

## Shortening of southern Tibet

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Geological studies of the Himalayan orogen have been focusing on three aspects: the initial collision in Early Eocene, Miocene tectonics, and recent seismotectonics. However little is known about first half of the Himalayan orogeny, during the Eocene and Oligocene. The Tethyan Himalaya, located between the crest of the Himalaya and the India-Eurasia suture (the Indus-Tsangpo suture Zone) in the southern Tibet, are a fold-and-thrust belt that developed during this period. This project has two principal objectives. The first one is to determine the geometry of the basal detachment of the Tethyan Himalaya. The current hypothesis is that the basal detachment of this fold-and-thrust belt was a south-vergent thrust which was reactivated as a low-angle normal fault geometry shear zone. This structure crops out in the northern Himalaya as the South Tibetan Detachment. The second aim is to calculate the shortening amounts of the Tethyan Himalaya as only one such study was performed until now. The objectives of this project will be implemented through construction of a series of balanced, retrodeformable cross sections using MOVE ® software. The cross sections will be constructed based on published geological maps and field observations. This study is part of a larger project aimed to constrain the structure of southern Tibet and the Himalaya. [Poster]