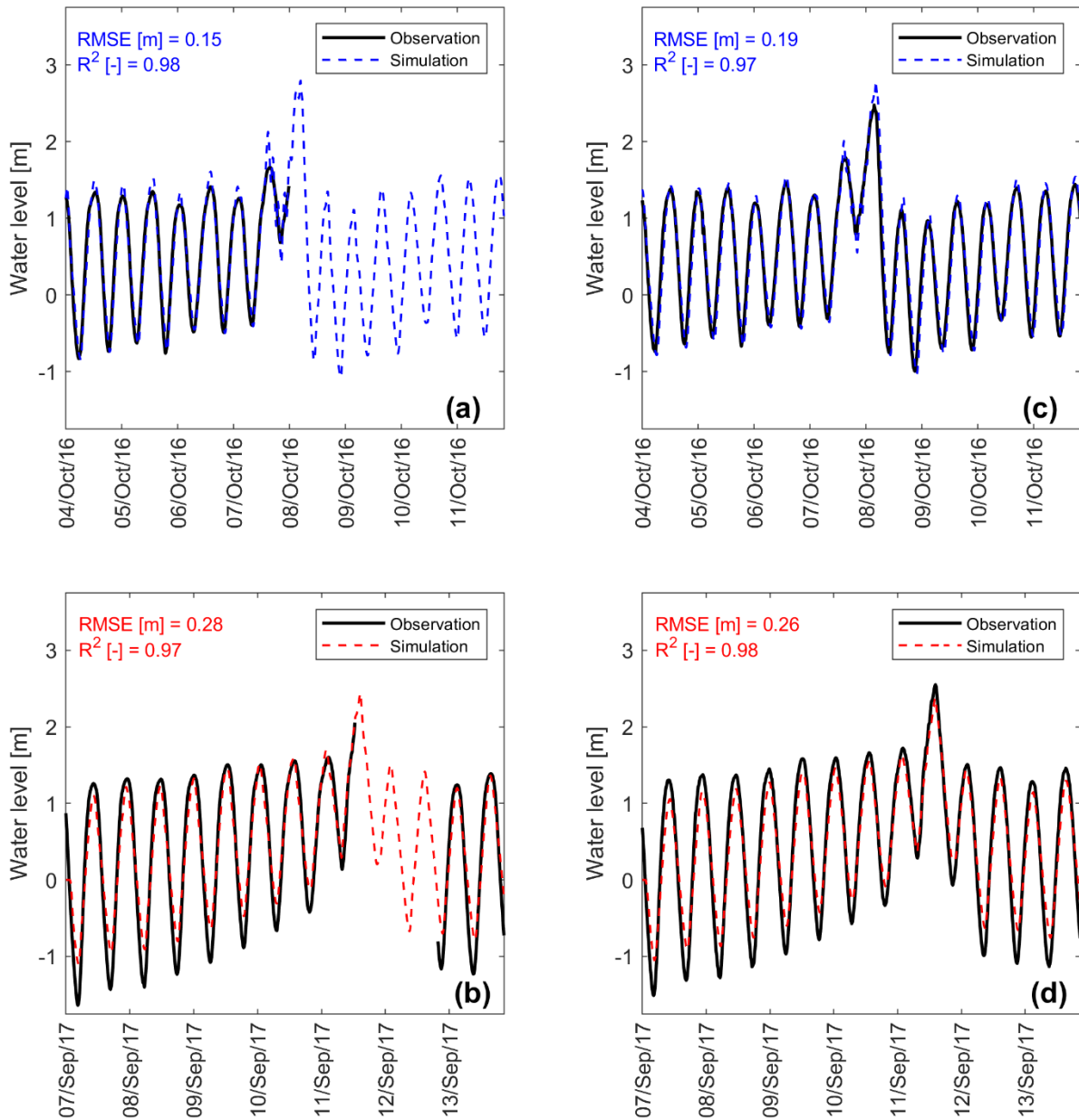
1 **Supplementary Material**

3 **Figure S1.** Calibration and validation of the Savannah Delft3D-FM model. Time series of
4 simulated and observed WLs at (a, b) Port Wentworth and (c, d) Savannah River at USACE dock.
5 Top and bottom panel show times series of Hurricane Matthew and Irma, respectively. Note that
6 the model can simulate water level variability, and so fill the data gaps observed during Hurricane
7 Matthew.