-19	392	No stop
14 22 45	=2046+429	17 19 16	54.5	84.4	-3.5		-55.1	86	395	14 21 01
14 22 45	W75N	17 19 16	55.7	87.0	-3.3		-54.7	-19	395	No stop
14 26 00	---	17 22 31	56.2	87.6	-3.3		-54.7	176	401	14 22 46
14 26 45	J2048+4310	17 23 16	55.1	85.1	-3.4		-55.2	26	401	14 26 45
14 28 30	=2046+429	17 25 02	55.4	85.4	-3.4		-55.3	105	405	14 26 46
14 28 30	W75N	17 25 02	56.5	88.1	-3.2		-54.8	-20	405	No stop
14 31 45	---	17 28 17	57.0	88.7	-3.2		-54.8	175	411	14 28 31
14 31 45	J2048+4310	17 28 17	55.9	86.0	-3.3		-55.3	-19	411	No stop
14 33 30	=2046+429	17 30 03	56.2	86.4	-3.3		-55.4	86	414	14 31 46
---------- Ef out for pointing ----------										
14 37 15	J1925+1227	17 33 48	43.6	140.4	-1.9		-23.1	103	414	14 37 15
14 39 00	=1923+123	17 35 34	43.8	141.0	-1.9		-22.8	105	418	14 37 16
14 39 00	G45.467	17 35 34	43.6	145.2	-1.7		-20.5	-24	418	No stop
14 42 15	---	17 38 49	43.9	146.2	-1.6		-19.9	171	424	14 39 01
14 42 15	J1925+1227	17 38 49	44.1	142.0	-1.8		-22.3	-23	424	No stop
14 44 00	=1923+123	17 40 34	44.2	142.5	-1.8		-22.0	82	428	14 42 16
14 44 45	G45.467	17 41 19	44.1	147.0	-1.6		-19.5	21	428	14 44 45
14 48 00	---	17 44 35	44.3	148.1	-1.5		-18.9	195	434	14 44 46
---------- Ef back ----------										
14 48 00	J1925+1227	17 44 35	44.6	143.8	-1.7		-21.3	-23	434	No stop
14 49 45	=1923+123	17 46 20	44.8	144.4	-1.7		-21.0	82	437	14 48 01
14 49 45	G45.467	17 46 20	44.5	148.6	-1.5		-18.6	-24	437	No stop
14 53 00	---	17 49 36	44.7	149.7	-1.4		-18.0	171	443	14 49 46
14 53 00	J1925+1227	17 49 36	45.0	145.4	-1.6		-20.4	-23	443	No stop
14 54 45	=1923+123	17 51 21	45.2	146.0	-1.6		-20.1	82	447	14 53 01
14 55 30	G45.467	17 52 06	44.9	150.5	-1.4		-17.5	21	447	14 55 30
14 58 45	---	17 55 22	45.1	151.6	-1.3		-16.9	195	453	14 55 31

Schedule for TORUN (Code Tr) Page 8

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
14 58 45	J1925+1227	17 55 22	45.5	147.3	-1.5		-19.4	-23	453	No stop
15 00 30	=1923+123	17 57 07	45.7	147.9	-1.5		-19.1	82	457	14 58 46
15 00 30	G45.467	17 57 07	45.3	152.2	-1.3		-16.6	-24	457	No stop
15 03 45	---	18 00 23	45.5	153.3	-1.2		-16.0	171	463	15 00 31
15 03 45	J1925+1227	18 00 23	45.9	149.0	-1.4		-18.5	-23	463	No stop
15 05 30	=1923+123	18 02 08	46.1	149.5	-1.4		-18.2	82	466	15 03 46
15 06 15	G45.467	18 02 53	45.7	154.1	-1.2		-15.5	21	466	15 06 15
15 09 30	---	18 06 09	45.9	155.2	-1.2		-14.9	195	472	15 06 16
15 09 30	J1925+1227	18 06 09	46.4	150.9	-1.3		-17.4	-23	472	No stop
15 11 15	=1923+123	18 07 54	46.5	151.5	-1.3		-17.1	82	476	15 09 31
15 13 15	J1825-0737	18 09 54	29.2	175.2	-0.3		-2.9	41	476	15 13 15
15 15 00	=1822-076	18 11 39	29.2	175.7	-0.3		-2.6	105	479	15 13 16
15 15 00	G24.148	18 11 39	28.9	173.0	-0.4		-4.2	-20	479	No stop
15 18 15	---	18 14 55	28.9	173.9	-0.4		-3.7	175	485	15 15 01
15 18 15	J1825-0737	18 14 55	29.2	176.6	-0.2		-2.0	-20	485	No stop
15 20 00	=1822-076	18 16 40	29.3	177.1	-0.2		-1.7	85	489	15 18 16
15 20 45	G20.237	18 17 25	25.6	176.9	-0.2		-1.9	17	489	15 20 45
15 24 00	---	18 20 41	25.6	177.8	-0.1		-1.4	195	495	15 20 46
15 24 00	J1825-0737	18 20 41	29.3	178.3	-0.1		-1.0	-28	495	No stop
15 25 45	=1822-076	18 22 26	29.3	178.8	-0.1		-0.7	77	499	15 24 01
15 25 45	G24.148	18 22 26	29.0	176.0	-0.2		-2.4	-20	499	No stop
15 29 00	---	18 25 42	29.1	177.0	-0.2		-1.8	175	505	15 25 46
15 29 00	J1825-0737	18 25 42	29.3	179.7	-0.0		-0.2	-20	505	No stop
15 30 45	=1822-076	18 27 27	29.3	180.2	0.0		0.1	85	508	15 29 01
15 31 30	G20.237	18 28 12	25.7	179.8	-0.0		-0.1	18	508	15 31 30
15 34 45	---	18 31 28	25.7	180.7	0.0		0.4	195	514	15 31 31
15 34 45	J1825-0737	18 31 28	29.3	181.3	0.1		0.8	-27	514	No stop
15 36 30	=1822-076	18 33 13	29.3	181.8	0.1		1.1	78	518	15 34 46
15 36 30	G24.148	18 33 13	29.1	179.1	-0.1		-0.6	-20	518	No stop
15 39 45	---	18 36 28	29.1	180.0	0.0		0.0	175	524	15 36 31

Schedule for TORUN (Code Tr) Page 9

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 16 Oct 2020 Day 290 ---										
15 39 45	J1825-0737	18 36 28	29.3	182.8	0.2		1.7	-20	524	No stop
15 41 30	=1822-076	18 38 14	29.2	183.3	0.2		2.0	85	528	15 39 46
15 42 15	G20.237	18 38 59	25.6	182.7	0.2		1.7	18	528	15 42 15
15 45 30	---	18 42 14	25.6	183.6	0.2		2.2	195	534	15 42 16
15 45 30	J1825-0737	18 42 14	29.2	184.4	0.3		2.7	-27	534	No stop
15 47 15	=1822-076	18 44 00	29.2	184.9	0.3		3.0	78	537	15 45 31
15 47 15	G24.148	18 44 00	29.1	182.1	0.1		1.3	-20	537	No stop
15 50 30	---	18 47 15	29.1	183.1	0.2		1.9	175	543	15 47 16
15 50 30	J1825-0737	18 47 15	29.1	185.8	0.3		3.5	-20	543	No stop
15 52 15	=1822-076	18 49 01	29.1	186.3	0.4		3.8	85	547	15 50 31
15 53 00	G20.237	18 49 46	25.5	185.7	0.3		3.5	18	547	15 53 00
15 56 15	---	18 53 01	25.5	186.6	0.4		4.0	195	553	15 53 01
15 56 15	J1825-0737	18 53 01	29.0	187.5	0.4		4.5	-27	553	No stop
15 58 00	=1822-076	18 54 46	29.0	188.0	0.5		4.8	78	556	15 56 16
15 58 00	G24.148	18 54 46	29.0	185.2	0.3		3.1	-20	556	No stop
16 01 15	---	18 58 02	28.9	186.1	0.4		3.7	175	563	15 58 01
16 01 15	J1825-0737	18 58 02	28.9	188.9	0.5		5.4	-20	563	No stop
16 03 00	=1822-076	18 59 47	28.9	189.4	0.6		5.7	85	566	16 01 16
16 03 45	G20.237	19 00 32	25.3	188.6	0.5		5.2	18	566	16 03 45
16 07 00	---	19 03 48	25.2	189.5	0.6		5.8	195	572	16 03 46
16 07 00	J1825-0737	19 03 48	28.8	190.5	0.6		6.3	-27	572	No stop
16 08 45	=1822-076	19 05 33	28.7	191.0	0.6		6.6	78	576	16 07 01
16 08 45	G24.148	19 05 33	28.8	188.2	0.5		5.0	-20	576	No stop
16 12 00	---	19 08 49	28.7	189.1	0.5		5.5	175	582	16 08 46
16 12 00	J1825-0737	19 08 49	28.6	191.9	0.7		7.2	-20	582	No stop
16 13 45	=1822-076	19 10 34	28.6	192.4	0.7		7.5	85	585	16 12 01
16 14 30	G20.237	19 11 19	25.0	191.5	0.7		7.0	18	585	16 14 30
16 17 45	---	19 14 35	24.9	192.4	0.8		7.5	195	592	16 14 31
16 17 45	J1825-0737	19 14 35	28.4	193.5	0.8		8.1	-27	592	No stop
16 19 30	=1822-076	19 16 20	28.4	194.0	0.8		8.4	78	595	16 17 46

Schedule for TORUN (Code Tr) Page 10

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 16 Oct 2020 Day 290 ---										
16 19 30	G24.148	19 16 20	28.5	191.3	0.7		6.8	-20	595	No stop
16 22 45	---	19 19 36	28.4	192.2	0.7		7.3	175	601	16 19 31
16 22 45	J1825-0737	19 19 36	28.3	194.9	0.9		9.0	-20	601	No stop
16 24 30	=1822-076	19 21 21	28.2	195.4	0.9		9.3	85	605	16 22 46
16 25 15	G20.237	19 22 06	24.7	194.4	0.9		8.7	18	605	16 25 15
16 28 30	---	19 25 21	24.5	195.3	0.9		9.3	195	611	16 25 16
16 28 30	J1825-0737	19 25 21	28.0	196.5	1.0		9.9	-27	611	No stop
16 30 15	=1822-076	19 27 07	28.0	197.0	1.0		10.2	78	614	16 28 31
16 30 15	G24.148	19 27 07	28.2	194.3	0.8		8.6	-20	614	No stop
16 33 30	---	19 30 22	28.0	195.2	0.9		9.1	175	621	16 30 16
16 33 30	J1825-0737	19 30 22	27.8	197.9	1.1		10.7	-20	621	No stop
16 35 15	=1822-076	19 32 08	27.7	198.4	1.1		11.0	85	624	16 33 31
16 36 00	G20.237	19 32 53	24.2	197.2	1.1		10.5	18	624	16 36 00
16 39 15	---	19 36 08	24.1	198.1	1.1		11.0	195	630	16 36 01
16 39 15	J1825-0737	19 36 08	27.5	199.5	1.2		11.7	-27	630	No stop
16 41 00	=1822-076	19 37 54	27.4	200.0	1.2		11.9	78	634	16 39 16
16 44 45	J2048+4310	19 41 39	75.1	124.6	-1.1		-42.7	33	634	16 44 45
16 46 30	=2046+429	19 43 24	75.3	125.6	-1.1		-42.1	105	637	16 44 46
16 46 30	W75N	19 43 24	76.1	132.5	-0.9		-37.0	-29	637	No stop
16 49 45	---	19 46 40	76.4	134.6	-0.9		-35.6	166	643	16 46 31
16 49 45	J2048+4310	19 46 40	75.7	127.3	-1.0		-41.0	-29	643	No stop
16 51 30	=2046+429	19 48 25	75.9	128.3	-1.0		-40.3	76	647	16 49 46
16 51 30	W75N	19 48 25	76.6	135.7	-0.8		-34.8	-30	647	No stop
16 54 45	---	19 51 41	76.9	137.9	-0.8		-33.2	165	653	16 51 31
16 55 30	J2048+4310	19 52 26	76.4	130.7	-0.9		-38.7	15	653	16 55 30
16 57 15	=2046+429	19 54 11	76.6	131.8	-0.9		-38.0	105	656	16 55 31
16 57 15	W75N	19 54 11	77.2	139.6	-0.8		-32.0	-31	656	No stop
17 00 30	---	19 57 27	77.5	141.9	-0.7		-30.2	164	663	16 57 16
17 00 30	J2048+4310	19 57 27	77.0	133.8	-0.9		-36.5	-31	663	No stop
17 02 15	=2046+429	19 59 12	77.2	135.0	-0.8		-35.7	74	666	17 00 31

Schedule for TORUN (Code Tr) Page 11

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
17 02 15	W75N	19 59 12	77.6	143.2	-0.7		-29.3	-32	666	No stop
17 05 30	---	20 02 28	77.9	145.7	-0.6		-27.4	163	672	17 02 16
17 06 15	J2048+4310	20 03 13	77.6	137.7	-0.8		-33.7	14	672	17 06 15
17 08 00	=2046+429	20 04 58	77.7	139.0	-0.7		-32.8	105	676	17 06 16
17 08 00	W75N	20 04 58	78.1	147.7	-0.6		-25.9	-33	676	No stop
17 11 15	---	20 08 14	78.4	150.4	-0.5		-23.8	162	682	17 08 01
17 11 15	J2048+4310	20 08 14	78.1	141.4	-0.7		-31.0	-32	682	No stop
17 13 00	=2046+429	20 09 59	78.2	142.7	-0.7		-30.0	73	685	17 11 16
17 15 00	J1925+1227	20 11 59	48.4	196.8	0.8		10.2	-6	685	17 15 00
17 16 45	=1923+123	20 13 44	48.3	197.4	0.8		10.6	99	689	17 15 01
17 16 45	G45.467	20 13 44	46.5	201.0	1.0		12.7	-22	689	No stop
17 20 00	---	20 17 00	46.3	202.2	1.0		13.4	173	695	17 16 46
17 20 00	J1925+1227	20 17 00	48.2	198.6	0.8		11.3	-22	695	No stop
17 21 45	=1923+123	20 18 45	48.1	199.2	0.9		11.7	83	699	17 20 01
17 22 30	G45.467	20 19 30	46.2	203.0	1.1		13.9	23	699	17 22 30
17 25 45	---	20 22 46	46.0	204.2	1.1		14.5	195	705	17 22 31
17 25 45	J1925+1227	20 22 46	47.9	200.7	0.9		12.5	-21	705	No stop
17 27 30	=1923+123	20 24 31	47.8	201.3	1.0		12.9	84	708	17 25 46
17 27 30	G45.467	20 24 31	45.9	204.8	1.2		14.9	-22	708	No stop
17 30 45	---	20 27 47	45.7	205.9	1.2		15.5	173	714	17 27 31
17 30 45	J1925+1227	20 27 47	47.6	202.4	1.0		13.6	-21	714	No stop
17 32 30	=1923+123	20 29 32	47.5	203.1	1.0		13.9	84	718	17 30 46
17 33 15	G45.467	20 30 17	45.5	206.7	1.2		16.0	23	718	17 33 15
17 36 30	---	20 33 33	45.3	207.8	1.3		16.6	195	724	17 33 16
17 36 30	J1925+1227	20 33 33	47.3	204.5	1.1		14.8	-21	724	No stop
17 38 15	=1923+123	20 35 18	47.2	205.1	1.1		15.1	84	728	17 36 31
17 39 00	J1825-0737	20 36 03	23.4	215.3	2.2		20.5	-58	728	17 39 00
17 40 45	=1822-076	20 37 48	23.2	215.7	2.2		20.7	47	731	17 39 01
17 40 45	G24.148	20 37 48	23.9	213.2	2.0		19.4	-19	731	No stop
17 44 00	---	20 41 04	23.6	214.0	2.1		19.8	176	737	17 40 46

Schedule for TORUN (Code Tr) Page 12

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
17 44 00	J1825-0737	20 41 04	22.9	216.5	2.2		21.1	-19	737	No stop
17 45 45	=1822-076	20 42 49	22.8	217.0	2.3		21.4	86	741	17 44 01
17 46 30	G20.237	20 43 34	19.5	215.2	2.2		20.7	19	741	17 46 30
17 49 45	---	20 46 50	19.2	216.0	2.3		21.1	195	747	17 46 31
17 49 45	J1825-0737	20 46 50	22.4	218.0	2.3		21.9	-26	747	No stop
17 51 30	=1822-076	20 48 35	22.3	218.4	2.4		22.1	79	750	17 49 46
17 51 30	G24.148	20 48 35	23.0	215.9	2.2		20.8	-19	750	No stop
17 54 45	---	20 51 51	22.7	216.7	2.3		21.3	176	756	17 51 31
17 54 45	J1825-0737	20 51 51	22.0	219.2	2.4		22.5	-19	756	No stop
17 56 30	=1822-076	20 53 36	21.8	219.7	2.4		22.7	86	760	17 54 46
17 57 15	G20.237	20 54 21	18.6	217.8	2.4		22.1	19	760	17 57 15
18 00 30	---	20 57 37	18.3	218.6	2.5		22.5	195	766	17 57 16
18 00 30	J1825-0737	20 57 37	21.4	220.6	2.5		23.2	-26	766	No stop
18 02 15	=1822-076	20 59 22	21.2	221.1	2.5		23.5	79	770	18 00 31
18 02 15	G24.148	20 59 22	22.0	218.6	2.4		22.2	-19	770	No stop
18 05 30	---	21 02 37	21.7	219.4	2.4		22.6	176	776	18 02 16
18 05 30	J1825-0737	21 02 37	20.9	221.9	2.6		23.8	-19	776	No stop
18 07 15	=1822-076	21 04 23	20.7	222.3	2.6		24.1	86	779	18 05 31
18 08 00	G20.237	21 05 08	17.5	220.4	2.6		23.4	19	779	18 08 00
18 11 15	---	21 08 23	17.2	221.2	2.7		23.8	195	785	18 08 01
18 11 15	J1825-0737	21 08 23	20.3	223.3	2.7		24.5	-25	785	No stop
18 13 00	=1822-076	21 10 09	20.1	223.7	2.7		24.7	80	789	18 11 16
18 13 00	G24.148	21 10 09	21.0	221.2	2.6		23.6	-19	789	No stop
18 16 15	---	21 13 24	20.6	222.0	2.6		23.9	176	795	18 13 01
18 16 15	J1825-0737	21 13 24	19.8	224.5	2.8		25.1	-19	795	No stop
18 18 00	=1822-076	21 15 09	19.6	224.9	2.8		25.3	86	799	18 16 16
18 18 45	G20.237	21 15 55	16.5	222.9	2.8		24.6	19	799	18 18 45
18 22 00	---	21 19 10	16.1	223.7	2.8		25.0	195	805	18 18 46
18 22 00	J1825-0737	21 19 10	19.2	225.8	2.9		25.8	-25	805	No stop
18 23 45	=1822-076	21 20 55	19.0	226.2	2.9		25.9	80	808	18 22 01

Schedule for TORUN (Code Tr) Page 13

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
18 23 45	G24.148	21 20 55	19.9	223.8	2.7		24.8	-19	808	No stop
18 27 00	---	21 24 11	19.5	224.6	2.8		25.2	176	814	18 23 46
18 27 00	J1825-0737	21 24 11	18.6	227.0	3.0		26.3	-19	814	No stop
18 28 45	=1822-076	21 25 56	18.4	227.4	3.0		26.5	86	818	18 27 01
18 29 30	G20.237	21 26 41	15.3	225.4	3.0		25.9	20	818	18 29 30
18 32 45	---	21 29 57	15.0	226.2	3.0		26.2	195	824	18 29 31
18 32 45	J1825-0737	21 29 57	18.0	228.4	3.1		26.9	-25	824	No stop
18 34 30	=1822-076	21 31 42	17.8	228.8	3.1		27.1	80	828	18 32 46
---------- EF out for pointing ----------										
18 44 30	G24.148	21 41 44	17.6	228.7	3.1		27.1	581	828	18 44 30
18 47 45	---	21 44 59	17.2	229.5	3.1		27.4	195	834	18 44 31
18 47 45	J1825-0737	21 44 59	16.3	231.8	3.3		28.4	-19	834	No stop
18 49 30	=1822-076	21 46 45	16.1	232.2	3.3		28.6	86	837	18 47 46
18 50 15	G20.237	21 47 30	13.0	230.1	3.3		28.0	20	837	18 50 15
18 53 30	---	21 50 45	12.7	230.8	3.4		28.3	195	843	18 50 16
18 53 30	J1825-0737	21 50 45	15.6	233.1	3.4		29.0	-25	843	No stop
18 55 15	=1822-076	21 52 31	15.4	233.5	3.4		29.1	80	847	18 53 31
---------- EF back ----------										
18 59 00	J2048+4310	21 56 16	75.2	235.3	1.1		42.7	-13	847	18 59 00
19 00 45	=2046+429	21 58 02	74.9	236.2	1.1		43.2	92	850	18 59 01
19 00 45	W75N	21 58 02	73.3	239.4	1.3		44.7	-21	850	No stop
19 04 00	---	22 01 17	72.9	240.9	1.4		45.6	174	856	19 00 46
19 04 00	J2048+4310	22 01 17	74.5	237.8	1.2		44.2	-20	856	No stop
19 05 45	=2046+429	22 03 02	74.3	238.6	1.2		44.8	85	860	19 04 01
19 05 45	W75N	22 03 02	72.6	241.6	1.4		46.0	-21	860	No stop
19 09 00	---	22 06 18	72.2	243.0	1.4		46.7	174	866	19 05 46
19 09 45	J2048+4310	22 07 03	73.8	240.5	1.3		45.9	25	866	19 09 45
19 11 30	=2046+429	22 08 48	73.6	241.3	1.3		46.3	105	870	19 09 46
19 11 30	W75N	22 08 48	71.9	244.0	1.5		47.3	-20	870	No stop
19 14 45	---	22 12 04	71.4	245.3	1.5		47.9	175	876	19 11 31

Schedule for TORUN (Code Tr) Page 14

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 16 Oct 2020 Day 290 ---										
19 14 45	J2048+4310	22 12 04	73.1	242.7	1.4		47.1	-20	876	No stop
19 16 30	=2046+429	22 13 49	72.9	243.5	1.4		47.5	85	879	19 14 46
19 16 30	W75N	22 13 49	71.2	246.0	1.6		48.3	-20	879	No stop
19 19 45	---	22 17 05	70.7	247.2	1.6		48.9	175	885	19 16 31
19 20 30	J2048+4310	22 17 50	72.3	245.1	1.5		48.4	25	885	19 20 30
19 22 15	=2046+429	22 19 35	72.1	245.8	1.5		48.8	105	889	19 20 31
19 22 15	W75N	22 19 35	70.4	248.1	1.7		49.3	-20	889	No stop
19 25 30	---	22 22 51	69.9	249.3	1.7		49.8	175	895	19 22 16
19 25 30	J2048+4310	22 22 51	71.7	247.0	1.6		49.4	-20	895	No stop
19 27 15	=2046+429	22 24 36	71.4	247.7	1.6		49.7	85	899	19 25 31
19 29 15	J1925+1227	22 26 36	36.0	238.6	3.0		31.7	-27	899	19 29 15
19 31 00	=1923+123	22 28 21	35.8	239.0	3.0		31.8	78	902	19 29 16
19 31 00	G45.467	22 28 21	33.2	241.0	3.2		32.4	-24	902	No stop
19 34 15	---	22 31 37	32.8	241.8	3.3		32.6	171	908	19 31 01
19 34 15	J1925+1227	22 31 37	35.3	239.8	3.1		32.1	-23	908	No stop
19 36 00	=1923+123	22 33 22	35.1	240.3	3.1		32.3	82	912	19 34 16
19 36 45	G45.467	22 34 07	32.4	242.4	3.3		32.9	21	912	19 36 45
19 40 00	---	22 37 23	32.0	243.2	3.4		33.1	195	918	19 36 46
19 40 00	J1925+1227	22 37 23	34.6	241.3	3.2		32.6	-23	918	No stop
19 41 45	=1923+123	22 39 08	34.4	241.7	3.2		32.8	82	921	19 40 01
19 41 45	G45.467	22 39 08	31.8	243.6	3.4		33.3	-24	921	No stop
19 45 00	---	22 42 24	31.3	244.4	3.5		33.5	171	927	19 41 46
19 45 00	J1925+1227	22 42 24	33.9	242.5	3.3		33.1	-23	927	No stop
19 46 45	=1923+123	22 44 09	33.7	243.0	3.3		33.2	82	931	19 45 01
19 47 30	G45.467	22 44 54	31.0	245.0	3.5		33.7	21	931	19 47 30
19 50 45	---	22 48 10	30.5	245.8	3.5		33.9	195	937	19 47 31
19 50 45	J1925+1227	22 48 10	33.2	243.9	3.4		33.5	-24	937	No stop
19 52 30	=1923+123	22 49 55	32.9	244.4	3.4		33.7	81	941	19 50 46
19 52 30	G45.467	22 49 55	30.3	246.2	3.6		34.1	-24	941	No stop
19 55 45	---	22 53 11	29.9	247.0	3.6		34.3	171	947	19 52 31

Schedule for TORUN (Code Tr) Page 15

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
19 55 45	J1925+1227	22 53 11	32.5	245.2	3.4		33.9	-24	947	No stop
19 57 30	=1923+123	22 54 56	32.2	245.6	3.5		34.1	81	950	19 55 46
19 58 15	G45.467	22 55 41	29.5	247.5	3.7		34.5	21	950	19 58 15
20 01 30	---	22 58 56	29.1	248.3	3.7		34.7	195	956	19 58 16
20 01 30	J1925+1227	22 58 56	31.7	246.5	3.5		34.3	-24	956	No stop
20 03 15	=1923+123	23 00 42	31.4	246.9	3.6		34.5	81	960	20 01 31
20 03 15	G45.467	23 00 42	28.8	248.7	3.8		34.8	-24	960	No stop
20 06 30	---	23 03 57	28.4	249.5	3.8		35.0	171	966	20 03 16
20 06 30	J1925+1227	23 03 57	31.0	247.7	3.6		34.7	-24	966	No stop
20 08 15	=1923+123	23 05 43	30.8	248.1	3.7		34.8	81	970	20 06 31
20 09 00	G45.467	23 06 28	28.0	250.0	3.9		35.1	21	970	20 09 00
20 12 15	---	23 09 43	27.5	250.8	3.9		35.3	195	976	20 09 01
20 12 15	J1925+1227	23 09 43	30.2	249.0	3.7		35.1	-24	976	No stop
20 14 00	=1923+123	23 11 29	29.9	249.5	3.7		35.2	81	979	20 12 16
20 14 00	G45.467	23 11 29	27.3	251.2	3.9		35.4	-24	979	No stop
20 17 15	---	23 14 44	26.8	251.9	4.0		35.6	171	985	20 14 01
20 17 15	J1925+1227	23 14 44	29.5	250.2	3.8		35.4	-24	985	No stop
20 19 00	=1923+123	23 16 29	29.2	250.6	3.8		35.5	81	989	20 17 16
20 19 45	G45.467	23 17 14	26.5	252.4	4.0		35.7	21	989	20 19 45
20 23 00	---	23 20 30	26.0	253.2	4.1		35.9	195	995	20 19 46
20 23 00	J1925+1227	23 20 30	28.7	251.5	3.9		35.7	-24	995	No stop
20 24 45	=1923+123	23 22 15	28.4	251.9	3.9		35.8	81	999	20 23 01
20 24 45	G45.467	23 22 15	25.7	253.6	4.1		36.0	-24	999	No stop
20 28 00	---	23 25 31	25.3	254.3	4.2		36.1	171	1005	20 24 46
20 28 00	J1925+1227	23 25 31	28.0	252.6	4.0		35.9	-24	1005	No stop
20 29 45	=1923+123	23 27 16	27.7	253.0	4.0		36.0	81	1008	20 28 01
20 30 30	G45.467	23 28 01	24.9	254.8	4.2		36.2	21	1008	20 30 30
20 33 45	---	23 31 17	24.4	255.5	4.3		36.4	195	1014	20 30 31
20 33 45	J1925+1227	23 31 17	27.1	253.9	4.1		36.2	-24	1014	No stop
20 35 30	=1923+123	23 33 02	26.9	254.3	4.1		36.3	81	1018	20 33 46

Schedule for TORUN (Code Tr) Page 16

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 16 Oct 2020 Day 290 ---										
20 39 15	J2048+4310	23 36 48	60.8	267.4	2.8		55.5	83	1018	20 39 15
20 41 00	=2046+429	23 38 33	60.6	267.8	2.8		55.5	105	1021	20 39 16
20 41 00	W75N	23 38 33	58.8	268.9	3.0		54.8	-21	1021	No stop
20 44 15	---	23 41 49	58.3	269.6	3.0		54.8	174	1027	20 41 01
20 44 15	J2048+4310	23 41 49	60.1	268.5	2.9		55.5	-20	1027	No stop
20 46 00	=2046+429	23 43 34	59.8	268.9	2.9		55.5	85	1031	20 44 16
20 46 00	W75N	23 43 34	58.1	269.9	3.1		54.8	-21	1031	No stop
20 49 15	---	23 46 49	57.6	270.6	3.1		54.8	174	1037	20 46 01
20 50 00	J2048+4310	23 47 34	59.2	269.7	3.0		55.5	25	1037	20 50 00
20 51 45	=2046+429	23 49 20	59.0	270.0	3.0		55.5	105	1041	20 50 01
20 51 45	W75N	23 49 20	57.2	271.1	3.2		54.8	-21	1041	No stop
20 55 00	---	23 52 35	56.7	271.7	3.2		54.8	174	1047	20 51 46
20 55 00	J2048+4310	23 52 35	58.5	270.7	3.1		55.5	-20	1047	No stop
20 56 45	=2046+429	23 54 21	58.2	271.0	3.1		55.5	85	1050	20 55 01
20 56 45	W75N	23 54 21	56.4	272.1	3.3		54.7	-21	1050	No stop
21 00 00	---	23 57 36	55.9	272.7	3.3		54.7	174	1056	20 56 46
21 00 45	J2048+4310	23 58 21	57.6	271.8	3.2		55.5	25	1056	21 00 45
21 02 30	=2046+429	00 00 07	57.3	272.1	3.2		55.5	105	1060	21 00 46
21 02 30	W75N	00 00 07	55.6	273.1	3.3		54.7	-21	1060	No stop
21 05 45	---	00 03 22	55.1	273.8	3.4		54.6	174	1066	21 02 31
21 05 45	J2048+4310	00 03 22	56.9	272.7	3.2		55.4	-20	1066	No stop
21 07 30	=2046+429	00 05 07	56.6	273.1	3.3		55.4	85	1070	21 05 46
21 07 30	W75N	00 05 07	54.8	274.1	3.4		54.6	-21	1070	No stop
21 10 45	---	00 08 23	54.3	274.7	3.5		54.5	174	1076	21 07 31
21 11 30	J2048+4310	00 09 08	56.0	273.8	3.3		55.4	25	1076	21 11 30
21 13 15	=2046+429	00 10 53	55.7	274.2	3.4		55.3	105	1079	21 11 31
21 13 15	W75N	00 10 53	54.0	275.1	3.5		54.5	-21	1079	No stop
21 16 30	---	00 14 09	53.5	275.7	3.6		54.4	174	1085	21 13 16
21 16 30	J2048+4310	00 14 09	55.2	274.7	3.4		55.3	-20	1085	No stop
21 18 15	=2046+429	00 15 54	55.0	275.1	3.4		55.2	85	1089	21 16 31

Schedule for TORUN (Code Tr) Page 17

Gas properties of HMYSOs II

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 16 Oct 2020 Day 290 ---										
21 18 15	W75N	00 15 54	53.2	276.0	3.6		54.3	-21	1089	No stop
21 21 30	---	00 19 10	52.7	276.6	3.7		54.3	174	1095	21 18 16
21 22 15	J2048+4310	00 19 55	54.4	275.8	3.5		55.1	25	1095	21 22 15
21 24 00	=2046+429	00 21 40	54.1	276.1	3.5		55.1	105	1099	21 22 16
21 24 00	W75N	00 21 40	52.3	277.1	3.7		54.2	-21	1099	No stop
21 27 15	---	00 24 56	51.9	277.6	3.8		54.1	174	1105	21 24 01
21 27 15	J2048+4310	00 24 56	53.6	276.7	3.6		55.0	-20	1105	No stop
21 29 00	=2046+429	00 26 41	53.4	277.0	3.6		54.9	85	1108	21 27 16
21 29 00	W75N	00 26 41	51.6	277.9	3.8		54.0	-21	1108	No stop
21 32 15	---	00 29 56	51.1	278.5	3.8		53.9	174	1114	21 29 01
21 33 00	J2048+4310	00 30 42	52.8	277.7	3.7		54.8	25	1114	21 33 00
21 34 45	=2046+429	00 32 27	52.5	278.0	3.7		54.7	105	1118	21 33 01
21 34 45	W75N	00 32 27	50.7	278.9	3.9		53.8	-21	1118	No stop
21 38 00	---	00 35 42	50.3	279.5	3.9		53.7	174	1124	21 34 46
21 38 00	J2048+4310	00 35 42	52.0	278.5	3.8		54.6	-20	1124	No stop
21 39 45	=2046+429	00 37 28	51.8	278.8	3.8		54.6	85	1127	21 38 01
21 39 45	W75N	00 37 28	50.0	279.8	4.0		53.6	-21	1127	No stop
21 43 00	---	00 40 43	49.5	280.3	4.0		53.5	174	1134	21 39 46
21 43 45	J2048+4310	00 41 28	51.2	279.5	3.9		54.4	25	1134	21 43 45
21 45 30	=2046+429	00 43 14	50.9	279.8	3.9		54.3	105	1137	21 43 46
21 45 30	W75N	00 43 14	49.2	280.8	4.1		53.4	-21	1137	No stop
21 48 45	---	00 46 29	48.7	281.3	4.1		53.3	174	1143	21 45 31
21 48 45	J2048+4310	00 46 29	50.4	280.4	4.0		54.2	-20	1143	No stop
21 50 30	=2046+429	00 48 14	50.2	280.7	4.0		54.1	85	1147	21 48 46
21 50 30	W75N	00 48 14	48.4	281.6	4.1		53.2	-20	1147	No stop
21 53 45	---	00 51 30	47.9	282.1	4.2		53.0	175	1153	21 50 31
21 54 30	J2048+4310	00 52 15	49.6	281.3	4.1		53.9	25	1153	21 54 30
21 56 15	=2046+429	00 54 00	49.3	281.6	4.1		53.9	105	1156	21 54 31
21 56 15	W75N	00 54 00	47.6	282.5	4.2		52.9	-20	1156	No stop
21 59 30	---	00 57 16	47.1	283.1	4.3		52.7	175	1163	21 56 16

```
Schedule for TORUN     (Code Tr )                                Page  18
              Gas properties of HMYSOs II
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Fri  16 Oct 2020   Day 290 ---

21 59 30  J2048+4310   00 57 16  48.8 282.2  4.1      53.7   -20     1163   No stop
22 01 15  =2046+429    00 59 01  48.6 282.4  4.2      53.6    85     1166   21 59 31

22 01 15  W75N         00 59 01  46.8 283.4  4.3      52.7   -20     1166   No stop
22 04 30  ---          01 02 17  46.4 283.9  4.4      52.5   175     1172   22 01 16

22 05 15  J2048+4310   01 03 02  48.0 283.1  4.2      53.4    25     1172   22 05 15
22 07 00  =2046+429    01 04 47  47.7 283.4  4.3      53.3   105     1176   22 05 16

22 07 00  W75N         01 04 47  46.0 284.3  4.4      52.4   -20     1176   No stop
22 10 15  ---          01 08 03  45.5 284.8  4.5      52.2   175     1182   22 07 01

22 11 00  J2048+4310   01 08 48  47.2 284.0  4.3      53.1    25     1182   22 11 00
22 12 45  =2046+429    01 10 33  46.9 284.3  4.4      53.0   105     1185   22 11 01

22 12 45  W75N         01 10 33  45.2 285.2  4.5      52.0   -20     1185   No stop
22 16 00  ---          01 13 49  44.7 285.8  4.6      51.9   175     1192   22 12 46

22 16 00  J2048+4310   01 13 49  46.4 284.8  4.4      52.9   -20     1192   No stop
22 20 00  =2046+429    01 17 49  45.9 285.5  4.5      52.6   220     1199   22 16 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.M256line

   Setup group:    6         Station: TORUN            Total bit rate:   256
   Format: VDIF              Bits per sample: 2        Sample rate:  8.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   5300.00   5300.00   5300.00   5300.00   5300.00   5300.00   5300.00   5300.00
            5300.00   5300.00   5300.00   5300.00   5300.00   5300.00   5300.00   5300.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   6  Setup file default.  Used with PCAL = off
  LO sum=   6023.83  6023.83  6023.83  6023.83  6031.83  6031.83  6031.83  6031.83
            6036.08  6036.08  6036.08  6036.08  6044.08  6044.08  6044.08  6044.08
  BBC fr=    723.83   723.83   723.83   723.83   731.83   731.83   731.83   731.83
             736.08   736.08   736.08   736.08   744.08   744.08   744.08   744.08
  Bandwd=      4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00
               4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00
   Matching frequency sets:   6

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)             (J2000)             (Date)            (mas)

* G20.237           18 24 57.557198   * 18 27 44.564300     18 28 52.332338       0.00
                   -11 16 49.29188    *-11 14 54.30000     -11 14 01.76621        0.00

* G24.148           18 32 38.060924   * 18 35 20.942700     18 36 27.067940       0.00
                   -07 51 23.78920    *-07 48 55.67450     -07 47 48.58658        0.00

* G45.467           19 12 02.823799   * 19 14 24.147000     19 15 21.669667       0.00
                    11 04 28.62873    * 11 09 43.41400      11 12 04.19611        0.00

* W75N              20 36 49.978920   * 20 38 36.423000     20 39 20.230640       0.00
                    42 26 58.15678    * 42 37 34.56000      42 42 13.10545        0.00

* 3C345             16 41 17.606229   * 16 42 58.809967     16 43 38.993564       0.79
  J1642+3948        39 54 10.81492    * 39 48 36.99399      39 46 35.29225        0.59
  1641+399          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J1642+39          GSFC 2016a X/S astro solution,  53724 observations.

  1822-076          18 22 54.910228   * 18 25 37.609521     18 26 43.613174       0.16
* J1825-0737       -07 39 15.96721    *-07 37 30.01329     -07 36 40.04607        0.24
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    113 observations.

  1923+123          19 23 20.742095   * 19 25 40.817056     19 26 37.890346       0.12
* J1925+1227        12 21 36.84529    * 12 27 38.08656      12 30 18.21329        0.21
```

```
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    123 observations.

  2046+429          20 46 32.274306   * 20 48 19.526084     20 49 03.739091       2.39
* J2048+4310        42 59 33.44292    * 43 10 42.05533      43 15 33.70282        3.62
  J2048+43          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     13 observations.
```

ed048atr

EVN mapping of 6.7 GHz maser in G85.41

PI: *Michal Durjasz*

```
Address:  Torun Centre for Astronomy

Observing mode: MKV, 128Mb/s

Schedule for TORUN     (Code Tr )                                   Page   2
               EVN mapping of 6.7 GHz maser in G85.41
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------
 --- Sat  17 Oct 2020   Day 291 ---
 Next scan frequencies:  6663.27  6663.27  6663.27  6663.27  6671.27  6671.27  6671.27  6671.27
 Next BBC frequencies:    761.27   761.27   761.27   761.27   769.27   769.27   769.27   769.27
 Next scan bandwidths:      4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00

10 00 00  2007+777     12 59 44  48.3  17.6 -7.1     -60.1     0        0   10 00 00
10 05 00  ---          13 04 45  48.5  17.7 -7.0     -61.2   300        5   10 00 01

10 09 00  J2102+4702   13 08 46  23.0  40.5 -7.9     -35.0   129        5   10 09 00
10 10 45  =2100+468    13 10 31  23.2  40.7 -7.9     -35.2   105        7   10 09 01

10 11 15  G85.41       13 11 01  22.3  43.4 -7.7     -35.7    11        7   10 11 15
10 14 30  ---          13 14 17  22.6  43.9 -7.7     -36.1   195       10   10 11 16

10 14 30  J2102+4702   13 14 17  23.5  41.3 -7.8     -35.6   -19       10   No stop
10 16 15  =2100+468    13 16 02  23.7  41.6 -7.8     -35.9    86       11   10 14 31

10 16 45  G85.41       13 16 32  22.9  44.3 -7.6     -36.3    10       11   10 16 45
10 20 00  ---          13 19 48  23.2  44.8 -7.6     -36.7   195       14   10 16 46

10 20 00  J2102+4702   13 19 48  24.1  42.1 -7.7     -36.3   -19       14   No stop
10 21 45  =2100+468    13 21 33  24.3  42.4 -7.7     -36.5    86       16   10 20 01

10 22 15  G85.41       13 22 03  23.4  45.1 -7.5     -37.0    10       16   10 22 15
10 25 30  ---          13 25 18  23.8  45.6 -7.5     -37.3   195       19   10 22 16

10 25 30  J2102+4702   13 25 18  24.6  43.0 -7.6     -37.0   -19       19   No stop
10 27 15  =2100+468    13 27 04  24.8  43.2 -7.6     -37.2    86       21   10 25 31

10 27 45  G85.41       13 27 34  24.0  46.0 -7.5     -37.6    10       21   10 27 45
10 31 00  ---          13 30 49  24.4  46.5 -7.4     -38.0   195       24   10 27 46

10 31 00  J2102+4702   13 30 49  25.2  43.8 -7.5     -37.6   -19       24   No stop
10 32 45  =2100+468    13 32 35  25.4  44.1 -7.5     -37.9    86       26   10 31 01

10 33 15  G85.41       13 33 05  24.6  46.8 -7.4     -38.2    10       26   10 33 15
10 36 30  ---          13 36 20  25.0  47.3 -7.3     -38.6   195       29   10 33 16

10 36 30  J2102+4702   13 36 20  25.8  44.6 -7.4     -38.3   -20       29   No stop
10 38 15  =2100+468    13 38 06  26.0  44.9 -7.4     -38.5    85       31   10 36 31
```

Schedule for TORUN (Code Tr) Page 3

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 17 Oct 2020 Day 291 ---										
10 38 45	G85.41	13 38 36	25.2	47.6	-7.3		-38.9	10	31	10 38 45
10 42 00	---	13 41 51	25.6	48.1	-7.2		-39.2	195	34	10 38 46
10 42 00	J2102+4702	13 41 51	26.4	45.4	-7.4		-39.0	-20	34	No stop
10 43 45	=2100+468	13 43 36	26.6	45.7	-7.3		-39.2	85	36	10 42 01
10 44 15	G85.41	13 44 07	25.9	48.5	-7.2		-39.5	10	36	10 44 15
10 47 30	---	13 47 22	26.2	49.0	-7.1		-39.8	195	39	10 44 16
10 47 30	J2102+4702	13 47 22	27.0	46.2	-7.3		-39.6	-20	39	No stop
10 49 15	=2100+468	13 49 07	27.2	46.5	-7.2		-39.8	85	40	10 47 31
10 49 45	G85.41	13 49 37	26.5	49.3	-7.1		-40.1	10	40	10 49 45
10 53 00	---	13 52 53	26.9	49.8	-7.0		-40.4	195	43	10 49 46
10 53 00	J2102+4702	13 52 53	27.6	47.1	-7.2		-40.2	-20	43	No stop
10 54 45	=2100+468	13 54 38	27.8	47.3	-7.1		-40.4	85	45	10 53 01
10 55 15	G85.41	13 55 08	27.1	50.1	-7.0		-40.7	10	45	10 55 15
10 58 30	---	13 58 24	27.5	50.6	-6.9		-41.0	195	48	10 55 16
10 58 30	J2102+4702	13 58 24	28.2	47.9	-7.1		-40.9	-20	48	No stop
11 00 15	=2100+468	14 00 09	28.4	48.1	-7.0		-41.1	85	50	10 58 31
11 00 45	G85.41	14 00 39	27.7	51.0	-6.9		-41.3	10	50	11 00 45
11 04 00	---	14 03 55	28.1	51.5	-6.9		-41.6	195	53	11 00 46
11 04 00	J2102+4702	14 03 55	28.8	48.7	-7.0		-41.5	-20	53	No stop
11 05 45	=2100+468	14 05 40	29.0	48.9	-7.0		-41.7	85	55	11 04 01
11 06 15	G85.41	14 06 10	28.4	51.8	-6.8		-41.9	10	55	11 06 15
11 09 30	---	14 09 26	28.8	52.3	-6.8		-42.2	195	58	11 06 16
11 09 30	J2102+4702	14 09 26	29.4	49.5	-6.9		-42.1	-20	58	No stop
11 11 15	=2100+468	14 11 11	29.6	49.7	-6.9		-42.3	85	60	11 09 31
11 11 45	G85.41	14 11 41	29.1	52.6	-6.7		-42.4	10	60	11 11 45
11 15 00	---	14 14 57	29.4	53.1	-6.7		-42.8	195	63	11 11 46
11 15 00	J2102+4702	14 14 57	30.1	50.3	-6.8		-42.7	-20	63	No stop
11 16 45	=2100+468	14 16 42	30.3	50.5	-6.8		-42.9	85	64	11 15 01
11 17 15	G85.41	14 17 12	29.7	53.4	-6.6		-43.0	10	64	11 17 15
11 20 30	---	14 20 27	30.1	53.9	-6.6		-43.3	195	68	11 17 16
11 20 30	J2102+4702	14 20 27	30.7	51.1	-6.7		-43.3	-20	68	No stop
11 22 15	=2100+468	14 22 13	30.9	51.3	-6.7		-43.5	85	69	11 20 31
11 22 45	G85.41	14 22 43	30.4	54.3	-6.5		-43.6	10	69	11 22 45
11 26 00	---	14 25 58	30.8	54.8	-6.5		-43.9	195	72	11 22 46

Schedule for TORUN (Code Tr) Page 4

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
11 26 00	J2102+4702	14 25 58	31.4	51.8	-6.6		-43.9	-20	72	No stop
11 27 45	=2100+468	14 27 44	31.6	52.1	-6.6		-44.1	85	74	11 26 01
11 28 15	G85.41	14 28 14	31.1	55.1	-6.4		-44.1	10	74	11 28 15
11 31 30	---	14 31 29	31.5	55.6	-6.4		-44.4	195	77	11 28 16
11 31 30	J2102+4702	14 31 29	32.0	52.6	-6.5		-44.5	-20	77	No stop
11 33 15	=2100+468	14 33 15	32.2	52.9	-6.5		-44.7	85	79	11 31 31
11 33 45	G85.41	14 33 45	31.7	55.9	-6.4		-44.7	10	79	11 33 45
11 37 00	---	14 37 00	32.1	56.4	-6.3		-45.0	195	82	11 33 46
11 37 00	J2102+4702	14 37 00	32.7	53.4	-6.4		-45.1	-20	82	No stop
11 38 45	=2100+468	14 38 45	32.9	53.7	-6.4		-45.3	85	84	11 37 01
11 39 15	G85.41	14 39 16	32.4	56.7	-6.3		-45.2	9	84	11 39 15
11 42 30	---	14 42 31	32.8	57.2	-6.2		-45.5	195	87	11 39 16
11 42 30	J2102+4702	14 42 31	33.3	54.2	-6.3		-45.7	-20	87	No stop
11 44 15	=2100+468	14 44 16	33.5	54.5	-6.3		-45.9	85	89	11 42 31
11 44 45	G85.41	14 44 46	33.1	57.5	-6.2		-45.7	9	89	11 44 45
11 48 00	---	14 48 02	33.5	58.0	-6.1		-46.1	195	92	11 44 46
11 48 00	J2102+4702	14 48 02	34.0	55.0	-6.2		-46.3	-20	92	No stop
11 49 45	=2100+468	14 49 47	34.2	55.2	-6.2		-46.5	85	93	11 48 01
11 50 15	G85.41	14 50 17	33.8	58.3	-6.1		-46.3	9	93	11 50 15
11 53 30	---	14 53 33	34.2	58.8	-6.0		-46.6	195	97	11 50 16
11 53 30	J2102+4702	14 53 33	34.7	55.8	-6.2		-46.9	-21	97	No stop
11 55 15	=2100+468	14 55 18	34.9	56.0	-6.1		-47.0	84	98	11 53 31
11 55 45	G85.41	14 55 48	34.5	59.2	-6.0		-46.8	9	98	11 55 45
11 59 00	---	14 59 04	35.0	59.6	-5.9		-47.1	195	101	11 55 46
11 59 00	J2102+4702	14 59 04	35.4	56.6	-6.1		-47.4	-21	101	No stop
12 00 45	=2100+468	15 00 49	35.6	56.8	-6.0		-47.6	84	103	11 59 01
12 01 15	G85.41	15 01 19	35.2	60.0	-5.9		-47.3	9	103	12 01 15
12 04 30	---	15 04 35	35.7	60.4	-5.8		-47.6	195	106	12 01 16
12 04 30	J2102+4702	15 04 35	36.1	57.3	-6.0		-48.0	-21	106	No stop
12 06 15	=2100+468	15 06 20	36.3	57.6	-5.9		-48.2	84	108	12 04 31

Schedule for TORUN (Code Tr) Page 5

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
12 06 45	G85.41	15 06 50	36.0	60.8	-5.8		-47.8	9	108	12 06 45
12 10 00	---	15 10 06	36.4	61.3	-5.7		-48.1	195	111	12 06 46
12 10 00	J2102+4702	15 10 06	36.8	58.1	-5.9		-48.5	-21	111	No stop
12 11 45	=2100+468	15 11 51	37.0	58.4	-5.9		-48.7	84	113	12 10 01
12 12 15	G85.41	15 12 21	36.7	61.6	-5.7		-48.3	9	113	12 12 15
12 15 30	---	15 15 36	37.1	62.1	-5.7		-48.6	195	116	12 12 16
12 15 30	J2102+4702	15 15 36	37.5	58.9	-5.8		-49.1	-21	116	No stop
12 17 15	=2100+468	15 17 22	37.7	59.1	-5.8		-49.2	84	118	12 15 31
12 17 45	G85.41	15 17 52	37.4	62.4	-5.6		-48.8	9	118	12 17 45
12 21 00	---	15 21 07	37.9	62.9	-5.6		-49.1	195	121	12 17 46
12 21 00	J2102+4702	15 21 07	38.2	59.7	-5.7		-49.6	-21	121	No stop
12 22 45	=2100+468	15 22 53	38.4	59.9	-5.7		-49.8	84	122	12 21 01
12 23 15	G85.41	15 23 23	38.2	63.2	-5.5		-49.3	9	122	12 23 15
12 26 30	---	15 26 38	38.6	63.7	-5.5		-49.5	195	126	12 23 16
12 26 30	J2102+4702	15 26 38	38.9	60.4	-5.6		-50.1	-21	126	No stop
12 28 15	=2100+468	15 28 24	39.1	60.7	-5.6		-50.3	84	127	12 26 31
12 28 45	G85.41	15 28 54	38.9	64.0	-5.4		-49.7	9	127	12 28 45
12 32 00	---	15 32 09	39.3	64.5	-5.4		-50.0	195	130	12 28 46
12 32 00	J2102+4702	15 32 09	39.6	61.2	-5.5		-50.7	-21	130	No stop
12 33 45	=2100+468	15 33 54	39.9	61.4	-5.5		-50.8	84	132	12 32 01
12 34 15	G85.41	15 34 25	39.6	64.8	-5.3		-50.2	9	132	12 34 15
12 37 30	---	15 37 40	40.1	65.3	-5.3		-50.5	195	135	12 34 16
12 37 30	J2102+4702	15 37 40	40.4	62.0	-5.4		-51.2	-21	135	No stop
12 39 15	=2100+468	15 39 25	40.6	62.2	-5.4		-51.3	84	137	12 37 31
12 39 45	G85.41	15 39 55	40.4	65.6	-5.3		-50.7	9	137	12 39 45
12 43 00	---	15 43 11	40.8	66.1	-5.2		-50.9	195	140	12 39 46
12 43 00	J2102+4702	15 43 11	41.1	62.7	-5.3		-51.7	-21	140	No stop
12 44 45	=2100+468	15 44 56	41.3	63.0	-5.3		-51.8	84	142	12 43 01
12 45 15	G85.41	15 45 26	41.2	66.4	-5.2		-51.1	8	142	12 45 15
12 48 30	---	15 48 42	41.6	66.9	-5.1		-51.4	195	145	12 45 16

Schedule for TORUN (Code Tr) Page 6

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
12 48 30	J2102+4702	15 48 42	41.8	63.5	-5.2		-52.2	-21	145	No stop
12 50 15	=2100+468	15 50 27	42.1	63.8	-5.2		-52.3	84	147	12 48 31
12 50 45	G85.41	15 50 57	41.9	67.3	-5.1		-51.5	8	147	12 50 45
12 54 00	---	15 54 13	42.4	67.7	-5.0		-51.8	195	150	12 50 46
12 54 00	J2102+4702	15 54 13	42.6	64.3	-5.1		-52.7	-22	150	No stop
12 55 45	=2100+468	15 55 58	42.8	64.5	-5.1		-52.8	83	151	12 54 01
12 56 15	G85.41	15 56 28	42.7	68.1	-5.0		-52.0	8	151	12 56 15
12 59 30	---	15 59 44	43.1	68.6	-4.9		-52.2	195	155	12 56 16
12 59 30	J2102+4702	15 59 44	43.3	65.1	-5.1		-53.2	-22	155	No stop
13 01 15	=2100+468	16 01 29	43.6	65.3	-5.0		-53.3	83	156	12 59 31
13 01 45	G85.41	16 01 59	43.5	68.9	-4.9		-52.4	8	156	13 01 45
13 05 00	---	16 05 15	43.9	69.4	-4.8		-52.6	195	159	13 01 46
13 05 00	J2102+4702	16 05 15	44.1	65.8	-5.0		-53.6	-22	159	No stop
13 06 45	=2100+468	16 07 00	44.3	66.1	-4.9		-53.8	83	161	13 05 01
13 09 45	2007+777	16 10 00	57.9	19.6	-3.9		-105.1	72	161	13 09 45
13 16 45	---	16 17 02	58.3	19.4	-3.8		-107.0	420	168	13 09 46
13 20 45	J2102+4702	16 21 02	46.3	68.1	-4.7		-54.9	128	168	13 20 45
13 22 30	=2100+468	16 22 47	46.5	68.3	-4.7		-55.1	105	170	13 20 46
13 23 00	G85.41	16 23 18	46.5	72.1	-4.5		-53.9	8	170	13 23 00
13 26 15	---	16 26 33	46.9	72.6	-4.5		-54.1	195	173	13 23 01
13 26 15	J2102+4702	16 26 33	47.0	68.8	-4.6		-55.4	-22	173	No stop
13 28 00	=2100+468	16 28 18	47.3	69.1	-4.6		-55.5	83	174	13 26 16
13 28 30	G85.41	16 28 48	47.3	72.9	-4.4		-54.2	8	174	13 28 30
13 31 45	---	16 32 04	47.7	73.4	-4.4		-54.5	195	178	13 28 31
13 31 45	J2102+4702	16 32 04	47.8	69.6	-4.5		-55.8	-22	178	No stop
13 33 30	=2100+468	16 33 49	48.0	69.9	-4.5		-56.0	83	179	13 31 46
13 34 00	G85.41	16 34 19	48.0	73.8	-4.3		-54.6	7	179	13 34 00
13 37 15	---	16 37 35	48.5	74.3	-4.3		-54.8	195	182	13 34 01
13 37 15	J2102+4702	16 37 35	48.6	70.4	-4.4		-56.2	-22	182	No stop
13 39 00	=2100+468	16 39 20	48.8	70.7	-4.4		-56.4	83	184	13 37 16

```
Schedule for TORUN     (Code Tr )                                Page   7
              EVN mapping of 6.7 GHz maser in G85.41
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Sat  17 Oct 2020   Day 291 ---

13 39 30  G85.41       16 39 50  48.8  74.6 -4.3     -54.9     7      184   13 39 30
13 42 45  ---          16 43 06  49.3  75.1 -4.2     -55.1   195      187   13 39 31

13 42 45  J2102+4702   16 43 06  49.4  71.2 -4.3     -56.7   -23      187   No stop
13 44 30  =2100+468    16 44 51  49.6  71.5 -4.3     -56.8    82      189   13 42 46

13 45 00  G85.41       16 45 21  49.6  75.5 -4.2     -55.3     7      189   13 45 00
13 48 15  ---          16 48 37  50.1  76.0 -4.1     -55.5   195      192   13 45 01

13 48 15  J2102+4702   16 48 37  50.1  72.0 -4.2     -57.1   -23      192   No stop
13 50 00  =2100+468    16 50 22  50.4  72.2 -4.2     -57.2    82      194   13 48 16

 ---------- Ef out for pointing ----------

13 50 30  G85.41       16 50 52  50.4  76.3 -4.1     -55.6     7      194   13 50 30
13 53 45  ---          16 54 08  50.9  76.8 -4.0     -55.8   195      197   13 50 31

13 53 45  J2102+4702   16 54 08  50.9  72.8 -4.1     -57.5   -23      197   No stop
13 55 30  =2100+468    16 55 53  51.2  73.0 -4.1     -57.6    82      199   13 53 46

13 56 00  G85.41       16 56 23  51.3  77.2 -4.0     -55.9     7      199   13 56 00
13 59 15  ---          16 59 39  51.7  77.7 -3.9     -56.1   195      202   13 56 01

13 59 15  J2102+4702   16 59 39  51.7  73.6 -4.1     -57.8   -23      202   No stop
14 01 00  =2100+468    17 01 24  52.0  73.9 -4.0     -58.0    82      203   13 59 16

 ---------- Ef back again ----------

14 01 30  G85.41       17 01 54  52.1  78.1 -3.9     -56.2     7      203   14 01 30
14 04 45  ---          17 05 09  52.5  78.6 -3.8     -56.3   195      207   14 01 31

14 04 45  J2102+4702   17 05 09  52.5  74.4 -4.0     -58.2   -23      207   No stop
14 06 30  =2100+468    17 06 55  52.8  74.7 -3.9     -58.3    82      208   14 04 46

14 07 00  G85.41       17 07 25  52.9  79.0 -3.8     -56.4     7      208   14 07 00
14 10 15  ---          17 10 40  53.4  79.5 -3.7     -56.6   195      211   14 07 01

14 10 15  J2102+4702   17 10 40  53.3  75.2 -3.9     -58.6   -23      211   No stop
14 12 00  =2100+468    17 12 26  53.6  75.5 -3.8     -58.7    82      213   14 10 16

14 12 30  G85.41       17 12 56  53.7  79.9 -3.7     -56.7     6      213   14 12 30
14 15 45  ---          17 16 11  54.2  80.4 -3.6     -56.8   195      216   14 12 31

14 15 45  J2102+4702   17 16 11  54.1  76.0 -3.8     -58.9   -24      216   No stop
14 17 30  =2100+468    17 17 57  54.4  76.3 -3.8     -59.0    81      218   14 15 46
```

Schedule for TORUN (Code Tr) Page 8

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
14 18 00	G85.41	17 18 27	54.5	80.8	-3.6		-56.9	6	218	14 18 00
14 21 15	---	17 21 42	55.0	81.3	-3.6		-57.1	195	221	14 18 01
14 21 15	J2102+4702	17 21 42	54.9	76.9	-3.7		-59.3	-24	221	No stop
14 23 00	=2100+468	17 23 27	55.2	77.1	-3.7		-59.4	81	223	14 21 16
14 23 30	G85.41	17 23 58	55.3	81.7	-3.5		-57.2	6	223	14 23 30
14 26 45	---	17 27 13	55.8	82.3	-3.5		-57.3	195	226	14 23 31
14 26 45	J2102+4702	17 27 13	55.7	77.7	-3.6		-59.6	-24	226	No stop
14 28 30	=2100+468	17 28 58	56.0	78.0	-3.6		-59.7	81	228	14 26 46
14 29 00	G85.41	17 29 28	56.1	82.6	-3.4		-57.4	6	228	14 29 00
14 32 15	---	17 32 44	56.6	83.2	-3.4		-57.5	195	231	14 29 01
14 32 15	J2102+4702	17 32 44	56.5	78.6	-3.5		-59.9	-24	231	No stop
14 34 00	=2100+468	17 34 29	56.8	78.8	-3.5		-60.0	81	232	14 32 16
14 34 30	G85.41	17 34 59	57.0	83.6	-3.3		-57.5	6	232	14 34 30
14 37 45	---	17 38 15	57.5	84.2	-3.3		-57.6	195	235	14 34 31
14 37 45	J2102+4702	17 38 15	57.4	79.4	-3.4		-60.2	-24	235	No stop
14 39 30	=2100+468	17 40 00	57.6	79.7	-3.4		-60.3	81	237	14 37 46
14 40 00	G85.41	17 40 30	57.8	84.6	-3.2		-57.7	5	237	14 40 00
14 43 15	---	17 43 46	58.3	85.1	-3.2		-57.8	195	240	14 40 01
14 43 15	J2102+4702	17 43 46	58.2	80.3	-3.3		-60.4	-25	240	No stop
14 45 00	=2100+468	17 45 31	58.4	80.6	-3.3		-60.5	80	242	14 43 16
14 45 30	G85.41	17 46 01	58.6	85.5	-3.1		-57.8	5	242	14 45 30
14 48 45	---	17 49 17	59.1	86.1	-3.1		-57.9	195	245	14 45 31
14 48 45	J2102+4702	17 49 17	59.0	81.2	-3.2		-60.7	-25	245	No stop
14 50 30	=2100+468	17 51 02	59.3	81.5	-3.2		-60.8	80	247	14 48 46
14 51 00	G85.41	17 51 32	59.4	86.6	-3.1		-57.9	5	247	14 51 00
14 54 15	---	17 54 48	59.9	87.2	-3.0		-58.0	195	250	14 51 01
14 54 15	J2102+4702	17 54 48	59.8	82.1	-3.1		-60.9	-25	250	No stop
14 56 00	=2100+468	17 56 33	60.1	82.4	-3.1		-61.0	80	252	14 54 16
14 56 30	G85.41	17 57 03	60.3	87.6	-3.0		-58.0	5	252	14 56 30
14 59 45	---	18 00 18	60.8	88.2	-2.9		-58.1	195	255	14 56 31

Schedule for TORUN (Code Tr) Page 9

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
14 59 45	J2102+4702	18 00 18	60.6	83.0	-3.0		-61.2	-25	255	No stop
15 01 30	=2100+468	18 02 04	60.9	83.3	-3.0		-61.2	80	257	14 59 46
15 02 00	G85.41	18 02 34	61.1	88.6	-2.9		-58.1	4	257	15 02 00
15 05 15	---	18 05 49	61.6	89.3	-2.8		-58.1	195	260	15 02 01
15 05 15	J2102+4702	18 05 49	61.5	83.9	-3.0		-61.3	-26	260	No stop
15 07 00	=2100+468	18 07 35	61.7	84.2	-2.9		-61.4	79	261	15 05 16
15 07 30	G85.41	18 08 05	61.9	89.7	-2.8		-58.1	4	261	15 07 30
15 10 45	---	18 11 20	62.4	90.4	-2.7		-58.1	195	264	15 07 31
15 10 45	J2102+4702	18 11 20	62.3	84.9	-2.9		-61.5	-26	264	No stop
15 12 30	=2100+468	18 13 06	62.5	85.2	-2.8		-61.6	79	266	15 10 46
15 13 00	G85.41	18 13 36	62.7	90.8	-2.7		-58.1	4	266	15 13 00
15 16 15	---	18 16 51	63.2	91.5	-2.6		-58.1	195	269	15 13 01
15 16 15	J2102+4702	18 16 51	63.1	85.8	-2.8		-61.7	-26	269	No stop
15 18 00	=2100+468	18 18 36	63.4	86.2	-2.7		-61.7	79	271	15 16 16
15 18 30	G85.41	18 19 07	63.6	92.0	-2.6		-58.0	3	271	15 18 30
15 21 45	---	18 22 22	64.1	92.7	-2.5		-58.0	195	274	15 18 31
15 21 45	J2102+4702	18 22 22	63.9	86.8	-2.7		-61.8	-27	274	No stop
15 23 30	=2100+468	18 24 07	64.2	87.2	-2.6		-61.8	78	276	15 21 46
15 24 00	G85.41	18 24 37	64.4	93.1	-2.5		-58.0	3	276	15 24 00
15 27 15	---	18 27 53	64.9	93.9	-2.5		-57.9	195	279	15 24 01
15 27 15	J2102+4702	18 27 53	64.8	87.9	-2.6		-61.9	-27	279	No stop
15 29 00	=2100+468	18 29 38	65.0	88.2	-2.6		-61.9	78	281	15 27 16
15 29 30	G85.41	18 30 08	65.2	94.4	-2.4		-57.8	3	281	15 29 30
15 32 45	---	18 33 24	65.7	95.1	-2.4		-57.7	195	284	15 29 31
15 32 45	J2102+4702	18 33 24	65.6	88.9	-2.5		-61.9	-27	284	No stop
15 34 30	=2100+468	18 35 09	65.8	89.3	-2.5		-61.9	78	285	15 32 46
15 35 00	G85.41	18 35 39	66.1	95.6	-2.3		-57.7	2	285	15 35 00
15 38 15	---	18 38 55	66.5	96.4	-2.3		-57.5	195	289	15 35 01
15 38 15	J2102+4702	18 38 55	66.4	90.0	-2.4		-61.9	-28	289	No stop
15 40 00	=2100+468	18 40 40	66.7	90.4	-2.4		-61.9	77	290	15 38 16

Schedule for TORUN (Code Tr) Page 10

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
15 40 30	G85.41	18 41 10	66.9	96.9	-2.2		-57.4	2	290	15 40 30
15 43 45	---	18 44 26	67.4	97.7	-2.2		-57.3	195	293	15 40 31
15 43 45	J2102+4702	18 44 26	67.2	91.1	-2.3		-61.9	-28	293	No stop
15 45 30	=2100+468	18 46 11	67.5	91.5	-2.3		-61.9	77	295	15 43 46
15 46 00	G85.41	18 46 41	67.7	98.3	-2.1		-57.2	1	295	15 46 00
15 49 15	---	18 49 57	68.2	99.1	-2.1		-57.0	195	298	15 46 01
15 49 15	J2102+4702	18 49 57	68.1	92.3	-2.2		-61.9	-29	298	No stop
15 51 00	=2100+468	18 51 42	68.3	92.7	-2.2		-61.8	76	300	15 49 16
15 51 30	G85.41	18 52 12	68.5	99.7	-2.0		-56.8	1	300	15 51 30
15 54 45	---	18 55 28	69.0	100.6	-2.0		-56.6	195	303	15 51 31
15 54 45	J2102+4702	18 55 28	68.9	93.5	-2.1		-61.7	-29	303	No stop
15 56 30	=2100+468	18 57 13	69.2	93.9	-2.1		-61.7	76	305	15 54 46
15 57 00	G85.41	18 57 43	69.3	101.2	-2.0		-56.4	0	305	15 57 00
16 00 15	---	19 00 58	69.8	102.1	-1.9		-56.1	195	308	15 57 01
16 00 15	J2102+4702	19 00 58	69.7	94.8	-2.0		-61.6	-30	308	No stop
16 02 00	=2100+468	19 02 44	70.0	95.2	-2.0		-61.5	75	310	16 00 16
16 02 30	G85.41	19 03 14	70.1	102.8	-1.9		-55.9	0	310	16 02 30
16 05 45	---	19 06 29	70.6	103.8	-1.8		-55.6	195	313	16 02 31
16 05 45	J2102+4702	19 06 29	70.5	96.1	-1.9		-61.4	-30	313	No stop
16 07 30	=2100+468	19 08 15	70.8	96.5	-1.9		-61.3	75	314	16 05 46
16 08 00	G85.41	19 08 45	70.9	104.4	-1.8		-55.3	-1	314	16 08 00
16 11 15	---	19 12 00	71.4	105.5	-1.7		-54.9	194	318	16 08 01
16 11 15	J2102+4702	19 12 00	71.4	97.5	-1.8		-61.1	-31	318	No stop
16 13 00	=2100+468	19 13 46	71.6	97.9	-1.8		-60.9	74	319	16 11 16
16 13 30	G85.41	19 14 16	71.7	106.2	-1.7		-54.6	-2	319	16 13 30
16 16 45	---	19 17 31	72.2	107.3	-1.6		-54.2	193	322	16 13 31
16 16 45	J2102+4702	19 17 31	72.2	98.9	-1.8		-60.7	-31	322	No stop
16 18 30	=2100+468	19 19 16	72.4	99.4	-1.7		-60.5	74	324	16 16 46
16 19 00	G85.41	19 19 46	72.5	108.1	-1.6		-53.8	-2	324	16 19 00
16 22 15	---	19 23 02	73.0	109.2	-1.5		-53.3	193	327	16 19 01

Schedule for TORUN (Code Tr) Page 11

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
16 22 15	J2102+4702	19 23 02	73.0	100.5	-1.7		-60.2	-32	327	No stop
16 24 00	=2100+468	19 24 47	73.3	101.0	-1.6		-60.0	73	329	16 22 16
16 24 30	G85.41	19 25 17	73.3	110.0	-1.5		-52.9	-3	329	16 24 30
16 27 45	---	19 28 33	73.8	111.3	-1.4		-52.3	192	332	16 24 31
16 27 45	J2102+4702	19 28 33	73.8	102.1	-1.6		-59.6	-33	332	No stop
16 29 30	=2100+468	19 30 18	74.1	102.7	-1.5		-59.4	72	334	16 27 46
16 30 00	G85.41	19 30 48	74.1	112.2	-1.4		-51.8	-4	334	16 30 00
16 33 15	---	19 34 04	74.5	113.5	-1.3		-51.1	191	337	16 30 01
16 33 15	J2102+4702	19 34 04	74.6	103.9	-1.5		-59.0	-34	337	No stop
16 35 00	=2100+468	19 35 49	74.9	104.5	-1.5		-58.7	71	339	16 33 16
16 35 30	G85.41	19 36 19	74.8	114.4	-1.3		-50.6	-5	339	16 35 30
16 38 45	---	19 39 35	75.3	115.9	-1.3		-49.8	190	342	16 35 31
16 38 45	J2102+4702	19 39 35	75.4	105.8	-1.4		-58.1	-35	342	No stop
16 40 30	=2100+468	19 41 20	75.7	106.4	-1.4		-57.8	70	343	16 38 46
16 41 00	G85.41	19 41 50	75.6	116.9	-1.2		-49.2	-6	343	16 41 00
16 44 15	---	19 45 06	76.0	118.4	-1.2		-48.3	189	347	16 41 01
16 44 15	J2102+4702	19 45 06	76.2	107.8	-1.3		-57.2	-36	347	No stop
16 46 00	=2100+468	19 46 51	76.5	108.5	-1.3		-56.8	69	348	16 44 16
16 46 30	G85.41	19 47 21	76.3	119.6	-1.1		-47.6	-7	348	16 46 30
16 49 45	---	19 50 37	76.7	121.3	-1.1		-46.5	188	351	16 46 31
16 49 45	J2102+4702	19 50 37	77.0	110.0	-1.2		-56.0	-37	351	No stop
16 51 30	=2100+468	19 52 22	77.2	110.8	-1.2		-55.6	68	353	16 49 46
16 52 00	G85.41	19 52 52	77.0	122.5	-1.0		-45.7	-8	353	16 52 00
16 55 15	---	19 56 07	77.4	124.3	-1.0		-44.5	187	356	16 52 01
16 55 15	J2102+4702	19 56 07	77.8	112.5	-1.1		-54.6	-38	356	No stop
16 57 00	=2100+468	19 57 53	78.0	113.3	-1.1		-54.1	67	358	16 55 16
16 57 30	G85.41	19 58 23	77.7	125.6	-0.9		-43.6	-10	358	16 57 30
17 00 45	---	20 01 38	78.1	127.7	-0.9		-42.2	185	361	16 57 31
17 00 45	J2102+4702	20 01 38	78.5	115.2	-1.0		-53.0	-39	361	No stop
17 02 30	=2100+468	20 03 24	78.8	116.1	-1.0		-52.4	66	363	17 00 46

Schedule for TORUN (Code Tr) Page 12

EVN mapping of 6.7 GHz maser in G85.41

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
17 03 00	G85.41	20 03 54	78.4	129.1	-0.9		-41.2	-11	363	17 03 00
17 06 15	---	20 07 09	78.8	131.3	-0.8		-39.6	184	366	17 03 01
17 06 15	J2102+4702	20 07 09	79.3	118.2	-0.9		-51.1	-41	366	No stop
17 08 00	=2100+468	20 08 55	79.5	119.2	-0.9		-50.4	64	368	17 06 16
17 08 30	G85.41	20 09 25	79.0	132.9	-0.8		-38.4	-13	368	17 08 30
17 11 45	---	20 12 40	79.4	135.4	-0.7		-36.6	182	371	17 08 31
17 11 45	J2102+4702	20 12 40	80.0	121.5	-0.8		-48.8	-42	371	No stop
17 13 30	=2100+468	20 14 25	80.2	122.7	-0.8		-48.0	63	372	17 11 46
17 14 00	G85.41	20 14 56	79.6	137.1	-0.7		-35.3	-14	372	17 14 00
17 17 15	---	20 18 11	79.9	139.8	-0.6		-33.2	181	376	17 14 01
17 17 15	J2102+4702	20 18 11	80.7	125.3	-0.7		-46.1	-43	376	No stop
17 19 00	=2100+468	20 19 56	80.9	126.6	-0.7		-45.1	62	377	17 17 16
17 19 30	G85.41	20 20 26	80.1	141.8	-0.6		-31.7	-16	377	17 19 30
17 22 45	---	20 23 42	80.4	144.7	-0.5		-29.4	179	380	17 19 31
17 22 45	J2102+4702	20 23 42	81.3	129.6	-0.7		-42.8	-44	380	No stop
17 24 30	=2100+468	20 25 27	81.5	131.1	-0.6		-41.7	61	382	17 22 46
17 25 00	G85.41	20 25 57	80.6	146.8	-0.5		-27.7	-17	382	17 25 00
17 28 15	---	20 29 13	80.9	150.0	-0.4		-25.1	178	385	17 25 01
17 28 15	J2102+4702	20 29 13	81.9	134.5	-0.6		-39.0	-45	385	No stop
17 30 00	=2100+468	20 30 58	82.1	136.2	-0.5		-37.7	60	387	17 28 16
17 30 30	G85.41	20 31 28	81.0	152.4	-0.4		-23.2	-18	387	17 30 30
17 33 45	---	20 34 44	81.2	155.8	-0.3		-20.3	177	390	17 30 31
17 33 45	J2102+4702	20 34 44	82.5	140.0	-0.5		-34.5	-45	390	No stop
17 35 30	=2100+468	20 36 29	82.7	142.0	-0.4		-32.9	60	392	17 33 46
17 36 00	G85.41	20 36 59	81.4	158.3	-0.3		-18.3	-18	392	17 36 00
17 39 15	---	20 40 15	81.5	162.0	-0.2		-15.2	177	395	17 36 01
17 39 15	J2102+4702	20 40 15	83.0	146.4	-0.4		-29.3	-45	395	No stop
17 41 00	=2100+468	20 42 00	83.1	148.5	-0.3		-27.4	60	397	17 39 16
17 41 30	G85.41	20 42 30	81.6	164.7	-0.2		-13.0	-18	397	17 41 30
17 44 45	---	20 45 46	81.8	168.6	-0.2		-9.7	177	400	17 41 31

```
Schedule for TORUN     (Code Tr )                                Page  13
              EVN mapping of 6.7 GHz maser in G85.41
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Sat  17 Oct 2020   Day 291 ---

17 44 45  J2102+4702   20 45 46  83.4 153.5 -0.3     -23.2   -43      400   No stop
17 46 30  =2100+468    20 47 31  83.5 155.9 -0.3     -21.1    62      401   17 44 46

17 51 30  2007+777     20 52 32  64.8  -5.8  0.8     163.0   -39      401   17 51 30
18 00 00  ---          21 01 03  64.6  -6.8  0.9     160.1   471      410   17 51 31



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.M128line

   Setup group:    5         Station: TORUN            Total bit rate:   128
   Format: VDIF              Bits per sample: 2        Sample rate:  8.000
   Number of channels:  8    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
  Net SB=         L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
  BBC SB=         L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   4  Based on FREQ, BW, and/or DOPPLER in schedule.  Used with PCAL = off
  LO sum=   6663.27  6663.27  6663.27  6663.27  6671.27  6671.27  6671.27  6671.27
  BBC fr=    761.27   761.27   761.27   761.27   769.27   769.27   769.27   769.27
  Bandwd=      4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00
   Matching frequency sets:   4

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* G85.41            20 52 28.152532   * 20 54 13.680000     20 54 57.215111       0.00
                    44 42 39.95224    * 44 54 07.60000      44 59 07.22281        0.00
                    Doppler based on LSR frame and radio definition.  Velocities:
                       -29.00   -29.00   -29.00   -29.00   -29.00   -29.00

* 2007+777          20 07 20.430197   * 20 05 30.998526     20 04 45.068591       0.04
  J2005+7752        77 43 58.12301    * 77 52 43.24754      77 56 34.69663        0.01
  J2005+77          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  15674 observations.
                    Doppler based on other sources.

  2100+468          21 00 33.500167   * 21 02 17.056074     21 02 59.861933       0.38
* J2102+4702        46 50 23.37641    * 47 02 16.25338      47 07 26.27725        0.39
  J2102+47          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     41 observations.
                    Doppler based on other sources.
```

rsc07tr

Probing the radio activity of a newly discovered XRB AT2019wey

PI: *Hongmin Cao*

Address: Shangqiu Normal University

Observing mode: phase-referencing at 5cm (2Gb/s)

```
Schedule for TORUN     (Code Tr )                                   Page   2
               Probing the radio activity of a newly discovered XRB AT2019wey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                   LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------
 --- Sat  17 Oct 2020   Day 291 ---
 Next scan frequencies:  6584.49  6584.49  6584.49  6584.49  6648.49  6648.49  6648.49  6648.49
                         6712.49  6712.49  6712.49  6712.49  6776.49  6776.49  6776.49  6776.49
 Next BBC frequencies:    682.49   682.49   682.49   682.49   746.49   746.49   746.49   746.49
                          810.49   810.49   810.49   810.49   874.49   874.49   874.49   874.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

20 00 00  J0442+5436   23 01 23  42.7  51.8 -5.7     -54.6     0        0   20 00 00
20 02 00  ---          23 03 23  43.0  52.0 -5.7     -54.8   120       31   20 00 01

20 02 00  J0435+5522   23 03 23  44.2  51.9 -5.6     -56.3   -18       31   No stop
20 05 00  ---          23 06 24  44.6  52.2 -5.5     -56.7   162       77   20 02 01

20 05 00  J0442+5436   23 06 24  43.3  52.3 -5.6     -55.2   -18       77   No stop
20 06 00  ---          23 07 24  43.4  52.4 -5.6     -55.4    42       93   20 05 01

20 06 00  J0435+5522   23 07 24  44.7  52.3 -5.5     -56.9   -18       93   No stop
20 09 00  ---          23 10 24  45.0  52.7 -5.4     -57.2   162      139   20 06 01

20 09 30  J0442+5436   23 10 54  43.9  52.8 -5.6     -55.8    12      139   20 09 30
20 10 30  ---          23 11 55  44.0  52.9 -5.5     -55.9    60      155   20 09 31

20 10 30  J0435+5522   23 11 55  45.2  52.8 -5.4     -57.4   -18      155   No stop
20 13 30  ---          23 14 55  45.6  53.1 -5.4     -57.8   162      201   20 10 31

20 13 30  J0442+5436   23 14 55  44.3  53.3 -5.5     -56.3   -18      201   No stop
20 14 30  ---          23 15 55  44.5  53.4 -5.5     -56.4    42      216   20 13 31

20 14 30  J0435+5522   23 15 55  45.7  53.2 -5.4     -58.0   -18      216   No stop
20 17 30  ---          23 18 56  46.1  53.6 -5.3     -58.3   162      263   20 14 31

20 18 00  J0442+5436   23 19 26  44.9  53.8 -5.4     -56.9    12      263   20 18 00
20 19 00  ---          23 20 26  45.0  53.9 -5.4     -57.0    60      278   20 18 01

20 19 00  J0435+5522   23 20 26  46.3  53.7 -5.3     -58.5   -18      278   No stop
20 22 00  ---          23 23 26  46.6  54.1 -5.2     -58.9   162      325   20 19 01

20 22 00  J0442+5436   23 23 26  45.4  54.2 -5.3     -57.4   -18      325   No stop
20 23 00  ---          23 24 27  45.5  54.3 -5.3     -57.5    42      340   20 22 01
```

Schedule for TORUN (Code Tr) Page 3

Probing the radio activity of a newly discovered XRB AT2019wey

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat	17 Oct 2020	Day 291 ---								
20 23 00	J0435+5522	23 24 27	46.7	54.2	-5.2		-59.0	-18	340	No stop
20 26 00	---	23 27 27	47.1	54.5	-5.2		-59.4	162	386	20 23 01
20 26 30	J0442+5436	23 27 57	45.9	54.7	-5.3		-57.9	12	386	20 26 30
20 27 30	---	23 28 57	46.0	54.8	-5.3		-58.1	60	402	20 26 31
20 27 30	J0435+5522	23 28 57	47.3	54.6	-5.1		-59.6	-18	402	No stop
20 30 30	---	23 31 58	47.7	55.0	-5.1		-60.0	162	448	20 27 31
20 30 30	J0442+5436	23 31 58	46.4	55.2	-5.2		-58.4	-18	448	No stop
20 31 30	---	23 32 58	46.5	55.3	-5.2		-58.6	42	464	20 30 31
20 31 30	J0435+5522	23 32 58	47.8	55.1	-5.1		-60.1	-18	464	No stop
20 34 30	---	23 35 58	48.2	55.4	-5.0		-60.5	162	510	20 31 31
20 35 00	J0442+5436	23 36 29	47.0	55.7	-5.1		-59.0	12	510	20 35 00
20 36 00	---	23 37 29	47.1	55.8	-5.1		-59.1	60	526	20 35 01
20 36 00	J0442+5436	23 37 29	47.1	55.8	-5.1		-59.1	-5	526	No stop
20 38 00	---	23 39 29	47.3	56.0	-5.1		-59.4	115	556	20 36 01
20 38 00	J0435+5522	23 39 29	48.6	55.7	-5.0		-61.0	-18	556	No stop
20 41 00	---	23 42 30	49.0	56.1	-4.9		-61.4	162	603	20 38 01
20 41 00	J0442+5436	23 42 30	47.7	56.3	-5.0		-59.7	-18	603	No stop
20 42 00	---	23 43 30	47.8	56.4	-5.0		-59.9	42	618	20 41 01
20 42 00	J0435+5522	23 43 30	49.1	56.2	-4.9		-61.5	-18	618	No stop
20 45 00	---	23 46 30	49.5	56.5	-4.8		-61.9	162	665	20 42 01
20 45 30	J0442+5436	23 47 00	48.3	56.8	-5.0		-60.3	12	665	20 45 30
20 46 30	---	23 48 00	48.4	56.9	-4.9		-60.4	60	680	20 45 31
20 46 30	J0435+5522	23 48 00	49.7	56.6	-4.8		-62.1	-18	680	No stop
20 49 30	---	23 51 01	50.0	56.9	-4.8		-62.4	162	727	20 46 31
20 49 30	J0442+5436	23 51 01	48.8	57.2	-4.9		-60.8	-18	727	No stop
20 50 30	---	23 52 01	48.9	57.3	-4.9		-60.9	42	742	20 49 31
20 50 30	J0435+5522	23 52 01	50.2	57.0	-4.8		-62.6	-18	742	No stop
20 53 30	---	23 55 02	50.5	57.3	-4.7		-63.0	162	788	20 50 31
20 54 00	J0442+5436	23 55 32	49.4	57.7	-4.8		-61.3	12	788	20 54 00
20 55 00	---	23 56 32	49.5	57.8	-4.8		-61.5	60	804	20 54 01
20 55 00	J0435+5522	23 56 32	50.7	57.5	-4.7		-63.1	-18	804	No stop
20 58 00	---	23 59 32	51.1	57.8	-4.6		-63.5	162	850	20 55 01
20 58 00	J0442+5436	23 59 32	49.9	58.1	-4.7		-61.8	-18	850	No stop
20 59 00	---	00 00 32	50.0	58.3	-4.7		-62.0	42	866	20 58 01

Schedule for TORUN (Code Tr) Page 4

Probing the radio activity of a newly discovered XRB AT2019wey

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
20 59 00	J0435+5522	00 00 32	51.2	57.9	-4.6		-63.7	-18	866	No stop
21 02 00	---	00 03 33	51.6	58.2	-4.6		-64.0	162	912	20 59 01
21 02 30	J0442+5436	00 04 03	50.5	58.6	-4.7		-62.4	12	912	21 02 30
21 03 30	---	00 05 03	50.6	58.7	-4.6		-62.5	60	927	21 02 31
21 03 30	J0435+5522	00 05 03	51.8	58.4	-4.5		-64.2	-18	927	No stop
21 06 30	---	00 08 04	52.2	58.7	-4.5		-64.6	162	974	21 03 31
21 06 30	J0442+5436	00 08 04	51.0	59.0	-4.6		-62.9	-18	974	No stop
21 07 30	---	00 09 04	51.1	59.2	-4.6		-63.0	42	989	21 06 31
21 07 30	J0435+5522	00 09 04	52.3	58.8	-4.5		-64.7	-18	989	No stop
21 10 30	---	00 12 04	52.7	59.0	-4.4		-65.1	162	1036	21 07 31
21 11 00	J0442+5436	00 12 34	51.5	59.5	-4.5		-63.4	12	1036	21 11 00
21 12 00	---	00 13 35	51.7	59.6	-4.5		-63.6	60	1051	21 11 01
21 12 00	J0435+5522	00 13 35	52.9	59.2	-4.4		-65.3	-18	1051	No stop
21 15 00	---	00 16 35	53.3	59.5	-4.3		-65.7	162	1098	21 12 01
21 15 00	J0442+5436	00 16 35	52.1	59.9	-4.5		-63.9	-18	1098	No stop
21 16 00	---	00 17 35	52.2	60.0	-4.4		-64.1	42	1113	21 15 01
21 16 00	J0435+5522	00 17 35	53.4	59.6	-4.3		-65.8	-18	1113	No stop
21 19 00	---	00 20 36	53.8	59.9	-4.3		-66.2	162	1159	21 16 01
21 19 30	J0442+5436	00 21 06	52.7	60.4	-4.4		-64.5	12	1159	21 19 30
21 20 30	---	00 22 06	52.8	60.5	-4.4		-64.6	60	1175	21 19 31
21 20 30	J0435+5522	00 22 06	54.0	60.0	-4.2		-66.4	-18	1175	No stop
21 23 30	---	00 25 07	54.4	60.3	-4.2		-66.8	162	1221	21 20 31
21 23 30	J0442+5436	00 25 07	53.2	60.8	-4.3		-65.0	-18	1221	No stop
21 24 30	---	00 26 07	53.3	60.9	-4.3		-65.1	42	1237	21 23 31
21 24 30	J0435+5522	00 26 07	54.5	60.4	-4.2		-66.9	-18	1237	No stop
21 27 30	---	00 29 07	54.9	60.7	-4.1		-67.3	162	1283	21 24 31
21 28 00	J0442+5436	00 29 37	53.8	61.3	-4.2		-65.5	12	1283	21 28 00
21 29 00	---	00 30 37	53.9	61.4	-4.2		-65.6	60	1298	21 28 01
21 29 00	J0435+5522	00 30 37	55.1	60.8	-4.1		-67.5	-18	1298	No stop
21 32 00	---	00 33 38	55.5	61.1	-4.1		-67.9	162	1345	21 29 01

Schedule for TORUN (Code Tr) Page 5

Probing the radio activity of a newly discovered XRB AT2019wey

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
21 32 00	J0442+5436	00 33 38	54.3	61.7	-4.2		-66.0	-18	1345	No stop
21 33 00	---	00 34 38	54.4	61.8	-4.2		-66.1	42	1360	21 32 01
21 33 00	J0435+5522	00 34 38	55.6	61.2	-4.0		-68.0	-18	1360	No stop
21 36 00	---	00 37 39	56.0	61.5	-4.0		-68.4	162	1407	21 33 01
21 36 30	J0442+5436	00 38 09	54.9	62.1	-4.1		-66.6	12	1407	21 36 30
21 37 30	---	00 39 09	55.0	62.2	-4.1		-66.7	60	1422	21 36 31
21 37 30	J0435+5522	00 39 09	56.2	61.6	-4.0		-68.6	-18	1422	No stop
21 40 30	---	00 42 09	56.6	61.9	-3.9		-69.0	162	1469	21 37 31
21 40 30	J0442+5436	00 42 09	55.4	62.5	-4.0		-67.1	-18	1469	No stop
21 41 30	---	00 43 09	55.6	62.6	-4.0		-67.2	42	1484	21 40 31
21 41 30	J0435+5522	00 43 09	56.8	62.0	-3.9		-69.1	-18	1484	No stop
21 44 30	---	00 46 10	57.2	62.3	-3.8		-69.5	162	1530	21 41 31
21 45 00	J0442+5436	00 46 40	56.0	63.0	-4.0		-67.6	12	1530	21 45 00
21 46 00	---	00 47 40	56.2	63.1	-3.9		-67.7	60	1546	21 45 01
21 46 00	J0435+5522	00 47 40	57.4	62.4	-3.8		-69.7	-18	1546	No stop
21 49 00	---	00 50 41	57.8	62.7	-3.8		-70.1	162	1592	21 46 01
21 49 00	J0442+5436	00 50 41	56.6	63.4	-3.9		-68.1	-18	1592	No stop
21 50 00	---	00 51 41	56.7	63.5	-3.9		-68.2	42	1608	21 49 01
21 50 00	J0435+5522	00 51 41	57.9	62.8	-3.8		-70.2	-18	1608	No stop
21 53 00	---	00 54 41	58.3	63.1	-3.7		-70.6	162	1654	21 50 01
21 53 30	J0442+5436	00 55 11	57.2	63.8	-3.8		-68.6	13	1654	21 53 30
21 54 30	---	00 56 12	57.3	63.9	-3.8		-68.8	60	1669	21 53 31
21 56 00	DA193	00 57 42	39.3	73.2	-5.0		-48.5	8	1669	21 56 00
21 58 00	---	00 59 42	39.5	73.5	-5.0		-48.6	120	1700	21 56 01
21 59 30	J0442+5436	01 01 12	58.0	64.4	-3.7		-69.4	7	1700	21 59 30
22 01 30	---	01 03 13	58.3	64.6	-3.7		-69.6	120	1731	21 59 31
22 01 30	J0435+5522	01 03 13	59.5	63.8	-3.6		-71.7	-18	1731	No stop
22 04 30	---	01 06 13	59.9	64.1	-3.5		-72.1	162	1778	22 01 31
22 04 30	J0442+5436	01 06 13	58.7	64.9	-3.6		-70.0	-17	1778	No stop
22 05 30	---	01 07 13	58.8	65.0	-3.6		-70.1	43	1793	22 04 31

Schedule for TORUN (Code Tr) Page 6

Probing the radio activity of a newly discovered XRB AT2019wey

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
22 05 30	J0435+5522	01 07 13	60.0	64.2	-3.5		-72.2	-18	1793	No stop
22 08 30	---	01 10 14	60.4	64.4	-3.4		-72.6	162	1840	22 05 31
22 09 00	J0442+5436	01 10 44	59.3	65.3	-3.6		-70.5	13	1840	22 09 00
22 10 00	---	01 11 44	59.4	65.4	-3.5		-70.7	60	1855	22 09 01
22 10 00	J0435+5522	01 11 44	60.6	64.6	-3.4		-72.8	-18	1855	No stop
22 13 00	---	01 14 45	61.0	64.8	-3.4		-73.2	162	1901	22 10 01
22 13 00	J0442+5436	01 14 45	59.8	65.7	-3.5		-71.0	-17	1901	No stop
22 14 00	---	01 15 45	60.0	65.8	-3.5		-71.2	43	1917	22 13 01
22 14 00	J0435+5522	01 15 45	61.2	64.9	-3.4		-73.3	-18	1917	No stop
22 17 00	---	01 18 45	61.6	65.2	-3.3		-73.7	162	1963	22 14 01
22 17 30	J0442+5436	01 19 15	60.5	66.1	-3.4		-71.6	13	1963	22 17 30
22 18 30	---	01 20 16	60.6	66.2	-3.4		-71.7	60	1979	22 17 31
22 18 30	J0435+5522	01 20 16	61.8	65.3	-3.3		-73.9	-18	1979	No stop
22 21 30	---	01 23 16	62.2	65.5	-3.2		-74.3	162	2025	22 18 31
22 21 30	J0442+5436	01 23 16	61.0	66.5	-3.3		-72.1	-17	2025	No stop
22 22 30	---	01 24 16	61.1	66.6	-3.3		-72.2	43	2040	22 21 31
22 22 30	J0435+5522	01 24 16	62.3	65.6	-3.2		-74.5	-18	2040	No stop
22 25 30	---	01 27 17	62.7	65.9	-3.2		-74.9	162	2087	22 22 31
22 26 00	J0442+5436	01 27 47	61.6	66.9	-3.3		-72.7	13	2087	22 26 00
22 27 00	---	01 28 47	61.8	67.0	-3.3		-72.8	60	2102	22 26 01
22 27 00	J0435+5522	01 28 47	62.9	66.0	-3.1		-75.1	-18	2102	No stop
22 30 00	---	01 31 47	63.3	66.2	-3.1		-75.5	162	2149	22 27 01
22 30 00	J0442+5436	01 31 47	62.2	67.2	-3.2		-73.2	-17	2149	No stop
22 31 00	---	01 32 48	62.3	67.3	-3.2		-73.3	43	2164	22 30 01
22 31 00	J0435+5522	01 32 48	63.5	66.3	-3.1		-75.6	-18	2164	No stop
22 34 00	---	01 35 48	63.9	66.5	-3.0		-76.0	162	2211	22 31 01
22 34 30	J0442+5436	01 36 18	62.8	67.6	-3.1		-73.7	13	2211	22 34 30
22 35 30	---	01 37 18	62.9	67.7	-3.1		-73.8	60	2226	22 34 31
22 35 30	J0435+5522	01 37 18	64.1	66.6	-3.0		-76.2	-18	2226	No stop
22 38 30	---	01 40 19	64.5	66.9	-2.9		-76.6	162	2272	22 35 31

Schedule for TORUN (Code Tr) Page 7

Probing the radio activity of a newly discovered XRB AT2019wey

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
22 38 30	J0442+5436	01 40 19	63.4	68.0	-3.1		-74.2	-17	2272	No stop
22 39 30	---	01 41 19	63.5	68.1	-3.0		-74.3	43	2288	22 38 31
22 39 30	J0435+5522	01 41 19	64.7	67.0	-2.9		-76.8	-18	2288	No stop
22 42 30	---	01 44 19	65.1	67.2	-2.9		-77.2	162	2334	22 39 31
22 43 00	J0442+5436	01 44 50	64.0	68.4	-3.0		-74.8	13	2334	22 43 00
22 44 00	---	01 45 50	64.1	68.5	-3.0		-74.9	60	2350	22 43 01
22 44 00	J0435+5522	01 45 50	65.3	67.3	-2.9		-77.4	-18	2350	No stop
22 47 00	---	01 48 50	65.7	67.5	-2.8		-77.8	162	2396	22 44 01
22 47 00	J0442+5436	01 48 50	64.6	68.7	-2.9		-75.3	-17	2396	No stop
22 48 00	---	01 49 50	64.7	68.8	-2.9		-75.4	43	2411	22 47 01
22 48 00	J0435+5522	01 49 50	65.8	67.6	-2.8		-78.0	-18	2411	No stop
22 51 00	---	01 52 51	66.3	67.8	-2.7		-78.4	162	2458	22 48 01
22 51 30	J0442+5436	01 53 21	65.2	69.1	-2.8		-75.9	13	2458	22 51 30
22 52 30	---	01 54 21	65.3	69.2	-2.8		-76.0	60	2473	22 51 31
22 52 30	J0435+5522	01 54 21	66.5	67.9	-2.7		-78.6	-17	2473	No stop
22 55 30	---	01 57 22	66.9	68.1	-2.7		-79.0	163	2520	22 52 31
22 55 30	J0442+5436	01 57 22	65.7	69.4	-2.8		-76.4	-17	2520	No stop
22 56 30	---	01 58 22	65.9	69.5	-2.8		-76.5	43	2535	22 55 31
22 56 30	J0435+5522	01 58 22	67.0	68.2	-2.6		-79.2	-17	2535	No stop
22 59 30	---	02 01 22	67.4	68.4	-2.6		-79.6	163	2582	22 56 31
23 00 00	J0442+5436	02 01 52	66.4	69.8	-2.7		-77.0	13	2582	23 00 00
23 01 00	---	02 02 53	66.5	69.9	-2.7		-77.1	60	2597	23 00 01
23 01 00	J0435+5522	02 02 53	67.7	68.5	-2.6		-79.8	-17	2597	No stop
23 03 30	---	02 05 23	68.0	68.7	-2.5		-80.2	133	2636	23 01 01
23 03 30	J0442+5436	02 05 23	66.9	70.1	-2.6		-77.4	-17	2636	No stop
23 04 30	---	02 06 23	67.0	70.2	-2.6		-77.5	43	2651	23 03 31
23 04 30	J0435+5522	02 06 23	68.1	68.7	-2.5		-80.3	-17	2651	No stop
23 07 00	---	02 08 54	68.5	68.9	-2.5		-80.7	133	2690	23 04 31
23 07 30	J0442+5436	02 09 24	67.4	70.4	-2.6		-77.9	13	2690	23 07 30
23 08 30	---	02 10 24	67.6	70.5	-2.6		-78.1	60	2705	23 07 31

Schedule for TORUN (Code Tr) Page 8

Probing the radio activity of a newly discovered XRB AT2019wey

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 17 Oct 2020 Day 291 ---										
23 08 30	J0435+5522	02 10 24	68.7	69.0	-2.4		-80.9	-17	2705	No stop
23 11 00	---	02 12 54	69.1	69.1	-2.4		-81.3	133	2744	23 08 31
23 11 00	J0442+5436	02 12 54	67.9	70.7	-2.5		-78.4	-17	2744	No stop
23 12 00	---	02 13 54	68.1	70.8	-2.5		-78.5	43	2759	23 11 01
23 12 00	J0435+5522	02 13 54	69.2	69.2	-2.4		-81.4	-17	2759	No stop
23 14 30	---	02 16 25	69.5	69.3	-2.3		-81.8	133	2798	23 12 01
23 15 00	J0442+5436	02 16 55	68.5	71.0	-2.5		-78.9	13	2798	23 15 00
23 16 00	---	02 17 55	68.7	71.1	-2.4		-79.1	60	2813	23 15 01
23 16 00	J0435+5522	02 17 55	69.8	69.4	-2.3		-82.0	-17	2813	No stop
23 18 30	---	02 20 25	70.1	69.6	-2.3		-82.4	133	2852	23 16 01
23 18 30	J0442+5436	02 20 25	69.0	71.3	-2.4		-79.4	-17	2852	No stop
23 19 30	---	02 21 26	69.2	71.3	-2.4		-79.5	43	2868	23 18 31
23 19 30	J0435+5522	02 21 26	70.3	69.6	-2.3		-82.6	-17	2868	No stop
23 22 00	---	02 23 56	70.6	69.7	-2.2		-83.0	133	2906	23 19 31
23 22 30	J0442+5436	02 24 26	69.6	71.6	-2.3		-79.9	13	2906	23 22 30
23 23 30	---	02 25 26	69.7	71.6	-2.3		-80.1	60	2922	23 22 31
23 23 30	J0435+5522	02 25 26	70.8	69.8	-2.2		-83.2	-17	2922	No stop
23 26 00	---	02 27 57	71.2	69.9	-2.2		-83.6	133	2960	23 23 31
23 26 00	J0442+5436	02 27 57	70.1	71.8	-2.3		-80.4	-17	2960	No stop
23 27 00	---	02 28 57	70.2	71.9	-2.3		-80.6	43	2976	23 26 01
23 27 00	J0435+5522	02 28 57	71.3	70.0	-2.1		-83.8	-17	2976	No stop
23 29 30	---	02 31 27	71.7	70.1	-2.1		-84.2	133	3014	23 27 01
23 30 00	J0442+5436	02 31 57	70.7	72.1	-2.2		-81.0	12	3014	23 30 00
23 31 00	---	02 32 57	70.8	72.2	-2.2		-81.1	60	3030	23 30 01
23 31 00	J0435+5522	02 32 57	71.9	70.2	-2.1		-84.4	-18	3030	No stop
23 33 30	---	02 35 28	72.2	70.3	-2.0		-84.8	132	3068	23 31 01
23 33 30	J0442+5436	02 35 28	71.2	72.3	-2.1		-81.5	-18	3068	No stop
23 34 30	---	02 36 28	71.3	72.4	-2.1		-81.6	42	3084	23 33 31
23 34 30	J0435+5522	02 36 28	72.4	70.3	-2.0		-85.0	-18	3084	No stop
23 37 00	---	02 38 58	72.7	70.4	-2.0		-85.4	132	3123	23 34 31

```
Schedule for TORUN     (Code Tr )                                  Page   9
              Probing the radio activity of a newly discovered XRB AT2019wey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Sat  17 Oct 2020   Day 291 ---

23 37 30  J0442+5436   02 39 29  71.7  72.6 -2.1     -82.0    12     3123   23 37 30
23 38 30  ---          02 40 29  71.9  72.7 -2.1     -82.2    60     3138   23 37 31

23 38 30  J0435+5522   02 40 29  72.9  70.5 -1.9     -85.7   -18     3138   No stop
23 41 00  ---          02 42 59  73.3  70.6 -1.9     -86.1   132     3177   23 38 31

23 41 00  J0442+5436   02 42 59  72.2  72.8 -2.0     -82.5   -18     3177   No stop
23 42 00  ---          02 43 59  72.4  72.9 -2.0     -82.7    42     3192   23 41 01

23 42 00  J0435+5522   02 43 59  73.4  70.6 -1.9     -86.3   -18     3192   No stop
23 44 30  ---          02 46 30  73.8  70.7 -1.8     -86.7   132     3231   23 42 01

23 45 00  J0442+5436   02 47 00  72.8  73.1 -2.0     -83.1    11     3231   23 45 00
23 46 00  ---          02 48 00  73.0  73.1 -1.9     -83.3    60     3246   23 45 01

23 46 00  J0435+5522   02 48 00  74.0  70.7 -1.8     -87.0   -19     3246   No stop
23 48 30  ---          02 50 30  74.4  70.8 -1.8     -87.4   131     3285   23 46 01

23 48 30  J0442+5436   02 50 30  73.3  73.3 -1.9     -83.7   -19     3285   No stop
23 49 30  ---          02 51 30  73.5  73.3 -1.9     -83.8    41     3300   23 48 31

23 49 30  J0435+5522   02 51 30  74.5  70.8 -1.8     -87.6   -19     3300   No stop
23 52 00  ---          02 54 01  74.9  70.9 -1.7     -88.1   131     3339   23 49 31

23 52 30  J0442+5436   02 54 31  73.9  73.5 -1.8     -84.3    11     3339   23 52 30
23 53 30  ---          02 55 31  74.0  73.5 -1.8     -84.4    60     3354   23 52 31

23 55 00  DA193        02 57 01  57.0  95.3 -3.0     -51.1    12     3354   23 55 00
23 59 59  ---          03 02 02  57.7  96.4 -2.9     -51.0   299     3432   23 55 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.M2048

   Setup group:    5         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
           5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   7  Setup file default.  Used with PCAL = off
 LO sum=   6584.49  6584.49  6584.49  6584.49  6648.49  6648.49  6648.49  6648.49
           6712.49  6712.49  6712.49  6712.49  6776.49  6776.49  6776.49  6776.49
 BBC fr=    682.49   682.49   682.49   682.49   746.49   746.49   746.49   746.49
            810.49   810.49   810.49   810.49   874.49   874.49   874.49   874.49
 Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
             32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
  Matching frequency sets:   7

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                          Source position (RA/Dec)                        Error
                       (B1950)             (J2000)             (Date)             (mas)

* DA193             05 52 01.407175   * 05 55 30.805617     05 56 57.165942       0.00
                    39 48 21.94582    * 39 48 49.16497      39 48 52.39533        0.00
                    Coordinates from http://astrogeo.org/vlbi/solutions/rfc_2020c/rfc_2020c_cat.html

* J0442+5436        04 38 18.779719   * 04 42 20.793026     04 44 01.486102       0.00
                    54 31 14.08642    * 54 36 55.35525      54 39 05.12865        0.00
                    Coordinates from http://astrogeo.org/vlbi/solutions/rfc_2020c/rfc_2020c_cat.html

* J0435+5522        04 31 19.791230   * 04 35 23.277600     04 37 04.673289       0.00
                    55 16 24.49244    * 55 22 34.24800      55 24 55.84450        0.00
```

ed048btr

EVN mapping of 6.7 GHz maser in Cep A

PI: *Michal Durjasz*

```
Address:  Torun Centre for Astronomy

Observing mode: MKV, 128Mb/s

Schedule for TORUN     (Code Tr )                                  Page   2
               EVN mapping of 6.7 GHz maser in Cep A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------
 --- Sun  18 Oct 2020   Day 292 ---
 Next scan frequencies:  6662.86  6662.86  6662.86  6662.86  6670.86  6670.86  6670.86  6670.86
 Next BBC frequencies:    760.86   760.86   760.86   760.86   768.86   768.86   768.86   768.86
 Next scan bandwidths:      4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00

10 00 00  2007+777     13 03 41  48.5  17.7 -7.0     -61.0     0        0   10 00 00
10 05 00  ---          13 08 42  48.7  17.9 -6.9     -62.0   300        5   10 00 01

10 09 00  J2302+6405   13 12 42  29.9  15.6 -9.8     -21.7   155        5   10 09 00
10 10 45  =2300+638    13 14 28  30.0  15.8 -9.8     -22.0   105        7   10 09 01

10 11 15  CEPA         13 14 58  28.4  17.5 -9.7     -22.7    10        7   10 11 15
10 14 30  ---          13 18 13  28.5  17.9 -9.6     -23.2   195       10   10 11 16

10 14 30  J2302+6405   13 18 13  30.2  16.2 -9.8     -22.6   -20       10   No stop
10 16 15  =2300+638    13 19 58  30.2  16.4 -9.7     -22.9    85       11   10 14 31

10 16 45  CEPA         13 20 29  28.7  18.2 -9.6     -23.6    10       11   10 16 45
10 20 00  ---          13 23 44  28.8  18.6 -9.6     -24.1   195       14   10 16 46

10 20 00  J2302+6405   13 23 44  30.4  16.8 -9.7     -23.6   -20       14   No stop
10 21 45  =2300+638    13 25 29  30.5  17.0 -9.6     -23.9    85       16   10 20 01

10 22 15  CEPA         13 25 59  28.9  18.8 -9.5     -24.5    10       16   10 22 15
10 25 30  ---          13 29 15  29.1  19.2 -9.5     -25.0   195       19   10 22 16

10 25 30  J2302+6405   13 29 15  30.7  17.5 -9.6     -24.5   -20       19   No stop
10 27 15  =2300+638    13 31 00  30.7  17.7 -9.5     -24.8    85       21   10 25 31

10 27 45  CEPA         13 31 30  29.2  19.5 -9.4     -25.4    11       21   10 27 45
10 31 00  ---          13 34 46  29.4  19.9 -9.4     -25.9   195       24   10 27 46

10 31 00  J2302+6405   13 34 46  30.9  18.1 -9.5     -25.4   -19       24   No stop
10 32 45  =2300+638    13 36 31  31.0  18.3 -9.5     -25.7    86       26   10 31 01

10 33 15  CEPA         13 37 01  29.5  20.2 -9.3     -26.3    11       26   10 33 15
10 36 30  ---          13 40 17  29.6  20.6 -9.3     -26.8   195       29   10 33 16

10 36 30  J2302+6405   13 40 17  31.2  18.7 -9.4     -26.3   -19       29   No stop
10 38 15  =2300+638    13 42 02  31.3  18.9 -9.4     -26.6    86       31   10 36 31
```

Schedule for TORUN (Code Tr) Page 3

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 18 Oct 2020 Day 292 ---										
10 38 45	CEPA	13 42 32	29.8	20.8	-9.2		-27.2	11	31	10 38 45
10 42 00	---	13 45 48	29.9	21.2	-9.2		-27.7	195	34	10 38 46
10 42 00	J2302+6405	13 45 48	31.4	19.4	-9.3		-27.2	-19	34	No stop
10 43 45	=2300+638	13 47 33	31.5	19.6	-9.3		-27.5	86	36	10 42 01
10 44 15	CEPA	13 48 03	30.1	21.5	-9.2		-28.1	11	36	10 44 15
10 47 30	---	13 51 19	30.2	21.9	-9.1		-28.6	195	39	10 44 16
10 47 30	J2302+6405	13 51 19	31.7	20.0	-9.2		-28.2	-19	39	No stop
10 49 15	=2300+638	13 53 04	31.8	20.2	-9.2		-28.4	86	40	10 47 31
10 49 45	CEPA	13 53 34	30.4	22.1	-9.1		-29.0	11	40	10 49 45
10 53 00	---	13 56 49	30.6	22.5	-9.0		-29.5	195	43	10 49 46
10 53 00	J2302+6405	13 56 49	32.0	20.6	-9.1		-29.1	-19	43	No stop
10 54 45	=2300+638	13 58 35	32.1	20.8	-9.1		-29.4	86	45	10 53 01
10 55 15	CEPA	13 59 05	30.7	22.8	-9.0		-29.9	11	45	10 55 15
10 58 30	---	14 02 20	30.9	23.2	-8.9		-30.4	195	48	10 55 16
10 58 30	J2302+6405	14 02 20	32.3	21.2	-9.0		-30.0	-19	48	No stop
11 00 15	=2300+638	14 04 06	32.4	21.4	-9.0		-30.3	86	50	10 58 31
11 00 45	CEPA	14 04 36	31.0	23.4	-8.9		-30.7	11	50	11 00 45
11 04 00	---	14 07 51	31.2	23.8	-8.8		-31.3	195	53	11 00 46
11 04 00	J2302+6405	14 07 51	32.6	21.8	-8.9		-30.9	-19	53	No stop
11 05 45	=2300+638	14 09 37	32.7	22.0	-8.9		-31.2	86	55	11 04 01
11 06 15	CEPA	14 10 07	31.3	24.1	-8.8		-31.6	11	55	11 06 15
11 09 30	---	14 13 22	31.5	24.5	-8.7		-32.2	195	58	11 06 16
11 09 30	J2302+6405	14 13 22	32.9	22.4	-8.8		-31.8	-19	58	No stop
11 11 15	=2300+638	14 15 07	33.0	22.6	-8.8		-32.1	86	60	11 09 31
11 11 45	CEPA	14 15 38	31.7	24.7	-8.7		-32.5	12	60	11 11 45
11 15 00	---	14 18 53	31.9	25.1	-8.6		-33.0	195	63	11 11 46
11 15 00	J2302+6405	14 18 53	33.2	23.1	-8.7		-32.7	-18	63	No stop
11 16 45	=2300+638	14 20 38	33.3	23.2	-8.7		-33.0	87	64	11 15 01
11 17 15	CEPA	14 21 08	32.0	25.4	-8.6		-33.4	12	64	11 17 15
11 20 30	---	14 24 24	32.2	25.7	-8.5		-33.9	195	68	11 17 16
11 20 30	J2302+6405	14 24 24	33.6	23.7	-8.7		-33.6	-18	68	No stop
11 22 15	=2300+638	14 26 09	33.7	23.8	-8.6		-33.9	87	69	11 20 31
11 22 45	CEPA	14 26 39	32.4	26.0	-8.5		-34.3	12	69	11 22 45
11 26 00	---	14 29 55	32.6	26.4	-8.5		-34.8	195	72	11 22 46

Schedule for TORUN (Code Tr) Page 4

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
11 26 00	J2302+6405	14 29 55	33.9	24.3	-8.6		-34.5	-18	72	No stop
11 27 45	=2300+638	14 31 40	34.0	24.4	-8.5		-34.8	87	74	11 26 01
11 28 15	CEPA	14 32 10	32.8	26.6	-8.4		-35.2	12	74	11 28 15
11 31 30	---	14 35 26	33.0	27.0	-8.4		-35.7	195	77	11 28 16
11 31 30	J2302+6405	14 35 26	34.2	24.8	-8.5		-35.4	-18	77	No stop
11 33 15	=2300+638	14 37 11	34.4	25.0	-8.4		-35.7	87	79	11 31 31
11 33 45	CEPA	14 37 41	33.1	27.2	-8.3		-36.0	12	79	11 33 45
11 37 00	---	14 40 57	33.4	27.6	-8.3		-36.6	195	82	11 33 46
11 37 00	J2302+6405	14 40 57	34.6	25.4	-8.4		-36.4	-18	82	No stop
11 38 45	=2300+638	14 42 42	34.7	25.6	-8.3		-36.6	87	84	11 37 01
11 39 15	CEPA	14 43 12	33.5	27.9	-8.2		-36.9	12	84	11 39 15
11 42 30	---	14 46 28	33.7	28.2	-8.2		-37.4	195	87	11 39 16
11 42 30	J2302+6405	14 46 28	35.0	26.0	-8.3		-37.3	-18	87	No stop
11 44 15	=2300+638	14 48 13	35.1	26.2	-8.3		-37.6	87	89	11 42 31
11 44 45	CEPA	14 48 43	33.9	28.5	-8.1		-37.8	12	89	11 44 45
11 48 00	---	14 51 59	34.1	28.8	-8.1		-38.3	195	92	11 44 46
11 48 00	J2302+6405	14 51 59	35.3	26.6	-8.2		-38.2	-18	92	No stop
11 49 45	=2300+638	14 53 44	35.4	26.8	-8.2		-38.5	87	93	11 48 01
11 50 15	CEPA	14 54 14	34.3	29.1	-8.0		-38.7	11	93	11 50 15
11 53 30	---	14 57 29	34.5	29.5	-8.0		-39.2	195	97	11 50 16
11 53 30	J2302+6405	14 57 29	35.7	27.2	-8.1		-39.1	-18	97	No stop
11 55 15	=2300+638	14 59 15	35.8	27.4	-8.1		-39.4	87	98	11 53 31
11 55 45	CEPA	14 59 45	34.7	29.7	-8.0		-39.5	11	98	11 55 45
11 59 00	---	15 03 00	35.0	30.1	-7.9		-40.1	195	101	11 55 46
11 59 00	J2302+6405	15 03 00	36.1	27.7	-8.0		-40.0	-19	101	No stop
12 00 45	=2300+638	15 04 46	36.2	27.9	-8.0		-40.3	86	103	11 59 01
12 01 15	CEPA	15 05 16	35.1	30.3	-7.9		-40.4	11	103	12 01 15
12 04 30	---	15 08 31	35.4	30.7	-7.8		-40.9	195	106	12 01 16
12 04 30	J2302+6405	15 08 31	36.5	28.3	-7.9		-40.9	-19	106	No stop
12 06 15	=2300+638	15 10 17	36.6	28.5	-7.9		-41.2	86	108	12 04 31

Schedule for TORUN (Code Tr) Page 5

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
12 06 45	CEPA	15 10 47	35.5	30.9	-7.8		-41.3	11	108	12 06 45
12 10 00	---	15 14 02	35.8	31.3	-7.7		-41.8	195	111	12 06 46
12 10 00	J2302+6405	15 14 02	36.9	28.9	-7.8		-41.8	-19	111	No stop
12 11 45	=2300+638	15 15 47	37.0	29.0	-7.8		-42.1	86	113	12 10 01
12 12 15	CEPA	15 16 18	36.0	31.5	-7.7		-42.2	11	113	12 12 15
12 15 30	---	15 19 33	36.2	31.8	-7.6		-42.7	195	116	12 12 16
12 15 30	J2302+6405	15 19 33	37.3	29.4	-7.7		-42.7	-19	116	No stop
12 17 15	=2300+638	15 21 18	37.4	29.6	-7.7		-43.0	86	118	12 15 31
12 17 45	CEPA	15 21 48	36.4	32.1	-7.6		-43.0	11	118	12 17 45
12 21 00	---	15 25 04	36.7	32.4	-7.5		-43.6	195	121	12 17 46
12 21 00	J2302+6405	15 25 04	37.7	30.0	-7.6		-43.6	-19	121	No stop
12 22 45	=2300+638	15 26 49	37.8	30.2	-7.6		-43.9	86	122	12 21 01
12 23 15	CEPA	15 27 19	36.9	32.7	-7.5		-43.9	11	122	12 23 15
12 26 30	---	15 30 35	37.1	33.0	-7.4		-44.4	195	126	12 23 16
12 26 30	J2302+6405	15 30 35	38.1	30.5	-7.5		-44.5	-19	126	No stop
12 28 15	=2300+638	15 32 20	38.2	30.7	-7.5		-44.8	86	127	12 26 31
12 28 45	CEPA	15 32 50	37.3	33.2	-7.4		-44.8	11	127	12 28 45
12 32 00	---	15 36 06	37.6	33.6	-7.4		-45.3	195	130	12 28 46
12 32 00	J2302+6405	15 36 06	38.5	31.1	-7.5		-45.4	-19	130	No stop
12 33 45	=2300+638	15 37 51	38.7	31.2	-7.4		-45.7	86	132	12 32 01
12 34 15	CEPA	15 38 21	37.8	33.8	-7.3		-45.7	11	132	12 34 15
12 37 30	---	15 41 37	38.0	34.1	-7.3		-46.2	195	135	12 34 16
12 37 30	J2302+6405	15 41 37	38.9	31.6	-7.4		-46.3	-19	135	No stop
12 39 15	=2300+638	15 43 22	39.1	31.8	-7.3		-46.6	86	137	12 37 31
12 39 45	CEPA	15 43 52	38.2	34.4	-7.2		-46.5	11	137	12 39 45
12 43 00	---	15 47 08	38.5	34.7	-7.2		-47.0	195	140	12 39 46
12 43 00	J2302+6405	15 47 08	39.4	32.1	-7.3		-47.2	-19	140	No stop
12 44 45	=2300+638	15 48 53	39.5	32.3	-7.2		-47.5	86	142	12 43 01
12 45 15	CEPA	15 49 23	38.7	34.9	-7.1		-47.4	11	142	12 45 15
12 48 30	---	15 52 38	39.0	35.3	-7.1		-47.9	195	145	12 45 16

Schedule for TORUN (Code Tr) Page 6

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
12 48 30	J2302+6405	15 52 38	39.8	32.7	-7.2		-48.1	-19	145	No stop
12 50 15	=2300+638	15 54 24	40.0	32.8	-7.2		-48.4	86	147	12 48 31
12 50 45	CEPA	15 54 54	39.2	35.5	-7.0		-48.3	10	147	12 50 45
12 54 00	---	15 58 09	39.5	35.8	-7.0		-48.8	195	150	12 50 46
12 54 00	J2302+6405	15 58 09	40.3	33.2	-7.1		-49.0	-19	150	No stop
12 55 45	=2300+638	15 59 55	40.4	33.3	-7.1		-49.3	86	151	12 54 01
12 56 15	CEPA	16 00 25	39.7	36.0	-6.9		-49.1	10	151	12 56 15
12 59 30	---	16 03 40	39.9	36.4	-6.9		-49.6	195	155	12 56 16
12 59 30	J2302+6405	16 03 40	40.7	33.7	-7.0		-50.0	-20	155	No stop
13 01 15	=2300+638	16 05 26	40.9	33.8	-7.0		-50.2	85	156	12 59 31
13 01 45	CEPA	16 05 56	40.2	36.6	-6.9		-50.0	10	156	13 01 45
13 05 00	---	16 09 11	40.4	36.9	-6.8		-50.5	195	159	13 01 46
13 05 00	J2302+6405	16 09 11	41.2	34.2	-6.9		-50.9	-20	159	No stop
13 06 45	=2300+638	16 10 56	41.3	34.4	-6.9		-51.2	85	161	13 05 01
13 09 45	2007+777	16 13 57	58.1	19.5	-3.8		-106.1	104	161	13 09 45
13 16 45	---	16 20 58	58.5	19.3	-3.7		-108.0	420	168	13 09 46
13 20 45	J2302+6405	16 24 59	42.6	35.6	-6.6		-53.5	166	168	13 20 45
13 22 30	=2300+638	16 26 44	42.7	35.8	-6.6		-53.8	105	170	13 20 46
13 23 00	CEPA	16 27 14	42.1	38.6	-6.5		-53.4	10	170	13 23 00
13 26 15	---	16 30 30	42.4	38.9	-6.4		-53.9	195	173	13 23 01
13 26 15	J2302+6405	16 30 30	43.0	36.1	-6.6		-54.4	-20	173	No stop
13 28 00	=2300+638	16 32 15	43.2	36.2	-6.5		-54.7	85	174	13 26 16
13 28 30	CEPA	16 32 45	42.6	39.2	-6.4		-54.2	10	174	13 28 30
13 31 45	---	16 36 01	42.9	39.5	-6.4		-54.8	195	178	13 28 31
13 31 45	J2302+6405	16 36 01	43.5	36.6	-6.5		-55.3	-20	178	No stop
13 33 30	=2300+638	16 37 46	43.7	36.7	-6.4		-55.6	85	179	13 31 46
13 34 00	CEPA	16 38 16	43.1	39.7	-6.3		-55.1	10	179	13 34 00
13 37 15	---	16 41 31	43.5	40.0	-6.3		-55.6	195	182	13 34 01
13 37 15	J2302+6405	16 41 31	44.0	37.0	-6.4		-56.2	-20	182	No stop
13 39 00	=2300+638	16 43 17	44.2	37.2	-6.3		-56.5	85	184	13 37 16

```
Schedule for TORUN     (Code Tr )                                  Page   7
              EVN mapping of 6.7 GHz maser in Cep A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sun  18 Oct 2020   Day 292 ---

13 39 30  CEPA         16 43 47  43.7  40.2 -6.2     -56.0    10      184   13 39 30
13 42 45  ---          16 47 02  44.0  40.5 -6.2     -56.5   195      187   13 39 31

13 42 45  J2302+6405   16 47 02  44.5  37.5 -6.3     -57.1   -20      187   No stop
13 44 30  =2300+638    16 48 48  44.7  37.6 -6.2     -57.4    85      189   13 42 46

13 45 00  CEPA         16 49 18  44.2  40.7 -6.1     -56.9     9      189   13 45 00
13 48 15  ---          16 52 33  44.5  40.9 -6.1     -57.4   195      192   13 45 01

13 48 15  J2302+6405   16 52 33  45.0  37.9 -6.2     -58.1   -20      192   No stop
13 50 00  =2300+638    16 54 19  45.2  38.1 -6.2     -58.4    85      194   13 48 16

 ---------- Ef out for pointing ----------

13 50 30  CEPA         16 54 49  44.8  41.1 -6.0     -57.7     9      194   13 50 30
13 53 45  ---          16 58 04  45.1  41.4 -6.0     -58.3   195      197   13 50 31

13 53 45  J2302+6405   16 58 04  45.5  38.4 -6.1     -59.0   -21      197   No stop
13 55 30  =2300+638    16 59 49  45.7  38.5 -6.1     -59.3    84      199   13 53 46

13 56 00  CEPA         17 00 20  45.3  41.6 -5.9     -58.6     9      199   13 56 00
13 59 15  ---          17 03 35  45.6  41.9 -5.9     -59.1   195      202   13 56 01

13 59 15  J2302+6405   17 03 35  46.1  38.8 -6.0     -59.9   -21      202   No stop
14 01 00  =2300+638    17 05 20  46.2  39.0 -6.0     -60.2    84      203   13 59 16

 ---------- Ef back again ----------

14 01 30  CEPA         17 05 50  45.9  42.1 -5.9     -59.5     9      203   14 01 30
14 04 45  ---          17 09 06  46.2  42.4 -5.8     -60.0   195      207   14 01 31

14 04 45  J2302+6405   17 09 06  46.6  39.3 -5.9     -60.9   -21      207   No stop
14 06 30  =2300+638    17 10 51  46.7  39.4 -5.9     -61.2    84      208   14 04 46

14 07 00  CEPA         17 11 21  46.4  42.6 -5.8     -60.4     9      208   14 07 00
14 10 15  ---          17 14 37  46.7  42.8 -5.7     -60.9   195      211   14 07 01

14 10 15  J2302+6405   17 14 37  47.1  39.7 -5.8     -61.8   -21      211   No stop
14 12 00  =2300+638    17 16 22  47.3  39.8 -5.8     -62.1    84      213   14 10 16

14 12 30  CEPA         17 16 52  47.0  43.0 -5.7     -61.3     9      213   14 12 30
14 15 45  ---          17 20 08  47.3  43.3 -5.6     -61.8   195      216   14 12 31

14 15 45  J2302+6405   17 20 08  47.6  40.1 -5.7     -62.7   -21      216   No stop
14 17 30  =2300+638    17 21 53  47.8  40.2 -5.7     -63.0    84      218   14 15 46
```

Schedule for TORUN (Code Tr) Page 8

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
14 18 00	CEPA	17 22 23	47.5	43.5	-5.6		-62.2	9	218	14 18 00
14 21 15	---	17 25 39	47.9	43.7	-5.5		-62.7	195	221	14 18 01
14 21 15	J2302+6405	17 25 39	48.2	40.5	-5.6		-63.7	-21	221	No stop
14 23 00	=2300+638	17 27 24	48.3	40.6	-5.6		-64.0	84	223	14 21 16
14 23 30	CEPA	17 27 54	48.1	43.9	-5.5		-63.0	9	223	14 23 30
14 26 45	---	17 31 10	48.5	44.2	-5.4		-63.6	195	226	14 23 31
14 26 45	J2302+6405	17 31 10	48.7	40.9	-5.5		-64.6	-21	226	No stop
14 28 30	=2300+638	17 32 55	48.9	41.0	-5.5		-64.9	84	228	14 26 46
14 29 00	CEPA	17 33 25	48.7	44.3	-5.4		-63.9	9	228	14 29 00
14 32 15	---	17 36 41	49.0	44.6	-5.3		-64.5	195	231	14 29 01
14 32 15	J2302+6405	17 36 41	49.3	41.3	-5.4		-65.6	-21	231	No stop
14 34 00	=2300+638	17 38 26	49.4	41.4	-5.4		-65.9	84	232	14 32 16
14 34 30	CEPA	17 38 56	49.3	44.8	-5.3		-64.8	9	232	14 34 30
14 37 45	---	17 42 11	49.6	45.0	-5.2		-65.4	195	235	14 34 31
14 37 45	J2302+6405	17 42 11	49.8	41.6	-5.4		-66.5	-21	235	No stop
14 39 30	=2300+638	17 43 57	50.0	41.8	-5.3		-66.8	84	237	14 37 46
14 40 00	CEPA	17 44 27	49.9	45.2	-5.2		-65.7	8	237	14 40 00
14 43 15	---	17 47 42	50.2	45.4	-5.2		-66.3	195	240	14 40 01
14 43 15	J2302+6405	17 47 42	50.4	42.0	-5.3		-67.5	-21	240	No stop
14 45 00	=2300+638	17 49 28	50.5	42.1	-5.2		-67.8	84	242	14 43 16
14 45 30	CEPA	17 49 58	50.5	45.6	-5.1		-66.7	8	242	14 45 30
14 48 45	---	17 53 13	50.8	45.8	-5.1		-67.2	195	245	14 45 31
14 48 45	J2302+6405	17 53 13	50.9	42.4	-5.2		-68.5	-22	245	No stop
14 50 30	=2300+638	17 54 59	51.1	42.5	-5.1		-68.8	83	247	14 48 46
14 51 00	CEPA	17 55 29	51.0	46.0	-5.0		-67.6	8	247	14 51 00
14 54 15	---	17 58 44	51.4	46.2	-5.0		-68.1	195	250	14 51 01
14 54 15	J2302+6405	17 58 44	51.5	42.7	-5.1		-69.4	-22	250	No stop
14 56 00	=2300+638	18 00 29	51.7	42.8	-5.1		-69.7	83	252	14 54 16
14 56 30	CEPA	18 00 59	51.6	46.4	-4.9		-68.5	8	252	14 56 30
14 59 45	---	18 04 15	52.0	46.6	-4.9		-69.0	195	255	14 56 31

Schedule for TORUN (Code Tr) Page 9

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
14 59 45	J2302+6405	18 04 15	52.0	43.0	-5.0		-70.4	-22	255	No stop
15 01 30	=2300+638	18 06 00	52.2	43.1	-5.0		-70.7	83	257	14 59 46
15 02 00	CEPA	18 06 30	52.2	46.8	-4.8		-69.4	8	257	15 02 00
15 05 15	---	18 09 46	52.6	47.0	-4.8		-70.0	195	260	15 02 01
15 05 15	J2302+6405	18 09 46	52.6	43.4	-4.9		-71.4	-22	260	No stop
15 07 00	=2300+638	18 11 31	52.8	43.5	-4.9		-71.7	83	261	15 05 16
15 07 30	CEPA	18 12 01	52.8	47.1	-4.8		-70.3	8	261	15 07 30
15 10 45	---	18 15 17	53.2	47.3	-4.7		-70.9	195	264	15 07 31
15 10 45	J2302+6405	18 15 17	53.2	43.7	-4.8		-72.4	-22	264	No stop
15 12 30	=2300+638	18 17 02	53.4	43.8	-4.8		-72.7	83	266	15 10 46
15 13 00	CEPA	18 17 32	53.5	47.5	-4.7		-71.3	8	266	15 13 00
15 16 15	---	18 20 48	53.8	47.7	-4.6		-71.8	195	269	15 13 01
15 16 15	J2302+6405	18 20 48	53.7	44.0	-4.7		-73.4	-22	269	No stop
15 18 00	=2300+638	18 22 33	53.9	44.1	-4.7		-73.7	83	271	15 16 16
15 18 30	CEPA	18 23 03	54.1	47.8	-4.6		-72.2	8	271	15 18 30
15 21 45	---	18 26 19	54.4	48.0	-4.5		-72.8	195	274	15 18 31
15 21 45	J2302+6405	18 26 19	54.3	44.3	-4.6		-74.4	-22	274	No stop
15 23 30	=2300+638	18 28 04	54.5	44.3	-4.6		-74.7	83	276	15 21 46
15 24 00	CEPA	18 28 34	54.7	48.1	-4.5		-73.2	8	276	15 24 00
15 27 15	---	18 31 50	55.0	48.3	-4.4		-73.7	195	279	15 24 01
15 27 15	J2302+6405	18 31 50	54.9	44.5	-4.5		-75.4	-22	279	No stop
15 29 00	=2300+638	18 33 35	55.1	44.6	-4.5		-75.8	83	281	15 27 16
15 29 30	CEPA	18 34 05	55.3	48.5	-4.4		-74.1	7	281	15 29 30
15 32 45	---	18 37 20	55.7	48.6	-4.3		-74.7	195	284	15 29 31
15 32 45	J2302+6405	18 37 20	55.5	44.8	-4.4		-76.5	-23	284	No stop
15 34 30	=2300+638	18 39 06	55.7	44.9	-4.4		-76.8	82	285	15 32 46
15 35 00	CEPA	18 39 36	55.9	48.8	-4.3		-75.1	7	285	15 35 00
15 38 15	---	18 42 51	56.3	48.9	-4.2		-75.7	195	289	15 35 01
15 38 15	J2302+6405	18 42 51	56.1	45.0	-4.3		-77.5	-23	289	No stop
15 40 00	=2300+638	18 44 37	56.3	45.1	-4.3		-77.8	82	290	15 38 16

Schedule for TORUN (Code Tr) Page 10

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
15 40 30	CEPA	18 45 07	56.5	49.0	-4.2		-76.1	7	290	15 40 30
15 43 45	---	18 48 22	56.9	49.2	-4.1		-76.7	195	293	15 40 31
15 43 45	J2302+6405	18 48 22	56.7	45.2	-4.3		-78.6	-23	293	No stop
15 45 30	=2300+638	18 50 08	56.8	45.3	-4.2		-78.9	82	295	15 43 46
15 46 00	CEPA	18 50 38	57.2	49.3	-4.1		-77.1	7	295	15 46 00
15 49 15	---	18 53 53	57.5	49.5	-4.1		-77.7	195	298	15 46 01
15 49 15	J2302+6405	18 53 53	57.2	45.4	-4.2		-79.6	-23	298	No stop
15 51 00	=2300+638	18 55 38	57.4	45.5	-4.1		-80.0	82	300	15 49 16
15 51 30	CEPA	18 56 09	57.8	49.6	-4.0		-78.1	7	300	15 51 30
15 54 45	---	18 59 24	58.2	49.7	-4.0		-78.7	195	303	15 51 31
15 54 45	J2302+6405	18 59 24	57.8	45.6	-4.1		-80.7	-23	303	No stop
15 56 30	=2300+638	19 01 09	58.0	45.7	-4.0		-81.0	82	305	15 54 46
15 57 00	CEPA	19 01 39	58.4	49.8	-3.9		-79.1	7	305	15 57 00
16 00 15	---	19 04 55	58.8	50.0	-3.9		-79.7	195	308	15 57 01
16 00 15	J2302+6405	19 04 55	58.4	45.8	-4.0		-81.8	-23	308	No stop
16 02 00	=2300+638	19 06 40	58.6	45.9	-3.9		-82.1	82	310	16 00 16
16 02 30	CEPA	19 07 10	59.1	50.0	-3.8		-80.1	7	310	16 02 30
16 05 45	---	19 10 26	59.4	50.2	-3.8		-80.7	195	313	16 02 31
16 05 45	J2302+6405	19 10 26	59.0	46.0	-3.9		-82.9	-23	313	No stop
16 07 30	=2300+638	19 12 11	59.2	46.0	-3.9		-83.3	82	314	16 05 46
16 08 00	CEPA	19 12 41	59.7	50.3	-3.7		-81.1	7	314	16 08 00
16 11 15	---	19 15 57	60.1	50.4	-3.7		-81.8	195	318	16 08 01
16 11 15	J2302+6405	19 15 57	59.6	46.1	-3.8		-84.0	-23	318	No stop
16 13 00	=2300+638	19 17 42	59.8	46.1	-3.8		-84.4	82	319	16 11 16
16 13 30	CEPA	19 18 12	60.3	50.4	-3.6		-82.2	6	319	16 13 30
16 16 45	---	19 21 28	60.7	50.5	-3.6		-82.8	195	322	16 13 31
16 16 45	J2302+6405	19 21 28	60.2	46.2	-3.7		-85.2	-24	322	No stop
16 18 30	=2300+638	19 23 13	60.4	46.2	-3.7		-85.5	81	324	16 16 46
16 19 00	CEPA	19 23 43	61.0	50.6	-3.6		-83.3	6	324	16 19 00
16 22 15	---	19 26 59	61.4	50.7	-3.5		-83.9	195	327	16 19 01

Schedule for TORUN (Code Tr) Page 11

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
16 22 15	J2302+6405	19 26 59	60.8	46.3	-3.6		-86.3	-24	327	No stop
16 24 00	=2300+638	19 28 44	61.0	46.3	-3.6		-86.7	81	329	16 22 16
16 24 30	CEPA	19 29 14	61.6	50.7	-3.5		-84.4	6	329	16 24 30
16 27 45	---	19 32 29	62.0	50.8	-3.4		-85.0	195	332	16 24 31
16 27 45	J2302+6405	19 32 29	61.4	46.4	-3.5		-87.5	-24	332	No stop
16 29 30	=2300+638	19 34 15	61.6	46.4	-3.5		-87.9	81	334	16 27 46
16 30 00	CEPA	19 34 45	62.3	50.9	-3.4		-85.5	6	334	16 30 00
16 33 15	---	19 38 00	62.6	50.9	-3.3		-86.2	195	337	16 30 01
16 33 15	J2302+6405	19 38 00	62.0	46.4	-3.4		-88.7	-24	337	No stop
16 35 00	=2300+638	19 39 46	62.2	46.4	-3.4		-89.1	81	339	16 33 16
16 35 30	CEPA	19 40 16	62.9	51.0	-3.3		-86.6	6	339	16 35 30
16 38 45	---	19 43 31	63.3	51.0	-3.2		-87.3	195	342	16 35 31
16 38 45	J2302+6405	19 43 31	62.6	46.4	-3.3		-90.0	-24	342	No stop
16 40 30	=2300+638	19 45 17	62.8	46.4	-3.3		-90.4	81	343	16 38 46
16 41 00	CEPA	19 45 47	63.5	51.0	-3.2		-87.8	6	343	16 41 00
16 44 15	---	19 49 02	63.9	51.1	-3.1		-88.5	195	347	16 41 01
16 44 15	J2302+6405	19 49 02	63.2	46.4	-3.2		-91.2	-24	347	No stop
16 46 00	=2300+638	19 50 47	63.4	46.4	-3.2		-91.6	81	348	16 44 16
16 46 30	CEPA	19 51 18	64.2	51.1	-3.1		-89.0	6	348	16 46 30
16 49 45	---	19 54 33	64.6	51.1	-3.0		-89.7	195	351	16 46 31
16 49 45	J2302+6405	19 54 33	63.8	46.4	-3.1		-92.5	-24	351	No stop
16 51 30	=2300+638	19 56 18	64.0	46.3	-3.1		-92.9	81	353	16 49 46
16 52 00	CEPA	19 56 48	64.8	51.1	-3.0		-90.2	6	353	16 52 00
16 55 15	---	20 00 04	65.2	51.1	-3.0		-90.9	195	356	16 52 01
16 55 15	J2302+6405	20 00 04	64.4	46.3	-3.1		-93.8	-25	356	No stop
16 57 00	=2300+638	20 01 49	64.6	46.3	-3.0		-94.2	80	358	16 55 16
16 57 30	CEPA	20 02 19	65.5	51.1	-2.9		-91.4	5	358	16 57 30
17 00 45	---	20 05 35	65.9	51.0	-2.9		-92.1	195	361	16 57 31
17 00 45	J2302+6405	20 05 35	65.0	46.2	-3.0		-95.1	-25	361	No stop
17 02 30	=2300+638	20 07 20	65.2	46.1	-2.9		-95.6	80	363	17 00 46

Schedule for TORUN (Code Tr) Page 12

EVN mapping of 6.7 GHz maser in Cep A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 18 Oct 2020 Day 292 ---										
17 03 00	CEPA	20 07 50	66.1	51.0	-2.8		-92.7	5	363	17 03 00
17 06 15	---	20 11 06	66.5	51.0	-2.8		-93.4	195	366	17 03 01
17 06 15	J2302+6405	20 11 06	65.6	46.0	-2.9		-96.5	-25	366	No stop
17 08 00	=2300+638	20 12 51	65.8	46.0	-2.8		-97.0	80	368	17 06 16
17 08 30	CEPA	20 13 21	66.8	50.9	-2.7		-94.0	5	368	17 08 30
17 11 45	---	20 16 37	67.1	50.8	-2.7		-94.8	195	371	17 08 31
17 11 45	J2302+6405	20 16 37	66.2	45.9	-2.8		-97.9	-25	371	No stop
17 13 30	=2300+638	20 18 22	66.4	45.8	-2.8		-98.4	80	372	17 11 46
17 14 00	CEPA	20 18 52	67.4	50.8	-2.6		-95.3	5	372	17 14 00
17 17 15	---	20 22 08	67.8	50.7	-2.6		-96.1	195	376	17 14 01
17 17 15	J2302+6405	20 22 08	66.8	45.6	-2.7		-99.4	-25	376	No stop
17 19 00	=2300+638	20 23 53	67.0	45.5	-2.7		-99.8	80	377	17 17 16
17 19 30	CEPA	20 24 23	68.0	50.6	-2.5		-96.7	5	377	17 19 30
17 22 45	---	20 27 39	68.4	50.5	-2.5		-97.5	195	380	17 19 31
17 22 45	J2302+6405	20 27 39	67.4	45.4	-2.6		-100.9	-25	380	No stop
17 24 30	=2300+638	20 29 24	67.6	45.3	-2.6		-101.3	80	382	17 22 46
17 25 00	CEPA	20 29 54	68.7	50.4	-2.5		-98.1	5	382	17 25 00
17 28 15	---	20 33 09	69.1	50.2	-2.4		-99.0	195	385	17 25 01
17 28 15	J2302+6405	20 33 09	68.0	45.0	-2.5		-102.4	-25	385	No stop
17 30 00	=2300+638	20 34 55	68.2	44.9	-2.5		-102.9	80	387	17 28 16
17 30 30	CEPA	20 35 25	69.3	50.1	-2.4		-99.6	5	387	17 30 30
17 33 45	---	20 38 40	69.7	49.9	-2.3		-100.5	195	390	17 30 31
17 33 45	J2302+6405	20 38 40	68.6	44.7	-2.4		-104.0	-26	390	No stop
17 35 30	=2300+638	20 40 26	68.7	44.5	-2.4		-104.5	79	392	17 33 46
17 36 00	CEPA	20 40 56	70.0	49.8	-2.3		-101.1	5	392	17 36 00
17 39 15	---	20 44 11	70.3	49.5	-2.2		-102.1	195	395	17 36 01
17 39 15	J2302+6405	20 44 11	69.1	44.2	-2.3		-105.6	-26	395	No stop
17 41 00	=2300+638	20 45 57	69.3	44.1	-2.3		-106.2	79	397	17 39 16
17 41 30	CEPA	20 46 27	70.6	49.4	-2.2		-102.7	4	397	17 41 30
17 44 45	---	20 49 42	71.0	49.1	-2.1		-103.7	195	400	17 41 31

```
Schedule for TORUN     (Code Tr )                                Page  13
              EVN mapping of 6.7 GHz maser in Cep A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Sun  18 Oct 2020   Day 292 ---

17 44 45  J2302+6405   20 49 42  69.7  43.8 -2.2    -107.3   -26      400   No stop
17 46 30  =2300+638    20 51 27  69.9  43.6 -2.2    -107.9    79      401   17 44 46

17 51 30  2007+777     20 56 28  64.7  -6.3  0.9     161.7   186      401   17 51 30
18 00 00  ---          21 05 00  64.6  -7.3  1.0     158.7   510      410   17 51 31



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.M128line

   Setup group:    5         Station: TORUN            Total bit rate:   128
   Format: VDIF              Bits per sample: 2        Sample rate:  8.000
   Number of channels:  8    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00   5902.00
 Net SB=         L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
 BBC SB=         L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1

The following frequency sets based on these setups were used.

Frequency Set:   4  Based on FREQ, BW, and/or DOPPLER in schedule.  Used with PCAL = off
 LO sum=   6662.86  6662.86  6662.86  6662.86  6670.86  6670.86  6670.86  6670.86
 BBC fr=    760.86   760.86   760.86   760.86   768.86   768.86   768.86   768.86
 Bandwd=      4.00     4.00     4.00     4.00     4.00     4.00     4.00     4.00
  Matching frequency sets:   4

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                        Source position (RA/Dec)                        Error
                      (B1950)            (J2000)            (Date)            (mas)

* CEPA             22 54 18.959416   * 22 56 17.900000     22 57 08.442675       0.00
                   61 45 47.43147    * 62 01 49.65000      62 08 38.40633        0.00
                   Doppler based on LSR frame and radio definition.  Velocities:
                       -3.75    -3.75    -3.75    -3.75    -3.75    -3.75

* 2007+777         20 07 20.430197   * 20 05 30.998526     20 04 44.962746       0.04
  J2005+7752       77 43 58.12301    * 77 52 43.24754      77 56 34.80243        0.01
  J2005+77         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,  15674 observations.
                   Doppler based on other sources.

  2300+638         23 00 41.944919   * 23 02 41.314995     23 03 32.241847       0.26
* J2302+6405       63 49 43.23593    * 64 05 52.84867      64 12 44.23934        0.16
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    159 observations.
                   Doppler based on other sources.
```

n20k3tr

Network Monitoring Experiment

PI: *Dhanya G.Nair*

```
Address:  JIVE
=
Phone during observation: +31-521-596508

Observing mode:

Schedule for TORUN     (Code Tr )                                  Page   2
               Network Monitoring Experiment
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Thu  22 Oct 2020   Day 296 ---

 Next scan frequencies:  22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.4
                         22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.4
 Next BBC frequencies:     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.4
                           787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.4
 Next scan bandwidths:      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0
                            32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0

12 00 00  J1751+0939   15 19 47  36.8 130.4 -2.5     -27.6     0        0   12 00 00
12 12 00  =1749+096    15 31 49  38.2 133.8 -2.3     -26.1   720      185   12 00 01

12 17 00  J1751+0939   15 36 50  38.7 135.2 -2.3     -25.4   293      185   12 17 00
12 27 00  =1749+096    15 46 51  39.7 138.1 -2.1     -24.0   600      340   12 17 01

12 32 00  J1751+0939   15 51 52  40.2 139.6 -2.0     -23.3   293      340   12 32 00
12 42 00  =1749+096    16 01 54  41.2 142.6 -1.8     -21.7   600      495   12 32 01

12 47 00  J1751+0939   16 06 54  41.6 144.1 -1.8     -20.9   293      495   12 47 00
12 57 00  =1749+096    16 16 56  42.5 147.2 -1.6     -19.3   600      649   12 47 01

13 02 00  J1751+0939   16 21 57  42.9 148.8 -1.5     -18.4   293      649   13 02 00
13 12 00  =1749+096    16 31 59  43.6 152.1 -1.3     -16.6   600      804   13 02 01

13 17 00  J1849+6705   16 36 59  68.8  35.9 -2.2    -115.0    53      804   13 17 00
13 27 00  =1849+670    16 47 01  69.7  34.7 -2.0    -118.5   600      958   13 17 01

13 32 00  J1849+6705   16 52 02  70.1  34.0 -2.0    -120.3   294      958   13 32 00
13 42 00  =1849+670    17 02 03  70.9  32.4 -1.8    -124.1   600     1113   13 32 01

13 47 00  J2139+1423   17 07 04  24.6  98.7 -4.5     -37.8   111     1113   13 47 00
13 57 00  =2136+141    17 17 06  26.0 100.8 -4.4     -37.5   600     1268   13 47 01

14 02 00  J2139+1423   17 22 07  26.8 101.9 -4.3     -37.4   293     1268   14 02 00
14 12 00  =2136+141    17 32 08  28.2 104.0 -4.1     -37.0   600     1422   14 02 01

14 17 00  J2139+1423   17 37 09  29.0 105.1 -4.0     -36.8   293     1422   14 17 00
14 27 00  =2136+141    17 47 11  30.4 107.4 -3.9     -36.3   600     1577   14 17 01

14 32 00  J2148+0657   17 52 12  23.8 111.3 -3.9     -34.3   259     1577   14 32 00
14 42 00  =2145+067    18 02 13  25.2 113.6 -3.8     -33.7   600     1731   14 32 01
```

```
14 47 00  J2148+0657   18 07 14  25.9 114.7 -3.7     -33.3   293     1731   14 47 00
15 00 00  =2145+067    18 20 16  27.6 117.7 -3.5     -32.4   780     1932   14 47 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
           21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.49
            22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.49
  BBC fr=     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.49
              787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.49
  Bandwd=      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
               32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
   Matching frequency sets:   7  14

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

  1749+096          17 49 10.387930   * 17 51 32.818574     17 52 30.306958       0.00
* J1751+0939        09 39 42.82586    * 09 39 00.72841      09 38 54.65645        0.00
  J1751+09          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution, 192391 observations.

  1849+670          18 49 16.505878   * 18 49 16.072291     18 49 14.532438       0.01
* J1849+6705        67 02 07.88051    * 67 05 41.68025      67 07 27.11804        0.00
  J1849+67          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  31337 observations.

  2136+141          21 36 37.412147   * 21 39 01.309269     21 40 00.618613       0.00
* J2139+1423        14 10 00.62101    * 14 23 35.99216      14 29 21.64103        0.00
  J2139+14          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  53632 observations.

  2145+067          21 45 36.078473   * 21 48 05.458671     21 49 07.038861       0.26
* J2148+0657        06 43 40.90456    * 06 57 38.60416      07 03 31.23764        0.25
  J2148+06          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution, 110505 observations.
```

ec071ftr

EVN 5 GHz and 22 GHz study of 43 compact radio sources

PI: *Carolina Casadio*

```
Address:  FORTH - Institute of Astrophysics

Phone during observation:

Observing mode: Continuum

Schedule for TORUN     (Code Tr )                                    Page   2
               EVN 5 GHz and 22 GHz study of 43 compact radio sources
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Thu  22 Oct 2020   Day 296 ---

 Next scan frequencies:  22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.4
                         22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.4
 Next BBC frequencies:     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.4
                           787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.4
 Next scan bandwidths:      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0
                            32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0

16 00 00  J0151+5134   19 20 26  35.1  48.6 -6.5     -46.6     0        0   16 00 00
16 02 00  ---          19 22 26  35.3  48.8 -6.5     -46.8   120       31   16 00 01

16 02 00  J0132+5211   19 22 26  37.9  50.8 -6.2     -49.5   -24       31   No stop
16 03 40  ---          19 24 07  38.1  51.0 -6.2     -49.7    76       57   16 02 01

16 03 40  J0151+5134   19 24 07  35.5  49.1 -6.5     -47.0   -24       57   No stop
16 05 20  ---          19 25 47  35.7  49.3 -6.5     -47.2    76       82   16 03 41

16 05 20  J0132+5211   19 25 47  38.3  51.2 -6.1     -49.9   -24       82   No stop
16 07 00  ---          19 27 27  38.5  51.4 -6.1     -50.1    76      108   16 05 21

16 07 30  J0151+5134   19 27 57  35.9  49.6 -6.4     -47.5     6      108   16 07 30
16 08 40  ---          19 29 08  36.1  49.7 -6.4     -47.6    70      126   16 07 31

16 08 40  J0132+5211   19 29 08  38.7  51.6 -6.1     -50.3   -24      126   No stop
16 10 20  ---          19 30 48  38.9  51.8 -6.0     -50.5    76      152   16 08 41

16 10 20  J0151+5134   19 30 48  36.2  49.9 -6.4     -47.8   -24      152   No stop
16 12 00  ---          19 32 28  36.4  50.1 -6.3     -48.0    76      178   16 10 21

16 12 00  J0132+5211   19 32 28  39.1  52.0 -6.0     -50.7   -24      178   No stop
16 13 40  ---          19 34 08  39.3  52.2 -6.0     -50.9    76      204   16 12 01

16 14 10  J0151+5134   19 34 38  36.7  50.4 -6.3     -48.3     6      204   16 14 10
16 15 20  ---          19 35 49  36.8  50.6 -6.3     -48.4    70      222   16 14 11

16 15 20  J0132+5211   19 35 49  39.5  52.4 -6.0     -51.1   -24      222   No stop
16 17 00  ---          19 37 29  39.7  52.6 -5.9     -51.3    76      247   16 15 21

16 17 00  J0151+5134   19 37 29  37.0  50.8 -6.3     -48.6   -24      247   No stop
16 18 40  ---          19 39 09  37.2  51.0 -6.2     -48.8    76      273   16 17 01
```

Schedule for TORUN (Code Tr) Page 3

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
16 18 40	J0132+5211	19 39 09	39.9	52.8	-5.9		-51.5	-24	273	No stop
16 20 20	---	19 40 49	40.1	53.1	-5.9		-51.7	76	299	16 18 41
16 20 50	J0151+5134	19 41 20	37.5	51.3	-6.2		-49.1	6	299	16 20 50
16 22 00	---	19 42 30	37.6	51.4	-6.2		-49.2	70	317	16 20 51
16 22 00	J0132+5211	19 42 30	40.3	53.3	-5.9		-51.9	-24	317	No stop
16 23 40	---	19 44 10	40.5	53.5	-5.8		-52.1	76	343	16 22 01
16 23 40	J0151+5134	19 44 10	37.8	51.6	-6.1		-49.4	-24	343	No stop
16 25 20	---	19 45 50	38.0	51.9	-6.1		-49.6	76	368	16 23 41
16 25 20	J0132+5211	19 45 50	40.7	53.7	-5.8		-52.3	-24	368	No stop
16 27 00	---	19 47 31	40.9	53.9	-5.8		-52.5	76	394	16 25 21
16 27 30	J0151+5134	19 48 01	38.3	52.1	-6.1		-49.9	6	394	16 27 30
16 28 40	---	19 49 11	38.4	52.3	-6.1		-50.0	70	412	16 27 31
16 28 40	J0132+5211	19 49 11	41.1	54.1	-5.7		-52.7	-24	412	No stop
16 30 20	---	19 50 51	41.3	54.3	-5.7		-52.9	76	438	16 28 41
16 30 20	J0151+5134	19 50 51	38.6	52.5	-6.0		-50.2	-24	438	No stop
16 32 00	---	19 52 31	38.8	52.7	-6.0		-50.4	76	464	16 30 21
16 32 00	J0132+5211	19 52 31	41.5	54.5	-5.7		-53.1	-24	464	No stop
16 33 40	---	19 54 12	41.7	54.7	-5.7		-53.3	76	490	16 32 01
16 34 10	J0151+5134	19 54 42	39.1	53.0	-6.0		-50.6	6	490	16 34 10
16 35 20	---	19 55 52	39.2	53.1	-6.0		-50.8	70	508	16 34 11
16 35 20	J0132+5211	19 55 52	41.9	54.9	-5.6		-53.5	-24	508	No stop
16 37 00	---	19 57 32	42.1	55.1	-5.6		-53.6	76	533	16 35 21
16 37 00	J0151+5134	19 57 32	39.4	53.3	-5.9		-51.0	-24	533	No stop
16 38 40	---	19 59 13	39.6	53.6	-5.9		-51.2	76	559	16 37 01
16 38 40	J0132+5211	19 59 13	42.3	55.3	-5.6		-53.8	-24	559	No stop
16 40 20	---	20 00 53	42.6	55.5	-5.5		-54.0	76	585	16 38 41
16 40 50	J0151+5134	20 01 23	39.9	53.8	-5.9		-51.4	6	585	16 40 50
16 42 00	---	20 02 33	40.0	54.0	-5.8		-51.6	70	603	16 40 51
16 42 00	J0132+5211	20 02 33	42.8	55.7	-5.5		-54.2	-24	603	No stop
16 43 40	---	20 04 13	43.0	55.9	-5.5		-54.4	76	629	16 42 01
16 43 40	J0151+5134	20 04 13	40.2	54.2	-5.8		-51.7	-24	629	No stop
16 45 20	---	20 05 54	40.4	54.4	-5.8		-51.9	76	654	16 43 41
16 45 20	J0132+5211	20 05 54	43.2	56.1	-5.5		-54.6	-24	654	No stop
16 47 00	---	20 07 34	43.4	56.3	-5.4		-54.8	76	680	16 45 21

Schedule for TORUN (Code Tr) Page 4

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
16 47 30	J0151+5134	20 08 04	40.7	54.7	-5.7		-52.2	6	680	16 47 30
16 48 40	---	20 09 14	40.8	54.8	-5.7		-52.3	70	698	16 47 31
16 48 40	J0132+5211	20 09 14	43.6	56.5	-5.4		-55.0	-24	698	No stop
16 50 20	---	20 10 54	43.8	56.7	-5.4		-55.2	76	724	16 48 41
16 50 20	J0151+5134	20 10 54	41.0	55.0	-5.7		-52.5	-24	724	No stop
16 52 00	---	20 12 35	41.2	55.2	-5.7		-52.7	76	750	16 50 21
16 52 00	J0132+5211	20 12 35	44.0	56.9	-5.4		-55.4	-24	750	No stop
16 53 40	---	20 14 15	44.2	57.1	-5.3		-55.6	76	775	16 52 01
16 54 10	J0151+5134	20 14 45	41.5	55.5	-5.6		-53.0	6	775	16 54 10
16 55 20	---	20 15 55	41.6	55.7	-5.6		-53.1	70	794	16 54 11
16 55 20	J0132+5211	20 15 55	44.4	57.3	-5.3		-55.8	-25	794	No stop
16 57 00	---	20 17 36	44.6	57.5	-5.3		-55.9	75	819	16 55 21
16 57 00	J0151+5134	20 17 36	41.8	55.9	-5.6		-53.3	-24	819	No stop
16 58 40	---	20 19 16	42.1	56.1	-5.6		-53.5	76	845	16 57 01
16 58 40	J0132+5211	20 19 16	44.9	57.7	-5.2		-56.1	-25	845	No stop
17 00 20	---	20 20 56	45.1	57.9	-5.2		-56.3	75	871	16 58 41
17 00 50	J0151+5134	20 21 26	42.3	56.3	-5.5		-53.7	6	871	17 00 50
17 02 00	---	20 22 36	42.5	56.5	-5.5		-53.8	70	889	17 00 51
17 02 00	J0132+5211	20 22 36	45.3	58.1	-5.2		-56.5	-25	889	No stop
17 03 40	---	20 24 17	45.5	58.3	-5.2		-56.7	75	915	17 02 01
17 03 40	J0151+5134	20 24 17	42.7	56.7	-5.5		-54.0	-24	915	No stop
17 05 20	---	20 25 57	42.9	56.9	-5.5		-54.2	76	940	17 03 41
17 05 20	J0132+5211	20 25 57	45.7	58.5	-5.1		-56.9	-25	940	No stop
17 07 00	---	20 27 37	45.9	58.7	-5.1		-57.1	75	966	17 05 21
17 07 30	J0151+5134	20 28 07	43.2	57.2	-5.4		-54.5	6	966	17 07 30
17 08 40	---	20 29 17	43.3	57.3	-5.4		-54.6	70	984	17 07 31
17 08 40	J0132+5211	20 29 17	46.1	58.9	-5.1		-57.3	-25	984	No stop
17 10 20	---	20 30 58	46.4	59.1	-5.0		-57.4	75	1010	17 08 41
17 10 20	J0151+5134	20 30 58	43.5	57.5	-5.4		-54.8	-24	1010	No stop
17 12 00	---	20 32 38	43.7	57.7	-5.3		-55.0	76	1036	17 10 21

Schedule for TORUN (Code Tr) Page 5

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
17 12 00	J0132+5211	20 32 38	46.6	59.3	-5.0		-57.6	-25	1036	No stop
17 13 40	---	20 34 18	46.8	59.5	-5.0		-57.8	75	1061	17 12 01
17 14 10	J0151+5134	20 34 48	44.0	58.0	-5.3		-55.2	6	1061	17 14 10
17 15 20	---	20 35 59	44.2	58.1	-5.3		-55.3	70	1080	17 14 11
17 15 20	J0132+5211	20 35 59	47.0	59.7	-5.0		-58.0	-25	1080	No stop
17 17 00	---	20 37 39	47.2	59.9	-4.9		-58.2	75	1105	17 15 21
17 17 00	J0151+5134	20 37 39	44.4	58.3	-5.3		-55.5	-24	1105	No stop
17 18 40	---	20 39 19	44.6	58.5	-5.2		-55.7	76	1131	17 17 01
17 18 40	J0132+5211	20 39 19	47.4	60.1	-4.9		-58.4	-25	1131	No stop
17 20 20	---	20 40 59	47.7	60.3	-4.9		-58.6	75	1157	17 18 41
17 20 50	J0151+5134	20 41 29	44.9	58.8	-5.2		-55.9	6	1157	17 20 50
17 22 00	---	20 42 40	45.0	59.0	-5.2		-56.1	70	1175	17 20 51
17 22 00	J0132+5211	20 42 40	47.9	60.5	-4.8		-58.7	-25	1175	No stop
17 23 40	---	20 44 20	48.1	60.7	-4.8		-58.9	75	1201	17 22 01
17 23 40	J0151+5134	20 44 20	45.2	59.2	-5.1		-56.2	-24	1201	No stop
17 25 20	---	20 46 00	45.4	59.4	-5.1		-56.4	76	1226	17 23 41
17 25 20	J0132+5211	20 46 00	48.3	60.9	-4.8		-59.1	-25	1226	No stop
17 27 00	---	20 47 40	48.5	61.1	-4.8		-59.3	75	1252	17 25 21
17 27 30	J0151+5134	20 48 11	45.7	59.6	-5.1		-56.7	6	1252	17 27 30
17 28 40	---	20 49 21	45.9	59.8	-5.1		-56.8	70	1270	17 27 31
17 28 40	J0132+5211	20 49 21	48.7	61.3	-4.7		-59.5	-25	1270	No stop
17 30 20	---	20 51 01	49.0	61.5	-4.7		-59.7	75	1296	17 28 41
17 30 20	J0151+5134	20 51 01	46.1	60.0	-5.0		-57.0	-24	1296	No stop
17 32 00	---	20 52 41	46.3	60.2	-5.0		-57.2	76	1322	17 30 21
17 32 00	J0132+5211	20 52 41	49.2	61.7	-4.7		-59.8	-25	1322	No stop
17 33 40	---	20 54 22	49.4	61.9	-4.7		-60.0	75	1347	17 32 01
17 34 10	J0151+5134	20 54 52	46.6	60.4	-5.0		-57.4	5	1347	17 34 10
17 35 20	---	20 56 02	46.8	60.6	-5.0		-57.5	70	1365	17 34 11
17 35 20	J0132+5211	20 56 02	49.6	62.1	-4.6		-60.2	-25	1365	No stop
17 37 00	---	20 57 42	49.9	62.3	-4.6		-60.4	75	1391	17 35 21

Schedule for TORUN (Code Tr) Page 6

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
17 37 00	J0151+5134	20 57 42	47.0	60.8	-4.9		-57.7	-25	1391	No stop
17 38 40	---	20 59 22	47.2	61.0	-4.9		-57.9	75	1417	17 37 01
17 38 40	J0132+5211	20 59 22	50.1	62.5	-4.6		-60.6	-25	1417	No stop
17 40 20	---	21 01 03	50.3	62.7	-4.5		-60.7	75	1443	17 38 41
17 40 50	J0151+5134	21 01 33	47.5	61.3	-4.9		-58.1	5	1443	17 40 50
17 42 00	---	21 02 43	47.6	61.4	-4.8		-58.2	70	1461	17 40 51
17 51 50	J0237+2848	21 12 35	27.6	77.7	-5.4		-42.1	496	1461	17 51 50
17 55 40	---	21 16 25	28.1	78.4	-5.4		-42.2	230	1520	17 51 51
18 17 10	J0137+0923	21 37 59	25.2	108.9	-4.0		-35.2	1223	1520	18 17 10
18 18 40	---	21 39 29	25.4	109.2	-4.0		-35.1	90	1543	18 17 11
18 18 40	J0139+0824	21 39 29	24.3	109.3	-4.0		-35.0	-17	1543	No stop
18 20 20	---	21 41 09	24.6	109.7	-4.0		-34.9	83	1569	18 18 41
18 20 20	J0137+0923	21 41 09	25.7	109.6	-4.0		-35.0	-17	1569	No stop
18 22 00	---	21 42 49	25.9	109.9	-3.9		-34.9	83	1595	18 20 21
18 22 00	J0139+0824	21 42 49	24.8	110.1	-4.0		-34.8	-17	1595	No stop
18 23 40	---	21 44 30	25.0	110.5	-3.9		-34.7	83	1621	18 22 01
18 24 10	J0137+0923	21 45 00	26.2	110.4	-3.9		-34.8	13	1621	18 24 10
18 25 20	---	21 46 10	26.4	110.7	-3.9		-34.7	70	1639	18 24 11
18 25 20	J0139+0824	21 46 10	25.3	110.8	-3.9		-34.6	-17	1639	No stop
18 27 00	---	21 47 50	25.5	111.2	-3.9		-34.5	83	1664	18 25 21
18 27 00	J0137+0923	21 47 50	26.6	111.1	-3.9		-34.6	-17	1664	No stop
18 28 40	---	21 49 31	26.8	111.5	-3.8		-34.5	83	1690	18 27 01
18 28 40	J0139+0824	21 49 31	25.7	111.6	-3.9		-34.4	-17	1690	No stop
18 30 20	---	21 51 11	26.0	112.0	-3.8		-34.3	83	1716	18 28 41
18 30 50	J0137+0923	21 51 41	27.1	111.9	-3.8		-34.4	13	1716	18 30 50
18 32 00	---	21 52 51	27.3	112.2	-3.8		-34.3	70	1734	18 30 51
18 32 00	J0139+0824	21 52 51	26.2	112.4	-3.8		-34.2	-17	1734	No stop
18 33 40	---	21 54 31	26.4	112.7	-3.8		-34.1	83	1760	18 32 01
18 33 40	J0137+0923	21 54 31	27.5	112.6	-3.7		-34.2	-17	1760	No stop
18 35 20	---	21 56 12	27.8	113.0	-3.7		-34.1	83	1785	18 33 41

Schedule for TORUN (Code Tr) Page 7

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
18 35 20	J0139+0824	21 56 12	26.7	113.1	-3.7		-33.9	-17	1785	No stop
18 37 00	---	21 57 52	26.9	113.5	-3.7		-33.8	83	1811	18 35 21
18 37 30	J0137+0923	21 58 22	28.1	113.5	-3.7		-33.9	13	1811	18 37 30
18 38 40	---	21 59 32	28.2	113.8	-3.7		-33.9	70	1829	18 37 31
18 38 40	J0139+0824	21 59 32	27.1	113.9	-3.7		-33.7	-17	1829	No stop
18 40 20	---	22 01 12	27.3	114.3	-3.7		-33.6	83	1855	18 38 41
18 40 20	J0137+0923	22 01 12	28.4	114.1	-3.6		-33.7	-17	1855	No stop
18 42 00	---	22 02 53	28.7	114.5	-3.6		-33.6	83	1881	18 40 21
18 42 00	J0139+0824	22 02 53	27.6	114.7	-3.6		-33.5	-17	1881	No stop
18 43 40	---	22 04 33	27.8	115.1	-3.6		-33.4	83	1907	18 42 01
18 44 10	J0137+0923	22 05 03	29.0	115.0	-3.6		-33.5	13	1907	18 44 10
18 45 20	---	22 06 13	29.1	115.3	-3.5		-33.4	70	1925	18 44 11
18 45 20	J0139+0824	22 06 13	28.0	115.4	-3.6		-33.2	-17	1925	No stop
18 47 00	---	22 07 54	28.3	115.8	-3.6		-33.1	83	1950	18 45 21
18 47 00	J0137+0923	22 07 54	29.4	115.7	-3.5		-33.3	-17	1950	No stop
18 48 40	---	22 09 34	29.6	116.1	-3.5		-33.1	83	1976	18 47 01
18 48 40	J0139+0824	22 09 34	28.5	116.2	-3.5		-33.0	-17	1976	No stop
18 50 20	---	22 11 14	28.7	116.6	-3.5		-32.9	83	2002	18 48 41
18 50 50	J0137+0923	22 11 44	29.9	116.6	-3.5		-33.0	13	2002	18 50 50
18 52 00	---	22 12 54	30.0	116.9	-3.4		-32.9	70	2020	18 50 51
18 52 00	J0139+0824	22 12 54	28.9	117.0	-3.5		-32.7	-17	2020	No stop
18 53 40	---	22 14 35	29.2	117.4	-3.4		-32.6	83	2046	18 52 01
18 53 40	J0137+0923	22 14 35	30.3	117.3	-3.4		-32.7	-17	2046	No stop
18 55 20	---	22 16 15	30.5	117.7	-3.4		-32.6	83	2071	18 53 41
18 55 20	J0139+0824	22 16 15	29.4	117.8	-3.4		-32.5	-17	2071	No stop
18 57 00	---	22 17 55	29.6	118.2	-3.4		-32.3	83	2097	18 55 21
18 57 30	J0137+0923	22 18 25	30.8	118.2	-3.3		-32.4	13	2097	18 57 30
18 58 40	---	22 19 35	30.9	118.5	-3.3		-32.3	70	2115	18 57 31
18 58 40	J0139+0824	22 19 35	29.8	118.6	-3.4		-32.2	-17	2115	No stop
19 00 20	---	22 21 16	30.0	119.0	-3.3		-32.1	83	2141	18 58 41

Schedule for TORUN (Code Tr) Page 8

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
19 00 20	J0137+0923	22 21 16	31.1	118.9	-3.3		-32.2	-17	2141	No stop
19 02 00	---	22 22 56	31.4	119.3	-3.3		-32.1	83	2167	19 00 21
19 02 00	J0139+0824	22 22 56	30.3	119.4	-3.3		-31.9	-17	2167	No stop
19 03 40	---	22 24 36	30.5	119.8	-3.3		-31.8	83	2193	19 02 01
19 04 10	J0137+0923	22 25 06	31.6	119.9	-3.2		-31.9	13	2193	19 04 10
19 05 20	---	22 26 17	31.8	120.2	-3.2		-31.8	70	2211	19 04 11
19 05 20	J0139+0824	22 26 17	30.7	120.2	-3.2		-31.6	-17	2211	No stop
19 07 00	---	22 27 57	30.9	120.7	-3.2		-31.5	83	2236	19 05 21
19 07 00	J0137+0923	22 27 57	32.0	120.6	-3.2		-31.6	-17	2236	No stop
19 08 40	---	22 29 37	32.2	121.0	-3.2		-31.5	83	2262	19 07 01
19 08 40	J0139+0824	22 29 37	31.1	121.1	-3.2		-31.3	-17	2262	No stop
19 10 20	---	22 31 17	31.3	121.5	-3.2		-31.2	83	2288	19 08 41
19 10 50	J0137+0923	22 31 47	32.5	121.5	-3.1		-31.3	13	2288	19 10 50
19 12 00	---	22 32 58	32.7	121.8	-3.1		-31.2	70	2306	19 10 51
19 12 00	J0139+0824	22 32 58	31.5	121.9	-3.1		-31.0	-17	2306	No stop
19 13 40	---	22 34 38	31.8	122.3	-3.1		-30.9	83	2332	19 12 01
19 13 40	J0137+0923	22 34 38	32.9	122.2	-3.1		-31.0	-17	2332	No stop
19 15 20	---	22 36 18	33.1	122.7	-3.0		-30.8	83	2357	19 13 41
19 15 20	J0139+0824	22 36 18	32.0	122.7	-3.1		-30.7	-17	2357	No stop
19 17 00	---	22 37 59	32.2	123.1	-3.1		-30.6	83	2383	19 15 21
19 17 30	J0137+0923	22 38 29	33.4	123.2	-3.0		-30.6	13	2383	19 17 30
19 18 40	---	22 39 39	33.5	123.5	-3.0		-30.5	70	2401	19 17 31
19 18 40	J0139+0824	22 39 39	32.4	123.6	-3.0		-30.4	-17	2401	No stop
19 20 20	---	22 41 19	32.6	124.0	-3.0		-30.2	83	2427	19 18 41
19 20 20	J0137+0923	22 41 19	33.7	123.9	-3.0		-30.3	-17	2427	No stop
19 22 00	---	22 42 59	33.9	124.4	-2.9		-30.2	83	2453	19 20 21
19 22 00	J0139+0824	22 42 59	32.8	124.4	-3.0		-30.1	-17	2453	No stop
19 23 40	---	22 44 40	33.0	124.8	-2.9		-29.9	83	2478	19 22 01
19 24 10	J0137+0923	22 45 10	34.2	124.9	-2.9		-29.9	13	2478	19 24 10
19 25 20	---	22 46 20	34.3	125.2	-2.9		-29.8	70	2497	19 24 11

Schedule for TORUN (Code Tr) Page 9

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
19 25 20	J0139+0824	22 46 20	33.2	125.3	-2.9		-29.7	-17	2497	No stop
19 27 00	---	22 48 00	33.4	125.7	-2.9		-29.5	83	2522	19 25 21
19 27 00	J0137+0923	22 48 00	34.5	125.7	-2.8		-29.6	-17	2522	No stop
19 28 40	---	22 49 40	34.7	126.1	-2.8		-29.5	83	2548	19 27 01
19 28 40	J0139+0824	22 49 40	33.6	126.1	-2.9		-29.4	-17	2548	No stop
19 30 20	---	22 51 21	33.8	126.6	-2.8		-29.2	83	2574	19 28 41
19 30 50	J0137+0923	22 51 51	35.0	126.7	-2.8		-29.2	13	2574	19 30 50
19 32 00	---	22 53 01	35.1	127.0	-2.8		-29.1	70	2592	19 30 51
19 32 00	J0139+0824	22 53 01	34.0	127.0	-2.8		-29.0	-17	2592	No stop
19 33 40	---	22 54 41	34.2	127.4	-2.8		-28.8	83	2618	19 32 01
19 33 40	J0137+0923	22 54 41	35.3	127.4	-2.7		-28.9	-17	2618	No stop
19 35 20	---	22 56 22	35.5	127.9	-2.7		-28.7	83	2643	19 33 41
19 35 20	J0139+0824	22 56 22	34.4	127.9	-2.7		-28.6	-17	2643	No stop
19 37 00	---	22 58 02	34.6	128.3	-2.7		-28.5	83	2669	19 35 21
19 37 30	J0137+0923	22 58 32	35.8	128.4	-2.7		-28.5	13	2669	19 37 30
19 38 40	---	22 59 42	35.9	128.7	-2.7		-28.3	70	2687	19 37 31
19 38 40	J0139+0824	22 59 42	34.8	128.8	-2.7		-28.3	-17	2687	No stop
19 40 20	---	23 01 22	35.0	129.2	-2.7		-28.1	83	2713	19 38 41
19 40 20	J0137+0923	23 01 22	36.1	129.2	-2.6		-28.2	-17	2713	No stop
19 42 00	---	23 03 03	36.3	129.6	-2.6		-28.0	83	2739	19 40 21
19 42 00	J0139+0824	23 03 03	35.2	129.6	-2.6		-27.9	-17	2739	No stop
19 43 40	---	23 04 43	35.4	130.1	-2.6		-27.7	83	2764	19 42 01
19 44 10	J0137+0923	23 05 13	36.6	130.2	-2.6		-27.7	13	2764	19 44 10
19 45 20	---	23 06 23	36.7	130.6	-2.5		-27.6	70	2782	19 44 11
19 45 20	J0139+0824	23 06 23	35.6	130.5	-2.6		-27.5	-17	2782	No stop
19 47 00	---	23 08 03	35.8	131.0	-2.5		-27.3	83	2808	19 45 21
19 47 00	J0137+0923	23 08 03	36.9	131.0	-2.5		-27.3	-17	2808	No stop
19 48 40	---	23 09 44	37.1	131.5	-2.5		-27.1	83	2834	19 47 01
19 48 40	J0139+0824	23 09 44	36.0	131.5	-2.5		-27.1	-17	2834	No stop
19 50 20	---	23 11 24	36.2	131.9	-2.5		-26.9	83	2860	19 48 41

Schedule for TORUN (Code Tr) Page 10

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
19 50 50	J0137+0923	23 11 54	37.3	132.1	-2.5		-26.9	13	2860	19 50 50
19 52 00	---	23 13 04	37.5	132.4	-2.4		-26.7	70	2878	19 50 51
19 52 00	J0139+0824	23 13 04	36.3	132.4	-2.5		-26.7	-17	2878	No stop
19 53 40	---	23 14 45	36.5	132.8	-2.4		-26.4	83	2904	19 52 01
19 53 40	J0137+0923	23 14 45	37.6	132.9	-2.4		-26.5	-17	2904	No stop
19 55 20	---	23 16 25	37.8	133.3	-2.4		-26.3	83	2929	19 53 41
19 55 20	J0139+0824	23 16 25	36.7	133.3	-2.4		-26.2	-17	2929	No stop
19 57 00	---	23 18 05	36.9	133.7	-2.4		-26.0	83	2955	19 55 21
19 57 30	J0137+0923	23 18 35	38.1	133.9	-2.3		-26.0	13	2955	19 57 30
19 58 40	---	23 19 45	38.2	134.3	-2.3		-25.8	70	2973	19 57 31
19 58 40	J0139+0824	23 19 45	37.1	134.2	-2.4		-25.8	-17	2973	No stop
20 00 20	---	23 21 26	37.3	134.7	-2.3		-25.6	83	2999	19 58 41
20 00 20	J0137+0923	23 21 26	38.4	134.7	-2.3		-25.6	-17	2999	No stop
20 02 00	---	23 23 06	38.5	135.2	-2.3		-25.4	83	3025	20 00 21
20 02 00	J0139+0824	23 23 06	37.4	135.2	-2.3		-25.4	-17	3025	No stop
20 03 40	---	23 24 46	37.6	135.6	-2.3		-25.1	83	3050	20 02 01
20 04 10	J0137+0923	23 25 16	38.8	135.8	-2.2		-25.1	13	3050	20 04 10
20 05 20	---	23 26 26	38.9	136.2	-2.2		-24.9	70	3068	20 04 11
20 05 20	J0139+0824	23 26 26	37.8	136.1	-2.2		-24.9	-17	3068	No stop
20 07 00	---	23 28 07	38.0	136.6	-2.2		-24.7	83	3094	20 05 21
20 07 00	J0137+0923	23 28 07	39.1	136.6	-2.2		-24.7	-17	3094	No stop
20 08 40	---	23 29 47	39.2	137.1	-2.2		-24.5	83	3120	20 07 01
20 08 40	J0139+0824	23 29 47	38.1	137.0	-2.2		-24.4	-17	3120	No stop
20 10 20	---	23 31 27	38.3	137.5	-2.2		-24.2	83	3146	20 08 41
20 10 50	J0137+0923	23 31 57	39.5	137.8	-2.1		-24.2	13	3146	20 10 50
20 12 00	---	23 33 08	39.6	138.1	-2.1		-24.0	70	3164	20 10 51
20 12 00	J0139+0824	23 33 08	38.5	138.0	-2.1		-24.0	-17	3164	No stop
20 13 40	---	23 34 48	38.6	138.5	-2.1		-23.7	83	3190	20 12 01
20 13 40	J0137+0923	23 34 48	39.7	138.6	-2.1		-23.7	-17	3190	No stop
20 15 20	---	23 36 28	39.9	139.1	-2.0		-23.5	83	3215	20 13 41

Schedule for TORUN (Code Tr) Page 11

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
20 15 20	J0139+0824	23 36 28	38.8	139.0	-2.1		-23.5	-17	3215	No stop
20 17 00	---	23 38 08	39.0	139.5	-2.0		-23.2	83	3241	20 15 21
20 17 30	J0137+0923	23 38 38	40.1	139.7	-2.0		-23.2	13	3241	20 17 30
20 18 40	---	23 39 49	40.2	140.1	-2.0		-23.0	70	3259	20 17 31
20 18 40	J0139+0824	23 39 49	39.1	140.0	-2.0		-23.0	-17	3259	No stop
20 20 20	---	23 41 29	39.3	140.4	-2.0		-22.7	83	3285	20 18 41
20 20 20	J0137+0923	23 41 29	40.4	140.6	-2.0		-22.7	-17	3285	No stop
20 22 00	---	23 43 09	40.6	141.1	-1.9		-22.5	83	3311	20 20 21
20 22 00	J0139+0824	23 43 09	39.4	140.9	-2.0		-22.5	-17	3311	No stop
20 23 40	---	23 44 49	39.6	141.4	-1.9		-22.2	83	3336	20 22 01
20 24 10	J0137+0923	23 45 20	40.8	141.7	-1.9		-22.2	13	3336	20 24 10
20 25 20	---	23 46 30	40.9	142.1	-1.9		-22.0	70	3354	20 24 11
20 25 20	J0139+0824	23 46 30	39.8	141.9	-1.9		-22.0	-17	3354	No stop
20 27 00	---	23 48 10	39.9	142.4	-1.9		-21.7	83	3380	20 25 21
20 27 00	J0137+0923	23 48 10	41.0	142.6	-1.8		-21.7	-17	3380	No stop
20 28 40	---	23 49 50	41.2	143.1	-1.8		-21.4	83	3406	20 27 01
20 28 40	J0139+0824	23 49 50	40.1	142.9	-1.9		-21.5	-17	3406	No stop
20 30 20	---	23 51 31	40.2	143.4	-1.8		-21.2	83	3432	20 28 41
20 30 50	J0137+0923	23 52 01	41.4	143.8	-1.8		-21.1	13	3432	20 30 50
20 32 00	---	23 53 11	41.5	144.1	-1.8		-20.9	70	3450	20 30 51
20 42 00	J0053+2925	00 03 12	64.6	153.0	-0.9		-18.2	502	3450	20 42 00
20 43 10	---	00 04 23	64.7	153.6	-0.8		-17.9	70	3468	20 42 01
20 43 10	J0044+2858	00 04 23	64.8	158.5	-0.7		-14.6	-25	3468	No stop
20 45 00	---	00 06 13	64.9	159.4	-0.7		-14.0	85	3496	20 43 11
20 45 00	J0053+2925	00 06 13	64.8	154.5	-0.8		-17.3	-25	3496	No stop
20 46 50	---	00 08 03	64.9	155.4	-0.8		-16.7	85	3524	20 45 01
20 46 50	J0044+2858	00 08 03	65.0	160.3	-0.6		-13.4	-25	3524	No stop
20 48 40	---	00 09 54	65.1	161.3	-0.6		-12.8	85	3553	20 46 51
20 49 20	J0053+2925	00 10 34	65.1	156.6	-0.7		-15.9	15	3553	20 49 20
20 50 30	---	00 11 44	65.1	157.2	-0.7		-15.5	70	3571	20 49 21

Schedule for TORUN (Code Tr) Page 12

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
20 50 30	J0044+2858	00 11 44	65.2	162.2	-0.6		-12.1	-25	3571	No stop
20 52 20	---	00 13 34	65.3	163.1	-0.5		-11.5	85	3599	20 50 31
20 52 20	J0053+2925	00 13 34	65.3	158.1	-0.7		-14.9	-25	3599	No stop
20 54 10	---	00 15 24	65.4	159.1	-0.7		-14.3	85	3628	20 52 21
20 54 10	J0044+2858	00 15 24	65.4	164.1	-0.5		-10.9	-25	3628	No stop
20 56 00	---	00 17 15	65.4	165.0	-0.5		-10.2	85	3656	20 54 11
20 56 40	J0053+2925	00 17 55	65.5	160.3	-0.6		-13.4	15	3656	20 56 40
20 57 50	---	00 19 05	65.5	160.9	-0.6		-13.0	70	3674	20 56 41
20 57 50	J0044+2858	00 19 05	65.5	166.0	-0.4		-9.6	-25	3674	No stop
20 59 40	---	00 20 55	65.6	166.9	-0.4		-8.9	85	3702	20 57 51
20 59 40	J0053+2925	00 20 55	65.6	161.9	-0.6		-12.4	-25	3702	No stop
21 01 30	---	00 22 46	65.7	162.8	-0.5		-11.8	85	3731	20 59 41
21 01 30	J0044+2858	00 22 46	65.6	167.9	-0.4		-8.3	-26	3731	No stop
21 03 20	---	00 24 36	65.7	168.9	-0.3		-7.6	84	3759	21 01 31
21 04 00	J0053+2925	00 25 16	65.8	164.1	-0.5		-10.9	15	3759	21 04 00
21 05 10	---	00 26 26	65.9	164.7	-0.5		-10.5	70	3777	21 04 01
21 05 10	J0044+2858	00 26 26	65.7	169.8	-0.3		-7.0	-26	3777	No stop
21 07 00	---	00 28 17	65.8	170.8	-0.3		-6.3	84	3805	21 05 11
21 07 00	J0053+2925	00 28 17	65.9	165.7	-0.4		-9.8	-25	3805	No stop
21 08 50	---	00 30 07	66.0	166.7	-0.4		-9.2	85	3834	21 07 01
21 08 50	J0044+2858	00 30 07	65.8	171.8	-0.3		-5.6	-26	3834	No stop
21 10 40	---	00 31 57	65.9	172.8	-0.2		-5.0	84	3862	21 08 51
21 11 20	J0053+2925	00 32 37	66.1	168.0	-0.4		-8.3	15	3862	21 11 20
21 12 30	---	00 33 47	66.1	168.6	-0.4		-7.8	70	3880	21 11 21
21 12 30	J0044+2858	00 33 47	65.9	173.7	-0.2		-4.3	-26	3880	No stop
21 14 20	---	00 35 38	65.9	174.7	-0.2		-3.6	84	3908	21 12 31
21 14 20	J0053+2925	00 35 38	66.2	169.6	-0.3		-7.2	-25	3908	No stop
21 16 10	---	00 37 28	66.2	170.6	-0.3		-6.5	85	3937	21 14 21
21 16 10	J0044+2858	00 37 28	65.9	175.7	-0.1		-3.0	-26	3937	No stop
21 18 00	---	00 39 18	66.0	176.7	-0.1		-2.3	84	3965	21 16 11

Schedule for TORUN (Code Tr) Page 13

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
21 18 40	J0053+2925	00 39 58	66.3	171.9	-0.2		-5.6	15	3965	21 18 40
21 19 50	---	00 41 09	66.3	172.6	-0.2		-5.1	70	3983	21 18 41
21 19 50	J0044+2858	00 41 09	66.0	177.7	-0.1		-1.6	-26	3983	No stop
21 21 40	---	00 42 59	66.0	178.7	-0.0		-0.9	84	4011	21 19 51
21 21 40	J0053+2925	00 42 59	66.3	173.5	-0.2		-4.4	-25	4011	No stop
21 23 30	---	00 44 49	66.4	174.5	-0.2		-3.8	85	4040	21 21 41
21 23 30	J0044+2858	00 44 49	66.0	179.6	-0.0		-0.2	-26	4040	No stop
21 25 20	---	00 46 40	66.0	180.6	0.0		0.4	84	4068	21 23 31
21 26 00	J0053+2925	00 47 20	66.4	175.9	-0.1		-2.8	15	4068	21 26 00
21 27 10	---	00 48 30	66.4	176.5	-0.1		-2.4	70	4086	21 26 01
21 27 10	J0044+2858	00 48 30	66.0	181.6	0.1		1.1	-26	4086	No stop
21 29 00	---	00 50 20	66.0	182.6	0.1		1.8	84	4114	21 27 11
21 29 00	J0053+2925	00 50 20	66.4	177.5	-0.1		-1.7	-25	4114	No stop
21 30 50	---	00 52 10	66.4	178.5	-0.0		-1.0	85	4143	21 29 01
21 30 50	J0044+2858	00 52 10	66.0	183.6	0.1		2.5	-25	4143	No stop
21 32 40	---	00 54 01	65.9	184.6	0.1		3.1	85	4171	21 30 51
21 33 20	J0053+2925	00 54 41	66.4	179.9	-0.0		-0.1	15	4171	21 33 20
21 34 30	---	00 55 51	66.4	180.5	0.0		0.4	70	4189	21 33 21
21 34 30	J0044+2858	00 55 51	65.9	185.6	0.2		3.8	-25	4189	No stop
21 36 20	---	00 57 41	65.9	186.5	0.2		4.5	85	4218	21 34 31
21 36 20	J0053+2925	00 57 41	66.4	181.5	0.0		1.1	-25	4218	No stop
21 38 10	---	00 59 32	66.4	182.5	0.1		1.7	85	4246	21 36 21
21 38 10	J0044+2858	00 59 32	65.9	187.5	0.2		5.2	-25	4246	No stop
21 40 00	---	01 01 22	65.8	188.5	0.3		5.8	85	4274	21 38 11
21 40 40	J0053+2925	01 02 02	66.4	183.9	0.1		2.7	15	4274	21 40 40
21 41 50	---	01 03 12	66.4	184.5	0.1		3.1	70	4292	21 40 41
21 41 50	J0044+2858	01 03 12	65.8	189.5	0.3		6.5	-25	4292	No stop
21 43 40	---	01 05 03	65.7	190.4	0.3		7.2	85	4321	21 41 51
21 43 40	J0053+2925	01 05 03	66.4	185.5	0.2		3.8	-24	4321	No stop
21 45 30	---	01 06 53	66.3	186.5	0.2		4.5	86	4349	21 43 41

Schedule for TORUN (Code Tr) Page 14

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
21 45 30	J0044+2858	01 06 53	65.7	191.4	0.4		7.8	-25	4349	No stop
21 47 20	---	01 08 43	65.6	192.4	0.4		8.5	85	4377	21 45 31
21 48 00	J0053+2925	01 09 23	66.3	187.9	0.2		5.4	16	4377	21 48 00
21 49 10	---	01 10 34	66.3	188.5	0.3		5.9	70	4395	21 48 01
21 49 10	J0044+2858	01 10 34	65.6	193.3	0.4		9.1	-25	4395	No stop
21 51 00	---	01 12 24	65.5	194.3	0.4		9.8	85	4424	21 49 11
21 51 00	J0053+2925	01 12 24	66.2	189.5	0.3		6.5	-24	4424	No stop
21 52 50	---	01 14 14	66.2	190.5	0.3		7.2	86	4452	21 51 01
21 52 50	J0044+2858	01 14 14	65.4	195.2	0.5		10.4	-25	4452	No stop
21 54 40	---	01 16 04	65.3	196.2	0.5		11.0	85	4480	21 52 51
21 55 20	J0053+2925	01 16 45	66.1	191.8	0.4		8.1	16	4480	21 55 20
21 56 30	---	01 17 55	66.1	192.4	0.4		8.5	70	4498	21 55 21
21 56 30	J0044+2858	01 17 55	65.3	197.1	0.5		11.7	-25	4498	No stop
21 58 20	---	01 19 45	65.2	198.1	0.6		12.3	85	4527	21 56 31
21 58 20	J0053+2925	01 19 45	66.0	193.4	0.4		9.2	-24	4527	No stop
22 00 10	---	01 21 35	65.9	194.4	0.4		9.9	86	4555	21 58 21
22 00 10	J0044+2858	01 21 35	65.1	199.0	0.6		12.9	-25	4555	No stop
22 02 00	---	01 23 26	65.0	199.9	0.6		13.5	85	4583	22 00 11
22 02 40	J0053+2925	01 24 06	65.8	195.7	0.5		10.8	16	4583	22 02 40
22 03 50	---	01 25 16	65.8	196.3	0.5		11.2	70	4601	22 02 41
22 03 50	J0044+2858	01 25 16	64.9	200.9	0.7		14.2	-24	4601	No stop
22 05 40	---	01 27 06	64.8	201.8	0.7		14.8	86	4630	22 03 51
22 05 40	J0053+2925	01 27 06	65.7	197.2	0.5		11.8	-24	4630	No stop
22 07 30	---	01 28 57	65.6	198.2	0.6		12.4	86	4658	22 05 41
22 07 30	J0044+2858	01 28 57	64.7	202.7	0.7		15.4	-24	4658	No stop
22 09 20	---	01 30 47	64.6	203.6	0.8		16.0	86	4686	22 07 31
22 10 00	J0053+2925	01 31 27	65.5	199.5	0.6		13.3	16	4686	22 10 00
22 11 10	---	01 32 37	65.4	200.1	0.6		13.7	70	4704	22 10 01
22 11 10	J0044+2858	01 32 37	64.5	204.5	0.8		16.5	-24	4704	No stop
22 13 00	---	01 34 27	64.4	205.4	0.8		17.1	86	4733	22 11 11

Schedule for TORUN (Code Tr) Page 15

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
22 13 00	J0053+2925	01 34 27	65.3	201.0	0.7		14.3	-23	4733	No stop
22 14 50	---	01 36 18	65.2	201.9	0.7		14.9	87	4761	22 13 01
22 14 50	J0044+2858	01 36 18	64.2	206.2	0.8		17.7	-24	4761	No stop
22 16 40	---	01 38 08	64.1	207.1	0.9		18.3	86	4790	22 14 51
22 17 20	J0053+2925	01 38 48	65.1	203.2	0.7		15.8	17	4790	22 17 20
22 18 30	---	01 39 58	65.0	203.8	0.8		16.1	70	4808	22 17 21
22 18 30	J0044+2858	01 39 58	64.0	208.0	0.9		18.8	-24	4808	No stop
22 20 20	---	01 41 49	63.9	208.9	0.9		19.4	86	4836	22 18 31
22 20 20	J0053+2925	01 41 49	64.9	204.7	0.8		16.7	-23	4836	No stop
22 22 10	---	01 43 39	64.8	205.6	0.8		17.3	87	4864	22 20 21
22 22 10	J0044+2858	01 43 39	63.7	209.7	1.0		19.9	-24	4864	No stop
22 24 00	---	01 45 29	63.6	210.6	1.0		20.5	86	4893	22 22 11
22 24 40	J0053+2925	01 46 09	64.6	206.8	0.9		18.1	17	4893	22 24 40
22 25 50	---	01 47 20	64.6	207.4	0.9		18.5	70	4911	22 24 41
22 25 50	J0044+2858	01 47 20	63.4	211.4	1.0		21.0	-23	4911	No stop
22 27 40	---	01 49 10	63.3	212.2	1.1		21.5	87	4939	22 25 51
22 27 40	J0053+2925	01 49 10	64.4	208.2	0.9		19.1	-23	4939	No stop
22 29 30	---	01 51 00	64.3	209.1	0.9		19.6	87	4967	22 27 41
22 29 30	J0044+2858	01 51 00	63.2	213.1	1.1		22.0	-23	4967	No stop
22 31 20	---	01 52 50	63.0	213.9	1.1		22.5	87	4996	22 29 31
22 32 00	J0053+2925	01 53 31	64.1	210.3	1.0		20.4	18	4996	22 32 00
22 33 10	---	01 54 41	64.0	210.8	1.0		20.7	70	5014	22 32 01
22 33 10	J0044+2858	01 54 41	62.8	214.7	1.2		23.0	-23	5014	No stop
22 35 00	---	01 56 31	62.7	215.5	1.2		23.5	87	5042	22 33 11
22 35 00	J0053+2925	01 56 31	63.9	211.7	1.0		21.2	-22	5042	No stop
22 36 50	---	01 58 21	63.7	212.5	1.1		21.8	88	5070	22 35 01
22 36 50	J0044+2858	01 58 21	62.5	216.3	1.2		24.0	-23	5070	No stop
22 38 40	---	02 00 12	62.4	217.1	1.2		24.5	87	5099	22 36 51
22 39 20	J0053+2925	02 00 52	63.5	213.7	1.1		22.5	18	5099	22 39 20
22 40 30	---	02 02 02	63.4	214.2	1.1		22.8	70	5117	22 39 21

Schedule for TORUN (Code Tr) Page 16

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 22 Oct 2020 Day 296 ---										
22 40 30	J0044+2858	02 02 02	62.2	217.9	1.3		25.0	-22	5117	No stop
22 42 20	---	02 03 52	62.0	218.7	1.3		25.4	88	5145	22 40 31
22 42 20	J0053+2925	02 03 52	63.3	215.0	1.2		23.3	-22	5145	No stop
22 44 10	---	02 05 43	63.1	215.8	1.2		23.8	88	5173	22 42 21
22 44 10	J0044+2858	02 05 43	61.8	219.4	1.3		25.9	-22	5173	No stop
22 46 00	---	02 07 33	61.7	220.2	1.4		26.3	88	5202	22 44 11
22 46 40	J0053+2925	02 08 13	62.9	216.9	1.2		24.5	18	5202	22 46 40
22 47 50	---	02 09 23	62.8	217.4	1.2		24.8	70	5220	22 46 41
22 47 50	J0044+2858	02 09 23	61.5	221.0	1.4		26.8	-22	5220	No stop
22 49 40	---	02 11 13	61.3	221.7	1.4		27.2	88	5248	22 47 51
22 49 40	J0053+2925	02 11 13	62.6	218.2	1.3		25.3	-21	5248	No stop
22 51 30	---	02 13 04	62.4	219.0	1.3		25.7	89	5276	22 49 41
22 51 30	J0044+2858	02 13 04	61.1	222.4	1.5		27.6	-22	5276	No stop
22 53 20	---	02 14 54	60.9	223.2	1.5		28.0	88	5305	22 51 31
22 54 00	J0053+2925	02 15 34	62.2	220.0	1.3		26.4	19	5305	22 54 00
22 55 10	---	02 16 44	62.1	220.5	1.4		26.6	70	5323	22 54 01
22 55 10	J0044+2858	02 16 44	60.7	223.9	1.5		28.5	-22	5323	No stop
22 57 00	---	02 18 35	60.6	224.6	1.6		28.9	88	5351	22 55 11
22 57 00	J0053+2925	02 18 35	61.9	221.3	1.4		27.1	-21	5351	No stop
22 58 50	---	02 20 25	61.7	222.0	1.4		27.5	89	5379	22 57 01
22 58 50	J0044+2858	02 20 25	60.4	225.3	1.6		29.3	-21	5379	No stop
23 00 40	---	02 22 15	60.2	226.0	1.6		29.6	89	5408	22 58 51
23 01 20	J0053+2925	02 22 55	61.5	223.1	1.5		28.1	19	5408	23 01 20
23 02 30	---	02 24 06	61.3	223.5	1.5		28.4	70	5426	23 01 21
23 02 30	J0044+2858	02 24 06	60.0	226.7	1.6		30.0	-21	5426	No stop
23 04 20	---	02 25 56	59.8	227.4	1.7		30.4	89	5454	23 02 31
23 04 20	J0053+2925	02 25 56	61.2	224.3	1.5		28.8	-21	5454	No stop
23 06 10	---	02 27 46	61.0	225.0	1.5		29.2	89	5483	23 04 21
23 06 10	J0044+2858	02 27 46	59.6	228.1	1.7		30.8	-21	5483	No stop
23 08 00	---	02 29 36	59.3	228.8	1.7		31.1	89	5511	23 06 11

Schedule for TORUN (Code Tr) Page 17

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
23 08 40	J0053+2925	02 30 17	60.7	226.0	1.6		29.7	20	5511	23 08 40
23 09 50	---	02 31 27	60.6	226.4	1.6		30.0	70	5529	23 08 41
23 09 50	J0044+2858	02 31 27	59.1	229.5	1.8		31.5	-21	5529	No stop
23 11 40	---	02 33 17	58.9	230.1	1.8		31.8	89	5557	23 09 51
23 12 20	J0053+2925	02 33 57	60.3	227.4	1.7		30.5	20	5557	23 12 20
23 13 30	---	02 35 07	60.2	227.8	1.7		30.7	70	5575	23 12 21
23 22 30	J0206-2212	02 44 09	14.4	188.8	0.6		5.7	355	5575	23 22 30
23 24 50	---	02 46 29	14.3	189.4	0.7		6.1	140	5611	23 22 31
23 24 50	J0210-2213	02 46 29	14.4	188.4	0.6		5.5	-13	5611	No stop
23 26 30	---	02 48 09	14.3	188.8	0.6		5.7	87	5637	23 24 51
23 26 30	J0206-2212	02 48 09	14.3	189.8	0.7		6.3	-14	5637	No stop
23 28 10	---	02 49 50	14.2	190.2	0.7		6.6	86	5663	23 26 31
23 28 10	J0210-2213	02 49 50	14.3	189.2	0.6		6.0	-13	5663	No stop
23 29 50	---	02 51 30	14.3	189.6	0.7		6.2	87	5689	23 28 11
23 30 20	J0206-2212	02 52 00	14.2	190.7	0.7		6.9	16	5689	23 30 20
23 31 30	---	02 53 10	14.1	190.9	0.8		7.1	70	5707	23 30 21
23 31 30	J0210-2213	02 53 10	14.2	190.0	0.7		6.5	-13	5707	No stop
23 33 10	---	02 54 51	14.2	190.4	0.7		6.7	87	5732	23 31 31
23 33 10	J0206-2212	02 54 51	14.1	191.3	0.8		7.3	-14	5732	No stop
23 34 50	---	02 56 31	14.0	191.7	0.8		7.6	86	5758	23 33 11
23 34 50	J0210-2213	02 56 31	14.1	190.8	0.8		7.0	-13	5758	No stop
23 36 30	---	02 58 11	14.1	191.2	0.8		7.2	87	5784	23 34 51
23 37 00	J0206-2212	02 58 41	14.0	192.3	0.9		7.9	16	5784	23 37 00
23 38 10	---	02 59 51	13.9	192.5	0.9		8.1	70	5802	23 37 01
23 38 10	J0210-2213	02 59 51	14.0	191.6	0.8		7.5	-13	5802	No stop
23 39 50	---	03 01 32	14.0	192.0	0.8		7.8	87	5828	23 38 11
23 39 50	J0206-2212	03 01 32	13.9	192.9	0.9		8.3	-14	5828	No stop
23 41 30	---	03 03 12	13.8	193.3	0.9		8.6	86	5854	23 39 51
23 41 30	J0210-2213	03 03 12	13.9	192.4	0.9		8.0	-13	5854	No stop
23 43 10	---	03 04 52	13.9	192.8	0.9		8.3	87	5879	23 41 31

Schedule for TORUN (Code Tr) Page 18

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 22 Oct 2020 Day 296 ---										
23 43 40	J0206-2212	03 05 22	13.7	193.8	1.0		8.9	16	5879	23 43 40
23 44 50	---	03 06 33	13.7	194.1	1.0		9.1	70	5897	23 43 41
23 44 50	J0210-2213	03 06 33	13.8	193.2	0.9		8.5	-13	5897	No stop
23 46 30	---	03 08 13	13.8	193.6	1.0		8.8	87	5923	23 44 51
23 46 30	J0206-2212	03 08 13	13.6	194.5	1.0		9.3	-14	5923	No stop
23 48 10	---	03 09 53	13.6	194.9	1.0		9.6	86	5949	23 46 31
23 48 10	J0210-2213	03 09 53	13.7	194.0	1.0		9.0	-13	5949	No stop
23 49 50	---	03 11 33	13.6	194.4	1.0		9.3	87	5975	23 48 11
23 50 20	J0206-2212	03 12 03	13.5	195.4	1.1		9.9	16	5975	23 50 20
23 51 30	---	03 13 14	13.4	195.7	1.1		10.1	70	5993	23 50 21
23 51 30	J0210-2213	03 13 14	13.6	194.8	1.0		9.5	-13	5993	No stop
23 53 10	---	03 14 54	13.5	195.2	1.1		9.8	87	6018	23 51 31
23 53 10	J0206-2212	03 14 54	13.4	196.1	1.1		10.3	-14	6018	No stop
23 54 50	---	03 16 34	13.3	196.5	1.2		10.6	86	6044	23 53 11
23 54 50	J0210-2213	03 16 34	13.4	195.6	1.1		10.0	-13	6044	No stop
23 56 30	---	03 18 14	13.4	196.0	1.1		10.3	87	6070	23 54 51
23 57 00	J0206-2212	03 18 45	13.2	197.0	1.2		10.9	16	6070	23 57 00
23 58 10	---	03 19 55	13.2	197.2	1.2		11.1	70	6088	23 57 01
23 58 10	J0210-2213	03 19 55	13.3	196.3	1.1		10.5	-13	6088	No stop
23 59 50	---	03 21 35	13.2	196.7	1.2		10.8	87	6114	23 58 11
--- Start: Thu 22 Oct 2020 Day 296 -- Stop: Fri 23 Oct 2020 Day 297 ---										
23 59 50	J0206-2212	03 21 35	13.1	197.6	1.2		11.3	-14	6114	No stop
00 01 30	---	03 23 15	13.0	198.0	1.3		11.6	86	6140	23 59 51
00 01 30	J0210-2213	03 23 15	13.2	197.1	1.2		11.0	-13	6140	No stop
00 03 10	---	03 24 56	13.1	197.5	1.2		11.2	87	6165	00 01 31
00 03 40	J0206-2212	03 25 26	12.9	198.5	1.3		11.9	16	6165	00 03 40
00 04 50	---	03 26 36	12.9	198.8	1.3		12.1	70	6183	00 03 41
00 04 50	J0210-2213	03 26 36	13.0	197.9	1.3		11.5	-13	6183	No stop
00 06 30	---	03 28 16	12.9	198.3	1.3		11.7	87	6209	00 04 51

Schedule for TORUN (Code Tr) Page 19

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
00 06 30	J0206-2212	03 28 16	12.8	199.2	1.3		12.3	-14	6209	No stop
00 08 10	---	03 29 56	12.7	199.6	1.4		12.5	86	6235	00 06 31
00 08 10	J0210-2213	03 29 56	12.9	198.7	1.3		12.0	-13	6235	No stop
00 09 50	---	03 31 37	12.8	199.1	1.3		12.2	87	6261	00 08 11
00 10 20	J0206-2212	03 32 07	12.6	200.1	1.4		12.9	16	6261	00 10 20
00 11 30	---	03 33 17	12.5	200.3	1.4		13.0	70	6279	00 10 21
00 11 30	J0210-2213	03 33 17	12.7	199.5	1.4		12.5	-13	6279	No stop
00 13 10	---	03 34 57	12.6	199.8	1.4		12.7	87	6304	00 11 31
00 13 10	J0206-2212	03 34 57	12.4	200.7	1.5		13.3	-14	6304	No stop
00 14 50	---	03 36 37	12.3	201.1	1.5		13.5	86	6330	00 13 11
00 14 50	J0210-2213	03 36 37	12.5	200.2	1.4		13.0	-13	6330	No stop
00 16 30	---	03 38 18	12.4	200.6	1.5		13.2	87	6356	00 14 51
00 17 00	J0206-2212	03 38 48	12.2	201.6	1.5		13.8	16	6356	00 17 00
00 18 10	---	03 39 58	12.2	201.9	1.5		14.0	70	6374	00 17 01
00 18 10	J0210-2213	03 39 58	12.3	201.0	1.5		13.4	-13	6374	No stop
00 19 50	---	03 41 38	12.3	201.4	1.5		13.7	87	6400	00 18 11
00 19 50	J0206-2212	03 41 38	12.1	202.3	1.6		14.2	-14	6400	No stop
00 21 30	---	03 43 19	12.0	202.7	1.6		14.5	86	6426	00 19 51
00 21 30	J0210-2213	03 43 19	12.2	201.8	1.5		13.9	-13	6426	No stop
00 23 10	---	03 44 59	12.1	202.2	1.6		14.2	87	6451	00 21 31
00 23 40	J0206-2212	03 45 29	11.8	203.2	1.6		14.8	16	6451	00 23 40
00 24 50	---	03 46 39	11.8	203.4	1.7		14.9	70	6469	00 23 41
00 24 50	J0210-2213	03 46 39	12.0	202.5	1.6		14.4	-13	6469	No stop
00 26 30	---	03 48 19	11.9	202.9	1.6		14.6	87	6495	00 24 51
00 26 30	J0206-2212	03 48 19	11.7	203.8	1.7		15.2	-14	6495	No stop
00 28 10	---	03 50 00	11.6	204.2	1.7		15.4	86	6521	00 26 31
00 28 10	J0210-2213	03 50 00	11.8	203.3	1.6		14.9	-13	6521	No stop
00 29 50	---	03 51 40	11.7	203.7	1.7		15.1	87	6547	00 28 11
00 30 20	J0206-2212	03 52 10	11.4	204.7	1.7		15.7	16	6547	00 30 20
00 31 30	---	03 53 20	11.4	204.9	1.8		15.9	70	6565	00 30 21

Schedule for TORUN (Code Tr) Page 20

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
00 31 30	J0210-2213	03 53 20	11.6	204.1	1.7		15.3	-13	6565	No stop
00 33 10	---	03 55 00	11.5	204.4	1.7		15.6	87	6590	00 31 31
00 33 10	J0206-2212	03 55 00	11.3	205.3	1.8		16.1	-14	6590	No stop
00 34 50	---	03 56 41	11.1	205.7	1.8		16.3	86	6616	00 33 11
00 34 50	J0210-2213	03 56 41	11.4	204.8	1.8		15.8	-13	6616	No stop
00 36 30	---	03 58 21	11.3	205.2	1.8		16.0	87	6642	00 34 51
00 37 00	J0206-2212	03 58 51	11.0	206.2	1.9		16.6	16	6642	00 37 00
00 38 10	---	04 00 01	10.9	206.5	1.9		16.8	70	6660	00 37 01
00 38 10	J0210-2213	04 00 01	11.2	205.6	1.8		16.3	-13	6660	No stop
00 39 50	---	04 01 42	11.0	206.0	1.8		16.5	87	6686	00 38 11
00 39 50	J0206-2212	04 01 42	10.8	206.8	1.9		17.0	-14	6686	No stop
00 41 30	---	04 03 22	10.7	207.2	1.9		17.2	86	6711	00 39 51
00 41 30	J0210-2213	04 03 22	10.9	206.3	1.9		16.7	-13	6711	No stop
00 43 10	---	04 05 02	10.8	206.7	1.9		16.9	87	6737	00 41 31
00 43 40	J0206-2212	04 05 32	10.5	207.7	2.0		17.5	17	6737	00 43 40
00 44 50	---	04 06 42	10.5	208.0	2.0		17.7	70	6755	00 43 41
00 44 50	J0210-2213	04 06 42	10.7	207.1	1.9		17.2	-13	6755	No stop
00 46 30	---	04 08 23	10.6	207.5	2.0		17.4	87	6781	00 44 51
00 46 30	J0206-2212	04 08 23	10.3	208.3	2.0		17.9	-13	6781	No stop
00 48 10	---	04 10 03	10.2	208.7	2.0		18.1	87	6807	00 46 31
00 48 10	J0210-2213	04 10 03	10.5	207.8	2.0		17.6	-13	6807	No stop
00 49 50	---	04 11 43	10.4	208.2	2.0		17.9	87	6833	00 48 11
00 50 20	J0206-2212	04 12 13	10.1	209.2	2.1		18.4	17	6833	00 50 20
00 51 30	---	04 13 23	10.0	209.5	2.1		18.6	70	6851	00 50 21
00 51 30	J0210-2213	04 13 23	10.2	208.6	2.0		18.1	-13	6851	No stop
00 53 10	---	04 15 04	10.1	209.0	2.1		18.3	87	6876	00 51 31
00 53 10	J0206-2212	04 15 04	9.9	209.8	2.1		18.8	-13	6876	No stop
00 54 50	---	04 16 44	9.7	210.2	2.2		19.0	87	6902	00 53 11
00 54 50	J0210-2213	04 16 44	10.0	209.3	2.1		18.5	-13	6902	No stop
00 56 30	---	04 18 24	9.9	209.7	2.1		18.7	87	6928	00 54 51

Schedule for TORUN (Code Tr) Page 21

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
00 57 00	J0206-2212	04 18 54	9.6	210.7	2.2		19.3	17	6928	00 57 00
00 58 10	---	04 20 05	9.5	210.9	2.2		19.5	70	6946	00 57 01
00 58 10	J0210-2213	04 20 05	9.7	210.1	2.1		19.0	-13	6946	No stop
00 59 50	---	04 21 45	9.6	210.5	2.2		19.2	87	6972	00 58 11
00 59 50	J0206-2212	04 21 45	9.3	211.3	2.2		19.7	-13	6972	No stop
01 01 30	---	04 23 25	9.2	211.7	2.3		19.9	87	6997	00 59 51
01 01 30	J0210-2213	04 23 25	9.5	210.8	2.2		19.4	-13	6997	No stop
01 03 10	---	04 25 05	9.4	211.2	2.2		19.6	87	7023	01 01 31
01 03 40	J0206-2212	04 25 35	9.0	212.2	2.3		20.2	17	7023	01 03 40
01 04 50	---	04 26 46	8.9	212.4	2.3		20.3	70	7041	01 03 41
01 04 50	J0210-2213	04 26 46	9.2	211.6	2.3		19.8	-13	7041	No stop
01 06 30	---	04 28 26	9.1	211.9	2.3		20.1	87	7067	01 04 51
01 06 30	J0206-2212	04 28 26	8.8	212.8	2.4		20.5	-13	7067	No stop
01 08 10	---	04 30 06	8.7	213.2	2.4		20.8	87	7093	01 06 31
01 08 10	J0210-2213	04 30 06	9.0	212.3	2.3		20.3	-13	7093	No stop
01 09 50	---	04 31 46	8.8	212.7	2.3		20.5	87	7119	01 08 11
01 10 20	J0206-2212	04 32 17	8.5	213.6	2.4		21.0	17	7119	01 10 20
01 11 30	---	04 33 27	8.4	213.9	2.4		21.2	70	7137	01 10 21
01 11 30	J0210-2213	04 33 27	8.7	213.0	2.4		20.7	-13	7137	No stop
01 13 10	---	04 35 07	8.6	213.4	2.4		20.9	87	7162	01 11 31
01 13 40	J0206-2212	04 35 37	8.2	214.4	2.5		21.5	17	7162	01 13 40
01 14 50	---	04 36 47	8.1	214.6	2.5		21.6	70	7180	01 13 41
01 18 30	J0151+5134	04 40 28	64.8	283.8	2.8		70.1	-6	7180	01 18 30
01 20 10	---	04 42 08	64.5	284.0	2.8		70.0	94	7206	01 18 31
01 20 10	J0132+5211	04 42 08	61.9	287.6	3.1		69.4	-24	7206	No stop
01 22 00	---	04 43 58	61.7	287.8	3.2		69.2	86	7234	01 20 11
01 22 00	J0151+5134	04 43 58	64.3	284.3	2.8		69.8	-23	7234	No stop
01 23 50	---	04 45 49	64.0	284.5	2.9		69.7	87	7263	01 22 01
01 23 50	J0132+5211	04 45 49	61.4	288.0	3.2		69.0	-24	7263	No stop
01 25 40	---	04 47 39	61.2	288.3	3.2		68.8	86	7291	01 23 51

Schedule for TORUN (Code Tr) Page 22

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
01 26 10	J0151+5134	04 48 09	63.7	284.8	2.9		69.5	7	7291	01 26 10
01 27 30	---	04 49 29	63.5	284.9	2.9		69.3	80	7312	01 26 11
01 27 30	J0132+5211	04 49 29	60.9	288.5	3.3		68.6	-24	7312	No stop
01 29 20	---	04 51 20	60.6	288.7	3.3		68.5	86	7340	01 27 31
01 29 20	J0151+5134	04 51 20	63.2	285.2	3.0		69.2	-23	7340	No stop
01 31 10	---	04 53 10	62.9	285.4	3.0		69.0	87	7368	01 29 21
01 31 10	J0132+5211	04 53 10	60.4	288.9	3.3		68.3	-24	7368	No stop
01 33 00	---	04 55 00	60.1	289.1	3.4		68.1	86	7397	01 31 11
01 33 30	J0151+5134	04 55 30	62.6	285.7	3.0		68.8	7	7397	01 33 30
01 34 50	---	04 56 51	62.4	285.8	3.1		68.7	80	7417	01 33 31
01 34 50	J0132+5211	04 56 51	59.9	289.3	3.4		67.9	-24	7417	No stop
01 36 40	---	04 58 41	59.6	289.5	3.4		67.7	86	7446	01 34 51
01 36 40	J0151+5134	04 58 41	62.1	286.1	3.1		68.5	-23	7446	No stop
01 38 30	---	05 00 31	61.9	286.3	3.1		68.4	87	7474	01 36 41
01 38 30	J0132+5211	05 00 31	59.3	289.7	3.4		67.6	-24	7474	No stop
01 40 20	---	05 02 21	59.1	289.9	3.5		67.4	86	7502	01 38 31
01 40 50	J0151+5134	05 02 52	61.5	286.6	3.2		68.2	7	7502	01 40 50
01 42 10	---	05 04 12	61.3	286.7	3.2		68.0	80	7523	01 40 51
01 42 10	J0132+5211	05 04 12	58.8	290.2	3.5		67.2	-24	7523	No stop
01 44 00	---	05 06 02	58.6	290.4	3.5		67.0	86	7551	01 42 11
01 44 00	J0151+5134	05 06 02	61.1	286.9	3.2		67.9	-23	7551	No stop
01 45 50	---	05 07 52	60.8	287.2	3.2		67.7	87	7580	01 44 01
01 45 50	J0132+5211	05 07 52	58.3	290.6	3.6		66.8	-23	7580	No stop
01 47 40	---	05 09 43	58.0	290.8	3.6		66.6	87	7608	01 45 51
01 48 10	J0151+5134	05 10 13	60.5	287.4	3.3		67.5	7	7608	01 48 10
01 49 30	---	05 11 33	60.3	287.6	3.3		67.4	80	7629	01 48 11
01 49 30	J0132+5211	05 11 33	57.8	291.0	3.6		66.5	-23	7629	No stop
01 51 20	---	05 13 23	57.5	291.2	3.7		66.3	87	7657	01 49 31
01 51 20	J0151+5134	05 13 23	60.0	287.8	3.3		67.2	-23	7657	No stop
01 53 10	---	05 15 14	59.8	288.0	3.4		67.0	87	7685	01 51 21

Schedule for TORUN (Code Tr) Page 23

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
01 53 10	J0132+5211	05 15 14	57.3	291.4	3.7		66.1	-23	7685	No stop
01 55 00	---	05 17 04	57.0	291.6	3.7		65.9	87	7714	01 53 11
01 55 40	J0151+5134	05 17 44	59.4	288.3	3.4		66.8	17	7714	01 55 40
01 56 50	---	05 18 54	59.2	288.5	3.4		66.7	70	7732	01 55 41
01 58 20	J0237+2848	05 20 24	51.9	246.7	2.7		39.1	-8	7732	01 58 20
02 01 20	---	05 23 25	51.5	247.6	2.7		39.3	172	7778	01 58 21
02 10 20	J1148+5254	05 32 26	37.5	409.5	-6.3		-49.0	202	7778	02 10 20
02 12 30	---	05 34 37	37.8	409.8	-6.3		-49.3	130	7812	02 10 21
02 12 30	J1132+5100	05 34 37	38.4	413.6	-6.0		-50.0	-23	7812	No stop
02 14 20	---	05 36 27	38.7	413.9	-6.0		-50.3	87	7840	02 12 31
02 14 50	J1148+5254	05 36 57	38.0	410.0	-6.2		-49.6	7	7840	02 14 50
02 16 00	---	05 38 07	38.2	410.2	-6.2		-49.7	70	7858	02 14 51
02 16 00	J1132+5100	05 38 07	38.9	414.1	-5.9		-50.4	-23	7858	No stop
02 17 50	---	05 39 58	39.1	414.3	-5.9		-50.7	87	7886	02 16 01
02 17 50	J1148+5254	05 39 58	38.4	410.4	-6.2		-49.9	-23	7886	No stop
02 19 40	---	05 41 48	38.6	410.6	-6.1		-50.2	87	7915	02 17 51
02 19 40	J1132+5100	05 41 48	39.3	414.6	-5.9		-50.9	-23	7915	No stop
02 21 30	---	05 43 38	39.5	414.8	-5.8		-51.1	87	7943	02 19 41
02 22 00	J1148+5254	05 44 08	38.9	410.9	-6.1		-50.4	7	7943	02 22 00
02 23 10	---	05 45 19	39.0	411.1	-6.1		-50.6	70	7961	02 22 01
02 23 10	J1132+5100	05 45 19	39.7	415.0	-5.8		-51.3	-23	7961	No stop
02 25 00	---	05 47 09	40.0	415.3	-5.8		-51.5	87	7989	02 23 11
02 25 00	J1148+5254	05 47 09	39.2	411.3	-6.0		-50.8	-23	7989	No stop
02 26 50	---	05 48 59	39.4	411.5	-6.0		-51.0	87	8018	02 25 01
02 26 50	J1132+5100	05 48 59	40.2	415.5	-5.7		-51.7	-23	8018	No stop
02 28 40	---	05 50 49	40.4	415.7	-5.7		-51.9	87	8046	02 26 51
02 29 10	J1148+5254	05 51 20	39.7	411.8	-6.0		-51.3	7	8046	02 29 10
02 30 20	---	05 52 30	39.9	412.0	-6.0		-51.5	70	8064	02 29 11
02 30 20	J1132+5100	05 52 30	40.6	415.9	-5.7		-52.1	-23	8064	No stop
02 32 10	---	05 54 20	40.9	416.2	-5.7		-52.3	87	8092	02 30 21

Schedule for TORUN (Code Tr) Page 24

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 23 Oct 2020 Day 297 ---										
02 32 10	J1148+5254	05 54 20	40.1	412.2	-5.9		-51.7	-23	8092	No stop
02 34 00	---	05 56 10	40.3	412.4	-5.9		-51.9	87	8121	02 32 11
02 34 00	J1132+5100	05 56 10	41.1	416.4	-5.6		-52.5	-23	8121	No stop
02 35 50	---	05 58 01	41.3	416.6	-5.6		-52.7	87	8149	02 34 01
02 36 20	J1148+5254	05 58 31	40.6	412.7	-5.9		-52.2	7	8149	02 36 20
02 37 30	---	05 59 41	40.7	412.8	-5.8		-52.3	70	8167	02 36 21
02 37 30	J1132+5100	05 59 41	41.5	416.9	-5.6		-52.8	-23	8167	No stop
02 39 20	---	06 01 31	41.8	417.1	-5.5		-53.0	87	8195	02 37 31
02 39 20	J1148+5254	06 01 31	40.9	413.1	-5.8		-52.5	-23	8195	No stop
02 41 10	---	06 03 21	41.2	413.3	-5.8		-52.8	87	8224	02 39 21
02 41 10	J1132+5100	06 03 21	42.0	417.3	-5.5		-53.2	-23	8224	No stop
02 43 00	---	06 05 12	42.2	417.6	-5.5		-53.4	87	8252	02 41 11
02 43 30	J1148+5254	06 05 42	41.4	413.6	-5.7		-53.0	7	8252	02 43 30
02 44 40	---	06 06 52	41.6	413.7	-5.7		-53.2	70	8270	02 43 31
02 44 40	J1132+5100	06 06 52	42.4	417.8	-5.5		-53.6	-23	8270	No stop
02 46 30	---	06 08 42	42.7	418.0	-5.4		-53.8	87	8299	02 44 41
02 46 30	J1148+5254	06 08 42	41.8	413.9	-5.7		-53.4	-23	8299	No stop
02 48 20	---	06 10 33	42.0	414.2	-5.7		-53.6	87	8327	02 46 31
02 48 20	J1132+5100	06 10 33	42.9	418.2	-5.4		-54.0	-23	8327	No stop
02 50 10	---	06 12 23	43.1	418.5	-5.4		-54.2	87	8355	02 48 21
02 50 40	J1148+5254	06 12 53	42.3	414.4	-5.6		-53.9	7	8355	02 50 40
02 51 50	---	06 14 03	42.4	414.6	-5.6		-54.0	70	8373	02 50 41
02 51 50	J1132+5100	06 14 03	43.4	418.7	-5.3		-54.4	-23	8373	No stop
02 53 40	---	06 15 54	43.6	418.9	-5.3		-54.6	87	8402	02 51 51
02 53 40	J1148+5254	06 15 54	42.7	414.8	-5.6		-54.2	-23	8402	No stop
02 55 30	---	06 17 44	42.9	415.0	-5.5		-54.5	87	8430	02 53 41
02 55 30	J1132+5100	06 17 44	43.8	419.1	-5.3		-54.8	-23	8430	No stop
02 57 20	---	06 19 34	44.1	419.4	-5.2		-55.0	87	8458	02 55 31
02 57 50	J1148+5254	06 20 04	43.2	415.3	-5.5		-54.7	7	8458	02 57 50
02 59 00	---	06 21 14	43.3	415.4	-5.5		-54.9	70	8476	02 57 51

Schedule for TORUN (Code Tr) Page 25

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
02 59 00	J1132+5100	06 21 14	44.3	419.6	-5.2		-55.2	-23	8476	No stop
03 00 50	---	06 23 05	44.5	419.8	-5.2		-55.4	87	8505	02 59 01
03 00 50	J1148+5254	06 23 05	43.6	415.7	-5.4		-55.1	-23	8505	No stop
03 02 40	---	06 24 55	43.8	415.9	-5.4		-55.3	87	8533	03 00 51
03 02 40	J1132+5100	06 24 55	44.8	420.0	-5.2		-55.6	-23	8533	No stop
03 04 30	---	06 26 45	45.0	420.3	-5.1		-55.8	87	8561	03 02 41
03 05 00	J1148+5254	06 27 15	44.1	416.2	-5.4		-55.6	7	8561	03 05 00
03 06 10	---	06 28 26	44.2	416.3	-5.4		-55.7	70	8579	03 05 01
03 06 10	J1132+5100	06 28 26	45.2	420.5	-5.1		-55.9	-23	8579	No stop
03 08 00	---	06 30 16	45.5	420.7	-5.1		-56.1	87	8608	03 06 11
03 08 00	J1148+5254	06 30 16	44.5	416.5	-5.3		-55.9	-23	8608	No stop
03 09 50	---	06 32 06	44.7	416.7	-5.3		-56.1	87	8636	03 08 01
03 09 50	J1132+5100	06 32 06	45.7	420.9	-5.0		-56.3	-23	8636	No stop
03 11 40	---	06 33 56	45.9	421.2	-5.0		-56.5	87	8664	03 09 51
03 12 10	J1148+5254	06 34 27	45.0	417.0	-5.3		-56.4	7	8664	03 12 10
03 13 20	---	06 35 37	45.1	417.2	-5.2		-56.5	70	8682	03 12 11
03 13 20	J1132+5100	06 35 37	46.2	421.4	-5.0		-56.7	-23	8682	No stop
03 15 10	---	06 37 27	46.4	421.6	-4.9		-56.9	87	8711	03 13 21
03 15 10	J1148+5254	06 37 27	45.4	417.4	-5.2		-56.8	-23	8711	No stop
03 17 00	---	06 39 17	45.6	417.6	-5.2		-57.0	87	8739	03 15 11
03 17 00	J1132+5100	06 39 17	46.6	421.8	-4.9		-57.1	-24	8739	No stop
03 18 50	---	06 41 08	46.9	422.1	-4.9		-57.3	86	8767	03 17 01
03 19 20	J1148+5254	06 41 38	45.9	417.9	-5.1		-57.2	7	8767	03 19 20
03 20 30	---	06 42 48	46.0	418.0	-5.1		-57.4	70	8785	03 19 21
03 20 30	J1132+5100	06 42 48	47.1	422.3	-4.9		-57.4	-24	8785	No stop
03 22 20	---	06 44 38	47.3	422.5	-4.8		-57.6	86	8814	03 20 31
03 22 20	J1148+5254	06 44 38	46.3	418.2	-5.1		-57.6	-23	8814	No stop
03 24 10	---	06 46 29	46.5	418.4	-5.1		-57.8	87	8842	03 22 21
03 24 10	J1132+5100	06 46 29	47.6	422.7	-4.8		-57.8	-24	8842	No stop
03 26 00	---	06 48 19	47.8	423.0	-4.8		-58.0	86	8870	03 24 11

Schedule for TORUN (Code Tr) Page 26

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
03 26 30	J1148+5254	06 48 49	46.8	418.7	-5.0		-58.1	6	8870	03 26 30
03 27 40	---	06 49 59	47.0	418.8	-5.0		-58.2	70	8889	03 26 31
03 27 40	J1132+5100	06 49 59	48.1	423.2	-4.7		-58.2	-24	8889	No stop
03 29 30	---	06 51 49	48.3	423.4	-4.7		-58.3	86	8917	03 27 41
03 29 30	J1148+5254	06 51 49	47.2	419.1	-5.0		-58.4	-24	8917	No stop
03 31 20	---	06 53 40	47.4	419.3	-4.9		-58.6	86	8945	03 29 31
03 31 20	J1132+5100	06 53 40	48.6	423.6	-4.7		-58.5	-24	8945	No stop
03 33 10	---	06 55 30	48.8	423.9	-4.6		-58.7	86	8974	03 31 21
03 33 40	J1148+5254	06 56 00	47.7	419.5	-4.9		-58.9	6	8974	03 33 40
03 34 50	---	06 57 10	47.9	419.7	-4.9		-59.0	70	8992	03 33 41
03 34 50	J1132+5100	06 57 10	49.0	424.1	-4.6		-58.9	-24	8992	No stop
03 36 40	---	06 59 01	49.3	424.3	-4.6		-59.1	86	9020	03 34 51
03 36 40	J1148+5254	06 59 01	48.1	419.9	-4.8		-59.2	-24	9020	No stop
03 38 30	---	07 00 51	48.4	420.1	-4.8		-59.4	86	9048	03 36 41
03 38 30	J1132+5100	07 00 51	49.5	424.5	-4.6		-59.2	-24	9048	No stop
03 40 20	---	07 02 41	49.8	424.8	-4.5		-59.4	86	9077	03 38 31
03 40 50	J1148+5254	07 03 11	48.7	420.4	-4.8		-59.7	6	9077	03 40 50
03 42 00	---	07 04 21	48.8	420.5	-4.8		-59.8	70	9095	03 40 51
03 42 00	J1132+5100	07 04 21	50.0	425.0	-4.5		-59.6	-24	9095	No stop
03 43 50	---	07 06 12	50.3	425.2	-4.5		-59.8	86	9123	03 42 01
03 43 50	J1148+5254	07 06 12	49.1	420.7	-4.7		-60.0	-24	9123	No stop
03 45 40	---	07 08 02	49.3	420.9	-4.7		-60.2	86	9151	03 43 51
03 45 40	J1132+5100	07 08 02	50.5	425.4	-4.4		-60.0	-24	9151	No stop
03 47 30	---	07 09 52	50.8	425.6	-4.4		-60.1	86	9180	03 45 41
03 48 00	J1148+5254	07 10 22	49.6	421.2	-4.7		-60.5	6	9180	03 48 00
03 49 10	---	07 11 33	49.8	421.3	-4.6		-60.6	70	9198	03 48 01
03 49 10	J1132+5100	07 11 33	51.0	425.9	-4.4		-60.3	-24	9198	No stop
03 51 00	---	07 13 23	51.2	426.1	-4.3		-60.5	86	9226	03 49 11
03 51 00	J1148+5254	07 13 23	50.0	421.6	-4.6		-60.8	-24	9226	No stop
03 52 50	---	07 15 13	50.2	421.8	-4.6		-61.0	86	9254	03 51 01

```
Schedule for TORUN     (Code Tr )                                  Page  27
              EVN 5 GHz and 22 GHz study of 43 compact radio sources
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Fri  23 Oct 2020   Day 297 ---

03 52 50  J1132+5100   07 15 13  51.5 426.3 -4.3     -60.7   -24     9254   No stop
03 54 40  ---          07 17 04  51.7 426.5 -4.3     -60.8    86     9283   03 52 51

03 55 10  J1148+5254   07 17 34  50.6 422.0 -4.5     -61.3     6     9283   03 55 10
03 56 20  ---          07 18 44  50.7 422.2 -4.5     -61.4    70     9301   03 55 11

03 56 20  J1132+5100   07 18 44  52.0 426.7 -4.3     -61.0   -24     9301   No stop
03 58 10  ---          07 20 34  52.2 427.0 -4.2     -61.2    86     9329   03 56 21

03 58 10  J1148+5254   07 20 34  51.0 422.4 -4.5     -61.6   -24     9329   No stop
04 00 00  ---          07 22 24  51.2 422.6 -4.5     -61.8    86     9357   03 58 11



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
           21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.49
            22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.49
  BBC fr=     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.49
              787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.49
  Bandwd=      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
               32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* J0044+2858	00 41 40.919878	* 00 44 21.550622	00 45 28.697368	0.00
	28 42 09.42289	* 28 58 33.81146	29 05 25.66207	0.00
* J0132+5211	01 29 12.042742	* 01 32 18.861051	01 33 37.619157	0.00
	51 56 06.52774	* 52 11 30.85860	52 17 54.81942	0.00
* J0139+0824	01 37 19.376745	* 01 39 57.193745	01 41 03.072618	0.00
	08 09 15.93011	* 08 24 26.65186	08 30 45.65289	0.00
* J0210-2213	02 07 50.955939	* 02 10 10.058000	02 11 08.347778	0.00
	-22 27 44.66301	*-22 13 37.00300	-22 07 44.69717	0.00
* J1132+5100	11 30 06.335620	* 11 32 50.384900	11 33 55.697366	0.00
	51 16 54.02306	* 51 00 19.91600	50 53 27.95975	0.00
* J0053+2925	00 51 02.069494	* 00 53 44.323500	00 54 52.168259	0.00
	29 08 51.17614	* 29 25 07.10000	29 31 55.06035	0.00
* J0151+5134	01 48 28.343704	* 01 51 40.838000	01 53 01.919005	0.00
	51 19 39.14815	* 51 34 27.65800	51 40 35.48702	0.00
* J0137+0923	01 35 12.879246	* 01 37 51.093800	01 38 57.138783	0.00
	09 08 04.61429	* 09 23 19.13200	09 29 39.75325	0.00

```
* J0206-2212        02 04 00.566011   * 02 06 20.073600     02 07 18.527256       0.00
                   -22 26 36.14956    *-22 12 19.65600    -22 06 23.84246        0.00

* J1148+5254        11 46 18.019073   * 11 48 56.569100     11 49 59.485845       0.00
                    53 11 05.71074    * 52 54 25.32300      52 47 31.36130        0.00

* J0237+2848        02 34 55.589613   * 02 37 52.405700     02 39 06.297261       0.00
                    28 35 11.40775    * 28 48 08.99000      28 53 30.63711        0.00
```

ec076tr

EVN GEODESY

PI: *P. Charlot*

Address: Laboratoire d'Astrophysique de Bordeaux

Observing mode: K-band, RCP-only, geo-like BBC placements

Schedule for TORUN (Code Tr) Page 2

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Fri 23 Oct 2020 Day 297 ---

Next scan frequencies: 22002.99 22034.99 22081.99 22163.99 22267.99 22386.99 22418.99 22471.9
Next BBC frequencies: 522.99 554.99 601.99 683.99 787.99 906.99 938.99 991.9
Next scan bandwidths: 32.00 32.00 32.00 32.00 32.00 32.00 32.00 32.0

Start UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
Stop UT										
06 00 00	1236+077	09 22 44	29.4	120.2	-3.3		-31.6	0	0	06 00 00
06 01 03	---	09 23 47	29.5	120.5	-3.3		-31.5	63	8	06 00 01
06 04 57	0955+476	09 27 42	82.3	135.4	-0.5		-38.5	22	8	06 04 57
06 05 57	---	09 28 42	82.4	136.4	-0.5		-37.6	60	16	06 04 58
06 10 48	1636+473	09 33 34	28.3	47.7	-7.1		-40.9	74	16	06 10 48
06 11 48	---	09 34 34	28.4	47.9	-7.1		-41.0	60	24	06 10 49
06 13 46	1849+670	09 36 32	34.2	18.3	-9.2		-29.0	44	24	06 13 46
06 15 00	---	09 37 47	34.3	18.4	-9.2		-29.2	74	33	06 13 47
06 26 39	0059+581	09 49 28	28.3	-26.5	8.8		30.8	592	33	06 26 39
06 27 39	---	09 50 28	28.3	-26.3	8.8		30.7	60	41	06 26 40
06 29 17	0300+470	09 52 06	30.3	-50.2	6.8		42.9	35	41	06 29 17
06 30 17	---	09 53 06	30.2	-50.1	6.8		42.8	60	49	06 29 18
06 33 37	2353+816	09 56 27	46.0	-5.8	10.0		25.8	97	49	06 33 37
06 35 19	---	09 58 09	46.0	-5.7	10.0		25.5	102	62	06 33 38
06 36 46	1357+769	09 59 36	58.0	22.1	-4.0		-102.1	16	62	06 36 46
06 37 46	---	10 00 36	58.1	22.1	-4.0		-102.3	60	69	06 36 47
06 40 21	0716+714	10 03 12	64.9	-28.9	2.6		115.2	38	69	06 40 21
06 43 04	---	10 05 55	64.7	-29.1	2.7		114.4	163	90	06 40 22
06 48 41	0510+559	10 11 33	49.2	-55.1	4.9		61.9	267	90	06 48 41
06 51 45	---	10 14 38	48.8	-54.8	5.0		61.5	184	114	06 48 42
06 57 55	0415+398	10 20 49	30.9	-63.3	6.0		44.4	292	114	06 57 55
07 00 17	---	10 23 11	30.6	-62.9	6.0		44.2	142	132	06 57 56
07 01 59	0133+476	10 24 53	19.1	-32.0	8.8		28.3	25	132	07 01 59
07 02 59	---	10 25 53	19.0	-31.8	8.8		28.2	60	140	07 02 00

Schedule for TORUN (Code Tr) Page 3

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri	23 Oct 2020	Day 297 ---								
07 10 07	1124-186	10 33 03	16.9	166.4	-0.9		-8.6	17	140	07 10 07
07 11 07	---	10 34 03	16.9	166.7	-0.9		-8.4	60	148	07 10 08
07 15 26	1150+497	10 38 23	77.6	99.6	-1.3		-65.5	18	148	07 15 26
07 16 26	---	10 39 23	77.7	99.9	-1.3		-65.4	60	156	07 15 27
07 20 16	1130+009	10 43 13	36.4	164.0	-0.9		-9.5	61	156	07 20 16
07 22 13	---	10 45 11	36.5	164.6	-0.8		-9.2	117	171	07 20 17
07 26 16	0926-039	10 49 14	30.3	203.2	1.3		13.7	152	171	07 26 16
07 30 07	---	10 53 06	30.0	204.2	1.4		14.3	231	200	07 26 17
07 37 03	1504+377	11 00 03	45.4	84.8	-4.1		-48.9	161	200	07 37 03
07 38 45	---	11 01 45	45.7	85.1	-4.1		-48.9	102	214	07 37 04
07 40 11	1514+197	11 03 12	31.2	99.0	-4.2		-39.0	18	214	07 40 11
07 41 11	---	11 04 12	31.3	99.3	-4.2		-38.9	60	221	07 40 12
07 43 19	1846+322	11 06 20	12.0	51.1	-7.7		-33.6	17	221	07 43 19
07 45 25	---	11 08 26	12.2	51.5	-7.7		-33.8	126	238	07 43 20
07 49 51	1606+106	11 12 53	17.8	96.3	-4.9		-37.4	162	238	07 49 51
07 50 51	---	11 13 53	17.9	96.6	-4.9		-37.3	60	245	07 49 52
07 52 49	1510-089	11 15 52	10.0	120.3	-4.0		-31.7	56	245	07 52 49
07 53 49	---	11 16 52	10.1	120.5	-4.0		-31.6	60	253	07 52 50
07 59 17	0808+019	11 22 21	25.5	234.7	3.2		29.3	85	253	07 59 17
08 00 34	---	11 23 38	25.3	235.0	3.2		29.5	77	263	07 59 18
08 02 08	0657+172	11 25 12	28.0	261.3	4.4		38.4	27	263	08 02 08
08 03 08	---	11 26 12	27.8	261.5	4.4		38.4	60	271	08 02 09
08 04 54	0834+250	11 27 59	47.7	245.0	2.8		36.8	18	271	08 04 54
08 06 31	---	11 29 36	47.4	245.4	2.8		37.0	97	283	08 04 55
08 08 05	0748+126	11 31 10	30.7	248.1	3.7		34.8	18	283	08 08 05
08 09 05	---	11 32 10	30.6	248.3	3.7		34.9	60	291	08 08 06
08 11 33	0641+392	11 34 39	40.4	284.4	4.8		48.7	61	291	08 11 33
08 14 14	---	11 37 20	40.1	284.8	4.9		48.5	161	312	08 11 34
08 18 01	0556+238	11 41 08	21.8	281.2	5.7		40.1	146	312	08 18 01
08 20 00	---	11 43 07	21.5	281.6	5.7		40.0	119	327	08 18 02
08 22 11	0552+398	11 45 18	32.4	294.7	5.8		45.2	76	327	08 22 11
08 23 11	---	11 46 19	32.2	294.9	5.8		45.2	60	335	08 22 12
08 27 03	0430+289	11 50 11	12.7	302.1	7.3		35.6	146	335	08 27 03
08 32 00	---	11 55 09	12.1	303.0	7.3		35.2	297	373	08 27 04

Schedule for TORUN (Code Tr) Page 4

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
08 35 10	2319+444	11 58 20	8.3	366.3	-11.4		-5.3	49	373	08 35 10
08 36 57	---	12 00 07	8.3	366.6	-11.4		-5.6	107	387	08 35 11
08 44 35	1144+402	12 07 46	76.3	196.3	0.3		12.6	100	387	08 44 35
08 45 46	---	12 08 57	76.3	197.2	0.3		13.4	71	396	08 44 36
08 52 38	1236+077	12 15 50	44.0	171.5	-0.4		-5.1	277	396	08 52 38
08 53 41	---	12 16 54	44.0	171.9	-0.4		-4.9	63	404	08 52 39
09 03 20	0954+658	12 26 34	68.1	318.5	2.4		106.6	270	404	09 03 20
09 04 34	---	12 27 48	68.0	318.4	2.5		106.2	74	414	09 03 21
09 08 07	1357+769	12 31 22	65.1	371.7	-1.4		-148.3	91	414	09 08 07
09 09 07	---	12 32 22	65.1	371.6	-1.4		-148.6	60	421	09 08 08
09 17 49	1602-115	12 41 06	11.8	128.6	-3.4		-28.6	21	421	09 17 49
09 20 48	---	12 44 05	12.2	129.3	-3.4		-28.3	179	444	09 17 50
09 26 43	1751+288	12 50 01	30.8	81.9	-5.1		-42.7	244	444	09 26 43
09 27 43	---	12 51 01	30.9	82.1	-5.1		-42.7	60	452	09 26 44
09 30 26	1929+226	12 53 45	12.5	68.6	-6.6		-37.3	79	452	09 30 26
09 33 04	---	12 56 23	12.9	69.1	-6.6		-37.5	158	472	09 30 27
09 39 11	1022+194	13 02 31	44.6	236.9	2.6		32.2	17	472	09 39 11
09 41 33	---	13 04 54	44.3	237.5	2.7		32.4	142	491	09 39 12
09 43 47	0926-039	13 07 08	16.8	237.9	3.6		30.7	17	491	09 43 47
09 44 47	---	13 08 08	16.7	238.1	3.6		30.7	60	498	09 43 48
09 46 56	1124-186	13 10 17	14.5	204.9	1.7		15.5	47	498	09 46 56
09 47 56	---	13 11 18	14.5	205.1	1.7		15.7	60	506	09 46 57
09 53 30	0133+476	13 16 52	11.2	356.4	11.6		3.3	17	506	09 53 30
09 54 30	---	13 17 53	11.2	356.5	11.7		3.1	60	514	09 53 31
10 04 09	1510-089	13 27 33	23.7	151.1	-1.8		-17.1	152	514	10 04 09
10 05 09	---	13 28 33	23.8	151.4	-1.8		-16.9	60	522	10 04 10
10 07 28	1514+197	13 30 53	50.5	138.1	-1.8		-25.2	25	522	10 07 28
10 09 42	---	13 33 07	50.8	138.9	-1.7		-24.8	134	539	10 07 29
10 11 43	1754+155	13 35 08	27.0	100.1	-4.4		-37.9	18	539	10 11 43
10 12 50	---	13 36 16	27.1	100.3	-4.4		-37.8	67	547	10 11 44

Schedule for TORUN (Code Tr) Page 5

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 23 Oct 2020 Day 297 ---										
10 16 50	1324+224	13 40 16	58.9	185.5	0.2		3.6	55	547	10 16 50
10 18 07	---	13 41 34	58.9	186.1	0.2		3.9	77	557	10 16 51
10 24 48	0834+250	13 48 16	27.1	276.0	5.2		41.1	208	557	10 24 48
10 26 25	---	13 49 53	26.8	276.3	5.2		41.1	97	570	10 24 49
10 27 49	0804+499	13 51 17	40.0	302.9	5.7		51.3	16	570	10 27 49
10 28 49	---	13 52 17	39.9	303.0	5.7		51.2	60	578	10 27 50
10 38 41	2000+472	14 02 11	36.0	416.7	-6.0		-48.0	351	578	10 38 41
10 39 58	---	14 03 28	36.2	416.9	-6.0		-48.1	77	588	10 38 42
10 42 48	2319+444	14 06 19	14.0	388.5	-9.3		-23.8	72	588	10 42 48
10 44 35	---	14 08 06	14.1	388.8	-9.3		-24.1	107	601	10 42 49
10 47 43	2214+350	14 11 14	12.0	405.3	-8.1		-31.6	141	601	10 47 43
10 50 35	---	14 14 07	12.3	405.8	-8.1		-31.9	172	623	10 47 44
10 58 15	1144+402	14 21 48	60.9	258.6	2.6		50.1	149	623	10 58 15
10 59 26	---	14 22 59	60.7	258.9	2.6		50.2	71	633	10 58 16
11 03 06	0300+470	14 26 40	10.8	353.4	11.4		5.8	16	633	11 03 06
11 04 06	---	14 27 40	10.8	353.6	11.4		5.7	60	640	11 03 07
11 06 11	0641+392	14 29 45	17.6	313.0	7.7		34.5	29	640	11 06 11
11 08 52	---	14 32 27	17.3	313.4	7.8		34.2	161	661	11 06 12
11 10 16	0415+398	14 33 51	5.9	339.7	10.2		15.8	17	661	11 10 16
11 11 28	---	14 35 03	5.8	339.9	10.2		15.6	72	670	11 10 17
11 16 52	1243-072	14 40 28	24.7	211.2	1.9		18.3	51	670	11 16 52
11 17 52	---	14 41 28	24.6	211.4	1.9		18.4	60	678	11 16 53
11 22 26	1730-130	14 46 03	14.7	137.6	-2.8		-24.6	110	678	11 22 26
11 23 26	---	14 47 03	14.8	137.8	-2.8		-24.4	60	686	11 22 27
11 25 03	1657-261	14 48 41	5.6	150.3	-2.2		-19.4	48	686	11 25 03
11 26 03	---	14 49 41	5.6	150.5	-2.2		-19.2	60	694	11 25 04
11 29 38	1406-267	14 53 16	9.3	189.5	0.7		6.4	123	694	11 29 38
11 30 38	---	14 54 16	9.3	189.8	0.7		6.6	60	701	11 29 39
11 33 10	1602-115	14 56 49	23.5	161.4	-1.2		-11.3	80	701	11 33 10
11 35 57	---	14 59 36	23.6	162.1	-1.1		-10.9	167	723	11 33 11

Schedule for TORUN (Code Tr) Page 6

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
11 39 54	1519-273	15 03 34	9.2	175.5	-0.3		-3.1	169	723	11 39 54
11 40 54	---	15 04 34	9.2	175.7	-0.3		-2.9	60	731	11 39 55
11 45 07	1929+226	15 08 48	32.4	94.7	-4.4		-40.5	75	731	11 45 07
11 46 54	---	15 10 35	32.7	95.1	-4.4		-40.4	107	744	11 45 08
11 54 33	2113+293	15 18 15	23.6	71.5	-6.0		-40.9	394	744	11 54 33
11 55 57	---	15 19 40	23.8	71.7	-5.9		-41.0	84	755	11 54 34
11 58 02	2029+121	15 21 45	17.2	92.2	-5.2		-37.9	70	755	11 58 02
11 59 02	---	15 22 45	17.4	92.4	-5.2		-37.9	60	763	11 58 03
12 02 50	2121+547	15 26 34	41.3	49.6	-6.0		-53.1	125	763	12 02 50
12 04 46	---	15 28 30	41.5	49.8	-5.9		-53.3	116	778	12 02 51
12 17 36	1418+546	15 41 22	78.0	-76.2	1.3		87.5	503	778	12 17 36
12 18 36	---	15 42 22	77.9	-76.1	1.4		87.3	60	786	12 17 37
12 23 04	0133+476	15 46 51	14.7	21.6	-9.9		-19.3	17	786	12 23 04
12 24 04	---	15 47 51	14.7	21.8	-9.8		-19.4	60	793	12 23 05
12 31 59	1514+197	15 55 48	55.6	196.0	0.6		10.1	113	793	12 31 59
12 34 13	---	15 58 02	55.5	196.9	0.7		10.7	134	811	12 32 00
12 36 29	1606+106	16 00 18	47.3	176.6	-0.2		-2.1	79	811	12 36 29
12 37 29	---	16 01 18	47.3	176.9	-0.1		-1.9	60	818	12 36 30
12 40 34	1510-089	16 04 24	26.8	194.0	0.8		8.5	94	818	12 40 34
12 41 34	---	16 05 24	26.8	194.3	0.9		8.6	60	826	12 40 35
12 45 42	1936+046	16 09 33	25.6	118.8	-3.5		-31.9	81	826	12 45 42
12 47 35	---	16 11 26	25.8	119.2	-3.5		-31.7	113	841	12 45 43
12 55 07	1324+224	16 18 59	45.2	243.2	2.9		35.3	191	841	12 55 07
12 56 24	---	16 20 17	45.0	243.5	2.9		35.4	77	850	12 55 08
12 58 45	1022+194	16 22 38	15.6	281.1	5.9		38.6	17	850	12 58 45
12 59 45	---	16 23 38	15.5	281.3	6.0		38.5	60	858	12 58 46
13 01 37	0955+476	16 25 30	32.8	306.7	6.4		45.2	33	858	13 01 37
13 02 37	---	16 26 31	32.7	306.9	6.4		45.1	60	866	13 01 38
13 04 29	0804+499	16 28 23	23.0	324.7	8.3		32.5	62	866	13 04 29
13 05 53	---	16 29 47	22.9	324.9	8.3		32.3	84	877	13 04 30

Schedule for TORUN (Code Tr) Page 7

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
13 07 21	0510+559	16 31 15	19.5	353.4	11.3		7.1	16	877	13 07 21
13 08 24	---	16 32 19	19.5	353.5	11.3		6.9	63	885	13 07 22
13 12 05	1130+009	16 36 00	9.2	258.6	5.0		36.1	16	885	13 12 05
13 14 02	---	16 37 57	8.9	259.0	5.1		36.1	117	900	13 12 06
13 19 22	1243-072	16 43 18	11.5	240.2	3.9		31.7	265	900	13 19 22
13 20 22	---	16 44 18	11.4	240.4	4.0		31.8	60	908	13 19 23
13 23 42	1144+402	16 47 39	39.2	286.9	5.0		48.5	81	908	13 23 42
13 24 53	---	16 48 50	39.1	287.1	5.0		48.4	71	917	13 23 43
13 28 05	1236+077	16 52 03	22.0	252.2	4.2		35.2	106	917	13 28 05
13 29 08	---	16 53 06	21.8	252.4	4.2		35.3	63	925	13 28 06
13 35 25	1730-130	16 59 24	23.4	170.8	-0.6		-5.7	197	925	13 35 25
13 36 25	---	17 00 24	23.4	171.0	-0.6		-5.5	60	933	13 35 26
13 41 13	1846+322	17 05 13	62.1	127.7	-1.7		-34.2	130	933	13 41 13
13 43 19	---	17 07 19	62.4	128.5	-1.7		-33.8	126	949	13 41 14
13 45 34	1705+018	17 09 35	38.7	180.3	0.0		0.2	17	949	13 45 34
13 46 34	---	17 10 35	38.7	180.6	0.0		0.4	60	957	13 45 35
13 48 51	1657-261	17 12 52	10.7	182.5	0.2		1.6	18	957	13 48 51
13 49 51	---	17 13 52	10.7	182.7	0.2		1.8	60	964	13 48 52
13 55 17	2214+350	17 19 19	36.5	77.5	-5.0		-46.0	100	964	13 55 17
13 58 09	---	17 22 12	36.9	78.0	-4.9		-46.1	172	986	13 55 18
14 05 03	1751+288	17 29 07	65.3	166.6	-0.4		-9.1	226	986	14 05 03
14 06 03	---	17 30 07	65.3	167.1	-0.4		-8.8	60	994	14 05 04
14 08 46	2029+121	17 32 50	35.9	121.5	-3.0		-31.6	39	994	14 08 46
14 10 28	---	17 34 33	36.1	121.9	-3.0		-31.5	102	1007	14 08 47
14 16 39	1936-155	17 40 45	16.8	149.8	-2.0		-18.3	283	1007	14 16 39
14 17 39	---	17 41 45	16.9	150.0	-2.0		-18.1	60	1015	14 16 40
14 20 41	2113+293	17 44 47	45.3	100.0	-3.5		-42.9	62	1015	14 20 41
14 22 05	---	17 46 12	45.5	100.3	-3.5		-42.8	84	1026	14 20 42
14 23 49	2121+547	17 47 56	59.1	64.2	-3.6		-70.9	17	1026	14 23 49
14 24 49	---	17 48 56	59.2	64.3	-3.6		-71.1	60	1034	14 23 50

Schedule for TORUN (Code Tr) Page 8

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
14 29 01	0007+106	17 53 09	6.1	79.7	-6.3		-37.0	39	1034	14 29 01
14 31 00	---	17 55 08	6.4	80.0	-6.3		-37.1	119	1049	14 29 02
14 33 26	2227-088	17 57 34	5.9	112.5	-4.6		-34.1	67	1049	14 33 26
14 34 26	---	17 58 35	6.0	112.7	-4.5		-34.1	60	1057	14 33 27
14 37 44	0300+470	18 01 53	17.3	29.7	-9.1		-26.0	17	1057	14 37 44
14 38 44	---	18 02 53	17.3	29.8	-9.0		-26.1	60	1064	14 37 45
14 42 02	1150+497	18 06 12	36.0	-53.4	6.2		47.8	16	1064	14 42 02
14 43 02	---	18 07 12	35.8	-53.3	6.2		47.7	60	1072	14 42 03
14 45 48	0716+714	18 09 59	35.1	-7.2	10.8		13.5	59	1072	14 45 48
14 48 20	---	18 12 31	35.0	-6.9	10.8		13.0	152	1092	14 45 49
14 56 33	1606+106	18 20 45	39.9	223.9	2.2		25.1	17	1092	14 56 33
14 57 33	---	18 21 45	39.8	224.2	2.2		25.2	60	1099	14 56 34
14 59 08	1514+197	18 23 21	41.1	244.9	3.1		35.2	39	1099	14 59 08
15 00 08	---	18 24 21	40.9	245.1	3.1		35.3	60	1107	14 59 09
15 02 03	1324+224	18 26 16	26.7	271.8	5.0		40.4	47	1107	15 02 03
15 03 20	---	18 27 33	26.5	272.1	5.0		40.4	77	1117	15 02 04
15 10 18	2143-156	18 34 33	10.0	133.1	-3.2		-27.1	124	1117	15 10 18
15 11 38	---	18 35 53	10.2	133.4	-3.2		-26.9	80	1127	15 10 19
15 17 24	1602-115	18 41 40	17.2	220.0	2.6		23.2	159	1127	15 17 24
15 20 11	---	18 44 27	16.9	220.6	2.6		23.5	167	1149	15 17 25
15 25 47	1936+046	18 50 04	40.7	163.7	-0.8		-9.8	205	1149	15 25 47
15 27 40	---	18 51 57	40.8	164.3	-0.8		-9.4	113	1163	15 25 48
15 29 19	1929+226	18 53 37	58.8	162.6	-0.6		-11.2	18	1163	15 29 19
15 30 19	---	18 54 37	58.8	163.0	-0.6		-10.9	60	1171	15 29 20
15 33 22	2318+049	18 57 40	18.5	106.4	-4.4		-35.4	18	1171	15 33 22
15 34 22	---	18 58 40	18.6	106.6	-4.4		-35.3	60	1179	15 33 23
15 36 38	0046+316	19 00 57	26.7	71.3	-5.8		-42.2	50	1179	15 36 38
15 37 38	---	19 01 57	26.8	71.5	-5.8		-42.2	60	1187	15 36 39
15 39 51	2319+444	19 04 10	48.2	74.1	-4.3		-54.6	39	1187	15 39 51
15 41 38	---	19 05 58	48.5	74.4	-4.3		-54.7	107	1200	15 39 52

Schedule for TORUN (Code Tr) Page 9

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
15 45 06	2000+472	19 09 26	79.8	118.1	-0.9		-51.6	77	1200	15 45 06
15 46 23	---	19 10 43	80.0	118.8	-0.9		-51.1	77	1210	15 45 07
15 50 34	0059+581	19 14 55	44.2	46.7	-5.8		-56.7	91	1210	15 50 34
15 51 34	---	19 15 55	44.3	46.8	-5.8		-56.9	60	1218	15 50 35
15 53 40	0510+559	19 18 02	22.0	17.8	-10.0		-19.2	28	1218	15 53 40
15 56 44	---	19 21 06	22.1	18.2	-9.9		-19.7	184	1242	15 53 41
16 00 19	0804+499	19 24 42	13.3	-7.5	11.2		7.0	148	1242	16 00 19
16 01 43	---	19 26 06	13.3	-7.3	11.3		6.8	84	1253	16 00 20
16 09 57	2214+350	19 34 21	56.5	105.4	-2.7		-45.3	256	1253	16 09 57
16 12 49	---	19 37 14	57.0	106.1	-2.7		-45.1	172	1275	16 09 58
16 18 39	0054+161	19 43 05	19.9	88.7	-5.2		-38.8	195	1275	16 18 39
16 21 20	---	19 45 46	20.3	89.2	-5.2		-38.8	161	1296	16 18 40
16 28 49	0552+398	19 53 16	6.3	22.1	-10.1		-17.1	298	1296	16 28 49
16 29 49	---	19 54 17	6.3	22.2	-10.0		-17.2	60	1303	16 28 50
16 32 30	1144+402	19 56 58	15.5	-42.3	8.1		31.8	17	1303	16 32 30
16 33 41	---	19 58 09	15.3	-42.1	8.2		31.7	71	1312	16 32 31
16 42 54	1730-130	20 07 24	16.1	218.9	2.6		22.8	16	1312	16 42 54
16 43 54	---	20 08 24	16.0	219.2	2.6		22.9	60	1320	16 42 55
16 48 08	2029+121	20 12 39	49.1	172.4	-0.3		-4.6	116	1320	16 48 08
16 49 50	---	20 14 21	49.1	173.1	-0.3		-4.3	102	1333	16 48 09
16 53 09	2227-088	20 17 40	22.3	144.1	-2.2		-20.9	84	1333	16 53 09
16 54 09	---	20 18 41	22.4	144.3	-2.2		-20.7	60	1341	16 53 10
16 56 52	1921-293	20 21 24	6.8	192.1	0.9		8.3	53	1341	16 56 52
16 57 52	---	20 22 24	6.8	192.3	0.9		8.5	60	1349	16 56 53
17 02 12	0007+106	20 26 45	28.8	111.5	-3.7		-34.7	83	1349	17 02 12
17 04 11	---	20 28 44	29.1	111.9	-3.7		-34.6	119	1364	17 02 13
17 12 14	1751+288	20 36 49	51.7	246.9	2.7		39.1	200	1364	17 12 14
17 13 14	---	20 37 49	51.6	247.2	2.7		39.2	60	1372	17 12 15
17 16 37	1636+473	20 41 12	51.9	286.5	4.0		58.0	110	1372	17 16 37
17 17 37	---	20 42 12	51.7	286.7	4.1		57.9	60	1380	17 16 38

Schedule for TORUN (Code Tr) Page 10

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
17 19 22	1504+377	20 43 58	32.3	290.9	5.6		45.0	18	1380	17 19 22
17 21 04	---	20 45 40	32.0	291.2	5.6		44.8	102	1393	17 19 23
17 22 20	1514+197	20 46 56	20.0	276.0	5.5		39.3	17	1393	17 22 20
17 23 20	---	20 47 56	19.9	276.2	5.5		39.3	60	1400	17 22 21
17 27 14	1849+670	20 51 51	69.6	325.3	2.0		118.3	33	1400	17 27 14
17 28 28	---	20 53 05	69.5	325.1	2.1		117.9	74	1410	17 27 15
17 32 54	2121+547	20 57 32	85.7	419.8	-0.4		-114.9	60	1410	17 32 54
17 34 50	---	20 59 28	85.9	418.2	-0.4		-116.9	116	1425	17 32 55
17 41 22	1357+769	21 06 01	47.5	340.9	7.1		58.2	222	1425	17 41 22
17 42 22	---	21 07 02	47.5	340.9	7.2		58.0	60	1433	17 41 23
17 45 10	0955+476	21 09 50	11.0	351.4	11.2		7.6	17	1433	17 45 10
17 46 10	---	21 10 50	10.9	351.6	11.2		7.4	60	1440	17 45 11
17 48 40	0641+392	21 13 21	7.6	387.9	-9.5		-21.3	63	1440	17 48 40
17 51 21	---	21 16 02	7.8	388.4	-9.5		-21.6	161	1461	17 48 41
17 57 43	1418+546	21 22 25	33.8	317.4	7.0		44.1	224	1461	17 57 43
17 58 43	---	21 23 25	33.7	317.6	7.0		44.0	60	1469	17 57 44
18 04 40	1754+155	21 29 23	34.3	248.5	3.5		35.4	202	1469	18 04 40
18 06 00	---	21 30 43	34.1	248.8	3.5		35.5	80	1479	18 04 41
18 08 48	1705+018	21 33 32	15.5	251.7	4.4		34.8	85	1479	18 08 48
18 09 48	---	21 34 32	15.3	251.9	4.4		34.8	60	1487	18 08 49
18 17 21	2318+049	21 42 06	38.1	147.8	-1.7		-18.8	228	1487	18 17 21
18 18 21	---	21 43 06	38.2	148.1	-1.6		-18.6	60	1495	18 17 22
18 20 43	2355-106	21 45 29	20.6	144.6	-2.2		-20.7	62	1495	18 20 43
18 21 43	---	21 46 29	20.6	144.8	-2.2		-20.6	60	1502	18 20 44
18 24 43	0221+067	21 49 29	18.2	102.8	-4.6		-36.2	80	1502	18 24 43
18 26 03	---	21 50 50	18.4	103.1	-4.6		-36.1	80	1513	18 24 44
18 32 44	1936-155	21 57 32	15.5	214.2	2.3		20.5	165	1513	18 32 44
18 33 44	---	21 58 32	15.4	214.5	2.3		20.6	60	1520	18 32 45
18 37 37	2209+236	22 02 26	60.9	175.0	-0.2		-3.3	49	1520	18 37 37
18 38 54	---	22 03 43	60.9	175.6	-0.2		-2.9	77	1530	18 37 38

Schedule for TORUN (Code Tr) Page 11

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 23 Oct 2020 Day 297 ---										
18 41 56	2059+034	22 06 45	38.9	200.7	1.1		12.3	86	1530	18 41 56
18 42 59	---	22 07 48	38.9	201.1	1.1		12.5	63	1538	18 41 57
18 45 45	2143-156	22 10 35	21.4	186.0	0.4		3.7	87	1538	18 45 45
18 47 05	---	22 11 55	21.4	186.3	0.4		3.9	80	1549	18 45 46
18 49 16	1936+046	22 14 07	32.3	227.4	2.6		26.4	34	1549	18 49 16
18 50 16	---	22 15 07	32.2	227.7	2.6		26.5	60	1556	18 49 17
18 52 47	2113+293	22 17 38	64.0	211.6	1.0		21.2	18	1556	18 52 47
18 53 47	---	22 18 38	63.9	212.1	1.0		21.5	60	1564	18 52 48
18 55 49	2029+121	22 20 41	44.0	218.0	1.8		22.2	34	1564	18 55 49
18 56 49	---	22 21 41	43.9	218.3	1.8		22.4	60	1572	18 55 50
19 01 28	2214+350	22 26 21	72.2	186.1	0.2		4.5	159	1572	19 01 28
19 02 49	---	22 27 42	72.2	187.0	0.2		5.1	81	1582	19 01 29
19 07 35	0133+476	22 32 29	60.6	81.0	-3.1		-62.3	59	1582	19 07 35
19 08 35	---	22 33 29	60.7	81.1	-3.1		-62.4	60	1590	19 07 36
19 12 15	0415+398	22 37 09	33.1	65.9	-5.7		-45.7	102	1590	19 12 15
19 14 37	---	22 39 32	33.5	66.3	-5.7		-45.8	142	1608	19 12 16
19 18 49	0300+470	22 43 44	49.3	70.7	-4.4		-56.8	180	1608	19 18 49
19 19 49	---	22 44 45	49.4	70.9	-4.3		-56.9	60	1616	19 18 50
19 25 13	0007+106	22 50 09	44.9	151.2	-1.4		-17.2	150	1616	19 25 13
19 27 12	---	22 52 09	45.1	151.8	-1.3		-16.8	119	1631	19 25 14
19 29 40	0048-097	22 54 37	22.7	148.5	-2.0		-18.6	50	1631	19 29 40
19 30 40	---	22 55 37	22.8	148.7	-1.9		-18.4	60	1639	19 29 41
19 32 38	0237-027	22 57 36	17.6	119.9	-3.7		-31.4	45	1639	19 32 38
19 33 43	---	22 58 41	17.7	120.1	-3.7		-31.3	65	1647	19 32 39
19 36 18	0202-172	23 01 16	9.5	135.6	-3.1		-26.1	109	1647	19 36 18
19 37 18	---	23 02 16	9.6	135.8	-3.1		-25.9	60	1655	19 36 19
19 40 01	0420+022	23 05 00	8.0	96.8	-5.3		-36.6	70	1655	19 40 01
19 41 01	---	23 06 00	8.2	97.0	-5.3		-36.6	60	1663	19 40 02
19 45 54	0552+398	23 10 54	24.8	56.0	-6.8		-40.4	195	1663	19 45 54
19 46 54	---	23 11 54	25.0	56.2	-6.8		-40.5	60	1671	19 45 55

Schedule for TORUN (Code Tr) Page 12

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 23 Oct 2020 Day 297 ---										
19 50 56	1150+497	23 15 57	12.8	-6.4	11.4		5.9	101	1671	19 50 56
19 51 56	---	23 16 57	12.8	-6.2	11.4		5.8	60	1678	19 50 57
19 58 35	0046+316	23 23 37	63.9	135.0	-1.4		-30.1	103	1678	19 58 35
19 59 49	---	23 24 51	64.0	135.5	-1.4		-29.8	74	1688	19 58 36
20 06 25	0954+658	23 31 28	29.8	10.7	-10.5		-15.6	131	1688	20 06 25
20 07 39	---	23 32 42	29.9	10.8	-10.5		-15.8	74	1697	20 06 26
20 16 33	1929+226	23 41 38	34.5	262.3	4.2		40.2	16	1697	20 16 33
20 20 06	---	23 45 11	34.0	263.1	4.2		40.3	213	1725	20 16 34
20 23 01	1754+155	23 48 07	13.8	277.6	5.8		38.2	86	1725	20 23 01
20 24 21	---	23 49 27	13.6	277.9	5.9		38.1	80	1735	20 23 02
20 28 48	0804+499	23 53 55	23.2	395.6	-8.3		-32.8	17	1735	20 28 48
20 30 12	---	23 55 19	23.3	395.8	-8.2		-32.9	84	1746	20 28 49
20 32 10	0510+559	23 57 17	46.3	412.7	-5.3		-58.8	18	1746	20 32 10
20 33 10	---	23 58 18	46.5	412.8	-5.3		-59.0	60	1754	20 32 11
20 39 46	1751+288	00 04 55	21.2	290.1	6.2		40.0	135	1754	20 39 46
20 40 46	---	00 05 55	21.0	290.3	6.2		40.0	60	1761	20 39 47
20 45 00	2209+236	00 10 10	53.5	228.7	2.0		29.6	114	1761	20 45 00
20 46 17	---	00 11 27	53.4	229.1	2.0		29.8	77	1771	20 45 01
20 53 03	0507+179	00 18 14	24.3	92.1	-4.9		-39.1	116	1771	20 53 03
20 54 03	---	00 19 14	24.5	92.3	-4.9		-39.1	60	1779	20 53 04
20 59 39	2318+049	00 24 51	40.5	200.8	1.1		12.4	105	1779	20 59 39
21 00 39	---	00 25 51	40.5	201.2	1.1		12.6	60	1787	20 59 40
21 03 01	2355-106	00 28 13	26.4	188.0	0.5		4.8	75	1787	21 03 01
21 04 01	---	00 29 14	26.4	188.2	0.5		5.0	60	1795	21 03 02
21 06 11	0035-252	00 31 24	12.0	178.2	-0.1		-1.2	62	1795	21 06 11
21 07 11	---	00 32 24	12.0	178.4	-0.1		-1.1	60	1802	21 06 12
21 10 55	2059+034	00 36 09	24.2	241.4	3.6		31.9	84	1802	21 10 55
21 11 58	---	00 37 12	24.1	241.6	3.6		32.0	63	1810	21 10 56
21 15 28	2214+350	00 40 43	59.3	249.3	2.4		43.6	63	1810	21 15 28
21 18 20	---	00 43 35	58.9	250.1	2.4		43.9	172	1833	21 15 29

Schedule for TORUN (Code Tr) Page 13

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 23 Oct 2020 Day 297 ---										
21 23 47	2143-156	00 49 03	11.3	224.4	3.0		25.8	135	1833	21 23 47
21 24 47	---	00 50 03	11.2	224.6	3.0		25.9	60	1840	21 23 48
21 30 00	0202+319	00 55 17	65.6	141.4	-1.2		-26.3	96	1840	21 30 00
21 31 00	---	00 56 17	65.7	141.8	-1.2		-26.0	60	1848	21 30 01
21 32 52	0322+222	00 58 09	48.4	122.8	-2.5		-33.1	33	1848	21 32 52
21 33 55	---	00 59 13	48.5	123.1	-2.5		-33.0	63	1856	21 32 53
21 37 27	0641+392	01 02 45	32.6	66.5	-5.7		-45.3	83	1856	21 37 27
21 40 08	---	01 05 27	33.0	67.0	-5.7		-45.5	161	1877	21 37 28
21 47 11	0202-172	01 12 31	19.0	166.5	-0.9		-8.4	211	1877	21 47 11
21 48 11	---	01 13 31	19.1	166.7	-0.9		-8.3	60	1885	21 47 12
21 53 50	2113+293	01 19 11	40.6	266.8	4.0		43.6	125	1885	21 53 50
21 55 14	---	01 20 35	40.4	267.0	4.1		43.6	84	1895	21 53 51
21 57 36	2029+121	01 22 57	20.4	263.5	4.8		37.7	53	1895	21 57 36
21 58 36	---	01 23 58	20.2	263.7	4.9		37.7	60	1903	21 57 37
22 01 20	2121+547	01 26 42	55.5	298.3	4.0		67.5	18	1903	22 01 20
22 05 11	---	01 30 34	55.0	298.7	4.1		67.0	231	1933	22 01 21
22 08 46	1150+497	01 34 09	14.6	376.5	-10.3		-15.2	45	1933	22 08 46
22 09 46	---	01 35 09	14.7	376.6	-10.3		-15.3	60	1941	22 08 47
22 15 48	0007+106	01 41 12	44.3	211.5	1.5		18.7	17	1941	22 15 48
22 17 47	---	01 43 12	44.2	212.2	1.5		19.0	119	1956	22 15 49
22 22 54	0048-097	01 48 20	26.4	195.6	0.9		9.4	227	1956	22 22 54
22 23 59	---	01 49 25	26.3	195.9	1.0		9.6	65	1964	22 22 55
22 30 18	0552+398	01 55 45	47.8	83.1	-4.0		-50.9	138	1964	22 30 18
22 31 18	---	01 56 45	47.9	83.3	-4.0		-50.9	60	1972	22 30 19
22 35 11	2353+816	02 00 39	59.7	-8.1	2.1		142.4	35	1972	22 35 11
22 36 53	---	02 02 21	59.7	-8.2	2.1		141.9	102	1985	22 35 12
22 38 43	0716+714	02 04 11	52.3	31.1	-5.3		-75.1	16	1985	22 38 43
22 39 43	---	02 05 11	52.3	31.1	-5.3		-75.3	60	1993	22 38 44
22 42 52	0955+476	02 08 21	23.4	40.8	-7.9		-35.4	66	1993	22 42 52
22 43 52	---	02 09 21	23.5	41.0	-7.8		-35.5	60	2001	22 42 53

Schedule for TORUN (Code Tr) Page 14

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 23 Oct 2020 Day 297 ---										
22 47 20	0510+559	02 12 50	63.8	65.0	-3.1		-77.0	44	2001	22 47 20
22 50 24	---	02 15 54	64.2	65.2	-3.0		-77.5	184	2024	22 47 21
22 57 41	0420+022	02 23 12	33.5	143.0	-2.0		-21.2	269	2024	22 57 41
22 58 41	---	02 24 12	33.6	143.2	-2.0		-21.1	60	2032	22 57 42
23 00 25	0507+179	02 25 57	42.6	121.5	-2.8		-32.6	45	2032	23 00 25
23 01 25	---	02 26 57	42.7	121.8	-2.7		-32.5	60	2040	23 00 26
23 03 34	0657+172	02 29 06	26.8	97.0	-4.5		-38.6	55	2040	23 03 34
23 04 34	---	02 30 06	26.9	97.2	-4.5		-38.6	60	2048	23 03 35
23 07 51	0403-132	02 33 24	20.9	155.7	-1.6		-14.7	66	2048	23 07 51
23 08 51	---	02 34 24	20.9	155.9	-1.5		-14.6	60	2055	23 07 52
23 11 03	0221+067	02 36 37	43.9	183.8	0.2		2.3	32	2055	23 11 03
23 12 23	---	02 37 57	43.9	184.3	0.2		2.6	80	2066	23 11 04
23 18 43	0834+250	02 44 18	20.4	75.5	-5.9		-39.8	146	2066	23 18 43
23 20 20	---	02 45 55	20.6	75.8	-5.9		-39.9	97	2078	23 18 44
23 22 42	0748+126	02 48 17	18.4	93.6	-5.1		-37.9	92	2078	23 22 42
23 23 42	---	02 49 18	18.5	93.8	-5.0		-37.9	60	2086	23 22 43
23 29 35	0133+476	02 55 12	76.8	254.9	1.3		60.0	16	2086	23 29 35
23 30 35	---	02 56 12	76.6	255.3	1.3		60.1	60	2094	23 29 36
23 35 32	2214+350	03 01 10	38.5	280.0	4.7		46.5	141	2094	23 35 32
23 38 24	---	03 04 02	38.1	280.5	4.8		46.4	172	2116	23 35 33
23 39 59	2000+472	03 05 37	28.7	312.2	7.0		41.2	17	2116	23 39 59
23 40 59	---	03 06 37	28.5	312.3	7.1		41.1	60	2123	23 40 00
23 46 59	2318+049	03 12 38	23.2	246.3	3.8		33.5	211	2123	23 46 59
23 47 59	---	03 13 39	23.1	246.5	3.9		33.6	60	2131	23 47 00
23 49 54	2209+236	03 15 34	27.5	274.1	5.0		41.0	45	2131	23 49 54
23 51 11	---	03 16 51	27.3	274.3	5.1		41.0	77	2141	23 49 55
23 53 38	2355-106	03 19 19	13.8	230.9	3.3		28.3	45	2141	23 53 38
23 54 38	---	03 20 19	13.6	231.1	3.4		28.4	60	2149	23 53 39

Schedule for TORUN (Code Tr) Page 15

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Start: Fri 23 Oct 2020 Day 297 -- Stop: Sat 24 Oct 2020 Day 298 ---

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
23 58 09	2319+444	03 23 50	50.9	283.0	4.0		55.7	57	2149	23 58 09
00 01 42	---	03 27 24	50.4	283.5	4.1		55.5	213	2176	23 58 10
00 05 38	2113+293	03 31 20	21.2	291.5	6.2		40.0	114	2176	00 05 38
00 07 02	---	03 32 45	21.0	291.8	6.3		39.9	84	2187	00 05 39
00 10 10	1636+473	03 35 53	11.2	349.3	11.0		9.5	58	2187	00 10 10
00 11 10	---	03 36 53	11.2	349.4	11.0		9.3	60	2195	00 10 11
00 16 44	0237-027	03 42 28	32.9	198.4	1.0		11.0	17	2195	00 16 44
00 17 44	---	03 43 28	32.9	198.7	1.0		11.1	60	2203	00 16 45
00 19 44	0202-172	03 45 29	16.8	204.9	1.7		15.3	46	2203	00 19 44
00 20 44	---	03 46 29	16.7	205.1	1.7		15.4	60	2210	00 19 45
00 24 06	0322+222	03 49 52	59.1	190.4	0.4		6.7	29	2210	00 24 06
00 25 09	---	03 50 55	59.0	190.9	0.4		7.0	63	2218	00 24 07
00 28 18	0524+034	03 54 04	36.8	150.0	-1.6		-17.5	91	2218	00 28 18
00 29 55	---	03 55 41	36.9	150.5	-1.5		-17.2	97	2231	00 28 19
00 31 25	0556+238	03 57 12	52.7	129.3	-2.1		-30.6	17	2231	00 31 25
00 32 26	---	03 58 13	52.8	129.6	-2.0		-30.4	61	2239	00 31 26
00 34 13	0641+392	04 00 00	58.6	99.2	-2.8		-49.9	31	2239	00 34 13
00 36 54	---	04 02 42	59.0	99.9	-2.7		-49.8	161	2259	00 34 14
00 45 20	0202+319	04 11 09	59.5	239.6	2.1		37.8	214	2259	00 45 20
00 46 20	---	04 12 09	59.3	239.9	2.1		37.9	60	2267	00 45 21
00 48 14	0054+161	04 14 03	37.2	245.4	3.3		34.7	17	2267	00 48 14
00 51 47	---	04 17 37	36.8	246.2	3.3		35.0	213	2295	00 48 15
00 57 56	0430+289	04 23 47	66.0	174.0	-0.2		-4.1	206	2295	00 57 56
01 02 53	---	04 28 45	66.0	176.7	-0.1		-2.3	297	2333	00 57 57
01 09 55	1144+402	04 35 48	21.7	51.8	-7.2		-37.9	156	2333	01 09 55
01 11 06	---	04 36 59	21.8	52.0	-7.2		-38.0	71	2342	01 09 56
01 16 17	1357+769	04 42 11	42.3	11.9	-9.3		-32.2	215	2342	01 16 17
01 17 17	---	04 43 11	42.3	11.9	-9.2		-32.4	60	2350	01 16 18
01 19 05	0954+658	04 45 00	50.9	40.2	-5.3		-69.0	37	2350	01 19 05
01 20 19	---	04 46 14	51.0	40.3	-5.2		-69.2	74	2359	01 19 06

Schedule for TORUN (Code Tr) Page 16

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
01 25 21	1150+497	04 51 17	30.1	46.3	-7.1		-41.9	208	2359	01 25 21
01 26 21	---	04 52 17	30.2	46.5	-7.0		-42.0	60	2367	01 25 22
01 34 48	0808+019	05 00 45	25.2	124.9	-3.2		-29.5	338	2367	01 34 48
01 36 05	---	05 02 02	25.4	125.2	-3.2		-29.4	77	2377	01 34 49
01 40 14	0657+172	05 06 12	47.6	137.0	-1.9		-25.4	153	2377	01 40 14
01 41 14	---	05 07 12	47.7	137.3	-1.9		-25.2	60	2385	01 40 15
01 43 35	0727-115	05 09 34	18.5	143.2	-2.4		-21.5	17	2385	01 43 35
01 44 35	---	05 10 34	18.5	143.5	-2.3		-21.4	60	2392	01 43 36
01 46 49	0926-039	05 12 48	11.6	113.6	-4.3		-33.5	59	2392	01 46 49
01 49 38	---	05 15 38	12.0	114.2	-4.2		-33.3	169	2414	01 46 50
01 53 53	1022+194	05 19 53	23.2	88.8	-5.1		-39.4	188	2414	01 53 53
01 56 15	---	05 22 16	23.6	89.2	-5.1		-39.5	142	2432	01 53 54
02 04 02	2000+472	05 30 04	15.7	-25.7	9.5		22.7	221	2432	02 04 02
02 05 19	---	05 31 21	15.6	-25.5	9.5		22.5	77	2442	02 04 03
02 14 39	0221+067	05 40 43	29.4	239.0	3.3		31.2	16	2442	02 14 39
02 15 59	---	05 42 03	29.3	239.3	3.3		31.4	80	2453	02 14 40
02 19 15	0403-132	05 45 19	20.5	205.8	1.6		15.5	113	2453	02 19 15
02 20 15	---	05 46 20	20.4	206.0	1.7		15.7	60	2460	02 19 16
02 22 15	0237-027	05 48 20	22.0	231.9	3.1		28.2	54	2460	02 22 15
02 23 20	---	05 49 25	21.9	232.1	3.1		28.3	65	2469	02 22 16
02 27 44	0133+476	05 53 50	50.4	289.3	4.3		57.8	135	2469	02 27 44
02 28 44	---	05 54 50	50.3	289.4	4.3		57.8	60	2477	02 27 45
02 31 43	0007+106	05 57 49	10.9	274.0	5.8		37.6	18	2477	02 31 43
02 33 42	---	05 59 49	10.6	274.4	5.8		37.6	119	2492	02 31 44
02 36 21	2214+350	06 02 28	14.3	311.1	7.8		33.7	71	2492	02 36 21
02 37 21	---	06 03 28	14.2	311.2	7.8		33.6	60	2500	02 36 22
02 40 39	1504+377	06 06 47	8.6	394.6	-9.0		-25.4	16	2500	02 40 39
02 42 21	---	06 08 29	8.7	394.9	-9.0		-25.6	102	2513	02 40 40
02 44 25	1636+473	06 10 34	12.3	375.8	-10.5		-13.9	70	2513	02 44 25
02 45 25	---	06 11 34	12.3	376.0	-10.4		-14.1	60	2520	02 44 26

Schedule for TORUN (Code Tr) Page 17

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
02 48 13	2121+547	06 14 22	25.0	332.3	8.8		29.2	65	2520	02 48 13
02 50 09	---	06 16 19	24.9	332.6	8.9		28.9	116	2535	02 48 14
02 57 31	0415+398	06 23 42	65.4	250.2	2.0		47.5	259	2535	02 57 31
02 59 53	---	06 26 04	65.1	250.9	2.1		47.8	142	2554	02 57 32
03 06 43	0641+392	06 32 55	75.9	169.3	-0.2		-8.3	225	2554	03 06 43
03 09 24	---	06 35 37	76.0	171.4	-0.2		-6.7	161	2574	03 06 44
03 14 49	0507+179	06 41 03	50.8	215.1	1.5		21.3	218	2574	03 14 49
03 15 49	---	06 42 03	50.7	215.4	1.5		21.5	60	2582	03 14 50
03 18 04	0552+398	06 44 18	74.5	216.0	0.8		27.4	32	2582	03 18 04
03 19 04	---	06 45 18	74.4	216.7	0.8		27.8	60	2590	03 18 05
03 22 17	0420+022	06 48 32	31.2	223.5	2.4		24.5	17	2590	03 22 17
03 23 17	---	06 49 32	31.1	223.8	2.4		24.6	60	2598	03 22 18
03 24 58	0524+034	06 51 13	37.6	206.4	1.4		15.5	51	2598	03 24 58
03 26 35	---	06 52 50	37.5	206.9	1.4		15.8	97	2610	03 24 59
03 28 10	0607-157	06 54 26	20.5	191.3	0.7		7.0	18	2610	03 28 10
03 29 10	---	06 55 26	20.5	191.5	0.7		7.2	60	2618	03 28 11
03 32 15	0556+238	06 58 31	58.8	206.1	1.0		16.8	27	2618	03 32 15
03 34 14	---	07 00 31	58.7	207.0	1.0		17.3	119	2633	03 32 16
03 35 57	0430+289	07 02 14	54.0	243.0	2.5		37.8	16	2633	03 35 57
03 37 05	---	07 03 22	53.9	243.3	2.5		37.9	68	2642	03 35 58
03 42 05	1130+009	07 08 23	14.3	108.8	-4.4		-34.6	16	2642	03 42 05
03 44 11	---	07 10 29	14.6	109.3	-4.4		-34.5	126	2658	03 42 06
03 48 54	0727-115	07 15 13	25.1	175.7	-0.3		-2.7	137	2658	03 48 54
03 49 54	---	07 16 13	25.1	175.9	-0.3		-2.5	60	2666	03 48 55
03 52 50	0808+019	07 19 10	37.4	163.1	-0.9		-10.0	116	2666	03 52 50
03 54 07	---	07 20 27	37.5	163.5	-0.9		-9.8	77	2676	03 52 51
03 59 05	1144+402	07 25 26	44.6	79.3	-4.4		-50.2	114	2676	03 59 05
04 00 16	---	07 26 37	44.8	79.5	-4.4		-50.3	71	2685	03 59 06
04 04 26	0926-039	07 30 48	27.5	146.2	-2.0		-19.6	103	2685	04 04 26
04 08 17	---	07 34 39	27.8	147.2	-1.9		-19.0	231	2715	04 04 27

Schedule for TORUN (Code Tr) Page 18

EVN GEODESY

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
04 11 29	0748+126	07 37 52	49.3	174.7	-0.2		-3.3	98	2715	04 11 29
04 12 29	---	07 38 52	49.3	175.1	-0.2		-3.0	60	2722	04 11 30
04 19 06	0202+319	07 45 30	28.3	287.1	5.7		42.8	159	2722	04 19 06
04 20 06	---	07 46 30	28.1	287.3	5.7		42.7	60	2730	04 19 07
04 24 26	2353+816	07 50 51	48.8	349.3	7.9		53.3	121	2730	04 24 26
04 26 08	---	07 52 33	48.7	349.3	7.9		52.9	102	2743	04 24 27
04 28 41	0046+316	07 55 07	16.4	302.0	7.1		36.9	18	2743	04 28 41
04 29 41	---	07 56 07	16.2	302.2	7.1		36.8	60	2751	04 28 42
04 33 39	0716+714	08 00 06	71.4	351.0	0.6		163.0	17	2751	04 33 39
04 36 22	---	08 02 49	71.3	350.3	0.6		161.7	163	2772	04 33 40
04 41 43	0510+559	08 08 11	65.3	294.3	2.9		78.6	193	2772	04 41 43
04 44 47	---	08 11 15	64.9	294.5	2.9		78.2	184	2796	04 41 44
04 49 36	2319+444	08 16 05	15.8	327.5	8.9		27.1	92	2796	04 49 36
04 51 23	---	08 17 52	15.7	327.8	8.9		26.8	107	2810	04 49 37
04 56 34	0059+581	08 23 04	35.2	323.0	7.3		43.7	223	2810	04 56 34
04 57 34	---	08 24 04	35.1	323.2	7.3		43.6	60	2817	04 56 35
04 59 17	0300+470	08 25 48	41.1	297.6	5.3		51.7	37	2817	04 59 17
05 00 17	---	08 26 48	41.0	297.8	5.4		51.7	60	2825	04 59 18
05 04 10	1636+473	08 30 42	21.8	398.4	-8.1		-33.3	17	2825	05 04 10
05 05 10	---	08 31 42	21.9	398.5	-8.1		-33.4	60	2833	05 04 11
05 10 22	2000+472	08 36 55	10.8	365.9	-11.4		-5.2	230	2833	05 10 22
05 11 22	---	08 37 55	10.9	366.0	-11.4		-5.4	60	2840	05 10 23
05 14 11	1418+546	08 40 44	42.9	412.5	-5.7		-54.7	35	2840	05 14 11
05 15 11	---	08 41 44	43.0	412.6	-5.6		-54.8	60	2848	05 14 12
05 23 01	1504+377	08 49 36	26.7	422.5	-6.3		-42.1	392	2848	05 23 01
05 24 43	---	08 51 18	27.0	422.7	-6.3		-42.2	102	2861	05 23 02
05 33 09	0834-201	08 59 45	16.4	185.4	0.4		3.5	16	2861	05 33 09
05 34 09	---	09 00 45	16.4	185.7	0.4		3.6	60	2869	05 33 10
05 39 03	1324+224	09 05 40	32.0	95.5	-4.4		-40.2	98	2869	05 39 03
05 40 20	---	09 06 57	32.2	95.7	-4.4		-40.1	77	2879	05 39 04

```
Schedule for TORUN     (Code Tr )                                  Page  19
               EVN GEODESY
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sat  24 Oct 2020   Day 298 ---

05 44 01  0955+476     09 10 39  80.3 121.6 -0.8     -49.0    27     2879   05 44 01
05 45 01  ---          09 11 39  80.4 122.2 -0.8     -48.5    60     2887   05 44 02

05 51 42  1243-072     09 18 21  15.0 125.8 -3.5     -29.4   141     2887   05 51 42
05 52 42  ---          09 19 21  15.1 126.1 -3.5     -29.3    60     2894   05 51 43

05 57 39  0727-115     09 24 19  20.8 209.7  1.9      17.7   116     2894   05 57 39
06 00 00  ---          09 26 41  20.6 210.3  1.9      18.0   141     2913   05 57 40



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K1024geo

   Setup group:   12         Station: TORUN            Total bit rate:  1024
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels:  8    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
 Net SB=         U         U         U         U         U         U         U         U
 IF SB =         U         U         U         U         U         U         U         U
 Pol.  =       RCP       RCP       RCP       RCP       RCP       RCP       RCP       RCP
 BBC   =         1         2         3         4         5         6         7         8
 BBC SB=         U         U         U         U         U         U         U         U
 IF    =        A1        A1        A1        A1        A1        A1        A1        A1

The following frequency sets based on these setups were used.

 Frequency Set:   2  Setup file default.  Used with PCAL = 1MHz
 LO sum=   22002.99  22034.99  22081.99  22163.99  22267.99  22386.99  22418.99  22471.99
 BBC fr=     522.99    554.99    601.99    683.99    787.99    906.99    938.99    991.99
 Bandwd=      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
  Matching frequency sets:   2   3

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* 0007+106	00 07 56.721985	* 00 10 31.005902	00 11 35.257575	0.00
	10 41 48.22059	* 10 58 29.50438	11 05 27.71768	0.00
* 0035-252	00 35 46.005444	* 00 38 14.735518	00 39 16.828468	0.00
	-25 15 31.50235	*-24 59 02.23540	-24 52 14.89995	0.00
* 0046+316	00 46 04.857324	* 00 48 47.141482	00 49 55.034723	0.00
	31 41 04.49531	* 31 57 25.08482	32 04 15.40904	0.00
* 0048-097	00 48 09.975908	* 00 50 41.317375	00 51 44.434809	0.00
	-09 45 24.21190	*-09 29 05.21026	-09 22 19.41921	0.00
* 0054+161	00 54 16.841259	* 00 56 55.294327	00 58 01.426352	0.00
	16 09 00.62411	* 16 25 13.34093	16 31 59.24712	0.00
* 0059+581	00 59 43.470971	* 01 02 45.762380	01 04 03.003666	0.00
	58 08 04.84748	* 58 24 11.13663	58 30 54.42967	0.00
* 0133+476	01 33 55.103063	* 01 36 58.594808	01 38 15.779349	0.00
	47 36 12.85370	* 47 51 29.10009	47 57 49.86868	0.00
* 0202-172	02 02 34.512032	* 02 04 57.674333	02 05 57.589918	0.00
	-17 15 39.48031	*-17 01 19.84087	-16 55 22.60382	0.00
* 0202+319	02 02 09.652800	* 02 05 04.925362	02 06 18.270638	0.00
	31 58 10.39534	* 32 12 30.09556	32 18 26.87925	0.00
* 0221+067	02 21 49.960392	* 02 24 28.428189	02 25 34.593654	0.00
	06 45 50.43687	* 06 59 23.34170	07 05 01.54641	0.00
* 0237-027	02 37 13.715981	* 02 39 45.472268	02 40 48.862235	0.00
	-02 47 32.85440	*-02 34 40.91441	-02 29 19.22586	0.00
* 0300+470	03 00 10.111196	* 03 03 35.242215	03 05 01.242328	0.00

	47 04 33.67710	* 47 16 16.27544	47 21 03.26516	0.00
* 0322+222	03 22 41.745721	* 03 25 36.814357	03 26 49.833616	0.00
	22 13 30.30096	* 22 24 00.36562	22 28 20.51657	0.00
* 0403-132	04 03 13.979070	* 04 05 34.003404	04 06 32.471952	0.00
	-13 16 18.08487	*-13 08 13.69121	-13 04 48.01370	0.00
* 0415+398	04 15 58.485956	* 04 19 22.549517	04 20 47.574052	0.00
	39 48 16.37511	* 39 55 28.97756	39 58 22.22976	0.00
* 0420+022	04 20 16.064037	* 04 22 52.214651	04 23 57.206566	0.00
	02 12 29.61662	* 02 19 26.93080	02 22 22.51658	0.00
* 0430+289	04 30 29.680349	* 04 33 37.829854	04 34 56.066535	0.00
	28 59 40.39007	* 29 05 55.47725	29 08 27.27754	0.00
* 0507+179	05 07 07.486540	* 05 10 02.369126	05 11 14.900270	0.00
	17 56 58.64621	* 18 00 41.58166	18 02 13.08544	0.00
* 0510+559	05 10 08.039960	* 05 14 18.699604	05 16 02.980137	0.00
	55 58 43.74506	* 56 02 11.05301	56 03 24.60426	0.00
* 0524+034	05 24 54.913885	* 05 27 32.705442	05 28 38.111241	0.00
	03 29 04.36397	* 03 31 31.51646	03 32 35.95880	0.00
* 0552+398	05 52 01.407164	* 05 55 30.805606	05 56 57.405451	0.00
	39 48 21.94588	* 39 48 49.16503	39 48 52.50989	0.00
* 0556+238	05 56 28.691730	* 05 59 32.033128	06 00 47.796823	0.00
	23 53 45.20868	* 23 53 53.92655	23 53 54.95785	0.00
* 0607-157	06 07 25.981280	* 06 09 40.949534	06 10 36.837519	0.00
	-15 42 03.30620	*-15 42 40.67299	-15 42 46.08696	0.00
* 0641+392	06 41 26.310715	* 06 44 53.709578	06 46 19.100868	0.00
	39 17 55.15166	* 39 14 47.53382	39 13 22.02530	0.00
* 0646-306	06 46 19.200705	* 06 48 14.096465	06 49 01.618152	0.00
	-30 40 54.42126	*-30 44 19.65987	-30 45 29.27465	0.00
* 0657+172	06 57 07.785942	* 07 00 01.525540	07 01 12.970633	0.00
	17 13 35.02513	* 17 09 21.70132	17 07 37.25345	0.00
* 0716+714	07 16 13.029729	* 07 21 53.448463	07 24 12.882761	0.00
	71 26 15.17401	* 71 20 36.36336	71 17 56.78402	0.00
* 0727-115	07 27 58.097810	* 07 30 19.112470	07 31 17.005928	0.00
	-11 34 52.58110	*-11 41 12.60066	-11 43 38.67595	0.00
* 0748+126	07 48 05.060503	* 07 50 52.045741	07 52 00.415149	0.00
	12 38 45.47759	* 12 31 04.82827	12 27 57.28565	0.00
* 0804+499	08 04 58.395755	* 08 08 39.666296	08 10 09.968770	0.00
	49 59 23.07794	* 49 50 36.53025	49 46 48.18104	0.00
* 0808+019	08 08 51.138129	* 08 11 26.707313	08 12 30.298548	0.00
	01 55 51.17936	* 01 46 52.22004	01 43 16.69273	0.00
* 0834-201	08 34 24.601683	* 08 36 39.215243	08 37 34.099829	0.00
	-20 06 30.40838	*-20 16 59.50407	-20 21 04.56421	0.00
* 0834+250	08 34 42.314439	* 08 37 40.245681	08 38 52.764803	0.00
	25 04 54.32835	* 24 54 23.12149	24 50 01.44907	0.00

* 0926-039	09 26 02.640074	* 09 28 33.469371	09 29 34.697927	0.00
	-03 56 01.05674	*-04 09 08.84709	-04 14 23.74602	0.00
* 0955+476	09 55 08.528442	* 09 58 19.671657	09 59 36.752900	0.00
	47 39 28.28173	* 47 25 07.84242	47 19 06.55985	0.00
* 0954+658	09 54 57.847920	* 09 58 47.245101	10 00 19.018897	0.00
	65 48 15.53885	* 65 33 54.81804	65 27 48.16050	0.00
* 1016-311	10 16 12.577882	* 10 18 28.753496	10 19 23.659785	0.00
	-31 08 50.46294	*-31 23 53.84975	-31 29 49.25429	0.00
* 1022+194	10 22 01.467535	* 10 24 44.809599	10 25 50.788568	0.00
	19 27 34.69200	* 19 12 20.41555	19 06 06.95372	0.00
* 1124-186	11 24 34.018129	* 11 27 04.392454	11 28 04.888591	0.00
	-18 40 46.35990	*-18 57 17.44198	-19 03 52.18134	0.00
* 1130+009	11 30 46.181481	* 11 33 20.055795	11 34 21.980543	0.00
	00 57 27.49162	* 00 40 52.83710	00 34 12.70482	0.00
* 1144+402	11 44 21.020903	* 11 46 58.297915	11 48 01.153725	0.00
	40 15 14.23949	* 39 58 34.30440	39 51 43.14547	0.00
* 1150+497	11 50 47.999860	* 11 53 24.466643	11 54 26.678850	0.00
	49 47 50.09416	* 49 31 08.83019	49 24 15.31692	0.00
* 1236+077	12 36 52.308756	* 12 39 24.588328	12 40 25.666974	0.00
	07 46 45.40012	* 07 30 17.18917	07 23 39.26033	0.00
* 1243-072	12 43 28.787952	* 12 46 04.232113	12 47 06.621525	0.00
	-07 14 23.49342	*-07 30 46.57468	-07 37 20.37604	0.00
* 1313-333	13 13 20.042373	* 13 16 07.985953	13 17 15.285453	0.00
	-33 23 09.68780	*-33 38 59.17251	-33 45 18.32042	0.00
* 1324+224	13 24 37.118625	* 13 27 00.861310	13 27 58.274224	0.00
	22 26 22.70233	* 22 10 50.16277	22 04 34.33213	0.00
* 1357+769	13 57 42.117008	* 13 57 55.371539	13 57 56.258244	0.00
	76 57 53.35418	* 76 43 21.05098	76 37 23.90383	0.00
* 1406-267	14 06 58.428551	* 14 09 50.169773	14 10 59.064202	0.00
	-26 43 27.94582	*-26 57 36.98030	-27 03 16.70484	0.00
* 1418+546	14 18 06.187312	* 14 19 46.597408	14 20 25.520097	0.00
	54 36 58.06461	* 54 23 14.78702	54 17 42.87619	0.00
* 1504+377	15 04 12.956680	* 15 06 09.529968	15 06 55.650796	0.00
	37 42 23.33439	* 37 30 51.13249	37 26 16.93197	0.00
* 1510-089	15 10 08.900182	* 15 12 50.532930	15 13 55.425704	0.00
	-08 54 47.61937	*-09 05 59.82952	-09 10 27.19440	0.00
* 1514+197	15 14 40.985838	* 15 16 56.796160	15 17 51.042765	0.00
	19 43 10.94238	* 19 32 12.99194	19 27 53.28923	0.00
* 1519-273	15 19 37.241375	* 15 22 37.676003	15 23 50.179034	0.00
	-27 19 30.30397	*-27 30 10.78556	-27 34 27.39384	0.00
* 1602-115	16 02 31.767575	* 16 05 17.531658	16 06 24.205376	0.00
	-11 31 20.63009	*-11 39 26.83094	-11 42 38.90325	0.00

* 1606+106	16 06 23.396626	* 16 08 46.203189	16 09 43.478190	0.00
	10 36 59.80110	* 10 29 07.77579	10 26 04.64080	0.00
* 1636+473	16 36 19.144408	* 16 37 45.130551	16 38 18.801766	0.00
	47 23 28.57996	* 47 17 33.83116	47 15 22.13604	0.00
* 1657-261	16 57 47.714238	* 17 00 53.154061	17 02 07.961825	0.00
	-26 06 29.52804	*-26 10 51.72523	-26 12 36.04739	0.00
* 1705+018	17 05 02.722620	* 17 07 34.415266	17 08 35.526550	0.00
	01 52 38.29325	* 01 48 45.69940	01 47 19.64878	0.00
* 1730-130	17 30 13.535195	* 17 33 02.705792	17 34 11.043683	0.00
	-13 02 45.83961	*-13 04 49.54808	-13 05 34.61919	0.00
* 1751+288	17 51 45.401871	* 17 53 42.473644	17 54 29.498436	0.00
	28 48 36.64957	* 28 48 04.93885	28 48 06.72807	0.00
* 1754+155	17 54 37.953514	* 17 56 53.102137	17 57 47.611489	0.00
	15 35 39.32310	* 15 35 20.82652	15 35 25.67127	0.00
* 1846+322	18 46 29.612028	* 18 48 22.088571	18 49 07.501464	0.00
	32 15 36.66040	* 32 19 02.60380	32 20 43.27237	0.00
* 1849+670	18 49 16.505876	* 18 49 16.072289	18 49 14.489146	0.00
	67 02 07.88055	* 67 05 41.68029	67 07 27.03280	0.00
* 1921-293	19 21 42.234128	* 19 24 51.055955	19 26 07.883722	0.00
	-29 20 26.35366	*-29 14 30.12076	-29 12 05.25439	0.00
* 1929+226	19 29 16.894882	* 19 31 24.916776	19 32 16.980809	0.00
	22 37 06.35047	* 22 43 31.25849	22 46 23.63297	0.00
* 1936+046	19 36 01.936450	* 19 38 30.669550	19 39 31.258422	0.00
	04 41 18.91445	* 04 48 11.61455	04 51 10.49436	0.00
* 1936-155	19 36 36.026254	* 19 39 26.657759	19 40 36.179395	0.00
	-15 32 38.77347	*-15 25 43.05868	-15 22 49.47076	0.00
* 2000+472	20 00 39.216070	* 20 02 10.418255	20 02 47.534135	0.00
	47 17 02.42456	* 47 25 28.77377	47 29 15.26181	0.00
* 2029+121	20 29 32.681257	* 20 31 54.994264	20 32 53.258756	0.00
	12 09 28.75298	* 12 19 41.34014	12 24 04.06211	0.00
* 2059+034	20 59 08.011539	* 21 01 38.834158	21 02 40.735723	0.00
	03 29 41.48363	* 03 41 31.32089	03 46 31.05251	0.00
* 2113+293	21 13 20.577457	* 21 15 29.413445	21 16 22.464398	0.00
	29 21 06.68473	* 29 33 38.36703	29 39 01.95127	0.00
* 2121+547	21 21 31.883675	* 21 23 05.313434	21 23 44.079925	0.00
	54 47 33.35226	* 55 00 27.32543	55 06 03.40266	0.00
* 2143-156	21 43 38.873703	* 21 46 22.979330	21 47 30.537796	0.00
	-15 39 37.25747	*-15 25 43.88569	-15 19 59.94537	0.00
* 2209+236	22 09 45.687920	* 22 12 05.966315	22 13 04.021104	0.00
	23 40 49.85192	* 23 55 40.54386	24 01 58.76852	0.00
* 2214+350	22 14 07.014318	* 22 16 20.009893	22 17 15.202476	0.00
	35 03 15.09251	* 35 18 14.18024	35 24 37.87042	0.00
* 2227-088	22 27 02.336857	* 22 29 40.084335	22 30 45.271694	0.00

	-08 48 17.57632	*-08 32 54.43550	-08 26 31.62993	0.00
* 2318+049	23 18 12.130375	* 23 20 44.856596	23 21 48.251834	0.00
	04 57 23.44637	* 05 13 49.95247	05 20 41.91969	0.00
* 2319+444	23 19 57.705333	* 23 22 20.358080	23 23 20.099076	0.00
	44 29 14.78871	* 44 45 42.35361	44 52 40.80883	0.00
* 2353+816	23 53 58.676718	* 23 56 22.793868	23 57 30.032138	0.00
	81 36 10.67127	* 81 52 52.25518	81 59 53.78085	0.00
* 2355-106	23 55 36.945008	* 23 58 10.882390	23 59 14.901569	0.00
	-10 36 50.73998	*-10 20 08.61120	-10 13 13.79027	0.00

ec071gtr

EVN 5 GHz and 22 GHz study of 43 compact radio sources

PI: *Carolina Casadio*

Address: FORTH - Institute of Astrophysics

Observing mode: Continuum

```
Schedule for TORUN     (Code Tr )                                    Page   2
               EVN 5 GHz and 22 GHz study of 43 compact radio sources
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sat  24 Oct 2020   Day 298 ---

 Next scan frequencies:  22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.4
                         22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.4
 Next BBC frequencies:     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.4
                           787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.4
 Next scan bandwidths:      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0
                            32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0

16 00 00  J0111+3906   19 28 19  32.5  66.4 -5.7     -45.3     0        0   16 00 00
16 01 20  ---          19 29 39  32.7  66.6 -5.7     -45.3    80       21   16 00 01

16 01 20  J0118+3810   19 29 39  31.1  66.3 -5.8     -44.5   -19       21   No stop
16 03 00  ---          19 31 20  31.3  66.6 -5.8     -44.6    81       46   16 01 21

16 03 00  J0111+3906   19 31 20  32.9  66.9 -5.7     -45.5   -20       46   No stop
16 04 40  ---          19 33 00  33.1  67.2 -5.7     -45.6    80       72   16 03 01

16 04 40  J0118+3810   19 33 00  31.6  66.9 -5.8     -44.7   -19       72   No stop
16 06 20  ---          19 34 40  31.8  67.1 -5.7     -44.8    81       98   16 04 41

16 06 50  J0111+3906   19 35 10  33.4  67.5 -5.6     -45.7    10       98   16 06 50
16 08 00  ---          19 36 21  33.6  67.7 -5.6     -45.8    70      116   16 06 51

16 08 00  J0118+3810   19 36 21  32.0  67.4 -5.7     -44.9   -19      116   No stop
16 09 40  ---          19 38 01  32.3  67.7 -5.7     -45.1    81      142   16 08 01

16 09 40  J0111+3906   19 38 01  33.8  68.0 -5.6     -45.9   -20      142   No stop
16 11 20  ---          19 39 41  34.1  68.2 -5.6     -46.0    80      167   16 09 41

16 11 20  J0118+3810   19 39 41  32.5  68.0 -5.7     -45.2   -19      167   No stop
16 13 00  ---          19 41 21  32.7  68.2 -5.6     -45.3    81      193   16 11 21

16 13 30  J0111+3906   19 41 51  34.4  68.6 -5.5     -46.2    10      193   16 13 30
16 14 40  ---          19 43 02  34.5  68.8 -5.5     -46.3    70      211   16 13 31

16 14 40  J0118+3810   19 43 02  33.0  68.5 -5.6     -45.4   -19      211   No stop
16 16 20  ---          19 44 42  33.2  68.8 -5.6     -45.5    81      237   16 14 41

16 16 20  J0111+3906   19 44 42  34.8  69.0 -5.5     -46.4   -20      237   No stop
16 18 00  ---          19 46 22  35.0  69.3 -5.4     -46.5    80      263   16 16 21
```

Schedule for TORUN (Code Tr) Page 3

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
16 18 00	J0118+3810	19 46 22	33.4	69.1	-5.5		-45.6	-19	263	No stop
16 19 40	---	19 48 02	33.7	69.3	-5.5		-45.7	81	289	16 18 01
16 20 10	J0111+3906	19 48 33	35.3	69.7	-5.4		-46.6	10	289	16 20 10
16 21 20	---	19 49 43	35.5	69.9	-5.4		-46.7	70	307	16 20 11
16 21 20	J0118+3810	19 49 43	33.9	69.6	-5.5		-45.8	-19	307	No stop
16 23 00	---	19 51 23	34.1	69.9	-5.5		-45.9	81	332	16 21 21
16 23 00	J0111+3906	19 51 23	35.7	70.1	-5.4		-46.8	-20	332	No stop
16 24 40	---	19 53 03	35.9	70.4	-5.3		-46.9	80	358	16 23 01
16 24 40	J0118+3810	19 53 03	34.4	70.2	-5.4		-46.0	-19	358	No stop
16 26 20	---	19 54 44	34.6	70.4	-5.4		-46.1	81	384	16 24 41
16 26 50	J0111+3906	19 55 14	36.2	70.8	-5.3		-47.0	10	384	16 26 50
16 28 00	---	19 56 24	36.4	71.0	-5.3		-47.1	70	402	16 26 51
16 28 00	J0118+3810	19 56 24	34.8	70.7	-5.4		-46.2	-19	402	No stop
16 29 40	---	19 58 04	35.1	71.0	-5.4		-46.3	81	428	16 28 01
16 29 40	J0111+3906	19 58 04	36.6	71.2	-5.2		-47.2	-20	428	No stop
16 31 20	---	19 59 44	36.9	71.5	-5.2		-47.3	80	453	16 29 41
16 31 20	J0118+3810	19 59 44	35.3	71.3	-5.3		-46.4	-19	453	No stop
16 33 00	---	20 01 25	35.6	71.5	-5.3		-46.5	81	479	16 31 21
16 33 30	J0111+3906	20 01 55	37.2	71.9	-5.2		-47.4	10	479	16 33 30
16 34 40	---	20 03 05	37.4	72.1	-5.2		-47.5	70	497	16 33 31
16 34 40	J0118+3810	20 03 05	35.8	71.8	-5.3		-46.6	-19	497	No stop
16 36 20	---	20 04 45	36.0	72.1	-5.2		-46.7	81	523	16 34 41
16 36 20	J0111+3906	20 04 45	37.6	72.3	-5.1		-47.6	-20	523	No stop
16 38 00	---	20 06 26	37.8	72.6	-5.1		-47.7	80	549	16 36 21
16 38 00	J0118+3810	20 06 26	36.3	72.4	-5.2		-46.8	-19	549	No stop
16 39 40	---	20 08 06	36.5	72.7	-5.2		-46.9	81	575	16 38 01
16 40 10	J0111+3906	20 08 36	38.2	73.0	-5.1		-47.8	10	575	16 40 10
16 41 20	---	20 09 46	38.3	73.2	-5.1		-47.9	70	593	16 40 11
16 41 20	J0118+3810	20 09 46	36.8	72.9	-5.2		-47.0	-19	593	No stop
16 43 00	---	20 11 26	37.0	73.2	-5.1		-47.1	81	618	16 41 21
16 43 00	J0111+3906	20 11 26	38.6	73.4	-5.0		-48.0	-20	618	No stop
16 44 40	---	20 13 07	38.8	73.7	-5.0		-48.1	80	644	16 43 01
16 44 40	J0118+3810	20 13 07	37.2	73.5	-5.1		-47.2	-19	644	No stop
16 46 20	---	20 14 47	37.5	73.8	-5.1		-47.3	81	670	16 44 41

Schedule for TORUN (Code Tr) Page 4

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
16 46 50	J0111+3906	20 15 17	39.1	74.1	-5.0		-48.2	10	670	16 46 50
16 48 00	---	20 16 27	39.3	74.3	-4.9		-48.2	70	688	16 46 51
16 48 00	J0118+3810	20 16 27	37.7	74.1	-5.0		-47.4	-19	688	No stop
16 49 40	---	20 18 07	38.0	74.3	-5.0		-47.4	81	714	16 48 01
16 49 40	J0111+3906	20 18 07	39.5	74.5	-4.9		-48.3	-20	714	No stop
16 51 20	---	20 19 48	39.8	74.8	-4.9		-48.4	80	739	16 49 41
16 51 20	J0118+3810	20 19 48	38.2	74.6	-5.0		-47.5	-19	739	No stop
16 53 00	---	20 21 28	38.4	74.9	-5.0		-47.6	81	765	16 51 21
16 53 30	J0111+3906	20 21 58	40.1	75.2	-4.8		-48.5	10	765	16 53 30
16 54 40	---	20 23 08	40.2	75.4	-4.8		-48.6	70	783	16 53 31
16 54 40	J0118+3810	20 23 08	38.7	75.2	-4.9		-47.7	-19	783	No stop
16 56 20	---	20 24 49	38.9	75.5	-4.9		-47.8	81	809	16 54 41
16 56 20	J0111+3906	20 24 49	40.5	75.7	-4.8		-48.7	-20	809	No stop
16 58 00	---	20 26 29	40.7	76.0	-4.8		-48.8	80	835	16 56 21
16 58 00	J0118+3810	20 26 29	39.2	75.7	-4.9		-47.9	-19	835	No stop
16 59 40	---	20 28 09	39.4	76.0	-4.9		-47.9	81	861	16 58 01
17 00 10	J0111+3906	20 28 39	41.1	76.3	-4.7		-48.9	10	861	17 00 10
17 01 20	---	20 29 49	41.2	76.5	-4.7		-48.9	70	879	17 00 11
17 01 20	J0118+3810	20 29 49	39.7	76.3	-4.8		-48.0	-19	879	No stop
17 03 00	---	20 31 30	39.9	76.6	-4.8		-48.1	81	904	17 01 21
17 03 00	J0111+3906	20 31 30	41.5	76.8	-4.7		-49.0	-20	904	No stop
17 04 40	---	20 33 10	41.7	77.1	-4.7		-49.1	80	930	17 03 01
17 04 40	J0118+3810	20 33 10	40.1	76.9	-4.8		-48.2	-19	930	No stop
17 06 20	---	20 34 50	40.4	77.2	-4.7		-48.2	81	956	17 04 41
17 06 50	J0111+3906	20 35 20	42.0	77.5	-4.6		-49.2	10	956	17 06 50
17 08 00	---	20 36 30	42.2	77.7	-4.6		-49.2	70	974	17 06 51
17 08 00	J0118+3810	20 36 30	40.6	77.5	-4.7		-48.3	-19	974	No stop
17 09 40	---	20 38 11	40.9	77.7	-4.7		-48.4	81	1000	17 08 01
17 09 40	J0111+3906	20 38 11	42.4	77.9	-4.6		-49.3	-20	1000	No stop
17 11 20	---	20 39 51	42.7	78.2	-4.5		-49.4	80	1025	17 09 41

Schedule for TORUN (Code Tr) Page 5

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
17 11 20	J0118+3810	20 39 51	41.1	78.0	-4.7		-48.5	-19	1025	No stop
17 13 00	---	20 41 31	41.4	78.3	-4.6		-48.5	81	1051	17 11 21
17 13 30	J0111+3906	20 42 01	43.0	78.6	-4.5		-49.4	10	1051	17 13 30
17 14 40	---	20 43 12	43.2	78.8	-4.5		-49.5	70	1069	17 13 31
17 14 40	J0118+3810	20 43 12	41.6	78.6	-4.6		-48.6	-19	1069	No stop
17 16 20	---	20 44 52	41.9	78.9	-4.6		-48.7	81	1095	17 14 41
17 16 20	J0111+3906	20 44 52	43.4	79.1	-4.5		-49.6	-20	1095	No stop
17 18 00	---	20 46 32	43.7	79.4	-4.4		-49.6	80	1121	17 16 21
17 18 00	J0118+3810	20 46 32	42.1	79.2	-4.5		-48.7	-19	1121	No stop
17 19 40	---	20 48 12	42.4	79.5	-4.5		-48.8	81	1146	17 18 01
17 20 10	J0111+3906	20 48 42	44.0	79.8	-4.4		-49.7	10	1146	17 20 10
17 21 20	---	20 49 53	44.2	80.0	-4.4		-49.7	70	1165	17 20 11
17 21 20	J0118+3810	20 49 53	42.6	79.8	-4.5		-48.8	-19	1165	No stop
17 23 00	---	20 51 33	42.8	80.1	-4.5		-48.9	81	1190	17 21 21
17 23 00	J0111+3906	20 51 33	44.4	80.3	-4.4		-49.8	-20	1190	No stop
17 24 40	---	20 53 13	44.7	80.5	-4.3		-49.9	80	1216	17 23 01
17 25 40	J0203+3042	20 54 13	31.3	79.1	-5.2		-43.4	-4	1216	17 25 40
17 27 10	---	20 55 44	31.5	79.4	-5.2		-43.4	86	1239	17 25 41
17 27 10	J0203+3041	20 55 44	31.5	79.4	-5.2		-43.4	-6	1239	No stop
17 28 40	---	20 57 14	31.7	79.7	-5.1		-43.5	84	1262	17 27 11
17 28 40	J0203+3042	20 57 14	31.7	79.7	-5.1		-43.5	-7	1262	No stop
17 30 10	---	20 58 44	32.0	80.0	-5.1		-43.5	83	1286	17 28 41
17 30 10	J0203+3041	20 58 44	32.0	80.0	-5.1		-43.5	-6	1286	No stop
17 31 40	---	21 00 14	32.2	80.3	-5.1		-43.5	84	1309	17 30 11
17 32 10	J0203+3042	21 00 44	32.3	80.3	-5.1		-43.6	23	1309	17 32 10
17 33 10	---	21 01 45	32.4	80.5	-5.1		-43.6	60	1324	17 32 11
17 33 10	J0203+3041	21 01 45	32.4	80.5	-5.1		-43.6	-6	1324	No stop
17 34 40	---	21 03 15	32.6	80.8	-5.0		-43.6	84	1347	17 33 11
17 34 40	J0203+3042	21 03 15	32.6	80.8	-5.0		-43.6	-7	1347	No stop
17 36 10	---	21 04 45	32.9	81.1	-5.0		-43.7	83	1371	17 34 41

Schedule for TORUN (Code Tr) Page 6

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
17 36 10	J0203+3041	21 04 45	32.8	81.1	-5.0		-43.7	-6	1371	No stop
17 37 40	---	21 06 15	33.1	81.4	-5.0		-43.7	84	1394	17 36 11
17 38 10	J0203+3042	21 06 45	33.2	81.4	-5.0		-43.7	23	1394	17 38 10
17 39 10	---	21 07 46	33.3	81.6	-5.0		-43.8	60	1409	17 38 11
17 39 10	J0203+3041	21 07 46	33.3	81.6	-5.0		-43.8	-6	1409	No stop
17 40 40	---	21 09 16	33.5	81.9	-4.9		-43.8	84	1432	17 39 11
17 40 40	J0203+3042	21 09 16	33.5	81.9	-4.9		-43.8	-7	1432	No stop
17 42 10	---	21 10 46	33.8	82.2	-4.9		-43.8	83	1456	17 40 41
17 42 10	J0203+3041	21 10 46	33.7	82.2	-4.9		-43.8	-6	1456	No stop
17 43 40	---	21 12 16	34.0	82.5	-4.9		-43.9	84	1479	17 42 11
17 44 10	J0203+3042	21 12 46	34.1	82.6	-4.9		-43.9	23	1479	17 44 10
17 45 10	---	21 13 47	34.2	82.7	-4.9		-43.9	60	1494	17 44 11
17 45 10	J0203+3041	21 13 47	34.2	82.8	-4.9		-43.9	-6	1494	No stop
17 46 40	---	21 15 17	34.4	83.0	-4.8		-43.9	84	1517	17 45 11
17 46 40	J0203+3042	21 15 17	34.4	83.0	-4.8		-43.9	-7	1517	No stop
17 48 10	---	21 16 47	34.7	83.3	-4.8		-44.0	83	1541	17 46 41
17 48 10	J0203+3041	21 16 47	34.6	83.3	-4.8		-44.0	-6	1541	No stop
17 49 40	---	21 18 17	34.9	83.6	-4.8		-44.0	84	1564	17 48 11
17 50 10	J0203+3042	21 18 47	35.0	83.7	-4.8		-44.0	23	1564	17 50 10
17 51 10	---	21 19 48	35.1	83.9	-4.8		-44.0	60	1579	17 50 11
17 51 10	J0203+3041	21 19 48	35.1	83.9	-4.8		-44.0	-6	1579	No stop
17 52 40	---	21 21 18	35.3	84.2	-4.7		-44.1	84	1603	17 51 11
17 52 40	J0203+3042	21 21 18	35.3	84.2	-4.7		-44.1	-7	1603	No stop
17 54 10	---	21 22 48	35.5	84.4	-4.7		-44.1	83	1626	17 52 41
17 54 10	J0203+3041	21 22 48	35.5	84.5	-4.7		-44.1	-6	1626	No stop
17 55 40	---	21 24 18	35.8	84.7	-4.7		-44.1	84	1649	17 54 11
17 56 10	J0203+3042	21 24 48	35.8	84.8	-4.7		-44.1	23	1649	17 56 10
17 57 10	---	21 25 49	36.0	85.0	-4.7		-44.1	60	1664	17 56 11
18 06 10	J0237+2848	21 34 50	30.9	81.9	-5.1		-42.8	502	1664	18 06 10
18 09 40	---	21 38 21	31.4	82.5	-5.0		-42.8	210	1718	18 06 11

Schedule for TORUN (Code Tr) Page 7

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
18 11 40	J0006-0623	21 40 21	23.0	139.8	-2.4		-23.0	-10	1718	18 11 40
18 14 10	---	21 42 51	23.3	140.4	-2.4		-22.7	140	1757	18 11 41
18 14 10	J0010-0740	21 42 51	21.6	139.8	-2.5		-23.0	-20	1757	No stop
18 15 50	---	21 44 32	21.8	140.2	-2.5		-22.8	80	1783	18 14 11
18 15 50	J0006-0623	21 44 32	23.4	140.8	-2.4		-22.4	-20	1783	No stop
18 17 30	---	21 46 12	23.6	141.2	-2.4		-22.2	80	1809	18 15 51
18 17 30	J0010-0740	21 46 12	22.0	140.6	-2.4		-22.6	-20	1809	No stop
18 19 10	---	21 47 52	22.1	141.0	-2.4		-22.4	80	1834	18 17 31
18 19 40	J0006-0623	21 48 22	23.8	141.8	-2.3		-22.0	10	1834	18 19 40
18 20 50	---	21 49 32	23.9	142.1	-2.3		-21.8	70	1852	18 19 41
18 20 50	J0010-0740	21 49 32	22.3	141.4	-2.4		-22.2	-20	1852	No stop
18 22 30	---	21 51 13	22.4	141.8	-2.3		-22.0	80	1878	18 20 51
18 22 30	J0006-0623	21 51 13	24.0	142.5	-2.3		-21.6	-20	1878	No stop
18 24 10	---	21 52 53	24.2	142.9	-2.2		-21.4	80	1904	18 22 31
18 24 10	J0010-0740	21 52 53	22.6	142.3	-2.3		-21.8	-20	1904	No stop
18 25 50	---	21 54 33	22.7	142.7	-2.3		-21.5	80	1930	18 24 11
18 26 20	J0006-0623	21 55 03	24.4	143.5	-2.2		-21.1	10	1930	18 26 20
18 27 30	---	21 56 13	24.5	143.8	-2.2		-20.9	70	1948	18 26 21
18 27 30	J0010-0740	21 56 13	22.9	143.1	-2.3		-21.3	-20	1948	No stop
18 29 10	---	21 57 54	23.0	143.5	-2.2		-21.1	80	1974	18 27 31
18 29 10	J0006-0623	21 57 54	24.6	144.2	-2.2		-20.7	-20	1974	No stop
18 30 50	---	21 59 34	24.8	144.6	-2.1		-20.5	80	1999	18 29 11
18 30 50	J0010-0740	21 59 34	23.2	143.9	-2.2		-20.9	-20	1999	No stop
18 32 30	---	22 01 14	23.3	144.4	-2.2		-20.7	80	2025	18 30 51
18 33 00	J0006-0623	22 01 44	25.0	145.2	-2.1		-20.2	10	2025	18 33 00
18 34 10	---	22 02 55	25.1	145.5	-2.1		-20.0	70	2043	18 33 01
18 34 10	J0010-0740	22 02 55	23.5	144.8	-2.1		-20.4	-19	2043	No stop
18 35 50	---	22 04 35	23.6	145.2	-2.1		-20.2	81	2069	18 34 11
18 35 50	J0006-0623	22 04 35	25.2	145.9	-2.0		-19.8	-20	2069	No stop
18 37 30	---	22 06 15	25.3	146.3	-2.0		-19.6	80	2095	18 35 51

Schedule for TORUN (Code Tr) Page 8

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
18 37 30	J0010-0740	22 06 15	23.8	145.6	-2.1		-20.0	-19	2095	No stop
18 39 10	---	22 07 55	23.9	146.1	-2.1		-19.8	81	2120	18 37 31
18 39 40	J0006-0623	22 08 25	25.5	146.9	-2.0		-19.3	10	2120	18 39 40
18 40 50	---	22 09 36	25.6	147.2	-2.0		-19.1	70	2138	18 39 41
18 40 50	J0010-0740	22 09 36	24.0	146.5	-2.0		-19.5	-19	2138	No stop
18 42 30	---	22 11 16	24.2	146.9	-2.0		-19.3	81	2164	18 40 51
18 42 30	J0006-0623	22 11 16	25.8	147.6	-1.9		-18.9	-20	2164	No stop
18 44 10	---	22 12 56	25.9	148.1	-1.9		-18.6	80	2190	18 42 31
18 44 10	J0010-0740	22 12 56	24.3	147.3	-2.0		-19.1	-19	2190	No stop
18 45 50	---	22 14 37	24.4	147.8	-2.0		-18.8	81	2216	18 44 11
18 46 20	J0006-0623	22 15 07	26.1	148.6	-1.9		-18.3	10	2216	18 46 20
18 47 30	---	22 16 17	26.2	149.0	-1.9		-18.2	70	2234	18 46 21
18 47 30	J0010-0740	22 16 17	24.6	148.2	-1.9		-18.6	-19	2234	No stop
18 49 10	---	22 17 57	24.7	148.6	-1.9		-18.4	81	2259	18 47 31
18 49 10	J0006-0623	22 17 57	26.3	149.4	-1.8		-17.9	-20	2259	No stop
18 50 50	---	22 19 37	26.4	149.8	-1.8		-17.7	80	2285	18 49 11
18 50 50	J0010-0740	22 19 37	24.8	149.1	-1.9		-18.1	-19	2285	No stop
18 52 30	---	22 21 18	25.0	149.5	-1.8		-17.9	81	2311	18 50 51
18 53 00	J0006-0623	22 21 48	26.6	150.4	-1.8		-17.4	10	2311	18 53 00
18 54 10	---	22 22 58	26.7	150.7	-1.7		-17.2	70	2329	18 53 01
18 54 10	J0010-0740	22 22 58	25.1	149.9	-1.8		-17.7	-19	2329	No stop
18 55 50	---	22 24 38	25.2	150.4	-1.8		-17.4	81	2355	18 54 11
18 55 50	J0006-0623	22 24 38	26.8	151.2	-1.7		-16.9	-19	2355	No stop
18 57 30	---	22 26 18	26.9	151.6	-1.7		-16.7	81	2381	18 55 51
18 57 30	J0010-0740	22 26 18	25.3	150.8	-1.8		-17.2	-19	2381	No stop
18 59 10	---	22 27 59	25.5	151.2	-1.7		-16.9	81	2406	18 57 31
18 59 40	J0006-0623	22 28 29	27.1	152.2	-1.6		-16.4	11	2406	18 59 40
19 00 50	---	22 29 39	27.1	152.5	-1.6		-16.2	70	2424	18 59 41
19 00 50	J0010-0740	22 29 39	25.6	151.7	-1.7		-16.7	-19	2424	No stop
19 02 30	---	22 31 19	25.7	152.1	-1.7		-16.5	81	2450	19 00 51

Schedule for TORUN (Code Tr) Page 9

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
19 02 30	J0006-0623	22 31 19	27.2	153.0	-1.6		-15.9	-19	2450	No stop
19 04 10	---	22 33 00	27.4	153.4	-1.6		-15.7	81	2476	19 02 31
19 04 10	J0010-0740	22 33 00	25.8	152.6	-1.6		-16.2	-19	2476	No stop
19 05 50	---	22 34 40	25.9	153.0	-1.6		-16.0	81	2502	19 04 11
19 06 20	J0006-0623	22 35 10	27.5	154.0	-1.5		-15.4	11	2502	19 06 20
19 07 30	---	22 36 20	27.6	154.3	-1.5		-15.2	70	2520	19 06 21
19 07 30	J0010-0740	22 36 20	26.0	153.5	-1.6		-15.7	-19	2520	No stop
19 09 10	---	22 38 00	26.2	153.9	-1.6		-15.5	81	2545	19 07 31
19 09 10	J0006-0623	22 38 00	27.7	154.8	-1.5		-14.9	-19	2545	No stop
19 10 50	---	22 39 41	27.8	155.2	-1.5		-14.7	81	2571	19 09 11
19 10 50	J0010-0740	22 39 41	26.3	154.3	-1.5		-15.2	-19	2571	No stop
19 12 30	---	22 41 21	26.4	154.8	-1.5		-15.0	81	2597	19 10 51
19 13 00	J0006-0623	22 41 51	27.9	155.8	-1.4		-14.3	11	2597	19 13 00
19 14 10	---	22 43 01	28.0	156.1	-1.4		-14.2	70	2615	19 13 01
19 14 10	J0010-0740	22 43 01	26.5	155.2	-1.5		-14.7	-19	2615	No stop
19 15 50	---	22 44 41	26.6	155.7	-1.5		-14.4	81	2641	19 14 11
19 15 50	J0006-0623	22 44 41	28.1	156.6	-1.4		-13.9	-19	2641	No stop
19 17 30	---	22 46 22	28.2	157.0	-1.3		-13.6	81	2667	19 15 51
19 17 30	J0010-0740	22 46 22	26.7	156.1	-1.4		-14.2	-19	2667	No stop
19 19 10	---	22 48 02	26.8	156.6	-1.4		-13.9	81	2692	19 17 31
19 19 40	J0006-0623	22 48 32	28.3	157.6	-1.3		-13.3	11	2692	19 19 40
19 20 50	---	22 49 42	28.4	158.0	-1.3		-13.1	70	2710	19 19 41
19 20 50	J0010-0740	22 49 42	26.9	157.0	-1.4		-13.7	-19	2710	No stop
19 22 30	---	22 51 23	27.0	157.5	-1.3		-13.4	81	2736	19 20 51
19 22 30	J0006-0623	22 51 23	28.5	158.4	-1.3		-12.8	-19	2736	No stop
19 24 10	---	22 53 03	28.6	158.9	-1.2		-12.6	81	2762	19 22 31
19 24 10	J0010-0740	22 53 03	27.1	157.9	-1.3		-13.2	-19	2762	No stop
19 25 50	---	22 54 43	27.2	158.4	-1.3		-12.9	81	2788	19 24 11
19 26 20	J0006-0623	22 55 13	28.7	159.5	-1.2		-12.2	11	2788	19 26 20
19 27 30	---	22 56 23	28.8	159.8	-1.2		-12.0	70	2806	19 26 21

Schedule for TORUN (Code Tr) Page 10

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
19 27 30	J0010-0740	22 56 23	27.3	158.8	-1.3		-12.6	-19	2806	No stop
19 29 10	---	22 58 04	27.4	159.3	-1.2		-12.4	81	2831	19 27 31
19 29 10	J0006-0623	22 58 04	28.8	160.3	-1.2		-11.8	-19	2831	No stop
19 30 50	---	22 59 44	28.9	160.7	-1.1		-11.5	81	2857	19 29 11
19 30 50	J0010-0740	22 59 44	27.4	159.8	-1.2		-12.1	-19	2857	No stop
19 32 30	---	23 01 24	27.5	160.2	-1.2		-11.8	81	2883	19 30 51
19 33 00	J0006-0623	23 01 54	29.0	161.3	-1.1		-11.1	11	2883	19 33 00
19 34 10	---	23 03 04	29.1	161.7	-1.1		-11.0	70	2901	19 33 01
19 34 10	J0010-0740	23 03 04	27.6	160.7	-1.1		-11.6	-19	2901	No stop
19 35 50	---	23 04 45	27.7	161.1	-1.1		-11.3	81	2927	19 34 11
19 35 50	J0006-0623	23 04 45	29.2	162.1	-1.0		-10.7	-19	2927	No stop
19 37 30	---	23 06 25	29.2	162.6	-1.0		-10.4	81	2953	19 35 51
19 37 30	J0010-0740	23 06 25	27.8	161.6	-1.1		-11.0	-19	2953	No stop
19 39 10	---	23 08 05	27.9	162.0	-1.1		-10.8	81	2978	19 37 31
19 39 40	J0006-0623	23 08 35	29.3	163.2	-1.0		-10.1	11	2978	19 39 40
19 40 50	---	23 09 46	29.4	163.5	-1.0		-9.9	70	2996	19 39 41
19 40 50	J0010-0740	23 09 46	27.9	162.5	-1.0		-10.5	-19	2996	No stop
19 42 30	---	23 11 26	28.0	163.0	-1.0		-10.2	81	3022	19 40 51
19 42 30	J0006-0623	23 11 26	29.5	164.0	-0.9		-9.6	-19	3022	No stop
19 44 10	---	23 13 06	29.5	164.5	-0.9		-9.3	81	3048	19 42 31
19 44 10	J0010-0740	23 13 06	28.1	163.4	-1.0		-9.9	-19	3048	No stop
19 45 50	---	23 14 46	28.1	163.9	-1.0		-9.7	81	3074	19 44 11
19 46 20	J0006-0623	23 15 16	29.6	165.1	-0.9		-8.9	11	3074	19 46 20
19 47 30	---	23 16 27	29.7	165.4	-0.8		-8.7	70	3092	19 46 21
19 47 30	J0010-0740	23 16 27	28.2	164.4	-0.9		-9.4	-19	3092	No stop
19 49 10	---	23 18 07	28.3	164.8	-0.9		-9.1	81	3117	19 47 31
19 49 10	J0006-0623	23 18 07	29.7	165.9	-0.8		-8.5	-19	3117	No stop
19 50 50	---	23 19 47	29.8	166.4	-0.8		-8.2	81	3143	19 49 11
19 50 50	J0010-0740	23 19 47	28.3	165.3	-0.9		-8.8	-19	3143	No stop
19 52 30	---	23 21 27	28.4	165.8	-0.8		-8.6	81	3169	19 50 51

Schedule for TORUN (Code Tr) Page 11

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
19 53 00	J0006-0623	23 21 58	29.9	167.0	-0.8		-7.8	11	3169	19 53 00
19 54 10	---	23 23 08	29.9	167.3	-0.7		-7.6	70	3187	19 53 01
19 54 10	J0010-0740	23 23 08	28.5	166.2	-0.8		-8.3	-19	3187	No stop
19 55 50	---	23 24 48	28.5	166.7	-0.8		-8.0	81	3213	19 54 11
19 55 50	J0006-0623	23 24 48	29.9	167.8	-0.7		-7.3	-19	3213	No stop
19 57 30	---	23 26 28	30.0	168.3	-0.7		-7.1	81	3239	19 55 51
19 57 30	J0010-0740	23 26 28	28.6	167.2	-0.8		-7.7	-19	3239	No stop
19 59 10	---	23 28 09	28.6	167.6	-0.7		-7.5	81	3264	19 57 31
19 59 40	J0006-0623	23 28 39	30.1	168.9	-0.6		-6.7	11	3264	19 59 40
20 00 50	---	23 29 49	30.1	169.2	-0.6		-6.5	70	3282	19 59 41
20 00 50	J0010-0740	23 29 49	28.7	168.1	-0.7		-7.2	-19	3282	No stop
20 02 30	---	23 31 29	28.7	168.6	-0.7		-6.9	81	3308	20 00 51
20 02 30	J0006-0623	23 31 29	30.1	169.7	-0.6		-6.2	-19	3308	No stop
20 04 10	---	23 33 09	30.2	170.2	-0.6		-5.9	81	3334	20 02 31
20 04 10	J0010-0740	23 33 09	28.8	169.0	-0.6		-6.6	-19	3334	No stop
20 05 50	---	23 34 50	28.8	169.5	-0.6		-6.3	81	3360	20 04 11
20 06 20	J0006-0623	23 35 20	30.2	170.8	-0.5		-5.5	11	3360	20 06 20
20 07 30	---	23 36 30	30.3	171.1	-0.5		-5.3	70	3378	20 06 21
20 07 30	J0010-0740	23 36 30	28.9	170.0	-0.6		-6.1	-19	3378	No stop
20 09 10	---	23 38 10	28.9	170.4	-0.6		-5.8	81	3403	20 07 31
20 09 10	J0006-0623	23 38 10	30.3	171.6	-0.5		-5.1	-19	3403	No stop
20 10 50	---	23 39 50	30.3	172.1	-0.5		-4.8	81	3429	20 09 11
20 10 50	J0010-0740	23 39 50	29.0	170.9	-0.5		-5.5	-19	3429	No stop
20 12 30	---	23 41 31	29.0	171.4	-0.5		-5.2	81	3455	20 10 51
20 13 00	J0006-0623	23 42 01	30.4	172.7	-0.4		-4.4	11	3455	20 13 00
20 14 10	---	23 43 11	30.4	173.0	-0.4		-4.2	70	3473	20 13 01
20 14 10	J0010-0740	23 43 11	29.0	171.9	-0.5		-4.9	-18	3473	No stop
20 15 50	---	23 44 51	29.1	172.3	-0.5		-4.6	82	3499	20 14 11
20 15 50	J0006-0623	23 44 51	30.4	173.5	-0.4		-3.9	-18	3499	No stop
20 17 30	---	23 46 32	30.5	174.0	-0.3		-3.6	82	3524	20 15 51

Schedule for TORUN (Code Tr) Page 12

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
20 17 30	J0010-0740	23 46 32	29.1	172.8	-0.4		-4.4	-18	3524	No stop
20 19 10	---	23 48 12	29.1	173.3	-0.4		-4.1	82	3550	20 17 31
20 19 40	J0006-0623	23 48 42	30.5	174.6	-0.3		-3.2	12	3550	20 19 40
20 20 50	---	23 49 52	30.5	175.0	-0.3		-3.0	70	3568	20 19 41
20 20 50	J0010-0740	23 49 52	29.2	173.7	-0.4		-3.8	-18	3568	No stop
20 22 30	---	23 51 32	29.2	174.2	-0.3		-3.5	82	3594	20 20 51
20 22 30	J0006-0623	23 51 32	30.5	175.5	-0.3		-2.7	-18	3594	No stop
20 24 10	---	23 53 13	30.6	175.9	-0.2		-2.5	82	3620	20 22 31
20 24 10	J0010-0740	23 53 13	29.2	174.7	-0.3		-3.2	-18	3620	No stop
20 25 50	---	23 54 53	29.2	175.2	-0.3		-2.9	82	3646	20 24 11
20 26 20	J0006-0623	23 55 23	30.6	176.6	-0.2		-2.1	12	3646	20 26 20
20 27 30	---	23 56 33	30.6	176.9	-0.2		-1.9	70	3664	20 26 21
20 36 50	J0110-0741	00 05 55	27.7	161.5	-1.1		-11.1	509	3664	20 36 50
20 38 10	---	00 07 15	27.8	161.8	-1.1		-10.9	80	3684	20 36 51
20 38 10	J0104-0754	00 07 15	27.9	163.6	-1.0		-9.8	-17	3684	No stop
20 39 50	---	00 08 55	27.9	164.1	-0.9		-9.6	83	3710	20 38 11
20 39 50	J0110-0741	00 08 55	27.9	162.3	-1.0		-10.6	-17	3710	No stop
20 41 30	---	00 10 36	27.9	162.8	-1.0		-10.3	83	3736	20 39 51
20 41 30	J0104-0754	00 10 36	28.0	164.6	-0.9		-9.3	-17	3736	No stop
20 43 10	---	00 12 16	28.1	165.0	-0.9		-9.0	83	3762	20 41 31
20 43 40	J0110-0741	00 12 46	28.0	163.4	-1.0		-10.0	13	3762	20 43 40
20 44 50	---	00 13 56	28.1	163.7	-1.0		-9.8	70	3780	20 43 41
20 44 50	J0104-0754	00 13 56	28.1	165.5	-0.9		-8.7	-17	3780	No stop
20 46 30	---	00 15 36	28.2	166.0	-0.8		-8.5	83	3805	20 44 51
20 46 30	J0110-0741	00 15 36	28.2	164.1	-0.9		-9.5	-17	3805	No stop
20 48 10	---	00 17 17	28.2	164.6	-0.9		-9.3	83	3831	20 46 31
20 48 10	J0104-0754	00 17 17	28.2	166.4	-0.8		-8.2	-17	3831	No stop
20 49 50	---	00 18 57	28.3	166.9	-0.8		-7.9	83	3857	20 48 11
20 50 20	J0110-0741	00 19 27	28.3	165.2	-0.9		-8.9	13	3857	20 50 20
20 51 30	---	00 20 37	28.4	165.5	-0.9		-8.7	70	3875	20 50 21

Schedule for TORUN (Code Tr) Page 13

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
20 51 30	J0104-0754	00 20 37	28.4	167.4	-0.7		-7.6	-17	3875	No stop
20 53 10	---	00 22 17	28.4	167.8	-0.7		-7.3	83	3901	20 51 31
20 53 10	J0110-0741	00 22 17	28.4	166.0	-0.8		-8.4	-17	3901	No stop
20 54 50	---	00 23 58	28.5	166.5	-0.8		-8.2	83	3926	20 53 11
20 54 50	J0104-0754	00 23 58	28.5	168.3	-0.7		-7.1	-17	3926	No stop
20 56 30	---	00 25 38	28.5	168.8	-0.7		-6.8	83	3952	20 54 51
20 57 00	J0110-0741	00 26 08	28.5	167.1	-0.8		-7.8	13	3952	20 57 00
20 58 10	---	00 27 18	28.6	167.4	-0.7		-7.6	70	3970	20 57 01
20 58 10	J0104-0754	00 27 18	28.6	169.2	-0.6		-6.5	-17	3970	No stop
20 59 50	---	00 28 59	28.6	169.7	-0.6		-6.2	83	3996	20 58 11
20 59 50	J0110-0741	00 28 59	28.6	167.9	-0.7		-7.3	-17	3996	No stop
21 01 30	---	00 30 39	28.7	168.3	-0.7		-7.0	83	4022	20 59 51
21 01 30	J0104-0754	00 30 39	28.7	170.2	-0.6		-5.9	-17	4022	No stop
21 03 10	---	00 32 19	28.7	170.6	-0.6		-5.7	83	4048	21 01 31
21 03 40	J0110-0741	00 32 49	28.8	168.9	-0.7		-6.7	13	4048	21 03 40
21 04 50	---	00 33 59	28.8	169.3	-0.6		-6.5	70	4066	21 03 41
21 04 50	J0104-0754	00 33 59	28.7	171.1	-0.5		-5.4	-17	4066	No stop
21 06 30	---	00 35 40	28.8	171.6	-0.5		-5.1	83	4091	21 04 51
21 06 30	J0110-0741	00 35 40	28.8	169.7	-0.6		-6.2	-17	4091	No stop
21 08 10	---	00 37 20	28.9	170.2	-0.6		-5.9	83	4117	21 06 31
21 08 10	J0104-0754	00 37 20	28.8	172.0	-0.5		-4.8	-17	4117	No stop
21 09 50	---	00 39 00	28.8	172.5	-0.4		-4.5	83	4143	21 08 11
21 10 20	J0110-0741	00 39 30	28.9	170.8	-0.5		-5.5	13	4143	21 10 20
21 11 30	---	00 40 40	29.0	171.2	-0.5		-5.3	70	4161	21 10 21
21 11 30	J0104-0754	00 40 40	28.9	173.0	-0.4		-4.2	-17	4161	No stop
21 13 10	---	00 42 21	28.9	173.5	-0.4		-4.0	83	4187	21 11 31
21 13 10	J0110-0741	00 42 21	29.0	171.6	-0.5		-5.1	-17	4187	No stop
21 14 50	---	00 44 01	29.0	172.1	-0.5		-4.8	83	4212	21 13 11
21 14 50	J0104-0754	00 44 01	28.9	173.9	-0.4		-3.7	-17	4212	No stop
21 16 30	---	00 45 41	29.0	174.4	-0.3		-3.4	83	4238	21 14 51

Schedule for TORUN (Code Tr) Page 14

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
21 17 00	J0110-0741	00 46 11	29.1	172.7	-0.4		-4.4	13	4238	21 17 00
21 18 10	---	00 47 22	29.1	173.0	-0.4		-4.2	70	4256	21 17 01
21 18 10	J0104-0754	00 47 22	29.0	174.9	-0.3		-3.1	-17	4256	No stop
21 19 50	---	00 49 02	29.0	175.3	-0.3		-2.8	83	4282	21 18 11
21 19 50	J0110-0741	00 49 02	29.1	173.5	-0.4		-3.9	-17	4282	No stop
21 21 30	---	00 50 42	29.2	174.0	-0.4		-3.6	83	4308	21 19 51
21 21 30	J0104-0754	00 50 42	29.0	175.8	-0.2		-2.5	-17	4308	No stop
21 23 10	---	00 52 22	29.0	176.3	-0.2		-2.3	83	4333	21 21 31
21 23 40	J0110-0741	00 52 52	29.2	174.6	-0.3		-3.3	13	4333	21 23 40
21 24 50	---	00 54 03	29.2	174.9	-0.3		-3.1	70	4352	21 23 41
21 24 50	J0104-0754	00 54 03	29.1	176.8	-0.2		-2.0	-17	4352	No stop
21 26 30	---	00 55 43	29.1	177.2	-0.2		-1.7	83	4377	21 24 51
21 26 30	J0110-0741	00 55 43	29.2	175.4	-0.3		-2.8	-17	4377	No stop
21 28 10	---	00 57 23	29.2	175.9	-0.2		-2.5	83	4403	21 26 31
21 28 10	J0104-0754	00 57 23	29.1	177.7	-0.1		-1.4	-17	4403	No stop
21 29 50	---	00 59 03	29.1	178.2	-0.1		-1.1	83	4429	21 28 11
21 30 20	J0110-0741	00 59 34	29.3	176.5	-0.2		-2.1	13	4429	21 30 20
21 31 30	---	01 00 44	29.3	176.8	-0.2		-1.9	70	4447	21 30 21
21 31 30	J0104-0754	01 00 44	29.1	178.7	-0.1		-0.8	-17	4447	No stop
21 33 10	---	01 02 24	29.1	179.1	-0.1		-0.5	83	4473	21 31 31
21 33 10	J0110-0741	01 02 24	29.3	177.3	-0.2		-1.6	-17	4473	No stop
21 34 50	---	01 04 04	29.3	177.8	-0.1		-1.3	83	4498	21 33 11
21 34 50	J0104-0754	01 04 04	29.1	179.6	-0.0		-0.2	-17	4498	No stop
21 36 30	---	01 05 45	29.1	180.1	0.0		0.0	83	4524	21 34 51
21 37 00	J0110-0741	01 06 15	29.3	178.4	-0.1		-1.0	13	4524	21 37 00
21 38 10	---	01 07 25	29.3	178.7	-0.1		-0.8	70	4542	21 37 01
21 38 10	J0104-0754	01 07 25	29.1	180.5	0.0		0.3	-17	4542	No stop
21 39 50	---	01 09 05	29.1	181.0	0.1		0.6	83	4568	21 38 11
21 39 50	J0110-0741	01 09 05	29.3	179.2	-0.0		-0.5	-17	4568	No stop
21 41 30	---	01 10 45	29.3	179.7	-0.0		-0.2	83	4594	21 39 51

Schedule for TORUN (Code Tr) Page 15

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
21 41 30	J0104-0754	01 10 45	29.1	181.5	0.1		0.9	-17	4594	No stop
21 43 10	---	01 12 26	29.1	182.0	0.1		1.2	83	4619	21 41 31
21 43 40	J0110-0741	01 12 56	29.3	180.3	0.0		0.2	13	4619	21 43 40
21 44 50	---	01 14 06	29.3	180.6	0.0		0.4	70	4637	21 43 41
21 44 50	J0104-0754	01 14 06	29.1	182.4	0.1		1.5	-17	4637	No stop
21 46 30	---	01 15 46	29.1	182.9	0.2		1.8	83	4663	21 44 51
21 46 30	J0110-0741	01 15 46	29.3	181.1	0.1		0.7	-17	4663	No stop
21 48 10	---	01 17 26	29.3	181.6	0.1		1.0	83	4689	21 46 31
21 48 10	J0104-0754	01 17 26	29.0	183.4	0.2		2.1	-17	4689	No stop
21 49 50	---	01 19 07	29.0	183.9	0.2		2.3	83	4715	21 48 11
21 50 20	J0110-0741	01 19 37	29.3	182.2	0.1		1.3	13	4715	21 50 20
21 51 30	---	01 20 47	29.3	182.5	0.1		1.5	70	4733	21 50 21
21 51 30	J0104-0754	01 20 47	29.0	184.3	0.3		2.6	-17	4733	No stop
21 53 10	---	01 22 27	29.0	184.8	0.3		2.9	83	4759	21 51 31
21 53 10	J0110-0741	01 22 27	29.3	183.0	0.2		1.8	-17	4759	No stop
21 54 50	---	01 24 08	29.3	183.5	0.2		2.1	83	4784	21 53 11
21 54 50	J0104-0754	01 24 08	29.0	185.3	0.3		3.2	-17	4784	No stop
21 56 30	---	01 25 48	28.9	185.8	0.3		3.5	83	4810	21 54 51
21 57 00	J0110-0741	01 26 18	29.2	184.1	0.2		2.5	13	4810	21 57 00
21 58 10	---	01 27 28	29.2	184.4	0.3		2.7	70	4828	21 57 01
21 58 10	J0104-0754	01 27 28	28.9	186.2	0.4		3.8	-17	4828	No stop
21 59 50	---	01 29 08	28.9	186.7	0.4		4.1	83	4854	21 58 11
21 59 50	J0110-0741	01 29 08	29.2	184.9	0.3		3.0	-17	4854	No stop
22 01 30	---	01 30 49	29.2	185.4	0.3		3.3	83	4880	21 59 51
22 01 30	J0104-0754	01 30 49	28.9	187.2	0.4		4.3	-17	4880	No stop
22 03 10	---	01 32 29	28.8	187.6	0.5		4.6	83	4905	22 01 31
22 03 40	J0110-0741	01 32 59	29.2	186.0	0.4		3.6	13	4905	22 03 40
22 04 50	---	01 34 09	29.1	186.3	0.4		3.8	70	4923	22 03 41
22 04 50	J0104-0754	01 34 09	28.8	188.1	0.5		4.9	-17	4923	No stop
22 06 30	---	01 35 49	28.8	188.6	0.5		5.2	83	4949	22 04 51

Schedule for TORUN (Code Tr) Page 16

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
22 06 30	J0110-0741	01 35 49	29.1	186.8	0.4		4.1	-17	4949	No stop
22 08 10	---	01 37 30	29.1	187.3	0.4		4.4	83	4975	22 06 31
22 08 10	J0104-0754	01 37 30	28.7	189.1	0.5		5.5	-17	4975	No stop
22 09 50	---	01 39 10	28.7	189.5	0.6		5.8	83	5001	22 08 11
22 10 20	J0110-0741	01 39 40	29.0	187.9	0.5		4.8	13	5001	22 10 20
22 11 30	---	01 40 50	29.0	188.2	0.5		5.0	70	5019	22 10 21
22 11 30	J0104-0754	01 40 50	28.6	190.0	0.6		6.0	-17	5019	No stop
22 13 10	---	01 42 31	28.6	190.5	0.6		6.3	83	5045	22 11 31
22 13 10	J0110-0741	01 42 31	29.0	188.7	0.5		5.2	-17	5045	No stop
22 14 50	---	01 44 11	28.9	189.2	0.5		5.5	83	5070	22 13 11
22 14 50	J0104-0754	01 44 11	28.5	190.9	0.6		6.6	-17	5070	No stop
22 16 30	---	01 45 51	28.5	191.4	0.7		6.9	83	5096	22 14 51
22 17 00	J0110-0741	01 46 21	28.9	189.8	0.6		5.9	13	5096	22 17 00
22 18 10	---	01 47 31	28.8	190.1	0.6		6.1	70	5114	22 17 01
22 18 10	J0104-0754	01 47 31	28.4	191.9	0.7		7.2	-17	5114	No stop
22 19 50	---	01 49 12	28.4	192.3	0.7		7.4	83	5140	22 18 11
22 19 50	J0110-0741	01 49 12	28.8	190.6	0.6		6.4	-17	5140	No stop
22 21 30	---	01 50 52	28.8	191.0	0.6		6.7	83	5166	22 19 51
22 21 30	J0104-0754	01 50 52	28.3	192.8	0.8		7.7	-17	5166	No stop
22 23 10	---	01 52 32	28.3	193.3	0.8		8.0	83	5191	22 21 31
22 23 40	J0110-0741	01 53 02	28.7	191.6	0.7		7.0	13	5191	22 23 40
22 24 50	---	01 54 12	28.7	192.0	0.7		7.2	70	5209	22 23 41
22 24 50	J0104-0754	01 54 12	28.2	193.7	0.8		8.3	-17	5209	No stop
22 26 30	---	01 55 53	28.2	194.2	0.8		8.5	83	5235	22 24 51
22 26 30	J0110-0741	01 55 53	28.6	192.4	0.7		7.5	-17	5235	No stop
22 28 10	---	01 57 33	28.5	192.9	0.8		7.8	83	5261	22 26 31
22 28 10	J0104-0754	01 57 33	28.1	194.7	0.9		8.8	-17	5261	No stop
22 29 50	---	01 59 13	28.0	195.1	0.9		9.1	83	5287	22 28 11
22 30 20	J0110-0741	01 59 43	28.5	193.5	0.8		8.1	13	5287	22 30 20
22 31 30	---	02 00 54	28.4	193.8	0.8		8.3	70	5305	22 30 21

Schedule for TORUN (Code Tr) Page 17

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
22 31 30	J0104-0754	02 00 54	28.0	195.6	0.9		9.4	-17	5305	No stop
22 33 10	---	02 02 34	27.9	196.0	1.0		9.6	83	5331	22 31 31
22 33 10	J0110-0741	02 02 34	28.4	194.3	0.8		8.6	-17	5331	No stop
22 34 50	---	02 04 14	28.3	194.8	0.9		8.9	83	5356	22 33 11
22 34 50	J0104-0754	02 04 14	27.8	196.5	1.0		9.9	-17	5356	No stop
22 36 30	---	02 05 54	27.8	197.0	1.0		10.2	83	5382	22 34 51
22 37 00	J0110-0741	02 06 24	28.2	195.4	0.9		9.2	13	5382	22 37 00
22 38 10	---	02 07 35	28.2	195.7	0.9		9.4	70	5400	22 37 01
22 38 10	J0104-0754	02 07 35	27.7	197.4	1.0		10.5	-17	5400	No stop
22 39 50	---	02 09 15	27.6	197.9	1.1		10.7	83	5426	22 38 11
22 39 50	J0110-0741	02 09 15	28.1	196.2	1.0		9.7	-17	5426	No stop
22 41 30	---	02 10 55	28.0	196.6	1.0		10.0	83	5452	22 39 51
22 41 30	J0104-0754	02 10 55	27.5	198.3	1.1		11.0	-17	5452	No stop
22 43 10	---	02 12 35	27.5	198.8	1.1		11.3	83	5477	22 41 31
22 43 40	J0110-0741	02 13 06	27.9	197.2	1.0		10.3	13	5477	22 43 40
22 44 50	---	02 14 16	27.9	197.5	1.0		10.5	70	5495	22 43 41
22 44 50	J0104-0754	02 14 16	27.4	199.3	1.1		11.5	-17	5495	No stop
22 46 30	---	02 15 56	27.3	199.7	1.2		11.8	83	5521	22 44 51
22 46 30	J0110-0741	02 15 56	27.8	198.0	1.1		10.8	-16	5521	No stop
22 48 10	---	02 17 36	27.7	198.5	1.1		11.1	84	5547	22 46 31
22 48 10	J0104-0754	02 17 36	27.2	200.2	1.2		12.1	-17	5547	No stop
22 49 50	---	02 19 17	27.1	200.6	1.2		12.3	83	5573	22 48 11
22 50 20	J0110-0741	02 19 47	27.6	199.1	1.1		11.4	14	5573	22 50 20
22 51 30	---	02 20 57	27.6	199.4	1.2		11.6	70	5591	22 50 21
23 02 30	J0012+3353	02 31 59	59.0	245.9	2.3		41.4	524	5591	23 02 30
23 04 00	---	02 33 29	58.8	246.3	2.3		41.6	90	5614	23 02 31
23 04 00	J0011+3443	02 33 29	59.2	247.9	2.4		42.7	-16	5614	No stop
23 05 40	---	02 35 09	59.0	248.4	2.4		42.9	84	5640	23 04 01
23 05 40	J0012+3353	02 35 09	58.6	246.8	2.4		41.8	-16	5640	No stop
23 07 20	---	02 36 49	58.4	247.3	2.4		41.9	84	5665	23 05 41

Schedule for TORUN (Code Tr) Page 18

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
23 07 20	J0011+3443	02 36 49	58.8	248.9	2.4		43.0	-16	5665	No stop
23 09 00	---	02 38 30	58.5	249.3	2.4		43.2	84	5691	23 07 21
23 09 30	J0012+3353	02 39 00	58.1	248.0	2.4		42.2	14	5691	23 09 30
23 10 40	---	02 40 10	57.9	248.3	2.4		42.3	70	5709	23 09 31
23 10 40	J0011+3443	02 40 10	58.3	249.8	2.5		43.4	-16	5709	No stop
23 12 20	---	02 41 50	58.1	250.3	2.5		43.5	84	5735	23 10 41
23 12 20	J0012+3353	02 41 50	57.7	248.8	2.5		42.5	-16	5735	No stop
23 14 00	---	02 43 31	57.4	249.3	2.5		42.6	84	5761	23 12 21
23 14 00	J0011+3443	02 43 31	57.8	250.8	2.5		43.7	-16	5761	No stop
23 15 40	---	02 45 11	57.6	251.2	2.5		43.8	84	5787	23 14 01
23 16 10	J0012+3353	02 45 41	57.1	249.9	2.5		42.9	14	5787	23 16 10
23 17 20	---	02 46 51	57.0	250.2	2.5		43.0	70	5805	23 16 11
23 17 20	J0011+3443	02 46 51	57.3	251.7	2.6		44.0	-16	5805	No stop
23 19 00	---	02 48 31	57.1	252.1	2.6		44.1	84	5830	23 17 21
23 19 00	J0012+3353	02 48 31	56.7	250.7	2.6		43.1	-16	5830	No stop
23 20 40	---	02 50 12	56.5	251.1	2.6		43.3	84	5856	23 19 01
23 20 40	J0011+3443	02 50 12	56.9	252.6	2.6		44.3	-16	5856	No stop
23 22 20	---	02 51 52	56.6	253.0	2.7		44.4	84	5882	23 20 41
23 22 50	J0012+3353	02 52 22	56.2	251.7	2.6		43.5	14	5882	23 22 50
23 24 00	---	02 53 32	56.0	252.0	2.7		43.6	70	5900	23 22 51
23 24 00	J0011+3443	02 53 32	56.4	253.5	2.7		44.5	-16	5900	No stop
23 25 40	---	02 55 12	56.1	253.9	2.7		44.7	84	5926	23 24 01
23 25 40	J0012+3353	02 55 12	55.8	252.5	2.7		43.7	-16	5926	No stop
23 27 20	---	02 56 53	55.5	252.9	2.7		43.8	84	5951	23 25 41
23 27 20	J0011+3443	02 56 53	55.9	254.3	2.7		44.8	-16	5951	No stop
23 29 00	---	02 58 33	55.7	254.8	2.8		44.9	84	5977	23 27 21
23 29 30	J0012+3353	02 59 03	55.2	253.5	2.8		44.0	15	5977	23 29 30
23 30 40	---	03 00 13	55.0	253.8	2.8		44.1	70	5995	23 29 31
23 30 40	J0011+3443	03 00 13	55.4	255.2	2.8		45.0	-16	5995	No stop
23 32 20	---	03 01 54	55.2	255.6	2.8		45.1	84	6021	23 30 41

Schedule for TORUN (Code Tr) Page 19

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 24 Oct 2020 Day 298 ---										
23 32 20	J0012+3353	03 01 54	54.8	254.2	2.8		44.2	-15	6021	No stop
23 34 00	---	03 03 34	54.6	254.7	2.8		44.3	85	6047	23 32 21
23 34 00	J0011+3443	03 03 34	54.9	256.1	2.9		45.2	-16	6047	No stop
23 35 40	---	03 05 14	54.7	256.5	2.9		45.3	84	6073	23 34 01
23 36 10	J0012+3353	03 05 44	54.2	255.2	2.9		44.5	15	6073	23 36 10
23 37 20	---	03 06 54	54.1	255.5	2.9		44.5	70	6091	23 36 11
23 37 20	J0011+3443	03 06 54	54.4	256.9	2.9		45.4	-16	6091	No stop
23 39 00	---	03 08 35	54.2	257.3	2.9		45.5	84	6116	23 37 21
23 39 00	J0012+3353	03 08 35	53.8	255.9	2.9		44.6	-15	6116	No stop
23 40 40	---	03 10 15	53.6	256.3	2.9		44.7	85	6142	23 39 01
23 40 40	J0011+3443	03 10 15	54.0	257.7	3.0		45.6	-16	6142	No stop
23 42 20	---	03 11 55	53.7	258.1	3.0		45.7	84	6168	23 40 41
23 42 50	J0012+3353	03 12 25	53.3	256.9	3.0		44.9	15	6168	23 42 50
23 44 00	---	03 13 35	53.1	257.2	3.0		44.9	70	6186	23 42 51
23 44 00	J0011+3443	03 13 35	53.5	258.5	3.0		45.8	-16	6186	No stop
23 45 40	---	03 15 16	53.2	258.9	3.0		45.9	84	6212	23 44 01
23 45 40	J0012+3353	03 15 16	52.9	257.6	3.0		45.0	-15	6212	No stop
23 47 20	---	03 16 56	52.6	258.0	3.1		45.1	85	6237	23 45 41
23 47 20	J0011+3443	03 16 56	53.0	259.3	3.1		46.0	-16	6237	No stop
23 49 00	---	03 18 36	52.7	259.7	3.1		46.0	84	6263	23 47 21
23 49 30	J0012+3353	03 19 06	52.3	258.5	3.1		45.2	15	6263	23 49 30
23 50 40	---	03 20 17	52.1	258.8	3.1		45.3	70	6281	23 49 31
23 50 40	J0011+3443	03 20 17	52.5	260.1	3.1		46.1	-15	6281	No stop
23 52 20	---	03 21 57	52.2	260.5	3.2		46.2	85	6307	23 50 41
23 52 20	J0012+3353	03 21 57	51.9	259.2	3.1		45.4	-15	6307	No stop
23 54 00	---	03 23 37	51.6	259.6	3.2		45.4	85	6333	23 52 21
23 54 00	J0011+3443	03 23 37	52.0	260.9	3.2		46.3	-15	6333	No stop
23 55 40	---	03 25 17	51.7	261.3	3.2		46.3	85	6359	23 54 01
23 56 10	J0012+3353	03 25 47	51.3	260.1	3.2		45.5	15	6359	23 56 10
23 57 20	---	03 26 58	51.1	260.3	3.2		45.6	70	6377	23 56 11

Schedule for TORUN (Code Tr) Page 20

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 24 Oct 2020 Day 298 ---										
23 57 20	J0011+3443	03 26 58	51.5	261.6	3.2		46.4	-15	6377	No stop
23 59 00	---	03 28 38	51.2	262.0	3.3		46.4	85	6402	23 57 21
--- Start: Sat 24 Oct 2020 Day 298 -- Stop: Sun 25 Oct 2020 Day 299 ---										
23 59 00	J0012+3353	03 28 38	50.9	260.7	3.2		45.6	-15	6402	No stop
00 00 40	---	03 30 18	50.6	261.1	3.3		45.7	85	6428	23 59 01
00 00 40	J0011+3443	03 30 18	51.0	262.4	3.3		46.5	-15	6428	No stop
00 02 20	---	03 31 58	50.7	262.8	3.3		46.5	85	6454	00 00 41
00 02 50	J0012+3353	03 32 29	50.3	261.6	3.3		45.8	15	6454	00 02 50
00 04 00	---	03 33 39	50.1	261.9	3.3		45.8	70	6472	00 02 51
00 04 00	J0011+3443	03 33 39	50.5	263.1	3.4		46.6	-15	6472	No stop
00 05 40	---	03 35 19	50.2	263.5	3.4		46.6	85	6498	00 04 01
00 05 40	J0012+3353	03 35 19	49.9	262.2	3.4		45.9	-15	6498	No stop
00 07 20	---	03 36 59	49.6	262.6	3.4		45.9	85	6523	00 05 41
00 07 20	J0011+3443	03 36 59	50.0	263.9	3.4		46.7	-15	6523	No stop
00 09 00	---	03 38 40	49.7	264.2	3.4		46.7	85	6549	00 07 21
00 09 30	J0012+3353	03 39 10	49.3	263.1	3.4		46.0	15	6549	00 09 30
00 10 40	---	03 40 20	49.1	263.4	3.4		46.0	70	6567	00 09 31
00 10 40	J0011+3443	03 40 20	49.5	264.6	3.5		46.8	-15	6567	No stop
00 12 20	---	03 42 00	49.2	265.0	3.5		46.8	85	6593	00 10 41
00 12 20	J0012+3353	03 42 00	48.9	263.7	3.5		46.1	-15	6593	No stop
00 14 00	---	03 43 40	48.6	264.1	3.5		46.1	85	6619	00 12 21
00 14 00	J0011+3443	03 43 40	49.0	265.3	3.5		46.8	-15	6619	No stop
00 15 40	---	03 45 21	48.7	265.7	3.5		46.9	85	6644	00 14 01
00 16 10	J0012+3353	03 45 51	48.3	264.6	3.5		46.1	15	6644	00 16 10
00 17 20	---	03 47 01	48.1	264.8	3.6		46.2	70	6663	00 16 11
00 17 20	J0011+3443	03 47 01	48.5	266.0	3.6		46.9	-15	6663	No stop
00 19 00	---	03 48 41	48.2	266.4	3.6		46.9	85	6688	00 17 21
00 19 00	J0012+3353	03 48 41	47.9	265.2	3.6		46.2	-15	6688	No stop
00 20 40	---	03 50 22	47.6	265.5	3.6		46.2	85	6714	00 19 01

Schedule for TORUN (Code Tr) Page 21

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 25 Oct 2020 Day 299 ---										
00 20 40	J0011+3443	03 50 22	48.0	266.7	3.6		46.9	-15	6714	No stop
00 22 20	---	03 52 02	47.7	267.1	3.7		46.9	85	6740	00 20 41
00 22 50	J0012+3353	03 52 32	47.3	266.0	3.6		46.3	15	6740	00 22 50
00 24 00	---	03 53 42	47.1	266.2	3.7		46.3	70	6758	00 22 51
00 24 00	J0011+3443	03 53 42	47.5	267.4	3.7		47.0	-15	6758	No stop
00 25 40	---	03 55 22	47.2	267.8	3.7		47.0	85	6784	00 24 01
00 25 40	J0012+3353	03 55 22	46.9	266.6	3.7		46.3	-15	6784	No stop
00 27 20	---	03 57 03	46.6	266.9	3.7		46.3	85	6809	00 25 41
00 27 20	J0011+3443	03 57 03	47.0	268.1	3.7		47.0	-15	6809	No stop
00 29 00	---	03 58 43	46.7	268.5	3.8		47.0	85	6835	00 27 21
00 29 30	J0012+3353	03 59 13	46.3	267.4	3.8		46.4	15	6835	00 29 30
00 30 40	---	04 00 23	46.1	267.6	3.8		46.4	70	6853	00 29 31
00 30 40	J0011+3443	04 00 23	46.5	268.8	3.8		47.0	-15	6853	No stop
00 32 20	---	04 02 03	46.2	269.1	3.8		47.0	85	6879	00 30 41
00 32 20	J0012+3353	04 02 03	45.9	268.0	3.8		46.4	-15	6879	No stop
00 34 00	---	04 03 44	45.6	268.3	3.8		46.4	85	6905	00 32 21
00 34 00	J0011+3443	04 03 44	46.0	269.5	3.9		47.0	-15	6905	No stop
00 35 40	---	04 05 24	45.7	269.8	3.9		47.0	85	6930	00 34 01
00 36 10	J0012+3353	04 05 54	45.3	268.8	3.9		46.4	15	6930	00 36 10
00 37 20	---	04 07 04	45.1	269.0	3.9		46.4	70	6948	00 36 11
00 37 20	J0011+3443	04 07 04	45.5	270.2	3.9		47.0	-15	6948	No stop
00 39 00	---	04 08 45	45.2	270.5	3.9		47.0	85	6974	00 37 21
00 39 00	J0012+3353	04 08 45	44.9	269.3	3.9		46.4	-14	6974	No stop
00 40 40	---	04 10 25	44.6	269.7	3.9		46.4	86	7000	00 39 01
00 40 40	J0011+3443	04 10 25	45.0	270.8	4.0		47.0	-15	7000	No stop
00 42 20	---	04 12 05	44.7	271.1	4.0		47.0	85	7026	00 40 41
00 42 50	J0012+3353	04 12 35	44.3	270.1	4.0		46.4	16	7026	00 42 50
00 44 00	---	04 13 45	44.1	270.3	4.0		46.4	70	7044	00 42 51
00 44 00	J0011+3443	04 13 45	44.5	271.5	4.0		47.0	-15	7044	No stop
00 45 40	---	04 15 26	44.2	271.8	4.1		47.0	85	7070	00 44 01

Schedule for TORUN (Code Tr) Page 22

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 25 Oct 2020 Day 299 ---										
00 45 40	J0012+3353	04 15 26	43.9	270.7	4.0		46.4	-14	7070	No stop
00 47 20	---	04 17 06	43.6	271.0	4.1		46.4	86	7095	00 45 41
00 47 20	J0011+3443	04 17 06	44.0	272.1	4.1		47.0	-15	7095	No stop
00 49 00	---	04 18 46	43.7	272.5	4.1		47.0	85	7121	00 47 21
00 49 30	J0012+3353	04 19 16	43.3	271.4	4.1		46.4	16	7121	00 49 30
00 50 40	---	04 20 26	43.1	271.7	4.1		46.4	70	7139	00 49 31
00 50 40	J0011+3443	04 20 26	43.5	272.8	4.1		47.0	-15	7139	No stop
00 52 20	---	04 22 07	43.2	273.1	4.2		46.9	85	7165	00 50 41
00 52 20	J0012+3353	04 22 07	42.9	272.0	4.1		46.4	-14	7165	No stop
00 54 00	---	04 23 47	42.6	272.3	4.2		46.4	86	7191	00 52 21
00 54 00	J0011+3443	04 23 47	43.0	273.4	4.2		46.9	-15	7191	No stop
00 55 40	---	04 25 27	42.7	273.7	4.2		46.9	85	7216	00 54 01
00 56 10	J0012+3353	04 25 57	42.3	272.7	4.2		46.4	16	7216	00 56 10
00 57 20	---	04 27 08	42.1	273.0	4.2		46.3	70	7234	00 56 11
00 57 20	J0011+3443	04 27 08	42.5	274.1	4.2		46.9	-15	7234	No stop
00 59 00	---	04 28 48	42.2	274.4	4.3		46.8	85	7260	00 57 21
00 59 00	J0012+3353	04 28 48	41.9	273.3	4.2		46.3	-14	7260	No stop
01 00 40	---	04 30 28	41.6	273.6	4.3		46.3	86	7286	00 59 01
01 00 40	J0011+3443	04 30 28	42.0	274.7	4.3		46.8	-14	7286	No stop
01 02 20	---	04 32 08	41.7	275.0	4.3		46.8	86	7312	01 00 41
01 02 50	J0012+3353	04 32 38	41.3	274.0	4.3		46.3	16	7312	01 02 50
01 04 00	---	04 33 49	41.1	274.2	4.3		46.3	70	7330	01 02 51
01 04 00	J0011+3443	04 33 49	41.5	275.3	4.4		46.8	-14	7330	No stop
01 05 40	---	04 35 29	41.2	275.6	4.4		46.7	86	7356	01 04 01
01 05 40	J0012+3353	04 35 29	40.9	274.5	4.4		46.2	-14	7356	No stop
01 07 20	---	04 37 09	40.6	274.9	4.4		46.2	86	7381	01 05 41
01 07 20	J0011+3443	04 37 09	41.0	275.9	4.4		46.7	-14	7381	No stop
01 09 00	---	04 38 49	40.7	276.3	4.4		46.7	86	7407	01 07 21
01 09 30	J0012+3353	04 39 20	40.3	275.3	4.4		46.2	16	7407	01 09 30
01 10 40	---	04 40 30	40.1	275.5	4.4		46.1	70	7425	01 09 31

Schedule for TORUN (Code Tr) Page 23

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
01 10 40	J0011+3443	04 40 30	40.5	276.6	4.5		46.6	-14	7425	No stop
01 12 20	---	04 42 10	40.2	276.9	4.5		46.6	86	7451	01 10 41
01 12 20	J0012+3353	04 42 10	39.9	275.8	4.5		46.1	-14	7451	No stop
01 14 00	---	04 43 50	39.6	276.1	4.5		46.1	86	7477	01 12 21
01 14 00	J0011+3443	04 43 50	40.0	277.2	4.5		46.5	-14	7477	No stop
01 15 40	---	04 45 31	39.7	277.5	4.6		46.5	86	7502	01 14 01
01 16 10	J0012+3353	04 46 01	39.3	276.5	4.5		46.0	16	7502	01 16 10
01 17 20	---	04 47 11	39.1	276.7	4.6		46.0	70	7520	01 16 11
01 27 50	J0237+2848	04 57 43	55.0	240.1	2.3		36.5	536	7520	01 27 50
01 30 50	---	05 00 43	54.6	241.1	2.4		36.9	180	7567	01 27 51
01 32 20	J0203+3042	05 02 13	51.1	253.0	3.0		42.0	52	7567	01 32 20
01 33 40	---	05 03 33	50.9	253.3	3.0		42.0	80	7587	01 32 21
01 33 40	J0203+3041	05 03 33	50.9	253.3	3.0		42.0	-6	7587	No stop
01 35 10	---	05 05 04	50.7	253.7	3.0		42.1	84	7611	01 33 41
01 35 10	J0203+3042	05 05 04	50.7	253.7	3.0		42.1	-7	7611	No stop
01 36 40	---	05 06 34	50.5	254.1	3.0		42.2	83	7634	01 35 11
01 36 40	J0203+3041	05 06 34	50.5	254.0	3.0		42.2	-6	7634	No stop
01 38 10	---	05 08 04	50.3	254.4	3.1		42.3	84	7657	01 36 41
01 38 40	J0203+3042	05 08 34	50.2	254.6	3.1		42.4	23	7657	01 38 40
01 39 40	---	05 09 34	50.1	254.8	3.1		42.4	60	7672	01 38 41
01 39 40	J0203+3041	05 09 34	50.1	254.8	3.1		42.4	-6	7672	No stop
01 41 10	---	05 11 05	49.8	255.2	3.1		42.5	84	7696	01 39 41
01 41 10	J0203+3042	05 11 05	49.9	255.2	3.1		42.5	-7	7696	No stop
01 42 40	---	05 12 35	49.6	255.5	3.1		42.6	83	7719	01 41 11
01 42 40	J0203+3041	05 12 35	49.6	255.5	3.1		42.6	-6	7719	No stop
01 44 10	---	05 14 05	49.4	255.9	3.2		42.7	84	7742	01 42 41
01 44 40	J0203+3042	05 14 35	49.3	256.0	3.2		42.7	23	7742	01 44 40
01 45 40	---	05 15 35	49.2	256.3	3.2		42.8	60	7757	01 44 41
01 45 40	J0203+3041	05 15 35	49.2	256.3	3.2		42.8	-6	7757	No stop
01 47 10	---	05 17 06	49.0	256.6	3.2		42.8	84	7781	01 45 41

Schedule for TORUN (Code Tr) Page 24

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
01 47 10	J0203+3042	05 17 06	49.0	256.6	3.2		42.9	-7	7781	No stop
01 48 40	---	05 18 36	48.8	257.0	3.2		42.9	83	7804	01 47 11
01 48 40	J0203+3041	05 18 36	48.7	257.0	3.2		42.9	-6	7804	No stop
01 50 10	---	05 20 06	48.5	257.3	3.3		43.0	84	7827	01 48 41
01 50 40	J0203+3042	05 20 36	48.5	257.5	3.3		43.0	23	7827	01 50 40
01 51 40	---	05 21 36	48.3	257.7	3.3		43.1	60	7842	01 50 41
01 51 40	J0203+3041	05 21 36	48.3	257.7	3.3		43.1	-6	7842	No stop
01 53 10	---	05 23 07	48.1	258.0	3.3		43.1	84	7866	01 51 41
01 53 10	J0203+3042	05 23 07	48.1	258.1	3.3		43.2	-7	7866	No stop
01 54 40	---	05 24 37	47.9	258.4	3.3		43.2	83	7889	01 53 11
01 54 40	J0203+3041	05 24 37	47.9	258.4	3.3		43.2	-6	7889	No stop
01 56 10	---	05 26 07	47.6	258.7	3.4		43.3	84	7912	01 54 41
01 56 40	J0203+3042	05 26 37	47.6	258.9	3.4		43.3	23	7912	01 56 40
01 57 40	---	05 27 37	47.4	259.1	3.4		43.4	60	7928	01 56 41
01 57 40	J0203+3041	05 27 37	47.4	259.1	3.4		43.3	-6	7928	No stop
01 59 10	---	05 29 08	47.2	259.4	3.4		43.4	84	7951	01 57 41
01 59 10	J0203+3042	05 29 08	47.2	259.5	3.4		43.4	-7	7951	No stop
02 00 40	---	05 30 38	47.0	259.8	3.4		43.5	83	7974	01 59 11
02 00 40	J0203+3041	05 30 38	47.0	259.8	3.4		43.5	-6	7974	No stop
02 02 10	---	05 32 08	46.8	260.1	3.5		43.5	84	7997	02 00 41
02 02 40	J0203+3042	05 32 38	46.7	260.3	3.5		43.6	23	7997	02 02 40
02 03 40	---	05 33 38	46.5	260.5	3.5		43.6	60	8013	02 02 41
02 03 40	J0203+3041	05 33 38	46.5	260.5	3.5		43.6	-6	8013	No stop
02 05 10	---	05 35 09	46.3	260.8	3.5		43.6	84	8036	02 03 41
02 05 10	J0203+3042	05 35 09	46.3	260.8	3.5		43.6	-7	8036	No stop
02 06 40	---	05 36 39	46.1	261.2	3.5		43.7	83	8059	02 05 11
02 06 40	J0203+3041	05 36 39	46.1	261.1	3.5		43.7	-6	8059	No stop
02 08 10	---	05 38 09	45.9	261.5	3.6		43.7	84	8082	02 06 41
02 08 40	J0203+3042	05 38 39	45.8	261.6	3.6		43.8	23	8082	02 08 40
02 09 40	---	05 39 39	45.6	261.8	3.6		43.8	60	8098	02 08 41

Schedule for TORUN (Code Tr) Page 25

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 25 Oct 2020 Day 299 ---										
02 09 40	J0203+3041	05 39 39	45.6	261.8	3.6		43.8	-6	8098	No stop
02 11 10	---	05 41 10	45.4	262.1	3.6		43.8	84	8121	02 09 41
02 11 10	J0203+3042	05 41 10	45.4	262.2	3.6		43.8	-6	8121	No stop
02 12 40	---	05 42 40	45.2	262.5	3.6		43.9	84	8144	02 11 11
02 12 40	J0203+3041	05 42 40	45.2	262.5	3.6		43.9	-6	8144	No stop
02 14 10	---	05 44 10	45.0	262.8	3.7		43.9	84	8167	02 12 41
02 14 40	J0203+3042	05 44 40	44.9	262.9	3.7		43.9	23	8167	02 14 40
02 15 40	---	05 45 40	44.8	263.2	3.7		44.0	60	8183	02 14 41
02 15 40	J0203+3041	05 45 40	44.7	263.1	3.7		43.9	-6	8183	No stop
02 17 10	---	05 47 11	44.5	263.5	3.7		44.0	84	8206	02 15 41
02 17 10	J0203+3042	05 47 11	44.5	263.5	3.7		44.0	-6	8206	No stop
02 18 40	---	05 48 41	44.3	263.8	3.7		44.0	84	8229	02 17 11
02 18 40	J0203+3041	05 48 41	44.3	263.8	3.7		44.0	-6	8229	No stop
02 20 10	---	05 50 11	44.1	264.1	3.8		44.1	84	8252	02 18 41
02 20 40	J0203+3042	05 50 41	44.0	264.2	3.8		44.1	23	8252	02 20 40
02 21 40	---	05 51 41	43.9	264.5	3.8		44.1	60	8268	02 20 41
02 21 40	J0203+3041	05 51 41	43.8	264.4	3.8		44.1	-6	8268	No stop
02 23 10	---	05 53 12	43.6	264.8	3.8		44.1	84	8291	02 21 41
02 23 10	J0203+3042	05 53 12	43.6	264.8	3.8		44.1	-6	8291	No stop
02 24 40	---	05 54 42	43.4	265.1	3.8		44.2	84	8314	02 23 11
02 24 40	J0203+3041	05 54 42	43.4	265.1	3.8		44.1	-6	8314	No stop
02 26 10	---	05 56 12	43.2	265.4	3.9		44.2	84	8337	02 24 41
02 26 40	J0203+3042	05 56 42	43.1	265.5	3.9		44.2	23	8337	02 26 40
02 27 40	---	05 57 42	43.0	265.7	3.9		44.2	60	8353	02 26 41
02 27 40	J0203+3041	05 57 42	42.9	265.7	3.9		44.2	-6	8353	No stop
02 29 10	---	05 59 13	42.7	266.0	3.9		44.2	84	8376	02 27 41
02 29 10	J0203+3042	05 59 13	42.7	266.0	3.9		44.2	-6	8376	No stop
02 30 40	---	06 00 43	42.5	266.4	3.9		44.2	84	8399	02 29 11
02 30 40	J0203+3041	06 00 43	42.5	266.3	3.9		44.2	-6	8399	No stop
02 32 10	---	06 02 13	42.3	266.7	4.0		44.3	84	8422	02 30 41

Schedule for TORUN (Code Tr) Page 26

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 25 Oct 2020 Day 299 ---										
02 32 40	J0203+3042	06 02 43	42.2	266.8	4.0		44.3	23	8422	02 32 40
02 33 40	---	06 03 43	42.1	267.0	4.0		44.3	60	8438	02 32 41
02 33 40	J0203+3041	06 03 43	42.0	267.0	4.0		44.3	-6	8438	No stop
02 35 10	---	06 05 14	41.8	267.3	4.0		44.3	84	8461	02 33 41
02 35 10	J0203+3042	06 05 14	41.8	267.3	4.0		44.3	-6	8461	No stop
02 36 40	---	06 06 44	41.6	267.6	4.0		44.3	84	8484	02 35 11
02 36 40	J0203+3041	06 06 44	41.6	267.6	4.0		44.3	-6	8484	No stop
02 38 10	---	06 08 14	41.4	267.9	4.1		44.3	84	8507	02 36 41
02 38 40	J0203+3042	06 08 44	41.3	268.0	4.1		44.3	23	8507	02 38 40
02 39 40	---	06 09 44	41.2	268.2	4.1		44.3	60	8523	02 38 41
02 39 40	J0203+3041	06 09 44	41.1	268.2	4.1		44.3	-6	8523	No stop
02 41 10	---	06 11 15	40.9	268.5	4.1		44.3	84	8546	02 39 41
02 41 10	J0203+3042	06 11 15	40.9	268.5	4.1		44.3	-6	8546	No stop
02 42 40	---	06 12 45	40.7	268.8	4.1		44.3	84	8569	02 41 11
02 42 40	J0203+3041	06 12 45	40.7	268.8	4.1		44.3	-6	8569	No stop
02 44 10	---	06 14 15	40.5	269.1	4.2		44.3	84	8592	02 42 41
02 44 40	J0203+3042	06 14 45	40.4	269.2	4.2		44.4	23	8592	02 44 40
02 45 40	---	06 15 45	40.2	269.4	4.2		44.4	60	8608	02 44 41
02 45 40	J0203+3041	06 15 45	40.2	269.4	4.2		44.3	-6	8608	No stop
02 47 10	---	06 17 16	40.0	269.7	4.2		44.3	84	8631	02 45 41
02 47 10	J0203+3042	06 17 16	40.0	269.7	4.2		44.4	-6	8631	No stop
02 48 40	---	06 18 46	39.8	270.0	4.2		44.4	84	8654	02 47 11
02 48 40	J0203+3041	06 18 46	39.8	270.0	4.2		44.3	-6	8654	No stop
02 50 10	---	06 20 16	39.6	270.3	4.3		44.3	84	8677	02 48 41
02 50 40	J0203+3042	06 20 46	39.5	270.4	4.3		44.4	23	8677	02 50 40
02 51 40	---	06 21 46	39.3	270.6	4.3		44.4	60	8693	02 50 41
02 51 40	J0203+3041	06 21 46	39.3	270.6	4.3		44.3	-6	8693	No stop
02 53 10	---	06 23 17	39.1	270.9	4.3		44.3	84	8716	02 51 41
02 53 10	J0203+3042	06 23 17	39.1	270.9	4.3		44.4	-6	8716	No stop
02 54 40	---	06 24 47	38.9	271.2	4.3		44.3	84	8739	02 53 11

Schedule for TORUN (Code Tr) Page 27

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
02 54 40	J0203+3041	06 24 47	38.9	271.2	4.3		44.3	-6	8739	No stop
02 56 10	---	06 26 17	38.7	271.5	4.4		44.3	84	8762	02 54 41
02 56 40	J0203+3042	06 26 47	38.6	271.6	4.4		44.3	23	8762	02 56 40
02 57 40	---	06 27 47	38.4	271.8	4.4		44.3	60	8778	02 56 41
02 57 40	J0203+3041	06 27 47	38.4	271.8	4.4		44.3	-6	8778	No stop
02 59 10	---	06 29 18	38.2	272.1	4.4		44.3	84	8801	02 57 41
02 59 10	J0203+3042	06 29 18	38.2	272.1	4.4		44.3	-6	8801	No stop
03 00 40	---	06 30 48	38.0	272.4	4.4		44.3	84	8824	02 59 11
03 00 40	J0203+3041	06 30 48	38.0	272.4	4.4		44.3	-6	8824	No stop
03 02 10	---	06 32 18	37.8	272.7	4.5		44.3	84	8847	03 00 41
03 02 40	J0203+3042	06 32 48	37.7	272.8	4.5		44.3	23	8847	03 02 40
03 03 40	---	06 33 48	37.5	273.0	4.5		44.3	60	8863	03 02 41
03 05 10	J0111+3906	06 35 19	35.5	290.0	5.4		46.7	41	8863	03 05 10
03 06 40	---	06 36 49	35.3	290.3	5.4		46.6	90	8886	03 05 11
03 06 40	J0118+3810	06 36 49	35.6	288.4	5.3		46.6	-17	8886	No stop
03 08 20	---	06 38 29	35.4	288.7	5.3		46.5	83	8912	03 06 41
03 08 20	J0111+3906	06 38 29	35.1	290.6	5.4		46.5	-17	8912	No stop
03 10 00	---	06 40 09	34.9	290.8	5.5		46.4	83	8937	03 08 21
03 10 00	J0118+3810	06 40 09	35.2	288.9	5.3		46.4	-17	8937	No stop
03 11 40	---	06 41 50	34.9	289.2	5.4		46.3	83	8963	03 10 01
03 12 10	J0111+3906	06 42 20	34.6	291.2	5.5		46.3	13	8963	03 12 10
03 13 20	---	06 43 30	34.4	291.4	5.5		46.2	70	8981	03 12 11
03 13 20	J0118+3810	06 43 30	34.7	289.5	5.4		46.2	-17	8981	No stop
03 15 00	---	06 45 10	34.4	289.8	5.4		46.1	83	9007	03 13 21
03 15 00	J0111+3906	06 45 10	34.2	291.6	5.5		46.1	-17	9007	No stop
03 16 40	---	06 46 50	33.9	291.9	5.6		46.0	83	9033	03 15 01
03 16 40	J0118+3810	06 46 50	34.2	290.0	5.5		46.0	-17	9033	No stop
03 18 20	---	06 48 31	34.0	290.3	5.5		45.8	83	9059	03 16 41
03 18 50	J0111+3906	06 49 01	33.6	292.3	5.6		45.8	13	9059	03 18 50
03 20 00	---	06 50 11	33.5	292.5	5.6		45.8	70	9077	03 18 51

Schedule for TORUN (Code Tr) Page 28

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
03 20 00	J0118+3810	06 50 11	33.7	290.6	5.5		45.7	-17	9077	No stop
03 21 40	---	06 51 51	33.5	290.9	5.5		45.6	83	9102	03 20 01
03 21 40	J0111+3906	06 51 51	33.2	292.7	5.7		45.6	-17	9102	No stop
03 23 20	---	06 53 32	33.0	293.0	5.7		45.5	83	9128	03 21 41
03 23 20	J0118+3810	06 53 32	33.3	291.1	5.6		45.5	-17	9128	No stop
03 25 00	---	06 55 12	33.0	291.4	5.6		45.4	83	9154	03 23 21
03 25 30	J0111+3906	06 55 42	32.7	293.3	5.7		45.4	13	9154	03 25 30
03 26 40	---	06 56 52	32.5	293.5	5.7		45.3	70	9172	03 25 31
03 26 40	J0118+3810	06 56 52	32.8	291.7	5.6		45.3	-17	9172	No stop
03 28 20	---	06 58 32	32.6	292.0	5.7		45.2	83	9198	03 26 41
03 28 20	J0111+3906	06 58 32	32.3	293.8	5.8		45.2	-17	9198	No stop
03 30 00	---	07 00 13	32.1	294.1	5.8		45.0	83	9223	03 28 21
03 30 00	J0118+3810	07 00 13	32.3	292.2	5.7		45.1	-17	9223	No stop
03 31 40	---	07 01 53	32.1	292.5	5.7		45.0	83	9249	03 30 01
03 32 10	J0111+3906	07 02 23	31.8	294.4	5.8		44.9	13	9249	03 32 10
03 33 20	---	07 03 33	31.6	294.6	5.8		44.8	70	9267	03 32 11
03 33 20	J0118+3810	07 03 33	31.9	292.8	5.7		44.9	-17	9267	No stop
03 35 00	---	07 05 13	31.6	293.1	5.8		44.7	83	9293	03 33 21
03 35 00	J0111+3906	07 05 13	31.4	294.9	5.9		44.7	-17	9293	No stop
03 36 40	---	07 06 54	31.2	295.2	5.9		44.6	83	9319	03 35 01
03 36 40	J0118+3810	07 06 54	31.4	293.3	5.8		44.6	-17	9319	No stop
03 38 20	---	07 08 34	31.2	293.6	5.8		44.5	83	9345	03 36 41
03 38 50	J0111+3906	07 09 04	30.9	295.5	5.9		44.4	13	9345	03 38 50
03 40 00	---	07 10 14	30.7	295.7	6.0		44.3	70	9363	03 38 51
03 40 00	J0118+3810	07 10 14	30.9	293.9	5.8		44.4	-17	9363	No stop
03 41 40	---	07 11 55	30.7	294.1	5.9		44.3	83	9388	03 40 01
03 41 40	J0111+3906	07 11 55	30.5	296.0	6.0		44.2	-17	9388	No stop
03 43 20	---	07 13 35	30.3	296.2	6.0		44.0	83	9414	03 41 41
03 43 20	J0118+3810	07 13 35	30.5	294.4	5.9		44.2	-17	9414	No stop
03 45 00	---	07 15 15	30.3	294.7	5.9		44.0	83	9440	03 43 21

Schedule for TORUN (Code Tr) Page 29

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
03 45 30	J0111+3906	07 15 45	30.0	296.6	6.0		43.9	13	9440	03 45 30
03 46 40	---	07 16 55	29.8	296.8	6.1		43.8	70	9458	03 45 31
03 46 40	J0118+3810	07 16 55	30.0	295.0	6.0		43.9	-17	9458	No stop
03 48 20	---	07 18 36	29.8	295.2	6.0		43.8	83	9484	03 46 41
03 48 20	J0111+3906	07 18 36	29.6	297.0	6.1		43.7	-17	9484	No stop
03 50 00	---	07 20 16	29.4	297.3	6.1		43.5	83	9509	03 48 21
03 50 00	J0118+3810	07 20 16	29.6	295.5	6.0		43.7	-17	9509	No stop
03 51 40	---	07 21 56	29.4	295.8	6.0		43.5	83	9535	03 50 01
03 52 10	J0111+3906	07 22 26	29.1	297.7	6.2		43.4	13	9535	03 52 10
03 53 20	---	07 23 36	28.9	297.8	6.2		43.3	70	9553	03 52 11
03 53 20	J0118+3810	07 23 36	29.1	296.1	6.1		43.4	-17	9553	No stop
03 55 00	---	07 25 17	28.9	296.3	6.1		43.3	83	9579	03 53 21
03 55 00	J0111+3906	07 25 17	28.7	298.1	6.2		43.1	-17	9579	No stop
03 56 40	---	07 26 57	28.5	298.4	6.2		43.0	83	9605	03 55 01
03 56 40	J0118+3810	07 26 57	28.7	296.6	6.1		43.2	-17	9605	No stop
03 58 20	---	07 28 37	28.5	296.9	6.2		43.0	83	9631	03 56 41
03 58 50	J0111+3906	07 29 07	28.2	298.7	6.3		42.8	13	9631	03 58 50
04 00 00	---	07 30 18	28.0	298.9	6.3		42.7	70	9649	03 58 51

SETUP FILE INFORMATION:
NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

======== Setup file: sess320.K2048

Setup group: 10 Station: TORUN Total bit rate: 2048
Format: VDIF Bits per sample: 2 Sample rate: 64.000
Number of channels: 16 DBE type: DBBC_DDC Speedup factor: 1.00

Disk used to record data.

```
 1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
          21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

The following frequency sets based on these setups were used.

 Frequency Set:   7  Setup file default.  Used with PCAL = off
 LO sum=   22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.49
           22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.49
 BBC fr=     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.49
             787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.49
 Bandwd=      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
              32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
  Matching frequency sets:   7

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)             (mas)

* J0010-0740        00 08 17.215061   * 00 10 50.601715    00 11 54.437437       0.00
                   -07 56 53.37674    *-07 40 12.04344    -07 33 17.04214        0.00

* J0011+3443        00 08 41.237073   * 00 11 17.013100    00 12 22.156493       0.00
                    34 26 52.62917    * 34 43 33.64200     34 50 34.63238        0.00

* J0104-0754        01 01 54.627501   * 01 04 25.820400    01 05 28.913092       0.00
                   -08 10 52.55888    *-07 54 48.17800    -07 48 08.16654        0.00

* J0118+3810        01 15 19.164685   * 01 18 10.110995    01 19 21.778542       0.00
                    37 55 08.64021    * 38 10 54.92490     38 17 29.96083        0.00

* J0203+3041        02 00 51.522391   * 02 03 45.355100    02 04 58.095020       0.00
                    30 27 06.46215    * 30 41 29.10700     30 47 27.52321        0.00

* J0006-0623        00 03 40.288779   * 00 06 13.892900    00 07 17.800926       0.00
                   -06 40 17.29957    *-06 23 35.33500    -06 16 39.82826        0.00

* J0012+3353        00 10 11.375392   * 00 12 47.382200    00 13 52.610674       0.00
                    33 36 57.76311    * 33 53 38.47200     34 00 39.19771        0.00

* J0110-0741        01 08 19.003625   * 01 10 50.021000    01 11 53.055411       0.00
                   -07 57 37.49606    *-07 41 41.11400    -07 35 04.32249        0.00
```

```
* J0111+3906        01 08 47.254604   * 01 11 37.316800     01 12 48.631292       0.00
                    38 50 32.81437    * 39 06 28.10400      39 13 07.21912        0.00

* J0203+3042        02 00 50.425414   * 02 03 44.270700     02 04 57.016141       0.00
                    30 28 15.15183    * 30 42 37.83700      30 48 36.26972        0.00

* J0237+2848        02 34 55.589613   * 02 37 52.405700     02 39 06.330814       0.00
                    28 35 11.40775    * 28 48 08.99000      28 53 30.98325        0.00
```

es074dtr

Monitoring of B and of the outflows expantion in W75N-VLA2

PI: *G. Surcis*

Address: INAF - Osservatorio Astronomico di Cagliari

Observing mode: Polarization observations of W75N(B) at 22 GHz (64 Mb/s)

Schedule for TORUN (Code Tr) Page 2

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Sun 25 Oct 2020 Day 299 ---

Next scan frequencies: 22230.54 22230.54
Next BBC frequencies: 750.54 750.54
Next scan bandwidths: 8.00 8.00

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
12 00 00	J2202+4216	15 31 36	28.5	56.4	-6.5		-42.6	0	0	12 00 00
12 10 00	=BLLAC	15 41 38	29.8	57.9	-6.4		-43.5	600	5	12 00 01
12 11 25	J2040+4527	15 43 03	43.0	67.5	-5.0		-52.4	22	5	12 11 25
12 12 25	=2039+452	15 44 03	43.2	67.6	-5.0		-52.4	60	5	12 11 26
12 12 25	W75N	15 44 03	41.7	71.0	-4.9		-50.6	-21	5	No stop
12 13 25	---	15 45 04	41.8	71.1	-4.9		-50.6	39	6	12 12 26
12 13 25	J2040+4527	15 45 04	43.3	67.8	-4.9		-52.5	-21	6	No stop
12 14 25	=2039+452	15 46 04	43.4	67.9	-4.9		-52.6	39	6	12 13 26
12 14 25	W75N	15 46 04	42.0	71.3	-4.9		-50.7	-21	6	No stop
12 15 25	---	15 47 04	42.1	71.4	-4.9		-50.8	39	7	12 14 26
12 15 25	J2040+4527	15 47 04	43.6	68.1	-4.9		-52.7	-21	7	No stop
12 16 25	=2039+452	15 48 04	43.7	68.2	-4.9		-52.8	39	7	12 15 26
12 16 25	W75N	15 48 04	42.3	71.6	-4.9		-50.8	-22	7	No stop
12 17 25	---	15 49 04	42.4	71.7	-4.8		-50.9	38	8	12 16 26
12 17 25	J2040+4527	15 49 04	43.9	68.4	-4.9		-52.8	-21	8	No stop
12 18 25	=2039+452	15 50 04	44.0	68.5	-4.9		-52.9	39	8	12 17 26
12 18 25	W75N	15 50 04	42.6	71.9	-4.8		-51.0	-22	8	No stop
12 19 25	---	15 51 05	42.7	72.1	-4.8		-51.0	38	9	12 18 26
12 19 25	J2040+4527	15 51 05	44.1	68.7	-4.8		-53.0	-21	9	No stop
12 20 25	=2039+452	15 52 05	44.3	68.8	-4.8		-53.1	39	9	12 19 26
12 20 25	W75N	15 52 05	42.8	72.2	-4.8		-51.1	-22	9	No stop
12 21 25	---	15 53 05	43.0	72.4	-4.8		-51.2	38	10	12 20 26
12 22 07	J2040+4527	15 53 47	44.5	69.1	-4.8		-53.2	21	10	12 22 07
12 23 07	=2039+452	15 54 47	44.7	69.2	-4.8		-53.3	60	10	12 22 08

Schedule for TORUN (Code Tr) Page 3

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
12 23 07	W75N	15 54 47	43.2	72.6	-4.7		-51.3	-22	10	No stop
12 24 07	---	15 55 47	43.4	72.8	-4.7		-51.3	38	11	12 23 08
12 24 07	J2040+4527	15 55 47	44.8	69.4	-4.8		-53.3	-22	11	No stop
12 25 07	=2039+452	15 56 48	44.9	69.5	-4.7		-53.4	38	11	12 24 08
12 25 07	W75N	15 56 48	43.5	73.0	-4.7		-51.4	-22	11	No stop
12 26 07	---	15 57 48	43.7	73.1	-4.7		-51.4	38	12	12 25 08
12 26 07	J2040+4527	15 57 48	45.1	69.7	-4.7		-53.5	-22	12	No stop
12 27 07	=2039+452	15 58 48	45.2	69.8	-4.7		-53.6	38	12	12 26 08
12 27 07	W75N	15 58 48	43.8	73.3	-4.7		-51.5	-22	12	No stop
12 28 07	---	15 59 48	44.0	73.4	-4.7		-51.6	38	13	12 27 08
12 28 07	J2040+4527	15 59 48	45.4	70.0	-4.7		-53.6	-22	13	No stop
12 29 07	=2039+452	16 00 48	45.5	70.1	-4.7		-53.7	38	13	12 28 08
12 29 07	W75N	16 00 48	44.1	73.6	-4.6		-51.6	-22	13	No stop
12 30 07	---	16 01 48	44.2	73.8	-4.6		-51.7	38	14	12 29 08
12 30 07	J2040+4527	16 01 48	45.6	70.2	-4.7		-53.8	-22	14	No stop
12 31 07	=2039+452	16 02 49	45.8	70.4	-4.6		-53.9	38	14	12 30 08
12 31 07	W75N	16 02 49	44.4	73.9	-4.6		-51.7	-22	14	No stop
12 32 07	---	16 03 49	44.5	74.1	-4.6		-51.8	38	14	12 31 08
12 32 50	J2040+4527	16 04 32	46.0	70.7	-4.6		-54.0	21	14	12 32 50
12 33 50	=2039+452	16 05 32	46.2	70.8	-4.6		-54.1	60	15	12 32 51
12 33 50	W75N	16 05 32	44.8	74.4	-4.6		-51.9	-22	15	No stop
12 34 50	---	16 06 32	44.9	74.5	-4.5		-51.9	38	15	12 33 51
12 34 50	J2040+4527	16 06 32	46.3	70.9	-4.6		-54.1	-22	15	No stop
12 35 50	=2039+452	16 07 32	46.5	71.1	-4.6		-54.2	38	16	12 34 51
12 35 50	W75N	16 07 32	45.1	74.7	-4.5		-52.0	-22	16	No stop
12 36 50	---	16 08 32	45.2	74.8	-4.5		-52.1	38	16	12 35 51
12 36 50	J2040+4527	16 08 32	46.6	71.2	-4.5		-54.3	-22	16	No stop
12 37 50	=2039+452	16 09 33	46.7	71.4	-4.5		-54.3	38	17	12 36 51
12 37 50	W75N	16 09 33	45.4	75.0	-4.5		-52.1	-22	17	No stop
12 38 50	---	16 10 33	45.5	75.2	-4.5		-52.2	38	17	12 37 51
12 38 50	J2040+4527	16 10 33	46.9	71.5	-4.5		-54.4	-22	17	No stop
12 39 50	=2039+452	16 11 33	47.0	71.7	-4.5		-54.5	38	18	12 38 51
12 39 50	W75N	16 11 33	45.7	75.3	-4.5		-52.2	-22	18	No stop
12 40 50	---	16 12 33	45.8	75.5	-4.4		-52.3	38	18	12 39 51

Schedule for TORUN (Code Tr) Page 4

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
12 40 50	J2040+4527	16 12 33	47.2	71.8	-4.5		-54.5	-22	18	No stop
12 41 50	=2039+452	16 13 33	47.3	72.0	-4.5		-54.6	38	19	12 40 51
12 41 50	W75N	16 13 33	45.9	75.6	-4.4		-52.3	-22	19	No stop
12 42 50	---	16 14 33	46.1	75.8	-4.4		-52.4	38	19	12 41 51
12 43 33	J2040+4527	16 15 17	47.6	72.3	-4.4		-54.7	21	19	12 43 33
12 44 33	=2039+452	16 16 17	47.7	72.4	-4.4		-54.8	60	20	12 43 34
12 44 33	W75N	16 16 17	46.3	76.1	-4.4		-52.5	-22	20	No stop
12 45 33	---	16 17 17	46.5	76.2	-4.4		-52.5	38	20	12 44 34
12 45 33	J2040+4527	16 17 17	47.8	72.6	-4.4		-54.9	-22	20	No stop
12 46 33	=2039+452	16 18 17	48.0	72.7	-4.4		-54.9	38	21	12 45 34
12 46 33	W75N	16 18 17	46.6	76.4	-4.4		-52.6	-22	21	No stop
12 47 33	---	16 19 17	46.8	76.6	-4.3		-52.6	38	21	12 46 34
12 47 33	J2040+4527	16 19 17	48.1	72.9	-4.4		-55.0	-22	21	No stop
12 48 33	=2039+452	16 20 17	48.3	73.0	-4.4		-55.1	38	22	12 47 34
12 48 33	W75N	16 20 17	46.9	76.7	-4.3		-52.7	-22	22	No stop
12 49 33	---	16 21 18	47.1	76.9	-4.3		-52.7	38	22	12 48 34
12 49 33	J2040+4527	16 21 18	48.4	73.2	-4.3		-55.1	-22	22	No stop
12 50 33	=2039+452	16 22 18	48.6	73.3	-4.3		-55.2	38	23	12 49 34
12 50 33	W75N	16 22 18	47.2	77.1	-4.3		-52.8	-22	23	No stop
12 51 33	---	16 23 18	47.4	77.2	-4.3		-52.8	38	23	12 50 34
12 51 33	J2040+4527	16 23 18	48.7	73.5	-4.3		-55.3	-22	23	No stop
12 52 33	=2039+452	16 24 18	48.9	73.6	-4.3		-55.3	38	24	12 51 34
12 52 33	W75N	16 24 18	47.5	77.4	-4.3		-52.9	-22	24	No stop
12 53 33	---	16 25 18	47.7	77.6	-4.2		-52.9	38	24	12 52 34
12 53 33	J2040+4527	16 25 18	49.0	73.8	-4.3		-55.4	-22	24	No stop
12 54 33	=2039+452	16 26 18	49.1	73.9	-4.3		-55.5	38	25	12 53 34
12 55 56	J2202+4216	16 27 42	35.8	65.0	-5.6		-47.4	19	25	12 55 56
13 05 56	=BLLAC	16 37 43	37.2	66.5	-5.4		-48.2	600	29	12 55 57
13 07 21	J2040+4527	16 39 08	51.0	75.9	-4.0		-56.2	20	29	13 07 21
13 08 21	=2039+452	16 40 09	51.2	76.0	-4.0		-56.3	60	30	13 07 22

Schedule for TORUN (Code Tr) Page 5

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
13 08 21	W75N	16 40 09	49.8	80.0	-4.0		-53.6	-23	30	No stop
13 09 21	---	16 41 09	50.0	80.2	-4.0		-53.6	37	30	13 08 22
13 09 21	J2040+4527	16 41 09	51.3	76.2	-4.0		-56.4	-23	30	No stop
13 10 21	=2039+452	16 42 09	51.4	76.3	-4.0		-56.4	37	31	13 09 22
13 10 21	W75N	16 42 09	50.1	80.4	-4.0		-53.7	-23	31	No stop
13 11 21	---	16 43 09	50.3	80.5	-3.9		-53.7	37	31	13 10 22
13 11 21	J2040+4527	16 43 09	51.6	76.5	-4.0		-56.5	-23	31	No stop
13 12 21	=2039+452	16 44 09	51.7	76.7	-4.0		-56.5	37	32	13 11 22
13 12 21	W75N	16 44 09	50.4	80.7	-3.9		-53.7	-23	32	No stop
13 13 21	---	16 45 09	50.6	80.9	-3.9		-53.8	37	32	13 12 22
13 13 21	J2040+4527	16 45 09	51.9	76.8	-3.9		-56.6	-23	32	No stop
13 14 21	=2039+452	16 46 10	52.0	77.0	-3.9		-56.6	37	33	13 13 22
13 14 21	W75N	16 46 10	50.7	81.1	-3.9		-53.8	-23	33	No stop
13 15 21	---	16 47 10	50.9	81.2	-3.9		-53.9	37	33	13 14 22
13 15 21	J2040+4527	16 47 10	52.2	77.1	-3.9		-56.7	-23	33	No stop
13 16 21	=2039+452	16 48 10	52.3	77.3	-3.9		-56.7	37	34	13 15 22
13 16 21	W75N	16 48 10	51.0	81.4	-3.9		-53.9	-23	34	No stop
13 17 21	---	16 49 10	51.2	81.6	-3.8		-53.9	37	34	13 16 22
13 18 05	J2040+4527	16 49 54	52.6	77.6	-3.9		-56.8	21	34	13 18 05
13 19 05	=2039+452	16 50 54	52.7	77.7	-3.8		-56.9	60	35	13 18 06
13 19 05	W75N	16 50 54	51.4	81.9	-3.8		-54.0	-23	35	No stop
13 20 05	---	16 51 55	51.6	82.0	-3.8		-54.0	37	35	13 19 06
13 20 05	J2040+4527	16 51 55	52.9	77.9	-3.8		-56.9	-23	35	No stop
13 21 05	=2039+452	16 52 55	53.0	78.0	-3.8		-57.0	37	36	13 20 06
13 21 05	W75N	16 52 55	51.7	82.2	-3.8		-54.1	-23	36	No stop
13 22 05	---	16 53 55	51.9	82.4	-3.8		-54.1	37	36	13 21 06
13 22 05	J2040+4527	16 53 55	53.2	78.2	-3.8		-57.0	-23	36	No stop
13 23 05	=2039+452	16 54 55	53.3	78.4	-3.8		-57.1	37	37	13 22 06
13 23 05	W75N	16 54 55	52.0	82.6	-3.7		-54.1	-23	37	No stop
13 24 05	---	16 55 55	52.2	82.7	-3.7		-54.2	37	37	13 23 06

Schedule for TORUN (Code Tr) Page 6

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
13 24 05	J2040+4527	16 55 55	53.5	78.5	-3.8		-57.1	-23	37	No stop
13 25 05	=2039+452	16 56 55	53.6	78.7	-3.7		-57.2	37	38	13 24 06
13 25 05	W75N	16 56 55	52.3	82.9	-3.7		-54.2	-24	38	No stop
13 26 05	---	16 57 56	52.5	83.1	-3.7		-54.2	36	38	13 25 06
13 26 05	J2040+4527	16 57 56	53.8	78.8	-3.7		-57.2	-23	38	No stop
13 27 05	=2039+452	16 58 56	53.9	79.0	-3.7		-57.3	37	39	13 26 06
13 27 05	W75N	16 58 56	52.6	83.3	-3.7		-54.2	-24	39	No stop
13 28 05	---	16 59 56	52.8	83.5	-3.7		-54.3	36	39	13 27 06
13 28 49	J2040+4527	17 00 40	54.2	79.3	-3.7		-57.4	21	39	13 28 49
13 29 49	=2039+452	17 01 40	54.3	79.4	-3.7		-57.4	60	40	13 28 50
13 29 49	W75N	17 01 40	53.0	83.8	-3.6		-54.3	-24	40	No stop
13 30 49	---	17 02 40	53.2	83.9	-3.6		-54.3	36	40	13 29 50
13 30 49	J2040+4527	17 02 40	54.5	79.6	-3.6		-57.5	-24	40	No stop
13 31 49	=2039+452	17 03 40	54.6	79.8	-3.6		-57.5	36	41	13 30 50
13 31 49	W75N	17 03 40	53.3	84.1	-3.6		-54.4	-24	41	No stop
13 32 49	---	17 04 41	53.5	84.3	-3.6		-54.4	36	41	13 31 50
13 32 49	J2040+4527	17 04 41	54.8	79.9	-3.6		-57.6	-24	41	No stop
13 33 49	=2039+452	17 05 41	54.9	80.1	-3.6		-57.6	36	42	13 32 50
13 33 49	W75N	17 05 41	53.6	84.5	-3.6		-54.4	-24	42	No stop
13 34 49	---	17 06 41	53.8	84.7	-3.5		-54.4	36	42	13 33 50
13 34 49	J2040+4527	17 06 41	55.1	80.3	-3.6		-57.7	-24	42	No stop
13 35 49	=2039+452	17 07 41	55.2	80.4	-3.6		-57.7	36	43	13 34 50
13 35 49	W75N	17 07 41	53.9	84.8	-3.5		-54.5	-24	43	No stop
13 36 49	---	17 08 41	54.1	85.0	-3.5		-54.5	36	43	13 35 50
13 36 49	J2040+4527	17 08 41	55.3	80.6	-3.5		-57.7	-24	43	No stop
13 37 49	=2039+452	17 09 41	55.5	80.7	-3.5		-57.8	36	43	13 36 50
13 37 49	W75N	17 09 41	54.2	85.2	-3.5		-54.5	-24	43	No stop
13 38 49	---	17 10 42	54.4	85.4	-3.5		-54.5	36	44	13 37 50
13 39 33	J2040+4527	17 11 26	55.8	81.0	-3.5		-57.9	20	44	13 39 33
13 40 33	=2039+452	17 12 26	55.9	81.2	-3.5		-57.9	60	44	13 39 34

Schedule for TORUN (Code Tr) Page 7

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
13 40 33	W75N	17 12 26	54.7	85.7	-3.4		-54.6	-24	44	No stop
13 41 33	---	17 13 26	54.8	85.9	-3.4		-54.6	36	45	13 40 34
13 41 33	J2040+4527	17 13 26	56.1	81.4	-3.5		-57.9	-24	45	No stop
13 42 33	=2039+452	17 14 26	56.2	81.5	-3.5		-58.0	36	45	13 41 34
13 42 33	W75N	17 14 26	55.0	86.1	-3.4		-54.6	-24	45	No stop
13 43 33	---	17 15 26	55.1	86.3	-3.4		-54.6	36	46	13 42 34
13 43 33	J2040+4527	17 15 26	56.3	81.7	-3.4		-58.0	-24	46	No stop
13 44 33	=2039+452	17 16 27	56.5	81.9	-3.4		-58.1	36	46	13 43 34
13 44 33	W75N	17 16 27	55.3	86.5	-3.4		-54.6	-24	46	No stop
13 45 33	---	17 17 27	55.4	86.6	-3.4		-54.7	36	47	13 44 34
13 45 33	J2040+4527	17 17 27	56.6	82.0	-3.4		-58.1	-24	47	No stop
13 46 33	=2039+452	17 18 27	56.8	82.2	-3.4		-58.1	36	47	13 45 34
13 46 33	W75N	17 18 27	55.6	86.8	-3.3		-54.7	-24	47	No stop
13 47 33	---	17 19 27	55.7	87.0	-3.3		-54.7	36	48	13 46 34
13 47 33	J2040+4527	17 19 27	56.9	82.4	-3.4		-58.2	-24	48	No stop
13 48 33	=2039+452	17 20 27	57.1	82.5	-3.4		-58.2	36	48	13 47 34
13 48 33	W75N	17 20 27	55.9	87.2	-3.3		-54.7	-24	48	No stop
13 49 33	---	17 21 27	56.0	87.4	-3.3		-54.7	36	49	13 48 34
13 50 18	J2040+4527	17 22 13	57.4	82.8	-3.3		-58.3	21	49	13 50 18
13 51 18	=2039+452	17 23 13	57.5	83.0	-3.3		-58.3	60	49	13 50 19
13 51 18	W75N	17 23 13	56.3	87.7	-3.3		-54.7	-25	49	No stop
13 52 18	---	17 24 13	56.4	87.9	-3.3		-54.7	35	50	13 51 19
13 52 18	J2040+4527	17 24 13	57.7	83.2	-3.3		-58.3	-24	50	No stop
13 53 18	=2039+452	17 25 13	57.8	83.4	-3.3		-58.4	36	50	13 52 19
13 53 18	W75N	17 25 13	56.6	88.1	-3.2		-54.8	-25	50	No stop
13 54 18	---	17 26 13	56.7	88.3	-3.2		-54.8	35	51	13 53 19
13 54 18	J2040+4527	17 26 13	58.0	83.5	-3.3		-58.4	-24	51	No stop
13 55 18	=2039+452	17 27 13	58.1	83.7	-3.2		-58.4	36	51	13 54 19
13 55 18	W75N	17 27 13	56.9	88.5	-3.2		-54.8	-25	51	No stop
13 56 18	---	17 28 13	57.0	88.7	-3.2		-54.8	35	52	13 55 19

Schedule for TORUN (Code Tr) Page 8

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
13 56 18	J2040+4527	17 28 13	58.3	83.9	-3.2		-58.5	-25	52	No stop
13 57 18	=2039+452	17 29 14	58.4	84.1	-3.2		-58.5	35	52	13 56 19
13 57 18	W75N	17 29 14	57.2	88.9	-3.2		-54.8	-25	52	No stop
13 58 18	---	17 30 14	57.3	89.1	-3.2		-54.8	35	53	13 57 19
13 58 18	J2040+4527	17 30 14	58.6	84.2	-3.2		-58.5	-25	53	No stop
13 59 18	=2039+452	17 31 14	58.7	84.4	-3.2		-58.6	35	53	13 58 19
13 59 18	W75N	17 31 14	57.5	89.3	-3.1		-54.8	-25	53	No stop
14 00 18	---	17 32 14	57.6	89.5	-3.1		-54.8	35	54	13 59 19
14 00 18	J2040+4527	17 32 14	58.9	84.6	-3.2		-58.6	-25	54	No stop
14 01 18	=2039+452	17 33 14	59.0	84.8	-3.1		-58.6	35	54	14 00 19
14 02 43	J2202+4216	17 34 40	45.3	75.5	-4.5		-51.9	19	54	14 02 43
14 12 43	=BLLAC	17 44 41	46.8	77.1	-4.3		-52.4	600	59	14 02 44
14 20 43	J2040+4527	17 52 43	61.9	88.3	-2.8		-59.0	413	59	14 20 43
14 21 53	=2039+452	17 53 53	62.1	88.6	-2.8		-59.0	70	59	14 20 44
14 21 53	W75N	17 53 53	60.9	94.0	-2.8		-54.6	-26	59	No stop
14 23 03	---	17 55 03	61.0	94.2	-2.7		-54.6	44	60	14 21 54
14 23 03	J2040+4527	17 55 03	62.3	88.8	-2.8		-59.0	-26	60	No stop
14 24 13	=2039+452	17 56 13	62.4	89.0	-2.8		-59.0	44	61	14 23 04
14 24 13	W75N	17 56 13	61.2	94.5	-2.7		-54.5	-26	61	No stop
14 25 23	---	17 57 23	61.4	94.8	-2.7		-54.5	44	61	14 24 14
14 25 23	J2040+4527	17 57 23	62.6	89.3	-2.7		-59.0	-26	61	No stop
14 26 33	=2039+452	17 58 33	62.8	89.5	-2.7		-59.0	44	62	14 25 24
14 26 33	W75N	17 58 33	61.6	95.0	-2.7		-54.5	-26	62	No stop
14 27 43	---	17 59 44	61.7	95.3	-2.7		-54.5	44	62	14 26 34
14 27 43	J2040+4527	17 59 44	63.0	89.7	-2.7		-59.0	-26	62	No stop
14 28 53	=2039+452	18 00 54	63.1	89.9	-2.7		-59.0	44	63	14 27 44
14 28 53	W75N	18 00 54	61.9	95.5	-2.6		-54.4	-26	63	No stop
14 30 03	---	18 02 04	62.1	95.8	-2.6		-54.4	44	63	14 28 54
14 30 03	J2040+4527	18 02 04	63.3	90.2	-2.7		-59.0	-26	63	No stop
14 31 13	=2039+452	18 03 14	63.5	90.4	-2.6		-59.0	44	64	14 30 04

Schedule for TORUN (Code Tr) Page 9

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 25 Oct 2020 Day 299 ---										
14 31 13	W75N	18 03 14	62.3	96.1	-2.6		-54.3	-26	64	No stop
14 32 23	---	18 04 24	62.4	96.3	-2.6		-54.3	44	65	14 31 14
14 33 11	J2040+4527	18 05 13	63.8	90.8	-2.6		-59.0	22	65	14 33 11
14 34 21	=2039+452	18 06 23	64.0	91.1	-2.6		-59.0	70	65	14 33 12
14 34 21	W75N	18 06 23	62.7	96.8	-2.5		-54.2	-27	65	No stop
14 35 31	---	18 07 33	62.9	97.1	-2.5		-54.2	43	66	14 34 22
14 35 31	J2040+4527	18 07 33	64.1	91.3	-2.6		-59.0	-26	66	No stop
14 36 41	=2039+452	18 08 43	64.3	91.5	-2.5		-59.0	44	66	14 35 32
14 36 41	W75N	18 08 43	63.1	97.4	-2.5		-54.1	-27	66	No stop
14 37 51	---	18 09 53	63.3	97.6	-2.5		-54.1	43	67	14 36 42
14 37 51	J2040+4527	18 09 53	64.5	91.8	-2.5		-59.0	-27	67	No stop
14 39 01	=2039+452	18 11 04	64.7	92.0	-2.5		-58.9	43	67	14 37 52
14 39 01	W75N	18 11 04	63.4	97.9	-2.5		-54.0	-27	67	No stop
14 40 11	---	18 12 14	63.6	98.2	-2.5		-54.0	43	68	14 39 02
14 40 11	J2040+4527	18 12 14	64.8	92.3	-2.5		-58.9	-27	68	No stop
14 41 21	=2039+452	18 13 24	65.0	92.5	-2.5		-58.9	43	69	14 40 12
14 41 21	W75N	18 13 24	63.8	98.5	-2.4		-53.9	-27	69	No stop
14 42 31	---	18 14 34	64.0	98.8	-2.4		-53.9	43	69	14 41 22
14 42 31	J2040+4527	18 14 34	65.2	92.8	-2.4		-58.9	-27	69	No stop
14 43 41	=2039+452	18 15 44	65.4	93.0	-2.4		-58.9	43	70	14 42 32
14 43 41	W75N	18 15 44	64.1	99.1	-2.4		-53.8	-27	70	No stop
14 44 51	---	18 16 54	64.3	99.4	-2.4		-53.7	43	70	14 43 42
14 45 40	J2040+4527	18 17 44	65.7	93.5	-2.4		-58.8	22	70	14 45 40
14 46 50	=2039+452	18 18 54	65.8	93.7	-2.4		-58.8	70	71	14 45 41
14 46 50	W75N	18 18 54	64.6	99.9	-2.3		-53.6	-27	71	No stop
14 48 00	---	18 20 04	64.8	100.2	-2.3		-53.5	43	71	14 46 51
14 48 00	J2040+4527	18 20 04	66.0	94.0	-2.4		-58.8	-27	71	No stop
14 49 10	=2039+452	18 21 14	66.2	94.3	-2.3		-58.7	43	72	14 48 01
14 49 10	W75N	18 21 14	64.9	100.5	-2.3		-53.5	-28	72	No stop
14 50 20	---	18 22 24	65.1	100.8	-2.3		-53.4	42	72	14 49 11

Schedule for TORUN (Code Tr) Page 10

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
14 50 20	J2040+4527	18 22 24	66.4	94.5	-2.3		-58.7	-27	72	No stop
14 51 30	=2039+452	18 23 35	66.5	94.8	-2.3		-58.7	43	73	14 50 21
14 51 30	W75N	18 23 35	65.3	101.1	-2.3		-53.3	-28	73	No stop
14 52 40	---	18 24 45	65.5	101.4	-2.2		-53.2	42	74	14 51 31
14 52 40	J2040+4527	18 24 45	66.7	95.1	-2.3		-58.6	-27	74	No stop
14 53 50	=2039+452	18 25 55	66.9	95.3	-2.3		-58.6	43	74	14 52 41
14 53 50	W75N	18 25 55	65.6	101.7	-2.2		-53.1	-28	74	No stop
14 55 00	---	18 27 05	65.8	102.0	-2.2		-53.1	42	75	14 53 51
14 55 00	J2040+4527	18 27 05	67.1	95.6	-2.2		-58.6	-28	75	No stop
14 56 10	=2039+452	18 28 15	67.2	95.9	-2.2		-58.5	42	75	14 55 01
14 56 10	W75N	18 28 15	66.0	102.3	-2.2		-53.0	-28	75	No stop
14 57 20	---	18 29 26	66.1	102.6	-2.2		-52.9	42	76	14 56 11
14 58 11	J2040+4527	18 30 17	67.6	96.4	-2.2		-58.4	23	76	14 58 11
14 59 21	=2039+452	18 31 27	67.7	96.6	-2.2		-58.4	70	76	14 58 12
14 59 21	W75N	18 31 27	66.4	103.2	-2.1		-52.7	-28	76	No stop
15 00 31	---	18 32 37	66.6	103.5	-2.1		-52.6	42	77	14 59 22
15 00 31	J2040+4527	18 32 37	67.9	96.9	-2.1		-58.3	-28	77	No stop
15 01 41	=2039+452	18 33 47	68.1	97.2	-2.1		-58.3	42	78	15 00 32
15 01 41	W75N	18 33 47	66.8	103.9	-2.1		-52.5	-29	78	No stop
15 02 51	---	18 34 57	67.0	104.2	-2.1		-52.4	41	78	15 01 42
15 02 51	J2040+4527	18 34 57	68.2	97.5	-2.1		-58.2	-28	78	No stop
15 04 01	=2039+452	18 36 08	68.4	97.8	-2.1		-58.1	42	79	15 02 52
15 04 01	W75N	18 36 08	67.1	104.5	-2.1		-52.3	-29	79	No stop
15 05 11	---	18 37 18	67.3	104.9	-2.0		-52.2	41	79	15 04 02
15 05 11	J2040+4527	18 37 18	68.6	98.1	-2.1		-58.1	-28	79	No stop
15 06 21	=2039+452	18 38 28	68.8	98.4	-2.1		-58.0	42	80	15 05 12
15 06 21	W75N	18 38 28	67.5	105.2	-2.0		-52.0	-29	80	No stop
15 07 31	---	18 39 38	67.6	105.6	-2.0		-51.9	41	80	15 06 22
15 07 31	J2040+4527	18 39 38	68.9	98.7	-2.0		-57.9	-29	80	No stop
15 08 41	=2039+452	18 40 48	69.1	99.0	-2.0		-57.9	41	81	15 07 32

Schedule for TORUN (Code Tr) Page 11

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
15 08 41	W75N	18 40 48	67.8	105.9	-2.0		-51.8	-29	81	No stop
15 09 51	---	18 41 59	68.0	106.3	-2.0		-51.7	41	81	15 08 42
15 10 42	J2040+4527	18 42 50	69.4	99.5	-2.0		-57.7	22	81	15 10 42
15 11 52	=2039+452	18 44 00	69.6	99.8	-2.0		-57.6	70	82	15 10 43
15 11 52	W75N	18 44 00	68.3	106.9	-1.9		-51.4	-29	82	No stop
15 13 02	---	18 45 10	68.4	107.2	-1.9		-51.3	41	83	15 11 53
15 13 02	J2040+4527	18 45 10	69.8	100.2	-1.9		-57.5	-29	83	No stop
15 14 02	=2039+452	18 46 10	69.9	100.4	-1.9		-57.5	31	83	15 13 03
15 15 29	J2202+4216	18 47 38	56.1	88.2	-3.3		-54.3	21	83	15 15 29
15 25 29	=BLLAC	18 57 39	57.6	90.2	-3.1		-54.4	600	88	15 15 30
15 26 57	J2040+4527	18 59 07	71.8	104.2	-1.7		-56.2	21	88	15 26 57
15 28 07	=2039+452	19 00 18	72.0	104.6	-1.7		-56.1	70	88	15 26 58
15 28 07	W75N	19 00 18	70.6	112.3	-1.7		-49.1	-31	88	No stop
15 29 17	---	19 01 28	70.7	112.7	-1.6		-48.9	39	89	15 28 08
15 29 17	J2040+4527	19 01 28	72.1	105.0	-1.7		-55.9	-30	89	No stop
15 30 27	=2039+452	19 02 38	72.3	105.3	-1.6		-55.8	40	90	15 29 18
15 30 27	W75N	19 02 38	70.9	113.2	-1.6		-48.7	-31	90	No stop
15 31 37	---	19 03 48	71.1	113.6	-1.6		-48.5	39	90	15 30 28
15 31 37	J2040+4527	19 03 48	72.5	105.7	-1.6		-55.6	-31	90	No stop
15 32 47	=2039+452	19 04 58	72.7	106.1	-1.6		-55.4	39	91	15 31 38
15 32 47	W75N	19 04 58	71.2	114.1	-1.6		-48.3	-31	91	No stop
15 33 57	---	19 06 09	71.4	114.5	-1.6		-48.0	39	91	15 32 48
15 33 57	J2040+4527	19 06 09	72.8	106.5	-1.6		-55.3	-31	91	No stop
15 35 07	=2039+452	19 07 19	73.0	106.9	-1.6		-55.1	39	92	15 33 58
15 35 07	W75N	19 07 19	71.5	115.0	-1.5		-47.8	-31	92	No stop
15 36 17	---	19 08 29	71.7	115.4	-1.5		-47.6	39	92	15 35 08
15 36 17	J2040+4527	19 08 29	73.2	107.3	-1.6		-54.9	-31	92	No stop
15 37 27	=2039+452	19 09 39	73.3	107.7	-1.5		-54.8	39	93	15 36 18
15 37 27	W75N	19 09 39	71.8	115.9	-1.5		-47.3	-32	93	No stop
15 38 37	---	19 10 49	72.0	116.3	-1.5		-47.1	38	94	15 37 28

Schedule for TORUN (Code Tr) Page 12

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
15 39 31	J2040+4527	19 11 43	73.6	108.4	-1.5		-54.4	23	94	15 39 31
15 40 41	=2039+452	19 12 54	73.8	108.9	-1.5		-54.2	70	94	15 39 32
15 40 41	W75N	19 12 54	72.3	117.2	-1.4		-46.6	-32	94	No stop
15 41 51	---	19 14 04	72.4	117.7	-1.4		-46.4	38	95	15 40 42
15 41 51	J2040+4527	19 14 04	74.0	109.3	-1.5		-54.0	-31	95	No stop
15 43 01	=2039+452	19 15 14	74.1	109.7	-1.4		-53.8	39	95	15 41 52
15 43 01	W75N	19 15 14	72.6	118.2	-1.4		-46.1	-32	95	No stop
15 44 11	---	19 16 24	72.8	118.7	-1.4		-45.8	38	96	15 43 02
15 44 11	J2040+4527	19 16 24	74.3	110.2	-1.4		-53.6	-32	96	No stop
15 45 21	=2039+452	19 17 34	74.5	110.6	-1.4		-53.3	38	96	15 44 12
15 45 21	W75N	19 17 34	72.9	119.2	-1.4		-45.5	-33	96	No stop
15 46 31	---	19 18 45	73.1	119.7	-1.3		-45.2	37	97	15 45 22
15 46 31	J2040+4527	19 18 45	74.6	111.1	-1.4		-53.1	-32	97	No stop
15 47 41	=2039+452	19 19 55	74.8	111.6	-1.4		-52.9	38	97	15 46 32
15 47 41	W75N	19 19 55	73.2	120.2	-1.3		-44.9	-33	97	No stop
15 48 51	---	19 21 05	73.4	120.8	-1.3		-44.6	37	98	15 47 42
15 48 51	J2040+4527	19 21 05	74.9	112.0	-1.3		-52.6	-32	98	No stop
15 50 01	=2039+452	19 22 15	75.1	112.5	-1.3		-52.4	38	99	15 48 52
15 50 01	W75N	19 22 15	73.5	121.3	-1.3		-44.3	-33	99	No stop
15 51 11	---	19 23 25	73.7	121.8	-1.3		-44.0	37	99	15 50 02
15 52 07	J2040+4527	19 24 22	75.4	113.4	-1.3		-51.9	24	99	15 52 07
15 53 17	=2039+452	19 25 32	75.6	113.9	-1.3		-51.6	70	100	15 52 08
15 53 17	W75N	19 25 32	73.9	122.8	-1.2		-43.4	-33	100	No stop
15 54 27	---	19 26 42	74.1	123.4	-1.2		-43.0	37	100	15 53 18
15 54 27	J2040+4527	19 26 42	75.7	114.4	-1.2		-51.3	-33	100	No stop
15 55 37	=2039+452	19 27 52	75.9	115.0	-1.2		-51.0	37	101	15 54 28
15 55 37	W75N	19 27 52	74.2	124.0	-1.2		-42.6	-34	101	No stop
15 56 47	---	19 29 02	74.4	124.6	-1.2		-42.3	36	101	15 55 38
15 56 47	J2040+4527	19 29 02	76.0	115.5	-1.2		-50.7	-33	101	No stop
15 57 57	=2039+452	19 30 12	76.2	116.0	-1.2		-50.4	37	102	15 56 48

Schedule for TORUN (Code Tr) Page 13

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
15 57 57	W75N	19 30 12	74.5	125.2	-1.2		-41.9	-34	102	No stop
15 59 07	---	19 31 23	74.7	125.8	-1.1		-41.5	36	103	15 57 58
15 59 07	J2040+4527	19 31 23	76.4	116.6	-1.2		-50.0	-33	103	No stop
16 00 17	=2039+452	19 32 33	76.5	117.1	-1.1		-49.7	37	103	15 59 08
16 00 17	W75N	19 32 33	74.8	126.4	-1.1		-41.1	-34	103	No stop
16 01 27	---	19 33 43	74.9	127.0	-1.1		-40.7	36	104	16 00 18
16 01 27	J2040+4527	19 33 43	76.7	117.7	-1.1		-49.4	-33	104	No stop
16 02 37	=2039+452	19 34 53	76.8	118.3	-1.1		-49.0	37	104	16 01 28
16 02 37	W75N	19 34 53	75.1	127.6	-1.1		-40.3	-34	104	No stop
16 03 47	---	19 36 03	75.2	128.3	-1.1		-39.9	36	105	16 02 38
16 04 44	J2040+4527	19 37 01	77.1	119.4	-1.1		-48.3	24	105	16 04 44
16 05 54	=2039+452	19 38 11	77.3	120.0	-1.1		-47.9	70	105	16 04 45
16 05 54	W75N	19 38 11	75.5	129.5	-1.0		-39.1	-34	105	No stop
16 07 04	---	19 39 21	75.6	130.1	-1.0		-38.7	36	106	16 05 55
16 07 04	J2040+4527	19 39 21	77.4	120.6	-1.0		-47.5	-33	106	No stop
16 08 14	=2039+452	19 40 31	77.6	121.3	-1.0		-47.1	37	107	16 07 05
16 08 14	W75N	19 40 31	75.7	130.8	-1.0		-38.2	-35	107	No stop
16 09 24	---	19 41 41	75.9	131.5	-1.0		-37.7	35	107	16 08 15
16 09 24	J2040+4527	19 41 41	77.7	121.9	-1.0		-46.7	-34	107	No stop
16 10 34	=2039+452	19 42 52	77.9	122.6	-1.0		-46.2	36	108	16 09 25
16 10 34	W75N	19 42 52	76.0	132.2	-0.9		-37.2	-35	108	No stop
16 11 44	---	19 44 02	76.1	132.9	-0.9		-36.7	35	108	16 10 35
16 11 44	J2040+4527	19 44 02	78.0	123.3	-1.0		-45.8	-34	108	No stop
16 12 54	=2039+452	19 45 12	78.1	124.0	-0.9		-45.3	36	109	16 11 45
16 12 54	W75N	19 45 12	76.3	133.7	-0.9		-36.2	-35	109	No stop
16 14 04	---	19 46 22	76.4	134.4	-0.9		-35.7	35	109	16 12 55
16 14 04	J2040+4527	19 46 22	78.3	124.7	-0.9		-44.8	-34	109	No stop
16 15 14	=2039+452	19 47 32	78.4	125.4	-0.9		-44.3	36	110	16 14 05
16 15 14	W75N	19 47 32	76.5	135.1	-0.9		-35.2	-35	110	No stop
16 16 24	---	19 48 43	76.6	135.9	-0.8		-34.7	35	110	16 15 15

Schedule for TORUN (Code Tr) Page 14

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
16 16 24	J2040+4527	19 48 43	78.6	126.1	-0.9		-43.8	-34	110	No stop
16 17 34	=2039+452	19 49 53	78.7	126.9	-0.9		-43.3	36	111	16 16 25
16 19 01	J2202+4216	19 51 20	65.6	102.6	-2.2		-52.5	23	111	16 19 01
16 29 01	=BLLAC	20 01 22	67.1	105.5	-2.0		-51.6	600	116	16 19 02
16 37 01	J2040+4527	20 09 23	80.8	142.2	-0.5		-31.7	403	116	16 37 01
16 38 16	=2039+452	20 10 38	80.9	143.4	-0.5		-30.8	75	116	16 37 02
16 38 16	W75N	20 10 38	78.6	152.4	-0.5		-22.2	-34	116	No stop
16 39 31	---	20 11 53	78.6	153.5	-0.5		-21.4	41	117	16 38 17
16 39 31	J2040+4527	20 11 53	81.0	144.6	-0.5		-29.8	-32	117	No stop
16 40 46	=2039+452	20 13 09	81.1	145.8	-0.5		-28.8	43	118	16 39 32
16 40 46	W75N	20 13 09	78.7	154.6	-0.4		-20.5	-33	118	No stop
16 42 01	---	20 14 24	78.8	155.7	-0.4		-19.6	42	118	16 40 47
16 42 01	J2040+4527	20 14 24	81.3	147.1	-0.5		-27.8	-31	118	No stop
16 43 16	=2039+452	20 15 39	81.4	148.4	-0.4		-26.7	44	119	16 42 02
16 43 16	W75N	20 15 39	78.9	156.8	-0.4		-18.7	-33	119	No stop
16 44 31	---	20 16 54	79.0	158.0	-0.4		-17.8	42	119	16 43 17
16 44 31	J2040+4527	20 16 54	81.4	149.7	-0.4		-25.6	-31	119	No stop
16 45 46	=2039+452	20 18 09	81.5	151.0	-0.4		-24.5	44	120	16 44 32
16 45 46	W75N	20 18 09	79.0	159.1	-0.4		-16.9	-32	120	No stop
16 47 01	---	20 19 25	79.1	160.3	-0.3		-16.0	43	121	16 45 47
16 47 01	J2040+4527	20 19 25	81.6	152.4	-0.4		-23.4	-30	121	No stop
16 48 16	=2039+452	20 20 40	81.7	153.8	-0.3		-22.2	45	121	16 47 02
16 48 16	W75N	20 20 40	79.2	161.5	-0.3		-15.1	-31	121	No stop
16 49 31	---	20 21 55	79.2	162.7	-0.3		-14.1	44	122	16 48 17
16 50 37	J2040+4527	20 23 01	81.9	156.5	-0.3		-20.0	37	122	16 50 37
16 51 52	=2039+452	20 24 16	81.9	158.0	-0.3		-18.8	75	122	16 50 38
16 51 52	W75N	20 24 16	79.3	164.9	-0.3		-12.3	-30	122	No stop
16 53 07	---	20 25 32	79.4	166.1	-0.2		-11.3	45	123	16 51 53
16 53 07	J2040+4527	20 25 32	82.0	159.5	-0.3		-17.5	-27	123	No stop
16 54 22	=2039+452	20 26 47	82.1	161.0	-0.2		-16.2	48	124	16 53 08

Schedule for TORUN (Code Tr) Page 15

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
16 54 22	W75N	20 26 47	79.4	167.4	-0.2		-10.3	-29	124	No stop
16 55 37	---	20 28 02	79.4	168.6	-0.2		-9.3	46	124	16 54 23
16 55 37	J2040+4527	20 28 02	82.1	162.5	-0.2		-14.9	-26	124	No stop
16 56 52	=2039+452	20 29 17	82.2	164.1	-0.2		-13.6	49	125	16 55 38
16 56 52	W75N	20 29 17	79.5	169.8	-0.2		-8.3	-27	125	No stop
16 58 07	---	20 30 32	79.5	171.1	-0.1		-7.3	48	126	16 56 53
16 58 07	J2040+4527	20 30 32	82.2	165.7	-0.2		-12.3	-25	126	No stop
16 59 22	=2039+452	20 31 48	82.3	167.2	-0.2		-10.9	50	126	16 58 08
16 59 22	W75N	20 31 48	79.5	172.4	-0.1		-6.2	-26	126	No stop
17 00 37	---	20 33 03	79.6	173.6	-0.1		-5.2	49	127	16 59 23
17 00 37	J2040+4527	20 33 03	82.3	168.9	-0.1		-9.5	-24	127	No stop
17 01 52	=2039+452	20 34 18	82.3	170.5	-0.1		-8.1	51	127	17 00 38
17 01 52	W75N	20 34 18	79.6	174.9	-0.1		-4.2	-24	127	No stop
17 03 07	---	20 35 33	79.6	176.2	-0.1		-3.1	51	128	17 01 53
17 04 16	J2040+4527	20 36 42	82.4	173.6	-0.1		-5.4	45	128	17 04 16
17 05 31	=2039+452	20 37 58	82.4	175.3	-0.1		-4.0	75	129	17 04 17
17 05 31	W75N	20 37 58	79.6	178.6	-0.0		-1.1	-24	129	No stop
17 06 46	---	20 39 13	79.6	179.9	-0.0		-0.1	51	129	17 05 32
17 06 46	J2040+4527	20 39 13	82.4	177.0	-0.0		-2.6	-24	129	No stop
17 08 01	=2039+452	20 40 28	82.4	178.6	-0.0		-1.2	51	130	17 06 47
17 08 01	W75N	20 40 28	79.6	181.2	0.0		0.9	-25	130	No stop
17 09 16	---	20 41 43	79.6	182.4	0.0		2.0	50	130	17 08 02
17 09 16	J2040+4527	20 41 43	82.4	180.3	0.0		0.2	-25	130	No stop
17 10 31	=2039+452	20 42 58	82.4	182.0	0.0		1.7	50	131	17 09 17
17 10 31	W75N	20 42 58	79.6	183.7	0.1		3.0	-25	131	No stop
17 11 46	---	20 44 14	79.6	185.0	0.1		4.1	50	132	17 10 32
17 11 46	J2040+4527	20 44 14	82.4	183.6	0.0		3.1	-25	132	No stop
17 13 01	=2039+452	20 45 29	82.4	185.3	0.1		4.5	50	132	17 11 47
17 17 02	3C48	20 49 30	36.2	81.0	-4.8		-45.2	17	132	17 17 02
17 27 02	---	20 59 32	37.7	82.8	-4.7		-45.4	600	137	17 17 03

Schedule for TORUN (Code Tr) Page 16

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
17 30 11	J2202+4216	21 02 42	75.2	130.4	-1.0		-38.2	35	137	17 30 11
17 38 11	=BLLAC	21 10 43	76.1	135.2	-0.9		-34.9	480	141	17 30 12
17 40 41	J2040+4527	21 13 13	80.9	217.4	0.5		31.4	-30	141	17 40 41
17 41 56	=2039+452	21 14 29	80.7	218.6	0.5		32.3	45	141	17 40 42
17 41 56	W75N	21 14 29	78.1	212.9	0.6		26.4	-26	141	No stop
17 43 11	---	21 15 44	78.0	213.9	0.6		27.1	49	142	17 41 57
17 43 11	J2040+4527	21 15 44	80.6	219.7	0.6		33.2	-27	142	No stop
17 44 26	=2039+452	21 16 59	80.5	220.9	0.6		34.1	48	143	17 43 12
17 44 26	W75N	21 16 59	77.9	214.9	0.6		27.9	-26	143	No stop
17 45 41	---	21 18 14	77.8	215.8	0.6		28.6	49	143	17 44 27
17 45 41	J2040+4527	21 18 14	80.4	221.9	0.6		35.0	-28	143	No stop
17 46 56	=2039+452	21 19 29	80.2	223.0	0.6		35.8	47	144	17 45 42
17 46 56	W75N	21 19 29	77.6	216.8	0.7		29.3	-27	144	No stop
17 48 11	---	21 20 45	77.5	217.7	0.7		30.0	48	144	17 46 57
17 48 11	J2040+4527	21 20 45	80.1	224.0	0.7		36.6	-28	144	No stop
17 49 26	=2039+452	21 22 00	80.0	225.1	0.7		37.4	47	145	17 48 12
17 49 26	W75N	21 22 00	77.4	218.6	0.7		30.7	-27	145	No stop
17 50 41	---	21 23 15	77.3	219.5	0.7		31.3	48	146	17 49 27
17 50 41	J2040+4527	21 23 15	79.8	226.0	0.7		38.1	-29	146	No stop
17 51 56	=2039+452	21 24 30	79.7	227.0	0.7		38.8	46	146	17 50 42
17 51 56	W75N	21 24 30	77.2	220.4	0.8		32.0	-28	146	No stop
17 53 11	---	21 25 45	77.1	221.3	0.8		32.6	47	147	17 51 57
17 54 16	J2040+4527	21 26 51	79.5	228.8	0.8		40.1	36	147	17 54 16
17 55 31	=2039+452	21 28 06	79.3	229.7	0.8		40.8	75	147	17 54 17
17 55 31	W75N	21 28 06	76.8	222.9	0.8		33.8	-28	147	No stop
17 56 46	---	21 29 21	76.7	223.7	0.8		34.4	47	148	17 55 32
17 56 46	J2040+4527	21 29 21	79.2	230.6	0.8		41.5	-29	148	No stop
17 58 01	=2039+452	21 30 36	79.0	231.4	0.8		42.1	46	149	17 56 47
17 58 01	W75N	21 30 36	76.6	224.5	0.9		35.0	-28	149	No stop
17 59 16	---	21 31 51	76.4	225.3	0.9		35.5	47	149	17 58 02

Schedule for TORUN (Code Tr) Page 17

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
17 59 16	J2040+4527	21 31 51	78.9	232.3	0.8		42.7	-29	149	No stop
18 00 31	=2039+452	21 33 07	78.7	233.1	0.9		43.3	46	150	17 59 17
18 00 31	W75N	21 33 07	76.3	226.1	0.9		36.1	-28	150	No stop
18 01 46	---	21 34 22	76.2	226.9	0.9		36.6	47	151	18 00 32
18 01 46	J2040+4527	21 34 22	78.6	233.9	0.9		43.8	-30	151	No stop
18 03 01	=2039+452	21 35 37	78.4	234.7	0.9		44.4	45	151	18 01 47
18 03 01	W75N	21 35 37	76.0	227.7	0.9		37.2	-29	151	No stop
18 04 16	---	21 36 52	75.9	228.4	1.0		37.7	46	152	18 03 02
18 04 16	J2040+4527	21 36 52	78.3	235.5	0.9		44.9	-30	152	No stop
18 05 31	=2039+452	21 38 07	78.1	236.2	0.9		45.4	45	152	18 04 17
18 05 31	W75N	21 38 07	75.7	229.2	1.0		38.2	-29	152	No stop
18 06 46	---	21 39 23	75.6	229.9	1.0		38.7	46	153	18 05 32
18 07 31	J2040+4527	21 40 08	77.9	237.4	1.0		46.2	15	153	18 07 31
18 08 46	=2039+452	21 41 23	77.7	238.1	1.0		46.7	75	154	18 07 32
18 08 46	W75N	21 41 23	75.4	231.0	1.0		39.4	-29	154	No stop
18 10 01	---	21 42 38	75.2	231.7	1.1		39.9	46	154	18 08 47
18 10 01	J2040+4527	21 42 38	77.5	238.8	1.0		47.2	-30	154	No stop
18 11 16	=2039+452	21 43 53	77.4	239.5	1.0		47.6	45	155	18 10 02
18 11 16	W75N	21 43 53	75.1	232.4	1.1		40.4	-29	155	No stop
18 12 31	---	21 45 09	74.9	233.1	1.1		40.8	46	155	18 11 17
18 12 31	J2040+4527	21 45 09	77.2	240.2	1.1		48.0	-30	155	No stop
18 13 46	=2039+452	21 46 24	77.0	240.8	1.1		48.5	45	156	18 12 32
18 13 46	W75N	21 46 24	74.8	233.8	1.1		41.2	-29	156	No stop
18 15 01	---	21 47 39	74.6	234.4	1.1		41.6	46	157	18 13 47
18 15 01	J2040+4527	21 47 39	76.9	241.5	1.1		48.9	-30	157	No stop
18 16 16	=2039+452	21 48 54	76.7	242.1	1.1		49.2	45	157	18 15 02
18 16 16	W75N	21 48 54	74.5	235.1	1.2		42.1	-29	157	No stop
18 17 31	---	21 50 09	74.3	235.7	1.2		42.4	46	158	18 16 17
18 17 31	J2040+4527	21 50 09	76.5	242.7	1.1		49.6	-29	158	No stop
18 18 46	=2039+452	21 51 25	76.4	243.3	1.2		50.0	46	158	18 17 32

Schedule for TORUN (Code Tr) Page 18

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
18 18 46	W75N	21 51 25	74.1	236.3	1.2		42.8	-29	158	No stop
18 20 01	---	21 52 40	74.0	236.9	1.2		43.2	46	159	18 18 47
18 20 01	J2040+4527	21 52 40	76.2	243.9	1.2		50.3	-29	159	No stop
18 21 16	=2039+452	21 53 55	76.0	244.5	1.2		50.7	46	160	18 20 02
18 25 46	J2202+4216	21 58 26	79.3	174.9	-0.1		-4.1	112	160	18 25 46
18 33 46	=BLLAC	22 06 27	79.3	182.9	0.0		2.3	480	163	18 25 47
18 41 46	J2040+4527	22 14 28	73.2	252.7	1.5		54.9	329	163	18 41 46
18 43 01	=2039+452	22 15 44	73.0	253.1	1.6		55.1	75	164	18 41 47
18 43 01	W75N	22 15 44	70.9	246.7	1.6		48.6	-28	164	No stop
18 44 16	---	22 16 59	70.8	247.2	1.6		48.9	47	165	18 43 02
18 44 16	J2040+4527	22 16 59	72.8	253.6	1.6		55.3	-28	165	No stop
18 45 31	=2039+452	22 18 14	72.6	254.0	1.6		55.5	47	165	18 44 17
18 45 31	W75N	22 18 14	70.6	247.6	1.6		49.1	-27	165	No stop
18 46 46	---	22 19 29	70.4	248.1	1.7		49.3	48	166	18 45 32
18 46 46	J2040+4527	22 19 29	72.4	254.4	1.6		55.6	-28	166	No stop
18 48 01	=2039+452	22 20 44	72.3	254.8	1.7		55.8	47	166	18 46 47
18 48 01	W75N	22 20 44	70.2	248.5	1.7		49.5	-27	166	No stop
18 49 16	---	22 22 00	70.1	249.0	1.7		49.7	48	167	18 48 02
18 49 16	J2040+4527	22 22 00	72.1	255.2	1.7		56.0	-28	167	No stop
18 50 31	=2039+452	22 23 15	71.9	255.6	1.7		56.1	47	168	18 49 17
18 50 31	W75N	22 23 15	69.9	249.4	1.7		49.9	-27	168	No stop
18 51 46	---	22 24 30	69.7	249.8	1.8		50.1	48	168	18 50 32
18 51 46	J2040+4527	22 24 30	71.7	256.0	1.7		56.3	-28	168	No stop
18 53 01	=2039+452	22 25 45	71.5	256.4	1.7		56.4	47	169	18 51 47
18 53 01	W75N	22 25 45	69.5	250.3	1.8		50.3	-27	169	No stop
18 54 16	---	22 27 00	69.4	250.7	1.8		50.4	48	169	18 53 02
18 55 19	J2040+4527	22 28 04	71.2	257.1	1.8		56.7	36	169	18 55 19
18 56 34	=2039+452	22 29 19	71.0	257.4	1.8		56.8	75	170	18 55 20
18 56 34	W75N	22 29 19	69.0	251.4	1.8		50.8	-27	170	No stop
18 57 49	---	22 30 34	68.8	251.8	1.9		50.9	48	171	18 56 35

Schedule for TORUN (Code Tr) Page 19

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
18 57 49	J2040+4527	22 30 34	70.8	257.8	1.8		56.9	-27	171	No stop
18 59 04	=2039+452	22 31 49	70.6	258.2	1.8		57.0	48	171	18 57 50
18 59 04	W75N	22 31 49	68.7	252.2	1.9		51.1	-27	171	No stop
19 00 19	---	22 33 04	68.5	252.6	1.9		51.2	48	172	18 59 05
19 00 19	J2040+4527	22 33 04	70.5	258.5	1.9		57.1	-27	172	No stop
19 01 34	=2039+452	22 34 20	70.3	258.9	1.9		57.3	48	172	19 00 20
19 01 34	W75N	22 34 20	68.3	253.0	1.9		51.4	-26	172	No stop
19 02 49	---	22 35 35	68.1	253.4	1.9		51.5	49	173	19 01 35
19 02 49	J2040+4527	22 35 35	70.1	259.2	1.9		57.4	-27	173	No stop
19 04 04	=2039+452	22 36 50	69.9	259.6	1.9		57.5	48	174	19 02 50
19 04 04	W75N	22 36 50	68.0	253.8	2.0		51.7	-26	174	No stop
19 05 19	---	22 38 05	67.8	254.2	2.0		51.8	49	174	19 04 05
19 05 19	J2040+4527	22 38 05	69.7	259.9	1.9		57.6	-27	174	No stop
19 06 34	=2039+452	22 39 20	69.5	260.3	2.0		57.7	48	175	19 05 20
19 06 34	W75N	22 39 20	67.6	254.5	2.0		52.0	-26	175	No stop
19 07 49	---	22 40 36	67.4	254.9	2.0		52.1	49	176	19 06 35
19 08 50	J2040+4527	22 41 37	69.2	260.9	2.0		57.8	34	176	19 08 50
19 10 05	=2039+452	22 42 52	69.0	261.2	2.0		57.9	75	176	19 08 51
19 10 05	W75N	22 42 52	67.1	255.6	2.1		52.3	-26	176	No stop
19 11 20	---	22 44 07	66.9	255.9	2.1		52.4	49	177	19 10 06
19 11 20	J2040+4527	22 44 07	68.8	261.5	2.0		58.0	-26	177	No stop
19 12 35	=2039+452	22 45 22	68.6	261.8	2.1		58.1	49	177	19 11 21
19 16 55	J2202+4216	22 49 43	76.8	220.3	0.8		31.7	158	177	19 16 55
19 26 55	=BLLAC	22 59 45	75.8	226.8	0.9		36.3	600	182	19 16 56
19 31 35	J2040+4527	23 04 26	65.8	266.3	2.4		58.8	187	182	19 31 35
19 32 50	=2039+452	23 05 41	65.6	266.6	2.4		58.8	75	183	19 31 36
19 32 50	W75N	23 05 41	63.7	261.6	2.4		53.9	-25	183	No stop
19 34 05	---	23 06 56	63.5	261.9	2.5		54.0	50	183	19 32 51
19 34 05	J2040+4527	23 06 56	65.4	266.9	2.4		58.9	-25	183	No stop
19 35 20	=2039+452	23 08 11	65.2	267.2	2.4		58.9	50	184	19 34 06

Schedule for TORUN (Code Tr) Page 20

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
19 35 20	W75N	23 08 11	63.3	262.2	2.5		54.1	-25	184	No stop
19 36 35	---	23 09 26	63.2	262.5	2.5		54.1	50	185	19 35 21
19 36 35	J2040+4527	23 09 26	65.0	267.4	2.5		58.9	-25	185	No stop
19 37 50	=2039+452	23 10 42	64.9	267.7	2.5		58.9	50	185	19 36 36
19 37 50	W75N	23 10 42	63.0	262.8	2.5		54.2	-25	185	No stop
19 39 05	---	23 11 57	62.8	263.1	2.5		54.2	50	186	19 37 51
19 39 05	J2040+4527	23 11 57	64.7	268.0	2.5		58.9	-25	186	No stop
19 40 20	=2039+452	23 13 12	64.5	268.2	2.5		59.0	50	186	19 39 06
19 40 20	W75N	23 13 12	62.6	263.4	2.6		54.3	-24	186	No stop
19 41 35	---	23 14 27	62.4	263.7	2.6		54.3	51	187	19 40 21
19 41 35	J2040+4527	23 14 27	64.3	268.5	2.5		59.0	-25	187	No stop
19 42 50	=2039+452	23 15 42	64.1	268.8	2.6		59.0	50	188	19 41 36
19 42 50	W75N	23 15 42	62.2	264.0	2.6		54.4	-24	188	No stop
19 44 05	---	23 16 58	62.0	264.3	2.6		54.4	51	188	19 42 51
19 45 00	J2040+4527	23 17 53	63.8	269.2	2.6		59.0	30	188	19 45 00
19 46 15	=2039+452	23 19 08	63.6	269.5	2.6		59.0	75	189	19 45 01
19 46 15	W75N	23 19 08	61.7	264.8	2.7		54.5	-24	189	No stop
19 47 30	---	23 20 23	61.5	265.0	2.7		54.5	51	189	19 46 16
19 47 30	J2040+4527	23 20 23	63.4	269.7	2.6		59.0	-24	189	No stop
19 48 45	=2039+452	23 21 38	63.2	270.0	2.7		59.0	51	190	19 47 31
19 48 45	W75N	23 21 38	61.3	265.3	2.7		54.5	-24	190	No stop
19 50 00	---	23 22 54	61.2	265.6	2.7		54.6	51	191	19 48 46
19 50 00	J2040+4527	23 22 54	63.0	270.2	2.7		59.0	-24	191	No stop
19 51 15	=2039+452	23 24 09	62.8	270.5	2.7		59.0	51	191	19 50 01
19 51 15	W75N	23 24 09	61.0	265.9	2.7		54.6	-24	191	No stop
19 52 30	---	23 25 24	60.8	266.2	2.8		54.6	51	192	19 51 16
19 52 30	J2040+4527	23 25 24	62.7	270.7	2.7		59.0	-24	192	No stop
19 53 45	=2039+452	23 26 39	62.5	270.9	2.8		59.0	51	192	19 52 31
19 53 45	W75N	23 26 39	60.6	266.4	2.8		54.6	-24	192	No stop
19 55 00	---	23 27 54	60.4	266.7	2.8		54.7	51	193	19 53 46

Schedule for TORUN (Code Tr) Page 21

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
19 55 00	J2040+4527	23 27 54	62.3	271.2	2.8		59.0	-24	193	No stop
19 56 15	=2039+452	23 29 10	62.1	271.4	2.8		59.0	51	194	19 55 01
19 56 15	W75N	23 29 10	60.2	267.0	2.8		54.7	-24	194	No stop
19 57 30	---	23 30 25	60.0	267.2	2.9		54.7	51	194	19 56 16
19 58 25	J2040+4527	23 31 20	61.8	271.9	2.8		59.0	31	194	19 58 25
19 59 40	=2039+452	23 32 35	61.6	272.1	2.9		58.9	75	195	19 58 26
19 59 40	W75N	23 32 35	59.7	267.7	2.9		54.7	-24	195	No stop
20 00 55	---	23 33 50	59.5	268.0	2.9		54.7	51	195	19 59 41
20 00 55	J2040+4527	23 33 50	61.4	272.3	2.9		58.9	-24	195	No stop
20 02 10	=2039+452	23 35 06	61.2	272.6	2.9		58.9	51	196	20 00 56
20 02 10	W75N	23 35 06	59.3	268.2	2.9		54.8	-24	196	No stop
20 03 25	---	23 36 21	59.1	268.5	3.0		54.8	51	197	20 02 11
20 03 25	J2040+4527	23 36 21	61.0	272.8	2.9		58.9	-24	197	No stop
20 04 40	=2039+452	23 37 36	60.8	273.0	2.9		58.9	51	197	20 03 26
20 04 40	W75N	23 37 36	58.9	268.7	3.0		54.8	-23	197	No stop
20 05 55	---	23 38 51	58.8	269.0	3.0		54.8	52	198	20 04 41
20 05 55	J2040+4527	23 38 51	60.6	273.3	3.0		58.9	-24	198	No stop
20 07 10	=2039+452	23 40 06	60.4	273.5	3.0		58.8	51	198	20 05 56
20 07 10	W75N	23 40 06	58.6	269.2	3.0		54.8	-23	198	No stop
20 08 25	---	23 41 22	58.4	269.5	3.0		54.8	52	199	20 07 11
20 08 25	J2040+4527	23 41 22	60.3	273.7	3.0		58.8	-24	199	No stop
20 09 40	=2039+452	23 42 37	60.1	274.0	3.0		58.8	51	200	20 08 26
20 09 40	W75N	23 42 37	58.2	269.8	3.1		54.8	-23	200	No stop
20 10 55	---	23 43 52	58.0	270.0	3.1		54.8	52	200	20 09 41
20 10 55	J2040+4527	23 43 52	59.9	274.2	3.0		58.8	-23	200	No stop
20 12 10	=2039+452	23 45 07	59.7	274.4	3.1		58.7	52	201	20 10 56
20 15 16	J2202+4216	23 48 14	69.6	248.9	1.7		49.3	119	201	20 15 16
20 23 16	=BLLAC	23 56 15	68.4	251.6	1.9		50.5	480	205	20 15 17
20 29 11	3C48	00 02 11	63.7	129.3	-1.6		-33.7	94	205	20 29 11
20 39 11	---	00 12 13	64.9	133.4	-1.4		-31.5	600	210	20 29 12

Schedule for TORUN (Code Tr) Page 22

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
20 39 51	3C48	00 12 53	64.9	133.7	-1.4		-31.3	33	210	20 39 51
20 49 51	---	00 22 54	66.0	138.1	-1.3		-28.7	600	214	20 39 52
20 50 31	3C48	00 23 35	66.0	138.4	-1.3		-28.5	33	214	20 50 31
21 00 31	---	00 33 36	67.0	143.0	-1.1		-25.6	600	219	20 50 32
21 08 46	J2040+4527	00 41 53	51.3	283.8	4.0		56.4	200	219	21 08 46
21 09 56	=2039+452	00 43 03	51.1	284.0	4.0		56.3	70	220	21 08 47
21 09 56	W75N	00 43 03	49.2	280.7	4.1		53.4	-21	220	No stop
21 11 06	---	00 44 13	49.0	280.9	4.1		53.4	49	220	21 09 57
21 11 06	J2040+4527	00 44 13	51.0	284.2	4.0		56.2	-21	220	No stop
21 12 16	=2039+452	00 45 23	50.8	284.4	4.1		56.1	49	221	21 11 07
21 13 51	J2202+4216	00 46 58	61.0	265.0	2.7		54.1	41	221	21 13 51
21 21 51	=BLLAC	00 55 00	59.8	266.8	2.9		54.3	480	225	21 13 52
21 23 46	J2040+4527	00 56 55	49.1	286.1	4.3		55.4	62	225	21 23 46
21 24 56	=2039+452	00 58 05	48.9	286.3	4.3		55.4	70	225	21 23 47
21 24 56	W75N	00 58 05	47.0	283.2	4.3		52.7	-21	225	No stop
21 26 06	---	00 59 15	46.8	283.4	4.3		52.6	49	226	21 24 57
21 26 06	J2040+4527	00 59 15	48.8	286.5	4.3		55.3	-21	226	No stop
21 27 16	=2039+452	01 00 26	48.6	286.6	4.3		55.2	49	226	21 26 07
21 27 16	W75N	01 00 26	46.6	283.6	4.4		52.6	-21	226	No stop
21 28 26	---	01 01 36	46.5	283.8	4.4		52.5	49	227	21 27 17
21 28 26	J2040+4527	01 01 36	48.4	286.8	4.3		55.1	-21	227	No stop
21 29 36	=2039+452	01 02 46	48.3	287.0	4.4		55.1	49	228	21 28 27
21 29 36	W75N	01 02 46	46.3	284.0	4.4		52.5	-21	228	No stop
21 30 46	---	01 03 56	46.1	284.2	4.4		52.4	49	228	21 29 37
21 30 46	J2040+4527	01 03 56	48.1	287.2	4.4		55.0	-21	228	No stop
21 31 56	=2039+452	01 05 06	47.9	287.4	4.4		54.9	49	229	21 30 47
21 31 56	W75N	01 05 06	45.9	284.4	4.4		52.3	-21	229	No stop
21 33 06	---	01 06 17	45.8	284.5	4.4		52.3	49	229	21 31 57
21 33 06	J2040+4527	01 06 17	47.8	287.5	4.4		54.8	-21	229	No stop
21 34 16	=2039+452	01 07 27	47.6	287.7	4.4		54.7	49	230	21 33 07

Schedule for TORUN (Code Tr) Page 23

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
21 34 16	W75N	01 07 27	45.6	284.7	4.5		52.2	-21	230	No stop
21 35 26	---	01 08 37	45.4	284.9	4.5		52.1	49	230	21 34 17
21 36 11	J2040+4527	01 09 22	47.3	288.0	4.5		54.6	24	230	21 36 11
21 37 21	=2039+452	01 10 32	47.2	288.2	4.5		54.5	70	231	21 36 12
21 37 21	W75N	01 10 32	45.2	285.2	4.5		52.0	-22	231	No stop
21 38 31	---	01 11 42	45.0	285.4	4.5		52.0	48	232	21 37 22
21 38 31	J2040+4527	01 11 42	47.0	288.3	4.5		54.5	-21	232	No stop
21 39 41	=2039+452	01 12 53	46.8	288.5	4.5		54.4	49	232	21 38 32
21 39 41	W75N	01 12 53	44.8	285.6	4.6		51.9	-22	232	No stop
21 40 51	---	01 14 03	44.6	285.8	4.6		51.8	48	233	21 39 42
21 40 51	J2040+4527	01 14 03	46.7	288.7	4.5		54.3	-21	233	No stop
21 42 01	=2039+452	01 15 13	46.5	288.9	4.6		54.2	49	233	21 40 52
21 42 01	W75N	01 15 13	44.5	286.0	4.6		51.8	-22	233	No stop
21 43 11	---	01 16 23	44.3	286.2	4.6		51.7	48	234	21 42 02
21 43 11	J2040+4527	01 16 23	46.3	289.0	4.6		54.1	-21	234	No stop
21 44 21	=2039+452	01 17 33	46.2	289.2	4.6		54.0	49	234	21 43 12
21 44 21	W75N	01 17 33	44.1	286.3	4.6		51.6	-22	234	No stop
21 45 31	---	01 18 44	44.0	286.5	4.7		51.6	48	235	21 44 22
21 45 31	J2040+4527	01 18 44	46.0	289.4	4.6		54.0	-21	235	No stop
21 46 41	=2039+452	01 19 54	45.8	289.6	4.6		53.9	49	235	21 45 32
21 46 41	W75N	01 19 54	43.8	286.7	4.7		51.5	-22	235	No stop
21 47 51	---	01 21 04	43.6	286.9	4.7		51.4	48	236	21 46 42
21 48 35	J2040+4527	01 21 48	45.6	289.8	4.7		53.7	23	236	21 48 35
21 49 45	=2039+452	01 22 58	45.4	290.0	4.7		53.7	70	237	21 48 36
21 49 45	W75N	01 22 58	43.4	287.2	4.7		51.3	-22	237	No stop
21 50 55	---	01 24 08	43.2	287.4	4.7		51.2	48	237	21 49 46
21 50 55	J2040+4527	01 24 08	45.2	290.2	4.7		53.6	-21	237	No stop
21 52 05	=2039+452	01 25 19	45.1	290.4	4.7		53.5	49	238	21 50 56
21 52 05	W75N	01 25 19	43.0	287.6	4.8		51.2	-22	238	No stop
21 53 15	---	01 26 29	42.9	287.8	4.8		51.1	48	238	21 52 06

Schedule for TORUN (Code Tr) Page 24

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 25 Oct 2020 Day 299 ---										
21 53 15	J2040+4527	01 26 29	44.9	290.5	4.7		53.4	-21	238	No stop
21 54 25	=2039+452	01 27 39	44.7	290.7	4.8		53.3	49	239	21 53 16
21 54 25	W75N	01 27 39	42.7	287.9	4.8		51.0	-22	239	No stop
21 55 35	---	01 28 49	42.5	288.1	4.8		50.9	48	239	21 54 26
21 55 35	J2040+4527	01 28 49	44.6	290.9	4.8		53.2	-21	239	No stop
21 56 45	=2039+452	01 29 59	44.4	291.1	4.8		53.1	49	240	21 55 36
21 56 45	W75N	01 29 59	42.4	288.3	4.8		50.9	-22	240	No stop
21 57 55	---	01 31 10	42.2	288.5	4.9		50.8	48	241	21 56 46
21 57 55	J2040+4527	01 31 10	44.2	291.2	4.8		53.0	-21	241	No stop
21 59 05	=2039+452	01 32 20	44.1	291.4	4.8		53.0	49	241	21 57 56
21 59 05	W75N	01 32 20	42.0	288.7	4.9		50.7	-22	241	No stop
22 00 15	---	01 33 30	41.9	288.9	4.9		50.6	48	242	21 59 06
22 00 59	J2040+4527	01 34 14	43.8	291.7	4.9		52.8	23	242	22 00 59
22 02 09	=2039+452	01 35 24	43.7	291.8	4.9		52.7	70	242	22 01 00
22 02 09	W75N	01 35 24	41.6	289.2	4.9		50.5	-22	242	No stop
22 03 19	---	01 36 34	41.4	289.3	5.0		50.4	48	243	22 02 10
22 03 19	J2040+4527	01 36 34	43.5	292.0	4.9		52.6	-21	243	No stop
22 04 29	=2039+452	01 37 45	43.3	292.2	4.9		52.5	49	243	22 03 20
22 04 29	W75N	01 37 45	41.3	289.5	5.0		50.4	-22	243	No stop
22 05 39	---	01 38 55	41.1	289.7	5.0		50.3	48	244	22 04 30
22 05 39	J2040+4527	01 38 55	43.2	292.4	5.0		52.4	-21	244	No stop
22 06 49	=2039+452	01 40 05	43.0	292.5	5.0		52.4	49	245	22 05 40
22 06 49	W75N	01 40 05	40.9	289.9	5.0		50.2	-22	245	No stop
22 07 59	---	01 41 15	40.8	290.1	5.0		50.1	48	245	22 06 50
22 07 59	J2040+4527	01 41 15	42.8	292.7	5.0		52.3	-21	245	No stop
22 09 09	=2039+452	01 42 25	42.7	292.9	5.0		52.2	49	246	22 08 00
22 09 09	W75N	01 42 25	40.6	290.3	5.1		50.1	-22	246	No stop
22 10 19	---	01 43 36	40.4	290.4	5.1		50.0	48	246	22 09 10
22 10 19	J2040+4527	01 43 36	42.5	293.0	5.0		52.1	-22	246	No stop
22 11 29	=2039+452	01 44 46	42.4	293.2	5.1		52.0	48	247	22 10 20

Schedule for TORUN (Code Tr) Page 25

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
22 11 29	W75N	01 44 46	40.3	290.6	5.1		49.9	-22	247	No stop
22 12 39	---	01 45 56	40.1	290.8	5.1		49.8	48	247	22 11 30
22 12 39	J2040+4527	01 45 56	42.2	293.4	5.1		51.9	-22	247	No stop
22 13 49	=2039+452	01 47 06	42.0	293.6	5.1		51.8	48	248	22 12 40
22 15 16	J2202+4216	01 48 33	51.8	277.1	3.7		53.8	36	248	22 15 16
22 23 16	=BLLAC	01 56 35	50.6	278.5	3.9		53.5	480	252	22 15 17
22 24 42	J2040+4527	01 58 01	40.5	295.1	5.3		50.9	35	252	22 24 42
22 25 42	=2039+452	01 59 01	40.4	295.3	5.3		50.8	60	252	22 24 43
22 25 42	W75N	01 59 01	38.3	292.8	5.3		48.9	-22	252	No stop
22 26 42	---	02 00 01	38.1	293.0	5.3		48.8	38	253	22 25 43
22 26 42	J2040+4527	02 00 01	40.3	295.4	5.3		50.7	-22	253	No stop
22 27 42	=2039+452	02 01 02	40.1	295.6	5.3		50.6	38	253	22 26 43
22 27 42	W75N	02 01 02	38.0	293.1	5.4		48.7	-22	253	No stop
22 28 42	---	02 02 02	37.9	293.3	5.4		48.6	38	254	22 27 43
22 28 42	J2040+4527	02 02 02	40.0	295.7	5.3		50.6	-22	254	No stop
22 29 42	=2039+452	02 03 02	39.9	295.9	5.4		50.5	38	254	22 28 43
22 29 42	W75N	02 03 02	37.7	293.4	5.4		48.6	-22	254	No stop
22 30 42	---	02 04 02	37.6	293.6	5.4		48.5	38	255	22 29 43
22 30 42	J2040+4527	02 04 02	39.7	296.0	5.4		50.4	-22	255	No stop
22 31 42	=2039+452	02 05 02	39.6	296.2	5.4		50.3	38	255	22 30 43
22 31 42	W75N	02 05 02	37.5	293.7	5.4		48.4	-22	255	No stop
22 32 42	---	02 06 02	37.3	293.9	5.4		48.3	38	256	22 31 43
22 32 42	J2040+4527	02 06 02	39.5	296.3	5.4		50.2	-22	256	No stop
22 33 42	=2039+452	02 07 02	39.3	296.5	5.4		50.1	38	256	22 32 43
22 33 42	W75N	02 07 02	37.2	294.1	5.5		48.3	-22	256	No stop
22 34 42	---	02 08 03	37.0	294.2	5.5		48.2	38	257	22 33 43
22 35 24	J2040+4527	02 08 45	39.1	296.7	5.5		50.0	20	257	22 35 24
22 36 24	=2039+452	02 09 45	39.0	296.8	5.5		49.9	60	257	22 35 25
22 36 24	W75N	02 09 45	36.8	294.5	5.5		48.1	-22	257	No stop
22 37 24	---	02 10 45	36.7	294.6	5.5		48.0	38	258	22 36 25

Schedule for TORUN (Code Tr) Page 26

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
22 37 24	J2040+4527	02 10 45	38.8	297.0	5.5		49.8	-22	258	No stop
22 38 24	=2039+452	02 11 45	38.7	297.1	5.5		49.7	38	258	22 37 25
22 38 24	W75N	02 11 45	36.5	294.8	5.5		47.9	-22	258	No stop
22 39 24	---	02 12 45	36.4	294.9	5.6		47.8	38	259	22 38 25
22 39 24	J2040+4527	02 12 45	38.6	297.3	5.5		49.6	-22	259	No stop
22 40 24	=2039+452	02 13 46	38.4	297.4	5.5		49.5	38	259	22 39 25
22 40 24	W75N	02 13 46	36.3	295.1	5.6		47.7	-22	259	No stop
22 41 24	---	02 14 46	36.1	295.2	5.6		47.7	38	259	22 40 25
22 41 24	J2040+4527	02 14 46	38.3	297.6	5.6		49.5	-22	259	No stop
22 42 24	=2039+452	02 15 46	38.2	297.7	5.6		49.4	38	260	22 41 25
22 42 24	W75N	02 15 46	36.0	295.4	5.6		47.6	-22	260	No stop
22 43 24	---	02 16 46	35.9	295.5	5.6		47.5	38	260	22 42 25
22 43 24	J2040+4527	02 16 46	38.0	297.9	5.6		49.3	-22	260	No stop
22 44 24	=2039+452	02 17 46	37.9	298.0	5.6		49.2	38	261	22 43 25
22 44 24	W75N	02 17 46	35.7	295.7	5.6		47.4	-22	261	No stop
22 45 24	---	02 18 46	35.6	295.8	5.7		47.3	38	261	22 44 25
22 46 05	J2040+4527	02 19 28	37.7	298.3	5.6		49.0	19	261	22 46 05
22 47 05	=2039+452	02 20 28	37.5	298.4	5.6		48.9	60	262	22 46 06
22 47 05	W75N	02 20 28	35.4	296.1	5.7		47.2	-22	262	No stop
22 48 05	---	02 21 28	35.2	296.3	5.7		47.1	38	262	22 47 06
22 48 05	J2040+4527	02 21 28	37.4	298.5	5.7		48.9	-22	262	No stop
22 49 05	=2039+452	02 22 28	37.3	298.7	5.7		48.8	38	263	22 48 06
22 49 05	W75N	02 22 28	35.1	296.4	5.7		47.0	-22	263	No stop
22 50 05	---	02 23 28	34.9	296.6	5.7		47.0	38	263	22 49 06
22 50 05	J2040+4527	02 23 28	37.1	298.8	5.7		48.7	-22	263	No stop
22 51 05	=2039+452	02 24 28	37.0	299.0	5.7		48.6	38	264	22 50 06
22 51 05	W75N	02 24 28	34.8	296.7	5.8		46.9	-22	264	No stop
22 52 05	---	02 25 29	34.7	296.9	5.8		46.8	38	264	22 51 06
22 52 05	J2040+4527	02 25 29	36.9	299.1	5.7		48.5	-22	264	No stop
22 53 05	=2039+452	02 26 29	36.7	299.3	5.7		48.4	38	265	22 52 06

Schedule for TORUN (Code Tr) Page 27

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 25 Oct 2020 Day 299 ---										
22 53 05	W75N	02 26 29	34.5	297.0	5.8		46.7	-22	265	No stop
22 54 05	---	02 27 29	34.4	297.2	5.8		46.6	38	265	22 53 06
22 54 05	J2040+4527	02 27 29	36.6	299.4	5.8		48.3	-22	265	No stop
22 55 05	=2039+452	02 28 29	36.5	299.6	5.8		48.2	38	266	22 54 06
22 55 05	W75N	02 28 29	34.3	297.3	5.8		46.5	-22	266	No stop
22 56 05	---	02 29 29	34.1	297.5	5.8		46.5	38	266	22 55 06
22 56 46	J2040+4527	02 30 10	36.3	299.8	5.8		48.1	19	266	22 56 46
22 57 46	=2039+452	02 31 10	36.1	300.0	5.8		48.0	60	267	22 56 47
22 57 46	W75N	02 31 10	33.9	297.7	5.9		46.3	-22	267	No stop
22 58 46	---	02 32 11	33.8	297.9	5.9		46.2	38	267	22 57 47
22 58 46	J2040+4527	02 32 11	36.0	300.1	5.8		47.9	-22	267	No stop
22 59 46	=2039+452	02 33 11	35.9	300.2	5.9		47.8	38	268	22 58 47
23 07 46	J2202+4216	02 41 12	44.0	285.9	4.6		51.4	432	268	23 07 46
23 15 46	=BLLAC	02 49 13	42.9	287.2	4.8		51.0	480	272	23 07 47
23 17 02	J2040+4527	02 50 30	33.7	302.8	6.1		46.1	28	272	23 17 02
23 18 02	=2039+452	02 51 30	33.5	302.9	6.2		46.0	60	272	23 17 03
23 18 02	W75N	02 51 30	31.3	300.9	6.2		44.5	-23	272	No stop
23 19 02	---	02 52 30	31.1	301.0	6.2		44.5	37	273	23 18 03
23 19 02	J2040+4527	02 52 30	33.4	303.1	6.2		45.9	-22	273	No stop
23 20 02	=2039+452	02 53 30	33.3	303.2	6.2		45.8	38	273	23 19 03
23 20 02	W75N	02 53 30	31.0	301.2	6.2		44.4	-23	273	No stop
23 21 02	---	02 54 30	30.9	301.3	6.3		44.3	37	273	23 20 03
23 21 02	J2040+4527	02 54 30	33.1	303.4	6.2		45.7	-22	273	No stop
23 22 02	=2039+452	02 55 30	33.0	303.5	6.2		45.6	38	274	23 21 03
23 22 02	W75N	02 55 30	30.7	301.5	6.3		44.2	-23	274	No stop
23 23 02	---	02 56 31	30.6	301.6	6.3		44.1	37	274	23 22 03
23 23 02	J2040+4527	02 56 31	32.9	303.6	6.3		45.5	-22	274	No stop
23 24 02	=2039+452	02 57 31	32.8	303.8	6.3		45.4	38	275	23 23 03
23 24 02	W75N	02 57 31	30.5	301.8	6.3		44.0	-23	275	No stop
23 25 02	---	02 58 31	30.4	301.9	6.3		43.9	37	275	23 24 03

Schedule for TORUN (Code Tr) Page 28

Monitoring of B and of the outflows expantion in W75N-VLA2

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sun 25 Oct 2020 Day 299 ---										
23 25 02	J2040+4527	02 58 31	32.6	303.9	6.3		45.3	-22	275	No stop
23 26 02	=2039+452	02 59 31	32.5	304.1	6.3		45.2	38	276	23 25 03
23 26 02	W75N	02 59 31	30.2	302.1	6.3		43.8	-23	276	No stop
23 27 02	---	03 00 31	30.1	302.2	6.4		43.7	37	276	23 26 03
23 27 42	J2040+4527	03 01 11	32.3	304.3	6.3		45.1	18	276	23 27 42
23 28 42	=2039+452	03 02 12	32.2	304.5	6.3		45.0	60	277	23 27 43
23 28 42	W75N	03 02 12	29.9	302.5	6.4		43.6	-23	277	No stop
23 29 42	---	03 03 12	29.8	302.7	6.4		43.5	37	277	23 28 43
23 29 42	J2040+4527	03 03 12	32.1	304.6	6.4		44.9	-22	277	No stop
23 30 42	=2039+452	03 04 12	31.9	304.8	6.4		44.8	38	278	23 29 43
23 30 42	W75N	03 04 12	29.6	302.8	6.4		43.4	-23	278	No stop
23 31 42	---	03 05 12	29.5	303.0	6.4		43.3	37	278	23 30 43
23 31 42	J2040+4527	03 05 12	31.8	304.9	6.4		44.7	-22	278	No stop
23 32 42	=2039+452	03 06 12	31.7	305.1	6.4		44.6	38	279	23 31 43
23 32 42	W75N	03 06 12	29.4	303.1	6.4		43.2	-23	279	No stop
23 33 42	---	03 07 12	29.3	303.3	6.5		43.1	37	279	23 32 43
23 33 42	J2040+4527	03 07 12	31.6	305.2	6.4		44.5	-22	279	No stop
23 34 42	=2039+452	03 08 13	31.5	305.4	6.4		44.4	38	280	23 33 43
23 34 42	W75N	03 08 13	29.1	303.4	6.5		43.0	-23	280	No stop
23 35 42	---	03 09 13	29.0	303.6	6.5		42.9	37	280	23 34 43
23 35 42	J2040+4527	03 09 13	31.3	305.5	6.5		44.3	-22	280	No stop
23 36 42	=2039+452	03 10 13	31.2	305.7	6.5		44.2	38	281	23 35 43
23 36 42	W75N	03 10 13	28.9	303.7	6.5		42.8	-23	281	No stop
23 37 42	---	03 11 13	28.8	303.9	6.5		42.7	37	281	23 36 43
23 38 21	J2040+4527	03 11 52	31.0	305.9	6.5		44.0	17	281	23 38 21
23 39 21	=2039+452	03 12 52	30.9	306.0	6.5		43.9	60	282	23 38 22
23 39 21	W75N	03 12 52	28.6	304.1	6.6		42.6	-23	282	No stop
23 40 21	---	03 13 52	28.4	304.3	6.6		42.5	37	282	23 39 22
23 40 21	J2040+4527	03 13 52	30.8	306.2	6.5		43.8	-22	282	No stop
23 41 21	=2039+452	03 14 53	30.6	306.3	6.6		43.7	38	283	23 40 22

```
Schedule for TORUN     (Code Tr )                                  Page  29
              Monitoring of B and of the outflows expantion in W75N-VLA2
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sun  25 Oct 2020   Day 299 ---

23 41 21  W75N         03 14 53  28.3 304.4  6.6      42.4   -23      283   No stop
23 42 21  ---          03 15 53  28.2 304.6  6.6      42.3    37      283   23 41 22

23 42 21  J2040+4527   03 15 53  30.5 306.5  6.6      43.6   -23      283   No stop
23 43 21  =2039+452    03 16 53  30.4 306.6  6.6      43.5    37      284   23 42 22

23 43 21  W75N         03 16 53  28.1 304.8  6.6      42.2   -23      284   No stop
23 44 21  ---          03 17 53  27.9 304.9  6.6      42.1    37      284   23 43 22

23 44 21  J2040+4527   03 17 53  30.3 306.8  6.6      43.4   -23      284   No stop
23 45 21  =2039+452    03 18 53  30.2 306.9  6.6      43.3    37      285   23 44 22

23 45 21  W75N         03 18 53  27.8 305.1  6.7      42.0   -23      285   No stop
23 46 21  ---          03 19 53  27.7 305.2  6.7      41.9    37      285   23 45 22

23 46 21  J2040+4527   03 19 53  30.0 307.1  6.6      43.2   -23      285   No stop
23 47 21  =2039+452    03 20 54  29.9 307.2  6.7      43.0    37      286   23 46 22

23 47 21  W75N         03 20 54  27.6 305.4  6.7      41.8   -23      286   No stop
23 48 21  ---          03 21 54  27.4 305.5  6.7      41.7    37      286   23 47 22

23 49 00  J2040+4527   03 22 33  29.7 307.5  6.7      42.9    16      286   23 49 00
23 50 10  =2039+452    03 23 43  29.6 307.6  6.7      42.7    70      287   23 49 01

23 51 24  J2202+4216   03 24 57  37.8 292.8  5.4      48.6    29      287   23 51 24
23 59 59  =BLLAC       03 33 34  36.7 294.1  5.5      47.9   515      291   23 51 25



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K64line

   Setup group:    6         Station: TORUN            Total bit rate:    64
   Format: VDIF              Bits per sample: 2        Sample rate: 16.000
   Number of channels:  2    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=  21480.00  21480.00
  Net SB=         U         U
  IF SB =         U         U
  Pol.  =       RCP       LCP
  BBC   =         1         9
  BBC SB=         U         U
  IF    =        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   5  Based on FREQ, BW, and/or DOPPLER in schedule.  Used with PCAL = off
  LO sum=   22230.54  22230.54
  BBC fr=     750.54    750.54
  Bandwd=       8.00      8.00
   Matching frequency sets:   5   8

  Track assignments are:
   track1=   1,  2
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                          Source position (RA/Dec)                        Error
                       (B1950)             (J2000)             (Date)            (mas)

* W75N              20 36 49.991014   * 20 38 36.435000     20 39 20.032247       0.00
                    42 26 58.43611    * 42 37 34.84000      42 42 13.94405        0.00
                    Doppler based on LSR frame and radio definition.  Velocities:
                        10.00    10.00

  J0137+3309        01 34 49.826374   * 01 37 41.299440     01 38 53.100444       0.52
  0134+329          32 54 20.25881    * 33 09 35.13299      33 15 56.40019        0.50
* 3C48              /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
  J0137+33          rfc_2012b Petrov, 2012, unpublished 140 observations
                    Doppler based on other sources.

* J2040+4527        20 39 06.383159   * 20 40 48.333100     20 41 30.105079       0.46
  2039+452          45 16 33.23001    * 45 27 17.14599      45 31 59.69271        0.54
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
                    rfc_2012b Petrov, 2012, unpublished 77 observations
                    Doppler based on other sources.

* J2202+4216        22 00 39.362504   * 22 02 43.291371     22 03 34.705134       0.14
  BLLAC             42 02 08.59073    * 42 16 39.97987      42 22 53.97365        0.10
  2200+420          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
  J2202+42          rfc_2012b Petrov, 2012, unpublished 59418 observations
  VR422201          Doppler based on other sources.
```

eb074etr

Zooming into the cores of restarting giant radio galaxies
PI: *Gabriele Bruni*

```
Address:  INAF-IAPS

Observing mode: Phase-referencing of sources at 1.3cm

Schedule for TORUN     (Code Tr )                                  Page   2
               Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

 ---------- ########### Fringe Finder ########### ----------

 Next scan frequencies:  22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.4
                         22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.4
 Next BBC frequencies:     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.4
                           787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.4
 Next scan bandwidths:      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0
                            32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0

03 30 00  4C39.25      07 04 09  61.7 105.3 -2.4     -48.1     0        0   03 30 00
03 32 00  ---          07 06 09  62.0 105.9 -2.4     -48.0   120       31   03 30 01

03 35 00  4C+73        07 09 10  63.8  25.3 -2.7    -117.6     4       31   03 35 00
03 37 00  ---          07 11 10  64.0  25.2 -2.7    -118.2   120       62   03 35 01

03 38 00  J0929+7304   07 12 10  65.3  23.7 -2.3    -124.6    42       62   03 38 00
03 39 30  =0924+732    07 13 41  65.4  23.5 -2.3    -125.1    90       85   03 38 01

03 40 30  4C+73        07 14 41  64.2  24.9 -2.6    -119.3    42       85   03 40 30
03 42 30  ---          07 16 41  64.3  24.7 -2.6    -119.9   120      116   03 40 31

03 43 30  J0929+7304   07 17 41  65.7  23.1 -2.2    -126.4    42      116   03 43 30
03 45 00  =0924+732    07 19 12  65.8  22.9 -2.2    -127.0    90      139   03 43 31

03 46 00  4C+73        07 20 12  64.5  24.4 -2.5    -121.1    42      139   03 46 00
03 48 00  ---          07 22 12  64.7  24.3 -2.5    -121.7   120      170   03 46 01

03 49 00  J0929+7304   07 23 12  66.0  22.5 -2.1    -128.3    42      170   03 49 00
03 50 30  =0924+732    07 24 43  66.1  22.3 -2.1    -128.8    90      193   03 49 01

03 51 30  4C+73        07 25 43  64.9  23.9 -2.4    -122.8    42      193   03 51 30
03 53 30  ---          07 27 43  65.0  23.8 -2.4    -123.5   120      224   03 51 31

03 54 30  J0929+7304   07 28 43  66.3  21.9 -2.0    -130.2    42      224   03 54 30
03 56 00  =0924+732    07 30 13  66.4  21.7 -2.0    -130.7    90      247   03 54 31

03 58 00  1211+74      07 32 14  55.6  26.9 -4.7     -87.8    65      247   03 58 00
04 00 00  ---          07 34 14  55.7  26.9 -4.6     -88.3   120      278   03 58 01
```

Schedule for TORUN (Code Tr) Page 3

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 26 Oct 2020 Day 300 ---										
04 01 00	J1243+7442	07 35 14	53.7	26.0	-5.2		-81.7	38	278	04 01 00
04 02 30	=1241+749	07 36 45	53.8	26.0	-5.1		-82.1	90	301	04 01 01
04 03 30	1211+74	07 37 45	56.0	27.0	-4.6		-89.1	38	301	04 03 30
04 05 30	---	07 39 45	56.1	27.0	-4.6		-89.6	120	332	04 03 31
04 06 30	J1243+7442	07 40 45	54.1	26.0	-5.1		-83.0	38	332	04 06 30
04 08 00	=1241+749	07 42 15	54.2	26.1	-5.0		-83.3	90	356	04 06 31
04 09 00	1211+74	07 43 16	56.3	27.0	-4.5		-90.4	38	356	04 09 00
04 11 00	---	07 45 16	56.5	27.0	-4.5		-90.9	120	386	04 09 01
04 12 00	J1243+7442	07 46 16	54.4	26.1	-5.0		-84.3	38	386	04 12 00
04 13 30	=1241+749	07 47 46	54.5	26.1	-4.9		-84.6	90	410	04 12 01
04 14 30	1211+74	07 48 46	56.7	26.9	-4.4		-91.8	38	410	04 14 30
04 16 30	---	07 50 47	56.8	26.9	-4.4		-92.3	120	441	04 14 31
04 17 30	J1243+7442	07 51 47	54.8	26.2	-4.9		-85.6	38	441	04 17 30
04 19 00	=1241+749	07 53 17	54.9	26.2	-4.9		-85.9	90	464	04 17 31
04 21 00	4C+69	07 55 18	51.8	33.9	-5.3		-73.0	90	464	04 21 00
04 23 00	---	07 57 18	52.0	34.0	-5.3		-73.4	120	495	04 21 01
04 24 00	J1313+6735	07 58 18	51.5	37.1	-5.3		-71.3	39	495	04 24 00
04 25 30	=1311+678	07 59 48	51.7	37.2	-5.2		-71.6	90	518	04 24 01
04 26 30	4C+69	08 00 48	52.3	34.1	-5.2		-74.1	39	518	04 26 30
04 28 30	---	08 02 49	52.5	34.2	-5.2		-74.5	120	549	04 26 31
04 29 30	J1313+6735	08 03 49	52.0	37.4	-5.2		-72.3	39	549	04 29 30
04 31 00	=1311+678	08 05 19	52.2	37.5	-5.1		-72.6	90	572	04 29 31
04 32 00	4C+69	08 06 19	52.8	34.3	-5.1		-75.3	39	572	04 32 00
04 34 00	---	08 08 20	52.9	34.4	-5.1		-75.7	120	603	04 32 01
04 35 00	J1313+6735	08 09 20	52.5	37.7	-5.1		-73.4	39	603	04 35 00
04 36 30	=1311+678	08 10 50	52.7	37.7	-5.1		-73.7	90	626	04 35 01
04 37 30	4C+69	08 11 50	53.2	34.5	-5.0		-76.4	39	626	04 37 30
04 39 30	---	08 13 51	53.4	34.6	-5.0		-76.8	120	657	04 37 31
04 40 30	J1313+6735	08 14 51	53.0	37.9	-5.0		-74.5	39	657	04 40 30
04 42 00	=1311+678	08 16 21	53.2	38.0	-5.0		-74.8	90	680	04 40 31
04 44 00	4C+73	08 18 21	67.7	17.6	-1.6		-141.2	52	680	04 44 00
04 46 00	---	08 20 22	67.8	17.3	-1.5		-142.0	120	711	04 44 01
04 47 00	J0929+7304	08 21 22	68.8	14.1	-1.2		-149.9	39	711	04 47 00
04 48 30	=0924+732	08 22 52	68.8	13.9	-1.1		-150.5	90	734	04 47 01

Schedule for TORUN (Code Tr) Page 4

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
04 49 30	4C+73	08 23 52	67.9	16.8	-1.5		-143.3	39	734	04 49 30
04 51 30	---	08 25 53	68.0	16.5	-1.4		-144.1	120	765	04 49 31
04 52 30	J0929+7304	08 26 53	69.0	13.2	-1.1		-152.2	39	765	04 52 30
04 54 00	=0924+732	08 28 23	69.0	12.9	-1.1		-152.8	90	788	04 52 31
04 55 00	4C+73	08 29 23	68.2	15.9	-1.4		-145.4	39	788	04 55 00
04 57 00	---	08 31 23	68.3	15.6	-1.3		-146.2	120	819	04 55 01
04 58 00	J0929+7304	08 32 24	69.2	12.1	-1.0		-154.4	39	819	04 58 00
04 59 30	=0924+732	08 33 54	69.2	11.9	-1.0		-155.1	90	842	04 58 01
05 00 30	4C+73	08 34 54	68.4	15.0	-1.3		-147.6	39	842	05 00 30
05 02 30	---	08 36 54	68.5	14.7	-1.2		-148.4	120	873	05 00 31
05 03 30	J0929+7304	08 37 55	69.3	11.1	-0.9		-156.7	38	873	05 03 30
05 05 00	=0924+732	08 39 25	69.4	10.8	-0.9		-157.4	90	897	05 03 31
05 07 00	1211+74	08 41 25	60.2	25.9	-3.5		-105.3	72	897	05 07 00
05 09 00	---	08 43 25	60.4	25.9	-3.5		-105.9	120	927	05 07 01
05 10 00	J1243+7442	08 44 26	58.3	25.9	-4.0		-98.4	38	927	05 10 00
05 11 30	=1241+749	08 45 56	58.4	25.9	-4.0		-98.8	90	951	05 10 01
05 12 30	1211+74	08 46 56	60.6	25.7	-3.4		-106.8	38	951	05 12 30
05 14 30	---	08 48 56	60.7	25.6	-3.4		-107.4	120	982	05 12 31
05 15 30	J1243+7442	08 49 56	58.6	25.8	-3.9		-99.9	38	982	05 15 30
05 17 00	=1241+749	08 51 27	58.7	25.8	-3.9		-100.2	90	1005	05 15 31
05 18 00	1211+74	08 52 27	61.0	25.5	-3.3		-108.4	38	1005	05 18 00
05 20 00	---	08 54 27	61.1	25.4	-3.3		-108.9	120	1036	05 18 01
05 21 00	J1243+7442	08 55 27	59.0	25.7	-3.8		-101.3	38	1036	05 21 00
05 22 30	=1241+749	08 56 58	59.1	25.7	-3.8		-101.7	90	1059	05 21 01
05 23 30	1211+74	08 57 58	61.3	25.2	-3.2		-109.9	38	1059	05 23 30
05 25 30	---	08 59 58	61.4	25.1	-3.2		-110.5	120	1090	05 23 31
05 26 30	J1243+7442	09 00 58	59.4	25.6	-3.7		-102.8	38	1090	05 26 30
05 28 00	=1241+749	09 02 29	59.5	25.5	-3.7		-103.2	90	1113	05 26 31

```
Schedule for TORUN     (Code Tr )                                  Page   5
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

 ---------- ########### Effelsberg out for pointing ########### ----------

05 30 00  4C+69        09 04 29  57.8  35.6 -4.2     -87.8    85     1113   05 30 00
05 32 00  ---          09 06 29  58.0  35.6 -4.1     -88.3   120     1144   05 30 01

05 33 00  J1313+6735   09 07 29  58.0  39.5 -4.1     -85.4    38     1144   05 33 00
05 34 30  =1311+678    09 09 00  58.1  39.5 -4.1     -85.7    90     1167   05 33 01

 ---------- ########### Effelsberg back ########### ----------

05 35 30  4C+69        09 10 00  58.3  35.6 -4.1     -89.1    37     1167   05 35 30
05 37 30  ---          09 12 00  58.4  35.7 -4.0     -89.5   120     1198   05 35 31

05 38 30  J1313+6735   09 13 00  58.5  39.5 -4.0     -86.6    37     1198   05 38 30
05 40 00  =1311+678    09 14 31  58.6  39.5 -4.0     -86.9    90     1221   05 38 31

05 41 00  4C+69        09 15 31  58.7  35.7 -4.0     -90.4    37     1221   05 41 00
05 43 00  ---          09 17 31  58.9  35.6 -4.0     -90.8   120     1252   05 41 01

05 44 00  J1313+6735   09 18 31  59.0  39.6 -3.9     -87.8    37     1252   05 44 00
05 45 30  =1311+678    09 20 01  59.2  39.6 -3.9     -88.2    90     1275   05 44 01

05 46 30  4C+69        09 21 02  59.2  35.6 -3.9     -91.7    37     1275   05 46 30
05 48 30  ---          09 23 02  59.4  35.6 -3.9     -92.2   120     1306   05 46 31

05 49 30  J1313+6735   09 24 02  59.6  39.6 -3.8     -89.1    37     1306   05 49 30
05 51 00  =1311+678    09 25 32  59.7  39.6 -3.8     -89.4    90     1329   05 49 31

05 53 00  4C+73        09 27 33  69.8   5.0 -0.4    -169.5    36     1329   05 53 00
05 55 00  ---          09 29 33  69.8   4.6 -0.4    -170.4   120     1360   05 53 01

05 56 00  J0929+7304   09 30 33  70.1   0.2 -0.0    -179.5    37     1360   05 56 00
05 57 30  =0924+732    09 32 03  70.1  -0.1  0.0     179.8    90     1384   05 56 01

05 58 30  4C+73        09 33 04  69.9   3.9 -0.3    -171.9    37     1384   05 58 30
06 00 30  ---          09 35 04  69.9   3.5 -0.3    -172.8   120     1414   05 58 31

06 01 30  J0929+7304   09 36 04  70.1  -1.0  0.1     178.0    36     1414   06 01 30
06 03 00  =0924+732    09 37 34  70.1  -1.3  0.1     177.4    90     1438   06 01 31

06 04 00  4C+73        09 38 34  69.9   2.7 -0.2    -174.3    37     1438   06 04 00
06 06 00  ---          09 40 35  69.9   2.3 -0.2    -175.2   120     1469   06 04 01

06 07 00  J0929+7304   09 41 35  70.1  -2.1  0.2     175.6    36     1469   06 07 00
06 08 30  =0924+732    09 43 05  70.1  -2.5  0.2     175.0    90     1492   06 07 01
```

```
Schedule for TORUN     (Code Tr )                                  Page   6
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

06 09 30  4C+73        09 44 05  69.9   1.6 -0.1    -176.7    37     1492   06 09 30
06 11 30  ---          09 46 06  69.9   1.2 -0.1    -177.6   120     1523   06 09 31

06 12 30  J0929+7304   09 47 06  70.1  -3.3  0.3     173.2    36     1523   06 12 30
06 14 00  =0924+732    09 48 36  70.0  -3.6  0.3     172.5    90     1546   06 12 31

06 16 00  1211+74      09 50 36  64.5  21.6 -2.4    -125.8    54     1546   06 16 00
06 18 00  ---          09 52 37  64.6  21.4 -2.3    -126.5   120     1577   06 16 01

06 19 00  J1243+7442   09 53 37  62.6  23.1 -2.8    -117.6    39     1577   06 19 00
06 20 30  =1241+749    09 55 07  62.7  23.0 -2.8    -118.1    90     1600   06 19 01

06 21 30  1211+74      09 56 07  64.8  21.0 -2.3    -127.6    39     1600   06 21 30
06 23 30  ---          09 58 08  64.9  20.8 -2.2    -128.3   120     1631   06 21 31

06 24 30  J1243+7442   09 59 08  63.0  22.7 -2.8    -119.3    39     1631   06 24 30
06 26 00  =1241+749    10 00 38  63.0  22.6 -2.7    -119.7    90     1654   06 24 31

06 27 00  1211+74      10 01 38  65.1  20.5 -2.2    -129.5    39     1654   06 27 00
06 29 00  ---          10 03 39  65.2  20.3 -2.2    -130.1   120     1685   06 27 01

06 30 00  J1243+7442   10 04 39  63.3  22.3 -2.7    -121.0    39     1685   06 30 00
06 31 30  =1241+749    10 06 09  63.4  22.2 -2.6    -121.4    90     1708   06 30 01

06 32 30  1211+74      10 07 09  65.4  19.9 -2.1    -131.3    39     1708   06 32 30
06 34 30  ---          10 09 09  65.5  19.7 -2.1    -132.0   120     1739   06 32 31

06 35 30  J1243+7442   10 10 10  63.6  21.9 -2.6    -122.7    39     1739   06 35 30
06 37 00  =1241+749    10 11 40  63.7  21.7 -2.5    -123.2    90     1762   06 35 31

 ---------- ########### Effelsberg out for pointing ########### ----------

06 39 00  4C+69        10 13 40  63.8  34.2 -3.0    -105.3    80     1762   06 39 00
06 41 00  ---          10 15 41  63.9  34.1 -3.0    -105.8   120     1793   06 39 01

06 42 00  J1313+6735   10 16 41  64.6  38.6 -3.0    -102.2    36     1793   06 42 00
06 43 30  =1311+678    10 18 11  64.7  38.5 -2.9    -102.6    90     1816   06 42 01

 ---------- ########### Effelsberg back ########### ----------

06 44 30  4C+69        10 19 11  64.2  33.9 -2.9    -106.8    36     1816   06 44 30
06 46 30  ---          10 21 11  64.4  33.8 -2.9    -107.4   120     1847   06 44 31

06 47 30  J1313+6735   10 22 12  65.1  38.3 -2.9    -103.7    36     1847   06 47 30
06 49 00  =1311+678    10 23 42  65.2  38.2 -2.8    -104.1    90     1870   06 47 31
```

Schedule for TORUN (Code Tr) Page 7

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
06 50 00	4C+69	10 24 42	64.7	33.6	-2.8		-108.4	36	1870	06 50 00
06 52 00	---	10 26 42	64.9	33.4	-2.8		-109.0	120	1901	06 50 01
06 53 00	J1313+6735	10 27 43	65.6	38.0	-2.8		-105.2	36	1901	06 53 00
06 54 30	=1311+678	10 29 13	65.7	37.9	-2.7		-105.7	90	1925	06 53 01
06 55 30	4C+69	10 30 13	65.2	33.2	-2.7		-110.1	36	1925	06 55 30
06 57 30	---	10 32 13	65.3	33.1	-2.7		-110.7	120	1955	06 55 31
06 58 30	J1313+6735	10 33 13	66.1	37.6	-2.7		-106.8	36	1955	06 58 30
07 00 00	=1311+678	10 34 44	66.2	37.5	-2.7		-107.3	90	1979	06 58 31
07 02 00	4C+73	10 36 44	69.4	-9.3	0.8		160.5	12	1979	07 02 00
07 04 00	---	10 38 44	69.4	-9.7	0.8		159.6	120	2010	07 02 01
07 05 00	J0929+7304	10 39 44	68.9	-13.8	1.1		150.8	37	2010	07 05 00
07 06 30	=0924+732	10 41 15	68.8	-14.0	1.2		150.2	90	2033	07 05 01
07 07 30	4C+73	10 42 15	69.3	-10.3	0.8		158.2	38	2033	07 07 30
07 09 30	---	10 44 15	69.2	-10.7	0.9		157.3	120	2064	07 07 31
07 10 30	J0929+7304	10 45 15	68.7	-14.7	1.2		148.6	37	2064	07 10 30
07 12 00	=0924+732	10 46 46	68.6	-15.0	1.3		148.0	90	2087	07 10 31
07 13 00	4C+73	10 47 46	69.1	-11.4	0.9		155.9	38	2087	07 13 00
07 15 00	---	10 49 46	69.0	-11.7	1.0		155.1	120	2118	07 13 01
07 16 00	J0929+7304	10 50 46	68.4	-15.6	1.3		146.4	38	2118	07 16 00
07 17 30	=0924+732	10 52 17	68.4	-15.9	1.3		145.8	90	2141	07 16 01
07 18 30	4C+73	10 53 17	68.9	-12.4	1.0		153.6	38	2141	07 18 30
07 20 30	---	10 55 17	68.9	-12.7	1.1		152.8	120	2172	07 18 31
07 21 30	J0929+7304	10 56 17	68.2	-16.5	1.4		144.3	38	2172	07 21 30
07 23 00	=0924+732	10 57 47	68.1	-16.8	1.4		143.7	90	2195	07 21 31
07 25 00	1211+74	10 59 48	67.6	13.0	-1.2		-150.4	45	2195	07 25 00
07 27 00	---	11 01 48	67.7	12.6	-1.2		-151.1	120	2226	07 25 01
07 28 00	J1243+7442	11 02 48	66.2	16.4	-1.7		-140.3	37	2226	07 28 00
07 29 30	=1241+749	11 04 19	66.3	16.2	-1.7		-140.9	90	2249	07 28 01
07 30 30	1211+74	11 05 19	67.8	12.1	-1.1		-152.5	37	2249	07 30 30
07 32 30	---	11 07 19	67.9	11.8	-1.1		-153.3	120	2280	07 30 31

Schedule for TORUN (Code Tr) Page 8

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
07 33 30	J1243+7442	11 08 19	66.4	15.7	-1.6		-142.3	37	2280	07 33 30
07 35 00	=1241+749	11 09 49	66.5	15.5	-1.6		-142.9	90	2303	07 33 31
07 36 00	1211+74	11 10 50	68.0	11.2	-1.0		-154.7	37	2303	07 36 00
07 38 00	---	11 12 50	68.0	10.9	-1.0		-155.4	120	2334	07 36 01
07 39 00	J1243+7442	11 13 50	66.7	15.0	-1.5		-144.3	37	2334	07 39 00
07 40 30	=1241+749	11 15 20	66.7	14.7	-1.5		-144.9	90	2357	07 39 01
07 41 30	1211+74	11 16 20	68.1	10.3	-0.9		-156.8	36	2357	07 41 30
07 43 30	---	11 18 21	68.2	9.9	-0.9		-157.6	120	2388	07 41 31
07 44 30	J1243+7442	11 19 21	66.9	14.2	-1.4		-146.3	36	2388	07 44 30
07 46 00	=1241+749	11 20 51	66.9	14.0	-1.4		-146.9	90	2411	07 44 31
07 48 00	4C+73	11 22 52	67.8	-17.3	1.5		142.0	43	2411	07 48 00
07 50 00	---	11 24 52	67.7	-17.6	1.6		141.2	120	2442	07 48 01
07 51 00	J0929+7304	11 25 52	66.8	-20.8	1.9		133.3	39	2442	07 51 00
07 52 30	=0924+732	11 27 22	66.7	-21.0	1.9		132.7	90	2466	07 51 01
07 53 30	4C+73	11 28 22	67.5	-18.1	1.6		139.9	40	2466	07 53 30
07 55 30	---	11 30 23	67.4	-18.4	1.6		139.2	120	2497	07 53 31
07 56 30	J0929+7304	11 31 23	66.5	-21.5	2.0		131.3	40	2497	07 56 30
07 58 00	=0924+732	11 32 53	66.4	-21.7	2.0		130.8	90	2520	07 56 31
07 59 00	4C+73	11 33 53	67.3	-18.9	1.7		137.9	40	2520	07 59 00
08 01 00	---	11 35 54	67.2	-19.2	1.7		137.1	120	2551	07 59 01
08 06 00	J1209+4119	11 40 55	77.1	154.3	-0.5		-20.2	-64	2551	08 06 00
08 07 30	=1206+416	11 42 25	77.2	155.5	-0.5		-19.3	26	2574	08 06 01
08 08 30	1216+41	11 43 25	77.4	149.9	-0.6		-23.9	33	2574	08 08 30
08 10 30	---	11 45 25	77.6	151.4	-0.5		-22.7	120	2605	08 08 31
08 11 30	J1209+4119	11 46 25	77.5	158.8	-0.4		-16.8	31	2605	08 11 30
08 13 00	=1206+416	11 47 56	77.5	160.1	-0.4		-15.8	90	2628	08 11 31
08 14 00	1216+41	11 48 56	77.8	154.3	-0.5		-20.5	32	2628	08 14 00
08 16 00	---	11 50 56	78.0	156.0	-0.4		-19.2	120	2659	08 14 01
08 17 00	J1209+4119	11 51 56	77.7	163.5	-0.3		-13.1	31	2659	08 17 00
08 18 30	=1206+416	11 53 27	77.8	164.8	-0.3		-12.1	90	2682	08 17 01

```
Schedule for TORUN     (Code Tr )                                  Page   9
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

08 19 30  1216+41      11 54 27  78.2 159.0 -0.4     -16.8    32     2682   08 19 30
08 21 30  ---          11 56 27  78.3 160.7 -0.3     -15.4   120     2713   08 19 31

08 22 30  J1209+4119   11 57 27  77.9 168.3 -0.2      -9.3    31     2713   08 22 30
08 24 00  =1206+416    11 58 57  78.0 169.6 -0.2      -8.3    90     2736   08 22 31

08 26 00  1144+35      12 00 58  71.7 188.2  0.2       6.0    69     2736   08 26 00
08 28 00  ---          12 02 58  71.6 189.5  0.2       6.9   120     2767   08 26 01

08 28 00  1144+35      12 02 58  71.6 189.5  0.2       6.9    -5     2767   No stop
08 30 00  ---          12 04 58  71.6 190.8  0.3       7.9   115     2798   08 28 01

08 30 00  1144+35      12 04 58  71.6 190.8  0.3       7.9    -5     2798   No stop
08 32 00  ---          12 06 59  71.5 192.1  0.3       8.8   115     2829   08 30 01

08 32 00  1144+35      12 06 59  71.5 192.1  0.3       8.8    -5     2829   No stop
08 34 00  ---          12 08 59  71.4 193.4  0.3       9.7   115     2860   08 32 01

 ---------- ########### Effelsberg out for pointing ########### ----------

08 36 00  1216+41      12 10 59  78.7 174.1 -0.1      -4.7    64     2860   08 36 00
08 38 00  ---          12 13 00  78.8 176.0 -0.1      -3.2   120     2891   08 36 01

08 39 00  J1209+4119   12 14 00  78.1 183.3  0.1       2.6    32     2891   08 39 00
08 40 30  =1206+416    12 15 30  78.1 184.7  0.1       3.7    90     2914   08 39 01

 ---------- ########### Effelsberg back ########### ----------

08 41 30  1216+41      12 16 30  78.8 179.4 -0.0      -0.5    33     2914   08 41 30
08 43 30  ---          12 18 31  78.8 181.3  0.0       1.0   120     2945   08 41 31

08 44 30  J1209+4119   12 19 31  78.0 188.3  0.2       6.6    32     2945   08 44 30
08 46 00  =1206+416    12 21 01  78.0 189.6  0.2       7.7    90     2968   08 44 31

08 47 00  1216+41      12 22 01  78.8 184.6  0.1       3.7    34     2968   08 47 00
08 49 00  ---          12 24 02  78.7 186.6  0.1       5.3   120     2999   08 47 01

08 50 00  J1209+4119   12 25 02  77.9 193.2  0.2      10.5    33     2999   08 50 00
08 51 30  =1206+416    12 26 32  77.8 194.5  0.3      11.5    90     3022   08 50 01

08 52 30  1216+41      12 27 32  78.6 189.9  0.2       7.9    34     3022   08 52 30
08 54 30  ---          12 29 32  78.6 191.7  0.2       9.4   120     3053   08 52 31

08 55 30  J1209+4119   12 30 33  77.6 198.0  0.3      14.3    34     3053   08 55 30
08 57 00  =1206+416    12 32 03  77.6 199.3  0.4      15.3    90     3076   08 55 31
```

Schedule for TORUN (Code Tr) Page 10

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
08 59 00	1144+35	12 34 03	70.1	208.5	0.8		20.4	78	3076	08 59 00
09 01 00	---	12 36 04	70.0	209.6	0.8		21.2	120	3107	08 59 01
09 01 00	1144+35	12 36 04	70.0	209.6	0.8		21.2	-5	3107	No stop
09 03 00	---	12 38 04	69.8	210.7	0.8		22.0	115	3138	09 01 01
09 03 00	1144+35	12 38 04	69.8	210.7	0.8		22.0	-5	3138	No stop
09 05 00	---	12 40 04	69.6	211.8	0.9		22.7	115	3169	09 03 01
09 05 00	1144+35	12 40 04	69.6	211.8	0.9		22.7	-5	3169	No stop
09 07 00	---	12 42 05	69.5	212.9	0.9		23.4	115	3200	09 05 01
09 09 00	1216+41	12 44 05	77.9	204.6	0.4		19.6	74	3200	09 09 00
09 11 00	---	12 46 05	77.8	206.3	0.5		20.9	120	3231	09 09 01
09 12 00	J1209+4119	12 47 05	76.6	211.2	0.6		24.4	36	3231	09 12 00
09 13 30	=1206+416	12 48 36	76.5	212.3	0.6		25.2	90	3254	09 12 01
09 14 30	1216+41	12 49 36	77.5	209.1	0.5		23.1	38	3254	09 14 30
09 16 30	---	12 51 36	77.4	210.7	0.6		24.3	120	3285	09 14 31
09 17 30	J1209+4119	12 52 36	76.2	215.1	0.7		27.4	37	3285	09 17 30
09 19 00	=1206+416	12 54 06	76.0	216.2	0.7		28.1	90	3308	09 17 31
09 20 00	1216+41	12 55 07	77.1	213.4	0.6		26.3	39	3308	09 20 00
09 22 00	---	12 57 07	76.9	214.8	0.7		27.4	120	3339	09 20 01
09 23 00	J1209+4119	12 58 07	75.7	218.9	0.8		30.1	38	3339	09 23 00
09 24 30	=1206+416	12 59 37	75.5	219.9	0.8		30.8	90	3362	09 23 01
09 25 30	1216+41	13 00 38	76.6	217.4	0.7		29.3	39	3362	09 25 30
09 27 30	---	13 02 38	76.4	218.8	0.8		30.3	120	3393	09 25 31
09 28 30	J1209+4119	13 03 38	75.1	222.4	0.9		32.6	39	3393	09 28 30
09 30 00	=1206+416	13 05 08	75.0	223.3	0.9		33.2	90	3416	09 28 31
09 32 00	1144+35	13 07 09	67.1	225.2	1.3		31.3	77	3416	09 32 00
09 34 00	---	13 09 09	66.9	226.1	1.3		31.9	120	3447	09 32 01
09 34 00	1144+35	13 09 09	66.9	226.1	1.3		31.9	-5	3447	No stop
09 36 00	---	13 11 09	66.7	227.0	1.4		32.4	115	3478	09 34 01
09 36 00	1144+35	13 11 09	66.7	227.0	1.4		32.4	-5	3478	No stop
09 38 00	---	13 13 10	66.5	227.9	1.4		32.9	115	3509	09 36 01

```
Schedule for TORUN     (Code Tr )                                  Page  11
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

09 38 00  1144+35      13 13 10  66.5 227.9  1.4      32.9    -5     3509   No stop
09 40 00  ---          13 15 10  66.2 228.8  1.4      33.4   115     3540   09 38 01

09 42 00  1216+41      13 17 10  74.9 227.9  1.0      36.7    73     3540   09 42 00
09 44 00  ---          13 19 11  74.7 229.0  1.0      37.5   120     3571   09 42 01

09 45 00  J1209+4119   13 20 11  73.3 231.7  1.2      38.8    42     3571   09 45 00
09 46 30  =1206+416    13 21 41  73.1 232.4  1.2      39.3    90     3594   09 45 01

09 47 30  1216+41      13 22 41  74.3 230.9  1.1      38.8    42     3594   09 47 30
09 49 30  ---          13 24 42  74.1 232.0  1.1      39.5   120     3625   09 47 31

09 50 30  J1209+4119   13 25 42  72.6 234.4  1.3      40.5    42     3625   09 50 30
09 52 00  =1206+416    13 27 12  72.4 235.1  1.3      40.9    90     3648   09 50 31

09 53 00  1216+41      13 28 12  73.7 233.8  1.2      40.6    42     3648   09 53 00
09 55 00  ---          13 30 12  73.4 234.8  1.2      41.2   120     3679   09 53 01

09 56 00  J1209+4119   13 31 13  71.9 237.0  1.3      42.0    42     3679   09 56 00
09 57 30  =1206+416    13 32 43  71.8 237.7  1.4      42.4    90     3702   09 56 01

09 58 30  1216+41      13 33 43  73.0 236.5  1.3      42.3    42     3702   09 58 30
10 00 30  ---          13 35 43  72.7 237.4  1.3      42.8   120     3733   09 58 31

10 01 30  J1209+4119   13 36 43  71.2 239.4  1.4      43.4    41     3733   10 01 30
10 03 00  =1206+416    13 38 14  71.0 240.0  1.5      43.7    90     3756   10 01 31

10 05 00  1144+35      13 40 14  63.2 238.5  1.9      38.6    77     3756   10 05 00
10 07 00  ---          13 42 14  62.9 239.2  1.9      39.0   120     3787   10 05 01

10 07 00  1144+35      13 42 14  62.9 239.2  1.9      39.0    -5     3787   No stop
10 09 00  ---          13 44 15  62.7 239.9  1.9      39.3   115     3818   10 07 01

10 09 00  1144+35      13 44 15  62.7 239.9  1.9      39.3    -5     3818   No stop
10 11 00  ---          13 46 15  62.4 240.6  2.0      39.6   115     3849   10 09 01

10 11 00  1144+35      13 46 15  62.4 240.6  2.0      39.6    -5     3849   No stop
10 13 00  ---          13 48 15  62.2 241.3  2.0      39.9   115     3880   10 11 01

 ---------- ########### Effelsberg out for pointing ########### ----------

10 15 00  1216+41      13 50 16  70.8 243.6  1.6      46.2    73     3880   10 15 00
10 17 00  ---          13 52 16  70.6 244.4  1.6      46.6   120     3911   10 15 01
```

```
Schedule for TORUN     (Code Tr )                                  Page  12
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

10 18 00  J1209+4119   13 53 16  69.0 245.9  1.7      46.8    41     3911   10 18 00
10 19 30  =1206+416    13 54 46  68.8 246.4  1.7      47.0    90     3934   10 18 01

 ---------- ########### Effelsberg back ########### ----------

10 20 30  1216+41      13 55 47  70.1 245.7  1.6      47.3    42     3934   10 20 30
10 22 30  ---          13 57 47  69.8 246.4  1.7      47.7   120     3965   10 20 31

10 23 30  J1209+4119   13 58 47  68.3 247.8  1.8      47.7    41     3965   10 23 30
10 25 00  =1206+416    14 00 17  68.1 248.3  1.8      47.9    90     3988   10 23 31

10 26 00  1216+41      14 01 18  69.3 247.7  1.7      48.3    42     3988   10 26 00
10 28 00  ---          14 03 18  69.0 248.4  1.8      48.6   120     4019   10 26 01

10 29 00  J1209+4119   14 04 18  67.5 249.6  1.9      48.4    41     4019   10 29 00
10 30 30  =1206+416    14 05 48  67.3 250.1  1.9      48.7    90     4042   10 29 01

10 31 30  1216+41      14 06 48  68.5 249.6  1.8      49.1    42     4042   10 31 30
10 33 30  ---          14 08 49  68.3 250.2  1.9      49.4   120     4073   10 31 31

10 34 30  J1209+4119   14 09 49  66.7 251.4  2.0      49.2    41     4073   10 34 30
10 36 00  =1206+416    14 11 19  66.5 251.9  2.0      49.3    90     4096   10 34 31

10 38 00  1216+41      14 13 19  67.6 251.7  1.9      50.0   102     4096   10 38 00
10 40 00  ---          14 15 20  67.3 252.3  2.0      50.2   120     4127   10 38 01

10 41 00  J1209+4119   14 16 20  65.8 253.4  2.1      49.9    41     4127   10 41 00
10 42 30  =1206+416    14 17 50  65.6 253.8  2.1      50.1    90     4151   10 41 01

10 43 30  1216+41      14 18 50  66.8 253.4  2.0      50.6    42     4151   10 43 30
10 45 30  ---          14 20 51  66.5 254.0  2.1      50.8   120     4181   10 43 31

10 46 30  J1209+4119   14 21 51  65.0 255.0  2.2      50.4    41     4181   10 46 30
10 48 00  =1206+416    14 23 21  64.8 255.4  2.2      50.6    90     4205   10 46 31

10 49 00  1216+41      14 24 21  66.0 255.0  2.1      51.2    41     4205   10 49 00
10 51 00  ---          14 26 22  65.7 255.6  2.2      51.4   120     4236   10 49 01

10 52 00  J1209+4119   14 27 22  64.2 256.5  2.3      50.9    41     4236   10 52 00
10 53 30  =1206+416    14 28 52  64.0 256.9  2.3      51.0    90     4259   10 52 01

10 54 30  1216+41      14 29 52  65.2 256.5  2.2      51.7    41     4259   10 54 30
10 56 30  ---          14 31 53  64.9 257.1  2.2      51.8   120     4290   10 54 31
```

```
Schedule for TORUN     (Code Tr )                                  Page  13
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

10 57 30  J1209+4119   14 32 53  63.4 258.0  2.4      51.3    41     4290   10 57 30
10 59 00  =1206+416    14 34 23  63.2 258.4  2.4      51.4    90     4313   10 57 31

 ---------- ########### Fringe Finder ########### ----------

11 06 11  3C345        14 41 36  65.4 110.4 -2.0     -47.1   119     4313   11 06 11
11 08 11  ---          14 43 36  65.7 111.1 -2.0     -46.8   120     4344   11 06 12

11 11 11  MRK1498      14 46 36  74.5  84.8 -1.7     -74.9   112     4344   11 11 11
11 13 11  ---          14 48 37  74.8  85.1 -1.7     -75.0   120     4375   11 11 12

11 14 11  J1631+4927   14 49 37  73.7  92.7 -1.7     -67.2    30     4375   11 14 11
11 15 41  =1629+495    14 51 07  73.9  93.0 -1.7     -67.2    90     4398   11 14 12

11 16 41  MRK1498      14 52 07  75.3  85.6 -1.6     -75.2    30     4398   11 16 41
11 18 41  ---          14 54 08  75.6  85.9 -1.6     -75.3   120     4429   11 16 42

11 19 41  J1631+4927   14 55 08  74.5  94.0 -1.6     -67.1    29     4429   11 19 41
11 21 11  =1629+495    14 56 38  74.7  94.3 -1.6     -67.0    90     4452   11 19 42

11 22 11  MRK1498      14 57 38  76.1  86.5 -1.5     -75.4    29     4452   11 22 11
11 24 11  ---          14 59 39  76.4  86.8 -1.5     -75.5   120     4483   11 22 12

11 25 11  J1631+4927   15 00 39  75.3  95.3 -1.5     -66.8    28     4483   11 25 11
11 26 41  =1629+495    15 02 09  75.6  95.7 -1.5     -66.7    90     4506   11 25 12

11 27 41  MRK1498      15 03 09  77.0  87.4 -1.4     -75.6    28     4506   11 27 41
11 29 41  ---          15 05 09  77.3  87.7 -1.4     -75.7   120     4537   11 27 42

11 30 41  J1631+4927   15 06 10  76.2  96.8 -1.4     -66.4    27     4537   11 30 41
11 32 11  =1629+495    15 07 40  76.4  97.2 -1.4     -66.3    90     4560   11 30 42

11 34 11  1428+29      15 09 40  65.0 201.3  0.7      14.5  -105     4560   11 34 11
11 36 11  ---          15 11 40  64.9 202.3  0.7      15.1    15     4591   11 34 12

11 37 11  J1428+2724   15 12 41  63.0 201.5  0.7      14.4    39     4591   11 37 11
11 38 41  =NGC5635     15 14 11  62.9 202.3  0.7      14.8    90     4614   11 37 12

11 39 41  1428+29      15 15 11  64.7 204.0  0.8      16.3    39     4614   11 39 41
11 41 41  ---          15 17 11  64.6 205.0  0.8      16.9   120     4645   11 39 42

11 42 41  J1428+2724   15 18 12  62.7 204.1  0.8      16.0    39     4645   11 42 41
11 44 11  =NGC5635     15 19 42  62.6 204.8  0.8      16.5    90     4668   11 42 42
```

```
Schedule for TORUN     (Code Tr )                                  Page  14
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

11 45 11  1428+29      15 20 42  64.3 206.7  0.9      18.0    40     4668   11 45 11
11 47 11  ---          15 22 42  64.2 207.6  0.9      18.6   120     4699   11 45 12

11 48 11  J1428+2724   15 23 42  62.3 206.7  0.9      17.7    39     4699   11 48 11
11 49 41  =NGC5635     15 25 13  62.2 207.4  0.9      18.1    90     4723   11 48 12

11 50 41  1428+29      15 26 13  63.9 209.3  1.0      19.7    40     4723   11 50 41
11 52 41  ---          15 28 13  63.8 210.2  1.0      20.3   120     4753   11 50 42

11 53 41  J1428+2724   15 29 13  61.9 209.2  1.0      19.2    40     4753   11 53 41
11 55 11  =NGC5635     15 30 44  61.8 209.8  1.0      19.6    90     4777   11 53 42

11 56 11  1428+29      15 31 44  63.5 211.8  1.0      21.3    40     4777   11 56 11
11 58 11  ---          15 33 44  63.4 212.7  1.1      21.8   120     4808   11 56 12

11 59 11  J1428+2724   15 34 44  61.5 211.6  1.1      20.7    40     4808   11 59 11
12 00 41  =NGC5635     15 36 15  61.4 212.2  1.1      21.1    90     4831   11 59 12

12 01 41  1428+29      15 37 15  63.1 214.3  1.1      22.8    40     4831   12 01 41
12 03 41  ---          15 39 15  62.9 215.2  1.2      23.4   120     4862   12 01 42

12 04 41  J1428+2724   15 40 15  61.1 214.0  1.2      22.2    40     4862   12 04 41
12 06 11  =NGC5635     15 41 45  60.9 214.6  1.2      22.6    90     4885   12 04 42

12 07 11  1428+29      15 42 46  62.6 216.7  1.2      24.3    40     4885   12 07 11
12 09 11  ---          15 44 46  62.4 217.6  1.3      24.8   120     4916   12 07 12

12 10 11  J1428+2724   15 45 46  60.6 216.3  1.3      23.6    40     4916   12 10 11
12 11 41  =NGC5635     15 47 16  60.5 216.9  1.3      23.9    90     4939   12 10 12

12 12 41  1428+29      15 48 16  62.1 219.1  1.3      25.7    40     4939   12 12 41
12 14 41  ---          15 50 17  61.9 219.9  1.4      26.2   120     4970   12 12 42

12 15 41  J1428+2724   15 51 17  60.1 218.5  1.4      24.9    40     4970   12 15 41
12 17 11  =NGC5635     15 52 47  59.9 219.1  1.4      25.3    90     4993   12 15 42

 ---------- ########### Effelsberg out for pointing ########### ----------

12 20 11  MRK1498      15 55 48  84.8 102.0 -0.5     -71.5   -68     4993   12 20 11
12 22 11  ---          15 57 48  85.1 103.1 -0.5     -70.8    52     5024   12 20 12

12 23 11  J1631+4927   15 58 48  83.7 122.2 -0.5     -51.4     7     5024   12 23 11
12 24 41  =1629+495    16 00 18  83.9 123.6 -0.5     -50.3    90     5047   12 23 12
```

```
Schedule for TORUN     (Code Tr )                                  Page  15
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

 ---------- ########### Effelsberg back ########### ----------

12 25 41  MRK1498      16 01 19  85.6 105.4 -0.5     -69.2     8     5047   12 25 41
12 27 41  ---          16 03 19  85.9 107.0 -0.4     -68.0   120     5078   12 25 42

12 28 41  J1631+4927   16 04 19  84.3 127.8 -0.5     -46.8     4     5078   12 28 41
12 30 11  =1629+495    16 05 49  84.5 129.5 -0.4     -45.4    90     5101   12 28 42

12 31 11  MRK1498      16 06 50  86.4 110.2 -0.4     -65.5     6     5101   12 31 11
12 33 11  ---          16 08 50  86.7 112.4 -0.3     -63.7   120     5132   12 31 12

12 34 11  J1631+4927   16 09 50  85.0 134.7 -0.4     -41.0     1     5132   12 34 11
12 35 41  =1629+495    16 11 20  85.1 136.9 -0.3     -39.1    90     5155   12 34 12

12 36 41  MRK1498      16 12 20  87.2 117.2 -0.3     -59.6     5     5155   12 36 41
12 38 41  ---          16 14 21  87.4 120.7 -0.2     -56.4   120     5186   12 36 42

12 39 41  J1631+4927   16 15 21  85.5 143.4 -0.3     -33.4     0     5186   12 39 41
12 41 11  =1629+495    16 16 51  85.6 146.0 -0.2     -31.0    90     5209   12 39 42

12 44 11  MRK1498      16 19 52  88.1 134.9 -0.1     -43.4   128     5209   12 44 11
12 46 11  ---          16 21 52  88.3 142.5 -0.1     -36.2   120     5240   12 44 12

12 47 11  J1631+4927   16 22 52  86.1 158.3 -0.1     -20.0    15     5240   12 47 11
12 48 41  =1629+495    16 24 22  86.1 161.7 -0.1     -16.8    90     5264   12 47 12

12 49 41  MRK1498      16 25 23  88.6 160.1 -0.1     -19.3    34     5264   12 49 41
12 51 41  ---          16 27 23  88.6 172.4 -0.0      -7.3   120     5294   12 49 42

12 52 41  J1631+4927   16 28 23  86.3 171.4 -0.1      -8.0    37     5294   12 52 41
12 54 11  =1629+495    16 29 53  86.3 175.2 -0.0      -4.5    90     5318   12 52 42

12 55 11  MRK1498      16 30 53  88.6 194.9  0.0      14.5     8     5318   12 55 11
12 57 11  ---          16 32 54  88.5 206.4  0.1      25.5   120     5349   12 55 12

12 58 11  J1631+4927   16 33 54  86.3 185.3  0.0       4.9     2     5349   12 58 11
12 59 41  =1629+495    16 35 24  86.3 189.1  0.1       8.4    90     5372   12 58 12

13 00 41  MRK1498      16 36 24  88.2 222.1  0.1      40.6   -23     5372   13 00 41
13 02 41  ---          16 38 25  88.0 228.8  0.2      46.9    97     5403   13 00 42

13 03 41  J1631+4927   16 39 25  86.1 198.7  0.1      17.2   -14     5403   13 03 41
13 05 11  =1629+495    16 40 55  86.1 202.1  0.2      20.3    76     5426   13 03 42
```

Schedule for TORUN (Code Tr) Page 16

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
13 07 11	1428+29	16 42 55	55.9	239.0	2.2		36.1	-7	5426	13 07 11
13 09 11	---	16 44 56	55.6	239.6	2.3		36.4	113	5457	13 07 12
13 10 11	J1428+2724	16 45 56	54.0	237.9	2.3		34.9	41	5457	13 10 11
13 11 41	=NGC5635	16 47 26	53.8	238.4	2.3		35.1	90	5480	13 10 12
13 12 41	1428+29	16 48 26	55.2	240.7	2.3		36.9	41	5480	13 12 41
13 14 41	---	16 50 27	54.9	241.3	2.4		37.1	120	5511	13 12 42
13 15 41	J1428+2724	16 51 27	53.3	239.6	2.4		35.7	41	5511	13 15 41
13 17 11	=NGC5635	16 52 57	53.1	240.1	2.4		35.8	90	5534	13 15 42
13 18 11	1428+29	16 53 57	54.4	242.3	2.4		37.5	41	5534	13 18 11
13 20 11	---	16 55 58	54.2	242.9	2.4		37.8	120	5565	13 18 12
13 21 11	J1428+2724	16 56 58	52.5	241.2	2.5		36.3	41	5565	13 21 11
13 22 41	=NGC5635	16 58 28	52.3	241.7	2.5		36.5	90	5588	13 21 12
13 23 41	1428+29	16 59 28	53.7	244.0	2.5		38.2	41	5588	13 23 41
13 25 41	---	17 01 28	53.4	244.5	2.5		38.4	120	5619	13 23 42
13 26 41	J1428+2724	17 02 29	51.8	242.8	2.6		37.0	41	5619	13 26 41
13 28 11	=NGC5635	17 03 59	51.6	243.3	2.6		37.1	90	5642	13 26 42
13 29 11	1428+29	17 04 59	52.9	245.5	2.6		38.8	41	5642	13 29 11
13 31 11	---	17 06 59	52.7	246.1	2.6		39.0	120	5673	13 29 12
13 32 11	J1428+2724	17 08 00	51.1	244.4	2.6		37.6	41	5673	13 32 11
13 33 41	=NGC5635	17 09 30	50.9	244.8	2.7		37.7	90	5696	13 32 12
13 34 41	1428+29	17 10 30	52.2	247.1	2.7		39.3	41	5696	13 34 41
13 36 41	---	17 12 30	51.9	247.6	2.7		39.5	120	5727	13 34 42
13 37 41	J1428+2724	17 13 30	50.3	245.9	2.7		38.1	41	5727	13 37 41
13 39 11	=NGC5635	17 15 01	50.1	246.3	2.8		38.3	90	5750	13 37 42
13 40 11	1428+29	17 16 01	51.4	248.6	2.8		39.8	41	5750	13 40 11
13 42 11	---	17 18 01	51.1	249.1	2.8		40.0	120	5781	13 40 12
13 43 11	J1428+2724	17 19 01	49.5	247.4	2.8		38.6	41	5781	13 43 11
13 44 41	=NGC5635	17 20 32	49.3	247.8	2.9		38.7	90	5805	13 43 12
13 45 41	1428+29	17 21 32	50.6	250.0	2.9		40.3	41	5805	13 45 41
13 47 41	---	17 23 32	50.4	250.6	2.9		40.5	120	5836	13 45 42

```
Schedule for TORUN     (Code Tr )                                  Page  17
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

13 48 41  J1428+2724   17 24 32  48.8 248.9  2.9      39.1    41     5836   13 48 41
13 50 11  =NGC5635     17 26 03  48.6 249.3  2.9      39.2    90     5859   13 48 42

 ---------- ########### Effelsberg out for pointing ########### ----------

13 53 11  MRK1498      17 29 03  80.7 267.7  1.0      75.6    45     5859   13 53 11
13 55 11  ---          17 31 03  80.4 268.1  1.0      75.7   120     5890   13 53 12

13 56 11  J1631+4927   17 32 03  79.9 254.7  1.0      62.9    18     5890   13 56 11
13 57 41  =1629+495    17 33 34  79.7 255.3  1.0      63.3    90     5913   13 56 12

 ---------- ########### Effelsberg back ########### ----------

13 58 41  MRK1498      17 34 34  79.9 268.9  1.1      75.8    18     5913   13 58 41
14 00 41  ---          17 36 34  79.6 269.3  1.1      75.8   120     5944   13 58 42

14 01 41  J1631+4927   17 37 34  79.1 256.9  1.1      64.0    20     5944   14 01 41
14 03 11  =1629+495    17 39 05  78.9 257.5  1.1      64.3    90     5967   14 01 42

14 04 11  MRK1498      17 40 05  79.0 270.0  1.2      75.8    20     5967   14 04 11
14 06 11  ---          17 42 05  78.7 270.4  1.2      75.8   120     5998   14 04 12

14 07 11  J1631+4927   17 43 05  78.3 258.9  1.2      64.9    22     5998   14 07 11
14 08 41  =1629+495    17 44 36  78.1 259.4  1.2      65.1    90     6021   14 07 12

14 09 41  MRK1498      17 45 36  78.2 271.1  1.3      75.8    22     6021   14 09 41
14 11 41  ---          17 47 36  77.9 271.5  1.3      75.8   120     6052   14 09 42

14 12 41  J1631+4927   17 48 36  77.5 260.7  1.3      65.6    23     6052   14 12 41
14 14 11  =1629+495    17 50 06  77.3 261.1  1.3      65.8    90     6075   14 12 42

14 15 11  MRK1498      17 51 07  77.4 272.1  1.4      75.7    23     6075   14 15 11
14 17 11  ---          17 53 07  77.1 272.5  1.4      75.6   120     6106   14 15 12

14 18 11  J1631+4927   17 54 07  76.7 262.3  1.4      66.2    24     6106   14 18 11
14 19 41  =1629+495    17 55 37  76.4 262.7  1.4      66.3    90     6129   14 18 12

14 20 41  MRK1498      17 56 38  76.6 273.0  1.5      75.5    25     6129   14 20 41
14 22 41  ---          17 58 38  76.3 273.4  1.5      75.4   120     6160   14 20 42

14 23 41  J1631+4927   17 59 38  75.8 263.8  1.5      66.6    26     6160   14 23 41
14 25 11  =1629+495    18 01 08  75.6 264.2  1.5      66.7    90     6183   14 23 42

14 27 11  1428+29      18 03 09  44.6 260.1  3.6      42.7   -10     6183   14 27 11
14 29 11  ---          18 05 09  44.3 260.6  3.6      42.7   110     6214   14 27 12
```

Schedule for TORUN (Code Tr) Page 18

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
14 30 11	J1428+2724	18 06 09	42.8	259.0	3.6		41.6	41	6214	14 30 11
14 31 41	=NGC5635	18 07 39	42.6	259.3	3.6		41.6	90	6237	14 30 12
14 32 41	1428+29	18 08 39	43.8	261.4	3.7		42.9	42	6237	14 32 41
14 34 41	---	18 10 40	43.5	261.8	3.7		42.9	120	6268	14 32 42
14 35 41	J1428+2724	18 11 40	42.0	260.2	3.7		41.8	41	6268	14 35 41
14 37 11	=NGC5635	18 13 10	41.7	260.6	3.7		41.8	90	6292	14 35 42
14 38 11	1428+29	18 14 10	43.0	262.6	3.7		43.0	42	6292	14 38 11
14 40 11	---	18 16 11	42.7	263.0	3.8		43.1	120	6322	14 38 12
14 41 11	J1428+2724	18 17 11	41.1	261.5	3.8		41.9	41	6322	14 41 11
14 42 41	=NGC5635	18 18 41	40.9	261.8	3.8		42.0	90	6346	14 41 12
14 43 41	1428+29	18 19 41	42.1	263.8	3.8		43.2	42	6346	14 43 41
14 45 41	---	18 21 42	41.8	264.2	3.9		43.2	120	6377	14 43 42
14 46 41	J1428+2724	18 22 42	40.3	262.7	3.9		42.1	41	6377	14 46 41
14 48 11	=NGC5635	18 24 12	40.1	263.0	3.9		42.1	90	6400	14 46 42
14 49 11	1428+29	18 25 12	41.3	264.9	3.9		43.3	42	6400	14 49 11
14 51 11	---	18 27 13	41.0	265.4	4.0		43.3	120	6431	14 49 12
14 52 11	J1428+2724	18 28 13	39.5	263.8	4.0		42.2	41	6431	14 52 11
14 53 41	=NGC5635	18 29 43	39.3	264.2	4.0		42.2	90	6454	14 52 12
14 54 41	1428+29	18 30 43	40.5	266.1	4.0		43.4	42	6454	14 54 41
14 56 41	---	18 32 43	40.2	266.5	4.1		43.4	120	6485	14 54 42
14 57 41	J1428+2724	18 33 44	38.7	265.0	4.1		42.3	41	6485	14 57 41
14 59 11	=NGC5635	18 35 14	38.5	265.3	4.1		42.3	90	6508	14 57 42
15 00 11	1428+29	18 36 14	39.7	267.2	4.1		43.4	42	6508	15 00 11
15 02 11	---	18 38 14	39.4	267.7	4.2		43.4	120	6539	15 00 12
15 03 11	J1428+2724	18 39 15	37.9	266.2	4.2		42.4	41	6539	15 03 11
15 04 41	=NGC5635	18 40 45	37.6	266.5	4.2		42.4	90	6562	15 03 12
15 05 41	1428+29	18 41 45	38.8	268.4	4.2		43.5	42	6562	15 05 41
15 07 41	---	18 43 45	38.5	268.8	4.2		43.5	120	6593	15 05 42
15 08 41	J1428+2724	18 44 45	37.0	267.3	4.3		42.5	41	6593	15 08 41
15 10 11	=NGC5635	18 46 16	36.8	267.6	4.3		42.5	90	6616	15 08 42

```
Schedule for TORUN     (Code Tr )                                  Page  19
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

15 11 11  1428+29      18 47 16  38.0 269.5  4.3      43.5    42     6616   15 11 11
15 13 11  ---          18 49 16  37.7 269.9  4.3      43.5   120     6647   15 11 12

15 14 11  J1428+2724   18 50 16  36.2 268.4  4.3      42.5    41     6647   15 14 11
15 15 41  =NGC5635     18 51 47  36.0 268.7  4.4      42.5    90     6670   15 14 12

15 16 41  1428+29      18 52 47  37.2 270.6  4.4      43.5    42     6670   15 16 41
15 18 41  ---          18 54 47  36.9 271.0  4.4      43.5   120     6701   15 16 42

15 19 41  J1428+2724   18 55 47  35.4 269.5  4.4      42.5    41     6701   15 19 41
15 21 11  =NGC5635     18 57 17  35.1 269.8  4.5      42.5    90     6724   15 19 42

15 22 11  1428+29      18 58 18  36.4 271.7  4.5      43.5    42     6724   15 22 11
15 24 11  ---          19 00 18  36.1 272.1  4.5      43.4   120     6755   15 22 12

15 25 11  J1428+2724   19 01 18  34.5 270.6  4.5      42.5    41     6755   15 25 11
15 26 41  =NGC5635     19 02 48  34.3 270.9  4.6      42.5    90     6778   15 25 12

15 27 41  1428+29      19 03 49  35.5 272.8  4.6      43.4    42     6778   15 27 41
15 29 41  ---          19 05 49  35.2 273.1  4.6      43.4   120     6809   15 27 42



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
          21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

The following frequency sets based on these setups were used.

 Frequency Set:   7  Setup file default.  Used with PCAL = off
 LO sum=   22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.49
           22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.49
 BBC fr=     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.49
             787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.49
 Bandwd=      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
              32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
  Matching frequency sets:   7  14

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* 4C+73             09 45 10.137670   * 09 49 46.000000    09 51 35.944317      0.00
                    73 28 22.05512    * 73 14 23.10000     73 08 22.11288       0.00

* 1144+35           11 44 45.682846   * 11 47 22.300000    11 48 25.061483      0.00
                    35 17 49.16531    * 35 01 09.10000     34 54 18.26594       0.00

* MRK1498           16 26 48.155847   * 16 28 03.800000    16 28 33.016769      0.00
                    51 53 04.37701    * 51 46 30.70000     51 44 01.59811       0.00

* 1211+74           12 09 36.253355   * 12 11 58.700000    12 12 52.715165      0.00
                    74 35 44.48738    * 74 19 03.80000     74 12 05.91344       0.00

* 1216+41           12 13 39.767808   * 12 16 09.600000    12 17 09.337849      0.00
                    42 16 07.76175    * 41 59 28.00000     41 52 37.11640       0.00

* 4C+69             13 12 21.879544   * 13 13 58.800000    13 14 35.064451      0.00
                    69 53 09.16078    * 69 37 18.00000     69 30 45.67545       0.00

* 1428+29           14 26 07.998947   * 14 28 19.200000    14 29 11.405184      0.00
                    29 32 06.19177    * 29 18 44.00000     29 13 22.51851       0.00

* 4C39.25           09 23 55.319216   * 09 27 03.013937    09 28 19.182961      0.31
  J0927+3902        39 15 23.56644    * 39 02 20.85185     38 56 52.57334       0.16
  0923+392          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
```

```
  J0927+39          GSFC 2016a X/S astro solution, 250526 observations.

  0924+732          09 24 51.871240   * 09 29 42.160692     09 31 38.371096       2.36
* J0929+7304        73 17 12.07224    * 73 04 04.52496      72 58 23.59978        0.24
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     74 observations.

  1206+416          12 06 51.117947   * 12 09 22.788006     12 10 23.315568       0.17
* J1209+4119        41 36 22.62761    * 41 19 41.37011      41 12 49.65484        0.16
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    150 observations.

  1241+749          12 41 57.126852   * 12 43 45.033338     12 44 24.839244       0.32
* J1243+7442        74 59 01.44422    * 74 42 37.11490      74 35 48.16760        0.10
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    106 observations.

  1311+678          13 11 45.040320   * 13 13 27.988953     13 14 06.974399       1.26
* J1313+6735        67 51 42.29443    * 67 35 50.35993      67 29 18.02341        0.32
  J1313+67          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     58 observations.

  NGC5635           14 26 18.863525   * 14 28 31.761687     14 29 24.687348       0.12
* J1428+2724        27 37 53.92115    * 27 24 32.23252      27 19 11.09014        0.20
  1426+276          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     81 observations.

  1629+495          16 29 55.127603   * 16 31 16.539935     16 31 48.204143       0.20
* J1631+4927        49 34 00.43877    * 49 27 39.51496      49 25 15.88227        0.23
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     85 observations.

* 3C345             16 41 17.606229   * 16 42 58.809967     16 43 38.847462       0.79
  J1642+3948        39 54 10.81492    * 39 48 36.99399      39 46 33.16161        0.59
  1641+399          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J1642+39          GSFC 2016a X/S astro solution,  53724 observations.
```

eb074ftr

Zooming into the cores of restarting giant radio galaxies
PI: *Gabriele Bruni*

```
Address:  INAF-IAPS

Observing mode: Phase-referencing of sources at 1.3cm

Schedule for TORUN     (Code Tr )                                  Page   2
               Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

 ---------- ########### Fringe Finder ########### ----------

 Next scan frequencies:  22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.4
                         22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.4
 Next BBC frequencies:     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.4
                           787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.4
 Next scan bandwidths:      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0
                            32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0

18 30 00  0234+285     22 06 37  35.6  87.9 -4.5     -43.3     0        0   18 30 00
18 32 00  ---          22 08 37  35.9  88.3 -4.5     -43.3   120       31   18 30 01

18 35 00  0309+411B    22 11 38  39.8  71.1 -5.0     -49.2   130       31   18 35 00
18 37 00  ---          22 13 38  40.1  71.4 -5.0     -49.4   120       62   18 35 01

18 37 00  0309+411B    22 13 38  40.1  71.4 -5.0     -49.4    -5       62   No stop
18 39 00  ---          22 15 38  40.4  71.7 -5.0     -49.5   115       93   18 37 01

18 39 30  0309+411B    22 16 09  40.4  71.8 -5.0     -49.5    24       93   18 39 30
18 41 30  ---          22 18 09  40.7  72.1 -4.9     -49.6   120      124   18 39 31

18 41 30  0309+411B    22 18 09  40.7  72.1 -4.9     -49.6    -5      124   No stop
18 43 30  ---          22 20 09  41.0  72.5 -4.9     -49.8   115      155   18 41 31

18 43 30  0309+411B    22 20 09  41.0  72.5 -4.9     -49.8    -5      155   No stop
18 45 30  ---          22 22 10  41.3  72.8 -4.9     -49.9   115      185   18 43 31

18 46 00  0309+411B    22 22 40  41.4  72.9 -4.9     -49.9    24      185   18 46 00
18 48 00  ---          22 24 40  41.7  73.2 -4.8     -50.0   120      216   18 46 01

18 50 00  4C40.08      22 26 40  52.4  86.6 -3.6     -52.5    67      216   18 50 00
18 52 00  ---          22 28 41  52.7  87.0 -3.6     -52.5   120      247   18 50 01

18 53 00  J0204+4005   22 29 41  51.8  87.4 -3.6     -51.7    44      247   18 53 00
18 54 30  =0201+398    22 31 11  52.1  87.7 -3.6     -51.8    90      271   18 53 01

18 55 30  4C40.08      22 32 11  53.2  87.7 -3.5     -52.6    43      271   18 55 30
18 57 30  ---          22 34 12  53.5  88.0 -3.5     -52.6   120      301   18 55 31
```

Schedule for TORUN (Code Tr) Page 3

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 26 Oct 2020 Day 300 ---										
18 58 30	J0204+4005	22 35 12	52.7	88.5	-3.5		-51.8	44	301	18 58 30
19 00 00	=0201+398	22 36 42	52.9	88.8	-3.5		-51.8	90	325	18 58 31
19 01 00	4C40.08	22 37 42	54.0	88.7	-3.4		-52.6	43	325	19 01 00
19 03 00	---	22 39 42	54.3	89.1	-3.4		-52.6	120	356	19 01 01
19 04 00	J0204+4005	22 40 43	53.5	89.6	-3.4		-51.8	44	356	19 04 00
19 05 30	=0201+398	22 42 13	53.7	89.9	-3.4		-51.8	90	379	19 04 01
19 06 30	4C40.08	22 43 13	54.9	89.8	-3.3		-52.6	43	379	19 06 30
19 08 30	---	22 45 13	55.2	90.2	-3.3		-52.6	120	410	19 06 31
19 09 30	J0204+4005	22 46 13	54.3	90.7	-3.3		-51.8	44	410	19 09 30
19 11 00	=0201+398	22 47 44	54.5	91.0	-3.3		-51.8	90	433	19 09 31
19 12 00	4C40.08	22 48 44	55.7	90.9	-3.2		-52.6	43	433	19 12 00
19 14 00	---	22 50 44	56.0	91.3	-3.2		-52.6	120	464	19 12 01
19 15 00	J0204+4005	22 51 44	55.1	91.8	-3.2		-51.8	44	464	19 15 00
19 16 30	=0201+398	22 53 15	55.4	92.1	-3.2		-51.8	90	487	19 15 01
19 17 30	4C40.08	22 54 15	56.5	92.1	-3.1		-52.6	43	487	19 17 30
19 19 30	---	22 56 15	56.8	92.5	-3.1		-52.6	120	518	19 17 31
19 20 30	J0204+4005	22 57 15	56.0	93.0	-3.1		-51.7	44	518	19 20 30
19 22 00	=0201+398	22 58 46	56.2	93.3	-3.1		-51.7	90	541	19 20 31
19 23 00	4C40.08	22 59 46	57.3	93.2	-3.0		-52.5	43	541	19 23 00
19 25 00	---	23 01 46	57.6	93.7	-3.0		-52.5	120	572	19 23 01
19 26 00	J0204+4005	23 02 46	56.8	94.1	-3.0		-51.6	44	572	19 26 00
19 27 30	=0201+398	23 04 16	57.0	94.5	-3.0		-51.6	90	595	19 26 01
19 28 30	4C40.08	23 05 17	58.2	94.4	-2.9		-52.4	43	595	19 28 30
19 30 30	---	23 07 17	58.5	94.9	-2.9		-52.4	120	626	19 28 31
19 31 30	J0204+4005	23 08 17	57.6	95.4	-3.0		-51.5	44	626	19 31 30
19 33 00	=0201+398	23 09 47	57.8	95.7	-2.9		-51.5	90	649	19 31 31
19 35 00	LQ033+03	23 11 48	51.8	103.1	-3.1		-44.2	83	649	19 35 00
19 37 00	---	23 13 48	52.1	103.6	-3.0		-44.1	120	680	19 35 01
19 38 00	J0205+3212	23 14 48	53.1	106.9	-2.9		-42.8	39	680	19 38 00
19 39 30	=0202+319	23 16 18	53.3	107.3	-2.8		-42.7	90	703	19 38 01
19 40 30	LQ033+03	23 17 19	52.6	104.4	-3.0		-43.9	40	703	19 40 30
19 42 30	---	23 19 19	52.9	104.9	-2.9		-43.7	120	734	19 40 31
19 43 30	J0205+3212	23 20 19	53.9	108.3	-2.8		-42.4	39	734	19 43 30
19 45 00	=0202+319	23 21 49	54.1	108.7	-2.7		-42.3	90	757	19 43 31

```
Schedule for TORUN     (Code Tr )                                  Page   4
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

19 46 00  LQ033+03     23 22 49  53.4 105.8 -2.9     -43.5    39      757   19 46 00
19 48 00  ---          23 24 50  53.7 106.3 -2.8     -43.4   120      788   19 46 01

19 49 00  J0205+3212   23 25 50  54.6 109.8 -2.7     -42.0    39      788   19 49 00
19 50 30  =0202+319    23 27 20  54.8 110.2 -2.6     -41.8    90      812   19 49 01

19 51 30  LQ033+03     23 28 20  54.2 107.3 -2.8     -43.1    39      812   19 51 30
19 53 30  ---          23 30 21  54.4 107.8 -2.8     -43.0   120      842   19 51 31

19 54 30  J0205+3212   23 31 21  55.4 111.3 -2.6     -41.4    39      842   19 54 30
19 56 00  =0202+319    23 32 51  55.6 111.7 -2.6     -41.3    90      866   19 54 31

19 57 00  LQ033+03     23 33 51  54.9 108.7 -2.7     -42.7    39      866   19 57 00
19 59 00  ---          23 35 52  55.2 109.3 -2.7     -42.5   120      897   19 57 01

20 00 00  J0205+3212   23 36 52  56.2 112.9 -2.5     -40.9    39      897   20 00 00
20 01 30  =0202+319    23 38 22  56.4 113.3 -2.5     -40.7    90      920   20 00 01

20 02 30  LQ033+03     23 39 22  55.7 110.2 -2.6     -42.2    39      920   20 02 30
20 04 30  ---          23 41 23  56.0 110.8 -2.6     -42.0   120      951   20 02 31

20 05 30  J0205+3212   23 42 23  56.9 114.5 -2.4     -40.3    38      951   20 05 30
20 07 00  =0202+319    23 43 53  57.1 114.9 -2.4     -40.1    90      974   20 05 31

 ---------- ########### Effelsberg out for pointing ########### ----------

20 08 00  LQ033+03     23 44 53  56.5 111.8 -2.5     -41.6    39      974   20 08 00
20 10 00  ---          23 46 53  56.8 112.3 -2.5     -41.4   120     1005   20 08 01

20 11 00  J0205+3212   23 47 54  57.7 116.1 -2.3     -39.6    38     1005   20 11 00
20 12 30  =0202+319    23 49 24  57.9 116.6 -2.3     -39.4    90     1028   20 11 01

20 13 30  LQ033+03     23 50 24  57.3 113.4 -2.4     -41.1    38     1028   20 13 30
20 15 30  ---          23 52 24  57.5 113.9 -2.4     -40.8   120     1059   20 13 31

20 16 30  J0205+3212   23 53 25  58.4 117.8 -2.2     -38.9    38     1059   20 16 30
20 18 00  =0202+319    23 54 55  58.6 118.3 -2.2     -38.7    90     1082   20 16 31

 ---------- ########### Effelsberg back ########### ----------

20 21 00  0309+411B    23 57 55  55.5  89.5 -3.3     -53.2   107     1082   20 21 00
20 23 00  ---          23 59 56  55.8  89.9 -3.2     -53.2   120     1113   20 21 01

20 23 00  0309+411B    23 59 56  55.8  89.9 -3.2     -53.2    -5     1113   No stop
20 25 00  ---          00 01 56  56.1  90.3 -3.2     -53.2   115     1144   20 23 01
```

Schedule for TORUN (Code Tr) Page 5

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
20 25 30	0309+411B	00 02 26	56.1	90.4	-3.2		-53.2	24	1144	20 25 30
20 27 30	---	00 04 26	56.4	90.8	-3.2		-53.2	120	1175	20 25 31
20 27 30	0309+411B	00 04 26	56.4	90.8	-3.2		-53.2	-5	1175	No stop
20 29 30	---	00 06 27	56.7	91.2	-3.1		-53.2	115	1206	20 27 31
20 29 30	0309+411B	00 06 27	56.7	91.2	-3.1		-53.2	-5	1206	No stop
20 31 30	---	00 08 27	57.0	91.7	-3.1		-53.2	115	1237	20 29 31
20 32 00	0309+411B	00 08 57	57.1	91.8	-3.1		-53.2	24	1237	20 32 00
20 34 00	---	00 10 57	57.4	92.2	-3.1		-53.1	120	1268	20 32 01
20 36 00	4C40.08	00 12 58	68.0	112.7	-1.8		-47.2	65	1268	20 36 00
20 38 00	---	00 14 58	68.3	113.4	-1.8		-46.8	120	1298	20 36 01
20 39 00	J0204+4005	00 15 58	67.4	113.9	-1.8		-46.0	44	1298	20 39 00
20 40 30	=0201+398	00 17 28	67.6	114.4	-1.8		-45.7	90	1322	20 39 01
20 41 30	4C40.08	00 18 29	68.8	114.6	-1.7		-46.3	43	1322	20 41 30
20 43 30	---	00 20 29	69.1	115.3	-1.7		-45.9	120	1353	20 41 31
20 44 30	J0204+4005	00 21 29	68.2	115.8	-1.7		-45.0	44	1353	20 44 30
20 46 00	=0201+398	00 22 59	68.4	116.4	-1.7		-44.8	90	1376	20 44 31
20 47 00	4C40.08	00 24 00	69.5	116.7	-1.6		-45.2	43	1376	20 47 00
20 49 00	---	00 26 00	69.8	117.4	-1.6		-44.9	120	1407	20 47 01
20 50 00	J0204+4005	00 27 00	68.9	117.9	-1.6		-44.0	44	1407	20 50 00
20 51 30	=0201+398	00 28 30	69.1	118.4	-1.6		-43.7	90	1430	20 50 01
20 52 30	4C40.08	00 29 30	70.3	118.8	-1.5		-44.1	43	1430	20 52 30
20 54 30	---	00 31 31	70.5	119.6	-1.5		-43.7	120	1461	20 52 31
20 55 30	J0204+4005	00 32 31	69.6	120.0	-1.5		-42.9	44	1461	20 55 30
20 57 00	=0201+398	00 34 01	69.8	120.6	-1.5		-42.6	90	1484	20 55 31
20 58 00	4C40.08	00 35 01	71.0	121.1	-1.4		-42.9	43	1484	20 58 00
21 00 00	---	00 37 02	71.2	122.0	-1.4		-42.4	120	1515	20 58 01
21 01 00	J0204+4005	00 38 02	70.4	122.3	-1.5		-41.6	44	1515	21 01 00
21 02 30	=0201+398	00 39 32	70.5	122.9	-1.4		-41.3	90	1538	21 01 01
21 03 30	4C40.08	00 40 32	71.7	123.5	-1.4		-41.5	43	1538	21 03 30
21 05 30	---	00 42 33	71.9	124.4	-1.3		-41.0	120	1569	21 03 31

Schedule for TORUN (Code Tr) Page 6

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
21 06 30	J0204+4005	00 43 33	71.0	124.7	-1.4		-40.2	44	1569	21 06 30
21 08 00	=0201+398	00 45 03	71.2	125.4	-1.3		-39.8	90	1592	21 06 31
21 09 00	4C40.08	00 46 03	72.4	126.1	-1.3		-40.0	43	1592	21 09 00
21 11 00	---	00 48 03	72.6	127.0	-1.2		-39.4	120	1623	21 09 01
21 12 00	J0204+4005	00 49 04	71.7	127.3	-1.3		-38.7	44	1623	21 12 00
21 13 30	=0201+398	00 50 34	71.9	128.0	-1.2		-38.3	90	1646	21 12 01
21 14 30	4C40.08	00 51 34	73.0	128.8	-1.2		-38.3	43	1646	21 14 30
21 16 30	---	00 53 34	73.3	129.8	-1.1		-37.6	120	1677	21 14 31
21 17 30	J0204+4005	00 54 35	72.4	130.0	-1.2		-37.1	44	1677	21 17 30
21 19 00	=0201+398	00 56 05	72.5	130.7	-1.2		-36.6	90	1700	21 17 31
21 21 00	LQ033+03	00 58 05	65.6	137.8	-1.3		-28.7	79	1700	21 21 00
21 23 00	---	01 00 05	65.8	138.7	-1.3		-28.2	120	1731	21 21 01
21 24 00	J0205+3212	01 01 06	66.1	144.1	-1.1		-24.6	35	1731	21 24 00
21 25 30	=0202+319	01 02 36	66.3	144.8	-1.1		-24.2	90	1755	21 24 01
21 26 30	LQ033+03	01 03 36	66.1	140.3	-1.2		-27.2	35	1755	21 26 30
21 28 30	---	01 05 36	66.3	141.2	-1.2		-26.6	120	1785	21 26 31
21 29 30	J0205+3212	01 06 36	66.6	146.8	-1.0		-22.9	35	1785	21 29 30
21 31 00	=0202+319	01 08 07	66.7	147.5	-1.0		-22.4	90	1809	21 29 31
21 32 00	LQ033+03	01 09 07	66.6	142.9	-1.1		-25.6	35	1809	21 32 00
21 34 00	---	01 11 07	66.8	143.8	-1.1		-25.0	120	1840	21 32 01
21 35 00	J0205+3212	01 12 07	67.0	149.5	-0.9		-21.1	34	1840	21 35 00
21 36 30	=0202+319	01 13 38	67.2	150.3	-0.9		-20.6	90	1863	21 35 01
21 37 30	LQ033+03	01 14 38	67.1	145.5	-1.0		-23.9	35	1863	21 37 30
21 39 30	---	01 16 38	67.3	146.5	-1.0		-23.2	120	1894	21 37 31
21 40 30	J0205+3212	01 17 38	67.4	152.3	-0.8		-19.3	34	1894	21 40 30
21 42 00	=0202+319	01 19 09	67.5	153.1	-0.8		-18.7	90	1917	21 40 31
21 43 00	LQ033+03	01 20 09	67.5	148.3	-0.9		-22.1	35	1917	21 43 00
21 45 00	---	01 22 09	67.7	149.3	-0.9		-21.4	120	1948	21 43 01
21 46 00	J0205+3212	01 23 09	67.8	155.2	-0.7		-17.3	34	1948	21 46 00
21 47 30	=0202+319	01 24 39	67.9	156.0	-0.7		-16.8	90	1971	21 46 01

Schedule for TORUN (Code Tr) Page 7

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
21 48 30	LQ033+03	01 25 40	68.0	151.2	-0.8		-20.2	35	1971	21 48 30
21 50 30	---	01 27 40	68.1	152.2	-0.8		-19.5	120	2002	21 48 31
21 51 30	J0205+3212	01 28 40	68.1	158.2	-0.6		-15.3	34	2002	21 51 30
21 53 00	=0202+319	01 30 10	68.2	159.0	-0.6		-14.7	90	2025	21 51 31
---------- ########### Effelsberg out for pointing ########### ----------										
21 54 00	LQ033+03	01 31 11	68.3	154.1	-0.7		-18.2	34	2025	21 54 00
21 56 00	---	01 33 11	68.5	155.2	-0.7		-17.5	120	2056	21 54 01
21 57 00	J0205+3212	01 34 11	68.4	161.3	-0.5		-13.2	34	2056	21 57 00
21 58 30	=0202+319	01 35 41	68.5	162.1	-0.5		-12.6	90	2079	21 57 01
21 59 30	LQ033+03	01 36 41	68.7	157.1	-0.6		-16.2	34	2079	21 59 30
22 01 30	---	01 38 42	68.8	158.2	-0.6		-15.4	120	2110	21 59 31
22 02 30	J0205+3212	01 39 42	68.7	164.4	-0.4		-11.0	33	2110	22 02 30
22 04 00	=0202+319	01 41 12	68.7	165.2	-0.4		-10.4	90	2133	22 02 31
---------- ########### Effelsberg back ########### ----------										
22 07 00	0309+411B	01 44 13	70.9	118.6	-1.5		-44.7	71	2133	22 07 00
22 09 00	---	01 46 13	71.1	119.4	-1.5		-44.2	120	2164	22 07 01
22 09 00	0309+411B	01 46 13	71.1	119.4	-1.5		-44.2	-5	2164	No stop
22 11 00	---	01 48 13	71.4	120.2	-1.4		-43.8	115	2195	22 09 01
22 11 30	0309+411B	01 48 43	71.5	120.5	-1.4		-43.6	23	2195	22 11 30
22 13 30	---	01 50 44	71.7	121.3	-1.4		-43.2	120	2226	22 11 31
22 13 30	0309+411B	01 50 44	71.7	121.3	-1.4		-43.2	-5	2226	No stop
22 15 30	---	01 52 44	72.0	122.2	-1.4		-42.6	115	2257	22 13 31
22 15 30	0309+411B	01 52 44	72.0	122.2	-1.4		-42.6	-5	2257	No stop
22 17 30	---	01 54 44	72.2	123.1	-1.3		-42.1	115	2288	22 15 31
22 18 00	0309+411B	01 55 14	72.3	123.3	-1.3		-42.0	23	2288	22 18 00
22 20 00	---	01 57 15	72.6	124.3	-1.3		-41.4	120	2319	22 18 01
22 22 00	4C40.08	01 59 15	77.8	177.8	-0.0		-1.7	-2	2319	22 22 00
22 24 00	---	02 01 15	77.8	179.6	-0.0		-0.3	118	2350	22 22 01
22 25 00	J0204+4005	02 02 16	77.1	177.4	-0.1		-2.1	40	2350	22 25 00
22 26 30	=0201+398	02 03 46	77.1	178.6	-0.0		-1.1	90	2373	22 25 01

Schedule for TORUN (Code Tr) Page 8

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 26 Oct 2020 Day 300 ---										
22 27 30	4C40.08	02 04 46	77.8	182.8	0.1		2.2	38	2373	22 27 30
22 29 30	---	02 06 46	77.8	184.6	0.1		3.6	120	2404	22 27 31
22 30 30	J0204+4005	02 07 47	77.1	182.1	0.0		1.6	39	2404	22 30 30
22 32 00	=0201+398	02 09 17	77.1	183.3	0.1		2.6	90	2427	22 30 31
22 33 00	4C40.08	02 10 17	77.7	187.7	0.1		6.1	38	2427	22 33 00
22 35 00	---	02 12 17	77.7	189.4	0.2		7.5	120	2458	22 33 01
22 36 00	J0204+4005	02 13 17	77.0	186.8	0.1		5.3	39	2458	22 36 00
22 37 30	=0201+398	02 14 48	77.0	188.0	0.2		6.3	90	2481	22 36 01
22 38 30	4C40.08	02 15 48	77.6	192.5	0.2		9.9	37	2481	22 38 30
22 40 30	---	02 17 48	77.5	194.2	0.3		11.3	120	2512	22 38 31
22 41 30	J0204+4005	02 18 48	76.9	191.4	0.2		8.9	38	2512	22 41 30
22 43 00	=0201+398	02 20 19	76.8	192.6	0.2		9.9	90	2535	22 41 31
22 44 00	4C40.08	02 21 19	77.4	197.2	0.3		13.6	37	2535	22 44 00
22 46 00	---	02 23 19	77.3	198.9	0.4		14.9	120	2566	22 44 01
22 47 00	J0204+4005	02 24 19	76.7	195.9	0.3		12.4	38	2566	22 47 00
22 48 30	=0201+398	02 25 49	76.6	197.1	0.3		13.4	90	2589	22 47 01
22 49 30	4C40.08	02 26 50	77.1	201.8	0.4		17.1	37	2589	22 49 30
22 51 30	---	02 28 50	77.0	203.4	0.5		18.4	120	2620	22 49 31
22 52 30	J0204+4005	02 29 50	76.4	200.3	0.4		15.8	38	2620	22 52 30
22 54 00	=0201+398	02 31 20	76.4	201.5	0.4		16.7	90	2643	22 52 31
22 55 00	4C40.08	02 32 21	76.8	206.1	0.5		20.5	37	2643	22 55 00
22 57 00	---	02 34 21	76.6	207.7	0.5		21.6	120	2674	22 55 01
22 58 00	J0204+4005	02 35 21	76.1	204.6	0.5		19.1	38	2674	22 58 00
22 59 30	=0201+398	02 36 51	76.0	205.7	0.5		19.9	90	2697	22 58 01
23 00 30	4C40.08	02 37 51	76.4	210.3	0.6		23.6	37	2697	23 00 30
23 02 30	---	02 39 52	76.2	211.7	0.6		24.7	120	2728	23 00 31
23 03 30	J0204+4005	02 40 52	75.7	208.6	0.6		22.1	38	2728	23 03 30
23 05 00	=0201+398	02 42 22	75.6	209.7	0.6		22.9	90	2752	23 03 31
23 07 00	LQ033+03	02 44 23	69.2	197.3	0.5		12.3	79	2752	23 07 00
23 09 00	---	02 46 23	69.1	198.4	0.5		13.1	120	2782	23 07 01

Schedule for TORUN (Code Tr) Page 9

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 26 Oct 2020 Day 300 ---										
23 10 00	J0205+3212	02 47 23	67.9	203.6	0.7		16.6	35	2782	23 10 00
23 11 30	=0202+319	02 48 53	67.8	204.5	0.7		17.1	90	2806	23 10 01
23 12 30	LQ033+03	02 49 53	68.9	200.4	0.6		14.5	36	2806	23 12 30
23 14 30	---	02 51 54	68.8	201.6	0.6		15.2	120	2837	23 12 31
23 15 30	J0205+3212	02 52 54	67.6	206.6	0.8		18.5	36	2837	23 15 30
23 17 00	=0202+319	02 54 24	67.5	207.4	0.8		19.1	90	2860	23 15 31
23 18 00	LQ033+03	02 55 24	68.6	203.5	0.7		16.6	37	2860	23 18 00
23 20 00	---	02 57 25	68.5	204.6	0.7		17.3	120	2891	23 18 01
23 21 00	J0205+3212	02 58 25	67.2	209.4	0.9		20.4	36	2891	23 21 00
23 22 30	=0202+319	02 59 55	67.1	210.2	0.9		20.9	90	2914	23 21 01
23 23 30	LQ033+03	03 00 55	68.3	206.5	0.8		18.6	37	2914	23 23 30
23 25 30	---	03 02 56	68.1	207.6	0.8		19.3	120	2945	23 23 31
23 26 30	J0205+3212	03 03 56	66.8	212.2	1.0		22.3	36	2945	23 26 30
23 28 00	=0202+319	03 05 26	66.7	213.0	1.0		22.7	90	2968	23 26 31
23 29 00	LQ033+03	03 06 26	67.9	209.4	0.8		20.6	37	2968	23 29 00
23 31 00	---	03 08 26	67.7	210.5	0.9		21.3	120	2999	23 29 01
23 32 00	J0205+3212	03 09 27	66.3	214.9	1.1		24.0	37	2999	23 32 00
23 33 30	=0202+319	03 10 57	66.2	215.6	1.1		24.5	90	3022	23 32 01
23 34 30	LQ033+03	03 11 57	67.5	212.3	0.9		22.5	38	3022	23 34 30
23 36 30	---	03 13 57	67.3	213.3	1.0		23.1	120	3053	23 34 31
23 37 30	J0205+3212	03 14 58	65.8	217.5	1.1		25.6	37	3053	23 37 30
23 39 00	=0202+319	03 16 28	65.7	218.2	1.2		26.1	90	3076	23 37 31
23 40 00	LQ033+03	03 17 28	67.0	215.0	1.0		24.2	38	3076	23 40 00
23 42 00	---	03 19 28	66.8	216.0	1.1		24.9	120	3107	23 40 01
23 43 00	J0205+3212	03 20 28	65.3	220.0	1.2		27.2	38	3107	23 43 00
23 44 30	=0202+319	03 21 59	65.2	220.7	1.3		27.6	90	3130	23 43 01
23 47 30	0309+411B	03 24 59	78.2	189.7	0.2		7.8	100	3130	23 47 30
23 49 30	---	03 26 59	78.1	191.5	0.2		9.2	120	3161	23 47 31
23 49 30	0309+411B	03 26 59	78.1	191.5	0.2		9.2	-5	3161	No stop
23 51 30	---	03 29 00	78.1	193.3	0.2		10.6	115	3192	23 49 31

```
Schedule for TORUN     (Code Tr )                                  Page  10
               Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon  26 Oct 2020   Day 300 ---

23 52 00  0309+411B    03 29 30  78.0 193.8  0.3      11.0    22     3192   23 52 00
23 57 00  ---          03 34 31  77.8 198.2  0.3      14.5   300     3269   23 52 01

23 57 00  0309+411B    03 34 31  77.8 198.2  0.3      14.5    -5     3269   No stop
23 59 00  ---          03 36 31  77.7 199.9  0.4      15.8   115     3300   23 57 01

 --- Start: Mon  26 Oct 2020   Day 300 -- Stop: Tue  27 Oct 2020   Day 301 ---

23 59 00  0309+411B    03 36 31  77.7 199.9  0.4      15.8    -5     3300   No stop
00 01 00  ---          03 38 31  77.6 201.6  0.4      17.1   115     3331   23 59 01

00 01 30  0309+411B    03 39 01  77.6 202.0  0.4      17.4    22     3331   00 01 30
00 06 30  ---          03 44 02  77.3 206.1  0.5      20.6   300     3409   00 01 31

00 11 30  J0654+5042   03 49 03  61.6  75.7 -3.1     -66.7    24     3409   00 11 30
00 13 00  =0650+507    03 50 33  61.8  75.9 -3.1     -66.8    90     3432   00 11 31

 ---------- ########### Effelsberg back ########### ----------

00 14 00  0658+49      03 51 34  60.1  78.2 -3.2     -63.5    39     3432   00 14 00
00 16 00  ---          03 53 34  60.4  78.5 -3.2     -63.7   120     3463   00 14 01

00 17 00  J0654+5042   03 54 34  62.4  76.5 -3.0     -67.1    39     3463   00 17 00
00 18 30  =0650+507    03 56 04  62.6  76.7 -3.0     -67.2    90     3486   00 17 01

00 19 30  0658+49      03 57 04  60.9  79.0 -3.1     -63.9    39     3486   00 19 30
00 21 30  ---          03 59 05  61.2  79.3 -3.1     -64.0   120     3517   00 19 31

00 22 30  J0654+5042   04 00 05  63.2  77.2 -2.9     -67.5    39     3517   00 22 30
00 24 00  =0650+507    04 01 35  63.4  77.4 -2.9     -67.6    90     3540   00 22 31

00 25 00  0658+49      04 02 35  61.7  79.9 -3.0     -64.2    40     3540   00 25 00
00 27 00  ---          04 04 36  62.0  80.2 -3.0     -64.3   120     3571   00 25 01

00 28 00  J0654+5042   04 05 36  64.0  78.0 -2.8     -67.9    39     3571   00 28 00
00 29 30  =0650+507    04 07 06  64.2  78.2 -2.8     -68.0    90     3594   00 28 01

00 30 30  0658+49      04 08 06  62.5  80.7 -2.9     -64.5    40     3594   00 30 30
00 32 30  ---          04 10 07  62.8  81.0 -2.9     -64.6   120     3625   00 30 31

00 33 30  J0654+5042   04 11 07  64.8  78.7 -2.7     -68.3    39     3625   00 33 30
00 35 00  =0650+507    04 12 37  65.0  78.9 -2.7     -68.4    90     3648   00 33 31

00 36 00  0658+49      04 13 37  63.3  81.6 -2.8     -64.8    40     3648   00 36 00
00 38 00  ---          04 15 37  63.6  81.9 -2.8     -64.9   120     3679   00 36 01
```

```
Schedule for TORUN     (Code Tr )                                  Page  11
               Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Tue  27 Oct 2020   Day 301 ---

00 39 00  J0654+5042   04 16 38  65.6  79.5 -2.7     -68.7    39     3679   00 39 00
00 40 30  =0650+507    04 18 08  65.8  79.7 -2.6     -68.8    90     3702   00 39 01

00 41 30  0658+49      04 19 08  64.2  82.4 -2.7     -65.0    40     3702   00 41 30
00 43 30  ---          04 21 08  64.5  82.7 -2.7     -65.1   120     3733   00 41 31

00 44 30  J0654+5042   04 22 09  66.4  80.2 -2.6     -69.1    39     3733   00 44 30
00 46 00  =0650+507    04 23 39  66.7  80.5 -2.5     -69.1    90     3756   00 44 31

00 47 00  0658+49      04 24 39  65.0  83.3 -2.7     -65.3    40     3756   00 47 00
00 49 00  ---          04 26 39  65.3  83.6 -2.6     -65.3   120     3787   00 47 01

00 50 00  J0654+5042   04 27 39  67.2  81.0 -2.5     -69.4    39     3787   00 50 00
00 51 30  =0650+507    04 29 10  67.5  81.3 -2.4     -69.5    90     3810   00 50 01

00 52 30  0658+49      04 30 10  65.8  84.2 -2.6     -65.5    40     3810   00 52 30
00 54 30  ---          04 32 10  66.1  84.6 -2.5     -65.6   120     3841   00 52 31

00 55 30  J0654+5042   04 33 10  68.1  81.8 -2.4     -69.7    39     3841   00 55 30
00 57 00  =0650+507    04 34 41  68.3  82.1 -2.4     -69.8    90     3865   00 55 31

00 58 00  0658+49      04 35 41  66.6  85.1 -2.5     -65.7    40     3865   00 58 00
01 00 00  ---          04 37 41  66.9  85.5 -2.4     -65.7   120     3895   00 58 01

01 01 00  J0654+5042   04 38 41  68.9  82.7 -2.3     -70.0    39     3895   01 01 00
01 02 30  =0650+507    04 40 11  69.1  82.9 -2.3     -70.1    90     3919   01 01 01

01 03 30  0658+49      04 41 12  67.5  86.1 -2.4     -65.8    39     3919   01 03 30
01 05 30  ---          04 43 12  67.8  86.5 -2.3     -65.9   120     3950   01 03 31

01 06 30  J0654+5042   04 44 12  69.7  83.5 -2.2     -70.3    39     3950   01 06 30
01 08 00  =0650+507    04 45 42  69.9  83.7 -2.2     -70.4    90     3973   01 06 31

01 09 00  0658+49      04 46 43  68.3  87.1 -2.3     -66.0    39     3973   01 09 00
01 11 00  ---          04 48 43  68.6  87.4 -2.2     -66.0   120     4004   01 09 01

01 12 00  J0654+5042   04 49 43  70.5  84.4 -2.1     -70.6    39     4004   01 12 00
01 13 30  =0650+507    04 51 13  70.8  84.6 -2.1     -70.6    90     4027   01 12 01

01 14 30  0658+49      04 52 13  69.1  88.1 -2.2     -66.1    39     4027   01 14 30
01 16 30  ---          04 54 14  69.4  88.5 -2.2     -66.1   120     4058   01 14 31

01 17 30  J0654+5042   04 55 14  71.4  85.2 -2.0     -70.8    39     4058   01 17 30
01 19 00  =0650+507    04 56 44  71.6  85.5 -2.0     -70.9    90     4081   01 17 31
```

```
Schedule for TORUN     (Code Tr )                                  Page  12
               Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Tue  27 Oct 2020   Day 301 ---

01 20 00  0658+49      04 57 44  69.9  89.1 -2.1     -66.1    38     4081   01 20 00
01 22 00  ---          04 59 45  70.2  89.5 -2.1     -66.1   120     4112   01 20 01

01 23 00  J0654+5042   05 00 45  72.2  86.2 -1.9     -71.0    38     4112   01 23 00
01 24 30  =0650+507    05 02 15  72.4  86.4 -1.9     -71.0    90     4135   01 23 01

01 25 30  0658+49      05 03 15  70.8  90.2 -2.0     -66.1    38     4135   01 25 30
01 27 30  ---          05 05 16  71.1  90.6 -2.0     -66.1   120     4166   01 25 31

01 28 30  J0654+5042   05 06 16  73.0  87.1 -1.8     -71.2    38     4166   01 28 30
01 30 00  =0650+507    05 07 46  73.2  87.4 -1.8     -71.2    90     4189   01 28 31

01 31 00  0658+49      05 08 46  71.6  91.4 -1.9     -66.1    37     4189   01 31 00
01 33 00  ---          05 10 46  71.9  91.8 -1.9     -66.1   120     4220   01 31 01

01 34 00  J0654+5042   05 11 47  73.8  88.1 -1.7     -71.3    37     4220   01 34 00
01 35 30  =0650+507    05 13 17  74.1  88.4 -1.7     -71.3    90     4243   01 34 01

01 36 30  0658+49      05 14 17  72.4  92.6 -1.8     -66.0    37     4243   01 36 30
01 38 30  ---          05 16 17  72.7  93.0 -1.8     -66.0   120     4274   01 36 31

01 39 30  J0654+5042   05 17 18  74.7  89.1 -1.6     -71.3    37     4274   01 39 30
01 41 00  =0650+507    05 18 48  74.9  89.4 -1.6     -71.4    90     4297   01 39 31

01 42 00  0658+49      05 19 48  73.3  93.8 -1.7     -65.8    37     4297   01 42 00
01 44 00  ---          05 21 48  73.6  94.3 -1.7     -65.8   120     4328   01 42 01

01 45 00  J0654+5042   05 22 48  75.5  90.2 -1.6     -71.4    37     4328   01 45 00
01 46 30  =0650+507    05 24 19  75.7  90.5 -1.5     -71.4    90     4352   01 45 01

01 47 30  0658+49      05 25 19  74.1  95.1 -1.6     -65.6    36     4352   01 47 30
01 49 30  ---          05 27 19  74.4  95.6 -1.6     -65.5   120     4382   01 47 31

01 50 30  J0654+5042   05 28 19  76.3  91.4 -1.5     -71.3    36     4382   01 50 30
01 52 00  =0650+507    05 29 50  76.5  91.7 -1.4     -71.3    90     4406   01 50 31

01 53 00  0658+49      05 30 50  74.9  96.5 -1.5     -65.3    36     4406   01 53 00
01 55 00  ---          05 32 50  75.2  97.1 -1.5     -65.2   120     4437   01 53 01

01 56 00  J0654+5042   05 33 50  77.1  92.6 -1.4     -71.2    36     4437   01 56 00
01 57 30  =0650+507    05 35 21  77.4  92.9 -1.3     -71.1    90     4460   01 56 01
```

```
Schedule for TORUN     (Code Tr )                                  Page  13
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Tue  27 Oct 2020   Day 301 ---

 ---------- ########### Effelsberg out for pointing ########### ----------

01 58 30  0658+49      05 36 21  75.7  98.0 -1.5     -64.9    35     4460   01 58 30
02 00 30  ---          05 38 21  76.0  98.6 -1.4     -64.7   120     4491   01 58 31

02 01 30  J0654+5042   05 39 21  78.0  93.9 -1.3     -71.0    35     4491   02 01 30
02 03 00  =0650+507    05 40 51  78.2  94.3 -1.3     -70.9    90     4514   02 01 31

02 04 00  0658+49      05 41 52  76.5  99.7 -1.4     -64.4    35     4514   02 04 00
02 06 00  ---          05 43 52  76.8 100.3 -1.3     -64.1   120     4545   02 04 01

02 07 00  J0654+5042   05 44 52  78.8  95.3 -1.2     -70.7    35     4545   02 07 00
02 08 30  =0650+507    05 46 22  79.0  95.7 -1.2     -70.5    90     4568   02 07 01

 ---------- ########### Effelsberg back ########### ----------

02 09 30  0658+49      05 47 22  77.4 101.4 -1.3     -63.7    34     4568   02 09 30
02 11 30  ---          05 49 23  77.6 102.1 -1.2     -63.4   120     4599   02 09 31

02 12 30  J0654+5042   05 50 23  79.6  96.9 -1.1     -70.2    34     4599   02 12 30
02 14 00  =0650+507    05 51 53  79.8  97.3 -1.1     -70.0    90     4622   02 12 31

02 15 00  0658+49      05 52 53  78.2 103.3 -1.2     -62.8    33     4622   02 15 00
02 17 00  ---          05 54 54  78.5 104.1 -1.1     -62.5   120     4653   02 15 01

02 18 00  J0654+5042   05 55 54  80.4  98.6 -1.0     -69.5    34     4653   02 18 00
02 19 30  =0650+507    05 57 24  80.7  99.1 -1.0     -69.3    90     4676   02 18 01

02 20 30  0658+49      05 58 24  79.0 105.5 -1.1     -61.8    33     4676   02 20 30
02 22 30  ---          06 00 25  79.3 106.3 -1.1     -61.4   120     4707   02 20 31

02 23 30  J0654+5042   06 01 25  81.3 100.6 -0.9     -68.7    33     4707   02 23 30
02 25 00  =0650+507    06 02 55  81.5 101.2 -0.9     -68.4    90     4730   02 23 31

02 26 00  0658+49      06 03 55  79.8 107.8 -1.0     -60.5    32     4730   02 26 00
02 28 00  ---          06 05 56  80.0 108.8 -1.0     -60.0   120     4761   02 26 01

02 29 00  J0654+5042   06 06 56  82.1 102.8 -0.8     -67.5    33     4761   02 29 00
02 30 30  =0650+507    06 08 26  82.3 103.5 -0.8     -67.1    90     4784   02 29 01

02 31 30  0658+49      06 09 26  80.5 110.5 -0.9     -58.9    32     4784   02 31 30
02 33 30  ---          06 11 26  80.8 111.6 -0.9     -58.3   120     4815   02 31 31

02 34 30  J0654+5042   06 12 27  82.9 105.5 -0.7     -66.0    32     4815   02 34 30
02 36 00  =0650+507    06 13 57  83.1 106.3 -0.7     -65.5    90     4838   02 34 31
```

Schedule for TORUN (Code Tr) Page 14

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 27 Oct 2020 Day 301 ---										
02 37 00	0658+49	06 14 57	81.3	113.5	-0.8		-57.0	31	4838	02 37 00
02 39 00	---	06 16 57	81.6	114.8	-0.8		-56.1	120	4869	02 37 01
02 40 00	J0654+5042	06 17 58	83.7	108.6	-0.6		-63.9	32	4869	02 40 00
02 41 30	=0650+507	06 19 28	83.9	109.6	-0.6		-63.2	90	4893	02 40 01
02 42 30	0658+49	06 20 28	82.1	117.1	-0.7		-54.5	31	4893	02 42 30
02 44 30	---	06 22 28	82.3	118.5	-0.7		-53.5	120	4923	02 42 31
02 45 30	J0654+5042	06 23 28	84.4	112.5	-0.5		-61.1	32	4923	02 45 30
02 47 00	=0650+507	06 24 59	84.6	113.7	-0.5		-60.2	90	4947	02 45 31
02 48 00	0658+49	06 25 59	82.8	121.2	-0.6		-51.5	31	4947	02 48 00
02 50 00	---	06 27 59	83.0	122.9	-0.6		-50.2	120	4978	02 48 01
02 51 00	J0654+5042	06 28 59	85.2	117.5	-0.4		-57.2	33	4978	02 51 00
02 52 30	=0650+507	06 30 30	85.4	119.1	-0.4		-55.9	90	5001	02 51 01
02 53 30	0658+49	06 31 30	83.5	126.1	-0.5		-47.6	32	5001	02 53 30
02 55 30	---	06 33 30	83.7	128.1	-0.5		-46.0	120	5032	02 53 31
02 56 30	J0654+5042	06 34 30	85.9	124.0	-0.4		-51.8	35	5032	02 56 30
02 58 00	=0650+507	06 36 00	86.1	126.1	-0.3		-49.9	90	5055	02 56 31
---------- ########### Fringe Finder ########### ----------										
03 01 49	4C39.25	06 39 50	58.1	99.1	-2.8		-49.7	109	5055	03 01 49
03 03 49	---	06 41 50	58.4	99.6	-2.8		-49.6	120	5086	03 01 50
03 05 49	0654+73	06 43 50	69.7	2.7	-0.2		-174.3	-89	5086	03 05 49
03 07 49	---	06 45 51	69.8	2.3	-0.2		-175.2	31	5117	03 05 50
03 08 49	J0714+7408	06 46 51	68.8	5.7	-0.5		-167.4	38	5117	03 08 49
03 10 19	=0708+742	06 48 21	68.8	5.5	-0.5		-168.0	90	5140	03 08 50
03 11 19	0654+73	06 49 21	69.8	1.6	-0.1		-176.7	38	5140	03 11 19
03 13 19	---	06 51 22	69.8	1.2	-0.1		-177.5	120	5171	03 11 20
03 14 19	J0714+7408	06 52 22	68.8	4.7	-0.4		-169.6	38	5171	03 14 19
03 15 49	=0708+742	06 53 52	68.9	4.4	-0.4		-170.3	90	5194	03 14 20
03 16 49	0654+73	06 54 52	69.8	0.4	-0.0		-179.1	37	5194	03 16 49
03 18 49	---	06 56 53	69.8	0.0	-0.0		-179.9	120	5225	03 16 50

Schedule for TORUN (Code Tr) Page 15

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 27 Oct 2020 Day 301 ---										
03 19 49	J0714+7408	06 57 53	68.9	3.7	-0.3		-171.9	38	5225	03 19 49
03 21 19	=0708+742	06 59 23	68.9	3.4	-0.3		-172.6	90	5248	03 19 50
03 22 19	0654+73	07 00 23	69.8	-0.7	0.1		178.5	37	5248	03 22 19
03 24 19	---	07 02 24	69.8	-1.1	0.1		177.7	120	5279	03 22 20
03 25 19	J0714+7408	07 03 24	69.0	2.6	-0.2		-174.2	37	5279	03 25 19
03 26 49	=0708+742	07 04 54	69.0	2.3	-0.2		-174.9	90	5302	03 25 20
03 27 49	0654+73	07 05 54	69.8	-1.8	0.1		176.1	37	5302	03 27 49
03 29 49	---	07 07 54	69.8	-2.3	0.2		175.3	120	5333	03 27 50
03 30 49	J0714+7408	07 08 55	69.0	1.6	-0.1		-176.5	37	5333	03 30 49
03 32 19	=0708+742	07 10 25	69.0	1.3	-0.1		-177.2	90	5356	03 30 50
03 33 19	0654+73	07 11 25	69.7	-3.0	0.2		173.7	37	5356	03 33 19
03 35 19	---	07 13 25	69.7	-3.4	0.3		172.9	120	5387	03 33 20
03 36 19	J0714+7408	07 14 25	69.0	0.5	-0.0		-178.8	37	5387	03 36 19
03 37 49	=0708+742	07 15 56	69.0	0.2	-0.0		-179.5	90	5410	03 36 20
03 38 49	0654+73	07 16 56	69.7	-4.1	0.3		171.4	37	5410	03 38 49
03 40 49	---	07 18 56	69.7	-4.5	0.4		170.5	120	5441	03 38 50
03 41 49	J0714+7408	07 19 56	69.0	-0.5	0.0		178.8	37	5441	03 41 49
03 43 19	=0708+742	07 21 27	69.0	-0.8	0.1		178.2	90	5465	03 41 50
03 44 19	0654+73	07 22 27	69.6	-5.2	0.4		169.0	36	5465	03 44 19
03 46 19	---	07 24 27	69.6	-5.7	0.5		168.1	120	5495	03 44 20
03 47 19	J0714+7408	07 25 27	69.0	-1.6	0.1		176.5	37	5495	03 47 19
03 48 49	=0708+742	07 26 58	69.0	-1.9	0.2		175.9	90	5519	03 47 20
03 51 49	4C75	07 29 58	66.9	8.3	-0.9		-159.7	144	5519	03 51 49
03 53 49	---	07 31 58	67.0	8.0	-0.8		-160.4	120	5550	03 51 50
03 53 49	4C75	07 31 58	67.0	8.0	-0.8		-160.4	-5	5550	No stop
03 55 49	---	07 33 59	67.0	7.7	-0.8		-161.2	115	5580	03 53 50
03 56 19	4C75	07 34 29	67.0	7.6	-0.8		-161.4	24	5580	03 56 19
03 58 19	---	07 36 29	67.1	7.3	-0.8		-162.2	120	5611	03 56 20
03 58 19	4C75	07 36 29	67.1	7.3	-0.8		-162.2	-5	5611	No stop
04 00 19	---	07 38 29	67.1	7.0	-0.7		-162.9	115	5642	03 58 20

```
Schedule for TORUN     (Code Tr )                                  Page  16
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Tue  27 Oct 2020   Day 301 ---

04 00 49  4C75         07 39 00  67.1   6.9 -0.7    -163.1    24     5642   04 00 49
04 02 49  ---          07 41 00  67.2   6.6 -0.7    -163.9   120     5673   04 00 50

04 02 49  4C75         07 41 00  67.2   6.6 -0.7    -163.9    -5     5673   No stop
04 04 49  ---          07 43 00  67.2   6.3 -0.7    -164.7   115     5704   04 02 50

04 05 19  4C75         07 43 30  67.2   6.2 -0.6    -164.8    24     5704   04 05 19
04 07 19  ---          07 45 31  67.2   5.9 -0.6    -165.6   120     5735   04 05 20

04 07 19  4C75         07 45 31  67.2   5.9 -0.6    -165.6    -5     5735   No stop
04 09 19  ---          07 47 31  67.3   5.6 -0.6    -166.4   115     5766   04 07 20

04 09 49  4C75         07 48 01  67.3   5.5 -0.6    -166.6    24     5766   04 09 49
04 11 49  ---          07 50 01  67.3   5.2 -0.5    -167.4   120     5797   04 09 50

 ---------- ########### Effelsberg out for pointing ########### ----------

04 13 49  0654+73      07 52 02  69.0 -11.0  0.9     156.5    73     5797   04 13 49
04 15 49  ---          07 54 02  68.9 -11.4  1.0     155.7   120     5828   04 13 50

04 16 49  J0714+7408   07 55 02  68.6  -7.1  0.6     164.3    36     5828   04 16 49
04 18 19  =0708+742    07 56 32  68.6  -7.4  0.7     163.7    90     5851   04 16 50

04 19 19  0654+73      07 57 33  68.8 -12.0  1.0     154.3    36     5851   04 19 19
04 21 19  ---          07 59 33  68.8 -12.3  1.0     153.5   120     5882   04 19 20

04 22 19  J0714+7408   08 00 33  68.5  -8.1  0.7     162.0    36     5882   04 22 19
04 23 49  =0708+742    08 02 03  68.5  -8.4  0.7     161.4    90     5905   04 22 20

 ---------- ########### Effelsberg back ########### ----------

04 24 49  0654+73      08 03 03  68.6 -13.0  1.1     152.0    36     5905   04 24 49
04 26 49  ---          08 05 04  68.6 -13.3  1.1     151.2   120     5936   04 24 50

04 27 49  J0714+7408   08 06 04  68.4  -9.1  0.8     159.8    36     5936   04 27 49
04 29 19  =0708+742    08 07 34  68.4  -9.3  0.8     159.2    90     5959   04 27 50

04 30 19  0654+73      08 08 34  68.5 -13.9  1.2     149.8    36     5959   04 30 19
04 32 19  ---          08 10 35  68.4 -14.2  1.2     149.0   120     5990   04 30 20

04 33 19  J0714+7408   08 11 35  68.3 -10.0  0.9     157.6    36     5990   04 33 19
04 34 49  =0708+742    08 13 05  68.2 -10.3  0.9     157.0    90     6013   04 33 20

04 35 49  0654+73      08 14 05  68.2 -14.8  1.3     147.7    36     6013   04 35 49
04 37 49  ---          08 16 06  68.2 -15.2  1.3     146.9   120     6044   04 35 50
```

Schedule for TORUN (Code Tr) Page 17

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 27 Oct 2020 Day 301 ---										
04 38 49	J0714+7408	08 17 06	68.1	-11.0	1.0		155.4	36	6044	04 38 49
04 40 19	=0708+742	08 18 36	68.1	-11.2	1.0		154.8	90	6067	04 38 50
04 41 19	0654+73	08 19 36	68.0	-15.7	1.4		145.5	36	6067	04 41 19
04 43 19	---	08 21 36	67.9	-16.0	1.4		144.8	120	6098	04 41 20
04 44 19	J0714+7408	08 22 37	68.0	-11.9	1.1		153.2	36	6098	04 44 19
04 45 49	=0708+742	08 24 07	67.9	-12.1	1.1		152.6	90	6121	04 44 20
04 46 49	0654+73	08 25 07	67.8	-16.6	1.5		143.4	36	6121	04 46 49
04 48 49	---	08 27 07	67.7	-16.9	1.5		142.6	120	6152	04 46 50
04 49 49	J0714+7408	08 28 08	67.8	-12.8	1.2		151.1	37	6152	04 49 49
04 51 19	=0708+742	08 29 38	67.7	-13.0	1.2		150.5	90	6176	04 49 50
04 52 19	0654+73	08 30 38	67.6	-17.4	1.6		141.3	36	6176	04 52 19
04 54 19	---	08 32 38	67.5	-17.7	1.6		140.6	120	6207	04 52 20
04 55 19	J0714+7408	08 33 38	67.6	-13.6	1.3		148.9	37	6207	04 55 19
04 56 49	=0708+742	08 35 09	67.5	-13.8	1.3		148.4	90	6230	04 55 20
04 59 49	4C75	08 38 09	67.5	-2.6	0.3		173.8	142	6230	04 59 49
05 01 49	---	08 40 10	67.5	-2.9	0.3		173.0	120	6261	04 59 50
05 01 49	4C75	08 40 10	67.5	-2.9	0.3		173.0	-5	6261	No stop
05 03 49	---	08 42 10	67.4	-3.2	0.3		172.2	115	6292	05 01 50
05 04 19	4C75	08 42 40	67.4	-3.3	0.3		172.0	24	6292	05 04 19
05 06 19	---	08 44 40	67.4	-3.6	0.4		171.3	120	6322	05 04 20
05 06 19	4C75	08 44 40	67.4	-3.6	0.4		171.3	-5	6322	No stop
05 08 19	---	08 46 41	67.4	-3.9	0.4		170.5	115	6353	05 06 20
05 08 49	4C75	08 47 11	67.4	-4.0	0.4		170.3	24	6353	05 08 49
05 10 49	---	08 49 11	67.4	-4.3	0.4		169.5	120	6384	05 08 50
05 10 49	4C75	08 49 11	67.4	-4.3	0.4		169.5	-5	6384	No stop
05 12 49	---	08 51 11	67.3	-4.7	0.5		168.7	115	6415	05 10 50
05 13 19	4C75	08 51 41	67.3	-4.7	0.5		168.5	24	6415	05 13 19
05 15 19	---	08 53 42	67.3	-5.1	0.5		167.7	120	6446	05 13 20
05 15 19	4C75	08 53 42	67.3	-5.1	0.5		167.7	-5	6446	No stop
05 17 19	---	08 55 42	67.3	-5.4	0.6		167.0	115	6477	05 15 20

Schedule for TORUN (Code Tr) Page 18

Zooming into the cores of restarting giant radio galaxies

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 27 Oct 2020 Day 301 ---										
05 17 49	4C75	08 56 12	67.3	-5.4	0.6		166.8	24	6477	05 17 49
05 19 49	---	08 58 12	67.2	-5.8	0.6		166.0	120	6508	05 17 50
05 19 49	4C75	08 58 12	67.2	-5.8	0.6		166.0	-5	6508	No stop
05 21 49	---	09 00 13	67.2	-6.1	0.6		165.2	115	6539	05 19 50
05 22 19	4C75	09 00 43	67.2	-6.2	0.6		165.0	24	6539	05 22 19
05 24 19	---	09 02 43	67.2	-6.5	0.7		164.3	120	6570	05 22 20
05 24 19	4C75	09 02 43	67.2	-6.5	0.7		164.3	-5	6570	No stop
05 26 19	---	09 04 44	67.1	-6.8	0.7		163.5	115	6601	05 24 20
05 26 49	4C75	09 05 14	67.1	-6.8	0.7		163.3	24	6601	05 26 49
05 28 49	---	09 07 14	67.1	-7.2	0.7		162.5	120	6632	05 26 50
05 30 49	0654+73	09 09 14	65.6	-22.3	2.2		127.6	75	6632	05 30 49
05 32 49	---	09 11 15	65.5	-22.5	2.2		126.9	120	6663	05 30 50
05 33 49	J0714+7408	09 12 15	66.0	-18.9	1.9		134.8	38	6663	05 33 49
05 35 19	=0708+742	09 13 45	65.9	-19.1	1.9		134.3	90	6686	05 33 50
05 36 19	0654+73	09 14 45	65.3	-22.9	2.3		125.8	38	6686	05 36 19
05 38 19	---	09 16 46	65.1	-23.1	2.3		125.1	120	6717	05 36 20
05 39 19	J0714+7408	09 17 46	65.7	-19.5	2.0		132.9	38	6717	05 39 19
05 40 49	=0708+742	09 19 16	65.6	-19.7	2.0		132.4	90	6740	05 39 20
05 41 49	0654+73	09 20 16	64.9	-23.4	2.4		124.0	38	6740	05 41 49
05 43 49	---	09 22 16	64.8	-23.6	2.4		123.3	120	6771	05 41 50
05 44 49	J0714+7408	09 23 17	65.4	-20.1	2.1		131.0	38	6771	05 44 49
05 46 19	=0708+742	09 24 47	65.3	-20.3	2.1		130.5	90	6794	05 44 50
05 47 19	0654+73	09 25 47	64.6	-23.9	2.5		122.2	38	6794	05 47 19
05 49 19	---	09 27 47	64.5	-24.1	2.5		121.5	120	6825	05 47 20
05 50 19	J0714+7408	09 28 48	65.1	-20.7	2.2		129.2	38	6825	05 50 19
05 51 49	=0708+742	09 30 18	65.0	-20.9	2.2		128.7	90	6848	05 50 20
05 52 49	0654+73	09 31 18	64.3	-24.4	2.6		120.4	38	6848	05 52 49
05 54 49	---	09 33 18	64.1	-24.5	2.6		119.8	120	6879	05 52 50
05 55 49	J0714+7408	09 34 18	64.8	-21.3	2.3		127.3	39	6879	05 55 49
05 57 19	=0708+742	09 35 49	64.7	-21.4	2.3		126.9	90	6902	05 55 50

```
Schedule for TORUN     (Code Tr )                                  Page  19
              Zooming into the cores of restarting giant radio galaxies
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Tue  27 Oct 2020   Day 301 ---

05 58 19  0654+73      09 36 49  63.9 -24.8  2.7     118.7    39     6902   05 58 19
06 00 19  ---          09 38 49  63.8 -25.0  2.7     118.1   120     6933   05 58 20

06 01 19  J0714+7408   09 39 49  64.5 -21.8  2.4     125.5    39     6933   06 01 19
06 02 49  =0708+742    09 41 20  64.4 -21.9  2.4     125.1    90     6956   06 01 20

06 03 49  0654+73      09 42 20  63.6 -25.2  2.8     117.0    39     6956   06 03 49
06 05 49  ---          09 44 20  63.4 -25.4  2.8     116.4   120     6987   06 03 50

06 06 49  J0714+7408   09 45 20  64.2 -22.3  2.5     123.8    39     6987   06 06 49
06 08 19  =0708+742    09 46 50  64.1 -22.4  2.5     123.3    90     7010   06 06 50

06 09 19  0654+73      09 47 51  63.2 -25.6  2.8     115.3    39     7010   06 09 19
06 11 19  ---          09 49 51  63.1 -25.8  2.9     114.7   120     7041   06 09 20

06 12 19  J0714+7408   09 50 51  63.9 -22.8  2.6     122.0    39     7041   06 12 19
06 13 49  =0708+742    09 52 21  63.8 -22.9  2.6     121.6    90     7064   06 12 20

06 14 49  0654+73      09 53 22  62.9 -26.0  2.9     113.7    39     7064   06 14 49
06 16 49  ---          09 55 22  62.7 -26.1  3.0     113.1   120     7095   06 14 50

06 17 49  J0714+7408   09 56 22  63.6 -23.2  2.7     120.3    40     7095   06 17 49
06 19 19  =0708+742    09 57 52  63.5 -23.3  2.7     119.8    90     7119   06 17 50

06 20 19  0654+73      09 58 52  62.5 -26.3  3.0     112.1    40     7119   06 20 19
06 22 19  ---          10 00 53  62.4 -26.4  3.1     111.5   120     7149   06 20 20

06 23 19  J0714+7408   10 01 53  63.2 -23.6  2.7     118.6    40     7149   06 23 19
06 24 49  =0708+742    10 03 23  63.1 -23.7  2.8     118.1    90     7173   06 23 20

06 25 49  0654+73      10 04 23  62.1 -26.6  3.1     110.5    40     7173   06 25 49
06 27 49  ---          10 06 24  62.0 -26.7  3.2     109.9   120     7204   06 25 50

06 28 49  J0714+7408   10 07 24  62.9 -24.0  2.8     116.9    40     7204   06 28 49
06 29 49  =0708+742    10 08 24  62.8 -24.1  2.9     116.6    60     7219   06 28 50



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00
```

Disk used to record data.

```
 1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
          21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

The following frequency sets based on these setups were used.

 Frequency Set:   7  Setup file default.  Used with PCAL = off
 LO sum=   22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.49
           22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.49
 BBC fr=     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.49
             787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.49
 Bandwd=      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
              32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
  Matching frequency sets:   7  14

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* 0309+411B         03 09 44.731641   * 03 13 01.900000     03 14 24.451857       0.00
                    41 08 48.61606    * 41 20 01.00000      41 24 36.73754        0.00

* 4C40.08           01 57 22.236897   * 02 00 24.480600     02 01 40.932717       0.00
                    40 34 34.21982    * 40 49 04.32100      40 55 05.84346        0.00

* LQ033+03          02 11 18.131170   * 02 14 15.400000     02 15 29.610184       0.00
                    32 37 06.54880    * 32 51 05.00000      32 56 53.17296        0.00

* 0658+49           06 58 18.253245   * 07 02 06.268000     07 03 40.161580       0.00
                    49 03 40.49882    * 48 59 20.30000      48 57 21.45165        0.00

* 0654+73           06 48 15.042628   * 06 54 26.700000     06 56 59.972004       0.00
                    73 23 32.64153    * 73 19 50.00000      73 17 57.58582        0.00

* 4C75              08 13 39.650505   * 08 19 50.500000     08 22 20.766729       0.00
                    75 48 02.54756    * 75 38 39.56000      75 34 26.89229        0.00

  0201+398          02 01 02.903347   * 02 04 05.194780     02 05 21.646777       0.19
* J0204+4005        39 50 41.49514    * 40 05 03.51511      40 11 01.53119        0.15
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     72 observations.

  0202+319          02 02 09.652800   * 02 05 04.925362     02 06 18.298037       0.00
```

```
* J0205+3212        31 58 10.39522    * 32 12 30.09544      32 18 27.50301        0.00
  J0205+32          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  49141 observations.

* 0234+285          02 34 55.589590   * 02 37 52.405677     02 39 06.350265       0.00
  J0237+2848        28 35 11.40773    * 28 48 08.98999      28 53 31.28481        0.00
  J0237+28          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  58420 observations.

  0650+507          06 50 28.757134   * 06 54 22.093158     06 55 58.259374       0.15
* J0654+5042        50 46 11.08313    * 50 42 23.87323      50 40 38.07403        0.11
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    162 observations.

  0708+742          07 08 18.040386   * 07 14 36.124974     07 17 11.452047       0.56
* J0714+7408        74 13 17.50282    * 74 08 10.14418      74 05 42.34984        0.15
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     80 observations.

* 4C39.25           09 23 55.319216   * 09 27 03.013937     09 28 19.203586       0.31
  J0927+3902        39 15 23.56644    * 39 02 20.85185      38 56 52.48557        0.16
  0923+392          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0927+39          GSFC 2016a X/S astro solution, 250526 observations.
```

gm077tr

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

PI: *L. Moscadelli*

Address: Osservatorio Astrofisico di Arcetri

Phone during observation: +39 055 2752220

Observing mode: Polarization observations of 1 source at 22 GHz (256 Mb/s)

```
Schedule for TORUN     (Code Tr )                                    Page   2
               THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Tue  27 Oct 2020   Day 301 ---

 Next scan frequencies:  22196.00  22196.00  22212.00  22212.00  22228.00  22228.00  22244.00  22244.0
 Next BBC frequencies:     716.00    716.00    732.00    732.00    748.00    748.00    764.00    764.0
 Next scan bandwidths:      16.00     16.00     16.00     16.00     16.00     16.00     16.00     16.0

13 30 00  J2202+4216   17 09 44  41.7  71.5 -4.9     -50.4     0        0   13 30 00
13 40 00  =VR422201    17 19 46  43.1  73.1 -4.7     -51.1   600       39   13 30 01

13 43 00  G92.69       17 22 46  56.6  67.7 -3.8     -65.7   117       39   13 43 00
13 52 00  ---          17 31 48  57.8  68.7 -3.6     -66.7   540       73   13 43 01

13 52 20  G92.69       17 32 08  57.9  68.7 -3.6     -66.7    14       73   13 52 20
14 04 00  ---          17 43 50  59.5  70.0 -3.4     -67.9   700      119   13 52 21

14 04 20  G92.69       17 44 10  59.5  70.1 -3.4     -67.9    14      119   14 04 20
14 16 00  ---          17 55 52  61.2  71.4 -3.2     -69.1   700      164   14 04 21

14 16 20  G92.69       17 56 12  61.3  71.4 -3.2     -69.1    14      164   14 16 20
14 28 00  ---          18 07 54  62.9  72.8 -3.0     -70.3   700      209   14 16 21

14 28 20  G92.69       18 08 14  63.0  72.8 -3.0     -70.3    14      209   14 28 20
14 40 00  ---          18 19 56  64.7  74.1 -2.8     -71.4   700      254   14 28 21

14 43 00  J2202+4216   18 22 56  52.4  83.7 -3.7     -53.9   119      254   14 43 00
14 51 00  =VR422201    18 30 58  53.6  85.1 -3.5     -54.1   480      285   14 43 01

14 54 00  G92.69       18 33 58  66.7  75.7 -2.6     -72.8   118      285   14 54 00
14 59 00  ---          18 38 59  67.4  76.3 -2.5     -73.2   300      304   14 54 01

14 59 00  G92.69       18 38 59  67.4  76.3 -2.5     -73.2    -5      304   No stop
15 03 00  ---          18 43 00  68.0  76.7 -2.5     -73.6   235      319   14 59 01

15 03 20  G92.69       18 43 20  68.1  76.8 -2.4     -73.6    14      319   15 03 20
15 15 00  ---          18 55 02  69.8  78.1 -2.2     -74.7   700      365   15 03 21

15 15 20  G92.69       18 55 22  69.8  78.2 -2.2     -74.7    14      365   15 15 20
15 27 00  ---          19 07 04  71.5  79.5 -2.0     -75.8   700      410   15 15 21

15 27 20  G92.69       19 07 24  71.6  79.6 -2.0     -75.8    14      410   15 27 20
```

```
15 39 00  ---          19 19 05  73.3  81.0 -1.8     -76.8   700      455   15 27 21
```

Schedule for TORUN (Code Tr) Page 3

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue	27 Oct 2020	Day 301 ---								
15 39 20	G92.69	19 19 26	73.4	81.0	-1.8		-76.8	14	455	15 39 20
15 51 00	---	19 31 07	75.1	82.5	-1.6		-77.7	700	500	15 39 21
15 54 00	J2202+4216	19 34 08	63.1	98.2	-2.5		-53.6	120	500	15 54 00
16 02 00	=VR422201	19 42 09	64.3	100.2	-2.4		-53.1	480	531	15 54 01
16 05 00	G92.69	19 45 10	77.2	84.3	-1.4		-78.7	119	531	16 05 00
16 14 00	---	19 54 11	78.5	85.5	-1.3		-79.3	540	566	16 05 01
16 14 20	G92.69	19 54 31	78.6	85.6	-1.3		-79.3	14	566	16 14 20
16 26 00	---	20 06 13	80.4	87.3	-1.1		-79.9	700	611	16 14 21
16 26 20	G92.69	20 06 33	80.4	87.4	-1.1		-79.9	14	611	16 26 20
16 38 00	---	20 18 15	82.2	89.4	-0.9		-80.3	700	656	16 26 21
16 38 20	G92.69	20 18 35	82.2	89.5	-0.9		-80.3	14	656	16 38 20
16 50 00	---	20 30 17	84.0	92.0	-0.7		-80.1	700	701	16 38 21
16 50 20	G92.69	20 30 37	84.0	92.1	-0.7		-80.1	14	701	16 50 20
17 02 00	---	20 42 19	85.8	95.8	-0.5		-78.7	700	746	16 50 21
17 02 20	G92.69	20 42 39	85.8	95.9	-0.5		-78.6	14	746	17 02 20
17 14 00	---	20 54 21	87.5	103.3	-0.3		-73.6	700	791	17 02 21
17 17 00	J2202+4216	20 57 22	74.6	127.5	-1.1		-40.2	117	791	17 17 00
17 25 00	=VR422201	21 05 23	75.5	132.0	-1.0		-37.2	480	822	17 17 01
17 28 00	G92.69	21 08 23	89.3	158.5	-0.0		-21.2	115	822	17 28 00
17 33 00	---	21 13 24	89.2	219.5	0.1		38.8	300	841	17 28 01
17 33 00	G92.69	21 13 24	89.2	219.5	0.1		38.8	-5	841	No stop
17 40 00	---	21 20 25	88.3	249.2	0.2		67.2	415	868	17 33 01
17 40 20	G92.69	21 20 45	88.3	249.9	0.2		67.8	11	868	17 40 20
17 52 00	---	21 32 27	86.5	261.7	0.4		77.3	700	913	17 40 21
17 52 20	G92.69	21 32 47	86.5	261.9	0.4		77.4	13	913	17 52 20
18 04 00	---	21 44 29	84.8	266.6	0.6		79.7	700	958	17 52 21
18 04 20	G92.69	21 44 49	84.7	266.7	0.6		79.7	14	958	18 04 20
18 16 00	---	21 56 31	82.9	269.5	0.8		80.3	700	1004	18 04 21
18 16 20	G92.69	21 56 51	82.9	269.6	0.8		80.3	14	1004	18 16 20
18 28 00	---	22 08 33	81.1	271.8	1.0		80.1	700	1049	18 16 21
18 31 00	J2202+4216	22 11 34	79.2	187.9	0.1		6.4	-3	1049	18 31 00
18 39 00	=VR422201	22 19 35	79.0	195.6	0.3		12.6	477	1080	18 31 01
18 42 00	G92.69	22 22 36	79.0	274.0	1.2		79.5	8	1080	18 42 00
18 51 00	---	22 31 37	77.7	275.3	1.4		79.0	540	1114	18 42 01

Schedule for TORUN (Code Tr) Page 4

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 27 Oct 2020 Day 301 ---										
18 51 20	G92.69	22 31 57	77.6	275.3	1.4		78.9	14	1114	18 51 20
19 03 00	---	22 43 39	75.9	276.9	1.6		78.1	700	1159	18 51 21
19 03 20	G92.69	22 43 59	75.8	276.9	1.6		78.1	14	1159	19 03 20
19 15 00	---	22 55 41	74.1	278.4	1.8		77.2	700	1204	19 03 21
19 15 20	G92.69	22 56 01	74.0	278.4	1.8		77.2	14	1204	19 15 20
19 27 00	---	23 07 43	72.3	279.8	2.0		76.2	700	1250	19 15 21
19 27 20	G92.69	23 08 03	72.3	279.9	2.0		76.2	14	1250	19 27 20
19 39 00	---	23 19 45	70.5	281.3	2.2		75.2	700	1295	19 27 21
19 42 00	J2202+4216	23 22 45	73.0	238.9	1.3		44.1	79	1295	19 42 00
19 50 00	=VR422201	23 30 47	72.0	242.4	1.5		46.1	480	1326	19 42 01
19 53 00	G92.69	23 33 47	68.5	282.9	2.4		73.9	84	1326	19 53 00
19 58 00	---	23 38 48	67.7	283.5	2.5		73.5	300	1345	19 53 01
19 58 00	G92.69	23 38 48	67.7	283.5	2.5		73.5	-5	1345	No stop
20 02 00	---	23 42 49	67.2	283.9	2.5		73.1	235	1360	19 58 01
20 02 20	G92.69	23 43 09	67.1	284.0	2.6		73.1	14	1360	20 02 20
20 14 00	---	23 54 51	65.4	285.3	2.7		71.9	700	1405	20 02 21
20 14 20	G92.69	23 55 11	65.4	285.3	2.8		71.9	14	1405	20 14 20
20 26 00	---	00 06 53	63.7	286.6	2.9		70.8	700	1451	20 14 21
20 29 00	J2202+4216	00 09 53	66.5	255.7	2.1		52.0	102	1451	20 29 00
20 37 00	=VR422201	00 17 54	65.3	257.9	2.2		52.7	480	1481	20 29 01
20 40 00	3C84	00 20 55	58.0	92.6	-3.0		-53.3	-165	1481	20 40 00
20 50 00	---	00 30 57	59.5	94.7	-2.8		-53.1	435	1520	20 40 01
20 51 00	G92.69	00 31 57	60.1	-70.5	3.4		68.3	-284	1520	20 51 00
20 56 00	---	00 36 58	59.4	-70.0	3.4		67.8	16	1539	20 51 01
20 56 20	G92.69	00 37 18	59.3	-69.9	3.5		67.8	14	1539	20 56 20
21 08 00	---	00 49 00	57.7	-68.6	3.6		66.6	700	1584	20 56 21
21 08 20	G92.69	00 49 20	57.7	-68.6	3.7		66.6	14	1584	21 08 20
21 20 00	---	01 01 01	56.0	-67.2	3.9		65.3	700	1630	21 08 21
21 20 20	G92.69	01 01 22	56.0	-67.2	3.9		65.3	14	1630	21 20 20
21 32 00	---	01 13 03	54.4	-65.9	4.1		64.1	700	1675	21 20 21

Schedule for TORUN (Code Tr) Page 5

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 27 Oct 2020 Day 301 ---										
21 32 20	G92.69	01 13 24	54.3	-65.8	4.1		64.1	14	1675	21 32 20
21 44 00	---	01 25 05	52.7	-64.5	4.3		62.8	700	1720	21 32 21
21 44 20	G92.69	01 25 25	52.7	-64.4	4.3		62.8	14	1720	21 44 20
21 56 00	---	01 37 07	51.1	-63.1	4.5		61.5	700	1765	21 44 21
21 59 00	J2202+4216	01 40 08	53.0	275.6	3.6	W	54.0	-515	1765	21 59 00
22 07 00	=VR422201	01 48 09	51.8	277.0	3.7	W	53.8	0	1796	21 59 01
22 07 15	2007+777	01 48 24	52.3	340.1	5.7		78.2	-126	1796	22 07 15
22 18 00	---	01 59 11	51.7	340.3	5.9		75.7	519	1837	22 07 16
22 18 00	G92.69	01 59 11	48.2	299.5	4.8		59.1	-96	1837	No stop
22 23 00	---	02 04 12	47.5	300.1	4.9		58.5	204	1857	22 18 01
22 23 20	G92.69	02 04 32	47.5	300.1	4.9		58.5	14	1857	22 23 20
22 31 00	---	02 12 13	46.5	301.0	5.0		57.6	460	1886	22 23 21
22 31 00	G92.69	02 12 13	46.5	301.0	5.0		57.6	-5	1886	No stop
22 35 00	---	02 16 14	46.0	301.5	5.1		57.2	235	1902	22 31 01
22 35 20	G92.69	02 16 34	45.9	301.5	5.1		57.2	14	1902	22 35 20
22 47 00	---	02 28 16	44.5	302.9	5.3		55.8	700	1947	22 35 21
22 47 20	G92.69	02 28 36	44.4	303.0	5.3		55.8	14	1947	22 47 20
22 59 00	---	02 40 18	43.0	304.4	5.5		54.4	700	1992	22 47 21
22 59 20	G92.69	02 40 38	42.9	304.4	5.5		54.4	14	1992	22 59 20
23 11 00	---	02 52 20	41.5	305.8	5.7		53.0	700	2037	22 59 21
23 11 20	G92.69	02 52 40	41.4	305.9	5.7		53.0	14	2037	23 11 20
23 23 00	---	03 04 22	40.0	307.3	5.9		51.6	700	2082	23 11 21
23 26 00	J2202+4216	03 07 22	40.3	290.0	5.1		49.8	130	2082	23 26 00
23 34 00	=VR422201	03 15 24	39.2	291.3	5.2		49.2	480	2113	23 26 01
23 34 00	G92.69	03 15 24	38.7	308.7	6.1		50.3	-50	2113	No stop
23 39 00	---	03 20 24	38.1	309.3	6.2		49.7	250	2132	23 34 01
23 39 20	G92.69	03 20 44	38.1	309.3	6.2		49.7	14	2132	23 39 20
23 51 00	---	03 32 26	36.8	310.8	6.4		48.2	700	2177	23 39 21

Schedule for TORUN (Code Tr) Page 6

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Start: Tue 27 Oct 2020 Day 301 -- Stop: Wed 28 Oct 2020 Day 302 ---

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
23 51 20	G92.69	03 32 46	36.7	310.9	6.4		48.2	14	2177	23 51 20
00 03 00	---	03 44 28	35.4	312.4	6.6		46.8	700	2222	23 51 21
00 03 20	G92.69	03 44 48	35.4	312.4	6.6		46.7	14	2222	00 03 20
00 15 00	---	03 56 30	34.1	313.9	6.8		45.2	700	2268	00 03 21
00 15 20	G92.69	03 56 50	34.0	313.9	6.8		45.2	14	2268	00 15 20
00 27 00	---	04 08 32	32.8	315.5	7.0		43.7	700	2313	00 15 21
00 27 20	G92.69	04 08 52	32.8	315.5	7.0		43.7	14	2313	00 27 20
00 39 00	---	04 20 34	31.6	317.1	7.2		42.2	700	2358	00 27 21
00 42 00	J2202+4216	04 23 35	30.0	301.8	6.3		43.7	134	2358	00 42 00
00 50 00	=VR422201	04 31 36	29.0	303.0	6.5		43.0	480	2389	00 42 01
00 50 00	G92.69	04 31 36	30.4	318.5	7.4		40.8	-46	2389	No stop
00 55 00	---	04 36 37	29.9	319.2	7.4		40.1	254	2408	00 50 01
00 55 20	G92.69	04 36 57	29.9	319.2	7.4		40.1	14	2408	00 55 20
01 03 00	---	04 44 38	29.2	320.3	7.6		39.0	460	2438	00 55 21
01 03 00	G92.69	04 44 38	29.2	320.3	7.6		39.0	-5	2438	No stop
01 07 00	---	04 48 39	28.8	320.8	7.6		38.5	235	2453	01 03 01
01 07 20	G92.69	04 48 59	28.8	320.9	7.6		38.5	14	2453	01 07 20
01 19 00	---	05 00 41	27.7	322.5	7.8		36.9	700	2498	01 07 21
01 19 20	G92.69	05 01 01	27.6	322.5	7.8		36.9	14	2498	01 19 20
01 31 00	---	05 12 43	26.6	324.1	8.0		35.3	700	2543	01 19 21
01 31 20	G92.69	05 13 03	26.6	324.2	8.1		35.2	14	2543	01 31 20
01 43 00	---	05 24 45	25.5	325.8	8.2		33.6	700	2588	01 31 21
01 43 20	G92.69	05 25 05	25.5	325.9	8.3		33.6	14	2588	01 43 20
01 55 00	---	05 36 47	24.6	327.5	8.4		32.0	700	2633	01 43 21
01 58 00	J2202+4216	05 39 47	21.0	313.7	7.6		36.0	137	2633	01 58 00
02 06 00	=VR422201	05 47 48	20.1	315.0	7.7		35.1	480	2664	01 58 01
02 06 00	G92.69	05 47 48	23.7	329.1	8.6		30.4	-43	2664	No stop
02 11 00	---	05 52 49	23.3	329.8	8.7		29.7	257	2684	02 06 01
02 11 20	G92.69	05 53 09	23.3	329.9	8.7		29.7	14	2684	02 11 20
02 20 00	---	06 01 51	22.6	331.1	8.9		28.4	520	2717	02 11 21

Schedule for TORUN (Code Tr) Page 7

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 28 Oct 2020 Day 302 ---										
02 20 20	G92.69	06 02 11	22.6	331.2	8.9		28.4	14	2717	02 20 20
02 29 00	---	06 10 52	22.0	332.4	9.0		27.1	520	2751	02 20 21
02 32 00	J2202+4216	06 13 53	17.5	319.3	8.2		32.0	138	2751	02 32 00
02 40 00	=VR422201	06 21 54	16.7	320.6	8.3		31.1	480	2782	02 32 01
02 40 15	2007+777	06 22 09	42.0	353.0	10.3		20.5	-94	2782	02 40 15
02 51 00	---	06 32 56	41.8	353.7	10.5		18.3	551	2823	02 40 16
02 54 00	3C48	06 35 56	35.1	280.4	5.0		44.9	18	2823	02 54 00
03 03 00	---	06 44 58	33.8	282.0	5.1		44.6	540	2858	02 54 01
03 04 00	3C48	06 45 58	33.6	282.2	5.1		44.6	54	2858	03 04 00
03 13 00	---	06 54 59	32.3	283.8	5.3		44.2	540	2893	03 04 01
03 13 00	G92.69	06 54 59	19.3	339.0	9.7		20.7	-126	2893	No stop
03 18 00	---	07 00 00	19.0	339.7	9.8		20.0	174	2912	03 13 01
03 18 20	G92.69	07 00 20	19.0	339.8	9.8		19.9	14	2912	03 18 20
03 26 00	---	07 08 02	18.6	341.0	10.0		18.8	460	2942	03 18 21
03 26 00	G92.69	07 08 02	18.6	341.0	10.0		18.8	-5	2942	No stop
03 30 00	---	07 12 02	18.4	341.6	10.0		18.2	235	2957	03 26 01
03 30 20	G92.69	07 12 22	18.4	341.6	10.0		18.1	14	2957	03 30 20
03 42 00	---	07 24 04	17.9	343.4	10.2		16.3	700	3002	03 30 21
03 42 20	G92.69	07 24 24	17.8	343.5	10.2		16.3	14	3002	03 42 20
03 54 00	---	07 36 06	17.4	345.3	10.4		14.5	700	3047	03 42 21
03 54 20	G92.69	07 36 26	17.4	345.3	10.4		14.5	14	3047	03 54 20
04 06 00	---	07 48 08	16.9	347.1	10.6		12.7	700	3092	03 54 21
04 06 20	G92.69	07 48 28	16.9	347.2	10.6		12.6	14	3092	04 06 20
04 18 00	---	08 00 10	16.6	349.0	10.8		10.8	700	3137	04 06 21
04 21 00	J2202+4216	08 03 11	8.9	338.0	10.0		17.7	138	3137	04 21 00
04 29 00	=VR422201	08 11 12	8.5	339.4	10.1		16.6	480	3168	04 21 01
04 29 00	G92.69	08 11 12	16.3	350.7	11.0		9.1	-43	3168	No stop
04 34 00	---	08 16 13	16.2	351.5	11.1		8.4	257	3188	04 29 01
04 34 20	G92.69	08 16 33	16.2	351.6	11.1		8.3	14	3188	04 34 20
04 43 00	---	08 25 14	16.0	352.9	11.3		7.0	520	3221	04 34 21

Schedule for TORUN (Code Tr) Page 8

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 28 Oct 2020 Day 302 ---										
04 43 20	G92.69	08 25 34	16.0	353.0	11.3		6.9	14	3221	04 43 20
04 52 00	---	08 34 16	15.8	354.4	11.4		5.6	520	3255	04 43 21
04 55 00	J2202+4216	08 37 16	7.3	344.1	10.6		12.9	134	3255	04 55 00
05 03 00	=VR422201	08 45 18	7.0	345.6	10.7		11.7	480	3286	04 55 01
05 03 15	3C84	08 45 33	36.9	292.5	5.4		47.9	-110	3286	05 03 15
05 16 00	---	08 58 20	35.1	294.5	5.6		46.9	655	3335	05 03 16
05 16 00	G92.69	08 58 20	15.6	358.2	11.8		1.8	-143	3335	No stop
05 21 00	---	09 03 21	15.6	358.9	11.9		1.0	157	3354	05 16 01
05 21 20	G92.69	09 03 41	15.6	359.0	11.9		1.0	14	3354	05 21 20
05 29 00	---	09 11 22	15.6	360.2	-12.0		-0.2	460	3384	05 21 21
05 29 00	G92.69	09 11 22	15.6	360.2	-12.0		-0.2	-5	3384	No stop
05 33 00	---	09 15 22	15.6	360.8	-11.9		-0.8	235	3399	05 29 01
05 33 20	G92.69	09 15 43	15.6	360.9	-11.9		-0.9	14	3399	05 33 20
05 45 00	---	09 27 24	15.6	362.7	-11.7		-2.7	700	3444	05 33 21
05 45 20	G92.69	09 27 45	15.6	362.8	-11.7		-2.8	14	3444	05 45 20
05 57 00	---	09 39 26	15.7	364.6	-11.5		-4.6	700	3489	05 45 21
05 57 20	G92.69	09 39 46	15.7	364.7	-11.5		-4.6	14	3489	05 57 20
06 09 00	---	09 51 28	15.9	366.5	-11.3		-6.5	700	3534	05 57 21
06 09 20	G92.69	09 51 48	15.9	366.6	-11.3		-6.5	14	3534	06 09 20
06 21 00	---	10 03 30	16.2	368.4	-11.1		-8.3	700	3580	06 09 21
06 24 00	J2202+4216	10 06 31	5.5	360.5	-12.0		-0.4	126	3580	06 24 00
06 32 00	=VR422201	10 14 32	5.5	362.0	-11.8		-1.7	480	3610	06 24 01
06 35 00	G92.69	10 17 33	16.5	370.6	-10.9		-10.5	125	3610	06 35 00
06 42 00	---	10 24 34	16.7	371.7	-10.8		-11.6	420	3638	06 35 01
06 42 20	G92.69	10 24 54	16.7	371.8	-10.8		-11.6	14	3638	06 42 20
06 54 00	---	10 36 36	17.1	373.6	-10.6		-13.4	700	3683	06 42 21
06 54 20	G92.69	10 36 56	17.1	373.7	-10.6		-13.5	14	3683	06 54 20
07 06 00	---	10 48 38	17.6	375.5	-10.4		-15.2	700	3728	06 54 21
07 06 20	G92.69	10 48 58	17.6	375.5	-10.4		-15.3	14	3728	07 06 20
07 18 00	---	11 00 40	18.1	377.3	-10.2		-17.1	700	3773	07 06 21

Schedule for TORUN (Code Tr) Page 9

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Wed 28 Oct 2020 Day 302 ---

Start UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
Stop UT										
07 18 20	G92.69	11 01 00	18.1	377.4	-10.2		-17.1	14	3773	07 18 20
07 30 00	---	11 12 42	18.6	379.1	-10.0		-18.9	700	3818	07 18 21
07 33 00	J2202+4216	11 15 42	6.7	373.3	-10.8		-10.8	121	3818	07 33 00
07 41 00	=VR422201	11 23 44	7.0	374.8	-10.7		-12.0	480	3849	07 33 01
07 44 00	G92.69	11 26 44	19.4	381.3	-9.7		-21.0	120	3849	07 44 00
07 49 00	---	11 31 45	19.6	382.0	-9.6		-21.7	300	3868	07 44 01
07 49 00	G92.69	11 31 45	19.6	382.0	-9.6		-21.7	-5	3868	No stop
07 53 00	---	11 35 45	19.9	382.6	-9.6		-22.3	235	3884	07 49 01
07 53 20	G92.69	11 36 06	19.9	382.7	-9.6		-22.3	14	3884	07 53 20
08 05 00	---	11 47 47	20.6	384.4	-9.4		-24.0	700	3929	07 53 21
08 05 20	G92.69	11 48 08	20.6	384.5	-9.4		-24.1	14	3929	08 05 20
08 17 00	---	11 59 49	21.4	386.2	-9.2		-25.8	700	3974	08 05 21
08 17 20	G92.69	12 00 09	21.4	386.3	-9.2		-25.8	14	3974	08 17 20
08 29 00	---	12 11 51	22.2	388.0	-9.0		-27.5	700	4019	08 17 21
08 29 20	G92.69	12 12 11	22.2	388.0	-9.0		-27.6	14	4019	08 29 20
08 41 00	---	12 23 53	23.1	389.7	-8.8		-29.2	700	4064	08 29 21
08 44 00	J2202+4216	12 26 54	10.3	386.1	-9.6		-20.9	118	4064	08 44 00
08 52 00	=VR422201	12 34 55	10.9	387.5	-9.5		-22.0	480	4095	08 44 01
08 55 00	G92.69	12 37 56	24.1	391.7	-8.5		-31.2	117	4095	08 55 00
09 04 00	---	12 46 57	24.9	393.0	-8.4		-32.5	540	4130	08 55 01
09 04 20	G92.69	12 47 17	24.9	393.1	-8.4		-32.5	14	4130	09 04 20
09 16 00	---	12 58 59	25.9	394.7	-8.2		-34.1	700	4175	09 04 21
09 16 20	G92.69	12 59 19	25.9	394.8	-8.2		-34.2	14	4175	09 16 20
09 28 00	---	13 11 01	26.9	396.4	-8.0		-35.8	700	4220	09 16 21
09 28 20	G92.69	13 11 21	26.9	396.4	-8.0		-35.8	14	4220	09 28 20
09 40 00	---	13 23 03	28.0	398.0	-7.8		-37.4	700	4265	09 28 21
09 40 20	G92.69	13 23 23	28.0	398.1	-7.8		-37.4	14	4265	09 40 20
09 52 00	---	13 35 05	29.1	399.7	-7.6		-39.0	700	4310	09 40 21
09 55 00	J2202+4216	13 38 06	16.0	398.2	-8.4		-30.2	116	4310	09 55 00
10 03 00	=VR422201	13 46 07	16.8	399.6	-8.3		-31.2	480	4341	09 55 01

Schedule for TORUN (Code Tr) Page 10

THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 28 Oct 2020 Day 302 ---										
10 06 00	G92.69	13 49 07	30.5	401.6	-7.3		-40.8	115	4341	10 06 00
10 11 00	---	13 54 08	31.0	402.2	-7.3		-41.5	300	4360	10 06 01
10 11 00	G92.69	13 54 08	31.0	402.2	-7.3		-41.5	-5	4360	No stop
10 15 00	---	13 58 09	31.4	402.8	-7.2		-42.0	235	4376	10 11 01
10 15 20	G92.69	13 58 29	31.5	402.8	-7.2		-42.1	14	4376	10 15 20
10 27 00	---	14 10 11	32.7	404.4	-7.0		-43.6	700	4421	10 15 21
10 27 20	G92.69	14 10 31	32.7	404.4	-7.0		-43.6	14	4421	10 27 20
10 39 00	---	14 22 13	33.9	405.9	-6.8		-45.1	700	4466	10 27 21
10 39 20	G92.69	14 22 33	34.0	406.0	-6.8		-45.1	14	4466	10 39 20
10 51 00	---	14 34 15	35.3	407.5	-6.6		-46.6	700	4511	10 39 21
10 51 20	G92.69	14 34 35	35.3	407.5	-6.6		-46.6	14	4511	10 51 20
11 03 00	---	14 46 17	36.6	409.0	-6.4		-48.1	700	4556	10 51 21
11 06 00	J2202+4216	14 49 17	23.4	409.7	-7.2		-38.3	116	4556	11 06 00
11 14 00	=VR422201	14 57 18	24.4	411.0	-7.1		-39.2	480	4587	11 06 01
11 17 00	G92.69	15 00 19	38.2	410.8	-6.2		-49.8	115	4587	11 17 00
11 26 00	---	15 09 20	39.3	411.9	-6.0		-50.9	540	4622	11 17 01
11 26 20	G92.69	15 09 41	39.3	411.9	-6.0		-50.9	14	4622	11 26 20
11 39 00	---	15 22 23	40.8	413.5	-5.8		-52.4	760	4671	11 26 21
11 39 20	G92.69	15 22 43	40.9	413.6	-5.8		-52.5	14	4671	11 39 20
11 52 00	---	15 35 25	42.4	415.1	-5.6		-53.9	760	4720	11 39 21
11 52 20	G92.69	15 35 45	42.5	415.1	-5.6		-54.0	14	4720	11 52 20
12 05 00	---	15 48 27	44.0	416.7	-5.4		-55.4	760	4769	11 52 21
12 05 20	G92.69	15 48 47	44.1	416.7	-5.4		-55.5	14	4769	12 05 20
12 18 00	---	16 01 29	45.7	418.2	-5.1		-56.9	760	4818	12 05 21
12 21 00	J2202+4216	16 04 30	32.7	421.4	-6.0		-45.6	117	4818	12 21 00
12 29 00	=VR422201	16 12 31	33.8	422.7	-5.9		-46.2	480	4848	12 21 01
12 32 00	G92.69	16 15 31	47.5	419.9	-4.9		-58.5	116	4848	12 32 00
12 37 00	---	16 20 32	48.2	420.5	-4.8		-59.1	300	4868	12 32 01
12 37 00	G92.69	16 20 32	48.2	420.5	-4.8		-59.1	-5	4868	No stop
12 41 00	---	16 24 33	48.7	421.0	-4.8		-59.5	235	4883	12 37 01

```
Schedule for TORUN     (Code Tr )                                  Page  11
               THE VELOCITY AND MAGNETIC FIELD STRUCTURE OF THE DISK-WINDS
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Wed  28 Oct 2020   Day 302 ---

12 41 20  G92.69       16 24 53  48.7 421.0 -4.8     -59.5    14     4883   12 41 20
12 53 00  ---          16 36 35  50.3 422.4 -4.6     -60.8   700     4928   12 41 21

12 53 20  G92.69       16 36 55  50.3 422.4 -4.6     -60.9    14     4928   12 53 20
13 05 00  ---          16 48 37  51.9 423.8 -4.4     -62.1   700     4973   12 53 21

13 05 20  G92.69       16 48 57  51.9 423.8 -4.4     -62.2    14     4973   13 05 20
13 17 00  ---          17 00 39  53.5 425.1 -4.2     -63.4   700     5018   13 05 21

13 20 00  J2202+4216   17 03 39  40.8 430.6 -5.0     -50.1   118     5018   13 20 00
13 30 00  =VR422201    17 13 41  42.3 432.1 -4.8     -50.7   600     5057   13 20 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K512lineglob

   Setup group:   19         Station: TORUN            Total bit rate:   512
   Format: VDIF              Bits per sample: 2        Sample rate: 32.000
   Number of channels:  8    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
 Net SB=         U         U         U         U         U         U         U         U
 IF SB =         U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         2        10         3        11         4        12
 BBC SB=         U         U         U         U         U         U         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   7  Based on FREQ, BW, and/or DOPPLER in schedule.  Used with PCAL = off
  LO sum=   22196.00  22196.00  22212.00  22212.00  22228.00  22228.00  22244.00  22244.00
  BBC fr=     716.00    716.00    732.00    732.00    748.00    748.00    764.00    764.00
  Bandwd=      16.00     16.00     16.00     16.00     16.00     16.00     16.00     16.00
   Matching frequency sets:   7   8

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                          Source position (RA/Dec)                        Error
                       (B1950)             (J2000)             (Date)             (mas)

* G92.69            21 07 46.666431   * 21 09 21.720000     21 10 00.851030       0.00
                    52 10 22.60812    * 52 22 37.08000      52 27 57.24210        0.00
                    Doppler based on LSR frame and radio definition.  Velocities:
                        -6.40    -6.40    -6.40    -6.40    -6.40    -6.40    -6.40    -6.40

* 2051+528          20 51 45.443472   * 20 53 14.692900     20 53 51.289886       0.00
                    52 50 11.50341    * 53 01 36.43300      53 06 36.46621        0.00
                    Doppler based on other sources.

* 3C48              01 34 49.826446   * 01 37 41.299512     01 38 53.099606       0.55
  J0137+3309        32 54 20.25968    * 33 09 35.13386      33 15 56.71532        0.56
  0134+329          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0137+33          GSFC 2016a X/S astro solution,     90 observations.
                    Doppler based on other sources.

* 3C84              03 16 29.567265   * 03 19 48.160096     03 21 11.296335       1.50
  J0319+4130        41 19 51.91692    * 41 30 42.10404      41 35 08.43256        2.86
  0316+413          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0319+41          GSFC 2016a X/S astro solution,  10291 observations.
                    Doppler based on other sources.

* 2007+777          20 07 20.430197   * 20 05 30.998526     20 04 43.879528       0.04
  J2005+7752        77 43 58.12301    * 77 52 43.24754      77 56 35.13924        0.01
  J2005+77          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  15674 observations.
                    Doppler based on other sources.

* 2116+543          21 16 23.596185   * 21 17 56.484554     21 18 34.818152       0.18
  J2117+5431        54 18 52.99626    * 54 31 32.50199      54 37 02.98865        0.11
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     95 observations.
                    Doppler based on other sources.

  VR422201          22 00 39.362504   * 22 02 43.291371     22 03 34.651931       0.01
```

```
* J2202+4216        42 02 08.59075    * 42 16 39.97988      42 22 54.10651        0.00
  BLLAC             /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  2200+420          GSFC 2016a X/S astro solution,  52189 observations.
  J2202+42          Doppler based on other sources.
```

es093atr

The parsec-scale view of the most distant blazar at z = 6.1

PI: *Cristiana Spingola*


```
Address:  INAF- Institute for radioastronomy
          via Gobetti 101, 40129
          Bologna
          Italy

Phone:    +39 3938231373
EMAIL:    spingola@ira.inaf.it
Fax:
Phone during observation:
```


```
Observing mode:

Schedule for TORUN     (Code Tr )                                    Page   2
               The parsec-scale view of the most distant blazar at z = 6.1
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Wed  28 Oct 2020   Day 302 ---

 Next scan frequencies:  22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.4
                         22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.4
 Next BBC frequencies:     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.4
                           787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.4
 Next scan bandwidths:      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0
                            32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.0

20 30 00  J0316+2733   00 14 50  47.9 108.8 -3.0     -39.9     0        0   20 30 00
20 31 00  ---          00 15 50  48.1 109.1 -3.0     -39.8    60       15   20 30 01

20 31 00  PSOJ0309     00 15 50  48.8 111.0 -2.9     -39.1   -18       15   No stop
20 32 45  ---          00 17 35  49.1 111.5 -2.9     -39.0    87       43   20 31 01

20 32 45  J0316+2733   00 17 35  48.3 109.5 -3.0     -39.7   -17       43   No stop
20 33 45  ---          00 18 35  48.5 109.8 -3.0     -39.6    43       58   20 32 46

20 33 45  PSOJ0309     00 18 35  49.2 111.8 -2.9     -38.9   -18       58   No stop
20 35 30  ---          00 20 21  49.4 112.2 -2.8     -38.8    87       85   20 33 46

20 36 10  J0316+2733   00 21 01  48.8 110.4 -2.9     -39.4    23       85   20 36 10
20 37 10  ---          00 22 01  48.9 110.7 -2.9     -39.4    60      100   20 36 11

20 37 10  PSOJ0309     00 22 01  49.7 112.7 -2.8     -38.6   -18      100   No stop
20 38 55  ---          00 23 46  49.9 113.1 -2.8     -38.4    87      128   20 37 11

20 38 55  J0316+2733   00 23 46  49.2 111.1 -2.9     -39.2   -18      128   No stop
20 39 55  ---          00 24 46  49.3 111.4 -2.9     -39.1    42      143   20 38 56

20 39 55  PSOJ0309     00 24 46  50.1 113.4 -2.8     -38.4   -18      143   No stop
20 41 40  ---          00 26 32  50.3 113.9 -2.7     -38.2    87      170   20 39 56

20 42 20  J0316+2733   00 27 12  49.7 112.0 -2.8     -38.9    22      170   20 42 20
20 43 20  ---          00 28 12  49.8 112.3 -2.8     -38.8    60      185   20 42 21
```

20 43 20	PSOJ0309	00 28 12	50.5	114.4	-2.7	-38.0	-18	185	No stop
20 45 05	---	00 29 57	50.8	114.8	-2.7	-37.9	87	213	20 43 21
20 45 05	J0316+2733	00 29 57	50.0	112.8	-2.8	-38.7	-18	213	No stop
20 46 05	---	00 30 57	50.2	113.0	-2.8	-38.6	42	228	20 45 06
20 46 05	PSOJ0309	00 30 57	50.9	115.1	-2.7	-37.8	-18	228	No stop
20 47 50	---	00 32 43	51.1	115.6	-2.6	-37.6	87	255	20 46 06
20 48 30	J0316+2733	00 33 23	50.5	113.7	-2.7	-38.4	22	255	20 48 30
20 49 30	---	00 34 23	50.7	114.0	-2.7	-38.3	60	271	20 48 31

Schedule for TORUN (Code Tr) Page 3

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 28 Oct 2020 Day 302 ---										
20 49 30	PSOJ0309	00 34 23	51.4	116.1	-2.6		-37.4	-18	271	No stop
20 51 15	---	00 36 08	51.6	116.6	-2.6		-37.2	87	298	20 49 31
20 51 15	J0316+2733	00 36 08	50.9	114.4	-2.7		-38.1	-18	298	No stop
20 52 15	---	00 37 08	51.0	114.7	-2.7		-38.0	42	313	20 51 16
20 52 15	PSOJ0309	00 37 08	51.7	116.9	-2.6		-37.1	-18	313	No stop
20 54 00	---	00 38 54	52.0	117.4	-2.5		-36.9	87	340	20 52 16
20 54 40	J0316+2733	00 39 34	51.4	115.4	-2.6		-37.8	22	340	20 54 40
20 55 40	---	00 40 34	51.5	115.7	-2.6		-37.6	60	356	20 54 41
20 55 40	PSOJ0309	00 40 34	52.2	117.8	-2.5		-36.7	-18	356	No stop
20 57 25	---	00 42 19	52.4	118.4	-2.5		-36.5	87	383	20 55 41
20 57 25	J0316+2733	00 42 19	51.7	116.2	-2.6		-37.5	-18	383	No stop
20 58 25	---	00 43 20	51.9	116.5	-2.6		-37.4	42	398	20 57 26
20 58 25	PSOJ0309	00 43 20	52.6	118.7	-2.5		-36.4	-18	398	No stop
21 00 10	---	00 45 05	52.8	119.2	-2.4		-36.2	87	425	20 58 26
21 00 50	J0316+2733	00 45 45	52.2	117.2	-2.5		-37.1	22	425	21 00 50
21 01 50	---	00 46 45	52.3	117.5	-2.5		-37.0	60	441	21 00 51
21 01 50	PSOJ0309	00 46 45	53.0	119.7	-2.4		-36.0	-19	441	No stop
21 03 35	---	00 48 30	53.2	120.2	-2.4		-35.8	86	468	21 01 51
21 03 35	J0316+2733	00 48 30	52.6	118.0	-2.5		-36.8	-18	468	No stop
21 04 35	---	00 49 31	52.7	118.3	-2.5		-36.7	42	483	21 03 36
21 04 35	PSOJ0309	00 49 31	53.4	120.5	-2.4		-35.6	-19	483	No stop
21 06 20	---	00 51 16	53.6	121.0	-2.3		-35.4	86	510	21 04 36
21 07 00	J0316+2733	00 51 56	53.0	119.0	-2.4		-36.4	22	510	21 07 00
21 08 00	---	00 52 56	53.1	119.3	-2.4		-36.2	60	526	21 07 01
21 08 00	PSOJ0309	00 52 56	53.8	121.5	-2.3		-35.2	-19	526	No stop
21 09 45	---	00 54 41	54.0	122.1	-2.3		-35.0	86	553	21 08 01
21 09 45	J0316+2733	00 54 41	53.4	119.8	-2.4		-36.0	-18	553	No stop
21 10 45	---	00 55 42	53.5	120.1	-2.4		-35.9	42	568	21 09 46
21 10 45	PSOJ0309	00 55 42	54.2	122.4	-2.3		-34.8	-19	568	No stop
21 12 30	---	00 57 27	54.4	122.9	-2.2		-34.6	86	595	21 10 46

Schedule for TORUN (Code Tr) Page 4

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 28 Oct 2020 Day 302 ---										
21 13 10	J0316+2733	00 58 07	53.8	120.8	-2.3		-35.6	22	595	21 13 10
21 14 10	---	00 59 07	53.9	121.1	-2.3		-35.5	60	611	21 13 11
21 16 40	DA193	01 01 38	39.8	73.9	-4.9		-48.7	41	611	21 16 40
21 21 00	---	01 06 09	40.5	74.6	-4.8		-48.9	260	678	21 16 41
21 23 35	J0316+2733	01 08 34	55.1	124.1	-2.2		-34.1	41	678	21 23 35
21 24 35	---	01 09 44	55.3	124.5	-2.1		-34.0	60	693	21 23 36
21 24 35	PSOJ0309	01 09 34	55.9	126.9	-2.0		-32.8	-19	693	No stop
21 26 20	---	01 11 19	56.1	127.4	-2.0		-32.5	86	720	21 24 36
21 26 20	J0316+2733	01 11 19	55.5	125.0	-2.1		-33.7	-19	720	No stop
21 27 20	---	01 12 19	55.6	125.3	-2.1		-33.6	41	736	21 26 21
21 27 20	PSOJ0309	01 12 19	56.2	127.8	-2.0		-32.3	-19	736	No stop
21 29 05	---	01 14 04	56.4	128.4	-1.9		-32.0	86	763	21 27 21
21 29 45	J0316+2733	01 14 45	55.9	126.1	-2.0		-33.2	21	763	21 29 45
21 30 45	---	01 15 45	56.0	126.4	-2.0		-33.0	60	778	21 29 46
21 30 45	PSOJ0309	01 15 45	56.6	128.9	-1.9		-31.7	-19	778	No stop
21 32 30	---	01 17 30	56.8	129.5	-1.9		-31.4	86	805	21 30 46
21 32 30	J0316+2733	01 17 30	56.2	127.0	-2.0		-32.8	-19	805	No stop
21 33 30	---	01 18 30	56.4	127.4	-2.0		-32.6	41	821	21 32 31
21 33 30	PSOJ0309	01 18 30	56.9	129.9	-1.9		-31.3	-19	821	No stop
21 35 15	---	01 20 15	57.1	130.5	-1.8		-30.9	86	848	21 33 31
21 35 55	J0316+2733	01 20 56	56.6	128.2	-1.9		-32.2	21	848	21 35 55
21 36 55	---	01 21 56	56.8	128.5	-1.9		-32.0	60	863	21 35 56
21 36 55	PSOJ0309	01 21 56	57.3	131.1	-1.8		-30.6	-20	863	No stop
21 38 40	---	01 23 41	57.5	131.7	-1.8		-30.3	85	890	21 36 56
21 38 40	J0316+2733	01 23 41	57.0	129.1	-1.9		-31.7	-19	890	No stop
21 39 40	---	01 24 41	57.1	129.5	-1.9		-31.5	41	906	21 38 41
21 39 40	PSOJ0309	01 24 41	57.6	132.1	-1.8		-30.1	-20	906	No stop
21 41 25	---	01 26 26	57.8	132.7	-1.7		-29.8	85	933	21 39 41
21 42 05	J0316+2733	01 27 07	57.4	130.3	-1.8		-31.1	21	933	21 42 05
21 43 05	---	01 28 07	57.5	130.7	-1.8		-30.9	60	948	21 42 06

Schedule for TORUN (Code Tr) Page 5

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 28 Oct 2020 Day 302 ---										
21 43 05	PSOJ0309	01 28 07	58.0	133.3	-1.7		-29.5	-20	948	No stop
21 44 50	---	01 29 52	58.2	134.0	-1.7		-29.1	85	975	21 43 06
21 44 50	J0316+2733	01 29 52	57.7	131.3	-1.8		-30.6	-19	975	No stop
21 45 50	---	01 30 52	57.8	131.7	-1.8		-30.4	41	991	21 44 51
21 45 50	PSOJ0309	01 30 52	58.3	134.3	-1.7		-28.9	-20	991	No stop
21 47 35	---	01 32 38	58.5	135.0	-1.6		-28.6	85	1018	21 45 51
21 48 15	J0316+2733	01 33 18	58.1	132.5	-1.7		-30.0	21	1018	21 48 15
21 49 15	---	01 34 18	58.2	132.9	-1.7		-29.8	60	1033	21 48 16
21 49 15	PSOJ0309	01 34 18	58.7	135.6	-1.6		-28.2	-20	1033	No stop
21 51 00	---	01 36 03	58.8	136.3	-1.6		-27.9	85	1060	21 49 16
21 51 00	J0316+2733	01 36 03	58.4	133.5	-1.7		-29.4	-20	1060	No stop
21 52 00	---	01 37 03	58.5	133.9	-1.7		-29.2	40	1076	21 51 01
21 52 00	PSOJ0309	01 37 03	59.0	136.7	-1.6		-27.7	-20	1076	No stop
21 53 45	---	01 38 49	59.1	137.3	-1.5		-27.3	85	1103	21 52 01
21 54 25	J0316+2733	01 39 29	58.7	134.8	-1.6		-28.7	20	1103	21 54 25
21 55 25	---	01 40 29	58.8	135.2	-1.6		-28.5	60	1118	21 54 26
21 55 25	PSOJ0309	01 40 29	59.3	138.0	-1.5		-26.9	-20	1118	No stop
21 57 10	---	01 42 14	59.5	138.7	-1.5		-26.5	85	1145	21 55 26
21 57 10	J0316+2733	01 42 14	59.0	135.8	-1.6		-28.2	-20	1145	No stop
21 58 10	---	01 43 14	59.1	136.2	-1.6		-28.0	40	1161	21 57 11
21 58 10	PSOJ0309	01 43 14	59.6	139.0	-1.5		-26.3	-20	1161	No stop
21 59 55	---	01 45 00	59.7	139.7	-1.4		-25.9	85	1188	21 58 11
22 00 35	J0316+2733	01 45 40	59.4	137.2	-1.5		-27.4	20	1188	22 00 35
22 01 35	---	01 46 40	59.5	137.5	-1.5		-27.2	60	1203	22 00 36
22 01 35	PSOJ0309	01 46 40	59.9	140.4	-1.4		-25.5	-20	1203	No stop
22 03 20	---	01 48 25	60.1	141.1	-1.4		-25.1	85	1230	22 01 36
22 03 20	J0316+2733	01 48 25	59.6	138.2	-1.5		-26.8	-20	1230	No stop
22 04 20	---	01 49 25	59.7	138.6	-1.5		-26.6	40	1246	22 03 21
22 04 20	PSOJ0309	01 49 25	60.2	141.5	-1.4		-24.9	-20	1246	No stop
22 06 05	---	01 51 11	60.3	142.2	-1.3		-24.5	85	1273	22 04 21

Schedule for TORUN (Code Tr) Page 6

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 28 Oct 2020 Day 302 ---										
22 06 45	J0316+2733	01 51 51	60.0	139.6	-1.4		-26.1	20	1273	22 06 45
22 07 45	---	01 52 51	60.1	140.0	-1.4		-25.8	60	1288	22 06 46
22 07 45	PSOJ0309	01 52 51	60.5	142.9	-1.3		-24.1	-21	1288	No stop
22 09 30	---	01 54 36	60.6	143.6	-1.3		-23.6	84	1315	22 07 46
22 09 30	J0316+2733	01 54 36	60.3	140.7	-1.4		-25.4	-20	1315	No stop
22 10 30	---	01 55 36	60.3	141.1	-1.4		-25.2	40	1331	22 09 31
22 10 30	PSOJ0309	01 55 36	60.7	144.1	-1.3		-23.4	-21	1331	No stop
22 12 15	---	01 57 22	60.9	144.8	-1.2		-22.9	84	1358	22 10 31
22 12 55	J0316+2733	01 58 02	60.6	142.1	-1.3		-24.6	20	1358	22 12 55
22 13 55	---	01 59 02	60.7	142.5	-1.3		-24.4	60	1373	22 12 56
22 13 55	PSOJ0309	01 59 02	61.0	145.5	-1.2		-22.5	-21	1373	No stop
22 15 40	---	02 00 47	61.2	146.2	-1.2		-22.1	84	1400	22 13 56
22 15 40	J0316+2733	02 00 47	60.8	143.2	-1.3		-23.9	-20	1400	No stop
22 16 40	---	02 01 47	60.9	143.6	-1.3		-23.7	40	1416	22 15 41
22 16 40	PSOJ0309	02 01 47	61.3	146.7	-1.2		-21.8	-21	1416	No stop
22 18 25	---	02 03 33	61.4	147.4	-1.1		-21.4	84	1443	22 16 41
22 19 05	J0316+2733	02 04 13	61.1	144.6	-1.2		-23.1	20	1443	22 19 05
22 20 05	---	02 05 13	61.2	145.1	-1.2		-22.8	60	1458	22 19 06
22 20 05	PSOJ0309	02 05 13	61.5	148.1	-1.1		-20.9	-21	1458	No stop
22 21 50	---	02 06 58	61.7	148.9	-1.1		-20.4	84	1485	22 20 06
22 21 50	J0316+2733	02 06 58	61.4	145.8	-1.2		-22.4	-20	1485	No stop
22 22 50	---	02 07 58	61.4	146.3	-1.2		-22.1	40	1501	22 21 51
22 22 50	PSOJ0309	02 07 58	61.7	149.4	-1.1		-20.2	-21	1501	No stop
22 24 35	---	02 09 44	61.9	150.1	-1.0		-19.7	84	1528	22 22 51
22 25 15	J0316+2733	02 10 24	61.6	147.3	-1.1		-21.5	19	1528	22 25 15
22 26 15	---	02 11 24	61.7	147.7	-1.1		-21.2	60	1543	22 25 16
22 26 55	PSOJ0309	02 12 04	62.1	151.2	-1.0		-19.0	19	1543	22 26 55
22 28 40	---	02 13 49	62.2	152.0	-1.0		-18.5	105	1570	22 26 56
22 29 20	J0316+2733	02 14 29	62.0	149.1	-1.1		-20.4	19	1570	22 29 20
22 30 20	---	02 15 30	62.0	149.5	-1.0		-20.1	60	1586	22 29 21

Schedule for TORUN (Code Tr) Page 7

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 28 Oct 2020 Day 302 ---										
22 31 00	PSOJ0309	02 16 10	62.3	153.0	-0.9		-17.9	19	1586	22 31 00
22 32 45	---	02 17 55	62.5	153.8	-0.9		-17.4	105	1613	22 31 01
22 33 25	J0316+2733	02 18 35	62.3	150.9	-1.0		-19.2	19	1613	22 33 25
22 34 25	---	02 19 35	62.3	151.4	-1.0		-19.0	60	1628	22 33 26
22 35 05	J0316+2733	02 20 15	62.4	151.7	-1.0		-18.8	33	1628	22 35 05
22 36 05	---	02 21 15	62.5	152.1	-0.9		-18.5	60	1644	22 35 06
22 36 05	PSOJ0309	02 21 15	62.7	155.4	-0.8		-16.4	-21	1644	No stop
22 37 50	---	02 23 01	62.8	156.2	-0.8		-15.8	84	1671	22 36 06
22 37 50	J0316+2733	02 23 01	62.6	152.9	-0.9		-18.0	-21	1671	No stop
22 38 50	---	02 24 01	62.7	153.4	-0.9		-17.7	39	1686	22 37 51
22 38 50	PSOJ0309	02 24 01	62.8	156.6	-0.8		-15.5	-21	1686	No stop
22 40 35	---	02 25 46	62.9	157.5	-0.8		-15.0	84	1713	22 38 51
22 41 15	J0316+2733	02 26 26	62.8	154.5	-0.9		-17.0	19	1713	22 41 15
22 42 15	---	02 27 26	62.9	155.0	-0.8		-16.7	60	1729	22 41 16
22 42 15	PSOJ0309	02 27 26	63.0	158.3	-0.7		-14.5	-22	1729	No stop
22 44 00	---	02 29 12	63.1	159.1	-0.7		-14.0	83	1756	22 42 16
22 44 00	J0316+2733	02 29 12	63.0	155.8	-0.8		-16.1	-21	1756	No stop
22 45 00	---	02 30 12	63.1	156.3	-0.8		-15.8	39	1771	22 44 01
22 45 00	PSOJ0309	02 30 12	63.2	159.6	-0.7		-13.6	-22	1771	No stop
22 46 45	---	02 31 57	63.3	160.4	-0.7		-13.1	83	1798	22 45 01
22 47 25	J0316+2733	02 32 37	63.2	157.4	-0.8		-15.1	19	1798	22 47 25
22 48 25	---	02 33 38	63.3	157.9	-0.7		-14.8	60	1814	22 47 26
22 48 25	PSOJ0309	02 33 38	63.4	161.2	-0.6		-12.6	-22	1814	No stop
22 50 10	---	02 35 23	63.4	162.1	-0.6		-12.0	83	1841	22 48 26
22 50 10	J0316+2733	02 35 23	63.4	158.7	-0.7		-14.2	-21	1841	No stop
22 51 10	---	02 36 23	63.4	159.2	-0.7		-13.9	39	1856	22 50 11
22 51 10	PSOJ0309	02 36 23	63.5	162.6	-0.6		-11.7	-22	1856	No stop
22 52 55	---	02 38 08	63.6	163.4	-0.5		-11.1	83	1883	22 51 11
22 53 35	J0316+2733	02 38 48	63.5	160.4	-0.6		-13.2	19	1883	22 53 35
22 54 35	---	02 39 49	63.6	160.9	-0.6		-12.8	60	1899	22 53 36

Schedule for TORUN (Code Tr) Page 8

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 28 Oct 2020 Day 302 ---										
22 54 35	PSOJ0309	02 39 49	63.6	164.2	-0.5		-10.6	-22	1899	No stop
22 56 20	---	02 41 34	63.7	165.1	-0.5		-10.0	83	1926	22 54 36
22 56 20	J0316+2733	02 41 34	63.7	161.7	-0.6		-12.3	-21	1926	No stop
22 57 20	---	02 42 34	63.7	162.2	-0.6		-12.0	39	1941	22 56 21
22 57 20	PSOJ0309	02 42 34	63.7	165.6	-0.5		-9.7	-22	1941	No stop
22 59 05	---	02 44 19	63.8	166.5	-0.4		-9.1	83	1968	22 57 21
22 59 45	J0316+2733	02 44 59	63.8	163.4	-0.5		-11.2	19	1968	22 59 45
23 00 45	---	02 46 00	63.9	163.9	-0.5		-10.8	60	1984	22 59 46
23 00 45	PSOJ0309	02 46 00	63.9	167.3	-0.4		-8.6	-22	1984	No stop
23 02 30	---	02 47 45	63.9	168.2	-0.4		-8.0	83	2011	23 00 46
23 02 30	J0316+2733	02 47 45	63.9	164.7	-0.5		-10.3	-21	2011	No stop
23 03 30	---	02 48 45	64.0	165.2	-0.5		-9.9	39	2026	23 02 31
23 03 30	PSOJ0309	02 48 45	64.0	168.7	-0.4		-7.6	-22	2026	No stop
23 05 15	---	02 50 30	64.0	169.6	-0.3		-7.0	83	2053	23 03 31
23 05 55	J0316+2733	02 51 10	64.1	166.5	-0.4		-9.1	19	2053	23 05 55
23 06 55	---	02 52 11	64.1	167.0	-0.4		-8.8	60	2069	23 05 56
23 06 55	PSOJ0309	02 52 11	64.0	170.4	-0.3		-6.5	-22	2069	No stop
23 08 40	---	02 53 56	64.1	171.3	-0.3		-5.9	83	2096	23 06 56
23 08 40	J0316+2733	02 53 56	64.2	167.8	-0.4		-8.2	-21	2096	No stop
23 09 40	---	02 54 56	64.2	168.3	-0.4		-7.9	39	2111	23 08 41
23 09 40	PSOJ0309	02 54 56	64.1	171.8	-0.3		-5.5	-22	2111	No stop
23 11 25	---	02 56 41	64.1	172.7	-0.2		-4.9	83	2138	23 09 41
23 12 05	J0316+2733	02 57 21	64.3	169.6	-0.3		-7.1	19	2138	23 12 05
23 13 05	---	02 58 22	64.3	170.1	-0.3		-6.7	60	2154	23 12 06
23 13 05	PSOJ0309	02 58 22	64.2	173.5	-0.2		-4.4	-22	2154	No stop
23 14 50	---	03 00 07	64.2	174.4	-0.2		-3.8	83	2181	23 13 06
23 14 50	J0316+2733	03 00 07	64.3	171.0	-0.3		-6.1	-21	2181	No stop
23 15 50	---	03 01 07	64.3	171.5	-0.3		-5.8	39	2196	23 14 51
23 15 50	PSOJ0309	03 01 07	64.2	174.9	-0.2		-3.4	-22	2196	No stop
23 17 35	---	03 02 52	64.2	175.8	-0.1		-2.8	83	2223	23 15 51

Schedule for TORUN (Code Tr) Page 9

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 28 Oct 2020 Day 302 ---										
23 18 15	J0316+2733	03 03 32	64.4	172.7	-0.2		-4.9	19	2223	23 18 15
23 19 15	---	03 04 33	64.4	173.2	-0.2		-4.6	60	2239	23 18 16
23 19 15	PSOJ0309	03 04 33	64.3	176.7	-0.1		-2.2	-22	2239	No stop
23 21 00	---	03 06 18	64.3	177.6	-0.1		-1.6	83	2266	23 19 16
23 21 00	J0316+2733	03 06 18	64.4	174.1	-0.2		-4.0	-21	2266	No stop
23 22 00	---	03 07 18	64.5	174.6	-0.2		-3.6	39	2281	23 21 01
23 22 00	PSOJ0309	03 07 18	64.3	178.1	-0.1		-1.3	-22	2281	No stop
23 23 45	---	03 09 03	64.3	179.0	-0.0		-0.7	83	2308	23 22 01
23 24 25	J0316+2733	03 09 43	64.5	175.9	-0.1		-2.8	19	2308	23 24 25
23 25 25	---	03 10 44	64.5	176.4	-0.1		-2.4	60	2324	23 24 26
23 28 51	DA193	03 14 10	59.5	99.2	-2.7		-50.5	36	2324	23 28 51
23 33 11	---	03 18 41	60.2	100.3	-2.6		-50.3	260	2391	23 28 52
23 36 48	J0316+2733	03 22 08	64.5	182.3	0.1		1.5	39	2391	23 36 48
23 37 48	---	03 23 18	64.5	182.9	0.1		1.9	60	2406	23 36 49
23 37 48	PSOJ0309	03 23 08	64.2	186.2	0.2		4.2	-22	2406	No stop
23 39 33	---	03 24 53	64.2	187.1	0.2		4.8	83	2433	23 37 49
23 39 33	J0316+2733	03 24 53	64.5	183.7	0.1		2.5	-21	2433	No stop
23 40 33	---	03 25 54	64.5	184.2	0.1		2.8	39	2449	23 39 34
23 40 33	PSOJ0309	03 25 54	64.1	187.6	0.2		5.1	-22	2449	No stop
23 42 18	---	03 27 39	64.1	188.5	0.3		5.7	83	2476	23 40 34
23 42 58	J0316+2733	03 28 19	64.5	185.4	0.2		3.7	19	2476	23 42 58
23 43 58	---	03 29 19	64.4	186.0	0.2		4.0	60	2491	23 42 59
23 43 58	PSOJ0309	03 29 19	64.1	189.3	0.3		6.3	-22	2491	No stop
23 45 43	---	03 31 04	64.0	190.2	0.3		6.9	83	2518	23 43 59
23 45 43	J0316+2733	03 31 04	64.4	186.9	0.2		4.6	-21	2518	No stop
23 46 43	---	03 32 05	64.4	187.4	0.2		5.0	39	2534	23 45 44
23 46 43	PSOJ0309	03 32 05	64.0	190.7	0.4		7.2	-22	2534	No stop
23 48 28	---	03 33 50	63.9	191.6	0.4		7.8	83	2561	23 46 44
23 49 08	J0316+2733	03 34 30	64.3	188.6	0.3		5.8	19	2561	23 49 08
23 50 08	---	03 35 30	64.3	189.1	0.3		6.2	60	2576	23 49 09

```
Schedule for TORUN     (Code Tr )                                  Page  10
               The parsec-scale view of the most distant blazar at z = 6.1
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Wed  28 Oct 2020   Day 302 ---

23 50 08  PSOJ0309     03 35 30  63.9 192.4  0.4       8.4   -22     2576   No stop
23 51 53  ---          03 37 16  63.8 193.3  0.4       8.9    83     2603   23 50 09

23 51 53  J0316+2733   03 37 16  64.3 190.0  0.3       6.8   -21     2603   No stop
23 52 53  ---          03 38 16  64.2 190.5  0.3       7.1    39     2619   23 51 54

23 52 53  PSOJ0309     03 38 16  63.8 193.8  0.5       9.3   -22     2619   No stop
23 54 38  ---          03 40 01  63.7 194.7  0.5       9.8    83     2646   23 52 54

23 55 18  J0316+2733   03 40 41  64.2 191.7  0.4       7.9    19     2646   23 55 18
23 56 18  ---          03 41 41  64.1 192.2  0.4       8.3    60     2661   23 55 19

23 56 18  PSOJ0309     03 41 41  63.7 195.5  0.5      10.4   -21     2661   No stop
23 58 03  ---          03 43 27  63.6 196.3  0.5      11.0    84     2688   23 56 19

23 58 03  J0316+2733   03 43 27  64.1 193.1  0.4       8.8   -21     2688   No stop
23 59 03  ---          03 44 27  64.1 193.6  0.4       9.2    39     2704   23 58 04

 --- Start: Wed  28 Oct 2020   Day 302 -- Stop: Thu  29 Oct 2020   Day 303 ---

23 59 03  PSOJ0309     03 44 27  63.5 196.8  0.6      11.3   -21     2704   No stop
00 00 48  ---          03 46 12  63.5 197.7  0.6      11.9    84     2731   23 59 04

00 01 28  J0316+2733   03 46 52  64.0 194.8  0.5      10.0    19     2731   00 01 28
00 02 28  ---          03 47 52  63.9 195.3  0.5      10.3    60     2746   00 01 29

00 02 28  PSOJ0309     03 47 52  63.4 198.5  0.6      12.4   -21     2746   No stop
00 04 13  ---          03 49 38  63.3 199.3  0.6      12.9    84     2773   00 02 29

00 04 13  J0316+2733   03 49 38  63.9 196.2  0.5      10.9   -21     2773   No stop
00 05 13  ---          03 50 38  63.8 196.7  0.5      11.2    39     2789   00 04 14

00 05 13  PSOJ0309     03 50 38  63.3 199.8  0.7      13.3   -21     2789   No stop
00 06 58  ---          03 52 23  63.2 200.7  0.7      13.8    84     2816   00 05 14

00 07 38  J0316+2733   03 53 03  63.7 197.9  0.6      12.0    20     2816   00 07 38
00 08 38  ---          03 54 03  63.7 198.4  0.6      12.3    60     2831   00 07 39

00 08 38  PSOJ0309     03 54 03  63.1 201.5  0.7      14.3   -21     2831   No stop
00 10 23  ---          03 55 49  63.0 202.3  0.7      14.9    84     2858   00 08 39

00 10 23  J0316+2733   03 55 49  63.6 199.2  0.6      12.9   -20     2858   No stop
00 11 23  ---          03 56 49  63.5 199.7  0.7      13.2    40     2874   00 10 24
```

Schedule for TORUN (Code Tr) Page 11

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
00 11 23	PSOJ0309	03 56 49	62.9	202.8	0.8		15.2	-21	2874	No stop
00 13 08	---	03 58 34	62.8	203.6	0.8		15.7	84	2901	00 11 24
00 13 48	J0316+2733	03 59 14	63.4	200.9	0.7		14.0	20	2901	00 13 48
00 14 48	---	04 00 14	63.3	201.4	0.7		14.3	60	2916	00 13 49
00 14 48	PSOJ0309	04 00 14	62.7	204.4	0.8		16.2	-21	2916	No stop
00 16 33	---	04 02 00	62.6	205.2	0.8		16.7	84	2944	00 14 49
00 16 33	J0316+2733	04 02 00	63.2	202.2	0.7		14.8	-20	2944	No stop
00 17 33	---	04 03 00	63.2	202.7	0.8		15.1	40	2959	00 16 34
00 17 33	PSOJ0309	04 03 00	62.5	205.6	0.9		17.0	-21	2959	No stop
00 19 18	---	04 04 45	62.4	206.4	0.9		17.5	84	2986	00 17 34
00 19 58	J0316+2733	04 05 25	63.0	203.8	0.8		15.9	20	2986	00 19 58
00 20 58	---	04 06 25	63.0	204.3	0.8		16.2	60	3001	00 19 59
00 20 58	PSOJ0309	04 06 25	62.3	207.2	0.9		18.0	-21	3001	No stop
00 22 43	---	04 08 11	62.2	208.0	1.0		18.5	84	3029	00 20 59
00 22 43	J0316+2733	04 08 11	62.9	205.1	0.8		16.7	-20	3029	No stop
00 23 43	---	04 09 11	62.8	205.6	0.9		17.0	40	3044	00 22 44
00 23 43	PSOJ0309	04 09 11	62.1	208.5	1.0		18.8	-21	3044	No stop
00 25 28	---	04 10 56	62.0	209.2	1.0		19.3	84	3071	00 23 44
00 26 08	J0316+2733	04 11 36	62.6	206.7	0.9		17.7	20	3071	00 26 08
00 27 08	---	04 12 36	62.6	207.1	0.9		18.0	60	3087	00 26 09
00 27 48	PSOJ0309	04 13 16	61.8	210.3	1.0		19.9	20	3087	00 27 48
00 29 33	---	04 15 02	61.7	211.1	1.1		20.4	105	3114	00 27 49
00 30 13	J0316+2733	04 15 42	62.4	208.5	1.0		18.9	20	3114	00 30 13
00 31 13	---	04 16 42	62.3	209.0	1.0		19.2	60	3129	00 30 14
00 31 53	PSOJ0309	04 17 22	61.5	212.1	1.1		21.0	20	3129	00 31 53
00 33 38	---	04 19 07	61.4	212.8	1.1		21.5	105	3156	00 31 54
00 34 18	J0316+2733	04 19 47	62.1	210.4	1.0		20.0	20	3156	00 34 18
00 35 18	---	04 20 48	62.0	210.8	1.1		20.3	60	3172	00 34 19
00 35 58	J0316+2733	04 21 28	61.9	211.1	1.1		20.5	33	3172	00 35 58
00 36 58	---	04 22 28	61.9	211.6	1.1		20.8	60	3187	00 35 59

Schedule for TORUN (Code Tr) Page 12

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 29 Oct 2020 Day 303 ---										
00 36 58	PSOJ0309	04 22 28	61.1	214.3	1.2		22.4	-20	3187	No stop
00 38 43	---	04 24 13	60.9	215.0	1.2		22.8	85	3214	00 36 59
00 38 43	J0316+2733	04 24 13	61.7	212.3	1.1		21.3	-19	3214	No stop
00 39 43	---	04 25 13	61.6	212.8	1.1		21.5	41	3229	00 38 44
00 39 43	PSOJ0309	04 25 13	60.8	215.4	1.2		23.1	-20	3229	No stop
00 41 28	---	04 26 59	60.7	216.2	1.3		23.5	85	3257	00 39 44
00 42 08	J0316+2733	04 27 39	61.4	213.8	1.2		22.2	21	3257	00 42 08
00 43 08	---	04 28 39	61.4	214.2	1.2		22.4	60	3272	00 42 09
00 43 08	PSOJ0309	04 28 39	60.5	216.9	1.3		23.9	-20	3272	No stop
00 44 53	---	04 30 24	60.4	217.6	1.3		24.4	85	3299	00 43 09
00 44 53	J0316+2733	04 30 24	61.2	215.0	1.2		22.9	-19	3299	No stop
00 45 53	---	04 31 24	61.1	215.4	1.2		23.1	41	3315	00 44 54
00 45 53	PSOJ0309	04 31 24	60.3	218.0	1.3		24.6	-20	3315	No stop
00 47 38	---	04 33 10	60.1	218.7	1.4		25.0	85	3342	00 45 54
00 48 18	J0316+2733	04 33 50	60.9	216.4	1.3		23.7	21	3342	00 48 18
00 49 18	---	04 34 50	60.8	216.8	1.3		24.0	60	3357	00 48 19
00 49 18	PSOJ0309	04 34 50	60.0	219.4	1.4		25.4	-19	3357	No stop
00 51 03	---	04 36 35	59.8	220.1	1.4		25.8	86	3384	00 49 19
00 51 03	J0316+2733	04 36 35	60.7	217.6	1.3		24.4	-19	3384	No stop
00 52 03	---	04 37 35	60.6	218.0	1.3		24.7	41	3400	00 51 04
00 52 03	PSOJ0309	04 37 35	59.7	220.5	1.4		26.0	-19	3400	No stop
00 53 48	---	04 39 21	59.5	221.2	1.5		26.4	86	3427	00 52 04
00 54 28	J0316+2733	04 40 01	60.3	219.0	1.4		25.2	21	3427	00 54 28
00 55 28	---	04 41 01	60.2	219.4	1.4		25.5	60	3442	00 54 29
00 55 28	PSOJ0309	04 41 01	59.4	221.8	1.5		26.8	-19	3442	No stop
00 57 13	---	04 42 46	59.2	222.5	1.5		27.2	86	3469	00 55 29
00 57 13	J0316+2733	04 42 46	60.1	220.1	1.4		25.9	-19	3469	No stop
00 58 13	---	04 43 46	60.0	220.5	1.4		26.1	41	3485	00 57 14
00 58 13	PSOJ0309	04 43 46	59.1	222.9	1.5		27.4	-19	3485	No stop
00 59 58	---	04 45 32	58.9	223.5	1.6		27.8	86	3512	00 58 14

Schedule for TORUN (Code Tr) Page 13

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 29 Oct 2020 Day 303 ---										
01 00 38	J0316+2733	04 46 12	59.7	221.4	1.5		26.6	21	3512	01 00 38
01 01 38	---	04 47 12	59.6	221.8	1.5		26.9	60	3527	01 00 39
01 01 38	PSOJ0309	04 47 12	58.7	224.2	1.6		28.1	-19	3527	No stop
01 03 23	---	04 48 57	58.5	224.8	1.6		28.5	86	3554	01 01 39
01 03 23	J0316+2733	04 48 57	59.5	222.5	1.5		27.3	-18	3554	No stop
01 04 23	---	04 49 57	59.4	222.9	1.5		27.5	42	3570	01 03 24
01 04 23	PSOJ0309	04 49 57	58.4	225.2	1.6		28.7	-19	3570	No stop
01 06 08	---	04 51 43	58.2	225.9	1.7		29.0	86	3597	01 04 24
01 06 48	J0316+2733	04 52 23	59.1	223.8	1.6		28.0	22	3597	01 06 48
01 07 48	---	04 53 23	59.0	224.2	1.6		28.2	60	3612	01 06 49
01 07 48	PSOJ0309	04 53 23	58.1	226.5	1.7		29.4	-19	3612	No stop
01 09 33	---	04 55 08	57.9	227.1	1.7		29.7	86	3639	01 07 49
01 09 33	J0316+2733	04 55 08	58.8	224.9	1.6		28.6	-18	3639	No stop
01 10 33	---	04 56 08	58.7	225.2	1.6		28.8	42	3655	01 09 34
01 10 33	PSOJ0309	04 56 08	57.8	227.5	1.8		29.9	-19	3655	No stop
01 12 18	---	04 57 54	57.6	228.1	1.8		30.2	86	3682	01 10 34
01 12 58	J0316+2733	04 58 34	58.4	226.1	1.7		29.3	22	3682	01 12 58
01 13 58	---	04 59 34	58.3	226.5	1.7		29.5	60	3697	01 12 59
01 13 58	PSOJ0309	04 59 34	57.4	228.7	1.8		30.5	-18	3697	No stop
01 15 43	---	05 01 19	57.2	229.3	1.8		30.9	87	3724	01 13 59
01 15 43	J0316+2733	05 01 19	58.1	227.2	1.7		29.8	-18	3724	No stop
01 16 43	---	05 02 19	58.0	227.5	1.7		30.0	42	3740	01 15 44
01 16 43	PSOJ0309	05 02 19	57.1	229.7	1.9		31.0	-18	3740	No stop
01 18 28	---	05 04 05	56.9	230.3	1.9		31.3	87	3767	01 16 44
01 19 08	J0316+2733	05 04 45	57.8	228.4	1.8		30.4	22	3767	01 19 08
01 20 08	---	05 05 45	57.7	228.8	1.8		30.6	60	3782	01 19 09
01 20 08	PSOJ0309	05 05 45	56.7	230.9	1.9		31.6	-18	3782	No stop
01 21 53	---	05 07 30	56.5	231.5	1.9		31.9	87	3809	01 20 09
01 21 53	J0316+2733	05 07 30	57.5	229.4	1.8		31.0	-18	3809	No stop
01 22 53	---	05 08 30	57.3	229.7	1.8		31.1	42	3825	01 21 54

Schedule for TORUN (Code Tr) Page 14

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 29 Oct 2020 Day 303 ---										
01 22 53	PSOJ0309	05 08 30	56.3	231.8	2.0		32.1	-18	3825	No stop
01 24 38	---	05 10 16	56.1	232.4	2.0		32.4	87	3852	01 22 54
01 25 18	J0316+2733	05 10 56	57.1	230.6	1.9		31.6	22	3852	01 25 18
01 26 18	---	05 11 56	56.9	230.9	1.9		31.7	60	3867	01 25 19
01 26 18	PSOJ0309	05 11 56	55.9	233.0	2.0		32.7	-18	3867	No stop
01 28 03	---	05 13 41	55.7	233.5	2.0		32.9	87	3894	01 26 19
01 28 03	J0316+2733	05 13 41	56.7	231.5	1.9		32.0	-17	3894	No stop
01 29 03	---	05 14 41	56.6	231.9	1.9		32.2	43	3910	01 28 04
01 29 03	PSOJ0309	05 14 41	55.6	233.9	2.1		33.1	-18	3910	No stop
01 30 48	---	05 16 27	55.4	234.4	2.1		33.4	87	3937	01 29 04
01 31 28	J0316+2733	05 17 07	56.3	232.7	2.0		32.6	23	3937	01 31 28
01 32 28	---	05 18 07	56.2	233.0	2.0		32.8	60	3952	01 31 29
01 32 28	PSOJ0309	05 18 07	55.2	235.0	2.1		33.6	-18	3952	No stop
01 34 13	---	05 19 52	55.0	235.6	2.1		33.9	87	3979	01 32 29
01 34 13	J0316+2733	05 19 52	56.0	233.6	2.0		33.1	-17	3979	No stop
01 35 13	---	05 20 52	55.9	233.9	2.1		33.2	43	3995	01 34 14
01 35 13	PSOJ0309	05 20 52	54.8	235.9	2.2		34.0	-18	3995	No stop
01 36 58	---	05 22 38	54.6	236.4	2.2		34.3	87	4022	01 35 14
01 37 38	J0316+2733	05 23 18	55.6	234.7	2.1		33.6	23	4022	01 37 38
01 38 38	---	05 24 18	55.5	235.1	2.1		33.8	60	4037	01 37 39
01 38 38	PSOJ0309	05 24 18	54.4	237.0	2.2		34.5	-18	4037	No stop
01 40 23	---	05 26 03	54.2	237.5	2.3		34.8	87	4064	01 38 39
01 40 23	J0316+2733	05 26 03	55.2	235.6	2.1		34.0	-17	4064	No stop
01 41 23	---	05 27 03	55.1	236.0	2.2		34.2	43	4080	01 40 24
01 41 23	PSOJ0309	05 27 03	54.1	237.8	2.3		34.9	-17	4080	No stop
01 43 08	---	05 28 49	53.8	238.4	2.3		35.2	88	4107	01 41 24
01 43 48	J0316+2733	05 29 29	54.8	236.7	2.2		34.5	23	4107	01 43 48
01 44 48	---	05 30 29	54.7	237.0	2.2		34.7	60	4122	01 43 49
01 44 48	PSOJ0309	05 30 29	53.6	238.9	2.3		35.4	-17	4122	No stop
01 46 33	---	05 32 14	53.4	239.4	2.4		35.6	88	4149	01 44 49

Schedule for TORUN (Code Tr) Page 15

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 29 Oct 2020 Day 303 ---										
01 46 33	J0316+2733	05 32 14	54.5	237.6	2.2		34.9	-17	4149	No stop
01 47 33	---	05 33 15	54.3	237.9	2.3		35.0	43	4165	01 46 34
01 47 33	PSOJ0309	05 33 15	53.3	239.7	2.4		35.7	-17	4165	No stop
01 49 18	---	05 35 00	53.1	240.2	2.4		35.9	88	4192	01 47 34
01 49 58	J0316+2733	05 35 40	54.0	238.7	2.3		35.4	23	4192	01 49 58
01 50 58	---	05 36 40	53.9	239.0	2.3		35.5	60	4207	01 49 59
01 50 58	PSOJ0309	05 36 40	52.8	240.7	2.4		36.2	-17	4207	No stop
01 52 43	---	05 38 25	52.6	241.3	2.5		36.4	88	4234	01 50 59
01 52 43	J0316+2733	05 38 25	53.7	239.5	2.3		35.7	-17	4234	No stop
01 53 43	---	05 39 26	53.5	239.8	2.4		35.9	43	4250	01 52 44
01 53 43	PSOJ0309	05 39 26	52.5	241.5	2.5		36.5	-17	4250	No stop
01 55 28	---	05 41 11	52.2	242.1	2.5		36.7	88	4277	01 53 44
01 56 08	J0316+2733	05 41 51	53.2	240.5	2.4		36.2	23	4277	01 56 08
01 57 08	---	05 42 51	53.1	240.8	2.4		36.3	60	4292	01 56 09
01 57 08	PSOJ0309	05 42 51	52.0	242.5	2.5		36.9	-17	4292	No stop
01 58 53	---	05 44 36	51.8	243.0	2.6		37.1	88	4319	01 57 09
01 58 53	J0316+2733	05 44 36	52.9	241.3	2.4		36.5	-17	4319	No stop
01 59 53	---	05 45 37	52.7	241.6	2.5		36.6	43	4335	01 58 54
01 59 53	PSOJ0309	05 45 37	51.6	243.3	2.6		37.2	-17	4335	No stop
02 01 38	---	05 47 22	51.4	243.8	2.6		37.4	88	4362	01 59 54
02 02 18	J0316+2733	05 48 02	52.4	242.4	2.5		36.9	23	4362	02 02 18
02 03 18	---	05 49 02	52.3	242.6	2.5		37.0	60	4377	02 02 19
02 03 18	PSOJ0309	05 49 02	51.2	244.3	2.6		37.5	-17	4377	No stop
02 05 03	---	05 50 47	50.9	244.8	2.7		37.7	88	4404	02 03 19
02 05 03	J0316+2733	05 50 47	52.0	243.1	2.6		37.2	-17	4404	No stop
02 06 03	---	05 51 48	51.9	243.4	2.6		37.3	43	4420	02 05 04
02 06 03	PSOJ0309	05 51 48	50.8	245.1	2.7		37.8	-17	4420	No stop
02 07 48	---	05 53 33	50.6	245.6	2.7		38.0	88	4447	02 06 04
02 08 28	J0316+2733	05 54 13	51.6	244.1	2.6		37.6	23	4447	02 08 28
02 09 28	---	05 55 13	51.5	244.4	2.6		37.7	60	4462	02 08 29

Schedule for TORUN (Code Tr) Page 16

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart / SYNC
--- Thu 29 Oct 2020 Day 303 ---										
02 09 28	PSOJ0309	05 55 13	50.3	246.0	2.7		38.2	-17	4462	No stop
02 11 13	---	05 56 58	50.1	246.5	2.8		38.3	88	4489	02 09 29
02 11 13	J0316+2733	05 56 58	51.2	244.9	2.7		37.9	-17	4489	No stop
02 12 13	---	05 57 59	51.1	245.2	2.7		38.0	43	4505	02 11 14
02 12 13	PSOJ0309	05 57 59	50.0	246.8	2.8		38.4	-17	4505	No stop
02 13 58	---	05 59 44	49.7	247.2	2.8		38.6	88	4532	02 12 14
02 14 38	J0316+2733	06 00 24	50.7	245.8	2.7		38.2	23	4532	02 14 38
02 15 38	---	06 01 24	50.6	246.1	2.7		38.3	60	4547	02 14 39
02 20 41	DA193	06 06 29	76.6	187.9	0.2		6.2	167	4547	02 20 41
02 25 01	---	06 10 59	76.5	191.6	0.2		9.1	260	4614	02 20 42
02 30 16	J0316+2733	06 16 05	48.6	250.0	3.0		39.6	184	4614	02 30 16
02 31 16	---	06 17 15	48.4	250.3	3.0		39.7	60	4630	02 30 17
02 31 16	PSOJ0309	06 17 05	47.3	251.7	3.1		40.0	-17	4630	No stop
02 33 01	---	06 18 50	47.0	252.2	3.1		40.1	88	4657	02 31 17
02 33 01	J0316+2733	06 18 50	48.2	250.7	3.0		39.8	-17	4657	No stop
02 34 01	---	06 19 50	48.0	251.0	3.0		39.8	43	4672	02 33 02
02 34 01	PSOJ0309	06 19 50	46.9	252.4	3.1		40.1	-18	4672	No stop
02 35 46	---	06 21 36	46.6	252.9	3.2		40.3	87	4699	02 34 02
02 36 26	J0316+2733	06 22 16	47.7	251.6	3.1		40.0	23	4699	02 36 26
02 37 26	---	06 23 16	47.5	251.8	3.1		40.1	60	4715	02 36 27
02 38 06	J0316+2733	06 23 56	47.5	252.0	3.1		40.1	34	4715	02 38 06
02 39 06	---	06 24 56	47.3	252.3	3.1		40.2	60	4730	02 38 07
02 39 06	PSOJ0309	06 24 56	46.2	253.7	3.2		40.5	-18	4730	No stop
02 40 51	---	06 26 41	45.9	254.1	3.3		40.6	87	4757	02 39 07
02 40 51	J0316+2733	06 26 41	47.1	252.7	3.1		40.3	-17	4757	No stop
02 41 51	---	06 27 42	46.9	253.0	3.2		40.4	43	4773	02 40 52
02 41 51	PSOJ0309	06 27 42	45.8	254.4	3.3		40.6	-18	4773	No stop
02 43 36	---	06 29 27	45.5	254.8	3.3		40.7	87	4800	02 41 52
02 44 16	J0316+2733	06 30 07	46.6	253.5	3.2		40.5	23	4800	02 44 16
02 45 16	---	06 31 07	46.4	253.8	3.2		40.6	60	4815	02 44 17

Schedule for TORUN (Code Tr) Page 17

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 29 Oct 2020 Day 303 ---										
02 45 16	PSOJ0309	06 31 07	45.3	255.2	3.3		40.8	-18	4815	No stop
02 47 01	---	06 32 52	45.0	255.6	3.4		40.9	87	4842	02 45 17
02 47 01	J0316+2733	06 32 52	46.2	254.2	3.3		40.7	-17	4842	No stop
02 48 01	---	06 33 53	46.0	254.5	3.3		40.8	43	4858	02 47 02
02 48 01	PSOJ0309	06 33 53	44.9	255.8	3.4		41.0	-18	4858	No stop
02 49 46	---	06 35 38	44.6	256.2	3.4		41.1	87	4885	02 48 02
02 50 26	J0316+2733	06 36 18	45.7	255.0	3.3		40.9	23	4885	02 50 26
02 51 26	---	06 37 18	45.5	255.3	3.3		41.0	60	4900	02 50 27
02 51 26	PSOJ0309	06 37 18	44.4	256.6	3.4		41.1	-18	4900	No stop
02 53 11	---	06 39 03	44.1	257.0	3.5		41.2	87	4927	02 51 27
02 53 11	J0316+2733	06 39 03	45.3	255.7	3.4		41.1	-17	4927	No stop
02 54 11	---	06 40 04	45.1	255.9	3.4		41.1	43	4943	02 53 12
02 54 11	PSOJ0309	06 40 04	44.0	257.3	3.5		41.3	-18	4943	No stop
02 55 56	---	06 41 49	43.7	257.7	3.5		41.4	87	4970	02 54 12
02 56 36	J0316+2733	06 42 29	44.8	256.5	3.4		41.2	23	4970	02 56 36
02 57 36	---	06 43 29	44.6	256.7	3.4		41.3	60	4985	02 56 37
02 57 36	PSOJ0309	06 43 29	43.5	258.1	3.5		41.4	-18	4985	No stop
02 59 21	---	06 45 14	43.2	258.5	3.6		41.5	87	5012	02 57 37
02 59 21	J0316+2733	06 45 14	44.4	257.2	3.5		41.4	-17	5012	No stop
03 00 21	---	06 46 15	44.2	257.4	3.5		41.4	43	5028	02 59 22
03 00 21	PSOJ0309	06 46 15	43.0	258.7	3.6		41.5	-18	5028	No stop
03 02 06	---	06 48 00	42.8	259.1	3.6		41.6	87	5055	03 00 22
03 02 46	J0316+2733	06 48 40	43.9	257.9	3.5		41.5	23	5055	03 02 46
03 03 46	---	06 49 40	43.7	258.2	3.5		41.6	60	5070	03 02 47
03 03 46	PSOJ0309	06 49 40	42.5	259.5	3.6		41.7	-18	5070	No stop
03 05 31	---	06 51 25	42.3	259.9	3.7		41.7	87	5097	03 03 47
03 05 31	J0316+2733	06 51 25	43.5	258.6	3.6		41.6	-17	5097	No stop
03 06 31	---	06 52 26	43.3	258.8	3.6		41.7	43	5113	03 05 32
03 06 31	PSOJ0309	06 52 26	42.1	260.1	3.7		41.8	-18	5113	No stop
03 08 16	---	06 54 11	41.9	260.5	3.7		41.8	87	5140	03 06 32

Schedule for TORUN (Code Tr) Page 18

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 29 Oct 2020 Day 303 ---										
03 08 56	J0316+2733	06 54 51	43.0	259.4	3.6		41.8	23	5140	03 08 56
03 09 56	---	06 55 51	42.8	259.6	3.6		41.8	60	5155	03 08 57
03 09 56	PSOJ0309	06 55 51	41.6	260.9	3.7		41.9	-18	5155	No stop
03 11 41	---	06 57 36	41.4	261.2	3.8		41.9	87	5182	03 09 57
03 11 41	J0316+2733	06 57 36	42.5	260.0	3.7		41.9	-17	5182	No stop
03 12 41	---	06 58 37	42.4	260.2	3.7		41.9	43	5198	03 11 42
03 12 41	PSOJ0309	06 58 37	41.2	261.5	3.8		42.0	-18	5198	No stop
03 14 26	---	07 00 22	41.0	261.8	3.8		42.0	87	5225	03 12 42
03 15 06	J0316+2733	07 01 02	42.0	260.7	3.7		42.0	23	5225	03 15 06
03 16 06	---	07 02 02	41.9	261.0	3.7		42.0	60	5240	03 15 07
03 16 06	PSOJ0309	07 02 02	40.7	262.2	3.8		42.1	-18	5240	No stop
03 17 51	---	07 03 47	40.5	262.6	3.9		42.1	87	5267	03 16 07
03 17 51	J0316+2733	07 03 47	41.6	261.3	3.8		42.1	-17	5267	No stop
03 18 51	---	07 04 48	41.5	261.6	3.8		42.1	43	5283	03 17 52
03 18 51	PSOJ0309	07 04 48	40.3	262.8	3.9		42.1	-18	5283	No stop
03 20 36	---	07 06 33	40.0	263.2	3.9		42.2	87	5310	03 18 52
03 21 16	J0316+2733	07 07 13	41.1	262.1	3.8		42.2	23	5310	03 21 16
03 22 16	---	07 08 13	41.0	262.3	3.8		42.2	60	5325	03 21 17
03 22 16	PSOJ0309	07 08 13	39.8	263.5	4.0		42.2	-18	5325	No stop
03 24 01	---	07 09 58	39.5	263.9	4.0		42.3	87	5352	03 22 17
03 24 01	J0316+2733	07 09 58	40.7	262.7	3.9		42.2	-17	5352	No stop
03 25 01	---	07 10 59	40.6	262.9	3.9		42.3	43	5368	03 24 02
03 25 01	PSOJ0309	07 10 59	39.4	264.1	4.0		42.3	-18	5368	No stop
03 26 46	---	07 12 44	39.1	264.5	4.0		42.3	87	5395	03 25 02
03 27 26	J0316+2733	07 13 24	40.2	263.4	3.9		42.3	23	5395	03 27 26
03 28 26	---	07 14 24	40.1	263.7	3.9		42.3	60	5410	03 27 27
03 28 26	PSOJ0309	07 14 24	38.9	264.9	4.1		42.3	-18	5410	No stop
03 30 11	---	07 16 09	38.6	265.2	4.1		42.4	87	5437	03 28 27
03 30 11	J0316+2733	07 16 09	39.8	264.0	4.0		42.4	-17	5437	No stop
03 31 11	---	07 17 10	39.6	264.2	4.0		42.4	43	5453	03 30 12

Schedule for TORUN (Code Tr) Page 19

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
03 31 11	PSOJ0309	07 17 10	38.5	265.4	4.1		42.4	-18	5453	No stop
03 32 56	---	07 18 55	38.2	265.8	4.1		42.4	87	5480	03 31 12
03 33 36	J0316+2733	07 19 35	39.3	264.8	4.0		42.4	23	5480	03 33 36
03 34 36	---	07 20 35	39.1	265.0	4.0		42.5	60	5495	03 33 37
03 34 36	PSOJ0309	07 20 35	37.9	266.1	4.2		42.4	-18	5495	No stop
03 36 21	---	07 22 20	37.7	266.5	4.2		42.5	87	5522	03 34 37
03 36 21	J0316+2733	07 22 20	38.9	265.3	4.1		42.5	-17	5522	No stop
03 37 21	---	07 23 21	38.7	265.5	4.1		42.5	43	5538	03 36 22
03 37 21	PSOJ0309	07 23 21	37.5	266.7	4.2		42.5	-18	5538	No stop
03 39 06	---	07 25 06	37.3	267.1	4.2		42.5	87	5565	03 37 22
03 39 46	J0316+2733	07 25 46	38.4	266.0	4.1		42.5	23	5565	03 39 46
03 40 46	---	07 26 46	38.2	266.3	4.2		42.6	60	5580	03 39 47
03 40 46	PSOJ0309	07 26 46	37.0	267.4	4.3		42.5	-18	5580	No stop
03 42 31	---	07 28 31	36.8	267.8	4.3		42.5	87	5608	03 40 47
03 42 31	J0316+2733	07 28 31	37.9	266.6	4.2		42.6	-17	5608	No stop
03 43 31	---	07 29 32	37.8	266.8	4.2		42.6	43	5623	03 42 32
03 43 31	PSOJ0309	07 29 32	36.6	268.0	4.3		42.5	-18	5623	No stop
03 45 16	---	07 31 17	36.3	268.3	4.3		42.5	87	5650	03 43 32
03 45 56	J0316+2733	07 31 57	37.4	267.3	4.2		42.6	23	5650	03 45 56
03 46 56	---	07 32 57	37.3	267.5	4.3		42.6	60	5665	03 45 57
03 46 56	PSOJ0309	07 32 57	36.1	268.7	4.4		42.5	-18	5665	No stop
03 48 41	---	07 34 42	35.8	269.0	4.4		42.5	87	5693	03 46 57
03 48 41	J0316+2733	07 34 42	37.0	267.9	4.3		42.6	-17	5693	No stop
03 49 41	---	07 35 43	36.9	268.1	4.3		42.6	43	5708	03 48 42
03 49 41	PSOJ0309	07 35 43	35.7	269.2	4.4		42.5	-18	5708	No stop
03 51 26	---	07 37 28	35.4	269.6	4.4		42.5	87	5735	03 49 42
03 52 06	J0316+2733	07 38 08	36.5	268.6	4.3		42.7	23	5735	03 52 06
03 53 06	---	07 39 08	36.3	268.8	4.4		42.7	60	5750	03 52 07
03 53 06	PSOJ0309	07 39 08	35.2	269.9	4.5		42.5	-18	5750	No stop
03 54 51	---	07 40 54	34.9	270.3	4.5		42.5	87	5778	03 53 07

Schedule for TORUN (Code Tr) Page 20

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Thu 29 Oct 2020 Day 303 ---										
03 54 51	J0316+2733	07 40 54	36.1	269.1	4.4		42.7	-17	5778	No stop
03 55 51	---	07 41 54	35.9	269.3	4.4		42.7	43	5793	03 54 52
03 55 51	PSOJ0309	07 41 54	34.7	270.5	4.5		42.5	-18	5793	No stop
03 57 36	---	07 43 39	34.5	270.8	4.5		42.5	87	5820	03 55 52
03 58 16	J0316+2733	07 44 19	35.6	269.8	4.4		42.7	23	5820	03 58 16
03 59 16	---	07 45 19	35.4	270.0	4.5		42.7	60	5836	03 58 17
03 59 16	PSOJ0309	07 45 19	34.2	271.2	4.6		42.5	-18	5836	No stop
04 01 01	---	07 47 05	34.0	271.5	4.6		42.5	87	5863	03 59 17
04 01 01	J0316+2733	07 47 05	35.2	270.4	4.5		42.7	-17	5863	No stop
04 02 01	---	07 48 05	35.0	270.6	4.5		42.7	43	5878	04 01 02
04 02 01	PSOJ0309	07 48 05	33.8	271.7	4.6		42.5	-18	5878	No stop
04 03 46	---	07 49 50	33.6	272.0	4.6		42.5	87	5905	04 02 02
04 04 26	J0316+2733	07 50 30	34.6	271.1	4.5		42.7	23	5905	04 04 26
04 05 26	---	07 51 30	34.5	271.3	4.6		42.7	60	5921	04 04 27
04 05 26	PSOJ0309	07 51 30	33.3	272.4	4.7		42.5	-18	5921	No stop
04 07 11	---	07 53 16	33.0	272.7	4.7		42.5	87	5948	04 05 27
04 07 11	J0316+2733	07 53 16	34.2	271.6	4.6		42.6	-17	5948	No stop
04 08 11	---	07 54 16	34.1	271.8	4.6		42.6	43	5963	04 07 12
04 08 11	PSOJ0309	07 54 16	32.9	272.9	4.7		42.5	-18	5963	No stop
04 09 56	---	07 56 01	32.6	273.3	4.7		42.5	87	5990	04 08 12
04 10 36	J0316+2733	07 56 41	33.7	272.3	4.6		42.6	23	5990	04 10 36
04 11 36	---	07 57 41	33.6	272.5	4.7		42.6	60	6006	04 10 37
04 11 36	PSOJ0309	07 57 41	32.4	273.6	4.8		42.4	-18	6006	No stop
04 13 21	---	07 59 27	32.1	273.9	4.8		42.4	87	6033	04 11 37
04 13 21	J0316+2733	07 59 27	33.3	272.8	4.7		42.6	-17	6033	No stop
04 14 21	---	08 00 27	33.2	273.0	4.7		42.6	43	6048	04 13 22
04 14 21	PSOJ0309	08 00 27	32.0	274.1	4.8		42.4	-18	6048	No stop
04 16 06	---	08 02 12	31.7	274.5	4.9		42.4	87	6075	04 14 22
04 16 46	J0316+2733	08 02 52	32.8	273.5	4.8		42.6	23	6075	04 16 46
04 17 46	---	08 03 52	32.6	273.7	4.8		42.6	60	6091	04 16 47

```
Schedule for TORUN     (Code Tr )                                  Page  21
              The parsec-scale view of the most distant blazar at z = 6.1
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Thu  29 Oct 2020   Day 303 ---

04 17 46  PSOJ0309     08 03 52  31.5 274.8  4.9      42.4   -18     6091   No stop
04 19 31  ---          08 05 38  31.2 275.1  4.9      42.3    87     6118   04 17 47

04 19 31  J0316+2733   08 05 38  32.4 274.0  4.8      42.5   -17     6118   No stop
04 20 31  ---          08 06 38  32.2 274.2  4.8      42.5    43     6133   04 19 32

04 20 31  PSOJ0309     08 06 38  31.0 275.3  4.9      42.3   -18     6133   No stop
04 22 16  ---          08 08 23  30.8 275.6  5.0      42.3    87     6160   04 20 32

04 22 56  J0316+2733   08 09 03  31.9 274.7  4.9      42.5    23     6160   04 22 56
04 23 56  ---          08 10 03  31.7 274.9  4.9      42.5    60     6176   04 22 57

04 23 56  PSOJ0309     08 10 03  30.5 276.0  5.0      42.3   -18     6176   No stop
04 25 41  ---          08 11 49  30.3 276.3  5.0      42.2    87     6203   04 23 57

04 25 41  J0316+2733   08 11 49  31.4 275.2  4.9      42.5   -17     6203   No stop
04 26 41  ---          08 12 49  31.3 275.4  4.9      42.4    43     6218   04 25 42

04 26 41  PSOJ0309     08 12 49  30.1 276.5  5.0      42.2   -18     6218   No stop
04 28 26  ---          08 14 34  29.9 276.8  5.1      42.2    87     6245   04 26 42

04 29 06  J0316+2733   08 15 14  30.9 275.9  5.0      42.4    23     6245   04 29 06
04 30 06  ---          08 16 14  30.8 276.1  5.0      42.4    60     6261   04 29 07



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.K2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
           21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00  21480.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   22139.49  22139.49  22139.49  22139.49  22203.49  22203.49  22203.49  22203.49
            22267.49  22267.49  22267.49  22267.49  22331.49  22331.49  22331.49  22331.49
  BBC fr=     659.49    659.49    659.49    659.49    723.49    723.49    723.49    723.49
              787.49    787.49    787.49    787.49    851.49    851.49    851.49    851.49
  Bandwd=      32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
               32.00     32.00     32.00     32.00     32.00     32.00     32.00     32.00
   Matching frequency sets:   7  14

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                          Source position (RA/Dec)                        Error
                        (B1950)             (J2000)             (Date)            (mas)

* PSOJ0309          03 06 48.589182   * 03 09 47.486200     03 11 02.246202       0.00
                    27 06 34.92609    * 27 17 57.31670      27 22 39.46655        0.00
                    position of the core from VLBA 8.4 GHz

* J0316+2733        03 13 29.159808   * 03 16 29.011900     03 17 44.158505       0.00
                    27 22 07.44354    * 27 33 08.14700      27 37 41.07913        0.00
                    position from astrogeo.org

  J0555+3948        05 52 01.407174   * 05 55 30.805616     05 56 57.587555       0.13
  0552+398          39 48 21.94578    * 39 48 49.16493      39 48 52.95084        0.10
* DA193             /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
  J0555+39          rfc_2012b Petrov, 2012, unpublished 376994 observations
```

EFFECT OF SOLAR CORONA

```
 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  PSOJ0309           161.0
  J0316+2733         159.7
  DA193              125.0
```

```
Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

n20c3tr

Network Monitoring Experiment

PI: *Benito Marcote*


```
Address:  JIVE
          Oude Hoogeveensedijk 4
          7991PD Dwingeloo
          The Netherlands

Phone:    +31 521 596 508
EMAIL:    marcote@jive.eu
Fax:
Phone during observation: +31 521 596 508
```


```
Observing mode:

Schedule for TORUN     (Code Tr )                                    Page   2
               Network Monitoring Experiment
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Thu  29 Oct 2020   Day 303 ---

 Next scan frequencies:  4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
                         4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 Next BBC frequencies:    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
                          758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

11 00 00  J1751+0939   14 47 13  32.9 121.9 -3.1     -31.1     0        0   11 00 00
11 02 00  =1749+096    14 49 13  33.1 122.4 -3.1     -30.9   120       31   11 00 01

11 07 00  J1751+0939   14 54 14  33.8 123.7 -3.0     -30.5   293       31   11 07 00
11 17 00  =1749+096    15 04 16  35.0 126.3 -2.8     -29.4   600      185   11 07 01

11 22 00  J1751+0939   15 09 16  35.6 127.6 -2.7     -28.9   293      185   11 22 00
11 32 00  =1749+096    15 19 18  36.8 130.3 -2.6     -27.7   600      340   11 22 01

11 37 00  J1751+0939   15 24 19  37.3 131.7 -2.5     -27.1   293      340   11 37 00
11 47 00  =1749+096    15 34 20  38.4 134.5 -2.3     -25.8   600      495   11 37 01

11 52 00  J1751+0939   15 39 21  39.0 135.9 -2.2     -25.1   293      495   11 52 00
12 02 00  =1749+096    15 49 23  40.0 138.8 -2.1     -23.6   600      649   11 52 01

12 07 00  J1751+0939   15 54 24  40.5 140.3 -2.0     -22.9   293      649   12 07 00
12 17 00  =1749+096    16 04 25  41.4 143.3 -1.8     -21.3   600      804   12 07 01

12 22 00  J1751+0939   16 09 26  41.8 144.9 -1.7     -20.5   293      804   12 22 00
12 32 00  =1749+096    16 19 28  42.7 148.0 -1.6     -18.8   600      958   12 22 01

12 37 00  J1751+0939   16 24 29  43.1 149.6 -1.5     -17.9   293      958   12 37 00
12 47 00  =1749+096    16 34 30  43.8 152.9 -1.3     -16.1   600     1113   12 37 01

12 52 00  J2031+1219   16 39 31  28.7 108.7 -3.9     -35.6   195     1113   12 52 00
13 02 00  =2029+121    16 49 33  30.1 111.0 -3.7     -35.0   600     1268   12 52 01
```

```
13 07 00  J2031+1219   16 54 34  30.8 112.1 -3.6     -34.7   293     1268   13 07 00
13 17 00  =2029+121    17 04 35  32.2 114.5 -3.5     -34.0   600     1422   13 07 01

13 22 00  J2031+1219   17 09 36  32.8 115.7 -3.4     -33.6   293     1422   13 22 00
13 32 00  =2029+121    17 19 38  34.2 118.2 -3.2     -32.8   600     1577   13 22 01

13 37 00  J2031+1219   17 24 39  34.8 119.4 -3.1     -32.4   293     1577   13 37 00
13 47 00  =2029+121    17 34 40  36.1 122.0 -3.0     -31.4   600     1731   13 37 01

13 52 00  J2031+1219   17 39 41  36.8 123.3 -2.9     -30.9   293     1731   13 52 00
14 00 00  =2029+121    17 47 42  37.8 125.4 -2.8     -30.1   480     1855   13 52 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.C2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
           4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   8  Setup file default.  Used with PCAL = off
 LO sum=   4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
           4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 BBC fr=    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
            758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
             32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
  Matching frequency sets:   8

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
  barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                      (B1950)            (J2000)            (Date)            (mas)

  1749+096          17 49 10.387930   * 17 51 32.818574     17 52 30.206006       0.00
* J1751+0939        09 39 42.82586    * 09 39 00.72841      09 38 53.77753        0.00
  J1751+09          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution, 192391 observations.

  2029+121          20 29 32.681260   * 20 31 54.994267     20 32 53.138831       0.01
* J2031+1219        12 09 28.75299    * 12 19 41.34015      12 24 03.67620        0.02
  J2031+12          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,   4314 observations.


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 J1751+0939          58.4
 J2031+1219          96.7

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
```

```
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

ec071htr

EVN 5 GHz and 22 GHz study of 43 compact radio sources

PI: *Carolina Casadio*


```
Address:  FORTH - Institute of Astrophysics
          Voutes, 7110 - Heraklion

          Crete (GR)

Phone:    (+30) 2810 39-4266
EMAIL:    ccasadio@ia.forth.gr
Fax:
Phone during observation:
```


```
Observing mode: Continuum

Schedule for TORUN     (Code Tr )                                    Page   2
               EVN 5 GHz and 22 GHz study of 43 compact radio sources
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Thu  29 Oct 2020   Day 303 ---

 Next scan frequencies:  4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
                         4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 Next BBC frequencies:    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
                          758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

17 30 00  J0237+2848   21 18 17  28.4  78.8 -5.3     -42.3     0        0   17 30 00
17 32 30  ---          21 20 47  28.8  79.2 -5.3     -42.4   150       39   17 30 01

17 35 00  J0151+5134   21 23 18  50.4  63.9 -4.5     -60.4    56       39   17 35 00
17 36 10  ---          21 24 28  50.5  64.0 -4.5     -60.5    70       57   17 35 01

17 36 10  J0132+5211   21 24 28  53.5  65.4 -4.2     -63.2   -25       57   No stop
17 40 00  ---          21 28 18  54.0  65.9 -4.1     -63.6   205      116   17 36 11

17 40 00  J0151+5134   21 28 18  51.1  64.5 -4.4     -60.9   -25      116   No stop
17 41 50  ---          21 30 09  51.3  64.7 -4.4     -61.1    85      144   17 40 01

17 41 50  J0132+5211   21 30 09  54.2  66.1 -4.1     -63.8   -25      144   No stop
17 45 40  ---          21 33 59  54.8  66.5 -4.0     -64.2   205      204   17 41 51

17 46 10  J0151+5134   21 34 29  51.9  65.2 -4.3     -61.5     5      204   17 46 10
17 47 30  ---          21 35 50  52.1  65.4 -4.3     -61.7    80      224   17 46 11

17 47 30  J0132+5211   21 35 50  55.0  66.7 -4.0     -64.4   -25      224   No stop
17 51 20  ---          21 39 40  55.5  67.2 -3.9     -64.8   205      283   17 47 31

17 51 20  J0151+5134   21 39 40  52.6  65.8 -4.2     -62.1   -25      283   No stop
17 53 10  ---          21 41 31  52.9  66.1 -4.2     -62.3    85      312   17 51 21

17 53 10  J0132+5211   21 41 31  55.8  67.4 -3.9     -65.0   -25      312   No stop
17 57 00  ---          21 45 21  56.3  67.8 -3.8     -65.4   205      371   17 53 11
```

17 57 30	J0151+5134	21 45 51	53.4	66.6	-4.1	-62.7	5	371	17 57 30
17 58 50	---	21 47 12	53.6	66.7	-4.1	-62.8	80	392	17 57 31
17 58 50	J0132+5211	21 47 12	56.6	68.0	-3.8	-65.6	-25	392	No stop
18 02 40	---	21 51 02	57.1	68.5	-3.7	-66.0	205	451	17 58 51
18 02 40	J0151+5134	21 51 02	54.2	67.2	-4.0	-63.2	-25	451	No stop
18 04 30	---	21 52 52	54.4	67.4	-4.0	-63.4	85	479	18 02 41
18 04 30	J0132+5211	21 52 52	57.4	68.7	-3.7	-66.2	-25	479	No stop
18 08 20	---	21 56 43	57.9	69.1	-3.6	-66.6	205	538	18 04 31

Schedule for TORUN (Code Tr) Page 3

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
18 08 50	J0151+5134	21 57 13	55.0	67.9	-3.9		-63.8	5	538	18 08 50
18 10 10	---	21 58 33	55.2	68.1	-3.9		-64.0	80	559	18 08 51
18 13 20	J0012+3353	22 01 44	59.8	115.9	-2.2		-40.7	80	559	18 13 20
18 14 50	---	22 03 14	60.0	116.4	-2.2		-40.5	90	582	18 13 21
18 14 50	J0011+3443	22 03 14	60.9	115.8	-2.2		-41.2	-16	582	No stop
18 18 30	---	22 06 55	61.4	117.0	-2.1		-40.7	204	639	18 14 51
18 18 30	J0012+3353	22 06 55	60.5	117.6	-2.1		-39.9	-15	639	No stop
18 20 10	---	22 08 35	60.7	118.1	-2.1		-39.7	85	665	18 18 31
18 20 10	J0011+3443	22 08 35	61.6	117.5	-2.1		-40.5	-16	665	No stop
18 23 50	---	22 12 16	62.1	118.7	-2.0		-39.9	204	721	18 20 11
18 24 20	J0012+3353	22 12 46	61.3	119.5	-2.0		-39.1	15	721	18 24 20
18 25 30	---	22 13 56	61.5	119.9	-2.0		-38.9	70	739	18 24 21
18 25 30	J0011+3443	22 13 56	62.3	119.3	-2.0		-39.6	-16	739	No stop
18 29 10	---	22 17 37	62.8	120.6	-1.9		-39.1	204	796	18 25 31
18 29 10	J0012+3353	22 17 37	61.9	121.2	-1.9		-38.3	-15	796	No stop
18 30 50	---	22 19 17	62.1	121.7	-1.9		-38.0	85	822	18 29 11
18 30 50	J0011+3443	22 19 17	63.0	121.1	-1.9		-38.8	-16	822	No stop
18 34 30	---	22 22 57	63.5	122.5	-1.8		-38.1	204	879	18 30 51
18 35 00	J0012+3353	22 23 27	62.7	123.2	-1.8		-37.3	15	879	18 35 00
18 36 10	---	22 24 38	62.8	123.6	-1.8		-37.1	70	897	18 35 01
18 36 10	J0011+3443	22 24 38	63.7	123.1	-1.8		-37.8	-16	897	No stop
18 39 50	---	22 28 18	64.1	124.4	-1.7		-37.1	204	953	18 36 11
18 39 50	J0012+3353	22 28 18	63.3	125.0	-1.8		-36.4	-16	953	No stop
18 41 30	---	22 29 59	63.5	125.6	-1.7		-36.1	84	979	18 39 51
18 43 00	J0111+3906	22 31 29	59.3	100.5	-2.7		-49.7	24	979	18 43 00
18 44 40	---	22 33 09	59.6	100.9	-2.7		-49.6	100	1005	18 43 01
18 44 40	J0118+3810	22 33 09	58.0	100.6	-2.8		-48.8	-19	1005	No stop
18 48 20	---	22 36 50	58.6	101.5	-2.7		-48.6	201	1061	18 44 41
18 48 20	J0111+3906	22 36 50	60.1	101.8	-2.6		-49.4	-20	1061	No stop
18 50 00	---	22 38 30	60.4	102.2	-2.6		-49.2	80	1087	18 48 21

Schedule for TORUN (Code Tr) Page 4

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
18 50 00	J0118+3810	22 38 30	58.8	101.9	-2.7		-48.5	-19	1087	No stop
18 53 40	---	22 42 11	59.3	102.9	-2.6		-48.2	201	1144	18 50 01
18 54 10	J0111+3906	22 42 41	61.0	103.3	-2.5		-49.0	10	1144	18 54 10
18 55 20	---	22 43 51	61.2	103.6	-2.5		-48.9	70	1162	18 54 11
18 55 20	J0118+3810	22 43 51	59.6	103.3	-2.6		-48.1	-19	1162	No stop
18 59 00	---	22 47 31	60.1	104.3	-2.5		-47.9	201	1219	18 55 21
18 59 00	J0111+3906	22 47 31	61.7	104.6	-2.4		-48.6	-20	1219	No stop
19 00 40	---	22 49 12	61.9	105.0	-2.4		-48.5	80	1244	18 59 01
19 00 40	J0118+3810	22 49 12	60.4	104.7	-2.5		-47.7	-19	1244	No stop
19 04 20	---	22 52 52	60.9	105.7	-2.4		-47.4	201	1301	19 00 41
19 04 50	J0111+3906	22 53 22	62.5	106.2	-2.3		-48.1	10	1301	19 04 50
19 06 00	---	22 54 33	62.7	106.5	-2.3		-48.0	70	1319	19 04 51
19 07 00	J0203+3042	22 55 33	49.4	104.0	-3.2		-42.7	-4	1319	19 07 00
19 09 00	---	22 57 33	49.7	104.5	-3.1		-42.6	116	1350	19 07 01
19 09 00	J0203+3041	22 57 33	49.6	104.5	-3.1		-42.6	-6	1350	No stop
19 12 30	---	23 01 04	50.2	105.4	-3.1		-42.4	204	1404	19 09 01
19 12 30	J0203+3042	23 01 04	50.2	105.4	-3.1		-42.4	-7	1404	No stop
19 14 00	---	23 02 34	50.4	105.7	-3.0		-42.3	83	1427	19 12 31
19 14 00	J0203+3041	23 02 34	50.4	105.8	-3.0		-42.3	-6	1427	No stop
19 17 30	---	23 06 04	50.9	106.6	-3.0		-42.0	204	1481	19 14 01
19 18 00	J0203+3042	23 06 35	51.0	106.8	-3.0		-42.0	23	1481	19 18 00
19 19 00	---	23 07 35	51.1	107.0	-3.0		-42.0	60	1497	19 18 01
19 19 00	J0203+3041	23 07 35	51.1	107.0	-3.0		-41.9	-6	1497	No stop
19 22 30	---	23 11 05	51.6	107.9	-2.9		-41.7	204	1551	19 19 01
19 22 30	J0203+3042	23 11 05	51.6	107.9	-2.9		-41.7	-7	1551	No stop
19 24 00	---	23 12 36	51.8	108.3	-2.9		-41.6	83	1574	19 22 31
19 24 00	J0203+3041	23 12 36	51.8	108.3	-2.9		-41.6	-6	1574	No stop
19 27 30	---	23 16 06	52.3	109.2	-2.8		-41.3	204	1628	19 24 01
19 28 00	J0203+3042	23 16 36	52.4	109.3	-2.8		-41.3	23	1628	19 28 00
19 29 00	---	23 17 36	52.5	109.6	-2.8		-41.2	60	1644	19 28 01

Schedule for TORUN (Code Tr) Page 5

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
19 29 00	J0203+3041	23 17 36	52.5	109.6	-2.8		-41.2	-6	1644	No stop
19 32 30	---	23 21 07	53.0	110.6	-2.7		-40.9	204	1698	19 29 01
19 32 30	J0203+3042	23 21 07	53.0	110.6	-2.7		-40.9	-7	1698	No stop
19 34 00	---	23 22 37	53.3	111.0	-2.7		-40.8	83	1721	19 32 31
19 34 30	J0237+2848	23 23 07	47.0	104.4	-3.3		-41.6	-7	1721	19 34 30
19 37 30	---	23 26 08	47.4	105.1	-3.2		-41.5	173	1767	19 34 31
19 39 00	J0137+0923	23 27 38	39.0	136.5	-2.2		-24.8	12	1767	19 39 00
19 41 00	---	23 29 38	39.2	137.1	-2.2		-24.5	120	1798	19 39 01
19 41 00	J0139+0824	23 29 38	38.1	137.0	-2.2		-24.5	-17	1798	No stop
19 44 40	---	23 33 19	38.5	138.1	-2.1		-23.9	203	1855	19 41 01
19 44 40	J0137+0923	23 33 19	39.6	138.2	-2.1		-24.0	-17	1855	No stop
19 46 20	---	23 34 59	39.8	138.6	-2.1		-23.7	83	1881	19 44 41
19 46 20	J0139+0824	23 34 59	38.7	138.5	-2.1		-23.7	-17	1881	No stop
19 50 00	---	23 38 40	39.0	139.6	-2.0		-23.2	203	1937	19 46 21
19 50 30	J0137+0923	23 39 10	40.2	139.9	-2.0		-23.1	13	1937	19 50 30
19 51 40	---	23 40 20	40.3	140.2	-2.0		-22.9	70	1955	19 50 31
19 51 40	J0139+0824	23 40 20	39.2	140.1	-2.0		-22.9	-17	1955	No stop
19 55 20	---	23 44 01	39.5	141.2	-2.0		-22.4	203	2012	19 51 41
19 55 20	J0137+0923	23 44 01	40.6	141.3	-1.9		-22.4	-17	2012	No stop
19 57 00	---	23 45 41	40.8	141.8	-1.9		-22.1	83	2038	19 55 21
19 57 00	J0139+0824	23 45 41	39.7	141.7	-1.9		-22.1	-17	2038	No stop
20 00 40	---	23 49 22	40.0	142.8	-1.9		-21.5	203	2095	19 57 01
20 01 10	J0137+0923	23 49 52	41.2	143.1	-1.8		-21.4	13	2095	20 01 10
20 02 20	---	23 51 02	41.3	143.5	-1.8		-21.3	70	2113	20 01 11
20 02 20	J0139+0824	23 51 02	40.2	143.3	-1.8		-21.3	-17	2113	No stop
20 06 00	---	23 54 42	40.5	144.4	-1.8		-20.7	203	2169	20 02 21
20 06 00	J0137+0923	23 54 42	41.6	144.6	-1.7		-20.7	-17	2169	No stop
20 07 40	---	23 56 23	41.7	145.1	-1.7		-20.4	83	2195	20 06 01
20 07 40	J0139+0824	23 56 23	40.6	144.9	-1.7		-20.4	-17	2195	No stop
20 11 20	---	00 00 03	41.0	146.0	-1.7		-19.8	203	2252	20 07 41

Schedule for TORUN (Code Tr) Page 6

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
20 11 50	J0137+0923	00 00 33	42.1	146.4	-1.6		-19.7	13	2252	20 11 50
20 13 00	---	00 01 44	42.2	146.8	-1.6		-19.5	70	2270	20 11 51
20 14 00	J0053+2925	00 02 44	64.6	152.8	-0.9		-18.4	-38	2270	20 14 00
20 16 10	---	00 04 54	64.7	153.8	-0.8		-17.7	92	2303	20 14 01
20 16 10	J0044+2858	00 04 54	64.9	158.8	-0.7		-14.4	-25	2303	No stop
20 20 00	---	00 08 45	65.1	160.7	-0.6		-13.1	205	2363	20 16 11
20 20 00	J0053+2925	00 08 45	65.0	155.7	-0.8		-16.5	-25	2363	No stop
20 21 50	---	00 10 35	65.1	156.6	-0.7		-15.9	85	2391	20 20 01
20 21 50	J0044+2858	00 10 35	65.2	161.6	-0.6		-12.5	-25	2391	No stop
20 25 40	---	00 14 26	65.3	163.6	-0.5		-11.2	205	2450	20 21 51
20 26 20	J0053+2925	00 15 06	65.3	158.9	-0.7		-14.4	15	2450	20 26 20
20 27 30	---	00 16 16	65.4	159.5	-0.6		-14.0	70	2468	20 26 21
20 27 30	J0044+2858	00 16 16	65.4	164.5	-0.5		-10.6	-25	2468	No stop
20 31 20	---	00 20 07	65.5	166.5	-0.4		-9.2	205	2527	20 27 31
20 31 20	J0053+2925	00 20 07	65.6	161.5	-0.6		-12.7	-25	2527	No stop
20 33 10	---	00 21 57	65.7	162.4	-0.5		-12.0	85	2556	20 31 21
20 33 10	J0044+2858	00 21 57	65.6	167.5	-0.4		-8.6	-26	2556	No stop
20 37 00	---	00 25 48	65.7	169.5	-0.3		-7.2	204	2615	20 33 11
20 37 40	J0053+2925	00 26 28	65.9	164.7	-0.5		-10.5	15	2615	20 37 40
20 38 50	---	00 27 38	65.9	165.4	-0.5		-10.0	70	2633	20 37 41
20 38 50	J0044+2858	00 27 38	65.8	170.5	-0.3		-6.5	-26	2633	No stop
20 42 40	---	00 31 28	65.9	172.5	-0.2		-5.1	204	2692	20 38 51
20 42 40	J0053+2925	00 31 28	66.0	167.4	-0.4		-8.7	-25	2692	No stop
20 44 30	---	00 33 19	66.1	168.4	-0.4		-8.0	85	2721	20 42 41
20 47 30	J0110-0741	00 36 19	28.9	169.9	-0.6		-6.1	26	2721	20 47 30
20 49 30	---	00 38 20	28.9	170.5	-0.6		-5.7	120	2752	20 47 31
20 49 30	J0104-0754	00 38 20	28.8	172.3	-0.5		-4.6	-17	2752	No stop
20 53 10	---	00 42 00	28.9	173.4	-0.4		-4.0	203	2808	20 49 31
20 53 10	J0110-0741	00 42 00	29.0	171.5	-0.5		-5.1	-17	2808	No stop
20 54 50	---	00 43 40	29.0	172.0	-0.5		-4.8	83	2834	20 53 11

Schedule for TORUN (Code Tr) Page 7

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
20 54 50	J0104-0754	00 43 40	28.9	173.8	-0.4		-3.7	-17	2834	No stop
20 58 30	---	00 47 21	29.0	174.9	-0.3		-3.1	203	2891	20 54 51
20 59 10	J0110-0741	00 48 01	29.1	173.2	-0.4		-4.1	23	2891	20 59 10
21 00 10	---	00 49 01	29.1	173.5	-0.4		-3.9	60	2906	20 59 11
21 00 10	J0104-0754	00 49 01	29.0	175.3	-0.3		-2.8	-17	2906	No stop
21 03 50	---	00 52 42	29.0	176.4	-0.2		-2.2	203	2963	21 00 11
21 03 50	J0110-0741	00 52 42	29.2	174.6	-0.3		-3.3	-17	2963	No stop
21 05 30	---	00 54 22	29.2	175.0	-0.3		-3.0	83	2989	21 03 51
21 05 30	J0104-0754	00 54 22	29.1	176.9	-0.2		-1.9	-17	2989	No stop
21 09 10	---	00 58 03	29.1	177.9	-0.1		-1.3	203	3045	21 05 31
21 09 50	J0110-0741	00 58 43	29.3	176.3	-0.2		-2.3	23	3045	21 09 50
21 10 50	---	00 59 43	29.3	176.5	-0.2		-2.1	60	3061	21 09 51
21 10 50	J0104-0754	00 59 43	29.1	178.4	-0.1		-1.0	-17	3061	No stop
21 14 30	---	01 03 24	29.1	179.4	-0.0		-0.4	203	3117	21 10 51
21 14 30	J0110-0741	01 03 24	29.3	177.6	-0.1		-1.5	-17	3117	No stop
21 16 10	---	01 05 04	29.3	178.1	-0.1		-1.2	83	3143	21 14 31
21 17 40	J0006-0623	01 06 34	29.3	197.0	1.0		10.1	38	3143	21 17 40
21 19 10	---	01 08 04	29.2	197.4	1.0		10.4	90	3166	21 17 41
21 19 10	J0010-0740	01 08 04	28.2	195.8	0.9		9.5	-17	3166	No stop
21 22 50	---	01 11 45	28.0	196.9	1.0		10.1	203	3223	21 19 11
21 22 50	J0006-0623	01 11 45	29.1	198.4	1.1		11.0	-17	3223	No stop
21 24 30	---	01 13 25	29.0	198.9	1.1		11.3	83	3249	21 22 51
21 24 30	J0010-0740	01 13 25	28.0	197.3	1.0		10.4	-17	3249	No stop
21 28 10	---	01 17 06	27.8	198.3	1.1		11.0	203	3306	21 24 31
21 28 50	J0006-0623	01 17 46	28.8	200.1	1.2		12.0	23	3306	21 28 50
21 29 50	---	01 18 46	28.7	200.4	1.2		12.1	60	3321	21 28 51
21 29 50	J0010-0740	01 18 46	27.7	198.8	1.1		11.2	-17	3321	No stop
21 33 30	---	01 22 27	27.5	199.8	1.2		11.8	203	3378	21 29 51
21 33 30	J0006-0623	01 22 27	28.5	201.4	1.3		12.7	-17	3378	No stop
21 35 10	---	01 24 07	28.4	201.8	1.3		13.0	83	3403	21 33 31

Schedule for TORUN (Code Tr) Page 8

EVN 5 GHz and 22 GHz study of 43 compact radio sources

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 29 Oct 2020 Day 303 ---										
21 35 10	J0010-0740	01 24 07	27.4	200.3	1.2		12.1	-17	3403	No stop
21 38 50	---	01 27 48	27.2	201.3	1.3		12.7	203	3460	21 35 11
21 39 30	J0006-0623	01 28 28	28.2	203.0	1.4		13.7	24	3460	21 39 30
21 40 30	---	01 29 28	28.1	203.3	1.4		13.8	60	3476	21 39 31
21 40 30	J0010-0740	01 29 28	27.2	201.7	1.3		12.9	-16	3476	No stop
21 44 10	---	01 33 09	26.9	202.7	1.4		13.5	204	3532	21 40 31
21 44 10	J0006-0623	01 33 09	27.9	204.3	1.4		14.4	-16	3532	No stop
21 45 50	---	01 34 49	27.8	204.8	1.5		14.7	84	3558	21 44 11
21 48 20	J0237+2848	01 37 19	63.3	148.8	-1.0		-20.8	3	3558	21 48 20
21 51 20	---	01 40 20	63.5	150.2	-1.0		-20.0	180	3604	21 48 21
21 55 20	J0206-2212	01 44 20	14.6	174.5	-0.4		-3.6	43	3604	21 55 20
21 58 00	---	01 47 01	14.7	175.1	-0.3		-3.1	160	3646	21 55 21
21 58 00	J0210-2213	01 47 01	14.6	174.2	-0.4		-3.7	-13	3646	No stop
22 01 40	---	01 50 41	14.6	175.1	-0.3		-3.2	207	3702	21 58 01
22 01 40	J0206-2212	01 50 41	14.7	176.0	-0.3		-2.6	-14	3702	No stop
22 03 20	---	01 52 22	14.7	176.4	-0.2		-2.3	86	3728	22 01 41
22 03 20	J0210-2213	01 52 22	14.7	175.5	-0.3		-2.9	-13	3728	No stop
22 07 00	---	01 56 02	14.7	176.4	-0.3		-2.3	207	3785	22 03 21
22 07 30	J0206-2212	01 56 32	14.8	177.4	-0.2		-1.7	16	3785	22 07 30
22 08 40	---	01 57 43	14.8	177.7	-0.2		-1.5	70	3803	22 07 31
22 08 40	J0210-2213	01 57 43	14.7	176.8	-0.2		-2.1	-13	3803	No stop
22 12 20	---	02 01 23	14.7	177.7	-0.2		-1.5	207	3859	22 08 41
22 12 20	J0206-2212	02 01 23	14.8	178.6	-0.1		-0.9	-14	3859	No stop
22 14 00	---	02 03 03	14.8	179.0	-0.1		-0.7	86	3885	22 12 21
22 14 00	J0210-2213	02 03 03	14.8	178.1	-0.1		-1.3	-13	3885	No stop
22 17 40	---	02 06 44	14.8	178.9	-0.1		-0.7	207	3942	22 14 01
22 18 10	J0206-2212	02 07 14	14.8	180.0	-0.0		-0.0	16	3942	22 18 10
22 19 20	---	02 08 24	14.8	180.3	0.0		0.2	70	3960	22 18 11
22 19 20	J0210-2213	02 08 24	14.8	179.3	-0.0		-0.4	-13	3960	No stop
22 23 00	---	02 12 05	14.8	180.2	0.0		0.1	207	4017	22 19 21

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Schedule for TORUN     (Code Tr )                                  Page   9
               EVN 5 GHz and 22 GHz study of 43 compact radio sources
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Thu  29 Oct 2020   Day 303 ---

22 23 00  J0206-2212   02 12 05  14.8 181.1  0.1       0.7   -14     4017   No stop
22 24 40  ---          02 13 45  14.8 181.5  0.1       1.0    86     4042   22 23 01

22 24 40  J0210-2213   02 13 45  14.8 180.6  0.0       0.4   -13     4042   No stop
22 28 20  ---          02 17 26  14.8 181.5  0.1       1.0   207     4099   22 24 41

22 28 50  J0206-2212   02 17 56  14.8 182.5  0.2       1.6    16     4099   22 28 50
22 30 00  ---          02 19 06  14.8 182.8  0.2       1.8    70     4117   22 28 51



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.C2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
           4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   7  Setup file default.  Used with PCAL = off
 LO sum=   4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
           4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 BBC fr=    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
            758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
             32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
  Matching frequency sets:   7

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
  barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* J0010-0740        00 08 17.215061   * 00 10 50.601715    00 11 54.395677       0.00
                   -07 56 53.37674    *-07 40 12.04344    -07 33 17.54276        0.00

* J0011+3443        00 08 41.237073   * 00 11 17.013100    00 12 22.100219       0.00
                    34 26 52.62917    * 34 43 33.64200     34 50 35.27863        0.00

* J0044+2858        00 41 40.919878   * 00 44 21.550622    00 45 28.668653       0.00
                    28 42 09.42289    * 28 58 33.81146     29 05 26.55920        0.00

* J0104-0754        01 01 54.627501   * 01 04 25.820400    01 05 28.896523       0.00
                   -08 10 52.55888    *-07 54 48.17800    -07 48 08.68577        0.00

* J0118+3810        01 15 19.164685   * 01 18 10.110995    01 19 21.761075       0.00
                    37 55 08.64021    * 38 10 54.92490     38 17 30.81793        0.00

* J0132+5211        01 29 12.042742   * 01 32 18.861051    01 33 37.619391       0.00
                    51 56 06.52774    * 52 11 30.85860     52 17 56.66869        0.00

* J0139+0824        01 37 19.376745   * 01 39 57.193745    01 41 03.092525       0.00
                    08 09 15.93011    * 08 24 26.65186     08 30 45.73353        0.00

* J0203+3041        02 00 51.522391   * 02 03 45.355100    02 04 58.108319       0.00
                    30 27 06.46215    * 30 41 29.10700     30 47 28.18755        0.00
```

```
* J0210-2213        02 07 50.955939   * 02 10 10.058000     02 11 08.388576       0.00
                   -22 27 44.66301    *-22 13 37.00300    -22 07 45.86840        0.00

* J0006-0623        00 03 40.288779   * 00 06 13.892900     00 07 17.757205       0.00
                   -06 40 17.29957    *-06 23 35.33500    -06 16 40.29520        0.00

* J0012+3353        00 10 11.375392   * 00 12 47.382200     00 13 52.556002       0.00
                    33 36 57.76311    * 33 53 38.47200      34 00 39.82571        0.00

* J0053+2925        00 51 02.069494   * 00 53 44.323500     00 54 52.146918       0.00
                    29 08 51.17614    * 29 25 07.10000      29 31 55.99316        0.00

* J0110-0741        01 08 19.003625   * 01 10 50.021000     01 11 53.042008       0.00
                   -07 57 37.49606    *-07 41 41.11400    -07 35 04.83657        0.00

* J0111+3906        01 08 47.254604   * 01 11 37.316800     01 12 48.608997       0.00
                    38 50 32.81437    * 39 06 28.10400      39 13 08.09416        0.00

* J0151+5134        01 48 28.343704   * 01 51 40.838000     01 53 01.943853       0.00
                    51 19 39.14815    * 51 34 27.65800      51 40 37.33014        0.00

* J0137+0923        01 35 12.879246   * 01 37 51.093800     01 38 57.157113       0.00
                    09 08 04.61429    * 09 23 19.13200      09 29 39.87624        0.00

* J0203+3042        02 00 50.425414   * 02 03 44.270700     02 04 57.029428       0.00
                    30 28 15.15183    * 30 42 37.83700      30 48 36.93463        0.00

* J0206-2212        02 04 00.566011   * 02 06 20.073600     02 07 18.565227       0.00
                   -22 26 36.14956    *-22 12 19.65600    -22 06 25.01257        0.00

* J0237+2848        02 34 55.589613   * 02 37 52.405700     02 39 06.364617       0.00
                    28 35 11.40775    * 28 48 08.99000      28 53 31.58123        0.00
```

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
J0010-0740	142.1
J0011+3443	144.7
J0044+2858	153.7
J0104-0754	151.9
J0118+3810	152.3
J0132+5211	140.5
J0139+0824	169.5
J0203+3041	162.7
J0210-2213	144.0
J0006-0623	141.8
J0012+3353	145.4
J0053+2925	155.2
J0110-0741	153.0
J0111+3906	150.8
J0151+5134	141.8
J0137+0923	169.5
J0203+3042	162.7
J0206-2212	144.0
J0237+2848	164.1

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of 60deg F^(-0.6) where F is in GHz.

```
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

ey035atr

Imaging the pc-scale jet in RGG 9 at 5 GHz

PI: *Jun Yang*


```
Address:  Onsala Space Observatory
          SE-439 92 Onsala
          Sweden


Phone:    +46 31 7725531
EMAIL:    jun.yang@chalmers.se
Fax:      +46 31 7725590
Phone during observation: +46 31 7725531
```


```
Observing mode: 2048-16-2

Schedule for TORUN     (Code Tr )                                  Page   2
               Imaging the pc-scale jet in RGG 9 at 5 GHz
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Thu  29 Oct 2020   Day 303 ---

 Next scan frequencies:  4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
                         4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 Next BBC frequencies:    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
                          758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

23 30 00  J0854+5757   03 19 16  45.2  48.6 -5.6     -57.9     0        0   23 30 00
23 31 10  =0850+581    03 20 26  45.3  48.7 -5.6     -58.1    70       18   23 30 01

23 31 30  RGG9         03 20 46  43.0  49.7 -5.8     -55.1    -2       18   23 31 30
23 35 00  ---          03 24 17  43.5  50.0 -5.7     -55.6   208       72   23 31 31

23 35 20  J0854+5757   03 24 37  45.8  49.2 -5.5     -58.7    -3       72   23 35 20
23 36 30  =0850+581    03 25 47  45.9  49.3 -5.5     -58.9    67       90   23 35 21

23 36 50  RGG9         03 26 07  43.7  50.2 -5.7     -55.8    -2       90   23 36 50
23 40 20  ---          03 29 38  44.1  50.6 -5.6     -56.3   208      144   23 36 51

23 41 00  J0854+5757   03 30 18  46.4  49.7 -5.4     -59.5    17      144   23 41 00
23 42 10  =0850+581    03 31 28  46.6  49.8 -5.4     -59.7    70      162   23 41 01

23 42 30  RGG9         03 31 48  44.3  50.9 -5.6     -56.6    -2      162   23 42 30
23 46 00  ---          03 35 19  44.7  51.2 -5.5     -57.1   208      216   23 42 31

23 46 20  J0854+5757   03 35 39  47.0  50.2 -5.3     -60.2    -3      216   23 46 20
23 47 30  =0850+581    03 36 49  47.2  50.4 -5.3     -60.4    67      234   23 46 21

23 47 50  RGG9         03 37 09  44.9  51.4 -5.5     -57.3    -2      234   23 47 50
23 51 20  ---          03 40 39  45.4  51.8 -5.5     -57.8   208      289   23 47 51

23 52 00  J0854+5757   03 41 20  47.7  50.8 -5.2     -61.0    18      289   23 52 00
23 53 10  =0850+581    03 42 30  47.8  50.9 -5.2     -61.2    70      307   23 52 01
```

```
23 53 30  RGG9         03 42 50  45.6  52.0 -5.4     -58.0    -2      307   23 53 30
23 57 00  ---          03 46 20  46.0  52.4 -5.4     -58.5   208      361   23 53 31

23 57 20  J0854+5757   03 46 40  48.3  51.3 -5.2     -61.8    -2      361   23 57 20
23 58 30  =0850+581    03 47 51  48.5  51.4 -5.1     -62.0    68      379   23 57 21

 --- Start: Thu  29 Oct 2020   Day 303 -- Stop: Fri  30 Oct 2020   Day 304 ---

23 58 50  RGG9         03 48 11  46.3  52.6 -5.3     -58.8    -2      379   23 58 50
00 02 20  ---          03 51 41  46.7  53.0 -5.3     -59.2   208      433   23 58 51
```

Schedule for TORUN (Code Tr) Page 3

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
00 03 00	J0854+5757	03 52 21	49.0	51.8	-5.1		-62.6	18	433	00 03 00
00 04 10	=0850+581	03 53 32	49.1	51.9	-5.0		-62.8	70	451	00 03 01
00 04 30	RGG9	03 53 52	46.9	53.2	-5.2		-59.5	-2	451	00 04 30
00 08 00	---	03 57 22	47.4	53.6	-5.2		-60.0	208	505	00 04 31
00 08 20	J0854+5757	03 57 42	49.6	52.3	-5.0		-63.4	-2	505	00 08 20
00 09 30	=0850+581	03 58 52	49.8	52.4	-5.0		-63.5	68	523	00 08 21
00 09 50	RGG9	03 59 13	47.6	53.7	-5.1		-60.2	-2	523	00 09 50
00 13 20	---	04 02 43	48.0	54.1	-5.1		-60.7	208	577	00 09 51
00 14 00	J0854+5757	04 03 23	50.3	52.8	-4.9		-64.2	18	577	00 14 00
00 15 10	=0850+581	04 04 33	50.4	53.0	-4.9		-64.3	70	595	00 14 01
00 15 30	RGG9	04 04 53	48.3	54.3	-5.0		-61.0	-2	595	00 15 30
00 19 00	---	04 08 24	48.7	54.7	-5.0		-61.4	208	649	00 15 31
00 19 20	J0854+5757	04 08 44	50.9	53.3	-4.8		-64.9	-2	649	00 19 20
00 20 30	=0850+581	04 09 54	51.1	53.4	-4.8		-65.1	68	667	00 19 21
00 20 50	RGG9	04 10 14	48.9	54.9	-5.0		-61.7	-2	667	00 20 50
00 24 20	---	04 13 45	49.4	55.2	-4.9		-62.1	208	721	00 20 51
00 25 00	J0854+5757	04 14 25	51.6	53.8	-4.7		-65.7	18	721	00 25 00
00 26 10	=0850+581	04 15 35	51.8	53.9	-4.7		-65.9	70	739	00 25 01
00 26 30	RGG9	04 15 55	49.6	55.4	-4.9		-62.4	-2	739	00 26 30
00 30 00	---	04 19 26	50.1	55.8	-4.8		-62.9	208	794	00 26 31
00 30 20	J0854+5757	04 19 46	52.3	54.3	-4.6		-66.5	-2	794	00 30 20
00 31 30	=0850+581	04 20 56	52.4	54.4	-4.6		-66.7	68	812	00 30 21
00 31 50	RGG9	04 21 16	50.3	56.0	-4.8		-63.1	-2	812	00 31 50
00 35 20	---	04 24 47	50.7	56.3	-4.7		-63.6	208	866	00 31 51
00 36 00	J0854+5757	04 25 27	53.0	54.8	-4.5		-67.3	18	866	00 36 00
00 37 10	=0850+581	04 26 37	53.1	54.9	-4.5		-67.5	70	884	00 36 01
00 37 30	RGG9	04 26 57	51.0	56.5	-4.7		-63.9	-2	884	00 37 30
00 41 00	---	04 30 28	51.4	56.9	-4.6		-64.3	208	938	00 37 31
00 41 20	J0854+5757	04 30 48	53.6	55.2	-4.4		-68.1	-2	938	00 41 20
00 42 30	=0850+581	04 31 58	53.8	55.3	-4.4		-68.3	68	956	00 41 21

Schedule for TORUN (Code Tr) Page 4

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
00 42 50	RGG9	04 32 18	51.7	57.0	-4.6		-64.6	-2	956	00 42 50
00 46 20	---	04 35 48	52.1	57.4	-4.5		-65.0	208	1010	00 42 51
00 47 00	J0854+5757	04 36 29	54.3	55.7	-4.3		-68.9	18	1010	00 47 00
00 48 10	=0850+581	04 37 39	54.5	55.8	-4.3		-69.1	70	1028	00 47 01
00 48 30	RGG9	04 37 59	52.4	57.6	-4.5		-65.3	-2	1028	00 48 30
00 52 00	---	04 41 29	52.8	57.9	-4.4		-65.8	208	1082	00 48 31
00 52 20	J0854+5757	04 41 49	55.0	56.1	-4.2		-69.7	-2	1082	00 52 20
00 53 30	=0850+581	04 43 00	55.1	56.2	-4.2		-69.9	68	1100	00 52 21
00 53 50	RGG9	04 43 20	53.1	58.1	-4.4		-66.0	-2	1100	00 53 50
00 57 20	---	04 46 50	53.5	58.4	-4.3		-66.5	208	1154	00 53 51
00 58 00	J0854+5757	04 47 30	55.7	56.6	-4.1		-70.5	18	1154	00 58 00
00 59 10	=0850+581	04 48 41	55.9	56.7	-4.1		-70.7	70	1172	00 58 01
00 59 30	RGG9	04 49 01	53.8	58.6	-4.3		-66.8	-2	1172	00 59 30
01 03 00	---	04 52 31	54.2	59.0	-4.3		-67.2	208	1226	00 59 31
01 03 20	J0854+5757	04 52 51	56.4	57.0	-4.1		-71.3	-2	1226	01 03 20
01 04 30	=0850+581	04 54 01	56.5	57.1	-4.0		-71.5	68	1244	01 03 21
01 04 50	RGG9	04 54 22	54.5	59.1	-4.2		-67.5	-2	1244	01 04 50
01 08 20	---	04 57 52	54.9	59.4	-4.2		-67.9	208	1298	01 04 51
01 09 00	J0854+5757	04 58 32	57.1	57.4	-4.0		-72.1	18	1298	01 09 00
01 10 10	=0850+581	04 59 42	57.2	57.5	-3.9		-72.3	70	1317	01 09 01
01 10 30	RGG9	05 00 02	55.2	59.6	-4.1		-68.2	-1	1317	01 10 30
01 14 00	---	05 03 33	55.7	60.0	-4.1		-68.7	209	1371	01 10 31
01 14 20	J0854+5757	05 03 53	57.8	57.8	-3.9		-72.9	-2	1371	01 14 20
01 15 30	=0850+581	05 05 03	57.9	57.9	-3.9		-73.1	68	1389	01 14 21
01 15 50	RGG9	05 05 23	55.9	60.1	-4.0		-68.9	-1	1389	01 15 50
01 19 20	---	05 08 54	56.4	60.4	-4.0		-69.4	209	1443	01 15 51
01 20 00	J0854+5757	05 09 34	58.5	58.3	-3.8		-73.8	18	1443	01 20 00
01 21 10	=0850+581	05 10 44	58.6	58.3	-3.8		-74.0	70	1461	01 20 01
01 21 30	RGG9	05 11 04	56.6	60.6	-3.9		-69.7	-1	1461	01 21 30
01 25 00	---	05 14 35	57.1	60.9	-3.9		-70.2	209	1515	01 21 31

Schedule for TORUN (Code Tr) Page 5

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
01 25 20	J0854+5757	05 14 55	59.2	58.6	-3.7		-74.6	-2	1515	01 25 20
01 26 30	=0850+581	05 16 05	59.3	58.7	-3.7		-74.8	68	1533	01 25 21
01 26 50	RGG9	05 16 25	57.3	61.1	-3.9		-70.4	-1	1533	01 26 50
01 30 20	---	05 19 56	57.8	61.4	-3.8		-70.9	209	1587	01 26 51
01 31 00	J0854+5757	05 20 36	59.9	59.0	-3.6		-75.5	18	1587	01 31 00
01 32 10	=0850+581	05 21 46	60.1	59.1	-3.6		-75.7	70	1605	01 31 01
01 32 30	RGG9	05 22 06	58.1	61.6	-3.8		-71.2	-1	1605	01 32 30
01 36 00	---	05 25 37	58.6	61.9	-3.7		-71.7	209	1659	01 32 31
01 36 20	J0854+5757	05 25 57	60.6	59.4	-3.5		-76.3	-1	1659	01 36 20
01 37 30	=0850+581	05 27 07	60.8	59.4	-3.5		-76.5	69	1677	01 36 21
01 37 50	RGG9	05 27 27	58.8	62.0	-3.7		-71.9	-1	1677	01 37 50
01 41 20	---	05 30 58	59.3	62.3	-3.6		-72.4	209	1731	01 37 51
01 42 00	J0854+5757	05 31 38	61.3	59.7	-3.4		-77.2	19	1731	01 42 00
01 43 10	=0850+581	05 32 48	61.5	59.8	-3.4		-77.4	70	1749	01 42 01
01 43 30	RGG9	05 33 08	59.6	62.5	-3.6		-72.7	-1	1749	01 43 30
01 47 00	---	05 36 38	60.0	62.8	-3.5		-73.2	209	1803	01 43 31
01 47 20	J0854+5757	05 36 59	62.0	60.0	-3.3		-78.0	-1	1803	01 47 20
01 48 30	=0850+581	05 38 09	62.2	60.1	-3.3		-78.2	69	1822	01 47 21
01 48 50	RGG9	05 38 29	60.3	62.9	-3.5		-73.4	-1	1822	01 48 50
01 52 20	---	05 41 59	60.7	63.2	-3.4		-73.9	209	1876	01 48 51
01 53 00	J0854+5757	05 42 39	62.8	60.4	-3.2		-79.0	19	1876	01 53 00
01 54 10	=0850+581	05 43 50	62.9	60.4	-3.2		-79.2	70	1894	01 53 01
01 54 30	RGG9	05 44 10	61.0	63.4	-3.4		-74.2	-1	1894	01 54 30
01 58 00	---	05 47 40	61.5	63.7	-3.3		-74.7	209	1948	01 54 31
01 58 20	J0854+5757	05 48 00	63.5	60.7	-3.1		-79.8	-1	1948	01 58 20
01 59 30	=0850+581	05 49 11	63.6	60.7	-3.1		-80.0	69	1966	01 58 21
01 59 50	RGG9	05 49 31	61.8	63.8	-3.3		-74.9	-1	1966	01 59 50
02 03 20	---	05 53 01	62.2	64.1	-3.2		-75.4	209	2020	01 59 51
02 04 00	J0854+5757	05 53 41	64.2	60.9	-3.0		-80.8	19	2020	02 04 00
02 05 10	=0850+581	05 54 51	64.4	61.0	-3.0		-81.0	70	2038	02 04 01

Schedule for TORUN (Code Tr) Page 6

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
02 05 30	RGG9	05 55 12	62.5	64.2	-3.2		-75.7	-1	2038	02 05 30
02 09 00	---	05 58 42	63.0	64.5	-3.2		-76.2	209	2092	02 05 31
02 09 20	J0854+5757	05 59 02	64.9	61.2	-3.0		-81.7	-1	2092	02 09 20
02 10 30	=0850+581	06 00 12	65.1	61.2	-2.9		-81.9	69	2110	02 09 21
02 10 50	RGG9	06 00 32	63.2	64.6	-3.1		-76.5	-1	2110	02 10 50
02 14 20	---	06 04 03	63.7	64.9	-3.1		-77.0	209	2164	02 10 51
02 15 00	J0854+5757	06 04 43	65.7	61.4	-2.9		-82.7	18	2164	02 15 00
02 16 10	=0850+581	06 05 53	65.8	61.5	-2.8		-82.9	70	2182	02 15 01
02 16 30	RGG9	06 06 13	64.0	65.0	-3.0		-77.3	-2	2182	02 16 30
02 20 00	---	06 09 44	64.5	65.3	-3.0		-77.8	208	2236	02 16 31
02 20 20	J0854+5757	06 10 04	66.4	61.6	-2.8		-83.6	-2	2236	02 20 20
02 21 30	=0850+581	06 11 14	66.5	61.7	-2.8		-83.8	68	2254	02 20 21
02 21 50	RGG9	06 11 34	64.7	65.4	-2.9		-78.1	-2	2254	02 21 50
02 25 20	---	06 15 05	65.2	65.6	-2.9		-78.6	208	2308	02 21 51
02 26 00	J0854+5757	06 15 45	67.1	61.8	-2.7		-84.6	18	2308	02 26 00
02 27 10	=0850+581	06 16 55	67.3	61.9	-2.7		-84.8	70	2326	02 26 01
02 27 30	RGG9	06 17 15	65.5	65.8	-2.8		-78.9	-3	2326	02 27 30
02 31 00	---	06 20 46	66.0	66.0	-2.8		-79.5	207	2381	02 27 31
02 31 20	J0854+5757	06 21 06	67.8	62.0	-2.6		-85.6	-3	2381	02 31 20
02 32 30	=0850+581	06 22 16	68.0	62.0	-2.6		-85.8	67	2399	02 31 21
02 32 50	RGG9	06 22 36	66.3	66.1	-2.8		-79.7	-3	2399	02 32 50
02 36 20	---	06 26 07	66.7	66.3	-2.7		-80.3	207	2453	02 32 51
02 36 40	J0854+5757	06 26 27	68.5	62.1	-2.5		-86.6	-3	2453	02 36 40
02 37 50	=0850+581	06 27 37	68.7	62.2	-2.5		-86.9	67	2471	02 36 41
---------- Gap for EF to check pointing ----------										
02 39 50	4C39.25	06 29 37	56.6	96.8	-3.0		-50.1	36	2471	02 39 50
02 45 50	---	06 35 38	57.5	98.1	-2.9		-49.8	360	2564	02 39 51
02 46 40	J0854+5757	06 36 28	69.9	62.3	-2.3		-88.6	-37	2564	02 46 40
02 49 40	=0850+581	06 39 29	70.3	62.3	-2.3		-89.2	143	2610	02 46 41

Schedule for TORUN (Code Tr) Page 7

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
02 50 20	J0854+5757	06 40 09	70.4	62.3	-2.3		-89.4	34	2610	02 50 20
02 51 40	=0850+581	06 41 29	70.5	62.3	-2.2		-89.6	80	2630	02 50 21
02 52 00	RGG9	06 41 49	68.9	67.2	-2.4		-82.7	-5	2630	02 52 00
02 55 30	---	06 45 20	69.4	67.3	-2.4		-83.3	205	2685	02 52 01
02 55 50	J0854+5757	06 45 40	71.1	62.3	-2.2		-90.5	-5	2685	02 55 50
02 57 10	=0850+581	06 47 00	71.3	62.3	-2.2		-90.8	75	2705	02 55 51
02 57 30	RGG9	06 47 20	69.7	67.4	-2.3		-83.6	-5	2705	02 57 30
03 01 00	---	06 50 51	70.2	67.6	-2.3		-84.2	205	2759	02 57 31
03 01 40	J0854+5757	06 51 31	71.9	62.3	-2.1		-91.8	14	2759	03 01 40
03 03 00	=0850+581	06 52 51	72.1	62.2	-2.1		-92.1	80	2780	03 01 41
03 03 20	RGG9	06 53 11	70.5	67.7	-2.2		-84.6	-6	2780	03 03 20
03 06 50	---	06 56 42	71.0	67.8	-2.2		-85.2	204	2834	03 03 21
03 07 10	J0854+5757	06 57 02	72.6	62.2	-2.0		-93.1	-6	2834	03 07 10
03 08 30	=0850+581	06 58 22	72.8	62.1	-2.0		-93.4	74	2855	03 07 11
03 08 50	RGG9	06 58 42	71.2	67.9	-2.2		-85.6	-7	2855	03 08 50
03 12 20	---	07 02 12	71.7	68.0	-2.1		-86.2	203	2909	03 08 51
03 13 00	J0854+5757	07 02 53	73.4	62.0	-1.9		-94.5	13	2909	03 13 00
03 14 20	=0850+581	07 04 13	73.6	61.9	-1.9		-94.8	80	2929	03 13 01
03 14 40	RGG9	07 04 33	72.1	68.1	-2.1		-86.6	-7	2929	03 14 40
03 18 10	---	07 08 03	72.6	68.1	-2.0		-87.3	203	2983	03 14 41
03 18 30	J0854+5757	07 08 23	74.1	61.7	-1.8		-95.9	-8	2983	03 18 30
03 19 50	=0850+581	07 09 44	74.3	61.7	-1.8		-96.2	72	3004	03 18 31
03 20 10	RGG9	07 10 04	72.8	68.2	-2.0		-87.6	-8	3004	03 20 10
03 23 40	---	07 13 34	73.3	68.2	-1.9		-88.3	202	3058	03 20 11
03 24 20	J0854+5757	07 14 14	74.9	61.4	-1.7		-97.4	11	3058	03 24 20
03 25 40	=0850+581	07 15 35	75.1	61.3	-1.7		-97.8	80	3079	03 24 21
03 26 00	RGG9	07 15 55	73.6	68.3	-1.9		-88.8	-9	3079	03 26 00
03 29 30	---	07 19 25	74.1	68.3	-1.8		-89.5	201	3133	03 26 01
03 29 50	J0854+5757	07 19 45	75.6	61.0	-1.6		-99.0	-10	3133	03 29 50
03 31 10	=0850+581	07 21 06	75.8	60.9	-1.6		-99.4	70	3153	03 29 51

Schedule for TORUN (Code Tr) Page 8

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
03 31 30	RGG9	07 21 26	74.4	68.3	-1.8		-89.9	-10	3153	03 31 30
03 35 00	---	07 24 56	74.9	68.3	-1.7		-90.6	200	3208	03 31 31
03 35 40	J0854+5757	07 25 36	76.4	60.4	-1.5		-100.8	9	3208	03 35 40
03 37 00	=0850+581	07 26 57	76.5	60.3	-1.5		-101.2	80	3228	03 35 41
03 37 20	RGG9	07 27 17	75.2	68.3	-1.7		-91.1	-11	3228	03 37 20
03 40 50	---	07 30 47	75.7	68.2	-1.6		-91.9	199	3282	03 37 21
03 41 10	J0854+5757	07 31 07	77.1	59.8	-1.4		-102.6	-12	3282	03 41 10
03 42 30	=0850+581	07 32 27	77.3	59.6	-1.4		-103.0	68	3303	03 41 11
03 42 50	RGG9	07 32 47	76.0	68.2	-1.6		-92.4	-12	3303	03 42 50
03 46 20	---	07 36 18	76.5	68.1	-1.5		-93.2	198	3357	03 42 51
03 47 00	J0854+5757	07 36 58	77.8	59.0	-1.3		-104.6	7	3357	03 47 00
03 48 20	=0850+581	07 38 18	78.0	58.7	-1.3		-105.1	80	3378	03 47 01
03 48 40	RGG9	07 38 38	76.8	68.0	-1.5		-93.8	-14	3378	03 48 40
03 52 10	---	07 42 09	77.3	67.8	-1.4		-94.6	196	3432	03 48 41
03 52 30	J0854+5757	07 42 29	78.6	58.0	-1.2		-106.8	-15	3432	03 52 30
03 53 50	=0850+581	07 43 49	78.7	57.7	-1.2		-107.3	65	3452	03 52 31
03 54 10	RGG9	07 44 09	77.6	67.7	-1.4		-95.2	-15	3452	03 54 10
03 57 40	---	07 47 40	78.1	67.5	-1.3		-96.1	195	3506	03 54 11
03 58 20	J0854+5757	07 48 20	79.3	56.7	-1.1		-109.2	4	3506	03 58 20
03 59 40	=0850+581	07 49 40	79.5	56.4	-1.1		-109.8	80	3527	03 58 21
04 00 00	RGG9	07 50 00	78.4	67.3	-1.3		-96.8	-17	3527	04 00 00
04 03 30	---	07 53 31	78.9	67.0	-1.2		-97.8	193	3581	04 00 01
04 03 50	J0854+5757	07 53 51	80.0	55.3	-1.0		-111.8	-19	3581	04 03 50
04 05 10	=0850+581	07 55 11	80.1	54.9	-1.0		-112.5	61	3602	04 03 51
04 05 30	RGG9	07 55 31	79.2	66.8	-1.2		-98.4	-19	3602	04 05 30
04 09 00	---	07 59 02	79.6	66.4	-1.1		-99.6	191	3656	04 05 31
04 09 40	J0854+5757	07 59 42	80.7	53.5	-0.9		-114.8	-1	3656	04 09 40
04 11 00	=0850+581	08 01 02	80.9	53.0	-0.9		-115.6	79	3676	04 09 41
04 11 20	RGG9	08 01 22	80.0	66.1	-1.1		-100.4	-21	3676	04 11 20
04 14 50	---	08 04 53	80.4	65.5	-1.0		-101.6	189	3731	04 11 21

Schedule for TORUN (Code Tr) Page 9

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
04 15 10	J0854+5757	08 05 13	81.4	51.4	-0.9		-118.1	-24	3731	04 15 10
04 16 30	=0850+581	08 06 33	81.5	50.8	-0.8		-118.9	56	3751	04 15 11
04 16 50	RGG9	08 06 53	80.7	65.2	-1.0		-102.4	-24	3751	04 16 50
04 20 20	---	08 10 24	81.2	64.5	-1.0		-103.8	186	3805	04 16 51
04 21 00	J0854+5757	08 11 04	82.0	48.7	-0.8		-122.0	-7	3805	04 21 00
04 22 20	=0850+581	08 12 24	82.2	48.0	-0.7		-122.9	73	3826	04 21 01
04 22 40	RGG9	08 12 44	81.5	63.9	-0.9		-104.9	-27	3826	04 22 40
04 26 10	---	08 16 15	82.0	63.0	-0.9		-106.5	183	3880	04 22 41
04 26 30	J0854+5757	08 16 35	82.6	45.6	-0.7		-126.2	-30	3880	04 26 30
04 27 50	=0850+581	08 17 55	82.8	44.8	-0.6		-127.3	50	3901	04 26 31
04 28 10	RGG9	08 18 15	82.2	62.4	-0.8		-107.5	-30	3901	04 28 10
04 31 40	---	08 21 46	82.7	61.2	-0.8		-109.4	180	3955	04 28 11
04 32 20	J0854+5757	08 22 26	83.2	41.7	-0.6		-131.4	-14	3955	04 32 20
04 33 40	=0850+581	08 23 46	83.4	40.6	-0.5		-132.7	66	3975	04 32 21
04 34 00	RGG9	08 24 06	83.0	60.3	-0.7		-110.8	-34	3975	04 34 00
04 37 30	---	08 27 36	83.5	58.8	-0.7		-113.1	176	4029	04 34 01
04 37 50	J0854+5757	08 27 57	83.8	37.1	-0.5		-137.0	-39	4029	04 37 50
04 39 10	=0850+581	08 29 17	83.9	35.9	-0.4		-138.5	41	4050	04 37 51
04 39 30	RGG9	08 29 37	83.7	57.7	-0.6		-114.5	-38	4050	04 39 30
04 43 00	---	08 33 07	84.2	55.7	-0.6		-117.2	172	4104	04 39 31
04 43 40	J0854+5757	08 33 47	84.3	31.4	-0.4		-144.0	-24	4104	04 43 40
04 45 00	=0850+581	08 35 08	84.4	29.9	-0.4		-145.7	56	4125	04 43 41
04 45 20	RGG9	08 35 28	84.5	54.2	-0.5		-119.3	-43	4125	04 45 20
04 48 50	---	08 38 58	84.9	51.5	-0.5		-122.7	167	4179	04 45 21
04 49 10	J0854+5757	08 39 18	84.7	25.0	-0.3		-151.5	-50	4179	04 49 10
04 50 30	=0850+581	08 40 39	84.7	23.3	-0.3		-153.5	30	4200	04 49 11
04 50 50	RGG9	08 40 59	85.1	49.7	-0.4		-124.9	-46	4200	04 50 50
04 54 20	---	08 44 29	85.5	46.1	-0.4		-129.2	164	4254	04 50 51
04 55 00	J0854+5757	08 45 09	85.0	17.1	-0.2		-160.6	-34	4254	04 55 00
04 56 20	=0850+581	08 46 30	85.0	15.2	-0.2		-162.8	46	4274	04 55 01

Schedule for TORUN (Code Tr) Page 10

Imaging the pc-scale jet in RGG 9 at 5 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 30 Oct 2020 Day 304 ---										
04 56 40	RGG9	08 46 50	85.7	43.3	-0.3		-132.5	-49	4274	04 56 40
05 00 10	---	08 50 20	86.1	38.4	-0.3		-138.1	161	4328	04 56 41
05 00 30	J0854+5757	08 50 40	85.2	8.8	-0.1		-170.0	-57	4328	05 00 30
05 01 50	=0850+581	08 52 00	85.2	6.8	-0.1		-172.4	23	4349	05 00 31
05 02 10	RGG9	08 52 21	86.3	35.2	-0.3		-141.7	-49	4349	05 02 10
05 05 40	---	08 55 51	86.6	28.7	-0.2		-148.8	161	4403	05 02 11
05 06 20	J0854+5757	08 56 31	85.2	-0.4	0.0		179.6	-35	4403	05 06 20
05 07 40	=0850+581	08 57 51	85.2	-2.5	0.0		177.1	45	4424	05 06 21
05 08 00	RGG9	08 58 11	86.7	23.9	-0.2		-154.2	-45	4424	05 08 00
05 11 30	---	09 01 42	86.9	15.7	-0.1		-163.1	165	4478	05 08 01
05 11 50	J0854+5757	09 02 02	85.2	-9.1	0.1		169.7	-47	4478	05 11 50
05 13 10	=0850+581	09 03 22	85.1	-11.2	0.1		167.4	33	4498	05 11 51
05 13 30	RGG9	09 03 42	87.0	10.7	-0.1		-168.5	-36	4498	05 13 30
05 17 00	---	09 07 13	87.0	1.4	-0.0		-178.5	174	4552	05 13 31
05 17 40	J0854+5757	09 07 53	84.9	-17.8	0.2		159.8	-14	4552	05 17 40
05 19 00	=0850+581	09 09 13	84.9	-19.7	0.2		157.7	66	4573	05 17 41
05 19 20	RGG9	09 09 33	87.0	-4.8	0.0		174.8	-23	4573	05 19 20
05 22 50	---	09 13 04	86.9	-13.9	0.1		165.0	187	4627	05 19 21
05 23 10	J0854+5757	09 13 24	84.6	-25.2	0.3		151.3	-18	4627	05 23 10
05 24 30	=0850+581	09 14 44	84.6	-26.8	0.3		149.4	62	4648	05 23 11
05 24 50	RGG9	09 15 04	86.8	-18.8	0.1		159.7	-11	4648	05 24 50
05 28 20	---	09 18 35	86.6	-26.6	0.2		151.2	199	4702	05 24 51
05 28 40	J0854+5757	09 18 55	84.2	-31.6	0.4		143.8	-5	4702	05 28 40
05 30 00	=0850+581	09 20 15	84.1	-33.0	0.4		142.1	75	4723	05 28 41

SETUP FILE INFORMATION:
NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

======== Setup file: sess320.C2048

Setup group: 10 Station: TORUN Total bit rate: 2048
Format: VDIF Bits per sample: 2 Sample rate: 64.000
Number of channels: 16 DBE type: DBBC_DDC Speedup factor: 1.00

Disk used to record data.

```
  1st LO=   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
            4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   8  Setup file default.  Used with PCAL = off
  LO sum=   4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
            4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
  BBC fr=    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
             758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
  Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
              32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
   Matching frequency sets:   8

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



 POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* RGG9              09 02 30.649789   * 09 06 13.777047     09 07 44.438297       0.00
                    56 22 16.96925    * 56 10 15.14820      56 05 05.03620        0.00

  0850+581          08 50 50.156145   * 08 54 41.996409     08 56 16.300534       0.05
* J0854+5757        58 08 55.67782    * 57 57 29.93916      57 52 33.77564        0.04
  J0854+57          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,   1215 observations.

* 4C39.25           09 23 55.319216   * 09 27 03.013937     09 28 19.299002       0.31
  J0927+3902        39 15 23.56644    * 39 02 20.85185      38 56 52.02059        0.16
  0923+392          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0927+39          GSFC 2016a X/S astro solution, 250526 observations.



EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  RGG9                94.9
  J0854+5757          96.9
  4C39.25             85.8
```

```
Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

em144atr

Probing the radio jets in GRS1915+105 in a new puzzling accretion s

PI: *S.E.Motta*


```
Address:  INAF - Osservatorio Astronomico di Brera
          Via E. Bianchi 46, I-23807
          Merate
          Italy

Phone:    +39 3339445713
EMAIL:    sara.motta@inaf.it
Fax:
Phone during observation: +39 3339445713
```


```
Observing mode: EVN, 6 GHz continuum

Schedule for TORUN     (Code Tr )                                    Page   2
               Probing the radio jets in GRS1915+105 in a new puzzling accretion state
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Fri  30 Oct 2020   Day 304 ---

 Next scan frequencies:  4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
                         4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 Next BBC frequencies:    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
                          758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

12 30 00  J1800+3848   16 21 24  67.7 119.9 -1.7     -41.9     0        0   12 30 00
12 35 00  =1758+388    16 26 25  68.4 121.9 -1.6     -40.9   300       77   12 30 01

12 37 00  J1905+0952   16 28 25  36.4 128.8 -2.6     -28.4   -14       77   12 37 00
12 39 30  =1903+097    16 30 56  36.7 129.5 -2.6     -28.1   136      116   12 37 01

12 39 30  GRS1915      16 30 56  36.5 126.3 -2.8     -29.6   -21      116   No stop
12 43 00  ---          16 34 26  36.9 127.2 -2.7     -29.2   189      170   12 39 31

12 43 00  J1905+0952   16 34 26  37.1 130.4 -2.5     -27.7   -21      170   No stop
12 45 30  =1903+097    16 36 57  37.4 131.1 -2.5     -27.3   129      209   12 43 01

12 45 30  GRS1915      16 36 57  37.2 127.9 -2.7     -28.9   -21      209   No stop
12 49 00  ---          16 40 27  37.7 128.8 -2.6     -28.5   189      263   12 45 31

12 49 40  J1905+0952   16 41 07  37.9 132.3 -2.4     -26.8    19      263   12 49 40
12 51 30  =1903+097    16 42 58  38.1 132.8 -2.4     -26.6   110      291   12 49 41

12 51 30  GRS1915      16 42 58  38.0 129.5 -2.6     -28.2   -21      291   No stop
12 55 00  ---          16 46 28  38.4 130.5 -2.5     -27.7   189      345   12 51 31

12 55 00  J1905+0952   16 46 28  38.5 133.8 -2.3     -26.1   -21      345   No stop
12 57 30  =1903+097    16 48 59  38.7 134.5 -2.3     -25.8   129      384   12 55 01

12 57 30  GRS1915      16 48 59  38.6 131.2 -2.5     -27.4   -21      384   No stop
13 01 00  ---          16 52 29  39.0 132.2 -2.4     -27.0   189      438   12 57 31
```

13 01 40	J1905+0952	16 53 09	39.2	135.7	-2.2	-25.2	19	438	13 01 40
13 03 30	=1903+097	16 55 00	39.4	136.2	-2.2	-25.0	110	466	13 01 41
13 03 30	GRS1915	16 55 00	39.3	132.9	-2.4	-26.6	-21	466	No stop
13 07 00	---	16 58 30	39.7	133.9	-2.3	-26.2	189	520	13 03 31
13 07 00	J1905+0952	16 58 30	39.7	137.2	-2.1	-24.5	-22	520	No stop
13 09 30	=1903+097	17 01 01	40.0	137.9	-2.1	-24.1	128	559	13 07 01
13 09 30	GRS1915	17 01 01	40.0	134.6	-2.3	-25.8	-21	559	No stop
13 13 00	---	17 04 31	40.3	135.6	-2.2	-25.3	189	613	13 09 31

Schedule for TORUN (Code Tr) Page 3

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
13 13 40	J1905+0952	17 05 11	40.4	139.2	-2.0		-23.5	18	613	13 13 40
13 15 30	=1903+097	17 07 02	40.6	139.7	-2.0		-23.2	110	642	13 13 41
13 15 30	GRS1915	17 07 02	40.6	136.3	-2.2		-25.0	-21	642	No stop
13 19 00	---	17 10 32	41.0	137.4	-2.1		-24.5	189	696	13 15 31
13 19 00	J1905+0952	17 10 32	40.9	140.8	-1.9		-22.7	-22	696	No stop
13 21 30	=1903+097	17 13 03	41.1	141.5	-1.9		-22.3	128	734	13 19 01
13 21 30	GRS1915	17 13 03	41.2	138.1	-2.1		-24.1	-21	734	No stop
13 25 00	---	17 16 33	41.6	139.2	-2.0		-23.6	189	788	13 21 31
13 25 40	J1905+0952	17 17 13	41.5	142.8	-1.8		-21.6	18	788	13 25 40
13 27 30	=1903+097	17 19 04	41.7	143.4	-1.8		-21.3	110	817	13 25 41
13 27 30	J1913+0932	17 19 04	40.7	141.2	-1.9		-22.4	-18	817	No stop
13 30 00	---	17 21 34	40.9	141.9	-1.9		-22.1	132	855	13 27 31
13 30 40	J1905+0952	17 22 14	42.0	144.3	-1.7		-20.8	21	855	13 30 40
13 32 40	=1903+097	17 24 14	42.1	145.0	-1.7		-20.5	120	886	13 30 41
13 32 40	GRS1915	17 24 14	42.3	141.5	-1.9		-22.4	-21	886	No stop
13 36 10	---	17 27 45	42.6	142.6	-1.8		-21.8	189	940	13 32 41
13 36 10	J1905+0952	17 27 45	42.4	146.1	-1.6		-19.9	-22	940	No stop
13 38 40	=1903+097	17 30 15	42.7	146.9	-1.6		-19.5	128	979	13 36 11
13 38 40	GRS1915	17 30 15	42.8	143.4	-1.8		-21.4	-22	979	No stop
13 42 10	---	17 33 46	43.2	144.5	-1.7		-20.8	188	1033	13 38 41
13 42 50	J1905+0952	17 34 26	43.0	148.2	-1.5		-18.7	18	1033	13 42 50
13 44 40	=1903+097	17 36 16	43.1	148.8	-1.5		-18.4	110	1061	13 42 51
13 44 40	GRS1915	17 36 16	43.4	145.2	-1.7		-20.4	-22	1061	No stop
13 48 10	---	17 39 47	43.7	146.4	-1.6		-19.8	188	1116	13 44 41
13 48 10	J1905+0952	17 39 47	43.4	149.9	-1.4		-17.8	-22	1116	No stop
13 50 40	=1903+097	17 42 17	43.6	150.7	-1.4		-17.4	128	1154	13 48 11
13 50 40	GRS1915	17 42 17	43.9	147.2	-1.6		-19.4	-22	1154	No stop
13 54 10	---	17 45 48	44.2	148.3	-1.5		-18.8	188	1208	13 50 41
13 54 50	J1905+0952	17 46 28	43.9	152.1	-1.3		-16.6	18	1208	13 54 50
13 56 40	=1903+097	17 48 18	44.0	152.7	-1.3		-16.3	110	1237	13 54 51

Schedule for TORUN (Code Tr) Page 4

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
13 56 40	GRS1915	17 48 18	44.4	149.1	-1.5		-18.3	-22	1237	No stop
14 00 10	---	17 51 49	44.6	150.3	-1.4		-17.7	188	1291	13 56 41
14 00 10	J1905+0952	17 51 49	44.3	153.8	-1.2		-15.6	-22	1291	No stop
14 02 40	=1903+097	17 54 19	44.4	154.7	-1.2		-15.1	128	1329	14 00 11
14 02 40	GRS1915	17 54 19	44.8	151.1	-1.4		-17.2	-22	1329	No stop
14 06 10	---	17 57 50	45.1	152.2	-1.3		-16.5	188	1384	14 02 41
14 06 50	J1905+0952	17 58 30	44.7	156.1	-1.1		-14.3	18	1384	14 06 50
14 08 40	=1903+097	18 00 20	44.8	156.7	-1.1		-14.0	110	1412	14 06 51
14 08 40	GRS1915	18 00 20	45.2	153.1	-1.3		-16.1	-22	1412	No stop
14 12 10	---	18 03 51	45.5	154.3	-1.2		-15.4	188	1466	14 08 41
14 12 10	J1905+0952	18 03 51	45.0	157.9	-1.0		-13.3	-22	1466	No stop
14 14 40	=1903+097	18 06 21	45.1	158.7	-1.0		-12.8	128	1505	14 12 11
14 14 40	GRS1915	18 06 21	45.6	155.1	-1.2		-14.9	-22	1505	No stop
14 18 10	---	18 09 52	45.8	156.3	-1.1		-14.2	188	1559	14 14 41
14 18 50	J1905+0952	18 10 32	45.4	160.1	-0.9		-12.0	18	1559	14 18 50
14 20 40	=1903+097	18 12 22	45.4	160.8	-0.9		-11.6	110	1587	14 18 51
14 20 40	J1913+0932	18 12 22	44.7	158.2	-1.0		-13.1	-19	1587	No stop
14 23 10	---	18 14 53	44.9	159.1	-1.0		-12.6	131	1626	14 20 41
14 23 50	J1905+0952	18 15 33	45.6	161.9	-0.9		-10.9	20	1626	14 23 50
14 25 50	=1903+097	18 17 33	45.7	162.6	-0.8		-10.5	120	1657	14 23 51
14 25 50	GRS1915	18 17 33	46.3	158.9	-1.0		-12.7	-22	1657	No stop
14 29 20	---	18 21 04	46.5	160.2	-0.9		-12.0	188	1711	14 25 51
14 29 20	J1905+0952	18 21 04	45.8	163.8	-0.8		-9.8	-22	1711	No stop
14 31 50	=1903+097	18 23 34	45.9	164.7	-0.7		-9.3	128	1749	14 29 21
14 31 50	GRS1915	18 23 34	46.6	161.0	-0.9		-11.5	-22	1749	No stop
14 35 20	---	18 27 05	46.8	162.3	-0.8		-10.7	188	1803	14 31 51
14 36 00	J1905+0952	18 27 45	46.1	166.1	-0.6		-8.4	18	1803	14 36 00
14 37 50	=1903+097	18 29 35	46.2	166.8	-0.6		-8.0	110	1832	14 36 01
14 37 50	GRS1915	18 29 35	46.9	163.2	-0.8		-10.2	-22	1832	No stop
14 41 20	---	18 33 06	47.0	164.4	-0.7		-9.5	188	1886	14 37 51

Schedule for TORUN (Code Tr) Page 5

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
14 41 20	J1905+0952	18 33 06	46.3	168.0	-0.6		-7.3	-22	1886	No stop
14 43 50	=1903+097	18 35 36	46.4	168.9	-0.5		-6.7	128	1925	14 41 21
14 43 50	GRS1915	18 35 36	47.1	165.3	-0.7		-8.9	-22	1925	No stop
14 47 20	---	18 39 07	47.2	166.5	-0.6		-8.2	188	1979	14 43 51
14 48 00	J1905+0952	18 39 47	46.5	170.4	-0.4		-5.8	18	1979	14 48 00
14 49 50	=1903+097	18 41 37	46.5	171.0	-0.4		-5.5	110	2007	14 48 01
14 49 50	GRS1915	18 41 37	47.3	167.4	-0.6		-7.6	-22	2007	No stop
14 53 20	---	18 45 08	47.4	168.7	-0.5		-6.9	188	2061	14 49 51
14 53 20	J1905+0952	18 45 08	46.6	172.3	-0.4		-4.7	-22	2061	No stop
14 55 50	=1903+097	18 47 38	46.6	173.2	-0.3		-4.2	128	2100	14 53 21
14 55 50	GRS1915	18 47 38	47.5	169.6	-0.5		-6.3	-22	2100	No stop
14 59 20	---	18 51 09	47.6	170.9	-0.4		-5.6	188	2154	14 55 51
15 00 00	J1905+0952	18 51 49	46.7	174.7	-0.2		-3.2	18	2154	15 00 00
15 01 50	=1903+097	18 53 39	46.7	175.3	-0.2		-2.8	110	2182	15 00 01
15 01 50	GRS1915	18 53 39	47.6	171.8	-0.4		-5.0	-22	2182	No stop
15 05 20	---	18 57 10	47.7	173.1	-0.3		-4.2	188	2236	15 01 51
15 05 20	J1905+0952	18 57 10	46.8	176.6	-0.2		-2.1	-22	2236	No stop
15 07 50	=1903+097	18 59 40	46.8	177.5	-0.1		-1.5	128	2275	15 05 21
15 07 50	GRS1915	18 59 40	47.8	174.0	-0.3		-3.7	-22	2275	No stop
15 11 20	---	19 03 11	47.8	175.3	-0.2		-2.9	188	2329	15 07 51
15 12 00	J1905+0952	19 03 51	46.8	179.0	-0.0		-0.6	18	2329	15 12 00
15 13 50	=1903+097	19 05 41	46.8	179.7	-0.0		-0.2	110	2357	15 12 01
15 13 50	J1913+0932	19 05 41	46.5	176.9	-0.1		-1.9	-20	2357	No stop
15 16 20	---	19 08 11	46.5	177.8	-0.1		-1.3	130	2396	15 13 51
15 17 00	J1905+0952	19 08 52	46.8	180.8	0.0		0.5	20	2396	15 17 00
15 19 00	=1903+097	19 10 52	46.8	181.5	0.1		0.9	120	2427	15 17 01
15 19 00	GRS1915	19 10 52	47.9	178.1	-0.1		-1.2	-21	2427	No stop
15 22 30	---	19 14 22	47.9	179.4	-0.0		-0.4	189	2481	15 19 01
15 22 30	J1905+0952	19 14 22	46.8	182.8	0.1		1.7	-22	2481	No stop
15 25 00	=1903+097	19 16 53	46.8	183.7	0.2		2.2	128	2520	15 22 31

Schedule for TORUN (Code Tr) Page 6

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	 AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
15 25 00	GRS1915	19 16 53	47.9	180.3	0.0		0.2	-21	2520	No stop
15 28 30	---	19 20 23	47.9	181.6	0.1		0.9	189	2574	15 25 01
15 29 10	J1905+0952	19 21 04	46.7	185.2	0.2		3.2	18	2574	15 29 10
15 31 00	=1903+097	19 22 54	46.7	185.8	0.3		3.6	110	2602	15 29 11
15 31 00	GRS1915	19 22 54	47.9	182.5	0.1		1.5	-21	2602	No stop
15 34 30	---	19 26 24	47.8	183.8	0.2		2.3	189	2656	15 31 01
15 34 30	J1905+0952	19 26 24	46.6	187.1	0.3		4.3	-22	2656	No stop
15 37 00	=1903+097	19 28 55	46.6	188.0	0.4		4.9	128	2695	15 34 31
15 37 00	GRS1915	19 28 55	47.8	184.7	0.2		2.9	-21	2695	No stop
15 40 30	---	19 32 25	47.8	185.9	0.3		3.6	189	2749	15 37 01
15 41 10	J1905+0952	19 33 05	46.5	189.5	0.4		5.8	19	2749	15 41 10
15 43 00	=1903+097	19 34 56	46.4	190.1	0.5		6.2	110	2777	15 41 11
15 43 00	GRS1915	19 34 56	47.7	186.9	0.3		4.2	-21	2777	No stop
15 46 30	---	19 38 26	47.7	188.1	0.4		5.0	189	2831	15 43 01
15 46 30	J1905+0952	19 38 26	46.3	191.4	0.5		6.9	-21	2831	No stop
15 49 00	=1903+097	19 40 57	46.3	192.3	0.6		7.4	129	2870	15 46 31
15 49 00	GRS1915	19 40 57	47.6	189.0	0.4		5.5	-21	2870	No stop
15 52 30	---	19 44 27	47.5	190.3	0.5		6.3	189	2924	15 49 01
15 53 10	J1905+0952	19 45 07	46.1	193.7	0.6		8.3	19	2924	15 53 10
15 55 00	=1903+097	19 46 58	46.0	194.4	0.7		8.7	110	2953	15 53 11
15 55 00	GRS1915	19 46 58	47.4	191.2	0.5		6.8	-21	2953	No stop
15 58 30	---	19 50 28	47.3	192.5	0.6		7.6	189	3007	15 55 01
15 58 30	J1905+0952	19 50 28	45.9	195.6	0.7		9.4	-21	3007	No stop
16 01 00	=1903+097	19 52 59	45.8	196.5	0.8		10.0	129	3045	15 58 31
16 01 00	GRS1915	19 52 59	47.2	193.4	0.6		8.1	-21	3045	No stop
16 04 30	---	19 56 29	47.1	194.6	0.7		8.9	189	3099	16 01 01
16 05 10	J1905+0952	19 57 09	45.6	197.9	0.8		10.8	19	3099	16 05 10
16 07 00	=1903+097	19 59 00	45.5	198.6	0.9		11.2	110	3128	16 05 11
16 07 00	J1913+0932	19 59 00	45.6	195.8	0.7		9.6	-20	3128	No stop
16 09 30	---	20 01 30	45.5	196.7	0.8		10.1	130	3166	16 07 01

Schedule for TORUN (Code Tr) Page 7

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
16 10 00	J1800+3848	20 02 00	64.9	247.6	2.0		45.4	-88	3166	16 10 00
16 15 00	=1758+388	20 07 01	64.2	249.2	2.1		46.1	212	3244	16 10 01
16 15 40	J1905+0952	20 07 41	45.1	201.6	1.0		12.9	-69	3244	16 15 40
16 17 40	=1903+097	20 09 41	45.0	202.2	1.1		13.3	51	3275	16 15 41
16 17 40	GRS1915	20 09 41	46.5	199.3	0.9		11.7	-20	3275	No stop
16 21 10	---	20 13 12	46.4	200.5	1.0		12.4	190	3329	16 17 41
16 21 10	J1905+0952	20 13 12	44.8	203.4	1.1		14.0	-20	3329	No stop
16 23 40	=1903+097	20 15 42	44.6	204.3	1.2		14.5	130	3367	16 21 11
16 23 40	GRS1915	20 15 42	46.2	201.4	1.0		12.9	-20	3367	No stop
16 27 10	---	20 19 13	46.0	202.6	1.1		13.6	190	3421	16 23 41
16 27 50	J1905+0952	20 19 53	44.4	205.7	1.2		15.3	20	3421	16 27 50
16 29 40	=1903+097	20 21 43	44.2	206.3	1.3		15.6	110	3450	16 27 51
16 29 40	GRS1915	20 21 43	45.9	203.5	1.1		14.1	-20	3450	No stop
16 33 10	---	20 25 14	45.7	204.6	1.2		14.8	190	3504	16 29 41
16 33 10	J1905+0952	20 25 14	44.0	207.4	1.3		16.3	-20	3504	No stop
16 35 40	=1903+097	20 27 44	43.8	208.2	1.4		16.8	130	3543	16 33 11
16 35 40	GRS1915	20 27 44	45.5	205.5	1.2		15.3	-20	3543	No stop
16 39 10	---	20 31 15	45.3	206.7	1.3		15.9	190	3597	16 35 41
16 39 50	J1905+0952	20 31 55	43.5	209.6	1.4		17.5	20	3597	16 39 50
16 41 40	=1903+097	20 33 45	43.4	210.2	1.5		17.9	110	3625	16 39 51
16 41 40	GRS1915	20 33 45	45.1	207.5	1.3		16.4	-20	3625	No stop
16 45 10	---	20 37 16	44.9	208.7	1.4		17.1	190	3679	16 41 41
16 45 10	J1905+0952	20 37 16	43.1	211.3	1.5		18.5	-20	3679	No stop
16 47 40	=1903+097	20 39 46	42.9	212.1	1.6		18.9	130	3718	16 45 11
16 47 40	GRS1915	20 39 46	44.7	209.5	1.4		17.5	-20	3718	No stop
16 51 10	---	20 43 17	44.4	210.7	1.5		18.2	190	3772	16 47 41
16 51 50	J1905+0952	20 43 57	42.6	213.4	1.6		19.6	20	3772	16 51 50
16 53 40	=1903+097	20 45 47	42.4	214.0	1.7		19.9	110	3800	16 51 51
16 53 40	GRS1915	20 45 47	44.2	211.5	1.5		18.6	-20	3800	No stop
16 57 10	---	20 49 18	43.9	212.6	1.6		19.2	190	3854	16 53 41

Schedule for TORUN (Code Tr) Page 8

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
16 57 10	J1905+0952	20 49 18	42.1	215.1	1.7		20.5	-21	3854	No stop
16 59 40	=1903+097	20 51 48	41.9	215.9	1.8		20.9	129	3893	16 57 11
16 59 40	GRS1915	20 51 48	43.7	213.4	1.6		19.7	-21	3893	No stop
17 03 10	---	20 55 19	43.4	214.5	1.7		20.3	189	3947	16 59 41
17 03 50	J1905+0952	20 55 59	41.5	217.2	1.8		21.6	19	3947	17 03 50
17 05 40	=1903+097	20 57 49	41.4	217.7	1.9		21.9	110	3975	17 03 51
17 05 40	J1913+0932	20 57 49	41.8	215.2	1.7		20.6	-19	3975	No stop
17 08 10	---	21 00 20	41.5	216.0	1.8		21.0	131	4014	17 05 41
17 08 50	J1905+0952	21 01 00	41.1	218.7	1.9		22.4	21	4014	17 08 50
17 10 50	=1903+097	21 03 00	40.9	219.3	1.9		22.7	120	4045	17 08 51
17 10 50	GRS1915	21 03 00	42.8	216.9	1.8		21.6	-21	4045	No stop
17 14 20	---	21 06 31	42.4	218.0	1.8		22.1	189	4099	17 10 51
17 14 20	J1905+0952	21 06 31	40.5	220.4	2.0		23.2	-21	4099	No stop
17 16 50	=1903+097	21 09 01	40.3	221.1	2.0		23.6	129	4138	17 14 21
17 16 50	GRS1915	21 09 01	42.2	218.8	1.9		22.5	-21	4138	No stop
17 20 20	---	21 12 32	41.9	219.9	1.9		23.1	189	4192	17 16 51
17 21 00	J1905+0952	21 13 12	39.9	222.3	2.1		24.2	19	4192	17 21 00
17 22 50	=1903+097	21 15 02	39.7	222.9	2.1		24.5	110	4220	17 21 01
17 22 50	GRS1915	21 15 02	41.6	220.6	2.0		23.5	-21	4220	No stop
17 26 20	---	21 18 33	41.3	221.7	2.0		24.0	189	4274	17 22 51
17 26 20	J1905+0952	21 18 33	39.3	223.9	2.2		25.0	-21	4274	No stop
17 28 50	=1903+097	21 21 03	39.1	224.6	2.2		25.3	129	4313	17 26 21
17 28 50	GRS1915	21 21 03	41.0	222.4	2.1		24.4	-21	4313	No stop
17 32 20	---	21 24 34	40.7	223.5	2.1		24.9	189	4367	17 28 51
17 33 00	J1905+0952	21 25 14	38.6	225.8	2.3		25.9	19	4367	17 33 00
17 34 50	=1903+097	21 27 04	38.4	226.3	2.3		26.2	110	4395	17 33 01
17 34 50	GRS1915	21 27 04	40.4	224.2	2.2		25.2	-21	4395	No stop
17 38 20	---	21 30 35	40.0	225.2	2.2		25.7	189	4449	17 34 51
17 38 20	J1905+0952	21 30 35	38.0	227.3	2.4		26.6	-21	4449	No stop
17 40 50	=1903+097	21 33 05	37.8	228.0	2.4		26.9	129	4488	17 38 21

Schedule for TORUN (Code Tr) Page 9

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
17 40 50	GRS1915	21 33 05	39.8	225.9	2.3		26.1	-21	4488	No stop
17 44 20	---	21 36 36	39.4	226.9	2.3		26.5	189	4542	17 40 51
17 45 00	J1905+0952	21 37 16	37.3	229.2	2.5		27.5	18	4542	17 45 00
17 46 50	=1903+097	21 39 06	37.1	229.7	2.5		27.7	110	4571	17 45 01
17 46 50	GRS1915	21 39 06	39.1	227.6	2.4		26.9	-21	4571	No stop
17 50 20	---	21 42 37	38.7	228.6	2.4		27.3	189	4625	17 46 51
17 50 20	J1905+0952	21 42 37	36.7	230.6	2.6		28.1	-22	4625	No stop
17 52 50	=1903+097	21 45 07	36.4	231.3	2.6		28.4	128	4663	17 50 21
17 52 50	GRS1915	21 45 07	38.4	229.3	2.5		27.6	-21	4663	No stop
17 56 20	---	21 48 38	38.0	230.3	2.5		28.1	189	4717	17 52 51
17 57 00	J1905+0952	21 49 18	35.9	232.4	2.7		28.9	18	4717	17 57 00
17 58 50	=1903+097	21 51 08	35.7	232.9	2.7		29.1	110	4746	17 57 01
17 58 50	J1913+0932	21 51 08	36.3	230.6	2.6		28.1	-18	4746	No stop
18 01 20	---	21 53 39	36.0	231.3	2.7		28.4	132	4784	17 58 51
18 02 00	J1905+0952	21 54 19	35.3	233.7	2.8		29.4	21	4784	18 02 00
18 04 00	=1903+097	21 56 19	35.0	234.3	2.8		29.7	120	4815	18 02 01
18 04 00	GRS1915	21 56 19	37.1	232.4	2.7		29.0	-22	4815	No stop
18 07 30	---	21 59 50	36.7	233.3	2.7		29.4	188	4869	18 04 01
18 07 30	J1905+0952	21 59 50	34.6	235.2	2.9		30.0	-22	4869	No stop
18 10 00	=1903+097	22 02 20	34.3	235.8	2.9		30.3	128	4908	18 07 31
18 10 00	GRS1915	22 02 20	36.4	234.0	2.8		29.7	-22	4908	No stop
18 13 30	---	22 05 51	36.0	234.9	2.8		30.0	188	4962	18 10 01
18 14 10	J1905+0952	22 06 31	33.8	236.9	3.0		30.7	18	4962	18 14 10
18 16 10	=1903+097	22 08 31	33.5	237.4	3.0		30.9	120	4993	18 14 11
18 16 10	GRS1915	22 08 31	35.7	235.6	2.9		30.3	-22	4993	No stop
18 19 40	---	22 12 02	35.2	236.5	2.9		30.7	188	5047	18 16 11
18 19 40	J1905+0952	22 12 02	33.1	238.3	3.1		31.2	-22	5047	No stop
18 22 10	=1903+097	22 14 32	32.8	238.9	3.1		31.5	128	5086	18 19 41
18 22 10	GRS1915	22 14 32	34.9	237.2	3.0		30.9	-22	5086	No stop
18 25 40	---	22 18 03	34.5	238.1	3.0		31.3	188	5140	18 22 11

Schedule for TORUN (Code Tr) Page 10

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	 AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
18 26 20	J1905+0952	22 18 43	32.2	240.0	3.2		31.8	18	5140	18 26 20
18 28 20	=1903+097	22 20 43	32.0	240.4	3.2		32.0	120	5171	18 26 21
18 28 20	GRS1915	22 20 43	34.1	238.8	3.1		31.5	-22	5171	No stop
18 31 50	---	22 24 14	33.7	239.6	3.1		31.9	188	5225	18 28 21
18 31 50	J1905+0952	22 24 14	31.5	241.3	3.3		32.3	-22	5225	No stop
18 34 20	=1903+097	22 26 44	31.2	241.9	3.3		32.5	128	5264	18 31 51
18 34 20	GRS1915	22 26 44	33.3	240.3	3.2		32.1	-22	5264	No stop
18 37 50	---	22 30 15	32.9	241.1	3.2		32.4	188	5318	18 34 21
18 38 30	J1905+0952	22 30 55	30.6	242.9	3.4		32.9	18	5318	18 38 30
18 40 30	=1903+097	22 32 55	30.3	243.4	3.4		33.0	120	5349	18 38 31
18 40 30	GRS1915	22 32 55	32.5	241.8	3.3		32.6	-22	5349	No stop
18 44 00	---	22 36 26	32.1	242.6	3.3		32.9	188	5403	18 40 31
18 44 00	J1905+0952	22 36 26	29.9	244.2	3.5		33.3	-22	5403	No stop
18 46 30	=1903+097	22 38 56	29.5	244.8	3.5		33.5	128	5441	18 44 01
18 46 30	GRS1915	22 38 56	31.7	243.3	3.4		33.1	-22	5441	No stop
18 50 00	---	22 42 27	31.2	244.1	3.4		33.4	188	5495	18 46 31
18 50 40	J1905+0952	22 43 07	29.0	245.8	3.6		33.8	18	5495	18 50 40
18 52 40	=1903+097	22 45 07	28.7	246.3	3.6		33.9	120	5526	18 50 41
18 52 40	J1913+0932	22 45 07	29.5	244.3	3.5		33.3	-18	5526	No stop
18 55 10	---	22 47 37	29.1	244.9	3.6		33.5	132	5565	18 52 41
18 55 50	J1905+0952	22 48 17	28.2	247.0	3.7		34.1	22	5565	18 55 50
18 57 50	=1903+097	22 50 18	28.0	247.5	3.7		34.3	120	5596	18 55 51
18 57 50	GRS1915	22 50 18	30.2	246.0	3.6		34.0	-22	5596	No stop
19 01 20	---	22 53 48	29.7	246.8	3.6		34.2	188	5650	18 57 51
19 01 20	J1905+0952	22 53 48	27.5	248.3	3.8		34.5	-22	5650	No stop
19 03 50	=1903+097	22 56 19	27.1	248.9	3.8		34.7	128	5689	19 01 21
19 03 50	GRS1915	22 56 19	29.3	247.4	3.7		34.4	-22	5689	No stop
19 07 20	---	22 59 49	28.9	248.2	3.7		34.6	188	5743	19 03 51
19 08 00	J1905+0952	23 00 29	26.5	249.8	3.9		34.9	18	5743	19 08 00
19 10 00	=1903+097	23 02 30	26.3	250.3	3.9		35.0	120	5774	19 08 01

Schedule for TORUN (Code Tr) Page 11

Probing the radio jets in GRS1915+105 in a new puzzling accretion state

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 30 Oct 2020 Day 304 ---										
19 10 00	GRS1915	23 02 30	28.5	248.8	3.8		34.8	-22	5774	No stop
19 13 30	---	23 06 00	28.0	249.6	3.8		35.0	188	5828	19 10 01
19 13 30	J1905+0952	23 06 00	25.8	251.1	4.0		35.2	-22	5828	No stop
19 16 00	=1903+097	23 08 31	25.4	251.6	4.0		35.3	128	5866	19 13 31
19 16 00	GRS1915	23 08 31	27.6	250.2	3.9		35.1	-22	5866	No stop
19 19 30	---	23 12 01	27.1	251.0	3.9		35.3	188	5921	19 16 01
19 20 10	J1905+0952	23 12 41	24.8	252.5	4.1		35.6	18	5921	19 20 10
19 22 10	=1903+097	23 14 42	24.5	253.0	4.1		35.7	120	5951	19 20 11
19 22 10	GRS1915	23 14 42	26.8	251.6	4.0		35.5	-22	5951	No stop
19 25 40	---	23 18 12	26.3	252.3	4.0		35.7	188	6006	19 22 11
19 25 40	J1905+0952	23 18 12	24.0	253.7	4.2		35.8	-22	6006	No stop
19 28 10	=1903+097	23 20 43	23.7	254.3	4.2		35.9	128	6044	19 25 41
19 28 10	GRS1915	23 20 43	25.9	252.9	4.1		35.8	-22	6044	No stop
19 31 40	---	23 24 13	25.4	253.7	4.1		35.9	188	6098	19 28 11
19 32 20	J1905+0952	23 24 53	23.1	255.2	4.3		36.1	18	6098	19 32 20
19 34 20	=1903+097	23 26 54	22.8	255.6	4.3		36.2	120	6129	19 32 21
19 34 20	J1913+0932	23 26 54	23.6	253.8	4.2		35.8	-17	6129	No stop
19 36 50	---	23 29 24	23.3	254.3	4.3		35.9	133	6168	19 34 21
19 37 30	J1905+0952	23 30 04	22.3	256.3	4.4		36.3	23	6168	19 37 30
19 39 30	=1903+097	23 32 05	22.0	256.7	4.4		36.4	120	6199	19 37 31
19 39 30	GRS1915	23 32 05	24.3	255.4	4.3		36.3	-22	6199	No stop
19 43 00	---	23 35 35	23.8	256.2	4.3		36.4	188	6253	19 39 31
19 43 00	J1905+0952	23 35 35	21.5	257.5	4.5		36.5	-23	6253	No stop
19 45 30	=1903+097	23 38 06	21.1	258.0	4.5		36.6	127	6292	19 43 01
19 45 30	GRS1915	23 38 06	23.4	256.7	4.4		36.5	-22	6292	No stop
19 49 00	---	23 41 36	22.9	257.4	4.4		36.7	188	6346	19 45 31
19 49 40	J1905+0952	23 42 16	20.5	258.9	4.6		36.7	17	6346	19 49 40
19 51 40	=1903+097	23 44 17	20.2	259.3	4.6		36.8	120	6377	19 49 41
19 51 40	GRS1915	23 44 17	22.5	258.0	4.5		36.8	-22	6377	No stop
19 55 10	---	23 47 47	22.0	258.8	4.5		36.9	188	6431	19 51 41

```
Schedule for TORUN     (Code Tr )                                  Page  12
              Probing the radio jets in GRS1915+105 in a new puzzling accretion state
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Fri  30 Oct 2020   Day 304 ---

19 55 10  J1905+0952   23 47 47  19.7 260.1  4.7      36.9   -23     6431   No stop
19 57 40  =1903+097    23 50 18  19.3 260.6  4.7      37.0   127     6469   19 55 11

19 57 40  GRS1915      23 50 18  21.6 259.3  4.6      36.9   -22     6469   No stop
20 01 10  ---          23 53 48  21.1 260.0  4.6      37.0   188     6523   19 57 41

20 01 50  J1905+0952   23 54 28  18.7 261.5  4.8      37.1    17     6523   20 01 50
20 03 50  =1903+097    23 56 29  18.4 261.9  4.8      37.1   120     6554   20 01 51

20 03 50  GRS1915      23 56 29  20.7 260.6  4.7      37.1   -22     6554   No stop
20 07 20  ---          23 59 59  20.2 261.3  4.7      37.2   188     6608   20 03 51

20 07 20  J1905+0952   23 59 59  17.9 262.6  4.9      37.2   -23     6608   No stop
20 09 50  =1903+097    00 02 30  17.5 263.1  4.9      37.2   127     6647   20 07 21

20 09 50  GRS1915      00 02 30  19.8 261.8  4.8      37.3   -22     6647   No stop
20 13 20  ---          00 06 00  19.3 262.6  4.8      37.3   188     6701   20 09 51

20 14 00  J1905+0952   00 06 40  16.9 264.0  5.0      37.3    17     6701   20 14 00
20 16 00  =1903+097    00 08 41  16.6 264.4  5.0      37.3   120     6732   20 14 01

20 16 00  J1913+0932   00 08 41  17.5 262.6  4.9      37.1   -17     6732   No stop
20 18 30  ---          00 11 11  17.1 263.1  4.9      37.2   133     6771   20 16 01

20 19 10  J1905+0952   00 11 51  16.1 265.0  5.1      37.4    23     6771   20 19 10
20 22 40  =1903+097    00 15 22  15.6 265.7  5.1      37.4   210     6825   20 19 11

20 24 00  J2253+1608   00 16 42  49.8 211.3  1.4      19.0   -62     6825   20 24 00
20 30 00  =3C454.3     00 22 43  49.3 213.4  1.5      20.1   298     6918   20 24 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.C2048

   Setup group:   10         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
            4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   8  Setup file default.  Used with PCAL = off
  LO sum=   4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
            4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
  BBC fr=    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
             758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
  Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
              32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
   Matching frequency sets:   8

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



 POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* GRS1915           19 12 49.958613   * 19 15 11.544821     19 16 08.946282       0.00
  GRS1915+105       10 51 26.57111    * 10 56 44.62477      10 59 05.89093        0.00

* J1913+0932        19 11 00.869981   * 19 13 24.025348     19 14 22.061653       0.00
                    09 27 34.81592    * 09 32 45.37648      09 35 03.19161        0.00

  1758+388          17 58 44.703954   * 18 00 24.765363     18 01 04.600553       0.01
* J1800+3848        38 48 32.47350    * 38 48 30.69748      38 48 44.84096        0.01
  J1800+38          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,   5095 observations.

  1903+097          19 03 17.231910   * 19 05 39.898972     19 06 37.696026       0.13
* J1905+0952        09 47 30.15815    * 09 52 08.40750      09 54 13.05426        0.22
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    104 observations.

  3C454.3           22 51 29.519739   * 22 53 57.747939     22 54 59.130379       0.65
* J2253+1608        15 52 54.34808    * 16 08 53.56091      16 15 37.30815        0.73
  2251+158          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J2253+16          GSFC 2016a X/S astro solution,  41272 observations.


EFFECT OF SOLAR CORONA
```

```
The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 GRS1915             77.2
 J1913+0932          76.4
 J1800+3848          73.6
 J1905+0952          74.7
 J2253+1608         130.3

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

es094tr

ES094

PI: *Shu, Xinwen*


```
Address:  Department of Physics
          Anhui Normal University
          189 South Jiuhua Road
          Wuhu, Anhui, China

Phone:    8617755362162
EMAIL:    xwshu@mail.ahnu.edu.cn
Fax:
Phone during observation: 8617755362162
```


```
Observing mode: evn

Schedule for TORUN     (Code Tr )                                    Page   2
               es094
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Fri  30 Oct 2020   Day 304 ---

 Next scan frequencies:  4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
                         4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 Next BBC frequencies:    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
                          758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

23 00 00  J1143+6633   02 53 08  34.7  20.9 -8.9     -32.3     0        0   23 00 00
23 01 30  =1140+668    02 54 38  34.8  21.0 -8.8     -32.6    90       23   23 00 01

23 01 30  J1133        02 54 38  35.7  21.7 -8.7     -34.4   -16       23   No stop
23 05 00  ---          02 58 08  35.9  22.0 -8.6     -35.1   194       77   23 01 31

23 05 35  J1143+6633   02 58 44  35.0  21.4 -8.8     -33.3    19       77   23 05 35
23 06 55  =1140+668    03 00 04  35.1  21.6 -8.7     -33.5    80       98   23 05 36

23 06 55  J1133        03 00 04  36.0  22.2 -8.6     -35.4   -16       98   No stop
23 10 25  ---          03 03 34  36.2  22.6 -8.5     -36.0   194      152   23 06 56

23 10 25  J1143+6633   03 03 34  35.3  21.9 -8.7     -34.1   -16      152   No stop
23 11 55  =1140+668    03 05 05  35.4  22.1 -8.7     -34.4    74      175   23 10 26

23 11 55  J1133        03 05 05  36.3  22.7 -8.5     -36.2   -16      175   No stop
23 15 25  ---          03 08 35  36.5  23.1 -8.4     -36.8   194      229   23 11 56

23 16 00  J1143+6633   03 09 10  35.6  22.5 -8.6     -35.1    19      229   23 16 00
23 17 20  =1140+668    03 10 30  35.7  22.6 -8.6     -35.3    80      250   23 16 01

23 17 20  J1133        03 10 30  36.6  23.3 -8.4     -37.2   -16      250   No stop
23 20 50  ---          03 14 01  36.8  23.6 -8.4     -37.8   194      304   23 17 21

23 20 50  J1143+6633   03 14 01  35.9  23.0 -8.5     -35.9   -16      304   No stop
23 22 20  =1140+668    03 15 31  36.0  23.1 -8.5     -36.2    74      327   23 20 51
```

23 22 20	J1133	03 15 31	36.9	23.7	-8.3	-38.0	-16	327	No stop
23 25 50	---	03 19 02	37.1	24.1	-8.3	-38.6	194	381	23 22 21
23 26 25	J1143+6633	03 19 37	36.2	23.5	-8.4	-36.9	19	381	23 26 25
23 27 45	=1140+668	03 20 57	36.3	23.7	-8.4	-37.1	80	402	23 26 26
23 27 45	J1133	03 20 57	37.3	24.3	-8.2	-39.0	-16	402	No stop
23 31 15	---	03 24 28	37.5	24.6	-8.2	-39.6	194	456	23 27 46
23 31 15	J1143+6633	03 24 28	36.5	24.0	-8.3	-37.7	-16	456	No stop
23 32 45	=1140+668	03 25 58	36.6	24.2	-8.3	-38.0	74	479	23 31 16

Schedule for TORUN (Code Tr) Page 3
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UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Fri 30 Oct 2020 Day 304 ---										
23 32 45	J1133	03 25 58	37.6	24.7	-8.2		-39.8	-16	479	No stop
23 36 15	---	03 29 29	37.8	25.1	-8.1		-40.4	194	533	23 32 46
23 36 50	J1143+6633	03 30 04	36.9	24.6	-8.2		-38.6	19	533	23 36 50
23 38 10	=1140+668	03 31 24	36.9	24.7	-8.2		-38.9	80	554	23 36 51
23 38 10	J1133	03 31 24	37.9	25.3	-8.1		-40.8	-16	554	No stop
23 41 40	---	03 34 54	38.1	25.6	-8.0		-41.4	194	608	23 38 11
23 41 40	J1143+6633	03 34 54	37.2	25.0	-8.2		-39.5	-16	608	No stop
23 43 10	=1140+668	03 36 25	37.3	25.2	-8.1		-39.7	74	631	23 41 41
23 43 10	J1133	03 36 25	38.2	25.7	-8.0		-41.6	-16	631	No stop
23 46 40	---	03 39 55	38.5	26.0	-7.9		-42.2	194	685	23 43 11
23 47 15	J1143+6633	03 40 30	37.5	25.6	-8.1		-40.4	19	685	23 47 15
23 48 35	=1140+668	03 41 51	37.6	25.7	-8.0		-40.7	80	706	23 47 16
23 48 35	J1133	03 41 51	38.6	26.2	-7.9		-42.6	-17	706	No stop
23 52 05	---	03 45 21	38.8	26.6	-7.8		-43.2	193	760	23 48 36
23 52 05	J1143+6633	03 45 21	37.8	26.0	-8.0		-41.3	-16	760	No stop
23 53 35	=1140+668	03 46 51	37.9	26.2	-8.0		-41.5	74	783	23 52 06
23 53 35	J1133	03 46 51	38.9	26.7	-7.8		-43.4	-17	783	No stop
23 57 05	---	03 50 22	39.2	27.0	-7.7		-44.0	193	837	23 53 36
23 57 40	J1143+6633	03 50 57	38.2	26.6	-7.9		-42.2	19	837	23 57 40
23 59 00	=1140+668	03 52 17	38.3	26.7	-7.9		-42.4	80	858	23 57 41
--- Start: Fri 30 Oct 2020 Day 304 -- Stop: Sat 31 Oct 2020 Day 305 ---										
23 59 00	J1133	03 52 17	39.3	27.2	-7.7		-44.4	-17	858	No stop
00 02 30	---	03 55 48	39.5	27.5	-7.7		-45.0	193	912	23 59 01
00 02 30	J1143+6633	03 55 48	38.5	27.0	-7.8		-43.0	-16	912	No stop
00 04 00	=1140+668	03 57 18	38.6	27.2	-7.8		-43.3	74	935	00 02 31
00 04 00	J1133	03 57 18	39.6	27.6	-7.6		-45.2	-17	935	No stop
00 07 30	---	04 00 49	39.9	27.9	-7.6		-45.8	193	989	00 04 01
00 08 05	J1143+6633	04 01 24	38.9	27.5	-7.7		-44.0	19	989	00 08 05
00 09 25	=1140+668	04 02 44	39.0	27.7	-7.7		-44.2	80	1010	00 08 06

Schedule for TORUN (Code Tr) Page 4
es094

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
00 09 25	J1133	04 02 44	40.0	28.1	-7.5		-46.2	-17	1010	No stop
00 12 55	---	04 06 15	40.3	28.4	-7.5		-46.8	193	1064	00 09 26
00 12 55	J1143+6633	04 06 15	39.3	28.0	-7.6		-44.8	-17	1064	No stop
00 14 25	=1140+668	04 07 45	39.4	28.1	-7.6		-45.1	73	1087	00 12 56
00 14 25	J1133	04 07 45	40.4	28.6	-7.5		-47.0	-17	1087	No stop
00 17 55	---	04 11 15	40.6	28.9	-7.4		-47.6	193	1141	00 14 26
00 18 30	J1143+6633	04 11 50	39.7	28.5	-7.5		-45.8	18	1141	00 18 30
00 19 50	=1140+668	04 13 11	39.8	28.6	-7.5		-46.0	80	1162	00 18 31
00 19 50	J1133	04 13 11	40.8	29.0	-7.4		-48.0	-17	1162	No stop
00 23 20	---	04 16 41	41.0	29.3	-7.3		-48.6	193	1216	00 19 51
00 23 20	J1143+6633	04 16 41	40.0	28.9	-7.5		-46.6	-17	1216	No stop
00 24 50	=1140+668	04 18 12	40.1	29.1	-7.4		-46.9	73	1239	00 23 21
00 24 50	J1133	04 18 12	41.1	29.5	-7.3		-48.9	-17	1239	No stop
00 28 20	---	04 21 42	41.4	29.8	-7.2		-49.5	193	1293	00 24 51
00 28 55	J1143+6633	04 22 17	40.4	29.4	-7.4		-47.6	18	1293	00 28 55
00 30 15	=1140+668	04 23 37	40.5	29.5	-7.4		-47.8	80	1314	00 28 56
00 30 15	J1133	04 23 37	41.6	29.9	-7.2		-49.8	-17	1314	No stop
00 33 45	---	04 27 08	41.8	30.2	-7.1		-50.4	193	1368	00 30 16
00 33 45	J1143+6633	04 27 08	40.8	29.9	-7.3		-48.4	-17	1368	No stop
00 35 15	=1140+668	04 28 38	40.9	30.0	-7.3		-48.7	73	1391	00 33 46
00 35 15	J1133	04 28 38	41.9	30.4	-7.1		-50.7	-17	1391	No stop
00 38 45	---	04 32 09	42.2	30.6	-7.0		-51.3	193	1445	00 35 16
00 39 20	J1143+6633	04 32 44	41.2	30.3	-7.2		-49.4	18	1445	00 39 20
00 40 40	=1140+668	04 34 04	41.3	30.5	-7.2		-49.6	80	1466	00 39 21
00 40 40	J1133	04 34 04	42.3	30.8	-7.0		-51.6	-17	1466	No stop
00 44 10	---	04 37 35	42.6	31.1	-7.0		-52.2	193	1520	00 40 41
00 44 10	J1143+6633	04 37 35	41.6	30.8	-7.1		-50.2	-17	1520	No stop
00 45 40	=1140+668	04 39 05	41.7	30.9	-7.1		-50.5	73	1543	00 44 11
00 45 40	J1133	04 39 05	42.7	31.2	-6.9		-52.5	-17	1543	No stop
00 49 10	---	04 42 36	43.0	31.5	-6.9		-53.1	193	1597	00 45 41

Schedule for TORUN (Code Tr) Page 5
es094

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
00 49 45	J1143+6633	04 43 11	42.0	31.2	-7.0		-51.2	18	1597	00 49 45
00 51 05	=1140+668	04 44 31	42.1	31.3	-7.0		-51.4	80	1618	00 49 46
00 51 05	J1133	04 44 31	43.2	31.7	-6.8		-53.4	-17	1618	No stop
00 54 35	---	04 48 01	43.4	31.9	-6.8		-54.1	193	1672	00 51 06
00 54 35	J1143+6633	04 48 01	42.4	31.6	-6.9		-52.0	-17	1672	No stop
00 56 05	=1140+668	04 49 32	42.5	31.8	-6.9		-52.3	73	1695	00 54 36
00 56 05	J1133	04 49 32	43.6	32.0	-6.8		-54.3	-17	1695	No stop
00 59 35	---	04 53 02	43.8	32.3	-6.7		-54.9	193	1749	00 56 06
01 00 10	J1143+6633	04 53 37	42.8	32.1	-6.9		-53.0	18	1749	01 00 10
01 01 30	=1140+668	04 54 58	42.9	32.2	-6.8		-53.2	80	1770	01 00 11
01 01 30	J1133	04 54 58	44.0	32.5	-6.7		-55.3	-17	1770	No stop
01 05 00	---	04 58 28	44.3	32.7	-6.6		-55.9	193	1824	01 01 31
01 05 00	J1143+6633	04 58 28	43.2	32.5	-6.8		-53.8	-17	1824	No stop
01 06 30	=1140+668	04 59 58	43.3	32.6	-6.7		-54.1	73	1847	01 05 01
01 06 30	J1133	04 59 58	44.4	32.9	-6.6		-56.2	-17	1847	No stop
01 10 00	---	05 03 29	44.7	33.1	-6.5		-56.8	193	1901	01 06 31
01 10 35	J1143+6633	05 04 04	43.7	33.0	-6.7		-54.8	18	1901	01 10 35
01 11 55	=1140+668	05 05 24	43.8	33.1	-6.7		-55.0	80	1922	01 10 36
01 11 55	J1133	05 05 24	44.8	33.3	-6.5		-57.1	-17	1922	No stop
01 15 25	---	05 08 55	45.1	33.5	-6.4		-57.7	193	1976	01 11 56
01 15 25	J1143+6633	05 08 55	44.1	33.3	-6.6		-55.6	-17	1976	No stop
01 16 55	=1140+668	05 10 25	44.2	33.5	-6.6		-55.9	73	1999	01 15 26
01 16 55	J1133	05 10 25	45.3	33.6	-6.4		-58.0	-17	1999	No stop
01 20 25	---	05 13 56	45.5	33.9	-6.4		-58.6	193	2053	01 16 56
01 21 00	J1143+6633	05 14 31	44.5	33.8	-6.5		-56.6	18	2053	01 21 00
01 22 20	=1140+668	05 15 51	44.7	33.9	-6.5		-56.9	80	2074	01 21 01
01 22 20	J1133	05 15 51	45.7	34.0	-6.3		-59.0	-17	2074	No stop
01 25 50	---	05 19 22	46.0	34.3	-6.3		-59.6	193	2128	01 22 21
01 25 50	J1143+6633	05 19 22	44.9	34.1	-6.4		-57.5	-17	2128	No stop
01 27 20	=1140+668	05 20 52	45.1	34.3	-6.4		-57.7	73	2151	01 25 51

Schedule for TORUN (Code Tr) Page 6

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UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
01 27 20	J1133	05 20 52	46.1	34.4	-6.2		-59.9	-17	2151	No stop
01 30 50	---	05 24 22	46.4	34.7	-6.2		-60.5	193	2205	01 27 21
01 31 25	J1143+6633	05 24 57	45.4	34.6	-6.3		-58.5	18	2205	01 31 25
01 32 45	=1140+668	05 26 18	45.5	34.7	-6.3		-58.7	80	2226	01 31 26
01 33 20	J1133	05 26 53	46.6	34.8	-6.1		-60.9	18	2226	01 33 20
01 36 18	---	05 29 51	46.9	35.0	-6.1		-61.5	178	2272	01 33 21
01 36 18	J1143+6633	05 29 51	45.8	34.9	-6.2		-59.3	-17	2272	No stop
01 37 48	=1140+668	05 31 22	46.0	35.0	-6.2		-59.6	73	2295	01 36 19
01 42 12	4C39.25	05 35 47	48.5	85.7	-3.9		-50.4	149	2295	01 42 12
01 45 12	---	05 38 57	49.0	86.3	-3.8		-50.4	180	2341	01 42 13
01 53 22	J1143+6633	05 46 59	47.3	36.1	-6.0		-62.4	374	2341	01 53 22
01 54 42	=1140+668	05 48 29	47.5	36.2	-5.9		-62.6	80	2362	01 53 23
01 54 52	J1133	05 48 29	48.5	36.3	-5.8		-64.9	-7	2362	01 54 52
01 58 12	---	05 51 59	48.8	36.5	-5.7		-65.5	193	2414	01 54 53
01 59 02	J1143+6633	05 52 39	47.8	36.5	-5.9		-63.4	33	2414	01 59 02
02 00 12	=1140+668	05 54 00	48.0	36.6	-5.8		-63.6	70	2432	01 59 03
02 00 22	J1133	05 54 00	49.0	36.6	-5.7		-65.9	-7	2432	02 00 22
02 03 12	---	05 57 00	49.3	36.8	-5.6		-66.4	163	2475	02 00 23
02 03 22	J1143+6633	05 57 00	48.2	36.8	-5.8		-64.2	-7	2475	02 03 22
02 04 42	=1140+668	05 58 30	48.4	36.9	-5.8		-64.4	73	2496	02 03 23
02 04 52	J1133	05 58 30	49.4	36.9	-5.6		-66.7	-7	2496	02 04 52
02 08 12	---	06 02 01	49.7	37.1	-5.6		-67.3	193	2548	02 04 53
02 09 02	J1143+6633	06 02 41	48.7	37.2	-5.7		-65.2	33	2548	02 09 02
02 10 12	=1140+668	06 04 01	48.9	37.3	-5.7		-65.4	70	2566	02 09 03
02 10 22	J1133	06 04 01	49.9	37.2	-5.5		-67.7	-7	2566	02 10 22
02 13 12	---	06 07 02	50.2	37.4	-5.5		-68.3	163	2609	02 10 23
02 13 22	J1143+6633	06 07 02	49.1	37.4	-5.6		-66.0	-7	2609	02 13 22
02 14 42	=1140+668	06 08 32	49.3	37.5	-5.6		-66.3	73	2630	02 13 23
02 14 52	J1133	06 08 32	50.3	37.5	-5.4		-68.6	-7	2630	02 14 52
02 18 12	---	06 12 03	50.7	37.6	-5.4		-69.2	193	2682	02 14 53

Schedule for TORUN (Code Tr) Page 7

es094

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
02 19 02	J1143+6633	06 12 43	49.7	37.8	-5.5		-67.0	33	2682	02 19 02
02 20 12	=1140+668	06 14 03	49.8	37.9	-5.5		-67.3	70	2700	02 19 03
02 20 22	J1133	06 14 03	50.8	37.8	-5.4		-69.6	-7	2700	02 20 22
02 23 12	---	06 17 03	51.1	37.9	-5.3		-70.2	163	2743	02 20 23
02 23 22	J1143+6633	06 17 03	50.1	38.1	-5.5		-67.8	-7	2743	02 23 22
02 24 42	=1140+668	06 18 34	50.2	38.1	-5.4		-68.1	73	2764	02 23 23
02 24 52	J1133	06 18 34	51.3	38.0	-5.3		-70.4	-7	2764	02 24 52
02 28 12	---	06 22 04	51.6	38.2	-5.2		-71.1	193	2815	02 24 53
02 29 02	J1143+6633	06 22 44	50.6	38.4	-5.4		-68.9	33	2815	02 29 02
02 30 12	=1140+668	06 24 05	50.7	38.5	-5.3		-69.1	70	2834	02 29 03
02 30 22	J1133	06 24 05	51.8	38.3	-5.2		-71.5	-7	2834	02 30 22
02 33 12	---	06 27 05	52.0	38.4	-5.1		-72.1	163	2877	02 30 23
02 33 22	J1143+6633	06 27 05	51.0	38.6	-5.3		-69.7	-7	2877	02 33 22
02 34 42	=1140+668	06 28 35	51.1	38.7	-5.3		-70.0	73	2898	02 33 23
02 34 52	J1133	06 28 35	52.2	38.5	-5.1		-72.4	-7	2898	02 34 52
02 38 12	---	06 32 06	52.5	38.7	-5.0		-73.0	193	2949	02 34 53
02 39 02	J1143+6633	06 32 46	51.5	38.9	-5.2		-70.7	33	2949	02 39 02
02 40 12	=1140+668	06 34 06	51.7	39.0	-5.2		-71.0	70	2967	02 39 03
02 40 22	J1133	06 34 06	52.7	38.8	-5.0		-73.4	-7	2967	02 40 22
02 43 12	---	06 37 07	53.0	38.9	-5.0		-74.0	163	3011	02 40 23
02 43 22	J1143+6633	06 37 07	51.9	39.2	-5.1		-71.6	-7	3011	02 43 22
02 44 42	=1140+668	06 38 37	52.1	39.2	-5.1		-71.8	73	3032	02 43 23
02 47 41	4C39.25	06 41 26	58.3	99.5	-2.8		-49.6	44	3032	02 47 41
02 50 41	---	06 44 37	58.8	100.3	-2.7		-49.4	180	3078	02 47 42
02 53 40	J1143+6633	06 47 26	52.9	39.7	-5.0		-73.5	42	3078	02 53 40
02 55 00	=1140+668	06 48 56	53.1	39.7	-4.9		-73.8	80	3099	02 53 41
02 55 10	J1133	06 48 56	54.1	39.4	-4.8		-76.3	-7	3099	02 55 10
02 58 30	---	06 52 27	54.4	39.5	-4.7		-77.0	193	3150	02 55 11
02 59 15	J1143+6633	06 53 02	53.5	39.9	-4.9		-74.6	28	3150	02 59 15
03 00 25	=1140+668	06 54 22	53.6	40.0	-4.8		-74.9	70	3168	02 59 16

Schedule for TORUN (Code Tr) Page 8

es094

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
03 00 35	J1133	06 54 22	54.6	39.6	-4.7		-77.4	-7	3168	03 00 35
03 03 55	---	06 57 53	55.0	39.7	-4.6		-78.1	193	3220	03 00 36
03 04 05	J1143+6633	06 57 53	53.9	40.1	-4.8		-75.5	-7	3220	03 04 05
03 05 25	=1140+668	06 59 23	54.1	40.2	-4.8		-75.8	73	3241	03 04 06
03 05 35	J1133	06 59 23	55.1	39.8	-4.6		-78.4	-7	3241	03 05 35
03 08 55	---	07 02 54	55.4	39.9	-4.5		-79.1	193	3292	03 05 36
03 09 40	J1143+6633	07 03 29	54.5	40.4	-4.7		-76.6	28	3292	03 09 40
03 10 50	=1140+668	07 04 49	54.6	40.4	-4.7		-76.9	70	3310	03 09 41
03 11 00	J1133	07 04 49	55.6	40.0	-4.5		-79.5	-7	3310	03 11 00
03 14 20	---	07 08 19	56.0	40.1	-4.4		-80.2	193	3362	03 11 01
03 14 30	J1143+6633	07 08 19	54.9	40.5	-4.6		-77.6	-7	3362	03 14 30
03 15 50	=1140+668	07 09 50	55.1	40.6	-4.6		-77.9	73	3382	03 14 31
03 16 00	J1133	07 09 50	56.1	40.1	-4.4		-80.5	-7	3382	03 16 00
03 19 20	---	07 13 20	56.5	40.2	-4.4		-81.3	193	3434	03 16 01
03 20 05	J1143+6633	07 13 55	55.5	40.7	-4.5		-78.7	28	3434	03 20 05
03 21 15	=1140+668	07 15 16	55.6	40.8	-4.5		-79.0	70	3452	03 20 06
03 21 25	J1133	07 15 16	56.6	40.3	-4.3		-81.7	-7	3452	03 21 25
03 24 45	---	07 18 46	57.0	40.4	-4.3		-82.4	193	3503	03 21 26
03 24 55	J1143+6633	07 18 46	56.0	40.9	-4.4		-79.7	-7	3503	03 24 55
03 26 15	=1140+668	07 20 16	56.1	41.0	-4.4		-80.0	73	3524	03 24 56
03 26 25	J1133	07 20 16	57.1	40.4	-4.2		-82.7	-7	3524	03 26 25
03 29 45	---	07 23 47	57.5	40.5	-4.2		-83.4	193	3576	03 26 26
03 30 30	J1143+6633	07 24 22	56.5	41.1	-4.3		-80.8	28	3576	03 30 30
03 31 40	=1140+668	07 25 42	56.6	41.1	-4.3		-81.1	70	3594	03 30 31
03 31 50	J1133	07 25 42	57.7	40.5	-4.2		-83.9	-7	3594	03 31 50
03 35 10	---	07 29 13	58.0	40.6	-4.1		-84.6	193	3645	03 31 51
03 35 20	J1143+6633	07 29 13	57.0	41.2	-4.3		-81.8	-7	3645	03 35 20
03 36 40	=1140+668	07 30 43	57.1	41.3	-4.2		-82.1	73	3666	03 35 21
03 36 50	J1133	07 30 43	58.1	40.6	-4.1		-84.9	-7	3666	03 36 50
03 40 10	---	07 34 14	58.5	40.7	-4.0		-85.7	193	3717	03 36 51

Schedule for TORUN (Code Tr) Page 9

es094

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
03 40 55	J1143+6633	07 34 49	57.5	41.3	-4.2		-83.0	28	3717	03 40 55
03 42 05	=1140+668	07 36 09	57.7	41.4	-4.1		-83.3	70	3735	03 40 56
03 42 15	J1133	07 36 09	58.7	40.7	-4.0		-86.1	-7	3735	03 42 15
03 45 35	---	07 39 40	59.0	40.7	-3.9		-86.9	193	3787	03 42 16
03 45 45	J1143+6633	07 39 40	58.0	41.5	-4.1		-84.0	-7	3787	03 45 45
03 47 05	=1140+668	07 41 10	58.2	41.5	-4.1		-84.3	73	3807	03 45 46
03 47 15	J1133	07 41 10	59.2	40.7	-3.9		-87.2	-7	3807	03 47 15
03 50 35	---	07 44 40	59.5	40.8	-3.8		-88.0	193	3859	03 47 16
03 51 20	J1143+6633	07 45 16	58.6	41.6	-4.0		-85.2	29	3859	03 51 20
03 52 30	=1140+668	07 46 36	58.7	41.6	-4.0		-85.5	70	3877	03 51 21
03 52 40	J1133	07 46 36	59.7	40.8	-3.8		-88.4	-6	3877	03 52 40
03 56 00	---	07 50 06	60.0	40.8	-3.7		-89.2	194	3928	03 52 41
03 56 10	J1143+6633	07 50 06	59.1	41.6	-3.9		-86.3	-6	3928	03 56 10
03 57 30	=1140+668	07 51 37	59.2	41.6	-3.9		-86.6	74	3949	03 56 11
03 57 40	J1133	07 51 37	60.2	40.8	-3.7		-89.6	-6	3949	03 57 40
04 01 00	---	07 55 07	60.5	40.8	-3.7		-90.4	194	4001	03 57 41
04 01 45	J1143+6633	07 55 42	59.6	41.7	-3.8		-87.5	29	4001	04 01 45
04 02 55	=1140+668	07 57 02	59.8	41.7	-3.8		-87.8	70	4019	04 01 46
04 03 05	J1133	07 57 02	60.7	40.8	-3.6		-90.8	-6	4019	04 03 05
04 06 25	---	08 00 33	61.1	40.8	-3.6		-91.6	194	4070	04 03 06
04 06 35	J1143+6633	08 00 33	60.1	41.7	-3.7		-88.6	-6	4070	04 06 35
04 07 55	=1140+668	08 02 03	60.3	41.7	-3.7		-88.9	74	4091	04 06 36
04 08 05	J1133	08 02 03	61.2	40.8	-3.6		-92.0	-6	4091	04 08 05
04 11 25	---	08 05 34	61.6	40.7	-3.5		-92.8	194	4142	04 08 06
04 12 10	J1143+6633	08 06 09	60.7	41.7	-3.6		-89.9	29	4142	04 12 10
04 13 20	=1140+668	08 07 29	60.8	41.7	-3.6		-90.2	70	4160	04 12 11
04 13 30	J1133	08 07 29	61.8	40.7	-3.5		-93.3	-6	4160	04 13 30
04 16 50	---	08 11 00	62.1	40.7	-3.4		-94.1	194	4212	04 13 31
04 17 00	J1143+6633	08 11 00	61.2	41.7	-3.6		-91.0	-6	4212	04 17 00
04 18 20	=1140+668	08 12 30	61.3	41.7	-3.5		-91.3	74	4232	04 17 01

Schedule for TORUN (Code Tr) Page 10

es094

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
04 18 30	J1133	08 12 30	62.2	40.6	-3.4		-94.5	-6	4232	04 18 30
04 21 50	---	08 16 01	62.6	40.6	-3.3		-95.4	194	4284	04 18 31
04 22 35	J1143+6633	08 16 36	61.7	41.7	-3.5		-92.3	29	4284	04 22 35
04 23 45	=1140+668	08 17 56	61.8	41.7	-3.4		-92.6	70	4302	04 22 36
04 23 55	J1133	08 17 56	62.8	40.5	-3.3		-95.8	-6	4302	04 23 55
04 27 15	---	08 21 26	63.1	40.5	-3.2		-96.7	194	4354	04 23 56
04 27 25	J1143+6633	08 21 26	62.2	41.6	-3.4		-93.4	-6	4354	04 27 25
04 28 45	=1140+668	08 22 57	62.3	41.6	-3.4		-93.8	74	4374	04 27 26
04 28 55	J1133	08 22 57	63.3	40.4	-3.2		-97.1	-6	4374	04 28 55
04 32 15	---	08 26 27	63.6	40.3	-3.1		-98.0	194	4426	04 28 56
04 33 00	J1143+6633	08 27 02	62.8	41.5	-3.3		-94.8	29	4426	04 33 00
04 34 10	=1140+668	08 28 23	62.9	41.5	-3.3		-95.1	70	4444	04 33 01
04 34 20	J1133	08 28 23	63.8	40.2	-3.1		-98.5	-6	4444	04 34 20
04 37 40	---	08 31 53	64.1	40.1	-3.1		-99.4	194	4495	04 34 21
04 37 50	J1143+6633	08 31 53	63.2	41.4	-3.2		-96.0	-6	4495	04 37 50
04 39 10	=1140+668	08 33 23	63.4	41.4	-3.2		-96.4	74	4516	04 37 51
04 39 20	J1133	08 33 23	64.3	40.1	-3.0		-99.8	-6	4516	04 39 20
04 42 40	---	08 36 54	64.6	39.9	-3.0		-100.8	194	4567	04 39 21
04 43 25	J1143+6633	08 37 29	63.8	41.3	-3.1		-97.4	29	4567	04 43 25
04 44 35	=1140+668	08 38 49	63.9	41.3	-3.1		-97.8	70	4585	04 43 26
04 44 45	J1133	08 38 49	64.8	39.8	-2.9		-101.3	-6	4585	04 44 45
04 48 05	---	08 42 20	65.1	39.7	-2.9		-102.2	194	4637	04 44 46
04 48 15	J1143+6633	08 42 20	64.3	41.1	-3.0		-98.7	-6	4637	04 48 15
04 49 35	=1140+668	08 43 50	64.4	41.1	-3.0		-99.1	74	4658	04 48 16
04 49 45	J1133	08 43 50	65.3	39.6	-2.9		-102.6	-6	4658	04 49 45
04 53 05	---	08 47 21	65.6	39.4	-2.8		-103.6	194	4709	04 49 46
04 53 50	J1143+6633	08 47 56	64.8	40.9	-2.9		-100.1	29	4709	04 53 50
04 55 00	=1140+668	08 49 16	65.0	40.9	-2.9		-100.5	70	4727	04 53 51
04 55 10	J1133	08 49 16	65.8	39.3	-2.8		-104.2	-6	4727	04 55 10
04 58 30	---	08 52 47	66.1	39.1	-2.7		-105.2	194	4779	04 55 11

```
Schedule for TORUN     (Code Tr )                                Page  11
               es094
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sat  31 Oct 2020   Day 305 ---

04 58 40  J1143+6633   08 52 47  65.3  40.7 -2.9    -101.5    -6     4779   04 58 40
05 00 00  =1140+668    08 54 17  65.4  40.6 -2.8    -101.9    74     4799   04 58 41




SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.C2048

   Setup group:    9         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
            4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
            4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
  BBC fr=    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
             758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
  Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
              32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



 POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* J1133             11 31 03.195344   * 11 33 55.931900     11 35 03.965271       0.00
                    67 17 41.65256    * 67 01 07.04100      66 54 08.87574        0.00

* 4C39.25           09 23 55.319216   * 09 27 03.013937     09 28 19.328354       0.31
  J0927+3902        39 15 23.56644    * 39 02 20.85185      38 56 51.85703        0.16
  0923+392          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0927+39          GSFC 2016a X/S astro solution, 250526 observations.

  1140+668          11 40 55.894858   * 11 43 41.603360     11 44 46.756960       0.47
* J1143+6633        66 50 10.06472    * 66 33 31.22994      66 26 32.05493        0.16
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    156 observations.



EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  J1133               86.7
  4C39.25             86.7
  J1143+6633          85.8
```

```
Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

n20l3tr

Network Monitoring Experiment

PI: *Dhanya Nair*


```
Address:  JIVE
          Oude Hoogeveensedijk 4
          7991PD Dwingeloo
          The Netherlands

Phone:    +31 521 596 508
EMAIL:    nair@jive.eu
Fax:
Phone during observation: +31 521 596 508
```


```
Observing mode:

Schedule for TORUN     (Code Tr )                                    Page   2
               Network Monitoring Experiment
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sat  31 Oct 2020   Day 305 ---

 Next scan frequencies:  1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
                         1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
 Next BBC frequencies:    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
                          625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
 Next scan bandwidths:     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
                           16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00

11 00 00  J1751+0939   14 55 06  33.9 123.9 -3.0     -30.4     0        0   11 00 00
11 04 00  =1749+096    14 59 07  34.4 124.9 -2.9     -30.0   240       31   11 00 01

11 07 00  J1751+0939   15 02 07  34.7 125.7 -2.8     -29.6   173       31   11 07 00
11 17 00  =1749+096    15 12 09  35.9 128.4 -2.7     -28.5   600      108   11 07 01

11 20 00  J1751+0939   15 15 09  36.3 129.2 -2.6     -28.2   173      108   11 20 00
11 32 00  =1749+096    15 27 11  37.7 132.5 -2.4     -26.7   720      201   11 20 01

11 35 00  J1751+0939   15 30 12  38.0 133.3 -2.4     -26.3   173      201   11 35 00
11 47 00  =1749+096    15 42 14  39.3 136.7 -2.2     -24.7   720      294   11 35 01

11 50 00  J1751+0939   15 45 14  39.6 137.6 -2.1     -24.2   173      294   11 50 00
12 02 00  =1749+096    15 57 16  40.7 141.2 -1.9     -22.5   720      386   11 50 01

12 05 00  J1642+3948   16 00 17  74.8 146.6 -0.7     -25.5    39      386   12 05 00
12 17 00  =3C345       16 12 19  75.6 155.0 -0.5     -19.3   720      479   12 05 01

 Next scan frequencies:  1626.49  1626.49  1626.49  1626.49  1690.49  1690.49  1690.49  1690.49
 Next BBC frequencies:    673.51   673.51   673.51   673.51   609.51   609.51   609.51   609.51
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

12 24 00  J1642+3948   16 19 20  76.0 160.3 -0.4     -15.3   411      479   12 24 00
12 32 00  =3C345       16 27 21  76.4 166.6 -0.3     -10.4   480      541   12 24 25

12 35 00  J1642+3948   16 30 21  76.5 169.0 -0.2      -8.6   171      541   12 35 00
12 47 00  =3C345       16 42 23  76.7 179.0 -0.0      -0.8   720      634   12 35 01
```

12 50 00	J1848+3219	16 45 24	59.7	120.7	-2.1	-37.7	48	634	12 50 00
13 02 00	=1846+322	16 57 26	61.2	124.9	-1.9	-35.7	720	727	12 50 01
13 05 00	J1848+3219	17 00 26	61.5	125.9	-1.8	-35.1	173	727	13 05 00
13 17 00	=1846+322	17 12 28	63.0	130.5	-1.6	-32.7	720	819	13 05 01
13 20 00	J1848+3219	17 15 29	63.3	131.7	-1.6	-32.1	173	819	13 20 00
13 32 00	=1846+322	17 27 31	64.6	136.6	-1.4	-29.2	720	912	13 20 01
13 35 00	J1848+3219	17 30 31	64.9	137.9	-1.3	-28.4	173	912	13 35 00
13 47 00	=1846+322	17 42 33	66.0	143.4	-1.1	-25.1	720	1005	13 35 01

```
Schedule for TORUN     (Code Tr )                                Page   3
               Network Monitoring Experiment
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Sat  31 Oct 2020   Day 305 ---

13 50 00  J1848+3219   17 45 34  66.3 144.8 -1.1     -24.2   172     1005   13 50 00
14 00 00  =1846+322    17 55 35  67.1 149.8 -0.9     -20.9   600     1082   13 50 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.L1024

   Setup group:   11         Station: TORUN            Total bit rate:  1024
   Format: VDIF              Bits per sample: 2        Sample rate: 32.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
            2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         L         L         L         L         L         L         L         L
                  L         L         L         L         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         U         U         L         L         U         U         L         L
                  U         U         L         L         U         U         L         L
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   9  Setup file default.  Used with PCAL = off
  LO sum=   1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
            1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
  BBC fr=    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
             625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
  Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
              16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
   Matching frequency sets:   9

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off


======== Setup file: sess320.L1024_32

  Setup group:   31         Station: TORUN            Total bit rate:  1024
  Format: VDIF              Bits per sample: 2        Sample rate: 64.000
  Number of channels:  8    DBE type: DBBC_DDC        Speedup factor:   1.00

  Disk used to record data.
```

```
 1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U         L         L         U         U
 IF SB =         L         L         L         L         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
 BBC SB=         U         U         L         L         U         U         L         L
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1

The following frequency sets based on these setups were used.

 Frequency Set:  29  Setup file default.  Used with PCAL = off
 LO sum=   1626.49  1626.49  1626.49  1626.49  1690.49  1690.49  1690.49  1690.49
 BBC fr=    673.51   673.51   673.51   673.51   609.51   609.51   609.51   609.51
 Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
  Matching frequency sets:  29

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                        Source position (RA/Dec)                        Error
                      (B1950)            (J2000)            (Date)            (mas)

  3C345             16 41 17.606229   * 16 42 58.809967     16 43 38.757499       0.79
* J1642+3948        39 54 10.81492    * 39 48 36.99399      39 46 31.91672        0.59
  1641+399          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J1642+39          GSFC 2016a X/S astro solution,  53724 observations.

  1749+096          17 49 10.387930   * 17 51 32.818574     17 52 30.173780       0.00
* J1751+0939        09 39 42.82586    * 09 39 00.72841      09 38 53.60979        0.00
  J1751+09          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution, 192391 observations.

  1846+322          18 46 29.612030   * 18 48 22.088573     18 49 07.315688       0.00
* J1848+3219        32 15 36.66044    * 32 19 02.60384      32 20 42.21069        0.00
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  38727 observations.
```

EFFECT OF SOLAR CORONA

```
 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  J1642+3948          63.0
  J1751+0939          56.8
  J1848+3219          78.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
```

```
  8.4 GHz          17. deg
 15.0 GHz          12. deg
 22.0 GHz           9. deg
```

em142tr

EM142

PI: *Marcote*


```
Address:  JIVE
          Oude Hoogeveensedijk 4
          Dwingeloo
          Netherlands

Phone:    +31 521 596 508
EMAIL:    marcote@jive.eu
Fax:      +31 521 596 539
Phone during observation: +31 521 596 530
```


```
Observing mode: evn

Schedule for TORUN     (Code Tr )                                    Page   2
               EM142
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sat  31 Oct 2020   Day 305 ---

 ---------- pulsar-check ----------

 Next scan frequencies:  1626.49  1626.49  1626.49  1626.49  1690.49  1690.49  1690.49  1690.49
 Next BBC frequencies:    673.51   673.51   673.51   673.51   609.51   609.51   609.51   609.51
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

15 00 00  B2111+46     18 55 45  67.1  91.8 -2.3     -61.3     0        0   15 00 00
15 04 00  ---          18 59 46  67.7  92.7 -2.2     -61.2   240       31   15 00 01

15 09 00  J2229-0832   19 04 47  14.6 126.9 -3.4     -29.1    86       31   15 09 00
15 10 50  =2227-088    19 06 37  14.8 127.3 -3.4     -28.9   110       45   15 09 01

15 10 50  FRB190608    19 06 37  17.0 130.0 -3.2     -27.6   -22       45   No stop
15 15 20  ---          19 11 08  17.5 131.1 -3.1     -27.2   248       80   15 10 51

15 15 50  J2229-0832   19 11 38  15.4 128.4 -3.3     -28.4     8       80   15 15 50
15 17 20  =2227-088    19 13 08  15.6 128.8 -3.3     -28.3    90       91   15 15 51

15 17 20  FRB190608    19 13 08  17.7 131.5 -3.1     -27.0   -22       91   No stop
15 21 50  ---          19 17 39  18.2 132.6 -3.0     -26.5   248      126   15 17 21

15 21 50  J2229-0832   19 17 39  16.1 129.8 -3.2     -27.8   -22      126   No stop
15 23 50  =2227-088    19 19 39  16.4 130.2 -3.2     -27.6    98      142   15 21 51

15 23 50  FRB190608    19 19 39  18.5 133.1 -3.0     -26.3   -22      142   No stop
15 28 20  ---          19 24 10  19.0 134.1 -2.9     -25.8   248      176   15 23 51

15 28 50  J2229-0832   19 24 40  16.9 131.4 -3.1     -27.1     8      176   15 28 50
15 30 20  =2227-088    19 26 10  17.1 131.7 -3.1     -26.9    90      188   15 28 51

15 30 20  FRB190608    19 26 10  19.2 134.6 -2.8     -25.6   -22      188   No stop
15 34 50  ---          19 30 41  19.7 135.7 -2.8     -25.1   248      223   15 30 21

15 34 50  J2229-0832   19 30 41  17.6 132.8 -3.0     -26.5   -21      223   No stop
```

15 36 50	=2227-088	19 32 41	17.8	133.2	-3.0	-26.2	99	238	15 34 51
15 36 50	J2228-0753	19 32 41	18.5	133.1	-3.0	-26.3	-15	238	No stop
15 41 20	=2226-081	19 37 12	19.0	134.2	-2.9	-25.8	255	273	15 36 51
15 41 50	J2229-0832	19 37 42	18.4	134.4	-2.9	-25.7	16	273	15 41 50
15 43 20	=2227-088	19 39 12	18.5	134.8	-2.9	-25.5	90	285	15 41 51
15 43 20	FRB190608	19 39 12	20.5	137.7	-2.6	-24.1	-21	285	No stop
15 47 50	---	19 43 43	21.0	138.8	-2.6	-23.5	249	319	15 43 21

Schedule for TORUN (Code Tr) Page 3
EM142

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
15 48 20	J2229-0832	19 44 13	19.1	136.0	-2.8		-25.0	9	319	15 48 20
15 49 50	=2227-088	19 45 43	19.2	136.3	-2.8		-24.8	90	331	15 48 21
15 49 50	FRB190608	19 45 43	21.2	139.3	-2.5		-23.3	-21	331	No stop
15 54 20	---	19 50 14	21.6	140.4	-2.4		-22.7	249	366	15 49 51
15 54 20	J2229-0832	19 50 14	19.7	137.4	-2.7		-24.3	-21	366	No stop
15 56 20	=2227-088	19 52 15	19.9	137.9	-2.6		-24.0	99	381	15 54 21
15 56 20	FRB190608	19 52 15	21.8	140.9	-2.4		-22.5	-21	381	No stop
16 00 50	---	19 56 45	22.2	142.0	-2.3		-21.9	249	416	15 56 21
16 01 20	J2229-0832	19 57 15	20.4	139.1	-2.6		-23.4	9	416	16 01 20
16 02 50	=2227-088	19 58 46	20.5	139.4	-2.5		-23.3	90	428	16 01 21
16 02 50	FRB190608	19 58 46	22.4	142.5	-2.3		-21.6	-21	428	No stop
16 07 20	---	20 03 16	22.8	143.6	-2.2		-21.1	249	462	16 02 51
16 07 20	J2229-0832	20 03 16	21.0	140.5	-2.5		-22.7	-21	462	No stop
16 09 20	=2227-088	20 05 17	21.2	141.0	-2.4		-22.4	99	478	16 07 21
16 09 20	J2228-0753	20 05 17	21.8	141.0	-2.4		-22.4	-15	478	No stop
16 13 50	=2226-081	20 09 47	22.3	142.1	-2.3		-21.9	255	513	16 09 21
16 14 20	J2229-0832	20 10 18	21.6	142.3	-2.3		-21.8	16	513	16 14 20
16 15 50	=2227-088	20 11 48	21.8	142.6	-2.3		-21.6	90	524	16 14 21
---------- fringe-finder ----------										
16 16 30	J2225-0457	20 12 28	25.5	142.3	-2.2		-21.6	12	524	16 16 30
16 19 30	=3C446	20 15 28	25.8	143.1	-2.2		-21.2	180	547	16 16 31
16 20 20	J2229-0832	20 16 18	22.2	143.8	-2.2		-21.0	22	547	16 20 20
16 21 50	=2227-088	20 17 49	22.3	144.1	-2.2		-20.8	90	559	16 20 21
16 21 50	FRB190608	20 17 49	24.1	147.3	-2.0		-19.1	-21	559	No stop
16 26 20	---	20 22 19	24.4	148.5	-1.9		-18.5	249	594	16 21 51
16 26 50	J2229-0832	20 22 50	22.7	145.4	-2.1		-20.2	9	594	16 26 50
16 28 20	=2227-088	20 24 20	22.9	145.8	-2.1		-20.0	90	605	16 26 51
16 28 20	FRB190608	20 24 20	24.6	149.0	-1.9		-18.2	-21	605	No stop
16 32 50	---	20 28 51	24.9	150.2	-1.8		-17.5	249	640	16 28 21

Schedule for TORUN (Code Tr) Page 4
EM142

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
16 32 50	J2229-0832	20 28 51	23.2	146.9	-2.0		-19.4	-21	640	No stop
16 34 50	=2227-088	20 30 51	23.4	147.4	-2.0		-19.1	99	656	16 32 51
16 34 50	FRB190608	20 30 51	25.1	150.7	-1.8		-17.3	-21	656	No stop
16 39 20	---	20 35 22	25.4	151.9	-1.7		-16.6	249	690	16 34 51
16 39 50	J2229-0832	20 35 52	23.8	148.7	-1.9		-18.4	9	690	16 39 50
16 41 20	=2227-088	20 37 22	23.9	149.1	-1.9		-18.2	90	702	16 39 51
16 41 20	FRB190608	20 37 22	25.5	152.4	-1.7		-16.3	-21	702	No stop
16 45 50	---	20 41 53	25.8	153.6	-1.6		-15.6	249	737	16 41 21
16 45 50	J2229-0832	20 41 53	24.3	150.2	-1.8		-17.5	-21	737	No stop
16 47 50	=2227-088	20 43 53	24.4	150.8	-1.8		-17.2	99	752	16 45 51
16 47 50	J2228-0753	20 43 53	25.1	150.8	-1.8		-17.2	-15	752	No stop
16 52 20	=2226-081	20 48 24	25.4	151.9	-1.7		-16.6	255	787	16 47 51
16 52 50	J2229-0832	20 48 54	24.8	152.1	-1.7		-16.5	16	787	16 52 50
16 54 20	=2227-088	20 50 24	24.9	152.5	-1.7		-16.3	90	799	16 52 51
16 54 20	FRB190608	20 50 24	26.4	155.9	-1.4		-14.3	-22	799	No stop
16 58 50	---	20 54 55	26.7	157.1	-1.4		-13.6	248	833	16 54 21
16 59 20	J2229-0832	20 55 25	25.2	153.8	-1.6		-15.6	9	833	16 59 20
17 00 50	=2227-088	20 56 55	25.3	154.2	-1.6		-15.3	90	845	16 59 21
17 00 50	FRB190608	20 56 55	26.8	157.6	-1.3		-13.3	-22	845	No stop
17 05 20	---	21 01 26	27.0	158.8	-1.3		-12.6	248	880	17 00 51
17 05 20	J2229-0832	21 01 26	25.6	155.4	-1.5		-14.7	-21	880	No stop
17 07 20	=2227-088	21 03 26	25.7	155.9	-1.5		-14.3	99	895	17 05 21
17 07 20	FRB190608	21 03 26	27.1	159.4	-1.2		-12.3	-22	895	No stop
17 11 50	---	21 07 57	27.4	160.6	-1.2		-11.6	248	930	17 07 21
17 12 20	J2229-0832	21 08 27	26.0	157.2	-1.4		-13.6	8	930	17 12 20
17 13 50	=2227-088	21 09 57	26.1	157.6	-1.3		-13.3	90	942	17 12 21
17 13 50	FRB190608	21 09 57	27.5	161.2	-1.1		-11.3	-22	942	No stop
17 18 20	---	21 14 28	27.7	162.4	-1.0		-10.6	248	976	17 13 51
17 18 20	J2229-0832	21 14 28	26.4	158.9	-1.3		-12.6	-22	976	No stop
17 20 20	=2227-088	21 16 28	26.5	159.4	-1.2		-12.3	98	992	17 18 21

Schedule for TORUN (Code Tr) Page 5
EM142

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
17 20 20	J2228-0753	21 16 28	27.1	159.5	-1.2		-12.3	-15	992	No stop
17 24 50	=2226-081	21 20 59	27.4	160.7	-1.1		-11.6	255	1027	17 20 21
17 25 20	J2229-0832	21 21 29	26.7	160.8	-1.2		-11.5	16	1027	17 25 20
17 26 50	=2227-088	21 22 59	26.8	161.2	-1.1		-11.3	90	1038	17 25 21
17 26 50	FRB190608	21 22 59	28.0	164.8	-0.9		-9.2	-22	1038	No stop
17 31 20	---	21 27 30	28.2	166.0	-0.8		-8.4	248	1073	17 26 51
17 31 50	J2229-0832	21 28 00	27.0	162.5	-1.0		-10.5	8	1073	17 31 50
17 33 20	=2227-088	21 29 30	27.1	162.9	-1.0		-10.3	90	1085	17 31 51
17 33 20	FRB190608	21 29 30	28.3	166.6	-0.8		-8.1	-22	1085	No stop
17 37 50	---	21 34 01	28.4	167.8	-0.7		-7.3	248	1119	17 33 21
17 37 50	J2229-0832	21 34 01	27.3	164.2	-0.9		-9.5	-22	1119	No stop
17 39 50	=2227-088	21 36 02	27.4	164.7	-0.9		-9.2	98	1135	17 37 51
17 39 50	FRB190608	21 36 02	28.5	168.4	-0.7		-7.0	-22	1135	No stop
17 44 20	---	21 40 32	28.6	169.7	-0.6		-6.2	248	1170	17 39 51
17 44 50	J2229-0832	21 41 02	27.6	166.1	-0.8		-8.4	8	1170	17 44 50
17 46 20	=2227-088	21 42 33	27.6	166.5	-0.8		-8.1	90	1181	17 44 51
17 46 20	FRB190608	21 42 33	28.7	170.2	-0.6		-5.9	-22	1181	No stop
17 50 50	---	21 47 03	28.8	171.5	-0.5		-5.1	248	1216	17 46 21
17 50 50	J2229-0832	21 47 03	27.8	167.8	-0.7		-7.4	-22	1216	No stop
17 52 50	=2227-088	21 49 04	27.8	168.3	-0.7		-7.1	98	1232	17 50 51
17 52 50	J2228-0753	21 49 04	28.5	168.5	-0.7		-7.0	-14	1232	No stop
17 57 20	=2226-081	21 53 34	28.6	169.7	-0.6		-6.2	256	1266	17 52 51
17 57 50	J2229-0832	21 54 05	28.0	169.7	-0.6		-6.2	16	1266	17 57 50
17 59 20	=2227-088	21 55 35	28.0	170.1	-0.6		-6.0	90	1278	17 57 51
---------- fringe-finder ----------										
18 01 10	J0006-0623	21 57 25	24.6	144.1	-2.2		-20.8	42	1278	18 01 10
18 04 10	=0003-066	22 00 26	24.9	144.8	-2.1		-20.4	180	1301	18 01 11
18 06 10	J2229-0832	22 02 26	28.2	172.1	-0.5		-4.8	51	1301	18 06 10
18 07 40	=2227-088	22 03 56	28.2	172.5	-0.4		-4.6	90	1313	18 06 11

Schedule for TORUN (Code Tr) Page 6
EM142

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	 EL	 AZ	 HA	 UP	 ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
18 07 40	FRB190608	22 03 56	29.0	176.3	-0.2		-2.3	-23	1313	No stop
18 12 10	---	22 08 27	29.1	177.5	-0.1		-1.5	247	1347	18 07 41
18 12 40	J2229-0832	22 08 57	28.3	173.9	-0.4		-3.7	8	1347	18 12 40
18 14 10	=2227-088	22 10 27	28.3	174.3	-0.3		-3.5	90	1359	18 12 41
18 14 10	FRB190608	22 10 27	29.1	178.1	-0.1		-1.2	-23	1359	No stop
18 18 40	---	22 14 58	29.1	179.4	-0.0		-0.4	247	1394	18 14 11
18 18 40	J2229-0832	22 14 58	28.4	175.6	-0.3		-2.7	-22	1394	No stop
18 20 40	=2227-088	22 16 58	28.4	176.1	-0.2		-2.4	98	1409	18 18 41
18 20 40	FRB190608	22 16 58	29.1	179.9	-0.0		-0.0	-23	1409	No stop
18 25 10	---	22 21 29	29.1	181.2	0.1		0.7	247	1444	18 20 41
18 25 40	J2229-0832	22 21 59	28.4	177.5	-0.1		-1.5	8	1444	18 25 40
18 27 10	=2227-088	22 23 29	28.4	178.0	-0.1		-1.2	90	1456	18 25 41
18 27 10	FRB190608	22 23 29	29.1	181.8	0.1		1.1	-23	1456	No stop
18 31 40	---	22 28 00	29.1	183.1	0.2		1.9	247	1490	18 27 11
18 31 40	J2229-0832	22 28 00	28.5	179.2	-0.0		-0.5	-22	1490	No stop
18 33 40	=2227-088	22 30 00	28.5	179.8	-0.0		-0.1	98	1506	18 31 41
18 33 40	J2228-0753	22 30 00	29.1	180.0	0.0		0.0	-14	1506	No stop
18 38 10	=2226-081	22 34 31	29.1	181.3	0.1		0.8	256	1541	18 33 41
18 38 40	J2229-0832	22 35 01	28.5	181.2	0.1		0.7	16	1541	18 38 40
18 40 10	=2227-088	22 36 31	28.4	181.6	0.1		1.0	90	1552	18 38 41
18 40 10	FRB190608	22 36 31	29.0	185.5	0.3		3.3	-23	1552	No stop
18 44 40	---	22 41 02	28.9	186.8	0.4		4.1	247	1587	18 40 11
18 45 10	J2229-0832	22 41 32	28.4	183.0	0.2		1.8	8	1587	18 45 10
18 46 40	=2227-088	22 43 03	28.4	183.5	0.2		2.1	90	1599	18 45 11
18 46 40	FRB190608	22 43 03	28.9	187.3	0.4		4.4	-23	1599	No stop
18 51 10	---	22 47 33	28.8	188.6	0.5		5.2	247	1633	18 46 41
18 51 10	J2229-0832	22 47 33	28.4	184.7	0.3		2.9	-22	1633	No stop
18 53 10	=2227-088	22 49 34	28.3	185.3	0.3		3.2	98	1649	18 51 11
18 53 10	FRB190608	22 49 34	28.7	189.2	0.5		5.5	-23	1649	No stop
18 57 40	---	22 54 04	28.6	190.4	0.6		6.3	247	1684	18 53 11

Schedule for TORUN (Code Tr) Page 7
EM142

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
18 58 10	J2229-0832	22 54 34	28.3	186.7	0.4		4.1	8	1684	18 58 10
18 59 40	=2227-088	22 56 05	28.2	187.1	0.4		4.3	90	1695	18 58 11
18 59 40	FRB190608	22 56 05	28.6	191.0	0.6		6.6	-23	1695	No stop
19 04 10	---	23 00 35	28.4	192.2	0.7		7.4	247	1730	18 59 41
19 04 10	J2229-0832	23 00 35	28.1	188.4	0.5		5.1	-22	1730	No stop
19 06 10	=2227-088	23 02 36	28.1	188.9	0.5		5.4	98	1745	19 04 11
19 06 10	J2228-0753	23 02 36	28.7	189.2	0.5		5.6	-14	1745	No stop
19 10 40	=2226-081	23 07 06	28.6	190.5	0.6		6.3	256	1780	19 06 11
19 11 10	J2229-0832	23 07 37	28.0	190.3	0.6		6.2	16	1780	19 11 10
19 12 40	=2227-088	23 09 07	27.9	190.7	0.6		6.5	90	1792	19 11 11
19 12 40	FRB190608	23 09 07	28.1	194.6	0.9		8.8	-23	1792	No stop
19 17 10	---	23 13 38	27.9	195.9	0.9		9.5	247	1827	19 12 41
19 17 40	J2229-0832	23 14 08	27.8	192.1	0.7		7.3	8	1827	19 17 40
19 19 10	=2227-088	23 15 38	27.7	192.6	0.7		7.6	90	1838	19 17 41
19 19 10	FRB190608	23 15 38	27.9	196.4	1.0		9.9	-23	1838	No stop
19 23 40	---	23 20 09	27.7	197.7	1.0		10.6	247	1873	19 19 11
19 23 40	J2229-0832	23 20 09	27.6	193.8	0.8		8.3	-22	1873	No stop
19 25 40	=2227-088	23 22 09	27.5	194.4	0.9		8.7	98	1888	19 23 41
19 25 40	FRB190608	23 22 09	27.6	198.2	1.1		10.9	-23	1888	No stop
19 30 10	---	23 26 40	27.3	199.5	1.2		11.6	247	1923	19 25 41
19 30 40	J2229-0832	23 27 10	27.3	195.7	0.9		9.5	8	1923	19 30 40
19 32 10	=2227-088	23 28 40	27.2	196.2	1.0		9.7	90	1935	19 30 41
19 32 10	FRB190608	23 28 40	27.2	200.0	1.2		12.0	-23	1935	No stop
19 36 40	---	23 33 11	27.0	201.2	1.3		12.7	247	1970	19 32 11
19 36 40	J2229-0832	23 33 11	27.0	197.4	1.0		10.5	-22	1970	No stop
19 38 40	=2227-088	23 35 11	27.0	197.9	1.1		10.8	98	1985	19 36 41
19 38 40	J2228-0753	23 35 11	27.6	198.3	1.1		11.0	-14	1985	No stop
19 43 10	=2226-081	23 39 42	27.3	199.5	1.2		11.7	256	2020	19 38 41
19 43 40	J2229-0832	23 40 12	26.7	199.3	1.2		11.6	16	2020	19 43 40
19 45 10	=2227-088	23 41 42	26.6	199.7	1.2		11.8	90	2031	19 43 41

Schedule for TORUN (Code Tr) Page 8
EM142

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	 EL	 AZ	 HA	 UP	 ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
19 45 10	FRB190608	23 41 42	26.5	203.5	1.4		14.0	-23	2031	No stop
19 49 40	---	23 46 13	26.2	204.7	1.5		14.7	247	2066	19 45 11
19 50 10	J2229-0832	23 46 43	26.4	201.1	1.3		12.6	8	2066	19 50 10
19 51 40	=2227-088	23 48 13	26.3	201.5	1.3		12.8	90	2078	19 50 11
19 51 40	FRB190608	23 48 13	26.1	205.3	1.5		15.0	-23	2078	No stop
19 56 10	---	23 52 44	25.8	206.5	1.6		15.7	247	2113	19 51 41
19 56 10	J2229-0832	23 52 44	26.0	202.7	1.4		13.5	-22	2113	No stop
19 58 10	=2227-088	23 54 44	25.9	203.2	1.4		13.8	98	2128	19 56 11
19 58 10	FRB190608	23 54 44	25.7	207.0	1.6		16.0	-23	2128	No stop
20 02 40	---	23 59 15	25.4	208.2	1.7		16.6	247	2163	19 58 11
20 03 10	J2229-0832	23 59 45	25.6	204.5	1.5		14.6	8	2163	20 03 10
20 04 40	=2227-088	00 01 15	25.5	204.9	1.5		14.8	90	2174	20 03 11
20 04 40	FRB190608	00 01 15	25.2	208.7	1.7		16.9	-23	2174	No stop
20 09 10	---	00 05 46	24.9	209.9	1.8		17.6	247	2209	20 04 41
20 09 10	J2229-0832	00 05 46	25.2	206.1	1.6		15.5	-22	2209	No stop
20 11 10	=2227-088	00 07 46	25.1	206.7	1.6		15.8	98	2225	20 09 11
20 11 10	J2228-0753	00 07 46	25.7	207.1	1.6		16.0	-14	2225	No stop
20 15 40	=2226-081	00 12 17	25.4	208.3	1.7		16.7	256	2259	20 11 11
20 16 10	J2229-0832	00 12 47	24.8	208.0	1.7		16.5	16	2259	20 16 10
20 17 40	=2227-088	00 14 17	24.6	208.4	1.7		16.8	90	2271	20 16 11
20 17 40	FRB190608	00 14 17	24.2	212.1	2.0		18.8	-22	2271	No stop
20 22 10	---	00 18 48	23.9	213.3	2.0		19.4	248	2306	20 17 41
20 22 40	J2229-0832	00 19 18	24.3	209.7	1.8		17.5	8	2306	20 22 40
20 24 10	=2227-088	00 20 49	24.2	210.1	1.8		17.7	90	2317	20 22 41
20 24 10	FRB190608	00 20 49	23.7	213.8	2.1		19.7	-22	2317	No stop
20 28 40	---	00 25 19	23.3	214.9	2.1		20.3	248	2352	20 24 11
20 28 40	J2229-0832	00 25 19	23.8	211.2	1.9		18.3	-22	2352	No stop
20 30 40	=2227-088	00 27 20	23.7	211.7	1.9		18.6	98	2368	20 28 41
20 30 40	FRB190608	00 27 20	23.1	215.4	2.2		20.6	-22	2368	No stop
20 35 10	---	00 31 50	22.7	216.6	2.2		21.2	248	2402	20 30 41

Schedule for TORUN (Code Tr) Page 9
EM142

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 31 Oct 2020 Day 305 ---										
20 35 40	J2229-0832	00 32 20	23.3	213.0	2.0		19.3	8	2402	20 35 40
20 37 10	=2227-088	00 33 51	23.1	213.4	2.1		19.5	90	2414	20 35 41
20 37 10	FRB190608	00 33 51	22.6	217.1	2.3		21.4	-22	2414	No stop
20 41 40	---	00 38 21	22.2	218.2	2.4		22.0	248	2449	20 37 11
20 41 40	J2229-0832	00 38 21	22.8	214.5	2.1		20.1	-22	2449	No stop
20 43 40	=2227-088	00 40 22	22.6	215.0	2.2		20.4	98	2464	20 41 41
20 43 40	J2228-0753	00 40 22	23.1	215.5	2.2		20.6	-13	2464	No stop
20 48 10	=2226-081	00 44 52	22.7	216.6	2.2		21.2	257	2499	20 43 41
20 48 40	J2229-0832	00 45 23	22.1	216.3	2.2		21.1	16	2499	20 48 40
20 50 10	=2227-088	00 46 53	22.0	216.7	2.3		21.3	90	2511	20 48 41
20 50 10	FRB190608	00 46 53	21.3	220.3	2.5		23.1	-22	2511	No stop
20 54 40	---	00 51 24	20.9	221.4	2.6		23.6	248	2545	20 50 11
20 55 10	J2229-0832	00 51 54	21.6	217.9	2.4		21.9	8	2545	20 55 10
20 56 40	=2227-088	00 53 24	21.4	218.3	2.4		22.1	90	2557	20 55 11
20 56 40	FRB190608	00 53 24	20.7	221.9	2.6		23.9	-22	2557	No stop
21 01 10	---	00 57 55	20.2	223.0	2.7		24.4	248	2592	20 56 41
21 01 10	J2229-0832	00 57 55	21.0	219.4	2.5		22.7	-22	2592	No stop
21 03 10	=2227-088	00 59 55	20.8	219.9	2.5		22.9	98	2607	21 01 11
21 03 10	FRB190608	00 59 55	20.0	223.4	2.7		24.6	-22	2607	No stop
21 07 40	---	01 04 26	19.6	224.5	2.8		25.1	248	2642	21 03 11
21 08 10	J2229-0832	01 04 56	20.3	221.1	2.6		23.5	8	2642	21 08 10
21 09 40	=2227-088	01 06 26	20.2	221.5	2.6		23.7	90	2654	21 08 11
21 09 40	FRB190608	01 06 26	19.4	225.0	2.8		25.4	-22	2654	No stop
21 14 10	---	01 10 57	18.9	226.1	2.9		25.9	248	2688	21 09 41
21 14 10	J2229-0832	01 10 57	19.7	222.5	2.7		24.2	-22	2688	No stop
21 16 10	=2227-088	01 12 57	19.5	223.0	2.7		24.5	98	2704	21 14 11
21 16 10	J2228-0753	01 12 57	20.0	223.5	2.7		24.7	-13	2704	No stop
21 20 40	=2226-081	01 17 28	19.5	224.6	2.8		25.2	257	2739	21 16 11
21 21 10	J2229-0832	01 17 58	19.0	224.2	2.8		25.0	17	2739	21 21 10
21 22 40	=2227-088	01 19 28	18.8	224.6	2.8		25.2	90	2750	21 21 11

```
Schedule for TORUN     (Code Tr )                                Page  10
               EM142
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sat  31 Oct 2020   Day 305 ---

21 22 40  FRB190608    01 19 28  17.9 228.1  3.0      26.8   -22     2750   No stop
21 27 10  ---          01 23 59  17.4 229.1  3.1      27.3   248     2785   21 22 41

21 27 40  J2229-0832   01 24 29  18.3 225.7  2.9      25.8     9     2785   21 27 40
21 29 10  =2227-088    01 25 59  18.1 226.1  2.9      25.9    90     2797   21 27 41

21 29 10  FRB190608    01 25 59  17.2 229.6  3.1      27.5   -22     2797   No stop
21 33 40  ---          01 30 30  16.7 230.6  3.2      27.9   248     2831   21 29 11

21 33 40  J2229-0832   01 30 30  17.6 227.2  3.0      26.4   -21     2831   No stop
21 35 40  =2227-088    01 32 30  17.4 227.6  3.0      26.6    99     2847   21 33 41

21 35 40  FRB190608    01 32 30  16.4 231.0  3.3      28.1   -22     2847   No stop
21 40 10  ---          01 37 01  15.9 232.1  3.3      28.6   248     2882   21 35 41

21 40 40  J2229-0832   01 37 31  16.9 228.8  3.1      27.2     9     2882   21 40 40
21 42 10  =2227-088    01 39 01  16.7 229.1  3.1      27.3    90     2893   21 40 41

21 42 10  FRB190608    01 39 01  15.7 232.5  3.4      28.8   -22     2893   No stop
21 46 40  ---          01 43 32  15.1 233.5  3.4      29.2   248     2928   21 42 11

21 46 40  J2229-0832   01 43 32  16.2 230.2  3.2      27.8   -21     2928   No stop
21 48 40  =2227-088    01 45 32  15.9 230.6  3.2      28.0    99     2944   21 46 41

21 48 40  J2228-0753   01 45 32  16.4 231.1  3.3      28.1   -13     2944   No stop
21 53 10  =2226-081    01 50 03  15.9 232.1  3.3      28.6   257     2978   21 48 41

21 53 40  J2229-0832   01 50 33  15.4 231.7  3.3      28.5    17     2978   21 53 40
21 55 10  =2227-088    01 52 03  15.2 232.1  3.4      28.6    90     2990   21 53 41

 ---------- fringe-finder ----------

21 57 00  J0006-0623   01 53 54  26.5 209.9  1.8      17.5    50     2990   21 57 00
22 00 00  =0003-066    01 56 54  26.3 210.7  1.8      17.9   180     3013   21 57 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.L1024

   Setup group:   11         Station: TORUN            Total bit rate:  1024
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels:  8    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U         L         L         U         U
  IF SB =         L         L         L         L         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
  BBC SB=         U         U         L         L         U         U         L         L
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   8  Setup file default.  Used with PCAL = off
  LO sum=   1626.49  1626.49  1626.49  1626.49  1690.49  1690.49  1690.49  1690.49
  BBC fr=    673.51   673.51   673.51   673.51   609.51   609.51   609.51   609.51
  Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
   Matching frequency sets:   8

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8
   barrel=roll_off



 POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                          Source position (RA/Dec)                        Error
                       (B1950)             (J2000)             (Date)             (mas)

* FRB190608          22 13 26.786954   * 22 16 04.740000     22 17 09.813638       0.00
                    -08 08 51.99134    *-07 53 53.60000     -07 47 41.38498        0.00

* B2111+46           21 11 37.743598   * 21 13 24.328000     21 14 08.086062       0.00
                     46 31 42.70664    * 46 44 08.82000      46 49 33.24646        0.00

  0003-066           00 03 40.288767   * 00 06 13.892888     00 07 17.738225       0.00
* J0006-0623        -06 40 17.29995    *-06 23 35.33538     -06 16 40.48296        0.01
  J0006-06           /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                     GSFC 2016a X/S astro solution,  38365 observations.

  3C446              22 23 11.077766   * 22 25 47.259293     22 26 51.665176       0.00
* J2225-0457        -05 12 17.79945    *-04 57 01.39081     -04 50 40.88898        0.00
  2223-052           /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J2225-04           GSFC 2016a X/S astro solution,  72049 observations.

  2226-081           22 26 15.132738   * 22 28 52.607584     22 29 57.556568       0.10
* J2228-0753        -08 09 08.43156    *-07 53 46.64255     -07 47 24.88833        0.22
                     /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                     GSFC 2016a X/S astro solution,     74 observations.

  2227-088           22 27 02.336858   * 22 29 40.084336     22 30 45.148703       0.00
* J2229-0832        -08 48 17.57641    *-08 32 54.43559     -08 26 32.33863        0.01
  J2229-08           /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                     GSFC 2016a X/S astro solution,  27284 observations.



EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
    Source         Sun distance (deg)
```

```
 FRB190608          114.5
 B2111+46           108.7
 J0006-0623         139.9
 J2225-0457         117.8
 J2228-0753         117.5
 J2229-0832         117.4

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

ey035btr

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

PI: *Jun Yang*


```
Address:  Onsala Space Observatory
          SE-439 92 Onsala
          Sweden


Phone:    +46 31 7725531
EMAIL:    jun.yang@chalmers.se
Fax:      +46 31 7725590
Phone during observation: +46 31 7725531
```


```
Observing mode: 1024-16-2

Schedule for TORUN     (Code Tr )                                    Page   2
               Imaging the pc-scale jet in RGG 9 at 1.6 GHz
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sat  31 Oct 2020   Day 305 ---

 Next scan frequencies:  1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
                         1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
 Next BBC frequencies:    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
                          625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
 Next scan bandwidths:     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
                           16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00

23 30 00  DA193        03 27 09  61.4 102.4 -2.5     -49.8     0        0   23 30 00
23 32 00  ---          03 29 09  61.7 103.0 -2.5     -49.6   120       15   23 30 01

23 32 00  DA193        03 29 09  61.7 103.0 -2.5     -49.6    -5       15   No stop
23 34 00  ---          03 31 10  62.0 103.5 -2.4     -49.5   115       31   23 32 01

23 36 00  J0854+5757   03 33 10  46.8  50.0 -5.4     -59.9    -2       31   23 36 00
23 40 00  =0850+581    03 37 11  47.2  50.4 -5.3     -60.5   238       62   23 36 01

23 40 40  J0854+5757   03 37 51  47.3  50.5 -5.3     -60.6    34       62   23 40 40
23 41 50  =0850+581    03 39 01  47.4  50.6 -5.3     -60.7    70       71   23 40 41

23 42 10  RGG9         03 39 21  45.2  51.7 -5.5     -57.6    -2       71   23 42 10
23 45 10  ---          03 42 22  45.6  52.0 -5.4     -58.0   178       94   23 42 11

23 45 30  J0854+5757   03 42 42  47.9  50.9 -5.2     -61.2    -2       94   23 45 30
23 46 50  =0850+581    03 44 02  48.0  51.0 -5.2     -61.4    78      104   23 45 31

23 47 10  RGG9         03 44 22  45.8  52.2 -5.4     -58.2    -2      104   23 47 10
23 50 00  ---          03 47 12  46.1  52.5 -5.3     -58.6   168      126   23 47 11

23 50 40  J0854+5757   03 47 52  48.5  51.4 -5.1     -62.0    18      126   23 50 40
23 51 50  =0850+581    03 49 03  48.6  51.5 -5.1     -62.1    70      135   23 50 41

23 52 10  RGG9         03 49 23  46.4  52.7 -5.3     -58.9    -2      135   23 52 10
23 55 10  ---          03 52 23  46.8  53.0 -5.3     -59.3   178      158   23 52 11
```

```
23 55 30  J0854+5757   03 52 43  49.0  51.9 -5.1     -62.7    -2      158   23 55 30
23 56 50  =0850+581    03 54 03  49.2  52.0 -5.0     -62.8    78      169   23 55 31

23 57 10  RGG9         03 54 24  47.0  53.2 -5.2     -59.6    -2      169   23 57 10
23 59 59  ---          03 57 14  47.3  53.5 -5.2     -59.9   167      191   23 57 11

 --- Sun   1 Nov 2020   Day 306 ---

00 00 40  J0854+5757   03 57 54  49.6  52.3 -5.0     -63.4    18      191   00 00 40
00 01 50  =0850+581    03 59 04  49.8  52.5 -5.0     -63.5    70      200   00 00 41
```

Schedule for TORUN (Code Tr) Page 3

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
00 02 10	RGG9	03 59 24	47.6	53.8	-5.1		-60.2	-2	200	00 02 10
00 05 10	---	04 02 25	48.0	54.1	-5.1		-60.6	178	223	00 02 11
00 05 30	J0854+5757	04 02 45	50.2	52.8	-4.9		-64.1	-2	223	00 05 30
00 06 50	=0850+581	04 04 05	50.4	52.9	-4.9		-64.3	78	233	00 05 31
00 07 10	RGG9	04 04 25	48.2	54.3	-5.1		-60.9	-2	233	00 07 10
00 10 00	---	04 07 16	48.6	54.6	-5.0		-61.3	168	255	00 07 11
00 10 40	J0854+5757	04 07 56	50.8	53.3	-4.8		-64.8	18	255	00 10 40
00 11 50	=0850+581	04 09 06	51.0	53.4	-4.8		-65.0	70	264	00 10 41
00 12 10	RGG9	04 09 26	48.8	54.8	-5.0		-61.5	-2	264	00 12 10
00 15 10	---	04 12 26	49.2	55.1	-4.9		-61.9	178	287	00 12 11
00 15 30	J0854+5757	04 12 47	51.4	53.7	-4.7		-65.5	-2	287	00 15 30
00 16 50	=0850+581	04 14 07	51.6	53.8	-4.7		-65.7	78	298	00 15 31
00 17 10	RGG9	04 14 27	49.4	55.3	-4.9		-62.2	-2	298	00 17 10
00 20 00	---	04 17 17	49.8	55.6	-4.8		-62.6	168	319	00 17 11
00 20 40	J0854+5757	04 17 57	52.1	54.1	-4.6		-66.2	18	319	00 20 40
00 21 50	=0850+581	04 19 08	52.2	54.2	-4.6		-66.4	70	328	00 20 41
00 22 10	RGG9	04 19 28	50.1	55.8	-4.8		-62.9	-2	328	00 22 10
00 25 10	---	04 22 28	50.4	56.1	-4.8		-63.3	178	352	00 22 11
00 25 30	J0854+5757	04 22 48	52.6	54.6	-4.6		-66.9	-2	352	00 25 30
00 26 50	=0850+581	04 24 08	52.8	54.7	-4.5		-67.1	78	362	00 25 31
00 27 10	RGG9	04 24 28	50.7	56.3	-4.7		-63.5	-2	362	00 27 10
00 30 00	---	04 27 19	51.0	56.6	-4.7		-63.9	168	384	00 27 11
00 30 40	J0854+5757	04 27 59	53.3	55.0	-4.5		-67.7	18	384	00 30 40
00 31 50	=0850+581	04 29 09	53.4	55.1	-4.5		-67.8	70	393	00 30 41
00 32 10	RGG9	04 29 29	51.3	56.8	-4.6		-64.2	-2	393	00 32 10
00 35 10	---	04 32 30	51.7	57.1	-4.6		-64.6	178	416	00 32 11
00 35 30	J0854+5757	04 32 50	53.9	55.4	-4.4		-68.4	-2	416	00 35 30
00 36 50	=0850+581	04 34 10	54.0	55.5	-4.4		-68.6	78	426	00 35 31
00 37 10	RGG9	04 34 30	51.9	57.3	-4.6		-64.8	-2	426	00 37 10
00 40 00	---	04 37 21	52.3	57.5	-4.5		-65.2	168	448	00 37 11

Schedule for TORUN (Code Tr) Page 4

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
00 40 40	J0854+5757	04 38 01	54.5	55.8	-4.3		-69.1	18	448	00 40 40
00 41 50	=0850+581	04 39 11	54.7	55.9	-4.3		-69.3	70	457	00 40 41
00 42 10	RGG9	04 39 31	52.6	57.7	-4.5		-65.5	-2	457	00 42 10
00 45 10	---	04 42 31	53.0	58.0	-4.4		-65.9	178	480	00 42 11
00 45 30	J0854+5757	04 42 51	55.1	56.2	-4.2		-69.8	-2	480	00 45 30
00 46 50	=0850+581	04 44 12	55.3	56.3	-4.2		-70.0	78	491	00 45 31
00 47 10	RGG9	04 44 32	53.2	58.2	-4.4		-66.2	-2	491	00 47 10
00 50 00	---	04 47 22	53.6	58.5	-4.3		-66.5	168	513	00 47 11
00 50 40	J0854+5757	04 48 02	55.8	56.6	-4.1		-70.6	18	513	00 50 40
00 51 50	=0850+581	04 49 13	55.9	56.7	-4.1		-70.8	70	522	00 50 41
00 52 10	RGG9	04 49 33	53.9	58.7	-4.3		-66.8	-2	522	00 52 10
00 55 10	---	04 52 33	54.2	59.0	-4.3		-67.2	178	545	00 52 11
00 55 30	J0854+5757	04 52 53	56.4	57.0	-4.1		-71.3	-2	545	00 55 30
00 56 50	=0850+581	04 54 13	56.6	57.1	-4.0		-71.5	78	555	00 55 31
00 57 10	RGG9	04 54 33	54.5	59.1	-4.2		-67.5	-2	555	00 57 10
01 00 00	---	04 57 24	54.9	59.4	-4.2		-67.9	168	577	00 57 11
01 00 40	J0854+5757	04 58 04	57.0	57.4	-4.0		-72.1	18	577	01 00 40
01 01 50	=0850+581	04 59 14	57.2	57.5	-4.0		-72.2	70	586	01 00 41
01 02 10	RGG9	04 59 34	55.2	59.6	-4.1		-68.2	-1	586	01 02 10
01 05 10	---	05 02 35	55.5	59.9	-4.1		-68.6	179	609	01 02 11
01 05 30	J0854+5757	05 02 55	57.7	57.8	-3.9		-72.8	-2	609	01 05 30
01 06 50	=0850+581	05 04 15	57.8	57.9	-3.9		-73.0	78	620	01 05 31
01 07 10	RGG9	05 04 35	55.8	60.1	-4.1		-68.8	-1	620	01 07 10
01 10 00	---	05 07 25	56.2	60.3	-4.0		-69.2	169	642	01 07 11
01 10 40	J0854+5757	05 08 06	58.3	58.1	-3.8		-73.6	18	642	01 10 40
01 11 50	=0850+581	05 09 16	58.5	58.2	-3.8		-73.7	70	651	01 10 41
01 12 10	RGG9	05 09 36	56.5	60.5	-4.0		-69.5	-1	651	01 12 10
01 15 10	---	05 12 36	56.8	60.8	-3.9		-69.9	179	674	01 12 11
01 15 30	J0854+5757	05 12 56	58.9	58.5	-3.7		-74.3	-2	674	01 15 30
01 16 50	=0850+581	05 14 17	59.1	58.6	-3.7		-74.5	78	684	01 15 31

Schedule for TORUN (Code Tr) Page 5

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Sun 1 Nov 2020 Day 306 ---

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
01 17 10	RGG9	05 14 37	57.1	60.9	-3.9		-70.2	-1	684	01 17 10
01 20 00	---	05 17 27	57.5	61.2	-3.8		-70.6	169	706	01 17 11
01 20 40	J0854+5757	05 18 07	59.6	58.8	-3.6		-75.1	18	706	01 20 40
01 21 50	=0850+581	05 19 17	59.7	58.9	-3.6		-75.3	70	715	01 20 41
01 22 10	RGG9	05 19 37	57.8	61.4	-3.8		-70.8	-1	715	01 22 10
01 25 10	---	05 22 38	58.2	61.6	-3.8		-71.3	179	738	01 22 11
01 25 30	J0854+5757	05 22 58	60.2	59.2	-3.6		-75.8	-2	738	01 25 30
01 26 50	=0850+581	05 24 18	60.4	59.3	-3.5		-76.1	78	748	01 25 31
01 27 10	RGG9	05 24 38	58.4	61.8	-3.7		-71.5	-1	748	01 27 10
01 30 00	---	05 27 29	58.8	62.0	-3.7		-71.9	169	770	01 27 11
01 30 40	J0854+5757	05 28 09	60.9	59.5	-3.5		-76.7	19	770	01 30 40
01 31 50	=0850+581	05 29 19	61.0	59.6	-3.4		-76.8	70	779	01 30 41
01 32 10	RGG9	05 29 39	59.1	62.2	-3.6		-72.2	-1	779	01 32 10
01 35 10	---	05 32 40	59.5	62.5	-3.6		-72.6	179	803	01 32 11
01 35 30	J0854+5757	05 33 00	61.5	59.8	-3.4		-77.4	-1	803	01 35 30
01 36 50	=0850+581	05 34 20	61.7	59.9	-3.4		-77.6	79	813	01 35 31
01 37 10	RGG9	05 34 40	59.8	62.6	-3.6		-72.9	-1	813	01 37 10
01 40 00	---	05 37 30	60.1	62.9	-3.5		-73.3	169	835	01 37 11
01 40 40	J0854+5757	05 38 11	62.2	60.1	-3.3		-78.2	19	835	01 40 40
01 41 50	=0850+581	05 39 21	62.3	60.2	-3.3		-78.4	70	844	01 40 41
01 42 10	RGG9	05 39 41	60.4	63.0	-3.5		-73.6	-1	844	01 42 10
01 45 10	---	05 42 41	60.8	63.3	-3.4		-74.0	179	867	01 42 11
01 45 30	J0854+5757	05 43 01	62.8	60.4	-3.2		-79.0	-1	867	01 45 30
01 46 50	=0850+581	05 44 22	63.0	60.5	-3.2		-79.2	79	877	01 45 31
01 47 10	RGG9	05 44 42	61.1	63.4	-3.4		-74.3	-1	877	01 47 10
01 50 00	---	05 47 32	61.5	63.7	-3.3		-74.7	169	899	01 47 11
01 50 40	J0854+5757	05 48 12	63.5	60.7	-3.1		-79.9	19	899	01 50 40
01 51 50	=0850+581	05 49 22	63.6	60.7	-3.1		-80.1	70	908	01 50 41
01 52 10	RGG9	05 49 42	61.8	63.8	-3.3		-75.0	-1	908	01 52 10
01 55 10	---	05 52 43	62.2	64.0	-3.3		-75.4	179	931	01 52 11

Schedule for TORUN (Code Tr) Page 6

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
01 55 30	J0854+5757	05 53 03	64.1	60.9	-3.1		-80.7	-1	931	01 55 30
01 56 50	=0850+581	05 54 23	64.3	61.0	-3.0		-80.9	79	942	01 55 31
01 57 10	RGG9	05 54 43	62.5	64.2	-3.2		-75.7	-1	942	01 57 10
02 00 00	---	05 57 34	62.8	64.4	-3.2		-76.1	169	964	01 57 11
02 00 40	J0854+5757	05 58 14	64.8	61.2	-3.0		-81.5	19	964	02 00 40
02 01 50	=0850+581	05 59 24	65.0	61.2	-2.9		-81.7	70	973	02 00 41
02 02 10	RGG9	05 59 44	63.1	64.6	-3.1		-76.4	-1	973	02 02 10
02 05 10	---	06 02 45	63.5	64.8	-3.1		-76.8	179	996	02 02 11
02 05 30	J0854+5757	06 03 05	65.5	61.4	-2.9		-82.4	-2	996	02 05 30
02 06 50	=0850+581	06 04 25	65.6	61.4	-2.9		-82.6	78	1006	02 05 31
02 07 10	RGG9	06 04 45	63.8	64.9	-3.0		-77.1	-2	1006	02 07 10
02 10 00	---	06 07 35	64.2	65.1	-3.0		-77.5	168	1028	02 07 11
02 10 40	J0854+5757	06 08 15	66.1	61.6	-2.8		-83.3	18	1028	02 10 40
02 11 50	=0850+581	06 09 26	66.3	61.6	-2.8		-83.5	70	1037	02 10 41
02 12 10	RGG9	06 09 46	64.5	65.3	-3.0		-77.8	-2	1037	02 12 10
02 15 10	---	06 12 46	64.9	65.5	-2.9		-78.3	178	1060	02 12 11
02 15 30	J0854+5757	06 13 06	66.8	61.8	-2.7		-84.1	-2	1060	02 15 30
02 16 50	=0850+581	06 14 26	67.0	61.8	-2.7		-84.4	78	1070	02 15 31
02 17 10	RGG9	06 14 47	65.2	65.6	-2.9		-78.6	-2	1070	02 17 10
02 20 00	---	06 17 37	65.6	65.8	-2.8		-79.0	168	1092	02 17 11
02 20 40	J0854+5757	06 18 17	67.5	61.9	-2.6		-85.1	17	1092	02 20 40
02 21 50	=0850+581	06 19 27	67.6	62.0	-2.6		-85.3	70	1101	02 20 41
02 22 10	RGG9	06 19 47	65.9	65.9	-2.8		-79.3	-3	1101	02 22 10
02 25 10	---	06 22 48	66.3	66.1	-2.7		-79.8	177	1125	02 22 11
02 25 30	J0854+5757	06 23 08	68.1	62.1	-2.6		-86.0	-3	1125	02 25 30
02 26 50	=0850+581	06 24 28	68.3	62.1	-2.5		-86.3	77	1135	02 25 31
02 27 10	RGG9	06 24 48	66.6	66.2	-2.7		-80.1	-3	1135	02 27 10
02 30 00	---	06 27 39	66.9	66.4	-2.7		-80.5	167	1157	02 27 11
02 30 40	J0854+5757	06 28 19	68.8	62.2	-2.5		-87.0	17	1157	02 30 40
02 31 50	=0850+581	06 29 29	68.9	62.2	-2.4		-87.2	70	1166	02 30 41

Schedule for TORUN (Code Tr) Page 7

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
02 32 10	RGG9	06 29 49	67.2	66.5	-2.6		-80.8	-4	1166	02 32 10
02 35 10	---	06 32 49	67.7	66.7	-2.6		-81.3	176	1189	02 32 11
02 35 30	J0854+5757	06 33 10	69.4	62.2	-2.4		-87.9	-4	1189	02 35 30
02 36 50	=0850+581	06 34 30	69.6	62.3	-2.4		-88.2	76	1199	02 35 31
02 37 10	RGG9	06 34 50	67.9	66.8	-2.5		-81.6	-4	1199	02 37 10
02 40 00	---	06 37 40	68.3	67.0	-2.5		-82.1	166	1221	02 37 11
02 40 40	J0854+5757	06 38 20	70.1	62.3	-2.3		-89.0	16	1221	02 40 40
02 41 50	=0850+581	06 39 31	70.3	62.3	-2.3		-89.2	70	1230	02 40 41
02 42 10	RGG9	06 39 51	68.6	67.1	-2.5		-82.4	-5	1230	02 42 10
02 45 10	---	06 42 51	69.0	67.2	-2.4		-82.9	175	1253	02 42 11
02 45 30	J0854+5757	06 43 11	70.8	62.3	-2.2		-90.0	-5	1253	02 45 30
02 49 30	=0850+581	06 47 12	71.3	62.3	-2.2		-90.9	235	1284	02 45 31
02 49 50	RGG9	06 47 32	69.7	67.4	-2.3		-83.7	-5	1284	02 49 50
02 52 40	---	06 50 22	70.1	67.6	-2.3		-84.1	165	1306	02 49 51
02 53 20	J0854+5757	06 51 02	71.8	62.3	-2.1		-91.7	14	1306	02 53 20
02 54 30	=0850+581	06 52 13	72.0	62.3	-2.1		-92.0	70	1315	02 53 21
02 54 50	RGG9	06 52 33	70.4	67.7	-2.3		-84.5	-6	1315	02 54 50
02 57 50	---	06 55 33	70.8	67.8	-2.2		-85.0	174	1338	02 54 51
02 58 10	J0854+5757	06 55 53	72.5	62.2	-2.0		-92.8	-6	1338	02 58 10
02 59 30	=0850+581	06 57 13	72.6	62.2	-2.0		-93.1	74	1349	02 58 11
02 59 50	RGG9	06 57 34	71.1	67.8	-2.2		-85.4	-6	1349	02 59 50
03 02 40	---	07 00 24	71.5	67.9	-2.1		-85.9	164	1371	02 59 51
03 03 20	J0854+5757	07 01 04	73.1	62.0	-1.9		-94.0	13	1371	03 03 20
03 04 30	=0850+581	07 02 14	73.3	62.0	-1.9		-94.3	70	1380	03 03 21
03 04 50	RGG9	07 02 34	71.8	68.0	-2.1		-86.3	-7	1380	03 04 50
03 07 50	---	07 05 35	72.2	68.1	-2.0		-86.8	173	1403	03 04 51
03 08 10	J0854+5757	07 05 55	73.8	61.9	-1.8		-95.2	-7	1403	03 08 10
03 09 30	=0850+581	07 07 15	74.0	61.8	-1.8		-95.6	73	1413	03 08 11
03 09 50	RGG9	07 07 35	72.5	68.1	-2.0		-87.2	-8	1413	03 09 50
03 12 40	---	07 10 26	72.9	68.2	-2.0		-87.7	162	1435	03 09 51

Schedule for TORUN (Code Tr) Page 8

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
03 13 20	J0854+5757	07 11 06	74.5	61.6	-1.8		-96.6	12	1435	03 13 20
03 14 30	=0850+581	07 12 16	74.6	61.5	-1.7		-96.9	70	1444	03 13 21
03 14 50	RGG9	07 12 36	73.2	68.2	-1.9		-88.1	-8	1444	03 14 50
03 17 50	---	07 15 36	73.6	68.3	-1.9		-88.7	172	1467	03 14 51
03 18 10	J0854+5757	07 15 57	75.1	61.3	-1.7		-97.9	-9	1467	03 18 10
03 19 30	=0850+581	07 17 17	75.3	61.2	-1.6		-98.3	71	1478	03 18 11
03 19 50	RGG9	07 17 37	73.9	68.3	-1.8		-89.1	-9	1478	03 19 50
03 22 40	---	07 20 27	74.3	68.3	-1.8		-89.7	161	1499	03 19 51
03 23 20	J0854+5757	07 21 07	75.8	60.9	-1.6		-99.4	10	1499	03 23 20
03 24 30	=0850+581	07 22 18	75.9	60.8	-1.6		-99.8	70	1508	03 23 21
03 24 50	RGG9	07 22 38	74.6	68.3	-1.8		-90.1	-10	1508	03 24 50
03 27 50	---	07 25 38	75.0	68.3	-1.7		-90.8	170	1532	03 24 51
03 28 10	J0854+5757	07 25 58	76.4	60.4	-1.5		-100.9	-11	1532	03 28 10
03 29 30	=0850+581	07 27 18	76.6	60.3	-1.5		-101.3	69	1542	03 28 11
03 29 50	RGG9	07 27 38	75.3	68.3	-1.7		-91.2	-11	1542	03 29 50
03 32 40	---	07 30 29	75.7	68.2	-1.6		-91.8	159	1564	03 29 51
03 33 20	J0854+5757	07 31 09	77.1	59.8	-1.4		-102.6	8	1564	03 33 20
03 34 30	=0850+581	07 32 19	77.2	59.6	-1.4		-103.0	70	1573	03 33 21
03 34 50	RGG9	07 32 39	76.0	68.2	-1.6		-92.3	-12	1573	03 34 50
03 37 50	---	07 35 40	76.4	68.1	-1.5		-93.0	168	1596	03 34 51
03 38 10	J0854+5757	07 36 00	77.7	59.1	-1.3		-104.3	-13	1596	03 38 10
03 39 30	=0850+581	07 37 20	77.9	58.9	-1.3		-104.8	67	1606	03 38 11
03 39 50	RGG9	07 37 40	76.7	68.0	-1.5		-93.5	-13	1606	03 39 50
03 42 40	---	07 40 31	77.1	67.9	-1.5		-94.2	157	1628	03 39 51
03 43 20	J0854+5757	07 41 11	78.4	58.2	-1.3		-106.2	6	1628	03 43 20
03 44 30	=0850+581	07 42 21	78.5	58.0	-1.2		-106.7	70	1637	03 43 21
03 44 50	RGG9	07 42 41	77.4	67.8	-1.4		-94.8	-15	1637	03 44 50
03 47 50	---	07 45 41	77.8	67.6	-1.4		-95.6	165	1660	03 44 51
03 48 10	J0854+5757	07 46 01	79.0	57.3	-1.2		-108.2	-16	1660	03 48 10
03 49 30	=0850+581	07 47 22	79.2	57.0	-1.1		-108.8	64	1671	03 48 11

Schedule for TORUN (Code Tr) Page 9

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
03 49 50	RGG9	07 47 42	78.1	67.5	-1.3		-96.1	-16	1671	03 49 50
03 52 40	---	07 50 32	78.5	67.3	-1.3		-96.9	154	1693	03 49 51
03 53 20	J0854+5757	07 51 12	79.7	56.0	-1.1		-110.5	3	1693	03 53 20
03 54 30	=0850+581	07 52 23	79.8	55.7	-1.1		-111.1	70	1702	03 53 21
03 54 50	RGG9	07 52 43	78.8	67.1	-1.3		-97.6	-18	1702	03 54 50
03 57 50	---	07 55 43	79.2	66.8	-1.2		-98.5	162	1725	03 54 51
03 58 10	J0854+5757	07 56 03	80.3	54.7	-1.0		-112.9	-19	1725	03 58 10
03 59 30	=0850+581	07 57 23	80.4	54.2	-1.0		-113.6	61	1735	03 58 11
03 59 50	RGG9	07 57 43	79.5	66.5	-1.2		-99.1	-20	1735	03 59 50
04 02 40	---	08 00 34	79.8	66.2	-1.1		-100.1	150	1757	03 59 51
04 03 20	J0854+5757	08 01 14	80.9	52.9	-0.9		-115.7	-1	1757	04 03 20
04 04 30	=0850+581	08 02 24	81.0	52.5	-0.9		-116.4	69	1766	04 03 21
04 04 50	RGG9	08 02 44	80.1	65.9	-1.1		-100.9	-22	1766	04 04 50
04 07 50	---	08 05 45	80.6	65.4	-1.0		-102.0	158	1789	04 04 51
04 08 10	J0854+5757	08 06 05	81.5	51.0	-0.8		-118.6	-24	1789	04 08 10
04 09 30	=0850+581	08 07 25	81.6	50.4	-0.8		-119.5	56	1800	04 08 11
04 09 50	RGG9	08 07 45	80.8	65.0	-1.0		-102.8	-24	1800	04 09 50
04 12 40	---	08 10 36	81.2	64.4	-1.0		-103.9	146	1822	04 09 51
04 13 20	J0854+5757	08 11 16	82.0	48.6	-0.8		-122.1	-7	1822	04 13 20
04 14 30	=0850+581	08 12 26	82.2	48.0	-0.7		-123.0	63	1831	04 13 21
04 14 50	RGG9	08 12 46	81.5	63.9	-0.9		-104.9	-27	1831	04 14 50
04 17 50	---	08 15 46	81.9	63.1	-0.9		-106.3	153	1854	04 14 51
04 18 10	J0854+5757	08 16 06	82.6	45.9	-0.7		-125.8	-30	1854	04 18 10
04 19 30	=0850+581	08 17 27	82.7	45.1	-0.6		-126.9	50	1864	04 18 11
04 19 50	RGG9	08 17 47	82.2	62.5	-0.8		-107.3	-30	1864	04 19 50
04 22 40	---	08 20 37	82.6	61.6	-0.8		-108.8	140	1886	04 19 51
04 23 20	J0854+5757	08 21 17	83.1	42.5	-0.6		-130.3	-13	1886	04 23 20
04 24 30	=0850+581	08 22 27	83.2	41.6	-0.6		-131.4	57	1895	04 23 21
04 24 50	RGG9	08 22 48	82.8	60.8	-0.7		-110.0	-33	1895	04 24 50
04 27 50	---	08 25 48	83.2	59.6	-0.7		-111.9	147	1918	04 24 51

Schedule for TORUN (Code Tr) Page 10

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
04 28 10	J0854+5757	08 26 08	83.6	38.7	-0.5		-135.1	-38	1918	04 28 10
04 29 30	=0850+581	08 27 28	83.7	37.6	-0.5		-136.5	42	1928	04 28 11
04 29 50	RGG9	08 27 48	83.5	58.7	-0.7		-113.2	-37	1928	04 29 50
04 32 40	---	08 30 39	83.9	57.2	-0.6		-115.2	133	1950	04 29 51
04 33 20	J0854+5757	08 31 19	84.1	33.9	-0.4		-140.9	-22	1950	04 33 20
04 34 30	=0850+581	08 32 29	84.2	32.8	-0.4		-142.3	48	1959	04 33 21
04 34 50	RGG9	08 32 49	84.1	55.9	-0.6		-117.0	-41	1959	04 34 50
04 37 50	---	08 35 50	84.5	53.9	-0.5		-119.6	139	1983	04 34 51
04 38 10	J0854+5757	08 36 10	84.4	28.7	-0.3		-147.1	-47	1983	04 38 10
04 39 30	=0850+581	08 37 30	84.5	27.2	-0.3		-149.0	33	1993	04 38 11
04 39 50	RGG9	08 37 50	84.7	52.4	-0.5		-121.5	-44	1993	04 39 50
04 42 40	---	08 40 40	85.1	50.0	-0.5		-124.5	126	2015	04 39 51
04 43 20	J0854+5757	08 41 21	84.8	22.3	-0.2		-154.6	-31	2015	04 43 20
04 44 30	=0850+581	08 42 31	84.8	20.8	-0.2		-156.4	39	2024	04 43 21
04 44 50	RGG9	08 42 51	85.3	47.8	-0.4		-127.1	-48	2024	04 44 50
04 47 50	---	08 45 51	85.6	44.5	-0.4		-131.1	132	2047	04 44 51
04 48 10	J0854+5757	08 46 11	85.0	15.6	-0.2		-162.3	-55	2047	04 48 10
04 49 30	=0850+581	08 47 32	85.1	13.6	-0.1		-164.6	25	2057	04 48 11
04 49 50	RGG9	08 47 52	85.9	41.9	-0.3		-134.0	-49	2057	04 49 50
04 52 40	---	08 50 42	86.1	37.8	-0.3		-138.7	121	2079	04 49 51
04 53 20	J0854+5757	08 51 22	85.2	7.8	-0.1		-171.2	-37	2079	04 53 20
04 54 30	=0850+581	08 52 32	85.2	5.9	-0.1		-173.3	33	2088	04 53 21
04 54 50	RGG9	08 52 52	86.3	34.3	-0.2		-142.7	-49	2088	04 54 50
04 57 50	---	08 55 53	86.6	28.7	-0.2		-148.9	131	2111	04 54 51
04 58 10	J0854+5757	08 56 13	85.2	0.1	-0.0		-179.9	-55	2111	04 58 10
04 59 30	=0850+581	08 57 33	85.2	-2.0	0.0		177.7	25	2122	04 58 11
04 59 50	RGG9	08 57 53	86.7	24.5	-0.2		-153.5	-45	2122	04 59 50
05 02 40	---	09 00 44	86.8	18.1	-0.1		-160.5	125	2144	04 59 51
05 03 20	J0854+5757	09 01 24	85.2	-8.1	0.1		170.8	-28	2144	05 03 20
05 04 30	=0850+581	09 02 34	85.1	-9.9	0.1		168.8	42	2153	05 03 21

Schedule for TORUN (Code Tr) Page 11

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
05 04 50	RGG9	09 02 54	86.9	12.7	-0.1		-166.3	-37	2153	05 04 50
05 07 50	---	09 05 55	87.0	4.9	-0.0		-174.7	143	2176	05 04 51
05 08 10	J0854+5757	09 06 15	85.0	-15.4	0.2		162.5	-37	2176	05 08 10
05 09 30	=0850+581	09 07 35	85.0	-17.4	0.2		160.3	43	2186	05 08 11
05 09 50	RGG9	09 07 55	87.0	-0.5	0.0		179.5	-27	2186	05 09 50
05 12 40	---	09 10 45	87.0	-8.0	0.1		171.4	143	2208	05 09 51
05 13 20	J0854+5757	09 11 25	84.8	-22.6	0.3		154.2	-4	2208	05 13 20
05 14 30	=0850+581	09 12 36	84.7	-24.1	0.3		152.5	66	2217	05 13 21
05 14 50	RGG9	09 12 56	86.9	-13.6	0.1		165.4	-15	2217	05 14 50
05 17 50	---	09 15 56	86.8	-20.8	0.1		157.5	165	2240	05 14 51
05 18 10	J0854+5757	09 16 16	84.4	-28.6	0.3		147.3	-11	2240	05 18 10
05 19 30	=0850+581	09 17 36	84.3	-30.1	0.4		145.5	69	2250	05 18 11
05 19 50	RGG9	09 17 57	86.7	-25.3	0.2		152.7	-5	2250	05 19 50
05 22 40	---	09 20 47	86.5	-31.0	0.2		146.4	165	2272	05 19 51
05 23 20	J0854+5757	09 21 27	84.0	-34.2	0.4		140.6	17	2272	05 23 20
05 24 30	=0850+581	09 22 37	83.9	-35.3	0.4		139.3	70	2281	05 23 21
05 24 50	RGG9	09 22 57	86.3	-34.9	0.3		142.0	-3	2281	05 24 50
05 27 50	---	09 25 58	86.0	-39.6	0.3		136.7	177	2305	05 24 51
05 28 10	J0854+5757	09 26 18	83.6	-38.6	0.5		135.2	-3	2305	05 28 10
05 29 30	=0850+581	09 27 38	83.5	-39.7	0.5		133.8	77	2315	05 28 11
05 29 50	RGG9	09 27 58	85.8	-42.4	0.3		133.5	-3	2315	05 29 50
05 32 40	---	09 30 49	85.5	-45.9	0.4		129.4	167	2337	05 29 51
05 33 20	J0854+5757	09 31 29	83.1	-42.6	0.6		130.1	17	2337	05 33 20
05 34 30	=0850+581	09 32 39	83.0	-43.5	0.6		129.0	70	2346	05 33 21
05 34 50	RGG9	09 32 59	85.3	-48.2	0.4		126.7	-4	2346	05 34 50
05 37 50	---	09 35 59	84.9	-51.0	0.5		123.2	176	2369	05 34 51
05 38 10	J0854+5757	09 36 20	82.6	-45.8	0.7		125.9	-5	2369	05 38 10
05 39 30	=0850+581	09 37 40	82.4	-46.6	0.7		124.8	75	2379	05 38 11
05 39 50	RGG9	09 38 00	84.7	-52.7	0.5		121.2	-7	2379	05 39 50
05 42 40	---	09 40 50	84.4	-54.7	0.6		118.5	163	2401	05 39 51

Schedule for TORUN (Code Tr) Page 12

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Sun 1 Nov 2020 Day 306 ---

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
05 43 20	J0854+5757	09 41 30	82.0	-48.7	0.8		122.0	13	2401	05 43 20
05 44 30	=0850+581	09 42 41	81.9	-49.3	0.8		121.1	70	2410	05 43 21
05 44 50	RGG9	09 43 01	84.1	-56.1	0.6		116.7	-9	2410	05 44 50
05 47 50	---	09 46 01	83.7	-57.8	0.6		114.4	171	2433	05 44 51
05 48 10	J0854+5757	09 46 21	81.5	-51.0	0.8		118.7	-9	2433	05 48 10
05 49 30	=0850+581	09 47 41	81.3	-51.5	0.9		117.9	71	2444	05 48 11
05 49 50	RGG9	09 48 01	83.5	-58.8	0.7		113.0	-10	2444	05 49 50
05 52 40	---	09 50 52	83.1	-60.1	0.7		111.1	160	2466	05 49 51
05 53 20	J0854+5757	09 51 32	80.9	-53.0	0.9		115.6	11	2466	05 53 20
05 54 30	=0850+581	09 52 42	80.7	-53.4	0.9		114.9	70	2475	05 53 21
05 54 50	RGG9	09 53 02	82.8	-61.0	0.8		109.8	-10	2475	05 54 50
05 57 50	---	09 56 03	82.4	-62.0	0.8		108.1	170	2498	05 54 51
05 58 10	J0854+5757	09 56 23	80.3	-54.6	1.0		113.0	-10	2498	05 58 10
05 59 30	=0850+581	09 57 43	80.1	-55.0	1.0		112.3	70	2508	05 58 11
05 59 50	RGG9	09 58 03	82.1	-62.6	0.8		107.1	-10	2508	05 59 50
06 02 40	---	10 00 54	81.8	-63.4	0.9		105.7	160	2530	05 59 51
06 03 20	J0854+5757	10 01 34	79.6	-56.1	1.1		110.4	10	2530	06 03 20
06 04 30	=0850+581	10 02 44	79.5	-56.4	1.1		109.9	70	2539	06 03 21
06 04 50	RGG9	10 03 04	81.5	-64.0	0.9		104.7	-10	2539	06 04 50
06 07 50	---	10 06 04	81.1	-64.7	1.0		103.4	170	2562	06 04 51
06 08 10	J0854+5757	10 06 24	79.0	-57.2	1.2		108.3	-10	2562	06 08 10
06 09 30	=0850+581	10 07 45	78.8	-57.5	1.2		107.7	70	2573	06 08 11
06 09 50	RGG9	10 08 05	80.8	-65.1	1.0		102.6	-10	2573	06 09 50
06 12 40	---	10 10 55	80.4	-65.6	1.1		101.5	160	2594	06 09 51
06 13 20	J0854+5757	10 11 35	78.4	-58.3	1.3		106.2	10	2594	06 13 20
06 14 30	=0850+581	10 12 46	78.2	-58.5	1.3		105.7	70	2603	06 13 21
06 14 50	RGG9	10 13 06	80.1	-65.9	1.1		100.7	-10	2603	06 14 50
06 17 50	---	10 16 06	79.7	-66.3	1.1		99.7	170	2627	06 14 51
06 18 10	J0854+5757	10 16 26	77.7	-59.1	1.3		104.3	-9	2627	06 18 10
06 19 30	=0850+581	10 17 46	77.6	-59.3	1.4		103.8	71	2637	06 18 11

Schedule for TORUN (Code Tr) Page 13

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
06 19 50	RGG9	10 18 06	79.4	-66.6	1.2		99.0	-10	2637	06 19 50
06 22 40	---	10 20 57	79.0	-66.9	1.2		98.1	160	2659	06 19 51
06 23 20	J0854+5757	10 21 37	77.1	-59.8	1.4		102.5	11	2659	06 23 20
06 24 30	=0850+581	10 22 47	76.9	-60.0	1.4		102.1	70	2668	06 23 21
06 24 50	RGG9	10 23 07	78.7	-67.1	1.3		97.5	-9	2668	06 24 50
06 27 50	---	10 26 08	78.3	-67.4	1.3		96.6	171	2691	06 24 51
06 28 10	J0854+5757	10 26 28	76.4	-60.4	1.5		100.9	-9	2691	06 28 10
06 29 30	=0850+581	10 27 48	76.3	-60.5	1.5		100.5	71	2701	06 28 11
06 29 50	RGG9	10 28 08	78.0	-67.5	1.3		96.0	-9	2701	06 29 50
06 32 40	---	10 30 59	77.6	-67.7	1.4		95.3	161	2723	06 29 51
06 33 20	J0854+5757	10 31 39	75.8	-60.9	1.6		99.3	11	2723	06 33 20
06 34 30	=0850+581	10 32 49	75.6	-61.0	1.6		99.0	70	2732	06 33 21
06 34 50	RGG9	10 33 09	77.3	-67.8	1.4		94.7	-9	2732	06 34 50
06 37 50	---	10 36 09	76.9	-68.0	1.5		93.9	171	2755	06 34 51
06 38 10	J0854+5757	10 36 29	75.1	-61.3	1.7		97.9	-8	2755	06 38 10
06 39 30	=0850+581	10 37 50	74.9	-61.4	1.7		97.6	72	2766	06 38 11
06 39 50	RGG9	10 38 10	76.6	-68.1	1.5		93.4	-8	2766	06 39 50
06 42 40	---	10 41 00	76.2	-68.1	1.6		92.8	162	2788	06 39 51
06 43 20	J0854+5757	10 41 40	74.4	-61.6	1.8		96.5	12	2788	06 43 20
06 44 30	=0850+581	10 42 50	74.3	-61.7	1.8		96.2	70	2797	06 43 21
06 44 50	RGG9	10 43 11	75.9	-68.2	1.6		92.3	-8	2797	06 44 50
06 47 50	---	10 46 11	75.5	-68.3	1.6		91.6	172	2820	06 44 51
06 48 10	J0854+5757	10 46 31	73.8	-61.9	1.8		95.3	-8	2820	06 48 10
06 49 30	=0850+581	10 47 51	73.6	-61.9	1.9		94.9	72	2830	06 48 11
06 49 50	RGG9	10 48 11	75.2	-68.3	1.7		91.1	-8	2830	06 49 50
06 52 40	---	10 51 02	74.8	-68.3	1.7		90.5	162	2852	06 49 51
06 53 20	J0854+5757	10 51 42	73.1	-62.1	1.9		94.0	12	2852	06 53 20
06 54 30	=0850+581	10 52 52	73.0	-62.1	1.9		93.7	70	2861	06 53 21
06 54 50	RGG9	10 53 12	74.5	-68.3	1.8		90.1	-7	2861	06 54 50
06 57 50	---	10 56 13	74.1	-68.3	1.8		89.4	173	2884	06 54 51

Schedule for TORUN (Code Tr) Page 14

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
06 58 10	J0854+5757	10 56 33	72.5	-62.2	2.0		92.8	-7	2884	06 58 10
06 59 30	=0850+581	10 57 53	72.3	-62.2	2.0		92.5	73	2895	06 58 11
06 59 50	RGG9	10 58 13	73.8	-68.3	1.8		89.0	-7	2895	06 59 50
07 02 40	---	11 01 03	73.4	-68.3	1.9		88.5	163	2916	06 59 51
07 03 20	J0854+5757	11 01 44	71.8	-62.3	2.1		91.7	13	2916	07 03 20
07 04 30	=0850+581	11 02 54	71.6	-62.3	2.1		91.4	70	2925	07 03 21
07 04 50	RGG9	11 03 14	73.1	-68.2	1.9		88.1	-7	2925	07 04 50
07 07 50	---	11 06 14	72.7	-68.2	2.0		87.5	173	2949	07 04 51
07 08 10	J0854+5757	11 06 34	71.1	-62.3	2.2		90.6	-7	2949	07 08 10
07 09 30	=0850+581	11 07 55	71.0	-62.3	2.2		90.3	73	2959	07 08 11
07 09 50	RGG9	11 08 15	72.4	-68.1	2.0		87.1	-7	2959	07 09 50
07 12 40	---	11 11 05	72.0	-68.1	2.1		86.6	163	2981	07 09 51
07 13 20	J0854+5757	11 11 45	70.4	-62.3	2.3		89.5	14	2981	07 13 20
07 14 30	=0850+581	11 12 55	70.3	-62.3	2.3		89.3	70	2990	07 13 21
07 14 50	RGG9	11 13 15	71.7	-68.0	2.1		86.2	-6	2990	07 14 50
07 17 50	---	11 16 16	71.3	-67.9	2.1		85.7	174	3013	07 14 51
07 18 10	J0854+5757	11 16 36	69.8	-62.3	2.3		88.5	-6	3013	07 18 10
07 19 30	=0850+581	11 17 56	69.6	-62.3	2.4		88.2	74	3023	07 18 11
07 19 50	RGG9	11 18 16	71.0	-67.8	2.2		85.3	-6	3023	07 19 50
07 22 40	---	11 21 07	70.6	-67.7	2.2		84.8	164	3045	07 19 51
07 23 20	J0854+5757	11 21 47	69.1	-62.2	2.4		87.5	14	3045	07 23 20
07 24 30	=0850+581	11 22 57	69.0	-62.2	2.4		87.2	70	3054	07 23 21
07 24 50	RGG9	11 23 17	70.3	-67.6	2.3		84.5	-6	3054	07 24 50
07 27 50	---	11 26 18	69.9	-67.5	2.3		84.0	174	3077	07 24 51
07 28 10	J0854+5757	11 26 38	68.5	-62.1	2.5		86.5	-6	3077	07 28 10
07 29 30	=0850+581	11 27 58	68.3	-62.1	2.5		86.3	74	3088	07 28 11
07 29 50	RGG9	11 28 18	69.6	-67.4	2.3		83.6	-6	3088	07 29 50
07 32 40	---	11 31 08	69.3	-67.3	2.4		83.1	164	3110	07 29 51
07 33 20	J0854+5757	11 31 48	67.8	-62.0	2.6		85.5	14	3110	07 33 20
07 34 30	=0850+581	11 32 59	67.6	-62.0	2.6		85.3	70	3119	07 33 21

Schedule for TORUN (Code Tr) Page 15

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
07 34 50	RGG9	11 33 19	69.0	-67.2	2.4		82.8	-5	3119	07 34 50
07 37 50	---	11 36 19	68.5	-67.0	2.5		82.3	175	3142	07 34 51
07 38 10	J0854+5757	11 36 39	67.1	-61.8	2.7		84.7	-5	3142	07 38 10
07 39 30	=0850+581	11 37 59	67.0	-61.8	2.7		84.4	75	3152	07 38 11
07 39 50	RGG9	11 38 20	68.3	-66.9	2.5		82.0	-5	3152	07 39 50
07 42 40	---	11 41 10	67.9	-66.8	2.6		81.5	165	3174	07 39 51
07 43 20	J0854+5757	11 41 50	66.5	-61.7	2.8		83.7	15	3174	07 43 20
07 44 30	=0850+581	11 43 00	66.3	-61.6	2.8		83.5	70	3183	07 43 21
07 44 50	RGG9	11 43 20	67.6	-66.7	2.6		81.2	-5	3183	07 44 50
07 47 50	---	11 46 21	67.2	-66.5	2.6		80.7	175	3206	07 44 51
07 48 10	J0854+5757	11 46 41	65.8	-61.5	2.8		82.9	-5	3206	07 48 10
07 49 30	=0850+581	11 48 01	65.6	-61.4	2.9		82.6	75	3217	07 48 11
07 49 50	RGG9	11 48 21	66.9	-66.4	2.7		80.4	-5	3217	07 49 50
07 52 40	---	11 51 12	66.5	-66.2	2.7		80.0	165	3239	07 49 51
07 53 20	J0854+5757	11 51 52	65.1	-61.3	2.9		82.0	15	3239	07 53 20
07 54 30	=0850+581	11 53 02	65.0	-61.2	2.9		81.8	70	3248	07 53 21
07 54 50	RGG9	11 53 22	66.2	-66.1	2.8		79.7	-5	3248	07 54 50
07 57 50	---	11 56 22	65.8	-65.9	2.8		79.2	175	3271	07 54 51
07 58 10	J0854+5757	11 56 43	64.5	-61.0	3.0		81.1	-5	3271	07 58 10
07 59 30	=0850+581	11 58 03	64.3	-61.0	3.0		80.9	75	3281	07 58 11
07 59 50	RGG9	11 58 23	65.5	-65.8	2.8		78.9	-5	3281	07 59 50
08 02 40	---	12 01 13	65.1	-65.6	2.9		78.5	165	3303	07 59 51
08 03 20	J0854+5757	12 01 53	63.8	-60.8	3.1		80.3	15	3303	08 03 20
08 04 30	=0850+581	12 03 04	63.7	-60.7	3.1		80.1	70	3312	08 03 21
08 04 50	RGG9	12 03 24	64.8	-65.4	2.9		78.2	-4	3312	08 04 50
08 07 50	---	12 06 24	64.4	-65.2	3.0		77.7	176	3335	08 04 51
08 08 10	J0854+5757	12 06 44	63.2	-60.5	3.2		79.5	-4	3335	08 08 10
08 09 30	=0850+581	12 08 04	63.0	-60.5	3.2		79.3	76	3345	08 08 11
08 09 50	RGG9	12 08 24	64.1	-65.1	3.0		77.4	-4	3345	08 09 50
08 12 40	---	12 11 15	63.7	-64.9	3.1		77.0	166	3367	08 09 51

Schedule for TORUN (Code Tr) Page 16

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
08 13 20	J0854+5757	12 11 55	62.5	-60.2	3.3		78.6	16	3367	08 13 20
08 14 30	=0850+581	12 13 05	62.4	-60.2	3.3		78.4	70	3376	08 13 21
08 14 50	RGG9	12 13 25	63.5	-64.7	3.1		76.7	-4	3376	08 14 50
08 17 50	---	12 16 26	63.0	-64.5	3.1		76.3	176	3400	08 14 51
08 18 10	J0854+5757	12 16 46	61.9	-60.0	3.3		77.9	-4	3400	08 18 10
08 19 30	=0850+581	12 18 06	61.7	-59.9	3.4		77.6	76	3410	08 18 11
08 19 50	RGG9	12 18 26	62.8	-64.4	3.2		76.0	-4	3410	08 19 50
08 22 40	---	12 21 17	62.4	-64.2	3.2		75.6	166	3432	08 19 51
08 23 20	J0854+5757	12 21 57	61.2	-59.7	3.4		77.0	16	3432	08 23 20
08 24 30	=0850+581	12 23 07	61.1	-59.6	3.4		76.9	70	3441	08 23 21
08 24 50	RGG9	12 23 27	62.1	-64.0	3.3		75.3	-4	3441	08 24 50
08 27 50	---	12 26 27	61.7	-63.8	3.3		74.9	176	3464	08 24 51
08 28 10	J0854+5757	12 26 47	60.6	-59.3	3.5		76.3	-4	3464	08 28 10
08 29 30	=0850+581	12 28 08	60.4	-59.3	3.5		76.1	76	3474	08 28 11
08 29 50	RGG9	12 28 28	61.4	-63.6	3.3		74.6	-4	3474	08 29 50
08 32 40	---	12 31 18	61.0	-63.4	3.4		74.2	166	3496	08 29 51
08 33 20	J0854+5757	12 31 58	59.9	-59.0	3.6		75.5	16	3496	08 33 20
08 34 30	=0850+581	12 33 09	59.8	-58.9	3.6		75.3	70	3505	08 33 21
08 34 50	RGG9	12 33 29	60.7	-63.2	3.4		73.9	-4	3505	08 34 50
08 37 50	---	12 36 29	60.3	-63.0	3.5		73.5	176	3528	08 34 51
08 38 10	J0854+5757	12 36 49	59.3	-58.7	3.7		74.7	-4	3528	08 38 10
08 39 30	=0850+581	12 38 09	59.1	-58.6	3.7		74.5	76	3539	08 38 11
08 39 50	RGG9	12 38 29	60.1	-62.8	3.5		73.2	-3	3539	08 39 50
08 42 40	---	12 41 20	59.7	-62.6	3.6		72.8	167	3561	08 39 51
08 43 20	J0854+5757	12 42 00	58.6	-58.3	3.8		73.9	17	3561	08 43 20
08 44 30	=0850+581	12 43 10	58.5	-58.2	3.8		73.8	70	3570	08 43 21
08 44 50	RGG9	12 43 30	59.4	-62.4	3.6		72.5	-3	3570	08 44 50
08 47 50	---	12 46 31	59.0	-62.2	3.6		72.1	177	3593	08 44 51
08 48 10	J0854+5757	12 46 51	58.0	-58.0	3.8		73.2	-3	3593	08 48 10
08 49 30	=0850+581	12 48 11	57.8	-57.9	3.9		73.0	77	3603	08 48 11

Schedule for TORUN (Code Tr) Page 17

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
08 49 50	RGG9	12 48 31	58.7	-62.0	3.7		71.8	-3	3603	08 49 50
08 52 40	---	12 51 22	58.4	-61.8	3.7		71.5	167	3625	08 49 51
08 53 20	J0854+5757	12 52 02	57.3	-57.6	3.9		72.4	17	3625	08 53 20
08 54 30	=0850+581	12 53 12	57.2	-57.5	3.9		72.3	70	3634	08 53 21
08 54 50	RGG9	12 53 32	58.1	-61.6	3.8		71.2	-3	3634	08 54 50
08 58 20	---	12 57 02	57.6	-61.3	3.8		70.7	207	3661	08 54 51
08 58 40	J0854+5757	12 57 22	56.7	-57.2	4.0		71.6	-3	3661	08 58 40
09 00 00	=0850+581	12 58 43	56.5	-57.1	4.0		71.4	77	3671	08 58 41
09 00 20	RGG9	12 59 03	57.4	-61.1	3.9		70.4	-3	3671	09 00 20
09 03 10	---	13 01 53	57.0	-60.9	3.9		70.0	167	3693	09 00 21
09 03 50	J0854+5757	13 02 33	56.0	-56.8	4.1		70.9	17	3693	09 03 50
09 05 00	=0850+581	13 03 44	55.9	-56.7	4.1		70.7	70	3702	09 03 51
09 05 20	RGG9	13 04 04	56.7	-60.7	3.9		69.7	-3	3702	09 05 20
09 08 20	---	13 07 04	56.3	-60.4	4.0		69.3	177	3725	09 05 21
09 08 40	J0854+5757	13 07 24	55.4	-56.4	4.2		70.2	-3	3725	09 08 40
09 10 00	=0850+581	13 08 44	55.2	-56.3	4.2		70.0	77	3736	09 08 41
09 10 20	RGG9	13 09 04	56.0	-60.2	4.0		69.1	-3	3736	09 10 20
09 13 10	---	13 11 55	55.7	-60.0	4.1		68.7	167	3758	09 10 21
09 13 50	J0854+5757	13 12 35	54.8	-56.0	4.3		69.4	17	3758	09 13 50
09 15 00	=0850+581	13 13 45	54.6	-55.9	4.3		69.2	70	3767	09 13 51
09 15 20	RGG9	13 14 05	55.4	-59.8	4.1		68.4	-3	3767	09 15 20
09 18 20	---	13 17 06	55.0	-59.5	4.2		68.0	177	3790	09 15 21
09 18 40	J0854+5757	13 17 26	54.2	-55.6	4.4		68.7	-3	3790	09 18 40
09 20 00	=0850+581	13 18 46	54.0	-55.5	4.4		68.5	77	3800	09 18 41
09 20 20	RGG9	13 19 06	54.7	-59.3	4.2		67.7	-2	3800	09 20 20
09 23 10	---	13 21 57	54.4	-59.0	4.2		67.4	168	3822	09 20 21
09 23 50	J0854+5757	13 22 37	53.5	-55.2	4.4		68.0	17	3822	09 23 50
09 25 00	=0850+581	13 23 47	53.4	-55.1	4.5		67.8	70	3831	09 23 51
09 25 20	RGG9	13 24 07	54.1	-58.8	4.3		67.1	-2	3831	09 25 20
09 28 20	---	13 27 07	53.7	-58.6	4.3		66.7	178	3854	09 25 21

Schedule for TORUN (Code Tr) Page 18

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
09 28 40	J0854+5757	13 27 27	52.9	-54.8	4.5		67.3	-2	3854	09 28 40
09 30 00	=0850+581	13 28 48	52.8	-54.6	4.5		67.1	78	3865	09 28 41
09 30 20	RGG9	13 29 08	53.5	-58.4	4.4		66.4	-2	3865	09 30 20
09 33 10	---	13 31 58	53.1	-58.1	4.4		66.0	168	3886	09 30 21
09 33 50	J0854+5757	13 32 38	52.3	-54.3	4.6		66.5	18	3886	09 33 50
09 35 00	=0850+581	13 33 48	52.2	-54.2	4.6		66.3	70	3895	09 33 51
09 35 20	RGG9	13 34 09	52.8	-57.9	4.4		65.7	-2	3895	09 35 20
09 38 20	---	13 37 09	52.4	-57.6	4.5		65.4	178	3919	09 35 21
09 38 40	J0854+5757	13 37 29	51.7	-53.9	4.7		65.8	-2	3919	09 38 40
09 40 00	=0850+581	13 38 49	51.5	-53.8	4.7		65.6	78	3929	09 38 41
09 40 20	RGG9	13 39 09	52.2	-57.4	4.5		65.1	-2	3929	09 40 20
09 43 10	---	13 42 00	51.8	-57.2	4.6		64.7	168	3951	09 40 21
09 43 50	J0854+5757	13 42 40	51.1	-53.4	4.8		65.1	18	3951	09 43 50
09 45 00	=0850+581	13 43 50	50.9	-53.3	4.8		64.9	70	3960	09 43 51
09 45 20	RGG9	13 44 10	51.5	-56.9	4.6		64.4	-2	3960	09 45 20
09 48 20	---	13 47 11	51.2	-56.7	4.7		64.0	178	3983	09 45 21
09 48 40	J0854+5757	13 47 31	50.5	-53.0	4.9		64.4	-2	3983	09 48 40
09 50 00	=0850+581	13 48 51	50.3	-52.9	4.9		64.2	78	3993	09 48 41
09 50 20	RGG9	13 49 11	50.9	-56.5	4.7		63.8	-2	3993	09 50 20
09 53 10	---	13 52 01	50.6	-56.2	4.7		63.4	168	4015	09 50 21
09 53 50	J0854+5757	13 52 42	49.9	-52.5	4.9		63.7	18	4015	09 53 50
09 55 00	=0850+581	13 53 52	49.7	-52.4	5.0		63.5	70	4024	09 53 51
09 55 20	RGG9	13 54 12	50.3	-56.0	4.8		63.1	-2	4024	09 55 20
09 58 20	---	13 57 12	49.9	-55.7	4.8		62.7	178	4047	09 55 21
09 58 40	J0854+5757	13 57 32	49.3	-52.1	5.0		63.0	-2	4047	09 58 40
10 00 00	=0850+581	13 58 53	49.1	-52.0	5.0		62.8	78	4058	09 58 41
10 00 20	RGG9	13 59 13	49.7	-55.5	4.9		62.4	-2	4058	10 00 20
10 03 10	---	14 02 03	49.3	-55.2	4.9		62.1	168	4080	10 00 21
10 03 50	J0854+5757	14 02 43	48.7	-51.6	5.1		62.2	18	4080	10 03 50
10 05 00	=0850+581	14 03 53	48.6	-51.5	5.1		62.1	70	4089	10 03 51

Schedule for TORUN (Code Tr) Page 19

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	 AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
10 05 20	RGG9	14 04 13	49.0	-55.0	4.9		61.8	-2	4089	10 05 20
10 08 20	---	14 07 14	48.7	-54.7	5.0		61.4	178	4112	10 05 21
10 08 40	J0854+5757	14 07 34	48.1	-51.1	5.2		61.6	-2	4112	10 08 40
10 10 00	=0850+581	14 08 54	48.0	-51.0	5.2		61.4	78	4122	10 08 41
10 10 20	RGG9	14 09 14	48.4	-54.5	5.0		61.1	-2	4122	10 10 20
10 13 10	---	14 12 05	48.1	-54.2	5.1		60.8	168	4144	10 10 21
10 13 50	J0854+5757	14 12 45	47.5	-50.6	5.3		60.8	18	4144	10 13 50
10 15 00	=0850+581	14 13 55	47.4	-50.5	5.3		60.7	70	4153	10 13 51
10 15 20	RGG9	14 14 15	47.8	-53.9	5.1		60.5	-2	4153	10 15 20
10 18 20	---	14 17 16	47.5	-53.6	5.2		60.1	178	4176	10 15 21
10 18 40	J0854+5757	14 17 36	47.0	-50.2	5.4		60.1	-2	4176	10 18 40
10 20 00	=0850+581	14 18 56	46.8	-50.0	5.4		60.0	78	4187	10 18 41
10 20 20	RGG9	14 19 16	47.2	-53.4	5.2		59.8	-1	4187	10 20 20
10 23 10	---	14 22 06	46.9	-53.1	5.2		59.4	169	4209	10 20 21
10 23 50	J0854+5757	14 22 46	46.4	-49.7	5.4		59.4	18	4209	10 23 50
10 25 00	=0850+581	14 23 57	46.2	-49.6	5.5		59.2	70	4218	10 23 51
10 25 20	RGG9	14 24 17	46.6	-52.9	5.3		59.2	-1	4218	10 25 20
10 28 20	---	14 27 17	46.3	-52.6	5.3		58.8	179	4241	10 25 21
10 28 40	J0854+5757	14 27 37	45.8	-49.2	5.5		58.7	-1	4241	10 28 40
10 30 00	=0850+581	14 28 57	45.7	-49.1	5.5		58.5	79	4251	10 28 41
10 30 20	RGG9	14 29 18	46.0	-52.4	5.4		58.5	-1	4251	10 30 20
10 33 10	---	14 32 08	45.7	-52.1	5.4		58.1	169	4273	10 30 21
10 33 50	J0854+5757	14 32 48	45.2	-48.7	5.6		58.0	19	4273	10 33 50
10 35 00	=0850+581	14 33 58	45.1	-48.6	5.6		57.8	70	4282	10 33 51
10 35 20	RGG9	14 34 18	45.4	-51.9	5.4		57.8	-1	4282	10 35 20
10 38 20	---	14 37 19	45.1	-51.5	5.5		57.4	179	4305	10 35 21
10 38 40	J0854+5757	14 37 39	44.7	-48.2	5.7		57.3	-1	4305	10 38 40
10 40 00	=0850+581	14 38 59	44.5	-48.1	5.7		57.1	79	4315	10 38 41
10 40 20	RGG9	14 39 19	44.8	-51.3	5.5		57.2	-1	4315	10 40 20
10 43 10	---	14 42 10	44.5	-51.0	5.6		56.8	169	4337	10 40 21

Schedule for TORUN (Code Tr) Page 20

Imaging the pc-scale jet in RGG 9 at 1.6 GHz

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
10 43 50	J0854+5757	14 42 50	44.1	-47.7	5.8		56.6	19	4337	10 43 50
10 45 00	=0850+581	14 44 00	44.0	-47.5	5.8		56.4	70	4346	10 43 51
10 45 20	RGG9	14 44 20	44.2	-50.8	5.6		56.5	-1	4346	10 45 20
10 48 20	---	14 47 21	43.9	-50.5	5.7		56.1	179	4370	10 45 21
10 48 40	J0854+5757	14 47 41	43.6	-47.2	5.9		55.9	-1	4370	10 48 40
10 50 00	=0850+581	14 49 01	43.4	-47.0	5.9		55.7	79	4380	10 48 41
10 50 20	RGG9	14 49 21	43.7	-50.3	5.7		55.8	-1	4380	10 50 20
10 53 10	---	14 52 11	43.3	-49.9	5.7		55.5	169	4402	10 50 21
10 53 50	J0854+5757	14 52 51	43.0	-46.6	5.9		55.2	19	4402	10 53 50
10 55 00	=0850+581	14 54 02	42.9	-46.5	6.0		55.0	70	4411	10 53 51
10 55 20	RGG9	14 54 22	43.1	-49.7	5.8		55.2	-1	4411	10 55 20
10 58 20	---	14 57 22	42.7	-49.4	5.8		54.8	179	4434	10 55 21
10 58 40	J0854+5757	14 57 42	42.5	-46.1	6.0		54.5	-1	4434	10 58 40
11 00 00	=0850+581	14 59 02	42.3	-46.0	6.0		54.3	79	4444	10 58 41
11 00 20	RGG9	14 59 22	42.5	-49.2	5.9		54.5	-1	4444	11 00 20
11 03 10	---	15 02 13	42.2	-48.8	5.9		54.1	169	4466	11 00 21
11 03 50	J0854+5757	15 02 53	41.9	-45.6	6.1		53.8	19	4466	11 03 50
11 05 00	=0850+581	15 04 03	41.8	-45.5	6.1		53.6	70	4475	11 03 51
11 05 20	RGG9	15 04 23	42.0	-48.6	5.9		53.8	-1	4475	11 05 20
11 08 20	---	15 07 24	41.6	-48.3	6.0		53.4	179	4498	11 05 21
11 08 40	J0854+5757	15 07 44	41.4	-45.1	6.2		53.1	-1	4498	11 08 40
11 10 00	=0850+581	15 09 04	41.3	-44.9	6.2		52.9	79	4509	11 08 41
11 10 20	RGG9	15 09 24	41.4	-48.0	6.0		53.2	-1	4509	11 10 20
11 13 10	---	15 12 15	41.1	-47.7	6.1		52.8	169	4531	11 10 21
11 13 50	J0854+5757	15 12 55	40.8	-44.5	6.3		52.3	19	4531	11 13 50
11 15 00	=0850+581	15 14 05	40.7	-44.4	6.3		52.2	70	4540	11 13 51
11 15 20	RGG9	15 14 25	40.8	-47.5	6.1		52.5	-1	4540	11 15 20
11 18 20	---	15 17 25	40.5	-47.1	6.2		52.1	179	4563	11 15 21
11 18 40	J0854+5757	15 17 45	40.3	-44.0	6.4		51.7	-1	4563	11 18 40
11 20 00	=0850+581	15 19 06	40.2	-43.8	6.4		51.5	79	4573	11 18 41

```
Schedule for TORUN     (Code Tr )                                  Page  21
               Imaging the pc-scale jet in RGG 9 at 1.6 GHz
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Sun   1 Nov 2020   Day 306 ---

11 20 20  RGG9         15 19 26  40.3 -46.9  6.2      51.8    -1     4573   11 20 20
11 23 10  ---          15 22 16  40.0 -46.6  6.2      51.4   169     4595   11 20 21

11 23 50  J0854+5757   15 22 56  39.8 -43.4  6.4      50.9    19     4595   11 23 50
11 25 00  =0850+581    15 24 07  39.7 -43.3  6.5      50.8    70     4604   11 23 51

11 25 20  RGG9         15 24 27  39.7 -46.4  6.3      51.1    -1     4604   11 25 20
11 28 20  ---          15 27 27  39.4 -46.0  6.3      50.7   179     4627   11 25 21

11 28 40  J0854+5757   15 27 47  39.3 -42.9  6.5      50.2    -1     4627   11 28 40
11 30 00  =0850+581    15 29 07  39.2 -42.8  6.5      50.0    79     4637   11 28 41



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.L1024mrl1

   Setup group:   11         Station: TORUN            Total bit rate:  1024
   Format: VDIF              Bits per sample: 2        Sample rate: 32.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
            2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         L         L         L         L         L         L         L         L
                  L         L         L         L         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         U         U         L         L         U         U         L         L
                  U         U         L         L         U         U         L         L
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   9  Setup file default.  Used with PCAL = off
  LO sum=   1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
            1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
  BBC fr=    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
             625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
  Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
              16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
   Matching frequency sets:   9

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



 POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* RGG9              09 02 30.649789   * 09 06 13.777047     09 07 44.523543       0.00
                    56 22 16.96925    * 56 10 15.14820      56 05 04.73327        0.00

  0552+398          05 52 01.407168   * 05 55 30.805611     05 56 57.675632       0.00
  J0555+3948        39 48 21.94581    * 39 48 49.16496      39 48 53.03959        0.00
* DA193             /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0555+39          GSFC 2016a X/S astro solution, 415688 observations.

  0850+581          08 50 50.156145   * 08 54 41.996409     08 56 16.390797       0.05
* J0854+5757        58 08 55.67782    * 57 57 29.93916      57 52 33.50245        0.04
  J0854+57          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,   1215 observations.



EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  RGG9                96.6
  DA193              128.0
  J0854+5757          98.6
```

```
Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

em145tr

Intermed. Radio Structure J1955+5131

PI: *Muxlow*

Address: JBO

Phone: +44 (0)1477-572-609
EMAIL: tom.muxlow@manchester.ac.uk
Fax:
Phone during observation:

Observing mode:

Schedule for TORUN (Code Tr) Page 2

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

--- Sun 1 Nov 2020 Day 306 ---

Next scan frequencies:	1610.49	1610.49	1610.49	1610.49	1642.49	1642.49	1642.49	1642.49
	1674.49	1674.49	1674.49	1674.49	1706.49	1706.49	1706.49	1706.49
Next BBC frequencies:	689.51	689.51	689.51	689.51	657.51	657.51	657.51	657.51
	625.51	625.51	625.51	625.51	593.51	593.51	593.51	593.51
Next scan bandwidths:	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early / Dwell	Disk / GBytes	TPStart / SYNC
12 30 00	3C286	16 29 17	50.8	252.5	3.0		41.6	0	0	12 30 00
12 34 00	---	16 33 18	50.3	253.5	3.0		41.9	240	31	12 30 01
12 35 26	OQ208	16 34 44	53.5	242.1	2.4		37.1	47	31	12 35 26
12 39 26	---	16 38 49	52.9	243.3	2.5		37.5	240	62	12 35 27
12 49 30	J1949+5041	16 48 51	62.4	76.3	-3.0		-67.2	255	62	12 49 30
12 52 30	---	16 51 51	62.8	76.7	-3.0		-67.5	180	85	12 49 31
12 52 30	J1955+5131	16 51 51	62.3	74.3	-3.1		-68.5	-19	85	No stop
12 56 00	---	16 55 22	62.8	74.7	-3.0		-68.8	191	112	12 52 31
12 56 00	J1949+5041	16 55 22	63.4	77.2	-2.9		-67.7	-19	112	No stop
12 57 30	---	16 56 52	63.6	77.4	-2.9		-67.9	71	124	12 56 01
12 57 30	J1955+5131	16 56 52	63.0	74.9	-3.0		-68.9	-19	124	No stop
13 01 00	---	17 00 23	63.5	75.3	-2.9		-69.2	191	151	12 57 31
13 01 40	J1949+5041	17 01 03	64.2	78.0	-2.8		-68.2	21	151	13 01 40
13 03 10	---	17 02 33	64.4	78.2	-2.8		-68.3	90	162	13 01 41
13 03 10	J1955+5131	17 02 33	63.8	75.6	-2.9		-69.4	-19	162	No stop
13 06 40	---	17 06 04	64.3	76.0	-2.8		-69.7	191	189	13 03 11
13 06 40	J1949+5041	17 06 04	64.9	78.6	-2.7		-68.5	-20	189	No stop
13 08 10	---	17 07 34	65.1	78.8	-2.7		-68.6	70	201	13 06 41

13 08 10	J1955+5131	17 07 34	64.6	76.2	-2.8	-69.8	-19	201	No stop
13 11 40	---	17 11 05	65.1	76.7	-2.8	-70.1	191	228	13 08 11
13 12 20	J1949+5041	17 11 45	65.8	79.4	-2.6	-68.9	20	228	13 12 20
13 13 50	---	17 13 15	66.0	79.6	-2.6	-69.0	90	240	13 12 21
13 13 50	J1955+5131	17 13 15	65.4	76.9	-2.7	-70.3	-20	240	No stop
13 17 20	---	17 16 45	65.9	77.4	-2.7	-70.6	190	267	13 13 51
13 17 20	J1949+5041	17 16 45	66.5	80.1	-2.6	-69.2	-20	267	No stop
13 18 50	---	17 18 16	66.7	80.3	-2.5	-69.3	70	278	13 17 21

Schedule for TORUN (Code Tr) Page 3

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
13 18 50	J1955+5131	17 18 16	66.1	77.6	-2.6		-70.7	-20	278	No stop
13 22 20	---	17 21 46	66.6	78.0	-2.6		-71.0	190	305	13 18 51
13 23 00	J1949+5041	17 22 26	67.3	80.9	-2.5		-69.6	20	305	13 23 00
13 24 30	---	17 23 57	67.6	81.1	-2.4		-69.7	90	317	13 23 01
13 24 30	J1955+5131	17 23 57	67.0	78.3	-2.5		-71.2	-20	317	No stop
13 28 00	---	17 27 27	67.5	78.7	-2.5		-71.4	190	344	13 24 31
13 28 00	J1949+5041	17 27 27	68.1	81.7	-2.4		-69.9	-20	344	No stop
13 29 30	---	17 28 57	68.3	81.9	-2.4		-70.0	70	356	13 28 01
13 29 30	J1955+5131	17 28 57	67.7	78.9	-2.5		-71.5	-20	356	No stop
13 33 00	---	17 32 28	68.2	79.4	-2.4		-71.8	190	383	13 29 31
13 33 40	J1949+5041	17 33 08	68.9	82.5	-2.3		-70.2	19	383	13 33 40
13 35 10	---	17 34 38	69.2	82.7	-2.3		-70.3	90	394	13 33 41
13 35 10	J1955+5131	17 34 38	68.5	79.7	-2.4		-72.0	-21	394	No stop
13 38 40	---	17 38 09	69.1	80.1	-2.3		-72.2	189	421	13 35 11
13 38 40	J1949+5041	17 38 09	69.7	83.2	-2.2		-70.5	-21	421	No stop
13 40 10	---	17 39 39	69.9	83.5	-2.2		-70.5	69	433	13 38 41
13 40 10	J1955+5131	17 39 39	69.3	80.3	-2.3		-72.3	-21	433	No stop
13 43 40	---	17 43 10	69.8	80.8	-2.2		-72.6	189	460	13 40 11
13 44 20	J1949+5041	17 43 50	70.5	84.1	-2.1		-70.7	19	460	13 44 20
13 45 50	---	17 45 20	70.8	84.4	-2.1		-70.8	90	471	13 44 21
13 45 50	J1955+5131	17 45 20	70.1	81.1	-2.2		-72.7	-21	471	No stop
13 49 20	---	17 48 51	70.6	81.6	-2.1		-73.0	189	499	13 45 51
13 49 20	J1949+5041	17 48 51	71.3	84.9	-2.0		-71.0	-21	499	No stop
13 50 50	---	17 50 21	71.5	85.2	-2.0		-71.0	69	510	13 49 21
13 50 50	J1955+5131	17 50 21	70.9	81.8	-2.1		-73.1	-21	510	No stop
13 54 20	---	17 53 52	71.4	82.3	-2.0		-73.3	189	537	13 50 51
13 55 00	J1949+5041	17 54 32	72.1	85.8	-1.9		-71.2	18	537	13 55 00
13 56 30	---	17 56 02	72.4	86.1	-1.9		-71.2	90	549	13 55 01
13 56 30	J1955+5131	17 56 02	71.7	82.6	-2.0		-73.4	-22	549	No stop
14 00 00	---	17 59 32	72.2	83.1	-1.9		-73.6	188	576	13 56 31

Schedule for TORUN (Code Tr) Page 4

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
14 00 00	J1949+5041	17 59 32	72.9	86.7	-1.8		-71.3	-22	576	No stop
14 01 30	---	18 01 03	73.1	87.0	-1.8		-71.4	68	587	14 00 01
14 01 30	J1955+5131	18 01 03	72.5	83.3	-1.9		-73.7	-22	587	No stop
14 05 00	---	18 04 33	73.0	83.8	-1.9		-73.9	188	614	14 01 31
14 05 40	J1949+5041	18 05 13	73.7	87.7	-1.8		-71.5	18	614	14 05 40
14 07 10	---	18 06 44	74.0	88.0	-1.7		-71.5	90	626	14 05 41
14 07 10	J1955+5131	18 06 44	73.3	84.1	-1.8		-74.0	-22	626	No stop
14 10 40	---	18 10 14	73.8	84.7	-1.8		-74.2	188	653	14 07 11
14 10 40	J1949+5041	18 10 14	74.5	88.6	-1.7		-71.6	-23	653	No stop
14 12 10	---	18 11 44	74.7	88.9	-1.6		-71.6	67	665	14 10 41
14 12 10	J1955+5131	18 11 44	74.1	84.9	-1.7		-74.3	-23	665	No stop
14 15 40	---	18 15 15	74.6	85.4	-1.7		-74.5	187	692	14 12 11
14 16 20	J1949+5041	18 15 55	75.3	89.7	-1.6		-71.6	17	692	14 16 20
14 17 50	---	18 17 25	75.6	90.0	-1.5		-71.6	90	703	14 16 21
14 17 50	J1955+5131	18 17 25	74.9	85.8	-1.6		-74.6	-23	703	No stop
14 21 20	---	18 20 56	75.4	86.3	-1.6		-74.7	187	730	14 17 51
14 21 20	J1949+5041	18 20 56	76.1	90.7	-1.5		-71.6	-24	730	No stop
14 22 50	---	18 22 26	76.3	91.0	-1.5		-71.6	66	742	14 21 21
14 22 50	J1955+5131	18 22 26	75.7	86.6	-1.6		-74.8	-24	742	No stop
14 26 20	---	18 25 57	76.2	87.2	-1.5		-74.9	186	769	14 22 51
14 27 00	J1949+5041	18 26 37	76.9	91.9	-1.4		-71.5	16	769	14 27 00
14 28 30	---	18 28 07	77.2	92.3	-1.4		-71.5	90	781	14 27 01
14 28 30	J1955+5131	18 28 07	76.5	87.5	-1.5		-74.9	-24	781	No stop
14 32 00	---	18 31 38	77.0	88.2	-1.4		-75.0	186	808	14 28 31
14 32 00	J1949+5041	18 31 38	77.7	93.1	-1.3		-71.4	-25	808	No stop
14 33 30	---	18 33 08	77.9	93.4	-1.3		-71.3	65	819	14 32 01
14 33 30	J1955+5131	18 33 08	77.3	88.4	-1.4		-75.1	-25	819	No stop
14 37 00	---	18 36 39	77.8	89.1	-1.3		-75.1	185	846	14 33 31
14 37 40	J1949+5041	18 37 19	78.5	94.5	-1.2		-71.1	14	846	14 37 40
14 39 10	---	18 38 49	78.8	94.9	-1.2		-71.0	90	858	14 37 41

Schedule for TORUN (Code Tr) Page 5

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
14 39 25	J1955+5131	18 39 04	78.2	89.5	-1.3		-75.1	-11	858	14 39 25
14 49 10	---	18 48 51	79.6	91.6	-1.1		-75.1	574	933	14 39 26
14 49 25	J1955+5131	18 49 06	79.7	91.6	-1.1		-75.0	9	933	14 49 25
14 59 10	---	18 58 52	81.1	94.0	-1.0		-74.6	585	1009	14 49 26
14 59 25	J1955+5131	18 59 07	81.2	94.1	-1.0		-74.6	9	1009	14 59 25
15 09 10	---	19 08 54	82.6	97.0	-0.8		-73.6	585	1084	14 59 26
15 09 25	J1955+5131	19 09 09	82.7	97.1	-0.8		-73.6	9	1084	15 09 25
15 19 10	---	19 18 55	84.1	101.1	-0.6		-71.5	585	1159	15 09 26
15 19 25	J1955+5131	19 19 11	84.1	101.2	-0.6		-71.5	9	1159	15 19 25
15 29 10	---	19 28 57	85.6	107.1	-0.5		-67.5	585	1235	15 19 26
15 29 25	J1955+5131	19 29 12	85.6	107.3	-0.5		-67.3	8	1235	15 29 25
15 39 10	---	19 38 59	87.0	118.0	-0.3		-58.6	585	1310	15 29 26
15 39 25	J1955+5131	19 39 14	87.0	118.4	-0.3		-58.3	7	1310	15 39 25
15 49 10	---	19 49 00	88.1	143.0	-0.1		-35.6	585	1385	15 39 26
15 49 25	J1955+5131	19 49 15	88.2	143.9	-0.1		-34.7	3	1385	15 49 25
15 59 10	---	19 59 02	88.4	196.1	0.0		15.5	585	1461	15 49 26
15 59 25	J1955+5131	19 59 17	88.4	197.4	0.1		16.8	1	1461	15 59 25
16 09 10	---	20 09 04	87.5	233.7	0.2		51.2	585	1536	15 59 26
16 09 25	J1955+5131	20 09 19	87.5	234.3	0.2		51.7	6	1536	16 09 25
16 19 10	---	20 19 05	86.2	248.9	0.4		64.4	585	1612	16 09 26
16 19 25	J1955+5131	20 19 20	86.2	249.2	0.4		64.6	8	1612	16 19 25
16 29 10	---	20 29 07	84.8	256.6	0.5		70.1	585	1687	16 19 26
16 29 25	J1955+5131	20 29 22	84.7	256.7	0.6		70.2	8	1687	16 29 25
16 39 10	---	20 39 09	83.3	261.3	0.7		72.8	585	1762	16 29 26
16 39 25	J1955+5131	20 39 24	83.2	261.4	0.7		72.9	9	1762	16 39 25
16 49 10	---	20 49 10	81.8	264.7	0.9		74.3	585	1838	16 39 26
16 49 25	J1955+5131	20 49 25	81.8	264.8	0.9		74.3	9	1838	16 49 25
16 59 10	---	20 59 12	80.3	267.4	1.0		74.9	585	1913	16 49 26
16 59 25	J1955+5131	20 59 27	80.3	267.5	1.1		74.9	9	1913	16 59 25
17 09 10	---	21 09 14	78.8	269.6	1.2		75.1	585	1988	16 59 26

Schedule for TORUN (Code Tr) Page 6

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
17 09 25	J1955+5131	21 09 29	78.7	269.7	1.2		75.1	9	1988	17 09 25
17 19 10	---	21 19 15	77.3	271.6	1.4		75.1	585	2064	17 09 26
17 19 25	J1955+5131	21 19 30	77.2	271.6	1.4		75.0	9	2064	17 19 25
17 29 10	---	21 29 17	75.8	273.3	1.6		74.8	585	2139	17 19 26
17 29 25	J1955+5131	21 29 32	75.7	273.3	1.6		74.8	9	2139	17 29 25
17 39 10	---	21 39 18	74.3	274.9	1.7		74.4	585	2214	17 29 26
17 39 25	J1955+5131	21 39 34	74.2	274.9	1.7		74.4	9	2214	17 39 25
17 49 10	---	21 49 20	72.8	276.4	1.9		73.8	585	2290	17 39 26
17 49 25	J1955+5131	21 49 35	72.7	276.4	1.9		73.8	9	2290	17 49 25
17 59 10	---	21 59 22	71.3	277.8	2.1		73.2	585	2365	17 49 26
17 59 25	J1955+5131	21 59 37	71.2	277.9	2.1		73.2	9	2365	17 59 25
18 09 10	---	22 09 23	69.8	279.2	2.2		72.6	585	2440	17 59 26
18 09 25	J1955+5131	22 09 38	69.8	279.2	2.2		72.6	9	2440	18 09 25
18 19 10	---	22 19 25	68.3	280.5	2.4		71.8	585	2516	18 09 26
18 19 25	J1955+5131	22 19 40	68.3	280.6	2.4		71.8	9	2516	18 19 25
18 29 10	---	22 29 27	66.8	281.8	2.6		71.1	585	2591	18 19 26
18 29 25	J1955+5131	22 29 42	66.8	281.9	2.6		71.1	9	2591	18 29 25
18 39 10	---	22 39 28	65.4	283.1	2.7		70.3	585	2667	18 29 26
18 39 25	J1955+5131	22 39 43	65.3	283.1	2.7		70.3	9	2667	18 39 25
18 49 10	---	22 49 30	63.9	284.4	2.9		69.4	585	2742	18 39 26
18 49 50	J1949+5041	22 50 10	62.6	283.5	3.0		67.4	22	2742	18 49 50
18 51 50	---	22 52 10	62.3	283.7	3.0		67.2	120	2757	18 49 51
18 51 50	J1955+5131	22 52 10	63.5	284.7	2.9		69.2	-17	2757	No stop
18 55 30	---	22 55 51	63.0	285.1	3.0		68.9	203	2786	18 51 51
18 55 30	J1949+5041	22 55 51	61.8	284.2	3.1		66.9	-18	2786	No stop
18 57 00	---	22 57 21	61.6	284.4	3.1		66.8	72	2797	18 55 31
18 57 00	J1955+5131	22 57 21	62.8	285.3	3.0		68.8	-17	2797	No stop
19 00 40	---	23 01 02	62.2	285.8	3.1		68.5	203	2826	18 57 01
19 01 20	J1949+5041	23 01 42	60.9	285.0	3.2		66.5	22	2826	19 01 20
19 02 50	---	23 03 12	60.7	285.2	3.2		66.3	90	2837	19 01 21

Schedule for TORUN (Code Tr) Page 7

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
19 02 50	J1955+5131	23 03 12	61.9	286.0	3.1		68.3	-17	2837	No stop
19 06 30	---	23 06 53	61.4	286.5	3.2		67.9	203	2866	19 02 51
19 06 30	J1949+5041	23 06 53	60.2	285.7	3.3		66.0	-18	2866	No stop
19 08 00	---	23 08 23	60.0	285.8	3.3		65.9	72	2877	19 06 31
19 08 00	J1955+5131	23 08 23	61.2	286.7	3.2		67.8	-17	2877	No stop
19 11 40	---	23 12 04	60.6	287.1	3.3		67.5	203	2906	19 08 01
19 12 20	J1949+5041	23 12 44	59.4	286.4	3.4		65.6	22	2906	19 12 20
19 13 50	---	23 14 14	59.1	286.6	3.4		65.4	90	2917	19 12 21
19 13 50	J1955+5131	23 14 14	60.3	287.4	3.3		67.3	-17	2917	No stop
19 17 30	---	23 17 55	59.8	287.8	3.4		66.9	203	2945	19 13 51
19 17 30	J1949+5041	23 17 55	58.6	287.1	3.5		65.1	-18	2945	No stop
19 19 00	---	23 19 25	58.4	287.3	3.5		65.0	72	2957	19 17 31
19 19 00	J1955+5131	23 19 25	59.6	288.0	3.4		66.8	-17	2957	No stop
19 22 40	---	23 23 05	59.1	288.5	3.4		66.5	203	2985	19 19 01
19 23 20	J1949+5041	23 23 46	57.8	287.8	3.6		64.6	22	2985	19 23 20
19 24 50	---	23 25 16	57.6	288.0	3.6		64.5	90	2997	19 23 21
19 24 50	J1955+5131	23 25 16	58.8	288.7	3.5		66.3	-18	2997	No stop
19 28 30	---	23 28 56	58.2	289.2	3.5		65.9	202	3025	19 24 51
19 28 30	J1949+5041	23 28 56	57.0	288.5	3.6		64.2	-18	3025	No stop
19 30 00	---	23 30 27	56.8	288.7	3.7		64.0	72	3037	19 28 31
19 30 00	J1955+5131	23 30 27	58.0	289.3	3.6		65.8	-18	3037	No stop
19 33 40	---	23 34 07	57.5	289.8	3.6		65.4	202	3065	19 30 01
19 34 20	J1949+5041	23 34 47	56.2	289.2	3.7		63.7	22	3065	19 34 20
19 35 50	---	23 36 18	56.0	289.4	3.8		63.5	90	3077	19 34 21
19 35 50	J1955+5131	23 36 18	57.2	290.0	3.7		65.2	-18	3077	No stop
19 39 20	---	23 39 48	56.7	290.5	3.7		64.9	192	3104	19 35 51
19 39 20	J1949+5041	23 39 48	55.5	289.8	3.8		63.2	-18	3104	No stop
19 40 50	---	23 41 18	55.3	290.0	3.9		63.1	72	3115	19 39 21
19 40 50	J1955+5131	23 41 18	56.5	290.6	3.8		64.8	-18	3115	No stop
19 44 20	---	23 44 49	56.0	291.1	3.8		64.4	192	3143	19 40 51

Schedule for TORUN (Code Tr) Page 8

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
19 44 50	J1949+5041	23 45 19	54.7	290.5	3.9		62.7	12	3143	19 44 50
19 46 20	---	23 46 49	54.5	290.7	3.9		62.6	90	3154	19 44 51
19 46 20	J1955+5131	23 46 49	55.7	291.3	3.8		64.2	-18	3154	No stop
19 49 50	---	23 50 20	55.2	291.7	3.9		63.9	192	3181	19 46 21
19 49 50	J1949+5041	23 50 20	54.0	291.2	4.0		62.3	-18	3181	No stop
19 51 20	---	23 51 50	53.8	291.4	4.0		62.1	72	3193	19 49 51
19 51 20	J1955+5131	23 51 50	55.0	291.9	3.9		63.7	-18	3193	No stop
19 54 50	---	23 55 21	54.5	292.3	4.0		63.4	192	3220	19 51 21
19 55 20	J1949+5041	23 55 51	53.2	291.9	4.1		61.7	12	3220	19 55 20
19 56 50	---	23 57 21	53.0	292.0	4.1		61.6	90	3231	19 55 21
19 56 50	J1955+5131	23 57 21	54.2	292.6	4.0		63.2	-18	3231	No stop
20 00 20	---	00 00 52	53.8	293.0	4.1		62.8	192	3258	19 56 51
20 00 20	J1949+5041	00 00 52	52.5	292.5	4.2		61.3	-18	3258	No stop
20 01 50	---	00 02 22	52.3	292.7	4.2		61.1	72	3270	20 00 21
20 01 50	J1955+5131	00 02 22	53.6	293.2	4.1		62.7	-18	3270	No stop
20 05 20	---	00 05 52	53.1	293.6	4.2		62.3	192	3297	20 01 51
20 05 50	J1949+5041	00 06 23	51.8	293.2	4.3		60.8	12	3297	20 05 50
20 07 20	---	00 07 53	51.6	293.4	4.3		60.6	90	3309	20 05 51
20 07 20	J1955+5131	00 07 53	52.8	293.8	4.2		62.1	-18	3309	No stop
20 10 50	---	00 11 23	52.3	294.2	4.3		61.8	192	3336	20 07 21
20 10 50	J1949+5041	00 11 23	51.1	293.8	4.4		60.3	-18	3336	No stop
20 12 20	---	00 12 54	50.9	294.0	4.4		60.1	72	3347	20 10 51
20 12 20	J1955+5131	00 12 54	52.1	294.4	4.3		61.6	-18	3347	No stop
20 15 50	---	00 16 24	51.6	294.9	4.3		61.3	192	3374	20 12 21
20 16 20	J1949+5041	00 16 54	50.3	294.5	4.4		59.7	12	3374	20 16 20
20 17 50	---	00 18 25	50.1	294.7	4.5		59.6	90	3386	20 16 21
20 17 50	J1955+5131	00 18 25	51.4	295.1	4.4		61.1	-18	3386	No stop
20 21 20	---	00 21 55	50.9	295.5	4.4		60.7	192	3413	20 17 51
20 21 20	J1949+5041	00 21 55	49.6	295.1	4.5		59.2	-18	3413	No stop
20 22 50	---	00 23 25	49.4	295.3	4.6		59.1	72	3425	20 21 21

Schedule for TORUN (Code Tr) Page 9

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
20 22 50	J1955+5131	00 23 25	50.7	295.7	4.5		60.6	-18	3425	No stop
20 26 20	---	00 26 56	50.2	296.1	4.5		60.2	192	3452	20 22 51
20 26 50	J1949+5041	00 27 26	48.9	295.8	4.6		58.7	12	3452	20 26 50
20 28 20	---	00 28 56	48.7	296.0	4.6		58.6	90	3463	20 26 51
20 28 20	J1955+5131	00 28 56	49.9	296.4	4.5		60.0	-18	3463	No stop
20 31 50	---	00 32 27	49.5	296.8	4.6		59.6	192	3490	20 28 21
20 31 50	J1949+5041	00 32 27	48.2	296.4	4.7		58.2	-18	3490	No stop
20 33 20	---	00 33 57	48.0	296.6	4.7		58.0	72	3502	20 31 51
20 33 20	J1955+5131	00 33 57	49.3	297.0	4.6		59.5	-18	3502	No stop
20 36 50	---	00 37 28	48.8	297.4	4.7		59.1	192	3529	20 33 21
20 37 20	J1949+5041	00 37 58	47.5	297.1	4.8		57.6	12	3529	20 37 20
20 38 50	---	00 39 28	47.3	297.3	4.8		57.5	90	3541	20 37 21
20 38 50	J1955+5131	00 39 28	48.5	297.6	4.7		58.9	-18	3541	No stop
20 42 20	---	00 42 59	48.1	298.1	4.8		58.5	192	3568	20 38 51
20 42 20	J1949+5041	00 42 59	46.8	297.7	4.9		57.1	-18	3568	No stop
20 43 50	---	00 44 29	46.6	297.9	4.9		57.0	72	3579	20 42 21
20 43 50	J1955+5131	00 44 29	47.9	298.2	4.8		58.4	-18	3579	No stop
20 47 20	---	00 47 59	47.4	298.7	4.9		58.0	192	3606	20 43 51
20 47 50	J1949+5041	00 48 29	46.1	298.4	5.0		56.6	12	3606	20 47 50
20 49 20	---	00 50 00	45.9	298.6	5.0		56.4	90	3618	20 47 51
20 49 20	J1955+5131	00 50 00	47.1	298.9	4.9		57.8	-18	3618	No stop
20 52 50	---	00 53 30	46.7	299.3	5.0		57.4	192	3645	20 49 21
20 52 50	J1949+5041	00 53 30	45.4	299.1	5.1		56.0	-18	3645	No stop
20 54 20	---	00 55 01	45.2	299.3	5.1		55.9	72	3657	20 52 51
20 54 20	J1955+5131	00 55 01	46.5	299.5	5.0		57.2	-18	3657	No stop
20 57 50	---	00 58 31	46.0	300.0	5.0		56.9	192	3684	20 54 21
20 58 20	J1949+5041	00 59 01	44.7	299.8	5.1		55.5	12	3684	20 58 20
20 59 50	---	01 00 31	44.5	300.0	5.2		55.3	90	3695	20 58 21
20 59 50	J1955+5131	01 00 31	45.8	300.2	5.1		56.7	-18	3695	No stop
21 03 20	---	01 04 02	45.3	300.6	5.1		56.3	192	3722	20 59 51

Schedule for TORUN (Code Tr) Page 10

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
21 03 20	J1949+5041	01 04 02	44.1	300.4	5.2		54.9	-18	3722	No stop
21 04 50	---	01 05 32	43.9	300.6	5.3		54.8	72	3734	21 03 21
21 04 50	J1955+5131	01 05 32	45.1	300.8	5.2		56.1	-18	3734	No stop
21 08 20	---	01 09 03	44.7	301.2	5.2		55.7	192	3761	21 04 51
21 08 50	J1949+5041	01 09 33	43.3	301.1	5.3		54.4	12	3761	21 08 50
21 10 20	---	01 11 03	43.2	301.3	5.3		54.2	90	3772	21 08 51
21 10 20	J1955+5131	01 11 03	44.4	301.5	5.2		55.5	-18	3772	No stop
21 13 50	---	01 14 34	44.0	301.9	5.3		55.1	192	3800	21 10 21
21 13 50	J1949+5041	01 14 34	42.7	301.7	5.4		53.8	-18	3800	No stop
21 15 20	---	01 16 04	42.5	301.9	5.4		53.7	72	3811	21 13 51
21 15 20	J1955+5131	01 16 04	43.8	302.1	5.3		55.0	-18	3811	No stop
21 18 50	---	01 19 35	43.3	302.5	5.4		54.6	192	3838	21 15 21
21 19 20	J1949+5041	01 20 05	42.0	302.4	5.5		53.2	12	3838	21 19 20
21 20 50	---	01 21 35	41.8	302.6	5.5		53.1	90	3850	21 19 21
21 20 50	J1955+5131	01 21 35	43.1	302.8	5.4		54.3	-18	3850	No stop
21 24 20	---	01 25 05	42.6	303.2	5.5		54.0	192	3877	21 20 51
21 24 20	J1949+5041	01 25 05	41.4	303.1	5.6		52.7	-18	3877	No stop
21 25 50	---	01 26 36	41.2	303.3	5.6		52.5	72	3888	21 24 21
21 25 50	J1955+5131	01 26 36	42.4	303.4	5.5		53.8	-18	3888	No stop
21 29 20	---	01 30 06	42.0	303.8	5.6		53.4	192	3915	21 25 51
21 29 50	J1949+5041	01 30 36	40.7	303.8	5.7		52.1	12	3915	21 29 50
21 31 20	---	01 32 07	40.5	304.0	5.7		51.9	90	3927	21 29 51
21 31 20	J1955+5131	01 32 07	41.7	304.1	5.6		53.2	-18	3927	No stop
21 34 50	---	01 35 37	41.3	304.5	5.7		52.8	192	3954	21 31 21
21 34 50	J1949+5041	01 35 37	40.1	304.4	5.8		51.5	-18	3954	No stop
21 36 20	---	01 37 07	39.9	304.6	5.8		51.4	72	3966	21 34 51
21 36 20	J1955+5131	01 37 07	41.1	304.7	5.7		52.6	-18	3966	No stop
21 39 50	---	01 40 38	40.7	305.2	5.7		52.2	192	3993	21 36 21
21 40 20	J1949+5041	01 41 08	39.4	305.1	5.8		50.9	12	3993	21 40 20
21 41 50	---	01 42 38	39.2	305.3	5.9		50.7	90	4004	21 40 21

Schedule for TORUN (Code Tr) Page 11

Intermed. Radio Structure J1955+5131

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 1 Nov 2020 Day 306 ---										
21 41 50	J1955+5131	01 42 38	40.4	305.4	5.8		52.0	-18	4004	No stop
21 45 20	---	01 46 09	40.0	305.9	5.8		51.6	192	4031	21 41 51
21 45 20	J1949+5041	01 46 09	38.8	305.8	5.9		50.3	-18	4031	No stop
21 46 50	---	01 47 39	38.6	306.0	6.0		50.2	72	4043	21 45 21
21 46 50	J1955+5131	01 47 39	39.8	306.1	5.9		51.4	-18	4043	No stop
21 50 20	---	01 51 10	39.4	306.5	5.9		51.0	192	4070	21 46 51
21 50 50	J1949+5041	01 51 40	38.1	306.5	6.0		49.7	12	4070	21 50 50
21 52 20	---	01 53 10	37.9	306.7	6.0		49.6	90	4082	21 50 51
21 52 20	J1955+5131	01 53 10	39.2	306.7	5.9		50.8	-18	4082	No stop
21 55 50	---	01 56 41	38.7	307.2	6.0		50.3	192	4109	21 52 21
21 55 50	J1949+5041	01 56 41	37.5	307.1	6.1		49.2	-18	4109	No stop
21 57 20	---	01 58 11	37.3	307.3	6.1		49.0	72	4120	21 55 51
21 57 20	J1955+5131	01 58 11	38.6	307.4	6.0		50.2	-18	4120	No stop
22 00 50	---	02 01 41	38.2	307.8	6.1		49.8	192	4147	21 57 21
22 01 20	J1949+5041	02 02 12	36.8	307.9	6.2		48.5	12	4147	22 01 20
22 02 50	---	02 03 42	36.7	308.1	6.2		48.3	90	4159	22 01 21
22 02 50	J1955+5131	02 03 42	37.9	308.1	6.1		49.5	-18	4159	No stop
22 06 55	---	02 07 47	37.4	308.6	6.2		49.0	227	4190	22 02 51
22 06 55	J1949+5041	02 07 47	36.2	308.6	6.3		47.9	-18	4190	No stop
22 08 25	---	02 09 18	36.0	308.8	6.3		47.7	72	4202	22 06 56
22 10 53	BLLAC	02 11 45	48.3	281.1	4.1		52.9	76	4202	22 10 53
22 14 53	---	02 15 46	47.7	281.8	4.2		52.7	240	4233	22 10 54
22 26 00	3C84	02 26 56	75.3	136.2	-0.9		-33.8	354	4233	22 26 00
22 30 00	---	02 30 56	75.7	138.7	-0.8		-32.0	240	4264	22 26 01

SETUP FILE INFORMATION:
NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

======== Setup file: sess320.L1024

Setup group: 7 Station: TORUN Total bit rate: 1024
Format: VDIF Bits per sample: 2 Sample rate: 32.000
Number of channels: 16 DBE type: DBBC_DDC Speedup factor: 1.00

Disk used to record data.

```
  1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
            2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         L         L         L         L         L         L         L         L
                  L         L         L         L         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         U         U         L         L         U         U         L         L
                  U         U         L         L         U         U         L         L
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
            1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
  BBC fr=    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
             625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
  Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
              16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* J1955+5131        19 54 22.470371   * 19 55 42.738600     19 56 14.972269       0.00
                    51 23 46.42697    * 51 31 48.54800      51 35 24.93826        0.00

* J1949+5041        19 48 22.065862   * 19 49 43.492100     19 50 16.163793       0.00
                    50 33 53.00372    * 50 41 31.98200      50 44 58.71849        0.00

* 3C84              03 16 29.567265   * 03 19 48.160096     03 21 11.360532       1.50
  J0319+4130        41 19 51.91692    * 41 30 42.10404      41 35 09.16009        2.86
  0316+413          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0319+41          GSFC 2016a X/S astro solution,  10291 observations.

* 3C286             13 28 49.657769   * 13 31 08.288061     13 32 03.575436       0.17
  J1331+3030        30 45 58.64066    * 30 30 32.95930      30 24 16.62731        0.16
  1328+307          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J1331+30          GSFC 2016a X/S astro solution,    269 observations.

* OQ208             14 04 45.615156   * 14 07 00.394415     14 07 54.090898       0.24
  J1407+2827        28 41 29.23515    * 28 27 14.69019      28 21 29.36556        0.35
  1404+286          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J1407+28          GSFC 2016a X/S astro solution,  68278 observations.

  VR422201          22 00 39.362504   * 22 02 43.291371     22 03 34.532007       0.01
  J2202+4216        42 02 08.59075    * 42 16 39.97988      42 22 54.44872        0.00
* BLLAC             /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
```

```
 2200+420          GSFC 2016a X/S astro solution,  52189 observations.
 J2202+42
```

EFFECT OF SOLAR CORONA

```
The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 J1955+5131          96.5
 J1949+5041          95.3
 3C84               150.9
 3C286               47.2
 OQ208               43.4
 BLLAC              117.2

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

en007atr

E-EVN: EN007A

PI: *Nimmo*


```
Address:  JIVE
          Oude Hoogeveensedijk 4
          Dwingeloo
          Netherlands

Phone:    +31 521 596 537
EMAIL:    k.nimmo@uva.nl
Fax:      +31 521 596 539
Phone during observation: +31 521 596 530
```


```
Observing mode: L-band 1Gbps

Schedule for TORUN     (Code Tr )                                    Page   2
               e-EVN: EN007A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                  Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Mon   2 Nov 2020   Day 307 ---

 Next scan frequencies:  1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
                         1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
 Next BBC frequencies:    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
                          625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
 Next scan bandwidths:     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
                           16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00

00 00 00  J0854+2006   04 01 11  25.6  90.3 -4.9     -39.7     0        0   00 00 00
00 05 00  =OJ287       04 06 11  26.4  91.3 -4.8     -39.7   300       39   00 00 01

00 11 00  J0121+1149   04 12 12  36.8 235.4  2.8      30.4    57       39   00 11 00
00 12 30  =0119+115    04 13 43  36.7 235.8  2.8      30.5    90       50   00 11 01

00 12 30  NR4          04 13 43  33.8 237.6  3.0      31.0   -25       50   No stop
00 18 10  ---          04 19 24  33.1 239.1  3.1      31.6   315       94   00 12 31

00 18 50  J0121+1149   04 20 04  35.9 237.5  3.0      31.2    16       94   00 18 50
00 20 10  =0119+115    04 21 24  35.7 237.8  3.0      31.3    80      104   00 18 51

00 20 10  NR4          04 21 24  32.8 239.6  3.2      31.8   -25      104   No stop
00 25 50  ---          04 27 05  32.1 241.0  3.3      32.3   315      148   00 20 11

00 25 50  J0121+1149   04 27 05  35.0 239.3  3.1      31.8   -24      148   No stop
00 27 50  =0119+115    04 29 05  34.7 239.8  3.1      32.0    96      164   00 25 51

00 27 50  NR4          04 29 05  31.8 241.5  3.3      32.4   -25      164   No stop
00 33 30  ---          04 34 46  31.1 242.9  3.4      32.9   315      207   00 27 51

00 34 10  J0121+1149   04 35 26  33.9 241.4  3.2      32.6    15      207   00 34 10
00 35 40  =0119+115    04 36 56  33.7 241.8  3.2      32.7    90      219   00 34 11

00 35 40  NR4          04 36 56  30.8 243.4  3.4      33.1   -25      219   No stop
00 41 20  ---          04 42 37  30.0 244.7  3.5      33.5   315      263   00 35 41
```

00 42 00	J0121+1149	04 43 17	32.8	243.3	3.3	33.3	15	263	00 42 00
00 43 20	=0119+115	04 44 38	32.6	243.6	3.4	33.4	80	273	00 42 01
00 43 20	NR4	04 44 38	29.7	245.2	3.5	33.6	-25	273	No stop
00 49 00	---	04 50 19	29.0	246.5	3.6	34.0	315	317	00 43 21
00 49 00	J0121+1149	04 50 19	31.9	245.0	3.5	33.8	-25	317	No stop
00 51 00	=0119+115	04 52 19	31.6	245.5	3.5	33.9	95	332	00 49 01
00 51 00	NR4	04 52 19	28.7	247.0	3.7	34.2	-25	332	No stop
00 56 40	---	04 58 00	27.9	248.3	3.8	34.5	315	376	00 51 01

Schedule for TORUN (Code Tr) Page 3

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
00 57 20	J0121+1149	04 58 40	30.7	247.0	3.6		34.4	15	376	00 57 20
00 58 50	=0119+115	05 00 10	30.5	247.3	3.6		34.5	90	388	00 57 21
00 58 50	NR4	05 00 10	27.6	248.8	3.8		34.7	-25	388	No stop
01 04 30	---	05 05 51	26.8	250.1	3.9		35.0	315	432	00 58 51
01 05 10	J0121+1149	05 06 31	29.6	248.8	3.7		34.9	15	432	01 05 10
01 06 30	=0119+115	05 07 51	29.5	249.1	3.8		35.0	80	442	01 05 11
01 06 30	NR4	05 07 51	26.5	250.6	3.9		35.1	-25	442	No stop
01 12 10	---	05 13 32	25.7	251.8	4.0		35.4	315	486	01 06 31
01 12 10	J0121+1149	05 13 32	28.7	250.4	3.8		35.3	-25	486	No stop
01 14 10	=0119+115	05 15 33	28.4	250.9	3.9		35.4	95	501	01 12 11
01 14 10	NR4	05 15 33	25.4	252.3	4.1		35.5	-25	501	No stop
01 19 50	---	05 21 14	24.6	253.5	4.2		35.8	315	545	01 14 11
01 20 30	J0121+1149	05 21 54	27.5	252.3	4.0		35.8	15	545	01 20 30
01 22 00	=0119+115	05 23 24	27.2	252.6	4.0		35.9	90	556	01 20 31
01 22 00	NR4	05 23 24	24.3	254.0	4.2		35.9	-25	556	No stop
01 27 40	---	05 29 05	23.5	255.2	4.3		36.2	315	600	01 22 01
01 28 20	J0121+1149	05 29 45	26.3	254.1	4.1		36.2	15	600	01 28 20
01 29 50	=0119+115	05 31 15	26.1	254.4	4.1		36.2	90	612	01 28 21
01 29 50	NR4	05 31 15	23.2	255.7	4.3		36.3	-25	612	No stop
01 34 30	---	05 35 56	22.5	256.7	4.4		36.4	255	648	01 29 51
01 34 30	J0121+1149	05 35 56	25.4	255.4	4.2		36.4	-25	648	No stop
01 36 30	=0119+115	05 37 56	25.1	255.8	4.3		36.5	95	663	01 34 31
01 36 30	J0121+1127	05 37 56	24.8	255.6	4.3		36.4	-12	663	No stop
01 39 30	=0118+111	05 40 57	24.4	256.3	4.3		36.5	168	687	01 36 31
01 39 30	J0121+1149	05 40 57	24.7	256.5	4.3		36.6	-12	687	No stop
01 41 20	=0119+115	05 42 47	24.4	256.9	4.3		36.7	98	701	01 39 31
01 45 20	J0358+5606	05 46 48	74.4	292.0	1.8		90.1	38	701	01 45 20
01 46 20	=0354+559	05 47 48	74.2	292.0	1.8		89.9	60	709	01 45 21
01 47 20	B0355+54	05 48 48	74.0	285.1	1.8		83.2	31	709	01 47 20
01 50 20	---	05 51 49	73.6	285.3	1.9		82.7	180	732	01 47 21

Schedule for TORUN (Code Tr) Page 4

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
01 50 20	J0358+5606	05 51 49	73.7	292.0	1.9		89.1	-28	732	No stop
01 52 20	=0354+559	05 53 49	73.4	292.0	1.9		88.7	92	747	01 50 21
01 54 20	J0451+5935	05 55 49	79.2	313.3	1.0		120.2	62	747	01 54 20
01 55 50	=0446+595	05 57 20	79.0	312.8	1.1		119.4	90	759	01 54 21
01 56 50	NR3	05 58 20	76.8	311.0	1.4		114.0	38	759	01 56 50
02 01 50	---	06 03 21	76.2	310.0	1.4		111.9	300	797	01 56 51
02 01 50	J0451+5935	06 03 21	78.3	311.0	1.2		116.3	-22	797	No stop
02 03 50	=0446+595	06 05 21	78.1	310.5	1.2		115.4	98	813	02 01 51
02 04 40	NR3	06 06 11	75.9	309.5	1.5		110.7	28	813	02 04 40
02 09 40	---	06 11 12	75.3	308.6	1.6		108.8	300	851	02 04 41
02 10 20	J0451+5935	06 11 52	77.4	308.9	1.3		112.4	18	851	02 10 20
02 11 50	=0446+595	06 13 22	77.2	308.6	1.3		111.8	90	863	02 10 21
02 12 40	NR3	06 14 12	75.0	308.2	1.6		107.7	28	863	02 12 40
02 17 40	---	06 19 13	74.4	307.5	1.7		106.0	300	902	02 12 41
02 17 40	J0451+5935	06 19 13	76.5	307.4	1.4		109.4	-22	902	No stop
02 19 40	=0446+595	06 21 13	76.3	307.1	1.5		108.6	98	917	02 17 41
02 20 30	NR3	06 22 04	74.0	307.1	1.8		105.0	28	917	02 20 30
02 25 30	---	06 27 04	73.4	306.6	1.8		103.4	300	956	02 20 31
02 25 30	J0451+5935	06 27 04	75.5	306.1	1.6		106.5	-22	956	No stop
02 27 30	=0446+595	06 29 05	75.3	305.9	1.6		105.8	98	971	02 25 31
02 28 20	NR3	06 29 55	73.1	306.3	1.9		102.5	28	971	02 28 20
02 33 20	---	06 34 56	72.5	305.9	2.0		101.0	300	1010	02 28 21
02 34 00	J0451+5935	06 35 36	74.5	305.1	1.7		103.6	18	1010	02 34 00
02 35 30	=0446+595	06 37 06	74.3	304.9	1.7		103.1	90	1022	02 34 01
02 36 20	NR3	06 37 56	72.1	305.7	2.0		100.2	28	1022	02 36 20
02 41 20	---	06 42 57	71.5	305.3	2.1		98.8	300	1060	02 36 21
02 41 20	J0451+5935	06 42 57	73.6	304.3	1.8		101.3	-22	1060	No stop
02 43 20	=0446+595	06 44 57	73.4	304.2	1.9		100.7	98	1076	02 41 21
02 44 10	NR3	06 45 48	71.1	305.2	2.1		98.0	28	1076	02 44 10
02 49 10	---	06 50 48	70.5	304.9	2.2		96.7	300	1114	02 44 11

Schedule for TORUN (Code Tr) Page 5

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
02 49 10	J0451+5935	06 50 48	72.6	303.7	2.0		99.0	-22	1114	No stop
02 51 10	=0446+595	06 52 49	72.4	303.6	2.0		98.5	98	1130	02 49 11
02 52 00	NR3	06 53 39	70.2	304.8	2.3		96.0	28	1130	02 52 00
02 57 00	---	06 58 40	69.6	304.7	2.4		94.7	300	1168	02 52 01
02 57 40	J0451+5935	06 59 20	71.6	303.3	2.1		96.7	18	1168	02 57 40
02 59 10	=0446+595	07 00 50	71.4	303.2	2.1		96.4	90	1180	02 57 41
03 00 00	NR3	07 01 40	69.2	304.6	2.4		94.0	28	1180	03 00 00
03 05 00	---	07 06 41	68.6	304.5	2.5		92.8	300	1219	03 00 01
03 05 00	J0451+5935	07 06 41	70.6	303.0	2.2		94.9	-21	1219	No stop
03 07 00	=0446+595	07 08 41	70.4	302.9	2.3		94.4	99	1234	03 05 01
03 07 50	NR3	07 09 31	68.2	304.4	2.5		92.1	28	1234	03 07 50
03 12 50	---	07 14 32	67.6	304.4	2.6		91.0	300	1273	03 07 51
03 13 30	J0451+5935	07 15 12	69.6	302.7	2.4		92.8	19	1273	03 13 30
03 15 00	=0446+595	07 16 43	69.4	302.7	2.4		92.5	90	1284	03 13 31
03 15 50	NR3	07 17 33	67.2	304.4	2.7		90.4	28	1284	03 15 50
03 19 50	---	07 21 33	66.7	304.4	2.7		89.5	240	1315	03 15 51
03 20 20	J0451+5935	07 22 03	68.7	302.7	2.5		91.3	9	1315	03 20 20
03 21 50	=0446+595	07 23 34	68.5	302.6	2.5		90.9	90	1327	03 20 21
03 21 50	J0449+6332	07 23 34	67.9	313.2	2.5		100.3	-36	1327	No stop
03 24 50	=0444+634	07 26 34	67.6	313.0	2.6		99.5	144	1350	03 21 51
03 24 50	J0451+5935	07 26 34	68.1	302.6	2.6		90.3	-36	1350	No stop
03 26 40	=0446+595	07 28 25	67.9	302.6	2.6		89.9	74	1364	03 24 51
03 29 40	J0929+8612	07 31 25	56.4	363.6	-2.1		-146.2	43	1364	03 29 40
03 31 10	=0916+864	07 32 55	56.4	363.6	-2.0		-146.6	90	1376	03 29 41
03 31 50	NR1	07 33 35	56.3	359.7	0.2		177.3	18	1376	03 31 50
03 36 50	---	07 38 36	56.3	359.6	0.2		175.9	300	1414	03 31 51
03 36 50	J0929+8612	07 38 36	56.5	363.4	-1.9		-148.2	-22	1414	No stop
03 38 50	=0916+864	07 40 37	56.5	363.4	-1.9		-148.7	98	1430	03 36 51
03 39 30	NR1	07 41 17	56.3	359.5	0.3		175.2	18	1430	03 39 30
03 44 30	---	07 46 17	56.3	359.4	0.4		173.9	300	1469	03 39 31

Schedule for TORUN (Code Tr) Page 6

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 2 Nov 2020 Day 307 ---										
03 45 10	J0929+8612	07 46 58	56.5	363.2	-1.8		-150.4	18	1469	03 45 10
03 46 40	=0916+864	07 48 28	56.5	363.2	-1.8		-150.8	90	1480	03 45 11
03 47 20	NR1	07 49 08	56.3	359.3	0.4		173.1	18	1480	03 47 20
03 52 20	---	07 54 09	56.3	359.2	0.5		171.7	300	1519	03 47 21
03 52 20	J0929+8612	07 54 09	56.6	363.0	-1.7		-152.4	-22	1519	No stop
03 54 20	=0916+864	07 56 09	56.6	362.9	-1.6		-152.9	98	1534	03 52 21
03 55 00	NR1	07 56 49	56.3	359.2	0.6		171.0	18	1534	03 55 00
04 00 00	---	08 01 50	56.3	359.0	0.6		169.7	300	1573	03 55 01
04 00 00	J0929+8612	08 01 50	56.6	362.8	-1.5		-154.5	-22	1573	No stop
04 02 00	=0916+864	08 03 50	56.7	362.7	-1.5		-155.0	98	1588	04 00 01
04 02 40	NR1	08 04 30	56.3	359.0	0.7		168.9	18	1588	04 02 40
04 07 40	---	08 09 31	56.3	358.8	0.8		167.6	300	1627	04 02 41
04 08 20	J0929+8612	08 10 11	56.7	362.6	-1.4		-156.8	18	1627	04 08 20
04 09 50	=0916+864	08 11 42	56.7	362.5	-1.4		-157.2	90	1639	04 08 21
04 10 30	NR1	08 12 22	56.3	358.8	0.8		166.8	18	1639	04 10 30
04 15 30	---	08 17 23	56.2	358.6	0.9		165.5	300	1677	04 10 31
04 15 30	J0929+8612	08 17 23	56.7	362.4	-1.3		-158.7	-22	1677	No stop
04 17 30	=0916+864	08 19 23	56.8	362.3	-1.3		-159.3	98	1693	04 15 31
04 18 10	NR1	08 20 03	56.2	358.6	0.9		164.7	18	1693	04 18 10
04 23 10	---	08 25 04	56.2	358.5	1.0		163.4	300	1731	04 18 11
04 23 10	J0929+8612	08 25 04	56.8	362.1	-1.2		-160.8	-22	1731	No stop
04 25 10	=0916+864	08 27 04	56.8	362.1	-1.1		-161.4	98	1747	04 23 11
04 25 50	NR1	08 27 44	56.2	358.4	1.1		162.7	18	1747	04 25 50
04 30 50	---	08 32 45	56.2	358.3	1.2		161.3	300	1785	04 25 51
04 31 30	J0929+8612	08 33 25	56.8	361.9	-1.0		-163.1	18	1785	04 31 30
04 33 00	=0916+864	08 34 55	56.8	361.8	-1.0		-163.5	90	1797	04 31 31
04 33 40	NR1	08 35 36	56.2	358.2	1.2		160.5	18	1797	04 33 40
04 38 40	---	08 40 36	56.1	358.1	1.3		159.2	300	1836	04 33 41
04 38 40	J0929+8612	08 40 36	56.9	361.7	-0.9		-165.1	-22	1836	No stop
04 40 40	=0916+864	08 42 37	56.9	361.6	-0.9		-165.6	98	1851	04 38 41

Schedule for TORUN (Code Tr) Page 7

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 2 Nov 2020 Day 307 ---										
04 41 20	NR1	08 43 17	56.1	358.0	1.3		158.5	18	1851	04 41 20
04 46 20	---	08 48 18	56.1	357.9	1.4		157.1	300	1890	04 41 21
04 47 00	J0929+8612	08 48 58	56.9	361.4	-0.8		-167.4	18	1890	04 47 00
04 48 30	=0916+864	08 50 28	56.9	361.4	-0.7		-167.8	90	1901	04 47 01
04 49 10	NR1	08 51 08	56.1	357.8	1.5		156.4	18	1901	04 49 10
04 53 10	---	08 55 09	56.1	357.7	1.5		155.3	240	1932	04 49 11
04 53 40	J0929+8612	08 55 39	56.9	361.2	-0.7		-169.2	8	1932	04 53 40
04 55 10	=0916+864	08 57 09	56.9	361.2	-0.6		-169.6	90	1944	04 53 41
04 55 10	J0702+8549	08 57 09	56.8	356.5	1.8		150.3	-24	1944	No stop
04 58 10	=0645+858	09 00 10	56.8	356.4	1.8		149.5	156	1967	04 55 11
04 58 10	J0929+8612	09 00 10	56.9	361.1	-0.6		-170.5	-24	1967	No stop
05 00 00	=0916+864	09 02 00	56.9	361.0	-0.5		-171.0	86	1981	04 58 11
05 06 00	J0854+2006	09 08 01	56.9	185.2	0.2		3.3	-7	1981	05 06 00
05 11 00	=OJ287	09 13 02	56.8	187.3	0.3		4.7	293	2020	05 06 01
05 17 00	J1048+7143	09 19 03	69.0	19.9	-1.5		-139.7	10	2020	05 17 00
05 18 30	=1044+719	09 20 33	69.1	19.6	-1.5		-140.3	90	2031	05 17 01
05 19 20	R4	09 21 23	68.1	14.0	-1.2		-149.1	24	2031	05 19 20
05 24 20	---	09 26 24	68.3	13.2	-1.2		-151.1	300	2070	05 19 21
05 24 20	J1048+7143	09 26 24	69.4	18.6	-1.4		-142.6	-26	2070	No stop
05 26 20	=1044+719	09 28 24	69.5	18.2	-1.4		-143.4	94	2086	05 24 21
05 26 40	R4	09 28 44	68.4	12.8	-1.1		-152.0	-6	2086	05 26 40
05 32 10	---	09 34 15	68.5	11.8	-1.0		-154.2	324	2128	05 26 41
05 32 50	J1048+7143	09 34 55	69.7	17.0	-1.2		-146.1	14	2128	05 32 50
05 34 20	=1044+719	09 36 25	69.8	16.7	-1.2		-146.7	90	2140	05 32 51
05 34 40	R4	09 36 46	68.6	11.4	-1.0		-155.2	-6	2140	05 34 40
05 40 10	---	09 42 16	68.8	10.4	-0.9		-157.4	324	2182	05 34 41
05 40 10	J1048+7143	09 42 16	70.1	15.6	-1.1		-149.2	-25	2182	No stop
05 42 10	=1044+719	09 44 17	70.1	15.2	-1.1		-150.1	95	2198	05 40 11
05 42 30	R4	09 44 37	68.8	10.0	-0.9		-158.4	-5	2198	05 42 30
05 48 00	---	09 50 08	69.0	9.0	-0.8		-160.7	325	2240	05 42 31

Schedule for TORUN (Code Tr) Page 8

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 2 Nov 2020 Day 307 ---										
05 48 00	J1048+7143	09 50 08	70.4	14.0	-1.0		-152.6	-25	2240	No stop
05 50 00	=1044+719	09 52 08	70.4	13.6	-1.0		-153.4	95	2256	05 48 01
05 50 20	R4	09 52 28	69.0	8.5	-0.7		-161.6	-5	2256	05 50 20
05 55 50	---	09 57 59	69.1	7.5	-0.6		-163.9	325	2298	05 50 21
05 56 30	J1048+7143	09 58 39	70.6	12.2	-0.9		-156.3	15	2298	05 56 30
05 58 00	=1044+719	10 00 09	70.7	11.9	-0.8		-157.0	90	2310	05 56 31
05 58 20	R4	10 00 29	69.2	7.0	-0.6		-165.0	-5	2310	05 58 20
06 03 50	---	10 06 00	69.3	5.9	-0.5		-167.3	325	2352	05 58 21
06 03 50	J1048+7143	10 06 00	70.9	10.6	-0.7		-159.6	-24	2352	No stop
06 05 50	=1044+719	10 08 01	70.9	10.1	-0.7		-160.5	96	2368	06 03 51
06 06 10	R4	10 08 21	69.3	5.5	-0.5		-168.3	-4	2368	06 06 10
06 11 40	---	10 13 52	69.4	4.4	-0.4		-170.6	326	2410	06 06 11
06 11 40	J1048+7143	10 13 52	71.1	8.8	-0.6		-163.2	-24	2410	No stop
06 13 40	=1044+719	10 15 52	71.1	8.3	-0.6		-164.1	96	2426	06 11 41
06 14 00	R4	10 16 12	69.4	3.9	-0.3		-171.6	-4	2426	06 14 00
06 19 30	---	10 21 43	69.5	2.8	-0.2		-174.0	326	2468	06 14 01
06 20 10	J1048+7143	10 22 23	71.2	6.7	-0.5		-167.1	17	2468	06 20 10
06 21 40	=1044+719	10 23 53	71.3	6.4	-0.4		-167.8	90	2480	06 20 11
06 22 00	R4	10 24 13	69.5	2.3	-0.2		-175.0	-3	2480	06 22 00
06 27 30	---	10 29 44	69.5	1.2	-0.1		-177.4	327	2522	06 22 01
06 27 30	J1048+7143	10 29 44	71.3	5.0	-0.3		-170.5	-22	2522	No stop
06 29 30	=1044+719	10 31 45	71.4	4.5	-0.3		-171.4	98	2538	06 27 31
06 29 50	R4	10 32 05	69.5	0.8	-0.1		-178.4	-2	2538	06 29 50
06 35 20	---	10 37 35	69.5	-0.4	0.0		179.2	328	2580	06 29 51
06 36 00	J1048+7143	10 38 16	71.4	2.9	-0.2		-174.5	19	2580	06 36 00
06 37 30	=1044+719	10 39 46	71.4	2.5	-0.2		-175.2	90	2592	06 36 01
06 37 50	R4	10 40 06	69.5	-0.9	0.1		178.2	-1	2592	06 37 50
06 43 20	---	10 45 37	69.5	-2.0	0.2		175.8	329	2634	06 37 51
06 43 50	J1048+7143	10 46 07	71.5	0.9	-0.1		-178.2	9	2634	06 43 50
06 45 20	=1044+719	10 47 37	71.5	0.6	-0.0		-178.9	90	2646	06 43 51

Schedule for TORUN (Code Tr) Page 9

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 2 Nov 2020 Day 307 ---										
06 45 20	J1056+7011	10 47 37	73.0	3.1	-0.2		-174.5	-19	2646	No stop
06 48 20	=1053+704	10 50 38	73.0	2.2	-0.1		-176.1	161	2669	06 45 21
06 48 20	J1048+7143	10 50 38	71.5	-0.2	0.0		179.7	-19	2669	No stop
06 50 10	=1044+719	10 52 28	71.5	-0.6	0.0		178.8	91	2683	06 48 21
06 51 30	J1240+6958	10 53 48	69.3	26.1	-1.8		-130.0	11	2683	06 51 30
06 53 00	=1238+702	10 55 18	69.4	25.8	-1.8		-130.5	90	2695	06 51 31
06 53 50	R21	10 56 09	70.0	20.9	-1.4		-139.9	25	2695	06 53 50
06 58 50	---	11 01 09	70.3	20.0	-1.3		-142.0	300	2734	06 53 51
06 58 50	J1240+6958	11 01 09	69.7	24.9	-1.7		-132.8	-25	2734	No stop
07 00 50	=1238+702	11 03 10	69.9	24.5	-1.6		-133.6	95	2749	06 58 51
07 01 30	R21	11 03 50	70.4	19.4	-1.3		-143.1	15	2749	07 01 30
07 06 40	---	11 09 01	70.7	18.4	-1.2		-145.3	310	2789	07 01 31
07 07 20	J1240+6958	11 09 41	70.2	23.4	-1.5		-136.2	15	2789	07 07 20
07 08 50	=1238+702	11 11 11	70.3	23.1	-1.5		-136.8	90	2801	07 07 21
07 09 30	R21	11 11 51	70.8	17.8	-1.2		-146.5	15	2801	07 09 30
07 14 40	---	11 17 02	71.1	16.7	-1.1		-148.8	310	2840	07 09 31
07 14 40	J1240+6958	11 17 02	70.7	22.0	-1.4		-139.3	-25	2840	No stop
07 16 40	=1238+702	11 19 02	70.8	21.6	-1.4		-140.1	95	2856	07 14 41
07 17 20	R21	11 19 42	71.2	16.1	-1.0		-150.0	14	2856	07 17 20
07 22 30	---	11 24 53	71.4	14.9	-1.0		-152.3	310	2896	07 17 21
07 22 30	J1240+6958	11 24 53	71.1	20.4	-1.3		-142.6	-26	2896	No stop
07 24 30	=1238+702	11 26 54	71.2	19.9	-1.2		-143.5	94	2911	07 22 31
07 25 10	R21	11 27 34	71.5	14.3	-0.9		-153.6	14	2911	07 25 10
07 30 20	---	11 32 45	71.7	13.0	-0.8		-156.0	310	2951	07 25 11
07 31 00	J1240+6958	11 33 25	71.5	18.5	-1.1		-146.4	14	2951	07 31 00
07 32 30	=1238+702	11 34 55	71.6	18.2	-1.1		-147.1	90	2963	07 31 01
07 33 10	R21	11 35 35	71.8	12.4	-0.8		-157.3	14	2963	07 33 10
07 38 20	---	11 40 46	71.9	11.1	-0.7		-159.7	310	3003	07 33 11
07 38 20	J1240+6958	11 40 46	71.9	16.8	-1.0		-149.7	-26	3003	No stop
07 40 20	=1238+702	11 42 46	71.9	16.3	-1.0		-150.7	94	3018	07 38 21

Schedule for TORUN (Code Tr) Page 10

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
07 41 00	R21	11 43 26	72.0	10.4	-0.6		-161.0	13	3018	07 41 00
07 46 10	---	11 48 37	72.1	9.1	-0.6		-163.5	310	3058	07 41 01
07 46 10	J1240+6958	11 48 37	72.2	14.9	-0.9		-153.4	-26	3058	No stop
07 48 10	=1238+702	11 50 37	72.3	14.4	-0.8		-154.4	94	3074	07 46 11
07 48 50	R21	11 51 18	72.2	8.4	-0.5		-164.8	13	3074	07 48 50
07 54 00	---	11 56 28	72.3	7.0	-0.4		-167.3	310	3114	07 48 51
07 54 40	J1240+6958	11 57 09	72.5	12.7	-0.7		-157.5	13	3114	07 54 40
07 56 10	=1238+702	11 58 39	72.5	12.3	-0.7		-158.2	90	3125	07 54 41
07 56 50	R21	11 59 19	72.3	6.2	-0.4		-168.7	13	3125	07 56 50
08 02 00	---	12 04 30	72.4	4.8	-0.3		-171.3	310	3165	07 56 51
08 02 00	J1240+6958	12 04 30	72.7	10.7	-0.6		-161.1	-27	3165	No stop
08 04 00	=1238+702	12 06 30	72.8	10.1	-0.6		-162.1	93	3181	08 02 01
08 04 40	R21	12 07 10	72.4	4.1	-0.2		-172.6	13	3181	08 04 40
08 09 50	---	12 12 21	72.5	2.7	-0.2		-175.2	310	3220	08 04 41
08 10 30	J1240+6958	12 13 01	72.9	8.3	-0.5		-165.4	14	3220	08 10 30
08 12 00	=1238+702	12 14 31	73.0	7.9	-0.4		-166.2	90	3232	08 10 31
08 12 00	R21	12 14 31	72.5	2.1	-0.1		-176.3	-27	3232	No stop
08 16 50	---	12 19 22	72.5	0.7	-0.0		-178.7	263	3269	08 12 01
08 17 20	J1240+6958	12 19 52	73.1	6.3	-0.4		-168.9	4	3269	08 17 20
08 18 50	=1238+702	12 21 22	73.1	5.9	-0.3		-169.7	90	3281	08 17 21
08 18 50	J1247+7046	12 21 22	72.2	7.2	-0.4		-166.9	-16	3281	No stop
08 21 50	=1245+710	12 24 23	72.2	6.4	-0.4		-168.4	164	3304	08 18 51
08 21 50	J1240+6958	12 24 23	73.1	5.0	-0.3		-171.2	-16	3304	No stop
08 23 40	=1238+702	12 26 13	73.1	4.5	-0.3		-172.1	94	3318	08 21 51
08 24 00	J1247+7046	12 26 33	72.3	5.8	-0.4		-169.5	4	3318	08 24 00
08 25 30	=1245+710	12 28 04	72.3	5.4	-0.3		-170.2	90	3330	08 24 01
08 26 20	R15	12 28 54	69.1	0.8	-0.1		-178.2	24	3330	08 26 20
08 31 20	---	12 33 55	69.1	-0.1	0.0		179.7	300	3369	08 26 21
08 31 20	J1247+7046	12 33 55	72.4	3.8	-0.2		-173.1	-26	3369	No stop
08 33 20	=1245+710	12 35 55	72.4	3.3	-0.2		-174.1	94	3384	08 31 21

Schedule for TORUN (Code Tr) Page 11

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
08 33 50	R15	12 36 25	69.1	-0.6	0.1		178.6	4	3384	08 33 50
08 39 10	---	12 41 46	69.1	-1.7	0.1		176.4	320	3425	08 33 51
08 39 50	J1247+7046	12 42 26	72.4	1.5	-0.1		-177.3	14	3425	08 39 50
08 41 20	=1245+710	12 43 56	72.4	1.1	-0.1		-178.1	90	3437	08 39 51
08 41 50	R15	12 44 26	69.0	-2.2	0.2		175.3	3	3437	08 41 50
08 47 10	---	12 49 47	69.0	-3.2	0.3		173.0	320	3478	08 41 51
08 47 10	J1247+7046	12 49 47	72.4	-0.5	0.0		179.0	-27	3478	No stop
08 49 10	=1245+710	12 51 47	72.4	-1.1	0.1		178.0	93	3494	08 47 11
08 49 40	R15	12 52 18	69.0	-3.7	0.3		172.0	3	3494	08 49 40
08 55 00	---	12 57 38	68.9	-4.7	0.4		169.7	320	3535	08 49 41
08 55 00	J1247+7046	12 57 38	72.4	-2.7	0.2		175.1	-27	3535	No stop
08 57 00	=1245+710	12 59 39	72.4	-3.2	0.2		174.1	93	3550	08 55 01
08 57 30	R15	13 00 09	68.9	-5.2	0.4		168.7	3	3550	08 57 30
09 02 50	---	13 05 30	68.8	-6.2	0.5		166.5	320	3591	08 57 31
09 03 30	J1247+7046	13 06 10	72.3	-5.0	0.3		170.9	13	3591	09 03 30
09 05 00	=1245+710	13 07 40	72.3	-5.4	0.3		170.2	90	3603	09 03 31
09 05 30	R15	13 08 10	68.8	-6.6	0.6		165.4	3	3603	09 05 30
09 10 50	---	13 13 31	68.7	-7.6	0.7		163.2	320	3644	09 05 31
09 10 50	J1247+7046	13 13 31	72.2	-6.9	0.4		167.3	-27	3644	No stop
09 12 50	=1245+710	13 15 31	72.2	-7.5	0.5		166.3	93	3660	09 10 51
09 13 20	R15	13 16 01	68.6	-8.1	0.7		162.2	3	3660	09 13 20
09 18 40	---	13 21 22	68.5	-9.0	0.8		160.0	320	3701	09 13 21
09 18 40	J1247+7046	13 21 22	72.0	-9.0	0.6		163.5	-27	3701	No stop
09 20 40	=1245+710	13 23 23	72.0	-9.5	0.6		162.6	93	3716	09 18 41
09 21 10	R15	13 23 53	68.4	-9.5	0.8		159.0	3	3716	09 21 10
09 26 30	---	13 29 14	68.3	-10.4	0.9		156.8	320	3758	09 21 11
09 27 10	J1247+7046	13 29 54	71.8	-11.2	0.7		159.5	13	3758	09 27 10
09 28 40	=1245+710	13 31 24	71.8	-11.5	0.7		158.8	90	3769	09 27 11
09 29 10	R15	13 31 54	68.2	-10.8	1.0		155.8	3	3769	09 29 10
09 34 30	---	13 37 15	68.1	-11.7	1.1		153.7	320	3810	09 29 11

Schedule for TORUN (Code Tr) Page 12

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 2 Nov 2020 Day 307 ---										
09 34 30	J1247+7046	13 37 15	71.6	-12.9	0.8		156.0	-27	3810	No stop
09 36 30	=1245+710	13 39 15	71.5	-13.4	0.9		155.1	93	3826	09 34 31
09 37 00	R15	13 39 45	68.0	-12.2	1.1		152.7	3	3826	09 37 00
09 42 20	---	13 45 06	67.8	-13.0	1.2		150.6	320	3867	09 37 01
09 43 00	J1247+7046	13 45 46	71.3	-14.9	1.0		152.1	13	3867	09 43 00
09 44 30	=1245+710	13 47 17	71.2	-15.3	1.0		151.4	90	3879	09 43 01
09 44 30	R15	13 47 17	67.7	-13.4	1.2		149.7	-27	3879	No stop
09 49 20	---	13 52 07	67.6	-14.1	1.3		147.9	263	3916	09 44 31
09 49 50	J1247+7046	13 52 37	71.0	-16.5	1.1		149.1	3	3916	09 49 50
09 51 20	=1245+710	13 54 08	70.9	-16.8	1.1		148.4	90	3928	09 49 51
09 51 20	J1240+6958	13 54 08	71.3	-19.6	1.2		144.2	-20	3928	No stop
09 54 20	=1238+702	13 57 08	71.1	-20.2	1.3		142.9	160	3951	09 51 21
09 54 20	J1247+7046	13 57 08	70.8	-17.4	1.2		147.1	-20	3951	No stop
09 56 10	=1245+710	13 58 58	70.7	-17.8	1.2		146.3	90	3965	09 54 21
10 03 40	R17	14 06 30	84.5	204.5	0.2		21.8	-10	3965	10 03 40
10 08 40	---	14 11 31	84.1	212.1	0.3		28.5	290	4004	10 03 41
10 09 00	J1345+4452	14 11 51	80.7	209.2	0.4		24.3	-7	4004	10 09 00
10 11 00	=1343+451	14 13 51	80.6	211.1	0.5		25.9	113	4019	10 09 01
10 11 40	R17	14 14 31	83.9	216.3	0.4		32.1	14	4019	10 11 40
10 17 00	---	14 19 52	83.4	222.9	0.5		37.7	320	4060	10 11 41
10 17 20	J1345+4452	14 20 12	80.0	217.0	0.6		30.6	-7	4060	10 17 20
10 18 50	=1343+451	14 21 42	79.9	218.3	0.6		31.6	83	4072	10 17 21
10 19 30	R17	14 22 22	83.1	225.7	0.5		40.0	11	4072	10 19 30
10 24 50	---	14 27 43	82.5	231.0	0.6		44.2	320	4113	10 19 31
10 25 10	J1345+4452	14 28 03	79.3	223.5	0.7		35.6	-10	4113	10 25 10
10 27 10	=1343+451	14 30 04	79.0	225.0	0.7		36.8	110	4129	10 25 11
10 27 50	R17	14 30 44	82.1	233.6	0.6		46.3	8	4129	10 27 50
10 33 10	---	14 36 05	81.5	237.8	0.7		49.5	320	4170	10 27 51
10 33 30	J1345+4452	14 36 25	78.3	229.5	0.8		40.1	-11	4170	10 33 30
10 35 30	=1343+451	14 38 25	78.1	230.9	0.9		41.0	109	4185	10 33 31

Schedule for TORUN (Code Tr) Page 13

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
10 36 10	R17	14 39 05	81.1	239.9	0.8		51.0	7	4185	10 36 10
10 41 30	---	14 44 26	80.4	243.3	0.9		53.4	320	4227	10 36 11
10 41 50	J1345+4452	14 44 46	77.4	234.8	1.0		43.7	-12	4227	10 41 50
10 43 20	=1343+451	14 46 16	77.2	235.7	1.0		44.3	78	4238	10 41 51
10 44 00	R17	14 46 56	80.0	244.8	0.9		54.3	7	4238	10 44 00
10 49 20	---	14 52 17	79.3	247.6	1.0		56.1	320	4279	10 44 01
10 49 40	J1345+4452	14 52 37	76.4	239.1	1.1		46.6	-12	4279	10 49 40
10 51 40	=1343+451	14 54 38	76.1	240.1	1.1		47.2	108	4295	10 49 41
10 52 20	R17	14 55 18	78.9	249.1	1.0		57.0	7	4295	10 52 20
10 57 40	---	15 00 39	78.1	251.5	1.1		58.4	320	4336	10 52 21
10 58 00	J1345+4452	15 00 59	75.3	243.2	1.2		49.0	-12	4336	10 58 00
11 00 00	=1343+451	15 02 59	75.0	244.1	1.3		49.5	108	4352	10 58 01
11 00 40	R17	15 03 39	77.7	252.8	1.2		59.0	8	4352	11 00 40
11 06 00	---	15 09 00	76.9	254.8	1.3		60.1	320	4393	11 00 41
11 06 20	J1345+4452	15 09 20	74.1	246.8	1.4		51.0	-11	4393	11 06 20
11 07 50	=1343+451	15 10 50	73.9	247.4	1.4		51.4	79	4404	11 06 21
11 08 30	R17	15 11 30	76.6	255.7	1.3		60.5	8	4404	11 08 30
11 13 50	---	15 16 51	75.8	257.6	1.4		61.2	320	4446	11 08 31
11 14 10	J1345+4452	15 17 11	73.0	249.8	1.5		52.6	-10	4446	11 14 10
11 16 10	=1343+451	15 19 12	72.7	250.6	1.5		52.9	110	4461	11 14 11
11 16 50	R17	15 19 52	75.3	258.5	1.5		61.6	9	4461	11 16 50
11 22 10	---	15 25 13	74.6	260.1	1.5		62.2	320	4502	11 16 51
11 22 50	J1345+4452	15 25 53	71.8	252.9	1.7		54.0	10	4502	11 22 50
11 24 20	=1343+451	15 27 23	71.6	253.4	1.7		54.2	90	4514	11 22 51
11 24 20	R17	15 27 23	74.2	260.8	1.6		62.4	-30	4514	No stop
11 29 20	---	15 32 24	73.5	262.2	1.7		62.8	270	4552	11 24 21
11 29 40	J1345+4452	15 32 44	70.8	255.1	1.8		54.8	-9	4552	11 29 40
11 31 10	=1343+451	15 34 14	70.6	255.6	1.8		55.0	81	4564	11 29 41
11 31 10	J1335+4542	15 34 14	69.5	260.5	2.0		57.8	-25	4564	No stop
11 34 10	=1333+459	15 37 15	69.1	261.3	2.0		58.0	155	4587	11 31 11

Schedule for TORUN (Code Tr) Page 14

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
11 34 10	J1345+4452	15 37 15	70.1	256.5	1.8		55.3	-24	4587	No stop
11 36 00	=1343+451	15 39 05	69.9	257.0	1.9		55.5	86	4601	11 34 11
11 37 20	J1419+5423	15 40 25	78.1	283.8	1.3		87.6	11	4601	11 37 20
11 38 50	=1418+546	15 41 55	77.9	283.9	1.4		87.4	90	4613	11 37 21
11 39 30	R13	15 42 35	80.0	277.5	1.1		84.0	12	4613	11 39 30
11 44 30	---	15 47 36	79.2	277.9	1.2		83.4	300	4652	11 39 31
11 44 30	J1419+5423	15 47 36	77.1	284.1	1.5		86.4	-27	4652	No stop
11 46 30	=1418+546	15 49 37	76.8	284.1	1.5		86.1	93	4667	11 44 31
11 46 30	R13	15 49 37	78.9	278.1	1.2		83.2	-27	4667	No stop
11 52 10	---	15 55 18	78.1	278.6	1.3		82.6	313	4711	11 46 31
11 52 50	J1419+5423	15 55 58	75.9	284.4	1.6		85.1	13	4711	11 52 50
11 54 20	=1418+546	15 57 28	75.7	284.5	1.6		84.9	90	4723	11 52 51
11 54 20	R13	15 57 28	77.7	278.8	1.4		82.4	-26	4723	No stop
11 59 50	---	16 02 59	76.9	279.4	1.5		81.8	304	4765	11 54 21
12 00 30	J1419+5423	16 03 39	74.8	284.9	1.7		84.0	14	4765	12 00 30
12 02 00	=1418+546	16 05 09	74.5	285.0	1.7		83.7	90	4777	12 00 31
12 02 00	R13	16 05 09	76.6	279.6	1.5		81.5	-26	4777	No stop
12 07 40	---	16 10 50	75.8	280.1	1.6		80.9	314	4820	12 02 01
12 07 40	J1419+5423	16 10 50	73.7	285.3	1.8		82.9	-25	4820	No stop
12 09 40	=1418+546	16 12 50	73.4	285.4	1.9		82.6	95	4836	12 07 41
12 09 40	R13	16 12 50	75.5	280.3	1.6		80.7	-25	4836	No stop
12 15 20	---	16 18 31	74.6	280.9	1.7		80.1	315	4880	12 09 41
12 16 00	J1419+5423	16 19 11	72.5	285.9	2.0		81.8	15	4880	12 16 00
12 17 30	=1418+546	16 20 42	72.3	286.0	2.0		81.6	90	4891	12 16 01
12 17 30	R13	16 20 42	74.3	281.1	1.8		79.9	-25	4891	No stop
12 23 00	---	16 26 13	73.5	281.6	1.8		79.3	305	4934	12 17 31
12 23 40	J1419+5423	16 26 53	71.4	286.4	2.1		80.7	15	4934	12 23 40
12 25 10	=1418+546	16 28 23	71.2	286.5	2.1		80.5	90	4945	12 23 41
12 25 10	R13	16 28 23	73.2	281.8	1.9		79.0	-24	4945	No stop
12 30 50	---	16 34 04	72.3	282.4	2.0		78.4	316	4989	12 25 11

Schedule for TORUN (Code Tr) Page 15

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
12 30 50	J1419+5423	16 34 04	70.4	287.0	2.2		79.8	-24	4989	No stop
12 32 50	=1418+546	16 36 04	70.1	287.1	2.3		79.5	96	5005	12 30 51
12 32 50	R13	16 36 04	72.0	282.6	2.0		78.2	-24	5005	No stop
12 38 30	---	16 41 45	71.2	283.1	2.1		77.6	316	5048	12 32 51
12 39 10	J1419+5423	16 42 25	69.2	287.6	2.4		78.7	16	5048	12 39 10
12 40 40	=1418+546	16 43 56	69.0	287.7	2.4		78.5	90	5060	12 39 11
12 40 40	R13	16 43 56	70.9	283.4	2.1		77.4	-24	5060	No stop
12 46 10	---	16 49 26	70.1	283.9	2.2		76.8	306	5103	12 40 41
12 46 50	J1419+5423	16 50 07	68.1	288.3	2.5		77.7	16	5103	12 46 50
12 48 20	=1418+546	16 51 37	67.9	288.4	2.5		77.5	90	5114	12 46 51
12 48 20	R13	16 51 37	69.8	284.1	2.3		76.6	-23	5114	No stop
12 54 00	---	16 57 18	68.9	284.7	2.4		76.0	317	5158	12 48 21
12 54 40	J1419+5423	16 57 58	67.0	288.9	2.6		76.7	17	5158	12 54 40
12 56 10	=1418+546	16 59 28	66.7	289.0	2.7		76.5	90	5170	12 54 41
12 56 10	R13	16 59 28	68.6	284.9	2.4		75.7	-23	5170	No stop
13 00 50	---	17 04 09	68.0	285.4	2.5		75.3	257	5206	12 56 11
13 01 20	J1419+5423	17 04 39	66.0	289.5	2.7		75.9	7	5206	13 01 20
13 02 50	=1418+546	17 06 09	65.8	289.6	2.8		75.7	90	5217	13 01 21
13 02 50	J1429+5406	17 06 09	67.1	288.1	2.6		76.3	-18	5217	No stop
13 05 50	=1427+543	17 09 10	66.7	288.4	2.7		75.9	162	5240	13 02 51
13 05 50	J1419+5423	17 09 10	65.4	289.9	2.8		75.4	-18	5240	No stop
13 07 40	=1418+546	17 11 00	65.1	290.1	2.8		75.1	92	5255	13 05 51
13 10 40	J1448+0402	17 14 00	32.7	224.2	2.4		24.8	33	5255	13 10 40
13 12 10	=1446+042	17 15 31	32.5	224.6	2.4		25.0	90	5266	13 10 41
13 12 30	NR2	17 15 51	32.7	225.0	2.4		25.2	9	5266	13 12 30
13 17 30	---	17 20 52	32.2	226.3	2.5		25.8	300	5305	13 12 31
13 17 30	J1448+0402	17 20 52	31.9	226.0	2.5		25.7	-11	5305	No stop
13 19 30	=1446+042	17 22 52	31.7	226.6	2.6		25.9	109	5320	13 17 31
13 19 50	NR2	17 23 12	31.9	226.9	2.6		26.1	9	5320	13 19 50
13 24 50	---	17 28 13	31.4	228.2	2.6		26.7	300	5359	13 19 51

Schedule for TORUN (Code Tr) Page 16

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
13 25 30	J1448+0402	17 28 53	31.0	228.1	2.7		26.6	29	5359	13 25 30
13 27 00	=1446+042	17 30 23	30.9	228.5	2.7		26.8	90	5370	13 25 31
13 27 20	NR2	17 30 43	31.1	228.9	2.7		27.0	9	5370	13 27 20
13 32 20	---	17 35 44	30.5	230.2	2.8		27.5	300	5409	13 27 21
13 32 20	J1448+0402	17 35 44	30.3	229.9	2.8		27.4	-11	5409	No stop
13 34 20	=1446+042	17 37 44	30.0	230.4	2.8		27.6	109	5425	13 32 21
13 34 40	NR2	17 38 04	30.2	230.8	2.8		27.8	9	5425	13 34 40
13 39 40	---	17 43 05	29.6	232.0	2.9		28.3	300	5463	13 34 41
13 39 40	J1448+0402	17 43 05	29.4	231.8	2.9		28.2	-11	5463	No stop
13 41 40	=1446+042	17 45 06	29.2	232.3	2.9		28.4	109	5479	13 39 41
13 42 00	NR2	17 45 26	29.4	232.6	2.9		28.6	10	5479	13 42 00
13 47 00	---	17 50 26	28.8	233.9	3.0		29.1	300	5517	13 42 01
13 47 40	J1448+0402	17 51 07	28.5	233.8	3.0		29.1	29	5517	13 47 40
13 49 10	=1446+042	17 52 37	28.3	234.2	3.0		29.2	90	5529	13 47 41
13 49 30	NR2	17 52 57	28.5	234.5	3.1		29.4	10	5529	13 49 30
13 54 30	---	17 57 58	27.8	235.7	3.1		29.8	300	5568	13 49 31
13 54 30	J1448+0402	17 57 58	27.6	235.5	3.1		29.7	-11	5568	No stop
13 56 30	=1446+042	17 59 58	27.4	236.0	3.2		29.9	109	5583	13 54 31
13 56 50	NR2	18 00 18	27.6	236.3	3.2		30.1	10	5583	13 56 50
14 01 50	---	18 05 19	26.9	237.5	3.3		30.5	300	5622	13 56 51
14 01 50	J1448+0402	18 05 19	26.7	237.2	3.3		30.4	-11	5622	No stop
14 03 50	=1446+042	18 07 19	26.4	237.7	3.3		30.6	109	5637	14 01 51
14 04 10	NR2	18 07 39	26.6	238.1	3.3		30.7	10	5637	14 04 10
14 09 10	---	18 12 40	26.0	239.3	3.4		31.2	300	5676	14 04 11
14 09 50	J1448+0402	18 13 20	25.7	239.2	3.4		31.1	29	5676	14 09 50
14 11 20	=1446+042	18 14 50	25.5	239.5	3.4		31.2	90	5687	14 09 51
14 11 40	NR2	18 15 10	25.7	239.9	3.4		31.4	10	5687	14 11 40
14 16 40	---	18 20 11	25.0	241.1	3.5		31.8	300	5726	14 11 41
14 16 40	J1448+0402	18 20 11	24.8	240.8	3.5		31.7	-11	5726	No stop
14 18 40	=1446+042	18 22 12	24.5	241.2	3.5		31.8	109	5741	14 16 41

Schedule for TORUN (Code Tr) Page 17

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
14 19 00	NR2	18 22 32	24.7	241.6	3.6		32.0	10	5741	14 19 00
14 24 00	---	18 27 32	24.0	242.8	3.6		32.4	300	5780	14 19 01
14 24 20	J1448+0402	18 27 53	23.8	242.6	3.6		32.3	9	5780	14 24 20
14 25 50	=1446+042	18 29 23	23.6	242.9	3.7		32.4	90	5792	14 24 21
14 26 10	NR2	18 29 43	23.7	243.3	3.7		32.5	10	5792	14 26 10
14 30 10	---	18 33 43	23.2	244.2	3.7		32.8	240	5823	14 26 11
14 30 30	J1448+0402	18 34 04	22.9	244.0	3.7		32.7	9	5823	14 30 30
14 32 00	=1446+042	18 35 34	22.7	244.3	3.8		32.9	90	5834	14 30 31
14 32 00	J1458+0416	18 35 34	24.3	242.1	3.6		32.2	-19	5834	No stop
14 35 00	=1456+044	18 38 34	23.9	242.8	3.6		32.4	161	5857	14 32 01
14 35 00	J1448+0402	18 38 34	22.3	245.0	3.8		33.1	-20	5857	No stop
14 36 50	=1446+042	18 40 25	22.1	245.4	3.8		33.2	90	5872	14 35 01
14 39 50	J1640+3946	18 43 25	65.3	249.6	2.0		47.0	4	5872	14 39 50
14 41 20	=NRAO512	18 44 55	65.1	250.1	2.1		47.2	90	5883	14 39 51
14 42 00	R25	18 45 35	65.7	254.2	2.1		50.4	17	5883	14 42 00
14 47 00	---	18 50 36	65.0	255.7	2.2		50.9	300	5922	14 42 01
14 47 00	J1640+3946	18 50 36	64.3	251.8	2.2		47.9	-22	5922	No stop
14 49 00	=NRAO512	18 52 37	64.0	252.4	2.2		48.1	98	5937	14 47 01
14 49 40	R25	18 53 17	64.6	256.4	2.3		51.1	17	5937	14 49 40
14 54 40	---	18 58 18	63.8	257.7	2.3		51.5	300	5976	14 49 41
14 55 20	J1640+3946	18 58 58	63.1	254.2	2.3		48.7	18	5976	14 55 20
14 56 50	=NRAO512	19 00 28	62.9	254.6	2.3		48.8	90	5988	14 55 21
14 57 30	R25	19 01 08	63.4	258.5	2.4		51.7	18	5988	14 57 30
15 02 30	---	19 06 09	62.7	259.8	2.5		52.0	300	6026	14 57 31
15 02 30	J1640+3946	19 06 09	62.1	256.2	2.4		49.3	-22	6026	No stop
15 04 30	=NRAO512	19 08 09	61.8	256.7	2.4		49.5	98	6042	15 02 31
15 05 10	R25	19 08 49	62.3	260.4	2.5		52.1	18	6042	15 05 10
15 10 10	---	19 13 50	61.5	261.7	2.6		52.4	300	6080	15 05 11
15 10 10	J1640+3946	19 13 50	61.0	258.2	2.5		49.9	-22	6080	No stop
15 12 10	=NRAO512	19 15 50	60.7	258.7	2.6		50.0	98	6096	15 10 11

Schedule for TORUN (Code Tr) Page 18

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
15 12 50	R25	19 16 31	61.1	262.3	2.6		52.5	18	6096	15 12 50
15 17 50	---	19 21 31	60.4	263.5	2.7		52.7	300	6134	15 12 51
15 18 30	J1640+3946	19 22 11	59.7	260.3	2.7		50.3	19	6134	15 18 30
15 20 00	=NRAO512	19 23 42	59.5	260.6	2.7		50.4	90	6146	15 18 31
15 20 40	R25	19 24 22	60.0	264.1	2.8		52.8	18	6146	15 20 40
15 25 40	---	19 29 23	59.2	265.2	2.9		52.9	300	6185	15 20 41
15 25 40	J1640+3946	19 29 23	58.7	262.0	2.8		50.7	-21	6185	No stop
15 27 40	=NRAO512	19 31 23	58.4	262.4	2.8		50.7	99	6200	15 25 41
15 28 20	R25	19 32 03	58.8	265.8	2.9		53.0	19	6200	15 28 20
15 33 20	---	19 37 04	58.1	266.9	3.0		53.1	300	6239	15 28 21
15 33 20	J1640+3946	19 37 04	57.5	263.7	2.9		50.9	-21	6239	No stop
15 35 20	=NRAO512	19 39 04	57.2	264.2	3.0		51.0	99	6254	15 33 21
15 36 00	R25	19 39 44	57.7	267.5	3.0		53.1	19	6254	15 36 00
15 41 00	---	19 44 45	56.9	268.5	3.1		53.2	300	6293	15 36 01
15 41 40	J1640+3946	19 45 25	56.3	265.6	3.1		51.1	19	6293	15 41 40
15 43 10	=NRAO512	19 46 55	56.0	265.9	3.1		51.2	90	6304	15 41 41
15 43 50	R25	19 47 36	56.5	269.1	3.2		53.2	19	6304	15 43 50
15 48 50	---	19 52 36	55.7	270.1	3.2		53.2	300	6343	15 43 51
15 48 50	J1640+3946	19 52 36	55.2	267.1	3.2		51.3	-20	6343	No stop
15 50 50	=NRAO512	19 54 37	54.9	267.5	3.2		51.3	100	6359	15 48 51
15 51 30	R25	19 55 17	55.3	270.6	3.3		53.2	19	6359	15 51 30
15 56 30	---	20 00 18	54.6	271.6	3.4		53.2	300	6397	15 51 31
15 57 10	J1640+3946	20 00 58	53.9	268.9	3.3		51.3	20	6397	15 57 10
15 58 40	=NRAO512	20 02 28	53.7	269.2	3.4		51.3	90	6409	15 57 11
15 59 20	R25	20 03 08	54.2	272.2	3.4		53.1	20	6409	15 59 20
16 03 20	---	20 07 09	53.6	272.9	3.5		53.1	240	6440	15 59 21
16 03 50	J1640+3946	20 07 39	52.9	270.2	3.4		51.3	10	6440	16 03 50
16 05 20	=NRAO512	20 09 09	52.7	270.5	3.5		51.3	90	6451	16 03 51
16 05 20	J1646+4059	20 09 09	54.4	270.8	3.4		52.7	-20	6451	No stop
16 08 20	=1645+410	20 12 10	54.0	271.4	3.4		52.6	160	6474	16 05 21

Schedule for TORUN (Code Tr) Page 19

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
16 08 20	J1640+3946	20 12 10	52.3	271.1	3.5		51.3	-20	6474	No stop
16 10 10	=NRAO512	20 14 00	52.0	271.5	3.5		51.3	90	6489	16 08 21
16 10 30	R19	20 14 20	52.2	271.2	3.5		51.3	9	6489	16 10 30
16 15 30	---	20 19 21	51.5	272.2	3.6		51.3	300	6527	16 10 31
16 15 30	J1640+3946	20 19 21	51.2	272.5	3.6		51.3	-11	6527	No stop
16 17 30	=NRAO512	20 21 21	50.9	272.9	3.7		51.3	109	6543	16 15 31
16 17 50	R19	20 21 41	51.1	272.6	3.6		51.3	9	6543	16 17 50
16 22 50	---	20 26 42	50.4	273.6	3.7		51.2	300	6581	16 17 51
16 23 30	J1640+3946	20 27 22	50.0	274.0	3.8		51.2	29	6581	16 23 30
16 25 00	=NRAO512	20 28 52	49.7	274.3	3.8		51.1	90	6593	16 23 31
16 25 20	R19	20 29 12	50.0	274.0	3.8		51.2	9	6593	16 25 20
16 30 20	---	20 34 13	49.2	275.0	3.9		51.1	300	6632	16 25 21
16 30 20	J1640+3946	20 34 13	48.9	275.3	3.9		51.0	-11	6632	No stop
16 32 20	=NRAO512	20 36 14	48.6	275.7	3.9		51.0	109	6647	16 30 21
16 32 40	R19	20 36 34	48.9	275.4	3.9		51.0	9	6647	16 32 40
16 37 40	---	20 41 34	48.1	276.3	4.0		50.9	300	6686	16 32 41
16 37 40	J1640+3946	20 41 34	47.8	276.6	4.0		50.9	-11	6686	No stop
16 39 40	=NRAO512	20 43 35	47.6	277.0	4.0		50.8	109	6701	16 37 41
16 40 00	R19	20 43 55	47.8	276.7	4.0		50.9	9	6701	16 40 00
16 45 00	---	20 48 56	47.0	277.6	4.1		50.7	300	6740	16 40 01
16 45 40	J1640+3946	20 49 36	46.7	278.1	4.1		50.6	29	6740	16 45 40
16 47 10	=NRAO512	20 51 06	46.4	278.3	4.2		50.6	90	6751	16 45 41
16 47 30	R19	20 51 26	46.7	278.1	4.1		50.7	9	6751	16 47 30
16 52 30	---	20 56 27	45.9	279.0	4.2		50.5	300	6790	16 47 31
16 52 30	J1640+3946	20 56 27	45.6	279.3	4.3		50.4	-11	6790	No stop
16 54 30	=NRAO512	20 58 27	45.3	279.6	4.3		50.4	109	6806	16 52 31
16 54 50	R19	20 58 47	45.6	279.4	4.3		50.4	9	6806	16 54 50
16 59 50	---	21 03 48	44.8	280.3	4.3		50.2	300	6844	16 54 51
16 59 50	J1640+3946	21 03 48	44.6	280.6	4.4		50.2	-11	6844	No stop
17 01 50	=NRAO512	21 05 48	44.3	280.9	4.4		50.1	109	6860	16 59 51

Schedule for TORUN (Code Tr) Page 20

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
17 02 10	R19	21 06 08	44.5	280.7	4.4		50.1	9	6860	17 02 10
17 07 10	---	21 11 09	43.7	281.5	4.5		49.9	300	6898	17 02 11
17 07 50	J1640+3946	21 11 49	43.4	281.9	4.5		49.8	29	6898	17 07 50
17 09 20	=NRAO512	21 13 20	43.1	282.2	4.5		49.8	90	6910	17 07 51
17 09 40	R19	21 13 40	43.4	282.0	4.5		49.8	9	6910	17 09 40
17 14 40	---	21 18 41	42.6	282.8	4.6		49.6	300	6949	17 09 41
17 14 40	J1640+3946	21 18 41	42.4	283.1	4.6		49.5	-11	6949	No stop
17 16 40	=NRAO512	21 20 41	42.1	283.4	4.7		49.4	109	6964	17 14 41
17 17 00	R19	21 21 01	42.3	283.2	4.6		49.5	9	6964	17 17 00
17 22 00	---	21 26 02	41.6	284.0	4.7		49.3	300	7003	17 17 01
17 22 40	J1640+3946	21 26 42	41.2	284.4	4.8		49.1	29	7003	17 22 40
17 24 10	=NRAO512	21 28 12	41.0	284.7	4.8		49.1	90	7014	17 22 41
17 24 30	R19	21 28 32	41.2	284.5	4.8		49.1	9	7014	17 24 30
17 28 30	---	21 32 33	40.6	285.1	4.8		48.9	240	7045	17 24 31
17 29 00	J1640+3946	21 33 03	40.3	285.5	4.9		48.8	19	7045	17 29 00
17 30 30	=NRAO512	21 34 33	40.1	285.7	4.9		48.7	90	7057	17 29 01
17 30 30	J1646+4059	21 34 33	41.8	285.9	4.8		49.9	-20	7057	No stop
17 33 30	=1645+410	21 37 34	41.3	286.4	4.8		49.7	160	7080	17 30 31
17 33 30	J1640+3946	21 37 34	39.6	286.2	4.9		48.6	-20	7080	No stop
17 35 20	=NRAO512	21 39 24	39.4	286.5	5.0		48.5	90	7094	17 33 31
17 36 40	J1808+4542	21 40 44	55.6	279.5	3.5		58.0	5	7094	17 36 40
17 38 10	=1806+456	21 42 14	55.4	279.8	3.6		57.9	90	7106	17 36 41
17 38 50	NR7	21 42 54	57.5	275.5	3.3		57.5	16	7106	17 38 50
17 43 50	---	21 47 55	56.8	276.3	3.3		57.3	300	7144	17 38 51
17 43 50	J1808+4542	21 47 55	54.5	280.7	3.6		57.7	-24	7144	No stop
17 45 50	=1806+456	21 49 56	54.2	281.0	3.7		57.6	96	7160	17 43 51
17 46 30	NR7	21 50 36	56.4	276.8	3.4		57.2	17	7160	17 46 30
17 51 30	---	21 55 37	55.6	277.7	3.5		57.1	300	7198	17 46 31
17 52 10	J1808+4542	21 56 17	53.3	282.0	3.8		57.3	16	7198	17 52 10
17 53 40	=1806+456	21 57 47	53.1	282.3	3.8		57.2	90	7210	17 52 11

Schedule for TORUN (Code Tr) Page 21

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
17 54 20	NR7	21 58 27	55.2	278.1	3.5		57.0	17	7210	17 54 20
17 59 20	---	22 03 28	54.5	279.0	3.6		56.8	300	7249	17 54 21
17 59 20	J1808+4542	22 03 28	52.2	283.1	3.9		56.9	-23	7249	No stop
18 01 20	=1806+456	22 05 28	52.0	283.5	3.9		56.8	97	7264	17 59 21
18 02 00	NR7	22 06 08	54.1	279.4	3.7		56.7	17	7264	18 02 00
18 07 00	---	22 11 09	53.3	280.3	3.7		56.4	300	7303	18 02 01
18 07 00	J1808+4542	22 11 09	51.1	284.3	4.0		56.4	-23	7303	No stop
18 09 00	=1806+456	22 13 09	50.8	284.6	4.1		56.3	97	7318	18 07 01
18 09 40	NR7	22 13 50	52.9	280.7	3.8		56.3	17	7318	18 09 40
18 14 40	---	22 18 50	52.2	281.5	3.9		56.1	300	7357	18 09 41
18 15 20	J1808+4542	22 19 30	49.9	285.6	4.2		55.9	17	7357	18 15 20
18 16 50	=1806+456	22 21 01	49.7	285.8	4.2		55.8	90	7368	18 15 21
18 17 30	NR7	22 21 41	51.8	282.0	3.9		55.9	17	7368	18 17 30
18 22 30	---	22 26 42	51.0	282.8	4.0		55.7	300	7407	18 17 31
18 22 30	J1808+4542	22 26 42	48.9	286.7	4.3		55.5	-23	7407	No stop
18 24 30	=1806+456	22 28 42	48.6	287.0	4.3		55.3	97	7423	18 22 31
18 25 10	NR7	22 29 22	50.6	283.2	4.0		55.5	17	7423	18 25 10
18 30 10	---	22 34 23	49.9	284.0	4.1		55.3	300	7461	18 25 11
18 30 10	J1808+4542	22 34 23	47.8	287.9	4.4		54.9	-23	7461	No stop
18 32 10	=1806+456	22 36 23	47.5	288.2	4.5		54.8	97	7477	18 30 11
18 32 50	NR7	22 37 03	49.5	284.4	4.2		55.1	18	7477	18 32 50
18 37 50	---	22 42 04	48.8	285.2	4.2		54.8	300	7515	18 32 51
18 38 30	J1808+4542	22 42 44	46.6	289.1	4.6		54.4	17	7515	18 38 30
18 40 00	=1806+456	22 44 15	46.4	289.3	4.6		54.3	90	7527	18 38 31
18 40 40	NR7	22 44 55	48.4	285.6	4.3		54.7	18	7527	18 40 40
18 45 40	---	22 49 55	47.7	286.4	4.4		54.3	300	7566	18 40 41
18 45 40	J1808+4542	22 49 55	45.6	290.2	4.7		53.8	-22	7566	No stop
18 47 40	=1806+456	22 51 56	45.3	290.4	4.7		53.7	98	7581	18 45 41
18 48 20	NR7	22 52 36	47.3	286.8	4.4		54.2	18	7581	18 48 20
18 53 20	---	22 57 37	46.6	287.6	4.5		53.8	300	7620	18 48 21

Schedule for TORUN (Code Tr) Page 22

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
18 54 00	J1808+4542	22 58 17	44.4	291.4	4.8		53.2	18	7620	18 54 00
18 55 30	=1806+456	22 59 47	44.2	291.6	4.8		53.1	90	7631	18 54 01
18 56 10	NR7	23 00 27	46.1	288.0	4.6		53.7	18	7631	18 56 10
19 00 10	---	23 04 28	45.6	288.6	4.6		53.4	240	7662	18 56 11
19 00 40	J1808+4542	23 04 58	43.5	292.4	4.9		52.7	8	7662	19 00 40
19 02 10	=1806+456	23 06 28	43.3	292.6	5.0		52.6	90	7674	19 00 41
19 02 10	J1759+4627	23 06 28	42.5	294.6	5.1		52.4	-18	7674	No stop
19 05 10	---	23 09 29	42.1	295.1	5.2		52.2	162	7697	19 02 11
19 05 10	J1808+4542	23 09 29	42.8	293.0	5.0		52.3	-18	7697	No stop
19 07 00	=1806+456	23 11 19	42.6	293.3	5.0		52.2	92	7711	19 05 11
19 09 00	J1930+1532	23 13 19	32.9	250.8	3.7		36.1	20	7711	19 09 00
19 10 00	=1928+154	23 14 19	32.8	251.0	3.7		36.1	60	7719	19 09 01
19 10 30	B1933+16	23 14 50	34.0	250.5	3.6		36.1	12	7719	19 10 30
19 13 30	---	23 17 50	33.6	251.2	3.7		36.3	180	7742	19 10 31
19 13 30	J1930+1532	23 17 50	32.3	251.8	3.8		36.3	-18	7742	No stop
19 15 30	=1928+154	23 19 50	32.0	252.3	3.8		36.4	102	7758	19 13 31
19 17 30	J2203+1725	23 21 51	51.4	210.4	1.3		18.6	21	7758	19 17 30
19 19 00	=2201+171	23 23 21	51.2	210.9	1.3		18.9	90	7769	19 17 31
19 19 30	R16	23 23 51	51.4	209.9	1.3		18.3	15	7769	19 19 30
19 24 30	---	23 28 52	51.0	211.7	1.4		19.3	300	7808	19 19 31
19 24 30	J2203+1725	23 28 52	50.8	212.9	1.4		20.0	-15	7808	No stop
19 26 30	=2201+171	23 30 52	50.6	213.6	1.4		20.4	105	7823	19 24 31
19 27 00	R16	23 31 22	50.8	212.6	1.4		19.8	15	7823	19 27 00
19 32 00	---	23 36 23	50.4	214.4	1.5		20.8	300	7862	19 27 01
19 32 40	J2203+1725	23 37 03	50.1	215.8	1.5		21.6	25	7862	19 32 40
19 34 10	=2201+171	23 38 33	50.0	216.3	1.6		21.9	90	7873	19 32 41
19 34 40	R16	23 39 04	50.2	215.3	1.5		21.3	15	7873	19 34 40
19 39 40	---	23 44 04	49.7	217.0	1.6		22.3	300	7912	19 34 41
19 39 40	J2203+1725	23 44 04	49.5	218.2	1.7		22.9	-15	7912	No stop
19 41 40	=2201+171	23 46 05	49.3	218.9	1.7		23.3	105	7928	19 39 41

Schedule for TORUN (Code Tr) Page 23

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
19 42 10	R16	23 46 35	49.5	217.9	1.6		22.7	16	7928	19 42 10
19 47 10	---	23 51 36	49.0	219.6	1.7		23.6	300	7966	19 42 11
19 47 10	J2203+1725	23 51 36	48.8	220.7	1.8		24.2	-15	7966	No stop
19 49 10	=2201+171	23 53 36	48.6	221.4	1.8		24.6	105	7982	19 47 11
19 49 40	R16	23 54 06	48.8	220.4	1.8		24.1	16	7982	19 49 40
19 54 40	---	23 59 07	48.3	222.0	1.9		24.9	300	8020	19 49 41
19 55 20	J2203+1725	23 59 47	47.9	223.4	1.9		25.6	25	8020	19 55 20
19 56 50	=2201+171	00 01 17	47.8	223.8	1.9		25.9	90	8032	19 55 21
19 57 20	R16	00 01 47	48.0	222.9	1.9		25.4	16	8032	19 57 20
20 02 20	---	00 06 48	47.5	224.5	2.0		26.2	300	8071	19 57 21
20 02 20	J2203+1725	00 06 48	47.2	225.6	2.0		26.7	-15	8071	No stop
20 04 20	=2201+171	00 08 48	47.0	226.2	2.1		27.0	105	8086	20 02 21
20 04 50	R16	00 09 18	47.2	225.3	2.0		26.6	16	8086	20 04 50
20 09 50	---	00 14 19	46.7	226.9	2.1		27.3	300	8125	20 04 51
20 09 50	J2203+1725	00 14 19	46.4	227.9	2.2		27.9	-14	8125	No stop
20 11 50	=2201+171	00 16 20	46.2	228.5	2.2		28.2	106	8140	20 09 51
20 12 20	R16	00 16 50	46.4	227.6	2.2		27.7	16	8140	20 12 20
20 17 20	---	00 21 51	45.9	229.1	2.2		28.4	300	8179	20 12 21
20 18 00	J2203+1725	00 22 31	45.5	230.4	2.3		29.0	26	8179	20 18 00
20 19 30	=2201+171	00 24 01	45.3	230.8	2.3		29.2	90	8190	20 18 01
20 20 00	R16	00 24 31	45.6	229.9	2.3		28.8	16	8190	20 20 00
20 25 00	---	00 29 32	45.0	231.4	2.4		29.5	300	8229	20 20 01
20 25 00	J2203+1725	00 29 32	44.6	232.4	2.4		29.9	-14	8229	No stop
20 27 00	=2201+171	00 31 32	44.4	233.0	2.5		30.2	106	8244	20 25 01
20 27 30	R16	00 32 02	44.7	232.2	2.4		29.8	16	8244	20 27 30
20 32 30	---	00 37 03	44.1	233.6	2.5		30.4	300	8283	20 27 31
20 33 10	J2203+1725	00 37 43	43.6	234.8	2.6		31.0	26	8283	20 33 10
20 34 40	=2201+171	00 39 13	43.5	235.2	2.6		31.1	90	8295	20 33 11
20 35 10	R16	00 39 43	43.8	234.4	2.5		30.8	16	8295	20 35 10
20 39 10	---	00 43 44	43.3	235.5	2.6		31.3	240	8326	20 35 11

Schedule for TORUN (Code Tr) Page 24

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
20 39 40	J2203+1725	00 44 14	42.8	236.6	2.7		31.7	16	8326	20 39 40
20 41 10	=2201+171	00 45 44	42.6	237.0	2.7		31.9	90	8337	20 39 41
20 41 10	J2219+1806	00 45 44	45.2	233.0	2.4		30.3	-23	8337	No stop
20 44 10	=2216+178	00 48 45	44.8	233.9	2.5		30.7	157	8360	20 41 11
20 44 10	J2203+1725	00 48 45	42.3	237.8	2.7		32.2	-24	8360	No stop
20 46 00	=2201+171	00 50 35	42.0	238.3	2.8		32.4	86	8375	20 44 11
20 47 20	J2322+4445	00 51 55	73.4	249.3	1.5		52.4	-51	8375	20 47 20
20 48 50	=2319+444	00 53 26	73.2	249.8	1.5		52.7	39	8386	20 47 21
20 49 30	NR6	00 54 06	75.5	247.0	1.3		52.3	17	8386	20 49 30
20 54 30	---	00 59 07	74.8	249.0	1.4		53.4	300	8425	20 49 31
20 54 30	J2322+4445	00 59 07	72.4	251.9	1.6		53.6	-23	8425	No stop
20 56 30	=2319+444	01 01 07	72.1	252.6	1.6		53.9	97	8440	20 54 31
20 56 30	NR6	01 01 07	74.6	249.8	1.4		53.8	-23	8440	No stop
21 02 10	---	01 06 48	73.8	251.9	1.5		54.8	317	8484	20 56 31
21 02 50	J2322+4445	01 07 28	71.2	254.6	1.7		54.8	17	8484	21 02 50
21 04 20	=2319+444	01 08 58	71.0	255.1	1.8		55.0	90	8496	21 02 51
21 04 20	NR6	01 08 58	73.5	252.7	1.5		55.2	-23	8496	No stop
21 10 00	---	01 14 39	72.6	254.6	1.6		56.0	317	8539	21 04 21
21 10 40	J2322+4445	01 15 19	70.0	257.0	1.9		55.7	17	8539	21 10 40
21 12 10	=2319+444	01 16 50	69.8	257.5	1.9		55.8	90	8551	21 10 41
21 12 10	NR6	01 16 50	72.3	255.3	1.7		56.3	-23	8551	No stop
21 17 40	---	01 22 20	71.5	257.0	1.8		56.9	307	8594	21 12 11
21 17 40	J2322+4445	01 22 20	69.0	259.0	2.0		56.3	-23	8594	No stop
21 19 40	=2319+444	01 24 21	68.7	259.6	2.0		56.4	97	8609	21 17 41
21 19 40	NR6	01 24 21	71.2	257.6	1.8		57.1	-23	8609	No stop
21 25 20	---	01 30 02	70.4	259.3	1.9		57.6	317	8653	21 19 41
21 26 00	J2322+4445	01 30 42	67.8	261.2	2.1		56.9	17	8653	21 26 00
21 27 30	=2319+444	01 32 12	67.6	261.6	2.1		57.0	90	8664	21 26 01
21 27 30	NR6	01 32 12	70.1	259.9	1.9		57.8	-23	8664	No stop
21 33 10	---	01 37 53	69.2	261.4	2.0		58.2	317	8708	21 27 31

Schedule for TORUN (Code Tr) Page 25

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 2 Nov 2020 Day 307 ---										
21 33 50	J2322+4445	01 38 33	66.6	263.2	2.3		57.3	17	8708	21 33 50
21 35 20	=2319+444	01 40 03	66.4	263.5	2.3		57.4	90	8720	21 33 51
21 35 20	NR6	01 40 03	68.9	261.9	2.0		58.3	-23	8720	No stop
21 40 50	---	01 45 34	68.1	263.3	2.1		58.6	307	8762	21 35 21
21 40 50	J2322+4445	01 45 34	65.6	264.8	2.4		57.6	-24	8762	No stop
21 42 50	=2319+444	01 47 35	65.3	265.3	2.4		57.6	96	8778	21 40 51
21 42 50	NR6	01 47 35	67.8	263.8	2.2		58.7	-23	8778	No stop
21 48 30	---	01 53 16	66.9	265.1	2.3		58.9	317	8822	21 42 51
21 49 10	J2322+4445	01 53 56	64.3	266.7	2.5		57.8	16	8822	21 49 10
21 50 40	=2319+444	01 55 26	64.1	267.0	2.5		57.8	90	8833	21 49 11
21 50 40	NR6	01 55 26	66.6	265.6	2.3		59.0	-23	8833	No stop
21 56 20	---	02 01 07	65.8	266.9	2.4		59.1	317	8877	21 50 41
21 57 00	J2322+4445	02 01 47	63.1	268.4	2.6		57.9	16	8877	21 57 00
21 58 30	=2319+444	02 03 17	62.9	268.7	2.7		57.9	90	8889	21 57 01
21 58 30	NR6	02 03 17	65.4	267.4	2.4		59.2	-23	8889	No stop
22 04 00	---	02 08 48	64.6	268.5	2.5		59.3	307	8931	21 58 31
22 04 40	J2322+4445	02 09 28	62.0	269.9	2.8		57.9	16	8931	22 04 40
22 06 10	=2319+444	02 10 58	61.7	270.2	2.8		57.9	90	8943	22 04 41
22 06 10	NR6	02 10 58	64.3	269.0	2.6		59.3	-23	8943	No stop
22 10 50	---	02 15 39	63.6	269.9	2.6		59.3	257	8979	22 06 11
22 11 20	J2322+4445	02 16 09	61.0	271.3	2.9		57.9	6	8979	22 11 20
22 12 50	=2319+444	02 17 40	60.7	271.6	2.9		57.9	90	8990	22 11 21
22 12 50	J2311+4543	02 17 40	59.7	275.2	3.1		59.2	-22	8990	No stop
22 15 50	=2309+454	02 20 40	59.2	275.7	3.1		59.1	158	9013	22 12 51
22 15 50	J2322+4445	02 20 40	60.3	272.1	3.0		57.9	-22	9013	No stop
22 17 40	=2319+444	02 22 30	60.0	272.5	3.0		57.8	88	9028	22 15 51
22 18 40	J2355+4950	02 23 30	67.1	277.1	2.5		67.8	19	9028	22 18 40
22 20 10	=2352+495	02 25 01	66.9	277.3	2.5		67.8	90	9039	22 18 41
22 20 50	NR5	02 25 41	69.6	273.5	2.2		67.8	16	9039	22 20 50
22 25 50	---	02 30 42	68.9	274.4	2.2		67.7	300	9078	22 20 51

Schedule for TORUN (Code Tr) Page 26

e-EVN: EN007A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 2 Nov 2020 Day 307 ---										
22 25 50	J2355+4950	02 30 42	66.1	278.2	2.6		67.5	-25	9078	No stop
22 27 50	=2352+495	02 32 42	65.8	278.5	2.6		67.4	95	9093	22 25 51
22 28 30	NR5	02 33 22	68.5	274.8	2.3		67.6	16	9093	22 28 30
22 33 30	---	02 38 23	67.7	275.7	2.4		67.4	300	9132	22 28 31
22 34 20	J2355+4950	02 39 13	64.8	279.5	2.7		67.0	25	9132	22 34 20
22 35 40	=2352+495	02 40 33	64.6	279.6	2.7		66.9	80	9142	22 34 21
22 36 20	NR5	02 41 13	67.3	276.1	2.4		67.3	16	9142	22 36 20
22 41 20	---	02 46 14	66.6	276.9	2.5		67.1	300	9181	22 36 21
22 41 20	J2355+4950	02 46 14	63.8	280.5	2.8		66.6	-25	9181	No stop
22 43 20	=2352+495	02 48 15	63.5	280.8	2.9		66.5	95	9196	22 41 21
22 44 00	NR5	02 48 55	66.2	277.3	2.6		67.0	16	9196	22 44 00
22 49 00	---	02 53 55	65.4	278.1	2.6		66.7	300	9235	22 44 01
22 49 00	J2355+4950	02 53 55	62.6	281.6	3.0		66.1	-24	9235	No stop
22 51 00	=2352+495	02 55 56	62.3	281.9	3.0		66.0	96	9251	22 49 01
22 51 40	NR5	02 56 36	65.0	278.5	2.7		66.6	16	9251	22 51 40
22 56 40	---	03 01 37	64.3	279.3	2.8		66.3	300	9289	22 51 41
22 57 30	J2355+4950	03 02 27	61.4	282.8	3.1		65.5	26	9289	22 57 30
22 58 50	=2352+495	03 03 47	61.2	283.0	3.1		65.4	80	9299	22 57 31
22 59 30	NR5	03 04 27	63.8	279.7	2.8		66.2	16	9299	22 59 30
23 04 30	---	03 09 28	63.1	280.4	2.9		65.9	300	9338	22 59 31
23 04 30	J2355+4950	03 09 28	60.4	283.7	3.2		65.0	-24	9338	No stop
23 06 30	=2352+495	03 11 28	60.1	284.0	3.3		64.9	96	9354	23 04 31
23 07 10	NR5	03 12 08	62.7	280.8	2.9		65.7	16	9354	23 07 10
23 12 10	---	03 17 09	62.0	281.6	3.0		65.4	300	9392	23 07 11
23 12 10	J2355+4950	03 17 09	59.2	284.8	3.3		64.5	-24	9392	No stop
23 14 10	=2352+495	03 19 10	58.9	285.1	3.4		64.3	96	9408	23 12 11
23 14 50	NR5	03 19 50	61.6	281.9	3.1		65.2	16	9408	23 14 50
23 19 50	---	03 24 51	60.8	282.6	3.2		64.9	300	9446	23 14 51
23 20 40	J2355+4950	03 25 41	58.0	285.9	3.5		63.8	26	9446	23 20 40
23 22 00	=2352+495	03 27 01	57.8	286.1	3.5		63.7	80	9457	23 20 41

```
Schedule for TORUN     (Code Tr )                                Page  27
               e-EVN: EN007A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon   2 Nov 2020   Day 307 ---

23 22 40  NR5          03 27 41  60.4 283.0  3.2      64.7    16     9457   23 22 40
23 27 40  ---          03 32 42  59.7 283.7  3.3      64.3   300     9495   23 22 41

23 27 40  J2355+4950   03 32 42  57.0 286.9  3.6      63.3   -24     9495   No stop
23 29 40  =2352+495    03 34 42  56.7 287.1  3.6      63.1    96     9511   23 27 41

23 30 20  NR5          03 35 22  59.3 284.1  3.3      64.1    16     9511   23 30 20
23 35 20  ---          03 40 23  58.6 284.8  3.4      63.8   300     9549   23 30 21

23 36 10  J2355+4950   03 41 13  55.8 288.0  3.8      62.6    26     9549   23 36 10
23 37 30  =2352+495    03 42 33  55.6 288.2  3.8      62.5    80     9560   23 36 11

23 37 30  NR5          03 42 33  58.3 285.1  3.4      63.6   -24     9560   No stop
23 42 10  ---          03 47 14  57.6 285.7  3.5      63.3   256     9596   23 37 31

23 42 10  J2355+4950   03 47 14  54.9 288.8  3.9      62.1   -24     9596   No stop
23 44 10  =2352+495    03 49 15  54.6 289.1  3.9      61.9    96     9611   23 42 11

23 44 10  J0004+4615   03 49 15  54.2 282.4  3.7      58.2   -28     9611   No stop
23 47 10  =0001+459    03 52 15  53.7 282.9  3.8      58.0   152     9634   23 44 11

23 47 10  J2355+4950   03 52 15  54.2 289.4  3.9      61.6   -28     9634   No stop
23 49 00  =2352+495    03 54 05  53.9 289.7  4.0      61.5    82     9649   23 47 11

23 55 00  J0854+2006   04 00 06  25.4  90.1 -4.9     -39.7   -54     9649   23 55 00
23 59 59  =OJ287       04 05 07  26.2  91.1 -4.8     -39.7   245     9687   23 55 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.L1024

   Setup group:   11         Station: TORUN            Total bit rate:  1024
   Format: VDIF              Bits per sample: 2        Sample rate: 32.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
            2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         L         L         L         L         L         L         L         L
                  L         L         L         L         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         U         U         L         L         U         U         L         L
                  U         U         L         L         U         U         L         L
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   9  Setup file default.  Used with PCAL = off
  LO sum=   1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
            1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
  BBC fr=    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
             625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
  Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
              16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
   Matching frequency sets:   9

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* R4	10 30 12.945855	* 10 34 12.720000	10 35 47.684954	0.00
	73 56 54.58222	* 73 41 25.35000	73 34 48.32203	0.00
* R13	14 33 08.288098	* 14 34 46.040000	14 35 23.932226	0.00
	53 31 51.31527	* 53 18 47.17000	53 13 29.01409	0.00
* R16	22 04 22.983159	* 22 06 46.830000	22 07 46.115355	0.00
	17 07 52.02348	* 17 22 31.79000	17 28 44.15940	0.00
* R17	13 50 04.229468	* 13 52 03.140000	13 52 49.918606	0.00
	48 22 05.54569	* 48 07 19.06000	48 01 16.97644	0.00
* R19	16 40 36.377744	* 16 42 17.670000	16 42 57.631251	0.00
	39 53 09.10874	* 39 47 32.46000	39 45 25.85850	0.00
* R21	12 18 51.922073	* 12 21 08.930000	12 22 01.684277	0.00
	70 57 47.03497	* 70 41 09.05000	70 34 11.27541	0.00
* R25	16 35 41.917621	* 16 37 20.480000	16 37 59.273628	0.00
	41 32 56.66686	* 41 26 59.80000	41 24 44.69184	0.00
* NR1	06 52 54.975940	* 07 14 48.730000	07 23 37.478669	0.00
	86 52 08.80085	* 86 47 32.93000	86 44 57.59866	0.00

```
* NR2              14 45 56.309448   * 14 48 26.610000     14 49 26.837720       0.00
                   04 34 03.67957    * 04 21 36.64000      04 16 38.22432        0.00

* NR3              04 30 46.745937   * 04 35 08.810000     04 36 58.762164       0.00
                   60 08 49.12606    * 60 15 00.48000      60 17 24.32620        0.00

* NR4              01 07 59.653565   * 01 10 36.930000     01 11 42.547687       0.00
                   09 52 54.04071    * 10 08 50.67000      10 15 29.24881        0.00

* NR5              00 11 59.959782   * 00 14 38.260000     00 15 44.768898       0.00
                   49 16 43.36813    * 49 33 23.57000      49 40 26.45166        0.00

* NR6              23 33 50.274534   * 23 36 16.680000     23 37 17.913645       0.00
                   45 18 18.09887    * 45 34 54.09000      45 41 56.95554        0.00

* NR7              18 25 05.513998   * 18 26 33.360000     18 27 08.173871       0.00
                   44 47 47.16859    * 44 49 39.89000      44 50 41.97983        0.00

* R15              12 30 22.543095   * 12 32 23.920000     12 33 09.599152       0.00
                   74 24 26.71249    * 74 07 54.30000      74 00 58.99319        0.00

* B0355+54         03 55 00.536080   * 03 58 53.723800     04 00 31.602619       0.00
                   54 04 41.38687    * 54 13 13.78400      54 16 39.57042        0.00

* B1933+16         19 33 31.840243   * 19 35 47.825900     19 36 42.990584       0.00
                   16 09 57.71854    * 16 16 39.98600      16 19 37.11541        0.00

* J1759+4627       17 58 18.322446   * 17 59 41.799400     18 00 14.639537       0.00
                   46 28 04.21524    * 46 27 59.91700      46 28 13.12762        0.00

  0001+459         00 01 41.453154   * 00 04 16.127656     00 05 20.966865       0.17
* J0004+4615       45 58 36.14556    * 46 15 17.97052      46 22 21.87110        0.12
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    148 observations.

  0118+111         01 18 50.654449   * 01 21 28.999188     01 22 35.092376       0.12
* J0121+1127       11 11 19.09001    * 11 27 00.50306      11 33 32.75594        0.20
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,     84 observations.

  0119+115         01 19 03.080126   * 01 21 41.595043     01 22 47.761093       0.00
* J0121+1149       11 34 09.31522    * 11 49 50.41321      11 56 22.57274        0.01
  J0121+11         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,  62476 observations.

  0354+559         03 54 31.306914   * 03 58 30.188163     04 00 10.534340       0.24
* J0358+5606       55 58 10.41714    * 56 06 44.46027      56 10 10.57094        0.17
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,     69 observations.

  0444+634         04 44 42.365041   * 04 49 23.310568     04 51 21.196183       0.04
* J0449+6332       63 26 55.93297    * 63 32 09.43401      63 34 07.61173        0.02
  J0449+63         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,   1127 observations.

  0446+595         04 46 56.740666   * 04 51 18.721781     04 53 08.446784       0.11
* J0451+5935       59 30 27.33126    * 59 35 32.18353      59 37 27.76550        0.05
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    336 observations.

  0645+858         06 45 00.718446   * 07 02 32.817025     07 09 42.235055       2.73
* J0702+8549       85 53 45.59517    * 85 49 52.47982      85 47 40.04192        0.17
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,     84 observations.
```

```
  OJ287            08 51 57.250615   * 08 54 48.874927     08 55 59.012922       0.00
* J0854+2006       20 17 58.41740    * 20 06 30.64085      20 01 46.62316        0.00
  0851+202         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0854+20         GSFC 2016a X/S astro solution, 270807 observations.

  0916+864         09 16 13.303854   * 09 29 43.057528     09 34 48.409216       2.21
* J0929+8612       86 25 17.24114    * 86 12 21.27882      86 06 35.35264        0.10
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    101 observations.

  1044+719         10 44 49.735100   * 10 48 27.619916     10 49 53.889749       0.34
* J1048+7143       71 59 26.88543    * 71 43 35.93846      71 36 51.28591        0.18
  J1048+71         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution, 131737 observations.

  1053+704         10 53 27.724045   * 10 56 53.617501     10 58 15.160467       0.02
* J1056+7011       70 27 47.93567    * 70 11 45.91563      70 04 57.55590        0.01
  J1056+70         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,  14774 observations.

  1238+702         12 38 32.658121   * 12 40 34.700389     12 41 21.376957       0.83
* J1240+6958       70 14 57.51748    * 69 58 30.61002      69 51 38.83036        0.43
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,     49 observations.

  1245+710         12 45 12.422838   * 12 47 07.552605     12 47 51.264992       0.28
* J1247+7046       71 03 06.65769    * 70 46 45.12132      70 39 55.85544        0.11
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,     89 observations.

  1333+459         13 33 15.707438   * 13 35 21.962221     13 36 11.848749       0.15
* J1335+4542       45 57 56.43928    * 45 42 38.23225      45 36 22.52282        0.08
  J1335+45         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    136 observations.

  1343+451         13 43 28.829762   * 13 45 33.172486     13 46 22.285480       0.14
* J1345+4452       45 07 59.03593    * 44 52 59.57262      44 46 52.28379        0.09
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    154 observations.

  1418+546         14 18 06.187310   * 14 19 46.597405     14 20 25.531393       0.01
* J1419+5423       54 36 58.06476    * 54 23 14.78717      54 17 39.46124        0.00
  J1419+54         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,  71191 observations.

  1427+543         14 27 44.050456   * 14 29 21.878793     14 29 59.767093       0.16
* J1429+5406       54 19 29.74795    * 54 06 11.12296      54 00 46.57263        0.11
  J1429+54         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    232 observations.

  1446+042         14 46 19.815447   * 14 48 50.361091     14 49 50.690076       0.17
* J1448+0402       04 14 45.78467    * 04 02 19.89224      03 57 21.95947        0.38
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,     69 observations.

  1456+044         14 56 29.152723   * 14 58 59.356213     14 59 59.545180       0.03
* J1458+0416       04 28 09.34454    * 04 16 13.82044      04 11 28.42604        0.04
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,   1518 observations.

  NRAO512          16 38 48.169688   * 16 40 29.632773     16 41 09.658760       0.00
* J1640+3946       39 52 30.08664    * 39 46 46.02845      39 44 36.30680        0.00
  1638+398         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
```

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  J1640+39          GSFC 2016a X/S astro solution, 124178 observations.

  1645+410          16 45 18.214793   * 16 46 56.858700     16 47 35.725475       0.09
* J1646+4059        41 04 34.49967    * 40 59 17.17206      40 57 18.72122        0.13
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    111 observations.

  1806+456          18 06 56.514675   * 18 08 21.885888     18 08 55.565602       0.01
* J1808+4542        45 41 47.34683    * 45 42 20.86644      45 42 49.88435        0.01
  J1808+45          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,  16758 observations.

  1928+154          19 28 36.092055   * 19 30 52.766980     19 31 48.188732       0.06
* J1930+1532        15 26 11.96598    * 15 32 34.42737      15 35 23.22862        0.08
  J1930+15          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    219 observations.

  2201+171          22 01 03.345094   * 22 03 26.893679     22 04 26.036888       0.05
* J2203+1725        17 11 15.54383    * 17 25 48.24774      17 31 57.78549        0.09
  J2203+17          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    284 observations.

  2216+178          22 16 49.646729   * 22 19 14.092480     22 20 13.701061       0.05
* J2219+1806        17 51 31.06967    * 18 06 35.58083      18 12 58.09708        0.11
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    302 observations.

  2309+454          23 09 28.211650   * 23 11 47.408977     23 12 45.504412       0.01
* J2311+4543        45 27 37.24968    * 45 43 56.01642      45 50 52.91530        0.01
  J2311+45          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,   6992 observations.

  2319+444          23 19 57.705336   * 23 22 20.358083     23 23 19.930561       0.02
* J2322+4445        44 29 14.78867    * 44 45 42.35356      44 52 42.30206        0.02
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,   2751 observations.

  2352+495          23 52 37.783439   * 23 55 09.458151     23 56 13.119156       0.14
* J2355+4950        49 33 26.79879    * 49 50 08.33945      49 57 12.89864        0.11
  J2355+49          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    358 observations.


EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
    Source         Sun distance (deg)
  R4                   96.2
  R13                  68.2
  R16                 116.7
  R17                  63.6
  R19                  62.6
  R21                  88.5
  R25                  63.4
  NR1                 105.9
  NR2                  19.7
  NR3                 129.4
  NR4                 159.8
  NR5                 135.6
  NR6                 132.2
  NR7                  80.0
```

```
 R15                 91.0
 B0355+54           137.1
 B1933+16            81.3
 J1759+4627          77.1
 J0004+4615         136.1
 J0121+1127         162.7
 J0121+1149         162.8
 J0358+5606         135.5
 J0449+6332         125.8
 J0451+5935         128.5
 J0702+8549         106.4
 J0854+2006          89.7
 J0929+8612         103.9
 J1048+7143          94.2
 J1056+7011          92.7
 J1240+6958          87.0
 J1247+7046          87.5
 J1335+4542          61.9
 J1345+4452          60.7
 J1419+5423          69.3
 J1429+5406          69.0
 J1448+0402          19.4
 J1458+0416          20.3
 J1640+3946          62.4
 J1646+4059          64.1
 J1808+4542          77.9
 J1930+1532          80.0
 J2203+1725         116.0
 J2219+1806         119.8
 J2311+4543         128.2
 J2322+4445         130.3
 J2355+4950         132.9
```

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

```
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

er047etr

EVN-COSMOS - Taming AGN and star-formation across cosmic time

PI: *Jack Radcliffe*


```
Address:  Physics Department
          University of Pretoria
          Private Bag X20, Hatfield
          Pretoria, South Africa

Phone:    00447950524280
EMAIL:    jack.f.radcliffe@gmail.com
Fax:
Phone during observation:
```


```
Observing mode:

Schedule for TORUN     (Code Tr )                                    Page   2
               EVN-COSMOS - Taming AGN and star-formation across cosmic time
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Tue   3 Nov 2020   Day 308 ---

 Next scan frequencies:  1610.50  1610.50  1610.50  1610.50  1642.50  1642.50  1642.50  1642.50
                         1674.50  1674.50  1674.50  1674.50  1706.50  1706.50  1706.50  1706.50
 Next BBC frequencies:    689.50   689.50   689.50   689.50   657.50   657.50   657.50   657.50
                          625.50   625.50   625.50   625.50   593.50   593.50   593.50   593.50
 Next scan bandwidths:     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
                           16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00

01 00 00  J1011+0106   05 05 17   8.7 100.1 -5.1     -36.3     0        0   01 00 00
01 06 00  =1008+013    05 11 18   9.6 101.3 -5.0     -36.1   360       46   01 00 01

01 06 40  J0959+0243   05 11 58  12.8 103.0 -4.8     -35.9    14       46   01 06 40
01 08 10  ---          05 13 28  13.0 103.3 -4.8     -35.8    90       58   01 06 41

01 08 10  COSMOS-DEEP  05 13 28  12.7 103.1 -4.8     -35.8   -11       58   No stop
01 14 10  ---          05 19 29  13.6 104.4 -4.7     -35.6   349      104   01 08 11

01 14 10  J0959+0243   05 19 29  13.9 104.5 -4.7     -35.6   -12      104   No stop
01 16 10  ---          05 21 30  14.2 104.9 -4.6     -35.5   108      120   01 14 11

01 16 10  COSMOS-DEEP  05 21 30  13.9 104.8 -4.7     -35.5   -11      120   No stop
01 24 10  ---          05 29 31  15.0 106.5 -4.5     -35.2   469      182   01 16 11

01 24 40  J0959+0243   05 30 01  15.4 106.7 -4.5     -35.1    18      182   01 24 40
01 26 10  ---          05 31 31  15.6 107.1 -4.5     -35.1    90      193   01 24 41

01 26 10  COSMOS-DEEP  05 31 31  15.3 106.9 -4.5     -35.1   -11      193   No stop
01 34 10  ---          05 39 33  16.5 108.6 -4.4     -34.7   469      255   01 26 11

01 34 10  J1011+0106   05 39 33  13.7 107.1 -4.5     -35.0   -24      255   No stop
01 36 00  =1008+013    05 41 23  14.0 107.5 -4.5     -34.9    86      269   01 34 11

01 36 40  J0959+0243   05 42 03  17.1 109.3 -4.3     -34.6    14      269   01 36 40
01 38 10  ---          05 43 33  17.3 109.6 -4.3     -34.5    90      281   01 36 41
```

01 38 10	COSMOS-DEEP	05 43 33	17.0	109.5	-4.3	-34.5	-11	281	No stop
01 44 10	---	05 49 34	17.9	110.8	-4.2	-34.2	349	327	01 38 11
01 44 10	J0959+0243	05 49 34	18.2	110.9	-4.2	-34.2	-12	327	No stop
01 46 10	---	05 51 35	18.5	111.4	-4.1	-34.0	108	343	01 44 11
01 46 10	COSMOS-DEEP	05 51 35	18.1	111.2	-4.2	-34.1	-11	343	No stop
01 54 10	---	05 59 36	19.3	112.9	-4.0	-33.6	469	404	01 46 11
01 54 40	J0959+0243	06 00 06	19.7	113.2	-4.0	-33.5	18	404	01 54 40
01 56 10	---	06 01 36	19.9	113.6	-4.0	-33.4	90	416	01 54 41

Schedule for TORUN (Code Tr) Page 3

EVN-COSMOS - Taming AGN and star-formation across cosmic time

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
01 56 10	COSMOS-DEEP	06 01 36	19.5	113.4	-4.0		-33.5	-11	416	No stop
02 04 10	---	06 09 38	20.6	115.2	-3.9		-33.0	469	478	01 56 11
02 04 10	J1011+0106	06 09 38	18.0	113.6	-4.0		-33.4	-24	478	No stop
02 06 00	=1008+013	06 11 28	18.2	114.0	-4.0		-33.3	86	492	02 04 11
02 06 40	J0959+0243	06 12 08	21.3	115.9	-3.8		-32.7	15	492	02 06 40
02 08 10	---	06 13 38	21.5	116.3	-3.8		-32.6	90	504	02 06 41
02 08 10	COSMOS-DEEP	06 13 38	21.2	116.1	-3.8		-32.7	-11	504	No stop
02 14 10	---	06 19 39	22.0	117.4	-3.7		-32.2	349	550	02 08 11
02 14 10	J0959+0243	06 19 39	22.3	117.6	-3.7		-32.2	-12	550	No stop
02 16 10	---	06 21 39	22.6	118.1	-3.6		-32.0	108	566	02 14 11
02 16 10	COSMOS-DEEP	06 21 39	22.3	117.9	-3.7		-32.1	-11	566	No stop
02 24 10	---	06 29 41	23.3	119.7	-3.5		-31.5	469	627	02 16 11
02 24 40	J0959+0243	06 30 11	23.7	120.1	-3.5		-31.3	18	627	02 24 40
02 26 10	---	06 31 41	23.9	120.4	-3.5		-31.2	90	639	02 24 41
02 26 10	COSMOS-DEEP	06 31 41	23.6	120.2	-3.5		-31.3	-11	639	No stop
02 34 10	---	06 39 42	24.6	122.1	-3.4		-30.6	469	701	02 26 11
02 34 10	J1011+0106	06 39 42	22.0	120.4	-3.5		-31.2	-24	701	No stop
02 36 00	=1008+013	06 41 33	22.2	120.8	-3.5		-31.1	86	715	02 34 11
02 36 40	J0959+0243	06 42 13	25.2	122.9	-3.3		-30.3	15	715	02 36 40
02 38 10	---	06 43 43	25.4	123.3	-3.3		-30.2	90	727	02 36 41
02 38 10	COSMOS-DEEP	06 43 43	25.1	123.0	-3.3		-30.3	-11	727	No stop
02 44 10	---	06 49 44	25.9	124.5	-3.2		-29.7	349	773	02 38 11
02 44 10	J0959+0243	06 49 44	26.2	124.7	-3.2		-29.6	-12	773	No stop
02 46 10	---	06 51 44	26.4	125.2	-3.1		-29.4	108	788	02 44 11
02 46 10	COSMOS-DEEP	06 51 44	26.1	125.0	-3.2		-29.5	-11	788	No stop
02 54 10	---	06 59 46	27.1	126.9	-3.0		-28.7	469	850	02 46 11
02 54 40	J0959+0243	07 00 16	27.4	127.3	-3.0		-28.6	19	850	02 54 40
02 56 10	---	07 01 46	27.6	127.7	-3.0		-28.4	90	862	02 54 41
02 56 10	COSMOS-DEEP	07 01 46	27.3	127.4	-3.0		-28.5	-11	862	No stop
03 04 10	---	07 09 47	28.3	129.4	-2.9		-27.7	469	924	02 56 11

Schedule for TORUN (Code Tr) Page 4

EVN-COSMOS - Taming AGN and star-formation across cosmic time

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart / SYNC
--- Tue 3 Nov 2020 Day 308 ---										
03 04 10	J1011+0106	07 09 47	25.7	127.5	-3.0		-28.5	-23	924	No stop
03 06 00	=1008+013	07 11 38	25.9	128.0	-3.0		-28.3	87	938	03 04 11
03 06 40	J0959+0243	07 12 18	28.9	130.3	-2.8		-27.3	15	938	03 06 40
03 08 10	---	07 13 48	29.0	130.7	-2.8		-27.1	90	949	03 06 41
03 08 10	COSMOS-DEEP	07 13 48	28.7	130.4	-2.8		-27.2	-11	949	No stop
03 14 10	---	07 19 49	29.4	132.0	-2.7		-26.5	349	996	03 08 11
03 14 10	J0959+0243	07 19 49	29.7	132.2	-2.7		-26.4	-11	996	No stop
03 16 10	---	07 21 49	29.9	132.7	-2.6		-26.2	109	1011	03 14 11
03 16 10	COSMOS-DEEP	07 21 49	29.6	132.5	-2.7		-26.3	-11	1011	No stop
03 24 10	---	07 29 51	30.5	134.6	-2.5		-25.4	469	1073	03 16 11
03 24 40	J0959+0243	07 30 21	30.8	135.0	-2.5		-25.2	19	1073	03 24 40
03 26 10	---	07 31 51	31.0	135.3	-2.5		-25.0	90	1085	03 24 41
03 26 10	COSMOS-DEEP	07 31 51	30.7	135.1	-2.5		-25.1	-11	1085	No stop
03 34 10	---	07 39 52	31.6	137.2	-2.4		-24.1	469	1146	03 26 11
03 34 10	J1011+0106	07 39 52	29.1	135.1	-2.5		-25.1	-23	1146	No stop
03 36 00	=1008+013	07 41 43	29.3	135.5	-2.5		-24.9	87	1161	03 34 11
03 36 40	J0959+0243	07 42 23	32.1	138.2	-2.3		-23.6	16	1161	03 36 40
03 38 10	---	07 43 53	32.2	138.6	-2.3		-23.4	90	1172	03 36 41
03 38 10	COSMOS-DEEP	07 43 53	32.0	138.3	-2.3		-23.6	-11	1172	No stop
03 44 10	---	07 49 54	32.5	139.9	-2.2		-22.8	349	1219	03 38 11
03 44 10	J0959+0243	07 49 54	32.8	140.2	-2.2		-22.6	-11	1219	No stop
03 46 10	---	07 51 54	33.0	140.8	-2.1		-22.3	109	1234	03 44 11
03 46 10	COSMOS-DEEP	07 51 54	32.7	140.5	-2.2		-22.5	-11	1234	No stop
03 54 10	---	07 59 56	33.5	142.7	-2.0		-21.4	469	1296	03 46 11
03 54 40	J0959+0243	08 00 26	33.8	143.1	-2.0		-21.1	19	1296	03 54 40
03 56 10	---	08 01 56	33.9	143.5	-2.0		-20.9	90	1308	03 54 41
03 56 10	COSMOS-DEEP	08 01 56	33.7	143.3	-2.0		-21.1	-11	1308	No stop
04 04 10	---	08 09 57	34.4	145.5	-1.9		-19.9	469	1369	03 56 11
04 04 10	J1011+0106	08 09 57	32.1	143.1	-2.0		-21.1	-22	1369	No stop
04 06 00	=1008+013	08 11 48	32.2	143.6	-2.0		-20.9	88	1384	04 04 11

Schedule for TORUN (Code Tr) Page 5

EVN-COSMOS - Taming AGN and star-formation across cosmic time

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
04 06 40	J0959+0243	08 12 28	34.8	146.5	-1.8		-19.4	16	1384	04 06 40
04 08 10	---	08 13 58	35.0	147.0	-1.8		-19.1	90	1395	04 06 41
04 08 10	COSMOS-DEEP	08 13 58	34.7	146.7	-1.8		-19.3	-11	1395	No stop
04 14 10	---	08 19 59	35.2	148.4	-1.7		-18.4	349	1441	04 08 11
04 14 10	J0959+0243	08 19 59	35.5	148.7	-1.7		-18.2	-11	1441	No stop
04 16 10	---	08 21 59	35.6	149.3	-1.6		-17.9	109	1457	04 14 11
04 16 10	COSMOS-DEEP	08 21 59	35.3	149.0	-1.7		-18.0	-11	1457	No stop
04 24 10	---	08 30 01	35.9	151.3	-1.5		-16.8	469	1519	04 16 11
04 24 40	J0959+0243	08 30 31	36.2	151.8	-1.5		-16.5	19	1519	04 24 40
04 26 10	---	08 32 01	36.3	152.3	-1.5		-16.2	90	1530	04 24 41
04 26 10	COSMOS-DEEP	08 32 01	36.1	151.9	-1.5		-16.4	-11	1530	No stop
04 34 10	---	08 40 02	36.6	154.3	-1.4		-15.1	469	1592	04 26 11
04 34 10	J1011+0106	08 40 02	34.5	151.6	-1.5		-16.6	-22	1592	No stop
04 36 00	=1008+013	08 41 52	34.6	152.1	-1.5		-16.3	88	1606	04 34 11
04 36 40	J0959+0243	08 42 33	37.0	155.4	-1.3		-14.5	17	1606	04 36 40
04 38 10	---	08 44 03	37.1	155.9	-1.3		-14.2	90	1618	04 36 41
04 38 10	COSMOS-DEEP	08 44 03	36.9	155.5	-1.3		-14.4	-11	1618	No stop
04 44 10	---	08 50 04	37.2	157.4	-1.2		-13.4	349	1664	04 38 11
04 44 10	J0959+0243	08 50 04	37.5	157.7	-1.2		-13.2	-11	1664	No stop
04 46 10	---	08 52 04	37.6	158.3	-1.1		-12.8	109	1680	04 44 11
04 46 10	COSMOS-DEEP	08 52 04	37.4	158.0	-1.2		-13.0	-11	1680	No stop
04 54 10	---	09 00 05	37.8	160.5	-1.0		-11.6	469	1742	04 46 11
04 54 40	J0959+0243	09 00 36	38.0	161.0	-1.0		-11.3	19	1742	04 54 40
04 56 10	---	09 02 06	38.1	161.4	-1.0		-11.0	90	1753	04 54 41
04 56 10	COSMOS-DEEP	09 02 06	37.9	161.1	-1.0		-11.2	-10	1753	No stop
05 04 10	---	09 10 07	38.3	163.6	-0.9		-9.8	470	1815	04 56 11
05 04 10	J1011+0106	09 10 07	36.3	160.6	-1.0		-11.5	-21	1815	No stop
05 06 00	=1008+013	09 11 57	36.4	161.1	-1.0		-11.2	89	1829	05 04 11
05 08 00	4C39.25	09 13 58	75.6	168.7	-0.2		-8.7	-41	1829	05 08 00
05 15 00	---	09 20 59	75.8	174.2	-0.1		-4.5	379	1883	05 08 01

Schedule for TORUN (Code Tr) Page 6

EVN-COSMOS - Taming AGN and star-formation across cosmic time

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Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
05 20 00	J1011+0106	09 26 00	37.0	165.4	-0.8		-8.7	140	1883	05 20 00
05 21 30	=1008+013	09 27 30	37.1	165.9	-0.7		-8.4	90	1895	05 20 01
05 21 30	J0959+0243	09 27 30	39.1	169.5	-0.5		-6.3	-22	1895	No stop
05 23 00	---	09 29 00	39.1	169.9	-0.5		-6.0	68	1907	05 21 31
05 23 00	COSMOS-DEEP	09 29 00	38.9	169.6	-0.5		-6.3	-10	1907	No stop
05 29 00	---	09 35 01	39.1	171.5	-0.4		-5.1	350	1953	05 23 01
05 29 30	J0959+0243	09 35 31	39.3	172.0	-0.4		-4.8	19	1953	05 29 30
05 31 00	---	09 37 01	39.3	172.5	-0.4		-4.5	90	1964	05 29 31
05 31 00	COSMOS-DEEP	09 37 01	39.1	172.1	-0.4		-4.7	-10	1964	No stop
05 37 00	---	09 43 02	39.2	174.1	-0.3		-3.6	350	2011	05 31 01
05 37 00	J0959+0243	09 43 02	39.4	174.5	-0.3		-3.3	-11	2011	No stop
05 39 00	---	09 45 03	39.4	175.1	-0.3		-2.9	109	2026	05 37 01
05 39 00	COSMOS-DEEP	09 45 03	39.2	174.7	-0.3		-3.2	-10	2026	No stop
05 46 30	---	09 52 34	39.3	177.1	-0.1		-1.7	440	2084	05 39 01
05 47 10	J1011+0106	09 53 14	37.8	174.0	-0.3		-3.6	19	2084	05 47 10
05 48 40	=1008+013	09 54 44	37.8	174.4	-0.3		-3.3	90	2096	05 47 11
05 48 40	J0959+0243	09 54 44	39.5	178.2	-0.1		-1.1	-23	2096	No stop
05 50 30	---	09 56 35	39.5	178.8	-0.1		-0.7	87	2110	05 48 41
05 50 30	COSMOS-DEEP	09 56 35	39.3	178.4	-0.1		-0.9	-11	2110	No stop
05 56 30	---	10 02 36	39.4	180.4	0.0		0.2	349	2156	05 50 31
05 57 00	J0959+0243	10 03 06	39.5	180.9	0.0		0.6	19	2156	05 57 00
05 59 00	---	10 05 06	39.5	181.6	0.1		1.0	120	2172	05 57 01
05 59 00	COSMOS-DEEP	10 05 06	39.4	181.2	0.1		0.7	-11	2172	No stop
06 07 00	---	10 13 07	39.3	183.8	0.2		2.3	469	2234	05 59 01
06 07 00	J0959+0243	10 13 07	39.5	184.2	0.2		2.5	-11	2234	No stop
06 09 00	---	10 15 08	39.4	184.8	0.2		2.9	109	2249	06 07 01
06 09 00	COSMOS-DEEP	10 15 08	39.3	184.4	0.2		2.6	-11	2249	No stop
06 17 00	---	10 23 09	39.2	187.0	0.4		4.2	469	2311	06 09 01
06 17 40	J1011+0106	10 23 49	37.9	183.6	0.2		2.2	18	2311	06 17 40
06 19 10	=1008+013	10 25 19	37.8	184.1	0.2		2.5	90	2323	06 17 41

Schedule for TORUN (Code Tr) Page 7

EVN-COSMOS - Taming AGN and star-formation across cosmic time

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Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
06 19 10	J0959+0243	10 25 19	39.3	188.1	0.4		4.9	-23	2323	No stop
06 21 00	---	10 27 10	39.2	188.7	0.4		5.2	87	2337	06 19 11
06 21 00	COSMOS-DEEP	10 27 10	39.1	188.3	0.4		5.0	-11	2337	No stop
06 27 00	---	10 33 11	38.9	190.2	0.5		6.1	349	2383	06 21 01
06 27 30	J0959+0243	10 33 41	39.1	190.8	0.6		6.5	19	2383	06 27 30
06 29 30	---	10 35 41	39.0	191.4	0.6		6.8	120	2399	06 27 31
06 29 30	COSMOS-DEEP	10 35 41	38.9	191.0	0.6		6.6	-11	2399	No stop
06 37 30	---	10 43 42	38.6	193.6	0.7		8.1	469	2460	06 29 31
06 37 30	J0959+0243	10 43 42	38.7	194.0	0.7		8.4	-11	2460	No stop
06 39 30	---	10 45 43	38.7	194.6	0.8		8.7	109	2476	06 37 31
06 39 30	COSMOS-DEEP	10 45 43	38.5	194.2	0.7		8.5	-11	2476	No stop
06 47 30	---	10 53 44	38.2	196.7	0.9		9.9	469	2538	06 39 31
06 48 10	J1011+0106	10 54 24	37.2	193.3	0.7		7.9	18	2538	06 48 10
06 49 40	=1008+013	10 55 54	37.1	193.7	0.7		8.2	90	2549	06 48 11
06 49 40	J0959+0243	10 55 54	38.2	197.8	0.9		10.6	-23	2549	No stop
06 51 30	---	10 57 45	38.1	198.4	1.0		10.9	87	2564	06 49 41
06 51 30	COSMOS-DEEP	10 57 45	38.0	198.0	0.9		10.7	-11	2564	No stop
06 57 30	---	11 03 46	37.7	199.8	1.0		11.8	349	2610	06 51 31
06 58 00	J0959+0243	11 04 16	37.8	200.4	1.1		12.1	19	2610	06 58 00
07 00 00	---	11 06 16	37.7	201.0	1.1		12.5	120	2625	06 58 01
07 00 00	COSMOS-DEEP	11 06 16	37.6	200.6	1.1		12.2	-11	2625	No stop
07 08 00	---	11 14 17	37.2	203.1	1.2		13.6	469	2687	07 00 01
07 08 00	J0959+0243	11 14 17	37.3	203.5	1.2		13.9	-11	2687	No stop
07 10 00	---	11 16 18	37.1	204.1	1.3		14.2	109	2703	07 08 01
07 10 00	COSMOS-DEEP	11 16 18	37.0	203.7	1.2		14.0	-11	2703	No stop
07 18 00	---	11 24 19	36.5	206.1	1.4		15.3	469	2764	07 10 01
07 18 40	J1011+0106	11 24 59	35.8	202.6	1.2		13.3	18	2764	07 18 40
07 20 10	=1008+013	11 26 29	35.7	203.0	1.2		13.6	90	2776	07 18 41
07 20 10	J0959+0243	11 26 29	36.5	207.2	1.4		15.9	-23	2776	No stop
07 22 00	---	11 28 20	36.3	207.7	1.5		16.2	87	2790	07 20 11

Schedule for TORUN (Code Tr) Page 8

EVN-COSMOS - Taming AGN and star-formation across cosmic time

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Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
07 22 00	COSMOS-DEEP	11 28 20	36.3	207.3	1.4		16.0	-11	2790	No stop
07 28 00	---	11 34 21	35.8	209.1	1.5		17.0	349	2837	07 22 01
07 28 30	J0959+0243	11 34 51	35.9	209.7	1.6		17.3	19	2837	07 28 30
07 30 30	---	11 36 51	35.7	210.2	1.6		17.6	120	2852	07 28 31
07 30 30	COSMOS-DEEP	11 36 51	35.7	209.8	1.6		17.4	-11	2852	No stop
07 38 30	---	11 44 52	35.0	212.1	1.7		18.6	469	2914	07 30 31
07 38 30	J0959+0243	11 44 52	35.1	212.6	1.7		18.9	-11	2914	No stop
07 40 30	---	11 46 53	34.9	213.2	1.8		19.2	109	2929	07 38 31
07 40 30	COSMOS-DEEP	11 46 53	34.9	212.7	1.8		19.0	-11	2929	No stop
07 48 30	---	11 54 54	34.2	215.0	1.9		20.2	469	2991	07 40 31
07 49 10	J1011+0106	11 55 34	33.7	211.6	1.7		18.3	18	2991	07 49 10
07 50 40	=1008+013	11 57 04	33.6	212.0	1.7		18.5	90	3003	07 49 11
07 50 40	J0959+0243	11 57 04	34.1	216.1	1.9		20.7	-23	3003	No stop
07 52 30	---	11 58 55	33.9	216.6	2.0		21.0	87	3017	07 50 41
07 52 30	COSMOS-DEEP	11 58 55	33.9	216.1	2.0		20.8	-11	3017	No stop
07 58 30	---	12 04 56	33.3	217.8	2.1		21.6	349	3063	07 52 31
07 59 00	J0959+0243	12 05 26	33.3	218.4	2.1		21.9	19	3063	07 59 00
08 01 00	---	12 07 26	33.1	219.0	2.1		22.2	120	3079	07 59 01
08 01 00	COSMOS-DEEP	12 07 26	33.1	218.5	2.1		22.0	-11	3079	No stop
08 09 00	---	12 15 27	32.3	220.7	2.2		23.1	469	3141	08 01 01
08 09 00	J0959+0243	12 15 27	32.3	221.1	2.3		23.3	-11	3141	No stop
08 11 00	---	12 17 28	32.1	221.7	2.3		23.6	109	3156	08 09 01
08 11 00	COSMOS-DEEP	12 17 28	32.1	221.3	2.3		23.4	-11	3156	No stop
08 19 00	---	12 25 29	31.3	223.4	2.4		24.4	469	3218	08 11 01
08 21 00	3C279	12 27 29	30.7	171.4	-0.5		-5.2	1	3218	08 21 00
08 29 00	---	12 35 31	30.8	173.7	-0.4		-3.8	480	3280	08 21 01
08 30 30	COSMOS-DEEP	12 37 01	30.1	226.5	2.6		25.8	-31	3280	08 30 30
08 37 00	---	12 43 32	29.4	228.1	2.7		26.6	359	3330	08 30 31
08 37 30	J0959+0243	12 44 02	29.3	228.7	2.7		26.8	19	3330	08 37 30
08 39 00	---	12 45 32	29.1	229.1	2.8		27.0	90	3342	08 37 31

Schedule for TORUN (Code Tr) Page 9

EVN-COSMOS - Taming AGN and star-formation across cosmic time

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
08 39 00	COSMOS-DEEP	12 45 32	29.1	228.6	2.7		26.8	-11	3342	No stop
08 46 00	---	12 52 34	28.3	230.4	2.9		27.6	409	3396	08 39 01
08 46 00	J0959+0243	12 52 34	28.3	230.8	2.9		27.8	-11	3396	No stop
08 48 00	---	12 54 34	28.1	231.3	2.9		28.0	109	3411	08 46 01
08 48 40	J1011+0106	12 55 14	28.0	227.6	2.7		26.3	18	3411	08 48 40
08 50 10	=1008+013	12 56 44	27.8	228.0	2.7		26.5	90	3423	08 48 41
08 50 10	J0959+0243	12 56 44	27.8	231.9	2.9		28.2	-23	3423	No stop
08 52 00	---	12 58 35	27.6	232.3	3.0		28.4	87	3437	08 50 11
08 52 00	COSMOS-DEEP	12 58 35	27.6	231.9	3.0		28.2	-11	3437	No stop
08 58 00	---	13 04 35	26.9	233.4	3.1		28.9	349	3483	08 52 01
08 58 30	J0959+0243	13 05 06	26.8	233.9	3.1		29.1	19	3483	08 58 30
09 00 00	---	13 06 36	26.7	234.3	3.1		29.2	90	3495	08 58 31
09 00 00	COSMOS-DEEP	13 06 36	26.7	233.9	3.1		29.1	-11	3495	No stop
09 08 00	---	13 14 37	25.7	235.9	3.2		29.8	469	3557	09 00 01
09 08 00	J0959+0243	13 14 37	25.7	236.3	3.2		30.0	-11	3557	No stop
09 10 00	---	13 16 37	25.4	236.7	3.3		30.2	109	3572	09 08 01
09 10 00	COSMOS-DEEP	13 16 37	25.4	236.3	3.3		30.0	-10	3572	No stop
09 18 00	---	13 24 39	24.4	238.2	3.4		30.7	470	3634	09 10 01
09 18 40	J1011+0106	13 25 19	24.4	235.0	3.2		29.5	19	3634	09 18 40
09 20 10	=1008+013	13 26 49	24.3	235.4	3.2		29.6	90	3646	09 18 41
09 20 10	J0959+0243	13 26 49	24.1	239.1	3.4		31.1	-22	3646	No stop
09 22 00	---	13 28 39	23.9	239.6	3.5		31.2	88	3660	09 20 11
09 22 00	COSMOS-DEEP	13 28 39	23.9	239.2	3.5		31.1	-10	3660	No stop
09 28 00	---	13 34 40	23.1	240.6	3.6		31.6	350	3706	09 22 01
09 28 30	J0959+0243	13 35 10	23.0	241.1	3.6		31.7	19	3706	09 28 30
09 30 00	---	13 36 41	22.8	241.4	3.6		31.9	90	3718	09 28 31
09 30 00	COSMOS-DEEP	13 36 41	22.9	241.0	3.6		31.7	-10	3718	No stop
09 38 00	---	13 44 42	21.8	242.9	3.7		32.3	470	3780	09 30 01
09 38 00	J0959+0243	13 44 42	21.8	243.3	3.7		32.5	-11	3780	No stop
09 40 00	---	13 46 42	21.5	243.7	3.8		32.6	109	3795	09 38 01

Schedule for TORUN (Code Tr) Page 10

EVN-COSMOS - Taming AGN and star-formation across cosmic time

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
09 40 00	COSMOS-DEEP	13 46 42	21.5	243.3	3.8		32.5	-10	3795	No stop
09 48 00	---	13 54 44	20.4	245.1	3.9		33.0	470	3857	09 40 01
09 48 40	J1011+0106	13 55 24	20.6	242.0	3.7		32.0	19	3857	09 48 40
09 50 10	=1008+013	13 56 54	20.4	242.4	3.7		32.1	90	3868	09 48 41
09 50 10	J0959+0243	13 56 54	20.1	246.0	3.9		33.3	-22	3868	No stop
09 52 00	---	13 58 44	19.9	246.4	4.0		33.4	88	3883	09 50 11
09 52 00	COSMOS-DEEP	13 58 44	19.9	246.0	4.0		33.3	-10	3883	No stop
09 58 00	---	14 04 45	19.1	247.4	4.1		33.7	350	3929	09 52 01
09 58 30	J0959+0243	14 05 15	19.0	247.9	4.1		33.8	19	3929	09 58 30
10 00 00	---	14 06 46	18.8	248.2	4.1		33.9	90	3941	09 58 31
10 00 00	COSMOS-DEEP	14 06 46	18.8	247.8	4.1		33.8	-10	3941	No stop
10 08 00	---	14 14 47	17.7	249.5	4.2		34.3	470	4002	10 00 01
10 08 00	J0959+0243	14 14 47	17.6	249.9	4.2		34.4	-11	4002	No stop
10 10 00	---	14 16 47	17.3	250.4	4.3		34.5	109	4018	10 08 01
10 10 00	COSMOS-DEEP	14 16 47	17.4	250.0	4.3		34.4	-10	4018	No stop
10 18 00	---	14 24 49	16.2	251.7	4.4		34.8	470	4080	10 10 01
10 18 40	J1011+0106	14 25 29	16.5	248.7	4.2		34.0	19	4080	10 18 40
10 20 10	=1008+013	14 26 59	16.3	249.0	4.2		34.1	90	4091	10 18 41
10 20 10	J0959+0243	14 26 59	15.9	252.5	4.4		35.0	-22	4091	No stop
10 22 00	---	14 28 49	15.6	252.9	4.5		35.1	88	4105	10 20 11
10 22 00	COSMOS-DEEP	14 28 49	15.7	252.6	4.5		35.0	-10	4105	No stop
10 28 00	---	14 34 50	14.8	253.8	4.6		35.3	350	4152	10 22 01
10 28 30	J0959+0243	14 35 20	14.7	254.3	4.6		35.4	19	4152	10 28 30
10 30 00	---	14 36 51	14.5	254.6	4.6		35.4	90	4163	10 28 31
10 30 00	COSMOS-DEEP	14 36 51	14.5	254.3	4.6		35.3	-10	4163	No stop
10 38 00	---	14 44 52	13.4	255.9	4.7		35.7	470	4225	10 30 01
10 38 00	J0959+0243	14 44 52	13.3	256.3	4.7		35.7	-11	4225	No stop
10 40 00	---	14 46 52	13.0	256.7	4.8		35.8	109	4241	10 38 01
10 40 00	COSMOS-DEEP	14 46 52	13.1	256.4	4.8		35.7	-10	4241	No stop
10 48 00	---	14 54 54	11.9	258.0	4.9		36.0	470	4303	10 40 01

Schedule for TORUN (Code Tr) Page 11

EVN-COSMOS - Taming AGN and star-formation across cosmic time

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
10 48 40	J1011+0106	14 55 34	12.2	255.0	4.7		35.5	19	4303	10 48 40
10 50 10	=1008+013	14 57 04	12.0	255.4	4.7		35.5	90	4314	10 48 41
10 50 10	J0959+0243	14 57 04	11.5	258.8	4.9		36.1	-22	4314	No stop
10 52 00	---	14 58 54	11.3	259.2	5.0		36.2	88	4328	10 50 11
10 52 00	COSMOS-DEEP	14 58 54	11.3	258.8	5.0		36.1	-10	4328	No stop
10 58 00	---	15 04 55	10.4	260.1	5.1		36.3	350	4375	10 52 01
10 58 30	J0959+0243	15 05 25	10.3	260.5	5.1		36.4	19	4375	10 58 30
11 00 00	---	15 06 56	10.1	260.9	5.1		36.4	90	4386	10 58 31
11 00 00	COSMOS-DEEP	15 06 56	10.1	260.5	5.1		36.4	-10	4386	No stop
11 08 00	---	15 14 57	8.9	262.1	5.2		36.5	470	4448	11 00 01
11 08 00	J0959+0243	15 14 57	8.9	262.5	5.2		36.6	-11	4448	No stop
11 10 00	---	15 16 57	8.6	262.9	5.3		36.6	109	4464	11 08 01
11 10 00	COSMOS-DEEP	15 16 57	8.6	262.5	5.3		36.6	-10	4464	No stop
11 18 00	---	15 24 58	7.4	264.2	5.4		36.7	470	4525	11 10 01
11 20 00	J1015+0109	15 26 59	8.3	260.6	5.2		36.3	97	4525	11 20 00
11 26 00	=1013+014	15 33 00	7.4	261.8	5.3		36.5	360	4572	11 20 01
11 26 30	J1011+0106	15 33 30	6.6	262.8	5.4		36.6	15	4572	11 26 30
11 28 30	=1008+013	15 35 30	6.3	263.2	5.4		36.6	120	4587	11 26 31
11 29 00	J0959+0243	15 36 00	5.7	266.7	5.6		36.9	8	4587	11 29 00
11 30 30	---	15 37 31	5.5	267.0	5.6		36.9	90	4599	11 29 01
11 30 30	COSMOS-DEEP	15 37 31	5.6	266.7	5.6		36.9	-10	4599	No stop
11 37 00	---	15 44 02	4.6	268.0	5.7		36.9	380	4649	11 30 31
11 37 30	J0959+0243	15 44 32	4.4	268.4	5.7		36.9	19	4649	11 37 30
11 39 00	---	15 46 02	4.2	268.7	5.8		36.9	90	4661	11 37 31
11 39 00	COSMOS-DEEP	15 46 02	4.3	268.4	5.7		36.9	-10	4661	No stop
11 47 00	---	15 54 03	3.1	270.0	5.9		36.9	470	4723	11 39 01
11 47 00	J0959+0243	15 54 03	3.0	270.3	5.9		36.9	-10	4723	No stop
11 49 00	---	15 56 04	2.7	270.7	5.9	D	36.9	0	4738	11 47 01

SETUP FILE INFORMATION:
NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.

```
======== Setup file: sess320.L1024ar

  Setup group:   13         Station: TORUN            Total bit rate:  1024
  Format: VDIF              Bits per sample: 2        Sample rate: 32.000
  Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

  Disk used to record data.
```

```
  1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
            2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         L         L         L         L         L         L         L         L
                  L         L         L         L         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         U         U         L         L         U         U         L         L
                  U         U         L         L         U         U         L         L
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   1610.50  1610.50  1610.50  1610.50  1642.50  1642.50  1642.50  1642.50
            1674.50  1674.50  1674.50  1674.50  1706.50  1706.50  1706.50  1706.50
  BBC fr=    689.50   689.50   689.50   689.50   657.50   657.50   657.50   657.50
             625.50   625.50   625.50   625.50   593.50   593.50   593.50   593.50
  Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
              16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                          Source position (RA/Dec)                        Error
                       (B1950)             (J2000)             (Date)            (mas)

* J0959+0243        09 56 32.884578   * 09 59 08.318200     10 00 11.541598       0.00
                    02 57 32.68843    * 02 43 09.61320      02 37 20.58616        0.00
                    approx 18 mJy from VLBA-COSMOS

* COSMOS-DEEP       09 57 49.681612   * 10 00 25.000000     10 01 28.169756       0.00
                    02 47 25.90418    * 02 33 00.00000      02 27 09.88388        0.00
                    Center of COSMOS-deep

  J0927+3902        09 23 55.319217   * 09 27 03.013938     09 28 19.436534       0.13
  0923+392          39 15 23.56637    * 39 02 20.85177      38 56 51.25849        0.10
* 4C39.25           /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
  J0927+39          rfc_2012b Petrov, 2012, unpublished 239566 observations

* J1011+0106        10 08 41.222937   * 10 11 15.639226     10 12 18.385420       0.66
  1008+013          01 21 31.32679    * 01 06 42.51399      01 00 43.59662        1.90
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
                    GSFC 2011B astro solution        32 Observations

* J1015+0109        10 13 22.642342   * 10 15 57.055116     10 16 59.775329       0.48
  1013+014          01 24 11.84452    * 01 09 13.74679      01 03 11.05201        0.70
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
                    GSFC 2011B astro solution        41 Observations

  J1256-0547        12 53 35.831299   * 12 56 11.166567     12 57 13.634122       0.69
```

```
 * 3C279            -05 31 07.99595    *-05 47 21.52481     -05 53 52.46715        0.92
   1253-055          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
   J1256-05          GSFC 2011B astro solution      7402 Observations


EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
    Source         Sun distance (deg)
   J0959+0243          70.4
   COSMOS-DEEP         70.0
   4C39.25             89.7
   J1011+0106          67.0
   J1015+0109          65.9
   3C279               25.9

  Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
  that the Sun will cause amplitude reductions on the  longest VLBA baselines
  at a solar distance of 60deg F^(-0.6) where F is in GHz.
  For common VLBI bands, this is:
       1.6 GHz         45. deg
       2.3 GHz         36. deg
       5.0 GHz         23. deg
       8.4 GHz         17. deg
      15.0 GHz         12. deg
      22.0 GHz          9. deg
```

es093btr

The parsec-scale view of the most distant blazar at z = 6.1

PI: *Cristiana Spingola*


```
Address:  INAF- Institute for radioastronomy
          via Gobetti 101, 40129
          Bologna
          Italy

Phone:    +39 3938231373
EMAIL:    spingola@ira.inaf.it
Fax:
Phone during observation:
```


```
Observing mode:

Schedule for TORUN     (Code Tr )                                    Page   2
               The parsec-scale view of the most distant blazar at z = 6.1
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Tue   3 Nov 2020   Day 308 ---

 Next scan frequencies:  1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
                         1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
 Next BBC frequencies:    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
                          625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
 Next scan bandwidths:     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
                           16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00

20 00 00  J0316+2733   00 08 24  47.0 107.2 -3.2     -40.3     0        0   20 00 00
20 01 30  ---          00 09 54  47.2 107.6 -3.1     -40.3    90       12   20 00 01

20 01 30  PSOJ0309     00 09 54  48.0 109.5 -3.0     -39.6   -18       12   No stop
20 05 00  ---          00 13 25  48.5 110.4 -3.0     -39.3   192       39   20 01 31

20 05 40  J0316+2733   00 14 05  47.8 108.6 -3.1     -40.0    23       39   20 05 40
20 07 10  ---          00 15 35  48.0 109.0 -3.0     -39.9    90       50   20 05 41

20 07 10  PSOJ0309     00 15 35  48.8 111.0 -2.9     -39.2   -18       50   No stop
20 10 40  ---          00 19 06  49.3 111.9 -2.9     -38.9   192       77   20 07 11

20 10 40  J0316+2733   00 19 06  48.5 109.9 -3.0     -39.6   -17       77   No stop
20 12 10  ---          00 20 36  48.7 110.3 -3.0     -39.5    73       89   20 10 41

20 12 10  PSOJ0309     00 20 36  49.5 112.3 -2.8     -38.7   -18       89   No stop
20 15 40  ---          00 24 07  50.0 113.2 -2.8     -38.4   192      116   20 12 11

20 16 20  J0316+2733   00 24 47  49.3 111.4 -2.9     -39.1    22      116   20 16 20
20 17 50  ---          00 26 17  49.5 111.8 -2.9     -39.0    90      128   20 16 21

20 17 50  PSOJ0309     00 26 17  50.3 113.8 -2.7     -38.2   -18      128   No stop
20 21 20  ---          00 29 48  50.7 114.8 -2.7     -37.9   192      155   20 17 51

20 21 20  J0316+2733   00 29 48  50.0 112.7 -2.8     -38.7   -18      155   No stop
20 22 50  ---          00 31 18  50.2 113.1 -2.8     -38.6    72      166   20 21 21
```

20 22 50	PSOJ0309	00 31 18	50.9	115.2	-2.7	-37.7	-18	166	No stop
20 26 20	---	00 34 49	51.4	116.2	-2.6	-37.4	192	193	20 22 51
20 27 00	J0316+2733	00 35 29	50.8	114.3	-2.7	-38.2	22	193	20 27 00
20 28 30	---	00 36 59	51.0	114.7	-2.7	-38.0	90	205	20 27 01
20 28 30	PSOJ0309	00 36 59	51.7	116.8	-2.6	-37.1	-18	205	No stop
20 32 00	---	00 40 29	52.2	117.8	-2.5	-36.7	192	232	20 28 31
20 32 00	J0316+2733	00 40 29	51.5	115.7	-2.6	-37.7	-18	232	No stop
20 33 30	---	00 42 00	51.7	116.1	-2.6	-37.5	72	243	20 32 01

Schedule for TORUN (Code Tr) Page 3

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 3 Nov 2020 Day 308 ---										
20 33 30	PSOJ0309	00 42 00	52.4	118.3	-2.5		-36.6	-18	243	No stop
20 37 00	---	00 45 30	52.8	119.3	-2.4		-36.1	192	271	20 33 31
20 37 40	J0316+2733	00 46 10	52.2	117.3	-2.5		-37.0	22	271	20 37 40
20 39 10	---	00 47 41	52.4	117.7	-2.5		-36.9	90	282	20 37 41
20 39 10	PSOJ0309	00 47 41	53.1	119.9	-2.4		-35.9	-19	282	No stop
20 42 40	---	00 51 11	53.6	121.0	-2.3		-35.4	191	309	20 39 11
20 42 40	J0316+2733	00 51 11	52.9	118.7	-2.4		-36.5	-18	309	No stop
20 44 10	---	00 52 41	53.1	119.2	-2.4		-36.3	72	321	20 42 41
20 44 10	PSOJ0309	00 52 41	53.8	121.5	-2.3		-35.2	-19	321	No stop
20 47 40	---	00 56 12	54.2	122.5	-2.2		-34.8	191	348	20 44 11
20 48 20	J0316+2733	00 56 52	53.7	120.4	-2.3		-35.8	22	348	20 48 20
20 49 50	---	00 58 22	53.8	120.9	-2.3		-35.6	90	359	20 48 21
20 49 50	PSOJ0309	00 58 22	54.5	123.2	-2.2		-34.4	-19	359	No stop
20 53 20	---	01 01 53	54.9	124.3	-2.2		-33.9	191	386	20 49 51
20 53 20	J0316+2733	01 01 53	54.3	122.0	-2.3		-35.1	-19	386	No stop
20 54 50	---	01 03 23	54.5	122.5	-2.2		-34.9	71	398	20 53 21
20 54 50	PSOJ0309	01 03 23	55.1	124.8	-2.1		-33.7	-19	398	No stop
20 58 20	---	01 06 54	55.5	126.0	-2.1		-33.2	191	425	20 54 51
20 59 00	J0316+2733	01 07 34	55.0	123.8	-2.2		-34.3	21	425	20 59 00
21 00 30	---	01 09 04	55.2	124.3	-2.1		-34.1	90	437	20 59 01
21 00 30	PSOJ0309	01 09 04	55.8	126.7	-2.0		-32.8	-19	437	No stop
21 04 00	---	01 12 35	56.2	127.9	-2.0		-32.3	191	464	21 00 31
21 04 00	J0316+2733	01 12 35	55.6	125.4	-2.1		-33.5	-19	464	No stop
21 05 30	---	01 14 05	55.8	125.9	-2.1		-33.3	71	475	21 04 01
21 05 30	PSOJ0309	01 14 05	56.4	128.4	-1.9		-32.0	-19	475	No stop
21 09 00	---	01 17 36	56.8	129.6	-1.9		-31.4	191	502	21 05 31
21 09 40	J0316+2733	01 18 16	56.3	127.3	-2.0		-32.6	21	502	21 09 40
21 11 10	---	01 19 46	56.5	127.8	-2.0		-32.4	90	514	21 09 41
21 11 10	PSOJ0309	01 19 46	57.1	130.3	-1.9		-31.0	-20	514	No stop
21 14 40	---	01 23 17	57.5	131.6	-1.8		-30.4	190	541	21 11 11

Schedule for TORUN (Code Tr) Page 4

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Tue 3 Nov 2020 Day 308 ---										
21 14 40	J0316+2733	01 23 17	56.9	129.0	-1.9		-31.8	-19	541	No stop
21 16 10	---	01 24 47	57.1	129.5	-1.9		-31.5	71	553	21 14 41
21 16 10	PSOJ0309	01 24 47	57.6	132.1	-1.8		-30.1	-20	553	No stop
21 19 40	---	01 28 17	58.0	133.4	-1.7		-29.4	190	580	21 16 11
21 20 20	J0316+2733	01 28 57	57.6	131.0	-1.8		-30.8	21	580	21 20 20
21 21 50	---	01 30 28	57.7	131.5	-1.8		-30.5	90	591	21 20 21
21 24 27	DA193	01 33 05	44.4	79.2	-4.4		-50.2	37	591	21 24 27
21 28 47	---	01 37 36	45.1	79.9	-4.3		-50.3	260	625	21 24 28
21 31 29	J0316+2733	01 40 09	58.8	135.1	-1.6		-28.6	37	625	21 31 29
21 34 29	---	01 43 19	59.1	136.3	-1.6		-27.9	180	648	21 31 30
21 34 29	PSOJ0309	01 43 09	59.6	139.0	-1.5		-26.3	-20	648	No stop
21 37 59	---	01 46 40	59.9	140.4	-1.4		-25.5	190	675	21 34 30
21 38 39	J0316+2733	01 47 20	59.5	137.8	-1.5		-27.1	20	675	21 38 39
21 40 09	---	01 48 50	59.7	138.4	-1.5		-26.7	90	687	21 38 40
21 40 09	PSOJ0309	01 48 50	60.1	141.3	-1.4		-25.0	-20	687	No stop
21 43 39	---	01 52 21	60.4	142.7	-1.3		-24.2	190	714	21 40 10
21 43 39	J0316+2733	01 52 21	60.0	139.8	-1.4		-26.0	-20	714	No stop
21 45 09	---	01 53 51	60.2	140.4	-1.4		-25.6	70	725	21 43 40
21 45 09	PSOJ0309	01 53 51	60.6	143.3	-1.3		-23.8	-21	725	No stop
21 48 39	---	01 57 22	60.9	144.8	-1.2		-23.0	189	752	21 45 10
21 49 19	J0316+2733	01 58 02	60.6	142.1	-1.3		-24.6	20	752	21 49 19
21 50 49	---	01 59 32	60.7	142.7	-1.3		-24.3	90	764	21 49 20
21 50 49	PSOJ0309	01 59 32	61.1	145.7	-1.2		-22.4	-21	764	No stop
21 54 19	---	02 03 02	61.4	147.2	-1.1		-21.5	189	791	21 50 50
21 54 19	J0316+2733	02 03 02	61.0	144.2	-1.2		-23.4	-20	791	No stop
21 55 49	---	02 04 33	61.2	144.8	-1.2		-23.0	70	803	21 54 20
21 55 49	PSOJ0309	02 04 33	61.5	147.9	-1.1		-21.1	-21	803	No stop
21 59 19	---	02 08 03	61.8	149.4	-1.0		-20.1	189	830	21 55 50
21 59 59	J0316+2733	02 08 43	61.5	146.6	-1.2		-21.9	20	830	21 59 59
22 01 29	---	02 10 14	61.6	147.2	-1.1		-21.5	90	841	22 00 00

Schedule for TORUN (Code Tr) Page 5

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 3 Nov 2020 Day 308 ---										
22 01 29	PSOJ0309	02 10 14	61.9	150.3	-1.0		-19.5	-21	841	No stop
22 04 59	---	02 13 44	62.2	151.9	-1.0		-18.6	189	868	22 01 30
22 04 59	J0316+2733	02 13 44	61.9	148.8	-1.1		-20.6	-21	868	No stop
22 06 29	---	02 15 14	62.0	149.4	-1.0		-20.2	69	880	22 05 00
22 06 29	PSOJ0309	02 15 14	62.3	152.6	-0.9		-18.1	-21	880	No stop
22 09 59	---	02 18 45	62.5	154.2	-0.9		-17.1	189	907	22 06 30
22 10 39	J0316+2733	02 19 25	62.3	151.3	-1.0		-19.0	19	907	22 10 39
22 12 09	---	02 20 55	62.4	152.0	-0.9		-18.6	90	918	22 10 40
22 12 09	PSOJ0309	02 20 55	62.7	155.2	-0.8		-16.5	-21	918	No stop
22 15 39	---	02 24 26	62.9	156.8	-0.8		-15.4	189	946	22 12 10
22 15 39	J0316+2733	02 24 26	62.7	153.6	-0.9		-17.6	-21	946	No stop
22 17 09	---	02 25 56	62.8	154.3	-0.9		-17.1	69	957	22 15 40
22 17 09	PSOJ0309	02 25 56	63.0	157.6	-0.8		-15.0	-22	957	No stop
22 20 39	---	02 29 27	63.1	159.2	-0.7		-13.9	188	984	22 17 10
22 21 19	J0316+2733	02 30 07	63.0	156.2	-0.8		-15.9	19	984	22 21 19
22 22 49	---	02 31 37	63.1	156.9	-0.8		-15.4	90	996	22 21 20
22 22 49	PSOJ0309	02 31 37	63.3	160.3	-0.7		-13.2	-22	996	No stop
22 26 19	---	02 35 08	63.4	162.0	-0.6		-12.1	188	1023	22 22 50
22 26 19	J0316+2733	02 35 08	63.3	158.6	-0.7		-14.3	-21	1023	No stop
22 27 49	---	02 36 38	63.4	159.3	-0.7		-13.9	69	1034	22 26 20
22 27 49	PSOJ0309	02 36 38	63.5	162.7	-0.6		-11.6	-22	1034	No stop
22 31 19	---	02 40 09	63.7	164.4	-0.5		-10.5	188	1061	22 27 50
22 31 59	J0316+2733	02 40 49	63.6	161.3	-0.6		-12.5	19	1061	22 31 59
22 33 29	---	02 42 19	63.7	162.1	-0.6		-12.0	90	1073	22 32 00
22 33 29	PSOJ0309	02 42 19	63.7	165.5	-0.5		-9.8	-22	1073	No stop
22 36 59	---	02 45 49	63.9	167.2	-0.4		-8.6	188	1100	22 33 30
22 36 59	J0316+2733	02 45 49	63.9	163.8	-0.5		-10.9	-21	1100	No stop
22 38 29	---	02 47 20	63.9	164.5	-0.5		-10.4	69	1112	22 37 00
22 38 29	PSOJ0309	02 47 20	63.9	168.0	-0.4		-8.1	-22	1112	No stop
22 41 59	---	02 50 50	64.0	169.7	-0.3		-6.9	188	1139	22 38 30

Schedule for TORUN (Code Tr) Page 6

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 3 Nov 2020 Day 308 ---										
22 42 39	J0316+2733	02 51 30	64.1	166.6	-0.4		-9.0	19	1139	22 42 39
22 44 09	---	02 53 01	64.1	167.4	-0.4		-8.5	90	1150	22 42 40
22 44 09	PSOJ0309	02 53 01	64.1	170.8	-0.3		-6.2	-22	1150	No stop
22 47 39	---	02 56 31	64.1	172.6	-0.2		-5.0	188	1177	22 44 10
22 47 39	J0316+2733	02 56 31	64.2	169.1	-0.4		-7.3	-21	1177	No stop
22 49 09	---	02 58 01	64.3	169.9	-0.3		-6.8	69	1189	22 47 40
22 49 09	PSOJ0309	02 58 01	64.2	173.4	-0.2		-4.5	-22	1189	No stop
22 52 39	---	03 01 32	64.2	175.1	-0.2		-3.3	188	1216	22 49 10
22 53 19	J0316+2733	03 02 12	64.4	172.0	-0.3		-5.4	19	1216	22 53 19
22 54 49	---	03 03 42	64.4	172.8	-0.2		-4.9	90	1228	22 53 20
22 54 49	PSOJ0309	03 03 42	64.2	176.3	-0.1		-2.5	-22	1228	No stop
22 58 19	---	03 07 13	64.3	178.0	-0.1		-1.3	188	1255	22 54 50
22 58 19	J0316+2733	03 07 13	64.5	174.6	-0.2		-3.7	-21	1255	No stop
22 59 49	---	03 08 43	64.5	175.4	-0.2		-3.1	69	1266	22 58 20
22 59 49	PSOJ0309	03 08 43	64.3	178.8	-0.0		-0.8	-22	1266	No stop
23 03 19	---	03 12 14	64.3	180.6	0.0		0.4	188	1293	22 59 50
23 03 59	J0316+2733	03 12 54	64.5	177.5	-0.1		-1.7	19	1293	23 03 59
23 05 29	---	03 14 24	64.5	178.3	-0.1		-1.2	90	1305	23 04 00
23 05 29	PSOJ0309	03 14 24	64.3	181.7	0.1		1.2	-22	1305	No stop
23 08 59	---	03 17 55	64.3	183.5	0.1		2.4	188	1332	23 05 30
23 08 59	J0316+2733	03 17 55	64.5	180.1	0.0		0.1	-21	1332	No stop
23 10 29	---	03 19 25	64.5	180.9	0.0		0.6	69	1344	23 09 00
23 10 29	PSOJ0309	03 19 25	64.2	184.3	0.1		2.9	-22	1344	No stop
23 13 59	---	03 22 56	64.2	186.1	0.2		4.1	188	1371	23 10 30
23 14 39	J0316+2733	03 23 36	64.5	183.0	0.1		2.0	19	1371	23 14 39
23 16 09	---	03 25 06	64.5	183.8	0.1		2.6	90	1382	23 14 40
23 16 09	PSOJ0309	03 25 06	64.2	187.2	0.2		4.8	-22	1382	No stop
23 19 39	---	03 28 36	64.1	188.9	0.3		6.0	188	1409	23 16 10
23 19 39	J0316+2733	03 28 36	64.5	185.6	0.2		3.8	-21	1409	No stop
23 21 09	---	03 30 07	64.4	186.4	0.2		4.3	69	1421	23 19 40

Schedule for TORUN (Code Tr) Page 7

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 3 Nov 2020 Day 308 ---										
23 21 09	PSOJ0309	03 30 07	64.0	189.7	0.3		6.5	-22	1421	No stop
23 24 39	---	03 33 37	63.9	191.5	0.4		7.7	188	1448	23 21 10
23 25 19	J0316+2733	03 34 17	64.3	188.5	0.3		5.7	19	1448	23 25 19
23 26 49	---	03 35 48	64.3	189.3	0.3		6.3	90	1460	23 25 20
23 26 49	PSOJ0309	03 35 48	63.9	192.6	0.4		8.5	-22	1460	No stop
23 30 19	---	03 39 18	63.8	194.3	0.5		9.6	188	1487	23 26 50
23 30 19	J0316+2733	03 39 18	64.2	191.0	0.4		7.5	-21	1487	No stop
23 31 49	---	03 40 48	64.2	191.8	0.4		8.0	69	1498	23 30 20
23 31 49	PSOJ0309	03 40 48	63.7	195.0	0.5		10.1	-21	1498	No stop
23 35 19	---	03 44 19	63.6	196.8	0.6		11.2	189	1525	23 31 50
23 35 59	J0316+2733	03 44 59	64.0	193.9	0.5		9.4	19	1525	23 35 59
23 37 29	---	03 46 29	64.0	194.6	0.5		9.9	90	1537	23 36 00
23 37 29	PSOJ0309	03 46 29	63.5	197.8	0.6		11.9	-21	1537	No stop
23 40 59	---	03 50 00	63.3	199.5	0.6		13.1	189	1564	23 37 30
23 40 59	J0316+2733	03 50 00	63.8	196.4	0.5		11.0	-21	1564	No stop
23 42 29	---	03 51 30	63.8	197.1	0.6		11.5	69	1575	23 41 00
23 42 29	PSOJ0309	03 51 30	63.2	200.2	0.7		13.5	-21	1575	No stop
23 45 59	---	03 55 01	63.0	201.9	0.7		14.6	189	1603	23 42 30
23 46 39	J0316+2733	03 55 41	63.6	199.2	0.6		12.9	20	1603	23 46 39
23 48 09	---	03 57 11	63.5	199.9	0.7		13.3	90	1614	23 46 40
23 48 09	PSOJ0309	03 57 11	62.9	202.9	0.8		15.3	-21	1614	No stop
23 51 39	---	04 00 42	62.7	204.6	0.8		16.3	189	1641	23 48 10
23 51 39	J0316+2733	04 00 42	63.3	201.6	0.7		14.4	-20	1641	No stop
23 53 09	---	04 02 12	63.2	202.3	0.7		14.9	70	1653	23 51 40
23 53 09	PSOJ0309	04 02 12	62.6	205.3	0.9		16.8	-21	1653	No stop
23 56 39	---	04 05 43	62.4	206.9	0.9		17.8	189	1680	23 53 10
23 57 19	J0316+2733	04 06 23	63.0	204.3	0.8		16.2	20	1680	23 57 19
23 58 49	---	04 07 53	62.9	205.0	0.8		16.6	90	1691	23 57 20

Schedule for TORUN (Code Tr) Page 8

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Start: Tue 3 Nov 2020 Day 308 -- Stop: Wed 4 Nov 2020 Day 309 ---										
23 58 49	PSOJ0309	04 07 53	62.2	207.9	0.9		18.4	-21	1691	No stop
00 02 19	---	04 11 23	62.0	209.4	1.0		19.4	189	1718	23 58 50
00 02 19	J0316+2733	04 11 23	62.7	206.6	0.9		17.7	-20	1718	No stop
00 03 49	---	04 12 54	62.6	207.3	0.9		18.1	70	1730	00 02 20
00 03 49	PSOJ0309	04 12 54	61.8	210.1	1.0		19.8	-20	1730	No stop
00 07 19	---	04 16 24	61.6	211.7	1.1		20.8	190	1757	00 03 50
00 07 59	J0316+2733	04 17 04	62.3	209.2	1.0		19.3	20	1757	00 07 59
00 10 59	---	04 20 05	62.0	210.5	1.0		20.1	180	1780	00 08 00
00 11 14	J0316+2733	04 20 20	62.0	210.6	1.0		20.2	9	1780	00 11 14
00 12 44	---	04 21 50	61.9	211.3	1.1		20.6	90	1792	00 11 15
00 12 44	PSOJ0309	04 21 50	61.1	214.0	1.2		22.2	-20	1792	No stop
00 16 14	---	04 25 21	60.8	215.5	1.2		23.1	190	1819	00 12 45
00 16 54	J0316+2733	04 26 01	61.6	213.1	1.1		21.7	21	1819	00 16 54
00 18 24	---	04 27 31	61.4	213.8	1.2		22.1	90	1831	00 16 55
00 18 24	PSOJ0309	04 27 31	60.6	216.4	1.3		23.6	-20	1831	No stop
00 21 54	---	04 31 02	60.3	217.8	1.3		24.5	190	1858	00 18 25
00 21 54	J0316+2733	04 31 02	61.1	215.3	1.2		23.0	-19	1858	No stop
00 23 24	---	04 32 32	61.0	215.9	1.2		23.4	71	1869	00 21 55
00 23 24	PSOJ0309	04 32 32	60.2	218.4	1.4		24.9	-20	1869	No stop
00 26 54	---	04 36 02	59.8	219.8	1.4		25.7	190	1896	00 23 25
00 27 34	J0316+2733	04 36 43	60.6	217.6	1.3		24.4	21	1896	00 27 34
00 29 04	---	04 38 13	60.5	218.2	1.3		24.8	90	1908	00 27 35
00 29 04	PSOJ0309	04 38 13	59.6	220.7	1.5		26.2	-19	1908	No stop
00 32 34	---	04 41 43	59.3	222.1	1.5		26.9	191	1935	00 29 05
00 32 34	J0316+2733	04 41 43	60.2	219.7	1.4		25.6	-19	1935	No stop
00 34 04	---	04 43 14	60.0	220.3	1.4		26.0	71	1946	00 32 35
00 34 04	PSOJ0309	04 43 14	59.1	222.7	1.5		27.3	-19	1946	No stop
00 37 34	---	04 46 44	58.8	224.0	1.6		28.0	191	1974	00 34 05
00 38 14	J0316+2733	04 47 24	59.6	221.9	1.5		26.9	22	1974	00 38 14
00 39 44	---	04 48 55	59.5	222.5	1.5		27.2	90	1985	00 38 15

Schedule for TORUN (Code Tr) Page 9

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 4 Nov 2020 Day 309 ---										
00 39 44	PSOJ0309	04 48 55	58.5	224.8	1.6		28.5	-19	1985	No stop
00 43 14	---	04 52 25	58.2	226.1	1.7		29.2	191	2012	00 39 45
00 43 14	J0316+2733	04 52 25	59.1	223.8	1.6		28.0	-18	2012	No stop
00 44 44	---	04 53 55	58.9	224.4	1.6		28.3	72	2024	00 43 15
00 44 44	PSOJ0309	04 53 55	58.0	226.7	1.7		29.5	-19	2024	No stop
00 48 14	---	04 57 26	57.6	227.9	1.8		30.1	191	2051	00 44 45
00 48 54	J0316+2733	04 58 06	58.5	226.0	1.7		29.2	22	2051	00 48 54
00 50 24	---	04 59 36	58.3	226.5	1.7		29.5	90	2062	00 48 55
00 50 24	PSOJ0309	04 59 36	57.4	228.7	1.8		30.5	-18	2062	No stop
00 53 54	---	05 03 07	57.0	229.9	1.9		31.2	192	2089	00 50 25
00 53 54	J0316+2733	05 03 07	57.9	227.8	1.8		30.1	-18	2089	No stop
00 55 24	---	05 04 37	57.8	228.3	1.8		30.4	72	2101	00 53 55
00 55 24	PSOJ0309	05 04 37	56.8	230.5	1.9		31.4	-18	2101	No stop
00 58 54	---	05 08 08	56.4	231.7	2.0		32.0	192	2128	00 55 25
00 59 34	J0316+2733	05 08 48	57.3	229.8	1.9		31.2	22	2128	00 59 34
01 01 04	---	05 10 18	57.1	230.4	1.9		31.5	90	2140	00 59 35
01 01 04	PSOJ0309	05 10 18	56.1	232.4	2.0		32.4	-18	2140	No stop
01 04 34	---	05 13 49	55.7	233.6	2.0		33.0	192	2167	01 01 05
01 04 34	J0316+2733	05 13 49	56.7	231.6	1.9		32.1	-17	2167	No stop
01 06 04	---	05 15 19	56.5	232.1	2.0		32.3	73	2178	01 04 35
01 06 04	PSOJ0309	05 15 19	55.5	234.1	2.1		33.2	-18	2178	No stop
01 09 34	---	05 18 50	55.1	235.2	2.1		33.7	192	2205	01 06 05
01 10 14	J0316+2733	05 19 30	56.0	233.5	2.0		33.0	23	2205	01 10 14
01 11 44	---	05 21 00	55.9	234.0	2.1		33.2	90	2217	01 10 15
01 16 48	DA193	05 26 04	75.7	155.3	-0.5		-19.1	128	2217	01 16 48
01 21 08	---	05 30 35	76.0	158.6	-0.4		-16.5	260	2250	01 16 49
01 26 28	J0316+2733	05 35 46	54.0	238.7	2.3		35.4	146	2250	01 26 28
01 29 28	---	05 38 56	53.6	239.7	2.4		35.8	180	2274	01 26 29
01 29 28	PSOJ0309	05 38 46	52.6	241.4	2.5		36.4	-17	2274	No stop
01 32 58	---	05 42 17	52.1	242.4	2.5		36.8	193	2301	01 29 29

Schedule for TORUN (Code Tr) Page 10

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 4 Nov 2020 Day 309 ---										
01 33 33	J0316+2733	05 42 52	53.1	240.8	2.4		36.3	18	2301	01 33 33
01 35 03	---	05 44 22	52.9	241.3	2.4		36.5	90	2312	01 33 34
01 35 03	PSOJ0309	05 44 22	51.8	243.0	2.6		37.0	-17	2312	No stop
01 38 33	---	05 47 53	51.3	244.0	2.6		37.4	193	2339	01 35 04
01 38 33	J0316+2733	05 47 53	52.4	242.3	2.5		36.9	-17	2339	No stop
01 40 03	---	05 49 23	52.2	242.7	2.5		37.0	73	2351	01 38 34
01 40 03	PSOJ0309	05 49 23	51.1	244.4	2.6		37.6	-17	2351	No stop
01 43 33	---	05 52 53	50.7	245.4	2.7		37.9	193	2378	01 40 04
01 44 08	J0316+2733	05 53 28	51.7	243.9	2.6		37.5	18	2378	01 44 08
01 45 38	---	05 54 59	51.5	244.3	2.6		37.7	90	2390	01 44 09
01 45 38	PSOJ0309	05 54 59	50.4	246.0	2.7		38.1	-17	2390	No stop
01 49 08	---	05 58 29	49.9	246.9	2.8		38.5	193	2417	01 45 39
01 49 08	J0316+2733	05 58 29	51.0	245.3	2.7		38.0	-17	2417	No stop
01 50 38	---	06 00 00	50.8	245.7	2.7		38.2	73	2428	01 49 09
01 50 38	PSOJ0309	06 00 00	49.7	247.3	2.8		38.6	-17	2428	No stop
01 54 08	---	06 03 30	49.2	248.2	2.9		38.9	193	2455	01 50 39
01 54 43	J0316+2733	06 04 05	50.2	246.9	2.8		38.5	18	2455	01 54 43
01 56 13	---	06 05 35	50.0	247.3	2.8		38.7	90	2467	01 54 44
01 56 13	PSOJ0309	06 05 35	48.9	248.8	2.9		39.1	-17	2467	No stop
01 59 43	---	06 09 06	48.4	249.7	3.0		39.4	193	2494	01 56 14
01 59 43	J0316+2733	06 09 06	49.5	248.2	2.9		39.0	-17	2494	No stop
02 01 13	---	06 10 36	49.3	248.6	2.9		39.1	73	2506	01 59 44
02 01 13	PSOJ0309	06 10 36	48.2	250.1	3.0		39.5	-17	2506	No stop
02 04 43	---	06 14 07	47.7	251.0	3.1		39.7	193	2533	02 01 14
02 05 18	J0316+2733	06 14 42	48.8	249.7	2.9		39.5	18	2533	02 05 18
02 06 48	---	06 16 12	48.5	250.1	3.0		39.6	90	2544	02 05 19
02 06 48	PSOJ0309	06 16 12	47.4	251.5	3.1		39.9	-17	2544	No stop
02 10 18	---	06 19 43	46.9	252.4	3.1		40.1	193	2571	02 06 49
02 10 18	J0316+2733	06 19 43	48.1	251.0	3.0		39.8	-17	2571	No stop
02 11 48	---	06 21 13	47.8	251.3	3.1		39.9	73	2583	02 10 19

Schedule for TORUN (Code Tr) Page 11

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 4 Nov 2020 Day 309 ---										
02 11 48	PSOJ0309	06 21 13	46.7	252.8	3.2		40.2	-18	2583	No stop
02 15 18	---	06 24 44	46.2	253.6	3.2		40.5	192	2610	02 11 49
02 15 53	J0316+2733	06 25 19	47.3	252.4	3.1		40.2	18	2610	02 15 53
02 17 23	---	06 26 49	47.0	252.7	3.2		40.3	90	2621	02 15 54
02 17 23	PSOJ0309	06 26 49	45.9	254.1	3.3		40.6	-18	2621	No stop
02 20 53	---	06 30 19	45.4	255.0	3.3		40.8	192	2649	02 17 24
02 20 53	J0316+2733	06 30 19	46.5	253.6	3.2		40.6	-17	2649	No stop
02 22 23	---	06 31 50	46.3	254.0	3.2		40.6	73	2660	02 20 54
02 22 23	PSOJ0309	06 31 50	45.2	255.3	3.3		40.9	-18	2660	No stop
02 25 53	---	06 35 20	44.6	256.2	3.4		41.0	192	2687	02 22 24
02 26 28	J0316+2733	06 35 55	45.7	255.0	3.3		40.9	18	2687	02 26 28
02 27 58	---	06 37 26	45.5	255.3	3.3		41.0	90	2699	02 26 29
02 27 58	PSOJ0309	06 37 26	44.3	256.7	3.4		41.1	-18	2699	No stop
02 31 28	---	06 40 56	43.8	257.5	3.5		41.3	192	2726	02 27 59
02 31 28	J0316+2733	06 40 56	45.0	256.1	3.4		41.2	-17	2726	No stop
02 32 58	---	06 42 26	44.8	256.5	3.4		41.2	73	2737	02 31 29
02 32 58	PSOJ0309	06 42 26	43.6	257.8	3.5		41.4	-18	2737	No stop
02 36 28	---	06 45 57	43.1	258.6	3.6		41.5	192	2764	02 32 59
02 37 03	J0316+2733	06 46 32	44.2	257.5	3.5		41.4	18	2764	02 37 03
02 38 33	---	06 48 02	44.0	257.8	3.5		41.5	90	2776	02 37 04
02 38 33	PSOJ0309	06 48 02	42.8	259.1	3.6		41.6	-18	2776	No stop
02 42 03	---	06 51 33	42.3	259.9	3.7		41.7	192	2803	02 38 34
02 42 03	J0316+2733	06 51 33	43.4	258.6	3.6		41.6	-17	2803	No stop
02 43 33	---	06 53 03	43.2	259.0	3.6		41.7	73	2815	02 42 04
02 43 33	PSOJ0309	06 53 03	42.0	260.2	3.7		41.8	-18	2815	No stop
02 47 03	---	06 56 34	41.5	261.0	3.8		41.9	192	2842	02 43 34
02 47 38	J0316+2733	06 57 09	42.6	259.9	3.7		41.9	18	2842	02 47 38
02 49 08	---	06 58 39	42.4	260.2	3.7		41.9	90	2853	02 47 39
02 49 08	PSOJ0309	06 58 39	41.2	261.5	3.8		42.0	-18	2853	No stop
02 52 38	---	07 02 10	40.7	262.2	3.9		42.1	192	2880	02 49 09

Schedule for TORUN (Code Tr) Page 12

The parsec-scale view of the most distant blazar at z = 6.1

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 4 Nov 2020 Day 309 ---										
02 52 38	J0316+2733	07 02 10	41.9	261.0	3.7		42.0	-17	2880	No stop
02 54 08	---	07 03 40	41.7	261.3	3.8		42.1	73	2892	02 52 39
02 54 08	PSOJ0309	07 03 40	40.5	262.6	3.9		42.1	-18	2892	No stop
02 57 38	---	07 07 11	39.9	263.3	3.9		42.2	192	2919	02 54 09
02 58 13	J0316+2733	07 07 46	41.0	262.2	3.8		42.2	18	2919	02 58 13
02 59 43	---	07 09 16	40.8	262.5	3.9		42.2	90	2931	02 58 14
02 59 43	PSOJ0309	07 09 16	39.6	263.8	4.0		42.2	-18	2931	No stop
03 03 13	---	07 12 46	39.1	264.5	4.0		42.3	192	2958	02 59 44
03 03 13	J0316+2733	07 12 46	40.3	263.3	3.9		42.3	-17	2958	No stop
03 04 43	---	07 14 17	40.1	263.6	3.9		42.3	73	2969	03 03 14
03 04 43	PSOJ0309	07 14 17	38.9	264.8	4.1		42.3	-18	2969	No stop
03 08 13	---	07 17 47	38.4	265.6	4.1		42.4	192	2996	03 04 44
03 08 48	J0316+2733	07 18 22	39.5	264.5	4.0		42.4	18	2996	03 08 48
03 10 18	---	07 19 53	39.2	264.8	4.0		42.5	90	3008	03 08 49
03 10 18	PSOJ0309	07 19 53	38.0	266.0	4.1		42.4	-18	3008	No stop
03 13 48	---	07 23 23	37.5	266.7	4.2		42.5	192	3035	03 10 19
03 13 48	J0316+2733	07 23 23	38.7	265.6	4.1		42.5	-17	3035	No stop
03 15 18	---	07 24 53	38.5	265.9	4.1		42.5	73	3047	03 13 49
03 15 18	PSOJ0309	07 24 53	37.3	267.0	4.2		42.5	-18	3047	No stop
03 18 48	---	07 28 24	36.8	267.8	4.3		42.5	192	3074	03 15 19
03 19 23	J0316+2733	07 28 59	37.9	266.7	4.2		42.6	18	3074	03 19 23
03 20 53	---	07 30 29	37.6	267.0	4.2		42.6	90	3085	03 19 24
03 20 53	PSOJ0309	07 30 29	36.5	268.2	4.3		42.5	-18	3085	No stop
03 24 23	---	07 34 00	35.9	268.9	4.4		42.5	192	3112	03 20 54
03 24 23	J0316+2733	07 34 00	37.1	267.7	4.3		42.6	-17	3112	No stop
03 25 53	---	07 35 30	36.9	268.1	4.3		42.6	73	3124	03 24 24
03 25 53	PSOJ0309	07 35 30	35.7	269.2	4.4		42.5	-18	3124	No stop
03 29 23	---	07 39 01	35.2	269.9	4.5		42.5	192	3151	03 25 54
03 29 58	J0316+2733	07 39 36	36.3	268.9	4.4		42.7	18	3151	03 29 58
03 31 28	---	07 41 06	36.1	269.2	4.4		42.7	90	3163	03 29 59

```
Schedule for TORUN     (Code Tr )                                  Page  13
              The parsec-scale view of the most distant blazar at z = 6.1
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Wed   4 Nov 2020   Day 309 ---

03 31 28  PSOJ0309     07 41 06  34.9 270.3  4.5      42.5   -18     3163   No stop
03 34 58  ---          07 44 37  34.3 271.0  4.6      42.5   192     3190   03 31 29

03 34 58  J0316+2733   07 44 37  35.5 269.9  4.4      42.7   -17     3190   No stop
03 36 28  ---          07 46 07  35.3 270.2  4.5      42.7    73     3201   03 34 59

03 36 28  PSOJ0309     07 46 07  34.1 271.3  4.6      42.5   -18     3201   No stop
03 39 58  ---          07 49 37  33.6 272.0  4.6      42.5   192     3228   03 36 29

03 40 33  J0316+2733   07 50 13  34.7 271.0  4.5      42.7    18     3228   03 40 33
03 42 03  ---          07 51 43  34.5 271.3  4.6      42.7    90     3240   03 40 34

03 42 03  PSOJ0309     07 51 43  33.3 272.4  4.7      42.5   -18     3240   No stop
03 45 33  ---          07 55 13  32.7 273.1  4.7      42.5   192     3267   03 42 04

03 45 33  J0316+2733   07 55 13  33.9 272.0  4.6      42.6   -17     3267   No stop
03 47 03  ---          07 56 44  33.7 272.3  4.6      42.6    73     3278   03 45 34

03 47 03  PSOJ0309     07 56 44  32.5 273.4  4.8      42.5   -18     3278   No stop
03 50 33  ---          08 00 14  32.0 274.1  4.8      42.4   192     3306   03 47 04

03 51 03  J0316+2733   08 00 44  33.1 273.1  4.7      42.6    13     3306   03 51 03
03 52 33  ---          08 02 15  32.9 273.4  4.7      42.6    90     3317   03 51 04

03 52 33  PSOJ0309     08 02 15  31.7 274.5  4.9      42.4   -18     3317   No stop
03 56 03  ---          08 05 45  31.2 275.1  4.9      42.3   192     3344   03 52 34

03 56 33  J0316+2733   08 06 15  32.3 274.1  4.8      42.5    13     3344   03 56 33
03 59 53  ---          08 09 36  31.8 274.8  4.9      42.5   200     3370   03 56 34



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.L1024

   Setup group:   10         Station: TORUN            Total bit rate:  1024
   Format: VDIF              Bits per sample: 2        Sample rate: 32.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
            2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         L         L         L         L         L         L         L         L
                  L         L         L         L         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         U         U         L         L         U         U         L         L
                  U         U         L         L         U         U         L         L
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
            1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
  BBC fr=    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
             625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
  Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
              16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



 POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

 * PSOJ0309          03 06 48.589182   * 03 09 47.486200     03 11 02.323606       0.00
                     27 06 34.92609    * 27 17 57.31670      27 22 39.89335        0.00
                     position of the core from VLBA 8.4 GHz

 * J0316+2733        03 13 29.159808   * 03 16 29.011900     03 17 44.240500       0.00
                     27 22 07.44354    * 27 33 08.14700      27 37 41.49907        0.00
                     position from astrogeo.org

  J0555+3948        05 52 01.407174   * 05 55 30.805616     05 56 57.778413       0.13
  0552+398          39 48 21.94578    * 39 48 49.16493      39 48 53.09315        0.10
 * DA193             /home/guest/rmc/SCHED/sched11.6/catalogs/sources.vlba.2012jul
  J0555+39          rfc_2012b Petrov, 2012, unpublished 376994 observations


EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
    Source         Sun distance (deg)
   PSOJ0309           165.9
   J0316+2733         164.8
   DA193              130.5
```

```
Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the  longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rm016atr

RM016A

PI: *Marcote*


```
Address:  JIVE
          Oude Hoogeveensedijk 4
          Dwingeloo
          Netherlands

Phone:    +31 521 596 508
EMAIL:    marcote@jive.eu
Fax:      +31 521 596 539
Phone during observation: +31 521 596 530
```


```
Observing mode: evn

Schedule for TORUN     (Code Tr )                                    Page   2
               RM016A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source                Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Mon   9 Nov 2020   Day 314 ---

 Next scan frequencies:  4632.00  4632.00  4632.00  4632.00  4696.00  4696.00  4696.00  4696.00
                         4760.00  4760.00  4760.00  4760.00  4824.00  4824.00  4824.00  4824.00
                         4888.00  4888.00  4888.00  4888.00  4952.00  4952.00  4952.00  4952.00
                         5016.00  5016.00  5016.00  5016.00  5080.00  5080.00  5080.00  5080.00
 Next BBC frequencies:    544.00   544.00   544.00   544.00   608.00   608.00   608.00   608.00
                          672.00   672.00   672.00   672.00   736.00   736.00   736.00   736.00
                          800.00   800.00   800.00   800.00   864.00   864.00   864.00   864.00
                          928.00   928.00   928.00   928.00   992.00   992.00   992.00   992.00
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

13 00 00  BLLAC        17 30 55  44.7  74.9 -4.5     -51.7     0        0   13 00 00
13 04 00  ---          17 34 55  45.3  75.5 -4.5     -51.9   240      124   13 00 01

13 05 50  J2353+5518   17 36 46  39.2  46.9 -6.3     -50.6    37      124   13 05 50
13 07 30  =2351+550    17 38 26  39.4  47.1 -6.3     -50.8   100      175   13 05 51

13 07 30  GRB201510A   17 38 26  40.0  50.9 -6.0     -51.7   -23      175   No stop
13 12 00  ---          17 42 57  40.6  51.5 -5.9     -52.2   247      314   13 07 31

13 12 30  J2353+5518   17 43 27  39.9  47.6 -6.2     -51.4     7      314   13 12 30
13 14 00  =2351+550    17 44 57  40.1  47.8 -6.2     -51.6    90      361   13 12 31

13 14 00  GRB201510A   17 44 57  40.8  51.7 -5.9     -52.5   -23      361   No stop
13 18 30  ---          17 49 28  41.3  52.2 -5.8     -53.0   247      500   13 14 01

13 18 30  J2353+5518   17 49 28  40.6  48.3 -6.1     -52.2   -23      500   No stop
13 20 30  =2351+550    17 51 28  40.8  48.6 -6.1     -52.5    97      562   13 18 31

13 20 30  J2347+5142   17 51 28  39.3  53.1 -5.9     -50.9   -24      562   No stop
13 24 30  =2344+514    17 55 29  39.8  53.6 -5.9     -51.4   216      685   13 20 31
```

13 25 00	J2353+5518	17 55 59	41.3	49.1	-6.0	-53.1	6	685	13 25 00
13 26 30	=2351+550	17 57 29	41.5	49.2	-6.0	-53.3	90	732	13 25 01
13 26 30	GRB201510A	17 57 29	42.3	53.2	-5.7	-54.0	-23	732	No stop
13 31 00	---	18 02 00	42.8	53.7	-5.6	-54.5	247	871	13 26 31
13 31 00	J2353+5518	18 02 00	42.0	49.7	-5.9	-53.9	-23	871	No stop
13 33 00	=2351+550	18 04 00	42.2	50.0	-5.8	-54.1	97	933	13 31 01
13 33 00	GRB201510A	18 04 00	43.1	54.0	-5.6	-54.8	-23	933	No stop
13 37 30	---	18 08 31	43.6	54.5	-5.5	-55.3	247	1072	13 33 01

Schedule for TORUN (Code Tr) Page 3
RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
13 38 00	J2353+5518	18 09 01	42.8	50.5	-5.8		-54.8	7	1072	13 38 00
13 39 30	=2351+550	18 10 31	43.0	50.7	-5.7		-55.0	90	1118	13 38 01
13 39 30	GRB201510A	18 10 31	43.9	54.7	-5.5		-55.6	-23	1118	No stop
13 44 00	---	18 15 02	44.4	55.2	-5.4		-56.1	247	1257	13 39 31
13 44 00	J2353+5518	18 15 02	43.5	51.2	-5.7		-55.6	-23	1257	No stop
13 46 00	=2351+550	18 17 02	43.7	51.4	-5.6		-55.8	97	1319	13 44 01
13 46 00	J2347+5142	18 17 02	42.5	56.2	-5.5		-53.9	-25	1319	No stop
13 50 00	=2344+514	18 21 03	43.0	56.7	-5.5		-54.3	215	1443	13 46 01
13 50 30	J2353+5518	18 21 33	44.3	51.9	-5.6		-56.4	5	1443	13 50 30
13 52 00	=2351+550	18 23 03	44.5	52.1	-5.5		-56.6	90	1489	13 50 31
13 52 00	GRB201510A	18 23 03	45.4	56.2	-5.3		-57.1	-23	1489	No stop
13 56 30	---	18 27 34	46.0	56.7	-5.2		-57.6	247	1628	13 52 01
13 56 30	J2353+5518	18 27 34	45.0	52.6	-5.5		-57.2	-23	1628	No stop
13 58 30	=2351+550	18 29 34	45.2	52.8	-5.4		-57.4	97	1690	13 56 31
13 58 30	GRB201510A	18 29 34	46.2	56.9	-5.1		-57.8	-23	1690	No stop
14 03 00	---	18 34 05	46.8	57.4	-5.1		-58.4	247	1829	13 58 31
14 03 30	J2353+5518	18 34 35	45.8	53.3	-5.3		-58.1	7	1829	14 03 30
14 05 00	=2351+550	18 36 05	46.0	53.5	-5.3		-58.3	90	1876	14 03 31
14 05 00	GRB201510A	18 36 05	47.1	57.7	-5.0		-58.6	-23	1876	No stop
14 09 30	---	18 40 36	47.6	58.2	-5.0		-59.1	247	2015	14 05 01
14 09 30	J2353+5518	18 40 36	46.6	54.0	-5.2		-58.9	-23	2015	No stop
14 11 30	=2351+550	18 42 36	46.8	54.2	-5.2		-59.1	97	2077	14 09 31
14 11 30	J2347+5142	18 42 36	45.7	59.4	-5.1		-56.7	-25	2077	No stop
14 15 30	=2344+514	18 46 37	46.2	59.9	-5.0		-57.2	215	2200	14 11 31
14 16 00	J2353+5518	18 47 07	47.4	54.7	-5.1		-59.7	5	2200	14 16 00
14 17 30	=2351+550	18 48 37	47.5	54.8	-5.1		-59.9	90	2247	14 16 01
14 17 30	GRB201510A	18 48 37	48.7	59.1	-4.8		-60.1	-24	2247	No stop
14 22 00	---	18 53 08	49.3	59.6	-4.8		-60.6	246	2386	14 17 31
14 22 00	J2353+5518	18 53 08	48.1	55.3	-5.0		-60.5	-23	2386	No stop
14 24 00	=2351+550	18 55 08	48.3	55.5	-5.0		-60.7	97	2448	14 22 01

Schedule for TORUN (Code Tr) Page 4

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
14 24 00	GRB201510A	18 55 08	49.5	59.8	-4.7		-60.8	-24	2448	No stop
14 28 30	---	18 59 39	50.1	60.3	-4.6		-61.4	246	2587	14 24 01
14 29 00	J2353+5518	19 00 09	49.0	56.0	-4.9		-61.4	6	2587	14 29 00
14 30 30	=2351+550	19 01 39	49.2	56.2	-4.9		-61.6	90	2633	14 29 01
14 30 30	GRB201510A	19 01 39	50.4	60.5	-4.6		-61.6	-24	2633	No stop
14 35 00	---	19 06 10	51.0	61.0	-4.5		-62.1	246	2772	14 30 31
14 35 00	J2353+5518	19 06 10	49.7	56.7	-4.8		-62.1	-24	2772	No stop
14 37 00	=2351+550	19 08 11	50.0	56.9	-4.8		-62.4	96	2834	14 35 01
14 37 00	J2347+5142	19 08 11	49.1	62.5	-4.7		-59.5	-26	2834	No stop
14 41 00	=2344+514	19 12 11	49.6	62.9	-4.6		-59.9	214	2958	14 37 01
14 41 30	J2353+5518	19 12 41	50.5	57.3	-4.7		-63.0	4	2958	14 41 30
14 43 00	=2351+550	19 14 11	50.7	57.5	-4.7		-63.2	90	3004	14 41 31
14 43 00	GRB201510A	19 14 11	52.0	61.9	-4.4		-63.0	-24	3004	No stop
14 47 30	---	19 18 42	52.6	62.4	-4.3		-63.6	246	3143	14 43 01
14 47 30	J2353+5518	19 18 42	51.3	57.9	-4.6		-63.7	-24	3143	No stop
14 49 30	=2351+550	19 20 43	51.6	58.1	-4.6		-64.0	96	3205	14 47 31
14 49 30	GRB201510A	19 20 43	52.9	62.6	-4.3		-63.8	-24	3205	No stop
14 54 00	---	19 25 13	53.5	63.1	-4.2		-64.3	246	3344	14 49 31
14 54 30	J2353+5518	19 25 43	52.2	58.6	-4.5		-64.6	6	3344	14 54 30
14 56 00	=2351+550	19 27 14	52.4	58.8	-4.5		-64.8	90	3391	14 54 31
14 56 00	GRB201510A	19 27 14	53.7	63.3	-4.2		-64.5	-24	3391	No stop
15 00 30	---	19 31 44	54.4	63.8	-4.1		-65.0	246	3530	14 56 01
15 00 30	J2353+5518	19 31 44	53.0	59.2	-4.4		-65.4	-24	3530	No stop
15 02 30	=2351+550	19 33 45	53.2	59.4	-4.4		-65.7	96	3591	15 00 31
15 02 30	J2347+5142	19 33 45	52.5	65.5	-4.2		-62.1	-27	3591	No stop
15 06 30	=2344+514	19 37 45	53.1	66.0	-4.2		-62.5	213	3715	15 02 31
15 07 00	J2353+5518	19 38 15	53.8	59.9	-4.3		-66.2	3	3715	15 07 00
15 08 30	=2351+550	19 39 46	54.0	60.0	-4.2		-66.4	90	3762	15 07 01
15 08 30	GRB201510A	19 39 46	55.4	64.7	-4.0		-66.0	-24	3762	No stop
15 13 00	---	19 44 16	56.1	65.2	-3.9		-66.5	246	3901	15 08 31

Schedule for TORUN (Code Tr) Page 5

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
15 13 00	J2353+5518	19 44 16	54.6	60.4	-4.2		-67.0	-24	3901	No stop
15 15 00	=2351+550	19 46 17	54.9	60.6	-4.1		-67.3	96	3962	15 13 01
15 15 00	GRB201510A	19 46 17	56.3	65.4	-3.9		-66.7	-25	3962	No stop
15 19 30	---	19 50 47	56.9	65.8	-3.8		-67.2	245	4102	15 15 01
15 20 00	J2353+5518	19 51 18	55.5	61.1	-4.1		-67.9	5	4102	15 20 00
15 21 30	=2351+550	19 52 48	55.7	61.2	-4.0		-68.1	90	4148	15 20 01
15 21 30	GRB201510A	19 52 48	57.2	66.1	-3.8		-67.4	-25	4148	No stop
15 26 00	---	19 57 19	57.8	66.5	-3.7		-67.9	245	4287	15 21 31
15 26 00	J2353+5518	19 57 19	56.3	61.7	-4.0		-68.7	-25	4287	No stop
15 28 00	=2351+550	19 59 19	56.6	61.9	-3.9		-68.9	95	4349	15 26 01
15 28 00	J2347+5142	19 59 19	56.1	68.5	-3.8		-64.7	-28	4349	No stop
15 32 00	=2344+514	20 03 20	56.6	69.0	-3.7		-65.1	212	4473	15 28 01
15 32 30	J2353+5518	20 03 50	57.2	62.3	-3.8		-69.5	2	4473	15 32 30
15 34 00	=2351+550	20 05 20	57.4	62.4	-3.8		-69.7	90	4519	15 32 31
15 34 00	GRB201510A	20 05 20	58.9	67.4	-3.5		-68.8	-25	4519	No stop
15 38 30	---	20 09 51	59.6	67.8	-3.5		-69.3	245	4658	15 34 01
15 38 30	J2353+5518	20 09 51	58.0	62.8	-3.7		-70.3	-25	4658	No stop
15 40 30	=2351+550	20 11 51	58.2	63.0	-3.7		-70.5	95	4720	15 38 31
15 40 30	GRB201510A	20 11 51	59.9	68.0	-3.4		-69.6	-25	4720	No stop
15 45 00	---	20 16 22	60.5	68.5	-3.4		-70.1	245	4859	15 40 31
15 45 30	J2353+5518	20 16 52	58.9	63.4	-3.6		-71.2	5	4859	15 45 30
15 47 00	=2351+550	20 18 22	59.1	63.6	-3.6		-71.4	90	4905	15 45 31
15 47 00	GRB201510A	20 18 22	60.8	68.7	-3.3		-70.3	-25	4905	No stop
15 51 30	---	20 22 53	61.4	69.2	-3.3		-70.8	245	5045	15 47 01
15 51 30	J2353+5518	20 22 53	59.7	64.0	-3.5		-72.0	-25	5045	No stop
15 53 30	=2351+550	20 24 53	60.0	64.1	-3.5		-72.2	95	5106	15 51 31
15 53 30	J2347+5142	20 24 53	59.7	71.6	-3.4		-67.2	-30	5106	No stop
15 57 30	=2344+514	20 28 54	60.2	72.0	-3.3		-67.5	210	5230	15 53 31
15 58 00	J2353+5518	20 29 24	60.6	64.5	-3.4		-72.8	0	5230	15 58 00
15 59 30	=2351+550	20 30 54	60.8	64.7	-3.4		-73.0	90	5276	15 58 01

Schedule for TORUN (Code Tr) Page 6

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 9 Nov 2020 Day 314 ---										
15 59 30	GRB201510A	20 30 54	62.5	70.0	-3.1		-71.7	-26	5276	No stop
16 04 00	---	20 35 25	63.2	70.5	-3.0		-72.2	244	5416	15 59 31
16 04 00	J2353+5518	20 35 25	61.4	65.0	-3.3		-73.6	-26	5416	No stop
16 06 00	=2351+550	20 37 25	61.7	65.2	-3.3		-73.9	94	5477	16 04 01
16 06 00	GRB201510A	20 37 25	63.4	70.7	-3.0		-72.4	-26	5477	No stop
16 10 30	---	20 41 56	64.1	71.1	-2.9		-72.9	244	5617	16 06 01
16 11 00	J2353+5518	20 42 26	62.4	65.6	-3.2		-74.6	4	5617	16 11 00
16 12 30	=2351+550	20 43 56	62.6	65.7	-3.2		-74.8	90	5663	16 11 01
16 12 30	GRB201510A	20 43 56	64.4	71.3	-2.9		-73.1	-26	5663	No stop
16 17 00	---	20 48 27	65.0	71.8	-2.8		-73.6	244	5802	16 12 31
16 17 00	J2353+5518	20 48 27	63.2	66.1	-3.1		-75.4	-26	5802	No stop
16 19 00	=2351+550	20 50 27	63.5	66.3	-3.1		-75.6	94	5864	16 17 01
16 19 00	J2347+5142	20 50 27	63.3	74.6	-3.0		-69.5	-32	5864	No stop
16 23 00	=2344+514	20 54 28	63.9	75.1	-2.9		-69.9	208	5988	16 19 01
16 23 30	J2353+5518	20 54 58	64.1	66.6	-3.0		-76.3	-2	5988	16 23 30
16 25 00	=2351+550	20 56 28	64.3	66.7	-3.0		-76.5	88	6034	16 23 31
16 25 00	GRB201510A	20 56 28	66.2	72.5	-2.7		-74.5	-27	6034	No stop
16 29 30	---	21 00 59	66.8	73.0	-2.6		-75.0	243	6173	16 25 01
16 29 30	J2353+5518	21 00 59	64.9	67.1	-2.9		-77.1	-27	6173	No stop
16 31 30	=2351+550	21 02 59	65.2	67.2	-2.9		-77.4	93	6235	16 29 31
16 31 30	GRB201510A	21 02 59	67.1	73.2	-2.6		-75.3	-27	6235	No stop
16 36 00	---	21 07 30	67.7	73.6	-2.5		-75.8	243	6374	16 31 31
16 36 30	J2353+5518	21 08 00	65.9	67.6	-2.8		-78.1	3	6374	16 36 30
16 38 00	=2351+550	21 09 30	66.1	67.7	-2.8		-78.3	90	6420	16 36 31
16 38 00	GRB201510A	21 09 30	68.0	73.8	-2.5		-76.0	-27	6420	No stop
16 42 30	---	21 14 01	68.7	74.2	-2.4		-76.5	243	6559	16 38 01
16 42 30	J2353+5518	21 14 01	66.7	68.0	-2.7		-78.9	-27	6559	No stop
16 44 30	=2351+550	21 16 01	67.0	68.2	-2.6		-79.2	93	6621	16 42 31
16 44 30	J2347+5142	21 16 01	67.1	77.7	-2.5		-71.7	-34	6621	No stop
16 48 30	=2344+514	21 20 02	67.7	78.2	-2.5		-72.0	206	6745	16 44 31

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Schedule for TORUN     (Code Tr )                                  Page   7
               RM016A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Mon   9 Nov 2020   Day 314 ---

16 49 00  J2353+5518   21 20 32  67.7  68.5 -2.6     -79.8    -5     6745   16 49 00
16 50 30  =2351+550    21 22 02  67.9  68.6 -2.5     -80.1    85     6791   16 49 01

16 50 30  GRB201510A   21 22 02  69.8  75.0 -2.3     -77.4   -28     6791   No stop
16 55 00  ---          21 26 33  70.5  75.4 -2.2     -77.9   242     6930   16 50 31

16 55 00  J2353+5518   21 26 33  68.5  68.8 -2.5     -80.7   -28     6930   No stop
16 57 00  =2351+550    21 28 34  68.8  69.0 -2.4     -81.0    92     6992   16 55 01

 ---------- Ef-pointing ----------

17 00 00  BLLAC        21 31 34  78.0 150.3 -0.5     -23.8     3     6992   17 00 00
17 05 00  ---          21 36 35  78.4 154.5 -0.4     -20.5   300     7147   17 00 01

 ---------- fringe-finder ----------

17 05 10  BLLAC        21 36 45  78.4 154.6 -0.4     -20.4     3     7147   17 05 10
17 08 10  ---          21 39 45  78.6 157.2 -0.4     -18.3   180     7240   17 05 11

17 10 00  J2353+5518   21 41 36  70.6  69.7 -2.2     -83.0   -80     7240   17 10 00
17 12 00  =2351+550    21 43 36  70.9  69.8 -2.2     -83.3    40     7301   17 10 01

17 12 00  GRB201510A   21 43 36  73.0  77.0 -1.9     -79.9   -29     7301   No stop
17 16 30  ---          21 48 07  73.6  77.4 -1.8     -80.4   241     7441   17 12 01

17 17 00  J2353+5518   21 48 37  71.6  70.0 -2.1     -84.1     0     7441   17 17 00
17 18 30  =2351+550    21 50 07  71.8  70.1 -2.1     -84.4    90     7487   17 17 01

17 18 30  GRB201510A   21 50 07  73.9  77.6 -1.8     -80.6   -30     7487   No stop
17 23 00  ---          21 54 38  74.6  78.0 -1.7     -81.1   240     7626   17 18 31

17 23 00  J2353+5518   21 54 38  72.4  70.3 -2.0     -85.1   -30     7626   No stop
17 25 00  =2351+550    21 56 38  72.7  70.4 -2.0     -85.5    90     7688   17 23 01

17 25 00  J2347+5142   21 56 38  73.1  83.1 -1.9     -74.7   -41     7688   No stop
17 29 00  =2344+514    22 00 39  73.7  83.6 -1.8     -74.9   199     7812   17 25 01

17 29 30  J2353+5518   22 01 09  73.4  70.5 -1.9     -86.2   -11     7812   17 29 30
17 31 00  =2351+550    22 02 39  73.6  70.6 -1.9     -86.5    79     7858   17 29 31

17 31 00  GRB201510A   22 02 39  75.8  78.6 -1.6     -82.1   -31     7858   No stop
17 35 30  ---          22 07 10  76.4  79.0 -1.5     -82.6   239     7997   17 31 01

17 35 30  J2353+5518   22 07 10  74.2  70.7 -1.8     -87.3   -32     7997   No stop
17 37 30  =2351+550    22 09 10  74.5  70.8 -1.8     -87.7    88     8059   17 35 31
```

Schedule for TORUN (Code Tr) Page 8

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 9 Nov 2020 Day 314 ---										
17 37 30	GRB201510A	22 09 10	76.7	79.2	-1.5		-82.9	-32	8059	No stop
17 42 00	---	22 13 41	77.4	79.5	-1.4		-83.4	238	8198	17 37 31
17 42 30	J2353+5518	22 14 11	75.2	70.8	-1.7		-88.6	-2	8198	17 42 30
17 44 00	=2351+550	22 15 41	75.4	70.9	-1.7		-88.9	88	8244	17 42 31
17 44 00	GRB201510A	22 15 41	77.7	79.7	-1.4		-83.7	-33	8244	No stop
17 48 30	---	22 20 12	78.4	80.0	-1.3		-84.3	237	8384	17 44 01
17 48 30	J2353+5518	22 20 12	76.1	70.9	-1.6		-89.8	-33	8384	No stop
17 50 30	=2351+550	22 22 12	76.4	70.9	-1.5		-90.2	87	8445	17 48 31
17 50 30	J2347+5142	22 22 12	76.9	86.9	-1.4		-76.0	-47	8445	No stop
17 54 30	=2344+514	22 26 13	77.5	87.6	-1.4		-76.1	193	8569	17 50 31
17 55 00	J2353+5518	22 26 43	77.0	70.9	-1.5		-91.2	-19	8569	17 55 00
17 56 30	=2351+550	22 28 13	77.2	70.8	-1.4		-91.5	71	8615	17 55 01
17 56 30	GRB201510A	22 28 13	79.6	80.6	-1.2		-85.3	-35	8615	No stop
18 01 00	---	22 32 44	80.2	80.9	-1.1		-86.0	235	8755	17 56 31
18 01 00	J2353+5518	22 32 44	77.8	70.7	-1.4		-92.6	-35	8755	No stop
18 03 00	=2351+550	22 34 44	78.1	70.7	-1.3		-93.0	85	8816	18 01 01
18 03 00	GRB201510A	22 34 44	80.5	81.0	-1.1		-86.2	-36	8816	No stop
18 07 30	---	22 39 15	81.2	81.2	-1.0		-86.9	234	8956	18 03 01
18 08 00	J2353+5518	22 39 45	78.8	70.4	-1.3		-94.3	-7	8956	18 08 00
18 09 30	=2351+550	22 41 15	79.1	70.4	-1.2		-94.7	83	9002	18 08 01
18 09 30	GRB201510A	22 41 15	81.5	81.3	-1.0		-87.2	-37	9002	No stop
18 14 00	---	22 45 46	82.2	81.5	-0.9		-87.9	233	9141	18 09 31
18 14 00	J2353+5518	22 45 46	79.7	70.0	-1.1		-95.9	-38	9141	No stop
18 16 00	=2351+550	22 47 46	80.0	69.9	-1.1		-96.5	82	9203	18 14 01
18 16 00	J2347+5142	22 47 46	80.7	91.8	-1.0		-76.2	-59	9203	No stop
18 20 00	=2344+514	22 51 47	81.3	92.8	-0.9		-76.0	181	9327	18 16 01
18 20 30	J2353+5518	22 52 17	80.6	69.4	-1.0		-97.9	-32	9327	18 20 30
18 22 00	=2351+550	22 53 47	80.8	69.2	-1.0		-98.4	58	9373	18 20 31
18 22 00	GRB201510A	22 53 47	83.3	81.8	-0.7		-89.3	-40	9373	No stop
18 26 30	---	22 58 18	84.0	81.8	-0.7		-90.2	230	9512	18 22 01

Schedule for TORUN (Code Tr) Page 9

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
18 26 30	J2353+5518	22 58 18	81.4	68.5	-0.9		-100.0	-42	9512	No stop
18 28 30	=2351+550	23 00 19	81.7	68.2	-0.9		-100.8	78	9574	18 26 31
18 28 30	GRB201510A	23 00 19	84.3	81.8	-0.6		-90.6	-42	9574	No stop
18 33 00	---	23 04 49	85.0	81.6	-0.6		-91.6	228	9713	18 28 31
18 33 30	J2353+5518	23 05 19	82.4	67.1	-0.8		-102.8	-14	9713	18 33 30
18 35 00	=2351+550	23 06 50	82.6	66.7	-0.8		-103.5	76	9759	18 33 31
18 35 00	GRB201510A	23 06 50	85.3	81.5	-0.5		-92.2	-44	9759	No stop
18 39 30	---	23 11 20	86.0	81.1	-0.4		-93.5	226	9898	18 35 01
18 39 30	J2353+5518	23 11 20	83.3	65.4	-0.7		-105.7	-47	9898	No stop
18 41 30	=2351+550	23 13 21	83.5	64.7	-0.7		-106.8	73	9960	18 39 31
18 41 30	J2347+5142	23 13 21	84.6	100.0	-0.6		-73.1	-87	9960	No stop
18 45 30	=2344+514	23 17 21	85.1	102.1	-0.5		-71.8	153	10084	18 41 31
18 46 00	J2353+5518	23 17 51	84.1	62.9	-0.6		-109.6	-64	10084	18 46 00
18 47 30	=2351+550	23 19 22	84.3	62.1	-0.6		-110.7	26	10130	18 46 01
18 47 30	GRB201510A	23 19 22	87.1	79.3	-0.3		-96.9	-49	10130	No stop
18 52 00	---	23 23 52	87.8	77.0	-0.2		-100.1	221	10269	18 47 31
18 52 00	J2353+5518	23 23 52	84.9	59.5	-0.5		-114.2	-51	10269	No stop
18 54 00	=2351+550	23 25 53	85.2	58.1	-0.5		-116.0	69	10331	18 52 01
18 54 00	GRB201510A	23 25 53	88.1	75.4	-0.2		-102.1	-48	10331	No stop
18 58 30	---	23 30 23	88.7	68.8	-0.1		-109.6	222	10470	18 54 01
18 59 00	J2353+5518	23 30 54	85.8	53.8	-0.4		-121.4	-15	10470	18 59 00
19 00 30	=2351+550	23 32 24	86.0	52.2	-0.4		-123.3	75	10517	18 59 01
19 00 30	GRB201510A	23 32 24	89.0	62.9	-0.1		-115.9	-32	10517	No stop
19 05 00	---	23 36 55	89.5	24.9	-0.0		-154.8	238	10656	19 00 31
19 05 00	J2353+5518	23 36 55	86.5	46.4	-0.3		-130.0	-55	10656	No stop
19 07 00	=2351+550	23 38 55	86.7	43.2	-0.3		-133.6	65	10718	19 05 01
19 07 00	J2347+5142	23 38 55	88.1	131.3	-0.2		-46.9	-215	10718	No stop
19 11 00	=2344+514	23 42 56	88.5	147.6	-0.1		-31.4	25	10841	19 07 01
19 13 00	GRB201510A	23 44 56	88.9	294.5	0.1		113.2	-175	10841	19 13 00
19 17 30	---	23 49 27	88.3	285.8	0.2		103.6	95	10981	19 13 01

Schedule for TORUN (Code Tr) Page 10

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
19 19 30	GRB201510A	23 51 27	88.0	283.9	0.2		101.2	111	10981	19 19 30
19 24 00	---	23 55 58	87.3	281.2	0.3		97.6	270	11120	19 19 31
19 26 00	GRB201510A	23 57 58	87.0	280.4	0.3		96.5	113	11120	19 26 00
19 30 30	---	00 02 29	86.4	279.3	0.4		94.5	270	11259	19 26 01
19 30 30	J2353+5518	00 02 29	87.4	335.0	0.1		153.4	-116	11259	No stop
19 32 30	=2351+550	00 04 29	87.3	329.7	0.2		147.7	4	11321	19 30 31
19 32 30	J2347+5142	00 04 29	87.2	244.6	0.3		61.4	-177	11321	No stop
19 36 30	=2344+514	00 08 30	86.6	249.7	0.3		65.7	63	11444	19 32 31
19 38 30	GRB201510A	00 10 30	85.2	278.4	0.5		92.0	48	11444	19 38 30
19 43 00	---	00 15 01	84.5	278.2	0.6		90.9	270	11583	19 38 31
19 43 00	J2353+5518	00 15 01	86.2	310.3	0.3		126.2	-76	11583	No stop
19 45 00	=2351+550	00 17 01	86.0	307.9	0.4		123.4	44	11645	19 43 01
19 45 00	GRB201510A	00 17 01	84.2	278.2	0.6		90.4	-74	11645	No stop
19 49 30	---	00 21 32	83.5	278.2	0.7		89.5	196	11784	19 45 01
19 50 00	J2353+5518	00 22 02	85.4	303.1	0.5		117.6	-34	11784	19 50 00
19 51 30	=2351+550	00 23 32	85.2	301.9	0.5		116.1	56	11831	19 50 01
19 51 30	GRB201510A	00 23 32	83.2	278.2	0.8		89.2	-62	11831	No stop
19 56 00	---	00 28 03	82.6	278.4	0.8		88.4	208	11970	19 51 31
19 56 00	J2353+5518	00 28 03	84.6	299.0	0.6		112.2	-55	11970	No stop
19 58 00	=2351+550	00 30 03	84.3	297.9	0.6		110.7	65	12032	19 56 01
19 58 00	J2347+5142	00 30 03	83.5	262.9	0.7		74.6	-84	12032	No stop
20 02 00	=2344+514	00 34 04	82.9	264.3	0.8		75.2	156	12155	19 58 01
20 02 30	J2353+5518	00 34 34	83.7	295.9	0.7		107.8	-48	12155	20 02 30
20 04 00	=2351+550	00 36 04	83.5	295.3	0.7		106.9	42	12202	20 02 31
20 04 00	GRB201510A	00 36 04	81.4	278.7	1.0		87.1	-48	12202	No stop
20 08 30	---	00 40 35	80.7	278.9	1.0		86.4	222	12341	20 04 01
20 08 30	J2353+5518	00 40 35	82.9	293.8	0.8		104.5	-44	12341	No stop
20 10 30	=2351+550	00 42 35	82.6	293.3	0.8		103.6	76	12403	20 08 31
20 10 30	GRB201510A	00 42 35	80.4	279.1	1.1		86.1	-43	12403	No stop
20 15 00	---	00 47 06	79.7	279.3	1.1		85.5	227	12542	20 10 31

Schedule for TORUN (Code Tr) Page 11

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
20 15 30	J2353+5518	00 47 36	82.0	292.1	0.9		101.4	-11	12542	20 15 30
20 17 00	=2351+550	00 49 06	81.7	291.8	0.9		100.8	79	12588	20 15 31
20 17 00	GRB201510A	00 49 06	79.4	279.5	1.2		85.2	-40	12588	No stop
20 21 30	---	00 53 37	78.8	279.8	1.3		84.6	230	12727	20 17 01
20 21 30	J2353+5518	00 53 37	81.1	291.1	1.0		99.1	-37	12727	No stop
20 23 30	=2351+550	00 55 37	80.8	290.8	1.0		98.4	83	12789	20 21 31
20 23 30	J2347+5142	00 55 37	79.7	269.7	1.1		76.3	-57	12789	No stop
20 27 30	=2344+514	00 59 38	79.1	270.5	1.2		76.3	183	12913	20 23 31
20 28 00	J2353+5518	01 00 08	80.2	290.3	1.1		97.0	-25	12913	20 28 00
20 29 30	=2351+550	01 01 38	80.0	290.2	1.1		96.5	65	12959	20 28 01
20 29 30	GRB201510A	01 01 38	77.6	280.4	1.4		83.6	-34	12959	No stop
20 34 00	---	01 06 09	76.9	280.7	1.5		83.0	236	13098	20 29 31
20 34 00	J2353+5518	01 06 09	79.3	289.8	1.2		95.3	-33	13098	No stop
20 36 00	=2351+550	01 08 09	79.1	289.7	1.2		94.7	87	13160	20 34 01
20 36 00	GRB201510A	01 08 09	76.6	280.9	1.5		82.8	-32	13160	No stop
20 40 30	---	01 12 40	76.0	281.3	1.6		82.2	238	13299	20 36 01
20 41 00	J2353+5518	01 13 10	78.4	289.4	1.3		93.4	-1	13299	20 41 00
20 42 30	=2351+550	01 14 41	78.1	289.3	1.3		93.1	89	13346	20 41 01
20 42 30	GRB201510A	01 14 41	75.7	281.4	1.6		82.0	-31	13346	No stop
20 47 00	---	01 19 11	75.0	281.8	1.7		81.5	239	13485	20 42 31
20 47 00	J2353+5518	01 19 11	77.5	289.2	1.4		92.0	-30	13485	No stop
20 49 00	=2351+550	01 21 12	77.2	289.2	1.4		91.5	90	13547	20 47 01
20 49 00	J2347+5142	01 21 12	75.8	274.2	1.6		75.7	-45	13547	No stop
20 53 00	=2344+514	01 25 12	75.2	274.8	1.6		75.5	195	13670	20 49 01
20 53 30	J2353+5518	01 25 42	76.6	289.1	1.5		90.6	-14	13670	20 53 30
20 55 00	=2351+550	01 27 13	76.4	289.1	1.5		90.3	76	13717	20 53 31
20 55 00	GRB201510A	01 27 13	73.8	282.5	1.8		80.5	-28	13717	No stop
20 59 30	---	01 31 43	73.2	282.9	1.9		80.0	242	13856	20 55 01
20 59 30	J2353+5518	01 31 43	75.7	289.1	1.6		89.3	-27	13856	No stop
21 01 30	=2351+550	01 33 44	75.4	289.1	1.6		88.9	93	13918	20 59 31

Schedule for TORUN (Code Tr) Page 12
RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	 AZ	 HA	 UP	 ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
21 01 30	GRB201510A	01 33 44	72.9	283.1	1.9		79.8	-27	13918	No stop
21 06 00	---	01 38 14	72.2	283.5	2.0		79.2	243	14057	21 01 31
21 06 30	J2353+5518	01 38 44	74.7	289.2	1.7		88.0	4	14057	21 06 30
21 08 00	=2351+550	01 40 15	74.5	289.2	1.8		87.7	90	14103	21 06 31
21 08 00	GRB201510A	01 40 15	71.9	283.7	2.0		79.0	-26	14103	No stop
21 12 30	---	01 44 45	71.3	284.1	2.1		78.5	244	14242	21 08 01
21 12 30	J2353+5518	01 44 45	73.9	289.3	1.8		86.9	-26	14242	No stop
21 14 30	=2351+550	01 46 46	73.6	289.4	1.9		86.5	94	14304	21 12 31
21 14 30	J2347+5142	01 46 46	72.0	277.9	2.0		74.2	-38	14304	No stop
21 18 30	=2344+514	01 50 46	71.4	278.5	2.0		73.9	202	14428	21 14 31
21 19 00	J2353+5518	01 51 17	73.0	289.6	1.9		85.7	-7	14428	21 19 00
21 20 30	=2351+550	01 52 47	72.7	289.6	2.0		85.5	83	14474	21 19 01
21 20 30	GRB201510A	01 52 47	70.1	284.8	2.2		77.6	-24	14474	No stop
21 25 00	---	01 57 18	69.4	285.3	2.3		77.1	246	14613	21 20 31
21 25 00	J2353+5518	01 57 18	72.1	289.8	2.0		84.7	-24	14613	No stop
21 27 00	=2351+550	01 59 18	71.8	289.9	2.1		84.4	96	14675	21 25 01
21 27 00	GRB201510A	01 59 18	69.2	285.4	2.4		76.9	-24	14675	No stop
21 31 30	---	02 03 49	68.5	285.9	2.4		76.4	246	14814	21 27 01
21 32 00	J2353+5518	02 04 19	71.1	290.1	2.2		83.6	6	14814	21 32 00
21 33 30	=2351+550	02 05 49	70.9	290.2	2.2		83.3	90	14861	21 32 01
21 33 30	GRB201510A	02 05 49	68.2	286.1	2.5		76.1	-24	14861	No stop
21 38 00	---	02 10 20	67.6	286.5	2.5		75.6	246	15000	21 33 31
21 38 00	J2353+5518	02 10 20	70.3	290.4	2.3		82.6	-24	15000	No stop
21 40 00	=2351+550	02 12 20	70.0	290.5	2.3		82.3	96	15062	21 38 01
21 40 00	J2347+5142	02 12 20	68.2	281.3	2.4		72.3	-33	15062	No stop
21 44 00	=2344+514	02 16 21	67.6	281.8	2.5		72.0	207	15185	21 40 01
21 44 30	J2353+5518	02 16 51	69.4	290.8	2.4		81.6	-3	15185	21 44 30
21 46 00	=2351+550	02 18 21	69.1	290.9	2.4		81.4	87	15232	21 44 31
21 46 00	GRB201510A	02 18 21	66.4	287.3	2.7		74.7	-24	15232	No stop
21 50 30	---	02 22 52	65.8	287.7	2.7		74.2	246	15371	21 46 01

Schedule for TORUN (Code Tr) Page 13

RM016A

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 9 Nov 2020 Day 314 ---										
21 50 30	J2353+5518	02 22 52	68.5	291.2	2.5		80.7	-24	15371	No stop
21 52 30	=2351+550	02 24 52	68.2	291.3	2.5		80.4	96	15433	21 50 31
21 52 30	GRB201510A	02 24 52	65.5	287.9	2.8		74.0	-24	15433	No stop
21 57 00	---	02 29 23	64.8	288.4	2.9		73.5	246	15572	21 52 31
21 57 30	J2353+5518	02 29 53	67.5	291.6	2.6		79.7	6	15572	21 57 30
21 59 00	=2351+550	02 31 23	67.3	291.7	2.6		79.5	90	15618	21 57 31
21 59 00	GRB201510A	02 31 23	64.5	288.6	2.9		73.3	-24	15618	No stop
22 03 30	---	02 35 54	63.9	289.0	3.0		72.8	246	15757	21 59 01
22 03 30	J2353+5518	02 35 54	66.7	292.0	2.7		78.8	-24	15757	No stop
22 05 30	=2351+550	02 37 54	66.4	292.2	2.7		78.6	96	15819	22 03 31
22 05 30	J2347+5142	02 37 54	64.5	284.4	2.8		70.2	-30	15819	No stop
22 09 30	=2344+514	02 41 55	63.9	284.9	2.9		69.8	210	15943	22 05 31
22 10 00	J2353+5518	02 42 25	65.8	292.5	2.8		77.9	0	15943	22 10 00
22 11 30	=2351+550	02 43 55	65.6	292.6	2.8		77.7	90	15989	22 10 01
22 11 30	GRB201510A	02 43 55	62.8	289.8	3.1		71.9	-25	15989	No stop
22 16 00	---	02 48 26	62.1	290.3	3.2		71.4	245	16128	22 11 31
22 16 00	J2353+5518	02 48 26	64.9	292.9	2.9		77.1	-24	16128	No stop
22 18 00	=2351+550	02 50 26	64.7	293.1	2.9		76.8	96	16190	22 16 01
22 18 00	GRB201510A	02 50 26	61.8	290.5	3.2		71.2	-25	16190	No stop
22 22 30	---	02 54 57	61.2	290.9	3.3		70.7	245	16329	22 18 01
22 23 00	J2353+5518	02 55 27	64.0	293.5	3.0		76.1	6	16329	22 23 00
22 24 30	=2351+550	02 56 57	63.8	293.6	3.0		75.9	90	16375	22 23 01
22 24 30	GRB201510A	02 56 57	60.9	291.2	3.3		70.4	-25	16375	No stop
22 29 00	---	03 01 28	60.3	291.6	3.4		69.9	245	16515	22 24 31
22 29 00	J2353+5518	03 01 28	63.2	293.9	3.1		75.3	-24	16515	No stop
22 31 00	=2351+550	03 03 28	62.9	294.1	3.1		75.0	96	16576	22 29 01
22 31 00	J2347+5142	03 03 28	60.8	287.5	3.3		67.9	-28	16576	No stop
22 35 00	=2344+514	03 07 29	60.2	288.0	3.3		67.5	212	16700	22 31 01
22 35 30	J2353+5518	03 07 59	62.3	294.5	3.2		74.4	2	16700	22 35 30
22 37 00	=2351+550	03 09 29	62.1	294.6	3.2		74.2	90	16746	22 35 31

```
Schedule for TORUN     (Code Tr )                                Page  14
               RM016A
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-------------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-------------------------------------------------------------------------------------------

 --- Mon   9 Nov 2020   Day 314 ---

22 37 00  GRB201510A   03 09 29  59.2 292.4  3.5      69.0   -25    16746   No stop
22 41 30  ---          03 14 00  58.6 292.9  3.6      68.5   245    16886   22 37 01

22 41 30  J2353+5518   03 14 00  61.4 294.9  3.3      73.6   -25    16886   No stop
22 43 30  =2351+550    03 16 00  61.2 295.1  3.4      73.4    95    16947   22 41 31

22 43 30  GRB201510A   03 16 00  58.3 293.1  3.6      68.3   -25    16947   No stop
22 47 00  ---          03 19 31  57.8 293.5  3.7      67.9   185    17056   22 43 31

22 47 00  J2353+5518   03 19 31  60.7 295.4  3.4      72.9   -25    17056   No stop
22 49 00  =2351+550    03 21 31  60.4 295.6  3.4      72.7    95    17117   22 47 01

 ---------- fringe-finder ----------

22 57 00  3C84         03 29 33  78.4 187.8  0.1       6.2   242    17117   22 57 00
23 00 00  ---          03 32 33  78.3 190.6  0.2       8.5   180    17210   22 57 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.C4096

   Setup group:    6         Station: TORUN            Total bit rate:  4096
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 32    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00
           4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00
           4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00
           4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00   4088.00
 Net SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF SB =         U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
                 U         U         U         U         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
               RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         9         1         9         2        10         2        10
                 3        11         3        11         4        12         4        12
                 5        13         5        13         6        14         6        14
                 7        15         7        15         8        16         8        16
 BBC SB=         L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
                 L         L         U         U         L         L         U         U
 IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1
                A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

 Frequency Set:   7  Setup file default.  Used with PCAL = off
 LO sum=   4632.00  4632.00  4632.00  4632.00  4696.00  4696.00  4696.00  4696.00
           4760.00  4760.00  4760.00  4760.00  4824.00  4824.00  4824.00  4824.00
           4888.00  4888.00  4888.00  4888.00  4952.00  4952.00  4952.00  4952.00
           5016.00  5016.00  5016.00  5016.00  5080.00  5080.00  5080.00  5080.00
 BBC fr=    544.00   544.00   544.00   544.00   608.00   608.00   608.00   608.00
            672.00   672.00   672.00   672.00   736.00   736.00   736.00   736.00
            800.00   800.00   800.00   800.00   864.00   864.00   864.00   864.00
            928.00   928.00   928.00   928.00   992.00   992.00   992.00   992.00
 Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
             32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
             32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
             32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
  Matching frequency sets:   7

 Track assignments are:
  track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 2
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

```
  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* GRB201510A        23 34 51.967445   * 23 37 16.410000     23 38 16.964726       0.00
                    53 08 19.97035    * 53 24 56.40000      53 32 01.64861        0.00

* 3C84              03 16 29.567265   * 03 19 48.160096     03 21 11.523440       1.50
```

```
  J0319+4130        41 19 51.91692    * 41 30 42.10404      41 35 10.71707        2.86
  0316+413          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0319+41          GSFC 2016a X/S astro solution,  10291 observations.

  VR422201          22 00 39.362504   * 22 02 43.291371     22 03 34.376439       0.01
  J2202+4216        42 02 08.59075    * 42 16 39.97988      42 22 55.06643        0.00
* BLLAC             /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  2200+420          GSFC 2016a X/S astro solution,  52189 observations.
  J2202+42

  2344+514          23 44 36.259370   * 23 47 04.836702     23 48 07.125985       1.25
* J2347+5142        51 25 37.90161    * 51 42 17.88113      51 49 23.96115        0.78
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,     36 observations.

  2351+550          23 51 11.688132   * 23 53 42.299715     23 54 45.621339       0.19
* J2353+5518        55 01 59.33476    * 55 18 40.66615      55 25 47.29480        0.12
                    /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution,    199 observations.
```

EFFECT OF SOLAR CORONA

```
  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
    Source         Sun distance (deg)
   GRB201510A         126.6
   3C84               155.2
   BLLAC              112.8
   J2347+5142         128.6
   J2353+5518         127.9

  Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
  that the Sun will cause amplitude reductions on the  longest VLBA baselines
  at a solar distance of 60deg F^(-0.6) where F is in GHz.
  For common VLBI bands, this is:
       1.6 GHz         45. deg
       2.3 GHz         36. deg
       5.0 GHz         23. deg
       8.4 GHz         17. deg
      15.0 GHz         12. deg
      22.0 GHz          9. deg
```

ey037tr

e-EVN: EY037, EG102L

PI: *Yang, Gabanyi*

```
Address:  JIVE

Observing mode: realtime e-vlbi

Schedule for TORUN     (Code Tr )                                   Page   2
               e-EVN: EY037, EG102L
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------
 --- Tue  17 Nov 2020   Day 322 ---
 ---------- CLOCK-SEARCH ----------

 Next scan frequencies:  4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
                         4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
 Next BBC frequencies:    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
                          758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
 Next scan bandwidths:     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
                           32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00

09 00 00  J1751+0939   14 01 48  26.8 111.1 -3.8     -34.6     0        0   09 00 00
09 14 00  =1749+096    14 15 50  28.7 114.3 -3.6     -33.7   840      216   09 00 01

09 16 00  J1751+0939   14 17 50  29.0 114.8 -3.6     -33.6   114      216   09 16 00
09 29 00  =1749+096    14 30 52  30.8 117.9 -3.4     -32.6   780      417   09 16 01

09 31 00  J1751+0939   14 32 53  31.0 118.4 -3.3     -32.4   114      417   09 31 00
09 44 00  =1749+096    14 45 55  32.7 121.6 -3.1     -31.3   780      618   09 31 01

09 46 00  J1751+0939   14 47 55  33.0 122.1 -3.1     -31.1   114      618   09 46 00
09 59 00  =1749+096    15 00 57  34.6 125.4 -2.9     -29.8   780      819   09 46 01

10 01 00  J1751+0939   15 02 58  34.8 125.9 -2.8     -29.6   114      819   10 01 00
10 14 00  =1749+096    15 16 00  36.4 129.4 -2.6     -28.1   780     1020   10 01 01

10 16 00  J1751+0939   15 18 00  36.6 129.9 -2.6     -27.8   113     1020   10 16 00
10 29 00  =1749+096    15 31 02  38.1 133.5 -2.4     -26.2   780     1221   10 16 01

10 31 00  J1751+0939   15 33 03  38.3 134.1 -2.3     -25.9   113     1221   10 31 00
10 44 00  =1749+096    15 46 05  39.7 137.8 -2.1     -24.1   780     1422   10 31 01

10 46 00  J1751+0939   15 48 05  39.9 138.4 -2.1     -23.8   113     1422   10 46 00
10 59 00  =1749+096    16 01 07  41.1 142.3 -1.9     -21.9   780     1623   10 46 01

11 01 00  J1751+0939   16 03 07  41.3 142.9 -1.8     -21.5   113     1623   11 01 00
11 14 00  =1749+096    16 16 10  42.4 147.0 -1.6     -19.4   780     1824   11 01 01

11 18 00  J1751+0939   16 20 10  42.7 148.2 -1.5     -18.7   233     1824   11 18 00
11 30 00  =1749+096    16 32 12  43.6 152.1 -1.3     -16.5   720     2010   11 18 01
```

Schedule for TORUN (Code Tr) Page 3

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 17 Nov 2020 Day 322 ---										
11 32 00	J2031+1219	16 34 13	27.9	107.5	-4.0		-35.9	16	2010	11 32 00
11 45 00	=2029+121	16 47 15	29.7	110.4	-3.8		-35.2	780	2211	11 32 01
11 47 00	J2031+1219	16 49 15	30.0	110.9	-3.7		-35.1	114	2211	11 47 00
12 00 00	=2029+121	17 02 17	31.8	114.0	-3.5		-34.2	780	2411	11 47 01
12 02 00	J2031+1219	17 04 17	32.1	114.4	-3.5		-34.0	114	2411	12 02 00
12 15 00	=2029+121	17 17 20	33.9	117.6	-3.3		-33.0	780	2612	12 02 01
12 17 00	J2031+1219	17 19 20	34.1	118.1	-3.2		-32.8	114	2612	12 17 00
12 30 00	=2029+121	17 32 22	35.8	121.4	-3.0		-31.7	780	2813	12 17 01
12 32 00	J2031+1219	17 34 22	36.1	121.9	-3.0		-31.5	114	2813	12 32 00
12 45 00	=2029+121	17 47 25	37.7	125.3	-2.8		-30.1	780	3014	12 32 01
12 47 00	J2031+1219	17 49 25	38.0	125.8	-2.7		-29.9	113	3014	12 47 00
13 00 00	=2029+121	18 02 27	39.5	129.4	-2.5		-28.4	780	3215	12 47 01
13 02 00	J2031+1219	18 04 27	39.8	130.0	-2.5		-28.1	113	3215	13 02 00
13 15 00	=2029+121	18 17 29	41.2	133.7	-2.3		-26.4	780	3416	13 02 01
13 17 00	J2031+1219	18 19 30	41.4	134.3	-2.2		-26.1	113	3416	13 17 00
13 30 00	=2029+121	18 32 32	42.8	138.2	-2.0		-24.2	780	3617	13 17 01
13 32 00	J2031+1219	18 34 32	43.0	138.8	-2.0		-23.9	113	3617	13 32 00
13 45 00	=2029+121	18 47 34	44.2	142.8	-1.8		-21.8	780	3818	13 32 01
13 47 00	J2031+1219	18 49 35	44.4	143.5	-1.7		-21.5	113	3818	13 47 00
14 00 00	=2029+121	19 02 37	45.5	147.7	-1.5		-19.2	780	4019	13 47 01
14 02 00	J2031+1219	19 04 37	45.7	148.3	-1.5		-18.8	113	4019	14 02 00
14 15 00	=2029+121	19 17 39	46.6	152.7	-1.3		-16.4	780	4220	14 02 01
14 17 00	J2031+1219	19 19 40	46.8	153.4	-1.2		-16.0	113	4220	14 17 00
14 30 00	=2029+121	19 32 42	47.6	157.9	-1.0		-13.4	780	4421	14 17 01
14 32 00	J2148+0657	19 34 42	36.5	136.9	-2.2		-24.4	62	4421	14 32 00
14 45 00	=2145+067	19 47 44	37.8	140.6	-2.0		-22.6	780	4622	14 32 01
14 47 00	J2148+0657	19 49 45	38.0	141.2	-2.0		-22.3	113	4622	14 47 00
15 00 00	=2145+067	20 02 47	39.1	145.1	-1.8		-20.3	780	4823	14 47 01
15 02 00	J2148+0657	20 04 47	39.3	145.7	-1.7		-20.0	113	4823	15 02 00
15 15 00	=2145+067	20 17 49	40.4	149.7	-1.5		-17.8	780	5024	15 02 01
15 17 00	J2148+0657	20 19 50	40.5	150.3	-1.5		-17.5	113	5024	15 17 00
15 30 00	=2145+067	20 32 52	41.4	154.4	-1.3		-15.2	780	5225	15 17 01
15 32 00	J2148+0657	20 34 52	41.5	155.0	-1.2		-14.8	113	5225	15 32 00
15 45 00	=2145+067	20 47 54	42.3	159.3	-1.0		-12.4	780	5426	15 32 01

Schedule for TORUN (Code Tr) Page 4

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 17 Nov 2020 Day 322 ---										
---------- EY037 ----------										
15 55 00	0059+581	20 57 56	56.2	55.7	-4.1		-71.8	377	5426	15 55 00
15 58 00	---	21 00 56	56.6	55.9	-4.1		-72.3	180	5472	15 55 01
15 59 50	J0056+1341	21 02 47	29.6	107.5	-3.9		-36.1	-8	5472	15 59 50
16 01 50	---	21 04 47	29.9	107.9	-3.9		-36.0	112	5503	15 59 51
16 01 50	IZW1	21 04 47	29.5	109.2	-3.8		-35.6	-15	5503	No stop
16 05 50	---	21 08 48	30.0	110.1	-3.8		-35.3	225	5565	16 01 51
16 05 50	J0056+1341	21 08 48	30.5	108.8	-3.8		-35.8	-15	5565	No stop
16 07 20	---	21 10 18	30.7	109.2	-3.8		-35.7	75	5588	16 05 51
16 07 20	IZW1	21 10 18	30.3	110.5	-3.7		-35.2	-15	5588	No stop
16 11 20	---	21 14 18	30.8	111.4	-3.7		-35.0	225	5650	16 07 21
16 11 55	J0056+1341	21 14 54	31.3	110.2	-3.7		-35.5	20	5650	16 11 55
16 12 50	---	21 15 49	31.5	110.4	-3.7		-35.4	55	5664	16 11 56
16 12 50	IZW1	21 15 49	31.0	111.7	-3.6		-34.9	-15	5664	No stop
16 16 50	---	21 19 49	31.6	112.7	-3.6		-34.6	225	5726	16 12 51
16 16 50	J0056+1341	21 19 49	32.0	111.4	-3.6		-35.2	-15	5726	No stop
16 18 20	---	21 21 20	32.2	111.7	-3.6		-35.1	75	5749	16 16 51
16 18 20	IZW1	21 21 20	31.8	113.0	-3.6		-34.5	-15	5749	No stop
16 22 20	---	21 25 20	32.3	114.0	-3.5		-34.2	225	5811	16 18 21
16 22 55	J0056+1341	21 25 55	32.9	112.8	-3.5		-34.7	20	5811	16 22 55
16 23 50	---	21 26 51	33.0	113.0	-3.5		-34.7	55	5825	16 22 56
16 23 50	IZW1	21 26 51	32.6	114.3	-3.5		-34.1	-15	5825	No stop
16 27 50	---	21 30 51	33.1	115.3	-3.4		-33.8	225	5887	16 23 51
16 27 50	J0056+1341	21 30 51	33.6	114.0	-3.4		-34.4	-15	5887	No stop
16 29 20	---	21 32 21	33.8	114.4	-3.4		-34.3	75	5910	16 27 51
16 29 20	IZW1	21 32 21	33.3	115.7	-3.4		-33.7	-15	5910	No stop
16 33 20	---	21 36 22	33.8	116.6	-3.3		-33.4	225	5972	16 29 21
16 33 55	J0056+1341	21 36 57	34.4	115.5	-3.3		-33.9	20	5972	16 33 55
16 34 50	---	21 37 52	34.5	115.7	-3.3		-33.9	55	5986	16 33 56

Schedule for TORUN (Code Tr) Page 5

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 17 Nov 2020 Day 322 ---										
16 34 50	IZW1	21 37 52	34.0	117.0	-3.3		-33.3	-15	5986	No stop
16 38 50	---	21 41 53	34.6	118.0	-3.2		-32.9	225	6048	16 34 51
16 38 50	J0056+1341	21 41 53	35.1	116.7	-3.3		-33.5	-15	6048	No stop
16 40 20	---	21 43 23	35.3	117.1	-3.2		-33.4	75	6071	16 38 51
16 40 20	IZW1	21 43 23	34.8	118.4	-3.2		-32.8	-15	6071	No stop
16 44 20	---	21 47 24	35.3	119.4	-3.1		-32.4	225	6133	16 40 21
16 44 55	J0056+1341	21 47 59	35.9	118.2	-3.2		-33.0	20	6133	16 44 55
16 45 50	---	21 48 54	36.0	118.4	-3.1		-32.9	55	6147	16 44 56
16 45 50	IZW1	21 48 54	35.5	119.8	-3.1		-32.3	-15	6147	No stop
16 49 50	---	21 52 55	36.0	120.8	-3.0		-31.9	225	6209	16 45 51
16 49 50	J0056+1341	21 52 55	36.5	119.5	-3.1		-32.6	-15	6209	No stop
16 51 20	---	21 54 25	36.7	119.8	-3.0		-32.4	75	6232	16 49 51
16 51 20	IZW1	21 54 25	36.2	121.2	-3.0		-31.8	-16	6232	No stop
16 55 20	---	21 58 26	36.7	122.2	-2.9		-31.4	224	6294	16 51 21
16 55 55	J0056+1341	21 59 01	37.3	121.0	-3.0		-32.0	20	6294	16 55 55
16 56 50	---	21 59 56	37.4	121.3	-3.0		-31.9	55	6308	16 55 56
16 56 50	IZW1	21 59 56	36.9	122.6	-2.9		-31.2	-16	6308	No stop
17 00 50	---	22 03 57	37.4	123.7	-2.8		-30.8	224	6370	16 56 51
17 00 50	J0056+1341	22 03 57	37.9	122.3	-2.9		-31.5	-15	6370	No stop
17 02 20	---	22 05 27	38.1	122.7	-2.9		-31.4	75	6393	17 00 51
17 02 20	IZW1	22 05 27	37.6	124.1	-2.8		-30.7	-16	6393	No stop
17 06 20	---	22 09 27	38.1	125.1	-2.8		-30.2	224	6455	17 02 21
17 06 55	J0056+1341	22 10 03	38.7	123.9	-2.8		-30.9	20	6455	17 06 55
17 07 50	---	22 10 58	38.8	124.2	-2.8		-30.8	55	6469	17 06 56
17 07 50	IZW1	22 10 58	38.3	125.5	-2.7		-30.1	-16	6469	No stop
17 11 50	---	22 14 58	38.8	126.6	-2.7		-29.6	224	6531	17 07 51
17 11 50	J0056+1341	22 14 58	39.3	125.2	-2.7		-30.3	-15	6531	No stop
17 13 20	---	22 16 29	39.5	125.7	-2.7		-30.2	75	6554	17 11 51
17 13 20	IZW1	22 16 29	39.0	127.0	-2.6		-29.5	-16	6554	No stop
17 17 20	---	22 20 29	39.4	128.1	-2.6		-29.0	224	6616	17 13 21

Schedule for TORUN (Code Tr) Page 6

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 17 Nov 2020 Day 322 ---										
17 17 55	J0056+1341	22 21 04	40.1	126.9	-2.6		-29.6	20	6616	17 17 55
17 18 50	---	22 22 00	40.2	127.2	-2.6		-29.5	55	6630	17 17 56
17 18 50	IZW1	22 22 00	39.6	128.5	-2.5		-28.8	-16	6630	No stop
17 22 50	---	22 26 00	40.1	129.7	-2.5		-28.3	224	6692	17 18 51
17 22 50	J0056+1341	22 26 00	40.6	128.3	-2.5		-29.0	-15	6692	No stop
17 24 20	---	22 27 30	40.8	128.7	-2.5		-28.9	75	6715	17 22 51
17 24 20	IZW1	22 27 30	40.3	130.1	-2.5		-28.1	-16	6715	No stop
17 28 20	---	22 31 31	40.7	131.2	-2.4		-27.6	224	6777	17 24 21
17 28 55	J0056+1341	22 32 06	41.4	130.0	-2.4		-28.3	20	6777	17 28 55
17 29 50	---	22 33 01	41.5	130.3	-2.4		-28.2	55	6791	17 28 56
17 29 50	IZW1	22 33 01	40.9	131.6	-2.4		-27.4	-16	6791	No stop
17 33 50	---	22 37 02	41.3	132.8	-2.3		-26.9	224	6853	17 29 51
17 33 50	J0056+1341	22 37 02	41.9	131.4	-2.3		-27.6	-15	6853	No stop
17 35 20	---	22 38 32	42.1	131.9	-2.3		-27.4	75	6876	17 33 51
17 35 20	IZW1	22 38 32	41.5	133.2	-2.3		-26.7	-16	6876	No stop
17 39 20	---	22 42 33	41.9	134.4	-2.2		-26.1	224	6938	17 35 21
17 39 55	J0056+1341	22 43 08	42.6	133.2	-2.2		-26.8	20	6938	17 39 55
17 40 50	---	22 44 03	42.7	133.5	-2.2		-26.7	55	6952	17 39 56
17 40 50	IZW1	22 44 03	42.1	134.8	-2.2		-25.9	-16	6952	No stop
17 44 50	---	22 48 04	42.5	136.0	-2.1		-25.3	224	7014	17 40 51
17 44 50	J0056+1341	22 48 04	43.1	134.7	-2.2		-26.1	-15	7014	No stop
17 46 20	---	22 49 34	43.3	135.1	-2.1		-25.9	75	7037	17 44 51
17 46 20	IZW1	22 49 34	42.7	136.5	-2.1		-25.1	-16	7037	No stop
17 50 20	---	22 53 35	43.1	137.7	-2.0		-24.5	224	7099	17 46 21
17 50 55	J0056+1341	22 54 10	43.8	136.5	-2.1		-25.2	20	7099	17 50 55
17 51 50	---	22 55 05	43.9	136.8	-2.0		-25.1	55	7113	17 50 56
17 51 50	IZW1	22 55 05	43.2	138.2	-2.0		-24.3	-16	7113	No stop
17 55 50	---	22 59 06	43.6	139.4	-1.9		-23.6	224	7175	17 51 51
17 55 50	J0056+1341	22 59 06	44.3	138.0	-2.0		-24.4	-15	7175	No stop
17 57 20	---	23 00 36	44.4	138.5	-1.9		-24.2	75	7198	17 55 51

Schedule for TORUN (Code Tr) Page 7

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 17 Nov 2020 Day 322 ---										
17 57 20	IZW1	23 00 36	43.8	139.9	-1.9		-23.4	-16	7198	No stop
18 01 20	---	23 04 37	44.2	141.1	-1.8		-22.7	224	7260	17 57 21
18 01 55	J0056+1341	23 05 12	44.9	139.9	-1.9		-23.5	20	7260	18 01 55
18 02 50	---	23 06 07	45.0	140.2	-1.9		-23.3	55	7274	18 01 56
18 02 50	IZW1	23 06 07	44.3	141.6	-1.8		-22.5	-16	7274	No stop
18 06 50	---	23 10 07	44.7	142.8	-1.7		-21.8	224	7336	18 02 51
18 06 50	J0056+1341	23 10 07	45.3	141.5	-1.8		-22.7	-15	7336	No stop
18 08 20	---	23 11 38	45.5	141.9	-1.8		-22.4	75	7359	18 06 51
18 08 20	IZW1	23 11 38	44.8	143.3	-1.7		-21.6	-16	7359	No stop
18 12 20	---	23 15 38	45.2	144.6	-1.7		-20.9	224	7421	18 08 21
18 12 55	J0056+1341	23 16 13	45.9	143.4	-1.7		-21.6	20	7421	18 12 55
18 13 50	---	23 17 09	46.0	143.7	-1.7		-21.5	55	7435	18 12 56
18 13 50	IZW1	23 17 09	45.3	145.1	-1.6		-20.6	-16	7435	No stop
18 17 50	---	23 21 09	45.6	146.4	-1.6		-19.9	224	7497	18 13 51
18 17 50	J0056+1341	23 21 09	46.3	145.0	-1.6		-20.8	-15	7497	No stop
18 19 20	---	23 22 39	46.5	145.5	-1.6		-20.5	75	7520	18 17 51
18 19 20	IZW1	23 22 39	45.7	146.9	-1.5		-19.6	-16	7520	No stop
18 23 20	---	23 26 40	46.1	148.2	-1.5		-18.9	224	7582	18 19 21
18 23 55	J0056+1341	23 27 15	46.8	147.1	-1.5		-19.6	20	7582	18 23 55
18 24 50	---	23 28 10	46.9	147.4	-1.5		-19.5	55	7596	18 23 56
18 24 50	IZW1	23 28 10	46.2	148.7	-1.4		-18.6	-16	7596	No stop
18 28 50	---	23 32 11	46.5	150.1	-1.4		-17.9	224	7658	18 24 51
18 28 50	J0056+1341	23 32 11	47.2	148.7	-1.4		-18.7	-15	7658	No stop
18 30 20	---	23 33 41	47.3	149.2	-1.4		-18.4	75	7681	18 28 51
18 30 20	IZW1	23 33 41	46.6	150.6	-1.3		-17.6	-16	7681	No stop
18 34 20	---	23 37 42	46.9	151.9	-1.3		-16.8	224	7743	18 30 21
18 34 55	J0056+1341	23 38 17	47.7	150.8	-1.3		-17.6	20	7743	18 34 55
18 35 50	---	23 39 12	47.8	151.1	-1.3		-17.4	55	7757	18 34 56
18 35 50	IZW1	23 39 12	47.0	152.5	-1.3		-16.5	-16	7757	No stop
18 39 50	---	23 43 13	47.3	153.8	-1.2		-15.8	224	7819	18 35 51

Schedule for TORUN (Code Tr) Page 8

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 17 Nov 2020 Day 322 ---										
18 39 50	J0056+1341	23 43 13	48.0	152.5	-1.2		-16.6	-15	7819	No stop
18 41 20	---	23 44 43	48.1	153.0	-1.2		-16.3	75	7843	18 39 51
18 41 20	IZW1	23 44 43	47.4	154.4	-1.2		-15.5	-16	7843	No stop
18 45 20	---	23 48 44	47.6	155.8	-1.1		-14.6	224	7904	18 41 21
18 45 55	J0056+1341	23 49 19	48.5	154.6	-1.1		-15.4	20	7904	18 45 55
18 46 50	---	23 50 14	48.5	155.0	-1.1		-15.2	55	7919	18 45 56
18 46 50	IZW1	23 50 14	47.7	156.3	-1.1		-14.3	-16	7919	No stop
18 50 50	---	23 54 15	47.9	157.7	-1.0		-13.5	224	7980	18 46 51
18 50 50	J0056+1341	23 54 15	48.8	156.4	-1.1		-14.3	-15	7980	No stop
18 52 20	---	23 55 45	48.8	156.9	-1.0		-14.0	75	8004	18 50 51
18 52 20	IZW1	23 55 45	48.0	158.2	-1.0		-13.2	-15	8004	No stop
18 56 20	---	23 59 46	48.3	159.7	-0.9		-12.4	225	8065	18 52 21
18 56 55	J0056+1341	00 00 21	49.1	158.6	-0.9		-13.0	19	8065	18 56 55
18 57 50	---	00 01 16	49.2	158.9	-0.9		-12.9	55	8080	18 56 56
18 57 50	IZW1	00 01 16	48.3	160.2	-0.9		-12.0	-15	8080	No stop
19 01 50	---	00 05 16	48.5	161.6	-0.8		-11.2	225	8141	18 57 51
19 01 50	J0056+1341	00 05 16	49.4	160.4	-0.9		-12.0	-16	8141	No stop
19 03 20	---	00 06 47	49.4	160.9	-0.8		-11.7	74	8165	19 01 51
19 03 20	IZW1	00 06 47	48.6	162.2	-0.8		-10.9	-16	8165	No stop
19 07 20	---	00 10 47	48.8	163.6	-0.7		-10.0	224	8226	19 03 21
19 07 55	J0056+1341	00 11 22	49.7	162.6	-0.8		-10.7	19	8226	19 07 55
19 08 50	---	00 12 18	49.7	162.9	-0.8		-10.4	55	8241	19 07 56
19 08 50	IZW1	00 12 18	48.8	164.2	-0.7		-9.7	-16	8241	No stop
19 12 50	---	00 16 18	49.0	165.7	-0.6		-8.8	224	8302	19 08 51
19 12 50	J0056+1341	00 16 18	49.9	164.4	-0.7		-9.6	-16	8302	No stop
19 14 20	---	00 17 49	49.9	165.0	-0.7		-9.2	74	8326	19 12 51
19 14 20	IZW1	00 17 49	49.0	166.2	-0.6		-8.4	-16	8326	No stop
19 18 20	---	00 21 49	49.2	167.7	-0.5		-7.5	224	8387	19 14 21
19 18 55	J0056+1341	00 22 24	50.1	166.7	-0.6		-8.2	19	8387	19 18 55
19 19 50	---	00 23 19	50.1	167.1	-0.6		-8.0	55	8402	19 18 56

Schedule for TORUN (Code Tr) Page 9

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 17 Nov 2020 Day 322 ---										
19 19 50	IZW1	00 23 19	49.2	168.3	-0.5		-7.2	-16	8402	No stop
19 23 50	---	00 27 20	49.3	169.7	-0.5		-6.3	224	8463	19 19 51
19 23 50	J0056+1341	00 27 20	50.3	168.6	-0.5		-7.0	-16	8463	No stop
19 25 20	---	00 28 50	50.3	169.1	-0.5		-6.7	74	8487	19 23 51
19 25 20	IZW1	00 28 50	49.4	170.3	-0.4		-6.0	-16	8487	No stop
19 29 20	---	00 32 51	49.5	171.8	-0.4		-5.0	224	8548	19 25 21
19 29 55	J0056+1341	00 33 26	50.4	170.9	-0.4		-5.6	19	8548	19 29 55
19 30 50	---	00 34 21	50.4	171.2	-0.4		-5.4	55	8563	19 29 56
19 30 50	IZW1	00 34 21	49.5	172.4	-0.3		-4.7	-16	8563	No stop
19 34 50	---	00 38 22	49.6	173.9	-0.3		-3.8	224	8624	19 30 51
19 34 50	J0056+1341	00 38 22	50.5	172.7	-0.3		-4.5	-16	8624	No stop
19 36 20	---	00 39 52	50.6	173.3	-0.3		-4.1	74	8648	19 34 51
19 36 20	IZW1	00 39 52	49.6	174.4	-0.2		-3.4	-16	8648	No stop
19 40 20	---	00 43 53	49.7	175.9	-0.2		-2.5	224	8709	19 36 21
19 40 55	J0056+1341	00 44 28	50.6	175.1	-0.2		-3.0	19	8709	19 40 55
19 41 50	---	00 45 23	50.6	175.4	-0.2		-2.8	55	8724	19 40 56
19 42 50	3C454.3	00 46 23	47.2	221.3	1.9		24.4	-47	8724	19 42 50
19 47 50	---	00 51 24	46.7	222.9	1.9		25.2	253	8801	19 42 51
19 55 50	J0056+1341	00 59 25	50.7	180.8	0.0		0.5	376	8801	19 55 50
19 57 50	---	01 01 26	50.7	181.6	0.1		1.0	120	8832	19 55 51
19 57 50	IZW1	01 01 26	49.7	182.5	0.1		1.6	-17	8832	No stop
20 01 50	---	01 05 26	49.7	184.1	0.2		2.5	223	8894	19 57 51
20 01 50	J0056+1341	01 05 26	50.7	183.1	0.1		1.9	-17	8894	No stop
20 03 20	---	01 06 57	50.7	183.7	0.2		2.3	73	8917	20 01 51
20 03 20	IZW1	01 06 57	49.6	184.6	0.2		2.8	-17	8917	No stop
20 07 20	---	01 10 57	49.6	186.1	0.3		3.8	223	8979	20 03 21
20 07 55	J0056+1341	01 11 32	50.6	185.4	0.2		3.4	18	8979	20 07 55
20 08 50	---	01 12 27	50.6	185.8	0.3		3.6	55	8993	20 07 56
20 08 50	IZW1	01 12 27	49.6	186.7	0.3		4.1	-17	8993	No stop
20 12 50	---	01 16 28	49.5	188.2	0.4		5.0	223	9055	20 08 51

Schedule for TORUN (Code Tr) Page 10

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 17 Nov 2020 Day 322 ---										
20 12 50	J0056+1341	01 16 28	50.5	187.3	0.3		4.5	-17	9055	No stop
20 14 20	---	01 17 58	50.5	187.9	0.3		4.9	73	9078	20 12 51
20 14 20	IZW1	01 17 58	49.4	188.8	0.4		5.4	-17	9078	No stop
20 18 20	---	01 21 59	49.3	190.2	0.5		6.3	223	9140	20 14 21
20 18 55	J0056+1341	01 22 34	50.4	189.6	0.4		5.9	18	9140	20 18 55
20 19 50	---	01 23 29	50.4	190.0	0.4		6.2	55	9154	20 18 56
20 19 50	IZW1	01 23 29	49.3	190.8	0.5		6.6	-17	9154	No stop
20 23 50	---	01 27 30	49.2	192.3	0.5		7.5	223	9216	20 19 51
20 23 50	J0056+1341	01 27 30	50.3	191.5	0.5		7.1	-17	9216	No stop
20 25 20	---	01 29 00	50.2	192.1	0.5		7.4	73	9239	20 23 51
20 25 20	IZW1	01 29 00	49.1	192.9	0.6		7.9	-17	9239	No stop
20 29 20	---	01 33 01	49.0	194.3	0.6		8.8	223	9301	20 25 21
20 29 55	J0056+1341	01 33 36	50.1	193.8	0.6		8.5	18	9301	20 29 55
20 30 50	---	01 34 31	50.0	194.1	0.6		8.7	55	9315	20 29 56
20 30 50	IZW1	01 34 31	48.9	194.9	0.7		9.1	-17	9315	No stop
20 34 50	---	01 38 32	48.8	196.3	0.7		10.0	223	9377	20 30 51
20 34 50	J0056+1341	01 38 32	49.9	195.6	0.7		9.6	-17	9377	No stop
20 36 20	---	01 40 02	49.8	196.2	0.7		9.9	73	9400	20 34 51
20 36 20	IZW1	01 40 02	48.7	196.9	0.8		10.3	-17	9400	No stop
20 40 20	---	01 44 03	48.5	198.3	0.8		11.2	223	9462	20 36 21
20 40 55	J0056+1341	01 44 38	49.6	197.9	0.8		10.9	18	9462	20 40 55
20 41 50	---	01 45 33	49.6	198.2	0.8		11.1	55	9476	20 40 56
20 41 50	IZW1	01 45 33	48.5	198.9	0.8		11.5	-17	9476	No stop
20 45 50	---	01 49 34	48.3	200.3	0.9		12.4	223	9538	20 41 51
20 45 50	J0056+1341	01 49 34	49.4	199.7	0.9		12.0	-17	9538	No stop
20 47 20	---	01 51 04	49.3	200.2	0.9		12.3	73	9561	20 45 51
20 47 20	IZW1	01 51 04	48.2	200.9	0.9		12.7	-17	9561	No stop
20 51 20	---	01 55 04	48.0	202.3	1.0		13.5	223	9623	20 47 21
20 51 55	J0056+1341	01 55 40	49.0	201.9	1.0		13.3	18	9623	20 51 55
20 52 50	---	01 56 35	49.0	202.2	1.0		13.5	55	9637	20 51 56

Schedule for TORUN (Code Tr) Page 11

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 17 Nov 2020 Day 322 ---										
20 52 50	IZW1	01 56 35	47.9	202.8	1.0		13.8	-17	9637	No stop
20 56 50	---	02 00 35	47.6	204.2	1.1		14.6	223	9699	20 52 51
20 56 50	J0056+1341	02 00 35	48.7	203.7	1.1		14.4	-17	9699	No stop
20 58 20	---	02 02 06	48.7	204.2	1.1		14.7	73	9722	20 56 51
20 58 20	IZW1	02 02 06	47.5	204.8	1.1		14.9	-17	9722	No stop
21 02 20	---	02 06 06	47.3	206.1	1.2		15.7	223	9784	20 58 21
21 02 55	J0056+1341	02 06 41	48.4	205.8	1.2		15.6	18	9784	21 02 55
21 03 50	---	02 07 36	48.3	206.1	1.2		15.8	55	9798	21 02 56
21 03 50	IZW1	02 07 36	47.2	206.7	1.2		16.0	-17	9798	No stop
21 07 50	---	02 11 37	46.9	208.0	1.3		16.8	223	9860	21 03 51
21 07 50	J0056+1341	02 11 37	48.0	207.5	1.2		16.6	-17	9860	No stop
21 09 20	---	02 13 07	47.9	208.1	1.3		16.9	73	9883	21 07 51
21 09 20	IZW1	02 13 07	46.8	208.6	1.3		17.1	-17	9883	No stop
21 13 20	---	02 17 08	46.5	209.9	1.4		17.9	223	9945	21 09 21
21 13 55	J0056+1341	02 17 43	47.6	209.7	1.3		17.8	18	9945	21 13 55
21 14 50	---	02 18 38	47.5	210.0	1.4		18.0	55	9959	21 13 56
21 14 50	IZW1	02 18 38	46.4	210.4	1.4		18.2	-17	9959	No stop
21 18 50	---	02 22 39	46.1	211.8	1.5		18.9	223	10021	21 14 51
21 18 50	J0056+1341	02 22 39	47.2	211.3	1.4		18.8	-17	10021	No stop
21 20 20	---	02 24 09	47.1	211.8	1.4		19.0	73	10044	21 18 51
21 20 20	IZW1	02 24 09	45.9	212.3	1.5		19.2	-17	10044	No stop
21 24 20	---	02 28 10	45.6	213.6	1.6		19.9	223	10106	21 20 21
21 24 55	J0056+1341	02 28 45	46.7	213.4	1.5		19.9	18	10106	21 24 55
21 25 50	---	02 29 40	46.7	213.7	1.5		20.1	55	10120	21 24 56
21 25 50	IZW1	02 29 40	45.5	214.1	1.6		20.2	-18	10120	No stop
21 29 50	---	02 33 41	45.2	215.4	1.7		20.9	222	10182	21 25 51
21 29 50	J0056+1341	02 33 41	46.3	215.0	1.6		20.8	-17	10182	No stop
21 31 20	---	02 35 11	46.2	215.5	1.6		21.0	73	10205	21 29 51
21 31 20	IZW1	02 35 11	45.0	215.9	1.7		21.1	-18	10205	No stop
21 35 20	---	02 39 12	44.7	217.1	1.7		21.8	222	10267	21 31 21

Schedule for TORUN (Code Tr) Page 12

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 17 Nov 2020 Day 322 ---										
21 35 55	J0056+1341	02 39 47	45.8	217.0	1.7		21.8	18	10267	21 35 55
21 36 50	---	02 40 42	45.7	217.3	1.7		22.0	55	10281	21 35 56
21 36 50	IZW1	02 40 42	44.5	217.6	1.8		22.1	-18	10281	No stop
21 40 50	---	02 44 43	44.2	218.9	1.8		22.7	222	10343	21 36 51
21 40 50	J0056+1341	02 44 43	45.3	218.6	1.8		22.7	-17	10343	No stop
21 42 20	---	02 46 13	45.2	219.1	1.8		22.9	73	10366	21 40 51
21 42 20	IZW1	02 46 13	44.0	219.4	1.9		23.0	-18	10366	No stop
21 46 20	---	02 50 13	43.6	220.6	1.9		23.6	222	10428	21 42 21
21 46 55	J0056+1341	02 50 49	44.7	220.5	1.9		23.7	18	10428	21 46 55
21 47 50	---	02 51 44	44.6	220.8	1.9		23.8	55	10442	21 46 56
21 47 50	IZW1	02 51 44	43.5	221.1	2.0		23.9	-18	10442	No stop
21 51 50	---	02 55 44	43.1	222.3	2.0		24.5	222	10504	21 47 51
21 51 50	J0056+1341	02 55 44	44.3	222.0	2.0		24.5	-17	10504	No stop
21 53 20	---	02 57 15	44.1	222.5	2.0		24.7	73	10527	21 51 51
21 53 20	IZW1	02 57 15	42.9	222.7	2.0		24.7	-18	10527	No stop
21 57 20	---	03 01 15	42.5	224.0	2.1		25.3	222	10589	21 53 21
21 57 55	J0056+1341	03 01 50	43.6	223.9	2.1		25.4	18	10589	21 57 55
21 58 50	---	03 02 46	43.5	224.2	2.1		25.5	55	10603	21 57 56
21 58 50	IZW1	03 02 46	42.4	224.4	2.1		25.5	-18	10603	No stop
22 02 50	---	03 06 46	41.9	225.6	2.2		26.1	222	10665	21 58 51
22 02 50	J0056+1341	03 06 46	43.1	225.4	2.2		26.1	-17	10665	No stop
22 04 20	---	03 08 16	42.9	225.8	2.2		26.3	73	10688	22 02 51
22 04 20	IZW1	03 08 16	41.8	226.0	2.2		26.3	-18	10688	No stop
22 08 20	---	03 12 17	41.3	227.2	2.3		26.9	222	10750	22 04 21
22 08 55	J0056+1341	03 12 52	42.4	227.2	2.3		27.0	18	10750	22 08 55
22 09 50	---	03 13 47	42.3	227.5	2.3		27.1	55	10764	22 08 56
22 09 50	IZW1	03 13 47	41.2	227.6	2.3		27.1	-18	10764	No stop
22 13 50	---	03 17 48	40.7	228.8	2.4		27.6	222	10826	22 09 51
22 13 50	J0056+1341	03 17 48	41.9	228.6	2.3		27.6	-17	10826	No stop
22 15 20	---	03 19 18	41.7	229.1	2.4		27.8	73	10849	22 13 51

Schedule for TORUN (Code Tr) Page 13

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 17 Nov 2020 Day 322 ---										
22 15 20	IZW1	03 19 18	40.5	229.2	2.4		27.8	-18	10849	No stop
22 19 20	---	03 23 19	40.1	230.3	2.5		28.3	222	10911	22 15 21
22 19 55	J0056+1341	03 23 54	41.2	230.4	2.4		28.4	18	10911	22 19 55
22 20 50	---	03 24 49	41.1	230.6	2.5		28.6	55	10925	22 19 56
22 20 50	IZW1	03 24 49	39.9	230.8	2.5		28.5	-18	10925	No stop
22 24 50	---	03 28 50	39.4	231.9	2.6		29.0	222	10987	22 20 51
22 24 50	J0056+1341	03 28 50	40.6	231.8	2.5		29.1	-17	10987	No stop
22 26 20	---	03 30 20	40.4	232.2	2.5		29.2	73	11010	22 24 51
22 26 20	IZW1	03 30 20	39.3	232.3	2.6		29.2	-18	11010	No stop
22 30 20	---	03 34 21	38.8	233.4	2.7		29.6	222	11072	22 26 21
22 30 55	J0056+1341	03 34 56	39.9	233.5	2.6		29.8	18	11072	22 30 55
22 31 50	---	03 35 51	39.8	233.7	2.6		29.9	55	11086	22 30 56
22 31 50	IZW1	03 35 51	38.6	233.8	2.7		29.8	-18	11086	No stop
22 35 50	---	03 39 52	38.1	234.9	2.8		30.2	222	11148	22 31 51
22 35 50	J0056+1341	03 39 52	39.3	234.8	2.7		30.3	-17	11148	No stop
22 37 20	---	03 41 22	39.1	235.2	2.7		30.5	73	11171	22 35 51
22 37 20	IZW1	03 41 22	37.9	235.3	2.8		30.4	-18	11171	No stop
22 41 20	---	03 45 23	37.4	236.3	2.8		30.8	222	11233	22 37 21
22 41 55	J0056+1341	03 45 58	38.5	236.4	2.8		31.0	18	11233	22 41 55
22 42 50	---	03 46 53	38.4	236.7	2.8		31.1	55	11247	22 41 56
22 42 50	IZW1	03 46 53	37.2	236.7	2.9		31.0	-18	11247	No stop
22 46 50	---	03 50 53	36.7	237.8	2.9		31.4	222	11309	22 42 51
22 46 50	J0056+1341	03 50 53	37.9	237.7	2.9		31.5	-17	11309	No stop
22 48 20	---	03 52 24	37.7	238.1	2.9		31.7	73	11332	22 46 51
22 48 20	IZW1	03 52 24	36.5	238.2	3.0		31.5	-18	11332	No stop
22 52 20	---	03 56 24	36.0	239.2	3.0		31.9	222	11394	22 48 21
22 52 55	J0056+1341	03 56 59	37.1	239.3	3.0		32.1	18	11394	22 52 55
22 53 50	---	03 57 55	37.0	239.6	3.0		32.2	55	11408	22 52 56
22 53 50	IZW1	03 57 55	35.8	239.6	3.1		32.1	-18	11408	No stop
22 57 50	---	04 01 55	35.3	240.6	3.1		32.4	222	11470	22 53 51

Schedule for TORUN (Code Tr) Page 14

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 17 Nov 2020 Day 322 ---										
22 57 50	J0056+1341	04 01 55	36.5	240.6	3.1		32.6	-17	11470	No stop
22 59 20	---	04 03 25	36.3	241.0	3.1		32.7	73	11493	22 57 51
22 59 20	IZW1	04 03 25	35.1	241.0	3.1		32.6	-18	11493	No stop
23 03 20	---	04 07 26	34.6	242.0	3.2		32.9	222	11555	22 59 21
23 03 55	J0056+1341	04 08 01	35.7	242.1	3.2		33.1	18	11555	23 03 55
23 04 50	---	04 08 56	35.6	242.4	3.2		33.2	55	11569	23 03 56
23 04 50	IZW1	04 08 56	34.4	242.4	3.2		33.1	-18	11569	No stop
23 08 50	---	04 12 57	33.8	243.3	3.3		33.4	222	11631	23 04 51
23 08 50	J0056+1341	04 12 57	35.0	243.4	3.3		33.5	-17	11631	No stop
23 10 20	---	04 14 27	34.8	243.7	3.3		33.7	73	11654	23 08 51
23 10 20	IZW1	04 14 27	33.6	243.7	3.3		33.5	-18	11654	No stop
23 14 20	---	04 18 28	33.1	244.7	3.4		33.8	222	11716	23 10 21
23 14 55	J0056+1341	04 19 03	34.2	244.8	3.4		34.0	18	11716	23 14 55
23 15 50	---	04 19 58	34.1	245.1	3.4		34.1	55	11730	23 14 56
23 15 50	IZW1	04 19 58	32.9	245.1	3.4		33.9	-18	11730	No stop
23 19 50	---	04 23 59	32.4	246.0	3.5		34.2	222	11792	23 15 51
23 19 50	J0056+1341	04 23 59	33.5	246.0	3.4		34.4	-17	11792	No stop
23 21 20	---	04 25 29	33.3	246.4	3.5		34.5	73	11815	23 19 51
23 21 20	IZW1	04 25 29	32.1	246.4	3.5		34.3	-18	11815	No stop
23 25 20	---	04 29 30	31.6	247.3	3.6		34.6	222	11877	23 21 21
23 25 55	J0056+1341	04 30 05	32.7	247.5	3.5		34.8	18	11877	23 25 55
23 26 50	---	04 31 00	32.6	247.7	3.6		34.9	55	11891	23 25 56
23 26 50	IZW1	04 31 00	31.4	247.7	3.6		34.7	-18	11891	No stop
23 30 50	---	04 35 01	30.8	248.6	3.7		35.0	222	11953	23 26 51
23 30 50	J0056+1341	04 35 01	32.0	248.7	3.6		35.2	-17	11953	No stop
23 32 20	---	04 36 31	31.8	249.0	3.7		35.3	73	11976	23 30 51
23 32 20	IZW1	04 36 31	30.6	249.0	3.7		35.1	-18	11976	No stop
23 36 20	---	04 40 32	30.0	249.9	3.8		35.3	222	12038	23 32 21
23 36 55	J0056+1341	04 41 07	31.2	250.1	3.7		35.5	18	12038	23 36 55
23 37 50	---	04 42 02	31.0	250.3	3.7		35.6	55	12052	23 36 56

Schedule for TORUN (Code Tr) Page 15

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 17 Nov 2020 Day 322 ---										
23 37 50	IZW1	04 42 02	29.8	250.2	3.8		35.4	-18	12052	No stop
23 41 50	---	04 46 02	29.3	251.1	3.9		35.6	222	12114	23 37 51
23 41 50	J0056+1341	04 46 02	30.5	251.2	3.8		35.8	-17	12114	No stop
23 43 20	---	04 47 33	30.2	251.5	3.8		35.9	73	12137	23 41 51
23 43 20	IZW1	04 47 33	29.1	251.5	3.9		35.7	-18	12137	No stop
23 47 20	---	04 51 33	28.5	252.4	3.9		35.9	222	12199	23 43 21
23 47 55	J0056+1341	04 52 08	29.6	252.6	3.9		36.2	18	12199	23 47 55
23 48 50	---	04 53 04	29.5	252.8	3.9		36.2	55	12213	23 47 56
23 48 50	IZW1	04 53 04	28.3	252.7	4.0		36.0	-18	12213	No stop
23 52 50	---	04 57 04	27.7	253.6	4.0		36.2	222	12275	23 48 51
23 52 50	J0056+1341	04 57 04	28.9	253.7	4.0		36.4	-17	12275	No stop
23 54 20	---	04 58 35	28.7	254.0	4.0		36.5	73	12298	23 52 51
23 54 20	IZW1	04 58 35	27.5	254.0	4.1		36.3	-18	12298	No stop
23 58 20	---	05 02 35	26.9	254.8	4.1		36.5	222	12360	23 54 21
23 58 55	J0056+1341	05 03 10	28.0	255.0	4.1		36.7	18	12360	23 58 55
23 59 50	---	05 04 05	27.9	255.3	4.1		36.7	55	12374	23 58 56
--- Start: Tue 17 Nov 2020 Day 322 -- Stop: Wed 18 Nov 2020 Day 323 ---										
23 59 50	IZW1	05 04 05	26.7	255.2	4.2		36.5	-18	12374	No stop
00 03 50	---	05 08 06	26.1	256.0	4.2		36.7	222	12436	23 59 51
00 03 50	J0056+1341	05 08 06	27.3	256.1	4.2		36.9	-17	12436	No stop
00 05 20	---	05 09 36	27.1	256.5	4.2		37.0	73	12459	00 03 51
00 05 20	IZW1	05 09 36	25.9	256.4	4.2		36.8	-18	12459	No stop
00 09 20	---	05 13 37	25.3	257.2	4.3		36.9	222	12521	00 05 21
00 09 55	J0056+1341	05 14 12	26.4	257.5	4.3		37.1	18	12521	00 09 55
00 10 50	---	05 15 07	26.3	257.7	4.3		37.2	55	12535	00 09 56
00 10 50	IZW1	05 15 07	25.1	257.6	4.3		37.0	-18	12535	No stop
00 14 50	---	05 19 08	24.5	258.4	4.4		37.1	222	12597	00 10 51
00 14 50	J0056+1341	05 19 08	25.7	258.5	4.4		37.3	-17	12597	No stop
00 16 20	---	05 20 38	25.4	258.8	4.4		37.3	73	12620	00 14 51

Schedule for TORUN (Code Tr) Page 16

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
00 16 20	IZW1	05 20 38	24.3	258.7	4.4		37.2	-18	12620	No stop
00 20 20	---	05 24 39	23.7	259.6	4.5		37.3	222	12682	00 16 21
00 20 55	J0056+1341	05 25 14	24.8	259.8	4.5		37.5	18	12682	00 20 55
00 21 50	---	05 26 09	24.6	260.0	4.5		37.5	55	12696	00 20 56
00 30 50	4C39.25	05 35 11	48.4	85.6	-3.9		-50.3	175	12696	00 30 50
00 34 50	---	05 39 11	49.0	86.4	-3.8		-50.4	240	12758	00 30 51
---------- GAP ----------										
00 45 50	J0956+2515	05 50 13	36.6	96.1	-4.1		-41.3	594	12758	00 45 50
00 55 50	=OK290	06 00 15	38.0	98.2	-4.0		-41.0	600	12913	00 45 51
01 00 50	J0956+2515	06 05 15	38.8	99.3	-3.9		-40.9	293	12913	01 00 50
01 10 50	=OK290	06 15 17	40.3	101.6	-3.7		-40.5	600	13067	01 00 51
01 15 50	J0956+2515	06 20 18	41.0	102.7	-3.6		-40.3	293	13067	01 15 50
01 25 50	=OK290	06 30 20	42.5	105.0	-3.5		-39.8	600	13222	01 15 51
01 30 50	J0956+2515	06 35 20	43.2	106.2	-3.4		-39.6	293	13222	01 30 50
01 40 50	=OK290	06 45 22	44.6	108.7	-3.2		-38.9	600	13377	01 30 51
01 45 50	J0956+2515	06 50 23	45.3	109.9	-3.1		-38.6	293	13377	01 45 50
01 55 50	=OK290	07 00 24	46.7	112.5	-3.0		-37.8	600	13531	01 45 51
02 00 50	J0956+2515	07 05 25	47.4	113.8	-2.9		-37.4	293	13531	02 00 50
02 10 50	=OK290	07 15 27	48.8	116.5	-2.7		-36.4	600	13686	02 00 51
02 15 50	J0956+2515	07 20 28	49.5	117.9	-2.6		-35.9	293	13686	02 15 50
02 25 50	=OK290	07 30 29	50.8	120.8	-2.5		-34.7	600	13840	02 15 51
02 30 50	J0956+2515	07 35 30	51.4	122.3	-2.4		-34.1	293	13840	02 30 50
02 40 50	=OK290	07 45 32	52.7	125.4	-2.2		-32.8	600	13995	02 30 51
02 45 50	J0956+2515	07 50 33	53.3	127.0	-2.1		-32.0	293	13995	02 45 50
02 55 50	=OK290	08 00 34	54.5	130.2	-2.0		-30.4	600	14149	02 45 51
03 00 50	J0956+2515	08 05 35	55.0	131.9	-1.9		-29.6	293	14149	03 00 50
03 10 50	=OK290	08 15 37	56.1	135.5	-1.7		-27.7	600	14304	03 00 51
03 15 50	J0956+2515	08 20 38	56.6	137.3	-1.6		-26.7	293	14304	03 15 50
03 25 50	=OK290	08 30 39	57.6	141.1	-1.5		-24.6	600	14459	03 15 51

Schedule for TORUN (Code Tr) Page 17

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
03 30 50	J0956+2515	08 35 40	58.1	143.0	-1.4		-23.5	292	14459	03 30 50
03 40 50	=OK290	08 45 42	58.9	147.0	-1.2		-21.2	600	14613	03 30 51
03 45 50	J0956+2515	08 50 43	59.3	149.1	-1.1		-19.9	292	14613	03 45 50
03 55 50	=OK290	09 00 44	60.1	153.4	-1.0		-17.3	600	14768	03 45 51
04 00 50	J0956+2515	09 05 45	60.4	155.5	-0.9		-15.9	292	14768	04 00 50
04 10 50	=OK290	09 15 47	61.0	160.0	-0.7		-13.1	600	14922	04 00 51
04 15 50	J0956+2515	09 20 47	61.2	162.3	-0.6		-11.6	292	14922	04 15 50
04 25 50	=OK290	09 30 49	61.6	167.0	-0.5		-8.6	600	15077	04 15 51
04 30 50	J0956+2515	09 35 50	61.8	169.4	-0.4		-7.0	292	15077	04 30 50
04 40 50	=OK290	09 45 52	62.0	174.2	-0.2		-3.9	600	15232	04 30 51
04 45 50	J0956+2515	09 50 52	62.0	176.6	-0.1		-2.3	292	15232	04 45 50
04 55 50	=OK290	10 00 54	62.1	181.4	0.0		0.9	600	15386	04 45 51
05 00 50	J1430+1043	10 05 55	22.6	102.8	-4.4		-36.6	127	15386	05 00 50
05 10 50	=1427+109	10 15 57	24.1	105.0	-4.3		-36.2	600	15541	05 00 51
05 15 00	J1430+1043	10 20 07	24.7	105.9	-4.2		-36.0	243	15541	05 15 00
05 20 00	=1427+109	10 25 08	25.4	107.0	-4.1		-35.8	300	15618	05 15 01
---------- EG102L ----------										
05 30 00	J1430+1043	10 35 10	26.8	109.2	-3.9		-35.2	593	15618	05 30 00
05 35 00	=1427+109	10 40 10	27.6	110.4	-3.8		-34.9	300	15695	05 30 01
05 35 50	J1428+1628	10 41 01	32.6	107.1	-3.8		-36.7	17	15695	05 35 50
05 37 50	---	10 43 01	32.9	107.6	-3.8		-36.6	120	15726	05 35 51
05 37 50	J1434+1628	10 43 01	32.0	106.2	-3.9		-36.9	-16	15726	No stop
05 41 20	---	10 46 32	32.6	107.0	-3.8		-36.8	194	15780	05 37 51
05 41 20	J1428+1628	10 46 32	33.4	108.4	-3.7		-36.4	-16	15780	No stop
05 42 50	---	10 48 02	33.6	108.7	-3.7		-36.4	74	15804	05 41 21
05 42 50	J1434+1628	10 48 02	32.8	107.4	-3.8		-36.7	-16	15804	No stop
05 46 20	---	10 51 32	33.3	108.2	-3.7		-36.5	194	15858	05 42 51
05 47 00	J1428+1628	10 52 12	34.2	109.7	-3.6		-36.1	24	15858	05 47 00
05 48 00	---	10 53 13	34.4	110.0	-3.6		-36.0	60	15873	05 47 01

Schedule for TORUN (Code Tr) Page 18

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
05 48 00	J1434+1628	10 53 13	33.5	108.5	-3.7		-36.4	-15	15873	No stop
05 51 30	---	10 56 43	34.0	109.4	-3.6		-36.2	195	15927	05 48 01
05 51 30	J1428+1628	10 56 43	34.9	110.8	-3.5		-35.8	-16	15927	No stop
05 53 00	---	10 58 13	35.1	111.1	-3.5		-35.7	74	15950	05 51 31
05 53 00	J1434+1628	10 58 13	34.2	109.7	-3.6		-36.1	-16	15950	No stop
05 56 30	---	11 01 44	34.7	110.5	-3.6		-35.9	194	16004	05 53 01
05 57 10	J1428+1628	11 02 24	35.6	112.1	-3.4		-35.4	24	16004	05 57 10
05 58 10	---	11 03 24	35.8	112.4	-3.4		-35.4	60	16020	05 57 11
05 58 10	J1434+1628	11 03 24	34.9	110.9	-3.5		-35.8	-16	16020	No stop
06 01 40	---	11 06 55	35.4	111.8	-3.5		-35.5	194	16074	05 58 11
06 01 40	J1428+1628	11 06 55	36.3	113.2	-3.4		-35.1	-16	16074	No stop
06 03 10	---	11 08 25	36.5	113.6	-3.3		-35.0	74	16097	06 01 41
06 03 10	J1434+1628	11 08 25	35.6	112.1	-3.4		-35.4	-16	16097	No stop
06 06 40	---	11 11 56	36.1	113.0	-3.4		-35.2	194	16151	06 03 11
06 07 20	J1428+1628	11 12 36	37.1	114.6	-3.3		-34.7	24	16151	06 07 20
06 08 20	---	11 13 36	37.2	114.9	-3.3		-34.6	60	16167	06 07 21
06 08 20	J1434+1628	11 13 36	36.4	113.4	-3.4		-35.1	-16	16167	No stop
06 11 50	---	11 17 07	36.8	114.2	-3.3		-34.8	194	16221	06 08 21
06 11 50	J1428+1628	11 17 07	37.7	115.7	-3.2		-34.3	-16	16221	No stop
06 13 20	---	11 18 37	37.9	116.1	-3.2		-34.2	74	16244	06 11 51
06 13 20	J1434+1628	11 18 37	37.1	114.6	-3.3		-34.7	-16	16244	No stop
06 16 50	---	11 22 07	37.5	115.5	-3.2		-34.4	194	16298	06 13 21
06 17 30	J1428+1628	11 22 47	38.4	117.2	-3.1		-33.8	24	16298	06 17 30
06 18 30	---	11 23 48	38.6	117.4	-3.1		-33.7	60	16314	06 17 31
06 18 30	J1434+1628	11 23 48	37.8	115.9	-3.2		-34.3	-16	16314	No stop
06 22 00	---	11 27 18	38.2	116.8	-3.1		-34.0	194	16368	06 18 31
06 22 00	J1428+1628	11 27 18	39.0	118.3	-3.0		-33.4	-16	16368	No stop
06 23 30	---	11 28 48	39.2	118.7	-3.0		-33.3	74	16391	06 22 01
06 23 30	J1434+1628	11 28 48	38.4	117.2	-3.1		-33.8	-16	16391	No stop
06 27 00	---	11 32 19	38.9	118.1	-3.0		-33.5	194	16445	06 23 31

Schedule for TORUN (Code Tr) Page 19

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
06 27 40	J1428+1628	11 32 59	39.8	119.8	-2.9		-32.9	24	16445	06 27 40
06 28 40	---	11 33 59	39.9	120.1	-2.9		-32.8	60	16460	06 27 41
06 28 40	J1434+1628	11 33 59	39.1	118.5	-3.0		-33.4	-16	16460	No stop
06 32 10	---	11 37 30	39.6	119.4	-3.0		-33.0	194	16515	06 28 41
06 32 10	J1428+1628	11 37 30	40.4	121.0	-2.9		-32.4	-16	16515	No stop
06 33 40	---	11 39 00	40.6	121.4	-2.8		-32.3	74	16538	06 32 11
06 33 40	J1434+1628	11 39 00	39.8	119.8	-2.9		-32.9	-16	16538	No stop
06 37 10	---	11 42 31	40.2	120.7	-2.9		-32.6	194	16592	06 33 41
06 37 50	J1428+1628	11 43 11	41.1	122.5	-2.8		-31.9	23	16592	06 37 50
06 38 50	---	11 44 11	41.2	122.8	-2.7		-31.7	60	16607	06 37 51
06 38 50	J1434+1628	11 44 11	40.4	121.2	-2.8		-32.4	-16	16607	No stop
06 42 20	---	11 47 42	40.9	122.1	-2.8		-32.0	194	16661	06 38 51
06 42 20	J1428+1628	11 47 42	41.7	123.7	-2.7		-31.4	-17	16661	No stop
06 43 50	---	11 49 12	41.8	124.2	-2.7		-31.2	73	16685	06 42 21
06 43 50	J1434+1628	11 49 12	41.1	122.5	-2.8		-31.9	-16	16685	No stop
06 47 20	---	11 52 42	41.5	123.5	-2.7		-31.5	194	16739	06 43 51
06 48 00	J1428+1628	11 53 22	42.4	125.3	-2.6		-30.7	23	16739	06 48 00
06 49 00	---	11 54 23	42.5	125.6	-2.6		-30.6	60	16754	06 48 01
06 52 50	J1722+6105	11 58 13	48.1	45.7	-5.4		-62.7	55	16754	06 52 50
06 54 50	=1722+611	12 00 14	48.3	45.9	-5.4		-63.0	120	16785	06 52 51
06 54 50	J1720+6028	12 00 14	48.3	46.9	-5.3		-62.8	-14	16785	No stop
06 58 20	---	12 03 44	48.7	47.2	-5.3		-63.4	196	16839	06 54 51
06 58 20	J1722+6105	12 03 44	48.7	46.2	-5.3		-63.6	-14	16839	No stop
06 59 50	=1722+611	12 05 14	48.9	46.3	-5.3		-63.8	76	16862	06 58 21
06 59 50	J1720+6028	12 05 14	48.9	47.3	-5.3		-63.6	-14	16862	No stop
07 03 20	---	12 08 45	49.3	47.6	-5.2		-64.1	196	16917	06 59 51
07 03 50	J1722+6105	12 09 15	49.3	46.6	-5.2		-64.5	16	16917	07 03 50
07 04 50	=1722+611	12 10 15	49.4	46.7	-5.2		-64.6	60	16932	07 03 51
07 04 50	J1720+6028	12 10 15	49.4	47.8	-5.2		-64.4	-14	16932	No stop
07 08 20	---	12 13 46	49.8	48.0	-5.1		-64.9	196	16986	07 04 51

Schedule for TORUN (Code Tr) Page 20

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
07 08 20	J1722+6105	12 13 46	49.8	47.0	-5.2		-65.2	-14	16986	No stop
07 09 50	=1722+611	12 15 16	50.0	47.1	-5.1		-65.4	76	17009	07 08 21
07 09 50	J1720+6028	12 15 16	50.0	48.2	-5.1		-65.1	-14	17009	No stop
07 13 20	---	12 18 47	50.4	48.4	-5.0		-65.7	196	17063	07 09 51
07 13 50	J1722+6105	12 19 17	50.4	47.4	-5.1		-66.1	16	17063	07 13 50
07 14 50	=1722+611	12 20 17	50.5	47.5	-5.0		-66.2	60	17079	07 13 51
07 14 50	J1720+6028	12 20 17	50.6	48.6	-5.0		-65.9	-14	17079	No stop
07 18 20	---	12 23 47	51.0	48.8	-4.9		-66.5	196	17133	07 14 51
07 18 20	J1722+6105	12 23 47	50.9	47.7	-5.0		-66.8	-14	17133	No stop
07 19 50	=1722+611	12 25 18	51.1	47.8	-5.0		-67.0	76	17156	07 18 21
07 19 50	J1720+6028	12 25 18	51.1	49.0	-4.9		-66.7	-14	17156	No stop
07 23 20	---	12 28 48	51.5	49.2	-4.9		-67.3	196	17210	07 19 51
07 23 50	J1722+6105	12 29 18	51.5	48.1	-4.9		-67.7	16	17210	07 23 50
07 24 50	=1722+611	12 30 19	51.6	48.2	-4.9		-67.8	60	17226	07 23 51
07 24 50	J1720+6028	12 30 19	51.7	49.3	-4.8		-67.5	-15	17226	No stop
07 28 20	---	12 33 49	52.1	49.6	-4.8		-68.1	195	17280	07 24 51
07 28 20	J1722+6105	12 33 49	52.0	48.5	-4.8		-68.4	-14	17280	No stop
07 29 50	=1722+611	12 35 19	52.2	48.6	-4.8		-68.6	76	17303	07 28 21
07 29 50	J1720+6028	12 35 19	52.3	49.7	-4.8		-68.3	-15	17303	No stop
07 33 20	---	12 38 50	52.7	50.0	-4.7		-68.8	195	17357	07 29 51
07 33 50	J1722+6105	12 39 20	52.7	48.9	-4.7		-69.3	15	17357	07 33 50
07 34 50	=1722+611	12 40 20	52.8	48.9	-4.7		-69.5	60	17373	07 33 51
07 34 50	J1720+6028	12 40 20	52.8	50.1	-4.7		-69.1	-15	17373	No stop
07 38 20	---	12 43 51	53.2	50.3	-4.6		-69.6	195	17427	07 34 51
07 38 20	J1722+6105	12 43 51	53.2	49.2	-4.7		-70.0	-15	17427	No stop
07 39 50	=1722+611	12 45 21	53.3	49.3	-4.6		-70.3	75	17450	07 38 21
07 39 50	J1720+6028	12 45 21	53.4	50.5	-4.6		-69.9	-15	17450	No stop
07 43 20	---	12 48 52	53.8	50.7	-4.5		-70.5	195	17504	07 39 51
07 43 50	J1722+6105	12 49 22	53.8	49.6	-4.6		-70.9	15	17504	07 43 50
07 44 50	=1722+611	12 50 22	53.9	49.6	-4.5		-71.1	60	17519	07 43 51

Schedule for TORUN (Code Tr) Page 21

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Wed 18 Nov 2020 Day 323 ---										
07 44 50	J1720+6028	12 50 22	54.0	50.8	-4.5		-70.7	-15	17519	No stop
07 48 20	---	12 53 52	54.4	51.0	-4.4		-71.3	195	17573	07 44 51
07 48 20	J1722+6105	12 53 52	54.3	49.9	-4.5		-71.7	-15	17573	No stop
07 49 50	=1722+611	12 55 23	54.5	50.0	-4.5		-71.9	75	17597	07 48 21
07 49 50	J1720+6028	12 55 23	54.6	51.1	-4.4		-71.5	-15	17597	No stop
07 53 20	---	12 58 53	55.0	51.4	-4.4		-72.1	195	17651	07 49 51
07 53 50	J1722+6105	12 59 23	55.0	50.2	-4.4		-72.6	15	17651	07 53 50
07 54 50	=1722+611	13 00 23	55.1	50.3	-4.4		-72.8	60	17666	07 53 51
07 54 50	J1720+6028	13 00 23	55.2	51.5	-4.3		-72.3	-15	17666	No stop
07 58 20	---	13 03 54	55.6	51.7	-4.3		-72.9	195	17720	07 54 51
07 58 20	J1722+6105	13 03 54	55.5	50.5	-4.3		-73.4	-15	17720	No stop
07 59 50	=1722+611	13 05 24	55.6	50.6	-4.3		-73.6	75	17744	07 58 21
07 59 50	J1720+6028	13 05 24	55.8	51.8	-4.2		-73.1	-15	17744	No stop
08 03 20	---	13 08 55	56.2	52.0	-4.2		-73.7	195	17798	07 59 51
08 03 50	J1722+6105	13 09 25	56.1	50.8	-4.2		-74.3	15	17798	08 03 50
08 04 50	=1722+611	13 10 25	56.2	50.9	-4.2		-74.5	60	17813	08 03 51
08 09 20	J1428+1628	13 14 56	50.5	151.3	-1.2		-17.5	55	17813	08 09 20
08 11 20	---	13 16 56	50.7	152.0	-1.2		-17.1	120	17844	08 09 21
08 11 20	J1434+1628	13 16 56	50.2	149.9	-1.3		-18.3	-18	17844	No stop
08 14 50	---	13 20 27	50.5	151.1	-1.2		-17.6	192	17898	08 11 21
08 14 50	J1428+1628	13 20 27	50.9	153.3	-1.1		-16.3	-18	17898	No stop
08 16 20	---	13 21 57	51.0	153.9	-1.1		-16.0	72	17921	08 14 51
08 16 20	J1434+1628	13 21 57	50.6	151.7	-1.2		-17.3	-18	17921	No stop
08 19 50	---	13 25 28	50.8	152.9	-1.2		-16.5	192	17975	08 16 21
08 20 30	J1428+1628	13 26 08	51.3	155.4	-1.1		-15.1	21	17975	08 20 30
08 21 30	---	13 27 08	51.3	155.8	-1.0		-14.9	60	17991	08 20 31
08 21 30	J1434+1628	13 27 08	50.9	153.6	-1.1		-16.2	-18	17991	No stop
08 25 00	---	13 30 38	51.2	154.8	-1.1		-15.4	192	18045	08 21 31
08 25 00	J1428+1628	13 30 38	51.5	157.1	-1.0		-14.1	-19	18045	No stop
08 26 30	---	13 32 09	51.6	157.6	-0.9		-13.8	71	18068	08 25 01

Schedule for TORUN (Code Tr) Page 22

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
08 26 30	J1434+1628	13 32 09	51.3	155.4	-1.1		-15.1	-18	18068	No stop
08 30 00	---	13 35 39	51.5	156.7	-1.0		-14.3	192	18122	08 26 31
08 30 40	J1428+1628	13 36 19	51.9	159.2	-0.9		-12.8	21	18122	08 30 40
08 31 40	---	13 37 19	51.9	159.6	-0.9		-12.6	60	18138	08 30 41
08 31 40	J1434+1628	13 37 19	51.6	157.3	-1.0		-14.0	-18	18138	No stop
08 35 10	---	13 40 50	51.8	158.6	-0.9		-13.2	192	18192	08 31 41
08 35 10	J1428+1628	13 40 50	52.1	160.9	-0.8		-11.8	-19	18192	No stop
08 36 40	---	13 42 20	52.2	161.5	-0.8		-11.4	71	18215	08 35 11
08 36 40	J1434+1628	13 42 20	51.9	159.2	-0.9		-12.8	-18	18215	No stop
08 40 10	---	13 45 51	52.0	160.5	-0.8		-12.0	192	18269	08 36 41
08 40 50	J1428+1628	13 46 31	52.4	163.1	-0.7		-10.5	21	18269	08 40 50
08 41 50	---	13 47 31	52.4	163.5	-0.7		-10.2	60	18285	08 40 51
08 41 50	J1434+1628	13 47 31	52.1	161.2	-0.8		-11.6	-18	18285	No stop
08 45 20	---	13 51 02	52.3	162.5	-0.7		-10.8	192	18339	08 41 51
08 45 20	J1428+1628	13 51 02	52.5	164.9	-0.6		-9.4	-19	18339	No stop
08 46 50	---	13 52 32	52.6	165.5	-0.6		-9.0	71	18362	08 45 21
08 46 50	J1434+1628	13 52 32	52.4	163.1	-0.7		-10.5	-18	18362	No stop
08 50 20	---	13 56 03	52.5	164.5	-0.7		-9.6	192	18416	08 46 51
08 51 00	J1428+1628	13 56 43	52.7	167.1	-0.5		-8.0	21	18416	08 51 00
08 52 00	---	13 57 43	52.8	167.5	-0.5		-7.8	60	18431	08 51 01
08 52 00	J1434+1628	13 57 43	52.6	165.1	-0.6		-9.2	-18	18431	No stop
08 55 30	---	14 01 13	52.7	166.5	-0.6		-8.4	192	18486	08 52 01
08 55 30	J1428+1628	14 01 13	52.9	168.9	-0.5		-6.9	-19	18486	No stop
08 57 00	---	14 02 44	52.9	169.5	-0.4		-6.6	71	18509	08 55 31
08 57 00	J1434+1628	14 02 44	52.7	167.1	-0.5		-8.0	-19	18509	No stop
09 00 30	---	14 06 14	52.9	168.5	-0.5		-7.2	191	18563	08 57 01
09 01 10	J1428+1628	14 06 54	53.0	171.1	-0.4		-5.6	21	18563	09 01 10
09 02 10	---	14 07 55	53.1	171.5	-0.4		-5.3	60	18578	09 01 11
09 02 10	J1434+1628	14 07 55	52.9	169.1	-0.5		-6.8	-19	18578	No stop
09 05 40	---	14 11 25	53.0	170.5	-0.4		-5.9	191	18632	09 02 11

Schedule for TORUN (Code Tr) Page 23

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
09 05 40	J1428+1628	14 11 25	53.1	172.9	-0.3		-4.4	-19	18632	No stop
09 07 10	---	14 12 55	53.2	173.5	-0.3		-4.1	71	18656	09 05 41
09 07 10	J1434+1628	14 12 55	53.0	171.1	-0.4		-5.6	-19	18656	No stop
09 10 40	---	14 16 26	53.1	172.5	-0.3		-4.7	191	18710	09 07 11
09 11 20	J1428+1628	14 17 06	53.2	175.2	-0.2		-3.0	21	18710	09 11 20
09 12 20	---	14 18 06	53.2	175.6	-0.2		-2.8	60	18725	09 11 21
09 12 20	J1434+1628	14 18 06	53.1	173.2	-0.3		-4.3	-19	18725	No stop
09 15 50	---	14 21 37	53.2	174.6	-0.2		-3.4	191	18779	09 12 21
09 15 50	J1428+1628	14 21 37	53.3	177.0	-0.1		-1.9	-19	18779	No stop
09 17 20	---	14 23 07	53.3	177.6	-0.1		-1.5	71	18802	09 15 51
09 17 20	J1434+1628	14 23 07	53.2	175.2	-0.2		-3.0	-19	18802	No stop
09 20 50	---	14 26 38	53.3	176.6	-0.1		-2.1	191	18857	09 17 21
09 21 30	J1428+1628	14 27 18	53.3	179.3	-0.0		-0.5	21	18857	09 21 30
09 22 30	---	14 28 18	53.3	179.7	-0.0		-0.2	60	18872	09 21 31
09 22 30	J1434+1628	14 28 18	53.3	177.2	-0.1		-1.7	-19	18872	No stop
09 26 00	---	14 31 48	53.3	178.7	-0.1		-0.8	191	18926	09 22 31
09 26 00	J1428+1628	14 31 48	53.3	181.1	0.0		0.7	-19	18926	No stop
09 28 00	---	14 33 49	53.3	181.9	0.1		1.2	101	18957	09 26 01
09 33 30	J1722+6105	14 39 20	66.8	53.6	-2.7		-91.6	58	18957	09 33 30
09 35 30	=1722+611	14 41 20	67.1	53.6	-2.7		-92.0	120	18988	09 33 31
09 35 30	J1720+6028	14 41 20	67.4	55.2	-2.7		-91.1	-16	18988	No stop
09 39 00	---	14 44 51	67.8	55.2	-2.6		-91.9	194	19042	09 35 31
09 39 00	J1722+6105	14 44 51	67.5	53.5	-2.6		-92.8	-16	19042	No stop
09 40 30	=1722+611	14 46 21	67.7	53.5	-2.6		-93.2	74	19065	09 39 01
09 40 30	J1720+6028	14 46 21	68.0	55.1	-2.6		-92.2	-16	19065	No stop
09 44 00	---	14 49 51	68.5	55.1	-2.5		-93.0	194	19119	09 40 31
09 44 30	J1722+6105	14 50 21	68.2	53.4	-2.5		-94.1	14	19119	09 44 30
09 45 30	=1722+611	14 51 22	68.3	53.4	-2.5		-94.4	60	19135	09 44 31
09 45 30	J1720+6028	14 51 22	68.7	55.1	-2.5		-93.4	-16	19135	No stop
09 49 00	---	14 54 52	69.1	55.0	-2.4		-94.2	194	19189	09 45 31

Schedule for TORUN (Code Tr) Page 24

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
09 49 00	J1722+6105	14 54 52	68.7	53.3	-2.5		-95.2	-17	19189	No stop
09 50 30	=1722+611	14 56 22	68.9	53.3	-2.4		-95.6	73	19212	09 49 01
09 50 30	J1720+6028	14 56 22	69.3	54.9	-2.4		-94.6	-17	19212	No stop
09 54 00	---	14 59 53	69.7	54.8	-2.3		-95.5	193	19266	09 50 31
09 54 30	J1722+6105	15 00 23	69.4	53.1	-2.4		-96.6	13	19266	09 54 30
09 55 30	=1722+611	15 01 23	69.5	53.1	-2.4		-96.9	60	19282	09 54 31
09 55 30	J1720+6028	15 01 23	69.9	54.8	-2.3		-95.8	-17	19282	No stop
09 59 00	---	15 04 54	70.3	54.6	-2.3		-96.7	193	19336	09 55 31
09 59 00	J1722+6105	15 04 54	69.9	52.9	-2.3		-97.8	-17	19336	No stop
10 00 30	=1722+611	15 06 24	70.1	52.8	-2.3		-98.2	73	19359	09 59 01
10 00 30	J1720+6028	15 06 24	70.5	54.6	-2.2		-97.1	-17	19359	No stop
10 04 00	---	15 09 55	70.9	54.4	-2.2		-98.1	193	19413	10 00 31
10 04 30	J1722+6105	15 10 25	70.6	52.6	-2.2		-99.3	13	19413	10 04 30
10 05 30	=1722+611	15 11 25	70.7	52.6	-2.2		-99.6	60	19428	10 04 31
10 05 30	J1720+6028	15 11 25	71.1	54.3	-2.1		-98.5	-17	19428	No stop
10 09 00	---	15 14 55	71.5	54.1	-2.1		-99.4	193	19483	10 05 31
10 09 00	J1722+6105	15 14 55	71.1	52.3	-2.1		-100.5	-17	19483	No stop
10 10 30	=1722+611	15 16 26	71.3	52.2	-2.1		-101.0	73	19506	10 09 01
10 10 30	J1720+6028	15 16 26	71.7	54.0	-2.1		-99.8	-17	19506	No stop
10 14 00	---	15 19 56	72.1	53.8	-2.0		-100.8	193	19560	10 10 31
10 14 30	J1722+6105	15 20 26	71.8	51.9	-2.0		-102.1	13	19560	10 14 30
10 15 30	=1722+611	15 21 27	71.9	51.8	-2.0		-102.4	60	19575	10 14 31
10 15 30	J1720+6028	15 21 27	72.3	53.6	-2.0		-101.3	-17	19575	No stop
10 19 00	---	15 24 57	72.8	53.3	-1.9		-102.3	193	19629	10 15 31
10 19 00	J1722+6105	15 24 57	72.3	51.5	-2.0		-103.5	-17	19629	No stop
10 20 30	=1722+611	15 26 27	72.5	51.4	-1.9		-104.0	73	19653	10 19 01
10 20 30	J1720+6028	15 26 27	72.9	53.2	-1.9		-102.8	-17	19653	No stop
10 24 00	---	15 29 58	73.4	52.9	-1.8		-103.9	193	19707	10 20 31
10 24 30	J1722+6105	15 30 28	73.0	51.0	-1.9		-105.2	13	19707	10 24 30
10 25 30	=1722+611	15 31 28	73.1	50.9	-1.9		-105.6	60	19722	10 24 31

Schedule for TORUN (Code Tr) Page 25

e-EVN: EY037, EG102L

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 18 Nov 2020 Day 323 ---										
10 25 30	J1720+6028	15 31 28	73.5	52.7	-1.8		-104.4	-17	19722	No stop
10 29 00	---	15 34 59	74.0	52.3	-1.8		-105.5	193	19776	10 25 31
10 29 00	J1722+6105	15 34 59	73.5	50.5	-1.8		-106.7	-17	19776	No stop
10 30 30	=1722+611	15 36 29	73.7	50.3	-1.8		-107.2	73	19799	10 29 01
10 30 30	J1720+6028	15 36 29	74.1	52.1	-1.7		-106.0	-17	19799	No stop
10 34 00	---	15 40 00	74.5	51.7	-1.7		-107.2	193	19854	10 30 31
10 34 30	J1722+6105	15 40 30	74.1	49.7	-1.7		-108.6	13	19854	10 34 30
10 35 30	=1722+611	15 41 30	74.2	49.6	-1.7		-109.0	60	19869	10 34 31
10 35 30	J1720+6028	15 41 30	74.7	51.5	-1.6		-107.7	-17	19869	No stop
10 39 00	---	15 45 00	75.1	50.9	-1.6		-109.0	193	19923	10 35 31
10 39 00	J1722+6105	15 45 00	74.6	49.1	-1.6		-110.3	-17	19923	No stop
10 40 30	=1722+611	15 46 31	74.8	48.8	-1.6		-110.8	73	19946	10 39 01
10 40 30	J1720+6028	15 46 31	75.3	50.7	-1.6		-109.6	-17	19946	No stop
10 44 00	---	15 50 01	75.7	50.1	-1.5		-110.9	193	20000	10 40 31
10 44 30	J1722+6105	15 50 31	75.3	48.1	-1.5		-112.4	13	20000	10 44 30
10 45 30	=1722+611	15 51 31	75.4	47.9	-1.5		-112.8	60	20016	10 44 31
10 45 30	J1720+6028	15 51 31	75.9	49.8	-1.5		-111.5	-17	20016	No stop
10 49 00	---	15 55 02	76.3	49.1	-1.4		-112.9	193	20070	10 45 31
10 49 00	J1722+6105	15 55 02	75.8	47.3	-1.5		-114.2	-17	20070	No stop
10 51 00	=1722+611	15 57 02	76.0	46.9	-1.4		-115.0	103	20101	10 49 01
10 54 00	J1734+3857	16 00 03	68.5	121.5	-1.6		-41.2	16	20101	10 54 00
11 00 00	=1732+389	16 06 04	69.2	123.9	-1.5		-39.8	360	20194	10 54 01
---------- TEST ----------										
11 10 00	J1734+3857	16 16 06	70.4	128.4	-1.3		-37.3	592	20194	11 10 00
11 15 00	=1732+389	16 21 06	71.0	130.7	-1.2		-35.8	300	20271	11 10 01
11 17 00	J1734+3857	16 23 07	71.2	131.7	-1.2		-35.2	113	20271	11 17 00
11 30 00	=1732+389	16 36 09	72.6	138.6	-1.0		-30.7	780	20472	11 17 01
11 32 00	J1734+3857	16 38 09	72.8	139.7	-0.9		-29.9	112	20472	11 32 00
11 45 00	=1732+389	16 51 11	74.0	147.6	-0.7		-24.4	780	20673	11 32 01

```
Schedule for TORUN     (Code Tr )                                  Page  26
               e-EVN: EY037, EG102L
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes recorded to this point.
  TPStart:  Recording start time.  Frequencies are LO sum (band edge).
  SYNC: Time correlator is expected to sync up.
-----------------------------------------------------------------------------------------
Start UT  Source               Start / Stop                 Early    Disk   TPStart
Stop UT                  LST      EL    AZ   HA  UP   ParA  Dwell   GBytes    SYNC
-----------------------------------------------------------------------------------------

 --- Wed  18 Nov 2020   Day 323 ---

11 47 00  J1734+3857   16 53 12  74.1 148.9 -0.7     -23.5   112    20673   11 47 00
12 00 00  =1732+389    17 06 14  75.0 157.9 -0.5     -16.9   780    20874   11 47 01

12 02 00  J1734+3857   17 08 14  75.1 159.3 -0.4     -15.8   112    20874   12 02 00
12 15 00  =1732+389    17 21 16  75.7 169.2 -0.2      -8.3   780    21075   12 02 01

12 17 00  J1734+3857   17 23 17  75.7 170.7 -0.2      -7.1   112    21075   12 17 00
12 30 00  =1732+389    17 36 19  75.9 181.0  0.0       0.8   780    21276   12 17 01

12 32 00  J1734+3857   17 38 19  75.8 182.6  0.1       2.0   112    21276   12 32 00
12 45 00  =1732+389    17 51 21  75.6 192.9  0.3       9.9   780    21477   12 32 01

12 47 00  J1734+3857   17 53 21  75.5 194.4  0.3      11.1   112    21477   12 47 00
13 00 00  =1732+389    18 06 24  74.9 204.0  0.5      18.3   780    21678   12 47 01

13 02 00  J1734+3857   18 08 24  74.7 205.4  0.6      19.3   112    21678   13 02 00
13 15 00  =1732+389    18 21 26  73.8 214.0  0.8      25.6   780    21879   13 02 01

13 17 00  J1734+3857   18 23 26  73.6 215.3  0.8      26.5   112    21879   13 17 00
13 30 00  =1732+389    18 36 29  72.4 222.9  1.0      31.7   780    22080   13 17 01

13 32 00  J1734+3857   18 38 29  72.2 223.9  1.1      32.4   112    22080   13 32 00
13 45 00  =1732+389    18 51 31  70.7 230.5  1.3      36.6   780    22281   13 32 01

13 47 00  J1734+3857   18 53 31  70.5 231.5  1.3      37.1   113    22281   13 47 00
14 00 00  =1732+389    19 06 33  68.9 237.1  1.5      40.4   780    22481   13 47 01



SETUP FILE INFORMATION:
   NOTE: If DOPPLER, FREQ, or BW were used, see the individual scans for the final BBC settings.


 ======== Setup file: sess320.C2048e

   Setup group:    7         Station: TORUN            Total bit rate:  2048
   Format: VDIF              Bits per sample: 2        Sample rate: 64.000
   Number of channels: 16    DBE type: DBBC_DDC        Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
            4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00   4200.00
  Net SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF SB =         U         U         U         U         U         U         U         U
                  U         U         U         U         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
  BBC   =         1         9         1         9         2        10         2        10
                  3        11         3        11         4        12         4        12
  BBC SB=         L         L         U         U         L         L         U         U
                  L         L         U         U         L         L         U         U
  IF    =        A1        B1        A1        B1        A1        B1        A1        B1
                 A1        B1        A1        B1        A1        B1        A1        B1

 The following frequency sets based on these setups were used.

  Frequency Set:   7  Setup file default.  Used with PCAL = off
  LO sum=   4830.49  4830.49  4830.49  4830.49  4894.49  4894.49  4894.49  4894.49
            4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
  BBC fr=    630.49   630.49   630.49   630.49   694.49   694.49   694.49   694.49
             758.49   758.49   758.49   758.49   822.49   822.49   822.49   822.49
  Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
              32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

  Source                        Source position (RA/Dec)                        Error
                       (B1950)            (J2000)            (Date)            (mas)

* IZW1              00 50 57.804411   * 00 53 34.934000     00 54 40.426847       0.00
                    12 25 19.79278    * 12 41 35.92500      12 48 23.54772        0.00

* J0056+1341        00 53 37.228419   * 00 56 14.816000     00 57 20.516024       0.00
                    13 25 02.32515    * 13 41 15.75500      13 48 02.42707        0.00

* J1434+1628        14 31 51.606500   * 14 34 13.057000     14 35 09.776194       0.00
                    16 41 59.50095    * 16 28 52.73000      16 23 33.52296        0.00

* J1428+1628        14 25 49.519741   * 14 28 11.383700     14 29 08.284234       0.00
                    16 42 14.69813    * 16 28 51.87200      16 23 25.90449        0.00

* J1720+6028        17 19 29.636053   * 17 20 07.182400     17 20 20.095938       0.00
                    60 31 18.72101    * 60 28 23.99200      60 27 20.63965        0.00

* 0059+581          00 59 43.470969   * 01 02 45.762377     01 04 02.816853       0.00
  J0102+5824        58 08 04.84743    * 58 24 11.13658      58 31 00.99506        0.00
  J0102+58          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                    GSFC 2016a X/S astro solution, 399648 observations.

* 4C39.25           09 23 55.319216   * 09 27 03.013937     09 28 20.019342       0.31
  J0927+3902        39 15 23.56644    * 39 02 20.85185      38 56 48.87279        0.16
  0923+392          /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0927+39          GSFC 2016a X/S astro solution, 250526 observations.
```

```
  OK290            09 53 59.738482   * 09 56 49.875376     09 57 59.533769       0.41
* J0956+2515       25 29 33.58581    * 25 15 16.04991      25 09 18.49789        0.37
  0953+254         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J0956+25         GSFC 2016a X/S astro solution,  26975 observations.

  1427+109         14 27 43.700718   * 14 30 09.738797     14 31 08.386222       0.06
* J1430+1043       10 56 44.61950    * 10 43 26.86236      10 38 03.90568        0.12
  J1430+10         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    179 observations.

  1722+611         17 22 05.759505   * 17 22 40.059355     17 22 51.601271       0.22
* J1722+6105       61 08 43.42150    * 61 05 59.78739      61 05 01.09657        0.15
                   /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,    116 observations.

  1732+389         17 32 40.487474   * 17 34 20.578540     17 35 00.069392       0.01
* J1734+3857       38 59 46.93242    * 38 57 51.44310      38 57 13.96747        0.01
  J1734+38         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,   7213 observations.

  1749+096         17 49 10.387930   * 17 51 32.818574     17 52 30.052329       0.00
* J1751+0939       09 39 42.82586    * 09 39 00.72841      09 38 51.48040        0.00
  J1751+09         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution, 192391 observations.

  2029+121         20 29 32.681260   * 20 31 54.994267     20 32 52.856562       0.01
* J2031+1219       12 09 28.75299    * 12 19 41.34015      12 24 02.66290        0.02
  J2031+12         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution,   4314 observations.

  2145+067         21 45 36.078473   * 21 48 05.458671     21 49 06.672816       0.26
* J2148+0657       06 43 40.90456    * 06 57 38.60416      07 03 30.39619        0.25
  J2148+06         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
                   GSFC 2016a X/S astro solution, 110505 observations.

* 3C454.3          22 51 29.519739   * 22 53 57.747939     22 54 58.928031       0.65
  J2253+1608       15 52 54.34808    * 16 08 53.56091      16 15 37.53412        0.73
  2251+158         /home/guest/rmc/SCHED/sched11.6/catalogs/sources.gsfc
  J2253+16         GSFC 2016a X/S astro solution,  41272 observations.
```

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