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Lightning Observation Project at INPE/Brazil

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Abstract

There are only a few observational data of lightning attachment to common structures or buildings (under 60 m) that are present in almost every city. Most of what is known about the electric current of downward flashes and striking distance of lightning protection systems come from information gathered on tall towers. In order to study lightning strikes to common structures, several instruments were installed in and around INPE facilities in Brazil. This work describes the setup of electric field sensors, current transformers, X-ray sensors, several high-speed video cameras and several standard video cameras. From video and image recordings of the lightning channel, 3D reconstructions of the channel will be available and used to study several physical characteristics of lightning that demand this information (e.g. distance of the downward leader tip to the upward connecting leader; leader tip orientation and location of X-ray sensor, etc). Some of the data gathered and preliminary analyses will be also shown.

Attachments

torres_no_INPE.jpg



Topic Areas

Lightning Physics, Characteristics and Measurements, Lightning Detection Systems
Technology and Performance

Submission Format

Oral