

## Westward Expansion Process of Substorm Current Wedge

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We have investigated the westward expansion process of substorm current wedge (SCW), using the data sets of magnetic field from the geosynchronous GOES satellites, proton and electron flux from the LANL satellites, and auroral UV image from the POLAR satellite.

It was confirmed that the speed of SCW expansion at geosynchronous orbit was almost constant during a isolated substorm event, and corresponded with the speed of the westward traveling surge (WTS) estimated from the POLAR UV data.

It was also shown that the speed of SCW expansion corresponded with the westward drift velocity of hot protons which were injected on the substorm expansion onset.