The Effects of Collisions on the Beta Pictoris Disk

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Abstract

Collisionless numerical simulations have demonstrated that a planet on an inclined orbit (such as Beta Pic b) may be responsible for the observed warp in the Beta Pictoris disk. We investigate the effects of fragmenting collisions on the creation and propagation of such a warp. We present the results of our SMACK simulations of the 3D dynamical and collisional evolution of the Beta Pictoris planetesimal disk and the implications for the perturbing planet.

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