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Probing 3D Gas Kinematic of HD 163296 Protoplanetary Disk

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Understanding gas dynamics in protoplanetary disks is crucial for searching the planet forming region and comprehending the evolution of planetary systems. Various observational signatures suggest the presence of protoplanets in the disk of HD 163296, such as CO kink structure. To expand our understanding of planetary systems, we aim to focus on the gas kinematic structure of HD 163296. In this work, we successfully obtained the 3D gas kinematic structure using multi-wavelength line observations from ALMA MAPS, providing new insights into localized, non-Keplerian kinematic perturbations associated with potential planets and disk substructures.

Section

Star Formation

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