



Study of the Lyman alpha airglow with Spicam on Mars Express

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Atomic hydrogen is an important tracer of the global behaviour and evolutionary processes of an atmosphere. A method usually used for determining the abundance of atomic hydrogen is the observation of the Lyman alpha line at 121.6 nm, excited by resonant scattering of the solar FUV radiation. During limb observations on 2004 and 2005 the SPICAM UV imaging spectrometer on Mars Express measured this airglow for different altitudes and solar zenith angles for a period of medium solar activity. One spectrum was recorded each second, resulting in more than 1000 spectra for each observation. We will present the data processing, the calculation of the sky background contribution and the first density profiles of atomic hydrogen obtained by fitting the data with a model of thermospheric and exospheric density profiles coupled with a radiative transfer model. We will compare these results with previous observations by Mariner 6, 7 and 9. We will also discuss about the escaping flux deduced from this fitting.