



National Transportation Safety Board

**Office of Marine Safety
Washington, D.C. 20594-2000
December 13, 2016**

**ATTACHMENT 28 to the METEOROLOGY GROUP FACTUAL REPORT
DCA16MM001**

Tropical Weather Outlooks for the Atlantic valid between 2000 EDT on September 28, 2015, and 0800 EDT on October 1, 2015.

*Submitted by: Mike Richards
NTSB, AS-30*

ABNT20 KNHC 282328
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
800 PM EDT MON SEP 28 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Tropical Depression Eleven, located about midway between the central Bahamas and Bermuda.

A sharp trough of low pressure located over the eastern Gulf of Mexico about 150 miles west of Tampa, Florida, continues to produce a large area of showers and thunderstorms over the eastern Gulf of Mexico and portions of the southeastern United States. Surface observations and data from a reconnaissance aircraft from a few hours ago indicate that the system has become elongated. However, the aircraft did find gale-force winds in the eastern portion of the trough. Strong upper-level winds will likely prevent significant development of this system before it moves inland over the northern Gulf coast on Tuesday. Another Air Force Reserve reconnaissance aircraft is scheduled to investigate the disturbance Tuesday morning, if necessary. Regardless of whether or not this system becomes a tropical cyclone, locally heavy rains are likely over portions of the southeastern United States during the next couple of days. For additional information on this weather system, see High Seas Forecasts issued by the National Weather Service and products from your local National Weather Service office.

* Formation chance through 48 hours...low...20 percent

* Formation chance through 5 days...low...20 percent

A large area of disturbed weather over the central Atlantic several hundred miles northeast of the northern Leeward Islands is associated with a frontal trough and the remnants of Ida. Some slow development of this system is possible in a couple of days while it moves west-northwestward.

* Formation chance through 48 hours...low...near 0 percent

* Formation chance through 5 days...low...30 percent

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High Seas Forecasts issued by the National Weather Service can be found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Cangialosi

ABNT20 KNHC 290533
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
200 AM EDT TUE SEP 29 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on recently upgraded Tropical Storm Joaquin, located a few hundred miles northeast of the central Bahamas.

A trough of low pressure located over the eastern Gulf of Mexico about 100 miles west-northwest of Tampa, Florida, continues to produce disorganized showers and thunderstorms over the northeastern Gulf of Mexico and portions of the southeastern United States.

Strong upper-level winds will likely prevent any significant development of this system before it moves inland over the northern Gulf coast later today. An Air Force Reserve reconnaissance aircraft is scheduled to investigate the disturbance later today, if necessary. Regardless of tropical cyclone development, locally heavy rains are likely over portions of the southeastern United States during the next couple of days. For additional information on this system, see High Seas Forecasts issued by the National Weather Service and products from your local National Weather Service office.

* Formation chance through 48 hours...low...20 percent

* Formation chance through 5 days...low...20 percent

A large area of disturbed weather over the central Atlantic several hundred miles northeast of the northern Leeward Islands is associated with a frontal trough and the remnants of Ida. Some slow development of this system is possible later this week while it moves slowly west-northwestward. For additional information on this system, see High Seas Forecasts issued by the National Weather Service.

* Formation chance through 48 hours...low...near 0 percent

* Formation chance through 5 days...low...30 percent

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High Seas Forecasts issued by the National Weather Service can be found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Brennan

ABNT20 KNHC 291145
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
800 AM EDT TUE SEP 29 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Tropical Storm Joaquin, located a few hundred miles northeast of the central Bahamas.

A trough of low pressure located over the northeastern Gulf of Mexico between Tampa, Florida and Apalachicola, Florida, continues to produce disorganized showers and thunderstorms over the northeastern Gulf of Mexico and portions of the southeastern United States. Strong upper-level winds will likely prevent any significant development of this system before it moves inland over the northern Gulf coast later today, and the Air Force Reserve reconnaissance aircraft scheduled for today has been canceled. Regardless of tropical cyclone development, locally heavy rains are likely over portions of the southeastern United States during the next couple of days. For additional information on this system, see High Seas Forecasts issued by the National Weather Service and products from your local National Weather Service office.

* Formation chance through 48 hours...low...10 percent

* Formation chance through 5 days...low...10 percent

A large area of disturbed weather over the central Atlantic several hundred miles northeast of the northern Leeward Islands is associated with a frontal trough and the remnants of Ida. Some slow development of this system is possible later this week while it moves slowly west-northwestward. For additional information on this system, see High Seas Forecasts issued by the National Weather Service.

* Formation chance through 48 hours...low...10 percent

* Formation chance through 5 days...medium...40 percent

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High Seas Forecasts issued by the National Weather Service can be found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Beven

ABNT20 KNHC 291736
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
200 PM EDT TUE SEP 29 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Tropical Storm Joaquin, located a few hundred miles northeast of the central Bahamas.

The trough of low pressure over the northeastern Gulf of Mexico has moved inland over northeastern Florida and development is not expected. Locally heavy rains are still likely over portions of the southeastern United States during the next couple of days. For additional information on this system, see High Seas Forecasts issued by the National Weather Service and products from your local National Weather Service office.

* Formation chance through 48 hours...low...near 0 percent

* Formation chance through 5 days...low...near 0 percent

A large area of disturbed weather over the central Atlantic several hundred miles northeast of the northern Leeward Islands is associated with a frontal trough and the remnants of Ida. Some slow development of this system is possible later this week while it moves slowly west-northwestward. For additional information on this system, see High Seas Forecasts issued by the National Weather Service.

* Formation chance through 48 hours...low...10 percent

* Formation chance through 5 days...medium...50 percent

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High Seas Forecasts issued by the National Weather Service can be found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Blake

ABNT20 KNHC 292325
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
800 PM EDT TUE SEP 29 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Tropical
Storm Joaquin, located a few hundred miles northeast of the central
Bahamas.

A large area of cloudiness and thunderstorms over the central
Atlantic several hundred miles northeast of the northern Leeward
Islands is associated with a frontal trough and the remnants of Ida.
Some gradual development of this system is possible during the next
several days while it moves slowly west-northwestward. Additional
information on this system can be found in High Seas Forecasts
issued by the National Weather Service.

- * Formation chance through 48 hours...low...30 percent
- * Formation chance through 5 days...medium...60 percent

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High Seas Forecasts issued by the National Weather Service can be
found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and
on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Brown

ABNT20 KNHC 300507
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
200 AM EDT WED SEP 30 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Tropical Storm Joaquin, located a few hundred miles east of the northwestern Bahamas.

A large area of cloudiness and thunderstorms over the central Atlantic several hundred miles northeast of the northern Leeward Islands is associated with a frontal trough and the remnants of Ida. Some gradual development of this system is possible during the next several days while it moves slowly west-northwestward. Additional information on this system can be found in High Seas Forecasts issued by the National Weather Service.

- * Formation chance through 48 hours...low...30 percent
- * Formation chance through 5 days...medium...60 percent

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High Seas Forecasts issued by the National Weather Service can be found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Brennan

ABNT20 KNHC 301150
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
800 AM EDT WED SEP 30 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on just-upgraded
Hurricane Joaquin, located a few hundred miles east-northeast of the
central Bahamas.

A large area of cloudiness and thunderstorms over the central
Atlantic several hundred miles northeast of the northern Leeward
Islands is associated with a frontal trough and the remnants of Ida.
This system has become a little better organized since yesterday,
and additional gradual development is possible during the next
several days while it moves slowly northwestward. Additional
information on this system can be found in High Seas Forecasts
issued by the National Weather Service.

* Formation chance through 48 hours...medium...40 percent

* Formation chance through 5 days...high...70 percent

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High Seas Forecasts issued by the National Weather Service can be
found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and
on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Beven

ABNT20 KNHC 301749
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
200 PM EDT WED SEP 30 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Hurricane
Joaquin, located a few hundred miles east-northeast of the
central Bahamas.

A large area of cloudiness and thunderstorms over the central
Atlantic several hundred miles southeast of Bermuda is associated
with a frontal trough which has absorbed the remnants of Ida. This
system has become a little better organized since yesterday, and
additional gradual development is possible during the next several
days while it moves slowly northwestward to northward. Additional
information on this system can be found in High Seas Forecasts
issued by the National Weather Service.

* Formation chance through 48 hours...medium...50 percent

* Formation chance through 5 days...high...80 percent

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High Seas Forecasts issued by the National Weather Service can be
found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and
on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Beven

ABNT20 KNHC 302313
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
800 PM EDT WED SEP 30 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Hurricane
Joaquin, located a few hundred miles east-northeast of the
central Bahamas.

A broad low pressure system has developed along an old frontal
boundary over the central Atlantic more than 600 miles southeast of
Bermuda. Cloudiness and thunderstorms associated with this system
have become a little better organized since yesterday. Environmental
conditions are expected to be conducive for a tropical depression to
form by the weekend while the low moves slowly northwestward to
northward. Additional information on this system can be found in
High Seas Forecasts issued by the National Weather Service.

* Formation chance through 48 hours...medium...50 percent

* Formation chance through 5 days...high...80 percent

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High Seas Forecasts issued by the National Weather Service can be
found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and
on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Stewart

ABNT20 KNHC 010507
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
200 AM EDT THU OCT 1 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Hurricane
Joaquin, located near the central Bahamas.

A broad area of low pressure associated with an old frontal
zone is centered over the central Atlantic more than 600 miles
southeast of Bermuda. This system is producing a large area of
cloudiness and thunderstorms, and environmental conditions are
expected to be conducive for a tropical depression to form by the
weekend while the low moves slowly northwestward to northward.
Additional information on this system can be found in High Seas
Forecasts issued by the National Weather Service.

* Formation chance through 48 hours...medium...50 percent

* Formation chance through 5 days...high...80 percent

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High Seas Forecasts issued by the National Weather Service can be
found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and
on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Avila

ABNT20 KNHC 011156
TWOAT
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
800 AM EDT THU OCT 1 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:
The National Hurricane Center is issuing advisories on Hurricane
Joaquin, located near the central Bahamas.

A non-tropical area of low pressure centered over the central
Atlantic about 700 miles southeast of Bermuda is producing a large
area of cloudiness and thunderstorms. Environmental conditions
are expected to be conducive for the low to gradually obtain
more tropical characteristics, and a tropical depression is
likely to form in within a few days while the low moves slowly
north-northwestward to northward. Additional information on this
system can be found in High Seas Forecasts issued by the National
Weather Service.

* Formation chance through 48 hours...medium...50 percent

* Formation chance through 5 days...high...80 percent

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High Seas Forecasts issued by the National Weather Service can be
found under AWIPS header NFDHSFAT1, WMO header FZNT01 KWBC, and
on the Web at <http://www.opc.ncep.noaa.gov/shtml/NFDHSFAT1.shtml>.

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Forecaster Blake