

UPLIFTED BASEMENT STRUCTURE OF WESTERN SURUGA BAY, CENTRAL JAPAN

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Suruga Bay located in the central Japan is believed to be plate boundary between Eurasia and Philippine Sea Plates. It is also suggested that triple junction of Eurasia, North America and Philippine Sea Plates is found off the central Japan. The size of the bay is about 60km in N-S direction and 50km in W-E direction. About 2500m water depth is found at the mouth of the bay. Southern margin of the great depression, so called Fossa Magna, is located coastal area of the bay. Suruga Trough located at the center of the bay is a location where the Philippine Sea Plate is subducting westward beneath the Eurasia Plate. Marine geological and geophysical investigations of the Suruga Bay has been carried out since 1980's. Bathymetric and seismic reflection data have been accumulated enough to show basement and sedimentary structure of this area. Integrated geomagnetic, earthquake catalogue and leveling data are also interpreted synthetically. We proposed a structural model for this area. The uplifted zone are composed of the N-S trending several anticlinal and synclinal axis. Formation of uplifted zone is getting younger to the trough which is east. The size of the uplifted zone is getting larger to the west which is away from the trough. Differences in water depth of the continental shelf edge which may reflect difference in vertical crustal movement of the coastal zone after 18,000yBP are determined. The results suggests that the vertical crustal movement of the western part of the bay is getting larger to the east.