

The Dynamics of Disks in Multi-Star Systems

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The process of star formation frequently produces multi-star systems, with nearly half of Sun-like stars formed as part of a pair. Protoplanetary disks in these systems experience additional gravitational interactions and are subject to environments unlike those around single stars, influencing their evolution and subsequent planet formation. We investigate a potential source of variability in misaligned circumbinary disks due to changing illumination from the central stars. We also study numerical simulations of disks around triple star systems, and find that misalignment angles between the disk and stellar components are frequently nonzero due to orbital precession of the stellar orbits, in rough agreement with the observed population of circumtriple disks.

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