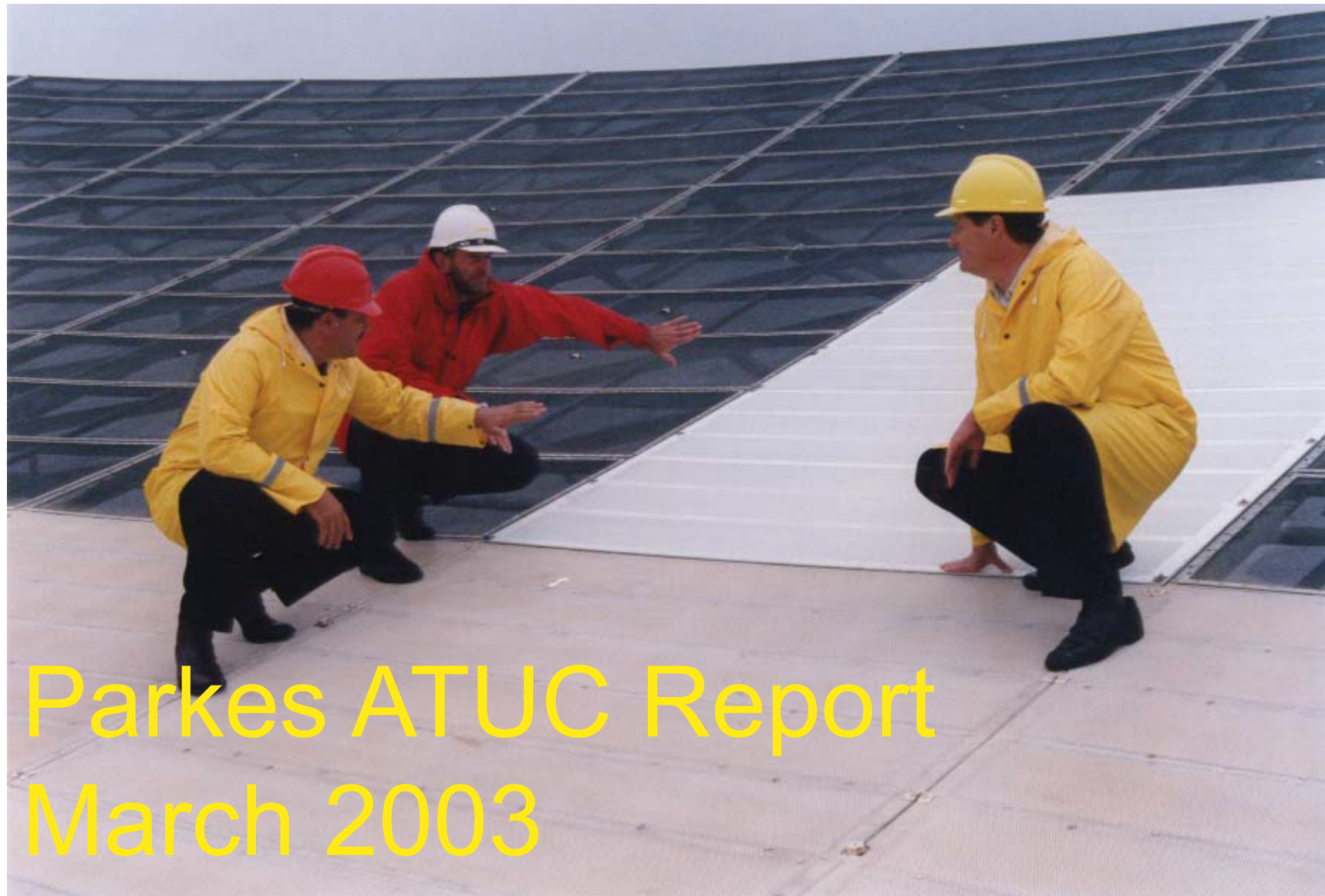




Parkes ATUC Report March 2003

Parkes staff changes

- New receiver engineer – Brett Dawson
(Harry Fagg position)
receiver development, measurement
- New receiver technician – David Catlin
(Martin McColl position)
receiver operations, cryogenics
- Admin Trainee - Bonnie Lanzarini

Parkes observing statistics

(full year 2002, cf 2001)

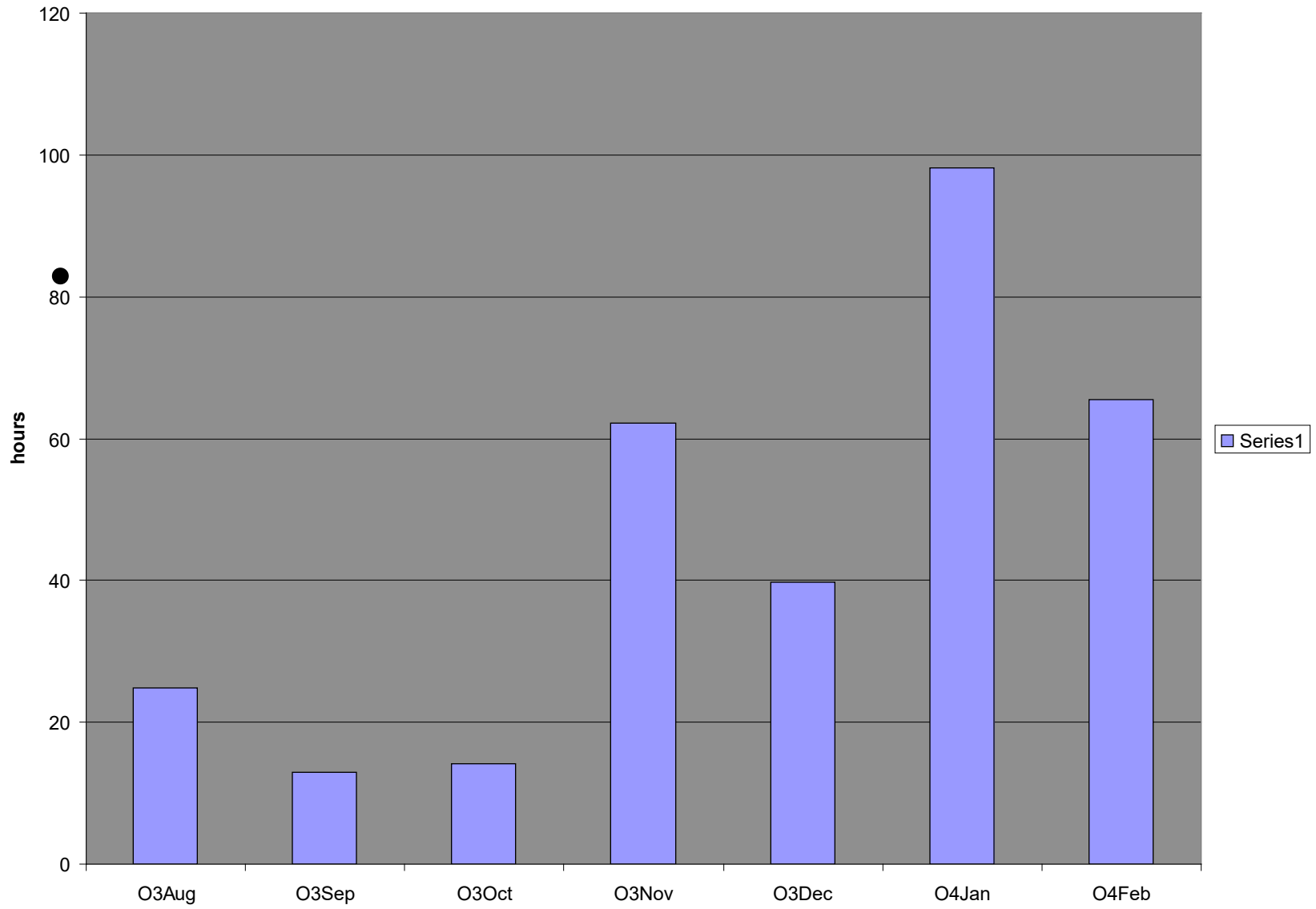
- 81.6% (82.0%) Scheduled observing
Includes 4.0% “HiPARK” zenith strip survey
- 18.4% (18.0%) Maintenance/tests/shutdown

Parkes downtime statistics

(full year 2002)

- 1.2% (1.4%) equipment faults
- 3.8% (2.8%) weather
- > 1% RFI

Hours lost to wind, by month



Parkes observer feedback

Last 6 months (year 2002, year 2001)

- 17 (26,34) responses (WWW form)
- Extreme scores
 - 9.3 (9.2, 9.1) Tech support (in/out of normal hours)
 - 9.2 (9.1, 9.2) Admin support
 - 9.1 (8.5, 8.8) Overall
 -
 - 8.8 (8.3, 7.7) Library
 - 7.5 (7.4, 7.6) Documentation
 - 7.8 (6.1, 6.7) RFI (freedom from)
 - 8.1 (7.4, 7.7) Offline software (spectral-line reduction)

Major Works

- Sep-Oct 2002
 - Elevation gearboxes: replace all moving parts
 - Regrind rack gears to correct shape
- Mar-Apr 2003
 - Install new high-performance panels
- Sep 2003 – Mar 2004
 - NASA tracking
- 2004 – 2nd half
 - Repaint surface, backing structure

New developments

- Wideband (1GHz) correlator + TCS
- Swinburne 1Gb/s pulsar timing system
- “Dither” mode for baseline ripple (untested)
- 10/50cm receiver (August 2003)
 - January test fit went well
- 6GHz Methanol receiver (May 2004 ??)

CPSR2

- Shielded racks ready soon!



Receiver maintenance

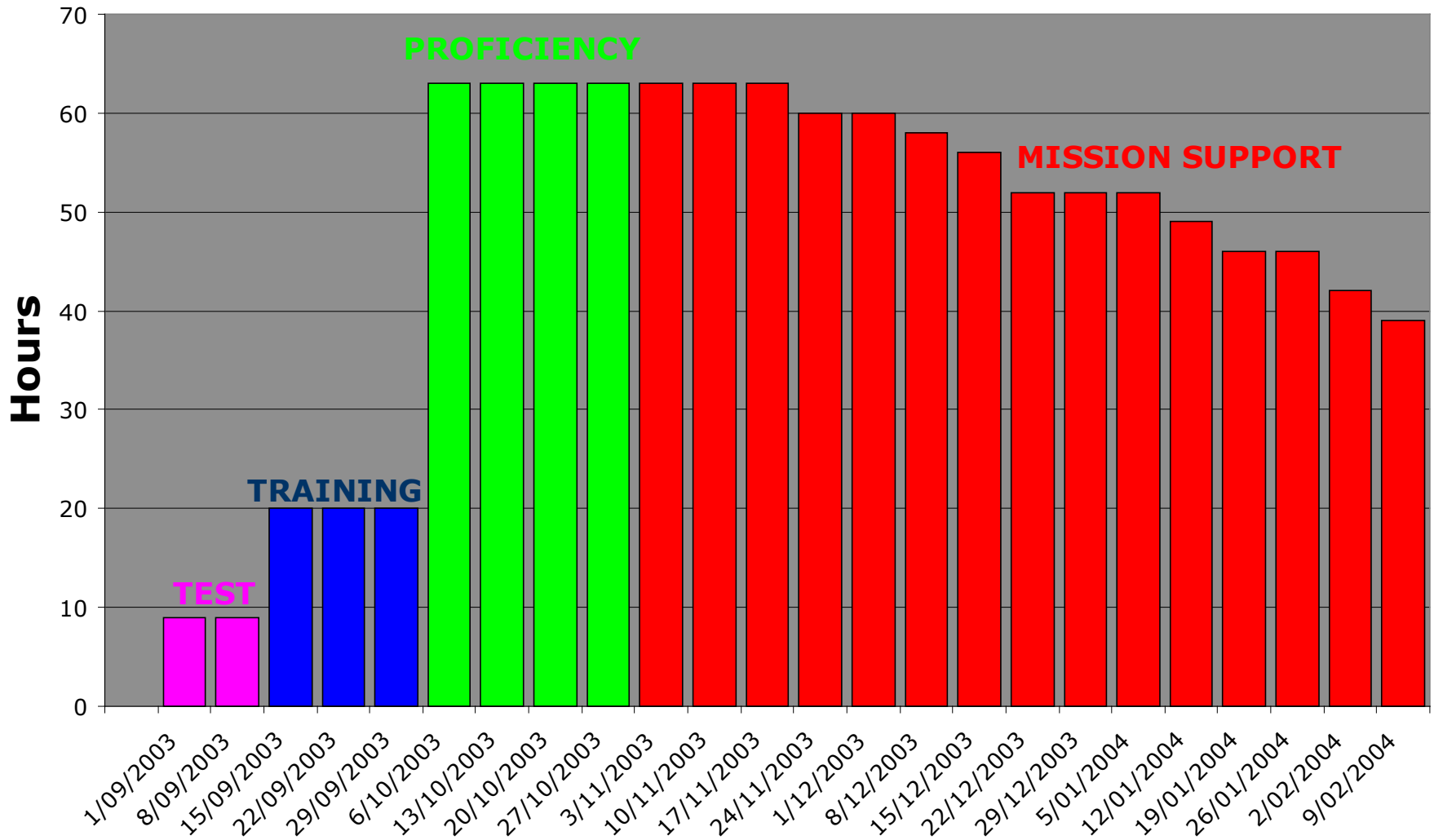
- SETI receiver has returned : now what?
- Upgrade K-band receiver
 - $\sim \times 2$ improvement in sensitivity
 - wider bandwidth : 18~25GHz

Several other older receivers need work

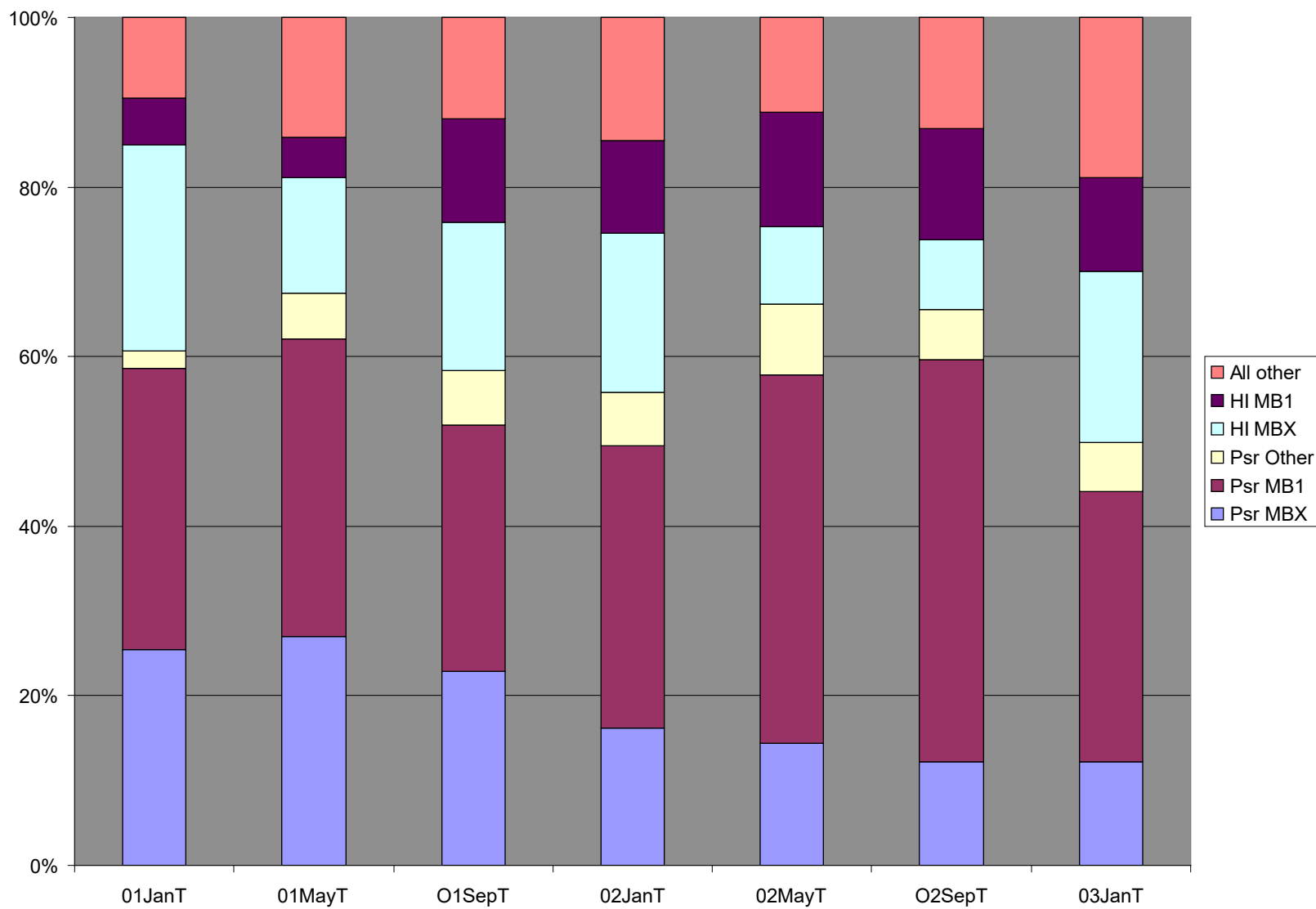
JPL tracking contract

- Extension of perforated panels: 44 → 54m (wind loading?)
- New X-band (8.4GHz) receiver
- Tracking (Sep 03 - Mar 04)
 - 8 hours/day: 22h, -16d ⇒ 03h, +17d

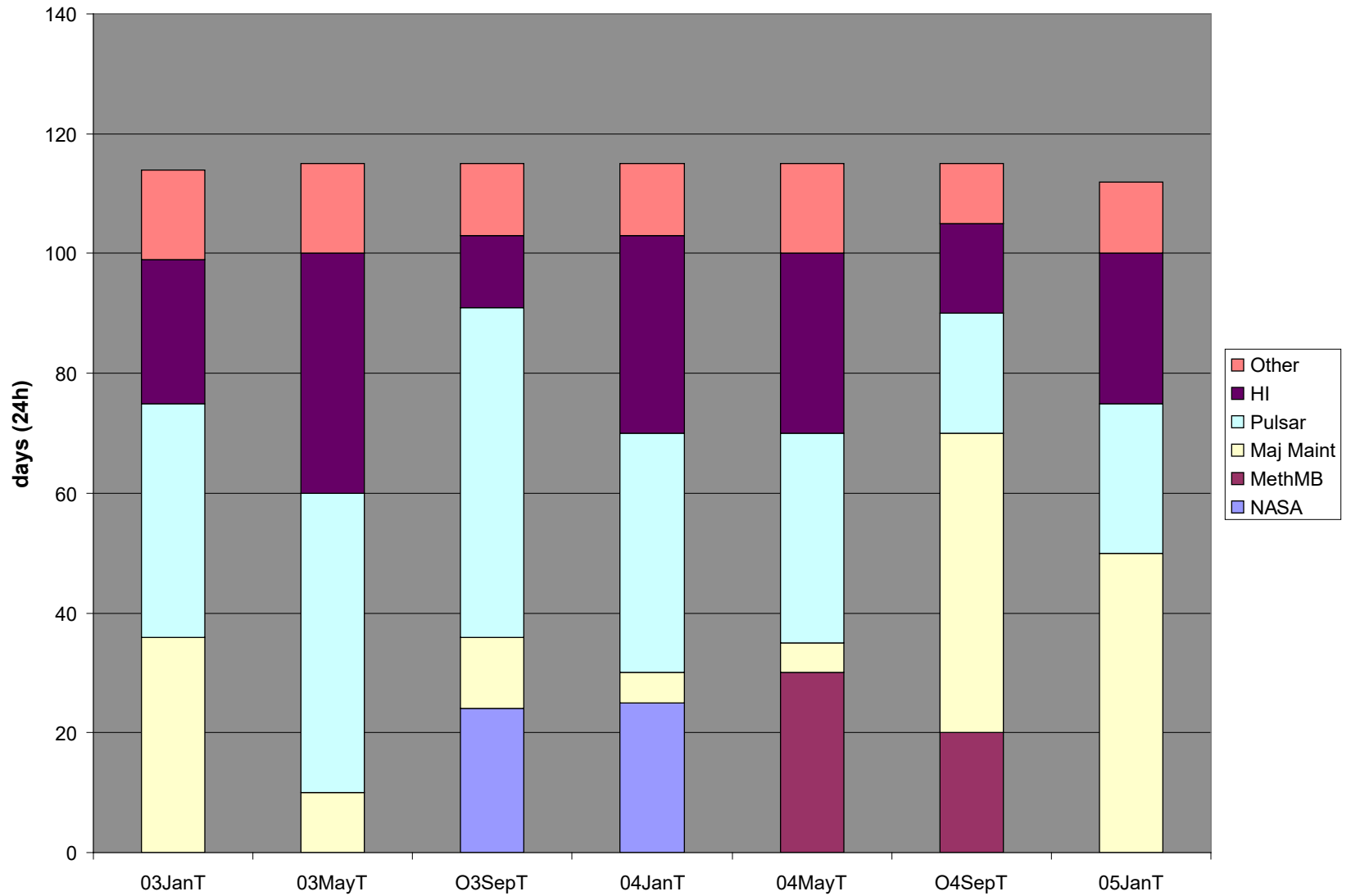
Mars Tracking



Parkes Multibeam usage 2001-03



Parkes predicted usage, 2003-04



Multibeam receiver status

- 1 dead channel (10A), more showing problems
- 15+ new LNAs being built;
- Remove MB when 10/50cm delivered, ~4 month refurbishment period?

Other stuff

- Single-dish reduction software
 - SPC still in use! AIPS++??
- Library
 - Keep paper journals of “big four”
- Quarters refurbishment
 - Started, using local labour
- RFI : Parkes airport beacon
 - Moved from 1168MHz to 1018MHz

