

ATUC Report to the Director, October 2008

This meeting of the AT Users Committee was held at the ATNF Headquarters, on the 27th and 28th October 2008. The meeting included an Open Session on the morning of Monday 27th October, and business sessions from 14:00 to 17:00 on 27th October and 08:30 to 12:30 on 28th October.

ATUC members also had a tour of the ATNF labs on 27th October to look at work related to the CABB project. We thank Graeme Carrad and Mark Leach for taking the time to show us around and explain some of the finer details of CABB development.

Attendance: Elaine Sadler (Chair), Stacy Mader (Secretary), Andrew Walsh, George Hobbs, Sarah Maddison, Stuart Ryder.

The Chair welcomed new members Clancy James (student member), James Urquhart, Tara Murphy, Hayley Bignall and Daniel Yardley (student member).

At the conclusion of the meeting, Lewis Ball (ATUC-ATNF liaison) thanked Elaine for her efforts and hard work as ATUC Chair over the last two and a half years.

Date and Format of the next meeting:

The next ATUC meeting is scheduled to be held in the last week of March 2009.

Commendations and successes:

1. ATUC congratulates the ATNF on achieving first light from the Parkes 13mm receiver. ATUC wish to thank all those involved.
2. ATUC commends the introduction of baseline ripple mitigation via feed oscillation at Parkes.
3. ATUC congratulate the ASKAP team for obtaining first light on the Parkes FPA 12 metre, plus obtaining fringes via interferometry between the 12 metre and 64 metre telescopes.
4. ATUC commends the ATNF on hosting a very successful 8th Imaging Synthesis School held at Narrabri.
5. ATUC congratulate the ATNF on the export of Pulsar Digital Filterbank units to China, Italy, Germany and the UK.
6. ATUC thanks the ATNF for providing a CLASS export facility available from within the single-dish data reduction software, ASAP.
7. ATUC commends the ATNF for the continuance of Tidbinbilla for radio astronomy in the new operations model.
8. ATUC commends the ASKAP Project Scientists for engaging the community with the Scientific Roadshow.

Elaine Sadler (ATUC Chair)

ATUC Recommendations [ATNF response requested]

Matters arising from the May 2008 ATUC report and the Directors response.

- 1) The issue of providing a minimal-level, quick-look display tool for ASAP was mentioned in the last ATUC report (point 5) and has yet to be addressed. ATUC have become aware such a GUI exists (the ASAP Online Monitor) but note this is absent from ASAP binaries provided by the ATNF. ATUC urges the ATNF to have this feature made available with high priority.
- 2) ATUC is encouraged by the assignment of Phil Edwards as Project Scientist for WVRs (point 8). ATUC would appreciate feedback on the feasibility of having both hardware and software components (including MIRIAD incorporation of opacities) completed and available for the beginning of the 2009 millimetre season.
- 3) Following on from item 14 from the last report, ATUC seeks clarification on whom the ATNF-Tidbinbilla liaison is. In addition, ATUC thanks the ATNF for updating the Tidbinbilla project status pages.
- 4) Following on from the issue of the new TAC model outlined in the last ATUC report (point 21); ATUC would like outcomes of discussions between ATNF and ATSC on the new model to be made available.
- 5) ATUC notes the request to have international representation on ATUC (item 30) has been given a red flag. Discussions between the ATUC chair and members of the ATNF Steering Committee suggest this idea could be explored further. ATUC notes the use of video or tele-conferencing facilities are acceptable alternatives to flying and accommodation costs associated with internationals physically attending meetings.

New recommendations

General

- 6) ATUC would like to increase its visibility to both local and international astronomers. ATUC would like to request the ATNF include a link to the ATUC feedback page on the page observers see after submitting an observer report.

Software/computing

- 7) ATUC thanks Mark Wieringa for his report on ATNF Software.
- 8) The installation of ASAP on newer Linux installations such as Fedora Core 9 is currently not possible. Although this has been earmarked for v2.3, ATUC would like version 2.3 of ASAP be released with some urgency as some students have been waiting on this feature for some months.
- 9) ATUC makes the comment the suite of pulsar online software is not fully supported from within the ATNF. ATUC would like clarification on who is directly responsible for items such as bug fixes, upgrades and requests for help by "non-expert" users.

Instrumentation - CABB low-frequency upgrade

- 10) ATUC expresses concern about the lack of funding to simultaneously complete the L/S and C/X CABB upgrades to the ATCA. ATUC feels this project should be completed as originally conceived. ATUC notes in Robert Braun's presentation the ATCA during 2010-2015 was to be used for "cutting edge" Star Formation studies, for which the C/X upgrade is essential. ATUC understands funding has been provided by University groups towards the completion of this project and as such suggests the Project Scientist (Naomi McClure-Griffiths) organise a half-day meeting with these and other interested parties to discuss the issue in more detail.

Compact Array and Mopra

- 11) Based on feedback from mm-wave observers, the provision of a millimetre calibrator flux database via C007 has not been made available for the start of the 2008 season. The observations and reduction of high-frequency calibrators are an essential service to astronomers and so ATUC recommends the calibrator flux database be updated at the start of each millimetre season.
- 12) ATUC notes provision for mm/cm swap scheduling was not provided in the APR08 and OCT08 semesters. ATUC recommends the ATNF look into re-introducing cm/mm swap scheduling.
- 13) Some members of the millimetre community have been very nervous about the mention in the ATNF Science Priorities Document v1.0 about the future decommissioning the 3mm system - which is now an excellent and stable system that is much loved by its users. There was serious concern that a decision had already been made to decommission the 3 mm receivers by 2011. It was reassuring to hear from Robert Braun's presentation that no such decision has been made and no decision would be made until ALMA was online and successfully running at 3mm. ATUC certainly hopes that any plan to decommission would involve extensive community consultation.
- 14) Given the success at Parkes of cycling the receiver position as a means of mitigating the effects of standing waves, ATUC encourage the ATNF to similarly examine whether such a method would also work at Mopra. The shifting of the entire sub-reflector may require looking at reliability of associated motor drives.
- 15) ATUC would like the ATNF to determine whether "fast-mapping" can be undertaken with MOPS. This is mapping with a faster cycle time than currently used (possibly 0.2s rather than the current 2s), which would enable larger area maps to be made (in particular of CO line emission). If such "fast-mapping" is possible it significantly affects what kind of surveys might be conducted or proposed for the Mopra Milky-Way meeting.
- 16) ATUC wishes to advise the ATNF some users have commented on the lack of climate control in the Mopra control area.
- 17) ATUC understands recent network, generator and power supply issues at Mopra have caused some concerns from observers. ATUC would like the ATNF to review procedures regarding loss of power to observatories. This will be particularly important in the realm of remote operations for ASKAP, Parkes and Mopra.

Parkes

- 18) The current FAO document (Section 2.3.2, "Consolidate Instrumentation") and Brett Dawson's ATUC presentation make mention of streamlining the Parkes receiver fleet. ATUC would like clarification on what receivers are being modified and/or removed from use and what is the estimated timeline for this process.
- 19) ATUC would like clarification on when the Methanol Multibeam receiver will be shipped back to either Jodrell or Effelsberg Observatories. Are there plans to upgrade the existing C-band receiver or incorporate C-band capability into the NASA X-band receiver?
- 20) ATUC seeks clarification on the use of a matrix switch for operations at Parkes. The matrix switch will be very useful for the majority of standard observations, but by its nature will be prescriptive. In cases of non-standard projects, ATUC would like to see Parkes retain some flexibility to continue the tradition of pushing the envelope of what can be done.

Tidbinbilla

- 21) ATUC would welcome regular reports from the (to be appointed) ATNF-Tidbinbilla liaison.

LBA/eVLBI

- 22) ATUC welcomes increased support for calibration and scheduling as provided in the new ATNF-Curtin contract.
- 23) ATUC notes the science priorities in relation to the LBA could be improved. These priorities have not been developed via community workshops as has been done for Mopra, Parkes and the ATCA. ATUC understands discussions with Steven Tingay are being planned. ATUC would encourage the ATNF to seek further community feedback on LBA priorities sometime in 2009.

Future instrumentation

- 24) ATUC would like to obtain costings for the following five potential new developments listed in Robert Braun's presentation:
 - a) Extend ATCA N-S baselines to ~400m
 - b) Shift 6 km ATCA antenna to 3 km track
 - c) FPA or MB receivers on Mopra for 3, 7, 12mm
 - d) 12mm FPAs for ATCA
 - e) 12mm FPA or Multibeam for Parkes
 - f) Information relating to preference over Multibeam and FPA technologies needs to be clarified, as will the allocation of resources in terms of man-power. As the upcoming Mopra Milky-Way workshop may indeed request some of the items above, ATUC encourage the ATNF to hold a workshop to encourage feedback on all items.

National Facility Office

- 25) ATUC understands version 2 of the Future Operations Document will be released towards the end of October 2008. ATUC would like to recommend an open forum be used for feedback as has been done on past occasions.
- 26) Given the on-hold status of the auto-scheduling software project, ATUC understands once John Reynolds leaves Parkes, Phil Edwards will be the prime contact regarding scheduling for all observatories. ATUC would also like clarification on whom observers should contact about allocation of Green Time at all observatories.

Students

- 27) To encourage non-affiliated ATNF students to obtain access to announcements usually distributed via ATNF email exploders, ATUC request such information on how to subscribe to these lists be made more prominent on the ATNF web site.

ASKAP

- 28) ATUC recommends there be at least one member in common on the EOI Evaluation Committee, Survey Project Assignment Committee, and the Survey Review Committee. This would allow some continuity through the selection process for ASKAP projects.

ATNF Steering Committee

- 29) ATUC would like to suggest a change to the current ATUC terms of reference (Version 2.0, November 2004). Specifically, ATUC would like to add ASKAP to the list of ATNF facilities as listed in the first paragraph.

Other Matters

- 30) The issue on the effectiveness of ATUC was raised. How ATUC could be made more effective will be dealt with from input from ATUC members and a meeting between the incoming ATUC Chair (Sarah Maddison) and the ATNF-ATUC Liaison (Lewis Ball) in early 2009. ATUC agreed to provide the community with updates on action items contained in Director's response.
- 31) On behalf of the users of ATNF facilities, ATUC would like to thank former OICs John Reynolds and Phil Edwards for their contributions to the running of the Parkes and Narrabri/Mopra Observatories over the years.