

File Revision Date:

October 28, 2024

Data Set Description:

PI: Ankie Pitors (pitors@knmi.nl)
Instrument: Brewer MKIII
Site(s): Paramaribo, Meteorological Service Suriname (MDS)
Measurement Quantities: Total column ozone
Coordinates: 5.80608N -55.21456E 16 mASL

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Reference Articles:

Brewer, A replacement for the Dobson spectrophotometer, Pure and Applied Geophys., 106-108, 919-927, 1973

Operator's Manual Brewer MkIII Spectrophotometer

<http://www.kippzonen.com/Download/207/Brewer-MkIII-Operator-s-Manual>

Instrument Description:

Brewer MKIII #159 1999-now

Algorithm Description:

Original Brewer algorithm as described in manual for Direct Sun observations
Zenith Sky observations are calibrated using a "fit" to Direct Sun observations

Zenith Sky observations are reported only on days with no Direct Sun observations

Expected Precision/Accuracy of Instrument:

6 dobson units for Direct Sun observations

9 dobson units for Zenith Sky observations

Instrument History:

1999-03	Start observations
2001-06	Calibration IOS
2002-11	Calibration IOS
2005-04	Calibration IOS
2008-08	Calibration IOS
2010-12	Calibration K+Z
2014-11	Calibration IOS, lamp board replaced
2016-04	Motor FW2 replaced
2016-06	Power supply replaced
2017-11	Calibration IOS
2021-09	Data stop due to instrumental problems
2023-09	Instrument sent to IOS for repair and Calibration to IOS
2024-03	Instrument back in Paramaribo, instrumental problems
2024-08	Instrument operational, iris motor problem
2025	Minor gaps of few days in a row due to power outages and restart problems

Before 2004, and in 2007, the clock drifted.

Some effort has been made to correct the data in these periods.

L0/L1 data are stored at KNMI cloud facility at Surf.nl

Note

In the NDACC database, only daily average O3 observations are available.

However, individual observations are available in the WOUDC database (2012-now)

UV aerosol data are not (yet) available

Brewer #159 performs O3 and SO2 observations in three modes:

DS: Direct Sun

ZS: Zenith Sky

GI: Global irradiance

Brewer #159 also performs about hourly UV-scans:

UX: Extended UV wavelength scan

These data are available on request.