

# Draft ASKAP User Policy

CSIRO-ATNF  
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## Document History

Title	Revision	Date	Author	Remark
Recommendations for ASKAP User Policy	Final	2008 Oct 21	Ilana Feain & Simon Johnston	Submitted to ATNF Director
Draft ASKAP User Policy	1.1	2008 Oct 23	Ilana Feain & Simon Johnston	Draft sent to ATNF Director and Deputy Director
Draft ASKAP User Policy	1.2	2008 Oct 24	ATNF	Minor revisions

## Document Status:

This document represents CSIRO's first draft of the User Policy for the Australian SKA Pathfinder (ASKAP) which is planned to begin scientific operation in late 2012. This draft is based on recommendations from the ASKAP User Policy Taskforce to the ATNF Director received in late October 2008, and differs only in a small number of areas from the recommendations received. Furthermore, the Taskforce has endorsed the changes from its recommendations. The efforts of the Taskforce, chaired by Ilana Feain and with members from CSIRO, Australian universities and from Canada, are very much appreciated and the ATNF thanks all the members for their efforts.

This draft policy incorporates input from the Australia Telescope Steering Committee (ATSC) based on consideration of the Taskforce recommendations at the ATSC meeting on 16 & 17 October 2008.

Whilst extensive input from the astronomy user committee has informed the development of the draft policy through the ASKAP User Policy Taskforce, further feedback is welcome and encouraged. Appropriate routes for such feedback include via the ASKAP Project Scientists Ilana Feain and Simon Johnston, the Australia Telescope User Committee, or directly to the ATNF Director or Deputy Director.

Formal approval for the ASKAP user policy is ultimately the responsibility of the CSIRO Board. This draft is currently under consideration by the CSIRO SKA Taskforce to ensure alignment with existing CSIRO policies. CSIRO is also seeking advice from the Australian SKA Coordination Committee (ASCC), which will in turn receive advice from its own Science and Technical Advisory Group (STAG).

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## 0. ACRONYMS & DEFINITIONS

**ASKAP:** Australian Square Kilometre Array Pathfinder

**ATNF:** Australia Telescope National Facility

**ATSC:** Australia Telescope Steering Committee

**ASCC:** Australian SKA Coordination Committee

**CSIRO ET:** CSIRO Executive Team

**SKA:** Square Kilometre Array

**STAG:** Science & Technology Advisory Group (advising ASCC)

**EoI Evaluation Committee:** A one-off committee to evaluate the Expressions of Interest for Survey Science Projects in early 2009.

**Survey Science Project Assignment Committee:** A one-off committee to review the Survey Science Project proposals in 2009.

**Survey Review Committee:** A standing committee who carry out annual progress reviews of the Survey Science Projects & Teams.

**TAC:** The standing ATNF Time Assignment Committee that reviews Australia Telescope proposals.

## 1. OPERATIONAL PRINCIPLES

The following principles define the framework within which ASKAP will operate.

- 1.1 ASKAP telescope time will be assigned to astronomical research projects subject only to scientific merit and to technical and operational feasibility.
- 1.2 No a priori guaranteed science time will be allocated to particular countries, institutions, nor to any individuals currently on existing (2008) working groups.
- 1.3 ASKAP will not be a user-operated telescope; generally users will interact with the ASKAP Science Archive.
- 1.4 ASKAP data and data products will be released publicly through the ASKAP Science Archive on a timescale designed to maximise scientific utilization and impact.
- 1.5 The ASKAP Science Archive will be available to astronomers from all over the world.
- 1.6 Simultaneous observing programs will be encouraged where possible.
- 1.7 In general there will be three classes of observing time allocated on ASKAP; Survey Science Projects, Guest Science Projects and Target of Opportunity over-rides.
- 1.8 Time Assignment will be made by the ATNF Director, subject to advice received from the appropriate Times Assignment / Survey Review committees.

## 2. SOFTWARE INSTRUMENTS

2.1 An ASKAP software instrument is a mode of telescope operation that enables high quality data (and/or data products) to be placed into the ASKAP Science Archive for users to retrieve.

2.2 ATNF will develop three basic software instruments necessary for science operations.

These software instruments are:

- A continuum software instrument to produce calibrated images over the full field of view for a large fraction of the sky, and
- A slow transient software instrument to image changes in the continuum sky on the time scale of five seconds or longer, and
- A spectral line software instrument to produce a spectral catalogue over the full field of view for a large fraction of the sky.

ATNF is committed to developing future software instruments for ASKAP. The development of future software capabilities by ATNF/ASKAP will strongly depend on science priorities, budget, personnel and development timescales.

2.3 The Survey Science Projects will drive the direction of future software instruments. Survey Science Teams together with the ATNF astrophysics and computing groups will develop the instrument capabilities.

## 3. SURVEY SCIENCE PROJECTS

### Definition

The ASKAP Survey Science Projects are large (>1500 hrs) and coherent science projects that utilise ASKAP's wide field-of-view and fast survey speed to enable major science outcomes early in its lifetime. Survey Science Projects are distinguished from Guest Science Projects (see Section 4) by the following:

- (i) Survey Science Projects are large and coherent science projects, which address widely recognized astrophysical issues and that could not be reasonably addressed by any combination of Guest Science Projects.
- (ii) Survey Science Projects will enable scientific results that are intended to be of general and lasting importance to the broad astronomical community
- (iii) Survey Science Project data and data products will enter the public domain in a timely way to enable effective opportunities for follow-up observations and for archival research both with ASKAP and other observatories.

- 3.1 For the first five years of routine science operations with ASKAP, it is envisaged that at least 75% of observing time will be available for Survey Science Projects.
- 3.2 The observing time required to complete a Survey Science Project will be allocated in advance, but will remain subject to staged data releases and progress reviews.
- 3.3 ASKAP Survey Science Projects will be selected by competitive peer-review.

## **Survey Science Teams**

- 3.4 Membership, including leadership, of ASKAP Survey Science Teams will be open access in accordance with principles 1.1 and 1.2.
- 3.5 The role of a Survey Science Team is to facilitate the design, implementation, integrity and delivery of Survey Science Project data and data products to the ASKAP science archive.
- 3.6 Survey Science Teams will play a lead role in survey design, software instrument design, early science commissioning, data processing and quality control.
- 3.7 Survey Science Teams must provide clear statements on their proposed data release and publication timescales.
- 3.8 To facilitate interactions with ASKAP designers, each Survey Science Team should include at least one person associated or affiliated with ATNF.

## **Data Access**

- 3.9 All data and data products produced by the software instruments (subject to storage capacity) will be made publicly available through the ASKAP Science Archive on a time scale determined by operational issues (e.g. quality control) and not proprietorial interests.
- 3.10 Ranking of Survey Science Projects will take into account the intention of the Survey Science Teams to provide value added data products into the ASKAP Science Archive. Teams should specify the form of any such products as well as their intention and timeline for providing them.

## **4. GUEST SCIENCE PROJECTS**

Guest Science Projects are observational programs that require <1500 hours of observing time to complete and that utilise ASKAP's capabilities to enable scientifically interesting experiments. Guest Science Projects can include Non A-priori Assignable proposals (NAPA) but do not include override requests such as Target of Opportunity (Section 5).

- 4.1 For the first five years of routine science operations with ASKAP, it is envisaged that up to 25% of observing time will be available for Guest Science Projects.
- 4.2 Proposals for Guest Science Projects will be subject to competitive peer-review by the Time Assignment Committee (TAC).

## **Data Access**

- 4.3 If reasonable grounds are established in the proposal, the TAC will have the discretion to allow a proprietary period of up to 12 months from the last scheduled observations to data and data products from Guest Science Projects.
- 4.4 Otherwise Guest Science Project data and data products will be released publicly into the ASKAP Science Archive without any proprietary period.

## **5. TARGET OF OPPORTUNITY**

Existing ATNF policies for telescope override observations are adopted.

- 5.1 Target of Opportunity events are unexpected astronomical events of extraordinary scientific interest for which observations on a short time scale are justified.
- 5.2 Target of Opportunity observing time is allocated at the discretion of the ATNF Director and may displace other scheduled observations at short notice. To avoid conflicts of interest, ToO requests are crosschecked against existing observations and proposals.

## **Data Access**

- 5.3 Target of Opportunity data and data products will be released publicly into the ASKAP Science Archive without any proprietary period.

## **6. SCHEDULING & TIME ASSIGNMENT**

A three-stage process will be adopted to select the first set of ASKAP Survey Science Projects. These stages are (i) Proposal Submission, (ii) Design Study, and (iii) Scheduling & Science Operations. A description of these stages is given in a separate document.

- 6.1 All ASKAP proposals will be submitted through OPAL at <http://opal.atnf.csiro.au/>.
- 6.2 The standing ATNF Time Assignment Committee will evaluate Guest Science Project proposals.
- 6.3 The EoI Evaluation Committee, appointed by the ATNF Steering Committee, will evaluate the Survey Science Project Expressions of Interest.

- 6.4 The Survey Science Project Assignment Committee, appointed by the ATNF Steering Committee, will evaluate the Survey Science Project proposals. This committee will be of international stature, having expertise in astronomical survey projects and management of large teams.
- 6.5 The Survey Science Project Assignment Committee will provide advice to the ATNF Director on the overall fraction of time to be devoted to Survey Science Projects.
- 6.6 The Survey Science Project Assignment Committee will provide advice to the ATNF Director on the release time scale for survey data and data products, consistent maximising survey impact and utilization.
- 6.7 Survey Science Projects, and the release of survey data and data products, will be subject to annual progress reviews by the Survey Review Committee appointed by the ATNF Steering Committee.

## **7. EXTERNALLY PROVIDED HARDWARE OR SOFTWARE**

- 7.1 Hardware or software that is developed in collaboration with - or provided exclusively by - external partners, will be operated as National Facility infrastructure.
- 7.2 ASKAP data and data products obtained using software instruments developed in collaboration with - or provided exclusively by - external partners, are subject to the user policies laid out in this document.

## **8. COMMISSIONING AND EARLY SCIENCE VERIFICATION**

- 8.1 Commissioning of a 6-element Boolardy Engineering Test Array (BETA) will begin in 2010 and there will be a staged rollout of further antennas over several years until ASKAP becomes fully operational. Survey Science Teams, in conjunction with ATNF staff, will carry out commissioning tests and science verification with BETA and the data will be released into the ASKAP Science Archive (if appropriate) once adequate quality control is performed.

## **9. ACKNOWLEDGEMENT & CITATION**

- 9.1 ASKAP users are requested to properly cite the appropriate Survey Science Project data release or survey design publication in any publications resulting from the use of Survey Science Project data or data products obtained from the ASKAP Science Archive.



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