

Preliminary Studies of the Earth's Fair Weather Electric Field in Sri Lanka

K.P.S.C. Jayaratne and A.S. Dissanayake

Department of Physics, University of Colombo

A large number of instruments of field mill type have been developed in the past, for the measurement of electric fields both in the atmosphere and in the laboratory. A recently developed, highly reliable measuring instrument called "Dual Channel Wide Band Field Mill" is used for continuous and accurate measurements of earth's vertical potential gradient under fair weather and thunderstorm conditions.

In Colombo, diurnal variation of the potential gradient has double oscillation type variation of the months of August, September and October. During daytime the potential gradient has a higher value than at night time. The calculated height of the AEEL (Atmospheric Electric Equalisation Layer) over Sri Lanka is 67 Km.