

6. Title: ***Transition-Region Explosive Events: Reconnection Modulated By p-Mode waves***

Speaker: *Dr. P. F. Chen (Nanjing University)*

Abstract:

Transition-region explosive events (TREEs) have long been proposed as a consequence of magnetic reconnection. However, several critical issues have not been well addressed, such as the location of the reconnection site, their unusually short lifetime (about one minute), and the recently discovered repetitive behavior with a period of three to five minutes. In this paper, we perform MHD numerical simulations of magnetic reconnection, where the effect of five-minute solar p-mode oscillations is examined. UV emission lines are synthesized on the basis of numerical results in order to compare with observations directly. It is found that several typical and puzzling features of the TREEs with impulsive bursty behavior can only be explained if there exist p-mode oscillations and the reconnection site is located in the upper chromosphere at a height range of around 1900 km <math><h< 2150</math> km above the solar surface. Furthermore, the lack of proper motions of the high-velocity ejection may be due to a rapid change of temperature along the reconnection ejecta.

Scheduled: June 05, 2008

7. Title: ***SPD Meeting: Summary***

Speaker: *Haimin Wang et al.*

Abstract: recent advances in the solar physics reported in the SPD meeting are briefly reported.

Scheduled: June 12, 2008

8. Title: ***A Frequency Distribution Theory and the OVSA data***

Speaker: *Jeongwoo Lee*

Abstract:

A frequency distribution, a function that describes how many events occur in a given interval of their sizes, is known as a useful tool for studying nonlinear dissipative processes. The frequency distribution of solar flare energy has thus far been studied mainly using hard X-ray data. In this talk, I will show a similar statistical study that we have carried out using the microwave data of 412 flares measured with the Owens Valley Solar Array (OVSA) in 2001-2002.

Scheduled: June 26, 2008

9. Title: ***Exploring the Solar Origin of Interplanetary Magnetic Flux Ropes: the Role of Low-corona Magnetic Reconnection***

Speaker: *Jiong Qiu*

Abstract:

The origin of the magnetic flux ropes, which are sometimes observed as Magnetic Clouds at 1 AU, has been an issue of debate for decades. A magnetic flux rope may emerge from below the photosphere or form gradually before its eruption and ejection to interplanetary space, or it may be created in-situ during the eruption by magnetic reconnection. To provide observational insight into the formation mechanisms of twisted magnetic flux ropes, we present a quantitative comparison between the total magnetic reconnection flux in low-corona at the wake of coronal mass ejections (CMEs) and the magnetic flux in magnetic clouds (MCs) that reach 1 AU 2 - 3 days after CME onset. It is found that for the studied 11 events, in which the association between flares, CMEs, and MCs is identified, the poloidal MC flux (referring to the amount of twist) is nearly linearly scaled with the total reconnection flux measured in the low-corona during the flare. The revealed relation between these independently measured fluxes suggests that the magnetic flux and twist of the flux rope are highly relevant to low-corona magnetic reconnection.

Scheduled: July 15, 2008

10. Title: *A selective review of the 2008 COSPAR-PRBEM*

Speaker: *Jeongwoo Lee*

Abstract:

The COSPAR Assembly of 2008 was held on July 13-20 in Montreal, about 350 miles north from New Jersey. I had mostly attended a session called "Panel for Radiation Belt Environment Modeling" (PRBEM). I will briefly review some of the presentations in the session. It includes: space missions, mechanisms for acceleration and loss of energetic particles, and paradigms of wave-particle interactions in the radiation belts.

Scheduled: August 7, 2008, 2:30

11. Title: *Solar studies with the GMRT*

Speaker: *Ananth Ananthkrishnan, Pune University, INDIA*

Abstract:

The GMRT has been used, since 2001, for observations of the solar corona at frequencies ranging from 150 to 610 MHz. Most of these observations have been made by snapshot measurements of solar coronal activity during this period.

As an example, an exceptional flare-CME event was observed by GMRT on Nov 17 2001 which has yielded several notable results, including a possible observational confirmations of the formation of a current sheet beneath the erupting arcade. Flare observations at decimetric wavelengths have yielded clues to the important issue of the geometry of the primary energy release site. A campaign of joint observations between GMRT and the Nancay RadioHeliograph (NRH) has yielded high dynamic range snapshot images of the solar corona at radio wavelengths. These observations have revealed the presence of very compact sources which constrain the parameters of coronal turbulence which cause angular broadening. An attempt has also been made to map the Sun at 150 MHz to look for coronal hole features.

Scheduled: August 19, 2008, 2:30