

**Opportunity Title:** Exploring deep ocean worlds with ROCKE-3D: conditions for habitability

**Opportunity Reference Code:** 0016-NPP-NOV23-GISS-PlanetSci

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

**Reference Code** 0016-NPP-NOV23-GISS-PlanetSci

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

**Description** The ocean worlds orbiting the outer planets of our solar system are in some ways the new frontier for looking at subsurface habitability and how that might come about. In collaboration with MIT we are currently investigating deep ocean circulation & plume transport and their impact on habitability in Enceladus & Europa using an extended version of the GISS/ROCKE-3D GCM Ocean model.

This opportunity presents prospective postdocs the potential to explore how such worlds operate and what sorts of observables might present themselves to future orbiter/fly-by missions and those possible from Earth based ground and space based telescopes. Our study will better quantify the habitability potential of these worlds, and extrasolar planetary cousins.

We are interested in self-sufficient applicants with the capacity for interdisciplinary research, with a desire to apply their talents to questions that lie at the intersection of ice covered ocean worlds and astrobiology. Experience modeling oceans, ocean biogeochemical processes, and possibly ice dynamics is preferred. This opportunity draws on a broad range of modeling techniques, parameters, and conditions. Thus, we will work with the prospective applicants to coordinate the proposed activities. Thus, if you are interested in applying to this opportunity, please contact the primary advisor (Michael Way) and Co-I John Marshall (MIT) in advance to coordinate your proposed activities.

**Location:**

Goddard Institute for Space Studies  
New York City, New York

**Field of Science:** Planetary Science

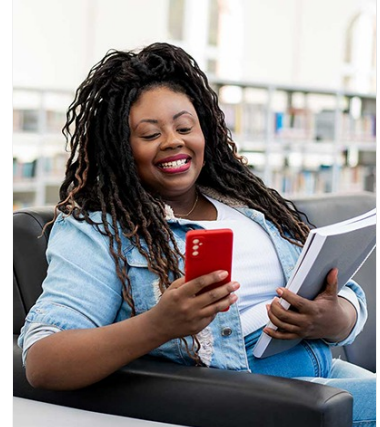
**Advisors:**

Michael Way  
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(212) 678-5665

**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);



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- 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 Requirements**

- **Degree:** Doctoral Degree.