



The formation of gas-rich planets

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The results of the Kepler mission show that planets smaller than Neptune ("mini-Neptunes"), presumably composed of non-negligible amounts of hydrogen and helium, are very frequent. The formation of this type of objects is challenging for the classical core-accretion paradigm for giant planet formation. I will show that mini-Neptunes are a natural outcome of the core accretion model when including the effect of envelope enrichment by icy planetesimals/pebbles in formation models. I will discuss as well how envelope enrichment affects the formation timescale, the planetary composition/structure, and the implications for the interpretation of exoplanet observations.