

## **ATUC Report to the Director - October 2009**

This meeting of the AT Users Committee was held at the ATNF Headquarters from 28<sup>th</sup> – 29<sup>th</sup> October 2009.

Attendance: Sarah Maddison (Chair), Stacy Mader (Secretary), James Urquhart, Tara Murphy, Andrew Walsh, Indra Bains, Aquib Moin (student representative), John Dickey, Haley Bignall, Chris Springob, Elizabeth Mahony (student representative), Dhruba Saikia (invited, ATNF distinguished visitor).

### **Date and Format of the next meeting:**

The next ATUC and associated Science Meeting will be scheduled in May 2010, with exact dates to be determined.

### **Thanks and welcomes:**

The committee wishes to thank out going members Stuart Ryder, George Hobbs, Clancy James and Daniel Yardley for their invaluable contributions and service to ATUC. We also welcome new ATUC members John Dickey, Chris Springob, Elizabeth Mahoney & Aquib Moin. (Plus a special thanks to our international guest Dhruba Saikia.)

### **Commendations and successes:**

1. ATUC commends both Warwick Wilson for receiving the CSIRO Lifetime Achievement Award and John O'Sullivan for receiving the Prime Minister's prize for Science.
2. ATUC congratulates the ATNF for the success of the Parkes Radio School.

3. ATUC would like to thank the ASKAP Project Scientists Ilana Feain and Simon Johnston for coordinating the Science Survey Projects and getting these moving forward at last months meeting.

**Matters arising from the May 2009 ATUC report.**

1. Matters arising #1: ATCA C/X upgrade: ATUC strongly recommends the ATNF to complete the C/X upgrade, which has obvious benefits not only for the ATCA, but for Parkes as well.
2. Matters arising #2: ATUC looks forward to a report on the new TAC process at the next ATUC meeting.
3. Matters arising #4: Standing wave on Mopra. ATUC understands the sub-reflector motor is not able to drive at constant rate as is done at Parkes. ATUC suggests the ATNF look to install a new motor for Mopra, but also look at a Path Length Modulator as an alternative solution.
4. Matters arising #6: Fast Mapping on Mopra. ATUC are encouraged by progress and look forward to having this feature implemented for the next winter season.
5. Recommendations #3: Calibrators and Quality Control. ATUC would appreciate users be informed when the C2050 project has identified suitable millimetre calibrators.
6. Recommendations #4: ATUC looks forward to receiving a report at the next meeting on CABB system performance and how the observed Tsys estimation used by the sensitivity calculator compares with real data. ATUC also suggest the online sensitivity calculator not be too optimistic.

7. Recommendations #6, #10 and #15: ATUC appreciates the characterization of ATNF telescopes is being addressed.

## **ATUC Recommendations [ATNF response requested]**

### *ATCA*

1. Order of preference for zoom-modes after 1MHz (4, 16, 64MHz). Based on the information provided by Graeme Carrad and user feedback, ATUC recommends the ATNF first address the 16MHz option before embarking on the 64MHz option, and inform users how to configure the 1MHz system to get 64MHz in the interim. ATUC recommends this technique be described with examples on CABB webpage.
2. Handling CABB data. ATUC would like to see a tips & tricks page set up (i.e., generic strategy for processing data). Also, an automatic flagger to deal with all known RFI would be appreciated by users once available.
3. Miriad manual and CABB data. ATUC accepts CABB is still very much in a state of flux. However, much of the Miriad documentation has not yet been updated, although the latest version of Miriad does handle CABB data. To cater for both the occasional and expert Miriad user, ATUC recommends the Miriad cookbook (<http://www.atnf.csiro.au/computing/software/miriad/userguide/userhtml.html>) be brought up to date to reflect the changes introduced by CABB.

ATCA in "single-dish" mode. ATUC understands it is possible to record autocorrelation ("single-dish") spectra on the ATCA to get 5 x 22 m dishes for high-resolution spectroscopy. ATUC notes that Andrew Walsh will be trailing this mode in March 2010 and looks forward to his report, and subject to the outcome, with the future possibility of the ATNF offering this observing mode to all users.

### *Mopra*

5. Remote observing for large-scale projects. ATUC notes that ATNF seeks advice on how they can assist with remote observing of largew projects. Andrew Walsh will prepare a report for the ATNF based on his HOPS observing experience, and seek advice from other large-scale Mopra project teams.
6. Webcam for remote observing. ATUC recommends ATNF install an all-sky webcam at Mopra (like the APT webcam at Coonabarrabran) with an active cross which traces where the telescope is pointing.

### *Parkes*

7. 5-6 GHz system at Parkes. ATUC recommends ATNF address the lack of a fully functional 5GHz system at Parkes. ATUC understands a prototype C-band LNA is available and suggests this be installed in the AT-Multiband receiver to allow a high-ranking LBA proposal to proceed. ATUC also urges the ATNF to persue development of the 4-12 GHz LNA (as part of the ATCA C/X upgrade) to upgrade the existing K/Ku package at Parkes. The wider frequency coverage will cover both a replacement for the 5-GHz receiver and the loss of the 6-GHz Multibeam, should it be moved to Effelsberg.

8. Receiver rationalization. ATUC recommends the ATNF not be to restrictive in relation to limiting receiver changes at Parkes, especially in relation to LBA/eVLBI observing which presently covers several frequencies on a regular basis.

9. Continuum and polarisation software. ATUC recommends the ATNF look to support and implement a continuum and polarization data reduction software package.

### *LBA/eVLBI*

10. LBA documentation. Given the sometimes complex cabling required for eVLBI/LBA setups at Parkes, ATUC recommends the LBA documentation for Parkes setups be improved.

## Other Matters

11. Remote operations. ATUC are encouraged to hear the ATNF is retaining some flexibility to allow users to observe on-site.
12. ATNF HI gateway. ATUC would like to point out the ATNF HI gateway does not function as expected. For example, passing this string into a web browser:  
`http://www.atnf.csiro.au/research/HI/common/?coord1=302&coord2=-0.0&coord_type=gl%2Fgb&state=query` for the HIPASS survey the following message can be seen: **Warning:**  
`opendir(/DATA/MULTI_8/WWW_RELEASE/HIPASS_RDV): failed to open dir: No such file or directory in /nfs/wwwatdocs/research/HI/common/functions.php on line 961`  
`Directory "/DATA/MULTI_8/WWW_RELEASE/HIPASS_RDV" doesn't exist`
13. OPAL abstracts on ADS. ATUC suggests ATNF may wish to consider publishing accepted OPAL abstracts on ADS, similar to other facilities such as HST and Chandra.
14. Radio School suggestions. Based on feedback from users, it was suggested that there be more coordination between speakers on their topics and that there be more hands-on practical sessions (such as conducting observations and handling single-dish data).
15. ATNF accommodation website. Some users have noticed that the accommodation website does not recall updates made by users in previous sessions.
16. Emails from ATNF staff. ATNF emails often come with a "winmail.dat" attachment, which is generally unreadable to non-ATNF people. This program wraps attached documents, making them impossible to unpack. While ATUC realises that this protocol is most likely a CSIRO policy, we would like to recommend that ATNF consider the effect this has on communication with users.