METAR Reports

Fall 2015
METAR Reports

- Meteorological Airways Reports

- Became primary method for coded surface data on July 1, 1996.
  SAO's (Surface Airway Observation's) were used prior.

- METAR's are used to create surface plots.
  - Page 11 in Course Notes.
METAR Example

- KAMW 131453Z AUTO 14006KT 4SM -RA BR SCT021 BKN033 21/19 A3016 RMK AO2 RAB42 SLP204 P0000 6/// T02110189 TSNO=

- 3W's: Where, When, Wind
- Where? KAMW
- When? 13th day of month, 14:53Z
- Wind? From 140 degrees @ 6kts.
- Three digit direction to nearest ten degrees, two digit speed.
4SM?
- 4 statue mile visibility.
- Statue mile: a standard land mile (5,280 ft)
  - Nautical mile: length corresponding to one minute of arc (6,076 ft) – Arc length.

-RA BR?
- Weather types: light rain, mist

SCT021 BKN033?
- Cloud Cover in 100's of feet
  - SCT021: Scattered clouds (3-4 octas) @ 2100ft
  - BKN033: Broken clouds @ 3300ft

21/19?
- T = 21 °C, Td = 19 °C.
• **A3016?**
  – Altimeter reading: 30.16 inches of mercury

• **AO2?**
  – Automated station with precipitation discriminator.

• **RAB42?**
  – Rain began at 42 minutes after the hour.

• **SLP204?**
  – Sea Level Pressure

• **P0000?**
  – Precipitation in the last hour, in 1/100 of an inch.
  – 0000 means a trace.
• 6/////?
  – For hours divisible by 6 (00Z, 06Z, 12Z, 18Z), six hour in 1/100 of an inch.
  – For other hours (03Z, 09Z, 15Z, 21Z), three hour

• T02110189?
  – More accurate temperature and dew point (1/10 of a degree).
  – T = 21.1 °C, Td = 18.9 °C
  – Note: a one in the zero spot indicates a negative temp.

• TSNO?
  – Not Thundersnow? That would be TSSN earlier in the METAR.
  – Thunderstorm information not available.
Other Important Groups

- **10211?**
  - Maximum temperature in last 6 hours: 21.1 °C

- **20176?**
  - Minimum temperature in last 6 hours: 17.6 °C

- **53010?**
  - Pressure tendency in past three hours.
  - First digit gives trend, last three pressure change 1/10 of a mb.

- **70122?**
  - Reported at 12Z, 24-hour rainfall in 1/100 of an inch.

- **400461006?**
  - 24-hour maximum and minimum temperatures. Reported at 06Z.
  - Tmax = 4.6 °C, Tmin = -0.6 °C. (1 in 0 spot means -)
METAR Pressure Tendencies

(Also found on Page 20 of your Course Notes)

0 - rising then falling; net pressure rise
1 - rising then steady
2 - rising consistently
3 - falling or steady, then rising; net pressure rise
4 - no pressure change
5 - falling or steady then rising; net pressure fall
6 - falling then steady
7 - falling consistently
8 - rising or steady, then falling; net pressure fall