On measurement plan of geomagnetic induced current of power transformers in Japan

*Shinichi Watari[1], Yusuke Ebihara[2], Shigeru Fujita[3], Tada-nori Goto[4]

1.National Institute of Information and Communications Technology, 2.Research Institute for Sustainable Humanosphere, Kyoto University, 3.Meteorological College, Japan Meteorological Agency, 4.Graduate School of Enginieering, Kyoto University

It has been considered that the effect on power system by geomagnetically induced current (GIC) is not significant in Japan because of its geomagnetic latitude. However, the damage of the power transformers was reported in Republic of South Africa located in the same geomagnetic latitude as the northern part of Japan when a series of geomagnetic storms occurred between in the end of October and in the beginning of November 2003. It is known that amplitude of GIC depends on underground conductivity structure. We need to consider the complex underground structure in Japan when we make a GIC model. We report the measurement plan of GIC for the modeling.

Keywords: geomagnetically induced current, geomagnetic storm, power system

