ATNF Director's Response
ATUC meeting 7 November 2007

ATUC Recommendation	**Director's Response**	**Traffic Light**
New actions on ATUC: None		
Commendations and successes		
• ATUC commends the ATNF on the installation of the new 3 mm system with noise diode and improved amplifier performance at the Compact Array. • The ATNF is commended on the decision to install the 7 mm spare receiver from the ATCA upgrade at Mopra. • The recent calibration efforts at Mopra are also welcomed. • Parkes staff are commended for doing a great job on getting the PDFBs working. • Users of the ATNF telescopes have conveyed to ATUC their appreciation of the quick turnaround on resolving fault reports. • ATUC has been notified of Graham Moorey's forthcoming retirement and wish him the very best. Elaine Sadler (ATUC Chair)		
ATUC Recommendations [ATNF response requested]		
Matters arising from the Director's Response to the May 2007 ATUC report		
• Members of ATUC have been informed that the most recent Parkes observing schedule was again released very late.	This has been an ongoing problem, symptomatic of the resource difficulties that continue for ATNF operations. The plan for changes to operations aim to address this and similar issues. The ATNF is working closely with CSIRO's Division of Maths and Information Sciences (CMIS) to develop fully automated generation of the ATNF observing schedules. Automation promises also to deliver a number of additional advantages, including strict adherence to TAC grading, the ability to regenerate or revise schedules at any time as circumstances demand, and tight interlocking of the Parkes, ATCA, Mopra and LBA schedules.	Yellow
New recommendations:		
ATNF students		
1. ATUC notes that the website regarding the policy for ATNF co-	University PhD students are an integral part of the research environment at ATNF and are highly valued	

supervised students has been updated as of August 2007. We are concerned about the residency requirement mentioned on the page which states that "ATNF Graduate students are expected to spend about a quarter of their time at the ATNF to interact with their co-supervisor, staff, other students and visitors." While we understand that there needs to be sufficient, sustained contact between the ATNF and the students, spending 3 months per year at ATNF in addition to observing and DA commitments seems far too high. Given that this policy seems to have developed without consultation with university supervisors, we would like to open a dialogue with ATNF regarding requirements for co-supervised students. ATUC nominate Melanie Johnston-Hollitt to discuss details with an ATNF representative.	by all staff. They strengthen our connection with the Universities and bring in new ideas, skills and lots of enthusiasm. Entry into the "ATNF Graduate Student Program" is optional for students with ATNF co-supervisors. The program provides benefits and duties, which include spending a suggested 25% of their time at the ATNF (including observing and being ATCA Duty astronomer).Students applying for entry into the "ATNF Graduate Student Program" discuss and agree to a project outline and ATNF visits with all supervisors and the program coordinator (B. Koribalski). This topic will be raised at the coming meeting.	
ATCA Duty Astronomers		
2. There was some uncertainty as to the purpose and intended audience of an upcoming DA training course that is being organised at Narrabri. Could this please be clarified? • Some issues were identified regarding DAs giving Mopra support without adequate training; if DAs are supposed to support Mopra observers, an induction to Mopra support should be given (or at least a clarification given of what kind of support they are to give for Mopra observers).	The best DA training is experience on observing trips. However, with the knowledge that there were a number of new staff who had not observed with the ATCA, it was felt that a DA training course may help the new group to be brought up to speed. The training course was a poor substitute for observing. It is hoped that we will not need to do anything similar again, and that a way can be found to involve new staff in observing at the ATCA. With respect to Mopra -- DAs are expected to be the first point of call for Mopra, and an overview of the Mopra system is now being included as part of the “DA induction” given on the DA’s first day on site. Information on Mopra support is available online at: http://www.narrabri.atnf.csiro.au/mopra/support.html Currently the information reads: "Should you require assistance at any time during your observations then contact the Duty Astronomer. Please note that the primary role of the Duty Astronomer is to support Compact Array observations. The Duty Astronomer may not necessarily be proficient with Mopra observing but they will know who the on-call staff person is and how to contact them (see the Duty Astronomer Roster). In case of an emergency do not hesitate to	Gree n

	contact the Duty Astronomer."	
Future ATNF operations		
3. ATUC requests that details of the new future operations model for the ATNF be presented at the key astronomy sites around Australia.	The ATNF Future Operations plan has now been widely discussed around Australia and through feedback via a web forum and to ATUC. In March & April 2008 discussions were held at a range of venues with participants from eight Australian Universities, and at an open forum in Marsfield. The feedback will be summarised in a joint ATNF/ATUC document and made publically available. A separate response from ATNF will also be provided.	Green
Compact Array and Mopra		
4. Is the paddle still needed for 3-mm calibration now that a noise diode has been installed on one of the telescopes?	Yes. For 3mm measurements at Mopra & ATCA the paddle is still required to calibrate the attenuation of the signal caused by water vapour in the atmosphere (Tau measurement). The noise diode does not provide a tau measurement. Instead it provides a way to monitor the changes to the Tsys measurement (instrumental changes only) during the period in between paddle measurements. (In addition the diode signal is used to measure the X-Y phase needed for polarimetry.) There are alternatives to the paddle measurement (skydips, WVRs, atmospheric modeling etc). For Mopra the paddle measurement is hardwired into the MOPS internal software at 3mm.	Green
5. Users would like to be able to read ASAP data into CLASS to take advantage of additional functionality there or have that functionality reproduced within ASAP, e.g. multiple line-fitting. Andrew Walsh would be happy to provide a wishlist.	From Mopra Training Day wish list: "Implement the option within ASAP to write files in GILDAS format. The GILDAS software package developed by IRAM continues to be the dominant data reduction package within the millimetre user community. The large user base has resulted in numerous algorithms that are available to analyse molecular-line data with. While ASAP has the potential to have the same capability nobody has developed these algorithms as yet. There is an algorithm within ASAP that does line-fitting to NH3 lines but it has not been fully debugged." This issue has been discussed and is technically feasible, although the resources needed have not yet been identified. Specifications additional to the statement above would help if they exist (e.g. from Andrew Walsh).	Yellow
6. ATUC recognise the strong user interest in having a wide-band correlator available at the ATCA for the next mm season. Given that the full installation is going to be delayed, ATUC urges the ATNF to make available a single-frequency CABB system on 5 antennas for the 2008 mm season. If possible, this should be announced for the next proposal deadline in December.	The December announcement of opportunity advertised: "... we anticipate that an interim CABB system comprised of five antennas outfitted with a capability for single frequency operation will be available in May 2008. Initially the CABB backend will be available for 5 antennas and the 3-, 7- and 12-mm receivers only, with bandwidths up to 2 GHz. We anticipate that from July 2008, some CABB capability will be available for observations with 5 antennas at 3, 6, 13 and 20 cm. These should provide a wider bandwidth than the current 128 MHz, but may not reach the full CABB bandwidth of 2 GHz."	Yellow

	In fact loss of key staff has led to a delay and the five-antenna system is unlikely to be available much before July. Details will be presented at the next ATUC meeting.	
7. At this point ATUC does not have enough information to comment on the feasibility of ATCA observations below 1200 MHz, where RFI is a serious issue. This impacts on key HI and polarisation (Faraday rotation) science and needs further investigation.	A study of the RFI environment at the ATCA was undertaken last year. This included taking spectra between 0 and 4 GHz, and a more detailed study between 1.0 and 3.6 GHz. The report concludes the largest identifiable threats to broad-banding the front-end receivers come from mobile base-station transmitters at around 850-950MHz, and from transmissions associated with the aeronautical radio navigation band, 960-1260 MHz. A copy of the report is available at http://www.narrabri.atnf.csiro.au/observing/rfi/Narrabri_LS_Survey.pdf	Green
8. Documentation to reduce Mopra data with ASAP to be improved and Python workshop to be held.	A Mopra Training Day was held on Tuesday 25 March. All the presentations are available online from the Mopra Web Page. Included in the program was a 1-hr tutorial devoted to ASAP data reduction. Available online is a tutorial sheet with step-by-step instructions on how to use a Python script to reduce the data as well as some example data files. More needs to be done to make ASAP more friendly, particularly for new users and for users who just want to quickly look at the spectra during their observations. Having some simple GUI interfaces within ASAP that enable users to load in their latest data file and plot and print a spectrum would be a huge improvement. This, and other items requested at the Mopra Training day remain to be done (see: http://www.narrabri.atnf.csiro.au/mopra/TrainingDay08/wishlistMarch08.txt	Green
9. ATUC encourages the ATNF to continue current attempts to set the Mopra absolute flux calibration scale.	Attempts will be continued but there are technical issues with the available software.	Yellow
10. Mopra baseline ripple to be minimised, in coordination with efforts to minimise the same problem (“standing wave”) at Parkes.	This ripple continues to plague observers who are after data with long integration times (> 10 min). This degrades the science that can be done on weak molecular lines in our Galaxy and all extra-Galactic science. From discussions at the Mopra Training Day it was agreed that the best solution was to develop sophisticated software routines in ASAP and Live data to minimise the baseline ripple. Resources for this work have not been identified. There is a ATNF project plan, led by Robert Braun, to develop a diffusive surface treatment for Parkes, and extending this approach to Mopra will be investigated.	Yellow
ATCA/Mopra science review		
11. ATUC feels that there has been	A meeting to discuss science with the ATCA has	Gree

good value to the community in the on-going series of workshops held in conjunctions with the user committee meetings and endorses that the theme for the next workshop be “ATCA and Mopra science”.	been scheduled for 11 June 2008. At present we believe that the input received from the "Chowder Bay" meeting gives an adequate picture of Mopra science, and that dividing a day between the two instruments would do neither justice. The Chowder Bay meeting was held before MOPS was full operational, so a Mopra science discussion over the next year sometime would be useful.	n
12. ATUC would welcome an integrated 3-mm upgrade plan as part of the ATCA science plan (WVRs, T_{sys}, 115 GHz upgrade, paddle).	At present the full commissioning of CABB has a greater urgency. Elements of such a plan exist and may be further developed through 2008.	Yello w
Technology development		
13. ATUC strongly support plans to install WVRs on the Compact Array by mid-2009. ATUC would like to have more information about this project and its likely impact on observers. Is there an ATNF project scientist for this?	Balt Indermuehle is Project Manager, Peter Mirtschin is Project Engineer, and Phil Edwards is Project Leader. We are in the process of identifying a Project Scientist within ATNF. As an interim solution, Phil Edwards may act as project scientist until the end of this year. More information on the WVRs and how they are expected to be implemented is attached.	Gree n
14. ATUC notes that a design study has been started for a 3-mm multi-beam system at Mopra. ATUC feel that it would be useful to have a more coordinated process for planning and submitting LIEF proposals with university groups for instrumentation on ATNF telescopes.	The ATNF agrees that a more co-ordinated process may be to the community's benefit and encourages University colleagues contemplating LIEF proposals related to the National Facility to approach the ATNF very early in the planning process. The ATNF would welcome discussions regarding the possibility of ATUC setting in place a process that makes it straightforward for its members to be aware of, and participate in, the planning and submission of LIEF proposals.	Gree n
Parkes		
15. ATUC thinks it is important not to limit unduly the minimum time request on Parkes. Short programs with high scientific merit should still be accepted, subject to operational constraints. At our next meeting we would like to see statistics on the acceptance rate of large and small proposals and the relative scientific outcomes of such proposals at Parkes and the Compact Array. Statistics on student proposals would also be useful.	Statistics will be provided at the next ATUC meeting.	Gree n
16. Following the Parkes workshop, it appears that much of the key science to be done with Parkes over the next 5-10 years requires only existing or planned instrumentation and software (pulsars and pulsar timing, diffuse polarised and HI emission, eVLBI). The 22-GHz FPA is potentially interesting, but needs a more detailed science case which also	It is true that more work is needed on science cases for 22 GHz FPA. Since the Parkes workshop a polarimetry project below 1 GHz has been approved by the TAC.	Yello w

explores synergies with ALMA. The case for science below 1 GHz, especially rotation measures and pulsars, needs to be evaluated along with a discussion of the effects of RFI.		
17. Users are generally enthusiastic about remote observing at Parkes.	The ATNF is assessing the extent to which Parkes can be operated remotely.	Green
ATUC support		
18. Could the reports for the open session please be made available to ATUC at least 2 days before the meeting please?	The ATUC secretary will try to ensure reports are posted on the ATUC web page within the requested 2 days.	Green
Other business		
19. ATUC notes that Australian time is now available on NANTEN-2 in discussion with the universities involved. There will be announcements via the ASA exploder.		
Other comments from AT users [for information]		
20. The standard ATNF acknowledgement blurb, which currently only resides on the ATNF Publications page (http://www.atnf.csiro.au/research/publications/) lies within the "Astrophysics Research at the ATNF" section; it is not that easy to find for external visitors. It should be copied onto the top-level OPAL and ATOA web pages.	Information and a link have been added to the OPAL Users Guide. We prefer though not to overload the OPAL front page.	Green
21. Would it be possible to have a button to click on OPAL that allows you to simply resubmit a previous (particularly NAPA) proposal unchanged to the next semester? Having to download and upload such proposals seems pointless.	This is not provided. The facilities available can change between semesters and proposals should be checked before resubmission.	Red
22. Some users report that they have had no response to requests for access to their own data on the online archive.	Please encourage individuals with difficulties to contact us directly. The ATOA now automates access to data using information from the proposals. This should happen without intervention and we will need to be informed if there is a technical problem.	Green