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Systematic accretionary prism and slope basin system exposed in the Miura and Boso peninsulas, central Japan

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Geologic architectures in the southern Kanto region including the area where the Taisho-Kanto and Genroku earthquakes and Boso slow slip events occur show E-W or WNW-ENE trending geologic belt. Since the structure extends to the Miura and Boso peninsulas, on land geology in this area would provide a key to understanding geologic framework in the proposed drilling sites of Kanto Asperity Project. The Miura and Boso are composed of systematic accretionary prism and slope basin system. The former consists of two accretionary complexes: the early to middle Miocene Hota accretionary complex buried only 2-4 km, and the late Miocene to early Pliocene Miura-Boso accretionary complex buried less than 1 km. The latter uncomfortably overlies the accretionary prism and tend to be younger to the south. These geologic systems were uplifted rapidly due to the Izu-Bonin island arc collision and therefore have never experienced deeper burial, thermal, and physical overprinting. In this presentation, we will show the geologic framework of accretionary wedge and overlying slope sediments in the Miura and Boso areas, corresponding characteristics on physical properties and deformation/fabrics, and comparison with modern-plate convergent margins in Kanto regions.

Keywords: accretionary prism, slope basin, OST, Boso, KAP