Continuous statistics

Long name	METplus name	Tools
Along track error (nm)	ALTK_ERR	TC-Pairs TC-Stat
Anomaly Correlation including mean error,	ANOM_CORR	,Point-Stat Grid-Stat Series-Analysis Stat-Analysis
Uncentered Anomaly Correlation excluding mean error	ANOM_CORR_UNCNTR	Point-Stat Grid-Stat Series-Analysis Stat-Analysis
Bias-corrected mean squared error,	BCMSE	,Point-Stat Grid-Stat Ensemble-Stat
Climatological mean value	CLIMO_MEAN	Point-Stat Grid-Stat Ensemble-Stat
Climatological standard deviation value	CLIMO_STDEV	Point-Stat Grid-Stat Ensemble-Stat
Cross track error (nm)	CRTK_ERR	TC-Pairs TC-Stat
Absolute value of DIR_ERR (see below)	DIR_ABSERR	Point-Stat Grid-Stat

Continuous statistics (cont)

Signed angle between the directions of the average forecast and observed wind vectors	DIR_ERR	Point-Stat Grid-Stat
Mean of absolute value of forecast minus observed gradients	EGBAR	Grid-Stat
Standard deviation of the error	ESTDEV	Point-Stat Grid-Stat Ensemble-Stat
Mean forecast wind speed	F_SPEED_BAR	Point-Stat Grid-Stat
Mean Forecast Anomaly	FABAR	Point-Stat Grid-Stat
Length (speed) of the average forecast wind vector	FBAR_SPEED	Point-Stat Grid-Stat
Fractions Brier Score	FBS	Grid-Stat
Direction of the average forecast wind vector	FDIR	,Point-Stat Grid-Stat

Continuous statistics (cont)

Mean Forecast Anomaly Squared	FFABAR	Point-Stat Grid-Stat
Average of forecast squared	FFBAR	Ensemble-Stat Point-Stat Grid-Stat
Forecast mean	FMEAN	MODE Grid-Stat Point-Stat
Average product of forecast--climo and observation--climo / Mean(f-c)*(o-c)	FOABAR	Point-Stat Grid-Stat
Average product of forecast and observation / Mean(f*o)	FOBAR	Ensemble-Stat Point-Stat Grid-Stat
Number of tied forecast ranks used in computing Kendall's tau statistic	FRANK_TIES	Point-Stat Grid-Stat
Root mean square forecast wind speed	FS_RMS	Point-Stat Grid-Stat

Continuous statistics (cont)		
Standard deviation of the error	FSTDEV	Ensemble-Stat Point-Stat Grid-Stat
Interquartile Range	IQR	Point-Stat Grid-Stat
Kendall's tau statistic	KT_CORR	Point-Stat Grid-Stat
The Median Absolute Deviation	MAD	Point-Stat Grid-Stat
Mean absolute error	MAE	Point-Stat Grid-Stat
Magnitude & Multiplicative bias	MBIAS	Ensemble-Stat Point-Stat Grid-Stat
The Mean Error	ME	Ensemble-Stat Point-Stat Grid-Stat
The Mean Error of the PERTURBED ensemble mean	ME_OERR	Ensemble-Stat
The square of the mean error (bias)	ME2	Point-Stat Grid-Stat
Mean squared error	MSE	Ensemble-Stat Wavelet-Stat Point-Stat Grid-Stat

Continuous statistics (cont)		
The mean squared error skill	MSESS	Point-Stat Grid-Stat
Mean squared length of the vector difference between the forecast and observed winds	MSVE	Point-Stat Grid-Stat
Mean observed wind speed	O_SPEED_BAR	Point-Stat Grid-Stat
Mean Observation Anomaly	OABAR	Point-Stat Grid-Stat
Average observed value	OBAR	Ensemble-Stat Point-Stat Grid-Stat
Length (speed) of the average observed wind vector	OBAR_SPEED	Point-Stat Grid-Stat
Direction of the average observed wind vector	ODIR	Point-Stat Grid-Stat
Mean Squared Observation Anomaly	OOABAR	Point-Stat Grid-Stat
Average of observation squared	OOBAR	Ensemble-Stat Point-Stat Grid-Stat

Continuous statistics (cont)		
Number of tied observation ranks used in computing Kendall's tau statistic	ORANK_TIES	Point-Stat Grid-Stat
Root mean square observed wind speed	OS_RMS	Point-Stat Grid-Stat
Standard deviation of observations	OSTDEV	Ensemble-Stat Point-Stat Grid-Stat
Pearson correlation coefficient	PR_CORR	Ensemble-Stat Point-Stat Grid-Stat
Number of ranks used in computing Kendall's tau statistic	RANKS	Point-Stat Grid-Stat
Root mean squared error	RMSE	Point-Stat Grid-Stat Ensemble-Stat
Root Mean Square Error of the PERTURBED ensemble mean	RMSE_OERR	Ensemble-Stat

Continuous statistics (cont)		
Root mean squared forecast anomaly	RMSFA	Point-Stat Grid-Stat
Root mean squared observation anomaly	RMSOA	Point-Stat Grid-Stat
Square root of MSVE	RMSVE	Point-Stat Grid-Stat
S1 score	S1	Grid-Stat
S1 score with respect to observed gradient	S1_OG	Grid-Stat
Scatter Index	SI	Point-Stat Grid-Stat
Spearman's rank correlation coefficient	SP_CORR	Point-Stat Grid-Stat
Absolute value of SPEED_ERR	SPEED _ABSERR	Point-Stat Grid-Stat
Difference between the length of the average forecast wind vector and the average observed wind vector (in the sense F - O),	SPEED_ERR	Point-Stat Grid-Stat

Continuous statistics (cont)		
Track error of adeck relative to bdeck (nm)	TK_ERR	TC-Pairs
Mean U-component Forecast Anomaly	UFABAR	Point-Stat Grid-Stat
Mean U-component	UFBAR	Point-Stat Grid-Stat
Mean U-component Observation Anomaly	UOABAR	Point-Stat Grid-Stat
Mean U-component Observation	UOBAR	Point-Stat Grid-Stat
Mean U-component Squared Forecast Anomaly plus Squared Observation Anomaly	UVFFABAR	Point-Stat Grid-Stat
Mean U-component Squared Forecast plus Squared Observation	UVFFBAR	,Point-Stat Grid-Stat
Mean((uf-uc)*(uo-uc)+ (vf-vc)*(vo-vc))	UVFOABAR	Point-Stat Grid-Stat
Mean(uf*uo+vf*vo)	UVFOBAR	Point-Stat Grid-Stat

Continuous statistics (cont)		
Mean((uo-uc)²+(-vo-vc)²)	UVOOABAR	Point-Stat Grid-Stat
Mean(uo²+vo²)	UVOOBAR	Point-Stat Grid-Stat
Direction of the vector difference between the average forecast and average wind vectors	VDIFF_DIR	Point-Stat Grid-Stat
Length (speed) of the vector difference between the average forecast and average observed wind vectors	VDIFF_-SPEED	Point-Stat Grid-Stat
Mean(vf-vc)	VFABAR	Point-Stat Grid-Stat
Mean(vf)	VFBAR	Point-Stat Grid-Stat
Mean(vo-vc)	VOABAR	Point-Stat Grid-Stat
Mean(vo)	VOBAR	Point-Stat Grid-Stat

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Distance statistics

Long name	METplus name	Tools
Baddeleys Delta Metric	BADDELEY	Grid-Stat
Mean-error Distance from observation to forecast	MED_FO	Grid-Stat
Maximum of MED_FO and MED_OF	MED_MAX	Grid-Stat
Mean of MED_FO and MED_OF	MED_MEAN	Grid-Stat
Minimum of MED_FO and MED_OF	MED_MIN	Grid-Stat
Mean-error Distance from forecast to observation	MED_OF	Grid-Stat

Neighborhood statistics

Long name	METplus name	Tools
Asymptotic Fractions Skill Score	AFSS	Grid-Stat
Fractions Skill Score	FSS	Grid-Stat
Uniform Fractions Skill Score	UFSS	Grid-Stat

Categorical statistics

Long name	METplus name	Tools
Accuracy	ACC	Point-Stat Grid-Stat MODE
Bias Adjusted Gilbert Skill Score	BAGSS	Point-Stat Grid-Stat
Base Rate	BASER	Point-Stat Grid-Stat Wavelet-Stat MODE
Critical Success Index	CSI	Point-Stat MODE cts Grid-Stat
Expected correct rate used for MCTS HSS_EC	EC_VALUE	Point-Stat Grid-Stat
Extreme Dependency Index	EDI	Point-Stat Grid-Stat
Extreme Dependency Score	EDS	Point-Stat Grid-Stat
Forecast rate/event frequency	F_RATE	Point-Stat Grid-Stat

Categorical statistics (cont)

False alarm ratio	FAR	Point-Stat Grid-Stat MODE
Forecast mean	FBAR	Ensemble-Stat Point-Stat Grid-Stat
Frequency Bias	FBIAS	Wavelet-Stat MODE Point-Stat Grid-Stat
Count of events in forecast category i and observation category j	Fi_Oj	Point-Stat Grid-Stat
Number of forecast no and observation no	FN_ON	MODE Grid-Stat Point-Stat
Number of forecast no and observation yes	FN_OY	MODE Grid-Stat Point-Stat
Attributes for pairs of simple forecast and observation objects	FNNN_ONNN	MODE
Number of forecast events	FY	Grid-Stat

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Categorical statistics (cont)		
Number of forecast yes and observation no	FY_ON	MODE Point-Stat Grid-Stat
Number of forecast yes and observation yes	FY_OY	MODE Point-Stat Grid-Stat
Gerrity Score and bootstrap confidence limits	GER	Point-Stat Grid-Stat
Gilbert Skill Score	GSS	Point-Stat Grid-Stat MODE
Hit rate,	H_RATE	Point-Stat Grid-Stat
Hanssen and Kuipers Discriminant	HK	MODE Point-Stat Grid-Stat
Heidke Skill Score	HSS	MODE Point-Stat Grid-Stat
Heidke Skill Score user-specific expected correct	HSS_EC	Point-Stat Grid-Stat
Logarithm of the Odds Ratio	LODDS	Point-Stat Grid-Stat

Categorical statistics (cont)		
Dimension of the contingency table & the total number of categories in each dimension	N_CAT	Point-Stat Grid-Stat
Observation rate	O_RATE	Point-Stat Grid-Stat
Odds Ratio	ODDS	MODE Point-Stat Grid-Stat
Odds Ratio Skill Score,,	ORSS	Point-Stat Grid-Stat
Number of observation events	OY	Grid-Stat
Probability of false detection	PODF	Point-Stat Grid-Stat
Probability of detecting no	PODN	Point-Stat Grid-Stat MODE
Probability of detecting yes	PODY	Point-Stat Grid-Stat MODE

Categorical statistics (cont)		
Probability of detecting yes when forecast is greater than the ith probability thresholds	PODY_i	Point-Stat Grid-Stat
Probability of false detection	POFD	MODE Grid-Stat
Probability of false detection when forecast is greater than the ith probability thresholds	POFD_i	Point-Stat Grid-Stat
Symmetric Extremal Dependency Index,	SEDI	Point-Stat Grid-Stat
Symmetric Extreme Dependency Score	SEDS	Point-Stat Grid-Stat

Probability statistics		
Long name	**METplus name**	**Tools**
Brier Score	BRIER	Point-Stat Grid-Stat

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Probability statistics (cont)

Climatological Brier Score	BRIERCL	Point-Stat Grid-Stat
Brier Skill Score relative to sample climatology	BSS	Point-Stat Grid-Stat
Brier Skill Score relative to external climatology	BSS_SMPL	Point-Stat Grid-Stat
Calibration when forecast is between the ith and i+1th probability thresholds (repeated)	CALIBRATION _i	Point-Stat Grid-Stat
Likelihood when forecast is between the ith and i+1th probability thresholds repeated	LIKELIHOOD _i	Point-Stat Grid-Stat
Number of observation when forecast is between the ith and i+1th probability thresholds	ON_i	Point-Stat Grid-Stat

Probability statistics (cont)

Number of observation when forecast is between the ith and i+1th probability thresholds	ON_TP_i	Point-Stat Grid-Stat
Number of observation yes when forecast is between the ith and i+1th probability thresholds	OY_i	Point-Stat Grid-Stat
Number of observation yes when forecast is between the ith and i+1th probability thresholds as a proportion of the total OY (repeated)	OY_TP_i	Point-Stat Grid-Stat
Refinement when forecast is between the ith and i+1th probability thresholds (repeated)	REFINEMENT _i	Point-Stat Grid-Stat
Reliability	RELIABILITY	Point-Stat Grid-Stat
Resolution	RESOLUTION	Point-Stat Grid-Stat

Probability statistics (cont)

Area under the receiver operating characteristic curve	ROC_AUC	Point-Stat Grid-Stat
Variability of Observations	UNCERTAINTY	Point-Stat Grid-Stat
Economic value of the base rate	VALUE_BASER	Point-Stat Grid-Stat
Relative value for the ith Cost/Loss ratio	VALUE_i	Point-Stat Grid-Stat

Ensemble statistics

Long name	METplus name	Tools
Continuous Ranked Probability Score (normal dist.)	CRPS	Ensemble-Stat
Continuous Ranked Probability Score (empirical dist.)	CRPS_EMP	Ensemble-Stat
Climatological Continuous Ranked Probability Score (normal dist.)	CRPSCL	Ensemble-Stat
Climatological Continuous Ranked Probability Score (empirical dist.)	CRPSCL_EMP	Ensemble-Stat

Ensemble statistics (cont)		
Continuous Ranked Probability Skill Score (normal dist.)	CRPSS	Ensemble-Stat
Continuous Ranked Probability Skill Score (empirical dist.)	CRPSS_EMP	Ensemble-Stat
The unperturbed ensemble mean value	ENS_MEAN	,Ensemble-Stat
The PERTURBED ensemble mean (e.g. with Observation Error).	ENS_MEAN_OERR	Ensemble-Stat
Ignorance Score	IGN	Ensemble-Stat
Probability Integral Transform	PIT	Ensemble-Stat
Rank of the observation	RANK	Ensemble-Stat
Count of observations with the i-th rank	RANK_i	Ensemble-Stat
Number of times the i-th ensemble member's value was closest to the observation (repeated). When n members tie, 1/n is assigned to each member.	RELP_i	Ensemble-Stat

Ensemble statistics (cont)		
Mean of the Brier Scores for each RPS threshold	RPS	Ensemble-Stat
Mean of the reliabilities for each RPS threshold	RPS_REL	Ensemble-Stat
Mean of the resolutions for each RPS threshold	RPS_RES	Ensemble-Stat
Mean of the uncertainties for each RPS threshold	RPS_UNC	Ensemble-Stat
Ranked Probability Skill Score relative to external climatology	RPSS	Ensemble-Stat
Ranked Probability Skill Score relative to sample climatology	RPSS_SMPL	Ensemble-Stat
Standard deviation of the mean of the UNPERTURBED ensemble	SPREAD	Ensemble-Stat
Standard deviation of the mean of the PERTURBED ensemble	SPREAD_OERR	Ensemble-Stat

Ensemble statistics (cont)		
Standard Deviation of unperturbed ensemble variance and the observation error variance	SPREAD_PLUS_OERR	Ensemble-Stat
Maximum variance	VAR_MAX	Ensemble-Stat
Average variance	VAR_MEAN	Ensemble-Stat
Minimum variance	VAR_MIN	Ensemble-Stat

Diagnostic statistics		
Long name	**METplus name**	**Tools**
Difference between the axis angles of two objects (in degrees)	ANGLE_DIFF	MODE
Object area (in grid squares)	AREA	MODE MTD
Forecast object area divided by the observation object area (unitless)	AREA_RATIO	MODE

Diagnostic statistics (cont)		
Area of the object that meet the object definition threshold criteria (in grid squares)	AREA_THRESH	MODE
Absolute value of the difference between the aspect ratios of two objects (unitless)	ASPECT_DIFF	MODE
Object axis angle (in degrees)	AXIS_ANG	MODE MTD
Difference in spatial axis plane angles	AXIS_DIFF	MTD
Blocking Index	Blocking Index	METplus Use Case
Minimum distance between the boundaries of two objects	BOUNDARY_DIST	MODE

Diagnostic statistics (cont)		
Total great circle distance travelled by the 2D spatial centroid over the lifetime of the 3D object	CDIST_TRAVELLED	MTD
Distance between two objects centroids (in grid units)	CENTROID_DIST	MODE
Latitude of centroid	CENTROID_LAT	MTD MODE
Longitude of centroid	CENTROID_LON	MTD MODE
Time coordinate of centroid	CENTROID_T	MTD
X coordinate of centroid	CENTROID_X	MTD MODE
Y coordinate of centroid	CENTROID_Y	MTD MODE
Space-Time Coherence Diagram	Coherence Diagram	METplus Use Case

Diagnostic statistics (cont)		
Ratio of the difference between the area of an object and the area of its convex hull divided by the area of the complex hull (unitless)	COMPLEXITY	MODE
Ratio of complexities of two objects defined as the lesser of the forecast complexity divided by the observation complexity or its reciprocal (unitless)	COMPLEXITY_RATIO	MODE
Minimum distance between the convex hulls of two objects (in grid units)	CONVEX_HULL_DIST	MODE

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Diagnostic statistics (cont)		
Radius of curvature	CURVATURE	MODE
Ratio of the curvature	CURVATURE_RATIO	MODE
Center of curvature (in grid coordinates)	CURVATURE_X	MODE
Center of curvature (in grid coordinates)	CURVATURE_Y	MODE
Cloud Water / Precip Relationship	CW/Precip Relationship	GridDiag
Difference in object direction of movement	DIRECTION_DIFF	MTD
Difference in the lifetimes of the two objects	DURATION_DIFF	MTD
Object end time	END_TIME	MTD
Difference in object ending time steps	END_TIME_DELTA	MTD
Number of forecast clusters	FCST_CLUS	MODE

Diagnostic statistics (cont)		
Number of points used to define the hull of all of the cluster forecast objects	FCST_CLUS_HULL	MODE
Forecast Cluster Convex Hull Point Latitude	FCST_CLUS_HULL_LAT	MODE
Forecast Cluster Convex Hull Point Longitude	FCST_CLUS_HULL_LON	MODE
Number of Forecast Cluster Convex Hull Points	FCST_CLUS_HULL_NPTS	MODE
Forecast Cluster Convex Hull Starting Index	FCST_CLUS_HULL_START	MODE
Forecast Cluster Convex Hull Point X-Coordinate	FCST_CLUS_HULL_X	MODE
Forecast Cluster Convex Hull Point Y-Coordinate	FCST_CLUS_HULL_Y	MODE

Diagnostic statistics (cont)		
Forecast Object Raw Values	FCST_OBJ_RAW	MODE
Number of simple forecast objects	FCST_SIMP	MODE
Number of points used to define the boundaries of all of the simple forecast objects	FCST_SIMP_BDY	MODE
Forecast Simple Boundary Latitude	FCST_SIMP_BDY_LAT	MODE
Forecast Simple Boundary Longitude	FCST_SIMP_BDY_LON	MODE
Number of Forecast Simple Boundary Points	FCST_SIMP_BDY_NPTS	MODE
Forecast Simple Boundary Starting Index	FCST_SIMP_BDY_START	MODE
Forecast Simple Boundary X-Coordinate	FCST_SIMP_BDY_X	MODE

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Diagnostic statistics (cont)		
Forecast Simple Boundary Y-Coordinate	FCST_SIMP_BDY_Y	MODE
Number of points used to define the hull of all of the simple forecast objects	FCST_SIMP-_HULL	MODE
Forecast Simple Convex Hull Point Latitude	FCST_SIMP-_HULL_LAT	MODE
Forecast Simple Convex Hull Point Longitude	FCST_SIMP_HULL_LON	MODE
Number of Forecast Simple Convex Hull Points	FCST_SIMP_HULL_NPTS	MODE
Forecast Simple Convex Hull Starting Index	FCST_SIMP_HULL_-START	MODE
Forecast Simple Convex Hull Point X-Coordinate	FCST_SIMP_HULL_X	MODE

Diagnostic statistics (cont)		
Forecast Simple Convex Hull Point Y-Coordinate	FCST_SIMP_HULL_Y	MODE
Number of thresholds applied to the forecast	FCST_THRESH_LENGTH	MODE
Number of thresholds applied to the forecast	FCST_T-HRESH_LENGTH	MODE
Pratt's Figure of Merit from observation to forecast	FOM_FO	Grid-Stat
Maximum of FOM_FO and FOM_OF	FOM_MAX	Grid-Stat
Mean of FOM_FO and FOM_OF	FOM_MEAN	Grid-Stat
Minimum of FOM_FO and FOM_OF	FOM_MIN	Grid-Stat
Pratt's Figure of Merit from forecast to observation	FOM_OF	Grid-Stat

Diagnostic statistics (cont)		
Distance between the forecast and Best track genesis events (km)	GEN_DIST	TC-Gen
Forecast minus Best track genesis time in HHMMSS format	GEN_TDIFF	TC-Gen
Hausdorff Distance	HAUSDORFF	Grid-Stat
Hovmoeller Diagram	Hovmoeller	METplus Use Case
Best track genesis minus forecast initialization time in HHMMSS format	INIT_TDIFF	TC-Gen
10th, 25th, 50th, 75th, 90th, and user-specified percentiles of intensity of the raw field within the object or time slice	INTENSITY_10, _25, _50, _75, _90, _NN	MODE

Diagnostic statistics (cont)		
Sum of the intensities of the raw field within the object (variable units)	INTENSITY_SUM	MODE
Total interest for this object pair	INTEREST	MTD MODE
Intersection area of two objects (in grid squares)	INTERSECTION_AREA,	MODE
Ratio of intersection area to the lesser of the forecast and observation object areas (unitless)	INTERSECTION_OVER_AREA	MODE
“Volume” of object intersection	INTERSECTION_VOLUME	MTD

Diagnostic statistics (cont)		
Joint Probability Distribution between variable,Joint PDF to Diagnose Relationship,Grid-Diag Dimension of the latitude	LAT	MODE
Length of the enclosing rectangle	LENGTH	MODE
Dimension of the longitude	LON	MODE
Meridional Means	Meridional Means	METplus Use Case
Number of cluster objects	N_CLUS	MODE
Number of simple forecast objects	N_FCST_SIMP	MODE
Number of simple observation objects	N_OBS_SIMP	MODE
Number of observed clusters	OBS_CLUS	MODE

Diagnostic statistics (cont)		
Number of points used to define the hull of all of the cluster observation objects	OBS_CLUS_HULL	MODE
Observation Cluster Convex Hull Point Latitude	OBS_CLUS_HULL_LAT	MODE
Observation Cluster Convex Hull Point Longitude	OBS_CLUS_HULL_LON	MODE
Number of Observation Cluster Convex Hull Points	OBS_CLUS_HULL_NPTS	MODE
Observation Cluster Convex Hull Starting Index	OBS_CLUS_HULL_START	MODE
Observation Cluster Convex Hull Point X-Coordinate	OBS_CLUS_HULL_X	MODE

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Diagnostic statistics (cont)		
Observation Cluster Convex Hull Point Y-Coordinate	OBS_CLUS_HULL_Y	MODE
Number of simple observation objects	OBS_SIMP	MODE
Number of points used to define the boundaries of the simple observation objects	OBS_SIMP_BDY	MODE
Observation Simple Boundary Point Latitude	OBS_SIMP_BDY_LAT	MODE
Observation Simple Boundary Point Longitude	OBS_SIMP_BDY_LON	MODE
Number of Observation Simple Boundary Points	OBS_SIMP_BDY_NPTS	MODE
Number of points used to define the hull of the simple observation objects	OBS_SIMP_HULL	MODE

Diagnostic statistics (cont)		
Number of Observation Simple Convex Hull Points	OBS_SIMP_HULL_NPTS	MODE
OLR-based MJO Index	OMI	METplus Use Case
Ratio of the nth percentile (INTENSITY_NN column) of intensity of the two objects	PERCENTILE_INTENSITY_RATIO	MODE
Phase Diagram for RMM and OMI,	Phase Diagram	METplus Use Case
Realtime Multivariate MJO Index	RMM	METplus Use Case
Spatial distance between (x,y) (x,y) coordinates of object spacetime centroid	SPACE_CENTROID_DIST	MTD
Difference in object speeds	SPEED_DELTA	MTD

Diagnostic statistics (cont)		
Difference in object starting time steps	START_TIME_DELTA	MTD
Symmetric difference of two objects (in grid squares)	SYMMETRIC_DIFF	MODE
Difference in t index of object spacetime centroid	TIME_CENTROID_DELTA	MTD
Union area of two objects (in grid squares)	UNION_AREA	MODE
Integer count of the number of 3D “cells” in an object	VOLUME	MTD
Forecast object volume divided by observation object volume	VOLUME_RATIO	MTD
Weather Regime Index	Weather Regime Index	METplus Use Case

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Diagnostic statistics (cont)		
Width of the enclosing rectangle (in grid units)	WIDTH	MODE
X component of object velocity	X_DOT	MTD
y component of object velocity	Y_DOT	MTD
Y component position error (nm)	Y_ERR	TC-Pairs
Zonal Means	Zonal Means	METplus Use Case
Zhu's Measure from observation to forecast	ZHU_FO	Grid-Stat
Maximum of ZHU_FO and ZHU_OF	ZHU_MAX	Grid-Stat
Mean of ZHU_FO and ZHU_OF	ZHU_MEAN	Grid-Stat
Minimum of ZHU_FO and ZHU_OF	ZHU_MIN	Grid-Stat
Zhu's Measure from forecast to observation	ZHU_OF	Grid-Stat