

Estimation of magnetic flux diffusion region using a system of Magnetic Field Tracing in Global MHD simulations

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We developed a system of Magnetic Field Tracing in Global MHD simulations in order to understand magnetosphere convection. To trace magnetic flux tube, 'Frozen-in' needs to hold. We investigated the time revolution of magnetic flux and visualize magnetic diffusion regions. As a result, we find that magnetic diffusion regions change depending on IMF directions. In this lecture, we discuss the application of the magnetic field tracing system to space weather.

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