

U.S. National Coding Practices (Specifically METARs)

Adapted directly from the National Weather Service, code FM 15-X Ext. METAR

WIND:

*The mean direction and speed of the wind over the 2 minutes immediately preceding the observation shall be reported for the wind.

*If, during the 2 minutes immediately preceding the observation, the total variation in wind direction is 60 degrees or more and the mean wind speed is greater than 6 knots, the wind direction may be reported as variable.

*Wind gust speed shall be reported when there are rapid fluctuations of speed with a variation between peaks and lulls of 10 knots or more in the 10-minute period immediately preceding the observation.

VISIBILITY:

*Prevailing visibility, at manual stations, shall be reported as follows:

- a. less than 3/8 statute mile (abbreviated SM), rounded down to the nearest 1/16 SM;
- b. from 3/8 SM to 2 SM, rounded to the nearest 1/8 SM (SM and fractions of SM shall be encoded with a space. Ex: 1 1/8 SM shall be reported in the METAR as 1 1/8SM);
- c. from 2 SM to 3 SM, rounded down to the nearest 1/4 SM;
- d. from 3 SM to 15 SM, rounded down to the nearest SM;
- e. beyond 15 SM, rounded down to the nearest 5 SM.

*Prevailing visibility, at automated stations, shall be reported as follows:

- a. less than 1/4 SM shall be reported as M1/4;
- b. between 1/4 SM and 2 SM, rounded down to the nearest 1/4 SM;
- c. between 2 SM and 3 SM, rounded down to the nearest 1/2 mile;
- d. between 3 SM and 10 SM, rounded down to the nearest SM.

OBSERVATIONS:

*The Following weather phenomena/qualifiers shall not be reported by automated stations: FC (funnel cloud), GR (hail), IC (ice crystals), SG (snow grains), DZ (drizzle), FU (smoke), VA (volcanic ash), SA (sand), SS (sandstorm), DS (duststorm), TS (thunderstorm), MI (shallow), BC (patches), DR (low drifting), BL (blowing), SH (showers), VC (in the vicinity), PO (dust devil).

*Appropriate intensity indicators shall be prefixed to significant weather, except for GR (hail) and BLSN (blowing snow).

*If more than one significant weather phenomenon is observed, entries shall be made in the following order: tornadic activity, thunderstorms, precipitation, and obscurations.

*A thunderstorm shall be regarded as having ceased 15 minutes after thunder was last heard.

*U.S. stations report FC (funnel cloud) as at the station.

*U.S. stations will use the proximity qualifier VC to indicate weather phenomena observed between 5 and 10 statute miles of the usual point of observation, but not at the station.

*For BR (mist) to be reported, the prevailing visibility shall be less than 7 SM but greater than or equal to 5/8 SM.

*The acronym CLR may be used when automated stations report no clouds below 12,000 feet.

*U.S. stations shall report the cumulative amount of clouds occurring at and below each level up to the first overcast layer. Clouds above 12,000 feet shall not be reported from automated stations.

*U.S. stations shall report the heights of the base of the cloud layers as follows:

- a. less than 5,000 feet, rounded down to the nearest 100 feet;
- b. from 5,000 feet to 10,000 feet, rounded down to the nearest 500 feet;
- c. above 10,000 feet, rounded down to the nearest 1,000 feet.