



Highlights of ESA's Planetary Sciences Programme Achievements and a Glimpse into the Future (Jean Dominique Cassini Medal Lecture)

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Images of Jupiter and of Saturn returned by the Voyagers in the late 70s and early 80s made me acquainted with the outer planet exploration. The ringed planet appeared to me as a fascinating place, but I thought it would remain a dream place for myself as I was then working as an Earth ionosphere scientist. But, a couple of years later, in 1984, I got involved in the joint study by ESA and NASA of the Cassini mission to Saturn. Fair to say, at that time I did not know much about Titan, which was to become the focus of ESA's involvement in the Cassini (later renamed Cassini-Huygens) mission and the main Solar System target for the rest of my career at ESA. The Cassini-Huygens exploration of Saturn and Titan turned out to be a most rewarding story for all involved. During the 27 years I spent as the ESA Study & later Project Scientist for the Cassini-Huygens mission, I also got involved in various ways in the flight instrumentation development of other ESA planetary missions, in part driven by my desire to keep abreast with planetary science instrumentation and to remain directly involved with research. I led or contributed to the development of flight space hardware (mostly Langmuir probes and E-field sensors) for several Earth-orbiting and planetary missions, including for Rosetta, and Bepi-Colombo. I also worked for a while on Venus Express as Study Scientist. Most recently I have been the Study Scientist for TSSM and for the EJSM-Laplace mission Study Scientist, the latter giving me the opportunity to work on Jupiter. In this lecture, I will briefly present highlights, with a personal view, of some of the major achievements within ESA's planetary programme. I will focus my science presentation on a couple of specific topics that illustrates my personal research activities in the field of planetary sciences.