



## **An analysis of convective parameters in the Northern Hemisphere from the ERA Interim re-analysis and CMIP5 projections**

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Convective parameters (i.e. convective available potential energy (CAPE), convective inhibition (CIN) and vertical shear) are calculated from the European Centre for Medium-Range Weather Forecasts Interim re-analysis (ERA-Interim) for 1979-2012 and from a range of models and experiments from the Coupled Model Intercomparison Project Phase 5 (CMIP5) for 1950-2100. Of particular interest, the analysis shows approximate 20% and 50% increases in mean CMIP5 multi-model European summer 1200UTC CAPE for the 4.5 W/m<sup>2</sup> and 8.5 W/m<sup>2</sup> Representative Concentration Pathways (RCPs), respectively, relative to the Historical period of the CMIP5 analysis. However, in the model spread in this analysis is very high and shows some relationship with model resolution. Further key results, plus the spatial and temporal variability of the convective parameters from the different datasets, will be presented and interpreted in the presentation.