

**Opportunity Title:** Unified Modeling of Europa's Space Environment and Atmosphere

**Opportunity Reference Code:** 0229-NPP-NOV23-JPL-PlanetSci

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0229-NPP-NOV23-JPL-PlanetSci

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

**Description** Jupiter's moon Europa is one of the premier targets in our search for habitable environments and possible life beyond Earth. The goal of this project is to develop a unified global modeling framework for Europa's space environment that incorporates the moon's plasma interaction, energetic particle bombardment, and atmosphere. The establishment of this unified modeling framework will significantly improve our understanding of Europa's plasma interaction, and aid in the retrieval of information regarding Europa's sub-surface ocean from magnetic field data, thus constraining its habitability. In addition, this modeling will improve our understanding of how charged particles affect Europa's surface and provide key context for past and future remote sensing measurements, including those made by Galileo, the currently ongoing Juno mission, and the upcoming Europa Clipper and JUICE missions.

The postdoctoral fellow will have an opportunity to work with Dr. Tom Nordheim to couple the models together, develop new codes, and analyze results. They will also collaborate with relevant members of the Europa Clipper Project Science Team to apply the model in support of planning for the Europa Clipper mission.

**Location:**

Jet Propulsion Laboratory  
Pasadena, California

**Field of Science:** Planetary Science

**Advisors:**

Tom Andre Nordheim  
nordheim@jpl.nasa.gov  
(818) 393-8037

**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: <https://www.nasa.gov/oiir/export-control>.

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



Whether you are just starting your career or already at a senior level, ORAU offers internships, fellowships, research opportunities, and contract positions that can provide you with invaluable experience. Download the ORAU Pathfinder mobile app and find the right opportunity to propel you along your career path!

Visit ORAU Pathfinder [↗](#)



**Opportunity Title:** Unified Modeling of Europa's Space Environment and Atmosphere

**Opportunity Reference Code:** 0229-NPP-NOV23-JPL-PlanetSci

**Eligibility Requirements** • **Degree:** Doctoral Degree.