**NHC Wind Speed Probability (WSP) Test Plan**

[Matthew Onderlinde - NOAA Federal HYPERLINK](mailto:matthew.onderlinde@noaa.gov)

Fortran unit-tests are available in the test/ directory. Steps to run these tests are included in the implementation instructions. These are only intended to verify the compiler and infrastructure are compatible prior to initial installation.

**Real-time parallel-production testing**

Once v1.10.0 is installed by NCO, a parallel run should be set up. The grib output files from v1.10.0 should be sent to ...para/nhc/v1.10/wsp.yyyymmdd. NHC/TSB staff will compare those with the current operational WSP output from v1.9.x.

TSB will also run a few selected cases outside of WCOSS with the newest version of the WSP model, and compare those with the para results to make sure they are identical within machine accuracy limits.

There may be active storms to run in parallel for the testing. If not, NHC/TSB will coordinate with the NHC Hurricane Specialist Unit (HSU) to run test storms. Active tropical cyclones cases are restricted to ATCF numbers 01-49 and invests (pre-TC stage) to 90-99. The test storms will have ATCF numbers 80-89. In 2020 parallel testing, the code was permanently modified to allow 80s series storms to run in para.