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**Cenozoic Mountain Building Process in the Greater Caucasus, from Subduction to Collision**

[Wang, S. J.](http://adsabs.harvard.edu/cgi-bin/author_form?author=Wang,+S&fullauthor=Wang,%20S.%20J.&charset=UTF-8&db_key=PHY); [Lee, Y. H.](http://adsabs.harvard.edu/cgi-bin/author_form?author=Lee,+Y&fullauthor=Lee,%20Y.%20H.&charset=UTF-8&db_key=PHY); [Chung, S. L.](http://adsabs.harvard.edu/cgi-bin/author_form?author=Chung,+S&fullauthor=Chung,%20S.%20L.&charset=UTF-8&db_key=PHY); [Okrostsvaridze, A.](http://adsabs.harvard.edu/cgi-bin/author_form?author=Okrostsvaridze,+A&fullauthor=Okrostsvaridze,%20A.&charset=UTF-8&db_key=PHY)

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The Arabia-Eurasia collision propagates from south to north which results in the south Caspian Sea northward subducting and rapid exhumation in the Greater Caucasus. In this study we conduct the apatite fission track dating combing with previous thermochronolgy data to reveal the comprehensive exhumation history of the Greater Caucasus. The Greater Caucasus shows the bivegent-wedge shape and the highest metamorphic grade shows in the central axis area and decreases to northward and southward. The apatite shows in the central axis area (ca. 2-5 Ma) with highest elevation indicates the highest uplift and exhumation rate area that indicates the all the Caucasus start to rapid exhumation since the Pliocene. The apatite ages increases the ages to the east and west which indicates decreasing the exhumation. Variation the exhumation along the strike of mountain infers different convergence process. To the eastern side the transition or oceanic North Anatolia crust subduct to the Eurasia plate and North Anatolia continent crust subduct and collide with Eurasia plate that result in high exhumation rate in the central Greater Caucasus.

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