



Udaipur Solar Observatory/ Physical Research Laboratory

P.Box.No 198, Dewali, Badi Road, Udaipur-313001

---

## SEMINAR

### Characterization of LCVRs for MAST Polarimeter

(Alok Ranjan Tiwary)

Spectro-polarimetry analyzes light as a function of its two most important characteristics: wavelength and state of polarization and is a powerful tool for measuring the magnetic field on the Sun. The observational aim of solar spectro-polarimetry is to record the Stokes vector as accurately as possible with highest spectral, spatial and temporal resolution. A Polarimeter is being developed at USO for measuring the vector magnetic field in the solar atmosphere at two different heights, and it will be used with the newly installed MAST.

We plan to use two LCVRs and a linear polarizer for the MAST Polarimeter. LCVRs are electro-optically tunable retarders. Characterization of each LCVR is important in order to get the accurate retardance and voltage dependence for a particular wavelength. In this presentation, we discuss about the calibration of the LCVRs for two solar spectral lines at Fe I 6173 Å, and Ca K 8542 Å. We also present the details of the calibration set-up and the obtained results.

**Date:** Apr 25, 2013

**Time:** 16:00

**Venue:** USO Seminar Hall