**ATM 209**

**METAR Remarks (appearing after RMK in a METAR report)**

KTLH 101153Z 13010KT 10SM -RA FEW015 BKN065 22/20 A2991 **RMK** AO2 RAB01 SLP128 P0000 60013 70018 T02170200 10217 20206 55004=

REVIEW:

**\* Sea-level pressure**

SLP###, where ### is the coded sea level pressure

**\* Temperature and dew point**

Tttttdddd, where tttt is the temperature out to the tenths digit, and dddd is the dew point. If the first digit is a 1, the number is negative.

**\* 3-hour pressure tendency**

5t###, where ### is the pressure tendency in tenths of millibars, and t denotes how the pressure has changed.

NEW:

**\* Hourly precipitation**

P####, where #### is the total amount of (liquid-equivalent) precipitation in the past hour, written out to the hundredths place.

Examples:

P0024 = 0.24” in last hour

P0161 = 1.61”

P0000 = Trace in last hour

**\* 3- and 6-hour precipitation**

If the observation is at 03Z, 09Z, 15Z, or 21Z, the 6-column gives 3-hour precipitation totals

If the observation is at 00Z, 06Z, 12Z, or 18Z, the 6-column gives 6-hour precipitation totals

6####

Examples:

15Z: 60003 = 0.03” in last three hours

18Z: 60018 = 0.18” in last six hours

**\* 24-hour precipitation**

Only given in the 12Z observation

7####

Example:

70201 = 2.01” in last 24 hours

**\* Snow depth on ground**

4/### where ### is the snow depth in inches

Example:

4/031 = Currently 31” of snow on the ground

**\* 6-hourly maximum temperature**

1####, where #### is the maximum temperature in the past six hours, written out to the tenths place. If the first # is a 1, the number is negative.

Examples:

10128 = 12.8°C is the highest temperature in the past six hours

11050 = -5.0°C is the highest temperature in the past six hours

**\* 6-hourly minimum temperature**

2####, same coding as maximum temperature

Examples:

20206 = 20.6°C is the minimum temperature in the past six hours

21144 = -14.4°C is the minimum temperature in the past six hours

**\* Peak Wind (PK WND):**

PK WND dddff/hhmm

ddd = direction

ff = peak speed (in knots) since last observation

hhmm = hour and minutes of peak gust

Example:

PK WND 33042/1932

Peak wind gust of 42 knots at 330°, occurred at 1932Z

**\* Wind Shift (WSHFT)**

WSHFT hhmm

Example:

WSHFT 1712 FROPA

Wind direction shift occurred at 1712Z due to a frontal passage

**\* Lightning**

{frequency} LTG{type} {location}

Frequency:

OCNL = Occasional

FRQ = Frequent

CONS = Continuous

Type:

IC = In cloud

CG = Cloud-to-ground

CC = Cloud-to-cloud

CA = Cloud-to-air

Location:

DSNT = Distant

OHD = Overhead

VC = Vicinity

ALQDS = All quadrants (in every direction!)

Examples:

OCNL LTGICCG OHD = Occasional lightning in cloud and cloud-to-ground overhead

CONS LTGCC DSNT W = Continuous lightning cloud-to-cloud distant west

**\* Beginning and ending of precipitation or thunderstorms**

B denotes the time the weather began

E denotes the time the weather ended

Examples:

RAB12 = Rain began 12 minutes after the hour

SNE33 = Snow ended 33 minutes after the hour

DZB08E25 = Drizzle began 8 minutes after the hour and ended 25 minutes after the hour

SNB01E20RAB15 = Snow began 1 minute after the hour and ended at 20 minutes after the hour. Rain began at 15 minutes after the hour and it is still raining.

TSB0957E40 = Thunderstorm began at 0957Z and ended 40 minutes after current hour

**\* Thunderstorm location**

TS {location} moving {direction of movement}

Examples:

TS SE MOV NE = Thunderstorm southeast of station, moving northeast

TS OHD MOV E = Thunderstorm overhead moving east

**\* Hailstone size**

GR {diameter in inches}

Example:

GR 1 3/4 = Hail 1 3/4 inches in diameter

**\* Virga**

VIRGA {location}

Example:

VIRGA W = Virga west of station

**\* Funnel cloud**

Example:

TORNADO B21 4NE

Tornado began 21 minutes after the hour, four miles northeast of station.

**\* Volcanic Eruption**

Example:

MT AUGUSTINE VOLCANO 70 MILES SW ERUPTED 231505 LARGE ASH CLOUD EXTENDING TO APRX 30000 FEET MOVING N

**\* Obscurations**

{Type of obscuration} {amount of obscuration} {height of obscuration}

Examples:

FG BKN000 = Broken fog at surface

FU SCT020 = Scattered smoke at 2,000 feet

**\* Significant cloud types**

{Cloud type} {location} {direction of movement}

Cloud types:

CB = Cumulonimbus

CBMAM = Cumulonimbus mammatus

TCU = Towering cumulus

ACC = Altocumulus castellanus

Examples:

CB SW MOV E = Cumulonimbus southwest of station moving east

TCU ALQDS = Towering cumulus all quadrants

**\* Rapid pressure changes**

Examples:

PRESRR = Pressure rising rapidly

PRESFR = Pressure falling rapidly

**\* Snow Increase**

SNINCR {inches in the last hour / inches on ground}

Example:

SNINCR 2/10 = two inches of snow in the last hour, with ten inches on the ground

\*\*\*A final note on METAR reports:

In the United States, hourly METARs are reported *slightly* before the hour. As an example, the 12Z observation is often reported several minutes before 12Z, at approximately 1153Z.

In Albany, NY (KALB), the hourly observations are reported at :51, so that a 00Z observation is actually at 2351Z, or 23:51 UTC. In Buffalo, NY (KBUF), the hourly observations are reported at :54, so that the 8Z observation is actually 0754Z, or 07:54 UTC.