

**Opportunity Title:** Space Science: Observational Infrared Astronomy **Opportunity Reference Code:** 0014-NPP-NOV23-ARC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0014-NPP-NOV23-ARC-Astrophys

Application Deadline 11/1/2023 6:00:59 PM Eastern Time Zone

**Description** Opportunities exist to participate in a program of observational astronomy and new instrumentation development at near- to far-infrared (IR) wavelengths. Observations are currently being made with the Hubble Space Telescope, Spitzer Space Telescope, and ground-based facilities. In addition, we are planning observations to be made with NASA's James Webb Space Telescope (JWST) and SOFIA. Ames staff has been involved in developing these observatories, with JWST expected to begin science operations in 2021.

Current scientific investigations are largely directed toward obtaining spectral information on galactic and extragalactic objects, particularly the formation and evolution of stars, extrasolar planets, stellar winds, brown dwarfs, galactic H-II regions, reflection nebulae, planetary nebulae, supernovae remnants, the galactic center, molecular clouds, interstellar dust, galaxies, and quasars. The molecular and grain components of various interstellar media are also being studied. Opportunities exist to continue observational studies in these areas, particularly the formation and evolution of stars and planetary systems, processes in the interstellar medium, and the formation and evolution of galaxies. Existing data from the Hubble Space Telescope, the Spitzer Space Telescope, and the W. M. Keck Observatory are available for these studies, and applications for new observations are also encouraged.

Instrumentation and technologies for future SOFIA instruments, JWST, and future space observatories are also being studied and tested. Participation in the scientific and technical definition and development of these systems is welcomed.

These activities are closely related to other research at Ames, particularly the opportunities entitled "Laboratory Studies of Cosmic Ices and Polycyclic Aromatic Hydrocarbons," "Origin and Evolution of Stars and Planetary Systems," and "Theoretical Astrophysics."

## Location: Ames Research Center

Moffet Field, California

Field of Science: Astrophysics

## Advisors:

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Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: <u>https://www.nasa.gov/oiir/export-control</u>

Eligibility is currently open to:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Eligibility • Degree: Doctoral Degree. Requirements