METAR Remark Codes

Prefix	Meaning	Format	Detail	Example	Explanation
1	6-Hourly Maximum Temperature.	$1S_nT_xT_xT_x$	S_n = 1 if the maximum temperature is below 0°C and S_n = 0 if the maximum temperature is 0°C or higher. T_x = the maximum temperature in tenths of degrees Celsius.	11021 10142	maximum temperature of ⁻2.1°C. maximum temperature of 14.2°C.
2	6-Hourly minimum Temperature.	$2S_nT_xT_xT_x$	Same as #1	21001 20012	A minimum temperature of ⁻0.1°C A minimum temperature 1.2°C
3	3-hour Precipitation.	3RRRR	The amount of precipitation in hundredths of an inch (water equivalent) accumulated in the past 3 hours (taken at 0300, 0900, 1500, or 2100 UTC).	30217 30000 3////	2.17 inches of precipitation. A trace of precipitation. An indeterminable amount of precipitation.
4	24-hour Maximum and Minimum Temperature.	$4S_nT_xT_xT_xS_nT_nT_nT_n$	S_n = 1 if the maximum temperature is below 0°C and S_n = 0 if the maximum temperature is 0°C or higher. T_x = the maximum temperature in tenths of degrees Celsius. T_n = the minimum temperature in tenths of degrees Celsius.	401120084 401001015	A 24-hour maximum temperature of 11.2°C and minimum temperature of 8.4°C. A 24-hour maximum temperature of 10.0°C and minimum temperature of ⁻1.5°C.
4/	Snow Depth on Ground.	4/sss	Snow depth in whole inches.	4/023	A snow depth of 23 inches.
5	3 Hourly Pressure Tendency.	5appp	a indicates the pressure change over the past 3 hours, and ppp is the barometric change in tenths of hectopascals.*	52032	A steady increase of 3.2 hectopascals in the past three hours.
6	6-hour Precipitation	6RRRR	The amount of precipitation in hundredths of an inch (water equivalent) accumulated in the past 6 hours (taken at 0000, 0600, 1200, or 1800 UTC).	60217 60000 6////	2.17 inches of precipitation A trace of precipitation An indeterminable amount of precipitation

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Prefix	Meaning	Format	Detail	Example	Explanation
7	24-Hour Precipitation Amount.	7RRRR	Precipitation amount (water equivalent in hundredths of an inch) in the past 24 hours.	70125 70000 7////	1.25 inches in the past 24 hours A trace of precipitation An indeterminable amount of precipitation
8/	Cloud Types.**	8/$C_LC_MC_H$	The predominant low cloud (C_L), middle cloud (C_M), and high cloud (C_H). A 0 represents low, middle, or high cloud type if no cloud is present in that classification. A solidus "/" represents layers above an overcast.	8/6// 8/903	An overcast layer of stratus clouds Cumulonimbus type low clouds, no middle clouds, and dense cirrus high clouds.
933	Water Equivalent of Snow on Ground.	933RRR	Water equivalent of snow, snow pellets, snow grains, ice pellets, ice crystals, and hail in the 1800Z report (in tenths of an inch) if the average depth is 2 inches or more.	933125	A water equivalent of 12.5 inches.
98	Duration of Sunshine.	98mmm	Duration of sunshine that occurred the previous calendar day, in the 0800Z report as minutes of sunshine.	98096	96 minutes of sunshine.
	Beginning and Ending Of Precipitation.	wwB(hh)mmE(hh)mm	The beginning and ending of precipitation where ww is the type of precipitation (see table below), B denotes the beginning, and 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)	RAB05E30SNB20E55	Rain began at 5 minutes past the hour, ended at 30 minutes past the hour, and snow began at 20 minutes past the hour, and ended at 55 minutes past the hour.
P	Hourly Precipitation Amount.	Prrrr	The water equivalent of all precipitation, in hundredths of an inch, that has occurred since the last METAR.	P0009 P0000	9/100 of an inch of precipitation fell in the past hour. Less than 1/100 of an inch of precipitation fell in the past hour.

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Prefix	Meaning	Format	Detail	Example	Explanation
T	Hourly Temperature and Dew Point.	$TS_nT_xT_xT_xS_nT_dT_dT_d$	S_n = 1 if the maximum temperature is below 0°C and S_n = 0 if the maximum temperature is 0°C or higher. T_x = the temperature in tenths of degrees Celsius. T_d = the dew point in tenths of degrees Celsius.	T00261015	A temperature of 2.6°C and dew point of ⁻1.5°C.
SLP	Sea-Level Pressure	SLPppp	Tens, units, and tenths of the sea-level pressure in hectopascals.	SLP982 SLP182 SLPNO	A sea-level pressure of 998.2 hectopascals. Sea-level pressure of 1018.2 Sea-level pressure is not available where it would normally be reported.

*Characteristics of Barometer Tendency

Primary Requirement	Description	Code Figure
Atmospheric pressure now higher than 3 hours ago.	Increasing, then decreasing.	**0**
	Increasing, then steady, or increasing then increasing more slowly.	**1**
	Increasing steadily or unsteadily.	**2**
	Decreasing or steady, then increasing; or increasing then increasing more rapidly.	**3**
Atmospheric pressure now same as 3 hours ago.	Increasing, then decreasing.	**0**
	Steady	**4**
	Decreasing then increasing.	**5**
Atmospheric pressure now lower than 3 hours ago.	Decreasing then increasing.	**5**
	Decreasing, then steady, or decreasing then decreasing more slowly.	**6**
	Decreasing steadily or unsteadily.	**7**
	Steady or increasing, then decreasing; or decreasing then decreasing more rapidly.	**8**

To be used with *3 Hourly Pressure Tendency* remark (5appp)

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Present Weather

Qualifier		Weather Phenomena		
Intensity or Proximity	**Descriptor**	**Precipitation**	**Obscuration**	**Other**
– Light	**MI** Shallow	**DZ** Drizzle	**BR** Mist	**PO** Well-Developed Dust/Sand Whirls
Moderate (no symbol)	**PR** Partial	**RA** Rain	**FG** Fog	**SQ** Squalls
+ Heavy	**BC** Patches	**SN** Snow	**FU** Smoke	**FC** Funnel Cloud, (Tornado or Waterspout coded as +FC)
VC In the Vicinity	**DR** Low Drifting	**SG** Snow Grains	**VA** Volcanic Ash	**SS** Sandstorm
	BL Blowing	**IC** Ice Crystals	**DU** Widespread Dust	**DS** Duststorm
	SH Shower(s)	**PL** Ice Pellets	**SA** Sand	
	TS Thunderstorm	**GR** Hail	**HZ** Haze	
	FZ Freezing	**GS** Small Hail and/or Snow Pellets	**PY** Spray	
		UP Unknown Precipitation		

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**Cloud Types

Code	C_L (Form of Low Cloud)	C_M (Form of Medium Cloud)	C_H (Form of High Cloud)
0	No Stratocumulus, Stratus, Cumulus or Cumulonimbus	No Altocumulus, Altostratus or Nimbostratus	No Cirrus, Cirrocumulus or Cirrostratus
1	Cumulus with little vertical extent and seemingly flattened, or ragged Cumulus other than of bad weather*, or both	Altostratus, the greater part of which is semi-transparent; through this part the sun or moon may be weakly visible - as through ground glass	Cirrus in the form of filaments, strands or hooks, not progressively invading the sky
2	Cumulus of moderate or strong vertical extent, generally with protuberances in the form of domes or towers, either accompanied or not by other Cumulus or by Stratocumulus, all having their bases at the same level	Altostratus, the greater part of which is sufficiently dense to hide the sun or moon, or Nimbostratus	Dense Cirrus, in patches or entangled sheaves, which usually do not increase and sometimes seem to be the remains of the upper part of a Cumulonimbus; or Cirrus with sproutings in the form of small turrets or battlements, or Cirrus having the appearance of cumuliform tufts
3	Cumulonimbus the summits of which, at least partially, lack sharp outlines, but are neither clearly fibrous (cirriform) nor in the form of an anvil; Cumulus, Stratocumulus or Stratus may also be present	Altocumulus, the greater part of which is semi-transparent; the various elements of the cloud change only slowly and are all at a single level	Dense Cirrus, often in the form of an anvil, being the remains of the upper parts of Cumulonimbus
4	Stratocumulus formed from the spreading out of Cumulus; Cumulus may also be present	Patches (often in the form of almonds or fishes) of Altocumulus, the greater part of which is semi-transparent; the clouds occur at one or more levels and the elements are continually changing in appearance	Cirrus in the form of hooks or filaments, or both, progressively invading the sky; they generally become denser as a whole
5	Stratocumulus not formed from the spreading out of Cumulus	Semi-transparent Altocumulus in bands, or Altocumulus in one or more fairly continuous layers (semi-transparent or opaque), progressively invading the sky; these Altocumulus clouds generally thicken as a whole	Cirrus (often in bands converging towards one point or two opposite points of the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole, but the continuous veil does not reach 45 degrees above the horizon
6	Stratus in a more or less continuous sheet or layer, or in ragged shreds, or both, but no Stratus fractus of bad weather*	Altocumulus resulting from the spreading out of Cumulus (or Cumulonimbus)	Cirrus (often in bands converging towards one point or two opposite points of the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole, the continuous veil extends more than 45 degrees above the horizon, without the sky being totally covered

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Code	C_L (Form of Low Cloud)	C_M (Form of Medium Cloud)	C_H (Form of High Cloud)
7	Stratus fractus of bad weather* or Cumulus fractus of bad weather or both (pannus), usually below Altostratus or Nimbostratus	Altocumulus in two or more layers, usually opaque in places, and not progressively invading the sky; or opaque layer of Altocumulus, not progressively invading the sky; or Altocumulus together with Altostratus or Nimbostratus	Veil of Cirrostratus covering the celestial dome
8	Cumulus and Stratocumulus other than that formed from the spreading out of Cumulus; the base of the Cumulus is at a different level from that of the Stratocumulus	Altocumulus with sproutings in the form of small towers or battlements, or Altocumulus having the appearance of cumuliform tufts	Cirrostratus not progressively invading the sky and not completely covering the celestial dome
9	Cumulonimbus, the upper part of which is clearly fibrous (cirriform), often in the form of an anvil; either accompanied by Cumulonimbus without anvil or fibrous upper part, by Cumulus, Stratocumulus, Stratus or pannus	Altocumulus of a chaotic sky, generally at several levels	Cirrocumulus alone, or Cirrocumulus accompanied by Cirrus or Cirrostratus, or both, but Cirrocumulus is predominant
/	Stratocumulus, Stratus, Cumulus and Cumulonimbus invisible owing to darkness, fog, blowing snow, dust or sand, or other similar phenomena	Altocumulus, Altostratus and Nimbostratus invisible owing to darkness, fog, blowing snow, dust or sand, or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds	Cirrus, Cirrocumulus or Cirrostratus invisible owing to darkness, fog, blowing snow, dust or sand, or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds

**Bad weather* denotes the conditions which generally exists during precipitation and a short time before and after.

The above was abstracted from the following sources:

http://clem.mscd.edu/~serranof/wxhandbook/fmh1ch12.htm
http://www.faa.gov/ATpubs/SWO/chapter_15.htm
http://www.met.tamu.edu/class/METAR/metar-pg13-rmk.html
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http://www.nws.noaa.gov/oso/oso1/oso12/fmh1/fmh1ch12.htm
http://www.weather.org.uk/resource/cld_code.htm

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