VERIFICATION OF RIVER STAGES DURING HURRICANE KATRINA 8-29-2005

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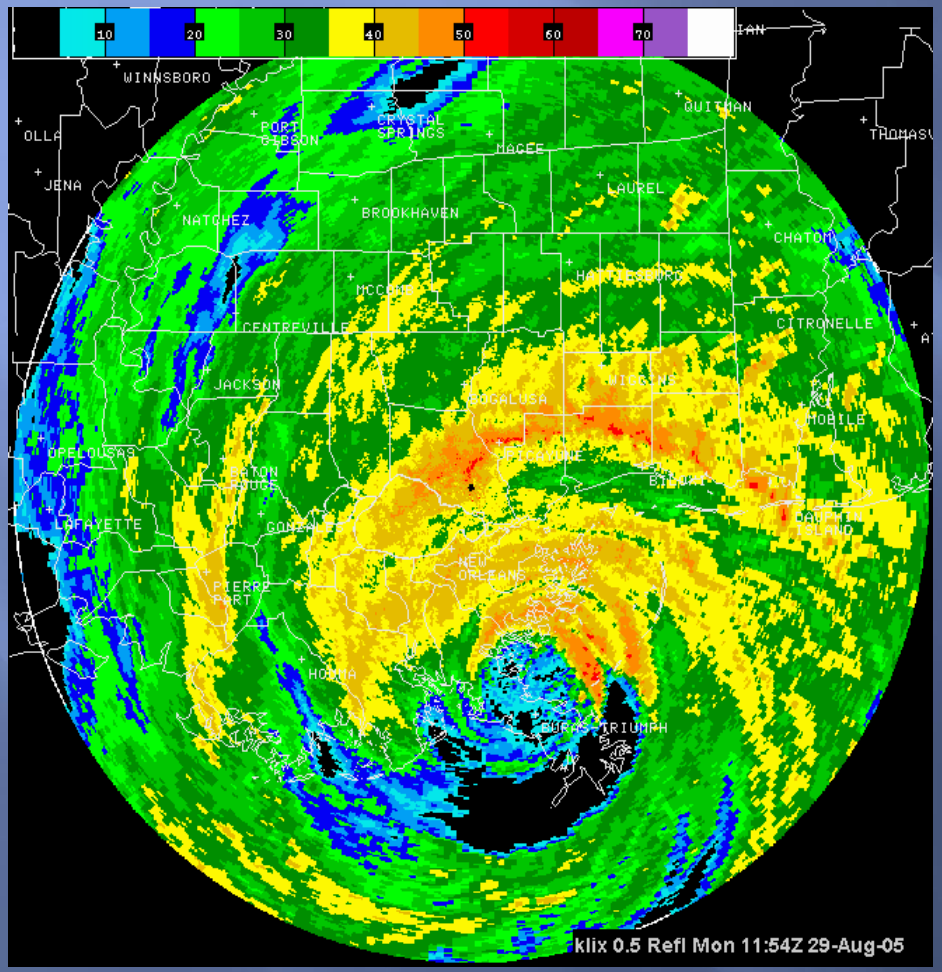
Outline

- Synopsis of Hurricane Katrina
- Rainfall Totals
- Storm Surge
- River Impacts
- Verification of Rivers
- Conclusions

Synopsis

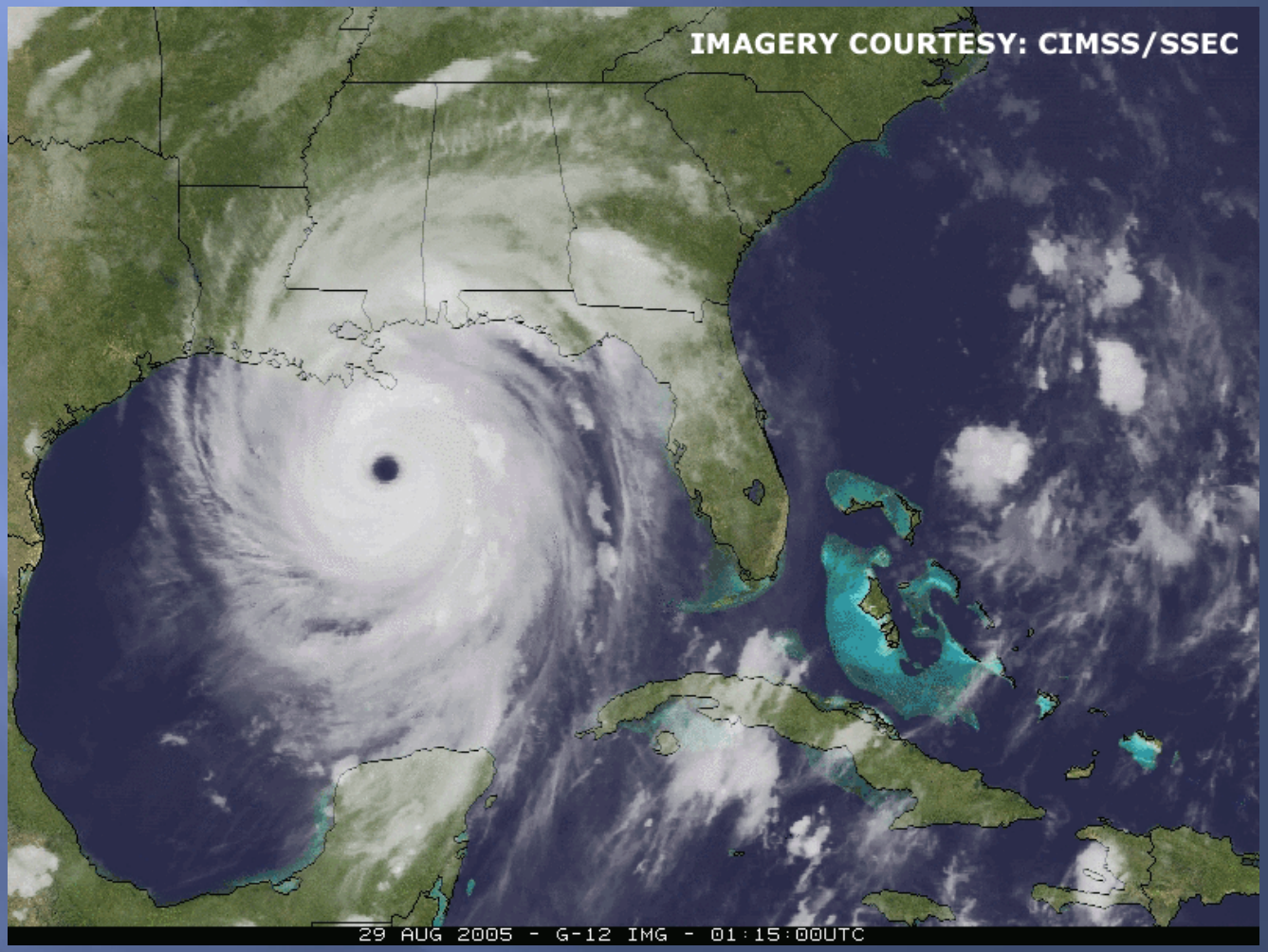
- Developed as a tropical depression on August 23.
- Category 1 at landfall North of Miami, FL
- Attained wind speeds of over 150 knots on Sunday August 28th.

Synopsis

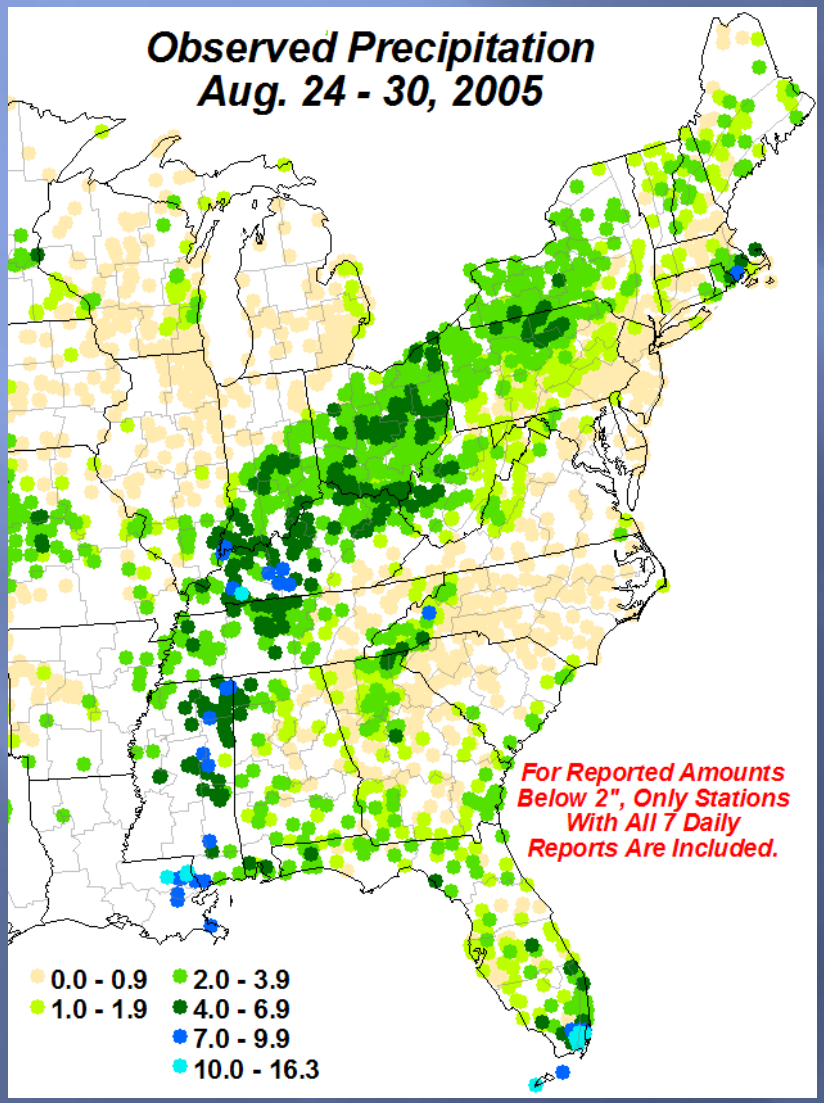


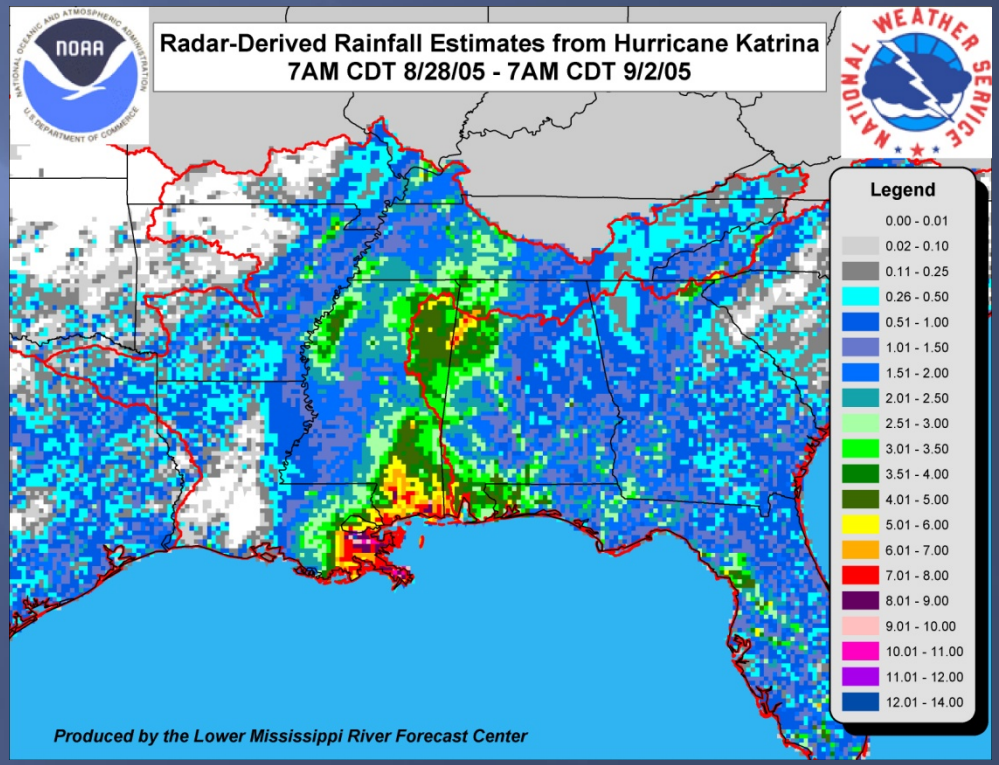
- Made landfall at Buras, LA August 29th with wind speeds of 110 knots.
- Central pressure of 920 mb (3rd lowest on record for an Atlantic land falling hurricane)
- Upwards of a 20 - 30 ft. storm surge.

Satellite Imagery of Katrina

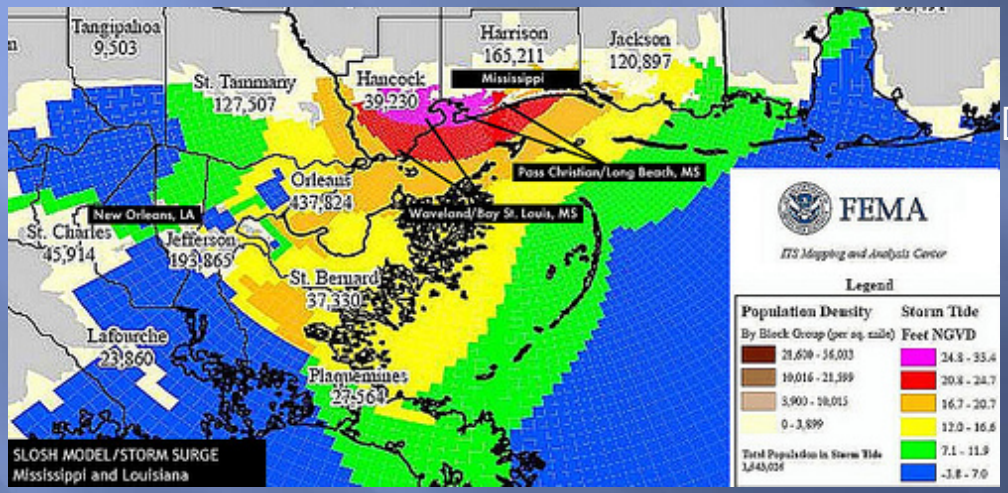


Rainfall Totals





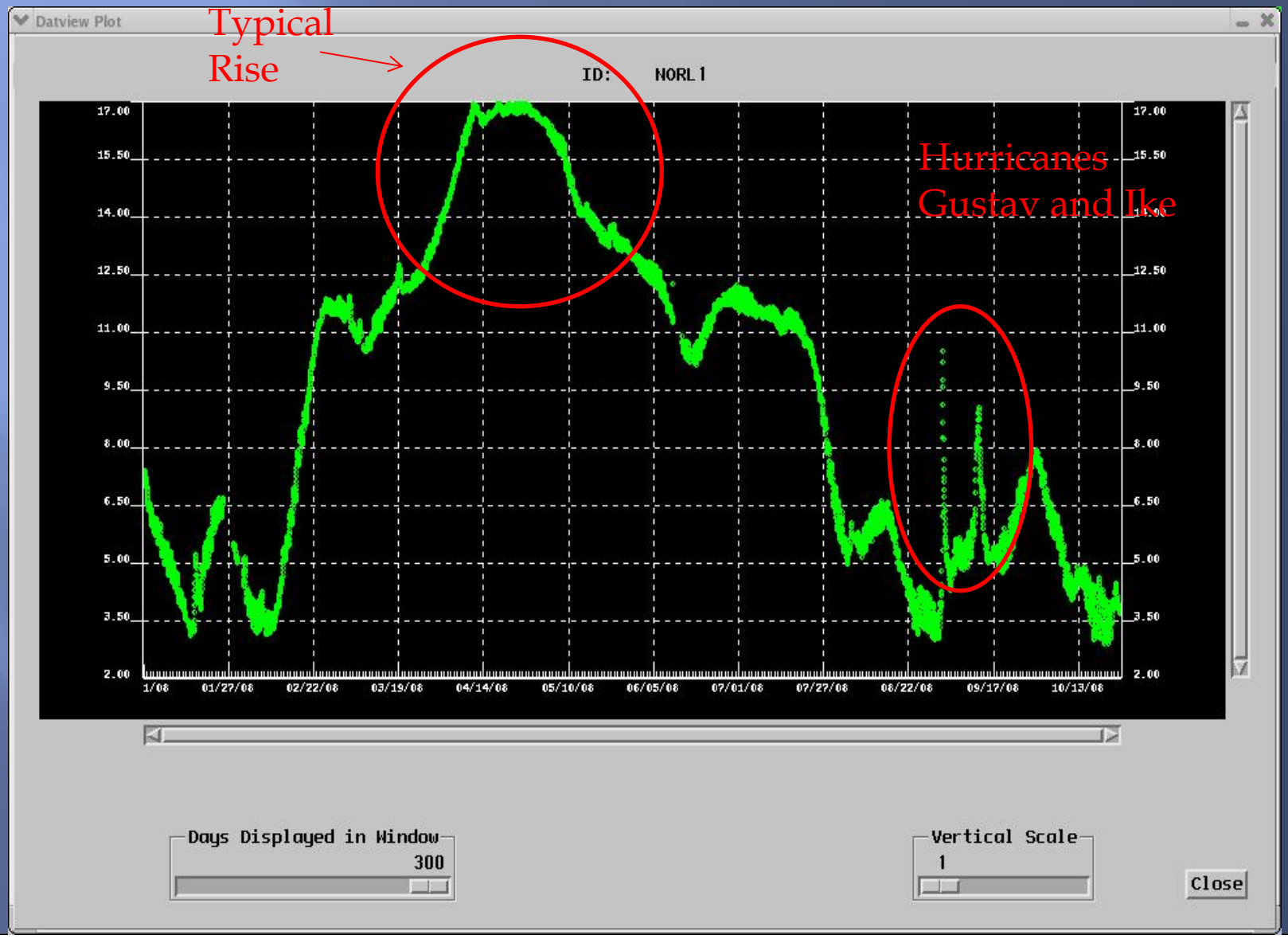
Storm Surge



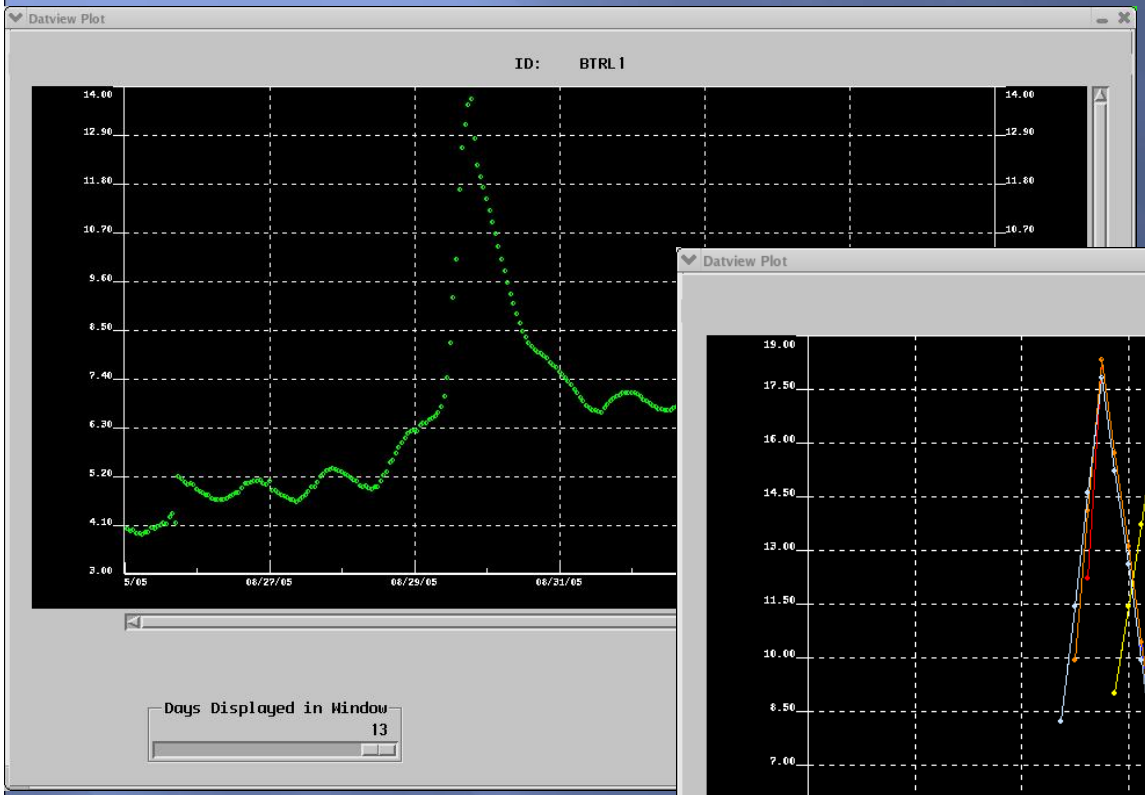
- ~30 ft storm surge along the MS gulf coast
- Upwards of 15 – 20 ft surge in the New Orleans area.

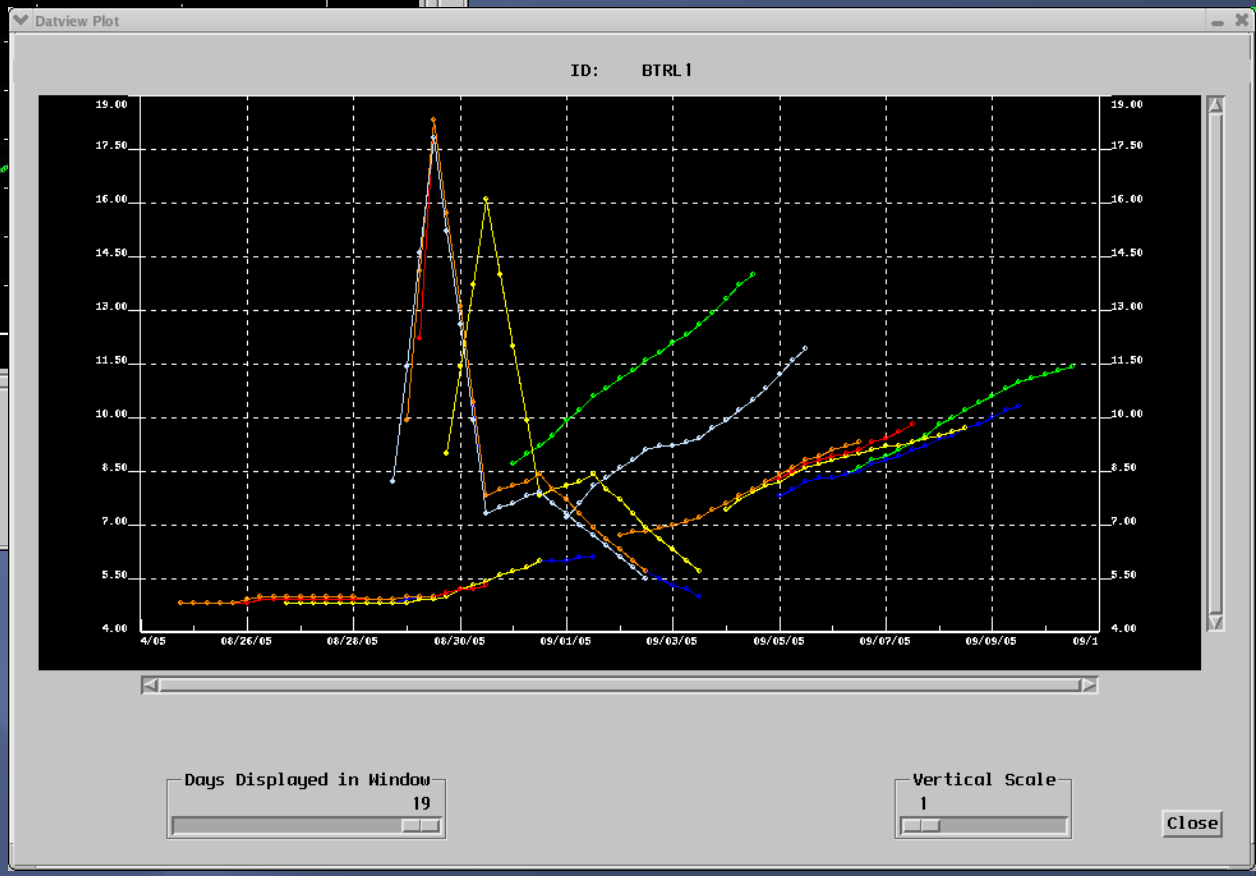
Location of Verification Points

NORL1 2008 Hydrograph

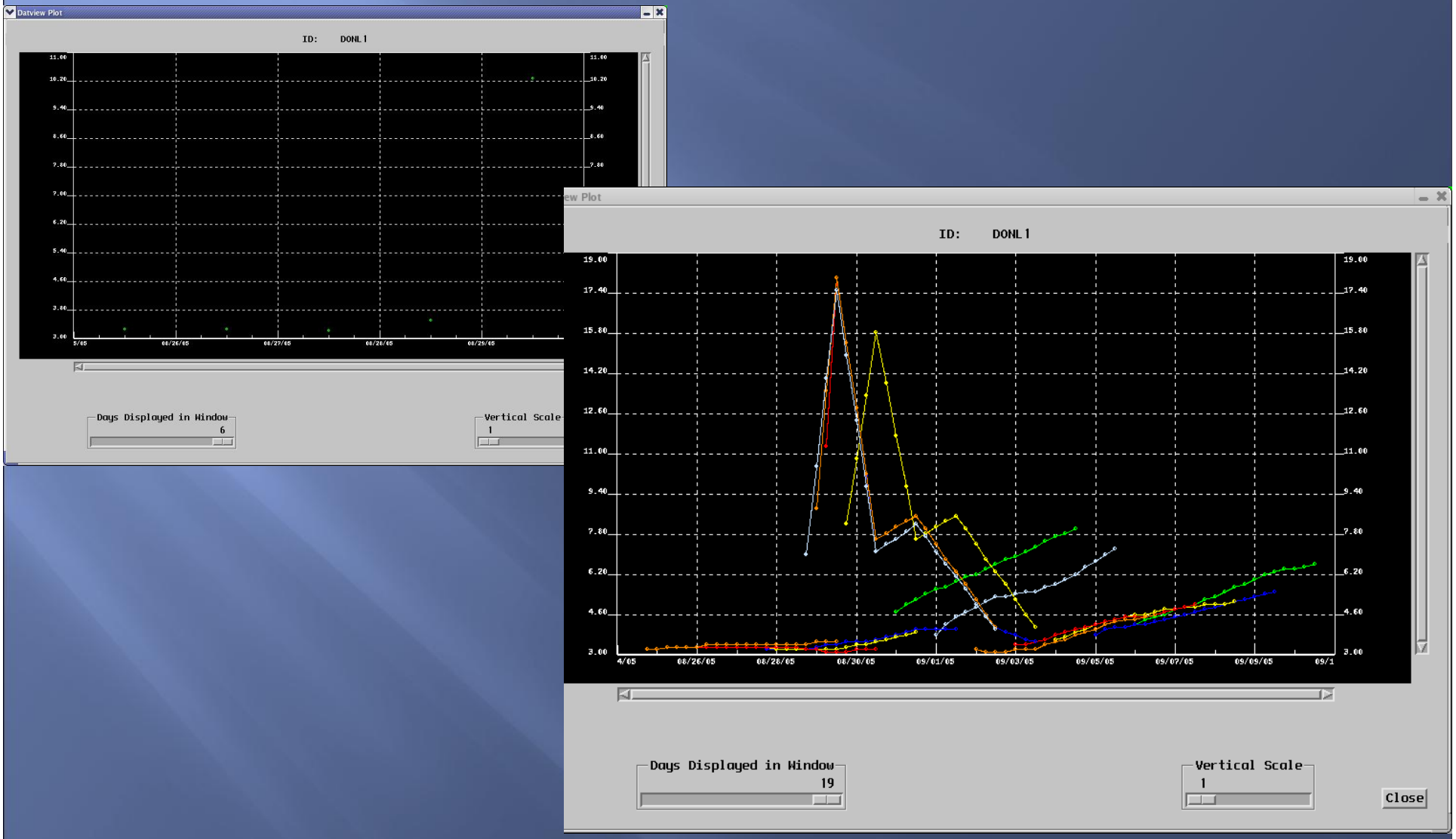


BTRL1 Hydrographs and Foreasts

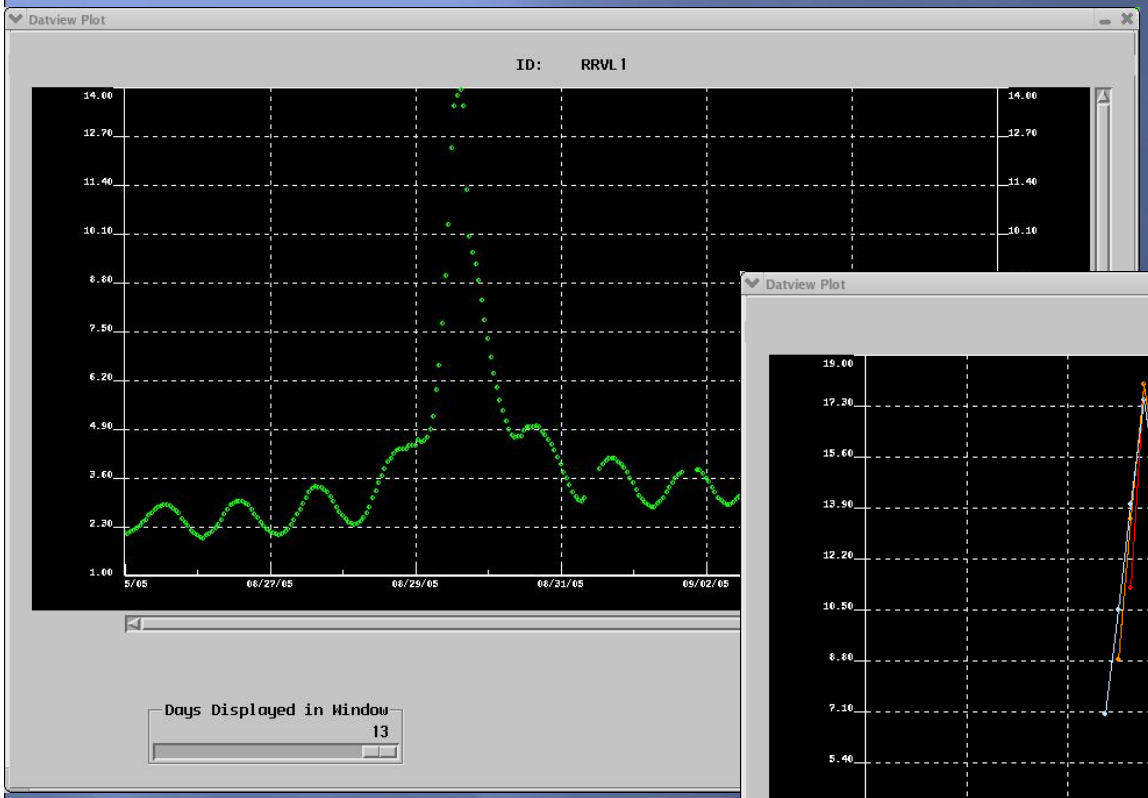


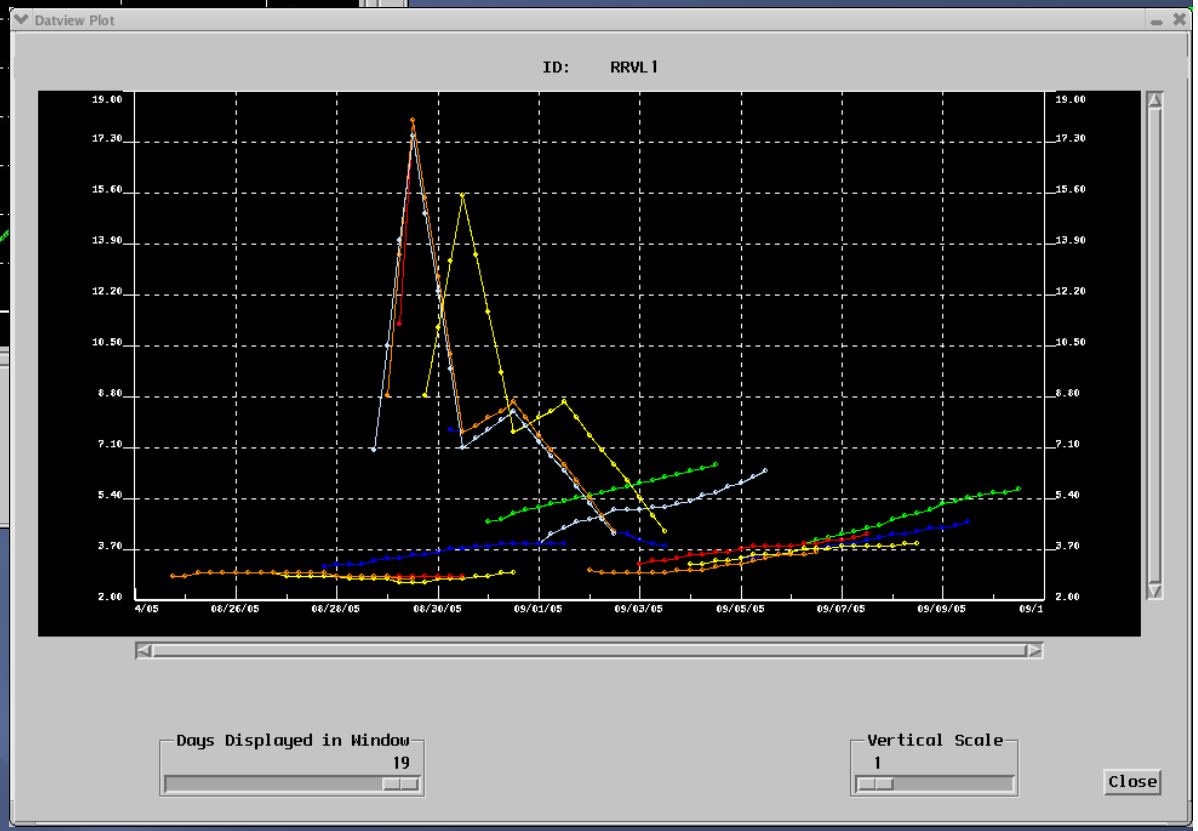


DONL1 Hydrograph and Forecasts

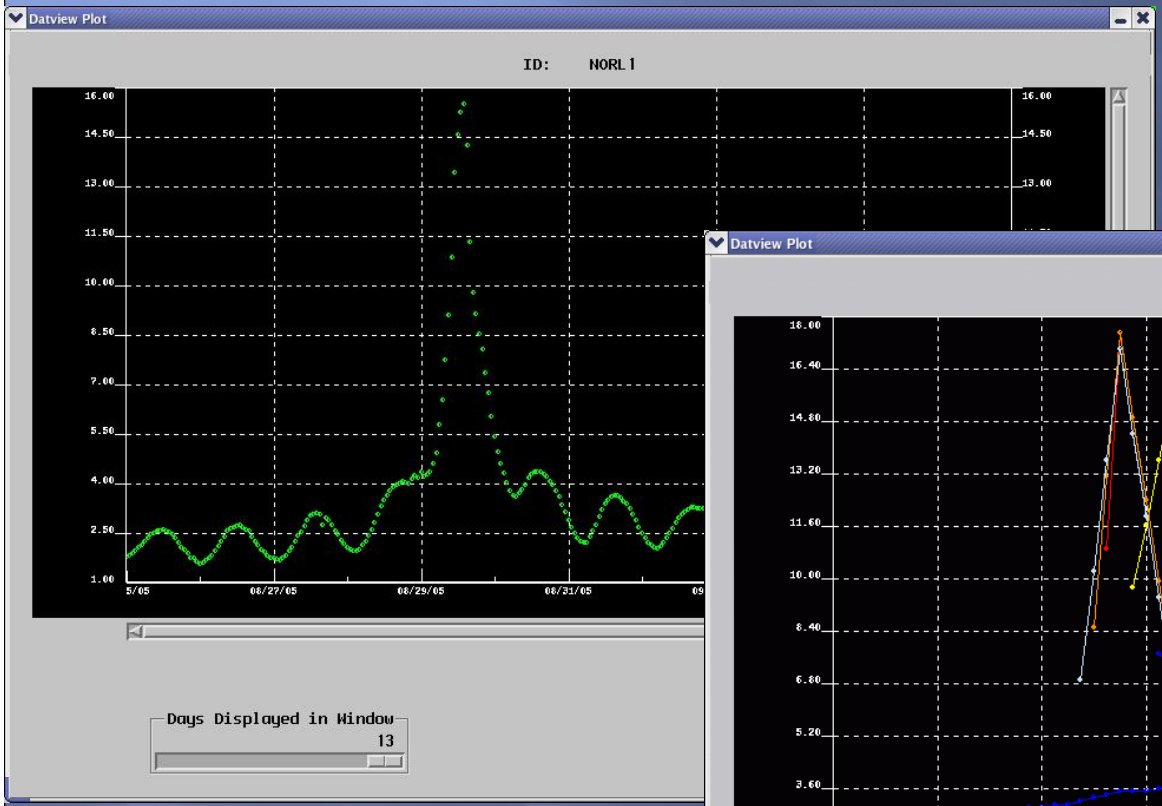


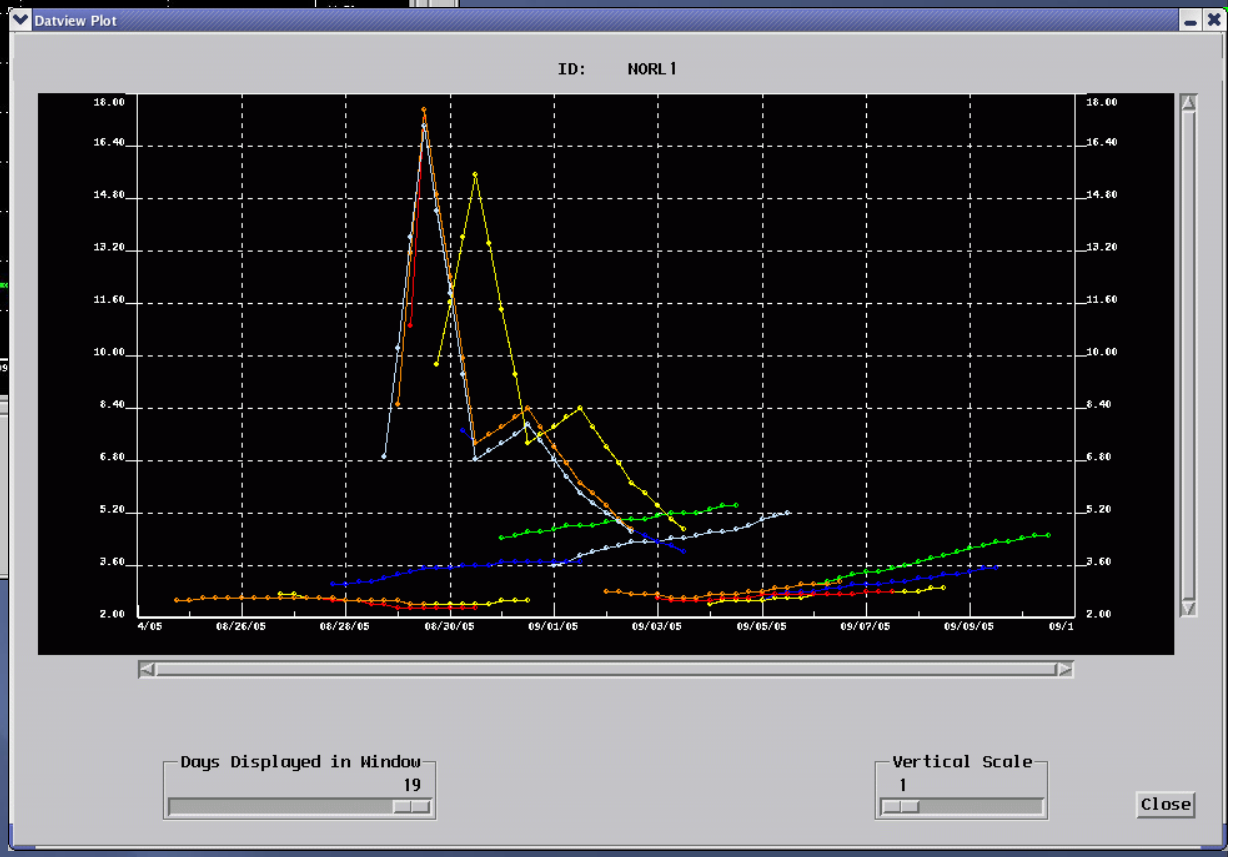
RRVL1 Hydrograph and Forecasts





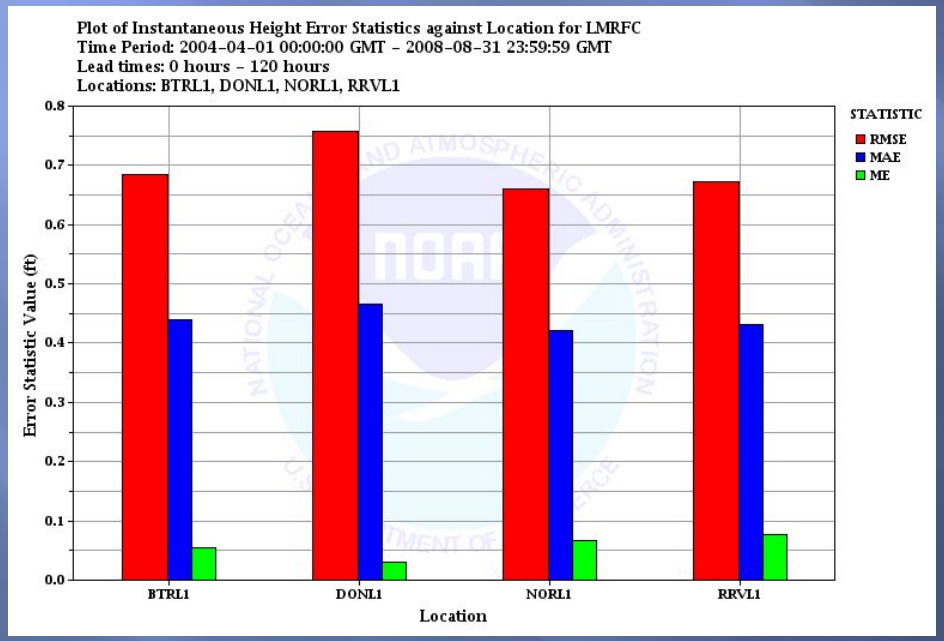
NORL1 Hydrograph and Forecasts



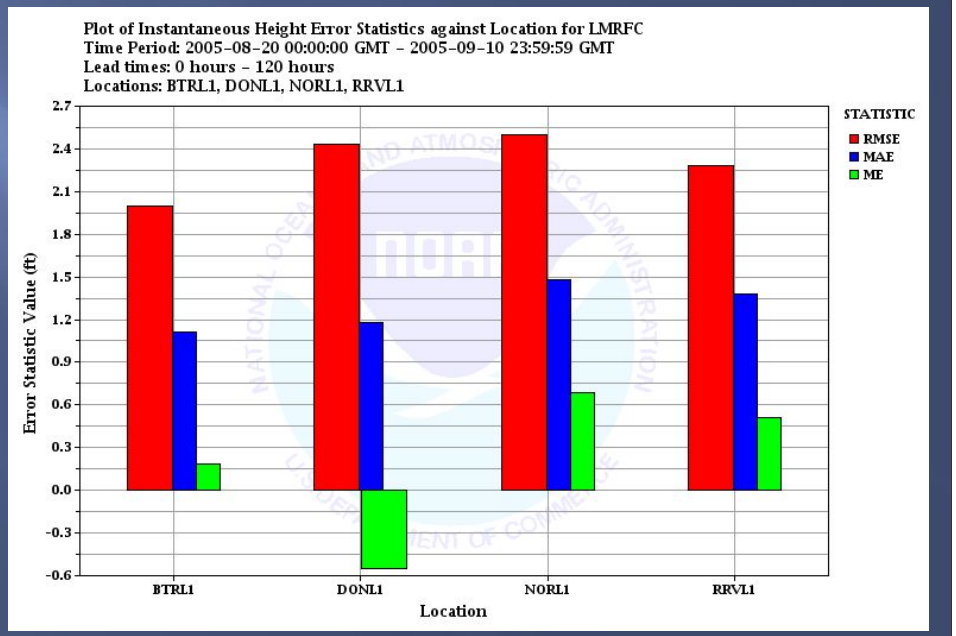


4 Year Record vs. Katrina

2004 – 2008

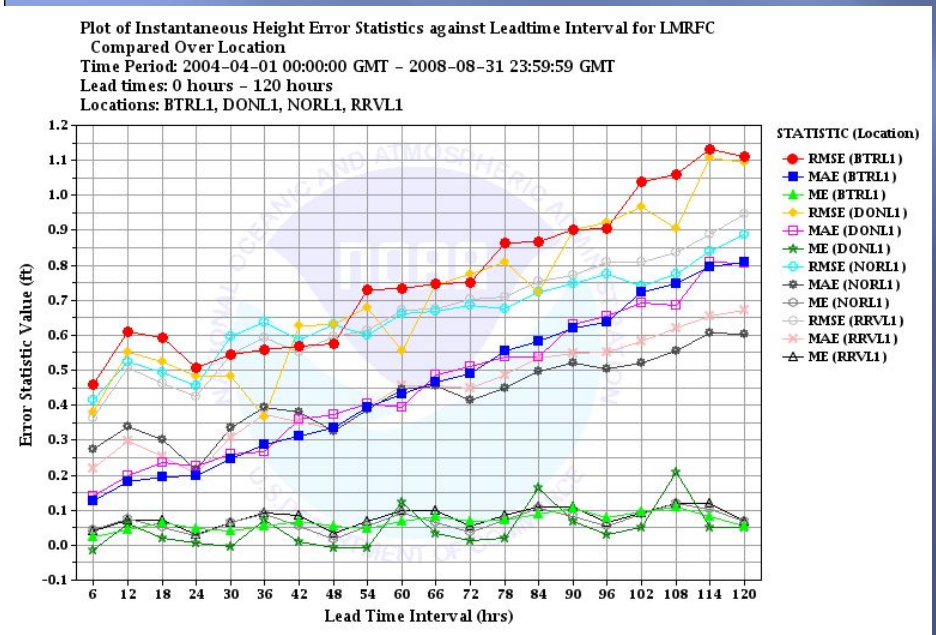


KATRINA



Lead-time Statistics

2004 - 2008



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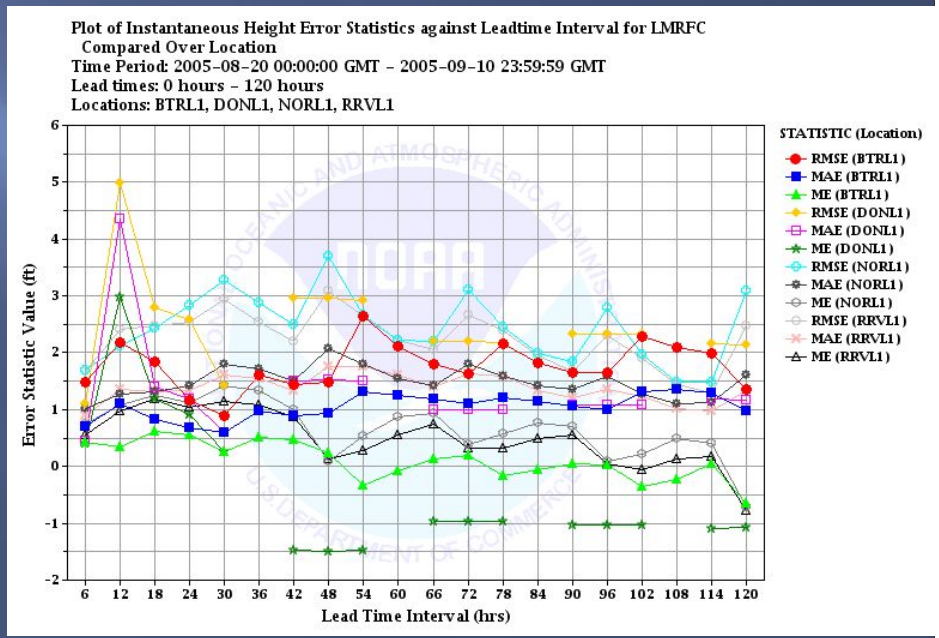
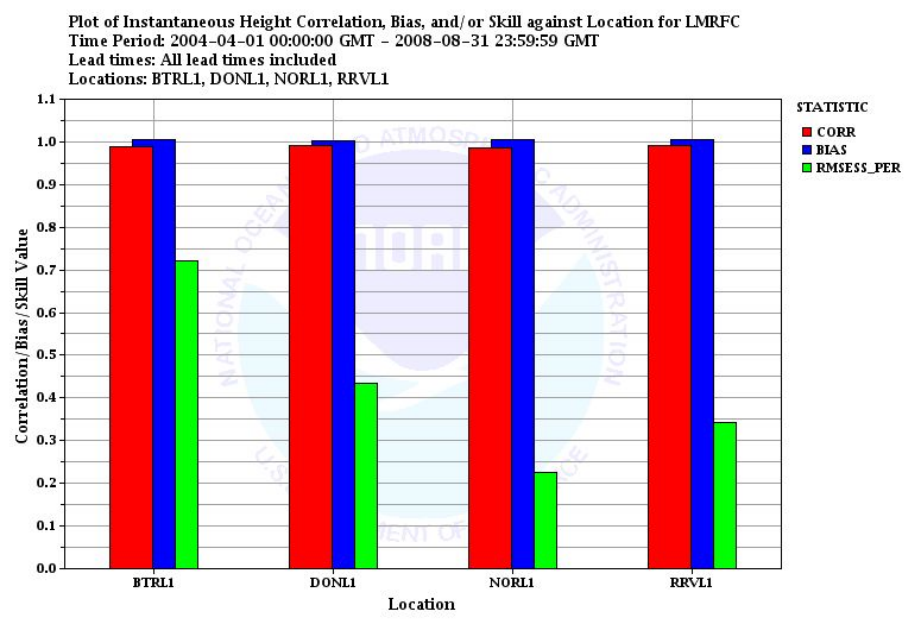
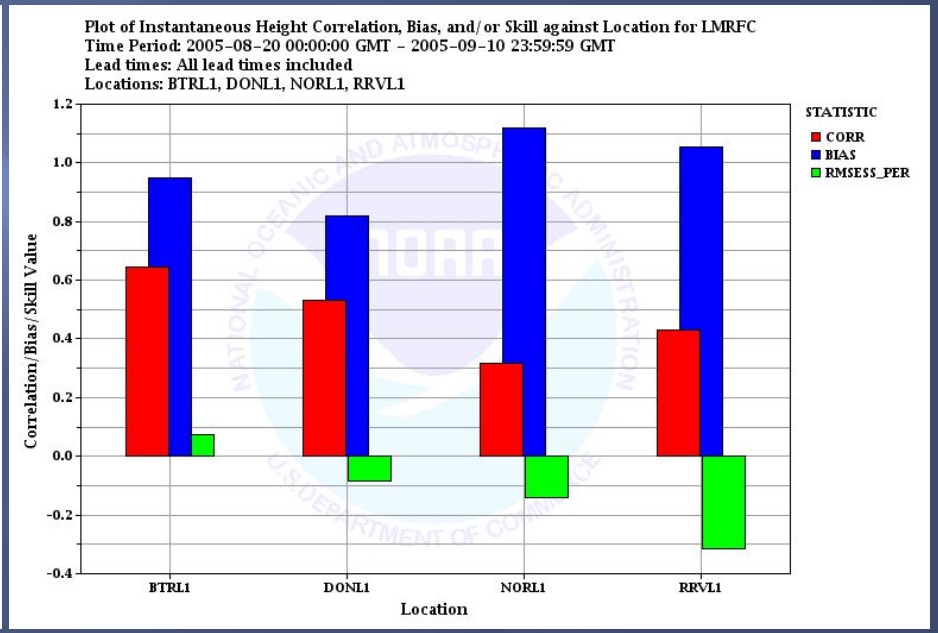


Correlation, Bias, and Skill

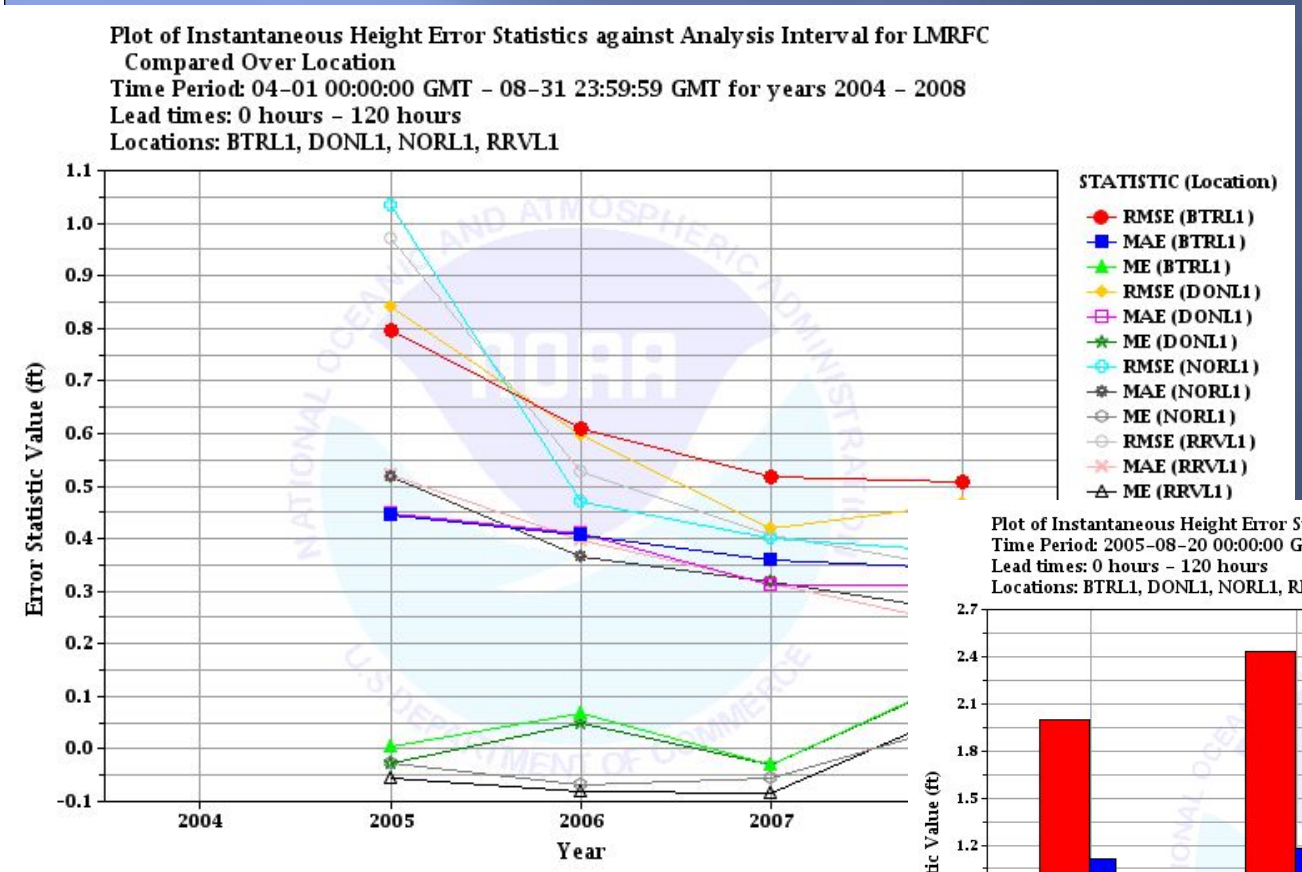
2004 - 2008

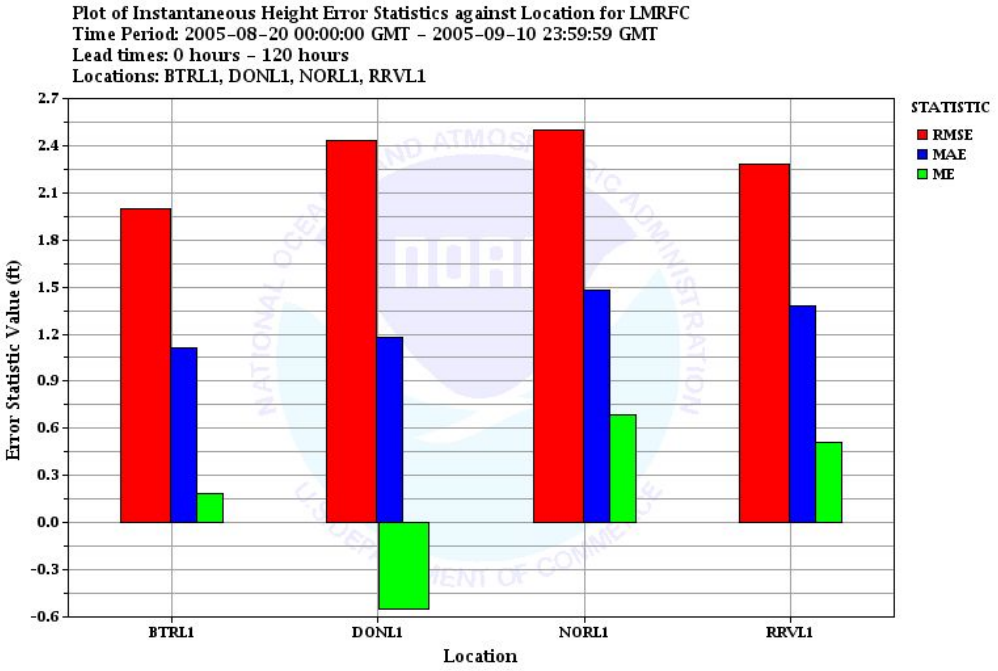


KATRINA



Forecast Trend Over Time





Conclusions

- Forecasts between 2004-2008 verified better than forecasts for Katrina due to Storm surge issue.
- The difference in obs vs. forecasts at N.O. was greater than upstream points because the storm surge affected that point more than the ones further up.

QUESTIONS?

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