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Poster
Precisely measuring sea level is a major objective for climate change studies. Since about two decades, sea level is routinely measured from space using altimetry techniques. But to address a number of important questions relevant to sea level studies (is sea level rise accelerating? Can we close the sea level budget? What are the causes of the regional and interannual variability? What are the coastal impacts of sea level rise? etc.), the accuracy of altimetry-based sea level measurements at global and regional scales need to be improved. This was the goal of the ESA CCI Sea Level project that started 3 years ago. Using multi-mission satellite altimetry data, the project developed a new satellite altimetry-based sea level processing system, with dedicated algorithms and data processing strategies, in order to generate high-accuracy altimetry-based sea level products for the last two decades. Here we present validation results of the ESA CCI Sea Level products. Validation includes comparison with tide gauges-based sea level, sea level budget closure studies, and comparisons with ocean reanalyses and coupled climate model outputs at global and regional scales. Impacts of assimilating the ESA CCI sea level products in numerical ocean models are also discussed. Plans for future improvements are presented.
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