TDLI Astronomy Seminar

Prof. Hugh Richard Arthur Jones

University of Hertfordshire

On-sky with a small stable high-resolution spectrograph

Time: 14:00-15:00, 16 January (Thursday), Shanghai time

Venue: N400（TDLI）

Host: Fabo Feng (冯发波)

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Meeting ID: 794287746

Abstract:

The EXOplanet high resolution SPECtrograph (EXOhSPEC) is a high-resolution spectrograph which aims to use catalogue components tested on the Sun and local stars. It provides developments towards a small stable high-resolution spectrograph via a fibre feed into the laboratory and sometimes with telescopes local and elsewhere. We have investigated several promising developments including modal noise control with a galvanometer, wavelength calibration with a metalon, fibre tapering and active metrology. The aim of the project is to optimise components for a prototype with a small footprint and low cost to significantly extend the reach of precision radial velocities to higher precisions enabling for example a space-based radial velocity instrument. I will talk about on-sky test observations making an atlas of Zeeman-sensitive lines and identifying optical methane.

Biography:

Professor Hugh Jones is a RS-NSFC visiting fellow working in the LAMOST group. He is a professor at the University of Hertfordshire in the UK with research interests in the discovery and characterisation of nearby low-mass stars, brown dwarfs and exoplanets. He has held previous positions in Liverpool and Tokyo where he developed instrumentation and model atmosphere experience. He started his research studies of “The Coolest Dwarfs” as the title of his 1995 PhD thesis from the University of Edinburgh partly conducted at the Space Telescope Institute.