

2003 Fall Meeting
Search Results

Cite abstracts as *Eos Trans. AGU*, 84(46),
Fall Meet. Suppl., Abstract xxxxx-xx, 2003

Your query was:
zeitler

HR: 1330h

AN: **T42B-0288**

**Geochemical and Geochronologic Constraints on the Tectonic
Evolution of Southeastern Tibet**

***Booth, A L**

EMbooth@pangea.stanford.edu

AFStanford University, Dept. of Geological & Environ. Sci., Stanford, CA
94305

Zeitler, P K

EMpeter.zeitler@lehigh.edu

AFLehigh University, 31 Williams Dr, Bethlehem, PA 18015-3188

Kidd, W S

EMwkidd@atmos.albany.edu

AF31 Williams Dr, ES 315, Albany, NY 12222-0001

Wooden, J L

EMjwooden@usgs.gov

AFU.S. Geol Survey, 345 Middlefield Road, Menlo Park, CA 94025

Idleman, B

EMbdi2@lehigh.edu

AFLehigh University, 31 Williams Dr, Bethlehem, PA 18015-3188

Yuping, L

EMcdlyuping@cgs.gov.cn

AFChengdu Institute of Mines and Geology, 82 Beisanduan, Chengdu,
610082 China

Chamberlain, C P

EMchamb@pangea.stanford.edu

AFStanford University, Dept. of Geological & Environ. Sci., Stanford, CA
94305

AThe eastern syntaxis of the Himalayas is expressed in the crust as a rotation of topographic, structural, and lithologic features from dominantly east-west to approximately north-south trends. The axis of rotation of geologic features is coincidental with the high topography of the Namche Barwa region, the exposure of granulite-grade metamorphic rocks, and a major bend in the Tsangpo River. Within the Namche Barwa and subjacent terranes are numerous granitoids that are associated with various events contributing to the tectonic development of southeastern Tibet. Our combined geochronologic and geochemical investigation of these granitoids provides insight into mechanisms of granite formation and helps to constrain the distribution of terranes, timing of assembly, and magmatic processes operative in each. U-Pb

SHRIMP ages establish a complex tectonic history for southeastern Tibet, with the presence of at least five magmatic episodes: ~ 250 Ma, ~ 120 Ma, 40-70 Ma, 18-25 Ma, and 3-10 Ma. Two lines of evidence suggest that the Namche Barwa massif is a product of local feedbacks between tectonic and surficial processes: 1) exceptionally young zircon ages (~ 2.8 – 9.5 Ma) for samples collected from the Tsangpo river gorge correspond to a period of rapid denudation; 2) granitoid geochemistry within the massif core reveals high Rb/Sr ratios (> 1.4), suggesting a fluid-absent (decompression) melting regime dominates near the core of Namche Barwa.

UR: <http://www.ees.lehigh.edu/groups/corners/corners.html>

DE: 8110 Continental tectonics--general (0905)

SC: Tectonophysics [T]

MN: 2003 Fall Meeting

New Search

