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Total Ozone Column above Hohenpeissenberg – Comparison of different ground based and satellite borne instruments

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Regular total ozone column (TOC) measurements using different types of spectrometers (Dobson since 1967, Brewer since 1983) have been performed at the Meteorological Observatory Hohenpeissenberg (MOHp) for almost 50 years. The observation of the ozone layer with satellite borne instruments started in the early 1970ties. Thus MOHp is one of the few stations in the global ozone monitoring network, which can be used for long-term intercomparisons either between ground based Dobson and Brewer instruments and the various satellite data sets.

Results of these intercomparisons and reasons for differences are presented and discussed. Modifications of the data processing algorithms (improved ozone cross sections, inclusion of actual effective temperature of the ozone layer, correct calculation of μ_{e} etc.) can significantly reduce the differences especially in the annual cycles.