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Trends and acceleration in regional sea levels

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We use all available tide gauge records since 1807 to compose a global sea level reconstruction and analyse the evolution of global and regional sea level trends and their acceleration. Regional linear trends for 14 ocean basins since 1960 suggest the fastest sea level rise near the coast of Antarctica (3.6 mm/yr) and North West Pacific region (3.4 mm/yr). Arctic and Antarctic regions show the highest acceleration in sea level, however, in several regions (for example, North East Pacific) there is no acceleration in sea levels.
We have selected 16 years of the fastest global sea level rise during the 20th century (1930-46) to compare with sea level rise for the period 1993-2009. We suggest that distinct physical processes caused fast sea level rise during the periods 1930-46 and 1993-2009 in which similar total sea level rise of 5-6cm has been observed.