SolFER Spring 2021 Meeting



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Hot Onsets of Solar Flares

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The GOES/XRS data show low-level soft X-ray emissions prior to a flare in a "hot onset" precursor of the main flare development (2021MNRAS.501.1273H). This phenomenon provides clear evidence for a heating process not identifiable with the impulsive-phase energy release. The hot onset phase may last for tens of seconds to minutes, characterized by steady growth of emission measure at characteristic isothermal temperatures of 10-15 MK and no clear pattern of temperature increase. The newer GOES-R data also show this effect, providing higher time resolution (1 s) and better noise properties, although with higher background levels. I characterize these new data and discuss interpretations in terms of physical processes in the context of the AIA imagery.

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