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First ground based FTIR observations in the atmosphere over Ural

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Ural Atmospheric Fourier Station (UAFS) is arranged in Kourovka Astronomical Observatory of Ural State University. The UAFS situated at 57.038N and 59.545E in forest area and operated since July of 2009. The UAFS is equipped with Bruker Optics IFS125M with spectral resolution of $0.0035cm^{-1}$ and solar tracker A547N. Set of passed through the atmosphere solar spectra from the range of 4000-11000cm^{-1} with resolution of 0.05 - $0.0035cm^{-1}$ were recorded during clear sky conditions using the FTIR from July 2009. Based on independent data of AERONET spectrometer in Kourovka, the spectra corresponding to weak aerosol atmosphere have been selected for further analysis with GFIT. The GFIT outputs for column mean concentration of CO_2, CH_4, CO, N_2O, H_2O and other trace gases are obtained. Original method for determination of HDO to H_2O ratio in the atmosphere from the FTIR spectrum is suggested. Validation of TANSO-FTS/GOSAT CH_4, CO_2 and HDO/H_2O retrievals are discussed.
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