

Data underlying the publication: Turbulent-driven magnetic reconnection in the magnetosheath downstream of a quasi-parallel shock: three-dimensional global hybrid simulation

Authors: Quanming Lu^{1,2*}, Huanyu Wang^{1,2}, Xueyi Wang³, Rongsheng Wang^{1,2}, Xinliang Gao^{1,2}, and Shui Wang^{1,2}

Corresponding author: Quanming Lu

Contact Information: qmlu@ustc.edu.cn

1 CAS Key Lab of Geospace Environment, School of Earth and Space Sciences, University of Science and Technology of China, Hefei 230026, China

2 CAS Center for Excellence in Comparative Planetology, China

3 Physics Department, Auburn University, Auburn, Alabama, USA

General Introduction

This dataset contains data collected during dayside hybrid code computer simulations at University of Science and Technology of China, as part of the paper: **Turbulent-driven magnetic reconnection in the magnetosheath downstream of a quasi-parallel shock: three-dimensional global hybrid simulation**, which has been accepted by the *Geophys. Rev. Lett.* (Paper #2019GL085661R).

The data in this data set was collected in the CAS Key Lab of Geospace Environment, School of Earth and Space Sciences, University of Science and Technology of China, between Jun. 2019 and Oct. 2019. The code used is provided by Prof. *Xueyi Wang*. This work was supported by the NSFC grant 41774169, 41527804, 41804159, and Key Research Program of Frontier Sciences, CAS(QYZDJ-SSW-DQC010).

Purpose of the computer simulation

The purpose of this computer simulation was to investigate the characteristics of the quasi-parallel

magnetosheath of the terrestrial bow shock, which is formed due to the interaction of the solar wind with the earth's magnetosphere.

Test equipment

All tests were performed on TH-1A server.

Description of the data in this dataset

The data files in the /data/ are simulation results of the meridian plane with $n_x=n_z=201$ in GSM coordinates. The *.nc files in /mb9/ are 3D data files with $n_x=n_y=n_z=201$.