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A new method to estimate the infilling of alluvial sediment of glacial valleys using a sloping local base level

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Abstract: A new method to estimate the volumes of infilling sediment of glacial valleys is tested. This method is based on the concept of sloping local base and requires only a digital terrain model as input data. The Rhone Valley in Switzerland was used for this test, with the free digital terrain model SRTM (~92 m resolution). Results obtained are in good agreement with the previous estimations based on seismic profiles and gravimetric modeling. Comparing these different estimations, the existence of large landslides in the bottom of the Rhone Valley is suspected.