

SWINBURNE TIME ALLOCATION COMMITTEE FOR KECK (STACK) POLICY AND PROCEDURES

SCOPE

This document defines the terms of reference, policy guidelines, procedures and operational details for our internal TAC – the Swinburne Time Allocation Committee for Keck, or STACK – that is responsible for allocating Swinburne time on the Keck telescopes. The chair of the Swinburne Advisory Committee for Keck (SACK) is responsible for updating this document.

PRIMARY ROLE

The primary role of the STACK is to ensure the maximum scientific outcomes for Swinburne from time on the Keck telescopes.

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*. The STACK members, and all applicants for Keck time, must realize the seriousness of this investment. This is illustrated by the value of each Keck night, i.e. approximately one staff member's annual salary. Therefore, the deliberations and decisions of the STACK must focus on **maximizing the scientific return for Swinburne**. The STACK is not distributing time on a National Facility; it is instead being given significant responsibility for Swinburne's scientific output and an important say in how a large proportion of Swinburne's research budget is used. As such, the STACK is tasked the assessment of a relatively small number of proposals, spanning a large range of science goals from researchers with a wide range of expertise, for time on the Keck telescopes and the challenges these unique conditions create.

The STACK is reminded that Swinburne's investment in Keck has been renewed for only a 5-year period, extending access until the end of 2023A.

MEMBERSHIP

The STACK will comprise 6 voting members:

- The Chair, who will be appointed externally for a 4-semester term;
- 3 Level E/D/C CAS staff member with 4-semester term;
- 1 level A/B CAS staff member with a 4-semester term;
- 1 CAS PhD student with a 2-semester term.

The Director, or a proxy, may attend the STACK as a non-voting member.

The STACK will also have a non-voting Technical Secretary (TS) with experience in observational optical astronomy. The role of the TS is to liaise with Caltech and Keck on all aspects of the telescopes, available instruments and proposal/scheduling process. The TS will also administer the internal Swinburne proposal process, including the STACK meeting and its outcomes. The TS will undertake other duties related the Swinburne's Keck investment not detailed here. Finally, the TS will ensure that STACK member appointments are staggered to provide continuity and retention of 'memory', with no more than half of the members rotating off at any given time. The latter point may require an amendment to a member's tenure.

Senior CAS staff will select the external STACK Chair. Volunteers will be called to fill the Level E, D/E, C/D, and A/B positions. STACK members must notify the TS well in advance (preferably before their proposed final STACK meeting) if they wish to shorten their STACK tenure.

The student representative will be chosen by a transparent student vote organized by the Centre student representative. Students must consult their supervisor(s) before nominating themselves (or being nominated) for the vote. The CAS Director must confirm all appointments.

PROPOSAL ASSESSMENT

PROPOSAL CONSIDERATIONS

The STACK will not consider technical, editorial or any minor changes to a proposal made after the submission deadline. If important additional information emerges about a proposal after the submission deadline, the PI must have submitted it to the TS in writing **before** the STACK meeting. No information from any other party, including STACK members, may be considered when grading the proposal. The TS will consult with the STACK Chair and the CAS Director about the relevance of any additional information provided by a PI and whether it should be considered when (pre-)grading their proposal. Depending on the Chair and Director's decision, the TS may circulate the additional information, in writing, to all STACK members **before** the STACK meeting. No new information, of any kind, about any proposal, may be tabled at the STACK meeting itself. The only exception shall be a PI's request to withdraw their proposal from consideration; such a request must be in writing to the TS.

Applicants are told "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." **Thus the STACK should carefully consider the proposals of PIs and Co-Is that had Keck time that remains unpublished for projects that were completed more than 1.5 years ago.**

The TS and STACK members will, on a best-efforts basis, assess the technical feasibility of each submitted proposal. There will be no discussion between PIs and STACK members or PIs and the TS about particular proposals after the submission deadline.

RANKING OF PROPOSALS

The proposals will be ranked on how well they maximize the scientific outcomes for Swinburne. Note that the ranking is not to be based purely on scientific merit or, by contrast, purely on some measure or perception of "Swinburneness"; rather, the ranking will reflect the STACK's balanced consideration of how each proposal **maximizes the scientific outcomes for Swinburne**. Given this primary role, the STACK may support higher-risk/higher-payoff proposals compared to other TACs (e.g. ATAC). Recall that one of SUT's main goals is to increase the number of SUT *Nature* and *Science* publications.

The STACK will follow a similar process to other TACs. The ranking scheme for the given semester will be outlined and sent to the STACK members, along with the submitted proposals, immediately after the proposal deadline. Initially, STACK members will read and rank each proposal and submit their pre-grades to the TS by a date prior to the STACK meeting as set by the TS. All STACK members must attempt to assess all proposals with the same level of detail. The scores and comments of individual STACK members will be treated as strictly confidential before, during and after the STACK meeting.

Two days prior to the STACK meeting, the TS will assign each proposal to a single STACK member who will lead its discussion during the meeting. The discussion leader will, among other things, (1) review the proposal and the proposed science, (2) address the "Swinburneness" of the proposal, and (3) discuss the potential scientific outcomes to Swinburne. **The following discussion should include a note of the PI's contract length, publication prospects of the Keck data (e.g. risk of non-publication in a timely manner), and the expected credit to Swinburne if/when published.**

At the meeting, the STACK will discuss the proposals in the order in which they were submitted. STACK members can alter their initial proposal rankings during the meeting. STACK members will take no part in the **grading or discussion** of proposals on which they are an investigator, absenting themselves from the meeting when their proposal is being considered/discussed. STACK members may declare a conflict of interest in grading and discussion of any proposal and absent themselves accordingly.

After all proposal discussions are completed, STACK members will submit their final rankings to the TS, who will compile and reveal the final scores for all proposals. The scores will determine the proposal rankings for time allocation on each telescope and lunation range. Ties between proposals will be broken by a STACK member vote. The STACK Chair will have the casting vote; that is, if there is a tied vote, the

proposal for which the Chair voted will be ranked higher.

The ultimate outcome of the STACK meeting must be a recommended allocation of the available telescope time to particular proposals. The final proposal scores will be the main guide toward awarding time. However, if there is any justification for a variance from the PI's requested minimum time and any other aspect of flexibility in the proposed allocation (e.g. with respect to instrument, lunation etc.), this should be discussed during the meeting and at the time of telescope allocation. At all times, the primary role of the STACK should be carefully considered: for example, several proposals may have very similar scores, however allocating time strictly in order of formal proposal ranking may not maximize the scientific outcomes for Swinburne. Moreover, telescope time may need to be passed over, or "banked", to the following semester if not enough proposals are of sufficient quality and/or do not deliver a sufficient level of scientific outcome or impact for SUT. In deviating from the formal proposal ranking, careful consideration should be given to conflicts of interest among the STACK members. The STACK, particularly the Chair, should be diligent during this phase of the STACK meeting to ensure that the STACK's primary role is achieved.

QUORUM

The minimum number of non-conflicted STACK members required to reasonably assess a proposal and rank it against others is three (3). If, at the proposal deadline, it becomes clear that this quorum will not be met for one or more proposals, then the CAS Director and the external STACK Chair should together select an additional number of STACK members (either internal or external) to produce a quorum for that semester. All STACK members, including the additional ones, will have equal rights and responsibilities to rank and discuss every proposal for that semester.

STACK RECOMMENDATIONS

The recommendations made by the STACK on the allocation of time will be final. Only the CAS Director, in consultation with the STACK Chair, may alter the recommendations (see below) prior to the forwarding of proposals to Caltech. This notwithstanding, it must be realized that the STACK outcomes are subject to approval by Caltech (e.g., changes in lunation, nights, etc.) and scheduling by the Keck Observatory. As described above, efforts will be made to resolve such conflicts. However, the TS will inform the STACK members if Keck cannot schedule a proposal after efforts (discussed above) have been made to resolve the conflict(s). The STACK will allocate the available telescope time to the next best proposal that can be scheduled.

ROLE OF CAS DIRECTOR

Prior to the Call for Proposals, the TS will inform the CAS Director of any restrictions on the number and distribution (telescope, lunation, instrument etc.) of Keck nights in the upcoming semester. The CAS Director should indicate if they wish to place any further restriction on the number or distribution, after which the TS would issue the Call for Proposal.

Immediately after the proposal submission deadline, the TS will supply all proposals to the STACK and the CAS Director. Shortly before the STACK meeting, the CAS Director, having read all proposals in detail, will meet with the STACK Chair with the aim of ensuring the Chair is well briefed on the primary role of the STACK.

The recommended time allocation from the STACK, and any special instructions with regard to scheduling, will be submitted to the Director for approval immediately after the STACK meeting. The CAS Director may meet with the Chair at this time to query the recommended allocations and, if required, adjust them, including requests to change to the distribution of nights across telescope or lunation or the banking of nights. No changes by the CAS Director are expected without consulting the Chair. If the Chair wishes, another meeting of all STACK members may be called as soon as possible to consider proposed alterations to the allocations if time permits. Any modification that leads to the allocation of time on a proposal on which the Director is PI or Co-I will be deferred to the SACK chair or representative. The CAS Director (or appointee) has final responsibility for, and must approve, the final allocations before they are forwarded to Caltech.

ABBREVIATIONS

ATAC: Australian TAC

CAS: Centre for Astrophysics and Supercomputing CFP: Call for proposals

CoI: Co-investigator

PDF: Portable Document Format

PI: Principal Investigator

SACK: Swinburne Advisory Committee for Keck

STACK: Swinburne TAC for Keck

SUT: Swinburne University of Technology

TAC: Time assignment committee

TS: Technical Secretary