

CCPA (V3.0) upgrade

Yan Luo

Ensemble and post-process team

Environmental Modeling Center

NCEP/NWS/NOAA

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CCPA - Changes

- Current:
 - Length of process (estimate in minutes): 10 minutes
 - How many nodes? two
 - Start-end time: twice per day at 16Z (16:10Z-16:10Z) and 00Z (00:10Z-00:10Z)
 - Input: hourly Stage II & Stage IV, 6 hourly Stage IV using 7-yr based regression coefficients
 - Output: 3 hourly, 6hourly CCPA at 1, 0.5, 0.125 degree, HRAP, 5km NDGD grids
- Future:
 - Length of process: almost same
 - How many nodes: same
 - Start-end time: almost same, slightly longer
 - Input: same fresh data (Stage II & IV) but using **12-yr based regress coefficients (NEW)**
 - Output: add **2.5km NDGD** grid
 - No GRIB2 code conversion (due to Stage II&IV GRIB1 only input)

CCPA V3.0 software development Plan

- Major scientific tasks
 - Create a new set of regression coefficients
 - Collect and process new sample data for CPC and STAGE IV (7yr->12yr)
 - Linear regression
 - Scientific Test and Evaluation
 - Replace with the new set of regression coefficients (fix directory change)
 - Add 2.5 km NDGD by-products (product change)
- Major technical tasks
(to meet the NCO code delivery standards)
 - Create vertical structure
 - Design environment variable settings
 - Create modules to pass version numbers of libraries
 - Code version control
 - Estimate resources requirements
 - Test functionality and final delivery

Upstream Dependencies

- Stage II & Stage IV (Ying Lin)

Downstream Dependencies

- SREF (Jun Du) – 3hrly CCPA
- GSD/ESRL (Tom Hamill) – blender project
- NAM (Eric Rogers)
- Public access