

# **NAAMES**

# **WX Briefing**

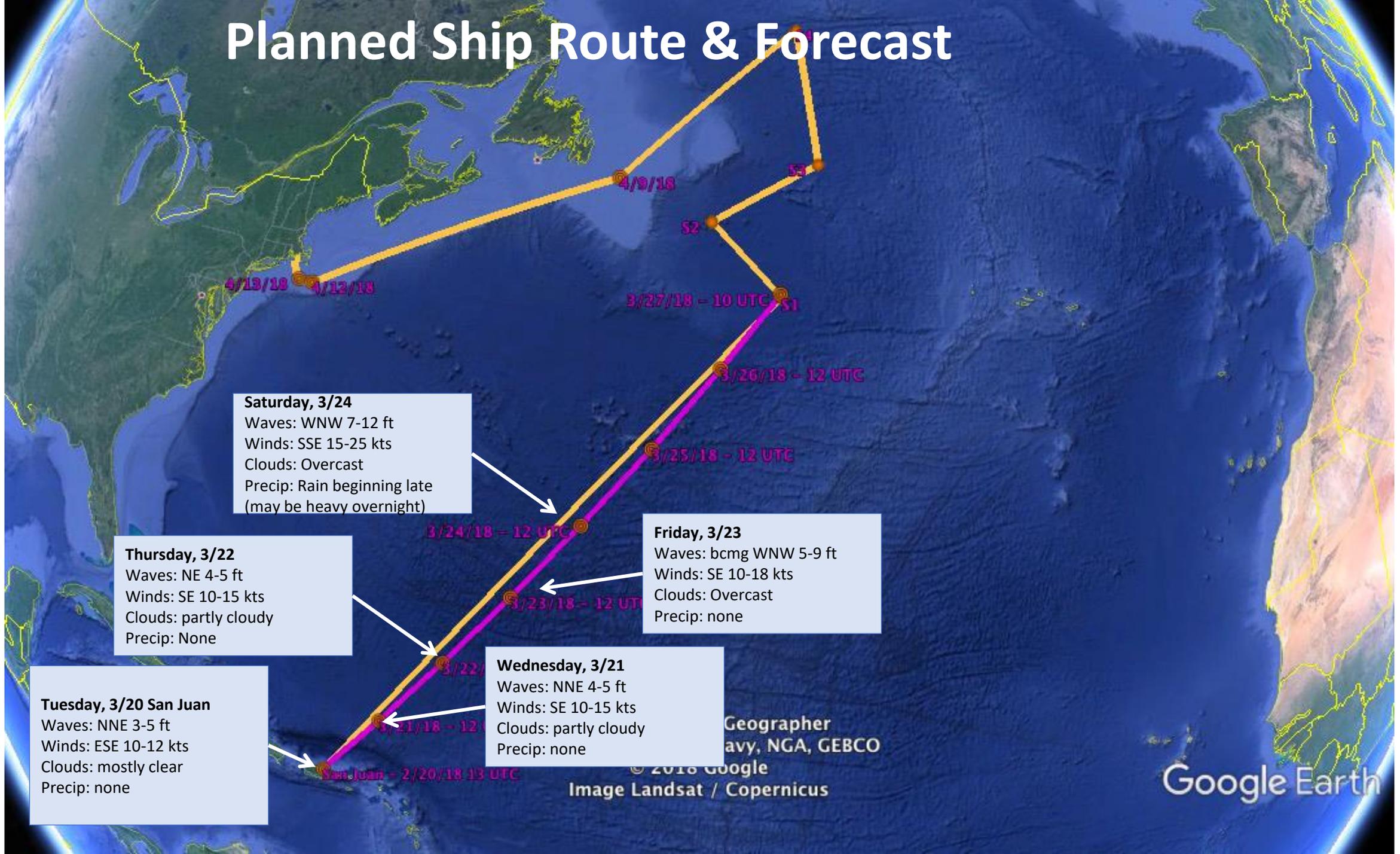
**Sunday, March 18, 2018**

Michael Shook

# Forecast Highlights

- Afternoon/evening rain for Monday, no rain in forecast for Tuesday morning now
- Clear at Wallops now, clouds and rain move in Monday-Thursday, rainy Saturday departure
- St. John's currently looks okay for arrival on Saturday 3/24

# Planned Ship Route & Forecast



**Saturday, 3/24**  
Waves: WNW 7-12 ft  
Winds: SSE 15-25 kts  
Clouds: Overcast  
Precip: Rain beginning late (may be heavy overnight)

**Thursday, 3/22**  
Waves: NE 4-5 ft  
Winds: SE 10-15 kts  
Clouds: partly cloudy  
Precip: None

**Friday, 3/23**  
Waves: bcmg WNW 5-9 ft  
Winds: SE 10-18 kts  
Clouds: Overcast  
Precip: none

**Wednesday, 3/21**  
Waves: NNE 4-5 ft  
Winds: SE 10-15 kts  
Clouds: partly cloudy  
Precip: none

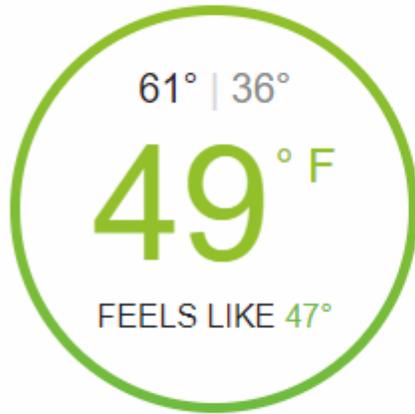
**Tuesday, 3/20 San Juan**  
Waves: NNE 3-5 ft  
Winds: ESE 10-12 kts  
Clouds: mostly clear  
Precip: none

Geographer  
avy, NGA, GEBCO  
© 2018 Google  
Image Landsat / Copernicus

Google Earth

# Current Conditions at Wallops

© 12:35 PM EDT on March 18, 2018 (GMT -0400) | Updated a minute ago

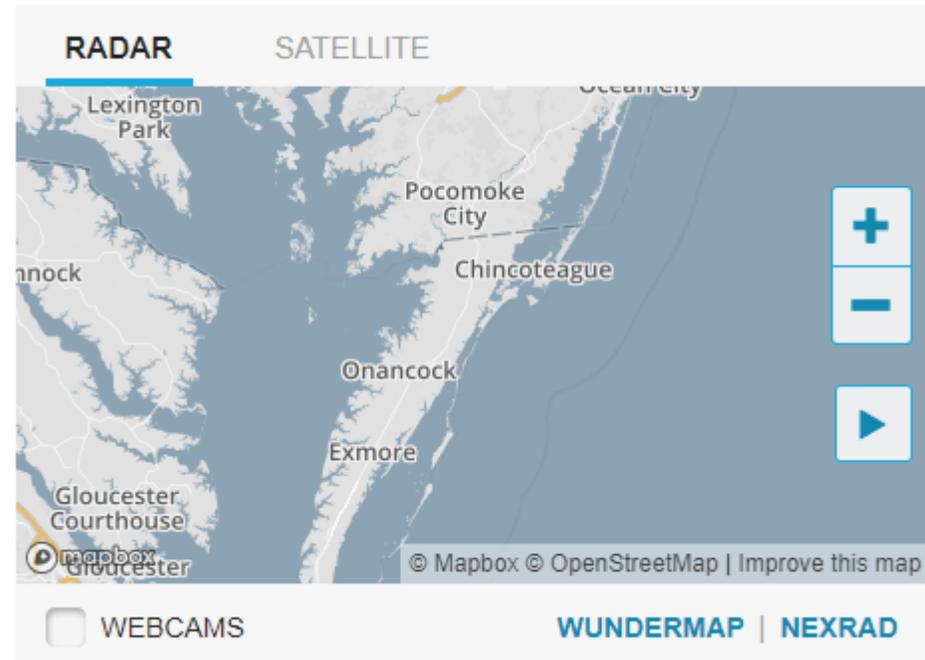


Sunny

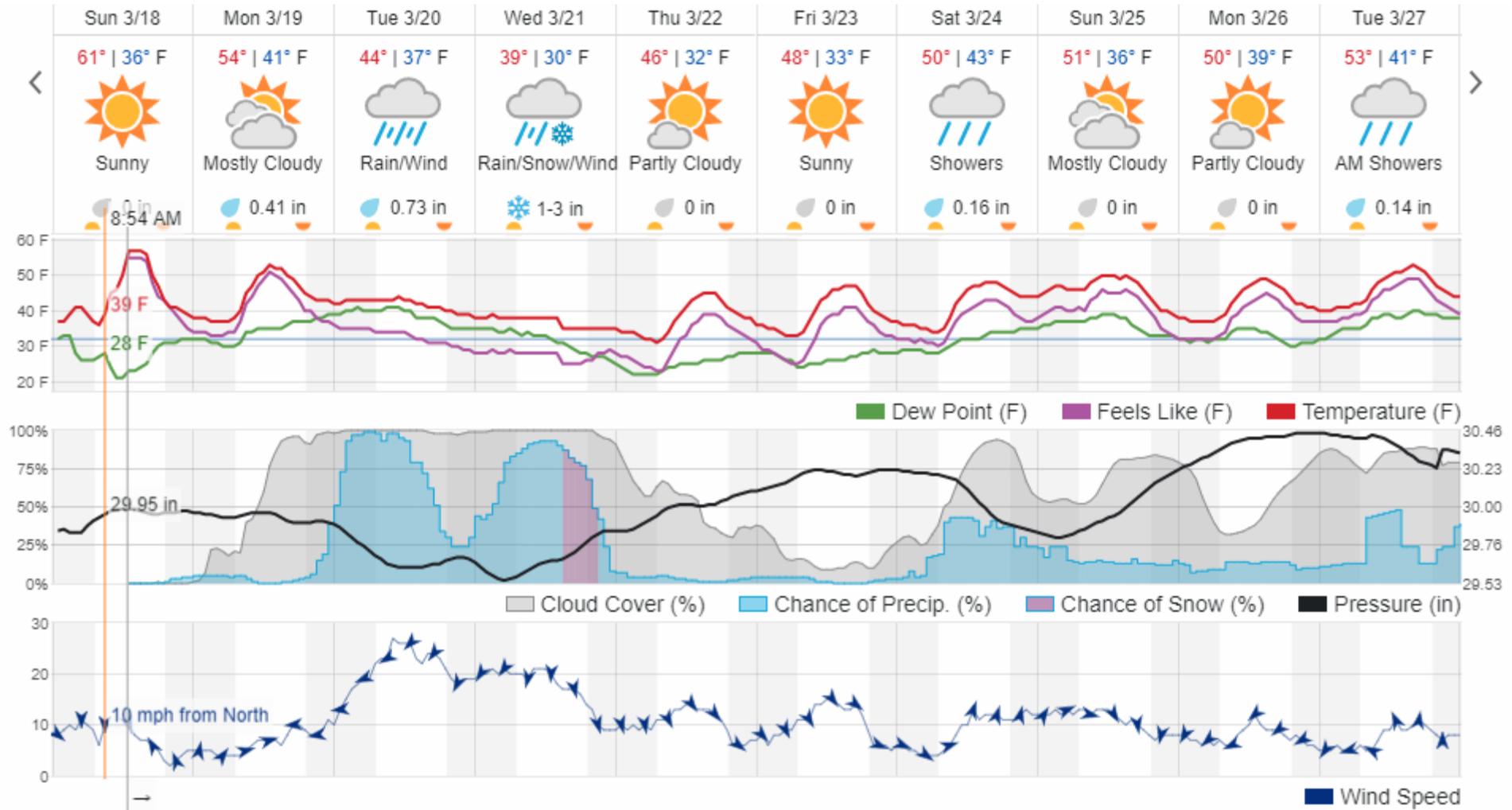


Wind **WNW**  
Gusts **12 mph**

Today is forecast to be **MUCH WARMER** than yesterday.



# Wallops Forecast



# Current Conditions at San Juan

© 12:38 PM AST on March 18, 2018 (GMT -0400) | Updated a few seconds ago

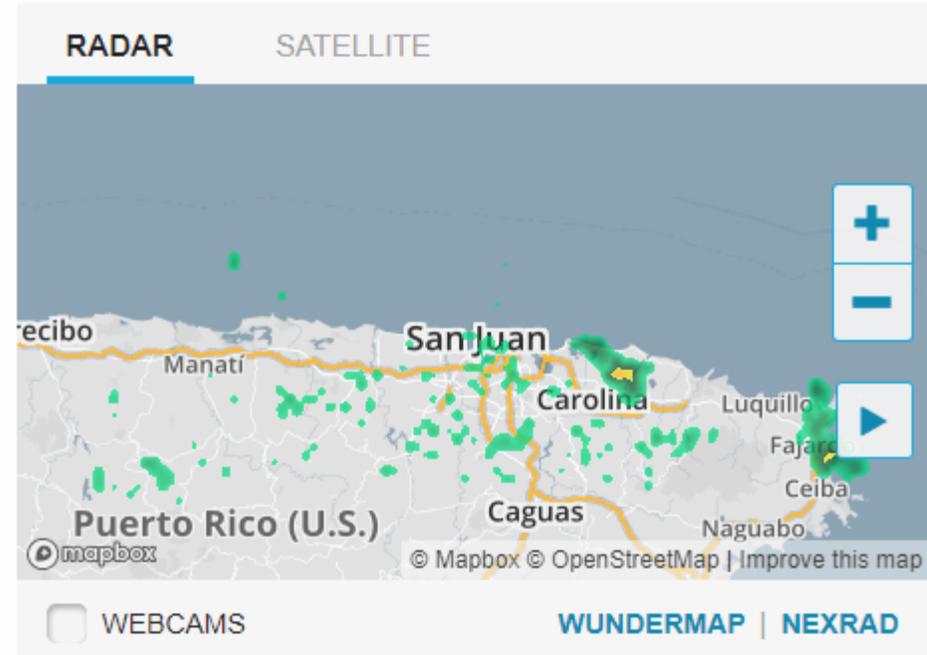


Partly Cloudy

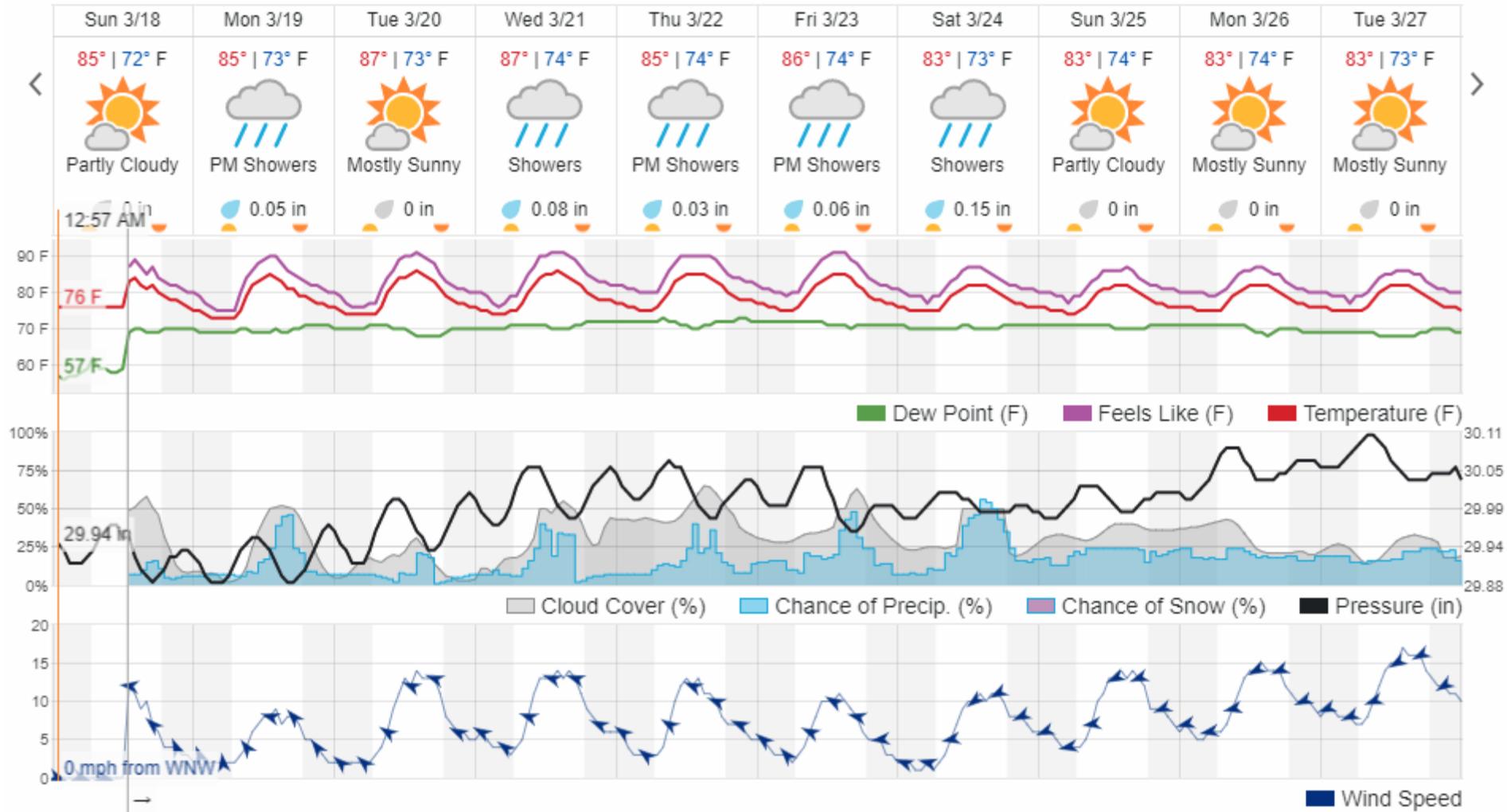


Wind **WNW**

Today is forecast to be **MUCH WARMER** than yesterday.



# San Juan Forecast



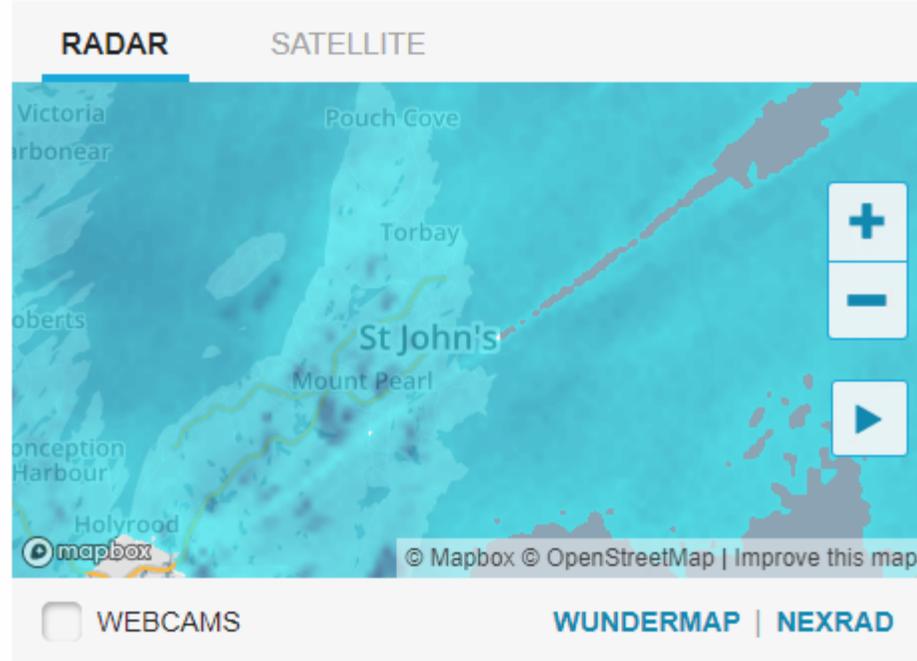
# Current Conditions at St. John's

© 3:10 PM NDT on March 18, 2018 (GMT -0230) | Updated 8 minutes ago

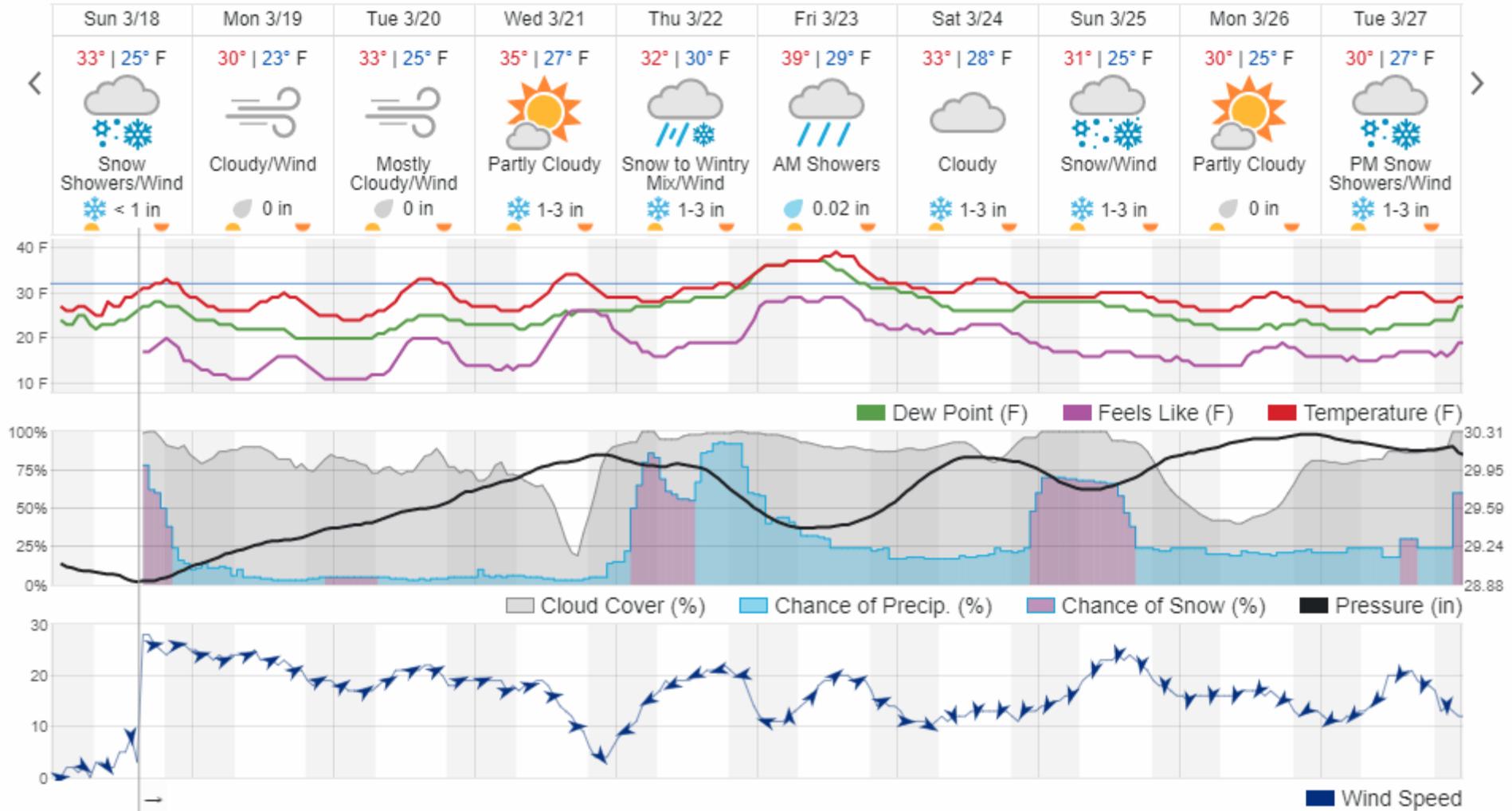


Wind **WNW**  
Gusts **14 mph**

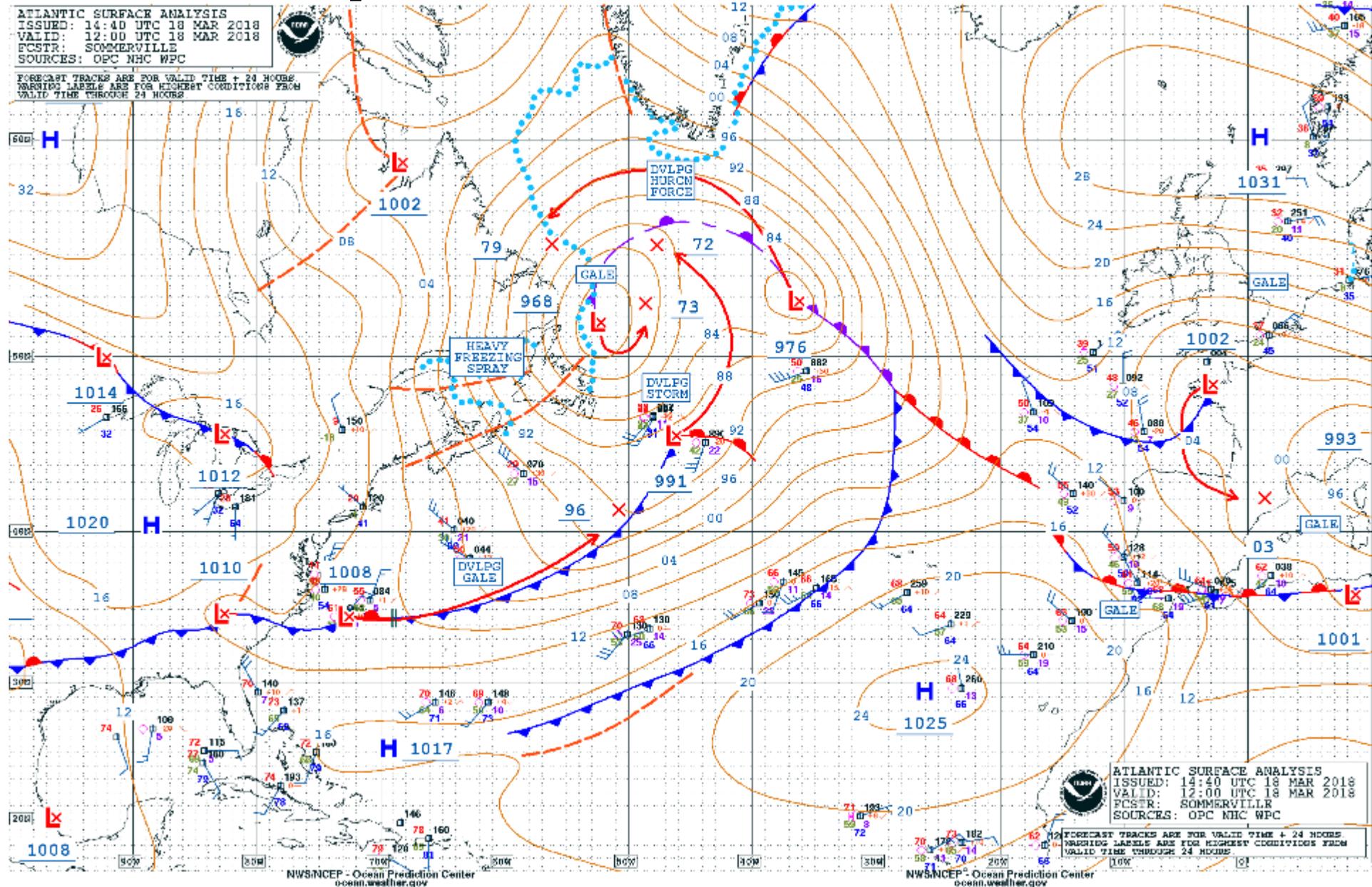
Today is forecast to be **MUCH COOLER** than yesterday.



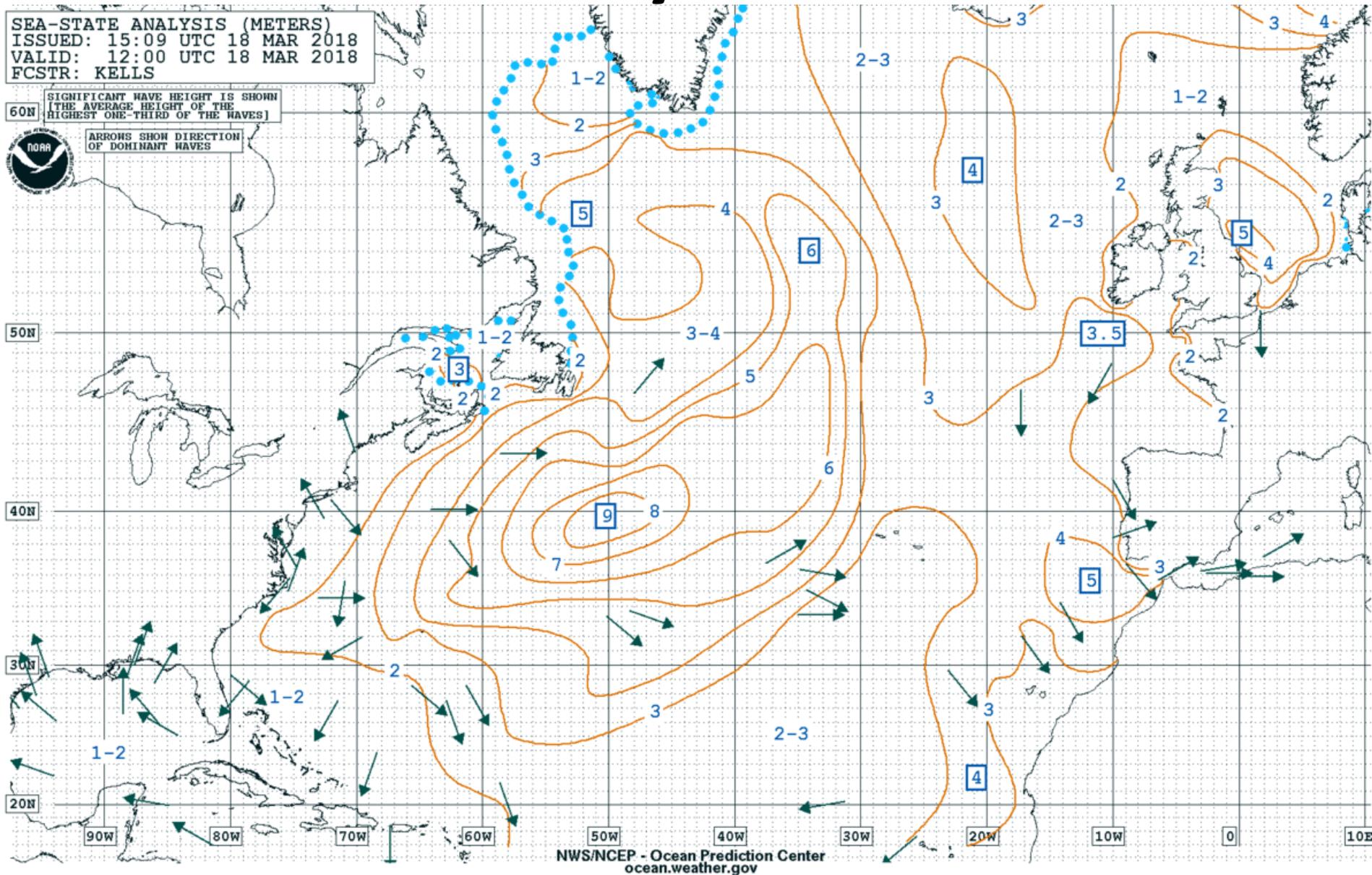
# St. John's Forecast



# Surface Analysis



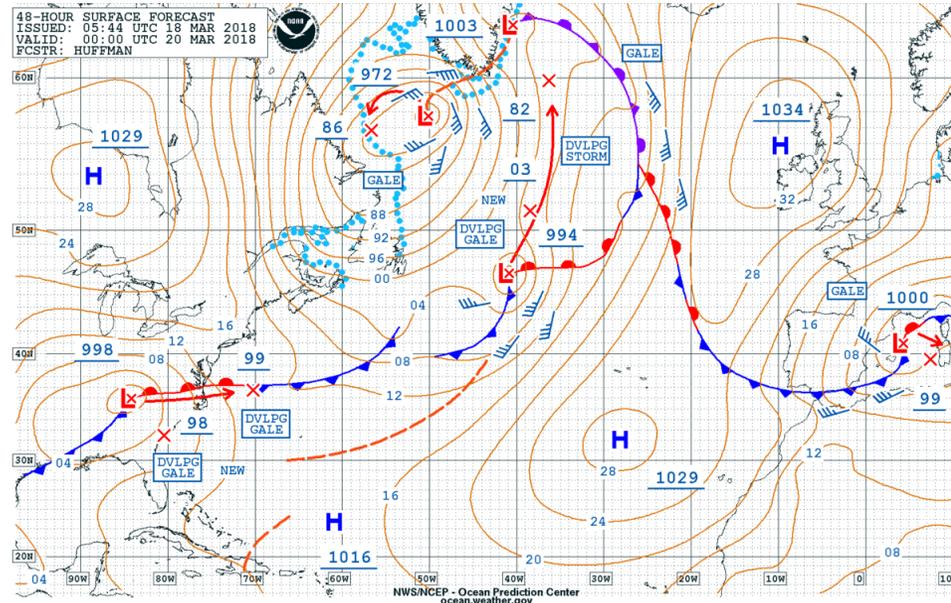
# Sea State Analysis



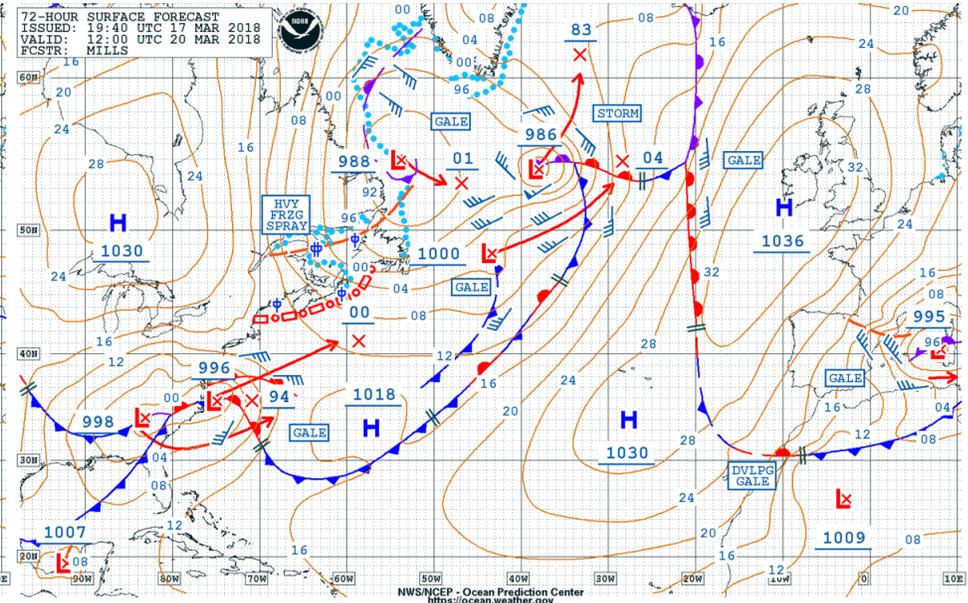
- Significant Wave Height is shown (in meters). This is the average height of the highest one-third of the waves
- Arrows show direction of dominant waves

# Synoptic Forecast

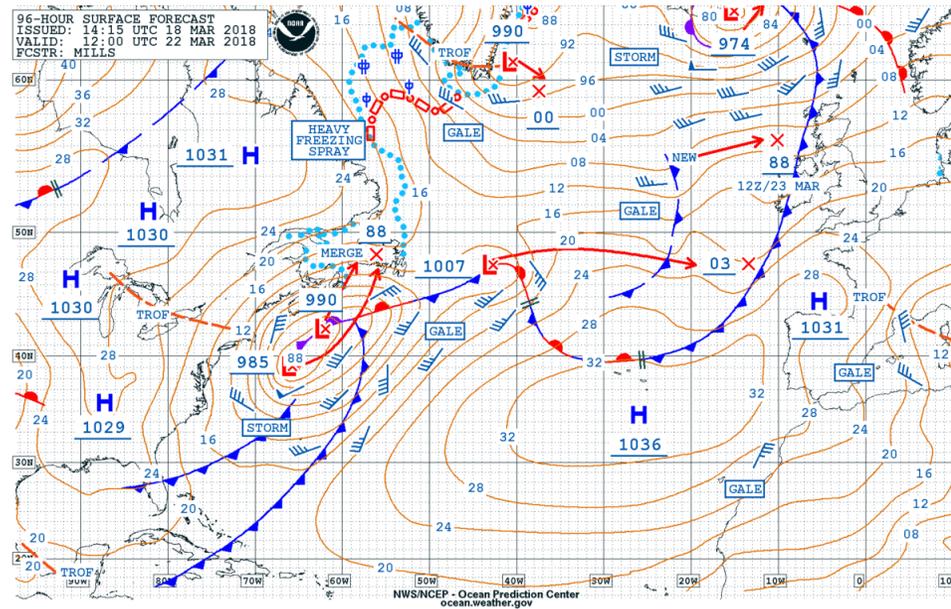
## 48 Hour Forecast - Monday 8pm EDT



## 72 Hour Forecast - Tuesday 8am EDT

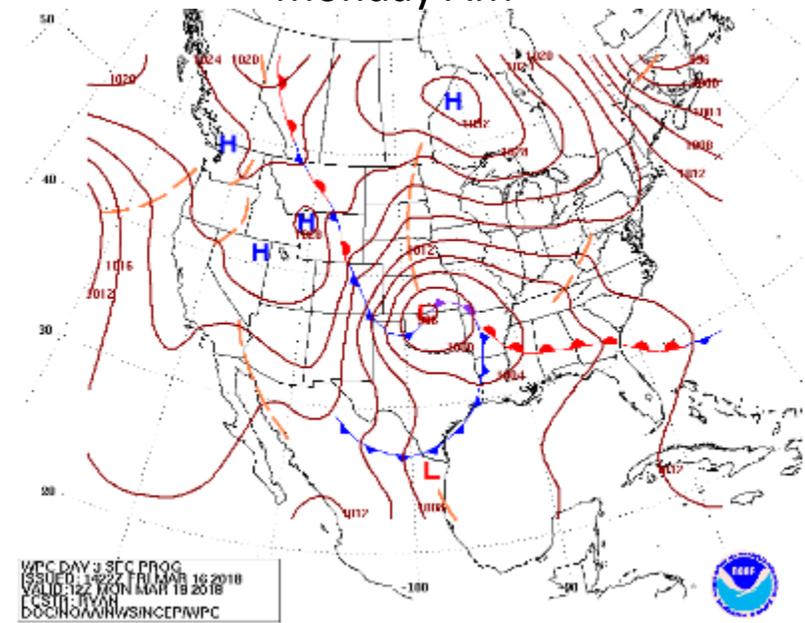


## 96 Hour Forecast - Thursday 8am EDT

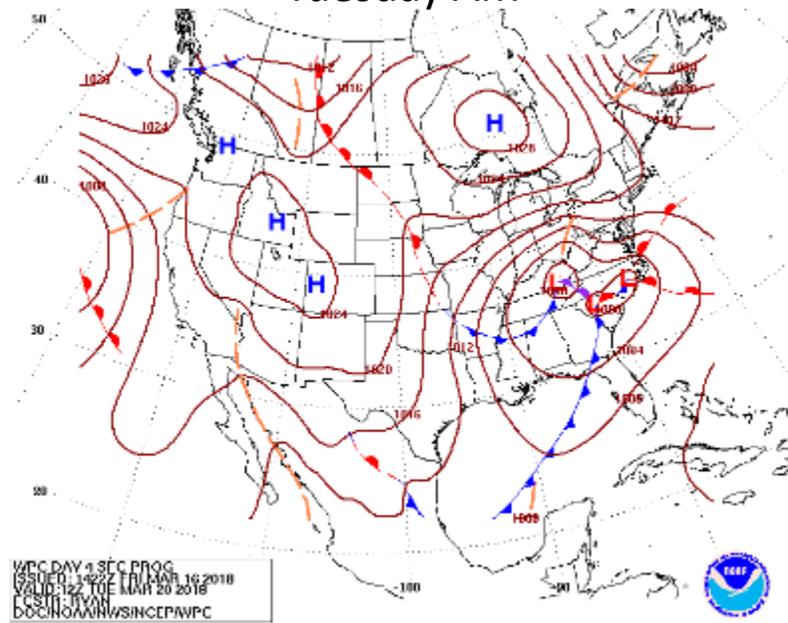


# Nor'easter Tracking

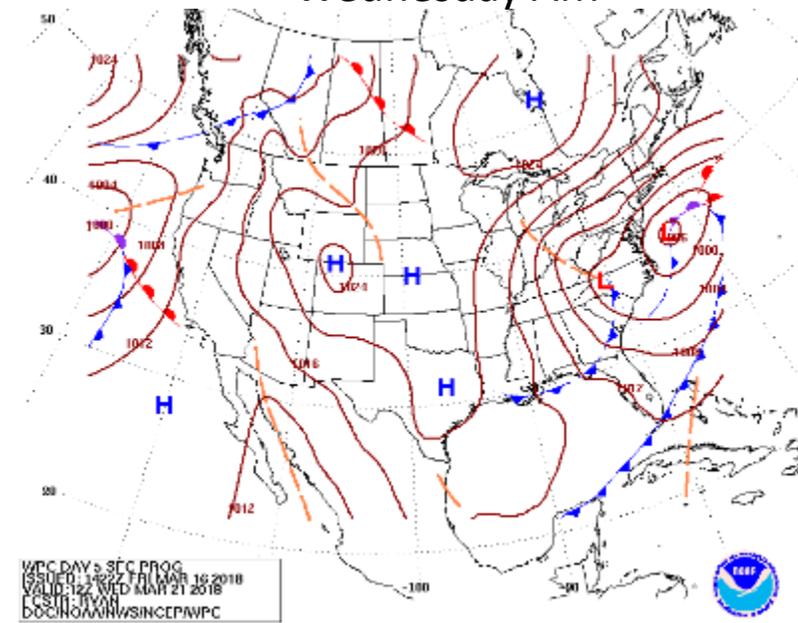
Monday AM



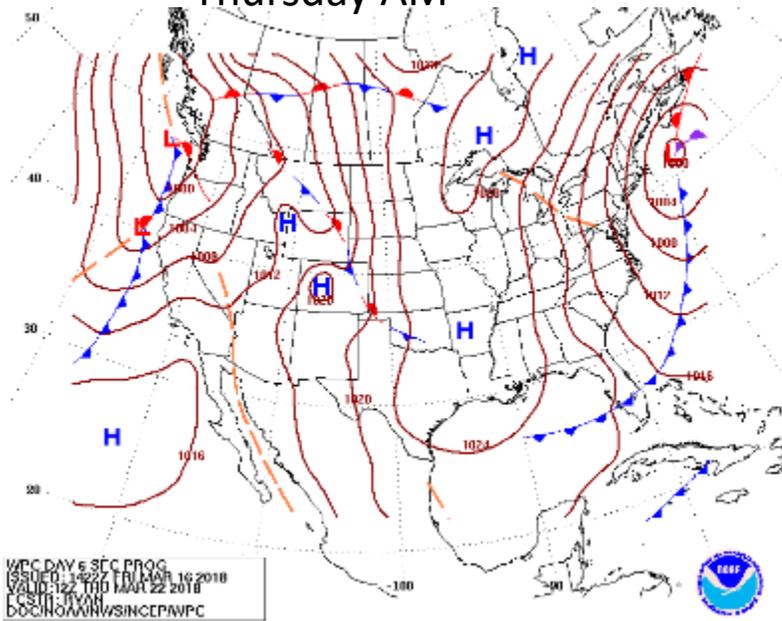
Tuesday AM



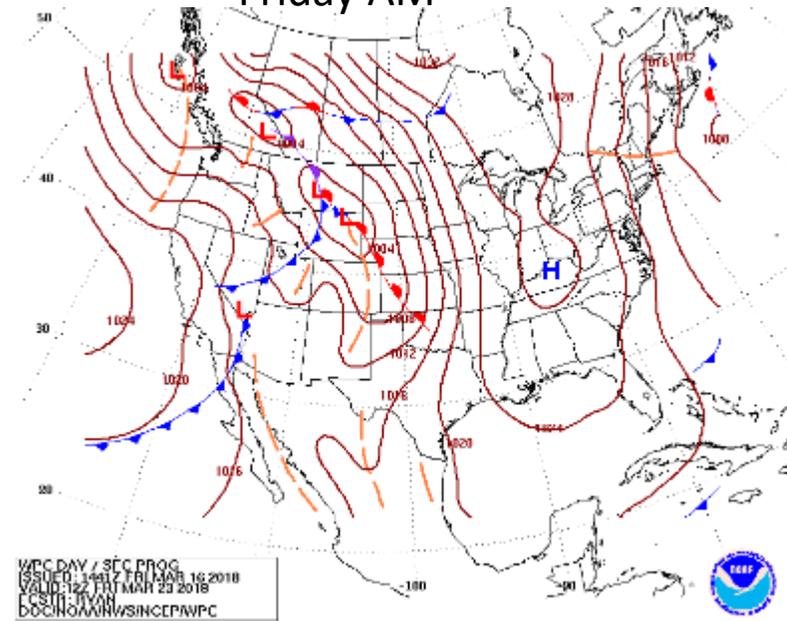
Wednesday AM



Thursday AM

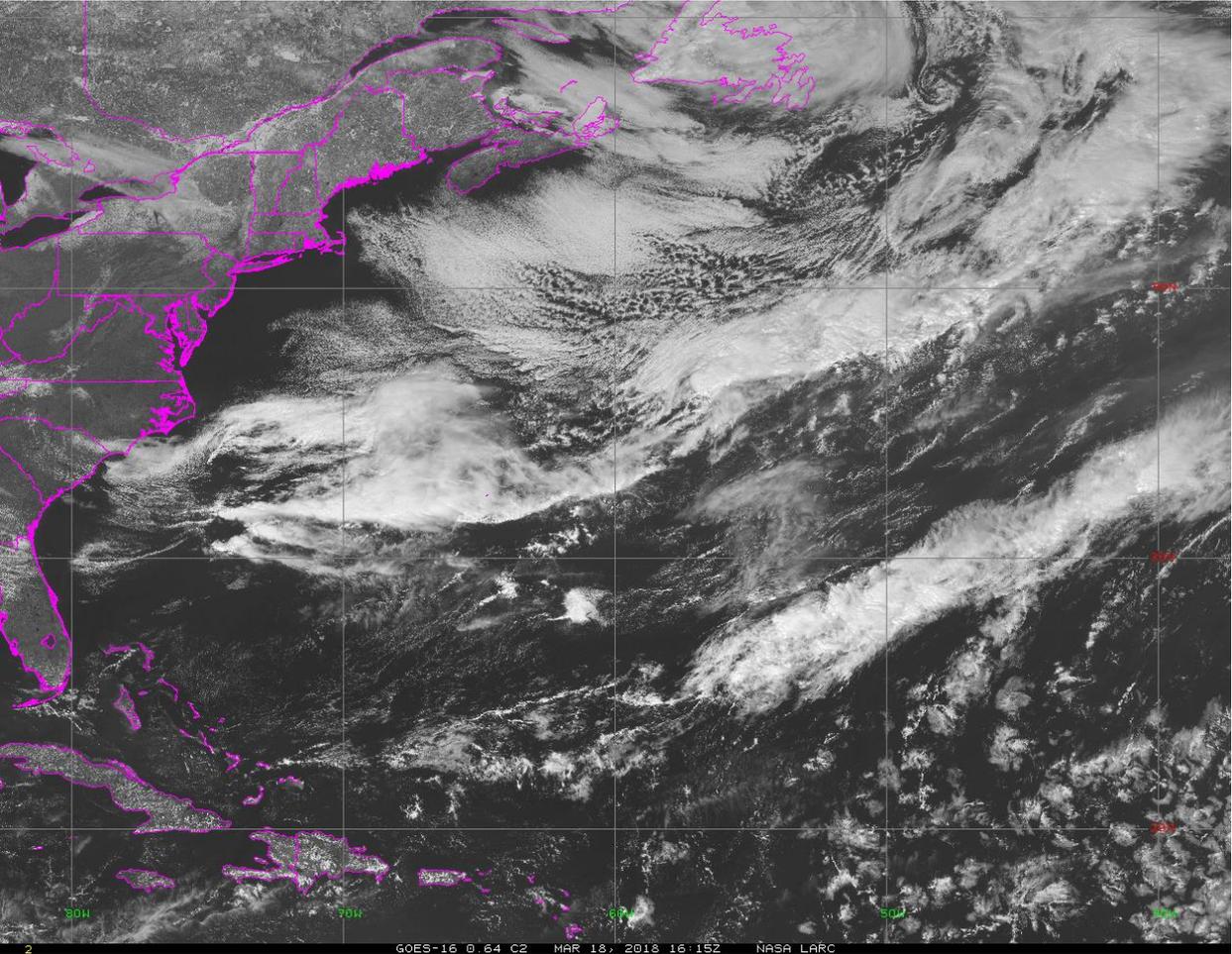


Friday AM

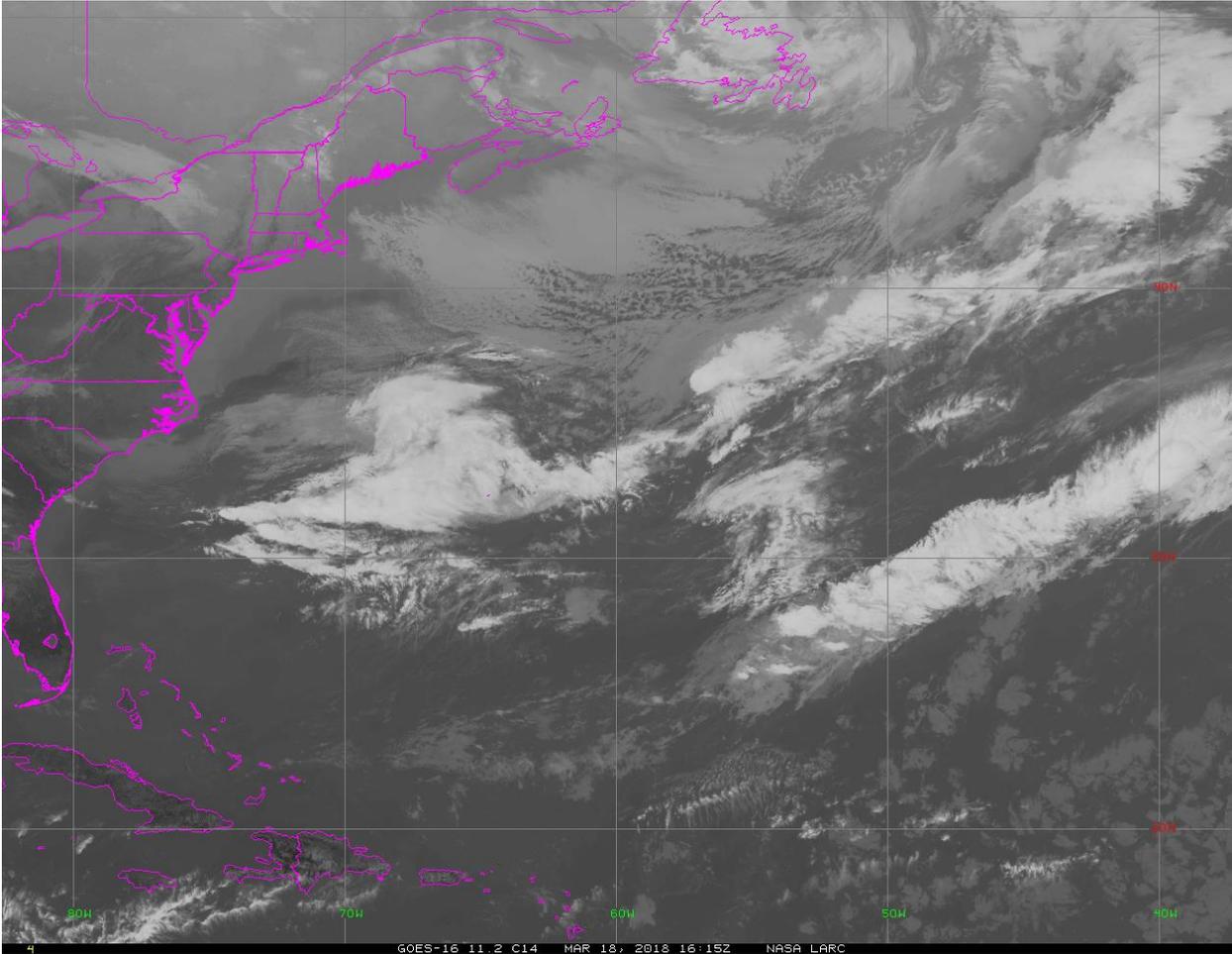


# GOES-16 Imagery (3/18 16:15 UTC)

Visible

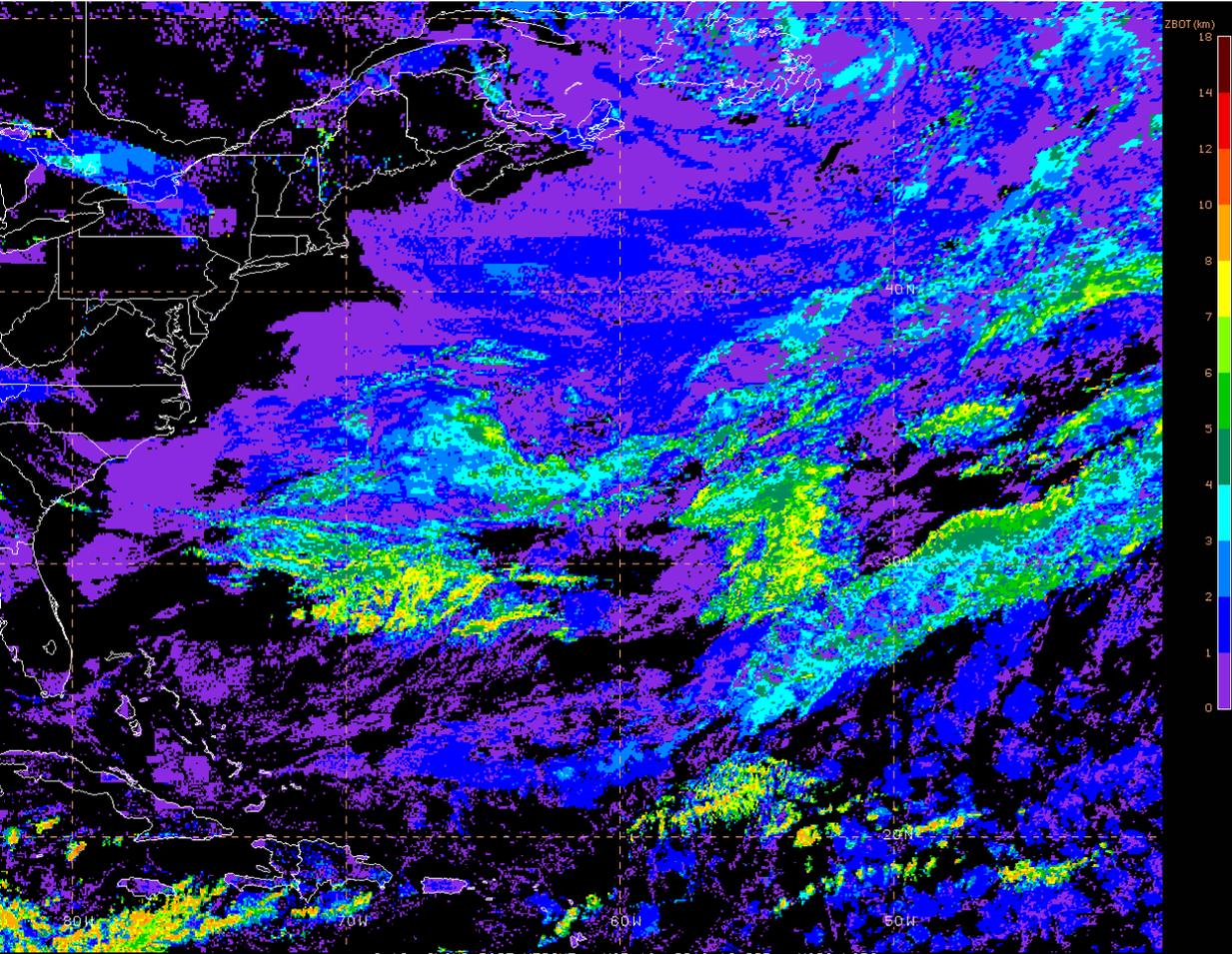


IR

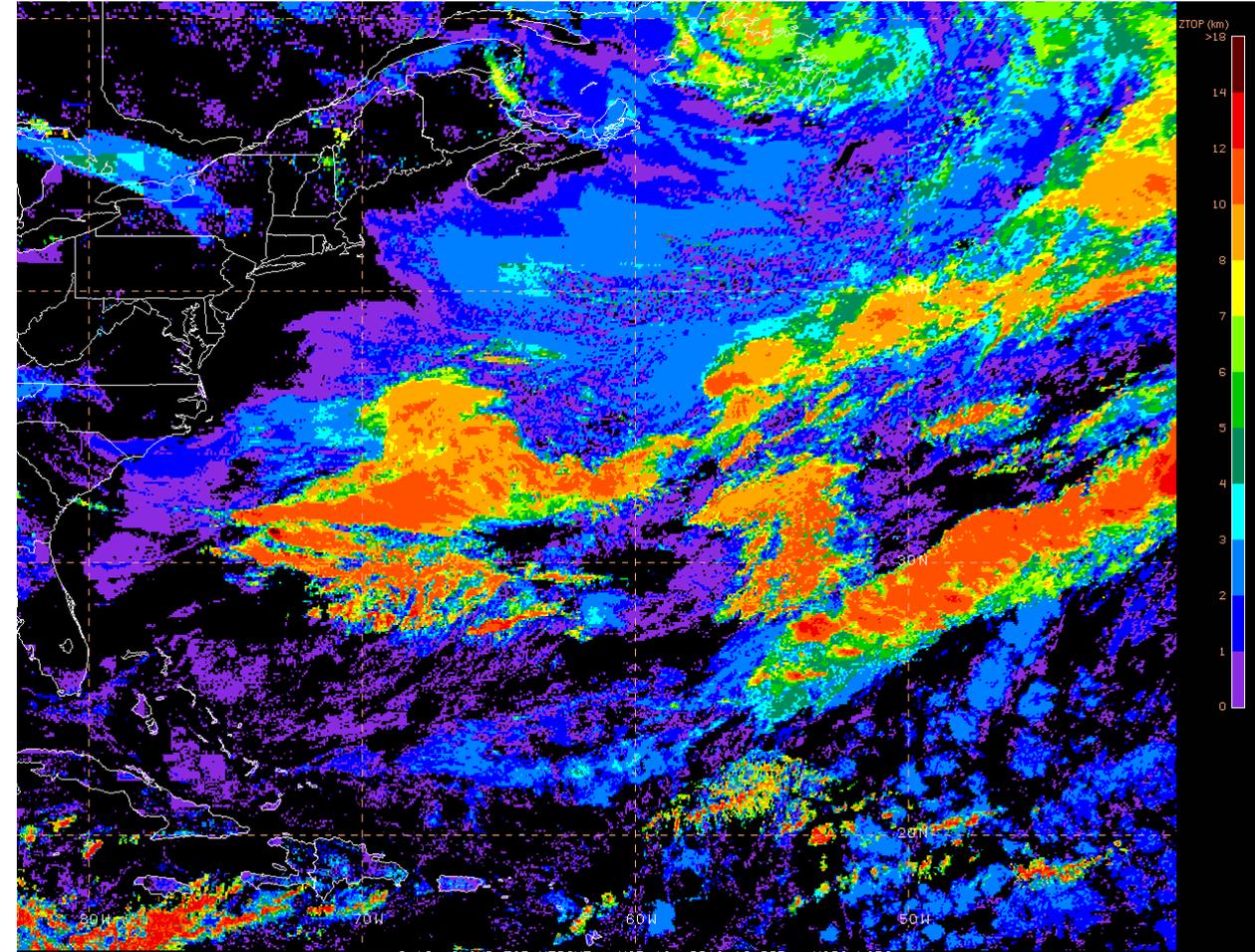


# GOES-16 Cloud Products (3/16 14:00 UTC)

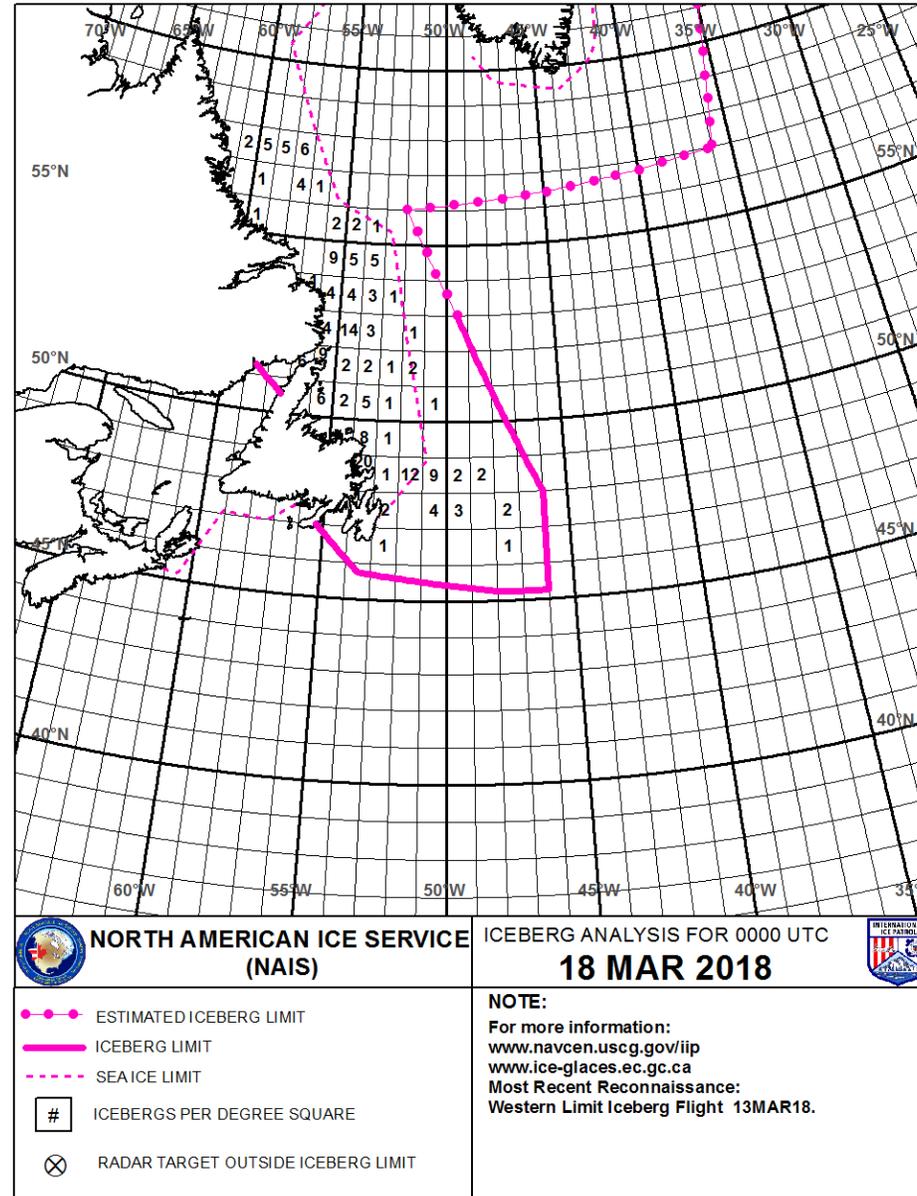
## Cloud Base Heights



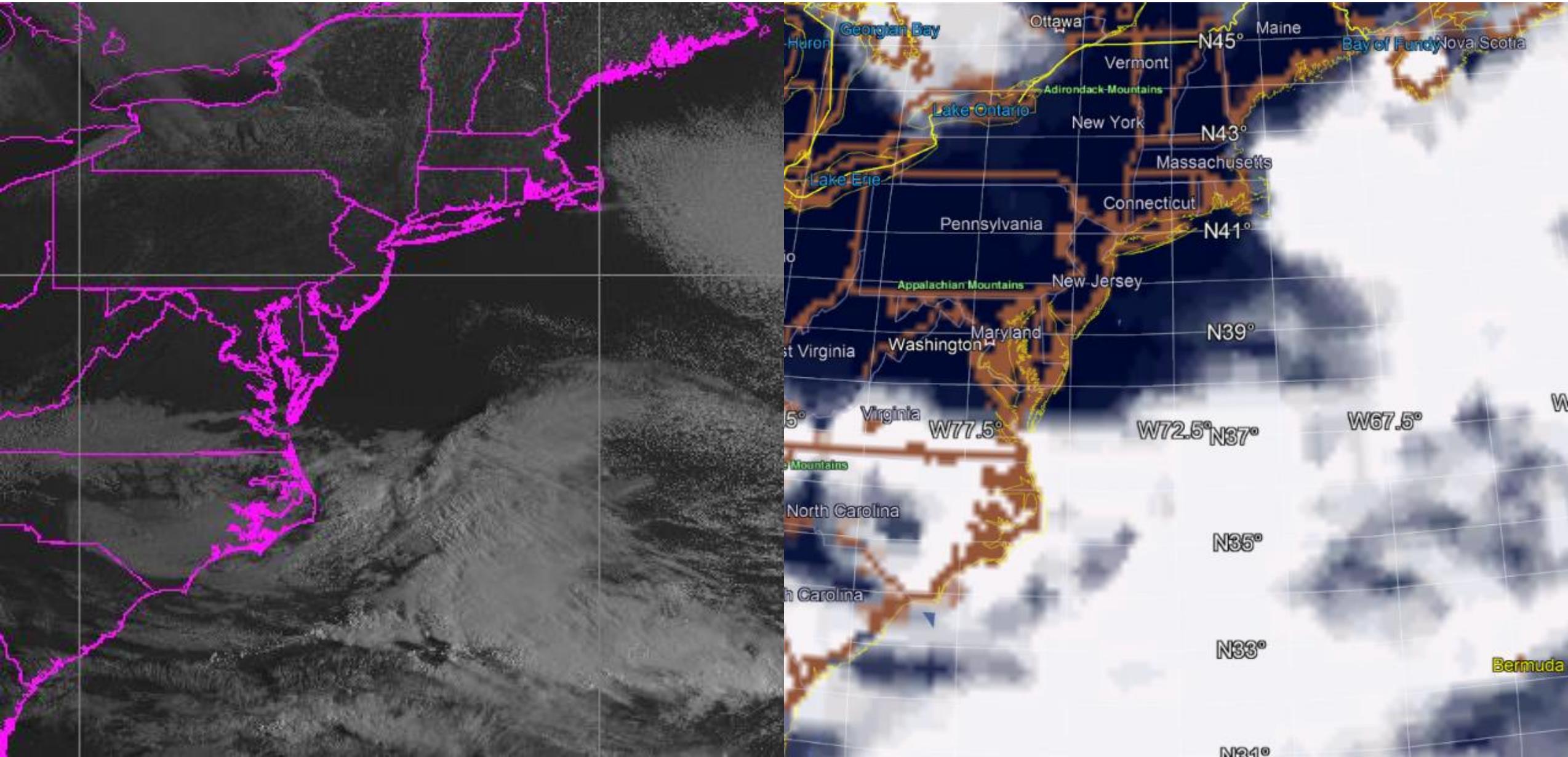
## Cloud Top Heights



# Sea Ice and Icebergs



# Cloud Verification – 12:15z observed/12z 4cast

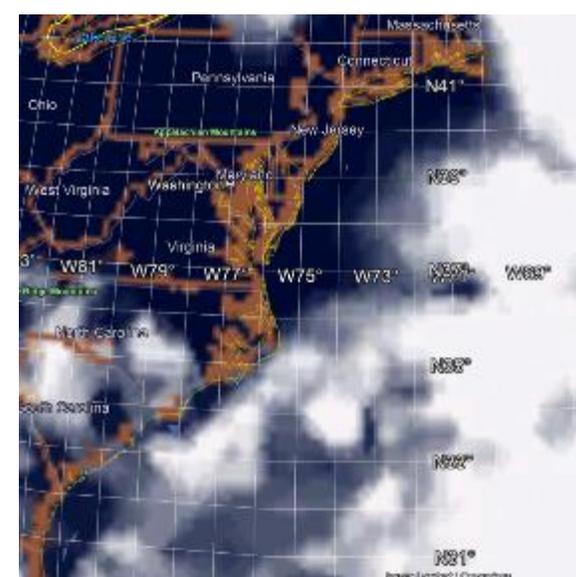
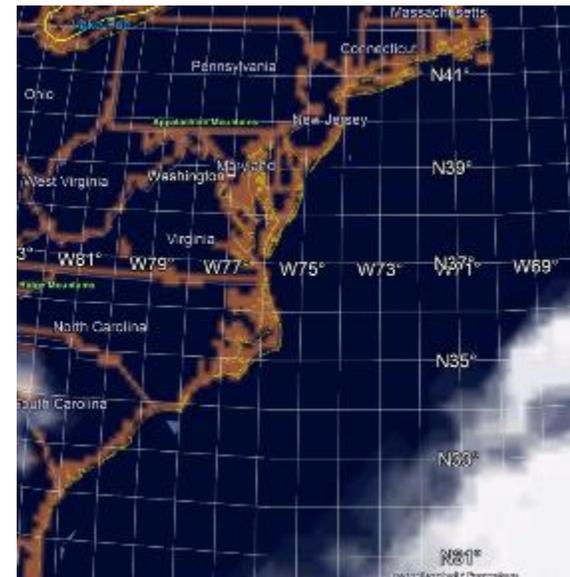
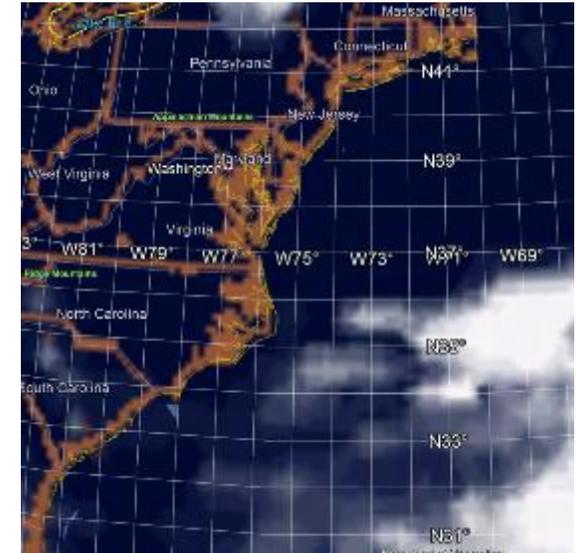
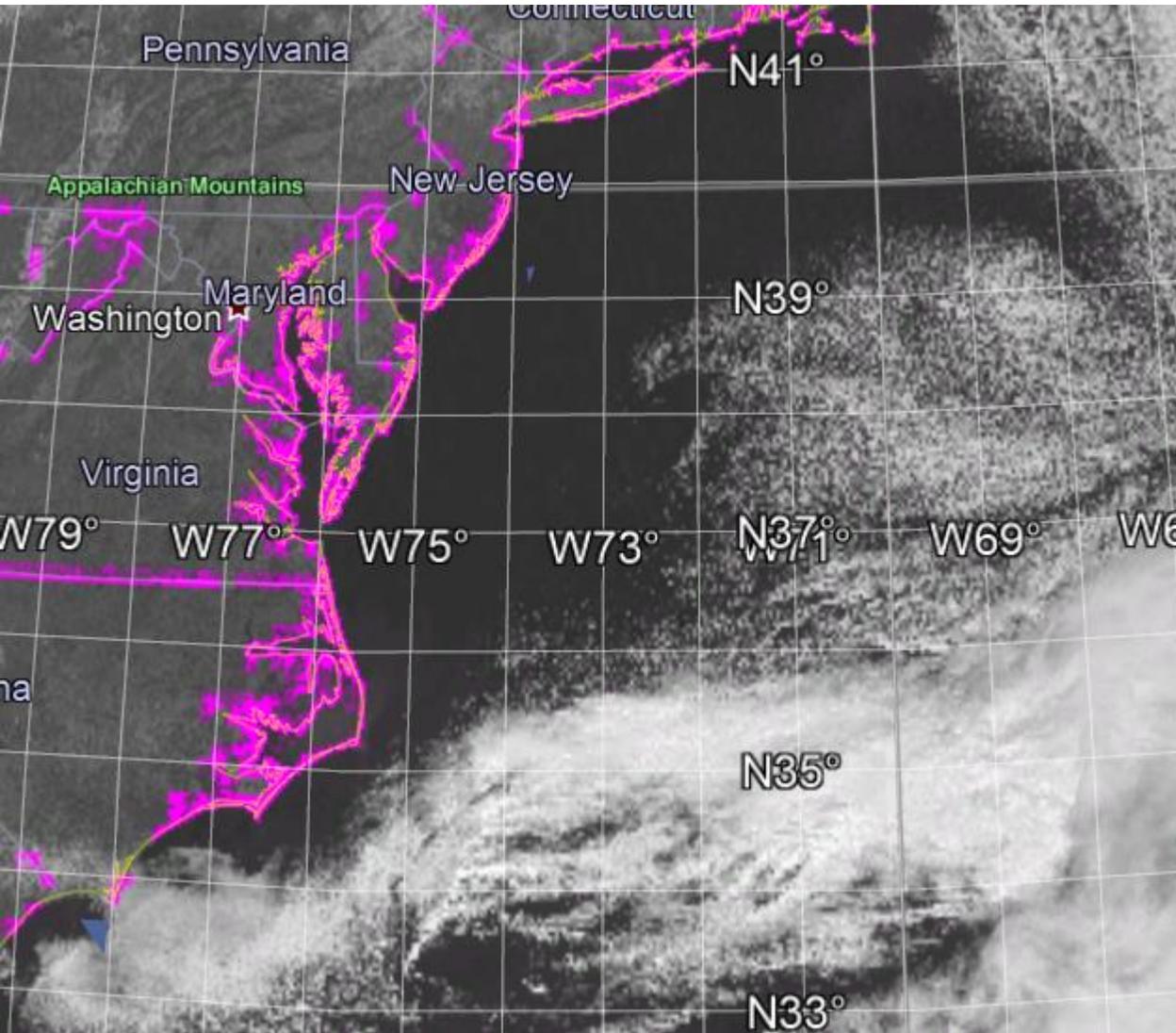


# 3/18/18 ATF/Science Test Flight

LOW

18Z

MID



HIGH

TOTAL

# 3/20/18 Test Flight

LOW

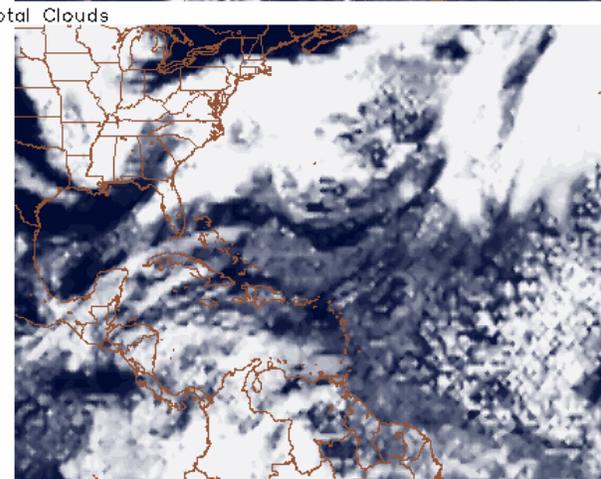
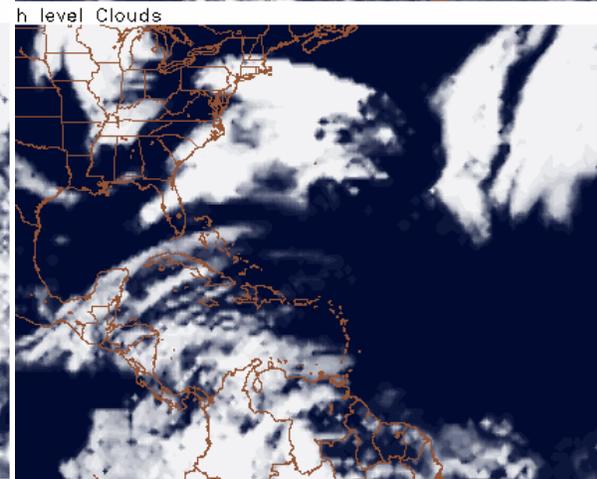
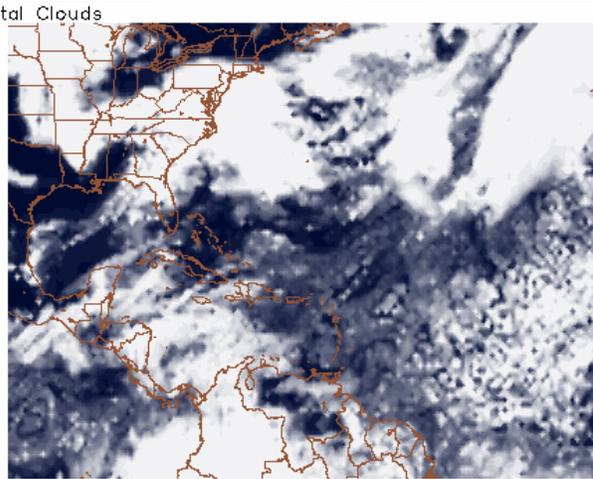
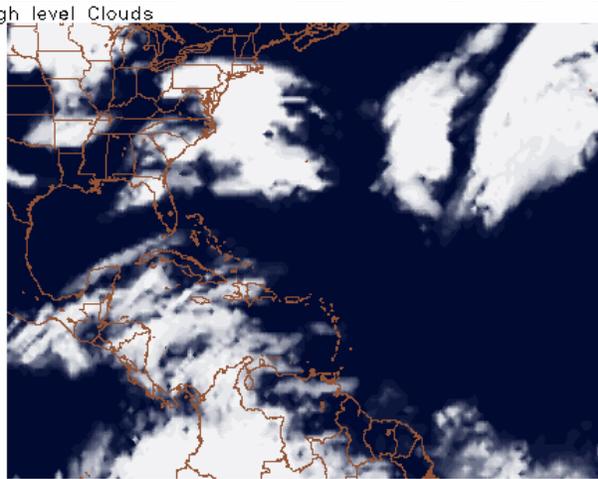
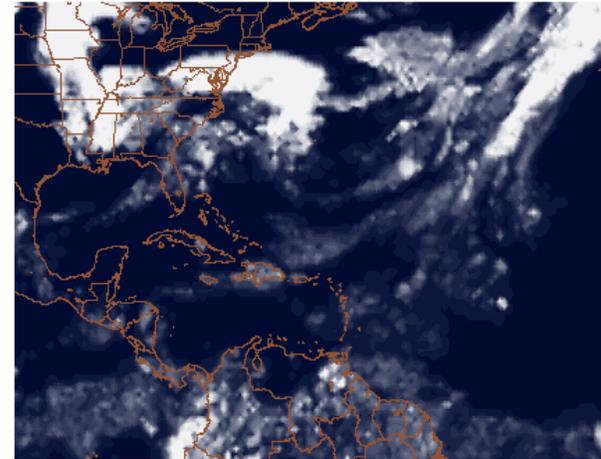
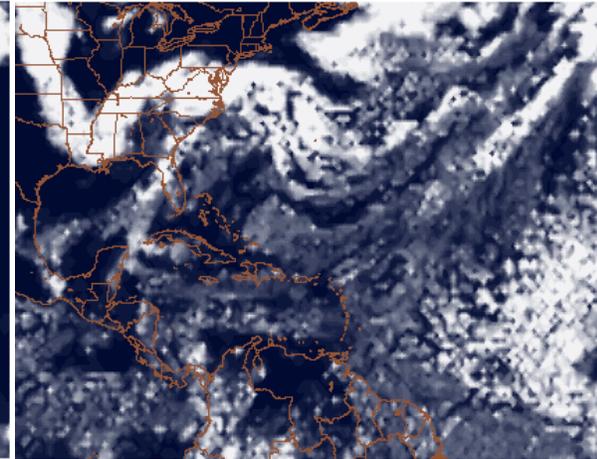
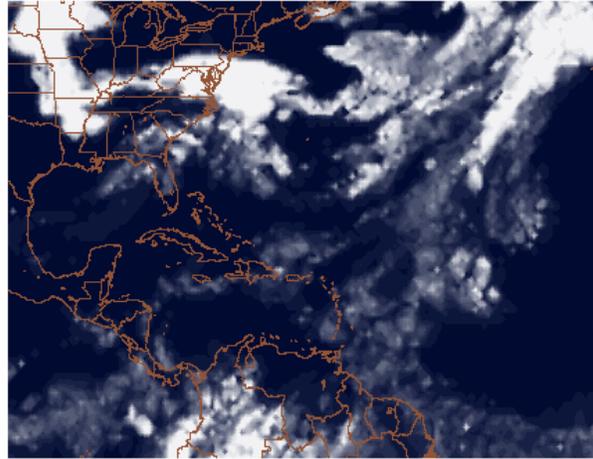
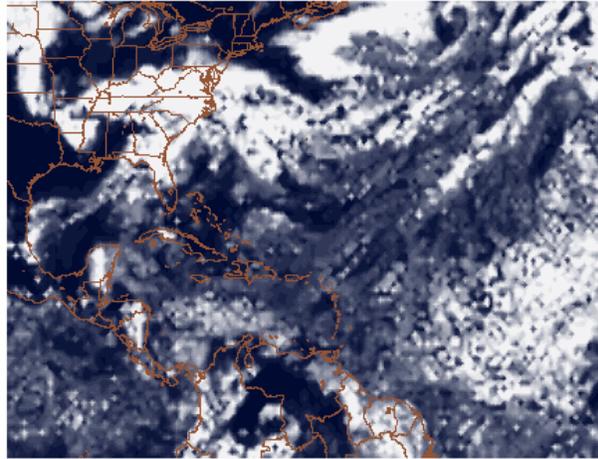
12Z

MID

LOW

18Z

MID



HIGH

TOTAL

HIGH

TOTAL

# 3/21/18 Test Flight

LOW

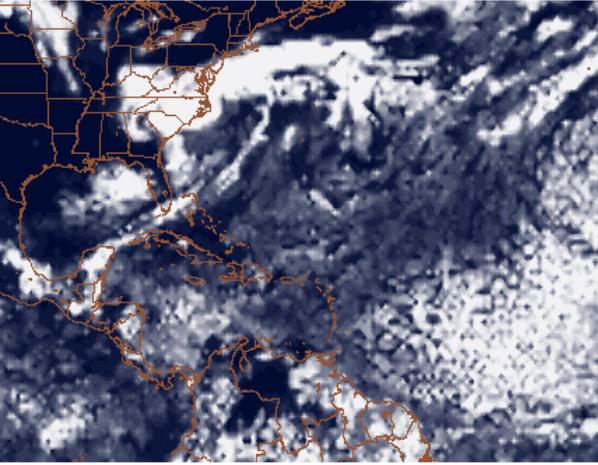
12Z

MID

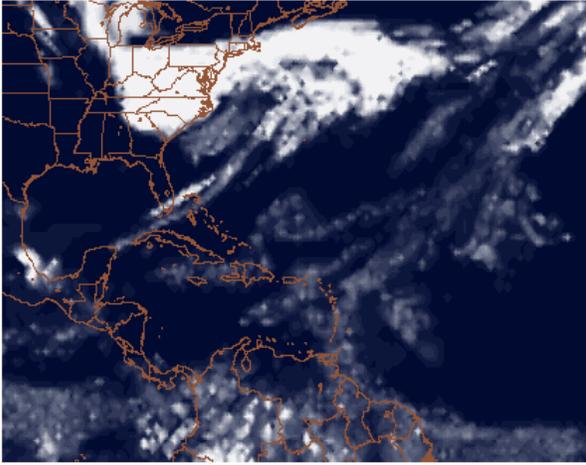
LOW

18Z

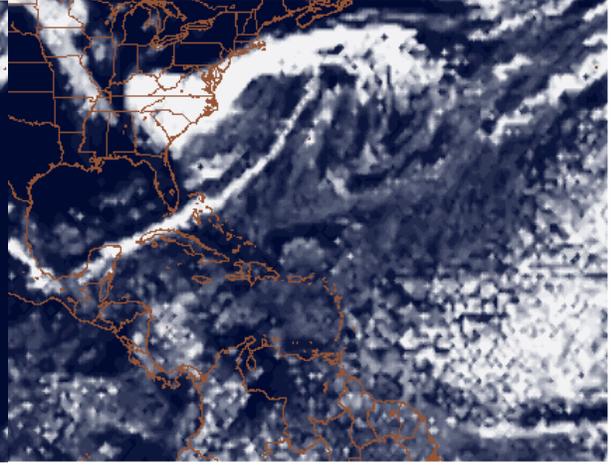
MID



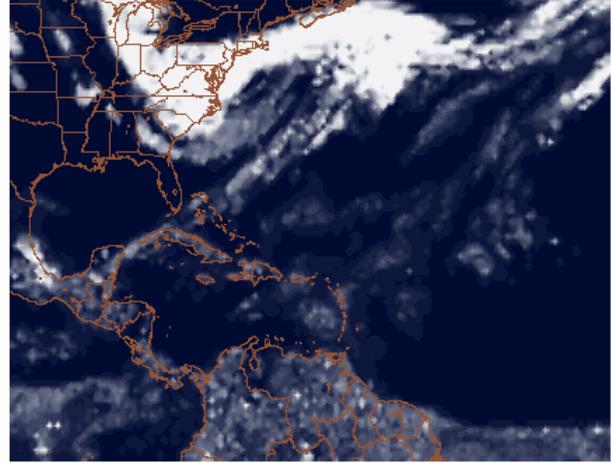
h level Clouds



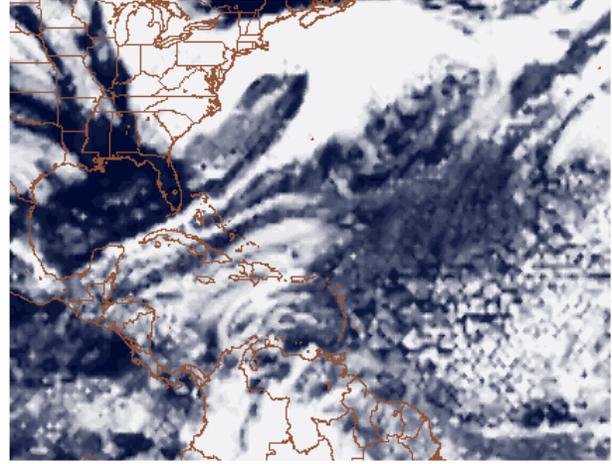
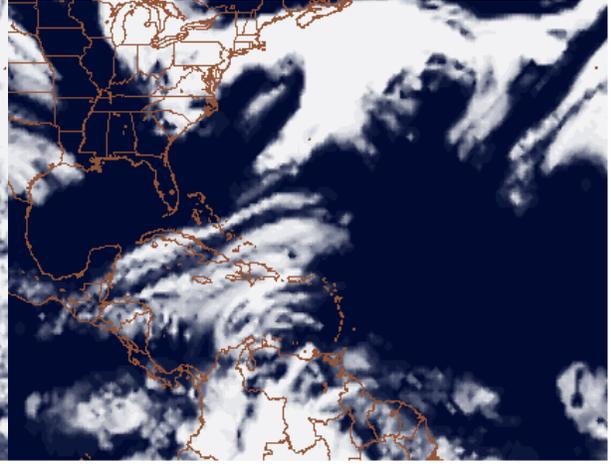
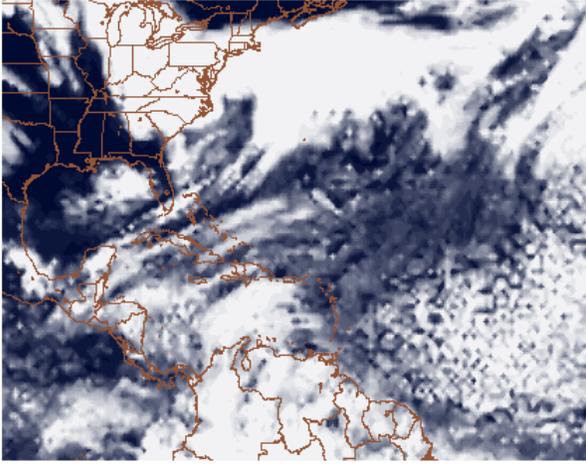
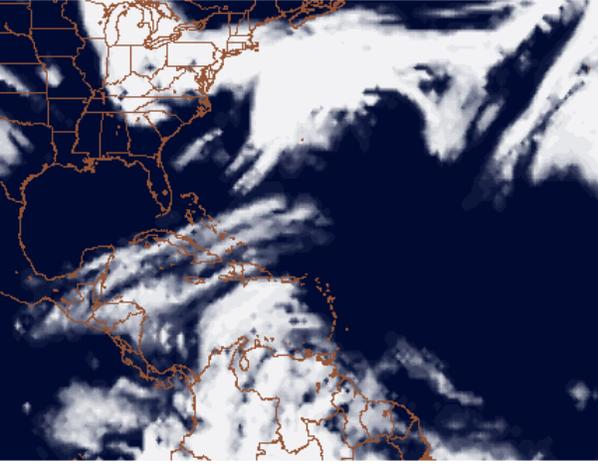
Total Clouds



h level Clouds



Total Clouds



Total Clouds

HIGH

TOTAL

HIGH

TOTAL

# 3/24/18 Transit Flight

LOW

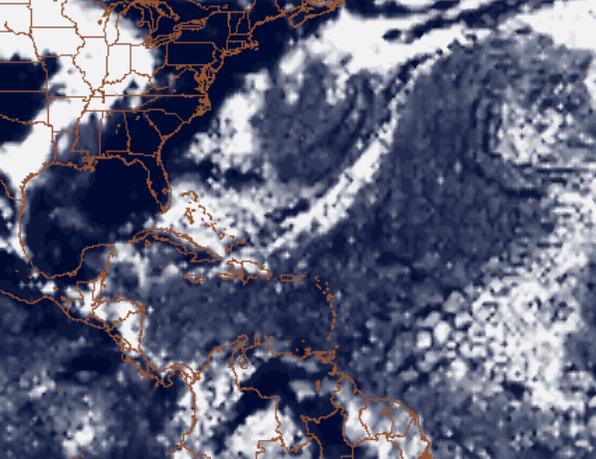
12Z

MID

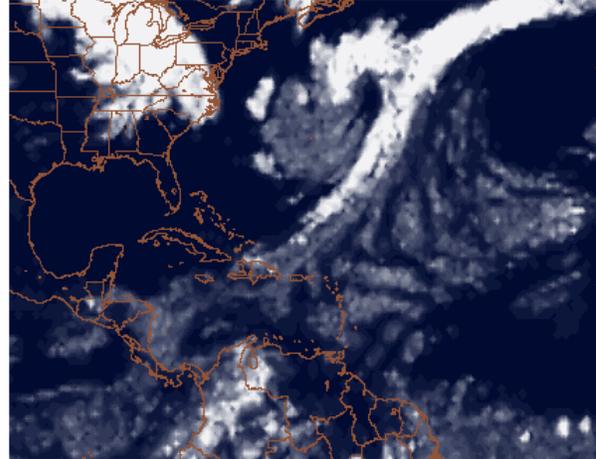
LOW

18Z

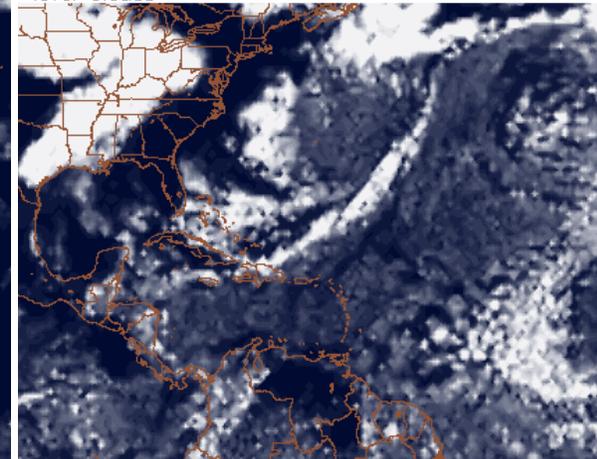
MID



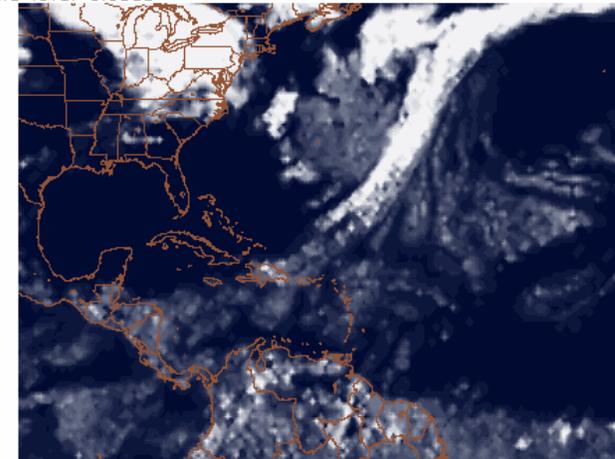
h level Clouds



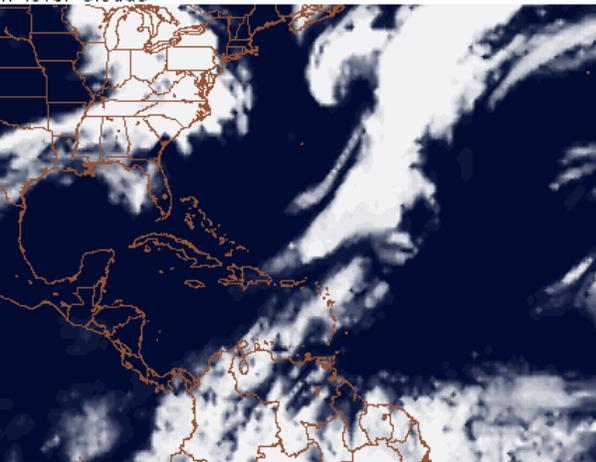
Total Clouds



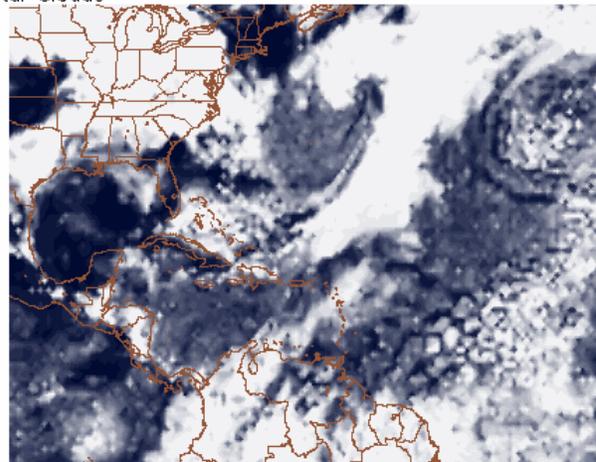
h level Clouds



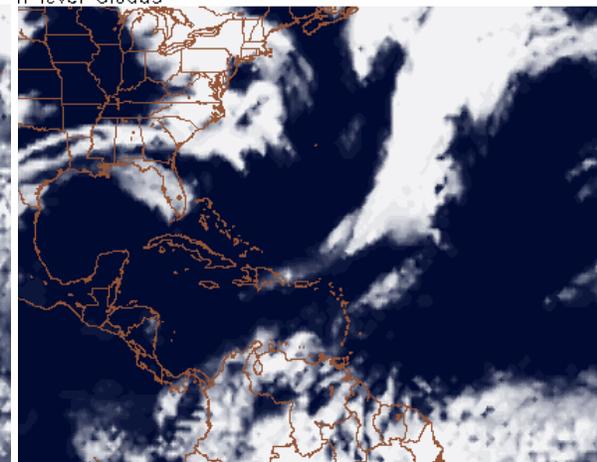
Total Clouds



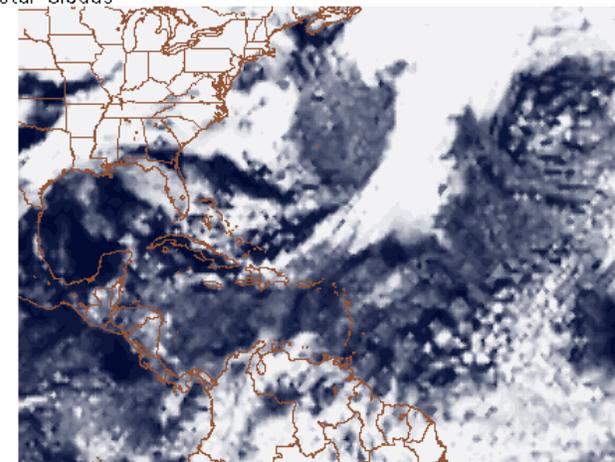
HIGH



TOTAL



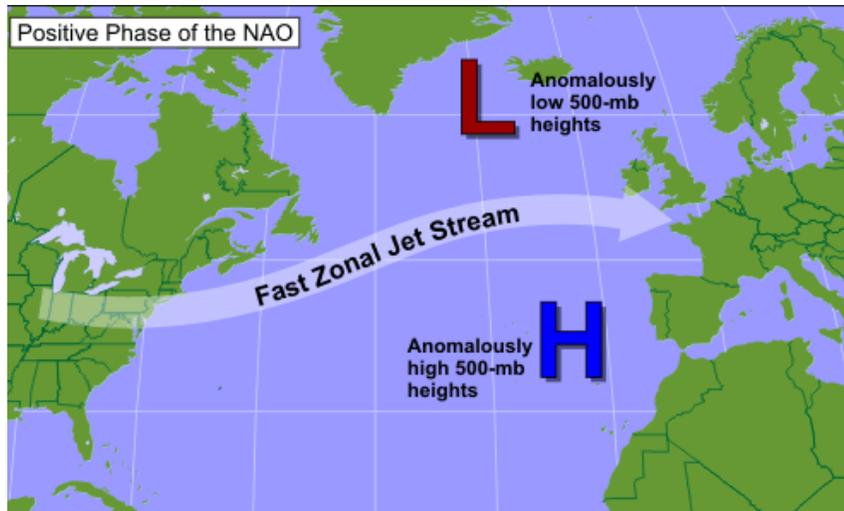
HIGH



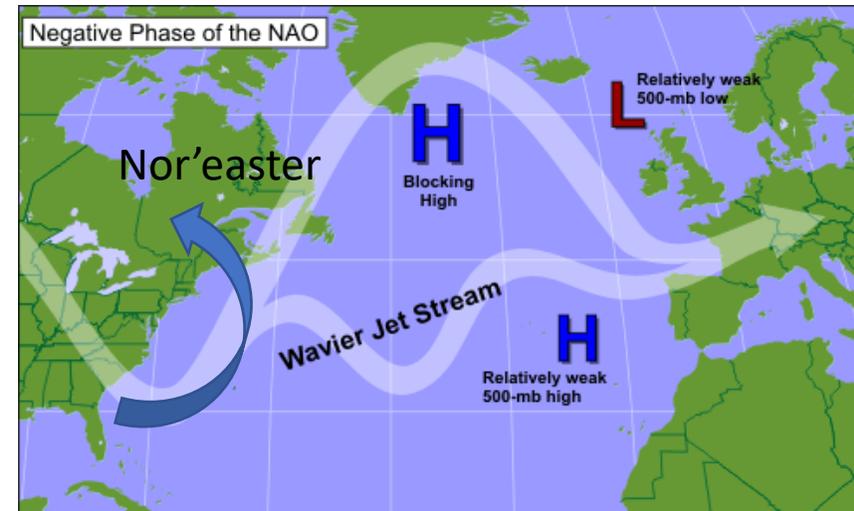
TOTAL

# North Atlantic Oscillation

The North Atlantic Oscillation (NAO) is a weather phenomenon in the North Atlantic Ocean of fluctuations in the difference of atmospheric pressure at sea level between the Icelandic low and the Azores high. The fluctuations in the strength of the Icelandic low and the Azores high controls the strength and direction of westerly winds and storm tracks across the North Atlantic, which is important for our mission domain



The positive phase of the NAO is marked by low 500-mb heights near Iceland and high 500-mb heights near the Azores Islands.



The negative phase of the NAO is marked by unusually high 500-mb heights near Iceland, a pattern that typically develops with a blocking ridge or blocking high.

Forecasters track the NAO by comparing the 500-mb heights over the far North Atlantic (near Iceland) with those several thousand miles to the south near the Azores Islands.

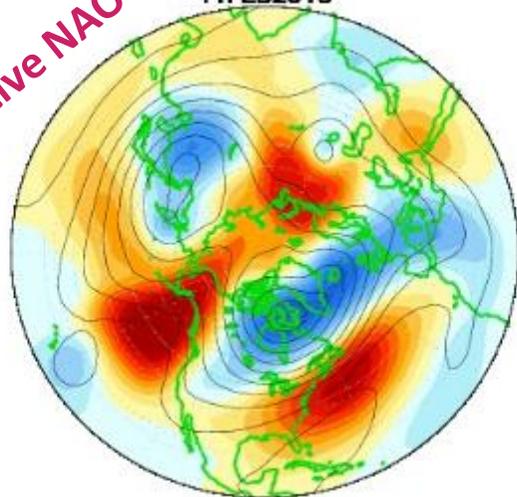
*Credit: <https://www.e-education.psu.edu/worldofweather/s15.html>*

# Current NAO

CDAS 500-hPa HT Anoms (5d rm)

11FEB2018

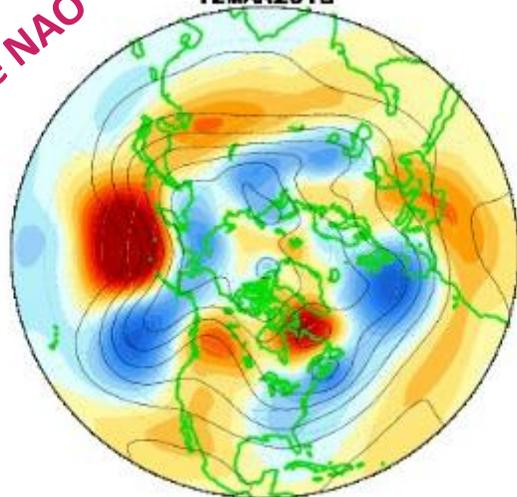
Positive NAO



CDAS 500-hPa HT Anoms (5d rm)

12MAR2018

Negative NAO



## NAO: Observed & ENSM forecasts

