A particle precipitation event as observed by all-sky image and by magnetometer at geosynchronous altitude

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An auroral precipitation event recorded during 0500 - 0530 UT of 17 January, 1986 by all-sky camera at Shamattawa (SHM; 60.0 deg. N, 111.9 deg. W in geographic coordinates) during Global Aurora Dynamic Campaign (GADC; Jan. of 1986) was examined by comparing with the magnetic field data as observed by geosynchronous satellites in the same meridian, GOES 5 and GOES 6. It is found that an enhancement of the particle precipitation in the all-sky image is correlated well with the field changes in the D component of GOES 5 and GOES 6 satellites. The correlation found was such that the precipitation is enhanced when the D component of the GOES 5 and 6 position changes inversely, while the precipitation become weak when the D field changes in parallel at the two satellite positions.

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