

2nd Metis Science Meeting



Contribution ID: 21

Type: **not specified**

3-Dimensional reconstruction of the thermal X-ray emission in solar flares

Since October 2022, for the first time, two indirect X-ray imagers, the Spectrometer/Telescope for Imaging X-rays (STIX) on board Solar Orbiter and the Hard X-ray Imager (HXI) on board the Chinese ASO-S mission, are simultaneously observing the Sun in the hard X-ray regime. Given that the two telescopes have different vantage points on the star, it is possible to combine their stereoscopic observations for addressing the 3-dimensional reconstruction of the thermal X-ray emission in solar flares. In this presentation, we describe our 3-dimensional imaging technique based on simultaneous observations of solar flares provided by STIX and HXI. We show preliminary results in the case of a flaring event that occurred on 2024 October 1, and we demonstrate the potential of this methodology for studying the thermodynamic properties of the flaring thermal emission.

Piana M. F.,

Primary author: PALUMBO, Barbara (Università di Genova)

Co-authors: BENVENUTO, F.; KRUCKER, Säm (FHNW & UC Berkeley); MASSA, Paolo (Dipartimento di Matematica, Università di Genova); MASSONE, Anna Maria; PIANA, M. F.; RYAN, D.; SU, Y.; PIANA, michele (MIDA, dipartimento di matematica, università di genova)

Presenter: PALUMBO, Barbara (Università di Genova)

Session Classification: Metis Science - Short communications