

MT Survey in the Mt.Riiser-Larsen Area, East Antarctica

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The summer party of the 42th Japanese Antarctic Research Expedition(2000-2001) carried out magnetotelluric survey in the Mt.Riiser-Larsen Area, located on the eastern coastline of Amundsen Bay, East Antarctica. The main purpose of this survey is to investigate the deep resistivity structure of the Napier Complex which is one of the oldest rocks in the earth. The MT observation was carried out at the 6 sites around the Richardson lake. We used the wide band MT instrument which frequency range is about 0.001 Hz to 500 Hz. In spite of the hard conditions to make observation, we could obtain high quality MT data. The observed induction arrows point to southwest at 10 Hz and point to west below 1 Hz. These induction arrows can be explained by coast effect roughly, but it is difficult to explain that induction arrows point to west strongly. The general features of the obtained one dimensional resistivity structure are high resistivity layer from surface to 10km depth, relatively low resistivity layer to 30km depth and high resistivity layer below 30km depth.