

NOUS41 KWBC 191140 AAA
PNSWSH

Technical Implementation Notice 15-41 Amended
National Weather Service Headquarters Washington DC
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From: Tim McClung, Chief Operating Officer
 Office of Science and Technology Integration

Subject: Amended: Changes to Gridded Localized Aviation Model Output
Statistics Program (LAMP): Effective Monday, October 19, 2015

Amended to change the implementation date from Thursday, October 1, 2015,
to Monday, October 19, 2015.

On or about Monday, October 19, 2015, beginning with the 1400 Coordinated
Universal Time (UTC) model run, the NWS Meteorological Development
Laboratory (MDL) will implement changes to the Gridded Localized Aviation
Model Output Statistics Program (LAMP).

Gridded LAMP (GLMP) products are generated on a 2.5-km Lambert Conformal
grid over the contiguous U.S. (CONUS). Gridded observations and gridded
forecasts (1 to 25 hour projections) are produced hourly. These products
are disseminated on the Satellite Broadcast Network (SBN) and NOAAPort,
and are available in the operational National Digital Guidance Database
(NDGD).

The changes are as follows:

- Add three new elements to LAMP gridded observations and forecast
guidance for the CONUS. Guidance will be available for the following new
elements:

Opaque sky cover
10-m Wind speed
10-m Wind direction

- Improve GLMP observations and forecast guidance for existing elements:

2-m Temperature
2-m Dewpoint temperature
Ceiling height
Visibility

- Increase the number of LAMP forecast points input into the GLMP analyses
for ceiling height and visibility forecast guidance, and increase the

number of observations which are input into the GLMP analyses of temperature and dewpoint observations.

- Replace Short-Range Ensemble Forecast (SREF) data with observations and MOS data for augmentation of GLMP temperature and dewpoint forecast guidance grids.

Benefits of the system changes include:

- Make available GLMP guidance for new elements of opaque sky cover, 10-m wind speed, and 10-m wind direction.
- Improve ceiling height and visibility forecast guidance due to additional LAMP forecast inputs and modified analysis scheme.
- Improve temperature and dewpoint observation and forecast grids due to augmentation with observations and Model Output Statistics (MOS) data.
- Provide better temporal consistency between the observation grids and the 1-hour forecast grids for all elements, as well as between every forecast projection for temperature, dewpoint, and wind grids.
- Improve system robustness in case of missing observations.

The GLMP products for the CONUS, in gridded binary version two (GRIB2) format, are available on the NWS server at:

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.glmf/AR.conus/>

or

<http://weather.noaa.gov/pub/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.glmf/AR.conus/>

A listing of the GRIB2 file names for gridded observations and forecasts for new and existing elements is available at:

<http://www.nws.noaa.gov/mdl/gfslamp/docs/glmf NWS tgftp server.php>

The new communication identifiers for the GRIB2 products are shown below in Tables 1 and 2. A complete list of GLMP World Meteorological Organization (WMO) headers is available at:

<http://www.nws.noaa.gov/mdl/gfslamp/docs/glmfheaders 2015.pdf>

Table 1: Communication Identifiers for the GLMP Observation Products in GRIB2 Format

Listed below are representations of the WMO header: xx represents the valid UTC hour (00-23).

WMO Header	Element
LAUAXx KMDL	2-meter gridded temperature observations
LAUBxx KMDL	2-meter gridded temperature observation error estimations
LBUAxx KMDL	2-meter gridded dewpoint temperature observations
LBUBxx KMDL	2-meter gridded dewpoint temperature observation error estimations
LCUAxx KMDL	Gridded ceiling height observations
LDUAxx KMDL	Gridded visibility observations
LEUAxx KMDL	Gridded opaque sky cover observations
LFUAxx KMDL	10-m gridded wind speed observations
LGUAxx KMDL	10-m gridded wind direction observations

Table 2: Communication Identifiers for the GLMP Forecast Products in GRIB2 format

Listed below are representations of the WMO header: xx represents the forecast projections (01-25).

WMO Header	Element
LKUAxx KMDL	Gridded 2-meter temperature forecasts
LLUAxx KMDL	Gridded 2-meter dewpoint temperature forecasts
LMUAxx KMDL	Gridded ceiling height forecasts
LNUAxx KMDL	Gridded visibility forecasts
LOUAxx KMDL	Gridded opaque sky cover forecasts
LPUAxx KMDL	10-m gridded wind speed forecasts
LQUAxx KMDL	10-m gridded wind direction forecasts

More details about the GLMP products and this implementation, including a link to a website for displaying the new and improved products, can be found online at:

<http://www.nws.noaa.gov/mdl/gfslamp/docs/glmpinfo.php>

A consistent parallel feed of data will be made available on the NCEP HTTP server once the model is running in parallel on the NCEP Weather and Climate Operational Supercomputing System (WCOS). The data will be available at the following URL:

<http://para.nomads.ncep.noaa.gov/pub/data/nccf/com/glmp/para/>

If you have technical comments or questions, please contact:

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Links to the LAMP products and descriptions can found at:

<http://www.nws.noaa.gov/mdl/gfslamp/gfslamp.shtml>

National Technical Implementation Notices are online at:

<https://www.weather.gov/notification/archive>

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