Format of files in this directory.

Umkehr ozone profile retrieval is performed with UMK04 algorithm (Petropavlovskikh et al, 2005). Empirical stray light corrections are applied (Petropavlovskikh et al, 2011). First four columns are fractional year, year, month, total ozone column

Next 10 columns are for Umkehr ozone profiles, beginning from the top layer.

Data in files are monthly averaged.

012 – Supporo, Japan (revised data in October 2014, private communications with K. Miyagawa, JMA)

014 – Tateno, Japan (revised in October 2014, private communications with K. Miyagawa, JMA)

031 – MLO, Hawaii (after June 2005 Umkehr data are empirically corrected for instrumental offset)

035- Arosa, Switzerland (after 2007 data are preliminary, homogenization is done prior to 2007)

040 – OHP, France (clock related problems are corrected)

067- Boulder, CO

105 – Faibanks, Alaska

159 – Perth, Australia (historical data prior to 1980s are very sparse and scattered)

256 – Lauder, New Zealand

Petropavlovskikh, I., P. K. Bhartia, and J. DeLuisi (2005), New Umkehr ozone profile retrieval algorithm optimized for climatological studies, Geophys. Res. Lett., 32, L16808, doi:10.1029/2005GL023323

Petropavlovskikh, R. Evans, G. McConville , S. Oltmans , D. Quincy, K. Lantz, P.Disterhoft, M. Stanek, L. Flynn (2011), Sensitivity of Dobson and Brewer Umkehr ozone profile retrievals to ozone cross-sections and stray light effects. *Atmospheric Measurement Techniques*, *4* 1-29, [doi: 10.5194/amtd-4-1-2011](http://dx.doi.org/doi:10.5194/amtd-4-1-2011)