

**Opportunity Title:** Upper Atmosphere Climate and Energy Balance

**Opportunity Reference Code:** 0031-NPP-NOV23-LRC-HelioSci

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

**Reference Code** 0031-NPP-NOV23-LRC-HelioSci

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

**Description** This position seeks a recent Ph.D. in the physical sciences to conduct leading-edge research in the area of upper atmosphere climate and energy balance using data from multiple satellite missions. One focus will be on the energy budget of the terrestrial lower thermosphere and the role of nitric oxide. Using advanced radiative transfer models, the intent is to derive the nitric oxide concentration from measurements of infrared emission from the SABER instrument on the NASA TIMED satellite. A second outcome of this will be improved rates of infrared radiative cooling by nitric oxide in the thermosphere. The position will enable evaluation of the response of the chemistry and energy budget of the thermosphere on timescales ranging from days (during geomagnetic storms) to decades (with the 11-year solar cycle). The analyses will also guide the development of future infrared sensors for observing the climate and space weather of the thermosphere.

**Location:**

Langley Research Center  
Hampton, Virginia

**Field of Science:**Heliophysics Science

**Advisors:**

Marty Mlynczak  
M.G.Mlynczak@nasa.gov  
(757) 864-5695

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



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 [↗](#)

