The European COST Action EUBrewNet

Towards consistency in quality control, quality assurance and coordinated operations of the Brewer Instrument

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The 10th meeting of the Ozone Research Managers of the Parties to the Vienna Convention, Geneva 28th - 30th March 2017.
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What we said we would do.

• Automated data transfers to central database beginning Sept 2014.
• Calibration data stored in central data base.
• Site and instrument characterisation.
• Central data processing in addition to station processing.
• Central re-processing.
• Central QA/QC systems.
• Near real time data.
• Link to WOUDC.
What we have done.
(and it’s all automated)

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Data levels.

- Level 0
  - Raw data from the Brewer. Operator only.

- Level 1.0
  - Basic values from calibration data. Operator only.

- Level 1.5
  - NRT data changeable over first week. Calibration and characteristic corrections applied. Available to user

- Level 1.6
  - Interim data. Calibration and characteristic corrections applied. Available to user

- Level 2.0
  - Final for archiving. Interpolated over calibration cycle. Available to user.
Data Versions.

• Version 1 - Brewer standard coefficients.

• Version 2 of the EUBREWNET algorithm will account:
  • Use of Bremen cross section
  • Unify Air mass calculation with Dobson
  • Update Rayleigh coefficients to Bodhaine (1999)
Capacity building.

- Operator training Courses.
  - Tenerife, March 2014
  - Huelva, June 2015
  - Edinburgh, Sept 2016
  - Sydney, Sept 2017
How EuBrewNet supports monitoring in A5 countries.

• The operator courses cover care and maintenance, scheduling, principles of operation and data management.

• The importance of regular calibration is emphasised.

• Calibration data can be stored in EuBrewNet database.

• Software can be installed to enable automatic transfer of raw data to the EuBrewNet database for QA/QC and processing into NRT products.

• Once set up all the operator needs to do is carry out daily checks and maintenance – cost reductions – higher submission rates.

• This only works if the developed world maintains its expert pool and knowledge base which exist in its national programs.
Future

• Finalise UV and AOD products.
• EuBrewNet governance overseen by WMO SAG-Ozone.
• Network growth.
• Capacity building.
  o Automating data submissions promotes increased data submissions.
  o Central processing and QA can reduce station running costs – less closures.
  o Training courses promote good practice and community - cooperation.
• We need! – Funds to finish off and maintain the central processing, QA and database
Thank you!