Bob Gall led the HFIP telecon held on May 23, 2012 from 1400 -1500 EST. The following items were discussed:

* Reservations
* HFIP Product Webpage
* Presentations
  + Nick Shay – Upper Ocean Impacts and Air-Sea Fluxes During Hurricane Earl
  + Buck Sampson – Web ATCF
* Next telecon is scheduled for **June 6, 2012 @ 1400EST**

Participants from NESDIS, CDSL, NCAR, DTC, Wisconsin, ESRL, GFDL, UCLA, NHC, JPL, FSU, OMAO, OST, UM/RSMAS and NRL were present.

**Reservations**

Bob is working on the reservations. The plan is to provide reservations for all of the machines (100%)**.** This year we will try two approaches to allow time on the machines for development: One - people must release observations when they are not in use. Two – time may be available on other machines for development (i.e. West Virginia).

**HFIP Product page**

Sheema provided an update on the development of the HFIP Product Webpage. Paula McCaslin is the lead and has provided an UI prototype for the webpage. Eight people have been selected as part of the working group. The group is currently getting the models running on stream 1.5. The group needs contacts for PSU and NESDIS to get the stream 1.5 models. Mark DeMaria suggested Kate Musgrave for NESDIS and Sheema will add her to the HFIP product webpage telecon mailing list.

Bob stated that the goal is to generate a central webpage that is a single point of contact for all of HFIP. The webpage will be easy to use, provide the information for NHC and include anything that we would like to share amongst the group. It will not be password protected so it will be available to people outside of the group. The products will be available through links.

**Presentations**

Presentation 1

Nick Shay presented “Upper Ocean Impacts and Air-Sea Fluxes”. Nick began the presentation by explaining the Systematically Merged Atlantic Regional Temperature and Salinity (SMARTS) climatology database developed by Pat Meyers is being used to assess the oceanic role in intensity changes. He reviewed the Ocean Heat Content (slide 2) and explained that they’ve been using only one altimeter since 1988 (slide 3) which leads to large mapping errors. Another altimeter will be obtained in the near future. Over 50,000 thermal profiles have been pulled from multiple platforms. Data set includes Argo, XBT, Airborne and PIRATA (slide 4, manuscript to submit to AMS). Slide 5 provided fourteen years of satellite data and compared it to the in-situ measurements (normally distributed). Nick stated that the counterpart to SMARTS in the Pacific is called SPORTS Systematically Merged Pacific Ocean Regional Temperature and Salinity (SPORTS) climatology and will cover the entire basin for the north pacific.

**Question**: Doesn’t a lot of the SMARTS data contain in-situ stuff? Yes, the in-situ is used to evaluate the satellite products.

The microwave SST before and after Earl and the pre and post OHC from SMARTS were presented in slide 6. The float measurements (pre and post) were fairly consistent with the satellite product (slide 7). The SST response (slide 8) from microwave radiometer from TRIM was used to help estimate the air sea flux as well as the SST derived from the aircraft. This ensured there was consistency between space based and aircraft based measurements. The Donelan drag coefficient, where you get maximums of 2.5 x 10-3 beyond about 33 m/s, was used in calculating momentum and enthalpy fluxes (slide 9). The bigger issue is the Ck/Cd ratio which requires testing to see what kind of fluxes the ocean is supporting and how it affect the storm. Testing of the how much momentum flux entered the upper ocean for Hurricane Ivan demonstrated the Donelan drag coefficient was much closer to the observed than the Powell and Large and Pond approaches (slide 10). It doesn’t appear the ocean is over mixing or over cooling with the Donelan drag coefficient. The track and intensity for Earl was presented with SST and OHC (slide 11). Five snapshots of what the momentum flux was doing during specific episodes were shown in slide 12. The fluxes increased right along the gradients of OHC (SST relatively flat) right along the strong loop current and warm eddy boundaries (slide 13). By integrating the estimated enthalpy fluxes data into the along track direction +/- 6Rmax, one can begin to try to understand how much heat loss of the upper ocean is going to the sea surface. The surface heat loss was much less than what was thought. The delta OHC total heat loss was 20 kJ/cm2, on average along the track, compared to the sea surface heat loss which was 35-45% of the heat loss of the upper ocean (slide 14). Nick concluded by stating an extensive in-situ temperature profile data (~ 50,000 profiles) has been used to evaluate SMARTS and the data set includes 14 years of continuous data (1998 – 2012). Work continues on evaluating high OHC values (>100kJ/cm2), low OHC values (<40 kJ/cm2), the impact of SST and OHC gradients on fluxes, testing of Ck/Cd ratio and work with fisheries and biologist to improve estimates of OHC and satellite derived fields (slide 15)

**Question**: Is the 20 kJ/cm2 of the OHC within 6 RMW of the storm center? Yes +/- 6. How much of that happens when the storm is there and how much of that loss occurs due to the upwelling? We do not have any estimates at this time. We also drop current profilers to assess advection and to estimate current shear and entrainment mixing. We can measure heat loss during the storm but this requires air craft time to get the probes on to measure the heat loss during the storm.

**Question**: Have you estimated the biases in the TMI analysis? We did estimate that. In addition to the brightness temperature, SFMR also allows you to get the sea surface temperature. Biases of 0.4 – 0.8 °C were seen so we are confident that the TMI is close.

Presentation 2

Buck Sampson presented “Web-ATCF”. Slide 2 provided an outline for the presentation which described the differences between ATCF and web-ATCF and provided examples and link/passwords for use. The ATCF is an automated tropical cyclone forecast system that resides at the National Hurricane Center or the Joint Typhoon Warning Center which ingests or produces information (ATCF decks, serial wind probabilities, NWP models etc) and allows the forecaster to produce tracks, fixes, objectives, guidance, warnings, advisories, bogus TCFA generate statistics for post storm analysis (slide 3). An annual meeting is held to discuss requirements, identify and prioritize tasks. Links to the completed task and new tasks were provided in slide 4. Next, Buck explained that ATCF is for the TC forecasters to generate advisories and warning while the Web-ATCF cannot send out advisories and is for situational awareness, training and research (slide 5). The Web-ATCF server is at NRL, only works on Windows and Linux, and uses Java Web Start. The Web-ATCF is an application that runs commands back to the server (slide 6). Slides 7 – 16 provided examples generated using Web-ATCF and included Aletta with NCODA Ocean heat content (slide 7), the track (black) and fixes for individual estimates of where the positions are for the storm (slide 8), CIRA Wind Analysis with Vis Image (slide 9), SSMIS image of the CIRA wind analysis (slide 10), and scatterometer pass over 01E (slide 11). In addition, the objective guidance of what the NHC forecasters are looking at a given time was presented (slide 12) with time sequence for HFIP 1.4 (slide 13), intensity (slide 14) and wind radii (slide 15). The Time vs. intensity graph allows you to change the guidance by axis (slide 16) and Web-ATCF allows the user to send the results via email. Web-ATCF also allows for homogenous statistics to get a quick look at how the model is forming by selecting the basin, year, storm(s), forecast methods, a number of parameters and the type of output required (slide 17). Examples of output for track (slide 18) and intensity (slide 19) were provided. In slide 20, a link to Web-ATCF was provided as well as a temporary password. Buck recommended those who are interested contact him directly to obtain a password. He also stated that Web-ATCF is not available to the public and the server is updated regularly with new software. There are also three training videos accessible via the Web-ATCF link.

**Question**: The scale on the OHC goes from -300 to 280? Will that be changed? Yes

**Upcoming HFIP Telecon**

The next telecon is scheduled for Wednesday, June 6, 2012 1400 – 1500 EST.

Dial in: 1-877-985-3644

Passcode: 5846644#