Description of Version 2 Data Format NSF UV Monitoring Network: Total Column Ozone

Filename: SITE_ozone_coincident_SOURCE.csv

where SITE is MCM for McMurdo Station, Antarctica
PAL for Palmer Station, Antarctica
SPO for South Pole, Antarctica
USH for Ushuaia, Argentina
SAN for San Diego, California
BAR for Barrow, Alaska
SUM for Summit, Greenland
SOURCE identifies the data source to which Version 2 ozone data are matched in time, see table below.

Total ozone values were calculated from UV spectra using an algorithm published in:
G. Bernhard, C.R. Booth, and R.D. McPeters, "Calculation of total column ozone from global UV spectra at high latitudes" *J. Geophys. Res.*, 108(D17), 4532, doi:10.1029/2003JD003450, 2003, available at: http://www.biospherical.com/nsf/presentations/2003JD003450.pdf

Ozone data are provided for times when also measurements from other instruments exist. The following instruments are implemented:

Source	Description
Dobson	At McMurdo: Measurements of a Dobson photometer operated by New Zealand's National Institute of Water and Atmospheric Research (NIWA) At South Pole: Measurements of a Dobson photometer operated by NOAA's Climate Monitoring and Diagnostics Laboratory At Barrow: Measurements of a Dobson photometer operated by NOAA's Climate Monitoring and Diagnostics Laboratory
TOMS_N7_V7	Version 7 data of NASA's Total Ozone Mapping Spectrometer (TOMS) onboard the Nimbus-7 satellite
TOMS_N7_V8	Version 8 data of NASA's Total Ozone Mapping Spectrometer (TOMS) onboard the Nimbus-7 satellite
TOMS_Meteor_V7	Version 7 data of NASA's Total Ozone Mapping Spectrometer (TOMS) onboard the Meteor-3 satellite
TOMS_EP_V7	Version 7 data of NASA's Total Ozone Mapping Spectrometer (TOMS) onboard the Earth Probe satellite
TOMS_EP_V8	Version 8 data of NASA's Total Ozone Mapping Spectrometer (TOMS) onboard the Earth Probe satellite
OMI	Measurements from the Ozone Monitoring Instrument onboard NASA's AURA satellite

Column Assignment

Label	Description	Unit	Remark
Filename	Filename of spectral scan		1
TIME_SUV	Time in UT at start of scan	mm/dd/yy hh:mm:ss	
SZA_SUV	Solar zenith angle at start of scan	degree	2
O3_SUV	Total column ozone retrieved from SUV spectra	Dobson Unit (DU)	

See next page for remarks.

Remarks

1 - Filename convention of spectral scans:
sCyyhhmm.jjj

where
s = Site identifier (A=McMurdo; B=Palmer; C=South Pole; D=Ushuaia; E=San Diego; F=Barrow; J=Summit)
C = Always C
yy = Year
hh = Hour (UT)
mm = Minute
jjj = Day of Year

2 - Solar zenith is the true solar zenith angle, i.e. the angle between the zenith and the Sun if the Earth had no atmosphere. Due to refraction of the Earth's atmosphere, the Sun appears to an observer, who is standing at the surface of the Earth, at a smaller angle.