



The World Ozone and Ultraviolet Radiation Data Centre (WOUDC)

Updates and Issues

E.W. Hare
Environment Canada





Updates and Achievements



- A data quality assessment report accompanied the 2nd *Ozone Data for the World* (ODW) “Red-book” DVD release.
- Data file disclaimer header – from World Data Centre meeting in Dübendorf, Switzerland, March 2007 has been added to all data listed on the ODW DVD. **Question:**
Should the main archive be next?
- New ozone mapping software (demo) allows the WOUDC to animate ozone while providing individual ozone values and metadata for each location (testing stage)



Updates and Achievements ... continued



- Continue to participate in the IGACO initiative
- New data content being recommended (table and attribute additions for Ozone Sonde and Total Ozone)
- A web based model for calibration information is still in the development stages, but these could be deployed quickly if accepted by the SAG
- Metadata updates are reported dynamically on the web site and can be accessed at:
http://www.woudc.org/updates_report_e.cfm
- Soon to be added ... dynamic revision and calibration events





WMO-WOUDC Data Disclaimer



* -----
* WMO WOUDC Data Usage Disclaimer
*
* "For scientific purposes, access to these [GAW] data is unlimited and provided without charge. By their use you
* accept that an offer of co-authorship will be *made through personal contact with the data providers or owners
* whenever *substantial use is made of their data. In all cases, an acknowledgment must be *made to the data
* providers or owners and to the data centre when these data are used within a publication."
* -----

#CONTENT

Class,Category,Level,Form
WOUDC,TotalOzoneObs,1.0,1

#DATA_GENERATION

Date,Agency,Version,ScientificAuthority
2005-12-13,MSC,2.00,Vitali Fioletov

#PLATFORM

Type,ID,Name,Country,GAW_ID
STN,65,Toronto,CAN,71638

#INSTRUMENT

Name,Model,Number
Brewer,MKII,008

#LOCATION

Latitude,Longitude,Height
43.78,-79.47,198





Other Issues & Action Items arising from last meeting



- Action Items 1 & 2 - WIS
Issue: time and resources
Response: *I am still concerned on what will be expected from each WDC manager.*
- Action Items 4 - Disclaimer
Issue: none
Response: *completed*
- Action Items 10 – Web site audit
Issue: none
Response: *completed and now completed by ET-WDC group*
- Action Items 11 – Mobile GAW “stations”
Issue: describing stations in motion, example a flight or ship
Response: *any metadata standards that I have read tag data as a “geobox”. The WOUDC has done this since 2000.*



Data Quality and the Data Passport



The “Data Passport” is a fundamental descriptor of many aspects of data quality, written by the data originators (PI)

Aspects of a Data Passport:

- How data are measured and collected
Example: precision, traceability, error estimates etc.
- Network (site/platform) information and updates
Example: changes where applicable like obstructions
- Compliance with SOP's and other standards
- Calibration and revision histories – plus regular reporting
- Contact information – maintain up-to-date information

The Data Passport should be continually updated by data submitting Agencies to reflect their data collection procedures.

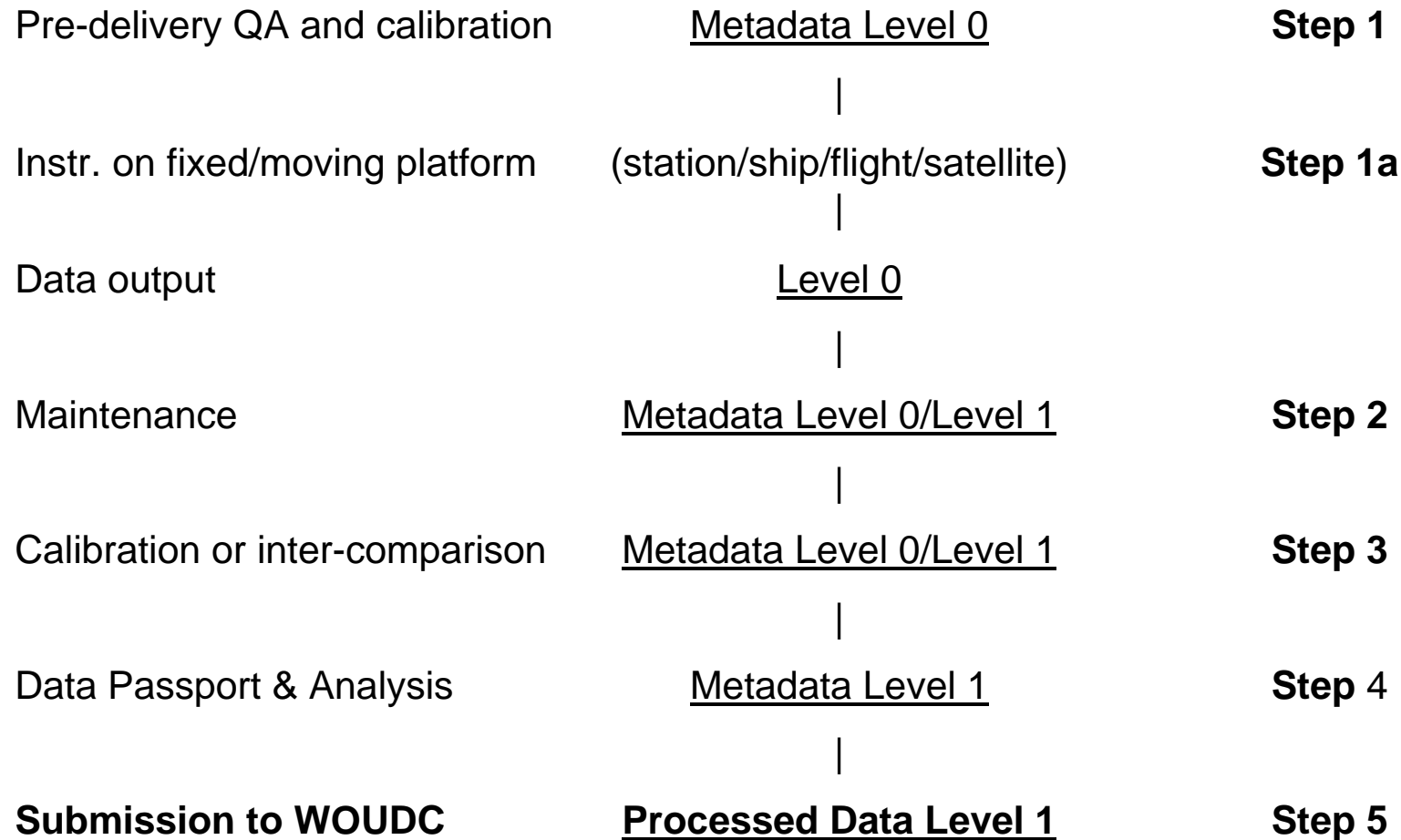




The Data Pathway - Issues to Consider



A flow chart for an Instrument (could be a sample pathway as well)





Data Quality & User Guidance Indicators



Some examples of the types of information required to provide a metric on DQ

1. Has the data originator (i.e. on behalf of their agency) submitted a “Data Passport” ?
2. Are the level 0 data re-processed regularly following any maintenance, calibration or inter-comparisons?
3. Are the re-processed data then forwarded to the WOUDC for updating the archive? Should there be a metric for time of submission, such as the past 5 years? **Action:** A list of sites with recent revisions are posted.
4. Is the instrument (or sample) history well described?
5. Is the community of data clients who use the data forwarding feedback about the data sets. **If not, how can we build such a system to use their expertise?**
6. Is it time to have a graduated (tiered) data archive? For example, old data sets from stations that have been closed, and where data sets have not been re-processed ... should these data be archived in a different location?



Tracking Calibration Histories



Instrument Calibration Report - WOUDC - [Meteorological Service of Canada] - Microsoft Internet Explorer

Address: http://www.woudc.org/data/MetaQuery/CalReport_e.html?Type=Dobson&Number=074

Environment Canada / Environnement Canada
 Meteorological Service of Canada / Service météorologique du Canada
 World Meteorological Organization

WOUDC Instrument Calibration Report: 11 records found.

Report Date: 2007-02-27
 Instrument Type: Dobson
 Instrument Number: 074

Website for more information on Dobson Instrument Calibrations: [Dobson Ad-Hoc Committee \(DAHc\)](#)

Year	Start Date	End Date	Location	Reference Instrument	Link
1969			Siozok	Dobson Beck 084	
2005			Hohenpeissenberg, Germany	Dobson Beck 064	Supporting Files or Reports
1979	1979-06-05	1979-06-22	Potsdam, Germany	Dobson Beck 071	Koehler U. and K. Vanicek., Report on activities of the WMO/GAW Regional Dobson Calibration
1986	1986-08-03	1986-08-25	Arosa, Switzerland	Dobson Beck 083	Basher R.E., 1994. Survey of WMO-sponsored Dobson spectrophotometer intercomparisons. WMO Gl
1990	1990-07-22	1990-08-10	Arosa, Switzerland	Dobson Beck 065	Basher R.E., 1994. Survey of WMO-sponsored Dobson spectrophotometer intercomparisons. WMO Gl
1993	1993-05-20	1993-05-30	Hradec Králové, Czech Republic	Dobson Beck 065	Basher R.E., 1994. Survey of WMO-sponsored Dobson spectrophotometer intercomparisons. WMO Gl
1995			Arosa, Switzerland	Dobson Beck 065	WMO. Report of the tenth WMO international comparison of Dobson spectrophotometers. WMO/GAW I
1997			Kalavryta, Greece	Dobson Beck 065	WMO. Report of the intercomparison of Dobson spectrophotometers in Kalavryta, Greece. Not pub
1999	1999-07-19	1999-07-31	Arosa, Switzerland	Dobson Beck 065	WMO. Reports on WMO International Comparisons of Dobson Spectrophotometers, Part I - Arosa, S
1999			Hohenpeissenberg, Germany	Dobson Beck 065	Reference: DAHC Web site (CHMI)
2002			Hohenpeissenberg, Germany	Dobson Beck 064	Supporting Files or Reports Koehler U. and K. Vanicek., Report on activities of the WMO/GAW Regional Dobson Calibration

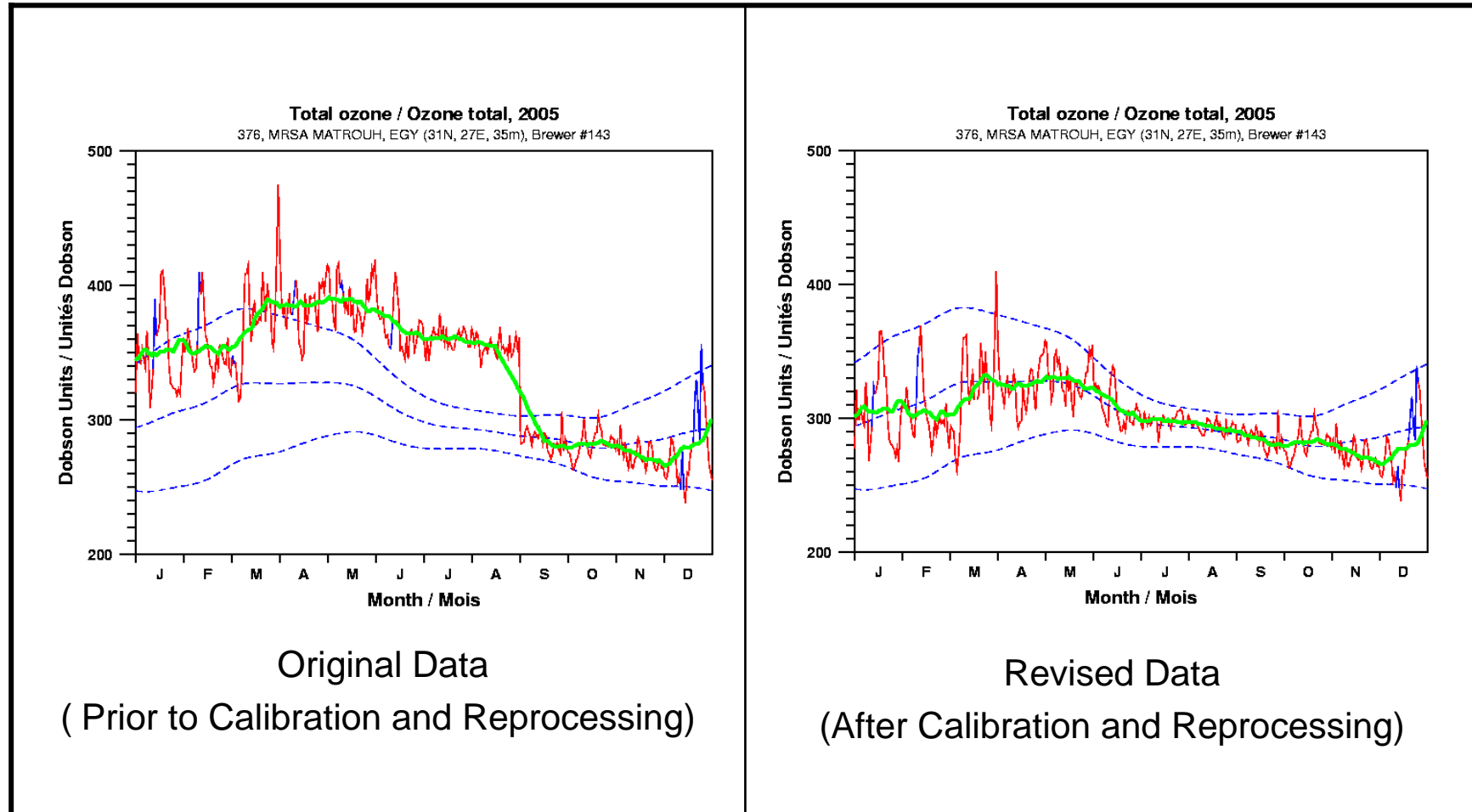
Link to Prototype Calibration/Service Update Page: [click here...](#)

http://www.woudc.org/data/MetaQuery/metaquery_e.cfm





An example of how the system works





Collaborations continued ...



- WOUDC provides weekly metadata updates to GAW SIS
- WOUDC provides timely feedback to data originators on any data quality exceptions found. A formal data quality flag system has yet to be implemented. The SAG's for Ozone and UV are still debating and working this issue.
- The WOUDC values the close collaboration with each data originator and his/her respective agency/institute
- Such collaborations closes the data pathway “loop” ... from the birth of a data record to its final archival

Updated weekly: http://www.woudc.org/contributors_e.html





Final Remarks



- Perhaps it is time to combine efforts with all other related data centres to share the work load, but how is this to be achieved?
- A possible first step would be to have a meeting of all the related personnel from the various centres: for the WOUDC this may be NDACC (NOAA/NASA), SHADOZ (NASA), EUVDB (FMI), NILU, JMA, other WMO World Data Centres where discussions would focus on the common technical elements of data delivery, processing and presentation. Similar to the ET-WDC discussions.
- Assistance from the WMO, and SAG Ozone/UV in particular, in arranging such as meeting would be a first step. Perhaps at the next WMO-GAW 2009 workshop?

