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报告时间：2019年10月15日上午10点，报告地点：九章大厦A708

报告题目：Turbulence and particle acceleration in collisionless magnetic reconnection

摘要：Magnetic reconnection is an important process in various plasma environments because it reconfigures the magnetic field and releases magnetic energy to accelerate charged particles. Recent spacecraft observations suggest that turbulence exists commonly in collisionless magnetic reconnection, which changes the reconnection process significantly. Using particle-in-cell simulation, we study turbulence and particle acceleration in collisionless magnetic reconnection, showing that (1) the turbulence is essentially caused by secondary islands in the reconnection region, (2) inhomogeneous temperature across the pre-reconnection current sheet favors formation of these secondary islands (i.e., the turbulence in reconnection), and (3) these secondary islands lead to a much more efficient energy conversion and particle acceleration. These simulation results are confirmed by ARTEMIS observations of magnetic reconnection in Earth’s magnetotail.

教育背景:

* Ph.D. in Space Physics, June 2014, University of Science and Technology of China, Hefei, China, advisor: Prof. Shui Wang
* B.S. in Geophysics, June 2009, University of Science and Technology of China, Hefei, China

工作经历：

* Assistant Researcher, October 2015 – Present, University of California, Los Angeles, USA
* Postdoctoral Researcher, May 2014 – October 2015, University of Science and Technology of China, Hefei, China
* Visiting Scholar, October 2012 – October 2013, Auburn University, Auburn, USA
* Research Assistant, June 2009 – May 2014, University of Science and Technology of China, Hefei, China

工作简介：

Ten years of hybrid and particle-in-cell simulations of space plasma physics, especially on magnetospheric dynamics/kinetics. Total publications: 41, first author publications: 18, H-index: 12

近期工作简介：

* Magnetotail thin current sheet, magnetic reconnection, dipolarization fronts, magnetic islands (or flux ropes), particle acceleration and heating, and the dawn-dusk asymmetry using multi-spacecraft observations and particle-in-cell and hybrid simulations
* Dayside kinetic/dynamic structure and processes (e.g., foreshock transients, flux transfer events) using three-dimensional dayside global hybrid simulations and spacecraft observations