



Exhumation history of the Northwestern Tibet

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In order to reveal the exhumation history in northwestern Tibet we use fission track, U-Th/He dating to reveal the exhumation history along the mountain front of eastern side of the Pamir plateau (western side of Kunglun Mountain).

The structural style shows thrusting and strike-slip fault dominantly in the mountain front and it becomes normal fault dominantly in the internal of the mountain belt. We collect two 40 km length transects from deformation front to mountain belt. The preliminary results show the reset zircon fission track ages range from ca. 25 to 7 Ma, the Zircon U-Th/He ages range from ca. 2-17 Ma, apatite fission track ages range from ca. 3-6 Ma, and apatite U-Th/He range from ca. 2-10 [U+FF2D] a. Some Zircon and apatite U-Th/He ages are similar ca. 2 and 5 Ma that indicates the developing timing of shear zone. The preliminary result shows the Cenozoic exhumation started from ca. 25 Ma and increases the exhumation rate since the ca. Pliocene in northwestern Tibet. The exhumation amount and rate progressively increases from southeast to northwest that is consistent with the topography variation. We suspect that increasing the exhumation rate and topography toward to the northwest result from the collision between the India plate and Eurasia plate.