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From: Brian Gross
 Director, NCEP/Environmental Modeling Center

Subject: Soliciting Public Comments on the Proposed Upgrade of
the RTOFS Global Model through June 15, 2020

The National Centers for Environmental Prediction (NCEP) is soliciting comments on upgrading the Real-Time Ocean Forecast System (RTOFS) to Version 2.0 through June 15, 2020. If comments are favorable, the upgrade would occur on or about November 11, 2020.

The following changes will be implemented in RTOFS v2.0:

- The daily ocean and ice analysis, which for RTOFS v1 is done through the Navy Coupled Ocean Data Assimilation (NCODA) at the Naval Oceanographic Office (NAVOCEANO), will be done instead at the Environmental Modeling Center (EMC) with a similar but upgraded data assimilation system, RTOFS-DA.
- The coupled ocean-sea ice model, `hycom_cice`, will also be upgraded with the following major changes:

- A difference archive can be read for incrementally updating the `hycom` state according to the RTOFS-DA increments for temperature, salinity, layer pressure and velocity (u,v). The RTOFS-DA incremental update procedure would start three hours prior to the RTOFS-DA analysis time to end with the increments fully incorporated at the analysis time. The new source includes improvements in incremental update time stepping.
- A "RELO" (relocation) option will be included in `hycom` to allow using the same executable for different domains. Land masks are used to skip land.
- The source will include several upgrades for future use:
 - a. In addition to ice coverage, ice thickness can be inserted

- in cice.
- b. Atmospheric pressure can be used as atmospheric forcing.
 - c. Wind stress can be evaluated on the run, from (U10m - Uocean).
 - d. Tidal body forcing was added.

- Evaluation results from RTOFS v2 are available at:

<https://www.emc.ncep.noaa.gov/users/meg/rtofsv2/>

Please send comments on this proposal by June 15, 2020 to:

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