



POSTER

Comparative analysis of Val Ferret glaciers evolution from multi-temporal photos

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The “Ghiacciai sorvegliati speciali” project, started in 2004, focuses on the morphological analysis of glaciers evolution by means of comparison of repeated pictures. The thirteen glaciers lying on the southern side of Mont Blanc Massif, in the Italian Val Ferret Valley, have been studied. The southern side of Mont Blanc shows high-elevation, steep slopes, while the opposite side of the valley can be easily accessed. Photographic benchmarks have been placed along a trail crossing the side in front of the glaciers at an elevation of about 2000 m a.s.l., allowing shooting photos of glaciers from a distance less than 4 km. High definition images can thus be obtained without need of special telephoto lenses simply walking along a trail bringing a digital camera.

Since 2004 over 470 images of the 13 glaciers have been collected. The photographs, taken at the beginning, middle and end of the ablation season, allow to follow glaciers changing from one year to the other and snow cover evolution during Summer season. Shooting from fixed benchmarks allows to easily stack, and therefore compare, photos.

A detailed analysis of images shows the significant volumetric shrinkage and the sharp front retreat of all glaciers monitored. The information obtained can be compared with data from the mass balance of Pré de Bard glacier (one of the glaciers in the Val Ferret, monitored since 2007 by Fondazione Montagna sicura and ARPA VdA) and with measures of frontal retreat carried out by Italian Glaciological Committee (CGI) for some of these glaciers.

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