Characteristic of Thunderstorm and Lightning of Interior Plateau in China Thunderstorm Charges and Currents

Yang Zhao, Xiangzhen Kong, Huaibin Wang, Tong Zhang (Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, Dong Gang West Road 320, 730000, Lanzhou, China; zhaoy@lzb.ac.cn)

The paper presents some results of characteristic of thunderstorm and lightning flashes in different altitude areas in China. Using the electric field mill, fast antenna, slow antenna, high speed camera and Doppler radar, etc., we carried out annual summer field observations during the past decades. The main four observation sites are spread from east to west of China, the altitude distribution from 10 m to 4500 m (Shandong, Gansu, Qinghai, Xizang).

The electric filed changes of different altitude thunderstorms are discussed in detail. The results show that the electric field intense in lower area was higher than that of plateau. The charge structure is more complex in lower thunderstorm. In different altitude areas, the thunderstorm processes show the distinct differences, for example, the duration of storm, the precipitation characteristics and lightning activities etc.