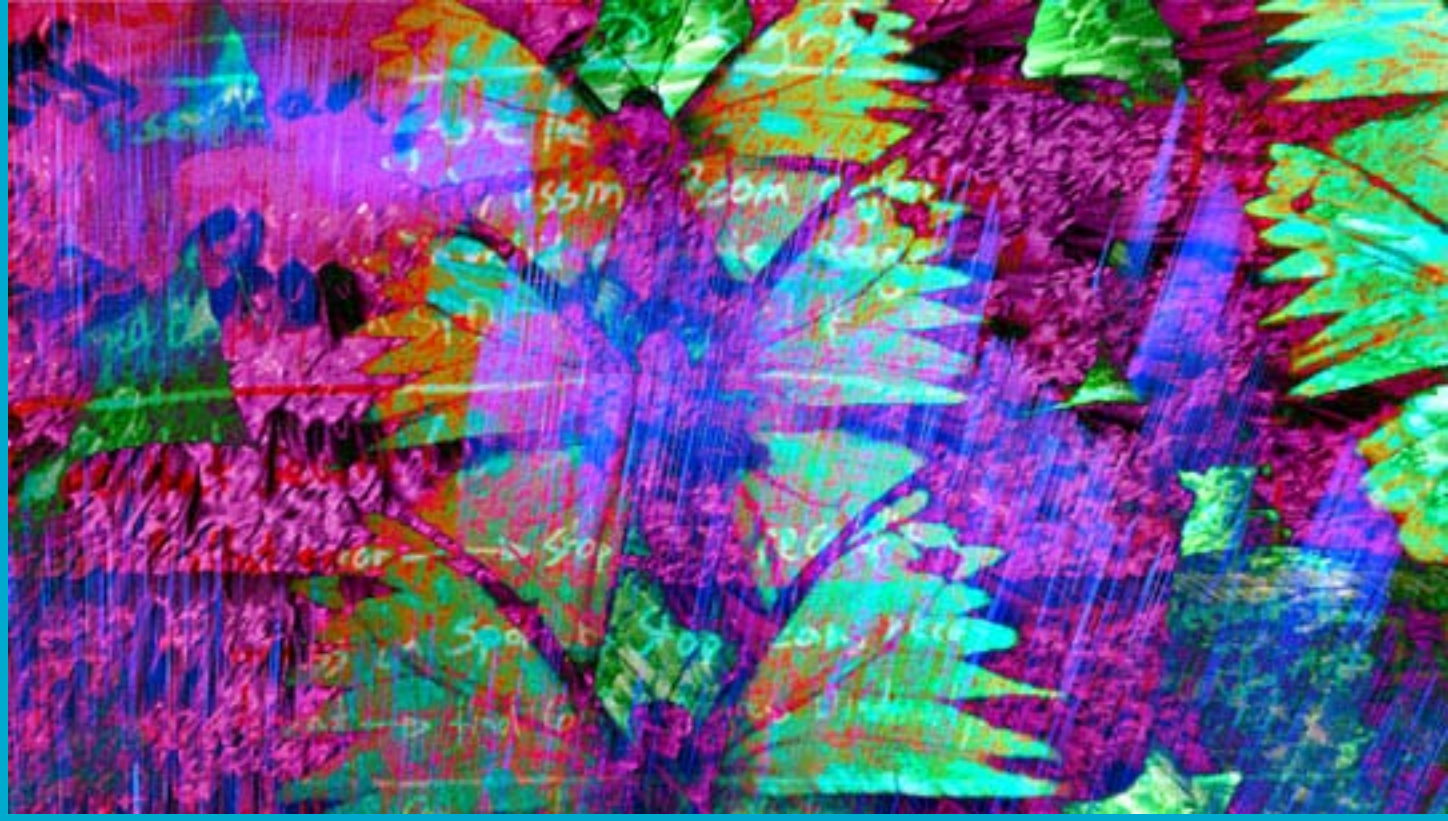

Science Operations

Phil Edwards | Head of Science Operations

05 December 2013

Outline

Visitor Services Group

Computing Infrastructure Group

Time Assignment Committee

Science Operations Centre

ATCA

Parkes

Mopra

Tidbinbilla

LBA

Some notes on dynamic scheduling

Visitor Services Group

From October 1st, the Parkes Quarters has been providing only accommodation and breakfast. Lunches and evening meals can be purchased from the Dish Cafe during its business hours, or alternative arrangements made.

As it has been three years since we have had an increase, ATNF accommodation prices will increase from 1 January 2014 by 10%. It is the room and breakfast prices that will go up; Narrabri lunch and dinner prices will remain the same. The Marsfield lodge (B&B) will be ~$80, Parkes & Narrabri (B&B) ~$70, and Narrabri (all meals) ~$103.

Students will continue to receive a 50% discount on the above prices. We will honour current prices for any bookings already received for next year.

Computing Infrastructure

In February 2014, CI will be bringing in a password aging policy for ATNF UNIX accounts.

- Passwords will be good for 1 year.
- Two weeks before the password is due to expire, users will receive reminder emails if an external email is known
- If not changed, the account will be locked and the user will need help to reset the password.

All users should receive an email advising them that password aging has been turned on for their account. (This will not actually affect anyone till Feb 2015.)

TAC

Proposal deadline is 5pm AEDT Monday December 16th.

A current version of the cover sheets and observations table must be used.

OPAL user guide has been clarified re large projects, in particular with respect to NAPA projects. A large project (>400 hrs *over the full lifetime of the project*) is allowed an extra two pages in the justification and must address data analysis and timeline plans, data release plans, and (recommended) a public outreach plan.

The TAC has been giving consideration to the grading of large projects, and welcomes feedback from the user community on the grading of large projects specifically, and on the TAC process generally.

SOC

Tomorrow marks the first anniversary of Parkes remote observing from the SOC!

The first 12 months has seen extensive Parkes usage, increasing ASKAP usage, steady ATCA usage, more limited Mopra usage: all ATNF antennas were controlled from the SOC during the August LBA session.

The interaction space is regularly used for large informal meetings, and the visitors desks are this week completely booked out.

Having the VSG office in the SOC is an improvement.

Further improvements to be made, including the feature wall, and SOC corridor security.

ATCA

An issue was discovered last month with the 7mm down-conversion – in some instances the reported observing frequency will be 1 kHz from the actual frequency: see ATCA Current Issues page for more information. This has been remedied.

The Water Vapour Radiometer webpage has been established: http://www.narrabri.atnf.csiro.au/observing/WVRs.html

Several issues with the calibrator database have been identified and are being addressed.

It is proposed that we continue to require first-time ATCA to observe from Narrabri, however that the (annual) requalification for remote observing be allowed from the SOC or Narrabri. ATUC feedback on this proposal is welcomed.

Parkes

Remote observing, but requiring a person in the tower, until July 15.

From July 15, TPS commissioned, person in tower not required.

From Dec to June, observer locations were logged as:

Tower (67%), SOC (26%), Home (3%), Swinburne (2%), ATCA (1%), Japan (1%).

From July to Nov, observer locations were logged as:

Tower (26%), SOC (31%), Home institution (10%), Other (33%).

("Other" includes ATNF sites, Sydney, WA, Swinburne, USA, UK, and Germany.)

All observers in the last 12 months will be polled for feedback on their observing experiences in the new era.

Parkes remote observing locations

Image credit: Stacy Mader

Parkes remote observing

The users would appreciate clarification on the remote observations policy, and observer training and support, as it is fully developed.

Remote observing policy is outlined in the release notes for the current semester

(http://www.parkes.atnf.csiro.au/observing/schedules/current/oct13_releasenotes.html)

and the Parkes User Guide. Observer training is provided by Parkes SO staff during week-day work-hours, in addition some astro group members will become qualified trainers. Support is provided by SO staff during work hours, with the designated Project Expert being the first point of contact after hours. Observers currently need to observe from the SOC, or Parkes, annually to re-qualify for remote observing.

Telescope efficiency in the remote era

ATUC would appreciate updates on telescope efficiency in the remote observation era. In the event of a decrease of efficiency, ATUC recommends that discretionary time be allocated to enable re-scheduling of time lost by high-priority projects.

This calendar year will have a higher percentage of downtime at Parkes, but only a small fraction (at most) can be ascribed to the introduction of remote observing.

Highly graded proposals requesting a receiver that is not installed in the focus cabin in 2013OCT will be reconsidered for scheduling in the 2014APR semester with the same grade, without the need to resubmit the proposal.

This condition was met again this semester, with one team being advised their requested receiver would not be scheduled during 2013OCT.

Mopra

In a similar (but, fortunately, not identical!) manner to the ATCA, Mopra 7mm observing frequencies are off by 1kHz in some cases. This will be remedied before the next millimetre season.

The first year under the new operating model has ended successfully: positive feedback received from NAOJ and UNSW/Adelaide.

With the end of the MALT-90 project, all LST ranges are being offered in ATNF time for 2014APR.

Mopra

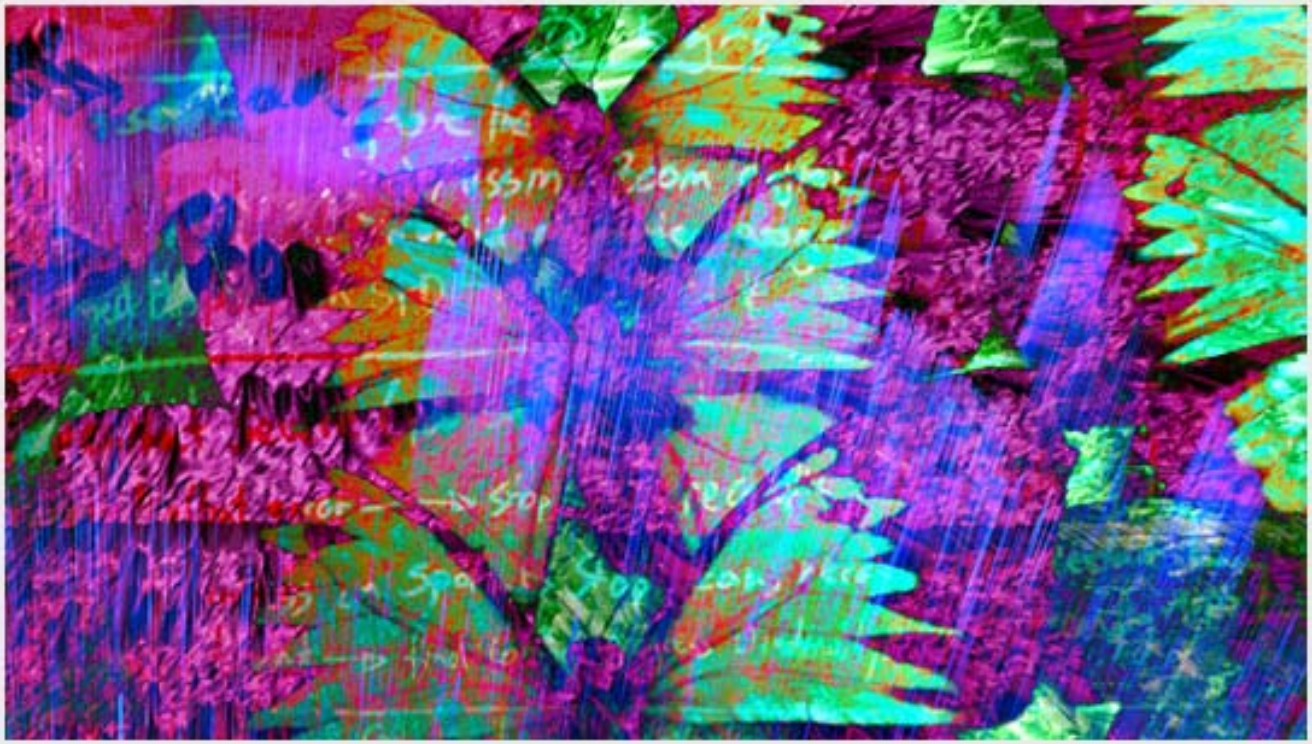

Image: *'Iridescent Ray'*. Artistic representation of the mapping of flight and the unique textural surface of insects. The image embeds images from the Australian National Insect Collection with research notes from the MOPRA telescope. Original images by Megan Clark. | © Eleanor Gates-Stuart

Tidbinbilla

Continued occasional use of Tidbinbilla antennas for single dish (70m) and VLBI (70m or 34m) observations.

A new 4-channel K-band receiver and down-converter system has recently been installed on the 70m. This system supports two simultaneous beams per polarisation (four beams in total) across the current frequency coverage of 21 GHz to 25 GHz.

A recent paper presents results on development of a mapping mode with the 70m: "*High-sensitivity mapping of ammonia emission in the Trumpler 14/Car I photo-dissociation region*", Young, Horiuchi, Green, & Jerjen, 2013, MNRAS, 435, 3568

Good progress with new 34 m antenna

Tidbinbilla DSS-35 “photobombing”

LBA

Currently the most highly oversubscribed ATNF facility!

November 2013 session completed with observations in the 1.6, 6.0/6.7, 22, *and 32* GHz bands.

Occasional out-of-session RadioAstron runs with a subset of LBA antennas.

Four shorter LBA sessions in Feb/Mar 2014 to coincide with RadioAstron perigee passes.

An unusual out-of-session observation will be made on December 29th of the MEX spacecraft as it makes a fly-by of Phobos.

Observing time (in hrs) by year and band

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
20cm	36	37	107	142	58	65	44	20	84	64
13cm	64	44	54	91	51	11	37	70	75	0
6cm	22	60	42	14	65	95	88	72	31	117
3cm	98	192	127	99	226	168	290	247	148	201
15mm	24	0	12	21	105	57	60	54	113	84
9mm	0	0	0	0	0	0	0	0	(4)	2
total	244	333	341	366	505	396	519	463	385	474

Dynamic scheduling at the ATNF

Dynamic scheduling enables a telescope to be scheduled more efficiently. The GBT has a Dynamic Scheduling System, described at https://science.nrao.edu/facilities/gbt/schedules/dynamic .

Dynamic scheduling is most applicable to the ATCA, and to Parkes to a lesser degree. The ‘mm-swap’ scheme implemented by Bob Sault was an attempt to improve the lot of 3mm observers, but suitable pairs of projects are rare.

With the ATNF model of (most) observers travelling to the site or SOC to observe, dynamic scheduling is more difficult unless observers are prepared to extend their stay.

Dynamic scheduling at the ATCA is complicated by the need to reconfigure the array, reconfigure CABB, and coordinate maintenance periods between sites.

Thank you

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megan clark

I included one that one might consider art from the insect collection but this white board instructions to students at the MOPRA telescope is still one of my favourites in CSIRO in what to do if you get error messages. I like the sense of hope and confidence!