

Interactive comment on “Coastal observing and forecasting system for the German Bight – estimates of hydrophysical states” by E. V. Stanev et al.

Anonymous Referee #1

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Coastal observing and forecasting system for the German Bight – estimates of hydrophysical states E. Stanev, J. Schulz-Stellenfleth, J. Staneva, S. Grayek, J. Seemann, W. Petersen

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General comments

The paper describes the integration of measurements made by a coastal observatory and modelling in the development of a pre-operational forecasting system. The COSYNA observing system focuses on the German Bight – a tidally dominated region

C249

with large fresh water inputs. It is a positive start and encouraging to see ferrybox data assimilated into models and hf radar data being combined with models. For the latter, the technique described has limited applicability, applying to one set of radial velocities, but has enabled the authors to take first steps towards more sophisticated assimilation methods. The paper is a very useful, concise summary of present advanced capabilities. However, there is still some way to go before assessing which measurements will provide the greatest rewards for data assimilation and for which processes and time scales the benefits are largest.

Specific comments

More explanation is needed for Figure 14d on skill, for those not familiar with data assimilation. What is the red contour line?

Technical corrections

One typo on page 843, line 22 ‘lacking’ should be replaced by ‘lagging’.

The meaning of the sentence on page 831, line 16 starting ‘Complementing’ is not clear.

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