ATUC Report to the Director - May 2009

This meeting of the AT Users Committee was held at the ATNF Headquarters from 13-15 May 2009. The meeting included a Science Meeting on 13 May, devoted to the installation of CABB on the ATCA. An Open Session was held in the morning on Wednesday 14 May, and business sessions were held from 14:00 to 17:00 on 14 May and 09:00 to 15:00 on 15 May.

Attendance: Sarah Maddison (Chair), Stacy Mader (Secretary), Stuart Ryder, James Urquhart, Daniel Yardley, Tara Murphy, Andrew Walsh, Indra Bains.

Apologies: Clancy James, George Hobbs, Hayley Bignall

Date and Format of the next meeting:

The next ATUC meeting and associated Science Meeting will be scheduled in October 2009, with exact dates to be determined.

Commendations and successes:

1. ATUC congratulates the ATNF on the delivery, installation and early science demonstrated with CABB.

2. ATUC is pleased to pass on praise from an ATNF summer student who thought it a “very useful practice” to make the students submit an observing proposal.

3. ATUC is delighted to see the provision of an ASAP quick-look reduction GUI provided by Cormac Purcell, and looks forward to seeing this GUI available from the ATNF Mopra website.

4. ATUC appreciates the support provided by the ATNF to the 2009 AstroInformatics School.

Matters arising from the October 2008 ATUC report.

1. L/S and C/X upgrade: ATUC is pleased to see ATNF devoting resources towards the completion of the CABB L/S upgrade on the ATCA. ATUC recognises the niche that a complete L/S- and C/X-capable ATCA will provide, which will not be supplanted by ASKAP or ALMA. Therefore ATUC strongly recommends the ATNF look to allocate resources to ensure the full completion of the CABB project, including the C/X upgrade.

2. TAC: ATUC welcomes initiatives to reduce the workload on TAC members. ATUC suggests that as well as at least one expert, one non-expert be allocated to each proposal to provide a more impartial view. ATUC would appreciate a report on the effectiveness of the TAC changes after two observing semesters.

3. ATUC again notes the absence of an international representative on the users committee.

4. Standing wave on Mopra: Regarding the cycling of the Mopra sub-reflector as a way to mitigate standing waves, ATUC is aware Phil Edwards has contacted Andrew Walsh to help perform tests this semester. ATUC looks forward to receiving a report on this at the next ATUC meeting.

5. Pulsar software: Regarding the support of the suite of pulsar software, ATUC requests that the ATNF update the Pulsar webpages to reflect George Hobbs as the official contact person. ATUC notes that Pulsar software (such as TEMPO2) are not listed on the official list of ATNF supported software: http://www.atnf.csiro.au/computing/software/ .

6. Fast mapping with Mopra: ATUC strongly encourages ATNF to trial fast mapping with Mopra. ATUC looks forward to seeing a report on the progress of this much wanted and anticipated feature at the next ATUC meeting.

7. WVRs: ATUC notes the recent update on the WVR project provided by Michael Burton and is pleased to see that project is currently on track.

ATUC Recommendations [ATNF response requested]

General

1. Travel costs to the observatories: The increasing cost of travel is a concern to users. While observers are still required to travel to the observatories (which some love to do!), ATUC would like ATNF to consider a travel support scheme, perhaps similar to the AAO model.

Compact Array

2. CABB calibration: ATUC understands that reduction techniques and calibration of CABB data are still in the early stages and that appropriate philosophies will be developed in time. However, there are several issues arising from the CABB Science day which ATUC would like the ATNF to investigate. The issue of bandpass instability over time (c.f. Bjorn Emonts presentation) and the apparent factor of two differences seen in 7mm flux observations of Uranus and 1934-638 (c.f. Maxim Voronkov presentation) are a concern to users. ATUC requests a presentation at the next meeting which addresses the issues of flux density

calibration accuracy, bandpass stability and updates of the MIRIAD data reduction guide for the 'CABB era'.

3. mm calibrators: ATUC notes that some users have concerns about the quality of millimetre calibration data taken as part of C007 and C2050. At present, the reduction and quality assurance is done by Katherine Newton-McGee on a one day/fortnight basis with additional effort from the new Narrabri Systems Scientist, Jamie Stevens. ATUC would like Jamie Stevens or Phil Edwards to give a presentation about the mm calibrator project and its integration into the online database at the next meeting.

4. Tsys values and sensitivity calculator: Users have commented the system temperatures stored with the visibilities at 1.4 and 2.3 GHz are significantly higher than those assumed by the online sensitivity calculator. In particular at S band the Tsys values are a lot higher than predicted (around 40%). Users have raised concerns they are not able to deliver on statements made in proposals and to make up for the lower sensitivity of the array they have to spend twice as much time on source. ATUC notes these observations were pre-CABB, and ATUC looks forward to seeing updated values of Tsys in the post-CABB era as soon as possible.

5. ATCA remote observing: With the change from SSH to VNC for ATCA remote observing, ATUC notes that the “Guide to Remote Observing with the ATCA” webpage (http://www.narrabri.atnf.csiro.au/observing/rem_obs.html) needs updating.

Mopra

6. Characterisation of Mopra: ATUC notes that some users have expressed concerns about the variability of Mopra and the lack of on-going characterisation. For example, users are seeing variations in the telescope gain as the central frequency is changed and as the elevation changes. Through these variations users are expressing concern on other vital parameters, such as beam efficiency and flux calibration, beam size and pointing calibrators. ATUC notes the last formal investigation of these parameters in the 86-115GHz range was undertaken by Ladd et al. 2005 (PASA, v22, p62-72), to which current 3mm publications still refer. ATUC recommends the ATNF look to schedule a pre-season program which looks to characterise the Mopra 3-, 7-, and 12-mm systems, and report results via the Mopra website.

Parkes

7. Safety induction: ATUC notes some users feel the Parkes safety induction is too long, such that the last 20-30 minutes may be falling on deaf ears. Given that Narrabri and Mopra observers perform their safety induction online, ATUC

suggests that the ATNF consider a shorter online safety induction for Parkes observers as well.

8. Bikes at Parkes: ATUC notes the bike situation at Parkes is getting quite dire. Apparently there is only one fully functioning bike, with a second semi-functional bike (green metallic) becoming increasingly difficult to ride and occasionally dangerous. ATUC is also aware that people are now required to wear bike helmets when riding at the sites and would appreciate this be relayed to users as soon as possible.

9. Taxi service: ATUC notes observers were surprised to learn at the time of booking accommodation that travel from the Parkes airport to the observatory is now via taxi. ATUC suggests that changes of procedure be formally communicated to users as a matter of courtesy, especially if it will affect them financially.

10. 13mm receiver calibration: ATUC understands that users from the APR08 semester were concerned by the lack of calibration information for the new 13mm receiver. ATUC notes time has been allocated in early July to finalize commissioning of the 13mm receiver and strongly urges the ATNF to place this information online as soon as it becomes available.

11. Parkes Receiver Fleet.

    a. 10-50cm: Given the success of RFI mitigation with the Parkes Digital Filterbank (specifically DFB3), ATUC seeks clarification on whether the proposed upbanding of the 50cm receiver will still proceed.

    b. Mars S/X: ATUC notes there are plans to modify the existing conversion system of the Mars receiver to allow direct input into the Parkes Conversion System. ATUC would like clarification on whether this work will coincide with the proposed upgrading of the Mars receiver to a dual S/X package or will the modification of the Mars conversion system take priority. ATUC also seeks clarification on whether the X-band capabilities of the AT-Multiband will be made available to users when the S/X merge occurs.

12. Parkes Users Guide: ATUC notes the Parkes User's Guide contains detailed information on how to operate the telescope, but that there is not enough information for first-time observers planning new observations. There are no receiver block diagrams, no signal path information, no useful correlator information and no descriptions of the final data product and the RPFITS format. ATUC suggests that the Users Guide be updated.

LBA/eVLBI

13. Online documentation: In the interest of encouraging first-time users to apply for time with eVLBI and the LBA, ATUC suggests that the LBA/eVLBI web documentation be improved - specifically with first-time users in mind.

ASKAP

14. Data proprietary period: ATUC continues to hear concerns about the lack of a proprietary period associated with ASKAP data, especially since the data products will be science ready. ATUC encourages the ATNF to continue community consultation on this issue.

Other Matters

15. Characterisation of ATNF telescopes: ATUC notes - via items 3, 6 and 10 above - that characterisation of Mopra and Parkes is occasionally not done to users' satisfaction - or more specifically is not completed before new instruments are handed over to observers - and there appears to be insufficient formal effort on the part of ATNF to relay fundamental parameters to the users. ATUC understands that there is a tension between fully characterising new instruments and giving users access as soon as possible, however it would appear users would prefer slightly delayed access to well characterised instrument rather than immediate access to a not-so-well characterised instrument. There are some concerns this pattern will once again be repeated with CABB (see item 2 above). ATUC would like to see the ATNF present a concerted effort towards complete characterisation of all its telescopes and instruments and suggest the System Scientists take a lead role in this and report back to ATUC at the next meeting.