Geophysical Research Abstracts,
Vol. 10, EGU2008-A-08705, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-08705
EGU General Assembly 2008

Recent Results On Titan From Huygens

J.-P. Lebreton

Research and Scientific Support Department, ESA-ESTEC, Keplerlaan 1, 2200 AG Noordwijk, The Netherlands

Titan, Saturn's largest moon, is a major target of the international Cassini-Huygens mission to the Saturnian System. It has been globally explored by the suite of Cassini orbiter instruments for about 4 years during each of the flybys accomplished so far. The Huygens Probe, which descended in the atmosphere of Titan under parachute during 2 $^1/_2$ hours on 14 January 2005, provided us with a wealth of in-situ measurements. After a safe landing, it continued to operate flawlessly on the surface for more than 3 hours. Since the publication of the first results in the December 8 2005 issue of Volume 438 of *Nature*, the Huygens data have been processed in more details using the synergy of the Huygens data set complemented with those obtained by the orbiter, as well as new modeling results and experimental simulations in the laboratory. The first set of results obtained from a multi-instrument, multi-disciplinary approach, were published in Volume 1 of a two-volume special issue of *Planetary and Space Science*: "Titan as seen by Huygens" that appeared in November 2007. New results will appear in volume 2 by mid-2008. In this presentation, I will review a selected set of the results obtained by Huygens and discuss lessons learned for designing future in-situ missions to Titan.