



Monash Weather and Climate seminar series

SPECIAL seminar: Wednesday 18th November 12pm

Cloudnet: the evaluation of profiles of cloud properties in operational models using ground-based active remote-sensing.

Ewan O'Conner

(University of Reading, UK/Finnish Meteorological Institute, Finland)

The aim of Cloudnet is to provide a systematic evaluation of clouds in forecast and climate models. Clouds and their associated microphysical processes strongly regulate radiative transfer and the hydrological cycle, and are often themselves important for end users of weather forecasts, who may be interested not only in cloud cover, but in other variables determined by cloud properties, such as surface precipitation, temperatures, or shortwave/ultraviolet radiation. In order to provide these variables, accurate prediction of the vertical and horizontal distribution of cloud ice and liquid water contents is necessary. Cloudnet was originally a successful EU project comparing radar and lidar observations at several sites in Europe with the representation of clouds over these sites in a number of operational forecast models. It has also been extended to the ARM (Atmospheric Radiation Measurement) sites and the various AMF (ARM Mobile Facility) sites.

Forecast models now typically use one or two prognostic variables to describe the clouds, such as cloud fraction and ice/liquid water content. The evaluation of the NWP model performance concentrates on these cloud parameters. In this talk I will outline how these parameters are retrieved from the observations, how models and observations are compared, and some methods of assessing the model skill. I will show some specific examples of model improvements arising from these comparisons and outline some future plans.

Seminars held in Room 345, Building 28.

All Welcome!

For more information, contact Laura Davies
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