

THE MAGNETOSPHERIC BOUNDARY MOTION DURING THE MAIN PHASE OF THE MODERATE MAGNETIC STORM (CASE STUDY)

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We analyzed the low latitude magnetopause motion that was observed on INTERBALL-1 satellite during the main phase of the magnetic storm on February 10, 1997. As result of ICME interaction with the magnetosphere, series of events were observed on the Earth almost simultaneously with multiple magnetopause crossings on the evening flank of the magnetosphere.

The simultaneous plasma and magnetic field measurements made in the nearest magnetotail (GOES 8, 9), in the middle tail (GEOTAIL), in solar wind (WIND), and magnetic field data from ground stations were compared to trace the sequence of events. We evaluated the amplitude of magnetopause motion and analyzed causes of this motion that include external sources and possible internal influence.