

Interpretation of Output – Grid and Point Stat

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They may look the same, but . . .

- Output from **point and grid stat** represents an accumulation over an area for a *single forecast time*.
- Output from **stat analysis tool** represents an accumulation over an area for *several forecast times*.

Point and Grid Stat Output Lines

- CTC - Contingency Table Counts
- CTS - Contingency Table Statistics
- CNT - Continuous Statistics
- FHO - Forecast, Hit, Observation Rates
- SL1L2 - Scalar L1L2 Partial Sums
- SAL1L2 - Scalar Anomaly L1L2 Partial Sums when climatological data is supplied
- VL1L2 - Vector L1L2 Partial Sums
- VAL1L2 - Vector Anomaly L1L2 Partial Sums when climatological data is supplied
- MPR - Matched Pair data

Available in the newest release MET 2.0, line types for probability forecasts.

Point and Grid stat output example

Header Line:

- TOTAL BASER BASER_NCL BASER_NCU BASER_BCL BASER_BCU FMEAN
FMEAN_NCL FMEAN_NCU FMEAN_BCL FMEAN_BCU ACC ACC_NCL ACC_NCU
ACC_BCL ACC_BCU FBIAS FBIAS_BCL FBIAS_BCU PODY PODY_NCL PODY_NCU
PODY_BCL PODY_BCU PODN PODN_NCL PODN_NCU PODN_BCL PODN_BCU
POFD POFD_NCL POFD_NCU POFD_BCL POFD_BCU FAR FAR_NCL FAR_NCU
FAR_BCL FAR_BCU CSI CSI_NCL CSI_NCU CSI_BCL CSI_BCU GSS GSS_BCL
GSS_BCU HK HK_NCL HK_NCU HK_BCL HK_BCU HSS HSS_BCL HSS_BCU ODDS
ODDS_NCL ODDS_NCU ODDS_BCL ODDS_BCU

Data Line:

- CTS 5 1.00000 0.56552 1.00000 NA NA 0.40000 0.11762 0.76928 NA
NA 0.40000 0.11762 0.76928 NA NA 0.40000 NA NA 0.40000 0.11762
0.76928 NA NA NA NA NA NA NA NA NA NA NA
NA 0.00000 0.00000 0.43448 NA NA 0.40000 0.11762 0.76928 NA NA 0.00000
NA NA NA NA NA NA NA 0.00000 NA NA NA NA NA NA
NA

See Appendix C of MET documentation for equations and details

- TOTAL – Count of total pairs included in the stats for this line
- BASER – base rate (e.g. sample climatological rate of event)
- FMEAN – mean of forecast values
- ACC – accuracy
- FBIAS – frequency bias
- PODY – probability of detection (events)
- PODN – probability of detection (non-events)
- POFD – probability of false detection
- FAR – False Alarm Ratio
- CSI – Critical success index
- GSS – Gilbert Skill Score
- HK – Hanssen-Kuipers Discriminant
- HSS – Heidke Skill Score
- ODDS – Odds Ratio
- Etc., etc., etc. . .

Confidence Intervals for some measures are included with the following suffixes:

_NCL = Normal Confidence Lower

_NCU = Normal Confidence Upper

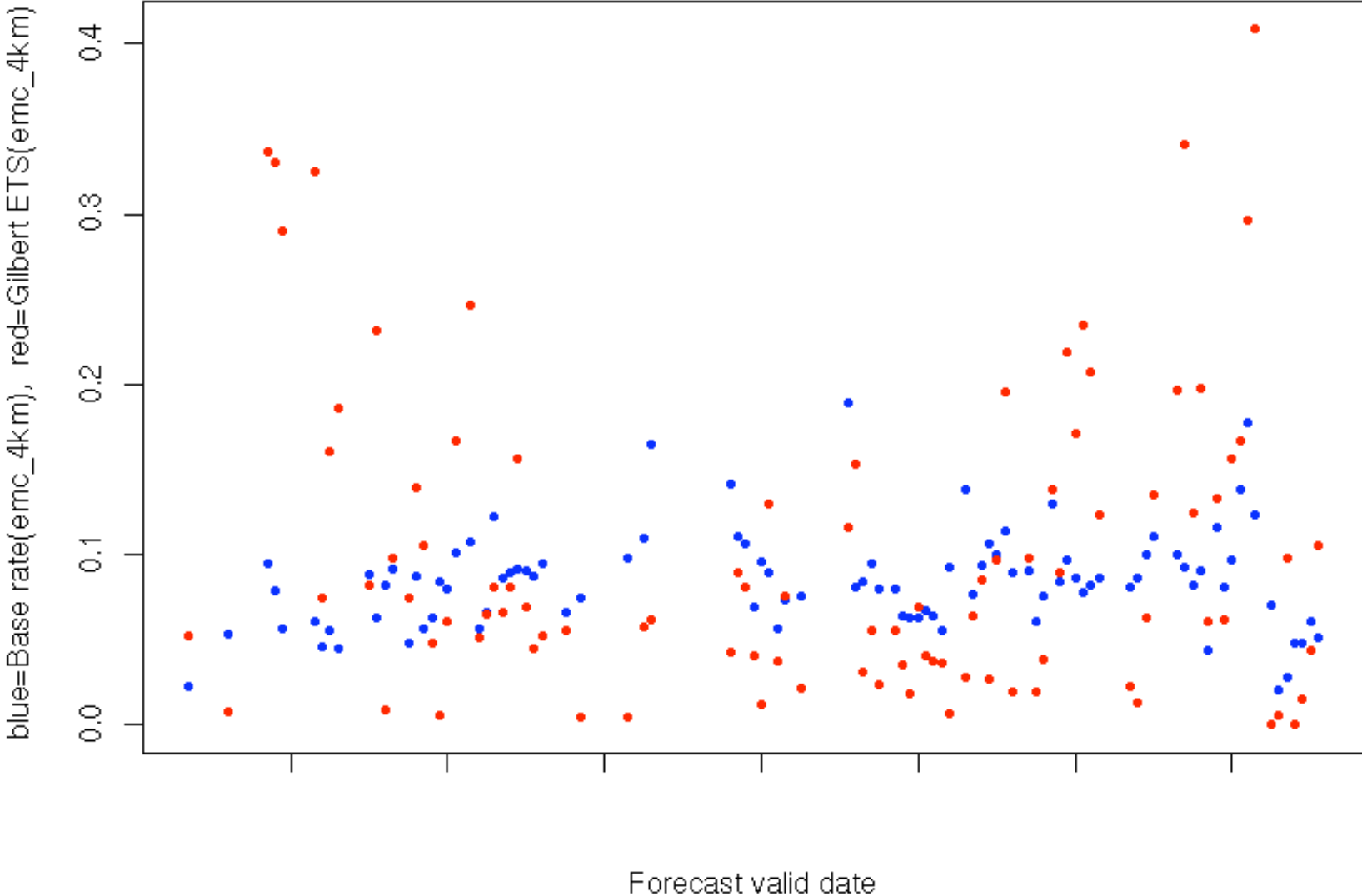
_BCL = Bootstrap Confidence Lower

_BCU = Bootstrap Confidence Upper

Example of Appendix C info

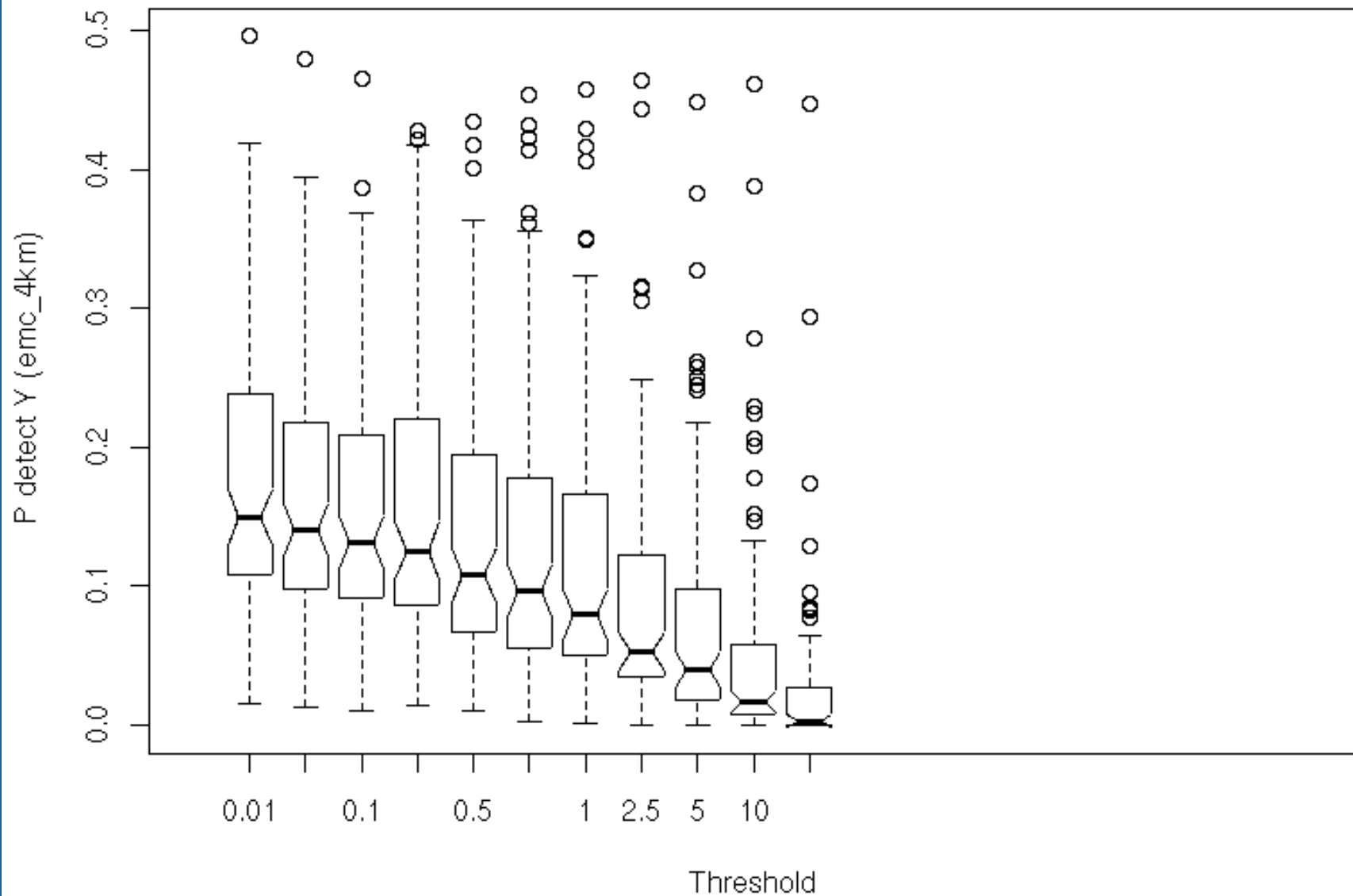
- Accuracy - for a 2x2 contingency table is defined as $\frac{n_{11} + n_{00}}{T}$
- That is, it is the proportion of forecasts that were either hits or correct rejections – the fraction that were correct.
- Accuracy ranges from 0 to 1; a perfect forecast would have an accuracy value of 1.
- Accuracy should be used with caution, especially for rare events, because it can be strongly influenced by large values of n_{00} .

Example Scatter Plot



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Example Box Plot



Customizing



- You have several options for customizing the output of point stat, grid stat, and the stat analysis tool.
- Now **Randy Bullock** will show you some examples . . .