



## Quantifying the long-term erosion rate of peneplains in south-central Tibet from *in situ*-produced $^{10}\text{Be}$

M. Strobl (1), R. Hetzel (1), and L. Ding (2)

(1) Geologisch-Paläontologisches Institut, Westfälische Wilhelms-Universität Münster, Corrensstr. 24, D-48149 Münster, Germany, (2) Institute of Tibetan Plateau Research, Chinese Academy of Sciences, Beijing 100029, People's Republic of China

Vast peneplains constitute one of the most prominent geomorphic element of the Tibetan Plateau, however, owing to the generally poor sedimentary record, still little is known about their formation and the subsequent Late Cenozoic landscape evolution. The process of peneplanation was presumably related to a phase of intense erosion that followed nappe stacking and crustal thickening in the Late Cretaceous/Paleocene but preceded the main uplift phase of the Tibetan Plateau. We will present the first results of a study that aims to constrain the Quaternary landscape evolution of south-central Tibet, where extensive peneplains were carved into Cretaceous granitoids and sediments north of the lake Nam Co. The Quaternary erosion rate of these low-relief surfaces will be quantified by analyzing *in situ*-produced cosmogenic  $^{10}\text{Be}$  in bedrock and grus samples, which were taken from well-preserved parts of the peneplain surfaces at elevations between 4800 and 5300 m. In addition, we will obtain spatially-integrated erosion rates for small river systems that are currently eroding backwards into the peneplains from  $^{10}\text{Be}$  concentrations in stream sediment. Our study will provide important data on the evolution and long-term stability of the landscape in south-central Tibet.