

磁気リコネクションアウトフローと磁気圏バウンスフロー

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Magnetic Reconnection Outflow and Magnetospheric Bounce Flow

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The present study examines the evolution of the fast reconnection outflow and geomagnetospheric bounce flow using magnetohydrodynamic simulations on the basis of the spontaneous fast reconnection model. Localized magnetic reconnection in the near-Earth neutral line produce the narrow fast plasma outflow, then it collides with earth's dipole field. The increased radial pressure gradient produces the magnetospheric bounce flow. If the steady magnetic reconnection keeps the fast plasma outflow producing, the bounce flows following the earthward flows, which are frequently observed, cannot be observed. This problem is closely related with the evolution of the magnetic reconnection.