SubX Model Updates in the IRI Data Library

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All SubX model data served by the IRI Data Library are held on phoenix (and duplicated on geruda). The cron owned by datag on phoenix runs the update scripts for the SubX models:

```
05      22      *       *       2-6     /volume1/DataLibrary/SubX/ESRL/FIMr1p1/get_FIMr1p1_SubX_fcst.pl
10      06,15   *       *       *
/volume1/DataLibrary/SubX/NASA/GEOS_V2p1/get_GEOS_V2p1_SubX_fcst.pl
15      06,09   *       *       3-6     /volume1/DataLibrary/SubX/ECCC/get_ECCC_SubX_fcst.pl
50      08      *       *       3-6     /volume1/DataLibrary/SubX/ECCC/get_ECCC_SubX_hcast.pl
30      06      *       *       3-6     /volume1/DataLibrary/SubX/EMC/GEFS/forecast/get_GEFS_SubX_fcst.pl
40      06      *       *       *
/volume1/DataLibrary/SubX/RSMAS/CCSM4/forecast/get_CCSM4_SubX_fcst.pl
20      06      *       *       3-6     /volume1/DataLibrary/SubX/NRL/NESM/get_NESM_SubX_fcst.pl
06      22      *       *       3-6
/volume1/DataLibrary/SubX/ESRL/FIMr1p1/fcst_anom9916bp/get_fcst_anom_file.pl
35      06,16   *       *       3-6
/volume1/DataLibrary/SubX/CWB/CWB1T1/forecast/get_CWB1T1_SubX_fcst.pl
20      03,09,15,21     *       *       *
/volume1/DataLibrary/SubX/NCEP/CFSv2/bash_CFSv2_SubX_update
```

Information on each individual SubX model forecast update, including the location of the remote data source, contacts at each of the data providers, and other details are included below. Most of the same information is included in the update script for each model.

More information about the SubX project and each of the models can be found at the following SubX project website: http://cola.gmu.edu/kpegion/subx/index.html

CMC ECCC GEPS6 SubX Forecast

This forecast model is updated by the script
/volume1/DataLibrary/SubX/ECCC/get_ECCC_SubX_fcst.pl

The contact person at CMC for this model is Hai Lin, Hai.Lin@canada.ca , Research Scientist, Meteorological Research Division, Environment and Climate Change Canada / Government of Canada, Tel: 514 421-7276

For more information see the documentation.txt file at
/volume1/DataLibrary/SubX/ECCC/GEPS5/documentation.txt

This model's forecasts are initialized and released weekly on Thursdays.

The data files are downloaded from the following remote http location at CMC:

All variables: http://collaboration.cmc.ec.gc.ca/cmc/ensemble/subX/realtime/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/ECCC/GEPS6/forecast

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.ECCC/.GEPS6/

As of July 4, 2019, the GEPS5 forecasts are no longer being updated. Forecast files at the collaboration.cmc.ec.gc.ca/cmc/ensemble/SubX/realtime site named with dates from July 4, 2019, onward are GEPS6 data files, while files named with dates before July 4, 2019, contain GEPS5 data.

ROMI (Real-time OLR MJO Index) files based upon CMC ECCC GEPS6 forecasts:

ROMI forecasts are generated by Shuguang Wang once the SubX forecasts become available in the Data Library.

The contact person at Columbia University APAM is Shuguang Wang, sw2526@columbia.edu

The ROMI files are downloaded from:
http://dynamo.appmath.columbia.edu/romi_realtime_forecasts/ncfiles/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/ECCC/GEPS5/ROMI/

CMC ECCC GEPS6 SubX Hindcast

The ECCC GEPS6 hindcasts are updated by the script
/volume1/DataLibrary/SubX/ECCC/get_ECCC_SubX_hcast.pl

The contact person at CMC for this model is Hai Lin, Hai.Lin@canada.ca , Research Scientist, Meteorological Research Division, Environment and Climate Change Canada / Government of Canada, Tel: 514 421-7276

For more information see the documentation.txt file at
/volume1/DataLibrary/SubX/ECCC/GEPS5/documentation.txt

This model's forecasts are initialized and released weekly on Thursdays. The hindcasts are being released as new forecasts come out, but for starts at least two weeks ahead of the forecast's start date to allow for the hindcast climatology to be calculated by members of the SubX team as each forecast start comes out. Hindcast years for GEPS6 range from 1998 to 2017.

The hindcast data files are downloaded from the following remote http location at CMC:

All variables: http://collaboration.cmc.ec.gc.ca/cmc/ensemble/subX/hindcast/

The ECCC system changed over from GEPS5 to GEPS6 with the 4 July 2019 forecast start. Unfortunately, ECCC did not provide an indication in the files or file names which files on their site are for GEPS5 and which ones are for GEPS6. Initially, ECCC provided the earliest GEPS6 hindcast files for 20 June 2019 to 11 July 2019 forecast starts in the following location:

http://collaboration.cmc.ec.gc.ca/cmc/ensemble/subX/hindcast6/

However, after that point, they started providing the GEPS6 hindcast files in the same directory that holds the GEPS5 hindcast files:

http://collaboration.cmc.ec.gc.ca/cmc/ensemble/SubX/hindcast/

Therefore, to distinguish between GEPS5 and GEPS6 hindcasts in this directory, just know that the “0718” directories and those after that date contain GEPS6 hindcast data. All directories for dates before that hold GEPS5 data.

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/ECCC/GEPS6/hindcast

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.ECCC/.GEPS6/

CWB CWB1T1 SubX Forecast

The CWB CWB1T1 forecast files are updated by the script
/volume1/DataLibrary/SubX/CWB/CWB1T1/forecast/get_CWB1T1_SubX_fcst.pl

The contact person at Taiwan Central Weather Bureau (CWB) for this model is Chia-Ling Wu, rensa@cwb.gov.tw
Tel: +886-2-2349-1318
Central Weather Bureau
64, Gongyuan Road, Taipei 10048, Taiwan (R.O.C.)

Other associated email contacts at CWB are: Jyh-Wen Hwu <jwhwu@cwb.gov.tw>; rfs19 <rfs19@cwb.gov.tw>; <river@cwb.gov.tw>

This model is not actually an official member of the SubX suite of forecasts, but follows the same conventions. The model is initialized on Tuesdays, Wednesdays, Fridays, and Sundays each week, but the files are released every Thursday.

For more information see the documentation.txt file in
/volume1/DataLibrary/SubX/CWB/CWB1T1/forecast/

The data files are downloaded from the following remote ftp location at CWB:

ftp://pds.cwb.gov.tw/575

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/CWB/CWB1T1/forecast/

The dataset in the Data Library is not with the other SubX datasets in the public Data Library, but rather in mbell's DL space:

http://iridl.ldeo.columbia.edu/home/.mbell/.SubX/.CWB/.CWB1T1/

EMC GEFS SubX Forecast

The EMC GEFS SubX forecasts are updated by the script
/volume1/DataLibrary/SubX/EMC/GEFS/forecast/get_GEFS_SubX_fcst.pl

The contact person at EMC for this model is Eric Sinsky, eric.sinsky@noaa.gov

For more information see the documentation.txt file at
/volume1/DataLibrary/SubX/EMC/GEFS/forecast/documentation.txt

The forecasts for this model are initialized and released weekly on Wednesdays.

The data files are downloaded from the following remote ftp locations at EMC:

Priority 1 variables:
ftp://ftp.emc.ncep.noaa.gov/gmb/emc.enspara/subx/com/gens/dev/YYYYmmdd/output_p1/

Priority 2 variables:
ftp://ftp.emc.ncep.noaa.gov/gmb/emc.enspara/subx/com/gens/dev/YYYYmmdd/output_p2/

Priority 3 variables:
ftp://ftp.emc.ncep.noaa.gov/gmb/emc.enspara/subx/com/gens/dev/YYYYmmdd/output_p3/

where YYYYmmdd is the 4-digit year, 2-digit month, and 2-digit day for the forecast initialization dates.

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/EMC/GEFS/forecast/YYYYmmdd/

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.EMC/.GEFS/

ROMI (Real-time OLR MJO Index) files based upon EMC GEFS forecasts:

ROMI forecasts are generated by Shuguang Wang once the SubX forecasts become available in the Data Library.

The contact person at Columbia University APAM is Shuguang Wang, sw2526@columbia.edu

The ROMI files are downloaded from:
http://dynamo.appmath.columbia.edu/romi_realtime_forecasts/ncfiles/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/EMC/GEFS/ROMI/

ESRL FIMr1p1 SubX Forecast

The ESRL FIMr1p1 SubX forecasts are updated by the script
/volume1/DataLibrary/SubX/ESRL/FIMr1p1/get_FIMr1p1_SubX_fcst.pl

The contact person at ESRL for this model is Ben Green, ben.green@noaa.gov

Other related contacts at ESRL include: Shan Sun, shan.sun@noaa.gov , Bob Lipschutz, robert.c.lipschutz@noaa.gov , Stan Benjamin, stan.benjamin@noaa.gov

Fore more information see the documentation.txt file at
/volume1/DataLibrary/SubX/ESRL/FIMr1p1/documentation.txt

The forecasts for this model are initialized and released weekly on Wednesdays. The data providers asked that the previous version of this model, FIMr1.0, no longer be served via the Data Library, but we still have those data files saved on phoenix.

The data files are downloaded from the following remote ftp locations at ESRL:

All variables: ftp://gsdftp.fsl.noaa.gov/SubX-ESRL-FIMr1.1/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/ESRL/FIMr1p1/forecast/

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.ESRL/.FIMr1p1/

ROMI (Real-time OLR MJO Index) files based upon ESRL FIMr1p1 forecasts:

ROMI forecasts are generated by Shuguang Wang once the SubX forecasts become available in the Data Library.

The contact person at Columbia University APAM is Shuguang Wang, sw2526@columbia.edu

The ROMI files are downloaded from:
http://dynamo.appmath.columbia.edu/romi_realtime_forecasts/ncfiles/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/ESRL/FIMr1p1/ROMI/

Additionally, the
/volume1/DataLibrary/SubX/ESRL/FIMr1p1/fcst_anom9916bp/get_fcst_anom_file.pl
script calculates forecast temperature and precipitation anomalies (based on the FIMr1p1 hindcast climatology) to produce the anomaly maps used in the START network maproom:

http://iridl.ldeo.columbia.edu/maproom/START/index.html

NASA GMAO GEOS V2.1 SubX Forecast

The NASA GEOS V2.1 SubX forecasts are updated by the script /volume1/DataLibrary/SubX/NASA/GEOS_V2p1/get_GEOS_V2p1_SubX_fcst.pl

This is the second version of the NASA GEOS model used in the SubX suite. The previous version of the model is no longer being updated, though the IRI Data Library still holds and serves data from the previous model version.

The contact person at NASA for this model is Kazumi Nakada, kazumi.nakada@nasa.gov , NASA GSFC GMAO Code 610.1, Phone: 301-614-5843

For more information see the documentation.txt and README files in /volume1/DataLibrary/SubX/NASA/GEOS_V2p1/

Forecasts for this model are initialized and released every 5 days instead of weekly.

The data files are downloaded from the following remote https locations at NASA GSFC:

Priority 1 variables:
https://gmao.gsfc.nasa.gov/gmaoftp/gmaofcst/subx/GEOS_S2S_V2.1_fcst/pr1/

Other variables: https://gmao.gsfc.nasa.gov/gmaoftp/gmaofcst/subx/GEOS_S2S_V2.1_fcst/IRI/

The data files are downloaded locally to phoenix to /volume1/DataLibrary/SubX/NASA/GEOS_V2p1/forecast/

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.GMAO/.GEOS_V2p1/

ROMI (Real-time OLR MJO Index) files based upon NASA GMAO forecasts:

ROMI forecasts are generated by Shuguang Wang once the SubX forecasts become available in the Data Library.

The contact person at Columbia University APAM is Shuguang Wang, sw2526@columbia.edu

The ROMI files are downloaded from:
http://dynamo.appmath.columbia.edu/romi_realtime_forecasts/ncfiles/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/NASA/GEOS_V2p1/ROMI/

NCEP CFSv2 SubX Forecast

The NCEP CFSv2 SubX forecasts are updated by the script
/volume1/DataLibrary/SubX/NCEP/CFSv2/bash_CFSv2_SubX_update
bash script, which calls the
/volume1/DataLibrary/SubX/NCEP/CFSv2/get_NCEP_SubX_fcst.pl
perl script, which does the real work.

I had set up the update scripts this way initially because I was having trouble successfully calling the NCO module from the cron, but this is working now. It may now be possible to run the perl script directly from the cron, rather than going through the bash script, but I haven't tried messing with it any more.

The contact persons at NCEP for this model are Dan Collins, dan.collins@noaa.gov , and Emerson LaJoie, emerson.lajoie@noaa.gov

For more information see the documentation file at
/volume1/DataLibrary/SubX/NCEP/CFSv2/dataset_documentation.txt

The forecasts for this model are initialized 4 times daily and are released at least daily.

The data files are downloaded from the following remote ftp locations at NCEP:

Priority 1 variables: ftp://ftp.cpc.ncep.noaa.gov/dcollins/SubX/CFS/

with a separate subdirectory for each variable, named by the variable (and pressure level, if applicable).

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/NCEP/CFSv2/forecast/

In the netCDF CFSv2 SubX files that NCEP distributes, the order of the dimensions is reversed from those distributed by all the other modeling centers. In addition, this reversed ordering of the dimensions prevents the Data Library from generating a working time series for this dataset. NCEP was not willing to rewrite and re-distribute the data files with the dimensions written in the

same order as the other centers. Therefore, this update script reads the original files distributed by NCEP and writes new versions of these files with the order of the dimensions reversed so that the Data Library can use them correctly. This is done by using the "ncpdq" operator from the NCO suite of operators. The new files written using this script include "XYT" in the netCDF file names. These are the files read by the Data Library.

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.NCEP/.CFSv2/

ROMI (Real-time OLR MJO Index) files based upon NCEP CFSv2 forecasts:

ROMI forecasts are generated by Shuguang Wang once the SubX forecasts become available in the Data Library.

The contact person at Columbia University APAM is Shuguang Wang, sw2526@columbia.edu

The ROMI files are downloaded from:
http://dynamo.appmath.columbia.edu/romi_realtime_forecasts/ncfiles/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/NCEP/CFSv2/ROMI/

NRL NESM SubX Forecast

The NRL NESM SubX forecasts are updated by the script
/volume1/DataLibrary/SubX/NRL/NESM/get_NESM_SubX_fcst.pl

The contact person at NRL for this model is Joe Metzger, joe.metzger@nrlssc.navy.mil

Fore more information see the documentation.txt file at
/volume1/DataLibrary/SubX/NRL/NESM/documentation.txt

The forecasts for this model are released weekly on Wednesdays. However, unlike most of the other SubX models, the initializations are for four consecutive days during the week. Additionally, the initialization time is 12Z instead of 00Z, and in some variables, the L = 0.5 day lead is not available -- the first lead for these variables is for L = 1.5

The data files are downloaded from the following remote https locations at NRL:

Priority 1 variables: https://www7320.nrlssc.navy.mil/nesm/forecast/priority1/

Priority 2 variables: https://www7320.nrlssc.navy.mil/nesm/forecast/priority2/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/NRL/NESM/forecast/

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.NRL/.NESM/

ROMI (Real-time OLR MJO Index) files based upon NRL NESM forecasts:

ROMI forecasts are generated by Shuguang Wang once the SubX forecasts become available in the Data Library.

The contact person at Columbia University APAM is Shuguang Wang, sw2526@columbia.edu

The ROMI files are downloaded from:
http://dynamo.appmath.columbia.edu/romi_realtime_forecasts/ncfiles/

The data files are downloaded locally to phoenix to
/volume1/DataLibrary/SubX/NRL/NESM/ROMI/

RSMAS CCSM4 SubX Forecast

The RSMAS CCSM4 SubX forecasts are updated by the script
/volume1/DataLibrary/SubX/RSMAS/CCSM4/forecast/get_CCSM4_SubX_fcst.pl

The contact person at RSMAS for this model is Dug Hong Min, dmin@rsmas.miami.edu .

The other contact person at RSMAS associated with this model is Ben Kirtman, bkirtman@rsmas.miami.edu .

For more information see the documentation.txt file at
/volume1/DataLibrary/SubX/RSMAS/CCSM4/documentation.txt

The forecasts for this model are initialized weekly on Sundays, but may be released up to two or three days later.

The data files are downloaded from the following remote ftp locations at RSMAS:

Priority 1 variables: ftp://decadal.rsmas.miami.edu/forecast/priority1/

Priority 2 variables: ftp://decadal.rsmas.miami.edu/forecast/priority2/

The data files (both priority 1 and priority 2) are downloaded locally to phoenix to /volume1/DataLibrary/SubX/RSMAS/CCSM4/forecast/priority1/

The dataset in the Data Library is here:
http://iridl.ldeo.columbia.edu/SOURCES/.Models/.SubX/.RSMAS/.CCSM4/

ROMI (Real-time OLR MJO Index) files based upon RSMAS CCSM4 forecasts:

ROMI forecasts are generated by Shuguang Wang once the SubX forecasts become available in the Data Library.

The contact person at Columbia University APAM is Shuguang Wang, sw2526@columbia.edu

The ROMI files are downloaded from:
http://dynamo.appmath.columbia.edu/romi_realtime_forecasts/ncfiles/

The data files are downloaded locally to phoenix to /volume1/DataLibrary/SubX/RSMAS/CCSM4/ROMI/