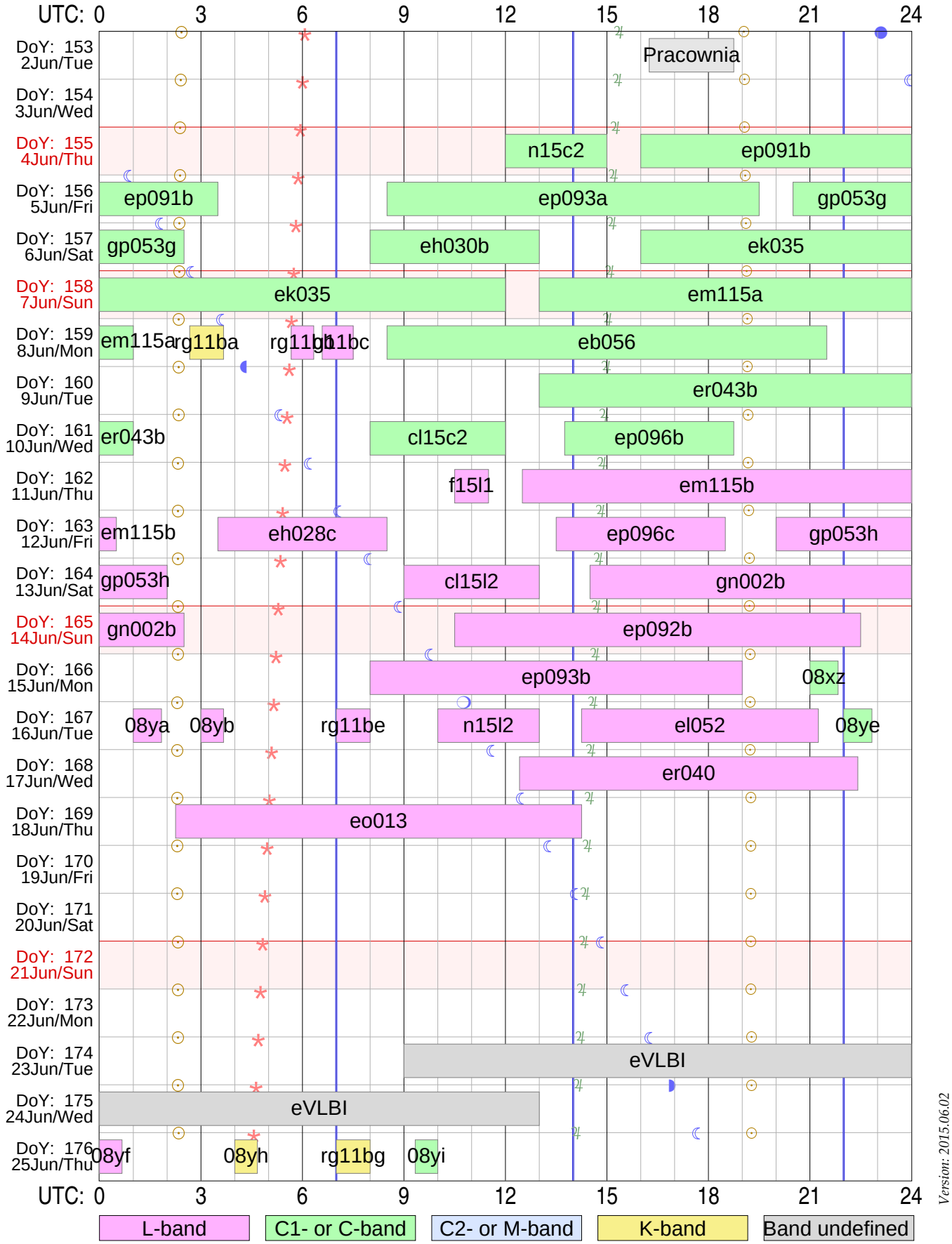
Tr VLBI plan for Jun 2015



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: 240.3 hours in 37 experiments scheduled

Initial characters 'rk' are omitted from RA experiment names!

Version: 2015.06.02

Strona zostawiona celowo pusta

RadioAstron & EVN Experiments

Jun 2015

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`

```
DoY  D  M WD UT_Start UT_Stop Experiment    Band    Correlator
               h  m   h  m   name

155  4 06 Czw  12 00  15 00  n15c2    "C"   1 -- E66 0.69
155  4 06 Czw  16 00  24 00  ep091b   "C"
156  5 06 Pia   0 00   3 30  ep091b   "C"   2 -- E90 5.30
156  5 06 Pia   8 30  19 30  ep093a   "C"   3 -- E91 5.07
156  5 06 Pia  20 30  24 00  gp053g   "C"
157  6 06 Sob   0 00   2 30  gp053g   "C"   4 -- E40 2.76
157  6 06 Sob   8 00  13 00  eh030b   "C"   5 -- E30 2.30
157  6 06 Sob  16 00  24 00  ek035    "C"
158  7 06 Nie   0 00  12 00  ek035    "C"   6 -- E86 9.22
158  7 06 Nie  13 00  24 00  em115a   "C"
159  8 06 Pon   0 00   1 00  em115a   "C"   7 -- E60 5.30
159  8 06 Pon   2 40   3 40  rg11ba "K        "
159  8 06 Pon   5 40   6 20  rg11bb "L        "
159  8 06 Pon   6 35   7 30  rg11bc "L        "
159  8 06 Pon   8 30  21 30  eb056    "C"   8 -- E79 5.99
160  9 06 Wto  13 00  24 00  er043b   "C"
161 10 06 Sro   0 00   1 00  er043b   "C"   9 -- E02 2.76
161 10 06 Sro   8 00  12 00  cl15c2   "C"  10 -- E00 0.00
161 10 06 Sro  13 45  18 45  ep096b   "C"  11 -- E90 2.30
162 11 06 Czw  10 30  11 30  f15l1    "L"  12 -- E45 0.23
162 11 06 Czw  12 30  24 00  em115b   "L"
163 12 06 Pia   0 00   0 30  em115b   "L"  13 -- E30 5.30
163 12 06 Pia   3 30   8 30  eh028c   "L"  14 -- E19 0.29
163 12 06 Pia  13 30  18 30  ep096c   "L"  15 -- E60 2.30
163 12 06 Pia  20 00  24 00  gp053h   "L"
164 13 06 Sob   0 00   2 00  gp053h   "L"  16 -- E64 2.76
164 13 06 Sob   9 00  13 00  cl15l2   "L"  17 -- E00 0.00
164 13 06 Sob  14 30  24 00  gn002b   "L"
165 14 06 Nie   0 00   2 30  gn002b   "L"  18 -- E64 5.53
165 14 06 Nie  10 30  22 30  ep092b   "L"  19 -- E36 5.53
166 15 06 Pon   8 00  19 00  ep093b   "L"  20 -- E84 5.07
166 15 06 Pon  21 00  21 50  rk08xz "C        "
167 16 06 Wto   1 00   1 50  rk08ya "L        "
167 16 06 Wto   3 00   3 40  rk08yb "L        "
167 16 06 Wto   7 00   8 00  rg11be "L        "
167 16 06 Wto  10 00  13 00  n15l2    "L"  21 -- E35 0.69
167 16 06 Wto  14 15  21 15  el052    "L"  22 -- E99 3.23
167 16 06 Wto  22 00  22 50  rk08ye "C        "
```

```
168 17 06 Sro  12 25  22 25  er040    "L"  23 -- E32 4.61
169 18 06 Czw   2 15  14 15  eo013    "L"  24 -- E83 5.53
176 25 06 Czw   0 00   0 40  rk08yf "L        "
176 25 06 Czw   4 00   4 40  rk08yh "K        "
176 25 06 Czw   7 00   8 00  rg11bg "K        "
176 25 06 Czw   9 20  10 00  rk08yi "C        "


 Total observing time: 212.3 hours in 36 experiments scheduled
```

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

`http://paulo.astro.uni.torun.pl/~pw/VLBI/schedules/jun15.pdf`

n15c2tr

Network Monitoring Experiment

PI: *Minnie Mao*


```
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```


```
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   4 Jun 2015   Day 155 ---

 Next scan frequencies:  4966.49  4966.49  4966.49  4966.49  4982.49  4982.49  4982.49  4982.49
                         4998.49  4998.49  4998.49  4998.49  5014.49  5014.49  5014.49  5014.49
 Next BBC frequencies:    766.49   766.49   766.49   766.49   782.49   782.49   782.49   782.49
                          798.49   798.49   798.49   798.49   814.49   814.49   814.49   814.49
 Next scan bandwidths:      8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
                            8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00

12 00 00  J0126+2559   06 04 42  32.8 270.7  4.6      41.9     0        0   12 00 00
12 04 00  =0123+257    06 08 43  32.2 271.5  4.7      41.9   240       15   12 00 01

12 06 00  J0126+2559   06 10 43  31.9 271.9  4.7      41.9   114       15   12 06 00
12 10 00  =0123+257    06 14 44  31.3 272.6  4.8      41.9   240       31   12 06 01

12 12 00  J0126+2559   06 16 44  31.0 273.0  4.8      41.9   114       31   12 12 00
12 16 00  =0123+257    06 20 45  30.4 273.8  4.9      41.8   240       46   12 12 01

12 18 00  J0126+2559   06 22 45  30.1 274.2  4.9      41.8   114       46   12 18 00
12 32 00  =0123+257    06 36 48  28.0 276.9  5.2      41.6   840      100   12 18 01

12 34 00  J0126+2559   06 38 48  27.7 277.3  5.2      41.5   114      100   12 34 00
12 48 00  =0123+257    06 52 50  25.6 279.9  5.4      41.2   840      154   12 34 01

12 50 00  J0126+2559   06 54 51  25.3 280.3  5.5      41.1   114      154   12 50 00
13 04 00  =0123+257    07 08 53  23.3 282.9  5.7      40.7   840      208   12 50 01

13 06 00  J0126+2559   07 10 53  23.0 283.3  5.7      40.6   114      208   13 06 00
13 10 00  =0123+257    07 14 54  22.4 284.0  5.8      40.4   240      223   13 06 01

13 12 00  J0126+2559   07 16 54  22.1 284.4  5.8      40.3   114      223   13 12 00
13 16 00  =0123+257    07 20 55  21.5 285.1  5.9      40.2   240      238   13 12 01

13 18 00  J0126+2559   07 22 55  21.2 285.5  5.9      40.1   114      238   13 18 00
13 22 00  =0123+257    07 26 56  20.7 286.2  6.0      39.9   240      254   13 18 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 Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 4 Jun 2015 Day 155 ---										
13 34 00	J1051+2119	07 38 58	41.4	111.7	-3.2		-36.8	353	254	13 34 00
13 38 00	=1049+215	07 42 58	42.0	112.7	-3.2		-36.5	240	269	13 34 01
13 40 00	J1051+2119	07 44 59	42.2	113.2	-3.1		-36.3	114	269	13 40 00
13 44 00	=1049+215	07 48 59	42.8	114.2	-3.1		-36.0	240	285	13 40 01
13 46 00	J1051+2119	07 51 00	43.1	114.7	-3.0		-35.8	114	285	13 46 00
13 50 00	=1049+215	07 55 00	43.6	115.8	-3.0		-35.5	240	300	13 46 01
13 52 00	J1051+2119	07 57 01	43.9	116.3	-2.9		-35.3	113	300	13 52 00
14 06 00	=1049+215	08 11 03	45.7	120.1	-2.7		-33.9	840	354	13 52 01
14 08 00	J1051+2119	08 13 03	46.0	120.6	-2.7		-33.7	113	354	14 08 00
14 22 00	=1049+215	08 27 06	47.8	124.7	-2.4		-32.0	840	408	14 08 01
14 24 00	J1051+2119	08 29 06	48.0	125.3	-2.4		-31.7	113	408	14 24 00
14 38 00	=1049+215	08 43 08	49.7	129.5	-2.2		-29.8	840	462	14 24 01
14 40 00	J1051+2119	08 45 09	49.9	130.2	-2.1		-29.5	113	462	14 40 00
14 44 00	=1049+215	08 49 09	50.4	131.4	-2.1		-28.9	240	477	14 40 01
14 46 00	J1051+2119	08 51 10	50.6	132.1	-2.0		-28.6	113	477	14 46 00
14 50 00	=1049+215	08 55 10	51.0	133.4	-2.0		-27.9	240	492	14 46 01
14 52 00	J1051+2119	08 57 11	51.3	134.0	-1.9		-27.6	113	492	14 52 00
15 00 00	=1049+215	09 05 12	52.1	136.7	-1.8		-26.2	480	523	14 52 01

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

======== Setup file: sess215.C512

Setup group: 11 Station: TORUN Total bit rate: 512
Format: MARK5B Bits per sample: 2 Sample rate: 16.000
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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   4966.49  4966.49  4966.49  4966.49  4982.49  4982.49  4982.49  4982.49
            4998.49  4998.49  4998.49  4998.49  5014.49  5014.49  5014.49  5014.49
  BBC fr=    766.49   766.49   766.49   766.49   782.49   782.49   782.49   782.49
             798.49   798.49   798.49   798.49   814.49   814.49   814.49   814.49
  Bandwd=      8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
               8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
   Matching frequency sets:   7

  Track assignments are:
   track1=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* J0126+2559        01 23 57.254021   * 01 26 42.792640     01 27 33.431173       0.11
  0123+257          25 43 27.95555    * 25 59 01.30009      26 03 36.08092        0.11
  J0126+25          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 1729 observations

* J1051+2119        10 49 07.187573   * 10 51 48.789073     10 52 38.366574       0.11
  1049+215          21 35 48.53736    * 21 19 52.31374      21 14 58.36810        0.11
  J1051+21          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 1666 observations
```

ep091btr

Snapshot observations of high Rotation Measure (RM) sources

PI: *A. Pasetto*


```
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```


```
Observing mode: Snapshot observations of sources at 6cm (256 Mb/s)

Schedule for TORUN     (Code Tr )                                    Page   2
               Snapshot observations of high Rotation Measure (RM) 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   4 Jun 2015   Day 155 ---

 Next scan frequencies:  4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
                         5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
 Next BBC frequencies:    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
                          806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
 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

16 00 00  0845+04      10 05 22  38.8 205.7  1.3      15.2     0        0   16 00 00
16 05 00  ---          10 10 23  38.5 207.3  1.4      16.0   300       38   16 00 01

16 05 10  0845+04      10 10 33  38.5 207.3  1.4      16.0     4       38   16 05 10
16 10 10  ---          10 15 33  38.1 208.8  1.5      16.9   300       77   16 05 11

16 10 20  0845+04      10 15 43  38.1 208.9  1.5      16.9     4       77   16 10 20
16 20 20  ---          10 25 45  37.4 211.9  1.7      18.6   600      154   16 10 21

16 22 50  1048+01      10 28 15  38.3 173.3 -0.3      -4.0    57      154   16 22 50
16 32 50  ---          10 38 17  38.5 176.5 -0.2      -2.1   600      231   16 22 51

16 35 20  0845+04      10 40 48  36.1 216.3  1.9      20.9    56      231   16 35 20
16 45 20  ---          10 50 49  35.2 219.2  2.1      22.4   600      308   16 35 21

16 47 50  1311+14      10 53 20  42.5 131.7 -2.3     -27.6   -40      308   16 47 50
16 57 50  ---          11 03 21  43.6 134.6 -2.1     -26.2   560      385   16 47 51

16 59 40  3C286        11 05 12  55.1 115.8 -2.4     -38.8    53      385   16 59 40
17 00 40  ---          11 06 12  55.3 116.1 -2.4     -38.7    60      392   16 59 41

17 00 50  3C286        11 06 22  55.3 116.1 -2.4     -38.7     4      392   17 00 50
17 01 50  ---          11 07 22  55.4 116.4 -2.4     -38.6    60      400   17 00 51
```

Schedule for TORUN (Code Tr) Page 3

Snapshot observations of high Rotation Measure (RM) 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 4 Jun 2015 Day 155 ---										
17 03 40	J1407+2827	11 09 12	49.1	109.2	-3.0		-40.1	72	400	17 03 40
17 04 40	=OQ208	11 10 12	49.3	109.5	-3.0		-40.1	60	408	17 03 41
17 04 50	J1407+2827	11 10 22	49.3	109.5	-3.0		-40.0	4	408	17 04 50
17 05 50	=OQ208	11 11 23	49.4	109.8	-2.9		-40.0	60	415	17 04 51
17 09 50	0845+04	11 15 23	32.7	225.9	2.5		25.6	-7	415	17 09 50
17 19 50	---	11 25 25	31.6	228.5	2.7		26.8	593	492	17 09 51
17 22 20	1048+01	11 27 55	37.9	192.3	0.6		7.4	62	492	17 22 20
17 32 20	---	11 37 57	37.5	195.4	0.8		9.2	600	569	17 22 21
17 34 50	0845+04	11 40 27	29.8	232.4	2.9		28.5	62	569	17 34 50
17 44 50	---	11 50 29	28.6	234.9	3.1		29.5	600	646	17 34 51
17 47 20	1048+01	11 52 59	36.8	200.1	1.1		11.9	65	646	17 47 20
17 57 20	---	12 03 01	36.3	203.1	1.2		13.6	600	723	17 47 21
17 59 50	0845+04	12 05 31	26.7	238.6	3.3		30.9	65	723	17 59 50
18 09 50	---	12 15 33	25.4	240.9	3.5		31.8	600	800	17 59 51
18 12 20	1246-07	12 18 03	29.0	171.8	-0.5		-4.9	-3	800	18 12 20
18 17 20	---	12 23 04	29.1	173.2	-0.4		-4.1	297	838	18 12 21
18 21 10	3C286	12 26 55	64.4	146.0	-1.1		-22.9	84	838	18 21 10
18 22 10	---	12 27 55	64.5	146.5	-1.1		-22.6	60	846	18 21 11
18 22 20	3C286	12 28 05	64.5	146.6	-1.1		-22.6	4	846	18 22 20
18 23 20	---	12 29 05	64.6	147.0	-1.0		-22.3	60	854	18 22 21
18 25 40	J1333+2725	12 31 26	61.8	149.7	-1.0		-20.0	115	854	18 25 40
18 26 40	=1330+276	12 32 26	61.8	150.1	-1.0		-19.7	60	862	18 25 41
18 26 50	J1333+2725	12 32 36	61.9	150.2	-1.0		-19.6	4	862	18 26 50
18 27 50	=1330+276	12 33 36	61.9	150.6	-1.0		-19.4	60	869	18 26 51
18 30 10	J1407+2827	12 35 56	60.1	136.6	-1.5		-28.0	96	869	18 30 10
18 31 10	=OQ208	12 36 57	60.2	137.0	-1.5		-27.8	60	877	18 30 11
18 31 20	J1407+2827	12 37 07	60.2	137.0	-1.5		-27.7	4	877	18 31 20
18 32 20	=OQ208	12 38 07	60.3	137.4	-1.5		-27.5	60	885	18 31 21
18 35 20	1246-07	12 41 07	29.3	178.4	-0.1		-1.0	50	885	18 35 20
18 40 20	---	12 46 08	29.3	179.8	-0.0		-0.1	300	923	18 35 21
18 42 50	1048+01	12 48 38	32.9	216.4	2.0		20.9	62	923	18 42 50
18 52 50	---	12 58 40	32.0	219.1	2.2		22.3	600	1000	18 42 51

Schedule for TORUN (Code Tr) Page 4

Snapshot observations of high Rotation Measure (RM) 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 4 Jun 2015 Day 155 ---										
18 55 10	1246-07	13 01 01	29.2	184.0	0.2		2.4	54	1000	18 55 10
19 02 10	---	13 08 02	29.1	186.0	0.4		3.6	420	1054	18 55 11
19 02 20	1246-07	13 08 12	29.1	186.0	0.4		3.7	4	1054	19 02 20
19 08 20	---	13 14 13	29.0	187.8	0.5		4.7	360	1100	19 02 21
19 10 50	1311+14	13 16 43	51.1	181.9	0.1		1.2	53	1100	19 10 50
19 20 50	---	13 26 45	51.0	185.7	0.2		3.5	600	1177	19 10 51
19 23 20	1048+01	13 29 15	28.8	227.2	2.7		26.2	53	1177	19 23 20
19 33 20	---	13 39 17	27.7	229.7	2.8		27.3	600	1254	19 23 21
19 35 40	1246-07	13 41 37	28.2	195.4	0.9		9.3	56	1254	19 35 40
19 42 40	---	13 48 38	27.9	197.4	1.0		10.4	420	1308	19 35 41
19 42 50	1246-07	13 48 48	27.9	197.4	1.0		10.4	4	1308	19 42 50
19 48 50	---	13 54 49	27.6	199.1	1.1		11.4	360	1354	19 42 51
19 51 20	1311+14	13 57 20	50.1	197.3	0.8		10.6	52	1354	19 51 20
20 01 20	---	14 07 21	49.6	201.0	0.9		12.8	600	1431	19 51 21
20 03 10	1246-07	14 09 12	26.8	203.0	1.4		13.7	11	1431	20 03 10
20 13 10	---	14 19 13	26.2	205.7	1.5		15.2	600	1508	20 03 11
20 13 20	1246-07	14 19 23	26.2	205.7	1.5		15.2	4	1508	20 13 20
20 18 20	---	14 24 24	25.9	207.0	1.6		16.0	300	1546	20 13 21
20 20 50	1048+01	14 26 55	21.8	241.1	3.6		31.7	67	1546	20 20 50
20 30 50	---	14 36 56	20.5	243.4	3.8		32.5	600	1623	20 20 51
20 33 20	1311+14	14 39 27	47.4	212.3	1.5		19.3	35	1623	20 33 20
20 43 20	---	14 49 28	46.6	215.6	1.6		21.2	600	1700	20 33 21
20 45 10	1246-07	14 51 19	23.8	214.0	2.1		19.8	11	1700	20 45 10
20 55 10	---	15 01 20	23.0	216.6	2.2		21.2	600	1777	20 45 11
20 55 20	1246-07	15 01 30	22.9	216.6	2.2		21.2	4	1777	20 55 20
21 00 20	---	15 06 31	22.5	217.9	2.3		21.8	300	1815	20 55 21
21 02 50	1311+14	15 09 01	44.8	221.9	2.0		24.4	52	1815	21 02 50
21 12 50	---	15 19 03	43.7	225.0	2.1		26.0	600	1892	21 02 51
21 15 20	1405+04	15 21 34	38.7	204.5	1.3		14.5	93	1892	21 15 20
21 25 20	---	15 31 35	38.0	207.6	1.4		16.2	600	1969	21 15 21
21 27 50	1311+14	15 34 06	42.1	229.4	2.4		28.1	92	1969	21 27 50
21 37 50	---	15 44 07	40.9	232.2	2.5		29.3	600	2046	21 27 51

Schedule for TORUN (Code Tr) Page 5

Snapshot observations of high Rotation Measure (RM) 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
--- Thu 4 Jun 2015 Day 155 ---										
21 40 20	1405+04	15 46 38	36.9	212.1	1.7		18.6	94	2046	21 40 20
21 50 20	---	15 56 39	36.1	215.0	1.8		20.2	600	2123	21 40 21
21 52 50	1311+14	15 59 10	39.1	236.3	2.8		31.0	93	2123	21 52 50
22 02 50	---	16 09 11	37.8	239.0	3.0		32.1	600	2200	21 52 51
22 04 50	1405+04	16 11 12	34.7	219.1	2.1		22.3	65	2200	22 04 50
22 09 50	---	16 16 12	34.3	220.5	2.2		23.0	300	2238	22 04 51
22 12 10	1616+04	16 18 33	41.9	180.4	0.0		0.2	44	2238	22 12 10
22 22 10	---	16 28 35	41.8	183.7	0.2		2.2	600	2315	22 12 11
22 22 20	1616+04	16 28 45	41.8	183.8	0.2		2.3	4	2315	22 22 20
22 27 20	---	16 33 45	41.7	185.5	0.3		3.3	300	2354	22 22 21
22 29 50	1311+14	16 36 16	34.2	245.8	3.4		34.4	15	2354	22 29 50
22 39 50	---	16 46 17	32.8	248.2	3.6		35.1	600	2431	22 29 51
22 41 50	1405+04	16 48 18	30.9	229.1	2.7		27.1	66	2431	22 41 50
22 51 50	---	16 58 19	29.7	231.7	2.9		28.2	600	2508	22 41 51
22 53 40	1616+04	17 00 10	41.1	194.2	0.7		8.5	20	2508	22 53 40
22 59 40	---	17 06 11	40.8	196.1	0.8		9.6	360	2554	22 53 41
22 59 50	1616+04	17 06 21	40.8	196.2	0.8		9.7	4	2554	22 59 50
23 05 50	---	17 12 22	40.6	198.1	0.9		10.8	360	2600	22 59 51
23 08 20	1405+04	17 14 52	27.7	235.8	3.2		29.9	60	2600	23 08 20
23 18 20	---	17 24 54	26.4	238.2	3.3		30.8	600	2677	23 08 21
23 20 50	1616+04	17 27 24	39.8	202.9	1.2		13.6	64	2677	23 20 50
23 30 50	---	17 37 26	39.1	206.1	1.3		15.4	600	2754	23 20 51
23 33 20	1405+04	17 39 56	24.5	241.8	3.6		32.0	64	2754	23 33 20
23 43 20	---	17 49 58	23.1	244.1	3.7		32.8	600	2831	23 33 21
23 45 50	1616+04	17 52 28	38.1	210.7	1.6		17.9	67	2831	23 45 50
23 55 50	---	18 02 30	37.3	213.6	1.8		19.5	600	2908	23 45 51
--- Start: Thu 4 Jun 2015 Day 155 -- Stop: Fri 5 Jun 2015 Day 156 ---										
23 58 20	1405+04	18 05 00	21.1	247.5	4.0		33.8	68	2908	23 58 20
00 08 20	---	18 15 02	19.7	249.7	4.2		34.4	600	2985	23 58 21
00 10 50	1616+04	18 17 32	35.9	218.0	2.0		21.8	71	2985	00 10 50
00 20 50	---	18 27 34	35.0	220.8	2.2		23.2	600	3062	00 10 51

Schedule for TORUN (Code Tr) Page 6

Snapshot observations of high Rotation Measure (RM) 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 5 Jun 2015 Day 156 ---										
00 23 20	1405+04	18 30 04	17.5	252.9	4.4		35.1	71	3062	00 23 20
00 28 20	---	18 35 05	16.8	254.0	4.5		35.4	300	3100	00 23 21
00 30 40	1616+04	18 37 26	34.0	223.6	2.3		24.5	61	3100	00 30 40
00 40 40	---	18 47 27	32.9	226.3	2.5		25.8	600	3177	00 30 41
00 40 50	1616+04	18 47 37	32.9	226.3	2.5		25.8	4	3177	00 40 50
00 45 50	---	18 52 38	32.4	227.7	2.6		26.5	300	3215	00 40 51
00 52 10	J2145+1115	18 58 59	36.6	125.6	-2.8		-29.9	159	3215	00 52 10
00 53 10	=2142+110	18 59 59	36.7	125.8	-2.8		-29.8	60	3223	00 52 11
00 53 20	J2145+1115	19 00 09	36.7	125.9	-2.8		-29.8	4	3223	00 53 20
00 54 20	=2142+110	19 01 10	36.9	126.1	-2.7		-29.6	60	3231	00 53 21
00 56 50	2147+09	19 03 40	35.4	127.4	-2.7		-28.9	130	3231	00 56 50
01 06 50	---	19 13 42	36.6	130.1	-2.6		-27.8	600	3308	00 56 51
01 09 20	2245+03	19 16 12	24.4	119.6	-3.5		-31.6	90	3308	01 09 20
01 19 20	---	19 26 14	25.7	121.9	-3.3		-30.7	600	3385	01 09 21
01 21 50	2147+09	19 28 44	38.3	134.2	-2.3		-25.9	90	3385	01 21 50
01 31 50	---	19 38 46	39.3	137.1	-2.2		-24.5	600	3462	01 21 51
01 34 20	2245+03	19 41 16	27.6	125.6	-3.1		-29.3	91	3462	01 34 20
01 44 20	---	19 51 18	28.8	128.1	-2.9		-28.3	600	3538	01 34 21
01 46 50	2147+09	19 53 48	40.8	141.5	-1.9		-22.3	92	3538	01 46 50
01 56 50	---	20 03 50	41.7	144.6	-1.7		-20.7	600	3615	01 46 51
01 59 20	2245+03	20 06 20	30.5	131.9	-2.7		-26.6	94	3615	01 59 20
02 09 20	---	20 16 22	31.6	134.5	-2.5		-25.4	600	3692	01 59 21
02 11 50	2147+09	20 18 52	42.9	149.3	-1.5		-18.1	94	3692	02 11 50
02 21 50	---	20 28 54	43.6	152.6	-1.3		-16.3	600	3769	02 11 51
02 24 20	2245+03	20 31 24	33.2	138.6	-2.2		-23.5	96	3769	02 24 20
02 34 20	---	20 41 26	34.1	141.3	-2.1		-22.1	600	3846	02 24 21
02 36 50	2147+09	20 43 56	44.6	157.6	-1.1		-13.4	97	3846	02 36 50
02 46 50	---	20 53 58	45.1	161.0	-0.9		-11.5	600	3923	02 36 51
02 49 20	2245+03	20 56 28	35.5	145.6	-1.8		-19.9	99	3923	02 49 20
02 59 20	---	21 06 30	36.3	148.5	-1.7		-18.3	600	4000	02 49 21
03 01 50	2147+09	21 09 00	45.8	166.2	-0.6		-8.4	101	4000	03 01 50
03 11 50	---	21 19 02	46.1	169.7	-0.5		-6.3	600	4077	03 01 51
03 14 10	2245+03	21 21 22	37.4	152.9	-1.4		-15.9	91	4077	03 14 10
03 24 10	---	21 31 24	38.0	156.0	-1.2		-14.2	600	4154	03 14 11

```
Schedule for TORUN     (Code Tr )                                  Page   7
              Snapshot observations of high Rotation Measure (RM) 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   5 Jun 2015   Day 156 ---

03 24 20  2245+03      21 31 34  38.1 156.1 -1.2     -14.1     4     4154   03 24 20
03 29 20  ---          21 36 35  38.4 157.6 -1.2     -13.3   300     4192   03 24 21


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


 ======== Setup file: evn_pol.6cm

   Setup group:   10         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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=   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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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=   4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
             5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
   BBC fr=    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
              806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
   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=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
    barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* 0845+04	08 42 39.211651	* 08 45 17.151000	08 46 05.149965	0.00
	04 50 43.96264	* 04 39 46.64900	04 36 13.48645	0.00
* 1048+01	10 45 48.428835	* 10 48 22.850000	10 49 10.472164	0.00
	01 57 39.27331	* 01 41 47.46100	01 36 47.91161	0.00
* 1246-07	12 43 28.786835	* 12 46 04.231000	12 46 52.993546	0.00
	-07 14 23.54972	*-07 30 46.63100	-07 35 52.60486	0.00
* 1311+14	13 08 39.228589	* 13 11 07.835000	13 11 54.337278	0.00
	14 33 42.46904	* 14 17 46.69100	14 12 56.88165	0.00
* 1405+04	14 02 29.970657	* 14 05 01.113000	14 05 48.768084	0.00
	04 29 55.35285	* 04 15 35.87000	04 11 15.23371	0.00
* 1616+04	16 14 09.049716	* 16 16 37.530000	16 17 24.718654	0.00
	05 06 53.62193	* 04 59 31.96000	04 57 24.27440	0.00
* 2147+09	21 44 42.474294	* 21 47 10.162000	21 47 56.280659	0.00
	09 15 51.12554	* 09 29 46.63000	09 34 05.87354	0.00
* 2245+03	22 42 55.747012	* 22 45 28.284000	22 46 15.507447	0.00
	03 08 20.88831	* 03 24 08.71900	03 29 01.88424	0.00
* 3C286	13 28 49.657758	* 13 31 08.288051	13 31 51.687512	0.18
J1331+3030	30 45 58.64059	* 30 30 32.95924	30 25 57.44431	0.17
1328+307	/Applications/SCHED/sched_11.4/catalogs/sources.gsfc			
J1331+30	GSFC 2015a astro solution, unpublished 225 observations.			
1330+276	13 30 47.332192	* 13 33 07.490722	13 33 51.394876	0.14
* J1333+2725	27 40 40.74277	* 27 25 18.38297	27 20 43.15081	0.24
	/Applications/SCHED/sched_11.4/catalogs/sources.gsfc			
	GSFC 2015a astro solution, unpublished 150 observations.			
OQ208	14 04 45.615156	* 14 07 00.394414	14 07 42.830797	0.24
* J1407+2827	28 41 29.23518	* 28 27 14.69022	28 23 01.23035	0.34
1404+286	/Applications/SCHED/sched_11.4/catalogs/sources.gsfc			
J1407+28	GSFC 2015a astro solution, unpublished 67871 observations.			
2142+110	21 42 52.346942	* 21 45 18.775070	21 46 04.537112	0.02
* J2145+1115	11 01 36.29886	* 11 15 27.31235	11 19 44.68614	0.05
	/Applications/SCHED/sched_11.4/catalogs/sources.gsfc			
	GSFC 2015a astro solution, unpublished 1232 observations.			

ep093atr

Flat-spectrum doubles

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```
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```


```
Observing mode: regular EVN continuum

Schedule for TORUN     (Code Tr )                                  Page   2
               Flat-spectrum doubles
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   5 Jun 2015   Day 156 ---

 Next scan frequencies:  4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
                         5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
 Next BBC frequencies:    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
                          806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
 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

08 30 00  3C138        02 38 04  41.6 122.9 -2.7     -31.8     0        0   08 30 00
08 40 00  ---          02 48 06  42.8 125.7 -2.6     -30.6   600       77   08 30 01
        Source only    9.0 degrees from the Sun.

08 41 00  0528+134     02 49 06  39.0 125.3 -2.7     -30.3    32       77   08 41 00
08 45 00  ---          02 53 07  39.5 126.4 -2.6     -29.8   240      108   08 41 01

08 48 00  J0741+3112   02 56 07  35.2  83.4 -4.8     -44.2    78      108   08 48 00
08 49 00  =0738+313    02 57 07  35.4  83.6 -4.8     -44.2    60      115   08 48 01

08 49 00  SDSSJ0741    02 57 07  34.7  84.3 -4.8     -43.8   -14      115   No stop
08 52 30  ---          03 00 38  35.2  84.9 -4.7     -43.8   196      142   08 49 01

08 53 10  J0741+3112   03 01 18  36.0  84.4 -4.7     -44.3    25      142   08 53 10
08 54 00  =0738+313    03 02 08  36.1  84.6 -4.7     -44.3    50      149   08 53 11

08 54 00  SDSSJ0741    03 02 08  35.5  85.2 -4.7     -43.9   -14      149   No stop
08 57 30  ---          03 05 39  36.0  85.9 -4.6     -43.9   196      176   08 54 01

08 57 30  J0741+3112   03 05 39  36.6  85.2 -4.6     -44.4   -15      176   No stop
08 59 00  =0738+313    03 07 09  36.9  85.5 -4.6     -44.4    75      187   08 57 31

08 59 00  SDSSJ0741    03 07 09  36.2  86.2 -4.6     -43.9   -14      187   No stop
09 02 30  ---          03 10 40  36.7  86.9 -4.5     -44.0   196      214   08 59 01
```

Schedule for TORUN (Code Tr) Page 3

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
09 03 10	J0741+3112	03 11 20	37.5	86.3	-4.5		-44.4	25	214	09 03 10
09 04 00	=0738+313	03 12 10	37.6	86.5	-4.5		-44.5	50	221	09 03 11
09 04 00	SDSSJ0741	03 12 10	37.0	87.2	-4.5		-44.0	-14	221	No stop
09 07 30	---	03 15 41	37.5	87.8	-4.4		-44.0	196	247	09 04 01
09 07 30	J0741+3112	03 15 41	38.2	87.1	-4.4		-44.5	-15	247	No stop
09 09 00	=0738+313	03 17 11	38.4	87.4	-4.4		-44.5	75	259	09 07 31
09 09 00	SDSSJ0741	03 17 11	37.7	88.1	-4.4		-44.0	-14	259	No stop
09 12 30	---	03 20 41	38.2	88.8	-4.4		-44.1	196	286	09 09 01
09 13 10	J0741+3112	03 21 21	39.0	88.3	-4.3		-44.5	25	286	09 13 10
09 14 00	=0738+313	03 22 12	39.1	88.4	-4.3		-44.5	50	292	09 13 11
09 14 00	SDSSJ0741	03 22 12	38.5	89.1	-4.3		-44.1	-14	292	No stop
09 17 30	---	03 25 42	39.0	89.8	-4.3		-44.1	196	319	09 14 01
09 17 30	J0741+3112	03 25 42	39.7	89.1	-4.3		-44.6	-15	319	No stop
09 19 00	=0738+313	03 27 12	39.9	89.4	-4.2		-44.6	75	331	09 17 31
09 19 00	SDSSJ0741	03 27 12	39.2	90.1	-4.3		-44.1	-14	331	No stop
09 22 30	---	03 30 43	39.7	90.8	-4.2		-44.1	196	358	09 19 01
09 23 10	J0741+3112	03 31 23	40.5	90.2	-4.2		-44.6	25	358	09 23 10
09 24 00	=0738+313	03 32 13	40.6	90.4	-4.2		-44.6	50	364	09 23 11
09 24 00	SDSSJ0741	03 32 13	40.0	91.1	-4.2		-44.1	-14	364	No stop
09 27 30	---	03 35 44	40.5	91.9	-4.1		-44.0	196	391	09 24 01
09 27 30	J0741+3112	03 35 44	41.2	91.1	-4.1		-44.6	-15	391	No stop
09 29 00	=0738+313	03 37 14	41.4	91.4	-4.1		-44.5	75	403	09 27 31
09 29 00	SDSSJ0741	03 37 14	40.7	92.2	-4.1		-44.0	-14	403	No stop
09 32 30	---	03 40 45	41.2	92.9	-4.0		-44.0	196	429	09 29 01
09 33 10	J0741+3112	03 41 25	42.0	92.3	-4.0		-44.5	25	429	09 33 10
09 34 00	=0738+313	03 42 15	42.1	92.4	-4.0		-44.5	50	436	09 33 11
09 34 00	SDSSJ0741	03 42 15	41.5	93.2	-4.0		-44.0	-14	436	No stop
09 37 30	---	03 45 45	42.0	93.9	-3.9		-43.9	196	463	09 34 01
09 37 30	J0741+3112	03 45 45	42.7	93.2	-3.9		-44.5	-15	463	No stop
09 39 00	=0738+313	03 47 16	42.9	93.5	-3.9		-44.5	75	474	09 37 31
09 39 00	SDSSJ0741	03 47 16	42.2	94.2	-3.9		-43.9	-14	474	No stop
09 42 30	---	03 50 46	42.7	95.0	-3.9		-43.9	196	501	09 39 0

Schedule for TORUN (Code Tr) Page 4

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
09 43 10	J0741+3112	03 51 26	43.5	94.4	-3.8		-44.4	25	501	09 43 10
09 44 00	=0738+313	03 52 17	43.6	94.5	-3.8		-44.4	50	508	09 43 11
09 44 00	SDSSJ0741	03 52 17	43.0	95.3	-3.8		-43.8	-14	508	No stop
09 47 30	---	03 55 47	43.5	96.0	-3.8		-43.8	196	535	09 44 01
09 47 30	J0741+3112	03 55 47	44.2	95.3	-3.8		-44.3	-15	535	No stop
09 49 00	=0738+313	03 57 17	44.4	95.6	-3.7		-44.3	75	546	09 47 31
09 49 00	SDSSJ0741	03 57 17	43.7	96.4	-3.8		-43.7	-14	546	No stop
09 52 30	---	04 00 48	44.2	97.1	-3.7		-43.6	196	573	09 49 01
09 53 10	J0741+3112	04 01 28	45.0	96.5	-3.7		-44.2	25	573	09 53 10
09 54 00	=0738+313	04 02 18	45.1	96.7	-3.7		-44.2	50	579	09 53 11
09 54 00	SDSSJ0741	04 02 18	44.5	97.5	-3.7		-43.6	-14	579	No stop
09 57 30	---	04 05 49	45.0	98.2	-3.6		-43.5	196	606	09 54 01
09 57 30	J0741+3112	04 05 49	45.7	97.5	-3.6		-44.1	-15	606	No stop
09 59 00	=0738+313	04 07 19	45.9	97.8	-3.6		-44.0	75	618	09 57 31
09 59 00	SDSSJ0741	04 07 19	45.2	98.6	-3.6		-43.4	-14	618	No stop
10 02 30	---	04 10 50	45.7	99.4	-3.5		-43.3	196	645	09 59 01
10 03 10	J0741+3112	04 11 30	46.5	98.7	-3.5		-43.9	25	645	10 03 10
10 04 00	=0738+313	04 12 20	46.6	98.9	-3.5		-43.9	50	651	10 03 11
10 04 00	SDSSJ0741	04 12 20	46.0	99.7	-3.5		-43.3	-14	651	No stop
10 07 30	---	04 15 50	46.5	100.5	-3.4		-43.1	196	678	10 04 01
10 07 30	J0741+3112	04 15 50	47.1	99.7	-3.4		-43.8	-15	678	No stop
10 09 00	=0738+313	04 17 21	47.4	100.0	-3.4		-43.7	75	690	10 07 31
10 09 00	SDSSJ0741	04 17 21	46.7	100.8	-3.4		-43.1	-14	690	No stop
10 12 30	---	04 20 51	47.2	101.6	-3.4		-42.9	196	717	10 09 01
10 13 10	J0741+3112	04 21 31	48.0	101.0	-3.3		-43.5	25	717	10 13 10
10 14 00	=0738+313	04 22 21	48.1	101.2	-3.3		-43.5	50	723	10 13 11
10 14 00	SDSSJ0741	04 22 21	47.4	102.0	-3.3		-42.9	-14	723	No stop
10 17 30	---	04 25 52	47.9	102.8	-3.3		-42.7	196	750	10 14 01
10 17 30	J0741+3112	04 25 52	48.6	102.0	-3.3		-43.3	-15	750	No stop
10 19 00	=0738+313	04 27 22	48.8	102.4	-3.2		-43.3	75	762	10 17 31
10 19 00	SDSSJ0741	04 27 22	48.2	103.2	-3.3		-42.6	-14	762	No stop
10 22 30	---	04 30 53	48.7	104.0	-3.2		-42.4	196	788	10 19 01

Schedule for TORUN (Code Tr) Page 5

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
10 23 10	J0741+3112	04 31 33	49.5	103.4	-3.2		-43.1	25	788	10 23 10
10 24 00	=0738+313	04 32 23	49.6	103.6	-3.2		-43.0	50	795	10 23 11
10 24 00	SDSSJ0741	04 32 23	48.9	104.4	-3.2		-42.3	-14	795	No stop
10 27 30	---	04 35 54	49.4	105.2	-3.1		-42.1	196	822	10 24 01
10 27 30	J0741+3112	04 35 54	50.1	104.4	-3.1		-42.8	-15	822	No stop
10 29 00	=0738+313	04 37 24	50.3	104.8	-3.1		-42.7	75	833	10 27 31
10 29 00	SDSSJ0741	04 37 24	49.6	105.6	-3.1		-42.1	-14	833	No stop
10 32 30	---	04 40 54	50.1	106.5	-3.0		-41.8	196	860	10 29 01
10 33 10	J0741+3112	04 41 35	50.9	105.8	-3.0		-42.5	25	860	10 33 10
10 34 00	=0738+313	04 42 25	51.0	106.0	-3.0		-42.4	50	867	10 33 11
10 34 00	SDSSJ0741	04 42 25	50.3	106.9	-3.0		-41.7	-14	867	No stop
10 37 30	---	04 45 55	50.9	107.8	-2.9		-41.5	196	894	10 34 01
10 37 30	J0741+3112	04 45 55	51.5	106.9	-2.9		-42.2	-15	894	No stop
10 39 00	=0738+313	04 47 26	51.8	107.3	-2.9		-42.1	75	905	10 37 31
10 39 00	SDSSJ0741	04 47 26	51.1	108.1	-2.9		-41.4	-14	905	No stop
10 42 30	---	04 50 56	51.6	109.1	-2.9		-41.1	196	932	10 39 01
10 43 10	J0741+3112	04 51 36	52.4	108.4	-2.8		-41.8	25	932	10 43 10
10 44 00	=0738+313	04 52 26	52.5	108.6	-2.8		-41.7	50	938	10 43 11
10 44 00	SDSSJ0741	04 52 26	51.8	109.5	-2.8		-41.0	-14	938	No stop
10 47 30	---	04 55 57	52.3	110.4	-2.8		-40.7	196	965	10 44 01
10 47 30	J0741+3112	04 55 57	53.0	109.5	-2.8		-41.4	-15	965	No stop
10 49 00	=0738+313	04 57 27	53.2	109.9	-2.7		-41.3	75	977	10 47 31
10 51 00	4C39.25	04 59 28	43.2	79.2	-4.5		-49.4	43	977	10 51 00
10 54 00	---	05 02 28	43.6	79.8	-4.4		-49.5	180	1000	10 51 01
10 56 00	J0956+5753	05 04 28	50.3	52.9	-4.9		-64.1	51	1000	10 56 00
10 57 00	=0952+581	05 05 29	50.4	53.0	-4.9		-64.2	60	1008	10 56 01
10 57 00	SDSSJ0956	05 05 29	50.2	53.4	-4.9		-63.9	-11	1008	No stop
11 00 30	---	05 08 59	50.7	53.8	-4.8		-64.4	199	1035	10 57 01
11 01 00	J0956+5753	05 09 29	50.9	53.4	-4.8		-64.8	19	1035	11 01 00
11 02 00	=0952+581	05 10 29	51.0	53.5	-4.8		-65.0	60	1042	11 01 01
11 02 00	SDSSJ0956	05 10 29	50.8	53.9	-4.8		-64.6	-11	1042	No stop
11 05 30	---	05 14 00	51.3	54.2	-4.7		-65.1	199	1069	11 02 01

Schedule for TORUN (Code Tr) Page 6

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
11 05 30	J0956+5753	05 14 00	51.4	53.8	-4.7		-65.5	-11	1069	No stop
11 07 00	=0952+581	05 15 30	51.6	53.9	-4.7		-65.7	79	1081	11 05 31
11 07 00	SDSSJ0956	05 15 30	51.5	54.3	-4.7		-65.3	-11	1081	No stop
11 10 30	---	05 19 01	51.9	54.7	-4.6		-65.8	199	1108	11 07 01
11 11 00	J0956+5753	05 19 31	52.1	54.2	-4.6		-66.2	19	1108	11 11 00
11 12 00	=0952+581	05 20 31	52.2	54.3	-4.6		-66.4	60	1115	11 11 01
11 12 00	SDSSJ0956	05 20 31	52.1	54.8	-4.6		-66.0	-11	1115	No stop
11 15 30	---	05 24 02	52.5	55.1	-4.6		-66.5	199	1142	11 12 01
11 15 30	J0956+5753	05 24 02	52.6	54.6	-4.6		-66.9	-11	1142	No stop
11 17 00	=0952+581	05 25 32	52.8	54.8	-4.5		-67.1	79	1154	11 15 31
11 17 00	SDSSJ0956	05 25 32	52.7	55.2	-4.5		-66.7	-11	1154	No stop
11 20 30	---	05 29 02	53.1	55.5	-4.5		-67.2	199	1181	11 17 01
11 21 00	J0956+5753	05 29 32	53.3	55.1	-4.5		-67.7	19	1181	11 21 00
11 22 00	=0952+581	05 30 33	53.4	55.2	-4.4		-67.8	60	1188	11 21 01
11 22 00	SDSSJ0956	05 30 33	53.3	55.7	-4.4		-67.4	-11	1188	No stop
11 25 30	---	05 34 03	53.7	56.0	-4.4		-67.9	199	1215	11 22 01
11 25 30	J0956+5753	05 34 03	53.9	55.5	-4.4		-68.3	-11	1215	No stop
11 27 00	=0952+581	05 35 33	54.1	55.6	-4.4		-68.5	79	1227	11 25 31
11 27 00	SDSSJ0956	05 35 33	53.9	56.1	-4.4		-68.1	-11	1227	No stop
11 30 30	---	05 39 04	54.4	56.4	-4.3		-68.6	199	1254	11 27 01
11 31 00	J0956+5753	05 39 34	54.6	55.9	-4.3		-69.1	19	1254	11 31 00
11 32 00	=0952+581	05 40 34	54.7	56.0	-4.3		-69.3	60	1262	11 31 01
11 32 00	SDSSJ0956	05 40 34	54.6	56.5	-4.3		-68.8	-11	1262	No stop
11 35 30	---	05 44 05	55.0	56.8	-4.2		-69.3	199	1288	11 32 01
11 35 30	J0956+5753	05 44 05	55.1	56.3	-4.2		-69.8	-11	1288	No stop
11 37 00	=0952+581	05 45 35	55.3	56.4	-4.2		-70.0	79	1300	11 35 31
11 37 00	SDSSJ0956	05 45 35	55.2	56.9	-4.2		-69.6	-11	1300	No stop
11 40 30	---	05 49 06	55.6	57.2	-4.1		-70.1	199	1327	11 37 01
11 41 00	J0956+5753	05 49 36	55.8	56.8	-4.1		-70.6	19	1327	11 41 00
11 42 00	=0952+581	05 50 36	55.9	56.8	-4.1		-70.7	60	1335	11 41 01
11 42 00	SDSSJ0956	05 50 36	55.8	57.3	-4.1		-70.3	-11	1335	No stop
11 45 30	---	05 54 06	56.3	57.6	-4.1		-70.8	199	1362	11 42 01

Schedule for TORUN (Code Tr) Page 7

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
11 45 30	J0956+5753	05 54 06	56.4	57.1	-4.1		-71.2	-11	1362	No stop
11 47 00	=0952+581	05 55 37	56.6	57.2	-4.0		-71.5	79	1373	11 45 31
11 47 00	SDSSJ0956	05 55 37	56.5	57.7	-4.0		-71.0	-12	1373	No stop
11 50 30	---	05 59 07	56.9	58.0	-4.0		-71.5	198	1400	11 47 01
11 51 00	J0956+5753	05 59 37	57.1	57.5	-4.0		-72.1	18	1400	11 51 00
11 52 00	=0952+581	06 00 38	57.2	57.6	-3.9		-72.2	60	1408	11 51 01
11 52 00	SDSSJ0956	06 00 38	57.1	58.1	-3.9		-71.7	-12	1408	No stop
11 55 30	---	06 04 08	57.5	58.4	-3.9		-72.2	198	1435	11 52 01
11 55 30	J0956+5753	06 04 08	57.6	57.9	-3.9		-72.7	-12	1435	No stop
11 57 00	=0952+581	06 05 38	57.8	58.0	-3.9		-73.0	78	1446	11 55 31
11 57 00	SDSSJ0956	06 05 38	57.7	58.5	-3.9		-72.5	-12	1446	No stop
12 00 30	---	06 09 09	58.2	58.8	-3.8		-73.0	198	1473	11 57 01
12 01 00	J0956+5753	06 09 39	58.3	58.3	-3.8		-73.6	18	1473	12 01 00
12 02 00	=0952+581	06 10 39	58.5	58.3	-3.8		-73.7	60	1481	12 01 01
12 02 00	SDSSJ0956	06 10 39	58.4	58.9	-3.8		-73.2	-12	1481	No stop
12 05 30	---	06 14 10	58.8	59.2	-3.7		-73.7	198	1508	12 02 01
12 05 30	J0956+5753	06 14 10	58.9	58.6	-3.7		-74.2	-12	1508	No stop
12 07 00	=0952+581	06 15 40	59.1	58.7	-3.7		-74.5	78	1519	12 05 31
12 07 00	SDSSJ0956	06 15 40	59.0	59.3	-3.7		-73.9	-12	1519	No stop
12 10 30	---	06 19 11	59.5	59.5	-3.6		-74.5	198	1546	12 07 01
12 11 00	J0956+5753	06 19 41	59.6	59.0	-3.6		-75.1	18	1546	12 11 00
12 12 00	=0952+581	06 20 41	59.8	59.0	-3.6		-75.2	60	1554	12 11 01
12 12 00	SDSSJ0956	06 20 41	59.7	59.6	-3.6		-74.7	-12	1554	No stop
12 15 30	---	06 24 11	60.1	59.9	-3.6		-75.2	198	1581	12 12 01
12 15 30	J0956+5753	06 24 11	60.2	59.3	-3.6		-75.8	-12	1581	No stop
12 17 00	=0952+581	06 25 42	60.4	59.4	-3.5		-76.0	78	1592	12 15 31
12 17 00	SDSSJ0956	06 25 42	60.3	60.0	-3.5		-75.5	-12	1592	No stop
12 20 30	---	06 29 12	60.8	60.2	-3.5		-76.0	198	1619	12 17 01
12 21 00	J0956+5753	06 29 42	60.9	59.6	-3.5		-76.6	18	1619	12 21 00
12 22 00	=0952+581	06 30 42	61.1	59.7	-3.4		-76.8	60	1627	12 21 01
12 22 00	SDSSJ0956	06 30 42	61.0	60.3	-3.4		-76.2	-12	1627	No stop
12 25 30	---	06 34 13	61.4	60.5	-3.4		-76.8	198	1654	12 22 01

Schedule for TORUN (Code Tr) Page 8

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
12 25 30	J0956+5753	06 34 13	61.5	59.9	-3.4		-77.3	-12	1654	No stop
12 27 00	=0952+581	06 35 43	61.7	60.0	-3.4		-77.6	78	1665	12 25 31
12 27 00	SDSSJ0956	06 35 43	61.6	60.6	-3.4		-77.0	-12	1665	No stop
12 30 30	---	06 39 14	62.1	60.9	-3.3		-77.5	198	1692	12 27 01
12 31 00	J0956+5753	06 39 44	62.2	60.2	-3.3		-78.2	18	1692	12 31 00
12 32 00	=0952+581	06 40 44	62.4	60.3	-3.3		-78.4	60	1700	12 31 01
12 32 00	SDSSJ0956	06 40 44	62.3	60.9	-3.3		-77.8	-12	1700	No stop
12 35 30	---	06 44 15	62.7	61.2	-3.2		-78.3	198	1727	12 32 01
12 35 30	J0956+5753	06 44 15	62.8	60.5	-3.2		-78.9	-12	1727	No stop
12 37 00	=0952+581	06 45 45	63.0	60.6	-3.2		-79.2	78	1738	12 35 31
12 37 00	SDSSJ0956	06 45 45	62.9	61.2	-3.2		-78.6	-12	1738	No stop
12 40 30	---	06 49 16	63.4	61.4	-3.1		-79.1	198	1765	12 37 01
12 41 00	J0956+5753	06 49 46	63.5	60.8	-3.1		-79.8	18	1765	12 41 00
12 42 00	=0952+581	06 50 46	63.7	60.8	-3.1		-80.0	60	1773	12 41 01
12 42 00	SDSSJ0956	06 50 46	63.6	61.5	-3.1		-79.4	-12	1773	No stop
12 45 30	---	06 54 16	64.1	61.7	-3.1		-79.9	198	1800	12 42 01
12 45 30	J0956+5753	06 54 16	64.1	61.0	-3.1		-80.6	-12	1800	No stop
12 47 00	=0952+581	06 55 47	64.3	61.1	-3.0		-80.8	78	1812	12 45 31
12 47 00	SDSSJ0956	06 55 47	64.3	61.8	-3.0		-80.2	-13	1812	No stop
12 50 30	---	06 59 17	64.7	62.0	-3.0		-80.8	197	1838	12 47 01
12 51 00	J0956+5753	06 59 47	64.9	61.3	-3.0		-81.5	17	1838	12 51 00
12 52 00	=0952+581	07 00 47	65.0	61.3	-2.9		-81.7	60	1846	12 51 01
12 52 00	SDSSJ0956	07 00 47	64.9	62.1	-2.9		-81.0	-13	1846	No stop
12 55 30	---	07 04 18	65.4	62.2	-2.9		-81.6	197	1873	12 52 01
12 55 30	J0956+5753	07 04 18	65.5	61.5	-2.9		-82.3	-13	1873	No stop
12 57 00	=0952+581	07 05 48	65.7	61.6	-2.9		-82.5	77	1885	12 55 31
12 59 00	4C39.25	07 07 49	62.3	106.4	-2.3		-47.8	16	1885	12 59 00
13 02 00	---	07 10 49	62.7	107.2	-2.3		-47.5	180	1908	12 59 01
13 05 00	J1015+0109	07 13 50	25.7	127.4	-3.0		-28.5	27	1908	13 05 00
13 06 00	=1013+014	07 14 50	25.8	127.6	-3.0		-28.4	60	1915	13 05 01

Schedule for TORUN (Code Tr) Page 9

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
13 06 00	SDSSJ1014	07 14 50	27.5	127.2	-3.0		-28.6	-20	1915	No stop
13 09 30	---	07 18 20	27.9	128.1	-2.9		-28.2	190	1942	13 06 01
13 10 10	J1015+0109	07 19 00	26.3	128.6	-3.0		-28.0	20	1942	13 10 10
13 11 00	=1013+014	07 19 51	26.4	128.8	-2.9		-27.9	50	1949	13 10 11
13 11 00	SDSSJ1014	07 19 51	28.1	128.5	-2.9		-28.1	-20	1949	No stop
13 14 30	---	07 23 21	28.5	129.4	-2.9		-27.7	190	1976	13 11 01
13 14 30	J1015+0109	07 23 21	26.8	129.7	-2.9		-27.5	-20	1976	No stop
13 16 00	=1013+014	07 24 51	27.0	130.1	-2.9		-27.4	70	1987	13 14 31
13 16 00	SDSSJ1014	07 24 51	28.6	129.7	-2.8		-27.5	-20	1987	No stop
13 19 30	---	07 28 22	29.0	130.6	-2.8		-27.1	190	2014	13 16 01
13 20 10	J1015+0109	07 29 02	27.5	131.1	-2.8		-26.9	20	2014	13 20 10
13 21 00	=1013+014	07 29 52	27.6	131.3	-2.8		-26.8	50	2021	13 20 11
13 21 00	SDSSJ1014	07 29 52	29.2	131.0	-2.7		-27.0	-20	2021	No stop
13 24 30	---	07 33 23	29.6	131.9	-2.7		-26.6	190	2047	13 21 01
13 24 30	J1015+0109	07 33 23	28.0	132.2	-2.7		-26.4	-20	2047	No stop
13 26 00	=1013+014	07 34 53	28.1	132.6	-2.7		-26.2	70	2059	13 24 31
13 27 00	J1024-0052	07 35 53	25.5	131.7	-2.8		-26.6	36	2059	13 27 00
13 28 00	=1021-006	07 36 53	25.6	132.0	-2.8		-26.5	60	2067	13 27 01
13 28 00	SDSSJ1026	07 36 53	25.5	131.4	-2.8		-26.8	-12	2067	No stop
13 31 30	---	07 40 24	25.9	132.2	-2.8		-26.4	198	2094	13 28 01
13 32 10	J1024-0052	07 41 04	26.1	133.0	-2.7		-26.0	28	2094	13 32 10
13 33 00	=1021-006	07 41 54	26.2	133.2	-2.7		-25.9	50	2100	13 32 11
13 33 00	SDSSJ1026	07 41 54	26.1	132.6	-2.8		-26.2	-12	2100	No stop
13 36 30	---	07 45 25	26.5	133.5	-2.7		-25.8	198	2127	13 33 01
13 36 30	J1024-0052	07 45 25	26.5	134.1	-2.7		-25.5	-12	2127	No stop
13 38 00	=1021-006	07 46 55	26.7	134.5	-2.6		-25.4	78	2138	13 36 31
13 38 00	SDSSJ1026	07 46 55	26.6	133.9	-2.7		-25.7	-12	2138	No stop
13 41 30	---	07 50 26	27.0	134.8	-2.6		-25.2	198	2165	13 38 01
13 42 10	J1024-0052	07 51 06	27.1	135.6	-2.6		-24.9	28	2165	13 42 10
13 43 00	=1021-006	07 51 56	27.2	135.8	-2.6		-24.8	50	2172	13 42 11

Schedule for TORUN (Code Tr) Page 10

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
13 43 00	SDSSJ1026	07 51 56	27.2	135.1	-2.6		-25.1	-12	2172	No stop
13 46 30	---	07 55 26	27.5	136.0	-2.5		-24.6	198	2199	13 43 01
13 46 30	J1024-0052	07 55 26	27.6	136.7	-2.5		-24.3	-12	2199	No stop
13 48 00	=1021-006	07 56 57	27.7	137.1	-2.5		-24.1	78	2210	13 46 31
13 49 00	J1015+0109	07 57 57	30.6	138.6	-2.3		-23.4	36	2210	13 49 00
13 50 00	=1013+014	07 58 57	30.7	138.9	-2.3		-23.3	60	2218	13 49 01
13 50 00	SDSSJ1014	07 58 57	32.3	138.7	-2.3		-23.4	-20	2218	No stop
13 53 30	---	08 02 28	32.7	139.6	-2.2		-22.9	190	2245	13 50 01
13 54 10	J1015+0109	08 03 08	31.1	140.0	-2.2		-22.7	20	2245	13 54 10
13 55 00	=1013+014	08 03 58	31.2	140.2	-2.2		-22.6	50	2251	13 54 11
13 55 00	SDSSJ1014	08 03 58	32.8	140.0	-2.2		-22.7	-20	2251	No stop
13 58 30	---	08 07 28	33.1	141.0	-2.1		-22.2	190	2278	13 55 01
13 58 30	J1015+0109	08 07 28	31.5	141.2	-2.2		-22.1	-20	2278	No stop
14 00 00	=1013+014	08 08 59	31.6	141.6	-2.1		-21.9	70	2290	13 58 31
14 00 00	SDSSJ1014	08 08 59	33.3	141.4	-2.1		-22.0	-20	2290	No stop
14 03 30	---	08 12 29	33.6	142.4	-2.0		-21.5	190	2317	14 00 01
14 04 10	J1015+0109	08 13 09	32.0	142.7	-2.1		-21.3	20	2317	14 04 10
14 05 00	=1013+014	08 13 59	32.1	143.0	-2.0		-21.2	50	2323	14 04 11
14 05 00	SDSSJ1014	08 13 59	33.7	142.8	-2.0		-21.3	-20	2323	No stop
14 08 30	---	08 17 30	34.1	143.8	-2.0		-20.8	190	2350	14 05 01
14 08 30	J1015+0109	08 17 30	32.4	143.9	-2.0		-20.7	-20	2350	No stop
14 10 00	=1013+014	08 19 00	32.5	144.3	-2.0		-20.5	70	2362	14 08 31
14 11 00	J1024-0052	08 20 00	30.0	143.1	-2.1		-21.1	36	2362	14 11 00
14 12 00	=1021-006	08 21 01	30.1	143.4	-2.1		-21.0	60	2369	14 11 01
14 12 00	SDSSJ1026	08 21 01	30.0	142.7	-2.1		-21.3	-12	2369	No stop
14 15 30	---	08 24 31	30.3	143.7	-2.0		-20.8	198	2396	14 12 01
14 16 10	J1024-0052	08 25 11	30.4	144.5	-2.0		-20.4	28	2396	14 16 10
14 17 00	=1021-006	08 26 01	30.5	144.8	-2.0		-20.3	50	2403	14 16 11
14 17 00	SDSSJ1026	08 26 01	30.5	144.1	-2.0		-20.6	-12	2403	No stop
14 20 30	---	08 29 32	30.8	145.1	-2.0		-20.1	198	2429	14 17 01

Schedule for TORUN (Code Tr) Page 11

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
14 20 30	J1024-0052	08 29 32	30.8	145.7	-1.9		-19.8	-12	2429	No stop
14 22 00	=1021-006	08 31 02	30.9	146.1	-1.9		-19.6	78	2441	14 20 31
14 22 00	SDSSJ1026	08 31 02	30.9	145.5	-1.9		-19.9	-12	2441	No stop
14 25 30	---	08 34 33	31.2	146.4	-1.9		-19.4	198	2468	14 22 01
14 26 10	J1024-0052	08 35 13	31.3	147.3	-1.8		-18.9	27	2468	14 26 10
14 27 00	=1021-006	08 36 03	31.3	147.5	-1.8		-18.8	50	2474	14 26 11
14 27 00	SDSSJ1026	08 36 03	31.3	146.8	-1.9		-19.2	-12	2474	No stop
14 30 30	---	08 39 34	31.6	147.8	-1.8		-18.7	198	2501	14 27 01
14 30 30	J1024-0052	08 39 34	31.6	148.5	-1.8		-18.3	-13	2501	No stop
14 32 00	=1021-006	08 41 04	31.7	148.9	-1.7		-18.1	77	2513	14 30 31
14 33 00	J1015+0109	08 42 04	34.4	150.9	-1.6		-17.0	36	2513	14 33 00
14 34 00	=1013+014	08 43 04	34.5	151.2	-1.6		-16.8	60	2521	14 33 01
14 34 00	SDSSJ1014	08 43 04	36.1	151.2	-1.5		-16.8	-20	2521	No stop
14 37 30	---	08 46 35	36.4	152.2	-1.5		-16.3	190	2547	14 34 01
14 38 10	J1015+0109	08 47 15	34.8	152.4	-1.5		-16.2	20	2547	14 38 10
14 39 00	=1013+014	08 48 05	34.8	152.6	-1.5		-16.0	50	2554	14 38 11
14 39 00	SDSSJ1014	08 48 05	36.5	152.7	-1.4		-16.0	-20	2554	No stop
14 42 30	---	08 51 36	36.7	153.7	-1.4		-15.4	190	2581	14 39 01
14 42 30	J1015+0109	08 51 36	35.1	153.7	-1.4		-15.4	-20	2581	No stop
14 44 00	=1013+014	08 53 06	35.2	154.1	-1.4		-15.2	70	2592	14 42 31
14 44 00	SDSSJ1014	08 53 06	36.8	154.2	-1.4		-15.2	-20	2592	No stop
14 47 30	---	08 56 36	37.0	155.2	-1.3		-14.6	190	2619	14 44 01
14 48 10	J1015+0109	08 57 16	35.4	155.4	-1.3		-14.5	20	2619	14 48 10
14 49 00	=1013+014	08 58 07	35.5	155.6	-1.3		-14.4	50	2626	14 48 11
14 49 00	SDSSJ1014	08 58 07	37.1	155.7	-1.3		-14.3	-20	2626	No stop
14 52 30	---	09 01 37	37.3	156.8	-1.2		-13.7	190	2653	14 49 01
14 52 30	J1015+0109	09 01 37	35.7	156.7	-1.3		-13.8	-20	2653	No stop
14 54 00	=1013+014	09 03 07	35.8	157.1	-1.2		-13.5	70	2664	14 52 31
14 55 00	J1024-0052	09 04 08	33.3	155.5	-1.4		-14.4	37	2664	14 55 00
14 56 00	=1021-006	09 05 08	33.4	155.8	-1.3		-14.3	60	2672	14 55 01

Schedule for TORUN (Code Tr) Page 12

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
14 56 00	SDSSJ1026	09 05 08	33.4	155.1	-1.4		-14.7	-12	2672	No stop
14 59 30	---	09 08 38	33.7	156.1	-1.3		-14.1	198	2699	14 56 01
15 00 10	J1024-0052	09 09 18	33.7	157.0	-1.3		-13.6	27	2699	15 00 10
15 01 00	=1021-006	09 10 09	33.7	157.2	-1.3		-13.4	50	2705	15 00 11
15 01 00	SDSSJ1026	09 10 09	33.8	156.5	-1.3		-13.8	-12	2705	No stop
15 04 30	---	09 13 39	34.0	157.6	-1.2		-13.2	198	2732	15 01 01
15 04 30	J1024-0052	09 13 39	33.9	158.3	-1.2		-12.9	-13	2732	No stop
15 06 00	=1021-006	09 15 09	34.0	158.7	-1.2		-12.6	77	2744	15 04 31
15 06 00	SDSSJ1026	09 15 09	34.0	158.0	-1.2		-13.0	-12	2744	No stop
15 09 30	---	09 18 40	34.2	159.0	-1.1		-12.4	198	2771	15 06 01
15 10 10	J1024-0052	09 19 20	34.2	159.9	-1.1		-11.9	27	2771	15 10 10
15 11 00	=1021-006	09 20 10	34.3	160.2	-1.1		-11.7	50	2777	15 10 11
15 11 00	SDSSJ1026	09 20 10	34.3	159.5	-1.1		-12.1	-12	2777	No stop
15 14 30	---	09 23 41	34.5	160.5	-1.1		-11.5	198	2804	15 11 01
15 14 30	J1024-0052	09 23 41	34.4	161.2	-1.0		-11.1	-13	2804	No stop
15 16 00	=1021-006	09 25 11	34.5	161.7	-1.0		-10.9	77	2815	15 14 31
15 17 00	J1015+0109	09 26 11	36.9	164.1	-0.8		-9.5	37	2815	15 17 00
15 18 00	=1013+014	09 27 11	37.0	164.4	-0.8		-9.3	60	2823	15 17 01
15 18 00	SDSSJ1014	09 27 11	38.6	164.7	-0.8		-9.1	-20	2823	No stop
15 21 30	---	09 30 42	38.7	165.8	-0.7		-8.5	190	2850	15 18 01
15 22 10	J1015+0109	09 31 22	37.1	165.7	-0.8		-8.5	20	2850	15 22 10
15 23 00	=1013+014	09 32 12	37.2	166.0	-0.7		-8.4	50	2856	15 22 11
15 23 00	SDSSJ1014	09 32 12	38.8	166.3	-0.7		-8.2	-20	2856	No stop
15 26 30	---	09 35 43	38.9	167.4	-0.7		-7.5	190	2883	15 23 01
15 26 30	J1015+0109	09 35 43	37.3	167.1	-0.7		-7.7	-20	2883	No stop
15 28 00	=1013+014	09 37 13	37.3	167.5	-0.7		-7.4	70	2895	15 26 31
15 28 00	SDSSJ1014	09 37 13	39.0	167.9	-0.6		-7.3	-20	2895	No stop
15 31 30	---	09 40 44	39.1	169.0	-0.6		-6.6	190	2922	15 28 01
15 32 10	J1015+0109	09 41 24	37.5	168.8	-0.6		-6.7	20	2922	15 32 10
15 33 00	=1013+014	09 42 14	37.5	169.1	-0.6		-6.5	50	2928	15 32 11

Schedule for TORUN (Code Tr) Page 13

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
15 33 00	SDSSJ1014	09 42 14	39.1	169.5	-0.5		-6.3	-20	2928	No stop
15 36 30	---	09 45 44	39.2	170.6	-0.5		-5.6	190	2955	15 33 01
15 36 30	J1015+0109	09 45 44	37.6	170.2	-0.5		-5.9	-20	2955	No stop
15 38 00	=1013+014	09 47 15	37.6	170.7	-0.5		-5.6	70	2967	15 36 31
15 38 00	SDSSJ1014	09 47 15	39.2	171.1	-0.5		-5.3	-20	2967	No stop
15 41 30	---	09 50 45	39.3	172.2	-0.4		-4.7	190	2994	15 38 01
15 42 10	J1015+0109	09 51 25	37.7	172.0	-0.4		-4.8	20	2994	15 42 10
15 43 00	=1013+014	09 52 16	37.7	172.3	-0.4		-4.6	50	3000	15 42 11
15 43 00	SDSSJ1014	09 52 16	39.3	172.7	-0.4		-4.4	-20	3000	No stop
15 46 30	---	09 55 46	39.4	173.8	-0.3		-3.7	190	3027	15 43 01
15 46 30	J1015+0109	09 55 46	37.8	173.4	-0.3		-4.0	-20	3027	No stop
15 48 00	=1013+014	09 57 16	37.8	173.8	-0.3		-3.7	70	3038	15 46 31
15 48 00	SDSSJ1014	09 57 16	39.4	174.3	-0.3		-3.4	-20	3038	No stop
15 51 30	---	10 00 47	39.5	175.4	-0.2		-2.7	190	3065	15 48 01
15 52 10	J1015+0109	10 01 27	37.9	175.2	-0.3		-2.9	20	3065	15 52 10
15 53 00	=1013+014	10 02 17	37.9	175.4	-0.2		-2.7	50	3072	15 52 11
15 53 00	SDSSJ1014	10 02 17	39.5	175.9	-0.2		-2.4	-20	3072	No stop
15 56 30	---	10 05 48	39.5	177.1	-0.2		-1.8	190	3099	15 53 01
15 56 30	J1015+0109	10 05 48	37.9	176.5	-0.2		-2.1	-20	3099	No stop
15 58 00	=1013+014	10 07 18	37.9	177.0	-0.2		-1.8	70	3110	15 56 31
15 58 00	SDSSJ1014	10 07 18	39.5	177.6	-0.1		-1.5	-20	3110	No stop
16 01 30	---	10 10 49	39.6	178.7	-0.1		-0.8	190	3137	15 58 01
16 02 10	J1015+0109	10 11 29	38.0	178.3	-0.1		-1.0	20	3137	16 02 10
16 03 00	=1013+014	10 12 19	38.0	178.6	-0.1		-0.8	50	3144	16 02 11
16 03 00	SDSSJ1014	10 12 19	39.6	179.2	-0.0		-0.5	-20	3144	No stop
16 06 30	---	10 15 49	39.6	180.3	0.0		0.2	190	3171	16 03 01
16 06 30	J1015+0109	10 15 49	38.0	179.7	-0.0		-0.2	-20	3171	No stop
16 08 00	=1013+014	10 17 20	38.0	180.2	0.0		0.1	70	3182	16 06 31
16 08 00	SDSSJ1014	10 17 20	39.6	180.8	0.0		0.5	-20	3182	No stop
16 11 30	---	10 20 50	39.5	181.9	0.1		1.2	190	3209	16 08 01

Schedule for TORUN (Code Tr) Page 14

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
16 12 10	J1015+0109	10 21 30	38.0	181.5	0.1		0.9	20	3209	16 12 10
16 13 00	=1013+014	10 22 20	38.0	181.8	0.1		1.1	50	3215	16 12 11
16 13 00	SDSSJ1014	10 22 20	39.5	182.4	0.1		1.5	-19	3215	No stop
16 16 30	---	10 25 51	39.5	183.6	0.2		2.1	191	3242	16 13 01
16 16 30	J1015+0109	10 25 51	37.9	182.9	0.2		1.7	-19	3242	No stop
16 18 00	=1013+014	10 27 21	37.9	183.4	0.2		2.0	71	3254	16 16 31
16 19 00	J1024-0052	10 28 21	35.9	181.0	0.1		0.6	39	3254	16 19 00
16 20 00	=1021-006	10 29 22	35.9	181.3	0.1		0.8	60	3262	16 19 01
16 20 00	SDSSJ1026	10 29 22	36.1	180.6	0.0		0.4	-12	3262	No stop
16 23 30	---	10 32 52	36.1	181.7	0.1		1.0	198	3288	16 20 01
16 24 10	J1024-0052	10 33 32	35.9	182.5	0.1		1.5	27	3288	16 24 10
16 25 00	=1021-006	10 34 22	35.9	182.8	0.2		1.7	50	3295	16 24 11
16 25 00	SDSSJ1026	10 34 22	36.1	182.1	0.1		1.3	-12	3295	No stop
16 28 30	---	10 37 53	36.1	183.2	0.2		1.9	198	3322	16 25 01
16 28 30	J1024-0052	10 37 53	35.9	183.9	0.2		2.3	-12	3322	No stop
16 30 00	=1021-006	10 39 23	35.9	184.4	0.2		2.6	78	3333	16 28 31
16 30 00	SDSSJ1026	10 39 23	36.1	183.7	0.2		2.2	-12	3333	No stop
16 33 30	---	10 42 54	36.0	184.8	0.3		2.9	198	3360	16 30 01
16 34 10	J1024-0052	10 43 34	35.8	185.6	0.3		3.4	27	3360	16 34 10
16 35 00	=1021-006	10 44 24	35.8	185.9	0.3		3.5	50	3367	16 34 11
16 35 00	SDSSJ1026	10 44 24	36.0	185.2	0.3		3.1	-12	3367	No stop
16 38 30	---	10 47 55	36.0	186.3	0.3		3.8	198	3394	16 35 01
16 38 30	J1024-0052	10 47 55	35.7	187.0	0.4		4.2	-12	3394	No stop
16 40 00	=1021-006	10 49 25	35.7	187.4	0.4		4.5	78	3405	16 38 31
16 40 00	SDSSJ1026	10 49 25	35.9	186.8	0.4		4.1	-12	3405	No stop
16 43 30	---	10 52 55	35.9	187.9	0.4		4.7	198	3432	16 40 01
16 44 10	J1024-0052	10 53 36	35.6	188.7	0.5		5.2	28	3432	16 44 10
16 45 00	=1021-006	10 54 26	35.6	189.0	0.5		5.4	50	3438	16 44 11
16 45 00	SDSSJ1026	10 54 26	35.8	188.3	0.4		5.0	-12	3438	No stop
16 48 30	---	10 57 56	35.7	189.4	0.5		5.6	198	3465	16 45 01

Schedule for TORUN (Code Tr) Page 15

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
16 48 30	J1024-0052	10 57 56	35.5	190.0	0.5		6.0	-12	3465	No stop
16 50 00	=1021-006	10 59 27	35.5	190.5	0.6		6.3	78	3477	16 48 31
16 50 00	SDSSJ1026	10 59 27	35.7	189.9	0.5		5.9	-12	3477	No stop
16 53 30	---	11 02 57	35.6	190.9	0.6		6.5	198	3504	16 50 01
16 54 10	J1024-0052	11 03 37	35.4	191.8	0.6		7.0	28	3504	16 54 10
16 55 00	=1021-006	11 04 27	35.3	192.0	0.7		7.2	50	3510	16 54 11
16 55 00	SDSSJ1026	11 04 27	35.6	191.4	0.6		6.8	-12	3510	No stop
16 58 30	---	11 07 58	35.5	192.5	0.7		7.4	198	3537	16 55 01
16 58 30	J1024-0052	11 07 58	35.2	193.1	0.7		7.8	-12	3537	No stop
17 00 00	=1021-006	11 09 28	35.2	193.6	0.7		8.1	78	3549	16 58 31
17 00 00	SDSSJ1026	11 09 28	35.4	192.9	0.7		7.7	-12	3549	No stop
17 03 30	---	11 12 59	35.3	194.0	0.8		8.3	198	3576	17 00 01
17 04 10	J1024-0052	11 13 39	35.0	194.8	0.8		8.8	28	3576	17 04 10
17 05 00	=1021-006	11 14 29	35.0	195.1	0.8		9.0	50	3582	17 04 11
17 05 00	SDSSJ1026	11 14 29	35.2	194.4	0.8		8.6	-12	3582	No stop
17 08 30	---	11 18 00	35.1	195.5	0.8		9.2	198	3609	17 05 01
17 08 30	J1024-0052	11 18 00	34.8	196.1	0.9		9.6	-12	3609	No stop
17 10 00	=1021-006	11 19 30	34.8	196.6	0.9		9.9	78	3621	17 08 31
17 10 00	SDSSJ1026	11 19 30	35.0	196.0	0.9		9.5	-12	3621	No stop
17 13 30	---	11 23 00	34.9	197.0	0.9		10.1	198	3647	17 10 01
17 14 10	J1024-0052	11 23 40	34.6	197.8	1.0		10.6	28	3647	17 14 10
17 15 00	=1021-006	11 24 31	34.5	198.1	1.0		10.7	50	3654	17 14 11
17 15 00	SDSSJ1026	11 24 31	34.8	197.5	1.0		10.4	-12	3654	No stop
17 18 30	---	11 28 01	34.7	198.5	1.0		11.0	198	3681	17 15 01
17 18 30	J1024-0052	11 28 01	34.4	199.1	1.0		11.3	-12	3681	No stop
17 20 00	=1021-006	11 29 31	34.3	199.6	1.1		11.6	78	3692	17 18 31
17 25 00	J1440+0157	11 34 32	25.9	125.9	-3.1		-29.1	136	3692	17 25 00
17 30 00	=1438+021	11 39 33	26.5	127.1	-3.0		-28.6	300	3731	17 25 01
17 30 00	SDSSJ1447	11 39 33	26.0	125.5	-3.1		-29.3	-16	3731	No stop
17 33 30	---	11 43 04	26.4	126.3	-3.1		-29.0	194	3758	17 30 01

Schedule for TORUN (Code Tr) Page 16

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
17 34 10	J1440+0157	11 43 44	27.0	128.1	-3.0		-28.2	23	3758	17 34 10
17 35 00	=1438+021	11 44 34	27.1	128.3	-3.0		-28.1	50	3764	17 34 11
17 35 00	SDSSJ1447	11 44 34	26.6	126.7	-3.1		-28.8	-16	3764	No stop
17 38 30	---	11 48 04	27.0	127.5	-3.0		-28.5	194	3791	17 35 01
17 38 30	J1440+0157	11 48 04	27.5	129.2	-2.9		-27.7	-17	3791	No stop
17 40 00	=1438+021	11 49 35	27.7	129.6	-2.9		-27.6	73	3803	17 38 31
17 40 00	SDSSJ1447	11 49 35	27.2	127.9	-3.0		-28.3	-16	3803	No stop
17 43 30	---	11 53 05	27.6	128.8	-2.9		-27.9	194	3829	17 40 01
17 44 10	J1440+0157	11 53 45	28.2	130.6	-2.8		-27.1	23	3829	17 44 10
17 45 00	=1438+021	11 54 36	28.3	130.8	-2.8		-27.0	50	3836	17 44 11
17 45 00	SDSSJ1447	11 54 36	27.8	129.2	-2.9		-27.8	-16	3836	No stop
17 48 30	---	11 58 06	28.2	130.0	-2.8		-27.4	194	3863	17 45 01
17 48 30	J1440+0157	11 58 06	28.7	131.7	-2.7		-26.6	-17	3863	No stop
17 50 00	=1438+021	11 59 36	28.9	132.1	-2.7		-26.5	73	3874	17 48 31
17 50 00	SDSSJ1447	11 59 36	28.4	130.4	-2.8		-27.2	-16	3874	No stop
17 53 30	---	12 03 07	28.8	131.3	-2.7		-26.8	194	3901	17 50 01
17 54 10	J1440+0157	12 03 47	29.3	133.2	-2.6		-26.0	23	3901	17 54 10
17 55 00	=1438+021	12 04 37	29.4	133.4	-2.6		-25.9	50	3908	17 54 11
17 55 00	SDSSJ1447	12 04 37	28.9	131.7	-2.7		-26.7	-17	3908	No stop
17 58 30	---	12 08 08	29.3	132.6	-2.7		-26.3	193	3935	17 55 01
17 58 30	J1440+0157	12 08 08	29.8	134.3	-2.6		-25.5	-17	3935	No stop
18 00 00	=1438+021	12 09 38	29.9	134.7	-2.5		-25.3	73	3946	17 58 31
18 00 00	SDSSJ1447	12 09 38	29.5	133.0	-2.6		-26.1	-17	3946	No stop
18 03 30	---	12 13 09	29.9	133.9	-2.6		-25.7	193	3973	18 00 01
18 04 10	J1440+0157	12 13 49	30.4	135.8	-2.5		-24.8	23	3973	18 04 10
18 05 00	=1438+021	12 14 39	30.5	136.0	-2.5		-24.7	50	3979	18 04 11
18 05 00	SDSSJ1447	12 14 39	30.0	134.3	-2.6		-25.5	-17	3979	No stop
18 08 30	---	12 18 09	30.4	135.2	-2.5		-25.1	193	4006	18 05 01
18 08 30	J1440+0157	12 18 09	30.8	136.9	-2.4		-24.2	-17	4006	No stop
18 10 00	=1438+021	12 19 40	31.0	137.3	-2.4		-24.0	73	4018	18 08 31

Schedule for TORUN (Code Tr) Page 17

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
18 10 00	SDSSJ1447	12 19 40	30.6	135.6	-2.5		-24.9	-17	4018	No stop
18 13 30	---	12 23 10	30.9	136.5	-2.4		-24.4	193	4045	18 10 01
18 14 10	J1440+0157	12 23 50	31.4	138.5	-2.3		-23.5	23	4045	18 14 10
18 15 00	=1438+021	12 24 40	31.5	138.7	-2.3		-23.4	50	4051	18 14 11
18 15 00	SDSSJ1447	12 24 40	31.1	136.9	-2.4		-24.2	-17	4051	No stop
18 18 30	---	12 28 11	31.4	137.9	-2.3		-23.8	193	4078	18 15 01
18 18 30	J1440+0157	12 28 11	31.8	139.6	-2.2		-22.9	-17	4078	No stop
18 20 00	=1438+021	12 29 41	32.0	140.0	-2.2		-22.7	73	4090	18 18 31
18 20 00	SDSSJ1447	12 29 41	31.6	138.3	-2.3		-23.6	-17	4090	No stop
18 23 30	---	12 33 12	31.9	139.2	-2.2		-23.1	193	4117	18 20 01
18 24 10	J1440+0157	12 33 52	32.4	141.2	-2.1		-22.1	23	4117	18 24 10
18 25 00	=1438+021	12 34 42	32.5	141.4	-2.1		-22.0	50	4123	18 24 11
18 25 00	SDSSJ1447	12 34 42	32.1	139.6	-2.2		-22.9	-17	4123	No stop
18 28 30	---	12 38 13	32.4	140.6	-2.2		-22.4	193	4150	18 25 01
18 28 30	J1440+0157	12 38 13	32.8	142.4	-2.1		-21.5	-17	4150	No stop
18 30 00	=1438+021	12 39 43	32.9	142.8	-2.0		-21.3	73	4162	18 28 31
18 30 00	SDSSJ1447	12 39 43	32.6	141.0	-2.1		-22.2	-17	4162	No stop
18 33 30	---	12 43 14	32.9	142.0	-2.1		-21.7	193	4188	18 30 01
18 34 10	J1440+0157	12 43 54	33.3	144.0	-2.0		-20.7	23	4188	18 34 10
18 35 00	=1438+021	12 44 44	33.4	144.2	-2.0		-20.6	50	4195	18 34 11
18 35 00	SDSSJ1447	12 44 44	33.0	142.4	-2.1		-21.5	-17	4195	No stop
18 38 30	---	12 48 14	33.3	143.3	-2.0		-21.0	193	4222	18 35 01
18 38 30	J1440+0157	12 48 14	33.7	145.2	-1.9		-20.1	-17	4222	No stop
18 40 00	=1438+021	12 49 45	33.8	145.6	-1.9		-19.8	73	4233	18 38 31
18 40 00	SDSSJ1447	12 49 45	33.5	143.8	-2.0		-20.8	-17	4233	No stop
18 43 30	---	12 53 15	33.8	144.8	-1.9		-20.3	193	4260	18 40 01
18 44 10	J1440+0157	12 53 55	34.2	146.8	-1.8		-19.2	23	4260	18 44 10
18 45 00	=1438+021	12 54 45	34.2	147.0	-1.8		-19.1	50	4267	18 44 11
18 45 00	SDSSJ1447	12 54 45	33.9	145.2	-1.9		-20.1	-17	4267	No stop
18 48 30	---	12 58 16	34.2	146.2	-1.8		-19.5	193	4294	18 45 01

Schedule for TORUN (Code Tr) Page 18

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
18 48 30	J1440+0157	12 58 16	34.5	148.0	-1.7		-18.5	-17	4294	No stop
18 50 00	=1438+021	12 59 46	34.6	148.5	-1.7		-18.3	73	4305	18 48 31
18 50 00	SDSSJ1447	12 59 46	34.3	146.6	-1.8		-19.3	-17	4305	No stop
18 53 30	---	13 03 17	34.6	147.6	-1.7		-18.8	193	4332	18 50 01
18 54 10	J1440+0157	13 03 57	34.9	149.7	-1.6		-17.7	23	4332	18 54 10
18 55 00	=1438+021	13 04 47	35.0	149.9	-1.6		-17.5	50	4338	18 54 11
18 55 00	SDSSJ1447	13 04 47	34.7	148.0	-1.7		-18.5	-17	4338	No stop
18 58 30	---	13 08 18	35.0	149.1	-1.7		-18.0	193	4365	18 55 01
18 58 30	J1440+0157	13 08 18	35.3	150.9	-1.6		-17.0	-17	4365	No stop
19 00 00	=1438+021	13 09 48	35.4	151.4	-1.5		-16.7	73	4377	18 58 31
19 00 00	SDSSJ1447	13 09 48	35.1	149.5	-1.6		-17.8	-17	4377	No stop
19 03 30	---	13 13 18	35.4	150.5	-1.6		-17.2	193	4404	19 00 01
19 04 10	J1440+0157	13 13 59	35.7	152.6	-1.5		-16.0	22	4404	19 04 10
19 05 00	=1438+021	13 14 49	35.7	152.9	-1.4		-15.9	50	4410	19 04 11
19 05 00	SDSSJ1447	13 14 49	35.5	151.0	-1.6		-17.0	-17	4410	No stop
19 08 30	---	13 18 19	35.8	152.0	-1.5		-16.4	193	4437	19 05 01
19 08 30	J1440+0157	13 18 19	36.0	153.9	-1.4		-15.3	-18	4437	No stop
19 10 00	=1438+021	13 19 50	36.1	154.4	-1.4		-15.1	72	4449	19 08 31
19 10 00	SDSSJ1447	13 19 50	35.9	152.4	-1.5		-16.1	-17	4449	No stop
19 13 30	---	13 23 20	36.1	153.5	-1.4		-15.6	193	4476	19 10 01
19 14 10	J1440+0157	13 24 00	36.3	155.6	-1.3		-14.4	22	4476	19 14 10
19 15 00	=1438+021	13 24 50	36.4	155.9	-1.3		-14.2	50	4482	19 14 11
19 15 00	SDSSJ1447	13 24 50	36.2	153.9	-1.4		-15.3	-17	4482	No stop
19 18 30	---	13 28 21	36.4	155.0	-1.3		-14.7	193	4509	19 15 01
19 18 30	J1440+0157	13 28 21	36.6	156.9	-1.2		-13.6	-18	4509	No stop
19 20 00	=1438+021	13 29 51	36.7	157.4	-1.2		-13.4	72	4520	19 18 31
19 20 00	SDSSJ1447	13 29 51	36.5	155.4	-1.3		-14.5	-17	4520	No stop
19 23 30	---	13 33 22	36.7	156.5	-1.2		-13.9	193	4547	19 20 01
19 24 10	J1440+0157	13 34 02	36.9	158.6	-1.1		-12.6	22	4547	19 24 10
19 25 00	=1438+021	13 34 52	37.0	158.9	-1.1		-12.5	50	4554	19 24 11

```
Schedule for TORUN     (Code Tr )                                Page  19
              Flat-spectrum doubles
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   5 Jun 2015   Day 156 ---

19 25 00  SDSSJ1447    13 34 52  36.8 156.9 -1.2     -13.6   -17     4554   No stop
19 28 30  ---          13 38 23  37.0 158.0 -1.2     -13.0   193     4581   19 25 01

19 28 30  J1440+0157   13 38 23  37.1 160.0 -1.1     -11.9   -18     4581   No stop
19 30 00  =1438+021    13 39 53  37.2 160.4 -1.0     -11.6    72     4592   19 28 31

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

 ======== Setup file: sess215.C1024

   Setup group:   10         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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=   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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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=   4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
             5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
   BBC fr=    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
              806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
   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=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
    barrel=roll_off

 POSITIONS OF SOURCES USED IN RECORDING SCANS
```

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

* SDSSJ0741         07 38 21.204039   * 07 41 30.464000     07 42 27.538629       0.00
                    30 27 09.21814    * 30 20 06.04000      30 17 48.52620        0.00

* SDSSJ0956         09 53 00.397340   * 09 56 29.068000     09 57 31.628728       0.00
                    57 49 23.86012    * 57 35 07.93000      57 30 51.84769        0.00

* SDSSJ1014         10 11 28.231412   * 10 14 03.489000     10 14 51.148624       0.00
                    02 59 10.68452    * 02 44 16.31000      02 39 33.21007        0.00

* SDSSJ1026         10 24 06.920481   * 10 26 40.404000     10 27 27.633709       0.00
                   -00 26 48.58181    *-00 42 06.51000     -00 46 57.45646        0.00

* SDSSJ1447         14 44 39.264808   * 14 47 11.266000     14 47 59.368409       0.00
                    02 24 06.74006    * 02 11 36.00000      02 07 50.18935        0.00

  J0521+1638        05 18 16.514078   * 05 21 09.885960     05 22 02.138314       0.12
  0518+165          16 35 26.83399    * 16 38 22.05146      16 39 02.40262        0.12
* 3C138             /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
  J0521+16          rfc_2012b Petrov, 2012, unpublished 410 observations

  J0530+1331        05 28 06.759218   * 05 30 56.416749     05 31 47.527497       0.10
* 0528+134          13 29 42.28877    * 13 31 55.14944      13 32 22.46262        0.10
  J0530+13          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 138123 observations

* J0741+3112        07 38 00.178559   * 07 41 10.703308     07 42 08.149264       0.18
  0738+313          31 19 02.05925    * 31 12 00.22924      31 09 43.28250        1.24
  J0741+31          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    GSFC 2011B astro solution      1998 Observations

  J0927+3902        09 23 55.319217   * 09 27 03.013938     09 27 59.764173       0.13
  0923+392          39 15 23.56637    * 39 02 20.85177      38 58 21.02319        0.10
* 4C39.25           /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
  J0927+39          rfc_2012b Petrov, 2012, unpublished 239566 observations

* J0956+5753        09 52 53.248058   * 09 56 22.634489     09 57 25.392966       0.66
  0952+581          58 08 11.57697    * 57 53 55.90463      57 49 39.95604        0.38
                    /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 95 observations

* J1015+0109        10 13 22.642342   * 10 15 57.055116     10 16 44.484953       0.48
  1013+014          01 24 11.84452    * 01 09 13.74679      01 04 29.04842        0.70
                    /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    GSFC 2011B astro solution        41 Observations

* J1024-0052        10 21 56.195585   * 10 24 29.586681     10 25 16.777131       1.10
  1021-006         -00 37 41.43262    *-00 52 55.49697     -00 57 45.41543        1.37
  J1024-00          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    GSFC 2011B astro solution       336 Observations

* J1440+0157        14 38 27.268930   * 14 40 59.495886     14 41 47.649531       0.22
  1438+021          02 10 32.56699    * 01 57 44.15153      01 53 52.60567        0.43
                    /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 81 observations
```

gp053gtr

6cm global VLBI observations of Arp299

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```
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```


```
Observing mode: PFB

Schedule for TORUN     (Code Tr )                                  Page   2
               6cm global VLBI observations of Arp299
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   5 Jun 2015   Day 156 ---

 Next scan frequencies:  4940.75  4940.75  4940.75  4940.75  4972.75  4972.75  4972.75  4972.75
                         5019.25  5019.25  5019.25  5019.25  5051.25  5051.25  5051.25  5051.25
 Next BBC frequencies:    740.75   740.75   740.75   740.75   772.75   772.75   772.75   772.75
                          819.25   819.25   819.25   819.25   851.25   851.25   851.25   851.25
 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 30 00  4C39.25      14 40 03  36.9 -71.9  5.2      47.2     0        0   20 30 00
20 31 00  ---          14 41 03  36.7 -71.7  5.2      47.2    60        8   20 30 01

20 31 17  4C39.25      14 41 20  36.7 -71.7  5.2      47.2    11        8   20 31 17
20 32 27  ---          14 42 30  36.5 -71.5  5.2      47.1    70       17   20 31 18

20 32 27  4C39.25      14 42 30  36.5 -71.5  5.2      47.1    -5       17   No stop
20 34 57  ---          14 45 00  36.2 -71.1  5.3      46.9   145       36   20 32 28

20 35 14  J1128+5925   14 45 18  62.7 -57.1  3.3      81.3   -96       36   20 35 14
20 38 24  ---          14 48 28  62.3 -57.0  3.3      80.8    94       60   20 35 15

20 38 24  J1128+5925   14 48 28  62.3 -57.0  3.3      80.8    -5       60   No stop
20 39 14  ---          14 49 18  62.2 -56.9  3.3      80.6    45       67   20 38 25

20 39 14  ARP299       14 49 18  62.1 -58.7  3.3      79.1   -17       67   No stop
20 44 32  ---          14 54 37  61.4 -58.4  3.4      78.2   301      107   20 39 15

20 44 32  J1128+5925   14 54 37  61.5 -56.7  3.4      79.7   -17      107   No stop
20 45 32  ---          14 55 37  61.4 -56.6  3.4      79.5    43      115   20 44 33
```

Schedule for TORUN (Code Tr) Page 3

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
20 45 49	J1128+5925	14 55 54	61.4	-56.6	3.4		79.5	11	115	20 45 49
20 46 29	---	14 56 34	61.3	-56.6	3.5		79.3	40	120	20 45 50
20 46 29	ARP299	14 56 34	61.1	-58.3	3.5		77.9	-17	120	No stop
20 51 49	---	15 01 55	60.5	-58.0	3.5		77.0	303	161	20 46 30
20 51 49	J1128+5925	15 01 55	60.6	-56.3	3.5		78.4	-17	161	No stop
20 52 49	---	15 02 55	60.5	-56.3	3.6		78.3	43	169	20 51 50
20 52 49	J1128+5925	15 02 55	60.5	-56.3	3.6		78.3	-5	169	No stop
20 53 39	---	15 03 46	60.4	-56.2	3.6		78.1	45	175	20 52 50
20 53 39	ARP299	15 03 46	60.2	-57.9	3.6		76.7	-17	175	No stop
20 58 57	---	15 09 04	59.6	-57.6	3.7		75.9	301	216	20 53 40
20 58 57	J1128+5925	15 09 04	59.7	-55.9	3.7		77.2	-17	216	No stop
20 59 57	---	15 10 05	59.6	-55.9	3.7		77.1	43	224	20 58 58
21 00 14	J1128+5925	15 10 22	59.6	-55.8	3.7		77.0	11	224	21 00 14
21 00 54	---	15 11 02	59.5	-55.8	3.7		76.9	40	229	21 00 15
21 00 54	ARP299	15 11 02	59.3	-57.5	3.7		75.6	-16	229	No stop
21 06 14	---	15 16 23	58.6	-57.1	3.8		74.7	304	270	21 00 55
21 06 14	J1128+5925	15 16 23	58.8	-55.5	3.8		76.0	-16	270	No stop
21 07 14	---	15 17 23	58.7	-55.4	3.8		75.9	44	278	21 06 15
21 07 14	J1128+5925	15 17 23	58.7	-55.4	3.8		75.9	-5	278	No stop
21 08 04	---	15 18 13	58.6	-55.4	3.8		75.7	45	284	21 07 15
21 08 04	ARP299	15 18 13	58.4	-57.0	3.8		74.4	-16	284	No stop
21 13 22	---	15 23 32	57.7	-56.6	3.9		73.6	302	325	21 08 05
21 13 22	J1128+5925	15 23 32	57.9	-55.1	3.9		74.9	-16	325	No stop
21 14 22	---	15 24 32	57.8	-55.0	3.9		74.7	44	333	21 13 23
21 14 39	J1128+5925	15 24 49	57.8	-55.0	3.9		74.6	11	333	21 14 39
21 15 19	---	15 25 29	57.7	-54.9	3.9		74.5	40	338	21 14 40
21 15 19	ARP299	15 25 29	57.5	-56.5	3.9		73.3	-16	338	No stop
21 20 39	---	15 30 50	56.8	-56.1	4.0		72.5	304	379	21 15 20
21 20 39	J1128+5925	15 30 50	57.0	-54.6	4.0		73.7	-16	379	No stop
21 21 39	---	15 31 50	56.9	-54.5	4.0		73.5	44	386	21 20 40
21 21 39	J1128+5925	15 31 50	56.9	-54.5	4.0		73.5	-5	386	No stop
21 22 29	---	15 32 40	56.8	-54.5	4.1		73.4	45	393	21 21 40

Schedule for TORUN (Code Tr) Page 4

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
21 22 29	ARP299	15 32 40	56.6	-56.0	4.1		72.2	-16	393	No stop
21 27 47	---	15 37 59	55.9	-55.6	4.1		71.4	302	434	21 22 30
21 27 47	J1128+5925	15 37 59	56.2	-54.1	4.1		72.5	-16	434	No stop
21 28 47	---	15 38 59	56.0	-54.0	4.2		72.4	44	441	21 27 48
21 29 04	J1128+5925	15 39 16	56.0	-54.0	4.2		72.3	11	441	21 29 04
21 29 44	---	15 39 56	55.9	-54.0	4.2		72.2	40	446	21 29 05
21 29 44	ARP299	15 39 56	55.7	-55.4	4.2		71.1	-16	446	No stop
21 35 04	---	15 45 17	55.0	-55.0	4.3		70.3	304	487	21 29 45
21 35 04	J1128+5925	15 45 17	55.3	-53.6	4.3		71.4	-16	487	No stop
21 36 04	---	15 46 18	55.1	-53.5	4.3		71.2	44	495	21 35 05
21 36 04	J1128+5925	15 46 18	55.1	-53.5	4.3		71.2	-5	495	No stop
21 36 54	---	15 47 08	55.0	-53.5	4.3		71.1	45	502	21 36 05
21 36 54	ARP299	15 47 08	54.8	-54.9	4.3		70.0	-16	502	No stop
21 42 12	---	15 52 27	54.2	-54.5	4.4		69.2	302	542	21 36 55
21 42 12	J1128+5925	15 52 27	54.4	-53.1	4.4		70.3	-16	542	No stop
21 43 12	---	15 53 27	54.3	-53.0	4.4		70.1	44	550	21 42 13
21 43 29	J1128+5925	15 53 44	54.3	-53.0	4.4		70.1	11	550	21 43 29
21 44 09	---	15 54 24	54.2	-52.9	4.4		70.0	40	555	21 43 30
21 44 09	ARP299	15 54 24	53.9	-54.3	4.4		68.9	-16	555	No stop
21 49 29	---	15 59 45	53.3	-53.9	4.5		68.1	304	596	21 44 10
21 49 29	J1128+5925	15 59 45	53.5	-52.5	4.5		69.2	-16	596	No stop
21 50 29	---	16 00 45	53.4	-52.5	4.5		69.0	44	604	21 49 30
21 50 29	J1128+5925	16 00 45	53.4	-52.5	4.5		69.0	-5	604	No stop
21 51 19	---	16 01 35	53.3	-52.4	4.5		68.9	45	610	21 50 30
21 51 19	ARP299	16 01 35	53.0	-53.7	4.5		67.9	-15	610	No stop
21 56 37	---	16 06 54	52.4	-53.3	4.6		67.1	303	651	21 51 20
21 56 37	J1128+5925	16 06 54	52.7	-52.0	4.6		68.1	-15	651	No stop
21 57 37	---	16 07 54	52.6	-51.9	4.6		67.9	45	659	21 56 38
21 57 54	J1128+5925	16 08 11	52.5	-51.9	4.7		67.9	11	659	21 57 54
21 58 34	---	16 08 51	52.5	-51.8	4.7		67.8	40	664	21 57 55
21 58 34	ARP299	16 08 51	52.2	-53.1	4.7		66.8	-15	664	No stop
22 03 54	---	16 14 12	51.5	-52.7	4.7		66.0	305	705	21 58 35

Schedule for TORUN (Code Tr) Page 5

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
22 03 54	J1128+5925	16 14 12	51.8	-51.4	4.8		66.9	-15	705	No stop
22 04 54	---	16 15 12	51.7	-51.3	4.8		66.8	45	713	22 03 55
22 04 54	J1128+5925	16 15 12	51.7	-51.3	4.8		66.8	-5	713	No stop
22 05 44	---	16 16 02	51.6	-51.2	4.8		66.7	45	719	22 04 55
22 05 44	ARP299	16 16 02	51.3	-52.5	4.8		65.7	-15	719	No stop
22 11 02	---	16 21 21	50.7	-52.1	4.9		65.0	303	760	22 05 45
22 11 02	J1128+5925	16 21 21	51.0	-50.8	4.9		65.9	-15	760	No stop
22 12 02	---	16 22 21	50.9	-50.7	4.9		65.7	45	767	22 11 03
22 12 19	J1128+5925	16 22 38	50.8	-50.7	4.9		65.7	11	767	22 12 19
22 12 59	---	16 23 19	50.8	-50.6	4.9		65.6	40	773	22 12 20
22 12 59	ARP299	16 23 19	50.4	-51.9	4.9		64.7	-15	773	No stop
22 18 19	---	16 28 39	49.8	-51.4	5.0		63.9	305	814	22 13 00
22 18 19	J1128+5925	16 28 39	50.1	-50.2	5.0		64.8	-15	814	No stop
22 19 19	---	16 29 40	50.0	-50.1	5.0		64.6	45	821	22 18 20
22 19 19	J1128+5925	16 29 40	50.0	-50.1	5.0		64.6	-5	821	No stop
22 20 09	---	16 30 30	49.9	-50.0	5.0		64.5	45	828	22 19 20
22 20 09	ARP299	16 30 30	49.6	-51.3	5.0		63.6	-15	828	No stop
22 25 27	---	16 35 49	49.0	-50.8	5.1		62.9	303	868	22 20 10
22 25 27	J1128+5925	16 35 49	49.3	-49.6	5.1		63.7	-15	868	No stop
22 26 27	---	16 36 49	49.2	-49.5	5.1		63.6	45	876	22 25 28
22 26 44	J1128+5925	16 37 06	49.2	-49.5	5.1		63.5	11	876	22 26 44
22 27 24	---	16 37 46	49.1	-49.4	5.1		63.4	40	881	22 26 45
22 27 24	ARP299	16 37 46	48.7	-50.6	5.1		62.6	-15	881	No stop
22 32 44	---	16 43 07	48.1	-50.1	5.2		61.8	305	922	22 27 25
22 32 44	J1128+5925	16 43 07	48.5	-48.9	5.2		62.6	-15	922	No stop
22 33 44	---	16 44 07	48.4	-48.9	5.3		62.5	45	930	22 32 45
22 33 44	J1128+5925	16 44 07	48.4	-48.9	5.3		62.5	-5	930	No stop
22 34 34	---	16 44 57	48.3	-48.8	5.3		62.3	45	936	22 33 45
22 34 34	ARP299	16 44 57	47.9	-49.9	5.3		61.5	-15	936	No stop
22 39 52	---	16 50 16	47.3	-49.4	5.3		60.8	303	977	22 34 35
22 39 52	J1128+5925	16 50 16	47.7	-48.3	5.4		61.5	-15	977	No stop
22 40 52	---	16 51 16	47.6	-48.2	5.4		61.4	45	985	22 39 53

Schedule for TORUN (Code Tr) Page 6

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
22 41 09	J1128+5925	16 51 33	47.5	-48.2	5.4		61.4	11	985	22 41 09
22 41 49	---	16 52 13	47.5	-48.1	5.4		61.3	40	990	22 41 10
22 41 49	ARP299	16 52 13	47.1	-49.3	5.4		60.5	-14	990	No stop
22 47 09	---	16 57 34	46.5	-48.8	5.5		59.7	306	1031	22 41 50
22 47 09	J1128+5925	16 57 34	46.9	-47.6	5.5		60.5	-15	1031	No stop
22 48 09	---	16 58 34	46.8	-47.5	5.5		60.3	45	1039	22 47 10
22 48 09	J1128+5925	16 58 34	46.8	-47.5	5.5		60.3	-5	1039	No stop
22 48 59	---	16 59 24	46.7	-47.5	5.5		60.2	45	1045	22 48 10
22 48 59	ARP299	16 59 24	46.3	-48.6	5.5		59.5	-14	1045	No stop
22 54 17	---	17 04 43	45.7	-48.1	5.6		58.7	304	1086	22 49 00
22 54 17	J1128+5925	17 04 43	46.1	-47.0	5.6		59.4	-14	1086	No stop
22 55 17	---	17 05 44	46.0	-46.9	5.6		59.3	46	1094	22 54 18
22 55 34	J1128+5925	17 06 01	45.9	-46.9	5.6		59.2	11	1094	22 55 34
22 56 14	---	17 06 41	45.9	-46.8	5.6		59.1	40	1099	22 55 35
22 56 14	ARP299	17 06 41	45.5	-47.9	5.6		58.4	-14	1099	No stop
23 01 34	---	17 12 02	44.9	-47.3	5.7		57.7	306	1140	22 56 15
23 01 34	J1128+5925	17 12 02	45.3	-46.3	5.7		58.3	-14	1140	No stop
23 02 34	---	17 13 02	45.2	-46.2	5.7		58.2	46	1147	23 01 35
23 02 34	J1128+5925	17 13 02	45.2	-46.2	5.7		58.2	-5	1147	No stop
23 03 24	---	17 13 52	45.1	-46.1	5.7		58.1	45	1154	23 02 35
23 03 24	ARP299	17 13 52	44.7	-47.2	5.7		57.4	-14	1154	No stop
23 08 42	---	17 19 11	44.1	-46.6	5.8		56.6	304	1195	23 03 25
23 08 42	J1128+5925	17 19 11	44.5	-45.6	5.8		57.3	-14	1195	No stop
23 09 42	---	17 20 11	44.4	-45.5	5.9		57.1	46	1202	23 08 43
23 09 59	J1128+5925	17 20 28	44.4	-45.5	5.9		57.1	11	1202	23 09 59
23 10 39	---	17 21 08	44.3	-45.4	5.9		57.0	40	1207	23 10 00
23 10 39	ARP299	17 21 08	43.9	-46.4	5.9		56.3	-14	1207	No stop
23 15 59	---	17 26 29	43.3	-45.9	6.0		55.6	306	1248	23 10 40
23 15 59	J1128+5925	17 26 29	43.7	-44.9	6.0		56.2	-14	1248	No stop
23 16 59	---	17 27 29	43.6	-44.8	6.0		56.1	46	1256	23 16 00
23 16 59	J1128+5925	17 27 29	43.6	-44.8	6.0		56.1	-5	1256	No stop
23 17 49	---	17 28 19	43.5	-44.7	6.0		55.9	45	1263	23 17 00

Schedule for TORUN (Code Tr) Page 7

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 5 Jun 2015 Day 156 ---										
23 17 49	ARP299	17 28 19	43.1	-45.7	6.0		55.3	-14	1263	No stop
23 23 07	---	17 33 38	42.5	-45.2	6.1		54.6	304	1303	23 17 50
23 23 07	J1128+5925	17 33 38	43.0	-44.2	6.1		55.2	-14	1303	No stop
23 24 07	---	17 34 38	42.9	-44.1	6.1		55.0	46	1311	23 23 08
23 24 24	J1128+5925	17 34 55	42.8	-44.1	6.1		55.0	11	1311	23 24 24
23 25 04	---	17 35 35	42.8	-44.0	6.1		54.9	40	1316	23 24 25
23 25 04	ARP299	17 35 35	42.3	-45.0	6.1		54.3	-14	1316	No stop
23 30 24	---	17 40 56	41.8	-44.4	6.2		53.5	306	1357	23 25 05
23 30 24	J1128+5925	17 40 56	42.2	-43.4	6.2		54.1	-14	1357	No stop
23 31 24	---	17 41 56	42.1	-43.3	6.2		53.9	46	1365	23 30 25
23 31 24	J1128+5925	17 41 56	42.1	-43.3	6.2		53.9	-5	1365	No stop
23 32 14	---	17 42 47	42.0	-43.3	6.2		53.8	45	1371	23 31 25
23 32 14	ARP299	17 42 47	41.6	-44.2	6.2		53.2	-14	1371	No stop
23 37 32	---	17 48 05	41.0	-43.7	6.3		52.5	304	1412	23 32 15
23 37 32	J1128+5925	17 48 05	41.5	-42.7	6.3		53.0	-14	1412	No stop
23 38 32	---	17 49 06	41.4	-42.6	6.3		52.9	46	1420	23 37 33
23 38 49	J1128+5925	17 49 23	41.4	-42.6	6.3		52.8	11	1420	23 38 49
23 39 29	---	17 50 03	41.3	-42.5	6.3		52.7	40	1425	23 38 50
23 39 29	ARP299	17 50 03	40.8	-43.5	6.3		52.2	-14	1425	No stop
23 44 49	---	17 55 24	40.3	-42.9	6.4		51.4	306	1466	23 39 30
23 44 49	J1128+5925	17 55 24	40.8	-42.0	6.4		51.9	-14	1466	No stop
23 45 49	---	17 56 24	40.7	-41.9	6.5		51.8	46	1474	23 44 50
23 45 49	J1128+5925	17 56 24	40.7	-41.9	6.5		51.8	-5	1474	No stop
23 46 39	---	17 57 14	40.6	-41.8	6.5		51.7	45	1480	23 45 50
23 46 39	ARP299	17 57 14	40.1	-42.7	6.5		51.2	-13	1480	No stop
23 51 57	---	18 02 33	39.5	-42.1	6.6		50.4	305	1521	23 46 40
23 51 57	J1128+5925	18 02 33	40.0	-41.2	6.6		50.9	-14	1521	No stop
23 52 57	---	18 03 33	39.9	-41.1	6.6		50.7	46	1528	23 51 58
23 53 14	J1128+5925	18 03 50	39.9	-41.1	6.6		50.7	11	1528	23 53 14
23 53 54	---	18 04 30	39.8	-41.0	6.6		50.6	40	1534	23 53 15
23 53 54	ARP299	18 04 30	39.3	-41.9	6.6		50.1	-13	1534	No stop
23 59 14	---	18 09 51	38.8	-41.3	6.7		49.3	307	1575	23 53 55

Schedule for TORUN (Code Tr) Page 8

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: 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 5 Jun 2015 Day 156 -- Stop: Sat 6 Jun 2015 Day 157 ---

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart / SYNC
23 59 14	J1128+5925	18 09 51	39.3	-40.4	6.7		49.8	-13	1575	No stop
00 00 14	---	18 10 51	39.2	-40.3	6.7		49.7	47	1582	23 59 15
00 00 14	J1128+5925	18 10 51	39.2	-40.3	6.7		49.7	-5	1582	No stop
00 01 04	---	18 11 41	39.1	-40.3	6.7		49.5	45	1589	00 00 15
00 01 04	ARP299	18 11 41	38.6	-41.1	6.7		49.1	-13	1589	No stop
00 06 22	---	18 17 00	38.1	-40.5	6.8		48.3	305	1629	00 01 05
00 06 22	J1128+5925	18 17 00	38.6	-39.7	6.8		48.8	-13	1629	No stop
00 07 22	---	18 18 00	38.5	-39.6	6.8		48.6	47	1637	00 06 23
00 07 39	J1128+5925	18 18 17	38.5	-39.5	6.8		48.6	11	1637	00 07 39
00 08 19	---	18 18 58	38.4	-39.5	6.8		48.5	40	1642	00 07 40
00 08 19	ARP299	18 18 58	37.9	-40.3	6.8		48.0	-14	1642	No stop
00 13 39	---	18 24 18	37.4	-39.7	6.9		47.2	306	1683	00 08 20
00 13 39	J1128+5925	18 24 18	37.9	-38.9	6.9		47.7	-13	1683	No stop
00 14 39	---	18 25 19	37.8	-38.8	6.9		47.5	47	1691	00 13 40
00 14 39	J1128+5925	18 25 19	37.8	-38.8	6.9		47.5	-5	1691	No stop
00 15 29	---	18 26 09	37.8	-38.7	7.0		47.4	45	1697	00 14 40
00 15 29	ARP299	18 26 09	37.2	-39.5	6.9		47.0	-14	1697	No stop
00 20 47	---	18 31 28	36.7	-38.9	7.0		46.2	304	1738	00 15 30
00 20 47	J1128+5925	18 31 28	37.3	-38.1	7.0		46.6	-14	1738	No stop
00 21 47	---	18 32 28	37.2	-38.0	7.1		46.5	46	1746	00 20 48
00 22 04	J1128+5925	18 32 45	37.1	-38.0	7.1		46.4	11	1746	00 22 04
00 22 44	---	18 33 25	37.1	-37.9	7.1		46.3	40	1751	00 22 05
00 22 44	ARP299	18 33 25	36.5	-38.7	7.1		45.9	-14	1751	No stop
00 28 04	---	18 38 46	36.0	-38.1	7.2		45.1	306	1792	00 22 45
00 28 04	J1128+5925	18 38 46	36.6	-37.3	7.2		45.5	-14	1792	No stop
00 29 04	---	18 39 46	36.5	-37.2	7.2		45.4	46	1800	00 28 05
00 29 04	J1128+5925	18 39 46	36.5	-37.2	7.2		45.4	-5	1800	No stop
00 29 54	---	18 40 36	36.4	-37.1	7.2		45.3	45	1806	00 29 05
00 29 54	ARP299	18 40 36	35.9	-37.9	7.2		44.9	-14	1806	No stop
00 35 12	---	18 45 55	35.4	-37.3	7.3		44.1	304	1847	00 29 55

Schedule for TORUN (Code Tr) Page 9

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
00 35 12	J1128+5925	18 45 55	36.0	-36.5	7.3		44.5	-14	1847	No stop
00 36 12	---	18 46 55	35.9	-36.4	7.3		44.3	46	1855	00 35 13
00 36 29	J1128+5925	18 47 12	35.8	-36.4	7.3		44.3	11	1855	00 36 29
00 37 09	---	18 47 52	35.8	-36.3	7.3		44.2	40	1860	00 36 30
00 37 09	ARP299	18 47 52	35.2	-37.1	7.3		43.8	-14	1860	No stop
00 42 29	---	18 53 13	34.7	-36.4	7.4		43.0	306	1901	00 37 10
00 42 29	J1128+5925	18 53 13	35.3	-35.7	7.4		43.4	-14	1901	No stop
00 43 29	---	18 54 13	35.2	-35.6	7.4		43.2	46	1908	00 42 30
00 43 29	J1128+5925	18 54 13	35.2	-35.6	7.4		43.2	-5	1908	No stop
00 44 19	---	18 55 03	35.1	-35.5	7.4		43.1	45	1915	00 43 30
00 44 19	ARP299	18 55 03	34.5	-36.2	7.4		42.7	-14	1915	No stop
00 49 37	---	19 00 22	34.1	-35.6	7.5		42.0	304	1956	00 44 20
00 49 37	J1128+5925	19 00 22	34.7	-34.9	7.5		42.3	-14	1956	No stop
00 50 37	---	19 01 22	34.6	-34.7	7.5		42.2	46	1963	00 49 38
00 50 54	J1128+5925	19 01 40	34.6	-34.7	7.5		42.1	11	1963	00 50 54
00 51 34	---	19 02 20	34.5	-34.6	7.6		42.0	40	1968	00 50 55
00 51 34	ARP299	19 02 20	33.9	-35.4	7.5		41.7	-14	1968	No stop
00 56 54	---	19 07 40	33.4	-34.7	7.6		40.9	306	2009	00 51 35
00 56 54	J1128+5925	19 07 40	34.1	-34.0	7.6		41.2	-14	2009	No stop
00 57 54	---	19 08 41	34.0	-33.9	7.7		41.1	46	2017	00 56 55
00 57 54	J1128+5925	19 08 41	34.0	-33.9	7.7		41.1	-5	2017	No stop
00 58 44	---	19 09 31	33.9	-33.8	7.7		40.9	45	2024	00 57 55
00 58 44	ARP299	19 09 31	33.3	-34.5	7.7		40.6	-14	2024	No stop
01 04 02	---	19 14 50	32.8	-33.9	7.8		39.8	304	2064	00 58 45
01 04 02	J1128+5925	19 14 50	33.5	-33.2	7.8		40.1	-14	2064	No stop
01 05 02	---	19 15 50	33.4	-33.1	7.8		40.0	46	2072	01 04 03
01 05 19	J1128+5925	19 16 07	33.4	-33.0	7.8		39.9	11	2072	01 05 19
01 05 59	---	19 16 47	33.3	-33.0	7.8		39.8	40	2077	01 05 20
01 05 59	ARP299	19 16 47	32.7	-33.7	7.8		39.5	-14	2077	No stop
01 11 19	---	19 22 08	32.2	-33.0	7.9		38.7	306	2118	01 06 00

Schedule for TORUN (Code Tr) Page 10

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
01 11 19	J1128+5925	19 22 08	32.9	-32.3	7.9		39.0	-14	2118	No stop
01 12 19	---	19 23 08	32.8	-32.2	7.9		38.9	46	2126	01 11 20
01 12 19	J1128+5925	19 23 08	32.8	-32.2	7.9		38.9	-5	2126	No stop
01 13 09	---	19 23 58	32.7	-32.1	7.9		38.8	45	2132	01 12 20
01 13 09	ARP299	19 23 58	32.1	-32.8	7.9		38.5	-14	2132	No stop
01 18 27	---	19 29 17	31.7	-32.1	8.0		37.7	304	2173	01 13 10
01 18 27	J1128+5925	19 29 17	32.3	-31.5	8.0		38.0	-14	2173	No stop
01 19 27	---	19 30 17	32.2	-31.4	8.0		37.8	46	2181	01 18 28
01 19 44	J1128+5925	19 30 34	32.2	-31.3	8.0		37.8	11	2181	01 19 44
01 20 24	---	19 31 14	32.2	-31.3	8.0		37.7	40	2186	01 19 45
01 20 24	ARP299	19 31 14	31.5	-31.9	8.0		37.4	-14	2186	No stop
01 25 44	---	19 36 35	31.1	-31.3	8.1		36.6	306	2227	01 20 25
01 25 44	J1128+5925	19 36 35	31.7	-30.6	8.1		36.8	-14	2227	No stop
01 26 44	---	19 37 35	31.7	-30.5	8.1		36.7	46	2235	01 25 45
01 26 44	J1128+5925	19 37 35	31.7	-30.5	8.1		36.7	-5	2235	No stop
01 27 34	---	19 38 26	31.6	-30.4	8.2		36.6	45	2241	01 26 45
01 27 34	ARP299	19 38 26	30.9	-31.0	8.2		36.3	-14	2241	No stop
01 32 52	---	19 43 44	30.5	-30.4	8.2		35.5	304	2282	01 27 35
01 32 52	J1128+5925	19 43 44	31.2	-29.8	8.2		35.8	-14	2282	No stop
01 33 52	---	19 44 45	31.1	-29.6	8.3		35.6	46	2289	01 32 53
01 34 09	J1128+5925	19 45 02	31.1	-29.6	8.3		35.6	11	2289	01 34 09
01 34 49	---	19 45 42	31.1	-29.5	8.3		35.5	40	2295	01 34 10
01 34 49	ARP299	19 45 42	30.4	-30.1	8.3		35.2	-15	2295	No stop
01 40 09	---	19 51 03	30.0	-29.5	8.4		34.4	305	2336	01 34 50
01 40 09	J1128+5925	19 51 03	30.7	-28.9	8.4		34.6	-14	2336	No stop
01 41 09	---	19 52 03	30.6	-28.7	8.4		34.5	46	2343	01 40 10
01 41 09	J1128+5925	19 52 03	30.6	-28.7	8.4		34.5	-5	2343	No stop
01 41 59	---	19 52 53	30.5	-28.6	8.4		34.4	45	2350	01 41 10
01 41 59	ARP299	19 52 53	29.9	-29.2	8.4		34.1	-15	2350	No stop
01 47 17	---	19 58 12	29.5	-28.6	8.5		33.3	303	2391	01 42 00

Schedule for TORUN (Code Tr) Page 11

6cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
01 47 17	J1128+5925	19 58 12	30.2	-28.0	8.5		33.5	-15	2391	No stop
01 48 17	---	19 59 12	30.1	-27.9	8.5		33.4	45	2398	01 47 18
01 48 34	J1128+5925	19 59 29	30.1	-27.8	8.5		33.3	11	2398	01 48 34
01 49 14	---	20 00 09	30.0	-27.7	8.5		33.2	40	2403	01 48 35
01 49 14	ARP299	20 00 09	29.3	-28.3	8.5		33.0	-15	2403	No stop
01 54 34	---	20 05 30	28.9	-27.7	8.6		32.2	305	2444	01 49 15
01 54 34	J1128+5925	20 05 30	29.7	-27.1	8.6		32.4	-15	2444	No stop
01 55 34	---	20 06 30	29.6	-27.0	8.6		32.3	45	2452	01 54 35
01 55 34	J1128+5925	20 06 30	29.6	-27.0	8.6		32.3	-5	2452	No stop
01 56 24	---	20 07 20	29.5	-26.9	8.6		32.1	45	2458	01 55 35
01 56 24	ARP299	20 07 20	28.8	-27.4	8.6		31.9	-15	2458	No stop
02 01 42	---	20 12 39	28.5	-26.7	8.7		31.1	303	2499	01 56 25
02 01 42	J1128+5925	20 12 39	29.2	-26.2	8.7		31.3	-15	2499	No stop
02 02 42	---	20 13 39	29.1	-26.1	8.7		31.2	45	2507	02 01 43
02 02 59	J1128+5925	20 13 56	29.1	-26.0	8.7		31.1	11	2507	02 02 59
02 03 39	---	20 14 36	29.0	-26.0	8.8		31.0	40	2512	02 03 00
02 03 39	ARP299	20 14 36	28.3	-26.5	8.8		30.8	-15	2512	No stop
02 08 59	---	20 19 57	28.0	-25.8	8.8		30.0	305	2553	02 03 40
02 08 59	J1128+5925	20 19 57	28.7	-25.3	8.8		30.2	-15	2553	No stop
02 09 59	---	20 20 57	28.6	-25.2	8.9		30.0	45	2561	02 09 00
02 09 59	J1128+5925	20 20 57	28.6	-25.2	8.9		30.0	-5	2561	No stop
02 10 49	---	20 21 48	28.6	-25.1	8.9		29.9	45	2567	02 10 00
02 10 49	ARP299	20 21 48	27.9	-25.6	8.9		29.7	-15	2567	No stop
02 16 07	---	20 27 07	27.5	-24.9	9.0		28.9	303	2608	02 10 50
02 16 07	J1128+5925	20 27 07	28.2	-24.4	9.0		29.1	-15	2608	No stop
02 17 07	---	20 28 07	28.2	-24.3	9.0		28.9	45	2616	02 16 08
02 17 24	J1128+5925	20 28 24	28.2	-24.2	9.0		28.9	11	2616	02 17 24
02 18 04	---	20 29 04	28.1	-24.1	9.0		28.8	40	2621	02 17 25
02 18 04	ARP299	20 29 04	27.4	-24.6	9.0		28.6	-15	2621	No stop
02 23 24	---	20 34 25	27.1	-24.0	9.1		27.8	305	2662	02 18 05

```
Schedule for TORUN     (Code Tr )                                Page  12
              6cm global VLBI observations of Arp299
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   6 Jun 2015   Day 157 ---

02 23 24  J1128+5925   20 34 25  27.8 -23.5  9.1      28.0   -15     2662   No stop
02 24 24  ---          20 35 25  27.7 -23.3  9.1      27.8    45     2669   02 23 25

02 24 24  J1128+5925   20 35 25  27.7 -23.3  9.1      27.8    -5     2669   No stop
02 25 14  ---          20 36 15  27.7 -23.2  9.1      27.7    45     2676   02 24 25

02 25 14  3C286        20 36 15  15.2 -59.1  7.1      36.7   -86     2676   No stop
02 30 00  ---          20 41 02  14.5 -58.3  7.2      36.3   200     2713   02 25 15

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

 ======== Setup file: sess215.C1024glob

   Setup group:   12         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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=   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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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=   4940.75  4940.75  4940.75  4940.75  4972.75  4972.75  4972.75  4972.75
             5019.25  5019.25  5019.25  5019.25  5051.25  5051.25  5051.25  5051.25
   BBC fr=    740.75   740.75   740.75   740.75   772.75   772.75   772.75   772.75
              819.25   819.25   819.25   819.25   851.25   851.25   851.25   851.25
   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=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
    barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* ARP299	11 25 44.174219	* 11 28 33.622010	11 29 24.944341	0.00
	58 50 18.17319	* 58 33 46.61000	58 28 54.23793	0.00
* J1128+5925	11 25 23.181652	* 11 28 13.340676	11 29 04.838158	0.00
	59 41 46.14397	* 59 25 14.79866	59 20 22.65881	0.00
* 4C39.25	09 23 55.319215	* 09 27 03.013936	09 27 59.760513	0.30
J0927+3902	39 15 23.56645	* 39 02 20.85186	38 58 21.00779	0.16
0923+392	/Users/torres/sched_11.4/catalogs/sources.gsfc			
J0927+39	GSFC 2015a astro solution, unpublished 245753 observations.			
* 3C286	13 28 49.657758	* 13 31 08.288051	13 31 51.681423	0.18
J1331+3030	30 45 58.64059	* 30 30 32.95924	30 25 57.59156	0.17
1328+307	/Users/torres/sched_11.4/catalogs/sources.gsfc			
J1331+30	GSFC 2015a astro solution, unpublished 225 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)
ARP299	75.2
J1128+5925	74.9
4C39.25	59.5
3C286	108.0

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

eh030btr

NGC1614 - 6.0cm

PI: *Ruben Herrero-Illana*


```
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```


```
Observing mode: 1024 Mbps

Schedule for TORUN     (Code Tr )                                  Page   2
               NGC1614 - 6.0cm
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   6 Jun 2015   Day 157 ---

 Next scan frequencies:  4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
                         5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
 Next BBC frequencies:    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
                          806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
 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

08 00 00  3C454.3      02 11 56  36.8 245.4  3.3      34.7     0        0   08 00 00
08 03 30  ---          02 15 27  36.3 246.3  3.3      34.9   210       27   08 00 01

08 03 30  3C454.3      02 15 27  36.3 246.3  3.3      34.9    -5       27   No stop
08 07 10  ---          02 19 07  35.8 247.2  3.4      35.2   215       55   08 03 31

08 07 50  J0427-0700   02 19 47  24.1 144.7 -2.1     -20.5  -178       55   08 07 50
08 12 40  ---          02 24 38  24.5 146.0 -2.1     -19.8   112       92   08 07 51

08 12 40  NGC1614      02 24 38  22.4 144.9 -2.2     -20.4   -21       92   No stop
08 16 10  ---          02 28 09  22.7 145.8 -2.1     -20.0   189      119   08 12 41

08 16 10  J0427-0700   02 28 09  24.8 146.9 -2.0     -19.3   -22      119   No stop
08 16 50  ---          02 28 49  24.8 147.0 -2.0     -19.2    18      124   08 16 11

08 16 50  NGC1614      02 28 49  22.8 145.9 -2.1     -19.9   -21      124   No stop
08 20 32  ---          02 32 31  23.1 146.9 -2.0     -19.4   201      153   08 16 51

08 21 12  J0427-0700   02 33 11  25.2 148.2 -1.9     -18.6    19      153   08 21 12
08 21 52  ---          02 33 52  25.2 148.3 -1.9     -18.5    40      158   08 21 13

08 21 52  NGC1614      02 33 52  23.2 147.2 -2.0     -19.2   -21      158   No stop
08 25 30  ---          02 37 30  23.5 148.1 -2.0     -18.7   197      186   08 21 53
```

Schedule for TORUN (Code Tr) Page 3

NGC1614 - 6.0cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
08 25 30	J0427-0700	02 37 30	25.5	149.3	-1.8		-18.0	-21	186	No stop
08 26 40	---	02 38 40	25.6	149.6	-1.8		-17.8	49	195	08 25 31
08 26 40	NGC1614	02 38 40	23.6	148.4	-1.9		-18.5	-21	195	No stop
08 30 18	---	02 42 19	23.9	149.4	-1.9		-18.0	197	223	08 26 41
08 30 58	J0427-0700	02 42 59	25.9	150.7	-1.8		-17.2	19	223	08 30 58
08 31 38	---	02 43 39	26.0	150.9	-1.7		-17.1	40	228	08 30 59
08 31 38	NGC1614	02 43 39	24.0	149.7	-1.9		-17.8	-21	228	No stop
08 35 16	---	02 47 18	24.3	150.7	-1.8		-17.3	197	256	08 31 39
08 35 16	J0427-0700	02 47 18	26.2	151.9	-1.7		-16.6	-21	256	No stop
08 36 26	---	02 48 28	26.3	152.2	-1.7		-16.4	49	265	08 35 17
08 36 26	NGC1614	02 48 28	24.3	151.0	-1.8		-17.1	-21	265	No stop
08 40 04	---	02 52 07	24.6	151.9	-1.7		-16.6	197	293	08 36 27
08 40 44	J0427-0700	02 52 47	26.6	153.3	-1.6		-15.8	19	293	08 40 44
08 41 24	---	02 53 27	26.7	153.5	-1.6		-15.7	40	298	08 40 45
08 41 24	NGC1614	02 53 27	24.7	152.3	-1.7		-16.4	-21	298	No stop
08 45 02	---	02 57 05	25.0	153.2	-1.6		-15.9	197	326	08 41 25
08 45 02	J0427-0700	02 57 05	26.9	154.5	-1.5		-15.1	-21	326	No stop
08 46 12	---	02 58 16	27.0	154.8	-1.5		-14.9	49	335	08 45 03
08 46 12	NGC1614	02 58 16	25.0	153.5	-1.6		-15.7	-21	335	No stop
08 49 50	---	03 01 54	25.3	154.5	-1.5		-15.2	197	363	08 46 13
08 50 30	J0427-0700	03 02 34	27.2	156.0	-1.4		-14.3	19	363	08 50 30
08 51 10	---	03 03 14	27.3	156.1	-1.4		-14.2	40	368	08 50 31
08 51 10	NGC1614	03 03 14	25.4	154.8	-1.5		-15.0	-21	368	No stop
08 54 48	---	03 06 53	25.6	155.8	-1.5		-14.4	197	396	08 51 11
08 54 48	J0427-0700	03 06 53	27.5	157.1	-1.4		-13.6	-21	396	No stop
08 55 58	---	03 08 03	27.6	157.4	-1.3		-13.4	49	405	08 54 49
08 55 58	NGC1614	03 08 03	25.7	156.1	-1.4		-14.2	-21	405	No stop
08 59 36	---	03 11 42	25.9	157.1	-1.4		-13.7	197	433	08 55 59
09 00 16	J0427-0700	03 12 22	27.8	158.6	-1.3		-12.7	19	433	09 00 16
09 00 56	---	03 13 02	27.8	158.8	-1.3		-12.6	40	438	09 00 17
09 00 56	NGC1614	03 13 02	26.0	157.4	-1.4		-13.5	-21	438	No stop
09 04 34	---	03 16 41	26.2	158.4	-1.3		-12.9	197	466	09 00 57

Schedule for TORUN (Code Tr) Page 4

NGC1614 - 6.0cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
09 04 34	J0427-0700	03 16 41	28.0	159.8	-1.2		-12.1	-21	466	No stop
09 05 44	---	03 17 51	28.1	160.1	-1.2		-11.9	49	475	09 04 35
09 05 44	NGC1614	03 17 51	26.2	158.7	-1.3		-12.7	-21	475	No stop
09 09 22	---	03 21 29	26.4	159.7	-1.2		-12.2	197	503	09 05 45
09 10 02	J0427-0700	03 22 10	28.3	161.3	-1.1		-11.2	19	503	09 10 02
09 10 42	---	03 22 50	28.3	161.5	-1.1		-11.1	40	508	09 10 03
09 10 42	NGC1614	03 22 50	26.5	160.1	-1.2		-11.9	-21	508	No stop
09 14 20	---	03 26 28	26.7	161.1	-1.1		-11.4	197	536	09 10 43
09 14 20	J0427-0700	03 26 28	28.5	162.5	-1.0		-10.5	-21	536	No stop
09 15 30	---	03 27 38	28.6	162.8	-1.0		-10.3	49	545	09 14 21
09 15 30	NGC1614	03 27 38	26.7	161.4	-1.1		-11.2	-21	545	No stop
09 19 08	---	03 31 17	26.9	162.4	-1.1		-10.6	197	573	09 15 31
09 19 48	J0427-0700	03 31 57	28.8	164.0	-0.9		-9.6	19	573	09 19 48
09 20 28	---	03 32 37	28.8	164.2	-0.9		-9.5	40	578	09 19 49
09 20 28	NGC1614	03 32 37	27.0	162.7	-1.0		-10.4	-21	578	No stop
09 24 06	---	03 36 16	27.1	163.7	-1.0		-9.8	197	606	09 20 29
09 24 06	J0427-0700	03 36 16	28.9	165.2	-0.9		-8.9	-21	606	No stop
09 25 16	---	03 37 26	29.0	165.6	-0.8		-8.7	49	615	09 24 07
09 25 16	NGC1614	03 37 26	27.2	164.0	-1.0		-9.6	-20	615	No stop
09 28 54	---	03 41 05	27.3	165.0	-0.9		-9.0	198	643	09 25 17
09 29 34	J0427-0700	03 41 45	29.1	166.8	-0.8		-7.9	19	643	09 29 34
09 30 14	---	03 42 25	29.1	167.0	-0.8		-7.8	40	648	09 29 35
09 30 14	NGC1614	03 42 25	27.4	165.4	-0.9		-8.8	-20	648	No stop
09 33 52	---	03 46 03	27.5	166.4	-0.8		-8.2	198	676	09 30 15
09 33 52	J0427-0700	03 46 03	29.3	168.0	-0.7		-7.2	-20	676	No stop
09 35 02	---	03 47 14	29.3	168.3	-0.7		-7.0	50	685	09 33 53
09 35 02	NGC1614	03 47 14	27.5	166.7	-0.8		-8.0	-20	685	No stop
09 38 40	---	03 50 52	27.7	167.7	-0.7		-7.4	198	713	09 35 03
09 39 20	J0427-0700	03 51 32	29.4	169.6	-0.6		-6.3	20	713	09 39 20
09 40 00	---	03 52 12	29.4	169.7	-0.6		-6.2	40	718	09 39 21
09 40 00	NGC1614	03 52 12	27.7	168.1	-0.7		-7.2	-20	718	No stop
09 43 38	---	03 55 51	27.8	169.1	-0.6		-6.6	198	746	09 40 01
09 43 38	J0427-0700	03 55 51	29.5	170.8	-0.5		-5.6	-20	746	No stop
09 44 48	---	03 57 01	29.6	171.1	-0.5		-5.4	50	755	09 43 39

Schedule for TORUN (Code Tr) Page 5

NGC1614 - 6.0cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
09 44 48	NGC1614	03 57 01	27.8	169.4	-0.6		-6.4	-20	755	No stop
09 48 26	---	04 00 40	27.9	170.5	-0.6		-5.8	198	783	09 44 49
09 49 06	J0427-0700	04 01 20	29.7	172.3	-0.4		-4.6	20	783	09 49 06
09 49 46	---	04 02 00	29.7	172.5	-0.4		-4.5	40	788	09 49 07
09 49 46	NGC1614	04 02 00	28.0	170.8	-0.5		-5.6	-20	788	No stop
09 53 24	---	04 05 39	28.0	171.8	-0.5		-4.9	198	816	09 49 47
09 53 24	J0427-0700	04 05 39	29.7	173.6	-0.4		-3.9	-20	816	No stop
09 54 34	---	04 06 49	29.8	173.9	-0.4		-3.7	50	825	09 53 25
09 54 34	NGC1614	04 06 49	28.1	172.2	-0.5		-4.7	-20	825	No stop
09 58 12	---	04 10 27	28.1	173.2	-0.4		-4.1	198	853	09 54 35
09 58 52	J0427-0700	04 11 08	29.8	175.1	-0.3		-2.9	20	853	09 58 52
09 59 32	---	04 11 48	29.8	175.3	-0.3		-2.8	40	858	09 58 53
09 59 32	NGC1614	04 11 48	28.2	173.6	-0.4		-3.9	-20	858	No stop
10 03 10	---	04 15 26	28.2	174.6	-0.3		-3.3	198	886	09 59 33
10 03 10	J0427-0700	04 15 26	29.9	176.4	-0.2		-2.2	-20	886	No stop
10 04 20	---	04 16 36	29.9	176.7	-0.2		-2.0	50	895	10 03 11
10 04 20	NGC1614	04 16 36	28.2	174.9	-0.3		-3.1	-20	895	No stop
10 07 58	---	04 20 15	28.3	175.9	-0.2		-2.5	198	923	10 04 21
10 08 38	J0427-0700	04 20 55	29.9	177.9	-0.1		-1.3	20	923	10 08 38
10 09 18	---	04 21 35	29.9	178.1	-0.1		-1.1	40	928	10 08 39
10 09 18	NGC1614	04 21 35	28.3	176.3	-0.2		-2.2	-20	928	No stop
10 12 56	---	04 25 14	28.3	177.3	-0.2		-1.6	198	956	10 09 19
10 12 56	J0427-0700	04 25 14	29.9	179.2	-0.0		-0.5	-20	956	No stop
10 14 06	---	04 26 24	29.9	179.5	-0.0		-0.3	50	965	10 12 57
10 14 06	NGC1614	04 26 24	28.3	177.7	-0.1		-1.4	-20	965	No stop
10 17 44	---	04 30 03	28.3	178.7	-0.1		-0.8	198	993	10 14 07
10 18 24	J0427-0700	04 30 43	29.9	180.7	0.0		0.4	20	993	10 18 24
10 19 04	---	04 31 23	29.9	180.9	0.1		0.6	40	998	10 18 25
10 19 04	NGC1614	04 31 23	28.3	179.1	-0.1		-0.6	-19	998	No stop
10 22 42	---	04 35 01	28.4	180.1	0.0		0.1	199	1026	10 19 05
10 22 42	J0427-0700	04 35 01	29.9	182.0	0.1		1.2	-19	1026	No stop
10 23 52	---	04 36 12	29.9	182.3	0.1		1.4	51	1035	10 22 43
10 23 52	NGC1614	04 36 12	28.4	180.4	0.0		0.3	-19	1035	No stop
10 27 30	---	04 39 50	28.3	181.4	0.1		0.9	199	1063	10 23 53

Schedule for TORUN (Code Tr) Page 6

NGC1614 - 6.0cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
10 28 10	J0427-0700	04 40 30	29.9	183.5	0.2		2.1	21	1063	10 28 10
10 28 50	---	04 41 10	29.9	183.7	0.2		2.3	40	1068	10 28 11
10 28 50	NGC1614	04 41 10	28.3	181.8	0.1		1.1	-19	1068	No stop
10 32 28	---	04 44 49	28.3	182.8	0.2		1.7	199	1096	10 28 51
10 32 28	J0427-0700	04 44 49	29.8	184.8	0.3		2.9	-19	1096	No stop
10 33 38	---	04 45 59	29.8	185.1	0.3		3.1	51	1105	10 32 29
10 33 38	NGC1614	04 45 59	28.3	183.2	0.2		1.9	-19	1105	No stop
10 37 16	---	04 49 38	28.3	184.2	0.2		2.5	199	1133	10 33 39
10 37 56	J0427-0700	04 50 18	29.7	186.3	0.4		3.8	21	1133	10 37 56
10 38 36	---	04 50 58	29.7	186.5	0.4		3.9	40	1138	10 37 57
10 38 36	NGC1614	04 50 58	28.3	184.6	0.3		2.8	-19	1138	No stop
10 42 14	---	04 54 37	28.2	185.6	0.3		3.4	199	1166	10 38 37
10 42 14	J0427-0700	04 54 37	29.7	187.6	0.4		4.6	-19	1166	No stop
10 43 24	---	04 55 47	29.6	187.9	0.5		4.8	51	1175	10 42 15
10 43 24	NGC1614	04 55 47	28.2	185.9	0.4		3.6	-19	1175	No stop
10 47 02	---	04 59 25	28.1	186.9	0.4		4.2	199	1203	10 43 25
10 47 42	J0427-0700	05 00 06	29.5	189.1	0.5		5.5	21	1203	10 47 42
10 48 22	---	05 00 46	29.5	189.3	0.5		5.6	40	1208	10 47 43
10 48 22	NGC1614	05 00 46	28.1	187.3	0.4		4.4	-19	1208	No stop
10 52 00	---	05 04 24	28.0	188.3	0.5		5.0	199	1236	10 48 23
10 52 00	J0427-0700	05 04 24	29.4	190.3	0.6		6.2	-19	1236	No stop
10 53 10	---	05 05 34	29.4	190.7	0.6		6.4	51	1245	10 52 01
10 53 10	NGC1614	05 05 34	28.0	188.6	0.5		5.2	-19	1245	No stop
10 56 48	---	05 09 13	27.9	189.7	0.6		5.8	199	1273	10 53 11
10 57 28	J0427-0700	05 09 53	29.3	191.9	0.7		7.2	21	1273	10 57 28
10 58 08	---	05 10 33	29.3	192.1	0.7		7.3	40	1278	10 57 29
10 58 08	NGC1614	05 10 33	27.9	190.0	0.6		6.1	-19	1278	No stop
11 01 46	---	05 14 12	27.8	191.0	0.7		6.7	199	1306	10 58 09
11 01 46	J0427-0700	05 14 12	29.1	193.1	0.8		7.9	-18	1306	No stop
11 02 56	---	05 15 22	29.1	193.4	0.8		8.1	52	1315	11 01 47

Schedule for TORUN (Code Tr) Page 7

NGC1614 - 6.0cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
11 02 56	NGC1614	05 15 22	27.7	191.4	0.7		6.9	-18	1315	No stop
11 06 34	---	05 19 01	27.6	192.4	0.7		7.5	200	1343	11 02 57
11 07 14	J0427-0700	05 19 41	28.9	194.6	0.9		8.8	22	1343	11 07 14
11 07 54	---	05 20 21	28.9	194.8	0.9		8.9	40	1348	11 07 15
11 07 54	NGC1614	05 20 21	27.6	192.7	0.8		7.7	-18	1348	No stop
11 11 32	---	05 23 59	27.5	193.8	0.8		8.3	200	1376	11 07 55
11 11 32	J0427-0700	05 23 59	28.8	195.8	0.9		9.5	-18	1376	No stop
11 12 42	---	05 25 10	28.7	196.2	0.9		9.7	52	1385	11 11 33
11 12 42	NGC1614	05 25 10	27.4	194.1	0.8		8.5	-18	1385	No stop
11 16 20	---	05 28 48	27.3	195.1	0.9		9.1	200	1413	11 12 43
11 17 00	J0427-0700	05 29 28	28.5	197.4	1.0		10.4	22	1413	11 17 00
11 17 40	---	05 30 08	28.5	197.6	1.0		10.5	40	1418	11 17 01
11 17 40	NGC1614	05 30 08	27.2	195.4	0.9		9.3	-18	1418	No stop
11 21 18	---	05 33 47	27.1	196.4	1.0		9.9	200	1446	11 17 41
11 21 18	J0427-0700	05 33 47	28.3	198.6	1.1		11.1	-18	1446	No stop
11 22 28	---	05 34 57	28.3	198.9	1.1		11.3	52	1455	11 21 19
11 22 28	NGC1614	05 34 57	27.0	196.8	1.0		10.1	-18	1455	No stop
11 26 06	---	05 38 36	26.9	197.8	1.1		10.7	200	1483	11 22 29
11 26 46	J0427-0700	05 39 16	28.1	200.1	1.2		12.0	22	1483	11 26 46
11 27 26	---	05 39 56	28.0	200.3	1.2		12.1	40	1488	11 26 47
11 27 26	NGC1614	05 39 56	26.8	198.1	1.1		10.9	-18	1488	No stop
11 31 04	---	05 43 35	26.6	199.1	1.1		11.5	200	1516	11 27 27
11 31 04	J0427-0700	05 43 35	27.8	201.3	1.3		12.7	-18	1516	No stop
11 32 14	---	05 44 45	27.8	201.6	1.3		12.9	52	1525	11 31 05
11 32 14	NGC1614	05 44 45	26.6	199.4	1.2		11.7	-18	1525	No stop
11 35 52	---	05 48 23	26.4	200.4	1.2		12.2	200	1553	11 32 15
11 36 32	J0427-0700	05 49 04	27.5	202.8	1.3		13.5	22	1553	11 36 32
11 37 12	---	05 49 44	27.5	202.9	1.4		13.6	40	1558	11 36 33
11 37 12	NGC1614	05 49 44	26.3	200.8	1.3		12.4	-18	1558	No stop
11 40 50	---	05 53 22	26.1	201.8	1.3		13.0	200	1586	11 37 13

Schedule for TORUN (Code Tr) Page 8

NGC1614 - 6.0cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
11 40 50	J0427-0700	05 53 22	27.3	203.9	1.4		14.2	-18	1586	No stop
11 42 00	---	05 54 32	27.2	204.2	1.4		14.4	52	1595	11 40 51
11 42 00	NGC1614	05 54 32	26.1	202.1	1.3		13.2	-18	1595	No stop
11 45 38	---	05 58 11	25.8	203.0	1.4		13.7	200	1623	11 42 01
11 46 18	J0427-0700	05 58 51	26.9	205.4	1.5		15.0	22	1623	11 46 18
11 46 58	---	05 59 31	26.9	205.6	1.5		15.1	40	1628	11 46 19
11 46 58	NGC1614	05 59 31	25.8	203.4	1.4		14.0	-18	1628	No stop
11 50 36	---	06 03 10	25.5	204.4	1.5		14.5	200	1656	11 46 59
11 50 36	J0427-0700	06 03 10	26.6	206.6	1.6		15.7	-18	1656	No stop
11 51 46	---	06 04 20	26.6	206.9	1.6		15.9	52	1665	11 50 37
11 51 46	NGC1614	06 04 20	25.5	204.7	1.5		14.7	-18	1665	No stop
11 55 24	---	06 07 59	25.2	205.6	1.6		15.2	200	1693	11 51 47
11 56 04	J0427-0700	06 08 39	26.3	208.0	1.7		16.5	22	1693	11 56 04
11 56 44	---	06 09 19	26.2	208.2	1.7		16.6	40	1698	11 56 05
11 56 44	NGC1614	06 09 19	25.2	206.0	1.6		15.4	-18	1698	No stop
12 00 22	---	06 12 57	24.9	206.9	1.6		16.0	200	1726	11 56 45
12 00 22	J0427-0700	06 12 57	26.0	209.2	1.7		17.1	-19	1726	No stop
12 01 32	---	06 14 08	25.9	209.5	1.8		17.3	51	1735	12 00 23
12 01 32	NGC1614	06 14 08	24.8	207.3	1.7		16.1	-18	1735	No stop
12 05 10	---	06 17 46	24.6	208.2	1.7		16.7	200	1763	12 01 33
12 05 50	J0427-0700	06 18 26	25.5	210.6	1.8		17.9	21	1763	12 05 50
12 06 30	---	06 19 06	25.5	210.8	1.8		18.0	40	1768	12 05 51
12 06 30	NGC1614	06 19 06	24.5	208.6	1.7		16.9	-18	1768	No stop
12 10 08	---	06 22 45	24.2	209.5	1.8		17.4	200	1796	12 06 31
12 10 08	J0427-0700	06 22 45	25.2	211.7	1.9		18.6	-19	1796	No stop
12 11 18	---	06 23 55	25.1	212.0	1.9		18.7	51	1805	12 10 09
12 11 18	NGC1614	06 23 55	24.1	209.8	1.8		17.6	-18	1805	No stop
12 14 56	---	06 27 34	23.9	210.7	1.9		18.1	200	1833	12 11 19
12 15 36	J0427-0700	06 28 14	24.8	213.2	2.0		19.3	21	1833	12 15 36
12 16 16	---	06 28 54	24.7	213.3	2.0		19.4	40	1838	12 15 37

Schedule for TORUN (Code Tr) Page 9

NGC1614 - 6.0cm

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
12 16 16	NGC1614	06 28 54	23.7	211.1	1.9		18.3	-18	1838	No stop
12 19 54	---	06 32 33	23.5	212.0	2.0		18.8	200	1866	12 16 17
12 19 54	J0427-0700	06 32 33	24.4	214.3	2.1		19.9	-19	1866	No stop
12 21 04	---	06 33 43	24.3	214.6	2.1		20.1	51	1875	12 19 55
12 21 04	NGC1614	06 33 43	23.4	212.3	2.0		18.9	-18	1875	No stop
12 24 42	---	06 37 21	23.1	213.2	2.0		19.4	200	1903	12 21 05
12 25 22	J0427-0700	06 38 02	23.9	215.7	2.2		20.7	21	1903	12 25 22
12 26 02	---	06 38 42	23.9	215.8	2.2		20.7	40	1908	12 25 23
12 26 02	NGC1614	06 38 42	23.0	213.6	2.1		19.6	-18	1908	No stop
12 29 40	---	06 42 20	22.7	214.5	2.1		20.1	200	1936	12 26 03
12 29 40	J0427-0700	06 42 20	23.6	216.7	2.2		21.2	-19	1936	No stop
12 30 50	---	06 43 30	23.4	217.0	2.3		21.4	51	1945	12 29 41
12 30 50	NGC1614	06 43 30	22.6	214.8	2.1		20.3	-18	1945	No stop
12 34 28	---	06 47 09	22.2	215.7	2.2		20.8	200	1973	12 30 51
12 35 08	J0427-0700	06 47 49	23.1	218.1	2.3		21.9	21	1973	12 35 08
12 35 48	---	06 48 29	23.0	218.3	2.3		22.0	40	1978	12 35 09
12 35 48	NGC1614	06 48 29	22.1	216.0	2.2		20.9	-18	1978	No stop
12 39 26	---	06 52 08	21.8	216.9	2.3		21.4	200	2006	12 35 49
12 39 26	J0427-0700	06 52 08	22.7	219.2	2.4		22.5	-19	2006	No stop
12 40 36	---	06 53 18	22.5	219.5	2.4		22.6	51	2015	12 39 27
12 40 36	NGC1614	06 53 18	21.7	217.2	2.3		21.6	-18	2015	No stop
12 44 14	---	06 56 57	21.4	218.1	2.4		22.0	200	2043	12 40 37
12 44 54	J0427-0700	06 57 37	22.1	220.6	2.5		23.2	21	2043	12 44 54
12 45 34	---	06 58 17	22.1	220.7	2.5		23.2	40	2048	12 44 55
12 45 34	NGC1614	06 58 17	21.2	218.5	2.4		22.2	-18	2048	No stop
12 49 12	---	07 01 56	20.9	219.4	2.5		22.6	200	2076	12 45 35
12 49 12	J0427-0700	07 01 56	21.7	221.6	2.6		23.7	-19	2076	No stop
12 50 22	---	07 03 06	21.6	221.9	2.6		23.8	51	2085	12 49 13
12 50 22	NGC1614	07 03 06	20.8	219.6	2.5		22.8	-18	2085	No stop
12 54 00	---	07 06 44	20.4	220.5	2.5		23.2	200	2113	12 50 23

```
Schedule for TORUN     (Code Tr )                                Page  10
              NGC1614 - 6.0cm
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   6 Jun 2015   Day 157 ---

12 54 40  J0427-0700   07 07 24  21.1 223.0  2.7      24.3    21     2113   12 54 40
12 55 30  ---          07 08 15  21.1 223.2  2.7      24.4    50     2119   12 54 41

12 55 30  NGC1614      07 08 15  20.3 220.9  2.6      23.4   -18     2119   No stop
12 58 50  ---          07 11 35  19.9 221.7  2.6      23.8   182     2145   12 55 31

12 58 50  J0427-0700   07 11 35  20.7 224.0  2.7      24.8   -19     2145   No stop
13 00 00  ---          07 12 45  20.6 224.2  2.7      25.0    51     2154   12 58 51

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

 ======== Setup file: sess215.C1024

   Setup group:    8         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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=   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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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=   4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
             5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
   BBC fr=    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
              806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
   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=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
    barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* NGC1614	04 31 35.696438	* 04 34 00.027000	04 34 43.287017	0.00
	-08 40 57.34737	*-08 34 45.12000	-08 33 02.84712	0.00
* J0427-0700	04 25 00.008158	* 04 27 26.159237	04 28 09.998985	0.00
	-07 07 10.04282	*-07 00 31.26378	-06 58 40.68679	0.00
* 3C454.3	22 51 29.519738	* 22 53 57.747938	22 54 43.827211	0.67
J2253+1608	15 52 54.34810	* 16 08 53.56093	16 13 45.86746	0.70
2251+158	/Users/herrero/sched114/catalogs/sources.gsfc			
J2253+16	GSFC 2015a astro solution, unpublished 40748 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)
NGC1614	31.7
J0427-0700	30.4
3C454.3	84.3

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

ek035tr

Inclination Dependences of Optical-UV Broad Emission Line Profiles

PI: *Jun Yi Koay*


```
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          Copenhagen O
          Denmark
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EMAIL:    koayjy@dark-cosmology.dk
Phone during observation: +4542681063
```


```
Observing mode: 6cm EVN/MKV

Schedule for TORUN     (Code Tr )                                    Page   2
               Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   6 Jun 2015   Day 157 ---

 Next scan frequencies:  4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
                         5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
 Next BBC frequencies:    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
                          806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
 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

16 00 00  1402-012     10 13 15  17.2 117.4 -3.9     -32.2     0        0   16 00 00
16 09 00  ---          10 22 16  18.4 119.4 -3.7     -31.6   540       69   16 00 01

16 10 20  1442+101     10 23 37  22.5 103.9 -4.4     -36.3    34       69   16 10 20
16 16 20  ---          10 29 38  23.3 105.2 -4.3     -36.0   360      115   16 10 21

16 17 40  1402-012     10 30 58  19.5 121.3 -3.6     -30.9    33      115   16 17 40
16 26 40  ---          10 39 59  20.6 123.4 -3.4     -30.1   540      185   16 17 41

16 28 00  1442+101     10 41 19  25.0 107.8 -4.1     -35.5    33      185   16 28 00
16 34 00  ---          10 47 20  25.9 109.1 -4.0     -35.2   360      231   16 28 01

16 35 20  1402-012     10 48 41  21.7 125.4 -3.3     -29.3    33      231   16 35 20
16 44 20  ---          10 57 42  22.8 127.6 -3.1     -28.4   540      300   16 35 21

16 45 40  1442+101     10 59 02  27.5 111.7 -3.8     -34.5    33      300   16 45 40
16 51 40  ---          11 05 03  28.4 113.1 -3.7     -34.1   360      346   16 45 41

16 53 00  1402-012     11 06 24  23.8 129.7 -3.0     -27.5    32      346   16 53 00
17 02 00  ---          11 15 25  24.8 131.9 -2.8     -26.6   540      415   16 53 01

17 03 20  1442+101     11 16 45  29.9 115.9 -3.5     -33.3    33      415   17 03 20
17 09 20  ---          11 22 46  30.8 117.3 -3.4     -32.8   360      462   17 03 21

17 14 10  3C345        11 27 37  36.9  70.5 -5.3     -47.5   180      462   17 14 10
17 19 10  ---          11 32 38  37.6  71.3 -5.2     -47.8   300      500   17 14 11

17 23 20  J1313-2722   11 36 49   6.7 158.5 -1.6     -14.4    61      500   17 23 20
17 24 20  =1310-271    11 37 49   6.8 158.7 -1.6     -14.2    60      508   17 23 21
```

Schedule for TORUN (Code Tr) Page 3

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
17 24 20	1311-270	11 37 49	6.8	158.5	-1.6		-14.4	-9	508	No stop
17 27 45	---	11 41 14	7.0	159.2	-1.6		-13.9	196	534	17 24 21
17 27 45	J1313-2722	11 41 14	7.0	159.4	-1.5		-13.8	-9	534	No stop
17 29 25	=1310-271	11 42 55	7.0	159.8	-1.5		-13.5	91	547	17 27 46
17 29 25	1311-270	11 42 55	7.1	159.6	-1.5		-13.6	-9	547	No stop
17 32 50	---	11 46 20	7.3	160.3	-1.5		-13.2	196	573	17 29 26
17 33 25	J1313-2722	11 46 55	7.2	160.7	-1.4		-13.0	26	573	17 33 25
17 34 55	=1310-271	11 48 25	7.3	161.0	-1.4		-12.7	90	585	17 33 26
17 34 55	1311-270	11 48 25	7.4	160.8	-1.4		-12.9	-9	585	No stop
17 38 20	---	11 51 51	7.5	161.5	-1.4		-12.4	196	611	17 34 56
17 38 20	J1313-2722	11 51 51	7.5	161.7	-1.4		-12.3	-9	611	No stop
17 40 00	=1310-271	11 53 31	7.6	162.1	-1.3		-12.0	91	624	17 38 21
17 40 00	1311-270	11 53 31	7.6	161.9	-1.4		-12.1	-9	624	No stop
17 43 25	---	11 56 57	7.8	162.7	-1.3		-11.6	196	650	17 40 01
17 44 00	J1313-2722	11 57 32	7.7	163.0	-1.3		-11.4	26	650	17 44 00
17 45 30	=1310-271	11 59 02	7.8	163.3	-1.2		-11.2	90	662	17 44 01
17 45 30	1311-270	11 59 02	7.9	163.1	-1.3		-11.3	-9	662	No stop
17 48 55	---	12 02 28	8.0	163.9	-1.2		-10.8	196	688	17 45 31
17 48 55	J1313-2722	12 02 28	8.0	164.1	-1.2		-10.7	-9	688	No stop
17 50 35	=1310-271	12 04 08	8.0	164.4	-1.2		-10.5	91	701	17 48 56
17 50 35	1311-270	12 04 08	8.1	164.2	-1.2		-10.6	-9	701	No stop
17 54 00	---	12 07 34	8.2	165.0	-1.1		-10.1	196	727	17 50 36
17 54 35	J1313-2722	12 08 09	8.2	165.3	-1.1		-9.9	26	727	17 54 35
17 56 05	=1310-271	12 09 39	8.2	165.6	-1.1		-9.7	90	738	17 54 36
17 56 05	1311-270	12 09 39	8.3	165.5	-1.1		-9.8	-9	738	No stop
17 59 30	---	12 13 04	8.4	166.2	-1.0		-9.3	196	765	17 56 06
17 59 30	J1313-2722	12 13 04	8.4	166.4	-1.0		-9.2	-9	765	No stop
18 01 10	=1310-271	12 14 45	8.4	166.8	-1.0		-8.9	91	778	17 59 31
18 01 10	1311-270	12 14 45	8.5	166.6	-1.0		-9.0	-9	778	No stop
18 04 35	---	12 18 10	8.6	167.3	-0.9		-8.5	196	804	18 01 11
18 05 10	J1313-2722	12 18 45	8.5	167.7	-0.9		-8.3	26	804	18 05 10
18 06 40	=1310-271	12 20 16	8.6	168.0	-0.9		-8.1	90	815	18 05 11
18 06 40	1311-270	12 20 16	8.7	167.8	-0.9		-8.2	-9	815	No stop
18 10 05	---	12 23 41	8.8	168.6	-0.8		-7.7	196	842	18 06 41

Schedule for TORUN (Code Tr) Page 4

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
18 10 05	J1313-2722	12 23 41	8.7	168.8	-0.8		-7.6	-9	842	No stop
18 11 45	=1310-271	12 25 21	8.7	169.1	-0.8		-7.3	91	854	18 10 06
18 11 45	1311-270	12 25 21	8.8	168.9	-0.8		-7.5	-9	854	No stop
18 15 10	---	12 28 47	8.9	169.7	-0.8		-6.9	196	881	18 11 46
18 15 45	J1313-2722	12 29 22	8.9	170.0	-0.7		-6.7	26	881	18 15 45
18 17 15	=1310-271	12 30 52	8.9	170.4	-0.7		-6.5	90	892	18 15 46
18 17 15	1311-270	12 30 52	9.0	170.2	-0.7		-6.6	-9	892	No stop
18 20 40	---	12 34 18	9.1	170.9	-0.7		-6.1	196	919	18 17 16
18 20 40	J1313-2722	12 34 18	9.0	171.1	-0.7		-6.0	-9	919	No stop
18 22 20	=1310-271	12 35 58	9.0	171.5	-0.6		-5.7	91	931	18 20 41
18 22 20	1311-270	12 35 58	9.1	171.3	-0.6		-5.9	-9	931	No stop
18 25 45	---	12 39 24	9.2	172.1	-0.6		-5.3	196	958	18 22 21
18 26 20	J1313-2722	12 39 59	9.1	172.4	-0.6		-5.1	26	958	18 26 20
18 27 50	=1310-271	12 41 29	9.1	172.7	-0.5		-4.9	90	969	18 26 21
18 27 50	1311-270	12 41 29	9.2	172.5	-0.6		-5.0	-9	969	No stop
18 31 15	---	12 44 55	9.3	173.3	-0.5		-4.5	196	996	18 27 51
18 31 15	J1313-2722	12 44 55	9.2	173.5	-0.5		-4.4	-9	996	No stop
18 32 55	=1310-271	12 46 35	9.2	173.9	-0.5		-4.1	91	1008	18 31 16
18 32 55	1311-270	12 46 35	9.3	173.7	-0.5		-4.3	-9	1008	No stop
18 36 20	---	12 50 01	9.4	174.5	-0.4		-3.7	196	1035	18 32 56
18 36 55	J1313-2722	12 50 36	9.3	174.8	-0.4		-3.5	26	1035	18 36 55
18 38 25	=1310-271	12 52 06	9.3	175.1	-0.4		-3.3	90	1046	18 36 56
18 38 25	1311-270	12 52 06	9.4	174.9	-0.4		-3.4	-9	1046	No stop
18 41 50	---	12 55 31	9.4	175.7	-0.3		-2.9	196	1072	18 38 26
18 41 50	J1313-2722	12 55 31	9.3	175.9	-0.3		-2.8	-9	1072	No stop
18 43 30	=1310-271	12 57 12	9.4	176.2	-0.3		-2.5	91	1085	18 41 51
18 43 30	1311-270	12 57 12	9.5	176.1	-0.3		-2.7	-9	1085	No stop
18 46 55	---	13 00 37	9.5	176.8	-0.2		-2.1	196	1112	18 43 31
18 47 30	J1313-2722	13 01 12	9.4	177.1	-0.2		-1.9	26	1112	18 47 30
18 49 00	=1310-271	13 02 43	9.4	177.5	-0.2		-1.7	90	1123	18 47 31
18 49 00	1311-270	13 02 43	9.5	177.3	-0.2		-1.8	-9	1123	No stop
18 52 25	---	13 06 08	9.5	178.1	-0.1		-1.3	196	1149	18 49 01

Schedule for TORUN (Code Tr) Page 5

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
18 52 25	J1313-2722	13 06 08	9.4	178.3	-0.1		-1.2	-9	1149	No stop
18 54 05	=1310-271	13 07 48	9.4	178.6	-0.1		-0.9	91	1162	18 52 26
18 54 05	1311-270	13 07 48	9.5	178.5	-0.1		-1.0	-9	1162	No stop
18 57 30	---	13 11 14	9.5	179.2	-0.1		-0.5	196	1188	18 54 06
18 58 05	J1313-2722	13 11 49	9.4	179.5	-0.0		-0.3	26	1188	18 58 05
18 59 35	=1310-271	13 13 19	9.4	179.9	-0.0		-0.1	90	1200	18 58 06
18 59 35	1311-270	13 13 19	9.5	179.7	-0.0		-0.2	-9	1200	No stop
19 03 00	---	13 16 45	9.5	180.5	0.0		0.3	196	1226	18 59 36
19 03 00	J1313-2722	13 16 45	9.4	180.6	0.0		0.4	-9	1226	No stop
19 04 40	=1310-271	13 18 25	9.4	181.0	0.1		0.7	91	1239	19 03 01
19 04 40	1311-270	13 18 25	9.5	180.8	0.1		0.6	-9	1239	No stop
19 08 05	---	13 21 51	9.5	181.6	0.1		1.1	196	1265	19 04 41
19 08 40	J1313-2722	13 22 26	9.4	181.9	0.1		1.3	26	1265	19 08 40
19 10 10	=1310-271	13 23 56	9.4	182.3	0.2		1.5	90	1277	19 08 41
19 10 10	1311-270	13 23 56	9.5	182.1	0.2		1.4	-9	1277	No stop
19 13 35	---	13 27 22	9.5	182.9	0.2		1.9	196	1303	19 10 11
19 13 35	J1313-2722	13 27 22	9.4	183.0	0.2		2.0	-9	1303	No stop
19 15 15	=1310-271	13 29 02	9.4	183.4	0.3		2.3	91	1316	19 13 36
19 15 15	1311-270	13 29 02	9.5	183.2	0.2		2.2	-9	1316	No stop
19 18 40	---	13 32 27	9.4	184.0	0.3		2.7	196	1342	19 15 16
19 19 15	J1313-2722	13 33 03	9.3	184.3	0.3		2.9	26	1342	19 19 15
19 20 45	=1310-271	13 34 33	9.3	184.6	0.3		3.1	90	1354	19 19 16
19 25 45	3C345	13 39 34	56.3	94.4	-3.1		-51.2	104	1354	19 25 45
19 30 45	---	13 44 34	57.1	95.5	-3.0		-51.1	300	1392	19 25 46
19 33 30	1542+042	13 47 20	35.3	142.9	-2.0		-21.3	56	1392	19 33 30
19 38 30	---	13 52 21	35.7	144.3	-1.9		-20.6	300	1431	19 33 31
19 38 30	J1640+1220	13 52 21	37.2	124.4	-2.8		-30.5	-54	1431	No stop
19 40 50	=1638+124	13 54 41	37.5	125.0	-2.8		-30.2	86	1449	19 38 31
19 40 50	1629+120	13 54 41	38.2	127.7	-2.6		-29.1	-20	1449	No stop
19 44 15	---	13 58 07	38.6	128.6	-2.6		-28.7	185	1475	19 40 51

Schedule for TORUN (Code Tr) Page 6

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
19 44 15	J1640+1220	13 58 07	37.9	125.9	-2.7		-29.9	-20	1475	No stop
19 45 40	=1638+124	13 59 32	38.1	126.3	-2.7		-29.7	65	1486	19 44 16
19 46 25	1629+120	14 00 17	38.9	129.2	-2.5		-28.4	25	1486	19 46 25
19 49 25	---	14 03 18	39.2	130.1	-2.5		-28.0	180	1509	19 46 26
19 49 25	J1640+1220	14 03 18	38.5	127.3	-2.6		-29.3	-20	1509	No stop
19 50 50	=1638+124	14 04 43	38.7	127.7	-2.6		-29.1	65	1520	19 49 26
19 50 50	1629+120	14 04 43	39.4	130.5	-2.5		-27.8	-20	1520	No stop
19 54 15	---	14 08 08	39.8	131.4	-2.4		-27.4	185	1546	19 50 51
19 54 15	J1640+1220	14 08 08	39.1	128.6	-2.6		-28.7	-20	1546	No stop
19 55 40	=1638+124	14 09 34	39.3	129.0	-2.5		-28.5	65	1557	19 54 16
19 57 05	1705+018	14 10 59	27.0	128.3	-3.0		-28.1	25	1557	19 57 05
20 02 05	---	14 16 00	27.6	129.6	-2.9		-27.6	300	1596	19 57 06
20 03 40	1542+042	14 17 35	37.7	151.7	-1.5		-16.6	36	1596	20 03 40
20 08 40	---	14 22 36	38.1	153.3	-1.4		-15.7	300	1634	20 03 41
20 08 40	J1640+1220	14 22 36	40.7	132.7	-2.3		-26.8	-56	1634	No stop
20 11 00	=1638+124	14 24 56	41.0	133.4	-2.3		-26.5	84	1652	20 08 41
20 11 00	1629+120	14 24 56	41.6	136.3	-2.1		-25.1	-20	1652	No stop
20 14 25	---	14 28 22	41.9	137.3	-2.1		-24.6	185	1678	20 11 01
20 14 25	J1640+1220	14 28 22	41.4	134.4	-2.2		-26.1	-20	1678	No stop
20 15 50	=1638+124	14 29 47	41.5	134.8	-2.2		-25.9	65	1689	20 14 26
20 16 35	1629+120	14 30 32	42.2	137.9	-2.0		-24.3	25	1689	20 16 35
20 19 35	---	14 33 32	42.5	138.9	-2.0		-23.8	180	1712	20 16 36
20 19 35	J1640+1220	14 33 32	41.9	135.9	-2.1		-25.3	-20	1712	No stop
20 21 00	=1638+124	14 34 58	42.1	136.3	-2.1		-25.1	65	1723	20 19 36
20 21 00	1629+120	14 34 58	42.6	139.3	-2.0		-23.6	-21	1723	No stop
20 24 25	---	14 38 23	42.9	140.3	-1.9		-23.1	184	1749	20 21 01
20 24 25	J1640+1220	14 38 23	42.4	137.4	-2.1		-24.6	-20	1749	No stop
20 25 50	=1638+124	14 39 49	42.6	137.8	-2.0		-24.4	65	1760	20 24 26
20 27 15	1705+018	14 41 14	30.4	136.1	-2.5		-24.6	25	1760	20 27 15
20 32 15	---	14 46 15	30.9	137.4	-2.4		-24.0	300	1799	20 27 16

Schedule for TORUN (Code Tr) Page 7

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
20 33 50	1542+042	14 47 50	39.6	161.1	-1.0		-11.2	33	1799	20 33 50
20 38 50	---	14 52 51	39.8	162.7	-0.9		-10.3	300	1837	20 33 51
20 38 50	J1640+1220	14 52 51	43.8	141.8	-1.8		-22.3	-56	1837	No stop
20 41 10	=1638+124	14 55 11	44.0	142.5	-1.8		-22.0	84	1855	20 38 51
20 41 10	1629+120	14 55 11	44.5	145.6	-1.6		-20.3	-21	1855	No stop
20 44 35	---	14 58 37	44.7	146.7	-1.6		-19.7	184	1881	20 41 11
20 44 35	J1640+1220	14 58 37	44.3	143.6	-1.7		-21.4	-21	1881	No stop
20 46 00	=1638+124	15 00 02	44.5	144.1	-1.7		-21.1	64	1892	20 44 36
20 46 45	1629+120	15 00 47	44.9	147.4	-1.5		-19.3	24	1892	20 46 45
20 49 45	---	15 03 47	45.2	148.4	-1.5		-18.8	180	1915	20 46 46
20 49 45	J1640+1220	15 03 47	44.8	145.3	-1.6		-20.5	-21	1915	No stop
20 51 10	=1638+124	15 05 13	44.9	145.7	-1.6		-20.2	64	1926	20 49 46
20 51 10	1629+120	15 05 13	45.3	148.9	-1.5		-18.5	-21	1926	No stop
20 54 35	---	15 08 38	45.5	150.0	-1.4		-17.9	184	1953	20 51 11
20 54 35	J1640+1220	15 08 38	45.2	146.9	-1.5		-19.6	-21	1953	No stop
20 56 00	=1638+124	15 10 03	45.3	147.3	-1.5		-19.4	64	1963	20 54 36
20 57 25	1705+018	15 11 29	33.3	144.3	-1.9		-20.5	26	1963	20 57 25
21 02 25	---	15 16 30	33.7	145.7	-1.9		-19.8	300	2002	20 57 26
21 04 00	1542+042	15 18 05	40.7	170.9	-0.5		-5.5	30	2002	21 04 00
21 09 00	---	15 23 06	40.8	172.5	-0.4		-4.5	300	2040	21 04 01
21 09 00	J1640+1220	15 23 06	46.3	151.7	-1.3		-17.0	-56	2040	No stop
21 11 20	=1638+124	15 25 26	46.5	152.5	-1.3		-16.5	84	2058	21 09 01
21 11 20	1629+120	15 25 26	46.7	155.7	-1.1		-14.6	-21	2058	No stop
21 14 45	---	15 28 52	46.9	156.9	-1.1		-13.9	184	2085	21 11 21
21 14 45	J1640+1220	15 28 52	46.7	153.6	-1.2		-15.8	-21	2085	No stop
21 16 10	=1638+124	15 30 17	46.8	154.1	-1.2		-15.6	64	2096	21 14 46
21 16 55	1629+120	15 31 02	47.0	157.6	-1.0		-13.5	24	2096	21 16 55
21 19 55	---	15 34 02	47.2	158.7	-1.0		-12.9	180	2119	21 16 56
21 19 55	J1640+1220	15 34 02	47.0	155.4	-1.1		-14.8	-21	2119	No stop
21 21 20	=1638+124	15 35 28	47.1	155.9	-1.1		-14.5	64	2129	21 19 56

Schedule for TORUN (Code Tr) Page 8

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
21 21 20	1629+120	15 35 28	47.3	159.2	-1.0		-12.6	-21	2129	No stop
21 24 45	---	15 38 53	47.4	160.4	-0.9		-11.9	184	2156	21 21 21
21 24 45	J1640+1220	15 38 53	47.3	157.1	-1.0		-13.8	-21	2156	No stop
21 26 10	=1638+124	15 40 18	47.4	157.6	-1.0		-13.6	64	2167	21 24 46
21 27 35	1705+018	15 41 44	35.7	153.0	-1.4		-15.8	27	2167	21 27 35
21 32 35	---	15 46 44	36.0	154.5	-1.4		-15.0	300	2205	21 27 36
21 34 10	1542+042	15 48 20	41.0	180.8	0.0		0.5	28	2205	21 34 10
21 39 10	---	15 53 21	41.0	182.5	0.1		1.5	300	2244	21 34 11
21 42 05	J1800+3848	15 56 16	64.4	111.2	-2.1		-45.9	17	2244	21 42 05
21 47 05	=1758+388	16 01 17	65.1	112.8	-2.0		-45.2	300	2282	21 42 06
21 51 35	J1604-2223	16 05 48	14.5	180.2	0.0		0.1	66	2282	21 51 35
21 52 35	=1601-222	16 06 48	14.5	180.4	0.0		0.3	60	2290	21 51 36
21 52 35	1554-203	16 06 48	16.4	182.1	0.1		1.3	-21	2290	No stop
21 56 00	---	16 10 13	16.3	182.9	0.2		1.9	184	2316	21 52 36
21 56 00	J1604-2223	16 10 13	14.5	181.3	0.1		0.8	-21	2316	No stop
21 57 25	=1601-222	16 11 39	14.5	181.6	0.1		1.0	64	2327	21 56 01
21 57 25	1554-203	16 11 39	16.3	183.3	0.2		2.1	-21	2327	No stop
22 00 50	---	16 15 04	16.3	184.1	0.3		2.6	184	2353	21 57 26
22 01 30	J1604-2223	16 15 44	14.4	182.6	0.2		1.7	19	2353	22 01 30
22 02 30	=1601-222	16 16 44	14.4	182.8	0.2		1.8	60	2361	22 01 31
22 02 30	1554-203	16 16 44	16.3	184.5	0.3		2.9	-21	2361	No stop
22 05 55	---	16 20 10	16.2	185.3	0.4		3.4	184	2387	22 02 31
22 05 55	J1604-2223	16 20 10	14.4	183.6	0.3		2.4	-21	2387	No stop
22 07 20	=1601-222	16 21 35	14.4	184.0	0.3		2.6	64	2398	22 05 56
22 07 20	1554-203	16 21 35	16.2	185.7	0.4		3.6	-21	2398	No stop
22 10 45	---	16 25 01	16.1	186.5	0.4		4.2	184	2424	22 07 21
22 11 25	J1604-2223	16 25 41	14.3	184.9	0.3		3.2	19	2424	22 11 25
22 12 25	=1601-222	16 26 41	14.3	185.2	0.4		3.4	60	2432	22 11 26
22 12 25	1554-203	16 26 41	16.1	186.9	0.5		4.4	-20	2432	No stop
22 15 50	---	16 30 07	16.1	187.8	0.5		5.0	185	2458	22 12 26

Schedule for TORUN (Code Tr) Page 9

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
22 15 50	J1604-2223	16 30 07	14.3	186.0	0.4		3.9	-20	2458	No stop
22 17 15	=1601-222	16 31 32	14.2	186.3	0.4		4.1	65	2469	22 15 51
22 17 15	1554-203	16 31 32	16.0	188.1	0.6		5.2	-20	2469	No stop
22 20 40	---	16 34 57	15.9	188.9	0.6		5.7	185	2496	22 17 16
22 21 20	J1604-2223	16 35 37	14.2	187.3	0.5		4.7	20	2496	22 21 20
22 22 20	=1601-222	16 36 38	14.2	187.5	0.5		4.9	60	2503	22 21 21
22 22 20	1554-203	16 36 38	15.9	189.3	0.6		6.0	-20	2503	No stop
22 25 45	---	16 40 03	15.8	190.2	0.7		6.5	185	2529	22 22 21
22 25 45	J1604-2223	16 40 03	14.1	188.4	0.6		5.4	-20	2529	No stop
22 27 10	=1601-222	16 41 28	14.1	188.7	0.6		5.6	65	2540	22 25 46
22 27 10	1554-203	16 41 28	15.8	190.5	0.7		6.7	-20	2540	No stop
22 30 35	---	16 44 54	15.7	191.3	0.8		7.2	185	2567	22 27 11
22 31 15	J1604-2223	16 45 34	14.0	189.7	0.7		6.3	20	2567	22 31 15
22 32 15	=1601-222	16 46 34	13.9	189.9	0.7		6.4	60	2574	22 31 16
22 32 15	1554-203	16 46 34	15.6	191.7	0.8		7.5	-20	2574	No stop
22 35 40	---	16 50 00	15.5	192.6	0.9		8.0	185	2601	22 32 16
22 35 40	J1604-2223	16 50 00	13.8	190.7	0.8		6.9	-20	2601	No stop
22 37 05	=1601-222	16 51 25	13.8	191.0	0.8		7.2	65	2612	22 35 41
22 37 05	1554-203	16 51 25	15.5	192.9	0.9		8.2	-20	2612	No stop
22 40 30	---	16 54 51	15.4	193.7	0.9		8.8	185	2638	22 37 06
22 41 10	J1604-2223	16 55 31	13.7	192.0	0.8		7.8	20	2638	22 41 10
22 42 10	=1601-222	16 56 31	13.6	192.2	0.9		7.9	60	2646	22 41 11
22 42 10	1554-203	16 56 31	15.3	194.1	1.0		9.0	-20	2646	No stop
22 45 35	---	16 59 56	15.2	194.9	1.0		9.5	185	2672	22 42 11
22 45 35	J1604-2223	16 59 56	13.5	193.1	0.9		8.4	-20	2672	No stop
22 47 00	=1601-222	17 01 22	13.5	193.4	0.9		8.7	65	2683	22 45 36
22 47 00	1554-203	17 01 22	15.1	195.3	1.1		9.7	-20	2683	No stop
22 50 25	---	17 04 47	15.0	196.1	1.1		10.2	185	2709	22 47 01
22 51 05	J1604-2223	17 05 27	13.3	194.3	1.0		9.3	20	2709	22 51 05
22 52 05	=1601-222	17 06 28	13.3	194.6	1.0		9.4	60	2717	22 51 06

Schedule for TORUN (Code Tr) Page 10

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 6 Jun 2015 Day 157 ---										
22 52 05	1554-203	17 06 28	14.9	196.5	1.1		10.5	-20	2717	No stop
22 55 30	---	17 09 53	14.8	197.3	1.2		11.0	185	2743	22 52 06
22 55 30	J1604-2223	17 09 53	13.2	195.4	1.1		9.9	-20	2743	No stop
22 56 55	=1601-222	17 11 18	13.1	195.7	1.1		10.1	65	2754	22 55 31
22 56 55	1554-203	17 11 18	14.7	197.7	1.2		11.2	-19	2754	No stop
23 00 20	---	17 14 44	14.5	198.5	1.3		11.7	186	2780	22 56 56
23 01 00	J1604-2223	17 15 24	12.9	196.7	1.2		10.7	20	2780	23 01 00
23 02 00	=1601-222	17 16 24	12.9	196.9	1.2		10.9	60	2788	23 01 01
23 04 55	J1640+1220	17 19 20	48.5	194.0	0.6		8.6	27	2788	23 04 55
23 05 55	=1638+124	17 20 20	48.5	194.4	0.6		8.8	60	2796	23 04 56
23 05 55	1629+120	17 20 20	47.7	197.5	0.8		10.7	-21	2796	No stop
23 09 15	---	17 23 40	47.6	198.7	0.9		11.4	179	2821	23 05 56
23 09 15	J1640+1220	17 23 40	48.4	195.6	0.7		9.5	-21	2821	No stop
23 10 45	=1638+124	17 25 11	48.3	196.1	0.7		9.8	69	2833	23 09 16
23 10 45	1629+120	17 25 11	47.5	199.3	0.9		11.7	-21	2833	No stop
23 14 05	---	17 28 31	47.3	200.4	0.9		12.4	179	2858	23 10 46
23 14 05	J1640+1220	17 28 31	48.1	197.3	0.8		10.6	-21	2858	No stop
23 15 35	=1638+124	17 30 01	48.1	197.9	0.8		10.9	69	2870	23 14 06
23 15 35	1629+120	17 30 01	47.2	201.0	1.0		12.7	-21	2870	No stop
23 18 55	---	17 33 22	47.0	202.1	1.0		13.4	179	2896	23 15 36
23 19 40	J1640+1220	17 34 07	47.9	199.3	0.9		11.7	25	2896	23 19 40
23 20 40	=1638+124	17 35 07	47.8	199.7	0.9		12.0	60	2903	23 19 41
23 20 40	1629+120	17 35 07	46.9	202.8	1.0		13.7	-21	2903	No stop
23 24 00	---	17 38 28	46.7	203.9	1.1		14.4	179	2929	23 20 41
23 24 00	J1640+1220	17 38 28	47.7	200.9	0.9		12.7	-20	2929	No stop
23 25 30	=1638+124	17 39 58	47.6	201.4	1.0		13.0	70	2940	23 24 01
23 25 30	1629+120	17 39 58	46.7	204.4	1.1		14.7	-21	2940	No stop
23 28 50	---	17 43 19	46.4	205.6	1.2		15.4	179	2966	23 25 31
23 28 50	J1640+1220	17 43 19	47.4	202.6	1.0		13.7	-20	2966	No stop
23 30 20	=1638+124	17 44 49	47.3	203.1	1.1		14.0	70	2978	23 28 51

```
Schedule for TORUN     (Code Tr )                                  Page  11
              Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   6 Jun 2015   Day 157 ---

23 30 20  1629+120     17 44 49  46.3 206.1  1.2      15.7   -21     2978   No stop
23 33 40  ---          17 48 09  46.1 207.2  1.3      16.3   179     3003   23 30 21

23 34 25  J1640+1220   17 48 54  47.1 204.5  1.1      14.8    25     3003   23 34 25
23 35 25  =1638+124    17 49 55  47.0 204.9  1.1      15.0    60     3011   23 34 26

23 35 25  1629+120     17 49 55  46.0 207.8  1.3      16.6   -21     3011   No stop
23 38 45  ---          17 53 15  45.8 208.9  1.3      17.3   179     3037   23 35 26

23 38 45  J1640+1220   17 53 15  46.8 206.0  1.2      15.7   -20     3037   No stop
23 40 15  =1638+124    17 54 45  46.7 206.6  1.2      16.0    70     3048   23 38 46

23 40 15  1629+120     17 54 45  45.6 209.5  1.4      17.6   -20     3048   No stop
23 43 35  ---          17 58 06  45.4 210.6  1.4      18.2   180     3074   23 40 16

23 43 35  J1640+1220   17 58 06  46.4 207.7  1.3      16.6   -20     3074   No stop
23 45 05  =1638+124    17 59 36  46.3 208.2  1.3      16.9    70     3085   23 43 36

23 45 05  1629+120     17 59 36  45.3 211.1  1.5      18.5   -20     3085   No stop
23 48 25  ---          18 02 57  45.0 212.2  1.5      19.1   180     3111   23 45 06

23 49 10  J1640+1220   18 03 42  46.0 209.6  1.4      17.7    25     3111   23 49 10
23 50 10  =1638+124    18 04 42  46.0 209.9  1.4      17.9    60     3119   23 49 11

23 50 10  1629+120     18 04 42  44.9 212.7  1.5      19.4   -20     3119   No stop
23 53 30  ---          18 08 03  44.6 213.8  1.6      20.0   180     3144   23 50 11

23 53 30  J1640+1220   18 08 03  45.7 211.0  1.4      18.5   -20     3144   No stop
23 55 00  =1638+124    18 09 33  45.6 211.5  1.5      18.8    70     3156   23 53 31

23 55 00  1629+120     18 09 33  44.5 214.3  1.6      20.2   -20     3156   No stop
23 58 20  ---          18 12 53  44.2 215.4  1.7      20.8   180     3181   23 55 01

23 58 20  J1640+1220   18 12 53  45.3 212.6  1.5      19.4   -20     3181   No stop
23 59 50  =1638+124    18 14 24  45.2 213.1  1.5      19.6    70     3193   23 58 21

 --- Start: Sat   6 Jun 2015   Day 157 -- Stop: Sun   7 Jun 2015   Day 158 ---

23 59 50  1629+120     18 14 24  44.1 215.8  1.7      21.1   -20     3193   No stop
00 03 10  ---          18 17 44  43.8 216.9  1.8      21.6   180     3219   23 59 51

00 03 55  J1640+1220   18 18 29  44.9 214.5  1.6      20.4    26     3219   00 03 55
00 04 55  =1638+124    18 19 30  44.8 214.8  1.6      20.5    60     3226   00 03 56
```

Schedule for TORUN (Code Tr) Page 12

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
00 04 55	1629+120	18 19 30	43.6	217.5	1.8		21.9	-20	3226	No stop
00 08 15	---	18 22 50	43.3	218.5	1.8		22.5	180	3252	00 04 56
00 08 15	J1640+1220	18 22 50	44.5	215.9	1.7		21.1	-19	3252	No stop
00 09 45	=1638+124	18 24 20	44.4	216.3	1.7		21.4	71	3263	00 08 16
00 09 45	1629+120	18 24 20	43.2	219.0	1.9		22.7	-20	3263	No stop
00 13 05	---	18 27 41	42.8	220.0	1.9		23.2	180	3289	00 09 46
00 13 05	J1640+1220	18 27 41	44.1	217.4	1.8		21.9	-19	3289	No stop
00 14 35	=1638+124	18 29 11	43.9	217.9	1.8		22.2	71	3301	00 13 06
00 14 35	1629+120	18 29 11	42.7	220.5	1.9		23.5	-20	3301	No stop
00 17 55	---	18 32 32	42.4	221.5	2.0		24.0	180	3326	00 14 36
00 18 40	J1640+1220	18 33 17	43.5	219.1	1.9		22.8	26	3326	00 18 40
00 19 40	=1638+124	18 34 17	43.4	219.5	1.9		23.0	60	3334	00 18 41
00 25 35	3C454.3	18 40 13	28.7	101.4	-4.2		-37.8	103	3334	00 25 35
00 30 35	---	18 45 14	29.4	102.5	-4.2		-37.6	300	3372	00 25 36
00 32 10	J2151+0552	18 46 49	29.6	124.0	-3.1		-30.0	37	3372	00 32 10
00 33 10	=2149+056	18 47 49	29.8	124.3	-3.1		-29.9	60	3380	00 32 11
00 33 10	2150+053	18 47 49	29.3	124.0	-3.1		-30.0	-13	3380	No stop
00 36 30	---	18 51 10	29.7	124.8	-3.1		-29.7	187	3406	00 33 11
00 36 30	J2151+0552	18 51 10	30.2	125.1	-3.0		-29.6	-13	3406	No stop
00 37 50	=2149+056	18 52 30	30.4	125.4	-3.0		-29.5	67	3416	00 36 31
00 37 50	2150+053	18 52 30	29.9	125.1	-3.0		-29.6	-13	3416	No stop
00 41 10	---	18 55 50	30.3	126.0	-3.0		-29.2	187	3442	00 37 51
00 41 10	J2151+0552	18 55 50	30.8	126.3	-2.9		-29.1	-13	3442	No stop
00 42 30	=2149+056	18 57 11	30.9	126.6	-2.9		-29.0	67	3452	00 41 11
00 42 30	2150+053	18 57 11	30.5	126.3	-3.0		-29.1	-13	3452	No stop
00 45 50	---	19 00 31	30.9	127.2	-2.9		-28.7	187	3478	00 42 31
00 45 50	J2151+0552	19 00 31	31.3	127.5	-2.9		-28.6	-13	3478	No stop
00 47 10	=2149+056	19 01 51	31.5	127.8	-2.8		-28.5	67	3488	00 45 51
00 48 10	J2217+0220	19 02 52	25.3	123.6	-3.3		-30.1	23	3488	00 48 10
00 49 10	=2215+020	19 03 52	25.5	123.8	-3.2		-30.0	60	3496	00 48 11

Schedule for TORUN (Code Tr) Page 13

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
00 49 10	2222+051	19 03 52	27.2	120.2	-3.4		-31.4	-22	3496	No stop
00 52 40	---	19 07 22	27.6	121.1	-3.3		-31.1	188	3522	00 49 11
00 52 40	J2217+0220	19 07 22	25.9	124.6	-3.2		-29.6	-22	3522	No stop
00 54 10	=2215+020	19 08 53	26.1	125.0	-3.2		-29.5	68	3534	00 52 41
00 54 10	2222+051	19 08 53	27.8	121.4	-3.3		-31.0	-22	3534	No stop
00 57 40	---	19 12 23	28.3	122.3	-3.2		-30.7	188	3561	00 54 11
00 57 40	J2217+0220	19 12 23	26.5	125.9	-3.1		-29.2	-22	3561	No stop
00 59 10	=2215+020	19 13 53	26.7	126.2	-3.1		-29.0	68	3572	00 57 41
00 59 10	2222+051	19 13 53	28.5	122.7	-3.2		-30.5	-22	3572	No stop
01 02 40	---	19 17 24	28.9	123.5	-3.1		-30.2	188	3599	00 59 11
01 03 30	J2217+0220	19 18 14	27.2	127.3	-3.0		-28.6	28	3599	01 03 30
01 04 30	=2215+020	19 19 14	27.3	127.5	-3.0		-28.5	60	3607	01 03 31
01 06 05	J2151+0552	19 20 50	33.6	132.8	-2.5		-26.3	58	3607	01 06 05
01 07 05	=2149+056	19 21 50	33.8	133.1	-2.5		-26.2	60	3615	01 06 06
01 07 05	2150+053	19 21 50	33.3	132.7	-2.5		-26.3	-12	3615	No stop
01 10 25	---	19 25 10	33.7	133.6	-2.5		-25.9	188	3640	01 07 06
01 10 25	J2151+0552	19 25 10	34.1	134.0	-2.5		-25.8	-13	3640	No stop
01 11 45	=2149+056	19 26 30	34.3	134.3	-2.4		-25.6	67	3651	01 10 26
01 11 45	2150+053	19 26 30	33.8	134.0	-2.5		-25.7	-12	3651	No stop
01 15 05	---	19 29 51	34.2	134.9	-2.4		-25.3	188	3676	01 11 46
01 15 05	J2151+0552	19 29 51	34.6	135.2	-2.4		-25.2	-13	3676	No stop
01 16 25	=2149+056	19 31 11	34.8	135.6	-2.4		-25.0	67	3687	01 15 06
01 16 25	2150+053	19 31 11	34.3	135.2	-2.4		-25.1	-12	3687	No stop
01 19 45	---	19 34 32	34.7	136.2	-2.3		-24.7	188	3712	01 16 26
01 19 45	J2151+0552	19 34 32	35.1	136.5	-2.3		-24.5	-13	3712	No stop
01 21 05	=2149+056	19 35 52	35.3	136.9	-2.3		-24.4	67	3722	01 19 46
01 22 05	J2217+0220	19 36 52	29.4	132.0	-2.7		-26.5	24	3722	01 22 05
01 23 05	=2215+020	19 37 52	29.5	132.2	-2.7		-26.4	60	3730	01 22 06
01 23 05	2222+051	19 37 52	31.4	128.7	-2.8		-28.1	-22	3730	No stop
01 26 35	---	19 41 23	31.8	129.6	-2.7		-27.7	188	3757	01 23 06

Schedule for TORUN (Code Tr) Page 14

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
01 26 35	J2217+0220	19 41 23	29.9	133.1	-2.6		-26.0	-22	3757	No stop
01 28 05	=2215+020	19 42 53	30.0	133.5	-2.6		-25.8	68	3769	01 26 36
01 28 05	2222+051	19 42 53	32.0	130.0	-2.7		-27.5	-22	3769	No stop
01 31 35	---	19 46 24	32.4	130.9	-2.7		-27.1	188	3796	01 28 06
01 31 35	J2217+0220	19 46 24	30.4	134.4	-2.5		-25.4	-22	3796	No stop
01 33 05	=2215+020	19 47 54	30.6	134.8	-2.5		-25.2	68	3807	01 31 36
01 33 05	2222+051	19 47 54	32.6	131.3	-2.6		-27.0	-22	3807	No stop
01 36 35	---	19 51 25	32.9	132.2	-2.6		-26.5	188	3834	01 33 06
01 37 25	J2217+0220	19 52 15	31.0	136.0	-2.4		-24.7	28	3834	01 37 25
01 38 25	=2215+020	19 53 15	31.1	136.2	-2.4		-24.6	60	3842	01 37 26
01 40 00	J2151+0552	19 54 50	37.1	142.3	-2.0		-21.7	59	3842	01 40 00
01 41 00	=2149+056	19 55 50	37.2	142.6	-1.9		-21.5	60	3849	01 40 01
01 41 00	2150+053	19 55 50	36.8	142.2	-2.0		-21.7	-12	3849	No stop
01 44 20	---	19 59 11	37.1	143.1	-1.9		-21.2	188	3875	01 41 01
01 44 20	J2151+0552	19 59 11	37.5	143.5	-1.9		-21.0	-12	3875	No stop
01 45 40	=2149+056	20 00 31	37.6	143.9	-1.9		-20.8	68	3885	01 44 21
01 45 40	2150+053	20 00 31	37.2	143.5	-1.9		-21.0	-12	3885	No stop
01 49 00	---	20 03 52	37.5	144.5	-1.8		-20.5	188	3911	01 45 41
01 49 00	J2151+0552	20 03 52	37.9	144.9	-1.8		-20.3	-12	3911	No stop
01 50 20	=2149+056	20 05 12	38.0	145.3	-1.8		-20.1	68	3921	01 49 01
01 50 20	2150+053	20 05 12	37.6	144.9	-1.8		-20.3	-12	3921	No stop
01 53 40	---	20 08 32	37.9	145.9	-1.8		-19.8	188	3947	01 50 21
01 53 40	J2151+0552	20 08 32	38.3	146.3	-1.7		-19.6	-12	3947	No stop
01 55 00	=2149+056	20 09 53	38.4	146.7	-1.7		-19.4	68	3957	01 53 41
01 56 00	J2217+0220	20 10 53	32.9	141.0	-2.1		-22.2	25	3957	01 56 00
01 57 00	=2215+020	20 11 53	33.0	141.3	-2.1		-22.1	60	3965	01 56 01
01 57 00	2222+051	20 11 53	35.1	137.8	-2.2		-23.9	-22	3965	No stop
02 00 30	---	20 15 23	35.5	138.7	-2.2		-23.4	188	3992	01 57 01
02 00 30	J2217+0220	20 15 23	33.3	142.3	-2.1		-21.6	-22	3992	No stop
02 02 00	=2215+020	20 16 54	33.4	142.7	-2.0		-21.4	68	4003	02 00 31

Schedule for TORUN (Code Tr) Page 15

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
02 02 00	2222+051	20 16 54	35.6	139.2	-2.2		-23.2	-22	4003	No stop
02 05 30	---	20 20 24	36.0	140.2	-2.1		-22.7	188	4030	02 02 01
02 05 30	J2217+0220	20 20 24	33.8	143.7	-2.0		-20.9	-22	4030	No stop
02 07 00	=2215+020	20 21 55	33.9	144.1	-1.9		-20.6	68	4042	02 05 31
02 07 00	2222+051	20 21 55	36.1	140.6	-2.1		-22.5	-22	4042	No stop
02 10 30	---	20 25 25	36.4	141.6	-2.0		-22.0	188	4069	02 07 01
02 11 20	J2217+0220	20 26 15	34.3	145.3	-1.9		-20.0	28	4069	02 11 20
02 12 20	=2215+020	20 27 15	34.3	145.6	-1.9		-19.9	60	4076	02 11 21
02 13 55	J2151+0552	20 28 51	39.9	152.5	-1.4		-16.2	61	4076	02 13 55
02 14 55	=2149+056	20 29 51	39.9	152.8	-1.4		-16.0	60	4084	02 13 56
02 14 55	2150+053	20 29 51	39.5	152.3	-1.4		-16.3	-12	4084	No stop
02 18 15	---	20 33 11	39.8	153.4	-1.4		-15.7	188	4110	02 14 56
02 18 15	J2151+0552	20 33 11	40.1	153.8	-1.3		-15.4	-12	4110	No stop
02 19 35	=2149+056	20 34 32	40.2	154.3	-1.3		-15.2	68	4120	02 18 16
02 19 35	2150+053	20 34 32	39.9	153.8	-1.3		-15.5	-12	4120	No stop
02 22 55	---	20 37 52	40.1	154.8	-1.3		-14.9	188	4146	02 19 36
02 22 55	J2151+0552	20 37 52	40.4	155.3	-1.2		-14.6	-12	4146	No stop
02 24 15	=2149+056	20 39 12	40.5	155.7	-1.2		-14.4	68	4156	02 22 56
02 24 15	2150+053	20 39 12	40.2	155.3	-1.2		-14.6	-12	4156	No stop
02 27 35	---	20 42 33	40.4	156.3	-1.2		-14.0	188	4181	02 24 16
02 27 35	J2151+0552	20 42 33	40.7	156.8	-1.2		-13.8	-12	4181	No stop
02 28 55	=2149+056	20 43 53	40.8	157.2	-1.1		-13.5	68	4192	02 27 36
02 29 55	J2217+0220	20 44 53	35.7	150.7	-1.6		-17.1	27	4192	02 29 55
02 30 55	=2215+020	20 45 53	35.8	151.0	-1.5		-16.9	60	4199	02 29 56
02 30 55	2222+051	20 45 53	38.2	147.6	-1.7		-18.9	-23	4199	No stop
02 34 25	---	20 49 24	38.5	148.6	-1.6		-18.3	187	4226	02 30 56
02 34 25	J2217+0220	20 49 24	36.1	152.0	-1.5		-16.4	-23	4226	No stop
02 35 55	=2215+020	20 50 54	36.2	152.5	-1.5		-16.1	67	4238	02 34 26
02 35 55	2222+051	20 50 54	38.6	149.1	-1.6		-18.1	-23	4238	No stop
02 39 25	---	20 54 25	38.9	150.2	-1.5		-17.5	187	4265	02 35 56

Schedule for TORUN (Code Tr) Page 16

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
02 39 25	J2217+0220	20 54 25	36.4	153.5	-1.4		-15.5	-23	4265	No stop
02 40 55	=2215+020	20 55 55	36.5	154.0	-1.4		-15.3	67	4276	02 39 26
02 40 55	2222+051	20 55 55	39.0	150.6	-1.5		-17.2	-23	4276	No stop
02 44 25	---	20 59 26	39.2	151.7	-1.4		-16.6	187	4303	02 40 56
02 45 15	J2217+0220	21 00 16	36.8	155.3	-1.3		-14.6	27	4303	02 45 15
02 46 15	=2215+020	21 01 16	36.9	155.6	-1.3		-14.4	60	4311	02 45 16
02 47 50	J2151+0552	21 02 51	41.8	163.4	-0.8		-9.9	63	4311	02 47 50
02 48 50	=2149+056	21 03 51	41.8	163.7	-0.8		-9.8	60	4319	02 47 51
02 48 50	2150+053	21 03 51	41.5	163.2	-0.8		-10.1	-12	4319	No stop
02 52 10	---	21 07 12	41.6	164.3	-0.8		-9.4	188	4344	02 48 51
02 52 10	J2151+0552	21 07 12	41.9	164.8	-0.8		-9.1	-12	4344	No stop
02 53 30	=2149+056	21 08 32	42.0	165.2	-0.7		-8.8	68	4354	02 52 11
02 53 30	2150+053	21 08 32	41.7	164.7	-0.8		-9.2	-12	4354	No stop
02 56 50	---	21 11 53	41.8	165.8	-0.7		-8.5	188	4380	02 53 31
02 56 50	J2151+0552	21 11 53	42.1	166.4	-0.7		-8.2	-12	4380	No stop
02 58 10	=2149+056	21 13 13	42.2	166.8	-0.7		-7.9	68	4390	02 56 51
02 58 10	2150+053	21 13 13	41.8	166.3	-0.7		-8.2	-12	4390	No stop
03 01 30	---	21 16 34	42.0	167.4	-0.6		-7.6	188	4416	02 58 11
03 01 30	J2151+0552	21 16 34	42.3	167.9	-0.6		-7.3	-12	4416	No stop
03 02 50	=2149+056	21 17 54	42.3	168.4	-0.6		-7.0	68	4426	03 01 31
03 03 50	J2217+0220	21 18 54	37.8	161.0	-1.0		-11.3	29	4426	03 03 50
03 04 50	=2215+020	21 19 54	37.9	161.3	-1.0		-11.1	60	4434	03 03 51
03 04 50	2222+051	21 19 54	40.5	158.1	-1.1		-13.0	-24	4434	No stop
03 08 20	---	21 23 25	40.7	159.2	-1.0		-12.3	186	4461	03 04 51
03 08 20	J2217+0220	21 23 25	38.0	162.4	-0.9		-10.5	-24	4461	No stop
03 09 50	=2215+020	21 24 55	38.1	162.9	-0.9		-10.2	66	4472	03 08 21
03 09 50	2222+051	21 24 55	40.8	159.7	-1.0		-12.1	-24	4472	No stop
03 13 20	---	21 28 25	41.0	160.9	-1.0		-11.4	186	4499	03 09 51
03 13 20	J2217+0220	21 28 25	38.3	164.0	-0.8		-9.6	-24	4499	No stop
03 14 50	=2215+020	21 29 56	38.3	164.4	-0.8		-9.3	66	4511	03 13 21

Schedule for TORUN (Code Tr) Page 17

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
03 14 50	2222+051	21 29 56	41.1	161.3	-0.9		-11.1	-24	4511	No stop
03 18 20	---	21 33 26	41.2	162.5	-0.9		-10.5	186	4538	03 14 51
03 19 10	J2217+0220	21 34 16	38.5	165.8	-0.7		-8.5	26	4538	03 19 10
03 20 10	=2215+020	21 35 17	38.5	166.1	-0.7		-8.3	60	4546	03 19 11
03 21 35	3C454.3	21 36 42	50.1	150.0	-1.3		-18.2	28	4546	03 21 35
03 26 35	---	21 41 43	50.4	151.8	-1.2		-17.2	300	4584	03 21 36
03 29 10	0106+013	21 44 18	23.5	121.7	-3.4		-30.7	40	4584	03 29 10
03 33 10	---	21 48 19	24.0	122.7	-3.4		-30.4	240	4615	03 29 11
03 36 20	2212-299	21 51 29	7.1	174.6	-0.4		-3.7	72	4615	03 36 20
03 42 20	---	21 57 30	7.1	175.9	-0.3		-2.8	360	4661	03 36 21
03 45 05	J0040-0146	22 00 16	25.7	134.1	-2.7		-25.6	66	4661	03 45 05
03 46 05	=0038-020	22 01 16	25.8	134.3	-2.7		-25.5	60	4669	03 45 06
03 46 05	0038-019	22 01 16	25.8	134.2	-2.7		-25.5	-8	4669	No stop
03 49 25	---	22 04 36	26.2	135.0	-2.6		-25.1	192	4694	03 46 06
03 49 25	J0040-0146	22 04 36	26.2	135.2	-2.6		-25.1	-9	4694	No stop
03 50 40	=0038-020	22 05 52	26.3	135.5	-2.6		-24.9	66	4704	03 49 26
03 50 40	0038-019	22 05 52	26.3	135.3	-2.6		-25.0	-8	4704	No stop
03 54 00	---	22 09 12	26.6	136.2	-2.6		-24.6	192	4729	03 50 41
03 54 00	J0040-0146	22 09 12	26.6	136.3	-2.5		-24.5	-9	4729	No stop
03 55 15	=0038-020	22 10 27	26.8	136.6	-2.5		-24.4	66	4739	03 54 01
03 55 15	0038-019	22 10 27	26.8	136.5	-2.5		-24.4	-8	4739	No stop
03 58 35	---	22 13 48	27.1	137.4	-2.5		-24.0	192	4765	03 55 16
03 58 35	J0040-0146	22 13 48	27.1	137.5	-2.5		-23.9	-9	4765	No stop
03 59 50	=0038-020	22 15 03	27.2	137.8	-2.4		-23.8	66	4774	03 58 36
04 03 00	2212-299	22 18 14	7.2	180.5	0.0		0.3	90	4774	04 03 00
04 09 00	---	22 24 15	7.2	181.8	0.1		1.2	360	4821	04 03 01
04 11 45	J0040-0146	22 27 00	28.4	140.9	-2.2		-22.3	68	4821	04 11 45
04 12 45	=0038-020	22 28 00	28.5	141.2	-2.2		-22.1	60	4828	04 11 46
04 12 45	0038-019	22 28 00	28.5	141.0	-2.2		-22.2	-8	4828	No stop
04 16 05	---	22 31 21	28.8	141.9	-2.2		-21.7	192	4854	04 12 46

Schedule for TORUN (Code Tr) Page 18

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
04 16 05	J0040-0146	22 31 21	28.8	142.1	-2.2		-21.7	-9	4854	No stop
04 17 20	=0038-020	22 32 36	28.9	142.4	-2.2		-21.5	66	4863	04 16 06
04 17 20	0038-019	22 32 36	28.9	142.3	-2.2		-21.6	-8	4863	No stop
04 20 40	---	22 35 57	29.2	143.1	-2.1		-21.1	192	4889	04 17 21
04 20 40	J0040-0146	22 35 57	29.2	143.3	-2.1		-21.0	-9	4889	No stop
04 21 55	=0038-020	22 37 12	29.4	143.6	-2.1		-20.9	66	4899	04 20 41
04 21 55	0038-019	22 37 12	29.4	143.5	-2.1		-20.9	-8	4899	No stop
04 25 15	---	22 40 32	29.7	144.4	-2.0		-20.5	192	4924	04 21 56
04 25 15	J0040-0146	22 40 32	29.6	144.5	-2.0		-20.4	-9	4924	No stop
04 26 30	=0038-020	22 41 47	29.8	144.9	-2.0		-20.2	66	4934	04 25 16
04 29 40	2212-299	22 44 58	7.0	186.3	0.5		4.4	91	4934	04 29 40
04 35 40	---	22 50 59	6.9	187.6	0.6		5.3	360	4980	04 29 41
04 38 25	J0040-0146	22 53 44	30.7	148.1	-1.8		-18.5	62	4980	04 38 25
04 39 25	=0038-020	22 54 45	30.8	148.4	-1.8		-18.3	60	4988	04 38 26
04 39 25	0038-019	22 54 45	30.8	148.3	-1.8		-18.4	-8	4988	No stop
04 42 45	---	22 58 05	31.1	149.2	-1.7		-17.9	192	5013	04 39 26
04 42 45	J0040-0146	22 58 05	31.1	149.3	-1.7		-17.8	-9	5013	No stop
04 44 00	=0038-020	22 59 20	31.2	149.7	-1.7		-17.7	66	5023	04 42 46
04 44 00	0038-019	22 59 20	31.2	149.5	-1.7		-17.7	-8	5023	No stop
04 47 20	---	23 02 41	31.4	150.5	-1.7		-17.2	192	5049	04 44 01
04 47 20	J0040-0146	23 02 41	31.4	150.6	-1.7		-17.1	-9	5049	No stop
04 48 35	=0038-020	23 03 56	31.5	151.0	-1.6		-17.0	66	5058	04 47 21
04 48 35	0038-019	23 03 56	31.5	150.8	-1.6		-17.0	-8	5058	No stop
04 51 55	---	23 07 17	31.8	151.8	-1.6		-16.5	192	5084	04 48 36
04 51 55	J0040-0146	23 07 17	31.8	151.9	-1.6		-16.4	-9	5084	No stop
04 53 10	=0038-020	23 08 32	31.8	152.3	-1.6		-16.2	66	5094	04 51 56
04 54 15	0106+013	23 09 37	32.9	143.5	-2.0		-20.9	32	5094	04 54 15
04 58 15	---	23 13 38	33.3	144.6	-1.9		-20.3	240	5124	04 54 16
04 59 45	0226-038	23 15 08	20.3	127.0	-3.2		-28.7	27	5124	04 59 45
05 04 45	---	23 20 09	20.9	128.2	-3.2		-28.2	300	5163	04 59 46

Schedule for TORUN (Code Tr) Page 19

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
05 06 05	J0242+1101	23 21 29	31.9	116.9	-3.4		-33.1	25	5163	05 06 05
05 07 05	=0239+108	23 22 29	32.1	117.2	-3.3		-33.0	60	5171	05 06 06
05 07 05	0238+100	23 22 29	31.6	117.9	-3.3		-32.7	-13	5171	No stop
05 10 25	---	23 25 50	32.1	118.7	-3.3		-32.4	187	5196	05 07 06
05 10 25	J0242+1101	23 25 50	32.5	118.0	-3.3		-32.7	-13	5196	No stop
05 11 45	=0239+108	23 27 10	32.7	118.3	-3.3		-32.6	67	5206	05 10 26
05 11 45	0238+100	23 27 10	32.2	119.0	-3.3		-32.3	-13	5206	No stop
05 15 05	---	23 30 30	32.7	119.9	-3.2		-32.0	187	5232	05 11 46
05 15 05	J0242+1101	23 30 30	33.1	119.1	-3.2		-32.3	-13	5232	No stop
05 16 25	=0239+108	23 31 51	33.3	119.5	-3.2		-32.2	67	5242	05 15 06
05 16 25	0238+100	23 31 51	32.8	120.2	-3.2		-31.9	-13	5242	No stop
05 19 45	---	23 35 11	33.3	121.0	-3.1		-31.5	187	5268	05 16 26
05 19 45	J0242+1101	23 35 11	33.7	120.3	-3.1		-31.9	-13	5268	No stop
05 21 05	=0239+108	23 36 31	33.9	120.6	-3.1		-31.8	67	5278	05 19 46
05 22 35	0226-038	23 38 02	22.9	132.5	-2.9		-26.3	35	5278	05 22 35
05 27 35	---	23 43 03	23.5	133.7	-2.8		-25.8	300	5317	05 22 36
05 28 55	J0242+1101	23 44 23	34.9	122.6	-3.0		-31.0	23	5317	05 28 55
05 29 55	=0239+108	23 45 23	35.0	122.9	-3.0		-30.9	60	5324	05 28 56
05 29 55	0238+100	23 45 23	34.6	123.6	-2.9		-30.6	-13	5324	No stop
05 33 15	---	23 48 43	35.0	124.5	-2.9		-30.2	187	5350	05 29 56
05 33 15	J0242+1101	23 48 43	35.5	123.7	-2.9		-30.6	-13	5350	No stop
05 34 35	=0239+108	23 50 04	35.6	124.1	-2.9		-30.4	67	5360	05 33 16
05 34 35	0238+100	23 50 04	35.2	124.8	-2.9		-30.1	-13	5360	No stop
05 37 55	---	23 53 24	35.6	125.7	-2.8		-29.7	187	5386	05 34 36
05 37 55	J0242+1101	23 53 24	36.0	125.0	-2.8		-30.1	-13	5386	No stop
05 39 15	=0239+108	23 54 44	36.2	125.3	-2.8		-30.0	67	5396	05 37 56
05 39 15	0238+100	23 54 44	35.7	126.0	-2.8		-29.6	-13	5396	No stop
05 42 35	---	23 58 05	36.1	126.9	-2.7		-29.2	187	5422	05 39 16
05 42 35	J0242+1101	23 58 05	36.6	126.2	-2.8		-29.6	-13	5422	No stop
05 43 55	=0239+108	23 59 25	36.8	126.6	-2.7		-29.4	67	5432	05 42 36

Schedule for TORUN (Code Tr) Page 20

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
05 45 25	0226-038	00 00 55	25.3	138.1	-2.5		-23.7	33	5432	05 45 25
05 50 25	---	00 05 56	25.8	139.4	-2.4		-23.0	300	5471	05 45 26
05 51 45	J0242+1101	00 07 16	37.7	128.7	-2.6		-28.5	22	5471	05 51 45
05 52 45	=0239+108	00 08 17	37.8	128.9	-2.6		-28.4	60	5478	05 51 46
05 52 45	0238+100	00 08 17	37.3	129.7	-2.6		-28.0	-13	5478	No stop
05 56 05	---	00 11 37	37.7	130.6	-2.5		-27.6	187	5504	05 52 46
05 56 05	J0242+1101	00 11 37	38.2	129.9	-2.5		-28.0	-13	5504	No stop
05 57 25	=0239+108	00 12 57	38.4	130.2	-2.5		-27.8	67	5514	05 56 06
05 57 25	0238+100	00 12 57	37.9	131.0	-2.5		-27.5	-13	5514	No stop
06 00 45	---	00 16 18	38.2	131.9	-2.4		-27.0	187	5540	05 57 26
06 00 45	J0242+1101	00 16 18	38.7	131.2	-2.5		-27.4	-13	5540	No stop
06 02 05	=0239+108	00 17 38	38.9	131.5	-2.4		-27.3	67	5550	06 00 46
06 02 05	0238+100	00 17 38	38.4	132.3	-2.4		-26.9	-13	5550	No stop
06 05 25	---	00 20 59	38.8	133.2	-2.4		-26.4	187	5576	06 02 06
06 05 25	J0242+1101	00 20 59	39.3	132.5	-2.4		-26.8	-13	5576	No stop
06 06 45	=0239+108	00 22 19	39.4	132.9	-2.3		-26.7	67	5586	06 05 26
06 09 10	3C84	00 24 44	58.6	93.5	-2.9		-53.2	51	5586	06 09 10
06 14 10	---	00 29 45	59.4	94.6	-2.9		-53.1	300	5624	06 09 11
06 14 10	J2151+0552	00 29 45	33.0	228.7	2.6		27.0	-286	5624	No stop
06 21 05	=2149+056	00 36 41	32.2	230.6	2.7		27.8	129	5678	06 14 11
06 22 10	J2151+0552	00 37 46	32.1	230.8	2.8		27.9	59	5678	06 22 10
06 23 10	=2149+056	00 38 47	32.0	231.1	2.8		28.0	60	5685	06 22 11
06 23 10	2150+053	00 38 47	31.9	230.5	2.7		27.8	-12	5685	No stop
06 26 30	---	00 42 07	31.6	231.4	2.8		28.1	188	5711	06 23 11
06 26 30	J2151+0552	00 42 07	31.6	232.0	2.8		28.4	-12	5711	No stop
06 27 50	=2149+056	00 43 27	31.4	232.3	2.9		28.5	68	5721	06 26 31
06 27 50	2150+053	00 43 27	31.4	231.7	2.8		28.3	-12	5721	No stop
06 31 10	---	00 46 48	31.0	232.6	2.9		28.6	188	5747	06 27 51
06 31 10	J2151+0552	00 46 48	31.0	233.2	2.9		28.9	-12	5747	No stop
06 32 30	=2149+056	00 48 08	30.9	233.5	2.9		29.0	68	5757	06 31 11

Schedule for TORUN (Code Tr) Page 21

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
06 32 30	2150+053	00 48 08	30.8	232.9	2.9		28.8	-12	5757	No stop
06 35 50	---	00 51 29	30.4	233.7	3.0		29.1	188	5783	06 32 31
06 35 50	J2151+0552	00 51 29	30.5	234.3	3.0		29.4	-12	5783	No stop
06 37 10	=2149+056	00 52 49	30.3	234.7	3.0		29.5	68	5793	06 35 51
06 38 15	J2217+0220	00 53 54	30.1	226.4	2.6		25.8	33	5793	06 38 15
06 39 15	=2215+020	00 54 54	30.0	226.6	2.6		25.9	60	5801	06 38 16
06 39 15	2222+051	00 54 54	33.6	226.3	2.5		25.8	-27	5801	No stop
06 42 45	---	00 58 25	33.2	227.2	2.5		26.3	183	5828	06 39 16
06 42 45	J2217+0220	00 58 25	29.6	227.5	2.7		26.3	-28	5828	No stop
06 44 15	=2215+020	00 59 55	29.4	227.9	2.7		26.5	62	5839	06 42 46
06 44 15	2222+051	00 59 55	33.0	227.6	2.6		26.5	-27	5839	No stop
06 47 45	---	01 03 26	32.6	228.5	2.6		26.9	183	5866	06 44 16
06 47 45	J2217+0220	01 03 26	29.0	228.8	2.7		26.9	-28	5866	No stop
06 49 15	=2215+020	01 04 56	28.8	229.2	2.8		27.1	62	5878	06 47 46
06 49 15	2222+051	01 04 56	32.5	228.9	2.6		27.1	-27	5878	No stop
06 52 45	---	01 08 27	32.1	229.9	2.7		27.5	183	5904	06 49 16
06 53 35	J2217+0220	01 09 17	28.3	230.3	2.8		27.5	22	5904	06 53 35
06 54 35	=2215+020	01 10 17	28.2	230.6	2.9		27.7	60	5912	06 53 36
06 55 40	J2151+0552	01 11 22	28.0	239.2	3.3		31.2	33	5912	06 55 40
06 56 40	=2149+056	01 12 22	27.8	239.5	3.3		31.3	60	5920	06 55 41
06 56 40	2150+053	01 12 22	27.8	238.9	3.3		31.1	-12	5920	No stop
07 00 00	---	01 15 43	27.4	239.7	3.4		31.4	188	5946	06 56 41
07 00 00	J2151+0552	01 15 43	27.4	240.3	3.4		31.6	-12	5946	No stop
07 01 20	=2149+056	01 17 03	27.2	240.6	3.4		31.7	68	5956	07 00 01
07 01 20	2150+053	01 17 03	27.2	240.0	3.4		31.5	-12	5956	No stop
07 04 40	---	01 20 23	26.8	240.8	3.4		31.8	188	5981	07 01 21
07 04 40	J2151+0552	01 20 23	26.8	241.4	3.5		32.0	-12	5981	No stop
07 06 00	=2149+056	01 21 44	26.6	241.7	3.5		32.1	68	5992	07 04 41
07 06 00	2150+053	01 21 44	26.6	241.1	3.5		31.9	-12	5992	No stop
07 09 20	---	01 25 04	26.2	241.9	3.5		32.2	188	6017	07 06 01

Schedule for TORUN (Code Tr) Page 22

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
07 09 20	J2151+0552	01 25 04	26.2	242.5	3.5		32.4	-12	6017	No stop
07 10 40	=2149+056	01 26 24	26.0	242.8	3.6		32.5	68	6028	07 09 21
07 11 45	J2217+0220	01 27 30	26.2	234.8	3.1		29.4	34	6028	07 11 45
07 12 45	=2215+020	01 28 30	26.1	235.0	3.2		29.5	60	6035	07 11 46
07 12 45	2222+051	01 28 30	29.7	235.0	3.0		29.6	-27	6035	No stop
07 16 15	---	01 32 00	29.2	235.8	3.1		29.9	183	6062	07 12 46
07 16 15	J2217+0220	01 32 00	25.6	235.9	3.2		29.8	-28	6062	No stop
07 17 45	=2215+020	01 33 31	25.4	236.3	3.2		30.0	62	6074	07 16 16
07 17 45	2222+051	01 33 31	29.1	236.2	3.1		30.1	-27	6074	No stop
07 21 15	---	01 37 01	28.6	237.1	3.2		30.4	183	6101	07 17 46
07 21 15	J2217+0220	01 37 01	25.0	237.1	3.3		30.3	-28	6101	No stop
07 22 45	=2215+020	01 38 31	24.8	237.4	3.3		30.4	62	6112	07 21 16
07 22 45	2222+051	01 38 31	28.4	237.4	3.2		30.6	-27	6112	No stop
07 26 15	---	01 42 02	28.0	238.3	3.3		30.9	183	6139	07 22 46
07 27 05	J2217+0220	01 42 52	24.2	238.5	3.4		30.8	22	6139	07 27 05
07 28 05	=2215+020	01 43 52	24.1	238.7	3.4		30.9	60	6147	07 27 06
07 31 00	J0040-0146	01 46 48	33.5	199.6	1.1		11.6	81	6147	07 31 00
07 32 00	=0038-020	01 47 48	33.5	199.9	1.1		11.8	60	6154	07 31 01
07 32 00	0038-019	01 47 48	33.6	199.8	1.1		11.7	-8	6154	No stop
07 35 20	---	01 51 08	33.4	200.8	1.1		12.3	192	6180	07 32 01
07 35 20	J0040-0146	01 51 08	33.3	200.9	1.2		12.4	-8	6180	No stop
07 36 40	=0038-020	01 52 29	33.2	201.3	1.2		12.6	72	6190	07 35 21
07 36 40	0038-019	01 52 29	33.3	201.2	1.2		12.5	-8	6190	No stop
07 40 00	---	01 55 49	33.1	202.1	1.2		13.1	192	6216	07 36 41
07 40 00	J0040-0146	01 55 49	33.1	202.3	1.2		13.2	-8	6216	No stop
07 41 20	=0038-020	01 57 09	33.0	202.6	1.3		13.4	72	6226	07 40 01
07 43 55	J0242+1101	01 59 45	47.1	164.2	-0.7		-9.6	62	6226	07 43 55
07 44 55	=0239+108	02 00 45	47.1	164.6	-0.7		-9.4	60	6234	07 43 56
07 44 55	0238+100	02 00 45	46.5	165.1	-0.7		-9.0	-14	6234	No stop
07 48 15	---	02 04 06	46.6	166.3	-0.6		-8.3	186	6260	07 44 56

Schedule for TORUN (Code Tr) Page 23

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
07 48 15	J0242+1101	02 04 06	47.3	165.7	-0.7		-8.7	-14	6260	No stop
07 49 35	=0239+108	02 05 26	47.3	166.2	-0.6		-8.4	66	6270	07 48 16
07 49 35	0238+100	02 05 26	46.6	166.8	-0.6		-8.0	-14	6270	No stop
07 52 55	---	02 08 46	46.8	168.0	-0.6		-7.3	186	6296	07 49 36
07 52 55	J0242+1101	02 08 46	47.4	167.4	-0.6		-7.7	-14	6296	No stop
07 54 15	=0239+108	02 10 07	47.5	167.9	-0.6		-7.4	66	6306	07 52 56
07 55 35	J0312+0133	02 11 27	36.9	160.5	-1.0		-11.6	27	6306	07 55 35
07 56 35	=0310+013	02 12 27	37.0	160.8	-1.0		-11.4	60	6313	07 55 36
07 56 35	0317-023	02 12 27	33.0	159.4	-1.1		-12.2	-29	6313	No stop
08 00 05	---	02 15 58	33.1	160.4	-1.1		-11.6	181	6340	07 56 36
08 00 05	J0312+0133	02 15 58	37.1	161.8	-1.0		-10.8	-29	6340	No stop
08 01 35	=0310+013	02 17 28	37.2	162.3	-0.9		-10.5	61	6352	08 00 06
08 01 35	0317-023	02 17 28	33.2	160.8	-1.1		-11.4	-29	6352	No stop
08 05 05	---	02 20 58	33.4	161.9	-1.0		-10.8	181	6379	08 01 36
08 05 05	J0312+0133	02 20 58	37.4	163.4	-0.9		-9.9	-29	6379	No stop
08 06 35	=0310+013	02 22 29	37.4	163.9	-0.9		-9.6	61	6390	08 05 06
08 09 30	J0040-0146	02 25 24	31.1	210.7	1.7		17.8	67	6390	08 09 30
08 10 30	=0038-020	02 26 24	31.0	210.9	1.7		18.0	60	6398	08 09 31
08 10 30	0038-019	02 26 24	31.1	210.8	1.7		17.9	-8	6398	No stop
08 13 50	---	02 29 45	30.8	211.8	1.8		18.4	192	6424	08 10 31
08 13 50	J0040-0146	02 29 45	30.7	211.9	1.8		18.5	-9	6424	No stop
08 15 10	=0038-020	02 31 05	30.6	212.2	1.8		18.7	71	6434	08 13 51
08 15 10	0038-019	02 31 05	30.7	212.1	1.8		18.6	-8	6434	No stop
08 18 30	---	02 34 26	30.5	213.0	1.9		19.1	192	6460	08 15 11
08 18 30	J0040-0146	02 34 26	30.4	213.2	1.9		19.2	-9	6460	No stop
08 19 50	=0038-020	02 35 46	30.3	213.5	1.9		19.4	71	6470	08 18 31
08 22 25	J0242+1101	02 38 21	48.0	178.2	-0.1		-1.1	68	6470	08 22 25
08 23 25	=0239+108	02 39 21	48.0	178.6	-0.1		-0.9	60	6478	08 22 26
08 23 25	0238+100	02 39 21	47.3	179.0	-0.0		-0.6	-15	6478	No stop
08 26 45	---	02 42 42	47.3	180.2	0.0		0.1	185	6503	08 23 26

Schedule for TORUN (Code Tr) Page 24

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
08 26 45	J0242+1101	02 42 42	48.0	179.8	-0.0		-0.1	-15	6503	No stop
08 28 05	=0239+108	02 44 02	48.0	180.3	0.0		0.2	65	6513	08 26 46
08 28 05	0238+100	02 44 02	47.3	180.7	0.0		0.4	-15	6513	No stop
08 31 25	---	02 47 23	47.3	181.9	0.1		1.1	185	6539	08 28 06
08 31 25	J0242+1101	02 47 23	48.0	181.5	0.1		0.9	-15	6539	No stop
08 32 45	=0239+108	02 48 43	48.0	182.0	0.1		1.2	65	6549	08 31 26
08 34 05	J0312+0133	02 50 03	38.3	172.5	-0.4		-4.5	30	6549	08 34 05
08 35 05	=0310+013	02 51 03	38.3	172.8	-0.4		-4.3	60	6557	08 34 06
08 35 05	0317-023	02 51 03	34.5	170.8	-0.5		-5.5	-28	6557	No stop
08 38 35	---	02 54 34	34.5	171.9	-0.4		-4.9	182	6584	08 35 06
08 38 35	J0312+0133	02 54 34	38.4	174.0	-0.3		-3.6	-28	6584	No stop
08 40 05	=0310+013	02 56 04	38.4	174.4	-0.3		-3.3	62	6596	08 38 36
08 40 05	0317-023	02 56 04	34.6	172.4	-0.4		-4.6	-28	6596	No stop
08 43 35	---	02 59 35	34.6	173.4	-0.4		-3.9	182	6622	08 40 06
08 43 35	J0312+0133	02 59 35	38.4	175.6	-0.2		-2.7	-28	6622	No stop
08 45 05	=0310+013	03 01 05	38.4	176.0	-0.2		-2.4	62	6634	08 43 36
08 48 00	J0040-0146	03 04 00	27.7	221.0	2.4		23.2	71	6634	08 48 00
08 49 00	=0038-020	03 05 01	27.6	221.3	2.4		23.4	60	6642	08 48 01
08 49 00	0038-019	03 05 01	27.7	221.2	2.4		23.3	-8	6642	No stop
08 52 20	---	03 08 21	27.4	222.1	2.4		23.7	192	6667	08 49 01
08 52 20	J0040-0146	03 08 21	27.3	222.2	2.4		23.8	-9	6667	No stop
08 53 40	=0038-020	03 09 41	27.1	222.5	2.5		23.9	71	6678	08 52 21
08 53 40	0038-019	03 09 41	27.2	222.4	2.5		23.9	-8	6678	No stop
08 57 00	---	03 13 02	26.9	223.3	2.5		24.3	192	6703	08 53 41
08 57 00	J0040-0146	03 13 02	26.8	223.4	2.5		24.4	-9	6703	No stop
08 58 20	=0038-020	03 14 22	26.6	223.7	2.5		24.5	71	6713	08 57 01
09 00 55	J0242+1101	03 16 58	47.4	192.3	0.6		7.5	63	6713	09 00 55
09 01 55	=0239+108	03 17 58	47.4	192.6	0.6		7.7	60	6721	09 00 56
09 01 55	0238+100	03 17 58	46.7	192.9	0.6		7.8	-15	6721	No stop
09 05 15	---	03 21 18	46.6	194.1	0.7		8.5	185	6747	09 01 56

Schedule for TORUN (Code Tr) Page 25

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
09 05 15	J0242+1101	03 21 18	47.3	193.8	0.6		8.4	-15	6747	No stop
09 06 35	=0239+108	03 22 38	47.2	194.3	0.7		8.7	65	6757	09 05 16
09 06 35	0238+100	03 22 38	46.5	194.5	0.7		8.8	-15	6757	No stop
09 09 55	---	03 25 59	46.4	195.7	0.7		9.5	185	6783	09 06 36
09 09 55	J0242+1101	03 25 59	47.1	195.5	0.7		9.4	-15	6783	No stop
09 11 15	=0239+108	03 27 19	47.1	196.0	0.7		9.7	65	6793	09 09 56
09 12 35	J0312+0133	03 28 39	38.4	184.8	0.3		2.9	34	6793	09 12 35
09 13 35	=0310+013	03 29 40	38.4	185.2	0.3		3.1	60	6801	09 12 36
09 13 35	0317-023	03 29 40	34.8	182.6	0.1		1.5	-27	6801	No stop
09 17 05	---	03 33 10	34.8	183.6	0.2		2.2	183	6828	09 13 36
09 17 05	J0312+0133	03 33 10	38.4	186.3	0.3		3.8	-27	6828	No stop
09 18 35	=0310+013	03 34 40	38.3	186.7	0.4		4.0	63	6839	09 17 06
09 18 35	0317-023	03 34 40	34.7	184.1	0.2		2.5	-27	6839	No stop
09 22 05	---	03 38 11	34.7	185.2	0.3		3.1	183	6866	09 18 36
09 22 05	J0312+0133	03 38 11	38.3	187.9	0.4		4.7	-27	6866	No stop
09 23 35	=0310+013	03 39 41	38.2	188.3	0.4		5.0	63	6878	09 22 06
09 26 25	0528+134	03 42 32	44.9	141.0	-1.8		-22.9	60	6878	09 26 25
09 31 25	---	03 47 33	45.4	142.6	-1.7		-22.1	300	6916	09 26 26
09 34 50	J0242+1101	03 50 58	45.8	204.2	1.1		14.5	68	6916	09 34 50
09 35 50	=0239+108	03 51 58	45.8	204.5	1.1		14.7	60	6924	09 34 51
09 35 50	0238+100	03 51 58	45.0	204.7	1.2		14.8	-15	6924	No stop
09 39 10	---	03 55 19	44.8	205.8	1.2		15.4	185	6949	09 35 51
09 39 10	J0242+1101	03 55 19	45.6	205.7	1.2		15.4	-15	6949	No stop
09 40 30	=0239+108	03 56 39	45.5	206.1	1.2		15.6	65	6960	09 39 11
09 40 30	0238+100	03 56 39	44.7	206.2	1.2		15.7	-15	6960	No stop
09 43 50	---	04 00 00	44.5	207.3	1.3		16.3	185	6985	09 40 31
09 43 50	J0242+1101	04 00 00	45.3	207.2	1.3		16.3	-15	6985	No stop
09 45 10	=0239+108	04 01 20	45.2	207.7	1.3		16.5	65	6996	09 43 51
09 45 10	0238+100	04 01 20	44.4	207.8	1.3		16.5	-15	6996	No stop
09 48 30	---	04 04 40	44.2	208.9	1.4		17.1	185	7021	09 45 11

Schedule for TORUN (Code Tr) Page 26

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
09 48 30	J0242+1101	04 04 40	44.9	208.8	1.4		17.1	-15	7021	No stop
09 49 50	=0239+108	04 06 01	44.8	209.2	1.4		17.4	65	7031	09 48 31
09 51 00	J0312+0133	04 07 11	37.3	197.0	0.9		10.1	28	7031	09 51 00
09 52 00	=0310+013	04 08 11	37.3	197.3	0.9		10.3	60	7039	09 51 01
09 52 00	0317-023	04 08 11	33.9	194.2	0.8		8.5	-26	7039	No stop
09 55 20	---	04 11 31	33.8	195.2	0.8		9.1	174	7065	09 52 01
09 55 20	J0312+0133	04 11 31	37.1	198.3	1.0		10.9	-26	7065	No stop
09 56 45	=0310+013	04 12 57	37.1	198.7	1.0		11.1	59	7076	09 55 21
09 56 45	0317-023	04 12 57	33.8	195.6	0.9		9.3	-26	7076	No stop
10 00 05	---	04 16 17	33.6	196.6	0.9		9.9	174	7101	09 56 46
10 00 05	J0312+0133	04 16 17	36.9	199.8	1.0		11.7	-26	7101	No stop
10 01 30	=0310+013	04 17 43	36.8	200.2	1.1		12.0	59	7112	10 00 06
10 01 30	0317-023	04 17 43	33.6	197.0	0.9		10.1	-26	7112	No stop
10 04 50	---	04 21 03	33.4	198.0	1.0		10.7	174	7138	10 01 31
10 04 50	J0312+0133	04 21 03	36.6	201.2	1.1		12.6	-26	7138	No stop
10 06 15	=0310+013	04 22 28	36.6	201.6	1.1		12.8	59	7149	10 04 51
10 09 40	J0242+1101	04 25 54	43.2	215.7	1.7		20.9	164	7149	10 09 40
10 10 40	=0239+108	04 26 54	43.1	216.0	1.7		21.1	60	7156	10 09 41
10 10 40	0238+100	04 26 54	42.4	216.0	1.7		21.0	-15	7156	No stop
10 14 00	---	04 30 15	42.1	217.0	1.8		21.6	185	7182	10 10 41
10 14 00	J0242+1101	04 30 15	42.8	217.0	1.8		21.6	-15	7182	No stop
10 15 20	=0239+108	04 31 35	42.7	217.4	1.8		21.8	65	7192	10 14 01
10 15 20	0238+100	04 31 35	42.0	217.4	1.8		21.8	-15	7192	No stop
10 18 40	---	04 34 55	41.7	218.4	1.9		22.3	185	7218	10 15 21
10 18 40	J0242+1101	04 34 55	42.4	218.5	1.9		22.4	-15	7218	No stop
10 20 00	=0239+108	04 36 16	42.3	218.9	1.9		22.6	65	7228	10 18 41
10 20 00	0238+100	04 36 16	41.5	218.9	1.9		22.5	-15	7228	No stop
10 23 20	---	04 39 36	41.2	219.9	2.0		23.0	185	7254	10 20 01
10 23 20	J0242+1101	04 39 36	42.0	219.9	1.9		23.1	-15	7254	No stop
10 24 40	=0239+108	04 40 56	41.8	220.3	2.0		23.3	65	7264	10 23 21

Schedule for TORUN (Code Tr) Page 27

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
10 25 50	J0312+0133	04 42 07	35.3	207.5	1.5		16.1	29	7264	10 25 50
10 26 50	=0310+013	04 43 07	35.3	207.8	1.5		16.3	60	7272	10 25 51
10 26 50	0317-023	04 43 07	32.2	204.4	1.4		14.4	-25	7272	No stop
10 30 10	---	04 46 27	32.0	205.3	1.4		14.9	175	7297	10 26 51
10 30 10	J0312+0133	04 46 27	35.0	208.8	1.5		16.8	-25	7297	No stop
10 31 35	=0310+013	04 47 52	34.9	209.2	1.6		17.0	60	7308	10 30 11
10 31 35	0317-023	04 47 52	31.9	205.8	1.4		15.1	-25	7308	No stop
10 34 55	---	04 51 13	31.7	206.7	1.5		15.7	175	7334	10 31 36
10 34 55	J0312+0133	04 51 13	34.7	210.2	1.6		17.6	-25	7334	No stop
10 36 20	=0310+013	04 52 38	34.6	210.6	1.7		17.8	60	7345	10 34 56
10 36 20	0317-023	04 52 38	31.6	207.1	1.5		15.9	-25	7345	No stop
10 39 40	---	04 55 59	31.4	208.0	1.6		16.4	175	7371	10 36 21
10 39 40	J0312+0133	04 55 59	34.3	211.6	1.7		18.3	-25	7371	No stop
10 41 05	=0310+013	04 57 24	34.2	212.0	1.7		18.5	60	7381	10 39 41
10 44 30	J0242+1101	05 00 50	39.8	226.2	2.3		26.2	163	7381	10 44 30
10 45 30	=0239+108	05 01 50	39.7	226.4	2.3		26.3	60	7389	10 44 31
10 45 30	0238+100	05 01 50	38.9	226.4	2.3		26.2	-15	7389	No stop
10 48 50	---	05 05 10	38.6	227.3	2.4		26.7	185	7415	10 45 31
10 48 50	J0242+1101	05 05 10	39.3	227.4	2.4		26.8	-15	7415	No stop
10 50 10	=0239+108	05 06 31	39.2	227.8	2.4		26.9	65	7425	10 48 51
10 50 10	0238+100	05 06 31	38.4	227.7	2.4		26.8	-15	7425	No stop
10 53 30	---	05 09 51	38.0	228.6	2.5		27.3	185	7451	10 50 11
10 53 30	J0242+1101	05 09 51	38.8	228.7	2.4		27.4	-15	7451	No stop
10 54 50	=0239+108	05 11 11	38.6	229.1	2.5		27.5	65	7461	10 53 31
10 54 50	0238+100	05 11 11	37.9	229.0	2.5		27.4	-15	7461	No stop
10 58 10	---	05 14 32	37.5	229.9	2.5		27.8	185	7487	10 54 51
10 58 10	J0242+1101	05 14 32	38.3	230.0	2.5		28.0	-15	7487	No stop
10 59 30	=0239+108	05 15 52	38.1	230.4	2.5		28.1	65	7497	10 58 11
11 00 40	J0312+0133	05 17 02	32.5	217.5	2.1		21.4	29	7497	11 00 40
11 01 40	=0310+013	05 18 02	32.4	217.8	2.1		21.6	60	7504	11 00 41

Schedule for TORUN (Code Tr) Page 28

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
11 01 40	0317-023	05 18 02	29.6	214.1	1.9		19.7	-24	7504	No stop
11 05 00	---	05 21 23	29.4	215.0	2.0		20.2	176	7530	11 01 41
11 05 00	J0312+0133	05 21 23	32.1	218.7	2.1		22.0	-24	7530	No stop
11 06 25	=0310+013	05 22 48	32.0	219.1	2.2		22.2	61	7541	11 05 01
11 06 25	0317-023	05 22 48	29.2	215.4	2.0		20.4	-24	7541	No stop
11 09 45	---	05 26 09	28.9	216.3	2.1		20.8	176	7567	11 06 26
11 09 45	J0312+0133	05 26 09	31.7	220.0	2.2		22.7	-24	7567	No stop
11 11 10	=0310+013	05 27 34	31.5	220.4	2.2		22.9	61	7578	11 09 46
11 11 10	0317-023	05 27 34	28.8	216.7	2.1		21.0	-24	7578	No stop
11 14 30	---	05 30 55	28.5	217.6	2.2		21.5	176	7603	11 11 11
11 14 30	J0312+0133	05 30 55	31.2	221.3	2.3		23.3	-24	7603	No stop
11 15 55	=0310+013	05 32 20	31.1	221.6	2.3		23.5	61	7614	11 14 31
11 19 20	J0242+1101	05 35 45	35.7	235.7	2.9		30.4	163	7614	11 19 20
11 20 20	=0239+108	05 36 45	35.6	236.0	2.9		30.5	60	7622	11 19 21
11 20 20	0238+100	05 36 45	34.9	235.8	2.9		30.3	-15	7622	No stop
11 23 40	---	05 40 06	34.4	236.7	3.0		30.7	185	7647	11 20 21
11 23 40	J0242+1101	05 40 06	35.2	236.8	2.9		30.8	-15	7647	No stop
11 25 00	=0239+108	05 41 26	35.0	237.2	3.0		30.9	65	7658	11 23 41
11 25 00	0238+100	05 41 26	34.3	237.0	3.0		30.8	-15	7658	No stop
11 28 20	---	05 44 47	33.8	237.9	3.0		31.1	185	7683	11 25 01
11 28 20	J0242+1101	05 44 47	34.6	238.0	3.0		31.3	-15	7683	No stop
11 29 40	=0239+108	05 46 07	34.4	238.4	3.0		31.4	65	7694	11 28 21
11 29 40	0238+100	05 46 07	33.7	238.2	3.1		31.3	-15	7694	No stop
11 33 00	---	05 49 28	33.2	239.1	3.1		31.6	185	7719	11 29 41
11 33 00	J0242+1101	05 49 28	34.0	239.2	3.1		31.7	-15	7719	No stop
11 34 20	=0239+108	05 50 48	33.8	239.5	3.1		31.8	65	7729	11 33 01
11 35 30	J0312+0133	05 51 58	29.0	226.8	2.6		26.0	29	7729	11 35 30
11 36 30	=0310+013	05 52 58	28.9	227.0	2.7		26.1	60	7737	11 35 31
11 36 30	0317-023	05 52 58	26.4	223.3	2.5		24.3	-23	7737	No stop
11 39 50	---	05 56 19	26.0	224.1	2.6		24.7	177	7763	11 36 31

Schedule for TORUN (Code Tr) Page 29

Inclination Dependences of Optical-UV Broad Emission Line Profiles in Qu

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 7 Jun 2015 Day 158 ---										
11 39 50	J0312+0133	05 56 19	28.5	227.9	2.7		26.5	-23	7763	No stop
11 41 15	=0310+013	05 57 44	28.4	228.3	2.7		26.6	62	7774	11 39 51
11 41 15	0317-023	05 57 44	25.9	224.5	2.6		24.9	-23	7774	No stop
11 44 35	---	06 01 04	25.5	225.3	2.7		25.3	177	7799	11 41 16
11 44 35	J0312+0133	06 01 04	28.0	229.1	2.8		27.0	-23	7799	No stop
11 46 00	=0310+013	06 02 30	27.8	229.5	2.8		27.2	62	7810	11 44 36
11 46 00	0317-023	06 02 30	25.4	225.7	2.7		25.5	-23	7810	No stop
11 49 20	---	06 05 50	25.0	226.5	2.7		25.8	177	7836	11 46 01
11 49 20	J0312+0133	06 05 50	27.4	230.3	2.9		27.5	-23	7836	No stop
11 50 45	=0310+013	06 07 15	27.3	230.7	2.9		27.7	62	7847	11 49 21
11 53 40	0528+134	06 10 11	49.7	194.5	0.6		8.9	77	7847	11 53 40
12 00 00	---	06 16 32	49.5	196.9	0.7		10.3	380	7896	11 53 41

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

======== Setup file: sess215.C1024

Setup group: 10 Station: TORUN Total bit rate: 1024
Format: MARK5B 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=   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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
            5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
  BBC fr=    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
             806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
  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=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 3C345             16 41 17.606228   * 16 42 58.809966     16 43 31.653559       0.76
  J1642+3948        39 54 10.81496    * 39 48 36.99402      39 47 04.02873        0.52
  J1642+39          GSFC 2015a astro solution, unpublished  53430 observations.

  1758+388          17 58 44.703952   * 18 00 24.765362     18 00 57.360995       0.01
* J1800+3848        38 48 32.47350    * 38 48 30.69749      38 48 36.75059        0.01
                    GSFC 2015a astro solution, unpublished   4173 observations.

* 3C454.3           22 51 29.519738   * 22 53 57.747938     22 54 43.838352       0.67
  J2253+1608        15 52 54.34810    * 16 08 53.56093      16 13 45.93309        0.70
  J2253+16          GSFC 2015a astro solution, unpublished  40748 observations.

* 3C84              03 16 29.567263   * 03 19 48.160094     03 20 48.494765       1.30
  J0319+4130        41 19 51.91701    * 41 30 42.10413      41 33 46.03222        2.69
  J0319+41          GSFC 2015a astro solution, unpublished  10208 observations.

* 0528+134          05 28 06.759216   * 05 30 56.416747     05 31 47.541844       0.21
  J0530+1331        13 29 42.28885    * 13 31 55.14952      13 32 22.57255        0.24
                    GSFC 2015a astro solution, unpublished 135789 observations.

  0038-020          00 38 24.230030   * 00 40 57.611588     00 41 44.471940       0.08
* J0040-0146       -02 02 59.21442    *-01 46 32.02655     -01 41 30.50214        0.18
                    GSFC 2015a astro solution, unpublished    178 observations.
```

```
  0239+108          02 39 47.089939   * 02 42 29.170854     02 43 18.325951       0.02
* J0242+1101        10 48 16.27851    * 11 01 00.72797      11 04 44.88812        0.03
                    GSFC 2015a astro solution, unpublished   1493 observations.

  0310+013          03 10 08.587554   * 03 12 43.603242     03 13 30.396128       0.10
* J0312+0133        01 22 05.14986    * 01 33 17.56438      01 36 34.12876        0.24
                    GSFC 2015a astro solution, unpublished    155 observations.

  1310-271          13 10 17.069514   * 13 13 01.421386     13 13 53.458293       2.34
* J1313-2722       -27 07 05.16631    *-27 22 58.84526     -27 27 59.47836        5.30
                    GSFC 2015a astro solution, unpublished     16 observations.

  1601-222          16 01 03.776468   * 16 04 01.471727     16 04 57.997823       0.21
* J1604-2223       -22 15 29.52702    *-22 23 40.98839     -22 26 05.96715        0.50
                    GSFC 2015a astro solution, unpublished    169 observations.

  1638+124          16 38 27.927652   * 16 40 47.938827     16 41 32.545302       0.07
* J1640+1220        12 25 46.27283    * 12 20 02.07892      12 18 25.22182        0.14
                    GSFC 2015a astro solution, unpublished    191 observations.

  2149+056          21 49 07.701244   * 21 51 37.875493     21 52 24.760532       0.01
* J2151+0552        05 38 06.87001    * 05 52 12.95453      05 56 36.86432        0.02
                    GSFC 2015a astro solution, unpublished   8579 observations.

  2215+020          22 15 15.584192   * 22 17 48.237934     22 18 35.704649       0.05
* J2217+0220        02 05 08.96689    * 02 20 10.71220      02 24 51.77991        0.12
                    GSFC 2015a astro solution, unpublished    340 observations.

* 0106+013          01 06 04.517939   * 01 08 38.771109     01 09 25.810919       0.32
  J0108+0135        01 19 01.13988    * 01 35 00.31726      01 39 50.73219        0.36
                    GSFC 2015a astro solution, unpublished  46288 observations.

* 0226-038          02 26 22.077066   * 02 28 53.211237     02 29 38.887086       0.11
  J0228-0337       -03 50 58.49320    *-03 37 37.12577     -03 33 37.92278        0.23
                    GSFC 2015a astro solution, unpublished    154 observations.

* 1402-012          14 02 11.292907   * 14 04 45.895479     14 05 34.685112       0.06
  J1404-0130       -01 16 01.79754    *-01 30 21.94704     -01 34 44.06981        0.06
                    GSFC 2015a astro solution, unpublished    638 observations.

  OQ172             14 42 50.483797   * 14 45 16.465247     14 46 02.637710       0.04
  J1445+0958        10 11 12.14451    * 09 58 36.07277      09 54 50.13337        0.04
  J1445+09          GSFC 2015a astro solution, unpublished    947 observations.

* 1542+042          15 42 29.717606   * 15 44 59.427298     15 45 46.967306       0.14
  J1544+0407        04 17 07.62621    * 04 07 46.35587      04 05 01.22086        0.27
                    GSFC 2015a astro solution, unpublished     97 observations.

* 1705+018          17 05 02.722625   * 17 07 34.415271     17 08 22.654553       0.01
  J1707+0148        01 52 38.29325    * 01 48 45.69941      01 47 43.41213        0.01
                    GSFC 2015a astro solution, unpublished   5459 observations.

* 2212-299          22 12 25.112689   * 22 15 16.034544     22 16 08.746911       0.36
  J2215-2944       -29 59 20.02671    *-29 44 23.33252     -29 39 32.82926        1.05
                    GSFC 2015a astro solution, unpublished     30 observations.

* 0038-019          00 38 52.620660   * 00 41 26.008742     00 42 12.869500       1.16
  J0041-0143       -01 59 42.50626    *-01 43 15.67731     -01 38 14.30620        5.02
                    rfc_2015a Petrov, 2015, unpublished.  125 observations

* 0238+100          02 38 40.792812   * 02 41 22.280000     02 42 11.250342       0.00
                    10 05 59.81805    * 10 18 47.40000      10 22 32.69993        0.00
                    Target
```

```
* 0317-023          03 17 57.039321   * 03 20 28.800000     03 21 14.531971       0.00
                   -02 19 24.82328    *-02 08 38.00000     -02 05 28.99500        0.00
                    Target

* 1311-270          13 11 02.934524   * 13 13 47.348700     13 14 39.406369       0.00
                   -27 00 56.29776    *-27 16 48.94200     -27 21 49.17463        0.00
                    Target

* 1554-203          15 54 26.088583   * 15 57 21.180000     15 58 16.863884       0.00
                   -20 20 35.51238    *-20 29 12.10000     -20 31 45.12055        0.00
                    Target

* 1629+120          16 29 24.581195   * 16 31 45.246900     16 32 30.044861       0.00
                    12 02 24.07097    * 11 56 02.99100      11 54 14.71730        0.00
                    Target

* 2150+053          21 50 54.174447   * 21 53 24.558300     21 54 11.495483       0.00
                    05 22 08.26957    * 05 36 18.49200      05 40 43.68533        0.00
                    Target

* 2222+051          22 22 43.457054   * 22 25 14.702300     22 26 01.733551       0.00
                    05 11 53.48861    * 05 27 08.95700      05 31 52.83800        0.00
                    Target
```

em115atr

EVN-6CM-J1230+41

PI: *Aina Musaeva*


```
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```


```
Observing mode: Continuum
Schedule for TORUN     (Code Tr )                                  Page   2
               EVN-6CM-J1230+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
-----------------------------------------------------------------------------------------
 --- Sun   7 Jun 2015   Day 158 ---
 Next scan frequencies:  4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
                         5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
 Next BBC frequencies:    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
                          806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
 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

13 00 00  4C39.25      07 16 42  63.5 109.0 -2.2     -46.9     0        0   13 00 00
13 04 00  ---          07 20 42  64.1 110.2 -2.1     -46.5   240       31   13 00 01

13 07 33  1223+395     07 24 16  38.4  73.3 -5.0     -47.9   102       31   13 07 33
13 10 18  ---          07 27 17  38.8  73.8 -5.0     -48.1   165       52   13 07 34

13 11 06  J1230+41     07 27 50  39.8  70.8 -5.1     -49.3    27       52   13 11 06
13 16 01  ---          07 33 00  40.5  71.6 -5.0     -49.6   295       90   13 11 07

13 16 49  1223+395     07 33 33  39.7  74.9 -4.9     -48.4    27       90   13 16 49
13 18 34  ---          07 35 34  40.0  75.2 -4.9     -48.5   105      103   13 16 50

13 19 22  J1230+41     07 36 07  41.0  72.1 -4.9     -49.8    27      103   13 19 22
13 24 17  ---          07 41 18  41.7  73.0 -4.8     -50.1   295      141   13 19 23

13 25 05  1223+395     07 41 51  40.9  76.3 -4.7     -48.8    27      141   13 25 05
13 26 50  ---          07 43 51  41.2  76.6 -4.7     -48.9   105      154   13 25 06

13 27 38  J1230+41     07 44 24  42.2  73.5 -4.8     -50.3    27      154   13 27 38
13 32 33  ---          07 49 35  42.9  74.3 -4.7     -50.6   295      192   13 27 39

13 33 21  1223+395     07 50 09  42.1  77.7 -4.6     -49.2    27      192   13 33 21
13 35 06  ---          07 52 09  42.4  78.0 -4.6     -49.3   105      206   13 33 22

13 35 55  J1230+41     07 52 42  43.4  74.8 -4.6     -50.8    27      206   13 35 55
13 40 50  ---          07 57 53  44.1  75.7 -4.6     -51.0   295      244   13 35 56

13 41 38  1223+395     07 58 27  43.4  79.1 -4.5     -49.5    27      244   13 41 38
13 43 23  ---          08 00 27  43.7  79.5 -4.4     -49.6   105      257   13 41 39

13 44 12  J1230+41     08 01 01  44.6  76.2 -4.5     -51.2    27      257   13 44 12
13 49 07  ---          08 06 12  45.3  77.0 -4.4     -51.4   295      295   13 44 13

13 49 56  1223+395     08 06 46  44.6  80.6 -4.3     -49.8    27      295   13 49 56
13 51 41  ---          08 08 46  44.9  80.9 -4.3     -49.9   105      308   13 49 57
```

Schedule for TORUN (Code Tr) Page 3

EVN-6CM-J1230+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	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Sun 7 Jun 2015 Day 158 ---										
13 52 29	J1230+41	08 09 20	45.8	77.6	-4.4		-51.6	27	308	13 52 29
13 57 24	---	08 14 31	46.6	78.4	-4.3		-51.8	295	346	13 52 30
13 58 13	1223+395	08 15 05	45.8	82.0	-4.2		-50.1	27	346	13 58 13
13 59 58	---	08 17 05	46.1	82.4	-4.2		-50.1	105	360	13 58 14
14 00 47	J1230+41	08 17 39	47.0	78.9	-4.2		-52.0	27	360	14 00 47
14 05 42	---	08 22 50	47.8	79.8	-4.1		-52.2	295	397	14 00 48
14 06 32	1223+395	08 23 25	47.1	83.5	-4.1		-50.3	27	397	14 06 32
14 08 17	---	08 25 25	47.4	83.9	-4.0		-50.4	105	411	14 06 33
14 09 06	J1230+41	08 25 59	48.2	80.4	-4.1		-52.3	27	411	14 09 06
14 14 01	---	08 31 10	49.0	81.3	-4.0		-52.5	295	449	14 09 07
14 14 51	1223+395	08 31 45	48.3	85.1	-3.9		-50.5	27	449	14 14 51
14 16 36	---	08 33 45	48.6	85.4	-3.9		-50.5	105	462	14 14 52
14 17 25	J1230+41	08 34 20	49.5	81.8	-4.0		-52.6	27	462	14 17 25
14 22 20	---	08 39 31	50.3	82.7	-3.9		-52.8	295	500	14 17 26
14 23 10	1223+395	08 40 06	49.6	86.6	-3.8		-50.6	28	500	14 23 10
14 24 55	---	08 42 06	49.9	87.0	-3.7		-50.7	105	513	14 23 11
14 25 45	J1230+41	08 42 41	50.7	83.3	-3.8		-52.8	27	513	14 25 45
14 30 40	---	08 47 52	51.5	84.2	-3.7		-53.0	295	551	14 25 46
14 31 30	1223+395	08 48 27	50.8	88.2	-3.6		-50.7	28	551	14 31 30
14 33 15	---	08 50 28	51.1	88.6	-3.6		-50.7	105	565	14 31 31
14 34 06	J1230+41	08 51 03	52.0	84.8	-3.7		-53.1	27	565	14 34 06
14 39 01	---	08 56 14	52.7	85.8	-3.6		-53.2	295	603	14 34 07
14 39 51	1223+395	08 56 49	52.1	89.9	-3.5		-50.8	28	603	14 39 51
14 41 36	---	08 58 50	52.4	90.3	-3.5		-50.8	105	616	14 39 52
14 42 27	J1230+41	08 59 25	53.2	86.3	-3.5		-53.2	27	616	14 42 27
14 47 22	---	09 04 36	54.0	87.3	-3.4		-53.3	295	654	14 42 28
14 48 12	1223+395	09 05 12	53.3	91.6	-3.4		-50.7	28	654	14 48 12
14 49 57	---	09 07 12	53.6	92.0	-3.3		-50.7	105	667	14 48 13
14 53 06	4C39.25	09 10 06	75.5	165.9	-0.3		-10.8	26	667	14 53 06
14 57 06	---	09 14 07	75.7	169.0	-0.2		-8.4	240	698	14 53 07
15 00 14	1223+395	09 17 15	55.1	94.1	-3.2		-50.6	23	698	15 00 14
15 03 14	---	09 20 16	55.6	94.8	-3.1		-50.5	180	721	15 00 15

Schedule for TORUN (Code Tr) Page 4

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
15 03 44	J1230+41	09 20 46	56.4	90.5	-3.2		-53.4	7	721	15 03 44
15 08 54	---	09 25 57	57.2	91.5	-3.1		-53.3	310	761	15 03 45
15 09 26	1223+395	09 26 29	56.5	96.1	-3.0		-50.4	7	761	15 09 26
15 11 26	---	09 28 29	56.8	96.6	-3.0		-50.3	120	776	15 09 27
15 11 57	J1230+41	09 29 01	57.7	92.2	-3.0		-53.3	8	776	15 11 57
15 17 07	---	09 34 12	58.4	93.3	-3.0		-53.2	310	816	15 11 58
15 17 40	1223+395	09 34 44	57.7	98.0	-2.9		-50.1	8	816	15 17 40
15 19 40	---	09 36 45	58.0	98.5	-2.8		-50.0	120	831	15 17 41
15 20 13	J1230+41	09 37 18	58.9	93.9	-2.9		-53.2	9	831	15 20 13
15 25 23	---	09 42 28	59.7	95.1	-2.8		-53.1	310	871	15 20 14
15 25 57	1223+395	09 43 03	59.0	100.0	-2.7		-49.7	9	871	15 25 57
15 27 57	---	09 45 03	59.3	100.5	-2.7		-49.6	120	887	15 25 58
15 28 31	J1230+41	09 45 37	60.2	95.8	-2.8		-53.0	10	887	15 28 31
15 33 41	---	09 50 48	60.9	97.0	-2.7		-52.8	310	926	15 28 32
15 34 17	1223+395	09 51 24	60.2	102.1	-2.6		-49.2	11	926	15 34 17
15 36 17	---	09 53 24	60.5	102.6	-2.6		-49.1	120	942	15 34 18
15 36 53	J1230+41	09 54 00	61.4	97.7	-2.6		-52.7	11	942	15 36 53
15 42 03	---	09 59 11	62.2	99.0	-2.5		-52.4	310	981	15 36 54
15 42 40	1223+395	09 59 49	61.4	104.3	-2.4		-48.6	12	981	15 42 40
15 44 40	---	10 01 49	61.7	104.8	-2.4		-48.5	120	997	15 42 41
15 45 11	J1230+41	10 02 20	62.6	99.8	-2.5		-52.3	5	997	15 45 11
15 50 21	---	10 07 31	63.4	101.1	-2.4		-52.0	310	1037	15 45 12
15 50 47	1223+395	10 07 57	62.6	106.5	-2.3		-47.9	0	1037	15 50 47
15 52 47	---	10 09 57	62.9	107.1	-2.3		-47.7	120	1052	15 50 48
15 53 12	J1230+41	10 10 23	63.8	101.8	-2.3		-51.8	0	1052	15 53 12
15 58 22	---	10 15 33	64.6	103.2	-2.3		-51.4	310	1092	15 53 13
15 58 54	1223+395	10 16 05	63.8	108.9	-2.2		-47.1	5	1092	15 58 54
16 00 54	---	10 18 06	64.1	109.5	-2.1		-46.9	120	1107	15 58 55
16 01 25	J1230+41	10 18 37	65.0	104.0	-2.2		-51.1	5	1107	16 01 25
16 06 35	---	10 23 48	65.8	105.5	-2.1		-50.7	310	1147	16 01 26

Schedule for TORUN (Code Tr) Page 5

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
16 07 02	1223+395	10 24 15	64.9	111.4	-2.0		-46.1	0	1147	16 07 02
16 09 02	---	10 26 15	65.2	112.0	-2.0		-45.9	120	1162	16 07 03
16 09 29	J1230+41	10 26 41	66.2	106.3	-2.1		-50.4	0	1162	16 09 29
16 14 39	---	10 31 52	66.9	107.9	-2.0		-49.8	310	1202	16 09 30
16 15 11	1223+395	10 32 25	66.1	114.1	-1.9		-45.0	6	1202	16 15 11
16 17 11	---	10 34 25	66.3	114.7	-1.9		-44.7	120	1217	16 15 12
16 17 43	J1230+41	10 34 58	67.4	108.9	-1.9		-49.4	5	1217	16 17 43
16 22 53	---	10 40 09	68.1	110.6	-1.9		-48.7	310	1257	16 17 44
16 23 21	1223+395	10 40 36	67.2	116.9	-1.8		-43.7	0	1257	16 23 21
16 25 21	---	10 42 37	67.4	117.7	-1.7		-43.3	120	1272	16 23 22
16 25 48	J1230+41	10 43 04	68.5	111.5	-1.8		-48.3	0	1272	16 25 48
16 30 58	---	10 48 15	69.2	113.3	-1.7		-47.5	310	1312	16 25 49
16 31 32	1223+395	10 48 49	68.2	120.0	-1.6		-42.1	6	1312	16 31 32
16 33 32	---	10 50 49	68.5	120.8	-1.6		-41.7	120	1328	16 31 33
16 34 05	J1230+41	10 51 22	69.7	114.5	-1.7		-46.9	5	1328	16 34 05
16 39 15	---	10 56 33	70.4	116.4	-1.6		-45.9	310	1367	16 34 06
16 39 44	1223+395	10 57 02	69.3	123.3	-1.5		-40.3	0	1367	16 39 44
16 41 44	---	10 59 02	69.6	124.2	-1.5		-39.9	120	1383	16 39 45
16 42 12	J1230+41	10 59 31	70.8	117.6	-1.5		-45.3	0	1383	16 42 12
16 47 22	---	11 04 42	71.5	119.7	-1.4		-44.2	310	1422	16 42 13
16 47 57	1223+395	11 05 17	70.3	126.9	-1.4		-38.3	6	1422	16 47 57
16 49 57	---	11 07 17	70.6	127.8	-1.3		-37.7	120	1438	16 47 58
16 50 32	J1230+41	11 07 51	71.9	121.1	-1.4		-43.4	6	1438	16 50 32
16 55 42	---	11 13 02	72.5	123.4	-1.3		-42.1	310	1478	16 50 33
16 56 11	1223+395	11 13 32	71.3	130.8	-1.2		-35.9	0	1478	16 56 11
16 58 11	---	11 15 32	71.5	131.8	-1.2		-35.3	120	1493	16 56 12
16 58 40	J1230+41	11 16 01	72.9	124.8	-1.3		-41.2	0	1493	16 58 40
17 03 50	---	11 21 12	73.5	127.4	-1.2		-39.6	310	1533	16 58 41
17 04 27	1223+395	11 21 49	72.2	135.0	-1.1		-33.2	6	1533	17 04 27
17 06 27	---	11 23 49	72.4	136.1	-1.0		-32.5	120	1548	17 04 28

Schedule for TORUN (Code Tr) Page 6

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
17 07 03	J1230+41	11 24 25	73.9	129.0	-1.1		-38.6	6	1548	17 07 03
17 12 13	---	11 29 36	74.5	131.8	-1.0		-36.7	310	1588	17 07 04
17 12 43	1223+395	11 30 06	73.0	139.6	-0.9		-30.1	0	1588	17 12 43
17 14 43	---	11 32 07	73.2	140.7	-0.9		-29.3	120	1603	17 12 44
17 15 13	J1230+41	11 32 36	74.8	133.6	-1.0		-35.6	0	1603	17 15 13
17 20 23	---	11 37 47	75.4	136.7	-0.9		-33.4	310	1643	17 15 14
17 21 01	1223+395	11 38 25	73.8	144.5	-0.8		-26.7	8	1643	17 21 01
17 23 01	---	11 40 26	74.0	145.8	-0.8		-25.8	120	1658	17 21 02
17 23 38	J1230+41	11 41 03	75.7	138.7	-0.8		-32.0	8	1658	17 23 38
17 28 48	---	11 46 14	76.2	142.2	-0.8		-29.5	310	1698	17 23 39
17 29 18	1223+395	11 46 44	74.5	149.9	-0.7		-22.9	0	1698	17 29 18
17 31 18	---	11 48 45	74.6	151.3	-0.6		-21.9	120	1713	17 29 19
17 31 47	J1230+41	11 49 14	76.5	144.2	-0.7		-28.0	0	1713	17 31 47
17 36 57	---	11 54 25	76.9	148.0	-0.6		-25.2	310	1753	17 31 48
17 37 37	1223+395	11 55 05	75.1	155.7	-0.5		-18.6	10	1753	17 37 37
17 39 37	---	11 57 05	75.2	157.1	-0.5		-17.5	120	1769	17 37 38
17 40 16	J1230+41	11 57 44	77.2	150.5	-0.6		-23.3	10	1769	17 40 16
17 45 26	---	12 02 55	77.5	154.6	-0.5		-20.1	310	1808	17 40 17
17 45 58	1223+395	12 03 26	75.5	161.8	-0.4		-14.0	2	1808	17 45 58
17 47 58	---	12 05 27	75.6	163.3	-0.4		-12.9	120	1824	17 45 59
17 53 26	4C39.25	12 10 56	58.9	259.6	2.7		49.4	122	1824	17 53 26
17 57 26	---	12 14 57	58.4	260.5	2.8		49.6	240	1854	17 53 27
18 02 38	1223+395	12 20 10	76.0	174.8	-0.1		-4.0	122	1854	18 02 38
18 05 38	---	12 23 10	76.0	177.2	-0.1		-2.1	180	1878	18 02 39
18 06 07	J1230+41	12 23 39	78.4	172.8	-0.1		-5.8	5	1878	18 06 07
18 11 17	---	12 28 50	78.5	177.6	-0.0		-1.9	310	1917	18 06 08
18 11 49	1223+395	12 29 23	76.1	182.2	0.0		1.7	9	1917	18 11 49
18 13 49	---	12 31 23	76.0	183.8	0.1		3.0	120	1933	18 11 50
18 14 22	J1230+41	12 31 55	78.5	180.5	0.0		0.4	9	1933	18 14 22
18 19 32	---	12 37 06	78.4	185.4	0.1		4.3	310	1972	18 14 23

Schedule for TORUN (Code Tr) Page 7

EVN-6CM-J1230+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	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Sun 7 Jun 2015 Day 158 ---										
18 19 59	1223+395	12 37 33	75.9	188.8	0.2		6.8	4	1972	18 19 59
18 21 59	---	12 39 33	75.9	190.3	0.2		8.0	120	1988	18 20 00
18 22 26	J1230+41	12 40 00	78.4	188.1	0.1		6.5	4	1988	18 22 26
18 27 36	---	12 45 11	78.2	192.8	0.2		10.2	310	2028	18 22 27
18 28 12	1223+395	12 45 48	75.7	195.2	0.3		11.7	13	2028	18 28 12
18 30 12	---	12 47 48	75.6	196.7	0.4		12.9	120	2043	18 28 13
18 30 44	J1230+41	12 48 20	78.1	195.6	0.3		12.5	9	2043	18 30 44
18 35 54	---	12 53 31	77.9	200.1	0.4		16.0	310	2083	18 30 45
18 36 21	1223+395	12 53 59	75.3	201.3	0.5		16.4	4	2083	18 36 21
18 38 21	---	12 55 59	75.2	202.8	0.5		17.5	120	2098	18 36 22
18 38 47	J1230+41	12 56 25	77.7	202.6	0.4		17.9	2	2098	18 38 47
18 43 57	---	13 01 35	77.4	206.8	0.5		21.2	310	2138	18 38 48
18 44 26	1223+395	13 02 04	74.8	207.1	0.6		20.7	5	2138	18 44 26
18 46 26	---	13 04 05	74.7	208.5	0.6		21.7	120	2153	18 44 27
18 47 03	J1230+41	13 04 42	77.2	209.3	0.6		23.1	13	2153	18 47 03
18 52 13	---	13 09 53	76.8	213.2	0.6		26.0	310	2193	18 47 04
18 52 44	1223+395	13 10 24	74.2	212.7	0.7		24.7	8	2193	18 52 44
18 54 44	---	13 12 24	74.0	214.0	0.8		25.6	120	2208	18 52 45
18 55 16	J1230+41	13 12 56	76.5	215.4	0.7		27.7	8	2208	18 55 16
19 00 26	---	13 18 07	76.0	219.0	0.8		30.3	310	2248	18 55 17
19 01 01	1223+395	13 18 42	73.5	217.8	0.9		28.4	11	2248	19 01 01
19 03 01	---	13 20 42	73.3	219.0	0.9		29.2	120	2263	19 01 02
19 03 36	J1230+41	13 21 18	75.7	221.0	0.8		31.8	12	2263	19 03 36
19 08 46	---	13 26 29	75.2	224.3	0.9		34.1	310	2303	19 03 37
19 09 11	1223+395	13 26 53	72.7	222.6	1.0		31.6	1	2303	19 09 11
19 11 11	---	13 28 53	72.5	223.7	1.0		32.3	120	2319	19 09 12
19 11 34	J1230+41	13 29 17	74.9	226.0	1.0		35.2	0	2319	19 11 34
19 16 44	---	13 34 28	74.3	228.9	1.1		37.2	310	2358	19 11 35
19 17 16	1223+395	13 35 00	71.8	226.9	1.1		34.4	8	2358	19 17 16
19 19 16	---	13 37 00	71.6	227.9	1.2		35.1	120	2374	19 17 17

Schedule for TORUN (Code Tr) Page 8

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
19 19 47	J1230+41	13 37 31	74.0	230.6	1.1		38.3	9	2374	19 19 47
19 24 57	---	13 42 42	73.4	233.2	1.2		40.0	310	2413	19 19 48
19 25 20	1223+395	13 43 06	70.9	230.9	1.3		36.9	0	2413	19 25 20
19 27 20	---	13 45 06	70.7	231.8	1.3		37.5	120	2429	19 25 21
19 27 43	J1230+41	13 45 28	73.0	234.6	1.2		40.9	0	2429	19 27 43
19 32 53	---	13 50 39	72.4	237.0	1.3		42.3	310	2469	19 27 44
19 33 16	1223+395	13 51 02	69.9	234.5	1.4		39.1	0	2469	19 33 16
19 35 16	---	13 53 03	69.7	235.4	1.4		39.6	120	2484	19 33 17
19 35 39	J1230+41	13 53 26	72.0	238.3	1.4		43.1	0	2484	19 35 39
19 40 49	---	13 58 36	71.4	240.5	1.5		44.3	310	2524	19 35 40
19 41 10	1223+395	13 58 58	68.9	237.8	1.5		41.0	-1	2524	19 41 10
19 43 10	---	14 00 58	68.7	238.7	1.6		41.4	119	2539	19 41 11
19 43 32	J1230+41	14 01 20	71.0	241.7	1.5		44.9	-1	2539	19 43 32
19 48 42	---	14 06 31	70.3	243.7	1.6		46.0	309	2579	19 43 33
19 49 05	1223+395	14 06 54	67.9	241.0	1.7		42.6	0	2579	19 49 05
19 51 05	---	14 08 54	67.7	241.7	1.7		43.0	120	2594	19 49 06
19 51 35	J1230+41	14 09 25	69.9	244.8	1.6		46.6	8	2594	19 51 35
19 56 45	---	14 14 36	69.2	246.7	1.7		47.5	310	2634	19 51 36
19 57 08	1223+395	14 14 59	66.8	243.9	1.8		44.1	0	2634	19 57 08
19 59 08	---	14 16 59	66.6	244.6	1.8		44.4	120	2649	19 57 09
19 59 31	J1230+41	14 17 21	68.8	247.7	1.8		47.9	0	2649	19 59 31
20 04 41	---	14 22 32	68.1	249.4	1.9		48.7	310	2689	19 59 32
20 05 12	1223+395	14 23 04	65.7	246.7	1.9		45.3	9	2689	20 05 12
20 07 12	---	14 25 04	65.5	247.4	2.0		45.6	120	2704	20 05 13
20 07 43	J1230+41	14 25 35	67.7	250.4	1.9		49.1	9	2704	20 07 43
20 12 53	---	14 30 46	67.0	252.1	2.0		49.8	310	2744	20 07 44
20 13 15	1223+395	14 31 08	64.6	249.3	2.1		46.4	0	2744	20 13 15
20 15 15	---	14 33 09	64.3	249.9	2.1		46.7	120	2760	20 13 16
20 15 38	J1230+41	14 33 31	66.6	252.9	2.0		50.1	0	2760	20 15 38
20 20 48	---	14 38 42	65.8	254.4	2.1		50.6	310	2799	20 15 39

Schedule for TORUN (Code Tr) Page 9

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
20 21 19	1223+395	14 39 13	63.5	251.7	2.2		47.3	9	2799	20 21 19
20 23 19	---	14 41 13	63.2	252.3	2.2		47.5	120	2815	20 21 20
20 23 49	J1230+41	14 41 44	65.4	255.3	2.2		50.9	8	2815	20 23 49
20 28 59	---	14 46 55	64.6	256.7	2.3		51.4	310	2854	20 23 50
20 29 22	1223+395	14 47 17	62.3	254.0	2.3		48.1	0	2854	20 29 22
20 31 22	---	14 49 18	62.0	254.6	2.4		48.3	120	2870	20 29 23
20 31 44	J1230+41	14 49 40	64.2	257.5	2.3		51.6	0	2870	20 31 44
20 36 54	---	14 54 51	63.5	258.8	2.4		51.9	310	2910	20 31 45
20 37 20	1223+395	14 55 17	61.2	256.2	2.5		48.8	4	2910	20 37 20
20 39 20	---	14 57 18	60.9	256.7	2.5		48.9	120	2925	20 37 21
20 39 47	J1230+41	14 57 44	63.0	259.6	2.4		52.1	4	2925	20 39 47
20 44 57	---	15 02 55	62.3	260.9	2.5		52.4	310	2965	20 39 48
20 45 19	1223+395	15 03 17	60.0	258.3	2.6		49.3	0	2965	20 45 19
20 47 19	---	15 05 18	59.7	258.8	2.6		49.4	120	2980	20 45 20
20 47 41	J1230+41	15 05 40	61.9	261.5	2.6		52.5	0	2980	20 47 41
20 52 51	---	15 10 51	61.1	262.8	2.7		52.8	310	3020	20 47 42
20 53 15	1223+395	15 11 15	58.8	260.3	2.7		49.8	2	3020	20 53 15
20 55 15	---	15 13 15	58.5	260.7	2.8		49.8	120	3035	20 53 16
20 55 39	J1230+41	15 13 39	60.7	263.4	2.7		52.9	2	3035	20 55 39
21 00 49	---	15 18 50	59.9	264.6	2.8		53.0	310	3075	20 55 40
21 01 12	1223+395	15 19 13	57.6	262.1	2.9		50.1	0	3075	21 01 12
21 03 12	---	15 21 13	57.3	262.6	2.9		50.2	120	3090	21 01 13
21 03 34	J1230+41	15 21 35	59.5	265.2	2.8		53.1	0	3090	21 03 34
21 08 44	---	15 26 46	58.7	266.3	2.9		53.2	310	3130	21 03 35
21 09 06	1223+395	15 27 08	56.5	264.0	3.0		50.4	0	3130	21 09 06
21 11 06	---	15 29 09	56.2	264.4	3.0		50.4	120	3146	21 09 07
21 11 29	J1230+41	15 29 31	58.3	266.9	3.0		53.3	0	3146	21 11 29
21 16 39	---	15 34 42	57.5	268.0	3.1		53.3	310	3185	21 11 30
21 17 00	1223+395	15 35 04	55.3	265.7	3.1		50.6	0	3185	21 17 00
21 19 00	---	15 37 04	55.0	266.1	3.2		50.6	120	3201	21 17 01

Schedule for TORUN (Code Tr) Page 10

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
21 19 22	J1230+41	15 37 26	57.1	268.6	3.1		53.3	0	3201	21 19 22
21 24 32	---	15 42 37	56.3	269.6	3.2		53.4	310	3240	21 19 23
21 24 55	1223+395	15 42 59	54.1	267.4	3.3		50.7	0	3240	21 24 55
21 26 55	---	15 45 00	53.8	267.8	3.3		50.7	120	3256	21 24 56
21 27 16	J1230+41	15 45 22	55.9	270.2	3.2		53.4	0	3256	21 27 16
21 32 26	---	15 50 33	55.1	271.2	3.3		53.4	310	3296	21 27 17
21 32 48	1223+395	15 50 54	52.9	269.0	3.4		50.7	-1	3296	21 32 48
21 34 48	---	15 52 54	52.6	269.4	3.4		50.7	119	3311	21 32 49
21 35 09	J1230+41	15 53 15	54.7	271.7	3.4		53.3	-1	3311	21 35 09
21 40 19	---	15 58 26	54.0	272.7	3.5		53.3	309	3351	21 35 10
21 40 41	1223+395	15 58 48	51.7	270.6	3.5		50.7	0	3351	21 40 41
21 42 41	---	16 00 48	51.4	271.0	3.6		50.7	120	3366	21 40 42
21 43 03	J1230+41	16 01 10	53.5	273.3	3.5		53.2	0	3366	21 43 03
21 48 13	---	16 06 21	52.8	274.2	3.6		53.2	310	3406	21 43 04
21 48 34	1223+395	16 06 42	50.5	272.1	3.7		50.7	-1	3406	21 48 34
21 50 34	---	16 08 43	50.2	272.5	3.7		50.7	119	3421	21 48 35
21 50 55	J1230+41	16 09 04	52.4	274.7	3.6		53.1	-1	3421	21 50 55
21 56 05	---	16 14 15	51.6	275.7	3.7		53.0	309	3461	21 50 56
21 56 27	1223+395	16 14 37	49.3	273.7	3.8		50.6	0	3461	21 56 27
21 58 27	---	16 16 37	49.0	274.0	3.8		50.6	120	3476	21 56 28
21 58 49	J1230+41	16 16 59	51.2	276.2	3.8		52.9	0	3476	21 58 49
22 03 59	---	16 22 10	50.4	277.1	3.8		52.8	310	3516	21 58 50
22 04 20	1223+395	16 22 31	48.1	275.1	3.9		50.5	-1	3516	22 04 20
22 06 20	---	16 24 32	47.8	275.5	4.0		50.4	119	3531	22 04 21
22 06 41	J1230+41	16 24 53	50.0	277.6	3.9		52.7	-1	3531	22 06 41
22 11 51	---	16 30 04	49.2	278.5	4.0		52.5	309	3571	22 06 42
22 12 13	1223+395	16 30 26	47.0	276.6	4.1		50.3	0	3571	22 12 13
22 14 13	---	16 32 26	46.7	276.9	4.1		50.2	120	3587	22 12 14
22 14 35	J1230+41	16 32 48	48.8	279.0	4.0		52.4	0	3587	22 14 35
22 19 45	---	16 37 59	48.1	279.8	4.1		52.3	310	3626	22 14 36

Schedule for TORUN (Code Tr) Page 11

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
22 20 06	1223+395	16 38 20	45.8	278.0	4.2		50.1	-1	3626	22 20 06
22 22 06	---	16 40 21	45.5	278.4	4.2		50.0	119	3642	22 20 07
22 22 27	J1230+41	16 40 42	47.7	280.3	4.2		52.1	-1	3642	22 22 27
22 27 37	---	16 45 52	46.9	281.2	4.2		51.9	309	3681	22 22 28
22 28 00	1223+395	16 46 15	44.6	279.4	4.3		49.8	0	3681	22 28 00
22 30 00	---	16 48 15	44.3	279.8	4.4		49.7	120	3697	22 28 01
22 30 22	J1230+41	16 48 37	46.5	281.7	4.3		51.8	0	3697	22 30 22
22 35 32	---	16 53 48	45.7	282.5	4.4		51.6	310	3737	22 30 23
22 35 53	1223+395	16 54 09	43.4	280.8	4.5		49.5	-1	3737	22 35 53
22 37 53	---	16 56 10	43.2	281.1	4.5		49.5	119	3752	22 35 54
22 38 14	J1230+41	16 56 31	45.3	283.0	4.4		51.4	-1	3752	22 38 14
22 43 24	---	17 01 42	44.6	283.8	4.5		51.2	309	3792	22 38 15
22 43 46	1223+395	17 02 04	42.3	282.1	4.6		49.2	0	3792	22 43 46
22 45 46	---	17 04 04	42.0	282.5	4.6		49.1	120	3807	22 43 47
22 46 08	J1230+41	17 04 26	44.2	284.3	4.6		51.1	0	3807	22 46 08
22 51 18	---	17 09 37	43.4	285.1	4.6		50.8	310	3847	22 46 09
22 51 39	1223+395	17 09 58	41.1	283.5	4.7		48.9	-1	3847	22 51 39
22 53 39	---	17 11 59	40.8	283.8	4.8		48.8	119	3862	22 51 40
22 54 00	J1230+41	17 12 20	43.0	285.6	4.7		50.6	-1	3862	22 54 00
22 59 10	---	17 17 31	42.3	286.4	4.8		50.3	309	3902	22 54 01
22 59 33	1223+395	17 17 53	40.0	284.8	4.9		48.5	0	3902	22 59 33
23 01 33	---	17 19 54	39.7	285.2	4.9		48.4	120	3917	22 59 34
23 01 55	J1230+41	17 20 16	41.9	286.8	4.8		50.2	0	3917	23 01 55
23 07 05	---	17 25 27	41.1	287.7	4.9		49.9	310	3957	23 01 56
23 07 26	1223+395	17 25 48	38.8	286.1	5.0		48.1	-2	3957	23 07 26
23 09 26	---	17 27 48	38.5	286.5	5.0		48.0	118	3972	23 07 27
23 09 47	J1230+41	17 28 09	40.8	288.1	4.9		49.7	-1	3972	23 09 47
23 14 57	---	17 33 20	40.0	288.9	5.0		49.4	309	4012	23 09 48
23 15 20	1223+395	17 33 43	37.7	287.5	5.1		47.6	0	4012	23 15 20
23 17 20	---	17 35 43	37.4	287.8	5.2		47.5	120	4028	23 15 21

Schedule for TORUN (Code Tr) Page 12

EVN-6CM-J1230+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
--- Sun 7 Jun 2015 Day 158 ---										
23 17 42	J1230+41	17 36 05	39.6	289.4	5.1		49.2	0	4028	23 17 42
23 22 52	---	17 41 16	38.9	290.2	5.2		48.9	310	4067	23 17 43
23 23 13	1223+395	17 41 37	36.6	288.8	5.3		47.2	-2	4067	23 23 13
23 25 13	---	17 43 37	36.3	289.1	5.3		47.0	118	4083	23 23 14
23 25 34	J1230+41	17 43 59	38.5	290.6	5.2		48.7	-1	4083	23 25 34
23 30 44	---	17 49 09	37.8	291.4	5.3		48.3	309	4122	23 25 35
23 31 07	1223+395	17 49 32	35.4	290.1	5.4		46.7	0	4122	23 31 07
23 33 07	---	17 51 32	35.2	290.4	5.4		46.5	120	4138	23 31 08
23 33 29	J1230+41	17 51 55	37.4	291.9	5.3		48.1	0	4138	23 33 29
23 38 39	---	17 57 06	36.7	292.7	5.4		47.8	310	4178	23 33 30
23 39 00	1223+395	17 57 27	34.3	291.3	5.5		46.2	-2	4178	23 39 00
23 41 00	---	17 59 27	34.1	291.7	5.5		46.0	118	4193	23 39 01
23 41 21	J1230+41	17 59 48	36.3	293.1	5.5		47.6	-1	4193	23 41 21
23 46 31	---	18 04 59	35.6	293.9	5.6		47.2	309	4233	23 41 22
23 46 54	1223+395	18 05 22	33.2	292.6	5.6		45.6	0	4233	23 46 54
23 48 54	---	18 07 22	33.0	293.0	5.7		45.5	120	4248	23 46 55
23 49 16	J1230+41	18 07 45	35.2	294.4	5.6		47.0	0	4248	23 49 16
23 54 26	---	18 12 55	34.5	295.2	5.7		46.6	310	4288	23 49 17
23 54 47	1223+395	18 13 17	32.1	293.9	5.8		45.1	-2	4288	23 54 47
23 56 47	---	18 15 17	31.9	294.2	5.8		44.9	118	4303	23 54 48
--- Start: Sun 7 Jun 2015 Day 158 -- Stop: Mon 8 Jun 2015 Day 159 ---										
23 57 08	J1230+41	18 15 38	34.1	295.6	5.7		46.4	-1	4303	23 57 08
00 02 18	---	18 20 49	33.4	296.4	5.8		46.0	309	4343	23 57 09
00 02 41	1223+395	18 21 12	31.1	295.2	5.9		44.5	0	4343	00 02 41
00 04 41	---	18 23 12	30.8	295.5	5.9		44.3	120	4358	00 02 42
00 05 03	J1230+41	18 23 35	33.1	296.8	5.9		45.7	0	4358	00 05 03
00 10 13	---	18 28 45	32.4	297.6	6.0		45.3	310	4398	00 05 04
00 10 34	1223+395	18 29 06	30.0	296.5	6.0		43.9	-2	4398	00 10 34
00 12 34	---	18 31 07	29.7	296.8	6.1		43.7	118	4413	00 10 35

Schedule for TORUN (Code Tr) Page 13

EVN-6CM-J1230+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
--- Mon 8 Jun 2015 Day 159 ---										
00 12 55	J1230+41	18 31 28	32.0	298.0	6.0		45.1	-2	4413	00 12 55
00 18 05	---	18 36 39	31.3	298.9	6.1		44.7	308	4453	00 12 56
00 18 28	1223+395	18 37 02	28.9	297.7	6.2		43.3	0	4453	00 18 28
00 20 28	---	18 39 02	28.7	298.1	6.2		43.1	120	4469	00 18 29
00 20 51	J1230+41	18 39 25	31.0	299.3	6.1		44.4	0	4469	00 20 51
00 26 01	---	18 44 35	30.3	300.1	6.2		44.0	310	4508	00 20 52
00 26 22	1223+395	18 44 57	27.9	299.0	6.3		42.6	-2	4508	00 26 22
00 28 22	---	18 46 57	27.6	299.3	6.3		42.5	118	4524	00 26 23
00 28 43	J1230+41	18 47 18	30.0	300.5	6.3		43.7	-2	4524	00 28 43
00 33 53	---	18 52 29	29.3	301.3	6.4		43.3	308	4563	00 28 44
00 34 16	1223+395	18 52 52	26.9	300.3	6.4		42.0	0	4563	00 34 16
00 36 16	---	18 54 52	26.6	300.6	6.5		41.8	120	4579	00 34 17
00 36 39	J1230+41	18 55 15	28.9	301.8	6.4		43.0	0	4579	00 36 39
00 41 49	---	19 00 26	28.3	302.6	6.5		42.6	310	4619	00 36 40
00 42 10	1223+395	19 00 47	25.8	301.6	6.6		41.3	-2	4619	00 42 10
00 44 10	---	19 02 47	25.6	301.9	6.6		41.1	118	4634	00 42 11
00 44 31	J1230+41	19 03 08	27.9	303.0	6.5		42.3	-2	4634	00 44 31
00 49 41	---	19 08 19	27.3	303.8	6.6		41.8	308	4674	00 44 32
00 50 04	1223+395	19 08 42	24.8	302.9	6.7		40.6	0	4674	00 50 04
00 52 04	---	19 10 43	24.6	303.2	6.7		40.4	120	4689	00 50 05
00 52 27	J1230+41	19 11 05	26.9	304.2	6.7		41.6	0	4689	00 52 27
00 57 37	---	19 16 16	26.3	305.1	6.7		41.1	310	4729	00 52 28
00 57 56	1223+395	19 16 36	23.8	304.1	6.8		39.9	-4	4729	00 57 56
00 59 56	---	19 18 36	23.6	304.5	6.9		39.7	116	4744	00 57 57

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

======== Setup file: sess215.C1024

Setup group: 9 Station: TORUN Total bit rate: 1024
Format: MARK5B 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=   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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
            5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
  BBC fr=    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
             806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
  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=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
   barrel=roll_off

POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* J1230+41          12 28 10.110249   * 12 30 36.240000     12 31 21.377528       0.00
                    41 55 11.68551    * 41 38 38.03000      41 33 43.31287        0.00

* 4C39.25           09 23 55.319215   * 09 27 03.013936     09 27 59.744001       0.30
  J0927+3902        39 15 23.56645    * 39 02 20.85186      38 58 20.98234        0.16
  0923+392          /Users/mmezcua/sched_11.4/catalogs/sources.gsfc
  J0927+39          GSFC 2015a astro solution, unpublished 245753 observations.

* 1223+395          12 23 22.683483   * 12 25 50.569078     12 26 36.244397       0.20
  J1225+3914        39 30 58.80672    * 39 14 22.68652      39 09 26.40521        0.28
                    /Users/mmezcua/sched_11.4/catalogs/sources.gsfc
                    GSFC 2015a astro solution, unpublished    134 observations.
```

rg11batr

RadioAstron Maser observations

PI: *Alexei Alakoz*

```
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Observing mode: K-band, dual-pol

Schedule for TORUN     (Code Tr )                                   Page   2
               RadioAstron Maser observations
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

 ---------- This is a fringe finder/clock offset calibrator 16.2 deg. from G34.26+0.1 ----------

 Next scan frequencies:  22228.00  22228.00  22228.00  22228.00
 Next BBC frequencies:     728.00    728.00    728.00    728.00
 Next scan bandwidths:      16.00     16.00     16.00     16.00

02 32 00  1937-101     20 50 55  25.1 199.1  1.2      11.5     0        0   02 32 00
02 37 00  ---          20 55 56  24.9 200.5  1.3      12.3   300       10   02 32 01

 ---------- Please, make sure PCAL is OFF for G34.26+0.1 maser observations. ----------

02 40 00  G34.26+0.1   20 58 57  32.1 217.7  2.1      21.5   132       10   02 40 00
02 59 30  ---          21 18 30  30.2 223.0  2.4      24.2  1170       47   02 40 01

03 00 00  G34.26+0.1   21 19 00  30.1 223.1  2.4      24.2    24       47   03 00 00
03 19 30  ---          21 38 33  28.0 228.1  2.7      26.6  1170       84   03 00 01

03 20 00  G34.26+0.1   21 39 03  28.0 228.3  2.7      26.6    24       84   03 20 00
03 40 00  ---          21 59 06  25.7 233.2  3.1      28.8  1200      123   03 20 01



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


 ======== Setup file: ra1cm2.set
   Matching groups in ./rg11ba_freq.dat:
     tr1cm

   Setup group:    1         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=  21500.00  21500.00  21500.00  21500.00
  Net SB=         L         L         U         U
  IF SB =         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         L         L         U         U
  IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used with PCAL = off
  LO sum=   22228.00  22228.00  22228.00  22228.00
  BBC fr=     728.00    728.00    728.00    728.00
  Bandwd=      16.00     16.00     16.00     16.00
   Matching frequency sets:   4

  Track assignments are:
   track1=   2, 18,  3, 19
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 43.149848       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.48682        0.00
                    fake circumpolar target for a TS to look at

* G34.26+0.1        18 50 46.281655   * 18 53 18.685000     18 54 07.004317       0.00
  G34.26+0.15_      01 11 14.26435    * 01 14 59.90000      01 16 19.25533        0.00
                    ./rg11ba_sources.radioastron
                    OH maser; positions from 2001MNRAS320...217Slysh, RA-AO2-08, RA-AO2-13

* 1937-101          19 37 12.649200   * 19 39 57.256582     19 40 49.146997       0.00
  J1939-1002       -10 09 39.45684    *-10 02 41.52079     -10 00 20.98830        0.00
                    ./rg11ba_sources.radioastron
                    AGN, HIGHz, rfc_2013d Petrov, 2013, unpublished 906 observations, RA-AO2-03, RA-
```

rg11bbtr

RadioAstron Maser observations

PI: *Alexei Alakoz*


```
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Fax:      +7-495-3332378                Phone during observation: +7-903-6614865
```


```
Observing mode: L-band, dual-pol

Schedule for TORUN     (Code Tr )                                   Page   2
               RadioAstron Maser observations
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

 ---------- This is a fringe finder/clock offset calibrator 24.7 deg. from G34.26+0.1 ----------

 Next scan frequencies:  1660.00  1660.00  1660.00  1660.00
 Next BBC frequencies:    740.00   740.00   740.00   740.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

05 32 00  2022-077     23 51 25  15.5 233.3  3.4      29.1     0        0   05 32 00
05 37 00  ---          23 56 26  14.9 234.5  3.5      29.5   300       10   05 32 01

 ---------- Please, make sure PCAL is OFF for G34.26+0.1 maser observations. ----------

05 40 00  G34.26+0.1   23 59 26   9.2 259.8  5.1      36.2   115       10   05 40 00
05 59 30  ---          00 18 59   6.3 263.7  5.4      36.7  1170       47   05 40 01

06 00 00  G34.26+0.1   00 19 29   6.2 263.8  5.4      36.7    24       47   06 00 00
06 20 00  ---          00 39 33   3.2 267.8  5.8      36.9  1200       85   06 00 01



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


 ======== Setup file: ra18cm2.set

   Setup group:    4         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2400.00   2400.00   2400.00   2400.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         U         U         L         L
  IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used with PCAL = off
  LO sum=   1660.00  1660.00  1660.00  1660.00
  BBC fr=    740.00   740.00   740.00   740.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   4

  Track assignments are:
   track1=   2, 18,  3, 19
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 43.125470       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.49178        0.00
                    fake circumpolar target for a TS to look at

* G34.26+0.1        18 50 46.281655   * 18 53 18.685000     18 54 07.006415       0.00
  G34.26+0.15_      01 11 14.26435    * 01 14 59.90000      01 16 19.27030        0.00
                    ./rg11bb_sources.radioastron
                    OH maser; positions from 2001MNRAS320...217Slysh, RA-AO2-08, RA-AO2-13

* 2022-077          20 22 59.593466   * 20 25 40.660411     20 26 31.258724       0.00
  J2025-0735       -07 45 42.96124    *-07 35 52.68916     -07 32 40.27911        0.00
                    ./rg11bb_sources.radioastron
                    AGN, rfc_2013d Petrov, 2013, unpublished 81 observations, RA-AO2-12
```

rg11bctr

RadioAstron Maser observations

PI: *Alexei Alakoz*

```
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Fax:      +7-495-3332378                Phone during observation: +7-903-6614865

Observing mode: L-band, dual-pol

Schedule for TORUN     (Code Tr )                                   Page   2
               RadioAstron Maser observations
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

 ---------- This is a fringe finder/clock offset calibrator 20.3 deg. from W49N_OH ----------

 Next scan frequencies:  1660.00  1660.00  1660.00  1660.00
 Next BBC frequencies:    740.00   740.00   740.00   740.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

06 27 00  2029+121     00 46 34  25.7 255.9  4.2      36.6     0        0   06 27 00
06 32 00  ---          00 51 35  25.0 257.0  4.3      36.8   300       10   06 27 01

 ---------- Please, make sure PCAL is OFF for W49N_OH maser observations. ----------

06 35 00  W49N_OH      00 54 35   9.7 272.3  5.7      37.4   110       10   06 35 00
06 54 30  ---          01 14 08   6.8 276.1  6.1      37.2  1170       47   06 35 01

06 55 00  W49N_OH      01 14 38   6.7 276.2  6.1      37.2    24       47   06 55 00
07 14 30  ---          01 34 12   3.8 280.1  6.4      36.8  1170       84   06 55 01

 ---------- Please, make sure PCAL is OFF for W49N_OH maser observations. ----------

07 15 00  W49N_OH      01 34 42   3.8 280.2  6.4      36.8    24       84   07 15 00
07 20 10  ---          01 39 53   3.0 281.2  6.5      36.6   310       94   07 15 01



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


 ======== Setup file: ra18cm2.set

   Setup group:    4         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2400.00   2400.00   2400.00   2400.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         U         U         L         L
  IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used with PCAL = off
  LO sum=   1660.00  1660.00  1660.00  1660.00
  BBC fr=    740.00   740.00   740.00   740.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   4

  Track assignments are:
   track1=   2, 18,  3, 19
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 43.116890       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.49356        0.00
                    fake circumpolar target for a TS to look at

* W49N_OH           19 07 49.567892   * 19 10 13.180000     19 10 58.781511       0.00
                    09 01 14.90739    * 09 06 12.20000      09 07 52.00303        0.00
                    ./rg11bc_sources.radioastron
                    OH maser; positions from 2000ApJS...129Argon, RA-AO2-13

* 2029+121          20 29 32.681261   * 20 31 54.994268     20 32 39.947682       0.00
  J2031+1219        12 09 28.75295    * 12 19 41.34011      12 22 54.97703        0.00
                    ./rg11bc_sources.radioastron
                    AGN, MASIV, rfc_2013d Petrov, 2013, unpublished 2970 observations, RA-AO2-12
```

eb056tr

CLASS B0850+054 with Hartebeesthoek

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Observing mode: 1 Gbps continuum at 6cm

Schedule for TORUN (Code Tr) Page 2
CLASS B0850+054 with Hartebeesthoek
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
Next scan frequencies:		4942.49	4942.49	4942.49	4942.49		4974.49	4974.49	4974.49	4974.49
		5006.49	5006.49	5006.49	5006.49		5038.49	5038.49	5038.49	5038.49
Next BBC frequencies:		742.49	742.49	742.49	742.49		774.49	774.49	774.49	774.49
		806.49	806.49	806.49	806.49		838.49	838.49	838.49	838.49
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
08 30 00	J0853+0654	02 49 54	4.8	84.9	-6.1		-37.0	0	0	08 30 00
08 30 50	=0851+071	02 50 44	4.9	85.1	-6.1		-37.1	50	6	08 30 01
08 30 50	B0850+054	02 50 44	3.7	86.3	-6.0		-37.0	-17	6	No stop
08 33 50	---	02 53 45	4.2	86.9	-6.0		-37.0	163	29	08 30 51
08 33 50	J0853+0654	02 53 45	5.3	85.7	-6.0		-37.1	-18	29	No stop
08 34 40	=0851+071	02 54 35	5.5	85.9	-6.0		-37.1	32	36	08 33 51
08 34 40	B0850+054	02 54 35	4.3	87.1	-6.0		-37.0	-17	36	No stop
08 37 40	---	02 57 35	4.7	87.7	-5.9		-37.0	163	59	08 34 41
08 37 40	J0853+0654	02 57 35	5.9	86.5	-6.0		-37.1	-18	59	No stop
08 38 30	=0851+071	02 58 25	6.0	86.6	-5.9		-37.1	32	65	08 37 41
08 38 30	B0850+054	02 58 25	4.9	87.8	-5.9		-37.1	-17	65	No stop
08 41 30	---	03 01 26	5.3	88.4	-5.9		-37.1	163	88	08 38 31
08 41 30	J0853+0654	03 01 26	6.5	87.2	-5.9		-37.2	-18	88	No stop
08 42 20	=0851+071	03 02 16	6.6	87.4	-5.9		-37.2	32	95	08 41 31
08 42 20	B0850+054	03 02 16	5.4	88.6	-5.9		-37.1	-17	95	No stop
08 45 20	---	03 05 17	5.9	89.2	-5.8		-37.1	163	118	08 42 21
08 45 50	J0853+0654	03 05 47	7.1	88.1	-5.8		-37.2	12	118	08 45 50
08 46 40	=0851+071	03 06 37	7.3	88.3	-5.8		-37.2	50	124	08 45 51
08 46 40	B0850+054	03 06 37	6.1	89.5	-5.8		-37.1	-17	124	No stop
08 49 40	---	03 09 37	6.5	90.1	-5.7		-37.1	163	147	08 46 41
08 49 40	J0853+0654	03 09 37	7.7	88.9	-5.7		-37.2	-18	147	No stop
08 50 30	=0851+071	03 10 27	7.9	89.0	-5.7		-37.2	32	154	08 49 41
08 50 30	B0850+054	03 10 27	6.7	90.2	-5.7		-37.1	-17	154	No stop
08 53 30	---	03 13 28	7.1	90.8	-5.7		-37.1	163	177	08 50 31

Schedule for TORUN (Code Tr) Page 3

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
08 53 30	J0853+0654	03 13 28	8.3	89.6	-5.7		-37.2	-18	177	No stop
08 54 20	=0851+071	03 14 18	8.4	89.8	-5.7		-37.2	32	183	08 53 31
08 54 20	B0850+054	03 14 18	7.2	91.0	-5.7		-37.1	-17	183	No stop
08 57 20	---	03 17 19	7.7	91.6	-5.6		-37.1	163	206	08 54 21
08 57 20	J0853+0654	03 17 19	8.9	90.4	-5.6		-37.2	-18	206	No stop
08 58 10	=0851+071	03 18 09	9.0	90.6	-5.6		-37.2	32	213	08 57 21
08 58 10	B0850+054	03 18 09	7.8	91.8	-5.6		-37.1	-17	213	No stop
09 01 10	---	03 21 09	8.3	92.4	-5.5		-37.0	163	236	08 58 11
09 02 10	J0853+0654	03 22 09	9.6	91.4	-5.5		-37.2	42	236	09 02 10
09 03 00	=0851+071	03 22 59	9.7	91.5	-5.5		-37.2	50	242	09 02 11
09 03 00	B0850+054	03 22 59	8.5	92.7	-5.5		-37.0	-17	242	No stop
09 06 00	---	03 26 00	9.0	93.3	-5.5		-37.0	163	265	09 03 01
09 06 00	J0853+0654	03 26 00	10.2	92.1	-5.5		-37.2	-18	265	No stop
09 06 50	=0851+071	03 26 50	10.3	92.3	-5.5		-37.2	32	272	09 06 01
09 06 50	B0850+054	03 26 50	9.1	93.5	-5.4		-37.0	-17	272	No stop
09 09 50	---	03 29 51	9.6	94.1	-5.4		-37.0	163	295	09 06 51
09 09 50	J0853+0654	03 29 51	10.8	92.9	-5.4		-37.2	-18	295	No stop
09 10 40	=0851+071	03 30 41	10.9	93.1	-5.4		-37.2	32	301	09 09 51
09 10 40	B0850+054	03 30 41	9.7	94.3	-5.4		-37.0	-17	301	No stop
09 13 40	---	03 33 41	10.1	94.9	-5.3		-36.9	163	324	09 10 41
09 13 40	J0853+0654	03 33 41	11.3	93.7	-5.3		-37.1	-18	324	No stop
09 14 30	=0851+071	03 34 31	11.5	93.9	-5.3		-37.1	32	331	09 13 41
09 14 30	B0850+054	03 34 31	10.3	95.1	-5.3		-36.9	-17	331	No stop
09 17 30	---	03 37 32	10.7	95.7	-5.3		-36.9	163	354	09 14 31
09 18 00	J0853+0654	03 38 02	12.0	94.6	-5.3		-37.1	12	354	09 18 00
09 18 50	=0851+071	03 38 52	12.1	94.7	-5.3		-37.1	50	360	09 18 01
09 18 50	B0850+054	03 38 52	10.9	95.9	-5.2		-36.8	-17	360	No stop
09 21 50	---	03 41 53	11.4	96.6	-5.2		-36.8	163	383	09 18 51
09 21 50	J0853+0654	03 41 53	12.6	95.3	-5.2		-37.0	-18	383	No stop
09 22 40	=0851+071	03 42 43	12.7	95.5	-5.2		-37.0	32	390	09 21 51
09 22 40	B0850+054	03 42 43	11.5	96.7	-5.2		-36.8	-17	390	No stop
09 25 40	---	03 45 43	11.9	97.3	-5.1		-36.7	163	413	09 22 41

Schedule for TORUN (Code Tr) Page 4

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
09 25 40	J0853+0654	03 45 43	13.1	96.1	-5.1		-37.0	-18	413	No stop
09 26 30	=0851+071	03 46 33	13.3	96.3	-5.1		-37.0	32	419	09 25 41
09 26 30	B0850+054	03 46 33	12.1	97.5	-5.1		-36.7	-17	419	No stop
09 29 30	---	03 49 34	12.5	98.1	-5.1		-36.6	163	442	09 26 31
09 29 30	J0853+0654	03 49 34	13.7	96.9	-5.1		-36.9	-18	442	No stop
09 30 20	=0851+071	03 50 24	13.8	97.1	-5.1		-36.9	32	449	09 29 31
09 30 20	B0850+054	03 50 24	12.6	98.3	-5.1		-36.6	-17	449	No stop
09 33 20	---	03 53 24	13.1	98.9	-5.0		-36.6	163	472	09 30 21
09 34 50	J0811+0146	03 54 55	16.5	110.0	-4.3		-34.4	53	472	09 34 50
09 36 50	=0808+019	03 56 55	16.8	110.4	-4.3		-34.3	120	487	09 34 51
09 38 20	J0853+0654	03 58 25	15.0	98.7	-4.9		-36.7	51	487	09 38 20
09 39 10	=0851+071	03 59 15	15.1	98.9	-4.9		-36.7	50	494	09 38 21
09 39 10	B0850+054	03 59 15	14.0	100.1	-4.9		-36.4	-17	494	No stop
09 42 10	---	04 02 16	14.4	100.7	-4.9		-36.3	163	517	09 39 11
09 42 10	J0853+0654	04 02 16	15.6	99.5	-4.9		-36.6	-18	517	No stop
09 43 00	=0851+071	04 03 06	15.7	99.7	-4.9		-36.6	32	523	09 42 11
09 43 00	B0850+054	04 03 06	14.5	100.9	-4.8		-36.3	-17	523	No stop
09 46 00	---	04 06 07	15.0	101.5	-4.8		-36.2	163	546	09 43 01
09 46 00	J0853+0654	04 06 07	16.2	100.3	-4.8		-36.5	-18	546	No stop
09 46 50	=0851+071	04 06 57	16.3	100.5	-4.8		-36.5	32	553	09 46 01
09 46 50	B0850+054	04 06 57	15.1	101.7	-4.8		-36.2	-17	553	No stop
09 49 50	---	04 09 57	15.5	102.3	-4.7		-36.1	163	576	09 46 51
09 49 50	J0853+0654	04 09 57	16.7	101.1	-4.7		-36.4	-18	576	No stop
09 50 40	=0851+071	04 10 47	16.9	101.3	-4.7		-36.4	32	582	09 49 51
09 50 40	B0850+054	04 10 47	15.7	102.5	-4.7		-36.1	-18	582	No stop
09 53 40	---	04 13 48	16.1	103.1	-4.7		-36.0	162	605	09 50 41
09 54 10	J0853+0654	04 14 18	17.4	102.0	-4.7		-36.3	12	605	09 54 10
09 55 00	=0851+071	04 15 08	17.5	102.2	-4.7		-36.2	50	612	09 54 11
09 55 00	B0850+054	04 15 08	16.3	103.4	-4.6		-35.9	-18	612	No stop
09 58 00	---	04 18 08	16.7	104.0	-4.6		-35.8	162	635	09 55 01

Schedule for TORUN (Code Tr) Page 5

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
09 58 00	J0853+0654	04 18 08	17.9	102.8	-4.6		-36.1	-18	635	No stop
09 58 50	=0851+071	04 18 59	18.1	103.0	-4.6		-36.1	32	641	09 58 01
09 58 50	B0850+054	04 18 59	16.8	104.2	-4.6		-35.8	-18	641	No stop
10 01 50	---	04 21 59	17.3	104.9	-4.5		-35.6	162	664	09 58 51
10 01 50	J0853+0654	04 21 59	18.5	103.6	-4.5		-36.0	-18	664	No stop
10 02 40	=0851+071	04 22 49	18.6	103.8	-4.5		-36.0	32	671	10 01 51
10 02 40	B0850+054	04 22 49	17.4	105.0	-4.5		-35.6	-18	671	No stop
10 05 40	---	04 25 50	17.8	105.7	-4.5		-35.5	162	694	10 02 41
10 05 40	J0853+0654	04 25 50	19.1	104.5	-4.5		-35.8	-18	694	No stop
10 06 30	=0851+071	04 26 40	19.2	104.6	-4.5		-35.8	32	700	10 05 41
10 06 30	B0850+054	04 26 40	18.0	105.9	-4.5		-35.5	-18	700	No stop
10 09 30	---	04 29 40	18.4	106.5	-4.4		-35.3	162	723	10 06 31
10 10 30	J0853+0654	04 30 41	19.8	105.5	-4.4		-35.6	42	723	10 10 30
10 11 20	=0851+071	04 31 31	19.9	105.7	-4.4		-35.6	50	729	10 10 31
10 11 20	B0850+054	04 31 31	18.7	106.9	-4.4		-35.2	-18	729	No stop
10 14 20	---	04 34 31	19.1	107.5	-4.3		-35.1	162	753	10 11 21
10 14 20	J0853+0654	04 34 31	20.3	106.3	-4.3		-35.5	-18	753	No stop
10 15 10	=0851+071	04 35 21	20.4	106.5	-4.3		-35.4	32	759	10 14 21
10 15 10	B0850+054	04 35 21	19.2	107.7	-4.3		-35.1	-18	759	No stop
10 18 10	---	04 38 22	19.6	108.4	-4.3		-34.9	162	782	10 15 11
10 18 10	J0853+0654	04 38 22	20.9	107.2	-4.3		-35.3	-18	782	No stop
10 19 00	=0851+071	04 39 12	21.0	107.3	-4.3		-35.3	32	788	10 18 11
10 19 00	B0850+054	04 39 12	19.8	108.6	-4.2		-34.9	-18	788	No stop
10 22 00	---	04 42 12	20.2	109.2	-4.2		-34.7	162	812	10 19 01
10 22 00	J0853+0654	04 42 12	21.4	108.0	-4.2		-35.1	-18	812	No stop
10 22 50	=0851+071	04 43 03	21.5	108.2	-4.2		-35.1	32	818	10 22 01
10 22 50	B0850+054	04 43 03	20.3	109.4	-4.2		-34.7	-18	818	No stop
10 25 50	---	04 46 03	20.7	110.0	-4.1		-34.5	162	841	10 22 51
10 26 20	J0853+0654	04 46 33	22.0	108.9	-4.1		-34.9	12	841	10 26 20
10 27 10	=0851+071	04 47 23	22.2	109.1	-4.1		-34.8	50	847	10 26 21

Schedule for TORUN (Code Tr) Page 6

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
10 27 10	B0850+054	04 47 23	20.9	110.3	-4.1		-34.4	-18	847	No stop
10 30 10	---	04 50 24	21.3	111.0	-4.1		-34.3	162	871	10 27 11
10 30 10	J0853+0654	04 50 24	22.6	109.8	-4.1		-34.7	-18	871	No stop
10 31 00	=0851+071	04 51 14	22.7	110.0	-4.1		-34.6	32	877	10 30 11
10 31 00	B0850+054	04 51 14	21.5	111.2	-4.0		-34.2	-18	877	No stop
10 34 00	---	04 54 14	21.9	111.9	-4.0		-34.0	162	900	10 31 01
10 34 00	J0853+0654	04 54 14	23.1	110.6	-4.0		-34.5	-18	900	No stop
10 34 50	=0851+071	04 55 05	23.2	110.8	-4.0		-34.4	32	906	10 34 01
10 34 50	B0850+054	04 55 05	22.0	112.0	-4.0		-34.0	-18	906	No stop
10 37 50	---	04 58 05	22.4	112.7	-3.9		-33.8	162	929	10 34 51
10 37 50	J0853+0654	04 58 05	23.7	111.5	-3.9		-34.2	-18	929	No stop
10 38 40	=0851+071	04 58 55	23.8	111.7	-3.9		-34.2	32	936	10 37 51
10 38 40	B0850+054	04 58 55	22.5	112.9	-3.9		-33.7	-18	936	No stop
10 41 40	---	05 01 56	22.9	113.6	-3.9		-33.5	162	959	10 38 41
10 42 40	J0853+0654	05 02 56	24.3	112.6	-3.9		-33.9	42	959	10 42 40
10 43 30	=0851+071	05 03 46	24.4	112.8	-3.8		-33.9	50	965	10 42 41
10 43 30	B0850+054	05 03 46	23.2	114.0	-3.8		-33.4	-18	965	No stop
10 46 30	---	05 06 46	23.6	114.7	-3.8		-33.2	162	988	10 43 31
10 46 30	J0853+0654	05 06 46	24.9	113.5	-3.8		-33.7	-18	988	No stop
10 47 20	=0851+071	05 07 37	25.0	113.7	-3.8		-33.6	32	995	10 46 31
10 47 20	B0850+054	05 07 37	23.7	114.9	-3.8		-33.2	-18	995	No stop
10 50 20	---	05 10 37	24.1	115.6	-3.7		-33.0	162	1018	10 47 21
10 50 20	J0853+0654	05 10 37	25.4	114.3	-3.7		-33.4	-18	1018	No stop
10 51 10	=0851+071	05 11 27	25.5	114.5	-3.7		-33.4	32	1024	10 50 21
10 51 10	B0850+054	05 11 27	24.2	115.7	-3.7		-32.9	-18	1024	No stop
10 54 10	---	05 14 28	24.6	116.4	-3.7		-32.7	162	1047	10 51 11
10 54 10	J0853+0654	05 14 28	25.9	115.2	-3.7		-33.2	-18	1047	No stop
10 55 00	=0851+071	05 15 18	26.0	115.4	-3.7		-33.1	32	1054	10 54 11
10 55 00	B0850+054	05 15 18	24.8	116.6	-3.6		-32.6	-18	1054	No stop
10 58 00	---	05 18 18	25.2	117.3	-3.6		-32.4	162	1077	10 55 01

Schedule for TORUN (Code Tr) Page 7

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
10 59 30	J0811+0146	05 19 49	27.5	129.6	-2.9		-27.6	51	1077	10 59 30
11 01 30	=0808+019	05 21 49	27.8	130.1	-2.8		-27.3	120	1092	10 59 31
11 03 00	J0853+0654	05 23 19	27.1	117.3	-3.5		-32.5	49	1092	11 03 00
11 03 50	=0851+071	05 24 09	27.2	117.5	-3.5		-32.4	50	1099	11 03 01
11 03 50	B0850+054	05 24 09	25.9	118.7	-3.5		-31.9	-18	1099	No stop
11 06 50	---	05 27 10	26.3	119.4	-3.4		-31.7	162	1122	11 03 51
11 06 50	J0853+0654	05 27 10	27.6	118.2	-3.5		-32.2	-18	1122	No stop
11 07 40	=0851+071	05 28 00	27.7	118.4	-3.4		-32.1	32	1128	11 06 51
11 07 40	B0850+054	05 28 00	26.4	119.6	-3.4		-31.6	-18	1128	No stop
11 10 40	---	05 31 00	26.8	120.3	-3.4		-31.4	162	1151	11 07 41
11 10 40	J0853+0654	05 31 00	28.1	119.1	-3.4		-31.9	-18	1151	No stop
11 11 30	=0851+071	05 31 51	28.2	119.3	-3.4		-31.8	32	1158	11 10 41
11 11 30	B0850+054	05 31 51	26.9	120.5	-3.4		-31.3	-18	1158	No stop
11 14 30	---	05 34 51	27.3	121.2	-3.3		-31.0	162	1181	11 11 31
11 14 30	J0853+0654	05 34 51	28.6	120.0	-3.3		-31.6	-18	1181	No stop
11 15 20	=0851+071	05 35 41	28.7	120.2	-3.3		-31.5	32	1187	11 14 31
11 15 20	B0850+054	05 35 41	27.4	121.4	-3.3		-31.0	-18	1187	No stop
11 18 20	---	05 38 42	27.8	122.2	-3.3		-30.7	162	1210	11 15 21
11 19 20	J0853+0654	05 39 42	29.3	121.2	-3.2		-31.2	42	1210	11 19 20
11 20 10	=0851+071	05 40 32	29.4	121.4	-3.2		-31.1	50	1217	11 19 21
11 20 10	B0850+054	05 40 32	28.1	122.6	-3.2		-30.5	-18	1217	No stop
11 23 10	---	05 43 32	28.4	123.3	-3.2		-30.2	162	1240	11 20 11
11 23 10	J0853+0654	05 43 32	29.7	122.1	-3.2		-30.8	-18	1240	No stop
11 24 00	=0851+071	05 44 23	29.9	122.4	-3.2		-30.7	32	1246	11 23 11
11 24 00	B0850+054	05 44 23	28.5	123.5	-3.2		-30.2	-18	1246	No stop
11 27 00	---	05 47 23	28.9	124.3	-3.1		-29.9	162	1269	11 24 01
11 27 00	J0853+0654	05 47 23	30.2	123.1	-3.1		-30.4	-18	1269	No stop
11 27 50	=0851+071	05 48 13	30.3	123.3	-3.1		-30.4	32	1276	11 27 01
11 27 50	B0850+054	05 48 13	29.0	124.5	-3.1		-29.8	-18	1276	No stop
11 30 50	---	05 51 14	29.4	125.2	-3.0		-29.5	162	1299	11 27 51

Schedule for TORUN (Code Tr) Page 8

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
11 30 50	J0853+0654	05 51 14	30.7	124.1	-3.1		-30.1	-18	1299	No stop
11 31 40	=0851+071	05 52 04	30.8	124.3	-3.0		-30.0	32	1305	11 30 51
11 31 40	B0850+054	05 52 04	29.5	125.4	-3.0		-29.4	-18	1305	No stop
11 34 40	---	05 55 04	29.9	126.2	-3.0		-29.1	162	1328	11 31 41
11 35 10	J0853+0654	05 55 34	31.2	125.1	-3.0		-29.6	12	1328	11 35 10
11 36 00	=0851+071	05 56 25	31.4	125.4	-3.0		-29.6	50	1335	11 35 11
11 36 00	B0850+054	05 56 25	30.0	126.5	-3.0		-29.0	-18	1335	No stop
11 39 00	---	05 59 25	30.4	127.3	-2.9		-28.7	162	1358	11 36 01
11 39 00	J0853+0654	05 59 25	31.7	126.1	-2.9		-29.2	-19	1358	No stop
11 39 50	=0851+071	06 00 15	31.8	126.3	-2.9		-29.2	31	1364	11 39 01
11 39 50	B0850+054	06 00 15	30.5	127.5	-2.9		-28.6	-18	1364	No stop
11 42 50	---	06 03 16	30.8	128.3	-2.8		-28.3	162	1387	11 39 51
11 42 50	J0853+0654	06 03 16	32.2	127.1	-2.9		-28.8	-19	1387	No stop
11 43 40	=0851+071	06 04 06	32.3	127.3	-2.8		-28.8	31	1394	11 42 51
11 43 40	B0850+054	06 04 06	30.9	128.5	-2.8		-28.2	-18	1394	No stop
11 46 40	---	06 07 06	31.3	129.2	-2.8		-27.8	162	1417	11 43 41
11 46 40	J0853+0654	06 07 06	32.6	128.1	-2.8		-28.4	-19	1417	No stop
11 47 30	=0851+071	06 07 56	32.7	128.3	-2.8		-28.3	31	1423	11 46 41
11 47 30	B0850+054	06 07 56	31.4	129.5	-2.8		-27.7	-18	1423	No stop
11 50 30	---	06 10 57	31.7	130.2	-2.7		-27.4	162	1446	11 47 31
11 51 30	J0853+0654	06 11 57	33.2	129.4	-2.7		-27.9	41	1446	11 51 30
11 52 20	=0851+071	06 12 47	33.3	129.6	-2.7		-27.8	50	1453	11 51 31
11 52 20	B0850+054	06 12 47	31.9	130.7	-2.7		-27.2	-18	1453	No stop
11 55 20	---	06 15 48	32.3	131.5	-2.6		-26.8	162	1476	11 52 21
11 55 20	J0853+0654	06 15 48	33.6	130.4	-2.6		-27.4	-19	1476	No stop
11 56 10	=0851+071	06 16 38	33.7	130.6	-2.6		-27.3	31	1482	11 55 21
11 56 10	B0850+054	06 16 38	32.4	131.7	-2.6		-26.7	-18	1482	No stop
11 59 10	---	06 19 38	32.7	132.5	-2.6		-26.4	162	1505	11 56 11
11 59 10	J0853+0654	06 19 38	34.1	131.4	-2.6		-27.0	-19	1505	No stop
12 00 00	=0851+071	06 20 29	34.2	131.6	-2.6		-26.9	31	1512	11 59 11

Schedule for TORUN (Code Tr) Page 9

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
12 00 00	B0850+054	06 20 29	32.8	132.7	-2.6		-26.3	-18	1512	No stop
12 03 00	---	06 23 29	33.1	133.5	-2.5		-25.9	162	1535	12 00 01
12 03 00	J0853+0654	06 23 29	34.5	132.4	-2.5		-26.5	-19	1535	No stop
12 03 50	=0851+071	06 24 19	34.6	132.6	-2.5		-26.4	31	1541	12 03 01
12 03 50	B0850+054	06 24 19	33.2	133.8	-2.5		-25.8	-18	1541	No stop
12 06 50	---	06 27 20	33.5	134.6	-2.4		-25.4	162	1564	12 03 51
12 07 20	J0853+0654	06 27 50	35.0	133.6	-2.4		-26.0	11	1564	12 07 20
12 08 10	=0851+071	06 28 40	35.1	133.8	-2.4		-25.9	50	1571	12 07 21
12 08 10	B0850+054	06 28 40	33.7	134.9	-2.4		-25.3	-19	1571	No stop
12 11 10	---	06 31 40	34.0	135.8	-2.4		-24.9	161	1594	12 08 11
12 11 10	J0853+0654	06 31 40	35.4	134.6	-2.4		-25.5	-19	1594	No stop
12 12 00	=0851+071	06 32 31	35.5	134.9	-2.4		-25.4	31	1600	12 11 11
12 12 00	B0850+054	06 32 31	34.1	136.0	-2.4		-24.8	-19	1600	No stop
12 15 00	---	06 35 31	34.4	136.8	-2.3		-24.4	161	1623	12 12 01
12 15 00	J0853+0654	06 35 31	35.8	135.7	-2.3		-25.0	-19	1623	No stop
12 15 50	=0851+071	06 36 21	35.9	135.9	-2.3		-24.9	31	1629	12 15 01
12 15 50	B0850+054	06 36 21	34.5	137.0	-2.3		-24.3	-19	1629	No stop
12 18 50	---	06 39 22	34.8	137.9	-2.2		-23.9	161	1653	12 15 51
12 18 50	J0853+0654	06 39 22	36.2	136.8	-2.3		-24.5	-19	1653	No stop
12 19 40	=0851+071	06 40 12	36.3	137.0	-2.2		-24.4	31	1659	12 18 51
12 19 40	B0850+054	06 40 12	34.9	138.1	-2.2		-23.7	-19	1659	No stop
12 22 40	---	06 43 12	35.2	138.9	-2.2		-23.3	161	1682	12 19 41
12 25 10	J0927+3902	06 45 43	59.0	100.6	-2.7		-49.4	47	1682	12 25 10
12 31 10	=0923+392	06 51 44	59.9	102.1	-2.6		-49.0	360	1728	12 25 11
12 33 40	J0853+0654	06 54 14	37.7	141.0	-2.0		-22.4	52	1728	12 33 40
12 34 30	=0851+071	06 55 04	37.8	141.3	-2.0		-22.2	50	1735	12 33 41
12 34 30	B0850+054	06 55 04	36.3	142.3	-2.0		-21.6	-19	1735	No stop
12 37 30	---	06 58 05	36.6	143.2	-1.9		-21.2	161	1758	12 34 31
12 37 30	J0853+0654	06 58 05	38.0	142.1	-1.9		-21.8	-19	1758	No stop
12 38 20	=0851+071	06 58 55	38.1	142.4	-1.9		-21.7	31	1764	12 37 31

Schedule for TORUN (Code Tr) Page 10

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
12 38 20	B0850+054	06 58 55	36.7	143.4	-1.9		-21.1	-19	1764	No stop
12 41 20	---	07 01 55	36.9	144.3	-1.9		-20.6	161	1787	12 38 21
12 41 20	J0853+0654	07 01 55	38.4	143.3	-1.9		-21.2	-19	1787	No stop
12 42 10	=0851+071	07 02 45	38.5	143.5	-1.9		-21.1	31	1794	12 41 21
12 42 10	B0850+054	07 02 45	37.0	144.5	-1.8		-20.5	-19	1794	No stop
12 45 10	---	07 05 46	37.3	145.4	-1.8		-20.0	161	1817	12 42 11
12 45 10	J0853+0654	07 05 46	38.7	144.4	-1.8		-20.6	-19	1817	No stop
12 46 00	=0851+071	07 06 36	38.8	144.7	-1.8		-20.5	31	1823	12 45 11
12 46 00	B0850+054	07 06 36	37.3	145.7	-1.8		-19.9	-19	1823	No stop
12 49 00	---	07 09 37	37.6	146.5	-1.7		-19.4	161	1846	12 46 01
12 49 30	J0853+0654	07 10 07	39.1	145.7	-1.7		-19.9	11	1846	12 49 30
12 50 20	=0851+071	07 10 57	39.2	146.0	-1.7		-19.8	50	1853	12 49 31
12 50 20	B0850+054	07 10 57	37.7	146.9	-1.7		-19.2	-19	1853	No stop
12 53 20	---	07 13 57	37.9	147.8	-1.7		-18.7	161	1876	12 50 21
12 53 20	J0853+0654	07 13 57	39.4	146.9	-1.7		-19.3	-19	1876	No stop
12 54 10	=0851+071	07 14 47	39.5	147.1	-1.7		-19.2	31	1882	12 53 21
12 54 10	B0850+054	07 14 47	38.0	148.1	-1.6		-18.6	-19	1882	No stop
12 57 10	---	07 17 48	38.2	149.0	-1.6		-18.1	161	1905	12 54 11
12 57 10	J0853+0654	07 17 48	39.7	148.0	-1.6		-18.7	-19	1905	No stop
12 58 00	=0851+071	07 18 38	39.8	148.3	-1.6		-18.5	31	1912	12 57 11
12 58 00	B0850+054	07 18 38	38.3	149.2	-1.6		-18.0	-19	1912	No stop
13 01 00	---	07 21 39	38.5	150.2	-1.5		-17.5	161	1935	12 58 01
13 01 00	J0853+0654	07 21 39	40.0	149.2	-1.5		-18.0	-19	1935	No stop
13 01 50	=0851+071	07 22 29	40.1	149.5	-1.5		-17.9	31	1941	13 01 01
13 01 50	B0850+054	07 22 29	38.6	150.4	-1.5		-17.3	-19	1941	No stop
13 04 50	---	07 25 29	38.8	151.3	-1.5		-16.8	161	1964	13 01 51
13 05 50	J0853+0654	07 26 29	40.4	150.7	-1.5		-17.2	41	1964	13 05 50
13 06 40	=0851+071	07 27 19	40.5	151.0	-1.5		-17.1	50	1971	13 05 51
13 06 40	B0850+054	07 27 19	38.9	151.9	-1.4		-16.5	-19	1971	No stop
13 09 40	---	07 30 20	39.1	152.8	-1.4		-16.0	161	1994	13 06 41

Schedule for TORUN (Code Tr) Page 11

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
13 09 40	J0853+0654	07 30 20	40.7	151.9	-1.4		-16.5	-19	1994	No stop
13 10 30	=0851+071	07 31 10	40.7	152.2	-1.4		-16.4	31	2000	13 09 41
13 10 30	B0850+054	07 31 10	39.2	153.1	-1.4		-15.8	-19	2000	No stop
13 13 30	---	07 34 11	39.4	154.0	-1.3		-15.3	161	2023	13 10 31
13 13 30	J0853+0654	07 34 11	40.9	153.1	-1.3		-15.9	-19	2023	No stop
13 14 20	=0851+071	07 35 01	41.0	153.4	-1.3		-15.7	31	2029	13 13 31
13 14 20	B0850+054	07 35 01	39.5	154.3	-1.3		-15.2	-19	2029	No stop
13 17 20	---	07 38 01	39.6	155.2	-1.3		-14.6	161	2053	13 14 21
13 17 20	J0853+0654	07 38 01	41.2	154.4	-1.3		-15.2	-19	2053	No stop
13 18 10	=0851+071	07 38 51	41.2	154.6	-1.3		-15.0	31	2059	13 17 21
13 18 10	B0850+054	07 38 51	39.7	155.5	-1.2		-14.5	-19	2059	No stop
13 21 10	---	07 41 52	39.9	156.4	-1.2		-14.0	161	2082	13 18 11
13 21 40	J0853+0654	07 42 22	41.5	155.7	-1.2		-14.4	11	2082	13 21 40
13 22 30	=0851+071	07 43 12	41.5	156.0	-1.2		-14.2	50	2088	13 21 41
13 22 30	B0850+054	07 43 12	40.0	156.8	-1.2		-13.7	-19	2088	No stop
13 25 30	---	07 46 13	40.1	157.8	-1.1		-13.2	161	2112	13 22 31
13 25 30	J0853+0654	07 46 13	41.7	157.0	-1.1		-13.7	-19	2112	No stop
13 26 20	=0851+071	07 47 03	41.7	157.3	-1.1		-13.5	31	2118	13 25 31
13 26 20	B0850+054	07 47 03	40.2	158.1	-1.1		-13.0	-19	2118	No stop
13 29 20	---	07 50 03	40.4	159.0	-1.1		-12.5	161	2141	13 26 21
13 29 20	J0853+0654	07 50 03	41.9	158.2	-1.1		-13.0	-20	2141	No stop
13 30 10	=0851+071	07 50 53	42.0	158.5	-1.1		-12.8	30	2147	13 29 21
13 30 10	B0850+054	07 50 53	40.4	159.3	-1.0		-12.3	-19	2147	No stop
13 33 10	---	07 53 54	40.6	160.2	-1.0		-11.8	161	2171	13 30 11
13 33 10	J0853+0654	07 53 54	42.1	159.5	-1.0		-12.2	-20	2171	No stop
13 34 00	=0851+071	07 54 44	42.2	159.8	-1.0		-12.1	30	2177	13 33 11
13 34 00	B0850+054	07 54 44	40.6	160.5	-1.0		-11.6	-19	2177	No stop
13 37 00	---	07 57 44	40.7	161.5	-0.9		-11.0	161	2200	13 34 01
13 38 30	J0811+0146	07 59 15	38.6	175.8	-0.2		-2.5	47	2200	13 38 30
13 40 30	=0808+019	08 01 15	38.6	176.5	-0.2		-2.1	120	2215	13 38 31

Schedule for TORUN (Code Tr) Page 12

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
13 42 00	J0853+0654	08 02 45	42.6	162.4	-0.9		-10.5	46	2215	13 42 00
13 42 50	=0851+071	08 03 35	42.6	162.7	-0.9		-10.4	50	2222	13 42 01
13 42 50	B0850+054	08 03 35	41.0	163.4	-0.8		-9.9	-20	2222	No stop
13 45 50	---	08 06 36	41.1	164.3	-0.8		-9.4	160	2245	13 42 51
13 45 50	J0853+0654	08 06 36	42.7	163.7	-0.8		-9.8	-20	2245	No stop
13 46 40	=0851+071	08 07 26	42.8	164.0	-0.8		-9.6	30	2251	13 45 51
13 46 40	B0850+054	08 07 26	41.2	164.6	-0.8		-9.2	-20	2251	No stop
13 49 40	---	08 10 27	41.3	165.6	-0.7		-8.6	160	2274	13 46 41
13 49 40	J0853+0654	08 10 27	42.9	165.0	-0.7		-9.0	-20	2274	No stop
13 50 30	=0851+071	08 11 17	42.9	165.2	-0.7		-8.9	30	2281	13 49 41
13 50 30	B0850+054	08 11 17	41.3	165.9	-0.7		-8.5	-20	2281	No stop
13 53 30	---	08 14 17	41.4	166.9	-0.7		-7.9	160	2304	13 50 31
13 53 30	J0853+0654	08 14 17	43.0	166.2	-0.7		-8.3	-20	2304	No stop
13 54 20	=0851+071	08 15 07	43.1	166.5	-0.7		-8.1	30	2310	13 53 31
13 54 20	B0850+054	08 15 07	41.4	167.1	-0.6		-7.7	-20	2310	No stop
13 57 20	---	08 18 08	41.5	168.1	-0.6		-7.1	160	2333	13 54 21
13 57 50	J0853+0654	08 18 38	43.2	167.7	-0.6		-7.4	10	2333	13 57 50
13 58 40	=0851+071	08 19 28	43.2	168.0	-0.6		-7.2	50	2340	13 57 51
13 58 40	B0850+054	08 19 28	41.6	168.6	-0.6		-6.9	-20	2340	No stop
14 01 40	---	08 22 29	41.7	169.6	-0.5		-6.3	160	2363	13 58 41
14 01 40	J0853+0654	08 22 29	43.3	169.0	-0.5		-6.6	-20	2363	No stop
14 02 30	=0851+071	08 23 19	43.3	169.3	-0.5		-6.5	30	2369	14 01 41
14 02 30	B0850+054	08 23 19	41.7	169.8	-0.5		-6.1	-20	2369	No stop
14 05 30	---	08 26 19	41.8	170.8	-0.5		-5.5	160	2392	14 02 31
14 05 30	J0853+0654	08 26 19	43.4	170.3	-0.5		-5.8	-20	2392	No stop
14 06 20	=0851+071	08 27 09	43.4	170.6	-0.5		-5.7	30	2399	14 05 31
14 06 20	B0850+054	08 27 09	41.8	171.1	-0.4		-5.3	-20	2399	No stop
14 09 20	---	08 30 10	41.9	172.1	-0.4		-4.7	160	2422	14 06 21
14 09 20	J0853+0654	08 30 10	43.5	171.6	-0.4		-5.1	-20	2422	No stop
14 10 10	=0851+071	08 31 00	43.5	171.9	-0.4		-4.9	30	2428	14 09 21

Schedule for TORUN (Code Tr) Page 13

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
14 10 10	B0850+054	08 31 00	41.9	172.4	-0.4		-4.6	-20	2428	No stop
14 13 10	---	08 34 00	41.9	173.4	-0.3		-4.0	160	2451	14 10 11
14 14 10	J0853+0654	08 35 01	43.6	173.3	-0.3		-4.1	40	2451	14 14 10
14 15 00	=0851+071	08 35 51	43.6	173.6	-0.3		-3.9	50	2458	14 14 11
14 15 00	B0850+054	08 35 51	42.0	174.0	-0.3		-3.6	-20	2458	No stop
14 18 00	---	08 38 51	42.0	175.0	-0.2		-3.0	160	2481	14 15 01
14 18 00	J0853+0654	08 38 51	43.6	174.6	-0.3		-3.3	-20	2481	No stop
14 18 50	=0851+071	08 39 41	43.7	174.9	-0.2		-3.1	30	2487	14 18 01
14 18 50	B0850+054	08 39 41	42.0	175.3	-0.2		-2.8	-20	2487	No stop
14 21 50	---	08 42 42	42.0	176.3	-0.2		-2.2	160	2510	14 18 51
14 21 50	J0853+0654	08 42 42	43.7	175.9	-0.2		-2.5	-20	2510	No stop
14 22 40	=0851+071	08 43 32	43.7	176.2	-0.2		-2.3	30	2517	14 21 51
14 22 40	B0850+054	08 43 32	42.1	176.6	-0.2		-2.1	-20	2517	No stop
14 25 40	---	08 46 32	42.1	177.6	-0.1		-1.4	160	2540	14 22 41
14 25 40	J0853+0654	08 46 32	43.7	177.2	-0.1		-1.7	-20	2540	No stop
14 26 30	=0851+071	08 47 23	43.7	177.5	-0.1		-1.5	30	2546	14 25 41
14 26 30	B0850+054	08 47 23	42.1	177.9	-0.1		-1.3	-20	2546	No stop
14 29 30	---	08 50 23	42.1	178.9	-0.1		-0.7	160	2569	14 26 31
14 30 00	J0853+0654	08 50 53	43.8	178.7	-0.1		-0.8	10	2569	14 30 00
14 30 50	=0851+071	08 51 43	43.8	179.0	0.0		-0.6	50	2576	14 30 01
14 30 50	B0850+054	08 51 43	42.1	179.3	0.0		-0.4	-20	2576	No stop
14 33 50	---	08 54 44	42.1	180.3	0.0		0.2	160	2599	14 30 51
14 33 50	J0853+0654	08 54 44	43.8	180.0	0.0		0.0	-20	2599	No stop
14 34 40	=0851+071	08 55 34	43.8	180.3	0.0		0.2	30	2605	14 33 51
14 34 40	B0850+054	08 55 34	42.1	180.6	0.0		0.4	-20	2605	No stop
14 37 40	---	08 58 34	42.1	181.6	0.1		1.0	160	2628	14 34 41
14 37 40	J0853+0654	08 58 34	43.7	181.4	0.1		0.8	-20	2628	No stop
14 38 30	=0851+071	08 59 25	43.7	181.6	0.1		1.0	30	2635	14 37 41
14 38 30	B0850+054	08 59 25	42.1	181.9	0.1		1.2	-20	2635	No stop
14 41 30	---	09 02 25	42.1	182.9	0.1		1.8	160	2658	14 38 31

Schedule for TORUN (Code Tr) Page 14

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
14 41 30	J0853+0654	09 02 25	43.7	182.7	0.1		1.6	-20	2658	No stop
14 42 20	=0851+071	09 03 15	43.7	183.0	0.1		1.8	30	2664	14 41 31
14 42 20	B0850+054	09 03 15	42.1	183.2	0.2		1.9	-20	2664	No stop
14 45 20	---	09 06 16	42.0	184.2	0.2		2.5	160	2687	14 42 21
14 46 20	J0853+0654	09 07 16	43.7	184.3	0.2		2.6	40	2687	14 46 20
14 47 10	=0851+071	09 08 06	43.7	184.6	0.2		2.8	50	2694	14 46 21
14 47 10	B0850+054	09 08 06	42.0	184.8	0.2		2.9	-20	2694	No stop
14 50 10	---	09 11 06	42.0	185.8	0.3		3.5	160	2717	14 47 11
14 50 10	J0853+0654	09 11 06	43.6	185.7	0.3		3.4	-20	2717	No stop
14 51 00	=0851+071	09 11 57	43.6	185.9	0.3		3.6	30	2723	14 50 11
14 51 00	B0850+054	09 11 57	42.0	186.1	0.3		3.7	-20	2723	No stop
14 54 00	---	09 14 57	41.9	187.1	0.4		4.3	160	2746	14 51 01
14 54 00	J0853+0654	09 14 57	43.6	187.0	0.3		4.2	-20	2746	No stop
14 54 50	=0851+071	09 15 47	43.6	187.3	0.4		4.4	30	2753	14 54 01
14 54 50	B0850+054	09 15 47	41.9	187.4	0.4		4.5	-20	2753	No stop
14 57 50	---	09 18 48	41.8	188.4	0.4		5.1	160	2776	14 54 51
14 57 50	J0853+0654	09 18 48	43.5	188.3	0.4		5.0	-20	2776	No stop
14 58 40	=0851+071	09 19 38	43.5	188.6	0.4		5.2	30	2782	14 57 51
14 58 40	B0850+054	09 19 38	41.8	188.7	0.4		5.2	-20	2782	No stop
15 01 40	---	09 22 38	41.7	189.7	0.5		5.8	160	2805	14 58 41
15 02 10	J0853+0654	09 23 08	43.4	189.8	0.5		5.9	10	2805	15 02 10
15 03 00	=0851+071	09 23 59	43.4	190.1	0.5		6.1	50	2812	15 02 11
15 03 00	B0850+054	09 23 59	41.7	190.1	0.5		6.1	-20	2812	No stop
15 06 00	---	09 26 59	41.6	191.1	0.6		6.7	160	2835	15 03 01
15 06 00	J0853+0654	09 26 59	43.3	191.1	0.5		6.7	-20	2835	No stop
15 06 50	=0851+071	09 27 49	43.3	191.4	0.6		6.8	30	2841	15 06 01
15 06 50	B0850+054	09 27 49	41.6	191.4	0.6		6.8	-20	2841	No stop
15 09 50	---	09 30 50	41.5	192.4	0.6		7.4	160	2864	15 06 51
15 09 50	J0853+0654	09 30 50	43.2	192.4	0.6		7.4	-20	2864	No stop
15 10 40	=0851+071	09 31 40	43.1	192.7	0.6		7.6	30	2871	15 09 51

Schedule for TORUN (Code Tr) Page 15

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
15 10 40	B0850+054	09 31 40	41.5	192.7	0.6		7.6	-20	2871	No stop
15 13 40	---	09 34 40	41.4	193.7	0.7		8.2	160	2894	15 10 41
15 13 40	J0853+0654	09 34 40	43.0	193.7	0.7		8.2	-20	2894	No stop
15 14 30	=0851+071	09 35 30	43.0	193.9	0.7		8.4	30	2900	15 13 41
15 14 30	B0850+054	09 35 30	41.3	193.9	0.7		8.3	-20	2900	No stop
15 17 30	---	09 38 31	41.2	194.9	0.7		8.9	160	2923	15 14 31
15 19 00	J0811+0146	09 40 01	35.5	207.3	1.5		16.0	51	2923	15 19 00
15 21 00	=0808+019	09 42 02	35.4	207.9	1.5		16.3	120	2938	15 19 01
15 22 30	J0853+0654	09 43 32	42.7	196.6	0.8		10.0	49	2938	15 22 30
15 23 20	=0851+071	09 44 22	42.7	196.9	0.8		10.1	50	2945	15 22 31
15 23 20	B0850+054	09 44 22	41.0	196.8	0.8		10.0	-20	2945	No stop
15 26 20	---	09 47 22	40.8	197.8	0.9		10.6	160	2968	15 23 21
15 26 20	J0853+0654	09 47 22	42.5	197.9	0.9		10.7	-20	2968	No stop
15 27 10	=0851+071	09 48 13	42.5	198.2	0.9		10.9	30	2974	15 26 21
15 27 10	B0850+054	09 48 13	40.8	198.1	0.9		10.8	-20	2974	No stop
15 30 10	---	09 51 13	40.7	199.0	1.0		11.3	160	2997	15 27 11
15 30 10	J0853+0654	09 51 13	42.3	199.2	0.9		11.5	-20	2997	No stop
15 31 00	=0851+071	09 52 03	42.3	199.4	1.0		11.6	30	3004	15 30 11
15 31 00	B0850+054	09 52 03	40.6	199.3	1.0		11.5	-20	3004	No stop
15 34 00	---	09 55 04	40.5	200.3	1.0		12.1	160	3027	15 31 01
15 34 00	J0853+0654	09 55 04	42.1	200.4	1.0		12.2	-20	3027	No stop
15 34 50	=0851+071	09 55 54	42.1	200.7	1.0		12.3	30	3033	15 34 01
15 34 50	B0850+054	09 55 54	40.4	200.5	1.0		12.2	-20	3033	No stop
15 37 50	---	09 58 54	40.3	201.5	1.1		12.8	160	3056	15 34 51
15 38 20	J0853+0654	09 59 24	41.9	201.8	1.1		13.0	10	3056	15 38 20
15 39 10	=0851+071	10 00 15	41.9	202.1	1.1		13.2	50	3063	15 38 21
15 39 10	B0850+054	10 00 15	40.2	201.9	1.1		13.0	-20	3063	No stop
15 42 10	---	10 03 15	40.0	202.9	1.2		13.6	160	3086	15 39 11
15 42 10	J0853+0654	10 03 15	41.7	203.1	1.1		13.7	-20	3086	No stop
15 43 00	=0851+071	10 04 05	41.6	203.4	1.2		13.9	30	3092	15 42 11

Schedule for TORUN (Code Tr) Page 16

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
15 43 00	B0850+054	10 04 05	40.0	203.1	1.2		13.7	-20	3092	No stop
15 46 00	---	10 07 06	39.8	204.1	1.2		14.2	160	3115	15 43 01
15 46 00	J0853+0654	10 07 06	41.5	204.3	1.2		14.4	-20	3115	No stop
15 46 50	=0851+071	10 07 56	41.4	204.6	1.2		14.6	30	3122	15 46 01
15 46 50	B0850+054	10 07 56	39.7	204.3	1.2		14.4	-20	3122	No stop
15 49 50	---	10 10 56	39.5	205.3	1.3		14.9	160	3145	15 46 51
15 49 50	J0853+0654	10 10 56	41.2	205.6	1.3		15.1	-20	3145	No stop
15 50 40	=0851+071	10 11 46	41.2	205.8	1.3		15.3	30	3151	15 49 51
15 50 40	B0850+054	10 11 46	39.5	205.5	1.3		15.1	-20	3151	No stop
15 53 40	---	10 14 47	39.3	206.5	1.4		15.6	160	3174	15 50 41
15 54 40	J0853+0654	10 15 47	40.9	207.1	1.4		16.0	40	3174	15 54 40
15 55 30	=0851+071	10 16 37	40.8	207.4	1.4		16.1	50	3181	15 54 41
15 55 30	B0850+054	10 16 37	39.2	207.0	1.4		15.9	-20	3181	No stop
15 58 30	---	10 19 38	39.0	208.0	1.4		16.4	160	3204	15 55 31
15 58 30	J0853+0654	10 19 38	40.6	208.3	1.4		16.7	-20	3204	No stop
15 59 20	=0851+071	10 20 28	40.6	208.6	1.4		16.8	30	3210	15 58 31
15 59 20	B0850+054	10 20 28	38.9	208.2	1.4		16.6	-20	3210	No stop
16 02 20	---	10 23 28	38.7	209.2	1.5		17.1	160	3233	15 59 21
16 02 20	J0853+0654	10 23 28	40.3	209.5	1.5		17.3	-20	3233	No stop
16 03 10	=0851+071	10 24 18	40.3	209.8	1.5		17.5	30	3240	16 02 21
16 03 10	B0850+054	10 24 18	38.6	209.4	1.5		17.2	-20	3240	No stop
16 06 10	---	10 27 19	38.4	210.3	1.6		17.7	160	3263	16 03 11
16 06 10	J0853+0654	10 27 19	40.1	210.7	1.5		18.0	-20	3263	No stop
16 07 00	=0851+071	10 28 09	40.0	211.0	1.6		18.1	30	3269	16 06 11
16 07 00	B0850+054	10 28 09	38.3	210.6	1.6		17.9	-20	3269	No stop
16 10 00	---	10 31 10	38.1	211.5	1.6		18.4	160	3292	16 07 01
16 10 30	J0853+0654	10 31 40	39.7	212.0	1.6		18.7	10	3292	16 10 30
16 11 20	=0851+071	10 32 30	39.6	212.3	1.6		18.8	50	3299	16 10 31
16 11 20	B0850+054	10 32 30	38.0	211.9	1.6		18.6	-20	3299	No stop
16 14 20	---	10 35 30	37.8	212.8	1.7		19.1	160	3322	16 11 21

```
Schedule for TORUN     (Code Tr )                                  Page  17
               CLASS B0850+054 with Hartebeesthoek
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

16 14 20  J0853+0654   10 35 30  39.4 213.2  1.7      19.3   -20     3322   No stop
16 15 10  =0851+071    10 36 20  39.3 213.5  1.7      19.5    30     3328   16 14 21

16 15 10  B0850+054    10 36 20  37.7 213.0  1.7      19.2   -20     3328   No stop
16 18 10  ---          10 39 21  37.4 213.9  1.8      19.7   160     3351   16 15 11

16 18 10  J0853+0654   10 39 21  39.1 214.4  1.7      20.0   -20     3351   No stop
16 19 00  =0851+071    10 40 11  39.0 214.6  1.8      20.1    30     3358   16 18 11

16 19 00  B0850+054    10 40 11  37.4 214.2  1.8      19.8   -20     3358   No stop
16 22 00  ---          10 43 12  37.1 215.0  1.8      20.3   160     3381   16 19 01

16 22 00  J0853+0654   10 43 12  38.8 215.5  1.8      20.6   -20     3381   No stop
16 22 50  =0851+071    10 44 02  38.7 215.8  1.8      20.7    30     3387   16 22 01

16 22 50  B0850+054    10 44 02  37.0 215.3  1.8      20.4   -20     3387   No stop
16 25 50  ---          10 47 02  36.8 216.2  1.9      20.8   160     3410   16 22 51

16 26 50  J0853+0654   10 48 02  38.3 216.9  1.9      21.3    40     3410   16 26 50
16 27 40  =0851+071    10 48 53  38.2 217.2  1.9      21.4    50     3417   16 26 51

16 27 40  B0850+054    10 48 53  36.6 216.7  1.9      21.1   -20     3417   No stop
16 30 40  ---          10 51 53  36.3 217.6  2.0      21.6   160     3440   16 27 41

16 30 40  J0853+0654   10 51 53  38.0 218.1  2.0      21.9   -20     3440   No stop
16 31 30  =0851+071    10 52 43  37.9 218.3  2.0      22.0    30     3446   16 30 41

16 31 30  B0850+054    10 52 43  36.3 217.8  2.0      21.7   -20     3446   No stop
16 34 30  ---          10 55 44  36.0 218.7  2.0      22.1   160     3469   16 31 31

16 34 30  J0853+0654   10 55 44  37.6 219.2  2.0      22.5   -20     3469   No stop
16 35 20  =0851+071    10 56 34  37.5 219.4  2.0      22.6    30     3476   16 34 31

16 35 20  B0850+054    10 56 34  35.9 218.9  2.0      22.3   -20     3476   No stop
16 38 20  ---          10 59 34  35.6 219.8  2.1      22.7   160     3499   16 35 21

16 38 20  J0853+0654   10 59 34  37.2 220.3  2.1      23.0   -20     3499   No stop
16 39 10  =0851+071    11 00 24  37.2 220.5  2.1      23.1    30     3505   16 38 21

16 39 10  B0850+054    11 00 24  35.5 220.0  2.1      22.8   -20     3505   No stop
16 42 10  ---          11 03 25  35.2 220.8  2.2      23.2   160     3528   16 39 11

16 43 40  J0811+0146   11 04 55  27.5 230.4  2.9      27.6    47     3528   16 43 40
16 45 40  =0808+019    11 06 55  27.3 230.9  2.9      27.8   120     3544   16 43 41
```

Schedule for TORUN (Code Tr) Page 18

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
16 47 10	J0853+0654	11 08 26	36.4	222.8	2.2		24.3	42	3544	16 47 10
16 48 00	=0851+071	11 09 16	36.3	223.0	2.2		24.4	50	3550	16 47 11
16 48 00	B0850+054	11 09 16	34.7	222.5	2.3		24.0	-20	3550	No stop
16 51 00	---	11 12 16	34.4	223.3	2.3		24.4	160	3573	16 48 01
16 51 00	J0853+0654	11 12 16	36.0	223.9	2.3		24.8	-20	3573	No stop
16 51 50	=0851+071	11 13 06	35.9	224.1	2.3		24.9	30	3579	16 51 01
16 51 50	B0850+054	11 13 06	34.3	223.5	2.3		24.5	-20	3579	No stop
16 54 50	---	11 16 07	34.0	224.3	2.4		24.9	160	3603	16 51 51
16 54 50	J0853+0654	11 16 07	35.6	225.0	2.4		25.3	-19	3603	No stop
16 55 40	=0851+071	11 16 57	35.5	225.2	2.4		25.4	31	3609	16 54 51
16 55 40	B0850+054	11 16 57	33.9	224.6	2.4		25.0	-20	3609	No stop
16 58 40	---	11 19 58	33.6	225.4	2.4		25.4	160	3632	16 55 41
16 58 40	J0853+0654	11 19 58	35.1	226.0	2.4		25.8	-19	3632	No stop
16 59 30	=0851+071	11 20 48	35.1	226.2	2.4		25.9	31	3638	16 58 41
16 59 30	B0850+054	11 20 48	33.5	225.6	2.5		25.5	-20	3638	No stop
17 02 30	---	11 23 48	33.1	226.4	2.5		25.9	160	3662	16 59 31
17 03 00	J0853+0654	11 24 18	34.7	227.2	2.5		26.3	11	3662	17 03 00
17 03 50	=0851+071	11 25 08	34.6	227.4	2.5		26.4	50	3668	17 03 01
17 03 50	B0850+054	11 25 08	33.0	226.8	2.5		26.1	-20	3668	No stop
17 06 50	---	11 28 09	32.7	227.6	2.6		26.4	160	3691	17 03 51
17 06 50	J0853+0654	11 28 09	34.2	228.2	2.6		26.8	-19	3691	No stop
17 07 40	=0851+071	11 28 59	34.2	228.5	2.6		26.9	31	3697	17 06 51
17 07 40	B0850+054	11 28 59	32.6	227.8	2.6		26.5	-20	3697	No stop
17 10 40	---	11 32 00	32.2	228.6	2.6		26.9	160	3721	17 07 41
17 10 40	J0853+0654	11 32 00	33.8	229.3	2.6		27.3	-19	3721	No stop
17 11 30	=0851+071	11 32 50	33.7	229.5	2.6		27.4	31	3727	17 10 41
17 11 30	B0850+054	11 32 50	32.1	228.8	2.7		27.0	-20	3727	No stop
17 14 30	---	11 35 50	31.8	229.6	2.7		27.3	160	3750	17 11 31
17 14 30	J0853+0654	11 35 50	33.4	230.3	2.7		27.7	-19	3750	No stop
17 15 20	=0851+071	11 36 40	33.3	230.5	2.7		27.8	31	3756	17 14 31

Schedule for TORUN (Code Tr) Page 19

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
17 15 20	B0850+054	11 36 40	31.7	229.8	2.7		27.4	-20	3756	No stop
17 18 20	---	11 39 41	31.4	230.6	2.8		27.8	160	3779	17 15 21
17 19 20	J0853+0654	11 40 41	32.8	231.5	2.8		28.3	41	3779	17 19 20
17 20 10	=0851+071	11 41 31	32.7	231.8	2.8		28.4	50	3786	17 19 21
17 20 10	B0850+054	11 41 31	31.1	231.1	2.8		28.0	-20	3786	No stop
17 23 10	---	11 44 32	30.8	231.8	2.8		28.3	160	3809	17 20 11
17 23 10	J0853+0654	11 44 32	32.4	232.5	2.8		28.7	-19	3809	No stop
17 24 00	=0851+071	11 45 22	32.3	232.7	2.8		28.8	31	3815	17 23 11
17 24 00	B0850+054	11 45 22	30.7	232.1	2.9		28.4	-20	3815	No stop
17 27 00	---	11 48 22	30.3	232.8	2.9		28.7	160	3838	17 24 01
17 27 00	J0853+0654	11 48 22	31.9	233.5	2.9		29.1	-19	3838	No stop
17 27 50	=0851+071	11 49 12	31.8	233.7	2.9		29.2	31	3845	17 27 01
17 27 50	B0850+054	11 49 12	30.2	233.0	2.9		28.8	-20	3845	No stop
17 30 50	---	11 52 13	29.9	233.8	3.0		29.1	160	3868	17 27 51
17 30 50	J0853+0654	11 52 13	31.4	234.5	3.0		29.5	-19	3868	No stop
17 31 40	=0851+071	11 53 03	31.3	234.7	3.0		29.6	31	3874	17 30 51
17 31 40	B0850+054	11 53 03	29.8	234.0	3.0		29.2	-20	3874	No stop
17 34 40	---	11 56 04	29.4	234.7	3.0		29.5	160	3897	17 31 41
17 35 10	J0853+0654	11 56 34	30.9	235.6	3.0		29.9	11	3897	17 35 10
17 36 00	=0851+071	11 57 24	30.8	235.8	3.0		30.0	50	3904	17 35 11
17 36 00	B0850+054	11 57 24	29.2	235.1	3.1		29.6	-20	3904	No stop
17 39 00	---	12 00 24	28.9	235.8	3.1		29.9	160	3927	17 36 01
17 39 00	J0853+0654	12 00 24	30.4	236.5	3.1		30.3	-19	3927	No stop
17 39 50	=0851+071	12 01 14	30.3	236.8	3.1		30.4	31	3933	17 39 01
17 39 50	B0850+054	12 01 14	28.8	236.0	3.1		30.0	-20	3933	No stop
17 42 50	---	12 04 15	28.4	236.8	3.2		30.3	160	3956	17 39 51
17 42 50	J0853+0654	12 04 15	29.9	237.5	3.2		30.7	-19	3956	No stop
17 43 40	=0851+071	12 05 05	29.8	237.7	3.2		30.7	31	3963	17 42 51
17 43 40	B0850+054	12 05 05	28.3	237.0	3.2		30.4	-19	3963	No stop
17 46 40	---	12 08 05	27.9	237.7	3.2		30.6	161	3986	17 43 41

```
Schedule for TORUN     (Code Tr )                                  Page  20
               CLASS B0850+054 with Hartebeesthoek
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

17 46 40  J0853+0654   12 08 05  29.4 238.4  3.2      31.0   -19     3986   No stop
17 47 30  =0851+071    12 08 56  29.3 238.6  3.2      31.1    31     3992   17 46 41

17 47 30  B0850+054    12 08 56  27.8 237.9  3.3      30.7   -19     3992   No stop
17 50 30  ---          12 11 56  27.4 238.6  3.3      31.0   161     4015   17 47 31

17 51 30  J0853+0654   12 12 56  28.8 239.6  3.3      31.5    41     4015   17 51 30
17 52 20  =0851+071    12 13 46  28.7 239.8  3.3      31.5    50     4022   17 51 31

17 52 20  B0850+054    12 13 46  27.2 239.1  3.3      31.1   -19     4022   No stop
17 55 20  ---          12 16 47  26.8 239.8  3.4      31.4   161     4045   17 52 21

17 55 20  J0853+0654   12 16 47  28.3 240.5  3.4      31.8   -19     4045   No stop
17 56 10  =0851+071    12 17 37  28.2 240.7  3.4      31.8    31     4051   17 55 21

17 56 10  B0850+054    12 17 37  26.7 240.0  3.4      31.5   -19     4051   No stop
17 59 10  ---          12 20 38  26.3 240.7  3.4      31.7   161     4074   17 56 11

17 59 10  J0853+0654   12 20 38  27.8 241.5  3.4      32.1   -19     4074   No stop
18 00 00  =0851+071    12 21 28  27.7 241.7  3.4      32.2    31     4081   17 59 11

18 00 00  B0850+054    12 21 28  26.2 240.9  3.5      31.8   -19     4081   No stop
18 03 00  ---          12 24 28  25.8 241.6  3.5      32.0   161     4104   18 00 01

18 03 00  J0853+0654   12 24 28  27.3 242.4  3.5      32.4   -19     4104   No stop
18 03 50  =0851+071    12 25 18  27.2 242.6  3.5      32.5    31     4110   18 03 01

18 03 50  B0850+054    12 25 18  25.7 241.8  3.5      32.1   -19     4110   No stop
18 06 50  ---          12 28 19  25.3 242.5  3.6      32.3   161     4133   18 03 51

18 08 20  J0811+0146   12 29 49  16.5 250.0  4.3      34.4    44     4133   18 08 20
18 10 20  =0808+019    12 31 49  16.2 250.5  4.3      34.5   120     4149   18 08 21

18 11 50  J0853+0654   12 33 20  26.1 244.4  3.6      33.1    39     4149   18 11 50
18 12 40  =0851+071    12 34 10  26.0 244.6  3.7      33.1    50     4155   18 11 51

18 12 40  B0850+054    12 34 10  24.5 243.9  3.7      32.8   -19     4155   No stop
18 15 40  ---          12 37 10  24.1 244.5  3.7      33.0   161     4178   18 12 41

18 15 40  J0853+0654   12 37 10  25.6 245.3  3.7      33.3   -19     4178   No stop
18 16 30  =0851+071    12 38 00  25.5 245.5  3.7      33.4    31     4185   18 15 41

18 16 30  B0850+054    12 38 00  24.0 244.7  3.7      33.0   -19     4185   No stop
18 19 30  ---          12 41 01  23.6 245.4  3.8      33.3   161     4208   18 16 31
```

Schedule for TORUN (Code Tr) Page 21

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
18 19 30	J0853+0654	12 41 01	25.1	246.2	3.8		33.6	-19	4208	No stop
18 20 20	=0851+071	12 41 51	24.9	246.4	3.8		33.7	31	4214	18 19 31
18 20 20	B0850+054	12 41 51	23.4	245.6	3.8		33.3	-19	4214	No stop
18 23 20	---	12 44 52	23.0	246.3	3.9		33.5	161	4237	18 20 21
18 23 20	J0853+0654	12 44 52	24.5	247.1	3.8		33.9	-19	4237	No stop
18 24 10	=0851+071	12 45 42	24.4	247.3	3.9		33.9	31	4244	18 23 21
18 24 10	B0850+054	12 45 42	22.9	246.5	3.9		33.6	-19	4244	No stop
18 27 10	---	12 48 42	22.5	247.2	3.9		33.8	161	4267	18 24 11
18 27 40	J0853+0654	12 49 12	23.9	248.1	3.9		34.1	11	4267	18 27 40
18 28 30	=0851+071	12 50 02	23.8	248.3	3.9		34.2	50	4273	18 27 41
18 28 30	B0850+054	12 50 02	22.3	247.5	3.9		33.8	-19	4273	No stop
18 31 30	---	12 53 03	21.9	248.1	4.0		34.0	161	4296	18 28 31
18 31 30	J0853+0654	12 53 03	23.4	248.9	4.0		34.4	-19	4296	No stop
18 32 20	=0851+071	12 53 53	23.3	249.1	4.0		34.4	31	4303	18 31 31
18 32 20	B0850+054	12 53 53	21.8	248.3	4.0		34.1	-19	4303	No stop
18 35 20	---	12 56 53	21.4	249.0	4.1		34.3	161	4326	18 32 21
18 35 20	J0853+0654	12 56 53	22.9	249.8	4.0		34.6	-19	4326	No stop
18 36 10	=0851+071	12 57 44	22.7	250.0	4.1		34.6	31	4332	18 35 21
18 36 10	B0850+054	12 57 44	21.2	249.2	4.1		34.3	-19	4332	No stop
18 39 10	---	13 00 44	20.8	249.8	4.1		34.5	161	4355	18 36 11
18 39 10	J0853+0654	13 00 44	22.3	250.6	4.1		34.8	-19	4355	No stop
18 40 00	=0851+071	13 01 34	22.2	250.8	4.1		34.8	31	4362	18 39 11
18 40 00	B0850+054	13 01 34	20.7	250.0	4.1		34.5	-19	4362	No stop
18 43 00	---	13 04 35	20.3	250.7	4.2		34.7	161	4385	18 40 01
18 44 00	J0853+0654	13 05 35	21.6	251.7	4.2		35.0	41	4385	18 44 00
18 44 50	=0851+071	13 06 25	21.5	251.9	4.2		35.1	50	4391	18 44 01
18 44 50	B0850+054	13 06 25	20.0	251.1	4.2		34.8	-19	4391	No stop
18 47 50	---	13 09 26	19.6	251.7	4.3		34.9	161	4414	18 44 51
18 47 50	J0853+0654	13 09 26	21.1	252.5	4.2		35.2	-19	4414	No stop
18 48 40	=0851+071	13 10 16	21.0	252.7	4.3		35.3	31	4420	18 47 51

```
Schedule for TORUN     (Code Tr )                                Page  22
               CLASS B0850+054 with Hartebeesthoek
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

18 48 40  B0850+054    13 10 16  19.5 251.9  4.3      35.0   -19     4420   No stop
18 51 40  ---          13 13 16  19.0 252.5  4.3      35.1   161     4444   18 48 41

18 51 40  J0853+0654   13 13 16  20.5 253.4  4.3      35.4   -19     4444   No stop
18 52 30  =0851+071    13 14 06  20.4 253.5  4.3      35.5    31     4450   18 51 41

18 52 30  B0850+054    13 14 06  18.9 252.7  4.3      35.2   -19     4450   No stop
18 55 30  ---          13 17 07  18.5 253.4  4.4      35.3   161     4473   18 52 31

18 55 30  J0853+0654   13 17 07  20.0 254.2  4.4      35.6   -19     4473   No stop
18 56 20  =0851+071    13 17 57  19.8 254.4  4.4      35.6    31     4479   18 55 31

18 56 20  B0850+054    13 17 57  18.4 253.6  4.4      35.3   -19     4479   No stop
18 59 20  ---          13 20 57  17.9 254.2  4.5      35.5   161     4503   18 56 21

18 59 50  J0853+0654   13 21 28  19.3 255.1  4.4      35.8    11     4503   18 59 50
19 00 40  =0851+071    13 22 18  19.2 255.3  4.5      35.8    50     4509   18 59 51

19 00 40  B0850+054    13 22 18  17.7 254.5  4.5      35.5   -19     4509   No stop
19 03 40  ---          13 25 18  17.3 255.1  4.5      35.6   161     4532   19 00 41

19 03 40  J0853+0654   13 25 18  18.8 255.9  4.5      35.9   -19     4532   No stop
19 04 30  =0851+071    13 26 08  18.7 256.1  4.5      36.0    31     4538   19 03 41

19 04 30  B0850+054    13 26 08  17.2 255.3  4.5      35.7   -19     4538   No stop
19 07 30  ---          13 29 09  16.7 255.9  4.6      35.8   161     4562   19 04 31

19 07 30  J0853+0654   13 29 09  18.2 256.8  4.6      36.1   -19     4562   No stop
19 08 20  =0851+071    13 29 59  18.1 256.9  4.6      36.1    31     4568   19 07 31

19 08 20  B0850+054    13 29 59  16.6 256.1  4.6      35.8   -19     4568   No stop
19 11 20  ---          13 32 59  16.2 256.7  4.7      35.9   161     4591   19 08 21

19 11 20  J0853+0654   13 32 59  17.7 257.6  4.6      36.2   -19     4591   No stop
19 12 10  =0851+071    13 33 50  17.5 257.7  4.7      36.2    31     4597   19 11 21

19 12 10  B0850+054    13 33 50  16.1 256.9  4.7      36.0   -19     4597   No stop
19 15 10  ---          13 36 50  15.6 257.5  4.7      36.1   161     4620   19 12 11

19 16 10  J0853+0654   13 37 50  16.9 258.6  4.7      36.4    41     4620   19 16 10
19 17 00  =0851+071    13 38 40  16.8 258.8  4.7      36.4    50     4627   19 16 11

19 17 00  B0850+054    13 38 40  15.3 257.9  4.7      36.1   -19     4627   No stop
19 20 00  ---          13 41 41  14.9 258.6  4.8      36.2   161     4650   19 17 01
```

```
Schedule for TORUN     (Code Tr )                                  Page  23
               CLASS B0850+054 with Hartebeesthoek
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

19 20 00  J0853+0654   13 41 41  16.4 259.4  4.8      36.5   -19     4650   No stop
19 21 10  =0851+071    13 42 51  16.2 259.6  4.8      36.5    51     4659   19 20 01

19 21 10  B0850+054    13 42 51  14.7 258.8  4.8      36.3   -19     4659   No stop
19 23 50  ---          13 45 31  14.3 259.4  4.9      36.3   141     4679   19 21 11

19 23 50  J0853+0654   13 45 31  15.8 260.2  4.8      36.6   -19     4679   No stop
19 25 00  =0851+071    13 46 42  15.6 260.4  4.9      36.6    51     4688   19 23 51

19 25 00  B0850+054    13 46 42  14.2 259.6  4.9      36.4   -19     4688   No stop
19 27 40  ---          13 49 22  13.8 260.1  4.9      36.4   141     4709   19 25 01

19 27 40  J0853+0654   13 49 22  15.2 261.0  4.9      36.7   -19     4709   No stop
19 28 50  =0851+071    13 50 32  15.1 261.2  4.9      36.7    51     4718   19 27 41

19 28 50  B0850+054    13 50 32  13.6 260.4  4.9      36.5   -19     4718   No stop
19 31 30  ---          13 53 13  13.2 260.9  5.0      36.5   141     4738   19 28 51

19 33 00  J0811+0146   13 54 43   4.0 267.5  5.7      36.9    42     4738   19 33 00
19 39 00  =0808+019    14 00 44   3.1 268.7  5.8      36.9   360     4785   19 33 01

19 40 30  J0853+0654   14 02 14  13.3 263.6  5.1      36.9    37     4785   19 40 30
19 41 20  =0851+071    14 03 04  13.2 263.8  5.1      37.0    50     4791   19 40 31

19 41 20  B0850+054    14 03 04  11.7 263.0  5.2      36.8   -19     4791   No stop
19 44 20  ---          14 06 05  11.3 263.6  5.2      36.8   161     4814   19 41 21

19 44 20  J0853+0654   14 06 05  12.8 264.4  5.2      37.0   -19     4814   No stop
19 45 30  =0851+071    14 07 15  12.6 264.6  5.2      37.0    51     4823   19 44 21

19 45 30  B0850+054    14 07 15  11.1 263.8  5.2      36.8   -19     4823   No stop
19 48 10  ---          14 09 55  10.7 264.3  5.3      36.9   141     4844   19 45 31

19 48 10  J0853+0654   14 09 55  12.2 265.2  5.3      37.1   -19     4844   No stop
19 49 20  =0851+071    14 11 06  12.0 265.4  5.3      37.1    51     4853   19 48 11

19 49 20  B0850+054    14 11 06  10.5 264.6  5.3      36.9   -19     4853   No stop
19 52 00  ---          14 13 46  10.1 265.1  5.3      36.9   141     4873   19 49 21

19 52 00  J0853+0654   14 13 46  11.6 266.0  5.3      37.1   -19     4873   No stop
19 53 10  =0851+071    14 14 56  11.4 266.2  5.3      37.1    51     4882   19 52 01

19 53 10  B0850+054    14 14 56  10.0 265.4  5.4      36.9   -19     4882   No stop
19 55 50  ---          14 17 37   9.6 265.9  5.4      37.0   141     4903   19 53 11
```

Schedule for TORUN (Code Tr) Page 24

CLASS B0850+054 with Hartebeesthoek

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 8 Jun 2015 Day 159 ---										
19 56 50	J0853+0654	14 18 37	10.9	266.9	5.4		37.2	41	4903	19 56 50
19 57 40	=0851+071	14 19 27	10.7	267.1	5.4		37.2	50	4909	19 56 51
19 57 40	B0850+054	14 19 27	9.3	266.3	5.4		37.0	-19	4909	No stop
20 00 40	---	14 22 27	8.8	266.9	5.5		37.0	161	4932	19 57 41
20 00 40	J0853+0654	14 22 27	10.3	267.7	5.5		37.2	-19	4932	No stop
20 01 50	=0851+071	14 23 38	10.1	267.9	5.5		37.2	51	4941	20 00 41
20 01 50	B0850+054	14 23 38	8.7	267.1	5.5		37.0	-19	4941	No stop
20 04 30	---	14 26 18	8.3	267.6	5.5		37.0	141	4962	20 01 51
20 04 30	J0853+0654	14 26 18	9.7	268.5	5.5		37.2	-19	4962	No stop
20 05 40	=0851+071	14 27 28	9.5	268.7	5.5		37.2	51	4970	20 04 31
20 05 40	B0850+054	14 27 28	8.1	267.9	5.6		37.1	-19	4970	No stop
20 08 20	---	14 30 09	7.7	268.4	5.6		37.1	141	4991	20 05 41
20 08 20	J0853+0654	14 30 09	9.1	269.2	5.6		37.2	-19	4991	No stop
20 09 30	=0851+071	14 31 19	9.0	269.5	5.6		37.2	51	5000	20 08 21
20 09 30	B0850+054	14 31 19	7.5	268.7	5.6		37.1	-19	5000	No stop
20 12 10	---	14 33 59	7.1	269.2	5.7		37.1	141	5020	20 09 31
20 12 40	J0853+0654	14 34 29	8.5	270.1	5.7		37.2	11	5020	20 12 40
20 13 30	=0851+071	14 35 20	8.4	270.3	5.7		37.2	50	5027	20 12 41
20 13 30	B0850+054	14 35 20	6.9	269.5	5.7		37.1	-19	5027	No stop
20 16 30	---	14 38 20	6.5	270.1	5.7		37.1	161	5050	20 13 31
20 16 30	J0853+0654	14 38 20	7.9	270.9	5.7		37.2	-19	5050	No stop
20 17 40	=0851+071	14 39 30	7.7	271.1	5.7		37.2	51	5059	20 16 31
20 17 40	B0850+054	14 39 30	6.3	270.3	5.8		37.1	-19	5059	No stop
20 20 20	---	14 42 11	5.9	270.8	5.8		37.1	141	5079	20 17 41
20 20 20	J0853+0654	14 42 11	7.3	271.7	5.8		37.2	-19	5079	No stop
20 21 30	=0851+071	14 43 21	7.2	271.9	5.8		37.2	51	5088	20 20 21
20 21 30	B0850+054	14 43 21	5.7	271.1	5.8		37.1	-19	5088	No stop
20 24 10	---	14 46 01	5.3	271.6	5.9		37.1	141	5109	20 21 31
20 24 10	J0853+0654	14 46 01	6.8	272.4	5.9		37.2	-19	5109	No stop
20 25 20	=0851+071	14 47 12	6.6	272.7	5.9		37.2	51	5118	20 24 11

```
Schedule for TORUN     (Code Tr )                                Page  25
               CLASS B0850+054 with Hartebeesthoek
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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   8 Jun 2015   Day 159 ---

20 25 20  B0850+054    14 47 12   5.1 271.8  5.9      37.1   -19     5118   No stop
20 28 00  ---          14 49 52   4.7 272.4  5.9      37.0   141     5138   20 25 21

20 29 00  J0853+0654   14 50 52   6.0 273.4  5.9      37.1    41     5138   20 29 00
20 29 50  =0851+071    14 51 42   5.9 273.5  6.0      37.1    50     5145   20 29 01

20 29 50  B0850+054    14 51 42   4.4 272.7  6.0      37.0   -19     5145   No stop
20 32 50  ---          14 54 43   4.0 273.3  6.0      37.0   161     5168   20 29 51

20 32 50  J0853+0654   14 54 43   5.5 274.1  6.0      37.1   -19     5168   No stop
20 34 00  =0851+071    14 55 53   5.3 274.4  6.0      37.1    51     5177   20 32 51

20 34 00  B0850+054    14 55 53   3.8 273.6  6.0      37.0   -19     5177   No stop
20 36 40  ---          14 58 33   3.4 274.1  6.1      37.0   141     5197   20 34 01

20 36 40  J0853+0654   14 58 33   4.9 274.9  6.1      37.1   -19     5197   No stop
20 37 50  =0851+071    14 59 44   4.7 275.1  6.1      37.0    51     5206   20 36 41

20 37 50  B0850+054    14 59 44   3.2 274.3  6.1      37.0   -19     5206   No stop
20 40 30  ---          15 02 24   2.8 274.9  6.1  D   36.9     0     5227   20 37 51

20 40 30  J0853+0654   15 02 24   4.3 275.7  6.1      37.0   -18     5227   No stop
20 41 40  =0851+071    15 03 34   4.1 275.9  6.1      37.0    52     5236   20 40 31

20 44 50  J0853+0654   15 06 45   3.7 276.5  6.2      36.9   183     5236   20 44 50
20 45 40  =0851+071    15 07 35   3.5 276.7  6.2      36.9    50     5242   20 44 51

20 48 40  J0853+0654   15 10 35   3.1 277.3  6.3      36.9   173     5242   20 48 40
20 49 50  =0851+071    15 11 46   2.9 277.5  6.3  D   36.8     0     5251   20 48 41

21 22 50  J1642+3948   15 44 51  73.4 137.2 -1.0     -32.1  1656     5251   21 22 50
21 30 00  =1641+399    15 52 02  74.1 141.4 -0.9     -29.1   430     5306   21 22 51



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


 ======== Setup file: sess215.C1024

   Setup group:   10         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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=   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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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:   1  Setup file default.  Used with PCAL = off
  LO sum=   4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
            5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
  BBC fr=    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
             806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
  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:   1   5

  Track assignments are:
   track1=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* B0850+054          08 50 15.249465   * 08 52 53.578000     08 53 41.704655       0.00
                     05 26 37.36077    * 05 15 15.32000      05 11 35.28313        0.00

  0808+019           08 08 51.138132   * 08 11 26.707315     08 12 13.837566       0.10
* J0811+0146         01 55 51.17950    * 01 46 52.22019      01 43 54.05042        0.10
                     /Users/abiggs/sched/catalogs/sources.rfc
                     rfc_2015a Petrov, 2015, unpublished.  12005 observations

  0851+071           08 51 08.449262   * 08 53 48.189985     08 54 36.738777       0.25
* J0853+0654         07 06 12.14413    * 06 54 47.23567      06 51 06.81653        0.48
                     /Users/abiggs/sched/catalogs/sources.rfc
                     rfc_2015a Petrov, 2015, unpublished.  148 observations

  0923+392           09 23 55.319219   * 09 27 03.013940     09 27 59.732986       0.13
* J0927+3902         39 15 23.56641    * 39 02 20.85181      38 58 20.98183        0.10
                     /Users/abiggs/sched/catalogs/sources.rfc
                     rfc_2015a Petrov, 2015, unpublished.  252917 observations

  1641+399           16 41 17.606227   * 16 42 58.809964     16 43 31.661589       0.13
* J1642+3948         39 54 10.81485    * 39 48 36.99391      39 47 04.45735        0.10
                     /Users/abiggs/sched/catalogs/sources.rfc
                     rfc_2015a Petrov, 2015, unpublished.  52024 observations
```

er043btr

LIRGI

PI: *Naim Ramirez-Olivencia*

Address: IAA - CSIC Glorieta de la Astronomia s/n 18008 Granada, Spain
Phone: +34-958230566 Phone during observation: +34-630801163 EMAIL: naimro@iaa.es

Observing mode: 512 Mbps
Schedule for TORUN (Code Tr) Page 2
LIRGI
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
Next scan frequencies:		4966.49	4966.49	4966.49	4966.49		4982.49	4982.49	4982.49	4982.49
		4998.49	4998.49	4998.49	4998.49		5014.49	5014.49	5014.49	5014.49
Next BBC frequencies:		766.49	766.49	766.49	766.49		782.49	782.49	782.49	782.49
		798.49	798.49	798.49	798.49		814.49	814.49	814.49	814.49
Next scan bandwidths:		8.00	8.00	8.00	8.00		8.00	8.00	8.00	8.00
		8.00	8.00	8.00	8.00		8.00	8.00	8.00	8.00
13 00 00	J1102+2757	07 24 35	42.9	100.1	-3.6		-42.0	0	0	13 00 00
13 05 00	---	07 29 36	43.7	101.2	-3.6		-41.8	300	19	13 00 01
13 05 00	IRAS10565	07 29 36	41.5	104.9	-3.5		-39.6	-22	19	No stop
13 09 10	---	07 33 46	42.1	105.9	-3.4		-39.4	228	35	13 05 01
13 09 10	J1102+2757	07 33 46	44.3	102.2	-3.5		-41.6	-22	35	No stop
13 10 20	---	07 34 57	44.5	102.5	-3.5		-41.5	48	40	13 09 11
13 11 00	IRAS10565	07 35 37	42.4	106.4	-3.4		-39.3	18	40	13 11 00
13 15 00	---	07 39 37	43.0	107.3	-3.3		-39.0	240	55	13 11 01
13 15 00	J1102+2757	07 39 37	45.1	103.6	-3.4		-41.3	-22	55	No stop
13 16 10	---	07 40 48	45.3	103.8	-3.4		-41.3	48	60	13 15 01
13 16 10	IRAS10565	07 40 48	43.1	107.6	-3.3		-39.0	-23	60	No stop
13 20 10	---	07 44 48	43.7	108.6	-3.3		-38.7	217	75	13 16 11
13 20 10	J1102+2757	07 44 48	45.9	104.8	-3.3		-41.1	-22	75	No stop
13 21 20	---	07 45 58	46.1	105.1	-3.3		-41.0	48	79	13 20 11
13 22 00	IRAS10565	07 46 39	44.0	109.0	-3.2		-38.6	17	79	13 22 00
13 26 00	---	07 50 39	44.5	110.0	-3.2		-38.3	240	95	13 22 01
13 26 00	J1102+2757	07 50 39	46.7	106.2	-3.2		-40.7	-22	95	No stop
13 27 10	---	07 51 49	46.9	106.5	-3.2		-40.6	48	99	13 26 01
13 27 50	IRAS10565	07 52 30	44.8	110.5	-3.1		-38.2	17	99	13 27 50
13 31 50	---	07 56 30	45.4	111.5	-3.1		-37.9	240	115	13 27 51
13 31 50	J1102+2757	07 56 30	47.6	107.7	-3.1		-40.3	-22	115	No stop
13 33 00	---	07 57 40	47.8	108.0	-3.1		-40.3	48	119	13 31 51
13 33 00	IRAS10565	07 57 40	45.5	111.8	-3.0		-37.8	-23	119	No stop
13 37 00	---	08 01 41	46.1	112.9	-3.0		-37.4	217	135	13 33 01

Schedule for TORUN (Code Tr) Page 3
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
13 37 00	J1102+2757	08 01 41	48.3	109.0	-3.0		-40.0	-22	135	No stop
13 38 10	---	08 02 51	48.5	109.3	-3.0		-39.9	48	139	13 37 01
13 38 50	IRAS10565	08 03 31	46.3	113.3	-2.9		-37.3	17	139	13 38 50
13 42 50	---	08 07 32	46.9	114.4	-2.9		-36.9	240	154	13 38 51
13 42 50	J1102+2757	08 07 32	49.1	110.5	-2.9		-39.5	-23	154	No stop
13 44 00	---	08 08 42	49.3	110.8	-2.9		-39.4	47	159	13 42 51
13 44 40	IRAS10565	08 09 22	47.1	114.9	-2.8		-36.8	17	159	13 44 40
13 48 40	---	08 13 23	47.7	116.0	-2.8		-36.4	240	174	13 44 41
13 48 40	J1102+2757	08 13 23	50.0	112.0	-2.8		-39.0	-23	174	No stop
13 49 50	---	08 14 33	50.1	112.3	-2.8		-38.9	47	179	13 48 41
13 49 50	IRAS10565	08 14 33	47.8	116.3	-2.8		-36.3	-23	179	No stop
13 53 50	---	08 18 34	48.4	117.4	-2.7		-35.9	217	194	13 49 51
13 53 50	J1102+2757	08 18 34	50.7	113.4	-2.7		-38.6	-23	194	No stop
13 55 00	---	08 19 44	50.8	113.7	-2.7		-38.5	47	199	13 53 51
13 55 40	IRAS10565	08 20 24	48.6	117.9	-2.7		-35.7	17	199	13 55 40
13 59 40	---	08 24 25	49.1	119.0	-2.6		-35.2	240	214	13 55 41
13 59 40	J1102+2757	08 24 25	51.5	115.0	-2.6		-38.0	-23	214	No stop
14 00 50	---	08 25 35	51.6	115.4	-2.6		-37.9	47	219	13 59 41
14 01 30	IRAS10565	08 26 15	49.4	119.6	-2.6		-35.0	17	219	14 01 30
14 05 30	---	08 30 16	49.9	120.7	-2.5		-34.5	240	234	14 01 31
14 05 30	J1102+2757	08 30 16	52.3	116.7	-2.5		-37.4	-23	234	No stop
14 06 40	---	08 31 26	52.4	117.0	-2.5		-37.2	47	238	14 05 31
14 06 40	IRAS10565	08 31 26	50.1	121.1	-2.5		-34.4	-23	238	No stop
14 10 40	---	08 35 27	50.6	122.2	-2.4		-33.9	217	254	14 06 41
14 10 40	J1102+2757	08 35 27	53.0	118.2	-2.5		-36.8	-23	254	No stop
14 11 50	---	08 36 37	53.1	118.5	-2.4		-36.6	47	258	14 10 41
14 12 30	IRAS10565	08 37 17	50.8	122.8	-2.4		-33.7	17	258	14 12 30
14 16 30	---	08 41 18	51.3	124.0	-2.3		-33.2	240	274	14 12 31
14 16 30	J1102+2757	08 41 18	53.7	119.9	-2.4		-36.1	-23	274	No stop
14 17 40	---	08 42 28	53.9	120.3	-2.3		-35.9	47	278	14 16 31
14 18 20	IRAS10565	08 43 08	51.5	124.6	-2.3		-32.9	17	278	14 18 20
14 22 20	---	08 47 08	52.0	125.8	-2.2		-32.3	240	294	14 18 21

Schedule for TORUN (Code Tr) Page 4
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
14 22 20	J1102+2757	08 47 08	54.5	121.7	-2.3		-35.3	-23	294	No stop
14 23 30	---	08 48 19	54.6	122.1	-2.2		-35.1	47	298	14 22 21
14 23 30	IRAS10565	08 48 19	52.2	126.2	-2.2		-32.2	-23	298	No stop
14 27 30	---	08 52 19	52.6	127.4	-2.1		-31.6	217	313	14 23 31
14 27 30	J1102+2757	08 52 19	55.1	123.4	-2.2		-34.6	-23	313	No stop
14 28 40	---	08 53 30	55.3	123.7	-2.2		-34.4	47	318	14 27 31
14 29 20	IRAS10565	08 54 10	52.9	128.0	-2.1		-31.3	17	318	14 29 20
14 33 20	---	08 58 10	53.3	129.3	-2.0		-30.7	240	333	14 29 21
14 33 20	J1102+2757	08 58 10	55.9	125.2	-2.1		-33.7	-24	333	No stop
14 34 30	---	08 59 20	56.0	125.6	-2.1		-33.5	46	338	14 33 21
14 35 10	IRAS10565	09 00 01	53.5	129.9	-2.0		-30.4	17	338	14 35 10
14 39 40	---	09 04 31	54.1	131.5	-1.9		-29.6	270	355	14 35 11
14 39 40	J1102+2757	09 04 31	56.6	127.4	-2.0		-32.7	-24	355	No stop
14 40 50	---	09 05 42	56.8	127.8	-2.0		-32.5	46	360	14 39 41
14 40 50	IRAS10565	09 05 42	54.2	131.8	-1.9		-29.4	-23	360	No stop
14 45 20	---	09 10 12	54.7	133.4	-1.8		-28.6	247	377	14 40 51
14 45 20	J1102+2757	09 10 12	57.3	129.3	-1.9		-31.7	-24	377	No stop
14 46 30	---	09 11 22	57.4	129.7	-1.9		-31.5	46	381	14 45 21
14 47 10	IRAS10565	09 12 03	54.9	134.0	-1.8		-28.3	16	381	14 47 10
14 50 10	---	09 15 03	55.2	135.1	-1.8		-27.8	180	393	14 47 11
14 50 10	J1102+2757	09 15 03	57.9	131.0	-1.8		-30.8	-24	393	No stop
14 51 20	---	09 16 13	58.0	131.4	-1.8		-30.6	46	397	14 50 11
14 51 20	4C39.25	09 16 13	75.7	170.7	-0.2		-7.2	-96	397	No stop
14 53 20	---	09 18 14	75.8	172.3	-0.2		-6.0	24	405	14 51 21
14 53 20	4C39.25	09 18 14	75.8	172.3	-0.2		-6.0	-5	405	No stop
14 59 20	---	09 24 15	75.9	177.0	-0.1		-2.3	355	428	14 53 21
14 59 20	J1102+2757	09 24 15	58.9	134.4	-1.6		-29.0	-99	428	No stop
15 01 50	---	09 26 45	59.1	135.3	-1.6		-28.5	51	438	14 59 21
15 02 30	IRAS10565	09 27 25	56.5	139.6	-1.5		-25.3	16	438	15 02 30
15 05 50	---	09 30 46	56.8	140.8	-1.5		-24.6	200	451	15 02 31

Schedule for TORUN (Code Tr) Page 5
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
15 05 50	J1102+2757	09 30 46	59.6	136.8	-1.5		-27.7	-24	451	No stop
15 07 00	---	09 31 56	59.7	137.3	-1.5		-27.4	46	455	15 05 51
15 07 40	IRAS10565	09 32 36	57.0	141.5	-1.5		-24.2	16	455	15 07 40
15 11 30	---	09 36 27	57.3	143.0	-1.4		-23.4	230	470	15 07 41
15 11 30	J1102+2757	09 36 27	60.1	139.1	-1.4		-26.4	-25	470	No stop
15 12 40	---	09 37 37	60.2	139.5	-1.4		-26.2	45	474	15 11 31
15 12 40	IRAS10565	09 37 37	57.4	143.4	-1.4		-23.1	-24	474	No stop
15 16 25	---	09 41 22	57.8	144.9	-1.3		-22.3	201	489	15 12 41
15 16 25	J1102+2757	09 41 22	60.6	141.1	-1.4		-25.3	-25	489	No stop
15 17 35	---	09 42 33	60.7	141.5	-1.3		-25.0	45	493	15 16 26
15 18 15	IRAS10565	09 43 13	57.9	145.6	-1.3		-21.9	15	493	15 18 15
15 22 00	---	09 46 58	58.2	147.2	-1.2		-21.0	225	508	15 18 16
15 22 00	J1102+2757	09 46 58	61.1	143.4	-1.3		-23.9	-25	508	No stop
15 23 10	---	09 48 08	61.2	143.9	-1.2		-23.6	45	512	15 22 01
15 23 50	IRAS10565	09 48 49	58.4	147.9	-1.2		-20.5	15	512	15 23 50
15 27 40	---	09 52 39	58.7	149.5	-1.1		-19.6	230	527	15 23 51
15 27 40	J1102+2757	09 52 39	61.6	145.8	-1.2		-22.5	-25	527	No stop
15 28 50	---	09 53 49	61.7	146.3	-1.2		-22.2	45	531	15 27 41
15 28 50	IRAS10565	09 53 49	58.8	150.0	-1.1		-19.3	-25	531	No stop
15 32 35	---	09 57 35	59.0	151.5	-1.0		-18.3	200	546	15 28 51
15 32 35	J1102+2757	09 57 35	62.0	147.9	-1.1		-21.1	-25	546	No stop
15 33 45	---	09 58 45	62.1	148.4	-1.1		-20.8	45	550	15 32 36
15 34 25	IRAS10565	09 59 25	59.2	152.3	-1.0		-17.9	15	550	15 34 25
15 38 10	---	10 03 11	59.4	153.9	-0.9		-16.9	225	565	15 34 26
15 38 10	J1102+2757	10 03 11	62.5	150.4	-1.0		-19.6	-25	565	No stop
15 39 20	---	10 04 21	62.5	150.9	-1.0		-19.3	45	569	15 38 11
15 40 00	IRAS10565	10 05 01	59.5	154.7	-0.9		-16.4	15	569	15 40 00
15 43 50	---	10 08 52	59.8	156.4	-0.9		-15.3	230	584	15 40 01
15 43 50	J1102+2757	10 08 52	62.9	153.0	-0.9		-18.0	-26	584	No stop
15 45 00	---	10 10 02	62.9	153.5	-0.9		-17.6	44	588	15 43 51

Schedule for TORUN (Code Tr) Page 6
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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
--- Tue 9 Jun 2015 Day 160 ---										
15 45 00	IRAS10565	10 10 02	59.8	156.9	-0.8		-15.0	-25	588	No stop
15 48 45	---	10 13 48	60.1	158.5	-0.8		-14.0	200	603	15 45 01
15 48 45	J1102+2757	10 13 48	63.2	155.3	-0.8		-16.5	-26	603	No stop
15 49 55	---	10 14 58	63.3	155.8	-0.8		-16.1	44	607	15 48 46
15 50 35	IRAS10565	10 15 38	60.2	159.3	-0.7		-13.5	14	607	15 50 35
15 54 20	---	10 19 24	60.4	161.0	-0.7		-12.4	225	622	15 50 36
15 54 20	J1102+2757	10 19 24	63.5	157.9	-0.7		-14.8	-26	622	No stop
15 55 30	---	10 20 34	63.6	158.5	-0.7		-14.4	44	626	15 54 21
15 56 10	IRAS10565	10 21 14	60.4	161.8	-0.6		-11.9	14	626	15 56 10
16 00 00	---	10 25 05	60.6	163.6	-0.6		-10.7	230	641	15 56 11
16 00 00	J1102+2757	10 25 05	63.8	160.7	-0.6		-13.0	-26	641	No stop
16 01 10	---	10 26 15	63.9	161.3	-0.6		-12.6	44	646	16 00 01
16 01 10	IRAS10565	10 26 15	60.7	164.1	-0.6		-10.4	-26	646	No stop
16 04 55	---	10 30 00	60.8	165.8	-0.5		-9.3	199	660	16 01 11
16 04 55	J1102+2757	10 30 00	64.0	163.1	-0.6		-11.4	-26	660	No stop
16 06 05	---	10 31 11	64.1	163.7	-0.5		-11.0	44	664	16 04 56
16 06 45	IRAS10565	10 31 51	60.9	166.7	-0.5		-8.7	14	664	16 06 45
16 10 30	---	10 35 36	61.0	168.4	-0.4		-7.6	225	679	16 06 46
16 10 30	J1102+2757	10 35 36	64.3	165.9	-0.5		-9.5	-26	679	No stop
16 11 40	---	10 36 46	64.3	166.5	-0.4		-9.1	44	683	16 10 31
16 12 20	IRAS10565	10 37 27	61.0	169.3	-0.4		-7.0	14	683	16 12 20
16 16 10	---	10 41 17	61.1	171.1	-0.3		-5.9	230	698	16 12 21
16 16 10	J1102+2757	10 41 17	64.5	168.8	-0.4		-7.6	-26	698	No stop
16 17 20	---	10 42 27	64.5	169.4	-0.3		-7.2	44	703	16 16 11
16 17 20	IRAS10565	10 42 27	61.2	171.6	-0.3		-5.5	-26	703	No stop
16 21 05	---	10 46 13	61.2	173.4	-0.2		-4.3	199	717	16 17 21
16 21 05	J1102+2757	10 46 13	64.6	171.3	-0.3		-5.9	-26	717	No stop
16 22 15	---	10 47 23	64.6	171.9	-0.3		-5.5	44	721	16 21 06
16 22 55	IRAS10565	10 48 03	61.3	174.3	-0.2		-3.8	14	721	16 22 55
16 26 40	---	10 51 49	61.3	176.1	-0.1		-2.6	225	736	16 22 56

Schedule for TORUN (Code Tr) Page 7
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
16 26 40	J1102+2757	10 51 49	64.7	174.2	-0.2		-4.0	-27	736	No stop
16 27 50	---	10 52 59	64.7	174.8	-0.2		-3.5	43	740	16 26 41
16 28 30	IRAS10565	10 53 39	61.3	176.9	-0.1		-2.0	13	740	16 28 30
16 32 20	---	10 57 30	61.4	178.8	-0.0		-0.8	230	755	16 28 31
16 32 20	J1102+2757	10 57 30	64.8	177.1	-0.1		-2.0	-27	755	No stop
16 33 30	---	10 58 40	64.8	177.7	-0.1		-1.5	43	760	16 32 21
16 33 30	IRAS10565	10 58 40	61.4	179.3	-0.0		-0.5	-27	760	No stop
16 37 15	---	11 02 26	61.4	181.1	0.0		0.7	198	774	16 33 31
16 37 15	J1102+2757	11 02 26	64.8	179.7	-0.0		-0.2	-27	774	No stop
16 38 25	---	11 03 36	64.8	180.3	0.0		0.2	43	779	16 37 16
16 39 05	IRAS10565	11 04 16	61.4	182.0	0.1		1.3	13	779	16 39 05
16 42 50	---	11 08 02	61.3	183.7	0.1		2.5	225	793	16 39 06
16 42 50	J1102+2757	11 08 02	64.8	182.6	0.1		1.7	-27	793	No stop
16 44 00	---	11 09 12	64.7	183.2	0.1		2.2	43	797	16 42 51
16 44 00	J1522+3144	11 09 12	40.4	89.2	-4.2		-44.9	-202	797	No stop
16 48 20	---	11 13 32	41.1	90.1	-4.2		-44.9	58	814	16 44 01
16 48 20	IRAS15250	11 13 32	43.3	85.0	-4.2		-47.6	-25	814	No stop
16 51 47	---	11 17 00	43.8	85.6	-4.2		-47.7	182	827	16 48 21
16 51 47	J1522+3144	11 17 00	41.6	90.7	-4.1		-44.9	-25	827	No stop
16 53 08	---	11 18 21	41.8	91.0	-4.1		-44.9	56	833	16 51 48
16 53 48	IRAS15250	11 19 01	44.1	86.0	-4.1		-47.7	15	833	16 53 48
16 57 53	---	11 23 07	44.8	86.8	-4.1		-47.8	245	848	16 53 49
16 57 53	J1522+3144	11 23 07	42.5	92.0	-4.0		-44.8	-26	848	No stop
16 59 14	---	11 24 28	42.7	92.3	-4.0		-44.8	55	853	16 57 54
16 59 14	IRAS15250	11 24 28	45.0	87.1	-4.1		-47.8	-25	853	No stop
17 03 19	---	11 28 34	45.6	87.9	-4.0		-47.8	220	869	16 59 15
17 03 19	J1522+3144	11 28 34	43.4	93.1	-3.9		-44.8	-26	869	No stop
17 04 40	---	11 29 55	43.6	93.4	-3.9		-44.8	55	874	17 03 20
17 05 20	IRAS15250	11 30 35	45.9	88.2	-4.0		-47.8	15	874	17 05 20
17 09 25	---	11 34 41	46.5	89.0	-3.9		-47.9	245	890	17 05 21

Schedule for TORUN (Code Tr) Page 8
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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
--- Tue 9 Jun 2015 Day 160 ---										
17 09 25	J1522+3144	11 34 41	44.3	94.4	-3.8		-44.7	-26	890	No stop
17 10 46	---	11 36 02	44.5	94.7	-3.8		-44.7	55	895	17 09 26
17 11 26	IRAS15250	11 36 42	46.8	89.4	-3.8		-47.9	14	895	17 11 26
17 15 31	---	11 40 48	47.4	90.3	-3.8		-47.9	245	911	17 11 27
17 15 31	J1522+3144	11 40 48	45.2	95.7	-3.7		-44.6	-26	911	No stop
17 16 52	---	11 42 09	45.4	96.0	-3.7		-44.6	55	916	17 15 32
17 16 52	IRAS15250	11 42 09	47.6	90.5	-3.8		-47.9	-26	916	No stop
17 20 57	---	11 46 15	48.2	91.4	-3.7		-47.8	219	932	17 16 53
17 20 57	J1522+3144	11 46 15	46.0	96.9	-3.6		-44.5	-26	932	No stop
17 22 18	---	11 47 36	46.2	97.2	-3.6		-44.4	55	937	17 20 58
17 22 58	IRAS15250	11 48 16	48.5	91.8	-3.7		-47.8	14	937	17 22 58
17 27 03	---	11 52 22	49.1	92.6	-3.6		-47.8	245	953	17 22 59
17 27 03	J1522+3144	11 52 22	46.9	98.2	-3.5		-44.3	-26	953	No stop
17 28 24	---	11 53 43	47.1	98.5	-3.5		-44.3	55	958	17 27 04
17 29 04	IRAS15250	11 54 23	49.4	93.0	-3.6		-47.8	14	958	17 29 04
17 33 09	---	11 58 29	50.1	93.9	-3.5		-47.7	245	974	17 29 05
17 33 09	J1522+3144	11 58 29	47.8	99.6	-3.4		-44.1	-27	974	No stop
17 34 30	---	11 59 50	48.0	99.9	-3.4		-44.0	54	979	17 33 10
17 34 30	IRAS15250	11 59 50	50.3	94.2	-3.5		-47.7	-26	979	No stop
17 38 35	---	12 03 56	50.9	95.1	-3.4		-47.6	219	995	17 34 31
17 38 35	J1522+3144	12 03 56	48.6	100.9	-3.3		-43.9	-27	995	No stop
17 39 56	---	12 05 17	48.8	101.2	-3.3		-43.8	54	1000	17 38 36
17 40 36	IRAS15250	12 05 57	51.2	95.5	-3.4		-47.6	14	1000	17 40 36
17 44 41	---	12 10 03	51.8	96.4	-3.3		-47.5	245	1015	17 40 37
17 44 41	J1522+3144	12 10 03	49.5	102.3	-3.2		-43.6	-27	1015	No stop
17 46 02	---	12 11 24	49.7	102.6	-3.2		-43.5	54	1021	17 44 42
17 46 42	IRAS15250	12 12 04	52.1	96.9	-3.3		-47.4	13	1021	17 46 42
17 50 47	---	12 16 10	52.7	97.8	-3.2		-47.3	245	1036	17 46 43
17 50 47	J1522+3144	12 16 10	50.4	103.8	-3.1		-43.3	-27	1036	No stop
17 52 08	---	12 17 31	50.6	104.1	-3.1		-43.2	54	1042	17 50 48

Schedule for TORUN (Code Tr) Page 9
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
17 52 08	IRAS15250	12 17 31	52.9	98.1	-3.2		-47.2	-27	1042	No stop
17 56 13	---	12 21 37	53.5	99.0	-3.1		-47.1	218	1057	17 52 09
17 56 13	J1522+3144	12 21 37	51.2	105.1	-3.0		-42.9	-27	1057	No stop
17 57 34	---	12 22 58	51.4	105.4	-3.0		-42.9	54	1062	17 56 14
17 58 14	IRAS15250	12 23 38	53.8	99.5	-3.1		-47.0	13	1062	17 58 14
18 02 19	---	12 27 44	54.4	100.5	-3.0		-46.8	245	1078	17 58 15
18 02 19	J1522+3144	12 27 44	52.1	106.6	-2.9		-42.5	-28	1078	No stop
18 03 40	---	12 29 05	52.3	107.0	-2.9		-42.4	53	1083	18 02 20
18 04 20	IRAS15250	12 29 45	54.7	101.0	-3.0		-46.7	13	1083	18 04 20
18 08 25	---	12 33 51	55.3	101.9	-2.9		-46.5	245	1099	18 04 21
18 08 25	J1522+3144	12 33 51	53.0	108.2	-2.8		-42.1	-28	1099	No stop
18 09 46	---	12 35 12	53.2	108.6	-2.8		-42.0	53	1104	18 08 26
18 09 46	IRAS15250	12 35 12	55.5	102.3	-2.9		-46.4	-27	1104	No stop
18 13 51	---	12 39 18	56.1	103.3	-2.8		-46.2	218	1120	18 09 47
18 13 51	J1522+3144	12 39 18	53.7	109.7	-2.7		-41.6	-28	1120	No stop
18 15 12	---	12 40 39	53.9	110.0	-2.7		-41.5	53	1125	18 13 52
18 15 52	IRAS15250	12 41 19	56.4	103.8	-2.8		-46.1	12	1125	18 15 52
18 19 57	---	12 45 25	57.0	104.9	-2.7		-45.8	245	1141	18 15 53
18 19 57	J1522+3144	12 45 25	54.6	111.3	-2.6		-41.1	-28	1141	No stop
18 21 18	---	12 46 46	54.8	111.7	-2.6		-41.0	53	1146	18 19 58
18 21 58	IRAS15250	12 47 26	57.3	105.4	-2.7		-45.6	12	1146	18 21 58
18 26 03	---	12 51 32	57.9	106.5	-2.6		-45.3	245	1162	18 21 59
18 26 03	J1522+3144	12 51 32	55.5	113.1	-2.5		-40.5	-28	1162	No stop
18 27 24	---	12 52 53	55.6	113.4	-2.5		-40.3	53	1167	18 26 04
18 27 24	IRAS15250	12 52 53	58.1	106.8	-2.6		-45.2	-28	1167	No stop
18 31 29	---	12 56 58	58.7	108.0	-2.5		-44.9	217	1183	18 27 25
18 31 29	J1522+3144	12 56 58	56.2	114.6	-2.4		-39.9	-29	1183	No stop
18 32 50	---	12 58 20	56.4	115.0	-2.4		-39.7	52	1188	18 31 30
18 33 30	IRAS15250	12 59 00	59.0	108.5	-2.5		-44.7	12	1188	18 33 30
18 37 35	---	13 03 05	59.5	109.7	-2.4		-44.3	245	1204	18 33 31

Schedule for TORUN (Code Tr) Page 10
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
18 37 35	J1522+3144	13 03 05	57.0	116.5	-2.3		-39.2	-29	1204	No stop
18 38 56	---	13 04 27	57.2	116.9	-2.3		-39.0	52	1209	18 37 36
18 39 36	IRAS15250	13 05 07	59.8	110.3	-2.4		-44.1	12	1209	18 39 36
18 43 41	---	13 09 12	60.4	111.4	-2.3		-43.6	245	1224	18 39 37
18 43 41	J1522+3144	13 09 12	57.8	118.3	-2.2		-38.4	-29	1224	No stop
18 45 02	---	13 10 34	58.0	118.8	-2.2		-38.2	52	1230	18 43 42
18 45 02	IRAS15250	13 10 34	60.6	111.9	-2.3		-43.5	-29	1230	No stop
18 49 07	---	13 14 39	61.2	113.1	-2.2		-43.0	216	1245	18 45 03
18 49 07	J1522+3144	13 14 39	58.6	120.1	-2.1		-37.6	-29	1245	No stop
18 50 28	---	13 16 01	58.7	120.5	-2.1		-37.4	52	1251	18 49 08
18 51 08	IRAS15250	13 16 41	61.4	113.7	-2.2		-42.8	11	1251	18 51 08
18 55 13	---	13 20 46	62.0	115.0	-2.1		-42.2	245	1266	18 51 09
18 55 13	J1522+3144	13 20 46	59.3	122.1	-2.0		-36.7	-29	1266	No stop
18 56 34	---	13 22 08	59.5	122.5	-2.0		-36.5	52	1271	18 55 14
18 57 14	IRAS15250	13 22 48	62.3	115.7	-2.1		-41.9	11	1271	18 57 14
19 01 19	---	13 26 53	62.8	117.0	-2.0		-41.4	245	1287	18 57 15
19 01 19	J1522+3144	13 26 53	60.1	124.2	-1.9		-35.7	-30	1287	No stop
19 02 40	---	13 28 15	60.3	124.6	-1.9		-35.5	51	1292	19 01 20
19 02 40	IRAS15250	13 28 15	63.0	117.5	-2.0		-41.2	-29	1292	No stop
19 06 45	---	13 32 20	63.5	118.8	-1.9		-40.5	216	1308	19 02 41
19 06 45	J1522+3144	13 32 20	60.8	126.1	-1.8		-34.8	-30	1308	No stop
19 08 06	---	13 33 41	60.9	126.6	-1.8		-34.5	51	1313	19 06 46
19 08 46	IRAS15250	13 34 22	63.8	119.5	-1.9		-40.2	11	1313	19 08 46
19 12 51	---	13 38 27	64.3	121.0	-1.8		-39.5	245	1329	19 08 47
19 12 51	J1522+3144	13 38 27	61.5	128.3	-1.7		-33.6	-30	1329	No stop
19 14 12	---	13 39 48	61.7	128.8	-1.7		-33.4	51	1334	19 12 52
19 14 52	IRAS15250	13 40 29	64.6	121.7	-1.8		-39.1	11	1334	19 14 52
19 18 57	---	13 44 34	65.1	123.3	-1.7		-38.3	245	1350	19 14 53
19 18 57	J1522+3144	13 44 34	62.2	130.6	-1.6		-32.4	-30	1350	No stop
19 20 18	---	13 45 55	62.4	131.2	-1.6		-32.1	51	1355	19 18 58

Schedule for TORUN (Code Tr) Page 11
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
19 20 18	IRAS15250	13 45 55	65.3	123.8	-1.7		-38.1	-29	1355	No stop
19 24 23	---	13 50 01	65.8	125.4	-1.6		-37.2	216	1371	19 20 19
19 24 23	J1522+3144	13 50 01	62.8	132.8	-1.5		-31.2	-30	1371	No stop
19 25 44	---	13 51 22	63.0	133.3	-1.5		-30.9	51	1376	19 24 24
19 26 24	IRAS15250	13 52 02	66.0	126.2	-1.6		-36.8	11	1376	19 26 24
19 30 29	---	13 56 08	66.5	127.8	-1.5		-35.9	245	1392	19 26 25
19 30 29	J1522+3144	13 56 08	63.5	135.2	-1.4		-29.8	-30	1392	No stop
19 31 50	---	13 57 29	63.6	135.8	-1.4		-29.5	51	1397	19 30 30
19 32 30	IRAS15250	13 58 09	66.8	128.7	-1.5		-35.4	10	1397	19 32 30
19 36 35	---	14 02 15	67.2	130.4	-1.4		-34.4	245	1412	19 32 31
19 36 35	J1522+3144	14 02 15	64.1	137.8	-1.3		-28.3	-30	1412	No stop
19 37 56	---	14 03 36	64.3	138.4	-1.3		-27.9	51	1418	19 36 36
19 37 56	IRAS15250	14 03 36	67.4	131.0	-1.4		-34.0	-29	1418	No stop
19 42 01	---	14 07 42	67.8	132.8	-1.3		-33.0	216	1433	19 37 57
19 42 01	J1522+3144	14 07 42	64.7	140.2	-1.3		-26.9	-30	1433	No stop
19 43 22	---	14 09 03	64.8	140.8	-1.2		-26.5	51	1439	19 42 02
19 44 02	IRAS15250	14 09 43	68.1	133.7	-1.3		-32.4	11	1439	19 44 02
19 48 07	---	14 13 49	68.5	135.6	-1.2		-31.2	245	1454	19 44 03
19 48 07	J1522+3144	14 13 49	65.2	143.0	-1.1		-25.2	-30	1454	No stop
19 49 28	---	14 15 10	65.4	143.6	-1.1		-24.8	51	1459	19 48 08
19 50 08	IRAS15250	14 15 50	68.7	136.6	-1.2		-30.6	11	1459	19 50 08
19 54 13	---	14 19 56	69.1	138.6	-1.1		-29.4	245	1475	19 50 09
19 54 13	J1522+3144	14 19 56	65.8	145.8	-1.0		-23.4	-30	1475	No stop
19 55 34	---	14 21 17	65.9	146.5	-1.0		-22.9	51	1480	19 54 14
19 55 34	IRAS15250	14 21 17	69.3	139.3	-1.1		-28.9	-29	1480	No stop
19 59 39	---	14 25 23	69.7	141.3	-1.0		-27.6	216	1496	19 55 35
19 59 39	J1522+3144	14 25 23	66.2	148.5	-1.0		-21.7	-30	1496	No stop
20 01 00	---	14 26 44	66.3	149.1	-0.9		-21.2	51	1501	19 59 40
20 01 40	IRAS15250	14 27 24	69.8	142.4	-1.0		-26.9	11	1501	20 01 40
20 05 45	---	14 31 30	70.2	144.6	-0.9		-25.5	245	1517	20 01 41

Schedule for TORUN (Code Tr) Page 12
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
20 05 45	J1522+3144	14 31 30	66.7	151.5	-0.9		-19.7	-29	1517	No stop
20 07 06	---	14 32 51	66.8	152.2	-0.8		-19.2	52	1522	20 05 46
20 07 46	IRAS15250	14 33 31	70.4	145.7	-0.9		-24.7	12	1522	20 07 46
20 11 51	---	14 37 37	70.7	147.9	-0.8		-23.2	245	1538	20 07 47
20 11 51	J1522+3144	14 37 37	67.1	154.6	-0.8		-17.6	-29	1538	No stop
20 13 12	---	14 38 58	67.2	155.4	-0.7		-17.1	52	1543	20 11 52
20 13 12	IRAS15250	14 38 58	70.8	148.7	-0.8		-22.7	-28	1543	No stop
20 17 17	---	14 43 04	71.1	151.1	-0.7		-21.0	217	1559	20 13 13
20 17 17	J1522+3144	14 43 04	67.4	157.5	-0.7		-15.7	-28	1559	No stop
20 18 38	---	14 44 25	67.5	158.2	-0.6		-15.2	53	1564	20 17 18
20 19 18	IRAS15250	14 45 05	71.3	152.3	-0.7		-20.2	12	1564	20 19 18
20 23 23	---	14 49 11	71.6	154.7	-0.6		-18.5	245	1580	20 19 19
20 23 23	J1522+3144	14 49 11	67.7	160.8	-0.6		-13.4	-28	1580	No stop
20 24 44	---	14 50 32	67.8	161.6	-0.5		-12.9	53	1585	20 23 24
20 25 24	IRAS15250	14 51 12	71.7	156.0	-0.6		-17.6	12	1585	20 25 24
20 29 29	---	14 55 18	71.9	158.5	-0.5		-15.8	245	1601	20 25 25
20 29 29	J1522+3144	14 55 18	68.0	164.2	-0.5		-11.1	-28	1601	No stop
20 30 50	---	14 56 39	68.1	165.0	-0.4		-10.6	53	1606	20 29 30
20 30 50	IRAS15250	14 56 39	72.0	159.3	-0.5		-15.2	-29	1606	No stop
20 34 55	---	15 00 45	72.2	162.0	-0.4		-13.3	216	1621	20 30 51
20 34 55	J1522+3144	15 00 45	68.2	167.3	-0.4		-9.0	-29	1621	No stop
20 36 16	---	15 02 06	68.3	168.0	-0.3		-8.4	52	1627	20 34 56
20 36 56	IRAS15250	15 02 46	72.3	163.3	-0.4		-12.3	11	1627	20 36 56
20 41 01	---	15 06 52	72.4	166.0	-0.3		-10.4	245	1642	20 36 57
20 41 01	J1522+3144	15 06 52	68.4	170.7	-0.3		-6.5	-29	1642	No stop
20 42 22	---	15 08 13	68.4	171.5	-0.2		-6.0	52	1648	20 41 02
20 43 02	IRAS15250	15 08 53	72.5	167.3	-0.3		-9.4	11	1648	20 43 02
20 47 07	---	15 12 59	72.6	170.0	-0.2		-7.4	245	1663	20 43 03
20 47 07	J1522+3144	15 12 59	68.5	174.3	-0.2		-4.0	-29	1663	No stop
20 48 28	---	15 14 20	68.5	175.1	-0.1		-3.5	52	1668	20 47 08

Schedule for TORUN (Code Tr) Page 13
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
20 48 28	IRAS15250	15 14 20	72.7	170.9	-0.2		-6.7	-29	1668	No stop
20 52 33	---	15 18 26	72.8	173.7	-0.2		-4.7	216	1684	20 48 29
20 52 33	J1522+3144	15 18 26	68.6	177.4	-0.1		-1.8	-30	1684	No stop
20 53 54	---	15 19 47	68.6	178.2	-0.1		-1.2	51	1689	20 52 34
20 54 34	IRAS15250	15 20 27	72.8	175.1	-0.1		-3.6	10	1689	20 54 34
20 58 39	---	15 24 33	72.8	177.9	-0.1		-1.6	245	1705	20 54 35
20 58 39	J1522+3144	15 24 33	68.6	181.0	0.0		0.7	-30	1705	No stop
21 00 00	---	15 25 54	68.6	181.8	0.1		1.3	51	1710	20 58 40
21 00 00	J1102+2757	15 25 54	36.3	269.3	4.4		42.8	-191	1710	No stop
21 06 34	---	15 32 29	35.3	270.6	4.5		42.8	203	1736	21 00 01
21 07 14	IRAS10565	15 33 09	32.2	268.6	4.6		41.3	15	1736	21 07 14
21 11 14	---	15 37 10	31.6	269.4	4.6		41.3	240	1751	21 07 15
21 11 14	J1102+2757	15 37 10	34.6	271.5	4.6		42.8	-25	1751	No stop
21 13 24	---	15 39 20	34.3	272.0	4.6		42.8	105	1759	21 11 15
21 13 24	IRAS10565	15 39 20	31.3	269.8	4.7		41.3	-25	1759	No stop
21 17 24	---	15 43 21	30.7	270.6	4.7		41.3	215	1775	21 13 25
21 17 24	J1102+2757	15 43 21	33.7	272.7	4.7		42.7	-25	1775	No stop
21 19 34	---	15 45 31	33.4	273.2	4.7		42.7	105	1783	21 17 25
21 20 14	IRAS10565	15 46 11	30.3	271.2	4.8		41.3	15	1783	21 20 14
21 24 14	---	15 50 12	29.7	272.0	4.8		41.2	240	1798	21 20 15
21 24 14	J1102+2757	15 50 12	32.7	274.1	4.8		42.7	-25	1798	No stop
21 26 24	---	15 52 22	32.3	274.5	4.8		42.6	105	1807	21 24 15
21 27 04	IRAS10565	15 53 02	29.3	272.5	4.9		41.2	15	1807	21 27 04
21 31 04	---	15 57 03	28.7	273.3	4.9		41.2	240	1822	21 27 05
21 31 04	J1102+2757	15 57 03	31.6	275.4	4.9		42.6	-25	1822	No stop
21 33 14	---	15 59 13	31.3	275.8	4.9		42.5	105	1830	21 31 05
21 33 14	IRAS10565	15 59 13	28.3	273.7	5.0		41.2	-25	1830	No stop
21 37 14	---	16 03 14	27.7	274.5	5.1		41.1	215	1846	21 33 15
21 37 14	J1102+2757	16 03 14	30.7	276.6	5.0		42.4	-25	1846	No stop
21 39 24	---	16 05 24	30.4	277.0	5.0		42.4	105	1854	21 37 15

Schedule for TORUN (Code Tr) Page 14
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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
--- Tue 9 Jun 2015 Day 160 ---										
21 40 04	IRAS10565	16 06 04	27.3	275.1	5.1		41.1	15	1854	21 40 04
21 44 04	---	16 10 05	26.7	275.8	5.2		41.0	240	1869	21 40 05
21 44 04	J1102+2757	16 10 05	29.7	277.9	5.1		42.3	-25	1869	No stop
21 46 14	---	16 12 15	29.4	278.3	5.2		42.2	105	1878	21 44 05
21 46 54	IRAS10565	16 12 56	26.3	276.4	5.2		41.0	15	1878	21 46 54
21 50 54	---	16 16 56	25.7	277.2	5.3		40.9	240	1893	21 46 55
21 50 54	J1102+2757	16 16 56	28.7	279.1	5.2		42.1	-25	1893	No stop
21 53 04	---	16 19 07	28.4	279.5	5.3		42.1	105	1902	21 50 55
21 53 04	IRAS10565	16 19 07	25.4	277.6	5.3		40.8	-25	1902	No stop
21 57 04	---	16 23 07	24.8	278.3	5.4		40.7	215	1917	21 53 05
21 57 04	J1102+2757	16 23 07	27.8	280.3	5.3		41.9	-25	1917	No stop
21 59 14	---	16 25 18	27.4	280.7	5.4		41.9	105	1925	21 57 05
21 59 54	IRAS10565	16 25 58	24.3	278.9	5.4		40.7	15	1925	21 59 54
22 03 54	---	16 29 58	23.8	279.6	5.5		40.6	240	1941	21 59 55
22 03 54	J1102+2757	16 29 58	26.8	281.6	5.4		41.7	-25	1941	No stop
22 06 04	---	16 32 09	26.4	282.0	5.5		41.6	105	1949	22 03 55
22 06 44	IRAS10565	16 32 49	23.3	280.2	5.5		40.5	15	1949	22 06 44
22 10 44	---	16 36 49	22.7	280.9	5.6		40.4	240	1964	22 06 45
22 10 44	J1102+2757	16 36 49	25.8	282.8	5.6		41.5	-25	1964	No stop
22 12 54	---	16 39 00	25.4	283.2	5.6		41.4	105	1973	22 10 45
22 12 54	IRAS10565	16 39 00	22.4	281.3	5.6		40.3	-25	1973	No stop
22 16 54	---	16 43 00	21.8	282.1	5.7		40.2	215	1988	22 12 55
22 16 54	J1102+2757	16 43 00	24.8	284.0	5.7		41.2	-25	1988	No stop
22 19 04	---	16 45 11	24.5	284.4	5.7		41.2	105	1996	22 16 55
22 19 44	IRAS10565	16 45 51	21.4	282.6	5.8		40.1	15	1996	22 19 44
22 23 44	---	16 49 52	20.8	283.4	5.8		39.9	240	2012	22 19 45
22 23 44	J1102+2757	16 49 52	23.9	285.2	5.8		41.0	-25	2012	No stop
22 25 54	---	16 52 02	23.5	285.6	5.8		40.9	105	2020	22 23 45
22 26 34	IRAS10565	16 52 42	20.4	283.9	5.9		39.8	15	2020	22 26 34
22 30 34	---	16 56 43	19.8	284.6	5.9		39.7	240	2036	22 26 35

Schedule for TORUN (Code Tr) Page 15
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
22 30 34	J1102+2757	16 56 43	22.9	286.5	5.9		40.6	-25	2036	No stop
22 32 44	---	16 58 53	22.6	286.9	5.9		40.5	105	2044	22 30 35
22 32 44	IRAS10565	16 58 53	19.5	285.0	6.0		39.6	-25	2044	No stop
22 36 44	---	17 02 54	18.9	285.8	6.0		39.4	215	2059	22 32 45
22 36 44	J1102+2757	17 02 54	22.0	287.6	6.0		40.4	-25	2059	No stop
22 38 54	---	17 05 04	21.7	288.0	6.0		40.2	105	2068	22 36 45
22 39 34	IRAS10565	17 05 44	18.5	286.3	6.1		39.3	15	2068	22 39 34
22 43 34	---	17 09 45	17.9	287.1	6.2		39.1	240	2083	22 39 35
22 43 34	J1102+2757	17 09 45	21.0	288.8	6.1		40.0	-25	2083	No stop
22 45 44	---	17 11 55	20.7	289.2	6.1		39.9	105	2091	22 43 35
22 46 24	IRAS10565	17 12 35	17.5	287.6	6.2		39.0	14	2091	22 46 24
22 50 24	---	17 16 36	17.0	288.3	6.3		38.8	240	2107	22 46 25
22 50 24	J1102+2757	17 16 36	20.0	290.1	6.2		39.6	-25	2107	No stop
22 52 34	---	17 18 46	19.7	290.5	6.3		39.5	105	2115	22 50 25
22 52 34	IRAS10565	17 18 46	16.7	288.7	6.3		38.7	-26	2115	No stop
22 56 34	---	17 22 47	16.1	289.5	6.4		38.5	214	2130	22 52 35
22 56 34	J1102+2757	17 22 47	19.2	291.2	6.3		39.3	-25	2130	No stop
22 58 44	---	17 24 57	18.9	291.6	6.4		39.2	105	2139	22 56 35
22 59 24	IRAS10565	17 25 37	15.7	290.0	6.4		38.3	14	2139	22 59 24
23 03 24	---	17 29 38	15.1	290.8	6.5		38.1	240	2154	22 59 25
23 03 24	J1102+2757	17 29 38	18.2	292.4	6.4		38.9	-25	2154	No stop
23 05 34	---	17 31 48	17.9	292.8	6.5		38.8	105	2162	23 03 25
23 05 34	J1102+2757	17 31 48	17.9	292.8	6.5		38.8	-5	2162	No stop
23 07 44	---	17 33 59	17.6	293.2	6.5		38.6	125	2171	23 05 35
23 08 24	IRAS10565	17 34 39	14.4	291.7	6.6		37.8	14	2171	23 08 24
23 11 42	---	17 37 57	14.0	292.3	6.6		37.6	198	2183	23 08 25
23 11 42	J1102+2757	17 37 57	17.1	293.9	6.6		38.4	-25	2183	No stop
23 13 52	---	17 40 08	16.8	294.3	6.6		38.2	105	2192	23 11 43
23 14 32	IRAS10565	17 40 48	13.6	292.8	6.7		37.4	14	2192	23 14 32
23 17 50	---	17 44 06	13.1	293.4	6.7		37.2	198	2204	23 14 33

Schedule for TORUN (Code Tr) Page 16
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 9 Jun 2015 Day 160 ---										
23 17 50	J1102+2757	17 44 06	16.2	295.1	6.7		38.0	-25	2204	No stop
23 20 00	---	17 46 17	15.9	295.4	6.7		37.8	105	2213	23 17 51
23 20 00	J1522+3144	17 46 17	56.5	244.7	2.4		39.6	-165	2213	No stop
23 24 30	---	17 50 48	55.9	246.0	2.5		40.1	105	2230	23 20 01
23 25 10	IRAS15250	17 51 28	59.6	250.1	2.4		44.2	12	2230	23 25 10
23 29 29	---	17 55 47	59.0	251.4	2.5		44.6	259	2247	23 25 11
23 29 29	J1522+3144	17 55 47	55.2	247.4	2.5		40.7	-28	2247	No stop
23 30 39	---	17 56 58	55.1	247.8	2.6		40.8	42	2251	23 29 30
23 30 39	IRAS15250	17 56 58	58.8	251.7	2.5		44.8	-28	2251	No stop
23 34 58	---	18 01 17	58.2	252.9	2.6		45.1	231	2268	23 30 40
23 34 58	J1522+3144	18 01 17	54.5	249.0	2.6		41.2	-28	2268	No stop
23 36 08	---	18 02 27	54.3	249.3	2.7		41.3	42	2272	23 34 59
23 36 48	IRAS15250	18 03 08	58.0	253.4	2.6		45.3	12	2272	23 36 48
23 41 06	---	18 07 26	57.3	254.5	2.7		45.6	258	2289	23 36 49
23 41 06	J1522+3144	18 07 26	53.6	250.6	2.7		41.7	-28	2289	No stop
23 42 16	---	18 08 36	53.4	250.9	2.8		41.8	42	2293	23 41 07
23 42 56	IRAS15250	18 09 17	57.1	255.0	2.7		45.7	12	2293	23 42 56
23 47 15	---	18 13 36	56.4	256.1	2.8		46.0	259	2310	23 42 57
23 47 15	J1522+3144	18 13 36	52.7	252.3	2.8		42.2	-28	2310	No stop
23 48 25	---	18 14 46	52.5	252.6	2.9		42.3	42	2314	23 47 16
23 48 25	IRAS15250	18 14 46	56.3	256.4	2.8		46.1	-28	2314	No stop
23 52 44	---	18 19 06	55.6	257.5	2.9		46.4	231	2331	23 48 26
23 52 44	J1522+3144	18 19 06	51.9	253.7	2.9		42.6	-28	2331	No stop
23 53 54	---	18 20 16	51.7	254.0	3.0		42.7	42	2336	23 52 45
23 54 34	IRAS15250	18 20 56	55.4	257.9	2.9		46.5	12	2336	23 54 34
23 58 52	---	18 25 15	54.7	259.0	3.0		46.7	258	2352	23 54 35
--- Start: Tue 9 Jun 2015 Day 160 -- Stop: Wed 10 Jun 2015 Day 161 ---										
23 58 52	J1522+3144	18 25 15	51.0	255.2	3.0		43.0	-28	2352	No stop
00 00 02	---	18 26 25	50.9	255.5	3.1		43.1	42	2357	23 58 53

Schedule for TORUN (Code Tr) Page 17
LIRGI

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 10 Jun 2015 Day 161 ---										
00 00 42	IRAS15250	18 27 05	54.5	259.4	3.0		46.8	12	2357	00 00 42
00 05 01	---	18 31 25	53.8	260.5	3.1		47.0	259	2373	00 00 43
00 05 01	J1522+3144	18 31 25	50.1	256.7	3.1		43.4	-28	2373	No stop
00 06 11	---	18 32 35	50.0	257.0	3.2		43.4	42	2378	00 05 02
00 06 11	IRAS15250	18 32 35	53.7	260.7	3.1		47.0	-28	2378	No stop
00 10 30	---	18 36 55	53.0	261.7	3.2		47.2	231	2394	00 06 12
00 10 30	J1522+3144	18 36 55	49.3	258.0	3.2		43.7	-28	2394	No stop
00 11 40	---	18 38 05	49.2	258.3	3.3		43.7	42	2399	00 10 31
00 12 20	IRAS15250	18 38 45	52.7	262.1	3.2		47.3	12	2399	00 12 20
00 16 38	---	18 43 04	52.1	263.1	3.3		47.4	258	2415	00 12 21
00 16 38	J1522+3144	18 43 04	48.4	259.5	3.3		43.9	-28	2415	No stop
00 17 48	---	18 44 14	48.2	259.7	3.4		44.0	42	2420	00 16 39
00 18 28	IRAS15250	18 44 54	51.8	263.5	3.3		47.5	13	2420	00 18 28
00 22 47	---	18 49 14	51.2	264.5	3.4		47.6	259	2436	00 18 29
00 22 47	J1522+3144	18 49 14	47.5	260.9	3.4		44.2	-28	2436	No stop
00 23 57	---	18 50 24	47.3	261.1	3.5		44.2	42	2441	00 22 48
00 23 57	IRAS15250	18 50 24	51.0	264.7	3.4		47.6	-27	2441	No stop
00 28 16	---	18 54 44	50.4	265.7	3.5		47.7	232	2457	00 23 58
00 28 16	J1522+3144	18 54 44	46.7	262.1	3.5		44.3	-28	2457	No stop
00 29 26	---	18 55 54	46.5	262.4	3.6		44.4	42	2462	00 28 17
00 30 06	IRAS15250	18 56 34	50.1	266.1	3.5		47.7	13	2462	00 30 06
00 34 24	---	19 00 53	49.4	267.0	3.6		47.8	258	2478	00 30 07
00 34 24	J1522+3144	19 00 53	45.8	263.5	3.6		44.5	-28	2478	No stop
00 35 34	---	19 02 03	45.6	263.7	3.7		44.5	42	2483	00 34 25
00 36 14	IRAS15250	19 02 43	49.2	267.3	3.6		47.8	13	2483	00 36 14
00 40 33	---	19 07 03	48.5	268.2	3.7		47.8	259	2500	00 36 15
00 40 33	J1522+3144	19 07 03	44.9	264.8	3.7		44.6	-28	2500	No stop
00 41 43	---	19 08 13	44.7	265.0	3.8		44.7	42	2504	00 40 34
00 41 43	IRAS15250	19 08 13	48.3	268.5	3.7		47.8	-27	2504	No stop
00 46 02	---	19 12 33	47.7	269.4	3.7		47.9	232	2521	00 41 44

```
Schedule for TORUN     (Code Tr )                                  Page  18
              LIRGI
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  10 Jun 2015   Day 161 ---

00 46 02  J1522+3144   19 12 33  44.0 265.9  3.8      44.7   -28     2521   No stop
00 47 12  ---          19 13 43  43.9 266.2  3.8      44.8    42     2525   00 46 03

00 47 52  IRAS15250    19 14 23  47.4 269.7  3.8      47.9    13     2525   00 47 52
00 52 10  ---          19 18 42  46.8 270.6  3.9      47.9   258     2542   00 47 53

00 52 10  J1522+3144   19 18 42  43.1 267.2  3.9      44.8   -28     2542   No stop
00 53 20  ---          19 19 52  42.9 267.5  4.0      44.8    42     2546   00 52 11

00 53 20  J1522+3144   19 19 52  42.9 267.5  4.0      44.8    -5     2546   No stop
00 54 30  ---          19 21 02  42.8 267.7  4.0      44.8    65     2551   00 53 21

00 54 30  IRAS15250    19 21 02  46.4 271.1  3.9      47.9   -27     2551   No stop
00 58 50  ---          19 25 23  45.8 271.9  4.0      47.8   233     2567   00 54 31

00 58 50  J1522+3144   19 25 23  42.1 268.6  4.0      44.9   -28     2567   No stop
01 00 00  ---          19 26 33  41.9 268.8  4.1      44.9    42     2572   00 58 51



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


 ======== Setup file: sess215.C512

   Setup group:   10         Station: TORUN            Total bit rate:   512
   Format: MARK5B            Bits per sample: 2        Sample rate: 16.000
   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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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=   4966.49  4966.49  4966.49  4966.49  4982.49  4982.49  4982.49  4982.49
            4998.49  4998.49  4998.49  4998.49  5014.49  5014.49  5014.49  5014.49
  BBC fr=    766.49   766.49   766.49   766.49   782.49   782.49   782.49   782.49
             798.49   798.49   798.49   798.49   814.49   814.49   814.49   814.49
  Bandwd=      8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
               8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
   Matching frequency sets:   7  13

  Track assignments are:
   track1=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
   barrel=roll_off


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* IRAS15250          15 25 03.717218   * 15 26 59.420927     15 27 36.386519       0.00
                     36 09 01.00191    * 35 58 37.42610      35 55 37.46516        0.00

* J1522+3144         15 20 08.107572   * 15 22 09.991715     15 22 48.818882       0.00
                     31 54 54.51259    * 31 44 14.38185      31 41 08.78924        0.00

* IRAS10565          10 56 36.169677   * 10 59 18.132935     11 00 07.758089       0.00
                     24 48 39.97243    * 24 32 34.49800      24 27 39.46164        0.00

* J1102+2757         10 59 31.439332   * 11 02 14.288462     11 03 04.144467       0.00
                     28 13 17.49366    * 27 57 08.68984      27 52 13.88824        0.00

* 4C39.25            09 23 55.319215   * 09 27 03.013936     09 27 59.713130       0.30
  J0927+3902         39 15 23.56645    * 39 02 20.85186      38 58 20.98427        0.16
  0923+392           /Users/naimro/sched_11.4/catalogs/sources.gsfc
  J0927+39           GSFC 2015a astro solution, unpublished 245753 observations.
```

ep096btr

ASASSN-14il binary AGN

PI: *J. L. Prieto*

```
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Observing mode: 1024 Mbps

Schedule for TORUN     (Code Tr )                                   Page   2
               ASASSN-14il binary AGN
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  10 Jun 2015   Day 161 ---
 Next scan frequencies:  4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
                         5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
 Next BBC frequencies:    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
                          806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
 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

13 45 00  J1159+2914   08 13 39  42.7  97.1 -3.8     -43.0     0        0   13 45 00
13 49 50  =1156+295    08 18 30  43.4  98.2 -3.7     -42.9   290       37   13 45 01

13 51 20  J1250+1621   08 20 00  26.3  97.9 -4.5     -38.3    12       37   13 51 20
13 52 20  =1247+166    08 21 00  26.4  98.1 -4.5     -38.3    60       45   13 51 21

13 52 20  ASASSN-14LI  08 21 00  27.8  97.5 -4.5     -38.7   -19       45   No stop
13 55 50  ---          08 24 31  28.3  98.2 -4.4     -38.6   191       72   13 52 21

13 55 50  J1250+1621   08 24 31  26.9  98.8 -4.4     -38.2   -18       72   No stop
13 57 20  =1247+166    08 26 01  27.2  99.1 -4.4     -38.1    72       83   13 55 51

13 57 20  ASASSN-14LI  08 26 01  28.6  98.5 -4.4     -38.6   -19       83   No stop
14 00 50  ---          08 29 31  29.1  99.3 -4.3     -38.5   191      110   13 57 21

14 01 30  J1250+1621   08 30 12  27.8 100.0 -4.3     -38.0    22      110   14 01 30
14 02 30  =1247+166    08 31 12  27.9 100.2 -4.3     -38.0    60      118   14 01 31

14 02 30  ASASSN-14LI  08 31 12  29.3  99.6 -4.3     -38.4   -19      118   No stop
14 06 00  ---          08 34 42  29.8 100.4 -4.2     -38.3   191      145   14 02 31

14 06 00  J1250+1621   08 34 42  28.4 101.0 -4.3     -37.9   -18      145   No stop
14 07 30  =1247+166    08 36 13  28.7 101.3 -4.2     -37.8    72      156   14 06 01

14 07 30  ASASSN-14LI  08 36 13  30.1 100.7 -4.2     -38.3   -19      156   No stop
14 11 00  ---          08 39 43  30.6 101.5 -4.2     -38.1   191      183   14 07 31

14 11 40  J1250+1621   08 40 23  29.3 102.2 -4.2     -37.7    22      183   14 11 40
14 12 40  =1247+166    08 41 23  29.4 102.4 -4.2     -37.7    60      191   14 11 41

14 12 40  ASASSN-14LI  08 41 23  30.8 101.8 -4.1     -38.1   -19      191   No stop
14 16 10  ---          08 44 54  31.3 102.6 -4.1     -38.0   191      218   14 12 41

14 16 10  J1250+1621   08 44 54  29.9 103.2 -4.1     -37.5   -18      218   No stop
14 17 40  =1247+166    08 46 24  30.2 103.5 -4.1     -37.5    72      229   14 16 11
```

```
Schedule for TORUN     (Code Tr )                                  Page   3
               ASASSN-14il binary AGN
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  10 Jun 2015   Day 161 ---

14 17 40  ASASSN-14LI  08 46 24  31.6 102.9 -4.0     -37.9   -19      229   No stop
14 21 10  ---          08 49 55  32.1 103.7 -4.0     -37.8   191      256   14 17 41

14 21 50  J1250+1621   08 50 35  30.8 104.5 -4.0     -37.3    21      256   14 21 50
14 22 50  =1247+166    08 51 35  30.9 104.7 -4.0     -37.2    60      264   14 21 51

14 22 50  ASASSN-14LI  08 51 35  32.3 104.1 -4.0     -37.7   -19      264   No stop
14 26 20  ---          08 55 06  32.8 104.9 -3.9     -37.5   191      291   14 22 51

14 26 20  J1250+1621   08 55 06  31.4 105.5 -3.9     -37.1   -19      291   No stop
14 27 50  =1247+166    08 56 36  31.6 105.8 -3.9     -37.0    71      303   14 26 21

14 27 50  ASASSN-14LI  08 56 36  33.0 105.2 -3.9     -37.5   -19      303   No stop
14 31 20  ---          09 00 07  33.5 106.0 -3.8     -37.3   191      329   14 27 51

14 32 00  J1250+1621   09 00 47  32.2 106.7 -3.8     -36.8    21      329   14 32 00
14 33 00  =1247+166    09 01 47  32.4 107.0 -3.8     -36.7    60      337   14 32 01

14 33 00  ASASSN-14LI  09 01 47  33.8 106.4 -3.8     -37.2   -19      337   No stop
14 36 30  ---          09 05 17  34.3 107.2 -3.7     -37.0   191      364   14 33 01

14 36 30  J1250+1621   09 05 17  32.9 107.8 -3.8     -36.6   -19      364   No stop
14 38 00  =1247+166    09 06 48  33.1 108.1 -3.7     -36.5    71      376   14 36 31

14 38 00  ASASSN-14LI  09 06 48  34.5 107.5 -3.7     -36.9   -19      376   No stop
14 41 30  ---          09 10 18  35.0 108.4 -3.6     -36.7   191      403   14 38 01

14 42 10  J1250+1621   09 10 58  33.7 109.1 -3.7     -36.2    21      403   14 42 10
14 43 10  =1247+166    09 11 58  33.8 109.3 -3.6     -36.2    60      410   14 42 11

14 43 10  ASASSN-14LI  09 11 58  35.2 108.7 -3.6     -36.6   -19      410   No stop
14 46 40  ---          09 15 29  35.7 109.6 -3.6     -36.4   191      437   14 43 11

14 46 40  J1250+1621   09 15 29  34.3 110.1 -3.6     -36.0   -19      437   No stop
14 48 10  =1247+166    09 16 59  34.5 110.5 -3.6     -35.9    71      449   14 46 41

14 48 10  ASASSN-14LI  09 16 59  36.0 109.9 -3.5     -36.3   -19      449   No stop
14 51 40  ---          09 20 30  36.5 110.8 -3.5     -36.1   191      476   14 48 11

14 52 20  J1250+1621   09 21 10  35.1 111.5 -3.5     -35.6    21      476   14 52 20
14 53 20  =1247+166    09 22 10  35.3 111.7 -3.5     -35.5    60      483   14 52 21

14 53 20  ASASSN-14LI  09 22 10  36.7 111.2 -3.4     -36.0   -19      483   No stop
14 56 50  ---          09 25 41  37.2 112.0 -3.4     -35.8   191      510   14 53 21

14 56 50  J1250+1621   09 25 41  35.8 112.6 -3.4     -35.3   -19      510   No stop
14 58 20  =1247+166    09 27 11  36.0 112.9 -3.4     -35.2    71      522   14 56 51
```

Schedule for TORUN (Code Tr) Page 4

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 10 Jun 2015 Day 161 ---										
14 58 20	ASASSN-14LI	09 27 11	37.4	112.4	-3.4		-35.6	-19	522	No stop
15 01 50	---	09 30 42	37.9	113.2	-3.3		-35.4	191	549	14 58 21
15 02 30	J1250+1621	09 31 22	36.5	114.0	-3.3		-34.9	21	549	15 02 30
15 03 30	=1247+166	09 32 22	36.7	114.2	-3.3		-34.8	60	556	15 02 31
15 03 30	ASASSN-14LI	09 32 22	38.1	113.6	-3.3		-35.3	-19	556	No stop
15 07 00	---	09 35 52	38.6	114.5	-3.2		-35.0	191	583	15 03 31
15 07 00	J1250+1621	09 35 52	37.2	115.1	-3.3		-34.5	-19	583	No stop
15 08 30	=1247+166	09 37 23	37.4	115.4	-3.2		-34.4	71	595	15 07 01
15 08 30	ASASSN-14LI	09 37 23	38.8	114.9	-3.2		-34.9	-19	595	No stop
15 12 00	---	09 40 53	39.3	115.8	-3.1		-34.6	191	622	15 08 31
15 12 40	J1250+1621	09 41 33	37.9	116.5	-3.2		-34.0	21	622	15 12 40
15 13 40	=1247+166	09 42 33	38.1	116.7	-3.1		-34.0	60	629	15 12 41
15 13 40	ASASSN-14LI	09 42 33	39.5	116.2	-3.1		-34.4	-19	629	No stop
15 17 10	---	09 46 04	40.0	117.1	-3.0		-34.1	191	656	15 13 41
15 17 10	J1250+1621	09 46 04	38.5	117.6	-3.1		-33.7	-19	656	No stop
15 18 40	=1247+166	09 47 34	38.7	118.0	-3.1		-33.5	71	668	15 17 11
15 18 40	ASASSN-14LI	09 47 34	40.2	117.5	-3.0		-34.0	-19	668	No stop
15 22 10	---	09 51 05	40.6	118.4	-3.0		-33.7	191	695	15 18 41
15 22 50	J1250+1621	09 51 45	39.3	119.1	-3.0		-33.1	21	695	15 22 50
15 23 50	=1247+166	09 52 45	39.4	119.4	-3.0		-33.0	60	703	15 22 51
15 23 50	ASASSN-14LI	09 52 45	40.8	118.8	-2.9		-33.5	-19	703	No stop
15 27 20	---	09 56 16	41.3	119.8	-2.9		-33.2	191	729	15 23 51
15 27 20	J1250+1621	09 56 16	39.9	120.3	-2.9		-32.7	-19	729	No stop
15 28 50	=1247+166	09 57 46	40.1	120.7	-2.9		-32.5	71	741	15 27 21
15 28 50	ASASSN-14LI	09 57 46	41.5	120.2	-2.9		-33.0	-19	741	No stop
15 32 20	---	10 01 17	42.0	121.1	-2.8		-32.7	191	768	15 28 51
15 33 00	J1250+1621	10 01 57	40.6	121.8	-2.8		-32.1	21	768	15 33 00
15 34 00	=1247+166	10 02 57	40.7	122.1	-2.8		-32.0	60	776	15 33 01
15 34 00	ASASSN-14LI	10 02 57	42.2	121.6	-2.8		-32.5	-19	776	No stop
15 37 30	---	10 06 27	42.6	122.5	-2.7		-32.1	191	803	15 34 01

Schedule for TORUN (Code Tr) Page 5

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 10 Jun 2015 Day 161 ---										
15 37 30	J1250+1621	10 06 27	41.2	123.0	-2.7		-31.6	-19	803	No stop
15 39 00	=1247+166	10 07 58	41.4	123.4	-2.7		-31.5	71	814	15 37 31
15 39 00	ASASSN-14LI	10 07 58	42.8	122.9	-2.7		-31.9	-19	814	No stop
15 42 30	---	10 11 28	43.2	123.9	-2.6		-31.5	191	841	15 39 01
15 43 10	J1250+1621	10 12 08	41.9	124.6	-2.6		-31.0	21	841	15 43 10
15 44 10	=1247+166	10 13 08	42.0	124.8	-2.6		-30.9	60	849	15 43 11
15 44 10	ASASSN-14LI	10 13 08	43.5	124.4	-2.6		-31.3	-19	849	No stop
15 47 40	---	10 16 39	43.9	125.4	-2.5		-30.9	191	876	15 44 11
15 47 40	J1250+1621	10 16 39	42.4	125.8	-2.6		-30.5	-19	876	No stop
15 49 10	=1247+166	10 18 09	42.6	126.2	-2.5		-30.3	71	887	15 47 41
15 49 10	ASASSN-14LI	10 18 09	44.1	125.8	-2.5		-30.8	-19	887	No stop
15 52 40	---	10 21 40	44.5	126.8	-2.5		-30.3	191	914	15 49 11
15 53 20	J1250+1621	10 22 20	43.1	127.4	-2.5		-29.8	21	914	15 53 20
15 54 20	=1247+166	10 23 20	43.2	127.7	-2.5		-29.7	60	922	15 53 21
15 55 50	OQ208	10 24 50	42.7	98.7	-3.7		-42.4	17	922	15 55 50
15 59 50	---	10 28 51	43.3	99.6	-3.6		-42.3	240	953	15 55 51
16 01 20	J1250+1621	10 30 21	44.1	129.7	-2.3		-28.8	15	953	16 01 20
16 02 20	=1247+166	10 31 21	44.2	130.0	-2.3		-28.6	60	960	16 01 21
16 02 20	ASASSN-14LI	10 31 21	45.6	129.6	-2.3		-29.0	-19	960	No stop
16 05 50	---	10 34 52	46.0	130.7	-2.2		-28.6	191	987	16 02 21
16 05 50	J1250+1621	10 34 52	44.6	131.1	-2.3		-28.1	-19	987	No stop
16 07 20	=1247+166	10 36 22	44.7	131.5	-2.2		-27.9	71	999	16 05 51
16 07 20	ASASSN-14LI	10 36 22	46.2	131.1	-2.2		-28.3	-19	999	No stop
16 10 50	---	10 39 53	46.6	132.2	-2.2		-27.8	191	1026	16 07 21
16 11 30	J1250+1621	10 40 33	45.2	132.8	-2.2		-27.3	21	1026	16 11 30
16 12 30	=1247+166	10 41 33	45.3	133.1	-2.2		-27.2	60	1033	16 11 31
16 12 30	ASASSN-14LI	10 41 33	46.8	132.7	-2.1		-27.6	-19	1033	No stop
16 16 00	---	10 45 04	47.2	133.8	-2.1		-27.1	191	1060	16 12 31
16 16 00	J1250+1621	10 45 04	45.7	134.2	-2.1		-26.7	-19	1060	No stop
16 17 30	=1247+166	10 46 34	45.9	134.6	-2.1		-26.4	71	1072	16 16 01

```
Schedule for TORUN     (Code Tr )                                  Page   6
               ASASSN-14il binary AGN
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  10 Jun 2015   Day 161 ---

16 17 30  ASASSN-14LI  10 46 34  47.3 134.3 -2.0     -26.8   -19     1072   No stop
16 21 00  ---          10 50 05  47.7 135.4 -2.0     -26.3   191     1099   16 17 31

16 21 40  J1250+1621   10 50 45  46.3 135.9 -2.0     -25.8    21     1099   16 21 40
16 22 40  =1247+166    10 51 45  46.4 136.2 -2.0     -25.6    60     1106   16 21 41

16 22 40  ASASSN-14LI  10 51 45  47.9 135.9 -2.0     -26.0   -19     1106   No stop
16 26 10  ---          10 55 15  48.2 137.0 -1.9     -25.4   191     1133   16 22 41

16 26 10  J1250+1621   10 55 15  46.8 137.3 -1.9     -25.1   -19     1133   No stop
16 27 40  =1247+166    10 56 46  46.9 137.8 -1.9     -24.8    71     1145   16 26 11

16 27 40  ASASSN-14LI  10 56 46  48.4 137.5 -1.9     -25.2   -19     1145   No stop
16 31 10  ---          11 00 16  48.8 138.7 -1.8     -24.6   191     1172   16 27 41

16 31 50  J1250+1621   11 00 56  47.3 139.2 -1.8     -24.2    21     1172   16 31 50
16 32 50  =1247+166    11 01 56  47.4 139.5 -1.8     -24.0    60     1179   16 31 51

16 32 50  ASASSN-14LI  11 01 56  48.9 139.2 -1.8     -24.3   -19     1179   No stop
16 36 20  ---          11 05 27  49.3 140.4 -1.7     -23.7   191     1206   16 32 51

16 36 20  J1250+1621   11 05 27  47.8 140.6 -1.8     -23.4   -19     1206   No stop
16 37 50  =1247+166    11 06 57  47.9 141.1 -1.7     -23.1    71     1218   16 36 21

16 37 50  ASASSN-14LI  11 06 57  49.4 140.9 -1.7     -23.4   -19     1218   No stop
16 41 20  ---          11 10 28  49.7 142.1 -1.6     -22.8   191     1245   16 37 51

16 42 00  J1250+1621   11 11 08  48.3 142.5 -1.7     -22.4    21     1245   16 42 00
16 43 00  =1247+166    11 12 08  48.4 142.8 -1.6     -22.2    60     1253   16 42 01

16 43 00  ASASSN-14LI  11 12 08  49.9 142.7 -1.6     -22.5   -19     1253   No stop
16 46 30  ---          11 15 39  50.2 143.9 -1.6     -21.8   191     1279   16 43 01

16 46 30  J1250+1621   11 15 39  48.7 144.0 -1.6     -21.6   -19     1279   No stop
16 48 00  =1247+166    11 17 09  48.8 144.5 -1.6     -21.3    71     1291   16 46 31

16 48 00  ASASSN-14LI  11 17 09  50.3 144.4 -1.5     -21.5   -19     1291   No stop
16 51 30  ---          11 20 40  50.6 145.6 -1.5     -20.9   191     1318   16 48 01

16 52 10  J1250+1621   11 21 20  49.2 146.0 -1.5     -20.5    21     1318   16 52 10
16 53 10  =1247+166    11 22 20  49.3 146.3 -1.5     -20.3    60     1326   16 52 11

16 53 10  ASASSN-14LI  11 22 20  50.8 146.2 -1.4     -20.5   -19     1326   No stop
16 56 40  ---          11 25 50  51.1 147.4 -1.4     -19.8   191     1353   16 53 11
```

```
Schedule for TORUN     (Code Tr )                                Page   7
               ASASSN-14il binary AGN
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  10 Jun 2015   Day 161 ---

16 56 40  J1250+1621   11 25 50  49.6 147.5 -1.4     -19.6   -19     1353   No stop
16 58 10  =1247+166    11 27 21  49.7 148.0 -1.4     -19.3    71     1364   16 56 41

16 58 10  ASASSN-14LI  11 27 21  51.2 148.0 -1.4     -19.5   -19     1364   No stop
17 01 40  ---          11 30 51  51.5 149.2 -1.3     -18.8   191     1391   16 58 11

17 02 20  J1250+1621   11 31 31  50.0 149.5 -1.3     -18.5    21     1391   17 02 20
17 03 20  =1247+166    11 32 31  50.1 149.9 -1.3     -18.3    60     1399   17 02 21

17 03 20  ASASSN-14LI  11 32 31  51.6 149.8 -1.3     -18.5   -19     1399   No stop
17 06 50  ---          11 36 02  51.8 151.1 -1.2     -17.7   191     1426   17 03 21

17 06 50  J1250+1621   11 36 02  50.4 151.1 -1.2     -17.6   -19     1426   No stop
17 08 20  =1247+166    11 37 32  50.5 151.7 -1.2     -17.3    71     1437   17 06 51

17 08 20  ASASSN-14LI  11 37 32  52.0 151.7 -1.2     -17.4   -19     1437   No stop
17 11 50  ---          11 41 03  52.2 153.0 -1.1     -16.6   191     1464   17 08 21

17 12 30  J1250+1621   11 41 43  50.8 153.2 -1.2     -16.4    21     1464   17 12 30
17 13 30  =1247+166    11 42 43  50.8 153.5 -1.1     -16.2    60     1472   17 12 31

17 13 30  ASASSN-14LI  11 42 43  52.3 153.6 -1.1     -16.3   -19     1472   No stop
17 17 00  ---          11 46 14  52.5 154.9 -1.0     -15.5   191     1499   17 13 31

17 17 00  J1250+1621   11 46 14  51.0 154.8 -1.1     -15.4   -19     1499   No stop
17 18 30  =1247+166    11 47 44  51.1 155.4 -1.1     -15.1    71     1510   17 17 01

17 18 30  ASASSN-14LI  11 47 44  52.6 155.5 -1.0     -15.2   -19     1510   No stop
17 22 00  ---          11 51 15  52.8 156.8 -1.0     -14.4   191     1537   17 18 31

17 22 40  J1250+1621   11 51 55  51.4 156.9 -1.0     -14.2    21     1537   17 22 40
17 23 40  =1247+166    11 52 55  51.5 157.3 -1.0     -14.0    60     1545   17 22 41

17 23 40  ASASSN-14LI  11 52 55  52.9 157.5 -0.9     -14.0   -19     1545   No stop
17 27 10  ---          11 56 25  53.1 158.8 -0.9     -13.2   191     1572   17 23 41

17 27 10  J1250+1621   11 56 25  51.7 158.6 -0.9     -13.2   -19     1572   No stop
17 28 40  =1247+166    11 57 56  51.7 159.2 -0.9     -12.8    71     1583   17 27 11

17 28 40  ASASSN-14LI  11 57 56  53.2 159.4 -0.9     -12.8   -19     1583   No stop
17 32 10  ---          12 01 26  53.4 160.8 -0.8     -12.0   191     1610   17 28 41

17 32 50  J1250+1621   12 02 06  51.9 160.8 -0.8     -11.9    21     1610   17 32 50
17 33 50  =1247+166    12 03 06  52.0 161.2 -0.8     -11.7    60     1618   17 32 51
```

Schedule for TORUN (Code Tr) Page 8

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 10 Jun 2015 Day 161 ---										
17 33 50	ASASSN-14LI	12 03 06	53.5	161.4	-0.8		-11.6	-19	1618	No stop
17 37 20	---	12 06 37	53.6	162.8	-0.7		-10.7	191	1645	17 33 51
17 37 20	J1250+1621	12 06 37	52.2	162.5	-0.7		-10.8	-19	1645	No stop
17 38 50	=1247+166	12 08 07	52.2	163.1	-0.7		-10.5	71	1656	17 37 21
17 38 50	ASASSN-14LI	12 08 07	53.7	163.4	-0.7		-10.4	-19	1656	No stop
17 42 20	---	12 11 38	53.9	164.8	-0.6		-9.5	191	1683	17 38 51
17 43 00	J1250+1621	12 12 18	52.4	164.7	-0.6		-9.5	21	1683	17 43 00
17 44 00	=1247+166	12 13 18	52.4	165.1	-0.6		-9.3	60	1691	17 43 01
17 44 00	ASASSN-14LI	12 13 18	53.9	165.5	-0.6		-9.1	-19	1691	No stop
17 47 30	---	12 16 49	54.0	166.9	-0.5		-8.2	191	1718	17 44 01
17 47 30	J1250+1621	12 16 49	52.6	166.5	-0.6		-8.4	-19	1718	No stop
17 49 00	=1247+166	12 18 19	52.6	167.0	-0.5		-8.1	71	1729	17 47 31
17 49 00	ASASSN-14LI	12 18 19	54.1	167.5	-0.5		-7.9	-19	1729	No stop
17 52 30	---	12 21 50	54.2	168.9	-0.5		-7.0	191	1756	17 49 01
17 53 10	J1250+1621	12 22 30	52.8	168.7	-0.5		-7.1	21	1756	17 53 10
17 54 10	=1247+166	12 23 30	52.8	169.1	-0.5		-6.8	60	1764	17 53 11
17 54 10	ASASSN-14LI	12 23 30	54.2	169.6	-0.4		-6.6	-19	1764	No stop
17 57 40	---	12 27 00	54.3	171.0	-0.4		-5.7	191	1791	17 54 11
17 57 40	J1250+1621	12 27 00	52.9	170.5	-0.4		-6.0	-19	1791	No stop
17 59 10	=1247+166	12 28 31	52.9	171.1	-0.4		-5.6	71	1803	17 57 41
17 59 10	ASASSN-14LI	12 28 31	54.4	171.6	-0.3		-5.3	-19	1803	No stop
18 02 40	---	12 32 01	54.4	173.0	-0.3		-4.4	191	1829	17 59 11
18 03 20	J1250+1621	12 32 41	53.0	172.7	-0.3		-4.6	21	1829	18 03 20
18 04 20	=1247+166	12 33 41	53.0	173.1	-0.3		-4.3	60	1837	18 03 21
18 04 20	ASASSN-14LI	12 33 41	54.5	173.7	-0.3		-4.0	-19	1837	No stop
18 07 50	---	12 37 12	54.5	175.1	-0.2		-3.1	191	1864	18 04 21
18 07 50	J1250+1621	12 37 12	53.1	174.5	-0.2		-3.4	-19	1864	No stop
18 09 20	=1247+166	12 38 42	53.1	175.1	-0.2		-3.1	71	1876	18 07 51
18 09 20	ASASSN-14LI	12 38 42	54.5	175.8	-0.2		-2.7	-19	1876	No stop
18 12 50	---	12 42 13	54.6	177.2	-0.1		-1.8	191	1903	18 09 21

```
Schedule for TORUN     (Code Tr )                                Page   9
               ASASSN-14il binary AGN
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  10 Jun 2015   Day 161 ---

18 13 30  J1250+1621   12 42 53  53.1 176.8 -0.1      -2.0    21     1903   18 13 30
18 14 30  =1247+166    12 43 53  53.2 177.2 -0.1      -1.8    60     1910   18 13 31

18 14 30  ASASSN-14LI  12 43 53  54.6 177.9 -0.1      -1.3   -19     1910   No stop
18 18 00  ---          12 47 24  54.6 179.3 -0.0      -0.4   191     1937   18 14 31

18 18 00  J1250+1621   12 47 24  53.2 178.6 -0.1      -0.9   -19     1937   No stop
18 19 30  =1247+166    12 48 54  53.2 179.2 -0.0      -0.5    71     1949   18 18 01

18 19 30  ASASSN-14LI  12 48 54  54.6 179.9 -0.0      -0.0   -19     1949   No stop
18 23 00  ---          12 52 25  54.6 181.4  0.1       0.9   191     1976   18 19 31

18 23 40  J1250+1621   12 53 05  53.2 180.9  0.0       0.5    21     1976   18 23 40
18 24 40  =1247+166    12 54 05  53.2 181.3  0.1       0.8    60     1983   18 23 41

18 24 40  ASASSN-14LI  12 54 05  54.6 182.1  0.1       1.3   -19     1983   No stop
18 28 10  ---          12 57 35  54.6 183.5  0.1       2.2   191     2010   18 24 41

18 28 10  J1250+1621   12 57 35  53.2 182.7  0.1       1.7   -19     2010   No stop
18 29 40  =1247+166    12 59 06  53.1 183.3  0.1       2.0    71     2022   18 28 11

18 29 40  ASASSN-14LI  12 59 06  54.5 184.1  0.2       2.6   -19     2022   No stop
18 33 10  ---          13 02 36  54.5 185.6  0.2       3.5   191     2049   18 29 41

18 33 50  J1250+1621   13 03 16  53.1 184.9  0.2       3.1    21     2049   18 33 50
18 34 50  =1247+166    13 04 17  53.1 185.3  0.2       3.3    60     2056   18 33 51

18 34 50  ASASSN-14LI  13 04 17  54.5 186.3  0.3       3.9   -19     2056   No stop
18 38 20  ---          13 07 47  54.4 187.7  0.3       4.8   191     2083   18 34 51

18 38 20  J1250+1621   13 07 47  53.0 186.7  0.3       4.2   -19     2083   No stop
18 39 50  =1247+166    13 09 17  53.0 187.3  0.3       4.6    71     2095   18 38 21

18 39 50  ASASSN-14LI  13 09 17  54.4 188.3  0.3       5.2   -19     2095   No stop
18 43 20  ---          13 12 48  54.3 189.7  0.4       6.1   191     2122   18 39 51

18 44 00  J1250+1621   13 13 28  52.9 189.0  0.4       5.6    21     2122   18 44 00
18 45 00  =1247+166    13 14 28  52.9 189.4  0.4       5.9    60     2129   18 44 01


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


 ======== Setup file: sess215CGjb2.setini

   Setup group:   10         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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=   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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   4942.49  4942.49  4942.49  4942.49  4974.49  4974.49  4974.49  4974.49
            5006.49  5006.49  5006.49  5006.49  5038.49  5038.49  5038.49  5038.49
  BBC fr=    742.49   742.49   742.49   742.49   774.49   774.49   774.49   774.49
             806.49   806.49   806.49   806.49   838.49   838.49   838.49   838.49
  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:   8

  Track assignments are:
   track1=  18, 26,  2, 10, 20, 28,  4, 12, 22, 30,  6, 14, 24, 32,  8, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* ASASSN-14LI       12 45 45.858736   * 12 48 15.226300     12 49 01.734636       0.00
                    18 02 47.44778    * 17 46 26.45700      17 41 29.65125        0.00

  1156+295          11 56 57.786211   * 11 59 31.833912     12 00 19.314801       0.00
* J1159+2914        29 31 25.73882    * 29 14 43.82692      29 09 42.13991        0.00
  J1159+29          /home/cromero/sched_11.4/catalogs/sources.gsfc.2015feb
                    GSFC 2015a astro solution, unpublished  69878 observations.

  1247+166          12 47 39.650446   * 12 50 09.227097     12 50 55.828372       0.28
* J1250+1621        16 37 40.73650    * 16 21 21.46211      16 16 24.81726        0.47
                    /home/cromero/sched_11.4/catalogs/sources.gsfc.2015feb
                    GSFC 2015a astro solution, unpublished     48 observations.

* OQ208             14 04 45.615156   * 14 07 00.394414     14 07 42.785726       0.24
  J1407+2827        28 41 29.23518    * 28 27 14.69022      28 23 02.20308        0.34
  1404+286          /home/cromero/sched_11.4/catalogs/sources.gsfc.2015feb
  J1407+28          GSFC 2015a astro solution, unpublished  67871 observations.
```

f15l1tr

Network Monitoring Experiment

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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.

--- Thu 11 Jun 2015 Day 162 ---

Next scan frequencies:	1634.49	1634.49	1634.49	1634.49	1650.49	1650.49	1650.49	1650.49
	1666.49	1666.49	1666.49	1666.49	1682.49	1682.49	1682.49	1682.49
Next BBC frequencies:	665.51	665.51	665.51	665.51	649.51	649.51	649.51	649.51
	633.51	633.51	633.51	633.51	617.51	617.51	617.51	617.51
Next scan bandwidths:	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early / Dwell	Disk / GBytes	TPStart / SYNC
10 30 00	2251+158	05 02 03	11.8	-78.7	6.1		37.8	0	0	10 30 00
10 34 00	---	05 06 04	11.2	-77.9	6.2		37.7	240	15	10 30 01
10 35 00	2251+158	05 07 04	11.1	-77.7	6.2		37.7	54	15	10 35 00
10 40 00	---	05 12 05	10.4	-76.7	6.3		37.5	300	35	10 35 01
10 45 00	DA193	05 17 06	75.1	149.2	-0.7		-23.6	-171	35	10 45 00
10 49 00	---	05 21 07	75.4	152.0	-0.6		-21.5	69	50	10 45 01
10 51 00	DA193	05 23 07	75.5	153.4	-0.6		-20.5	112	50	10 51 00
10 56 00	---	05 28 08	75.9	157.1	-0.5		-17.7	300	69	10 51 01
11 01 00	2251+158	05 33 09	7.3	287.4	6.6		36.7	25	69	11 01 00
11 05 00	---	05 37 09	6.7	288.1	6.7		36.5	240	85	11 01 01
11 06 00	2251+158	05 38 09	6.6	288.3	6.7		36.4	54	85	11 06 00
11 11 00	---	05 43 10	5.9	289.3	6.8		36.2	300	104	11 06 01
11 18 00	DA193	05 50 11	76.7	174.7	-0.1		-4.2	141	104	11 18 00
11 22 00	---	05 54 12	76.7	178.0	-0.0		-1.5	240	119	11 18 01
11 24 00	DA193	05 56 12	76.7	179.7	-0.0		-0.2	111	119	11 24 00
11 30 00	---	06 02 13	76.7	184.7	0.1		3.7	360	142	11 24 01

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

======== Setup file: sess215.L512

Setup group: 11 Station: TORUN Total bit rate: 512
Format: MARK5B Bits per sample: 2 Sample rate: 16.000

```
  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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   1634.49  1634.49  1634.49  1634.49  1650.49  1650.49  1650.49  1650.49
            1666.49  1666.49  1666.49  1666.49  1682.49  1682.49  1682.49  1682.49
  BBC fr=    665.51   665.51   665.51   665.51   649.51   649.51   649.51   649.51
             633.51   633.51   633.51   633.51   617.51   617.51   617.51   617.51
  Bandwd=      8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
               8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

  J0555+3948        05 52 01.407174   * 05 55 30.805616     05 56 33.882856       0.13
  0552+398          39 48 21.94578    * 39 48 49.16493      39 48 45.63079        0.10
* DA193             /Users/oasis/Applications/sched_11.3U1/catalogs/sources.vlba
  J0555+39          rfc_2012b Petrov, 2012, unpublished 376994 observations

  J2253+1608        22 51 29.519738   * 22 53 57.747937     22 54 43.971927       0.68
  3C454.3           15 52 54.34810    * 16 08 53.56093      16 13 46.74468        0.72
* 2251+158          /Users/oasis/Applications/sched_11.3U1/catalogs/sources.vlba
  J2253+16          GSFC 2011B astro solution     39747 Observations
```

em115btr

EVN-18CM-J1230+41

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Observing mode: Continuum
Schedule for TORUN (Code Tr) Page 2
EVN-18CM-J1230+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
--- Thu 11 Jun 2015 Day 162 ---										
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
12 30 00	4C39.25	07 02 23	61.5	104.9	-2.4		-48.3	0	0	12 30 00
12 35 00	---	07 07 24	62.2	106.3	-2.3		-47.9	300	38	12 30 01
12 37 54	1223+395	07 10 19	36.4	71.0	-5.3		-47.1	63	38	12 37 54
12 41 39	---	07 14 19	37.0	71.7	-5.2		-47.3	225	67	12 37 55
12 42 20	J1230+41	07 14 45	38.0	68.8	-5.3		-48.4	20	67	12 42 20
12 47 15	---	07 19 56	38.7	69.6	-5.2		-48.8	295	105	12 42 21
12 47 56	1223+395	07 20 22	37.8	72.7	-5.1		-47.7	20	105	12 47 56
12 49 41	---	07 22 22	38.1	73.0	-5.1		-47.8	105	119	12 47 57
12 50 22	J1230+41	07 22 48	39.1	70.0	-5.1		-49.0	20	119	12 50 22
12 55 17	---	07 27 59	39.8	70.8	-5.1		-49.3	295	156	12 50 23
12 55 55	1223+395	07 28 22	39.0	74.0	-5.0		-48.1	17	156	12 55 55
12 57 40	---	07 30 22	39.3	74.4	-4.9		-48.2	105	170	12 55 56
12 58 18	J1230+41	07 30 46	40.2	71.3	-5.0		-49.5	17	170	12 58 18
13 03 13	---	07 35 57	41.0	72.1	-4.9		-49.8	295	208	12 58 19
13 03 54	1223+395	07 36 23	40.1	75.4	-4.8		-48.5	20	208	13 03 54
13 05 39	---	07 38 23	40.4	75.7	-4.8		-48.6	105	221	13 03 55
13 06 20	J1230+41	07 38 50	41.4	72.6	-4.9		-50.0	20	221	13 06 20
13 11 15	---	07 44 00	42.1	73.4	-4.8		-50.3	295	259	13 06 21
13 11 54	1223+395	07 44 24	41.3	76.7	-4.7		-48.9	18	259	13 11 54
13 13 39	---	07 46 25	41.6	77.1	-4.7		-49.0	105	272	13 11 55
13 14 18	J1230+41	07 46 49	42.5	73.9	-4.7		-50.4	18	272	13 14 18
13 19 13	---	07 51 59	43.3	74.7	-4.7		-50.7	295	310	13 14 19
13 19 55	1223+395	07 52 26	42.5	78.1	-4.6		-49.3	20	310	13 19 55
13 21 40	---	07 54 26	42.8	78.4	-4.5		-49.3	105	324	13 19 56

Schedule for TORUN (Code Tr) Page 3

EVN-18CM-J1230+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	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Thu 11 Jun 2015 Day 162 ---										
13 22 21	J1230+41	07 54 53	43.7	75.2	-4.6		-50.9	20	324	13 22 21
13 27 16	---	08 00 04	44.4	76.0	-4.5		-51.1	295	362	13 22 22
13 27 56	1223+395	08 00 28	43.7	79.5	-4.4		-49.6	18	362	13 27 56
13 29 41	---	08 02 29	44.0	79.8	-4.4		-49.7	105	375	13 27 57
13 30 20	J1230+41	08 02 53	44.8	76.5	-4.5		-51.3	18	375	13 30 20
13 35 15	---	08 08 04	45.6	77.3	-4.4		-51.5	295	413	13 30 21
13 35 57	1223+395	08 08 31	44.8	80.9	-4.3		-49.9	20	413	13 35 57
13 37 42	---	08 10 32	45.1	81.2	-4.3		-49.9	105	426	13 35 58
13 38 24	J1230+41	08 10 59	46.0	77.8	-4.3		-51.7	20	426	13 38 24
13 43 19	---	08 16 09	46.8	78.7	-4.3		-51.9	295	464	13 38 25
13 44 00	1223+395	08 16 35	46.0	82.3	-4.2		-50.1	19	464	13 44 00
13 45 45	---	08 18 35	46.3	82.7	-4.1		-50.2	105	478	13 44 01
13 46 25	J1230+41	08 19 01	47.2	79.2	-4.2		-52.0	19	478	13 46 25
13 51 20	---	08 24 12	48.0	80.1	-4.1		-52.2	295	515	13 46 26
13 52 02	1223+395	08 24 39	47.2	83.8	-4.0		-50.3	20	515	13 52 02
13 53 47	---	08 26 39	47.5	84.1	-4.0		-50.4	105	529	13 52 03
13 54 30	J1230+41	08 27 07	48.4	80.6	-4.1		-52.3	20	529	13 54 30
13 59 25	---	08 32 18	49.2	81.5	-4.0		-52.5	295	567	13 54 31
14 00 06	1223+395	08 32 44	48.5	85.3	-3.9		-50.5	19	567	14 00 06
14 01 51	---	08 34 44	48.8	85.6	-3.9		-50.5	105	580	14 00 07
14 02 33	J1230+41	08 35 11	49.6	82.0	-3.9		-52.6	19	580	14 02 33
14 07 28	---	08 40 22	50.4	82.9	-3.8		-52.8	295	618	14 02 34
14 08 10	1223+395	08 40 50	49.7	86.8	-3.8		-50.6	20	618	14 08 10
14 09 55	---	08 42 50	50.0	87.2	-3.7		-50.7	105	631	14 08 11
14 10 38	J1230+41	08 43 18	50.8	83.4	-3.8		-52.9	20	631	14 10 38
14 15 33	---	08 48 29	51.6	84.3	-3.7		-53.0	295	669	14 10 39
14 16 16	1223+395	08 48 56	50.9	88.3	-3.6		-50.7	20	669	14 16 16
14 18 01	---	08 50 56	51.2	88.7	-3.6		-50.7	105	683	14 16 17
14 18 43	J1230+41	08 51 24	52.0	84.9	-3.7		-53.1	20	683	14 18 43
14 23 38	---	08 56 35	52.8	85.8	-3.6		-53.2	295	721	14 18 44
14 24 22	1223+395	08 57 03	52.1	89.9	-3.5		-50.8	20	721	14 24 22
14 26 07	---	08 59 04	52.4	90.3	-3.5		-50.7	105	734	14 24 23

Schedule for TORUN (Code Tr) Page 4

EVN-18CM-J1230+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	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Thu 11 Jun 2015 Day 162 ---										
14 26 50	J1230+41	08 59 32	53.2	86.4	-3.5		-53.2	20	734	14 26 50
14 31 45	---	09 04 43	54.0	87.3	-3.4		-53.3	295	772	14 26 51
14 32 29	1223+395	09 05 12	53.3	91.6	-3.4		-50.7	21	772	14 32 29
14 34 14	---	09 07 12	53.6	92.0	-3.3		-50.7	105	785	14 32 30
14 36 58	4C39.25	09 09 42	75.5	165.6	-0.3		-11.1	2	785	14 36 58
14 42 58	---	09 15 43	75.7	170.3	-0.2		-7.5	360	831	14 36 59
14 46 05	1223+395	09 18 51	55.4	94.5	-3.1		-50.5	21	831	14 46 05
14 50 05	---	09 22 51	56.0	95.3	-3.1		-50.4	240	862	14 46 06
14 50 36	J1230+41	09 23 22	56.8	91.0	-3.1		-53.4	7	862	14 50 36
14 55 46	---	09 28 33	57.6	92.1	-3.0		-53.3	310	902	14 50 37
14 56 18	1223+395	09 29 05	56.9	96.7	-3.0		-50.3	8	902	14 56 18
14 58 18	---	09 31 06	57.2	97.2	-2.9		-50.2	120	917	14 56 19
14 58 50	J1230+41	09 31 38	58.1	92.7	-3.0		-53.3	8	917	14 58 50
15 04 00	---	09 36 48	58.8	93.8	-2.9		-53.2	310	957	14 58 51
15 04 33	1223+395	09 37 22	58.1	98.6	-2.8		-50.0	9	957	15 04 33
15 06 33	---	09 39 22	58.4	99.1	-2.8		-49.9	120	972	15 04 34
15 07 06	J1230+41	09 39 55	59.3	94.5	-2.9		-53.1	9	972	15 07 06
15 12 16	---	09 45 06	60.1	95.7	-2.8		-53.0	310	1012	15 07 07
15 12 51	1223+395	09 45 41	59.4	100.7	-2.7		-49.6	10	1012	15 12 51
15 14 51	---	09 47 41	59.7	101.2	-2.6		-49.4	120	1028	15 12 52
15 15 26	J1230+41	09 48 16	60.5	96.4	-2.7		-52.9	10	1028	15 15 26
15 20 36	---	09 53 27	61.3	97.6	-2.6		-52.7	310	1067	15 15 27
15 21 12	1223+395	09 54 03	60.6	102.8	-2.5		-49.0	11	1067	15 21 12
15 23 12	---	09 56 04	60.9	103.3	-2.5		-48.9	120	1083	15 21 13
15 23 49	J1230+41	09 56 40	61.8	98.4	-2.6		-52.6	12	1083	15 23 49
15 28 59	---	10 01 51	62.6	99.6	-2.5		-52.3	310	1122	15 23 50
15 29 37	1223+395	10 02 30	61.8	105.0	-2.4		-48.4	13	1122	15 29 37
15 31 37	---	10 04 30	62.1	105.6	-2.4		-48.2	120	1138	15 29 38
15 32 08	J1230+41	10 05 01	63.0	100.4	-2.4		-52.1	5	1138	15 32 08
15 37 18	---	10 10 11	63.8	101.8	-2.4		-51.8	310	1178	15 32 09

Schedule for TORUN (Code Tr) Page 5

EVN-18CM-J1230+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	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Thu 11 Jun 2015 Day 162 ---										
15 37 44	1223+395	10 10 38	63.0	107.3	-2.3		-47.7	0	1178	15 37 44
15 39 44	---	10 12 38	63.3	107.9	-2.2		-47.5	120	1193	15 37 45
15 40 09	J1230+41	10 13 04	64.2	102.5	-2.3		-51.6	0	1193	15 40 09
15 45 19	---	10 18 15	65.0	103.9	-2.2		-51.2	310	1233	15 40 10
15 45 51	1223+395	10 18 47	64.2	109.7	-2.1		-46.8	5	1233	15 45 51
15 47 51	---	10 20 47	64.4	110.3	-2.1		-46.6	120	1248	15 45 52
15 48 23	J1230+41	10 21 18	65.4	104.8	-2.2		-50.9	5	1248	15 48 23
15 53 33	---	10 26 29	66.2	106.3	-2.1		-50.4	310	1288	15 48 24
15 53 59	1223+395	10 26 56	65.3	112.3	-2.0		-45.8	0	1288	15 53 59
15 55 59	---	10 28 56	65.6	112.9	-2.0		-45.5	120	1303	15 54 00
15 56 26	J1230+41	10 29 23	66.6	107.2	-2.0		-50.1	0	1303	15 56 26
16 01 36	---	10 34 34	67.3	108.8	-1.9		-49.5	310	1343	15 56 27
16 02 09	1223+395	10 35 07	66.4	115.0	-1.9		-44.6	6	1343	16 02 09
16 04 09	---	10 37 07	66.7	115.7	-1.8		-44.3	120	1358	16 02 10
16 04 41	J1230+41	10 37 40	67.8	109.7	-1.9		-49.1	5	1358	16 04 41
16 09 51	---	10 42 51	68.5	111.5	-1.8		-48.3	310	1398	16 04 42
16 10 19	1223+395	10 43 18	67.5	117.9	-1.7		-43.2	0	1398	16 10 19
16 12 19	---	10 45 19	67.8	118.7	-1.7		-42.8	120	1413	16 10 20
16 12 47	J1230+41	10 45 46	68.9	112.5	-1.8		-47.9	0	1413	16 12 47
16 17 57	---	10 50 57	69.6	114.3	-1.7		-47.0	310	1453	16 12 48
16 18 31	1223+395	10 51 31	68.6	121.1	-1.6		-41.6	6	1453	16 18 31
16 20 31	---	10 53 32	68.9	121.9	-1.6		-41.1	120	1469	16 18 32
16 21 04	J1230+41	10 54 05	70.0	115.5	-1.6		-46.4	5	1469	16 21 04
16 26 14	---	10 59 16	70.7	117.5	-1.5		-45.4	310	1508	16 21 05
16 26 43	1223+395	10 59 45	69.6	124.5	-1.4		-39.7	0	1508	16 26 43
16 28 43	---	11 01 45	69.9	125.3	-1.4		-39.2	120	1524	16 26 44
16 29 11	J1230+41	11 02 14	71.1	118.7	-1.5		-44.7	0	1524	16 29 11
16 34 21	---	11 07 24	71.8	120.9	-1.4		-43.5	310	1563	16 29 12
16 34 56	1223+395	11 08 00	70.6	128.1	-1.3		-37.5	6	1563	16 34 56
16 36 56	---	11 10 00	70.9	129.1	-1.3		-37.0	120	1579	16 34 57

Schedule for TORUN (Code Tr) Page 6

EVN-18CM-J1230+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	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Thu 11 Jun 2015 Day 162 ---										
16 37 31	J1230+41	11 10 35	72.2	122.3	-1.3		-42.7	6	1579	16 37 31
16 42 41	---	11 15 46	72.9	124.7	-1.3		-41.3	310	1619	16 37 32
16 43 11	1223+395	11 16 16	71.6	132.1	-1.2		-35.1	0	1619	16 43 11
16 45 11	---	11 18 16	71.8	133.1	-1.1		-34.4	120	1634	16 43 12
16 45 40	J1230+41	11 18 45	73.2	126.1	-1.2		-40.4	0	1634	16 45 40
16 50 50	---	11 23 56	73.8	128.8	-1.1		-38.7	310	1674	16 45 41
16 51 27	1223+395	11 24 33	72.5	136.5	-1.0		-32.2	7	1674	16 51 27
16 53 27	---	11 26 33	72.7	137.6	-1.0		-31.5	120	1689	16 51 28
16 54 03	J1230+41	11 27 09	74.2	130.5	-1.1		-37.6	7	1689	16 54 03
16 59 13	---	11 32 20	74.8	133.4	-1.0		-35.7	310	1729	16 54 04
16 59 43	1223+395	11 32 51	73.3	141.2	-0.9		-29.1	0	1729	16 59 43
17 01 43	---	11 34 51	73.5	142.4	-0.9		-28.2	120	1744	16 59 44
17 02 13	J1230+41	11 35 20	75.1	135.2	-0.9		-34.5	0	1744	17 02 13
17 07 23	---	11 40 31	75.7	138.4	-0.8		-32.2	310	1784	17 02 14
17 08 01	1223+395	11 41 10	74.0	146.3	-0.8		-25.5	8	1784	17 08 01
17 10 01	---	11 43 10	74.2	147.6	-0.7		-24.5	120	1799	17 08 02
17 10 39	J1230+41	11 43 48	76.0	140.5	-0.8		-30.7	8	1799	17 10 39
17 15 49	---	11 48 59	76.4	144.1	-0.7		-28.1	310	1839	17 10 40
17 16 19	1223+395	11 49 29	74.7	151.8	-0.6		-21.5	0	1839	17 16 19
17 18 19	---	11 51 29	74.8	153.1	-0.6		-20.5	120	1854	17 16 20
17 18 48	J1230+41	11 51 58	76.7	146.2	-0.7		-26.5	0	1854	17 18 48
17 23 58	---	11 57 09	77.1	150.1	-0.6		-23.6	310	1894	17 18 49
17 24 38	1223+395	11 57 50	75.2	157.6	-0.5		-17.1	11	1894	17 24 38
17 26 38	---	11 59 50	75.3	159.1	-0.4		-16.0	120	1910	17 24 39
17 27 17	J1230+41	12 00 29	77.4	152.7	-0.5		-21.6	11	1910	17 27 17
17 32 27	---	12 05 40	77.7	156.9	-0.4		-18.4	310	1949	17 27 18
17 32 58	1223+395	12 06 11	75.6	163.9	-0.3		-12.4	2	1949	17 32 58
17 34 58	---	12 08 11	75.7	165.4	-0.3		-11.3	120	1965	17 32 59
17 40 26	4C39.25	12 13 40	58.5	260.2	2.8		49.6	124	1965	17 40 26
17 44 26	---	12 17 40	57.9	261.2	2.8		49.8	240	1996	17 40 27

Schedule for TORUN (Code Tr) Page 7

EVN-18CM-J1230+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
--- Thu 11 Jun 2015 Day 162 ---										
17 49 35	1223+395	12 22 51	76.0	177.0	-0.1		-2.3	123	1996	17 49 35
17 53 35	---	12 26 51	76.1	180.2	0.0		0.2	240	2026	17 49 36
17 54 05	J1230+41	12 27 22	78.4	176.3	-0.1		-3.0	7	2026	17 54 05
17 59 15	---	12 32 33	78.5	181.1	0.0		0.9	310	2066	17 54 06
17 59 50	1223+395	12 33 07	76.0	185.2	0.1		4.0	11	2066	17 59 50
18 01 50	---	12 35 07	76.0	186.8	0.1		5.3	120	2081	17 59 51
18 02 23	J1230+41	12 35 41	78.4	184.0	0.1		3.2	10	2081	18 02 23
18 07 33	---	12 40 51	78.4	188.8	0.2		7.1	310	2121	18 02 24
18 08 00	1223+395	12 41 18	75.8	191.7	0.2		9.1	3	2121	18 08 00
18 10 00	---	12 43 19	75.8	193.3	0.3		10.2	120	2137	18 08 01
18 10 26	J1230+41	12 43 45	78.3	191.5	0.2		9.2	3	2137	18 10 26
18 15 36	---	12 48 56	78.1	196.1	0.3		12.9	310	2176	18 10 27
18 16 11	1223+395	12 49 31	75.5	198.0	0.4		13.9	11	2176	18 16 11
18 18 11	---	12 51 31	75.4	199.5	0.4		15.0	120	2192	18 16 12
18 18 39	J1230+41	12 52 00	78.0	198.8	0.3		15.0	5	2192	18 18 39
18 23 49	---	12 57 10	77.7	203.2	0.4		18.4	310	2231	18 18 40
18 24 13	1223+395	12 57 34	75.1	203.9	0.5		18.3	0	2231	18 24 13
18 26 13	---	12 59 34	75.0	205.4	0.5		19.4	120	2247	18 24 14
18 26 36	J1230+41	12 59 58	77.5	205.5	0.5		20.2	0	2247	18 26 36
18 31 46	---	13 05 09	77.1	209.6	0.6		23.4	310	2287	18 26 37
18 32 24	1223+395	13 05 47	74.5	209.6	0.7		22.5	14	2287	18 32 24
18 34 24	---	13 07 47	74.4	211.0	0.7		23.5	120	2302	18 32 25
18 34 59	J1230+41	13 08 22	76.9	212.0	0.6		25.2	11	2302	18 34 59
18 40 09	---	13 13 33	76.5	215.8	0.7		28.0	310	2342	18 35 00
18 40 33	1223+395	13 13 57	73.9	214.9	0.8		26.3	1	2342	18 40 33
18 42 33	---	13 15 57	73.7	216.2	0.8		27.2	120	2357	18 40 34
18 42 57	J1230+41	13 16 21	76.2	217.8	0.7		29.4	1	2357	18 42 57
18 48 07	---	13 21 32	75.7	221.2	0.8		31.9	310	2397	18 42 58
18 48 34	1223+395	13 21 59	73.1	219.8	0.9		29.7	3	2397	18 48 34
18 50 34	---	13 23 59	72.9	220.9	1.0		30.5	120	2412	18 48 35

Schedule for TORUN (Code Tr) Page 8

EVN-18CM-J1230+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
--- Thu 11 Jun 2015 Day 162 ---										
18 50 59	J1230+41	13 24 25	75.4	223.0	0.9		33.2	2	2412	18 50 59
18 56 09	---	13 29 36	74.9	226.1	1.0		35.4	310	2452	18 51 00
18 56 32	1223+395	13 29 59	72.3	224.3	1.1		32.7	0	2452	18 56 32
18 58 32	---	13 31 59	72.1	225.3	1.1		33.4	120	2467	18 56 33
18 58 55	J1230+41	13 32 22	74.6	227.7	1.0		36.4	0	2467	18 58 55
19 04 05	---	13 37 33	74.0	230.6	1.1		38.3	310	2507	18 58 56
19 04 29	1223+395	13 37 57	71.5	228.4	1.2		35.4	0	2507	19 04 29
19 06 29	---	13 39 57	71.2	229.4	1.2		36.0	120	2522	19 04 30
19 06 52	J1230+41	13 40 20	73.7	232.0	1.1		39.3	0	2522	19 06 52
19 12 02	---	13 45 31	73.0	234.6	1.2		40.9	310	2562	19 06 53
19 12 24	1223+395	13 45 53	70.6	232.2	1.3		37.7	-1	2562	19 12 24
19 14 24	---	13 47 53	70.3	233.1	1.4		38.3	119	2578	19 12 25
19 14 46	J1230+41	13 48 16	72.7	235.9	1.3		41.7	-1	2578	19 14 46
19 19 56	---	13 53 27	72.0	238.3	1.4		43.1	309	2617	19 14 47
19 20 19	1223+395	13 53 50	69.6	235.7	1.5		39.8	0	2617	19 20 19
19 22 19	---	13 55 50	69.3	236.5	1.5		40.2	120	2633	19 20 20
19 22 42	J1230+41	13 56 13	71.7	239.5	1.4		43.8	0	2633	19 22 42
19 27 52	---	14 01 24	71.0	241.7	1.5		45.0	310	2672	19 22 43
19 28 13	1223+395	14 01 45	68.6	239.0	1.6		41.6	-1	2672	19 28 13
19 30 13	---	14 03 46	68.3	239.8	1.6		42.0	119	2688	19 28 14
19 30 35	J1230+41	14 04 07	70.6	242.8	1.5		45.5	-1	2688	19 30 35
19 35 45	---	14 09 18	70.0	244.8	1.6		46.6	309	2728	19 30 36
19 36 08	1223+395	14 09 41	67.6	242.0	1.7		43.1	0	2728	19 36 08
19 38 08	---	14 11 41	67.3	242.7	1.8		43.5	120	2743	19 36 09
19 38 30	J1230+41	14 12 04	69.6	245.8	1.7		47.1	0	2743	19 38 30
19 43 40	---	14 17 15	68.9	247.6	1.8		47.9	310	2783	19 38 31
19 44 01	1223+395	14 17 36	66.5	244.8	1.8		44.5	-2	2783	19 44 01
19 46 01	---	14 19 36	66.2	245.5	1.9		44.8	118	2798	19 44 02
19 46 22	J1230+41	14 19 57	68.5	248.6	1.8		48.3	-1	2798	19 46 22
19 51 32	---	14 25 08	67.8	250.3	1.9		49.1	309	2838	19 46 23

Schedule for TORUN (Code Tr) Page 9

EVN-18CM-J1230+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
--- Thu 11 Jun 2015 Day 162 ---										
19 51 55	1223+395	14 25 31	65.4	247.5	2.0		45.7	0	2838	19 51 55
19 53 55	---	14 27 31	65.1	248.1	2.0		46.0	120	2853	19 51 56
19 54 17	J1230+41	14 27 53	67.4	251.2	1.9		49.4	0	2853	19 54 17
19 59 27	---	14 33 04	66.6	252.8	2.0		50.0	310	2893	19 54 18
19 59 48	1223+395	14 33 25	64.3	250.0	2.1		46.7	-2	2893	19 59 48
20 01 48	---	14 35 26	64.0	250.6	2.1		46.9	118	2908	19 59 49
20 02 09	J1230+41	14 35 47	66.2	253.6	2.1		50.3	-1	2908	20 02 09
20 07 19	---	14 40 57	65.5	255.1	2.2		50.8	309	2948	20 02 10
20 07 42	1223+395	14 41 20	63.2	252.4	2.2		47.6	0	2948	20 07 42
20 09 42	---	14 43 20	62.9	252.9	2.3		47.8	120	2963	20 07 43
20 10 04	J1230+41	14 43 43	65.1	255.9	2.2		51.1	0	2963	20 10 04
20 15 14	---	14 48 53	64.3	257.3	2.3		51.5	310	3003	20 10 05
20 15 35	1223+395	14 49 15	62.0	254.6	2.4		48.3	-1	3003	20 15 35
20 17 35	---	14 51 15	61.7	255.1	2.4		48.5	119	3019	20 15 36
20 17 56	J1230+41	14 51 36	63.9	258.0	2.3		51.7	-1	3019	20 17 56
20 23 06	---	14 56 47	63.2	259.3	2.4		52.1	309	3058	20 17 57
20 23 28	1223+395	14 57 09	60.9	256.7	2.5		48.9	0	3058	20 23 28
20 25 28	---	14 59 10	60.6	257.2	2.5		49.0	120	3074	20 23 29
20 25 50	J1230+41	14 59 32	62.8	260.0	2.5		52.2	0	3074	20 25 50
20 31 00	---	15 04 43	62.0	261.3	2.6		52.5	310	3113	20 25 51
20 31 21	1223+395	15 05 04	59.7	258.7	2.6		49.4	-1	3113	20 31 21
20 33 21	---	15 07 04	59.4	259.2	2.7		49.5	119	3129	20 31 22
20 33 42	J1230+41	15 07 25	61.6	262.0	2.6		52.6	-1	3129	20 33 42
20 38 52	---	15 12 36	60.8	263.2	2.7		52.8	309	3169	20 33 43
20 39 15	1223+395	15 12 58	58.6	260.7	2.8		49.8	0	3169	20 39 15
20 41 15	---	15 14 59	58.3	261.2	2.8		49.9	120	3184	20 39 16
20 41 37	J1230+41	15 15 21	60.4	263.8	2.7		52.9	0	3184	20 41 37
20 46 47	---	15 20 31	59.6	265.0	2.8		53.1	310	3224	20 41 38
20 47 08	1223+395	15 20 53	57.4	262.5	2.9		50.2	-1	3224	20 47 08
20 49 08	---	15 22 53	57.1	263.0	2.9		50.2	119	3239	20 47 09

Schedule for TORUN (Code Tr) Page 10

EVN-18CM-J1230+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	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
--- Thu 11 Jun 2015 Day 162 ---										
20 49 29	J1230+41	15 23 14	59.2	265.6	2.9		53.1	-1	3239	20 49 29
20 54 39	---	15 28 25	58.5	266.7	3.0		53.2	309	3279	20 49 30
20 55 01	1223+395	15 28 47	56.2	264.3	3.0		50.4	0	3279	20 55 01
20 57 01	---	15 30 47	55.9	264.8	3.1		50.5	120	3294	20 55 02
20 57 23	J1230+41	15 31 09	58.0	267.3	3.0		53.3	0	3294	20 57 23
21 02 33	---	15 36 20	57.3	268.4	3.1		53.3	310	3334	20 57 24
21 02 54	1223+395	15 36 41	55.0	266.0	3.2		50.6	-1	3334	21 02 54
21 04 54	---	15 38 42	54.7	266.5	3.2		50.6	119	3349	21 02 55
21 05 15	J1230+41	15 39 03	56.9	268.9	3.1		53.4	-1	3349	21 05 15
21 10 25	---	15 44 14	56.1	270.0	3.2		53.4	309	3389	21 05 16
21 10 47	1223+395	15 44 36	53.8	267.7	3.3		50.7	0	3389	21 10 47
21 12 47	---	15 46 36	53.5	268.1	3.3		50.7	120	3404	21 10 48
21 13 09	J1230+41	15 46 58	55.7	270.5	3.3		53.4	0	3404	21 13 09
21 18 19	---	15 52 09	54.9	271.5	3.3		53.3	310	3444	21 13 10
21 18 40	1223+395	15 52 30	52.7	269.3	3.4		50.7	-1	3444	21 18 40
21 20 40	---	15 54 31	52.3	269.7	3.5		50.8	119	3460	21 18 41
21 21 01	J1230+41	15 54 52	54.5	272.1	3.4		53.3	-1	3460	21 21 01
21 26 11	---	16 00 02	53.7	273.0	3.5		53.3	309	3499	21 21 02
21 26 34	1223+395	16 00 25	51.5	270.9	3.6		50.7	0	3499	21 26 34
21 28 34	---	16 02 25	51.2	271.3	3.6		50.7	120	3515	21 26 35
21 28 55	J1230+41	16 02 47	53.3	273.6	3.5		53.2	0	3515	21 28 55
21 34 05	---	16 07 58	52.5	274.5	3.6		53.1	310	3554	21 28 56
21 34 27	1223+395	16 08 19	50.3	272.5	3.7		50.7	-1	3554	21 34 27
21 36 27	---	16 10 19	50.0	272.8	3.7		50.7	119	3570	21 34 28
21 36 48	J1230+41	16 10 40	52.1	275.0	3.7		53.1	-1	3570	21 36 48
21 41 58	---	16 15 51	51.3	276.0	3.7		53.0	309	3610	21 36 49
21 42 20	1223+395	16 16 14	49.1	274.0	3.8		50.6	0	3610	21 42 20
21 44 20	---	16 18 14	48.8	274.3	3.9		50.6	120	3625	21 42 21
21 44 42	J1230+41	16 18 36	50.9	276.5	3.8		52.9	0	3625	21 44 42
21 49 52	---	16 23 47	50.2	277.4	3.9		52.7	310	3665	21 44 43

Schedule for TORUN (Code Tr) Page 11

EVN-18CM-J1230+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
--- Thu 11 Jun 2015 Day 162 ---										
21 50 13	1223+395	16 24 08	47.9	275.4	4.0		50.4	-1	3665	21 50 13
21 52 13	---	16 26 08	47.6	275.8	4.0		50.4	119	3680	21 50 14
21 52 34	J1230+41	16 26 29	49.8	277.9	3.9		52.7	-1	3680	21 52 34
21 57 44	---	16 31 40	49.0	278.8	4.0		52.5	309	3720	21 52 35
21 58 06	1223+395	16 32 03	46.7	276.9	4.1		50.3	0	3720	21 58 06
22 00 06	---	16 34 03	46.4	277.2	4.1		50.2	120	3735	21 58 07
22 00 28	J1230+41	16 34 25	48.6	279.2	4.1		52.4	0	3735	22 00 28
22 05 38	---	16 39 36	47.8	280.1	4.1		52.2	310	3775	22 00 29
22 05 59	1223+395	16 39 57	45.6	278.3	4.2		50.0	-1	3775	22 05 59
22 07 59	---	16 41 57	45.3	278.6	4.3		50.0	119	3790	22 06 00
22 08 20	J1230+41	16 42 18	47.4	280.6	4.2		52.1	-1	3790	22 08 20
22 13 30	---	16 47 29	46.7	281.5	4.3		51.9	309	3830	22 08 21
22 13 53	1223+395	16 47 52	44.4	279.7	4.4		49.8	0	3830	22 13 53
22 15 53	---	16 49 52	44.1	280.0	4.4		49.7	120	3845	22 13 54
22 16 15	J1230+41	16 50 14	46.3	281.9	4.3		51.7	0	3845	22 16 15
22 21 25	---	16 55 25	45.5	282.8	4.4		51.5	310	3885	22 16 16
22 21 46	1223+395	16 55 46	43.2	281.1	4.5		49.5	-1	3885	22 21 46
22 23 46	---	16 57 46	42.9	281.4	4.5		49.4	119	3901	22 21 47
22 24 07	J1230+41	16 58 07	45.1	283.2	4.4		51.4	-1	3901	22 24 07
22 29 17	---	17 03 18	44.3	284.1	4.5		51.1	309	3940	22 24 08
22 29 39	1223+395	17 03 41	42.0	282.4	4.6		49.1	0	3940	22 29 39
22 31 39	---	17 05 41	41.8	282.8	4.7		49.0	120	3956	22 29 40
22 32 01	J1230+41	17 06 03	43.9	284.5	4.6		51.0	0	3956	22 32 01
22 37 11	---	17 11 14	43.2	285.4	4.7		50.7	310	3995	22 32 02
22 37 32	1223+395	17 11 35	40.9	283.8	4.7		48.8	-1	3995	22 37 32
22 39 32	---	17 13 35	40.6	284.1	4.8		48.7	119	4011	22 37 33
22 39 53	J1230+41	17 13 57	42.8	285.8	4.7		50.5	-1	4011	22 39 53
22 45 03	---	17 19 07	42.1	286.7	4.8		50.2	309	4051	22 39 54
22 45 26	1223+395	17 19 30	39.7	285.1	4.9		48.4	0	4051	22 45 26
22 47 26	---	17 21 30	39.5	285.4	4.9		48.3	120	4066	22 45 27

Schedule for TORUN (Code Tr) Page 12

EVN-18CM-J1230+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
--- Thu 11 Jun 2015 Day 162 ---										
22 47 48	J1230+41	17 21 52	41.7	287.1	4.8		50.1	0	4066	22 47 48
22 52 58	---	17 27 03	40.9	287.9	4.9		49.8	310	4106	22 47 49
22 53 19	1223+395	17 27 24	38.6	286.4	5.0		48.0	-2	4106	22 53 19
22 55 19	---	17 29 25	38.3	286.7	5.0		47.9	118	4121	22 53 20
22 55 40	J1230+41	17 29 46	40.5	288.4	5.0		49.6	-1	4121	22 55 40
23 00 50	---	17 34 57	39.8	289.2	5.1		49.3	309	4161	22 55 41
23 01 12	1223+395	17 35 19	37.5	287.7	5.1		47.5	0	4161	23 01 12
23 03 12	---	17 37 20	37.2	288.1	5.2		47.4	120	4176	23 01 13
23 03 35	J1230+41	17 37 42	39.4	289.6	5.1		49.1	0	4176	23 03 35
23 08 45	---	17 42 53	38.7	290.4	5.2		48.8	310	4216	23 03 36
23 09 06	1223+395	17 43 14	36.3	289.0	5.3		47.1	-2	4216	23 09 06
23 11 06	---	17 45 14	36.1	289.3	5.3		46.9	118	4231	23 09 07
23 11 27	J1230+41	17 45 35	38.3	290.9	5.2		48.6	-1	4231	23 11 27
23 16 37	---	17 50 46	37.6	291.7	5.3		48.2	309	4271	23 11 28
23 16 59	1223+395	17 51 09	35.2	290.3	5.4		46.6	0	4271	23 16 59
23 18 59	---	17 53 09	34.9	290.6	5.4		46.4	120	4287	23 17 00
23 19 22	J1230+41	17 53 32	37.2	292.1	5.4		48.0	0	4287	23 19 22
23 24 32	---	17 58 42	36.5	292.9	5.5		47.7	310	4326	23 19 23
23 24 53	1223+395	17 59 03	34.1	291.6	5.5		46.1	-2	4326	23 24 53
23 26 53	---	18 01 04	33.8	291.9	5.6		45.9	118	4342	23 24 54
23 27 14	J1230+41	18 01 25	36.1	293.4	5.5		47.5	-1	4342	23 27 14
23 32 24	---	18 06 36	35.4	294.2	5.6		47.1	309	4381	23 27 15
23 32 47	1223+395	18 06 59	33.0	292.9	5.7		45.5	0	4381	23 32 47
23 34 47	---	18 08 59	32.7	293.2	5.7		45.4	120	4397	23 32 48
23 35 09	J1230+41	18 09 21	35.0	294.6	5.6		46.9	0	4397	23 35 09
23 40 19	---	18 14 32	34.3	295.4	5.7		46.5	310	4437	23 35 10
23 40 40	1223+395	18 14 53	31.9	294.2	5.8		45.0	-2	4437	23 40 40
23 42 40	---	18 16 54	31.6	294.5	5.8		44.8	118	4452	23 40 41
23 43 01	J1230+41	18 17 15	33.9	295.8	5.8		46.2	-1	4452	23 43 01
23 48 11	---	18 22 26	33.2	296.6	5.9		45.8	309	4492	23 43 02

Schedule for TORUN (Code Tr) Page 13

EVN-18CM-J1230+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
--- Thu 11 Jun 2015 Day 162 ---										
23 48 34	1223+395	18 22 48	30.8	295.4	5.9		44.4	0	4492	23 48 34
23 50 34	---	18 24 49	30.6	295.8	6.0		44.2	120	4507	23 48 35
23 50 56	J1230+41	18 25 11	32.9	297.1	5.9		45.6	0	4507	23 50 56
23 56 06	---	18 30 22	32.2	297.9	6.0		45.2	310	4547	23 50 57
23 56 27	1223+395	18 30 43	29.8	296.7	6.1		43.8	-2	4547	23 56 27
23 58 27	---	18 32 44	29.5	297.0	6.1		43.6	118	4562	23 56 28
--- Start: Thu 11 Jun 2015 Day 162 -- Stop: Fri 12 Jun 2015 Day 163 ---										
23 58 48	J1230+41	18 33 05	31.8	298.3	6.0		45.0	-2	4562	23 58 48
00 03 58	---	18 38 15	31.1	299.1	6.1		44.5	308	4602	23 58 49
00 04 21	1223+395	18 38 38	28.7	298.0	6.2		43.1	0	4602	00 04 21
00 06 21	---	18 40 39	28.5	298.3	6.2		43.0	120	4617	00 04 22
00 06 44	J1230+41	18 41 01	30.8	299.5	6.2		44.3	0	4617	00 06 44
00 11 54	---	18 46 12	30.1	300.3	6.2		43.8	310	4657	00 06 45
00 12 15	1223+395	18 46 33	27.7	299.3	6.3		42.5	-2	4657	00 12 15
00 14 15	---	18 48 34	27.4	299.6	6.4		42.3	118	4672	00 12 16
00 14 36	J1230+41	18 48 55	29.7	300.8	6.3		43.6	-2	4672	00 14 36
00 19 46	---	18 54 06	29.1	301.6	6.4		43.1	308	4712	00 14 37
00 20 09	1223+395	18 54 29	26.6	300.6	6.5		41.8	0	4712	00 20 09
00 22 09	---	18 56 29	26.4	300.9	6.5		41.7	120	4728	00 20 10
00 22 32	J1230+41	18 56 52	28.7	302.0	6.4		42.9	0	4728	00 22 32
00 27 42	---	19 02 03	28.1	302.8	6.5		42.4	310	4767	00 22 33
00 28 03	1223+395	19 02 24	25.6	301.8	6.6		41.1	-2	4767	00 28 03
00 30 03	---	19 04 24	25.4	302.2	6.6		41.0	118	4783	00 28 04

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

======== Setup file: sess215.L1024

Setup group: 9 Station: TORUN Total bit rate: 1024
Format: MARK5B 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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* J1230+41          12 28 10.110249   * 12 30 36.240000     12 31 21.296065       0.00
                    41 55 11.68551    * 41 38 38.03000      41 33 43.85479        0.00

* 4C39.25           09 23 55.319215   * 09 27 03.013936     09 27 59.675302       0.30
  J0927+3902        39 15 23.56645    * 39 02 20.85186      38 58 20.95804        0.16
  0923+392          /Users/mmezcua/sched_11.4/catalogs/sources.gsfc
  J0927+39          GSFC 2015a astro solution, unpublished 245753 observations.

* 1223+395          12 23 22.683483   * 12 25 50.569078     12 26 36.165978       0.20
  J1225+3914        39 30 58.80672    * 39 14 22.68652      39 09 26.93194        0.28
                    /Users/mmezcua/sched_11.4/catalogs/sources.gsfc
                    GSFC 2015a astro solution, unpublished    134 observations.
```

eh028ctr

Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

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Observing mode:
Schedule for TORUN (Code Tr) Page 2
Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
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 12 Jun 2015 Day 163 ---

Start UT	Source	Start / Stop						Early	Disk	TPStart			
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC			
Next scan frequencies:		1609.49	1609.49	1609.49	1609.49	1613.49	1613.49	1613.49	1613.49				
		1617.49	1617.49	1617.49	1617.49	1621.49	1621.49	1621.49	1621.49				
Next BBC frequencies:		690.51	690.51	690.51	690.51	686.51	686.51	686.51	686.51				
		682.51	682.51	682.51	682.51	678.51	678.51	678.51	678.51				
Next scan bandwidths:		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				
03 30 00	3C84	22 04 51	38.0	68.9	-5.3		-48.5	0	0	03 30 00			
03 35 00	---	22 09 52	38.8	69.6	-5.2		-48.8	300	5	03 30 01			
03 37 52	J0322+6610	22 12 44	51.5	39.3	-5.2		-70.7	96	5	03 37 52			
03 39 22	---	22 14 14	51.7	39.4	-5.2		-70.9	90	6	03 37 53			
03 39 22	OH138.0+7.2	22 14 14	51.2	40.2	-5.2		-69.7	-13	6	No stop			
03 42 52	---	22 17 45	51.6	40.4	-5.1		-70.3	197	10	03 39 23			
03 43 22	J0333+6536	22 18 15	50.8	39.8	-5.3		-68.9	15	10	03 43 22			
03 44 52	---	22 19 45	50.9	39.9	-5.3		-69.2	90	11	03 43 23			
03 44 52	OH138.0+7.2	22 19 45	51.7	40.5	-5.1		-70.7	-16	11	No stop			
03 48 22	---	22 23 16	52.1	40.7	-5.1		-71.3	194	14	03 44 53			
03 48 22	J0322+6610	22 23 16	52.5	39.9	-5.0		-72.6	-13	14	No stop			
03 49 52	---	22 24 46	52.7	39.9	-5.0		-72.9	77	16	03 48 23			
03 49 52	OH138.0+7.2	22 24 46	52.2	40.8	-5.0		-71.6	-13	16	No stop			
03 53 22	---	22 28 17	52.6	41.0	-5.0		-72.3	197	19	03 49 53			
03 53 52	J0333+6536	22 28 47	51.8	40.4	-5.1		-70.8	15	19	03 53 52			
03 55 22	---	22 30 17	51.9	40.5	-5.1		-71.1	90	21	03 53 53			
03 55 22	OH138.0+7.2	22 30 17	52.8	41.1	-4.9		-72.7	-16	21	No stop			
03 58 52	---	22 33 47	53.1	41.3	-4.9		-73.3	194	24	03 55 23			
03 58 52	J0322+6610	22 33 47	53.6	40.3	-4.8		-74.7	-13	24	No stop			
04 00 22	---	22 35 18	53.7	40.4	-4.8		-74.9	77	25	03 58 53			
04 00 22	OH138.0+7.2	22 35 18	53.3	41.3	-4.9		-73.6	-14	25	No stop			
04 03 52	---	22 38 48	53.6	41.5	-4.8		-74.3	196	29	04 00 23			
04 04 22	J0333+6536	22 39 18	52.8	41.0	-4.9		-72.8	14	29	04 04 22			
04 05 52	---	22 40 49	53.0	41.0	-4.9		-73.1	90	30	04 04 23			

Schedule for TORUN (Code Tr) Page 3

Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
04 05 52	OH138.0+7.2	22 40 49	53.8	41.6	-4.8		-74.6	-16	30	No stop
04 09 22	---	22 44 19	54.2	41.7	-4.7		-75.3	194	34	04 05 53
04 09 22	J0322+6610	22 44 19	54.6	40.8	-4.7		-76.7	-14	34	No stop
04 10 52	---	22 45 49	54.7	40.9	-4.6		-77.0	76	35	04 09 23
04 10 52	OH138.0+7.2	22 45 49	54.3	41.8	-4.7		-75.6	-14	35	No stop
04 14 22	---	22 49 20	54.7	42.0	-4.6		-76.3	196	38	04 10 53
04 14 52	J0333+6536	22 49 50	53.9	41.5	-4.8		-74.8	14	38	04 14 52
04 16 22	---	22 51 20	54.0	41.5	-4.7		-75.1	90	40	04 14 53
04 16 22	OH138.0+7.2	22 51 20	54.9	42.1	-4.6		-76.7	-16	40	No stop
04 19 52	---	22 54 51	55.2	42.2	-4.5		-77.3	194	43	04 16 23
04 19 52	J0322+6610	22 54 51	55.6	41.2	-4.5		-78.8	-14	43	No stop
04 21 22	---	22 56 21	55.8	41.2	-4.5		-79.1	76	45	04 19 53
04 21 22	OH138.0+7.2	22 56 21	55.4	42.3	-4.5		-77.6	-14	45	No stop
04 24 52	---	22 59 52	55.7	42.4	-4.4		-78.3	196	48	04 21 23
04 25 22	J0333+6536	23 00 22	54.9	41.9	-4.6		-76.8	14	48	04 25 22
04 26 52	---	23 01 52	55.1	42.0	-4.6		-77.1	90	50	04 25 23
04 26 52	OH138.0+7.2	23 01 52	55.9	42.5	-4.4		-78.7	-16	50	No stop
04 30 22	---	23 05 23	56.3	42.6	-4.4		-79.4	194	53	04 26 53
04 30 22	J0322+6610	23 05 23	56.7	41.5	-4.3		-80.9	-14	53	No stop
04 31 52	---	23 06 53	56.8	41.6	-4.3		-81.2	76	54	04 30 23
04 31 52	OH138.0+7.2	23 06 53	56.4	42.6	-4.3		-79.7	-14	54	No stop
04 35 22	---	23 10 23	56.8	42.7	-4.3		-80.4	196	58	04 31 53
04 35 52	J0333+6536	23 10 53	56.0	42.3	-4.4		-78.9	14	58	04 35 52
04 37 22	---	23 12 24	56.1	42.4	-4.4		-79.2	90	59	04 35 53
04 37 22	OH138.0+7.2	23 12 24	57.0	42.8	-4.2		-80.8	-16	59	No stop
04 40 52	---	23 15 54	57.4	42.9	-4.2		-81.5	194	62	04 37 23
04 40 52	J0322+6610	23 15 54	57.7	41.8	-4.1		-83.1	-14	62	No stop
04 42 22	---	23 17 25	57.9	41.8	-4.1		-83.4	76	64	04 40 53
04 42 22	OH138.0+7.2	23 17 25	57.5	43.0	-4.2		-81.8	-14	64	No stop
04 45 52	---	23 20 55	57.9	43.0	-4.1		-82.6	196	67	04 42 23
04 46 22	J0333+6536	23 21 25	57.0	42.7	-4.2		-81.0	14	67	04 46 22
04 47 52	---	23 22 55	57.2	42.7	-4.2		-81.3	90	69	04 46 23

Schedule for TORUN (Code Tr) Page 4

Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
04 47 52	OH138.0+7.2	23 22 55	58.1	43.1	-4.1		-83.0	-16	69	No stop
04 51 22	---	23 26 26	58.4	43.2	-4.0		-83.7	194	72	04 47 53
04 51 22	J0322+6610	23 26 26	58.8	42.0	-4.0		-85.3	-15	72	No stop
04 52 52	---	23 27 56	58.9	42.0	-3.9		-85.7	75	74	04 51 23
04 52 52	OH138.0+7.2	23 27 56	58.6	43.2	-4.0		-84.0	-15	74	No stop
04 56 22	---	23 31 27	59.0	43.3	-3.9		-84.8	195	77	04 52 53
04 56 52	J0333+6536	23 31 57	58.1	43.0	-4.1		-83.2	14	77	04 56 52
04 58 22	---	23 33 27	58.3	43.0	-4.0		-83.5	90	78	04 56 53
04 58 22	OH138.0+7.2	23 33 27	59.2	43.3	-3.9		-85.2	-16	78	No stop
05 01 52	---	23 36 58	59.5	43.4	-3.8		-85.9	194	82	04 58 23
05 01 52	J0322+6610	23 36 58	59.8	42.1	-3.8		-87.6	-15	82	No stop
05 03 22	---	23 38 28	60.0	42.1	-3.8		-88.0	75	83	05 01 53
05 03 22	OH138.0+7.2	23 38 28	59.7	43.4	-3.8		-86.3	-15	83	No stop
05 06 52	---	23 41 59	60.0	43.4	-3.7		-87.0	195	87	05 03 23
05 07 22	J0333+6536	23 42 29	59.2	43.2	-3.9		-85.4	14	87	05 07 22
05 08 52	---	23 43 59	59.4	43.2	-3.9		-85.7	90	88	05 07 23
05 08 52	OH138.0+7.2	23 43 59	60.3	43.4	-3.7		-87.5	-16	88	No stop
05 12 22	---	23 47 29	60.6	43.5	-3.7		-88.3	194	91	05 08 53
05 12 22	J0322+6610	23 47 29	60.9	42.2	-3.6		-90.0	-15	91	No stop
05 13 52	---	23 49 00	61.1	42.2	-3.6		-90.3	75	93	05 12 23
05 13 52	OH138.0+7.2	23 49 00	60.8	43.5	-3.6		-88.6	-15	93	No stop
05 17 22	---	23 52 30	61.1	43.5	-3.6		-89.4	195	96	05 13 53
05 17 52	J0333+6536	23 53 00	60.3	43.3	-3.7		-87.7	14	96	05 17 52
05 19 22	---	23 54 31	60.4	43.3	-3.7		-88.0	90	98	05 17 53
05 19 22	OH138.0+7.2	23 54 31	61.3	43.5	-3.5		-89.8	-16	98	No stop
05 22 52	---	23 58 01	61.7	43.5	-3.5		-90.6	194	101	05 19 23
05 22 52	J0322+6610	23 58 01	62.0	42.1	-3.4		-92.4	-15	101	No stop
05 24 22	---	23 59 31	62.1	42.1	-3.4		-92.8	75	102	05 22 53
05 24 22	OH138.0+7.2	23 59 31	61.9	43.5	-3.4		-91.0	-16	102	No stop
05 27 52	---	00 03 02	62.2	43.5	-3.4		-91.8	194	106	05 24 23

Schedule for TORUN (Code Tr) Page 5

Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
05 28 22	J0333+6536	00 03 32	61.4	43.3	-3.5		-90.0	14	106	05 28 22
05 29 52	---	00 05 02	61.5	43.3	-3.5		-90.4	90	107	05 28 23
05 29 52	OH138.0+7.2	00 05 02	62.4	43.5	-3.4		-92.3	-16	107	No stop
05 33 22	---	00 08 33	62.8	43.4	-3.3		-93.1	194	111	05 29 53
05 33 22	J0322+6610	00 08 33	63.0	42.0	-3.3		-95.0	-16	111	No stop
05 34 52	---	00 10 03	63.2	41.9	-3.2		-95.4	74	112	05 33 23
05 34 52	OH138.0+7.2	00 10 03	62.9	43.4	-3.3		-93.5	-16	112	No stop
05 38 22	---	00 13 34	63.3	43.3	-3.2		-94.3	194	115	05 34 53
05 38 52	J0333+6536	00 14 04	62.4	43.3	-3.4		-92.5	14	115	05 38 52
05 40 22	---	00 15 34	62.6	43.3	-3.3		-92.8	90	117	05 38 53
05 40 22	OH138.0+7.2	00 15 34	63.5	43.3	-3.2		-94.8	-16	117	No stop
05 43 52	---	00 19 05	63.9	43.2	-3.1		-95.7	194	120	05 40 23
05 57 59	F0217+7349	00 33 14	66.6	18.1	-1.8		-137.8	785	120	05 57 59
06 02 59	---	00 38 15	66.8	17.4	-1.7		-139.6	300	125	05 58 00
06 04 21	J0322+6610	00 39 37	66.1	40.8	-2.7		-103.1	20	125	06 04 21
06 05 51	---	00 41 07	66.3	40.7	-2.7		-103.6	90	126	06 04 22
06 05 51	OH138.0+7.2	00 41 07	66.1	42.4	-2.8		-101.4	-17	126	No stop
06 09 21	---	00 44 38	66.5	42.3	-2.7		-102.4	193	130	06 05 52
06 09 51	J0333+6536	00 45 08	65.6	42.5	-2.8		-100.3	14	130	06 09 51
06 11 21	---	00 46 38	65.8	42.4	-2.8		-100.7	90	131	06 09 52
06 11 21	OH138.0+7.2	00 46 38	66.7	42.1	-2.7		-102.9	-16	131	No stop
06 14 51	---	00 50 09	67.0	41.9	-2.6		-103.9	194	135	06 11 22
06 14 51	J0322+6610	00 50 09	67.1	40.2	-2.6		-106.2	-17	135	No stop
06 16 21	---	00 51 39	67.3	40.0	-2.5		-106.6	73	136	06 14 52
06 16 21	OH138.0+7.2	00 51 39	67.2	41.8	-2.6		-104.4	-17	136	No stop
06 19 51	---	00 55 10	67.5	41.6	-2.5		-105.4	193	139	06 16 22
06 20 21	J0333+6536	00 55 40	66.7	41.9	-2.7		-103.2	14	139	06 20 21
06 21 51	---	00 57 10	66.8	41.8	-2.6		-103.6	90	141	06 20 22
06 21 51	OH138.0+7.2	00 57 10	67.7	41.4	-2.5		-106.0	-16	141	No stop
06 25 21	---	01 00 41	68.1	41.2	-2.4		-107.0	194	144	06 21 52

Schedule for TORUN (Code Tr) Page 6

Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
06 25 21	J0322+6610	01 00 41	68.1	39.3	-2.4		-109.4	-17	144	No stop
06 26 51	---	01 02 11	68.3	39.2	-2.4		-109.8	73	146	06 25 22
06 26 51	OH138.0+7.2	01 02 11	68.2	41.0	-2.4		-107.5	-17	146	No stop
06 30 21	---	01 05 42	68.6	40.7	-2.3		-108.6	193	149	06 26 52
06 30 51	J0333+6536	01 06 12	67.7	41.2	-2.5		-106.2	14	149	06 30 51
06 32 21	---	01 07 42	67.9	41.1	-2.5		-106.7	90	150	06 30 52
06 32 21	OH138.0+7.2	01 07 42	68.8	40.6	-2.3		-109.2	-16	150	No stop
06 35 51	---	01 11 12	69.1	40.2	-2.3		-110.3	194	154	06 32 22
06 35 51	J0322+6610	01 11 12	69.1	38.3	-2.2		-112.7	-18	154	No stop
06 37 21	---	01 12 43	69.3	38.1	-2.2		-113.2	72	155	06 35 52
06 37 21	OH138.0+7.2	01 12 43	69.3	40.1	-2.2		-110.8	-17	155	No stop
06 40 51	---	01 16 13	69.6	39.7	-2.2		-111.9	193	159	06 37 22
06 41 21	J0333+6536	01 16 43	68.8	40.3	-2.3		-109.4	14	159	06 41 21
06 42 51	---	01 18 14	68.9	40.2	-2.3		-109.9	90	160	06 41 22
06 42 51	OH138.0+7.2	01 18 14	69.8	39.5	-2.1		-112.6	-16	160	No stop
06 46 21	---	01 21 44	70.1	39.0	-2.1		-113.8	194	163	06 42 52
06 46 21	J0322+6610	01 21 44	70.1	37.0	-2.0		-116.3	-18	163	No stop
06 47 51	---	01 23 14	70.2	36.8	-2.0		-116.9	72	165	06 46 22
06 47 51	OH138.0+7.2	01 23 14	70.3	38.8	-2.1		-114.3	-18	165	No stop
06 51 21	---	01 26 45	70.6	38.4	-2.0		-115.6	192	168	06 47 52
06 51 51	J0333+6536	01 27 15	69.8	39.2	-2.1		-112.9	14	168	06 51 51
06 53 21	---	01 28 45	69.9	39.0	-2.1		-113.4	90	170	06 51 52
06 53 21	OH138.0+7.2	01 28 45	70.8	38.1	-2.0		-116.3	-16	170	No stop
06 56 51	---	01 32 16	71.1	37.6	-1.9		-117.5	194	173	06 53 22
06 56 51	J0322+6610	01 32 16	71.0	35.5	-1.9		-120.2	-18	173	No stop
06 58 21	---	01 33 46	71.2	35.2	-1.8		-120.7	72	175	06 56 52
06 58 21	OH138.0+7.2	01 33 46	71.2	37.4	-1.9		-118.1	-18	175	No stop
07 01 51	---	01 37 17	71.6	36.8	-1.8		-119.4	192	178	06 58 22
07 02 21	J0333+6536	01 37 47	70.8	37.9	-2.0		-116.5	15	178	07 02 21
07 03 51	---	01 39 17	70.9	37.7	-1.9		-117.1	90	179	07 02 22

Schedule for TORUN (Code Tr) Page 7

Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
07 03 51	OH138.0+7.2	01 39 17	71.7	36.5	-1.8		-120.2	-16	179	No stop
07 07 21	---	01 42 48	72.1	35.9	-1.7		-121.6	194	183	07 03 52
07 07 21	J0322+6610	01 42 48	71.9	33.7	-1.7		-124.3	-18	183	No stop
07 08 51	---	01 44 18	72.1	33.4	-1.7		-124.9	72	184	07 07 22
07 08 51	OH138.0+7.2	01 44 18	72.2	35.6	-1.7		-122.1	-18	184	No stop
07 12 21	---	01 47 48	72.5	35.0	-1.6		-123.6	192	187	07 08 52
07 12 51	J0333+6536	01 48 18	71.7	36.3	-1.8		-120.5	15	187	07 12 51
07 14 21	---	01 49 49	71.9	36.0	-1.8		-121.1	90	189	07 12 52
07 14 21	OH138.0+7.2	01 49 49	72.7	34.6	-1.6		-124.4	-16	189	No stop
07 17 51	---	01 53 19	73.0	33.9	-1.6		-125.9	194	192	07 14 22
07 17 51	J0322+6610	01 53 19	72.8	31.6	-1.5		-128.7	-19	192	No stop
07 19 21	---	01 54 50	72.9	31.3	-1.5		-129.3	71	194	07 17 52
07 19 21	OH138.0+7.2	01 54 50	73.1	33.6	-1.5		-126.5	-18	194	No stop
07 22 51	---	01 58 20	73.4	32.8	-1.5		-128.0	192	197	07 19 22
07 23 21	J0333+6536	01 58 50	72.6	34.4	-1.6		-124.7	14	197	07 23 21
07 24 51	---	02 00 20	72.8	34.1	-1.6		-125.3	90	199	07 23 22
07 24 51	OH138.0+7.2	02 00 20	73.5	32.4	-1.4		-128.9	-17	199	No stop
07 28 21	---	02 03 51	73.8	31.6	-1.4		-130.5	193	202	07 24 52
07 28 21	J0322+6610	02 03 51	73.6	29.2	-1.3		-133.4	-19	202	No stop
07 29 51	---	02 05 21	73.7	28.8	-1.3		-134.1	71	203	07 28 22
07 29 51	OH138.0+7.2	02 05 21	73.9	31.2	-1.4		-131.2	-19	203	No stop
07 33 21	---	02 08 52	74.2	30.3	-1.3		-132.9	191	207	07 29 52
07 33 51	J0333+6536	02 09 22	73.5	32.1	-1.4		-129.2	13	207	07 33 51
07 35 21	---	02 10 52	73.6	31.8	-1.4		-129.9	90	208	07 33 52
07 35 21	OH138.0+7.2	02 10 52	74.4	29.8	-1.3		-133.8	-18	208	No stop
07 38 51	---	02 14 23	74.6	28.8	-1.2		-135.5	192	212	07 35 22
07 38 51	J0322+6610	02 14 23	74.3	26.4	-1.2		-138.4	-19	212	No stop
07 40 21	---	02 15 53	74.4	26.0	-1.1		-139.2	71	213	07 38 52
07 40 21	OH138.0+7.2	02 15 53	74.7	28.4	-1.2		-136.3	-19	213	No stop
07 43 51	---	02 19 24	75.0	27.4	-1.1		-138.1	191	216	07 40 22

```
Schedule for TORUN     (Code Tr )                                  Page   8
              Parallax Measurement to 1.6GHz OH Masers in OH/IR star OH 138.0+7.4
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  12 Jun 2015   Day 163 ---

07 44 21  J0333+6536   02 19 54  74.3  29.5 -1.3    -134.1    12      216   07 44 21
07 45 51  ---          02 21 24  74.4  29.1 -1.2    -134.9    90      218   07 44 22

07 45 51  OH138.0+7.2  02 21 24  75.1  26.8 -1.1    -139.1   -19      218   No stop
07 49 21  ---          02 24 54  75.3  25.7 -1.0    -141.0   191      221   07 45 52

07 49 21  J0322+6610   02 24 54  75.0  23.3 -1.0    -143.9   -19      221   No stop
07 50 51  ---          02 26 25  75.1  22.8 -1.0    -144.7    71      223   07 49 22

07 50 51  OH138.0+7.2  02 26 25  75.4  25.2 -1.0    -141.8   -19      223   No stop
07 54 21  ---          02 29 55  75.7  24.1 -0.9    -143.7   191      226   07 50 52

07 54 51  J0333+6536   02 30 25  75.1  26.5 -1.1    -139.4    11      226   07 54 51
07 56 21  ---          02 31 56  75.2  26.1 -1.1    -140.2    90      227   07 54 52

07 56 21  OH138.0+7.2  02 31 56  75.8  23.4 -0.9    -144.8   -20      227   No stop
07 59 51  ---          02 35 26  76.0  22.1 -0.9    -146.8   190      231   07 56 22

07 59 51  J0322+6610   02 35 26  75.6  19.8 -0.8    -149.7   -19      231   No stop
08 01 21  ---          02 36 56  75.7  19.3 -0.8    -150.5    71      232   07 59 52

08 01 21  OH138.0+7.2  02 36 56  76.1  21.6 -0.8    -147.7   -18      232   No stop
08 04 51  ---          02 40 27  76.3  20.3 -0.8    -149.7   192      236   08 01 22

08 05 21  J0333+6536   02 40 57  75.7  23.1 -0.9    -145.1    10      236   08 05 21
08 06 51  ---          02 42 27  75.8  22.6 -0.9    -145.9    90      237   08 05 22

08 06 51  OH138.0+7.2  02 42 27  76.4  19.6 -0.7    -150.9   -21      237   No stop
08 10 21  ---          02 45 58  76.5  18.2 -0.7    -153.0   189      240   08 06 52

08 15 11  F0102+5824   02 50 49  74.1 -59.5  1.8      98.2   120      240   08 15 11
08 20 11  ---          02 55 50  73.5 -59.8  1.9      96.8   300      245   08 15 12



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


 ======== Setup file: sess215.L128

   Setup group:    9         Station: TORUN            Total bit rate:   128
   Format: MARK5B            Bits per sample: 2        Sample rate:  4.000
   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         5         1         5         2         6         2         6
                 3         7         3         7         4         8         4         8
 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  Based on FREQ, BW, and/or DOPPLER in schedule.  Used with PCAL = off
  LO sum=   1609.49  1609.49  1609.49  1609.49  1613.49  1613.49  1613.49  1613.49
            1617.49  1617.49  1617.49  1617.49  1621.49  1621.49  1621.49  1621.49
  BBC fr=    690.51   690.51   690.51   690.51   686.51   686.51   686.51   686.51
             682.51   682.51   682.51   682.51   678.51   678.51   678.51   678.51
  Bandwd=      2.00     2.00     2.00     2.00     2.00     2.00     2.00     2.00
               2.00     2.00     2.00     2.00     2.00     2.00     2.00     2.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 3C84              03 16 29.567270   * 03 19 48.160100     03 20 48.608926       0.00
                    41 19 51.91597    * 41 30 42.10310      41 33 45.72082        0.00
                    Doppler based on other sources.

* F0217+7349        02 12 49.921919   * 02 17 30.813400     02 18 57.427966       0.00
                    73 35 40.08567    * 73 49 32.62200      73 53 28.00823        0.00
                    Doppler based on other sources.

* F0102+5824        00 59 43.470991   * 01 02 45.762400     01 03 42.451428       0.00
                    58 08 04.84785    * 58 24 11.13700      58 28 50.50621        0.00
                    Doppler based on other sources.

* J0322+6610        03 17 57.999024   * 03 22 27.228812     03 23 49.170856       0.00
                    65 59 45.07766    * 66 10 28.30547      66 13 26.93139        0.00
                    Doppler based on other sources.

* J0333+6536        03 29 25.878099   * 03 33 56.737993     03 35 19.043511       0.00
                    65 26 52.21323    * 65 36 56.18412      65 39 43.05557        0.00
                    Doppler based on other sources.

* OH138.0+7.2       03 20 41.852264   * 03 25 08.800001     03 26 30.017184       0.00
                    65 21 32.90423    * 65 32 07.00001      65 35 02.94380        0.00
```

ep096ctr

ASASSN-14il binary AGN

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```
Observing mode: 1024 Mbps
Schedule for TORUN     (Code Tr )                                    Page   2
               ASASSN-14il binary AGN
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  12 Jun 2015   Day 163 ---
 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

13 30 00  J1159+2914   08 06 30  41.6  95.6 -3.9     -43.2     0        0   13 30 00
13 35 00  =1156+295    08 11 30  42.4  96.7 -3.8     -43.1   300       38   13 30 01

13 36 30  J1250+1621   08 13 01  25.2  96.4 -4.6     -38.4    12       38   13 36 30
13 38 00  =1247+166    08 14 31  25.4  96.7 -4.6     -38.4    90       50   13 36 31

13 38 00  ASASSN-14LI  08 14 31  26.8  96.1 -4.6     -38.8   -19       50   No stop
13 41 30  ---          08 18 01  27.4  96.9 -4.5     -38.7   191       77   13 38 01

13 41 30  J1250+1621   08 18 01  26.0  97.4 -4.5     -38.3   -18       77   No stop
13 43 00  =1247+166    08 19 32  26.2  97.8 -4.5     -38.3    72       88   13 41 31

13 43 00  ASASSN-14LI  08 19 32  27.6  97.2 -4.5     -38.7   -19       88   No stop
13 46 30  ---          08 23 02  28.1  97.9 -4.4     -38.6   191      115   13 43 01

13 47 10  J1250+1621   08 23 42  26.8  98.6 -4.5     -38.2    22      115   13 47 10
13 48 30  =1247+166    08 25 03  27.0  98.9 -4.4     -38.2    80      126   13 47 11

13 48 30  ASASSN-14LI  08 25 03  28.4  98.3 -4.4     -38.6   -19      126   No stop
13 52 00  ---          08 28 33  28.9  99.1 -4.3     -38.5   191      153   13 48 31

13 52 00  J1250+1621   08 28 33  27.5  99.7 -4.4     -38.1   -18      153   No stop
13 53 30  =1247+166    08 30 03  27.8 100.0 -4.3     -38.0    72      164   13 52 01

13 53 30  ASASSN-14LI  08 30 03  29.2  99.4 -4.3     -38.5   -19      164   No stop
13 57 00  ---          08 33 34  29.7 100.1 -4.3     -38.3   191      191   13 53 31

13 57 40  J1250+1621   08 34 14  28.4 100.9 -4.3     -37.9    22      191   13 57 40
13 59 00  =1247+166    08 35 34  28.6 101.2 -4.3     -37.9    80      201   13 57 41

13 59 00  ASASSN-14LI  08 35 34  30.0 100.6 -4.2     -38.3   -19      201   No stop
14 02 30  ---          08 39 05  30.5 101.3 -4.2     -38.2   191      228   13 59 01

14 02 30  J1250+1621   08 39 05  29.1 101.9 -4.2     -37.7   -18      228   No stop
14 04 00  =1247+166    08 40 35  29.3 102.3 -4.2     -37.7    72      240   14 02 31
```

Schedule for TORUN (Code Tr) Page 3

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
14 04 00	ASASSN-14LI	08 40 35	30.7	101.7	-4.1		-38.1	-19	240	No stop
14 07 30	---	08 44 06	31.2	102.4	-4.1		-38.0	191	267	14 04 01
14 08 10	J1250+1621	08 44 46	29.9	103.2	-4.1		-37.5	21	267	14 08 10
14 09 30	=1247+166	08 46 06	30.1	103.5	-4.1		-37.5	80	277	14 08 11
14 09 30	ASASSN-14LI	08 46 06	31.5	102.9	-4.0		-37.9	-19	277	No stop
14 13 00	---	08 49 37	32.0	103.7	-4.0		-37.8	191	304	14 09 31
14 13 00	J1250+1621	08 49 37	30.6	104.2	-4.0		-37.3	-19	304	No stop
14 14 30	=1247+166	08 51 07	30.8	104.6	-4.0		-37.3	71	315	14 13 01
14 14 30	ASASSN-14LI	08 51 07	32.2	104.0	-4.0		-37.7	-19	315	No stop
14 18 00	---	08 54 37	32.8	104.8	-3.9		-37.6	191	342	14 14 31
14 18 40	J1250+1621	08 55 18	31.4	105.5	-3.9		-37.1	21	342	14 18 40
14 20 00	=1247+166	08 56 38	31.6	105.8	-3.9		-37.0	80	353	14 18 41
14 20 00	ASASSN-14LI	08 56 38	33.0	105.2	-3.9		-37.5	-19	353	No stop
14 23 30	---	09 00 08	33.6	106.0	-3.8		-37.3	191	379	14 20 01
14 23 30	J1250+1621	09 00 08	32.1	106.6	-3.8		-36.8	-19	379	No stop
14 25 00	=1247+166	09 01 39	32.4	106.9	-3.8		-36.8	71	391	14 23 31
14 25 00	ASASSN-14LI	09 01 39	33.8	106.4	-3.8		-37.2	-19	391	No stop
14 28 30	---	09 05 09	34.3	107.2	-3.7		-37.0	191	418	14 25 01
14 29 10	J1250+1621	09 05 49	33.0	107.9	-3.8		-36.5	21	418	14 29 10
14 30 30	=1247+166	09 07 09	33.2	108.2	-3.7		-36.5	80	428	14 29 11
14 30 30	ASASSN-14LI	09 07 09	34.6	107.6	-3.7		-36.9	-19	428	No stop
14 34 00	---	09 10 40	35.1	108.4	-3.6		-36.7	191	455	14 30 31
14 34 00	J1250+1621	09 10 40	33.7	109.0	-3.7		-36.3	-19	455	No stop
14 35 30	=1247+166	09 12 10	33.9	109.4	-3.6		-36.2	71	467	14 34 01
14 35 30	ASASSN-14LI	09 12 10	35.3	108.8	-3.6		-36.6	-19	467	No stop
14 39 00	---	09 15 41	35.8	109.6	-3.6		-36.4	191	494	14 35 31
14 39 40	J1250+1621	09 16 21	34.5	110.4	-3.6		-35.9	21	494	14 39 40
14 41 00	=1247+166	09 17 41	34.6	110.7	-3.6		-35.8	80	504	14 39 41
14 41 00	ASASSN-14LI	09 17 41	36.1	110.1	-3.5		-36.3	-19	504	No stop
14 44 30	---	09 21 12	36.6	110.9	-3.5		-36.1	191	531	14 41 01
14 44 30	J1250+1621	09 21 12	35.1	111.5	-3.5		-35.6	-19	531	No stop
14 46 00	=1247+166	09 22 42	35.3	111.9	-3.5		-35.5	71	542	14 44 31

Schedule for TORUN (Code Tr) Page 4

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
14 46 00	ASASSN-14LI	09 22 42	36.8	111.3	-3.4		-36.0	-19	542	No stop
14 49 30	---	09 26 13	37.3	112.1	-3.4		-35.7	191	569	14 46 01
14 50 10	J1250+1621	09 26 53	35.9	112.9	-3.4		-35.2	21	569	14 50 10
14 51 30	=1247+166	09 28 13	36.1	113.2	-3.4		-35.1	80	579	14 50 11
14 51 30	ASASSN-14LI	09 28 13	37.5	112.6	-3.3		-35.6	-19	579	No stop
14 55 00	---	09 31 44	38.0	113.5	-3.3		-35.3	191	606	14 51 31
14 55 00	J1250+1621	09 31 44	36.6	114.0	-3.3		-34.8	-19	606	No stop
14 56 30	=1247+166	09 33 14	36.8	114.4	-3.3		-34.7	71	618	14 55 01
14 56 30	ASASSN-14LI	09 33 14	38.2	113.9	-3.3		-35.2	-19	618	No stop
15 00 00	---	09 36 44	38.7	114.7	-3.2		-34.9	191	645	14 56 31
15 00 40	J1250+1621	09 37 24	37.4	115.5	-3.2		-34.4	21	645	15 00 40
15 02 00	=1247+166	09 38 45	37.5	115.8	-3.2		-34.3	80	655	15 00 41
15 02 00	ASASSN-14LI	09 38 45	39.0	115.2	-3.2		-34.8	-19	655	No stop
15 05 30	---	09 42 15	39.4	116.1	-3.1		-34.5	191	682	15 02 01
15 05 30	J1250+1621	09 42 15	38.0	116.7	-3.1		-34.0	-19	682	No stop
15 07 00	=1247+166	09 43 45	38.2	117.0	-3.1		-33.9	71	694	15 05 31
15 07 00	ASASSN-14LI	09 43 45	39.7	116.5	-3.1		-34.3	-19	694	No stop
15 10 30	---	09 47 16	40.1	117.4	-3.0		-34.0	191	721	15 07 01
15 11 10	J1250+1621	09 47 56	38.8	118.1	-3.0		-33.5	21	721	15 11 10
15 12 30	=1247+166	09 49 16	39.0	118.5	-3.0		-33.4	80	731	15 11 11
15 12 30	ASASSN-14LI	09 49 16	40.4	117.9	-3.0		-33.8	-19	731	No stop
15 16 00	---	09 52 47	40.9	118.8	-2.9		-33.5	191	758	15 12 31
15 16 00	J1250+1621	09 52 47	39.4	119.4	-3.0		-33.0	-19	758	No stop
15 17 30	=1247+166	09 54 17	39.6	119.8	-2.9		-32.9	71	769	15 16 01
15 17 30	ASASSN-14LI	09 54 17	41.0	119.2	-2.9		-33.4	-19	769	No stop
15 21 00	---	09 57 48	41.5	120.2	-2.9		-33.0	191	796	15 17 31
15 21 40	J1250+1621	09 58 28	40.2	120.9	-2.9		-32.5	21	796	15 21 40
15 23 00	=1247+166	09 59 48	40.3	121.2	-2.9		-32.3	80	806	15 21 41
15 23 00	ASASSN-14LI	09 59 48	41.8	120.7	-2.8		-32.8	-19	806	No stop
15 26 30	---	10 03 19	42.2	121.7	-2.8		-32.4	191	833	15 23 01

Schedule for TORUN (Code Tr) Page 5

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
15 26 30	J1250+1621	10 03 19	40.8	122.2	-2.8		-32.0	-19	833	No stop
15 28 00	=1247+166	10 04 49	41.0	122.6	-2.8		-31.8	71	845	15 26 31
15 28 00	ASASSN-14LI	10 04 49	42.4	122.1	-2.7		-32.3	-19	845	No stop
15 31 30	---	10 08 19	42.9	123.0	-2.7		-31.9	191	872	15 28 01
15 32 10	J1250+1621	10 09 00	41.5	123.7	-2.7		-31.4	21	872	15 32 10
15 33 30	=1247+166	10 10 20	41.7	124.1	-2.7		-31.2	80	882	15 32 11
15 33 30	ASASSN-14LI	10 10 20	43.1	123.6	-2.6		-31.7	-19	882	No stop
15 37 00	---	10 13 50	43.5	124.6	-2.6		-31.3	191	909	15 33 31
15 37 00	J1250+1621	10 13 50	42.1	125.0	-2.6		-30.8	-19	909	No stop
15 38 30	=1247+166	10 15 21	42.3	125.4	-2.6		-30.6	71	921	15 37 01
15 38 30	ASASSN-14LI	10 15 21	43.7	125.0	-2.6		-31.1	-19	921	No stop
15 42 00	---	10 18 51	44.2	126.0	-2.5		-30.7	191	947	15 38 31
15 42 40	J1250+1621	10 19 31	42.8	126.6	-2.5		-30.1	21	947	15 42 40
15 44 00	=1247+166	10 20 52	42.9	127.0	-2.5		-30.0	80	958	15 42 41
15 44 00	ASASSN-14LI	10 20 52	44.4	126.6	-2.5		-30.4	-19	958	No stop
15 47 30	---	10 24 22	44.8	127.6	-2.4		-30.0	191	985	15 44 01
15 47 30	J1250+1621	10 24 22	43.4	128.0	-2.4		-29.5	-19	985	No stop
15 49 00	=1247+166	10 25 52	43.5	128.4	-2.4		-29.3	71	996	15 47 31
15 49 00	ASASSN-14LI	10 25 52	45.0	128.0	-2.4		-29.8	-19	996	No stop
15 52 30	---	10 29 23	45.4	129.0	-2.3		-29.3	191	1023	15 49 01
15 53 10	J1250+1621	10 30 03	44.0	129.7	-2.3		-28.8	21	1023	15 53 10
15 54 30	=1247+166	10 31 23	44.2	130.0	-2.3		-28.6	80	1033	15 53 11
15 54 30	ASASSN-14LI	10 31 23	45.6	129.6	-2.3		-29.0	-19	1033	No stop
15 58 00	---	10 34 54	46.0	130.7	-2.2		-28.5	191	1060	15 54 31
15 58 00	J1250+1621	10 34 54	44.6	131.1	-2.3		-28.1	-19	1060	No stop
15 59 30	=1247+166	10 36 24	44.8	131.5	-2.2		-27.9	71	1072	15 58 01
15 59 30	ASASSN-14LI	10 36 24	46.2	131.1	-2.2		-28.3	-19	1072	No stop
16 03 00	---	10 39 55	46.6	132.2	-2.2		-27.8	191	1099	15 59 31
16 03 40	J1250+1621	10 40 35	45.2	132.8	-2.2		-27.3	21	1099	16 03 40
16 05 00	=1247+166	10 41 55	45.4	133.2	-2.2		-27.1	80	1109	16 03 41

Schedule for TORUN (Code Tr) Page 6

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
16 05 00	ASASSN-14LI	10 41 55	46.8	132.8	-2.1		-27.5	-19	1109	No stop
16 08 30	---	10 45 26	47.2	133.9	-2.1		-27.0	191	1136	16 05 01
16 08 30	J1250+1621	10 45 26	45.7	134.3	-2.1		-26.6	-19	1136	No stop
16 09 30	=1247+166	10 46 26	45.9	134.6	-2.1		-26.5	41	1144	16 08 31
16 11 30	OQ208	10 48 26	46.1	104.1	-3.3		-41.5	44	1144	16 11 30
16 16 00	---	10 52 57	46.8	105.2	-3.2		-41.2	270	1178	16 11 31
16 17 30	J1250+1621	10 54 27	46.7	137.1	-1.9		-25.2	11	1178	16 17 30
16 19 00	=1247+166	10 55 57	46.8	137.6	-1.9		-25.0	90	1190	16 17 31
16 19 00	ASASSN-14LI	10 55 57	48.3	137.3	-1.9		-25.3	-19	1190	No stop
16 22 30	---	10 59 28	48.7	138.4	-1.8		-24.7	191	1217	16 19 01
16 22 30	J1250+1621	10 59 28	47.2	138.7	-1.9		-24.4	-19	1217	No stop
16 24 00	=1247+166	11 00 58	47.3	139.2	-1.8		-24.1	71	1228	16 22 31
16 24 00	ASASSN-14LI	11 00 58	48.8	138.9	-1.8		-24.5	-19	1228	No stop
16 27 30	---	11 04 29	49.2	140.1	-1.7		-23.9	191	1255	16 24 01
16 28 10	J1250+1621	11 05 09	47.7	140.5	-1.8		-23.4	21	1255	16 28 10
16 29 30	=1247+166	11 06 29	47.9	141.0	-1.7		-23.2	80	1265	16 28 11
16 29 30	ASASSN-14LI	11 06 29	49.4	140.7	-1.7		-23.5	-19	1265	No stop
16 33 00	---	11 10 00	49.7	141.9	-1.7		-22.9	191	1292	16 29 31
16 33 00	J1250+1621	11 10 00	48.2	142.1	-1.7		-22.6	-19	1292	No stop
16 34 30	=1247+166	11 11 30	48.3	142.6	-1.7		-22.3	71	1304	16 33 01
16 34 30	ASASSN-14LI	11 11 30	49.8	142.4	-1.6		-22.6	-19	1304	No stop
16 38 00	---	11 15 00	50.1	143.6	-1.6		-21.9	191	1331	16 34 31
16 38 40	J1250+1621	11 15 41	48.7	144.0	-1.6		-21.6	21	1331	16 38 40
16 40 00	=1247+166	11 17 01	48.8	144.5	-1.6		-21.3	80	1341	16 38 41
16 40 00	ASASSN-14LI	11 17 01	50.3	144.3	-1.5		-21.6	-19	1341	No stop
16 43 30	---	11 20 31	50.6	145.6	-1.5		-20.9	191	1368	16 40 01
16 43 30	J1250+1621	11 20 31	49.1	145.7	-1.5		-20.7	-19	1368	No stop
16 45 00	=1247+166	11 22 02	49.3	146.2	-1.5		-20.4	71	1379	16 43 31
16 45 00	ASASSN-14LI	11 22 02	50.7	146.1	-1.5		-20.6	-19	1379	No stop
16 48 30	---	11 25 32	51.0	147.3	-1.4		-19.9	191	1406	16 45 01

Schedule for TORUN (Code Tr) Page 7

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
16 49 10	J1250+1621	11 26 12	49.6	147.6	-1.4		-19.6	21	1406	16 49 10
16 50 30	=1247+166	11 27 32	49.7	148.1	-1.4		-19.3	80	1417	16 49 11
16 50 30	ASASSN-14LI	11 27 32	51.2	148.0	-1.4		-19.5	-19	1417	No stop
16 54 00	---	11 31 03	51.5	149.3	-1.3		-18.8	191	1444	16 50 31
16 54 00	J1250+1621	11 31 03	50.0	149.3	-1.3		-18.6	-19	1444	No stop
16 55 30	=1247+166	11 32 33	50.1	149.9	-1.3		-18.3	71	1455	16 54 01
16 55 30	ASASSN-14LI	11 32 33	51.6	149.9	-1.3		-18.5	-19	1455	No stop
16 59 00	---	11 36 04	51.8	151.1	-1.2		-17.7	191	1482	16 55 31
16 59 40	J1250+1621	11 36 44	50.4	151.4	-1.2		-17.4	21	1482	16 59 40
17 01 00	=1247+166	11 38 04	50.5	151.9	-1.2		-17.2	80	1492	16 59 41
17 01 00	ASASSN-14LI	11 38 04	52.0	151.9	-1.2		-17.3	-19	1492	No stop
17 04 30	---	11 41 35	52.2	153.2	-1.1		-16.5	191	1519	17 01 01
17 04 30	J1250+1621	11 41 35	50.7	153.1	-1.2		-16.4	-19	1519	No stop
17 06 00	=1247+166	11 43 05	50.8	153.7	-1.1		-16.1	71	1531	17 04 31
17 06 00	ASASSN-14LI	11 43 05	52.3	153.7	-1.1		-16.2	-19	1531	No stop
17 09 30	---	11 46 36	52.6	155.1	-1.0		-15.4	191	1558	17 06 01
17 10 10	J1250+1621	11 47 16	51.1	155.2	-1.1		-15.2	21	1558	17 10 10
17 11 30	=1247+166	11 48 36	51.2	155.7	-1.0		-14.9	80	1568	17 10 11
17 11 30	ASASSN-14LI	11 48 36	52.7	155.8	-1.0		-15.0	-19	1568	No stop
17 15 00	---	11 52 07	52.9	157.2	-0.9		-14.2	191	1595	17 11 31
17 15 00	J1250+1621	11 52 07	51.4	157.0	-1.0		-14.1	-19	1595	No stop
17 16 30	=1247+166	11 53 37	51.5	157.6	-1.0		-13.8	71	1606	17 15 01
17 16 30	ASASSN-14LI	11 53 37	53.0	157.7	-0.9		-13.8	-19	1606	No stop
17 20 00	---	11 57 07	53.2	159.1	-0.9		-13.0	191	1633	17 16 31
17 20 40	J1250+1621	11 57 47	51.7	159.1	-0.9		-12.9	21	1633	17 20 40
17 22 00	=1247+166	11 59 08	51.8	159.6	-0.9		-12.6	80	1644	17 20 41
17 22 00	ASASSN-14LI	11 59 08	53.3	159.9	-0.8		-12.5	-19	1644	No stop
17 25 30	---	12 02 38	53.5	161.2	-0.8		-11.7	191	1671	17 22 01
17 25 30	J1250+1621	12 02 38	52.0	161.0	-0.8		-11.8	-19	1671	No stop
17 27 00	=1247+166	12 04 08	52.0	161.6	-0.8		-11.4	71	1682	17 25 31

Schedule for TORUN (Code Tr) Page 8

ASASSN-14il binary AGN

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
17 27 00	ASASSN-14LI	12 04 08	53.5	161.8	-0.7		-11.3	-19	1682	No stop
17 30 30	---	12 07 39	53.7	163.2	-0.7		-10.5	191	1709	17 27 01
17 31 10	J1250+1621	12 08 19	52.2	163.2	-0.7		-10.4	21	1709	17 31 10
17 32 30	=1247+166	12 09 39	52.3	163.7	-0.7		-10.1	80	1719	17 31 11
17 32 30	ASASSN-14LI	12 09 39	53.8	164.0	-0.7		-10.0	-19	1719	No stop
17 36 00	---	12 13 10	53.9	165.4	-0.6		-9.1	191	1746	17 32 31
17 36 00	J1250+1621	12 13 10	52.4	165.0	-0.6		-9.3	-19	1746	No stop
17 37 30	=1247+166	12 14 40	52.5	165.6	-0.6		-8.9	71	1758	17 36 01
17 37 30	ASASSN-14LI	12 14 40	54.0	166.0	-0.6		-8.8	-19	1758	No stop
17 41 00	---	12 18 11	54.1	167.4	-0.5		-7.9	191	1785	17 37 31
17 41 40	J1250+1621	12 18 51	52.6	167.2	-0.5		-7.9	21	1785	17 41 40
17 43 00	=1247+166	12 20 11	52.7	167.8	-0.5		-7.6	80	1795	17 41 41
17 43 00	ASASSN-14LI	12 20 11	54.2	168.2	-0.5		-7.4	-19	1795	No stop
17 46 30	---	12 23 42	54.3	169.6	-0.4		-6.5	191	1822	17 43 01
17 46 30	J1250+1621	12 23 42	52.8	169.2	-0.5		-6.8	-19	1822	No stop
17 48 00	=1247+166	12 25 12	52.8	169.7	-0.4		-6.4	71	1833	17 46 31
17 48 00	ASASSN-14LI	12 25 12	54.3	170.2	-0.4		-6.1	-19	1833	No stop
17 51 30	---	12 28 42	54.4	171.7	-0.3		-5.2	191	1860	17 48 01
17 52 10	J1250+1621	12 29 23	52.9	171.4	-0.4		-5.4	21	1860	17 52 10
17 53 30	=1247+166	12 30 43	53.0	171.9	-0.3		-5.0	80	1871	17 52 11
17 53 30	ASASSN-14LI	12 30 43	54.4	172.5	-0.3		-4.7	-19	1871	No stop
17 57 00	---	12 34 13	54.5	173.9	-0.2		-3.8	191	1897	17 53 31
17 57 00	J1250+1621	12 34 13	53.0	173.3	-0.3		-4.2	-19	1897	No stop
17 58 30	=1247+166	12 35 44	53.1	173.9	-0.3		-3.8	71	1909	17 57 01
17 58 30	ASASSN-14LI	12 35 44	54.5	174.5	-0.2		-3.4	-19	1909	No stop
18 02 00	---	12 39 14	54.5	176.0	-0.2		-2.5	191	1936	17 58 31
18 02 40	J1250+1621	12 39 54	53.1	175.6	-0.2		-2.8	21	1936	18 02 40
18 04 00	=1247+166	12 41 15	53.1	176.1	-0.2		-2.4	80	1946	18 02 41
18 04 00	ASASSN-14LI	12 41 15	54.6	176.8	-0.1		-2.0	-19	1946	No stop
18 07 30	---	12 44 45	54.6	178.2	-0.1		-1.1	191	1973	18 04 01

```
Schedule for TORUN     (Code Tr )                                Page   9
               ASASSN-14il binary AGN
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  12 Jun 2015   Day 163 ---

18 07 30  J1250+1621   12 44 45  53.2 177.5 -0.1      -1.5   -19     1973   No stop
18 09 00  =1247+166    12 46 15  53.2 178.1 -0.1      -1.2    71     1985   18 07 31

18 09 00  ASASSN-14LI  12 46 15  54.6 178.9 -0.0      -0.7   -19     1985   No stop
18 12 30  ---          12 49 46  54.6 180.3  0.0       0.2   191     2012   18 09 01

18 13 10  J1250+1621   12 50 26  53.2 179.8 -0.0      -0.1    21     2012   18 13 10
18 14 30  =1247+166    12 51 46  53.2 180.3  0.0       0.2    80     2022   18 13 11

18 14 30  ASASSN-14LI  12 51 46  54.6 181.1  0.0       0.7   -19     2022   No stop
18 18 00  ---          12 55 17  54.6 182.6  0.1       1.6   191     2049   18 14 31

18 18 00  J1250+1621   12 55 17  53.2 181.7  0.1       1.1   -19     2049   No stop
18 19 30  =1247+166    12 56 47  53.2 182.3  0.1       1.5    71     2060   18 18 01

18 19 30  ASASSN-14LI  12 56 47  54.6 183.2  0.1       2.0   -19     2060   No stop
18 23 00  ---          13 00 18  54.5 184.6  0.2       2.9   191     2087   18 19 31

18 23 40  J1250+1621   13 00 58  53.1 184.0  0.2       2.5    21     2087   18 23 40
18 25 00  =1247+166    13 02 18  53.1 184.5  0.2       2.8    80     2097   18 23 41

18 25 00  ASASSN-14LI  13 02 18  54.5 185.4  0.2       3.4   -19     2097   No stop
18 28 30  ---          13 05 49  54.4 186.9  0.3       4.3   191     2124   18 25 01

18 28 30  J1250+1621   13 05 49  53.1 185.9  0.2       3.7   -19     2124   No stop
18 30 00  =1247+166    13 07 19  53.0 186.5  0.3       4.1    71     2136   18 28 31



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


 ======== Setup file: sess215LG.setini

   Setup group:   10         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* ASASSN-14LI       12 45 45.858736   * 12 48 15.226300     12 49 01.703779       0.00
                    18 02 47.44778    * 17 46 26.45700      17 41 29.92235        0.00

  1156+295          11 56 57.786211   * 11 59 31.833912     12 00 19.276679       0.00
* J1159+2914        29 31 25.73882    * 29 14 43.82692      29 09 42.35927        0.00
  J1159+29          /home/cromero/sched_11.4/catalogs/sources.gsfc.2015feb
                    GSFC 2015a astro solution, unpublished  69878 observations.

  1247+166          12 47 39.650446   * 12 50 09.227097     12 50 55.798081       0.28
* J1250+1621        16 37 40.73650    * 16 21 21.46211      16 16 25.08639        0.47
                    /home/cromero/sched_11.4/catalogs/sources.gsfc.2015feb
                    GSFC 2015a astro solution, unpublished     48 observations.

* OQ208             14 04 45.615156   * 14 07 00.394414     14 07 42.758751       0.24
  J1407+2827        28 41 29.23518    * 28 27 14.69022      28 23 02.60986        0.34
  1404+286          /home/cromero/sched_11.4/catalogs/sources.gsfc.2015feb
  J1407+28          GSFC 2015a astro solution, unpublished  67871 observations.
```

gp053htr

18cm global VLBI observations of Arp299

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```
Observing mode: PFB
Schedule for TORUN     (Code Tr )                                    Page   2
               18cm global VLBI observations of Arp299
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  12 Jun 2015   Day 163 ---
 Next scan frequencies:  1610.25  1610.25  1610.25  1610.25  1642.25  1642.25  1642.25  1642.25
                         1674.25  1674.25  1674.25  1674.25  1706.25  1706.25  1706.25  1706.25
 Next BBC frequencies:    689.75   689.75   689.75   689.75   657.75   657.75   657.75   657.75
                          625.75   625.75   625.75   625.75   593.75   593.75   593.75   593.75
 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  4C39.25      14 37 34  37.2 -72.3  5.2      47.4     0        0   20 00 00
20 01 00  ---          14 38 34  37.1 -72.1  5.2      47.3    60        8   20 00 01

20 01 17  4C39.25      14 38 51  37.0 -72.1  5.2      47.3    11        8   20 01 17
20 02 27  ---          14 40 01  36.9 -71.9  5.2      47.2    70       17   20 01 18

20 02 27  4C39.25      14 40 01  36.9 -71.9  5.2      47.2    -5       17   No stop
20 04 57  ---          14 42 31  36.5 -71.5  5.2      47.1   145       36   20 02 28

20 05 14  J1128+5925   14 42 48  63.0 -57.2  3.2      81.8   -96       36   20 05 14
20 08 24  ---          14 45 59  62.6 -57.1  3.3      81.2    94       60   20 05 15

20 08 24  J1128+5925   14 45 59  62.6 -57.1  3.3      81.2    -5       60   No stop
20 09 14  ---          14 46 49  62.5 -57.0  3.3      81.0    45       67   20 08 25

20 09 14  ARP299       14 46 49  62.4 -58.9  3.3      79.5   -17       67   No stop
20 14 32  ---          14 52 08  61.7 -58.6  3.4      78.6   301      107   20 09 15

20 14 32  J1128+5925   14 52 08  61.8 -56.8  3.4      80.1   -17      107   No stop
20 15 32  ---          14 53 08  61.7 -56.7  3.4      79.9    43      115   20 14 33

20 15 49  J1128+5925   14 53 25  61.7 -56.7  3.4      79.9    11      115   20 15 49
20 16 29  ---          14 54 05  61.6 -56.7  3.4      79.8    40      120   20 15 50

20 16 29  ARP299       14 54 05  61.5 -58.5  3.4      78.3   -17      120   No stop
20 21 49  ---          14 59 26  60.8 -58.2  3.5      77.4   303      161   20 16 30

20 21 49  J1128+5925   14 59 26  60.9 -56.4  3.5      78.9   -17      161   No stop
20 22 49  ---          15 00 26  60.8 -56.4  3.5      78.7    43      169   20 21 50

20 22 49  J1128+5925   15 00 26  60.8 -56.4  3.5      78.7    -5      169   No stop
20 23 39  ---          15 01 16  60.7 -56.3  3.5      78.5    45      175   20 22 50

20 23 39  ARP299       15 01 16  60.5 -58.1  3.5      77.1   -17      175   No stop
20 28 57  ---          15 06 35  59.9 -57.7  3.6      76.3   301      216   20 23 40
```

Schedule for TORUN (Code Tr) Page 3

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
20 28 57	J1128+5925	15 06 35	60.0	-56.1	3.6		77.6	-17	216	No stop
20 29 57	---	15 07 36	59.9	-56.0	3.6		77.5	43	224	20 28 58
20 30 14	J1128+5925	15 07 53	59.9	-56.0	3.6		77.4	11	224	20 30 14
20 30 54	---	15 08 33	59.8	-55.9	3.7		77.3	40	229	20 30 15
20 30 54	ARP299	15 08 33	59.6	-57.6	3.7		75.9	-17	229	No stop
20 36 14	---	15 13 54	58.9	-57.3	3.7		75.1	303	270	20 30 55
20 36 14	J1128+5925	15 13 54	59.1	-55.6	3.7		76.4	-16	270	No stop
20 37 14	---	15 14 54	59.0	-55.6	3.8		76.3	44	278	20 36 15
20 37 14	J1128+5925	15 14 54	59.0	-55.6	3.8		76.3	-5	278	No stop
20 38 04	---	15 15 44	58.9	-55.5	3.8		76.1	45	284	20 37 15
20 38 04	ARP299	15 15 44	58.7	-57.2	3.8		74.8	-16	284	No stop
20 43 22	---	15 21 03	58.0	-56.8	3.9		74.0	302	325	20 38 05
20 43 22	J1128+5925	15 21 03	58.2	-55.2	3.9		75.3	-16	325	No stop
20 44 22	---	15 22 03	58.1	-55.2	3.9		75.1	44	333	20 43 23
20 44 39	J1128+5925	15 22 20	58.1	-55.1	3.9		75.0	11	333	20 44 39
20 45 19	---	15 23 00	58.0	-55.1	3.9		74.9	40	338	20 44 40
20 45 19	ARP299	15 23 00	57.8	-56.7	3.9		73.7	-16	338	No stop
20 50 39	---	15 28 21	57.1	-56.3	4.0		72.9	304	379	20 45 20
20 50 39	J1128+5925	15 28 21	57.3	-54.8	4.0		74.1	-16	379	No stop
20 51 39	---	15 29 21	57.2	-54.7	4.0		73.9	44	386	20 50 40
20 51 39	J1128+5925	15 29 21	57.2	-54.7	4.0		73.9	-5	386	No stop
20 52 29	---	15 30 11	57.1	-54.6	4.0		73.8	45	393	20 51 40
20 52 29	ARP299	15 30 11	56.9	-56.2	4.0		72.6	-16	393	No stop
20 57 47	---	15 35 30	56.2	-55.8	4.1		71.8	302	434	20 52 30
20 57 47	J1128+5925	15 35 30	56.5	-54.3	4.1		72.9	-16	434	No stop
20 58 47	---	15 36 30	56.3	-54.2	4.1		72.8	44	441	20 57 48
20 59 04	J1128+5925	15 36 47	56.3	-54.2	4.1		72.7	11	441	20 59 04
20 59 44	---	15 37 27	56.2	-54.1	4.1		72.6	40	446	20 59 05
20 59 44	ARP299	15 37 27	56.0	-55.6	4.1		71.5	-16	446	No stop
21 05 04	---	15 42 48	55.3	-55.2	4.2		70.7	304	487	20 59 45
21 05 04	J1128+5925	15 42 48	55.6	-53.8	4.2		71.8	-16	487	No stop
21 06 04	---	15 43 48	55.4	-53.7	4.2		71.6	44	495	21 05 05

Schedule for TORUN (Code Tr) Page 4

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
21 06 04	J1128+5925	15 43 48	55.4	-53.7	4.2		71.6	-5	495	No stop
21 06 54	---	15 44 39	55.3	-53.6	4.3		71.5	45	502	21 06 05
21 06 54	ARP299	15 44 39	55.1	-55.1	4.3		70.4	-16	502	No stop
21 12 12	---	15 49 57	54.5	-54.7	4.3		69.6	302	542	21 06 55
21 12 12	J1128+5925	15 49 57	54.7	-53.3	4.3		70.7	-16	542	No stop
21 13 12	---	15 50 58	54.6	-53.2	4.4		70.5	44	550	21 12 13
21 13 29	J1128+5925	15 51 15	54.6	-53.2	4.4		70.5	11	550	21 13 29
21 14 09	---	15 51 55	54.5	-53.1	4.4		70.4	40	555	21 13 30
21 14 09	ARP299	15 51 55	54.2	-54.5	4.4		69.3	-16	555	No stop
21 19 29	---	15 57 16	53.6	-54.1	4.5		68.5	304	596	21 14 10
21 19 29	J1128+5925	15 57 16	53.8	-52.7	4.5		69.5	-16	596	No stop
21 20 29	---	15 58 16	53.7	-52.6	4.5		69.4	44	604	21 19 30
21 20 29	J1128+5925	15 58 16	53.7	-52.6	4.5		69.4	-5	604	No stop
21 21 19	---	15 59 06	53.6	-52.6	4.5		69.3	45	610	21 20 30
21 21 19	ARP299	15 59 06	53.3	-53.9	4.5		68.2	-15	610	No stop
21 26 37	---	16 04 25	52.7	-53.5	4.6		67.4	303	651	21 21 20
21 26 37	J1128+5925	16 04 25	53.0	-52.2	4.6		68.4	-15	651	No stop
21 27 37	---	16 05 25	52.9	-52.1	4.6		68.3	45	659	21 26 38
21 27 54	J1128+5925	16 05 42	52.8	-52.1	4.6		68.2	11	659	21 27 54
21 28 34	---	16 06 22	52.7	-52.0	4.6		68.1	40	664	21 27 55
21 28 34	ARP299	16 06 22	52.5	-53.3	4.6		67.2	-15	664	No stop
21 33 54	---	16 11 43	51.8	-52.9	4.7		66.4	305	705	21 28 35
21 33 54	J1128+5925	16 11 43	52.1	-51.6	4.7		67.3	-15	705	No stop
21 34 54	---	16 12 43	52.0	-51.5	4.7		67.2	45	713	21 33 55
21 34 54	J1128+5925	16 12 43	52.0	-51.5	4.7		67.2	-5	713	No stop
21 35 44	---	16 13 33	51.9	-51.4	4.7		67.0	45	719	21 34 55
21 35 44	ARP299	16 13 33	51.6	-52.7	4.7		66.1	-15	719	No stop
21 41 02	---	16 18 52	51.0	-52.3	4.8		65.3	303	760	21 35 45
21 41 02	J1128+5925	16 18 52	51.3	-51.0	4.8		66.2	-15	760	No stop
21 42 02	---	16 19 52	51.2	-50.9	4.8		66.1	45	767	21 41 03

Schedule for TORUN (Code Tr) Page 5

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
21 42 19	J1128+5925	16 20 09	51.1	-50.9	4.9		66.0	11	767	21 42 19
21 42 59	---	16 20 50	51.1	-50.8	4.9		65.9	40	773	21 42 20
21 42 59	ARP299	16 20 50	50.7	-52.1	4.9		65.0	-15	773	No stop
21 48 19	---	16 26 10	50.1	-51.6	4.9		64.3	305	814	21 43 00
21 48 19	J1128+5925	16 26 10	50.4	-50.4	5.0		65.1	-15	814	No stop
21 49 19	---	16 27 11	50.3	-50.3	5.0		65.0	45	821	21 48 20
21 49 19	J1128+5925	16 27 11	50.3	-50.3	5.0		65.0	-5	821	No stop
21 50 09	---	16 28 01	50.2	-50.2	5.0		64.9	45	828	21 49 20
21 50 09	ARP299	16 28 01	49.9	-51.5	5.0		64.0	-15	828	No stop
21 55 27	---	16 33 20	49.3	-51.0	5.1		63.2	303	868	21 50 10
21 55 27	J1128+5925	16 33 20	49.6	-49.8	5.1		64.1	-15	868	No stop
21 56 27	---	16 34 20	49.5	-49.7	5.1		63.9	45	876	21 55 28
21 56 44	J1128+5925	16 34 37	49.5	-49.7	5.1		63.9	11	876	21 56 44
21 57 24	---	16 35 17	49.4	-49.6	5.1		63.8	40	881	21 56 45
21 57 24	ARP299	16 35 17	49.0	-50.8	5.1		62.9	-15	881	No stop
22 02 44	---	16 40 38	48.4	-50.3	5.2		62.2	305	922	21 57 25
22 02 44	J1128+5925	16 40 38	48.8	-49.2	5.2		63.0	-15	922	No stop
22 03 44	---	16 41 38	48.7	-49.1	5.2		62.8	45	930	22 02 45
22 03 44	J1128+5925	16 41 38	48.7	-49.1	5.2		62.8	-5	930	No stop
22 04 34	---	16 42 28	48.6	-49.0	5.2		62.7	45	936	22 03 45
22 04 34	ARP299	16 42 28	48.2	-50.2	5.2		61.9	-15	936	No stop
22 09 52	---	16 47 47	47.6	-49.7	5.3		61.1	303	977	22 04 35
22 09 52	J1128+5925	16 47 47	48.0	-48.5	5.3		61.9	-15	977	No stop
22 10 52	---	16 48 47	47.9	-48.4	5.3		61.8	45	985	22 09 53
22 11 09	J1128+5925	16 49 04	47.8	-48.4	5.3		61.7	11	985	22 11 09
22 11 49	---	16 49 44	47.7	-48.3	5.3		61.6	40	990	22 11 10
22 11 49	ARP299	16 49 44	47.4	-49.5	5.3		60.9	-15	990	No stop
22 17 09	---	16 55 05	46.8	-49.0	5.4		60.1	305	1031	22 11 50
22 17 09	J1128+5925	16 55 05	47.1	-47.9	5.4		60.8	-15	1031	No stop
22 18 09	---	16 56 05	47.0	-47.8	5.5		60.7	45	1039	22 17 10

Schedule for TORUN (Code Tr) Page 6

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
22 18 09	J1128+5925	16 56 05	47.0	-47.8	5.5		60.7	-5	1039	No stop
22 18 59	---	16 56 55	46.9	-47.7	5.5		60.6	45	1045	22 18 10
22 18 59	ARP299	16 56 55	46.6	-48.8	5.5		59.8	-14	1045	No stop
22 24 17	---	17 02 14	46.0	-48.3	5.5		59.1	304	1086	22 19 00
22 24 17	J1128+5925	17 02 14	46.4	-47.2	5.6		59.8	-14	1086	No stop
22 25 17	---	17 03 14	46.2	-47.1	5.6		59.6	46	1094	22 24 18
22 25 34	J1128+5925	17 03 32	46.2	-47.1	5.6		59.6	11	1094	22 25 34
22 26 14	---	17 04 12	46.1	-47.0	5.6		59.5	40	1099	22 25 35
22 26 14	ARP299	17 04 12	45.7	-48.1	5.6		58.8	-14	1099	No stop
22 31 34	---	17 09 33	45.1	-47.6	5.7		58.0	306	1140	22 26 15
22 31 34	J1128+5925	17 09 33	45.6	-46.5	5.7		58.7	-14	1140	No stop
22 32 34	---	17 10 33	45.4	-46.4	5.7		58.6	46	1147	22 31 35
22 32 34	J1128+5925	17 10 33	45.4	-46.4	5.7		58.6	-5	1147	No stop
22 33 24	---	17 11 23	45.4	-46.3	5.7		58.4	45	1154	22 32 35
22 33 24	ARP299	17 11 23	44.9	-47.4	5.7		57.7	-14	1154	No stop
22 38 42	---	17 16 42	44.4	-46.9	5.8		57.0	304	1195	22 33 25
22 38 42	J1128+5925	17 16 42	44.8	-45.8	5.8		57.6	-14	1195	No stop
22 39 42	---	17 17 42	44.7	-45.7	5.8		57.5	46	1202	22 38 43
22 39 59	J1128+5925	17 17 59	44.6	-45.7	5.8		57.5	11	1202	22 39 59
22 40 39	---	17 18 39	44.6	-45.6	5.8		57.4	40	1207	22 40 00
22 40 39	ARP299	17 18 39	44.1	-46.7	5.8		56.7	-14	1207	No stop
22 45 59	---	17 24 00	43.6	-46.2	5.9		55.9	306	1248	22 40 40
22 45 59	J1128+5925	17 24 00	44.0	-45.1	5.9		56.6	-14	1248	No stop
22 46 59	---	17 25 00	43.9	-45.0	5.9		56.4	46	1256	22 46 00
22 46 59	J1128+5925	17 25 00	43.9	-45.0	5.9		56.4	-5	1256	No stop
22 47 49	---	17 25 50	43.8	-45.0	5.9		56.3	45	1263	22 47 00
22 47 49	ARP299	17 25 50	43.4	-46.0	5.9		55.7	-14	1263	No stop
22 53 07	---	17 31 09	42.8	-45.4	6.0		54.9	304	1303	22 47 50
22 53 07	J1128+5925	17 31 09	43.2	-44.4	6.0		55.5	-14	1303	No stop
22 54 07	---	17 32 09	43.1	-44.3	6.1		55.4	46	1311	22 53 08

Schedule for TORUN (Code Tr) Page 7

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
22 54 24	J1128+5925	17 32 26	43.1	-44.3	6.1		55.3	11	1311	22 54 24
22 55 04	---	17 33 06	43.0	-44.2	6.1		55.2	40	1316	22 54 25
22 55 04	ARP299	17 33 06	42.6	-45.2	6.1		54.6	-14	1316	No stop
23 00 24	---	17 38 27	42.0	-44.7	6.2		53.9	306	1357	22 55 05
23 00 24	J1128+5925	17 38 27	42.5	-43.7	6.2		54.4	-14	1357	No stop
23 01 24	---	17 39 27	42.4	-43.6	6.2		54.3	46	1365	23 00 25
23 01 24	J1128+5925	17 39 27	42.4	-43.6	6.2		54.3	-5	1365	No stop
23 02 14	---	17 40 18	42.3	-43.5	6.2		54.2	45	1371	23 01 25
23 02 14	ARP299	17 40 18	41.8	-44.5	6.2		53.6	-14	1371	No stop
23 07 32	---	17 45 36	41.3	-43.9	6.3		52.8	304	1412	23 02 15
23 07 32	J1128+5925	17 45 36	41.7	-43.0	6.3		53.4	-14	1412	No stop
23 08 32	---	17 46 37	41.6	-42.9	6.3		53.2	46	1420	23 07 33
23 08 49	J1128+5925	17 46 54	41.6	-42.8	6.3		53.2	11	1420	23 08 49
23 09 29	---	17 47 34	41.5	-42.8	6.3		53.1	40	1425	23 08 50
23 09 29	ARP299	17 47 34	41.1	-43.7	6.3		52.5	-14	1425	No stop
23 14 49	---	17 52 55	40.5	-43.2	6.4		51.8	306	1466	23 09 30
23 14 49	J1128+5925	17 52 55	41.0	-42.2	6.4		52.3	-14	1466	No stop
23 15 49	---	17 53 55	40.9	-42.1	6.4		52.2	46	1474	23 14 50
23 15 49	J1128+5925	17 53 55	40.9	-42.1	6.4		52.2	-5	1474	No stop
23 16 39	---	17 54 45	40.8	-42.0	6.4		52.0	45	1480	23 15 50
23 16 39	ARP299	17 54 45	40.3	-43.0	6.4		51.5	-14	1480	No stop
23 21 57	---	18 00 04	39.8	-42.4	6.5		50.7	304	1521	23 16 40
23 21 57	J1128+5925	18 00 04	40.3	-41.5	6.5		51.3	-14	1521	No stop
23 22 57	---	18 01 04	40.2	-41.4	6.5		51.1	46	1528	23 21 58
23 23 14	J1128+5925	18 01 21	40.2	-41.3	6.5		51.1	11	1528	23 23 14
23 23 54	---	18 02 01	40.1	-41.3	6.5		51.0	40	1534	23 23 15
23 23 54	ARP299	18 02 01	39.6	-42.2	6.5		50.5	-13	1534	No stop
23 29 14	---	18 07 22	39.0	-41.6	6.6		49.7	307	1575	23 23 55
23 29 14	J1128+5925	18 07 22	39.6	-40.7	6.6		50.2	-13	1575	No stop
23 30 14	---	18 08 22	39.5	-40.6	6.7		50.0	47	1582	23 29 15

Schedule for TORUN (Code Tr) Page 8

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 12 Jun 2015 Day 163 ---										
23 30 14	J1128+5925	18 08 22	39.5	-40.6	6.7		50.0	-5	1582	No stop
23 31 04	---	18 09 12	39.4	-40.5	6.7		49.9	45	1589	23 30 15
23 31 04	ARP299	18 09 12	38.9	-41.4	6.7		49.4	-13	1589	No stop
23 36 22	---	18 14 31	38.3	-40.8	6.8		48.7	305	1629	23 31 05
23 36 22	J1128+5925	18 14 31	38.9	-40.0	6.8		49.1	-13	1629	No stop
23 37 22	---	18 15 31	38.8	-39.8	6.8		49.0	47	1637	23 36 23
23 37 39	J1128+5925	18 15 48	38.7	-39.8	6.8		48.9	11	1637	23 37 39
23 38 19	---	18 16 28	38.7	-39.7	6.8		48.8	40	1642	23 37 40
23 38 19	ARP299	18 16 28	38.1	-40.6	6.8		48.4	-14	1642	No stop
23 43 39	---	18 21 49	37.6	-40.0	6.9		47.6	306	1683	23 38 20
23 43 39	J1128+5925	18 21 49	38.2	-39.2	6.9		48.0	-13	1683	No stop
23 44 39	---	18 22 50	38.1	-39.1	6.9		47.9	47	1691	23 43 40
23 44 39	J1128+5925	18 22 50	38.1	-39.1	6.9		47.9	-5	1691	No stop
23 45 29	---	18 23 40	38.0	-39.0	6.9		47.8	45	1697	23 44 40
23 45 29	ARP299	18 23 40	37.4	-39.8	6.9		47.3	-14	1697	No stop
23 50 47	---	18 28 59	36.9	-39.2	7.0		46.6	304	1738	23 45 30
23 50 47	J1128+5925	18 28 59	37.5	-38.4	7.0		47.0	-14	1738	No stop
23 51 47	---	18 29 59	37.4	-38.3	7.0		46.8	46	1746	23 50 48
23 52 04	J1128+5925	18 30 16	37.4	-38.2	7.0		46.8	11	1746	23 52 04
23 52 44	---	18 30 56	37.3	-38.2	7.0		46.7	40	1751	23 52 05
23 52 44	ARP299	18 30 56	36.8	-39.0	7.0		46.3	-14	1751	No stop
23 58 04	---	18 36 17	36.3	-38.4	7.1		45.5	306	1792	23 52 45
23 58 04	J1128+5925	18 36 17	36.8	-37.6	7.1		45.9	-14	1792	No stop
23 59 04	---	18 37 17	36.7	-37.5	7.1		45.8	46	1800	23 58 05
23 59 04	J1128+5925	18 37 17	36.7	-37.5	7.1		45.8	-5	1800	No stop
23 59 54	---	18 38 07	36.7	-37.4	7.2		45.6	45	1806	23 59 05
--- Start: Fri 12 Jun 2015 Day 163 -- Stop: Sat 13 Jun 2015 Day 164 ---										
23 59 54	ARP299	18 38 07	36.1	-38.2	7.1		45.2	-14	1806	No stop
00 05 12	---	18 43 26	35.6	-37.6	7.2		44.4	304	1847	23 59 55

Schedule for TORUN (Code Tr) Page 9

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
00 05 12	J1128+5925	18 43 26	36.2	-36.8	7.2		44.8	-14	1847	No stop
00 06 12	---	18 44 26	36.1	-36.7	7.3		44.7	46	1855	00 05 13
00 06 29	J1128+5925	18 44 43	36.1	-36.6	7.3		44.6	11	1855	00 06 29
00 07 09	---	18 45 23	36.0	-36.6	7.3		44.5	40	1860	00 06 30
00 07 09	ARP299	18 45 23	35.4	-37.3	7.3		44.2	-14	1860	No stop
00 12 29	---	18 50 44	34.9	-36.7	7.4		43.4	306	1901	00 07 10
00 12 29	J1128+5925	18 50 44	35.5	-36.0	7.4		43.7	-14	1901	No stop
00 13 29	---	18 51 44	35.4	-35.8	7.4		43.6	46	1908	00 12 30
00 13 29	J1128+5925	18 51 44	35.4	-35.8	7.4		43.6	-5	1908	No stop
00 14 19	---	18 52 34	35.4	-35.8	7.4		43.5	45	1915	00 13 30
00 14 19	ARP299	18 52 34	34.8	-36.5	7.4		43.1	-14	1915	No stop
00 19 37	---	18 57 53	34.3	-35.9	7.5		42.3	304	1956	00 14 20
00 19 37	J1128+5925	18 57 53	34.9	-35.1	7.5		42.7	-14	1956	No stop
00 20 37	---	18 58 53	34.8	-35.0	7.5		42.5	46	1963	00 19 38
00 20 54	J1128+5925	18 59 10	34.8	-35.0	7.5		42.5	11	1963	00 20 54
00 21 34	---	18 59 51	34.7	-34.9	7.5		42.4	40	1968	00 20 55
00 21 34	ARP299	18 59 51	34.1	-35.7	7.5		42.0	-14	1968	No stop
00 26 54	---	19 05 11	33.7	-35.0	7.6		41.3	306	2009	00 21 35
00 26 54	J1128+5925	19 05 11	34.3	-34.3	7.6		41.6	-14	2009	No stop
00 27 54	---	19 06 12	34.2	-34.2	7.6		41.4	46	2017	00 26 55
00 27 54	J1128+5925	19 06 12	34.2	-34.2	7.6		41.4	-5	2017	No stop
00 28 44	---	19 07 02	34.1	-34.1	7.6		41.3	45	2024	00 27 55
00 28 44	ARP299	19 07 02	33.5	-34.8	7.6		41.0	-14	2024	No stop
00 34 02	---	19 12 21	33.1	-34.2	7.7		40.2	304	2064	00 28 45
00 34 02	J1128+5925	19 12 21	33.7	-33.5	7.7		40.5	-14	2064	No stop
00 35 02	---	19 13 21	33.6	-33.4	7.7		40.4	46	2072	00 34 03
00 35 19	J1128+5925	19 13 38	33.6	-33.3	7.7		40.3	11	2072	00 35 19
00 35 59	---	19 14 18	33.5	-33.3	7.8		40.2	40	2077	00 35 20
00 35 59	ARP299	19 14 18	32.9	-33.9	7.7		39.9	-14	2077	No stop
00 41 19	---	19 19 39	32.4	-33.3	7.8		39.1	306	2118	00 36 00

Schedule for TORUN (Code Tr) Page 10

18cm global VLBI observations of Arp299

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
00 41 19	J1128+5925	19 19 39	33.1	-32.6	7.8		39.4	-14	2118	No stop
00 42 19	---	19 20 39	33.0	-32.5	7.9		39.3	46	2126	00 41 20
00 42 19	J1128+5925	19 20 39	33.0	-32.5	7.9		39.3	-5	2126	No stop
00 43 09	---	19 21 29	32.9	-32.4	7.9		39.1	45	2132	00 42 20
00 43 09	ARP299	19 21 29	32.3	-33.1	7.9		38.8	-14	2132	No stop
00 48 27	---	19 26 48	31.9	-32.4	8.0		38.0	304	2173	00 43 10
00 48 27	J1128+5925	19 26 48	32.5	-31.8	8.0		38.3	-14	2173	No stop
00 49 27	---	19 27 48	32.4	-31.7	8.0		38.2	46	2181	00 48 28
00 49 44	J1128+5925	19 28 05	32.4	-31.6	8.0		38.1	11	2181	00 49 44
00 50 24	---	19 28 45	32.4	-31.5	8.0		38.0	40	2186	00 49 45
00 50 24	ARP299	19 28 45	31.7	-32.2	8.0		37.8	-14	2186	No stop
00 55 44	---	19 34 06	31.3	-31.6	8.1		37.0	306	2227	00 50 25
00 55 44	J1128+5925	19 34 06	31.9	-30.9	8.1		37.2	-14	2227	No stop
00 56 44	---	19 35 06	31.9	-30.8	8.1		37.1	46	2235	00 55 45
00 56 44	J1128+5925	19 35 06	31.9	-30.8	8.1		37.1	-5	2235	No stop
00 57 34	---	19 35 56	31.8	-30.7	8.1		36.9	45	2241	00 56 45
00 57 34	ARP299	19 35 56	31.1	-31.3	8.1		36.7	-14	2241	No stop
01 02 52	---	19 41 15	30.7	-30.7	8.2		35.9	304	2282	00 57 35
01 02 52	J1128+5925	19 41 15	31.4	-30.0	8.2		36.1	-14	2282	No stop
01 03 52	---	19 42 16	31.3	-29.9	8.2		36.0	46	2289	01 02 53
01 04 09	J1128+5925	19 42 33	31.3	-29.9	8.2		35.9	11	2289	01 04 09
01 04 49	---	19 43 13	31.2	-29.8	8.2		35.8	40	2295	01 04 10
01 04 49	ARP299	19 43 13	30.6	-30.4	8.2		35.6	-15	2295	No stop
01 10 09	---	19 48 34	30.2	-29.8	8.3		34.8	305	2336	01 04 50
01 10 09	J1128+5925	19 48 34	30.8	-29.2	8.3		35.0	-14	2336	No stop
01 11 09	---	19 49 34	30.8	-29.0	8.3		34.9	46	2343	01 10 10
01 11 09	J1128+5925	19 49 34	30.8	-29.0	8.3		34.9	-5	2343	No stop
01 11 59	---	19 50 24	30.7	-28.9	8.4		34.7	45	2350	01 11 10
01 11 59	ARP299	19 50 24	30.0	-29.5	8.3		34.5	-15	2350	No stop
01 17 17	---	19 55 43	29.6	-28.9	8.4		33.7	303	2391	01 12 00

```
Schedule for TORUN     (Code Tr )                                  Page  11
               18cm global VLBI observations of Arp299
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  13 Jun 2015   Day 164 ---

01 17 17  J1128+5925   19 55 43  30.3 -28.3  8.4      33.9   -15     2391   No stop
01 18 17  ---          19 56 43  30.3 -28.2  8.5      33.8    45     2398   01 17 18

01 18 34  J1128+5925   19 57 00  30.2 -28.1  8.5      33.7    11     2398   01 18 34
01 19 14  ---          19 57 40  30.2 -28.1  8.5      33.6    40     2403   01 18 35

01 19 14  ARP299       19 57 40  29.5 -28.6  8.5      33.4   -15     2403   No stop
01 24 34  ---          20 03 01  29.1 -28.0  8.6      32.6   305     2444   01 19 15

01 24 34  J1128+5925   20 03 01  29.8 -27.4  8.6      32.8   -15     2444   No stop
01 25 34  ---          20 04 01  29.8 -27.3  8.6      32.7    45     2452   01 24 35

01 25 34  J1128+5925   20 04 01  29.8 -27.3  8.6      32.7    -5     2452   No stop
01 26 24  ---          20 04 51  29.7 -27.2  8.6      32.5    45     2458   01 25 35

01 26 24  ARP299       20 04 51  29.0 -27.7  8.6      32.3   -15     2458   No stop
01 31 42  ---          20 10 10  28.6 -27.1  8.7      31.5   303     2499   01 26 25

01 31 42  J1128+5925   20 10 10  29.3 -26.5  8.7      31.7   -15     2499   No stop
01 32 42  ---          20 11 10  29.3 -26.4  8.7      31.6    45     2507   01 31 43

01 32 59  J1128+5925   20 11 27  29.2 -26.3  8.7      31.5    11     2507   01 32 59
01 33 39  ---          20 12 07  29.2 -26.3  8.7      31.4    40     2512   01 33 00

01 33 39  ARP299       20 12 07  28.5 -26.8  8.7      31.2   -15     2512   No stop
01 38 59  ---          20 17 28  28.1 -26.1  8.8      30.4   305     2553   01 33 40

01 38 59  J1128+5925   20 17 28  28.9 -25.6  8.8      30.6   -15     2553   No stop
01 39 59  ---          20 18 28  28.8 -25.5  8.8      30.4    45     2561   01 39 00

01 39 59  J1128+5925   20 18 28  28.8 -25.5  8.8      30.4    -5     2561   No stop
01 40 49  ---          20 19 19  28.7 -25.4  8.8      30.3    45     2567   01 40 00

01 40 49  ARP299       20 19 19  28.0 -25.9  8.8      30.1   -15     2567   No stop
01 46 07  ---          20 24 37  27.7 -25.2  8.9      29.3   303     2608   01 40 50

01 46 07  J1128+5925   20 24 37  28.4 -24.7  8.9      29.5   -15     2608   No stop
01 47 07  ---          20 25 38  28.3 -24.6  8.9      29.3    45     2616   01 46 08

01 47 24  J1128+5925   20 25 55  28.3 -24.5  8.9      29.3    11     2616   01 47 24
01 48 04  ---          20 26 35  28.3 -24.4  9.0      29.2    40     2621   01 47 25

01 48 04  ARP299       20 26 35  27.5 -25.0  9.0      29.0   -15     2621   No stop
01 53 24  ---          20 31 56  27.2 -24.3  9.0      28.2   305     2662   01 48 05
```

```
Schedule for TORUN     (Code Tr )                                  Page  12
               18cm global VLBI observations of Arp299
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  13 Jun 2015   Day 164 ---

01 53 24  J1128+5925   20 31 56  27.9 -23.8  9.0      28.3   -15     2662   No stop
01 54 24  ---          20 32 56  27.9 -23.6  9.1      28.2    45     2669   01 53 25

01 54 24  J1128+5925   20 32 56  27.9 -23.6  9.1      28.2    -5     2669   No stop
01 55 14  ---          20 33 46  27.8 -23.5  9.1      28.1    45     2676   01 54 25

01 55 14  3C286        20 33 46  15.5 -59.6  7.0      36.9   -87     2676   No stop
02 00 00  ---          20 38 33  14.9 -58.7  7.1      36.5   199     2713   01 55 15


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


 ======== Setup file: sess215.L1024glob

   Setup group:   12         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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=   1610.25  1610.25  1610.25  1610.25  1642.25  1642.25  1642.25  1642.25
             1674.25  1674.25  1674.25  1674.25  1706.25  1706.25  1706.25  1706.25
   BBC fr=    689.75   689.75   689.75   689.75   657.75   657.75   657.75   657.75
              625.75   625.75   625.75   625.75   593.75   593.75   593.75   593.75
   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=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* ARP299            11 25 44.174219   * 11 28 33.622010     11 29 24.723301       0.00
                    58 50 18.17319    * 58 33 46.61000      58 28 54.57667        0.00

* J1128+5925        11 25 23.181652   * 11 28 13.340676     11 29 04.610357       0.00
                    59 41 46.14397    * 59 25 14.79866      59 20 22.98464        0.00

* 4C39.25           09 23 55.319215   * 09 27 03.013936     09 27 59.652405       0.30
  J0927+3902        39 15 23.56645    * 39 02 20.85186      38 58 20.89905        0.16
  0923+392          /Users/torres/sched_11.4/catalogs/sources.gsfc
  J0927+39          GSFC 2015a astro solution, unpublished 245753 observations.

* 3C286             13 28 49.657758   * 13 31 08.288051     13 31 51.590787       0.18
  J1331+3030        30 45 58.64059    * 30 30 32.95924      30 25 58.73452        0.17
  1328+307          /Users/torres/sched_11.4/catalogs/sources.gsfc
  J1331+30          GSFC 2015a astro solution, unpublished    225 observations.
```

gn002btr

Tracing the Evolution of Fast Jet-Driven Outflows

PI: *Kristina Nyland*

Address: ASTRON, Oude Hoogeveensedijk 4 7991 PD Dwingeloo The Netherlands
Phone: 0521-595-766 EMAIL: nyland@astron.nl Phone during obs: 0521-595-766

Observing mode: 21cm spectral line
Schedule for TORUN (Code Tr) Page 2
Tracing the Evolution of Fast Jet-Driven Outflows
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
Next scan frequencies:		1300.75	1300.75	1316.75	1316.75	1332.75	1332.75	1348.75	1348.75	
Next BBC frequencies:		799.25	799.25	783.25	783.25	767.25	767.25	751.25	751.25	
Next scan bandwidths:		16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	
14 30 00	J1001+3424	09 10 36	69.1	148.9	-0.9		-22.1	0	0	14 30 00
14 33 00	=0958+346	09 13 36	69.4	150.5	-0.8		-21.0	180	12	14 30 01
14 34 00	J0927+3902	09 14 37	75.7	169.4	-0.2		-8.2	8	12	14 34 00
14 39 00	=0923+392	09 19 37	75.8	173.4	-0.1		-5.1	300	31	14 34 01
14 39 00	J1001+3424	09 19 37	69.8	153.9	-0.7		-18.7	-53	31	No stop
14 42 00	=0958+346	09 22 38	70.0	155.6	-0.7		-17.5	127	42	14 39 01
14 42 00	3C236	09 22 38	70.1	152.4	-0.7		-19.8	-21	42	No stop
14 45 20	---	09 25 58	70.3	154.3	-0.7		-18.5	179	55	14 42 01
14 46 20	J1001+3424	09 26 59	70.2	158.1	-0.6		-15.7	38	55	14 46 20
14 47 20	=0958+346	09 27 59	70.3	158.7	-0.6		-15.3	60	59	14 46 21
14 47 20	3C236	09 27 59	70.5	155.5	-0.6		-17.7	-21	59	No stop
14 50 40	---	09 31 19	70.7	157.4	-0.6		-16.3	179	72	14 47 21
14 50 40	J1001+3424	09 31 19	70.5	160.7	-0.5		-13.9	-22	72	No stop
14 52 40	=0958+346	09 33 20	70.6	161.9	-0.5		-13.1	98	79	14 50 41
14 52 40	3C236	09 33 20	70.8	158.6	-0.6		-15.5	-21	79	No stop
14 56 00	---	09 36 40	71.0	160.7	-0.5		-14.0	179	92	14 52 41
14 57 00	J1001+3424	09 37 40	70.8	164.6	-0.4		-11.2	38	92	14 57 00
14 58 00	=0958+346	09 38 41	70.8	165.2	-0.4		-10.7	60	96	14 57 01
14 58 00	3C236	09 38 41	71.1	161.9	-0.5		-13.1	-21	96	No stop
15 01 20	---	09 42 01	71.2	164.0	-0.4		-11.7	179	109	14 58 01
15 01 20	J1001+3424	09 42 01	70.9	167.2	-0.3		-9.2	-22	109	No stop
15 03 20	=0958+346	09 44 01	71.0	168.5	-0.3		-8.3	98	117	15 01 21
15 03 20	3C236	09 44 01	71.3	165.2	-0.4		-10.8	-21	117	No stop
15 06 40	---	09 47 22	71.4	167.3	-0.3		-9.2	179	129	15 03 21
15 07 40	J1001+3424	09 48 22	71.1	171.2	-0.2		-6.4	38	129	15 07 40
15 08 40	=0958+346	09 49 22	71.1	171.9	-0.2		-5.9	60	133	15 07 41

Schedule for TORUN (Code Tr) Page 3

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
15 08 40	3C236	09 49 22	71.5	168.6	-0.3		-8.3	-21	133	No stop
15 12 00	---	09 52 43	71.6	170.7	-0.2		-6.8	179	146	15 08 41
15 12 00	J1001+3424	09 52 43	71.2	174.0	-0.2		-4.4	-22	146	No stop
15 14 00	=0958+346	09 54 43	71.2	175.3	-0.1		-3.4	98	154	15 12 01
15 14 00	3C236	09 54 43	71.6	172.0	-0.2		-5.8	-21	154	No stop
15 17 20	---	09 58 04	71.7	174.2	-0.1		-4.2	179	167	15 14 01
15 18 20	J1001+3424	09 59 04	71.2	178.1	-0.1		-1.4	39	167	15 18 20
15 19 20	=0958+346	10 00 04	71.2	178.7	0.0		-0.9	60	171	15 18 21
15 19 20	3C236	10 00 04	71.7	175.5	-0.1		-3.3	-21	171	No stop
15 22 40	---	10 03 25	71.7	177.7	-0.1		-1.7	179	183	15 19 21
15 22 40	J1001+3424	10 03 25	71.2	180.8	0.0		0.6	-21	183	No stop
15 24 40	=0958+346	10 05 25	71.2	182.1	0.1		1.6	99	191	15 22 41
15 24 40	3C236	10 05 25	71.7	179.0	0.0		-0.7	-20	191	No stop
15 28 00	---	10 08 45	71.7	181.2	0.0		0.9	180	204	15 24 41
15 29 00	J1001+3424	10 09 46	71.2	184.9	0.1		3.6	39	204	15 29 00
15 30 00	=0958+346	10 10 46	71.2	185.6	0.1		4.0	60	208	15 29 01
15 30 00	3C236	10 10 46	71.7	182.5	0.1		1.8	-20	208	No stop
15 33 30	---	10 14 16	71.7	184.8	0.1		3.5	190	221	15 30 01
15 34 30	J1001+3424	10 15 17	71.1	188.4	0.2		6.1	39	221	15 34 30
15 35 30	=0958+346	10 16 17	71.1	189.1	0.2		6.6	60	225	15 34 31
15 35 30	3C236	10 16 17	71.7	186.1	0.2		4.5	-20	225	No stop
15 39 00	---	10 19 47	71.6	188.4	0.2		6.1	190	238	15 35 31
15 39 00	J1001+3424	10 19 47	71.0	191.3	0.3		8.2	-21	238	No stop
15 41 00	=0958+346	10 21 48	70.9	192.5	0.3		9.1	99	246	15 39 01
15 41 00	3C236	10 21 48	71.5	189.7	0.2		7.1	-20	246	No stop
15 44 30	---	10 25 18	71.4	191.9	0.3		8.7	190	260	15 41 01
15 45 30	J1001+3424	10 26 18	70.8	195.3	0.4		11.1	40	260	15 45 30
15 46 30	=0958+346	10 27 19	70.7	195.9	0.4		11.5	60	263	15 45 31
15 46 30	3C236	10 27 19	71.4	193.2	0.3		9.6	-19	263	No stop
15 50 00	---	10 30 49	71.2	195.4	0.4		11.2	191	277	15 46 31
15 50 00	J1001+3424	10 30 49	70.6	198.1	0.5		13.0	-20	277	No stop
15 52 00	=0958+346	10 32 49	70.5	199.3	0.5		13.9	100	285	15 50 01

Schedule for TORUN (Code Tr) Page 4

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
15 52 00	3C236	10 32 49	71.2	196.7	0.4		12.1	-19	285	No stop
15 55 30	---	10 36 20	71.0	198.8	0.5		13.7	191	298	15 52 01
15 56 30	J1001+3424	10 37 20	70.2	202.0	0.6		15.8	40	298	15 56 30
15 57 30	=0958+346	10 38 20	70.2	202.5	0.6		16.2	60	302	15 56 31
15 57 30	3C236	10 38 20	70.9	200.1	0.5		14.5	-19	302	No stop
16 01 00	---	10 41 51	70.7	202.2	0.6		16.0	191	315	15 57 31
16 01 00	J1001+3424	10 41 51	70.0	204.6	0.7		17.6	-19	315	No stop
16 03 00	=0958+346	10 43 51	69.8	205.7	0.7		18.4	101	323	16 01 01
16 03 00	3C236	10 43 51	70.6	203.4	0.6		16.9	-18	323	No stop
16 06 30	---	10 47 22	70.4	205.4	0.7		18.3	192	337	16 03 01
16 07 30	J1001+3424	10 48 22	69.5	208.3	0.8		20.1	41	337	16 07 30
16 08 30	=0958+346	10 49 22	69.5	208.8	0.8		20.5	60	340	16 07 31
16 08 30	3C236	10 49 22	70.2	206.6	0.7		19.1	-18	340	No stop
16 12 00	---	10 52 53	70.0	208.6	0.8		20.5	192	354	16 08 31
16 12 00	J1001+3424	10 52 53	69.2	210.7	0.8		21.8	-18	354	No stop
16 14 00	=0958+346	10 54 53	69.0	211.8	0.9		22.5	102	362	16 12 01
16 14 00	3C236	10 54 53	69.9	209.7	0.8		21.2	-18	362	No stop
16 17 40	---	10 58 34	69.6	211.7	0.9		22.6	202	376	16 14 01
16 18 40	J1001+3424	10 59 34	68.7	214.3	1.0		24.2	42	376	16 18 40
16 19 40	=0958+346	11 00 34	68.6	214.8	1.0		24.5	60	379	16 18 41
16 20 40	J0927+3902	11 01 34	68.7	238.0	1.6		40.9	-1	379	16 20 40
16 25 40	=0923+392	11 06 35	68.0	240.0	1.6		42.0	299	399	16 20 41
16 25 40	J1001+3424	11 06 35	68.0	217.8	1.1		26.5	-58	399	No stop
16 28 40	=0958+346	11 09 35	67.8	219.3	1.1		27.4	122	410	16 25 41
16 28 40	3C236	11 09 35	68.6	217.5	1.0		26.4	-17	410	No stop
16 32 20	---	11 13 16	68.3	219.3	1.1		27.6	203	424	16 28 41
16 33 20	J1001+3424	11 14 16	67.3	221.5	1.2		28.8	43	424	16 33 20
16 34 20	=0958+346	11 15 16	67.2	222.0	1.2		29.1	60	428	16 33 21
16 34 20	3C236	11 15 16	68.1	220.3	1.1		28.2	-16	428	No stop
16 37 50	---	11 18 47	67.8	222.0	1.2		29.3	194	442	16 34 21

Schedule for TORUN (Code Tr) Page 5

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
16 37 50	J1001+3424	11 18 47	66.8	223.6	1.3		30.1	-17	442	No stop
16 39 50	=0958+346	11 20 47	66.6	224.5	1.3		30.6	103	449	16 37 51
16 39 50	3C236	11 20 47	67.6	222.9	1.2		29.9	-16	449	No stop
16 43 30	---	11 24 28	67.2	224.6	1.3		30.9	204	463	16 39 51
16 44 30	J1001+3424	11 25 28	66.1	226.6	1.4		31.9	44	463	16 44 30
16 45 30	=0958+346	11 26 28	66.0	227.0	1.4		32.1	60	467	16 44 31
16 45 30	3C236	11 26 28	67.0	225.5	1.3		31.5	-16	467	No stop
16 49 00	---	11 29 59	66.6	227.1	1.4		32.4	194	481	16 45 31
16 49 00	J1001+3424	11 29 59	65.6	228.5	1.5		33.0	-16	481	No stop
16 51 00	=0958+346	11 31 59	65.4	229.3	1.5		33.5	104	488	16 49 01
16 51 00	3C236	11 31 59	66.4	227.9	1.4		32.9	-16	488	No stop
16 54 40	---	11 35 40	65.9	229.5	1.5		33.8	204	503	16 51 01
16 55 40	J1001+3424	11 36 40	64.9	231.2	1.6		34.5	44	503	16 55 40
16 56 40	=0958+346	11 37 40	64.7	231.6	1.6		34.8	60	506	16 55 41
16 56 40	3C236	11 37 40	65.7	230.3	1.5		34.3	-16	506	No stop
17 00 10	---	11 41 11	65.3	231.7	1.6		35.1	194	520	16 56 41
17 00 10	J1001+3424	11 41 11	64.3	233.0	1.7		35.5	-17	520	No stop
17 02 10	=0958+346	11 43 11	64.1	233.8	1.7		35.9	103	528	17 00 11
17 02 10	3C236	11 43 11	65.1	232.5	1.6		35.5	-16	528	No stop
17 05 50	---	11 46 52	64.6	234.0	1.7		36.3	204	542	17 02 11
17 06 50	J1001+3424	11 47 52	63.5	235.5	1.8		36.8	43	542	17 06 50
17 07 50	=0958+346	11 48 52	63.4	235.9	1.8		37.0	60	546	17 06 51
17 07 50	3C236	11 48 52	64.4	234.8	1.7		36.7	-16	546	No stop
17 11 20	---	11 52 22	63.9	236.1	1.8		37.4	194	559	17 07 51
17 11 20	J1001+3424	11 52 22	62.9	237.2	1.8		37.7	-17	559	No stop
17 13 20	=0958+346	11 54 23	62.7	237.9	1.9		38.0	103	567	17 11 21
17 13 20	3C236	11 54 23	63.7	236.8	1.8		37.7	-16	567	No stop
17 17 00	---	11 58 03	63.2	238.1	1.9		38.4	204	581	17 13 21
17 18 00	J1001+3424	11 59 04	62.1	239.5	1.9		38.8	43	581	17 18 00
17 19 00	=0958+346	12 00 04	62.0	239.9	2.0		39.0	60	585	17 18 01

Schedule for TORUN (Code Tr) Page 6

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
17 19 00	3C236	12 00 04	63.0	238.9	1.9		38.8	-16	585	No stop
17 22 30	---	12 03 34	62.5	240.1	1.9		39.3	194	598	17 19 01
17 22 30	J1001+3424	12 03 34	61.5	241.1	2.0		39.5	-17	598	No stop
17 24 30	=0958+346	12 05 35	61.2	241.7	2.1		39.8	103	606	17 22 31
17 24 30	3C236	12 05 35	62.3	240.8	2.0		39.7	-16	606	No stop
17 28 00	---	12 09 05	61.8	241.9	2.0		40.2	194	619	17 24 31
17 29 00	J1001+3424	12 10 05	60.6	243.2	2.1		40.5	43	619	17 29 00
17 30 00	=0958+346	12 11 06	60.5	243.5	2.2		40.6	60	623	17 29 01
17 30 00	3C236	12 11 06	61.5	242.6	2.1		40.5	-16	623	No stop
17 33 40	---	12 14 46	61.0	243.8	2.1		41.0	204	637	17 30 01
17 34 40	J1001+3424	12 15 46	59.9	245.0	2.2		41.2	43	637	17 34 40
17 35 40	=0958+346	12 16 46	59.7	245.3	2.2		41.3	60	641	17 34 41
17 35 40	3C236	12 16 46	60.8	244.4	2.2		41.3	-17	641	No stop
17 39 20	---	12 20 27	60.3	245.6	2.2		41.8	203	655	17 35 41
17 39 20	J1001+3424	12 20 27	59.2	246.4	2.3		41.8	-17	655	No stop
17 41 20	=0958+346	12 22 27	59.0	247.0	2.3		42.0	103	663	17 39 21
17 41 20	3C236	12 22 27	60.0	246.2	2.3		42.0	-17	663	No stop
17 45 00	---	12 26 08	59.5	247.3	2.3		42.4	203	677	17 41 21
17 46 00	J1001+3424	12 27 08	58.3	248.4	2.4		42.5	43	677	17 46 00
17 47 00	=0958+346	12 28 08	58.2	248.7	2.4		42.6	60	681	17 46 01
17 47 00	3C236	12 28 08	59.2	247.9	2.4		42.7	-17	681	No stop
17 50 40	---	12 31 49	58.7	249.0	2.4		43.1	203	695	17 47 01
17 50 40	J1001+3424	12 31 49	57.7	249.7	2.5		43.0	-17	695	No stop
17 52 40	=0958+346	12 33 49	57.4	250.3	2.5		43.2	103	703	17 50 41
17 52 40	3C236	12 33 49	58.4	249.5	2.4		43.3	-17	703	No stop
17 56 20	---	12 37 30	57.9	250.6	2.5		43.6	203	717	17 52 41
17 57 20	J1001+3424	12 38 30	56.7	251.6	2.6		43.6	43	717	17 57 20
17 58 20	=0958+346	12 39 30	56.6	251.8	2.6		43.7	60	721	17 57 21
17 58 20	3C236	12 39 30	57.6	251.1	2.5		43.8	-17	721	No stop
18 02 00	---	12 43 11	57.1	252.1	2.6		44.1	203	735	17 58 21

Schedule for TORUN (Code Tr) Page 7

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
18 02 00	J1001+3424	12 43 11	56.0	252.8	2.7		44.0	-17	735	No stop
18 04 00	=0958+346	12 45 11	55.7	253.3	2.7		44.2	103	742	18 02 01
18 04 00	3C236	12 45 11	56.8	252.7	2.6		44.3	-17	742	No stop
18 07 40	---	12 48 52	56.3	253.7	2.7		44.6	203	756	18 04 01
18 08 40	J1001+3424	12 49 52	55.1	254.6	2.8		44.5	43	756	18 08 40
18 09 40	=0958+346	12 50 52	54.9	254.8	2.8		44.6	60	760	18 08 41
18 09 40	3C236	12 50 52	56.0	254.2	2.7		44.7	-17	760	No stop
18 13 20	---	12 54 33	55.4	255.1	2.8		45.0	203	774	18 09 41
18 13 20	J1001+3424	12 54 33	54.4	255.8	2.9		44.8	-17	774	No stop
18 15 20	=0958+346	12 56 33	54.1	256.3	2.9		44.9	103	782	18 13 21
18 15 20	3C236	12 56 33	55.1	255.6	2.8		45.1	-17	782	No stop
18 18 50	---	13 00 04	54.6	256.5	2.9		45.3	193	796	18 15 21
18 19 50	J1001+3424	13 01 04	53.4	257.4	3.0		45.2	43	796	18 19 50
18 20 50	=0958+346	13 02 04	53.3	257.6	3.0		45.3	60	799	18 19 51
18 21 50	J0927+3902	13 03 04	51.2	270.9	3.6		50.6	19	799	18 21 50
18 26 50	=0923+392	13 08 05	50.4	271.9	3.7		50.5	300	819	18 21 51
18 26 50	J1001+3424	13 08 05	52.4	259.1	3.1		45.6	-40	819	No stop
18 29 50	=0958+346	13 11 05	52.0	259.8	3.1		45.7	140	830	18 26 51
18 29 50	3C236	13 11 05	53.0	259.2	3.1		45.9	-17	830	No stop
18 33 20	---	13 14 36	52.5	260.0	3.1		46.1	193	844	18 29 51
18 34 20	J1001+3424	13 15 36	51.3	260.8	3.2		45.9	43	844	18 34 20
18 35 20	=0958+346	13 16 36	51.2	261.0	3.2		45.9	60	847	18 34 21
18 35 20	3C236	13 16 36	52.2	260.5	3.2		46.2	-17	847	No stop
18 38 50	---	13 20 07	51.7	261.3	3.2		46.3	193	861	18 35 21
18 38 50	J1001+3424	13 20 07	50.6	261.8	3.3		46.0	-17	861	No stop
18 40 50	=0958+346	13 22 07	50.3	262.3	3.3		46.1	103	869	18 38 51
18 40 50	3C236	13 22 07	51.4	261.8	3.3		46.4	-17	869	No stop
18 44 20	---	13 25 38	50.9	262.6	3.3		46.5	193	882	18 40 51
18 45 20	J1001+3424	13 26 38	49.7	263.3	3.4		46.2	43	882	18 45 20
18 46 20	=0958+346	13 27 38	49.5	263.5	3.4		46.3	60	886	18 45 21

Schedule for TORUN (Code Tr) Page 8

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
18 46 20	3C236	13 27 38	50.6	263.0	3.3		46.6	-17	886	No stop
18 49 50	---	13 31 09	50.0	263.8	3.4		46.7	193	899	18 46 21
18 49 50	J1001+3424	13 31 09	49.0	264.3	3.5		46.4	-17	899	No stop
18 51 50	=0958+346	13 33 09	48.7	264.7	3.5		46.4	103	907	18 49 51
18 51 50	3C236	13 33 09	49.7	264.2	3.4		46.7	-17	907	No stop
18 55 20	---	13 36 40	49.2	265.0	3.5		46.8	193	921	18 51 51
18 56 20	J1001+3424	13 37 40	48.0	265.7	3.6		46.5	43	921	18 56 20
18 57 20	=0958+346	13 38 40	47.9	265.9	3.6		46.5	60	924	18 56 21
18 57 20	3C236	13 38 40	48.9	265.4	3.5		46.8	-17	924	No stop
19 00 50	---	13 42 10	48.4	266.1	3.6		46.9	193	938	18 57 21
19 00 50	J1001+3424	13 42 10	47.3	266.6	3.7		46.6	-17	938	No stop
19 02 50	=0958+346	13 44 11	47.0	267.1	3.7		46.6	103	946	19 00 51
19 02 50	3C236	13 44 11	48.1	266.6	3.6		46.9	-17	946	No stop
19 06 20	---	13 47 41	47.6	267.3	3.7		46.9	193	959	19 02 51
19 07 20	J1001+3424	13 48 42	46.4	268.0	3.8		46.6	43	959	19 07 20
19 08 20	=0958+346	13 49 42	46.2	268.2	3.8		46.6	60	963	19 07 21
19 08 20	3C236	13 49 42	47.3	267.7	3.7		47.0	-17	963	No stop
19 11 50	---	13 53 12	46.7	268.4	3.8		47.0	193	976	19 08 21
19 11 50	J1001+3424	13 53 12	45.7	268.9	3.9		46.6	-17	976	No stop
19 13 50	=0958+346	13 55 13	45.4	269.3	3.9		46.7	103	984	19 11 51
19 13 50	3C236	13 55 13	46.4	268.8	3.8		47.0	-17	984	No stop
19 17 20	---	13 58 43	45.9	269.6	3.9		47.0	193	997	19 13 51
19 18 20	J1001+3424	13 59 43	44.7	270.2	4.0		46.7	43	997	19 18 20
19 19 20	=0958+346	14 00 43	44.6	270.4	4.0		46.7	60	1001	19 18 21
19 19 20	3C236	14 00 43	45.6	270.0	3.9		47.0	-17	1001	No stop
19 22 50	---	14 04 14	45.1	270.7	4.0		47.0	193	1015	19 19 21
19 22 50	J1001+3424	14 04 14	44.0	271.1	4.0		46.6	-17	1015	No stop
19 24 50	=0958+346	14 06 14	43.7	271.5	4.1		46.6	103	1022	19 22 51
19 24 50	3C236	14 06 14	44.8	271.1	4.0		47.0	-17	1022	No stop
19 28 20	---	14 09 45	44.3	271.7	4.0		47.0	193	1036	19 24 51

Schedule for TORUN (Code Tr) Page 9

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
19 29 20	J1001+3424	14 10 45	43.0	272.4	4.1		46.6	43	1036	19 29 20
19 30 20	=0958+346	14 11 45	42.9	272.6	4.2		46.6	60	1040	19 29 21
19 31 20	J0927+3902	14 12 45	40.8	283.5	4.7		48.7	23	1040	19 31 20
19 36 20	=0923+392	14 17 46	40.1	284.4	4.8		48.4	300	1059	19 31 21
19 36 20	J1001+3424	14 17 46	42.0	273.7	4.3		46.5	-36	1059	No stop
19 39 20	=0958+346	14 20 47	41.5	274.3	4.3		46.5	144	1071	19 36 21
19 39 20	3C236	14 20 47	42.6	273.9	4.2		46.9	-17	1071	No stop
19 43 00	---	14 24 27	42.1	274.6	4.3		46.8	203	1085	19 39 21
19 44 00	J1001+3424	14 25 28	40.8	275.2	4.4		46.4	43	1085	19 44 00
19 45 00	=0958+346	14 26 28	40.7	275.4	4.4		46.4	60	1088	19 44 01
19 45 00	3C236	14 26 28	41.8	274.9	4.3		46.8	-17	1088	No stop
19 48 40	---	14 30 08	41.2	275.6	4.4		46.7	203	1103	19 45 01
19 48 40	J1001+3424	14 30 08	40.1	276.1	4.5		46.3	-17	1103	No stop
19 50 40	=0958+346	14 32 09	39.8	276.4	4.5		46.3	103	1110	19 48 41
19 50 40	3C236	14 32 09	40.9	276.0	4.4		46.7	-17	1110	No stop
19 54 20	---	14 35 49	40.4	276.7	4.5		46.6	203	1124	19 50 41
19 55 20	J1001+3424	14 36 49	39.1	277.3	4.6		46.2	43	1124	19 55 20
19 56 20	=0958+346	14 37 50	39.0	277.5	4.6		46.1	60	1128	19 55 21
19 56 20	3C236	14 37 50	40.1	277.1	4.5		46.5	-17	1128	No stop
20 00 00	---	14 41 30	39.5	277.7	4.6		46.5	203	1142	19 56 21
20 00 00	J1001+3424	14 41 30	38.5	278.2	4.7		46.0	-17	1142	No stop
20 02 00	=0958+346	14 43 30	38.2	278.5	4.7		46.0	103	1150	20 00 01
20 02 00	3C236	14 43 30	39.2	278.1	4.6		46.4	-17	1150	No stop
20 05 40	---	14 47 11	38.7	278.8	4.7		46.3	203	1164	20 02 01
20 06 40	J1001+3424	14 48 11	37.5	279.4	4.8		45.8	43	1164	20 06 40
20 07 40	=0958+346	14 49 11	37.3	279.6	4.8		45.8	60	1168	20 06 41
20 07 40	3C236	14 49 11	38.4	279.1	4.7		46.2	-17	1168	No stop
20 11 20	---	14 52 52	37.8	279.8	4.8		46.1	203	1182	20 07 41
20 11 20	J1001+3424	14 52 52	36.8	280.2	4.8		45.7	-17	1182	No stop
20 13 20	=0958+346	14 54 52	36.5	280.6	4.9		45.6	103	1190	20 11 21

Schedule for TORUN (Code Tr) Page 10

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
20 13 20	3C236	14 54 52	37.5	280.2	4.8		46.1	-17	1190	No stop
20 17 00	---	14 58 33	37.0	280.8	4.9		45.9	203	1204	20 13 21
20 18 00	J1001+3424	14 59 33	35.8	281.4	5.0		45.5	43	1204	20 18 00
20 19 00	=0958+346	15 00 33	35.6	281.6	5.0		45.4	60	1208	20 18 01
20 19 00	3C236	15 00 33	36.7	281.2	4.9		45.9	-17	1208	No stop
20 22 40	---	15 04 14	36.1	281.8	5.0		45.7	203	1222	20 19 01
20 22 40	J1001+3424	15 04 14	35.1	282.3	5.0		45.3	-17	1222	No stop
20 24 40	=0958+346	15 06 14	34.8	282.6	5.1		45.2	103	1229	20 22 41
20 24 40	3C236	15 06 14	35.9	282.2	5.0		45.6	-17	1229	No stop
20 28 00	---	15 09 35	35.4	282.8	5.0		45.5	183	1242	20 24 41
20 29 00	J1001+3424	15 10 35	34.2	283.4	5.1		45.0	43	1242	20 29 00
20 30 00	=0958+346	15 11 35	34.0	283.6	5.2		45.0	60	1246	20 29 01
20 30 00	J0958+3224	15 11 35	32.2	282.4	5.2		44.0	-21	1246	No stop
20 37 00	=0955+326	15 18 36	31.1	283.6	5.3		43.7	399	1273	20 30 01
20 38 00	J1001+3424	15 19 36	32.9	285.0	5.3		44.6	39	1273	20 38 00
20 40 30	=0958+346	15 22 07	32.5	285.4	5.3		44.5	150	1283	20 38 01
20 40 30	3C236	15 22 07	33.5	285.0	5.3		45.0	-17	1283	No stop
20 43 50	---	15 25 27	33.1	285.6	5.3		44.8	183	1296	20 40 31
20 44 50	J1001+3424	15 26 28	31.9	286.2	5.4		44.3	43	1296	20 44 50
20 45 50	=0958+346	15 27 28	31.7	286.3	5.4		44.3	60	1299	20 44 51
20 45 50	3C236	15 27 28	32.8	285.9	5.3		44.7	-17	1299	No stop
20 49 10	---	15 30 48	32.3	286.5	5.4		44.5	183	1312	20 45 51
20 49 10	J1001+3424	15 30 48	31.2	286.9	5.5		44.1	-17	1312	No stop
20 51 10	=0958+346	15 32 49	30.9	287.3	5.5		44.0	103	1320	20 49 11
20 51 10	3C236	15 32 49	32.0	286.8	5.4		44.4	-17	1320	No stop
20 54 30	---	15 36 09	31.5	287.4	5.5		44.3	183	1333	20 51 11
20 55 30	J1001+3424	15 37 09	30.3	288.0	5.6		43.8	43	1333	20 55 30
20 56 30	=0958+346	15 38 09	30.2	288.2	5.6		43.7	60	1337	20 55 31
20 56 30	3C236	15 38 09	31.2	287.8	5.5		44.2	-17	1337	No stop
20 59 50	---	15 41 30	30.7	288.3	5.6		44.0	183	1349	20 56 31

Schedule for TORUN (Code Tr) Page 11

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
20 59 50	J1001+3424	15 41 30	29.7	288.8	5.7		43.5	-17	1349	No stop
21 01 50	=0958+346	15 43 30	29.4	289.1	5.7		43.4	103	1357	20 59 51
21 01 50	3C236	15 43 30	30.5	288.7	5.6		43.9	-17	1357	No stop
21 05 10	---	15 46 51	30.0	289.2	5.7		43.7	183	1370	21 01 51
21 06 10	J1001+3424	15 47 51	28.8	289.9	5.8		43.2	43	1370	21 06 10
21 07 10	=0958+346	15 48 51	28.7	290.0	5.8		43.1	60	1374	21 06 11
21 07 10	3C236	15 48 51	29.7	289.6	5.7		43.6	-17	1374	No stop
21 10 30	---	15 52 12	29.2	290.2	5.8		43.4	183	1387	21 07 11
21 10 30	J1001+3424	15 52 12	28.2	290.6	5.8		42.9	-17	1387	No stop
21 12 30	=0958+346	15 54 12	27.9	291.0	5.9		42.8	103	1394	21 10 31
21 12 30	3C236	15 54 12	28.9	290.5	5.8		43.2	-17	1394	No stop
21 15 50	---	15 57 33	28.5	291.1	5.8		43.0	183	1407	21 12 31
21 16 50	J1001+3424	15 58 33	27.3	291.7	5.9		42.5	43	1407	21 16 50
21 17 50	=0958+346	15 59 33	27.2	291.9	6.0		42.4	60	1411	21 16 51
21 17 50	3C236	15 59 33	28.2	291.4	5.9		42.9	-17	1411	No stop
21 21 10	---	16 02 53	27.7	292.0	5.9		42.7	183	1424	21 17 51
21 21 10	J1001+3424	16 02 53	26.7	292.4	6.0		42.2	-17	1424	No stop
21 23 10	=0958+346	16 04 54	26.4	292.8	6.0		42.1	103	1431	21 21 11
21 23 10	3C236	16 04 54	27.5	292.3	6.0		42.6	-17	1431	No stop
21 26 30	---	16 08 14	27.0	292.9	6.0		42.4	183	1444	21 23 11
21 27 30	J1001+3424	16 09 15	25.8	293.5	6.1		41.8	43	1444	21 27 30
21 28 30	=0958+346	16 10 15	25.7	293.7	6.1		41.8	60	1448	21 27 31
21 28 30	3C236	16 10 15	26.7	293.2	6.1		42.2	-17	1448	No stop
21 31 50	---	16 13 35	26.3	293.8	6.1		42.0	183	1461	21 28 31
21 31 50	J1001+3424	16 13 35	25.2	294.3	6.2		41.5	-17	1461	No stop
21 33 50	=0958+346	16 15 36	25.0	294.6	6.2		41.4	103	1469	21 31 51
21 33 50	3C236	16 15 36	26.0	294.1	6.1		41.9	-17	1469	No stop
21 37 10	---	16 18 56	25.5	294.7	6.2		41.6	183	1481	21 33 51
21 38 10	J1001+3424	16 19 56	24.4	295.4	6.3		41.1	43	1481	21 38 10
21 39 10	=0958+346	16 20 56	24.2	295.5	6.3		41.0	60	1485	21 38 11

Schedule for TORUN (Code Tr) Page 12

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
21 39 10	3C236	16 20 56	25.2	295.1	6.2		41.5	-17	1485	No stop
21 42 30	---	16 24 17	24.8	295.6	6.3		41.3	183	1498	21 39 11
21 42 30	J1001+3424	16 24 17	23.8	296.1	6.4		40.8	-17	1498	No stop
21 44 30	=0958+346	16 26 17	23.5	296.4	6.4		40.6	103	1506	21 42 31
21 44 30	3C236	16 26 17	24.5	296.0	6.3		41.1	-17	1506	No stop
21 47 50	---	16 29 38	24.1	296.5	6.4		40.9	183	1519	21 44 31
21 48 50	J1001+3424	16 30 38	22.9	297.2	6.5		40.3	43	1519	21 48 50
21 50 00	=0958+346	16 31 48	22.8	297.4	6.5		40.2	70	1523	21 48 51
21 51 00	J0958+3224	16 32 48	20.7	296.7	6.6		39.4	39	1523	21 51 00
21 58 00	=0955+326	16 39 50	19.8	297.9	6.7		38.9	420	1550	21 51 01
21 58 00	J1001+3424	16 39 50	21.7	298.8	6.6		39.6	-21	1550	No stop
22 00 00	=0958+346	16 41 50	21.4	299.1	6.7		39.5	99	1558	21 58 01
22 00 00	3C236	16 41 50	22.5	298.6	6.6		40.0	-16	1558	No stop
22 03 30	---	16 45 20	22.0	299.2	6.6		39.7	194	1571	22 00 01
22 04 30	J1001+3424	16 46 21	20.9	299.9	6.7		39.1	43	1571	22 04 30
22 05 30	=0958+346	16 47 21	20.7	300.0	6.8		39.0	60	1575	22 04 31
22 05 30	3C236	16 47 21	21.7	299.5	6.7		39.5	-16	1575	No stop
22 09 00	---	16 50 51	21.3	300.1	6.7		39.2	194	1588	22 05 31
22 09 00	J1001+3424	16 50 51	20.3	300.6	6.8		38.7	-17	1588	No stop
22 11 00	=0958+346	16 52 52	20.0	301.0	6.8		38.6	103	1596	22 09 01
22 11 00	3C236	16 52 52	21.0	300.5	6.8		39.1	-16	1596	No stop
22 14 30	---	16 56 22	20.6	301.1	6.8		38.8	194	1610	22 11 01
22 15 30	J1001+3424	16 57 22	19.4	301.8	6.9		38.2	43	1610	22 15 30
22 16 30	=0958+346	16 58 23	19.3	301.9	6.9		38.1	60	1613	22 15 31
22 16 30	3C236	16 58 23	20.3	301.4	6.9		38.6	-16	1613	No stop
22 20 00	---	17 01 53	19.9	302.0	6.9		38.3	194	1627	22 16 31
22 20 00	J1001+3424	17 01 53	18.9	302.5	7.0		37.8	-17	1627	No stop
22 22 00	=0958+346	17 03 53	18.6	302.9	7.0		37.6	103	1635	22 20 01
22 22 00	3C236	17 03 53	19.6	302.4	6.9		38.2	-16	1635	No stop
22 25 30	---	17 07 24	19.2	303.0	7.0		37.9	194	1648	22 22 01

Schedule for TORUN (Code Tr) Page 13

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
22 26 30	J1001+3424	17 08 24	18.0	303.7	7.1		37.2	43	1648	22 26 30
22 27 30	=0958+346	17 09 24	17.9	303.8	7.1		37.2	60	1652	22 26 31
22 27 30	3C236	17 09 24	18.9	303.3	7.0		37.7	-16	1652	No stop
22 31 00	---	17 12 55	18.5	303.9	7.1		37.4	194	1665	22 27 31
22 31 00	J1001+3424	17 12 55	17.5	304.4	7.2		36.8	-17	1665	No stop
22 33 00	=0958+346	17 14 55	17.2	304.8	7.2		36.7	103	1673	22 31 01
22 33 00	3C236	17 14 55	18.2	304.3	7.1		37.2	-16	1673	No stop
22 36 30	---	17 18 26	17.8	304.9	7.2		36.9	194	1687	22 33 01
22 37 30	J1001+3424	17 19 26	16.7	305.6	7.3		36.3	43	1687	22 37 30
22 38 30	=0958+346	17 20 26	16.6	305.8	7.3		36.2	60	1690	22 37 31
22 38 30	3C236	17 20 26	17.5	305.2	7.2		36.7	-16	1690	No stop
22 42 00	---	17 23 57	17.1	305.8	7.3		36.4	194	1704	22 38 31
22 42 00	J1001+3424	17 23 57	16.1	306.4	7.4		35.8	-17	1704	No stop
22 44 00	=0958+346	17 25 57	15.9	306.7	7.4		35.7	103	1712	22 42 01
22 44 00	3C236	17 25 57	16.9	306.2	7.3		36.2	-16	1712	No stop
22 47 30	---	17 29 28	16.4	306.8	7.4		35.9	194	1725	22 44 01
22 48 30	J1001+3424	17 30 28	15.3	307.5	7.5		35.2	43	1725	22 48 30
22 49 30	=0958+346	17 31 28	15.2	307.7	7.5		35.1	60	1729	22 48 31
22 49 30	3C236	17 31 28	16.2	307.1	7.4		35.7	-16	1729	No stop
22 53 00	---	17 34 59	15.8	307.7	7.5		35.3	194	1742	22 49 31
22 53 00	J1001+3424	17 34 59	14.8	308.3	7.5		34.8	-17	1742	No stop
22 55 00	=0958+346	17 36 59	14.6	308.6	7.6		34.6	103	1750	22 53 01
22 55 00	3C236	17 36 59	15.5	308.1	7.5		35.2	-16	1750	No stop
22 58 30	---	17 40 29	15.1	308.7	7.6		34.8	194	1763	22 55 01
22 59 30	J1001+3424	17 41 30	14.0	309.4	7.7		34.2	44	1763	22 59 30
23 00 30	=0958+346	17 42 30	13.9	309.6	7.7		34.1	60	1767	22 59 31
23 01 30	J0927+3902	17 43 30	14.0	318.3	8.3		30.9	28	1767	23 01 30
23 06 30	=0923+392	17 48 31	13.5	319.2	8.3		30.3	300	1787	23 01 31
23 06 30	J1001+3424	17 48 31	13.2	310.7	7.8		33.5	-32	1787	No stop
23 08 30	=0958+346	17 50 31	13.0	311.0	7.8		33.3	88	1794	23 06 31

Schedule for TORUN (Code Tr) Page 14

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
23 08 30	3C236	17 50 31	14.0	310.5	7.7		33.8	-16	1794	No stop
23 12 00	---	17 54 02	13.6	311.1	7.8		33.5	194	1808	23 08 31
23 13 00	J1001+3424	17 55 02	12.5	311.8	7.9		32.8	44	1808	23 13 00
23 14 00	=0958+346	17 56 02	12.4	312.0	7.9		32.7	60	1812	23 13 01
23 14 00	3C236	17 56 02	13.3	311.4	7.8		33.3	-16	1812	No stop
23 17 30	---	17 59 33	12.9	312.0	7.9		32.9	194	1825	23 14 01
23 17 30	J1001+3424	17 59 33	12.0	312.6	8.0		32.3	-16	1825	No stop
23 19 30	=0958+346	18 01 33	11.8	313.0	8.0		32.1	104	1833	23 17 31
23 19 30	3C236	18 01 33	12.7	312.4	7.9		32.7	-16	1833	No stop
23 23 00	---	18 05 04	12.3	313.0	8.0		32.3	194	1846	23 19 31
23 24 00	J1001+3424	18 06 04	11.3	313.8	8.1		31.7	44	1846	23 24 00
23 25 00	=0958+346	18 07 04	11.2	314.0	8.1		31.6	60	1850	23 24 01
23 25 00	3C236	18 07 04	12.1	313.4	8.0		32.1	-16	1850	No stop
23 28 30	---	18 10 34	11.7	314.0	8.1		31.7	194	1863	23 25 01
23 28 30	J1001+3424	18 10 34	10.8	314.6	8.1		31.2	-16	1863	No stop
23 30 30	=0958+346	18 12 35	10.6	315.0	8.2		31.0	104	1871	23 28 31
23 30 30	3C236	18 12 35	11.5	314.4	8.1		31.5	-16	1871	No stop
23 34 00	---	18 16 05	11.1	315.0	8.2		31.2	194	1885	23 30 31
23 35 00	J1001+3424	18 17 05	10.1	315.8	8.2		30.5	44	1885	23 35 00
23 36 00	=0958+346	18 18 06	10.0	316.0	8.3		30.4	60	1888	23 35 01
23 36 00	3C236	18 18 06	10.9	315.3	8.2		30.9	-16	1888	No stop
23 39 30	---	18 21 36	10.6	316.0	8.2		30.6	194	1902	23 36 01
23 39 30	J1001+3424	18 21 36	9.6	316.6	8.3		30.0	-16	1902	No stop
23 41 30	=0958+346	18 23 37	9.4	317.0	8.4		29.8	104	1910	23 39 31
23 41 30	3C236	18 23 37	10.4	316.3	8.3		30.3	-16	1910	No stop
23 45 00	---	18 27 07	10.0	317.0	8.3		29.9	194	1923	23 41 31
23 46 00	J1001+3424	18 28 07	9.0	317.8	8.4		29.3	44	1923	23 46 00
23 47 00	=0958+346	18 29 07	8.9	318.0	8.5		29.1	60	1927	23 46 01
23 47 00	3C236	18 29 07	9.8	317.3	8.4		29.7	-16	1927	No stop
23 50 30	---	18 32 38	9.4	318.0	8.4		29.3	194	1940	23 47 01

Schedule for TORUN (Code Tr) Page 15

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 13 Jun 2015 Day 164 ---										
23 50 30	J1001+3424	18 32 38	8.5	318.6	8.5		28.7	-16	1940	No stop
23 52 30	=0958+346	18 34 38	8.3	319.0	8.5		28.5	104	1948	23 50 31
23 52 30	3C236	18 34 38	9.2	318.3	8.5		29.1	-16	1948	No stop
23 56 00	---	18 38 09	8.9	319.0	8.5		28.7	194	1962	23 52 31
23 57 00	J1001+3424	18 39 09	7.9	319.8	8.6		28.0	44	1962	23 57 00
23 58 00	=0958+346	18 40 09	7.8	320.0	8.6		27.9	60	1965	23 57 01
--- Start: Sat 13 Jun 2015 Day 164 -- Stop: Sun 14 Jun 2015 Day 165 ---										
23 58 00	3C236	18 40 09	8.7	319.3	8.6		28.5	-16	1965	No stop
00 01 30	---	18 43 40	8.4	320.0	8.6		28.1	194	1979	23 58 01
00 01 30	J1001+3424	18 43 40	7.5	320.6	8.7		27.5	-16	1979	No stop
00 03 30	=0958+346	18 45 40	7.3	321.0	8.7		27.2	104	1987	00 01 31
00 03 30	3C236	18 45 40	8.2	320.3	8.6		27.8	-16	1987	No stop
00 07 00	---	18 49 11	7.8	321.0	8.7		27.4	194	2000	00 03 31
00 08 00	J1001+3424	18 50 11	6.8	321.8	8.8		26.7	44	2000	00 08 00
00 09 00	=0958+346	18 51 11	6.8	322.0	8.8		26.6	60	2004	00 08 01
00 09 00	3C236	18 51 11	7.6	321.4	8.7		27.2	-16	2004	No stop
00 12 30	---	18 54 42	7.3	322.0	8.8		26.8	194	2017	00 09 01
00 12 30	J1001+3424	18 54 42	6.4	322.7	8.9		26.2	-16	2017	No stop
00 14 30	=0958+346	18 56 42	6.2	323.1	8.9		25.9	104	2025	00 12 31
00 14 30	3C236	18 56 42	7.1	322.4	8.8		26.5	-16	2025	No stop
00 18 00	---	19 00 13	6.8	323.0	8.9		26.1	194	2038	00 14 31
00 19 00	J1001+3424	19 01 13	5.8	323.9	9.0		25.4	44	2038	00 19 00
00 20 00	=0958+346	19 02 13	5.8	324.1	9.0		25.2	60	2042	00 19 01
00 20 00	3C236	19 02 13	6.6	323.4	8.9		25.9	-16	2042	No stop
00 23 30	---	19 05 43	6.3	324.1	9.0		25.4	194	2056	00 20 01
00 23 30	J1001+3424	19 05 43	5.4	324.8	9.1		24.8	-16	2056	No stop
00 25 30	=0958+346	19 07 44	5.3	325.1	9.1		24.6	104	2063	00 23 31
00 25 30	3C236	19 07 44	6.1	324.4	9.0		25.2	-16	2063	No stop
00 28 50	---	19 11 04	5.8	325.1	9.1		24.8	184	2076	00 25 31

Schedule for TORUN (Code Tr) Page 16

Tracing the Evolution of Fast Jet-Driven Outflows

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
00 29 50	J1001+3424	19 12 04	4.9	325.9	9.2		24.0	44	2076	00 29 50
00 30 50	=0958+346	19 13 05	4.8	326.1	9.2		23.9	60	2080	00 29 51
00 31 50	J0927+3902	19 14 05	6.5	334.4	9.8		19.5	29	2080	00 31 50
00 36 50	=0923+392	19 19 06	6.2	335.4	9.9		18.8	300	2099	00 31 51
00 36 50	J1001+3424	19 19 06	4.3	327.3	9.3		23.1	-31	2099	No stop
00 38 50	=0958+346	19 21 06	4.2	327.7	9.3		22.9	89	2107	00 36 51
00 38 50	3C236	19 21 06	5.0	326.9	9.2		23.5	-15	2107	No stop
00 42 20	---	19 24 37	4.7	327.6	9.3		23.1	195	2121	00 38 51
00 43 20	J1001+3424	19 25 37	3.8	328.5	9.4		22.3	44	2121	00 43 20
00 44 20	=0958+346	19 26 37	3.7	328.7	9.4		22.2	60	2124	00 43 21
00 44 20	3C236	19 26 37	4.6	328.0	9.3		22.8	-15	2124	No stop
00 47 40	---	19 29 57	4.3	328.6	9.4		22.4	185	2137	00 44 21
00 47 40	J1001+3424	19 29 57	3.5	329.4	9.5		21.8	-16	2137	No stop
00 49 40	=0958+346	19 31 58	3.3	329.7	9.5		21.5	104	2145	00 47 41
00 49 40	3C236	19 31 58	4.1	329.0	9.4		22.1	-15	2145	No stop
00 53 10	---	19 35 28	3.9	329.7	9.5		21.7	195	2158	00 49 41
00 55 10	3C236	19 37 29	3.7	330.1	9.5		21.4	114	2158	00 55 10
00 58 30	---	19 40 49	3.5	330.7	9.6		21.0	200	2171	00 55 11
01 00 30	3C236	19 42 50	3.3	331.1	9.6		20.7	114	2171	01 00 30
01 04 00	---	19 46 20	3.1	331.8	9.7		20.3	210	2185	01 00 31

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

======== Setup file: 3C236globHI.set

Setup group: 15 Station: TORUN Total bit rate: 512
Format: MARK5B 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=   2100.00   2100.00   2100.00   2100.00   2100.00   2100.00   2100.00   2100.00
 Net SB=         L         L         L         L         L         L         L         L
 IF SB =         L         L         L         L         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
 BBC   =         1         5         2         6         3         7         4         8
 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:   5  Based on FREQ, BW, and/or DOPPLER in schedule.  Used with PCAL = off
 LO sum=   1300.75  1300.75  1316.75  1316.75  1332.75  1332.75  1348.75  1348.75
 BBC fr=    799.25   799.25   783.25   783.25   767.25   767.25   751.25   751.25
 Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
  Matching frequency sets:   5

 Track assignments are:
  track1=   2, 10,  4, 12,  6, 14,  8, 16
  barrel=roll_off


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 3C236             10 03 05.383878   * 10 06 01.731500     10 06 55.181395       0.00
                    35 08 47.92723    * 34 54 10.43400      34 49 42.75248        0.00
                    Doppler based on heliocentric frame and optical definition.  Velocities:
                     29600.00 29600.00 29600.00 29600.00 29600.00 29600.00 29600.00 29600.00

  0923+392          09 23 55.319219   * 09 27 03.013940     09 27 59.641320       0.13
* J0927+3902        39 15 23.56641    * 39 02 20.85181      38 58 20.84761        0.10
                    /usr/local/sched/catalogs/sources.rfc
                    rfc_2015a Petrov, 2015, unpublished.  252917 observations
                    Doppler based on other sources.

  0955+326          09 55 25.405783   * 09 58 20.949640     09 59 14.173570       0.12
* J0958+3224        32 38 23.03247    * 32 24 02.20952      32 19 38.48830        0.10
                    /usr/local/sched/catalogs/sources.rfc
                    rfc_2015a Petrov, 2015, unpublished.  4018 observations
                    Doppler based on other sources.

  0958+346          09 58 15.166820   * 10 01 11.949214     10 02 05.519375       0.13
* J1001+3424        34 39 17.56149    * 34 24 50.45927      34 20 25.53804        0.11
                    /usr/local/sched/catalogs/sources.rfc
                    rfc_2015a Petrov, 2015, unpublished.  843 observations
                    Doppler based on other sources.
```

ep092btr

SN2011fe at 1 Gb/s

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```
Observing mode: 1024 Mbps
Schedule for TORUN     (Code Tr )                                   Page   2
               SN2011fe at 1 Gb/s
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  14 Jun 2015   Day 165 ---
 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

10 30 00  J1359+5544   05 13 53  25.9  28.0 -8.8     -30.0     0        0   10 30 00
10 32 20  =1357+559    05 16 13  26.0  28.3 -8.7     -30.4   140       18   10 30 01

10 32 20  SN2011FE     05 16 13  24.5  28.6 -8.8     -29.4   -19       18   No stop
10 36 25  ---          05 20 19  24.8  29.2 -8.7     -30.0   226       49   10 32 21

10 37 05  J1359+5544   05 20 59  26.4  29.0 -8.6     -31.1    21       49   10 37 05
10 37 35  =1357+559    05 21 29  26.4  29.0 -8.6     -31.1    30       53   10 37 06

10 37 35  SN2011FE     05 21 29  24.9  29.3 -8.7     -30.2   -19       53   No stop
10 41 40  ---          05 25 35  25.2  29.9 -8.6     -30.8   226       85   10 37 36

10 41 40  J1359+5544   05 25 35  26.7  29.6 -8.6     -31.7   -19       85   No stop
10 42 40  =1357+559    05 26 35  26.8  29.7 -8.6     -31.9    41       92   10 41 41

10 42 40  SN2011FE     05 26 35  25.2  30.0 -8.6     -30.9   -19       92   No stop
10 46 45  ---          05 30 41  25.5  30.6 -8.5     -31.5   226      124   10 42 41

10 47 25  J1359+5544   05 31 21  27.1  30.4 -8.5     -32.6    21      124   10 47 25
10 47 55  =1357+559    05 31 51  27.2  30.4 -8.5     -32.6    30      128   10 47 26

10 47 55  SN2011FE     05 31 51  25.6  30.8 -8.5     -31.7   -19      128   No stop
10 52 00  ---          05 35 57  25.9  31.3 -8.5     -32.3   226      159   10 47 56

10 52 00  J1359+5544   05 35 57  27.5  31.0 -8.4     -33.2   -19      159   No stop
10 53 00  =1357+559    05 36 57  27.6  31.1 -8.4     -33.4    41      167   10 52 01

10 53 00  SN2011FE     05 36 57  26.0  31.5 -8.4     -32.4   -19      167   No stop
10 57 05  ---          05 41 03  26.4  32.0 -8.4     -33.0   226      198   10 53 01

10 57 45  J1359+5544   05 41 43  27.9  31.7 -8.3     -34.1    21      198   10 57 45
10 58 15  =1357+559    05 42 13  28.0  31.8 -8.3     -34.1    30      202   10 57 46

10 58 15  SN2011FE     05 42 13  26.4  32.2 -8.4     -33.2   -19      202   No stop
11 02 20  ---          05 46 18  26.8  32.7 -8.3     -33.7   226      233   10 58 16
```

```
Schedule for TORUN     (Code Tr )                                  Page   3
               SN2011fe at 1 Gb/s
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  14 Jun 2015   Day 165 ---

11 02 20  J1359+5544   05 46 18  28.3  32.4 -8.2     -34.7   -19      233   No stop
11 03 20  =1357+559    05 47 19  28.4  32.5 -8.2     -34.9    41      241   11 02 21


11 03 20  SN2011FE     05 47 19  26.9  32.9 -8.3     -33.9   -19      241   No stop
11 07 25  ---          05 51 24  27.2  33.4 -8.2     -34.5   226      272   11 03 21

11 08 05  J1359+5544   05 52 04  28.8  33.1 -8.1     -35.6    21      272   11 08 05
11 08 35  =1357+559    05 52 34  28.8  33.2 -8.1     -35.6    30      276   11 08 06

11 08 35  SN2011FE     05 52 34  27.3  33.6 -8.2     -34.6   -19      276   No stop
11 12 40  ---          05 56 40  27.6  34.2 -8.1     -35.2   226      308   11 08 36

11 12 40  J1359+5544   05 56 40  29.2  33.7 -8.0     -36.2   -19      308   No stop
11 13 40  =1357+559    05 57 40  29.2  33.8 -8.0     -36.4    41      315   11 12 41

11 13 40  SN2011FE     05 57 40  27.7  34.3 -8.1     -35.3   -19      315   No stop
11 17 45  ---          06 01 46  28.1  34.8 -8.0     -35.9   226      347   11 13 41

11 18 25  J1359+5544   06 02 26  29.6  34.5 -8.0     -37.0    21      347   11 18 25
11 18 55  =1357+559    06 02 56  29.7  34.5 -7.9     -37.1    30      351   11 18 26

11 18 55  SN2011FE     06 02 56  28.2  35.0 -8.0     -36.1   -19      351   No stop
11 23 00  ---          06 07 02  28.5  35.5 -7.9     -36.6   226      382   11 18 56

11 23 00  J1359+5544   06 07 02  30.0  35.1 -7.9     -37.7   -19      382   No stop
11 24 00  =1357+559    06 08 02  30.1  35.2 -7.9     -37.8    41      390   11 23 01

11 24 00  SN2011FE     06 08 02  28.6  35.7 -7.9     -36.8   -19      390   No stop
11 28 05  ---          06 12 08  29.0  36.2 -7.9     -37.4   226      421   11 24 01

11 28 45  J1359+5544   06 12 48  30.5  35.8 -7.8     -38.5    21      421   11 28 45
11 29 15  =1357+559    06 13 18  30.6  35.9 -7.8     -38.6    30      425   11 28 46

11 29 15  SN2011FE     06 13 18  29.1  36.4 -7.8     -37.5   -19      425   No stop
11 33 20  ---          06 17 23  29.4  36.9 -7.8     -38.1   226      456   11 29 16

11 33 20  J1359+5544   06 17 23  30.9  36.4 -7.7     -39.2   -19      456   No stop
11 34 20  =1357+559    06 18 24  31.0  36.5 -7.7     -39.3    41      464   11 33 21

11 34 20  SN2011FE     06 18 24  29.5  37.1 -7.8     -38.2   -19      464   No stop
11 38 25  ---          06 22 29  29.9  37.6 -7.7     -38.8   226      496   11 34 21

11 39 05  J1359+5544   06 23 09  31.5  37.1 -7.6     -40.0    21      496   11 39 05
11 39 35  =1357+559    06 23 40  31.5  37.2 -7.6     -40.0    30      499   11 39 06

11 39 35  SN2011FE     06 23 40  30.0  37.7 -7.7     -38.9   -19      499   No stop
11 43 40  ---          06 27 45  30.4  38.3 -7.6     -39.5   226      531   11 39 36
```

Schedule for TORUN (Code Tr) Page 4

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
11 43 40	J1359+5544	06 27 45	31.9	37.7	-7.5		-40.6	-19	531	No stop
11 44 40	=1357+559	06 28 45	32.0	37.8	-7.5		-40.8	41	538	11 43 41
11 44 40	SN2011FE	06 28 45	30.5	38.4	-7.6		-39.6	-19	538	No stop
11 48 45	---	06 32 51	30.9	38.9	-7.5		-40.2	226	570	11 44 41
11 49 25	J1359+5544	06 33 31	32.4	38.4	-7.4		-41.4	21	570	11 49 25
11 49 55	=1357+559	06 34 01	32.5	38.5	-7.4		-41.5	30	574	11 49 26
11 49 55	SN2011FE	06 34 01	31.0	39.1	-7.5		-40.4	-19	574	No stop
11 54 00	---	06 38 07	31.4	39.6	-7.4		-40.9	226	605	11 49 56
11 54 00	J1359+5544	06 38 07	32.8	39.0	-7.4		-42.1	-19	605	No stop
11 55 00	=1357+559	06 39 07	32.9	39.1	-7.3		-42.2	41	613	11 54 01
11 55 00	SN2011FE	06 39 07	31.5	39.8	-7.4		-41.0	-19	613	No stop
11 59 05	---	06 43 13	31.9	40.3	-7.3		-41.6	226	644	11 55 01
11 59 45	J1359+5544	06 43 53	33.4	39.7	-7.3		-42.9	21	644	11 59 45
12 00 15	=1357+559	06 44 23	33.4	39.8	-7.3		-42.9	30	648	11 59 46
12 00 15	SN2011FE	06 44 23	32.0	40.4	-7.3		-41.8	-19	648	No stop
12 04 20	---	06 48 29	32.4	41.0	-7.3		-42.3	226	679	12 00 16
12 04 20	J1359+5544	06 48 29	33.8	40.3	-7.2		-43.5	-19	679	No stop
12 05 20	=1357+559	06 49 29	33.9	40.4	-7.2		-43.6	41	687	12 04 21
12 05 20	SN2011FE	06 49 29	32.5	41.1	-7.2		-42.4	-19	687	No stop
12 09 25	---	06 53 34	32.9	41.6	-7.2		-43.0	226	719	12 05 21
12 10 05	J1359+5544	06 54 15	34.4	41.0	-7.1		-44.3	21	719	12 10 05
12 10 35	=1357+559	06 54 45	34.5	41.0	-7.1		-44.4	30	722	12 10 06
12 10 35	SN2011FE	06 54 45	33.0	41.8	-7.1		-43.1	-19	722	No stop
12 14 40	---	06 58 50	33.4	42.3	-7.1		-43.7	226	754	12 10 36
12 14 40	J1359+5544	06 58 50	34.9	41.5	-7.0		-44.9	-19	754	No stop
12 15 40	=1357+559	06 59 50	35.0	41.7	-7.0		-45.1	41	762	12 14 41
12 15 40	SN2011FE	06 59 50	33.5	42.4	-7.1		-43.8	-19	762	No stop
12 19 45	---	07 03 56	33.9	42.9	-7.0		-44.4	226	793	12 15 41
12 20 25	J1359+5544	07 04 36	35.4	42.2	-6.9		-45.7	21	793	12 20 25
12 20 55	=1357+559	07 05 06	35.5	42.3	-6.9		-45.8	30	797	12 20 26

Schedule for TORUN (Code Tr) Page 5
SN2011fe at 1 Gb/s
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
12 20 55	SN2011FE	07 05 06	34.0	43.1	-7.0		-44.5	-19	797	No stop
12 25 00	---	07 09 12	34.5	43.6	-6.9		-45.1	226	828	12 20 56
12 25 00	J1359+5544	07 09 12	35.9	42.8	-6.8		-46.3	-19	828	No stop
12 26 00	=1357+559	07 10 12	36.0	42.9	-6.8		-46.5	41	836	12 25 01
12 26 00	SN2011FE	07 10 12	34.6	43.7	-6.9		-45.2	-19	836	No stop
12 30 05	---	07 14 18	35.0	44.2	-6.8		-45.7	226	867	12 26 01
12 30 45	J1359+5544	07 14 58	36.5	43.5	-6.7		-47.1	21	867	12 30 45
12 31 15	=1357+559	07 15 28	36.5	43.5	-6.7		-47.2	30	871	12 30 46
12 31 15	SN2011FE	07 15 28	35.1	44.4	-6.8		-45.9	-19	871	No stop
12 35 20	---	07 19 34	35.6	44.9	-6.7		-46.4	226	903	12 31 16
12 35 20	J1359+5544	07 19 34	37.0	44.0	-6.7		-47.7	-19	903	No stop
12 36 20	=1357+559	07 20 34	37.1	44.2	-6.7		-47.9	41	910	12 35 21
12 36 20	SN2011FE	07 20 34	35.7	45.0	-6.7		-46.6	-19	910	No stop
12 40 25	---	07 24 40	36.1	45.5	-6.6		-47.1	226	942	12 36 21
12 41 05	J1359+5544	07 25 20	37.6	44.7	-6.6		-48.5	21	942	12 41 05
12 41 35	=1357+559	07 25 50	37.6	44.8	-6.6		-48.6	30	946	12 41 06
12 41 35	SN2011FE	07 25 50	36.2	45.7	-6.6		-47.2	-19	946	No stop
12 45 40	---	07 29 55	36.7	46.2	-6.6		-47.8	226	977	12 41 36
12 45 40	J1359+5544	07 29 55	38.1	45.3	-6.5		-49.1	-19	977	No stop
12 46 40	=1357+559	07 30 56	38.2	45.4	-6.5		-49.3	41	985	12 45 41
12 46 40	SN2011FE	07 30 56	36.8	46.3	-6.5		-47.9	-19	985	No stop
12 50 45	---	07 35 01	37.2	46.8	-6.5		-48.4	226	1016	12 46 41
12 51 25	J1359+5544	07 35 41	38.7	45.9	-6.4		-49.9	21	1016	12 51 25
12 51 55	=1357+559	07 36 11	38.7	46.0	-6.4		-50.0	30	1020	12 51 26
12 51 55	SN2011FE	07 36 11	37.3	46.9	-6.5		-48.6	-19	1020	No stop
12 56 00	---	07 40 17	37.8	47.4	-6.4		-49.1	226	1051	12 51 56
12 56 00	J1359+5544	07 40 17	39.2	46.5	-6.3		-50.5	-19	1051	No stop
12 57 00	=1357+559	07 41 17	39.3	46.6	-6.3		-50.7	41	1059	12 56 01
12 57 00	SN2011FE	07 41 17	37.9	47.5	-6.4		-49.2	-18	1059	No stop
13 01 05	---	07 45 23	38.4	48.0	-6.3		-49.8	227	1090	12 57 01

Schedule for TORUN (Code Tr) Page 6

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
13 01 45	J1359+5544	07 46 03	39.8	47.1	-6.2		-51.3	21	1090	13 01 45
13 02 15	=1357+559	07 46 33	39.9	47.2	-6.2		-51.4	30	1094	13 01 46
13 02 15	SN2011FE	07 46 33	38.5	48.2	-6.3		-49.9	-18	1094	No stop
13 06 20	---	07 50 39	39.0	48.7	-6.2		-50.4	227	1126	13 02 16
13 06 20	J1359+5544	07 50 39	40.3	47.7	-6.2		-51.9	-19	1126	No stop
13 07 20	=1357+559	07 51 39	40.4	47.8	-6.1		-52.0	41	1133	13 06 21
13 07 20	SN2011FE	07 51 39	39.1	48.8	-6.2		-50.6	-18	1133	No stop
13 11 25	---	07 55 45	39.5	49.3	-6.1		-51.1	227	1165	13 07 21
13 12 05	J1359+5544	07 56 25	41.0	48.3	-6.1		-52.7	21	1165	13 12 05
13 12 35	=1357+559	07 56 55	41.0	48.4	-6.0		-52.7	30	1169	13 12 06
13 12 35	SN2011FE	07 56 55	39.7	49.4	-6.1		-51.2	-18	1169	No stop
13 16 40	---	08 01 00	40.1	49.9	-6.0		-51.8	227	1200	13 12 36
13 16 40	J1359+5544	08 01 00	41.5	48.8	-6.0		-53.3	-19	1200	No stop
13 17 40	=1357+559	08 02 01	41.6	48.9	-6.0		-53.4	41	1208	13 16 41
13 17 40	SN2011FE	08 02 01	40.2	50.0	-6.0		-51.9	-18	1208	No stop
13 21 45	---	08 06 06	40.7	50.5	-6.0		-52.4	227	1239	13 17 41
13 22 25	J1359+5544	08 06 46	42.1	49.5	-5.9		-54.0	22	1239	13 22 25
13 22 55	=1357+559	08 07 16	42.2	49.5	-5.9		-54.1	30	1243	13 22 26
13 22 55	SN2011FE	08 07 16	40.9	50.6	-5.9		-52.5	-18	1243	No stop
13 27 00	---	08 11 22	41.3	51.1	-5.9		-53.1	227	1274	13 22 56
13 27 00	J1359+5544	08 11 22	42.7	50.0	-5.8		-54.6	-18	1274	No stop
13 28 00	=1357+559	08 12 22	42.8	50.1	-5.8		-54.8	42	1282	13 27 01
13 28 00	SN2011FE	08 12 22	41.4	51.2	-5.9		-53.2	-18	1282	No stop
13 32 05	---	08 16 28	41.9	51.7	-5.8		-53.7	227	1313	13 28 01
13 32 45	J1359+5544	08 17 08	43.3	50.6	-5.7		-55.4	22	1313	13 32 45
13 33 15	=1357+559	08 17 38	43.4	50.7	-5.7		-55.5	30	1317	13 32 46
13 33 15	SN2011FE	08 17 38	42.1	51.9	-5.8		-53.8	-18	1317	No stop
13 37 20	---	08 21 44	42.6	52.3	-5.7		-54.4	227	1349	13 33 16
13 37 20	J1359+5544	08 21 44	43.9	51.1	-5.6		-56.0	-18	1349	No stop
13 38 20	=1357+559	08 22 44	44.0	51.2	-5.6		-56.1	42	1356	13 37 21

Schedule for TORUN (Code Tr) Page 7

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
13 38 20	SN2011FE	08 22 44	42.7	52.4	-5.7		-54.5	-18	1356	No stop
13 42 25	---	08 26 50	43.2	52.9	-5.6		-55.0	227	1388	13 38 21
13 43 05	J1359+5544	08 27 30	44.5	51.8	-5.5		-56.7	22	1388	13 43 05
13 43 35	=1357+559	08 28 00	44.6	51.8	-5.5		-56.8	30	1392	13 43 06
13 43 35	SN2011FE	08 28 00	43.3	53.0	-5.6		-55.1	-18	1392	No stop
13 47 40	---	08 32 06	43.8	53.5	-5.5		-55.6	227	1423	13 43 36
13 47 40	J1359+5544	08 32 06	45.1	52.3	-5.5		-57.3	-18	1423	No stop
13 48 40	=1357+559	08 33 06	45.2	52.4	-5.4		-57.5	42	1431	13 47 41
13 48 40	SN2011FE	08 33 06	43.9	53.6	-5.5		-55.8	-18	1431	No stop
13 52 45	---	08 37 11	44.4	54.1	-5.4		-56.3	227	1462	13 48 41
13 53 25	J1359+5544	08 37 51	45.8	52.9	-5.4		-58.1	22	1462	13 53 25
13 53 55	=1357+559	08 38 22	45.8	52.9	-5.4		-58.2	30	1466	13 53 26
13 53 55	SN2011FE	08 38 22	44.6	54.2	-5.4		-56.4	-18	1466	No stop
13 58 00	---	08 42 27	45.1	54.7	-5.4		-56.9	227	1497	13 53 56
13 58 00	J1359+5544	08 42 27	46.3	53.4	-5.3		-58.7	-18	1497	No stop
13 59 00	=1357+559	08 43 27	46.4	53.5	-5.3		-58.8	42	1505	13 58 01
13 59 00	SN2011FE	08 43 27	45.2	54.8	-5.3		-57.0	-18	1505	No stop
14 03 05	---	08 47 33	45.7	55.3	-5.3		-57.5	227	1537	13 59 01
14 03 45	J1359+5544	08 48 13	47.0	54.0	-5.2		-59.4	22	1537	14 03 45
14 04 15	=1357+559	08 48 43	47.1	54.0	-5.2		-59.5	30	1540	14 03 46
14 04 15	SN2011FE	08 48 43	45.8	55.4	-5.2		-57.7	-18	1540	No stop
14 08 20	---	08 52 49	46.3	55.9	-5.2		-58.2	227	1572	14 04 16
14 08 20	J1359+5544	08 52 49	47.6	54.4	-5.1		-60.0	-18	1572	No stop
14 09 20	=1357+559	08 53 49	47.7	54.6	-5.1		-60.2	42	1579	14 08 21
14 09 20	SN2011FE	08 53 49	46.5	56.0	-5.2		-58.3	-18	1579	No stop
14 13 25	---	08 57 55	47.0	56.4	-5.1		-58.8	227	1611	14 09 21
14 14 05	J1359+5544	08 58 35	48.3	55.0	-5.0		-60.8	22	1611	14 14 05
14 14 35	=1357+559	08 59 05	48.3	55.1	-5.0		-60.8	30	1615	14 14 06
14 14 35	SN2011FE	08 59 05	47.1	56.6	-5.1		-58.9	-18	1615	No stop
14 18 40	---	09 03 11	47.6	57.0	-5.0		-59.4	227	1646	14 14 36

Schedule for TORUN (Code Tr) Page 8

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
14 18 40	J1359+5544	09 03 11	48.9	55.5	-4.9		-61.4	-18	1646	No stop
14 19 40	=1357+559	09 04 11	49.0	55.6	-4.9		-61.5	42	1654	14 18 41
14 19 40	SN2011FE	09 04 11	47.8	57.1	-5.0		-59.6	-18	1654	No stop
14 23 45	---	09 08 16	48.3	57.6	-4.9		-60.1	227	1685	14 19 41
14 24 25	J1359+5544	09 08 57	49.6	56.1	-4.8		-62.1	22	1685	14 24 25
14 24 55	=1357+559	09 09 27	49.6	56.2	-4.8		-62.2	30	1689	14 24 26
14 24 55	SN2011FE	09 09 27	48.4	57.7	-4.9		-60.2	-18	1689	No stop
14 29 00	---	09 13 32	48.9	58.1	-4.8		-60.7	227	1721	14 24 56
14 29 00	J1359+5544	09 13 32	50.1	56.6	-4.8		-62.7	-18	1721	No stop
14 30 00	=1357+559	09 14 33	50.3	56.7	-4.8		-62.8	42	1728	14 29 01
14 30 00	SN2011FE	09 14 33	49.1	58.3	-4.8		-60.8	-18	1728	No stop
14 34 05	---	09 18 38	49.6	58.7	-4.8		-61.3	227	1760	14 30 01
14 34 45	J1359+5544	09 19 18	50.9	57.2	-4.7		-63.5	22	1760	14 34 45
14 35 15	=1357+559	09 19 48	50.9	57.2	-4.7		-63.5	30	1763	14 34 46
14 35 15	SN2011FE	09 19 48	49.7	58.8	-4.7		-61.5	-17	1763	No stop
14 39 20	---	09 23 54	50.3	59.3	-4.7		-61.9	228	1795	14 35 16
14 39 20	J1359+5544	09 23 54	51.4	57.6	-4.6		-64.0	-18	1795	No stop
14 40 20	=1357+559	09 24 54	51.6	57.7	-4.6		-64.2	42	1803	14 39 21
14 40 20	SN2011FE	09 24 54	50.4	59.4	-4.6		-62.1	-17	1803	No stop
14 44 25	---	09 29 00	50.9	59.8	-4.6		-62.6	228	1834	14 40 21
14 45 05	J1359+5544	09 29 40	52.2	58.2	-4.5		-64.8	22	1834	14 45 05
14 45 35	=1357+559	09 30 10	52.2	58.2	-4.5		-64.9	30	1838	14 45 06
14 45 35	SN2011FE	09 30 10	51.1	59.9	-4.6		-62.7	-17	1838	No stop
14 49 40	---	09 34 16	51.6	60.4	-4.5		-63.2	228	1869	14 45 36
14 49 40	J1359+5544	09 34 16	52.8	58.6	-4.4		-65.4	-18	1869	No stop
14 50 40	=1357+559	09 35 16	52.9	58.7	-4.4		-65.5	42	1877	14 49 41
14 50 40	SN2011FE	09 35 16	51.7	60.5	-4.5		-63.3	-17	1877	No stop
14 54 45	---	09 39 22	52.3	60.9	-4.4		-63.8	228	1908	14 50 41
14 55 25	J1359+5544	09 40 02	53.5	59.2	-4.3		-66.1	23	1908	14 55 25
14 55 55	=1357+559	09 40 32	53.6	59.2	-4.3		-66.2	30	1912	14 55 26

Schedule for TORUN (Code Tr) Page 9

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
14 55 55	SN2011FE	09 40 32	52.4	61.0	-4.4		-63.9	-17	1912	No stop
15 00 00	---	09 44 37	53.0	61.5	-4.3		-64.4	228	1944	14 55 56
15 00 00	J1359+5544	09 44 37	54.1	59.6	-4.3		-66.7	-17	1944	No stop
15 01 00	=1357+559	09 45 38	54.2	59.7	-4.2		-66.9	43	1951	15 00 01
15 01 00	SN2011FE	09 45 38	53.1	61.6	-4.3		-64.5	-17	1951	No stop
15 05 05	---	09 49 43	53.6	62.0	-4.2		-65.0	228	1983	15 01 01
15 05 45	J1359+5544	09 50 23	54.9	60.2	-4.2		-67.5	23	1983	15 05 45
15 06 15	=1357+559	09 50 53	54.9	60.2	-4.1		-67.5	30	1987	15 05 46
15 06 15	SN2011FE	09 50 53	53.8	62.1	-4.2		-65.2	-17	1987	No stop
15 10 20	---	09 54 59	54.3	62.5	-4.1		-65.7	228	2018	15 06 16
15 10 20	J1359+5544	09 54 59	55.5	60.6	-4.1		-68.1	-17	2018	No stop
15 11 20	=1357+559	09 55 59	55.6	60.7	-4.1		-68.2	43	2026	15 10 21
15 11 20	SN2011FE	09 55 59	54.5	62.7	-4.1		-65.8	-18	2026	No stop
15 15 25	---	10 00 05	55.0	63.1	-4.1		-66.3	227	2057	15 11 21
15 16 05	J1359+5544	10 00 45	56.2	61.1	-4.0		-68.8	22	2057	15 16 05
15 16 35	=1357+559	10 01 15	56.3	61.2	-4.0		-68.9	30	2061	15 16 06
15 16 35	SN2011FE	10 01 15	55.2	63.2	-4.0		-66.4	-18	2061	No stop
15 20 40	---	10 05 21	55.7	63.6	-4.0		-66.9	227	2092	15 16 36
15 20 40	J1359+5544	10 05 21	56.8	61.5	-3.9		-69.4	-18	2092	No stop
15 21 40	=1357+559	10 06 21	56.9	61.6	-3.9		-69.6	42	2100	15 20 41
15 21 40	SN2011FE	10 06 21	55.9	63.7	-4.0		-67.0	-18	2100	No stop
15 25 45	---	10 10 27	56.4	64.1	-3.9		-67.5	227	2131	15 21 41
15 26 25	J1359+5544	10 11 07	57.6	62.1	-3.8		-70.2	22	2131	15 26 25
15 26 55	=1357+559	10 11 37	57.6	62.1	-3.8		-70.2	30	2135	15 26 26
15 26 55	SN2011FE	10 11 37	56.6	64.2	-3.9		-67.6	-18	2135	No stop
15 31 00	---	10 15 43	57.1	64.7	-3.8		-68.1	227	2167	15 26 56
15 31 00	J1359+5544	10 15 43	58.2	62.5	-3.7		-70.8	-18	2167	No stop
15 32 00	=1357+559	10 16 43	58.3	62.6	-3.7		-70.9	42	2174	15 31 01
15 32 00	SN2011FE	10 16 43	57.3	64.8	-3.8		-68.2	-18	2174	No stop
15 36 05	---	10 20 48	57.8	65.2	-3.7		-68.7	227	2206	15 32 01

Schedule for TORUN (Code Tr) Page 10

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
15 36 45	J1359+5544	10 21 28	59.0	63.0	-3.6		-71.5	22	2206	15 36 45
15 37 15	=1357+559	10 21 59	59.0	63.0	-3.6		-71.6	30	2210	15 36 46
15 37 15	SN2011FE	10 21 59	58.0	65.3	-3.7		-68.9	-19	2210	No stop
15 41 20	---	10 26 04	58.5	65.7	-3.6		-69.3	226	2241	15 37 16
15 41 20	J1359+5544	10 26 04	59.6	63.4	-3.6		-72.1	-19	2241	No stop
15 42 20	=1357+559	10 27 04	59.7	63.5	-3.5		-72.3	41	2249	15 41 21
15 42 20	SN2011FE	10 27 04	58.7	65.8	-3.6		-69.5	-19	2249	No stop
15 46 25	---	10 31 10	59.2	66.2	-3.5		-69.9	226	2280	15 42 21
15 47 05	J1359+5544	10 31 50	60.3	63.9	-3.5		-72.9	21	2280	15 47 05
15 47 35	=1357+559	10 32 20	60.4	63.9	-3.5		-73.0	30	2284	15 47 06
15 47 35	SN2011FE	10 32 20	59.4	66.3	-3.5		-70.1	-19	2284	No stop
15 51 40	---	10 36 26	60.0	66.7	-3.5		-70.6	226	2315	15 47 36
15 51 40	J1359+5544	10 36 26	61.0	64.2	-3.4		-73.5	-19	2315	No stop
15 52 40	=1357+559	10 37 26	61.1	64.3	-3.4		-73.7	41	2323	15 51 41
15 52 40	SN2011FE	10 37 26	60.1	66.8	-3.4		-70.7	-19	2323	No stop
15 56 45	---	10 41 32	60.7	67.2	-3.4		-71.2	226	2354	15 52 41
15 57 25	J1359+5544	10 42 12	61.8	64.7	-3.3		-74.3	21	2354	15 57 25
15 57 55	=1357+559	10 42 42	61.8	64.7	-3.3		-74.4	30	2358	15 57 26
15 57 55	SN2011FE	10 42 42	60.8	67.3	-3.3		-71.3	-19	2358	No stop
16 02 00	---	10 46 48	61.4	67.7	-3.3		-71.8	226	2390	15 57 56
16 02 00	J1359+5544	10 46 48	62.4	65.1	-3.2		-74.9	-19	2390	No stop
16 03 00	=1357+559	10 47 48	62.5	65.2	-3.2		-75.1	41	2397	16 02 01
16 03 00	SN2011FE	10 47 48	61.5	67.8	-3.3		-71.9	-20	2397	No stop
16 07 05	---	10 51 53	62.1	68.2	-3.2		-72.4	225	2429	16 03 01
16 07 45	J1359+5544	10 52 34	63.2	65.5	-3.1		-75.7	20	2429	16 07 45
16 08 15	=1357+559	10 53 04	63.2	65.6	-3.1		-75.8	30	2433	16 07 46
16 08 15	SN2011FE	10 53 04	62.3	68.3	-3.2		-72.5	-20	2433	No stop
16 12 20	---	10 57 09	62.8	68.7	-3.1		-73.0	225	2464	16 08 16
16 12 20	J1359+5544	10 57 09	63.8	65.9	-3.0		-76.4	-20	2464	No stop
16 13 20	=1357+559	10 58 09	63.9	66.0	-3.0		-76.5	40	2472	16 12 21

Schedule for TORUN (Code Tr) Page 11

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
16 13 20	SN2011FE	10 58 09	63.0	68.8	-3.1		-73.1	-20	2472	No stop
16 17 25	---	11 02 15	63.6	69.2	-3.0		-73.6	225	2503	16 13 21
16 18 05	J1359+5544	11 02 55	64.6	66.3	-2.9		-77.2	20	2503	16 18 05
16 18 35	=1357+559	11 03 25	64.7	66.3	-2.9		-77.2	30	2507	16 18 06
16 18 35	SN2011FE	11 03 25	63.7	69.3	-3.0		-73.8	-20	2507	No stop
16 22 40	---	11 07 31	64.3	69.6	-2.9		-74.3	225	2538	16 18 36
16 22 40	J1359+5544	11 07 31	65.2	66.6	-2.9		-77.8	-20	2538	No stop
16 23 40	=1357+559	11 08 31	65.4	66.7	-2.9		-78.0	40	2546	16 22 41
16 23 40	SN2011FE	11 08 31	64.4	69.7	-2.9		-74.4	-21	2546	No stop
16 27 45	---	11 12 37	65.0	70.1	-2.9		-74.9	224	2578	16 23 41
16 28 25	J1359+5544	11 13 17	66.0	67.0	-2.8		-78.6	19	2578	16 28 25
16 28 55	=1357+559	11 13 47	66.1	67.1	-2.8		-78.7	30	2581	16 28 26
16 28 55	SN2011FE	11 13 47	65.2	70.2	-2.8		-75.0	-21	2581	No stop
16 33 00	---	11 17 53	65.8	70.6	-2.8		-75.5	224	2613	16 28 56
16 33 00	J1359+5544	11 17 53	66.6	67.3	-2.7		-79.3	-21	2613	No stop
16 34 00	=1357+559	11 18 53	66.8	67.4	-2.7		-79.5	39	2621	16 33 01
16 34 00	SN2011FE	11 18 53	65.9	70.7	-2.7		-75.6	-21	2621	No stop
16 38 05	---	11 22 59	66.5	71.0	-2.7		-76.1	224	2652	16 34 01
16 38 45	J1359+5544	11 23 39	67.4	67.7	-2.6		-80.2	19	2652	16 38 45
16 39 15	=1357+559	11 24 09	67.5	67.7	-2.6		-80.2	30	2656	16 38 46
16 39 15	SN2011FE	11 24 09	66.7	71.1	-2.7		-76.3	-22	2656	No stop
16 43 20	---	11 28 14	67.2	71.5	-2.6		-76.8	223	2687	16 39 16
16 43 20	J1359+5544	11 28 14	68.1	68.0	-2.5		-80.8	-22	2687	No stop
16 44 20	=1357+559	11 29 15	68.2	68.1	-2.5		-81.0	38	2695	16 43 21
16 44 20	SN2011FE	11 29 15	67.4	71.6	-2.6		-76.9	-22	2695	No stop
16 48 25	---	11 33 20	68.0	71.9	-2.5		-77.4	223	2726	16 44 21
16 49 05	J1359+5544	11 34 00	68.9	68.3	-2.4		-81.7	18	2726	16 49 05
16 49 35	=1357+559	11 34 30	69.0	68.4	-2.4		-81.8	30	2730	16 49 06
16 49 35	SN2011FE	11 34 30	68.1	72.0	-2.5		-77.6	-22	2730	No stop
16 53 40	---	11 38 36	68.7	72.4	-2.4		-78.1	223	2762	16 49 36

Schedule for TORUN (Code Tr) Page 12

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
16 53 40	J1359+5544	11 38 36	69.5	68.6	-2.4		-82.4	-22	2762	No stop
16 54 40	=1357+559	11 39 36	69.7	68.6	-2.3		-82.6	38	2769	16 53 41
16 54 40	SN2011FE	11 39 36	68.9	72.5	-2.4		-78.2	-23	2769	No stop
16 58 45	---	11 43 42	69.4	72.8	-2.3		-78.7	222	2801	16 54 41
16 59 25	J1359+5544	11 44 22	70.3	68.9	-2.3		-83.4	17	2801	16 59 25
16 59 55	=1357+559	11 44 52	70.4	68.9	-2.2		-83.4	30	2804	16 59 26
16 59 55	SN2011FE	11 44 52	69.6	72.9	-2.3		-78.9	-23	2804	No stop
17 04 00	---	11 48 58	70.2	73.2	-2.2		-79.4	222	2836	16 59 56
17 04 00	J1359+5544	11 48 58	71.0	69.1	-2.2		-84.1	-23	2836	No stop
17 05 00	=1357+559	11 49 58	71.1	69.1	-2.2		-84.3	37	2844	17 04 01
17 05 00	SN2011FE	11 49 58	70.3	73.3	-2.2		-79.5	-23	2844	No stop
17 09 05	---	11 54 04	70.9	73.6	-2.2		-80.0	222	2875	17 05 01
17 09 45	J1359+5544	11 54 44	71.8	69.3	-2.1		-85.1	16	2875	17 09 45
17 10 15	=1357+559	11 55 14	71.9	69.4	-2.1		-85.1	30	2879	17 09 46
17 10 15	SN2011FE	11 55 14	71.1	73.7	-2.1		-80.2	-24	2879	No stop
17 14 20	---	11 59 20	71.7	74.0	-2.1		-80.7	221	2910	17 10 16
17 14 20	J1359+5544	11 59 20	72.4	69.5	-2.0		-85.9	-24	2910	No stop
17 15 20	=1357+559	12 00 20	72.6	69.5	-2.0		-86.0	36	2918	17 14 21
17 15 20	SN2011FE	12 00 20	71.8	74.1	-2.1		-80.9	-24	2918	No stop
17 19 25	---	12 04 25	72.4	74.4	-2.0		-81.4	221	2949	17 15 21
17 20 05	J1359+5544	12 05 05	73.2	69.7	-1.9		-86.9	16	2949	17 20 05
17 20 35	=1357+559	12 05 36	73.3	69.7	-1.9		-87.0	30	2953	17 20 06
17 20 35	SN2011FE	12 05 36	72.6	74.5	-2.0		-81.6	-25	2953	No stop
17 24 40	---	12 09 41	73.2	74.8	-1.9		-82.1	220	2985	17 20 36
17 24 40	J1359+5544	12 09 41	73.9	69.8	-1.8		-87.7	-25	2985	No stop
17 25 40	=1357+559	12 10 41	74.0	69.8	-1.8		-87.9	35	2992	17 24 41
17 25 40	SN2011FE	12 10 41	73.3	74.8	-1.9		-82.3	-25	2992	No stop
17 29 45	---	12 14 47	73.9	75.1	-1.8		-82.8	220	3024	17 25 41
17 30 25	J1359+5544	12 15 27	74.7	69.9	-1.7		-88.8	15	3024	17 30 25
17 30 55	=1357+559	12 15 57	74.8	69.9	-1.7		-88.9	30	3028	17 30 26

Schedule for TORUN (Code Tr) Page 13

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
17 30 55	SN2011FE	12 15 57	74.1	75.2	-1.8		-83.0	-26	3028	No stop
17 35 00	---	12 20 03	74.7	75.4	-1.7		-83.6	219	3059	17 30 56
17 35 00	J1359+5544	12 20 03	75.4	69.9	-1.7		-89.7	-26	3059	No stop
17 36 00	=1357+559	12 21 03	75.5	69.9	-1.6		-89.9	34	3067	17 35 01
17 36 00	SN2011FE	12 21 03	74.8	75.5	-1.7		-83.7	-26	3067	No stop
17 40 05	---	12 25 09	75.4	75.8	-1.6		-84.3	219	3098	17 36 01
17 40 45	J1359+5544	12 25 49	76.2	69.9	-1.6		-90.9	13	3098	17 40 45
17 41 15	=1357+559	12 26 19	76.2	69.9	-1.6		-91.1	30	3102	17 40 46
17 41 15	SN2011FE	12 26 19	75.6	75.8	-1.6		-84.5	-27	3102	No stop
17 45 20	---	12 30 25	76.2	76.0	-1.6		-85.1	218	3133	17 41 16
17 45 20	J1359+5544	12 30 25	76.8	69.8	-1.5		-92.0	-27	3133	No stop
17 46 20	=1357+559	12 31 25	77.0	69.8	-1.5		-92.2	33	3141	17 45 21
17 46 20	SN2011FE	12 31 25	76.3	76.1	-1.5		-85.2	-28	3141	No stop
17 50 25	---	12 35 30	76.9	76.3	-1.5		-85.9	217	3172	17 46 21
17 51 05	J1359+5544	12 36 11	77.6	69.6	-1.4		-93.3	12	3172	17 51 05
17 51 35	=1357+559	12 36 41	77.7	69.6	-1.4		-93.4	30	3176	17 51 06
17 51 35	SN2011FE	12 36 41	77.1	76.3	-1.4		-86.1	-28	3176	No stop
17 55 40	---	12 40 46	77.7	76.5	-1.4		-86.7	217	3208	17 51 36
17 55 40	J1359+5544	12 40 46	78.3	69.4	-1.3		-94.5	-29	3208	No stop
17 56 40	=1357+559	12 41 46	78.4	69.4	-1.3		-94.7	31	3215	17 55 41
17 56 40	SN2011FE	12 41 46	77.9	76.6	-1.4		-86.9	-29	3215	No stop
18 00 45	---	12 45 52	78.5	76.7	-1.3		-87.6	216	3247	17 56 41
18 01 25	J1359+5544	12 46 32	79.1	69.1	-1.2		-96.0	10	3247	18 01 25
18 01 55	=1357+559	12 47 02	79.2	69.0	-1.2		-96.2	30	3251	18 01 26
18 01 55	SN2011FE	12 47 02	78.6	76.7	-1.3		-87.8	-30	3251	No stop
18 06 00	---	12 51 08	79.2	76.8	-1.2		-88.5	215	3282	18 01 56
18 06 00	J1359+5544	12 51 08	79.7	68.6	-1.1		-97.4	-31	3282	No stop
18 07 00	=1357+559	12 52 08	79.9	68.5	-1.1		-97.7	29	3290	18 06 01
18 07 00	SN2011FE	12 52 08	79.4	76.9	-1.2		-88.7	-32	3290	No stop
18 11 05	---	12 56 14	80.0	76.9	-1.1		-89.5	213	3321	18 07 01

Schedule for TORUN (Code Tr) Page 14
SN2011fe at 1 Gb/s
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
18 11 45	J1359+5544	12 56 54	80.5	68.0	-1.0		-99.3	7	3321	18 11 45
18 12 15	=1357+559	12 57 24	80.6	67.9	-1.0		-99.4	30	3325	18 11 46
18 12 15	SN2011FE	12 57 24	80.1	76.9	-1.1		-89.7	-33	3325	No stop
18 16 20	---	13 01 30	80.7	76.9	-1.0		-90.6	212	3356	18 12 16
18 16 20	J1359+5544	13 01 30	81.2	67.2	-1.0		-100.9	-34	3356	No stop
18 17 20	=1357+559	13 02 30	81.3	67.1	-1.0		-101.3	26	3364	18 16 21
18 17 20	SN2011FE	13 02 30	80.9	76.9	-1.0		-90.8	-35	3364	No stop
18 21 25	---	13 06 36	81.5	76.8	-1.0		-91.7	210	3396	18 17 21
18 22 05	J1359+5544	13 07 16	82.0	66.1	-0.9		-103.3	4	3396	18 22 05
18 22 35	=1357+559	13 07 46	82.0	66.0	-0.9		-103.5	30	3399	18 22 06
18 22 35	SN2011FE	13 07 46	81.7	76.8	-0.9		-92.0	-37	3399	No stop
18 26 40	---	13 11 51	82.3	76.6	-0.9		-93.0	208	3431	18 22 36
18 26 40	J1359+5544	13 11 51	82.6	64.9	-0.8		-105.4	-39	3431	No stop
18 27 40	=1357+559	13 12 52	82.7	64.6	-0.8		-105.9	21	3438	18 26 41
18 27 40	SN2011FE	13 12 52	82.4	76.5	-0.8		-93.2	-39	3438	No stop
18 31 45	---	13 16 57	83.0	76.2	-0.8		-94.4	206	3470	18 27 41
18 32 25	J1359+5544	13 17 37	83.4	62.9	-0.7		-108.5	-1	3470	18 32 25
18 32 55	=1357+559	13 18 07	83.4	62.8	-0.7		-108.8	29	3474	18 32 26
18 32 55	SN2011FE	13 18 07	83.2	76.1	-0.8		-94.7	-42	3474	No stop
18 37 00	---	13 22 13	83.8	75.6	-0.7		-96.0	203	3505	18 32 56
18 37 00	J1359+5544	13 22 13	84.0	60.9	-0.6		-111.4	-45	3505	No stop
18 38 00	=1357+559	13 23 13	84.1	60.4	-0.6		-112.2	15	3513	18 37 01
18 38 00	SN2011FE	13 23 13	83.9	75.5	-0.7		-96.4	-45	3513	No stop
18 42 05	---	13 27 19	84.5	74.7	-0.6		-98.0	200	3544	18 38 01
18 42 45	J1359+5544	13 27 59	84.7	57.6	-0.5		-115.9	-9	3544	18 42 45
18 43 15	=1357+559	13 28 29	84.8	57.3	-0.5		-116.4	21	3548	18 42 46
18 43 15	SN2011FE	13 28 29	84.7	74.5	-0.6		-98.4	-49	3548	No stop
18 47 20	---	13 32 35	85.3	73.3	-0.5		-100.4	196	3579	18 43 16
18 47 20	J1359+5544	13 32 35	85.3	54.1	-0.5		-120.4	-55	3579	No stop
18 48 20	=1357+559	13 33 35	85.4	53.2	-0.4		-121.5	5	3587	18 47 21

Schedule for TORUN (Code Tr) Page 15

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
18 48 20	SN2011FE	13 33 35	85.4	73.0	-0.5		-100.9	-54	3587	No stop
18 52 25	---	13 37 41	86.0	71.3	-0.4		-103.4	191	3619	18 48 21
18 53 05	J1359+5544	13 38 21	86.0	48.1	-0.4		-127.5	-22	3619	18 53 05
18 53 35	=1357+559	13 38 51	86.0	47.5	-0.3		-128.3	8	3622	18 53 06
18 53 35	SN2011FE	13 38 51	86.2	70.7	-0.4		-104.3	-60	3622	No stop
18 57 40	---	13 42 56	86.7	68.1	-0.3		-107.8	185	3654	18 53 36
18 58 40	SN2011FE	13 43 57	86.9	67.2	-0.3		-108.8	52	3654	18 58 40
19 02 45	---	13 48 02	87.4	62.8	-0.3		-114.0	245	3685	18 58 41
19 03 55	SN2011FE	13 49 13	87.6	61.2	-0.2		-115.9	60	3685	19 03 55
19 08 00	---	13 53 18	88.1	53.1	-0.2		-124.8	245	3717	19 03 56
19 09 00	SN2011FE	13 54 18	88.2	50.4	-0.2		-127.7	48	3717	19 09 00
19 13 05	---	13 58 24	88.6	34.5	-0.1		-144.4	245	3748	19 09 01
19 14 15	SN2011FE	13 59 34	88.7	28.2	-0.1		-151.0	53	3748	19 14 15
19 18 20	---	14 03 40	88.9	-0.1	0.0		179.9	245	3779	19 14 16
19 18 20	J1359+5544	14 03 40	87.4	-12.4	0.1		166.8	-43	3779	No stop
19 19 20	=1357+559	14 04 40	87.3	-15.3	0.1		163.6	17	3787	19 18 21
19 19 20	SN2011FE	14 04 40	88.9	-7.6	0.0		172.2	-24	3787	No stop
19 23 25	---	14 08 46	88.7	-33.8	0.1		145.2	221	3819	19 19 21
19 24 05	J1359+5544	14 09 26	87.1	-27.9	0.2		150.1	12	3819	19 24 05
19 24 35	=1357+559	14 09 56	87.0	-29.1	0.2		148.8	30	3822	19 24 06
19 24 35	SN2011FE	14 09 56	88.6	-39.4	0.1		139.4	-40	3822	No stop
19 28 40	---	14 14 02	88.1	-53.1	0.2		124.8	205	3854	19 24 36
19 28 40	J1359+5544	14 14 02	86.7	-37.6	0.2		139.4	-44	3854	No stop
19 29 40	=1357+559	14 15 02	86.6	-39.4	0.3		137.4	16	3862	19 28 41
19 29 40	SN2011FE	14 15 02	88.0	-55.5	0.2		122.2	-50	3862	No stop
19 33 45	---	14 19 07	87.5	-62.6	0.3		114.3	195	3893	19 29 41
19 34 25	J1359+5544	14 19 48	86.1	-46.7	0.3		129.2	-7	3893	19 34 25
19 34 55	=1357+559	14 20 18	86.0	-47.3	0.3		128.5	23	3897	19 34 26
19 34 55	SN2011FE	14 20 18	87.3	-64.1	0.3		112.5	-50	3897	No stop
19 39 00	---	14 24 23	86.7	-68.1	0.3		107.8	195	3928	19 34 56

Schedule for TORUN (Code Tr) Page 16

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
19 39 00	J1359+5544	14 24 23	85.6	-51.9	0.4		123.0	-46	3928	No stop
19 40 00	=1357+559	14 25 23	85.5	-52.9	0.4		121.9	14	3936	19 39 01
19 40 00	SN2011FE	14 25 23	86.6	-68.8	0.4		106.8	-48	3936	No stop
19 44 05	---	14 29 29	86.0	-71.3	0.4		103.5	197	3967	19 40 01
19 44 45	J1359+5544	14 30 09	84.9	-56.8	0.5		117.0	-4	3967	19 44 45
19 45 15	=1357+559	14 30 39	84.8	-57.2	0.5		116.5	26	3971	19 44 46
19 45 15	SN2011FE	14 30 39	85.9	-71.8	0.4		102.8	-45	3971	No stop
19 49 20	---	14 34 45	85.3	-73.4	0.5		100.4	200	4003	19 45 16
19 49 20	J1359+5544	14 34 45	84.3	-59.7	0.6		113.1	-42	4003	No stop
19 50 20	=1357+559	14 35 45	84.2	-60.3	0.6		112.4	18	4010	19 49 21
19 50 20	SN2011FE	14 35 45	85.1	-73.7	0.5		99.9	-42	4010	No stop
19 54 25	---	14 39 51	84.5	-74.7	0.6		98.0	203	4042	19 50 21
19 55 05	J1359+5544	14 40 31	83.5	-62.5	0.7		109.2	1	4042	19 55 05
19 55 35	=1357+559	14 41 01	83.5	-62.7	0.7		108.9	30	4046	19 55 06
19 55 35	SN2011FE	14 41 01	84.4	-74.9	0.6		97.5	-40	4046	No stop
19 59 40	---	14 45 07	83.8	-75.6	0.7		96.0	205	4077	19 55 36
19 59 40	J1359+5544	14 45 07	82.9	-64.2	0.8		106.6	-38	4077	No stop
20 00 40	=1357+559	14 46 07	82.8	-64.5	0.8		106.1	22	4085	19 59 41
20 00 40	SN2011FE	14 46 07	83.6	-75.8	0.7		95.7	-38	4085	No stop
20 04 45	---	14 50 12	83.0	-76.2	0.8		94.4	207	4116	20 00 41
20 05 25	J1359+5544	14 50 53	82.1	-65.8	0.9		103.8	4	4116	20 05 25
20 05 55	=1357+559	14 51 23	82.1	-65.9	0.9		103.5	30	4120	20 05 26
20 05 55	SN2011FE	14 51 23	82.9	-76.3	0.8		94.1	-36	4120	No stop
20 10 00	---	14 55 28	82.3	-76.6	0.9		93.0	209	4151	20 05 56
20 10 00	J1359+5544	14 55 28	81.5	-66.8	0.9		101.8	-34	4151	No stop
20 11 00	=1357+559	14 56 29	81.4	-67.0	0.9		101.4	26	4159	20 10 01
20 11 00	SN2011FE	14 56 29	82.1	-76.6	0.9		92.7	-34	4159	No stop
20 15 05	---	15 00 34	81.5	-76.8	0.9		91.7	211	4190	20 11 01
20 15 45	J1359+5544	15 01 14	80.7	-67.8	1.0		99.7	7	4190	20 15 45
20 16 15	=1357+559	15 01 44	80.6	-67.9	1.0		99.5	30	4194	20 15 46

```
Schedule for TORUN     (Code Tr )                                Page  17
               SN2011fe at 1 Gb/s
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  14 Jun 2015   Day 165 ---

20 16 15  SN2011FE     15 01 44  81.3 -76.8  1.0      91.4   -33     4194   No stop
20 20 20  ---          15 05 50  80.7 -76.9  1.0      90.5   212     4226   20 16 16

20 20 20  J1359+5544   15 05 50  80.1 -68.4  1.1      98.1   -32     4226   No stop
20 21 20  =1357+559    15 06 50  79.9 -68.5  1.1      97.8    28     4233   20 20 21

20 21 20  SN2011FE     15 06 50  80.6 -76.9  1.1      90.3   -32     4233   No stop
20 25 25  ---          15 10 56  80.0 -76.9  1.1      89.5   213     4265   20 21 21

20 26 05  J1359+5544   15 11 36  79.2 -69.0  1.2      96.4     9     4265   20 26 05
20 26 35  =1357+559    15 12 06  79.2 -69.0  1.2      96.2    30     4269   20 26 06

20 26 35  SN2011FE     15 12 06  79.8 -76.9  1.1      89.3   -31     4269   No stop
20 30 40  ---          15 16 12  79.2 -76.8  1.2      88.5   214     4300   20 26 36

20 30 40  J1359+5544   15 16 12  78.6 -69.3  1.3      95.1   -30     4300   No stop
20 31 40  =1357+559    15 17 12  78.5 -69.4  1.3      94.8    30     4308   20 30 41

20 31 40  SN2011FE     15 17 12  79.1 -76.8  1.2      88.3   -30     4308   No stop
20 35 45  ---          15 21 18  78.5 -76.7  1.3      87.6   215     4339   20 31 41

20 36 25  J1359+5544   15 21 58  77.8 -69.6  1.4      93.6    11     4339   20 36 25
20 36 55  =1357+559    15 22 28  77.7 -69.6  1.4      93.5    30     4343   20 36 26

20 36 55  SN2011FE     15 22 28  78.3 -76.7  1.3      87.4   -29     4343   No stop
20 41 00  ---          15 26 33  77.7 -76.5  1.4      86.7   216     4374   20 36 56

20 41 00  J1359+5544   15 26 33  77.1 -69.8  1.4      92.5   -29     4374   No stop
20 42 00  =1357+559    15 27 34  77.0 -69.8  1.5      92.3    31     4382   20 41 01

20 42 00  SN2011FE     15 27 34  77.6 -76.5  1.4      86.6   -28     4382   No stop
20 46 05  ---          15 31 39  77.0 -76.3  1.5      85.9   217     4413   20 42 01

20 46 45  J1359+5544   15 32 19  76.3 -69.9  1.5      91.2    12     4413   20 46 45
20 47 15  =1357+559    15 32 49  76.3 -69.9  1.6      91.1    30     4417   20 46 46

20 47 15  SN2011FE     15 32 49  76.8 -76.2  1.5      85.7   -28     4417   No stop
20 51 20  ---          15 36 55  76.2 -76.0  1.6      85.1   217     4449   20 47 16

20 51 20  J1359+5544   15 36 55  75.7 -69.9  1.6      90.2   -27     4449   No stop
20 52 20  =1357+559    15 37 55  75.5 -69.9  1.6      90.0    33     4456   20 51 21

20 52 20  SN2011FE     15 37 55  76.1 -76.0  1.6      84.9   -27     4456   No stop
20 56 25  ---          15 42 01  75.5 -75.8  1.6      84.3   218     4488   20 52 21
```

Schedule for TORUN (Code Tr) Page 18

SN2011fe at 1 Gb/s

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
20 57 05	J1359+5544	15 42 41	74.9	-69.9	1.7		89.0	13	4488	20 57 05
20 57 35	=1357+559	15 43 11	74.8	-69.9	1.7		89.0	30	4492	20 57 06
20 57 35	SN2011FE	15 43 11	75.3	-75.7	1.7		84.2	-27	4492	No stop
21 01 40	---	15 47 17	74.7	-75.4	1.7		83.6	218	4523	20 57 36
21 01 40	J1359+5544	15 47 17	74.2	-69.8	1.8		88.2	-26	4523	No stop
21 02 40	=1357+559	15 48 17	74.1	-69.8	1.8		88.0	34	4531	21 01 41
21 02 40	SN2011FE	15 48 17	74.5	-75.4	1.7		83.4	-26	4531	No stop
21 06 45	---	15 52 23	74.0	-75.1	1.8		82.8	219	4562	21 02 41
21 07 25	J1359+5544	15 53 03	73.4	-69.7	1.9		87.1	14	4562	21 07 25
21 07 55	=1357+559	15 53 33	73.3	-69.7	1.9		87.0	30	4566	21 07 26
21 07 55	SN2011FE	15 53 33	73.8	-75.0	1.8		82.7	-26	4566	No stop
21 12 00	---	15 57 39	73.2	-74.8	1.9		82.1	219	4597	21 07 56
21 12 00	J1359+5544	15 57 39	72.8	-69.6	2.0		86.3	-25	4597	No stop
21 13 00	=1357+559	15 58 39	72.6	-69.5	2.0		86.1	35	4605	21 12 01
21 13 00	SN2011FE	15 58 39	73.0	-74.7	1.9		82.0	-25	4605	No stop
21 17 05	---	16 02 44	72.5	-74.4	2.0		81.4	220	4637	21 13 01
21 17 45	J1359+5544	16 03 24	72.0	-69.4	2.1		85.3	15	4637	21 17 45
21 18 15	=1357+559	16 03 55	71.9	-69.4	2.1		85.2	30	4640	21 17 46
21 18 15	SN2011FE	16 03 55	72.3	-74.3	2.0		81.3	-25	4640	No stop
21 22 20	---	16 08 00	71.7	-74.0	2.1		80.7	220	4672	21 18 16
21 22 20	J1359+5544	16 08 00	71.3	-69.2	2.1		84.5	-25	4672	No stop
21 23 20	=1357+559	16 09 00	71.2	-69.2	2.2		84.3	35	4679	21 22 21
21 23 20	SN2011FE	16 09 00	71.5	-73.9	2.1		80.6	-25	4679	No stop
21 27 25	---	16 13 06	71.0	-73.6	2.2		80.1	220	4711	21 23 21
21 28 05	J1359+5544	16 13 46	70.5	-68.9	2.2		83.5	16	4711	21 28 05
21 28 35	=1357+559	16 14 16	70.4	-68.9	2.2		83.5	30	4715	21 28 06
21 28 35	SN2011FE	16 14 16	70.8	-73.5	2.2		79.9	-24	4715	No stop
21 32 40	---	16 18 22	70.2	-73.2	2.2		79.4	221	4746	21 28 36
21 32 40	J1359+5544	16 18 22	69.9	-68.7	2.3		82.8	-24	4746	No stop
21 33 40	=1357+559	16 19 22	69.7	-68.7	2.3		82.6	36	4754	21 32 41

Schedule for TORUN (Code Tr) Page 19
SN2011fe at 1 Gb/s
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 14 Jun 2015 Day 165 ---										
21 33 40	SN2011FE	16 19 22	70.1	-73.1	2.3		79.3	-24	4754	No stop
21 37 45	---	16 23 28	69.5	-72.8	2.3		78.7	221	4785	21 33 41
21 38 25	J1359+5544	16 24 08	69.1	-68.4	2.4		81.9	16	4785	21 38 25
21 38 55	=1357+559	16 24 38	69.0	-68.4	2.4		81.8	30	4789	21 38 26
21 38 55	SN2011FE	16 24 38	69.3	-72.7	2.3		78.6	-24	4789	No stop
21 43 00	---	16 28 44	68.7	-72.4	2.4		78.1	221	4821	21 38 56
21 43 00	J1359+5544	16 28 44	68.4	-68.1	2.5		81.2	-23	4821	No stop
21 44 00	=1357+559	16 29 44	68.3	-68.1	2.5		81.0	37	4828	21 43 01
21 44 00	SN2011FE	16 29 44	68.6	-72.3	2.4		78.0	-23	4828	No stop
21 48 05	---	16 33 49	68.0	-71.9	2.5		77.4	222	4860	21 44 01
21 48 45	J1359+5544	16 34 30	67.6	-67.8	2.6		80.3	17	4860	21 48 45
21 49 15	=1357+559	16 35 00	67.5	-67.8	2.6		80.3	30	4863	21 48 46
21 49 15	SN2011FE	16 35 00	67.8	-71.8	2.5		77.3	-23	4863	No stop
21 53 20	---	16 39 05	67.2	-71.5	2.6		76.8	222	4895	21 49 16
21 53 20	J1359+5544	16 39 05	67.0	-67.5	2.7		79.6	-23	4895	No stop
21 54 20	=1357+559	16 40 05	66.8	-67.4	2.7		79.5	37	4903	21 53 21
21 54 20	SN2011FE	16 40 05	67.1	-71.4	2.6		76.7	-23	4903	No stop
21 58 25	---	16 44 11	66.5	-71.0	2.7		76.2	222	4934	21 54 21
21 59 05	J1359+5544	16 44 51	66.2	-67.1	2.8		78.8	17	4934	21 59 05
21 59 35	=1357+559	16 45 21	66.1	-67.1	2.8		78.7	30	4938	21 59 06
21 59 35	SN2011FE	16 45 21	66.3	-70.9	2.7		76.0	-23	4938	No stop
22 03 40	---	16 49 27	65.8	-70.6	2.8		75.5	222	4969	21 59 36
22 03 40	J1359+5544	16 49 27	65.5	-66.8	2.8		78.1	-22	4969	No stop
22 04 40	=1357+559	16 50 27	65.4	-66.7	2.8		78.0	38	4977	22 03 41
22 04 40	SN2011FE	16 50 27	65.6	-70.5	2.8		75.4	-22	4977	No stop
22 08 45	---	16 54 33	65.0	-70.1	2.8		74.9	223	5008	22 04 41
22 09 25	J1359+5544	16 55 13	64.7	-66.4	2.9		77.3	18	5008	22 09 25
22 09 55	=1357+559	16 55 43	64.7	-66.4	2.9		77.3	30	5012	22 09 26
22 09 55	SN2011FE	16 55 43	64.9	-70.0	2.9		74.8	-22	5012	No stop
22 14 00	---	16 59 49	64.3	-69.6	2.9		74.3	223	5044	22 09 56

```
Schedule for TORUN     (Code Tr )                                Page  20
              SN2011fe at 1 Gb/s
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  14 Jun 2015   Day 165 ---

22 14 00  J1359+5544   16 59 49  64.1 -66.0  3.0      76.7   -22     5044   No stop
22 15 00  =1357+559    17 00 49  64.0 -66.0  3.0      76.5    38     5051   22 14 01

22 15 00  SN2011FE     17 00 49  64.2 -69.6  3.0      74.1   -22     5051   No stop
22 19 00  ---          17 04 50  63.6 -69.2  3.0      73.7   218     5082   22 15 01

22 19 40  J1359+5544   17 05 30  63.3 -65.6  3.1      75.9    18     5082   22 19 40
22 22 00  =1357+559    17 07 50  63.0 -65.4  3.1      75.6   140     5100   22 19 41

22 24 00  3C309.1      17 09 50  66.7 -25.5  2.2     125.1    25     5100   22 24 00
22 27 00  ---          17 12 51  66.5 -25.8  2.2     124.1   180     5123   22 24 01

22 27 00  3C309.1      17 12 51  66.5 -25.8  2.2     124.1    -5     5123   No stop
22 30 00  ---          17 15 51  66.3 -26.1  2.3     123.0   175     5146   22 27 01


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


 ======== Setup file: sess215.L1024

   Setup group:    8         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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:   6  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:   6

  Track assignments are:
   track1=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* SN2011FE          14 01 19.456745   * 14 03 05.810000     14 03 39.305697       0.00
                    54 30 48.12012    * 54 16 25.40000      54 12 16.47991        0.00

  1357+559          13 57 20.569669   * 13 59 05.743398     13 59 38.838481       0.60
* J1359+5544        55 59 00.83861    * 55 44 29.38388      55 40 18.00933        0.32
                    /Users/torres/sched_11.4/catalogs/sources.gsfc
                    GSFC 2015a astro solution, unpublished     90 observations.

* 3C309.1           14 58 56.613405   * 14 59 07.583909     14 59 13.208707       0.64
  J1459+7140        71 52 11.18829    * 71 40 19.86681      71 36 58.23809        0.65
  1458+718          /Users/torres/sched_11.4/catalogs/sources.gsfc
  J1459+71          GSFC 2015a astro solution, unpublished   3001 observations.
```

ep093btr

Flat-spectrum doubles

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```
Observing mode: regular EVN continuum
Schedule for TORUN     (Code Tr )                                  Page   2
               Flat-spectrum doubles
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  15 Jun 2015   Day 166 ---
 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

08 00 00  3C138        02 47 25  42.7 125.5 -2.6     -30.7     0        0   08 00 00
08 10 00  ---          02 57 27  43.9 128.3 -2.4     -29.5   600       77   08 00 01
        Source only    7.3 degrees from the Sun.

08 11 00  0528+134     02 58 27  40.2 127.9 -2.6     -29.2    32       77   08 11 00
08 15 00  ---          03 02 27  40.6 129.0 -2.5     -28.7   240      108   08 11 01
        Source only    9.8 degrees from the Sun.

08 18 00  J0741+3112   03 05 28  36.6  85.2 -4.6     -44.4    77      108   08 18 00
08 19 00  =0738+313    03 06 28  36.8  85.4 -4.6     -44.4    60      115   08 18 01

08 19 00  SDSSJ0741    03 06 28  36.1  86.1 -4.6     -43.9   -14      115   No stop
08 22 30  ---          03 09 59  36.6  86.7 -4.5     -44.0   196      142   08 19 01

08 23 10  J0741+3112   03 10 39  37.4  86.2 -4.5     -44.4    25      142   08 23 10
08 24 00  =0738+313    03 11 29  37.5  86.3 -4.5     -44.5    50      149   08 23 11

08 24 00  SDSSJ0741    03 11 29  36.9  87.0 -4.5     -44.0   -14      149   No stop
08 27 30  ---          03 15 00  37.4  87.7 -4.5     -44.0   196      176   08 24 01

08 27 30  J0741+3112   03 15 00  38.0  87.0 -4.5     -44.5   -15      176   No stop
08 29 00  =0738+313    03 16 30  38.3  87.3 -4.4     -44.5    75      187   08 27 31

08 29 00  SDSSJ0741    03 16 30  37.6  88.0 -4.4     -44.0   -14      187   No stop
08 32 30  ---          03 20 00  38.1  88.7 -4.4     -44.1   196      214   08 29 01

08 33 10  J0741+3112   03 20 40  38.9  88.1 -4.4     -44.5    25      214   08 33 10
08 34 00  =0738+313    03 21 31  39.0  88.3 -4.3     -44.5    50      221   08 33 11

08 34 00  SDSSJ0741    03 21 31  38.4  89.0 -4.3     -44.1   -14      221   No stop
08 37 30  ---          03 25 01  38.9  89.7 -4.3     -44.1   196      247   08 34 01

08 37 30  J0741+3112   03 25 01  39.6  89.0 -4.3     -44.6   -15      247   No stop
08 39 00  =0738+313    03 26 31  39.8  89.3 -4.3     -44.6    75      259   08 37 31
```

Schedule for TORUN (Code Tr) Page 3

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
08 39 00	SDSSJ0741	03 26 31	39.1	90.0	-4.3		-44.1	-14	259	No stop
08 42 30	---	03 30 02	39.6	90.7	-4.2		-44.1	196	286	08 39 01
08 43 10	J0741+3112	03 30 42	40.4	90.1	-4.2		-44.6	25	286	08 43 10
08 44 00	=0738+313	03 31 32	40.5	90.3	-4.2		-44.6	50	292	08 43 11
08 44 00	SDSSJ0741	03 31 32	39.9	91.0	-4.2		-44.1	-14	292	No stop
08 47 30	---	03 35 03	40.4	91.7	-4.1		-44.0	196	319	08 44 01
08 47 30	J0741+3112	03 35 03	41.1	91.0	-4.1		-44.6	-15	319	No stop
08 49 00	=0738+313	03 36 33	41.3	91.3	-4.1		-44.6	75	331	08 47 31
08 49 00	SDSSJ0741	03 36 33	40.6	92.0	-4.1		-44.0	-14	331	No stop
08 52 30	---	03 40 04	41.1	92.7	-4.0		-44.0	196	358	08 49 01
08 53 10	J0741+3112	03 40 44	41.9	92.1	-4.0		-44.5	25	358	08 53 10
08 54 00	=0738+313	03 41 34	42.0	92.3	-4.0		-44.5	50	364	08 53 11
08 54 00	SDSSJ0741	03 41 34	41.4	93.1	-4.0		-44.0	-14	364	No stop
08 57 30	---	03 45 04	41.9	93.8	-4.0		-43.9	196	391	08 54 01
08 57 30	J0741+3112	03 45 04	42.6	93.0	-4.0		-44.5	-15	391	No stop
08 59 00	=0738+313	03 46 35	42.8	93.3	-3.9		-44.5	75	403	08 57 31
08 59 00	SDSSJ0741	03 46 35	42.1	94.1	-3.9		-43.9	-14	403	No stop
09 02 30	---	03 50 05	42.6	94.8	-3.9		-43.9	196	429	08 59 01
09 03 10	J0741+3112	03 50 45	43.4	94.2	-3.9		-44.4	25	429	09 03 10
09 04 00	=0738+313	03 51 36	43.5	94.4	-3.8		-44.4	50	436	09 03 11
09 04 00	SDSSJ0741	03 51 36	42.9	95.2	-3.8		-43.8	-14	436	No stop
09 07 30	---	03 55 06	43.4	95.9	-3.8		-43.8	196	463	09 04 01
09 07 30	J0741+3112	03 55 06	44.1	95.1	-3.8		-44.3	-15	463	No stop
09 09 00	=0738+313	03 56 36	44.3	95.5	-3.8		-44.3	75	474	09 07 31
09 09 00	SDSSJ0741	03 56 36	43.6	96.2	-3.8		-43.7	-14	474	No stop
09 12 30	---	04 00 07	44.1	97.0	-3.7		-43.7	196	501	09 09 01
09 13 10	J0741+3112	04 00 47	44.9	96.4	-3.7		-44.2	25	501	09 13 10
09 14 00	=0738+313	04 01 37	45.0	96.5	-3.7		-44.2	50	508	09 13 11
09 14 00	SDSSJ0741	04 01 37	44.4	97.3	-3.7		-43.6	-14	508	No stop
09 17 30	---	04 05 08	44.9	98.1	-3.6		-43.5	196	535	09 14 01
09 17 30	J0741+3112	04 05 08	45.6	97.3	-3.6		-44.1	-15	535	No stop
09 19 00	=0738+313	04 06 38	45.8	97.6	-3.6		-44.1	75	546	09 17 31

Schedule for TORUN (Code Tr) Page 4

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
09 19 00	SDSSJ0741	04 06 38	45.1	98.4	-3.6		-43.5	-14	546	No stop
09 22 30	---	04 10 09	45.6	99.2	-3.5		-43.4	196	573	09 19 01
09 23 10	J0741+3112	04 10 49	46.4	98.6	-3.5		-43.9	25	573	09 23 10
09 24 00	=0738+313	04 11 39	46.5	98.8	-3.5		-43.9	50	579	09 23 11
09 24 00	SDSSJ0741	04 11 39	45.9	99.5	-3.5		-43.3	-14	579	No stop
09 27 30	---	04 15 09	46.4	100.3	-3.5		-43.2	196	606	09 24 01
09 27 30	J0741+3112	04 15 09	47.0	99.5	-3.4		-43.8	-15	606	No stop
09 29 00	=0738+313	04 16 40	47.3	99.9	-3.4		-43.7	75	618	09 27 31
09 29 00	SDSSJ0741	04 16 40	46.6	100.7	-3.4		-43.1	-14	618	No stop
09 32 30	---	04 20 10	47.1	101.5	-3.4		-43.0	196	645	09 29 01
09 33 10	J0741+3112	04 20 50	47.9	100.8	-3.4		-43.6	25	645	09 33 10
09 34 00	=0738+313	04 21 40	48.0	101.0	-3.3		-43.5	50	651	09 33 11
09 34 00	SDSSJ0741	04 21 40	47.3	101.8	-3.3		-42.9	-14	651	No stop
09 37 30	---	04 25 11	47.8	102.7	-3.3		-42.7	196	678	09 34 01
09 37 30	J0741+3112	04 25 11	48.5	101.9	-3.3		-43.4	-15	678	No stop
09 39 00	=0738+313	04 26 41	48.7	102.2	-3.3		-43.3	75	690	09 37 31
09 39 00	SDSSJ0741	04 26 41	48.1	103.0	-3.3		-42.7	-14	690	No stop
09 42 30	---	04 30 12	48.6	103.9	-3.2		-42.5	196	717	09 39 01
09 43 10	J0741+3112	04 30 52	49.4	103.2	-3.2		-43.1	25	717	09 43 10
09 44 00	=0738+313	04 31 42	49.5	103.4	-3.2		-43.0	50	723	09 43 11
09 44 00	SDSSJ0741	04 31 42	48.8	104.2	-3.2		-42.4	-14	723	No stop
09 47 30	---	04 35 13	49.3	105.1	-3.1		-42.2	196	750	09 44 01
09 47 30	J0741+3112	04 35 13	50.0	104.3	-3.1		-42.9	-15	750	No stop
09 49 00	=0738+313	04 36 43	50.2	104.6	-3.1		-42.8	75	762	09 47 31
09 49 00	SDSSJ0741	04 36 43	49.5	105.4	-3.1		-42.1	-14	762	No stop
09 52 30	---	04 40 13	50.0	106.3	-3.0		-41.9	196	788	09 49 01
09 53 10	J0741+3112	04 40 54	50.8	105.7	-3.0		-42.5	25	788	09 53 10
09 54 00	=0738+313	04 41 44	50.9	105.9	-3.0		-42.5	50	795	09 53 11
09 54 00	SDSSJ0741	04 41 44	50.3	106.7	-3.0		-41.8	-14	795	No stop
09 57 30	---	04 45 14	50.8	107.6	-3.0		-41.5	196	822	09 54 01

Schedule for TORUN (Code Tr) Page 5

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
09 57 30	J0741+3112	04 45 14	51.4	106.7	-2.9		-42.2	-15	822	No stop
09 59 00	=0738+313	04 46 45	51.7	107.1	-2.9		-42.1	75	833	09 57 31
09 59 00	SDSSJ0741	04 46 45	51.0	108.0	-2.9		-41.4	-14	833	No stop
10 02 30	---	04 50 15	51.5	108.9	-2.9		-41.2	196	860	09 59 01
10 03 10	J0741+3112	04 50 55	52.3	108.2	-2.9		-41.8	25	860	10 03 10
10 04 00	=0738+313	04 51 45	52.4	108.4	-2.8		-41.7	50	867	10 03 11
10 04 00	SDSSJ0741	04 51 45	51.7	109.3	-2.8		-41.0	-14	867	No stop
10 07 30	---	04 55 16	52.2	110.2	-2.8		-40.7	196	894	10 04 01
10 07 30	J0741+3112	04 55 16	52.9	109.4	-2.8		-41.5	-15	894	No stop
10 09 00	=0738+313	04 56 46	53.1	109.8	-2.8		-41.3	75	905	10 07 31
10 09 00	SDSSJ0741	04 56 46	52.4	110.6	-2.8		-40.6	-14	905	No stop
10 12 30	---	05 00 17	52.9	111.6	-2.7		-40.3	196	932	10 09 01
10 13 10	J0741+3112	05 00 57	53.7	110.9	-2.7		-41.0	25	932	10 13 10
10 14 00	=0738+313	05 01 47	53.8	111.1	-2.7		-40.9	50	938	10 13 11
10 14 00	SDSSJ0741	05 01 47	53.1	112.0	-2.7		-40.2	-15	938	No stop
10 17 30	---	05 05 18	53.6	112.9	-2.6		-39.8	195	965	10 14 01
10 17 30	J0741+3112	05 05 18	54.3	112.1	-2.6		-40.6	-15	965	No stop
10 19 00	=0738+313	05 06 48	54.5	112.5	-2.6		-40.4	75	977	10 17 31
10 21 00	4C39.25	05 08 48	44.6	80.9	-4.3		-49.7	41	977	10 21 00
10 24 00	---	05 11 49	45.0	81.4	-4.3		-49.8	180	1000	10 21 01
10 26 00	J0956+5753	05 13 49	51.4	53.7	-4.7		-65.4	50	1000	10 26 00
10 27 00	=0952+581	05 14 49	51.5	53.8	-4.7		-65.6	60	1008	10 26 01
10 27 00	SDSSJ0956	05 14 49	51.4	54.3	-4.7		-65.2	-11	1008	No stop
10 30 30	---	05 18 20	51.8	54.6	-4.7		-65.7	199	1035	10 27 01
10 31 00	J0956+5753	05 18 50	52.0	54.2	-4.6		-66.1	19	1035	10 31 00
10 32 00	=0952+581	05 19 50	52.1	54.3	-4.6		-66.3	60	1042	10 31 01
10 32 00	SDSSJ0956	05 19 50	52.0	54.7	-4.6		-65.9	-11	1042	No stop
10 35 30	---	05 23 21	52.4	55.0	-4.6		-66.4	199	1069	10 32 01
10 35 30	J0956+5753	05 23 21	52.6	54.6	-4.6		-66.8	-11	1069	No stop
10 37 00	=0952+581	05 24 51	52.7	54.7	-4.5		-67.0	79	1081	10 35 31

Schedule for TORUN (Code Tr) Page 6

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
10 37 00	SDSSJ0956	05 24 51	52.6	55.2	-4.5		-66.6	-11	1081	No stop
10 40 30	---	05 28 21	53.0	55.5	-4.5		-67.1	199	1108	10 37 01
10 41 00	J0956+5753	05 28 51	53.2	55.1	-4.5		-67.6	19	1108	10 41 00
10 42 00	=0952+581	05 29 52	53.4	55.1	-4.5		-67.7	60	1115	10 41 01
10 42 00	SDSSJ0956	05 29 52	53.2	55.6	-4.5		-67.3	-11	1115	No stop
10 45 30	---	05 33 22	53.7	55.9	-4.4		-67.8	199	1142	10 42 01
10 45 30	J0956+5753	05 33 22	53.8	55.4	-4.4		-68.2	-11	1142	No stop
10 47 00	=0952+581	05 34 52	54.0	55.6	-4.4		-68.4	79	1154	10 45 31
10 47 00	SDSSJ0956	05 34 52	53.8	56.0	-4.4		-68.0	-11	1154	No stop
10 50 30	---	05 38 23	54.3	56.3	-4.3		-68.5	199	1181	10 47 01
10 51 00	J0956+5753	05 38 53	54.5	55.9	-4.3		-69.0	19	1181	10 51 00
10 52 00	=0952+581	05 39 53	54.6	56.0	-4.3		-69.2	60	1188	10 51 01
10 52 00	SDSSJ0956	05 39 53	54.5	56.5	-4.3		-68.7	-11	1188	No stop
10 55 30	---	05 43 24	54.9	56.8	-4.2		-69.2	199	1215	10 52 01
10 55 30	J0956+5753	05 43 24	55.0	56.3	-4.2		-69.7	-11	1215	No stop
10 57 00	=0952+581	05 44 54	55.2	56.4	-4.2		-69.9	79	1227	10 55 31
10 57 00	SDSSJ0956	05 44 54	55.1	56.9	-4.2		-69.5	-11	1227	No stop
11 00 30	---	05 48 25	55.5	57.2	-4.2		-70.0	199	1254	10 57 01
11 01 00	J0956+5753	05 48 55	55.7	56.7	-4.1		-70.5	19	1254	11 01 00
11 02 00	=0952+581	05 49 55	55.9	56.8	-4.1		-70.6	60	1262	11 01 01
11 02 00	SDSSJ0956	05 49 55	55.7	57.3	-4.1		-70.2	-11	1262	No stop
11 05 30	---	05 53 25	56.2	57.6	-4.1		-70.7	199	1288	11 02 01
11 05 30	J0956+5753	05 53 25	56.3	57.1	-4.1		-71.1	-11	1288	No stop
11 07 00	=0952+581	05 54 56	56.5	57.2	-4.0		-71.4	79	1300	11 05 31
11 07 00	SDSSJ0956	05 54 56	56.4	57.7	-4.0		-70.9	-12	1300	No stop
11 10 30	---	05 58 26	56.8	58.0	-4.0		-71.4	198	1327	11 07 01
11 11 00	J0956+5753	05 58 56	57.0	57.5	-4.0		-72.0	18	1327	11 11 00
11 12 00	=0952+581	05 59 57	57.1	57.5	-4.0		-72.1	60	1335	11 11 01
11 12 00	SDSSJ0956	05 59 57	57.0	58.1	-4.0		-71.6	-12	1335	No stop
11 15 30	---	06 03 27	57.5	58.4	-3.9		-72.1	198	1362	11 12 01

Schedule for TORUN (Code Tr) Page 7

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
11 15 30	J0956+5753	06 03 27	57.6	57.8	-3.9		-72.6	-12	1362	No stop
11 17 00	=0952+581	06 04 57	57.8	57.9	-3.9		-72.9	78	1373	11 15 31
11 17 00	SDSSJ0956	06 04 57	57.6	58.5	-3.9		-72.4	-12	1373	No stop
11 20 30	---	06 08 28	58.1	58.7	-3.8		-72.9	198	1400	11 17 01
11 21 00	J0956+5753	06 08 58	58.3	58.2	-3.8		-73.5	18	1400	11 21 00
11 22 00	=0952+581	06 09 58	58.4	58.3	-3.8		-73.6	60	1408	11 21 01
11 22 00	SDSSJ0956	06 09 58	58.3	58.9	-3.8		-73.1	-12	1408	No stop
11 25 30	---	06 13 29	58.7	59.1	-3.7		-73.6	198	1435	11 22 01
11 25 30	J0956+5753	06 13 29	58.8	58.5	-3.7		-74.1	-12	1435	No stop
11 27 00	=0952+581	06 14 59	59.0	58.6	-3.7		-74.4	78	1446	11 25 31
11 27 00	SDSSJ0956	06 14 59	58.9	59.2	-3.7		-73.8	-12	1446	No stop
11 30 30	---	06 18 30	59.4	59.5	-3.7		-74.4	198	1473	11 27 01
11 31 00	J0956+5753	06 19 00	59.5	58.9	-3.6		-75.0	18	1473	11 31 00
11 32 00	=0952+581	06 20 00	59.7	59.0	-3.6		-75.1	60	1481	11 31 01
11 32 00	SDSSJ0956	06 20 00	59.6	59.6	-3.6		-74.6	-12	1481	No stop
11 35 30	---	06 23 30	60.0	59.8	-3.6		-75.1	198	1508	11 32 01
11 35 30	J0956+5753	06 23 30	60.1	59.2	-3.6		-75.7	-12	1508	No stop
11 37 00	=0952+581	06 25 01	60.3	59.3	-3.5		-75.9	78	1519	11 35 31
11 37 00	SDSSJ0956	06 25 01	60.2	59.9	-3.5		-75.4	-12	1519	No stop
11 40 30	---	06 28 31	60.7	60.2	-3.5		-75.9	198	1546	11 37 01
11 41 00	J0956+5753	06 29 01	60.8	59.6	-3.5		-76.5	18	1546	11 41 00
11 42 00	=0952+581	06 30 01	61.0	59.6	-3.5		-76.7	60	1554	11 41 01
11 42 00	SDSSJ0956	06 30 01	60.9	60.3	-3.5		-76.1	-12	1554	No stop
11 45 30	---	06 33 32	61.3	60.5	-3.4		-76.7	198	1581	11 42 01
11 45 30	J0956+5753	06 33 32	61.4	59.9	-3.4		-77.2	-12	1581	No stop
11 47 00	=0952+581	06 35 02	61.6	60.0	-3.4		-77.5	78	1592	11 45 31
11 47 00	SDSSJ0956	06 35 02	61.5	60.6	-3.4		-76.9	-12	1592	No stop
11 50 30	---	06 38 33	62.0	60.8	-3.3		-77.4	198	1619	11 47 01
11 51 00	J0956+5753	06 39 03	62.1	60.2	-3.3		-78.1	18	1619	11 51 00
11 52 00	=0952+581	06 40 03	62.3	60.3	-3.3		-78.3	60	1627	11 51 01

Schedule for TORUN (Code Tr) Page 8

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
11 52 00	SDSSJ0956	06 40 03	62.2	60.9	-3.3		-77.7	-12	1627	No stop
11 55 30	---	06 43 34	62.7	61.1	-3.2		-78.2	198	1654	11 52 01
11 55 30	J0956+5753	06 43 34	62.7	60.5	-3.2		-78.8	-12	1654	No stop
11 57 00	=0952+581	06 45 04	62.9	60.5	-3.2		-79.1	78	1665	11 55 31
11 57 00	SDSSJ0956	06 45 04	62.9	61.2	-3.2		-78.5	-12	1665	No stop
12 00 30	---	06 48 35	63.3	61.4	-3.1		-79.0	198	1692	11 57 01
12 01 00	J0956+5753	06 49 05	63.5	60.8	-3.1		-79.7	18	1692	12 01 00
12 02 00	=0952+581	06 50 05	63.6	60.8	-3.1		-79.9	60	1700	12 01 01
12 02 00	SDSSJ0956	06 50 05	63.5	61.5	-3.1		-79.3	-12	1700	No stop
12 05 30	---	06 53 35	64.0	61.7	-3.1		-79.8	198	1727	12 02 01
12 05 30	J0956+5753	06 53 35	64.0	61.0	-3.1		-80.5	-12	1727	No stop
12 07 00	=0952+581	06 55 06	64.2	61.1	-3.0		-80.7	78	1738	12 05 31
12 07 00	SDSSJ0956	06 55 06	64.2	61.8	-3.0		-80.1	-13	1738	No stop
12 10 30	---	06 58 36	64.6	61.9	-3.0		-80.6	197	1765	12 07 01
12 11 00	J0956+5753	06 59 06	64.8	61.3	-3.0		-81.4	17	1765	12 11 00
12 12 00	=0952+581	07 00 06	64.9	61.3	-3.0		-81.6	60	1773	12 11 01
12 12 00	SDSSJ0956	07 00 06	64.8	62.0	-3.0		-80.9	-13	1773	No stop
12 15 30	---	07 03 37	65.3	62.2	-2.9		-81.5	197	1800	12 12 01
12 15 30	J0956+5753	07 03 37	65.4	61.5	-2.9		-82.2	-13	1800	No stop
12 17 00	=0952+581	07 05 07	65.6	61.5	-2.9		-82.4	77	1812	12 15 31
12 17 00	SDSSJ0956	07 05 07	65.5	62.3	-2.9		-81.7	-13	1812	No stop
12 20 30	---	07 08 38	66.0	62.4	-2.8		-82.3	197	1838	12 17 01
12 21 00	J0956+5753	07 09 08	66.1	61.7	-2.8		-83.1	17	1838	12 21 00
12 22 00	=0952+581	07 10 08	66.2	61.7	-2.8		-83.3	60	1846	12 21 01
12 22 00	SDSSJ0956	07 10 08	66.2	62.5	-2.8		-82.6	-13	1846	No stop
12 25 30	---	07 13 39	66.6	62.6	-2.7		-83.2	197	1873	12 22 01
12 25 30	J0956+5753	07 13 39	66.7	61.9	-2.7		-83.9	-13	1873	No stop
12 27 00	=0952+581	07 15 09	66.9	61.9	-2.7		-84.2	77	1885	12 25 31
12 29 00	4C39.25	07 17 09	63.6	109.1	-2.2		-46.9	11	1885	12 29 00
12 32 00	---	07 20 10	64.0	110.0	-2.1		-46.5	180	1908	12 29 01

Schedule for TORUN (Code Tr) Page 9

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
12 35 00	J1015+0109	07 23 10	26.8	129.7	-2.9		-27.5	26	1908	12 35 00
12 36 00	=1013+014	07 24 10	26.9	129.9	-2.9		-27.4	60	1915	12 35 01
12 36 00	SDSSJ1014	07 24 10	28.6	129.6	-2.8		-27.6	-20	1915	No stop
12 39 30	---	07 27 41	29.0	130.5	-2.8		-27.2	190	1942	12 36 01
12 40 10	J1015+0109	07 28 21	27.4	131.0	-2.8		-27.0	20	1942	12 40 10
12 41 00	=1013+014	07 29 11	27.5	131.2	-2.8		-26.9	50	1949	12 40 11
12 41 00	SDSSJ1014	07 29 11	29.1	130.8	-2.8		-27.1	-20	1949	No stop
12 44 30	---	07 32 42	29.5	131.7	-2.7		-26.7	190	1976	12 41 01
12 44 30	J1015+0109	07 32 42	27.9	132.1	-2.7		-26.5	-20	1976	No stop
12 46 00	=1013+014	07 34 12	28.1	132.4	-2.7		-26.3	70	1987	12 44 31
12 46 00	SDSSJ1014	07 34 12	29.7	132.1	-2.7		-26.5	-20	1987	No stop
12 49 30	---	07 37 43	30.1	133.0	-2.6		-26.1	190	2014	12 46 01
12 50 10	J1015+0109	07 38 23	28.5	133.5	-2.6		-25.8	20	2014	12 50 10
12 51 00	=1013+014	07 39 13	28.6	133.7	-2.6		-25.7	50	2021	12 50 11
12 51 00	SDSSJ1014	07 39 13	30.3	133.4	-2.6		-25.9	-20	2021	No stop
12 54 30	---	07 42 43	30.6	134.3	-2.5		-25.5	190	2047	12 51 01
12 54 30	J1015+0109	07 42 43	29.0	134.6	-2.6		-25.3	-20	2047	No stop
12 56 00	=1013+014	07 44 14	29.2	135.0	-2.5		-25.1	70	2059	12 54 31
12 57 00	J1024-0052	07 45 14	26.5	134.1	-2.7		-25.6	36	2059	12 57 00
12 58 00	=1021-006	07 46 14	26.6	134.3	-2.7		-25.4	60	2067	12 57 01
12 58 00	SDSSJ1026	07 46 14	26.5	133.7	-2.7		-25.7	-12	2067	No stop
13 01 30	---	07 49 45	26.9	134.6	-2.6		-25.3	198	2094	12 58 01
13 02 10	J1024-0052	07 50 25	27.1	135.4	-2.6		-24.9	28	2094	13 02 10
13 03 00	=1021-006	07 51 15	27.2	135.6	-2.6		-24.8	50	2100	13 02 11
13 03 00	SDSSJ1026	07 51 15	27.1	135.0	-2.6		-25.1	-12	2100	No stop
13 06 30	---	07 54 45	27.5	135.9	-2.5		-24.7	198	2127	13 03 01
13 06 30	J1024-0052	07 54 45	27.5	136.5	-2.5		-24.4	-12	2127	No stop
13 08 00	=1021-006	07 56 16	27.7	136.9	-2.5		-24.2	78	2138	13 06 31
13 08 00	SDSSJ1026	07 56 16	27.6	136.2	-2.5		-24.5	-12	2138	No stop
13 11 30	---	07 59 46	28.0	137.1	-2.5		-24.1	198	2165	13 08 01

Schedule for TORUN (Code Tr) Page 10

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
13 12 10	J1024-0052	08 00 26	28.1	138.0	-2.4		-23.7	28	2165	13 12 10
13 13 00	=1021-006	08 01 16	28.2	138.2	-2.4		-23.6	50	2172	13 12 11
13 13 00	SDSSJ1026	08 01 16	28.1	137.5	-2.4		-23.9	-12	2172	No stop
13 16 30	---	08 04 47	28.5	138.4	-2.4		-23.5	198	2199	13 13 01
13 16 30	J1024-0052	08 04 47	28.5	139.1	-2.3		-23.2	-12	2199	No stop
13 18 00	=1021-006	08 06 17	28.7	139.5	-2.3		-23.0	78	2210	13 16 31
13 19 00	J1015+0109	08 07 17	31.5	141.1	-2.2		-22.1	36	2210	13 19 00
13 20 00	=1013+014	08 08 18	31.6	141.4	-2.1		-22.0	60	2218	13 19 01
13 20 00	SDSSJ1014	08 08 18	33.2	141.2	-2.1		-22.1	-20	2218	No stop
13 23 30	---	08 11 48	33.5	142.2	-2.1		-21.6	190	2245	13 20 01
13 24 10	J1015+0109	08 12 28	32.0	142.5	-2.1		-21.4	20	2245	13 24 10
13 25 00	=1013+014	08 13 18	32.0	142.8	-2.1		-21.3	50	2251	13 24 11
13 25 00	SDSSJ1014	08 13 18	33.7	142.6	-2.0		-21.4	-20	2251	No stop
13 28 30	---	08 16 49	34.0	143.6	-2.0		-20.9	190	2278	13 25 01
13 28 30	J1015+0109	08 16 49	32.3	143.7	-2.0		-20.8	-20	2278	No stop
13 30 00	=1013+014	08 18 19	32.5	144.2	-2.0		-20.6	70	2290	13 28 31
13 30 00	SDSSJ1014	08 18 19	34.1	144.0	-1.9		-20.7	-20	2290	No stop
13 33 30	---	08 21 50	34.4	145.0	-1.9		-20.2	190	2317	13 30 01
13 34 10	J1015+0109	08 22 30	32.8	145.3	-1.9		-20.0	20	2317	13 34 10
13 35 00	=1013+014	08 23 20	32.9	145.6	-1.9		-19.9	50	2323	13 34 11
13 35 00	SDSSJ1014	08 23 20	34.6	145.4	-1.9		-19.9	-20	2323	No stop
13 38 30	---	08 26 51	34.9	146.4	-1.8		-19.4	190	2350	13 35 01
13 38 30	J1015+0109	08 26 51	33.2	146.5	-1.8		-19.3	-20	2350	No stop
13 40 00	=1013+014	08 28 21	33.3	147.0	-1.8		-19.1	70	2362	13 38 31
13 41 00	J1024-0052	08 29 21	30.8	145.7	-1.9		-19.8	36	2362	13 41 00
13 42 00	=1021-006	08 30 21	30.9	145.9	-1.9		-19.7	60	2369	13 41 01
13 42 00	SDSSJ1026	08 30 21	30.9	145.3	-2.0		-20.0	-12	2369	No stop
13 45 30	---	08 33 52	31.1	146.2	-1.9		-19.5	198	2396	13 42 01
13 46 10	J1024-0052	08 34 32	31.2	147.1	-1.8		-19.0	27	2396	13 46 10
13 47 00	=1021-006	08 35 22	31.3	147.3	-1.8		-18.9	50	2403	13 46 11

```
Schedule for TORUN     (Code Tr )                                Page  11
               Flat-spectrum doubles
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  15 Jun 2015   Day 166 ---

13 47 00  SDSSJ1026    08 35 22  31.3 146.7 -1.9     -19.3   -12     2403   No stop
13 50 30  ---          08 38 53  31.6 147.6 -1.8     -18.8   198     2429   13 47 01

13 50 30  J1024-0052   08 38 53  31.6 148.3 -1.8     -18.4   -13     2429   No stop
13 52 00  =1021-006    08 40 23  31.7 148.7 -1.7     -18.2    77     2441   13 50 31

13 52 00  SDSSJ1026    08 40 23  31.7 148.0 -1.8     -18.5   -12     2441   No stop
13 55 30  ---          08 43 53  32.0 149.0 -1.7     -18.0   198     2468   13 52 01

13 56 10  J1024-0052   08 44 34  32.0 149.9 -1.7     -17.5    27     2468   13 56 10
13 57 00  =1021-006    08 45 24  32.1 150.1 -1.7     -17.4    50     2474   13 56 11

13 57 00  SDSSJ1026    08 45 24  32.1 149.5 -1.7     -17.8   -12     2474   No stop
14 00 30  ---          08 48 54  32.3 150.4 -1.6     -17.2   198     2501   13 57 01

14 00 30  J1024-0052   08 48 54  32.3 151.1 -1.6     -16.9   -13     2501   No stop
14 02 00  =1021-006    08 50 24  32.4 151.5 -1.6     -16.6    77     2513   14 00 31

14 03 00  J1015+0109   08 51 25  35.0 153.6 -1.4     -15.5    36     2513   14 03 00
14 04 00  =1013+014    08 52 25  35.1 153.9 -1.4     -15.3    60     2521   14 03 01

14 04 00  SDSSJ1014    08 52 25  36.8 154.0 -1.4     -15.3   -20     2521   No stop
14 07 30  ---          08 55 55  37.0 155.0 -1.3     -14.7   190     2547   14 04 01

14 08 10  J1015+0109   08 56 35  35.4 155.2 -1.3     -14.6    20     2547   14 08 10
14 09 00  =1013+014    08 57 26  35.4 155.4 -1.3     -14.5    50     2554   14 08 11

14 09 00  SDSSJ1014    08 57 26  37.1 155.5 -1.3     -14.4   -20     2554   No stop
14 12 30  ---          09 00 56  37.3 156.5 -1.2     -13.8   190     2581   14 09 01

14 12 30  J1015+0109   09 00 56  35.7 156.4 -1.3     -13.9   -20     2581   No stop
14 14 00  =1013+014    09 02 26  35.7 156.9 -1.2     -13.6    70     2592   14 12 31

14 14 00  SDSSJ1014    09 02 26  37.4 157.0 -1.2     -13.6   -20     2592   No stop
14 17 30  ---          09 05 57  37.6 158.1 -1.1     -13.0   190     2619   14 14 01

14 18 10  J1015+0109   09 06 37  36.0 158.2 -1.2     -12.9    20     2619   14 18 10
14 19 00  =1013+014    09 07 27  36.0 158.4 -1.2     -12.8    50     2626   14 18 11

14 19 00  SDSSJ1014    09 07 27  37.7 158.5 -1.1     -12.7   -20     2626   No stop
14 22 30  ---          09 10 58  37.9 159.6 -1.1     -12.1   190     2653   14 19 01

14 22 30  J1015+0109   09 10 58  36.2 159.5 -1.1     -12.2   -20     2653   No stop
14 24 00  =1013+014    09 12 28  36.3 159.9 -1.1     -11.9    70     2664   14 22 31
```

Schedule for TORUN (Code Tr) Page 12

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
14 25 00	J1024-0052	09 13 28	33.9	158.2	-1.2		-12.9	37	2664	14 25 00
14 26 00	=1021-006	09 14 28	34.0	158.5	-1.2		-12.7	60	2672	14 25 01
14 26 00	SDSSJ1026	09 14 28	34.0	157.8	-1.2		-13.1	-12	2672	No stop
14 29 30	---	09 17 59	34.2	158.8	-1.2		-12.5	198	2699	14 26 01
14 30 10	J1024-0052	09 18 39	34.2	159.7	-1.1		-12.0	27	2699	14 30 10
14 31 00	=1021-006	09 19 29	34.2	160.0	-1.1		-11.9	50	2705	14 30 11
14 31 00	SDSSJ1026	09 19 29	34.3	159.3	-1.1		-12.3	-12	2705	No stop
14 34 30	---	09 23 00	34.5	160.3	-1.1		-11.7	198	2732	14 31 01
14 34 30	J1024-0052	09 23 00	34.4	161.0	-1.0		-11.3	-13	2732	No stop
14 36 00	=1021-006	09 24 30	34.5	161.5	-1.0		-11.0	77	2744	14 34 31
14 36 00	SDSSJ1026	09 24 30	34.5	160.8	-1.0		-11.4	-12	2744	No stop
14 39 30	---	09 28 01	34.7	161.8	-1.0		-10.8	198	2771	14 36 01
14 40 10	J1024-0052	09 28 41	34.7	162.7	-0.9		-10.3	27	2771	14 40 10
14 41 00	=1021-006	09 29 31	34.7	163.0	-0.9		-10.1	50	2777	14 40 11
14 41 00	SDSSJ1026	09 29 31	34.8	162.3	-1.0		-10.5	-12	2777	No stop
14 44 30	---	09 33 01	34.9	163.3	-0.9		-9.9	198	2804	14 41 01
14 44 30	J1024-0052	09 33 01	34.9	164.0	-0.9		-9.5	-13	2804	No stop
14 46 00	=1021-006	09 34 32	34.9	164.5	-0.8		-9.3	77	2815	14 44 31
14 47 00	J1015+0109	09 35 32	37.3	167.0	-0.7		-7.8	37	2815	14 47 00
14 48 00	=1013+014	09 36 32	37.3	167.3	-0.7		-7.6	60	2823	14 47 01
14 48 00	SDSSJ1014	09 36 32	38.9	167.7	-0.6		-7.4	-20	2823	No stop
14 51 30	---	09 40 03	39.1	168.8	-0.6		-6.7	190	2850	14 48 01
14 52 10	J1015+0109	09 40 43	37.4	168.6	-0.6		-6.8	20	2850	14 52 10
14 53 00	=1013+014	09 41 33	37.5	168.9	-0.6		-6.6	50	2856	14 52 11
14 53 00	SDSSJ1014	09 41 33	39.1	169.3	-0.6		-6.4	-20	2856	No stop
14 56 30	---	09 45 03	39.2	170.4	-0.5		-5.8	190	2883	14 53 01
14 56 30	J1015+0109	09 45 03	37.6	170.0	-0.5		-6.0	-20	2883	No stop
14 58 00	=1013+014	09 46 34	37.6	170.5	-0.5		-5.7	70	2895	14 56 31
14 58 00	SDSSJ1014	09 46 34	39.2	170.9	-0.5		-5.5	-20	2895	No stop
15 01 30	---	09 50 04	39.3	172.0	-0.4		-4.8	190	2922	14 58 01

Schedule for TORUN (Code Tr) Page 13

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
15 02 10	J1015+0109	09 50 44	37.7	171.8	-0.4		-4.9	20	2922	15 02 10
15 03 00	=1013+014	09 51 34	37.7	172.0	-0.4		-4.8	50	2928	15 02 11
15 03 00	SDSSJ1014	09 51 34	39.3	172.5	-0.4		-4.5	-20	2928	No stop
15 06 30	---	09 55 05	39.4	173.6	-0.3		-3.8	190	2955	15 03 01
15 06 30	J1015+0109	09 55 05	37.8	173.1	-0.4		-4.1	-20	2955	No stop
15 08 00	=1013+014	09 56 35	37.8	173.6	-0.3		-3.8	70	2967	15 06 31
15 08 00	SDSSJ1014	09 56 35	39.4	174.1	-0.3		-3.5	-20	2967	No stop
15 11 30	---	10 00 06	39.5	175.2	-0.2		-2.9	190	2994	15 08 01
15 12 10	J1015+0109	10 00 46	37.9	174.9	-0.3		-3.0	20	2994	15 12 10
15 13 00	=1013+014	10 01 36	37.9	175.2	-0.3		-2.9	50	3000	15 12 11
15 13 00	SDSSJ1014	10 01 36	39.5	175.7	-0.2		-2.6	-20	3000	No stop
15 16 30	---	10 05 07	39.5	176.8	-0.2		-1.9	190	3027	15 13 01
15 16 30	J1015+0109	10 05 07	37.9	176.3	-0.2		-2.2	-20	3027	No stop
15 18 00	=1013+014	10 06 37	37.9	176.8	-0.2		-1.9	70	3038	15 16 31
15 18 00	SDSSJ1014	10 06 37	39.5	177.3	-0.1		-1.6	-20	3038	No stop
15 21 30	---	10 10 08	39.6	178.5	-0.1		-0.9	190	3065	15 18 01
15 22 10	J1015+0109	10 10 48	38.0	178.1	-0.1		-1.1	20	3065	15 22 10
15 23 00	=1013+014	10 11 38	38.0	178.4	-0.1		-1.0	50	3072	15 22 11
15 23 00	SDSSJ1014	10 11 38	39.6	179.0	-0.1		-0.6	-20	3072	No stop
15 26 30	---	10 15 08	39.6	180.1	0.0		0.1	190	3099	15 23 01
15 26 30	J1015+0109	10 15 08	38.0	179.5	-0.0		-0.3	-20	3099	No stop
15 28 00	=1013+014	10 16 39	38.0	180.0	-0.0		-0.0	70	3110	15 26 31
15 28 00	SDSSJ1014	10 16 39	39.6	180.6	0.0		0.3	-20	3110	No stop
15 31 30	---	10 20 09	39.6	181.7	0.1		1.0	190	3137	15 28 01
15 32 10	J1015+0109	10 20 49	38.0	181.3	0.1		0.8	20	3137	15 32 10
15 33 00	=1013+014	10 21 39	38.0	181.6	0.1		0.9	50	3144	15 32 11
15 33 00	SDSSJ1014	10 21 39	39.5	182.2	0.1		1.3	-19	3144	No stop
15 36 30	---	10 25 10	39.5	183.3	0.2		2.0	191	3171	15 33 01
15 36 30	J1015+0109	10 25 10	37.9	182.7	0.1		1.6	-19	3171	No stop
15 38 00	=1013+014	10 26 40	37.9	183.1	0.2		1.9	71	3182	15 36 31

Schedule for TORUN (Code Tr) Page 14

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
15 38 00	SDSSJ1014	10 26 40	39.5	183.8	0.2		2.3	-19	3182	No stop
15 41 30	---	10 30 11	39.5	185.0	0.3		3.0	191	3209	15 38 01
15 42 10	J1015+0109	10 30 51	37.9	184.5	0.2		2.7	21	3209	15 42 10
15 43 00	=1013+014	10 31 41	37.9	184.7	0.2		2.8	50	3215	15 42 11
15 43 00	SDSSJ1014	10 31 41	39.4	185.4	0.3		3.3	-19	3215	No stop
15 46 30	---	10 35 12	39.4	186.6	0.3		3.9	191	3242	15 43 01
15 46 30	J1015+0109	10 35 12	37.8	185.8	0.3		3.5	-19	3242	No stop
15 48 00	=1013+014	10 36 42	37.8	186.3	0.3		3.8	71	3254	15 46 31
15 49 00	J1024-0052	10 37 42	35.9	183.8	0.2		2.3	39	3254	15 49 00
15 50 00	=1021-006	10 38 42	35.9	184.1	0.2		2.5	60	3262	15 49 01
15 50 00	SDSSJ1026	10 38 42	36.1	183.5	0.2		2.1	-12	3262	No stop
15 53 30	---	10 42 13	36.0	184.6	0.2		2.7	198	3288	15 50 01
15 54 10	J1024-0052	10 42 53	35.8	185.4	0.3		3.3	27	3288	15 54 10
15 55 00	=1021-006	10 43 43	35.8	185.7	0.3		3.4	50	3295	15 54 11
15 55 00	SDSSJ1026	10 43 43	36.0	185.0	0.3		3.0	-12	3295	No stop
15 58 30	---	10 47 14	36.0	186.1	0.3		3.7	198	3322	15 55 01
15 58 30	J1024-0052	10 47 14	35.7	186.8	0.4		4.1	-12	3322	No stop
16 00 00	=1021-006	10 48 44	35.7	187.2	0.4		4.3	78	3333	15 58 31
16 00 00	SDSSJ1026	10 48 44	35.9	186.6	0.4		3.9	-12	3333	No stop
16 03 30	---	10 52 14	35.9	187.7	0.4		4.6	198	3360	16 00 01
16 04 10	J1024-0052	10 52 55	35.6	188.5	0.5		5.1	28	3360	16 04 10
16 05 00	=1021-006	10 53 45	35.6	188.8	0.5		5.3	50	3367	16 04 11
16 05 00	SDSSJ1026	10 53 45	35.8	188.1	0.4		4.9	-12	3367	No stop
16 08 30	---	10 57 15	35.8	189.2	0.5		5.5	198	3394	16 05 01
16 08 30	J1024-0052	10 57 15	35.5	189.8	0.5		5.9	-12	3394	No stop
16 10 00	=1021-006	10 58 45	35.5	190.3	0.6		6.2	78	3405	16 08 31
16 10 00	SDSSJ1026	10 58 45	35.7	189.7	0.5		5.8	-12	3405	No stop
16 13 30	---	11 02 16	35.6	190.7	0.6		6.4	198	3432	16 10 01
16 14 10	J1024-0052	11 02 56	35.4	191.6	0.6		6.9	28	3432	16 14 10
16 15 00	=1021-006	11 03 46	35.3	191.8	0.6		7.1	50	3438	16 14 11

Schedule for TORUN (Code Tr) Page 15

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
16 15 00	SDSSJ1026	11 03 46	35.6	191.2	0.6		6.7	-12	3438	No stop
16 18 30	---	11 07 17	35.5	192.3	0.7		7.3	198	3465	16 15 01
16 18 30	J1024-0052	11 07 17	35.2	192.9	0.7		7.7	-12	3465	No stop
16 20 00	=1021-006	11 08 47	35.2	193.3	0.7		8.0	78	3477	16 18 31
16 20 00	SDSSJ1026	11 08 47	35.4	192.7	0.7		7.6	-12	3477	No stop
16 23 30	---	11 12 18	35.3	193.8	0.7		8.2	198	3504	16 20 01
16 24 10	J1024-0052	11 12 58	35.0	194.6	0.8		8.7	28	3504	16 24 10
16 25 00	=1021-006	11 13 48	35.0	194.9	0.8		8.9	50	3510	16 24 11
16 25 00	SDSSJ1026	11 13 48	35.3	194.2	0.8		8.5	-12	3510	No stop
16 28 30	---	11 17 19	35.1	195.3	0.8		9.1	198	3537	16 25 01
16 28 30	J1024-0052	11 17 19	34.9	195.9	0.9		9.5	-12	3537	No stop
16 30 00	=1021-006	11 18 49	34.8	196.4	0.9		9.7	78	3549	16 28 31
16 30 00	SDSSJ1026	11 18 49	35.1	195.8	0.9		9.4	-12	3549	No stop
16 33 30	---	11 22 19	34.9	196.8	0.9		10.0	198	3576	16 30 01
16 34 10	J1024-0052	11 22 59	34.6	197.6	1.0		10.5	28	3576	16 34 10
16 35 00	=1021-006	11 23 50	34.6	197.9	1.0		10.6	50	3582	16 34 11
16 35 00	SDSSJ1026	11 23 50	34.9	197.3	0.9		10.3	-12	3582	No stop
16 38 30	---	11 27 20	34.7	198.3	1.0		10.9	198	3609	16 35 01
16 38 30	J1024-0052	11 27 20	34.4	198.9	1.0		11.2	-12	3609	No stop
16 40 00	=1021-006	11 28 50	34.3	199.4	1.1		11.5	78	3621	16 38 31
16 40 00	SDSSJ1026	11 28 50	34.6	198.8	1.0		11.1	-12	3621	No stop
16 43 30	---	11 32 21	34.4	199.8	1.1		11.7	198	3647	16 40 01
16 44 10	J1024-0052	11 33 01	34.1	200.6	1.1		12.2	28	3647	16 44 10
16 45 00	=1021-006	11 33 51	34.1	200.8	1.1		12.3	50	3654	16 44 11
16 45 00	SDSSJ1026	11 33 51	34.4	200.2	1.1		12.0	-12	3654	No stop
16 48 30	---	11 37 22	34.2	201.3	1.2		12.6	198	3681	16 45 01
16 48 30	J1024-0052	11 37 22	33.9	201.9	1.2		12.9	-12	3681	No stop
16 50 00	=1021-006	11 38 52	33.8	202.3	1.2		13.2	78	3692	16 48 31
16 55 00	J1440+0157	11 43 53	27.0	128.2	-3.0		-28.2	136	3692	16 55 00
17 00 00	=1438+021	11 48 54	27.6	129.4	-2.9		-27.7	300	3731	16 55 01

Schedule for TORUN (Code Tr) Page 16

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
17 00 00	SDSSJ1447	11 48 54	27.1	127.7	-3.0		-28.4	-16	3731	No stop
17 03 30	---	11 52 24	27.5	128.6	-2.9		-28.0	194	3758	17 00 01
17 04 10	J1440+0157	11 53 04	28.1	130.5	-2.8		-27.2	23	3758	17 04 10
17 05 00	=1438+021	11 53 55	28.2	130.7	-2.8		-27.1	50	3764	17 04 11
17 05 00	SDSSJ1447	11 53 55	27.7	129.0	-2.9		-27.8	-16	3764	No stop
17 08 30	---	11 57 25	28.1	129.9	-2.8		-27.5	194	3791	17 05 01
17 08 30	J1440+0157	11 57 25	28.6	131.6	-2.7		-26.7	-17	3791	No stop
17 10 00	=1438+021	11 58 55	28.8	131.9	-2.7		-26.5	73	3803	17 08 31
17 10 00	SDSSJ1447	11 58 55	28.3	130.3	-2.8		-27.3	-16	3803	No stop
17 13 30	---	12 02 26	28.7	131.1	-2.8		-26.9	194	3829	17 10 01
17 14 10	J1440+0157	12 03 06	29.2	133.0	-2.6		-26.1	23	3829	17 14 10
17 15 00	=1438+021	12 03 56	29.3	133.2	-2.6		-26.0	50	3836	17 14 11
17 15 00	SDSSJ1447	12 03 56	28.9	131.5	-2.7		-26.7	-17	3836	No stop
17 18 30	---	12 07 27	29.2	132.4	-2.7		-26.3	193	3863	17 15 01
17 18 30	J1440+0157	12 07 27	29.7	134.1	-2.6		-25.5	-17	3863	No stop
17 20 00	=1438+021	12 08 57	29.9	134.5	-2.5		-25.4	73	3874	17 18 31
17 20 00	SDSSJ1447	12 08 57	29.4	132.8	-2.7		-26.2	-17	3874	No stop
17 23 30	---	12 12 28	29.8	133.7	-2.6		-25.7	193	3901	17 20 01
17 24 10	J1440+0157	12 13 08	30.3	135.6	-2.5		-24.8	23	3901	17 24 10
17 25 00	=1438+021	12 13 58	30.4	135.8	-2.5		-24.7	50	3908	17 24 11
17 25 00	SDSSJ1447	12 13 58	30.0	134.1	-2.6		-25.6	-17	3908	No stop
17 28 30	---	12 17 28	30.3	135.0	-2.5		-25.1	193	3935	17 25 01
17 28 30	J1440+0157	12 17 28	30.8	136.8	-2.4		-24.3	-17	3935	No stop
17 30 00	=1438+021	12 18 59	30.9	137.2	-2.4		-24.1	73	3946	17 28 31
17 30 00	SDSSJ1447	12 18 59	30.5	135.4	-2.5		-24.9	-17	3946	No stop
17 33 30	---	12 22 29	30.9	136.3	-2.4		-24.5	193	3973	17 30 01
17 34 10	J1440+0157	12 23 09	31.3	138.3	-2.3		-23.6	23	3973	17 34 10
17 35 00	=1438+021	12 23 59	31.4	138.5	-2.3		-23.5	50	3979	17 34 11
17 35 00	SDSSJ1447	12 23 59	31.0	136.7	-2.4		-24.3	-17	3979	No stop
17 38 30	---	12 27 30	31.4	137.7	-2.3		-23.9	193	4006	17 35 01

Schedule for TORUN (Code Tr) Page 17

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
17 38 30	J1440+0157	12 27 30	31.8	139.4	-2.2		-23.0	-17	4006	No stop
17 40 00	=1438+021	12 29 00	31.9	139.9	-2.2		-22.8	73	4018	17 38 31
17 40 00	SDSSJ1447	12 29 00	31.5	138.1	-2.3		-23.7	-17	4018	No stop
17 43 30	---	12 32 31	31.9	139.0	-2.3		-23.2	193	4045	17 40 01
17 44 10	J1440+0157	12 33 11	32.3	141.0	-2.1		-22.2	23	4045	17 44 10
17 45 00	=1438+021	12 34 01	32.4	141.2	-2.1		-22.1	50	4051	17 44 11
17 45 00	SDSSJ1447	12 34 01	32.0	139.4	-2.2		-23.0	-17	4051	No stop
17 48 30	---	12 37 32	32.4	140.4	-2.2		-22.5	193	4078	17 45 01
17 48 30	J1440+0157	12 37 32	32.7	142.2	-2.1		-21.6	-17	4078	No stop
17 50 00	=1438+021	12 39 02	32.9	142.6	-2.0		-21.4	73	4090	17 48 31
17 50 00	SDSSJ1447	12 39 02	32.5	140.8	-2.1		-22.3	-17	4090	No stop
17 53 30	---	12 42 32	32.8	141.8	-2.1		-21.8	193	4117	17 50 01
17 54 10	J1440+0157	12 43 13	33.2	143.8	-2.0		-20.8	23	4117	17 54 10
17 55 00	=1438+021	12 44 03	33.3	144.0	-2.0		-20.7	50	4123	17 54 11
17 55 00	SDSSJ1447	12 44 03	33.0	142.2	-2.1		-21.6	-17	4123	No stop
17 58 30	---	12 47 33	33.3	143.2	-2.0		-21.1	193	4150	17 55 01
17 58 30	J1440+0157	12 47 33	33.6	145.0	-1.9		-20.2	-17	4150	No stop
18 00 00	=1438+021	12 49 04	33.7	145.4	-1.9		-19.9	73	4162	17 58 31
18 00 00	SDSSJ1447	12 49 04	33.4	143.6	-2.0		-20.9	-17	4162	No stop
18 03 30	---	12 52 34	33.7	144.6	-1.9		-20.4	193	4188	18 00 01
18 04 10	J1440+0157	12 53 14	34.1	146.6	-1.8		-19.3	23	4188	18 04 10
18 05 00	=1438+021	12 54 04	34.2	146.8	-1.8		-19.2	50	4195	18 04 11
18 05 00	SDSSJ1447	12 54 04	33.9	145.0	-1.9		-20.2	-17	4195	No stop
18 08 30	---	12 57 35	34.2	146.0	-1.8		-19.6	193	4222	18 05 01
18 08 30	J1440+0157	12 57 35	34.4	147.8	-1.7		-18.7	-17	4222	No stop
18 10 00	=1438+021	12 59 05	34.6	148.3	-1.7		-18.4	73	4233	18 08 31
18 10 00	SDSSJ1447	12 59 05	34.3	146.4	-1.8		-19.4	-17	4233	No stop
18 13 30	---	13 02 36	34.6	147.4	-1.8		-18.9	193	4260	18 10 01
18 14 10	J1440+0157	13 03 16	34.9	149.5	-1.6		-17.8	23	4260	18 14 10
18 15 00	=1438+021	13 04 06	35.0	149.7	-1.6		-17.6	50	4267	18 14 11

Schedule for TORUN (Code Tr) Page 18

Flat-spectrum doubles

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 15 Jun 2015 Day 166 ---										
18 15 00	SDSSJ1447	13 04 06	34.7	147.8	-1.7		-18.7	-17	4267	No stop
18 18 30	---	13 07 37	35.0	148.9	-1.7		-18.1	193	4294	18 15 01
18 18 30	J1440+0157	13 07 37	35.2	150.7	-1.6		-17.1	-17	4294	No stop
18 20 00	=1438+021	13 09 07	35.3	151.2	-1.5		-16.8	73	4305	18 18 31
18 20 00	SDSSJ1447	13 09 07	35.1	149.3	-1.6		-17.9	-17	4305	No stop
18 23 30	---	13 12 37	35.4	150.3	-1.6		-17.3	193	4332	18 20 01
18 24 10	J1440+0157	13 13 18	35.6	152.4	-1.5		-16.2	22	4332	18 24 10
18 25 00	=1438+021	13 14 08	35.7	152.7	-1.5		-16.0	50	4338	18 24 11
18 25 00	SDSSJ1447	13 14 08	35.5	150.8	-1.6		-17.1	-17	4338	No stop
18 28 30	---	13 17 38	35.7	151.8	-1.5		-16.5	193	4365	18 25 01
18 28 30	J1440+0157	13 17 38	35.9	153.7	-1.4		-15.4	-18	4365	No stop
18 30 00	=1438+021	13 19 08	36.0	154.1	-1.4		-15.2	72	4377	18 28 31
18 30 00	SDSSJ1447	13 19 08	35.8	152.2	-1.5		-16.3	-17	4377	No stop
18 33 30	---	13 22 39	36.1	153.3	-1.4		-15.7	193	4404	18 30 01
18 34 10	J1440+0157	13 23 19	36.3	155.4	-1.3		-14.5	22	4404	18 34 10
18 35 00	=1438+021	13 24 09	36.3	155.6	-1.3		-14.3	50	4410	18 34 11
18 35 00	SDSSJ1447	13 24 09	36.2	153.7	-1.4		-15.4	-17	4410	No stop
18 38 30	---	13 27 40	36.4	154.8	-1.3		-14.8	193	4437	18 35 01
18 38 30	J1440+0157	13 27 40	36.5	156.7	-1.2		-13.7	-18	4437	No stop
18 40 00	=1438+021	13 29 10	36.6	157.2	-1.2		-13.5	72	4449	18 38 31
18 40 00	SDSSJ1447	13 29 10	36.5	155.2	-1.3		-14.6	-17	4449	No stop
18 43 30	---	13 32 41	36.7	156.3	-1.3		-14.0	193	4476	18 40 01
18 44 10	J1440+0157	13 33 21	36.9	158.4	-1.1		-12.8	22	4476	18 44 10
18 45 00	=1438+021	13 34 11	36.9	158.7	-1.1		-12.6	50	4482	18 44 11
18 45 00	SDSSJ1447	13 34 11	36.8	156.7	-1.2		-13.7	-17	4482	No stop
18 48 30	---	13 37 42	37.0	157.8	-1.2		-13.1	193	4509	18 45 01
18 48 30	J1440+0157	13 37 42	37.1	159.8	-1.1		-12.0	-18	4509	No stop
18 50 00	=1438+021	13 39 12	37.2	160.2	-1.0		-11.7	72	4520	18 48 31
18 50 00	SDSSJ1447	13 39 12	37.1	158.3	-1.1		-12.9	-17	4520	No stop
18 53 30	---	13 42 42	37.3	159.3	-1.1		-12.2	193	4547	18 50 01

```
Schedule for TORUN     (Code Tr )                                  Page  19
              Flat-spectrum doubles
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  15 Jun 2015   Day 166 ---

18 54 10  J1440+0157   13 43 22  37.4 161.5 -1.0     -11.0    22     4547   18 54 10
18 55 00  =1438+021    13 44 13  37.4 161.8 -1.0     -10.8    50     4554   18 54 11

18 55 00  SDSSJ1447    13 44 13  37.4 159.8 -1.1     -12.0   -17     4554   No stop
18 58 30  ---          13 47 43  37.5 160.9 -1.0     -11.4   193     4581   18 55 01

18 58 30  J1440+0157   13 47 43  37.6 162.9 -0.9     -10.2   -18     4581   No stop
19 00 00  =1438+021    13 49 13  37.7 163.3 -0.9      -9.9    72     4592   18 58 31

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


 ======== Setup file: sess215.L1024

   Setup group:   10         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
```

```
   barrel=roll_off

POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* SDSSJ0741          07 38 21.204039   * 07 41 30.464000     07 42 27.495917       0.00
                     30 27 09.21814    * 30 20 06.04000      30 17 48.10922        0.00

* SDSSJ0956          09 53 00.397340   * 09 56 29.068000     09 57 31.369053       0.00
                     57 49 23.86012    * 57 35 07.93000      57 30 51.19538        0.00

* SDSSJ1014          10 11 28.231412   * 10 14 03.489000     10 14 51.032737       0.00
                     02 59 10.68452    * 02 44 16.31000      02 39 33.96320        0.00

* SDSSJ1026          10 24 06.920481   * 10 26 40.404000     10 27 27.514797       0.00
                    -00 26 48.58181    *-00 42 06.51000     -00 46 56.66712        0.00

* SDSSJ1447          14 44 39.264808   * 14 47 11.266000     14 47 59.331109       0.00
                     02 24 06.74006    * 02 11 36.00000      02 07 51.24643        0.00

  J0521+1638         05 18 16.514078   * 05 21 09.885960     05 22 02.222299       0.12
  0518+165           16 35 26.83399    * 16 38 22.05146      16 39 02.76985        0.12
* 3C138              /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
  J0521+16           rfc_2012b Petrov, 2012, unpublished 410 observations

  J0530+1331         05 28 06.759218   * 05 30 56.416749     05 31 47.602700       0.10
* 0528+134           13 29 42.28877    * 13 31 55.14944      13 32 22.99546        0.10
  J0530+13           /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                     rfc_2012b Petrov, 2012, unpublished 138123 observations

* J0741+3112         07 38 00.178559   * 07 41 10.703308     07 42 08.106152       0.18
  0738+313           31 19 02.05925    * 31 12 00.22924      31 09 42.82243        1.24
  J0741+31           /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                     GSFC 2011B astro solution      1998 Observations

  J0927+3902         09 23 55.319217   * 09 27 03.013938     09 27 59.624247       0.13
  0923+392           39 15 23.56637    * 39 02 20.85177      38 58 20.70232        0.10
* 4C39.25            /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
  J0927+39           rfc_2012b Petrov, 2012, unpublished 239566 observations

* J0956+5753         09 52 53.248058   * 09 56 22.634489     09 57 25.130446       0.66
  0952+581           58 08 11.57697    * 57 53 55.90463      57 49 39.29361        0.38
                     /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                     rfc_2012b Petrov, 2012, unpublished 95 observations

* J1015+0109         10 13 22.642342   * 10 15 57.055116     10 16 44.368491       0.48
  1013+014           01 24 11.84452    * 01 09 13.74679      01 04 29.82306        0.70
                     /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                     GSFC 2011B astro solution        41 Observations

* J1024-0052         10 21 56.195585   * 10 24 29.586681     10 25 16.658564       1.10
  1021-006          -00 37 41.43262    *-00 52 55.49697     -00 57 44.62231        1.37
  J1024-00           /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                     GSFC 2011B astro solution       336 Observations

* J1440+0157         14 38 27.268930   * 14 40 59.495886     14 41 47.607847       0.22
  1438+021           02 10 32.56699    * 01 57 44.15153      01 53 53.63929        0.43
                     /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                     rfc_2012b Petrov, 2012, unpublished 81 observations
```

rk08xztr

RadioAstron AGN Survey

PI: *Yuri Kovalev*


```
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```


```
Observing mode: C/K-band, dual-pol

Schedule for TORUN     (Code Tr )                                  Page   2
               RadioAstron AGN Survey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  15 Jun 2015   Day 166 ---

 ---------- C-band VLBI scans ----------

 Next scan frequencies:  4836.00  4836.00  4836.00  4836.00
 Next BBC frequencies:    736.00   736.00   736.00   736.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

21 00 00  1739+522     15 49 33  73.2  81.8 -1.9     -75.8     0        0   21 00 00
21 12 00  ---          16 01 35  75.0  83.4 -1.7     -76.7   720       23   21 00 01

21 12 30  1739+522     16 02 05  75.0  83.5 -1.6     -76.7    24       23   21 12 30
21 24 30  ---          16 14 07  76.8  85.2 -1.4     -77.4   720       46   21 12 31

21 25 00  1739+522     16 14 37  76.9  85.3 -1.4     -77.5    24       46   21 25 00
21 37 00  ---          16 26 39  78.7  87.1 -1.2     -78.0   720       69   21 25 01

21 37 30  1739+522     16 27 09  78.8  87.2 -1.2     -78.1    24       69   21 37 30
21 50 00  ---          16 39 41  80.7  89.4 -1.0     -78.4   750       93   21 37 31



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


 ======== Setup file: ra6cm2.set

   Setup group:    2         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   4100.00   4100.00   4100.00   4100.00
 Net SB=         L         L         U         U
 IF SB =         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         L         L         U         U
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   2  Setup file default.  Used with PCAL = 1MHz
 LO sum=   4836.00  4836.00  4836.00  4836.00
 BBC fr=    736.00   736.00   736.00   736.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   2

 Track assignments are:
  track1=   2, 18,  3, 19
  barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 41.280534       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.61376        0.00
                    fake circumpolar target for a TS to look at

* 1739+522          17 39 29.003549   * 17 40 36.977846     17 41 00.144626       0.00
  J1740+5211        52 13 10.43839    * 52 11 43.40733      52 11 26.59895        0.00
                    ./rk08xz_sources.radioastron
                    AGN, MASIV, rfc_2013d Petrov, 2013, unpublished 209348 observations, RA-AO2-12


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)
  3C286              100.6
  1739+522           104.5

 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
```

rk08yatr

RadioAstron AGN Survey

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Fax:      +7-495-3332378                Phone during observation: +7-903-6614865
```


```
Observing mode: C/L-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron AGN Survey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  16 Jun 2015   Day 167 ---

 ---------- L-band VLBI scans ----------

 Next scan frequencies:  1668.00  1668.00  1668.00  1668.00
 Next BBC frequencies:    732.00   732.00   732.00   732.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

01 00 00  1751+441     19 50 13  69.0 256.6  1.9      54.5     0        0   01 00 00
01 12 00  ---          20 02 15  67.2 259.9  2.1      55.5   720       23   01 00 01

01 12 30  1751+441     20 02 45  67.2 260.1  2.1      55.5    24       23   01 12 30
01 24 30  ---          20 14 47  65.4 263.1  2.3      56.2   720       46   01 12 31

01 25 00  1751+441     20 15 17  65.3 263.2  2.4      56.2    24       46   01 25 00
01 37 00  ---          20 27 19  63.5 266.0  2.6      56.6   720       69   01 25 01

01 37 30  1751+441     20 27 49  63.4 266.1  2.6      56.6    24       69   01 37 30
01 50 00  ---          20 40 21  61.5 268.7  2.8      56.8   750       93   01 37 31



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


 ======== Setup file: ra18cm2.set

   Setup group:    6         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   2400.00   2400.00   2400.00   2400.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

The following frequency sets based on these setups were used.

 Frequency Set:   5  Setup file default.  Used with PCAL = 1MHz
 LO sum=   1668.00  1668.00  1668.00  1668.00
 BBC fr=    732.00   732.00   732.00   732.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   5

 Track assignments are:
  track1=   2, 18,  3, 19
  barrel=roll_off
```

POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 41.241097       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.60510        0.00
                    fake circumpolar target for a TS to look at

* 1751+441          17 51 53.712584   * 17 53 22.647889     17 53 52.033040       0.00
  J1753+4409        44 10 17.80399    * 44 09 45.68615      44 09 45.43504        0.00
                    ./rk08ya_sources.radioastron
                    AGN, MASIV, rfc_2013d Petrov, 2013, unpublished 1851 observations, RA-AO2-12
```

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)
  3C286              100.4
  1751+441           112.4

 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
```

rk08ybtr

RadioAstron AGN Survey

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Fax:      +7-495-3332378                Phone during observation: +7-903-6614865
```


```
Observing mode: C/L-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron AGN Survey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  16 Jun 2015   Day 167 ---

 ---------- L-band VLBI scans ----------

 Next scan frequencies:  1668.00  1668.00  1668.00  1668.00
 Next BBC frequencies:    732.00   732.00   732.00   732.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

03 00 00  1636+473     21 50 32  42.2 -63.6  5.2      52.5     0        0   03 00 00
03 19 30  ---          22 10 05  39.6 -60.9  5.5      50.7  1170       37   03 00 01

03 20 00  1636+473     22 10 36  39.5 -60.8  5.5      50.6    24       37   03 20 00
03 40 00  ---          22 30 39  36.9 -58.0  5.9      48.7  1200       76   03 20 01



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


 ======== Setup file: ra18cm2.set

   Setup group:    6         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   2400.00   2400.00   2400.00   2400.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

The following frequency sets based on these setups were used.

 Frequency Set:   5  Setup file default.  Used with PCAL = 1MHz
 LO sum=   1668.00  1668.00  1668.00  1668.00
 BBC fr=    732.00   732.00   732.00   732.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   5

 Track assignments are:
  track1=   2, 18,  3, 19
  barrel=roll_off


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 41.222169       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.60080        0.00
                    fake circumpolar target for a TS to look at

* 1636+473          16 36 19.144415   * 16 37 45.130558     16 38 13.426160       0.00
  J1637+4717        47 23 28.57983    * 47 17 33.83103      47 15 57.74360        0.00
                    ./rk08yb_sources.radioastron
                    AGN, rfc_2013d Petrov, 2013, unpublished 4851 observations, RA-AO2-12


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)
  3C48                52.7
  1636+473           108.2

 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
```

rg11betr

RadioAstron Maser observations

PI: *Alexei Alakoz*


```
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Phone:    +7-495-3332512                EMAIL:    kirx@scan.sai.msu.ru
Fax:      +7-495-3332378                Phone during observation: +7-903-6614865
```


```
Observing mode: L-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron Maser observations
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  16 Jun 2015   Day 167 ---

 ---------- This is a fringe finder/clock offset calibrator 19.8 deg. from ON1_OH ----------

 Next scan frequencies:  1660.00  1660.00  1660.00  1660.00
 Next BBC frequencies:    740.00   740.00   740.00   740.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

06 52 00  2029+121     01 43 10  17.3 267.7  5.2      37.9     0        0   06 52 00
06 57 00  ---          01 48 11  16.5 268.7  5.3      37.9   300       10   06 52 01

 ---------- Please, make sure PCAL is OFF for ON1_OH maser observations. ----------

07 00 00  ON1_OH       01 51 12  27.5 286.8  5.7      42.4   124       10   07 00 00
07 19 30  ---          02 10 45  24.8 290.2  6.0      41.4  1170       47   07 00 01

07 20 00  ON1_OH       02 11 15  24.7 290.3  6.0      41.4    24       47   07 20 00
07 39 30  ---          02 30 48  22.0 293.8  6.3      40.2  1170       84   07 20 01

07 40 00  ON1_OH       02 31 18  21.9 293.9  6.3      40.1    24       84   07 40 00
08 00 00  ---          02 51 22  19.2 297.4  6.7      38.7  1200      123   07 40 01



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


 ======== Setup file: ra18cm2.set

   Setup group:    4         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=   2400.00   2400.00   2400.00   2400.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         U         U         L         L
  IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used with PCAL = off
  LO sum=   1660.00  1660.00  1660.00  1660.00
  BBC fr=    740.00   740.00   740.00   740.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

  Track assignments are:
   track1=   2, 18,  3, 19
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 41.182478       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.59150        0.00
                    fake circumpolar target for a TS to look at

* ON1_OH            20 08 09.804428   * 20 10 09.050000     20 10 47.437605       0.00
                    31 22 39.90504    * 31 31 35.20000      31 34 23.70513        0.00
                    ./rg11be_sources.radioastron
                    OH maser; positions from 2005ApJS160...220..271Fish, RA-AO2-08, RA-AO2-13

* 2029+121          20 29 32.681261   * 20 31 54.994268     20 32 40.141108       0.00
  J2031+1219        12 09 28.75295    * 12 19 41.34011      12 22 56.80274        0.00
                    ./rg11be_sources.radioastron
                    AGN, MASIV, rfc_2013d Petrov, 2013, unpublished 2970 observations, RA-AO2-12
```

n15l2tr

Network Monitoring Experiment

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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 / Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 16 Jun 2015 Day 167 ---										
Next scan frequencies:		1634.49	1634.49	1634.49	1634.49	1650.49	1650.49	1650.49	1650.49	
		1666.49	1666.49	1666.49	1666.49	1682.49	1682.49	1682.49	1682.49	
Next BBC frequencies:		665.51	665.51	665.51	665.51	649.51	649.51	649.51	649.51	
		633.51	633.51	633.51	633.51	617.51	617.51	617.51	617.51	
Next scan bandwidths:		8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	
		8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	
10 00 00	J0854+2006	04 51 41	33.2	100.9	-4.1		-38.9	0	0	10 00 00
10 01 00	=0851+202	04 52 41	33.4	101.1	-4.0		-38.8	60	4	10 00 01
10 02 00	J0854+2006	04 53 42	33.5	101.3	-4.0		-38.8	54	4	10 02 00
10 07 00	=0851+202	04 58 42	34.2	102.5	-3.9		-38.6	300	23	10 02 01
10 17 00	J0011+0823	05 08 44	16.3	262.3	4.9		37.0	267	23	10 17 00
10 18 00	=0009+081	05 09 44	16.2	262.5	5.0		37.0	60	27	10 17 01
10 20 00	J0011+0823	05 11 45	15.9	262.9	5.0		37.1	114	27	10 20 00
10 22 00	=0009+081	05 13 45	15.6	263.4	5.0		37.1	120	35	10 20 01
10 24 00	J0011+0823	05 15 45	15.3	263.8	5.1		37.1	114	35	10 24 00
10 34 00	=0009+081	05 25 47	13.8	265.8	5.2		37.3	600	73	10 24 01
10 36 00	J0011+0823	05 27 47	13.5	266.2	5.3		37.3	114	73	10 36 00
10 46 00	=0009+081	05 37 49	12.0	268.2	5.4		37.4	600	112	10 36 01
10 48 00	J0011+0823	05 39 49	11.7	268.6	5.5		37.4	114	112	10 48 00
10 58 00	=0009+081	05 49 51	10.2	270.6	5.6		37.4	600	150	10 48 01
11 00 00	J0126+2559	05 51 51	34.8	268.1	4.4		41.9	14	150	11 00 00
11 07 00	=0123+257	05 58 52	33.7	269.5	4.5		41.9	420	177	11 00 01
11 08 00	J0126+2559	05 59 52	33.6	269.7	4.5		41.9	54	177	11 08 00
11 15 00	=0123+257	06 06 54	32.5	271.1	4.7		41.9	420	204	11 08 01
11 16 00	J0126+2559	06 07 54	32.3	271.3	4.7		41.9	54	204	11 16 00
11 24 00	=0123+257	06 15 55	31.1	272.9	4.8		41.9	480	235	11 16 01
11 25 00	J0126+2559	06 16 55	31.0	273.1	4.8		41.9	54	235	11 25 00
11 27 00	=0123+257	06 18 56	30.7	273.5	4.9		41.9	120	242	11 25 01
11 38 00	4C39.25	06 29 57	56.7	96.9	-3.0		-50.1	290	242	11 38 00
11 39 00	---	06 30 58	56.9	97.1	-3.0		-50.0	60	246	11 38 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
-----------------------------------------------------------------------------------------

 --- Tue  16 Jun 2015   Day 167 ---

11 40 00  4C39.25      06 31 58  57.0  97.3 -2.9     -50.0    54      246   11 40 00
11 42 00  ---          06 33 58  57.3  97.8 -2.9     -49.9   120      254   11 40 01

11 44 00  4C39.25      06 35 58  57.6  98.3 -2.9     -49.9   114      254   11 44 00
11 54 00  ---          06 46 00  59.1 100.7 -2.7     -49.4   600      292   11 44 01

11 55 00  4C39.25      06 47 00  59.2 100.9 -2.7     -49.3    54      292   11 55 00
12 03 00  ---          06 55 01  60.4 102.9 -2.5     -48.8   480      323   11 55 01

12 04 00  4C39.25      06 56 02  60.6 103.2 -2.5     -48.8    54      323   12 04 00
12 12 00  ---          07 04 03  61.7 105.3 -2.4     -48.1   480      354   12 04 01

12 20 00  J0854+2006   07 12 04  51.4 138.9 -1.7     -24.9   403      354   12 20 00
12 21 00  =0851+202    07 13 04  51.5 139.2 -1.7     -24.7    60      358   12 20 01

12 22 00  J0854+2006   07 14 05  51.6 139.6 -1.7     -24.5    53      358   12 22 00
12 27 00  =0851+202    07 19 05  52.1 141.3 -1.6     -23.6   300      377   12 22 01

12 29 00  J0854+2006   07 21 06  52.3 142.0 -1.6     -23.2   113      377   12 29 00
12 31 00  =0851+202    07 23 06  52.4 142.7 -1.5     -22.8   120      385   12 29 01

12 38 00  0234+285     07 30 07  32.8 275.7  4.9      43.0   140      385   12 38 00
12 47 00  ---          07 39 09  31.4 277.4  5.0      42.8   540      419   12 38 01

12 48 00  0234+285     07 40 09  31.3 277.6  5.0      42.8    54      419   12 48 00
12 56 00  ---          07 48 10  30.1 279.1  5.2      42.6   480      450   12 48 01

12 58 00  0234+285     07 50 11  29.8 279.4  5.2      42.6   114      450   12 58 00
13 00 00  ---          07 52 11  29.5 279.8  5.2      42.5   120      458   12 58 01



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


 ======== Setup file: sess215.L512

   Setup group:   11         Station: TORUN            Total bit rate:   512
   Format: MARK5B            Bits per sample: 2        Sample rate: 16.000
   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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   1634.49  1634.49  1634.49  1634.49  1650.49  1650.49  1650.49  1650.49
            1666.49  1666.49  1666.49  1666.49  1682.49  1682.49  1682.49  1682.49
  BBC fr=    665.51   665.51   665.51   665.51   649.51   649.51   649.51   649.51
             633.51   633.51   633.51   633.51   617.51   617.51   617.51   617.51
  Bandwd=      8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
               8.00     8.00     8.00     8.00     8.00     8.00     8.00     8.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* J0011+0823        00 09 01.064939   * 00 11 35.269638     00 12 22.962853       0.13
  0009+081          08 07 14.48713    * 08 23 55.58640      08 29 01.33495        0.22
                    /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 247 observations

* J0126+2559        01 23 57.254021   * 01 26 42.792640     01 27 33.790116       0.11
  0123+257          25 43 27.95555    * 25 59 01.30009      26 03 37.25543        0.11
  J0126+25          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 1729 observations

  J0237+2848        02 34 55.589591   * 02 37 52.405678     02 38 46.489745       0.11
* 0234+285          28 35 11.40773    * 28 48 08.98998      28 51 54.30590        0.10
  J0237+28          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 56811 observations

* J0854+2006        08 51 57.250618   * 08 54 48.874930     08 55 40.847307       0.11
  0851+202          20 17 58.41733    * 20 06 30.64078      20 02 53.12754        0.10
  J0854+20          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
  OJ287             rfc_2012b Petrov, 2012, unpublished 191510 observations

  J0927+3902        09 23 55.319217   * 09 27 03.013938     09 27 59.618098       0.13
  0923+392          39 15 23.56637    * 39 02 20.85177      38 58 20.60634        0.10
* 4C39.25           /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
  J0927+39          rfc_2012b Petrov, 2012, unpublished 239566 observations
```

el052tr

Is GRB 150101B related to an AGN jet?

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Observing mode: regular EVN continuum
Schedule for TORUN (Code Tr) Page 2
Is GRB 150101B related to an AGN jet?
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
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
14 15 00	3C286	09 07 23	37.9	88.2	-4.4		-44.1	0	0	14 15 00
14 25 00	---	09 17 25	39.4	90.2	-4.2		-44.1	600	77	14 15 01
14 27 00	OQ208	09 19 25	32.9	85.3	-4.8		-42.9	81	77	14 27 00
14 30 00	---	09 22 26	33.3	85.9	-4.8		-42.9	180	100	14 27 01
14 33 00	J1233-1025	09 25 26	14.8	131.8	-3.1		-27.1	74	100	14 33 00
14 36 00	=1230-101	09 28 27	15.2	132.5	-3.1		-26.8	180	123	14 33 01
14 36 00	2MASXJ1232	09 28 27	14.8	133.0	-3.1		-26.6	-12	123	No stop
14 39 30	---	09 31 57	15.2	133.8	-3.0		-26.2	198	150	14 36 01
14 40 10	J1233-1025	09 32 37	15.6	133.4	-3.0		-26.3	28	150	14 40 10
14 41 30	=1230-101	09 33 58	15.8	133.7	-3.0		-26.2	80	160	14 40 11
14 41 30	2MASXJ1232	09 33 58	15.4	134.2	-3.0		-26.0	-12	160	No stop
14 45 00	---	09 37 28	15.8	135.0	-2.9		-25.6	198	187	14 41 31
14 45 00	J1233-1025	09 37 28	16.1	134.5	-2.9		-25.8	-12	187	No stop
14 46 30	=1230-101	09 38 58	16.3	134.9	-2.9		-25.6	78	199	14 45 01
14 46 30	2MASXJ1232	09 38 58	16.0	135.4	-2.9		-25.5	-12	199	No stop
14 50 00	---	09 42 29	16.3	136.2	-2.8		-25.1	198	226	14 46 31
14 50 40	J1233-1025	09 43 09	16.7	135.9	-2.8		-25.2	28	226	14 50 40
14 52 00	=1230-101	09 44 29	16.9	136.2	-2.8		-25.0	80	236	14 50 41
14 52 00	2MASXJ1232	09 44 29	16.5	136.7	-2.8		-24.8	-12	236	No stop
14 55 30	---	09 48 00	16.9	137.5	-2.7		-24.4	198	263	14 52 01
14 55 30	J1233-1025	09 48 00	17.2	137.0	-2.8		-24.6	-12	263	No stop
14 57 00	=1230-101	09 49 30	17.4	137.3	-2.7		-24.5	78	274	14 55 31
14 57 00	J1232-1015	09 49 30	17.6	137.5	-2.7		-24.4	-11	274	No stop
14 58 30	=1229-099	09 51 00	17.8	137.8	-2.7		-24.2	79	286	14 57 01

Schedule for TORUN (Code Tr) Page 3

Is GRB 150101B related to an AGN jet?

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
14 59 10	J1233-1025	09 51 40	17.6	137.8	-2.7		-24.2	29	286	14 59 10
15 00 30	=1230-101	09 53 01	17.7	138.2	-2.7		-24.0	80	296	14 59 11
15 00 30	2MASXJ1232	09 53 01	17.4	138.6	-2.7		-23.8	-12	296	No stop
15 04 00	---	09 56 31	17.7	139.5	-2.6		-23.4	198	323	15 00 31
15 04 40	J1233-1025	09 57 11	18.2	139.1	-2.6		-23.5	28	323	15 04 40
15 06 00	=1230-101	09 58 32	18.3	139.5	-2.6		-23.4	80	333	15 04 41
15 06 00	2MASXJ1232	09 58 32	17.9	139.9	-2.6		-23.2	-12	333	No stop
15 09 30	---	10 02 02	18.3	140.8	-2.5		-22.8	198	360	15 06 01
15 09 30	J1233-1025	10 02 02	18.6	140.3	-2.5		-23.0	-12	360	No stop
15 11 00	=1230-101	10 03 32	18.8	140.7	-2.5		-22.8	78	372	15 09 31
15 11 00	2MASXJ1232	10 03 32	18.4	141.1	-2.5		-22.6	-12	372	No stop
15 14 30	---	10 07 03	18.7	142.0	-2.4		-22.1	198	399	15 11 01
15 15 10	J1233-1025	10 07 43	19.2	141.7	-2.4		-22.3	28	399	15 15 10
15 16 30	=1230-101	10 09 03	19.3	142.0	-2.4		-22.1	80	409	15 15 11
15 16 30	2MASXJ1232	10 09 03	18.9	142.5	-2.4		-21.9	-12	409	No stop
15 20 00	---	10 12 34	19.2	143.3	-2.3		-21.4	198	436	15 16 31
15 20 00	J1233-1025	10 12 34	19.6	142.8	-2.4		-21.7	-12	436	No stop
15 21 30	=1230-101	10 14 04	19.7	143.2	-2.3		-21.5	78	447	15 20 01
15 21 30	J1232-1015	10 14 04	20.0	143.4	-2.3		-21.4	-11	447	No stop
15 23 00	=1229-099	10 15 34	20.1	143.7	-2.3		-21.2	79	459	15 21 31
15 23 40	J1233-1025	10 16 14	19.9	143.7	-2.3		-21.2	29	459	15 23 40
15 25 00	=1230-101	10 17 35	20.1	144.1	-2.3		-21.0	80	469	15 23 41
15 28 00	OQ208	10 20 35	42.0	97.7	-3.8		-42.6	72	469	15 28 00
15 35 00	---	10 27 36	43.1	99.3	-3.7		-42.3	420	523	15 28 01
15 38 00	J1233-1025	10 30 37	21.2	147.3	-2.1		-19.3	70	523	15 38 00
15 41 00	=1230-101	10 33 37	21.4	148.0	-2.0		-18.9	180	546	15 38 01
15 41 00	2MASXJ1232	10 33 37	21.0	148.5	-2.0		-18.7	-12	546	No stop
15 44 30	---	10 37 08	21.3	149.4	-1.9		-18.2	198	573	15 41 01
15 45 10	J1233-1025	10 37 48	21.7	149.1	-1.9		-18.3	28	573	15 45 10
15 46 30	=1230-101	10 39 08	21.8	149.4	-1.9		-18.1	80	583	15 45 11
15 46 30	2MASXJ1232	10 39 08	21.4	149.9	-1.9		-17.9	-12	583	No stop
15 50 00	---	10 42 39	21.7	150.7	-1.8		-17.4	198	610	15 46 31

Schedule for TORUN (Code Tr) Page 4

Is GRB 150101B related to an AGN jet?

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
15 50 00	J1233-1025	10 42 39	22.1	150.3	-1.9		-17.6	-12	610	No stop
15 51 30	=1230-101	10 44 09	22.2	150.7	-1.8		-17.4	78	622	15 50 01
15 51 30	2MASXJ1232	10 44 09	21.8	151.1	-1.8		-17.2	-12	622	No stop
15 55 00	---	10 47 40	22.1	152.0	-1.8		-16.7	198	649	15 51 31
15 55 40	J1233-1025	10 48 20	22.5	151.7	-1.8		-16.8	28	649	15 55 40
15 57 00	=1230-101	10 49 40	22.6	152.1	-1.7		-16.6	80	659	15 55 41
15 57 00	2MASXJ1232	10 49 40	22.2	152.5	-1.7		-16.4	-12	659	No stop
16 00 30	---	10 53 10	22.4	153.4	-1.7		-15.9	198	686	15 57 01
16 00 30	J1233-1025	10 53 10	22.9	153.0	-1.7		-16.1	-13	686	No stop
16 02 00	=1230-101	10 54 41	23.0	153.4	-1.7		-15.9	77	697	16 00 31
16 02 00	2MASXJ1232	10 54 41	22.5	153.8	-1.6		-15.7	-12	697	No stop
16 05 30	---	10 58 11	22.8	154.7	-1.6		-15.2	198	724	16 02 01
16 06 10	J1233-1025	10 58 51	23.2	154.4	-1.6		-15.3	27	724	16 06 10
16 07 30	=1230-101	11 00 12	23.3	154.8	-1.6		-15.1	80	735	16 06 11
16 07 30	2MASXJ1232	11 00 12	22.9	155.2	-1.5		-14.9	-12	735	No stop
16 11 00	---	11 03 42	23.1	156.1	-1.5		-14.3	198	762	16 07 31
16 11 00	J1233-1025	11 03 42	23.5	155.7	-1.5		-14.6	-13	762	No stop
16 12 30	=1230-101	11 05 12	23.6	156.1	-1.5		-14.3	77	773	16 11 01
16 12 30	2MASXJ1232	11 05 12	23.2	156.5	-1.5		-14.1	-12	773	No stop
16 16 00	---	11 08 43	23.4	157.4	-1.4		-13.6	198	800	16 12 31
16 16 40	J1233-1025	11 09 23	23.9	157.2	-1.4		-13.7	27	800	16 16 40
16 18 00	=1230-101	11 10 43	24.0	157.5	-1.4		-13.5	80	810	16 16 41
16 18 00	2MASXJ1232	11 10 43	23.5	157.9	-1.4		-13.3	-13	810	No stop
16 21 30	---	11 14 14	23.7	158.9	-1.3		-12.8	197	837	16 18 01
16 21 30	J1233-1025	11 14 14	24.2	158.4	-1.3		-13.0	-13	837	No stop
16 23 00	=1230-101	11 15 44	24.2	158.8	-1.3		-12.7	77	849	16 21 31
16 23 00	2MASXJ1232	11 15 44	23.8	159.2	-1.3		-12.5	-13	849	No stop
16 26 30	---	11 19 15	24.0	160.2	-1.2		-12.0	197	876	16 23 01
16 27 10	J1233-1025	11 19 55	24.5	159.9	-1.2		-12.1	27	876	16 27 10
16 28 30	=1230-101	11 21 15	24.5	160.3	-1.2		-11.9	80	886	16 27 11

Schedule for TORUN (Code Tr) Page 5

Is GRB 150101B related to an AGN jet?

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
16 28 30	2MASXJ1232	11 21 15	24.1	160.7	-1.2		-11.7	-13	886	No stop
16 32 00	---	11 24 46	24.2	161.6	-1.1		-11.1	197	913	16 28 31
16 32 00	J1233-1025	11 24 46	24.7	161.2	-1.2		-11.3	-13	913	No stop
16 33 30	=1230-101	11 26 16	24.8	161.6	-1.1		-11.1	77	924	16 32 01
16 33 30	2MASXJ1232	11 26 16	24.3	162.0	-1.1		-10.9	-13	924	No stop
16 37 00	---	11 29 46	24.5	162.9	-1.1		-10.3	197	951	16 33 31
16 37 40	J1233-1025	11 30 27	25.0	162.7	-1.1		-10.5	27	951	16 37 40
16 39 00	=1230-101	11 31 47	25.0	163.1	-1.0		-10.2	80	962	16 37 41
16 39 00	2MASXJ1232	11 31 47	24.6	163.5	-1.0		-10.0	-13	962	No stop
16 42 30	---	11 35 17	24.7	164.4	-1.0		-9.5	197	988	16 39 01
16 42 30	J1233-1025	11 35 17	25.2	164.0	-1.0		-9.7	-13	988	No stop
16 44 00	=1230-101	11 36 48	25.2	164.4	-1.0		-9.4	77	1000	16 42 31
16 44 00	2MASXJ1232	11 36 48	24.8	164.8	-0.9		-9.2	-13	1000	No stop
16 47 30	---	11 40 18	24.9	165.7	-0.9		-8.7	197	1027	16 44 01
16 48 10	J1233-1025	11 40 58	25.4	165.5	-0.9		-8.8	27	1027	16 48 10
16 49 30	=1230-101	11 42 19	25.4	165.9	-0.9		-8.6	80	1037	16 48 11
16 49 30	2MASXJ1232	11 42 19	25.0	166.3	-0.8		-8.3	-13	1037	No stop
16 53 00	---	11 45 49	25.1	167.2	-0.8		-7.8	197	1064	16 49 31
16 53 00	J1233-1025	11 45 49	25.6	166.8	-0.8		-8.0	-13	1064	No stop
16 54 30	=1230-101	11 47 19	25.6	167.3	-0.8		-7.7	77	1076	16 53 01
16 54 30	2MASXJ1232	11 47 19	25.1	167.6	-0.8		-7.5	-13	1076	No stop
16 58 00	---	11 50 50	25.3	168.6	-0.7		-7.0	197	1103	16 54 31
16 58 40	J1233-1025	11 51 30	25.8	168.4	-0.7		-7.1	27	1103	16 58 40
17 00 00	=1230-101	11 52 50	25.8	168.7	-0.7		-6.8	80	1113	16 58 41
17 00 00	2MASXJ1232	11 52 50	25.3	169.1	-0.7		-6.6	-13	1113	No stop
17 03 30	---	11 56 21	25.4	170.1	-0.6		-6.1	197	1140	17 00 01
17 03 30	J1233-1025	11 56 21	25.9	169.7	-0.6		-6.3	-13	1140	No stop
17 05 00	=1230-101	11 57 51	25.9	170.1	-0.6		-6.0	77	1151	17 03 31
17 05 00	J1232-1015	11 57 51	26.1	170.3	-0.6		-5.9	-10	1151	No stop
17 08 30	=1229-099	12 01 22	26.2	171.3	-0.5		-5.3	200	1178	17 05 01

Schedule for TORUN (Code Tr) Page 6

Is GRB 150101B related to an AGN jet?

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
17 08 30	J1233-1025	12 01 22	26.0	171.1	-0.5		-5.4	-10	1178	No stop
17 09 30	=1230-101	12 02 22	26.0	171.3	-0.5		-5.3	50	1186	17 08 31
17 13 30	OQ208	12 06 22	56.7	125.9	-2.0		-33.6	112	1186	17 13 30
17 16 30	---	12 09 23	57.1	126.9	-2.0		-33.1	180	1209	17 13 31
17 20 30	J1233-1025	12 13 24	26.2	174.3	-0.3		-3.5	110	1209	17 20 30
17 22 00	=1230-101	12 14 54	26.3	174.8	-0.3		-3.2	90	1221	17 20 31
17 22 00	2MASXJ1232	12 14 54	25.8	175.1	-0.3		-3.0	-13	1221	No stop
17 25 30	---	12 18 24	25.8	176.1	-0.2		-2.4	197	1247	17 22 01
17 26 10	J1233-1025	12 19 05	26.3	175.9	-0.2		-2.5	27	1247	17 26 10
17 27 30	=1230-101	12 20 25	26.3	176.3	-0.2		-2.3	80	1258	17 26 11
17 27 30	2MASXJ1232	12 20 25	25.8	176.6	-0.2		-2.1	-13	1258	No stop
17 31 00	---	12 23 55	25.9	177.6	-0.1		-1.5	197	1285	17 27 31
17 31 00	J1233-1025	12 23 55	26.4	177.2	-0.2		-1.7	-13	1285	No stop
17 32 30	=1230-101	12 25 26	26.4	177.6	-0.1		-1.4	77	1296	17 31 01
17 32 30	2MASXJ1232	12 25 26	25.9	178.0	-0.1		-1.2	-13	1296	No stop
17 36 00	---	12 28 56	25.9	178.9	-0.1		-0.7	197	1323	17 32 31
17 36 40	J1233-1025	12 29 36	26.4	178.8	-0.1		-0.7	27	1323	17 36 40
17 38 00	=1230-101	12 30 57	26.4	179.2	-0.1		-0.5	80	1333	17 36 41
17 38 00	2MASXJ1232	12 30 57	25.9	179.5	-0.0		-0.3	-13	1333	No stop
17 41 30	---	12 34 27	25.9	180.4	0.0		0.3	197	1360	17 38 01
17 41 30	J1233-1025	12 34 27	26.4	180.1	0.0		0.1	-13	1360	No stop
17 43 00	=1230-101	12 35 57	26.4	180.5	0.0		0.3	77	1372	17 41 31
17 43 00	2MASXJ1232	12 35 57	25.9	180.8	0.1		0.5	-13	1372	No stop
17 46 30	---	12 39 28	25.9	181.8	0.1		1.1	197	1399	17 43 01
17 47 10	J1233-1025	12 40 08	26.4	181.7	0.1		1.0	27	1399	17 47 10
17 48 30	=1230-101	12 41 28	26.4	182.0	0.1		1.2	80	1409	17 47 11
17 48 30	2MASXJ1232	12 41 28	25.9	182.3	0.1		1.4	-13	1409	No stop
17 52 00	---	12 44 59	25.8	183.3	0.2		2.0	197	1436	17 48 31
17 52 00	J1233-1025	12 44 59	26.4	183.0	0.2		1.8	-13	1436	No stop
17 53 30	=1230-101	12 46 29	26.3	183.4	0.2		2.1	77	1447	17 52 01

Schedule for TORUN (Code Tr) Page 7

Is GRB 150101B related to an AGN jet?

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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 16 Jun 2015 Day 167 ---										
17 53 30	2MASXJ1232	12 46 29	25.8	183.7	0.2		2.3	-13	1447	No stop
17 57 00	---	12 50 00	25.8	184.7	0.3		2.8	197	1474	17 53 31
17 57 40	J1233-1025	12 50 40	26.3	184.6	0.3		2.8	27	1474	17 57 40
17 59 00	=1230-101	12 52 00	26.3	184.9	0.3		3.0	80	1485	17 57 41
17 59 00	2MASXJ1232	12 52 00	25.8	185.2	0.3		3.2	-13	1485	No stop
18 02 30	---	12 55 31	25.7	186.2	0.4		3.8	197	1512	17 59 01
18 02 30	J1233-1025	12 55 31	26.2	185.9	0.4		3.6	-13	1512	No stop
18 04 00	=1230-101	12 57 01	26.2	186.3	0.4		3.8	77	1523	18 02 31
18 04 00	2MASXJ1232	12 57 01	25.7	186.6	0.4		4.0	-13	1523	No stop
18 07 30	---	13 00 31	25.6	187.5	0.5		4.6	197	1550	18 04 01
18 08 10	J1233-1025	13 01 11	26.1	187.4	0.5		4.5	27	1550	18 08 10
18 09 30	=1230-101	13 02 32	26.1	187.8	0.5		4.8	80	1560	18 08 11
18 09 30	2MASXJ1232	13 02 32	25.6	188.1	0.5		4.9	-13	1560	No stop
18 13 00	---	13 06 02	25.5	189.0	0.6		5.5	197	1587	18 09 31
18 13 00	J1233-1025	13 06 02	26.0	188.8	0.5		5.3	-13	1587	No stop
18 14 30	=1230-101	13 07 32	26.0	189.2	0.6		5.6	77	1599	18 13 01
18 14 30	2MASXJ1232	13 07 32	25.5	189.4	0.6		5.7	-13	1599	No stop
18 18 00	---	13 11 03	25.4	190.4	0.6		6.3	197	1626	18 14 31
18 18 40	J1233-1025	13 11 43	25.9	190.3	0.6		6.3	27	1626	18 18 40
18 20 00	=1230-101	13 13 03	25.9	190.7	0.7		6.5	80	1636	18 18 41
18 20 00	2MASXJ1232	13 13 03	25.3	190.9	0.7		6.7	-14	1636	No stop
18 23 30	---	13 16 34	25.2	191.9	0.7		7.2	196	1663	18 20 01
18 23 30	J1233-1025	13 16 34	25.7	191.6	0.7		7.1	-13	1663	No stop
18 25 00	=1230-101	13 18 04	25.7	192.0	0.7		7.3	77	1674	18 23 31
18 25 00	2MASXJ1232	13 18 04	25.2	192.3	0.8		7.5	-14	1674	No stop
18 28 30	---	13 21 35	25.0	193.2	0.8		8.0	196	1701	18 25 01
18 29 10	J1233-1025	13 22 15	25.6	193.2	0.8		8.0	27	1701	18 29 10
18 30 30	=1230-101	13 23 35	25.5	193.5	0.8		8.2	80	1712	18 29 11
18 30 30	2MASXJ1232	13 23 35	25.0	193.7	0.8		8.4	-14	1712	No stop
18 34 00	---	13 27 06	24.8	194.7	0.9		8.9	196	1738	18 30 31

Schedule for TORUN (Code Tr) Page 8

Is GRB 150101B related to an AGN jet?

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
18 34 00	J1233-1025	13 27 06	25.4	194.5	0.9		8.8	-14	1738	No stop
18 35 30	=1230-101	13 28 36	25.3	194.9	0.9		9.0	76	1750	18 34 01
18 35 30	2MASXJ1232	13 28 36	24.8	195.1	0.9		9.2	-14	1750	No stop
18 39 00	---	13 32 07	24.6	196.0	1.0		9.7	196	1777	18 35 31
18 39 40	J1233-1025	13 32 47	25.2	196.0	1.0		9.7	26	1777	18 39 40
18 41 00	=1230-101	13 34 07	25.1	196.3	1.0		9.9	80	1787	18 39 41
18 41 00	2MASXJ1232	13 34 07	24.6	196.6	1.0		10.0	-14	1787	No stop
18 44 30	---	13 37 37	24.4	197.5	1.1		10.6	196	1814	18 41 01
18 44 30	J1233-1025	13 37 37	25.0	197.3	1.1		10.5	-14	1814	No stop
18 46 00	=1230-101	13 39 08	24.9	197.7	1.1		10.7	76	1826	18 44 31
18 46 00	J1232-1015	13 39 08	25.0	198.0	1.1		10.9	-10	1826	No stop
18 49 30	=1229-099	13 42 38	24.8	198.9	1.2		11.4	200	1853	18 46 01
18 49 30	J1233-1025	13 42 38	24.7	198.6	1.1		11.2	-10	1853	No stop
18 50 30	=1230-101	13 43 38	24.7	198.9	1.2		11.4	50	1860	18 49 31
18 54 30	OQ208	13 47 39	65.0	169.5	-0.3		-7.1	75	1860	18 54 30
18 57 30	---	13 50 40	65.1	171.1	-0.3		-6.1	180	1883	18 54 31
19 01 30	J1233-1025	13 54 40	24.1	201.8	1.3		13.1	73	1883	19 01 30
19 03 00	=1230-101	13 56 10	24.0	202.2	1.4		13.3	90	1895	19 01 31
19 03 00	2MASXJ1232	13 56 10	23.5	202.4	1.4		13.5	-14	1895	No stop
19 06 30	---	13 59 41	23.3	203.3	1.4		14.0	196	1922	19 03 01
19 07 10	J1233-1025	14 00 21	23.8	203.3	1.4		14.0	26	1922	19 07 10
19 08 30	=1230-101	14 01 41	23.7	203.6	1.5		14.2	80	1932	19 07 11
19 08 30	2MASXJ1232	14 01 41	23.1	203.8	1.5		14.3	-14	1932	No stop
19 12 00	---	14 05 12	22.9	204.7	1.5		14.8	196	1959	19 08 31
19 12 00	J1233-1025	14 05 12	23.5	204.5	1.5		14.7	-14	1959	No stop
19 13 30	=1230-101	14 06 42	23.4	204.9	1.5		14.9	76	1971	19 12 01
19 13 30	2MASXJ1232	14 06 42	22.8	205.1	1.6		15.0	-14	1971	No stop
19 17 00	---	14 10 13	22.6	206.0	1.6		15.5	196	1997	19 13 31
19 17 40	J1233-1025	14 10 53	23.1	206.0	1.6		15.5	26	1997	19 17 40
19 19 00	=1230-101	14 12 13	23.0	206.3	1.6		15.7	80	2008	19 17 41

Schedule for TORUN (Code Tr) Page 9

Is GRB 150101B related to an AGN jet?

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
19 19 00	2MASXJ1232	14 12 13	22.5	206.5	1.7		15.8	-14	2008	No stop
19 22 30	---	14 15 44	22.2	207.4	1.7		16.3	196	2035	19 19 01
19 22 30	J1233-1025	14 15 44	22.8	207.3	1.7		16.2	-14	2035	No stop
19 24 00	=1230-101	14 17 14	22.7	207.6	1.7		16.5	76	2046	19 22 31
19 24 00	2MASXJ1232	14 17 14	22.1	207.8	1.7		16.6	-14	2046	No stop
19 27 30	---	14 20 44	21.9	208.7	1.8		17.1	196	2073	19 24 01
19 28 10	J1233-1025	14 21 25	22.4	208.7	1.8		17.1	26	2073	19 28 10
19 29 30	=1230-101	14 22 45	22.3	209.0	1.8		17.2	80	2083	19 28 11
19 29 30	2MASXJ1232	14 22 45	21.7	209.2	1.8		17.3	-14	2083	No stop
19 33 00	---	14 26 15	21.5	210.0	1.9		17.8	196	2110	19 29 31
19 33 00	J1233-1025	14 26 15	22.0	209.9	1.9		17.7	-14	2110	No stop
19 34 30	=1230-101	14 27 46	21.9	210.3	1.9		18.0	76	2122	19 33 01
19 34 30	2MASXJ1232	14 27 46	21.4	210.4	1.9		18.0	-14	2122	No stop
19 38 00	---	14 31 16	21.1	211.3	2.0		18.5	196	2149	19 34 31
19 38 40	J1233-1025	14 31 56	21.6	211.4	2.0		18.5	26	2149	19 38 40
19 40 00	=1230-101	14 33 17	21.5	211.7	2.0		18.7	80	2159	19 38 41
19 40 00	2MASXJ1232	14 33 17	20.9	211.8	2.0		18.8	-14	2159	No stop
19 43 30	---	14 36 47	20.6	212.7	2.1		19.3	196	2186	19 40 01
19 43 30	J1233-1025	14 36 47	21.2	212.6	2.0		19.2	-14	2186	No stop
19 45 00	=1230-101	14 38 17	21.1	212.9	2.1		19.4	76	2197	19 43 31
19 45 00	2MASXJ1232	14 38 17	20.5	213.0	2.1		19.5	-14	2197	No stop
19 48 30	---	14 41 48	20.2	213.9	2.1		20.0	196	2224	19 45 01
19 49 10	J1233-1025	14 42 28	20.7	214.0	2.1		20.0	26	2224	19 49 10
19 50 30	=1230-101	14 43 48	20.6	214.3	2.2		20.1	80	2235	19 49 11
19 50 30	2MASXJ1232	14 43 48	20.1	214.4	2.2		20.2	-14	2235	No stop
19 54 00	---	14 47 19	19.8	215.3	2.2		20.7	196	2262	19 50 31
19 54 00	J1233-1025	14 47 19	20.3	215.2	2.2		20.6	-14	2262	No stop
19 55 30	=1230-101	14 48 49	20.2	215.5	2.2		20.8	76	2273	19 54 01
19 55 30	2MASXJ1232	14 48 49	19.6	215.6	2.3		20.9	-14	2273	No stop
19 59 00	---	14 52 20	19.3	216.5	2.3		21.3	196	2300	19 55 31

Schedule for TORUN (Code Tr) Page 10

Is GRB 150101B related to an AGN jet?

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 16 Jun 2015 Day 167 ---										
19 59 40	J1233-1025	14 53 00	19.8	216.6	2.3		21.3	26	2300	19 59 40
20 01 00	=1230-101	14 54 20	19.7	216.9	2.3		21.5	80	2310	19 59 41
20 01 00	2MASXJ1232	14 54 20	19.1	217.0	2.4		21.6	-14	2310	No stop
20 04 30	---	14 57 51	18.8	217.8	2.4		22.0	196	2337	20 01 01
20 04 30	J1233-1025	14 57 51	19.4	217.7	2.4		21.9	-14	2337	No stop
20 06 00	=1230-101	14 59 21	19.3	218.1	2.4		22.1	76	2349	20 04 31
20 06 00	J1232-1015	14 59 21	19.3	218.4	2.4		22.3	-10	2349	No stop
20 09 30	=1229-099	15 02 51	19.0	219.2	2.5		22.7	200	2376	20 06 01
20 09 30	J1233-1025	15 02 51	18.9	218.9	2.5		22.6	-10	2376	No stop
20 10 30	=1230-101	15 03 52	18.8	219.2	2.5		22.7	50	2383	20 09 31
20 14 30	OQ208	15 07 52	62.9	210.1	1.0		20.0	61	2383	20 14 30
20 17 30	---	15 10 53	62.7	211.4	1.1		20.9	180	2406	20 14 31
20 21 30	J1233-1025	15 14 53	17.8	221.8	2.7		24.0	58	2406	20 21 30
20 23 00	=1230-101	15 16 24	17.6	222.2	2.7		24.2	90	2418	20 21 31
20 23 00	2MASXJ1232	15 16 24	17.0	222.2	2.7		24.3	-14	2418	No stop
20 26 30	---	15 19 54	16.7	223.0	2.8		24.7	196	2445	20 23 01
20 27 10	J1233-1025	15 20 34	17.2	223.1	2.8		24.7	26	2445	20 27 10
20 28 30	=1230-101	15 21 55	17.0	223.5	2.8		24.8	80	2455	20 27 11
20 28 30	2MASXJ1232	15 21 55	16.5	223.5	2.8		24.9	-14	2455	No stop
20 32 00	---	15 25 25	16.1	224.3	2.9		25.3	196	2482	20 28 31
20 32 00	J1233-1025	15 25 25	16.7	224.3	2.9		25.2	-14	2482	No stop
20 33 30	=1230-101	15 26 55	16.5	224.6	2.9		25.4	76	2494	20 32 01
20 33 30	2MASXJ1232	15 26 55	15.9	224.7	2.9		25.5	-14	2494	No stop
20 37 00	---	15 30 26	15.6	225.5	3.0		25.9	196	2521	20 33 31
20 37 40	J1233-1025	15 31 06	16.1	225.6	3.0		25.9	26	2521	20 37 40
20 39 00	=1230-101	15 32 26	15.9	225.9	3.0		26.0	80	2531	20 37 41
20 39 00	2MASXJ1232	15 32 26	15.4	225.9	3.0		26.1	-14	2531	No stop
20 42 30	---	15 35 57	15.0	226.7	3.1		26.4	196	2558	20 39 01
20 42 30	J1233-1025	15 35 57	15.6	226.7	3.0		26.4	-14	2558	No stop
20 44 00	=1230-101	15 37 27	15.4	227.0	3.1		26.5	76	2569	20 42 31

```
Schedule for TORUN     (Code Tr )                                Page  11
              Is GRB 150101B related to an AGN jet?
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  16 Jun 2015   Day 167 ---

20 44 00  2MASXJ1232   15 37 27  14.8 227.1  3.1      26.6   -14     2569   No stop
20 47 30  ---          15 40 58  14.4 227.9  3.1      27.0   196     2596   20 44 01

20 48 10  J1233-1025   15 41 38  14.9 228.0  3.1      27.0    26     2596   20 48 10
20 49 30  =1230-101    15 42 58  14.8 228.3  3.1      27.1    80     2606   20 48 11

20 49 30  2MASXJ1232   15 42 58  14.2 228.3  3.2      27.2   -14     2606   No stop
20 53 00  ---          15 46 29  13.8 229.1  3.2      27.5   196     2633   20 49 31

20 53 00  J1233-1025   15 46 29  14.4 229.1  3.2      27.5   -14     2633   No stop
20 54 30  =1230-101    15 47 59  14.2 229.4  3.2      27.6    76     2645   20 53 01

20 54 30  2MASXJ1232   15 47 59  13.6 229.4  3.3      27.7   -14     2645   No stop
20 58 00  ---          15 51 29  13.2 230.2  3.3      28.0   196     2672   20 54 31

20 58 40  J1233-1025   15 52 09  13.7 230.4  3.3      28.1    26     2672   20 58 40
21 00 00  =1230-101    15 53 30  13.6 230.7  3.3      28.2    80     2682   20 58 41

21 00 00  2MASXJ1232   15 53 30  13.0 230.7  3.3      28.2   -14     2682   No stop
21 03 30  ---          15 57 00  12.6 231.4  3.4      28.6   196     2709   21 00 01

21 03 30  J1233-1025   15 57 00  13.2 231.4  3.4      28.5   -14     2709   No stop
21 05 00  =1230-101    15 58 31  13.0 231.8  3.4      28.7    76     2721   21 03 31

21 05 00  J1232-1015   15 58 31  13.0 232.1  3.4      28.8   -10     2721   No stop
21 08 30  =1229-099    16 02 01  12.6 232.8  3.5      29.1   200     2747   21 05 01

21 08 30  J1233-1025   16 02 01  12.6 232.5  3.5      29.0   -10     2747   No stop
21 09 30  =1230-101    16 03 01  12.5 232.8  3.5      29.1    50     2755   21 08 31

21 13 00  OQ208        16 06 32  57.0 233.2  2.0      33.2    29     2755   21 13 00
21 15 00  ---          16 08 32  56.8 233.9  2.0      33.5   120     2771   21 13 01



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


 ======== Setup file: sess215.L1024

   Setup group:    9         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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         5         1         5         2         6         2         6
                  3         7         3         7         4         8         4         8
  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=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 2MASXJ1232        12 29 29.500102   * 12 32 04.970000     12 32 53.597225       0.00
                   -10 39 27.46279    *-10 56 00.60000     -11 01 10.94576        0.00

* J1232-1015        12 29 40.489739   * 12 32 15.859812     12 33 04.446619       0.94
  1229-099         -09 58 52.14292    *-10 15 25.16903     -10 20 35.24516        1.61
                    /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    GSFC 2011B astro solution        22 Observations

* J1233-1025        12 30 37.717913   * 12 33 13.164828     12 34 01.783719       0.23
  1230-101         -10 08 45.98234    *-10 25 18.43860     -10 30 28.33918        0.49
                    /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
                    rfc_2012b Petrov, 2012, unpublished 81 observations

  J1331+3030        13 28 49.657778   * 13 31 08.288070     13 31 51.549815       0.20
* 3C286             30 45 58.64061    * 30 30 32.95925      30 25 59.24352        0.19
  1328+307          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
  J1331+30          rfc_2012b Petrov, 2012, unpublished 542 observations

  J1407+2827        14 04 45.615156   * 14 07 00.394414     14 07 42.723614       0.24
  1404+286          28 41 29.23519    * 28 27 14.69022      28 23 03.27499        0.34
  J1407+28          /aps3/opt/share/sched_11.3U1/catalogs/sources.vlba
* OQ208             GSFC 2011B astro solution     66461 Observations
```

rk08yetr

RadioAstron AGN Survey

PI: *Yuri Kovalev*


```
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```


```
Observing mode: C/L-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron AGN Survey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  16 Jun 2015   Day 167 ---

 ---------- C-band VLBI scans ----------

 Next scan frequencies:  4836.00  4836.00  4836.00  4836.00
 Next BBC frequencies:    736.00   736.00   736.00   736.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

22 00 00  2029+121     16 53 40  30.7 112.0 -3.7     -34.8     0        0   22 00 00
22 12 00  ---          17 05 42  32.3 114.8 -3.4     -33.9   720       23   22 00 01

22 12 30  2029+121     17 06 12  32.4 114.9 -3.4     -33.9    24       23   22 12 30
22 24 30  ---          17 18 14  34.0 117.9 -3.2     -32.9   720       46   22 12 31

22 25 00  2029+121     17 18 44  34.1 118.0 -3.2     -32.9    24       46   22 25 00
22 37 00  ---          17 30 46  35.6 121.0 -3.0     -31.8   720       69   22 25 01

22 37 30  2029+121     17 31 16  35.7 121.2 -3.0     -31.7    24       69   22 37 30
22 50 00  ---          17 43 48  37.3 124.4 -2.8     -30.5   750       93   22 37 31



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


 ======== Setup file: ra6cm2.set

   Setup group:    3         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   4100.00   4100.00   4100.00   4100.00
 Net SB=         L         L         U         U
 IF SB =         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         L         L         U         U
 IF    =         C         A         C         A

The following frequency sets based on these setups were used.

 Frequency Set:   3  Setup file default.  Used with PCAL = 1MHz
 LO sum=   4836.00  4836.00  4836.00  4836.00
 BBC fr=    736.00   736.00   736.00   736.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   3

 Track assignments are:
  track1=   2, 18,  3, 19
  barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 41.040596       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.55563        0.00
                    fake circumpolar target for a TS to look at

* 2029+121          20 29 32.681261   * 20 31 54.994268     20 32 40.159195       0.00
  J2031+1219        12 09 28.75295    * 12 19 41.34011      12 22 56.95867        0.00
                    ./rk08ye_sources.radioastron
                    AGN, MASIV, rfc_2013d Petrov, 2013, unpublished 2970 observations, RA-AO2-12


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)
  3C286               99.8
  2029+121           124.7

 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
```

er040tr

Parsec-scale Jet Motion in M51

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Observing mode: Single pointing with phase referencing (1024 Mb/s)
Schedule for TORUN (Code Tr) Page 2
Parsec-scale Jet Motion in M51
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
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
12 25 00	1156+295	07 21 02	34.8	86.4	-4.7		-43.3	0	0	12 25 00
12 29 00	---	07 25 02	35.4	87.2	-4.6		-43.4	240	31	12 25 01
12 31 00	J1332+4722	07 27 03	35.2	56.1	-6.1		-47.3	43	31	12 31 00
12 32 20	=1330+476	07 28 23	35.4	56.2	-6.1		-47.4	80	41	12 31 01
12 32 20	M51	07 28 23	35.6	56.8	-6.0		-47.6	-12	41	No stop
12 36 00	---	07 32 03	36.1	57.3	-6.0		-48.0	208	69	12 32 21
12 36 00	J1332+4722	07 32 03	35.8	56.8	-6.0		-47.8	-12	69	No stop
12 37 20	=1330+476	07 33 24	36.0	56.9	-6.0		-47.9	68	79	12 36 01
12 37 20	M51	07 33 24	36.2	57.5	-6.0		-48.1	-12	79	No stop
12 41 00	---	07 37 04	36.7	58.0	-5.9		-48.5	208	108	12 37 21
12 41 40	J1332+4722	07 37 44	36.5	57.6	-5.9		-48.4	28	108	12 41 40
12 43 00	=1330+476	07 39 05	36.7	57.7	-5.9		-48.5	80	118	12 41 41
12 43 00	M51	07 39 05	37.0	58.3	-5.9		-48.7	-12	118	No stop
12 46 40	---	07 42 45	37.4	58.8	-5.8		-49.0	208	146	12 43 01
12 46 40	J1332+4722	07 42 45	37.2	58.3	-5.8		-48.9	-12	146	No stop
12 48 00	=1330+476	07 44 05	37.3	58.4	-5.8		-49.0	68	156	12 46 41
12 48 00	M51	07 44 05	37.6	59.0	-5.8		-49.2	-12	156	No stop
12 51 40	---	07 47 46	38.1	59.5	-5.7		-49.5	208	185	12 48 01
12 52 20	J1332+4722	07 48 26	37.9	59.1	-5.7		-49.4	28	185	12 52 20
12 53 40	=1330+476	07 49 46	38.1	59.2	-5.7		-49.5	80	195	12 52 21
12 53 40	M51	07 49 46	38.3	59.8	-5.7		-49.7	-12	195	No stop
12 57 20	---	07 53 27	38.8	60.3	-5.6		-50.1	208	223	12 53 41
12 57 20	J1332+4722	07 53 27	38.6	59.8	-5.7		-49.9	-12	223	No stop
12 58 40	=1330+476	07 54 47	38.7	59.9	-5.6		-50.0	68	233	12 57 21

Schedule for TORUN (Code Tr) Page 3

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
12 58 40	M51	07 54 47	39.0	60.5	-5.6		-50.2	-12	233	No stop
13 02 20	---	07 58 28	39.5	61.0	-5.5		-50.5	208	262	12 58 41
13 03 00	J1332+4722	07 59 08	39.3	60.5	-5.6		-50.4	28	262	13 03 00
13 04 20	=1330+476	08 00 28	39.5	60.7	-5.5		-50.6	80	272	13 03 01
13 04 20	M51	08 00 28	39.7	61.3	-5.5		-50.7	-12	272	No stop
13 08 00	---	08 04 09	40.2	61.8	-5.4		-51.1	208	300	13 04 21
13 08 00	J1332+4722	08 04 09	39.9	61.2	-5.5		-50.9	-12	300	No stop
13 09 20	=1330+476	08 05 29	40.1	61.4	-5.5		-51.0	68	310	13 08 01
13 09 20	M51	08 05 29	40.4	62.0	-5.4		-51.2	-12	310	No stop
13 13 00	---	08 09 10	40.9	62.5	-5.4		-51.5	208	338	13 09 21
13 13 40	J1332+4722	08 09 50	40.7	62.0	-5.4		-51.5	28	338	13 13 40
13 15 00	=1330+476	08 11 10	40.9	62.2	-5.4		-51.6	80	349	13 13 41
13 15 00	M51	08 11 10	41.1	62.8	-5.3		-51.7	-12	349	No stop
13 18 40	---	08 14 50	41.6	63.3	-5.3		-52.0	208	377	13 15 01
13 18 40	J1332+4722	08 14 50	41.4	62.7	-5.3		-51.9	-12	377	No stop
13 20 00	=1330+476	08 16 11	41.5	62.9	-5.3		-52.0	68	387	13 18 41
13 20 00	M51	08 16 11	41.8	63.5	-5.2		-52.2	-12	387	No stop
13 23 40	---	08 19 51	42.3	64.0	-5.2		-52.5	208	415	13 20 01
13 24 20	J1332+4722	08 20 31	42.1	63.5	-5.2		-52.4	28	415	13 24 20
13 25 40	=1330+476	08 21 52	42.3	63.7	-5.2		-52.6	80	426	13 24 21
13 25 40	M51	08 21 52	42.6	64.3	-5.1		-52.7	-12	426	No stop
13 29 20	---	08 25 32	43.1	64.8	-5.1		-53.0	208	454	13 25 41
13 29 20	J1332+4722	08 25 32	42.8	64.2	-5.1		-52.9	-12	454	No stop
13 30 40	=1330+476	08 26 52	43.0	64.4	-5.1		-53.0	68	464	13 29 21
13 30 40	M51	08 26 52	43.3	65.0	-5.1		-53.1	-12	464	No stop
13 34 20	---	08 30 33	43.8	65.5	-5.0		-53.4	208	492	13 30 41
13 35 00	J1332+4722	08 31 13	43.6	65.0	-5.0		-53.4	28	492	13 35 00
13 36 20	=1330+476	08 32 33	43.8	65.2	-5.0		-53.5	80	503	13 35 01
13 36 20	M51	08 32 33	44.0	65.8	-5.0		-53.6	-12	503	No stop
13 40 00	---	08 36 14	44.5	66.3	-4.9		-53.9	208	531	13 36 21
13 40 00	J1332+4722	08 36 14	44.3	65.7	-5.0		-53.8	-12	531	No stop
13 41 20	=1330+476	08 37 34	44.4	65.9	-4.9		-53.9	68	541	13 40 01

Schedule for TORUN (Code Tr) Page 4

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
13 41 20	M51	08 37 34	44.7	66.5	-4.9		-54.0	-12	541	No stop
13 45 00	---	08 41 15	45.2	67.0	-4.8		-54.3	208	569	13 41 21
13 45 40	J1332+4722	08 41 55	45.0	66.5	-4.9		-54.3	28	569	13 45 40
13 47 00	=1330+476	08 43 15	45.2	66.7	-4.8		-54.4	80	579	13 45 41
13 47 00	M51	08 43 15	45.5	67.3	-4.8		-54.5	-12	579	No stop
13 50 40	---	08 46 56	46.0	67.8	-4.7		-54.8	208	608	13 47 01
13 50 40	J1332+4722	08 46 56	45.7	67.2	-4.8		-54.7	-12	608	No stop
13 52 00	=1330+476	08 48 16	45.9	67.4	-4.8		-54.8	68	618	13 50 41
13 52 00	M51	08 48 16	46.2	68.0	-4.7		-54.9	-12	618	No stop
13 55 40	---	08 51 57	46.7	68.5	-4.6		-55.2	208	646	13 52 01
13 56 20	J1332+4722	08 52 37	46.5	68.0	-4.7		-55.2	28	646	13 56 20
13 57 40	=1330+476	08 53 57	46.7	68.2	-4.7		-55.3	80	656	13 56 21
13 57 40	M51	08 53 57	47.0	68.8	-4.6		-55.4	-12	656	No stop
14 01 20	---	08 57 37	47.5	69.3	-4.5		-55.7	208	685	13 57 41
14 01 20	J1332+4722	08 57 37	47.2	68.7	-4.6		-55.6	-12	685	No stop
14 02 40	=1330+476	08 58 58	47.4	68.9	-4.6		-55.7	68	695	14 01 21
14 02 40	M51	08 58 58	47.7	69.5	-4.5		-55.8	-12	695	No stop
14 06 20	---	09 02 38	48.2	70.1	-4.5		-56.1	208	723	14 02 41
14 07 00	J1332+4722	09 03 18	48.0	69.5	-4.5		-56.0	28	723	14 07 00
14 08 20	=1330+476	09 04 39	48.2	69.7	-4.5		-56.2	80	733	14 07 01
14 08 20	M51	09 04 39	48.5	70.3	-4.4		-56.2	-12	733	No stop
14 12 00	---	09 08 19	49.0	70.9	-4.4		-56.5	208	762	14 08 21
14 12 00	J1332+4722	09 08 19	48.7	70.2	-4.4		-56.4	-12	762	No stop
14 13 20	=1330+476	09 09 39	48.9	70.4	-4.4		-56.5	68	772	14 12 01
14 13 20	M51	09 09 39	49.2	71.1	-4.3		-56.6	-12	772	No stop
14 17 00	---	09 13 20	49.7	71.6	-4.3		-56.9	208	800	14 13 21
14 17 40	J1332+4722	09 14 00	49.5	71.0	-4.3		-56.9	28	800	14 17 40
14 19 00	=1330+476	09 15 20	49.7	71.2	-4.3		-57.0	80	810	14 17 41
14 21 00	OQ208	09 17 21	32.6	84.9	-4.8		-42.8	41	810	14 21 00
14 24 40	---	09 21 01	33.1	85.6	-4.8		-42.9	220	838	14 21 01

Schedule for TORUN (Code Tr) Page 5

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
14 26 40	J1332+4722	09 23 02	50.8	72.3	-4.2		-57.5	40	838	14 26 40
14 28 00	=1330+476	09 24 22	51.0	72.5	-4.2		-57.6	80	849	14 26 41
14 28 00	M51	09 24 22	51.3	73.2	-4.1		-57.6	-12	849	No stop
14 31 40	---	09 28 02	51.9	73.7	-4.0		-57.9	208	877	14 28 01
14 31 40	J1332+4722	09 28 02	51.5	73.1	-4.1		-57.9	-12	877	No stop
14 33 00	=1330+476	09 29 23	51.7	73.3	-4.1		-58.0	68	887	14 31 41
14 33 00	M51	09 29 23	52.0	73.9	-4.0		-58.0	-12	887	No stop
14 36 40	---	09 33 03	52.6	74.5	-4.0		-58.2	208	915	14 33 01
14 37 20	J1332+4722	09 33 43	52.4	73.9	-4.0		-58.3	28	915	14 37 20
14 38 40	=1330+476	09 35 04	52.5	74.1	-4.0		-58.4	80	926	14 37 21
14 38 40	M51	09 35 04	52.9	74.8	-3.9		-58.4	-12	926	No stop
14 42 20	---	09 38 44	53.4	75.3	-3.9		-58.6	208	954	14 38 41
14 42 20	J1332+4722	09 38 44	53.1	74.6	-3.9		-58.6	-12	954	No stop
14 43 40	=1330+476	09 40 04	53.3	74.8	-3.9		-58.7	68	964	14 42 21
14 43 40	M51	09 40 04	53.6	75.5	-3.8		-58.7	-12	964	No stop
14 47 20	---	09 43 45	54.1	76.1	-3.8		-58.9	208	992	14 43 41
14 48 00	J1332+4722	09 44 25	53.9	75.5	-3.8		-59.0	28	992	14 48 00
14 49 20	=1330+476	09 45 45	54.1	75.7	-3.8		-59.1	80	1003	14 48 01
14 49 20	M51	09 45 45	54.4	76.4	-3.7		-59.0	-13	1003	No stop
14 53 00	---	09 49 26	55.0	76.9	-3.7		-59.3	207	1031	14 49 21
14 53 00	J1332+4722	09 49 26	54.6	76.2	-3.7		-59.3	-12	1031	No stop
14 54 20	=1330+476	09 50 46	54.8	76.4	-3.7		-59.4	68	1041	14 53 01
14 54 20	M51	09 50 46	55.2	77.1	-3.7		-59.3	-13	1041	No stop
14 58 00	---	09 54 27	55.7	77.7	-3.6		-59.6	207	1069	14 54 21
14 58 40	J1332+4722	09 55 07	55.5	77.1	-3.6		-59.7	28	1069	14 58 40
15 00 00	=1330+476	09 56 27	55.7	77.3	-3.6		-59.7	80	1079	14 58 41
15 00 00	M51	09 56 27	56.0	78.0	-3.6		-59.7	-13	1079	No stop
15 03 40	---	10 00 08	56.5	78.5	-3.5		-59.9	207	1108	15 00 01
15 03 40	J1332+4722	10 00 08	56.2	77.8	-3.6		-59.9	-12	1108	No stop
15 05 00	=1330+476	10 01 28	56.4	78.0	-3.5		-60.0	68	1118	15 03 41

Schedule for TORUN (Code Tr) Page 6

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
15 05 00	M51	10 01 28	56.7	78.8	-3.5		-59.9	-13	1118	No stop
15 08 40	---	10 05 09	57.3	79.3	-3.4		-60.1	207	1146	15 05 01
15 09 20	J1332+4722	10 05 49	57.0	78.7	-3.5		-60.3	27	1146	15 09 20
15 10 40	=1330+476	10 07 09	57.2	78.9	-3.4		-60.3	80	1156	15 09 21
15 10 40	M51	10 07 09	57.6	79.6	-3.4		-60.2	-13	1156	No stop
15 14 20	---	10 10 49	58.1	80.2	-3.3		-60.4	207	1185	15 10 41
15 14 20	J1332+4722	10 10 49	57.8	79.5	-3.4		-60.5	-13	1185	No stop
15 15 40	=1330+476	10 12 10	58.0	79.7	-3.4		-60.6	67	1195	15 14 21
15 15 40	M51	10 12 10	58.3	80.4	-3.3		-60.5	-13	1195	No stop
15 19 20	---	10 15 50	58.8	81.0	-3.2		-60.7	207	1223	15 15 41
15 20 00	J1332+4722	10 16 30	58.6	80.4	-3.3		-60.8	27	1223	15 20 00
15 21 20	=1330+476	10 17 51	58.8	80.6	-3.3		-60.9	80	1233	15 20 01
15 21 20	M51	10 17 51	59.1	81.3	-3.2		-60.7	-13	1233	No stop
15 25 00	---	10 21 31	59.7	81.9	-3.2		-60.9	207	1262	15 21 21
15 25 00	J1332+4722	10 21 31	59.3	81.2	-3.2		-61.0	-13	1262	No stop
15 26 20	=1330+476	10 22 51	59.5	81.4	-3.2		-61.1	67	1272	15 25 01
15 26 20	M51	10 22 51	59.9	82.2	-3.1		-61.0	-13	1272	No stop
15 30 00	---	10 26 32	60.4	82.8	-3.1		-61.1	207	1300	15 26 21
15 30 40	J1332+4722	10 27 12	60.2	82.1	-3.1		-61.3	27	1300	15 30 40
15 32 00	=1330+476	10 28 32	60.4	82.3	-3.1		-61.3	80	1310	15 30 41
15 32 00	M51	10 28 32	60.7	83.1	-3.0		-61.2	-13	1310	No stop
15 35 40	---	10 32 13	61.3	83.7	-3.0		-61.3	207	1338	15 32 01
15 35 40	J1332+4722	10 32 13	60.9	82.9	-3.0		-61.5	-13	1338	No stop
15 37 00	=1330+476	10 33 33	61.1	83.1	-3.0		-61.5	67	1349	15 35 41
15 37 00	M51	10 33 33	61.5	84.0	-2.9		-61.4	-13	1349	No stop
15 40 40	---	10 37 14	62.0	84.6	-2.9		-61.5	207	1377	15 37 01
15 41 20	J1332+4722	10 37 54	61.8	83.9	-2.9		-61.7	27	1377	15 41 20
15 42 40	=1330+476	10 39 14	62.0	84.1	-2.9		-61.7	80	1387	15 41 21
15 42 40	M51	10 39 14	62.3	84.9	-2.9		-61.5	-13	1387	No stop
15 46 20	---	10 42 55	62.9	85.6	-2.8		-61.6	207	1415	15 42 41

Schedule for TORUN (Code Tr) Page 7

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
15 46 20	J1332+4722	10 42 55	62.5	84.7	-2.8		-61.8	-13	1415	No stop
15 47 40	=1330+476	10 44 15	62.7	85.0	-2.8		-61.9	67	1426	15 46 21
15 47 40	M51	10 44 15	63.1	85.8	-2.8		-61.7	-13	1426	No stop
15 51 20	---	10 47 56	63.6	86.5	-2.7		-61.7	207	1454	15 47 41
15 52 00	J1332+4722	10 48 36	63.4	85.7	-2.7		-62.0	27	1454	15 52 00
15 53 20	=1330+476	10 49 56	63.6	86.0	-2.7		-62.0	80	1464	15 52 01
15 53 20	M51	10 49 56	63.9	86.9	-2.7		-61.8	-13	1464	No stop
15 57 00	---	10 53 36	64.5	87.5	-2.6		-61.8	207	1492	15 53 21
15 57 00	J1332+4722	10 53 36	64.1	86.6	-2.7		-62.1	-13	1492	No stop
15 58 20	=1330+476	10 54 57	64.3	86.9	-2.6		-62.1	67	1503	15 57 01
15 58 20	M51	10 54 57	64.7	87.8	-2.6		-61.9	-14	1503	No stop
16 02 00	---	10 58 37	65.2	88.5	-2.5		-61.9	206	1531	15 58 21
16 02 40	J1332+4722	10 59 17	65.0	87.7	-2.6		-62.2	27	1531	16 02 40
16 04 00	=1330+476	11 00 38	65.2	87.9	-2.5		-62.2	80	1541	16 02 41
16 04 00	M51	11 00 38	65.5	88.9	-2.5		-61.9	-14	1541	No stop
16 07 40	---	11 04 18	66.1	89.6	-2.4		-61.9	206	1569	16 04 01
16 07 40	J1332+4722	11 04 18	65.7	88.6	-2.5		-62.3	-14	1569	No stop
16 09 00	=1330+476	11 05 38	65.9	88.9	-2.5		-62.3	66	1579	16 07 41
16 09 00	M51	11 05 38	66.3	89.8	-2.4		-61.9	-14	1579	No stop
16 12 40	---	11 09 19	66.8	90.6	-2.4		-61.9	206	1608	16 09 01
16 13 20	J1332+4722	11 09 59	66.6	89.7	-2.4		-62.3	26	1608	16 13 20
16 14 40	=1330+476	11 11 19	66.8	90.0	-2.4		-62.3	80	1618	16 13 21
16 16 40	OQ208	11 13 20	49.7	110.3	-2.9		-39.8	42	1618	16 16 40
16 20 20	---	11 17 00	50.2	111.2	-2.8		-39.5	220	1646	16 16 41
16 22 20	J1332+4722	11 19 01	67.9	91.6	-2.2		-62.3	40	1646	16 22 20
16 23 40	=1330+476	11 20 21	68.1	91.9	-2.2		-62.2	80	1656	16 22 21
16 23 40	M51	11 20 21	68.5	92.9	-2.2		-61.8	-14	1656	No stop
16 27 20	---	11 24 01	69.0	93.7	-2.1		-61.7	206	1685	16 23 41
16 27 20	J1332+4722	11 24 01	68.7	92.7	-2.2		-62.2	-14	1685	No stop
16 28 40	=1330+476	11 25 22	68.9	93.0	-2.1		-62.2	66	1695	16 27 21

Schedule for TORUN (Code Tr) Page 8

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
16 28 40	M51	11 25 22	69.2	94.0	-2.1		-61.7	-14	1695	No stop
16 32 20	---	11 29 02	69.8	94.9	-2.0		-61.6	206	1723	16 28 41
16 33 00	J1332+4722	11 29 42	69.6	93.9	-2.1		-62.0	26	1723	16 33 00
16 34 20	=1330+476	11 31 03	69.8	94.2	-2.0		-62.0	80	1733	16 33 01
16 34 20	M51	11 31 03	70.1	95.4	-2.0		-61.5	-15	1733	No stop
16 38 00	---	11 34 43	70.6	96.3	-1.9		-61.3	205	1762	16 34 21
16 38 00	J1332+4722	11 34 43	70.3	95.1	-2.0		-61.9	-14	1762	No stop
16 39 20	=1330+476	11 36 03	70.5	95.4	-2.0		-61.8	66	1772	16 38 01
16 39 20	M51	11 36 03	70.8	96.6	-1.9		-61.2	-15	1772	No stop
16 43 00	---	11 39 44	71.4	97.5	-1.8		-61.0	205	1800	16 39 21
16 43 40	J1332+4722	11 40 24	71.2	96.5	-1.9		-61.6	25	1800	16 43 40
16 45 00	=1330+476	11 41 44	71.4	96.8	-1.9		-61.5	80	1810	16 43 41
16 45 00	M51	11 41 44	71.7	98.0	-1.8		-60.9	-15	1810	No stop
16 48 40	---	11 45 25	72.2	99.0	-1.8		-60.6	205	1838	16 45 01
16 48 40	J1332+4722	11 45 25	71.9	97.8	-1.8		-61.3	-15	1838	No stop
16 50 00	=1330+476	11 46 45	72.1	98.1	-1.8		-61.2	65	1849	16 48 41
16 50 00	M51	11 46 45	72.4	99.4	-1.7		-60.5	-15	1849	No stop
16 53 40	---	11 50 26	73.0	100.4	-1.7		-60.2	205	1877	16 50 01
16 54 20	J1332+4722	11 51 06	72.7	99.3	-1.7		-60.9	25	1877	16 54 20
16 55 40	=1330+476	11 52 26	72.9	99.7	-1.7		-60.8	80	1887	16 54 21
16 55 40	M51	11 52 26	73.3	101.0	-1.6		-60.0	-16	1887	No stop
16 59 20	---	11 56 07	73.8	102.1	-1.6		-59.6	204	1915	16 55 41
16 59 20	J1332+4722	11 56 07	73.5	100.7	-1.6		-60.5	-15	1915	No stop
17 00 40	=1330+476	11 57 27	73.7	101.1	-1.6		-60.3	65	1926	16 59 21
17 00 40	M51	11 57 27	74.0	102.5	-1.6		-59.5	-16	1926	No stop
17 04 20	---	12 01 08	74.6	103.7	-1.5		-59.0	204	1954	17 00 41
17 05 00	J1332+4722	12 01 48	74.3	102.4	-1.5		-59.8	24	1954	17 05 00
17 06 20	=1330+476	12 03 08	74.5	102.9	-1.5		-59.7	80	1964	17 05 01
17 06 20	M51	12 03 08	74.8	104.4	-1.5		-58.7	-16	1964	No stop
17 10 00	---	12 06 48	75.4	105.7	-1.4		-58.2	204	1992	17 06 21

Schedule for TORUN (Code Tr) Page 9

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
17 10 00	J1332+4722	12 06 48	75.1	104.1	-1.4		-59.2	-16	1992	No stop
17 11 20	=1330+476	12 08 09	75.2	104.5	-1.4		-59.0	64	2003	17 10 01
17 11 20	M51	12 08 09	75.6	106.1	-1.4		-58.0	-17	2003	No stop
17 15 00	---	12 11 49	76.1	107.5	-1.3		-57.3	203	2031	17 11 21
17 15 40	J1332+4722	12 12 29	75.9	106.1	-1.3		-58.3	24	2031	17 15 40
17 17 00	=1330+476	12 13 50	76.1	106.6	-1.3		-58.1	80	2041	17 15 41
17 17 00	M51	12 13 50	76.4	108.3	-1.3		-56.9	-17	2041	No stop
17 20 40	---	12 17 30	76.9	109.8	-1.2		-56.1	203	2069	17 17 01
17 20 40	J1332+4722	12 17 30	76.6	108.0	-1.3		-57.4	-17	2069	No stop
17 22 00	=1330+476	12 18 50	76.8	108.5	-1.2		-57.1	63	2079	17 20 41
17 22 00	M51	12 18 50	77.1	110.4	-1.2		-55.8	-17	2079	No stop
17 25 40	---	12 22 31	77.6	112.0	-1.1		-54.9	203	2108	17 22 01
17 26 20	J1332+4722	12 23 11	77.4	110.3	-1.2		-56.1	23	2108	17 26 20
17 27 40	=1330+476	12 24 31	77.6	110.9	-1.1		-55.8	80	2118	17 26 21
17 27 40	M51	12 24 31	77.9	112.9	-1.1		-54.4	-18	2118	No stop
17 31 20	---	12 28 12	78.4	114.7	-1.0		-53.3	202	2146	17 27 41
17 31 20	J1332+4722	12 28 12	78.1	112.6	-1.1		-54.8	-18	2146	No stop
17 32 40	=1330+476	12 29 32	78.3	113.2	-1.1		-54.5	62	2156	17 31 21
17 32 40	M51	12 29 32	78.6	115.4	-1.0		-52.9	-18	2156	No stop
17 36 20	---	12 33 13	79.1	117.4	-1.0		-51.6	202	2185	17 32 41
17 37 00	J1332+4722	12 33 53	78.9	115.4	-1.0		-53.1	22	2185	17 37 00
17 38 20	=1330+476	12 35 13	79.1	116.1	-1.0		-52.6	80	2195	17 37 01
17 38 20	M51	12 35 13	79.3	118.5	-0.9		-50.8	-19	2195	No stop
17 42 00	---	12 38 54	79.8	120.7	-0.9		-49.3	201	2223	17 38 21
17 42 00	J1332+4722	12 38 54	79.6	118.2	-0.9		-51.3	-19	2223	No stop
17 43 20	=1330+476	12 40 14	79.7	119.0	-0.9		-50.7	61	2233	17 42 01
17 43 20	M51	12 40 14	80.0	121.6	-0.8		-48.8	-20	2233	No stop
17 47 00	---	12 43 55	80.4	124.0	-0.8		-47.0	200	2262	17 43 21
17 47 40	J1332+4722	12 44 35	80.3	121.8	-0.8		-48.8	21	2262	17 47 40
17 49 00	=1330+476	12 45 55	80.5	122.7	-0.8		-48.2	80	2272	17 47 41

Schedule for TORUN (Code Tr) Page 10

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
17 49 00	M51	12 45 55	80.7	125.5	-0.7		-45.9	-21	2272	No stop
17 52 40	---	12 49 35	81.1	128.3	-0.7		-43.8	199	2300	17 49 01
17 52 40	J1332+4722	12 49 35	80.9	125.3	-0.7		-46.3	-20	2300	No stop
17 54 00	=1330+476	12 50 56	81.1	126.3	-0.7		-45.5	60	2310	17 52 41
17 54 00	M51	12 50 56	81.3	129.4	-0.7		-43.0	-21	2310	No stop
17 57 40	---	12 54 36	81.7	132.5	-0.6		-40.6	199	2338	17 54 01
17 58 20	J1332+4722	12 55 16	81.6	129.8	-0.6		-42.9	19	2338	17 58 20
17 59 40	=1330+476	12 56 37	81.7	130.9	-0.6		-42.0	80	2349	17 58 21
17 59 40	M51	12 56 37	81.9	134.4	-0.6		-39.1	-22	2349	No stop
18 03 20	---	13 00 17	82.3	138.0	-0.5		-36.2	198	2377	17 59 41
18 03 20	J1332+4722	13 00 17	82.2	134.3	-0.6		-39.3	-21	2377	No stop
18 04 40	=1330+476	13 01 37	82.3	135.6	-0.5		-38.3	59	2387	18 03 21
18 04 40	M51	13 01 37	82.4	139.4	-0.5		-35.1	-23	2387	No stop
18 08 20	---	13 05 18	82.8	143.4	-0.4		-31.7	197	2415	18 04 41
18 09 00	J1332+4722	13 05 58	82.7	140.2	-0.5		-34.5	18	2415	18 09 00
18 10 20	=1330+476	13 07 18	82.9	141.7	-0.4		-33.3	80	2426	18 09 01
18 10 20	M51	13 07 18	83.0	145.8	-0.4		-29.7	-24	2426	No stop
18 14 00	---	13 10 59	83.3	150.4	-0.3		-25.8	196	2454	18 10 21
18 14 00	J1332+4722	13 10 59	83.2	146.1	-0.4		-29.6	-23	2454	No stop
18 15 20	=1330+476	13 12 19	83.3	147.7	-0.4		-28.2	57	2464	18 14 01
18 15 20	M51	13 12 19	83.4	152.2	-0.3		-24.3	-25	2464	No stop
18 19 00	---	13 16 00	83.6	157.3	-0.2		-19.9	195	2492	18 15 21
18 19 40	J1332+4722	13 16 40	83.6	153.6	-0.3		-23.2	17	2492	18 19 40
18 21 00	=1330+476	13 18 00	83.7	155.5	-0.3		-21.6	80	2503	18 19 41
18 23 00	OQ208	13 20 00	63.8	155.7	-0.8		-16.3	31	2503	18 23 00
18 26 40	---	13 23 41	64.0	157.5	-0.7		-15.2	220	2531	18 23 01
18 28 40	J1332+4722	13 25 41	84.1	167.2	-0.1		-11.3	31	2531	18 28 40
18 30 00	=1330+476	13 27 02	84.1	169.4	-0.1		-9.4	80	2541	18 28 41
18 30 00	M51	13 27 02	84.0	174.3	-0.1		-5.0	-26	2541	No stop
18 33 40	---	13 30 42	84.0	180.3	0.0		0.2	194	2569	18 30 01

Schedule for TORUN (Code Tr) Page 11

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
18 33 40	J1332+4722	13 30 42	84.2	175.5	0.0		-4.0	-23	2569	No stop
18 35 00	=1330+476	13 32 02	84.2	177.7	0.0		-2.0	57	2579	18 33 41
18 35 00	M51	13 32 02	84.0	182.5	0.0		2.2	-26	2579	No stop
18 38 40	---	13 35 43	84.0	188.4	0.1		7.4	194	2608	18 35 01
18 39 20	J1332+4722	13 36 23	84.2	185.0	0.0		4.4	17	2608	18 39 20
18 40 40	=1330+476	13 37 43	84.2	187.2	0.1		6.4	80	2618	18 39 21
18 40 40	M51	13 37 43	83.9	191.6	0.1		10.2	-25	2618	No stop
18 44 20	---	13 41 24	83.8	197.3	0.2		15.2	195	2646	18 40 41
18 44 20	J1332+4722	13 41 24	84.1	193.2	0.1		11.7	-22	2646	No stop
18 45 40	=1330+476	13 42 44	84.0	195.4	0.2		13.6	58	2656	18 44 21
18 45 40	M51	13 42 44	83.7	199.3	0.2		17.0	-24	2656	No stop
18 49 20	---	13 46 25	83.5	204.6	0.3		21.6	196	2685	18 45 41
18 50 00	J1332+4722	13 47 05	83.8	202.0	0.2		19.4	19	2685	18 50 00
18 51 20	=1330+476	13 48 25	83.7	204.0	0.3		21.1	80	2695	18 50 01
18 51 20	M51	13 48 25	83.4	207.4	0.3		23.9	-22	2695	No stop
18 55 00	---	13 52 06	83.1	212.2	0.4		28.0	198	2723	18 51 21
18 55 00	J1332+4722	13 52 06	83.5	209.1	0.3		25.5	-20	2723	No stop
18 56 20	=1330+476	13 53 26	83.4	210.9	0.3		27.0	60	2733	18 55 01
18 56 20	M51	13 53 26	83.0	213.8	0.4		29.4	-21	2733	No stop
19 00 00	---	13 57 07	82.7	218.1	0.4		33.0	199	2762	18 56 21
19 00 40	J1332+4722	13 57 47	83.0	216.3	0.4		31.6	21	2762	19 00 40
19 02 00	=1330+476	13 59 07	82.9	217.9	0.4		32.9	80	2772	19 00 41
19 02 00	M51	13 59 07	82.5	220.3	0.5		34.8	-20	2772	No stop
19 05 40	---	14 02 47	82.1	224.0	0.5		37.8	200	2800	19 02 01
19 05 40	J1332+4722	14 02 47	82.5	221.9	0.5		36.3	-17	2800	No stop
19 07 00	=1330+476	14 04 08	82.4	223.3	0.5		37.4	63	2810	19 05 41
19 07 00	M51	14 04 08	82.0	225.3	0.6		38.9	-18	2810	No stop
19 10 40	---	14 07 48	81.6	228.7	0.6		41.5	202	2838	19 07 01
19 11 20	J1332+4722	14 08 28	81.9	227.5	0.6		40.8	24	2838	19 11 20
19 12 40	=1330+476	14 09 49	81.8	228.7	0.6		41.7	80	2849	19 11 21

Schedule for TORUN (Code Tr) Page 12

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
19 12 40	M51	14 09 49	81.3	230.4	0.7		42.8	-17	2849	No stop
19 16 20	---	14 13 29	80.9	233.3	0.7		45.0	203	2877	19 12 41
19 16 20	J1332+4722	14 13 29	81.4	231.8	0.7		44.1	-15	2877	No stop
19 17 40	=1330+476	14 14 49	81.2	232.9	0.7		44.9	65	2887	19 16 21
19 17 40	M51	14 14 49	80.7	234.3	0.7		45.8	-16	2887	No stop
19 21 20	---	14 18 30	80.3	236.9	0.8		47.7	204	2915	19 17 41
19 22 00	J1332+4722	14 19 10	80.7	236.1	0.8		47.3	26	2915	19 22 00
19 23 20	=1330+476	14 20 30	80.5	237.1	0.8		48.0	80	2926	19 22 01
19 23 20	M51	14 20 30	80.0	238.2	0.8		48.6	-15	2926	No stop
19 27 00	---	14 24 11	79.6	240.5	0.9		50.2	205	2954	19 23 21
19 27 00	J1332+4722	14 24 11	80.0	239.5	0.8		49.7	-14	2954	No stop
19 28 20	=1330+476	14 25 31	79.9	240.3	0.9		50.3	66	2964	19 27 01
19 28 20	M51	14 25 31	79.4	241.3	0.9		50.7	-14	2964	No stop
19 32 00	---	14 29 12	78.9	243.4	1.0		52.1	206	2992	19 28 21
19 32 40	J1332+4722	14 29 52	79.3	242.9	0.9		52.0	27	2992	19 32 40
19 34 00	=1330+476	14 31 12	79.1	243.6	1.0		52.5	80	3003	19 32 41
19 34 00	M51	14 31 12	78.6	244.4	1.0		52.8	-13	3003	No stop
19 37 40	---	14 34 53	78.1	246.3	1.1		53.9	207	3031	19 34 01
19 37 40	J1332+4722	14 34 53	78.6	245.6	1.0		53.7	-13	3031	No stop
19 39 00	=1330+476	14 36 13	78.4	246.2	1.0		54.1	67	3041	19 37 41
19 39 00	M51	14 36 13	77.9	246.9	1.1		54.3	-13	3041	No stop
19 42 40	---	14 39 54	77.4	248.6	1.2		55.3	207	3069	19 39 01
19 43 20	J1332+4722	14 40 34	77.8	248.3	1.1		55.4	27	3069	19 43 20
19 44 40	=1330+476	14 41 54	77.6	248.9	1.1		55.7	80	3079	19 43 21
19 44 40	M51	14 41 54	77.1	249.5	1.2		55.8	-13	3079	No stop
19 48 20	---	14 45 34	76.6	251.0	1.3		56.6	207	3108	19 44 41
19 48 20	J1332+4722	14 45 34	77.1	250.5	1.2		56.6	-13	3108	No stop
19 49 40	=1330+476	14 46 55	76.9	251.1	1.2		56.9	67	3118	19 48 21
19 49 40	M51	14 46 55	76.4	251.6	1.3		56.8	-13	3118	No stop
19 53 20	---	14 50 35	75.9	253.0	1.3		57.6	207	3146	19 49 41

Schedule for TORUN (Code Tr) Page 13

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
19 54 00	J1332+4722	14 51 15	76.3	252.8	1.3		57.8	27	3146	19 54 00
19 55 20	=1330+476	14 52 36	76.1	253.3	1.3		58.0	80	3156	19 54 01
19 55 20	M51	14 52 36	75.6	253.7	1.4		57.9	-13	3156	No stop
19 59 00	---	14 56 16	75.1	255.0	1.4		58.5	207	3185	19 55 21
19 59 00	J1332+4722	14 56 16	75.6	254.6	1.4		58.6	-13	3185	No stop
20 00 20	=1330+476	14 57 36	75.4	255.1	1.4		58.8	67	3195	19 59 01
20 00 20	M51	14 57 36	74.9	255.5	1.5		58.7	-13	3195	No stop
20 04 00	---	15 01 17	74.4	256.7	1.5		59.2	207	3223	20 00 21
20 04 40	J1332+4722	15 01 57	74.8	256.6	1.5		59.5	27	3223	20 04 40
20 06 00	=1330+476	15 03 17	74.6	257.0	1.5		59.6	80	3233	20 04 41
20 06 00	M51	15 03 17	74.1	257.3	1.5		59.4	-13	3233	No stop
20 09 40	---	15 06 58	73.5	258.5	1.6		59.8	207	3262	20 06 01
20 09 40	J1332+4722	15 06 58	74.0	258.2	1.6		60.1	-13	3262	No stop
20 11 00	=1330+476	15 08 18	73.8	258.6	1.6		60.2	67	3272	20 09 41
20 11 00	M51	15 08 18	73.3	258.9	1.6		60.0	-13	3272	No stop
20 14 40	---	15 11 59	72.8	259.9	1.7		60.3	207	3300	20 11 01
20 15 20	J1332+4722	15 12 39	73.2	259.8	1.7		60.6	27	3300	20 15 20
20 16 40	=1330+476	15 13 59	73.0	260.2	1.7		60.8	80	3310	20 15 21
20 18 40	OQ208	15 15 59	62.3	213.7	1.1		22.3	12	3310	20 18 40
20 22 20	---	15 19 40	62.0	215.3	1.2		23.2	220	3338	20 18 41
20 24 20	J1332+4722	15 21 40	71.9	262.3	1.8		61.3	11	3338	20 24 20
20 25 40	=1330+476	15 23 01	71.7	262.7	1.8		61.4	80	3349	20 24 21
20 25 40	M51	15 23 01	71.1	262.9	1.9		61.1	-13	3349	No stop
20 29 10	---	15 26 31	70.6	263.8	1.9		61.3	197	3376	20 25 41
20 29 10	J1332+4722	15 26 31	71.1	263.6	1.9		61.6	-13	3376	No stop
20 30 25	=1330+476	15 27 46	70.9	263.9	1.9		61.7	62	3385	20 29 11
20 30 25	M51	15 27 46	70.4	264.1	2.0		61.4	-13	3385	No stop
20 33 55	---	15 31 17	69.9	264.9	2.0		61.5	197	3412	20 30 26
20 34 35	J1332+4722	15 31 57	70.3	264.9	2.0		61.9	27	3412	20 34 35
20 35 50	=1330+476	15 33 12	70.1	265.2	2.0		61.9	75	3422	20 34 36

Schedule for TORUN (Code Tr) Page 14

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
20 35 50	M51	15 33 12	69.6	265.4	2.0		61.6	-13	3422	No stop
20 39 20	---	15 36 43	69.1	266.2	2.1		61.7	197	3449	20 35 51
20 39 20	J1332+4722	15 36 43	69.6	266.0	2.1		62.0	-13	3449	No stop
20 40 35	=1330+476	15 37 58	69.4	266.3	2.1		62.1	62	3458	20 39 21
20 40 35	M51	15 37 58	68.9	266.5	2.1		61.7	-13	3458	No stop
20 44 05	---	15 41 29	68.4	267.2	2.2		61.8	197	3485	20 40 36
20 44 45	J1332+4722	15 42 09	68.8	267.2	2.1		62.2	27	3485	20 44 45
20 46 00	=1330+476	15 43 24	68.6	267.5	2.2		62.2	75	3495	20 44 46
20 46 00	M51	15 43 24	68.1	267.7	2.2		61.9	-13	3495	No stop
20 49 30	---	15 46 55	67.6	268.4	2.3		61.9	197	3522	20 46 01
20 49 30	J1332+4722	15 46 55	68.1	268.2	2.2		62.3	-13	3522	No stop
20 50 45	=1330+476	15 48 10	67.9	268.5	2.2		62.3	62	3531	20 49 31
20 50 45	M51	15 48 10	67.4	268.7	2.3		61.9	-13	3531	No stop
20 54 15	---	15 51 40	66.9	269.4	2.4		61.9	197	3558	20 50 46
20 54 55	J1332+4722	15 52 20	67.3	269.4	2.3		62.3	27	3558	20 54 55
20 56 10	=1330+476	15 53 36	67.1	269.6	2.3		62.3	75	3568	20 54 56
20 56 10	M51	15 53 36	66.6	269.8	2.4		61.9	-13	3568	No stop
20 59 40	---	15 57 06	66.0	270.5	2.4		61.9	197	3595	20 56 11
20 59 40	J1332+4722	15 57 06	66.6	270.3	2.4		62.3	-13	3595	No stop
21 00 55	=1330+476	15 58 21	66.4	270.6	2.4		62.3	62	3604	20 59 41
21 00 55	M51	15 58 21	65.9	270.7	2.5		61.9	-13	3604	No stop
21 04 25	---	16 01 52	65.3	271.4	2.5		61.9	197	3631	21 00 56
21 05 05	J1332+4722	16 02 32	65.7	271.4	2.5		62.3	27	3631	21 05 05
21 06 20	=1330+476	16 03 47	65.5	271.6	2.5		62.3	75	3641	21 05 06
21 06 20	M51	16 03 47	65.0	271.8	2.6		61.9	-13	3641	No stop
21 09 50	---	16 07 18	64.5	272.4	2.6		61.8	197	3668	21 06 21
21 09 50	J1332+4722	16 07 18	65.0	272.3	2.6		62.2	-13	3668	No stop
21 11 05	=1330+476	16 08 33	64.8	272.5	2.6		62.2	62	3678	21 09 51
21 11 05	M51	16 08 33	64.3	272.7	2.6		61.8	-13	3678	No stop
21 14 35	---	16 12 04	63.8	273.3	2.7		61.8	197	3704	21 11 06

Schedule for TORUN (Code Tr) Page 15

Parsec-scale Jet Motion in M51

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 17 Jun 2015 Day 168 ---										
21 15 15	J1332+4722	16 12 44	64.2	273.3	2.7		62.1	27	3704	21 15 15
21 16 30	=1330+476	16 13 59	64.0	273.5	2.7		62.1	75	3714	21 15 16
21 16 30	M51	16 13 59	63.5	273.7	2.7		61.7	-13	3714	No stop
21 20 00	---	16 17 30	63.0	274.3	2.8		61.6	197	3741	21 16 31
21 20 00	J1332+4722	16 17 30	63.5	274.1	2.7		62.0	-13	3741	No stop
21 21 15	=1330+476	16 18 45	63.3	274.4	2.8		62.0	62	3751	21 20 01
21 21 15	M51	16 18 45	62.8	274.5	2.8		61.6	-13	3751	No stop
21 24 45	---	16 22 15	62.3	275.1	2.9		61.5	197	3778	21 21 16
21 25 25	J1332+4722	16 22 55	62.7	275.1	2.8		61.9	27	3778	21 25 25
21 26 40	=1330+476	16 24 11	62.5	275.3	2.8		61.8	75	3787	21 25 26
21 26 40	M51	16 24 11	62.0	275.5	2.9		61.5	-13	3787	No stop
21 30 10	---	16 27 41	61.5	276.1	3.0		61.3	197	3814	21 26 41
21 30 10	J1332+4722	16 27 41	62.0	275.9	2.9		61.7	-13	3814	No stop
21 31 25	=1330+476	16 28 56	61.8	276.1	2.9		61.7	62	3824	21 30 11
21 31 25	M51	16 28 56	61.3	276.3	3.0		61.3	-13	3824	No stop
21 34 55	---	16 32 27	60.7	276.9	3.0		61.2	197	3851	21 31 26
21 35 35	J1332+4722	16 33 07	61.2	276.8	3.0		61.5	27	3851	21 35 35
21 36 50	=1330+476	16 34 22	61.0	277.0	3.0		61.5	75	3860	21 35 36
21 36 50	M51	16 34 22	60.5	277.2	3.1		61.1	-13	3860	No stop
21 40 20	---	16 37 53	59.9	277.8	3.1		61.0	197	3887	21 36 51
21 40 20	J1332+4722	16 37 53	60.5	277.6	3.1		61.4	-13	3887	No stop
21 41 35	=1330+476	16 39 08	60.3	277.8	3.1		61.3	62	3897	21 40 21
21 41 35	M51	16 39 08	59.8	278.0	3.1		60.9	-13	3897	No stop
21 45 05	---	16 42 39	59.2	278.6	3.2		60.8	197	3924	21 41 36
21 45 45	J1332+4722	16 43 19	59.6	278.5	3.2		61.1	27	3924	21 45 45
21 47 00	=1330+476	16 44 34	59.5	278.7	3.2		61.1	75	3933	21 45 46
21 47 00	M51	16 44 34	58.9	278.9	3.2		60.7	-13	3933	No stop
21 50 30	---	16 48 05	58.4	279.4	3.3		60.5	197	3960	21 47 01
21 50 30	J1332+4722	16 48 05	58.9	279.3	3.2		60.9	-13	3960	No stop
21 51 45	=1330+476	16 49 20	58.8	279.5	3.3		60.9	62	3970	21 50 31

```
Schedule for TORUN     (Code Tr )                                Page  16
              Parsec-scale Jet Motion in M51
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  17 Jun 2015   Day 168 ---

21 51 45  M51          16 49 20  58.2 279.6  3.3      60.5   -13     3970   No stop
21 55 15  ---          16 52 50  57.7 280.2  3.4      60.3   197     3997   21 51 46

21 55 55  J1332+4722   16 53 30  58.1 280.1  3.3      60.6    27     3997   21 55 55
21 57 10  =1330+476    16 54 46  57.9 280.3  3.4      60.6    75     4006   21 55 56

21 57 10  M51          16 54 46  57.4 280.5  3.4      60.2   -13     4006   No stop
22 00 40  ---          16 58 16  56.9 281.0  3.5      60.0   197     4033   21 57 11

22 00 40  J1332+4722   16 58 16  57.4 280.9  3.4      60.4   -13     4033   No stop
22 01 55  =1330+476    16 59 31  57.2 281.1  3.4      60.3    62     4043   22 00 41

22 01 55  M51          16 59 31  56.7 281.2  3.5      59.9   -13     4043   No stop
22 05 25  ---          17 03 02  56.2 281.8  3.5      59.8   197     4070   22 01 56

22 06 05  J1332+4722   17 03 42  56.6 281.7  3.5      60.1    27     4070   22 06 05
22 07 20  =1330+476    17 04 57  56.4 281.9  3.5      60.0    75     4079   22 06 06

22 09 20  OQ208        17 06 58  49.0 251.0  3.0      40.2    43     4079   22 09 20
22 13 00  ---          17 10 38  48.5 251.9  3.0      40.5   220     4108   22 09 21

22 14 30  3C286        17 12 08  44.5 262.7  3.7      43.7    54     4108   22 14 30
22 24 30  ---          17 22 10  43.1 264.9  3.8      43.9   600     4185   22 14 31


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


 ======== Setup file: sess215.L1024

   Setup group:    9         Station: TORUN            Total bit rate:  1024
   Format: MARK5B            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         5         1         5         2         6         2         6
                   3         7         3         7         4         8         4         8
   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:   6  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:   6

  Track assignments are:
   track1=   2, 10, 18, 26,  4, 12, 20, 28,  6, 14, 22, 30,  8, 16, 24, 32
   barrel=roll_off

POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* M51               13 27 46.312548   * 13 29 52.698000     13 30 32.006024       0.00
                    47 27 10.46643    * 47 11 42.93000      47 07 12.79600        0.00

  J1159+2914        11 56 57.786211   * 11 59 31.833912     12 00 19.216779       0.11
* 1156+295          29 31 25.73868    * 29 14 43.82678      29 09 42.62478        0.10
  J1159+29          /usr/local/sched_11.4/catalogs/sources.vlba.2012jul
                    rfc_2012b Petrov, 2012, unpublished 64535 observations

  J1331+3030        13 28 49.657778   * 13 31 08.288070     13 31 51.542517       0.20
* 3C286             30 45 58.64061    * 30 30 32.95925      30 25 59.33639        0.19
  1328+307          /usr/local/sched_11.4/catalogs/sources.vlba.2012jul
  J1331+30          rfc_2012b Petrov, 2012, unpublished 542 observations

* J1332+4722        13 30 39.878237   * 13 32 45.246422     13 33 24.266126       0.16
  1330+476          47 37 45.36412    * 47 22 22.66757      47 17 54.11849        0.11
                    /usr/local/sched_11.4/catalogs/sources.vlba.2012jul
                    rfc_2012b Petrov, 2012, unpublished 1040 observations

  J1407+2827        14 04 45.615156   * 14 07 00.394414     14 07 42.718204       0.24
  1404+286          28 41 29.23519    * 28 27 14.69022      28 23 03.39073        0.34
  J1407+28          /usr/local/sched_11.4/catalogs/sources.vlba.2012jul
* OQ208             GSFC 2011B astro solution     66461 Observations
```

eo013tr

Cool-core cluster HI absorption with 32MHz SBs

PI: *Oonk*

Address: ASTRON Oude Hoogeveensedijk 4 7991 PD Dwingeloo The Netherlands
Phone: 0521-595-766 EMAIL:raymond.oonk@gmail.com Phone during obs: 0521-595-766

Observing mode:
Schedule for TORUN (Code Tr) Page 2
Cool-core cluster HI absorption with 32MHz SBs
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 18 Jun 2015 Day 169 ---										
Next scan frequencies:		1349.06	1349.06	1349.06	1349.06		1411.95	1411.95	1411.95	1411.95
Next BBC frequencies:		750.94	750.94	750.94	750.94		688.05	688.05	688.05	688.05
Next scan bandwidths:		32.00	32.00	32.00	32.00		32.00	32.00	32.00	32.00
02 15 00	3C454.3	21 13 18	48.1	142.0	-1.7		-22.7	0	0	02 15 00
02 25 00	---	21 23 20	49.0	145.4	-1.5		-20.8	600	77	02 15 01
02 25 30	3C454.3	21 23 50	49.0	145.5	-1.5		-20.7	24	77	02 25 30
02 30 30	---	21 28 51	49.5	147.3	-1.4		-19.8	300	115	02 25 31
02 35 30	3C84	21 33 51	33.8	64.0	-5.8		-46.2	118	115	02 35 30
02 45 30	---	21 43 53	35.1	65.6	-5.6		-46.9	600	192	02 35 31
02 46 00	3C84	21 44 23	35.2	65.6	-5.6		-47.0	24	192	02 46 00
02 56 00	---	21 54 25	36.6	67.2	-5.4		-47.7	600	269	02 46 01
02 56 30	3C84	21 54 55	36.7	67.3	-5.4		-47.8	24	269	02 56 30
03 06 30	---	22 04 56	38.1	68.9	-5.3		-48.5	600	346	02 56 31
03 07 00	3C84	22 05 27	38.1	68.9	-5.3		-48.5	24	346	03 07 00
03 17 00	---	22 15 28	39.5	70.5	-5.1		-49.2	600	423	03 07 01
03 22 40	3C454.3	22 21 09	52.5	166.7	-0.6		-8.3	135	423	03 22 40
03 32 40	---	22 31 11	52.8	170.6	-0.4		-5.9	600	500	03 22 41
03 33 10	3C454.3	22 31 41	52.9	170.8	-0.4		-5.7	24	500	03 33 10
03 38 10	---	22 36 42	53.0	172.8	-0.3		-4.5	300	538	03 33 11
03 43 50	3C84	22 42 23	43.4	74.8	-4.6		-50.8	128	538	03 43 50
03 53 50	---	22 52 24	44.9	76.5	-4.5		-51.3	600	615	03 43 51
03 54 20	3C84	22 52 54	44.9	76.6	-4.5		-51.3	24	615	03 54 20
04 04 20	---	23 02 56	46.4	78.2	-4.3		-51.8	600	692	03 54 21
04 04 50	3C84	23 03 26	46.5	78.3	-4.3		-51.8	24	692	04 04 50
04 14 50	---	23 13 28	48.0	80.0	-4.1		-52.2	600	769	04 04 51
04 19 20	3C454.3	23 17 58	52.9	189.3	0.4		5.8	37	769	04 19 20
04 21 20	---	23 19 59	52.8	190.1	0.4		6.3	120	785	04 19 21
04 21 20	3C454.3	23 19 59	52.8	190.1	0.4		6.3	-5	785	No stop
04 24 20	---	23 22 59	52.7	191.2	0.5		7.0	175	808	04 21 21

Schedule for TORUN (Code Tr) Page 3

Cool-core cluster HI absorption with 32MHz SBs

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 18 Jun 2015 Day 169 ---										
04 24 50	3C454.3	23 23 29	52.7	191.4	0.5		7.1	24	808	04 24 50
04 34 50	---	23 33 31	52.4	195.4	0.6		9.5	600	885	04 24 51
04 39 30	3C84	23 38 12	51.6	84.4	-3.7		-53.0	43	885	04 39 30
04 41 30	---	23 40 12	51.9	84.7	-3.7		-53.0	120	900	04 39 31
04 41 30	3C84	23 40 12	51.9	84.7	-3.7		-53.0	-5	900	No stop
04 49 30	---	23 48 13	53.1	86.2	-3.5		-53.2	475	962	04 41 31
04 50 00	3C84	23 48 43	53.2	86.3	-3.5		-53.2	24	962	04 50 00
05 00 00	---	23 58 45	54.7	88.2	-3.4		-53.3	600	1038	04 50 01
05 00 30	3C84	23 59 15	54.8	88.3	-3.4		-53.3	24	1038	05 00 30
05 10 30	---	00 09 17	56.3	90.3	-3.2		-53.4	600	1115	05 00 31
05 11 00	3C84	00 09 47	56.4	90.4	-3.2		-53.4	24	1115	05 11 00
05 21 00	---	00 19 49	57.9	92.5	-3.0		-53.3	600	1192	05 11 01
05 21 30	3C84	00 20 19	57.9	92.6	-3.0		-53.3	24	1192	05 21 30
05 31 30	---	00 30 20	59.4	94.7	-2.8		-53.1	600	1269	05 21 31
05 32 00	3C84	00 30 50	59.5	94.8	-2.8		-53.1	24	1269	05 32 00
05 42 00	---	00 40 52	61.0	97.1	-2.7		-52.8	600	1346	05 32 01
05 42 30	3C84	00 41 22	61.1	97.2	-2.7		-52.8	24	1346	05 42 30
05 52 30	---	00 51 24	62.6	99.7	-2.5		-52.3	600	1423	05 42 31
05 53 00	3C84	00 51 54	62.7	99.8	-2.5		-52.3	24	1423	05 53 00
06 03 00	---	01 01 55	64.1	102.4	-2.3		-51.6	600	1500	05 53 01
06 06 05	DA193	01 05 01	40.4	74.5	-4.9		-48.9	81	1500	06 06 05
06 16 05	---	01 15 03	41.8	76.2	-4.7		-49.4	600	1577	06 06 06
06 16 35	DA193	01 15 33	41.9	76.2	-4.7		-49.4	24	1577	06 16 35
06 26 35	---	01 25 34	43.4	77.9	-4.5		-49.9	600	1654	06 16 36
06 29 50	3C84	01 28 50	68.0	110.3	-1.9		-48.8	90	1654	06 29 50
06 39 50	---	01 38 51	69.4	113.8	-1.7		-47.3	600	1731	06 29 51
06 40 20	3C84	01 39 22	69.5	113.9	-1.7		-47.2	24	1731	06 40 20
06 50 20	---	01 49 23	70.8	117.8	-1.5		-45.3	600	1808	06 40 21
06 50 50	3C84	01 49 53	70.9	118.0	-1.5		-45.1	24	1808	06 50 50
07 00 50	---	01 59 55	72.2	122.2	-1.3		-42.8	600	1885	06 50 51
07 01 20	3C84	02 00 25	72.3	122.5	-1.3		-42.6	23	1885	07 01 20
07 11 20	---	02 10 27	73.5	127.2	-1.2		-39.7	600	1962	07 01 21

Schedule for TORUN (Code Tr) Page 4

Cool-core cluster HI absorption with 32MHz SBs

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 18 Jun 2015 Day 169 ---										
07 14 30	DA193	02 13 37	50.5	86.5	-3.7		-51.3	89	1962	07 14 30
07 24 30	---	02 23 39	52.0	88.4	-3.5		-51.4	600	2038	07 14 31
07 25 00	DA193	02 24 09	52.1	88.5	-3.5		-51.4	24	2038	07 25 00
07 30 00	---	02 29 10	52.8	89.5	-3.5		-51.4	300	2077	07 25 01
07 33 20	3C84	02 32 30	75.9	140.0	-0.8		-31.0	86	2077	07 33 20
07 43 20	---	02 42 32	76.8	147.0	-0.6		-25.9	600	2154	07 33 21
07 43 50	3C84	02 43 02	76.8	147.4	-0.6		-25.6	23	2154	07 43 50
07 53 50	---	02 53 04	77.6	155.2	-0.5		-19.7	600	2231	07 43 51
07 54 20	3C84	02 53 34	77.6	155.6	-0.5		-19.4	22	2231	07 54 20
08 04 20	---	03 03 35	78.1	164.2	-0.3		-12.6	600	2308	07 54 21
08 04 50	3C84	03 04 05	78.1	164.6	-0.3		-12.3	22	2308	08 04 50
08 14 50	---	03 14 07	78.4	173.8	-0.1		-5.0	600	2385	08 04 51
08 18 00	DA193	03 17 18	60.0	100.1	-2.7		-50.3	27	2385	08 18 00
08 28 00	---	03 27 19	61.5	102.6	-2.5		-49.7	600	2462	08 18 01
08 28 30	DA193	03 27 49	61.6	102.7	-2.5		-49.7	24	2462	08 28 30
08 33 30	---	03 32 50	62.3	104.1	-2.4		-49.3	300	2500	08 28 31
08 36 40	3C84	03 36 01	78.2	194.0	0.3		11.2	-5	2500	08 36 40
08 46 40	---	03 46 02	77.7	202.7	0.4		18.1	595	2577	08 36 41
08 47 10	3C84	03 46 32	77.7	203.1	0.4		18.4	22	2577	08 47 10
08 57 10	---	03 56 34	77.0	211.1	0.6		24.5	600	2654	08 47 11
08 57 40	3C84	03 57 04	77.0	211.5	0.6		24.8	23	2654	08 57 40
09 07 40	---	04 07 06	76.1	218.6	0.8		30.1	600	2731	08 57 41
09 08 10	3C84	04 07 36	76.0	219.0	0.8		30.3	23	2731	09 08 10
09 18 10	---	04 17 38	75.0	225.3	0.9		34.8	600	2808	09 08 11
09 18 40	3C84	04 18 08	75.0	225.6	1.0		35.0	23	2808	09 18 40
09 28 40	---	04 28 09	73.9	231.2	1.1		38.7	600	2885	09 18 41
09 34 10	4C39.25	04 33 40	39.4	74.8	-4.9		-48.2	2	2885	09 34 10
09 36 40	---	04 36 11	39.8	75.3	-4.9		-48.3	150	2904	09 34 11
09 36 40	4C39.25	04 36 11	39.8	75.3	-4.9		-48.3	-5	2904	No stop
09 44 10	---	04 43 42	40.9	76.5	-4.7		-48.7	445	2962	09 36 41

Schedule for TORUN (Code Tr) Page 5

Cool-core cluster HI absorption with 32MHz SBs

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes 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 18 Jun 2015 Day 169 ---										
09 44 40	4C39.25	04 44 12	40.9	76.6	-4.7		-48.7	24	2962	09 44 40
09 49 40	---	04 49 13	41.7	77.5	-4.6		-48.9	300	3000	09 44 41
09 55 10	3C84	04 54 44	70.5	243.2	1.6		45.8	-17	3000	09 55 10
09 59 10	---	04 58 44	70.0	244.8	1.6		46.5	223	3031	09 55 11
09 59 10	3C84	04 58 44	70.0	244.8	1.6		46.5	-5	3031	No stop
10 05 10	---	05 04 45	69.1	247.0	1.7		47.6	355	3077	09 59 11
10 05 40	3C84	05 05 15	69.1	247.1	1.7		47.7	24	3077	10 05 40
10 15 40	---	05 15 17	67.7	250.5	1.9		49.2	600	3154	10 05 41
10 16 10	3C84	05 15 47	67.6	250.7	1.9		49.2	24	3154	10 16 10
10 26 10	---	05 25 49	66.2	253.8	2.1		50.4	600	3231	10 16 11
10 26 40	3C84	05 26 19	66.1	253.9	2.1		50.4	24	3231	10 26 40
10 36 40	---	05 36 20	64.6	256.7	2.3		51.4	600	3308	10 26 41
10 37 10	3C84	05 36 50	64.6	256.9	2.3		51.4	24	3308	10 37 10
10 47 10	---	05 46 52	63.1	259.5	2.4		52.1	600	3385	10 37 11
10 53 10	4C39.25	05 52 53	51.2	89.1	-3.6		-50.6	4	3385	10 53 10
10 57 40	---	05 57 24	51.8	90.0	-3.5		-50.6	270	3419	10 53 11
10 57 40	4C39.25	05 57 24	51.8	90.0	-3.5		-50.6	-5	3419	No stop
11 03 10	---	06 02 55	52.7	91.1	-3.4		-50.6	325	3462	10 57 41
11 03 40	4C39.25	06 03 25	52.7	91.2	-3.4		-50.6	24	3462	11 03 40
11 08 40	---	06 08 26	53.5	92.2	-3.3		-50.5	300	3500	11 03 41
11 14 45	3C84	06 14 32	59.0	266.0	2.9		53.2	2	3500	11 14 45
11 20 05	---	06 19 53	58.2	267.1	3.0		53.3	320	3541	11 14 46
11 20 05	3C84	06 19 53	58.2	267.1	3.0		53.3	-5	3541	No stop
11 24 45	---	06 24 33	57.5	268.1	3.1		53.3	275	3577	11 20 06
11 25 15	3C84	06 25 03	57.4	268.2	3.1		53.3	24	3577	11 25 15
11 35 15	---	06 35 05	55.9	270.3	3.2		53.4	600	3654	11 25 16
11 35 45	3C84	06 35 35	55.8	270.4	3.2		53.4	24	3654	11 35 45
11 45 45	---	06 45 37	54.3	272.3	3.4		53.3	600	3731	11 35 46
11 46 15	3C84	06 46 07	54.2	272.4	3.4		53.3	24	3731	11 46 15
11 56 15	---	06 56 08	52.7	274.3	3.6		53.2	600	3808	11 46 16

Schedule for TORUN (Code Tr) Page 6

Cool-core cluster HI absorption with 32MHz SBs

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

--- Thu 18 Jun 2015 Day 169 ---

Start UT / Stop UT	Source	LST	Start / Stop EL	AZ	HA	UP	ParA	Early / Dwell	Disk GBytes	TPStart SYNC
11 56 45	3C84	06 56 39	52.6	274.4	3.6		53.1	24	3808	11 56 45
12 06 45	---	07 06 40	51.1	276.2	3.8		52.9	600	3885	11 56 46
12 09 55	DA193	07 09 51	71.8	230.6	1.2		37.1	82	3885	12 09 55
12 12 55	---	07 12 51	71.4	232.0	1.3		38.0	180	3908	12 09 56
12 12 55	DA193	07 12 51	71.4	232.0	1.3		38.0	-5	3908	No stop
12 19 55	---	07 19 52	70.6	235.2	1.4		40.0	415	3962	12 12 56
12 20 25	DA193	07 20 22	70.5	235.4	1.4		40.1	23	3962	12 20 25
12 25 25	---	07 25 23	69.9	237.6	1.5		41.3	300	4000	12 20 26
12 28 25	3C84	07 28 24	47.9	280.0	4.1		52.2	81	4000	12 28 25
12 31 05	---	07 31 04	47.5	280.5	4.2		52.1	160	4021	12 28 26
12 31 05	3C84	07 31 04	47.5	280.5	4.2		52.1	-5	4021	No stop
12 38 25	---	07 38 25	46.4	281.7	4.3		51.8	435	4077	12 31 06
12 38 55	3C84	07 38 55	46.4	281.8	4.3		51.8	24	4077	12 38 55
12 48 55	---	07 48 57	44.9	283.5	4.5		51.3	600	4154	12 38 56
12 49 25	3C84	07 49 27	44.8	283.5	4.5		51.3	24	4154	12 49 25
12 59 25	---	07 59 29	43.4	285.2	4.6		50.8	600	4231	12 49 26
12 59 55	3C84	07 59 59	43.3	285.3	4.7		50.7	24	4231	12 59 55
13 09 55	---	08 10 01	41.8	286.9	4.8		50.2	600	4308	12 59 56
13 10 25	3C84	08 10 31	41.8	287.0	4.8		50.1	24	4308	13 10 25
13 20 25	---	08 20 32	40.3	288.6	5.0		49.5	600	4385	13 10 26
13 24 00	DA193	08 24 08	61.8	257.0	2.5		49.6	120	4385	13 24 00
13 34 00	---	08 34 10	60.3	259.5	2.6		50.2	600	4462	13 24 01
13 34 30	DA193	08 34 40	60.2	259.6	2.6		50.3	24	4462	13 34 30
13 39 30	---	08 39 40	59.5	260.9	2.7		50.5	300	4500	13 34 31
13 42 50	3C84	08 43 01	37.2	292.1	5.4		48.0	103	4500	13 42 50
13 52 50	---	08 53 03	35.8	293.7	5.5		47.3	600	4577	13 42 51
13 53 20	3C84	08 53 33	35.7	293.8	5.5		47.3	24	4577	13 53 20
14 03 55	---	09 04 09	34.3	295.4	5.7		46.4	635	4658	13 53 21
14 04 25	3C84	09 04 40	34.2	295.5	5.7		46.4	24	4658	14 04 25
14 15 00	---	09 15 16	32.8	297.2	5.9		45.6	635	4740	14 04 26

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

```
======== Setup file: sess215.H1024

  Setup group:    7         Station: TORUN            Total bit rate:  1024
  Format: MARK5B            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=   2100.00   2100.00   2100.00   2100.00   2100.00   2100.00   2100.00   2100.00
  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         5         1         5         3         7         3         7
  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:   7  Based on FREQ, BW, and/or DOPPLER in schedule.  Used with PCAL = off
  LO sum=   1349.06  1349.06  1349.06  1349.06  1411.95  1411.95  1411.95  1411.95
  BBC fr=    750.94   750.94   750.94   750.94   688.05   688.05   688.05   688.05
  Bandwd=     32.00    32.00    32.00    32.00    32.00    32.00    32.00    32.00
   Matching frequency sets:   7

  Track assignments are:
   track1=   2,  6, 10, 14,  4,  8, 12, 16
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 3C84               03 16 29.567263   * 03 19 48.160094     03 20 48.802880       0.00
                     41 19 51.91701    * 41 30 42.10413      41 33 45.47314        0.00
                     Doppler based on heliocentric frame and optical definition.  Velocities:
                       5264.00  5264.00  5264.00  5264.00  5264.00  5264.00

  0552+398           05 52 01.407169   * 05 55 30.805611     05 56 33.969702       0.00
  J0555+3948         39 48 21.94581    * 39 48 49.16496      39 48 44.82518        0.00
* DA193              /home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc
  J0555+39           GSFC 2015a astro solution, unpublished 394383 observations.
                     Doppler based on other sources.

* 4C39.25            09 23 55.319215   * 09 27 03.013936     09 27 59.610952       0.30
  J0927+3902         39 15 23.56645    * 39 02 20.85186      38 58 20.47370        0.16
  0923+392           /home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc
  J0927+39           GSFC 2015a astro solution, unpublished 245753 observations.
                     Doppler based on other sources.

* 3C454.3            22 51 29.519738   * 22 53 57.747938     22 54 44.195703       0.67
  J2253+1608         15 52 54.34810    * 16 08 53.56093      16 13 48.24719        0.70
  2251+158           /home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc
  J2253+16           GSFC 2015a astro solution, unpublished  40748 observations.
                     Doppler based on other sources.
```

rk08yftr

RadioAstron AGN Survey

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```
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```


```
Observing mode: C/L-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron AGN Survey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  25 Jun 2015   Day 176 ---

 ---------- L-band VLBI scans ----------

 Next scan frequencies:  1668.00  1668.00  1668.00  1668.00
 Next BBC frequencies:    732.00   732.00   732.00   732.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

00 00 00  2029+121     19 25 32  47.1 155.5 -1.1     -14.8     0        0   00 00 00
00 19 30  ---          19 45 05  48.2 162.4 -0.8     -10.7  1170       37   00 00 01

00 20 00  2029+121     19 45 35  48.2 162.6 -0.8     -10.6    24       37   00 20 00
00 40 00  ---          20 05 38  48.9 169.9 -0.5      -6.2  1200       76   00 20 01



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


 ======== Setup file: ra18cm2.set

   Setup group:    5         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   2400.00   2400.00   2400.00   2400.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

The following frequency sets based on these setups were used.

 Frequency Set:   4  Setup file default.  Used with PCAL = 1MHz
 LO sum=   1668.00  1668.00  1668.00  1668.00
 BBC fr=    732.00   732.00   732.00   732.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   4

 Track assignments are:
  track1=   2, 18,  3, 19
  barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 39.301792       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.20848        0.00
                    fake circumpolar target for a TS to look at

* 2029+121          20 29 32.681261   * 20 31 54.994268     20 32 40.334061       0.00
  J2031+1219        12 09 28.75295    * 12 19 41.34011      12 22 58.64545        0.00
                    ./rk08yf_sources.radioastron
                    AGN, MASIV, rfc_2013d Petrov, 2013, unpublished 2970 observations, RA-AO2-12


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)
  2029+121           130.7

 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
```

rk08yhtr

RadioAstron AGN Survey

PI: *Yuri Kovalev*


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```


```
Observing mode: C/K-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron AGN Survey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  25 Jun 2015   Day 176 ---

 ---------- K-band VLBI scans ----------

 Next scan frequencies:  22236.00  22236.00  22236.00  22236.00
 Next BBC frequencies:     736.00    736.00    736.00    736.00
 Next scan bandwidths:      16.00     16.00     16.00     16.00

04 00 00  1751+441     23 26 11  37.5 -63.9  5.5      48.7     0        0   04 00 00
04 19 30  ---          23 45 44  34.9 -61.0  5.9      47.0  1170       37   04 00 01

04 20 00  1751+441     23 46 14  34.9 -60.9  5.9      47.0    24       37   04 20 00
04 40 00  ---          00 06 18  32.3 -57.9  6.2      45.2  1200       76   04 20 01



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


 ======== Setup file: ra1cm2.set
   Matching groups in ./rk08yh_freq.dat:
     tr1cm

   Setup group:    5         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=  21500.00  21500.00  21500.00  21500.00
 Net SB=         L         L         U         U
 IF SB =         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         L         L         U         U
 IF    =         C         A         C         A

The following frequency sets based on these setups were used.

 Frequency Set:   2  Setup file default.  Used with PCAL = 1MHz
 LO sum=   22236.00  22236.00  22236.00  22236.00
 BBC fr=     736.00    736.00    736.00    736.00
 Bandwd=      16.00     16.00     16.00     16.00
  Matching frequency sets:   2

 Track assignments are:
  track1=   2, 18,  3, 19
  barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 39.262147       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.20174        0.00
                    fake circumpolar target for a TS to look at

* 1751+441          17 51 53.712584   * 17 53 22.647889     17 53 52.080862       0.00
  J1753+4409        44 10 17.80399    * 44 09 45.68615      44 09 48.18391        0.00
                    ./rk08yh_sources.radioastron
                    AGN, MASIV, rfc_2013d Petrov, 2013, unpublished 1851 observations, RA-AO2-12


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)
  1751+441           112.3

 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
```

rg11bgtr

RadioAstron Maser observations

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```


```
Observing mode: K-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron Maser observations
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  25 Jun 2015   Day 176 ---

 ---------- This is a fringe finder/clock offset calibrator 5.8 deg. from ON1_H2O ----------

 Next scan frequencies:  22228.00  22228.00  22228.00  22228.00
 Next BBC frequencies:     728.00    728.00    728.00    728.00
 Next scan bandwidths:      16.00     16.00     16.00     16.00

06 52 00  2013+370     02 18 39  28.6 -65.0  6.0      43.1     0        0   06 52 00
06 57 00  ---          02 23 40  27.9 -64.2  6.1      42.8   300       10   06 52 01

 ---------- Please, make sure PCAL is OFF for ON1_H2O maser observations. ----------

07 00 00  ON1_H2O      02 26 41  22.5 -67.0  6.3      40.4   147       10   07 00 00
07 19 30  ---          02 46 14  19.9 -63.5  6.6      39.1  1170       47   07 00 01

07 20 00  ON1_H2O      02 46 44  19.8 -63.4  6.6      39.1    24       47   07 20 00
07 39 30  ---          03 06 17  17.2 -60.0  6.9      37.6  1170       84   07 20 01

07 40 00  ON1_H2O      03 06 47  17.2 -59.9  6.9      37.6    24       84   07 40 00
08 00 00  ---          03 26 51  14.6 -56.3  7.3      35.9  1200      123   07 40 01



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


 ======== Setup file: ra1cm2.set
   Matching groups in ./rg11bg_freq.dat:
     tr1cm

   Setup group:    1         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
  1st LO=  21500.00  21500.00  21500.00  21500.00
  Net SB=         L         L         U         U
  IF SB =         U         U         U         U
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         L         L         U         U
  IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used with PCAL = off
  LO sum=   22228.00  22228.00  22228.00  22228.00
  BBC fr=     728.00    728.00    728.00    728.00
  Bandwd=      16.00     16.00     16.00     16.00
   Matching frequency sets:   3

  Track assignments are:
   track1=   2, 18,  3, 19
   barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 39.236017       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.19716        0.00
                    fake circumpolar target for a TS to look at

* ON1_H2O           20 08 09.886907   * 20 10 09.132800     20 10 47.704513       0.00
  ON1_WMC2_H2O      31 22 39.39995    * 31 31 34.70000      31 34 25.66989        0.00
                    ./rg11bg_sources.radioastron
                    H2O maser; positions WMC2?, RA-AO2-08, RA-AO2-13

* 2013+370          20 13 37.014486   * 20 15 28.729772     20 16 05.102360       0.00
  J2015+3710        37 01 44.45939    * 37 10 59.51527      37 13 55.29937        0.00
                    ./rg11bg_sources.radioastron
                    AGN, rfc_2013d Petrov, 2013, unpublished 282 observations, RA-AO2-12
```

rk08yitr

RadioAstron AGN Survey

PI: *Yuri Kovalev*


```
Address:  ASC Lebedev          Profsoyuznaya 84/32          117997 Moscow, Russia
Phone:    +7-495-3332512                EMAIL:    kirx@scan.sai.msu.ru
Fax:      +7-495-3332378                Phone during observation: +7-903-6614865
```


```
Observing mode: C/L-band, dual-pol

Schedule for TORUN     (Code Tr )                                    Page   2
               RadioAstron AGN Survey
  UP:  D => Below limits;  H => Below horizon mask;  W => still slewing at end;  blank => Up.
  Early: Seconds between end of slew and start.   Dwell: On source seconds.
  Disk: GBytes 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  25 Jun 2015   Day 176 ---

 ---------- C-band VLBI scans ----------

 Next scan frequencies:  4836.00  4836.00  4836.00  4836.00
 Next BBC frequencies:    736.00   736.00   736.00   736.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

09 20 00  2107+353     04 47 04  15.4 -50.3  7.6      34.6     0        0   09 20 00
09 39 30  ---          05 06 37  13.2 -46.8  7.9      32.6  1170       37   09 20 01

09 40 00  2107+353     05 07 07  13.1 -46.8  7.9      32.6    24       37   09 40 00
10 00 00  ---          05 27 10  11.0 -43.2  8.3      30.4  1200       76   09 40 01



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


 ======== Setup file: ra6cm2.set

   Setup group:    1         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   4100.00   4100.00   4100.00   4100.00
 Net SB=         L         L         U         U
 IF SB =         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         L         L         U         U
 IF    =         C         A         C         A

The following frequency sets based on these setups were used.

 Frequency Set:   2  Setup file default.  Used with PCAL = 1MHz
 LO sum=   4836.00  4836.00  4836.00  4836.00
 BBC fr=    736.00   736.00   736.00   736.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   2

 Track assignments are:
  track1=   2, 18,  3, 19
  barrel=roll_off



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 39.208969       0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 09.19230        0.00
                    fake circumpolar target for a TS to look at

* 2107+353          21 07 30.448847   * 21 09 31.878723     21 10 11.082864       0.00
  J2109+3532        35 20 43.22902    * 35 32 57.59753      35 36 45.46021        0.00
                    ./rk08yi_sources.radioastron
                    AGN, rfc_2013d Petrov, 2013, unpublished 135 observations, RA-AO2-12


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)
  2107+353           108.0

 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
```

Rozklad dysk-packow

Dysk-pack	Bank A		Bank B
N15C2	HART-041		
EP091B	HART-041	->	MED-0007
EP093A	MPI+0804		
GP053G	MPI+0804		
EH030B	MPI+1647		
EK035	MPI+1647		
EM115A	MPI+1647		
EB056	UVLBI+85		
ER043B	MET-0011		
EP096B	UVLBI+85		
F15L1	MPI-0520		
EM115B	MET-0011	->	JIVE-061
EH028C	MPI+1629		
EP096C	MPI+1629		
GP053H	MPI+1629		
EP092B	MPI+1629		
EP093B	MPI+1629		
N15L2	MPI-0520		
EL052	MPI-0520		
ER040	MED-0003	->	OSOD-351
EO013	NTO-0024	<-	OSOD-351

UWAGA: W przypadku eksperymentu EO013 startujemy projekt dysk-pakiem zamontowanym Banku B!!!

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