

Persistence of the Karakoram glacier anomaly since 2008

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Karakoram glaciers experienced balanced mass budgets during the first decade of the 20th century. Recent works indicate that this “anomaly” can probably be extended back in time, since the 1970s. However, no study addressed very recent changes. Here, we compare digital elevation models (DEMs) derived from satellite optical stereo images (SPOT-5, -6, -7 and ASTER) to observe the state of balance of Karakoram glaciers since 2008. A comprehensive regional sampling ($\sim 10000 \text{ km}^2$) is achieved and, contrary to radar DEMs, our elevation data are not influenced by penetration into snow and firn. We conclude that the mass budget of Karakoram glaciers was balanced during 2008-2016. Influences of debris cover and surge activity on the individual glacier mass balance are also analyzed.