**AMSU Estimation v1.3.0 Test Plan**

This release includes updates for the WCOSS Phase 3 version of the AMSU estimation to run on WCOSS2. Test plans for special canned data testing and the normal parallel-production test plan are included below.

**Canned data testing**

ECF scripts used in testing: /lfs/h1/nhc/nhc/noscrub/save/amsu/amsu\_estimation.v1.3.0/ecf/TEST-jamsu\_estimation.ecf

The ecf batch script error/output logs are saved off on cactus in:

/lfs/h1/nhc/nhc/noscrub/save/amsu/test/

with date/cycle stamps and also noting whether it was run with -O2 or O3 optimization.

The actual testing output is in:

/lfs/h1/nhc/nhc/noscrub/save/amsu/test/amsu/amsu.20210824.O3\_opt and /lfs/h1/nhc/nhc/noscrub/save/amsu/test/amsu/amsu.20210824.O2\_opt

Since there are very little differences in results between -O2 and -O3 optimization level, the legacy -O3 optimization and compiler flags from wcoss1 were kept.

The GFS packed-ASCII file generation isn’t well suited for canned data tests. For testing, the following was added to ush/amsu\_convertgfs.pl.

$today = "20210824";

$yesterday = "20210823";

A sample of the file used for testing can be found in: /lfs/h1/nhc/nhc/noscrub/save/amsu/amsu\_estimation.v1.3.0/ush/TEST-amsu\_convertgfs.pl

**Real-time parallel-production testing**

Once AMSU v1.3.0 is installed by NCO on WCOSS2, a parallel run should be set up where the output goes to ../para/com/nhc/amsu/v1.3/amsu.yyyymmdd/atcfid where yyyy=year, mm=month, dd=day and atcfid is the ATCF storm ID. NHC TSB staff will compare the output from the two runs to confirm that the WCOSS2 version is working properly. The AMSU application runs for global tropical cyclones for five different polar-orbiting satellites, so there should be ample cases available for the evaluation. Once the WCOSS2 results are confirmed, NCO will make the operational transition to the WCOSS2 version.