

## Importance of estimating the extremely large GIC in Japan Importance of estimating the extremely large GIC in Japan

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The geomagnetically induced currents (GICs) happen to cause power line failure in the high-latitude countries. Meanwhile, there are no researches about extremes of GICs in Japan with heterogeneous profiles of the underground conductivity. Therefore, to evaluate extremes of the GIC in Japan is not only important for Japanese society but also significant for the scientists. Namely, estimation of extremes of the GIC is a challenging interdisciplinary research from the magnetosphere-ionosphere physics for estimation of the extremely large storms and related phenomena to the solid Earth geomagnetism for electromagnetic response under three-dimensionally heterogeneous conductivity profiles. We also need information from the solar physics for extremely large flares and the interplanetary physics for propagation of the disturbances from the sun to the Earth. This session is a kick-off meeting for investigating the extremely large GIC expected in Japan. By sharing present status of the researches related to evaluation of the extreme GIC, we will discuss future collaborating research among scientists from space science, solid-earth geomagnetism, and related fields toward evaluation of the extremes of GICs.

キーワード: Geomagnetically Induced Current, Extreme space waether condition, nonuniform ground electric conductivity, modelling, statistical analysis

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