

## Relativistic Magnetic Reconnection

# Seiji Zenitani[1], Masahiro Hoshino[2], Toshio Terasawa[3]

[1] Univ. of Tokyo, [2] Earth and Planetary Phys., Univ of Tokyo, [3] Dept. Earth Planetary Phys., Univ. of Tokyo

We are studying relativistic reconnection in pair-plasma (electron-positron plasma), which may occur in pulser magnetosphere, active galaxies or other astronomical situations. Blackman and Field [1984] noted that relativistic reconnection may cause much faster energy conversion than non-relativistic one. We want to actually confirm this by numerical study, using a 2D full particle model.

In this paper, we will show the initial results of our simulation focusing on the growth stage. The relativistic reconnection may grow slower than non-relativistic one, if accelerated particles become heavier by the Lorentz factor of gamma. On the other hand, the effective inertia resistivity may be enhanced due to relativistic effect. We will discuss these two competing effects.

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