

Name of research institute or organization:

Centre for Isotope Research (CIO), Groningen

Title of project:

Flask comparison on Jungfrauoch

Part of this programme:

ICOS

Project leader and team:

Prof. Harro Meijer, project leader, Huilin Chen, Bert Scheeren, Bert Kers (CIO, Groningen)
Prof. Markus Leuenberger, Michael Schibig, Tesfaye Berhanu, Peter Nyfeler (all UBern)
Martin and Joan Fischer, Urs and Maria Otz (HFSJG)

Project description:

Since late 2007 a flask intercomparison programme is ongoing between CIO of the Reichsuniversität Groningen (RUG), MPI Jena and the University of Bern. Originally initiated within the EU project CarboEurope IP and continued within IMECC (the European project IMECC: Infrastructure for Measurements of the European Carbon Cycle), it is now part of ICOS (Integrated Carbon Observation System, a EU Infrastructure programme).

Measurements from CIO are available until early September 2014. As already mentioned in the last year's report we had sampling problems during the period June 2012 to August 2013. This has been documented by the UBern measurements and is now backed up by the RUG oxygen determinations. The MPI-Jena flask though did not suffer from this sampling problem since their flasks are taken independently. The CO₂ measurements are in rather good agreement between the three laboratories as documented in the accompanied report by the MPI-Jena.

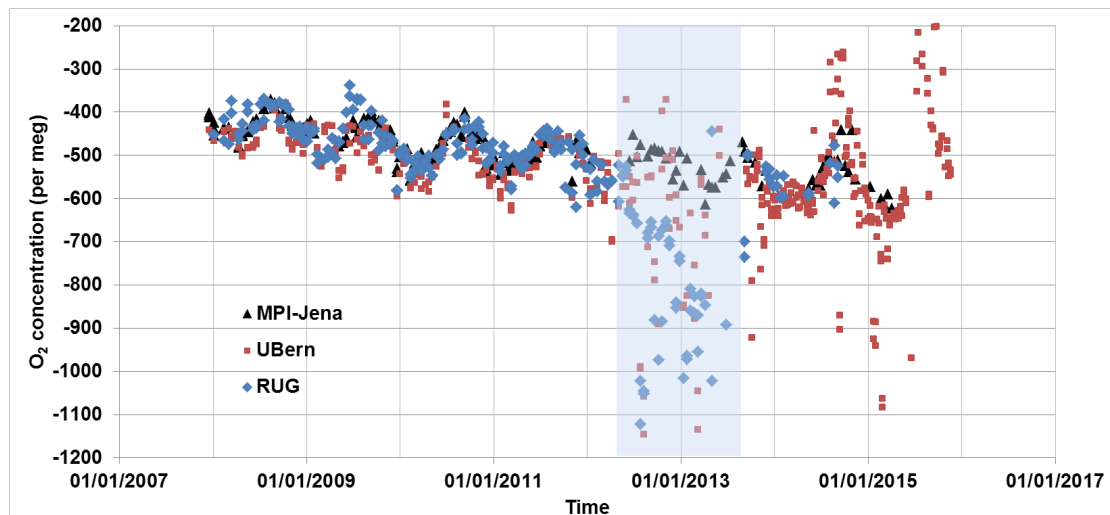


Figure 1. O₂ concentration as measured by each laboratory. The period from June 12 to August 2013 shaded in light blue corresponds to continuously leaky conditions for the combined UBE and RUG sampling device that progressively increased. UBern data unfiltered from 2012 onwards. The unexpectedly high oxygen values for the UBern flasks are not yet resolved but are most probably due to inconsistencies of the flask measurements at the Bern laboratory.

Key words:

Flask measurements, inter-comparison, oxygen and carbon dioxide measurements, greenhouse gas

Collaborating partners/networks:

University of Bern, HFSJG, MPI BGC Jena, ICOS partners

Address:

Isotope Research — Energy and Sustainability Research Institute Groningen
Nijenborgh 4
9747 AG Groningen
The Netherlands

Contacts:

Prof. Dr. Harro Meijer
Tel.: +31 50 363 4760 (Secretariat)
Fax: +31 50 363 4738
email: h.a.j.meijer@rug.nl