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Metis Observations of Geoeffective Solar Events

The Metis Coronagraph onboard the Solar Orbiter (SolO) mission is a powerful instrument capable of observing the solar corona simultaneously in the Visible (VL) broad-band light (580-640 nm) and in the Ultraviolet (UV) narrow spectral range centered on the Lyman α line of Hydrogen at 121.6 nm. This multiwavelength approach allows a comprehensive analysis of various eruptive solar events.

Metis can image the solar corona with very high spatial (down to 4000 km) and temporal resolution (\geq 1s) while at its closest approach to the Sun (i.e at 0.28 AU), the field of view ranges from 1.7 to 3 solar radii. The instrument can measure in that critical region of the corona plasma properties (temperature, energy budget, density distributions, etc.), as well as kinematic states (speed, acceleration, geometry,etc) of solar eruptive events, thus, playing a major role in studying how these form and evolve.

The Metis team is compiling a database of solar eruptive events observed with the Metis Coronagraph. Many of these events may have been geoeffective, i.e. potentially linked to the space weather phenomena. We plan to provide an overview of this subset of the Metis catalogue, highlighting selected geoeffective events.

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