




























Director's response to ATUC Report – November 2022








ATUC Recommendation	Director's Response	Traffic Light
2. Commendations for S&A		
<ul style="list-style-type: none"> • Successful Science & Technology Day • First ASKAP data image using the Pawsey Setonix supercomputer • 2022 Peter McGregor prize to the ASKAP team from the Astronomical Society of Australia • Progress on the commissioning of the CryoPAF on Parkes (Murriyang), including its sensitivity and engineering tests by single-port detection of the Vela pulsar • Signing of the Indigenous Land Use Agreement and the new Inyarrimanha Ilgari Bundara Murchison Radio Observatory name 		
3. Developing Future ATNF Instrumentation		
<p>Bearing in mind the above considerations, and the discussions that ensued during the open/closed sessions, the ATUC recommends S&A consider a broad framework in the path forward, along the lines as summarised below.</p> <ul style="list-style-type: none"> • Alongside scoping the development of future instrumentation, efforts need to be made to consolidate and take advantage of existing instrument capabilities that are already built-in, but not fully exploited (e.g., due to time and/or FTE constraints). For example, the RFI nulling and beam tracking capabilities of the PAFs remain unutilized in current observations with ASKAP. • Initiate community consultation to facilitate convergence of specific ideas to guide major instrumentation or upgrades — for example, science weeks for further discussions, white papers proposing specific upgrade paths, town-hall meetings. ATUC would appreciate a presentation of specific, cost-estimated, community-driven upgrade options at a future meeting. • Consider appointing an ASKAP upgrade scientist/engineer (coordinator), who will coordinate the various aspects of future upgrades and related activities. 	<p>ATUC is correct to identify that instrumental capabilities such as RFI nulling are currently constrained by availability of resources. ATNF would welcome discussion on how these additional resources might be found.</p> <p>ATNF agrees with ATUC that the recent Science & Technology Day was the beginning of a conversation along these lines, and that we need to continue with the next Australian astronomy decadal plan in mind. We will utilise ATUC meetings and other opportunities to progress this ongoing community engagement.</p> <p>ATNF welcomes the suggestion, noting that the ASKAP Senior System Scientist (Aidan Hotan) will clearly be a lead figure in this process.</p>	<p style="text-align: center;">●</p> <p style="text-align: center;">●</p> <p style="text-align: center;">●</p>




<ul style="list-style-type: none"> • Take advantage of the community consultation initiatives focused on instrument upgrade paths, and where relevant, explicitly seek engineering (community) inputs on what is achievable (and desirable) with only software/firmware capability upgrades to current instruments. • Lay out an explicit and transparent framework for decision-making and approvals <i>vis-a-vis</i> instrument upgrades. • Increased community engagement to address some of the specific (software) tasks (e.g. secondments of University ECRs). • While considering major instrumentation upgrades, factor in the technical and computing resource requirements and longer-term sustainability. • Connect with the community and develop the case for time-domain/multi-messenger science that can be exclusively done with wide-FoV instruments like ASKAP, and rapid-response capability. 	<p>ATNF is open to suggestions for upgrades and happy to accept any relevant support offered by the community.</p> <p>ATNF considers that consultation with the user community through ATUC is fundamental in decision-making on instrument upgrades and we welcome any specific suggestions for improvements in this process.</p> <p>ATNF welcomes any support available from ECRs and we are keen to progress any specific suggestions.</p> <p>Noted. These considerations have also featured strongly in our internal discussions.</p> <p>ATNF views this as an essential aspect of considering future upgrade pathways for ASKAP, and we look forward to engaging with the community to develop this case.</p>	    
4. ATNF Strategy		
<ul style="list-style-type: none"> • ATUC seeks further clarification on the make-up and plans for convening the advisory committee. • ATNF to consider including external (University) members in the working groups and advisory team for providing input to the strategy, and ensure that there is representation of the student engagement/training aspects in the process. 	<p>We have undertaken further strategic planning and convened five working groups to progress this project. We will describe progress in the next ATUC meeting.</p> <p>The working groups that we have convened do include representation from the user community. One of the working groups is focused on ATNF Users and explicitly includes scope to consider training and student engagement.</p>	 
5. Diversity & Inclusion (D&I)		
<ul style="list-style-type: none"> • S&A include an update from the D&I officer at the next ATUC meeting on their vision and the aspects of the D&I action plan that are relevant to student training and the broader user community. 	<p>The next ATUC Open Session will include a D&I update and we will seek to provide the requested clarity.</p>	

<ul style="list-style-type: none"> ATUC requests an update on the UNSW study of ATNF proposal evaluations and, if available, include this at the next ATUC meeting. 	<p>The UNSW study is likely to be completed by mid-year, so we will include a presentation in the second ATUC meeting this year.</p>	
6. ATNF Web Pages and Communication		
6.1 ATNF web pages		
<ul style="list-style-type: none"> ATUC requests clarification on the planned effort (and an expected timeframe) for a refresh (and update) of the ATNF web pages. 	<p>A major refresh of the ATNF website is currently in planning and estimates of the effort and timeframe will be communicated to ATUC when available.</p>	
6.2 Communication Pathways and Information Exchange		
<ul style="list-style-type: none"> S&A to evaluate existing communication pathways (both internally and with the external user community) and ascertain their effectiveness and inclusivity given the ever-changing work environment and landscape. 	<p>We are developing a communications plan seeking to address both of these aims: ensuring inclusivity (see also our D&I work) and increasing effective discussion with the community. We will provide more information on these plans when they are more mature.</p>	
<ul style="list-style-type: none"> S&A to consider incorporating newsletter-type communication (e.g. quarterly updates from Director or Program Leader), mini-town hall meetings etc. 	<p>An element of the developing communications plan is indeed to potentially introduce an ATNF newsletter. We will update ATUC on this possible solution as part of the overall communications plan update.</p>	
7. Data Archives		
<ul style="list-style-type: none"> ATNF to consider various aspects pertaining to the migration of ATOA to CASDA, and provide further clarification at the next ATUC meeting. 	<p>We will provide a summary of ATOA migration plans in the next ATUC meeting.</p>	
8. ASKAP		
<ul style="list-style-type: none"> ATNF to evaluate the development work (i.e. software and firmware improvements) needed to support the full survey operations, and provide an update at the next meeting on how the planned trial runs progressed over the next semester. 	<p>ATNF has developed a clear understanding of the development requirements for full survey operations and has maintained an ongoing conversation with the SSPs about progress and remaining issues; it is the set of resourcing requirements that presents an issue. We will provide a summary of the full survey trial at the next ATUC meeting.</p>	

9. National Facility Support Model		
9.1 Student Programme		
<ul style="list-style-type: none"> • Prioritise the organisation of a radio school targeted at PhD students and ECRs next year. This should be separate from any training offered to undergraduates as part of the summer vacation student programmes. 	<p>The 2023 radio school has been scheduled between the 25th and 29th September. Time has been allocated in the ATCA observing schedule to support this. We are currently finalising the organisers and expect announcements to be made soon.</p>	
<ul style="list-style-type: none"> • Reinstate student-focused events like the Student Day and Bolton Symposium, and consider formats that are more appropriate to the distributed student cohort. 	<p>The Student Day (Symposium) forms part of our ongoing review of the student program. Once feedback and suggestions have been obtained and the program reviewed, we will announce the format of student days/symposia and promote to the community.</p>	
<ul style="list-style-type: none"> • ATNF to provide further clarity on any proposed changes to the student programme. 	<p>We are in the process of surveying current and former students, and subsequently staff and university supervisors to gather feedback as part of our review of the program. This information will then inform any changes to the programme. Changes will be disseminated to the user and student communities.</p>	
<ul style="list-style-type: none"> • Undertake a student survey to help assess the type, frequency and locations of future student and Bolton symposia. 	<p>The student survey has recently been sent out to about 75 current and former (from 2018 onwards) students. Decisions regarding the Student Symposium will be informed by responses in the survey.</p>	
<ul style="list-style-type: none"> • ATNF to look into resource requirements for student training, and consider whether it would be appropriate to elect a champion from amongst staff who will prioritise various aspects of student learning. 	<p>Rob Hollow is the lead of our student supervision activities; and George Hobbs is presently designated as the lead coordinator of our training activities.</p>	
9.2 Observer Training and Qualification		
<ul style="list-style-type: none"> • ATNF to provide clarification on the structure of the accreditation programme for observer training and qualification. 	<p>This aspect is being discussed and finalised, and we will provide an update at the next ATUC meeting.</p>	

<ul style="list-style-type: none"> • ATNF to provide clarification on the involvement of students during the proposed rollout of the model. • ATNF to consider requesting short (2-3 minutes) videos from Large project teams that explain their projects and telescope setup for the purpose of training and education. • Provide additional clarification regarding how novice project experts will be supported in the new system and what mechanisms are available to train large numbers of observers. • Provide regular updates at the future ATUC meetings to gauge how the rollout is being received by the community. 	<p>This will form one part of the review of our student programme. No decision has been made to date.</p> <p>We are working to develop a series of videos for training purposes but are seeking a uniform style so are currently planning to develop these videos in-house.</p> <p>In the first semester of the new OE system, we are preferentially allocating experienced OEs. Training processes are being developed and will be implemented progressively during 2023APRS. We will provide a summary of plans at the next ATUC meeting.</p> <p>We are undertaking to survey observers before and after the transition to the new model so that we can identify valuable aspects, and those that need improvement. This process has commenced and we will provide ATUC with summaries of this ongoing assessment.</p>	   
10. ATCA & BIGCAT		
<ul style="list-style-type: none"> • ATNF to undertake an assessment of the benefits and impacts of the first round of legacy survey projects before the commencement of future legacy projects. <p>10.1 ATCA upgrades</p> <ul style="list-style-type: none"> • ATNF to evaluate the cost estimate for ATCA physical system upgrades that will result in improved observing efficiency and ensure telescope safety. <p>10.2 CABB to BIGCAT transition</p> <ul style="list-style-type: none"> • Update the current ATCA user's guide to highlight that CABB can result in artefacts at the phase centre when using the 64-MHz zoom modes and pulsar binning modes. 	<p>We have already undertaken to collect feedback from PIs of the ATCA Legacy Projects, and are designing the new round of what we are calling Longterm Projects with these outcomes in mind. We will summarise our plans at the next ATUC meeting.</p> <p>Planning to upgrade ATCA antenna infrastructure to increase efficiency, and potentially add capability is underway. Feedback from ATUC on new capability is welcomed.</p> <p>To date, we have not received direct reports of this issue, or evidence to confirm this occurrence. We would be happy to do this if</p>	  

<ul style="list-style-type: none"> • ATNF to provide clarification on a contingency plan in case CABB encounters a catastrophic failure before BIGCAT becomes science ready. • In light of CABB experience, ensure that necessary steps are taken to prevent the issues causing artefacts at the phase centre. • ATNF to evaluate the resources in terms of software development and the user support required to successfully transition to BIGCAT operations and early science. <p>10.3 Renaming the Observatory</p> <ul style="list-style-type: none"> • In addition to the current name, 'The Paul Wild Observatory', S&A to consider an Indigenous name for the Observatory. It is envisaged the observatory is then known by its original name, as well as an Indigenous name that is culturally and locally appropriate. 	<p>someone could point the ATCA Senior System Scientist to a dataset where this occurs so we can investigate.</p> <p>A catastrophic failure of CABB is likely to incur a prolonged outage of ATCA, noting that delivery of BIGCAT is itself the primary mitigation of this risk.</p> <p>If details of a dataset that present this issue can be supplied, steps can be taken to reduce the likelihood. As original CABB engineers have retired, more detail of the cause of this issue is needed to look into it.</p> <p>This is already addressed in the requirements documents previously distributed to ATUC</p> <p>ATNF supports the intent behind this recommendation and we continue to explore opportunities to confer Indigenous names on our facilities noting the complexities involved. We will keep ATUC apprised of developments.</p>	   
<p>11. Parkes (Murriyang)</p>		
<ul style="list-style-type: none"> • ATNF to consider suitable mechanisms that discourage observers from exceeding their proposed data rates, including the possibility of setting a hard limit based on proposal plans. • ATNF to investigate the feasibility of implementing beamforming algorithms beyond standard maximum S/N algorithms to enable pulsar timing and targeted observations. • ATNF to pursue the development of UWH receiver given the broader range of science that will be enabled alongside the increased observing efficiency for Parkes. 	<p>We have added a question in OPAL asking proposers to indicate where data will be stored if their total collected volume exceeds a threshold of 10 TB per semester. This will be described at the next ATUC meeting.</p> <p>We will consider if this is feasible, which resources would be required, and what timescale would apply.</p> <p>We would need to build a larger university consortium in order to confidently pursue a new LIEF bid to back this development. We view the applicability to LBA operations as a key element</p>	  

	conditions are the same as for standard NAPA proposals.	
16. User Feedback		
<ul style="list-style-type: none"> ATNF to reinstate the online user feedback form that (optionally) allows anonymous feedback. 	ATNF is investigating how this service could be resumed in a secure form with anonymous submissions, noting these were not supported previously.	
17. Communication between ATNF and ATUC		
<ul style="list-style-type: none"> ATUC would appreciate receiving summaries of outcomes and highlights from the ASKAP Survey Science PI meetings. 	We will summarise highlights from the PI meetings that have taken place since the last ATUC meeting and provide those in the ATUC meeting or separately, as appropriate.	
<ul style="list-style-type: none"> ATNF to provide a summary of the December 2022 ATSC meeting prior to the next ATUC meeting. 	As agreed previously we will share relevant outcomes with ATUC.	
18. Date and format of next meeting		
<ul style="list-style-type: none"> Retain and possibly expand the discussion sessions in future meetings. 	We have retained a substantial portion of breakout discussion time in the agenda of the next ATUC meeting and are keen to continue working with ATUC to optimise the balance between reports and discussion.	