

DEEP STRUCTURE OVER THE EASTERN SYNTAXIS OF THE HIMALAYA

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Magnetotelluric surveys were conducted over two profiles for mapping the major tectonic features over the eastern syntaxial bend. These studies over the main frontal thrust and Main boundary thrust of the Himalaya and the Mishmi thrust in the Indo Burman range have shown that the signatures of these thrusts at deeper level are not coincident with their corresponding surface expressions. Thus main frontal and the main boundary thrusts are traced about 20 km south of the surface manifestations where as the Mishmi thrust at deeper levels is about 25 km west of the location observed on the surface. The global positioning studies (Gan, W, et al. (2007) J. Geophys. Res. Article No: B08416) are indicative of eastward (transverse to the strike) movements of the sedimentary overburden north of the main frontal thrust, in this region. Another conspicuous feature is the south dipping thrust / reverse fault delineated to the north of the Main frontal thrust earlier observed in the Tawang-Bomdilla region (Gokarn et al, 2008, 19th EM induction workshop, Beijing China). Its signatures at shallow depth in this region are however obscured by the presence of then supracrustal deposits of the Abhor volcanics and Yinkiang formations occurring in small discrete patches in the close vicinity of this feature.

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