



An atmospheric electrical instrument for educational outreach

A.J. Bennett and R.G. Harrison

University of Reading, UK

(a.j.bennett@reading.ac.uk)

Electricity in the atmosphere provides an ideal topic for educational outreach in environmental science. To support this objective, a simple instrument to measure real atmospheric electrical parameters is proposed. This project compliments educational activities undertaken by the Coupling of Atmospheric Layers (CAL) European research collaboration. The instrument is inexpensive and simple to operate, allowing it to be used by school pupils. It is suited to students at a variety of different educational levels, who will be able to make measurements of the fair weather electric field and current density, thereby gaining an understanding in the electrical nature of the atmosphere. The timing of this initiative coincides with the centenary of the 1906 paper in which C.T.R. Wilson described an apparatus to measure the electric field and conduction current density, which continued regularly in the UK until 1979. The instrument proposed is based on the same physical principles as C.T.R. Wilson's instrument.