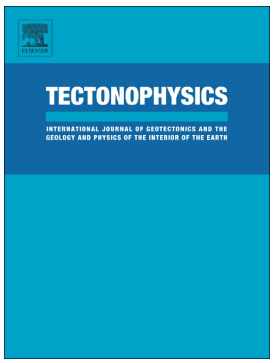


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# Earliest Cretaceous Accretion of Neo-Tethys Oceanic Subduction along the Yarlung Zangbo Suture Zone, Sangsang Area, Southern Tibet

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## Abstract

The accretionary complex of the Yarlung Zangbo Suture Zone (YZSZ) in southern Tibet records the subduction-accretion process of Neo-Tethys oceanic lithosphere. We report field observations, petrographic analysis, detrital zircon U-Pb geochronology, and Hf isotope data of one sedimentary-matrix mélange unit of YZSZ in Sangsang area, central southern Tibet. This mélange unit is the northernmost, and presumably the oldest one within the YZSZ accretionary complex. The sandstone matrix and blocks are rich in volcanic detritus, linking the main provenance to a juvenile magmatic arc. U-Pb-Hf analysis of detrital zircons from the sandstones reveals a unimodal age population of ~186 - 121 Ma with high positive εHf(t) values of +6.67 to +14.58, consistent with derivation from Gangdese Arc on southern margin of Lhasa terrane. The maximum depositional age of the mélange unit is limited to be