Planets in Orbit Around β Pictoris Formed the Orbital Architecture of Planetesimal Belts?

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We report near-infrared imaging observations of the β Pic dust disk that shows the orbital architecture of planetesimal belts formed by mean motion resonances (MMRs) with the outermost planet, which we call Planet N. Our results reveal that one of the previously identified planetesimal belts lies in one of the MMRs with Planet N. Furthermore, we find that the locations of all the previously reported planetesimal belts are best explained by the presence of four planets in the system. We will discuss the observational results in comparison with our numerical simulations of gravitational interactions between planetesimals and planets.