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Oral
(Contributed Talk)
It is now established that predominantly outward propagating Alfvénic waves carry a significant fraction of energy and momentum from the lower solar atmosphere to the corona. These waves dissipate their energy through MHD turbulence, leading to the heating of plasma and the acceleration of the solar wind. Perpendicular correlation length(s) is a key ingredient of Alfvénic turbulence-driven models which provides a measure of wave energy injection scales. This crucial parameter strongly influence energy dissipation below and above the sonic point while affecting the observed thermal and kinetic energy profiles. We investigate this relationship by comparing correlation length scales, estimated from observed transverse waves using Coronal Multi-Channel Polarimeter (CoMP) data with plasma characteristics and plane-of-sky magnetic field estimates in the inner corona. Our results provide a critical insight into the link between aforementioned parameters for regions with different magnetic field topologies (open/closed), providing necessary constraints for future numerical Alfvén wave turbulence studies.
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