



LATEMAR - LArgeST wavEs in MARine environment: new products for wave model forecast

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The LATEMAR project aims at improving the modelling of large wave events during marine storms in the framework of the Copernicus Marine Environment Monitoring Service (CMEMS). Indeed, at present, CMEMS operational systems only release average and peak wave parameters, with no information on individual waves whatsoever. However, developments of the state-of-the-art third-generation wave models (WAVEWATCH III and SWAN, for instance) demonstrated that, using the directional wave spectrum and theoretical statistical models for wave extremes, forecasters can accurately infer the expected shape and likelihood of the maximum waves during marine storms. The main goal of the LATEMAR project is therefore to provide the wave models used by the CMEMS service (WAM and WAVEWATCH III) with the procedures to explicitly estimate the maximum wave heights for each sea state. Besides this, further goals of LATEMAR are the following: perform an extensive assessment of the modeled maximum wave events using observations collected from an oceanographic station; inter-compare WAM and WAVEWATCH III model performance in a test area (Mediterranean Sea); investigate the sensitivity on sea state parameters of the maximum waves. All model developments and evaluations resulting from this R&D project will be directly applicable to the wave model forecasting systems, extending thus the CMEMS product catalogue.