

Dan Lindsey - NOAA Federal

From: Dan Lindsey - NOAA Federal
Sent: Sunday, September 1, 2019 2:34 PM
To: Louis Uccellini - NOAA Federal
Subject: Re: Forecast uncertainty in TC Dorian's turn to the north

Louis,

I will add frames to it in a little bit, but the link will remain the same.

Dan

On Sun, Sep 1, 2019 at 12:28 PM Louis Uccellini - NOAA Federal <louis.uccellini@noaa.gov> wrote:
Dan I: Hopefully you are continuing to loop. Would like to see loop as it passes over the entire Island.
Thanks. Louis

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Dr. Louis W. Uccellini, Director
NOAA/National Weather Service
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Silver Spring, MD 20910
[301.713.9095](tel:301.713.9095)

On Sep 1, 2019, at 1:45 PM, Dan Lindsey - NOAA Federal <0000006a2d176238-dmarc-request@listserv.albany.edu> wrote:

MAP,

Here's GOES-16's latest closeup - this starts with 30-sec imagery then switches to 1-min imagery. It's a VIS/IR "sandwich".

http://rammb.cira.colostate.edu/templates/loop_directory.asp?data_folder=dev/lindsey/loops/1sep19_sandwich&loop_speed_ms=40

Unfortunately I fear this is going to be devastating for the Bahamas, particularly the town of Marsh Harbour, population over 6000.

Dan

On Sun, Sep 1, 2019 at 11:30 AM Neil Stuart - NOAA Federal <00000087a1803eea-dmarc-request@listserv.albany.edu> wrote:

Lance and everyone,

The storm is making landfall on Great Abaco now (around 1 PM EDT) and attached is a small GOES-16 Mesoscale Sector Visible Satellite Loop with Earth Networks lightning data overlaid. It is 5 minute lightning data with 1 minute update. I don't even want to imagine the destruction going on there right now. The in-cloud and cloud-to-ground lightning has

been around the eyewall for many hours.

Neil

On Sun, Sep 1, 2019 at 10:17 AM Bosart, Lance F <lbosart@albany.edu> wrote:

Hi all,

A speculative post....

A simple subjective $d(\text{prog})/dt$ analysis of the 500-hPa geopotential heights, vorticity, and vertical motion from Alicia Bentley's website of the deterministic GFS forecasts verifying 0600 and 1200 UTC 2 Sep 2019 suggests that uncertainty on the forecast northward turn of TC Dorian *may* be related to uncertainty of the forecast southern extension of a trough across the MidAtlantic region (see the below links).

A few takeaways....

1. The GFS didn't really "see" Dorian until the 6–7 day forecasts when the storm developed in the extreme northeastern Gulf of Mexico.
2. The GFS correctly shifted Dorian to east of Florida in the 5–6 day forecasts.
3. The GFS forecast Dorian to turn to the north farther east of Florida in the 3–4 day forecasts in conjunction with a SSW extension of the southern portion of a MidAtlantic trough.
4. Need to understand to what extent forecast uncertainty in the southern extension of the aforementioned MidAtlantic trough is related to forecast uncertainty with the western CONUS ridge and weak disturbances moving around the northern periphery of this ridge across Canada.

Forecasts verifying 0600 UTC 2 Sep 2019:

http://www.atmos.albany.edu/student/abentley/realtime/dprogdt.php?domain=northamer&variable=rel_vort

Forecasts verifying 1200 UTC 2 Sep 2019:

http://www.atmos.albany.edu/student/abentley/realtime/dprogdt.php?domain=northamer&variable=rel_vort

Thoughts?

Lance

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Neil A. Stuart, Meteorologist
National Weather Service
Albany, NY (weather.gov/aly)
<https://www.facebook.com/NWSAlbany>
<https://twitter.com/NWSAlbany>
Ask me how to be a Weather Ready Nation Ambassador



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