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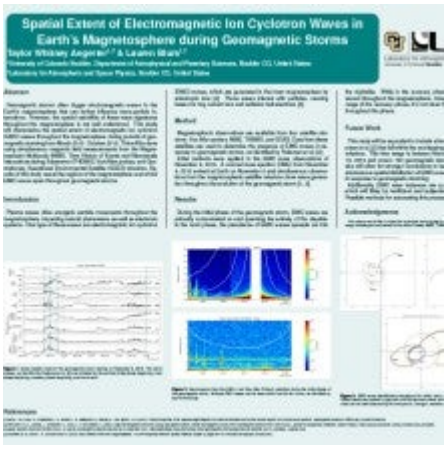
Poster
Geomagnetic storms often trigger electromagnetic waves in the Earth's magnetosphere that can further influence wave-particle interactions. However, the spatial variability of these wave signatures throughout the magnetosphere is not well understood. This study will characterize the spatial extent of electromagnetic ion cyclotron (EMIC) waves throughout the magnetosphere during periods of geomagnetic storming from March 2015 - October 2019. This will be done using simultaneous magnetic field measurements from the Magnetospheric Multiscale (MMS), Time History of Events and Macroscale Interactions during Substorms (THEMIS), Van Allen probes, and Geostationary Operational Environmental Satellite (GOES) missions. Results of this study reveal the regions of the magnetosphere over which EMIC waves span throughout geomagnetic storms.



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