

A duskside reversal in the diurnal variation of the low-latitude H component

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There is a reversal in the diurnal variation of low-latitude H component in the dusk sector with substorm activity increasing. In theoretical model of Denisenko and Zamay, 1989, the similar reversal in equatorial electric fields and currents is predicted over all the equator due to rise of the current system II and decay of the current system I during the substorm recovering phase. High sensitivity of the low-latitude H component diurnal variation to auroral processes is a manifestation of the magnetosphere sources significantly contributing its value; most probably, they dominate in the dusk sector. The reversal itself could be interpreted in the frame of the current system I and II competitive behavior.