

Name of research institute or organization:

Max Planck Institut für Biogeochemie, Jena

Title of project:

Flask comparison on Jungfrauoch

Part of this programme:

ICOS

Project leader and team:

Dr. Willi Brand, project leader, Armin Jordan (Jena)

Prof. M. Leuenberger, Michael Schibig, Tesfaye Berhanu, Peter Nyfeler (all UBern)

Martin and Joan Fischer, Urs and Maria Otz (all HFSJG)

Project description:

The flask sampling for the intercomparison between MPI Jena, CIO Groningen (RUG) and the University of Bern (UBE) was ongoing during the reporting period. The sampling normalized again in 2014 after the very difficult year 2013. For UBE flasks were taken every week, however, not all the flask have been analysed yet. For MPI Jena and RUG samples were taken on a biweekly basis. As in previous years, measurements of CO₂, O₂ and δ¹³C are common between the laboratories and can be compared. As already discussed in van der Laan [2013], CO₂ compares well among the three laboratories involved. However, for O₂ and δ¹³C there is significant space for improvements.

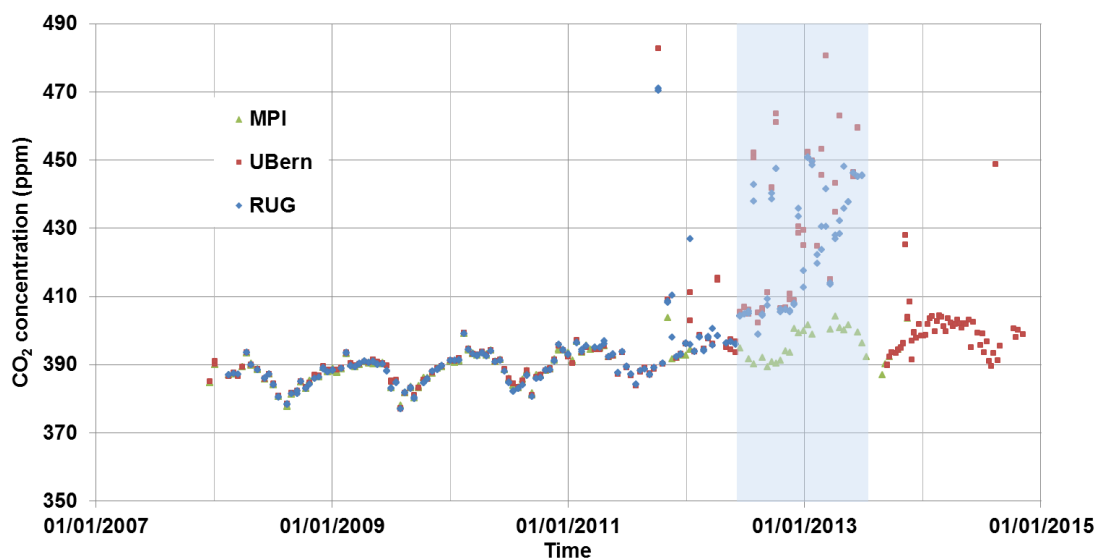


Figure 1. CO₂ concentration as measured by each laboratory. The period from June 2012 to August 2013 shaded in light blue corresponds to continuously leaky conditions for the combined UBE and RUG sampling device that progressively increased.

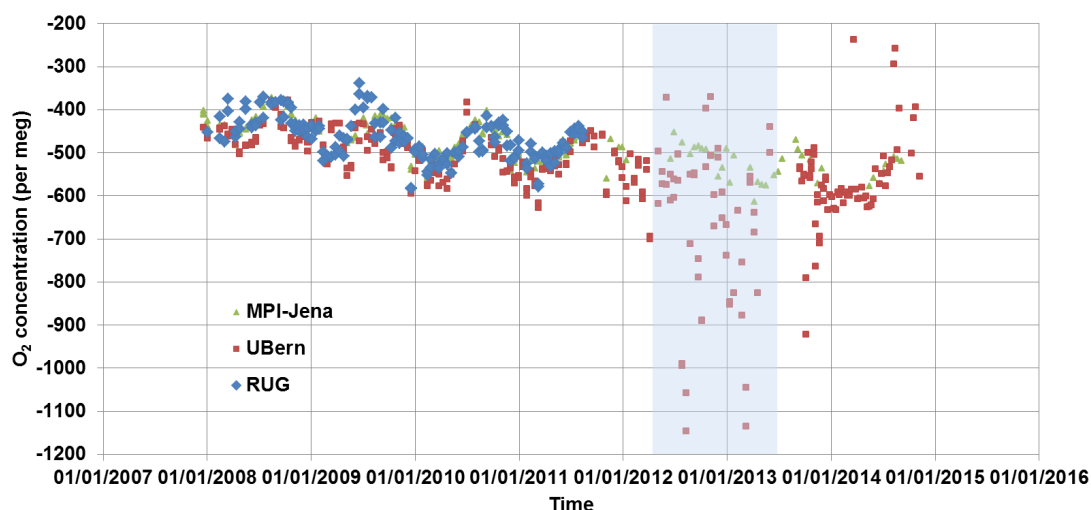


Figure 2. O₂ concentration as measured by each laboratory. The period from June 2012 to August 2013 shaded in light blue corresponds to continuously leaky conditions for the combined UBE and RUG sampling device that progressively increased. UBern data unfiltered.

References

van der Laan-Luijkx, I.T., S. van der Laan, C. Uglietti, M.F. Schibig, R.E.M. Neubert, H.A.J. Meijer, W.A. Brand, A. Jordan, J.M. Richter, M. Rothe, and M.C. Leuenberger, Atmospheric CO₂, delta(O-2/N-2) and delta(CO₂)-C-13 measurements at Jungfraujoch, Switzerland: results from a flask sampling intercomparison program, *Atmospheric Measurement Techniques*, 6 (7), 1805-1815, 2013. <http://dx.doi.org/10.5194/amt-6-1805-2013>.

Key words:

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

Collaborating partners/networks:

University of Groningen, HFSJG, University of Bern, ICOS partners

Address:

Max Planck Institut für Biogeochemie
Hans Knöll Str. 10
D-07745 Jena
Germany

Contacts:

Dr. Brand, Willi A.
Tel.: +49 3641 576400/ 6427 Lab
Fax: +49 3641 577400
e-mail: wbrand@bgc-jena.mpg.de
URL: <http://www.bgc-jena.mpg.de>