Generation of Lower Hybrid Turbulence in the Ionosphere and its Evolution in the Magnetosphere

-abstract-
A previous work considered the generation of ULF waves in the inner Magnetosphere due to a Lithium ion ring distribution [Ganguli et al., 2007]. We extend this analysis by considering the generation of Lower-hybrid waves in an Oxygen dominated plasma due to a Barium ion ring distribution. We demonstrate the criteria in which Lower-hybrid waves are produced. The quasilinear evolution of the Barium ring distribution lowers the instability threshold. We conclude that the strong turbulence generated by such a release can increase wave activity in the plasmasphere.


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