

P202a **Near-Infrared Imaging Polarimetry of Inner Region of GG Tau A Disk**

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By performing non-masked polarization imaging with Subaru/HiCIAO, polarized scattered light from the inner region of the disk around the GG Tau A system was successfully detected in the H band with a spatial resolution of approximately $0.07''$, revealing the complicated inner disk structures around this young binary. This paper reports an arc-like structure to the north of GG Tau Ab, part of a circumstellar structure that could be detected around GG Tau Aa extending to a distance of about 28 AU from the primary star. The speckle noise around GG Tau Ab constrains its disk radius to be smaller than 13 AU. Based on the size of the circumbinary ring and the circumstellar disk around GG Tau Aa, the semi-major axis of the binary's orbit is likely to be 62 AU. A comparison of the present observations with previous ALMA and near-infrared H_2 emission observations suggests that the north arc could be part of a large streamer flowing from the circumbinary ring to sustain the circumstellar disks. According to previous research, the circumstellar disk around GG Tau Aa has enough mass and can be sustained for a duration sufficient for planet formation; thus, our study indicates that planets can form within close (separation $< \sim 100$ AU) young binary systems.