Meeting Notes
November 28, 2018
8:00 to 9:30 MST
TOPIC - UPDATE on the YOPPSiteMIP Activities
Attending: Uttal, Akish, Hartten, Day, Khalsa, Jenson, Morris, Walden

Presentation and Discussion of ECMWF SOP1 YOPPSiteMIP Model Files (Day)
ECMWF has created SOP1 YOPPSiteMIP files for all Supersites.
Example files are available at: ftp://ftp1.esrl.noaa.gov/psd3/arctic/YOPP/. This site will only have a single example file from each source (ECMWF, ECCC, MODF) to facilitate development of the YOPPsiteMIP. Action item: Currently the ECMWF folder has all files for SOP1 for Barrow. These will be moved to a non-public location. (Akish)

Jonny Day showed preliminary analysis shows a model warm bias. This is particularly pronounced in the region surrounding the Sodankyla super-site where biases are as much as +10 degrees. This is why Gunilla Svenssen is so interested in having MODFs developed for this site in particular. See attached presentation.

ECMWF has determined that there will only be one "beam" of data at each supersite rather than the 4 originally planned for the YOPPSiteMIP.

The NOAA MODF team had a number of questions regarding instantaneous vs. averaging values. Day said that for the ECMWF files, fluxes are an integral of the preceding time while temperature and wind are instantaneous. There was discussion of having the averaging/interpolation scheme be included in the variable long names.

Uttal asked if this strategy of developing common model outputs had been done before in the many MIP exercises. Day indicated that to his knowledge that this has been done with CMIP (Climate Model Intercomparison Projects) but this might be a first for NWP models.

CMIPs have a common nomenclature. The YOPPSiteMIP nomenclature is largely based on the CMIP nomenclature and Khalsa is leading the effort to match up variable names as much as possible.

Walden asked if there are file format converters (target is NetCDF). He also suggested that the group look into Threads servers and OPENDAP and other services for format conversion.
Action item: Follow up on with Svensson about request for additional information on metadata and formatting from Godoy for the Norway Met YOPP portal. (Svensson)

Uttal asked if would be useful to create archives of 1-4 beams of model data from the operation model output. This question will require further discussion. First response from Day was probably not useful as there are already verification frameworks for operational data.

Presentation and Discussion of the YOPPSiteMIP MODF files

Akish has developed a prototype file with the same formatting as the YOPPSiteMIP files. This does not have all the variables and is greatly facilitated by using data that is readily available through the DOE/ARM archive. A table was presented showing included variables.
See attached presentation.
Action item: This file will be posted at: ftp://ftp1.esrl.noaa.gov/psd3/arctic/YOPP/MODF (Akish)

Issues with observed standard surface meteorology variables

Uttal reported that the original intention was to use surface meteorological variables that are submitted to the GTS that would be consistent between the Supersites. Finding archives with 7.5 min resolution has turned out to be a challenge. Although the NWP centers archive these it is not yet know what the time step resolution is. Daily values are available from the NCEI/GHCND archive and hourly values are partially available from the NCEI/ISD archive. Uttal may have located an archive of the original source files from which the GHCND and IDS files are generated, however these do not appear to be consistent, QC'd or suitable for the YOPPsiteMIP files. Therefore, the current plan is to use the research grade meteorological measurements made at the Supersites to meet the requirement for 7.5 min values for all obtainable surface meteorological variables.

Issues with upper air variables measured with rawinsondes

Hartten reported on efforts to catalog station identifiers (there are many) and sources for upper air soundings (also many). She is compiling tables that will cross reference the radiosonde data for all of the Supersites. It should be noted that many of the supersites are not locations where there was an enhanced rawinsonde release schedule during SOP1 and SOP2. She commented on the (sad) fact that the U.S. is still only submitting temp files with significant and mandatory files. She had a number of questions for the group:

- Use Data sent to GTS or richest data available?
- Spread sounding data in files through space and time or treat like an instantaneous profile at a single time/location?
- Nominal time vs Launch time? Hartten explained that launches were optimally scheduled so that they were at a certain height a reporting time (00Z, 12Z).

See attached presentation.

Day noted that ECMWF is assimilating drift data. Walden and Khalsa thought providing the highest resolution soundings available was more important than matching what was sent to the GTS.

Uttal brought up the discussion of descent data and if it was collected during SOP1 and SOP2.
Action item: Discuss with PPP SG in Helsinki in January especially in regards to SOP3 (Uttal and Jodha)

Interest from the Development Testbed Center

Jensen was able to call into the latter part of the meeting and do a brief presentation on the Developmental Testbed Center https://dtcenter.org/

The DTC provides testing and development for the NOAA operational models.

She indicated an interest in the YOPPsiteMIP MODF files and the opportunities for doing SCM comparisons. She referred the group to the Common Community Physics Package: https://dtcenter.org/ccpp/

Action item: Decide if the YOPP Verification team would like to have a more detailed presentation on the DTC verification toolkit. (Uttal)
https://dtcenter.org/testing-evaluation/verification

Administrative:

It was agreed that google docs would be an acceptable tool for developing planning documents and table.

Action item: The Common Model Output table will be expanded to have columns with notes specific to the MODFs and individual model (Hartten and Akish) and posted on google docs.