



Origin of the Saturnian System after the Cassini-Huygens mission

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We review the different key findings made by the Cassini-Huygens spacecraft that allowed to shed light on the formation conditions of Saturn, its rings and surrounding satellite system. Among them, Cassini's measurements of the Enceladus' plumes isotopic composition show that this satellite likely agglomerated from building blocks formed beyond 10 AU in the protosolar nebula. The strong noble gas impoverishment measured in Titan's atmosphere by the Huygens probe also suggest that this satellite could have formed from solids initially produced in the protosolar nebula and that would have been partly devolatilized during their migration and accretion within Saturn's circumplanetary disk. We also discuss the future missions that could help answer the remaining open questions regarding the origin of Saturn's system.