



Spectroscopic needs for Titan's characterization

A. Coustenis(1), Y. Bénilan(2), A. Jolly(2), A. Negrão(1)

(1) LESIA, Paris-Meudon Obs., France, (Athena.Coustenis@obspm.fr / Fax: +33145077469 / Phone: +33145077720)

(2) LISA, Université Paris 12, Av. du Général de Gaulle, 94010 Créteil Cedex

Titan studies require more and more precise information on the spectroscopic parameters in order to render models more accurate and performing. In trying to characterize Titan's atmosphere from ISO or from Cassini/CIRS data for instance (Coustenis et al., 2003; 2006), one finds lacks in such parameters for known molecules, but also for the possible candidates predicted by photochemical models and laboratory simulations (Shindo et al., 2003). I will discuss the current status of our knowledge (and lacking) in such input and in particular on: a) the methane absorption coefficients in the near-IR (Negrão et al., 2006); b) the spectroscopic parameters for some molecules such as C₂H₆, C₃H₈, C₄H₂, HC₃N and C₂N₂, etc; c) lacks in spectra which could be useful for identifying new molecules in Titan data (such as C₆H₂, HC₅N, etc).

Refs: Coustenis et al., 2003. *Icarus*, 161, 383.

Coustenis et al., 2006, *Icarus*, submitted.

Negrão et al., 2006. *Plan. Space Sci.*, submitted.

Shindo et al., 2003. *Plan. Space Sci.* 51, 9.