

## A Flight Near Thunderstorms

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“No convective weather forecast along your route.”

These are the words we all want to hear from a flight service briefer just before embarking on a flight. During the spring thunderstorm season it can be challenging to find destinations that meet distance requirements and have good weather along the entire route of flight. So when an open weather window shows itself, we jump on the opportunity. Sometimes with too much confidence...

For example, take a dual cross-country flight a Stage IV Advanced student and I recently *attempted*. Stage IV Lesson 16: a 3.0 dual night cross-country flight, with a landing point greater than 100 nm away. We had finally matched both of our schedules to make the flight and were to meet at 2000 local time. Earlier in the day however, several weather products showed no promise in being able to make the flight. All signs pointed to convective weather moving into the area around, you guessed it, 0100Z. Accustomed to Oklahoma weather, we kept an optimistic eye to the sky all day, communicating back and forth with each new release of any insight to the evening's forecast. We had come to the conclusion the weather would not permit the flight, but decided to hold off until the 0000Z TAF was released to make a go/no-go decision. To our surprise the TAF had dropped *all* signs of convective activity that had been forecasted all day! A peaceful uneventful evening was all that was called for, but we would still wait and see what the FSS briefer had to say.

I met the student at the airport at 2000 local time to go over flight planning, and of course the weather. My thorough student had no less than a full weather briefing from the FSS. Again, it mirrored the TAF's, stating that no convection would move into the area along our route, as a 'pressure cap' had kept the lid on everything. With the plane checked out and ready to go, we both got the feeling we wanted even more up-to-date weather information, as his briefing was now forty minutes old. So we requested an abbreviated briefing only to hear the same thing, “no convective weather forecasted along your route.” TAF's look good, radar only has a couple of cells in central Kansas, let go!

As we taxied to runway 17 we got a good look at the northern sky. Our flight would take us northeast to KTQH, so we strained our eyes for any last visual signs of imposing weather. “Was, that...” my student murmurs. I respond “yes, that was lightning, but it's as far as I can see North, and was only one flash, probably the cell in central Kansas, nowhere near our flight path.” Cleared for takeoff.

By the time we turned east and completed the climb checklist, we were seeing a few more flashes of lightning. We flew on for about 15 minutes. Now the bursts of lightning were illuminating large cumulus clouds that were spreading toward our destination. We knew we were not going to make it to KTQH, but we were both feeling the need to complete the flight. Who knew when we'd get another chance of our schedules matching up? So we

rationalized: Since the cells are localized to the northeast, and the student needed to practice a diversion anyway, let's divert to the southern part of Oklahoma. This will take us away from any potential development, and we'll complete the lesson's objectives safely.

After only ten minutes of heading south we looked behind us. To our chagrin, a massive wall of lightning stretching from Tulsa to just north of Edmond has intensified at an alarming rate. Each bolt of lightning illuminated a new, hidden giant, a menacing cumulus cloud with a taste for light aircraft. At this point, our concern over completing the flight's objectives shifted to returning to OUN safely. We decided to discontinue the flight. This is when my student did exactly what we hope to see out of all our students. Without a prompt from me he followed his training and keyed the mic:

**Crimson 12:** "Ft. Worth Center, Crimson 12 would like to switch over to Flight Watch for an update on the weather."

**Fort Worth Center:** "Approved as requested, report when back on my frequency."

**Crimson 12:** "Flight Watch, Crimson 12, Ada VOR."

**Flight Watch:** "Crimson 12, McAlester Flight Watch, go ahead."

**Crimson 12:** "We would just like to get an update on the radar for Crimson 12."

**Flight Watch:** "Crimson 12 let me pull that up... Crimson 12, suggest you turn back towards Norman immediately!"

**Crimson 12:** "Already on our way, can you tell us if we are going to beat the storms there, or should we think about landing before Norman?"

**Flight Watch:** "It appears you should make it back from Ada before they reach OKC."

This was relieving news and I was impressed with my student. We continued back to Norman with one of the most intense lightning shows I've seen from the air headed right towards us. Along the 20 min leg we continued to get updates from Ft. Worth Center and then OKC Approach on the storms' distance from us, as we all know we want to remain a good 20 miles from thunderstorm activity. Fingers crossed, we looked good as we got closer to Norman. Finally back on the ground safely!

Ground Track of the flight:

<http://flightaware.com/live/flight/OUA12/history/20100407/0148Z/KOUN/KOUN>

During our debrief, we talked about the take away lessons from the flight. A major lesson is that even FSS briefers can get the weather wrong. This is a good thing to keep in mind, because all too often we get a false sense of security from an optimistic briefing. Another lesson is remembering to use all available resources during a flight, especially when dealing with convective weather. Just because we don't have onboard radar doesn't mean we can't

get continual updates of a storm's location, movement, and development from either EFAS (Flight Watch), FSS, or even ATC. So on your next cross-country flight, you owe it to yourself to practice contacting Flight Watch for an update on the weather, even if it's a perfect day. Heck, you could even do it on your next local practice area flight. Get an update on the winds aloft to better conduct your maneuvers. In fact, go ahead and file a PIREP while you're at it. When contacting Flight Watch on 122.0 you don't have to know which Flight Watch to call. Just say "Flight Watch," followed by your position in reference to a VOR and the nearest Flight Watch facility will answer. If you are not familiar or comfortable with the procedure, have your instructor show you how.

Finally, you are the PIC. Don't let external/internal pressures of completing a flight, getting to your destination, or whatever else get in the way of how you feel about a flight. Never be afraid of turning back, or making a no-go decision. Err on the side of caution. It's all about your comfort level and personal minimums. If it doesn't feel right to you get back on the ground. The worst consequence is you have to reschedule. Just remember the old saying, "It's much better to be on the ground wishing you were up in the air, than up in the air wishing you were on the ground."

**Be safe, keep a weather eye to the sky, and fly and control like a champion today!**