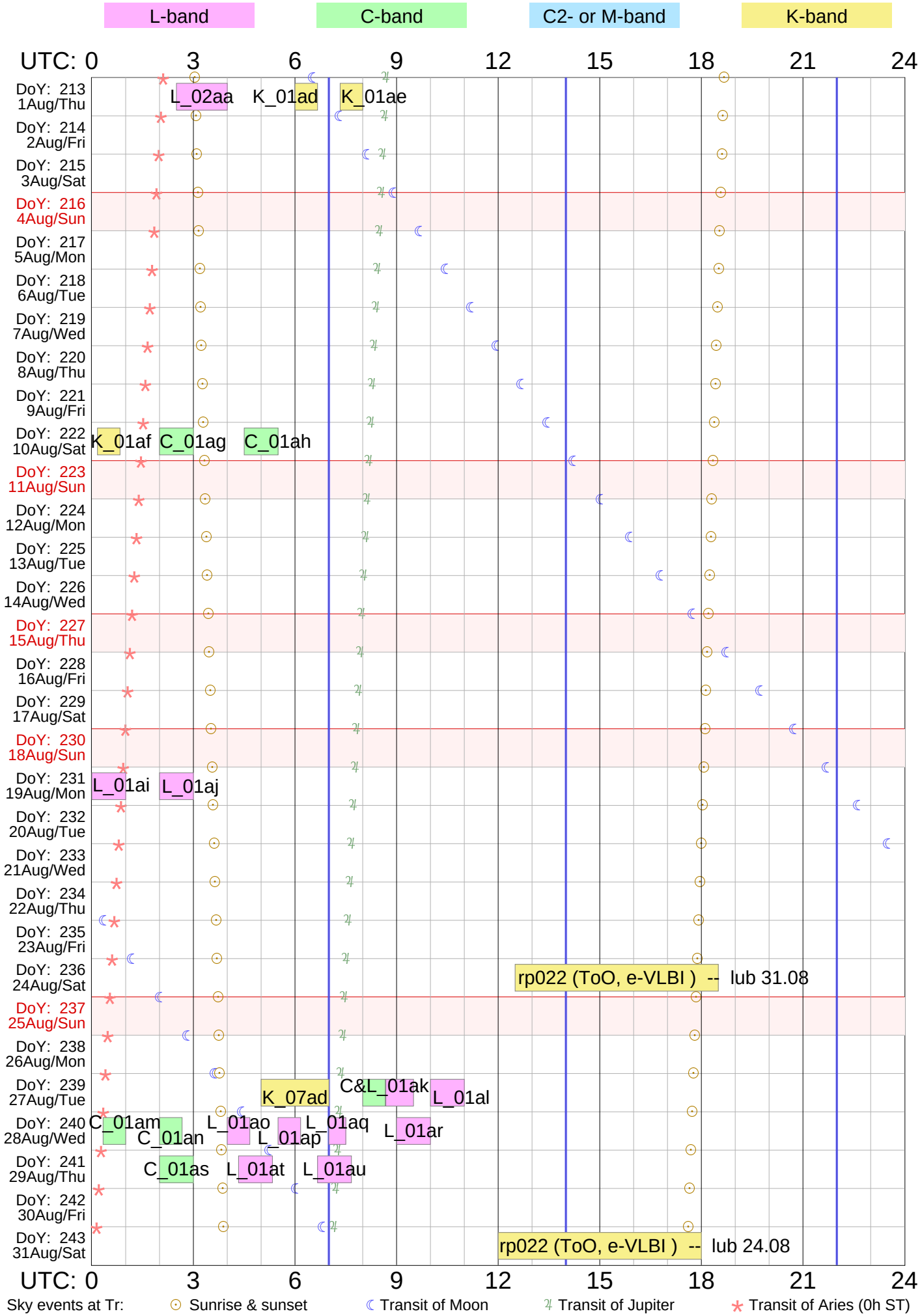
Tr RA schedule for Aug 2013 (skrypty rk....)



RadioAstron Experiments, August 2013

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`

Name	Band	DoY	D M/WD	UT_Start h m	UT_Stop h m	Disk_space _required
rk02aa	L	213	1.08/Czw	2 30	4 00	165 GB
rk01ad	K	213	1.08/Czw	6 00	6 40	74 GB
rk01ae	K	213	1.08/Czw	7 20	8 00	74 GB
rk01af	K	222	10.08/Sob	0 10	0 50	74 GB
rk01ag	C	222	10.08/Sob	2 00	3 00	110 GB
rk01ah	C	222	10.08/Sob	4 30	5 30	110 GB
rk01ai	L	231	19.08/Pon	0 00	1 00	110 GB
rk01aj	L	231	19.08/Pon	2 00	3 00	110 GB
rk07ad	K	239	27.08/Wto	5 00	7 00	220 GB
rk01ak	C&L	239	27.08/Wto	8 00	9 30	148 GB
rk01al	L	239	27.08/Wto	10 00	11 00	110 GB
rk01am	C	240	28.08/Sro	0 20	1 00	74 GB
rk01an	C	240	28.08/Sro	2 00	2 40	74 GB
rk01ao	L	240	28.08/Sro	4 00	4 40	74 GB
rk01ap	L	240	28.08/Sro	5 30	6 10	74 GB
rk01aq	L	240	28.08/Sro	7 00	7 30	56 GB
rk01ar	L	240	28.08/Sro	9 00	10 00	110 GB
rk01as	C	241	29.08/Czw	2 00	3 00	110 GB
rk01at	L	241	29.08/Czw	4 20	5 20	110 GB
rk01au	L	241	29.08/Czw	6 40	7 40	110 GB
					Sum:	2097 GB

Do zapisu obserwacji RadioAstronu dedykowany jest dyskpak

TR-00002/1600

zamontowany w baknu A. Gdyby ten się zapełnił, można użyć paka

NTO-0005/2000

zamontowanego w banku B.

rk02aatr

RadioAstron Pulsar observations

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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
--- Thu 1 Aug 2013 Day 213 ---										
---------- 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					
02 28 00	B1933+16	00 21 43	24.2	265.1	4.8		38.6	0	0	Stopped
02 29 00	---	00 22 43	24.0	265.4	4.8		38.6	60	0	
---------- Please make sure Pcal, noise diode (Tsys) and auto-level (AGC) are OFF now ----------										
02 30 00	B1933+16	00 23 43	23.9	265.6	4.8		38.6	54	0	02 30 00
02 39 30	---	00 33 15	22.4	267.5	4.9		38.7	570	18	02 30 01
02 40 00	B1933+16	00 33 45	22.4	267.6	5.0		38.7	24	18	02 40 00
02 49 30	---	00 43 17	20.9	269.5	5.1		38.7	570	36	02 40 01
02 50 00	B1933+16	00 43 47	20.8	269.6	5.1		38.7	24	36	02 50 00
02 59 30	---	00 53 18	19.4	271.5	5.3		38.7	570	55	02 50 01
03 00 00	B1933+16	00 53 48	19.3	271.6	5.3		38.7	24	55	03 00 00
03 09 30	---	01 03 20	17.9	273.5	5.4		38.6	570	73	03 00 01
03 10 00	B1933+16	01 03 50	17.8	273.6	5.5		38.6	24	73	03 10 00
03 19 30	---	01 13 22	16.4	275.5	5.6		38.5	570	91	03 10 01
03 20 00	B1933+16	01 13 52	16.3	275.6	5.6		38.5	24	91	03 20 00
03 29 30	---	01 23 23	14.9	277.4	5.8		38.3	570	109	03 20 01
03 30 00	B1933+16	01 23 53	14.8	277.5	5.8		38.3	24	109	03 30 00
03 39 30	---	01 33 25	13.4	279.4	5.9		38.1	570	128	03 30 01
03 40 00	B1933+16	01 33 55	13.4	279.5	6.0		38.1	24	128	03 40 00
03 49 30	---	01 43 27	11.9	281.3	6.1		37.8	570	146	03 40 01
03 50 00	B1933+16	01 43 57	11.9	281.4	6.1		37.8	24	146	03 50 00
04 00 00	---	01 53 58	10.4	283.4	6.3		37.5	600	165	03 50 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 /home/kirx/sched/catalogs/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:   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 = 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 /home/kirx/sched/catalogs/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:   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 = 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)
* B1933+16	19 33 31.840243	* 19 35 47.825900	19 36 26.818586	0.00
	16 09 57.71854	* 16 16 39.98600	16 18 45.42000	0.00
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 28.130513	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 38.73447	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)
B1933+16	141.7
FAKERA	68.7

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:

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

rk01adtr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 1 Aug 2013 Day 213 ---										
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	0201+113	03 54 18	43.1	218.2	1.8		22.3	0	0	06 00 00
06 09 30	---	04 03 50	42.2	221.1	2.0		23.8	570	18	06 00 01
06 10 00	0201+113	04 04 20	42.1	221.3	2.0		23.8	24	18	06 10 00
06 19 30	---	04 13 51	41.2	224.1	2.2		25.3	570	36	06 10 01
06 20 00	0201+113	04 14 21	41.1	224.2	2.2		25.3	24	36	06 20 00
06 29 30	---	04 23 53	40.1	227.0	2.3		26.6	570	55	06 20 01
06 30 00	0201+113	04 24 23	40.0	227.2	2.3		26.7	24	55	06 30 00
06 40 00	---	04 34 25	38.9	230.0	2.5		28.0	600	74	06 30 01

SETUP FILE INFORMATION:

======== Setup file: ra1cm2.set
Matching groups in /home/kirx/sched/catalogs/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:   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) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 28.103007	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 38.69202	0.00
J0203+1134	02 01 06.003328	* 02 03 46.657060	02 04 31.388840	0.10
* 0201+113	11 20 22.95393	* 11 34 45.40941	11 38 40.49361	0.10

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours Scan	Baseline
FAKERA	ra6cm2.set	2	0.642	0.000
0201+113	ra6cm2.set	1 2 3	0.642	1.925
	ra1cm2.set	4 5	0.642	0.642

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)
FAKERA	68.7
0201+113	96.2

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:

327 MHz	117. deg	8.4 GHz	17. deg
610 MHz	81. deg	15.0 GHz	12. deg
1.6 GHz	45. deg	22.0 GHz	9. deg
2.3 GHz	36. deg	43.0 GHz	6. deg
5.0 GHz	23. deg		

rk01aetr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 1 Aug 2013 Day 213 ---										
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	0149+218	05 14 31	41.0	251.0	3.4		37.8	0	0	07 20 00
07 29 30	---	05 24 03	39.7	253.3	3.5		38.4	570	18	07 20 01
07 30 00	0149+218	05 24 33	39.6	253.4	3.5		38.4	24	18	07 30 00
07 39 30	---	05 34 04	38.2	255.6	3.7		38.9	570	36	07 30 01
07 40 00	0149+218	05 34 34	38.2	255.7	3.7		38.9	24	36	07 40 00
07 49 30	---	05 44 06	36.8	257.9	3.9		39.3	570	55	07 40 01
07 50 00	0149+218	05 44 36	36.7	258.0	3.9		39.4	24	55	07 50 00
08 00 00	---	05 54 38	35.2	260.2	4.0		39.7	600	74	07 50 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 /home/kirx/sched/catalogs/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:   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) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 28.093098	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 38.67655	0.00
J0152+2207	01 49 31.744133	* 01 52 18.059044	01 53 04.550699	0.11
* 0149+218	21 52 20.74785	* 22 07 07.69973	22 11 06.30907	0.10

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours Scan	Baseline
FAKERA	ra6cm2.set	2	0.642	0.000
0149+218	ra6cm2.set	1 2 3	0.642	1.925
	ra1cm2.set	4 5	0.642	0.642

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)
FAKERA	68.7
0149+218	95.0

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:

5.0 GHz	23. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

rk01aftr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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
--- Sat 10 Aug 2013 Day 222 ---										
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 10 00	2010+723	22 38 49	65.0	-25.4	2.5		120.7	0	0	00 10 00
00 19 30	---	22 48 21	64.4	-26.3	2.6		117.7	570	18	00 10 01
00 20 00	2010+723	22 48 51	64.3	-26.3	2.7		117.6	24	18	00 20 00
00 29 30	---	22 58 23	63.7	-27.0	2.8		114.6	570	36	00 20 01
00 30 00	2010+723	22 58 53	63.7	-27.1	2.8		114.5	24	36	00 30 00
00 39 30	---	23 08 24	63.0	-27.7	3.0		111.7	570	55	00 30 01
00 40 00	2010+723	23 08 54	63.0	-27.7	3.0		111.5	24	55	00 40 00
00 50 00	---	23 18 56	62.3	-28.3	3.2		108.6	600	74	00 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 /home/kirx/sched/catalogs/freq.dat:
tr1cm Values from Bob Campbell by email (23-04-2013)

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=	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) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 26.853412	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 36.25960	0.00
J2009+7229	20 10 16.209320	* 20 09 52.303863	20 09 50.279501	0.66
* 2010+723	72 20 20.74133	* 72 29 19.35101	72 32 00.10343	0.29

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours Scan	Baseline
FAKERA	ra6cm2.set	1	0.642	0.000
2010+723	ra6cm2.set	1 2 3 7	0.967	1.925
	ra1cm2.set	4 5 6	0.950	0.642

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)
FAKERA	70.6
2010+723	91.1

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:

5.0 GHz	23. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

rk01agtr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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
--- Sat 10 Aug 2013 Day 222 ---										
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	0133+476	00 29 08	78.0	108.5	-1.1		-58.2	0	0	02 00 00
02 09 30	---	00 38 39	79.3	112.9	-1.0		-55.6	570	18	02 00 01
02 10 00	0133+476	00 39 09	79.4	113.2	-1.0		-55.5	23	18	02 10 00
02 19 30	---	00 48 41	80.6	118.6	-0.8		-51.9	570	36	02 10 01
02 20 00	0133+476	00 49 11	80.7	118.9	-0.8		-51.6	23	36	02 20 00
02 29 30	---	00 58 42	81.9	125.9	-0.7		-46.6	570	55	02 20 01
02 30 00	0133+476	00 59 12	82.0	126.3	-0.6		-46.3	22	55	02 30 00
02 39 30	---	01 08 44	83.1	135.3	-0.5		-39.1	570	73	02 30 01
02 40 00	0133+476	01 09 14	83.1	135.8	-0.5		-38.6	22	73	02 40 00
02 49 30	---	01 18 46	84.0	147.7	-0.3		-28.6	570	91	02 40 01
02 50 00	0133+476	01 19 16	84.0	148.4	-0.3		-28.0	21	91	02 50 00
03 00 00	---	01 29 17	84.7	164.4	-0.1		-13.9	600	110	02 50 01

SETUP FILE INFORMATION:

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) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 26.842201	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 36.23999	0.00
J0136+4751	01 33 55.103060	* 01 36 58.594805	01 37 50.814210	0.15
* 0133+476	47 36 12.85363	* 47 51 29.10002	47 55 30.02934	0.10

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours Scan	Baseline
FAKERA	ra6cm2.set	7	0.958	0.000
0133+476	ra6cm2.set	1 2 4	1.425	0.958
	ra1cm2.set	3 5 6	1.767	0.000

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)
FAKERA	70.6
0133+476	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
22.0 GHz	9. deg

rk01ahtr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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
--- Sat 10 Aug 2013 Day 222 ---										
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 30 00	0234+285	02 59 32	65.5	191.0	0.3		7.5	0	0	04 30 00
04 39 30	---	03 09 04	65.1	196.0	0.5		10.9	570	18	04 30 01
04 40 00	0234+285	03 09 34	65.1	196.2	0.5		11.0	23	18	04 40 00
04 49 30	---	03 19 05	64.7	201.0	0.7		14.2	570	36	04 40 01
04 50 00	0234+285	03 19 35	64.6	201.3	0.7		14.4	23	36	04 50 00
04 59 30	---	03 29 07	64.1	205.9	0.8		17.4	570	55	04 50 01
05 00 00	0234+285	03 29 37	64.0	206.1	0.8		17.6	23	55	05 00 00
05 09 30	---	03 39 09	63.3	210.6	1.0		20.4	570	73	05 00 01
05 10 00	0234+285	03 39 39	63.3	210.8	1.0		20.6	23	73	05 10 00
05 19 30	---	03 49 10	62.5	215.1	1.2		23.2	570	91	05 10 01
05 20 00	0234+285	03 49 40	62.5	215.3	1.2		23.3	23	91	05 20 00
05 30 00	---	03 59 42	61.6	219.5	1.4		25.9	600	110	05 20 01

SETUP FILE INFORMATION:

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) (B1950)	(J2000)	(Date)	Error (mas)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 26.826824	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 36.21323	0.00
J0237+2848	02 34 55.589591	* 02 37 52.405678	02 38 41.868878	0.11
* 0234+285	28 35 11.40773	* 28 48 08.98998	28 51 34.79965	0.10

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours Scan	Baseline
FAKERA	ra6cm2.set	1	0.958	0.000
0234+285	ra6cm2.set	1 2 3 6	1.425	2.875
	ra1cm2.set	4 5 7	1.442	0.958

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)
FAKERA	70.6
0234+285	91.4

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:

5.0 GHz	23. deg
15.0 GHz	12. deg
22.0 GHz	9. deg
43.0 GHz	6. deg

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 19 Aug 2013 Day 231 ---										
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	0307+380	23 04 17	45.9	83.7	-4.1		-49.5	0	0	00 00 00
00 09 30	---	23 13 48	47.3	85.5	-4.0		-49.7	570	18	00 00 01
00 10 00	0307+380	23 14 18	47.4	85.6	-4.0		-49.7	24	18	00 10 00
00 19 30	---	23 23 50	48.8	87.4	-3.8		-49.8	570	36	00 10 01
00 20 00	0307+380	23 24 20	48.9	87.5	-3.8		-49.9	24	36	00 20 00
00 29 30	---	23 33 52	50.3	89.3	-3.6		-49.9	570	55	00 20 01
00 30 00	0307+380	23 34 22	50.4	89.4	-3.6		-49.9	24	55	00 30 00
00 39 30	---	23 43 53	51.8	91.3	-3.5		-49.9	570	73	00 30 01
00 40 00	0307+380	23 44 23	51.9	91.5	-3.5		-49.9	24	73	00 40 00
00 49 30	---	23 53 55	53.3	93.4	-3.3		-49.8	570	91	00 40 01
00 50 00	0307+380	23 54 25	53.4	93.5	-3.3		-49.8	24	91	00 50 00
01 00 00	---	00 04 27	54.9	95.7	-3.1		-49.6	600	110	00 50 01

SETUP FILE INFORMATION:
======== Setup file: ra18cm2.set

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

Disk used to record data.

1st LO=	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)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 25.606911	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 33.39886	0.00
J0310+3814	03 07 37.554068	* 03 10 49.879926	03 11 43.850491	0.13
* 0307+380	38 03 34.47086	* 38 14 53.83785	38 17 49.21926	0.10

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours Scan	Baseline
FAKERA	ra18cm2.set	2	0.958	0.000
0307+380	ra18cm2.set	1 2 3 4	0.958	5.750

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)
FAKERA	72.9
0307+380	90.2

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:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
5.0 GHz	23. deg
22.0 GHz	9. deg

rk01ajtr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 19 Aug 2013 Day 231 ---										
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	0322+222	01 04 37	49.2	124.8	-2.4		-32.2	0	0	02 00 00
02 09 30	---	01 14 08	50.4	127.7	-2.2		-30.9	570	18	02 00 01
02 10 00	0322+222	01 14 38	50.4	127.9	-2.2		-30.9	24	18	02 10 00
02 19 30	---	01 24 10	51.6	130.9	-2.0		-29.4	570	36	02 10 01
02 20 00	0322+222	01 24 40	51.6	131.1	-2.0		-29.3	24	36	02 20 00
02 29 30	---	01 34 11	52.7	134.2	-1.9		-27.8	570	55	02 20 01
02 30 00	0322+222	01 34 41	52.7	134.4	-1.9		-27.7	24	55	02 30 00
02 39 30	---	01 44 13	53.7	137.7	-1.7		-26.0	570	73	02 30 01
02 40 00	0322+222	01 44 43	53.8	137.8	-1.7		-25.9	24	73	02 40 00
02 49 30	---	01 54 15	54.7	141.2	-1.5		-24.0	570	91	02 40 01
02 50 00	0322+222	01 54 45	54.7	141.4	-1.5		-23.9	24	91	02 50 00
03 00 00	---	02 04 46	55.6	145.2	-1.4		-21.8	600	110	02 50 01

SETUP FILE INFORMATION:

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

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

Disk used to record data.

1st LO=	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)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 25.600182	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 33.37004	0.00
J0325+2224	03 22 41.745723	* 03 25 36.814359	03 26 25.693537	0.11
* 0322+222	22 13 30.30087	* 22 24 00.36552	22 26 47.25201	0.10

SOURCE SCAN SUMMARY FOR SOURCES LISTED ABOVE

Scan hours are for recording scans only.
Baseline hours are only counted for scans above horizon at both ends.

Source	Setup file	Frequency sets (duplicates not shown)	Observing hours Scan	Baseline
FAKERA	ra18cm2.set	2	0.958	0.000
0322+222	ra18cm2.set	1 2 3 4	1.283	2.875

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)
FAKERA	72.9
0322+222	91.4

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:

327 MHz	117. deg
610 MHz	81. deg
1.6 GHz	45. deg
2.3 GHz	36. deg
5.0 GHz	23. deg

rk07adtr

RadioAstron Maser observations

PI: *Alexei Alakoz*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332512 EMAIL: kirx@scan.sai.msu.ru
Fax: +7-495-3332378 Phone during observation: +7-903-6614865

Observing mode: 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 / Stop UT	Source	LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
--- Tue 27 Aug 2013 Day 239 ---										
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					
05 00 00	SPER_H2O	04 36 39	70.8	-60.0	2.2		92.3	0	0	05 00 00
05 09 30	---	04 46 10	69.6	-60.1	2.4		90.2	570	18	05 00 01
05 10 00	SPER_H2O	04 46 40	69.5	-60.1	2.4		90.1	24	18	05 10 00
05 19 30	---	04 56 12	68.3	-60.0	2.5		88.1	570	36	05 10 01
05 20 00	SPER_H2O	04 56 42	68.2	-60.0	2.5		88.0	24	36	05 20 00
05 29 30	---	05 06 13	66.9	-59.8	2.7		86.1	570	55	05 20 01
05 30 00	SPER_H2O	05 06 43	66.9	-59.8	2.7		86.0	24	55	05 30 00
05 39 30	---	05 16 15	65.7	-59.6	2.9		84.2	570	73	05 30 01
05 40 00	SPER_H2O	05 16 45	65.6	-59.5	2.9		84.1	24	73	05 40 00
05 49 30	---	05 26 17	64.4	-59.2	3.0		82.4	570	91	05 40 01
05 50 00	SPER_H2O	05 26 47	64.3	-59.2	3.0		82.3	24	91	05 50 00
05 59 30	---	05 36 18	63.1	-58.8	3.2		80.6	570	109	05 50 01
06 00 00	SPER_H2O	05 36 48	63.0	-58.7	3.2		80.6	24	109	06 00 00
06 09 30	---	05 46 20	61.8	-58.3	3.4		78.9	570	128	06 00 01
06 10 00	SPER_H2O	05 46 50	61.7	-58.2	3.4		78.9	24	128	06 10 00
06 19 30	---	05 56 22	60.5	-57.7	3.5		77.3	570	146	06 10 01
06 20 00	SPER_H2O	05 56 52	60.4	-57.7	3.5		77.2	24	146	06 20 00
06 29 30	---	06 06 23	59.2	-57.1	3.7		75.7	570	164	06 20 01
06 30 00	SPER_H2O	06 06 53	59.2	-57.1	3.7		75.6	24	164	06 30 00
06 39 30	---	06 16 25	58.0	-56.4	3.9		74.1	570	182	06 30 01
06 40 00	SPER_H2O	06 16 55	57.9	-56.4	3.9		74.0	24	182	06 40 00
06 49 30	---	06 26 27	56.7	-55.8	4.0		72.5	570	201	06 40 01
06 50 00	SPER_H2O	06 26 57	56.7	-55.7	4.1		72.5	24	201	06 50 00
07 00 00	---	06 36 58	55.4	-55.0	4.2		70.9	600	220	06 50 01

SETUP FILE INFORMATION:

```
 ======== Setup file: ra1cm2.set
   Matching groups in /home/kirx/sched/catalogs/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:   4  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:   4

  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)

 * SPER_H2O           02 19 15.086020   * 02 22 51.710600     02 23 53.947657       0.00
                      58 21 33.45296    * 58 35 11.44400      58 38 42.67185        0.00

 * FAKERA             11 57 21.769299   * 12 00 00.000000     12 00 24.738725       0.00
                      85 16 41.77889    * 85 00 00.00000      84 55 30.81900        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)
   SPER_H2O             96.2
   FAKERA               75.4
```

rk01aktr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

Observing mode: C & L band, dual-pol

****
========== Uwaga: dwa pasma; 10 minut na zmiane ==========
****

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 27 Aug 2013 Day 239 ---										
---------- 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					
08 00 00	0235+164	07 37 08	22.6	267.9	5.0		38.8	0	0	08 00 00
08 09 30	---	07 46 40	21.1	269.8	5.1		38.8	570	18	08 00 01
08 10 00	0235+164	07 47 10	21.1	269.9	5.1		38.8	24	18	08 10 00
08 19 30	---	07 56 41	19.6	271.8	5.3		38.8	570	36	08 10 01
08 20 00	0235+164	07 57 11	19.6	271.9	5.3		38.8	24	36	08 20 00
08 29 30	---	08 06 43	18.1	273.8	5.5		38.7	570	55	08 20 01
08 30 00	0235+164	08 07 13	18.1	273.9	5.5		38.7	24	55	08 30 00
08 40 00	---	08 17 15	16.6	275.9	5.6		38.6	600	74	08 30 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					
08 50 00	0235+164	08 27 16	15.1	277.8	5.8		38.4	593	74	08 50 00
08 59 30	---	08 36 48	13.7	279.7	6.0		38.2	570	92	08 50 01
09 00 00	0235+164	08 37 18	13.6	279.8	6.0		38.2	24	92	09 00 00
09 09 30	---	08 46 50	12.2	281.6	6.1		37.9	570	110	09 00 01
09 10 00	0235+164	08 47 20	12.1	281.7	6.1		37.9	24	110	09 10 00
09 19 30	---	08 56 51	10.7	283.6	6.3		37.5	570	129	09 10 01
09 20 00	0235+164	08 57 21	10.6	283.7	6.3		37.5	24	129	09 20 00
09 30 00	---	09 07 23	9.2	285.6	6.5		37.1	600	148	09 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 /home/kirx/sched/catalogs/freq.dat:
     tr6cm           E-mail Borkowski 23Apr03 (CR 1May03)

   Setup group:    3         Station: TORUN            Total bit rate:   256
   Format: MKIV1:4           Bits per sample: 2        Sample rate: 32.000
   Number of channels:  4    DBE type:                 Speedup factor:   1.00

   Disk used to record data.

   1st LO=   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 /home/kirx/sched/catalogs/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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.724331     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.77519      0.00

  J0238+1636        02 35 52.630215   * 02 38 38.930107     02 39 25.829782     0.10
* 0235+164          16 24 04.01608    * 16 36 59.27450      16 40 31.10577      0.10


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)
  FAKERA              75.4
  0235+164           111.6

 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:
      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
```

rk01altr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 27 Aug 2013 Day 239 ---										
---------- 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					
10 00 00	0406+121	09 37 28	14.7	271.0	5.5		37.9	0	0	10 00 00
10 09 30	---	09 46 59	13.3	272.9	5.6		37.9	570	18	10 00 01
10 10 00	0406+121	09 47 29	13.2	273.0	5.6		37.9	24	18	10 10 00
10 19 30	---	09 57 01	11.8	274.9	5.8		37.8	570	36	10 10 01
10 20 00	0406+121	09 57 31	11.7	275.0	5.8		37.8	24	36	10 20 00
10 29 30	---	10 07 03	10.3	276.9	5.9		37.6	570	55	10 20 01
10 30 00	0406+121	10 07 33	10.2	277.0	6.0		37.6	24	55	10 30 00
10 39 30	---	10 17 04	8.8	278.8	6.1		37.4	570	73	10 30 01
10 40 00	0406+121	10 17 34	8.7	278.9	6.1		37.4	24	73	10 40 00
10 49 30	---	10 27 06	7.3	280.8	6.3		37.1	570	91	10 40 01
10 50 00	0406+121	10 27 36	7.2	280.9	6.3		37.1	24	91	10 50 00
11 00 00	---	10 37 38	5.8	282.9	6.5		36.8	600	110	10 50 01

```
SETUP FILE INFORMATION:

   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)

 * FAKERA             11 57 21.769299   * 12 00 00.000000     12 00 24.714825       0.00
                      85 16 41.77889    * 85 00 00.00000      84 55 30.74586        0.00

   J0409+1217         04 06 35.476886   * 04 09 22.008712     04 10 08.388658       0.11
 * 0406+121           12 09 49.31039    * 12 17 39.84765      12 19 45.90597        0.11


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)
   FAKERA              75.4
   0406+121            91.4
```

rk01amtr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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	Start / Stop LST	EL	AZ	HA	UP	ParA	Early Dwell	Disk GBytes	TPStart SYNC
Stop UT										
--- Wed 28 Aug 2013 Day 240 ---										
---------- 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 20 00	0340+362	23 59 49	48.1	90.2	-3.7		-48.3	0	0	00 20 00
00 29 30	---	00 09 21	49.5	92.1	-3.6		-48.2	570	18	00 20 01
00 30 00	0340+362	00 09 51	49.6	92.2	-3.6		-48.2	24	18	00 30 00
00 39 30	---	00 19 22	51.0	94.2	-3.4		-48.1	570	36	00 30 01
00 40 00	0340+362	00 19 52	51.1	94.3	-3.4		-48.1	24	36	00 40 00
00 49 30	---	00 29 24	52.5	96.4	-3.2		-47.9	570	55	00 40 01
00 50 00	0340+362	00 29 54	52.6	96.5	-3.2		-47.8	24	55	00 50 00
01 00 00	---	00 39 56	54.1	98.8	-3.1		-47.5	600	74	00 50 01

SETUP FILE INFORMATION:

======== Setup file: ra6cm2.set
Matching groups in /home/kirx/sched/catalogs/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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.648953     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.53291      0.00

  J0343+3622        03 40 14.791318   * 03 43 28.952407     03 44 23.421452     0.13
* 0340+362          36 12 44.44787    * 36 22 12.42957      36 24 37.49904      0.11


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)
  FAKERA              75.6
  0340+362            92.7

 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:
      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
```

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 28 Aug 2013 Day 240 ---									
---------- 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 0356+322	01 40 06	57.5	115.4	-2.3		-40.0	0	0	02 00 00
02 09 30 ---	01 49 37	58.7	118.3	-2.2		-38.7	570	18	02 00 01
02 10 00 0356+322	01 50 07	58.8	118.5	-2.2		-38.7	24	18	02 10 00
02 19 30 ---	01 59 39	60.0	121.6	-2.0		-37.3	570	36	02 10 01
02 20 00 0356+322	02 00 09	60.1	121.8	-2.0		-37.2	24	36	02 20 00
02 29 30 ---	02 09 40	61.3	125.1	-1.8		-35.6	570	55	02 20 01
02 30 00 0356+322	02 10 10	61.4	125.3	-1.8		-35.5	24	55	02 30 00
02 40 00 ---	02 20 12	62.6	129.0	-1.7		-33.6	600	74	02 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 /home/kirx/sched/catalogs/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)

* FAKERA           11 57 21.769299   * 12 00 00.000000     12 00 24.641567      0.00
                   85 16 41.77889    * 85 00 00.00000      84 55 30.50786       0.00

  J0359+3220       03 56 34.795463   * 03 59 44.912919     04 00 38.079719      0.17
* 0356+322         32 12 19.24956    * 32 20 47.15553      32 22 56.53697       0.20



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)
  FAKERA              75.7
  0356+322            90.4

 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:
      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
```

rk01aotr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 28 Aug 2013 Day 240 ---										
---------- 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	0420+022	03 40 25	38.5	166.2	-0.7		-8.3	0	0	04 00 00
04 09 30	---	03 49 57	38.8	169.2	-0.6		-6.5	570	18	04 00 01
04 10 00	0420+022	03 50 27	38.8	169.4	-0.6		-6.4	24	18	04 10 00
04 19 30	---	03 59 58	39.0	172.4	-0.4		-4.6	570	36	04 10 01
04 20 00	0420+022	04 00 29	39.0	172.6	-0.4		-4.5	24	36	04 20 00
04 29 30	---	04 10 00	39.2	175.6	-0.2		-2.6	570	55	04 20 01
04 30 00	0420+022	04 10 30	39.2	175.8	-0.2		-2.5	24	55	04 30 00
04 40 00	---	04 20 32	39.3	179.0	-0.1		-0.6	600	74	04 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 /home/kirx/sched/catalogs/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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.632782     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.47772      0.00

  J0422+0219        04 20 16.064039   * 04 22 52.214653     04 23 35.605831     0.10
* 0420+022          02 12 29.61655    * 02 19 26.93073      02 21 21.55810      0.10


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)
  FAKERA              75.7
  0420+022            90.6

 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:
      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
```

rk01aptr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 28 Aug 2013 Day 240 ---									
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 30 00 0420-014	05 10 40	34.7	194.2	0.8		8.5	0	0	05 30 00
05 39 30 ---	05 20 12	34.3	197.1	0.9		10.2	570	18	05 30 01
05 40 00 0420-014	05 20 42	34.3	197.3	0.9		10.3	24	18	05 40 00
05 49 30 ---	05 30 13	33.9	200.1	1.1		11.9	570	36	05 40 01
05 50 00 0420-014	05 30 43	33.8	200.2	1.1		12.0	24	36	05 50 00
05 59 30 ---	05 40 15	33.3	203.0	1.3		13.6	570	55	05 50 01
06 00 00 0420-014	05 40 45	33.3	203.2	1.3		13.7	24	55	06 00 00
06 10 00 ---	05 50 47	32.6	206.0	1.4		15.3	600	74	06 00 01

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

======== Setup file: ra18cm2.set
Matching groups in /home/kirx/sched/catalogs/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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.626250     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.45507      0.00

  J0423-0120         04 20 43.539850   * 04 23 15.800727     04 23 58.095481     0.10
* 0420-014          -01 27 28.70025    *-01 20 33.06555     -01 18 37.65101     0.10


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)
  FAKERA              75.7
  0420-014            91.1

 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:
      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
```

rk01aqtr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 28 Aug 2013 Day 240 ---										
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					
07 00 00	0422+004	06 40 55	30.5	220.3	2.3		22.8	0	0	07 00 00
07 09 30	---	06 50 26	29.5	222.8	2.4		24.1	570	18	07 00 01
07 10 00	0422+004	06 50 56	29.5	222.9	2.4		24.1	24	18	07 10 00
07 19 30	---	07 00 28	28.5	225.4	2.6		25.3	570	36	07 10 01
07 20 00	0422+004	07 00 58	28.4	225.5	2.6		25.4	24	36	07 20 00
07 30 00	---	07 11 00	27.3	228.1	2.8		26.5	600	56	07 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 /home/kirx/sched/catalogs/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)
* FAKERA	11 57 21.769299	* 12 00 00.000000	12 00 24.619768	0.00
	85 16 41.77889	* 85 00 00.00000	84 55 30.43237	0.00
J0424+0036	04 22 12.515417	* 04 24 46.842063	04 25 29.712280	0.10
* 0422+004	00 29 16.67917	* 00 36 06.32935	00 37 59.39956	0.11

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)
FAKERA	75.7
0422+004	90.5

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:

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

rk01artr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 28 Aug 2013 Day 240 ---										
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					
09 00 00	0406+121	08 41 15	23.1	259.5	4.5		37.2	0	0	09 00 00
09 09 30	---	08 50 46	21.7	261.5	4.7		37.4	570	18	09 00 01
09 10 00	0406+121	08 51 16	21.6	261.6	4.7		37.5	24	18	09 10 00
09 19 30	---	09 00 48	20.2	263.6	4.8		37.6	570	36	09 10 01
09 20 00	0406+121	09 01 18	20.1	263.7	4.9		37.7	24	36	09 20 00
09 29 30	---	09 10 49	18.7	265.7	5.0		37.8	570	55	09 20 01
09 30 00	0406+121	09 11 19	18.6	265.8	5.0		37.8	24	55	09 30 00
09 39 30	---	09 20 51	17.2	267.7	5.2		37.9	570	73	09 30 01
09 40 00	0406+121	09 21 21	17.1	267.8	5.2		37.9	24	73	09 40 00
09 49 30	---	09 30 53	15.7	269.7	5.3		37.9	570	91	09 40 01
09 50 00	0406+121	09 31 23	15.6	269.8	5.4		37.9	24	91	09 50 00
10 00 00	---	09 41 24	14.1	271.8	5.5		37.9	600	110	09 50 01

SETUP FILE INFORMATION:

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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.611203     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.40204      0.00

  J0409+1217        04 06 35.476886   * 04 09 22.008712     04 10 08.419570     0.11
* 0406+121          12 09 49.31039    * 12 17 39.84765      12 19 45.97519      0.11



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)
  FAKERA              75.8
  0406+121            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:
      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
```

rk01astr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 29 Aug 2013 Day 241 ---										
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	0420+022	01 44 02	29.6	132.6	-2.7		-26.3	0	0	02 00 00
02 09 30	---	01 53 34	30.6	135.0	-2.5		-25.1	570	18	02 00 01
02 10 00	0420+022	01 54 04	30.6	135.2	-2.5		-25.1	24	18	02 10 00
02 19 30	---	02 03 35	31.6	137.7	-2.3		-23.9	570	36	02 10 01
02 20 00	0420+022	02 04 05	31.7	137.8	-2.3		-23.8	24	36	02 20 00
02 29 30	---	02 13 37	32.6	140.4	-2.2		-22.5	570	55	02 20 01
02 30 00	0420+022	02 14 07	32.7	140.6	-2.2		-22.4	24	55	02 30 00
02 39 30	---	02 23 39	33.5	143.2	-2.0		-21.1	570	73	02 30 01
02 40 00	0420+022	02 24 09	33.6	143.3	-2.0		-21.0	24	73	02 40 00
02 49 30	---	02 33 40	34.4	146.0	-1.8		-19.6	570	91	02 40 01
02 50 00	0420+022	02 34 10	34.5	146.2	-1.8		-19.6	24	91	02 50 00
03 00 00	---	02 44 12	35.3	149.1	-1.7		-18.0	600	110	02 50 01

SETUP FILE INFORMATION:

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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.542101     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.14157      0.00

  J0422+0219        04 20 16.064039   * 04 22 52.214653     04 23 35.635204     0.10
* 0420+022          02 12 29.61655    * 02 19 26.93073      02 21 21.62554      0.10


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)
  FAKERA              76.0
  0420+022            91.4

 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:
      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
```

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 29 Aug 2013 Day 241 ---										
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 20 00	0420-014	04 04 25	35.4	174.0	-0.3		-3.6	0	0	04 20 00
04 29 30	---	04 13 57	35.6	176.9	-0.2		-1.8	570	18	04 20 01
04 30 00	0420-014	04 14 27	35.6	177.1	-0.2		-1.8	24	18	04 30 00
04 39 30	---	04 23 58	35.6	180.0	0.0		0.0	570	36	04 30 01
04 40 00	0420-014	04 24 28	35.6	180.2	0.0		0.1	24	36	04 40 00
04 49 30	---	04 34 00	35.6	183.1	0.2		1.9	570	55	04 40 01
04 50 00	0420-014	04 34 30	35.5	183.2	0.2		1.9	24	55	04 50 00
04 59 30	---	04 44 02	35.4	186.2	0.3		3.7	570	73	04 50 01
05 00 00	0420-014	04 44 32	35.4	186.3	0.3		3.8	24	73	05 00 00
05 09 30	---	04 54 03	35.2	189.2	0.5		5.5	570	91	05 00 01
05 10 00	0420-014	04 54 33	35.2	189.4	0.5		5.6	24	91	05 10 00
05 20 00	---	05 04 35	34.9	192.4	0.7		7.4	600	110	05 10 01

SETUP FILE INFORMATION:

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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.533146     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.10550      0.00

  J0423-0120        04 20 43.539850   * 04 23 15.800727     04 23 58.125790     0.10
* 0420-014         -01 27 28.70025    *-01 20 33.06555     -01 18 37.58063     0.10


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)
  FAKERA              76.0
  0420-014            92.0

 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
```

rk01autr

RadioAstron AGN Survey

PI: *Yuri Kovalev*

Address: ASC Lebedev Profsoyuznaya 84/32 117997 Moscow, Russia
Phone: +7-495-3332167 EMAIL: yyk@asc.rssi.ru
Fax: +7-495-3332378 Phone during observation: +7-915-1546281

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 29 Aug 2013 Day 241 ---										
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 40 00	0422+004	06 24 48	32.0	215.9	2.0		20.6	0	0	06 40 00
06 49 30	---	06 34 20	31.1	218.5	2.1		22.0	570	18	06 40 01
06 50 00	0422+004	06 34 50	31.1	218.6	2.2		22.0	24	18	06 50 00
06 59 30	---	06 44 21	30.2	221.2	2.3		23.3	570	36	06 50 01
07 00 00	0422+004	06 44 51	30.1	221.3	2.3		23.4	24	36	07 00 00
07 09 30	---	06 54 23	29.1	223.8	2.5		24.6	570	55	07 00 01
07 10 00	0422+004	06 54 53	29.1	224.0	2.5		24.6	24	55	07 10 00
07 19 30	---	07 04 25	28.1	226.4	2.6		25.8	570	73	07 10 01
07 20 00	0422+004	07 04 55	28.0	226.5	2.7		25.8	24	73	07 20 00
07 29 30	---	07 14 26	27.0	228.9	2.8		26.9	570	91	07 20 01
07 30 00	0422+004	07 14 56	26.9	229.1	2.8		27.0	24	91	07 30 00
07 40 00	---	07 24 58	25.7	231.6	3.0		28.1	600	110	07 30 01

SETUP FILE INFORMATION:

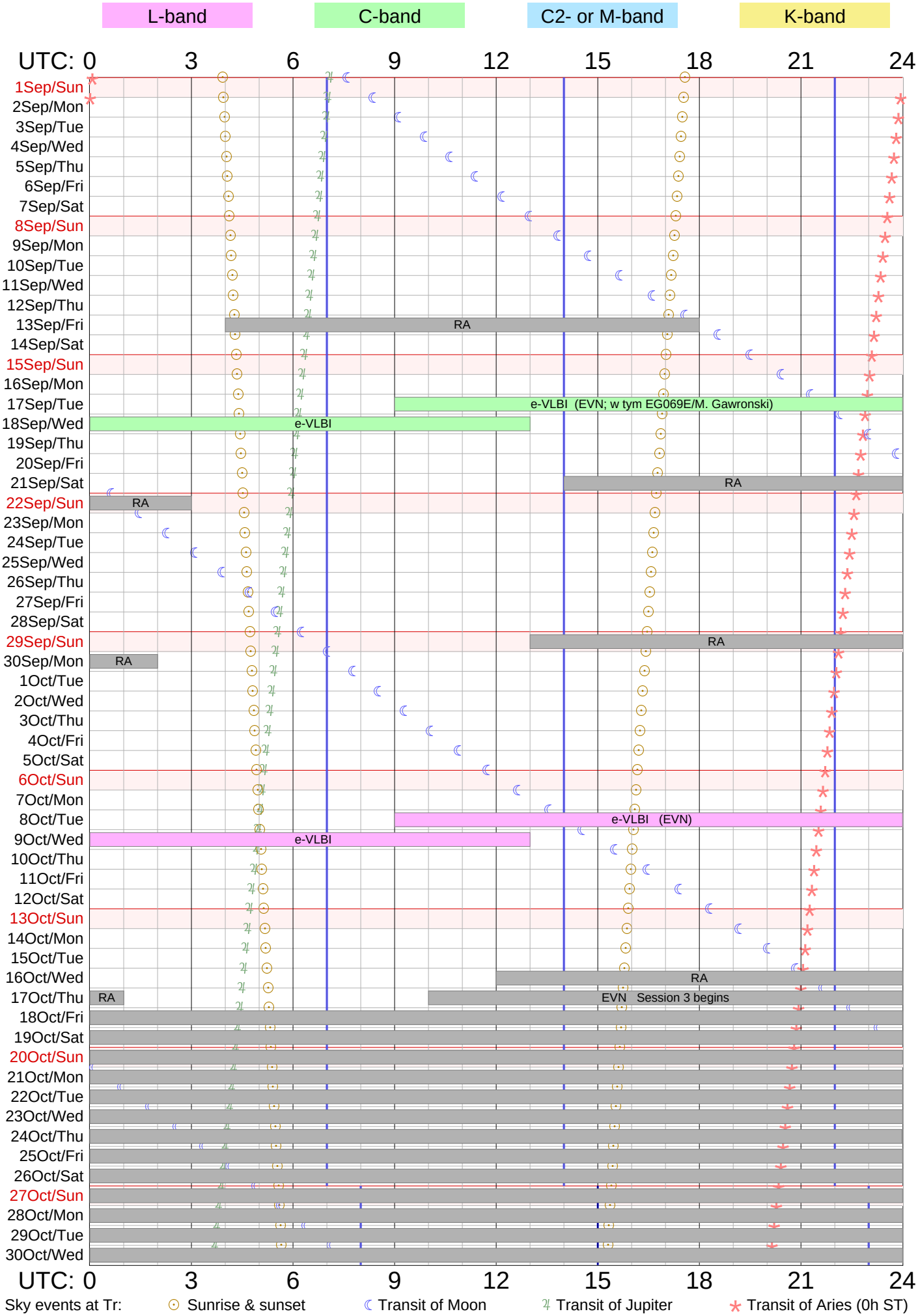
Setup group: 5 Station: TORUN Total bit rate: 256
Format: MKIV1:4 Bits per sample: 2 Sample rate: 32.000
Number of channels: 4 DBE type: Speedup factor: 1.00

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)

* FAKERA            11 57 21.769299   * 12 00 00.000000     12 00 24.524320     0.00
                    85 16 41.77889    * 85 00 00.00000      84 55 30.06937      0.00

  J0424+0036        04 22 12.515417   * 04 24 46.842063     04 25 29.743893     0.10
* 0422+004          00 29 16.67917    * 00 36 06.32935      00 37 59.47321      0.11



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)
  FAKERA              76.0
  0422+004            91.4

 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:
      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
```

Provisional schedule for Sep/Oct 2013



Contents