

Seismic reflection profiling from Tsukuba to the Tokyo bay

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We presented a 17 kilometers long seismic reflection profile between Tsukuba city and Fujishiro town, Ibaraki Prefecture, in the previous meeting (Yamaguchi et. al, 2002). After that, we processed a seismic survey data between Fujishiro town and Abiko city and merged it with the previous one to get a 24 kilometers long seismic reflection profile. Parameters of the surveys are as follows. Seismic source: minivibT15000, shot point interval: 10m, sweep frequency: 10-80Hz, number of sweep: 4-8/point, receiver: UM2, receiver point interval: 10m, grouping: 6elements/10m, recording instrument: DAS-1, number of channel: 144ch, spread: split 100+44, offset: 5m-995m. Another seismic data are available between Abiko city and the Tokyo bay (Chiba-ken, 2001). The survey parameters of Chiba-ken's and ours are different from each other and there is 2 kilometers gap between both ends of lines at Abiko city. But the two survey lines may be considered to continue on the basis of eastward geological trending inferred from the Bouguer anomaly, then we will get a 60 kilometers long seismic reflection profile from Tsukuba city southward to the Tokyo bay. This profile must cross the Median Tectonic Line somewhere on the way. No reflectors have been imaged in the basement so far which might correspond to the Median Tectonic Line, but the partial undulations of basement top may have something to do with it. The sediment layers above the basement gently dip southward and an angular unconformity exists in them.