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26 Al - 10 Be burial ages of a Pleistocene Terrace in the Vienna Basin

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The Vienna Basin is a pull-apart basin located between the Eastern Alps and the Western Carpathians. Its main subsidence started in the Miocene and resulted in a maximum of 6 km sedimentary infill. Up to five Pleistocene terraces formed by the Danube river and its tributaries and are separated by their geometic cross cutting and topographic relationships. The ongoing tectonic displacement results in tilting of terrace levels and prevents the correlation of similar levels to one sedimentation event. For this reason absolute age dating is essential in this setting.
This research applies 26Al/10Be isochrone dating of one selected Pleistocene Terrace, the Gänserndorf terrace at two different sampling sites. This terrace has already a numerical age determined by OSL age of 250 +/- 50 kyr. Isochrone age dating may be used for samples with different transport histories and exposition duration that share the same last burial event and is ideal for the sedimentary setting of the terrace gravels of the Gänserndorf terrace. The source area of the terrace consists mainly of metamorphic rocks that contain large quartz pebbles that are suitable for cosmogenic 26Al and 10Be extraction.