

# The eruption on 22 April 2021 as observed by Solar Orbiter, STEREO and Earth bound instruments 

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#### Abstract

The Extreme Ultraviolet Imager (EUI) onboard Solar Orbiter (SolO) observed an eruption with its Full Sun Imager (FSI) in both of its channels (17.4/30.4 nm), on 2021-April-22. At the time, the spacecraft was at 0.87 au from the Sun. The eruption was seen at the SW limb, starting at 04:24 UT, with the source slightly backside as seen from SolO (S20W103). From the Earth's perspective, SDO/AIA and PROBA2/SWAP observed a wave and dimmings starting around 04:07 UT, on-disk at $\sim$ S20W05. STEREO-A/EUVI saw similar signatures of an eruption starting around 04:17 UT, on-disk at $\sim$ S20W50. The corresponding CME was visible shortly after in several coronagraphs. SOHO/LASCO-C2 observed a full halo CME starting around 06:00 UT. STEREO-A/COR2 recorded a clear structured CME seen from around 05:23 UT. SolO Metis data will be analysed as it becomes available. SolO/STIX observed the associated X-ray flare, which was partially occulted. This allows the characterization of both the thermal plasma and any potential contribution of nonthermal electrons in the tenuous coronal source. The X-ray source location will be compared to the EUV coronal structures. The full-Sun radiometer PROBA2/LYRA also observed the event with the two SXR channels. The corresponding ICME arrived at the Earth on 2021-April-24-25 (probably also at STEREO-A), it was driving a shock and created minor geomagnetic storm conditions. STEREO-A/SEPT and ACE/EPAM observed a weak particle event most likely related to this eruption. We will analyse in depth these CME-ICME connections.


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