

Aviation Weather – Part 3

METARs and TAFs

1. Are the wind directions given in a METAR based on true or magnetic bearings? What other weather information sources use the same basis?
2. Are the wind directions given in an AWOS broadcast based on true or magnetic bearings? What other weather information sources use the same basis?
3. You have consulted the Surface and Low Level Prog Charts (see Weather – Part 2) and have decided to look further into a flight from New Braunfels (KBAZ) to Robert S Kerr (KRKR) to take your friends back home to their place near the Quachita National Forrest. You plan to depart at about 5 pm local time (Central Daylight Time – UTC -5 hrs) for an estimated 3 ½ hour flight. You're adding a half-hour of extra flight time to avoid controlled airspace and to do a little sight-seeing along the way, which is why you have chosen a VFR flight with a cruising altitude of 3500 ft. and the liberty to go lower pretty much anytime since the MEF is around 1500 feet for most of the trip. Decode the current New Braunfels METAR -

KBAZ 152051Z AUTO 22005KT 10SM CLR 34/19 A2984 RMK AO2 SLP094 T03440194

4. Just before departure you get the Austin-Bergstrom METAR and TAF and some additional terminal area forecasts along your route. Decode the Austin METAR -

KAUS 152153Z 18004KT 10SM FEW060 SCT100 SCT200 35/19 A2981 RMK AO2 SLP081 T03500194

5. You are delayed by a bit but expect to be off the ground a little before 5:30 PM CDT (2230 Z). You want to review the additional weather information before you depart. The current terminal area forecast (TAF) for KAUS is as follows:

KAUS 151730Z 1518/1624 21012KT P6SM SCT030 BKN120
FM160100 20010KT P6SM VCTS BKN050CB
TEMPO 1603/1606 5SM -TSRA BKN050CB
FM160600 35015KT P6SM VCTS OVC040CB
FM161500 35015KT P6SM BKN040

- a. For what time period is the TAF valid?
- b. Do you expect any significant weather based on your planned route, passing west of KAUS over the city of Austin at about 6:00 PM CDT (2300 Z)? If so, what weather might you encounter?
- c. What conditions are forecast for local time between 10 PM and 1 AM (the 16th)?

6. You expect to do a bit of slow-flying for sightseeing over Austin so you will be getting to the Waco area about 7 PM CDT (2400 Z) based on your expected departure time from KBAZ of 5:30 PM CDT.

- a. Based on the KACT TAF what weather might you encounter at that time?

KACT 152050Z 1521/1618 22009KT P6SM SCT050 BKN080
FM160300 29012KT P6SM VCTS BKN050CB
FM160400 32008KT P6SM BKN035 BKN100
FM161200 35014KT P6SM SCT250

- b. When is the earliest that you might expect to encounter significant weather in the area surrounding KACT? What weather is forecast for this earliest time of significant weather? How far (range of distance) from KACT would this be expected to occur?
- c. What is the visibility expected for the forecast period?

7. A small jog to the east to check out the Cedar Creek reservoir and to avoid the temporary flight restriction (TFR) for a VIP north of Waco and around the Dallas area, so you expect to fly adjacent to the Dallas area between 7:30 and 8:30 PM CDT (0030 – 0130 Z). The TAF for Dallas Love Field is:

KDAL 152217Z 1522/1618 22010KT P6SM SCT050 BKN100
FM160030 30013KT P6SM VCTS SCT050CB BKN100
FM160300 35015G25KT P6SM SCT025 BKN035
FM160600 36015KT P6SM SCT250

- a. What weather conditions are forecast for the time you expect to first arrive in the Dallas area?
- b. How long are these conditions expected to last and what conditions will prevail once the conditions you will encounter on arriving into the area change to the next forecast period?

8. You have already made your decision about this trip (you have, haven't you?) so you take a look at the Fort Smith forecast – KFSM is 23 NM north-northeast of your destination, KRKR and your ETA is 9:30 PM CDT (0230 Z). What is the forecast for your expected arrival time?

KFSM 152130Z 1522/1618 06005KT P6SM OVC060
FM152300 36008KT P6SM VCTS OVC035CB
FM160200 35013G21KT P6SM BKN025
FM160500 33010KT P6SM SKC
FM160200 35013G21KT P6SM BKN025

9. So – did you decide to make this trip?