

Opportunity Title: Validation of Satellite-Based Ozone using Ground-Based and Balloon-Borne Measurements

Opportunity Reference Code: 0049-NPP-MAR26-LRC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0049-NPP-MAR26-LRC-EarthSci

How to Apply All applications must be submitted in [Zintellect](#)

Please visit the NASA Postdoctoral Program website for application instructions and requirements: [How to Apply | NASA Postdoctoral Program \(orau.org\)](#).

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 11/1/2026 6:00:59 PM Eastern Time Zone

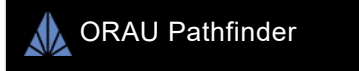
Description About the [NASA Postdoctoral Program](#)

The [NASA Postdoctoral Program \(NPP\)](#) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

Atmospheric ozone is multi-faceted in that it is protective or harmful to life on Earth depending on its proximity to life. Thus, it is very important to accurately know the vertical distribution of ozone. Of particular interest is the challenging upper troposphere and lower stratosphere (UTLS) where ozone can impact air quality and weather on a range of spatial and temporal scales. The successful candidate will engage in cutting-edge research aimed at validating satellite-derived ozone products through a multi-platform analysis of data from the space-based Tropospheric Emissions: Monitoring of Pollution (TEMPO) and the Stratospheric Aerosol and Gas Experiment on the International Space Station (SAGE III/ISS) against independent balloon-borne ozone sondes and the NASA Tropospheric Ozone Lidar Network (TOLNet). The selectee will research innovative analysis methods for synthesizing complex datasets, identifying sources of bias in remote sensing measurements, and contributing to the scientific understanding of atmospheric composition. Of specific focus are methods to derive quantitative, statistical comparison of satellite-retrieved ozone concentration with high-resolution vertical profiles to assess data accuracy and consistency. A goal of this opportunity is application of insight gained into these complementary data sets to answer relevant questions in Earth system science. Efforts are expected to be conducted in collaboration with scientists from the SAGE III/ISS and TEMPO missions and the broader user community, presenting results to advance the science objectives of the TEMPO and SAGE III/ISS missions.

Field of Science: Earth Science



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: Validation of Satellite-Based Ozone using Ground-Based and Balloon-Borne Measurements

Opportunity Reference Code: 0049-NPP-MAR26-LRC-EarthSci

Advisors:

Hazem Mahmoud
hazem.mahmoud@nasa.gov
(832) 206-5247

David Flittner
David.E.Flittner@nasa.gov
(757) 864-2966

Questions about this opportunity? Please email npp@orau.org

- Qualifications**
- Demonstrated experience in analyzing and interpreting atmospheric profile data (e.g., ozonesondes, LIDAR, or aircraft data).
 - Familiarity with satellite remote sensing concepts, specifically regarding ozone retrieval algorithms and validation methodologies.
 - Proficiency in programming languages commonly used in scientific research, such as Python, R, or MATLAB, for data visualization and statistical analysis.
 - Experience in handling large scientific datasets in formats such as NetCDF or HDF5.
 - A strong understanding of atmospheric chemistry and transport processes.
 - Strong verbal and written communication skills to participate in team discussions and document research outcomes.

Point of Contact [Mikeala](#)

- Eligibility**
- **Citizenship:** U.S. Citizen Only
- Requirements**
- **Degree:** Doctoral Degree.