Opportunity Title: Formation and evolution of galaxies and clusters: AGN feedback and the formation of multiphase gas
Opportunity Reference Code: 0063-NPP-MAR26-ARC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0063-NPP-MAR26-ARC-Astrophys

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 3/1/2026 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:

Our team is involved in the studies and interpretation of the ISM and the putative role of AGN feedback on the ISM content and star formation in massive elliptical galaxies. In particular, we are interested in investigating how the AGN feedback is coupled with the formation of multiphase gas that has been observed in recent multi-wavelength observations of galaxies that dominate the cores of groups and clusters. We are looking for candidates to conduct detailed investigation, both theoretical and observational, of the AGN feedback process through cosmic ages.

Models for AGN feedback must be established through detailed 3D simulations that require the development of new, sophisticate software and visualization techniques. The 3D simulations will allow a better understanding of the impact and the complex interplay of fundamental (astro)physics, and will provide key predictions which can be verified with forthcoming observations. Our team is involved in the development of the X-ray Explorer mission Arcus (currently in phase A development) which is designed to investigate the formation and evolution of clusters and galaxies. It is expected that investigations focused on the science preparation for the Arcus mission will be a relevant aspect of the proposed studies.

The successful postdoctoral candidate will conduct scientific research

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related to the acquisition and use of multi-wavelength observations of nearby group-centered galaxies since observations must drive our comprehension and theoretical modeling. Both aspects of the research - observational and theoretical/computational - are pursued and the exact nature of the proposed research will depend on the candidate's background and research interests. The successful candidate will be expected to accomplish independent research, produce publications, attend and present at conferences, become a member the current research team, and lead their proposed research effort.

Location:
Ames Research Center
Moffet Field, California

Field of Science: Astrophysics

Advisors:
Pasquale Temi
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650-604-1841

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

Eligibility
- **Degree:** Doctoral Degree.

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Requirements