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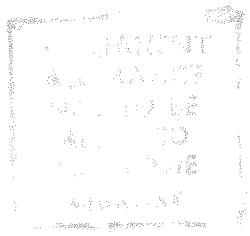

A STUDY OF THE CHARACTERISTICS OF LIGHTNING IN SRI LANKA

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AN INTRODUCTION

Lives and property of enormous value are destroyed every year due to lightning activity around the world. Some of the damages in Sri Lanka alone have been considerable. At least 10-15 people are killed every year by lightning. Even though there is no proper estimate of the damage to property, a number of electrical instruments like radio and television sets are damaged every year due to lightning flashes. Central electrical and communication systems have been disturbed and damaged by lightning on many occasions. The television broadcasting system was damaged seriously by lightning

Some knowledge of lightning activity may help people to prevent, or at least, to minimize the hazards caused by it.

During ancient times, as any other phenomenon of which the real mechanism was not known to man, lightning was regarded to be something sent by God as punishment on people. But since the discovery of the presence of electrical charges in thunderclouds by Benjamin Franklin in 1747, scientific studies have been done on lightning. Most of them were done in sub-tropical and temperate latitudes and only a few in tropical areas. Characteristics of lightning activity are now understood to a certain extent, but further investigations must be done around the Globe as it was revealed that these characteristics depend on a number of factors like latitude, geographical features, atmospheric conditions etc.

Data of lightning in tropical areas is vague. Apparently, only a few have studied the lightning characteristics in Sri Lanka which is a tropical island.

This dissertation will be a description of some of the results of an experiment done as a joint project between the Meteorological department, Sri Lanka and the department of Physics, University of Colombo, Sri Lanka on lightning activity in Sri Lanka. The data collected for nearly four and a half years will be utilised in the forthcoming analyses.