地上低緯度と静止軌道で同時観測されたPi 2の強度の統計解析

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Statistical analysis of Pi 2 wave power at low latitudes and geosynchronous altitude

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Statistical properties of Pi 2 wave power (dB^2 [Uozumi et al., 2000]) have been studied using magnetic the data from low-latitude MAGDAS station/KUJ and geosynchronous satellite ETS-VIII. We examined wave power of azimuthal (east-west component) and compressional (north-south component) Pi 2s at KUJ (GMLat.=26.13, GMLon.=202.96, L=1.24) and ETS-VIII (GMLat.=-10.8, GMLon.=217.5) for the 175 Pi 2 events observed at KUJ from 1 January through 31 May 2009. The following results will be demonstrated: (1) There was a good correlation between wave power of compressional and azimuthal Pi 2s at ETS-VIII, while at KUJ, there was poor correlation. (2) Wave power between compressional and azimuthal Pi 2s at KUJ depends on the local time. In contrast, at ETS-VIII, they are independent on the local time. (3) Wave power of compressional Pi 2s between KUJ and ETS-VIII depend on the local time. From these results, we will discuss the generation mechanism of azimuthal Pi 2s and the decay (enhance) process of Pi 2s near the equatorial plane.