

Characteristics of the subauroral ion drifts: Modification of the distribution during a substorm

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Subauroral ion drifts (SAID) are latitudinal narrow regions of rapid westward ion drift located usually in the premidnight sector. We used observations of SAID as identified with the poleward electric field of the DE2 to determine the temporal change of its distribution during a substorm. We identified substorm passes from all DE2 passes using the AL index, and found SAID in 85 passes from those substorm passes. Results of analyses of the 85 SAID events show that the distribution of the SAID in the premidnight extends to the postmidnight at the final stage of the recovery phase of a substorm.