

A study on the phase shift of Sq field around Japan Arc

Masahiro Ichiki[1], Hisashi Utada[2], Takao Koyama[3]

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

It is well known that the vertical phase of Sq field around Kanto district progresses relatively in Japan. It is, so far, believed that the shift be attributed to the earth's electrical conductivity distribution in depths of several hundreds km. However, the phase progress is pointed out by using time series data at only 3 observation sites. Therefore we investigated and compared the Sq field at 14 geomagnetic observation sites around Japan Arc. Since we assess the vertical phase difference of Sq field quantitatively, cross spectra among time series at those sites were calculated. As a result, the progress of the vertical phase of Sq fields is surely confirmed. We plan to estimate the oceanic effect into the vertical phase shift of Sq field by using finite difference method in the future.