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Atmos. Chem. Phys., 8, 5579-5588, 2008 www.atmos-chem-phys.net/8/5579/2008/ © Author(s) 2008. This work is distributed under the Creative Commons Attribution 3.0 License.

Quality assessment of O₃ profiles measured by a state-of-the-art ground-based FTIR observing system

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Abstract. Ground-based Fourier Transform Infra-Red (FTIR) measurements are an important component of the global atmospheric monitoring system. Their essential role in validating satellite measurements requires a precise documentation of their quality. Here we present an extensive quality documentation of ground-based FTIR O₃ profiles. This is done in the form of theoretical and empirical error estimations. The latter is achieved by an intercomparison with ECC-sonde O₃ profiles. The FTIR O₃ amounts are obtained by applying the most advanced instrumentation and retrieval strategies and consequently represent the current potential of this remote sensing technique.

■ Final Revised Paper (PDF, 815 KB) ■ Discussion Paper (ACPD)

Citation: Schneider, M., Hase, F., Blumenstock, T., Redondas, A., and Cuevas, E.: Quality assessment of O₃ profiles measured by a state-of-theart ground-based FTIR observing system, Atmos. Chem. Phys., 8, 5579-5588, 2008. ■ Bibtex ■ EndNote ■ Reference Manager



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