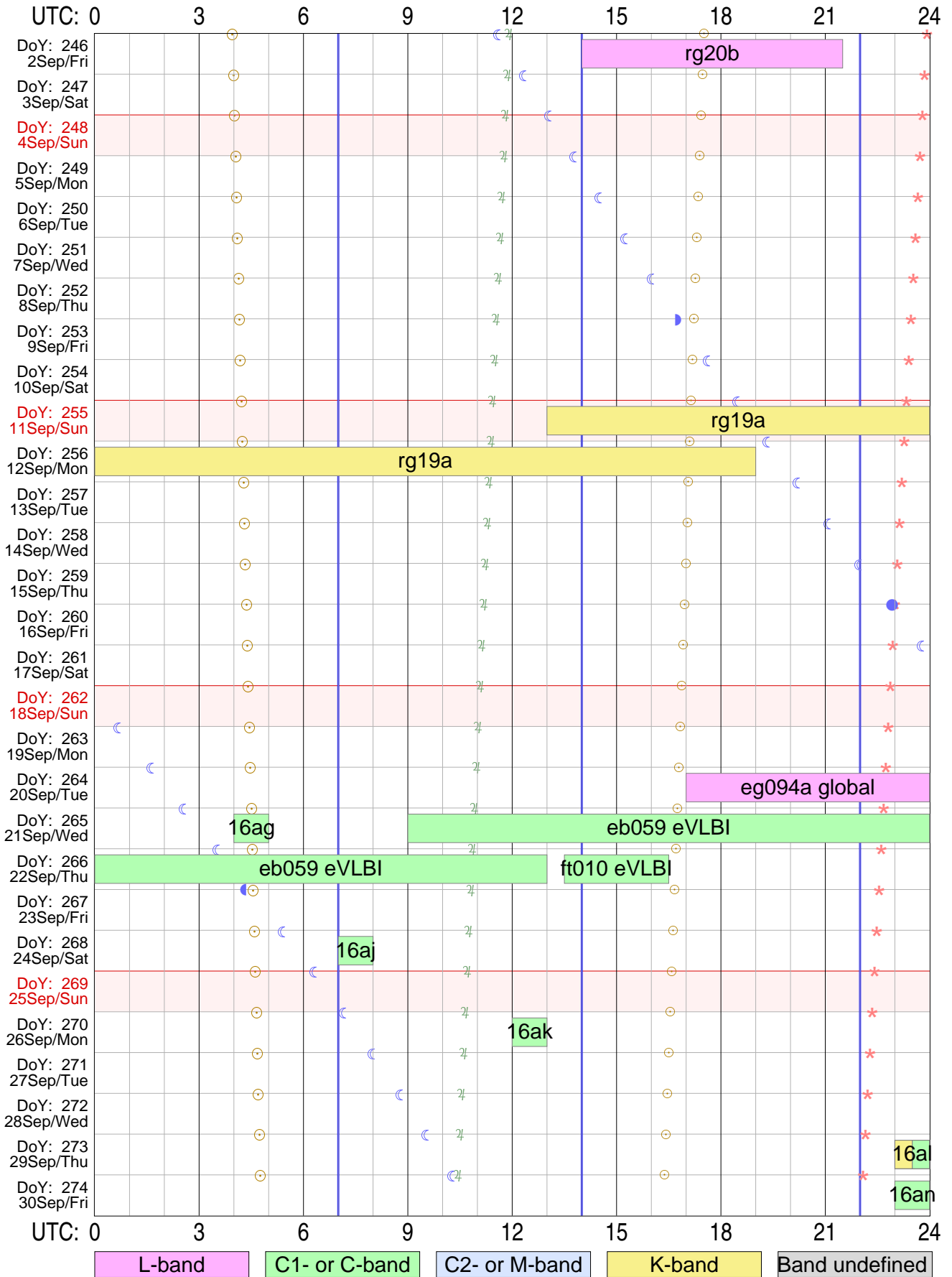


# Tr VLBI plan for Sep 2016



Version: 2016.09.16

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: 80.5 hours in 10 experiments scheduled

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

Strona zostawiona celowo pusta

# RadioAstron & EVN Experiments

## Sep 2016

Uytownik ftp dla logw i schedulw RA: grt  
ftp://webinet.asc.rssi.ru  
Przykad dla log files: cd GRT\_log\_files/2014\_09/2014\_09\_01\_raks08ak  
Przykad dla sched files: cd schedule/grtsched/RAKS/rk08ak

Year	Date	UTstart	UTstop	Exper.	xxComment
2016	D M DoW	hh mm	hh mm	name	
46	2 09 xxx	0 0	0 0	empty	"1" <- remove rk from RA names
246	2 09 Pia	14 00	21 30	rg20b	"L "
255	11 09 Nie	13 00	24 00	rg19a	"K "
256	12 09 Pon	0 00	19 00	rg19a	"K "
264	20 09 Wto	13 00	24 00	rg23a	"L "
265	21 09 Sro	4 00	5 00	rk16ag	"C "
268	24 09 Sob	7 00	8 00	rk16aj	"C "
270	26 09 Pon	12 00	13 00	rk16ak	"C "
273	29 09 Czw	23 00	24 00	rk16al	"K>C "
274	30 09 Pia	23 00	24 00	rk16an	"C "
274	21 09 Sro	09 00	120 00	eEVN	"C "

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

<http://paulo.astro.uni.torun.pl/~pw/VLBI/schedules/sep16.pdf>

**rg20btr**

RADIOASTRON PULSAR OBSERVATIONS

PI: *Misha Popov*

Address: ASC Lebedev, Moscow, Russia

Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr )

Page 2

RadioAstron pulsar 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

---

--- Fri 2 Sep 2016 Day 246 ---

----- short on-source gain calibration scan (Automatic Gain Control is ON here) -----

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

14 00 00	B2319+60	14 02 51	28.0	21.0	-9.3	-25.9	0	0	Stopped
14 01 00	---	14 03 51	28.1	21.1	-9.3	-26.1	60	0	

----- Space-GRT segment 01. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OK -----

14 02 00	B2319+60	14 04 52	28.1	21.3	-9.3	-26.3	54	0	14 02 00
14 23 12	---	14 26 07	29.3	23.9	-8.9	-29.6	1272	41	14 02 01
14 23 42	B2319+60	14 26 37	29.4	24.0	-8.9	-29.7	24	41	14 23 42
14 44 54	---	14 47 53	30.7	26.6	-8.6	-33.0	1272	81	14 23 43
14 45 24	B2319+60	14 48 23	30.8	26.6	-8.6	-33.1	24	81	14 45 24
15 06 36	---	15 09 38	32.3	29.1	-8.2	-36.4	1272	122	14 45 25
15 07 06	B2319+60	15 10 08	32.3	29.2	-8.2	-36.5	24	122	15 07 06
15 28 18	---	15 31 24	33.9	31.6	-7.9	-39.8	1272	163	15 07 07
15 28 48	B2319+60	15 31 54	34.0	31.7	-7.8	-39.9	24	163	15 28 48
15 50 00	---	15 53 09	35.7	34.1	-7.5	-43.1	1272	204	15 28 49

----- Ground-only Segment 02. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OK -----

15 51 00	B2319+60	15 54 10	35.8	34.2	-7.5	-43.3	54	204	15 51 00
16 11 00	---	16 14 13	37.5	36.4	-7.1	-46.3	1200	242	15 51 01
16 11 30	B2319+60	16 14 43	37.6	36.4	-7.1	-46.4	24	242	16 11 30
16 31 30	---	16 34 46	39.4	38.6	-6.8	-49.5	1200	280	16 11 31
16 32 00	B2319+60	16 35 16	39.4	38.6	-6.8	-49.5	24	280	16 32 00
16 52 00	---	16 55 20	41.4	40.6	-6.5	-52.6	1200	319	16 32 01
16 52 30	B2319+60	16 55 50	41.4	40.7	-6.4	-52.7	24	319	16 52 30
17 12 30	---	17 15 53	43.4	42.6	-6.1	-55.7	1200	357	16 52 31

Schedule for TORUN (Code Tr )

Page 3

RadioAstron pulsar observations

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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   2 Sep 2016   Day 246 ---
17 13 00  B2319+60   17 16 23  43.5  42.7 -6.1   -55.8   24    357   17 13 00
17 33 00  ---        17 36 26  45.5  44.6 -5.8   -58.8  1200    396   17 13 01

17 33 30  B2319+60   17 36 56  45.6  44.6 -5.8   -58.9   24    396   17 33 30
17 53 30  ---        17 57 00  47.7  46.4 -5.4   -62.0  1200    434   17 33 31

17 54 00  B2319+60   17 57 30  47.8  46.4 -5.4   -62.1   24    434   17 54 00
18 14 00  ---        18 17 33  50.0  48.1 -5.1   -65.2  1200    472   17 54 01

18 14 30  B2319+60   18 18 03  50.1  48.1 -5.1   -65.2   24    472   18 14 30
18 34 30  ---        18 38 06  52.3  49.7 -4.7   -68.4  1200    511   18 14 31

18 35 00  B2319+60   18 38 36  52.4  49.7 -4.7   -68.5   24    511   18 35 00
18 55 00  ---        18 58 40  54.7  51.1 -4.4   -71.7  1200    549   18 35 01

18 55 30  B2319+60   18 59 10  54.8  51.2 -4.4   -71.8   24    549   18 55 30
19 15 30  ---        19 19 13  57.1  52.4 -4.1   -75.1  1200    588   18 55 31

19 16 00  B2319+60   19 19 43  57.2  52.5 -4.1   -75.2   24    588   19 16 00
19 36 00  ---        19 39 46  59.6  53.5 -3.7   -78.7  1200    626   19 16 01

19 36 30  B2319+60   19 40 17  59.7  53.5 -3.7   -78.7   24    626   19 36 30
19 56 30  ---        20 00 20  62.1  54.4 -3.4   -82.4  1200    664   19 36 31

----- short on-source gain calibration scan (Automatic Gain Control is ON here) -----
19 58 00  B2319+60   20 01 50  62.3  54.4 -3.3   -82.7   84    664   Stopped
19 59 00  ---        20 02 50  62.4  54.5 -3.3   -82.9   60    664

----- Space-GRT segment 02. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are O
20 00 00  B2319+60   20 03 50  62.5  54.5 -3.3   -83.0   54    664   20 00 00
20 22 00  ---        20 25 54  65.2  55.0 -2.9   -87.4  1320    707   20 00 01

20 22 30  B2319+60   20 26 24  65.3  55.0 -2.9   -87.5   24    707   20 22 30
20 44 40  ---        20 48 38  68.0  55.0 -2.6   -92.3  1330    749   20 22 31

20 45 10  B2319+60   20 49 08  68.1  55.0 -2.6   -92.4   24    749   20 45 10
21 07 20  ---        21 11 21  70.8  54.3 -2.2   -97.9  1330    792   20 45 11

21 07 50  B2319+60   21 11 52  70.9  54.3 -2.2   -98.1   24    792   21 07 50
21 30 00  ---        21 34 05  73.5  52.5 -1.8  -104.6  1330    834   21 07 51

```

## 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:	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=	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: 2 Setup file default. Used with PCAL = off  
 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: 2

Track assignments are:

track1= 2, 18, 3, 19  
 barrel=roll\_off

## POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* B2319+60	23 19 41.342074	* 23 21 55.213000	23 22 43.269595	0.00
J2321+6024	60 08 03.46022	* 60 24 30.71000	60 30 00.55414	0.00
	./rg20b_sources.radioastron			
	RA-A04-02			

THE NUCLEAR STRUCTURE OF 3C84 WITH SPACE VLBI - II EPOCH

PI: *Gabriele Giovannini*

Address: Istituto di Radioastronomia - INAF

Observing mode: K/C-band, dual-pol

Schedule for TORUN (Code Tr ) Page 2

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 11 Sep 2016 Day 255 ---										
----- K-band VLBI scans. Space segment 01 -----										
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										
13 00 00	0316+413	13 38 10	7.2	-19.1	10.3		15.2	0	0	13 00 00
13 15 00	---	13 53 13	6.5	-16.3	10.5		13.0	900	29	13 00 01
13 15 30	0316+413	13 53 43	6.5	-16.2	10.5		13.0	24	29	13 15 30
13 30 00	---	14 08 15	6.0	-13.6	10.8		10.8	870	57	13 15 31
13 30 30	0316+413	14 08 45	5.9	-13.5	10.8		10.8	24	57	13 30 30
13 45 00	---	14 23 18	5.5	-10.8	11.0		8.6	870	85	13 30 31
13 45 30	0316+413	14 23 48	5.5	-10.7	11.0		8.6	24	85	13 45 30
14 00 00	---	14 38 20	5.1	-8.0	11.3		6.4	870	112	13 45 31
----- K-band VLBI scans. Ground-only segment 01 -----										
14 01 00	0316+413	14 39 20	5.1	-7.8	11.3		6.2	54	112	14 01 00
14 11 00	---	14 49 22	4.9	-5.9	11.5		4.7	600	132	14 01 01
14 11 30	0316+413	14 49 52	4.9	-5.8	11.5		4.7	24	132	14 11 30
14 21 00	---	14 59 24	4.8	-4.0	11.6		3.2	570	150	14 11 31
14 21 30	0316+413	14 59 54	4.8	-3.9	11.6		3.2	24	150	14 21 30
14 31 00	---	15 09 25	4.7	-2.2	11.8		1.7	570	168	14 21 31
14 31 30	0300+470	15 09 55	10.4	0.9-11.9			-0.8	-5	168	14 31 30
14 36 30	---	15 14 56	10.5	1.8-11.8			-1.6	295	178	14 31 31
14 37 00	0316+413	15 15 26	4.7	-1.0	11.9		0.8	-6	178	14 37 00
14 46 00	---	15 24 28	4.7	0.7-11.9			-0.5	534	195	14 37 01
14 46 30	0316+413	15 24 58	4.7	0.8-11.9			-0.6	24	195	14 46 30
14 56 00	---	15 34 29	4.7	2.5-11.8			-2.0	570	213	14 46 31
14 56 30	0316+413	15 35 00	4.7	2.6-11.8			-2.1	24	213	14 56 30
15 06 00	---	15 44 31	4.8	4.4-11.6			-3.6	570	232	14 56 31
15 06 30	0300+470	15 45 01	10.8	6.9-11.3			-6.1	-6	232	15 06 30
15 11 30	---	15 50 02	10.9	7.8-11.2			-6.9	294	241	15 06 31

Schedule for TORUN (Code Tr )

Page 3

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 11 Sep 2016	Day 255					---				
15 12 00	0316+413	15 50 32	4.9	5.6-11.5			-4.5	-6	241	15 12 00	
15 21 00	---	15 59 34	5.0	7.2-11.4			-5.8	534	259	15 12 01	
15 21 30	0316+413	16 00 04	5.0	7.3-11.3			-5.9	24	259	15 21 30	
15 31 00	---	16 09 35	5.2	9.1-11.2			-7.3	570	277	15 21 31	
15 31 30	0316+413	16 10 05	5.3	9.2-11.2			-7.4	24	277	15 31 30	
15 41 00	---	16 19 37	5.5	11.0-11.0			-8.8	570	295	15 31 31	
15 41 30	0300+470	16 20 07	11.7	12.9-10.7			-11.4	-7	295	15 41 30	
15 46 30	---	16 25 08	11.9	13.8-10.7			-12.2	293	305	15 41 31	
15 47 00	0316+413	16 25 38	5.7	12.1-10.9			-9.7	-7	305	15 47 00	
15 56 00	---	16 34 39	6.0	13.8-10.8			-11.0	533	322	15 47 01	
15 56 30	0316+413	16 35 09	6.0	13.9-10.8			-11.1	24	322	15 56 30	
16 06 00	---	16 44 41	6.4	15.6-10.6			-12.5	570	340	15 56 31	
16 06 30	0316+413	16 45 11	6.4	15.7-10.6			-12.5	24	340	16 06 30	
16 16 00	---	16 54 43	6.8	17.4-10.4			-13.9	570	359	16 06 31	
16 16 30	0300+470	16 55 13	13.1	18.8-10.2			-16.6	-8	359	16 16 30	
16 21 30	---	17 00 14	13.4	19.7-10.1			-17.3	292	368	16 16 31	
16 22 00	0316+413	17 00 44	7.1	18.5-10.3			-14.8	-8	368	16 22 00	
16 31 00	---	17 09 45	7.5	20.2-10.2			-16.1	532	386	16 22 01	
16 31 30	0316+413	17 10 15	7.6	20.3-10.2			-16.1	24	386	16 31 30	
16 41 00	---	17 19 47	8.1	22.0-10.0			-17.5	570	404	16 31 31	
16 41 30	0316+413	17 20 17	8.1	22.1-10.0			-17.6	24	404	16 41 30	
16 51 00	---	17 29 48	8.7	23.8 -9.9			-18.9	570	422	16 41 31	
16 51 30	0300+470	17 30 18	15.1	24.6 -9.6			-21.7	-8	422	16 51 30	
16 56 30	---	17 35 19	15.4	25.4 -9.5			-22.4	292	432	16 51 31	
16 57 00	0316+413	17 35 49	9.0	24.9 -9.8			-19.7	-8	432	16 57 00	
17 06 00	---	17 44 51	9.6	26.5 -9.6			-21.0	532	449	16 57 01	
17 06 30	0316+413	17 45 21	9.6	26.6 -9.6			-21.0	24	449	17 06 30	
17 15 30	---	17 54 22	10.3	28.2 -9.4			-22.3	540	466	17 06 31	
17 16 00	0316+413	17 54 52	10.3	28.2 -9.4			-22.3	24	466	17 16 00	
17 23 30	---	18 02 24	10.9	29.6 -9.3			-23.3	450	481	17 16 01	
17 24 00	0300+470	18 02 54	17.3	29.9 -9.0			-26.2	-8	481	17 24 00	
17 29 00	---	18 07 55	17.7	30.7 -8.9			-26.9	292	490	17 24 01	



Schedule for TORUN (Code Tr )

Page 4

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 11 Sep 2016 Day 255 ---										
----- K-band VLBI scans. Space segment 02 -----										
17 30 00	0316+413	18 08 55	11.3	30.7	-9.2		-24.2	22	490	17 30 00
17 45 00	---	18 23 57	12.5	33.3	-8.9		-26.1	900	519	17 30 01
17 45 30	0316+413	18 24 27	12.6	33.4	-8.9		-26.2	24	519	17 45 30
18 00 00	---	18 39 00	13.8	35.9	-8.7		-28.1	870	547	17 45 31
18 00 30	0316+413	18 39 30	13.9	36.0	-8.7		-28.1	24	547	18 00 30
18 15 00	---	18 54 02	15.2	38.4	-8.4		-29.9	870	575	18 00 31
18 15 30	0316+413	18 54 32	15.2	38.5	-8.4		-30.0	24	575	18 15 30
18 30 00	---	19 09 05	16.6	40.9	-8.2		-31.7	870	603	18 15 31
18 30 30	0316+413	19 09 35	16.7	41.0	-8.2		-31.8	24	603	18 30 30
18 45 00	---	19 24 07	18.1	43.4	-7.9		-33.5	870	631	18 30 31
18 45 30	0316+413	19 24 37	18.2	43.5	-7.9		-33.5	24	631	18 45 30
19 00 00	---	19 39 10	19.7	45.9	-7.7		-35.2	870	659	18 45 31
----- K-band VLBI scans. Ground-only segment 02 -----										
19 01 00	0316+413	19 40 10	19.8	46.0	-7.7		-35.3	54	659	19 01 00
19 11 00	---	19 50 11	20.9	47.7	-7.5		-36.4	600	678	19 01 01
19 11 30	0316+413	19 50 41	21.0	47.7	-7.5		-36.4	24	678	19 11 30
19 21 00	---	20 00 13	22.1	49.3	-7.3		-37.5	570	696	19 11 31
19 21 30	0316+413	20 00 43	22.1	49.3	-7.3		-37.5	24	696	19 21 30
19 31 00	---	20 10 15	23.2	50.9	-7.2		-38.5	570	714	19 21 31
19 31 30	0316+413	20 10 45	23.3	50.9	-7.2		-38.6	24	714	19 31 30
19 41 00	---	20 20 16	24.4	52.5	-7.0		-39.5	570	733	19 31 31
19 46 00	1823+568	20 25 17	72.4	-65.5	2.0		89.5	49	733	19 46 00
19 55 30	---	20 34 49	71.1	-65.4	2.2		87.6	570	751	19 46 01
20 00 30	0300+470	20 39 49	32.9	53.4	-6.4		-45.3	48	751	20 00 30
20 10 00	---	20 49 21	34.1	54.7	-6.3		-46.3	570	769	20 00 31
20 10 30	0300+470	20 49 51	34.2	54.8	-6.2		-46.4	24	769	20 10 30
20 20 00	---	20 59 23	35.3	56.2	-6.1		-47.4	570	787	20 10 31
20 20 30	0316+413	20 59 53	29.3	58.7	-6.4		-43.3	-7	787	20 20 30
20 30 00	---	21 09 24	30.5	60.2	-6.2		-44.1	563	806	20 20 31

Schedule for TORUN (Code Tr ) Page 5

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 11 Sep 2016 Day 255 ---										
20 30 30	0316+413	21 09 54	30.6	60.2	-6.2		-44.2	24	806	20 30 30
20 40 00	---	21 19 26	31.8	61.7	-6.0		-45.0	570	824	20 30 31
20 40 30	0316+413	21 19 56	31.9	61.8	-6.0		-45.0	24	824	20 40 30
20 50 00	---	21 29 28	33.2	63.3	-5.9		-45.8	570	842	20 40 31
20 50 30	0300+470	21 29 58	39.2	60.4	-5.6		-50.4	-7	842	20 50 30
21 00 00	---	21 39 29	40.5	61.8	-5.4		-51.3	563	861	20 50 31
21 00 30	0316+413	21 39 59	34.6	64.9	-5.7		-46.6	-6	861	21 00 30
21 10 00	---	21 49 31	35.9	66.4	-5.5		-47.4	564	879	21 00 31
21 15 00	1823+568	21 54 32	60.4	-61.4	3.5		74.6	29	879	21 15 00
21 24 30	---	22 04 03	59.1	-60.6	3.7		73.2	570	897	21 15 01
21 29 30	0300+470	22 09 04	44.5	65.9	-4.9		-54.0	32	897	21 29 30
21 39 00	---	22 18 36	45.8	67.2	-4.8		-54.8	570	915	21 29 31
21 39 30	0316+413	22 19 06	40.0	71.1	-5.0		-49.4	-5	915	21 39 30
21 49 00	---	22 28 37	41.4	72.6	-4.9		-50.0	565	934	21 39 31
21 49 30	0316+413	22 29 07	41.5	72.7	-4.9		-50.0	24	934	21 49 30
21 59 00	---	22 38 39	42.8	74.2	-4.7		-50.6	570	952	21 49 31
21 59 30	0316+413	22 39 09	42.9	74.3	-4.7		-50.6	24	952	21 59 30
22 09 00	---	22 48 41	44.3	75.9	-4.5		-51.1	570	970	21 59 31
22 09 30	0300+470	22 49 11	50.1	71.6	-4.3		-57.2	-6	970	22 09 30
22 19 00	---	22 58 42	51.5	72.9	-4.1		-57.9	564	988	22 09 31
22 19 30	0316+413	22 59 12	45.8	77.6	-4.4		-51.6	-5	988	22 19 30
22 29 00	---	23 08 44	47.2	79.2	-4.2		-52.0	565	1007	22 19 31
22 29 30	0316+413	23 09 14	47.3	79.3	-4.2		-52.1	24	1007	22 29 30
22 39 00	---	23 18 46	48.7	80.9	-4.0		-52.4	570	1025	22 29 31
22 39 30	0316+413	23 19 16	48.8	81.0	-4.0		-52.4	24	1025	22 39 30
22 49 00	---	23 28 47	50.2	82.7	-3.9		-52.8	570	1043	22 39 31
22 49 30	0300+470	23 29 17	55.9	77.4	-3.6		-59.9	-5	1043	22 49 30
22 59 00	---	23 38 49	57.3	78.9	-3.4		-60.4	565	1062	22 49 31
22 59 30	0316+413	23 39 19	51.8	84.6	-3.7		-53.0	-5	1062	22 59 30
23 12 00	---	23 51 51	53.7	86.9	-3.5		-53.3	745	1086	22 59 31

Schedule for TORUN (Code Tr ) Page 6

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 11 Sep 2016 Day 255 ---

----- K-band VLBI scans. Space segment 03 -----

```
23 15 00 0316+413    23 54 51  54.1  87.4 -3.4   -53.3  173   1086  23 15 00
23 30 00 ---          00 09 54  56.4  90.4 -3.2   -53.4  900   1114  23 15 01

23 30 30 0316+413    00 10 24  56.4  90.5 -3.2   -53.4   24   1114  23 30 30
23 45 00 ---          00 24 56  58.6  93.5 -2.9   -53.2  870   1142  23 30 31

23 45 30 0316+413    00 25 26  58.7  93.6 -2.9   -53.2   24   1142  23 45 30
23 59 59 ---          00 39 59  60.9  96.9 -2.7   -52.8  869   1170  23 45 31
```

--- Mon 12 Sep 2016 Day 256 ---

----- K-band VLBI scans. Ground-only segment 03 -----

```
00 16 00 0316+413    00 56 01  63.3 100.8 -2.4   -52.0   54   1198  00 16 00
00 26 00 ---          01 06 03  64.7 103.4 -2.2   -51.3   60   1217  00 16 01

00 26 30 0316+413    01 06 33  64.8 103.6 -2.2   -51.3   24   1217  00 26 30
00 35 00 ---          01 15 05  66.0 106.0 -2.1   -50.5   51   1234  00 26 31

00 35 30 0316+413    01 15 35  66.1 106.1 -2.1   -50.4   24   1234  00 35 30
00 44 00 ---          01 24 06  67.3 108.7 -1.9   -49.5   51   1250  00 35 31

00 44 30 0300+470    01 24 36  73.1  99.8 -1.7   -60.8   -5   1250  00 44 30
00 54 00 ---          01 34 08  74.5 102.7 -1.5   -59.8   56   1268  00 44 31

00 54 30 0316+413    01 34 38  68.8 112.2 -1.8   -48.0   -5   1268  00 54 30
01 04 00 ---          01 44 09  70.1 115.7 -1.6   -46.3   56   1287  00 54 31

01 04 30 0316+413    01 44 39  70.2 115.9 -1.6   -46.2   24   1287  01 04 30
01 14 00 ---          01 54 11  71.4 119.7 -1.4   -44.2   57   1305  01 04 31

01 19 00 1823+568    01 59 12  32.5 -36.4  7.6    40.7  -27   1305  01 19 00
01 28 30 ---          02 08 43  31.7 -35.2  7.7    39.3  543   1323  01 19 01

01 33 30 0300+470    02 13 44  80.0 120.2 -0.9   -50.0  -26   1323  01 33 30
01 43 00 ---          02 23 16  81.2 126.9 -0.7   -45.1  544   1341  01 33 31

01 43 30 0316+413    02 23 46  75.0 134.5 -1.0   -34.9   -7   1341  01 43 30
01 53 00 ---          02 33 17  76.0 140.5 -0.8   -30.7  563   1360  01 43 31
```

Schedule for TORUN (Code Tr )

Page 7

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 12 Sep 2016 Day 256 ---										
01 53 30	0316+413	02 33 47	76.0	140.8	-0.8		-30.5	23	1360	01 53 30
02 03 00	---	02 43 19	76.9	147.5	-0.6		-25.5	570	1378	01 53 31
02 03 30	0300+470	02 43 49	83.3	147.8	-0.3		-28.2	-8	1378	02 03 30
02 13 00	---	02 53 21	84.0	161.3	-0.2		-16.5	562	1396	02 03 31
02 13 30	0316+413	02 53 51	77.6	155.7	-0.5		-19.3	-8	1396	02 13 30
02 23 00	---	03 03 22	78.1	163.9	-0.3		-12.9	562	1414	02 13 31
02 23 30	0316+413	03 03 52	78.1	164.3	-0.3		-12.5	22	1414	02 23 30
02 33 00	---	03 13 24	78.4	173.0	-0.1		-5.6	570	1433	02 23 31
02 33 30	0316+413	03 13 54	78.4	173.4	-0.1		-5.3	22	1433	02 33 30
02 43 00	---	03 23 26	78.5	182.3	0.0		1.9	570	1451	02 33 31
02 43 30	0300+470	03 23 56	83.5	209.9	0.3		26.2	-42	1451	02 43 30
02 53 00	---	03 33 27	82.6	221.4	0.5		35.8	528	1469	02 43 31
02 53 30	0316+413	03 33 57	78.3	192.1	0.2		9.7	-42	1469	02 53 30
03 03 00	---	03 43 29	77.9	200.5	0.4		16.3	528	1487	02 53 31
03 03 30	0316+413	03 43 59	77.8	200.9	0.4		16.6	22	1487	03 03 30
03 13 00	---	03 53 31	77.2	208.7	0.5		22.7	570	1506	03 03 31
03 13 30	0316+413	03 54 01	77.2	209.1	0.6		23.0	23	1506	03 13 30
03 23 00	---	04 03 32	76.4	216.1	0.7		28.2	570	1524	03 13 31
03 23 30	0300+470	04 04 02	78.9	244.6	1.0		53.2	-43	1524	03 23 30
03 33 00	---	04 13 34	77.6	249.2	1.1		55.9	527	1542	03 23 31
03 33 30	0316+413	04 14 04	75.4	223.1	0.9		33.2	-37	1542	03 33 30
03 43 00	---	04 23 35	74.4	228.7	1.0		37.1	533	1561	03 33 31
03 48 00	1823+568	04 28 36	22.5	343.4	10.1		18.3	56	1561	03 48 00
03 57 30	---	04 38 08	22.1	344.7	10.2		16.9	570	1579	03 48 01
04 02 30	0300+470	04 43 09	73.3	259.7	1.6		60.7	93	1579	04 02 30
04 12 00	---	04 52 40	71.9	262.3	1.8		61.4	570	1597	04 02 31
----- K-band VLBI scans. Space segment 04 -----										
04 15 00	0316+413	04 55 41	70.4	243.6	1.6		45.9	126	1597	04 15 00
04 30 00	---	05 10 43	68.3	249.0	1.8		48.5	900	1626	04 15 01

Schedule for TORUN (Code Tr ) Page 8

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 12 Sep 2016 Day 256 ---										
04 30 30	0316+413	05 11 13	68.2	249.2	1.8		48.6	24	1626	04 30 30
04 45 00	---	05 25 46	66.2	253.7	2.1		50.4	870	1654	04 30 31
04 45 30	0316+413	05 26 16	66.1	253.9	2.1		50.4	24	1654	04 45 30
05 00 00	---	05 40 48	64.0	257.9	2.3		51.7	870	1682	04 45 31
05 00 30	0316+413	05 41 18	63.9	258.0	2.3		51.7	24	1682	05 00 30
05 15 00	---	05 55 51	61.8	261.7	2.6		52.6	870	1710	05 00 31
----- K-band VLBI scans. Ground-only segment 04 -----										
05 16 00	0316+413	05 56 51	61.6	261.9	2.6		52.6	54	1710	05 16 00
05 26 00	---	06 06 52	60.1	264.3	2.8		53.0	600	1729	05 16 01
05 26 30	0316+413	06 07 22	60.0	264.4	2.8		53.0	24	1729	05 26 30
05 36 00	---	06 16 54	58.6	266.5	2.9		53.2	570	1747	05 26 31
05 36 30	0316+413	06 17 24	58.5	266.6	2.9		53.2	24	1747	05 36 30
05 46 00	---	06 26 56	57.1	268.6	3.1		53.4	570	1765	05 36 31
05 46 30	0316+413	06 27 26	57.0	268.7	3.1		53.4	24	1765	05 46 30
05 56 00	---	06 36 57	55.6	270.6	3.3		53.4	570	1784	05 46 31
05 56 30	0316+413	06 37 27	55.5	270.7	3.3		53.4	24	1784	05 56 30
06 06 00	---	06 46 59	54.1	272.6	3.4		53.3	570	1802	05 56 31
06 06 30	0316+413	06 47 29	54.0	272.6	3.4		53.3	24	1802	06 06 30
06 16 00	---	06 57 01	52.6	274.4	3.6		53.1	570	1820	06 06 31
06 16 30	0316+413	06 57 31	52.5	274.5	3.6		53.1	24	1820	06 16 30
06 26 00	---	07 07 02	51.1	276.3	3.8		52.9	570	1838	06 16 31
06 26 30	0316+413	07 07 32	51.0	276.4	3.8		52.9	24	1838	06 26 30
06 36 00	---	07 17 04	49.6	278.0	3.9		52.6	570	1857	06 26 31
06 36 30	0316+413	07 17 34	49.5	278.1	3.9		52.6	24	1857	06 36 30
06 46 00	---	07 27 06	48.1	279.8	4.1		52.3	570	1875	06 36 31
06 46 30	0316+413	07 27 36	48.1	279.9	4.1		52.3	24	1875	06 46 30
06 56 00	---	07 37 07	46.6	281.5	4.3		51.9	570	1893	06 46 31
06 56 30	0316+413	07 37 37	46.6	281.6	4.3		51.8	24	1893	06 56 30
07 06 00	---	07 47 09	45.2	283.2	4.4		51.4	570	1912	06 56 31

Schedule for TORUN (Code Tr )

Page 9

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 12 Sep 2016 Day 256 ---										
07 06 30	0300+470	07 47 39	46.2	292.3	4.7		55.0	-3	1912	07 06 30
07 16 00	---	07 57 10	44.9	293.7	4.9		54.2	567	1930	07 06 31
07 16 30	0300+470	07 57 41	44.9	293.7	4.9		54.2	24	1930	07 16 30
07 26 00	---	08 07 12	43.6	295.1	5.0		53.4	570	1948	07 16 31
07 26 30	0300+470	08 07 42	43.5	295.1	5.0		53.3	24	1948	07 26 30
07 36 00	---	08 17 14	42.2	296.5	5.2		52.5	570	1966	07 26 31
07 36 30	0316+413	08 17 44	40.8	288.1	4.9		49.7	-2	1966	07 36 30
07 46 00	---	08 27 15	39.4	289.6	5.1		49.1	568	1985	07 36 31
07 46 30	0316+413	08 27 45	39.3	289.7	5.1		49.1	24	1985	07 46 30
07 56 00	---	08 37 17	38.0	291.2	5.3		48.4	570	2003	07 46 31
07 56 30	0316+413	08 37 47	37.9	291.3	5.3		48.4	24	2003	07 56 30
08 06 00	---	08 47 19	36.6	292.8	5.4		47.7	570	2021	07 56 31
08 06 30	0316+413	08 47 49	36.5	292.9	5.4		47.7	24	2021	08 06 30
08 16 00	---	08 57 20	35.2	294.4	5.6		47.0	570	2039	08 06 31
08 16 30	0316+413	08 57 50	35.2	294.4	5.6		46.9	24	2039	08 16 30
08 26 00	---	09 07 22	33.9	295.9	5.8		46.2	570	2058	08 16 31
08 26 30	0316+413	09 07 52	33.8	296.0	5.8		46.2	24	2058	08 26 30
08 36 00	---	09 17 24	32.5	297.5	5.9		45.4	570	2076	08 26 31
08 36 30	0316+413	09 17 54	32.4	297.6	5.9		45.4	24	2076	08 36 30
08 46 00	---	09 27 25	31.2	299.0	6.1		44.6	570	2094	08 36 31
08 51 00	1823+568	09 32 26	26.5	386.5	-8.9		-29.4	111	2094	08 51 00
09 00 30	---	09 41 58	27.1	387.8	-8.7		-30.8	570	2112	08 51 01
----- K-band VLBI scans. Space segment 05 -----										
09 05 00	0316+413	09 46 28	28.7	302.0	6.4		42.9	83	2112	09 05 00
09 20 00	---	10 01 31	26.8	304.4	6.7		41.5	900	2141	09 05 01
09 20 30	0316+413	10 02 01	26.8	304.5	6.7		41.4	24	2141	09 20 30
09 35 00	---	10 16 33	25.0	306.7	6.9		40.0	870	2169	09 20 31
09 35 30	0316+413	10 17 03	24.9	306.8	6.9		40.0	24	2169	09 35 30
09 50 00	---	10 31 36	23.2	309.1	7.2		38.5	870	2197	09 35 31

Schedule for TORUN (Code Tr ) Page 10

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 12 Sep 2016 Day 256 ---										
09 50 30	0316+413	10 32 06	23.2	309.2	7.2		38.5	24	2197	09 50 30
10 05 00	---	10 46 38	21.5	311.5	7.4		36.9	870	2225	09 50 31
----- K-band VLBI scans. Ground-only segment 05 -----										
10 06 00	0316+413	10 47 38	21.4	311.7	7.4		36.8	54	2225	10 06 00
10 16 00	---	10 57 40	20.3	313.3	7.6		35.7	600	2244	10 06 01
10 16 30	0316+413	10 58 10	20.2	313.4	7.6		35.7	24	2244	10 16 30
10 26 00	---	11 07 42	19.2	314.9	7.8		34.6	570	2262	10 16 31
10 26 30	0316+413	11 08 12	19.1	315.0	7.8		34.6	24	2262	10 26 30
10 36 00	---	11 17 43	18.1	316.6	7.9		33.5	570	2281	10 26 31
10 36 30	0316+413	11 18 13	18.1	316.7	8.0		33.4	24	2281	10 36 30
10 46 00	---	11 27 45	17.1	318.2	8.1		32.3	570	2299	10 36 31
10 46 30	0316+413	11 28 15	17.1	318.3	8.1		32.3	24	2299	10 46 30
10 56 00	---	11 37 47	16.1	319.9	8.3		31.1	570	2317	10 46 31
10 56 30	0316+413	11 38 17	16.1	320.0	8.3		31.1	24	2317	10 56 30
11 06 00	---	11 47 48	15.2	321.6	8.4		29.9	570	2336	10 56 31
11 06 30	0316+413	11 48 18	15.1	321.7	8.5		29.9	24	2336	11 06 30
11 16 00	---	11 57 50	14.3	323.3	8.6		28.7	570	2354	11 06 31
11 16 30	0316+413	11 58 20	14.2	323.4	8.6		28.6	24	2354	11 16 30
11 26 00	---	12 07 52	13.4	325.0	8.8		27.4	570	2372	11 16 31
11 26 30	0316+413	12 08 22	13.3	325.1	8.8		27.4	24	2372	11 26 30
11 36 00	---	12 17 53	12.5	326.7	8.9		26.1	570	2390	11 26 31
11 36 30	0316+413	12 18 23	12.5	326.8	9.0		26.1	24	2390	11 36 30
11 46 00	---	12 27 55	11.7	328.4	9.1		24.8	570	2409	11 36 31
11 46 30	0316+413	12 28 25	11.7	328.5	9.1		24.8	24	2409	11 46 30
11 56 00	---	12 37 56	11.0	330.2	9.3		23.5	570	2427	11 46 31
11 56 30	0316+413	12 38 27	10.9	330.3	9.3		23.5	24	2427	11 56 30
12 06 00	---	12 47 58	10.2	331.9	9.5		22.2	570	2445	11 56 31
12 06 30	0316+413	12 48 28	10.2	332.0	9.5		22.1	24	2445	12 06 30
12 16 00	---	12 58 00	9.5	333.7	9.6		20.8	570	2463	12 06 31

Schedule for TORUN (Code Tr )

Page 11

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 12 Sep 2016 Day 256 ---										
12 16 30	0316+413	12 58 30	9.5	333.8	9.6		20.8	24	2463	12 16 30
12 26 00	---	13 08 01	8.9	335.5	9.8		19.5	570	2482	12 16 31
12 26 30	0316+413	13 08 31	8.9	335.6	9.8		19.4	24	2482	12 26 30
12 36 00	---	13 18 03	8.3	337.3	10.0		18.1	570	2500	12 26 31
12 41 00	1823+568	13 23 04	48.8	413.4	-5.0		-61.9	133	2500	12 41 00
12 50 30	---	13 32 35	50.0	414.4	-4.9		-63.2	570	2518	12 41 01
12 54 30	0316+413	13 36 36	7.3	340.6	10.3		15.4	66	2518	12 54 30
13 04 00	---	13 46 08	6.8	342.4	10.4		14.1	570	2537	12 54 31
13 04 30	0316+413	13 46 38	6.8	342.5	10.4		14.0	24	2537	13 04 30
13 14 00	---	13 56 09	6.4	344.2	10.6		12.6	570	2555	13 04 31
13 14 30	0316+413	13 56 39	6.4	344.3	10.6		12.5	24	2555	13 14 30
13 24 00	---	14 06 11	6.0	346.1	10.8		11.2	570	2573	13 14 31
13 24 30	0316+413	14 06 41	6.0	346.1	10.8		11.1	24	2573	13 24 30
13 34 00	---	14 16 13	5.7	347.9	10.9		9.7	570	2591	13 24 31
13 34 30	0316+413	14 16 43	5.7	348.0	10.9		9.6	24	2591	13 34 30
13 44 00	---	14 26 14	5.4	349.8	11.1		8.2	570	2610	13 34 31
13 44 30	0316+413	14 26 44	5.4	349.9	11.1		8.1	24	2610	13 44 30
13 54 00	---	14 36 16	5.2	351.6	11.3		6.7	570	2628	13 44 31
----- K-band VLBI scans. Space segment 06 -----										
13 55 00	0316+413	14 37 16	5.1	351.8	11.3		6.6	54	2628	13 55 00
14 10 00	---	14 52 18	4.9	354.6	11.5		4.3	900	2657	13 55 01
14 10 30	0316+413	14 52 49	4.9	354.7	11.5		4.2	24	2657	14 10 30
14 25 00	---	15 07 21	4.7	357.5	11.8		2.0	870	2685	14 10 31
14 25 30	0316+413	15 07 51	4.7	357.5	11.8		2.0	24	2685	14 25 30
14 40 00	---	15 22 23	4.7	360.3-12.0			-0.2	870	2712	14 25 31
14 40 30	0316+413	15 22 53	4.7	360.4-12.0			-0.3	24	2712	14 40 30
14 55 00	---	15 37 26	4.7	363.1-11.7			-2.5	870	2740	14 40 31
----- K-band VLBI scans. Ground-only segment 06 -----										
14 56 00	0316+413	15 38 26	4.7	363.3-11.7			-2.6	54	2740	14 56 00
15 06 00	---	15 48 28	4.8	365.2-11.5			-4.1	600	2760	14 56 01



Schedule for TORUN (Code Tr )

Page 12

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 12 Sep 2016 Day 256 ---										
15 06 30	0316+413	15 48 58	4.9	365.3-11.5			-4.2	24	2760	15 06 30
15 16 00	---	15 58 29	5.0	367.0-11.4			-5.6	570	2778	15 06 31
15 16 30	0316+413	15 58 59	5.0	367.1-11.4			-5.7	24	2778	15 16 30
15 26 00	---	16 08 31	5.2	368.9-11.2			-7.1	570	2796	15 16 31
15 26 30	0316+413	16 09 01	5.2	369.0-11.2			-7.2	24	2796	15 26 30
15 36 00	---	16 18 33	5.5	370.8-11.0			-8.6	570	2814	15 26 31
15 36 30	0316+413	16 19 03	5.5	370.9-11.0			-8.7	24	2814	15 36 30
15 46 00	---	16 28 34	5.8	372.6-10.9			-10.1	570	2833	15 36 31
15 46 30	0316+413	16 29 04	5.8	372.7-10.9			-10.2	24	2833	15 46 30
15 56 00	---	16 38 36	6.1	374.5-10.7			-11.6	570	2851	15 46 31
15 56 30	0316+413	16 39 06	6.2	374.6-10.7			-11.7	24	2851	15 56 30
16 06 00	---	16 48 38	6.5	376.3-10.5			-13.0	570	2869	15 56 31
16 06 30	0316+413	16 49 08	6.6	376.4-10.5			-13.1	24	2869	16 06 30
16 16 00	---	16 58 39	7.0	378.2-10.4			-14.5	570	2887	16 06 31
16 16 30	0316+413	16 59 09	7.0	378.3-10.4			-14.6	24	2887	16 16 30
16 26 00	---	17 08 41	7.5	380.0-10.2			-15.9	570	2906	16 16 31
16 26 30	0316+413	17 09 11	7.5	380.1-10.2			-16.0	24	2906	16 26 30
16 36 00	---	17 18 42	8.0	381.8-10.0			-17.3	570	2924	16 26 31
16 36 30	0316+413	17 19 13	8.0	381.9-10.0			-17.4	24	2924	16 36 30
16 46 00	---	17 28 44	8.6	383.6 -9.9			-18.7	570	2942	16 36 31
16 46 30	0316+413	17 29 14	8.6	383.7 -9.9			-18.8	24	2942	16 46 30
16 56 00	---	17 38 46	9.2	385.4 -9.7			-20.1	570	2961	16 46 31
16 56 30	0316+413	17 39 16	9.2	385.5 -9.7			-20.2	24	2961	16 56 30
17 06 00	---	17 48 47	9.9	387.2 -9.5			-21.5	570	2979	16 56 31
17 11 00	1823+568	17 53 48	84.2	406.2 -0.5			-127.5	7	2979	17 11 00
17 20 30	---	18 03 20	85.2	396.6 -0.4			-139.1	570	2997	17 11 01
17 25 30	0316+413	18 08 21	11.3	390.6 -9.2			-24.1	9	2997	17 25 30
17 35 00	---	18 17 52	12.0	392.3 -9.1			-25.4	570	3015	17 25 31
17 35 30	0316+413	18 18 22	12.1	392.3 -9.0			-25.4	24	3015	17 35 30
17 45 00	---	18 27 54	12.9	394.0 -8.9			-26.7	570	3034	17 35 31

Schedule for TORUN (Code Tr ) Page 13

The nuclear structure of 3C84 with Space VLBI - II Epoch

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 12 Sep 2016 Day 256 ---

```
17 45 30 0316+413    18 28 24 12.9 394.1 -8.9    -26.7   24    3034  17 45 30
17 55 00 ---          18 37 55 13.7 395.7 -8.7    -27.9  570    3052  17 45 31

17 55 30 0316+413    18 38 26 13.8 395.8 -8.7    -28.0   24    3052  17 55 30
18 05 00 ---          18 47 57 14.6 397.4 -8.5    -29.2  570    3070  17 55 31

18 05 30 0316+413    18 48 27 14.7 397.5 -8.5    -29.2   24    3070  18 05 30
18 15 00 ---          18 57 59 15.6 399.1 -8.4    -30.4  570    3088  18 05 31
```

----- K-band VLBI scans. Space segment 07 -----

```
18 20 00 0316+413    19 03 00 16.0 399.9 -8.3    -31.0  294    3088  18 20 00
18 35 00 ---          19 18 02 17.5 402.4 -8.0    -32.8  900    3117  18 20 01

18 35 30 0316+413    19 18 32 17.6 402.5 -8.0    -32.8   24    3117  18 35 30
18 50 00 ---          19 33 04 19.1 404.9 -7.8    -34.5  870    3145  18 35 31

18 50 30 0316+413    19 33 35 19.1 405.0 -7.8    -34.6   24    3145  18 50 30
19 00 00 ---          19 43 06 20.2 406.5 -7.6    -35.6  570    3163  18 50 31
```

## SETUP FILE INFORMATION:

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

===== Setup file: ra1cm2.set

```
Setup group:   15          Station: TORUN          Total bit rate:  256
Format: MARK5B          Bits per sample:  2          Sample rate: 32.000
Number of channels:  4    DBE type: DBBC_DDC          Speedup factor:  1.00
```

Disk used to record data.

```

1st LO= 21500.00 21500.00 21500.00 21500.00
Net SB=      U      U      L      L
IF SB =      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP
BBC   =      1      5      1      5
BBC SB=      U      U      L      L
IF    =      A1     B1     A1     B1

```

The following frequency sets based on these setups were used.

```

Frequency Set:  4  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:  4

```

Track assignments are:

```

track1=  2,  4,  6,  8
barrel=roll_off

```

#### POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 30.474820	0.00
	85 16 41.77889	* 85 00 00.000000	84 54 31.69946	0.00
	fake circumpolar target for a TS to look at			
* 0300+470	03 00 10.111206	* 03 03 35.242224	03 04 44.989300	0.00
J0303+4716	47 04 33.67712	* 47 16 16.27546	47 19 54.94955	0.00
	./gg080_sources.radioastron AGN, rfc_2013d Petrov, 2013, unpublished 26473 observations, RA-A03-04, RA-A02-1			
* 0316+413	03 16 29.567283	* 03 19 48.160114	03 20 55.379781	0.00
J0319+4130	41 19 51.91847	* 41 30 42.10559	41 34 04.14191	0.00
3C84	./gg080_sources.radioastron AGN, rfc_2013d Petrov, 2013, unpublished 15448 observations, RA-A03-04, RA-A02-1			
* 1823+568	18 23 14.951493	* 18 24 07.068371	18 24 25.083866	0.00
J1824+5651	56 49 18.07195	* 56 51 01.49076	56 52 04.34072	0.00
	./gg080_sources.radioastron AGN, rfc_2013d Petrov, 2013, unpublished 8126 observations, RA-A03-04, RA-A02-12			

## RADIOASTRON IMAGING OF HIGH-REDSHIFT QUASARS

PI: Leonid Gurvits

Address: Joint Institute for VLBI in Europe

Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr )

Page 2

RadioAstron Imaging of high-redshift quasars

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 20 Sep 2016 Day 264 ---										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00	1668.00				
Next BBC frequencies:		632.00	632.00	632.00	632.00	632.00				
Next scan bandwidths:		16.00	16.00	16.00	16.00	16.00				
17 01 00	3C454.3	18 15 19	25.0	96.1	-4.7		-38.5	0	0	17 01 00
17 09 00	---	18 23 20	26.2	97.8	-4.5		-38.3	480	15	17 01 01
17 10 30	2215+020	18 24 51	20.3	114.8	-3.9		-33.1	41	15	17 10 30
17 19 00	---	18 33 22	21.5	116.7	-3.8		-32.5	510	32	17 10 31
17 19 30	2215+020	18 33 52	21.6	116.8	-3.7		-32.4	24	32	17 19 30
17 29 00	---	18 43 24	22.8	119.0	-3.6		-31.7	570	50	17 19 31
17 29 30	2215+020	18 43 54	22.9	119.1	-3.6		-31.7	24	50	17 29 30
17 39 00	---	18 53 25	24.1	121.3	-3.4		-30.9	570	68	17 29 31
17 39 30	2215+020	18 53 55	24.2	121.4	-3.4		-30.9	24	68	17 39 30
17 49 00	---	19 03 27	25.4	123.7	-3.3		-30.0	570	87	17 39 31
17 49 30	2215+020	19 03 57	25.5	123.8	-3.2		-30.0	24	87	17 49 30
18 00 00	---	19 14 29	26.8	126.3	-3.1		-29.0	630	107	17 49 31
18 00 30	2215+020	19 14 59	26.8	126.5	-3.1		-28.9	24	107	18 00 30
18 09 00	---	19 23 30	27.8	128.6	-2.9		-28.0	510	123	18 00 31
----- L-band VLBI scans. Space segment 02 -----										
18 10 00	2215+020	19 24 30	28.0	128.8	-2.9		-27.9	54	123	18 10 00
18 23 20	---	19 37 53	29.5	132.2	-2.7		-26.4	800	149	18 10 01
18 23 50	2215+020	19 38 23	29.5	132.3	-2.7		-26.4	24	149	18 23 50
18 36 40	---	19 51 15	30.9	135.7	-2.5		-24.8	770	173	18 23 51
18 37 10	2215+020	19 51 45	31.0	135.8	-2.4		-24.8	24	173	18 37 10
18 50 00	---	20 04 37	32.3	139.3	-2.2		-23.1	770	198	18 37 11
----- L-band VLBI scans. Ground segment 03 -----										
18 51 00	2215+020	20 05 37	32.4	139.5	-2.2		-23.0	54	198	18 51 00
18 59 30	---	20 14 08	33.2	141.9	-2.1		-21.8	510	214	18 51 01
19 00 00	2215+020	20 14 39	33.2	142.0	-2.1		-21.7	24	214	19 00 00
19 09 30	---	20 24 10	34.1	144.7	-1.9		-20.3	570	233	19 00 01

Schedule for TORUN (Code Tr )

Page 3

RadioAstron Imaging of high-redshift quasars

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 20 Sep 2016	Day 264					---				
19 10 00	2215+020	20 24 40	34.1	144.8	-1.9		-20.3	24	233	19 10 00	
19 19 30	---	20 34 12	34.9	147.6	-1.7		-18.8	570	251	19 10 01	
19 20 00	2215+020	20 34 42	35.0	147.7	-1.7		-18.7	24	251	19 20 00	
19 29 30	---	20 44 13	35.7	150.5	-1.6		-17.2	570	269	19 20 01	
19 30 00	2215+020	20 44 43	35.7	150.6	-1.6		-17.1	24	269	19 30 00	
19 39 30	---	20 54 15	36.4	153.4	-1.4		-15.6	570	287	19 30 01	
19 40 00	2215+020	20 54 45	36.4	153.6	-1.4		-15.5	24	287	19 40 00	
19 49 30	---	21 04 17	37.0	156.5	-1.2		-13.9	570	306	19 40 01	
19 51 30	3C454.3	21 06 17	47.5	139.6	-1.8		-23.9	68	306	19 51 30	
19 59 30	---	21 14 18	48.2	142.3	-1.7		-22.5	480	321	19 51 31	
20 01 30	2215+020	21 16 19	37.7	160.2	-1.0		-11.8	67	321	20 01 30	
20 09 00	---	21 23 50	38.1	162.5	-0.9		-10.4	450	336	20 01 31	
20 09 30	2215+020	21 24 20	38.1	162.7	-0.9		-10.3	24	336	20 09 30	
20 19 00	---	21 33 52	38.5	165.6	-0.7		-8.6	570	354	20 09 31	
20 19 30	2215+020	21 34 22	38.5	165.8	-0.7		-8.5	24	354	20 19 30	
20 29 00	---	21 43 53	38.8	168.8	-0.6		-6.7	570	372	20 19 31	
20 29 30	2215+020	21 44 23	38.8	169.0	-0.6		-6.6	24	372	20 29 30	
20 39 00	---	21 53 55	39.1	172.0	-0.4		-4.8	570	390	20 29 31	
20 39 30	2215+020	21 54 25	39.1	172.2	-0.4		-4.7	24	390	20 39 30	
20 49 00	---	22 03 56	39.2	175.2	-0.2		-2.9	570	409	20 39 31	
20 49 30	2215+020	22 04 27	39.2	175.4	-0.2		-2.8	24	409	20 49 30	
20 59 00	---	22 13 58	39.3	178.5	-0.1		-0.9	570	427	20 49 31	
20 59 30	2215+020	22 14 28	39.3	178.6	-0.1		-0.8	24	427	20 59 30	
21 09 00	---	22 24 00	39.3	181.7	0.1		1.0	570	445	20 59 31	
21 09 30	2215+020	22 24 30	39.3	181.9	0.1		1.1	24	445	21 09 30	
21 19 00	---	22 34 01	39.2	185.0	0.3		3.0	570	463	21 09 31	
21 19 30	2215+020	22 34 31	39.2	185.1	0.3		3.1	24	463	21 19 30	
21 29 00	---	22 44 03	39.1	188.2	0.4		4.9	570	482	21 19 31	
21 29 30	2215+020	22 44 33	39.0	188.3	0.4		5.0	24	482	21 29 30	
21 39 00	---	22 54 05	38.8	191.4	0.6		6.8	570	500	21 29 31	
21 39 30	2215+020	22 54 35	38.8	191.5	0.6		6.9	24	500	21 39 30	
21 49 00	---	23 04 06	38.5	194.6	0.8		8.7	570	518	21 39 31	

Schedule for TORUN (Code Tr )

Page 4

RadioAstron Imaging of high-redshift quasars

UP: D =&gt; Below limits; H =&gt; Below horizon mask; W =&gt; still slewing at end; blank =&gt; Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 20 Sep 2016 Day 264 ---

```
21 49 30 2215+020    23 04 36 38.4 194.7 0.8      8.8   24   518  21 49 30
21 59 00 ---          23 14 08 38.0 197.7 0.9     10.5  570   537  21 49 31

21 59 30 2215+020    23 14 38 38.0 197.9 0.9     10.6   24   537  21 59 30
22 09 00 ---          23 24 10 37.5 200.8 1.1     12.3  570   555  21 59 31

22 11 00 3C454.3    23 26 10 52.6 192.5 0.5      7.8   49   555  22 11 00
22 19 00 ---          23 34 11 52.3 195.6 0.7      9.7  480   570  22 11 01

22 20 30 2215+020    23 35 41 36.9 204.3 1.3     14.3   18   570  22 20 30
22 28 00 ---          23 43 13 36.4 206.6 1.4     15.6  450   585  22 20 31

22 28 30 2215+020    23 43 43 36.4 206.7 1.4     15.7   24   585  22 28 30
22 38 00 ---          23 53 14 35.7 209.6 1.6     17.2  570   603  22 28 31

22 38 30 2215+020    23 53 44 35.7 209.7 1.6     17.3   24   603  22 38 30
22 48 00 ---          00 03 16 34.9 212.5 1.7     18.8  570   621  22 38 31

22 48 30 2215+020    00 03 46 34.9 212.6 1.8     18.9   24   621  22 48 30
22 58 00 ---          00 13 18 34.1 215.3 1.9     20.3  570   639  22 48 31

22 58 30 2215+020    00 13 48 34.0 215.5 1.9     20.4   24   639  22 58 30
23 08 00 ---          00 23 19 33.2 218.1 2.1     21.8  570   658  22 58 31

23 08 30 2215+020    00 23 49 33.1 218.3 2.1     21.9   24   658  23 08 30
23 18 30 ---          00 33 51 32.2 221.0 2.3     23.2  600   677  23 08 31
```

----- L-band VLBI scans. Space segment 03 -----

```
23 20 00 2215+020    00 35 21 32.0 221.4 2.3     23.4   84   677  23 20 00
23 33 20 ---          00 48 43 30.6 225.0 2.5     25.2  800   703  23 20 01

23 33 50 2215+020    00 49 14 30.6 225.1 2.5     25.2   24   703  23 33 50
23 46 40 ---          01 02 06 29.2 228.5 2.7     26.7  770   727  23 33 51

23 47 10 2215+020    01 02 36 29.1 228.6 2.7     26.8   24   727  23 47 10
23 59 59 ---          01 15 28 27.6 231.8 2.9     28.2  769   752  23 47 11
```

## 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:   18           Station: TORUN           Total bit rate:   256
Format: MARK5B           Bits per sample:  2           Sample rate: 32.000
Number of channels:  4     DBE type: DBBC_DDC           Speedup factor:   1.00
  
```

Disk used to record data.

```

1st LO=   2300.00   2300.00   2300.00   2300.00
Net SB=           U           U           L           L
IF SB =          L           L           L           L
Pol.  =          RCP          LCP          RCP          LCP
BBC   =           1           5           1           5
BBC SB=          L           L           U           U
IF    =           A1          B1          A1          B1
  
```

The following frequency sets based on these setups were used.

```

Frequency Set: 21 Setup file default. Used with PCAL = 1MHz
LO sum=   1668.00  1668.00  1668.00  1668.00
BBC fr=    632.00  632.00  632.00  632.00
Bandwd=    16.00  16.00  16.00  16.00
Matching frequency sets: 21
  
```

Track assignments are:

```

track1=  6, 8, 2, 4
barrel=roll_off
  
```

## POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 30.359408	0.00
	85 16 41.77889	* 85 00 00.000000	84 54 28.42544	0.00
	fake circumpolar target for a TS to look at			
* 2215+020	22 15 15.584186	* 22 17 48.237927	22 18 40.059074	0.00
J2217+0220	02 05 08.96683	* 02 20 10.71214	02 25 23.16618	0.00
	./eg094a_sources.radioastron			
	AGN, HIGHz, rfc_2013d Petrov, 2013, unpublished 383 observations, RA-A03-04, RA-			
2251+158	22 51 29.519741	* 22 53 57.747940	22 54 48.393144	0.00
J2253+1608	15 52 54.34791	* 16 08 53.56074	16 14 24.24991	0.00
* 3C454.3	./eg094a_sources.radioastron			
	AGN, rfc_2013d Petrov, 2013, unpublished 40570 observations, RA-A03-04, RA-A02-1			





```

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) (B1950)	(Date)	Error (mas)	
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 30.340969	0.00
	85 16 41.77889	* 85 00 00.000000	84 54 28.17983	0.00
	fake circumpolar target for a TS to look at			
* 0529+483	05 29 27.565384	* 05 33 15.865793	05 34 32.001298	0.00
J0533+4822	48 20 47.97038	* 48 22 52.80771	48 23 13.86797	0.00
	./rk16ag_sources.radioastron			
	AGN, rfc_2013d Petrov, 2013, unpublished 19801 observations, RA-A04-07, RA-A03-0			

#### 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)
0529+483	93.0

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  $60 \text{ deg } F^{-0.6}$  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

eb059tr

E-EVN: EB059, RSC03

PI: Blanchard, Cui

Address: JIVE

Observing mode: realtime e-vlbi

Schedule for TORUN (Code Tr )

Page 2

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes 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 21 Sep 2016 Day 265 ---										
----- test run -----										
Next scan frequencies: 4974.49 4974.49 4974.49 4974.49 5006.49 5006.49 5006.49 5006.49										
Next BBC frequencies: 774.49 774.49 774.49 774.49 806.49 806.49 806.49 806.49										
Next scan bandwidths: 16.00 16.00 16.00 16.00 16.00 16.00 16.00 16.00										
09 00 00	J1308+3546	10 16 57	55.4	102.6	-2.9		-46.2	0	0	09 00 00
09 06 00	=1306+360	10 22 58	56.3	104.1	-2.8		-45.8	360	23	09 00 01
09 06 40	J1308+3546	10 23 38	56.4	104.3	-2.8		-45.8	34	23	09 06 40
09 16 00	=1306+360	10 32 59	57.7	106.8	-2.6		-45.1	560	59	09 06 41
09 16 40	J1308+3546	10 33 39	57.8	106.9	-2.6		-45.0	34	59	09 16 40
09 26 00	=1306+360	10 43 01	59.1	109.5	-2.4		-44.2	560	95	09 16 41
09 26 40	J1308+3546	10 43 41	59.2	109.7	-2.4		-44.1	34	95	09 26 40
09 36 00	=1306+360	10 53 02	60.5	112.5	-2.3		-43.1	560	131	09 26 41
09 36 40	J1308+3546	10 53 43	60.6	112.7	-2.3		-43.0	34	131	09 36 40
09 46 00	=1306+360	11 03 04	61.9	115.6	-2.1		-41.8	560	167	09 36 41
09 46 40	J1308+3546	11 03 44	62.0	115.8	-2.1		-41.7	34	167	09 46 40
09 56 00	=1306+360	11 13 06	63.3	118.9	-1.9		-40.3	560	203	09 46 41
09 56 40	J1308+3546	11 13 46	63.3	119.2	-1.9		-40.2	34	203	09 56 40
10 06 00	=1306+360	11 23 07	64.6	122.5	-1.8		-38.6	560	238	09 56 41
10 06 40	J1308+3546	11 23 47	64.6	122.7	-1.8		-38.5	34	238	10 06 40
10 16 00	=1306+360	11 33 09	65.8	126.3	-1.6		-36.6	560	274	10 06 41
10 16 40	J1308+3546	11 33 49	65.9	126.6	-1.6		-36.4	33	274	10 16 40
10 26 00	=1306+360	11 43 11	67.0	130.5	-1.4		-34.2	560	310	10 16 41
10 26 40	J1308+3546	11 43 51	67.0	130.8	-1.4		-34.1	33	310	10 26 40
10 36 00	=1306+360	11 53 12	68.1	135.0	-1.3		-31.5	560	346	10 26 41
10 36 40	J1308+3546	11 53 52	68.1	135.3	-1.3		-31.4	33	346	10 36 40
10 46 00	=1306+360	12 03 14	69.1	139.8	-1.1		-28.5	560	382	10 36 41
10 46 40	J1308+3546	12 03 54	69.2	140.1	-1.1		-28.3	33	382	10 46 40
10 56 00	=1306+360	12 13 16	70.0	145.0	-0.9		-25.1	560	418	10 46 41
10 56 40	J1308+3546	12 13 56	70.1	145.4	-0.9		-24.9	33	418	10 56 40
11 06 00	=1306+360	12 23 17	70.8	150.6	-0.8		-21.3	560	454	10 56 41

Schedule for TORUN (Code Tr )

Page 3

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---

11 06 40	J1308+3546	12 23 57	70.9	151.0	-0.8		-21.0	33	454	11 06 40
11 16 00	=1306+360	12 33 19	71.5	156.5	-0.6		-17.1	560	490	11 06 41
11 16 40	J1308+3546	12 33 59	71.5	156.9	-0.6		-16.8	33	490	11 16 40
11 26 00	=1306+360	12 43 21	72.0	162.8	-0.4		-12.6	560	526	11 16 41
11 30 00	J1734+3857	12 47 21	40.4	76.0	-4.8		-48.5	51	526	11 30 00
11 36 00	=1732+389	12 53 22	41.3	77.0	-4.7		-48.8	360	549	11 30 01
11 36 40	J1734+3857	12 54 02	41.4	77.1	-4.7		-48.8	34	549	11 36 40
11 46 00	=1732+389	13 03 24	42.7	78.7	-4.5		-49.2	560	585	11 36 41
11 46 40	J1734+3857	13 04 04	42.8	78.9	-4.5		-49.3	34	585	11 46 40
11 56 00	=1732+389	13 13 25	44.2	80.5	-4.4		-49.6	560	621	11 46 41
11 56 40	J1734+3857	13 14 06	44.3	80.6	-4.3		-49.6	34	621	11 56 40
12 06 00	=1732+389	13 23 27	45.7	82.3	-4.2		-49.9	560	656	11 56 41
12 06 40	J1734+3857	13 24 07	45.8	82.4	-4.2		-49.9	34	656	12 06 40
12 16 00	=1732+389	13 33 29	47.2	84.1	-4.0		-50.2	560	692	12 06 41
12 16 40	J1734+3857	13 34 09	47.3	84.2	-4.0		-50.2	34	692	12 16 40
12 26 00	=1732+389	13 43 30	48.7	85.9	-3.9		-50.4	560	728	12 16 41
12 26 40	J1734+3857	13 44 10	48.8	86.1	-3.8		-50.4	34	728	12 26 40
12 36 00	=1732+389	13 53 32	50.2	87.9	-3.7		-50.5	560	764	12 26 41
12 36 40	J1734+3857	13 54 12	50.3	88.0	-3.7		-50.5	34	764	12 36 40
12 46 00	=1732+389	14 03 34	51.7	89.8	-3.5		-50.6	560	800	12 36 41

```
Next scan frequencies: 4958.49 4958.49 4958.49 4958.49 5022.49 5022.49 5022.49 5022.49
Next BBC frequencies: 758.49 758.49 758.49 758.49 822.49 822.49 822.49 822.49
Next scan bandwidths: 32.00 32.00 32.00 32.00 32.00 32.00 32.00 32.00
```

12 51 00	J1246-0730	14 08 34	26.9	202.8	1.4		13.6	60	800	12 51 00
12 58 00	=1243-072	14 15 36	26.5	204.7	1.5		14.7	420	854	12 51 25

----- EB059 -----

12 59 00	J1250+0158	14 16 36	35.8	206.7	1.4		15.7	11	854	12 59 00
13 03 00	=1247+022	14 20 36	35.5	207.9	1.5		16.3	240	885	12 59 01
13 03 30	J12580+0134	14 21 07	35.6	205.6	1.4		15.0	11	885	13 03 30
13 06 30	---	14 24 07	35.4	206.5	1.4		15.5	180	908	13 03 31

Schedule for TORUN (Code Tr )

Page 4

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
13 07 00	J1250+0158	14 24 37	35.2	209.1	1.6		17.0	11	908	13 07 00
13 08 30	=1247+022	14 26 07	35.1	209.5	1.6		17.2	90	919	13 07 01
13 09 00	J12580+0134	14 26 37	35.3	207.2	1.5		16.0	11	919	13 09 00
13 12 00	---	14 29 38	35.1	208.1	1.5		16.4	180	942	13 09 01
13 12 40	J1250+0158	14 30 18	34.8	210.8	1.7		17.9	21	942	13 12 40
13 14 10	=1247+022	14 31 48	34.7	211.2	1.7		18.1	90	954	13 12 41
13 14 40	J12580+0134	14 32 18	34.9	208.9	1.6		16.9	11	954	13 14 40
13 17 40	---	14 35 19	34.7	209.8	1.6		17.4	180	977	13 14 41
13 18 10	J1250+0158	14 35 49	34.4	212.3	1.7		18.7	11	977	13 18 10
13 19 40	=1247+022	14 37 19	34.3	212.8	1.8		19.0	90	988	13 18 11
13 20 10	J12580+0134	14 37 49	34.5	210.5	1.6		17.7	11	988	13 20 10
13 23 10	---	14 40 50	34.2	211.4	1.7		18.2	180	1012	13 20 11
13 23 50	J1250+0158	14 41 30	33.9	214.0	1.8		19.6	21	1012	13 23 50
13 25 20	=1247+022	14 43 00	33.8	214.4	1.9		19.8	90	1023	13 23 51
13 25 50	J12580+0134	14 43 30	34.0	212.1	1.7		18.6	11	1023	13 25 50
13 28 50	---	14 46 31	33.8	213.0	1.8		19.1	180	1046	13 25 51
13 29 20	J1250+0158	14 47 01	33.4	215.5	1.9		20.4	11	1046	13 29 20
13 30 50	=1247+022	14 48 31	33.3	215.9	2.0		20.6	90	1058	13 29 21
13 31 20	J12580+0134	14 49 01	33.6	213.7	1.8		19.5	11	1058	13 31 20
13 34 20	---	14 52 02	33.3	214.5	1.9		19.9	180	1081	13 31 21
13 35 00	J1250+0158	14 52 42	32.9	217.1	2.0		21.3	21	1081	13 35 00
13 36 30	=1247+022	14 54 12	32.8	217.5	2.1		21.5	90	1092	13 35 01
13 37 00	J12580+0134	14 54 42	33.1	215.3	1.9		20.3	11	1092	13 37 00
13 40 00	---	14 57 43	32.8	216.1	2.0		20.7	180	1115	13 37 01
13 40 30	J1250+0158	14 58 13	32.4	218.6	2.1		22.0	11	1115	13 40 30
13 42 00	=1247+022	14 59 43	32.3	219.0	2.1		22.2	90	1127	13 40 31
13 42 30	J12580+0134	15 00 13	32.6	216.8	2.0		21.1	11	1127	13 42 30
13 45 30	---	15 03 13	32.3	217.7	2.1		21.5	180	1150	13 42 31
13 46 10	J1250+0158	15 03 54	31.9	220.2	2.2		22.8	21	1150	13 46 10
13 47 40	=1247+022	15 05 24	31.7	220.6	2.2		23.0	90	1162	13 46 11

Schedule for TORUN (Code Tr )

Page 5

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---									
13 48 10	J12580+0134	15 05 54	32.1	218.4	2.1	21.9	12	1162	13 48 10
13 51 10	---	15 08 54	31.8	219.2	2.2	22.3	180	1185	13 48 11
13 51 40	J1250+0158	15 09 24	31.3	221.7	2.3	23.5	11	1185	13 51 40
13 53 10	=1247+022	15 10 55	31.2	222.1	2.3	23.7	90	1196	13 51 41
13 53 40	J12580+0134	15 11 25	31.6	219.9	2.2	22.7	12	1196	13 53 40
13 56 40	---	15 14 25	31.3	220.7	2.3	23.1	180	1219	13 53 41
13 57 20	J1250+0158	15 15 05	30.8	223.2	2.4	24.3	21	1219	13 57 20
13 58 50	=1247+022	15 16 36	30.6	223.6	2.4	24.5	90	1231	13 57 21
13 59 20	J12580+0134	15 17 06	31.0	221.4	2.3	23.4	12	1231	13 59 20
14 02 20	---	15 20 06	30.7	222.2	2.4	23.8	180	1254	13 59 21
14 02 50	J1250+0158	15 20 36	30.2	224.6	2.5	25.0	11	1254	14 02 50
14 04 20	=1247+022	15 22 07	30.0	225.0	2.5	25.2	90	1265	14 02 51
14 04 50	J12580+0134	15 22 37	30.4	222.9	2.4	24.1	12	1265	14 04 50
14 07 50	---	15 25 37	30.1	223.7	2.4	24.5	180	1288	14 04 51
14 08 30	J1250+0158	15 26 17	29.6	226.1	2.6	25.7	21	1288	14 08 30
14 10 00	=1247+022	15 27 47	29.4	226.5	2.6	25.8	90	1300	14 08 31
14 10 30	J12580+0134	15 28 18	29.9	224.4	2.5	24.8	12	1300	14 10 30
14 13 30	---	15 31 18	29.5	225.2	2.5	25.2	180	1323	14 10 31
14 14 00	J1250+0158	15 31 48	29.0	227.5	2.7	26.3	11	1323	14 14 00
14 15 30	=1247+022	15 33 18	28.8	227.9	2.7	26.5	90	1335	14 14 01
14 16 00	J12580+0134	15 33 48	29.3	225.8	2.6	25.5	12	1335	14 16 00
14 19 00	---	15 36 49	28.9	226.6	2.6	25.9	180	1358	14 16 01
14 19 40	J1250+0158	15 37 29	28.3	229.0	2.8	27.0	22	1358	14 19 40
14 21 10	=1247+022	15 38 59	28.2	229.4	2.8	27.1	90	1369	14 19 41
14 21 40	J12580+0134	15 39 29	28.7	227.3	2.7	26.2	12	1369	14 21 40
14 24 40	---	15 42 30	28.3	228.0	2.7	26.5	180	1392	14 21 41
14 25 10	J1250+0158	15 43 00	27.7	230.4	2.9	27.6	12	1392	14 25 10
14 26 40	=1247+022	15 44 30	27.5	230.7	2.9	27.7	90	1404	14 25 11
14 27 10	J12580+0134	15 45 00	28.0	228.7	2.8	26.8	12	1404	14 27 10
14 30 10	---	15 48 01	27.7	229.4	2.8	27.2	180	1427	14 27 11

Schedule for TORUN (Code Tr )

Page 6

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
14 30 50	J1250+0158	15 48 41	27.1	231.8	3.0		28.2	22	1427	14 30 50
14 32 20	=1247+022	15 50 11	26.9	232.2	3.0		28.3	90	1438	14 30 51
14 32 50	J12580+0134	15 50 41	27.4	230.1	2.9		27.4	12	1438	14 32 50
14 35 50	---	15 53 42	27.0	230.9	2.9		27.8	180	1462	14 32 51
14 36 20	J1250+0158	15 54 12	26.4	233.1	3.1		28.7	12	1462	14 36 20
14 37 50	=1247+022	15 55 42	26.2	233.5	3.1		28.9	90	1473	14 36 21
14 38 20	J12580+0134	15 56 12	26.8	231.5	3.0		28.0	12	1473	14 38 20
14 41 20	---	15 59 13	26.4	232.2	3.0		28.3	180	1496	14 38 21
14 42 00	J1250+0158	15 59 53	25.7	234.5	3.1		29.3	22	1496	14 42 00
14 43 30	=1247+022	16 01 23	25.5	234.9	3.2		29.4	90	1508	14 42 01
14 44 00	J12580+0134	16 01 53	26.1	232.9	3.1		28.6	12	1508	14 44 00
14 47 00	---	16 04 54	25.7	233.6	3.1		28.9	180	1531	14 44 01
14 47 30	J1250+0158	16 05 24	25.0	235.8	3.2		29.8	12	1531	14 47 30
14 49 00	=1247+022	16 06 54	24.8	236.2	3.3		30.0	90	1542	14 47 31
14 49 30	J12580+0134	16 07 24	25.4	234.2	3.1		29.2	12	1542	14 49 30
14 52 30	---	16 10 24	25.0	234.9	3.2		29.5	180	1565	14 49 31
14 53 10	J1250+0158	16 11 05	24.3	237.2	3.3		30.3	22	1565	14 53 10
14 54 40	=1247+022	16 12 35	24.1	237.6	3.4		30.5	90	1577	14 53 11
14 55 10	J12580+0134	16 13 05	24.7	235.6	3.2		29.7	12	1577	14 55 10
14 59 00	---	16 16 56	24.2	236.5	3.3		30.1	230	1606	14 55 11
----- RSC03 -----										
15 02 00	1622-253	16 19 56	11.4	178.4	-0.1		-1.0	48	1606	15 02 00
15 03 10	---	16 21 06	11.4	178.7	-0.1		-0.9	70	1615	15 02 01
15 03 30	J162201	16 21 26	14.0	179.6	-0.0		-0.2	-4	1615	15 03 30
15 08 00	---	16 25 57	14.0	180.7	0.0		0.5	266	1650	15 03 31
15 08 30	1622-253	16 26 27	11.4	179.9	-0.0		-0.1	6	1650	15 08 30
15 09 30	---	16 27 27	11.4	180.2	0.0		0.1	60	1658	15 08 31
15 09 30	J162141	16 27 27	14.0	181.1	0.1		0.7	-23	1658	No stop
15 10 30	---	16 28 27	14.0	181.4	0.1		0.9	37	1665	15 09 31

Schedule for TORUN (Code Tr )

Page 7

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
15 10 30	J1621-2241	16 28 27	14.2	181.4	0.1		0.9	-10	1665	No stop
15 11 30	---	16 29 28	14.2	181.7	0.1		1.1	50	1673	15 10 31
15 12 00	1622-253	16 29 58	11.4	180.7	0.1		0.5	6	1673	15 12 00
15 13 00	---	16 30 58	11.4	181.0	0.1		0.6	60	1681	15 12 01
15 13 00	J162200	16 30 58	13.9	181.9	0.1		1.2	-23	1681	No stop
15 14 00	---	16 31 58	13.9	182.1	0.1		1.4	37	1688	15 13 01
15 14 00	J1620-2259	16 31 58	13.9	182.5	0.2		1.6	-10	1688	No stop
15 15 00	---	16 32 58	13.9	182.7	0.2		1.8	50	1696	15 14 01
15 15 30	1622-253	16 33 28	11.4	181.5	0.1		1.0	7	1696	15 15 30
15 16 30	---	16 34 28	11.4	181.8	0.1		1.2	60	1704	15 15 31
15 16 30	J162141	16 34 28	13.9	182.8	0.2		1.8	-23	1704	No stop
15 17 30	---	16 35 29	13.9	183.0	0.2		2.0	37	1712	15 16 31
15 17 30	J1621-2241	16 35 29	14.1	183.1	0.2		2.0	-10	1712	No stop
15 18 30	---	16 36 29	14.1	183.3	0.2		2.2	50	1719	15 17 31
15 19 00	1622-253	16 36 59	11.4	182.3	0.2		1.6	6	1719	15 19 00
15 20 00	---	16 37 59	11.4	182.6	0.2		1.7	60	1727	15 19 01
15 20 00	J162200	16 37 59	13.9	183.6	0.2		2.3	-23	1727	No stop
15 21 00	---	16 38 59	13.9	183.8	0.3		2.5	37	1735	15 20 01
15 21 00	J1620-2259	16 38 59	13.8	184.1	0.3		2.7	-10	1735	No stop
15 22 00	---	16 39 59	13.8	184.4	0.3		2.9	50	1742	15 21 01
15 22 30	1622-253	16 40 29	11.4	183.2	0.2		2.1	7	1742	15 22 30
15 23 30	---	16 41 30	11.3	183.4	0.2		2.3	60	1750	15 22 31
15 23 30	J162141	16 41 30	13.9	184.5	0.3		2.9	-23	1750	No stop
15 24 30	---	16 42 30	13.9	184.7	0.3		3.1	37	1758	15 23 31
15 24 30	J1621-2241	16 42 30	14.1	184.7	0.3		3.1	-10	1758	No stop
15 25 30	---	16 43 30	14.0	185.0	0.3		3.2	50	1765	15 24 31
15 26 00	1622-253	16 44 00	11.3	184.0	0.3		2.6	6	1765	15 26 00
15 27 00	---	16 45 00	11.3	184.2	0.3		2.8	60	1773	15 26 01
15 27 00	J162200	16 45 00	13.8	185.2	0.4		3.4	-23	1773	No stop
15 28 00	---	16 46 00	13.8	185.5	0.4		3.6	37	1781	15 27 01

Schedule for TORUN (Code Tr )

Page 8

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
15 28 00	J1620-2259	16 46 00	13.7	185.8	0.4		3.8	-10	1781	No stop
15 29 00	---	16 47 00	13.7	186.0	0.4		3.9	50	1788	15 28 01
15 29 30	1622-253	16 47 31	11.3	184.8	0.3		3.2	7	1788	15 29 30
15 30 30	---	16 48 31	11.3	185.0	0.4		3.3	60	1796	15 29 31
15 30 30	J162141	16 48 31	13.8	186.1	0.4		4.0	-23	1796	No stop
15 31 30	---	16 49 31	13.8	186.4	0.4		4.1	37	1804	15 30 31
15 31 30	J1621-2241	16 49 31	14.0	186.4	0.4		4.2	-10	1804	No stop
15 32 30	---	16 50 31	13.9	186.7	0.5		4.3	50	1812	15 31 31
15 33 00	1622-253	16 51 01	11.2	185.6	0.4		3.7	6	1812	15 33 00
15 34 00	---	16 52 01	11.2	185.8	0.4		3.9	60	1819	15 33 01
15 34 00	J162200	16 52 01	13.7	186.9	0.5		4.5	-23	1819	No stop
15 35 00	---	16 53 01	13.7	187.1	0.5		4.6	37	1827	15 34 01
15 35 00	J1620-2259	16 53 01	13.6	187.5	0.5		4.9	-10	1827	No stop
15 36 00	---	16 54 02	13.6	187.7	0.5		5.0	50	1835	15 35 01
15 36 30	1622-253	16 54 32	11.2	186.4	0.5		4.2	7	1835	15 36 30
15 37 30	---	16 55 32	11.2	186.6	0.5		4.4	60	1842	15 36 31
15 37 30	J162141	16 55 32	13.6	187.8	0.5		5.1	-23	1842	No stop
15 38 30	---	16 56 32	13.6	188.0	0.6		5.2	37	1850	15 37 31
15 38 30	J1621-2241	16 56 32	13.8	188.1	0.6		5.2	-10	1850	No stop
15 39 30	---	16 57 32	13.8	188.3	0.6		5.4	50	1858	15 38 31
15 40 00	1622-253	16 58 02	11.1	187.2	0.5		4.8	6	1858	15 40 00
15 41 00	---	16 59 02	11.1	187.4	0.5		4.9	60	1865	15 40 01
15 41 00	J162200	16 59 02	13.5	188.5	0.6		5.6	-23	1865	No stop
15 42 00	---	17 00 03	13.5	188.8	0.6		5.7	37	1873	15 41 01
15 42 00	J1620-2259	17 00 03	13.4	189.1	0.6		5.9	-10	1873	No stop
15 43 00	---	17 01 03	13.4	189.3	0.7		6.1	50	1881	15 42 01
15 43 30	1622-253	17 01 33	11.0	188.0	0.6		5.3	7	1881	15 43 30
15 44 30	---	17 02 33	11.0	188.2	0.6		5.5	60	1888	15 43 31
15 44 30	J162141	17 02 33	13.5	189.4	0.7		6.1	-23	1888	No stop
15 45 30	---	17 03 33	13.5	189.7	0.7		6.3	37	1896	15 44 31



Schedule for TORUN (Code Tr )

Page 9

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
15 45 30	J1621-2241	17 03 33	13.7	189.7	0.7		6.3	-10	1896	No stop
15 46 30	---	17 04 33	13.6	190.0	0.7		6.5	50	1904	15 45 31
15 47 00	1622-253	17 05 03	11.0	188.8	0.6		5.8	6	1904	15 47 00
15 48 00	---	17 06 04	10.9	189.0	0.7		6.0	60	1912	15 47 01
15 48 00	J162200	17 06 04	13.4	190.2	0.7		6.6	-23	1912	No stop
15 49 00	---	17 07 04	13.3	190.4	0.7		6.8	37	1919	15 48 01
15 49 00	J1620-2259	17 07 04	13.3	190.8	0.8		7.0	-10	1919	No stop
15 50 00	---	17 08 04	13.2	191.0	0.8		7.1	50	1927	15 49 01
15 50 30	1622-253	17 08 34	10.9	189.6	0.7		6.4	7	1927	15 50 30
15 51 30	---	17 09 34	10.9	189.8	0.7		6.5	60	1935	15 50 31
15 51 30	J162141	17 09 34	13.3	191.1	0.8		7.2	-23	1935	No stop
15 52 30	---	17 10 34	13.3	191.3	0.8		7.4	37	1942	15 51 31
15 52 30	J1621-2241	17 10 34	13.5	191.4	0.8		7.4	-10	1942	No stop
15 53 30	---	17 11 34	13.4	191.6	0.8		7.5	50	1950	15 52 31
15 54 00	1622-253	17 12 05	10.8	190.4	0.8		6.9	6	1950	15 54 00
15 55 00	---	17 13 05	10.8	190.6	0.8		7.0	60	1958	15 54 01
15 55 00	J162200	17 13 05	13.2	191.8	0.8		7.7	-23	1958	No stop
15 56 00	---	17 14 05	13.1	192.1	0.9		7.8	37	1965	15 55 01
15 56 00	J1620-2259	17 14 05	13.0	192.4	0.9		8.1	-10	1965	No stop
15 57 00	---	17 15 05	13.0	192.6	0.9		8.2	50	1973	15 56 01
15 57 30	1622-253	17 15 35	10.7	191.2	0.8		7.4	7	1973	15 57 30
15 58 30	---	17 16 35	10.7	191.4	0.8		7.6	60	1981	15 57 31
15 58 30	J162141	17 16 35	13.1	192.7	0.9		8.3	-23	1981	No stop
15 59 30	---	17 17 35	13.0	193.0	0.9		8.4	37	1988	15 58 31
15 59 30	J1621-2241	17 17 35	13.2	193.0	0.9		8.4	-10	1988	No stop
16 00 30	---	17 18 36	13.2	193.3	0.9		8.6	50	1996	15 59 31
16 01 00	1622-253	17 19 06	10.6	192.0	0.9		7.9	6	1996	16 01 00
16 02 00	---	17 20 06	10.6	192.2	0.9		8.1	60	2004	16 01 01
16 02 00	J162200	17 20 06	12.9	193.5	1.0		8.7	-23	2004	No stop
16 03 00	---	17 21 06	12.9	193.7	1.0		8.9	37	2012	16 02 01

Schedule for TORUN (Code Tr )

Page 10

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
16 03 00	J1620-2259	17 21 06	12.8	194.0	1.0		9.1	-10	2012	No stop
16 04 00	---	17 22 06	12.8	194.3	1.0		9.3	50	2019	16 03 01
16 04 30	1622-253	17 22 36	10.5	192.8	0.9		8.5	8	2019	16 04 30
16 05 30	---	17 23 36	10.4	193.0	0.9		8.6	60	2027	16 04 31
16 05 30	J162141	17 23 36	12.8	194.4	1.0		9.3	-23	2027	No stop
16 06 30	---	17 24 37	12.8	194.6	1.0		9.5	37	2035	16 05 31
16 06 30	J1621-2241	17 24 37	13.0	194.7	1.0		9.5	-10	2035	No stop
16 07 30	---	17 25 37	13.0	194.9	1.1		9.6	50	2042	16 06 31
16 08 00	1622-253	17 26 07	10.4	193.6	1.0		9.0	6	2042	16 08 00
16 09 00	---	17 27 07	10.3	193.8	1.0		9.1	60	2050	16 08 01
16 09 00	J162200	17 27 07	12.7	195.1	1.1		9.8	-23	2050	No stop
16 10 00	---	17 28 07	12.6	195.3	1.1		9.9	37	2058	16 09 01
16 10 00	J1620-2259	17 28 07	12.5	195.7	1.1		10.1	-10	2058	No stop
16 11 00	---	17 29 07	12.5	195.9	1.1		10.3	50	2065	16 10 01
16 11 30	1622-253	17 29 37	10.2	194.4	1.0		9.5	8	2065	16 11 30
16 12 30	---	17 30 38	10.2	194.6	1.1		9.7	60	2073	16 11 31
16 12 30	J162141	17 30 38	12.6	196.0	1.1		10.4	-23	2073	No stop
16 13 30	---	17 31 38	12.5	196.2	1.1		10.5	37	2081	16 12 31
16 13 30	J1621-2241	17 31 38	12.7	196.3	1.2		10.5	-10	2081	No stop
16 14 30	---	17 32 38	12.7	196.5	1.2		10.7	50	2088	16 13 31
16 15 00	1622-253	17 33 08	10.1	195.2	1.1		10.0	6	2088	16 15 00
16 16 00	---	17 34 08	10.1	195.4	1.1		10.2	60	2096	16 15 01
16 16 00	J162200	17 34 08	12.4	196.7	1.2		10.8	-23	2096	No stop
16 17 00	---	17 35 08	12.3	197.0	1.2		11.0	37	2104	16 16 01
16 17 00	J1620-2259	17 35 08	12.2	197.3	1.2		11.2	-10	2104	No stop
16 18 00	---	17 36 08	12.2	197.5	1.2		11.3	50	2112	16 17 01
16 18 30	1622-253	17 36 39	10.0	196.0	1.2		10.5	8	2112	16 18 30
16 19 30	---	17 37 39	9.9	196.2	1.2		10.7	60	2119	16 18 31
16 19 30	J162141	17 37 39	12.3	197.6	1.2		11.4	-23	2119	No stop
16 20 30	---	17 38 39	12.2	197.9	1.3		11.5	37	2127	16 19 31

Schedule for TORUN (Code Tr )

Page 11

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
16 20 30	J1621-2241	17 38 39	12.4	197.9	1.3		11.6	-10	2127	No stop
16 21 30	---	17 39 39	12.4	198.2	1.3		11.7	50	2135	16 20 31
16 22 00	1622-253	17 40 09	9.8	196.8	1.2		11.1	7	2135	16 22 00
16 23 00	---	17 41 09	9.8	197.0	1.2		11.2	60	2142	16 22 01
16 23 00	J162200	17 41 09	12.1	198.4	1.3		11.9	-23	2142	No stop
16 24 00	---	17 42 09	12.0	198.6	1.3		12.0	37	2150	16 23 01
16 24 00	J1620-2259	17 42 09	11.9	198.9	1.3		12.2	-10	2150	No stop
16 25 00	---	17 43 10	11.9	199.1	1.4		12.4	50	2158	16 24 01
16 25 30	1622-253	17 43 40	9.6	197.5	1.3		11.6	8	2158	16 25 30
16 26 30	---	17 44 40	9.6	197.8	1.3		11.7	60	2165	16 25 31
16 26 30	J162141	17 44 40	11.9	199.2	1.4		12.4	-23	2165	No stop
16 27 30	---	17 45 40	11.9	199.5	1.4		12.6	37	2173	16 26 31
16 27 30	J1621-2241	17 45 40	12.1	199.6	1.4		12.6	-10	2173	No stop
16 28 30	---	17 46 40	12.0	199.8	1.4		12.7	50	2181	16 27 31
16 29 00	1622-253	17 47 10	9.5	198.3	1.3		12.1	7	2181	16 29 00
16 30 00	---	17 48 10	9.4	198.6	1.4		12.2	60	2188	16 29 01
16 30 00	J162200	17 48 10	11.7	200.0	1.4		12.9	-22	2188	No stop
16 31 00	---	17 49 11	11.7	200.2	1.4		13.0	38	2196	16 30 01
16 31 00	J1620-2259	17 49 11	11.6	200.5	1.5		13.2	-10	2196	No stop
16 32 00	---	17 50 11	11.5	200.8	1.5		13.4	50	2204	16 31 01
16 32 30	1622-253	17 50 41	9.3	199.1	1.4		12.6	8	2204	16 32 30
16 33 30	---	17 51 41	9.3	199.3	1.4		12.7	60	2212	16 32 31
16 33 30	J162141	17 51 41	11.6	200.9	1.5		13.4	-22	2212	No stop
16 34 30	---	17 52 41	11.5	201.1	1.5		13.6	38	2219	16 33 31
16 34 30	J1621-2241	17 52 41	11.7	201.2	1.5		13.6	-10	2219	No stop
16 35 30	---	17 53 41	11.6	201.4	1.5		13.7	50	2227	16 34 31
16 36 00	1622-253	17 54 11	9.1	199.9	1.5		13.1	7	2227	16 36 00
16 37 00	---	17 55 12	9.1	200.1	1.5		13.2	60	2235	16 36 01
16 37 00	J162200	17 55 12	11.4	201.6	1.5		13.9	-22	2235	No stop
16 38 00	---	17 56 12	11.3	201.8	1.6		14.0	38	2242	16 37 01

Schedule for TORUN (Code Tr )

Page 12

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
16 38 00	J1620-2259	17 56 12	11.2	202.1	1.6		14.2	-10	2242	No stop
16 39 00	---	17 57 12	11.1	202.4	1.6		14.4	50	2250	16 38 01
16 39 30	1622-253	17 57 42	9.0	200.7	1.5		13.6	8	2250	16 39 30
16 40 30	---	17 58 42	8.9	200.9	1.5		13.7	60	2258	16 39 31
16 40 30	J162141	17 58 42	11.2	202.5	1.6		14.4	-22	2258	No stop
16 41 30	---	17 59 42	11.1	202.7	1.6		14.6	38	2265	16 40 31
16 41 30	J1621-2241	17 59 42	11.3	202.8	1.6		14.6	-10	2265	No stop
16 42 30	---	18 00 43	11.2	203.0	1.6		14.7	50	2273	16 41 31
16 43 00	1622-253	18 01 13	8.8	201.5	1.6		14.1	7	2273	16 43 00
16 44 00	---	18 02 13	8.7	201.7	1.6		14.2	60	2281	16 43 01
16 44 00	J162200	18 02 13	11.0	203.2	1.7		14.9	-22	2281	No stop
16 45 00	---	18 03 13	10.9	203.4	1.7		15.0	38	2288	16 44 01
16 45 00	J1620-2259	18 03 13	10.8	203.7	1.7		15.2	-10	2288	No stop
16 46 00	---	18 04 13	10.7	203.9	1.7		15.4	50	2296	16 45 01
16 46 30	1622-253	18 04 43	8.6	202.2	1.6		14.6	8	2296	16 46 30
16 47 30	---	18 05 43	8.5	202.4	1.6		14.7	60	2304	16 46 31
16 47 30	J162141	18 05 43	10.8	204.0	1.7		15.4	-22	2304	No stop
16 48 30	---	18 06 44	10.7	204.3	1.7		15.5	38	2312	16 47 31
16 48 30	J1621-2241	18 06 44	10.9	204.4	1.7		15.6	-10	2312	No stop
16 49 30	---	18 07 44	10.8	204.6	1.8		15.7	50	2319	16 48 31
16 50 00	1622-253	18 08 14	8.4	203.0	1.7		15.1	7	2319	16 50 00
16 51 00	---	18 09 14	8.3	203.2	1.7		15.2	60	2327	16 50 01
16 51 00	J162200	18 09 14	10.5	204.8	1.8		15.8	-22	2327	No stop
16 52 00	---	18 10 14	10.5	205.0	1.8		16.0	38	2335	16 51 01
16 52 00	J1620-2259	18 10 14	10.3	205.3	1.8		16.2	-10	2335	No stop
16 53 00	---	18 11 14	10.3	205.5	1.8		16.3	50	2342	16 52 01
16 53 30	1622-253	18 11 44	8.2	203.8	1.7		15.6	8	2342	16 53 30
16 54 30	---	18 12 44	8.1	204.0	1.8		15.7	60	2350	16 53 31
16 54 30	J162141	18 12 44	10.3	205.6	1.8		16.4	-22	2350	No stop
16 55 30	---	18 13 45	10.2	205.9	1.9		16.5	38	2358	16 54 31

Schedule for TORUN (Code Tr )

Page 13

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---

```
16 55 30  J1621-2241  18 13 45  10.4 205.9  1.9      16.5  -10   2358  No stop
16 56 30  ---          18 14 45  10.4 206.2  1.9      16.7   50   2365  16 55 31

16 57 00  1622-253       18 15 15   7.9 204.5  1.8      16.0   7   2365  16 57 00
16 58 00  ---          18 16 15   7.9 204.8  1.8      16.2  60   2373  16 57 01

16 58 00  J162200        18 16 15  10.1 206.3  1.9      16.8  -22   2373  No stop
16 59 00  ---          18 17 15  10.0 206.6  1.9      17.0  38   2381  16 58 01

16 59 00  J1620-2259     18 17 15   9.9 206.9  1.9      17.1  -10   2381  No stop
17 00 00  ---          18 18 15   9.8 207.1  1.9      17.3   50   2388  16 59 01
```

----- CLOCK SEARCH -----

```
Next scan frequencies: 4974.49 4974.49 4974.49 4974.49 5006.49 5006.49 5006.49 5006.49
Next BBC frequencies:  774.49  774.49  774.49  774.49  806.49  806.49  806.49  806.49
Next scan bandwidths:  16.00   16.00   16.00   16.00   16.00   16.00   16.00   16.00
```

```
17 05 00  2113+293     18 23 16  50.9 109.4 -2.9     -40.7  89   2388  17 05 00
17 15 00  ---          18 33 18  52.3 112.1 -2.7     -39.8  600  2427  17 05 25

17 15 30  2113+293     18 33 48  52.3 112.2 -2.7     -39.8  24   2427  17 15 30
17 28 30  ---          18 46 50  54.1 115.9 -2.5     -38.4  780  2477  17 15 31

17 29 00  2113+293     18 47 20  54.2 116.0 -2.5     -38.4  24   2477  17 29 00
17 43 30  ---          19 01 53  56.1 120.4 -2.2     -36.6  870  2533  17 29 01

17 44 00  2113+293     19 02 23  56.2 120.6 -2.2     -36.5  24   2533  17 44 00
17 58 30  ---          19 16 55  58.0 125.3 -2.0     -34.3  870  2588  17 44 01

17 59 00  2113+293     19 17 25  58.1 125.5 -2.0     -34.2  24   2588  17 59 00
18 13 30  ---          19 31 57  59.8 130.6 -1.7     -31.6  870  2644  17 59 01

18 14 00  2113+293     19 32 28  59.9 130.8 -1.7     -31.5  24   2644  18 14 00
18 28 30  ---          19 47 00  61.4 136.4 -1.5     -28.5  870  2700  18 14 01

18 29 00  2113+293     19 47 30  61.5 136.6 -1.5     -28.4  24   2700  18 29 00
18 43 30  ---          20 02 02  62.9 142.6 -1.2     -24.8  870  2756  18 29 01

18 44 00  2113+293     20 02 32  62.9 142.8 -1.2     -24.7  23   2756  18 44 00
18 58 30  ---          20 17 05  64.2 149.4 -1.0     -20.6  870  2812  18 44 01

18 59 00  2113+293     20 17 35  64.2 149.6 -1.0     -20.4  23   2812  18 59 00
19 13 30  ---          20 32 07  65.2 156.7 -0.7     -15.9  870  2867  18 59 01
```

Schedule for TORUN (Code Tr )

Page 14

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
19 14 00	2113+293	20 32 37	65.2	156.9	-0.7		-15.7	23	2867	19 14 00
19 28 30	---	20 47 10	65.9	164.4	-0.5		-10.7	870	2923	19 14 01
19 29 00	BLLAC	20 47 40	73.4	122.7	-1.3		-43.1	-67	2923	19 29 00
19 43 30	---	21 02 12	75.2	130.3	-1.0		-38.3	803	2979	19 29 01
19 44 00	BLLAC	21 02 42	75.2	130.6	-1.0		-38.1	23	2979	19 44 00
19 58 30	---	21 17 15	76.8	139.7	-0.8		-31.7	870	3035	19 44 01
19 59 00	BLLAC	21 17 45	76.8	140.0	-0.8		-31.5	23	3035	19 59 00
20 13 30	---	21 32 17	78.1	151.0	-0.5		-23.2	870	3090	19 59 01
20 14 00	BLLAC	21 32 47	78.1	151.4	-0.5		-22.9	22	3090	20 14 00
20 28 30	---	21 47 20	78.9	164.3	-0.3		-12.7	870	3146	20 14 01
20 29 00	BLLAC	21 47 50	79.0	164.8	-0.3		-12.3	22	3146	20 29 00
20 43 30	---	22 02 22	79.3	178.9	-0.0		-0.9	870	3202	20 29 01
20 44 00	BLLAC	22 02 52	79.3	179.4	-0.0		-0.5	22	3202	20 44 00
20 58 30	---	22 17 25	79.0	193.7	0.2		11.1	870	3258	20 44 01
20 59 00	BLLAC	22 17 55	79.0	194.1	0.2		11.5	22	3258	20 59 00
21 13 30	---	22 32 27	78.2	207.2	0.5		21.8	870	3313	20 59 01
21 14 00	BLLAC	22 32 57	78.2	207.6	0.5		22.1	22	3313	21 14 00
21 28 30	---	22 47 30	77.0	218.8	0.7		30.6	870	3369	21 14 01
21 29 00	BLLAC	22 48 00	76.9	219.2	0.7		30.9	23	3369	21 29 00
21 43 30	---	23 02 32	75.4	228.5	1.0		37.5	870	3425	21 29 01
21 44 00	BLLAC	23 03 02	75.4	228.8	1.0		37.7	23	3425	21 44 00
21 58 30	---	23 17 34	73.6	236.5	1.2		42.6	870	3481	21 44 01
22 03 30	J0403+2600	23 22 35	32.2	88.5	-4.7		-41.9	-11	3481	22 03 30
22 13 30	=0400+258	23 32 37	33.7	90.5	-4.5		-41.9	589	3519	22 03 31
22 14 00	J0403+2600	23 33 07	33.7	90.6	-4.5		-41.9	24	3519	22 14 00
22 28 30	=0400+258	23 47 39	35.9	93.5	-4.3		-41.8	870	3575	22 14 01
22 29 00	J0403+2600	23 48 09	36.0	93.6	-4.3		-41.8	24	3575	22 29 00
22 43 30	=0400+258	00 02 42	38.2	96.7	-4.0		-41.6	870	3631	22 29 01
22 44 00	J0403+2600	00 03 12	38.2	96.8	-4.0		-41.6	24	3631	22 44 00
22 58 30	=0400+258	00 17 44	40.4	100.0	-3.8		-41.2	870	3687	22 44 01

Schedule for TORUN (Code Tr ) Page 15  
 e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.  
 Early: Seconds between end of slew and start. Dwell: On source seconds.  
 Disk: GBytes recorded to this point.  
 TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
----- RP026C -----										
23 00 00	J0529+3209	00 19 15	32.2	77.9	-5.2		-43.9	31	3687	23 00 00
23 02 00	---	00 21 15	32.5	78.3	-5.2		-44.0	120	3694	23 00 01
23 02 00	FRB	00 21 15	32.8	77.0	-5.2		-44.3	-15	3694	No stop
23 05 30	---	00 24 45	33.3	77.6	-5.1		-44.5	195	3708	23 02 01
23 05 30	J0529+3209	00 24 45	33.0	78.9	-5.1		-44.1	-15	3708	No stop
23 07 00	---	00 26 16	33.2	79.2	-5.1		-44.2	75	3713	23 05 31
23 07 00	FRB	00 26 16	33.6	77.9	-5.1		-44.5	-15	3713	No stop
23 10 30	---	00 29 46	34.1	78.5	-5.1		-44.7	195	3727	23 07 01
23 11 00	J0529+3209	00 30 16	33.8	79.9	-5.0		-44.3	15	3727	23 11 00
23 12 00	---	00 31 17	34.0	80.1	-5.0		-44.3	60	3731	23 11 01
23 12 00	FRB	00 31 17	34.3	78.8	-5.0		-44.7	-15	3731	No stop
23 15 30	---	00 34 47	34.8	79.4	-5.0		-44.8	195	3744	23 12 01
23 15 30	J0529+3209	00 34 47	34.5	80.7	-4.9		-44.4	-15	3744	No stop
23 17 00	---	00 36 17	34.7	81.0	-4.9		-44.5	75	3750	23 15 31
23 17 00	J0530+3301	00 36 17	35.2	80.1	-4.9		-44.9	-13	3750	No stop
23 18 30	---	00 37 48	35.4	80.4	-4.9		-44.9	77	3756	23 17 01
23 19 00	J0529+3209	00 38 18	35.0	81.4	-4.9		-44.5	16	3756	23 19 00
23 20 00	---	00 39 18	35.2	81.6	-4.9		-44.6	60	3760	23 19 01
23 20 00	FRB	00 39 18	35.5	80.3	-4.9		-45.0	-15	3760	No stop
23 23 30	---	00 42 48	36.0	80.9	-4.8		-45.1	195	3773	23 20 01
23 23 30	J0529+3209	00 42 48	35.7	82.2	-4.8		-44.7	-15	3773	No stop
23 25 00	---	00 44 19	35.9	82.5	-4.8		-44.7	75	3779	23 23 31
23 25 00	FRB	00 44 19	36.2	81.2	-4.8		-45.1	-15	3779	No stop
23 28 30	---	00 47 49	36.8	81.8	-4.8		-45.2	195	3792	23 25 01
23 29 00	J0529+3209	00 48 19	36.5	83.3	-4.7		-44.8	15	3792	23 29 00
23 30 00	---	00 49 19	36.7	83.4	-4.7		-44.8	60	3796	23 29 01
23 30 00	FRB	00 49 19	37.0	82.1	-4.7		-45.3	-15	3796	No stop
23 33 30	---	00 52 50	37.5	82.8	-4.7		-45.4	195	3810	23 30 01

Schedule for TORUN (Code Tr )

Page 16

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 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 21 Sep 2016 Day 265 ---										
23 33 30	J0529+3209	00 52 50	37.2	84.1	-4.6		-44.9	-16	3810	No stop
23 35 00	---	00 54 20	37.4	84.4	-4.6		-44.9	74	3815	23 33 31
23 35 00	J0530+3301	00 54 20	37.9	83.4	-4.6		-45.4	-14	3815	No stop
23 36 30	---	00 55 51	38.1	83.7	-4.6		-45.4	76	3821	23 35 01
23 37 00	J0529+3209	00 56 21	37.7	84.8	-4.6		-44.9	16	3821	23 37 00
23 38 00	---	00 57 21	37.9	85.0	-4.6		-45.0	60	3825	23 37 01
23 38 00	FRB	00 57 21	38.2	83.6	-4.6		-45.5	-15	3825	No stop
23 41 30	---	01 00 51	38.7	84.2	-4.5		-45.5	195	3838	23 38 01
23 41 30	J0529+3209	01 00 51	38.4	85.6	-4.5		-45.0	-16	3838	No stop
23 43 00	---	01 02 22	38.6	85.9	-4.5		-45.0	74	3844	23 41 31
23 43 00	FRB	01 02 22	38.9	84.5	-4.5		-45.6	-15	3844	No stop
23 46 30	---	01 05 52	39.4	85.2	-4.5		-45.6	195	3858	23 43 01
23 47 10	J0529+3209	01 06 32	39.2	86.7	-4.4		-45.1	24	3858	23 47 10
23 48 10	---	01 07 32	39.4	86.9	-4.4		-45.1	60	3862	23 47 11
23 48 10	FRB	01 07 32	39.7	85.5	-4.4		-45.6	-15	3862	No stop
23 51 40	---	01 11 03	40.2	86.2	-4.4		-45.7	195	3875	23 48 11
23 51 40	J0529+3209	01 11 03	39.9	87.6	-4.3		-45.1	-16	3875	No stop
23 53 10	---	01 12 33	40.1	87.9	-4.3		-45.1	74	3881	23 51 41
23 53 10	J0530+3301	01 12 33	40.6	86.9	-4.3		-45.7	-14	3881	No stop
23 56 40	---	01 16 04	41.1	87.6	-4.3		-45.7	196	3894	23 53 11
23 57 20	J0529+3209	01 16 44	40.8	88.7	-4.2		-45.2	26	3894	23 57 20
23 58 20	---	01 17 44	40.9	88.9	-4.2		-45.2	60	3898	23 57 21
--- Start: Wed 21 Sep 2016 Day 265 -- Stop: Thu 22 Sep 2016 Day 266 ---										
23 58 20	FRB	01 17 44	41.2	87.5	-4.3		-45.8	-16	3898	No stop
00 01 50	---	01 21 15	41.8	88.2	-4.2		-45.8	194	3912	23 58 21
00 01 50	J0529+3209	01 21 15	41.4	89.6	-4.2		-45.2	-16	3912	No stop
00 03 20	---	01 22 45	41.7	89.9	-4.1		-45.2	74	3917	00 01 51
00 03 20	FRB	01 22 45	42.0	88.4	-4.2		-45.8	-16	3917	No stop
00 06 50	---	01 26 16	42.5	89.1	-4.1		-45.8	194	3931	00 03 21



Schedule for TORUN (Code Tr )

Page 17

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
00 07 30	J0529+3209	01 26 56	42.3	90.7	-4.1		-45.2	24	3931	00 07 30
00 08 30	---	01 27 56	42.4	90.9	-4.0		-45.2	60	3935	00 07 31
00 08 30	FRB	01 27 56	42.8	89.5	-4.1		-45.8	-16	3935	No stop
00 12 00	---	01 31 26	43.3	90.2	-4.0		-45.8	194	3948	00 08 31
00 12 00	J0529+3209	01 31 26	43.0	91.6	-4.0		-45.2	-16	3948	No stop
00 13 30	---	01 32 57	43.2	91.9	-4.0		-45.2	74	3954	00 12 01
00 13 30	J0530+3301	01 32 57	43.7	90.9	-4.0		-45.7	-14	3954	No stop
00 17 00	---	01 36 27	44.2	91.6	-3.9		-45.7	196	3967	00 13 31
00 17 40	J0529+3209	01 37 07	43.8	92.8	-3.9		-45.1	26	3967	00 17 40
00 18 40	---	01 38 07	44.0	93.0	-3.9		-45.1	60	3971	00 17 41
00 18 40	FRB	01 38 07	44.3	91.5	-3.9		-45.8	-16	3971	No stop
00 22 10	---	01 41 38	44.8	92.2	-3.9		-45.8	194	3985	00 18 41
00 22 10	J0529+3209	01 41 38	44.5	93.7	-3.8		-45.1	-16	3985	No stop
00 23 40	---	01 43 08	44.7	94.1	-3.8		-45.0	74	3990	00 22 11
00 23 40	FRB	01 43 08	45.0	92.5	-3.8		-45.8	-16	3990	No stop
00 27 10	---	01 46 39	45.6	93.3	-3.8		-45.7	194	4004	00 23 41
00 27 50	J0529+3209	01 47 19	45.3	94.9	-3.7		-45.0	24	4004	00 27 50
00 28 50	---	01 48 19	45.5	95.2	-3.7		-45.0	60	4008	00 27 51
00 28 50	FRB	01 48 19	45.8	93.6	-3.7		-45.7	-16	4008	No stop
00 32 20	---	01 51 50	46.3	94.4	-3.7		-45.7	194	4021	00 28 51
00 32 20	J0529+3209	01 51 50	46.0	95.9	-3.6		-44.9	-16	4021	No stop
00 33 50	---	01 53 20	46.2	96.2	-3.6		-44.8	74	4027	00 32 21
00 33 50	J0530+3301	01 53 20	46.7	95.2	-3.6		-45.5	-14	4027	No stop
00 37 20	---	01 56 51	47.2	95.9	-3.6		-45.4	196	4040	00 33 51
00 38 00	J0529+3209	01 57 31	46.9	97.2	-3.6		-44.7	26	4040	00 38 00
00 39 00	---	01 58 31	47.0	97.4	-3.5		-44.7	60	4044	00 38 01
00 39 00	FRB	01 58 31	47.3	95.8	-3.6		-45.5	-16	4044	No stop
00 42 30	---	02 02 01	47.9	96.6	-3.5		-45.4	194	4058	00 39 01
00 42 30	J0529+3209	02 02 01	47.5	98.2	-3.5		-44.6	-16	4058	No stop
00 44 00	---	02 03 32	47.8	98.5	-3.5		-44.6	74	4063	00 42 31

Schedule for TORUN (Code Tr )

Page 18

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
00 44 00	FRB	02 03 32	48.1	96.9	-3.5		-45.4	-16	4063	No stop
00 47 30	---	02 07 02	48.6	97.7	-3.4		-45.3	194	4077	00 44 01
00 48 10	J0529+3209	02 07 42	48.4	99.4	-3.4		-44.4	23	4077	00 48 10
00 49 10	---	02 08 42	48.5	99.7	-3.4		-44.4	60	4081	00 48 11
00 49 10	FRB	02 08 42	48.9	98.0	-3.4		-45.3	-16	4081	No stop
00 52 40	---	02 12 13	49.4	98.8	-3.3		-45.1	194	4094	00 49 11
00 52 40	J0529+3209	02 12 13	49.1	100.5	-3.3		-44.2	-17	4094	No stop
00 54 10	---	02 13 43	49.3	100.8	-3.3		-44.2	73	4100	00 52 41
00 54 10	J0530+3301	02 13 43	49.8	99.7	-3.3		-44.9	-14	4100	No stop
00 57 40	---	02 17 14	50.3	100.5	-3.2		-44.8	196	4113	00 54 11
00 58 20	J0529+3209	02 17 54	49.9	101.8	-3.2		-44.0	25	4113	00 58 20
00 59 20	---	02 18 54	50.0	102.0	-3.2		-43.9	60	4117	00 58 21
00 59 20	FRB	02 18 54	50.4	100.4	-3.2		-44.9	-16	4117	No stop
01 02 50	---	02 22 25	50.9	101.2	-3.2		-44.7	194	4131	00 59 21
01 02 50	J0529+3209	02 22 25	50.6	102.9	-3.1		-43.8	-17	4131	No stop
01 04 20	---	02 23 55	50.8	103.2	-3.1		-43.7	73	4137	01 02 51
01 04 20	FRB	02 23 55	51.1	101.5	-3.2		-44.6	-16	4137	No stop
01 07 50	---	02 27 26	51.6	102.4	-3.1		-44.5	194	4150	01 04 21
01 08 30	J0529+3209	02 28 06	51.4	104.3	-3.0		-43.4	23	4150	01 08 30
01 09 30	---	02 29 06	51.5	104.5	-3.0		-43.4	60	4154	01 08 31
01 09 30	FRB	02 29 06	51.9	102.8	-3.1		-44.4	-17	4154	No stop
01 13 00	---	02 32 36	52.4	103.6	-3.0		-44.2	193	4167	01 09 31
01 13 00	J0529+3209	02 32 36	52.0	105.4	-3.0		-43.2	-17	4167	No stop
01 14 30	---	02 34 07	52.3	105.8	-2.9		-43.1	73	4173	01 13 01
01 14 30	J0530+3301	02 34 07	52.7	104.6	-3.0		-43.9	-15	4173	No stop
01 18 00	---	02 37 37	53.3	105.4	-2.9		-43.7	195	4187	01 14 31
01 18 40	J0529+3209	02 38 17	52.9	106.8	-2.9		-42.8	25	4187	01 18 40
01 19 40	---	02 39 17	53.0	107.1	-2.9		-42.7	60	4190	01 18 41
01 19 40	FRB	02 39 17	53.4	105.3	-2.9		-43.8	-17	4190	No stop
01 23 10	---	02 42 48	53.9	106.2	-2.8		-43.5	193	4204	01 19 41

Schedule for TORUN (Code Tr )

Page 19

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
01 23 10	J0529+3209	02 42 48	53.5	108.0	-2.8		-42.4	-17	4204	No stop
01 24 40	---	02 44 18	53.7	108.4	-2.8		-42.3	73	4210	01 23 11
01 24 40	FRB	02 44 18	54.1	106.6	-2.8		-43.4	-17	4210	No stop
01 28 10	---	02 47 49	54.6	107.5	-2.8		-43.2	193	4223	01 24 41
01 28 50	J0529+3209	02 48 29	54.3	109.5	-2.7		-42.0	23	4223	01 28 50
01 29 50	---	02 49 29	54.5	109.8	-2.7		-41.9	60	4227	01 28 51
01 29 50	FRB	02 49 29	54.8	108.0	-2.7		-43.0	-17	4227	No stop
01 33 20	---	02 53 00	55.3	108.9	-2.7		-42.7	193	4240	01 29 51
01 33 20	J0529+3209	02 53 00	54.9	110.7	-2.6		-41.6	-17	4240	No stop
01 34 50	---	02 54 30	55.2	111.2	-2.6		-41.4	73	4246	01 33 21
01 34 50	J0530+3301	02 54 30	55.7	109.9	-2.6		-42.3	-15	4246	No stop
01 38 20	---	02 58 01	56.2	110.9	-2.6		-42.0	195	4260	01 34 51
01 39 00	J0529+3209	02 58 41	55.7	112.3	-2.5		-41.0	25	4260	01 39 00
01 40 00	---	02 59 41	55.9	112.6	-2.5		-40.9	60	4263	01 39 01
01 40 50	J0521+2112	03 00 31	48.1	125.7	-2.4		-31.6	7	4263	01 40 50
01 42 20	=0518+211	03 02 01	48.3	126.1	-2.3		-31.4	90	4269	01 40 51
01 42 20	J0528+2200	03 02 01	48.1	123.4	-2.5		-32.7	-20	4269	No stop
01 45 50	---	03 05 32	48.6	124.4	-2.4		-32.3	190	4283	01 42 21
01 45 50	J0521+2112	03 05 32	48.8	127.2	-2.3		-30.9	-20	4283	No stop
01 47 20	=0518+211	03 07 02	48.9	127.6	-2.3		-30.7	70	4288	01 45 51
01 48 30	J0529+3209	03 08 12	57.0	115.1	-2.4		-40.0	26	4288	01 48 30
01 49 30	---	03 09 12	57.2	115.4	-2.4		-39.9	60	4292	01 48 31
01 49 30	FRB	03 09 12	57.6	113.5	-2.4		-41.1	-17	4292	No stop
01 53 00	---	03 12 43	58.1	114.5	-2.3		-40.7	193	4306	01 49 31
01 53 00	J0529+3209	03 12 43	57.7	116.5	-2.3		-39.4	-18	4306	No stop
01 54 30	---	03 14 13	57.9	116.9	-2.3		-39.2	72	4312	01 53 01
01 54 30	FRB	03 14 13	58.3	115.0	-2.3		-40.6	-17	4312	No stop
01 58 00	---	03 17 44	58.7	116.0	-2.3		-40.1	193	4325	01 54 31
01 58 40	J0529+3209	03 18 24	58.4	118.2	-2.2		-38.7	22	4325	01 58 40
01 59 40	---	03 19 24	58.5	118.5	-2.2		-38.6	60	4329	01 58 41

Schedule for TORUN (Code Tr )

Page 20

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
01 59 40	FRB	03 19 24	59.0	116.5	-2.2		-39.9	-17	4329	No stop
02 03 10	---	03 22 55	59.4	117.7	-2.2		-39.4	193	4342	01 59 41
02 03 10	J0529+3209	03 22 55	59.0	119.7	-2.1		-38.1	-18	4342	No stop
02 04 40	---	03 24 25	59.2	120.2	-2.1		-37.8	72	4348	02 03 11
02 04 40	J0530+3301	03 24 25	59.8	118.8	-2.1		-38.9	-15	4348	No stop
02 08 10	---	03 27 55	60.2	120.0	-2.1		-38.4	195	4362	02 04 41
02 08 50	J0529+3209	03 28 36	59.7	121.5	-2.0		-37.2	24	4362	02 08 50
02 09 50	---	03 29 36	59.9	121.9	-2.0		-37.0	60	4365	02 08 51
02 09 50	FRB	03 29 36	60.3	119.8	-2.1		-38.5	-18	4365	No stop
02 13 20	---	03 33 06	60.8	121.0	-2.0		-37.9	192	4379	02 09 51
02 13 20	J0529+3209	03 33 06	60.3	123.1	-2.0		-36.5	-18	4379	No stop
02 14 50	---	03 34 37	60.5	123.6	-1.9		-36.2	72	4385	02 13 21
02 14 50	FRB	03 34 37	61.0	121.5	-2.0		-37.7	-18	4385	No stop
02 18 20	---	03 38 07	61.4	122.7	-1.9		-37.1	192	4398	02 14 51
02 19 00	J0529+3209	03 38 47	61.0	125.0	-1.9		-35.5	22	4398	02 19 00
02 20 00	---	03 39 47	61.1	125.4	-1.8		-35.3	60	4402	02 19 01
02 20 00	FRB	03 39 47	61.6	123.3	-1.9		-36.8	-18	4402	No stop
02 23 30	---	03 43 18	62.1	124.6	-1.8		-36.2	192	4415	02 20 01
02 23 30	J0529+3209	03 43 18	61.6	126.7	-1.8		-34.7	-18	4415	No stop
02 25 00	---	03 44 48	61.8	127.2	-1.8		-34.4	72	4421	02 23 31
02 25 00	J0530+3301	03 44 48	62.3	125.8	-1.8		-35.5	-15	4421	No stop
02 28 30	---	03 48 19	62.8	127.2	-1.7		-34.8	195	4435	02 25 01
02 29 10	J0529+3209	03 48 59	62.2	128.8	-1.7		-33.6	24	4435	02 29 10
02 30 10	---	03 49 59	62.4	129.2	-1.7		-33.4	60	4438	02 29 11
02 30 10	FRB	03 49 59	62.9	127.0	-1.7		-34.9	-18	4438	No stop
02 33 40	---	03 53 30	63.3	128.4	-1.7		-34.2	192	4452	02 30 11
02 33 40	J0529+3209	03 53 30	62.8	130.5	-1.6		-32.6	-18	4452	No stop
02 35 10	---	03 55 00	62.9	131.1	-1.6		-32.3	72	4458	02 33 41
02 35 10	FRB	03 55 00	63.5	128.9	-1.6		-33.9	-18	4458	No stop
02 38 40	---	03 58 30	63.9	130.3	-1.6		-33.2	192	4471	02 35 11

Schedule for TORUN (Code Tr )

Page 21

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
02 39 20	J0529+3209	03 59 11	63.4	132.8	-1.5		-31.4	21	4471	02 39 20
02 40 20	---	04 00 11	63.5	133.2	-1.5		-31.2	60	4475	02 39 21
02 40 20	FRB	04 00 11	64.1	131.0	-1.5		-32.8	-18	4475	No stop
02 43 50	---	04 03 41	64.5	132.4	-1.5		-32.0	192	4488	02 40 21
02 43 50	J0529+3209	04 03 41	63.9	134.6	-1.4		-30.3	-19	4488	No stop
02 45 20	---	04 05 12	64.1	135.2	-1.4		-30.0	71	4494	02 43 51
02 45 20	J0530+3301	04 05 12	64.7	133.9	-1.4		-31.1	-15	4494	No stop
02 48 50	---	04 08 42	65.1	135.4	-1.4		-30.2	195	4508	02 45 21
02 49 30	J0529+3209	04 09 22	64.5	137.0	-1.4		-28.9	24	4508	02 49 30
02 50 30	---	04 10 22	64.6	137.5	-1.3		-28.7	60	4512	02 49 31
02 50 30	FRB	04 10 22	65.2	135.2	-1.4		-30.3	-18	4512	No stop
02 54 00	---	04 13 53	65.6	136.8	-1.3		-29.4	192	4525	02 50 31
02 54 00	J0529+3209	04 13 53	64.9	139.0	-1.3		-27.7	-19	4525	No stop
02 55 30	---	04 15 23	65.1	139.7	-1.3		-27.3	71	4531	02 54 01
02 55 30	FRB	04 15 23	65.7	137.4	-1.3		-29.0	-18	4531	No stop
02 59 00	---	04 18 54	66.1	139.0	-1.2		-28.1	192	4544	02 55 31
02 59 40	J0529+3209	04 19 34	65.5	141.5	-1.2		-26.2	21	4544	02 59 40
03 00 40	---	04 20 34	65.6	142.0	-1.2		-25.9	60	4548	02 59 41
03 00 40	FRB	04 20 34	66.2	139.8	-1.2		-27.6	-18	4548	No stop
03 04 10	---	04 24 05	66.6	141.4	-1.1		-26.6	192	4562	03 00 41
03 04 10	J0529+3209	04 24 05	65.9	143.6	-1.1		-24.9	-19	4562	No stop
03 05 40	---	04 25 35	66.0	144.3	-1.1		-24.4	71	4567	03 04 11
03 05 40	J0530+3301	04 25 35	66.7	143.0	-1.1		-25.5	-15	4567	No stop
03 09 10	---	04 29 05	67.0	144.7	-1.0		-24.4	195	4581	03 05 41
03 09 50	J0529+3209	04 29 46	66.4	146.4	-1.0		-23.1	24	4581	03 09 50
03 10 50	---	04 30 46	66.5	146.8	-1.0		-22.8	60	4585	03 09 51
03 10 50	FRB	04 30 46	67.2	144.6	-1.0		-24.5	-18	4585	No stop
03 14 20	---	04 34 16	67.5	146.3	-1.0		-23.4	192	4598	03 10 51
03 14 20	J0529+3209	04 34 16	66.8	148.6	-0.9		-21.7	-19	4598	No stop
03 15 50	---	04 35 47	66.9	149.3	-0.9		-21.2	71	4604	03 14 21

Schedule for TORUN (Code Tr )

Page 22

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
03 15 50	FRB	04 35 47	67.6	147.1	-1.0		-22.9	-18	4604	No stop
03 19 20	---	04 39 17	67.9	148.9	-0.9		-21.7	192	4617	03 15 51
03 20 00	J0529+3209	04 39 57	67.2	151.4	-0.8		-19.8	21	4617	03 20 00
03 21 00	---	04 40 57	67.3	152.0	-0.8		-19.5	60	4621	03 20 01
03 21 00	FRB	04 40 57	68.0	149.8	-0.9		-21.2	-18	4621	No stop
03 24 30	---	04 44 28	68.2	151.6	-0.8		-19.9	192	4635	03 21 01
03 24 30	J0529+3209	04 44 28	67.5	153.8	-0.8		-18.3	-19	4635	No stop
03 26 00	---	04 45 58	67.6	154.6	-0.7		-17.7	71	4640	03 24 31
03 26 00	J0530+3301	04 45 58	68.3	153.4	-0.8		-18.7	-15	4640	No stop
03 29 30	---	04 49 29	68.6	155.3	-0.7		-17.4	195	4654	03 26 01
03 30 10	J0529+3209	04 50 09	67.8	156.8	-0.7		-16.2	25	4654	03 30 10
03 31 10	---	04 51 09	67.9	157.4	-0.7		-15.9	60	4658	03 30 11
03 31 10	FRB	04 51 09	68.7	155.2	-0.7		-17.5	-18	4658	No stop
03 34 40	---	04 54 40	68.9	157.2	-0.6		-16.2	192	4671	03 31 11
03 34 40	J0529+3209	04 54 40	68.1	159.3	-0.6		-14.5	-18	4671	No stop
03 36 10	---	04 56 10	68.2	160.1	-0.6		-14.0	72	4677	03 34 41
03 36 10	FRB	04 56 10	69.0	158.0	-0.6		-15.6	-18	4677	No stop
03 39 40	---	04 59 40	69.2	160.0	-0.6		-14.2	192	4690	03 36 11
03 40 20	J0529+3209	05 00 21	68.4	162.4	-0.5		-12.4	22	4690	03 40 20
03 41 20	---	05 01 21	68.4	163.0	-0.5		-12.0	60	4694	03 40 21
03 41 20	FRB	05 01 21	69.3	161.0	-0.5		-13.5	-17	4694	No stop
03 44 50	---	05 04 51	69.4	163.0	-0.5		-12.1	193	4708	03 41 21
03 44 50	J0529+3209	05 04 51	68.6	165.0	-0.4		-10.6	-18	4708	No stop
03 46 20	---	05 06 22	68.6	165.8	-0.4		-10.0	72	4713	03 44 51
03 46 20	J0530+3301	05 06 22	69.4	164.9	-0.4		-10.8	-15	4713	No stop
03 49 50	---	05 09 52	69.6	167.0	-0.4		-9.3	195	4727	03 46 21
03 50 30	J0529+3209	05 10 32	68.8	168.2	-0.3		-8.3	25	4727	03 50 30
03 51 30	---	05 11 32	68.8	168.8	-0.3		-7.9	60	4731	03 50 31
03 51 30	FRB	05 11 32	69.7	166.9	-0.4		-9.3	-17	4731	No stop
03 55 00	---	05 15 03	69.8	169.0	-0.3		-7.9	193	4744	03 51 31

Schedule for TORUN (Code Tr )

Page 23

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
03 55 00	J0529+3209	05 15 03	68.9	170.9	-0.3		-6.5	-18	4744	No stop
03 56 30	---	05 16 33	68.9	171.7	-0.2		-5.9	72	4750	03 55 01
03 56 30	FRB	05 16 33	69.8	169.9	-0.3		-7.2	-17	4750	No stop
04 00 00	---	05 20 04	69.9	172.0	-0.2		-5.7	193	4763	03 56 31
04 00 40	J0529+3209	05 20 44	69.0	174.2	-0.2		-4.1	23	4763	04 00 40
04 01 40	---	05 21 44	69.0	174.8	-0.1		-3.7	60	4767	04 00 41
04 01 40	FRB	05 21 44	70.0	173.1	-0.2		-5.0	-16	4767	No stop
04 05 10	---	05 25 15	70.0	175.2	-0.1		-3.4	194	4781	04 01 41
04 05 10	J0529+3209	05 25 15	69.1	176.9	-0.1		-2.2	-17	4781	No stop
04 06 40	---	05 26 45	69.1	177.7	-0.1		-1.6	73	4787	04 05 11
04 06 40	J0530+3301	05 26 45	69.9	177.1	-0.1		-2.1	-16	4787	No stop
04 10 10	---	05 30 15	69.9	179.3	-0.0		-0.5	194	4800	04 06 41
04 10 50	J0529+3209	05 30 56	69.1	180.2	0.0		0.2	24	4800	04 10 50
04 11 50	---	05 31 56	69.1	180.8	0.0		0.6	60	4804	04 10 51
04 11 50	FRB	05 31 56	70.1	179.3	-0.0		-0.5	-16	4804	No stop
04 15 20	---	05 35 26	70.1	181.5	0.0		1.0	194	4817	04 11 51
04 15 20	J0529+3209	05 35 26	69.1	182.9	0.1		2.1	-17	4817	No stop
04 16 50	---	05 36 57	69.0	183.8	0.1		2.7	73	4823	04 15 21
04 16 50	FRB	05 36 57	70.0	182.4	0.1		1.7	-17	4823	No stop
04 20 20	---	05 40 27	70.0	184.5	0.1		3.2	193	4837	04 16 51
04 21 00	J0529+3209	05 41 07	69.0	186.2	0.2		4.4	23	4837	04 21 00
04 22 00	---	05 42 07	69.0	186.8	0.2		4.8	60	4840	04 21 01
04 22 00	FRB	05 42 07	70.0	185.5	0.2		4.0	-17	4840	No stop
04 25 30	---	05 45 38	69.9	187.7	0.2		5.5	193	4854	04 22 01
04 25 30	J0529+3209	05 45 38	68.9	188.9	0.3		6.3	-17	4854	No stop
04 27 00	---	05 47 08	68.9	189.8	0.3		6.9	73	4860	04 25 31
04 27 00	J0530+3301	05 47 08	69.7	189.5	0.3		6.8	-16	4860	No stop
04 30 30	---	05 50 39	69.6	191.6	0.3		8.3	194	4873	04 27 01
04 31 10	J0529+3209	05 51 19	68.7	192.2	0.3		8.6	24	4873	04 31 10
04 32 10	---	05 52 19	68.7	192.8	0.4		9.0	60	4877	04 31 11

Schedule for TORUN (Code Tr )

Page 24

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
04 32 10	FRB	05 52 19	69.8	191.7	0.3		8.4	-17	4877	No stop
04 35 40	---	05 55 50	69.6	193.8	0.4		9.9	193	4890	04 32 11
04 35 40	J0529+3209	05 55 50	68.6	194.8	0.4		10.4	-17	4890	No stop
04 37 10	---	05 57 20	68.5	195.6	0.4		11.0	73	4896	04 35 41
04 37 10	FRB	05 57 20	69.6	194.7	0.4		10.5	-17	4896	No stop
04 40 40	---	06 00 50	69.5	196.8	0.5		11.9	193	4910	04 37 11
04 41 20	J0529+3209	06 01 31	68.3	198.0	0.5		12.7	23	4910	04 41 20
04 42 20	---	06 02 31	68.3	198.6	0.5		13.0	60	4913	04 41 21
04 42 20	FRB	06 02 31	69.4	197.7	0.5		12.6	-17	4913	No stop
04 45 50	---	06 06 01	69.2	199.7	0.5		14.0	193	4927	04 42 21
04 45 50	J0529+3209	06 06 01	68.1	200.5	0.6		14.4	-17	4927	No stop
04 47 20	---	06 07 32	68.0	201.3	0.6		14.9	73	4933	04 45 51
04 47 20	J0530+3301	06 07 32	68.9	201.4	0.6		15.2	-16	4933	No stop
04 50 50	---	06 11 02	68.7	203.4	0.7		16.5	194	4946	04 47 21
04 51 30	J0529+3209	06 11 42	67.8	203.6	0.7		16.5	24	4946	04 51 30
04 52 30	---	06 12 42	67.7	204.1	0.7		16.9	60	4950	04 51 31
04 52 30	FRB	06 12 42	68.8	203.5	0.7		16.6	-17	4950	No stop
04 56 00	---	06 16 13	68.6	205.5	0.7		18.0	193	4963	04 52 31
04 56 00	J0529+3209	06 16 13	67.5	206.0	0.8		18.1	-17	4963	No stop
04 57 30	---	06 17 43	67.4	206.8	0.8		18.6	73	4969	04 56 01
04 57 30	FRB	06 17 43	68.5	206.3	0.7		18.5	-17	4969	No stop
05 01 00	---	06 21 14	68.3	208.2	0.8		19.8	193	4983	04 57 31
05 01 40	J0529+3209	06 21 54	67.1	208.9	0.9		20.1	23	4983	05 01 40
05 02 40	---	06 22 54	67.1	209.4	0.9		20.4	60	4987	05 01 41
05 02 40	FRB	06 22 54	68.2	209.0	0.8		20.4	-17	4987	No stop
05 06 10	---	06 26 25	67.9	210.9	0.9		21.6	193	5000	05 02 41
05 06 10	J0529+3209	06 26 25	66.8	211.2	0.9		21.6	-17	5000	No stop
05 07 40	---	06 27 55	66.7	212.0	1.0		22.1	73	5006	05 06 11
05 07 40	J0530+3301	06 27 55	67.5	212.4	0.9		22.5	-16	5006	No stop
05 11 10	---	06 31 26	67.2	214.1	1.0		23.7	194	5019	05 07 41



Schedule for TORUN (Code Tr )

Page 25

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
05 11 50	J0529+3209	06 32 06	66.3	214.0	1.0		23.4	24	5019	05 11 50
05 12 50	---	06 33 06	66.2	214.5	1.0		23.7	60	5023	05 11 51
05 12 50	FRB	06 33 06	67.4	214.3	1.0		23.8	-17	5023	No stop
05 16 20	---	06 36 36	67.1	216.0	1.1		24.9	193	5037	05 12 51
05 16 20	J0529+3209	06 36 36	65.9	216.2	1.1		24.7	-17	5037	No stop
05 17 50	---	06 38 07	65.8	216.9	1.1		25.2	73	5042	05 16 21
05 17 50	FRB	06 38 07	66.9	216.7	1.1		25.4	-17	5042	No stop
05 21 20	---	06 41 37	66.6	218.4	1.1		26.5	193	5056	05 17 51
05 22 00	J0529+3209	06 42 17	65.4	218.8	1.2		26.4	23	5056	05 22 00
05 23 00	---	06 43 17	65.3	219.2	1.2		26.7	60	5060	05 22 01
05 23 00	FRB	06 43 17	66.4	219.2	1.2		26.9	-17	5060	No stop
05 26 30	---	06 46 48	66.1	220.8	1.2		27.9	193	5073	05 23 01
05 26 30	J0529+3209	06 46 48	65.0	220.8	1.3		27.6	-17	5073	No stop
05 28 00	---	06 48 18	64.8	221.5	1.3		28.0	73	5079	05 26 31
05 28 00	J0530+3301	06 48 18	65.7	222.1	1.3		28.7	-15	5079	No stop
05 31 30	---	06 51 49	65.3	223.6	1.3		29.6	195	5092	05 28 01
05 32 10	J0529+3209	06 52 29	64.4	223.3	1.4		29.1	24	5092	05 32 10
05 33 10	---	06 53 29	64.3	223.7	1.4		29.4	60	5096	05 32 11
05 33 10	FRB	06 53 29	65.4	223.8	1.3		29.8	-17	5096	No stop
05 36 40	---	06 57 00	65.1	225.3	1.4		30.7	193	5110	05 33 11
05 36 40	J0529+3209	06 57 00	63.9	225.2	1.4		30.2	-17	5110	No stop
05 38 10	---	06 58 30	63.8	225.8	1.5		30.6	73	5115	05 36 41
05 38 10	FRB	06 58 30	64.9	225.9	1.4		31.0	-17	5115	No stop
05 41 40	---	07 02 01	64.5	227.4	1.5		31.9	193	5129	05 38 11
05 42 20	J0529+3209	07 02 41	63.3	227.5	1.5		31.6	23	5129	05 42 20
05 43 20	---	07 03 41	63.2	227.9	1.6		31.8	60	5133	05 42 21
05 43 20	FRB	07 03 41	64.3	228.1	1.5		32.3	-17	5133	No stop
05 46 50	---	07 07 11	63.9	229.5	1.6		33.1	193	5146	05 43 21
05 46 50	J0529+3209	07 07 11	62.8	229.3	1.6		32.5	-17	5146	No stop
05 48 20	---	07 08 42	62.6	229.9	1.6		32.9	73	5152	05 46 51

Schedule for TORUN (Code Tr )

Page 26

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
05 48 20	J0530+3301	07 08 42	63.5	230.6	1.6		33.6	-15	5152	No stop
05 51 50	---	07 12 12	63.1	231.9	1.7		34.3	195	5165	05 48 21
05 52 30	J0529+3209	07 12 52	62.2	231.5	1.7		33.7	24	5165	05 52 30
05 53 30	---	07 13 52	62.0	231.9	1.7		33.9	60	5169	05 52 31
05 53 30	FRB	07 13 52	63.2	232.1	1.7		34.5	-17	5169	No stop
05 57 00	---	07 17 23	62.7	233.4	1.7		35.2	193	5183	05 53 31
05 57 00	J0529+3209	07 17 23	61.6	233.2	1.8		34.6	-17	5183	No stop
05 58 30	---	07 18 53	61.4	233.7	1.8		34.9	73	5188	05 57 01
05 58 30	FRB	07 18 53	62.6	234.0	1.8		35.5	-17	5188	No stop
06 02 00	---	07 22 24	62.1	235.3	1.8		36.1	193	5202	05 58 31
06 02 40	J0529+3209	07 23 04	60.9	235.2	1.9		35.6	23	5202	06 02 40
06 03 40	---	07 24 04	60.8	235.6	1.9		35.8	60	5206	06 02 41
06 03 40	FRB	07 24 04	61.9	235.9	1.8		36.4	-17	5206	No stop
06 07 10	---	07 27 35	61.5	237.1	1.9		37.0	193	5219	06 03 41
06 07 10	J0529+3209	07 27 35	60.4	236.8	2.0		36.4	-17	5219	No stop
06 08 40	---	07 29 05	60.2	237.3	2.0		36.7	73	5225	06 07 11
06 08 40	J0530+3301	07 29 05	61.0	238.1	2.0		37.4	-15	5225	No stop
06 12 10	---	07 32 36	60.5	239.2	2.0		38.0	195	5238	06 08 41
06 12 50	J0529+3209	07 33 16	59.6	238.7	2.0		37.3	25	5238	06 12 50
06 13 50	---	07 34 16	59.5	239.0	2.1		37.5	60	5242	06 12 51
06 13 50	FRB	07 34 16	60.6	239.4	2.0		38.1	-17	5242	No stop
06 17 20	---	07 37 46	60.2	240.6	2.1		38.7	193	5256	06 13 51
06 17 20	J0529+3209	07 37 46	59.1	240.2	2.1		38.0	-17	5256	No stop
06 18 50	---	07 39 17	58.9	240.7	2.1		38.2	73	5262	06 17 21
06 18 50	FRB	07 39 17	60.0	241.1	2.1		38.9	-17	5262	No stop
06 22 20	---	07 42 47	59.5	242.2	2.2		39.4	193	5275	06 18 51
06 23 00	J0529+3209	07 43 27	58.3	242.0	2.2		38.8	23	5275	06 23 00
06 24 00	---	07 44 27	58.2	242.3	2.2		38.9	60	5279	06 23 01
06 24 00	FRB	07 44 27	59.3	242.7	2.2		39.6	-17	5279	No stop
06 27 30	---	07 47 58	58.8	243.8	2.2		40.1	193	5292	06 24 01

Schedule for TORUN (Code Tr )

Page 27

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
06 27 30	J0529+3209	07 47 58	57.7	243.4	2.3		39.4	-17	5292	No stop
06 29 00	---	07 49 28	57.5	243.9	2.3		39.6	73	5298	06 27 31
06 29 00	J0530+3301	07 49 28	58.3	244.6	2.3		40.3	-15	5298	No stop
06 32 30	---	07 52 59	57.8	245.7	2.4		40.8	195	5312	06 29 01
06 33 10	J0529+3209	07 53 39	56.9	245.1	2.4		40.1	25	5312	06 33 10
06 34 10	---	07 54 39	56.8	245.4	2.4		40.2	60	5315	06 33 11
06 34 10	FRB	07 54 39	57.9	245.9	2.4		40.9	-17	5315	No stop
06 37 40	---	07 58 10	57.4	246.9	2.4		41.3	193	5329	06 34 11
06 37 40	J0529+3209	07 58 10	56.3	246.4	2.5		40.6	-17	5329	No stop
06 39 10	---	07 59 40	56.1	246.9	2.5		40.7	73	5335	06 37 41
06 39 10	FRB	07 59 40	57.2	247.3	2.4		41.4	-17	5335	No stop
06 42 40	---	08 03 11	56.7	248.3	2.5		41.8	193	5348	06 39 11
06 43 20	J0529+3209	08 03 51	55.5	248.1	2.6		41.2	23	5348	06 43 20
06 44 20	---	08 04 51	55.4	248.4	2.6		41.3	60	5352	06 43 21
06 44 20	FRB	08 04 51	56.5	248.8	2.5		42.0	-17	5352	No stop
06 47 50	---	08 08 21	56.0	249.8	2.6		42.3	193	5365	06 44 21
06 47 50	J0529+3209	08 08 21	54.9	249.3	2.6		41.6	-17	5365	No stop
06 49 20	---	08 09 52	54.7	249.7	2.7		41.7	73	5371	06 47 51
06 49 20	J0530+3301	08 09 52	55.5	250.5	2.6		42.5	-15	5371	No stop
06 52 50	---	08 13 22	55.0	251.5	2.7		42.8	195	5385	06 49 21
06 53 30	J0529+3209	08 14 02	54.1	250.9	2.7		42.1	25	5385	06 53 30
06 54 30	---	08 15 02	54.0	251.1	2.7		42.2	60	5388	06 53 31
06 54 30	FRB	08 15 02	55.0	251.6	2.7		42.9	-17	5388	No stop
06 58 00	---	08 18 33	54.5	252.5	2.8		43.2	193	5402	06 54 31
06 58 00	J0529+3209	08 18 33	53.5	252.1	2.8		42.5	-17	5402	No stop
06 59 30	---	08 20 03	53.3	252.5	2.8		42.6	73	5408	06 58 01
06 59 30	FRB	08 20 03	54.3	252.9	2.8		43.3	-17	5408	No stop
07 03 00	---	08 23 34	53.8	253.8	2.8		43.5	193	5421	06 59 31
07 03 40	J0529+3209	08 24 14	52.7	253.5	2.9		42.9	23	5421	07 03 40
07 04 40	---	08 25 14	52.5	253.8	2.9		42.9	60	5425	07 03 41

Schedule for TORUN (Code Tr )

Page 28

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
07 04 40	FRB	08 25 14	53.6	254.3	2.9		43.7	-17	5425	No stop
07 08 10	---	08 28 45	53.1	255.2	2.9		43.9	193	5438	07 04 41
07 08 10	J0529+3209	08 28 45	52.0	254.7	3.0		43.2	-17	5438	No stop
07 09 40	---	08 30 15	51.8	255.1	3.0		43.3	73	5444	07 08 11
07 09 40	J0530+3301	08 30 15	52.5	255.8	3.0		44.0	-15	5444	No stop
07 13 10	---	08 33 46	52.0	256.7	3.0		44.2	195	5458	07 09 41
07 13 50	J0529+3209	08 34 26	51.2	256.1	3.1		43.5	25	5458	07 13 50
07 14 50	---	08 35 26	51.0	256.3	3.1		43.6	60	5462	07 13 51
07 14 50	FRB	08 35 26	52.1	256.8	3.0		44.3	-17	5462	No stop
07 18 20	---	08 38 56	51.6	257.7	3.1		44.5	193	5475	07 14 51
07 18 20	J0529+3209	08 38 56	50.5	257.2	3.1		43.8	-17	5475	No stop
07 19 50	---	08 40 27	50.3	257.5	3.2		43.8	73	5481	07 18 21
07 19 50	FRB	08 40 27	51.4	258.0	3.1		44.6	-17	5481	No stop
07 23 20	---	08 43 57	50.9	258.9	3.2		44.7	193	5494	07 19 51
07 24 00	J0529+3209	08 44 37	49.7	258.5	3.2		44.0	23	5494	07 24 00
07 25 00	---	08 45 37	49.5	258.8	3.3		44.1	60	5498	07 24 01
07 25 00	FRB	08 45 37	50.6	259.3	3.2		44.8	-17	5498	No stop
07 28 30	---	08 49 08	50.1	260.1	3.3		45.0	193	5512	07 25 01
07 28 30	J0529+3209	08 49 08	49.0	259.6	3.3		44.2	-17	5512	No stop
07 30 00	---	08 50 38	48.8	259.9	3.3		44.3	73	5517	07 28 31
07 30 00	J0530+3301	08 50 38	49.5	260.7	3.3		45.0	-15	5517	No stop
07 33 30	---	08 54 09	49.0	261.4	3.4		45.1	195	5531	07 30 01
07 34 10	J0529+3209	08 54 49	48.2	260.9	3.4		44.5	25	5531	07 34 10
07 35 10	---	08 55 49	48.0	261.1	3.4		44.5	60	5535	07 34 11
07 35 10	FRB	08 55 49	49.1	261.6	3.4		45.2	-17	5535	No stop
07 38 40	---	08 59 20	48.6	262.4	3.4		45.3	193	5548	07 35 11
07 38 40	J0529+3209	08 59 20	47.5	261.9	3.5		44.6	-17	5548	No stop
07 40 10	---	09 00 50	47.3	262.2	3.5		44.7	73	5554	07 38 41
07 40 10	FRB	09 00 50	48.4	262.7	3.5		45.4	-17	5554	No stop
07 43 40	---	09 04 21	47.8	263.5	3.5		45.4	193	5567	07 40 11

Schedule for TORUN (Code Tr )

Page 29

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA UP	ParA	Dwell	GBytes SYNC
-----								
--- Thu 22 Sep 2016 Day 266 ---								
07 44 20	J0529+3209	09 05 01	46.7	263.2	3.6	44.8	23	5567 07 44 20
07 45 20	---	09 06 01	46.5	263.4	3.6	44.8	60	5571 07 44 21
07 45 20	FRB	09 06 01	47.6	263.8	3.5	45.5	-17	5571 No stop
07 48 50	---	09 09 31	47.1	264.6	3.6	45.6	193	5585 07 45 21
07 48 50	J0529+3209	09 09 31	46.0	264.1	3.6	44.9	-17	5585 No stop
07 50 20	---	09 11 02	45.8	264.5	3.7	44.9	73	5590 07 48 51
07 50 20	J0530+3301	09 11 02	46.5	265.1	3.7	45.5	-15	5590 No stop
07 53 50	---	09 14 32	46.0	265.9	3.7	45.6	195	5604 07 50 21
07 54 30	J0529+3209	09 15 12	45.1	265.4	3.7	45.0	25	5604 07 54 30
07 55 30	---	09 16 13	45.0	265.6	3.8	45.0	60	5608 07 54 31
07 55 30	FRB	09 16 13	46.1	266.0	3.7	45.7	-17	5608 No stop
07 59 00	---	09 19 43	45.5	266.8	3.8	45.7	193	5621 07 55 31
07 59 00	J0529+3209	09 19 43	44.5	266.3	3.8	45.1	-17	5621 No stop
08 00 30	---	09 21 13	44.2	266.6	3.8	45.1	73	5627 07 59 01
08 00 30	FRB	09 21 13	45.3	267.1	3.8	45.8	-17	5627 No stop
08 04 00	---	09 24 44	44.8	267.8	3.9	45.8	193	5640 08 00 31
08 04 40	J0529+3209	09 25 24	43.6	267.5	3.9	45.1	23	5640 08 04 40
08 05 40	---	09 26 24	43.5	267.7	3.9	45.1	60	5644 08 04 41
08 05 40	FRB	09 26 24	44.5	268.1	3.9	45.8	-17	5644 No stop
08 09 10	---	09 29 55	44.0	268.9	3.9	45.8	193	5658 08 05 41
08 09 10	J0529+3209	09 29 55	42.9	268.4	4.0	45.2	-17	5658 No stop
08 10 40	---	09 31 25	42.7	268.7	4.0	45.2	73	5663 08 09 11
08 10 40	J0530+3301	09 31 25	43.4	269.4	4.0	45.7	-15	5663 No stop
08 14 10	---	09 34 56	42.9	270.1	4.1	45.7	195	5677 08 10 41
08 14 50	J0529+3209	09 35 36	42.1	269.6	4.1	45.2	25	5677 08 14 50
08 15 50	---	09 36 36	41.9	269.8	4.1	45.2	60	5681 08 14 51
08 15 50	FRB	09 36 36	43.0	270.2	4.1	45.8	-17	5681 No stop
08 19 20	---	09 40 06	42.5	270.9	4.1	45.8	193	5694 08 15 51
08 19 20	J0529+3209	09 40 06	41.4	270.5	4.2	45.2	-17	5694 No stop
08 20 50	---	09 41 37	41.2	270.8	4.2	45.2	73	5700 08 19 21

Schedule for TORUN (Code Tr )

Page 30

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
08 20 50	FRB	09 41 37	42.2	271.2	4.1		45.8	-17	5700	No stop
08 24 20	---	09 45 07	41.7	271.9	4.2		45.8	193	5713	08 20 51
08 25 00	J0529+3209	09 45 47	40.6	271.6	4.3		45.2	23	5713	08 25 00
08 26 00	---	09 46 48	40.4	271.8	4.3		45.2	60	5717	08 25 01
08 26 00	FRB	09 46 48	41.5	272.2	4.2		45.8	-17	5717	No stop
08 29 30	---	09 50 18	40.9	272.9	4.3		45.8	193	5731	08 26 01
08 29 30	J0529+3209	09 50 18	39.9	272.5	4.3		45.1	-17	5731	No stop
08 31 00	---	09 51 48	39.6	272.8	4.4		45.1	73	5737	08 29 31
08 31 00	J0530+3301	09 51 48	40.4	273.4	4.3		45.6	-15	5737	No stop
08 34 30	---	09 55 19	39.9	274.1	4.4		45.6	195	5750	08 31 01
08 35 10	J0529+3209	09 55 59	39.0	273.6	4.4		45.1	25	5750	08 35 10
08 36 10	---	09 56 59	38.9	273.8	4.4		45.1	60	5754	08 35 11
08 36 10	FRB	09 56 59	39.9	274.2	4.4		45.7	-17	5754	No stop
08 39 40	---	10 00 30	39.4	274.8	4.5		45.6	193	5767	08 36 11
08 39 40	J0529+3209	10 00 30	38.3	274.4	4.5		45.0	-17	5767	No stop
08 41 10	---	10 02 00	38.1	274.7	4.5		45.0	73	5773	08 39 41
08 41 10	FRB	10 02 00	39.2	275.1	4.5		45.6	-17	5773	No stop
08 44 40	---	10 05 31	38.7	275.8	4.5		45.5	193	5787	08 41 11
08 45 20	J0529+3209	10 06 11	37.5	275.5	4.6		44.9	23	5787	08 45 20
08 46 20	---	10 07 11	37.3	275.7	4.6		44.9	60	5790	08 45 21
08 46 20	FRB	10 07 11	38.4	276.1	4.6		45.5	-17	5790	No stop
08 49 50	---	10 10 41	37.9	276.8	4.6		45.4	193	5804	08 46 21
08 49 50	J0529+3209	10 10 41	36.8	276.4	4.7		44.8	-17	5804	No stop
08 51 20	---	10 12 12	36.6	276.6	4.7		44.8	73	5810	08 49 51
08 51 20	J0530+3301	10 12 12	37.3	277.2	4.7		45.3	-15	5810	No stop
08 54 50	---	10 15 42	36.8	277.9	4.7		45.2	195	5823	08 51 21
08 55 30	J0529+3209	10 16 22	36.0	277.4	4.8		44.7	25	5823	08 55 30
08 56 30	---	10 17 23	35.8	277.6	4.8		44.7	60	5827	08 55 31
08 56 30	FRB	10 17 23	36.9	278.0	4.7		45.3	-17	5827	No stop
09 00 00	---	10 20 53	36.4	278.6	4.8		45.2	193	5840	08 56 31

Schedule for TORUN (Code Tr )

Page 31

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
09 00 00	J0529+3209	10 20 53	35.3	278.3	4.8		44.6	-17	5840	No stop
09 01 30	---	10 22 23	35.1	278.5	4.9		44.6	73	5846	09 00 01
09 01 30	FRB	10 22 23	36.2	278.9	4.8		45.1	-17	5846	No stop
09 05 00	---	10 25 54	35.6	279.6	4.9		45.0	193	5860	09 01 31
09 05 00	J0529+3209	10 25 54	34.6	279.2	4.9		44.5	-17	5860	No stop
09 06 30	---	10 27 24	34.3	279.5	4.9		44.4	73	5865	09 05 01
09 06 30	FRB	10 27 24	35.4	279.8	4.9		45.0	-17	5865	No stop
09 10 00	---	10 30 55	34.9	280.5	5.0		44.9	193	5879	09 06 31
09 10 40	J0529+3209	10 31 35	33.7	280.2	5.0		44.3	23	5879	09 10 40
09 11 40	---	10 32 35	33.6	280.4	5.0		44.2	60	5883	09 10 41
09 13 10	J0403+2600	10 34 05	16.3	291.9	6.5		38.3	11	5883	09 13 10
09 15 00	=0400+258	10 35 56	16.0	292.2	6.5		38.2	110	5890	09 13 11
09 15 00	J0403+2600	10 35 56	16.0	292.2	6.5		38.2	-5	5890	No stop
09 18 00	=0400+258	10 38 56	15.6	292.7	6.6		38.1	175	5901	09 15 01
09 18 20	J0403+2600	10 39 16	15.6	292.8	6.6		38.0	14	5901	09 18 20
09 27 20	=0400+258	10 48 18	14.3	294.5	6.7		37.5	540	5936	09 18 21
09 28 20	J0529+3209	10 49 18	31.1	283.4	5.3		43.6	-17	5936	09 28 20
09 31 50	---	10 52 48	30.6	284.0	5.4		43.5	193	5949	09 28 21
09 31 50	FRB	10 52 48	31.7	284.4	5.3		44.0	-17	5949	No stop
09 35 20	---	10 56 19	31.2	285.0	5.4		43.9	193	5963	09 31 51
09 35 20	J0529+3209	10 56 19	30.1	284.7	5.4		43.3	-17	5963	No stop
09 36 50	---	10 57 49	29.9	284.9	5.5		43.3	73	5969	09 35 21
09 36 50	FRB	10 57 49	31.0	285.3	5.4		43.8	-17	5969	No stop
09 40 20	---	11 01 20	30.4	285.9	5.5		43.6	193	5982	09 36 51
09 41 00	J0529+3209	11 02 00	29.3	285.7	5.5		43.1	23	5982	09 41 00
09 42 00	---	11 03 00	29.1	285.8	5.5		43.0	60	5986	09 41 01
09 42 00	FRB	11 03 00	30.2	286.2	5.5		43.5	-17	5986	No stop
09 45 30	---	11 06 31	29.7	286.8	5.6		43.4	193	5999	09 42 01
09 45 30	J0529+3209	11 06 31	28.6	286.5	5.6		42.9	-17	5999	No stop
09 47 00	---	11 08 01	28.4	286.7	5.6		42.8	73	6005	09 45 31

Schedule for TORUN (Code Tr )

Page 32

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
09 47 00	J0530+3301	11 08 01	29.2	287.2	5.6		43.2	-15	6005	No stop
09 50 30	---	11 11 31	28.7	287.9	5.7		43.0	195	6019	09 47 01
09 51 10	J0529+3209	11 12 12	27.8	287.5	5.7		42.6	25	6019	09 51 10
09 52 10	---	11 13 12	27.7	287.6	5.7		42.5	60	6022	09 51 11
09 52 10	FRB	11 13 12	28.7	288.0	5.7		43.0	-17	6022	No stop
09 55 40	---	11 16 42	28.2	288.6	5.7		42.8	193	6036	09 52 11
09 55 40	J0529+3209	11 16 42	27.2	288.3	5.8		42.4	-17	6036	No stop
09 57 10	---	11 18 12	26.9	288.5	5.8		42.3	73	6042	09 55 41
09 57 10	FRB	11 18 12	28.0	288.8	5.8		42.8	-17	6042	No stop
10 00 40	---	11 21 43	27.5	289.4	5.8		42.6	193	6055	09 57 11
10 01 20	J0529+3209	11 22 23	26.4	289.3	5.9		42.0	23	6055	10 01 20
10 02 20	---	11 23 23	26.2	289.4	5.9		42.0	60	6059	10 01 21
10 02 20	FRB	11 23 23	27.3	289.7	5.8		42.5	-17	6059	No stop
10 05 50	---	11 26 54	26.8	290.3	5.9		42.3	193	6072	10 02 21
10 05 50	J0529+3209	11 26 54	25.7	290.1	5.9		41.8	-17	6072	No stop
10 07 20	---	11 28 24	25.5	290.3	6.0		41.7	73	6078	10 05 51
10 07 20	J0530+3301	11 28 24	26.3	290.8	5.9		42.0	-15	6078	No stop
10 10 50	---	11 31 55	25.8	291.4	6.0		41.8	195	6092	10 07 21
10 11 30	J0529+3209	11 32 35	24.9	291.0	6.0		41.5	25	6092	10 11 30
10 12 30	---	11 33 35	24.8	291.2	6.1		41.4	60	6095	10 11 31
10 12 30	FRB	11 33 35	25.9	291.5	6.0		41.9	-17	6095	No stop
10 16 00	---	11 37 06	25.4	292.1	6.1		41.6	193	6109	10 12 31
10 16 00	J0529+3209	11 37 06	24.3	291.8	6.1		41.2	-17	6109	No stop
10 17 30	---	11 38 36	24.1	292.1	6.1		41.1	73	6115	10 16 01
10 17 30	FRB	11 38 36	25.2	292.4	6.1		41.5	-17	6115	No stop
10 21 00	---	11 42 06	24.7	293.0	6.2		41.3	193	6128	10 17 31
10 21 40	J0529+3209	11 42 47	23.5	292.8	6.2		40.8	23	6128	10 21 40
10 22 40	---	11 43 47	23.4	293.0	6.2		40.8	60	6132	10 21 41
10 22 40	FRB	11 43 47	24.4	293.3	6.2		41.2	-17	6132	No stop
10 26 10	---	11 47 17	24.0	293.9	6.2		41.0	193	6145	10 22 41



Schedule for TORUN (Code Tr )

Page 33

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
10 26 10	J0529+3209	11 47 17	22.9	293.6	6.3		40.5	-17	6145	No stop
10 27 40	---	11 48 47	22.7	293.9	6.3		40.4	73	6151	10 26 11
10 27 40	J0530+3301	11 48 47	23.4	294.3	6.3		40.7	-15	6151	No stop
10 31 10	---	11 52 18	23.0	294.9	6.3		40.5	195	6165	10 27 41
10 31 40	J0529+3209	11 52 48	22.1	294.6	6.4		40.2	15	6165	10 31 40
10 33 10	---	11 54 18	21.9	294.8	6.4		40.1	90	6170	10 31 41
10 33 10	FRB	11 54 18	23.0	295.1	6.4		40.5	-17	6170	No stop
10 36 40	---	11 57 49	22.5	295.7	6.4		40.3	193	6184	10 33 11
10 36 40	J0529+3209	11 57 49	21.4	295.5	6.5		39.8	-17	6184	No stop
10 38 10	---	11 59 19	21.2	295.7	6.5		39.7	73	6190	10 36 41
10 38 10	FRB	11 59 19	22.3	296.0	6.4		40.2	-17	6190	No stop
10 41 40	---	12 02 50	21.9	296.6	6.5		39.9	193	6203	10 38 11
10 42 20	J0529+3209	12 03 30	20.7	296.4	6.5		39.4	23	6203	10 42 20
10 43 20	---	12 04 30	20.5	296.6	6.6		39.4	60	6207	10 42 21
10 43 20	FRB	12 04 30	21.6	296.9	6.5		39.8	-17	6207	No stop
10 46 50	---	12 08 01	21.2	297.5	6.6		39.5	193	6220	10 43 21
10 46 50	J0529+3209	12 08 01	20.1	297.2	6.6		39.1	-17	6220	No stop
10 48 20	---	12 09 31	19.9	297.5	6.6		39.0	73	6226	10 46 51
10 48 20	J0530+3301	12 09 31	20.6	297.9	6.6		39.3	-15	6226	No stop
10 51 50	---	12 13 01	20.2	298.5	6.7		39.0	195	6240	10 48 21
10 52 20	J0529+3209	12 13 32	19.3	298.2	6.7		38.7	15	6240	10 52 20
10 53 50	---	12 15 02	19.1	298.5	6.7		38.6	90	6245	10 52 21

----- EB059 -----

Next scan frequencies:	4958.49	4958.49	4958.49	4958.49	5022.49	5022.49	5022.49	5022.49
Next BBC frequencies:	758.49	758.49	758.49	758.49	822.49	822.49	822.49	822.49
Next scan bandwidths:	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00

10 59 50	J1246-0730	12 21 03	29.1	172.7	-0.4		-4.4	92	6245	10 59 50
11 05 50	=1243-072	12 27 04	29.2	174.4	-0.3		-3.4	360	6292	11 00 15
11 05 50	J1250+0158	12 27 04	38.5	172.4	-0.4		-4.6	-49	6292	No stop
11 08 20	=1247+022	12 29 34	38.6	173.2	-0.4		-4.1	101	6311	11 05 51

Schedule for TORUN (Code Tr )

Page 34

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
11 09 00	J12580+0134	12 30 14	38.1	170.9	-0.5		-5.4	21	6311	11 09 00
11 12 00	---	12 33 15	38.1	171.9	-0.4		-4.9	180	6334	11 09 01
11 12 30	J1250+0158	12 33 45	38.7	174.5	-0.3		-3.3	11	6334	11 12 30
11 14 00	=1247+022	12 35 15	38.7	175.0	-0.3		-3.0	90	6345	11 12 31
11 14 30	J12580+0134	12 35 45	38.2	172.7	-0.4		-4.4	11	6345	11 14 30
11 17 30	---	12 38 46	38.2	173.6	-0.3		-3.8	180	6369	11 14 31
11 18 00	J1250+0158	12 39 16	38.7	176.3	-0.2		-2.2	11	6369	11 18 00
11 19 30	=1247+022	12 40 46	38.7	176.7	-0.2		-2.0	90	6380	11 18 01
11 20 10	J12580+0134	12 41 26	38.3	174.5	-0.3		-3.3	21	6380	11 20 10
11 23 10	---	12 44 27	38.3	175.4	-0.2		-2.8	180	6403	11 20 11
11 23 40	J1250+0158	12 44 57	38.8	178.1	-0.1		-1.2	11	6403	11 23 40
11 25 10	=1247+022	12 46 27	38.8	178.6	-0.1		-0.9	90	6415	11 23 41
11 25 40	J12580+0134	12 46 57	38.3	176.2	-0.2		-2.3	11	6415	11 25 40
11 28 40	---	12 49 58	38.4	177.2	-0.1		-1.7	180	6438	11 25 41
11 29 10	J1250+0158	12 50 28	38.8	179.8	-0.0		-0.1	11	6438	11 29 10
11 30 40	=1247+022	12 51 58	38.8	180.3	0.0		0.2	90	6449	11 29 11
11 31 20	J12580+0134	12 52 38	38.4	178.0	-0.1		-1.2	21	6449	11 31 20
11 34 20	---	12 55 38	38.4	179.0	-0.1		-0.6	180	6472	11 31 21
11 34 50	J1250+0158	12 56 09	38.8	181.7	0.1		1.0	11	6472	11 34 50
11 36 20	=1247+022	12 57 39	38.8	182.1	0.1		1.3	90	6484	11 34 51
11 36 50	J12580+0134	12 58 09	38.4	179.8	-0.0		-0.1	11	6484	11 36 50
11 39 50	---	13 01 09	38.4	180.7	0.0		0.4	180	6507	11 36 51
11 40 20	J1250+0158	13 01 39	38.7	183.4	0.2		2.1	11	6507	11 40 20
11 41 50	=1247+022	13 03 10	38.7	183.9	0.2		2.4	90	6519	11 40 21
11 42 30	J12580+0134	13 03 50	38.4	181.6	0.1		1.0	21	6519	11 42 30
11 45 30	---	13 06 50	38.4	182.5	0.1		1.5	180	6542	11 42 31
11 46 00	J1250+0158	13 07 20	38.7	185.3	0.3		3.2	11	6542	11 46 00
11 47 30	=1247+022	13 08 51	38.7	185.7	0.3		3.4	90	6553	11 46 01
11 48 00	J12580+0134	13 09 21	38.3	183.3	0.2		2.0	11	6553	11 48 00
11 51 00	---	13 12 21	38.3	184.3	0.2		2.6	180	6576	11 48 01

Schedule for TORUN (Code Tr )

Page 35

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop				Early	Disk	TPStart		
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
11 51 30	J1250+0158	13 12 51	38.6	187.0	0.4		4.2	11	6576	11 51 30
11 53 00	=1247+022	13 14 22	38.6	187.5	0.4		4.5	90	6588	11 51 31
11 53 40	J12580+0134	13 15 02	38.3	185.2	0.3		3.1	21	6588	11 53 40
11 56 40	---	13 18 02	38.2	186.1	0.3		3.7	180	6611	11 53 41
11 57 10	J1250+0158	13 18 32	38.5	188.8	0.5		5.3	10	6611	11 57 10
11 58 40	=1247+022	13 20 02	38.4	189.3	0.5		5.6	90	6622	11 57 11
11 59 10	J12580+0134	13 20 33	38.2	186.9	0.4		4.1	11	6622	11 59 10
12 02 10	---	13 23 33	38.1	187.9	0.4		4.7	180	6645	11 59 11
12 02 40	J1250+0158	13 24 03	38.3	190.6	0.6		6.3	10	6645	12 02 40
12 04 10	=1247+022	13 25 33	38.3	191.0	0.6		6.6	90	6657	12 02 41
12 04 50	J12580+0134	13 26 13	38.1	188.7	0.5		5.2	21	6657	12 04 50
12 07 50	---	13 29 14	38.0	189.7	0.5		5.8	180	6680	12 04 51
12 08 20	J1250+0158	13 29 44	38.2	192.4	0.6		7.4	10	6680	12 08 20
12 09 50	=1247+022	13 31 14	38.1	192.8	0.7		7.7	90	6692	12 08 21
12 10 20	J12580+0134	13 31 44	37.9	190.4	0.5		6.3	11	6692	12 10 20
12 13 20	---	13 34 45	37.9	191.4	0.6		6.8	180	6715	12 10 21
12 13 50	J1250+0158	13 35 15	38.0	194.1	0.7		8.4	11	6715	12 13 50
12 15 20	=1247+022	13 36 45	37.9	194.6	0.8		8.7	90	6726	12 13 51
12 16 00	J12580+0134	13 37 25	37.8	192.2	0.6		7.3	21	6726	12 16 00
12 19 00	---	13 40 26	37.7	193.2	0.7		7.9	180	6749	12 16 01
12 19 30	J1250+0158	13 40 56	37.7	195.9	0.8		9.5	11	6749	12 19 30
12 21 00	=1247+022	13 42 26	37.7	196.3	0.9		9.7	90	6761	12 19 31
12 21 30	J12580+0134	13 42 56	37.6	194.0	0.7		8.3	11	6761	12 21 30
12 24 30	---	13 45 57	37.5	194.9	0.8		8.9	180	6784	12 21 31
12 25 00	J1250+0158	13 46 27	37.5	197.6	0.9		10.5	11	6784	12 25 00
12 26 30	=1247+022	13 47 57	37.4	198.1	1.0		10.7	90	6795	12 25 01
12 27 10	J12580+0134	13 48 37	37.4	195.7	0.8		9.4	21	6795	12 27 10
12 30 10	---	13 51 38	37.2	196.7	0.9		9.9	180	6819	12 27 11
12 30 40	J1250+0158	13 52 08	37.2	199.3	1.0		11.5	11	6819	12 30 40
12 32 10	=1247+022	13 53 38	37.2	199.8	1.0		11.7	90	6830	12 30 41

Schedule for TORUN (Code Tr )

Page 36

e-EVN: eb059, rsc03

UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.

Early: Seconds between end of slew and start. Dwell: On source seconds.

Disk: GBytes recorded to this point.

TPStart: Recording start time. Frequencies are L0 sum (band edge).

SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop					Early	Disk	TPStart	
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
-----										
--- Thu 22 Sep 2016 Day 266 ---										
12 32 40	J12580+0134	13 54 08	37.1	197.4	0.9		10.4	11	6830	12 32 40
12 35 40	---	13 57 09	37.0	198.4	1.0		10.9	180	6853	12 32 41
12 36 10	J1250+0158	13 57 39	37.0	201.0	1.1		12.5	11	6853	12 36 10
12 37 40	=1247+022	13 59 09	36.9	201.5	1.1		12.7	90	6865	12 36 11
12 38 20	J12580+0134	13 59 49	36.9	199.2	1.0		11.4	21	6865	12 38 20
12 41 20	---	14 02 49	36.7	200.1	1.1		11.9	180	6888	12 38 21
12 41 50	J1250+0158	14 03 20	36.6	202.8	1.2		13.4	11	6888	12 41 50
12 43 20	=1247+022	14 04 50	36.5	203.2	1.2		13.7	90	6899	12 41 51
12 43 50	J12580+0134	14 05 20	36.6	200.9	1.1		12.4	11	6899	12 43 50
12 46 50	---	14 08 20	36.4	201.8	1.2		12.9	180	6922	12 43 51
12 47 20	J1250+0158	14 08 50	36.3	204.4	1.3		14.4	11	6922	12 47 20
12 48 50	=1247+022	14 10 21	36.2	204.9	1.3		14.6	90	6934	12 47 21
12 49 30	J12580+0134	14 11 01	36.3	202.6	1.2		13.3	21	6934	12 49 30
12 52 30	---	14 14 01	36.1	203.5	1.3		13.9	180	6957	12 49 31
12 53 00	J1250+0158	14 14 31	35.9	206.1	1.4		15.3	11	6957	12 53 00
12 54 30	=1247+022	14 16 02	35.8	206.6	1.4		15.6	90	6969	12 53 01
12 55 00	J12580+0134	14 16 32	35.9	204.2	1.3		14.3	11	6969	12 55 00
12 58 00	---	14 19 32	35.7	205.1	1.3		14.8	180	6992	12 55 01
12 58 30	J1250+0158	14 20 02	35.6	207.8	1.5		16.2	11	6992	12 58 30
13 00 00	=1247+022	14 21 33	35.5	208.2	1.5		16.5	90	7003	12 58 31

SETUP FILE INFORMATION:

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

==== Setup file: sess316.C1024eV105E

Setup group: 19	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=  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
IF SB =      U      U      U      U      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP     RCP     LCP     RCP     LCP
BBC   =      1      5      1      5      3      7      3      7
BBC SB=      L      L      U      U      L      L      U      U
IF    =      A1     B1     A1     B1     A1     B1     A1     B1
    
```

The following frequency sets based on these setups were used.

```

Frequency Set:  7  Setup file default.  Used with PCAL = off
LO sum=  4974.49  4974.49  4974.49  4974.49  5006.49  5006.49  5006.49  5006.49
BBC fr=   774.49  774.49  774.49  774.49  806.49  806.49  806.49  806.49
Bandwd=   16.00  16.00  16.00  16.00  16.00  16.00  16.00  16.00
Matching frequency sets:  7
    
```

```

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

==== Setup file: sess316.C2048e

```

Setup group:  9      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=  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
IF SB =      U      U      U      U      U      U      U      U
Pol.  =      RCP     LCP     RCP     LCP     RCP     LCP     RCP     LCP
BBC   =      1      5      1      5      3      7      3      7
BBC SB=      L      L      U      U      L      L      U      U
IF    =      A1     B1     A1     B1     A1     B1     A1     B1
    
```

The following frequency sets based on these setups were used.

```

Frequency Set: 17  Setup file default.  Used with PCAL = off
LO sum=  4958.49  4958.49  4958.49  4958.49  5022.49  5022.49  5022.49  5022.49
BBC fr=   758.49  758.49  758.49  758.49  822.49  822.49  822.49  822.49
Bandwd=   32.00  32.00  32.00  32.00  32.00  32.00  32.00  32.00
Matching frequency sets: 17
    
```

```

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

POSITIONS OF SOURCES USED IN RECORDING SCANS

Source	Source position (RA/Dec) (B1950)	Source position (RA/Dec) (J2000)	(Date)	Error (mas)
* J12580+0134	12 55 27.919406	* 12 58 01.196800	12 58 50.890398	0.00
	01 50 43.95319	* 01 34 32.42000	01 29 20.72540	0.00
* J1621-2241	16 18 33.037887	* 16 21 32.060000	16 22 31.112225	0.00
	-22 33 56.99705	*-22 41 00.40000	-22 43 09.94694	0.00
* J1620-2259	16 17 33.473332	* 16 20 32.800000	16 21 31.950370	0.00

	-22 51 07.07509	*-22 58 14.40000	-23 00 25.34652	0.00
* J162141	16 18 42.272007	* 16 21 41.560000	16 22 40.701757	0.00
	-22 46 24.21524	*-22 53 27.00000	-22 55 36.40484	0.00
* J162200	16 19 01.357649	* 16 22 00.700000	16 22 59.861143	0.00
	-22 48 14.27858	*-22 55 15.80000	-22 57 24.79216	0.00
* J162201	16 19 01.816960	* 16 22 01.070000	16 23 00.201295	0.00
	-22 43 55.10625	*-22 50 56.60000	-22 53 05.56052	0.00
* FRB	05 28 41.725142	* 05 31 58.702000	05 33 04.362093	0.00
	33 06 43.23981	* 33 08 52.54900	33 09 20.74698	0.00
* J0529+3209	05 26 12.903667	* 05 29 28.211037	05 30 33.334482	0.00
	32 07 26.83083	* 32 09 46.94745	32 10 19.13407	0.00
* J0530+3301	05 27 04.333498	* 05 30 21.061039	05 31 26.652437	0.00
	32 59 03.55663	* 33 01 19.90878	33 01 50.51210	0.00
* J0528+2200	05 25 51.827467	* 05 28 52.264000	05 29 52.411957	0.00
	21 57 41.80619	* 22 00 04.00000	22 00 40.70060	0.00
0400+258	04 00 03.594850	* 04 03 05.586080	04 04 06.910345	0.02
* J0403+2600	25 51 46.48888	* 26 00 01.50275	26 02 36.19709	0.02
J0403+26	/home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc			
0518+211	05 18 46.711020	* 05 21 45.965855	05 22 45.771030	0.30
* J0521+2112	21 09 58.62244	* 21 12 51.45162	21 13 38.70399	0.41
1243-072	12 43 28.787948	* 12 46 04.232110	12 46 54.728700	0.01
* J1246-0730	-07 14 23.49340	*-07 30 46.57465	-07 36 03.35349	0.02
J1246-07	/home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc			
1247+022	12 47 33.595169	* 12 50 06.841703	12 50 56.507752	0.79
* J1250+0158	02 14 23.56794	* 01 58 04.14529	01 52 49.48176	1.06
1306+360	13 06 03.930600	* 13 08 23.709130	13 09 08.208002	0.02
* J1308+3546	36 02 36.26236	* 35 46 37.16406	35 41 31.60070	0.02
* 1622-253	16 22 44.105299	* 16 25 46.891640	16 26 47.218264	0.00
J1625-2527	-25 20 51.69560	*-25 27 38.32680	-25 29 43.13852	0.01
J1625-25	/home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc			
	GSFC 2015a astro solution, unpublished 44045 observations.			
1732+389	17 32 40.487475	* 17 34 20.578541	17 34 53.593822	0.01
* J1734+3857	38 59 46.93242	* 38 57 51.44310	38 57 40.92206	0.01
J1734+38	/home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc			
* 2113+293	21 13 20.577468	* 21 15 29.413456	21 16 13.528732	0.00
J2115+2933	29 21 06.68463	* 29 33 38.36694	29 38 07.91073	0.01
J2115+29	/home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc			
VR422201	22 00 39.362505	* 22 02 43.291372	22 03 26.407319	0.00
J2202+4216	42 02 08.59077	* 42 16 39.97990	42 21 46.51958	0.00
* BLLAC	/home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc			
2200+420	GSFC 2015a astro solution, unpublished 51226 observations.			
J2202+42				

ft010tr

E-EVN: FT010

PI: Szomoru

Address: JIVE

Observing mode: realtime e-vlbi

Schedule for TORUN (Code Tr )

Page 2

e-EVN: ft010

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

Table with columns: Start UT, Stop UT, Source, LST, EL, AZ, HA, UP, ParA, Early Dwell, Disk GBytes, TPStart SYNC. Includes summary rows for frequencies and bandwidths, and a detailed schedule of observations from 13:30 to 16:30 on 22 Sep 2016.

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

=====  
Setup file: sess316.L1024eKAT7

Setup group:	4	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=	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00	2300.00
Net SB=	L	L	U	U	L	L	U	U
IF SB =	L	L	L	L	L	L	L	L
Pol. =	RCP	LCP	RCP	LCP	RCP	LCP	RCP	LCP
BBC =	1	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: 3 Setup file default. Used with PCAL = off

LO sum=	1626.49	1626.49	1626.49	1626.49	1690.49	1690.49	1690.49	1690.49
BBC fr=	673.51	673.51	673.51	673.51	609.51	609.51	609.51	609.51
Bandwd=	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00

Matching frequency sets: 3

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) (B1950)	(J2000)	(Date)	Error (mas)
* 1538+149	15 38 30.232266	* 15 40 49.491517	15 41 34.920355	0.01
J1540+1447	14 57 21.79435	* 14 47 45.88482	14 44 54.97014	0.02
J1540+14	/home/guest/rmc/SCHED/sched11.4/catalogs/sources.gsfc GSFC 2015a astro solution, unpublished 2022 observations.			





```

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) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 30.341499	0.00
	85 16 41.77889	* 85 00 00.000000	84 54 26.88533	0.00
	fake circumpolar target for a TS to look at			
* 0529+483	05 29 27.565384	* 05 33 15.865793	05 34 32.157690	0.00
J0533+4822	48 20 47.97038	* 48 22 52.80771	48 23 13.94471	0.00
	./rk16aj_sources.radioastron			
	AGN, rfc_2013d Petrov, 2013, unpublished 19801 observations, RA-A04-07, RA-A03-0			

#### 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)
0529+483        95.8

```

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes that the Sun will cause amplitude reductions on the longest VLBA baselines at a solar distance of  $60 \text{ deg } F^{-0.6}$  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

```



```

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) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 30.426811	0.00
	85 16 41.77889	* 85 00 00.000000	84 54 25.99643	0.00
	fake circumpolar target for a TS to look at			
* 0529+483	05 29 27.565384	* 05 33 15.865793	05 34 32.260471	0.00
J0533+4822	48 20 47.97038	* 48 22 52.80771	48 23 14.09698	0.00
	./rk16ak_sources.radioastron			
	AGN, rfc_2013d Petrov, 2013, unpublished 19801 observations, RA-A04-07, RA-A03-0			

#### 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)
0529+483    97.7

```

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  $60 \text{ deg } F^{-0.6}$  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

```

## Contents

Graphical Plan of Experiments in Sep 2016.....	1
Experiment Listing .....	3
rg20btr – RadioAstron pulsar observations .....	4
gg080tr – The nuclear structure of 3C84 with Space VLBI - II Epoch .....	7
eg094atr – RadioAstron Imaging of high-redshift quasars .....	20
rk16agtr – RadioAstron AGN Monitoring .....	24
eb059tr – e-EVN: eb059, rsc03 .....	26
ft010tr – e-EVN: ft010 .....	63
rk16ajtr – RadioAstron AGN Monitoring .....	66
rk16aktr – RadioAstron AGN Monitoring .....	68