

Seminar

von

Dr. Michihiro Takami

(Institute of Astronomy and Astrophysics, Academia Sinica,
National Taiwan University, Taiwan)

Mass Accretion Onto Low-Mass Young Stars: Our Recent Progress with Optical-I R Observations

Stars are born in molecular clouds through gravitational contraction. What is the physical mechanism that allows mass accretion to occur against centrifugal forces and magnetic fields? What determines their final stellar masses? Despite our devotion over many decades, we astronomers and astrophysicists have not been able to find clear answers.

In this talk I will focus on the following two key topics: (A) the physical mechanism of accretion in and from the circumstellar disk; and (B) the role of episodic and violent mass accretion in developing final stellar masses. We are tackling these issues with long-term monitoring observations of mass accretion and jet ejection toward a few pre-main sequence stars (using Gemini, CFHT etc.), and imaging observations of young stars with extremely active mass accretion at near-IR and millimeter wavelengths (using Subaru, ALMA etc.), respectively. Our observations to date, and numerical simulations by members of the team, suggest the following: (1) steady mass accretion is more important than episodic mass accretion for the formation of many stars; and (2) a jet plays an important role for accretion from the inner disk edge to the star. However, further studies are required for us to reach convincing conclusions.

Montag, 30. April 2018, um 15:00 Uhr im HS

des Institutes für Astrophysik, Türkenschanzstraße 17, 1180 Wien