WMO Headings for 2.5 km Gridded MOS Products

WMO headings have the format of $T_1T_2A_1A_2$ii CCCC

1. The CCCC for all gridded MOS product WMO headings is **KWBQ**.

2. The T_1 for all 2.5 km gridded MOS products based on the global model is **Y**.

3. The T_2 represents the weather element type designator. The following values are used for a T_1 = **Y**. When feasible, these values match those used for the NDFD WMO headers.
Values for T_2 are:
A = sky cover
B = wind direction at sensor height (nominally, 10 m)
C = wind speed at sensor height (nominally, 10 m)
D = probability of precipitation (12 h)
E = temperature at sensor height (nominally, 2 m)
F = dewpoint temperature at sensor height (nominally, 2 m)
G = daytime maximum temperature at sensor height (nominally, 2 m)
H = nighttime minimum temperature at sensor height (nominally, 2 m)
I = quantitative precipitation (6 h)
J = thunderstorms (6 h)
K = severe weather (6 h)
L = precipitation type
M = precipitation characteristics
N = precipitation occurrence
O = obstruction to vision
P = visibility
Q = ceiling height
R = relative humidity
S = snowfall amount (24 h)
T = apparent temperature
U = probability of precipitation (6 h)
V = quantitative precipitation (12 h)
W = wind gusts
X = thunderstorms (12 h)
Y = thunderstorms (3 h)
Z = unassigned

4. The A_1 designates the geographical area. The following designators follow the conventions established in the NDFD WMO headers.
A = Puerto Rico
R = Alaska
S = Hawaii
T = Guam
U = CONUS

5. The A_2 and ii follow the convention established in the NDFD. These three characters together represent the day and hour (UTC) for which the product is valid. The following convention for A_2 and ii is used for the gridded MOS products:

A = Day 0; ii = hour (0-23)
B = Day 1; ii = hour (0-23)
C = Day 2; ii = hour (0-23)
D = Day 3; ii = hour (0-23)
E = Day 4; ii = hour (0-23)
F = Day 5; ii = hour (0-23)
G = Day 6; ii = hour (0-23)
H = Day 7; ii = hour (0-23)
I = Day 8; ii = hour (0-23)
J = Day 9; ii = hour (0-23)

For super headers the grids for days 1-3, 4-7, and 8 and beyond are grouped as follows:

Days 1-3: A_2 = **Z**, ii = 98
Days 4-7: A_2 = **Z**, ii = 97
Days 8 and beyond: A_2 = **Z**, ii = 96

Table 1. WMO headers and product sizes for the 2.5-km CONUS gridded MOS. The headers shown are for the elements that will transmitted in the initial release of the 2.5 km products. Headers for additional elements will be added as needed.

Element	Header Category	No. of grids per cycle	First/Last Proj./Time Increment (hr)	Bytes per grid/cycle
Total sky cover	YAUA$_2$ii	23 (00Z) 27 (12Z)	6/72/3 (00Z) 6/84/3 (12Z)	440KB /9.9MB (00Z) 450KB /11.9MB (12Z)
	YAUA$_2$ii	40 (00Z) 36 (12Z)	75/192/3 (00Z) 87/192/3 (12Z)	480KB /18.9MB (00Z) 490KB /17.1MB (12Z)
Wind Direction	YBUA$_2$ii	23 (00Z) 27 (12Z)	6/72/3 (00Z) 6/84/3 (12Z)	500KB /11.2MB (00Z) 500KB /13.2MB (12Z)
	YBUA$_2$ii	40 (00Z) 36 (12Z)	75/192/3 (00Z) 87/192/3 (12Z)	500KB /19.7MB (00Z) 510KB /17.8MB (12Z)
Wind Speed	YCUA$_2$ii	23 (00Z) 27 (12Z)	6/72/3 (00Z) 6/84/3 (12Z)	510KB /11.5MB (00Z) 510KB /13.5MB (12Z)
	YCUA$_2$ii	40 (00Z) 36 (12Z)	75/192/3 (00Z) 87/192/3 (12Z)	520KB /20.3MB (00Z) 520KB /18.3MB (12Z)
PoP (12h)	YDUA$_2$ii	10 (00Z) 12 (12Z)	18/72/12 (00Z) 18/84/12 (12Z)	430KB /4.2MB (00Z) 430KB /5MB (12Z)
	YDUA$_2$ii	20 (00Z) 18 (12Z)	78/192/12 (00Z) 90/192/12 (12Z)	420KB /8.2MB (00Z) 420KB /7.3MB (12Z)
Temperature	YEUA$_2$ii	23 (00Z) 27 (12Z)	6/72/3 (00Z) 6/84/3 (12Z)	610KB /13.6MB (00Z) 610KB /16.2MB (12Z)
	YEUA$_2$ii	40 (00Z) 36 (12Z)	75/192/3 (00Z) 87/192/3 (12Z)	600KB /23.6MB (00Z) 600KB /21.2MB (12Z)
Dew Point	YFUA$_2$ii	23 (00Z) 27 (12Z)	6/72/3 (00Z) 6/84/3 (12Z)	610KB /13.6MB (00Z) 610KB /16MB (12Z)
	YFUA$_2$ii	40 (00Z) 36 (12Z)	75/192/3 (00Z) 87/192/3 (12Z)	600KB /23.4MB (00Z) 590KB /20.9MB (12Z)
Daytime Max	YGUA$_2$ii	3 (00Z) 3 (12Z)	24/74/24 (00Z) 36/84/24 (12Z)	620KB /1.8MB (00Z) 640KB /1.9MB (12Z)
	YGUA$_2$ii	5 (00Z) 4 (12Z)	96/192/24 (00Z) 108/180/24 (12Z)	630KB /3.1MB (00Z) 630KB /2.4MB (12Z)
Nighttime Min	YHUA$_2$ii	2 (00Z) 3 (12Z)	36/60/24 (00Z) 24/72/24 (12Z)	600KB /1.2MB (00Z) 600KB /1.8MB (12Z)
	YHUA$_2$ii	5 (00Z) 5 (12Z)	84/180/24 (00Z) 96/192/24 (12Z)	600KB /2.9MB (00Z) 590KB /2.9MB (12Z)
6-h QPF	YIUA$_2$ii	11 (00Z) 13 (12Z)	12/72/6 (00Z) 12/84/6 (12Z)	460KB /4.9MB (00Z) 460KB /5.8MB (12Z)
	YIUA$_2$ii	14 (00Z) 12 (12Z)	78/156/24 (00Z) 90/156/6 (12Z)	540KB /7.3MB (00Z) 560KB /6.5MB (12Z)
6-h thunderstorm probability	YJUA$_2$ii	11 (00Z) 13 (12Z)	12/72/6 (00Z) 12/84/6 (12Z)	310KB /3.4MB (00Z) 320KB /4MB (12Z)
	YJUA$_2$ii	20 (00Z) 18 (12Z)	78/192/6 (00Z) 90/192/6 (12Z)	330KB /6.4MB (00Z) 330KB /5.7MB (12Z)
Relative Humidity	YRUA$_2$ii	23 (00Z) 27 (12Z)	6/72/3 (00Z) 6/84/3 (12Z)	610KB /13.7MB (00Z) 610KB /16.1MB (12Z)
	YRUA$_2$ii	40 (00Z) 36 (12Z)	75/192/3 (00Z) 87/192/3 (12Z)	610KB /23.9MB (00Z) 610KB /21.4MB (12Z)

24-h snowfall amount	YSUA$_2$ii	5 (00Z) 5 (12Z)	24/72/12 (00Z) 24/72/12 (12Z)	210KB /1MB (00Z) 220KB /1.1MB (12Z)
	YSUA$_2$ii	7 (00Z) 7 (12Z)	84/156/12 (00Z) 84/156/12 (12Z)	290KB /2MB (00Z) 320KB /2.2MB (12Z)
PoP (6h)	YUUA$_2$ii	11 (00Z) 13 (12Z)	12/72/6 (00Z) 12/84/6 (12Z)	400KB /4.3MB (00Z) 400KB /5.1MB (12Z)
	YUUA$_2$ii	20 (00Z) 18 (12Z)	78/192/6 (00Z) 90/192/6 (12Z)	400KB /7.8MB (00Z) 400KB /6.9MB (12Z)
12-h QPF	YVUA$_2$ii	10 (00Z) 12 (12Z)	18/72/6 (00Z) 18/84/6 (12Z)	560KB /5.4MB (00Z) 560KB /6.5MB (12Z)
	YVUA$_2$ii	14 (00Z) 12 (12Z)	78/156/6 (00Z) 90/156/6 (12Z)	670KB /9.2MB (00Z) 690KB /8.1MB (12Z)
Wind Gusts	YWUA$_2$ii	23 (00Z) 27 (12Z)	6/72/3 (00Z) 6/84/3 (12Z)	550KB /12.3MB (00Z) 550KB /14.4MB (12Z)
	YWUA$_2$ii	40 (00Z) 36 (12Z)	75/192/3 (00Z) 87/192/3 (12Z)	560KB /21.9MB (00Z) 560KB /19.8MB (12Z)
12-h thunderstorm probability	YXUA$_2$ii	10 (00Z) 12 (12Z)	18/72/6 (00Z) 18/84/6 (12Z)	350KB /3.4MB (00Z) 350KB /4.1MB (12Z)
	YXUA$_2$ii	20 (00Z) 18 (12Z)	78/192/6 (00Z) 90/192/6 (12Z)	360KB /7.1MB (00Z) 360KB /6.4MB (12Z)
3-h thunderstorm probability	YYUA$_2$ii	22 (00Z) 26 (12Z)	9/72/3 (00Z) 9/84/3 (12Z)	290KB /6.1MB (00Z) 290KB /7.4MB (12Z)
	YYUA$_2$ii	4 (00Z)	75/84/3 (00Z)	300KB /1.2MB (00Z)

Table 2. Superheaders and individual headers for the 2.5 km CONUS gridded MOS products. The grids will be transmitted initially on the SBN containing only individual headers. Superheaders will be used at a later date when the Telecommunications Operations Center (TOC) file size limitations are increased to accommodate these products.

Element	Superheader	Product Headers
Total sky cover	YAUZ98	YAUA18 YAUA21 YAUB00 YAUB03 YAUB06 YAUB09 YAUB12 YAUB15 YAUB18 YAUB21 YAUC00 YAUC03 YAUC06 YAUC09 YAUC12 YAUC15 YAUC18 YAUC21 YAUD00 YAUD03 YAUD06 YAUD09 YAUD12 YAUD15 YAUD18 YAUD21 YAUE00
	YAUZ97	YAUE03 YAUE06 YAUE09 YAUE12 YAUE15 YAUE18 YAUE21 YAUF00 YAUF03 YAUF06 YAUF09 YAUF12 YAUF15 YAUF18 YAUF21 YAUG00 YAUG03 YAUG06 YAUG09 YAUG12 YAUG15 YAUG18 YAUG21 YAUH00 YAUH03 YAUH06 YAUH09 YAUH12 YAUH15 YAUH18 YAUH21 YAUI00 YAUI03 YAUI06 YAUI09 YAUI12 YAUI15 YAUI18 YAUI21 YAUJ00
Wind Direction	YBUZ98	YBUA18 YBUA21 YBUB00 YBUB03 YBUB06 YBUB09 YBUB12 YBUB15 YBUB18 YBUB21 YBUC00 YBUC03 YBUC06 YBUC09 YBUC12 YBUC15 YBUC18 YBUC21 YBUD00 YBUD03 YBUD06 YBUD09 YBUD12 YBUD15 YBUD18 YBUD21 YBUE00
	YBUZ97	YBUE03 YBUE06 YBUE09 YBUE12 YBUE15 YBUE18 YBUE21 YBUF00 YBUF03 YBUF06 YBUF09 YBUF12 YBUF15 YBUF18 YBUF21 YBUG00 YBUG03 YBUG06 YBUG09 YBUG12 YBUG15 YBUG18 YBUG21 YBUH00 YBUH03 YBUH06 YBUH09 YBUH12 YBUH15 YBUH18 YBUH21 YBUI00 YBUI03 YBUI06 YBUI09 YBUI12 YBUI15 YBUI18 YBUI21 YBUJ00
Wind Speed	YCUZ98	YCUA18 YCUA21 YCUB00 YCUB03 YCUB06 YCUB09 YCUB12 YCUB15 YCUB18 YCUB21 YCUC00 YCUC03 YCUC06 YCUC09 YCUC12 YCUC15 YCUC18 YCUC21 YCUD00 YCUD03 YCUD06 YCUD09 YCUD12 YCUD15 YCUD18 YCUD21 YCUE00

	YCUZ97	YCUE03 YCUE06 YCUE09 YCUE12 YCUE15 YCUE18 YCUE21 YCUF00 YCUF03 YCUF06 YCUF09 YCUF12 YCUF15 YCUF18 YCUF21 YCUG00 YCUG03 YCUG06 YCUG09 YCUG12 YCUG15 YCUG18 YCUG21 YCUH00 YCUH03 YCUH06 YCUH09 YCUH12 YCUH15 YCUH18 YCUH21 YCUI00 YCUI03 YCUI06 YCUI09 YCUI12 YCUI15 YCUI18 YCUI21 YCUJ00
PoP (12 h)	YDUZ98	YDUB06 YDUB12 YDUB18 YDUC00 YDUC06 YDUC12 YDUC18 YDUD00 YDUD06 YDUD12 YDUD18 YDUE00
	YDUZ97	YDUE06 YDUE12 YDUE18 YDUF00 YDUF06 YDUF12 YDUF18 YDUG00 YDUG06 YDUG12 YDUG18 YDUH00 YDUH06 YDUH12 YDUH18 YDUI00 YDUI06 YDUI12 YDUI18 YDUJ00
Temperature	YEUZ98	YEUA18 YEUA21 YEUB00 YEUB03 YEUB06 YEUB09 YEUB12 YEUB15 YEUB18 YEUB21 YEUC00 YEUC03 YEUC06 YEUC09 YEUC12 YEUC15 YEUC18 YEUC21 YEUD00 YEUD03 YEUD06 YEUD09 YEUD12 YEUD15 YEUD18 YEUD21 YEUE00
	YEUZ97	YEUE03 YEUE06 YEUE09 YEUE12 YEUE15 YEUE18 YEUE21 YEUF00 YEUF03 YEUF06 YEUF09 YEUF12 YEUF15 YEUF18 YEUF21 YEUG00 YEUG03 YEUG06 YEUG09 YEUG12 YEUG15 YEUG18 YEUG21 YEUH00 YEUH03 YEUH06 YEUH09 YEUH12 YEUH15 YEUH18 YEUH21 YEUI00 YEUI03 YEUI06 YEUI09 YEUI12 YEUI15 YEUI18 YEUI21 YEUJ00
Dew Point	YFUZ98	YFUA18 YFUA21 YFUB00 YFUB03 YFUB06 YFUB09 YFUB12 YFUB15 YFUB18 YFUB21 YFUC00 YFUC03 YFUC06 YFUC09 YFUC12 YFUC15 YFUC18 YFUC21 YFUD00 YFUD03 YFUD06 YFUD09 YFUD12 YFUD15 YFUD18 YFUD21 YFUE00
	YFUZ97	YFUE03 YFUE06 YFUE09 YFUE12 YFUE15 YFUE18 YFUE21 YFUF00 YFUF03 YFUF06 YFUF09 YFUF12 YFUF15 YFUF18 YFUF21 YFUG00 YFUG03 YFUG06 YFUG09 YFUG12 YFUG15

		YFUG18 YFUG21 YFUH00 YFUH03 YFUH06 YFUH09 YFUH12 YFUH15 YFUH18 YFUH21 YFUI00 YFUI03 YFUI06 YFUI09 YFUI12 YFUI15 YFUI18 YFUI21 YFUJ00
Daytime Max	YGUZ98	YGUC00 YGUD00 YGUE00
	YGUZ97	YGUF00 YGURG00 YGUH00 YGUI00 YGUJ00
Nighttime Min	YHUZ98	YHUB12 YHUC12 YHUD12
	YHUZ97	YHUE12 YHUF12 YHUG12 YHUH12 YHUI12
6-h QPF	YIUZ98	YIUB00 YIUB06 YIUB12 YIUB18 YIUC00 YIUC06 YIUC12 YIUC18 YIUD00 YIUD06 YIUD12 YIUD18 YIUE00
	YIUZ97	YIUE06 YIUE12 YIUE18 YIUF00 YIUF06 YIUF12 YIUF18 YIUG00 YIUG06 YIUG12 YIUG18 YIUH00 YIUH06 YIUH12
6-h tstorm prob	YJUZ98	YJUB00 YJUB06 YJUB12 YJUB18 YJUC00 YJUC06 YJUC12 YJUC18 YJUD00 YJUD06 YJUD12 YJUD18 YJUE00
	YJUZ97	YJUE06 YJUE12 YJUE18 YJUF00 YJUF06 YJUF12 YJUF18 YJUG00 YJUG06 YJUG12 YJUG18 YJUH00 YJUH06 YJUH12 YJUH18 YJUI00 YJUI06 YJUI12 YJUI18 YJUJ00
Relative Humidity	YRUZ98	YRUA18 YRUA21 YRUB00 YRUB03 YRUB06 YRUB09 YRUB12 YRUB15 YRUB18 YRUB21 YRUC00 YRUC03 YRUC06 YRUC09 YRUC12 YRUC15 YRUC18 YRUC21 YRUD00 YRUD03 YRUD06 YRUD09 YRUD12 YRUD15 YRUD18 YRUD21 YRUE00
	YRUZ97	YRUE03 YRUE06 YRUE09 YRUE12 YRUE15 YRUE18 YRUE21 YRUF00 YRUF03 YRUF06 YRUF09 YRUF12 YRUF15 YRUF18 YRUF21 YRUG00 YRUG03 YRUG06 YRUG09 YRUG12 YRUG15 YRUG18 YRUG21 YRUH00 YRUH03 YRUH06 YRUH09 YRUH12 YRUH15 YRUH18 YRUH21 YRUI00 YRUI03 YRUI06 YRUI09 YRUI12 YRUI15 YRUI18 YRUI21 YRUJ00
24-h snowfall amount	YSUZ98	YSUC00 YSUC12 YSUD00 YSUD12 YSUE00
	YSUZ97	YSUE12 YSUF00 YSUF12 YSUG00 YSUG12
PoP (6h)	YUUZ98	YUUB00 YUUB06 YUUB12 YUUB18 YUUC00 YUUC06 YUUC12 YUUC18

		YUUD00 YUUD06 YUUD12 YUUD18 YUUE00
	YUUZ97	YUUE06 YUUE12 YUUE18 YUUF00 YUUF06 YUUF12 YUUF18 YUUG00 YUUG06 YUUG12 YUUG18 YUUH00 YUUH06 YUUH12 YUUH18 YUUI00 YUUI06 YUUI12 YUUI18 YUUJ00
12-h QPF	YVUZ98	YVUB06 YVUB12 YVUB18 YVUC00 YVUC06 YVUC12 YVUC18 YVUD00 YVUD06 YVUD12 YVUD18 YVUE00
	YVUZ97	YVUE06 YVUE12 YVUE18 YVUF00 YVUF06 YVUF12 YVUF18 YVUG00 YVUG06 YVUG12 YVUG18 YVUH00 YVUH06 YVUH12
Wind gusts	YWUZ98	YWUA18 YWUA21 YWUB00 YWUB03 YWUB06 YWUB09 YWUB12 YWUB15 YWUB18 YWUB21 YWUC00 YWUC03 YWUC06 YWUC09 YWUC12 YWUC15 YWUC18 YWUC21 YWUD00 YWUD03 YWUD06 YWUD09 YWUD12 YWUD15 YWUD18 YWUD21 YWUE00
	YWUZ97	YWUE03 YWUE06 YWUE09 YWUE12 YWUE15 YWUE18 YWUE21 YWUF00 YWUF03 YWUF06 YWUF09 YWUF12 YWUF15 YWUF18 YWUF21 YWUG00 YWUG03 YWUG06 YWUG09 YWUG12 YWUG15 YWUG18 YWUG21 YWUH00 YWUH03 YWUH06 YWUH09 YWUH12 YWUH15 YWUH18 YWUH21 YWUI00 YWUI03 YWUI06 YWUI09 YWUI12 YWUI15 YWUI18 YWUI21 YWUJ00
12-h tstorm prob	YXUZ98	YXUB06 YXUB12 YXUB18 YXUC00 YXUC06 YXUC12 YXUC18 YXUD00 YXUD06 YXUD12 YXUD18 YXUE00
	YXUZ97	YXUE06 YXUE12 YXUE18 YXUF00 YXUF06 YXUF12 YXUF18 YXUG00 YXUG06 YXUG12 YXUG18 YXUH00 YXUH06 YXUH12 YXUH18 YXUI00 YXUI06 YXUI12 YXUI18 YXUJ00
3-h tstorm prob	YYUZ98	YYUA18 YYUA21 YYUB00 YYUB03 YYUB06 YYUB09 YYUB12 YYUB15 YYUB18 YYUB21 YYUC00 YYUC03 YYUC06 YYUC09 YYUC12 YYUC15 YYUC18 YYUC21 YYUD00 YYUD03 YYUD06 YYUD09 YYUD12 YYUD15 YYUD18 YYUD21

		YYUE00
	YYUZ97 (00Z only)	YYUE03 YYUE06 YYUE09 YYUE12 YYUE15 YYUE18 YYUE21 YYUF00 YYUF03 YYUF06 YYUF09 YYUF12 YYUF15 YYUF18 YYUF21 YYUG00 YYUG03 YYUG06 YYUG09 YYUG12 YYUG15 YYUG18 YYUG21 YYUH00 YYUH03 YYUH06 YYUH09 YYUH12 YYUH15 YYUH18 YYUH21 YYUI00 YYUI03 YYUI06 YYUI09 YYUI12 YYUI15 YYUI18 YYUI21 YYUJ00