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Oral
(Invited Talk)
The middle corona (1.5~6 Rs) is teeming with a variety of both transient and long-lived structures. Among these are coronal jets, small eruptions that typically form and terminate in the lower (~.5 Rs) or middle (1.5-6 Rs) corona. However some jets extend into the outer (10 Rs) corona and remain visible in the LASCO-C3 field of view. Recent studies aim to trace coronal jets from their source regions into the outer corona, however much work is still needed to understand the propagation of jets into the extended corona. One obstacle is the somewhat rare occurrence of high-cadence, middle-coronal observations. The Mauna Loa K-coronagraph (K-Cor) is an internally occulted refractive chronograph capable of imaging the white-light corona from 1.05 -3 Rs at a 15 second cadence, making it well suited to examine the formation and evolution of transient events in the lower and middle corona. K-Cor has been operational since 2013 and has produced a sustainable database of transient events including CMEs, coronal jets, and prominence eruptions. Here we discuss a recent study of coronal jets (and extended flows) using a combination of SDO/AIA and K-Cor polarized brightness images. Using differential emission measure analysis, initial results indicate that extended jets may undergo additional heating and/or acceleration as compared to their typical counterparts. We also discuss relationship of these features to the formation of the solar wind and potential overlap with the PUNCH mission. Finally, we highlight the current K-Cor database and synergies with space-based missions.
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