## Director's response to ATUC Report – November 2020

ATUC Recommendation		Director's Response	Traffic Light
2.	Commendations and successes		
	ATUC commends CASS on:	Noted	
	<ul> <li>Renaming the antennas at the Parkes observatory to local indigenous names and <i>Murriyang</i> (Parkes) receiving national heritage listing.</li> </ul>		
	• For the ground-breaking science achieved by the Parkes 20-cm multibeam receiver across a wide range of science over its lifetime.		
	<ul> <li>ASKAP marking an important milestone as a productive scientific instrument, with its 100th refereed publication.</li> </ul>		
	• 500th reconfiguration of the ATCA, another milestone marking successful operations and scientific support over the past several decades.		
	• Effective response to the COVID-19 pandemic, and keeping all facilities operational and accessible through remote observing.		
Red	commendations		
3.	SKA		
	No recommendations.		
4.	Diversity and Inclusion		
	a) CASS to articulate the current strategy for encouraging diversity within the Summer Student program and provide a standing report for Vacation Internship gender statistics moving forward.	Agreed. Diversity is encouraged in the advertisements for the Vacation Student program, and oversight of the shortlisting and offers made ensures reasonable gender balance is achieved. A standing report will be given.	
	<ul> <li>b) CASS to track the number of student-led and ECR-led proposals, as well as provide detailed gender statistics for each proposal round.</li> </ul>	OPAL provides the option for users to record their gender in their personal details, however the majority of users have not (yet) done so. The proposal cover sheets do not (currently) ask ECRs to self- identify. CASS is examining how we might present this information in future rounds.	

	c)	Consult ESO, HST, SARAO/MeerKAT on how blind proposal review is being implemented at other observatories and what their experience has been (lessons learned).	Some information on processes at other facilities has been shared by the UNSW team leading the study into unconscious bias, and we will follow up with SARAO/MeerKAT as they have just concluded their first round of open proposal reviews.	
	d)	Improvement of gender balance and diversity being made a priority in forthcoming productions/outreach materials.	Agreed. This is a high priority and current practice for CSIRO. The historical movie referred to in the ATUC report is being replaced.	
	e)	Standing report from diversity champion Kevin Ferguson, outlining the actions being undertaken by CASS to address any existing diversity and inclusion issues and whether there are plans for Pleiades or SAGE recognition.	Agreed. Since the ATUC meeting CASS has submitted a Pleaides application	
5.	Rad	dio Astronomy Technologies		
	a)	ATUC supports the CASS approach and strategies for LIEF applications, and recommends that CASS align the related Eol process with the timelines for Universities to secure commitment through their internal process.	CASS now releases a call for Expressions of Interest via the ASA exploder in September/October to align with University timelines and makes a final decision regarding applications alongside the Universities.	
	b)	CASS to consider holding a dual science and instrumentation day - possibly attached to the ATUC October 2021 meeting.	CASS welcomes this suggestion and will support ATUC in organising such a meeting.	
6.	Dat	ta Archives		
	a)	Relevant members and users to liaise with ATNF to develop a list of use- cases to implement more efficient data downloads from DAP.	ATNF staff will be happy to work with members and users in preparing a list of use cases to improve DA. We note however that resources to develop new DAP features are likely to remain limited over the next year or two.	
	b)	Investigate adoption of CASDA to host/query/access ATCA and ATCA BIGCAT data.	An existing proposal to merge ATOA into CASDA will be considered under the "DAP Futures" project, in collaboration with CSIRO's IM&T.	
	c)	Consideration of a cut-out service for spectral data to avoid downloading excessive amounts of	CASDA already has a spectral sub- cube cut-out facility, both in the UI and scripted access (examples in github repository). We plan to	

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		data when only a small portion is required.	introduce a cutout tool to the CASDA astroquery python module. There is currently no spectral sub-cube cutout facility in ATOA.	
	d)	Regardless of archival system, ATCA BIGCAT to retain the ability to give users fast initial access to data for transient or NAPA science.	Agreed.	
7.	AS	КАР		
	a)	ATUC recommends CASS to liaise with ASKAP Science Survey teams and help them iron out the data product issues before rushing into Phase II observations and to assess the impact of required tests for the start of Phase II observations.	There has been an extended consolidation period for ASKAP following Pilot Surveys Phase I to process the Phase I data and address data product issues. Plans for Pilot Surveys Phase II are described in the document <u>https://confluence.csiro.au/display/</u> <u>askapsst/Pilot+Surveys+Phase+II</u> .	
	b)	<u>Commensality</u> - CASS to clarify the commensality strategies that are being considered following the SST PI meeting, and expectations of the fractional availability of open time on ASKAP, given the time pressure anticipated from potential delays.	CASS aims to maximise scientific impact of ASKAP surveys in first five years and significant commensality remains highly desirable particularly for EMU, WALLABY and POSSUM. Any proposals by these projects for largely non-commensal programs will need to include a detailed and objective assessment of options for commensality and clear scientific arguments for why this is not their preferred option. Survey Teams should use Pilot Surveys Phase II to explore their options. Our current planning is that a cap of 10% on open time (GSP) will be adopted initially, once full surveys commence, rather than 25%.	
	c)	<u>ASKAP split-band mode</u> - CASS to report back on the feasibility and timeline of the split-band mode after it has been evaluated by the proposed tiger team, and to clarify how the implementation of split- band mode would impact the full survey's timeline.	Implementation of "split-band" mode is deferred until after completion of Pilot Survey Phase II, and will proceed only with confidence that any disruption to the commencement of full surveys is limited. We will give an update at the next ATUC meeting.	
8.	AT	CA		
	a)	CASS to invite a scientifically diverse range of potential ATCA users to attend the 2021 workshop and help finalise science requirements for BIGCAT.	The BIGCAT science requirements workshop will be held on the 11 <sup>th</sup> and 12 <sup>th</sup> of March 2021. This has been advertised to current ATCA users and the general astronomical community via the ASA exploder.	

	b)	<ul> <li>CASS to consider the following features when designing BIGCAT.</li> <li>Low-latency follow-up modes (like the low-latency triggering currently available). Pulsar/VLBI tied-array beams.</li> <li>Higher spectral frequency than 0.6 kHz (precise value to be determined, based on user feedback).</li> <li>The ability for both automated observing (made possible by easier reconfigurability of the system), as well as interactive observing modes to enable observer training.</li> <li>The ability to mitigate radio frequency interference, which would be important given the wider bandwidths.</li> </ul>	These features are all being considered in the BIGCAT design. The plan is that BIGCAT will offer all of the current modes offered by CABB (e.g. low-latency follow up (i.e. NAPA proposals), pulsar mode and tied-array beam modes, automated rapid-response triggers). A spectral frequency resolution higher than 0.6 kHz is likely possible with compromises such as reduced bandwidth, and this will be discussed further when finalising the science requirements with input from members of the community who have expertise in very high spectral resolution observations. The development of RFI mitigation technology is expected to take longer to implement than the current timescale of the BIGCAT upgrade, however, this feature will be included in the science requirements to ensure that this functionality can be added at a later date.	
	c)	<ul> <li>CASS to consider the following principles when deciding on a data format for BIGCAT.</li> <li>A well motivated data format is best designed by software engineers.</li> </ul>	ATUC raises some good points on deciding the data format for BIGCAT and these will all be taken into consideration.	
		<ul> <li>Data format should be able to interface with either CASA or miriad.</li> <li>The data format should not preclude science objectives (i.e. it should be possible to analyse data mid-observation to search for transients, etc.).</li> </ul>		
	d)	Legacy surveys - ATUC requests that an update on the legacy surveys be provided at the next meeting, including a) progress updates, b) publications, and c) plans for data releases.	We will present a Legacy project update at the next meeting.	
9.	Par	kes (Murriyang)		
	a)	A science case for high frequency observations (including large projects) to be further developed and discussed amongst the community.	A science case is being considered currently for an ARC LIEF funding proposal – which is contingent on funding from partner universities. Should it go ahead the science case will be led by one of those Universities and we will endeavour	

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	b)	<u>Use of facility names</u> - CASS to provide advice on how (and when) to refer to telescopes when communicating results (in refereed publications, popular media, and social media etc.)	to provide opportunity for wider community input, before submission in March 2021. The CSIRO Parkes radio telescope will retain its official name for use with CSIRO and the User community. The Wiradjuri name complements the official name - the CSIRO Parkes radio telescope - and recognises the country and first people of the observatory site, and Australia's first scientists and astronomers. The advice at https://www.atnf.csiro.au/research/ publications/Acknowledgements.html has been updated.	
10.	LB	Α		
	a)	ATUC requests an update on LBA and LBA-Low plans at the first 2021 meeting.	These will be included in the Agenda for the April meeting.	
11.	Use	er Feedback		
	No	recommendations.		