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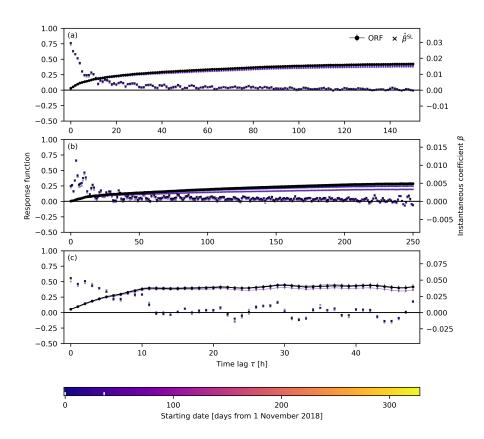
## Supplement of

## Technical note: Removing dynamic sea-level influences from groundwater-level measurements

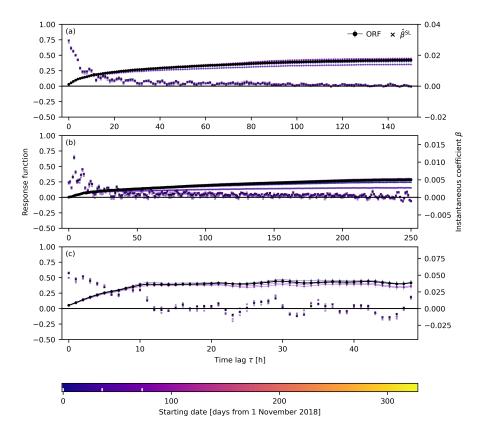
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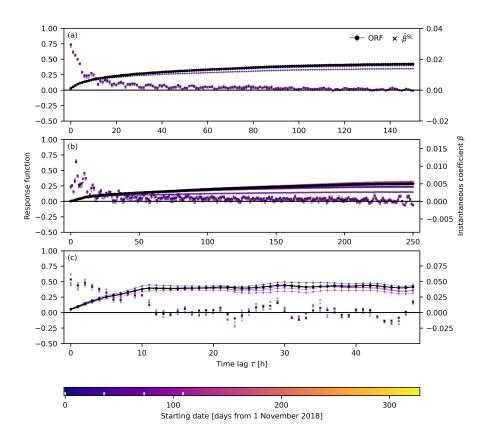
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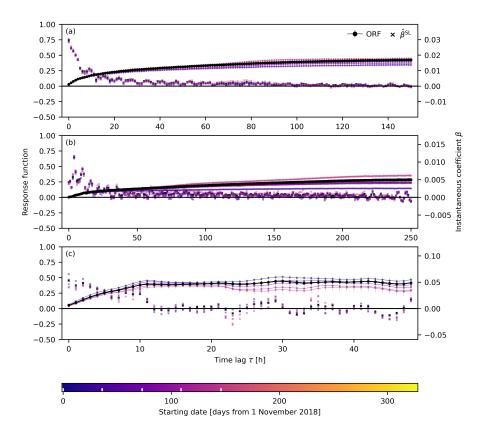
**Figure S1.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 328.5. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



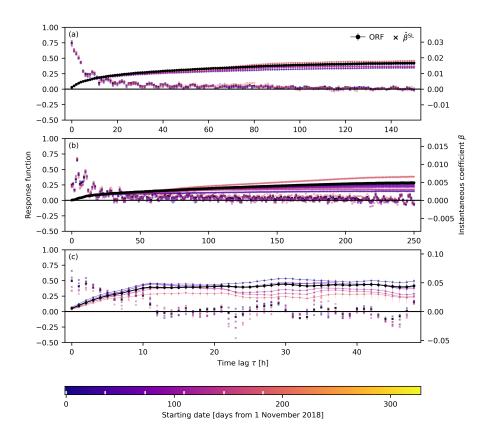
**Figure S2.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 292. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



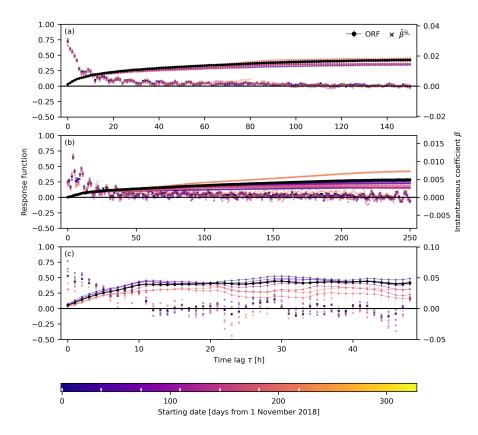
**Figure S3.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 255.5. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



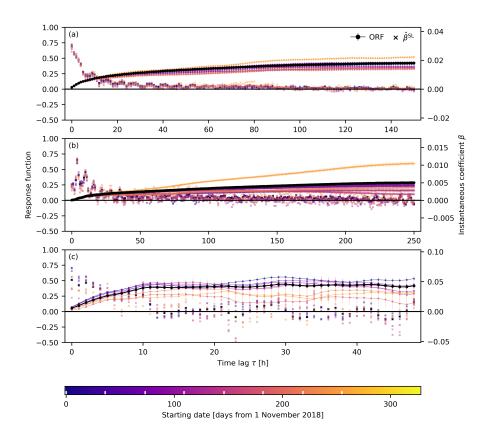
**Figure S4.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 219. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



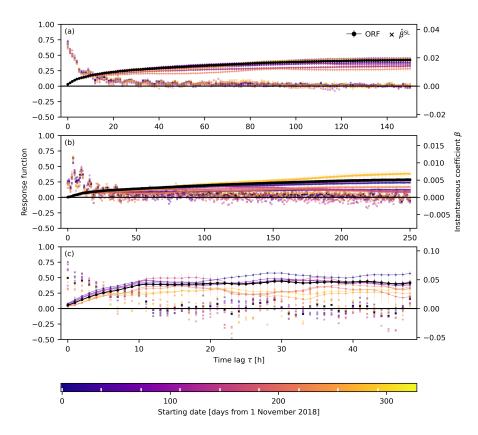
**Figure S5.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 182.5. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



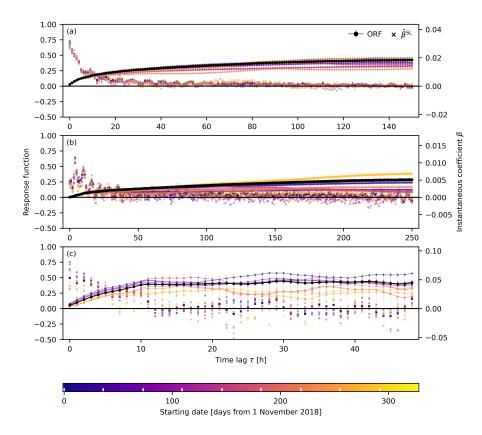
**Figure S6.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 146. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



**Figure S7.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 109.5. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



**Figure S8.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 73. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.



**Figure S9.** Oceanic Response Function (ORF) for (a) BS3, (b) NY-10, and (c) SN12/1 with a time series length 36.5. The black response functions and instantaneous coefficients show the results of the analysis of the complete one-year time series (Fig. 4). Colors indicate the time difference of the starting point of the shorter time series from the starting point of the complete time series. The starting dates of the analyzed time series are displayed by white stripes in the colorbar.