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Ozone Comparison between Pandora #34, the Dobson #061, OMI, and OMPS at Boulder Colorado for the period December 2013 – June 2016.

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A comparison of retrieved total column ozone amounts TCO between the Pandora #34 spectrometer system and the Dobson #061 spectrophotometer from direct-sun observations was performed on the roof of the Boulder, Colorado NOAA building for more than 2 years starting on December 17, 2013. Both the standard Dobson and Pandora total column ozone TCO retrievals required a correction $TCO_{corr} = TCO (1+C(T))$ using a monthly varying effective ozone temperature TE derived from a temperature and ozone profile climatology. TCO agreement between the instruments was within 1% for clear-sky conditions. Pandora TCO data showed 0.3% annual average agreement with satellite overpass data from AURA/OMI (Ozone Monitoring Instrument) and 1% annual average offset with Suomi-NPP/OMPS (Suomi National Polar-orbiting Partnership, the nadir viewing portion of the Ozone Mapper Profiler Suite). We observed a small secular drift between OMI and Pandora.