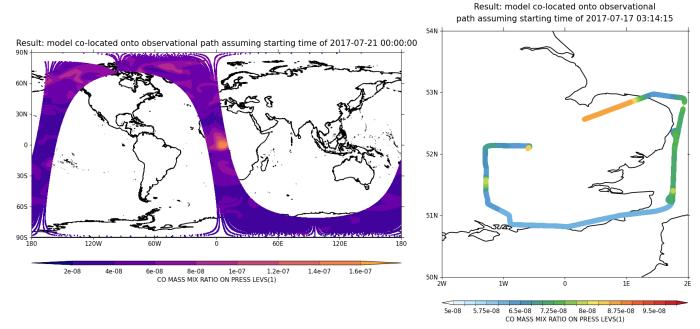
## LUNCHTIME SEMINARS



School of Mathematical,
Physical and
Computational

## Sadie Bartholomew

## VISION: towards seamless integration of model, satellite and in-situ observation data



(Left) a given variable from UM model data co-located onto a full orbit of satellite swaths using Version 2 of the VISION toolkit. (Right) The same variable from UM model data co-located onto a flight trajectory taken on a certain campaign (STANCO) by the FAAM Airborne Laboratory using Version 2 of the VISION toolkit.

Virtual Integration of Satellite and In Situ Observation Networks (VISION) is a new research toolkit developed to enable efficient and accurate interfacing of models and observations. Its core functionality is to read modelled variables and observational data files and output model data interpolated in space and time to match the observations, supporting any sufficiently CF metadata compliant model output files such as from the UM or (with built-in pre-processing) WRF, and observations including flight paths and satellite swaths. This, for example, enables exploitation of large observational datasets, potentially spanning decades, to be used for large-scale model evaluation. A collaboration between NCAS and NCEO researchers over the past 15 months will imminently result in Version 2 of the toolkit, which has improved the underlying algorithms and user interface and extended the functionality from Version 1. We present the background to VISION and showcase the use of, and command-line interface for, Version 2.