



10Be-inferred paleo-denudation rates imply that the mid-Miocene western central Andes eroded as slowly as today

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Terrestrial cosmogenic nuclide concentrations of detrital minerals yield a catchment-wide rate at which hillslope surfaces are eroded. These estimates are commonly used to infer millennial scale patterns of denudation and to identify the main controls on mass-balance and landscape evolution at orogenic scale. The same approach can be applied to minerals preserved in stratigraphic records of rivers, although extracting reliable paleo-denudation estimates from Ma-old archives can be strongly limited by the target nuclide's half-life as well as by the exposure to cosmic radiations after deposition. Slowly eroding landscapes, however, are characterized by some of the highest cosmogenic radionuclide concentrations; a condition that potentially allows pushing the time limits of this method further back in time, provided that independent constraints on the geological evolution of the studied deposits are available. Here, we report 13-10 million-year-old paleo-denudation rates from northernmost Chile and estimate the oldest ^{10}Be -inferred rates ever reported. We find that at 13-11 Ma the western Andean Altiplano has been eroding at 1-15 m/Ma, consistent with modern paces in the same setting. We suggest that the tectono-geomorphic state of the western margin of the Altiplano has remained stable since the mid-Miocene.