

**Opportunity Title:** Laboratory Kinetics of Relevance to the Earth's Atmosphere

**Opportunity Reference Code:** 0172-NPP-MAR26-JPL-EarthSci

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

**Reference Code** 0172-NPP-MAR26-JPL-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:**

This research opportunity is focused on the study of elementary reactions and photochemical processes important in Earth atmosphere. We focus on radical-radical reactions that control the oxidizing capacity of the earth's troposphere. Our work also includes the study of mechanisms for the formation of urban smog and the degradation of tropospheric air quality by pollutants and biogenic hydrocarbons. We use state-of-the-art techniques for the study of reaction mechanisms and photochemical processes including laser photolysis and discharge-flow, combined with detection by laser-induced fluorescence, cavity ringdown and frequency modulation spectroscopy and chemical ionization mass spectroscopy.

**References:**

L. Sheps, B. Rotavera, A.J. Eskola, D L. Osborn, C. A. Taatjes, K. Au, D.E. Shallcross, M. A. H. Khan and C. J. Percival (2017). The Reaction of Criegee Intermediate CH<sub>2</sub>OO with Water Dimer: Primary Products and Atmospheric Impact. PCCP, 19, 21970- 21979. C.J. Percival, O. Welz, A.J. Eskola, J.D. Savee, D.L. Osborn, D.O. Topping, D. Lowe, S. R. Utembe, A. Bacak, G. McFiggans, M.C. Cooke, P. Xiao, A.T. Archibald, M.E. Jenkin, R.G. Derwent, I. Riipinen, D.W.K. Mok, E.P.F. Lee, J.M. Dyke, C.A. Taatjes and D.E. Shallcross (2013) Regional and global impacts of Criegee intermediates on atmospheric sulphuric acid concentrations and first steps



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of aerosol formation, Faraday Discussions, 165, 45-73. CA Taatjes, O. Welz, A.K. Eskola, J.D. Savee, A.M. Scheer, D.E. Shallcross, B. Rotavera, E.P.F.Lee, J.M. Dyke, D.K.W. Mok, D.L. Osborn and C.J. Percival (2013) Direct Measurements of Conformer-Dependent Reactivity of the Criegee Intermediate CH<sub>3</sub>CHOO, Science, 340, 177-180.

**Location:**

Jet Propulsion Laboratory  
Pasadena, California

**Field of Science:**Earth Science

**Advisors:**

Carl Percival  
carl.j.percival@jpl.nasa.gov  
818-354-5581

**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/oior/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

***This opportunity may require the following: 1- Mandatory drug testing; 2-Random drug testing; 3- Testing prior to initiation of fellowship appointment.***

**Questions about this opportunity?** Please email [npp@oraui.org](mailto:npp@oraui.org)

**Point of Contact** [Mikeala](#)

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

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## Requirements