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The effect of climate change on wind waves in the Mediterranean Sea

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This study is based on three sets of 30-year long simulations of the wave fields in the Mediterranean Sea. The simulations have been forced by the wind fields computed by the Regional RegCM model at ICTP, and correspond to the present (CTR), A2 and B2 scenarios. The analysis is focused on monthly mean fields of SWH (Significant Wave Height). The mean annual cycle shows some effect of the emission scenarios. The average SWH field of the B2 scenario is larger than that of CTR in February and October. The average SWH of A2 is lower than that of CTR in December and August and larger in May. These variations, however, show no regular bahaviour with the emission level. The patterns of variability of the two scenarios A2 and B2 , computed by PCA of the SWH fields do not show large differences with respect to those of CTR. These simulations indicate that the effect of climate change on the monthly wave fields in the Mediterranean Sea are clearly present, but are not large.