

Better data access and archiving

Author / lead: G.Braathen

updated: 8 June 2006

Short description of activity ("Executive summary")

- motivation 1: Cumbersome for PIs to provide data in different formats to different data archives
- motivation 2: Difficult to find and retrieve data from multiple and often difficult-to-find sources.
- goal: To develop a plan on how to accomplish one-stop shopping, both for data submission and for data retrieval.

Tasks

- Make a list of people to invite to a workshop. People from the following categories should be invited:
 1. Data archive managers (WOUDC, NILU, NDACC, SHADOZ, ECMWF, WDC-RSAT, SPARC, ETHER, BADC, GAWSIS, space agencies)
 2. Data providers, ground-based and aircraft (e.g. CARIBIC and MOZAIC/IAGOS) observations(6-10)
 3. Data users (6-8), including DA people
 4. GRID and GTS experts, e.g. from WMO's WWW dept. (2-3)
→ approx. 30 participants
- suitable date and place for workshop (tentatively Oct-Nov. 2006 time frame).
- Weeks 40, 41, 44 are impossible. We should aim for weeks 42 or 43 or first three days of week 45.

Potential candidates to carry out this task

- FMI (IGACO-Ozone) secr. and WMO

Estimated work

- Need an inventory: List of existing archives with data policies, data protocols, etc.
- Detailed focussed agenda

Schedule / priority

- Inventory: Before summer vacation
- First contact with participants and request for feedback and viewpoints should be done before summer.
- Send out invitations: Before mid-June
- Explore funding possibilities (ACCENT?) Before mid-June

Related activities/entities

- Meteorological data
 - o Establish contact with ECMWF and GEMS and discuss the need for NRT data and easier access to ECMWF analyses and forecasts.
 - o Also discuss with other agencies (NCEP, UKMO, MeteoFrance etc., DMI)
 - o These contacts should be established well before the workshop, i.e. by mid September.

More total ozone & sondes on the GTS/WIS

Author / lead: G.Braathen

updated: 5 June 2006

Short description of activity ("Executive summary")

- motivation 1: For several purposes (DA, Ozone Bulletins, Ozone mapping etc.) it will be useful to have total ozone from ground stations in NRT.
- goal: To increase significantly the number of stations that submit total ozone data to GTS/WIS.

Tasks

- To train station crew on how to convert data to CREX and how to get it on the GTS/WIS.
- To discuss with WWW and NMSs how scientists can get easy access to GTS/WIS.
- Define data protocol for the use of NRT data

Potential candidates to carry out this task

- Ozone SAG

Estimated work

Schedule / priority

- Inventory: Preferably before summer 2006
- Send out invitations: Mid-June
- Explore funding possibilities (ACCENT?) Mid-June

Related activities/entities

- First contact with participants and request for feedback and viewpoints should be done before summer.

Meteorological Data

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Tasks

Potential candidates to carry out this task

Estimated work

Schedule / priority

Related activities/entities

Improve Groundbased Measurements at High SZA/latitudes

Author / lead: B. Bojkov

updated: 5 June 2006

Short description of activity ("Executive summary")

- Intercomparison of different groundbased instruments at high SZA and high latitude
- motivation: known groundbased measurement/algorithm limitations vs. satellite accuracy requirements
- goal: new groundbased algorithms/improved measurement capabilities (sat. also)

Tasks

- Report to SAG on SAUNA campaign encompassing measurement assessment and new algorithms

Potential candidates to carry out this task

- NASA, ESA, FMI, BIRA-IASB

Estimated work

- Analysis to be completed by October/November 2006

Schedule / priority

- Immediately

Related activities/entities

- O3 SAG
- Satellite community

Dobson/Brewer Absolute Calibration Comparisons

Author / lead: B. Bojkov

updated: 5 June 2006

Short description of activity ("Executive summary")

- Feasibility study
- motivation: side-by-side comparison of Dobson and Brewer absolute calibration has been never done
- goal: evaluation

Tasks

- Perform an absolute calibration comparison at Izana using the European secondary standard Dobson and European standard Brewer

Potential candidates to carry out this task

- European Dobson Cal. Facility (DWD, CHMI) and INM

Estimated work

- 10 day comparison + analysis

Schedule / priority

- 2007

Related activities/entities

- O3 SAG, NDACC, NASA, ESA

Acquire Brewer Umkehr Data

Author / lead: B. Bojkov

updated: 7 June 2006

Short description of activity ("Executive summary")

- Process Brewer Umkehr data
- motivation: 20+ years of raw Umkehr data has been collected in the Brewer network, but not yet processed
- goal: process the data and make available to scientists

Tasks

- Acquire the Brewer raw Umkehr measurement data
- Process and make available the inversions
- Compare to correlative data (satellite, sondes, etc.)

Potential candidates to carry out this task

- NOAA-CMDL, Env. Canada

Estimated work

- 1 FTE

Schedule / priority

- 2008

Related activities/entities

- SAG, NASA, ESA, NOAA-NESDIS, Eumetsat, JAXA, ...

US-EPA Brewer Upgrading

Author / lead: B. Bojkov

updated: 5 June 2006

Short description of activity ("Executive summary")

- Upgrade the EPA decommissioned Brewers to enhanced ozone capability
- motivation: 20+ Brewers decommissioned by EPA and transferred to NOAA-CMDL
- goal: upgrade instruments and deploy to new sites

Tasks

- Identify upgrade path
- Implement changes
- Deploy instruments across NOAA network

Potential candidates to carry out this task

- NOAA-CMDL, Env. Canada

Estimated work

- TBD

Schedule / priority

- 2008

Related activities/entities

- SAG, NASA, ESA, NOAA, Eumetsat, JAXA, ...

Measurement Platform Workshop

Author / lead: B. Bojkov

updated: 5 June 2006

Short description of activity ("Executive summary")

- Cross discipline workshop
- motivation: heterogeneous platforms/instruments performing similar measurements
- goals:
 - o Inform community of activities, enhance interactions between satellite and groundbased/aircraft/balloon communities
 - o Quantification of precision and accuracy of different techniques

Tasks

- Workshop and report

Potential candidates to carry out this task

- FZJ, ESA, and NASA

Estimated work

- 2 (wo)man month

Schedule / priority

- 2007

Related activities/entities

- SAG, NASA, ESA, NOAA, Eumetsat, JAXA,...

Reevaluation/maintenance of trop/sub-trop TOZ datasets

Author / lead: B. Bojkov

updated: 7 June 2006

Short description of activity ("Executive summary")

- Existing trop/sub-trop datasets
- motivation: heterogeneous total column datasets need thorough evaluation
- goal: improved/homogeneous datasets for validation and trend studies
- implementation of operational remote quality assurance

Tasks

- Collection and analysis
- Intercomparisons
- Remote QA

Potential candidates to carry out this task

- CHMI, JMA, WOUDC

Estimated work

- Investigation of calibration history
- Collection of raw data
- Reprocessing
- Near real-time QA

Schedule / priority

- 2008

Related activities/entities

- SAG, WOUDC, NASA, ESA, NOAA, Eumetsat, JAXA, ...

Data assimilation of groundbased ozone measurements

Author / lead: R. van Oss

updated: 5 June 2006

Short description of activity ("Executive summary")

- motivation:
 - o Assess added value groundbased ozone vis-a-vis satellite data for producing regular-gridded ozone fields
 - o Assess contribution of ground based data alone (< 1979 period)
- goals:
 - o Conclusion on added value of groundbased vis-a-vis satellite
 - o Conclusion on quality of assimilated ozone using only groundbased (relevant for period < 1979)

Tasks

- Assimilation study using satellite AND Brewer&Dobsons
- Assimilation study using satellite AND lidar/sonde/mwr
- Assimilation study using Brewer & Dobsons only
- Assimilation study using lidar/sonde/mwr only

Potential candidates to carry out this task

- KNMI/Eskes (total column); DLR/Baier (profile)

Estimated work

- few months

Schedule / priority

- 1-2 years

Related activities/entities

- Needed: knowledge on groundbased data properties (locations, time resolution, accuracies)

Data assimilation of surface ozone measurements

Author / lead: R. van Oss

updated: 5 June 2006

Short description of activity ("Executive summary")

- motivation:
 - o Assess contribution of surface ozone measurement to air quality models
 - o Augment surface ozone to produce consistent surface ozone fields
 - o Assess contribution of (OMI) tropospheric ozone to air quality fields

Tasks

- Set-up data assimilation system for surface ozone in air quality model
- Assess added value of observations

Potential candidates to carry out this task

- KNMI/Eskes (NL), Fishman (NASA)

Estimated work

- 2-4 years

Schedule / priority

- 2-4 years

Related activities/entities

- GSE-PROMOTE, NL project, US-EPA

Continue/augment ozonesonde network

Author / lead: T. McElroy

updated: 5 June 2006

Short description of activity ("Executive summary")

- High-resolution vertical profiles of ozone to support climate change studies (UTLS), development of environmental forecast models, satellite validation and ozone trend assessment
- Goal: Increased knowledge of the magnitude of climate forcing from tropospheric ozone, improved performance of environmental prediction (pollution) models and accurate satellite-based ozone measurements

Tasks

- Prepare briefing note for the WMO executive council on the importance of ozonesonde flights and secure co-operation of the PRs of meteorological services to continue existing operations or restore operations discontinued.
- Maintain/improve quality assurance procedures at all stations.
- Identify sites that would add significant new information to the global community (e.g.: tropical and southern hemisphere sites).

Potential candidates to carry out this task

- WMO secretariat, IGACO-O3 secretariat, WMO ozone SAG and national meteorological agencies

Estimated work

- Continuous

Schedule / priority

- This activity should be started immediately in order to restart discontinued sonde operations before the infrastructure is lost

Related activities/entities

- Ozone SAG