

## Attachment 3

## REMARKS

Table A3.1. Automated, Manual, and Plain Language Remarks/Additive and Maintenance Data.

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
1	<b>Volcanic Eruption</b>	Report the following information, if known: (1) Name of volcano, (2) Latitude and longitude or direction and distance from the installation, (3) Date/time UTC of eruption, (4) Size description, approximate height and direction of movement of the ash cloud, (5) And any other pertinent data, e.g., MT AUGUSTINE VOLCANO 70SM SW ERUPTED 231505 LARGE ASH CLOUD EXTENDING TO APRX 30000 FT MOV NE.	X	M	X	X
2	<b>Tornadic Activity</b> (See Note 1)	Encode tornadoes, funnel clouds, or waterspouts in format, <b>Tornadic activity_B/E(hh)mm_LOC/DIR_(MOV)</b> , where TORNADO, FUNNEL CLOUD, or WATERSPOUT identifies the specific tornadic activity, B/E denotes the beginning and/or ending time, (hh)mm is the time of occurrence (only the minutes are required if the hour can be inferred from the report time), LOC/DIR is the location (distance if known) and/or direction of the phenomena from the installation, and MOV is the movement, if known. Tornadic activity will be encoded as the first remark after the "RMK" entry. For example, "TORNADO B13 6 NE" would indicate that a tornado, which began at 13 minutes past the hour, was 6SM northeast of the observing location.	X	M	X	X

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
3	<b>Augmented or Automated Systems</b>	( <b>AO2</b> or <b>AO2A</b> ). Encode <b>AO2</b> in all METAR/SPECI from FBWOSs without augmentation. Encode <b>AO2A</b> in all METAR/SPECI from FBWOSs with manual augmentation. <b>Note:</b> ASOS/AWOS stations without a precipitation discriminator will report AO1; ASOS/AWOS stations with a precipitation discriminator will report AO2.		X	X	X
4	<b>Peak Wind</b>	Encode peak wind (> 25 knots) in format, <b>PK_WND_dddff(f)/(hh)mm</b> of the next METAR, where PK_WND is the remark identifier, ddd is the direction of the peak wind, ff(f) is the peak wind speed since the last METAR, and (hh)mm is the time of occurrence (only the minutes are required if the hour can be inferred from the report time). There will be a space between the two elements of the remark identifier and the wind direction/speed group; a slash "/" (without spaces) will separate the wind direction/speed group and the time. This remark is still required even if the peak wind speed was transmitted in an intervening SPECI, but is not required if the peak wind occurred and/or reoccurred during the 2-minute observation period prior to the METAR. For example, a peak wind of 45 knots from 280 degrees that occurred at 15 minutes past the hour would be encoded "PK WND 28045/15." Multiple occurrence example: PK WND 24042/43 25042/19 (augmented mode). <b>Note:</b> FBWOS report the most recent occurrence of the peak wind.	X	X		X
5	<b>Wind Shift</b>	Encode wind shift ( 45 in less than 15 minutes with sustained winds 10 kts) in format, <b>WSHFT_(hh)mm</b> , where WSHFT	X	X		X

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
		is the remark identifier and (hh)mm is the time the wind shift began. When augmenting, the contraction <b>FROPA</b> may be manually entered by the weather personnel following the time if it is reasonably certain that the wind shift was the result of a frontal passage. There is a space between the remark identifier and the time and, if applicable, between the time and the frontal passage contraction. For example, a remark reporting a wind shift accompanied by a frontal passage that began at 30 minutes after the hour would be encoded as "WSHFT 30 FROPA."				
6	<b>Tower Visibility</b>	Encode tower visibility as, <b>TWR_VIS_vvvvv</b> where vvvvv is the observed tower visibility value when surface and/or tower visibility are less than 4SM (6000 m) and the control tower reported visibility differs from the surface prevailing visibility by a reportable value. There is a space between each of the remark elements. For example, if the surface visibility is 2 statute mile (3200 m) and tower visibility is 1½SM (2400 m), you would encode TWR VIS 1½ (TWR VIS 2400). Continue to carry the last reported tower visibility in subsequent METAR or SPECI observations unless otherwise notified by the control tower.	X	M	X	X
7	<b>Variable Prevailing Visibility</b>	Encode variable prevailing visibility (visibility < 3SM (4800 m) increases/decreases by ½SM (800 m) during observation) in format <b>VIS_vnvnvnvnVvxvxvxvx</b> , where VIS is the remark identifier, <b>vnvnvnvn</b> is the lowest visibility evaluated, V denotes variability between two values, and <b>vxvxvxvx</b> is the highest visibility evaluated. There is one space following the remark identifier; no spaces between the	X	X		X

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
		letter V and the lowest/highest values. For example, a visibility that was varying between ½ and 2SM would be encoded "VIS 1/2V2."				
8	<b>Sector Visibility</b>	Encode sector visibility (visibility in $\geq 45^\circ$ sector differs from prevailing visibility by one or more reportable values and either prevailing or sector visibility is $< 3\text{SM}$ (4800 m) in format, <b>VIS_[DIR]_vvvvv_[Plain Language]</b> , where VIS is the remark identifier, [DIR] defines the sector to 8 points of the compass, and vvvvv is the sector visibility in SM or m, using the appropriate set of values. For example, a visibility of $2\frac{1}{2}\text{SM}$ (4000 m) in the northeastern octant would be encoded "VIS NE 2 1/2" (VIS NE 4000).	<b>O</b>			
9	<b>Visibility at Second Location</b>	Encode visibility at a second location in format <b>VIS_vvvvv_[LOC]</b> , where VIS is the remark identifier, vvvvv is the measured visibility value, and [LOC] is the specific location of the visibility sensor(s). Include the remark only when the condition is lower than that contained in the body of the report. For example, a visibility of $2\frac{1}{2}\text{SM}$ (4000 m) measured by a second sensor located at runway 11 would be encoded "VIS 2 1/2 RWY11" (VIS 4000 RWY11).		<b>X</b>		

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
10	Lightning	<b>Automated (including Augmented) Observing Locations.</b> When lightning is detected: Within 5 nautical miles of the detector, it will report <b>TS</b> in the body of the report with no remark; Between 5 and 10 nautical miles of the detector, it will report <b>VCTS</b> in the body of the report with no remark; Beyond 10 but less than 30 nautical miles of the detector, report it as <b>LTG DSNT</b> followed by the direction from the sensor (e.g., <b>LTG DSNT W</b> ). <b>Manual Observing Locations.</b> Report lightning type and frequency based on <b>Table 10.3</b> (e.g. <b>OCNL LTGICCCCG</b> )	X	X		X
11	Beginning and Ending of Precipitation	Encode beginning and ending of precipitation in format, <b>w'w'B(hh)mme(hh)mm</b> (FBWOS will encode on all observations up to and including the next METAR with time encoded in an HHMM format), where w'w' is the type of precipitation, B denotes the beginning, E denotes the ending, and (hh)mm is the time of occurrence (only the minutes are required if the hour can be inferred from the report time). There are no spaces between the elements. The encoded remarks are not required in SPECI and should be reported in the next METAR. Do not encode intensity qualifiers. For example, if rain began at 0005, ended at 0030, and snow began at 0020, and ended at 0055, the remarks would be encoded "RAB05E30SNB20E55." If the precipitation were showery, the remark would be encoded "SHRAB05E30SHSNB20E55."	X	X		X

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
12	<b>Beginning and Ending of Thunderstorms</b>  (See Note 1)	Encode beginning and ending of thunderstorm(s) in format, <b>TSB(hh)mmE(hh)mm</b> , where TS indicates thunderstorm, B denotes the beginning, E denotes the ending, and (hh)mm is the time of occurrence (only the minutes are required if the hour can be inferred from the report time). There are no spaces between the elements. For example, if a thunderstorm began at 0159 and ended at 0230, the remark would be encoded "TSB0159E30." FBWOSs automatically provide a remark both when the thunderstorm begins and ends (e.g., TSB1635 indicates a thunderstorm began at 1635Z).	X	X		X
13	<b>Thunderstorm Location</b>	Encode thunderstorm(s) in format, <b>TS_LOC_(MOV_DIR)</b> , where TS identifies the thunderstorm activity, LOC is the location (distance if known) of the thunderstorm(s) from the installation, and MOV_DIR is the movement with direction, if known. For example, a thunderstorm 8SM southeast of the installation and moving toward the northeast would be encoded "TS 8SE MOV NE."	O			
14	<b>Hailstone Size</b>	Encode hailstone size, <b>GR_[size]_[Plain Language]</b> , where GR is the remark identifier and [size] is the diameter of the largest hailstone. The hailstone size is encoded in ¼-inch increments. For example, "GR 1 3/4" would indicate that the largest hailstones were 1¾ inches in diameter. If hail smaller than ¼ inch is observed shall be coded as less than ¼ inch (i.e., "GR LESS THAN 1/4").	X(*)		X(*)	X(*)
15	<b>Snow Pellet</b>	Encode snow pellet intensity in the format <b>GS_[intensity]</b> , where GS is the remark identifier and [intensity] is the observed intensity. The snow pellet intensity shall be coded as LGT, MOD, or HVY incidating light, moderate, or heavy intensity, respectively.	X		X	X

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
16	<b>Variable Ceiling Height</b>	Encode variable ceiling height (height variable and ceiling layer below 3000 feet) in format, <b>CIG_h<sub>n</sub>h<sub>n</sub>h<sub>n</sub>Vh<sub>x</sub>h<sub>x</sub>h<sub>x</sub></b> , where CIG is the remark identifier, h <sub>n</sub> h <sub>n</sub> h <sub>n</sub> is the lowest ceiling height evaluated, V denotes variability between two values, and h <sub>x</sub> h <sub>x</sub> h <sub>x</sub> is the highest ceiling height evaluated. There is one space following the remark identifier; no spaces between the letter V and the lowest/highest ceiling values. For example, "CIG 005V010" would indicate a ceiling that was varying between 500 and 1000 feet.	<b>X</b>	<b>X</b>		<b>X</b>
17	<b>Partial Obscurations</b>	Encode partial obscurations (surface-based or aloft) in format, <b>w'w'_[N<sub>s</sub>N<sub>s</sub>N<sub>s</sub>]h<sub>s</sub>h<sub>s</sub>h<sub>s</sub>[Plain Language]</b> , where w'w' is the present weather causing the obscuration at the surface or aloft, and N <sub>s</sub> N <sub>s</sub> N <sub>s</sub> is the applicable sky cover amount of the obscuration aloft (FEW, SCT, BKN, OVC) or at the surface (FEW, SCT, BKN), and h <sub>s</sub> h <sub>s</sub> h <sub>s</sub> is the applicable height. Surface-based obscurations will have a height of "000." There is a space separating the weather causing the obscuration and the sky cover amount, and no space between the sky cover amount and the height. For example, fog hiding 3-4 oktas of the sky would be encoded "FG SCT000." A broken layer of smoke at 2000 feet would be encoded "FU BKN020."	<b>O</b>		<b>O</b>	
18	<b>Variable Sky Condition</b>	Encode variable sky condition (sky condition below 3000 feet that varies between one or more reportable values (FEW, SCT, BKN, OVC) during the period of observation) in format, <b>N<sub>s</sub>N<sub>s</sub>N<sub>s</sub>(h<sub>s</sub>h<sub>s</sub>h<sub>s</sub>)_V_N<sub>s</sub>N<sub>s</sub>N<sub>s</sub>[Plain Language]</b> , where N <sub>s</sub> N <sub>s</sub> N <sub>s</sub> (h <sub>s</sub> h <sub>s</sub> h <sub>s</sub> ) is the predominant sky condition N <sub>s</sub> N <sub>s</sub> N <sub>s</sub> is the varying sky condition, and V denotes the variability between the two ranges. For example, SCT V	<b>X</b>	<b>X</b>		<b>X</b>

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
		BKN" would identify a scattered layer that is variably broken. If there are several layers with the same sky condition amount in the report, the layer height will be coded with the variable layer. For example, an observation with cloud layers of SCT010 BKN014 BKN020 with a cloud layer at 1400 feet that is varying between broken and overcast would be coded "BKN014 V OVC."				
19	<b>Significant Cloud Types</b>	<p>Encode significant cloud types as follows. Identify cumulonimbus (CB) of any kind and towering cumulus (TCU) in the body of the report in the sky condition group. Include distance if known.</p> <p>(1) <b>Cumulonimbus or Cumulonimbus Mammatus</b> as appropriate, (when no thunderstorm is being reported) in format <b>(CB or CBMAM_LOC_(MOV_DIR)_[Plain Language]</b> where CB or CBMAM is the cloud type, LOC is the direction from the observing location, and MOV_DIR is the movement with direction (if known). Separate the cloud type entries from each other with a space. For example, a CB 21 nautical miles west of the observing location moving toward the east would be encoded "CB 21W MOV E." If a CB is more than 10 nautical miles to the west and distance cannot be determined, encode as "CB DSNT W."</p> <p>(2) <b>Towering cumulus</b> in format <b>TCU_[DIR]_[Plain Language]</b>, where TCU is cloud type and DIR is direction from the observing location. Separate the cloud type entries by a space. For example, a towering cumulus cloud up to 10 nautical</p>	<b>O</b>		<b>O</b>	



Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
		<p>miles west of the observing location would be encoded "TCU W."</p> <p>(3) <b>Alto cumulus Castellanus</b> in format, <b>ACC_[DIR]_[Plain Language]</b>, where ACC is cloud type and DIR is direction from the observing location. Separate the cloud type entries by a space. For example, an ACC cloud 5 to 10 nautical miles northwest of the observing location would be encoded "ACC NW."</p>				
19	<b>Significant Cloud Types (cont)</b>	<p>(4) <b>Standing lenticular or Rotor clouds.</b> Stratocumulus (SCSL), alto cumulus (ACSL), or cirrocumulus (CCSL), or rotor clouds in format, <b>CLD_[DIR]_[Plain Language]</b>, where CLD is cloud type and DIR is direction from the observing location. Separate the cloud type entries by a space. For example, ACSL clouds observed southwest through west of the observing location would be encoded "ACSL SW-W"; an apparent rotor cloud northeast of the observing location would be encoded "APRNT ROTOR CLD NE"; and CCSL clouds south of the observing location would be encoded "CCSL S."</p>	<b>O</b>			
20	<b>Ceiling Height at Second Location</b>	<p>Encode ceiling height at a second location in format, <b>CIG_hhh_[LOC]</b>, where CIG is the remark identifier, hhh is the measured height of the ceiling, and [LOC] is the specific location of the ceilometer(s) at the observing location. This remark is only generated when the ceiling is lower than that contained in the body of the report. For example, if the ceiling measured by a second sensor located at runway 11 is broken at 200 feet; the remark would be "CIG 002 RWY11."</p>		<b>X</b>		

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
21	<b>Pressure Rising or Falling Rapidly</b>	Include <b>PRESRR</b> (pressure rising rapidly) or <b>PRESFR</b> (pressure falling rapidly) when the pressure is rising or falling at a rate of 0.06 iHg per hour or more, totaling a change 0.02 iHg or more at the time of observation,	X	X		X
22	<b>Sea Level Pressure</b>	Encode sea-level pressure in format <b>SLPppp</b> , where SLP is the remark identifier and ppp is the sea level pressure in hectopascals. For example, a sea level pressure of 998.2 hectopascals would be encoded as "SLP982." If SLP is not available, it is encoded as " <b>SLPNO</b> ."	X	X		X
23	<b>Aircraft Mishap</b>	Include the remark <b>ACFT_MSHP [Plain Language]</b> to document weather conditions when notified of an aircraft mishap. The remark is not transmitted. Indicate non-transmission by enclosing the remark (ACFT_MSHP) in parentheses in the observation.	X		X	X
24	<b>Snow Increasing Rapidly</b>	Include the snow increasing rapidly remark in the next METAR, whenever the snow depth increases by 1 inch or more in the past hour. Encode the remark in format, <b>SNINCR [inches-hour/inches on ground]</b> , where SNINCR is the remark indicator, inches-hour is the depth increase in the past hour, and inches on ground is the total depth of snow on the ground at the time of the report. Separate the depth increase in the past hour from the total depth on the ground by a slash "/". For example, a snow depth increase of 2 inches in the past hour with a total depth on the ground of 10 inches would be encoded "SNINCR 2/10."	O		O	

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
25	<b>Other Significant Information</b>  <b>[Plain Language Remarks]</b>	<p>Added to report information significant to aircraft safety or resource protection. Amplifies entries in main observation. Some remarks will use the same order of entry as data the remark most closely relates (e.g., a VIS LWR E remark would have the entry as a sector visibility remark).</p> <p>(1) <b>Unofficial Weather Reports.</b> Information important to local aviation and public safety reported by an individual not task certified to take official weather observations. For example, UNOFFL RPT TORNADO 9 W OF KKAC PER LAW ENFORCEMENT or CLD LYR AT 400 FT ON APCH RWY 23 RPRTD BY PIREPS, CIG VIS LWR ON APCH RWY14L.</p> <p>(2) <b>Estimated Wind and Pressure. WND DATA ESTMD or ALSTG/SLP ESTMD</b> indicates the winds and/or pressure values from the primary airfield sensors are suspect or inoperative, and back-up equipment is being used. Report winds as estimated if using the AN/TMQ-53 as a back-up at permanent (non-tactical) locations or when the fixed-base wind equipment on the active end of the runway is inoperative and the wind data for the runway in use is obtained using the most reliable system available (e.g., inactive runway instrumentation at locations with wind equipment installed on two or more runways, hand-held anemometer, Beaufort scale, etc.).</p>	<p>O</p> <p>X</p>		<p>O</p> <p>X</p>	

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
		<p>(3) <b>Significant Atmospheric Phenomena not Reported Elsewhere.</b> Present weather observed but not occurring at the point of observation or in the vicinity (e.g., SHRA OVR MTNS N).</p> <p>(4) <b>Aurora</b> observed in the past hour. Include <b>AURBO</b> in the next METAR and subsequent METARs throughout period of occurrence.</p> <p>(5) <b>Condensation Trails.</b> Include <b>CONTRAILS</b> to indicate condensation trails are observed.</p> <p>(6) <b>Location Unique Information</b> (as required), e.g., fog dispersal, rawinsonde data, state of ground, wind difference between parallel runways.</p>	<p>O</p> <p>O</p> <p>O</p> <p>O</p>		<p>O</p> <p>O</p>	<p>O</p> <p>O</p>
26	<b>Hourly Precipitation Amount</b>  (METAR only)	Encode hourly precipitation amount in format, <b>Prrrr</b> , where P is the group indicator and rrrr is the water equivalent of all precipitation that has occurred since the last METAR. The amount is encoded in hundredths of an inch. For example, "P0009" would indicate 9/100 of an inch of precipitation fell in the past hour; "P0000" would indicate that less than 1/100 of an inch of precipitation fell in the past hour. When an indeterminable amount of precipitation has occurred during the period, encode Prrrr as P////. Omit the group if no precipitation occurred since the last METAR.		X		O
27	<b>3- and 6-Hour Precipitation Amount</b>	Encode the 3- and 6-hourly precipitation group in format, <b>6RRRR</b> , where 6 is the group indicator and RRRR is the amount of precipitation. Report the amount of precipitation	X	X		X

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
	(See Note 2) (METAR only)	(water equivalent) accumulated in the past 3 hours in the 3-hourly report; and the amount accumulated in the past 6 hours in the 6-hourly report. The amount of precipitation is encoded in inches, using the tens, units, tenths and hundredths digits of the amount. When an indeterminable amount of precipitation has occurred during the period, encode RRRR as 6////. For example, 2.17 inches of precipitation would be encoded "60217." A trace will be encoded "60000."				
28	<b>24-Hour Precipitation Amount</b>  (See Note 2) (METAR only)	Encode the 24-hour precipitation amount in format, <b>7R<sub>24</sub>R<sub>24</sub>R<sub>24</sub>R<sub>24</sub></b> , where 7 is the group indicator and R <sub>24</sub> R <sub>24</sub> R <sub>24</sub> R <sub>24</sub> is the 24-hour precipitation amount. Include the 24-hour precipitation amount in the 1200 UTC (or MAJCOM/Higher Headquarters designated time) whenever more than a trace of precipitation (water equivalent) has fallen in the preceding 24 hours. The amount of precipitation is encoded by using the tens, units, tenths, and hundredths of inches (water equivalent) for the 24-hour period. If more than a trace (water equivalent) has occurred and the amount cannot be determined, encode the group as 7////. For example, 1.25 inches of precipitation (water equivalent) in the past 24 hours will be encoded "70125."	<b>X</b>	<b>X</b>		<b>O</b>
29	<b>Snow Depth on Ground</b>  (See Note 2) (METAR only)	Encode snow depth during controlled airfield hours in the 0000, 0600, 1200, and 1800 UTC observation, or MAJCOM specified reporting time for your installation, when supplementing for snow depth. The remark is encoded in the format, <b>4/sss</b> , where 4/ is the group indicator and sss is the	<b>X(*)</b>		<b>X</b>	<b>O</b>

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
		snow depth in whole inches using three digits. For example, a snow depth of 21 inches will be encoded as "4/021."				
30	<b>Hourly Temperature and Dew Point</b>  (METAR only)	Encode the hourly temperature and dew point group to the tenth of a degree Celsius in format, <b>T<sub>s</sub>T'T'T's<sub>n</sub>T'dT'dT'd</b> , where T is the group indicator, s <sub>n</sub> is the sign of the temperature, T'T'T' is the temperature, and T'dT'dT'd is the dew point. Encode the sign of temperature and dew point as 1 if the value is below 0°C and 0 if the value is 0°C or higher. The temperature and dew point is reported in tens, units, and tenths of degrees Celsius. There will be no spaces between the entries. For example, a temperature of 2.6°C and dew point of -1.5°C would be reported in the body of the report as "03/M01" and the <b>T<sub>s</sub>T'T'T's<sub>n</sub>T'dT'dT'd</b> group as T00261015". If dew point is missing report the temperature; if the temperature is missing do not report the temperature/dew point group.		<b>X</b>		<b>O</b>
31	<b>6-Hourly Maximum Temperature</b>  (See Note 2)  (METAR only)	Encode the 6-hourly maximum temperature group in format, <b>1s<sub>n</sub>T<sub>x</sub>T<sub>x</sub>T<sub>x</sub></b> , where 1 is the group indicator, s <sub>n</sub> is the sign of the temperature, T <sub>x</sub> T <sub>x</sub> T <sub>x</sub> is the maximum temperature in tenths of degrees Celsius using three digits. Encode the sign of maximum temperature as 1 if the maximum temperature is below 0°C and 0 if the maximum temperature is 0°C or higher. For example, a maximum temperature of -2.1°C would be encoded "11021"; 14.2°C would be encoded "10142."	<b>O</b>	<b>X</b>		<b>O</b>
32	<b>6-Hourly Minimum Temperature</b>	Encode the 6-hourly minimum temperature group in format, <b>2s<sub>n</sub>T<sub>n</sub>T<sub>n</sub>T<sub>n</sub></b> , where 2 is the group indicator, s <sub>n</sub> is the sign of the temperature, and T <sub>n</sub> T <sub>n</sub> T <sub>n</sub> is the minimum temperature in	<b>O</b>	<b>X</b>		<b>O</b>

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
	(See Note 2) (METAR only)	tenths of degrees Celsius using three digits. Encode the sign of minimum temperature as 1 if the minimum temperature is below 0°C and 0 if the minimum temperature is 0°C or higher. For example, a minimum temperature of -0.1°C would be encoded "21001"; 1.2°C would be encoded "20012."				
33	<b>24-Hour Maximum and Minimum Temperature</b> (METAR only)	Encode the 24-hour maximum temperature and the 24-hour minimum temperature in format, <b>4s<sub>n</sub>T<sub>x</sub>T<sub>x</sub>T<sub>x</sub>s<sub>n</sub>T<sub>n</sub>T<sub>n</sub>T<sub>n</sub></b> , where 4 is the group indicator, s <sub>n</sub> is the sign of the temperature, T <sub>x</sub> T <sub>x</sub> T <sub>x</sub> is the maximum 24-hour temperature, and T <sub>n</sub> T <sub>n</sub> T <sub>n</sub> is the 24-hour minimum temperature encoded in tenths of degrees Celsius using three digits. Encode the sign of maximum or minimum temperature as 1 if it is below 0°C and 0 if it is 0°C or higher. For example, a 24-hour maximum temperature of 10.0°C and a 24-hour minimum temperature of -1.5°C would be encoded "401001015"; a 24-hour maximum temperature of 11.2°C and a 24-hour minimum temperature of 8.4°C would be encoded as "401120084."		<b>X</b>		<b>O</b>
34	<b>3-Hourly Pressure Tendency</b> (See Note 2) (METAR only)	Encode the 3-hourly pressure tendency group in format, <b>5a p p p</b> , where 5 is the group indicator, "a" is the character of pressure change over the past 3 hours, and p p p is the amount of barometric change in tenths of hectopascals. The amount of barometric change is encoded using the tens, units, and tenths digits. For example, a steady increase of 3.2 hectopascals in the past three hours would be encoded "52032." <b>Note:</b> FBWOSs report pressure net change code figures that <b>Table 13.4</b> may not reflect, e.g., 001, 004, 006, 011.	<b>O</b>	<b>X</b>		<b>O</b>

Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
35	<b>Sensor Status Indicators</b>	<p>Report sensor outages using the following remarks:</p> <p>(1) <b>RVRNO</b> - Runway Visual Range information should be reported but is missing or not available.</p> <p>(2) <b>PWINO</b> - precipitation identifier information not available.</p> <p>(3) <b>PNO</b> - precipitation amount not available.</p> <p>(4) <b>FZRANO</b> - freezing rain information not available.</p> <p>(5) <b>TSNO</b> - thunderstorm information not available.</p> <p>(6) <b>VISNO (LOC)</b> - visibility at secondary location not available, e.g., VISNO RWY06.</p> <p>(7) <b>CHINO (LOC)</b> - (cloud-height-indicator) sky condition at secondary location not available, e.g., CHINO RWY06.</p>	X	X		X
36	<b>Maintenance Indicator</b>	A maintenance indicator sign \$ is appended at the end of the report when (e.g., FBWOS) maintenance is needed on the system.		X		X
37	(1) <b>LAST</b> (manual observing locations only)	(1) At limited-duty manual observing locations and gunnery ranges, identify the last observation of the day (METAR or SPECI) by adding the term "LAST" following the last element in the observation text (e.g., TCU SE LAST).	X			
	(2) <b>FIRST</b>		X			



Remark Number	Observed Condition	Enter in Remarks Section	Manual	Automated	Supplement	Back-up
	(See Note 2)  <b>(3) COR</b>	(2) The FIRST remark will be used to facilitate collection of observations from limited-duty units, and deployed units in manual observing mode.  (3) Enter COR in column 13 followed by the time (to the nearest minute UTC) the correction was locally disseminated (e.g., COR 1426).	<b>X</b>		<b>X</b>	<b>X</b>

**NOTES:**  
**X** – Indicates required data  
**(\*)** – See **Table 5.1**  
**O** – Indicates optional based on local operational requirements  
**M** – Indicates Mandatory Supplementary Weather Conditions. When weather personnel are on duty, switch FBWOS to augment mode and begin supplementation operations.

1. Encode when in augmented mode only if the initial SPECI taken for the beginning and/or ending of tornadic activity, thunderstorm, or hail was not transmitted longline, include the time of beginning (B) and/or ending (E) with the current (most recent) remark in the next SPECI or METAR observation transmitted longline. Enter the indicator B and/or E and the appropriate time(s) immediately following the phenomena reported (e.g., TSB35 12 SW MOV E, GRB37E39 GR 3/4). These B and/or E times are entered for longline transmission only.
2. Or as directed by MAJCOM or Higher Headquarters supplement when augmenting observations
3. Substitute 5000 m for 4800 m at OCONUS locations based on the host-nation practice
4. Weather personnel will augment the FBWOS during controlled airfield hours to ensure accurate information when there is an AF deficiency report (DR) issued by system lead command or the FBWOS program management office covering systems or sensor operations.