

JOURNAL OF PLASMA AND FUSION RESEARCH

The Journal of the Japan Society of Plasma Science and Nuclear Fusion Research

Vol. 92, No.6, June 2016

Project Review

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As the z -direction inductive electric field E_z drives oppositely directed poloidal magnetic field in the x - y plane to reconnect around the current sheet, the electron and ion dynamics decouple around the reconnection layer and the separatrix regions, where charge separation takes place to produce the poloidal electric field E_x and E_y . The generation of quadrupole B_z magnetic field causes parallel electric field $E_{||}$ which is dominant around the separatrix regions. (C. Z. CHENG *et al.*, Plasma and Fusion Research Vol. 11, 1401081 (2016) <http://www.jspf.or.jp/PFR/>)