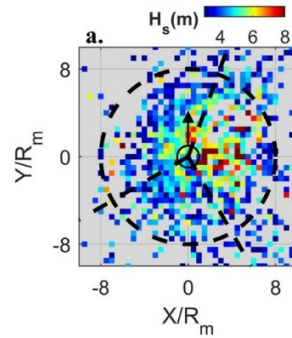## Supplementary Figures

Figure S1. Summary of all TC generated Hs observations (greater than 3 m) in a storm-centric frame of reference with X and Y distances normalized by the radius of maximum winds (Rm). Color scale indicates average wave height observed in 1Rm x 1Rm bins. The dashed circle is Rm = 8 with the small inner circle Rm = 1. The up arrow denotes the direction of the TCs forward translation.
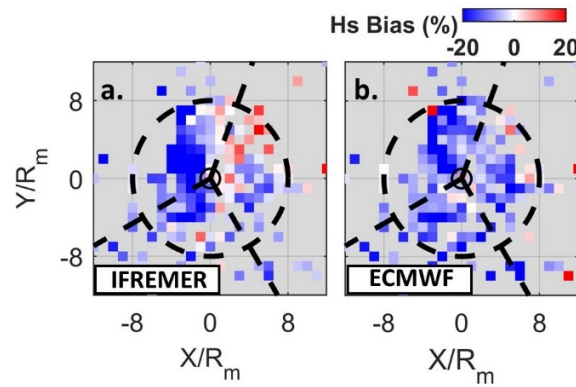

Figure S2. Hs bias at all buoy locations during Hurricane Sandy for (a) IFREMER and (b) ECMWF in a storm-centric frame of reference with distance from the eye normalized by the radius of maximum winds (Rm). Observations are binned into 1Rm x 1Rm bins. The inner circle denotes 1Rm and outer dotted circle denotes 8Rm. Direction of storm motion is up the page.
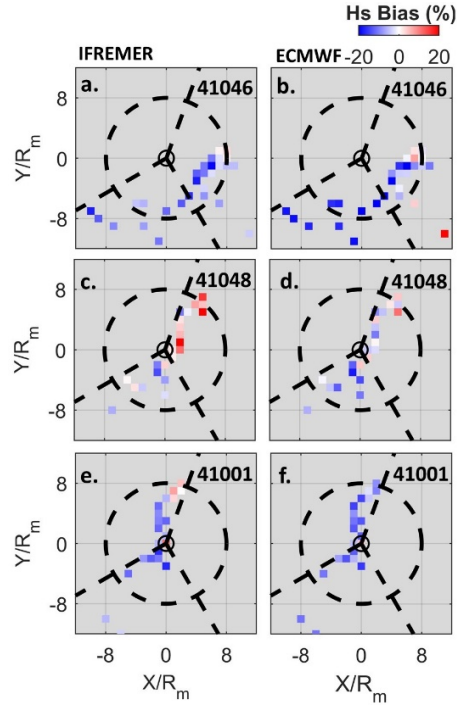
Figure S3. (a, c, e) IFREMER and (b, d, f) ECMWF Hs biases at buoys (a, b) 41046, (c, d) 41048, (e, f) 41002 during Hurricane Sandy. Plots are in a storm-centric frame of reference with distance from the eye normalized by the radius of maximum winds (Rm). Observations are binned into 1Rm x 1Rm bins. The inner circle denotes 1Rm and outer dotted circle denotes 8Rm. Direction of storm motion is up the page.