Parkes ATUC Report May 2007

Observing statistics

(Oct06-Sep07 cf 05/06, 2005, 2004, 2003, 2002)

- Scheduled observing:

  78% 79% 74%, 74%, 64.5%, 82%

- Director's Time:

  8% 9%, 17%, 11.5%, 6.7%, ..

- Maintenance/tests/shutdown:

  14% 12%, 9%, 10%, 26%, 18.0%

Parkes downtime statistics

YTD 2007 2006, 2005, 2004, 2003, 2002

equipment faults:

<0.4% 1.0%, 1.1%, 1.1%, 1.3%, 1.4%

Weather:

3.4% 3.6%, 2.2%, 3.1%, 3.8%, 3.8%

RFI reports:

1 17, 12, 6, 18, 11

Parkes observer feedback

2006/07 (2005/06, 2004, 2003, 2002, 2001)

- 22 (33, 24, 37,26,34) responses using WWW form

9.5 (9.2, 9.5, 9.2, 9.2, 9.1) Tech support
9.3 (9.2, 9.3, 9.0, 9.1, 9.2) Admin support
8.9 (8.9, 9.3, 8.8, 9.0,) Training
9.0 (8.8, 8.7, 8.9, 8.5, 8.8) Overall

9.2 (8.4, 7.8, 8.3, 7.4, 7.7) Offline software
8.1 (7.9, 7.7, 7.6, 7.4, 7.6) Documentation
7.1 (7.8, 70, 7.2, 6.1, 6.7) RFI (freedom from)

8.6 (7.9, 78, 8.0 …) Offline computing (Linux wkstns)
8.8 (7.7, 7.9, 6.9, 8.3 …) Library (visitor workspace)

Major works

28 Nov 2006: 3-week shutdown

- Remove 20cm Multibeam for refurb phase-2
- Refurbish azimuth gears (3 weeks)

March 2007 - PDFB2

8 May 2007 -reinstall 20cm MB

Nov-Dec 2007 - New K-band receiver (16-26GHz)

12m test-bed XNTD antenna

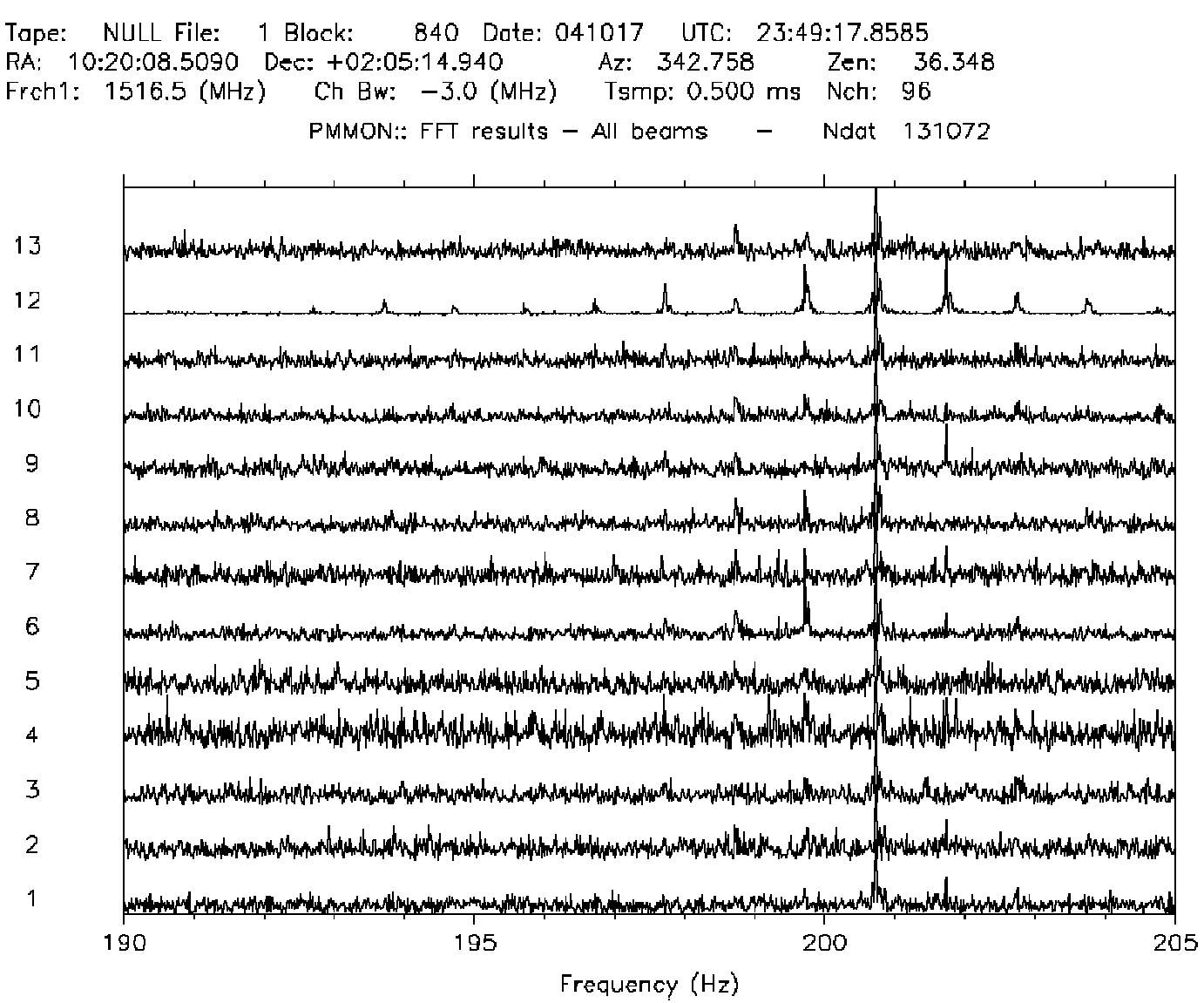
20cm Multibeam receiver

28 Nov 2006 – 17 May 2006

offline for 5.5 months

Current status:

- Refurb on track.
- Microphonics problem understood and rectified
- All original LNAs now replaced
- Refrigeration re-vamped: under test.


Tape: NULL File: 1 Block: 840 Date: 041017 UTC: 23:49:17.8585
RA: 10:20:08.5090 Dec: +02:05:14.940 Az: 342.758 Zen: 36.348
Frch1: 1516.5 (MHz) Ch Bw: −3.0 (MHz) Tsmp: 0.500 ms Nch: 96
PMMON:: FFT results − All beams − Ndat 131072
13
12
11
10
9
8
7
6
5
4
3
2
1
190
195
200
205
Frequency (Hz)

XNTD test-bed antenna

12m Patriot antenna at Parkes

- test-bed for FPA development
- Located ~400m East of 64m
- Site preparations on track
- Antenna complete November(?)
- Stand-alone + interferometer

- FPA copy for the 64m?

Observing: current active areas

- GASS complete (Nov 2006)
- Methanol Survey(s) on track
- Pulsar timing
  - PDFB3, APSR
- Polarimetry
  - Pulsar
  - Continuum
- eVLBI

Pulsar DFB Mark2

- Prototype DFB installed June 2005
  - 256MHz BW, limits on fast folding
- PDFB2 installed March 2007,
  - Single CABB board
  - Working well, currently being debugged.
  - Limited to 512MHz BW
- PDFB2.1 shortly
  - 1GHz BW (replacement CABB board)
- PDFB3 coming
  - 2 CABB boards

K-band (13mm) upgrade

New receiver package under construction;

- single horn, dual polarization
- 50~60K, 200-220Jy SEFD (5db improvement)
- 1GHz bandwidth (c.f. e-VLBI)
- 16-26GHz coverage (linear pol)
- VLBI option for ~22GHz (circ pol)