Table 1. Columns of the MACC Catalog

Feature	Description[a]
ASAS_ID	ID from ASAS catalog of Variable Stars
dotAstro_ID	ID from the online database http://dotastro.org/
RA, DEC	Coordinates from ASAS [a]
Class	Most probable class from the machine-learned classifier
P_Class	Posterior probability that the source is from that class
Anomaly	Anomaly metric; objects with score greater than 10.0 should be considered as outliers
ACVS_Class	Classification from the ASAS Catalog of Variable Stars
Train_Class	If the ASAS object was in the training set, its training class, else blank
Mira,..., W_Ursae_Maj	Posterior class probabilities for all 28 science classes
P, P_signif	Best fit period (in days) and its statistical significance (in number of σ)
N_epochs	Number of epochs in the ASAS light curve used to classify the object
V, deltaV	Mean ASAS V-band magnitude and ASAS V-band amplitude

[a]Coordinates from ASAS are sometimes wrong by several arcsec due to its ∼15-arcsec pixel size. This effect is worse in crowded fields.

Table 2. Periodic light curve features given for each object in the MACC.

Feature	Description[a]
`freq1_harmonics_amplitude_0`	$A_{1,1}$ (mag)
`freq1_harmonics_amplitude_1`	$A_{1,2}$
`freq1_harmonics_amplitude_2`	$A_{1,3}$
`freq1_harmonics_amplitude_3`	$A_{1,4}$
`freq1_harmonics_freq_0`	f_1 cycles per day
`freq1_harmonics_rel_phase_1`	$PH_{1,2}$
`freq1_harmonics_rel_phase_2`	$PH_{1,3}$
`freq1_harmonics_rel_phase_3`	$PH_{1,4}$
`freq2_harmonics_amplitude_0`	$A_{2,1}$
`freq2_harmonics_amplitude_1`	$A_{2,2}$
`freq2_harmonics_amplitude_2`	$A_{2,3}$
`freq2_harmonics_amplitude_3`	$A_{2,4}$
`freq2_harmonics_freq_0`	f_2
`freq2_harmonics_rel_phase_1`	$PH_{2,2}$
`freq2_harmonics_rel_phase_2`	$PH_{2,3}$
`freq2_harmonics_rel_phase_3`	$PH_{2,4}$
`freq3_harmonics_amplitude_0`	$A_{3,1}$
`freq3_harmonics_amplitude_1`	$A_{3,2}$
`freq3_harmonics_amplitude_2`	$A_{3,3}$
`freq3_harmonics_amplitude_3`	$A_{3,4}$
`freq3_harmonics_freq_0`	f_3
`freq3_harmonics_rel_phase_1`	$PH_{3,2}$
`freq3_harmonics_rel_phase_2`	$PH_{3,3}$
`freq3_harmonics_rel_phase_3`	$PH_{3,4}$
`freq_signif`	Significance of f_1 vs. null hypothesis of white noise with no periodic variation, computed using a Student's-T distribution
`freq_signif_ratio_21`	Ratio of significance of f_2 vs. null to f_1 vs. null
`freq_signif_ratio_31`	Ratio of significance of f_3 vs. null to f_1 vs. null
`freq_amplitude_ratio_21`	$A_{2,1}/A_{1,1}$
`freq_amplitude_ratio_31`	$A_{3,1}/A_{1,1}$
`freq_varrat`	Ratio of the variance after, to the variance before subtraction of the fit with f_1 and its 4 harmonics
`freq_y_offset`	c
`freq_model_max_delta_mags`	absolute value of mag difference between the two model light curve maxima phased on 2P
`freq_model_min_delta_mags`	absolute value of mag difference between the two model light curve minima phased on 2P
`freq_model_phi1_phi2`	ratio of the phase difference between the first minimum and the first maximum to the phase difference between the first minimum and second maximum
`freq_n_alias`	number of top period estimates that are consistent with an alias
`freq_rrd`	boolean that is true only if `freq_frequency_ratio_21` or `freq_frequency_ratio_31` are consistent with 0.746

[a]All notation is for the Fourier model: $y_i(t|f_i) = a_i \sin(2\pi f_i t) + b_i \cos(2\pi f_i t) + b_{i,\circ}$ with $A_{i,j} = \sqrt{a_{i,j}^2 + b_{i,j}^2}$ and $PH_{i,j} = \tan^{-1}(b_{i,j}, a_{i,j})$

Table 3. Non-periodic light curve features given for each object in the MACC.

Feature	Description
amplitude	Half the difference between the maximum and the minimum magnitude
beyond1std	Percentage of points beyond one st. dev. from the weighted mean
flux_percentile_ratio_mid20	Ratio of flux percentiles (60th - 40th) over (95th - 5th)
flux_percentile_ratio_mid35	Ratio of flux percentiles (67.5th - 32.5th) over (95th - 5th)
flux_percentile_ratio_mid50	Ratio of flux percentiles (75th - 25th) over (95th - 5th)
flux_percentile_ratio_mid65	Ratio of flux percentiles (82.5th - 17.5th) over (95th - 5th)
flux_percentile_ratio_mid80	Ratio of flux percentiles (90th - 10th) over (95th - 5th)
linear_trend	Slope of a linear fit to the light curve fluxes
max_slope	Maximum absolute flux slope between two consecutive observations
median_absolute_deviation	Median discrepancy of the fluxes from the median flux
median_buffer_range_percentage	Percentage of fluxes within 20% of the amplitude from the median
pair_slope_trend	Percentage of all pairs of consecutive flux measurements that have positive slope
percent_amplitude	Largest percentage difference between either the max or min magnitude and the median
percent_difference_flux_percentile	Diff. between the 2nd & 98th flux percentiles, converted to magnitude
QSO	Quasar variability metric in Butler & Bloom (2011), $\log(\chi^2_{\rm QSO})$
non_QSO	Non-quasar variability metric in Butler & Bloom (2011), $\log(\chi^2_{\rm falseQSO})$
skew	Skew of the fluxes
small_kurtosis	Kurtosis of the fluxes, reliable down to a small number of epochs
std	Standard deviation of the fluxes
stetson_j	Welch-Stetson variability index J
stetson_k	Welch-Stetson variability index K
scatter_res_raw	MAD of the Lomb-Scargle residuals divided by the MAD of the raw light-curve values
p2p_scatter_2praw	sum of squared mag differences between pairs of successive observations in the light curve folded around 2P divided by that of the raw light curve
p2p_scatter_over_mad	median of the absolute differences between successive observations normalized by the MAD
p2p_scatter_pfold_over_mad	median of the absolute differences between successive mags in the folded light curve normalized by the MAD of the raw light curve
medperc90_2p_p	90th percentile of the absolute residual values around the 2P model divided by the same quantity for the residuals around the P model
fold2P_slope_10percentile	10th percentile of slopes between adjacent mags after the light curve is folded on 2P
fold2P_slope_90percentile	90th percentile of slopes between adjacent mags after the light curve is folded on 2P
p2p_ssqr_diff_over_var	the sum of squared mag differences in successive measurements divided by the variance