

Pi2 currents at the dayside geomagnetic equator

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It has been reported that the Pi2 appears at the dayside geomagnetic equator with an enhancement in amplitude (Tokunaga et al., JGR 2007). This result suggests that the excitation of the nightside Pi2 drives an ionospheric current extending to the dayside equator. To better understand the generation of the Pi2 ionospheric currents, we examined phase relationship of the Pi2 at mid latitudes around the midnight and at the geomagnetic equator on the dayside. In this talk, we report initial results showing that the equatorial Pi2 is well correlated with the nightside Pi2 with no time shift greater than several seconds. It is suggested that the day- and nightside Pi2s were caused by a current circuit between the nightside magnetosphere and the dayside equatorial ionosphere.