



LARGE OBSERVING PROGRAMS ON THE AAT Request for Proposals Semester 14A

The AAO aims to provide opportunities for Australian and international astronomers to make effective use of the Anglo-Australian Telescope's unique capabilities to address major scientific questions through large observing programs. These large observing programs may use any general-user instrument at AAT: AAOmega, SPIRAL, UCLES, IRIS2 or HERMES. In Semester 14A, HERMES is being offered in shared-risk mode only.

The AAO is issuing a *Request for Proposals (RfP)* for major new observing programs to commence in semester 14A (February 2014 to July 2014). All proposals will be evaluated by ATAC. Ambitious projects are encouraged, and the AAO expects large observing programs to be awarded a total of at least 25% of the available time on the AAT; in some past semesters Large Programs have been allocated almost 50% of the available time. Existing AAT Large Program commitments are listed at <http://www.aao.gov.au/astro/apply/longterm.php>

All proposals should use the standard online AAT form although non-standard page limits and section headings will apply as outlined below. The case for the proposed large observing program must include:

1. **A major, compelling and feasible scientific program.** The proposal should focus on key questions that the observational data would address, but should also outline anticipated secondary uses of the data by the broader community. 'Major' in this context will generally mean programs requiring 50 nights or more (there is no set upper limit), possibly extending over several semesters. The science will be expected to be groundbreaking and not just incremental. Proposers need to discuss what their program will achieve in comparison with other on-going and future programs on similar timescales. *The scientific program should be described in no more than 5 pages (including figures, tables, and references).*
2. **An observing strategy** describing the provision of the input target sample, the detailed plan for the observations (number of nights including the standard allowance for weather, cadence of time-critical observations, and total duration of the project), the proposed instrumental setups, constraints on weather conditions or timing of observations, signal-to-noise or other figures of merit required to achieve the science goals, and any special support needed for the observations. The number of targets, required data quality, sensitivity limits and other relevant information should be rigorously justified. Programs requiring multiple visits to the same field should present a strategy for updating targets to achieve optimum efficiency. *The observing strategy should be described in no more than 2 pages.*
3. **A management plan** outlining the collaboration involved in the program, the sharing of responsibilities for scientific management; the planning of observations; the carrying out of observations; data reduction; quality control at each of these stages; data release to the AAO community and compliance with International Virtual Observatory Alliance standards; and finally, data analysis and exploitation by the proposing team. Specifically, the plan should address the following issues:

- a. *Data reduction procedures and requirements*: what are the team's specific data reduction needs and their capacity to support these needs?
- b. *Funding*: what resources have been secured (or are being secured) to support team personnel, and what is the duration of this funding?
- c. *Observing management*: what observing experience (directly applicable to the AAT instrument to be used) do team members have, and how many have indicated a willingness to participate in observing runs? The AAO expects all Large Program teams to become self-supporting at the AAT, in terms of including observers who are already competent with or are willing to be trained in the operations of the instrument(s) for the program without additional AAO staff support.

The plan should outline the roles of all team members and how members contribute to carrying out the program. Proposers may also wish to suggest a publication strategy, including the process for determining authorship. *The management plan should be described in no more than 2 pages.*

4. **A project timeline**, including the observational and analysis aspects, with milestones and regular reviews by ATAC during the course of the program.
5. **An outreach plan**. Proposers should plan for significant public outreach, and the proposal should explain the broader impact of the project. *The timeline and outreach plan, together, should be described in no more than 1 page.*

Proposers are encouraged to form broad collaborations across the Australian and international communities in support of their programs. The PIs for large programs will generally be expected to commit to the project as the main focus of their research over the program's duration. Proposers should also familiarise themselves with the method of time accounting (<http://www.aao.gov.au/AAO/astro/newformula.html>) on the AAT.

Proposals for large observing programs should be submitted to ATAC by the standard proposal deadline of 16 September 2013.

The number of large programs to be awarded time will be determined with a clear preference for a small number of very high quality programs delivering high impact science as quickly as possible. Within these guidelines, ATAC will award time based on considerations including the relative scientific merit and impact of the large programs and standard programs, the quality of the management, publication and outreach plans, and the phasing of programs to provide a steady rollover of large programs for the longer term. A panel of independent expert referees will be asked to provide comments on the proposals; proposers will be given the opportunity to respond to the referees' comments. ATAC will, at its discretion, seek progress reports (which may be refereed) at various stages of the project.

Anyone considering submitting a large program proposal should contact the AAO Director (director@ao.gov.au) to discuss their plans.

Warrick Couch
AAO Director
23 July 2013