



ICTS Seminar

Title : Radiation magnetohydrodynamics with non-equilibrium equation-of-state in the solar atmosphere

Speaker : Anusha LS Bhasari (Max Planck Institute for Solar System Research, Goettingen, Germany)

Date : Thursday, July 22, 2021

Time : 3:00 pm (IST)

Abstract : To understand the structuring and dynamics of the low density layers of the solar atmosphere (known as the solar chromosphere), we need to improve and extend the existing numerical radiation magnetohydrodynamical (MHD) simulations. In the solar chromosphere, radiative energy transport is dominated by only the strongest spectral lines formed due to scattering and for these lines, the approximation of local thermodynamic equilibrium (LTE) is known to be very inaccurate, and a state of equilibrium cannot be assumed in general. To this end we have developed a non-LTE non-equilibrium radiative transfer module to the MHD code MURaM (Voegler et al. 2005) introducing a new numerical method to solve this highly non-linear system of MHD and the radiative quantities self-consistently and iteratively, in a time-implicit way. In this seminar, I will present this work (Anusha et al. 2021).

Venue : Please click on the below link to join the meeting

<https://us06web.zoom.us/j/82231763633?pwd=OVNsUVB1N0YxT3RmaWZRVVZxRkwrQT09>

Meeting ID: 822 3176 3633

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