



HAO Colloquium Series

(Refreshments served)

Speaker: Hardi Peter, Max-Planck-Institute

Time: 11:00–12:00 pm

Date: Tuesday, May 15, 2012

Location: CG1-1210 South Auditorium

Title: Comparing 3D MHD Coronal Models to Observations

Abstract:

Observations of the solar corona show dynamic highly structured plasma that is in constant interaction with the magnetic field. In this talk particular emphasis will be given to three-dimensional magnetohydrodynamical models of the (active region) corona that are based on heating the corona through braiding of magnetic field lines, as originally suggested by Parker. The comparison of data synthesized from the model to real observations shows that to large extent we can reproduce the real corona. This applies to average quantities such as Doppler shifts or emission measure, and to the structure and dynamics of the coronal loops. However, the question remains how realistic these models are in terms of the physical parameters and processes used in the numerical experiments.