

学 术 报 告



报告题目: **Cluster highlights and preparation for SMILE mission**

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Dr. Philippe Escoubet (简介)

欧洲航天局 (ESA) 空间科学探测项目科学家, Cluster星簇卫星探测计划项目科学家, 中欧合作地球空间双星探测计划 (DSP) 欧方项目科学家、中欧合作SMILE卫星探测计划欧方项目科学家, 现任国际ILWS主席, ESA空间物理项目协调人, 国际著名空间物理学家, 空间卫星任务/计划专家, 在空间物理研究领域, 共发表论文200余篇, 引用次数达到一千余次, 对空间科学探测的发展做出了巨大贡献, 对中欧空间科学合作做出了巨大贡献。

报告摘要

After 19 years in space, the Cluster mission is continuing to deliver groundbreaking results. The Cluster mission, made of 4 identical spacecraft carrying each 11 complementary instruments, aimed to study 3-D key processes in space plasmas. The separations between the 4 Cluster spacecraft have been varied more than 70 times from a few km up to 36000 km to address the various scientific objectives. The smallest separation is smaller than any MMS spacecraft separation, so far. I will present the Cluster obtained science highlights on, such as solar wind, bow shock, turbulence in magnetosheath, K-H waves, magnetic reconnection in magnetopause, lobe reconnection, aurora, ionospheric outflows and plasmaspheric leak, and so on. And more important, I will also present some on the new CAS-ESA SMILE mission which will combine in situ and remote sensing instruments to observe the dayside magnetosphere and aurora in a unique way. Examples of common and complementary observations will also be shown for the Cluster and SMILE.