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| **COR Program Technology Needs Input** |
| Technology Need Name:       | Date:      |
| Your Name:       | Organization:       |
| Telephone:       | Email Address:       |
| **PATR Prioritization Information** |
| Brief Description of Technology Need:      |
| Goals and Objectives:      |
| Current State of the Art:       | Current Technology Readiness Level:  |   |
| Tipping Point:      |
| Scientific and/or Engineering Benefits:      |
| NASA Needs:      |
| Additional non-NASA Aerospace Applications:      |
| Non-Aerospace Applications:      |
| Technical Risks:      |
| Sequencing / Timing:      |
| Time and Effort:      |
| Technology is (check only one): [ ]  Enabling [ ]  Enhancing  |
| Potential Relevant Missions:      |
| Potential Providers, Capability, and Known Funding:      |
| **Internal Use** |
|  TABS       Retrieved By:      Date Retrieved       |

**COR Program Technology Needs Input**

**Instructions:**

Use this form to submit technology needs for potential NASA missions or projects to the Astrophysics Division Cosmic Origins (COR) Program Office. This form is intended to describe a technology need (e.g. a highly reflective optical surface) not a specific candidate technology (e.g. a specific coating process or material).

The Program Office will use the information provided via this form to assess how this technology need applies to potential future missions and to gauge the impact that a successful technical solution could provide. That information will guide the technology needs prioritization process that feeds into the Program Annual Technology Report (PATR). For the latest PATR, go to <http://cor.gsfc.nasa.gov/tech/>.

Please send your technology needs inputs to thai.pham@nasa.gov.

**General Information:**

Technology Need Name: Enter representative name for the technology need.

Date: Enter date form is submitted.

Your Name: Enter your name

Organization: Enter your organization

Telephone: Enter your telephone number

Email Address: Enter your email address

**PATR Prioritization Information** [The information in this section will be used directly as part of the technology needs prioritization process as described in the PATR]**:**

Brief Description of Technology Need: Briefly describe the technology need and the associated key performance criteria. Technology needs that are well defined will receive higher prioritization than those that are vague.

Goals and Objectives: Describe the goals and/or objectives for a candidate technology to fill the described need. For example, “The goal is to produce a detector with a sensitivity of *x* over a wavelength of *y* to *z* nm.” Technology needs with objectives that are clearly quantified will receive higher prioritization than those without quantified objectives.

Current State of the Art: Describe the current state of the art of the most relevant technology.

Current Technology Readiness Level: Enter the estimated current TRL of the most relevant technology. Based TRL estimate on the TRL definitions in NPR 7120.8.

Tipping Point: Estimate the timeframe during which a candidate technology addressing the need could be brought to a level where its eventual viability can be assessed.

Scientific, Engineering and/or Programmatic Benefits: Describe the scientific, engineering and/or programmatic benefits of fulfilling the technology need. If the need is enabling, describe how and/or why. If the need is enhancing describe, and if possible quantify, the impact. Benefits could be scientific (i.e. better science output), engineering (e.g. lower mass), or programmatic (i.e. reduced cost or schedule). For example, “Material *x* is 50% stronger than the current state of the art and will enable the optical subsystem for a 2 m telescope to be *y* kg lighter.” Technology needs with the larger potential mission benefits will receive higher prioritization.

NASA Needs: Describe the specific needs and performance requirements for NASA mission concepts.

Additional Possible non-NASA Aerospace Applications: Describe any known non-NASA aerospace applications with a similar technology needs. Information about non-NASA applications is for information only and will not be used in the prioritization process.

Non-Aerospace Applications: Describe any known non-aerospace applications with a similar technology needs. This information is for information only and will not be used in the prioritization process.

Technical Risks: Describe known technical challenges and risks associated with the technology development.

Sequencing / Timing: Describe when the technology will be needed to support anticipated mission needs. Technology needs with the shorter time windows relative to required development times will receive higher prioritization. Also, describe any known technical dependencies. For example, very large format detectors will not be feasible without very fast readout electronics.

Time and Effort: Enter the estimated duration and scope of technology development effort.

Technology is Enabling / Enhancing: Check Enabling if fulfilling the technology need is required to meet the associated missions’ objectives. Check enhancing if fulfilling the need would have significant benefits, but is not absolutely required. Use the fields below to provide a qualitative description.

Potential Relevant Missions: List future NASA missions or applications for which the technology need is relevant and discuss how the need applies. Technology needs with significant relevance to highly ranked missions or applications will be prioritized favorably.

Potential Providers, Capabilities and Known Funding: List any known potential providers of relevant technology and describe to your knowledge their current capability as it relates to the technology need and any information you have regarding any current funding sources for relevant technology development.