

**Slab dehydration in the continental convergent zone - Hindu Kush and Burma -**

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There are intermediate-depth seismicities in Hindu Kush and Burma. In these regions, continental crust is underthrusting beneath the Asian side. Collision happens in the regions where the continental crust is underthrusting, however, usually without intermediate-depth seismicity. Thus the above two regions are very anomalous. The existence of the intermediate-depth seismicity suggests that subduction of the continental crust occurs in these regions. Consistently, features of collision, i.e., offscraping of the upper crust, is weaker there than in the other regions of Himalaya.

We propose that this is caused by the convergence of the lithosphere affected by the Reunion and Kergulen hotspots. Both the regions are geographically in the northern extension of the hotspot traces. Magmatic activities of these hotspots would have made the lower portion of the lithosphere rich in the volatile, resulting in serpentinites formation. These serpentinites would have dehydrated in association with underthrusting and lubricated the thrust zone for the continental lithosphere to be able to subduct.