How to Determine Relevance to the Science Mission Directorate (SMD)

- Introduction: Proposals must demonstrate relevance to SMD specifically, not any other part of NASA. This document will help you determine whether your research aligns with SMD's interests. Proposed research must be directly relevant to at least one of the five science divisions of NASA's Science Mission Directorate: Heliophysics, Earth Science, Planetary Science, Biological and Physical Sciences, or Astrophysics or the Exploration Science Strategy Integration Office (ESSIO). NASA's most recent science plan can be found here: https://science.nasa.gov/files/atoms/files/2020-2024_NASA_Science_Plan_YR_21-22_Update_FINAL.pdf
- II. ROSES: To demonstrate relevance proposers may refer to, or cite, a specific ROSES program element or research overview (see below) e.g., in Table 3 of ROSES-2022 which may be more comprehensive because there will be not "TBDs", or Table 3 of ROSES-2023 for example. The ROSES list changes from year to year. In ROSES, if a particular program element is listed in Table 3 as "not solicited this year", TBD, or even absent, that topic is still relevant to SMD's strategic objectives. Research that crosses divisional boundaries e.g., sun-climate connection, upper/lower atmosphere connection, comparative planetary atmospheres and/or atmosphere/surface interactions, Earth as an analogue for exoplanets, common physical/chemical data and/or processes in support of modeling or observations, are relevant.

ROSES Overviews: Proposers should review the relevant ROSES research overview appendix to their research areas.

A.1 Earth Science Research Overview

<u>B.1 Heliophysics Research Program Overview</u> For further information, consult Our Dynamic Space Environment: Heliophysics Science and Technology Roadmap for 2014-2033 (download PDF).

C.1 Planetary Science Research Program Overview

D.1 Astrophysics Research Program Overview

E.1 Biological and Physical Sciences Research Program Overview.

- III. SMD Division/Office Overviews: You may also review and cite the SMD's Division/Office overviews called "Science Topics" on the Science.nasa.gov if your proposal is aligned to work described on those pages. The following Science Topics are invited:
 - a. Universe: https://science.nasa.gov/astrophysics
 - b. Solar System: https://science.nasa.gov/solar-system
 - c. Sun: https://science.nasa.gov/heliophysics
 - d. Earth: https://science.nasa.gov/earth-science
 - e. Space Experiments: https://science.nasa.gov/biological-physical
 - f. Lunar Discovery and Exploration: https://science.nasa.gov/lunar-discovery

- IV. Technology Development: In addition, each SMD science division develops new technologies. Often, these efforts are accomplished via division-sponsored technology development or mission programs. For More information see https://science.nasa.gov/technology.
- V. Space Flight Missions: The ROSES list does not provide information about SMD large space flight missions, such as the James Webb Space Telescope. The landing page for the list of past, present, and future SMD space flight missions is: https://science.nasa.gov/missions-page.
- VI. Decadal Surveys: If the proposer is going to advance goals found in the most recent decadal surveys that describe strategic goals for each SMD Division, then please cite which goal(s) and which of the following decadal surveys. It is not required to cite a decadal survey but may be helpful:
 - a. Planetary Science: https://nap.nationalacademies.org/catalog/26522/origins-worlds-andlife-a-decadal-strategy-for-planetary-science
 - b. Earth Science: https://www.nationalacademies.org/our-work/decadalsurvey-for-earth-science-and-applications-from-space
 - c. Astrophysics: https://nap.nationalacademies.org/catalog/26141/pathways-todiscovery-in-astronomy-and-astrophysics-for-the-2020s
 - d. Heliophysics: https://nap.nationalacademies.org/catalog/25668/progress-towardimplementation-of-the-2013-decadal-survey-for-solar-and-space-physics
 - e. Biological and Physical Sciences: https://www.nationalacademies.org/our-work/decadal-survey-on-lifeand-physical-sciences-research-in-space-2023-2032
 - f. See the National Academies Website for other documents: https://www.nationalacademies.org/home
- VI. NASA Science Strategy documents: The historical NASA Science Strategy documents may be consulted and cited by the proposer; they are located at: https://science.nasa.gov/about-us/science-strategy.
- VII. Additional Documents (as they pertain):
 - a. The Chief Science Data Office and the Science Mission
 Directorate's <u>Strategy for Data Management and Computing for Groundbreaking Science 2019-2024</u> and the <u>Overall Open Source Science Initiative</u>.

Any other questions related to relevance of research topic can be directed to https://hq-smd-bridge@mail.nasa.gov, as appropriate.