

## Electrical conductivity structure beneath the Pacific basin estimated by using a submarine cable network

# Takao Koyama[1], Hisayoshi Shimizu[2], Hisashi Utada[2], Alan Chave[3]

[1] ERI, Univ. Tokyo, [2] ERI, Univ. of Tokyo, [3] WHOI

We carry on the data analysis of the voltage data of a submarine cable network in addition to geomagnetic field data to elucidate the electrical conductivity structure beneath the Pacific. We estimated the MT responses for each data by eight cables and the GDS responses for each data of five geomagnetic observatories data with the frequency below 1 cpd. Although the D+ inversion was carried out for these data to examine if the conductivity structure is radially symmetric, the hypothesis of one dimensionality of the structure is rejected. Then we carried out the 3-D calculation including the ocean-land contrast and found out the conductivity structure beneath the sea floor is almost one dimensional and the structure we got has two jumps of the conductivity at the depth of 450 km and 650 km.