ExEP Resources Available to Strategic Astrophysics Technology (SAT) PIs

Brendan Crill
Deputy Program Chief Technologist
NASA Exoplanet Exploration Program (ExEP)
Jet Propulsion Laboratory/California Institute of Technology

10/8/21

Copyright 2021 California Institute of Technology. Government sponsorship acknowledged.
Cleared for public release JPL CL#21-5335
Strategic Astrophysics Technology timeline

- The timeline for requesting access to ExEP resources is based on the dates specified in **ROSES-2021 SAT amendment 37**

- Voluntary notice-of-intent (NOI) to propose to SAT-2021 is due on **November 19, 2021**

- The proposal deadline is **December 16, 2021**

- However, note that the amendment states that:

  *Should the Decadal Survey not be released by November 15, NASA will amend this solicitation to delay the due date, or cancel the solicitation.*
ExEP Resources for SAT PIs

- This presentation provides an overview of the ExEP resources located at JPL available to support a Strategic Astrophysics Technology (SAT) proposal.

- The available resources, if appropriate for your needs, may help you more efficiently meet your milestone goals and reduce your proposal costs and schedule.

**Available Resources**
- Vacuum coronagraph testbeds:
  - DST-1
  - DST-2 (commissioning in CY2022)
  - Vacuum Surface Gauge
- In-air coronagraph testbed
- Microdevices Laboratory (MDL)

**Unavailable Resources**
- HCIT-1 (dedicated to Roman)
Gaining Access to the ExEP Resources at JPL
How to Request Use of ExEP Resources at JPL

• Submit preliminary Statement of Work (SOW) for use of ExEP resources to Brendan Crill no later than December 3, 2021.
  – Follow SOW questionnaire on next page.

• Schedule telecon with Brendan Crill between Dec 6--10, 2021 to discuss use of the resources of interest and to obtain costing guidelines.
  – We will evaluate with the PI workforce, labor, and infrastructure access required across all received SOWs.
  – Proposal due date is Dec 16, 2021

• Brendan Crill will supply the proposal PI a Letter of Commitment for use of any ExEP resources.
  – PIs are to include both the SOW and the Letter of Commitment in their proposal (due December 16, 2021).
  – HCIT will provide workforce cost to set up testbeds; additional labor and unique procurements must be costed within the proposal.

• The Letter of Commitment does not assure selection of the proposal; lack of a SOW or Letter in a submitted proposal could adversely affect proposals intended to utilize ExEP resources.
1. Brief description of the proposed SAT

2. What resources are requested?

3. Milestone(s) to be accomplished and performance goals

4. Brief description of how the work will be conducted

5. Period(s) and preferred dates, if any, over which the resource is requested, stating whether in vacuum or air for testbeds. Include any time required for preparatory work.

6. A list of the personnel, expertise, and level of effort (if any) who will assist in the use of the resource.

7. Any anticipated changes to the resource needed to accommodate your demonstrations.

8. List of items needed for all testbed modifications. Identify items you will be procuring within your proposal’s budget and provide approximate cost of needed items.
   a. Otherwise, state that no additional procurements will be necessary for the use of the infrastructure under consideration.

9. Provide any other relevant information or constraints.
ExEP Technology Resources POC

For questions concerning use of ExEP technology resources or requests for more detail contact:

Dr. Brendan Crill
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, CA 91109

Office: (818) 354-5416
Email: bcrill@jpl.nasa.gov
Additional Slides
Figure 1: (Left) DST phase-1a commissioning layout. (Right) The DST bench in the HCIT2 vacuum chamber, covered in multi-layer insulation (MLI) and resting atop a support frame, Minus-K isolators, and Vespel platforms.
Figure 6: Top-down view of the DST2 bench CAD model with Zemax raytrace overlaid. Key elements are labeled.

Meeker et al. 2021 SPIE proceedings