

## Imaging Survey of T Tauri Stars with Subaru Telescope and CIAO

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We are currently conducting a systematic imaging survey of T Tauri stars in Taurus with the Subaru 8.2m telescope and the infrared coronagraph CIAO (Coronagraphic Imager with Adaptive Optics) as one of the observatory big projects.

The Taurus molecular cloud is one of the nearest star forming regions at a distance of 140 parsec.

The purpose of this project is as follow:

by obtaining almost diffraction limited resolution (a spatial resolution of about 0.1 arcsec) with the adaptive optics,

(1) We aim to detect and resolve the near-infrared scattering radiation from the disks and study the evolution of the circumstellar structure with the evolution of the central stars.

(2) We aim to detect companion-like young brown dwarfs and even young Planets.

The obtained resolution corresponds to about 15 Astronomical Units. The improved contrast enables to detect new disks and companions.

Aiming about 100 sample in the final list, we have just completed the observations of 30 (relatively young) T Tauri stars and related objects in this autumn and winter season

Even in quick reduction data, one can find nebula and/or companions for about half of the sample, although further detailed reductions are necessary.

In this talk, we present the observation details and preliminary results of some of the sources.