European Geosciences Union General Assembly 2008

Vienna, Austria, 13 – 18 April 2008

Findings on Titan and other outer planets and satellites

Press conference: Tuesday, 10:00-11:00, Press Room
Session: PS4.0 Monday 14 April, 8:30-19:00, Programme >>

Both Cassini and the Huygens probe have delivered striking images of the branching channels on Titan's surface. During the press conference researchers will discuss new findings related to those erosion channels and news from the recent Enceladus flyby.

Dr. Ralf Jaumann, of the German Space Agency, will explain how frequent and heavy methane storms and turbulent flows fit with observations of the channels and Titan's vast dune fields. Studies about erosion on Titan focus on erosional and depositional features that are used to constrain the amount of liquids (methane) involved in the erosional process.

Modelled methane convective storms on Titan indicate rainfall of 110 kg/m^2 within 5 - 8 hours (30 - 50 mm/hr) and even moderate storms still reach 4 - 65 kg/m^2 for storm lifetimes of 5 - 8 hrs (0.8 - 18 mm/h).

Fluvial erosion channels on Titan as identified through several observations (HLS, RADAR and VIMS) have similar discharges to rivers on Earth of the same size, e.g. the Yellowstone and Kansas Rivers (Osterkamp and Hedman, 1982).

Thus the observed surface erosion fits with the methane convective storm models as well as with the rates needed to move sediment of 0.5 - 15 mm/h (Perron et al., 2006).

In addition researchers discovered in one of the highest resolved Visual and Infrared Mapping Spectrometer (VIMS) images a bay area with depositional characteristics indicated by continuous change of the spectral behavior that indicates sedimentation of materials after transport.

Dr. Hunter Waite will report the latest results on Enceladus, one of Saturn's other moons that was inspected during a close flyby of the Cassini spacecraft on March 12th. Finally, thoughts about future missions will be shared with the press.

Dr. Athéna Coustenis LESIA Observatoire de Meudon	Prof. Hunter Waite AOSS University of Michigan, USA	Prof Dr. Ralf Jaumann Planetary Research DLR
Athena.Coustenis@obspm.fr	kasprzak@pop900.gsfc.nasa.gov	ralf.jaumann@dlr.de

Dick van der Wateren
EGU Press Officer
+31 20 4632559 (office)

http://www.egu-media.net
egu.press@copernicus.org
+31 6 54604741 (mobile)