## P111a Long-Term Monitoring Observations of Active Pre-main Sequence Stars: Where Do Jets Launch?

Michihiro Takami, Y.J. Wei, M.Y. Chou, J.L. Karr (ASIAA, Taiwan), T.L. Beck (STScI), N. Manset (CFHT), M. White (Australian National Univ.), K. Grankin (Crimean Atrophysical Observatory), M. Fukagawa (NAOJ), H.M. Gunther (MIT), C. Schneider (ESTEC), R. Kurosawa (MPIfR) et al.

Understanding the mechanisms of mass accretion and ejection is one of the key issues of star formation theories. In particular, jets seem to play a fundamental role in removing excess angular momentum from the disk, allowing mass accretion to occur. However, observational studies are hampered mainly by the limited angular resolutions of current telescopes, which are not sufficient for resolving structure and kinematics in the jet launching region. We are therefore using an alternative approach to tackle this issue: long-term monitoring of mass accretion and the extended jets of four active T Tauri stars. The observations include optical high-resolution spectroscopy with CFHT-ESPaDOnS; optical and near-IR photometry at Crimean Astrophysical Observatory and JAXA-ISAS; and integral field spectroscopy using Gemini-NIFS. Five-year observations of optical spectra at CFHT show remarkably different time variation in their emission line profiles between DG Tau, RW Aur A and RY Tau. The variations observed in RW Aur A and RY Tau may be related to time variable ejection in the jet. Continuing the observations and combining the different dataset will eventually inform us about the presence of jets launched from the magnetosphere/inner disk edge.