



A new global surface humidity dataset: creation and analysis

K. Willett (1), P. Jones (1), P. Thorne (2) and N. Gillett (1)

(1) Climatic Research Unit, University of East Anglia, Norwich, UK, (2) Hadley Centre, Met Office, Exeter, UK (K.Willett@uea.ac.uk / Phone: +44 (0)1603 593161)

Water vapour at the earth's surface is of key importance to the climate system. As a source to the upper atmosphere it holds significance for the radiation budget and the hydrological cycle. It is also an essential diagnostic alongside temperature for understanding global changes in energy. A global surface humidity data product is essential to our further understanding of these areas.

While attempts have been made to quantify changes in humidity at the surface these are generally globally incomplete, land or marine only and lack robust quality control, homogenisation and uncertainty estimation. All of which are essential if we are to give any weight to our findings.

The dataset is a global 5x5 gridded monthly mean land and marine blended product available in vapour pressure, specific humidity and relative humidity with efforts made in QC, homogenisation and uncertainty estimation. This talk outlines the building process of the dataset, its availability and findings so far.