

Abstract Submitted
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Magnetic reconnection in multispecies plasmas investigated by a kinetic fluid code. CHUANFEI DONG, Princeton Plasma Phys Lab, LIANG WANG, University of New Hampshire, AMITAVA BHATTACHARJEE, AMMAR HAKIM, YI-MIN HUANG, Princeton Plasma Phys Lab, KAI GERMASCHEWSKI, University of New Hampshire — We first study the reconnection process in multispecies plasmas by using Gkeyll, which is a kinetic fluid code solving the continuity, momentum and energy equations of each species, and the full Maxwell equations. Thus, there is no assumption by solving the generalized ohm's law in Gkeyll. We studied the reconnection processes in the plasma consisting of electrons, protons and oxygen ions. If time allows, we also plan to show some preliminary results of magnetic reconnection in dusty plasmas with negatively charged dust.

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