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U-He dating of the highest peak of Sinai: Mt Catherine, Egypt

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The rift related uplift of Sinai caused substantial uplift and erosion between the Gulf of Suez and a transform fault in the Gulf of Aqaba in the Neogene. However, it is not clear how much total rock uplift occurred and how much of this has been subsequently eroded in order produce the present day topography of over 2500 m surface elevation. Here, we pose the question if this uplift and erosion was enough to penetrate the 60° isotherm, using U-He dating of Apatite.
Most of the samples were taken from a vertical profile on the highest mountain of Sinai, Mount Catherine (2629 m) in intervals of 200 m in altitude down to about 270 m at the valley mouth of Wadi Mear 26 km west of Mount Catherine. There are also a few samples from different places distributed over the southern half of Sinai, to get ages for the general uplift and also to get information of the thickness of the (eroded) sedimentary cover.
There are no results at the time of writing this abstract, but will be available for presentation at EGU. Published fission track ages in the southern half of Sinai indicate both Neogene and Mesozoic ages so we can also expect corresponding ages for the U-He samples. The combination of the published fission track ages and the U-He ages obtained here will allow to derive a detailed exhumation history for the region. Because of the 200 m intervals of sampling we will be able to constrain exhumation rates by two independent methods.