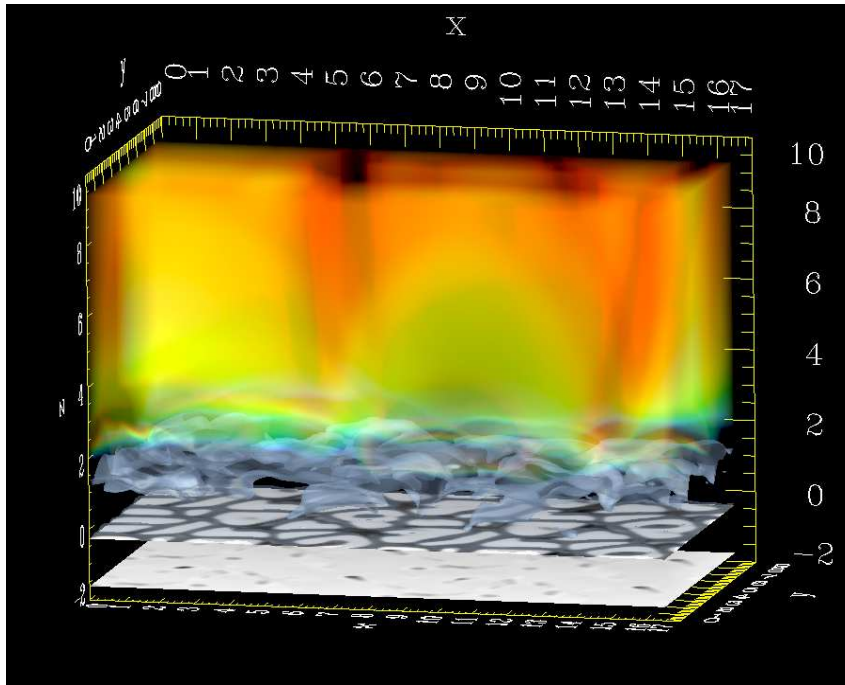


# Summer School

## Radiative Transfer and Numerical MHD

Institute of Theoretical Astrophysics  
Oslo, 19 – 29 June 2007



A summer school, “Radiative Transfer and Numerical MHD”, will be held at the Institute of Theoretical Astrophysics in Oslo, Norway, from 19 to 29 June 2007. The school will be organized as part of the EU Marie-Curie action “Utrecht-Stockholm-Oslo International Graduate School for Solar Physics” (see <http://www.solarphysics.kva.se/uso-est>)

The analysis of the electromagnetic radiation is our most important tool to probe the physical conditions of space plasmas outside the reach of in-situ measurements. In optically thick plasmas the decoding of the information is non-trivial; this is the reason why the theory of radiative transfer has a central position in astrophysics.

It has long been realized that static models fail to describe the outer atmospheres of stars. Since radiation is a dominant means of transporting energy, dynamic models demand a consistent treatment of radiation and hydrodynamics.

The aim of the summer school is to give a basic understanding of radiation, spectroscopic diagnostics, polarimetry, radiative transfer and numerical magnetohydrodynamics in the context of stellar atmospheres. Special emphasis will be given to applications through practical work with numerical methods.

The program of principles lectures will be:

- Basic Radiative Transfer (Rob Rutten, Utrecht)
- Numerical Radiative Transfer (Mats Carlsson, Oslo)
- Polarimetry (Jorge Sanchez Almeida, IAC)
- Numerical MHD (Rony Keppens, Leuven)

Each subject will be covered in a series of 8-12 lectures. Ample time will be provided for practical exercises using powerful workstations.

Participation is restricted to graduate students and post-docs entering the field and the number of students will not exceed thirty-five.

The participation fee including lodging and lecture notes but excluding food is 3000 NOK.

Applications should be sent before April 15th by email to [mats.carlsson@astro.uio.no](mailto:mats.carlsson@astro.uio.no) or by mail to Mats Carlsson, Institute of Theoretical Astrophysics, P.O. Box 1029 Blindern, N-0315 Oslo, Norway. Full details and application form at

<http://www.astro.uio.no/school-07>.