

Opportunity Title: Sonification of Spacecraft Data from the Heliophysics Systems Observatory

Opportunity Reference Code: 0279-NPP-NOV26-GSFC-Heliophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0279-NPP-NOV26-GSFC-Heliophys

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.

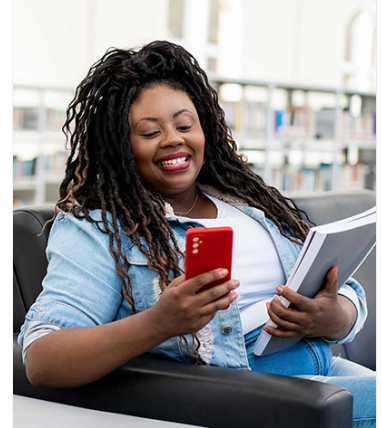
Description:

One of the key scientific objectives of NASA's Heliophysics division is to understand the fundamental physical processes that govern the nature of energy transfer from the Sun to the Earth. The increasingly large amount of spacecraft data now available from any Heliophysics Systems Observatory (HSO) mission, such as -- Parker Solar Probe, Solar Orbiter, WIND, MMS, CLUSTER, and THEMIS -- highlights a need to inspect data in novel ways. Spacecraft data sonification is a method of mapping data to sound, as an auditory equivalent to data visualization. The range of human hearing spans 12 orders of magnitude greater in frequency than human vision spans in wavelength. The enhanced nonlinearity of human hearing also enables increased perception of pitch and other dynamical waveform changes that could not be visually identified. Modern signal processing methods and software from audio engineering traditionally applied to music can also be applied to spacecraft time series data. To assess the fundamental process governing our universe, it is useful to characterize the similarities and differences of sounds in each heliospheric regime. What can we learn from "hearing" the nature of energy transfer the Sun to Earth? In addition to scientific advantages, data sonification is a highly effective mechanism for accessibility and outreach. How can we best share data from the HSO to a wider audience so that the nature of energy transfer can be perceived by all?

Field of Science: Heliophysics

Advisors:

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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/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 Requirements • **Degree:** Doctoral Degree.