Decadal Plan Facilities Meeting, Friday 17 December 2004, UNSW

Student Access to Facilities – Survey Results

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Introduction

This talk comes from the results of a survey sent to Australian PhD students in Astronomy.

The survey was emailed to students via various student lists and to individuals. 16 surveys were returned, covering 30 facility usages by these students.

The survey aimed to find out how students feel about the currently available astronomical Facilities available in Australia. University facilities were especially targeted, since they are funded by universities and so finding out if they are serving their educational purpose as well as their research purpose is important. The survey was also give a more general feedback to the community on the use of all Facilities by the students, the level of satisfaction, problems encountered, and student views on planning for future facilities.

Results

Question 1 involved a series of questions on students' experience of each facility they used. The results from the first few statements were collated and presented in a spreadsheet (below).

<table>
<thead>
<tr>
<th>Facility</th>
<th>Used?</th>
<th>Have to apply?</th>
<th>Ever refused time?</th>
<th>Deadlines awkward?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Ceduna Radio Observatory</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mt Pleasant Observatory</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>MOST</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>MSSSO: 2.3 m telescope</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>40 inch/1m</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>24 inch</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automated Patrol Telescope</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOPRA</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>ROTSE</td>
<td>2</td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Swinburne Super Cluster</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macquarie Uni Observatory</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>Mt Kent Observatory</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANGAROO Telescope</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>SUSI</td>
<td>1</td>
<td>1</td>
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<tr>
<td>ATCA</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Parkes</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>AAT</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Gemini</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

The above table serves to show the number of answers received for each University facility and those with no data. Important points noted include:

About 50% of student telescope time needs to be applied for
Few application knockbacks – none on University facilities - only Gemini / ATCA

Observing proposal deadlines were generally fine for university facilities. There were some problems working with the AAT/ATNF/Gemini proposal deadlines which are 6-monthly. One comment made illustrating the problems with long lead times on telescope time - if you get refused once, you need to wait 1 year for sources to be back up (optical) – is a huge setback in a 3 -3.5 year PhD.

**Was it easy to learn to operate it?**

Mostly yes (~ 60%)
MSSSO 2.3m/1m – lack of documentation or out of date
Swinburne supercluster also 'hard'

**Was the support adequate?**

25/28 yes
Generally staff excellent
lack of $ noticed for some facilities
some “no's” on 2.3m /1m

**Did/Do you obtain useful data? If no, what was the reason?**

Yes, 28/30, but not always as much as wanted
Reasons: technical problems (Mopra, MSSSO 1m, Mt Pleasant, APT), weather

**Was the data reduction software straightforward to use and well maintained?**

Often n/a (11), mostly fine (13)
Gemini software has non-implemented features
SPC (Mopra) 'horrible' – but DFM routine very god
Miriad (ATCA) well-maintained

**Use of facilities beneficial to your project?**

Ambiguous question
Generally yes (3 no)

**Are results from the observations published or planned to be published?**

Nearly all yes
Exceptions generally because the data obtained was not for the student's project

**Were delays in publishing due to instrumental delays associated with the facility used?**

Hardly anyway
Systematic error on APT one exception
Would you use this facility again for this project?

Ambiguous question
Generally yes (8 no)

Ranks

Not enough responses for there to be useful comparisons

For questions 2-9 student's responses / comments have been listed.

(2) How do you rank out of 5 any of the other University facilities you have not used but would like to comment on? Please state what influenced your opinion.

Comments:

MSSSO 40”. very impressed by this instrument as it is relatively easy to operate, easy to get time on, and still capable of doing 'real' research with despite being quite dated in both size and instrumentation. Like most university facilities it is in desperate need of an injection of cash but aside from that it is quite good.

MOST sounds like an exciting instrument, but I'm not sure that outside users can get access to it.

(3) What future University facilities would you use if they become available?

ANU skymapper telescope

SKAMP upgrade to MOST – also MOST for pulsar work

Ultra stable spectrograph for high precision radial velocity measurements similar to Coralie on a smaller telescope with possibility of extended time series observations (few weeks).

For universities and astronomy research institutions to pool their computing facilities and link them up with high bandwidth networks so that they are better utilised.

A telescope similar to the APT in, WA (or New Zealand, or South Africa, or Chile....), in combination with the APT, would be useful.

Swinburne supercomputer simulator / Virtual Observatory

Smaller optical telescopes @ SSO to replace those lost

Larger optical telescope

(4) Are University facilities (big and small observatories, planetaria, computing centres) adequate for the needs of undergraduate students who intend to do a PhD in astronomy?
Yes

Hard to know about MOST and SUSI as an undergraduate. Greater advertising about these facilities amongst the undergraduate community needed?

Not important – big attraction for PhD was getting to use National facilities.

(5) Are University facilities (observatories, computing centers) adequate for the needs of PhDstudents? How about National/International facilities?

Yes - privileged to have access to a wide range of facilities within Australia.

Uni facilities good as can always rebuild the bits that don't work. National facilities can be tricky on a PhD timescale.

Gemini competition fierce, waste of time and money for returns – better to find collaborators

Depends on project – if X-ray no, but radio national facilities great.

No – only way for PhD students to do first-class research is on nat/internat facilities

(6) What percentage of the time did/do you use University facilities, compared with National and International facilities during your PhD project?

Wide-ranging – 100% uni to 100% international, but biased towards uni + australian facilities.

100% university x 3

80 % University facilities.

At least 50%.

95% Australian, 5% International.

only used University facilities but all data from international facilities

70%/30%

1/6

5%.

100% National

100% international

(7) Do you think your project would be more efficient if University facilities were funded better, managed better, equipped better, upgraded?
Lots of 'all of the above'.

Inefficiency of link between Parkes and Melbourne a problem

Delayed upgrade to APT bad.

Better computers with the most up to date software would be good

Management decisions are most essential, to ensure that university facilities fill appropriate niches. Need enough funding and equipment so PhD students aren't 'dogs-body – not always happening.

**and for National/International facilities?**

Fine/happy/up to date

**8) How up-to-date are the University facilities with the current research trends?**

Uni facilities good for characterisation studies, sample selection

Nat/internat define trends, Uni always second-rate

Uni facilities fill niches – create new trends

Computer updates slow

as up to date as others / world class data

**and for National/International facilities?**

Good for following up on successful research areas

**9) Any further comments?**

Australian lacks $ - better off to collaborate intelligently, allocate money for people and travel funds

6 month observing terms are high-pressure

**Survey Conclusions**

Happy with funding for and conditions of National Facilities, but deadlines awkward

More cash needed for university facilities – necessary repairs / upgrades noticed.

Some specific suggestions / complaints received
Astronomy facilities in Australia are on the whole working for students – students are being supported, getting results on uni facilities as seen by publication rates