Supplement of

Seasonal behaviour of tidal damping and residual water level slope in the Yangtze River estuary: identifying the critical position and river discharge for maximum tidal damping

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1. Figures S1 to S4

Introduction

Figures S1-S3 show the seasonal behavior of the velocity number $\mu$, the celerity number $\lambda$ and the phase lag $\varepsilon$ under a wide range of tidal and riverine forcing conditions in the Yangtze River estuary.

Figure S4 shows the seasonal behavior of the three components ($S_t$, $S_r$, $S_m$) that contribute to the development of the residual water level slope $S$.

Figure S1. Contour plot of the velocity number $\mu$ together with its minimum value $\mu_{min}$ (indicated by the red line) for each month (a) and the relation between the critical value and the river discharge $Q$ (b).
Figure S2. Contour plot of the celerity number $\lambda$ together with its maximum value $\lambda_{\text{max}}$ (indicated by the red line) for each month (a) and the relation between the critical value and the river discharge $Q$ (b).
Figure S3. Contour plot of the phase lag $\varepsilon$ together with its minimum value $\varepsilon_{\text{min}}$ (indicated by the red line) for each month (a) and the relation between the critical value and the river discharge $Q$ (b).
Figure S4. Contour plot of the three contributions made to the residual water level slope: tidal component $S_t$ (a), riverine component $S_r$ (b), tide-river interaction component $S_{tr}$ (c).