



A Portable Dew Deposition Meter

J.D. Price (1) and R. Clark (2)

(1) UK Met Office (jeremy.price@metoffice.gov.uk), (2) UK Met Office (robert.clark@metoffice.gov.uk)

A practical instrument that measures dewfall and fog droplet deposition is described, having been developed at the UK Met Office Research Unit, Cardington. The instrument is a small portable device that utilises a load cell to measure the weight of a pan, upon which various types of natural and artificial canopies can be placed. The device can measure deposition to an accuracy of 0.00055mm. The challenges and requirements to measure representative values of deposition to the surface are discussed. Amounts of dewfall for a selection of different nights have been studied. Results show that, on any given night, the overriding factor determining the amount of dew deposition appears to be temperature of the canopy (confirmed by infra-red temperature measurements) and not its physical structure. The results also suggest that the hygroscopic effect of a canopy is important for the removal of atmospheric water vapour. Measurements of fog droplet deposition appear to be more straightforward. Example cases are presented of both dew and fog droplet deposition.