



Doppler wind measurements in Venus mesosphere

P. Gaulme (1,2), F.X. Schmider (3) A. Lopez (4) and B. Gelly (4)

(1) Institut d'Astrophysique Spatiale, Université Paris XI, F-91405 Orsay Cedex (Patrick.Gaulme@ias.u-psud.fr), (2) LESIA, Observatoire de Paris, F-92195 Meudon Cedex, (3) Laboratoire Fizeau, Observatoire de la Côte d'Azur, F-06108 Nice Cedex 2, (4) THEMIS Observatory, La Laguna, Tenerife, Spain

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Abstract

Solar light gets scattered at haze top level in Venus mesosphere, in the visible range (67-km altitude), while CO₂ absorption occurs almost 7 km higher in the mesosphere, which corresponds to a difference of about 2 pressure scale heights.

We present Doppler velocity measurements performed by scanning Venus with the long slit high resolution spectrometer MTR ($R > 100000$) of the Solar telescope THEMIS (Teide Observatory). A first test run was lead in late 2007 [1] during an international ground based support to the Venus Express mission [2].

Here, we analyse the data obtained during two observation run performed in May 2008 and Spetember 2009 in 4 narrow spectral ranges (10-Å intervals each) centred around 3 Fraunhofer lines (Mg 5172 Å, Fe 5550 Å, Na 5890 Å) and a CO₂ band at 8691 Å.

References

- [1] Gaulme, P. et al. (2008) PSS 56, 1335-1343
- [2] PSS 56 (2008), Editors Lellouch, E and Witasse, O.