



## **The Heat budget of contribution from Tropical Instability Waves in NEMO ORCA1 and ORCA025 models**

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The heat budget contribution from tropical instability waves (TIWs) is analysed in the NEMO ORCA1 (1deg) and ORCA025 (1/4deg) models. In the long term mean Meridional heat advection onto the equator by the TIWs is 30% larger in ORCA025 than ORCA1. During neutral and La Nina conditions this increases to 75% while there is little difference during El Nino conditions. Furthermore, the ORCA025 model is shown to be in better agreement with observations. The zonal advection of heat by TIWs is shown to be similar in both models. The extra heat advection by TIWs in ORCA025 is shown to improve the simulated SST in the tropical Pacific during La Nina.