DAES Forecast Contest Rules

…ALB (48-hour) Forecast Contest…

Forecasting

A forecast will comprise of a ***temperature***, ***probability of precipitation (POP)***, and ***precipitation category (PCAT)*** entry for the four 12-hour periods starting at the 0Z on the following day. The temperature entry will be either a minimum or maximum temperature achieved during the 12-hour period (minimum for 00Z-12Z, maximum for 12Z-00Z). The probability of precipitation will be the probability assigned to the chance of measurable (.01") precipitation reading during the 12-hour period. The precipitation category will be the estimate of actual precipitation measured during the 12-hour period. All entries are required for a forecast and will be scored as such.

Submitting an Entry

An entry must be submitted by 4:45 PM Eastern time (regardless of DST) on the day of forecasting. However, an entry can only be submitted on the forecast day (after midnight).

Verifications

Verifications will be obtained from the ASOS station at Albany International Airport (KALB). A trace of precipitation measurement verifies a PCAT of 0 and 1.

Scoring

Scores are first determined by totaling error points. Error point totals are used for the Forecaster of the Week scoring (but this requires 100% participation for the entire week). Temperature scores are determined based on the absolute deviation from the verified number. Probability of Precipitation (POP) scores are determined based on the square of the deviation from the verified number. A verified number here can only be a 0 (No >=.01") or a 10 (>=.01"). Thus. a POP of 3 for a verified 10 will result in 7^2, or 49 error points. Precipitation Category (PCAT) scores are determined by the deviation from the verified number. Note that trace verifications will yield no error points on PCAT forecasts of 0 and 1. However, for calculation purposes, a PCAT >= 2 on a trace verification will treat the trace verification P-Cat as 1. Note that PCAT entries are counted based on the number of >=.01" verifications. Thus, PCAT entries will not matter when the verified PCAT is exactly 0.

Scores are then determined in a series of combinations based on the scoring page and opponent displayed. Official scores are generated using CONSENSUS as the opponent, but one can select CLIMATOLOGY, a model, or contest administrator Ross Lazear as the "opponent" as well. Regardless of the page sought, scores are first determined by calculating a percentage score for each game by period (All Game scores). The score is simply (Opponent Error Points – Your Error Points) / Opponent Error Points. The score is then multiplied by 100 for display. Once the All Game scores are prepared, there are combinations based on whether the user wants Scores by Game or Scores by Period. Scores by Game combine scores across the periods to result in an overall Temp, PoP, and P-Cat scores. The combination process in this case is:

Num Entries = P1 Entries + P2 Entries + P3 Entries + P4 Entries Score = [(P1 Score * P1 Entries) + .. + (P4 Score * P4 Entries)] / Num Entries
* Note that PCAT Entry counts WILL differ.

Scores by Period perform the Overall combination for each period (see below).

Overall Scores will combine scores across the three variables. First, a precipitation score will be calculated (this is never shown but is actually calculated internally) and then it will be weighted equally against the temperature score.

Precip Score = [(POP Score * POP Entries) + (PCAT Score * PCAT Entries)] / (POP Entries + PCAT Entries)

Final Score = [(Temp Score * Temp Entries) + (Precip Score * POP Entries)] / (Temp Entries + POP Entries)

…EXT (3-5 day) Forecast Contest…

Forecasting

A forecast will comprise of a probably forecast for the deviation of temperature and precipitation from climatology for the 3-5 day period (if the forecast is made on Monday, the verification period is Thursday through Saturday). The probability forecast consists of a below, normal, and above probability assignments that must total 10.

Submitting an Entry

An entry must be submitted by 4:45 PM Eastern time (regardless of DST) on the day of forecasting. However, an entry can only be submitted on the forecast day (after midnight).

Verifications will be obtained from the Daily Climo Reports issued by the Albany NWS Weather Forecasting Office for Albany, NY. One verification will consist of three Climo Reports. The temperature verification will be the average of the three high and low temperatures. The precipitation verification will be the sum of the three precipitation measurements over the three-day period. The numerical verification is then converted to a climo deviation verification of Below, Normal, or Above based on the climatology registered for the three days of the forecast, which can be viewed on the forecast entry page.

Scoring

Scores are first determined by error points and will be calculated differently based on the verification. Here are the calculations:

Verification of "below average": $\text{Error Points} = \text{Above}^2 + (\text{Normal}+\text{Above})^2$

Verification of "normal": $\text{Error Points} = \text{Below}^2 + \text{Above}^2$

Verification of "above average": $\text{Error Points} = (\text{Below}+\text{Normal})^2 + \text{Below}^2$

Scores are determined for both Temperature and Precipitation. The score is simply (Opponent Error Points – Your Error Points) / Opponent Error Points, where the official scoring uses CONSENSUS as the opponent. Note that the score is multiplied by 100 for display. Once the scores are calculated, they are easily combined to create an overall score.

…National Thunderstorm Forecast Contest…

Forecasting

A forecast will comprise of a probability of thunder forecast for ten cities:

Albany, New York (KALB); Greensboro, North Carolina (KGSO); Nashville, Tennessee (KBNA); Tampa, Florida (KTPA); Oklahoma City, Oklahoma (KOKC); Omaha, Nebraska (KOMA); Springfield, Illinois (KSPI); Bismarck, North Dakota (KBIS); Denver, Colorado (KDEN); Salt Lake City, Utah (KSLC)

Probability is entered as an integer from 0-10, where 0 represents a 0% chance of thunder (TS), 1 a 10% chance, etc. The forecast period is from the 18Z ASOS reading right after the forecast entry deadline to the next 18Z ASOS reading (one full day). Note that the ASOS 18Z time differs from city to city and is generally approximately seven minutes before actual 18Z. This means that it is NOT exactly 18Z to 18Z, rather it could be 1753Z to 1753Z.

Submitting an Entry

An entry must be submitted by 17:45Z. Since the contest occurs in the summer, DST is a non-factor and the local deadline will be 1:45 PM. However, an entry can only be submitted on the forecast day (after midnight).

Verifications

Verifications will be obtained from the local ASOS readings for each city. For a verification of thunder, TS must exist in a **present weather** field in any METAR issued by the ASOS station or TSB/E in the RMK section of the METAR. Of course, the TS report must exist within the time bounds specified above. Any other TS reading is considered distant thunder and does not verify thunder for the city. If a TS reading occurs fifteen minutes prior to the 18Z METAR (and *beginning* of a forecast period) for a given city, a Gift-10 thunder verification occurs. A Gift-10 verification treats every entry as a 10 so no error points are issued for the city forecast.

Scoring

Scores are first determined by error points. Probability of Thunder scores are determined based on the square of the deviation from the verified number. A verified number here can only be a 0 (No TS) or a 10 (TS). Thus a PoT of 3 for a verified 10 will result in 7^2, 49 error points.

Your overall score is simply (Opponent [consensus] Error Points – Your Error Points) / Opponent [consensus] Error Points. Both your error points and your opponent's (consensus, climatology, etc.) add up throughout the duration of the contest. Note that the highest score you can possibly achieve for a given forecast day is 1, and the score is multiplied by 100 for display. You can also view the scores broken down by forecast city, to determine which forecasters are best at each of the ten cities.