



Case Study: January 31, 2008

A line of thunderstorms moved across southeast Texas early in the morning ahead of a strong cold front. A Tornado Watch was issued for the area at 5:50 AM. No tornadoes were reported. There were a few reports of large hail in Montgomery and Hardin counties. A tree was also knocked down by strong winds near Alvin.

In the weathercasts that aired the day before these storms, ABC13 meteorologists used exclusive FutureTrack computer model data to illustrate when and where the stronger storms would develop. Below is a comparison of the forecast maps shown during the 10 PM news the night before, and the actual satellite/radar images of the storms.



Image One: Rainfall coverage and intensity was forecast fairly well by FutureTrack. The storms in east Texas are not quite as strong as forecast and the line of activity developing ahead of the cold front is about 50 miles farther west than forecast.

(There is a notable difference in the resolution between the FutureTrack model and the observed radar data. FutureTrack uses a 12km grid. This means there are 12 kilometers between data points which accounts for the large contours. Radar data is high resolution so the individual cells are more discreet.)



Image Two: This comparison shows the forecast and actual location of the storms at 7:00 AM. Again, FutureTrack showed a wider area of precipitation than actually developed and the storms were more intense than forecast.



Image Three: The position of the storms is almost identical to what was forecast by FutureTrack. The clearing line behind the storms is perfectly timed along the entire line of activity. The storms are a bit more intense than forecast (more reds in the actual radar data), but that could be attributed to a difference in the resolution between the two

data types.



Image Four: Again the position and the coverage of the storms was well forecast by FutureTrack.

Conclusions: The thunderstorms along this cold front did not develop until the boundary reached central Texas, just northwest of Brenham and College Station. This is different

and more difficult for computer modeling to simulate than those storms systems that form well west of the area and simply move across the state. The initial storms developed farther west than forecast, but once the squall line developed the timing verified perfectly. The intensity was under-forecast by FutureTrack throughout the whole event. This is something that will need to be monitored.

The FutureTrack computer model is exclusive to ABC13. It is the only forecast model focused on southeast Texas. Since the computer is housed locally at ABC13, we have the ability to adjust the model parameters based on past performance. Honest analysis, such as this, is intended to help us improve the forecast you rely on.

Posted by Tim Heller on January 31, 2008 in [Case Studies](#) | [Permalink](#)