Meteorological Decision Matrix

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Comparing decisions made by the NWS to what actually occurred related to issuing a tornado warning.

Decisions --> What Actually Occurred?	**Decision is made that there is a tornado and a warning is issued by the National Weather Service.**	***D*ecision is make that there is not a tornado and no warning is issued by the National Weather Service.**
There actually is a tornado.	**OK**	***False Negative***
There actually is not a tornado.	**False Positive**	**OK**

This matrix could be used to determine how successful the data (TDS: Tornadic Debris Signature) are in predicting tornadoes. In this matrix a perfect correlation (+1.00) is the goal in which decisions and what actually occurs matches exactly every time.

The correlation will decrease if either false positives (+) or false negatives (-) are present. False negatives are significantly worse than false positives because of an uninformed public; however, false positives could lead to a lack of trust in the public with the decision making of the NWS which could be equally as devastating over time.

It would be interesting to match the thresholds, trigger points within the TDS, such as ZDR, CC, KDP, and compare those with each of the quadrants to see what are the significant differences or key indicators.

For example, what is significantly different in the data between the two OK quadrants and the False Positive or False Negative quadrants when it comes to the NWS decision making process in issuing a warning? (Fiene, 8/13/22).