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Hurricane Michael Discussion Number 17
NWS National Hurricane Center Miami FL AL142018
400 PM CDT Wed Oct 10 2018

Data from an Air Force Reserve Hurricane Hunter aircraft and NWS WSR-88D radar data showed that Michael continued to strengthen until it made landfall around 1730 UTC (12:30 PM CDT) along the coast of the Florida Panhandle between Mexico Beach and Tyndall Air Force Base. The aircraft found peak 700-mb flight-level winds of 152 kt during its final pass through southeast eyewall just before Michael made landfall. There were SFMR measurements of 132-138 kt, but the validity of those observations are questionable since they occurred in shallow water and were flagged. The landfall intensity was estimated at 135 kt (155 mph), which makes Michael the strongest hurricane to make landfall in the continental U.S. since Andrew (1992). The minimum pressure at landfall was estimated at 919 mb, which is the third lowest landfall pressure in the United States. A University of Florida/Weatherflow observing site measured a minimum pressure of 920.2 mb.

Now that the entire eyewall has moved over land, the Doppler radar velocities have decreased and the initial intensity has been lowered to 110 kt. Although steady weakening is expected as Michael moves over the southeast U.S. through Thursday morning, hurricane-force winds will continue to penetrate inland over the Florida Panhandle, southeastern Alabama, and southwestern Georgia through this evening. The circulation is forecast to emerge over the western Atlantic Thursday night and Friday, where intensification as an extratropical cyclone is expected. The extratropical low is expected to remain quite strong while it moves over the north Atlantic through the weekend. The low is expected to be absorbed by another low pressure area over the eastern Atlantic by day 5.

Michael is moving northeastward of 030/14 kt, and the hurricane should continue to accelerate northeastward as it becomes embedded within the mid-latitude westerlies. The post-tropical cyclone should turn east-northeastward and further accelerate as it moves over the north Atlantic. The track guidance remains tightly clustered, but has trended faster this cycle, and the NHC forecast has been adjusted accordingly.

Gale- to storm-force winds are expected over portions of the Mid-Atlantic coast as Michael exits the U.S. east coast and becomes post-tropical. Non-tropical high wind watches, warnings, and advisories have been issued by local NWS offices for wind hazards in these areas north of Duck, North Carolina.

Key Messages:

1. Life-threatening storm surge continues along portions of the Florida Panhandle, Big Bend, and Nature Coast. The worst storm surge is expected to continue between Tyndall Air Force Base and Aucilla River, where 5 to 10 feet of inundation is still ongoing.
2. Michael will continue to produce life-threatening hurricane-force winds well inland across portions of the Florida Panhandle, southeast Alabama, and southwestern Georgia this evening as the core

of the hurricane continues to move inland.

3. Heavy rainfall from Michael could produce life-threatening flash flooding from the Florida Panhandle and Big Bend region into portions southeast Alabama, Georgia, the Carolinas, and southeast Virginia.

4. Tropical storm conditions will affect portions of the southeast U.S. coast from northeast Florida through North Carolina, and tropical storm warnings are in effect for these areas.

FORECAST POSITIONS AND MAX WINDS

INIT	10/2100Z	30.9N	85.1W	110 KT	125 MPH...	INLAND
12H	11/0600Z	32.6N	83.2W	60 KT	70 MPH...	INLAND
24H	11/1800Z	35.1N	79.6W	40 KT	45 MPH...	INLAND
36H	12/0600Z	37.6N	74.4W	50 KT	60 MPH...	OVER WATER
48H	12/1800Z	40.7N	66.2W	60 KT	70 MPH...	POST-TROP/EXTRATROP
72H	13/1800Z	46.7N	43.5W	60 KT	70 MPH...	POST-TROP/EXTRATROP
96H	14/1800Z	49.2N	19.0W	50 KT	60 MPH...	POST-TROP/EXTRATROP
120H	15/1800Z...					ABSORBED

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Forecaster Brown