ABSOLUTE SEA-LEVEL RISE ON THE ESTONIAN COAST BASED ON THE GNSS AND TIDE GAUGE TIME SERIES

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Overview

- Aim: to calculate geocentric sea-level rise 1956-2014 at the Estonian coast
- The time series of ten tide gauges for the period 1956-2014 were used to calculate the apparent uplift
- The velocities of the eight CORS were calculated in ITRF2008 from the coordinate time series 2008-2016
- To transfer absolute land uplift rates to the tide gauges two absolute land uplift models were calculated



Overview

- Remove-compute-restore:
  - The TG and CORS residual velocities were found based on the GIA model NKG2016GIA
  - Residuals were modelled using LSC and Kriging methods
  - Residual models were added back to the NKG2016GIA
- Sea-level rise: $SLR = h_{abs} - h_{app} - \dot{N}$
- The average mean sea level rise:
  - 1.85 mm/yr (EST2018LU_abs_krig)
  - 1.97 mm/yr (EST2018LU_abs_LSC)

