Based upon our calculations and analysis, the nowcast time for 0600Z on figure 17 is twelve (12) miles too far to the west. Page 6 of [the report] discusses a "blending scheme used to blend the GDAS and HWRF winds to provide a seamless wind field over the entire wave model domain". For this to be accurate, the nowcast time position for 0600Z on figure 17 should be adjusted to the known NHC best track position.

There appears to be an error as to the position at which the model shows the eye to have been located at 0600Z (0200 EDT). It appears that the model is showing the forecasted position and not the National Hurricane Center's best track position. This error will affect the model's wind radii modeling as well as the timeline of the vessel's wind and wave observations. The error seems to originate from the blending of the small scale winds with the large scale winds and should be adjusted to generate a correct analysis.

NOAA Response:

The hurricane model consists of 3 nested grids, with the inner most nest moving with the eye of the hurricane. However the outer nest is a larger stationary nest that encompasses large portions of the North west Atlantic. The blending between the hurricane and GDAS wind field occurs in the far field and is outside the hurricane. The reviewers however are correct that there is a discrepancy between the location of the eye of the hurricane and the best track wind. This is because the hurricane winds used in this study are based on analysis winds that were generated using data being recorded at the time of the hurricane. Below shows two time stamps of the hurricane wind at 06 UTC and 12 UTC. Superimposed on the figures are the best estimates of the track (black lines are the best estimate at the time of the hurricane and white line is the official best estimate posted by NHC). The wind simulations have been done using the black lines as the locations for the eye of the hurricane as that was the best known position at that time. In general this matches well with the official position of the eye of the hurricane but there are a few exceptions like at 06 UTC which accounts for the discrepancy noted by the reviewers. A reanalysis of the hurricane winds was beyond the scope of this study. One option available when trying to determine sea state and wind conditions near the eye of the hurricane between 06 UTC and 12 UTC on 1st September is to rely on the simulation results at 12 UTC when the tracks match well.