

Name of research institute or organization:

Klima- und Umweltp Physik, Physikalisches Institut, Universität Bern

Title of project:

High precision carbon dioxide and oxygen measurements

Project leader and team:

PD Dr. Markus Leuenberger, project leader
Francesco Valentino, Chiara Uglietti

Project description:

During 2006 we monitored the CO₂ and O₂ concentration at Jungfrauojoch. Since three years we have observed a increasing trend for CO₂ and an expected decrease in O₂. However, the decrease in oxygen is stronger than expected pointing to an uptake by the ocean since it is not compatible either with the consumption by fossil fuel burning nor with terrestrial exchange.

Key words:

Greenhouse gas, climate change, CO₂ emissions

Internet data bases:

http://www.lsce.cnrs-gif.fr/CE-atmosphere/database/index_database.html

Collaborating partners/networks:

CarbonEurope IP partners

Scientific publications and public outreach 2006:

Conference papers

Leuenberger, M., Uglietti, C., Valentino, F. L., Nyfeler, P., Moret, H.P., Sturm, P., Significant enhancement of CO₂ and O₂ trends at the High Alpine Research Station, Abstract Book for the conference on Jungfrauojoch, Research at Jungfrauojoch "Top of Science", Interlaken, Switzerland, 2006.

Valentino, F. L., Leuenberger, M., Uglietti, C., Nyfeler, P., Moret, H.P., Sturm, P., M. Fischer, K. Hemund, Atmospheric CO₂ and $\delta^{13}\text{C}$ flask measurements combined with a continuous online CO₂ record at the High Alpine Research Station Jungfrauojoch, Abstract Book for the conference on Jungfrauojoch, Research at Jungfrauojoch "Top of Science", Interlaken, Switzerland, 2006.

Uglietti, C., Leuenberger, M., Valentino, F. L., Nyfeler, P., Moret, H.P., Sturm, P., M. Fischer, K. Hemund, Results of online and flasks measurement of O₂ at the High Alpine Research Station Jungfrauojoch, Abstract Book for the conference on Jungfrauojoch, Research at Jungfrauojoch "Top of Science", Interlaken, Switzerland, 2006.

U. Schotterer, Leuenberger, M., W. Stichler, R. Kozel, M. Schürch, Stable isotope in precipitation at Jungfrauojoch and in surrounding glaciers, Abstract Book for the conference on Jungfrauojoch, Research at Jungfrauojoch "Top of Science", Interlaken, Switzerland, 2006.

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