

QuinCe



Bjerknes Centre
For Climate Research
BCDC Bjerknes Climate Data Centre



ICOS



Steve D. Jones, Jonas F. Henriksen

Developing an online tool for data reduction and quality control of surface ocean fCO_2 data

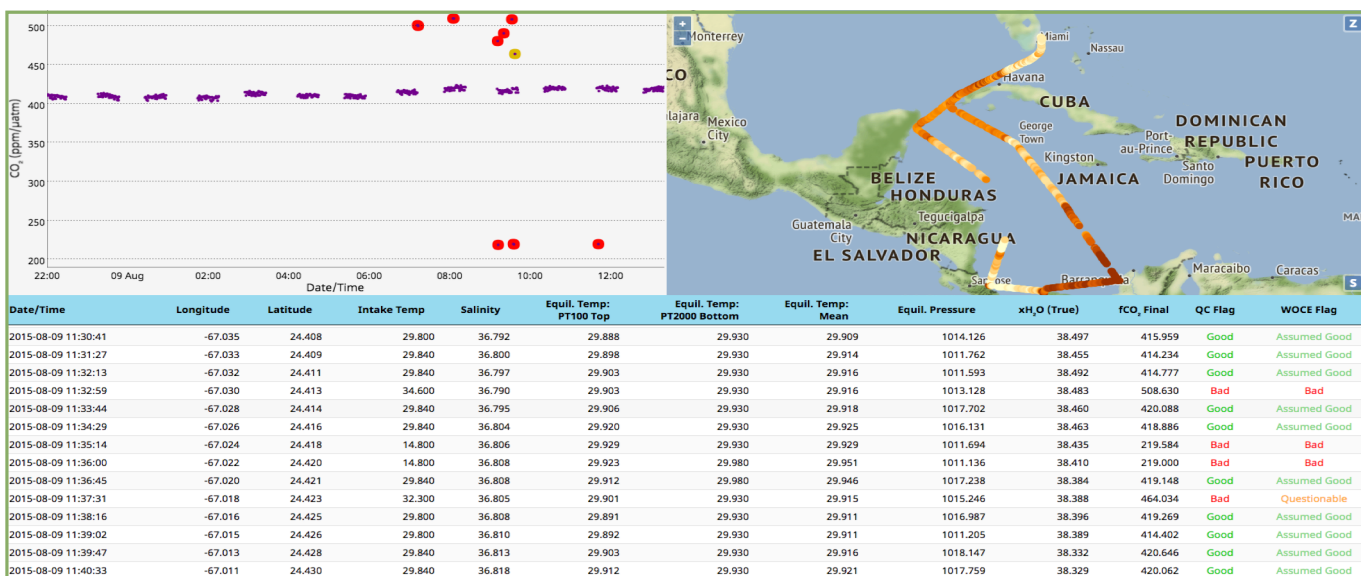
Motivation

- A single, centralised tool ensures data from all sources is treated with the same community-approved algorithms
- Removes code development responsibilities from scientists
- Open Source code increases traceability and transparency
- Reduces data handling work required by scientists
- Flexible architecture will allow shorter development time for new projects using different types of data

The screenshot shows the 'Files and Columns' configuration page. It includes a 'Column Assignments' table with columns for Run Type, Intake Temperature, Salinity, Equilibrator Temperature, Equilibrator Pressure (absolute), Equilibrator Pressure (differential), Atmospheric Pressure, CH_2O , CO_2 , Other Temperature, Other Pressure, and Air Flow. Below this is a 'TSC' configuration section for CO_2 with fields for Date/Time, Position (Longitude, Latitude), and Primary Position File. A data table with 16 rows and 11 columns is visible, containing numerical values for various parameters.

Features

- Users can upload data in any text format - no pre-processing required
- Individual sensor calibration adjustments can be applied
- Data reduction is performed automatically, with calibration to gas standards
- Automated QC routines detect common issues (GPS errors, range limits, outlier and spike detection...) and highlight them for further investigation
- Extensive plotting and mapping tools for manual 1st Level QC
- Automatic submission to data centres (e.g. CMEMS TAC), synthesis projects (e.g. SOCAT) & ICOS RI



Future Development

- Complete metadata integration - metadata and data will be treated as a single entity throughout
- More intelligent QC routines based on comparisons with historic observational data

