

Seasonal variations in Saturn's stratosphere from Cassini/CIRS limb observations

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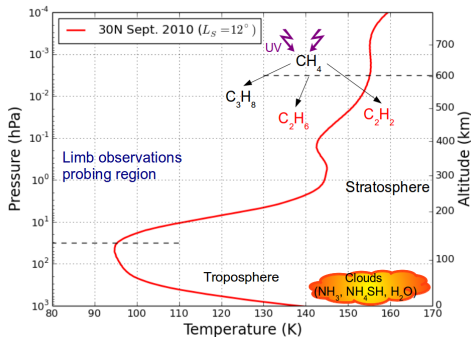
Laboratoire d'Études Spatiales et d'Instrumentation en Astrophysique



How did the stratosphere evolve from winter to spring?

Method

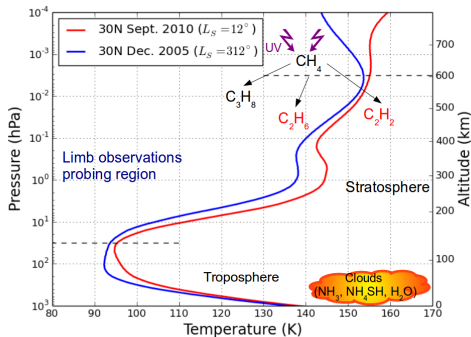
- Analysis of Cassini/CIRS limb observations of 2010-2012
⇒ temperature, C_2H_6 , C_2H_2 , C_3H_8



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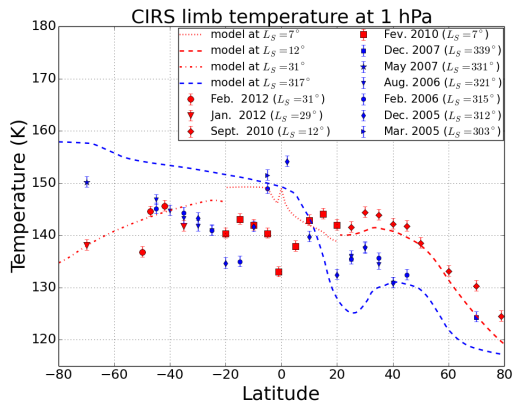
- Analysis of Cassini/CIRS limb observations of 2010-2012
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- Comparison with Cassini/CIRS limb observations of 2005-2007 (Guerlet et al., 2009)



Which processes are at play in this evolution ?

Comparison with :

- Radiative-convective model (Guerlet et al. 2014)
⇒ radiative contributions in the seasonal changes



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Comparison with :

- Radiative-convective model (Guerlet et al. 2014)
⇒ radiative contributions in the seasonal changes
- Photochemical model (Moses & Greathouse, 2005)
⇒ processes influencing the hydrocarbons abundances

