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Technical Implementation Notice 11-10
National Weather Service Headquarters Washington DC
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From: Timothy McClung
Chief, Science Plans Branch
Office of Science and Technology

Subject: Change to Wave Model Products:
Effective Date June 14, 2011

Effective Tuesday, June 14, 2011, beginning with the 1200 Coordinated Universal Time (UTC) run, the National Centers for Environmental Prediction (NCEP) will modify the spectral output grid products from the Multi-grid Global Wave and Hurricane Wave Models.

Both of these models are run using WAVEWATCH-III v3.14. Recent upgrades of the model to v3.14 increased the spectral resolution of the model from a 25x24 spectral domain (frequency and direction) to a 50x36 domain. For backward compatibility, however, the spectral output from the model was kept at 25x24. This upgrade will change the spectral output to match the internal model domain.

The key changes are as follows:

1. The frequency spectrum will now start from 0.035 (instead of 0.0412)
2. The logarithmic increment will now be 1.07 (as opposed to 1.1). i.e. the next frequency will be 7% higher as opposed to 10% higher earlier.
3. There will be 50 frequency components as opposed to the earlier 25 frequency components (with the highest resolved frequency being 0.963 as opposed to 0.406 earlier)
4. There will be 36 directional components as opposed to the 24 directional components earlier. This means that the directional resolution will now be 10 degrees as opposed to 15 degrees earlier

The spectral output files from these models are disseminated via the NCEP server at

<http://www.ftp.ncep.noaa.gov/data/nccf/com/wave/prod/>
and
<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/wave/prod/>

The following files will be affected:

akw.txxz.spec_tar
enp.txxz.spec_tar
multi_1.txxz.spec_tar
multi_2.txxz.spec_tar
nah.txxz.spec_tar
nph.txxz.spec_tar
wna.txxz.spec_tar

where xx is the model cycle.

This change will not affect the non-spectral output files from these models. The spectral products that are changing are not available on NOAAPORT or in AWIPS.

Sample output files reflecting this spectral resolution change are available at:

<ftp://polar.ncep.noaa.gov/pub/waves/develop/>

Details about the NCEP Multi-grid Wave Models are online at:

<http://polar.ncep.noaa.gov/waves/index2.shtml>

For questions regarding these model changes, please contact:

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For questions regarding the dataflow aspects of these data sets, please contact:

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NWS National Technical Implementation Notices are online at:

<http://www.nws.noaa.gov/os/notif.htm>

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