



Institute for Space Weather Sciences Colloquium

Thursday, 7th of November 2024, 1pm ET

via Zoom, meeting ID: 917 2169 7568, password: isws

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FOXSI-4 and the First Solar Flare Sounding Rocket Campaign

Understanding particle acceleration at the Sun requires dedicated investigations by high-sensitivity X-ray spectroscopic imagers. The first three flights of the Focusing Optics X-ray Solar Imager (FOXSI) experiment aboard sounding rockets established the technological feasibility of this approach, using focusing X-ray mirrors produced at NASA/MSFC. These flights successfully used this technology to investigate the energetics of the quiescent Sun, but due to the unpredictable timing of solar flares, could not study particle acceleration and heating in actual flares.

This has changed with the recent NASA solar flare sounding rocket campaign in April 2024. In this campaign, the FOXSI-4 experiment flew alongside the Hi-C experiment as the two sets of telescopes observed a GOES M1 class solar flare, resulting in the first-ever observation of a large solar flare with sounding rocket payloads.

This talk will introduce the FOXSI mission, give an overview of the solar flare sounding rocket campaign, show some preliminary results, and will discuss the prospects for future high-energy investigations of the Sun with a spaceborne mission.



Lindsay Glesener is an Associate Professor at the Minnesota Institute for Astrophysics. She earned her Ph.D. at the University of California at Berkeley in 2012, and eventually returned to her home state of Minnesota to join the physics department of the University of Minnesota - Twin Cities campus in late 2015. Dr. Glesener analyzes data from ground-based and space-based solar observatories, and also develops technology for new instruments. She is the principal investigator for instruments that fly on sounding rockets and small satellites to study the Sun.