



Apatite Fission Track Constraints on the Tertiary Tectonic History of Northern Iran

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The Alborz Mountains show the tectonic evolution of the northern side of the Arabia-Eurasia collision zone. We have used apatite fission track thermochronometry to constrain the Tertiary cooling history of this region. AFT cooling ages cluster around 40 Ma and 20 Ma. We interpret the 40 Ma age group to reflect erosional exhumation of extensional relief. This took place during a phase of extension throughout south-west Asia. Subsequent collision of Arabia and Eurasia resulted in regional shortening and construction of subaerial topography. The 20 Ma age group represents the erosion of this topography, a process that continues to the present. We tie our thermochronological results with the structure and stratigraphic record of the range.