



## **Titan Observations at the Time of the Huygens Descent with the VLT**

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We have observed Titan during the nights of 14-15, 15-16 and 16-17 January 2005 (UTCs from 00:00 to 07:00) using the NACO adaptive optics system in its modes imaging (filters NB\_1.28, IB\_2.00, NB\_2.12, IB\_2.15 and NB\_2.17), spectroscopy (S27\_3\_SK mode, scanning the 2.02-2.53 microns range) and also the SDI and Fabry-Pérot modes with filters in K band (between 2.00 and 2.18 micron). We achieved diffraction-limited resolutions, thanks to an excellent 0.6 arcsec seeing and Magain deconvolution. We have thus covered the period in time immediately after the descent of the Huygens probe and our data, besides their usefulness as such for the study of Titan's surface can be of some help in Huygens-related studies.

We have also had time to observe Titan in January with the NAOMI Integral field Spectrometer, combined with the 4.2m telescope of the WHT. We observed Titan during four half-nights on the 10, 18, 22 and 26 January 2005. We used varied lenslet, giving spatial resolutions of 0.09, 0.14 and 0.26 arcsec; as for spectroscopy, we scanned the 865-1037 nm range, with a spectral resolution of about 1000.

We will discuss the results of these two observational campaigns.