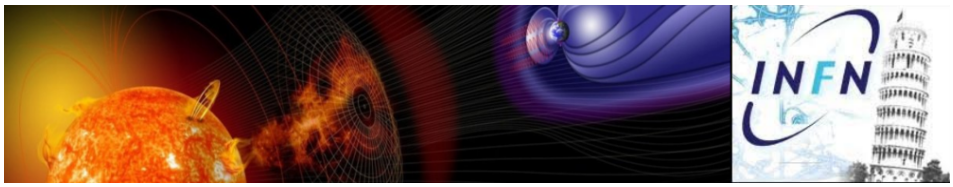

Contribution ID: **39** Type: **not specified**

NuSTAR observations of a repeatedly microflaring active region

Thursday, 8 July 2021 18:35 (50 minutes)

The Nuclear Spectroscopic Telescope Array (NuSTAR) is an astrophysical X-ray telescope capable of observing the Sun with direct imaging spectroscopy providing a unique sensitivity >2.5 keV. We use NuSTAR to investigate highly frequent and weak flares (microflares) thought to contribute to heating the Sun's atmosphere particularly in active regions. I will present several X-ray microflares from a recently emerged active region, AR12721, that were observed on 2018 September 9-10 with NuSTAR. In combination with SDO/AIA, I describe the temporal, spatial, and spectral evolution of these GOES sub-A class microflares that reach temperatures above those of the surrounding active region (>5 MK). One of the microflares presented is the faintest non-thermal microflare so far observed with NuSTAR with an equivalent GOES class of A0.1. Using SDO/HMI, I also present evidence of photospheric magnetic flux cancellation/emergence at the footpoints in 8 of the NuSTAR microflares.

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Session Classification: Working Group 1: Flare thermal response

Track Classification: Working Group 1: Flare thermal response