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## Crustal Structure of the Indus-Tsangpo Suture Zone and its Ophiolites, Southern Tibet

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The > 2000-km-long Indus-Tsangpo suture zone (ITSZ) in southern Tibet marks the boundary between the India and Eurasia plates and contains the remnants of the Neotethyan oceanic lithosphere, ophiolitic mélanges, flysch units and continental rocks. Field-based structural analyses and drill core observations from the Luobusa Scientific Drilling Project indicate a complex crustal architecture of superposed deformation fabrics resulted from the ophiolite emplacement and the subsequent continental collision. The late Jurassic-early Cretaceous suprasubduction zone ophiolites were emplaced onto the

northern margin of the proto-Indian plate along S-directed thrust faults in the late Cretaceous. The collision between the ophiolite-laden proto-Indian margin with the Lhasa Block (Eurasia) in the early Paleogene resulted in backthrusting and the inversion of the structural order of the ITSZ. The ophiolites, ophiolitic mélanges and flysch units were displaced northward as nappe sheets and were thrust over the Eocene and younger forearc basin strata. The ITSZ hence shows a bivergent structural anatomy with both S- and N-directed thrusting and associated ductile-brittle deformation fabrics.

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