

# Digital filtration of tidal disturbances in signals from hydrostatic pressure sensors of sea level monitoring devices

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**Abstract.** The author suggests an algorithm for digital filtration of tidal disturbances (TD) in signals from hydrostatic pressure sensors of sea level monitoring devices, using approximated spline functions, for analysis of Raleigh- and tsunami-wave disturbances. Models of signal components from sensors and variants of TD digital filtration algorithms were described. The article focuses on evaluation of TD filtration errors for the analyzed and suggested algorithms on the basis of statistical modeling. The author came to a conclusion that priority should be given to application of digital TD filtration algorithm based on approximated spline functions.

**Keywords:** digital filtration, tidal disturbances, signal of sensors, hydrostatic pressure, approximation, spline functions.