



AAPPS-DPP 2018 Plenary speaker Name: Prof. Chijie Xiao

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Talk Title: Three-dimensional magnetic reconnection: laboratory experiments and in situ measurements in the magnetosphere

Short abstract: Plasma waves and the particle dynamics in the magnetic null and separator are very important to understand the three-dimensional (3D) magnetic reconnection. A small plasma device, which named PPT device (abbreviated form of PKU Plasma Test device), has setup recently to study the reconnection process around the 3D null. Here we will report the preliminary results on the plasma dynamics of 3D null, such as the waves along the spines and the fan surfaces, as well as the plasma dynamics around it. Furthermore, some plasma properties around 3D nulls detected by MMS mission in the magnetosphere will be reported. These results will be helpful to increasing our understanding of magnetic nulls and 3D reconnection.