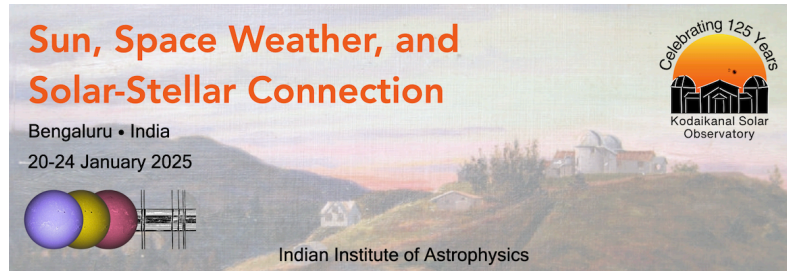


Sun, Space Weather, and Solar-Stellar Connection



Contribution ID: 159

Type: **Contributed talk**

Multiwavelength Study of Pre-flare Signatures using Aditya-L1

Friday, January 24, 2025 10:00 AM (15 minutes)

Solar Flares release large amounts of energy in the form of radiations in multiple wavelengths. Predicting solar flares starting time and their class is a difficult task. When and at what solar atmospheric layer the flare trigger happens, whether in the corona, transition region or in the chromosphere, is still a puzzle. One way forward is to study the pre-flare signatures in multi-wavelengths originating from different layers of the solar atmosphere.

In this study, we use simultaneous observations from Solar Ultraviolet Imaging Telescope (SUIT), High Energy L1 Orbiting X-ray Spectrometer (HEL1OS) and Solar Low Energy Spectrometer (SoLEXS) that observe the sun in the near ultraviolet (NUV) Soft X-ray and Hard X-ray to study the signatures during multiple pre-flare conditions. We also use HMI onboard SDO to study the magnetic parameters. Preliminary results suggest enhancements in NUV, especially in calcium and magnesium emissions, which are connected with the flux emergence during preflare conditions.

Contribution Type

Theme

Energetic Phenomena

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