

QOS2016-23, 2016

Quadrennial Ozone Symposium of the International Ozone Commission

© Author(s) 2016. CC Attribution 3.0 License.

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

J. Herman (1), R Evans (2), A Cede (4), N Abuhassan (1), I Petropavlovskikh (3), and G McConville (3)

(1) NASA/GSFC, Code 614, Greenbelt, Maryland 20771, United States (jay.r.herman@nasa.gov), (2) NOAA Earth System Research Laboratory, 325 Broadway, Boulder, CO 80305 United States, (3) Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder 80309 USA, (4) Goddard Earth Sciences Technology & Research (GESTAR) Columbia, MD 21046, USA

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.