## Hamburg COMMODORE conference



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## Numerical representation of internal gravity waves Propagation

Tuesday 28 January 2020 14:30 (30 minutes)

Due to their key role in the global distribution of (physical) diapycnal mixing and mass transport, proper representation of internal wave dynamics in numerical models should be considered a priority since global climate models are now configured with increasingly higher horizontal/vertical resolution.

The important terms involved in the discrete representation of gravity waves propagation are :

- The horizontal/vertical grid staggering

- The discrete approximation of the divergence term in the continuity equation and of the horizontal pressure gradient,

- The discrete approximation of the hydrostatic equilibrium

- The amount of vertical/horizontal diffusion

Based on a discrete normal mode decomposition, we study the impact of those different ingredients on the phase speed of internal waves.

## Do you need an official invitation letter?

No

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