



Sensitivity of stratified turbulence to the buoyancy Reynolds number

S. Tobias (1) and P. Bartello (2)

(1) University of Leeds, United Kingdom (smt@maths.leeds.ac.uk), (2) McGill University, Canada

We present direct numerical simulations of (non-rotating) stratified turbulence at resolutions up to $2048^2 \times 512$, exploring the scalings of horizontal and vertical spectra. While we were not able to achieve a wide range of stratifications unaffected by the vertical viscous term, we were able to determine that changes in the horizontal spectrum were due to the buoyancy Reynolds number and not to the stratification itself. This result is entirely consistent with previous work on the $F_v \sim 1, F_h \rightarrow 0$ limit at high enough Re as it implies horizontal spectra are independent of stratification.