



# Web-ATCF



## Presenter

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## Contributors

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**NRL TC Page group**

**Acknowledgment: HFIP, USN**



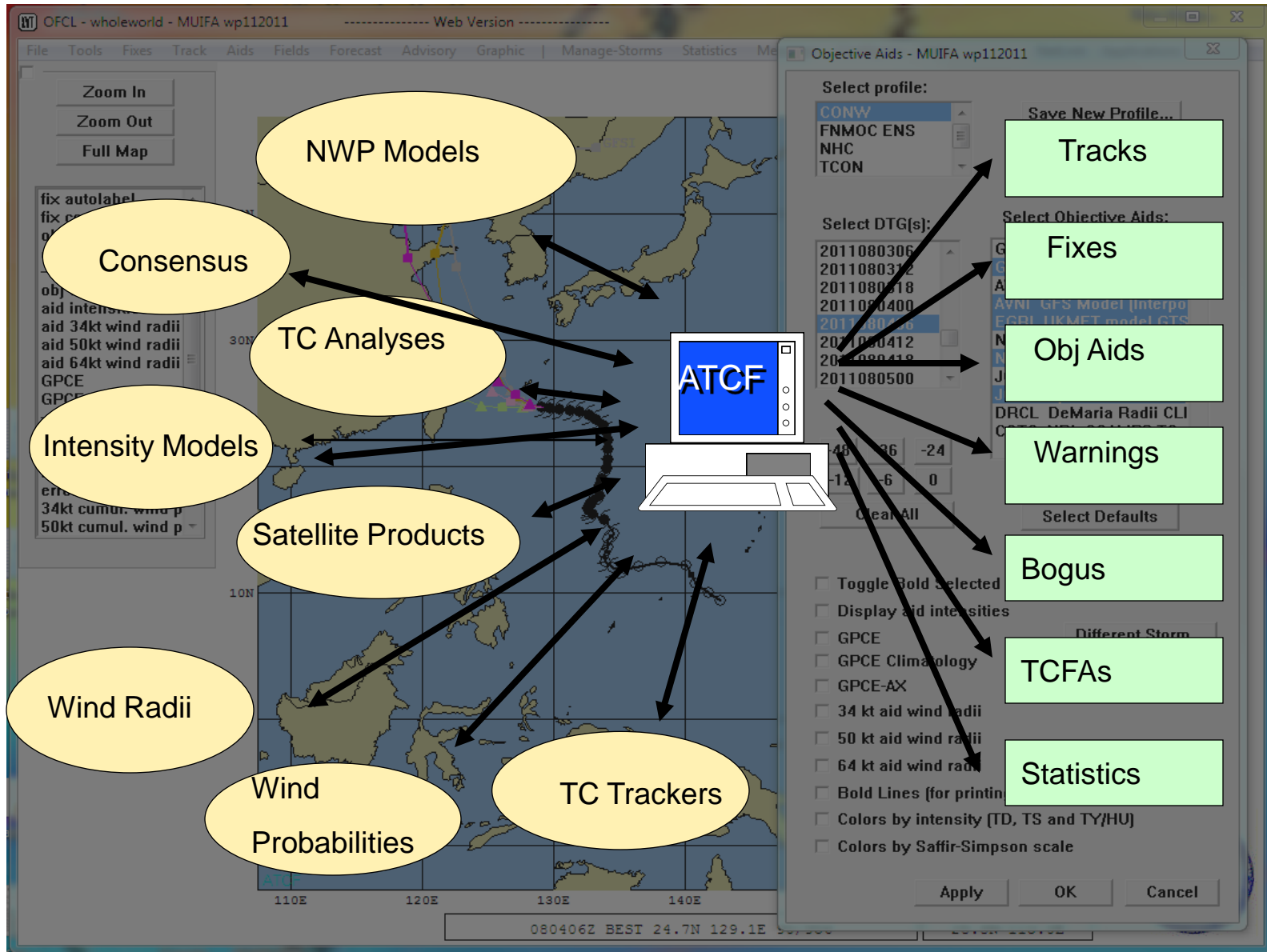
# Outline



- What is ATCF?
- What is Web-ATCF?
- Web-ATCF examples
- Links and passwords



# Automated Tropical Cyclone Forecast System (ATCF)





# ATCF Requirements Meeting



- Annual meeting to discuss requirements
- Participants include NRL, JTWC, CPHC, NHC, and FWC-Norfolk
- Discuss completed tasks
- Add new tasks
- Prioritize open tasks

FY11 <u>Completed Tasks</u>	70
FY12 <u>New Tasks</u>	50
Total Open Tasks	135



# Web-ATCF Specifics



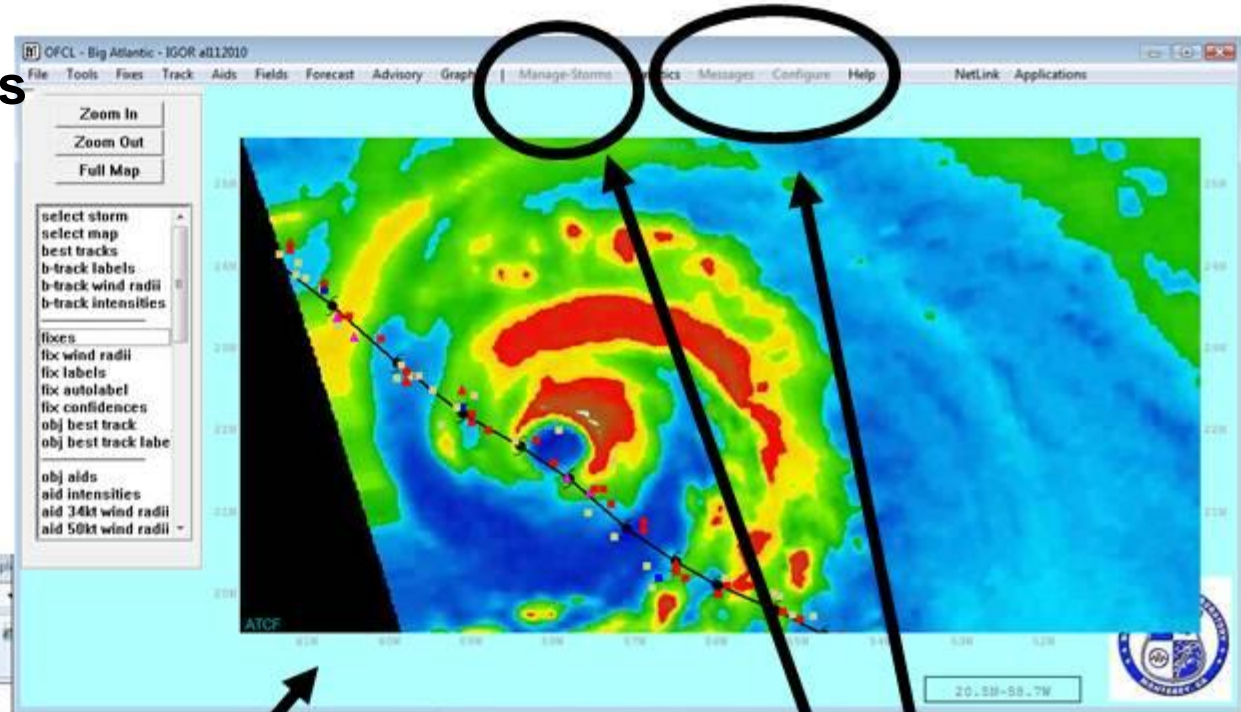
- ATCF is for TC forecasters (e.g., NHC)
- Web-ATCF is for situational awareness, training, research
- Server is at NRL, updated near real-time
- Works on most Windows and Linux systems
- Uses Java Web Start (3 minute installation)



# Web-ATCF "Display Only" Mode



- Situational awareness
- Training
- Demonstrations
- Research



**Web-ATCF**  
 (Experimental Version, Sponsored by HFIP, JHT)

- Most Windows and Linux Systems

Disabled Menu Items

Demo

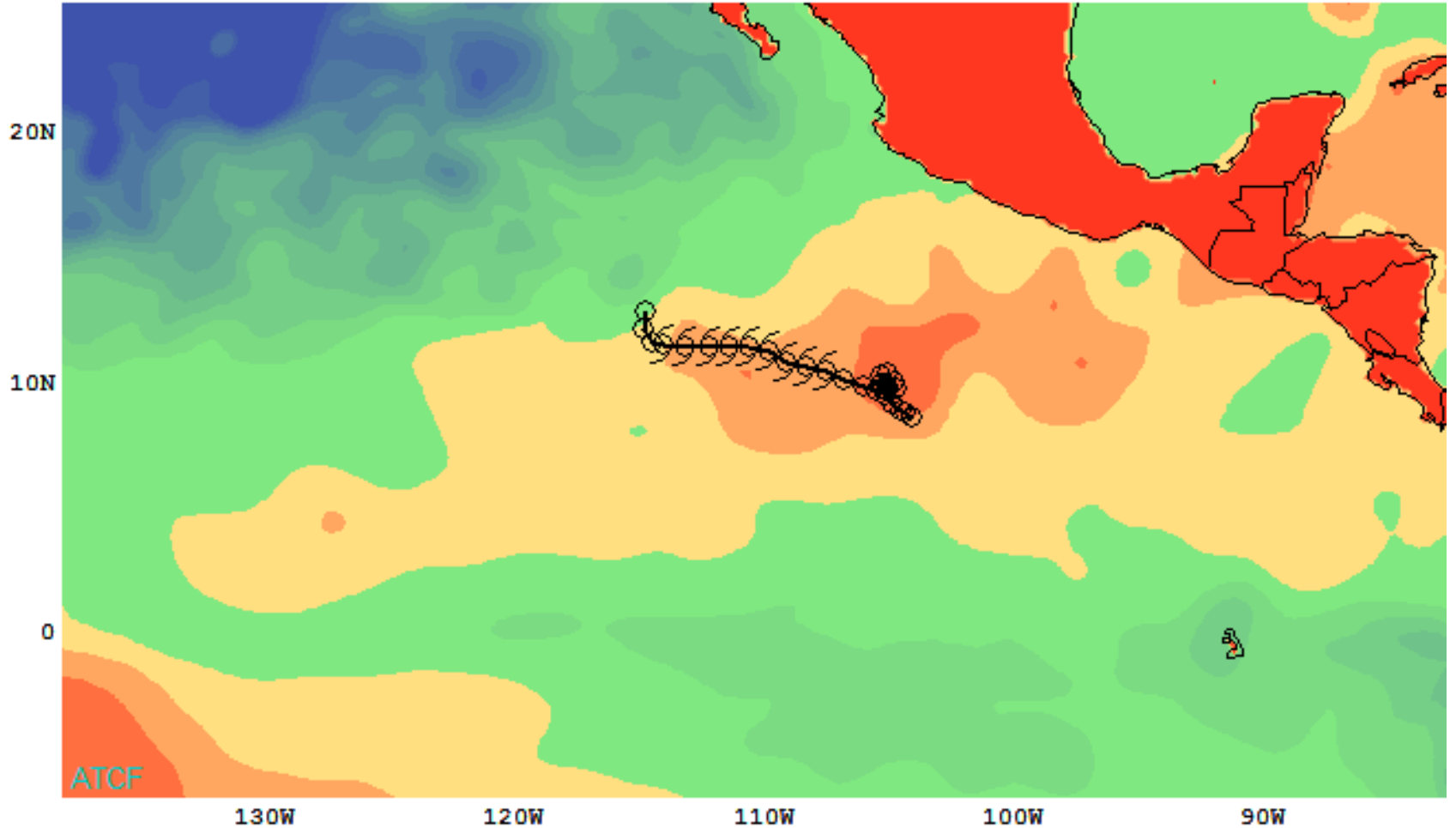
Disabled functions throughout application. Allows no advisories, no communication with web pages, no storm file updates. Near real-time updates on live tropical cyclones.



# Aletta (01E) with NCODA Ocean Heat Content ( $\text{Kj/cm}^{**2}$ )

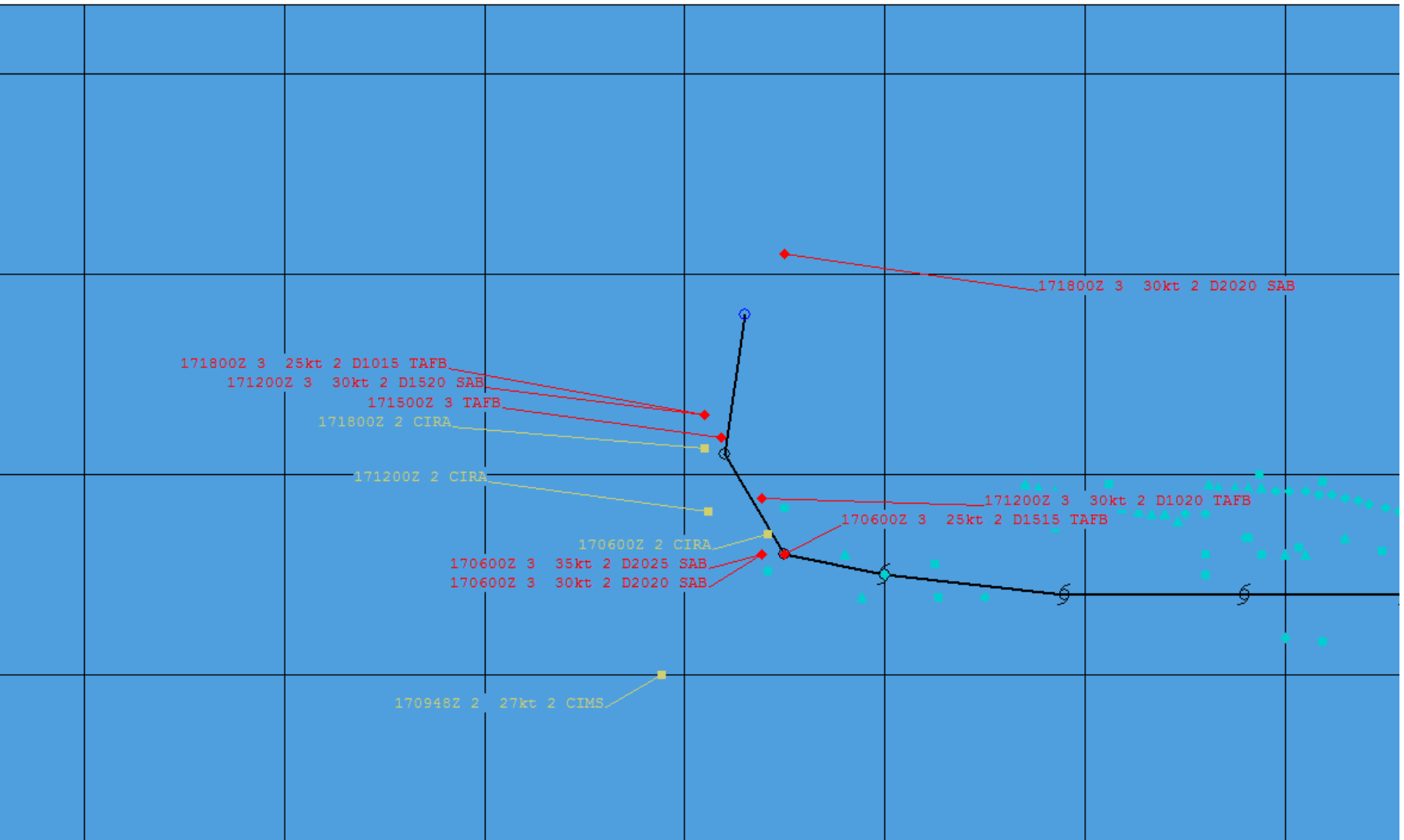


-300 280





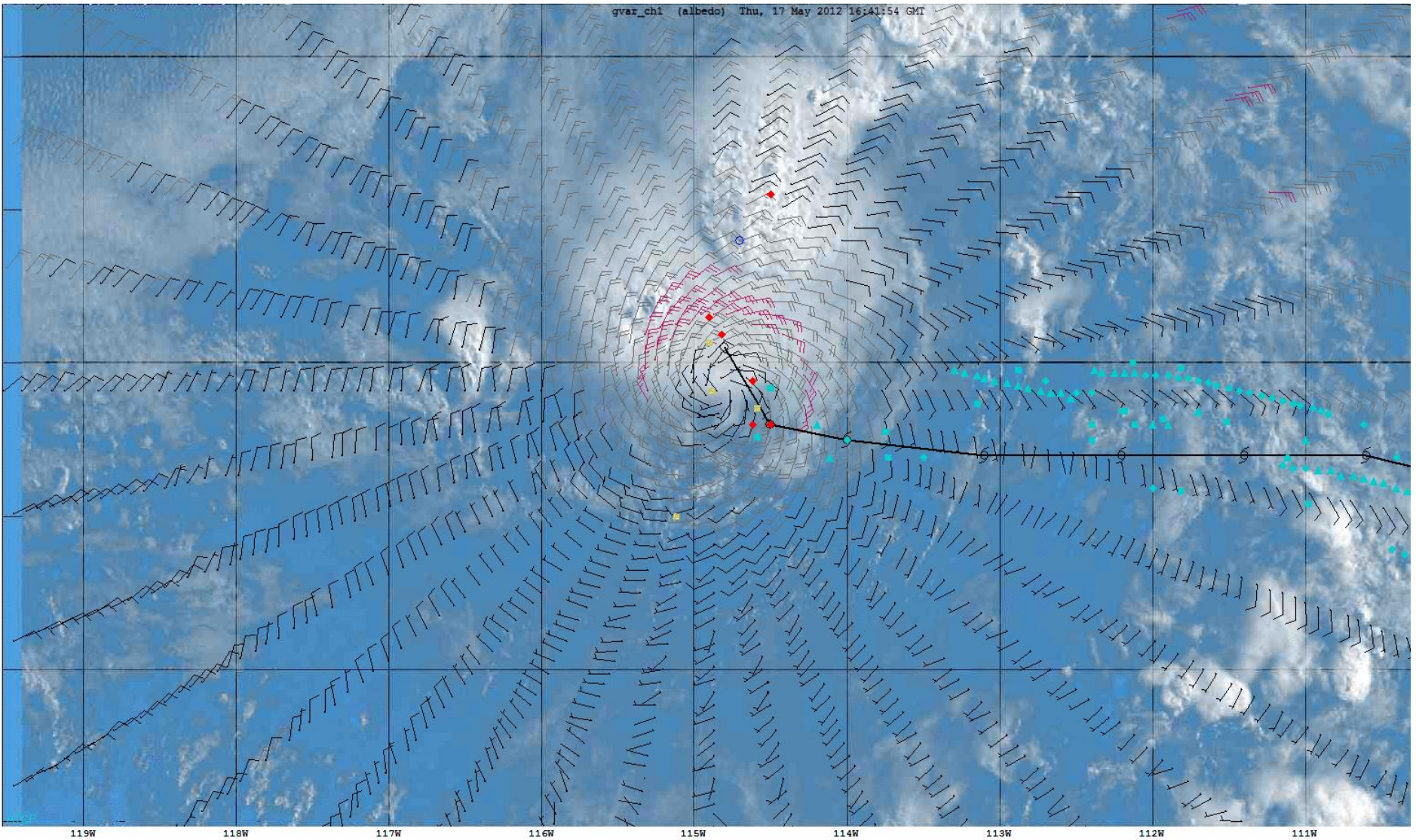
# Fixes with Labels





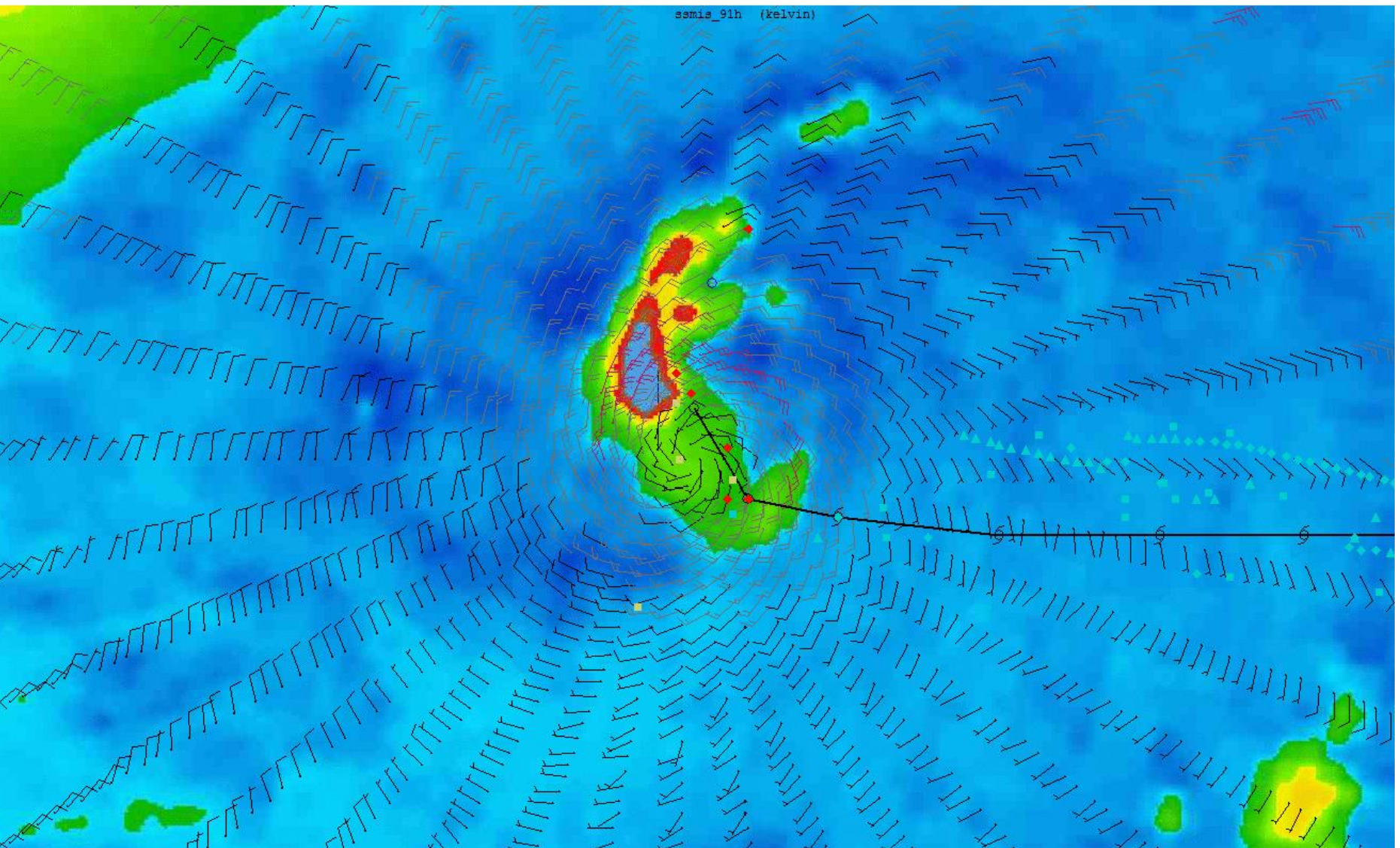


# CIRA Wind Analysis with Vis Image



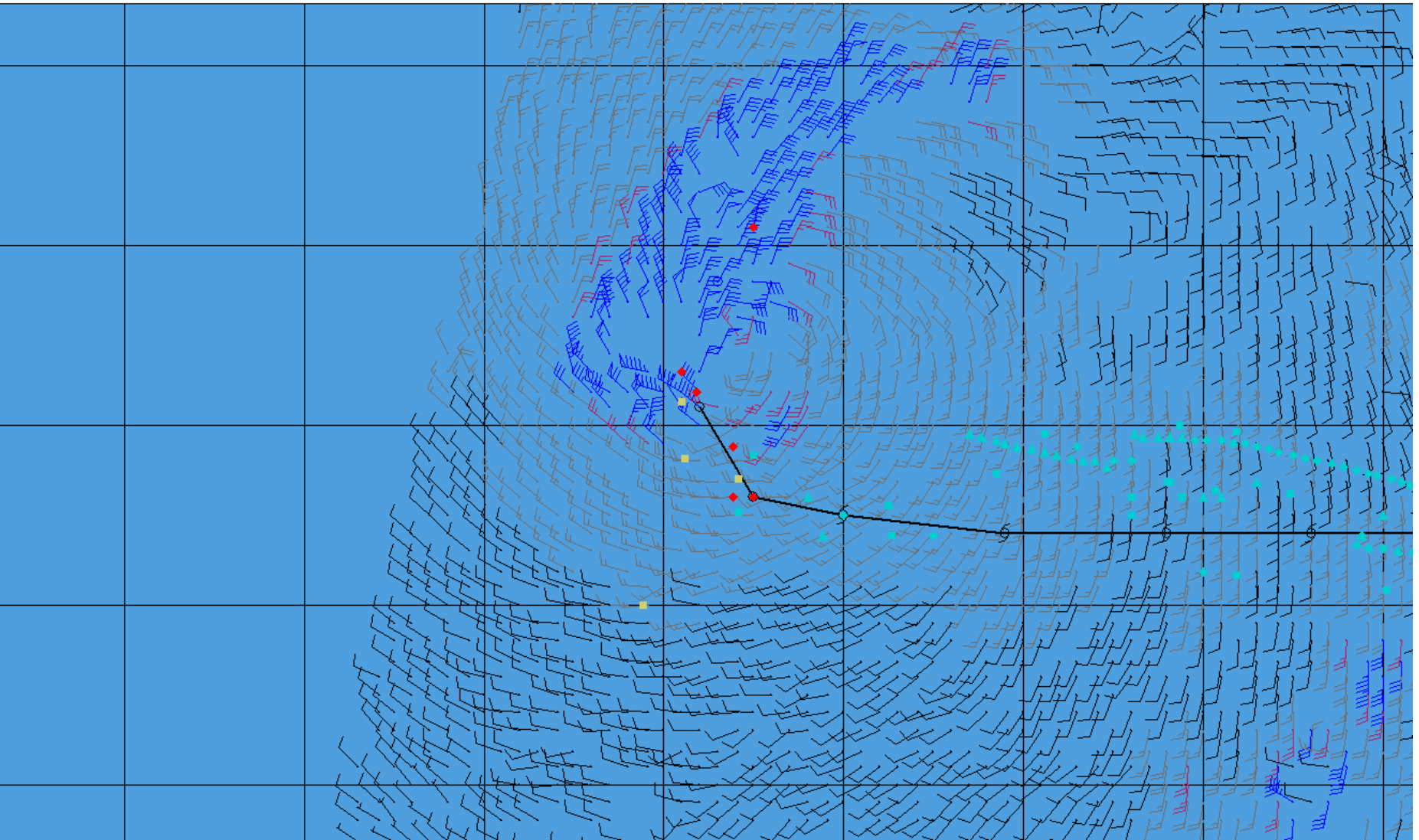
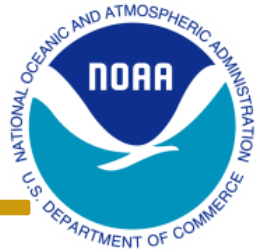


# CIRA Wind Analysis with SSMIS Image



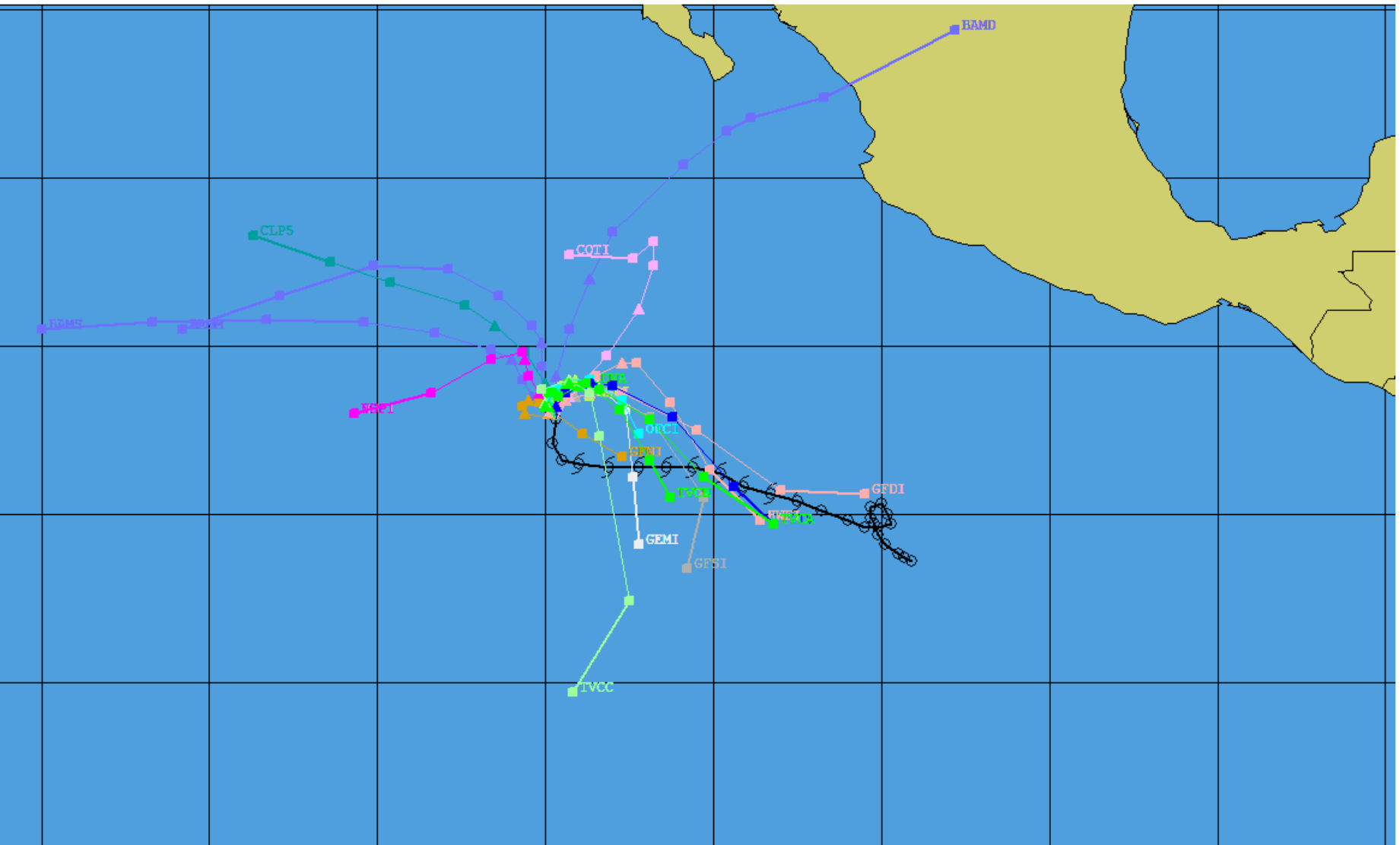


# Scatterometer pass over 01E



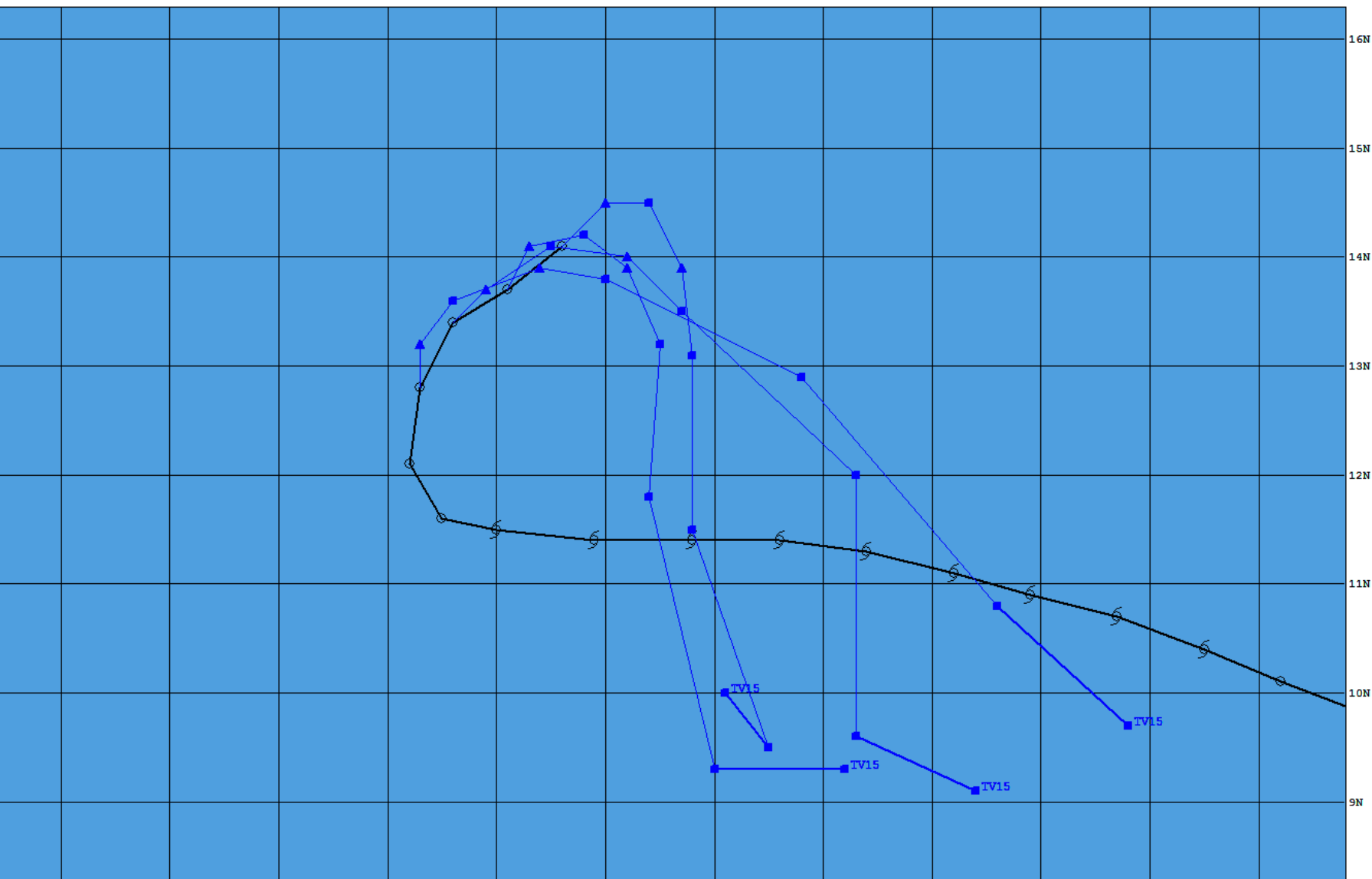
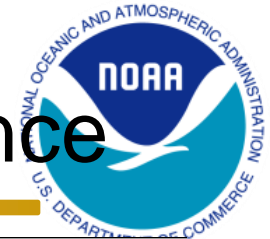


# Current Objective Aid Tracks



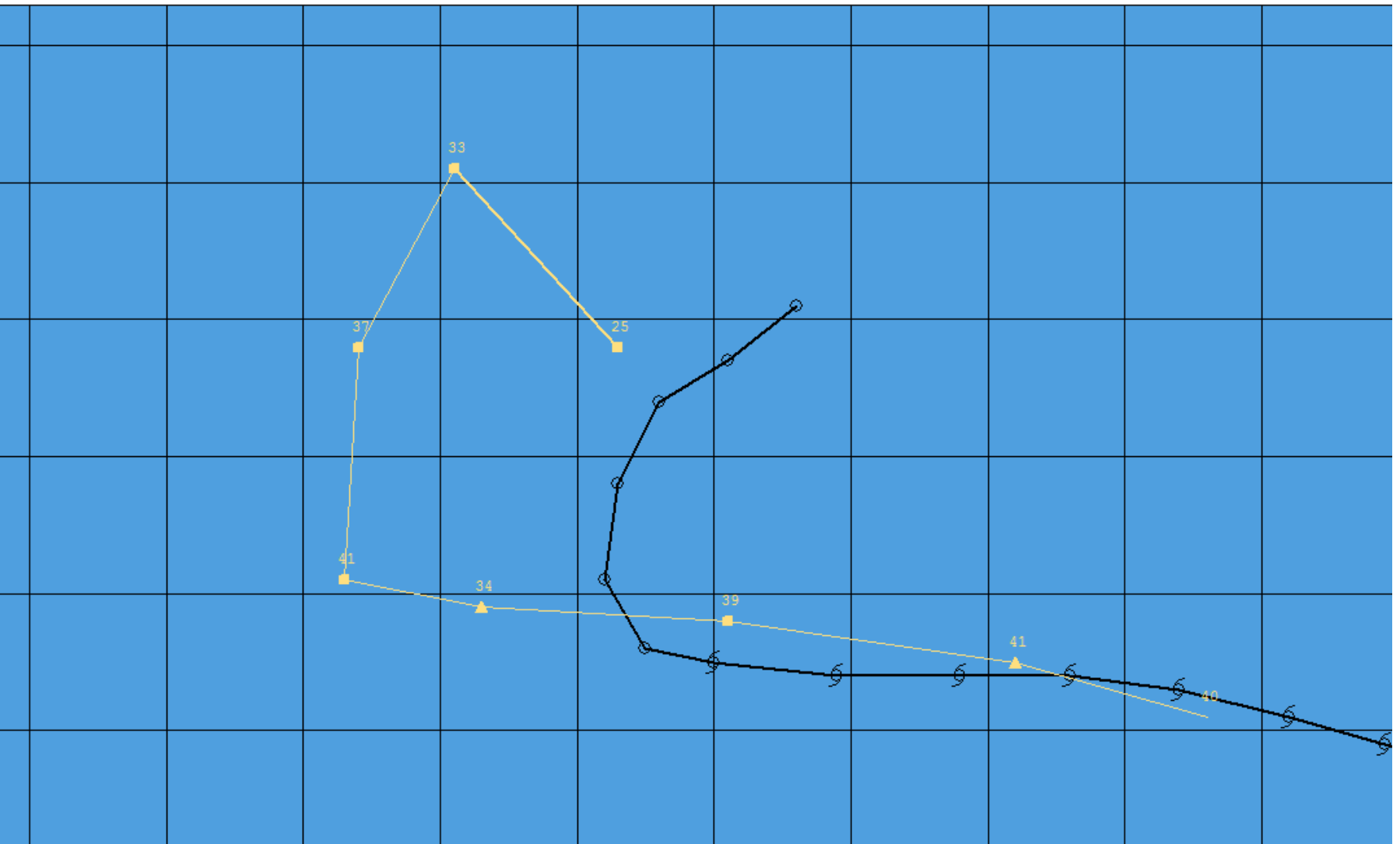


# Objective Aid Forecast Time Sequence



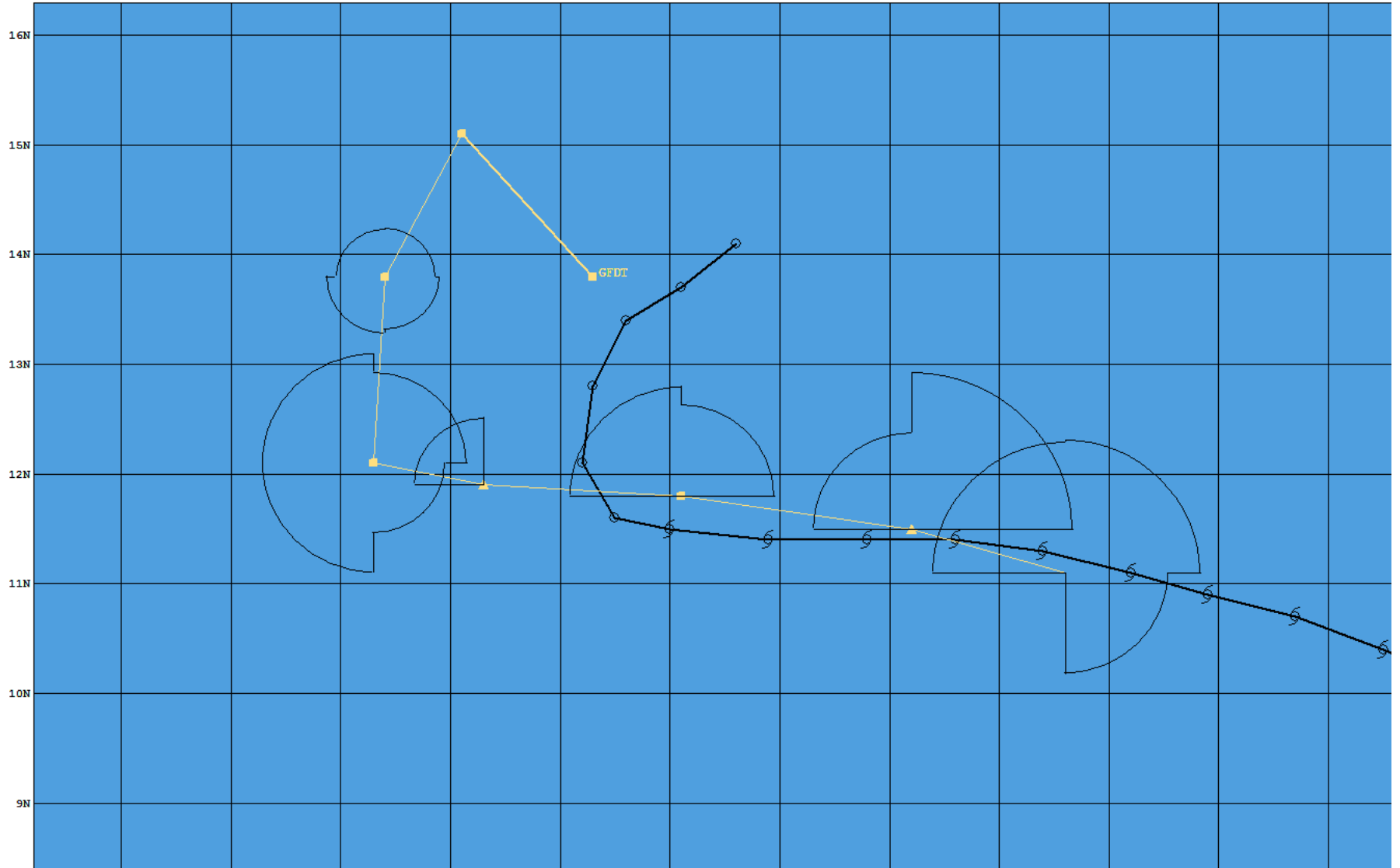
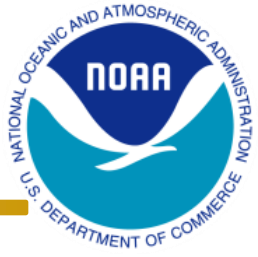


# Objective Aid Plot with Intensity



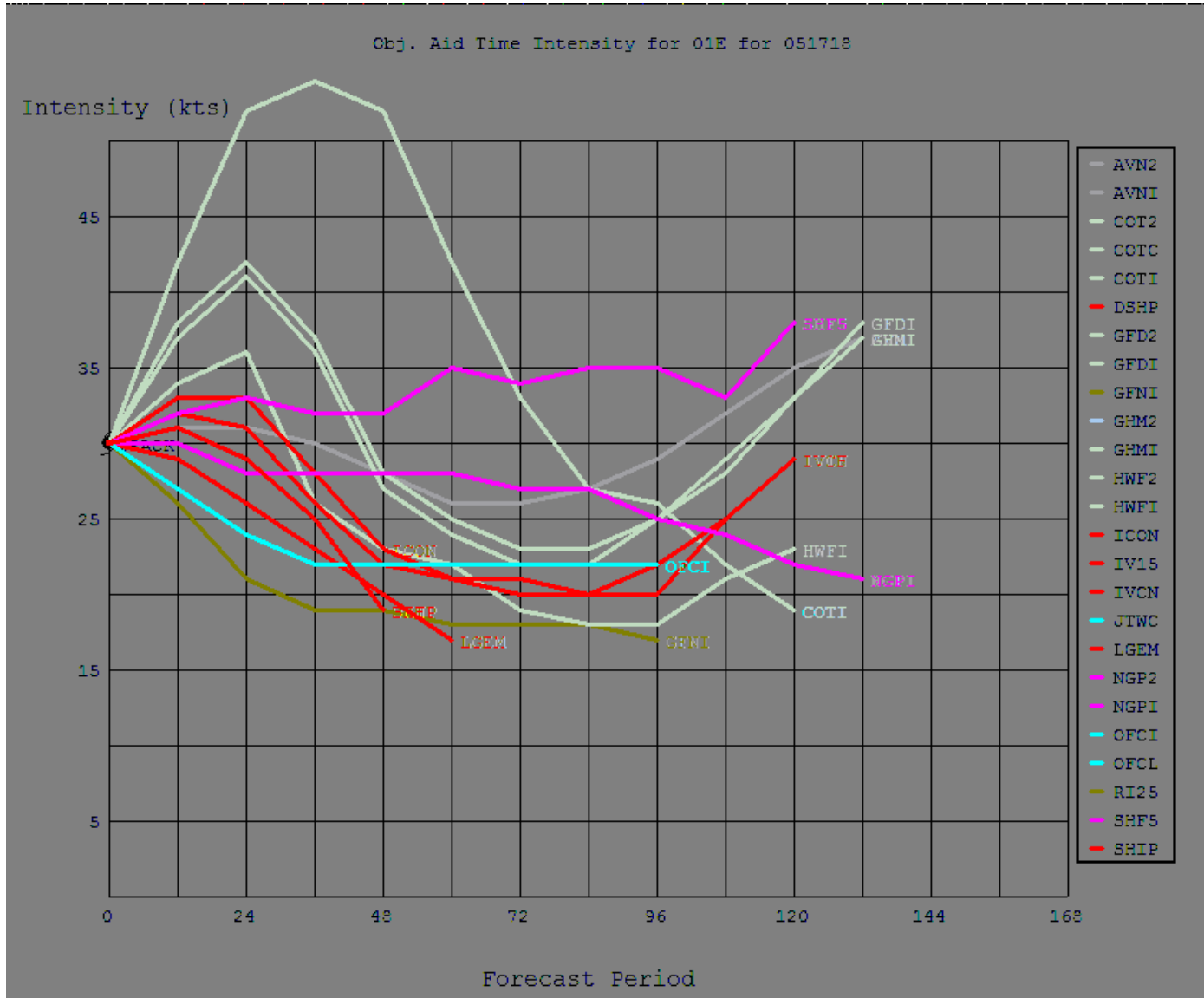


# Objective Aid Wind Radii





# Time vs Intensity Graph







# Homogeneous Statistics Dialog



**Compute Homogeneous Statistics**

**Basin**  
North Atlantic

**Years**  
2009  
2010  
2011

**Parameter**  
 Track  
 Intensity  
 Wind Radi  
 Max Seas  
 12ft Seas

**Output**  
 Storm Avgs  
 Storm Errs  
 Posits

**Units**  
 English  
 Metric

**Storms**  
14 2011 North Atlantic - MARIA  
15 2011 North Atlantic - NATE  
16 2011 North Atlantic - OPHELIA  
17 2011 North Atlantic - PHILIPPE  
18 2011 North Atlantic - RINA  
19 2011 North Atlantic - SEAN  
20 2011 North Atlantic - TWENTY  
80 2011 North Atlantic - SENSITIVTY

**Forecast Methods**  
S522  
OFCL  
OFCL  
ACEI  
AFWI  
AVNI  
COWI  
EGRI  
ECMI

**Lat/Lon Limits**  
North  
West: 90N  
East: 0W  
South: 90S  
30E

**Intensity Limits (kts)**  
Initial > 20 Verifying > 20  
Initial < 250 Verifying < 250

**Date Limits (MMDDHH)**  
Start: 010100  
End: 123118

**Initial Times**  
 00Z  
 06Z  
 12Z  
 18Z

**Development:**  
 Verify Land  
HU  
SD  
SS

Help Compute Done



# Track Forecast Statistics



- average track errors (NM) FOR HOMOGENEOUS SAMPLE
- 00       12       24       36       48       72       96       120       144       168
- TVCN           11.9   29.3   45.9   62.7   79.3   119.6   180.1   267.6   292.4   322.2
- TV15           11.9   29.4   45.3   58.3   71.7   111.1   169.1   245.5   257.6   322.2
- #CASES       325    272    244    219    195    158    130    108     67     58
- 
- 
- ERROR STANDARD DEVIATION (NM) FOR HOMOGENEOUS SAMPLE
- 00       12       24       36       48       72       96       120       144       168
- TVCN           11.2   17.9   28.3   36.3   46.5   77.9   108.1   144.4   152.2   167.5
- TV15           11.2   18.4   29.2   35.8   46.5   77.7   106.8   136.1   138.9   167.5
- #CASES       325    272    244    219    195    158    130    108     67     58
- 

TVCN=operational consensus at NHC  
 TV15= HFIP 1.5 consensus



# Intensity Forecast Statistics



• AVERAGE INTENSITY ERRORS (KT) FOR HOMOGENEOUS SAMPLE										
	00	12	24	36	48	72	96	120	144	168
• IVCN	3.1	6.7	9.3	11.1	12.2	16.1	15.5	14.8	0.0	0.0
• IVCR	3.1	6.6	9.1	10.7	11.5	15.1	14.2	13.7	0.0	0.0
• IV15	3.1	6.7	9.2	10.8	11.9	15.7	14.2	13.1	0.0	0.0
• #CASES	217	180	159	143	128	104	86	79	0	0
•										
•										
• ERROR STANDARD DEVIATION (KT) FOR HOMOGENEOUS SAMPLE										
	00	12	24	36	48	72	96	120	144	168
• IVCN	3.4	5.2	7.2	8.2	9.2	11.4	11.1	11.2	0.0	0.0
• IVCR	3.4	5.1	7.0	7.8	8.9	11.0	10.7	11.1	0.0	0.0
• IV15	3.4	5.1	7.0	7.9	8.9	11.1	10.7	9.8	0.0	0.0
• #CASES	217	180	159	143	128	104	86	79	0	0
•										
• AVERAGE INTENSITY BIAS (KT) FOR HOMOGENEOUS SAMPLE										
	00	12	24	36	48	72	96	120	144	168
• IVCN	-1.2	0.5	1.7	3.8	5.8	9.2	11.2	10.9	0.0	0.0
• IVCR	-1.2	0.2	1.2	2.9	4.6	7.7	9.5	9.5	0.0	0.0
• IV15	-1.2	-0.6	0.2	1.6	2.9	5.1	5.6	5.6	0.0	0.0
• #CASES	217	180	159	143	128	104	86	79	0	0

IVCN=operational intensity consensus at NHC

IV15= HFIP 1.5 intensity consensus

IVCR=NRL real-time consensus (IVCN aids + COTI + RI aid)



# Web-ATCF Access



- [http://www.nrlmry.navy.mil/atcf\\_web/xvtnet/hfip/xvtnet.html](http://www.nrlmry.navy.mil/atcf_web/xvtnet/hfip/xvtnet.html)
- Temporary password is !hfip! (will work for one week)
- Recommend viewing 3 short training videos at bottom of page
  - Web-ATCF and objective aids
  - General overview
  - Imagery overlay



# Questions?

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