

2006 Fall Meeting
Search Results

Cite abstracts as **Author(s) (2006), Title, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract xxxxx-xx**

Your query was:
zeitler

You've chosen **one** document:

HR: 1340h

AN: **T23B-0479**

Seismicity and Active Deformation in Southeastern Tibet

***Sol, S**

ENsol@lehigh.edu

AFDept of Earth and Sciences, Lehigh University, 31 Williams Drive,
Bethlehem, PA 18015 United States

Meltzer, A

ENameltzer@lehigh.edu

AFDept of Earth and Sciences, Lehigh University, 31 Williams Drive,
Bethlehem, PA 18015 United States

Zurek, B

ENZurek@lehigh.edu

AFDept of Earth and Sciences, Lehigh University, 31 Williams Drive,
Bethlehem, PA 18015 United States

Zeitler, P

ENpeter.zeitler@lehigh.edu

AFDept of Earth and Sciences, Lehigh University, 31 Williams Drive,
Bethlehem, PA 18015 United States

Zhang, X

EMcdzxuanyuang@cgs.gov.cn

AFChengdu Institute of Geology and Mineral Resources, 1st Ring Road,
Chengdu, SC 610082 China

Zhang, J

EMcdzjianlong@cgs.gov.cn

AFChengdu Institute of Geology and Mineral Resources, 1st Ring Road,
Chengdu, SC 610082 China

AThe eastern Himalayan syntaxis is a complex tectonic region where deformation due to the India-Eurasia collision is accommodated by a combination of shortening, extension, and strike-slip faulting as material rotates around the edge of the Indian indenter corner. The identification of active faults provides an important link between GPS measurements of infinite strain and finite strain in the mantle inferred from shear-wave splitting results. The combined datasets provide insight into the kinematics of deformation as shortening and extension in the central Tibetan plateau is replaced by strike-slip faulting along the southeastern margin of the plateau. We deployed a dense temporary seismic array to constrain the distribution of hypocenters and the focal mechanisms of local earthquakes in southeastern Tibet to determine the location and geometry of active surface faulting in the region. Part of a

multidisciplinary project, this array is composed of 48 broadband stations distributed regionally in southeastern Tibet above the edge of the Indian indenter corner and 19 short period stations located in the core of the syntaxis around the Gyala Peri and Namche Barwa massifs. Preliminary results reveal that although seismicity is observed throughout the study region, a significant number of events locate beneath or in the vicinity of the two high-standing massifs. Abundant seismicity is associated with the present uplift of the actively deforming metamorphic massifs. Periods of intense seismicity (over 60 events/day) are regularly observed beneath Namche Barwa at shallow depths above 10-15 km. While several events of moderate magnitude (5 mb) generated a significant aftershock sequence, a number of earthquake swarms appear independent of larger events. Our preliminary results suggest that the seismogenic zone is restricted to the crust and does not extend into the mantle.

DE: 7230 Seismicity and tectonics (1207, 1217, 1240, 1242)

SC: Tectonophysics [T]

MN: 2006 Fall Meeting

[New Search](#)

