

Reconstruction of global electric circuit model

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Global electric circuit model was proposed long time ago, around 1930s, in which thunderstorm plays a role of generator, and the ground and the ionosphere work as a spherical capacitor. We are going to reconstruct this simple model from two points of views: 1) taking into account the nonuniformities both of ionospheric conductivity and of the distribution of the generators, and 2) establishing the observational methodology, excluding the effect of cloud existing just above the observation sites. In order to this, we could use the global ELF observation network operated by Hokkaido University, potential gradient measurement with all-sky camera and the latest model of the ionosphere.