

Name of research institute or organization:

Centre for Atmospheric Science, University of Manchester

Title of project:

Measurement of clouds and secondary ice processes at Jungfraujoch

Part of this programme:

ACTRIS, INUIT

Project leader and team:

Prof. Tom Choulaton, project leader

Dr. Gary Lloyd

Project description:

Measurements have been made of ice crystal size distribution and number concentration, ice water content, the size distribution and number concentration of liquid droplets and cloud liquid water content. These measurements have been made at a frequency of 10Hz and correlated with measurements of vertical wind and turbulence using a sonic anemometer mounted close to the microphysics probe. The microphysics probes and sonic anemometer were mounted on a rotator arm to pint into wind. A large amount of data over a 4 week period has been gathered. Ice crystal concentrations and size distributions have been calculated. Upward fluxes of ice crystals have been identified indicating that the surface is a significant source of pristine ice particles but these fluxes are still being quantified through ongoing analysis. The data analysis will continue through 2018 but we will not make any further measurements in the field.

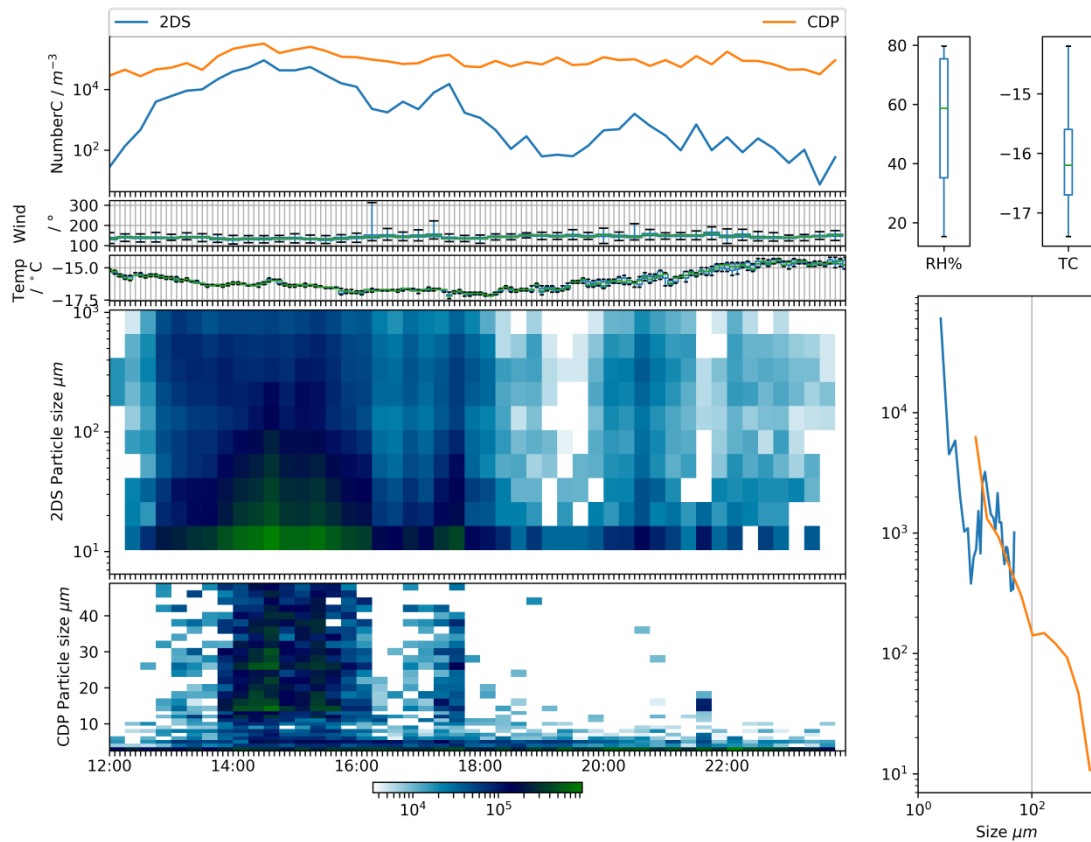


Figure 1. An example of number concentrations and size distributions of droplets (CDP) and ice crystals (2D-S) from the 2017 campaign.

Key words:

Ice crystals, cloud droplets, secondary ice, ice crystals fluxes

Collaborating partners/networks:

All those involved in the CLACE / INUIT 2017 project at Jungfraujoch

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