



Atmospheric water vapour from the PFS/ Mars Express observations

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Since the time of Mars Express orbit insertion the Planetary Fourier Spectrometer (PFS) has delivered more than 100,000 spectra of the planet. Due to wide spectral range and high resolution the instrument is a powerful tool to study atmospheric trace gases and, in particular, water vapour. Several H₂O bands around 50, 2.56, and 1.38 micron are routinely used for retrievals of the atmospheric water column density to reconstruct its spatial distribution and seasonal cycle on Mars. During the Northern winter the average amount of water vapour in the atmosphere was about 10 precipitable microns. Significantly higher abundance of water is systematically observed above the Arabia Terra - the region with subsurface hydrogen enhancement as measured in the HEND/ Mars Odyssey experiment. Comparison with the OMEGA and SPICAV observations of atmospheric water will be also presented.