

晕状日冕物质抛射

张 军 汪景琇

(中国科学院北京天文台 北京 100012)

摘 要

主要介绍晕状日冕物质抛射 (halo CMEs) 的产生机制。包括向量磁场演化是怎样触发 halo CMEs 的; halo CME 与耀斑、暗条活动的相互关系怎样, 是否有规律可循; 暗条爆发、耀斑等活动现象是如何相互联系的; halo CME 事件是由一个活动区或一个活动事件驱动的, 还是多个活动区或多个活动事件相互作用的结果。给出了两个 halo CME 的日面起源的观测例证, 提出相反极性的磁场对消是 CME 日面源区磁场演化的主要特征。

关键词 晕状日冕物质抛射 — 机制 — 磁场演化

分类号 P182.62

Halo Coronal Mass Ejection

Zhang Jun Wang Jinxiu

(Beijing Astronomical Observatory, Beijing 100012)

Abstract

This paper mechanisms of halo coronal mass ejections (halo CMEs) have been mainly presented, including how the evolution of vector magnetic field triggers the halo CMEs? what is the relation between the halo CME, and the activities of flares and filaments? is there any pattern available? how the filament explosion and flare activity are related to each other? Is the halo CME event driven by either an activity region or a single activity event, or resulted from interaction among either different activity regions or among different activity events. Two observational evidences to the solar surface origin of halo CME are demonstrated. It is suggested the cancellation of two opposite magnetic flux is the main characteristics of the evolution of magnetic fields in the solar surface areas.

Key words halo CME—mechanism—magnetic field evolution