

Limb Flare with Failed Eruption

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Solar flares are often associated with various eruptive phenomena. The most significant of these are coronal mass ejections, which can reach and impact the terrestrial magnetosphere. Sometimes, the eruption motion stops due to some reasons and this fact causes questions. Is it a real eruption with a distortion of the magnetic field topology? Or is it only a plasma motion and a visible effect? Multiwave observations of such events can help us to find answer to these questions. We present a study of the M7.2 GOES-class solar flare that occurred on July 12, 2023. This is a limb flare followed by a failed eruption, according to EUV observations. The event was observed by a set of instruments with spatial resolution, that allows an interpretation based not only on the flux evolution, but also on the flare source topology at different wavelengths. The Siberian Radioheliograph (SRH) obtains microwave images within the 3-12 GHz frequency band, while the Nançay Radioheliograph (NRH) provides images in the decimeter radio range. The Solar Dynamics Observatory/Atmospheric Imaging Assembly (SDO/AIA) get data in the UV range, and the Advanced Space-based Solar Observatory/Lyman-alpha Solar Telescope (ASO-S/LST) provides Lyman-alpha images. Analyzed the set of data, we found that studied event had a configuration of the circular ribbon flare, which magnetic morphology does not allow for eruptions except for jets. The possible of geoeffectivity of this type flare is discussed.