

Name of research institute or organization:

**Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW),
ETH Zürich**

Title of project:

Glaciological investigations on the Grosser Aletschgletscher

Project leader and team:

Dr. Andreas Bauder, project leader
4 field assistants, support of custodians

Project description:

Long-term glacier observations have been carried out to document glacier variations of Grosser Aletschgletscher and include annual length change measurements since 1880, accumulation and mass balance measurements starting in 1918, repeated map or arial photograph surveys, complemented by stream runoff in the Massa river since 1922 by BAFU, respectively.

In an ongoing project the length, area, volume, and mass changes are continuously observed applying modern remote sensing techniques as well as direct field measurements. The research activities are focused on long term trends and seasonal fluctuations. Net volume changes of the entire glacier are calculated by comparison of digital elevation models. Mass balance components with firn accumulation and ablation are measured in detail at Jungfraufirn.

The last observation period was characterized by large snow accumulation at the end of the winter period, a slow and moderate melt out and a short but intense melt season in July and August (see Figure 1). In total, the annual balance at the site near Jungfraujoch with a long series of measurements was one of the most positive years on record.

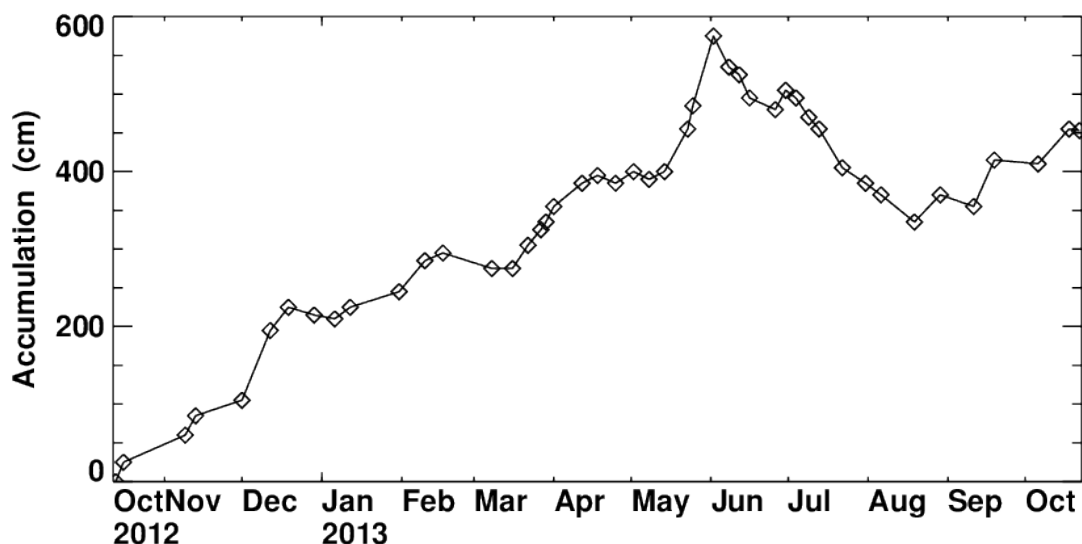


Figure 1. Evolution of the firn accumulation at site P3 on Jungfraufirn (3350 m asl) during the past observation period 2012/13.

Key words:

Glacier measurements, mass balance, snow and firn accumulation, ice melt

Internet data bases:

http://www.vaw.ethz.ch/people/gz/abauder/projects/data/gz_141_variations_gr_aletschgletscher

Collaborating partners/networks:

Swiss Glacier Monitoring Network, Federal Office for the Environment (BAFU)

Address:

ETH Zürich
Versuchsanstalt für Wasserbau, Hydrologie und Glaziologie (VAW)
Wolfgang-Pauli-Strasse 27
CH-8093 Zürich

Contacts:

Andreas Bauder
Tel.: +41 44 632 4112
e-mail: bauder@vaw.baug.ethz.ch
URL: <http://www.glaciology.ethz.ch>