

EGU21-14886

<https://doi.org/10.5194/egusphere-egu21-14886>

EGU General Assembly 2021

© Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.



Driving a Convection Parametrization with EUREC4A Observations

Leo Saffin¹, Leif Denby¹, and Alan Blyth^{1,2}

¹University of Leeds, ICAS, Leeds, United Kingdom

²NCAS, Leeds, United Kingdom

A main aim of the EUREC4A project is to better understand the interaction clouds and convection with changes in the circulation. A key part of this uncertainty in models is the response of the convection parametrization to changes in the grid-scale forcing. This uncertainty can be difficult to isolate due to the complexity of models leading to many competing errors. The comprehensive observations taken during the EUREC4A field campaign give us the opportunity to run convection parametrizations directly from observations. I will show the response of the Met Office's new convection parametrization (CoMorph) to profiles derived directly from EUREC4A observations. Initial tests with the dropsonde dataset (JOANNE), show that CoMorph can produce realistic forcing within the observational uncertainty. The aim is to include more observations into this framework to identify area in which the convection parametrization can be improved.