



Keck Institute for Space Studies Solicitation for Follow-on Technical Development Proposals

Release date: 19 September 2022
Letter of Intent due date: 19 October 2022 (noon)
Proposal due date: 21 November 2022 (noon)

Overview

The Keck Institute for Space Studies (KISS) is soliciting follow-on technical development proposals from Caltech Campus faculty who have been participants in previous KISS Study Programs.

The goal of the Keck Institute is to develop new space science and engineering ideas and concepts. **KISS will provide seed funding for one selected proposal** to advance technical development in promising areas identified by previous KISS study programs. Technical development work can include, but is not limited to:

- Technology development
- Development of prototypes
- Laboratory work
- Modeling
- Simulations and computation, and
- Observations and data analysis.

This proposal can include detailed scientific and engineering research aimed at demonstrating new technical approaches.

Proposals submitted in response to this solicitation must have a Caltech Campus Principal Investigator (PI).

The total funding resource for the successful proposal under this call is approximately \$200k. The period of performance for this technical funding is two years.

Criteria for Selection

The selection of the technical development proposal will be based on the following criteria:

- Potential for demonstrating innovative technical approaches with promise to impact the way that future space science and engineering are carried out
- Experience of the PI and Co-Is who will perform the technical work

- Involvement of early career researchers (graduate students and postdocs)
- The plan's ability to clearly articulate the implementation strategy for achieving the goals of the technical work
- Viability of the budget and schedule for carrying out the technical work
- How the proposed work is leveraging other complementary work proposed or supported by JPL or other institutions (if applicable)

Proposal Requirements

Proposals for Technical Development support can be in any format, but are required to provide the information outlined below in "Part 1: Program Description and Rationale" and are limited to five pages in length. Proposals must also include a budget and schedule as outlined below in "Part 2: Schedule and Budget." Proposers may provide additional material outside the formal proposal in an appendix, although reading the additional material is at the discretion of the review team.

Letter of Intent – Due 19 October 2022 (noon)

A one-page letter of intent to propose is requested by 19 October 2022 (noon). The letter should include:

- a brief description of the technical work to be proposed
- associated KISS study that generated the idea, and
- a list of probable investigators and their organizations.

The one-page letter of intent should be sent to Iryna Chatila at: ichatila@caltech.edu.

Proposal – Due 21 November 2022 (noon)

Cover Page:

- Name of the Technical Development Proposal
- Name of the KISS study area for which the proposal is being submitted
- Name of the Campus PI with e-mail and telephone contact information
- Names of Co-Is with e-mail and telephone contact information

Part 1: Program Description and Rationale (5-page limit)

- Summary of the goals of the technical development proposal
- Description of how the proposal will impact the way that future space science and engineering are carried out
- Description of the technical development efforts
- If applicable, descriptive summary of how the technical development work will leverage (or be coordinated with) complementary work at JPL or other institutions
- Description of opportunities for early career members of the community to participate (including involvement of Caltech graduate students and postdoctoral scholars).
 - o We particularly encourage active participation of Caltech graduate students and postdocs in the technical development programs. Please be specific in describing participation of these individuals, including whether or not the proposed technical work will be part of a student's thesis research.

*** It is understood that additional material may be valuable to the reviewers. As such, please feel free to attach supplemental information deemed necessary with your proposal. However, all critical information must be included in the 5-page main-body of the proposal text.***

Part 2: Schedule and Budget (not included in 5-page limit)

Schedule

- If there is more than one technical task defined in the proposal, each technical task must have its own schedule with identified milestones
- Include a mid-year project review
- Include one-page progress reports every February 1 (or earliest workday that follows)
- Include a final report at the completion of period of performance.

Budget

- Prepare your budget in direct cost, i.e. there will be no overhead as this will be deducted prior to your receipt of funds.
- Colleagues from JPL (and other organizations) can participate as consultants/advisors, or can provide a brief paragraph that describes linkages/proposed work at their organization that complement the Campus work proposed. For example, JPLers can collaborate based on ongoing

work, proposed R&TDs (spontaneous, topical or strategic) or other proposed funding, or as advisors.

- Small subcontracts are allowed, but must be fully justified.
- See Appendix A for an example of the required budget detail.

Proposals are due by 21 November 2022 (noon) to Iryna Chatila at:
ichatila@caltech.edu.

Deliverables and Requirements

- A Final Report is due at the completion of the period of performance in the award letter
- One-page executive summary progress reports in early February for each funded year of work
- Mid-year project reviews (1 per year)
- Website updates as requested

APPENDIX A – Required Two Year Budget Detail (Example)

	1/1/2023 - 12/31/2024
Personnel	
Research Staff (x.x FTE)	\$30,000
Postdoctoral Scholar (x.x FTE)	\$20,000
Total Salaries	\$50,000
Fringe Benefits (28% or current rate)	\$14,000
Graduate Student Stipend (use correct stipend for Division)	\$56,000
GRA Tuition Reimbursement (66% or current rate)	\$36,390
Total Personnel Costs	\$156,960
Travel	
Domestic (1 trip - Washington DC)	\$2,500
Foreign (1 trip - France)	\$5,000
Other	
Equipment (please list)	\$32,000
Supplies and Materials	\$2,000
Computing	\$1,000
PROPOSAL TOTAL	\$199,460

NOTE:

- Prepare your budget in direct cost, i.e. there will be no overhead as this will be deducted prior to your receipt of funds.
- There is no need to route this through the Division as the Division Chairs are part of the approval process.
- This does not need to go through the Office of Sponsored Research.