

HURRICANE MATTHEW DISCUSSION NUMBER 30
NWS NATIONAL HURRICANE CENTER MIAMI FL AL142016
1100 AM EDT WED OCT 05 2016

Both NOAA and Air Force Hurricane Hunter planes have been in the eye of Matthew during the past several hours. Data from those planes indicate that the hurricane is gradually recovering from the passage over the mountains of eastern Cuba and Haiti. The eye is becoming better defined on satellite. Based on SFMR winds of 103 kt and a flight-level peak wind of 118 kt, the initial intensity is 105 kt.

The environment between the Bahamas and Florida is favorable for Matthew to restrengthen some during the next couple of days. After that time, the shear is forecast to increase, resulting in gradual weakening.

Fixes from the planes indicate that Matthew is moving toward the northwest or 325 degrees at about 8 to 10 kt. The subtropical ridge over the western Atlantic is amplifying as anticipated by the global models. The flow pattern around this ridge should continue to steer the hurricane toward the northwest during the next day or two with no significant change in forward speed. After that time the ridge will move east allowing Matthew to move northward very near or over the Florida east coast and then near or to the east of the Georgia and South Carolina coasts. By the end of the forecast period, models have changed significantly since yesterday. Some track models keep the hurricane moving eastward across the Atlantic while the GFS and the ECMWF reduce the hurricane's forward speed with a southward turn. This change in these two valuable models is reflected in the current NHC forecast.

KEY MESSAGES:

1. Matthew is likely to produce devastating impacts from storm surge, extreme winds, heavy rains, flash floods, and/or mudslides in portions of the hurricane warning areas in Cuba and the Bahamas. Please consult statements from the meteorological services and other government officials in those countries.
2. When a hurricane is forecast to take a track roughly parallel to a coastline, as Matthew is forecast to do from Florida through South Carolina, it becomes very difficult to specify impacts at any one location. For example, only a small deviation of the track

to the left of the NHC forecast could bring the core of a major hurricane onshore within the hurricane warning area in Florida. However, a small deviation to the right could keep the hurricane-force winds offshore.

3. Tropical storm or hurricane conditions could affect Georgia, South Carolina, and North Carolina later this week or this weekend, even if the center of Matthew remains offshore. It is too soon to determine what, if any, land areas might be directly affected by Matthew next week. At a minimum, dangerous beach and boating conditions are likely along much of the U.S. east coast during the next several days.

4. The National Hurricane Center is issuing Potential Storm Surge Flooding Maps, and Prototype Storm Surge Watch/Warning Graphics for Matthew. It is important to remember that the Potential Storm Surge Flooding Map does not represent a forecast of expected inundation, but rather depicts a reasonable worst-case scenario - the amount of inundation that has a 10 percent chance of being exceeded. In addition, because the Flooding Map is based on inputs that extend out only to about 72 hours, it best represents the flooding potential in those locations within the watch and warning areas.

FORECAST POSITIONS AND MAX WINDS

INIT 05/1500Z 21.8N 75.2W 105 KT 120 MPH
12H 06/0000Z 23.1N 76.0W 110 KT 125 MPH
24H 06/1200Z 24.8N 77.5W 115 KT 130 MPH
36H 07/0000Z 26.6N 79.0W 115 KT 130 MPH
48H 07/1200Z 28.2N 80.1W 115 KT 130 MPH
72H 08/1200Z 31.5N 80.0W 95 KT 110 MPH
96H 09/1200Z 32.5N 76.0W 85 KT 100 MPH
120H 10/1200Z 32.0N 74.0W 70 KT 80 MPH