



Recent Results From The Electric and Magnetic Field Instrument Suite and Integrated Science (EMFISIS) on the Van Allen Probes

Craig Kletzing

The University of Iowa, Iowa City, IA, USA (craig-kletzing@uiowa.edu)

The physics of the creation, loss, and transport of radiation belt particles is intimately connected to the electric and magnetic fields which mediate these processes. A large range of field and particle interactions are involved in this physics which are well-measured by the twin Van Allen Probes spacecraft launched in 2012. An overview of recent results from the mission focusing on waves and wave-particle interactions measured by the Electric and Magnetic Field Instrument Suite and Integrated Science (EMFISIS) investigation is presented. We show examples of automated density determination and plasmopause identification as derived from the upper hybrid resonance; low frequency ULF pulsations; EMIC waves with electrostatic harmonics and their occurrence statistics; and whistler mode waves including upper and lower band chorus as well as plasmaspheric hiss and its relation to energetic particles.