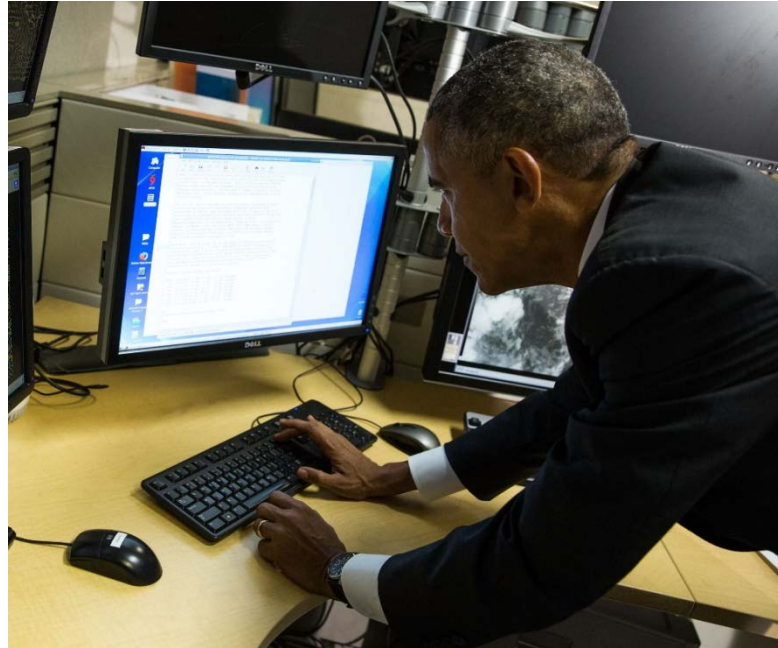


Automated Tropical Cyclone Forecast System (HFIP, November 2015)



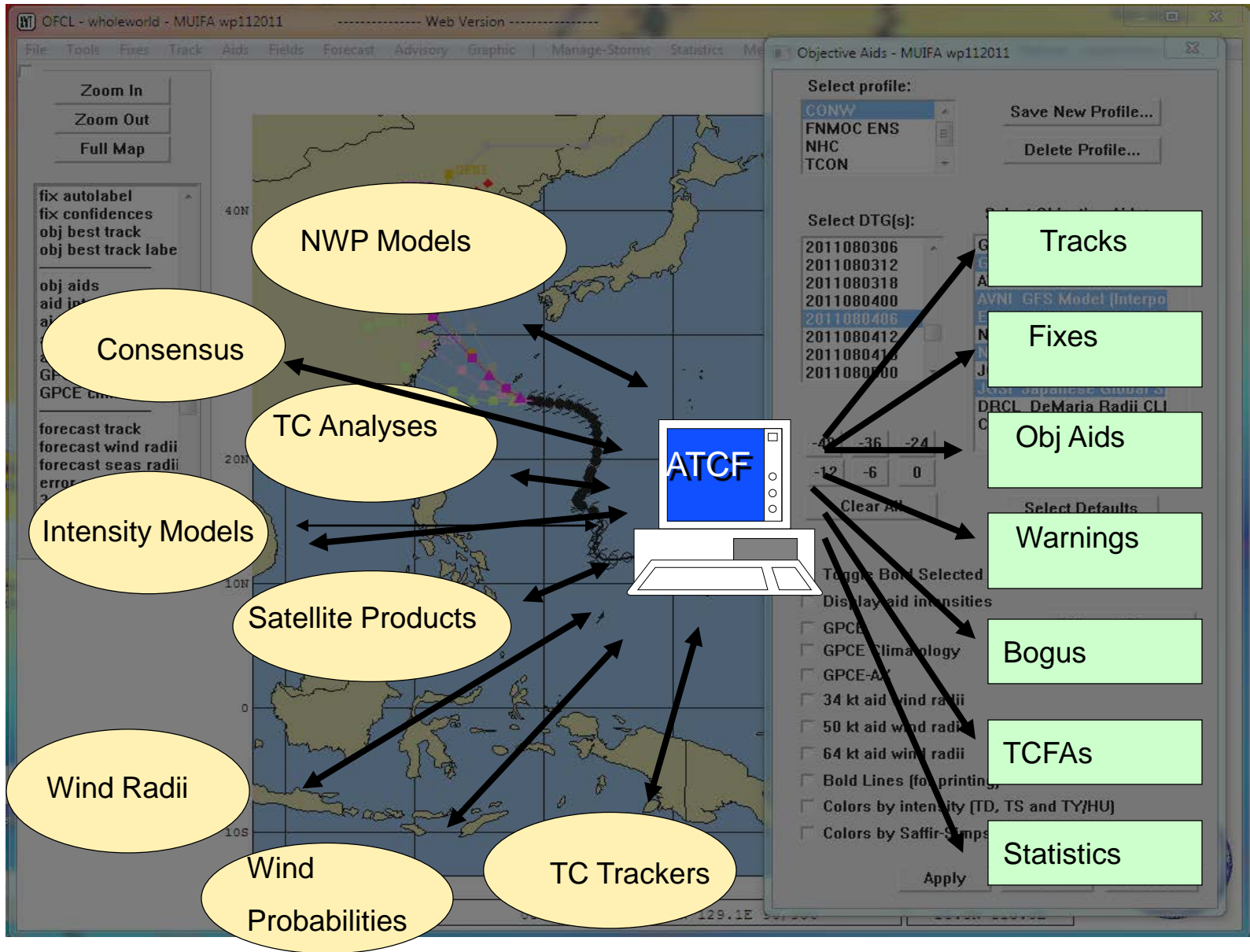
Forecaster hard at work generating products on ATCF

NRL Contributors

**Mike Frost, Kim Richardson, Buck Sampson (NRL)
Ann Schrader and Jim Goerss (SAIC)**

Some Other Contributors for 2015

**Brian Strahl, Ed Fukada, Angelo Alvarez, Matt Kucas, Marshall Wilson,
Mike Brennan, Monica Bozeman, Craig Mattocks, Mark DeMaria, John
Knaff, Rodney Jacques, Chris Gutierrez**



ATCF Project at NRL

- Navy FY15
 - 0.4 person directly for ATCF develop, install, support
 - 0.3 person for model development (SHIPS, consensus, GPCE)
 - 0.3 special funds for 64-bit upgrade (XVT)
- NOAA FY15
 - 0.1 person for support of NHC and CPHC
- Compare ATCF with “Programs of Record”
 - AWIPS2 \$38.0M/yr
 - NITES Next \$ 9.0M/yr
 - ATCF \$ 0.3M/yr

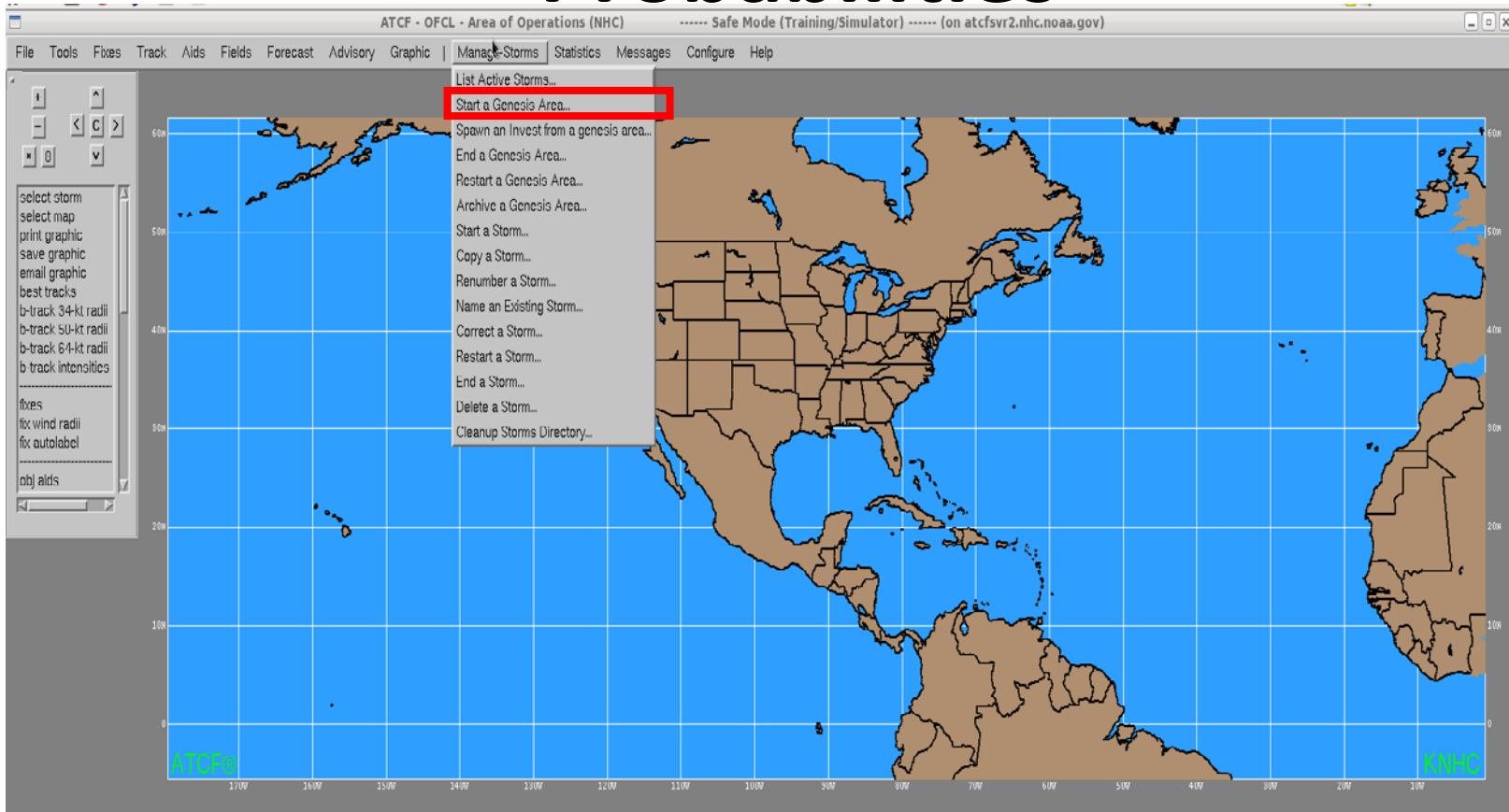
Progress

- FY12
 - 70 tasks completed
- FY13 (new hardware)
 - 83 tasks completed
- FY14 (RHEL 6)
 - 45 tasks completed
- FY15 (genesis probabilities)
 - 65 tasks completed
- FY16 (64-bit)
 - Upgrade to Navy only

NHC ATCF for 2015 Season

- Genesis Probabilities
- Maps/dialogs crossing 0W
- Satellite image overlay improvements
- Compute dialog changes

New Method for Storing Genesis Probabilities



To begin storing genesis probabilities for a disturbance go to **Manage Storms**>
Start a Genesis Area...

New Method for Storing Genesis Probabilities

Start a Genesis Area (on atcfsvr2.nhc.noaa.gov)

ATCF ID = AL782015

Genesis # 008 Name GENESIS008

Sub Basin North Atlantic Number 78

Starting Date and Time

Year 2015 Month 04 Day 08 Hour 12

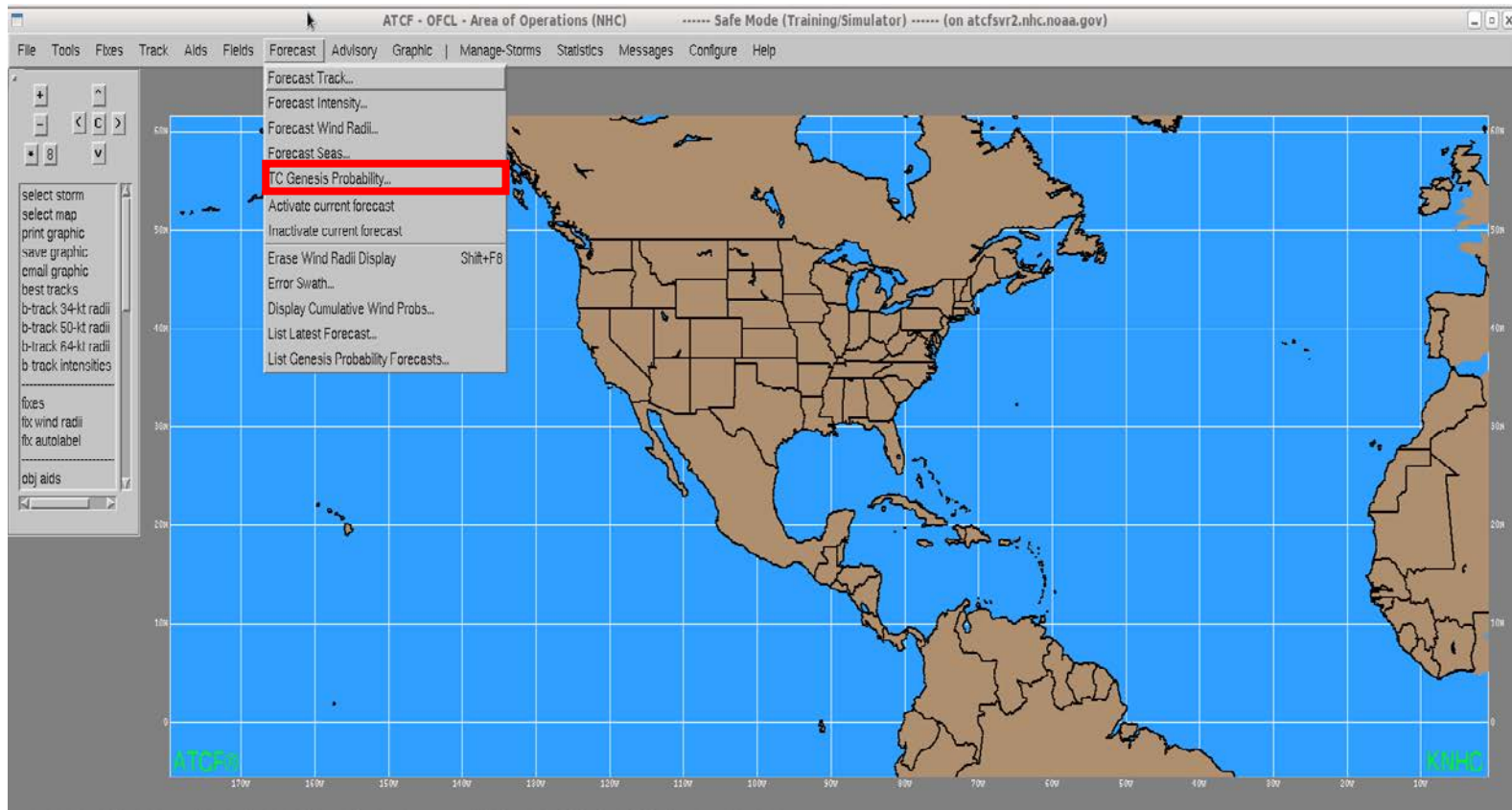
Center Lat/Lon

Latitude Longitude

Help OK Cancel

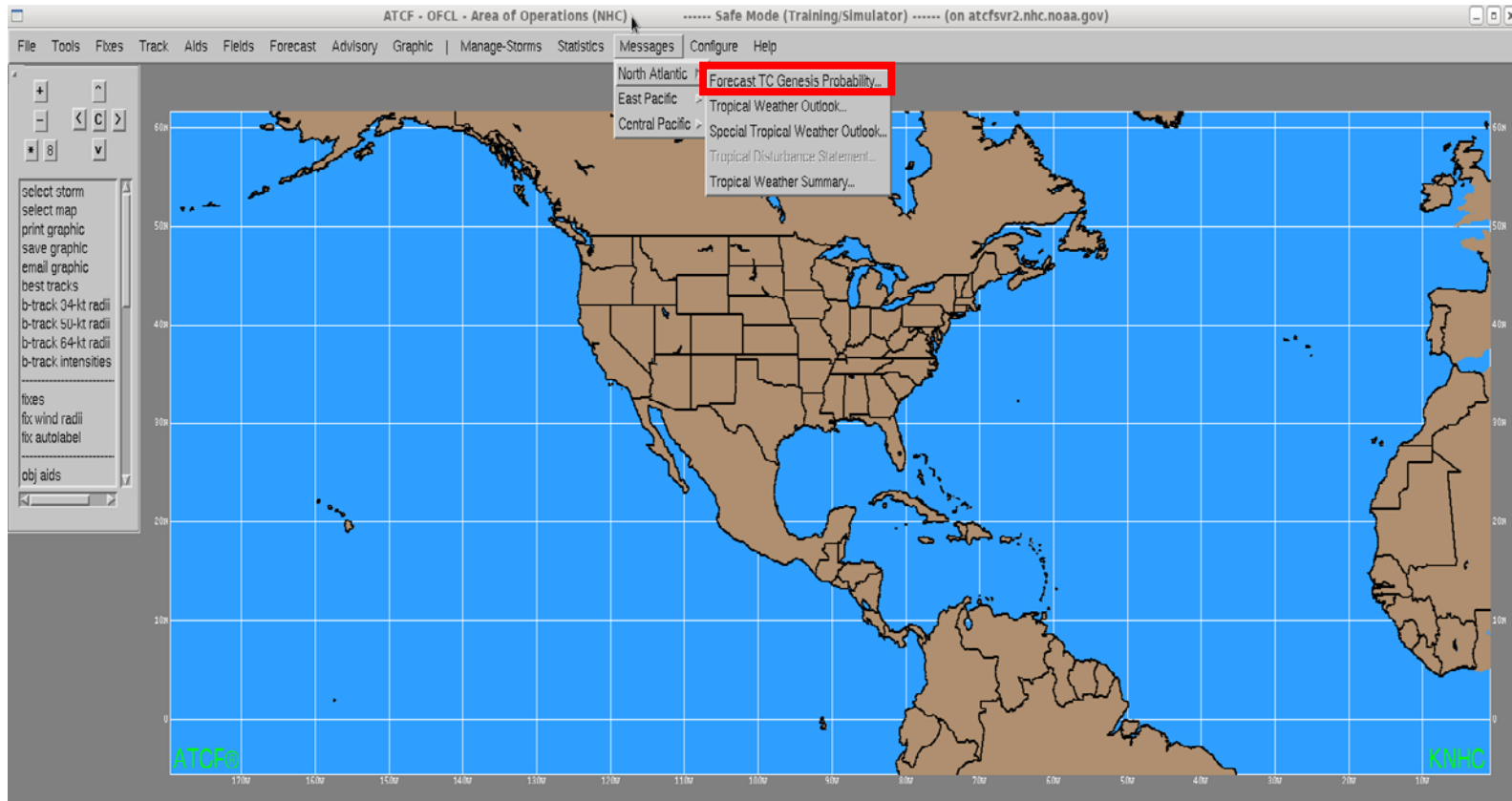
Select disturbance number (001, 002, 003...) and basin
Must provide starting date/time and some initial lat/lon (lat/lon doesn't have to be meaningful)
(70s series number will be set automatically and recycled)

New Method for Storing Genesis Probabilities



To make a genesis forecast go to **Forecast>TC Genesis Probability**
or
Messages>Basin>Forecast TC Genesis Probability

New Method for Storing Genesis Probabilities



To make a genesis forecast go to Forecast>TC Genesis Probability
or
Messages>Basin>Forecast TC Genesis Probability

New Method for Storing Genesis Probabilities

TC Genesis Probabilities (on atcfsvr2.nhc.noaa.gov)

Basin: North Atlantic Date: 2015040818

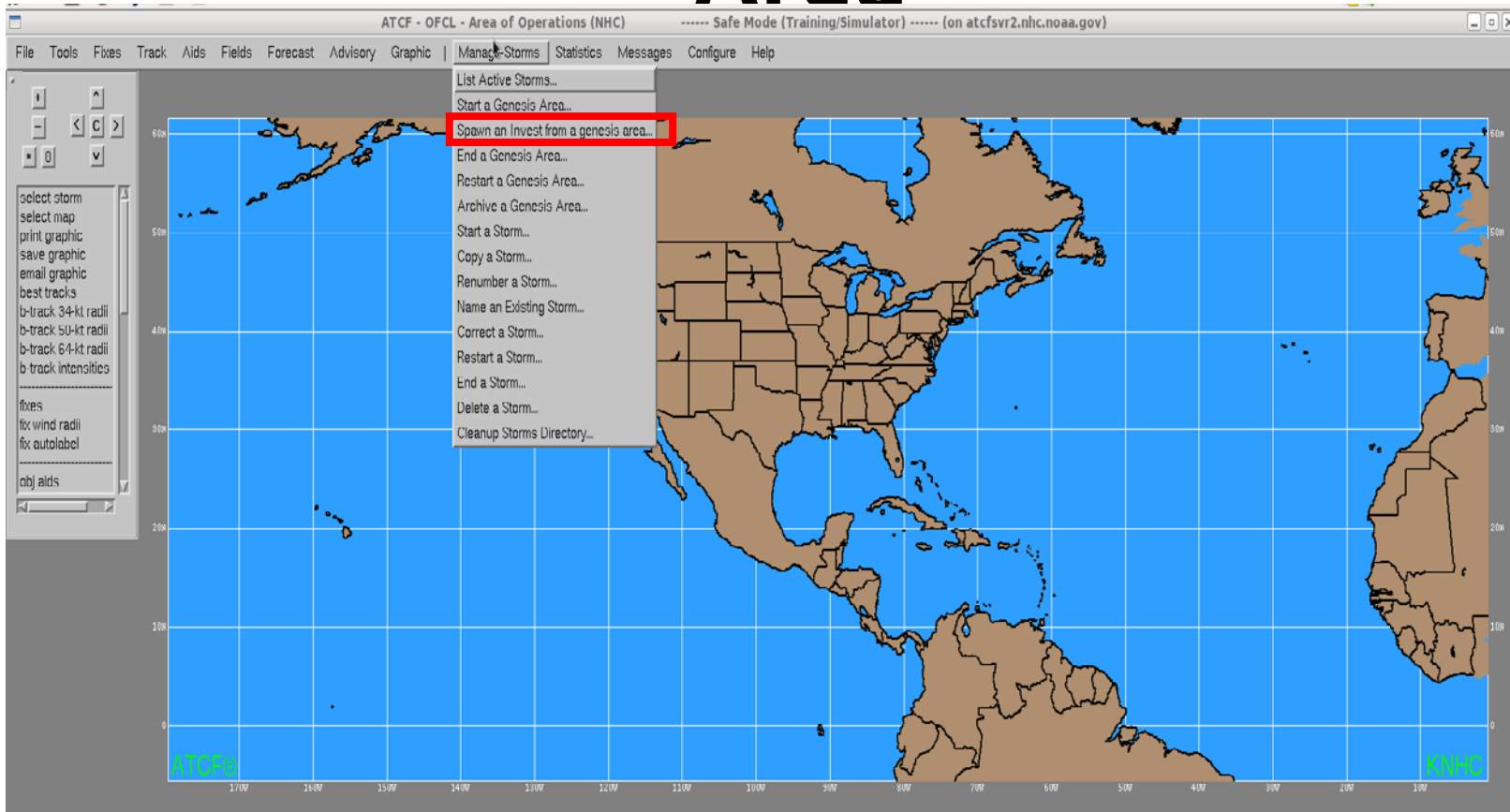
Genesis #	Storm ID	2 day probability	5 day probability
<input type="checkbox"/> 8	78 2015	0	0
<input type="checkbox"/> 9	79 2015	0	0

Forecaster: 000

Buttons: Help, Apply, OK, Cancel

Active genesis areas for each basin will be listed
Enter 2-day and 5-day probabilities from drop down menus
Select forecaster initials
Hit OK

Starting an Invest from a Genesis Area

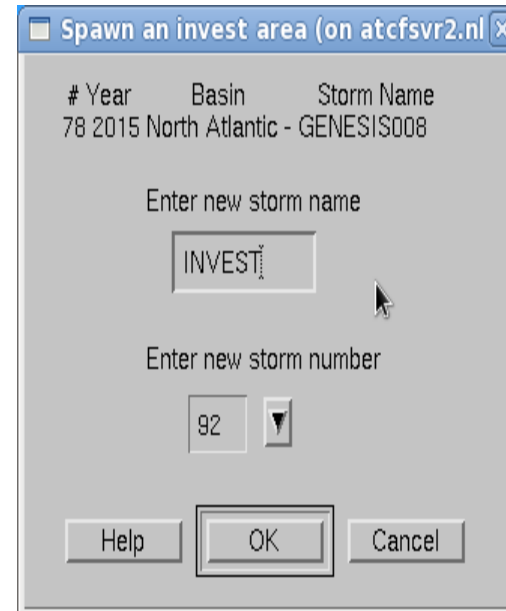
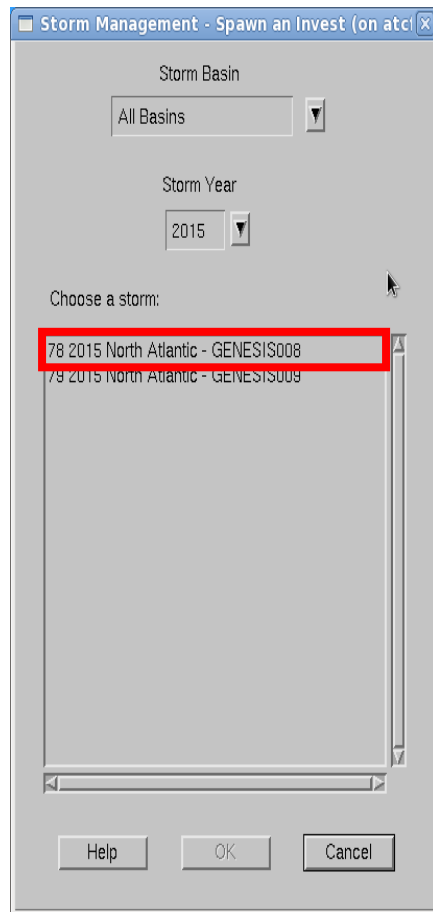


Manage Storms>Spawn an invest from a genesis area

This will be the new way we start most invests

Tags invest ID to the disturbance number

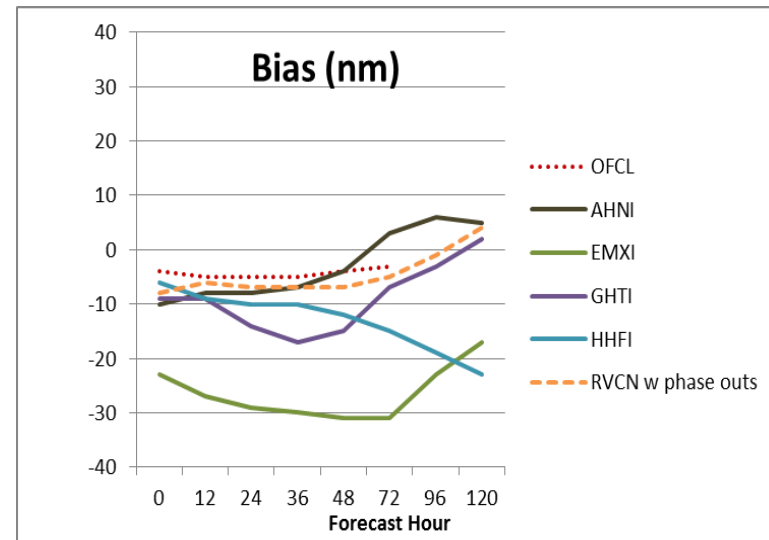
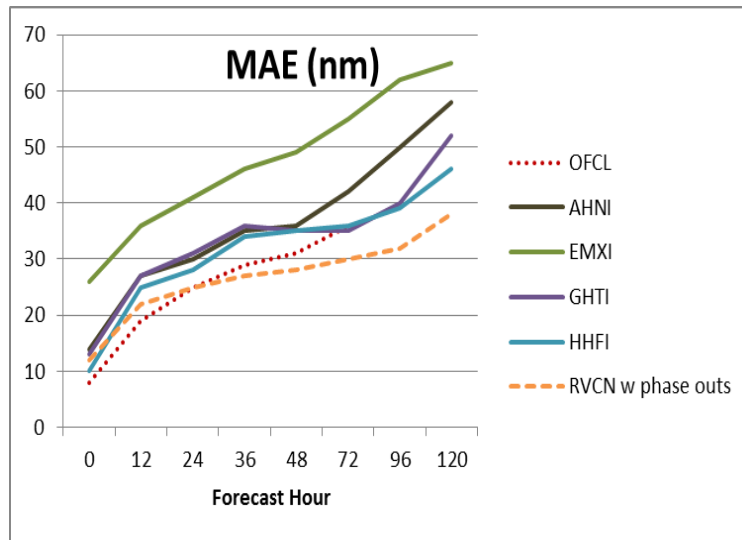
Starting an Invest from a Genesis Area



Select active genesis area you want to start an invest for
Then open and use invest as normal
Genesis system will remain active for probability forecasts

ATCF 5.8 Highlights (Navy only)

- 64-bit application (easier to support)
- 34-kt wind radii estimates from several sources
- Wind radii consensus (Sampson and Knaff 2015)



Atlantic 2012-2014 (Top Left) R34 mean absolute error of individual NWP model aids and official forecast. Numbers of forecasts are 2628, 2436, 2172, 1892, 1644, 1212, 904, and 636 at 0, 12, 24, 36, 48, 72, 96 and 120 h, respectively.

More Information

- [ATCF Requirements Meeting Agenda October 2015](#)
- [ATCF Requirements Document for FY16](#)
- [ATCF Closed Tickets \(November 2014- Oct 2015\)](#)
- [ATCF Genesis Process](#)
- [ATCF Document Repository](#)