On the Origin of the Outer Solar System and first Results from New Horizons

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The Kuiper belt is a remnant of the primordial Solar system. It consists of a disk of icy bodies located at the outskirts of our planetary system, just beyond the orbit of Neptune, and is the source of short period comets. More than 1000 KBOs have been detected since its discovery in by Jewitt & Luu in 1993. In the Kuiper Belt, planet formation never reached all the way to completion because the growth of planetary embryos was interrupted by an increase in their velocity dispersion. As a result, the Kuiper belt contains some of the least processed bodies in our Solar system and its dynamical and physical properties illuminate the conditions during the early stages of planet formation. Determining the abundance, material properties and collisional history of Kuiper Belt Objects (KBOs) is important since it illuminates the formation history of the outer solar system and the processes of planet formation in general. I will review recent results from NASA's New Horizons mission to Pluto, compare them with observations of the outer solar system and discuss their implications for planet formation.