

**Opportunity Title:** Astrophysics: Stellar Activity

**Opportunity Reference Code:** 0234-NPP-NOV23-GSFC-Astrophys

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

**Reference Code** 0234-NPP-NOV23-GSFC-Astrophys

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

**Description** Partially and fully convective stars ( $< 1.8$  solar masses) produce magnetic fields that inject energy into the photosphere, chromosphere, and corona producing a broad array of observable phenomena called “stellar activity”. Manifestations of stellar activity, for example starspots, flares, and quiescent chromospheric emission, can be observed with spectroscopy or photometry across the entire electromagnetic spectrum. Recent studies have prioritized the lowest-mass stars (M dwarfs) for their high levels of stellar activity and their importance as exoplanet host stars. Many NASA observatories including Chandra, NICER, Swift, Hubble, and TESS have produced rich multiwavelength data sets of stellar time-variability and X-ray and ultraviolet emission that can inform our understanding of stars and provide valuable inputs into exoplanet atmosphere models.

We seek a postdoctoral candidate to study stellar activity using time-series and/or other data. We are particularly interested in multi-wavelength approaches to understanding activity. Potential topics of study include: stellar rotation and flares, relationships between different activity indicators, the time evolution of stellar activity, and the influence of activity on exoplanets. NASA's Goddard Space Flight Center hosts several time-domain astrophysics missions currently in operation (TESS, Swift, NICER, etc.) and others in development (e.g. Pandora and Dorado). Proposed projects that capitalize on more than one resource are encouraged.

Qualifications for this opportunity include a Ph.D. in astronomy, physics, or a related discipline. Prior experience with time-domain astrophysics analyses, multi-wavelength studies, and other relevant skills are desirable.

Interested applicants are encouraged to contact the advisor(s).

**Location:**

Goddard Space Flight Center  
Greenbelt, Maryland

**Field of Science:** Astrophysics

**Advisors:**

Allison Youngblood  
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N/A



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**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/oiiir/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

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