



The vertical profiles of H₂O, O₂ and CO in the martian atmosphere derived from Herschel/HIFI observations

P. Hartogh (1), C. Jarchow (1), M. Błęcka (2), M. Kidger (3), T. Cavalié (4), E. Lellouch (5), M. Rengel (1), M. de Val-Borro (1), T. Encrenaz (5) and the HssO team.

(1) Max-Planck-Institut für Sonnensystemforschung, Germany, (hartogh@mps.mpg.de / Fax: +49-5556-9796342), (2) Space Research Centre, Polish Academy of Sciences, Warsaw, Poland, (3) European Space Astronomy Centre, Villafranca, Spain, (4) Université de Bordeaux, Laboratoire d'Astrophysique de Bordeaux, France, (5) LESIA, Obs. de Paris, France.

Abstract

Mars has been observed by the Heterodyne Instrument for the Far Infrared (HIFI) [1] on the Herschel Space Observatory [2] as part of our solar system key programme HssO [3] during two periods. They cover parts of the late martian Northern spring (April 11-16, 2010, $L_s=76-78$) and early Northern summer (June 23 - July 6, 2010, $L_s=108-114$). A number of dedicated line observations have been performed [4,5] as well as line surveys in the HIFI bands 1 to 6. This presentation will focus on the determination of the vertical profiles of water vapour, molecular oxygen and carbon monoxide derived from the resolved molecular line shapes. Furthermore, the upper limits of some selected atmospheric trace gases will be presented.

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