

## Locating Global Lightning from a Single Station Based on ELF Transient Observation

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In the spherical Earth-Ionosphere cavity, many resonant modes of ELF waves exist, which are called Schumann Resonance (SR). These resonance modes are caused by global lightning activity. In this study, we are interested in very large cloud to ground (CG) lightning which are detected as an electromagnetic transients propagating around the globe well above the background SR level. Therefore, we expect to derive the global spatio-temporal distribution of lightning from a single station based on ELF transient data which have recorded at a station, Moshiri, in Hokkaido. In this study, we calculate the bearing of the event and the source-receiver distance and derive a global map of the positive and negative CG lightning, respectively.