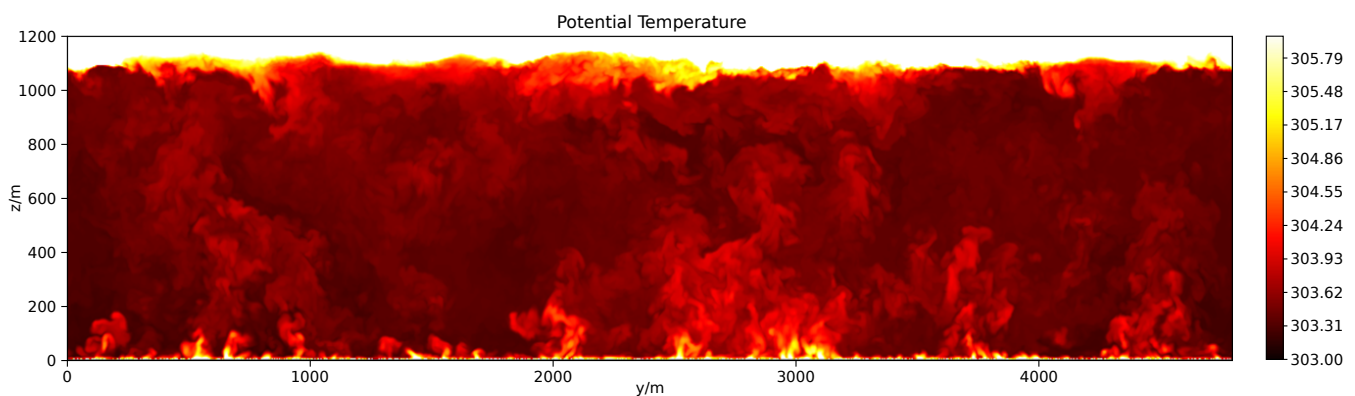


LUNCHTIME SEMINARS

Peter Clark

Developments in parametrization of atmospheric turbulence



Operational forecast and climate models are moving to increasing resolutions to explicitly resolve mesoscale phenomena that hitherto required parametrization. This introduces new challenges for the parametrization of the unresolved flow and exposes major limitations in existing parametrizations of ‘turbulence’, to the extent that we even need to think more precisely about what we mean by ‘turbulence’ in the first place. In particular, models necessarily exist in so-called ‘grey-zones’, where turbulent flow is neither well-resolved nor fully parametrized. This was famously dubbed “Terra Incognita” by John Wyngaard.

Modelling in these grey zones is a focus of many centres worldwide; in the UK, NERC/Met Office effort has been coordinated through joint programmes ParaCon (on moist convection) and Parachute (The ‘Turbulence Gray Zone’). In this seminar I shall give an overview of the new developments in the parametrization of turbulence emerging from these programmes and where we aim to be in a few years’ time.

Tuesday 5 November, 13:00–13:50 in 1L61

and on Teams / Meteorology All / Internal (Tuesday) Seminar Series