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The wind sea and swell waves and the wave age dependent climates revisited

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Wind generated waves represent the atmosphere-ocean boundary, and play a key role in the air-sea exchanging processes. Heat, mass and momentum are transferred up and down across this boundary, and these transfers are wave dependent (Rutgersson et al. 2010). Since the wave field can be wind sea or swell dominated, it is important to assess qualitatively the wind sea and swell climates separately, and the prevalence of one type of waves over the other, particularly in areas where their seasonal variability is highest, like along the eastern boundary currents (Semedo et al. 2016).
In this study the wind sea and swell climates is revisited, using the ERA-Interim and ERA-5 wave reanalysis, and satellite altimetry wave data. The global wave age climate is also presented, assessing the areas in the global ocean where the probability of occurrence of the so-called wave driven wind is highest, in light of new findings (Högström et al. 2011).

References:

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