

# Working Group 1: Solar Sources

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*WG1 Leaders*

# WG1 Topics and Schedule

- Sub-Surface Evolution
  - Plenary talk by George Fisher today at 11:15
  - Half-day session today at 14:00
- Numerical Models of CME Initiation
  - Half-day session Tuesday at 09:45
- Origin and Evolution of the Solar Wind (joint with WG2)
  - Half-day session Tuesday at 14:00
- Campaign Events (joint with WG2 and WG3)
  - Half-day session on Wednesday at 09:45
- Radio Observations of CMEs and Particle Acceleration (joint with WG3)
  - Half-day session on Thursday at 09:45
- End-to-End Modeling of CMEs and SEPs (joint with WG2 and WG3)
  - Full-day session on Thursday at 09:45 and 14:00
- Posters!

# Numerical Models of CME Initiation (1 of 2)

- Most of the recent models of CME initiation involve a slow buildup of stress in the coronal magnetic field, followed by a sudden release of the stored energy to drive the CME
  - Details of these processes vary significantly between the models (e.g. role of reconnection)
- An enormous database of CME observations exists to compare with models, with the prospect of even better observations of the pre-event corona and CMEs from new missions in the next few years
- Session has two objectives:
  - Elucidate the main features of each model that can be tested against observations
  - Devise a 'shootout' based on model predictions for selected events, with results to be presented at SHINE 2006 Workshop

# Numerical Models of CME Initiation (2 of 2)

- Speakers featured in the session are:
  - Dana Longcope (Energy Storage and Release in the Corona: The Role of Topology)
  - Spiro Antiochos (Breakout Model)
  - Terry Forbes (Role of Ideal MHD Processes)
  - Jon Linker (CME Initiation in a 'Simple' Active Region)

# Radio Observations of CMEs and Particle Acceleration (1 of 2)

- Radio emission associated with CMEs in the low corona (within a few solar radii of the Sun) can be divided into two categories:
  - Non-thermal and possibly thermal emission from CME structures – provides information on CME structure, dynamics, and magnetic fields.
  - Radio bursts associated with CMEs (type II, shock-associated type III or type III-I, type IV, and U-bursts).
- Questions to be addressed during the workshop are:
  - What can radio observations tell us about CMEs in the low corona – structure, dynamics, and magnetic field?
  - What can radio observations tell us about particle acceleration associated with CMEs in the low corona – location, timing, and mechanism?
  - How do radio observations fit with observations of CMEs at other wavelengths – visible, EUV, X-ray?

# Radio Observations of CMEs and Particle Acceleration (1 of 2)

- Speakers featured in the session are:
  - Tim Bastian (Radio Emission from CMEs)
  - Stephen White (Coronal Radio Bursts)
  - Hilary Cane (Solar Radio Emissions and Energetic Particle Events)
  - Mike Reiner (Radio Observations Related to Particle Acceleration)
- New topic for SHINE
  - Introductory session at this workshop, with the aim of developing challenge(s) to be addressed at future workshops

# SHINE Needs You!

- Speakers are reminded to leave plenty of time for discussion after their talks, and to try to stimulate discussion during their talks
  - Be provocative!
  - Please allow at least 1/3 of your allotted time for discussion
- Participants are reminded that this is a workshop, not a traditional conference
  - Sessions will only be successful if audience members participate actively in response to the talks