

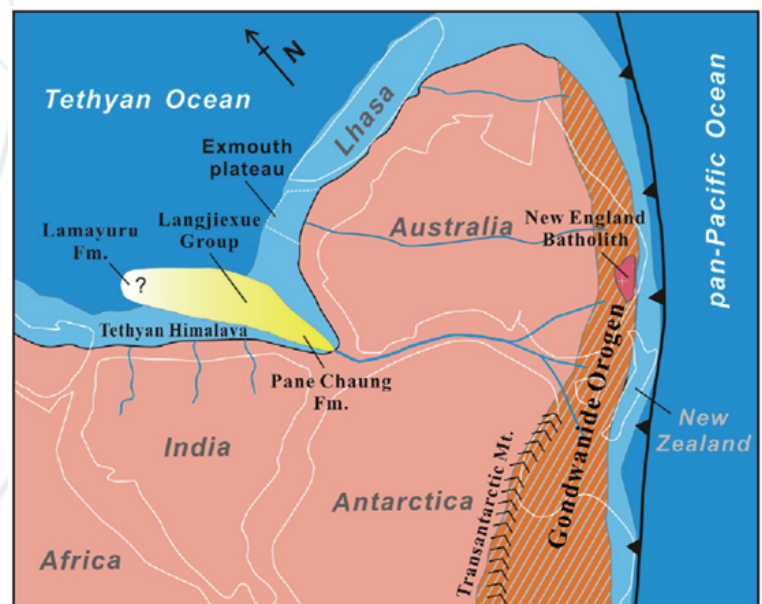
地質学セミナー

Provenance of the Langjiexue Group south of the Yarlung-Zangpo suture zone in the Shannan area, southeastern Tibet: evidence from petrology, whole-rock geochemistry and U-Pb geochronology

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The Langjiexue Group of late Triassic, which lies immediately south of the Yarlung-Zangpo suture zone, southeastern Tibet, constitutes one important part of the Tethys Himalayan Sequence and has been the subject of debate on the provenance and paleogeography. New data including clastic fragments analysis, heavy mineral assemblage, geochemistry and detrital zircon U-Pb geochronology of sedimentary/meta-sedimentary rocks are provided to constrain provenance of the Langjiexue Group in the Shannan area, southeastern Tibet. The domination of quartz grains and acid volcanic lithic fragments, stable heavy mineral assemblage of zircon and rutile and typical geochemical signatures (Al_2O_3/TiO_2 , Cr/V, Co/Th ratios and LREE enrichment) all point to the felsic igneous sources. The detrital zircon age spectrum displays three major peaks: Meso to Neoproterozoic (1150-850 Ma, 6.7-23.3%), Neoproterozoic to late Cambrian (750-480 Ma, 16.7-66.7%) and late Carboniferous to late Triassic (300-200 Ma, 5-38.9%), among which the youngest cluster seems incompatible with neighboring terranes, such as the South Qiangtang, Lhasa terrane, Tethys Himalaya Sequence (THS), Higher Himalaya Sequence (HHS), NW Australia, Banda Arc. The late Paleozoic to Mesozoic orogen (Gondwanide Orogen) along the convergent margin between SE Australia and Pacific ocean could have supplied the Langjiexue Group with

abundant magmatic materials through the Bird's Head, Banda Arc islands and northern Australia margin. Petrologic correlations of the Langjiexue Group with rocks from the orogen, such as Hf isotope and detrital spinel data, support the possibility of the origin from eastern Australia margin in late Triassic.



(From Wang et al., 2016)

【次回予定】

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