

## Variations of Whistler Mode Waves with Geomagnetic Activity and Magnetic Local Time

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The Van Allen probes spacecraft measure plasma waves in the Earth's inner magnetosphere with unprecedented accuracy and temporal resolution. Many studies have identified one particular mode of plasma wave – whistler mode chorus – as playing a significant role in both the energization of electrons to radiation belt energies and electron loss from the outer radiation belt to the atmosphere. However, almost all of these studies have been based on statistical models from heavily averaged data. The Van Allen Probes' data is uniquely capable of observing both peak and average wave power at high time resolution. This project will use this novel capability to investigate variations of whistler-mode wave properties with respect to geomagnetic activity index and magnetic local time.