

150-280 nm FUV Emissions from Lightning

H.T. Su, C.L. Kuo, Alfred Chen, R.K. Chou and R.R. Hsu

Department of Physics, National Cheng Kung University, Tainan 70101, Taiwan

Abstract

Lightning is known to emit electromagnetic radiation in radio, HF, VHF, UHF, IR, optical, mid-UV, VLF, ELF bands. Recently, lightning is also found to induce terrestrial gamma-ray emissions and transient luminous events (sprites, elves, halos, blue jets and gigantic jets) above thundercloud tops. One of the main mission goals for ISUAL is investigate the occurrence and spatial-temporal evolutions of TLEs from space. However in the ISUAL data, SP channel 1 (band pass 150-280 nm) often recorded strong FUV emissions from lightning. In this talk, we will present the observation data and discuss how it was possible for the FUV emissions to penetrate the thick atmosphere and to escape into space.