

Final Project Selection Form

2012 FIU HRSSERP

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This form is designed to help you think about how to organize your ideas into a detailed yet concise plan for explaining in an 8-10 minute presentation.

Year: _____

Basin: _____

Storm Name: _____

Beginning Time: _____ End Time: _____ (limit to a 48-60 hour time period)

Day	Hour	MSLP	Wind Speed	Lat	Lon	SST	Shear Direction	Shear Magnitude

Data for the first 6 columns is archived at: <http://weather.unisys.com/hurricane/>

SST information is archived at: http://tcpf.fiu.edu/tc_storms.html

-Click on the storm and then the overpass nearest to your desired time, the + symbol indicates the TC center

Shear information is archived at: <http://tropic.ssec.wisc.edu/archive/>

-Search for your storm, check "Overlays" box, select "Deep Layer Shear - Zoom"
-The shear magnitude is indicated by the yellow contours (in knots)—estimate the shear based on the closest contour to the center of the storm

-The shear direction is indicated by the pinkish colored lines with arrows. The arrows indicate the direction that the shear is coming from. Choose the line/arrows closest to the storm center. If the arrows are pointing to the northeast, then the shear is southwesterly.

-Optional: plot some of the above data in a MS Excel time series (line) plot for use in the final presentation.

After filling in the above data:

-Read all of the NHC forecast discussions for your time period archived at:

<http://www.nhc.noaa.gov/archive/2012/>

The forecast discussions will help you understand what was going on with the storm at the time. However, keep in mind that what actually happened isn't necessarily the same as what the forecasters were thinking!

Questions to consider for the presentation: (just for brainstorming, you will never have time to consider all of them and there may be others not on this list)

-Did the storm interact with land? If so, was the land flat or mountainous? How did it affect the intensity?

-What were the environmental steering currents? (use CIMSS archive) Were there certain features (highs, lows, troughs, ridges) that helped steer the storm in a certain direction? Did the actual direction agree with the NHC forecasts?

-Did changes in SST affect the intensity of your storm? Did your storm intensify despite moving over cooler SSTs or weaken despite moving over warmer SSTs?

-How did your storm look on visible and IR satellite? Is it symmetrical or are most of the clouds on one side? Where are the coldest IR cloud tops located?

-How does your storm look on Water Vapor Imagery? (or CIMMS SAL or TPW product?) Is dry air being entrained into the center of your storm or is it in a moist environment?

-How does your storm look on microwave imagery? (37, 85 GHz) Where is the deepest convection located? Are there any hot towers near the center? How are the rainbands organized? If your storm has an eyewall, is it open or closed? What about concentric eyewalls? Does the microwave presentation improve or degrade with time? Why?

-What was the wind shear? What direction was the shear coming from? Was the shear affecting the presentation of your storm on satellite and IR images?

-What are the upper level winds like around your storm? Does the storm have good outflow? (Check visible, IR channels) Is there an upper level anticyclone assisting with outflow? Is the storm interacting with any other synoptic-scale weather systems such as fronts or extratropical cyclones?

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-Was their aircraft reconnaissance data available for your storm? If so, how does it relate to the satellite observations? Is there information from recon that wasn't available from other sources?

Recon archive: <http://www.nhc.noaa.gov/recon.php>

How to interpret recon: <http://www.ofcm.gov/nhop/12/pdf/05-chap5.pdf> (see page 6)

-Consider the NHC forecast discussions and best-track data from the chart that you filled out. Did you find any observations that lead you to disagree with the best-track data? Does microwave data indicate that the storm center is in a different location compared with the best-track?

-Did your storm undergo rapid intensification? If so, were there any signs that the storm was going to rapidly intensify? (especially 12-24 hours before the intensification began) Does the storm have a "cyan ring" of rainfall around the center on the 37 GHz imagery?

-That is a long list of questions, you may want to start with one or two and then see where it leads you!