

GOES-R/JPSS Proving Ground Update National Hurricane Center

Proving Ground All-Hands Call
January 12th , 2015

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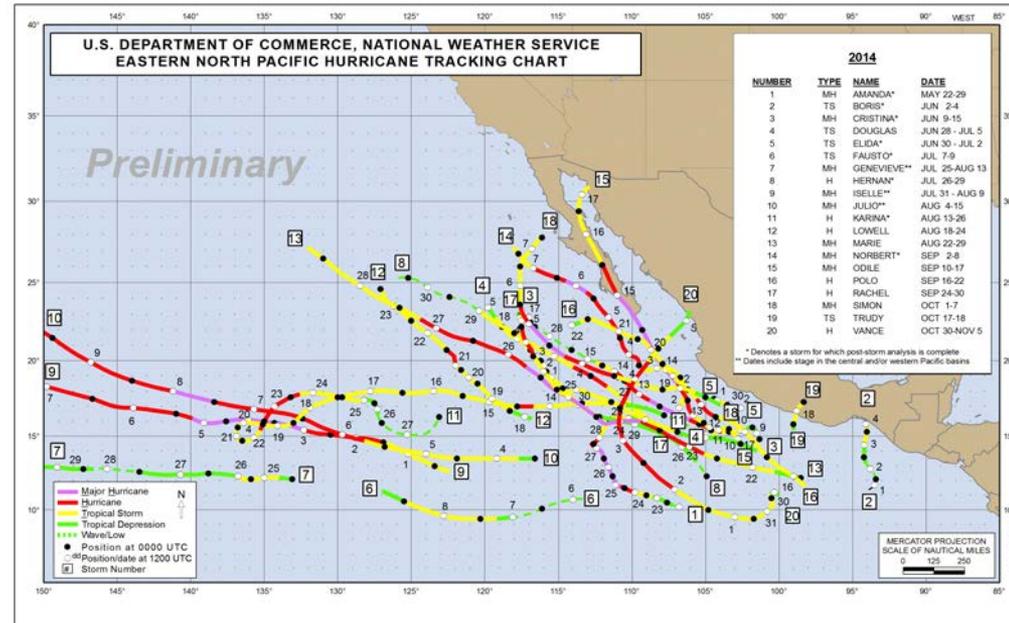
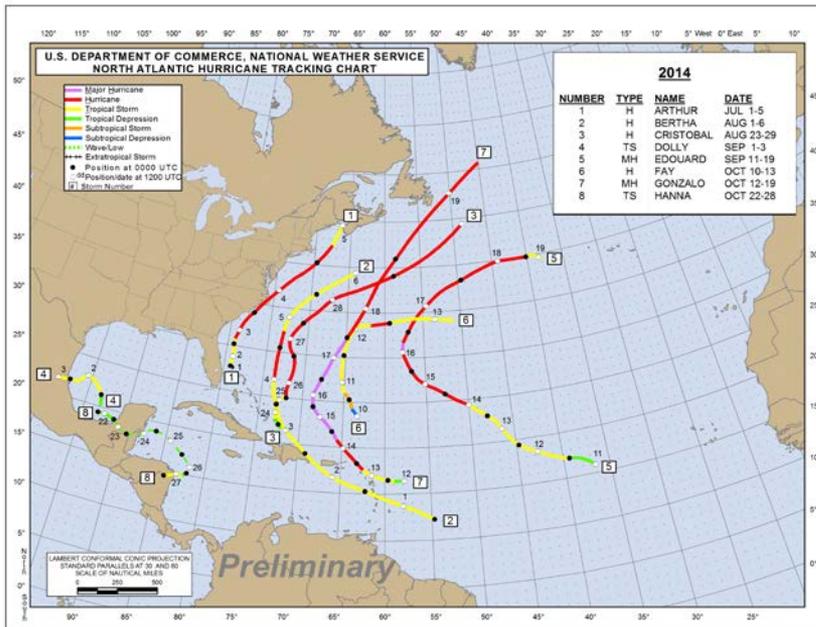
Recent NHC PG Activities

- Mid-project Review (17 Sep 2015)
 - A. Schumacher traveled to NHC
 - Met with several Hurricane Specialists and TAFB Forecasters to solicit feedback on PG demo products
- 2014 NHC Proving Ground Ended (30 Nov 2014)
 - Began 1 Aug 2014
 - Demonstrated 15 products
 - Emphasis on providing exposure to new products
- First draft of 2014 Final Report almost complete, expect final report by mid-Feb

2014 NHC PG Demo Plan

Proving Ground Product	Category	Evaluation Goals
GOES-R natural color	Mature	Included in NHC PG for several years Continue to obtain feedback, time permitting
RGB air mass		
RGB dust		
Saharan Air Layer (SAL)		
Pseudo natural color imagery product		
Hurricane Intensity Estimate (HIE)	Quantitative	Continue to obtain feedback, quantitative verification
Rapid Intensification Index (RII)		
RGB daytime microphysics	Introductory	Emphasize and obtain feedback on tropical applications – all were introduced in late 2013, little exposure
RGB nighttime microphysics		
RGB convective storms		
S-NPP Day/Night Band		
CIRA RGB Dust (DEBRA)	Comparison	Encourage forecasters to display comparison products w/ originals, provide strengths and weaknesses
Lightning density		
Super rapid scan imagery	Underutilized	Continue to be included, modified, or given less emphasis?
Tropical overshooting tops (TOT)		

2014 Atlantic & N.E. Pacific Hurricane Seasons

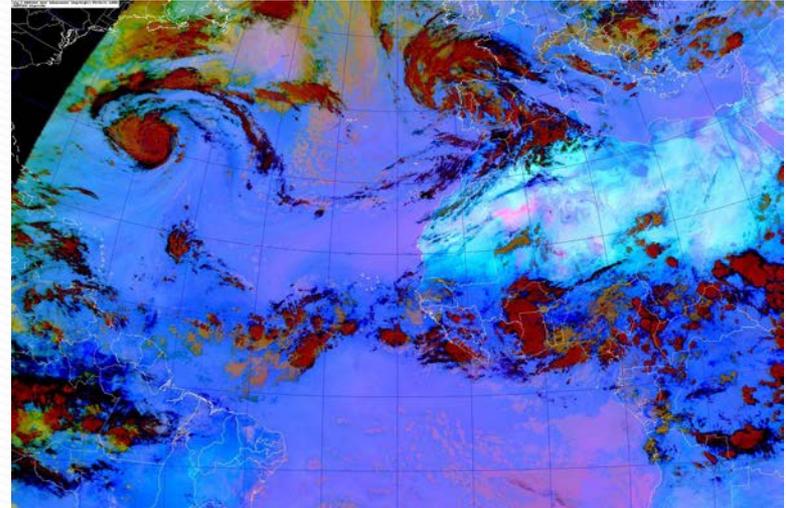
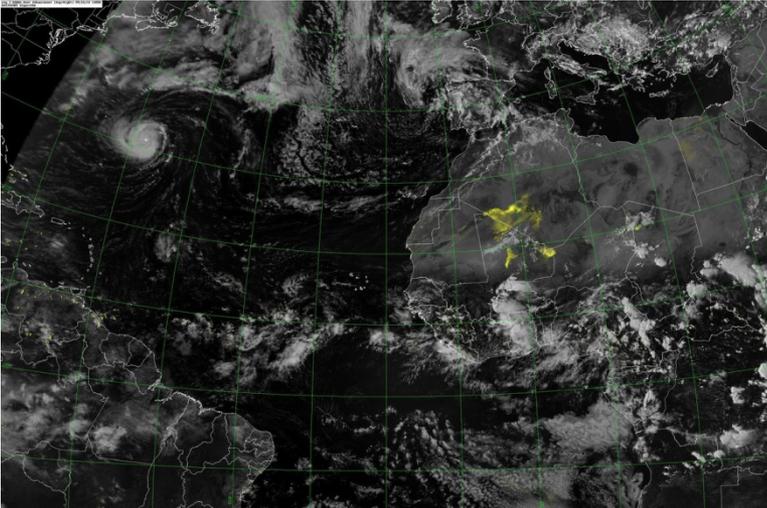


- Most NHC PG products being demonstrated primarily in the Atlantic
 - 8 TCs – 2 TS and 6 hurricanes (2 major)
- Received feedback on SRSO and lightning density and RII products for several N.E. Pacific storms

2014 NHC Proving Ground Highlights (1/2)

- Used NHCPG to gather information to help decide NHC operational suite
- Product Comparisons
 - EUMETSAT RGB Dust vs. DEBRRA
 - DEBRA better at defining dust boundaries
 - DEBRA helped users interpret RGB – matching areas of higher confidence of dust (brighter yellow) to corresponding pink colors on RGB
 - RGB highlights dust and large-scale features such as tropical waves and moisture gradients
 - Products complement each other

Dust product comparisons during 17 Sep mid-PG visit



- Not an ideal example, but still able to get some constructive feedback from forecasters

2014 NHC Proving Ground Highlights (2/2)

- Product comparisons (continued...)
 - Lightning strikes vs. lightning density
 - Loops of density contours provide better depiction of time evolution of lightning (easier to interpret)
 - Suggestion to overlay strike data and density contours
 - Units of density contours need to be adjusted for use on cases with less overall lightning
- New product demonstrations
 - RGBs
 - Convective storms and daytime microphysics showed increased deep convection on the SW side of Edouard (17 Sep)
 - Still using more for analysis of large-scale features, not storm-scale
 - Day-Night Band
 - Better coverage desired (snapshot is often not where they need it)

2014/2015 NHC Proving Ground Timeline

Nov 30 2014

NHC PG ended

Jan 2015

Project Debriefing and final
report preparation

mid-Feb 2015

2014 NHC PG Final Report

1 Jun 2015

2015 NHC PG Demo Plan finalized

1 Aug 2015

2015 NHC PG begins

Note: HSU and TAFB providing grounds will be
coordinated