Tectonis in the southern extension of Sumatran Fault, off Sunda Strait.

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Slip partitioning in a fore arc between closer-to-trench normal thrusting and trench-parallel strike-slip faulting has been postulated mainly from the study of earthquake slip. Offshore of Sunda Strait is one of the most appropriate areas in the world to examine the strain partition recorded in overlying fore arc. However there is no dependable data yet although an attention for offshore of the Sunda Strait has been paid for a long time to the junction of the regimes between normal subduction off Java and oblique subduction off Sumatra. A single channel and dive observation data were obtained by R/V Yokosuka, YK02-07 cruises provide quite different view to the expected previously. Namely we can identify the southern extension of Great Sumatran Fault as an active fault. Shinkai 6500 dive enables to shows a few meter vertical topographic displacement along the fault associated with a significant shear zone. The junction area is occupied by a bundle of tectonic blocks, well demarcated by SSE- and east-trending lineaments. A few amount of mud diapir mounds are recognized along the east-trending thrust that propagates from the southern extension of the GSF, where corresponds to significant negative Bouguer anomaly zone (approx. -150 mgal). Of course the morphologic feature is quite different to the transtensional graven in the Sunda Strait, it tells us that the strain partition in a fore arc does not uniformly stretched in the entire fore arc but localized (or concentrated) in specific area such as this area.