



Supplement of

Assessing storm surge model performance: what error indicators can measure the model's skill?

Rodrigo Campos-Caba et al.

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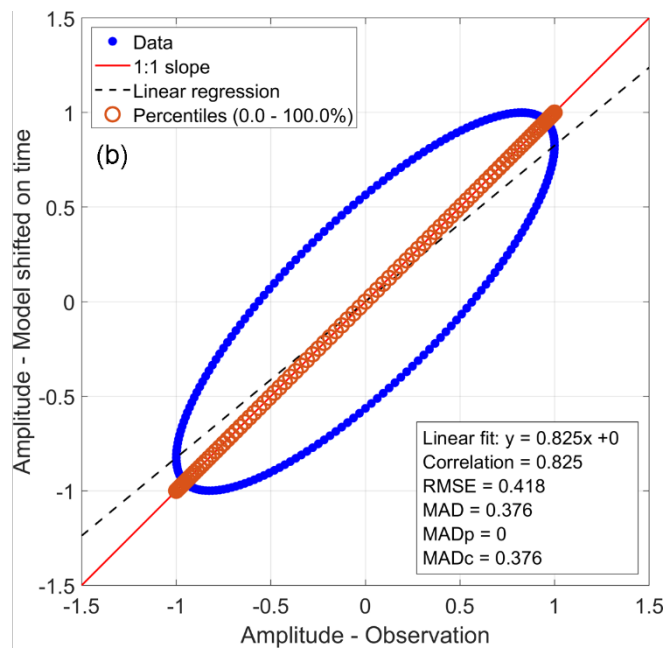
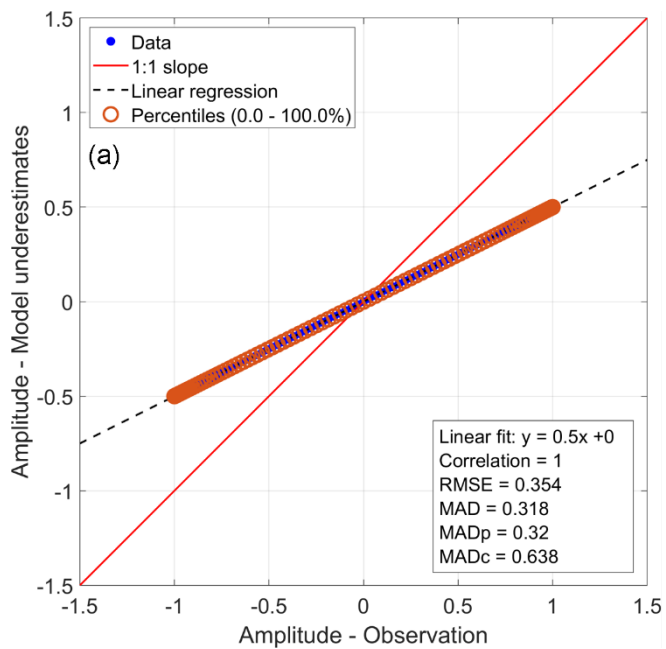
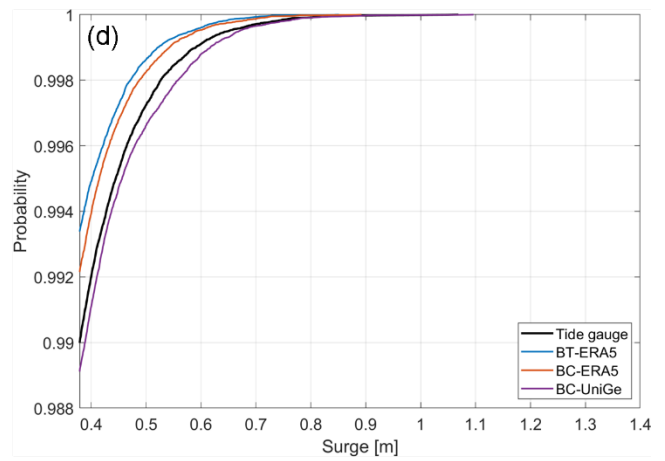
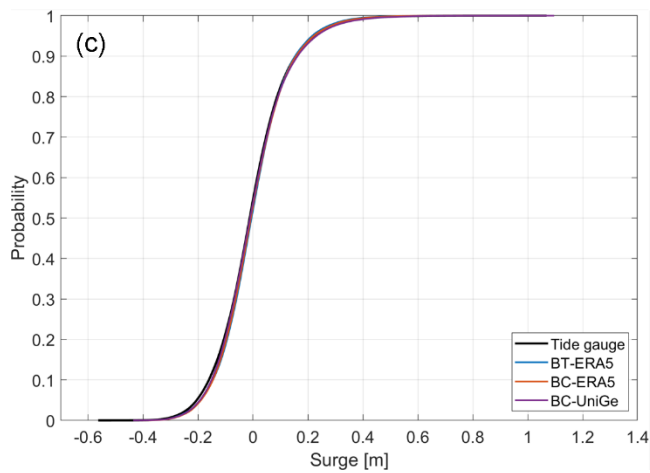
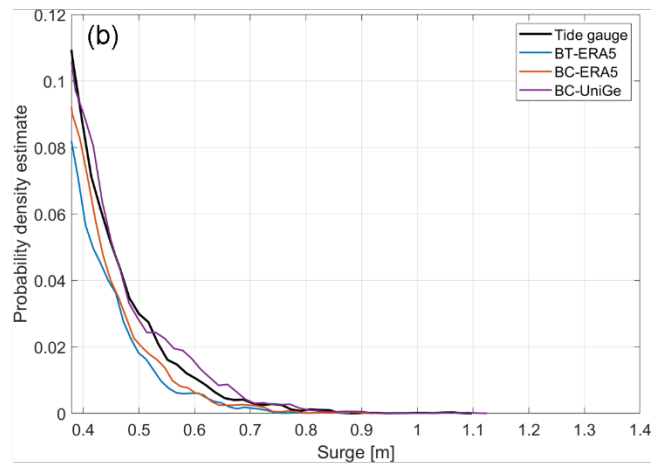
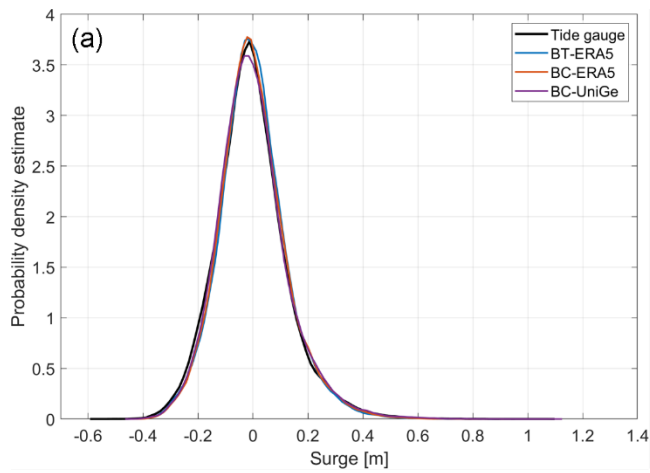
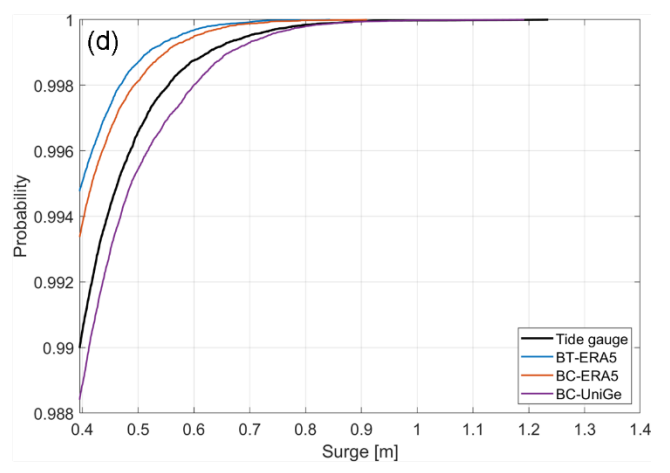
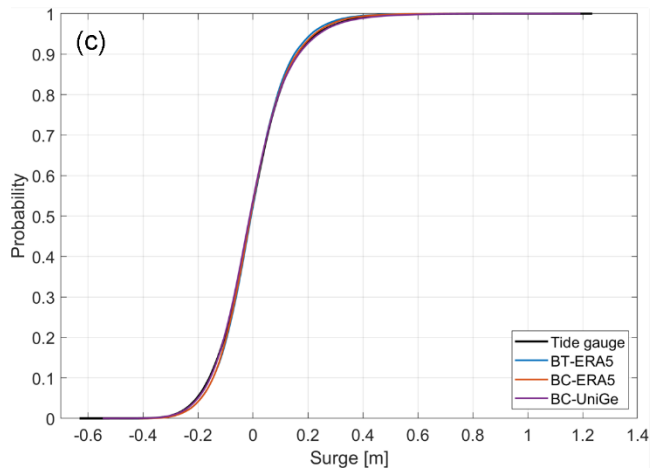
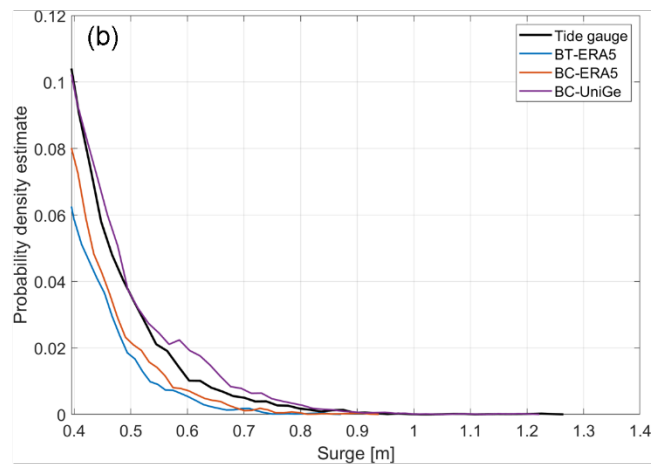
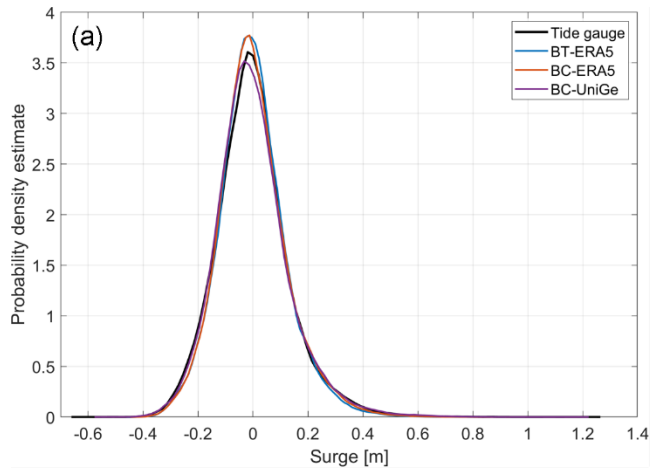


Figure S1: Scatter plots and metrics for the validation of the proposed metrics, MAD_p and MAD_c. (a) Observation vs model with half amplitude and same phase; (b) Observation vs model with same amplitude and phase shifted.

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10 **Figure S2: Probability Density Estimates (PDE) and Empirical Cumulative Distribution Function (ECDF), CNR platform. (a) PDE for the total amount of data; (b) PDE for values above 99th percentile of the observed data; (c) ECDF for the total amount of data; (d) ECDF for values above the 99th percentile of the observed data.**

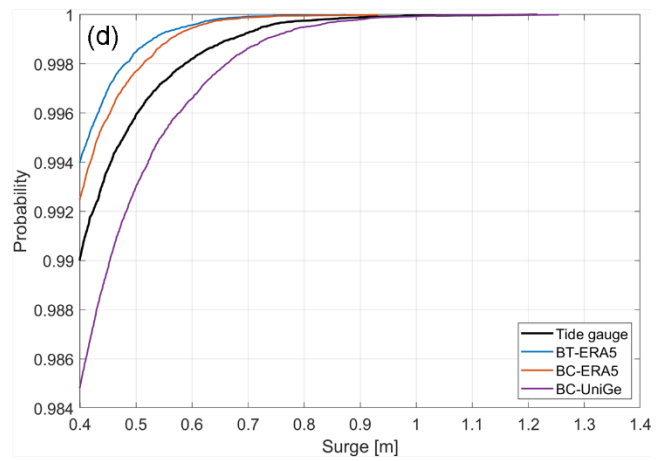
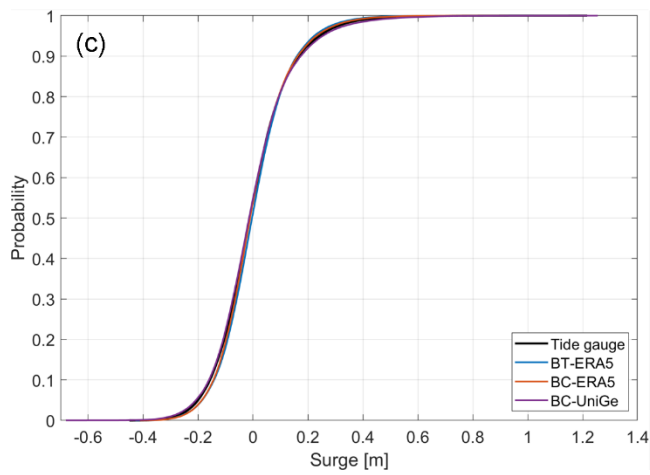
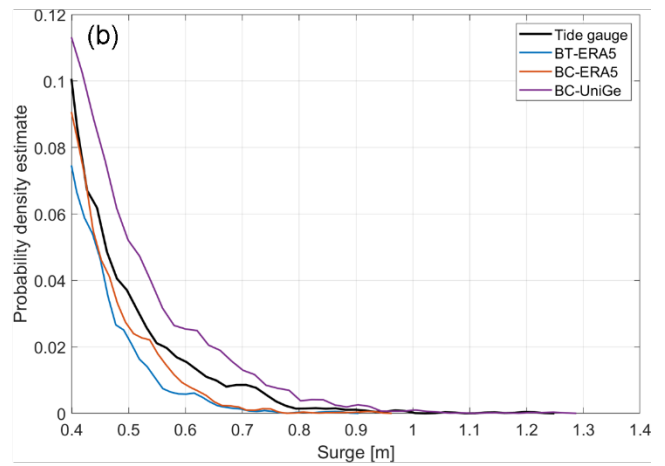
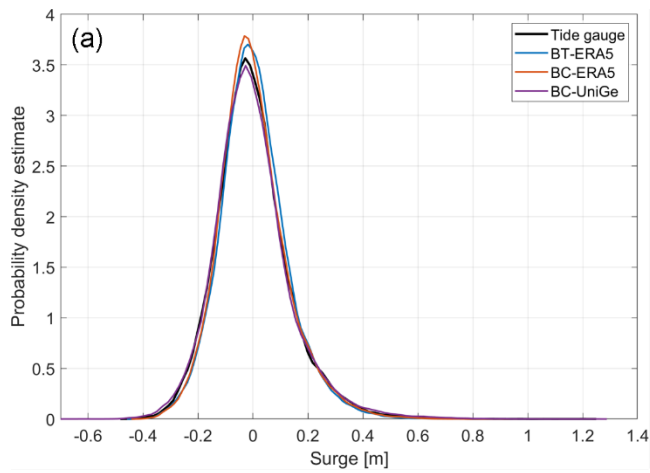


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Figure S3: Probability Density Estimates (PDE) and Empirical Cumulative Distribution Function (ECDF), Punta della Salute. (a) PDE for the total amount of data; (b) PDE for values above 99th percentile of the observed data; (c) ECDF for the total amount of data; (d) ECDF for values above the 99th percentile of the observed data.

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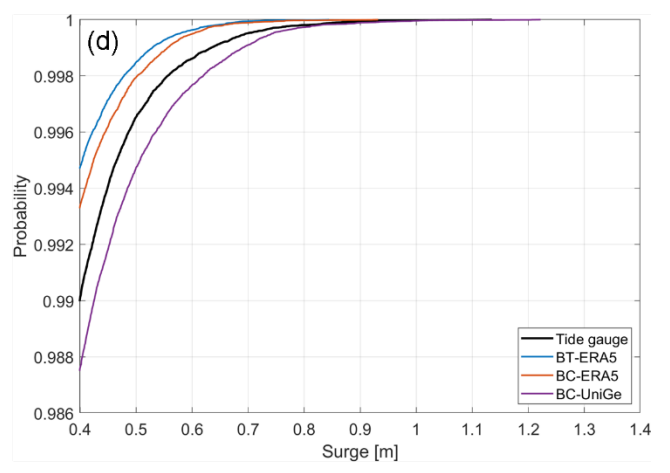
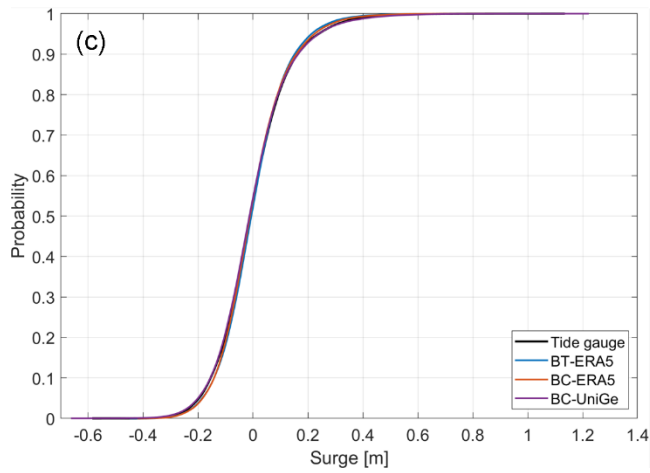
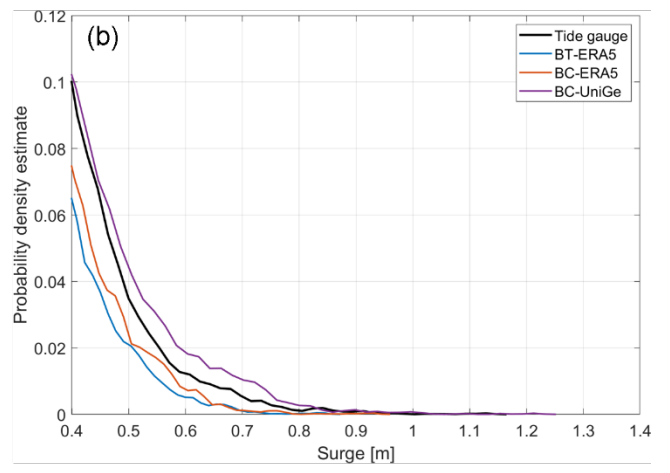
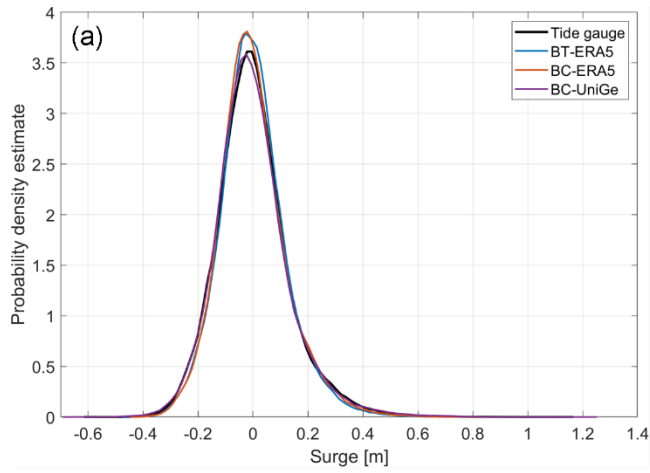
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35 **Figure S4: Probability Density Estimates (PDE) and Empirical Cumulative Distribution Function (ECDF), Caorle. (a) PDE for the total amount of data; (b) PDE for values above 99th percentile of the observed data; (c) ECDF for the total amount of data; (d) ECDF for values above the 99th percentile of the observed data.**

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50 **Figure S5: Probability Density Estimates (PDE) and Empirical Cumulative Distribution Function (ECDF), Grado. (a) PDE for the total amount of data; (b) PDE for values above 99th percentile of the observed data; (c) ECDF for the total amount of data; (d) ECDF for values above the 99th percentile of the observed data.**

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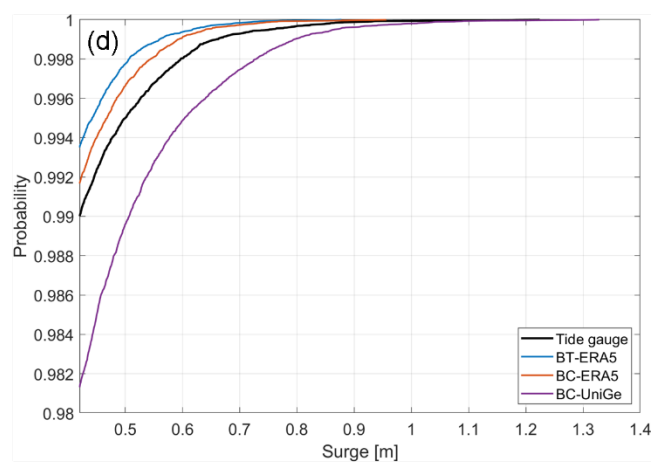
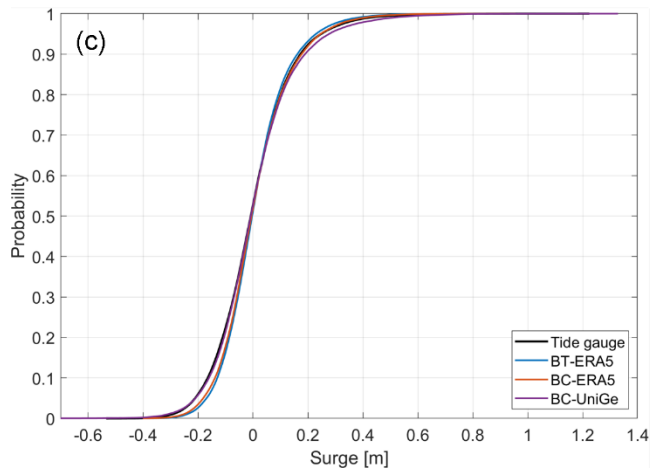
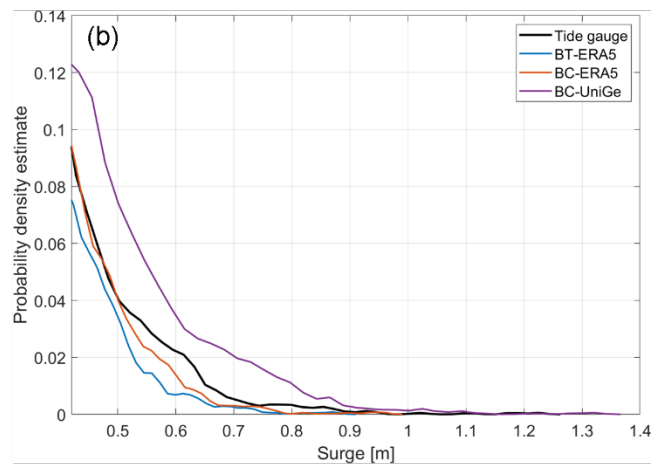
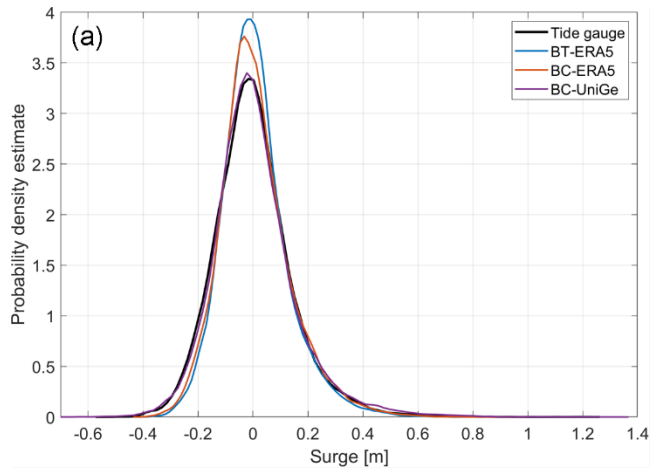


Figure S6: Probability Density Estimates (PDE) and Empirical Cumulative Distribution Function (ECDF), Monfalcone. (a) PDE for the total amount of data; (b) PDE for values above 99th percentile of the observed data; (c) ECDF for the total amount of data; (d) ECDF for values above the 99th percentile of the observed data.

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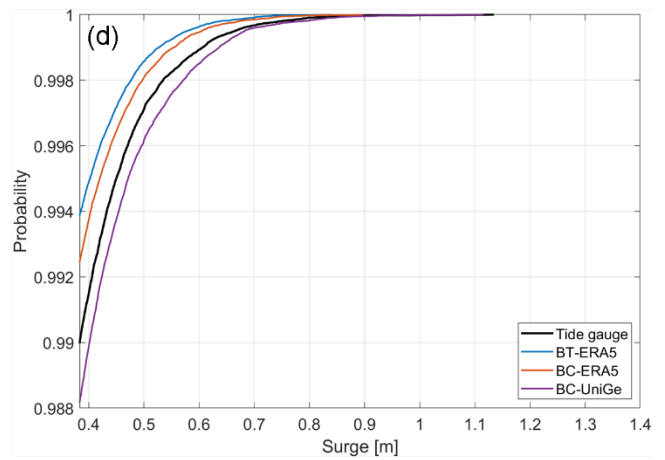
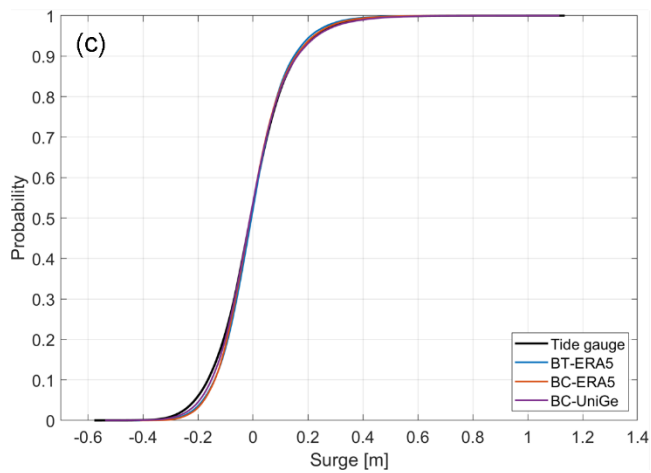
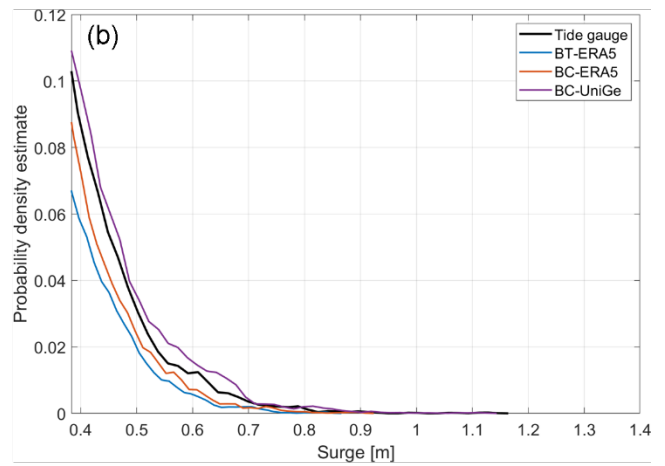
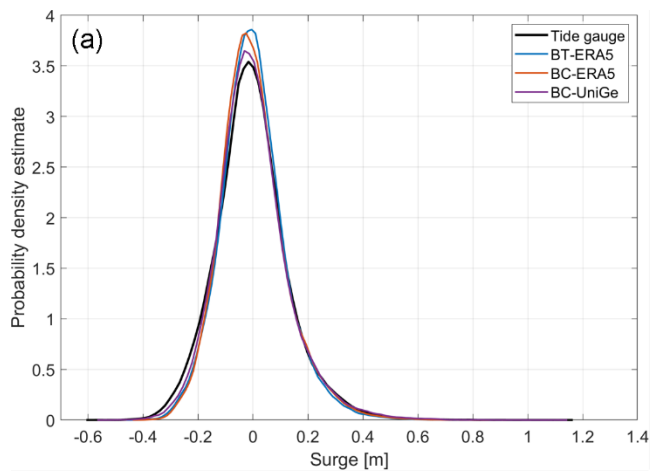


Figure S7: Probability Density Estimates (PDE) and Empirical Cumulative Distribution Function (ECDF), Trieste. (a) PDE for the total amount of data; (b) PDE for values above 99th percentile of the observed data; (c) ECDF for the total amount of data; (d) ECDF for values above the 99th percentile of the observed data.