

Mass balance glacier fluctuations and climate change over the 20th Century in the Alps

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Monitoring long-term trends of glaciers is of general interest for the study of climate change. For more than 4 decades, the LGGE has been measuring the yearly volume changes of several glaciers over the French Alps. Old maps, photogrammetric measurements and meteorological reconstructions allow to provide the cumulative mass balance over the 20th Century for 4 glaciers in the French Alps.

Cumulative mass balance analysis based on the longest direct mass balance measurements series available in the Austrian, Swiss and French Alps over the last 50 years indicates that cumulative mass balance fluctuations are very similar, revealing a common climatic signal over the entire region.