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Sorting and Parameterization of Observed Saturn and Jupiter Chorus Wave Power

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Recent work has shown that whistler mode chorus waves can accelerate electrons to MeV energies outside the orbit of the moon Io. These particles then form the source of Jupiter's radiation belts which peak near L=1.5. The wave acceleration process depends on the distribution of chorus wave power in frequency, local time, latitude and also on the plasma density. In this study we bin the chorus power spectral density observed by the Cassini radio and plasma wave science investigation (RPWS) at Saturn and the Galileo plasma wave investigation (PWS) at Jupiter. The spatial bins include L-shell (based on models), latitude, and local time. Within each spatial bin we calculate the mean power-versus-frequency profile (for upper and lower bands relative to the electron cyclotron frequency) which can then be fit to a guassian. One goal of the study is to provide a database for use in quasilinear models requiring the calculation of diffusion coefficients. In this report we present our initial findings.