Opportunity Title: Data-constrained Air Quality Modeling
Opportunity Reference Code: 0070-NPP-MAR26-ARC-EarthSci

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0070-NPP-MAR26-ARC-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 4/2/2026 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:

Chemistry transport (CTM) and air quality (AQ) models are vital tools used to understand tropospheric chemical composition, AQ, and human health. This research opportunity (RO) invites projects which will use CTMs and AQ models, combined with in situ and remote-sensing data, to better understand and forecast tropospheric chemistry and AQ from regional- to global-scales. An important aspect of proposed projects should be the demonstration of how in situ and remote-sensing data can improve the ability of CTMs and AQ models to replicate and forecast tropospheric composition. The application of data assimilation techniques in CTMs and AQ models is encouraged.

A wide variety of CTMs (e.g., WRF-Chem, GEOS-Chem) and AQ models (e.g., CMAQ) are available that can be used to investigate processes controlling atmospheric concentrations of traces gases and aerosol. Furthermore, numerous regional and global networks of in situ measurements (e.g., EPA's AQS) and field campaigns (e.g., AGES+ (AEROMMA+CUPiDS, GOTHAAM, EPCAPE, STAQS), DISCOVER-AQ) can be used for improving and evaluating AQ model results. Projects which emphasize the use of satellite (e.g., OMI, TROPOMI, TEMPO) and ground-based (e.g., TOLNet, Pandora) remote-sensing will be prioritized. The

application of data from NASA's recently launched TEMPO geostationary sensor is encouraged.

Position Requirements:

PhD in an Earth Science related field.
Experience with running and developing 3D atmospheric CTMs and data assimilation techniques.
Strong analytical skills and computer programming ability.
Strong written and verbal communication skills.

Location:
Ames Research Center
Moffet Field, California

Field of Science: Earth Science

Advisors:
Matthew Stephen Johnson
matthew.s.johnson@nasa.gov
650-604-5420

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

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

Point of Contact Mikeala

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Eligibility Requirements

- **Degree:** Doctoral Degree.