

## Pi2-associated reduction of field line magnitudes in night-side magnetosphere

# Osuke Saka[1]

[1] Office Geophysik

Magnetic fields from Goes5/6 (Jan, 1 March - 20 June, 1986) and proton densities (MPA/SPA) in CDAWeb (18 June - 25 Oct, 1994) were investigated at geosynchronous altitudes for 40-min intervals beginning 10-min before the ground Pi2 onset. The onset time was determined from ground Pi2 pulsations recorded at conjugate ground stations in low latitudes at Huancayo for the 1986 events and at Christmas Island for the 1994 events. We were able to show that magnetic fields commenced enhanced compressive oscillations in Pi2 band immediately after the Pi2 onset (top panel in Figure 2). The enhanced compressive oscillations lasted for about 10-min after the Pi2 onset. The field intensities were reduced, on the average, below the onset level (lower two panels) during the interval of enhanced compressive oscillations. In contrast, the proton densities in 50-400keV increased which may indicate plasma pressure increase (Figure 1). The night-side magnetosphere may be in transient state during the 10-min interval after the Pi2 onset.

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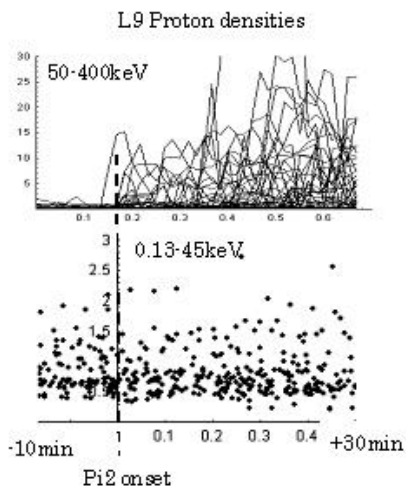


Fig 1

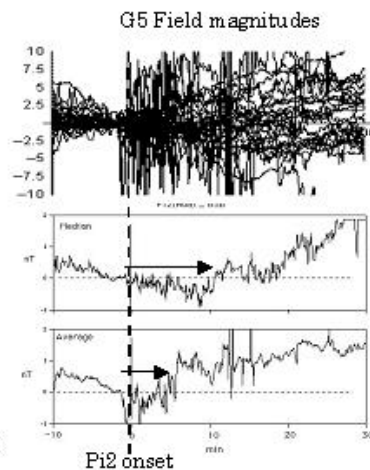


Fig 2