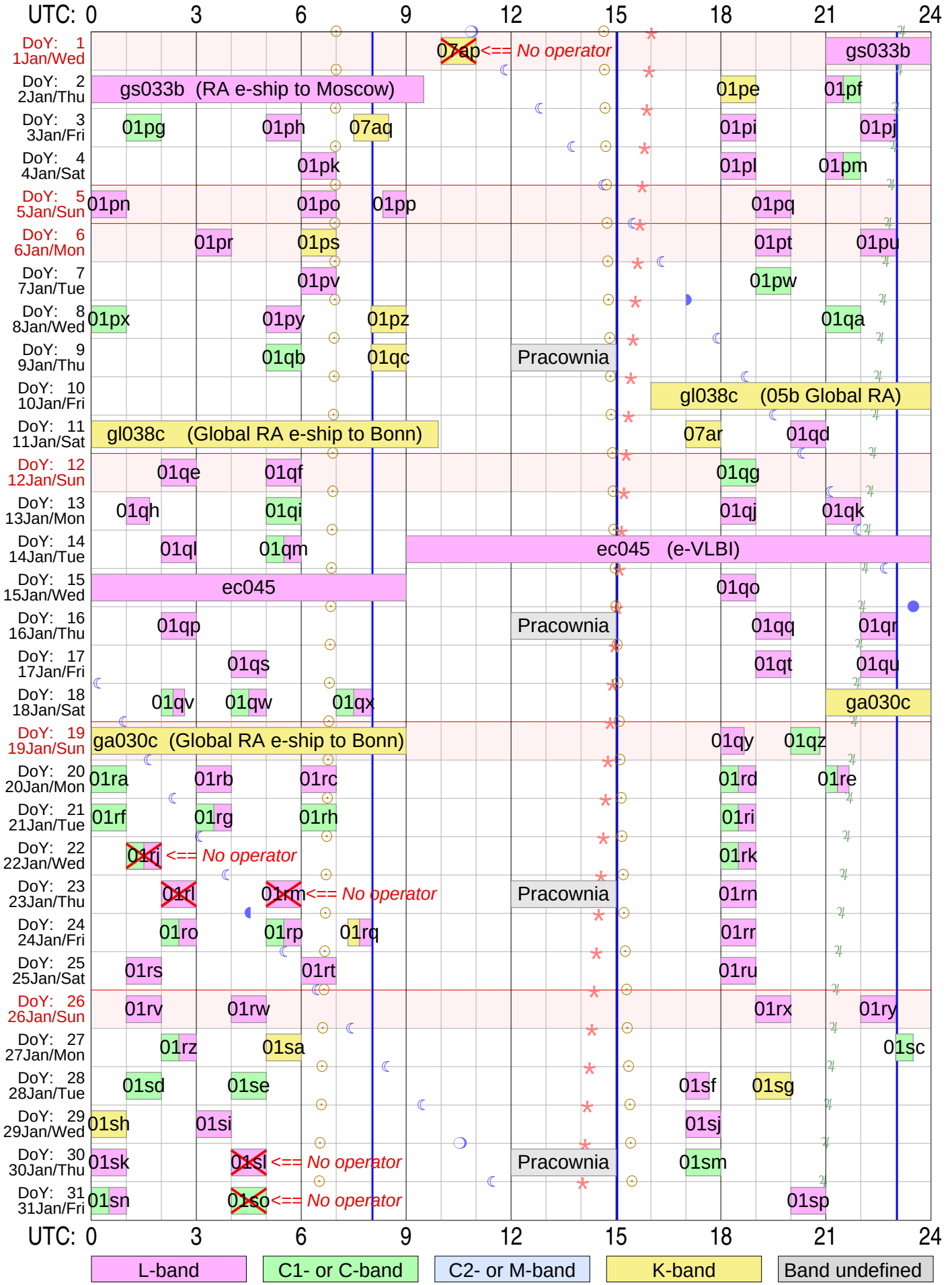
Tr VLBI plan for Jan 2014



L-band | C1- or C-band | C2- or M-band | K-band | Band undefined

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: 157.8 hours in 95 experiments planned

Two initial characters (rk) are omitted from RA experiment names!

Version: 2014.02.11

RadioAstron and EVN Experiments

January 2014

Użytkownik i hasło ftp dla logów i schedulów: `grt K0&th%`
`ftp://webinet.asc.rssi.ru`
Przykład dla log files: `cd GRT_log_files/2013_08/2013_08_01_raks02aa`
Przykład dla sched files: `cd schedule/grtsched/RAKS/rk02aa`

Exper. Name	Band	DoY	DoM	WD	UT_Start h	UT_Start m	UT_Stop h	UT_Stop m	Uwagi
rk07ap	K	1	1	Sro	10	00	11	00	
gs033b	L	1	1	Sro	21	00	24+09	30	
rk01pe	K	2	2	Czw	18	00	19	00	
rk01pf	L&C	2	2	Czw	21	00	22	00	Zmiana pasma!
rk01pg	C	3	3	Pia	1	00	2	00	
rk01ph	L	3	3	Pia	5	00	6	00	
rk07aq	K	3	3	Pia	7	30	8	30	
rk01pi	L	3	3	Pia	18	00	19	00	
rk01pj	L	3	3	Pia	22	00	23	00	
rk01pk	L	4	4	Sob	6	00	7	00	
rk01pl	L	4	4	Sob	18	00	19	00	
rk01pm	L&C	4	4	Sob	21	00	22	00	Zmiana pasma!
rk01pn	L	5	5	Nie	0	00	1	00	
rk01po	L	5	5	Nie	6	00	7	00	
rk01pp	L	5	5	Nie	8	20	9	00	
rk01pq	L	5	5	Nie	19	00	20	00	
rk01pr	L	6	6	Pon	3	00	4	00	
rk01ps	K	6	6	Pon	6	00	7	00	
rk01pt	L	6	6	Pon	19	00	20	00	
rk01pu	L	6	6	Pon	22	00	23	00	
rk01pv	L	7	7	Wto	6	00	7	00	
rk01pw	C	7	7	Wto	19	00	20	00	
rk01px	C	8	8	Sro	0	00	1	00	
rk01py	L	8	8	Sro	5	00	6	00	
rk01pz	K	8	8	Sro	8	00	9	00	
rk01qa	C	8	8	Sro	21	00	22	00	
rk01qb	C	9	9	Czw	5	00	6	00	
rk01qc	K	9	9	Czw	8	00	9	00	
gl038c	K	10	10	Pia	4	10	24+08	45	
rk07ar	K	11	11	Sob	17	00	18	00	
rk01qd	L	11	11	Sob	20	00	21	00	
rk01qe	L	12	12	Nie	2	00	3	00	
rk01qf	L	12	12	Nie	5	00	6	00	
rk01qg	C	12	12	Nie	18	00	19	00	
rk01qh	L	13	13	Pon	1	00	1	40	
rk01qi	C	13	13	Pon	5	00	6	00	
rk01qj	L	13	13	Pon	18	00	19	00	
rk01qk	L	13	13	Pon	21	00	22	00	
rk01ql	L	14	14	Wto	2	00	3	00	
rk01qm	C&L	14	14	Wto	5	00	6	00	Zmiana pasma!
ec045	L	14	14	Wto	9	00	24+13	00	e-VLBI (+ trigger @ C-band)
rk01qo	L	15	15	Sro	18	00	19	00	
rk01qp	L	16	16	Czw	2	00	3	00	
rk01qq	L	16	16	Czw	19	00	20	00	
rk01qr	L	16	16	Czw	22	00	23	00	
rk01qs	L	17	17	Pia	4	00	5	00	
rk01qt	L	17	17	Pia	19	00	20	00	
rk01qu	L	17	17	Pia	22	00	23	00	

```
rk01qv   C&L   18  18  Sob     2 00     2 40   Zmiana pasma!
rk01qw   C&L   18  18  Sob     4 00     5 00   Zmiana pasma!
rk01qx   C&L   18  18  Sob     7 00     8 00   Zmiana pasma!
ga030c    K    18  18  Sob    17 50 24+08 00
rk01qy    L    19  19  Nie    18 00    18 40
rk01qz    C    19  19  Nie    20 00    20 50
rk01ra    C    20  20  Pon     0 00     1 00
rk01rb    L    20  20  Pon     3 00     4 00
rk01rc    L    20  20  Pon     6 00     7 00
rk01rd   C&L   20  20  Pon    18 00    19 00   Zmiana pasma!
rk01re   C&L   20  20  Pon    21 00    21 40   Zmiana pasma!
rk01rf    C    21  21  Wto     0 00     1 00
rk01rg   C&L   21  21  Wto     3 00     4 00   Zmiana pasma!
rk01rh    C    21  21  Wto     6 00     7 00
rk01ri   C&L   21  21  Wto    18 00    19 00   Zmiana pasma!
rk01rj   C&L   22  22  Sro     1 00     2 00   Zmiana pasma!
rk01rk   C&L   22  22  Sro    18 00    19 00   Zmiana pasma!
rk01rl    L    23  23  Czw     2 00     3 00
rk01rm    L    23  23  Czw     5 00     6 00
rk01rn    L    23  23  Czw    18 00    19 00
rk01ro   C&L   24  24  Pia     2 00     3 00   Zmiana pasma!
rk01rp   C&L   24  24  Pia     5 00     6 00   Zmiana pasma!
rk01rq   K&L   24  24  Pia     7 20     8 00   Zmiana pasma!
rk01rr    L    24  24  Pia    18 00    19 00
rk01rs    L    25  25  Sob     1 00     2 00
rk01rt    L    25  25  Sob     6 00     7 00
rk01ru    L    25  25  Sob    18 00    19 00
rk01rv    L    26  26  Nie     1 00     2 00
rk01rw    L    26  26  Nie     4 00     5 00
rk01rx    L    26  26  Nie    19 00    20 00
rk01ry    L    26  26  Nie    22 00    23 00
rk01rz   C&L   27  27  Pon     2 00     3 00   Zmiana pasma!
rk01sa    K    27  27  Pon     5 00     6 00
rk01sc    C    27  27  Pon    23 00    23 30
rk01sd    C    28  28  Wto     1 00     2 00
rk01se    C    28  28  Wto     4 00     5 00
rk01sf    L    28  28  Wto    17 00    17 40
rk01sg    K    28  28  Wto    19 00    20 00
rk01sh    K    29  29  Sro     0 00     1 00
rk01si    L    29  29  Sro     3 00     4 00
rk01sj    L    29  29  Sro    17 00    18 00
rk01sk    L    30  30  Czw     0 00     1 00
rk01sl    L    30  30  Czw     4 00     5 00
rk01sm    C    30  30  Czw    17 00    18 00
rk01sn   C&L   31  31  Pia     0 00     1 00   Zmiana pasma!
rk01so    C    31  31  Pia     4 00     5 00
rk01sp    L    31  31  Pia    20 00    21 00

                    Razem 95 eksperymentow
```

Do zapisu obserwacji RadioAstronu dedykowany jest dyskpak

TR-00002/1600

montowany w banku A. Gdyby ten się zapełnił, można użyć paka

USN-0203/2000

zamontowanego w banku B obok TR-00002/1600 (lub samego w A). Jeśli zaczęto w Banku B, kolejne eksperymenty trzeba nagrywać także w B.

UWAGA: 1-godzinne eksperymenty RA zwykle wymagają ok. 110 GB wolnego miejsca na dyskpaku (dłuższe odpowiednio więcej).

rk07aptr

RadioAstron Maser observations

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Observing mode: K-band, dual-pol

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 1 Jan 2014 Day 1 ---										
Next scan frequencies:		22228.00	22228.00	22228.00	22228.00					
Next BBC frequencies:		728.00	728.00	728.00	728.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
09 50 00	0212+735	17 48 09	41.8	17.1	-8.5		-39.6	0	0	09 50 00
09 55 00	---	17 53 10	42.0	17.5	-8.4		-40.6	300	10	09 50 01
10 00 00	W3IRS5_H2O	17 58 10	32.5	26.2	-8.5		-34.6	250	10	10 00 00
10 19 30	---	18 17 44	33.9	28.4	-8.2		-37.7	1170	47	10 00 01
10 20 00	W3IRS5_H2O	18 18 14	33.9	28.5	-8.1		-37.8	24	47	10 20 00
10 39 30	---	18 37 47	35.4	30.6	-7.8		-40.9	1170	84	10 20 01
10 40 00	W3IRS5_H2O	18 38 17	35.4	30.7	-7.8		-41.0	24	84	10 40 00
11 00 00	---	18 58 20	37.0	32.8	-7.5		-44.1	1200	123	10 40 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk07ap_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

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

Disk used to record data.

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

 The following frequency sets based on these setups were used.

  Frequency Set:   5  Setup file default.  Used pcal sets:   1
  LO sum=   22228.00  22228.00  22228.00  22228.00
  BBC fr=     728.00    728.00    728.00    728.00
  Bandwd=      16.00     16.00     16.00     16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = OFF
   PCALXB1=   S1    S2    S3    S4    OFF   OFF   OFF   OFF
   PCALXB2=   M1    M2    M3    M4    OFF   OFF   OFF   OFF
   PCALFR1=     0     0     0     0     0     0     0     0
   PCALFR2=     0     0     0     0     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* W3IRS5_H2O         02 21 53.253968   * 02 25 40.712000     02 26 47.950631       0.00
                     61 52 21.48039    * 62 05 52.52200      62 09 51.99403        0.00

* 0212+735           02 12 49.921893   * 02 17 30.813373     02 18 55.352720       0.00
  J0217+7349         73 35 40.08547    * 73 49 32.62180      73 53 40.14384        0.00


EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
    Source         Sun distance (deg)
   W3IRS5_H2O          121.7
   0212+735            118.3

  Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
  that the Sun will cause amplitude reductions on the  longest VLBA baselines
  at a solar distance of 60deg F^(-0.6) where F is in GHz.
  For common VLBI bands, this is:
       1.6 GHz          45. deg
       2.3 GHz          36. deg
       5.0 GHz          23. deg
       8.4 GHz          17. deg
      15.0 GHz          12. deg
      22.0 GHz           9. deg
```

gs033btr

RadioAstron Pulsar observations

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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 / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 1 Jan 2014 Day 1 ---										
---------- This is a 1min calibration scan with auto-level (AGC) ON ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
20 58 00	B0329+54	04 57 58	77.6	-74.5	1.4		88.5	0	0	Stopped
20 59 00	---	04 58 59	77.4	-74.5	1.4		88.3	60	0	
--- Ground segment 1. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF now ---										
21 00 00	B0329+54	04 59 59	77.3	-74.5	1.4		88.1	54	0	21 00 00
21 19 30	---	05 19 32	74.5	-73.8	1.8		84.8	1170	37	21 00 01
21 20 00	B0329+54	05 20 02	74.4	-73.7	1.8		84.7	24	37	21 20 00
21 39 30	---	05 39 35	71.6	-72.6	2.1		81.8	1170	75	21 20 01
21 40 00	B0329+54	05 40 05	71.5	-72.6	2.1		81.8	24	75	21 40 00
21 59 30	---	05 59 39	68.7	-71.2	2.4		79.1	1170	112	21 40 01
22 00 00	B0329+54	06 00 09	68.7	-71.2	2.4		79.0	24	112	22 00 00
22 19 30	---	06 19 42	65.9	-69.6	2.8		76.5	1170	150	22 00 01
22 20 00	B0329+54	06 20 12	65.8	-69.6	2.8		76.4	24	150	22 20 00
22 39 30	---	06 39 45	63.1	-67.9	3.1		73.9	1170	187	22 20 01
22 40 00	B0329+54	06 40 15	63.0	-67.8	3.1		73.9	24	187	22 40 00
22 59 30	---	06 59 48	60.3	-66.1	3.4		71.4	1170	225	22 40 01
23 00 00	B0329+54	07 00 18	60.2	-66.0	3.4		71.4	24	225	23 00 00
23 07 30	---	07 07 50	59.2	-65.3	3.6		70.5	450	239	23 00 01
---------- This is a 1min calibration scan with auto-level (AGC) ON ----------										
23 08 00	B0329+54	07 08 20	59.2	-65.3	3.6		70.4	24	239	Stopped
23 09 00	---	07 09 20	59.0	-65.2	3.6		70.3	60	239	

Schedule for TORUN (Code Tr) Page 3

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 / Stop	Source	Start LST	Start EL	Start AZ	Stop LST	Stop EL	Stop AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Start: Wed 1 Jan 2014 Day 1 -- Stop: Thu 2 Jan 2014 Day 2 ---													
--- Space segment 1. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF now ---													
23 10 00	B0329+54	07 10 20	58.9	-65.1				3.6		70.2	54	239	23 10 00
23 29 30	---	07 29 53	56.2	-63.2				3.9		67.8	1170	276	23 10 01
23 30 00	B0329+54	07 30 23	56.2	-63.1				3.9		67.7	24	276	23 30 00
23 49 30	---	07 49 57	53.6	-61.2				4.3		65.3	1170	314	23 30 01
23 50 00	B0329+54	07 50 27	53.5	-61.1				4.3		65.3	24	314	23 50 00
00 09 30	---	08 10 00	51.0	-59.1				4.6		62.9	1170	351	23 50 01
00 10 00	B0329+54	08 10 30	50.9	-59.0				4.6		62.8	24	351	00 10 00
00 19 30	---	08 20 02	49.7	-58.0				4.8		61.6	570	370	00 10 01
--- Ground segment 2. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF now ---													
00 20 00	B0329+54	08 20 32	49.6	-58.0				4.8		61.6	24	370	00 20 00
00 39 30	---	08 40 05	47.2	-55.9				5.1		59.2	1170	407	00 20 01
00 40 00	B0329+54	08 40 35	47.1	-55.8				5.1		59.1	24	407	00 40 00
00 59 30	---	09 00 08	44.7	-53.7				5.4		56.7	1170	444	00 40 01
01 00 00	B0329+54	09 00 38	44.6	-53.6				5.4		56.6	24	444	01 00 00
01 19 30	---	09 20 11	42.3	-51.4				5.8		54.1	1170	482	01 00 01
01 20 00	B0329+54	09 20 41	42.3	-51.3				5.8		54.1	24	482	01 20 00
01 39 30	---	09 40 15	40.0	-49.1				6.1		51.6	1170	519	01 20 01
01 40 00	B0329+54	09 40 45	39.9	-49.0				6.1		51.5	24	519	01 40 00
01 59 30	---	10 00 18	37.8	-46.7				6.4		49.0	1170	557	01 40 01
02 00 00	B0329+54	10 00 48	37.7	-46.6				6.4		48.9	24	557	02 00 00
02 17 30	---	10 18 21	35.8	-44.5				6.7		46.6	1050	590	02 00 01
--- This is a 1min calibration scan with auto-level (AGC) ON ----------													
02 18 00	B0329+54	10 18 51	35.8	-44.4				6.7		46.6	24	590	Stopped
02 19 00	---	10 19 51	35.7	-44.3				6.8		46.4	60	590	
---------- Space segment 2. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF no													
02 20 00	B0329+54	10 20 51	35.6	-44.2				6.8		46.3	54	590	02 20 00
02 39 30	---	10 40 25	33.6	-41.7				7.1		43.7	1170	628	02 20 01
02 40 00	B0329+54	10 40 55	33.5	-41.7				7.1		43.6	24	628	02 40 00
02 59 30	---	11 00 28	31.6	-39.2				7.4		41.0	1170	665	02 40 01

Schedule for TORUN (Code Tr) Page 4

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 / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 2 Jan 2014 Day 2 ---										
03 00 00	B0329+54	11 00 58	31.6	-39.1	7.4		40.9	24	665	03 00 00
03 19 30	---	11 20 31	29.8	-36.6	7.8		38.2	1170	703	03 00 01
03 20 00	B0329+54	11 21 01	29.7	-36.5	7.8		38.1	24	703	03 20 00
03 39 30	---	11 40 34	28.0	-33.9	8.1		35.4	1170	740	03 20 01
03 40 00	B0329+54	11 41 04	28.0	-33.9	8.1		35.3	24	740	03 40 00
03 59 30	---	12 00 38	26.4	-31.2	8.4		32.5	1170	778	03 40 01
04 00 00	B0329+54	12 01 08	26.4	-31.2	8.5		32.5	24	778	04 00 00
04 19 30	---	12 20 41	24.9	-28.5	8.8		29.7	1170	815	04 00 01
04 20 00	B0329+54	12 21 11	24.9	-28.4	8.8		29.6	24	815	04 20 00
04 39 30	---	12 40 44	23.5	-25.7	9.1		26.7	1170	852	04 20 01
--- Ground segment 3. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF now ---										
04 40 00	B0329+54	12 41 14	23.5	-25.6	9.1		26.6	24	852	04 40 00
04 59 30	---	13 00 48	22.3	-22.8	9.4		23.7	1170	890	04 40 01
05 00 00	B0329+54	13 01 18	22.3	-22.8	9.5		23.7	24	890	05 00 00
05 19 30	---	13 20 51	21.2	-19.9	9.8		20.7	1170	927	05 00 01
05 20 00	B0329+54	13 21 21	21.2	-19.9	9.8		20.6	24	927	05 20 00
05 39 30	---	13 40 54	20.2	-17.0	10.1		17.7	1170	965	05 20 01
05 40 00	B0329+54	13 41 24	20.2	-16.9	10.1		17.6	24	965	05 40 00
05 59 30	---	14 00 57	19.4	-14.0	10.4		14.6	1170	1002	05 40 01
06 00 00	B0329+54	14 01 27	19.4	-14.0	10.5		14.5	24	1002	06 00 00
06 17 30	---	14 19 00	18.8	-11.4	10.7		11.8	1050	1036	06 00 01
---------- This is a 1min calibration scan with auto-level (AGC) ON ----------										
06 18 00	B0329+54	14 19 30	18.8	-11.3	10.8		11.7	24	1036	Stopped
06 19 00	---	14 20 31	18.8	-11.1	10.8		11.5	60	1036	
--- Space segment 3. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF now ---										
06 20 00	B0329+54	14 21 31	18.8	-11.0	10.8		11.4	54	1036	06 20 00
06 39 30	---	14 41 04	18.3	-8.0	11.1		8.3	1170	1073	06 20 01
06 40 00	B0329+54	14 41 34	18.3	-8.0	11.1		8.3	24	1073	06 40 00
06 59 30	---	15 01 07	17.9	-5.0	11.5		5.2	1170	1111	06 40 01
07 00 00	B0329+54	15 01 37	17.9	-4.9	11.5		5.1	24	1111	07 00 00
07 19 30	---	15 21 11	17.8	-2.0	11.8		2.0	1170	1148	07 00 01

Schedule for TORUN (Code Tr) Page 5

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 / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 2 Jan 2014 Day 2 ---										
07 20 00	B0329+54	15 21 41	17.8	-1.9	11.8		2.0	24	1148	07 20 00
07 39 30	---	15 41 14	17.7	1.1	-11.9		-1.1	1170	1186	07 20 01
07 40 00	B0329+54	15 41 44	17.7	1.2	-11.9		-1.2	24	1186	07 40 00
07 59 30	---	16 01 17	17.9	4.1	-11.5		-4.3	1170	1223	07 40 01
08 00 00	B0329+54	16 01 47	17.9	4.2	-11.5		-4.4	24	1223	08 00 00
08 19 30	---	16 21 20	18.2	7.2	-11.2		-7.4	1170	1260	08 00 01
08 20 00	B0329+54	16 21 50	18.2	7.2	-11.2		-7.5	24	1260	08 20 00
08 39 30	---	16 41 24	18.6	10.2	-10.9		-10.6	1170	1298	08 20 01
08 40 00	B0329+54	16 41 54	18.6	10.3	-10.9		-10.6	24	1298	08 40 00
08 59 30	---	17 01 27	19.2	13.2	-10.5		-13.7	1170	1335	08 40 01
09 00 00	B0329+54	17 01 57	19.2	13.3	-10.5		-13.8	24	1335	09 00 00
09 05 00	---	17 06 58	19.4	14.0	-10.5		-14.5	300	1345	09 00 01
--- Ground segment 4. Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF now ---										
09 05 30	B0329+54	17 07 28	19.4	14.1	-10.4		-14.6	24	1345	09 05 30
09 09 30	---	17 11 29	19.6	14.7	-10.4		-15.2	240	1353	09 05 31
09 10 00	B0329+54	17 11 59	19.6	14.7	-10.4		-15.3	24	1353	09 10 00
09 30 00	---	17 32 02	20.5	17.7	-10.0		-18.4	1200	1391	09 10 01

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

======== Setup file: ra18cm2_autolevel.set
Matching groups in ./gs033b_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 Setup not used for recording data.

 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

The following frequency sets based on these setups were used.

 Frequency Set:   5  Setup file default.  Used pcal sets:   1
 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:   5

The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = OFF
  PCALXB1=   S1    S2    S3    S4    OFF   OFF   OFF   OFF
  PCALXB2=   M1    M2    M3    M4    OFF   OFF   OFF   OFF
  PCALFR1=     0     0     0     0     0     0     0     0
  PCALFR2=     0     0     0     0     0     0     0     0


======== Setup file: ra18cm2.set
 Matching groups in ./gs033b_freq.dat:
   tr18cm          E-mail Borkowski 12Mar98, preferred alternative

 Setup group:    9         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=   2300.00   2300.00   2300.00   2300.00
 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:  16  Setup file default.  Used pcal sets:   1
 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:  16
```

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = OFF

PCALXB1=	S1	S2	S3	S4	OFF	OFF	OFF	OFF
PCALXB2=	M1	M2	M3	M4	OFF	OFF	OFF	OFF
PCALFR1=	0	0	0	0	0	0	0	0
PCALFR2=	0	0	0	0	0	0	0	0

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)
* B0329+54	03 29 11.066308	* 03 32 59.368000	03 34 06.605709	0.00
	54 24 37.47697	* 54 34 43.57000	54 37 38.22491	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
B0329+54	131.8

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
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
43.0 GHz	6. deg

rk01petr

RadioAstron AGN survey

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Observing mode: K-band, dual-pol

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 2 Jan 2014 Day 2 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0836+710	02 03 26	46.2	27.8	-6.7		-58.7	0	0	18 00 00
18 14 30	---	02 17 58	47.2	28.7	-6.4		-61.5	870	28	18 00 01
18 15 00	0836+710	02 18 28	47.3	28.7	-6.4		-61.6	24	28	18 15 00
18 29 30	---	02 33 01	48.3	29.5	-6.2		-64.4	870	56	18 15 01
18 30 00	0836+710	02 33 31	48.4	29.6	-6.2		-64.5	24	56	18 30 00
18 44 30	---	02 48 03	49.4	30.3	-5.9		-67.4	870	84	18 30 01
18 45 00	0836+710	02 48 33	49.5	30.3	-5.9		-67.5	24	84	18 45 00
19 00 00	---	03 03 36	50.6	31.0	-5.7		-70.5	900	112	18 45 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01pe_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

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

Disk used to record data.

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

 The following frequency sets based on these setups were used.

 Frequency Set:   4  Setup file default.  Used pcal sets:   1
 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

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0836+710          08 36 21.556646   * 08 41 24.365284     08 42 52.336934       0.00
  J0841+7053        71 04 22.42740    * 70 53 42.17302      70 50 20.59323        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 0836+710           129.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01pftr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: L&C-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 2 Jan 2014 Day 2 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
21 00 00	0119+115	05 03 55	29.9	248.3	3.7		34.8	0	0	21 00 00
21 14 30	---	05 18 28	27.9	251.6	3.9		35.6	870	28	21 00 01
21 15 00	0119+115	05 18 58	27.8	251.7	3.9		35.6	24	28	21 15 00
21 25 00	---	05 28 59	26.4	253.9	4.1		36.1	600	47	21 15 01
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
21 30 00	0119+115	05 34 00	25.6	255.0	4.2		36.4	293	47	21 30 00
21 44 30	---	05 48 33	23.5	258.2	4.4		36.9	870	75	21 30 01
21 45 00	0119+115	05 49 03	23.4	258.3	4.4		36.9	24	75	21 45 00
22 00 00	---	06 04 05	21.2	261.5	4.7		37.4	900	104	21 45 01

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

```
======== Setup file: ra18cm2.set
  Matching groups in ./rk01pf_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    5         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.


  1st LO=   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         U         U         L         L
  IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra6cm2.set
  Matching groups in ./rk01pf_freq.dat:
    tr6cm           E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.


  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0119+115          01 19 03.080127   * 01 21 41.595043     01 22 27.041354       0.00
  J0121+1149        11 34 09.31507    * 11 49 50.41305      11 54 16.82966        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0119+115           101.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pgtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

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

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 3 Jan 2014 Day 3 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:			4836.00	4836.00	4836.00	4836.00				
Next BBC frequencies:			636.00	636.00	636.00	636.00				
Next scan bandwidths:			16.00	16.00	16.00	16.00				
01 00 00	2351+456	09 04 35	15.5	-29.2	9.2		25.0	0	0	01 00 00
01 14 30	---	09 19 07	14.5	-26.9	9.4		23.0	870	28	01 00 01
01 15 00	2351+456	09 19 37	14.5	-26.8	9.4		22.9	24	28	01 15 00
01 29 30	---	09 34 10	13.5	-24.4	9.7		20.9	870	56	01 15 01
01 30 00	2351+456	09 34 40	13.5	-24.3	9.7		20.8	24	56	01 30 00
01 44 30	---	09 49 12	12.6	-21.8	9.9		18.7	870	84	01 30 01
01 45 00	2351+456	09 49 42	12.6	-21.7	9.9		18.7	24	84	01 45 00
02 00 00	---	10 04 45	11.8	-19.2	10.2		16.5	900	112	01 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01pg_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 Net SB=         L         L         U         U
 IF SB =         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         L         L         U         U
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   4  Setup file default.  Used pcal sets:   1
 LO sum=   4836.00  4836.00  4836.00  4836.00
 BBC fr=    636.00   636.00   636.00   636.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   4

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 2351+456          23 51 49.972507   * 23 54 21.680217     23 55 05.069298       0.00
  J2354+4553        45 36 22.77745    * 45 53 04.23639      45 58 02.55119        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  2351+456            96.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01phtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

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

Start UT / Stop	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 3 Jan 2014 Day 3 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
05 00 00	1327+321	13 05 14	68.2	165.4	-0.4		-10.3	0	0	05 00 00
05 14 30	---	13 19 47	68.6	173.7	-0.2		-4.4	870	28	05 00 01
05 15 00	1327+321	13 20 17	68.7	174.0	-0.2		-4.2	23	28	05 15 00
05 29 30	---	13 34 49	68.7	182.5	0.1		1.8	870	56	05 15 01
05 30 00	1327+321	13 35 19	68.7	182.8	0.1		2.0	23	56	05 30 00
05 44 30	---	13 49 52	68.4	191.2	0.3		7.9	870	84	05 30 01
05 45 00	1327+321	13 50 22	68.4	191.5	0.3		8.1	23	84	05 45 00
06 00 00	---	14 05 24	67.8	199.9	0.6		14.0	900	112	05 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01ph_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 7 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=   2300.00   2300.00   2300.00   2300.00
 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:   7  Setup file default.  Used pcal sets:   1
 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:   7

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1327+321          13 27 34.876201   * 13 29 52.864906     13 30 31.432195       0.00
  J1329+3154        32 09 38.80938    * 31 54 11.05448      31 49 38.76864        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1327+321            94.9

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk07aqtr

RadioAstron Maser observations

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Observing mode: K-band, dual-pol

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 3 Jan 2014 Day 3 ---										
Next scan frequencies:		22172.00	22172.00	22172.00	22172.00					
Next BBC frequencies:		672.00	672.00	672.00	672.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
07 20 00	1015+359	15 25 37	35.4	-75.8	5.1		45.8	0	0	07 20 00
07 25 00	---	15 30 38	34.6	-75.0	5.2		45.5	300	10	07 20 01
07 30 00	NGC3079_H2O	15 35 39	44.4	-51.8	5.5		56.6	240	10	07 30 00
07 49 30	---	15 55 12	42.2	-49.6	5.9		54.1	1170	47	07 30 01
07 50 00	NGC3079_H2O	15 55 42	42.1	-49.6	5.9		54.0	24	47	07 50 00
08 09 30	---	16 15 15	39.9	-47.3	6.2		51.4	1170	84	07 50 01
08 10 00	NGC3079_H2O	16 15 45	39.9	-47.3	6.2		51.4	24	84	08 10 00
08 30 00	---	16 35 49	37.7	-44.9	6.5		48.7	1200	123	08 10 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk07aq_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

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

Disk used to record data.

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

 The following frequency sets based on these setups were used.

 Frequency Set:   3  Setup file default.  Used pcal sets:   1
 LO sum=   22172.00  22172.00  22172.00  22172.00
 BBC fr=     672.00    672.00    672.00    672.00
 Bandwd=      16.00     16.00     16.00     16.00
  Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = OFF
  PCALXB1=   S1    S2    S3    S4    OFF   OFF   OFF   OFF
  PCALXB2=   M1    M2    M3    M4    OFF   OFF   OFF   OFF
  PCALFR1=     0     0     0     0     0     0     0     0
  PCALFR2=     0     0     0     0     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* NGC3079_H2O       09 58 35.011191   * 10 01 57.802000     10 02 56.071342       0.00
                    55 55 15.50111    * 55 40 47.26000      55 36 21.03316        0.00

* 1015+359          10 15 16.226760   * 10 18 10.988103     10 19 01.217300       0.00
  J1018+3542        35 57 41.35603    * 35 42 39.44084      35 38 07.29698        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 NGC3079_H2O        132.6
 1015+359           134.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01pitr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

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

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 3 Jan 2014 Day 3 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0917+624	02 07 22	38.1	34.1	-7.3		-46.2	0	0	18 00 00
18 14 30	---	02 21 55	39.3	35.6	-7.0		-48.5	870	28	18 00 01
18 15 00	0917+624	02 22 25	39.4	35.6	-7.0		-48.6	24	28	18 15 00
18 29 30	---	02 36 57	40.7	37.1	-6.8		-50.9	870	56	18 15 01
18 30 00	0917+624	02 37 27	40.7	37.1	-6.8		-51.0	24	56	18 30 00
18 44 30	---	02 52 00	42.1	38.5	-6.5		-53.3	870	84	18 30 01
18 45 00	0917+624	02 52 30	42.1	38.5	-6.5		-53.4	24	84	18 45 00
19 00 00	---	03 07 32	43.5	39.9	-6.3		-55.7	900	112	18 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pi_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   4  Setup file default.  Used pcal sets:   1
 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:   4

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0917+624          09 17 40.306860   * 09 21 36.231074     09 22 44.410953       0.00
  J0921+6215        62 28 38.64009    * 62 15 52.18031      62 11 54.67978        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0917+624           133.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pjtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

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

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 3 Jan 2014 Day 3 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
22 00 00	0119+115	06 08 02	20.6	262.3	4.8		37.5	0	0	22 00 00
22 14 30	---	06 22 34	18.5	265.3	5.0		37.7	870	28	22 00 01
22 15 00	0119+115	06 23 04	18.4	265.4	5.0		37.7	24	28	22 15 00
22 29 30	---	06 37 37	16.2	268.3	5.3		37.8	870	56	22 15 01
22 30 00	0119+115	06 38 07	16.1	268.4	5.3		37.8	24	56	22 30 00
22 44 30	---	06 52 39	14.0	271.3	5.5		37.8	870	84	22 30 01
22 45 00	0119+115	06 53 09	13.9	271.4	5.5		37.8	24	84	22 45 00
23 00 00	---	07 08 12	11.6	274.4	5.8		37.7	900	112	22 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pj_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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 pcal sets:   1
 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:   2

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0119+115          01 19 03.080127   * 01 21 41.595043     01 22 27.029516       0.00
  J0121+1149        11 34 09.31507    * 11 49 50.41305      11 54 16.78632        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 0119+115           100.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01pktr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

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

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 4 Jan 2014 Day 4 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
06 00 00	1807+698	14 09 21	58.9	35.0	-4.0		-91.3	0	0	06 00 00
06 14 30	---	14 23 53	60.1	34.9	-3.7		-94.8	870	28	06 00 01
06 15 00	1807+698	14 24 23	60.2	34.9	-3.7		-95.0	24	28	06 15 00
06 29 30	---	14 38 55	61.4	34.6	-3.5		-98.6	870	56	06 15 01
06 30 00	1807+698	14 39 26	61.5	34.6	-3.5		-98.8	24	56	06 30 00
06 44 30	---	14 53 58	62.7	34.1	-3.2		-102.6	870	84	06 30 01
06 45 00	1807+698	14 54 28	62.8	34.1	-3.2		-102.8	24	84	06 45 00
07 00 00	---	15 09 30	64.0	33.3	-3.0		-106.9	900	112	06 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pk_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   4  Setup file default.  Used pcal sets:   1
 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:   4

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1807+698          18 07 18.543586   * 18 06 50.680644     18 06 38.826965       0.00
  J1806+6949        69 48 57.10463    * 69 49 28.10848      69 49 40.28311        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1807+698            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 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pltr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 4 Jan 2014 Day 4 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	2351+456	02 11 19	67.0	265.8	2.3		59.5	0	0	18 00 00
18 14 30	---	02 25 51	64.8	268.9	2.5		59.7	870	28	18 00 01
18 15 00	2351+456	02 26 21	64.8	269.0	2.5		59.7	24	28	18 15 00
18 29 30	---	02 40 54	62.6	271.9	2.8		59.7	870	56	18 15 01
18 30 00	2351+456	02 41 24	62.5	272.0	2.8		59.7	24	56	18 30 00
18 44 30	---	02 55 56	60.3	274.7	3.0		59.4	870	84	18 30 01
18 45 00	2351+456	02 56 26	60.3	274.7	3.0		59.4	24	84	18 45 00
19 00 00	---	03 11 29	58.0	277.4	3.3		59.0	900	112	18 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pl_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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:   6  Setup file default.  Used pcal sets:   1
 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:   6

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 2351+456          23 51 49.972507   * 23 54 21.680217     23 55 05.027621       0.00
  J2354+4553        45 36 22.77745    * 45 53 04.23639      45 58 02.37919        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 3C48               109.4
 2351+456            95.3

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pmtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: L&C-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 4 Jan 2014 Day 4 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
21 00 00	0119+115	05 11 48	28.8	250.1	3.8		35.2	0	0	21 00 00
21 14 30	---	05 26 21	26.7	253.4	4.1		36.0	870	28	21 00 01
21 15 00	0119+115	05 26 51	26.7	253.5	4.1		36.0	24	28	21 15 00
21 25 00	---	05 36 53	25.2	255.7	4.2		36.5	600	47	21 15 01
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
21 30 00	0119+115	05 41 53	24.5	256.8	4.3		36.7	293	47	21 30 00
21 44 30	---	05 56 26	22.4	259.9	4.6		37.2	870	75	21 30 01
21 45 00	0119+115	05 56 56	22.3	260.0	4.6		37.2	24	75	21 45 00
22 00 00	---	06 11 58	20.0	263.1	4.8		37.5	900	104	21 45 01

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

```
======== Setup file: ra18cm2.set
  Matching groups in ./rk01pm_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    7         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=   2300.00   2300.00   2300.00   2300.00
  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:   6  Setup file default.  Used pcal sets:   1
  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:   6

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra6cm2.set
  Matching groups in ./rk01pm_freq.dat:
    tr6cm           E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.


  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   7  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   7

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0119+115          01 19 03.080127   * 01 21 41.595043     01 22 27.015280      0.00
  J0121+1149        11 34 09.31507    * 11 49 50.41305      11 54 16.72365       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0119+115            99.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pntr

RadioAstron AGN survey

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```


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

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

 --- Sun   5 Jan 2014   Day   5 ---

 ---------- L-band VLBI scans ----------

 Next scan frequencies:  1668.00  1668.00  1668.00  1668.00
 Next BBC frequencies:    632.00   632.00   632.00   632.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

00 00 00  0235+164     08 12 18  17.3 274.9  5.5      38.6     0         0   00 00 00
00 14 30  ---          08 26 50  15.1 277.8  5.8      38.4   870        28   00 00 01

00 15 00  0235+164     08 27 20  15.1 277.8  5.8      38.4    24        28   00 15 00
00 29 30  ---          08 41 53  12.9 280.7  6.0      38.0   870        56   00 15 01

00 30 00  0235+164     08 42 23  12.8 280.8  6.0      38.0    24        56   00 30 00
00 44 30  ---          08 56 55  10.7 283.6  6.3      37.5   870        84   00 30 01

00 45 00  0235+164     08 57 25  10.6 283.7  6.3      37.5    24        84   00 45 00
01 00 00  ---          09 12 28   8.4 286.6  6.6      36.9   900       112   00 45 01


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


 ======== Setup file: ra18cm2.set
   Matching groups in ./rk01pn_freq.dat:
     tr18cm          E-mail Borkowski 12Mar98, preferred alternative

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

   Disk used to record data.
```

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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 pcal sets:   1
  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:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0235+164          02 35 52.630215   * 02 38 38.930107     02 39 27.065711       0.00
  J0238+1636        16 24 04.01610    * 16 36 59.27452      16 40 36.51079        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0235+164           118.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01potr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 5 Jan 2014 Day 5 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
06 00 00	1308+326	14 13 17	66.4	214.4	1.0		23.7	0	0	06 00 00
06 14 30	---	14 27 50	65.0	221.1	1.3		27.8	870	28	06 00 01
06 15 00	1308+326	14 28 20	65.0	221.3	1.3		28.0	23	28	06 15 00
06 29 30	---	14 42 52	63.4	227.5	1.5		31.6	870	56	06 15 01
06 30 00	1308+326	14 43 22	63.4	227.7	1.5		31.7	24	56	06 30 00
06 44 30	---	14 57 54	61.7	233.3	1.8		34.7	870	84	06 30 01
06 45 00	1308+326	14 58 25	61.6	233.4	1.8		34.8	24	84	06 45 00
07 00 00	---	15 13 27	59.8	238.7	2.0		37.4	900	112	06 45 01

SETUP FILE INFORMATION:

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

```
 ======== Setup file: ra18cm2.set
   Matching groups in ./rk01po_freq.dat:
     tr18cm          E-mail Borkowski 12Mar98, preferred alternative

   Setup group:    7         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=   2300.00   2300.00   2300.00   2300.00
 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:   6  Setup file default.  Used pcal sets:   1
 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:   6

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1308+326          13 08 07.560133   * 13 10 28.663852     13 11 08.301703       0.00
  J1310+3220        32 36 40.23870    * 32 20 43.78277      32 16 01.88622        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1308+326           100.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pptr

RadioAstron AGN survey

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```


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

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

 --- Sun   5 Jan 2014   Day   5 ---

 ---------- L-band VLBI scans ----------

 Next scan frequencies:  1668.00  1668.00  1668.00  1668.00
 Next BBC frequencies:    632.00   632.00   632.00   632.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

08 20 00  1226+023     16 33 40  18.6 247.2  4.1      33.6     0        0   08 20 00
08 39 30  ---          16 53 13  15.8 251.4  4.4      34.7  1170       37   08 20 01

08 40 00  1226+023     16 53 43  15.8 251.5  4.4      34.7    24       37   08 40 00
09 00 00  ---          17 13 47  12.9 255.8  4.7      35.6  1200       76   08 40 01


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


 ======== Setup file: ra18cm2.set
   Matching groups in ./rk01pp_freq.dat:
     tr18cm          E-mail Borkowski 12Mar98, preferred alternative

   Setup group:    5         Station: TORUN             Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2         Sample rate: 32.000
   Number of channels:  4    DBE type:                  Speedup factor:   1.00

   Disk used to record data.
```

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1226+023          12 26 33.245835   * 12 29 06.699731     12 29 50.482377       0.00
  J1229+0203        02 19 43.30547    * 02 03 08.59797      01 58 24.11807        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1226+023            98.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pqtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 5 Jan 2014 Day 5 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
19 00 00	2351+456	03 15 25	57.4	278.0	3.3		58.8	0	0	19 00 00
19 14 30	---	03 29 58	55.3	280.4	3.6		58.2	870	28	19 00 01
19 15 00	2351+456	03 30 28	55.2	280.5	3.6		58.2	24	28	19 15 00
19 29 30	---	03 45 00	53.1	282.8	3.8		57.4	870	56	19 15 01
19 30 00	2351+456	03 45 30	53.0	282.9	3.8		57.4	24	56	19 30 00
19 44 30	---	04 00 03	50.9	285.1	4.1		56.5	870	84	19 30 01
19 45 00	2351+456	04 00 33	50.8	285.2	4.1		56.5	24	84	19 45 00
20 00 00	---	04 15 35	48.6	287.4	4.3		55.5	900	112	19 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pq_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 2351+456          23 51 49.972507   * 23 54 21.680217     23 55 04.999416       0.00
  J2354+4553        45 36 22.77745    * 45 53 04.23639      45 58 02.24093        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C48               108.5
  2351+456            94.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01prtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 6 Jan 2014 Day 6 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
03 00 00	0917+624	11 16 44	72.5	-47.6	1.9		108.1	0	0	03 00 00
03 14 30	---	11 31 17	70.8	-49.0	2.1		103.5	870	28	03 00 01
03 15 00	0917+624	11 31 47	70.8	-49.1	2.2		103.4	24	28	03 15 00
03 29 30	---	11 46 19	69.1	-50.1	2.4		99.3	870	56	03 15 01
03 30 00	0917+624	11 46 49	69.0	-50.1	2.4		99.1	24	56	03 30 00
03 44 30	---	12 01 21	67.4	-50.7	2.6		95.4	870	84	03 30 01
03 45 00	0917+624	12 01 52	67.3	-50.7	2.7		95.2	24	84	03 45 00
04 00 00	---	12 16 54	65.6	-50.9	2.9		91.7	900	112	03 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pr_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   5  Setup file default.  Used pcal sets:   1
 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:   5

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0917+624          09 17 40.306860   * 09 21 36.231074     09 22 44.509376       0.00
  J0921+6215        62 28 38.64009    * 62 15 52.18031      62 11 55.07679        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 0917+624           134.2

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pstr

RadioAstron AGN survey

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 6 Jan 2014 Day 6 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
06 00 00	0836+710	14 17 14	51.0	-31.2	5.6		71.5	0	0	06 00 00
06 14 30	---	14 31 46	49.9	-30.6	5.8		68.6	870	28	06 00 01
06 15 00	0836+710	14 32 16	49.9	-30.6	5.8		68.5	24	28	06 15 00
06 29 30	---	14 46 49	48.8	-29.9	6.1		65.6	870	56	06 15 01
06 30 00	0836+710	14 47 19	48.7	-29.8	6.1		65.5	24	56	06 30 00
06 44 30	---	15 01 51	47.6	-29.0	6.3		62.7	870	84	06 30 01
06 45 00	0836+710	15 02 21	47.6	-29.0	6.3		62.6	24	84	06 45 00
07 00 00	---	15 17 24	46.5	-28.1	6.6		59.7	900	112	06 45 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01ps_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

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

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0836+710          08 36 21.556646   * 08 41 24.365284     08 42 52.513306       0.00
  J0841+7053        71 04 22.42740    * 70 53 42.17302      70 50 21.41800        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0836+710           129.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pttr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 6 Jan 2014 Day 6 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
19 00 00	0122-003	03 19 22	31.9	213.9	1.9		19.6	0	0	19 00 00
19 14 30	---	03 33 54	30.6	217.9	2.1		21.7	870	28	19 00 01
19 15 00	0122-003	03 34 24	30.6	218.0	2.1		21.7	24	28	19 15 00
19 29 30	---	03 48 57	29.2	221.9	2.4		23.6	870	56	19 15 01
19 30 00	0122-003	03 49 27	29.1	222.0	2.4		23.7	24	56	19 30 00
19 44 30	---	04 03 59	27.6	225.8	2.6		25.5	870	84	19 30 01
19 45 00	0122-003	04 04 29	27.5	225.9	2.6		25.6	24	84	19 45 00
20 00 00	---	04 19 32	25.9	229.7	2.9		27.3	900	112	19 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pt_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0122-003          01 22 55.178115   * 01 25 28.843826     01 26 12.735236       0.00
  J0125-0005       -00 21 31.21931    *-00 05 55.93215     -00 01 35.91818       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0122-003            93.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01putr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 6 Jan 2014 Day 6 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
22 00 00	0149+218	06 19 51	31.5	265.5	4.4		40.3	0	0	22 00 00
22 14 30	---	06 34 24	29.3	268.5	4.7		40.4	870	28	22 00 01
22 15 00	0149+218	06 34 54	29.2	268.6	4.7		40.4	24	28	22 15 00
22 29 30	---	06 49 26	27.0	271.5	4.9		40.4	870	56	22 15 01
22 30 00	0149+218	06 49 56	27.0	271.6	4.9		40.4	24	56	22 30 00
22 44 30	---	07 04 29	24.8	274.5	5.2		40.3	870	84	22 30 01
22 45 00	0149+218	07 04 59	24.7	274.6	5.2		40.3	24	84	22 45 00
23 00 00	---	07 20 01	22.5	277.5	5.4		40.0	900	112	22 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pu_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   5  Setup file default.  Used pcal sets:   1
  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:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0149+218          01 49 31.744133   * 01 52 18.059044     01 53 05.987969       0.00
  J0152+2207        21 52 20.74786    * 22 07 07.69974      22 11 20.62493        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0149+218           107.3

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pvtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 7 Jan 2014 Day 7 ---									
---------- L-band VLBI scans ----------									
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00				
Next BBC frequencies:		632.00	632.00	632.00	632.00				
Next scan bandwidths:		16.00	16.00	16.00	16.00				
06 00 00 1327+321	14 21 10	66.9	208.3	0.8		19.6	0	0	06 00 00
06 14 30 ---	14 35 43	65.7	215.4	1.1		24.2	870	28	06 00 01
06 15 00 1327+321	14 36 13	65.7	215.6	1.1		24.3	23	28	06 15 00
06 29 30 ---	14 50 45	64.3	222.2	1.3		28.3	870	56	06 15 01
06 30 00 1327+321	14 51 15	64.2	222.4	1.3		28.5	23	56	06 30 00
06 44 30 ---	15 05 48	62.7	228.4	1.6		31.9	870	84	06 30 01
06 45 00 1327+321	15 06 18	62.6	228.6	1.6		32.0	24	84	06 45 00
07 00 00 ---	15 21 20	60.9	234.2	1.8		35.0	900	112	06 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01pv_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 8 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=   2300.00   2300.00   2300.00   2300.00
 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:   9  Setup file default.  Used pcal sets:   1
 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:   9

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1327+321          13 27 34.876201   * 13 29 52.864906     13 30 31.567533       0.00
  J1329+3154        32 09 38.80938    * 31 54 11.05448      31 49 37.99855        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 3C286               97.4
 1327+321            98.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01pwtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 7 Jan 2014 Day 7 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
19 00 00	0605-085	03 23 18	19.0	136.3	-2.8		-24.8	0	0	19 00 00
19 14 30	---	03 37 51	20.5	139.8	-2.5		-23.1	870	28	19 00 01
19 15 00	0605-085	03 38 21	20.6	139.9	-2.5		-23.0	24	28	19 15 00
19 29 30	---	03 52 53	21.9	143.5	-2.3		-21.2	870	56	19 15 01
19 30 00	0605-085	03 53 23	22.0	143.6	-2.3		-21.1	24	56	19 30 00
19 44 30	---	04 07 56	23.2	147.2	-2.0		-19.2	870	84	19 30 01
19 45 00	0605-085	04 08 26	23.2	147.4	-2.0		-19.1	24	84	19 45 00
20 00 00	---	04 23 28	24.4	151.2	-1.8		-17.0	900	112	19 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01pw_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0605-085          06 05 36.027963   * 06 07 59.699233     06 08 41.937924       0.00
  J0607-0834       -08 34 20.29746    *-08 34 49.97823     -08 35 11.62401        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0605-085           145.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pxtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 8 Jan 2014 Day 8 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
00 00 00	0234+285	08 24 08	24.8	-74.3	5.8		41.3	0	0	00 00 00
00 14 30	---	08 38 40	22.7	-71.7	6.0		40.6	870	28	00 00 01
00 15 00	0234+285	08 39 10	22.6	-71.6	6.0		40.6	24	28	00 15 00
00 29 30	---	08 53 43	20.6	-69.0	6.2		39.8	870	56	00 15 01
00 30 00	0234+285	08 54 13	20.5	-68.9	6.3		39.8	24	56	00 30 00
00 44 30	---	09 08 45	18.5	-66.3	6.5		38.9	870	84	00 30 01
00 45 00	0234+285	09 09 15	18.4	-66.2	6.5		38.9	24	84	00 45 00
01 00 00	---	09 24 18	16.4	-63.5	6.8		37.8	900	112	00 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01px_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0234+285          02 34 55.589591   * 02 37 52.405678     02 38 43.678215       0.00
  J0237+2848        28 35 11.40774    * 28 48 08.98999      28 51 50.56749        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0234+285           117.9

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pytr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 8 Jan 2014 Day 8 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
05 00 00	1324+224	13 24 57	59.0	178.8	-0.0		-0.8	0	0	05 00 00
05 14 30	---	13 39 29	58.9	185.3	0.2		3.4	870	28	05 00 01
05 15 00	1324+224	13 39 59	58.9	185.5	0.2		3.6	23	28	05 15 00
05 29 30	---	13 54 32	58.6	192.0	0.4		7.7	870	56	05 15 01
05 30 00	1324+224	13 55 02	58.6	192.2	0.5		7.9	23	56	05 30 00
05 44 30	---	14 09 34	58.0	198.5	0.7		11.9	870	84	05 30 01
05 45 00	1324+224	14 10 04	58.0	198.7	0.7		12.0	23	84	05 45 00
06 00 00	---	14 25 07	57.1	205.0	1.0		15.9	900	112	05 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01py_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 7 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=   2300.00   2300.00   2300.00   2300.00
 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:   8  Setup file default.  Used pcal sets:   1
  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:   8

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1324+224          13 24 37.118626   * 13 27 00.861311     13 27 41.387262       0.00
  J1327+2210        22 26 22.70232    * 22 10 50.16276      22 06 18.42157        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1324+224            96.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01pztr

RadioAstron AGN survey

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

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 8 Jan 2014 Day 8 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
08 00 00	1253-055	16 25 27	16.6	235.0	3.5		29.6	0	0	08 00 00
08 14 30	---	16 39 59	14.7	238.3	3.7		30.9	870	28	08 00 01
08 15 00	1253-055	16 40 29	14.7	238.4	3.7		30.9	24	28	08 15 00
08 29 30	---	16 55 01	12.8	241.5	4.0		32.1	870	56	08 15 01
08 30 00	1253-055	16 55 31	12.7	241.6	4.0		32.1	24	56	08 30 00
08 44 30	---	17 10 04	10.8	244.8	4.2		33.1	870	84	08 30 01
08 45 00	1253-055	17 10 34	10.7	244.9	4.2		33.1	24	84	08 45 00
09 00 00	---	17 25 36	8.6	248.0	4.5		34.0	900	112	08 45 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01pz_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

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

 The following frequency sets based on these setups were used.

 Frequency Set:   3  Setup file default.  Used pcal sets:   1
 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:   3

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* FAKERA             11 57 21.769299   * 12 00 00.000000     12 00 41.706899       0.00
                     85 16 41.77889    * 85 00 00.00000      84 54 54.88961        0.00
                     From catalog imbedded in main SCHED input file.
                     fake circumpolar target for a TS to look at

* 1253-055           12 53 35.831289   * 12 56 11.166557     12 56 55.500952       0.00
  J1256-0547        -05 31 07.99603    *-05 47 21.52489     -05 51 56.46435        0.00
  3C279              ./rk01pz_sources.radioastron
                     AGN, rfc_2013d Petrov, 2013, unpublished 7924 observations



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1253-055            92.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
```

```
15.0 GHz          12. deg
22.0 GHz           9. deg
```

rk01qatr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 8 Jan 2014 Day 8 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
21 00 00	0836+710	05 27 35	62.3	32.1	-3.3		-103.8	0	0	21 00 00
21 14 30	---	05 42 07	63.4	31.3	-3.0		-107.9	870	28	21 00 01
21 15 00	0836+710	05 42 37	63.5	31.3	-3.0		-108.0	24	28	21 15 00
21 29 30	---	05 57 10	64.6	30.4	-2.8		-112.3	870	56	21 15 01
21 30 00	0836+710	05 57 40	64.6	30.3	-2.8		-112.4	24	56	21 30 00
21 44 30	---	06 12 12	65.7	29.2	-2.5		-116.9	870	84	21 30 01
21 45 00	0836+710	06 12 42	65.7	29.1	-2.5		-117.1	24	84	21 45 00
22 00 00	---	06 27 45	66.8	27.6	-2.3		-122.0	900	112	21 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qa_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0836+710          08 36 21.556646   * 08 41 24.365284     08 42 52.604768       0.00
  J0841+7053        71 04 22.42740    * 70 53 42.17302      70 50 21.99471        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0836+710           129.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qbtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 9 Jan 2014 Day 9 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
05 00 00	1324+224	13 28 54	59.0	180.5	0.0		0.4	0	0	05 00 00
05 14 30	---	13 43 26	58.9	187.1	0.3		4.6	870	28	05 00 01
05 15 00	1324+224	13 43 56	58.9	187.3	0.3		4.7	23	28	05 15 00
05 29 30	---	13 58 28	58.5	193.7	0.5		8.8	870	56	05 15 01
05 30 00	1324+224	13 58 58	58.4	193.9	0.5		9.0	23	56	05 30 00
05 44 30	---	14 13 31	57.8	200.2	0.8		12.9	870	84	05 30 01
05 45 00	1324+224	14 14 01	57.8	200.4	0.8		13.1	23	84	05 45 00
06 00 00	---	14 29 03	56.9	206.6	1.0		16.9	900	112	05 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qb_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 Net SB=         L         L         U         U
 IF SB =         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         L         L         U         U
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1324+224          13 24 37.118626   * 13 27 00.861311     13 27 41.417538       0.00
  J1327+2210        22 26 22.70232    * 22 10 50.16276      22 06 18.25674        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1324+224            96.9

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qctr

RadioAstron AGN survey

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 9 Jan 2014 Day 9 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
08 00 00	1253-055	16 29 23	16.1	235.9	3.5		30.0	0	0	08 00 00
08 14 30	---	16 43 55	14.2	239.1	3.8		31.2	870	28	08 00 01
08 15 00	1253-055	16 44 26	14.2	239.2	3.8		31.2	24	28	08 15 00
08 29 30	---	16 58 58	12.3	242.4	4.0		32.3	870	56	08 15 01
08 30 00	1253-055	16 59 28	12.2	242.5	4.0		32.4	24	56	08 30 00
08 44 30	---	17 14 00	10.2	245.6	4.3		33.3	870	84	08 30 01
08 45 00	1253-055	17 14 30	10.2	245.7	4.3		33.4	24	84	08 45 00
09 00 00	---	17 29 33	8.1	248.8	4.5		34.3	900	112	08 45 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01qc_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

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

 The following frequency sets based on these setups were used.

 Frequency Set:   3  Setup file default.  Used pcal sets:   1
 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:   3

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1253-055          12 53 35.831289   * 12 56 11.166557     12 56 55.530993       0.00
  J1256-0547       -05 31 07.99603    *-05 47 21.52489     -05 51 56.64455       0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1253-055            93.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

gl038ctr

RA KSP: Structure and physics of compact jets

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RA KSP: Structure and physics of compact jets
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 10 Jan 2014 Day 10 ---										
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					
16 00 30	0836+710	00 35 09	40.6	21.5	-8.1		-42.2	0	0	16 00 30
16 06 00	---	00 40 39	40.9	22.0	-8.0		-43.2	330	11	16 00 31
16 06 30	0836+710	00 41 10	41.0	22.0	-8.0		-43.3	25	11	16 06 30
16 12 00	---	00 46 40	41.3	22.4	-7.9		-44.3	330	21	16 06 31
16 12 30	0836+710	00 47 11	41.3	22.5	-7.9		-44.4	24	21	16 12 30
16 18 00	---	00 52 41	41.6	22.9	-7.8		-45.4	330	32	16 12 31
16 18 30	0836+710	00 53 12	41.6	22.9	-7.8		-45.5	24	32	16 18 30
16 24 00	---	00 58 42	42.0	23.4	-7.7		-46.5	330	42	16 18 31
---------- BLOCK 02: K-band VLBI scans ----------										
16 25 00	0836+710	00 59 43	42.0	23.4	-7.7		-46.7	54	42	16 25 00
16 34 30	---	01 09 14	42.6	24.2	-7.6		-48.5	570	60	16 25 01
16 35 00	0836+710	01 09 44	42.6	24.2	-7.6		-48.6	24	60	16 35 00
16 44 30	---	01 19 16	43.2	24.9	-7.4		-50.4	570	79	16 35 01
16 45 00	0836+710	01 19 46	43.3	24.9	-7.4		-50.4	24	79	16 45 00
16 55 00	---	01 29 48	43.9	25.6	-7.2		-52.3	600	98	16 45 01
16 55 30	0836+710	01 30 18	43.9	25.7	-7.2		-52.4	24	98	16 55 30
17 00 00	---	01 34 48	44.2	26.0	-7.1		-53.3	270	107	16 55 31
17 00 30	0836+710	01 35 18	44.3	26.0	-7.1		-53.4	24	107	17 00 30
17 05 00	---	01 39 49	44.6	26.3	-7.1		-54.2	270	115	17 00 31

Schedule for TORUN (Code Tr) Page 3

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 10 Jan 2014 Day 10 ---										
17 05 30	0836+710	01 40 19	44.6	26.4	-7.0		-54.3	24	115	17 05 30
17 10 00	---	01 44 50	44.9	26.7	-7.0		-55.2	270	124	17 05 31
17 10 30	0836+710	01 45 20	44.9	26.7	-7.0		-55.3	24	124	17 10 30
17 15 00	---	01 49 51	45.2	27.0	-6.9		-56.1	270	132	17 10 31
17 15 30	0836+710	01 50 21	45.3	27.0	-6.9		-56.2	24	132	17 15 30
17 20 00	---	01 54 52	45.6	27.3	-6.8		-57.1	270	141	17 15 31
17 20 30	0836+710	01 55 22	45.6	27.3	-6.8		-57.2	24	141	17 20 30
17 25 00	---	01 59 52	45.9	27.6	-6.7		-58.0	270	150	17 20 31
17 25 30	0836+710	02 00 23	46.0	27.7	-6.7		-58.1	24	150	17 25 30
17 30 00	---	02 04 53	46.3	27.9	-6.6		-59.0	270	158	17 25 31
17 30 30	0836+710	02 05 23	46.3	28.0	-6.6		-59.1	24	158	17 30 30
17 35 00	---	02 09 54	46.6	28.2	-6.5		-60.0	270	167	17 30 31
17 35 30	0836+710	02 10 24	46.7	28.3	-6.5		-60.0	24	167	17 35 30
17 40 00	---	02 14 55	47.0	28.5	-6.5		-60.9	270	176	17 35 31
17 40 30	0836+710	02 15 25	47.0	28.6	-6.5		-61.0	24	176	17 40 30
17 45 00	---	02 19 56	47.4	28.8	-6.4		-61.9	270	184	17 40 31
17 45 30	0836+710	02 20 26	47.4	28.9	-6.4		-62.0	24	184	17 45 30
17 50 00	---	02 24 57	47.7	29.1	-6.3		-62.9	270	193	17 45 31
17 50 30	0836+710	02 25 27	47.8	29.1	-6.3		-63.0	24	193	17 50 30
17 55 00	---	02 29 57	48.1	29.4	-6.2		-63.8	270	202	17 50 31
17 55 30	0836+710	02 30 27	48.1	29.4	-6.2		-63.9	24	202	17 55 30
18 00 00	---	02 34 58	48.5	29.6	-6.1		-64.8	270	210	17 55 31
18 00 30	0836+710	02 35 28	48.5	29.7	-6.1		-64.9	24	210	18 00 30
18 05 00	---	02 39 59	48.8	29.9	-6.0		-65.8	270	219	18 00 31
18 05 30	0836+710	02 40 29	48.9	29.9	-6.0		-65.9	24	219	18 05 30
18 10 00	---	02 45 00	49.2	30.2	-6.0		-66.8	270	228	18 05 31
18 10 30	0836+710	02 45 30	49.3	30.2	-6.0		-66.9	24	228	18 10 30
18 15 00	---	02 50 01	49.6	30.4	-5.9		-67.8	270	236	18 10 31
18 15 30	0836+710	02 50 31	49.6	30.4	-5.9		-67.9	24	236	18 15 30
18 20 00	---	02 55 01	50.0	30.6	-5.8		-68.8	270	245	18 15 31

Schedule for TORUN (Code Tr) Page 4

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 10 Jan 2014 Day 10 ---										
18 20 30	0836+710	02 55 32	50.0	30.7	-5.8		-68.9	24	245	18 20 30
18 25 00	---	03 00 02	50.4	30.9	-5.7		-69.8	270	253	18 20 31
18 25 30	0836+710	03 00 32	50.4	30.9	-5.7		-69.9	24	253	18 25 30
18 28 30	---	03 03 33	50.6	31.0	-5.7		-70.5	180	259	18 25 31
---------- K-band VLBI scans ----------										
18 29 00	0836+710	03 04 03	50.7	31.0	-5.6		-70.6	24	259	18 29 00
18 38 30	---	03 13 35	51.4	31.4	-5.5		-72.6	570	277	18 29 01
18 39 00	0836+710	03 14 05	51.5	31.5	-5.5		-72.7	24	277	18 39 00
18 48 30	---	03 23 36	52.2	31.8	-5.3		-74.7	570	296	18 39 01
18 49 00	0836+710	03 24 06	52.2	31.8	-5.3		-74.8	24	296	18 49 00
18 59 00	---	03 34 08	53.0	32.2	-5.1		-76.9	600	315	18 49 01
18 59 30	0836+710	03 34 38	53.1	32.2	-5.1		-77.0	24	315	18 59 30
19 04 00	---	03 39 09	53.4	32.3	-5.1		-77.9	270	324	18 59 31
19 04 30	0836+710	03 39 39	53.5	32.3	-5.1		-78.0	24	324	19 04 30
19 09 00	---	03 44 10	53.8	32.4	-5.0		-79.0	270	332	19 04 31
19 09 30	0836+710	03 44 40	53.9	32.5	-5.0		-79.1	24	332	19 09 30
19 14 00	---	03 49 10	54.2	32.6	-4.9		-80.1	270	341	19 09 31
19 14 30	0836+710	03 49 40	54.3	32.6	-4.9		-80.2	24	341	19 14 30
19 19 00	---	03 54 11	54.7	32.7	-4.8		-81.2	270	349	19 14 31
19 19 30	0836+710	03 54 41	54.7	32.7	-4.8		-81.3	24	349	19 19 30
19 24 00	---	03 59 12	55.1	32.8	-4.7		-82.3	270	358	19 19 31
19 24 30	0836+710	03 59 42	55.1	32.8	-4.7		-82.4	24	358	19 24 30
19 29 00	---	04 04 13	55.5	32.9	-4.6		-83.4	270	367	19 24 31
19 29 30	0836+710	04 04 43	55.5	32.9	-4.6		-83.5	24	367	19 29 30
19 34 00	---	04 09 14	55.9	33.0	-4.6		-84.5	270	375	19 29 31
19 34 30	0836+710	04 09 44	55.9	33.0	-4.6		-84.6	24	375	19 34 30
19 39 00	---	04 14 14	56.3	33.0	-4.5		-85.6	270	384	19 34 31
19 39 30	0836+710	04 14 45	56.3	33.0	-4.5		-85.7	24	384	19 39 30
19 44 00	---	04 19 15	56.7	33.1	-4.4		-86.8	270	393	19 39 31
19 44 30	0836+710	04 19 45	56.7	33.1	-4.4		-86.9	24	393	19 44 30
19 49 00	---	04 24 16	57.1	33.1	-4.3		-87.9	270	401	19 44 31

Schedule for TORUN (Code Tr) Page 5

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 10 Jan 2014 Day 10 ---										
19 49 30	0836+710	04 24 46	57.2	33.1	-4.3		-88.0	24	401	19 49 30
19 54 00	---	04 29 17	57.5	33.1	-4.2		-89.1	270	410	19 49 31
19 54 30	0836+710	04 29 47	57.6	33.1	-4.2		-89.2	24	410	19 54 30
19 59 00	---	04 34 18	57.9	33.1	-4.1		-90.3	270	419	19 54 31
19 59 30	0836+710	04 34 48	58.0	33.1	-4.1		-90.4	24	419	19 59 30
20 04 00	---	04 39 19	58.3	33.1	-4.1		-91.5	270	427	19 59 31
20 04 30	0836+710	04 39 49	58.4	33.1	-4.1		-91.6	24	427	20 04 30
20 10 30	---	04 45 50	58.9	33.1	-4.0		-93.0	360	439	20 04 31
---------- BLOCK 06: K-band VLBI scans ----------										
20 11 00	0836+710	04 46 20	58.9	33.1	-3.9		-93.2	24	439	20 11 00
20 20 30	---	04 55 51	59.7	33.0	-3.8		-95.5	570	457	20 11 01
20 21 00	0836+710	04 56 21	59.7	33.0	-3.8		-95.6	24	457	20 21 00
20 30 30	---	05 05 53	60.5	32.8	-3.6		-98.1	570	475	20 21 01
20 31 00	0836+710	05 06 23	60.6	32.8	-3.6		-98.2	24	475	20 31 00
20 41 00	---	05 16 25	61.4	32.5	-3.4		-100.8	600	494	20 31 01
20 41 30	0836+710	05 16 55	61.4	32.5	-3.4		-100.9	24	494	20 41 30
20 46 00	---	05 21 25	61.8	32.3	-3.4		-102.1	270	503	20 41 31
20 46 30	0836+710	05 21 56	61.8	32.3	-3.3		-102.3	24	503	20 46 30
20 51 00	---	05 26 26	62.2	32.1	-3.3		-103.5	270	512	20 46 31
20 51 30	0836+710	05 26 56	62.2	32.1	-3.3		-103.6	24	512	20 51 30
20 56 00	---	05 31 27	62.6	31.9	-3.2		-104.9	270	520	20 51 31
20 56 30	0836+710	05 31 57	62.6	31.9	-3.2		-105.0	24	520	20 56 30
21 01 00	---	05 36 28	63.0	31.6	-3.1		-106.3	270	529	20 56 31
21 01 30	0836+710	05 36 58	63.0	31.6	-3.1		-106.4	24	529	21 01 30
21 06 00	---	05 41 29	63.4	31.4	-3.0		-107.7	270	538	21 01 31
21 06 30	0836+710	05 41 59	63.4	31.4	-3.0		-107.8	24	538	21 06 30
21 11 00	---	05 46 30	63.8	31.1	-2.9		-109.1	270	546	21 06 31
21 11 30	0836+710	05 47 00	63.8	31.1	-2.9		-109.3	24	546	21 11 30
21 16 00	---	05 51 30	64.1	30.8	-2.9		-110.6	270	555	21 11 31
21 16 30	0836+710	05 52 00	64.2	30.7	-2.8		-110.7	24	555	21 16 30
21 21 00	---	05 56 31	64.5	30.4	-2.8		-112.1	270	564	21 16 31

Schedule for TORUN (Code Tr) Page 6

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 10 Jan 2014 Day 10 ---										
21 21 30	0836+710	05 57 01	64.6	30.4	-2.8		-112.2	24	564	21 21 30
21 26 00	---	06 01 32	64.9	30.1	-2.7		-113.6	270	572	21 21 31
21 26 30	0836+710	06 02 02	64.9	30.0	-2.7		-113.8	24	572	21 26 30
21 31 00	---	06 06 33	65.3	29.7	-2.6		-115.2	270	581	21 26 31
21 31 30	0836+710	06 07 03	65.3	29.6	-2.6		-115.3	24	581	21 31 30
21 36 00	---	06 11 34	65.6	29.2	-2.5		-116.7	270	589	21 31 31
21 36 30	0836+710	06 12 04	65.7	29.2	-2.5		-116.9	24	589	21 36 30
21 41 00	---	06 16 35	66.0	28.8	-2.4		-118.3	270	598	21 36 31
21 41 30	0836+710	06 17 05	66.0	28.7	-2.4		-118.5	24	598	21 41 30
21 46 00	---	06 21 35	66.4	28.3	-2.4		-120.0	270	607	21 41 31
21 46 30	0836+710	06 22 05	66.4	28.2	-2.3		-120.2	24	607	21 46 30
21 52 30	---	06 28 06	66.8	27.6	-2.2		-122.2	360	618	21 46 31
---------- BLOCK08: K-band VLBI scans ----------										
21 53 00	0836+710	06 28 36	66.9	27.5	-2.2		-122.3	24	618	21 53 00
22 02 30	---	06 38 08	67.5	26.4	-2.1		-125.6	570	636	21 53 01
22 03 00	0836+710	06 38 38	67.5	26.3	-2.1		-125.8	24	636	22 03 00
22 12 30	---	06 48 10	68.2	25.1	-1.9		-129.2	570	655	22 03 01
22 13 00	0836+710	06 48 40	68.2	25.0	-1.9		-129.4	24	655	22 13 00
22 23 00	---	06 58 41	68.8	23.5	-1.7		-133.1	600	674	22 13 01
22 23 30	0836+710	06 59 11	68.8	23.4	-1.7		-133.3	24	674	22 23 30
22 28 00	---	07 03 42	69.1	22.7	-1.7		-135.1	270	683	22 23 31
22 28 30	0836+710	07 04 12	69.1	22.6	-1.6		-135.3	24	683	22 28 30
22 33 00	---	07 08 43	69.4	21.9	-1.6		-137.0	270	691	22 28 31
22 33 30	0836+710	07 09 13	69.4	21.8	-1.6		-137.2	24	691	22 33 30
22 38 00	---	07 13 44	69.7	21.0	-1.5		-139.0	270	700	22 33 31
22 38 30	0836+710	07 14 14	69.7	20.9	-1.5		-139.2	24	700	22 38 30
22 43 00	---	07 18 45	69.9	20.1	-1.4		-141.1	270	708	22 38 31
22 43 30	0836+710	07 19 15	70.0	20.0	-1.4		-141.3	24	708	22 43 30
22 48 00	---	07 23 46	70.2	19.1	-1.3		-143.2	270	717	22 43 31
22 48 30	0836+710	07 24 16	70.2	19.0	-1.3		-143.4	24	717	22 48 30
22 53 00	---	07 28 46	70.4	18.1	-1.2		-145.3	270	726	22 48 31

Schedule for TORUN (Code Tr) Page 7

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start LST	Start EL	Start AZ	Start HA	Start UP	Start ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 10 Jan 2014 Day 10 ---										
22 53 30	0836+710	07 29 16	70.5	18.0	-1.2		-145.5	24	726	22 53 30
22 58 00	---	07 33 47	70.7	17.1	-1.2		-147.4	270	734	22 53 31
22 58 30	0836+710	07 34 17	70.7	17.0	-1.1		-147.7	24	734	22 58 30
23 03 00	---	07 38 48	70.9	16.0	-1.1		-149.6	270	743	22 58 31
23 03 30	0836+710	07 39 18	70.9	15.9	-1.1		-149.8	24	743	23 03 30
23 08 00	---	07 43 49	71.1	14.9	-1.0		-151.9	270	752	23 03 31
23 08 30	0836+710	07 44 19	71.1	14.8	-1.0		-152.1	24	752	23 08 30
23 13 00	---	07 48 50	71.3	13.8	-0.9		-154.1	270	760	23 08 31
23 13 30	0836+710	07 49 20	71.3	13.7	-0.9		-154.3	24	760	23 13 30
23 18 00	---	07 53 50	71.4	12.6	-0.8		-156.4	270	769	23 13 31
23 18 30	0836+710	07 54 21	71.4	12.5	-0.8		-156.6	24	769	23 18 30
23 23 00	---	07 58 51	71.6	11.4	-0.7		-158.7	270	778	23 18 31
23 23 30	0836+710	07 59 21	71.6	11.3	-0.7		-159.0	24	778	23 23 30
23 28 00	---	08 03 52	71.7	10.2	-0.7		-161.1	270	786	23 23 31
23 28 30	0836+710	08 04 22	71.7	10.1	-0.6		-161.3	24	786	23 28 30
23 34 30	---	08 10 23	71.9	8.6	-0.5		-164.2	360	798	23 28 31
---------- BLOCK 10: K-band VLBI scans ----------										
23 35 00	0836+710	08 10 53	71.9	8.5	-0.5		-164.4	24	798	23 35 00
23 44 30	---	08 20 25	72.1	6.0	-0.4		-169.0	570	816	23 35 01
23 45 00	0836+710	08 20 55	72.1	5.9	-0.4		-169.2	24	816	23 45 00
23 54 30	---	08 30 26	72.2	3.3	-0.2		-173.9	570	834	23 45 01
--- Start: Fri 10 Jan 2014 Day 10 -- Stop: Sat 11 Jan 2014 Day 11 ---										
23 55 00	0836+710	08 30 57	72.2	3.2	-0.2		-174.1	24	834	23 55 00
00 05 00	---	08 40 58	72.3	0.5	-0.0		-179.1	600	853	23 55 01
00 10 30	0836+710	08 46 29	72.3	-1.0	0.1		178.2	323	853	00 10 30
00 15 00	---	08 51 00	72.2	-2.2	0.1		176.0	270	862	00 10 31
00 15 30	0836+710	08 51 30	72.2	-2.3	0.1		175.8	24	862	00 15 30
00 20 00	---	08 56 01	72.2	-3.5	0.2		173.5	270	871	00 15 31
00 20 30	0836+710	08 56 31	72.2	-3.7	0.2		173.3	24	871	00 20 30
00 25 00	---	09 01 01	72.1	-4.9	0.3		171.1	270	879	00 20 31
00 30 30	0836+710	09 06 32	72.1	-6.3	0.4		168.4	323	879	00 30 30
00 35 00	---	09 11 03	72.0	-7.5	0.5		166.2	270	888	00 30 31

Schedule for TORUN (Code Tr) Page 8

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 11 Jan 2014 Day 11 ---										
00 35 30	0836+710	09 11 33	72.0	-7.6	0.5		166.0	24	888	00 35 30
00 40 00	---	09 16 04	71.9	-8.8	0.6		163.8	270	897	00 35 31
00 40 30	0836+710	09 16 34	71.9	-8.9	0.6		163.6	24	897	00 40 30
00 45 00	---	09 21 05	71.7	-10.0	0.6		161.5	270	905	00 40 31
00 50 30	0836+710	09 26 36	71.6	-11.4	0.7		158.9	323	905	00 50 30
00 55 00	---	09 31 06	71.5	-12.4	0.8		156.8	270	914	00 50 31
00 55 30	0836+710	09 31 36	71.4	-12.6	0.8		156.5	24	914	00 55 30
01 00 00	---	09 36 07	71.3	-13.6	0.9		154.5	270	923	00 55 31
01 00 30	0836+710	09 36 37	71.3	-13.7	0.9		154.2	24	923	01 00 30
01 05 00	---	09 41 08	71.1	-14.8	1.0		152.2	270	931	01 00 31
01 10 30	0836+710	09 46 39	70.9	-16.0	1.1		149.8	323	931	01 10 30
01 16 30	---	09 52 40	70.6	-17.3	1.2		147.1	360	943	01 10 31
---------- BLOCK 12: K-band VLBI scans ----------										
01 17 00	0836+710	09 53 10	70.6	-17.4	1.2		146.9	24	943	01 17 00
01 26 30	---	10 02 42	70.2	-19.3	1.3		142.9	570	961	01 17 01
01 27 00	0836+710	10 03 12	70.1	-19.4	1.3		142.7	24	961	01 27 00
01 36 30	---	10 12 43	69.6	-21.1	1.5		138.8	570	979	01 27 01
01 37 00	0836+710	10 13 13	69.6	-21.2	1.5		138.6	24	979	01 37 00
01 47 00	---	10 23 15	69.0	-22.9	1.7		134.6	600	998	01 37 01
01 52 30	0836+710	10 28 46	68.7	-23.8	1.8		132.5	324	998	01 52 30
01 57 00	---	10 33 17	68.4	-24.4	1.8		130.8	270	1007	01 52 31
01 57 30	0836+710	10 33 47	68.4	-24.5	1.8		130.6	24	1007	01 57 30
02 02 00	---	10 38 17	68.1	-25.2	1.9		129.0	270	1016	01 57 31
02 02 30	0836+710	10 38 47	68.1	-25.2	1.9		128.8	24	1016	02 02 30
02 07 00	---	10 43 18	67.8	-25.8	2.0		127.2	270	1024	02 02 31
02 12 30	0836+710	10 48 49	67.4	-26.5	2.1		125.2	324	1024	02 12 30
02 17 00	---	10 53 20	67.1	-27.1	2.2		123.6	270	1033	02 12 31
02 17 30	0836+710	10 53 50	67.1	-27.1	2.2		123.5	24	1033	02 17 30
02 22 00	---	10 58 21	66.8	-27.6	2.3		121.9	270	1042	02 17 31

Schedule for TORUN (Code Tr) Page 9

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start LST	Start EL	Start AZ	Start HA	Start UP	Stop LST	Stop EL	Stop AZ	Stop HA	Stop UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 11 Jan 2014 Day 11 ---															
02 22 30	0836+710	10 58 51	66.7	-27.7	2.3							121.8	24	1042	02 22 30
02 27 00	---						11 03 21	66.4	-28.2	2.3		120.3	270	1050	02 22 31
02 32 30	0836+710	11 08 52	66.0	-28.7	2.4							118.4	324	1050	02 32 30
02 37 00	---						11 13 23	65.7	-29.1	2.5		117.0	270	1059	02 32 31
02 37 30	0836+710	11 13 53	65.7	-29.2	2.5							116.8	24	1059	02 37 30
02 42 00	---						11 18 24	65.3	-29.6	2.6		115.4	270	1068	02 37 31
02 42 30	0836+710	11 18 54	65.3	-29.6	2.6							115.3	24	1068	02 42 30
02 47 00	---						11 23 25	65.0	-30.0	2.7		113.9	270	1076	02 42 31
02 52 30	0836+710	11 28 56	64.5	-30.4	2.8							112.2	324	1076	02 52 30
02 58 30	---						11 34 57	64.1	-30.8	2.9		110.4	360	1088	02 52 31
---------- BLOCK 14: K-band VLBI scans ----------															
02 59 00	0836+710	11 35 27	64.0	-30.9	2.9							110.2	24	1088	02 59 00
03 08 30	---						11 44 58	63.3	-31.4	3.0		107.5	570	1106	02 59 01
03 09 00	0836+710	11 45 28	63.3	-31.4	3.0							107.3	24	1106	03 09 00
03 18 30	---						11 55 00	62.5	-31.9	3.2		104.7	570	1124	03 09 01
03 19 00	0836+710	11 55 30	62.5	-31.9	3.2							104.5	24	1124	03 19 00
03 29 00	---						12 05 32	61.7	-32.3	3.4		101.8	600	1143	03 19 01
03 34 30	0836+710	12 11 03	61.2	-32.5	3.5							100.3	324	1143	03 34 30
03 39 00	---						12 15 33	60.9	-32.7	3.5		99.2	270	1152	03 34 31
03 39 30	0836+710	12 16 03	60.8	-32.7	3.6							99.0	24	1152	03 39 30
03 44 00	---						12 20 34	60.5	-32.8	3.6		97.9	270	1161	03 39 31
03 44 30	0836+710	12 21 04	60.4	-32.8	3.6							97.7	24	1161	03 44 30
03 49 00	---						12 25 35	60.1	-32.9	3.7		96.6	270	1169	03 44 31
03 54 30	0836+710	12 31 06	59.6	-33.0	3.8							95.2	324	1169	03 54 30
03 59 00	---						12 35 37	59.2	-33.0	3.9		94.1	270	1178	03 54 31
03 59 30	0836+710	12 36 07	59.2	-33.0	3.9							94.0	24	1178	03 59 30
04 04 00	---						12 40 37	58.8	-33.1	4.0		92.9	270	1187	03 59 31
04 04 30	0836+710	12 41 08	58.8	-33.1	4.0							92.8	24	1187	04 04 30
04 09 00	---						12 45 38	58.4	-33.1	4.0		91.7	270	1195	04 04 31

Schedule for TORUN (Code Tr) Page 10

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 11 Jan 2014 Day 11 ---										
04 14 30	0836+710	12 51 09	58.0	-33.1	4.1		90.3	324	1195	04 14 30
04 19 00	---	12 55 40	57.6	-33.1	4.2		89.3	270	1204	04 14 31
04 19 30	0836+710	12 56 10	57.5	-33.1	4.2		89.2	24	1204	04 19 30
04 24 00	---	13 00 41	57.2	-33.1	4.3		88.1	270	1212	04 19 31
04 24 30	0836+710	13 01 11	57.1	-33.1	4.3		88.0	24	1212	04 24 30
04 29 00	---	13 05 42	56.8	-33.1	4.4		87.0	270	1221	04 24 31
04 34 30	0836+710	13 11 12	56.3	-33.0	4.5		85.7	324	1221	04 34 30
04 40 30	---	13 17 13	55.8	-33.0	4.6		84.3	360	1233	04 34 31
---------- BLOCK 16: K-band VLBI scans ----------										
04 41 00	0836+710	13 17 44	55.8	-32.9	4.6		84.2	24	1233	04 41 00
04 50 30	---	13 27 15	55.0	-32.8	4.7		82.1	570	1251	04 41 01
04 51 00	0836+710	13 27 45	55.0	-32.8	4.7		82.0	24	1251	04 51 00
05 00 30	---	13 37 17	54.2	-32.6	4.9		79.9	570	1269	04 51 01
05 01 00	0836+710	13 37 47	54.2	-32.5	4.9		79.8	24	1269	05 01 00
05 11 00	---	13 47 48	53.3	-32.3	5.1		77.7	600	1288	05 01 01
05 16 30	0836+710	13 53 19	52.9	-32.1	5.2		76.5	324	1288	05 16 30
05 21 00	---	13 57 50	52.5	-32.0	5.2		75.6	270	1297	05 16 31
05 21 30	0836+710	13 58 20	52.5	-31.9	5.3		75.5	24	1297	05 21 30
05 26 00	---	14 02 51	52.1	-31.8	5.3		74.5	270	1306	05 21 31
05 26 30	0836+710	14 03 21	52.1	-31.8	5.3		74.4	24	1306	05 26 30
05 31 00	---	14 07 52	51.8	-31.6	5.4		73.5	270	1314	05 26 31
05 36 30	0836+710	14 13 23	51.3	-31.4	5.5		72.3	324	1314	05 36 30
05 41 00	---	14 17 53	51.0	-31.2	5.6		71.4	270	1323	05 36 31
05 41 30	0836+710	14 18 23	50.9	-31.2	5.6		71.3	24	1323	05 41 30
05 46 00	---	14 22 54	50.6	-31.0	5.7		70.4	270	1332	05 41 31
05 46 30	0836+710	14 23 24	50.5	-31.0	5.7		70.3	24	1332	05 46 30
05 51 00	---	14 27 55	50.2	-30.8	5.8		69.4	270	1340	05 46 31
05 56 30	0836+710	14 33 26	49.8	-30.5	5.8		68.3	324	1340	05 56 30
06 01 00	---	14 37 57	49.4	-30.3	5.9		67.4	270	1349	05 56 31

Schedule for TORUN (Code Tr) Page 11

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 11 Jan 2014 Day 11 ---										
06 01 30	0836+710	14 38 27	49.4	-30.3	5.9		67.3	24	1349	06 01 30
06 06 00	---	14 42 57	49.0	-30.1	6.0		66.4	270	1357	06 01 31
06 06 30	0836+710	14 43 28	49.0	-30.0	6.0		66.3	24	1357	06 06 30
06 11 00	---	14 47 58	48.7	-29.8	6.1		65.4	270	1366	06 06 31
---------- BLOCK 18: K-band VLBI scans ----------										
06 23 00	0836+710	15 00 00	47.8	-29.2	6.3		63.0	714	1366	06 23 00
06 32 30	---	15 09 32	47.1	-28.6	6.4		61.2	570	1384	06 23 01
06 33 00	0836+710	15 10 02	47.1	-28.6	6.5		61.1	24	1384	06 33 00
06 42 30	---	15 19 33	46.4	-28.0	6.6		59.2	570	1403	06 33 01
06 43 00	0836+710	15 20 04	46.3	-28.0	6.6		59.1	24	1403	06 43 00
06 53 00	---	15 30 05	45.6	-27.4	6.8		57.2	600	1422	06 43 01
06 58 30	0836+710	15 35 36	45.3	-27.0	6.9		56.2	324	1422	06 58 30
07 03 00	---	15 40 07	45.0	-26.7	7.0		55.3	270	1430	06 58 31
07 03 30	0836+710	15 40 37	44.9	-26.7	7.0		55.2	24	1430	07 03 30
07 08 00	---	15 45 08	44.6	-26.4	7.0		54.4	270	1439	07 03 31
07 08 30	0836+710	15 45 38	44.6	-26.3	7.0		54.3	24	1439	07 08 30
07 13 00	---	15 50 08	44.3	-26.0	7.1		53.4	270	1448	07 08 31
07 18 30	0836+710	15 55 39	43.9	-25.7	7.2		52.4	324	1448	07 18 30
07 23 00	---	16 00 10	43.6	-25.3	7.3		51.5	270	1456	07 18 31
07 23 30	0836+710	16 00 40	43.6	-25.3	7.3		51.4	24	1456	07 23 30
07 28 00	---	16 05 11	43.3	-25.0	7.4		50.6	270	1465	07 23 31
07 28 30	0836+710	16 05 41	43.3	-24.9	7.4		50.5	24	1465	07 28 30
07 33 00	---	16 10 12	43.0	-24.6	7.5		49.7	270	1474	07 28 31
07 38 30	0836+710	16 15 43	42.7	-24.2	7.5		48.6	324	1474	07 38 30
07 43 00	---	16 20 13	42.4	-23.9	7.6		47.8	270	1482	07 38 31
07 43 30	0836+710	16 20 43	42.4	-23.8	7.6		47.7	24	1482	07 43 30
07 48 00	---	16 25 14	42.1	-23.5	7.7		46.9	270	1491	07 43 31
07 48 30	0836+710	16 25 44	42.1	-23.5	7.7		46.8	24	1491	07 48 30
07 53 00	---	16 30 15	41.8	-23.1	7.8		45.9	270	1500	07 48 31

Schedule for TORUN (Code Tr) Page 12

RA KSP: Structure and physics of compact jets

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 11 Jan 2014 Day 11 ---										
---------- BLOCK 20: K-band VLBI scans ----------										
08 05 00	0836+710	16 42 17	41.1	-22.2	8.0		43.7	714	1500	08 05 00
08 14 30	---	16 51 49	40.6	-21.4	8.1		42.0	570	1518	08 05 01
08 15 00	0836+710	16 52 19	40.5	-21.4	8.2		41.9	25	1518	08 15 00
08 24 30	---	17 01 50	40.0	-20.6	8.3		40.1	570	1536	08 15 01
08 25 00	0836+710	17 02 20	40.0	-20.6	8.3		40.0	25	1536	08 25 00
08 35 00	---	17 12 22	39.5	-19.7	8.5		38.2	600	1555	08 25 01
08 40 30	0836+710	17 17 53	39.2	-19.3	8.6		37.2	324	1555	08 40 30
08 45 00	---	17 22 24	39.0	-18.9	8.7		36.4	270	1564	08 40 31
08 45 30	0836+710	17 22 54	39.0	-18.9	8.7		36.3	25	1564	08 45 30
08 50 00	---	17 27 24	38.7	-18.5	8.7		35.4	270	1572	08 45 31
08 50 30	0836+710	17 27 54	38.7	-18.4	8.8		35.3	25	1572	08 50 30
08 55 00	---	17 32 25	38.5	-18.0	8.8		34.5	270	1581	08 50 31
09 00 30	0836+710	17 37 56	38.2	-17.6	8.9		33.5	324	1581	09 00 30
09 05 00	---	17 42 27	38.0	-17.2	9.0		32.7	270	1590	09 00 31
09 05 30	0836+710	17 42 57	38.0	-17.1	9.0		32.6	25	1590	09 05 30
09 10 00	---	17 47 28	37.8	-16.7	9.1		31.8	270	1598	09 05 31
09 10 30	0836+710	17 47 58	37.8	-16.7	9.1		31.7	25	1598	09 10 30
09 15 00	---	17 52 29	37.6	-16.3	9.2		30.9	270	1607	09 10 31
09 20 30	0836+710	17 57 59	37.4	-15.8	9.3		29.9	324	1607	09 20 30
09 25 00	---	18 02 30	37.2	-15.4	9.3		29.0	270	1616	09 20 31
09 25 30	0836+710	18 03 00	37.2	-15.3	9.3		29.0	25	1616	09 25 30
09 30 00	---	18 07 31	37.0	-14.9	9.4		28.1	270	1624	09 25 31
09 30 30	0836+710	18 08 01	37.0	-14.9	9.4		28.0	25	1624	09 30 30
09 35 00	---	18 12 32	36.8	-14.5	9.5		27.2	270	1633	09 30 31
09 40 30	0836+710	18 18 03	36.6	-14.0	9.6		26.2	324	1633	09 40 30
09 45 00	---	18 22 33	36.4	-13.6	9.7		25.4	270	1642	09 40 31
09 45 30	0836+710	18 23 04	36.4	-13.5	9.7		25.3	25	1642	09 45 30
09 50 00	---	18 27 34	36.3	-13.1	9.7		24.5	270	1650	09 45 31
09 50 30	0836+710	18 28 04	36.3	-13.1	9.8		24.4	25	1650	09 50 30
09 55 00	---	18 32 35	36.1	-12.6	9.8		23.6	270	1659	09 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
   Matching groups in ./gl038c_freq_sess313rdbe.dat:
     tr1cm

   Setup group:   33         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.

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

  The following frequency sets based on these setups were used.

   Frequency Set:   7  Setup file default.  Used pcal sets:   1
   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:   7

  The following pulse cal sets were used with this setup:

   Pulse cal detection set:   1  PCAL = 1MHZ
    PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
    PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
    PCALFR1=  1000  1000 13000 13000     0     0     0     0
    PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



 POSITIONS OF SOURCES USED IN RECORDING SCANS

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

 * 0836+710           08 36 21.556646   * 08 41 24.365284     08 42 52.671494       0.00
   J0841+7053         71 04 22.42740    * 70 53 42.17302      70 50 22.34628        0.00


EFFECT OF SOLAR CORONA

  The solar corona can cause unstable phases for sources too close to the Sun.
  SCHED provides warnings at individual scans for distances less than 10 degrees.
  The distance from the Sun to each source in this schedule is:
    Source         Sun distance (deg)
   0836+710            129.8
```

rk07artr

RadioAstron Maser observations

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron Maser observations

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

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Sat 11 Jan 2014 Day 11 ---										
---------- This is a fringe finder/clock offset calibrator 5.6 deg. from NGC2071_H2O ----------										
Next scan frequencies:		22228.00	22228.00	22228.00	22228.00					
Next BBC frequencies:		728.00	728.00	728.00	728.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
16 50 00	0536+145	01 28 43	27.7	103.1	-4.2		-37.2	0	0	16 50 00
16 55 00	---	01 33 44	28.5	104.2	-4.1		-37.0	300	10	16 50 01
17 00 00	NGC2071_H2O	01 38 45	16.5	112.6	-4.2		-33.7	239	10	17 00 00
17 29 30	---	02 08 20	20.5	119.2	-3.7		-31.6	1770	66	17 00 01
17 30 00	NGC2071_H2O	02 08 50	20.6	119.3	-3.7		-31.6	24	66	17 30 00
18 00 00	---	02 38 55	24.4	126.3	-3.1		-28.9	1800	124	17 30 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk07ar_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

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

Disk used to record data.

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

 The following frequency sets based on these setups were used.

 Frequency Set:   2  Setup file default.  Used pcal sets:   1
 LO sum=   22228.00  22228.00  22228.00  22228.00
 BBC fr=     728.00    728.00    728.00    728.00
 Bandwd=      16.00     16.00     16.00     16.00
  Matching frequency sets:   2

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = OFF
  PCALXB1=   S1    S2    S3    S4    OFF   OFF   OFF   OFF
  PCALXB2=   M1    M2    M3    M4    OFF   OFF   OFF   OFF
  PCALFR1=     0     0     0     0     0     0     0     0
  PCALFR2=     0     0     0     0     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* NGC2071_H2O       05 44 30.603584   * 05 47 04.758000     05 47 49.929978       0.00
                    00 20 40.59526    * 00 21 42.70000      00 21 47.19200        0.00

* 0536+145          05 36 51.361475   * 05 39 42.365993     05 40 32.377890       0.00
  J0539+1433        14 32 10.73038    * 14 33 45.56168      14 34 01.37616        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 NGC2071_H2O        146.7
 0536+145           152.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qdtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 11 Jan 2014 Day 11 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
20 00 00	0201+113	04 39 14	38.4	231.3	2.6		28.6	0	0	20 00 00
20 14 30	---	04 53 47	36.6	235.2	2.8		30.2	870	28	20 00 01
20 15 00	0201+113	04 54 17	36.5	235.3	2.8		30.3	24	28	20 15 00
20 29 30	---	05 08 49	34.7	239.1	3.1		31.7	870	56	20 15 01
20 30 00	0201+113	05 09 19	34.6	239.2	3.1		31.8	24	56	20 30 00
20 44 30	---	05 23 52	32.7	242.8	3.3		33.1	870	84	20 30 01
20 45 00	0201+113	05 24 22	32.7	243.0	3.3		33.1	24	84	20 45 00
21 00 00	---	05 39 24	30.6	246.6	3.6		34.2	900	112	20 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qd_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 9 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=   2300.00   2300.00   2300.00   2300.00
 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:   8  Setup file default.  Used pcal sets:   1
  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:   8

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0201+113          02 01 06.003329   * 02 03 46.657061     02 04 32.831314       0.00
  J0203+1134        11 20 22.95394    * 11 34 45.40942      11 38 46.80134        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C48               102.8
  0201+113           101.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qetr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 12 Jan 2014 Day 12 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
02 00 00	1213-172	10 40 14	16.3	156.1	-1.6		-14.8	0	0	02 00 00
02 14 30	---	10 54 46	17.1	159.6	-1.4		-12.7	870	28	02 00 01
02 15 00	1213-172	10 55 16	17.1	159.7	-1.4		-12.6	24	28	02 15 00
02 29 30	---	11 09 48	17.8	163.3	-1.1		-10.4	870	56	02 15 01
02 30 00	1213-172	11 10 19	17.9	163.4	-1.1		-10.4	24	56	02 30 00
02 44 30	---	11 24 51	18.4	167.0	-0.9		-8.1	870	84	02 30 01
02 45 00	1213-172	11 25 21	18.4	167.1	-0.9		-8.1	24	84	02 45 00
03 00 00	---	11 40 23	18.9	170.9	-0.6		-5.7	900	112	02 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qe_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 7 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=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   5  Setup file default.  Used pcal sets:   1
  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:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1213-172           12 13 11.668008   * 12 15 46.751763     12 16 31.532048       0.00
  J1215-1731        -17 15 05.20080    *-17 31 45.40317     -17 36 26.41821       0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1213-172           100.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qftr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 12 Jan 2014 Day 12 ---									
---------- L-band VLBI scans ----------									
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:	632.00	632.00	632.00	632.00					
Next scan bandwidths:	16.00	16.00	16.00	16.00					
05 00 00 1308+326	13 40 43	68.5	197.3	0.5		12.2	0	0	05 00 00
05 14 30 ---	13 55 16	67.7	205.2	0.7		17.6	870	28	05 00 01
05 15 00 1308+326	13 55 46	67.7	205.5	0.7		17.8	23	28	05 15 00
05 29 30 ---	14 10 18	66.6	212.9	1.0		22.7	870	56	05 15 01
05 30 00 1308+326	14 10 48	66.6	213.2	1.0		22.9	23	56	05 30 00
05 44 30 ---	14 25 20	65.3	220.0	1.2		27.2	870	84	05 30 01
05 45 00 1308+326	14 25 51	65.2	220.2	1.2		27.3	23	84	05 45 00
06 00 00 ---	14 40 53	63.7	226.7	1.5		31.1	900	112	05 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qf_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 8 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=   2300.00   2300.00   2300.00   2300.00
 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:   8  Setup file default.  Used pcal sets:   1
  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:   8

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1308+326          13 08 07.560133   * 13 10 28.663852     13 11 08.533684       0.00
  J1310+3220        32 36 40.23870    * 32 20 43.78277      32 16 00.81536        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1308+326           106.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qgtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 12 Jan 2014 Day 12 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0506+056	02 42 51	33.9	134.0	-2.5		-25.7	0	0	18 00 00
18 14 30	---	02 57 24	35.4	138.0	-2.2		-23.8	870	28	18 00 01
18 15 00	0506+056	02 57 54	35.5	138.2	-2.2		-23.7	24	28	18 15 00
18 29 30	---	03 12 26	36.9	142.3	-2.0		-21.6	870	56	18 15 01
18 30 00	0506+056	03 12 56	36.9	142.5	-2.0		-21.6	24	56	18 30 00
18 44 30	---	03 27 29	38.2	146.7	-1.7		-19.3	870	84	18 30 01
18 45 00	0506+056	03 27 59	38.2	146.9	-1.7		-19.3	24	84	18 45 00
19 00 00	---	03 43 01	39.4	151.4	-1.5		-16.8	900	112	18 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qg_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
  1st LO=   4200.00   4200.00   4200.00   4200.00
  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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0506+056          05 06 45.765584   * 05 09 25.964476     05 10 12.783911       0.00
  J0509+0541        05 37 50.30294    * 05 41 35.33359      05 42 27.32488        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0506+056           141.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qhtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 13 Jan 2014 Day 13 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
01 00 00	0605-085	09 44 00	13.4	235.1	3.6		29.9	0	0	01 00 00
01 09 30	---	09 53 32	12.2	237.2	3.7		30.7	570	18	01 00 01
01 10 00	0605-085	09 54 02	12.1	237.3	3.8		30.7	24	18	01 10 00
01 19 30	---	10 03 34	10.9	239.4	3.9		31.5	570	36	01 10 01
01 20 00	0605-085	10 04 04	10.8	239.5	3.9		31.5	24	36	01 20 00
01 29 30	---	10 13 35	9.6	241.5	4.1		32.3	570	55	01 20 01
01 30 00	0605-085	10 14 05	9.5	241.6	4.1		32.3	24	55	01 30 00
01 40 00	---	10 24 07	8.2	243.7	4.3		33.0	600	74	01 30 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qh_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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 pcal sets:   1
  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:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0605-085          06 05 36.027963   * 06 07 59.699233     06 08 41.947411       0.00
  J0607-0834       -08 34 20.29746    *-08 34 49.97823     -08 35 12.68840       0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0605-085           142.7

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qitr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 13 Jan 2014 Day 13 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
05 00 00	1928+738	13 44 40	51.4	26.1	-5.7		-73.5	0	0	05 00 00
05 14 30	---	13 59 12	52.3	26.5	-5.5		-76.7	870	28	05 00 01
05 15 00	1928+738	13 59 42	52.4	26.5	-5.5		-76.8	24	28	05 15 00
05 29 30	---	14 14 15	53.3	26.9	-5.2		-80.0	870	56	05 15 01
05 30 00	1928+738	14 14 45	53.4	26.9	-5.2		-80.1	24	56	05 30 00
05 44 30	---	14 29 17	54.4	27.1	-5.0		-83.4	870	84	05 30 01
05 45 00	1928+738	14 29 47	54.4	27.1	-5.0		-83.6	24	84	05 45 00
06 00 00	---	14 44 50	55.4	27.3	-4.7		-87.0	900	112	05 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qi_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
 LO sum=   4836.00  4836.00  4836.00  4836.00
 BBC fr=    636.00   636.00   636.00   636.00
 Bandwd=     16.00    16.00    16.00    16.00
  Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1928+738           19 28 49.350195   * 19 27 48.495148     19 27 26.529655       0.00
  J1927+7358         73 51 44.92742    * 73 58 01.56986      73 59 55.12639        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1928+738            95.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qjtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 13 Jan 2014 Day 13 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0201+113	02 46 48	47.7	195.5	0.7		9.4	0	0	18 00 00
18 14 30	---	03 01 20	47.0	200.6	0.9		12.5	870	28	18 00 01
18 15 00	0201+113	03 01 50	47.0	200.8	1.0		12.6	24	28	18 15 00
18 29 30	---	03 16 23	46.1	205.8	1.2		15.5	870	56	18 15 01
18 30 00	0201+113	03 16 53	46.1	206.0	1.2		15.6	24	56	18 30 00
18 44 30	---	03 31 25	45.1	210.9	1.4		18.3	870	84	18 30 01
18 45 00	0201+113	03 31 55	45.0	211.0	1.5		18.4	24	84	18 45 00
19 00 00	---	03 46 58	43.8	215.9	1.7		21.1	900	112	18 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qj_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 7 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=   2300.00   2300.00   2300.00   2300.00
 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:   6  Setup file default.  Used pcal sets:   1
 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:   6

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0201+113          02 01 06.003329   * 02 03 46.657061     02 04 32.814661       0.00
  J0203+1134        11 20 22.95394    * 11 34 45.40942      11 38 46.70913        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 3C48               101.0
 0201+113            99.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01qktr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 13 Jan 2014 Day 13 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
21 00 00	2007+777	05 47 17	42.7	-9.3	9.7		27.5	0	0	21 00 00
21 14 30	---	06 01 50	42.4	-8.3	9.9		24.6	870	28	21 00 01
21 15 00	2007+777	06 02 20	42.4	-8.3	10.0		24.5	25	28	21 15 00
21 29 30	---	06 16 52	42.1	-7.4	10.2		21.5	870	56	21 15 01
21 30 00	2007+777	06 17 22	42.1	-7.3	10.2		21.4	25	56	21 30 00
21 44 30	---	06 31 55	41.8	-6.4	10.5		18.5	870	84	21 30 01
21 45 00	2007+777	06 32 25	41.8	-6.3	10.5		18.4	25	84	21 45 00
22 00 00	---	06 47 27	41.6	-5.3	10.7		15.4	900	112	21 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qk_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 2007+777          20 07 20.430168   * 20 05 30.998496     20 04 53.816886       0.00
  J2005+7752        77 43 58.12300    * 77 52 43.24753      77 55 21.29707        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  2007+777            99.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qltr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
02 00 00	2010+723	10 48 07	38.6	14.2	-9.4		-29.3	0	0	02 00 00
02 14 30	---	11 02 39	39.2	15.4	-9.1		-32.0	870	28	02 00 01
02 15 00	2010+723	11 03 09	39.2	15.4	-9.1		-32.1	25	28	02 15 00
02 29 30	---	11 17 42	39.8	16.6	-8.9		-34.9	870	56	02 15 01
02 30 00	2010+723	11 18 12	39.8	16.6	-8.9		-34.9	25	56	02 30 00
02 44 30	---	11 32 44	40.4	17.8	-8.6		-37.7	870	84	02 30 01
02 45 00	2010+723	11 33 14	40.5	17.8	-8.6		-37.8	25	84	02 45 00
03 00 00	---	11 48 17	41.2	19.0	-8.4		-40.6	900	112	02 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01ql_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 2010+723          20 10 16.209319   * 20 09 52.303862     20 09 41.580870       0.00
  J2009+7229        72 20 20.74133    * 72 29 19.35101      72 32 02.09128        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  2010+723            94.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qmtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

```
##############################################################################################
#######################  Observing mode: C&L-band, dual-pol  ##################################
##############################################################################################
```

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

 --- Tue  14 Jan 2014   Day  14 ---

 ---------- C-band VLBI scans ----------

 Next scan frequencies:  4836.00  4836.00  4836.00  4836.00
 Next BBC frequencies:    636.00   636.00   636.00   636.00
 Next scan bandwidths:     16.00    16.00    16.00    16.00

05 00 00  1403+411     13 48 36  77.4 165.0 -0.3     -11.9     0        0   05 00 00
05 14 30  ---          14 03 09  77.8 177.7 -0.0      -1.8   870       28   05 00 01

05 15 00  1403+411     14 03 39  77.8 178.2 -0.0      -1.5    22       28   05 15 00
05 25 00  ---          14 13 40  77.7 187.1  0.1       5.6   600       47   05 15 01

 ---------- L-band VLBI scans ----------

 Next scan frequencies:  1668.00  1668.00  1668.00  1668.00
 Next BBC frequencies:    632.00   632.00   632.00   632.00

05 30 00  1403+411     14 18 41  77.6 191.5  0.2       9.1   290       47   05 30 00
05 44 30  ---          14 33 14  76.9 203.6  0.5      18.5   870       75   05 30 01

05 45 00  1403+411     14 33 44  76.9 204.0  0.5      18.8    23       75   05 45 00
06 00 00  ---          14 48 46  75.8 215.1  0.7      27.2   900      104   05 45 01


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


 ======== Setup file: ra6cm2.set
   Matching groups in ./rk01qm_freq.dat:
     tr6cm           E-mail Borkowski 23Apr03 (CR 1May03)
```

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01qm_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    6         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.


  1st LO=   2300.00   2300.00   2300.00   2300.00
  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: 7 Setup file default. Used pcal sets: 1
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: 7

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S1	S3	S1	S2	S3	S4
PCALXB2=	S2	S4	S2	S4	M1	M2	M3	M4
PCALFR1=	1000	1000	13000	13000	0	0	0	0
PCALFR2=	1000	1000	13000	13000	0	0	0	0

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)
* 1403+411	14 03 04.025300	* 14 05 07.795440	14 05 42.327370	0.00
J1405+4056	41 11 16.37060	* 40 56 57.83098	40 52 42.43714	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
1403+411	99.8

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

ec045tr

e-EVN run EC045 (Cseh)

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Schedule for TORUN (Code Tr) Page 2
e-EVN run EC045 (Cseh)
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
Next scan frequencies:		1610.49	1610.49	1610.49	1610.49	1642.49	1642.49	1642.49	1642.49	
		1674.49	1674.49	1674.49	1674.49	1706.49	1706.49	1706.49	1706.49	
Next BBC frequencies:		689.51	689.51	689.51	689.51	657.51	657.51	657.51	657.51	
		625.51	625.51	625.51	625.51	593.51	593.51	593.51	593.51	
Next scan bandwidths:		16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	
		16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	
09 00 00	BLLAC	17 49 16	47.4	78.0	-4.2		-52.6	0	0	09 00 00
09 15 00	---	18 04 18	49.7	80.5	-4.0		-53.3	900	116	09 00 01
09 15 40	BLLAC	18 04 58	49.8	80.6	-4.0		-53.3	34	116	09 15 40
09 30 00	---	18 19 21	51.9	83.1	-3.7		-53.8	860	227	09 15 41
09 30 40	BLLAC	18 20 01	52.0	83.2	-3.7		-53.8	34	227	09 30 40
09 45 00	---	18 34 23	54.1	85.8	-3.5		-54.1	860	338	09 30 41
09 45 40	BLLAC	18 35 03	54.2	86.0	-3.5		-54.1	34	338	09 45 40
10 00 00	---	18 49 26	56.4	88.7	-3.2		-54.3	860	449	09 45 41
10 00 40	BLLAC	18 50 06	56.5	88.8	-3.2		-54.3	34	449	10 00 40
10 15 00	---	19 04 28	58.7	91.7	-3.0		-54.3	860	560	10 00 41
10 15 40	BLLAC	19 05 08	58.8	91.8	-3.0		-54.3	34	560	10 15 40
10 30 00	---	19 19 31	60.9	94.9	-2.7		-54.0	860	671	10 15 41
10 30 40	BLLAC	19 20 11	61.0	95.1	-2.7		-54.0	34	671	10 30 40
10 45 00	---	19 34 33	63.2	98.4	-2.5		-53.5	860	782	10 30 41
10 45 40	BLLAC	19 35 13	63.3	98.6	-2.5		-53.5	34	782	10 45 40
11 00 00	---	19 49 35	65.4	102.3	-2.2		-52.6	860	893	10 45 41
11 00 40	BLLAC	19 50 16	65.5	102.5	-2.2		-52.5	34	893	11 00 40
11 15 00	---	20 04 38	67.6	106.6	-2.0		-51.1	860	1004	11 00 41

Schedule for TORUN (Code Tr) Page 3

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
11 15 40	BLLAC	20 05 18	67.7	106.8	-2.0		-51.1	34	1004	11 15 40
11 30 00	---	20 19 40	69.7	111.5	-1.7		-49.1	860	1115	11 15 41
11 30 40	BLLAC	20 20 20	69.8	111.7	-1.7		-49.0	34	1115	11 30 40
11 45 00	---	20 34 43	71.8	117.1	-1.5		-46.3	860	1226	11 30 41
11 45 40	BLLAC	20 35 23	71.8	117.4	-1.5		-46.2	33	1226	11 45 40
12 00 00	---	20 49 45	73.7	123.8	-1.2		-42.4	860	1337	11 45 41
12 02 00	0133+476	20 51 46	46.1	66.5	-4.8		-55.3	-10	1337	12 02 00
12 15 00	---	21 04 48	48.0	68.3	-4.6		-56.4	770	1437	12 02 01
12 15 40	0133+476	21 05 28	48.0	68.4	-4.5		-56.4	34	1437	12 15 40
12 30 00	---	21 19 50	50.1	70.4	-4.3		-57.6	860	1548	12 15 41
12 30 40	0133+476	21 20 30	50.2	70.5	-4.3		-57.7	34	1548	12 30 40
12 45 00	---	21 34 53	52.2	72.5	-4.0		-58.7	860	1659	12 30 41
12 45 40	0133+476	21 35 33	52.3	72.6	-4.0		-58.8	34	1659	12 45 40
13 00 00	---	21 49 55	54.4	74.7	-3.8		-59.8	860	1770	12 45 41
13 00 40	0133+476	21 50 35	54.5	74.8	-3.8		-59.9	34	1770	13 00 40
13 15 00	---	22 04 58	56.6	76.9	-3.5		-60.8	860	1881	13 00 41
13 15 40	0133+476	22 05 38	56.7	77.0	-3.5		-60.8	34	1881	13 15 40
13 30 00	---	22 20 00	58.8	79.2	-3.3		-61.7	860	1992	13 15 41
13 30 40	0133+476	22 20 40	58.9	79.3	-3.3		-61.7	34	1992	13 30 40
13 45 00	---	22 35 03	61.0	81.5	-3.0		-62.4	860	2103	13 30 41
13 45 40	0133+476	22 35 43	61.1	81.6	-3.0		-62.5	34	2103	13 45 40
14 00 00	---	22 50 05	63.2	84.0	-2.8		-63.0	860	2214	13 45 41
14 00 40	0133+476	22 50 45	63.3	84.1	-2.8		-63.1	34	2214	14 00 40
14 15 00	---	23 05 07	65.5	86.6	-2.5		-63.5	860	2325	14 00 41
14 15 40	0133+476	23 05 48	65.6	86.7	-2.5		-63.5	34	2325	14 15 40
14 30 00	---	23 20 10	67.7	89.4	-2.3		-63.7	860	2436	14 15 41
14 32 00	J0841+7053	23 22 10	37.2	15.3	-9.3		-28.8	-43	2436	14 32 00
14 45 00	=0836+710	23 35 12	37.7	16.5	-9.1		-31.2	737	2537	14 32 01
14 45 40	J0841+7053	23 35 53	37.7	16.5	-9.1		-31.3	34	2537	14 45 40
15 00 00	=0836+710	23 50 15	38.4	17.8	-8.9		-34.0	860	2648	14 45 41
15 01 10	J0749+7420	23 51 25	43.5	18.9	-8.0		-45.9	37	2648	15 01 10
15 04 00	=0743+744	23 54 16	43.7	19.0	-7.9		-46.4	170	2670	15 01 11

Schedule for TORUN (Code Tr) Page 4

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
15 05 10	J0841+7053	23 55 26	38.6	18.2	-8.8		-34.9	37	2670	15 05 10
15 06 10	=0836+710	23 56 26	38.6	18.3	-8.8		-35.1	60	2677	15 05 11
15 06 10	HOIIX-1	23 56 26	39.6	20.3	-8.4		-39.0	-18	2677	No stop
15 09 40	---	23 59 56	39.8	20.6	-8.4		-39.6	192	2704	15 06 11
15 09 40	J0841+7053	23 59 56	38.8	18.6	-8.7		-35.7	-18	2704	No stop
15 11 10	=0836+710	00 01 27	38.9	18.7	-8.7		-36.0	72	2716	15 09 41
15 11 10	HOIIX-1	00 01 27	39.8	20.7	-8.3		-39.9	-18	2716	No stop
15 14 40	---	00 04 57	40.0	21.0	-8.3		-40.5	192	2743	15 11 11
15 15 20	J0841+7053	00 05 37	39.1	19.1	-8.6		-36.8	22	2743	15 15 20
15 16 20	=0836+710	00 06 38	39.1	19.2	-8.6		-36.9	60	2751	15 15 21
15 16 20	HOIIX-1	00 06 38	40.1	21.2	-8.2		-40.9	-18	2751	No stop
15 19 50	---	00 10 08	40.3	21.4	-8.2		-41.5	192	2778	15 16 21
15 19 50	J0841+7053	00 10 08	39.3	19.5	-8.5		-37.6	-17	2778	No stop
15 21 20	=0836+710	00 11 38	39.4	19.6	-8.5		-37.9	73	2789	15 19 51
15 21 20	HOIIX-1	00 11 38	40.4	21.6	-8.2		-41.8	-18	2789	No stop
15 24 50	---	00 15 09	40.6	21.8	-8.1		-42.4	192	2817	15 21 21
15 25 30	J0841+7053	00 15 49	39.6	20.0	-8.5		-38.6	23	2817	15 25 30
15 26 30	=0836+710	00 16 49	39.6	20.0	-8.4		-38.8	60	2824	15 25 31
15 26 30	HOIIX-1	00 16 49	40.7	22.0	-8.1		-42.7	-18	2824	No stop
15 30 00	---	00 20 20	40.9	22.3	-8.0		-43.4	192	2851	15 26 31
15 30 00	J0841+7053	00 20 20	39.8	20.3	-8.4		-39.5	-17	2851	No stop
15 31 30	=0836+710	00 21 50	39.9	20.4	-8.4		-39.7	73	2863	15 30 01
15 31 30	HOIIX-1	00 21 50	41.0	22.4	-8.0		-43.6	-17	2863	No stop
15 35 00	---	00 25 21	41.2	22.7	-7.9		-44.3	193	2890	15 31 31
15 35 40	J0841+7053	00 26 01	40.1	20.8	-8.3		-40.5	23	2890	15 35 40
15 36 40	=0836+710	00 27 01	40.2	20.9	-8.3		-40.7	60	2898	15 35 41
15 36 40	HOIIX-1	00 27 01	41.3	22.8	-7.9		-44.6	-17	2898	No stop
15 40 10	---	00 30 31	41.5	23.1	-7.8		-45.2	193	2925	15 36 41
15 40 10	J0841+7053	00 30 31	40.4	21.2	-8.2		-41.3	-17	2925	No stop
15 41 40	=0836+710	00 32 02	40.5	21.3	-8.2		-41.6	73	2937	15 40 11
15 41 40	HOIIX-1	00 32 02	41.6	23.2	-7.8		-45.5	-17	2937	No stop
15 45 10	---	00 35 32	41.8	23.4	-7.8		-46.2	193	2964	15 41 41

Schedule for TORUN (Code Tr) Page 5

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
15 45 50	J0841+7053	00 36 12	40.7	21.6	-8.1		-42.4	23	2964	15 45 50
15 46 50	=0836+710	00 37 13	40.7	21.7	-8.1		-42.6	60	2971	15 45 51
15 46 50	HOIIX-1	00 37 13	41.9	23.6	-7.7		-46.5	-17	2971	No stop
15 50 20	---	00 40 43	42.1	23.8	-7.7		-47.1	193	2999	15 46 51
15 50 20	J0841+7053	00 40 43	40.9	22.0	-8.0		-43.2	-17	2999	No stop
15 51 50	=0836+710	00 42 13	41.0	22.1	-8.0		-43.5	73	3010	15 50 21
15 51 50	HOIIX-1	00 42 13	42.2	24.0	-7.6		-47.4	-17	3010	No stop
15 55 20	---	00 45 44	42.4	24.2	-7.6		-48.1	193	3037	15 51 51
15 56 00	J0841+7053	00 46 24	41.3	22.4	-7.9		-44.3	23	3037	15 56 00
15 57 00	=0836+710	00 47 24	41.3	22.5	-7.9		-44.4	60	3045	15 56 01
15 57 00	HOIIX-1	00 47 24	42.5	24.3	-7.6		-48.4	-18	3045	No stop
16 00 30	---	00 50 55	42.7	24.6	-7.5		-49.0	192	3072	15 57 01
16 00 30	J0841+7053	00 50 55	41.5	22.8	-7.9		-45.1	-18	3072	No stop
16 02 00	=0836+710	00 52 25	41.6	22.9	-7.8		-45.4	72	3084	16 00 31
16 02 00	HOIIX-1	00 52 25	42.8	24.7	-7.5		-49.3	-18	3084	No stop
16 05 30	---	00 55 56	43.0	25.0	-7.4		-49.9	192	3111	16 02 01
16 06 10	J0841+7053	00 56 36	41.8	23.2	-7.8		-46.1	22	3111	16 06 10
16 07 10	=0836+710	00 57 36	41.9	23.3	-7.8		-46.3	60	3119	16 06 11
16 07 10	HOIIX-1	00 57 36	43.1	25.1	-7.4		-50.3	-18	3119	No stop
16 10 40	---	01 01 06	43.4	25.4	-7.3		-50.9	192	3146	16 07 11
16 10 40	J0841+7053	01 01 06	42.1	23.6	-7.7		-47.0	-18	3146	No stop
16 12 10	=0836+710	01 02 37	42.2	23.7	-7.7		-47.3	72	3157	16 10 41
16 12 10	HOIIX-1	01 02 37	43.5	25.5	-7.3		-51.2	-18	3157	No stop
16 15 40	---	01 06 07	43.7	25.7	-7.2		-51.9	192	3184	16 12 11
16 16 20	J0841+7053	01 06 47	42.5	24.0	-7.6		-48.0	22	3184	16 16 20
16 17 20	=0836+710	01 07 48	42.5	24.1	-7.6		-48.2	60	3192	16 16 21
16 17 20	HOIIX-1	01 07 48	43.8	25.8	-7.2		-52.2	-18	3192	No stop
16 20 50	---	01 11 18	44.0	26.1	-7.2		-52.8	192	3219	16 17 21
16 20 50	J0841+7053	01 11 18	42.7	24.3	-7.5		-48.9	-18	3219	No stop
16 22 20	=0836+710	01 12 48	42.8	24.4	-7.5		-49.1	72	3231	16 20 51
16 22 20	HOIIX-1	01 12 48	44.1	26.2	-7.1		-53.1	-18	3231	No stop
16 25 50	---	01 16 19	44.4	26.4	-7.1		-53.8	192	3258	16 22 21

Schedule for TORUN (Code Tr) Page 6

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
16 26 30	J0841+7053	01 16 59	43.1	24.7	-7.4		-49.9	22	3258	16 26 30
16 27 30	=0836+710	01 17 59	43.2	24.8	-7.4		-50.1	60	3266	16 26 31
16 27 30	HOIIX-1	01 17 59	44.5	26.5	-7.1		-54.1	-18	3266	No stop
16 31 00	---	01 21 30	44.7	26.8	-7.0		-54.7	192	3293	16 27 31
16 31 00	J0841+7053	01 21 30	43.4	25.0	-7.4		-50.8	-18	3293	No stop
16 32 30	=0836+710	01 23 00	43.5	25.2	-7.3		-51.1	72	3304	16 31 01
16 32 30	HOIIX-1	01 23 00	44.8	26.9	-7.0		-55.0	-18	3304	No stop
16 36 00	---	01 26 31	45.0	27.1	-6.9		-55.7	192	3331	16 32 31
16 36 40	J0841+7053	01 27 11	43.7	25.5	-7.3		-51.8	22	3331	16 36 40
16 37 40	=0836+710	01 28 11	43.8	25.5	-7.2		-52.0	60	3339	16 36 41
16 37 40	HOIIX-1	01 28 11	45.2	27.2	-6.9		-56.0	-18	3339	No stop
16 41 10	---	01 31 41	45.4	27.4	-6.8		-56.7	192	3366	16 37 41
16 41 10	J0841+7053	01 31 41	44.0	25.8	-7.2		-52.7	-18	3366	No stop
16 42 40	=0836+710	01 33 12	44.1	25.9	-7.2		-53.0	72	3378	16 41 11
16 42 40	HOIIX-1	01 33 12	45.5	27.5	-6.8		-57.0	-19	3378	No stop
16 46 10	---	01 36 42	45.7	27.8	-6.7		-57.6	191	3405	16 42 41
16 46 50	J0841+7053	01 37 22	44.4	26.2	-7.1		-53.8	21	3405	16 46 50
16 47 50	=0836+710	01 38 23	44.5	26.2	-7.1		-53.9	60	3413	16 46 51
16 49 00	J0749+7420	01 39 33	49.6	24.6	-6.2		-67.7	37	3413	16 49 00
16 51 50	=0743+744	01 42 23	49.8	24.7	-6.1		-68.3	170	3435	16 49 01
16 53 00	J0841+7053	01 43 33	44.8	26.6	-7.0		-54.9	37	3435	16 53 00
16 54 00	=0836+710	01 44 34	44.9	26.6	-7.0		-55.1	60	3442	16 53 01
16 54 00	HOIIX-1	01 44 34	46.3	28.3	-6.6		-59.1	-19	3442	No stop
16 57 30	---	01 48 04	46.6	28.5	-6.5		-59.8	191	3469	16 54 01
16 57 30	J0841+7053	01 48 04	45.1	26.9	-6.9		-55.8	-19	3469	No stop
16 59 00	=0836+710	01 49 34	45.2	27.0	-6.9		-56.1	71	3481	16 57 31
16 59 00	HOIIX-1	01 49 34	46.7	28.6	-6.5		-60.1	-19	3481	No stop
17 02 30	---	01 53 05	46.9	28.8	-6.5		-60.8	191	3508	16 59 01
17 03 10	J0841+7053	01 53 45	45.5	27.2	-6.8		-56.9	21	3508	17 03 10
17 04 10	=0836+710	01 54 45	45.6	27.3	-6.8		-57.0	60	3516	17 03 11
17 04 10	HOIIX-1	01 54 45	47.0	28.9	-6.4		-61.1	-19	3516	No stop
17 07 40	---	01 58 16	47.3	29.1	-6.4		-61.8	191	3543	17 04 11

Schedule for TORUN (Code Tr) Page 7

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
17 07 40	J0841+7053	01 58 16	45.8	27.5	-6.7		-57.7	-19	3543	No stop
17 09 10	=0836+710	01 59 46	45.9	27.6	-6.7		-58.0	71	3555	17 07 41
17 09 10	HOIIX-1	01 59 46	47.4	29.2	-6.4		-62.0	-19	3555	No stop
17 12 40	---	02 03 17	47.7	29.4	-6.3		-62.7	191	3582	17 09 11
17 13 20	J0841+7053	02 03 57	46.2	27.9	-6.6		-58.8	21	3582	17 13 20
17 14 20	=0836+710	02 04 57	46.3	27.9	-6.6		-59.0	60	3589	17 13 21
17 14 20	HOIIX-1	02 04 57	47.8	29.5	-6.3		-63.1	-19	3589	No stop
17 17 50	---	02 08 28	48.0	29.6	-6.2		-63.7	191	3617	17 14 21
17 17 50	J0841+7053	02 08 28	46.5	28.2	-6.6		-59.7	-19	3617	No stop
17 19 20	=0836+710	02 09 58	46.6	28.2	-6.5		-60.0	71	3628	17 17 51
17 19 20	HOIIX-1	02 09 58	48.2	29.7	-6.2		-64.0	-19	3628	No stop
17 22 50	---	02 13 28	48.4	29.9	-6.1		-64.7	191	3655	17 19 21
17 23 30	J0841+7053	02 14 08	46.9	28.5	-6.5		-60.8	21	3655	17 23 30
17 24 30	=0836+710	02 15 09	47.0	28.5	-6.5		-61.0	60	3663	17 23 31
17 24 30	HOIIX-1	02 15 09	48.5	30.0	-6.1		-65.0	-19	3663	No stop
17 28 00	---	02 18 39	48.8	30.2	-6.0		-65.7	191	3690	17 24 31
17 28 00	J0841+7053	02 18 39	47.3	28.7	-6.4		-61.6	-19	3690	No stop
17 29 30	=0836+710	02 20 09	47.4	28.8	-6.4		-61.9	71	3702	17 28 01
17 29 30	HOIIX-1	02 20 09	48.9	30.3	-6.0		-66.0	-19	3702	No stop
17 33 00	---	02 23 40	49.2	30.4	-6.0		-66.7	191	3729	17 29 31
17 33 40	J0841+7053	02 24 20	47.7	29.1	-6.3		-62.7	21	3729	17 33 40
17 34 40	=0836+710	02 25 20	47.8	29.1	-6.3		-62.9	60	3737	17 33 41
17 34 40	HOIIX-1	02 25 20	49.3	30.5	-5.9		-67.1	-19	3737	No stop
17 38 10	---	02 28 51	49.6	30.7	-5.9		-67.8	191	3764	17 34 41
17 38 10	J0841+7053	02 28 51	48.0	29.3	-6.2		-63.6	-19	3764	No stop
17 39 40	=0836+710	02 30 21	48.1	29.4	-6.2		-63.9	71	3775	17 38 11
17 39 40	HOIIX-1	02 30 21	49.7	30.8	-5.8		-68.1	-20	3775	No stop
17 43 10	---	02 33 52	50.0	30.9	-5.8		-68.8	190	3802	17 39 41
17 43 50	J0841+7053	02 34 32	48.4	29.6	-6.1		-64.7	21	3802	17 43 50
17 44 50	=0836+710	02 35 32	48.5	29.7	-6.1		-64.9	60	3810	17 43 51

Schedule for TORUN (Code Tr) Page 8

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
17 44 50	HOIIX-1	02 35 32	50.1	31.0	-5.8		-69.1	-20	3810	No stop
17 48 20	---	02 39 03	50.4	31.2	-5.7		-69.8	190	3837	17 44 51
17 48 20	J0841+7053	02 39 03	48.8	29.9	-6.1		-65.6	-20	3837	No stop
17 49 50	=0836+710	02 40 33	48.9	29.9	-6.0		-65.9	70	3849	17 48 21
17 49 50	HOIIX-1	02 40 33	50.5	31.2	-5.7		-70.1	-20	3849	No stop
17 53 20	---	02 44 03	50.8	31.4	-5.6		-70.8	190	3876	17 49 51
17 54 00	J0841+7053	02 44 43	49.2	30.1	-6.0		-66.8	20	3876	17 54 00
17 55 00	=0836+710	02 45 44	49.3	30.2	-6.0		-67.0	60	3884	17 54 01
17 55 00	HOIIX-1	02 45 44	50.9	31.5	-5.6		-71.1	-20	3884	No stop
17 58 30	---	02 49 14	51.2	31.6	-5.5		-71.9	190	3911	17 55 01
17 58 30	J0841+7053	02 49 14	49.5	30.4	-5.9		-67.7	-20	3911	No stop
18 00 00	=0836+710	02 50 44	49.6	30.4	-5.9		-68.0	70	3922	17 58 31
18 00 00	HOIIX-1	02 50 44	51.3	31.7	-5.5		-72.2	-20	3922	No stop
18 03 30	---	02 54 15	51.6	31.8	-5.4		-72.9	190	3949	18 00 01
18 04 10	J0841+7053	02 54 55	50.0	30.6	-5.8		-68.8	20	3949	18 04 10
18 05 10	=0836+710	02 55 55	50.0	30.7	-5.8		-69.0	60	3957	18 04 11
18 05 10	HOIIX-1	02 55 55	51.7	31.9	-5.4		-73.2	-20	3957	No stop
18 08 40	---	02 59 26	52.0	32.0	-5.4		-74.0	190	3984	18 05 11
18 08 40	J0841+7053	02 59 26	50.3	30.8	-5.7		-69.7	-20	3984	No stop
18 10 10	=0836+710	03 00 56	50.4	30.9	-5.7		-70.0	70	3996	18 08 41
18 10 10	HOIIX-1	03 00 56	52.1	32.1	-5.3		-74.3	-20	3996	No stop
18 13 40	---	03 04 27	52.4	32.2	-5.3		-75.0	190	4023	18 10 11
18 14 20	J0841+7053	03 05 07	50.8	31.1	-5.6		-70.9	20	4023	18 14 20
18 15 20	=0836+710	03 06 07	50.8	31.1	-5.6		-71.1	60	4031	18 14 21
18 15 20	HOIIX-1	03 06 07	52.5	32.3	-5.2		-75.3	-20	4031	No stop
18 18 50	---	03 09 38	52.8	32.4	-5.2		-76.1	190	4058	18 15 21
18 18 50	J0841+7053	03 09 38	51.1	31.3	-5.6		-71.8	-20	4058	No stop
18 20 20	=0836+710	03 11 08	51.2	31.3	-5.5		-72.1	70	4069	18 18 51
18 20 20	HOIIX-1	03 11 08	52.9	32.4	-5.2		-76.4	-20	4069	No stop
18 23 50	---	03 14 38	53.2	32.5	-5.1		-77.1	190	4097	18 20 21

Schedule for TORUN (Code Tr) Page 9

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
18 24 30	J0841+7053	03 15 18	51.5	31.5	-5.5		-72.9	20	4097	18 24 30
18 25 30	=0836+710	03 16 19	51.6	31.5	-5.4		-73.1	60	4104	18 24 31
18 25 30	HOIIX-1	03 16 19	53.3	32.6	-5.1		-77.5	-20	4104	No stop
18 29 00	---	03 19 49	53.6	32.7	-5.0		-78.2	190	4131	18 25 31
18 29 00	J0841+7053	03 19 49	51.9	31.7	-5.4		-73.9	-20	4131	No stop
18 30 30	=0836+710	03 21 19	52.0	31.7	-5.4		-74.2	70	4143	18 29 01
18 30 30	HOIIX-1	03 21 19	53.7	32.7	-5.0		-78.5	-20	4143	No stop
18 34 00	---	03 24 50	54.0	32.8	-4.9		-79.3	190	4170	18 30 31
18 34 40	J0841+7053	03 25 30	52.4	31.9	-5.3		-75.1	20	4170	18 34 40
18 35 40	=0836+710	03 26 30	52.4	31.9	-5.3		-75.3	60	4178	18 34 41
18 36 50	J0749+7420	03 27 40	56.7	26.8	-4.4		-92.1	40	4178	18 36 50
18 39 40	=0743+744	03 30 31	56.9	26.7	-4.3		-92.8	170	4200	18 36 51
18 40 50	J0841+7053	03 31 41	52.8	32.1	-5.2		-76.3	41	4200	18 40 50
18 41 50	=0836+710	03 32 41	52.9	32.1	-5.2		-76.6	60	4207	18 40 51
18 41 50	HOIIX-1	03 32 41	54.7	33.0	-4.8		-81.0	-20	4207	No stop
18 45 20	---	03 36 12	54.9	33.1	-4.7		-81.8	190	4235	18 41 51
18 45 20	J0841+7053	03 36 12	53.2	32.2	-5.1		-77.3	-20	4235	No stop
18 46 50	=0836+710	03 37 42	53.3	32.3	-5.1		-77.6	70	4246	18 45 21
18 46 50	HOIIX-1	03 37 42	55.1	33.1	-4.7		-82.1	-20	4246	No stop
18 50 20	---	03 41 13	55.4	33.2	-4.7		-82.9	190	4273	18 46 51
18 51 00	J0841+7053	03 41 53	53.7	32.4	-5.0		-78.5	20	4273	18 51 00
18 52 00	=0836+710	03 42 53	53.7	32.4	-5.0		-78.7	60	4281	18 51 01
18 52 00	HOIIX-1	03 42 53	55.5	33.2	-4.6		-83.2	-20	4281	No stop
18 55 30	---	03 46 24	55.8	33.3	-4.6		-84.0	190	4308	18 52 01
18 55 30	J0841+7053	03 46 24	54.0	32.5	-4.9		-79.5	-20	4308	No stop
18 57 00	=0836+710	03 47 54	54.1	32.5	-4.9		-79.8	70	4320	18 55 31
18 57 00	HOIIX-1	03 47 54	55.9	33.3	-4.6		-84.4	-20	4320	No stop
19 00 30	---	03 51 24	56.2	33.3	-4.5		-85.1	190	4347	18 57 01
19 01 10	J0841+7053	03 52 04	54.5	32.6	-4.8		-80.7	20	4347	19 01 10
19 02 10	=0836+710	03 53 05	54.6	32.7	-4.8		-80.9	60	4355	19 01 11

Schedule for TORUN (Code Tr) Page 10

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
19 02 10	HOIIX-1	03 53 05	56.3	33.4	-4.5		-85.5	-20	4355	No stop
19 05 40	---	03 56 35	56.6	33.4	-4.4		-86.3	190	4382	19 02 11
19 05 40	J0841+7053	03 56 35	54.8	32.7	-4.8		-81.7	-20	4382	No stop
19 07 10	=0836+710	03 58 05	55.0	32.8	-4.7		-82.0	70	4393	19 05 41
19 07 10	HOIIX-1	03 58 05	56.7	33.4	-4.4		-86.7	-20	4393	No stop
19 10 40	---	04 01 36	57.0	33.4	-4.3		-87.5	190	4420	19 07 11
19 11 20	J0841+7053	04 02 16	55.3	32.9	-4.7		-82.9	20	4420	19 11 20
19 12 20	=0836+710	04 03 16	55.4	32.9	-4.7		-83.2	60	4428	19 11 21
19 12 20	HOIIX-1	04 03 16	57.2	33.5	-4.3		-87.8	-21	4428	No stop
19 15 50	---	04 06 47	57.5	33.5	-4.2		-88.7	189	4455	19 12 21
19 15 50	J0841+7053	04 06 47	55.7	32.9	-4.6		-84.0	-20	4455	No stop
19 17 20	=0836+710	04 08 17	55.8	32.9	-4.6		-84.3	70	4467	19 15 51
19 17 20	HOIIX-1	04 08 17	57.6	33.5	-4.2		-89.0	-21	4467	No stop
19 20 50	---	04 11 48	57.9	33.5	-4.2		-89.8	189	4494	19 17 21
19 21 30	J0841+7053	04 12 28	56.1	33.0	-4.5		-85.2	20	4494	19 21 30
19 22 30	=0836+710	04 13 28	56.2	33.0	-4.5		-85.5	60	4502	19 21 31
19 22 30	HOIIX-1	04 13 28	58.0	33.5	-4.1		-90.2	-21	4502	No stop
19 26 00	---	04 16 59	58.3	33.5	-4.1		-91.1	189	4529	19 22 31
19 26 00	J0841+7053	04 16 59	56.5	33.1	-4.4		-86.3	-20	4529	No stop
19 27 30	=0836+710	04 18 29	56.6	33.1	-4.4		-86.6	70	4540	19 26 01
19 27 30	HOIIX-1	04 18 29	58.4	33.5	-4.0		-91.4	-21	4540	No stop
19 31 00	---	04 21 59	58.7	33.4	-4.0		-92.3	189	4567	19 27 31
19 31 40	J0841+7053	04 22 39	57.0	33.1	-4.3		-87.6	20	4567	19 31 40
19 32 40	=0836+710	04 23 40	57.1	33.1	-4.3		-87.8	60	4575	19 31 41
19 32 40	HOIIX-1	04 23 40	58.9	33.4	-4.0		-92.7	-21	4575	No stop
19 36 10	---	04 27 10	59.2	33.4	-3.9		-93.5	189	4602	19 32 41
19 36 10	J0841+7053	04 27 10	57.3	33.1	-4.3		-88.6	-20	4602	No stop
19 37 40	=0836+710	04 28 40	57.5	33.1	-4.2		-89.0	70	4614	19 36 11
19 37 40	HOIIX-1	04 28 40	59.3	33.4	-3.9		-93.9	-21	4614	No stop
19 41 10	---	04 32 11	59.6	33.3	-3.8		-94.8	189	4641	19 37 41

Schedule for TORUN (Code Tr) Page 11

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
19 41 50	J0841+7053	04 32 51	57.8	33.1	-4.2		-89.9	20	4641	19 41 50
19 42 50	=0836+710	04 33 51	57.9	33.1	-4.2		-90.2	60	4649	19 41 51
19 42 50	HOIIX-1	04 33 51	59.7	33.3	-3.8		-95.2	-21	4649	No stop
19 46 20	---	04 37 22	60.0	33.3	-3.7		-96.0	189	4676	19 42 51
19 46 20	J0841+7053	04 37 22	58.2	33.1	-4.1		-91.0	-20	4676	No stop
19 47 50	=0836+710	04 38 52	58.3	33.1	-4.1		-91.4	70	4687	19 46 21
19 47 50	HOIIX-1	04 38 52	60.1	33.2	-3.7		-96.4	-21	4687	No stop
19 51 20	---	04 42 23	60.4	33.2	-3.6		-97.3	189	4715	19 47 51
19 52 00	J0841+7053	04 43 03	58.7	33.1	-4.0		-92.4	20	4715	19 52 00
19 53 00	=0836+710	04 44 03	58.7	33.1	-4.0		-92.6	60	4722	19 52 01
19 53 00	HOIIX-1	04 44 03	60.5	33.1	-3.6		-97.7	-21	4722	No stop
19 56 30	---	04 47 34	60.8	33.0	-3.6		-98.6	189	4749	19 53 01
19 56 30	J0841+7053	04 47 34	59.0	33.1	-3.9		-93.5	-20	4749	No stop
19 58 00	=0836+710	04 49 04	59.1	33.0	-3.9		-93.8	70	4761	19 56 31
19 58 00	HOIIX-1	04 49 04	61.0	33.0	-3.5		-99.0	-21	4761	No stop
20 01 30	---	04 52 34	61.2	32.9	-3.5		-99.9	189	4788	19 58 01
20 02 10	J0841+7053	04 53 15	59.5	33.0	-3.8		-94.9	20	4788	20 02 10
20 03 10	=0836+710	04 54 15	59.6	33.0	-3.8		-95.1	60	4796	20 02 11
20 03 10	HOIIX-1	04 54 15	61.4	32.9	-3.4		-100.4	-21	4796	No stop
20 06 40	---	04 57 45	61.7	32.7	-3.4		-101.3	189	4823	20 03 11
20 06 40	J0841+7053	04 57 45	59.9	32.9	-3.8		-96.0	-20	4823	No stop
20 08 10	=0836+710	04 59 15	60.0	32.9	-3.7		-96.4	70	4835	20 06 41
20 08 10	HOIIX-1	04 59 15	61.8	32.7	-3.4		-101.7	-21	4835	No stop
20 11 40	---	05 02 46	62.1	32.6	-3.3		-102.7	189	4862	20 08 11
20 12 20	J0841+7053	05 03 26	60.3	32.8	-3.7		-97.4	20	4862	20 12 20
20 13 20	=0836+710	05 04 26	60.4	32.8	-3.6		-97.7	60	4869	20 12 21
20 13 20	HOIIX-1	05 04 26	62.2	32.5	-3.3		-103.1	-21	4869	No stop
20 16 50	---	05 07 57	62.5	32.3	-3.2		-104.1	189	4896	20 13 21
20 16 50	J0841+7053	05 07 57	60.7	32.7	-3.6		-98.6	-20	4896	No stop
20 18 20	=0836+710	05 09 27	60.8	32.7	-3.6		-99.0	70	4908	20 16 51

Schedule for TORUN (Code Tr) Page 12

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
20 18 20	HOIIX-1	05 09 27	62.6	32.3	-3.2		-104.5	-21	4908	No stop
20 21 50	---	05 12 58	62.9	32.1	-3.1		-105.5	189	4935	20 18 21
20 22 30	J0841+7053	05 13 38	61.1	32.6	-3.5		-100.1	20	4935	20 22 30
20 23 30	=0836+710	05 14 38	61.2	32.5	-3.5		-100.3	60	4943	20 22 31
20 24 40	J0749+7420	05 15 48	63.7	22.5	-2.6		-121.8	35	4943	20 24 40
20 27 30	=0743+744	05 18 39	63.8	22.3	-2.5		-122.7	170	4965	20 24 41
20 28 40	J0841+7053	05 19 49	61.6	32.4	-3.4		-101.7	35	4965	20 28 40
20 29 40	=0836+710	05 20 49	61.7	32.3	-3.4		-102.0	60	4973	20 28 41
20 29 40	HOIIX-1	05 20 49	63.5	31.7	-3.0		-107.7	-21	4973	No stop
20 33 10	---	05 24 20	63.8	31.5	-2.9		-108.7	189	5000	20 29 41
20 33 10	J0841+7053	05 24 20	62.0	32.2	-3.3		-102.9	-20	5000	No stop
20 34 40	=0836+710	05 25 50	62.1	32.1	-3.3		-103.3	70	5011	20 33 11
20 34 40	HOIIX-1	05 25 50	63.9	31.4	-2.9		-109.1	-21	5011	No stop
20 38 10	---	05 29 20	64.2	31.2	-2.9		-110.2	189	5038	20 34 41
20 38 50	J0841+7053	05 30 01	62.5	32.0	-3.2		-104.5	20	5038	20 38 50
20 39 50	=0836+710	05 31 01	62.5	31.9	-3.2		-104.7	60	5046	20 38 51
20 39 50	HOIIX-1	05 31 01	64.3	31.1	-2.8		-110.6	-20	5046	No stop
20 43 20	---	05 34 31	64.6	30.8	-2.8		-111.7	190	5073	20 39 51
20 43 20	J0841+7053	05 34 31	62.8	31.7	-3.1		-105.7	-20	5073	No stop
20 44 50	=0836+710	05 36 02	62.9	31.7	-3.1		-106.1	70	5085	20 43 21
20 44 50	HOIIX-1	05 36 02	64.7	30.7	-2.7		-112.1	-20	5085	No stop
20 48 20	---	05 39 32	65.0	30.5	-2.7		-113.2	190	5112	20 44 51
20 49 00	J0841+7053	05 40 12	63.3	31.5	-3.0		-107.3	20	5112	20 49 00
20 50 00	=0836+710	05 41 12	63.3	31.4	-3.0		-107.6	60	5120	20 49 01
20 50 00	HOIIX-1	05 41 12	65.1	30.3	-2.7		-113.7	-20	5120	No stop
20 53 30	---	05 44 43	65.4	30.0	-2.6		-114.8	190	5147	20 50 01
20 53 30	J0841+7053	05 44 43	63.6	31.2	-3.0		-108.6	-20	5147	No stop
20 55 00	=0836+710	05 46 13	63.7	31.1	-2.9		-109.0	70	5158	20 53 31
20 55 00	HOIIX-1	05 46 13	65.5	29.9	-2.6		-115.3	-20	5158	No stop
20 58 30	---	05 49 44	65.7	29.6	-2.5		-116.4	190	5185	20 55 01

Schedule for TORUN (Code Tr) Page 13

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
20 59 10	J0841+7053	05 50 24	64.1	30.8	-2.9		-110.3	20	5185	20 59 10
21 00 10	=0836+710	05 51 24	64.1	30.8	-2.9		-110.6	60	5193	20 59 11
21 00 10	HOIIX-1	05 51 24	65.9	29.5	-2.5		-116.9	-20	5193	No stop
21 03 40	---	05 54 55	66.1	29.1	-2.4		-118.1	190	5220	21 00 11
21 03 40	J0841+7053	05 54 55	64.4	30.5	-2.8		-111.6	-20	5220	No stop
21 05 10	=0836+710	05 56 25	64.5	30.4	-2.8		-112.1	70	5232	21 03 41
21 05 10	HOIIX-1	05 56 25	66.2	29.0	-2.4		-118.5	-20	5232	No stop
21 08 40	---	05 59 55	66.5	28.6	-2.4		-119.7	190	5259	21 05 11
21 09 20	J0841+7053	06 00 36	64.8	30.1	-2.7		-113.3	20	5259	21 09 20
21 10 20	=0836+710	06 01 36	64.9	30.0	-2.7		-113.6	60	5267	21 09 21
21 10 20	HOIIX-1	06 01 36	66.6	28.5	-2.3		-120.2	-20	5267	No stop
21 13 50	---	06 05 06	66.8	28.1	-2.3		-121.4	190	5294	21 10 21
21 13 50	J0841+7053	06 05 06	65.2	29.8	-2.6		-114.7	-20	5294	No stop
21 15 20	=0836+710	06 06 37	65.3	29.6	-2.6		-115.2	70	5305	21 13 51
21 15 20	HOIIX-1	06 06 37	67.0	27.9	-2.2		-121.9	-20	5305	No stop
21 18 50	---	06 10 07	67.2	27.5	-2.2		-123.1	190	5333	21 15 21
21 19 30	J0841+7053	06 10 47	65.6	29.3	-2.5		-116.5	20	5333	21 19 30
21 20 30	=0836+710	06 11 47	65.7	29.2	-2.5		-116.8	60	5340	21 19 31
21 20 30	HOIIX-1	06 11 47	67.3	27.3	-2.2		-123.7	-20	5340	No stop
21 24 00	---	06 15 18	67.6	26.9	-2.1		-124.9	190	5367	21 20 31
21 24 00	J0841+7053	06 15 18	65.9	28.9	-2.5		-117.9	-20	5367	No stop
21 25 30	=0836+710	06 16 48	66.0	28.7	-2.4		-118.4	70	5379	21 24 01
21 25 30	HOIIX-1	06 16 48	67.7	26.7	-2.1		-125.5	-20	5379	No stop
21 29 00	---	06 20 19	67.9	26.2	-2.0		-126.7	190	5406	21 25 31
21 29 40	J0841+7053	06 20 59	66.3	28.3	-2.4		-119.8	20	5406	21 29 40
21 30 40	=0836+710	06 21 59	66.4	28.2	-2.3		-120.1	60	5414	21 29 41
21 30 40	HOIIX-1	06 21 59	68.0	26.0	-2.0		-127.3	-20	5414	No stop
21 34 10	---	06 25 30	68.2	25.5	-1.9		-128.6	190	5441	21 30 41
21 34 10	J0841+7053	06 25 30	66.6	27.8	-2.3		-121.3	-19	5441	No stop
21 35 40	=0836+710	06 27 00	66.7	27.7	-2.3		-121.8	71	5453	21 34 11

Schedule for TORUN (Code Tr) Page 14

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
21 35 40	HOIIX-1	06 27 00	68.3	25.3	-1.9		-129.1	-20	5453	No stop
21 39 10	---	06 30 30	68.5	24.8	-1.8		-130.4	190	5480	21 35 41
21 39 50	J0841+7053	06 31 11	67.0	27.2	-2.2		-123.2	21	5480	21 39 50
21 40 50	=0836+710	06 32 11	67.1	27.1	-2.2		-123.6	60	5487	21 39 51
21 40 50	HOIIX-1	06 32 11	68.7	24.6	-1.8		-131.0	-19	5487	No stop
21 44 20	---	06 35 41	68.9	24.1	-1.8		-132.4	191	5514	21 40 51
21 44 20	J0841+7053	06 35 41	67.3	26.7	-2.1		-124.8	-19	5514	No stop
21 45 50	=0836+710	06 37 12	67.4	26.5	-2.1		-125.3	71	5526	21 44 21
21 45 50	HOIIX-1	06 37 12	69.0	23.8	-1.7		-132.9	-20	5526	No stop
21 49 20	---	06 40 42	69.2	23.3	-1.7		-134.3	190	5553	21 45 51
21 50 00	J0841+7053	06 41 22	67.7	26.0	-2.0		-126.8	20	5553	21 50 00
21 51 00	=0836+710	06 42 22	67.8	25.8	-2.0		-127.1	60	5561	21 50 01
21 51 00	HOIIX-1	06 42 22	69.3	23.0	-1.6		-134.9	-20	5561	No stop
21 54 30	---	06 45 53	69.5	22.4	-1.6		-136.3	190	5588	21 51 01
21 54 30	J0841+7053	06 45 53	68.0	25.4	-1.9		-128.4	-20	5588	No stop
21 56 00	=0836+710	06 47 23	68.1	25.2	-1.9		-128.9	70	5600	21 54 31
21 56 00	HOIIX-1	06 47 23	69.6	22.1	-1.6		-136.9	-21	5600	No stop
21 59 30	---	06 50 54	69.8	21.5	-1.5		-138.3	189	5627	21 56 01
22 00 10	J0841+7053	06 51 34	68.4	24.6	-1.9		-130.5	19	5627	22 00 10
22 01 10	=0836+710	06 52 34	68.4	24.4	-1.8		-130.8	60	5634	22 00 11
22 01 10	HOIIX-1	06 52 34	69.8	21.2	-1.5		-139.0	-21	5634	No stop
22 04 40	---	06 56 05	70.0	20.6	-1.4		-140.4	189	5662	22 01 11
22 04 40	J0841+7053	06 56 05	68.7	23.9	-1.8		-132.2	-21	5662	No stop
22 06 10	=0836+710	06 57 35	68.7	23.7	-1.8		-132.7	69	5673	22 04 41
22 06 10	HOIIX-1	06 57 35	70.1	20.3	-1.4		-141.1	-22	5673	No stop
22 09 40	---	07 01 05	70.3	19.6	-1.3		-142.5	188	5700	22 06 11
22 10 20	J0841+7053	07 01 46	69.0	23.0	-1.7		-134.3	18	5700	22 10 20
22 11 20	=0836+710	07 02 46	69.1	22.9	-1.7		-134.7	60	5708	22 10 21
22 12 40	J0749+7420	07 04 06	68.3	8.6	-0.8		-160.7	37	5708	22 12 40
22 15 30	=0743+744	07 06 56	68.3	8.1	-0.7		-161.8	170	5730	22 12 41

Schedule for TORUN (Code Tr) Page 15

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
22 16 50	J0841+7053	07 08 17	69.4	21.9	-1.6		-136.9	37	5730	22 16 50
22 17 50	=0836+710	07 09 17	69.4	21.8	-1.6		-137.3	60	5738	22 16 51
22 17 50	HOIIX-1	07 09 17	70.7	18.0	-1.2		-146.0	-23	5738	No stop
22 21 20	---	07 12 47	70.8	17.2	-1.1		-147.5	187	5765	22 17 51
22 21 20	J0841+7053	07 12 47	69.6	21.2	-1.5		-138.7	-23	5765	No stop
22 22 50	=0836+710	07 14 18	69.7	20.9	-1.5		-139.3	67	5776	22 21 21
22 22 50	HOIIX-1	07 14 18	70.9	16.9	-1.1		-148.2	-23	5776	No stop
22 26 20	---	07 17 48	71.1	16.1	-1.1		-149.7	187	5804	22 22 51
22 27 10	J0841+7053	07 18 38	69.9	20.1	-1.4		-141.0	27	5804	22 27 10
22 28 10	=0836+710	07 19 38	70.0	19.9	-1.4		-141.5	60	5811	22 27 11
22 28 10	HOIIX-1	07 19 38	71.1	15.7	-1.0		-150.6	-23	5811	No stop
22 31 40	---	07 23 09	71.3	14.9	-1.0		-152.1	187	5838	22 28 11
22 31 40	J0841+7053	07 23 09	70.2	19.2	-1.3		-142.9	-23	5838	No stop
22 33 10	=0836+710	07 24 39	70.2	19.0	-1.3		-143.5	67	5850	22 31 41
22 33 10	HOIIX-1	07 24 39	71.3	14.6	-0.9		-152.8	-24	5850	No stop
22 36 40	---	07 28 10	71.5	13.8	-0.9		-154.4	186	5877	22 33 11
22 37 30	J0841+7053	07 29 00	70.4	18.1	-1.2		-145.4	26	5877	22 37 30
22 38 30	=0836+710	07 30 00	70.5	17.9	-1.2		-145.8	60	5885	22 37 31
22 38 30	HOIIX-1	07 30 00	71.5	13.3	-0.9		-155.3	-24	5885	No stop
22 42 00	---	07 33 31	71.6	12.5	-0.8		-156.9	186	5912	22 38 31
22 42 00	J0841+7053	07 33 31	70.6	17.2	-1.2		-147.3	-24	5912	No stop
22 43 30	=0836+710	07 35 01	70.7	16.9	-1.1		-148.0	66	5923	22 42 01
22 43 30	HOIIX-1	07 35 01	71.7	12.1	-0.8		-157.6	-25	5923	No stop
22 47 00	---	07 38 32	71.8	11.3	-0.7		-159.2	185	5951	22 43 31
22 47 50	J0841+7053	07 39 22	70.9	15.9	-1.1		-149.9	25	5951	22 47 50
22 48 50	=0836+710	07 40 22	70.9	15.7	-1.0		-150.3	60	5958	22 47 51
22 48 50	HOIIX-1	07 40 22	71.9	10.8	-0.7		-160.1	-25	5958	No stop
22 52 20	---	07 43 52	72.0	9.9	-0.6		-161.8	185	5985	22 48 51
22 52 20	J0841+7053	07 43 52	71.1	14.9	-1.0		-151.9	-25	5985	No stop
22 53 50	=0836+710	07 45 23	71.1	14.6	-1.0		-152.6	65	5997	22 52 21

Schedule for TORUN (Code Tr) Page 16

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
22 53 50	HOIIX-1	07 45 23	72.0	9.5	-0.6		-162.5	-25	5997	No stop
22 57 20	---	07 48 53	72.1	8.6	-0.5		-164.2	185	6024	22 53 51
22 58 10	J0841+7053	07 49 43	71.3	13.6	-0.9		-154.5	25	6024	22 58 10
22 59 10	=0836+710	07 50 44	71.3	13.4	-0.9		-155.0	60	6032	22 58 11
22 59 10	HOIIX-1	07 50 44	72.1	8.2	-0.5		-165.1	-26	6032	No stop
23 02 40	---	07 54 14	72.2	7.2	-0.4		-166.8	184	6059	22 59 11
23 02 40	J0841+7053	07 54 14	71.4	12.5	-0.8		-156.6	-25	6059	No stop
23 04 10	=0836+710	07 55 44	71.5	12.2	-0.8		-157.3	65	6071	23 02 41
23 04 10	HOIIX-1	07 55 44	72.2	6.9	-0.4		-167.5	-26	6071	No stop
23 07 40	---	07 59 15	72.3	5.9	-0.4		-169.2	184	6098	23 04 11
23 08 30	J0841+7053	08 00 05	71.6	11.1	-0.7		-159.3	24	6098	23 08 30
23 09 30	=0836+710	08 01 05	71.7	10.9	-0.7		-159.8	60	6105	23 08 31
23 09 30	HOIIX-1	08 01 05	72.3	5.4	-0.3		-170.1	-26	6105	No stop
23 13 00	---	08 04 36	72.3	4.5	-0.3		-171.9	184	6133	23 09 31
23 13 00	J0841+7053	08 04 36	71.7	10.0	-0.6		-161.4	-26	6133	No stop
23 14 30	=0836+710	08 06 06	71.8	9.7	-0.6		-162.1	64	6144	23 13 01
23 14 30	HOIIX-1	08 06 06	72.4	4.1	-0.2		-172.6	-26	6144	No stop
23 18 00	---	08 09 37	72.4	3.1	-0.2		-174.3	184	6171	23 14 31
23 18 50	J0841+7053	08 10 27	71.9	8.6	-0.5		-164.2	24	6171	23 18 50
23 19 50	=0836+710	08 11 27	71.9	8.3	-0.5		-164.7	60	6179	23 18 51
23 19 50	HOIIX-1	08 11 27	72.4	2.6	-0.2		-175.2	-27	6179	No stop
23 23 20	---	08 14 58	72.4	1.7	-0.1		-177.0	183	6206	23 19 51
23 23 20	J0841+7053	08 14 58	72.0	7.4	-0.5		-166.4	-26	6206	No stop
23 24 50	=0836+710	08 16 28	72.0	7.0	-0.4		-167.1	64	6218	23 23 21
23 24 50	HOIIX-1	08 16 28	72.4	1.2	-0.1		-177.7	-27	6218	No stop
23 28 20	---	08 19 58	72.4	0.3	-0.0		-179.5	183	6245	23 24 51
23 29 10	J0841+7053	08 20 49	72.1	5.9	-0.4		-169.2	24	6245	23 29 10
23 30 10	=0836+710	08 21 49	72.1	5.6	-0.4		-169.7	60	6253	23 29 11
23 30 10	HOIIX-1	08 21 49	72.4	-0.2	0.0		179.6	-27	6253	No stop
23 33 40	---	08 25 19	72.4	-1.2	0.1		177.9	183	6280	23 30 11

Schedule for TORUN (Code Tr) Page 17

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start LST	Start EL	Start AZ	Start HA	Start UP	Start ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 14 Jan 2014 Day 14 ---										
23 33 40	J0841+7053	08 25 19	72.1	4.7	-0.3		-171.4	-27	6280	No stop
23 35 10	=0836+710	08 26 49	72.2	4.3	-0.3		-172.1	63	6291	23 33 41
23 35 10	HOIIX-1	08 26 49	72.4	-1.6	0.1		177.1	-27	6291	No stop
23 38 40	---	08 30 20	72.4	-2.6	0.2		175.4	183	6318	23 35 11
23 39 30	J0841+7053	08 31 10	72.2	3.1	-0.2		-174.2	23	6318	23 39 30
23 40 30	=0836+710	08 32 10	72.2	2.9	-0.2		-174.7	60	6326	23 39 31
23 40 30	HOIIX-1	08 32 10	72.4	-3.1	0.2		174.5	-27	6326	No stop
23 44 00	---	08 35 41	72.4	-4.0	0.2		172.7	183	6353	23 40 31
23 44 00	J0841+7053	08 35 41	72.2	1.9	-0.1		-176.5	-27	6353	No stop
23 45 30	=0836+710	08 37 11	72.2	1.5	-0.1		-177.2	63	6365	23 44 01
23 45 30	HOIIX-1	08 37 11	72.3	-4.4	0.3		172.0	-27	6365	No stop
23 49 00	---	08 40 42	72.3	-5.4	0.3		170.2	183	6392	23 45 31
23 49 50	J0841+7053	08 41 32	72.3	0.4	-0.0		-179.3	23	6392	23 49 50
23 50 50	=0836+710	08 42 32	72.3	0.1	-0.0		-179.8	60	6400	23 49 51
23 50 50	HOIIX-1	08 42 32	72.3	-5.9	0.4		169.3	-27	6400	No stop
23 54 20	---	08 46 03	72.2	-6.8	0.4		167.6	183	6427	23 50 51
23 54 20	J0841+7053	08 46 03	72.3	-0.9	0.1		178.4	-27	6427	No stop
23 55 50	=0836+710	08 47 33	72.2	-1.3	0.1		177.7	63	6438	23 54 21
23 55 50	HOIIX-1	08 47 33	72.2	-7.2	0.4		166.9	-27	6438	No stop
23 59 20	---	08 51 03	72.1	-8.1	0.5		165.2	183	6465	23 55 51
--- Wed 15 Jan 2014 Day 15 ---										
00 00 10	J0841+7053	08 51 54	72.2	-2.4	0.2		175.6	23	6465	00 00 10
00 01 10	=0836+710	08 52 54	72.2	-2.7	0.2		175.1	60	6473	00 00 11
---------- Ef pointing check ----------										
00 05 10	3C147	08 56 54	60.3	-76.4	3.2		64.9	77	6473	00 05 10
00 15 10	---	09 06 56	58.9	-75.1	3.4		64.2	600	6551	00 05 11
00 17 40	J0749+7420	09 09 26	67.4	-13.6	1.3		148.5	12	6551	00 17 40
00 20 30	=0743+744	09 12 17	67.2	-14.0	1.4		147.4	170	6572	00 17 41
00 21 50	J0841+7053	09 13 37	71.9	-8.1	0.5		165.0	49	6572	00 21 50
00 22 50	=0836+710	09 14 37	71.9	-8.4	0.5		164.5	60	6580	00 21 51

Schedule for TORUN (Code Tr) Page 18

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
00 22 50	HOIIX-1	09 14 37	71.4	-14.0	0.9		154.1	-26	6580	No stop
00 26 20	---	09 18 08	71.3	-14.8	1.0		152.5	184	6607	00 22 51
00 26 20	J0841+7053	09 18 08	71.8	-9.3	0.6		162.8	-26	6607	No stop
00 27 50	=0836+710	09 19 38	71.8	-9.7	0.6		162.1	64	6619	00 26 21
00 27 50	HOIIX-1	09 19 38	71.2	-15.1	1.0		151.8	-26	6619	No stop
00 31 20	---	09 23 09	71.1	-15.9	1.0		150.2	184	6646	00 27 51
00 32 10	J0841+7053	09 23 59	71.7	-10.7	0.7		160.1	24	6646	00 32 10
00 33 10	=0836+710	09 24 59	71.6	-11.0	0.7		159.6	60	6654	00 32 11
00 33 10	HOIIX-1	09 24 59	71.0	-16.3	1.1		149.4	-26	6654	No stop
00 36 40	---	09 28 30	70.9	-17.1	1.1		147.9	184	6681	00 33 11
00 36 40	J0841+7053	09 28 30	71.5	-11.8	0.8		158.0	-25	6681	No stop
00 38 10	=0836+710	09 30 00	71.5	-12.2	0.8		157.3	65	6692	00 36 41
00 38 10	HOIIX-1	09 30 00	70.8	-17.4	1.1		147.2	-26	6692	No stop
00 41 40	---	09 33 30	70.7	-18.1	1.2		145.7	184	6720	00 38 11
00 42 30	J0841+7053	09 34 21	71.3	-13.2	0.9		155.3	25	6720	00 42 30
00 43 30	=0836+710	09 35 21	71.3	-13.4	0.9		154.8	60	6727	00 42 31
00 43 30	HOIIX-1	09 35 21	70.6	-18.5	1.2		144.9	-25	6727	No stop
00 47 00	---	09 38 51	70.4	-19.2	1.3		143.4	185	6754	00 43 31
00 47 00	J0841+7053	09 38 51	71.2	-14.2	0.9		153.2	-25	6754	No stop
00 48 30	=0836+710	09 40 22	71.1	-14.6	1.0		152.6	65	6766	00 47 01
00 48 30	HOIIX-1	09 40 22	70.3	-19.5	1.3		142.8	-25	6766	No stop
00 52 00	---	09 43 52	70.1	-20.2	1.4		141.3	185	6793	00 48 31
00 52 50	J0841+7053	09 44 42	71.0	-15.6	1.0		150.6	26	6793	00 52 50
00 53 50	=0836+710	09 45 42	70.9	-15.8	1.0		150.2	60	6801	00 52 51
00 53 50	HOIIX-1	09 45 42	70.0	-20.5	1.4		140.5	-25	6801	No stop
00 57 20	---	09 49 13	69.9	-21.2	1.5		139.1	185	6828	00 53 51
00 57 20	J0841+7053	09 49 13	70.8	-16.5	1.1		148.6	-24	6828	No stop
00 58 50	=0836+710	09 50 43	70.7	-16.8	1.1		148.0	66	6840	00 57 21
00 58 50	HOIIX-1	09 50 43	69.8	-21.4	1.5		138.5	-24	6840	No stop
01 02 20	---	09 54 14	69.6	-22.1	1.6		137.1	186	6867	00 58 51

Schedule for TORUN (Code Tr) Page 19

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
01 03 10	J0841+7053	09 55 04	70.5	-17.7	1.2		146.1	26	6867	01 03 10
01 04 10	=0836+710	09 56 04	70.5	-18.0	1.2		145.7	60	6874	01 03 11
01 04 10	HOIIX-1	09 56 04	69.5	-22.4	1.6		136.4	-24	6874	No stop
01 07 40	---	09 59 35	69.3	-23.0	1.6		135.0	186	6901	01 04 11
01 07 40	J0841+7053	09 59 35	70.3	-18.7	1.3		144.2	-23	6901	No stop
01 09 10	=0836+710	10 01 05	70.2	-18.9	1.3		143.6	67	6913	01 07 41
01 09 10	HOIIX-1	10 01 05	69.2	-23.2	1.7		134.4	-24	6913	No stop
01 12 40	---	10 04 36	69.0	-23.8	1.7		133.0	186	6940	01 09 11
01 13 30	J0841+7053	10 05 26	70.0	-19.8	1.4		141.7	27	6940	01 13 30
01 14 30	=0836+710	10 06 26	70.0	-20.0	1.4		141.3	60	6948	01 13 31
01 14 30	HOIIX-1	10 06 26	68.9	-24.1	1.8		132.3	-23	6948	No stop
01 18 00	---	10 09 56	68.6	-24.6	1.8		131.0	187	6975	01 14 31
01 18 00	J0841+7053	10 09 56	69.8	-20.6	1.5		139.9	-23	6975	No stop
01 19 30	=0836+710	10 11 27	69.7	-20.9	1.5		139.3	67	6987	01 18 01
01 19 30	HOIIX-1	10 11 27	68.6	-24.8	1.8		130.4	-23	6987	No stop
01 23 00	---	10 14 57	68.3	-25.3	1.9		129.1	187	7014	01 19 31
01 23 50	J0841+7053	10 15 47	69.5	-21.7	1.5		137.5	28	7014	01 23 50
01 24 50	=0836+710	10 16 48	69.4	-21.8	1.6		137.1	60	7021	01 23 51
01 24 50	HOIIX-1	10 16 48	68.2	-25.6	1.9		128.5	-22	7021	No stop
01 28 20	---	10 20 18	68.0	-26.1	2.0		127.2	188	7049	01 24 51
01 28 20	J0841+7053	10 20 18	69.2	-22.4	1.6		135.8	-22	7049	No stop
01 29 50	=0836+710	10 21 48	69.1	-22.7	1.6		135.2	68	7060	01 28 21
01 29 50	HOIIX-1	10 21 48	67.9	-26.3	2.0		126.7	-22	7060	No stop
01 33 20	---	10 25 19	67.6	-26.7	2.1		125.4	188	7087	01 29 51
01 34 10	J0841+7053	10 26 09	68.9	-23.4	1.7		133.5	28	7087	01 34 10
01 35 10	=0836+710	10 27 09	68.8	-23.5	1.7		133.1	60	7095	01 34 11
01 35 10	HOIIX-1	10 27 09	67.5	-26.9	2.1		124.8	-22	7095	No stop
01 38 40	---	10 30 40	67.3	-27.4	2.2		123.5	188	7122	01 35 11
01 38 40	J0841+7053	10 30 40	68.6	-24.1	1.8		131.8	-21	7122	No stop
01 40 10	=0836+710	10 32 10	68.5	-24.3	1.8		131.2	69	7134	01 38 41

Schedule for TORUN (Code Tr) Page 20

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start LST	Start EL	Start AZ	Stop HA	Stop UP	Stop ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
01 40 10	HOIIX-1	10 32 10	67.2	-27.5	2.2		123.0	-21	7134	No stop
01 43 40	---	10 35 41	66.9	-27.9	2.2		121.8	189	7161	01 40 11
01 44 30	J0841+7053	10 36 31	68.2	-24.9	1.9		129.6	29	7161	01 44 30
01 45 30	=0836+710	10 37 31	68.2	-25.0	1.9		129.2	60	7169	01 44 31
01 45 30	HOIIX-1	10 37 31	66.8	-28.1	2.3		121.2	-21	7169	No stop
01 49 00	---	10 41 01	66.6	-28.5	2.3		120.0	189	7196	01 45 31
01 49 00	J0841+7053	10 41 01	67.9	-25.5	2.0		128.0	-20	7196	No stop
01 50 30	=0836+710	10 42 32	67.8	-25.7	2.0		127.4	70	7207	01 49 01
01 50 30	HOIIX-1	10 42 32	66.4	-28.7	2.4		119.5	-20	7207	No stop
01 54 00	---	10 46 02	66.2	-29.0	2.4		118.4	190	7234	01 50 31
01 54 50	J0841+7053	10 46 52	67.6	-26.3	2.1		125.9	30	7234	01 54 50
01 55 50	=0836+710	10 47 53	67.5	-26.4	2.1		125.5	60	7242	01 54 51
01 55 50	HOIIX-1	10 47 53	66.1	-29.2	2.4		117.8	-20	7242	No stop
01 59 20	---	10 51 23	65.8	-29.5	2.5		116.7	190	7269	01 55 51
01 59 20	J0841+7053	10 51 23	67.3	-26.8	2.1		124.3	-20	7269	No stop
02 00 50	=0836+710	10 52 53	67.2	-27.0	2.2		123.8	70	7281	01 59 21
02 00 50	HOIIX-1	10 52 53	65.7	-29.7	2.5		116.2	-20	7281	No stop
02 04 20	---	10 56 24	65.4	-30.0	2.6		115.1	190	7308	02 00 51
02 05 10	J0841+7053	10 57 14	66.9	-27.5	2.2		122.3	31	7308	02 05 10
02 06 10	=0836+710	10 58 14	66.8	-27.6	2.3		122.0	60	7316	02 05 11
02 07 20	J0749+7420	10 59 24	61.7	-24.7	3.1		112.0	37	7316	02 07 20
02 10 10	=0743+744	11 02 15	61.5	-24.8	3.2		111.2	170	7338	02 07 21
02 11 20	J0841+7053	11 03 25	66.4	-28.2	2.3		120.2	38	7338	02 11 20
02 12 20	=0836+710	11 04 25	66.4	-28.3	2.4		119.9	60	7345	02 11 21
02 12 20	HOIIX-1	11 04 25	64.8	-30.6	2.7		112.6	-19	7345	No stop
02 15 50	---	11 07 56	64.5	-30.9	2.8		111.6	191	7372	02 12 21
02 15 50	J0841+7053	11 07 56	66.1	-28.6	2.4		118.8	-19	7372	No stop
02 17 20	=0836+710	11 09 26	66.0	-28.8	2.4		118.3	71	7384	02 15 51
02 17 20	HOIIX-1	11 09 26	64.4	-31.0	2.8		111.1	-20	7384	No stop
02 20 50	---	11 12 57	64.2	-31.2	2.9		110.1	190	7411	02 17 21

Schedule for TORUN (Code Tr) Page 21

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
02 21 40	J0841+7053	11 13 47	65.7	-29.2	2.5		116.9	31	7411	02 21 40
02 22 40	=0836+710	11 14 47	65.6	-29.3	2.5		116.6	60	7419	02 21 41
02 22 40	HOIIX-1	11 14 47	64.0	-31.3	2.9		109.5	-20	7419	No stop
02 26 10	---	11 18 18	63.7	-31.5	3.0		108.5	190	7446	02 22 41
02 26 10	J0841+7053	11 18 18	65.3	-29.6	2.6		115.5	-20	7446	No stop
02 27 40	=0836+710	11 19 48	65.2	-29.7	2.6		115.0	70	7458	02 26 11
02 27 40	HOIIX-1	11 19 48	63.6	-31.6	3.0		108.1	-20	7458	No stop
02 31 10	---	11 23 18	63.3	-31.8	3.0		107.1	190	7485	02 27 41
02 32 00	J0841+7053	11 24 09	64.9	-30.0	2.7		113.6	30	7485	02 32 00
02 33 00	=0836+710	11 25 09	64.8	-30.1	2.7		113.3	60	7492	02 32 01
02 33 00	HOIIX-1	11 25 09	63.2	-31.9	3.1		106.6	-20	7492	No stop
02 36 30	---	11 28 39	62.9	-32.1	3.1		105.6	190	7520	02 33 01
02 36 30	J0841+7053	11 28 39	64.6	-30.4	2.8		112.3	-20	7520	No stop
02 38 00	=0836+710	11 30 10	64.5	-30.5	2.8		111.8	70	7531	02 36 31
02 38 00	HOIIX-1	11 30 10	62.8	-32.2	3.2		105.1	-20	7531	No stop
02 41 30	---	11 33 40	62.5	-32.3	3.2		104.2	190	7558	02 38 01
02 42 20	J0841+7053	11 34 30	64.1	-30.8	2.9		110.5	30	7558	02 42 20
02 43 20	=0836+710	11 35 30	64.0	-30.9	2.9		110.2	60	7566	02 42 21
02 43 20	HOIIX-1	11 35 30	62.4	-32.4	3.2		103.7	-20	7566	No stop
02 46 50	---	11 39 01	62.1	-32.6	3.3		102.7	190	7593	02 43 21
02 46 50	J0841+7053	11 39 01	63.8	-31.1	2.9		109.2	-20	7593	No stop
02 48 20	=0836+710	11 40 31	63.7	-31.2	3.0		108.8	70	7605	02 46 51
02 48 20	HOIIX-1	11 40 31	62.0	-32.6	3.3		102.3	-20	7605	No stop
02 51 50	---	11 44 02	61.7	-32.7	3.4		101.4	190	7632	02 48 21
02 52 40	J0841+7053	11 44 52	63.3	-31.4	3.0		107.5	30	7632	02 52 40
02 53 40	=0836+710	11 45 52	63.2	-31.5	3.0		107.2	60	7640	02 52 41
02 53 40	HOIIX-1	11 45 52	61.5	-32.8	3.4		100.9	-20	7640	No stop
02 57 10	---	11 49 23	61.2	-32.9	3.5		100.0	190	7667	02 53 41
02 57 10	J0841+7053	11 49 23	63.0	-31.7	3.1		106.2	-20	7667	No stop
02 58 40	=0836+710	11 50 53	62.8	-31.7	3.1		105.8	70	7678	02 57 11

Schedule for TORUN (Code Tr) Page 22

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
02 58 40	HOIIX-1	11 50 53	61.1	-33.0	3.5		99.6	-20	7678	No stop
03 02 10	---	11 54 23	60.8	-33.0	3.6		98.7	190	7705	02 58 41
03 03 00	J0841+7053	11 55 14	62.5	-31.9	3.2		104.6	30	7705	03 03 00
03 04 00	=0836+710	11 56 14	62.4	-32.0	3.2		104.3	60	7713	03 03 01
03 04 00	HOIIX-1	11 56 14	60.7	-33.1	3.6		98.2	-20	7713	No stop
03 07 30	---	11 59 44	60.4	-33.2	3.6		97.3	190	7740	03 04 01
03 07 30	J0841+7053	11 59 44	62.1	-32.1	3.3		103.4	-20	7740	No stop
03 09 00	=0836+710	12 01 15	62.0	-32.2	3.3		103.0	70	7752	03 07 31
03 09 00	HOIIX-1	12 01 15	60.3	-33.2	3.7		96.9	-20	7752	No stop
03 12 30	---	12 04 45	60.0	-33.3	3.7		96.0	190	7779	03 09 01
03 13 20	J0841+7053	12 05 35	61.7	-32.3	3.4		101.8	30	7779	03 13 20
03 14 20	=0836+710	12 06 35	61.6	-32.4	3.4		101.5	60	7787	03 13 21
03 14 20	HOIIX-1	12 06 35	59.8	-33.3	3.8		95.6	-20	7787	No stop
03 17 50	---	12 10 06	59.5	-33.4	3.8		94.7	190	7814	03 14 21
03 17 50	J0841+7053	12 10 06	61.3	-32.5	3.5		100.6	-20	7814	No stop
03 19 20	=0836+710	12 11 36	61.2	-32.5	3.5		100.2	70	7825	03 17 51
03 19 20	HOIIX-1	12 11 36	59.4	-33.4	3.8		94.3	-20	7825	No stop
03 22 50	---	12 15 07	59.1	-33.4	3.9		93.5	190	7852	03 19 21
03 23 40	J0841+7053	12 15 57	60.8	-32.7	3.6		99.1	30	7852	03 23 40
03 24 40	=0836+710	12 16 57	60.8	-32.7	3.6		98.8	60	7860	03 23 41
03 24 40	HOIIX-1	12 16 57	59.0	-33.4	3.9		93.0	-20	7860	No stop
03 28 10	---	12 20 28	58.7	-33.5	4.0		92.2	190	7887	03 24 41
03 28 10	J0841+7053	12 20 28	60.5	-32.8	3.6		97.9	-20	7887	No stop
03 29 40	=0836+710	12 21 58	60.3	-32.8	3.7		97.5	70	7899	03 28 11
03 29 40	HOIIX-1	12 21 58	58.6	-33.5	4.0		91.8	-21	7899	No stop
03 33 10	---	12 25 29	58.3	-33.5	4.1		91.0	189	7926	03 29 41
03 34 00	J0841+7053	12 26 19	60.0	-32.9	3.7		96.4	30	7926	03 34 00
03 35 00	=0836+710	12 27 19	59.9	-32.9	3.7		96.2	60	7934	03 34 01
03 35 00	HOIIX-1	12 27 19	58.1	-33.5	4.1		90.5	-21	7934	No stop
03 38 30	---	12 30 49	57.8	-33.5	4.2		89.7	189	7961	03 35 01

Schedule for TORUN (Code Tr) Page 23

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
03 38 30	J0841+7053	12 30 49	59.6	-33.0	3.8		95.3	-20	7961	No stop
03 40 00	=0836+710	12 32 20	59.5	-33.0	3.8		94.9	70	7972	03 38 31
03 40 00	HOIIX-1	12 32 20	57.7	-33.5	4.2		89.3	-21	7972	No stop
03 43 30	---	12 35 50	57.4	-33.5	4.2		88.5	189	7999	03 40 01
03 44 20	J0841+7053	12 36 40	59.1	-33.0	3.9		93.8	30	7999	03 44 20
03 45 20	=0836+710	12 37 41	59.1	-33.1	3.9		93.6	60	8007	03 44 21
03 45 20	HOIIX-1	12 37 41	57.3	-33.5	4.3		88.1	-21	8007	No stop
03 48 50	---	12 41 11	57.0	-33.4	4.3		87.3	189	8034	03 45 21
03 48 50	J0841+7053	12 41 11	58.8	-33.1	4.0		92.7	-20	8034	No stop
03 50 20	=0836+710	12 42 41	58.7	-33.1	4.0		92.4	70	8046	03 48 51
03 50 20	HOIIX-1	12 42 41	56.8	-33.4	4.4		86.9	-21	8046	No stop
03 53 50	---	12 46 12	56.6	-33.4	4.4		86.1	189	8073	03 50 21
03 54 40	J0841+7053	12 47 02	58.3	-33.1	4.1		91.3	30	8073	03 54 40
03 55 40	=0836+710	12 48 02	58.2	-33.1	4.1		91.1	60	8081	03 54 41
03 56 50	J0749+7420	12 49 12	54.4	-26.6	5.0		83.9	42	8081	03 56 50
03 59 40	=0743+744	12 52 03	54.2	-26.6	5.0		83.2	170	8103	03 56 51
04 00 50	J0841+7053	12 53 13	57.8	-33.1	4.2		89.9	42	8103	04 00 50
04 01 50	=0836+710	12 54 13	57.7	-33.1	4.2		89.6	60	8110	04 00 51
04 01 50	HOIIX-1	12 54 13	55.9	-33.3	4.6		84.3	-21	8110	No stop
04 05 20	---	12 57 44	55.6	-33.2	4.6		83.5	189	8138	04 01 51
04 05 20	J0841+7053	12 57 44	57.4	-33.1	4.2		88.8	-20	8138	No stop
04 06 50	=0836+710	12 59 14	57.3	-33.1	4.3		88.5	70	8149	04 05 21
04 06 50	HOIIX-1	12 59 14	55.5	-33.2	4.6		83.2	-21	8149	No stop
04 10 20	---	13 02 45	55.2	-33.1	4.7		82.4	189	8176	04 06 51
04 11 00	J0841+7053	13 03 25	57.0	-33.1	4.3		87.5	20	8176	04 11 00
04 12 00	=0836+710	13 04 25	56.9	-33.1	4.4		87.3	60	8184	04 11 01
04 12 00	HOIIX-1	13 04 25	55.1	-33.1	4.7		82.1	-21	8184	No stop
04 15 30	---	13 07 56	54.8	-33.0	4.8		81.3	189	8211	04 12 01
04 15 30	J0841+7053	13 07 56	56.6	-33.1	4.4		86.4	-20	8211	No stop
04 17 00	=0836+710	13 09 26	56.5	-33.0	4.4		86.1	70	8223	04 15 31

Schedule for TORUN (Code Tr) Page 24

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
04 17 00	HOIIX-1	13 09 26	54.6	-33.0	4.8		81.0	-21	8223	No stop
04 20 30	---	13 12 56	54.4	-32.9	4.9		80.2	189	8250	04 17 01
04 21 10	J0841+7053	13 13 36	56.1	-33.0	4.5		85.2	20	8250	04 21 10
04 22 10	=0836+710	13 14 37	56.0	-33.0	4.5		84.9	60	8258	04 21 11
04 22 10	HOIIX-1	13 14 37	54.2	-32.9	4.9		79.9	-21	8258	No stop
04 25 40	---	13 18 07	53.9	-32.8	5.0		79.1	189	8285	04 22 11
04 25 40	J0841+7053	13 18 07	55.7	-32.9	4.6		84.1	-20	8285	No stop
04 27 10	=0836+710	13 19 37	55.6	-32.9	4.6		83.8	70	8296	04 25 41
04 27 10	HOIIX-1	13 19 37	53.8	-32.8	5.0		78.8	-21	8296	No stop
04 30 40	---	13 23 08	53.5	-32.7	5.0		78.0	189	8323	04 27 11
04 31 20	J0841+7053	13 23 48	55.3	-32.8	4.7		82.9	20	8323	04 31 20
04 32 20	=0836+710	13 24 48	55.2	-32.8	4.7		82.7	60	8331	04 31 21
04 32 20	HOIIX-1	13 24 48	53.4	-32.6	5.1		77.7	-21	8331	No stop
04 35 50	---	13 28 19	53.1	-32.5	5.1		76.9	189	8358	04 32 21
04 35 50	J0841+7053	13 28 19	54.9	-32.8	4.8		81.9	-20	8358	No stop
04 37 20	=0836+710	13 29 49	54.8	-32.7	4.8		81.6	70	8370	04 35 51
04 37 20	HOIIX-1	13 29 49	53.0	-32.5	5.1		76.6	-21	8370	No stop
04 40 50	---	13 33 20	52.7	-32.3	5.2		75.9	189	8397	04 37 21
04 41 30	J0841+7053	13 34 00	54.5	-32.6	4.9		80.6	20	8397	04 41 30
04 42 30	=0836+710	13 35 00	54.4	-32.6	4.9		80.4	60	8405	04 41 31
04 42 30	HOIIX-1	13 35 00	52.6	-32.3	5.2		75.5	-21	8405	No stop
04 46 00	---	13 38 31	52.3	-32.2	5.3		74.8	189	8432	04 42 31
04 46 00	J0841+7053	13 38 31	54.1	-32.5	4.9		79.7	-20	8432	No stop
04 47 30	=0836+710	13 40 01	54.0	-32.5	5.0		79.3	70	8443	04 46 01
04 47 30	HOIIX-1	13 40 01	52.2	-32.1	5.3		74.5	-21	8443	No stop
04 51 00	---	13 43 31	51.9	-32.0	5.4		73.8	189	8470	04 47 31
04 51 40	J0841+7053	13 44 11	53.6	-32.4	5.0		78.4	20	8470	04 51 40
04 52 40	=0836+710	13 45 12	53.6	-32.3	5.0		78.2	60	8478	04 51 41
04 52 40	HOIIX-1	13 45 12	51.8	-31.9	5.4		73.4	-21	8478	No stop
04 56 10	---	13 48 42	51.5	-31.8	5.5		72.7	189	8505	04 52 41

Schedule for TORUN (Code Tr) Page 25

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
04 56 10	J0841+7053	13 48 42	53.3	-32.2	5.1		77.5	-20	8505	No stop
04 57 40	=0836+710	13 50 12	53.2	-32.2	5.1		77.2	70	8517	04 56 11
04 57 40	HOIIX-1	13 50 12	51.4	-31.7	5.5		72.4	-21	8517	No stop
05 01 10	---	13 53 43	51.1	-31.6	5.5		71.7	189	8544	04 57 41
05 01 50	J0841+7053	13 54 23	52.8	-32.1	5.2		76.3	20	8544	05 01 50
05 02 50	=0836+710	13 55 23	52.7	-32.0	5.2		76.1	60	8552	05 01 51
05 02 50	HOIIX-1	13 55 23	51.0	-31.5	5.6		71.3	-20	8552	No stop
05 06 20	---	13 58 54	50.7	-31.4	5.6		70.6	190	8579	05 02 51
05 06 20	J0841+7053	13 58 54	52.5	-31.9	5.3		75.3	-20	8579	No stop
05 07 50	=0836+710	14 00 24	52.3	-31.9	5.3		75.0	70	8590	05 06 21
05 07 50	HOIIX-1	14 00 24	50.6	-31.3	5.7		70.3	-20	8590	No stop
05 11 20	---	14 03 55	50.3	-31.1	5.7		69.6	190	8618	05 07 51
05 12 00	J0841+7053	14 04 35	52.0	-31.7	5.4		74.2	20	8618	05 12 00
05 13 00	=0836+710	14 05 35	51.9	-31.7	5.4		73.9	60	8625	05 12 01
05 13 00	HOIIX-1	14 05 35	50.2	-31.1	5.7		69.3	-20	8625	No stop
05 16 30	---	14 09 06	49.9	-30.9	5.8		68.6	190	8652	05 13 01
05 16 30	J0841+7053	14 09 06	51.7	-31.6	5.4		73.2	-20	8652	No stop
05 18 00	=0836+710	14 10 36	51.5	-31.5	5.5		72.9	70	8664	05 16 31
05 18 00	HOIIX-1	14 10 36	49.8	-30.8	5.8		68.3	-20	8664	No stop
05 21 30	---	14 14 06	49.5	-30.7	5.9		67.6	190	8691	05 18 01
05 22 10	J0841+7053	14 14 46	51.2	-31.3	5.5		72.1	20	8691	05 22 10
05 23 10	=0836+710	14 15 47	51.1	-31.3	5.5		71.8	60	8699	05 22 11
05 23 10	HOIIX-1	14 15 47	49.4	-30.6	5.9		67.2	-20	8699	No stop
05 26 40	---	14 19 17	49.1	-30.4	6.0		66.5	190	8726	05 23 11
05 26 40	J0841+7053	14 19 17	50.9	-31.1	5.6		71.1	-20	8726	No stop
05 28 10	=0836+710	14 20 47	50.7	-31.1	5.6		70.8	70	8738	05 26 41
05 28 10	HOIIX-1	14 20 47	49.0	-30.3	6.0		66.2	-20	8738	No stop
05 31 40	---	14 24 18	48.7	-30.1	6.1		65.5	190	8765	05 28 11
05 32 20	J0841+7053	14 24 58	50.4	-30.9	5.7		70.0	20	8765	05 32 20
05 33 20	=0836+710	14 25 58	50.3	-30.9	5.7		69.8	60	8772	05 32 21

Schedule for TORUN (Code Tr) Page 26

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
05 33 20	HOIIX-1	14 25 58	48.6	-30.1	6.1		65.2	-20	8772	No stop
05 36 50	---	14 29 29	48.3	-29.9	6.1		64.5	190	8799	05 33 21
05 36 50	J0841+7053	14 29 29	50.1	-30.7	5.8		69.1	-20	8799	No stop
05 38 20	=0836+710	14 30 59	50.0	-30.6	5.8		68.8	70	8811	05 36 51
05 38 20	HOIIX-1	14 30 59	48.2	-29.8	6.2		64.2	-20	8811	No stop
05 41 50	---	14 34 30	48.0	-29.6	6.2		63.6	190	8838	05 38 21
05 42 30	J0841+7053	14 35 10	49.6	-30.4	5.9		67.9	20	8838	05 42 30
05 43 30	=0836+710	14 36 10	49.6	-30.4	5.9		67.7	60	8846	05 42 31
05 44 40	J0749+7420	14 37 20	47.5	-23.1	6.8		60.6	41	8846	05 44 40
05 47 30	=0743+744	14 40 11	47.3	-23.0	6.8		60.0	170	8868	05 44 41
05 49 00	J0841+7053	14 41 41	49.1	-30.1	6.0		66.6	61	8868	05 49 00
05 50 00	=0836+710	14 42 41	49.1	-30.1	6.0		66.4	60	8876	05 49 01
05 50 00	HOIIX-1	14 42 41	47.4	-29.1	6.4		62.0	-20	8876	No stop
05 53 30	---	14 46 12	47.1	-28.9	6.4		61.3	190	8903	05 50 01
05 53 30	J0841+7053	14 46 12	48.8	-29.9	6.1		65.7	-20	8903	No stop
05 55 00	=0836+710	14 47 42	48.7	-29.8	6.1		65.4	70	8914	05 53 31
05 55 00	HOIIX-1	14 47 42	47.0	-28.8	6.4		61.0	-20	8914	No stop
05 58 30	---	14 51 12	46.7	-28.6	6.5		60.3	190	8941	05 55 01
05 59 10	J0841+7053	14 51 53	48.4	-29.6	6.1		64.6	20	8941	05 59 10
06 00 10	=0836+710	14 52 53	48.3	-29.5	6.2		64.4	60	8949	05 59 11
06 00 10	HOIIX-1	14 52 53	46.6	-28.5	6.5		60.0	-20	8949	No stop
06 03 40	---	14 56 23	46.4	-28.3	6.6		59.3	190	8976	06 00 11
06 03 40	J0841+7053	14 56 23	48.1	-29.3	6.2		63.7	-20	8976	No stop
06 05 10	=0836+710	14 57 54	47.9	-29.3	6.3		63.4	70	8988	06 03 41
06 05 10	HOIIX-1	14 57 54	46.3	-28.2	6.6		59.0	-20	8988	No stop
06 08 40	---	15 01 24	46.0	-28.0	6.7		58.4	190	9015	06 05 11
06 09 20	J0841+7053	15 02 04	47.6	-29.0	6.3		62.6	20	9015	06 09 20
06 10 20	=0836+710	15 03 04	47.6	-29.0	6.3		62.4	60	9023	06 09 21
06 10 20	HOIIX-1	15 03 04	45.9	-27.9	6.7		58.0	-20	9023	No stop
06 13 50	---	15 06 35	45.7	-27.7	6.8		57.4	190	9050	06 10 21

Schedule for TORUN (Code Tr) Page 27

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
06 13 50	J0841+7053	15 06 35	47.3	-28.8	6.4		61.7	-20	9050	No stop
06 15 20	=0836+710	15 08 05	47.2	-28.7	6.4		61.5	70	9061	06 13 51
06 15 20	HOIIX-1	15 08 05	45.6	-27.6	6.8		57.1	-20	9061	No stop
06 18 50	---	15 11 36	45.3	-27.4	6.8		56.4	190	9088	06 15 21
06 19 30	J0841+7053	15 12 16	46.9	-28.5	6.5		60.6	20	9088	06 19 30
06 20 30	=0836+710	15 13 16	46.8	-28.4	6.5		60.5	60	9096	06 19 31
06 20 30	HOIIX-1	15 13 16	45.2	-27.3	6.9		56.1	-20	9096	No stop
06 24 00	---	15 16 47	45.0	-27.0	6.9		55.4	190	9123	06 20 31
06 24 00	J0841+7053	15 16 47	46.6	-28.2	6.6		59.8	-20	9123	No stop
06 25 30	=0836+710	15 18 17	46.5	-28.1	6.6		59.5	70	9135	06 24 01
06 25 30	HOIIX-1	15 18 17	44.9	-26.9	7.0		55.2	-20	9135	No stop
06 29 00	---	15 21 47	44.6	-26.7	7.0		54.5	190	9162	06 25 31
06 29 40	J0841+7053	15 22 28	46.2	-27.8	6.7		58.7	20	9162	06 29 40
06 30 40	=0836+710	15 23 28	46.1	-27.8	6.7		58.5	60	9170	06 29 41
06 30 40	HOIIX-1	15 23 28	44.5	-26.6	7.0		54.2	-20	9170	No stop
06 34 10	---	15 26 58	44.3	-26.3	7.1		53.5	190	9197	06 30 41
06 34 10	J0841+7053	15 26 58	45.9	-27.6	6.7		57.8	-19	9197	No stop
06 35 40	=0836+710	15 28 29	45.8	-27.5	6.8		57.5	71	9208	06 34 11
06 35 40	HOIIX-1	15 28 29	44.2	-26.2	7.1		53.2	-20	9208	No stop
06 39 10	---	15 31 59	43.9	-26.0	7.2		52.6	190	9236	06 35 41
06 39 50	J0841+7053	15 32 39	45.5	-27.2	6.8		56.7	21	9236	06 39 50
06 40 50	=0836+710	15 33 39	45.4	-27.1	6.8		56.5	60	9243	06 39 51
06 40 50	HOIIX-1	15 33 39	43.8	-25.9	7.2		52.3	-20	9243	No stop
06 44 20	---	15 37 10	43.6	-25.6	7.3		51.6	190	9270	06 40 51
06 44 20	J0841+7053	15 37 10	45.2	-26.9	6.9		55.9	-19	9270	No stop
06 45 50	=0836+710	15 38 40	45.1	-26.8	6.9		55.6	71	9282	06 44 21
06 45 50	HOIIX-1	15 38 40	43.5	-25.5	7.3		51.3	-19	9282	No stop
06 49 20	---	15 42 11	43.3	-25.3	7.4		50.7	191	9309	06 45 51
06 50 00	J0841+7053	15 42 51	44.8	-26.5	7.0		54.8	21	9309	06 50 00
06 51 00	=0836+710	15 43 51	44.7	-26.5	7.0		54.6	60	9317	06 50 01
06 51 00	HOIIX-1	15 43 51	43.2	-25.1	7.4		50.4	-19	9317	No stop
06 54 30	---	15 47 22	42.9	-24.9	7.4		49.7	191	9344	06 51 01

Schedule for TORUN (Code Tr) Page 28
e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
06 54 30	J0841+7053	15 47 22	44.5	-26.2	7.1		53.9	-19	9344	No stop
06 56 00	=0836+710	15 48 52	44.4	-26.1	7.1		53.7	71	9356	06 54 31
06 56 00	HOIIX-1	15 48 52	42.9	-24.8	7.5		49.4	-19	9356	No stop
06 59 30	---	15 52 22	42.6	-24.5	7.5		48.8	191	9383	06 56 01
07 00 10	J0841+7053	15 53 03	44.1	-25.8	7.2		52.9	21	9383	07 00 10
07 01 10	=0836+710	15 54 03	44.0	-25.8	7.2		52.7	60	9390	07 00 11
07 01 10	HOIIX-1	15 54 03	42.5	-24.4	7.6		48.5	-19	9390	No stop
07 04 40	---	15 57 33	42.3	-24.1	7.6		47.8	191	9417	07 01 11
07 04 40	J0841+7053	15 57 33	43.8	-25.5	7.2		52.0	-19	9417	No stop
07 06 10	=0836+710	15 59 04	43.7	-25.4	7.3		51.7	71	9429	07 04 41
07 06 10	HOIIX-1	15 59 04	42.2	-24.0	7.6		47.5	-19	9429	No stop
07 09 40	---	16 02 34	42.0	-23.7	7.7		46.9	191	9456	07 06 11
07 10 20	J0841+7053	16 03 14	43.4	-25.1	7.3		51.0	21	9456	07 10 20
07 11 20	=0836+710	16 04 14	43.4	-25.1	7.4		50.8	60	9464	07 10 21
07 11 20	HOIIX-1	16 04 14	41.9	-23.6	7.7		46.6	-19	9464	No stop
07 14 50	---	16 07 45	41.7	-23.4	7.8		45.9	191	9491	07 11 21
07 14 50	J0841+7053	16 07 45	43.2	-24.8	7.4		50.1	-19	9491	No stop
07 16 20	=0836+710	16 09 15	43.1	-24.7	7.4		49.8	71	9503	07 14 51
07 16 20	HOIIX-1	16 09 15	41.6	-23.2	7.8		45.7	-19	9503	No stop
07 19 50	---	16 12 46	41.4	-23.0	7.9		45.0	191	9530	07 16 21
07 20 30	J0841+7053	16 13 26	42.8	-24.4	7.5		49.1	21	9530	07 20 30
07 21 30	=0836+710	16 14 26	42.7	-24.3	7.5		48.9	60	9537	07 20 31
07 21 30	HOIIX-1	16 14 26	41.3	-22.8	7.9		44.7	-19	9537	No stop
07 25 00	---	16 17 57	41.1	-22.6	7.9		44.1	191	9565	07 21 31
07 25 00	J0841+7053	16 17 57	42.5	-24.1	7.6		48.2	-19	9565	No stop
07 26 30	=0836+710	16 19 27	42.4	-23.9	7.6		47.9	71	9576	07 25 01
07 26 30	HOIIX-1	16 19 27	41.0	-22.4	8.0		43.8	-19	9576	No stop
07 30 00	---	16 22 57	40.8	-22.2	8.0		43.1	191	9603	07 26 31
07 30 40	J0841+7053	16 23 38	42.2	-23.6	7.7		47.2	21	9603	07 30 40
07 31 40	=0836+710	16 24 38	42.1	-23.6	7.7		47.0	60	9611	07 30 41
07 32 50	J0749+7420	16 25 48	41.9	-16.5	8.6		39.1	41	9611	07 32 50
07 35 40	=0743+744	16 28 38	41.8	-16.3	8.6		38.5	170	9633	07 32 51

Schedule for TORUN (Code Tr) Page 29

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
07 37 10	J0841+7053	16 30 09	41.8	-23.1	7.8		46.0	61	9633	07 37 10
07 38 10	=0836+710	16 31 09	41.7	-23.1	7.8		45.8	60	9641	07 37 11
07 38 10	HOIIX-1	16 31 09	40.4	-21.5	8.2		41.6	-19	9641	No stop
07 41 40	---	16 34 39	40.2	-21.2	8.2		41.0	191	9668	07 38 11
07 41 40	J0841+7053	16 34 39	41.5	-22.8	7.9		45.1	-18	9668	No stop
07 43 10	=0836+710	16 36 10	41.4	-22.7	7.9		44.8	72	9679	07 41 41
07 43 10	HOIIX-1	16 36 10	40.1	-21.1	8.3		40.7	-19	9679	No stop
07 46 40	---	16 39 40	39.9	-20.8	8.3		40.1	191	9706	07 43 11
07 47 20	J0841+7053	16 40 20	41.2	-22.3	8.0		44.1	22	9706	07 47 20
07 48 20	=0836+710	16 41 21	41.1	-22.3	8.0		43.9	60	9714	07 47 21
07 48 20	HOIIX-1	16 41 21	39.8	-20.7	8.3		39.8	-18	9714	No stop
07 51 50	---	16 44 51	39.6	-20.4	8.4		39.1	192	9741	07 48 21
07 51 50	J0841+7053	16 44 51	40.9	-22.0	8.0		43.2	-18	9741	No stop
07 53 20	=0836+710	16 46 21	40.9	-21.9	8.1		43.0	72	9753	07 51 51
07 53 20	HOIIX-1	16 46 21	39.5	-20.2	8.4		38.8	-18	9753	No stop
07 56 50	---	16 49 52	39.4	-19.9	8.5		38.2	192	9780	07 53 21
07 57 30	J0841+7053	16 50 32	40.6	-21.5	8.1		42.2	22	9780	07 57 30
07 58 30	=0836+710	16 51 32	40.6	-21.5	8.1		42.0	60	9788	07 57 31
07 58 30	HOIIX-1	16 51 32	39.3	-19.8	8.5		37.9	-18	9788	No stop
08 02 00	---	16 55 03	39.1	-19.5	8.6		37.3	192	9815	07 58 31
08 02 00	J0841+7053	16 55 03	40.4	-21.2	8.2		41.4	-18	9815	No stop
08 03 30	=0836+710	16 56 33	40.3	-21.1	8.2		41.1	72	9826	08 02 01
08 03 30	HOIIX-1	16 56 33	39.0	-19.4	8.6		37.0	-18	9826	No stop
08 07 00	---	17 00 04	38.8	-19.1	8.7		36.3	192	9854	08 03 31
08 07 40	J0841+7053	17 00 44	40.1	-20.7	8.3		40.3	22	9854	08 07 40
08 08 40	=0836+710	17 01 44	40.0	-20.6	8.3		40.1	60	9861	08 07 41
08 08 40	HOIIX-1	17 01 44	38.8	-18.9	8.7		36.0	-18	9861	No stop
08 12 10	---	17 05 14	38.6	-18.6	8.7		35.4	192	9888	08 08 41
08 12 10	J0841+7053	17 05 14	39.8	-20.3	8.4		39.5	-18	9888	No stop
08 13 40	=0836+710	17 06 45	39.8	-20.2	8.4		39.2	72	9900	08 12 11
08 13 40	HOIIX-1	17 06 45	38.5	-18.5	8.8		35.1	-18	9900	No stop
08 17 10	---	17 10 15	38.4	-18.2	8.8		34.5	192	9927	08 13 41

Schedule for TORUN (Code Tr) Page 30

e-EVN run EC045 (Cseh)

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
08 17 50	J0841+7053	17 10 55	39.5	-19.9	8.5		38.5	22	9927	08 17 50
08 18 50	=0836+710	17 11 56	39.5	-19.8	8.5		38.3	60	9935	08 17 51
08 18 50	HOIIX-1	17 11 56	38.3	-18.1	8.8		34.2	-18	9935	No stop
08 22 20	---	17 15 26	38.1	-17.8	8.9		33.6	192	9962	08 18 51
08 22 20	J0841+7053	17 15 26	39.3	-19.5	8.5		37.6	-18	9962	No stop
08 23 50	=0836+710	17 16 56	39.2	-19.4	8.6		37.3	72	9974	08 22 21
08 23 50	HOIIX-1	17 16 56	38.1	-17.6	8.9		33.3	-18	9974	No stop
08 27 20	---	17 20 27	37.9	-17.3	9.0		32.6	192	10001	08 23 51
08 28 00	J0841+7053	17 21 07	39.0	-19.0	8.6		36.6	23	10001	08 28 00
08 29 00	=0836+710	17 22 07	39.0	-18.9	8.7		36.4	60	10008	08 28 01
08 29 00	HOIIX-1	17 22 07	37.8	-17.2	9.0		32.3	-18	10008	No stop
08 32 30	---	17 25 38	37.7	-16.8	9.1		31.7	192	10035	08 29 01
08 32 30	J0841+7053	17 25 38	38.8	-18.6	8.7		35.8	-17	10035	No stop
08 34 00	=0836+710	17 27 08	38.7	-18.5	8.7		35.5	73	10047	08 32 31
08 34 00	HOIIX-1	17 27 08	37.6	-16.7	9.1		31.4	-17	10047	No stop
08 37 30	---	17 30 39	37.4	-16.4	9.2		30.8	193	10074	08 34 01
08 38 10	J0841+7053	17 31 19	38.5	-18.1	8.8		34.7	23	10074	08 38 10
08 39 10	=0836+710	17 32 19	38.5	-18.1	8.8		34.5	60	10082	08 38 11
08 39 10	HOIIX-1	17 32 19	37.4	-16.3	9.2		30.5	-17	10082	No stop
08 42 40	---	17 35 49	37.2	-15.9	9.2		29.9	193	10109	08 39 11
08 42 40	J0841+7053	17 35 49	38.3	-17.7	8.9		33.9	-17	10109	No stop
08 44 10	=0836+710	17 37 20	38.3	-17.6	8.9		33.6	73	10121	08 42 41
08 44 10	HOIIX-1	17 37 20	37.2	-15.8	9.3		29.6	-17	10121	No stop
08 47 40	---	17 40 50	37.0	-15.5	9.3		28.9	193	10148	08 44 11
08 48 20	J0841+7053	17 41 30	38.1	-17.3	9.0		32.9	23	10148	08 48 20
08 49 20	=0836+710	17 42 31	38.0	-17.2	9.0		32.7	60	10155	08 48 21
08 49 20	HOIIX-1	17 42 31	37.0	-15.3	9.4		28.6	-17	10155	No stop
08 52 50	---	17 46 01	36.8	-15.0	9.4		28.0	193	10183	08 49 21
08 52 50	J0841+7053	17 46 01	37.9	-16.9	9.1		32.0	-17	10183	No stop
08 54 20	=0836+710	17 47 31	37.8	-16.7	9.1		31.8	73	10194	08 52 51
08 55 30	J0749+7420	17 48 42	39.1	-10.2	10.0		23.2	42	10194	08 55 30
09 00 00	=0743+744	17 53 12	38.9	-9.9	10.0		22.3	270	10229	08 55 31

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


 ======== Setup file: sess313.L1024
   Matching groups in /aps3/opt/share/sched_10.2/catalogs/freq.dat:
     tr18cm          E-mail Borkowski 12Mar98, preferred alternative

   Setup group:    3          Station: TORUN             Total bit rate: 1024
   Format: MKIV1:2            Bits per sample: 2         Sample rate: 32.000
   Number of channels: 16     DBE type:                  Speedup factor:   0.50

   Disk used to record data.

   1st LO=   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
             2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00   2300.00
   Net SB=         L         L         U         U         L         L         U         U
                   L         L         U         U         L         L         U         U
   Pol.  =       RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
                 RCP       LCP       RCP       LCP       RCP       LCP       RCP       LCP
   BBC   =         1         2         1         2         3         4         3         4
                   5         6         5         6         7         8         7         8
   BBC SB=         U         U         L         L         U         U         L         L
                   U         U         L         L         U         U         L         L
   IF    =         C         A         C         A         C         A         C         A
                   C         A         C         A         C         A         C         A

  The following frequency sets based on these setups were used.

   Frequency Set:   7  Setup file default.  Used pcal sets:   1
   LO sum=   1610.49  1610.49  1610.49  1610.49  1642.49  1642.49  1642.49  1642.49
             1674.49  1674.49  1674.49  1674.49  1706.49  1706.49  1706.49  1706.49
   BBC fr=    689.51   689.51   689.51   689.51   657.51   657.51   657.51   657.51
              625.51   625.51   625.51   625.51   593.51   593.51   593.51   593.51
   Bandwd=     16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
               16.00    16.00    16.00    16.00    16.00    16.00    16.00    16.00
    Matching frequency sets:   7

  The following pulse cal sets were used with this setup:

   Pulse cal detection set:   1  PCAL = OFF
    PCALXB1=   S1    S2    S3    S4    S5    S6    S7    S8
    PCALXB2=   M1    M2    M3    M4    M5    M6    M7    M8
    PCALFR1=     0     0     0     0     0     0     0     0
    PCALFR2=     0     0     0     0     0     0     0     0

   Track assignments are:
    track1=   2, 10, 18, 26,  3, 11, 19, 27, 66, 74, 82, 90, 67, 75, 83, 91
    barrel=roll_off
```

SOURCES USED IN RECORDING SCANS -- e-EVN run EC045 (Cseh)

Catalog positions marked with *.
Precession of date coordinates is based on stop time of first scan.
Names used in schedule marked with *.
Short names used in VLA and SNAP files marked with +.
Observation date used in B1950/J2000 coordinate conversion (PRECDATE): 1979.900
No adjustments are made for rates (DRA, DDEC).
Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Source position (RA/Dec) (B1950)	(J2000)	(Date)	Error (mas)
* HOIIX-1	08 14 16.789832	* 08 19 28.981800	08 21 00.406872	0.00
	70 51 42.44279	* 70 42 18.99200	70 39 22.76421	0.00
J0136+4751	01 33 55.103060	* 01 36 58.594805	01 37 51.739829	0.15
* 0133+476	47 36 12.85363	* 47 51 29.10002	47 55 58.91403	0.10
J0542+4951	05 38 43.517523	* 05 42 36.137900	05 43 44.430194	0.16
* 3C147	49 49 42.83711	* 49 51 07.23374	49 51 24.83076	0.11
* J0749+7420	07 43 14.670010	* 07 49 22.456659	07 51 10.579941	0.91
0743+744	74 28 09.87092	* 74 20 41.59192	74 18 19.36031	0.40
* J0841+7053	08 36 21.556645	* 08 41 24.365283	08 42 52.847196	0.31
0836+710	71 04 22.42740	* 70 53 42.17302	70 50 23.08843	0.10
J2202+4216	22 00 39.362504	* 22 02 43.291371	22 03 17.634348	0.14
* BLLAC	42 02 08.59073	* 42 16 39.97987	42 20 59.34798	0.10

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)
HOIIX-1	130.3
0133+476	104.2
3C147	142.5
J0749+7420	126.9
J0841+7053	129.7
BLLAC	71.0

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

327 MHz	117. deg
610 MHz	81. deg
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
43.0 GHz	6. deg

rk01qotr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 15 Jan 2014 Day 15 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0202+149	02 54 41	51.0	199.0	0.8		11.7	0	0	18 00 00
18 14 30	---	03 09 13	50.2	204.4	1.1		14.9	870	28	18 00 01
18 15 00	0202+149	03 09 43	50.2	204.6	1.1		15.0	24	28	18 15 00
18 29 30	---	03 24 16	49.2	209.7	1.3		18.0	870	56	18 15 01
18 30 00	0202+149	03 24 46	49.1	209.9	1.3		18.1	24	56	18 30 00
18 44 30	---	03 39 18	47.9	214.9	1.6		20.9	870	84	18 30 01
18 45 00	0202+149	03 39 48	47.9	215.1	1.6		21.0	24	84	18 45 00
19 00 00	---	03 54 51	46.5	220.0	1.8		23.6	900	112	18 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qo_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   5  Setup file default.  Used pcal sets:   1
 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:   5

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+149          02 02 07.396228   * 02 04 50.413896     02 05 37.276382       0.00
  J0204+1514        14 59 50.93936    * 15 14 11.04358      15 18 12.85662        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 0202+149            99.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01qptr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 16 Jan 2014 Day 16 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
02 00 00	0834-201	10 56 00	10.7	212.9	2.3		20.3	0	0	02 00 00
02 14 30	---	11 10 32	9.4	216.1	2.6		22.2	870	28	02 00 01
02 15 00	0834-201	11 11 02	9.4	216.2	2.6		22.2	24	28	02 15 00
02 29 30	---	11 25 35	8.1	219.4	2.8		24.0	870	56	02 15 01
02 30 00	0834-201	11 26 05	8.0	219.5	2.8		24.0	24	56	02 30 00
02 44 30	---	11 40 37	6.6	222.6	3.1		25.7	870	84	02 30 01
02 45 00	0834-201	11 41 07	6.5	222.7	3.1		25.7	24	84	02 45 00
03 00 00	---	11 56 10	4.9	225.9	3.3		27.4	900	112	02 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qp_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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 pcal sets:   1
  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:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0834-201          08 34 24.601681   * 08 36 39.215241     08 37 19.128675       0.00
  J0836-2016       -20 06 30.40845    *-20 16 59.50414     -20 20 08.00433       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0834-201           137.2

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qqtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 16 Jan 2014 Day 16 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
19 00 00	0215+015	03 58 47	34.7	211.0	1.7		18.0	0	0	19 00 00
19 14 30	---	04 13 20	33.5	215.1	1.9		20.2	870	28	19 00 01
19 15 00	0215+015	04 13 50	33.4	215.3	1.9		20.3	24	28	19 15 00
19 29 30	---	04 28 22	32.1	219.3	2.2		22.4	870	56	19 15 01
19 30 00	0215+015	04 28 52	32.1	219.4	2.2		22.4	24	56	19 30 00
19 44 30	---	04 43 25	30.6	223.3	2.4		24.3	870	84	19 30 01
19 45 00	0215+015	04 43 55	30.6	223.5	2.4		24.4	24	84	19 45 00
20 00 00	---	04 58 57	29.0	227.4	2.7		26.2	900	112	19 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qq_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   5  Setup file default.  Used pcal sets:   1
 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:   5

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0215+015          02 15 14.130235   * 02 17 48.954755     02 18 33.395704       0.00
  J0217+0144        01 31 00.16093    * 01 44 49.69903      01 48 37.45163        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 3C48                98.1
 0215+015            96.3

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01qrtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 16 Jan 2014 Day 16 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
22 00 00	0202+149	06 59 17	22.1	266.2	4.9		38.4	0	0	22 00 00
22 14 30	---	07 13 49	19.9	269.1	5.1		38.5	870	28	22 00 01
22 15 00	0202+149	07 14 19	19.9	269.2	5.1		38.5	24	28	22 15 00
22 29 30	---	07 28 52	17.7	272.1	5.4		38.5	870	56	22 15 01
22 30 00	0202+149	07 29 22	17.6	272.2	5.4		38.5	24	56	22 30 00
22 44 30	---	07 43 54	15.4	275.1	5.6		38.3	870	84	22 30 01
22 45 00	0202+149	07 44 24	15.3	275.2	5.6		38.3	24	84	22 45 00
23 00 00	---	07 59 27	13.1	278.1	5.9		38.0	900	112	22 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qr_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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 pcal sets:   1
 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:   2

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+149          02 02 07.396228   * 02 04 50.413896     02 05 37.261919       0.00
  J0204+1514        14 59 50.93936    * 15 14 11.04358      15 18 12.81230        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 0202+149            97.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01qstr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 17 Jan 2014 Day 17 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
04 00 00	1226+023	13 00 16	38.5	189.7	0.5		5.8	0	0	04 00 00
04 14 30	---	13 14 48	38.0	194.3	0.7		8.5	870	28	04 00 01
04 15 00	1226+023	13 15 19	38.0	194.5	0.8		8.6	24	28	04 15 00
04 29 30	---	13 29 51	37.4	199.0	1.0		11.3	870	56	04 15 01
04 30 00	1226+023	13 30 21	37.4	199.2	1.0		11.4	24	56	04 30 00
04 44 30	---	13 44 53	36.6	203.6	1.3		13.9	870	84	04 30 01
04 45 00	1226+023	13 45 24	36.5	203.7	1.3		14.0	24	84	04 45 00
05 00 00	---	14 00 26	35.5	208.2	1.5		16.5	900	112	04 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qs_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1226+023          12 26 33.245835   * 12 29 06.699731     12 29 50.855351       0.00
  J1229+0203        02 19 43.30547    * 02 03 08.59797      01 58 21.80465        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1226+023           110.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qttr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 17 Jan 2014 Day 17 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
19 00 00	1044+719	04 02 44	46.1	26.4	-6.8		-58.0	0	0	19 00 00
19 14 30	---	04 17 16	47.1	27.3	-6.5		-60.8	870	28	19 00 01
19 15 00	1044+719	04 17 46	47.1	27.3	-6.5		-60.9	24	28	19 15 00
19 29 30	---	04 32 19	48.1	28.1	-6.3		-63.8	870	56	19 15 01
19 30 00	1044+719	04 32 49	48.2	28.1	-6.3		-63.9	24	56	19 30 00
19 44 30	---	04 47 21	49.2	28.8	-6.0		-66.8	870	84	19 30 01
19 45 00	1044+719	04 47 51	49.3	28.8	-6.0		-66.9	24	84	19 45 00
20 00 00	---	05 02 54	50.4	29.5	-5.8		-70.0	900	112	19 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qt_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   5  Setup file default.  Used pcal sets:   1
 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:   5

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1044+719          10 44 49.735111   * 10 48 27.619927     10 49 30.452467       0.00
  J1048+7143        71 59 26.88535    * 71 43 35.93838      71 38 45.87508        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 1044+719           123.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01qutr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 17 Jan 2014 Day 17 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00						
Next BBC frequencies:	632.00	632.00	632.00	632.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
22 00 00	1156+295	07 03 14	32.1	83.0	-5.0		-43.0	0	0	22 00 00
22 14 30	---	07 17 46	34.3	85.8	-4.7		-43.3	870	28	22 00 01
22 15 00	1156+295	07 18 16	34.4	85.9	-4.7		-43.3	24	28	22 15 00
22 29 30	---	07 32 48	36.6	88.7	-4.5		-43.4	870	56	22 15 01
22 30 00	1156+295	07 33 18	36.6	88.8	-4.4		-43.4	24	56	22 30 00
22 44 30	---	07 47 51	38.8	91.7	-4.2		-43.4	870	84	22 30 01
22 45 00	1156+295	07 48 21	38.9	91.8	-4.2		-43.4	24	84	22 45 00
23 00 00	---	08 03 23	41.1	94.9	-3.9		-43.2	900	112	22 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qu_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1156+295          11 56 57.786212   * 11 59 31.833913     12 00 16.069526       0.00
  J1159+2914        29 31 25.73868    * 29 14 43.82678      29 09 45.64639        0.00



EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1156+295           125.3

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qvtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 18 Jan 2014 Day 18 ---									
---------- C-band VLBI scans ----------									
Next scan frequencies:	4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:	636.00	636.00	636.00	636.00					
Next scan bandwidths:	16.00	16.00	16.00	16.00					
02 00 00 0834-201	11 03 53	10.0	214.6	2.4		21.3	0	0	02 00 00
02 10 00 ---	11 13 55	9.1	216.8	2.6		22.6	600	19	02 00 01
---------- L-band VLBI scans ----------									
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:	632.00	632.00	632.00	632.00					
02 12 30 0834-201	11 16 25	8.9	217.4	2.7		22.9	144	19	02 12 30
02 27 00 ---	11 30 57	7.5	220.5	2.9		24.6	870	47	02 12 31
02 27 30 0834-201	11 31 27	7.5	220.6	2.9		24.7	24	47	02 27 30
02 37 30 ---	11 41 29	6.5	222.8	3.1		25.8	600	66	02 27 31

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qv_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.


  1st LO=   4200.00   4200.00   4200.00   4200.00
  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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01qv_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    6         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.


  1st LO=   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         U         U         L         L
  IF    =         C         A         C         A
```

The following frequency sets based on these setups were used.

```
 Frequency Set:   5  Setup file default.  Used pcal sets:   1
 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:   5
```

The following pulse cal sets were used with this setup:

```
 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

  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)
* 0834-201	08 34 24.601681	* 08 36 39.215241	08 37 19.152831	0.00
J0836-2016	-20 06 30.40845	*-20 16 59.50414	-20 20 08.49114	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0834-201	138.1

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01qwtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 18 Jan 2014 Day 18 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
04 00 00	1226+023	13 04 13	38.4	191.0	0.6		6.6	0	0	04 00 00
04 14 30	---	13 18 45	37.9	195.6	0.8		9.3	870	28	04 00 01
04 15 00	1226+023	13 19 15	37.9	195.7	0.8		9.4	24	28	04 15 00
04 25 00	---	13 29 17	37.4	198.8	1.0		11.2	600	47	04 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
04 30 00	1226+023	13 34 18	37.2	200.4	1.1		12.1	293	47	04 30 00
04 44 30	---	13 48 50	36.3	204.8	1.3		14.6	870	75	04 30 01
04 45 00	1226+023	13 49 20	36.3	204.9	1.3		14.7	24	75	04 45 00
05 00 00	---	14 04 23	35.3	209.4	1.6		17.1	900	104	04 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qw_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.


  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   7  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   7

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01qw_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    8         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=   2300.00   2300.00   2300.00   2300.00
  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:   9  Setup file default.  Used pcal sets:   1
  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:   9

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1226+023          12 26 33.245835   * 12 29 06.699731     12 29 50.884775       0.00
  J1229+0203        02 19 43.30547    * 02 03 08.59797      01 58 21.62105        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1226+023           111.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01qxtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 18 Jan 2014 Day 18 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
07 00 00	1403+411	16 04 42	66.6	250.6	2.0		48.5	0	0	07 00 00
07 14 30	---	16 19 15	64.5	255.0	2.2		50.1	870	28	07 00 01
07 15 00	1403+411	16 19 45	64.4	255.1	2.2		50.1	24	28	07 15 00
07 25 00	---	16 29 46	62.9	257.8	2.4		50.9	600	47	07 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
07 30 00	1403+411	16 34 47	62.2	259.1	2.5		51.2	293	47	07 30 00
07 44 30	---	16 49 20	60.1	262.6	2.7		52.0	870	75	07 30 01
07 45 00	1403+411	16 49 50	60.0	262.8	2.7		52.0	24	75	07 45 00
08 00 00	---	17 04 52	57.7	266.1	3.0		52.4	900	104	07 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qx_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   7  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   7

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01qx_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    7         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=   2300.00   2300.00   2300.00   2300.00
  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:   8  Setup file default.  Used pcal sets:   1
  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:   8

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1403+411          14 03 04.025300   * 14 05 07.795440     14 05 42.492107       0.00
  J1405+4056        41 11 16.37060    * 40 56 57.83098      40 52 41.65765        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1403+411           102.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

ga030ctr

Probing the innermost regions of AGN jets and their magnetic fields

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
Probing the innermost regions of AGN jets and their magnetic fields
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 18 Jan 2014 Day 18 ---										
---------- BLOCK #06a: EVN K-band VLBI scans. Ground segment 3 ----------										
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			
21 40 30	1222+216	06 47 37	20.1	81.0	-5.6		-39.5	0	0	21 40 30
21 45 00	---	06 52 08	20.8	81.9	-5.6		-39.6	270	9	21 40 31
21 46 00	1156+295	06 53 08	30.6	81.1	-5.1		-42.8	9	9	21 46 00
21 49 50	---	06 56 58	31.2	81.8	-5.1		-42.9	230	16	21 46 01
21 50 50	1222+216	06 57 59	21.7	83.0	-5.5		-39.8	10	16	21 50 50
21 54 50	---	07 01 59	22.3	83.8	-5.4		-39.8	240	24	21 50 51
21 55 50	1156+295	07 02 59	32.1	83.0	-5.0		-43.0	9	24	21 55 50
21 59 40	---	07 06 50	32.7	83.7	-4.9		-43.1	230	31	21 55 51
22 00 40	1222+216	07 07 50	23.1	84.9	-5.3		-39.9	10	31	22 00 40
22 04 40	---	07 11 51	23.7	85.7	-5.2		-40.0	240	39	22 00 41
22 05 40	1156+295	07 12 51	33.6	84.8	-4.8		-43.2	9	39	22 05 40
22 09 30	---	07 16 42	34.1	85.6	-4.7		-43.3	230	46	22 05 41
22 10 30	1222+216	07 17 42	24.6	86.8	-5.1		-40.1	10	46	22 10 30
22 14 30	---	07 21 42	25.2	87.6	-5.1		-40.1	240	54	22 10 31
22 15 30	1156+295	07 22 43	35.0	86.7	-4.6		-43.4	9	54	22 15 30
22 19 20	---	07 26 33	35.6	87.5	-4.6		-43.4	230	61	22 15 31
22 20 20	1222+216	07 27 33	26.1	88.8	-5.0		-40.1	10	61	22 20 20
22 24 20	---	07 31 34	26.7	89.6	-4.9		-40.1	240	69	22 20 21

Schedule for TORUN (Code Tr) Page 3

Probing the innermost regions of AGN jets and their magnetic fields

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 18 Jan 2014 Day 18 ---										
22 25 20	1156+295	07 32 34	36.5	88.7	-4.5		-43.4	9	69	22 25 20
22 29 10	---	07 36 25	37.1	89.4	-4.4		-43.4	230	76	22 25 21
22 30 10	1222+216	07 37 25	27.6	90.7	-4.8		-40.1	10	76	22 30 10
22 34 10	---	07 41 26	28.2	91.5	-4.7		-40.1	240	84	22 30 11
22 35 10	1156+295	07 42 26	38.0	90.6	-4.3		-43.4	9	84	22 35 10
22 39 00	---	07 46 16	38.6	91.4	-4.2		-43.4	230	91	22 35 11
22 40 00	1222+216	07 47 17	29.0	92.7	-4.6		-40.1	10	91	22 40 00
22 44 00	---	07 51 17	29.7	93.6	-4.6		-40.0	240	99	22 40 01
22 45 00	1156+295	07 52 17	39.5	92.6	-4.1		-43.4	9	99	22 45 00
22 49 00	---	07 56 18	40.1	93.4	-4.1		-43.3	240	107	22 45 01
---------- BLOCK #07: K-band VLBI scans. Space segment 4 ----------										
22 50 00	1226+023	07 57 18	14.5	106.6	-4.5		-35.2	-49	107	22 50 49
22 59 30	---	08 06 50	15.9	108.6	-4.4		-34.7	521	125	22 50 01
23 00 00	1226+023	08 07 20	16.0	108.8	-4.4		-34.7	24	125	23 00 00
23 09 30	---	08 16 51	17.3	110.8	-4.2		-34.2	570	143	23 00 01
23 10 00	1226+023	08 17 22	17.4	110.9	-4.2		-34.1	24	143	23 10 00
23 20 00	---	08 27 23	18.8	113.1	-4.0		-33.5	600	162	23 10 01
---------- BLOCK #08: K-band VLBI scans. Ground segment 4 ----------										
23 20 30	1226+023	08 27 53	18.9	113.2	-4.0		-33.5	24	162	23 20 30
23 25 00	---	08 32 24	19.5	114.2	-4.0		-33.2	270	171	23 20 31
23 26 30	1222+216	08 33 54	36.0	102.7	-3.9		-39.0	14	171	23 26 30
23 29 50	---	08 37 15	36.5	103.4	-3.8		-38.8	200	177	23 26 31
23 31 20	1226+023	08 38 45	20.3	115.6	-3.9		-32.8	15	177	23 31 20
23 34 50	---	08 42 16	20.8	116.4	-3.8		-32.6	210	184	23 31 21
23 36 20	1222+216	08 43 46	37.4	104.9	-3.7		-38.5	14	184	23 36 20
23 39 40	---	08 47 06	37.9	105.7	-3.6		-38.4	200	190	23 36 21
23 41 10	1226+023	08 48 37	21.7	117.8	-3.7		-32.1	15	190	23 41 10
23 44 40	---	08 52 07	22.1	118.7	-3.6		-31.8	210	197	23 41 11
23 46 10	1222+216	08 53 38	38.8	107.2	-3.5		-38.0	14	197	23 46 10
23 49 30	---	08 56 58	39.3	108.0	-3.5		-37.8	200	204	23 46 11
23 51 00	1226+023	08 58 28	23.0	120.1	-3.5		-31.3	15	204	23 51 00
23 54 30	---	09 01 59	23.4	120.9	-3.5		-31.0	210	210	23 51 01

Schedule for TORUN (Code Tr) Page 4

Probing the innermost regions of AGN jets and their magnetic fields

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
23 56 00	1222+216	09 03 29	40.2	109.6	-3.4		-37.4	13	210	23 56 00
23 59 20	---	09 06 50	40.7	110.4	-3.3		-37.2	200	217	23 56 01
--- Sun 19 Jan 2014 Day 19 ---										
00 00 50	1226+023	09 08 20	24.2	122.4	-3.4		-30.5	14	217	00 00 50
00 04 20	---	09 11 51	24.7	123.3	-3.3		-30.2	210	223	00 00 51
00 05 50	1222+216	09 13 21	41.6	112.0	-3.2		-36.7	13	223	00 05 50
00 09 10	---	09 16 41	42.1	112.8	-3.1		-36.4	200	230	00 05 51
00 10 40	1226+023	09 18 12	25.5	124.8	-3.2		-29.6	14	230	00 10 40
00 14 10	---	09 21 42	25.9	125.6	-3.1		-29.2	210	236	00 10 41
00 15 40	1222+216	09 23 12	43.0	114.5	-3.0		-35.9	12	236	00 15 40
00 19 00	---	09 26 33	43.4	115.3	-3.0		-35.6	200	243	00 15 41
00 20 30	1226+023	09 28 03	26.7	127.2	-3.0		-28.6	13	243	00 20 30
00 24 00	---	09 31 34	27.1	128.0	-3.0		-28.2	210	250	00 20 31
00 25 30	1222+216	09 33 04	44.3	117.1	-2.9		-35.0	12	250	00 25 30
00 28 30	---	09 36 04	44.7	117.9	-2.8		-34.7	180	255	00 25 31
---------- BLOCK #09: K-band VLBI scans. Space segment 5 ----------										
00 30 00	1226+023	09 37 35	27.8	129.5	-2.9		-27.6	12	255	00 30 00
00 39 30	---	09 47 06	28.9	131.9	-2.7		-26.5	570	274	00 30 01
00 40 00	1226+023	09 47 36	28.9	132.1	-2.7		-26.5	24	274	00 40 00
00 49 30	---	09 57 08	30.0	134.5	-2.5		-25.4	570	292	00 40 01
00 50 00	1226+023	09 57 38	30.0	134.7	-2.5		-25.3	24	292	00 50 00
01 00 00	---	10 07 40	31.1	137.3	-2.4		-24.0	600	311	00 50 01
---------- BLOCK #10: K-band VLBI scans. Ground segment 5 ----------										
01 00 30	1226+023	10 08 10	31.1	137.4	-2.4		-24.0	24	311	01 00 30
01 05 00	---	10 12 40	31.6	138.6	-2.3		-23.4	270	320	01 00 31
01 06 00	1253-055	10 13 41	21.7	135.6	-2.7		-25.0	9	320	01 06 00
01 09 50	---	10 17 31	22.1	136.5	-2.7		-24.5	230	327	01 06 01
01 10 50	1226+023	10 18 31	32.1	140.2	-2.2		-22.6	9	327	01 10 50
01 14 50	---	10 22 32	32.5	141.3	-2.1		-22.1	240	335	01 10 51
01 15 50	1253-055	10 23 32	22.8	138.0	-2.6		-23.8	9	335	01 15 50
01 19 40	---	10 27 23	23.1	138.9	-2.5		-23.4	230	342	01 15 51

Schedule for TORUN (Code Tr) Page 5

Probing the innermost regions of AGN jets and their magnetic fields

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

Start UT / Stop UT	Source	Start LST	Start EL	Start AZ	Start HA	Start UP	Start ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 19 Jan 2014 Day 19 ---										
01 20 40	1226+023	10 28 23	33.0	142.9	-2.0		-21.2	9	342	01 20 40
01 24 40	---	10 32 24	33.4	144.1	-2.0		-20.7	240	350	01 20 41
01 25 40	1253-055	10 33 24	23.7	140.4	-2.4		-22.6	10	350	01 25 40
01 29 30	---	10 37 14	24.1	141.4	-2.3		-22.1	230	357	01 25 41
01 30 30	1226+023	10 38 15	33.9	145.7	-1.9		-19.8	9	357	01 30 30
01 34 30	---	10 42 15	34.2	146.8	-1.8		-19.2	240	365	01 30 31
01 35 30	1253-055	10 43 15	24.6	142.9	-2.2		-21.3	10	365	01 35 30
01 39 20	---	10 47 06	25.0	143.9	-2.2		-20.8	230	372	01 35 31
01 40 20	1226+023	10 48 06	34.7	148.5	-1.7		-18.3	10	372	01 40 20
01 44 20	---	10 52 07	35.0	149.7	-1.6		-17.7	240	380	01 40 21
01 45 20	1253-055	10 53 07	25.5	145.5	-2.1		-20.0	10	380	01 45 20
01 49 10	---	10 56 58	25.8	146.5	-2.0		-19.5	230	387	01 45 21
01 50 10	1226+023	10 57 58	35.5	151.4	-1.5		-16.7	10	387	01 50 10
01 54 10	---	11 01 59	35.7	152.6	-1.5		-16.1	240	395	01 50 11
01 55 10	1253-055	11 02 59	26.3	148.0	-1.9		-18.6	11	395	01 55 10
01 59 00	---	11 06 49	26.6	149.1	-1.8		-18.1	230	402	01 55 11
02 00 00	1226+023	11 07 50	36.1	154.3	-1.4		-15.1	10	402	02 00 00
02 04 00	---	11 11 50	36.4	155.5	-1.3		-14.4	240	410	02 00 01
02 05 00	1253-055	11 12 50	27.1	150.7	-1.7		-17.2	11	410	02 05 00
02 09 00	---	11 16 51	27.4	151.7	-1.7		-16.6	240	418	02 05 01
---------- BLOCK #11: K-band VLBI scans. Space segment 6 ----------										
02 10 00	1226+023	11 17 51	36.7	157.3	-1.2		-13.4	11	418	02 10 00
02 19 30	---	11 27 23	37.3	160.2	-1.0		-11.7	570	436	02 10 01
02 20 00	1226+023	11 27 53	37.3	160.4	-1.0		-11.6	24	436	02 20 00
02 29 30	---	11 37 24	37.7	163.3	-0.9		-9.9	570	454	02 20 01
02 30 00	1226+023	11 37 54	37.8	163.5	-0.9		-9.8	24	454	02 30 00
02 40 00	---	11 47 56	38.1	166.6	-0.7		-8.0	600	473	02 30 01
---------- BLOCK #12: K-band VLBI scans. Ground segment 6 ----------										
02 40 30	1226+023	11 48 26	38.2	166.8	-0.7		-7.9	24	473	02 40 30
02 45 00	---	11 52 57	38.3	168.2	-0.6		-7.0	270	482	02 40 31
02 46 00	1253-055	11 53 57	29.6	161.9	-1.0		-10.8	13	482	02 46 00
02 49 50	---	11 57 48	29.7	163.0	-1.0		-10.2	230	489	02 46 01

Schedule for TORUN (Code Tr) Page 6

Probing the innermost regions of AGN jets and their magnetic fields

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

Start UT / Stop UT	Source	Start LST	Start EL	Start AZ	Start HA	Start UP	Start ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 19 Jan 2014 Day 19 ---										
02 50 50	1226+023	11 58 48	38.5	170.1	-0.5		-5.9	13	489	02 50 50
02 54 50	---	12 02 49	38.6	171.3	-0.5		-5.2	240	497	02 50 51
02 55 50	1253-055	12 03 49	30.0	164.7	-0.9		-9.2	14	497	02 55 50
02 59 40	---	12 07 39	30.1	165.8	-0.8		-8.5	230	504	02 55 51
03 00 40	1226+023	12 08 39	38.7	173.2	-0.4		-4.1	14	504	03 00 40
03 04 40	---	12 12 40	38.8	174.5	-0.3		-3.3	240	512	03 00 41
03 05 40	1253-055	12 13 40	30.3	167.5	-0.7		-7.5	14	512	03 05 40
03 09 30	---	12 17 31	30.5	168.6	-0.7		-6.8	230	519	03 05 41
03 10 30	1226+023	12 18 31	38.8	176.4	-0.2		-2.2	15	519	03 10 30
03 14 30	---	12 22 32	38.9	177.7	-0.1		-1.4	240	527	03 10 31
03 15 30	1253-055	12 23 32	30.6	170.3	-0.6		-5.8	15	527	03 15 30
03 19 20	---	12 27 23	30.7	171.4	-0.5		-5.2	230	534	03 15 31
03 20 20	1226+023	12 28 23	38.9	179.5	-0.0		-0.3	15	534	03 20 20
03 24 20	---	12 32 23	38.9	180.8	0.0		0.5	240	542	03 20 21
03 25 20	1253-055	12 33 24	30.8	173.2	-0.4		-4.1	16	542	03 25 20
03 29 10	---	12 37 14	30.9	174.3	-0.3		-3.4	230	549	03 25 21
03 30 10	1226+023	12 38 14	38.8	182.7	0.1		1.6	16	549	03 30 10
03 34 10	---	12 42 15	38.8	184.0	0.2		2.4	240	557	03 30 11
03 35 10	1253-055	12 43 15	31.0	176.0	-0.2		-2.4	17	557	03 35 10
03 39 00	---	12 47 06	31.0	177.1	-0.2		-1.7	230	564	03 35 11
03 40 00	1226+023	12 48 06	38.7	185.8	0.3		3.5	17	564	03 40 00
03 44 00	---	12 52 07	38.7	187.1	0.4		4.3	240	572	03 40 01
03 45 00	1253-055	12 53 07	31.0	178.9	-0.1		-0.7	17	572	03 45 00
03 49 00	---	12 57 07	31.0	180.1	0.0		0.0	240	580	03 45 01
---------- BLOCK #13: K-band VLBI scans. Space segment 7 ----------										
03 50 00	1226+023	12 58 08	38.5	189.0	0.5		5.4	18	580	03 50 00
03 59 30	---	13 07 39	38.3	192.1	0.6		7.2	570	598	03 50 01
04 00 00	1226+023	13 08 09	38.3	192.2	0.6		7.3	24	598	04 00 00
04 09 30	---	13 17 41	37.9	195.2	0.8		9.1	570	616	04 00 01
04 10 00	1226+023	13 18 11	37.9	195.4	0.8		9.2	24	616	04 10 00
04 20 00	---	13 28 13	37.5	198.5	1.0		11.0	600	636	04 10 01

Schedule for TORUN (Code Tr) Page 7

Probing the innermost regions of AGN jets and their magnetic fields

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 19 Jan 2014 Day 19 ---										
---------- BLOCK #14: K-band VLBI scans. Ground segment 7 ----------										
04 20 30	1226+023	13 28 43	37.4	198.6	1.0		11.1	24	636	04 20 30
04 25 00	---	13 33 13	37.2	200.0	1.1		11.9	270	644	04 20 31
04 26 30	1222+216	13 34 44	55.6	209.3	1.2		18.4	7	644	04 26 30
04 29 50	---	13 38 04	55.3	210.6	1.2		19.1	200	651	04 26 31
04 31 20	1226+023	13 39 34	36.9	202.0	1.2		13.0	7	651	04 31 20
04 34 50	---	13 43 05	36.7	203.0	1.2		13.6	210	657	04 31 21
04 36 20	1222+216	13 44 35	54.8	213.1	1.3		20.6	8	657	04 36 20
04 39 40	---	13 47 56	54.5	214.3	1.4		21.3	200	664	04 36 21
04 41 10	1226+023	13 49 26	36.3	205.0	1.3		14.7	8	664	04 41 10
04 44 40	---	13 52 57	36.1	206.0	1.4		15.3	210	670	04 41 11
04 46 10	1222+216	13 54 27	53.9	216.7	1.5		22.7	9	670	04 46 10
04 49 30	---	13 57 47	53.6	218.0	1.5		23.4	200	677	04 46 11
04 51 00	1226+023	13 59 18	35.6	207.9	1.5		16.3	9	677	04 51 00
04 54 30	---	14 02 48	35.4	208.9	1.5		16.9	210	684	04 51 01
04 56 00	1222+216	14 04 18	53.0	220.3	1.6		24.6	10	684	04 56 00
04 59 20	---	14 07 39	52.7	221.4	1.7		25.3	200	690	04 56 01
05 00 50	1226+023	14 09 09	34.9	210.8	1.7		17.9	9	690	05 00 50
05 04 20	---	14 12 40	34.6	211.8	1.7		18.5	210	697	05 00 51
05 05 50	1222+216	14 14 10	52.0	223.7	1.8		26.4	11	697	05 05 50
05 09 10	---	14 17 31	51.7	224.8	1.9		27.0	200	703	05 05 51
05 10 40	1226+023	14 19 01	34.1	213.6	1.8		19.4	10	703	05 10 40
05 14 10	---	14 22 31	33.8	214.6	1.9		20.0	210	710	05 10 41
05 15 40	1222+216	14 24 02	51.0	227.0	2.0		28.1	12	710	05 15 40
05 19 00	---	14 27 22	50.6	228.0	2.0		28.6	200	716	05 15 41
05 20 30	1226+023	14 28 52	33.3	216.4	2.0		20.9	11	716	05 20 30
05 24 00	---	14 32 23	32.9	217.4	2.0		21.4	210	723	05 20 31
05 25 30	1222+216	14 33 53	49.9	230.1	2.1		29.6	13	723	05 25 30
05 28 30	---	14 36 54	49.5	231.1	2.2		30.1	180	729	05 25 31

Schedule for TORUN (Code Tr) Page 8

Probing the innermost regions of AGN jets and their magnetic fields

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 19 Jan 2014 Day 19 ---										
---------- BLOCK #15: K-band VLBI scans. Space segment 8 ----------										
05 30 00	1226+023	14 38 24	32.4	219.0	2.1		22.2	12	729	05 30 00
05 39 30	---	14 47 56	31.5	221.6	2.3		23.5	570	747	05 30 01
05 40 00	1226+023	14 48 26	31.4	221.7	2.3		23.6	24	747	05 40 00
05 49 30	---	14 57 57	30.4	224.3	2.5		24.8	570	765	05 40 01
05 50 00	1226+023	14 58 27	30.4	224.4	2.5		24.9	24	765	05 50 00
06 00 00	---	15 08 29	29.3	227.0	2.6		26.1	600	784	05 50 01
---------- BLOCK #16: K-band VLBI scans. Ground segment 8 ----------										
06 00 30	1226+023	15 08 59	29.3	227.1	2.7		26.1	24	784	06 00 30
06 04 30	---	15 13 00	28.8	228.2	2.7		26.6	240	792	06 00 31
06 06 00	1222+216	15 14 30	44.8	241.9	2.8		34.7	16	792	06 06 00
06 09 20	---	15 17 50	44.4	242.8	2.9		35.0	200	798	06 06 01
06 10 50	1226+023	15 19 21	28.1	229.8	2.8		27.3	15	798	06 10 50
06 14 20	---	15 22 51	27.7	230.7	2.9		27.7	210	805	06 10 51
06 15 50	1222+216	15 24 22	43.5	244.6	3.0		35.6	17	805	06 15 50
06 19 10	---	15 27 42	43.0	245.4	3.0		35.9	200	812	06 15 51
06 20 40	1226+023	15 29 12	26.9	232.2	3.0		28.4	16	812	06 20 40
06 24 10	---	15 32 43	26.5	233.1	3.0		28.7	210	818	06 20 41
06 25 40	1222+216	15 34 13	42.1	247.1	3.1		36.4	17	818	06 25 40
06 29 00	---	15 37 34	41.7	247.9	3.2		36.7	200	825	06 25 41
06 30 30	1226+023	15 39 04	25.8	234.6	3.2		29.3	17	825	06 30 30
06 34 00	---	15 42 35	25.3	235.5	3.2		29.7	210	831	06 30 31
06 35 30	1222+216	15 44 05	40.8	249.5	3.3		37.1	18	831	06 35 30
06 38 50	---	15 47 25	40.3	250.4	3.4		37.4	200	838	06 35 31
06 40 20	1226+023	15 48 56	24.5	237.0	3.3		30.3	17	838	06 40 20
06 43 50	---	15 52 26	24.1	237.8	3.4		30.6	210	844	06 40 21
06 45 20	1222+216	15 53 56	39.4	251.9	3.5		37.8	19	844	06 45 20
06 48 40	---	15 57 17	38.9	252.7	3.5		38.0	200	851	06 45 21
06 50 10	1226+023	15 58 47	23.3	239.3	3.5		31.1	18	851	06 50 10
06 53 40	---	16 02 18	22.8	240.1	3.5		31.4	210	858	06 50 11

Schedule for TORUN (Code Tr) Page 9

Probing the innermost regions of AGN jets and their magnetic fields

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 19 Jan 2014 Day 19 ---										
06 55 10	1222+216	16 03 48	38.0	254.2	3.6		38.3	19	858	06 55 10
06 58 30	---	16 07 09	37.5	255.0	3.7		38.5	200	864	06 55 11
07 00 00	1226+023	16 08 39	22.0	241.6	3.6		31.9	18	864	07 00 00
07 03 30	---	16 12 09	21.5	242.4	3.7		32.2	210	871	07 00 01
07 05 00	1222+216	16 13 40	36.5	256.5	3.8		38.8	20	871	07 05 00
07 08 30	---	16 17 10	36.0	257.3	3.9		39.0	210	877	07 05 01
---------- BLOCK #17: K-band VLBI scans. Space segment 9 ----------										
07 10 00	1226+023	16 18 40	20.6	243.9	3.8		32.6	19	877	07 10 00
07 19 30	---	16 28 12	19.3	246.0	4.0		33.3	570	896	07 10 01
07 20 00	1226+023	16 28 42	19.3	246.1	4.0		33.3	24	896	07 20 00
07 29 30	---	16 38 14	18.0	248.2	4.1		33.9	570	914	07 20 01
07 30 00	1226+023	16 38 44	17.9	248.3	4.1		33.9	24	914	07 30 00
07 39 30	---	16 48 15	16.6	250.4	4.3		34.5	570	932	07 30 01
07 40 00	1226+023	16 48 45	16.5	250.5	4.3		34.5	24	932	07 40 00
07 49 30	---	16 58 17	15.1	252.5	4.5		35.0	570	950	07 40 01
07 50 00	1226+023	16 58 47	15.1	252.6	4.5		35.0	24	950	07 50 00
08 00 00	---	17 08 49	13.6	254.7	4.6		35.4	600	970	07 50 01
---------- BLOCK #18: K-band VLBI scans. Ground segment 9 ----------										
08 00 30	1226+023	17 09 19	13.5	254.8	4.7		35.4	24	970	08 00 30
08 05 00	---	17 13 49	12.9	255.8	4.7		35.6	270	978	08 00 31
08 06 00	1253-055	17 14 50	10.1	245.8	4.3		33.4	25	978	08 06 00
08 10 00	---	17 18 50	9.6	246.6	4.4		33.6	240	986	08 06 01
08 11 00	1226+023	17 19 50	12.0	257.0	4.8		35.8	24	986	08 11 00
08 15 00	---	17 23 51	11.4	257.9	4.9		36.0	240	994	08 11 01
08 16 00	1253-055	17 24 51	8.7	247.9	4.5		34.0	25	994	08 16 00
08 20 00	---	17 28 52	8.2	248.7	4.5		34.2	240	1001	08 16 01
08 21 00	1226+023	17 29 52	10.5	259.1	5.0		36.2	24	1001	08 21 00
08 25 00	---	17 33 53	9.9	259.9	5.1		36.3	240	1009	08 21 01
08 26 00	1253-055	17 34 53	7.3	249.9	4.6		34.5	25	1009	08 26 00
08 30 00	---	17 38 54	6.8	250.8	4.7		34.7	240	1017	08 26 01

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


 ======== Setup file: ra1cm2.set
   Matching groups in ./ga030c_freq_sess313rdbe.dat:
     tr1cm

   Setup group:   18          Station: TORUN             Total bit rate:   256
   Format: MKIV1:4            Bits per sample: 2         Sample rate: 32.000
   Number of channels:  4     DBE type:                  Speedup factor:   1.00

   Disk used to record data.

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

  The following frequency sets based on these setups were used.

   Frequency Set:  10  Setup file default.  Used pcal sets:   1
   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:  10

  The following pulse cal sets were used with this setup:

   Pulse cal detection set:   1  PCAL = 1MHZ
    PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
    PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
    PCALFR1=  1000  1000 13000 13000     0     0     0     0
    PCALFR2=  1000  1000 13000 13000     0     0     0     0

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

 POSITIONS OF SOURCES USED IN RECORDING SCANS

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

 * 0954+658          09 54 57.847936   * 09 58 47.245116     09 59 53.875760      0.00
   J0958+6533        65 48 15.53882    * 65 33 54.81801      65 29 31.69862       0.00

 * 1156+295          11 56 57.786212   * 11 59 31.833913     12 00 16.095129      0.00
   J1159+2914        29 31 25.73868    * 29 14 43.82678      29 09 45.58505       0.00

 * 1222+216          12 22 23.408709   * 12 24 54.458394     12 25 37.794604      0.00
   J1224+2122        21 39 23.03696    * 21 22 46.38857      21 17 52.49139       0.00

 * 1226+023          12 26 33.245835   * 12 29 06.699731     12 29 50.900697      0.00
   J1229+0203        02 19 43.30547    * 02 03 08.59797      01 58 21.52226       0.00

 * 1253-055          12 53 35.831289   * 12 56 11.166557     12 56 55.846230      0.00
   J1256-0547       -05 31 07.99603    *-05 47 21.52489     -05 51 58.64428       0.00
```

rk01qytr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 19 Jan 2014 Day 19 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0201+113	03 10 27	46.5	203.8	1.1		14.3	0	0	18 00 00
18 19 30	---	03 30 00	45.2	210.4	1.4		18.1	1170	37	18 00 01
18 20 00	0201+113	03 30 30	45.1	210.6	1.4		18.2	24	37	18 20 00
18 40 00	---	03 50 34	43.5	217.0	1.8		21.7	1200	76	18 20 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01qy_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 7 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=   2300.00   2300.00   2300.00   2300.00
 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:   6  Setup file default.  Used pcal sets:   1
 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:   6

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0201+113          02 01 06.003329   * 02 03 46.657061     02 04 32.735540       0.00
  J0203+1134        11 20 22.95394    * 11 34 45.40942      11 38 46.40913        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 0201+113            93.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01qztr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 19 Jan 2014 Day 19 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
20 00 00	0202+149	05 10 47	37.7	241.8	3.1		33.3	0	0	20 00 00
20 14 30	---	05 25 19	35.7	245.4	3.3		34.5	870	28	20 00 01
20 15 00	0202+149	05 25 49	35.7	245.5	3.3		34.5	24	28	20 15 00
20 29 30	---	05 40 22	33.6	249.0	3.6		35.5	870	56	20 15 01
20 30 00	0202+149	05 40 52	33.6	249.1	3.6		35.6	24	56	20 30 00
20 50 00	---	06 00 55	30.7	253.7	3.9		36.7	1200	94	20 30 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01qz_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 Net SB=         L         L         U         U
 IF SB =         U         U         U         U
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         L         L         U         U
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+149          02 02 07.396228   * 02 04 50.413896     02 05 37.213678       0.00
  J0204+1514        14 59 50.93936    * 15 14 11.04358      15 18 12.63827        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0202+149            94.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01ratr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Mon 20 Jan 2014 Day 20 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
00 00 00	0202+319	09 11 26	16.5	-57.8	7.1		36.9	0	0	00 00 00
00 14 30	---	09 25 59	14.7	-55.2	7.3		35.7	870	28	00 00 01
00 15 00	0202+319	09 26 29	14.6	-55.1	7.3		35.6	24	28	00 15 00
00 29 30	---	09 41 01	12.8	-52.5	7.6		34.3	870	56	00 15 01
00 30 00	0202+319	09 41 31	12.8	-52.4	7.6		34.3	24	56	00 30 00
00 44 30	---	09 56 04	11.1	-49.8	7.8		32.9	870	84	00 30 01
00 45 00	0202+319	09 56 34	11.0	-49.7	7.8		32.8	24	84	00 45 00
01 00 00	---	10 11 36	9.3	-47.0	8.1		31.3	900	112	00 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01ra_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+319           02 02 09.652798   * 02 05 04.925361     02 05 55.455284       0.00
  J0205+3212         31 58 10.39519    * 32 12 30.09541      32 16 37.47393        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0202+319           100.2

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rbtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 20 Jan 2014 Day 20 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
03 00 00	1928+738	12 11 56	45.7	21.9	-7.3		-54.4	0	0	03 00 00
03 14 30	---	12 26 28	46.5	22.7	-7.0		-57.3	870	28	03 00 01
03 15 00	1928+738	12 26 58	46.5	22.7	-7.0		-57.4	24	28	03 15 00
03 29 30	---	12 41 31	47.4	23.5	-6.8		-60.3	870	56	03 15 01
03 30 00	1928+738	12 42 01	47.4	23.5	-6.8		-60.4	24	56	03 30 00
03 44 30	---	12 56 33	48.3	24.2	-6.5		-63.4	870	84	03 30 01
03 45 00	1928+738	12 57 03	48.3	24.3	-6.5		-63.5	24	84	03 45 00
04 00 00	---	13 12 06	49.3	24.9	-6.3		-66.6	900	112	03 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rb_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

 Frequency Set:   4  Setup file default.  Used pcal sets:   1
 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:   4

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1928+738          19 28 49.350195   * 19 27 48.495148     19 27 26.546821       0.00
  J1927+7358        73 51 44.92742    * 73 58 01.56986      73 59 52.59316        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
  Source         Sun distance (deg)
 1928+738            94.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
     1.6 GHz         45. deg
     2.3 GHz         36. deg
     5.0 GHz         23. deg
     8.4 GHz         17. deg
    15.0 GHz         12. deg
    22.0 GHz          9. deg
```

rk01rctr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 20 Jan 2014 Day 20 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
06 00 00	1253-055	15 12 25	24.5	217.5	2.3		21.6	0	0	06 00 00
06 14 30	---	15 26 58	23.1	221.2	2.5		23.4	870	28	06 00 01
06 15 00	1253-055	15 27 28	23.0	221.3	2.5		23.5	24	28	06 15 00
06 29 30	---	15 42 00	21.5	224.9	2.8		25.2	870	56	06 15 01
06 30 00	1253-055	15 42 30	21.5	225.0	2.8		25.3	24	56	06 30 00
06 44 30	---	15 57 03	19.9	228.5	3.0		26.9	870	84	06 30 01
06 45 00	1253-055	15 57 33	19.8	228.6	3.0		26.9	24	84	06 45 00
07 00 00	---	16 12 35	18.1	232.1	3.3		28.4	900	112	06 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rc_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1253-055          12 53 35.831289   * 12 56 11.166557     12 56 55.886594       0.00
  J1256-0547       -05 31 07.99603    *-05 47 21.52489     -05 51 58.91117       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1253-055           104.7

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rdtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ####################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 20 Jan 2014 Day 20 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0202+149	03 14 24	49.8	206.2	1.1		16.0	0	0	18 00 00
18 14 30	---	03 28 56	48.8	211.4	1.4		18.9	870	28	18 00 01
18 15 00	0202+149	03 29 26	48.8	211.6	1.4		19.0	24	28	18 15 00
18 25 00	---	03 39 28	47.9	215.0	1.6		20.9	600	47	18 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
18 30 00	0202+149	03 44 29	47.5	216.6	1.6		21.8	293	47	18 30 00
18 44 30	---	03 59 01	46.1	221.4	1.9		24.3	870	75	18 30 01
18 45 00	0202+149	03 59 31	46.1	221.5	1.9		24.4	24	75	18 45 00
19 00 00	---	04 14 34	44.5	226.2	2.1		26.7	900	104	18 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rd_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01rd_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    6         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.

  1st LO=   2300.00   2300.00   2300.00   2300.00
  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:   6  Setup file default.  Used pcal sets:   1
  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:   6

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+149          02 02 07.396228   * 02 04 50.413896     02 05 37.195557       0.00
  J0204+1514        14 59 50.93936    * 15 14 11.04358      15 18 12.55974        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0202+149            93.9

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01retr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ##############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 20 Jan 2014 Day 20 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:	4836.00	4836.00	4836.00	4836.00						
Next BBC frequencies:	636.00	636.00	636.00	636.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
21 00 00	0536+145	06 14 53	50.9	193.2	0.6		8.2	0	0	21 00 00
21 15 00	---	06 29 56	50.3	198.9	0.8		11.6	900	29	21 00 01
---------- L-band VLBI scans ----------										
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00						
Next BBC frequencies:	632.00	632.00	632.00	632.00						
21 20 00	0536+145	06 34 57	50.0	200.7	0.9		12.7	293	29	21 20 00
21 39 30	---	06 54 30	48.8	207.8	1.2		16.8	1170	66	21 20 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01re_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01re_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    6         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.

  1st LO=   2300.00   2300.00   2300.00   2300.00
  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: 6 Setup file default. Used pcal sets: 1

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: 6

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S1	S3	S1	S2	S3	S4
PCALXB2=	S2	S4	S2	S4	M1	M2	M3	M4
PCALFR1=	1000	1000	13000	13000	0	0	0	0
PCALFR2=	1000	1000	13000	13000	0	0	0	0

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)
* 0536+145	05 36 51.361475	* 05 39 42.365993	05 40 32.362793	0.00
J0539+1433	14 32 10.73038	* 14 33 45.56168	14 34 01.17220	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0536+145	143.6

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01rftr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 21 Jan 2014 Day 21 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:	4836.00	4836.00	4836.00	4836.00						
Next BBC frequencies:	636.00	636.00	636.00	636.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
00 00 00	0333+321	09 15 23	28.5	-73.0	5.6		42.8	0	0	00 00 00
00 14 30	---	09 29 55	26.4	-70.5	5.9		42.1	870	28	00 00 01
00 15 00	0333+321	09 30 25	26.3	-70.4	5.9		42.0	24	28	00 15 00
00 29 30	---	09 44 58	24.3	-67.9	6.1		41.2	870	56	00 15 01
00 30 00	0333+321	09 45 28	24.2	-67.8	6.1		41.1	24	56	00 30 00
00 44 30	---	10 00 00	22.2	-65.2	6.4		40.2	870	84	00 30 01
00 45 00	0333+321	10 00 30	22.1	-65.1	6.4		40.2	24	84	00 45 00
01 00 00	---	10 15 33	20.1	-62.5	6.6		39.1	900	112	00 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rf_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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:   1  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   1

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0333+321          03 33 22.404692   * 03 36 30.107611     03 37 24.672686       0.00
  J0336+3218        32 08 36.66043    * 32 18 29.34220      32 21 16.26275        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0333+321           118.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rgtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 21 Jan 2014 Day 21 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
03 00 00	2010+723	12 15 52	42.6	21.0	-7.9		-45.8	0	0	03 00 00
03 14 30	---	12 30 25	43.4	22.0	-7.7		-48.6	870	28	03 00 01
03 15 00	2010+723	12 30 55	43.4	22.1	-7.6		-48.7	25	28	03 15 00
03 25 00	---	12 40 57	44.0	22.7	-7.5		-50.6	600	47	03 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
03 30 00	2010+723	12 45 57	44.3	23.1	-7.4		-51.6	294	47	03 30 00
03 44 30	---	13 00 30	45.2	24.0	-7.2		-54.4	870	75	03 30 01
03 45 00	2010+723	13 01 00	45.2	24.0	-7.1		-54.5	24	75	03 45 00
04 00 00	---	13 16 02	46.1	24.9	-6.9		-57.4	900	104	03 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rg_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01rg_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    6         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.

  1st LO=   2300.00   2300.00   2300.00   2300.00
  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:   6  Setup file default.  Used pcal sets:   1
  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:   6

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 2010+723          20 10 16.209319   * 20 09 52.303862     20 09 41.515053       0.00
  J2009+7229        72 20 20.74133    * 72 29 19.35101      72 31 59.54886        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  2010+723            92.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rhtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT	Source	Start / Stop						Early	Disk	TPStart
Stop UT		LST	EL	AZ	HA	UP	ParA	Dwell	GBytes	SYNC
--- Tue 21 Jan 2014 Day 21 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
06 00 00	1253-055	15 16 22	24.1	218.5	2.3		22.1	0	0	06 00 00
06 14 30	---	15 30 54	22.7	222.2	2.6		23.9	870	28	06 00 01
06 15 00	1253-055	15 31 25	22.6	222.3	2.6		24.0	24	28	06 15 00
06 29 30	---	15 45 57	21.1	225.8	2.8		25.6	870	56	06 15 01
06 30 00	1253-055	15 46 27	21.1	225.9	2.8		25.7	24	56	06 30 00
06 44 30	---	16 00 59	19.5	229.4	3.1		27.3	870	84	06 30 01
06 45 00	1253-055	16 01 29	19.4	229.5	3.1		27.3	24	84	06 45 00
07 00 00	---	16 16 32	17.6	233.0	3.3		28.8	900	112	06 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rh_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1253-055           12 53 35.831289   * 12 56 11.166557     12 56 55.911543       0.00
  J1256-0547        -05 31 07.99603    *-05 47 21.52489     -05 51 59.07249       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C286              108.6
  1253-055           105.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01ritr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ##############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 21 Jan 2014 Day 21 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:	4836.00	4836.00	4836.00	4836.00						
Next BBC frequencies:	636.00	636.00	636.00	636.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
18 00 00	0528+134	03 18 20	42.4	133.6	-2.2		-26.6	0	0	18 00 00
18 14 30	---	03 32 53	44.0	138.0	-2.0		-24.4	870	28	18 00 01
18 15 00	0528+134	03 33 23	44.0	138.1	-2.0		-24.4	24	28	18 15 00
18 25 00	---	03 43 24	45.0	141.2	-1.8		-22.7	600	47	18 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00						
Next BBC frequencies:	632.00	632.00	632.00	632.00						
18 30 00	0528+134	03 48 25	45.5	142.8	-1.7		-21.9	293	47	18 30 00
18 44 30	---	04 02 58	46.7	147.6	-1.5		-19.3	870	75	18 30 01
18 45 00	0528+134	04 03 28	46.7	147.8	-1.5		-19.2	24	75	18 45 00
19 00 00	---	04 18 30	47.9	152.9	-1.2		-16.3	900	104	18 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01ri_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01ri_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    5         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.

  1st LO=   2300.00   2300.00   2300.00   2300.00
  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:   6  Setup file default.  Used pcal sets:   1
 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:   6
```

The following pulse cal sets were used with this setup:

```
 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

  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)
* 0528+134	05 28 06.759218	* 05 30 56.416749	05 31 45.991536	0.00
J0530+1331	13 29 42.28878	* 13 31 55.14945	13 32 21.57198	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
3C147	137.5
0528+134	140.4

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01rjtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 22 Jan 2014 Day 22 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:	4836.00	4836.00	4836.00	4836.00						
Next BBC frequencies:	636.00	636.00	636.00	636.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
01 00 00	0536+145	10 19 29	23.7	262.7	4.6		38.0	0	0	01 00 00
01 14 30	---	10 34 02	21.6	265.7	4.9		38.2	870	28	01 00 01
01 15 00	0536+145	10 34 32	21.5	265.8	4.9		38.2	24	28	01 15 00
01 25 00	---	10 44 33	20.0	267.8	5.1		38.3	600	47	01 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00						
Next BBC frequencies:	632.00	632.00	632.00	632.00						
01 30 00	0536+145	10 49 34	19.2	268.8	5.2		38.3	293	47	01 30 00
01 44 30	---	11 04 07	17.0	271.7	5.4		38.3	870	75	01 30 01
01 45 00	0536+145	11 04 37	17.0	271.8	5.4		38.3	24	75	01 45 00
02 00 00	---	11 19 39	14.7	274.8	5.7		38.2	900	104	01 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rj_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   1  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   1

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01rj_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

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

  Disk used to record data.

  1st LO=   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =       RCP       LCP       RCP       LCP
  BBC   =         1         2         1         2
  BBC SB=         U         U         L         L
  IF    =         C         A         C         A
```

The following frequency sets based on these setups were used.

```
 Frequency Set:   3  Setup file default.  Used pcal sets:   1
 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:   3
```

The following pulse cal sets were used with this setup:

```
 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

 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)
* 0536+145	05 36 51.361475	* 05 39 42.365993	05 40 32.350572	0.00
J0539+1433	14 32 10.73038	* 14 33 45.56168	14 34 01.12617	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0536+145	142.4

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01rktr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ##############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 22 Jan 2014 Day 22 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	0202+319	03 22 17	65.1	221.0	1.3		27.8	0	0	18 00 00
18 14 30	---	03 36 49	63.5	227.2	1.5		31.4	870	28	18 00 01
18 15 00	0202+319	03 37 19	63.5	227.4	1.5		31.5	24	28	18 15 00
18 25 00	---	03 47 21	62.4	231.3	1.7		33.7	600	47	18 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
18 30 00	0202+319	03 52 22	61.8	233.2	1.8		34.6	293	47	18 30 00
18 44 30	---	04 06 54	60.0	238.3	2.0		37.2	870	75	18 30 01
18 45 00	0202+319	04 07 24	59.9	238.4	2.0		37.2	24	75	18 45 00
19 00 00	---	04 22 27	57.9	243.3	2.3		39.4	900	104	18 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rk_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   6  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   6

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01rk_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    7         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=   2300.00   2300.00   2300.00   2300.00
  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:   8  Setup file default.  Used pcal sets:   1
  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:   8

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+319           02 02 09.652798   * 02 05 04.925361     02 05 55.392701       0.00
  J0205+3212         31 58 10.39519    * 32 12 30.09541      32 16 37.24853        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C48                92.4
  0202+319            97.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rltr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 23 Jan 2014 Day 23 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
02 00 00	1150+812	11 23 36	62.1	2.6	-0.5		-170.2	0	0	02 00 00
02 14 30	---	11 38 08	62.2	1.3	-0.3		-174.9	870	28	02 00 01
02 15 00	1150+812	11 38 38	62.2	1.3	-0.3		-175.1	25	28	02 15 00
02 29 30	---	11 53 11	62.2	0.1	-0.0		-179.7	870	56	02 15 01
02 30 00	1150+812	11 53 41	62.2	0.0	-0.0		-179.9	25	56	02 30 00
02 44 30	---	12 08 13	62.2	-1.2	0.2		175.4	870	84	02 30 01
02 45 00	1150+812	12 08 43	62.2	-1.2	0.2		175.3	25	84	02 45 00
03 00 00	---	12 23 46	62.1	-2.5	0.5		170.4	900	112	02 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rl_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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:   6  Setup file default.  Used pcal sets:   1
  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:   6

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1150+812          11 50 23.482386   * 11 53 12.499225     11 54 00.946572       0.00
  J1153+8058        81 15 10.31174    * 80 58 29.15457      80 53 25.30983        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1150+812           114.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rmtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 23 Jan 2014 Day 23 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
05 00 00	1807+698	14 24 05	60.2	34.9	-3.7		-94.9	0	0	05 00 00
05 14 30	---	14 38 38	61.4	34.6	-3.5		-98.6	870	28	05 00 01
05 15 00	1807+698	14 39 08	61.5	34.6	-3.5		-98.7	24	28	05 15 00
05 29 30	---	14 53 40	62.7	34.1	-3.2		-102.5	870	56	05 15 01
05 30 00	1807+698	14 54 10	62.7	34.1	-3.2		-102.7	24	56	05 30 00
05 44 30	---	15 08 43	63.9	33.4	-3.0		-106.7	870	84	05 30 01
05 45 00	1807+698	15 09 13	64.0	33.3	-3.0		-106.9	24	84	05 45 00
06 00 00	---	15 24 15	65.2	32.4	-2.7		-111.3	900	112	05 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rm_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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:   6  Setup file default.  Used pcal sets:   1
 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:   6

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1807+698          18 07 18.543586   * 18 06 50.680644     18 06 39.294150       0.00
  J1806+6949        69 48 57.10463    * 69 49 28.10848      69 49 33.74543        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1807+698            92.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rntr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 23 Jan 2014 Day 23 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
18 00 00	1044+719	03 26 13	43.8	24.1	-7.4		-51.0	0	0	18 00 00
18 14 30	---	03 40 46	44.7	25.0	-7.1		-53.8	870	28	18 00 01
18 15 00	1044+719	03 41 16	44.7	25.1	-7.1		-53.9	24	28	18 15 00
18 29 30	---	03 55 48	45.6	26.0	-6.9		-56.7	870	56	18 15 01
18 30 00	1044+719	03 56 18	45.7	26.0	-6.9		-56.8	24	56	18 30 00
18 44 30	---	04 10 51	46.7	26.9	-6.6		-59.6	870	84	18 30 01
18 45 00	1044+719	04 11 21	46.7	26.9	-6.6		-59.7	24	84	18 45 00
19 00 00	---	04 26 23	47.7	27.8	-6.4		-62.6	900	112	18 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rn_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1044+719           10 44 49.735111   * 10 48 27.619927     10 49 30.788711       0.00
  J1048+7143         71 59 26.88535    * 71 43 35.93838      71 38 46.97212        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1044+719           123.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rotr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 24 Jan 2014 Day 24 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
02 00 00	1156+295	11 27 32	65.3	162.7	-0.5		-11.8	0	0	02 00 00
02 14 30	---	11 42 05	65.8	170.3	-0.3		-6.7	870	28	02 00 01
02 15 00	1156+295	11 42 35	65.8	170.5	-0.3		-6.5	23	28	02 15 00
02 25 00	---	11 52 36	66.0	175.9	-0.1		-2.8	600	47	02 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
02 30 00	1156+295	11 57 37	66.1	178.6	-0.0		-1.0	292	47	02 30 00
02 44 30	---	12 12 10	66.0	186.4	0.2		4.4	870	75	02 30 01
02 45 00	1156+295	12 12 40	66.0	186.7	0.2		4.6	23	75	02 45 00
03 00 00	---	12 27 42	65.5	194.6	0.5		10.0	900	104	02 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01ro_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01ro_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    7         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=   2300.00   2300.00   2300.00   2300.00
  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:   7  Setup file default.  Used pcal sets:   1
  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:   7

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1156+295          11 56 57.786212   * 11 59 31.833913     12 00 16.238512       0.00
  J1159+2914        29 31 25.73868    * 29 14 43.82678      29 09 45.33232        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1156+295           130.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rptr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: C&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 24 Jan 2014 Day 24 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
05 00 00	1253-055	14 28 02	28.0	205.8	1.5		15.3	0	0	05 00 00
05 14 30	---	14 42 34	27.0	209.8	1.8		17.4	870	28	05 00 01
05 15 00	1253-055	14 43 04	26.9	209.9	1.8		17.5	24	28	05 15 00
05 25 00	---	14 53 06	26.1	212.5	1.9		18.9	600	47	05 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
05 30 00	1253-055	14 58 07	25.7	213.8	2.0		19.6	293	47	05 30 00
05 44 30	---	15 12 39	24.4	217.6	2.3		21.6	870	75	05 30 01
05 45 00	1253-055	15 13 09	24.4	217.7	2.3		21.7	24	75	05 45 00
06 00 00	---	15 28 12	23.0	221.5	2.5		23.6	900	104	05 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rp_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.


  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   5  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01rp_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    7         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=   2300.00   2300.00   2300.00   2300.00
  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: 7 Setup file default. Used pcal sets: 1

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: 7

The following pulse cal sets were used with this setup:

Pulse cal detection set: 1 PCAL = 1MHZ

PCALXB1=	S1	S3	S1	S3	S1	S2	S3	S4
PCALXB2=	S2	S4	S2	S4	M1	M2	M3	M4
PCALFR1=	1000	1000	13000	13000	0	0	0	0
PCALFR2=	1000	1000	13000	13000	0	0	0	0

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)
* 1253-055	12 53 35.831289	* 12 56 11.166557	12 56 55.990011	0.00
J1256-0547	-05 31 07.99603	*-05 47 21.52489	-05 51 59.55542	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
1253-055	108.8

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01rqtr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

##
######################## Observing mode: K&L-band, dual-pol ############################
##

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 24 Jan 2014 Day 24 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
07 20 00	1226+023	16 48 25	16.5	250.4	4.3		34.5	0	0	07 20 00
07 35 00	---	17 03 27	14.4	253.6	4.6		35.2	900	29	07 20 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
07 40 00	1226+023	17 08 28	13.7	254.7	4.6		35.4	293	29	07 40 00
07 59 30	---	17 28 01	10.8	258.7	5.0		36.1	1170	66	07 40 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01rq_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

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

  Disk used to record data.

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

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01rq_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    5         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.

  1st LO=   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =      RCP       LCP       RCP       LCP
  BBC   =        1         2         1         2
  BBC SB=         U         U         L         L
  IF    =        C         A         C         A
```

The following frequency sets based on these setups were used.

```
 Frequency Set:   4  Setup file default.  Used pcal sets:   1
 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:   4
```

The following pulse cal sets were used with this setup:

```
 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

  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)
* 1226+023	12 26 33.245835	* 12 29 06.699731	12 29 51.040854	0.00
J1229+0203	02 19 43.30547	* 02 03 08.59797	01 58 20.68717	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
1226+023	118.1

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01rrtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 24 Jan 2014 Day 24 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00						
Next BBC frequencies:	632.00	632.00	632.00	632.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
18 00 00	0133+476	03 30 10	71.5	265.1	1.9		63.3	0	0	18 00 00
18 14 30	---	03 44 42	69.4	268.4	2.1		63.6	870	28	18 00 01
18 15 00	0133+476	03 45 12	69.3	268.5	2.1		63.6	24	28	18 15 00
18 29 30	---	03 59 45	67.1	271.4	2.4		63.6	870	56	18 15 01
18 30 00	0133+476	04 00 15	67.0	271.5	2.4		63.6	24	56	18 30 00
18 44 30	---	04 14 47	64.9	274.2	2.6		63.4	870	84	18 30 01
18 45 00	0133+476	04 15 17	64.8	274.2	2.6		63.4	24	84	18 45 00
19 00 00	---	04 30 20	62.5	276.8	2.9		62.9	900	112	18 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rr_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0133+476          01 33 55.103060   * 01 36 58.594805     01 37 51.462165       0.00
  J0136+4751        47 36 12.85365    * 47 51 29.10004      47 55 58.22203        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0133+476            96.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rstr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 25 Jan 2014 Day 25 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
01 00 00	0528+134	10 31 19	19.8	266.2	5.0		38.0	0	0	01 00 00
01 14 30	---	10 45 51	17.7	269.2	5.2		38.1	870	28	01 00 01
01 15 00	0528+134	10 46 21	17.6	269.3	5.2		38.1	24	28	01 15 00
01 29 30	---	11 00 54	15.4	272.2	5.5		38.1	870	56	01 15 01
01 30 00	0528+134	11 01 24	15.3	272.3	5.5		38.1	24	56	01 30 00
01 44 30	---	11 15 56	13.1	275.1	5.7		38.0	870	84	01 30 01
01 45 00	0528+134	11 16 26	13.1	275.2	5.7		38.0	24	84	01 45 00
02 00 00	---	11 31 29	10.8	278.2	6.0		37.7	900	112	01 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rs_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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 pcal sets:   1
  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:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0528+134          05 28 06.759218   * 05 30 56.416749     05 31 45.960762       0.00
  J0530+1331        13 29 42.28878    * 13 31 55.14945      13 32 21.34934        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0528+134           137.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rttr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 25 Jan 2014 Day 25 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00						
Next BBC frequencies:	632.00	632.00	632.00	632.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
06 00 00	0059+581	15 32 08	25.6	20.5	-9.5		-23.7	0	0	06 00 00
06 14 30	---	15 46 41	26.4	22.4	-9.3		-25.9	870	28	06 00 01
06 15 00	0059+581	15 47 11	26.4	22.5	-9.3		-26.0	24	28	06 15 00
06 29 30	---	16 01 43	27.2	24.3	-9.0		-28.3	870	56	06 15 01
06 30 00	0059+581	16 02 13	27.3	24.4	-9.0		-28.3	24	56	06 30 00
06 44 30	---	16 16 46	28.2	26.3	-8.8		-30.6	870	84	06 30 01
06 45 00	0059+581	16 17 16	28.2	26.3	-8.8		-30.7	24	84	06 45 00
07 00 00	---	16 32 18	29.3	28.3	-8.5		-32.9	900	112	06 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rt_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0059+581          00 59 43.470970   * 01 02 45.762378     01 03 38.213518       0.00
  J0102+5824        58 08 04.84745    * 58 24 11.13660      58 28 58.33638        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0059+581            95.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rutr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sat 25 Jan 2014 Day 25 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:			1668.00	1668.00	1668.00	1668.00				
Next BBC frequencies:			632.00	632.00	632.00	632.00				
Next scan bandwidths:			16.00	16.00	16.00	16.00				
18 00 00	0202+319	03 34 07	63.8	226.0	1.5		30.8	0	0	18 00 00
18 14 30	---	03 48 39	62.2	231.8	1.7		33.9	870	28	18 00 01
18 15 00	0202+319	03 49 09	62.1	232.0	1.7		34.0	24	28	18 15 00
18 29 30	---	04 03 41	60.4	237.2	2.0		36.6	870	56	18 15 01
18 30 00	0202+319	04 04 11	60.3	237.3	2.0		36.7	24	56	18 30 00
18 44 30	---	04 18 44	58.4	242.1	2.2		38.9	870	84	18 30 01
18 45 00	0202+319	04 19 14	58.3	242.3	2.2		39.0	24	84	18 45 00
19 00 00	---	04 34 16	56.3	246.8	2.5		40.7	900	112	18 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01ru_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 6 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   5  Setup file default.  Used pcal sets:   1
  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:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+319           02 02 09.652798   * 02 05 04.925361     02 05 55.340133       0.00
  J0205+3212         31 58 10.39519    * 32 12 30.09541      32 16 36.99444        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C48                89.6
  0202+319            94.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rvtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 26 Jan 2014 Day 26 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
01 00 00	1642+690	10 35 16	47.7	32.3	-6.1		-63.1	0	0	01 00 00
01 14 30	---	10 49 48	48.9	33.1	-5.9		-65.9	870	28	01 00 01
01 15 00	1642+690	10 50 18	48.9	33.2	-5.9		-66.0	24	28	01 15 00
01 29 30	---	11 04 50	50.1	34.0	-5.6		-68.8	870	56	01 15 01
01 30 00	1642+690	11 05 20	50.2	34.0	-5.6		-68.9	24	56	01 30 00
01 44 30	---	11 19 53	51.4	34.7	-5.4		-71.7	870	84	01 30 01
01 45 00	1642+690	11 20 23	51.5	34.7	-5.4		-71.8	24	84	01 45 00
02 00 00	---	11 35 25	52.7	35.3	-5.1		-74.8	900	112	01 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rv_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1642+690          16 42 18.064877   * 16 42 07.848507     16 42 02.336982       0.00
  J1642+6856        69 02 13.21708    * 68 56 39.75636      68 54 55.12726        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1642+690            96.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rwtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 26 Jan 2014 Day 26 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
04 00 00	1928+738	13 35 45	50.8	25.8	-5.9		-71.6	0	0	04 00 00
04 14 30	---	13 50 17	51.7	26.3	-5.6		-74.7	870	28	04 00 01
04 15 00	1928+738	13 50 48	51.8	26.3	-5.6		-74.9	24	28	04 15 00
04 29 30	---	14 05 20	52.7	26.7	-5.4		-78.0	870	56	04 15 01
04 30 00	1928+738	14 05 50	52.8	26.7	-5.4		-78.2	24	56	04 30 00
04 44 30	---	14 20 22	53.8	27.0	-5.1		-81.4	870	84	04 30 01
04 45 00	1928+738	14 20 53	53.8	27.0	-5.1		-81.5	24	84	04 45 00
05 00 00	---	14 35 55	54.8	27.2	-4.9		-85.0	900	112	04 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rw_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1928+738          19 28 49.350195   * 19 27 48.495148     19 27 26.648761       0.00
  J1927+7358        73 51 44.92742    * 73 58 01.56986      73 59 50.58896        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1928+738            93.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rxtr

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 26 Jan 2014 Day 26 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
19 00 00	1150+812	04 38 13	49.3	13.3	-7.3		-60.7	0	0	19 00 00
19 14 30	---	04 52 45	49.9	13.7	-7.0		-63.9	870	28	19 00 01
19 15 00	1150+812	04 53 15	49.9	13.7	-7.0		-64.1	25	28	19 15 00
19 29 30	---	05 07 48	50.4	14.1	-6.8		-67.4	870	56	19 15 01
19 30 00	1150+812	05 08 18	50.4	14.1	-6.8		-67.5	25	56	19 30 00
19 44 30	---	05 22 50	51.0	14.4	-6.5		-70.8	870	84	19 30 01
19 45 00	1150+812	05 23 20	51.0	14.4	-6.5		-70.9	25	84	19 45 00
20 00 00	---	05 38 23	51.5	14.7	-6.3		-74.4	900	112	19 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01rx_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1150+812          11 50 23.482386   * 11 53 12.499225     11 54 01.373668       0.00
  J1153+8058        81 15 10.31174    * 80 58 29.15457      80 53 25.79092        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1150+812           114.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rytr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Sun 26 Jan 2014 Day 26 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
22 00 00	1642+690	07 38 43	36.2	18.1	-9.1		-31.2	0	0	22 00 00
22 14 30	---	07 53 15	36.9	19.5	-8.8		-33.8	870	28	22 00 01
22 15 00	1642+690	07 53 45	37.0	19.5	-8.8		-33.9	25	28	22 15 00
22 29 30	---	08 08 17	37.7	20.9	-8.6		-36.5	870	56	22 15 01
22 30 00	1642+690	08 08 47	37.7	20.9	-8.6		-36.6	25	56	22 30 00
22 44 30	---	08 23 20	38.5	22.2	-8.3		-39.2	870	84	22 30 01
22 45 00	1642+690	08 23 50	38.6	22.3	-8.3		-39.2	25	84	22 45 00
23 00 00	---	08 38 52	39.5	23.6	-8.1		-41.9	900	112	22 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01ry_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   4  Setup file default.  Used pcal sets:   1
  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:   4

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1642+690          16 42 18.064877   * 16 42 07.848507     16 42 02.383007       0.00
  J1642+6856        69 02 13.21708    * 68 56 39.75636      68 54 54.92695        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1642+690            96.9

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01rztr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

```
################################################################################################
#######################  Observing mode: C&L-band, dual-pol  ###########################
################################################################################################
```

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 27 Jan 2014 Day 27 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
02 00 00	1807+698	11 39 22	46.6	29.9	-6.5		-60.1	0	0	02 00 00
02 14 30	---	11 53 54	47.7	30.7	-6.2		-62.9	870	28	02 00 01
02 15 00	1807+698	11 54 24	47.7	30.8	-6.2		-63.0	24	28	02 15 00
02 25 00	---	12 04 26	48.5	31.3	-6.0		-64.9	600	47	02 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
02 30 00	1807+698	12 09 27	48.9	31.6	-6.0		-65.9	294	47	02 30 00
02 44 30	---	12 23 59	50.0	32.4	-5.7		-68.7	870	75	02 30 01
02 45 00	1807+698	12 24 29	50.1	32.4	-5.7		-68.8	24	75	02 45 00
03 00 00	---	12 39 32	51.3	33.1	-5.5		-71.8	900	104	02 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01rz_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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:   8  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   8

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01rz_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    9         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=   2300.00   2300.00   2300.00   2300.00
  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:   9  Setup file default.  Used pcal sets:   1
 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:   9
```

The following pulse cal sets were used with this setup:

```
 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

 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)
* 1807+698	18 07 18.543586	* 18 06 50.680644	18 06 39.437000	0.00
J1806+6949	69 48 57.10463	* 69 49 28.10848	69 49 32.65062	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
1807+698	92.3

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01satr

RadioAstron AGN survey

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 27 Jan 2014 Day 27 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
05 00 00	1253-055	14 39 52	27.2	209.0	1.7		17.0	0	0	05 00 00
05 14 30	---	14 54 24	26.0	212.9	2.0		19.1	870	28	05 00 01
05 15 00	1253-055	14 54 54	26.0	213.0	2.0		19.2	24	28	05 15 00
05 29 30	---	15 09 26	24.7	216.8	2.2		21.2	870	56	05 15 01
05 30 00	1253-055	15 09 56	24.7	216.9	2.2		21.2	24	56	05 30 00
05 44 30	---	15 24 29	23.3	220.6	2.5		23.1	870	84	05 30 01
05 45 00	1253-055	15 24 59	23.3	220.7	2.5		23.2	24	84	05 45 00
06 00 00	---	15 40 01	21.8	224.4	2.7		25.0	900	112	05 45 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01sa_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

Setup group: 8 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

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

 The following frequency sets based on these setups were used.

  Frequency Set:   5  Setup file default.  Used pcal sets:   1
  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:   5

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1253-055          12 53 35.831289   * 12 56 11.166557     12 56 56.088904       0.00
  J1256-0547       -05 31 07.99603    *-05 47 21.52489     -05 52 00.15388       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1253-055           111.8

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sctr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Mon 27 Jan 2014 Day 27 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
23 00 00	0202+319	08 42 49	20.2	-62.8	6.6		39.2	0	0	23 00 00
23 14 30	---	08 57 21	18.3	-60.2	6.9		38.1	870	28	23 00 01
23 15 00	0202+319	08 57 51	18.2	-60.2	6.9		38.0	24	28	23 15 00
23 30 00	---	09 12 54	16.3	-57.5	7.1		36.8	900	57	23 15 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01sc_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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:   1  Setup file default.  Used pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   1

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0202+319          02 02 09.652798   * 02 05 04.925361     02 05 55.317141       0.00
  J0205+3212        31 58 10.39519    * 32 12 30.09541      32 16 36.89120        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0202+319            92.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sdtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 28 Jan 2014 Day 28 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:	4836.00	4836.00	4836.00	4836.00						
Next BBC frequencies:	636.00	636.00	636.00	636.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
01 00 00	1228+126	10 43 09	43.8	141.9	-1.8		-22.3	0	0	01 00 00
01 14 30	---	10 57 41	45.1	146.5	-1.6		-19.8	870	28	01 00 01
01 15 00	1228+126	10 58 11	45.2	146.7	-1.6		-19.7	24	28	01 15 00
01 29 30	---	11 12 43	46.3	151.5	-1.3		-17.0	870	56	01 15 01
01 30 00	1228+126	11 13 14	46.3	151.7	-1.3		-16.9	24	56	01 30 00
01 44 30	---	11 27 46	47.3	156.7	-1.1		-14.1	870	84	01 30 01
01 45 00	1228+126	11 28 16	47.3	156.9	-1.1		-14.0	24	84	01 45 00
02 00 00	---	11 43 19	48.1	162.2	-0.8		-10.8	900	112	01 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01sd_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1228+126          12 28 17.569280   * 12 30 49.423382     12 31 33.312546       0.00
  J1230+1223        12 40 01.74883    * 12 23 28.04365      12 18 36.66515        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1228+126           124.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01setr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 28 Jan 2014 Day 28 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
04 00 00	1228+126	13 43 38	46.8	206.2	1.2		15.7	0	0	04 00 00
04 14 30	---	13 58 11	45.7	211.1	1.4		18.5	870	28	04 00 01
04 15 00	1228+126	13 58 41	45.7	211.2	1.5		18.6	24	28	04 15 00
04 29 30	---	14 13 13	44.5	216.0	1.7		21.2	870	56	04 15 01
04 30 00	1228+126	14 13 43	44.4	216.1	1.7		21.3	24	56	04 30 00
04 44 30	---	14 28 16	43.1	220.7	1.9		23.6	870	84	04 30 01
04 45 00	1228+126	14 28 46	43.0	220.8	2.0		23.7	24	84	04 45 00
05 00 00	---	14 43 48	41.5	225.3	2.2		25.9	900	112	04 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01se_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1228+126          12 28 17.569280   * 12 30 49.423382     12 31 33.316703       0.00
  J1230+1223        12 40 01.74883    * 12 23 28.04365      12 18 36.64459        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1226+023           122.0
  1228+126           124.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sftr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 28 Jan 2014 Day 28 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
17 00 00	0528+134	02 45 46	38.6	124.4	-2.8		-30.6	0	0	17 00 00
17 19 30	---	03 05 20	41.0	129.8	-2.4		-28.3	1170	37	17 00 01
17 20 00	0528+134	03 05 50	41.0	130.0	-2.4		-28.3	24	37	17 20 00
17 40 00	---	03 25 53	43.2	135.8	-2.1		-25.5	1200	76	17 20 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01sf_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 9 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=   2300.00   2300.00   2300.00   2300.00
 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:  11  Setup file default.  Used pcal sets:   1
 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:  11

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0528+134          05 28 06.759218   * 05 30 56.416749     05 31 45.955009       0.00
  J0530+1331        13 29 42.28878    * 13 31 55.14945      13 32 21.16620        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C147               132.0
  0528+134            133.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sgtr

RadioAstron AGN survey

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 28 Jan 2014 Day 28 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
19 00 00	0333+321	04 46 06	65.9	217.6	1.1		25.7	0	0	19 00 00
19 14 30	---	05 00 38	64.4	224.1	1.4		29.6	870	28	19 00 01
19 15 00	0333+321	05 01 09	64.4	224.3	1.4		29.8	23	28	19 15 00
19 29 30	---	05 15 41	62.8	230.2	1.6		33.1	870	56	19 15 01
19 30 00	0333+321	05 16 11	62.7	230.4	1.6		33.2	24	56	19 30 00
19 44 30	---	05 30 43	61.0	235.7	1.9		36.0	870	84	19 30 01
19 45 00	0333+321	05 31 13	60.9	235.9	1.9		36.1	24	84	19 45 00
20 00 00	---	05 46 16	59.0	240.9	2.1		38.4	900	112	19 45 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01sg_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

Setup group: 8 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

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

 The following frequency sets based on these setups were used.

 Frequency Set:   6  Setup file default.  Used pcal sets:   1
 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:   6

 The following pulse cal sets were used with this setup:

 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0333+321          03 33 22.404692   * 03 36 30.107611     03 37 24.563965       0.00
  J0336+3218        32 08 36.66043    * 32 18 29.34220      32 21 16.15283        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C147               131.9
  0333+321            110.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz          45. deg
      2.3 GHz          36. deg
      5.0 GHz          23. deg
      8.4 GHz          17. deg
     15.0 GHz          12. deg
     22.0 GHz           9. deg
```

rk01shtr

RadioAstron AGN survey

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Observing mode: K-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 29 Jan 2014 Day 29 ---										
---------- K-band VLBI scans ----------										
Next scan frequencies:		22236.00	22236.00	22236.00	22236.00					
Next BBC frequencies:		736.00	736.00	736.00	736.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
00 00 00	1253-055	09 46 55	18.8	129.2	-3.2		-27.9	0	0	00 00 00
00 14 30	---	10 01 28	20.4	132.6	-2.9		-26.4	870	28	00 00 01
00 15 00	1253-055	10 01 58	20.5	132.8	-2.9		-26.3	24	28	00 15 00
00 29 30	---	10 16 30	22.0	136.3	-2.7		-24.7	870	56	00 15 01
00 30 00	1253-055	10 17 00	22.1	136.4	-2.7		-24.6	24	56	00 30 00
00 44 30	---	10 31 33	23.5	140.0	-2.4		-22.8	870	84	00 30 01
00 45 00	1253-055	10 32 03	23.6	140.1	-2.4		-22.8	24	84	00 45 00
01 00 00	---	10 47 05	25.0	143.9	-2.2		-20.8	900	112	00 45 01

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

======== Setup file: ra1cm2.set
Matching groups in ./rk01sh_freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

Setup group: 8 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

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

 The following frequency sets based on these setups were used.

  Frequency Set:   6  Setup file default.  Used pcal sets:   1
  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:   6

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1253-055           12 53 35.831289   * 12 56 11.166557     12 56 56.154389       0.00
  J1256-0547        -05 31 07.99603    *-05 47 21.52489     -05 52 00.57023       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C286              114.6
  1253-055           113.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sitr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 29 Jan 2014 Day 29 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:	1668.00	1668.00	1668.00	1668.00						
Next BBC frequencies:	632.00	632.00	632.00	632.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
03 00 00	1354-152	12 47 25	19.7	161.9	-1.2		-11.1	0	0	03 00 00
03 14 30	---	13 01 57	20.3	165.6	-0.9		-8.9	870	28	03 00 01
03 15 00	1354-152	13 02 27	20.3	165.7	-0.9		-8.8	24	28	03 15 00
03 29 30	---	13 17 00	20.8	169.4	-0.7		-6.6	870	56	03 15 01
03 30 00	1354-152	13 17 30	20.8	169.6	-0.7		-6.5	24	56	03 30 00
03 44 30	---	13 32 02	21.2	173.3	-0.4		-4.2	870	84	03 30 01
03 45 00	1354-152	13 32 32	21.2	173.4	-0.4		-4.1	24	84	03 45 00
04 00 00	---	13 47 35	21.3	177.3	-0.2		-1.7	900	112	03 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01si_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 9 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=   2300.00   2300.00   2300.00   2300.00
 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:  10  Setup file default.  Used pcal sets:   1
  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:  10

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1354-152           13 54 28.601586   * 13 57 11.244977     13 57 58.092880       0.00
  J1357-1527        -15 12 51.88927    *-15 27 28.78695     -15 31 34.08353       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  3C286              114.7
  1354-152            96.3

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sjtr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Wed 29 Jan 2014 Day 29 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
17 00 00	1807+698	02 49 43	38.0	-19.4	8.7		35.2	0	0	17 00 00
17 14 30	---	03 04 15	37.3	-18.0	9.0		32.6	870	28	17 00 01
17 15 00	1807+698	03 04 45	37.3	-18.0	9.0		32.5	25	28	17 15 00
17 29 30	---	03 19 18	36.6	-16.7	9.2		29.9	870	56	17 15 01
17 30 00	1807+698	03 19 48	36.6	-16.6	9.2		29.8	25	56	17 30 00
17 44 30	---	03 34 20	36.0	-15.2	9.5		27.2	870	84	17 30 01
17 45 00	1807+698	03 34 50	36.0	-15.2	9.5		27.1	25	84	17 45 00
18 00 00	---	03 49 53	35.4	-13.8	9.7		24.5	900	112	17 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01sj_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1807+698          18 07 18.543586   * 18 06 50.680644     18 06 39.539922       0.00
  J1806+6949        69 48 57.10463    * 69 49 28.10848      69 49 31.82577        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1807+698            92.1

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sktr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 30 Jan 2014 Day 30 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
00 00 00	0648-165	09 50 52	10.3	223.5	3.0		25.5	0	0	00 00 00
00 14 30	---	10 05 24	8.7	226.6	3.2		27.1	870	28	00 00 01
00 15 00	0648-165	10 05 54	8.7	226.7	3.2		27.2	24	28	00 15 00
00 29 30	---	10 20 27	7.0	229.8	3.5		28.6	870	56	00 15 01
00 30 00	0648-165	10 20 57	7.0	229.9	3.5		28.7	24	56	00 30 00
00 44 30	---	10 35 29	5.3	233.0	3.7		30.0	870	84	00 30 01
00 45 00	0648-165	10 35 59	5.2	233.1	3.7		30.1	24	84	00 45 00
01 00 00	---	10 51 02	3.4	236.2	4.0		31.4	900	112	00 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01sk_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0648-165           06 48 10.295571   * 06 50 24.581861     06 51 04.290776       0.00
  J0650-1637        -16 34 05.88130    *-16 37 39.72548     -16 38 57.81778       0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0648-165           134.9

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sltr

RadioAstron AGN survey

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Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 30 Jan 2014 Day 30 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
04 00 00	0106+612	13 51 31	25.0	5.3-11.3			-6.7	0	0	04 00 00
04 14 30	---	14 06 04	25.3	7.2-11.1			-9.1	870	28	04 00 01
04 15 00	0106+612	14 06 34	25.3	7.3-11.1			-9.2	24	28	04 15 00
04 29 30	---	14 21 06	25.6	9.2-10.8			-11.6	870	56	04 15 01
04 30 00	0106+612	14 21 36	25.6	9.2-10.8			-11.7	24	56	04 30 00
04 44 30	---	14 36 09	26.0	11.1-10.6			-14.1	870	84	04 30 01
04 45 00	0106+612	14 36 39	26.0	11.2-10.6			-14.2	24	84	04 45 00
05 00 00	---	14 51 41	26.5	13.1-10.3			-16.6	900	112	04 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01sl_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 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:   6  Setup file default.  Used pcal sets:   1
  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:   6

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0106+612          01 06 36.621798   * 01 09 46.344314     01 10 40.953747       0.00
  J0109+6133        61 17 32.64124    * 61 33 30.45573      61 38 15.42952        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0106+612            94.4

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01smtr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Thu 30 Jan 2014 Day 30 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:	4836.00	4836.00	4836.00	4836.00						
Next BBC frequencies:	636.00	636.00	636.00	636.00						
Next scan bandwidths:	16.00	16.00	16.00	16.00						
17 00 00	0016+731	02 53 39	64.2	-23.8	2.6		121.2	0	0	17 00 00
17 14 30	---	03 08 12	63.3	-24.9	2.8		116.7	870	28	17 00 01
17 15 00	0016+731	03 08 42	63.3	-25.0	2.8		116.6	24	28	17 15 00
17 29 30	---	03 23 14	62.3	-25.9	3.0		112.3	870	56	17 15 01
17 30 00	0016+731	03 23 44	62.3	-25.9	3.1		112.1	24	56	17 30 00
17 44 30	---	03 38 17	61.3	-26.7	3.3		108.0	870	84	17 30 01
17 45 00	0016+731	03 38 47	61.3	-26.7	3.3		107.8	24	84	17 45 00
18 00 00	---	03 53 49	60.3	-27.3	3.6		103.7	900	112	17 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01sm_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 0016+731          00 16 54.195077   * 00 19 45.786355     00 20 34.650503       0.00
  J0019+7327        73 10 51.40716    * 73 27 30.01760      73 32 29.51251        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  0016+731            97.0

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sntr

RadioAstron AGN survey

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UWAGA: zmiana pasma w czasie tego eksperymentu!!!

```
################################################################################################
#######################  Observing mode: C&L-band, dual-pol  ###########################
################################################################################################
```

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 31 Jan 2014 Day 31 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
00 00 00	0506+056	09 54 48	15.8	258.2	4.7		36.2	0	0	00 00 00
00 14 30	---	10 09 21	13.7	261.2	5.0		36.6	870	28	00 00 01
00 15 00	0506+056	10 09 51	13.6	261.3	5.0		36.6	24	28	00 15 00
00 25 00	---	10 19 53	12.1	263.3	5.2		36.8	600	47	00 15 01
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
00 30 00	0506+056	10 24 53	11.4	264.3	5.2		36.9	293	47	00 30 00
00 44 30	---	10 39 26	9.2	267.3	5.5		37.1	870	75	00 30 01
00 45 00	0506+056	10 39 56	9.1	267.4	5.5		37.1	24	75	00 45 00
01 00 00	---	10 54 58	6.8	270.4	5.7		37.1	900	104	00 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01sn_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

  Disk used to record data.

  1st LO=   4200.00   4200.00   4200.00   4200.00
  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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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


======== Setup file: ra18cm2.set
  Matching groups in ./rk01sn_freq.dat:
    tr18cm          E-mail Borkowski 12Mar98, preferred alternative

  Setup group:    5         Station: TORUN            Total bit rate:   256
  Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
  Number of channels:  4    DBE type:                 Speedup factor:   1.00

  Disk used to record data.

  1st LO=   2300.00   2300.00   2300.00   2300.00
  Net SB=         L         L         U         U
  IF SB =         L         L         L         L
  Pol.  =      RCP       LCP       RCP       LCP
  BBC   =        1         2         1         2
  BBC SB=         U         U         L         L
  IF    =        C         A         C         A
```

The following frequency sets based on these setups were used.

```
 Frequency Set:   5  Setup file default.  Used pcal sets:   1
 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:   5
```

The following pulse cal sets were used with this setup:

```
 Pulse cal detection set:   1  PCAL = 1MHZ
  PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
  PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
  PCALFR1=  1000  1000 13000 13000     0     0     0     0
  PCALFR2=  1000  1000 13000 13000     0     0     0     0

  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)
* 0506+056	05 06 45.765584	* 05 09 25.964476	05 10 12.671326	0.00
J0509+0541	05 37 50.30294	* 05 41 35.33359	05 42 26.09350	0.00

EFFECT OF SOLAR CORONA

The solar corona can cause unstable phases for sources too close to the Sun.
SCHED provides warnings at individual scans for distances less than 10 degrees.
The distance from the Sun to each source in this schedule is:

Source	Sun distance (deg)
0506+056	124.1

Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
that the Sun will cause amplitude reductions on the longest VLBA baselines
at a solar distance of 60deg F^(-0.6) where F is in GHz.
For common VLBI bands, this is:

1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg
8.4 GHz	17. deg
15.0 GHz	12. deg
22.0 GHz	9. deg

rk01sotr

RadioAstron AGN survey

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Observing mode: C-band, dual-pol

Schedule for TORUN (Code Tr) Page 2

RadioAstron AGN survey

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

Start UT / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 31 Jan 2014 Day 31 ---										
---------- C-band VLBI scans ----------										
Next scan frequencies:		4836.00	4836.00	4836.00	4836.00					
Next BBC frequencies:		636.00	636.00	636.00	636.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
04 00 00	1239+376	13 55 28	69.8	225.8	1.2		32.7	0	0	04 00 00
04 14 30	---	14 10 00	68.1	232.4	1.5		36.7	870	28	04 00 01
04 15 00	1239+376	14 10 30	68.0	232.6	1.5		36.8	23	28	04 15 00
04 29 30	---	14 25 03	66.2	238.4	1.7		40.0	870	56	04 15 01
04 30 00	1239+376	14 25 33	66.2	238.6	1.7		40.1	24	56	04 30 00
04 44 30	---	14 40 05	64.3	243.8	2.0		42.6	870	84	04 30 01
04 45 00	1239+376	14 40 35	64.2	244.0	2.0		42.7	24	84	04 45 00
05 00 00	---	14 55 38	62.1	248.8	2.2		44.7	900	112	04 45 01

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

======== Setup file: ra6cm2.set
Matching groups in ./rk01so_freq.dat:
tr6cm E-mail Borkowski 23Apr03 (CR 1May03)

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

Disk used to record data.

```
 1st LO=   4200.00   4200.00   4200.00   4200.00
 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 pcal sets:   1
  LO sum=   4836.00  4836.00  4836.00  4836.00
  BBC fr=    636.00   636.00   636.00   636.00
  Bandwd=     16.00    16.00    16.00    16.00
   Matching frequency sets:   2

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1239+376          12 39 45.151329   * 12 42 09.812390     12 42 51.497085       0.00
  J1242+3720        37 36 31.63208    * 37 20 05.69271      37 15 10.35655        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1239+376           126.5

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

rk01sptr

RadioAstron AGN survey

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Phone: +7-495-3332512 EMAIL: kirx@scan.sai.msu.ru
Fax: +7-495-3332378 Phone during observation: +7-903-6614865

Observing mode: L-band, dual-pol

Schedule for TORUN (Code Tr) Page 2
RadioAstron AGN survey
UP: D => Below limits; H => Below horizon mask; W => still slewing at end; blank => Up.
Early: Seconds between end of slew and start. Dwell: On source seconds.
Disk: GBytes recorded to this point.
TPStart: Recording start time. Frequencies are LO sum (band edge).
SYNC: Time correlator is expected to sync up.

Start UT / Stop	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Fri 31 Jan 2014 Day 31 ---										
---------- L-band VLBI scans ----------										
Next scan frequencies:		1668.00	1668.00	1668.00	1668.00					
Next BBC frequencies:		632.00	632.00	632.00	632.00					
Next scan bandwidths:		16.00	16.00	16.00	16.00					
20 00 00	1508+572	05 58 06	25.3	23.7	-9.2		-26.3	0	0	20 00 00
20 14 30	---	06 12 38	26.2	25.7	-9.0		-28.5	870	28	20 00 01
20 15 00	1508+572	06 13 08	26.2	25.8	-9.0		-28.6	24	28	20 15 00
20 29 30	---	06 27 40	27.2	27.7	-8.7		-30.8	870	56	20 15 01
20 30 00	1508+572	06 28 11	27.2	27.7	-8.7		-30.9	24	56	20 30 00
20 44 30	---	06 42 43	28.3	29.6	-8.5		-33.0	870	84	20 30 01
20 45 00	1508+572	06 43 13	28.3	29.7	-8.5		-33.1	24	84	20 45 00
21 00 00	---	06 58 15	29.5	31.6	-8.2		-35.3	900	112	20 45 01

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

======== Setup file: ra18cm2.set
Matching groups in ./rk01sp_freq.dat:
tr18cm E-mail Borkowski 12Mar98, preferred alternative

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

Disk used to record data.

```
 1st LO=   2300.00   2300.00   2300.00   2300.00
 Net SB=         L         L         U         U
 IF SB =         L         L         L         L
 Pol.  =       RCP       LCP       RCP       LCP
 BBC   =         1         2         1         2
 BBC SB=         U         U         L         L
 IF    =         C         A         C         A

 The following frequency sets based on these setups were used.

  Frequency Set:   3  Setup file default.  Used pcal sets:   1
  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:   3

 The following pulse cal sets were used with this setup:

  Pulse cal detection set:   1  PCAL = 1MHZ
   PCALXB1=   S1    S3    S1    S3    S1    S2    S3    S4
   PCALXB2=   S2    S4    S2    S4    M1    M2    M3    M4
   PCALFR1=  1000  1000 13000 13000     0     0     0     0
   PCALFR2=  1000  1000 13000 13000     0     0     0     0

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



POSITIONS OF SOURCES USED IN RECORDING SCANS

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

* 1508+572          15 08 45.204538   * 15 10 02.922371     15 10 24.265781       0.00
  J1510+5702        57 14 02.08966    * 57 02 43.37583      56 59 16.08002        0.00


EFFECT OF SOLAR CORONA

 The solar corona can cause unstable phases for sources too close to the Sun.
 SCHED provides warnings at individual scans for distances less than 10 degrees.
 The distance from the Sun to each source in this schedule is:
   Source         Sun distance (deg)
  1508+572           102.6

 Barry Clark estimates from predictions by Ketan Desai of IPM scattering sizes
 that the Sun will cause amplitude reductions on the  longest VLBA baselines
 at a solar distance of 60deg F^(-0.6) where F is in GHz.
 For common VLBI bands, this is:
      1.6 GHz         45. deg
      2.3 GHz         36. deg
      5.0 GHz         23. deg
      8.4 GHz         17. deg
     15.0 GHz         12. deg
     22.0 GHz          9. deg
```

RadioAstron Mission

http://www.asc.rssi.ru/radioastron/description/intro_eng.htm

RadioAstron project is an international collaborative mission to launch a free flying satellite carrying a 10-meter radio telescope in high apogee orbit around the Earth. The aim of the mission is to use the space telescope to conduct interferometer observations in conjunction with the global ground radio telescope network in order to obtain images, coordinates, motions and evolution of angular structure of different radio emitting objects in the Universe with the extraordinary high angular resolution.

The orbit of RadioAstron satellite will have apogee radius in the range up to 350 000 km. The spacecraft's operational lifetime will be no less than five years. Space-ground Very Long Baseline Interferometer (VLBI) measurements with this orbit will provide morphological and coordinate information on galactic and extragalactic radio sources with fringe size up to 8 micro arc second at the shortest wavelength 1.35 cm.

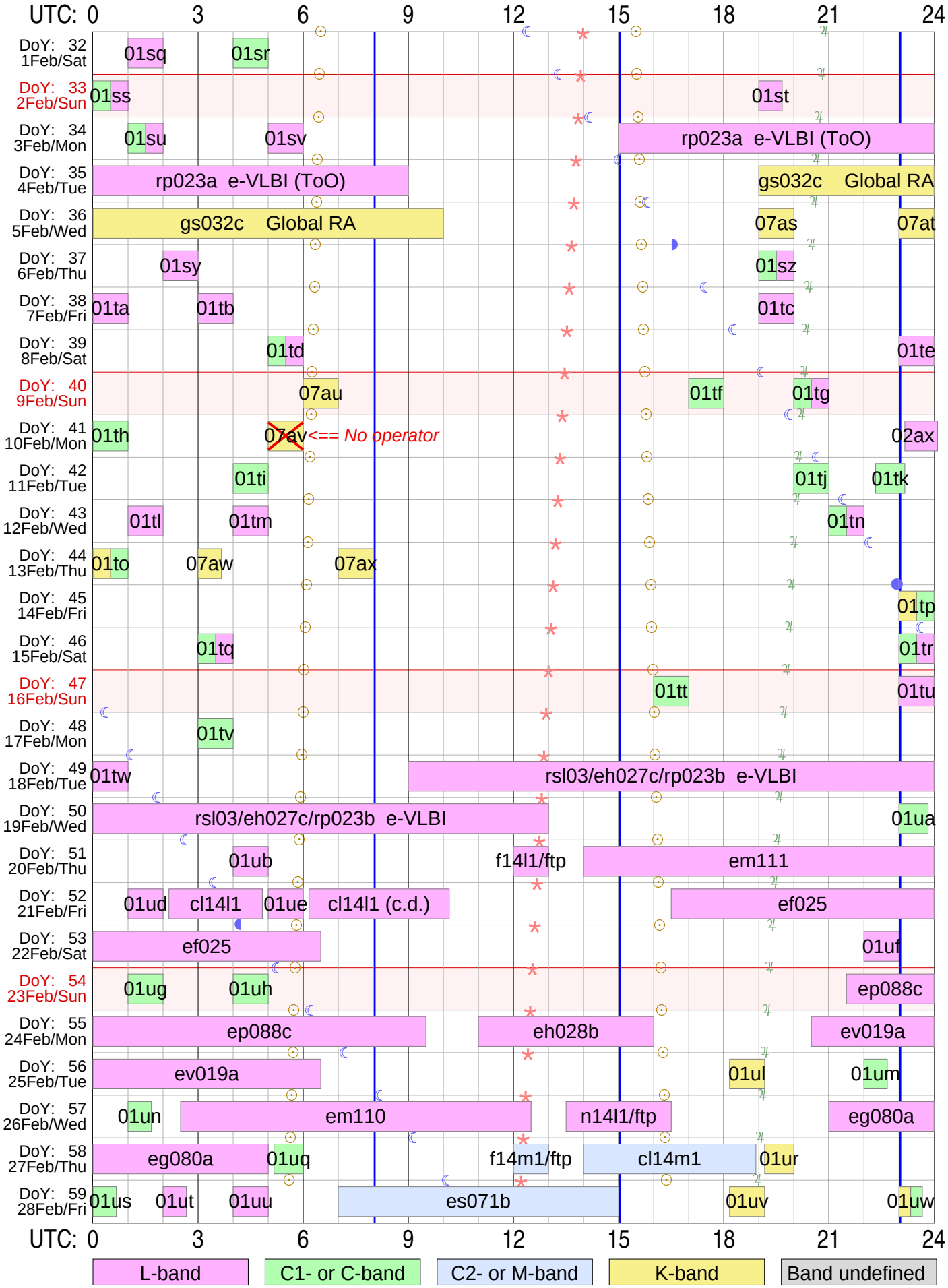
The RadioAstron program, initiated by Astro Space Center (ASC) of Lebedev Physical Institute of Russian Academy of Sciences (RAS) in collaboration with other institutions of RAS and Federal Space Agency (FSA), has expanded into a broad international collaboration: scientists from over 20 countries are constructing the instruments, planning the mission profile, and assuring ground radio telescopes support for RadioAstron. Russia will provide the satellite, most of the on-board hardware, interferometer integration and all kinds of the tests. General designer of satellite and SRT construction is Lavochkin Association (LA) of the RosKosmos.

Several other countries contribute to the on-board scientific payload. The 92-cm receiver is being built in India - National Center for Radio Astrophysics (NCRA) and Russia (Nizhny Novgorod, OAO KB "Gorizont"), the 18-cm receiver in Australia (CSIRO - Commonwealth Scientific and Industrial Research Organization), the 6-cm receiver by Russia, the 1.35-cm receiver by Finland (HUT - Helsinki University of Technology) and upgraded in USA (National Radio Astronomy Observatory- NRAO) and Russia (Moscow Institute of Radioengineering and Electronics - IRE), rubidium on-board frequency standard was built by the European Space Agency (ESA) at Neuchatel observatory in Switzerland. H-maser on-board frequency standard is being developed in Russia (Nizhny Novgorod, ZAO "Vremya-CH"). Russian (ASC) recording system on 6-system HDD and tapes will be able to accept a digital data stream at a maximum data rate of 128 Mbitś. The correlator will be able to process the data from up to 5 interferometer stations (including the space element) at a maximum data rate of 128 Mbitś. European Space Agency (ESA) participated in testing of the space radio telescope antenna. On board operating spacecraft system and command communication centers at Bear Lake (near Moscow) and near Ussuriisk (Eastern Russia), and also a tracking station at Pushchino are under preparation.

Main scientific goal of the mission is the study of various astronomical objects with unprecedented angular resolution up to few millionth of an arcsecond. The resolution achieved with RadioAstron will allow us in principle to study the following phenomena and problems:

- central engine of AGN and physical processes near super massive black holes providing an acceleration of cosmic rays — size, velocity and shape of emitting region in the core, spectrum, polarization and variability of emitting components;
- cosmological models, dark matter and dark energy - by studying dependence of above mentioned AGN's parameters with redshift, and by observing gravitational lensing;
- structure and dynamics of star and planets forming regions in our Galaxy and in AGN — by studying maser and Mega maser radio emission;
- neutron (quark?) stars and black holes in our Galaxy, their structure and dynamics — by VLBI and measurements of visibility scintillations, proper motions and parallaxes;
- structure and distribution of interstellar and interplanetary plasma — by fringe visibility scintillations of pulsars;
- building of high accuracy astronomical reference system of coordinates;
- building of high accuracy model of the Earth gravity field.

Tr VLBI plan for Feb 2014



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: 205.5 hours in 70 experiments planned

Two initial characters (rk) are omitted from RA experiment names!

Version: 2014.02.11

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