

## WMO Headings for Gridded LAMP (GLMP) Products

WMO headings have the format of T<sub>1</sub>T<sub>2</sub>A<sub>1</sub>A<sub>2</sub>ii CCCC

1. The CCCC for all Gridded LAMP (GLMP) product WMO headings is **KMDL**.
2. The T<sub>1</sub> for all GLMP products is **L**.
3. The T<sub>2</sub> represents the weather element type designator. Values for 0-hour observation T<sub>2</sub> are:

A = temperature at sensor height (nominally, 2 m)  
B = dew point temperature at sensor height (nominally, 2 m)  
C = ceiling height  
D = visibility  
E = opaque sky cover  
F = wind speed (nominally, 10 m)  
G = wind direction (nominally, 10 m)

Values for 1-25 hour forecast T<sub>2</sub> are:

K = temperature at sensor height (nominally, 2 m)  
L = dew point temperature at sensor height (nominally, 2 m)  
M = ceiling height  
N = visibility  
O = opaque sky cover  
P = wind speed (nominally, 10 m)  
Q = wind direction (nominally, 10 m)

Note that T<sub>2</sub> skips letters between 0-hour observation and 1-25 forecast grids so that elements can be added in the future and subsequent to the appropriate list, observations or forecasts.

4. The A<sub>1</sub> designates the geographical area. This implementation is over CONUS only and therefore

A<sub>1</sub>=**U**

5. As there are multiple grids for GLMP 0-hour temperature and dew point elements and there is the possibility of multiple grids for the GLMP elements in the future ( i.e. forecast

probability grids), A<sub>2</sub> for individual element headers will represent those multiple grids per element. The ii will represent the cycle time for the observation grids and number of hours past cycle time for the forecast grids.

6. Since there will be multiple GRIB2 messages for the GLMP forecast grids in the same file, they will be grouped under a superheader where the A<sub>2</sub> and ii will be “Z” and “98”, respectively, when being routed to the tgftp at the TOC for NDGD. As there will only be one grid per header for the GLMP observations, superheaders will not be necessary for those grids.

**GLMP 0-hour observation grids:**

LAUAii KMDL - Temperature  
LAUBii KMDL - Temperature Error Estimation  
LBUAii KMDL - Dew Point  
LBUBii KMDL - Dew Point Error Estimation  
LCUAii KMDL - Ceiling Height  
LDUAii KMDL - Visibility  
LEUAii KMDL - Opaque Sky Cover  
LFUAii KMDL - Wind Speed  
LGUAii KMDL - Wind Direction

ii = valid UTC hour (00-23)

**GLMP 1-25 hour forecast grids:**

LKUAii KMDL - Temperature  
LLUAii KMDL - Dew Point  
LMUAii KMDL - Ceiling Height  
LNUAii KMDL - Visibility  
LOUAii KMDL - Opaque Sky Cover  
LPUAii KMDL - Wind Speed  
LQUAii KMDL - Wind Direction

ii = forecast projection (01-25)

**Table1: Superheaders and individual headers and product sizes for Gridded LAMP products. Gridded LAMP products with individual headers commenced routing to experimental NDGD on August 22, 2011. Gridded LAMP observational grid products, which have individual headers, and Gridded LAMP forecast grid products, which will have individual headers as well as super headers, will be routed to operational NDGD, the Satellite Broadcast Network, and NOAAPORT beginning on December 17, 2012.**

Element	Super-header	Product Headers	Geographical Area	No. of Products per cycle	Projections (hr)	Estimated maximum Bytes per header/ cycle *
0-hr Observed Temperature	N/A	LAUIi KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	1MB/1MB
Error Estimate of 0-hr Observed Temperature	N/A	LAUBii KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	0.75MB/0.75MB
0-hr Observed Dew Point	N/A	LBUIi KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	1MB/1MB
Error Estimate of 0-hr Observed Dew Point	N/A	LBUBii KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	0.75MB/0.75MB
0-hr Observed Ceiling Height	N/A	LCUIi KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	1MB/1MB
0-hr Observed Visibility	N/A	LDUIi KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	1MB/1MB
0-hr Observed Opaque Sky Cover	N/A	LEUIi KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	1MB/1MB
0-hr Observed Wind Speed	N/A	LFUIi KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	1MB/1MB
0-hr Observed Wind Direction	N/A	LGUIi KMDL ii = valid hour in UTC (00-23)	CONUS	1	N/A	1MB/1MB
Forecasted Temperature	LKUZ98 KMDL	LKUIi KMDL ii = forecast projection (01-25)	CONUS	25	1-25 (in increments of 1 hour)	0.8MB/20MB
Forecasted Dew Point	LLUZ98 KMDL	LKUIi KMDL ii = forecast projection (01-25)	CONUS	25	1-25 (in increments of 1 hour)	0.8MB/20MB
Forecasted Ceiling Height	LMUZ98 KMDL	LMUIi KMDL ii = forecast	CONUS	25	1-25 (in increments of	1MB/25MB

		projection (01-25)			1 hour)	
Forecasted Visibility	LNUZ98 KMDL	LNUAii KMDL ii = forecast projection (01-25)	CONUS	25	1-25 (in increments of 1 hour)	1MB/25MB
Forecasted Opaque Sky Cover	LOUZ98 KMDL	LOUAii KMDL ii = forecast projection (01-25)	CONUS	25	1-25 (in increments of 1 hour)	0.8MB/20MB
Forecasted Wind Speed	LPUZ98 KMDL	LPUAii KMDL ii = forecast projection (01-25)	CONUS	25	1-25 (in increments of 1 hour)	0.8MB/20MB
Forecasted Wind Direction	LQUZ98 KMDL	LQUAii KMDL ii = forecast projection (01-25)	CONUS	25	1-25 (in increments of 1 hour)	1MB/25MB
Totals				184		163.5 MB/cycle (each hour)

\* Note: since file sizes differ by day depending on the actual weather and therefore the values encoded, this is an estimate for what the largest size might be.