

# PROPOSALS FOR SWINBURNE KECK TIME POLICY AND PROCEDURES

## SCOPE

This document provides policy guidelines and procedures for applicants wanting to apply for Swinburne time on the Keck telescopes.

Swinburne has invested in 15 Keck nights per year, with a 5-year tenure. The first term ended in semester 2013A. Swinburne's Keck investment has been critically reviewed and has been renewed for another 5-year period, extending access until 2018A.

The Vice Chancellor has invested in Keck time for CAS astronomers with the specific aim of achieving greater research output for Swinburne, particularly high-impact papers in *Nature* and *Science*. All applicants for Keck time must realize the seriousness of this investment, which is illustrated by the value of each Keck night, i.e. approximately one staff member's annual salary.

The STACK (Swinburne Time Allocation Committee for Keck) assesses Swinburne Keck proposals and puts forth time allocation recommendations to be approved by the CAS Director and Caltech. When assessing Keck proposals, the STACK will focus on **maximizing the scientific return for Swinburne**. Thus, the STACK assessments are not based purely on scientific merit but will reflect a balanced consideration of how each proposal maximizes the scientific outcomes for Swinburne. As a result, higher-risk/higher-payoff proposals may have a higher chance of being awarded Swinburne Keck time.

Applicants are reminded that additional Keck nights may be available via collaborations with Caltech staff. Proposals for those nights must be made in accordance with Caltech's submission deadline and procedures and in agreement with the terms of the MOU (contact the Technical Secretary for details). Similarly, additional Keck time may be obtained with by collaborating with ANU, University of Hawaii, the University of California, NASA, and with other Australian researchers via the ATAC Keck allocation.

## FOR OBSERVERS

### CALL FOR PROPOSALS

A call for proposals (CfP) will be issued by the STACK Technical Secretary (TS) once the number of nights available on each Keck telescope and their lunation distribution and any other restrictions has been determined by Caltech and Keck. **These restrictions will be stated in the CfP and should be carefully considered by proposers.** The CfP will also include a strict deadline for proposal submission.

### APPLICANT ELIGIBILITY

CAS staff and postdocs who have a PhD in astronomy/physics may act as PIs of STACK proposals. For PIs on fixed-term contracts, the contract end date must be stated clearly on the proposal form. Postdoc PIs are required to have a permanent CAS staff member as a CoI who must accept responsibility for the data and outcomes of the observations. Students can apply with an eligible PI. Applicants should consider that Keck observations cannot be guaranteed and **student theses should not be designed to rely exclusively on Keck data obtained through the STACK**. Note that data is not given to the student but remains the responsibility of the PI. The role of the proposal in the student CoI's thesis work should be detailed in the proposal. In addition, the role of all non-SUT Co-Is must be fully specified in the proposal.

### PUBLICATIONS

Any publications related to STACK-awarded time must have SUT as an affiliation on the publication. Even if the CAS staff member moves to a different institution, SUT must be listed as an affiliation. All publications using data from STACK allocations, regardless of lead author, must include the Keck observing code, e.g., 2014B\_W0123D, in the Acknowledgements. It is expected that data acquired via STACK allocated time is to be published in a timely manner, with submission to a refereed journal to occur no later than 1.5 years after the last date of observations for a given project. The lack of publications for completed projects will be considered in the ranking of the PI's and Co-Is' future proposals.

## **PROPOSALS**

### THE PROPOSAL FORM

The proposal form consists of two parts. The first part is an online cover sheet that is obtained from the Keck Observatory user-based webpage (i.e., the Keck user login page). The second part is a simple LaTeX pro-forma that can be found on the Keck CfP webpage or from the TS. The PDF version of the proposal (cover sheet and pro-forma) should be submitted via email to the TS by the advertised deadline. The proposal pro-forma includes specific instructions on information that is to be included in each section.

**Proposers should include all relevant information in the proposal.** Any significant information relevant to the proposal that emerges after the proposal submission deadline must be submitted to the TS in writing and assessed by the STACK Chair. No discussion of submitted proposals is permitted between proposers and STACK members.

### SCIENTIFIC JUSTIFICATION

The pro-forma Scientific Justification section is typical of proposals and should clearly set out the scientific background, importance, and expected/possible scientific outcomes of the proposed observations. In addition, the Scientific Justification of STACK proposals must include the scientific reasons why the proposal should be granted time on the Keck telescopes.

### TECHNICAL FEASIBILITY

The Technical Justification section is crucial for evaluating technical feasibility of the proposed science and will be carefully considered by the TS and STACK. This section should explain and detail how the science proposed in the Scientific Justification would be undertaken with Keck. It should not be used to explain, for example, target selection, sample definition, etc.

It is crucial that PIs **carefully justify** the telescope time, lunation and instrument requirements. The PIs must include a justification on why the number of hours or nights of telescope time is requested and why the lunation is required. Equally important is a discussion of whether or not the science can be done during other lunations. Finally, a clear description is required of the various instrument set-ups, filters, grisms/grating, etc. that are needed to achieve the proposed science. Any aspects of flexibility, in scheduling, lunation, instrument, wavelength range, resolution etc., should be justified in the proposal. In addition, a backup program must be presented (in the Backup Program section) in the event of bad weather or technical problems at the telescope. The backup program must include the science goals, choice of instrument, instrument set-up, and basic details of the observations for technical feasibility assessment.

**It is the PI's responsibility to ensure that the submitted proposal includes all information relevant to assessing its technical feasibility "as is", with no further assumptions required by the STACK for proper assessment.**

If the STACK cannot establish the feasibility of a proposed program of observations, **or proposed variations on it** (e.g. with respect to lunation, instrument etc.) then it is clearly difficult for the STACK to award that proposal time on Keck. Proposers are strongly encouraged to discuss technical feasibility issues with CAS staff, including the TS, and/or Keck staff and/or Caltech staff when preparing their proposals, i.e. **before the submission deadline.**

### MINIMUM TIME REQUEST

The minimum time request is 1 night. Applicants who wish to apply for half-nights should propose in collaboration with another proposer who can use the same night and same instrument, and both programs should be submitted in a single proposal. This arrangement should be clearly spelled out in the proposal. Of course, full and proper justification of all time requested must be supplied in each proposal.

### MAXIMUM TIME REQUEST

There will be no limit to the total amount of time requested by any applicant. Per the terms of the agreement with Caltech, there are 7 or 8 nights allocated to Swinburne each semester (15 nights per year). **Applicants should carefully consider requests for more than two nights in a single proposal.** Nevertheless, all allocations, regardless of their size, will be considered against their likely scientific

outcomes. As mentioned at the beginning of this document, five nights of Keck time are available in collaboration with Caltech. PIs may wish to investigate collaborations with Caltech staff on programs requiring more than two Keck nights.

#### LONG TERM STATUS

Long Term Status requests (i.e., proposals mandating Keck nights over multiple semesters) are not allowed. If a project is likely to require time in more than one semester, the amount of time required in future semesters should be noted in the proposal, including the Keck proposal cover sheet, and a new proposal should be submitted for the next relevant semester(s). Approval of a proposal in one semester does not imply that it will be favoured in subsequent semesters. **Reasons for future requests should be made clear in the current proposal. The outcomes of previous allocations for the same project should be made clear as well.**

### SCHEDULING OF SUCCESSFUL PROPOSALS

Once the final recommended time allocations are determined, the successful proposals will be put forward to Caltech for approval and sent to Keck. After Caltech approves the proposals, PIs will be notified of the recommended allocations as soon as possible. It is possible that Keck will not be able to schedule some proposals in their submitted form, or during their requested dates, thus the STACK allocated time is not guaranteed.

#### KECK SCHEDULING

**It is very important that PIs carefully select the “preferred” and “acceptable” dates on proposal cover sheets and provide the largest effective date range(s) to fully achieve their science.** The TS receives a preliminary telescope schedule from Keck and if a Swinburne proposal has not received scheduling during the marked “preferred” or “acceptable” date range(s), as entered on that proposal’s Keck cover sheet (i.e., the proposed science may be compromised by the scheduling constraints), the TS will inform the PI prior to the release of the official telescope schedule. If such proposals have some degree of flexibility, then the PIs and TS may liaise with the Keck schedulers to find a mutually satisfactory solution. It may also be possible to trade nights with other scheduled users of Keck (from any institution). However this option typically needs to be done **prior** to proposal submissions for either institution. If, after exhausting these possibilities, a successful proposal cannot be scheduled, the TS will inform the STACK members who will then offer the time to the next best proposal(s) that can properly make use of the available time.

Considering the above, **it is important that proposers detail the flexible aspects of their proposal.** Failure to do so may mean that their otherwise highly ranked proposal cannot be put forward to Keck for scheduling.

#### FEEDBACK

The TS will distill the STACK comments (reviewed by the STACK Chair) to provide feedback on proposals but this will be limited to a brief summary relating to their clarity, scientific merit and, on a best-efforts basis, their feasibility. Feedback will be made available as soon as possible to PIs after the final recommended allocations have been sent to Caltech and proposal outcomes have been made available to all applicants.