

US Planetary Science Decadal Survey Study of Saturn Probe Missions

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In 2009-11 the Space Studies Board of the US National Research Council (NRC), acting on a request by the US National Aeronautics and Space Administration (NASA), is undertaking a “Planetary Science Decadal Survey”, a study of the state of solar system science, and prioritization of science for planetary space flight missions in the 2013-2022 time frame. As a part of its deliberations the Decadal Survey requested that JPL conduct studies of potential Saturn atmospheric entry probe missions, with emphasis on missions that might fit within the resource constraints of NASA’s New Frontiers Program. The studies were conducted in two phases: first, in January 2010, a detailed trade study of particular crucial aspects of such a mission, to determine whether more comprehensive study was warranted; and in March 2010, a more comprehensive study, conducted using JPL’s “Team X”. At the time of the abstract deadline the Team X design sessions have not yet occurred. This paper will summarize the studies conducted and give the principal conclusions arising from them.