Name of research institute or organization:

Institute for Atmospheric and Climate Science, ETH Zurich

Title of project:

Measurements of ambient ice nuclei with the new instrument PINC

Project leader and team:

Dr. Olaf Stetzer and Prof. Ulrike Lohmann, project leaders
Cedric Chou

Project description:

The cloud physics group at ETH Zurich has developed various instruments to measure ice nucleation and the properties of ice nuclei of laboratory generated and ambient aerosols. After the lab instrument ZINC has been successfully implemented an instrument for ambient measurements during field and airborne campaigns has been developed. This new instrument (PINC) has been finished in late 2007 and was deployed for the first time on the Jungfraujoch station in January 2008. The intention was primarily to test the new instrument under field conditions and depending on data quality to get first measurements of IN at the Jungfraujoch. The instrument performed well from a technical point of view. However, the quality of the data taken is still being evaluated since the instrument had a relatively high background. Regardless, the experience with the instrument during this campaign helped a lot to target tasks that need to be accomplished to improve the instrument performance during future campaigns.

Key words:

ice nuclei, heterogeneous nucleation, aerosol particles

Internet data bases:

none

Collaborating partners/networks:

Ernest Weingartner, Martin Gysel, PSI

Scientific publications and public outreach 2008:

none so far

Address:

Institute for Atmospheric and Climate Science
ETH Zurich
Universitätsstrasse 16, CHN O16.3
CH-8092 Zürich

Contacts:

Olaf Stetzer
Tel.: +41 44 633 6161
Fax: +41 44 633 1058
e-mail: olaf.stetzer@env.ethz.ch
URL: http://www.iac.ethz.ch/