

Disk-Planet Interactions

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Structure in protostellar disks can arise through the gravitational interaction between the disk and planets. These disks, because of their relative brightness, are more easily detected than the planets. Detailed studies of these disks may allow us to place constraints on the properties of the planets in them and also on the formation and evolution of these systems. We outline three situations where the properties of planets can be constrained based on observations of disk morphology: 1) Resonant capture of dust by planets; 2) Sharp disk edges which are maintained by the presence of a planet; and 3) Eccentric holes caused by an eccentric planet. We will also discuss how spiral structure in the outer parts of protoplanetary disks can arise from perturbations caused by nearby companions.

