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CMEs eruptions with very intense UV emission observed by the Metis coronagraph on-board Solar Obiter

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Metis, the coronagraph on board Solar Orbiter (SolO), offers the unique capability to simultaneously track the evolution of coronal mass ejections and solar eruptions in the ultraviolet H I Ly-α line and polarized visible light. This comprehensive analysis allows for valuable insights into the dynamics, time evolution, mass contents, and outflow propagation velocity of plasma in the expanding corona.
We present the results of a recent work that focuses on observing six eruptive events with Metis during the SolO cruise phase. These events show a very strong emission of UV radiation and can be interpreted as due to eruptive prominences. Leveraging the exceptional spatial and temporal resolution of Metis, we follow the evolution of these structures by studying their morphology and kinematic state and providing estimates of their volume, densities and temperature, also in synergy with other coronagraphs in space. We will conclude by focusing on future investigations and ongoing work for these peculiar events.

Author: RUSSANO, Giuliana (Istituto Nazionale di Astrofisica (INAF))

Co-authors: Dr TELLONI, Daniele (National Institute for Astrophysics, Astrophysical Observatory of Torino, Pino Torinese (TO), Italy); Dr TERIACA, Luca (Max-Planck-Institut für Sonnensystemforschung, Göttingen, Germany); Dr USLENGHI, Michela (INAF –Istituto di Astrofisica Spaziale e Fisica Cosmica, Milan, Italy); Prof. HEINZEL, Petr (Astronomical Institute of the Czech Academy of Sciences, Ondˇrejov, Czech Republic); Dr GIORDANO, Silvio (National Institute for Astrophysics, Astrophysical Observatory of Torino, Pino Torinese (TO), Italy); Dr JEJˇCIˇC, Sonja (Astronomical Institute of the Czech Academy of Sciences, Ondˇrejov, Czech Republic); Dr ANDRETTA, Vincenzo (INAF - Osservatorio Astronomico di Capodimonte di Napoli); Dr DE LEO, Yara (Max-Planck--Institut für Sonnensystemforschung, Göttingen, Germany)

Presenter: RUSSANO, Giuliana (Istituto Nazionale di Astrofisica (INAF))

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