

Abstract Submitted
for the DPP19 Meeting of
The American Physical Society

Current Sheet Structure in Anti-Parallel Driven Magnetic Reconnection¹ CHIO CHENG, University of Tokyo, SHIZUO INOUE, National Institutes for Quantum and Radiological Science and Technology, YASUSHI ONO, HIROSHI TANABE, University of Tokyo, RITOKU HORIUCHI, National Institute of Fusion Science — Solutions of the particle dynamics, the density profiles and flow structures of electrons and ions in the reconnecting current sheet during quasi-steady phase of anti-parallel driven magnetic reconnection are presented. The theory provides understanding of the particle dynamics and heating/acceleration processes as observed in the PIC simulations. In particular, the increase of ion temperature is due to the electrostatic potential drop which is proportional to the square of the upstream Alfvén velocity..

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Date submitted: 19 Sep 2019

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