

KIC 010617638

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010617638-01	OBS	3016.01	0.710897	132.047222	87.4	1.242	13.7	15.2	1.05	5862	1.17	4590.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010617638-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

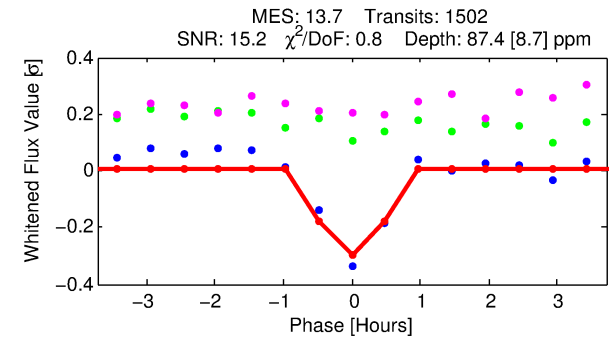
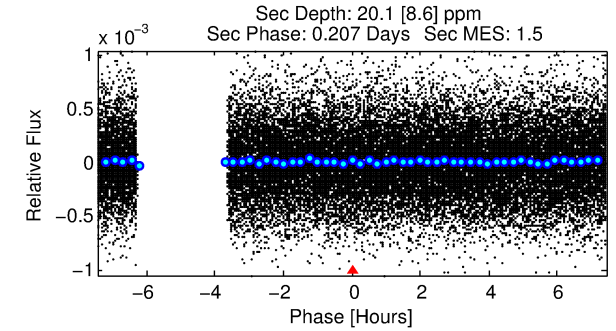
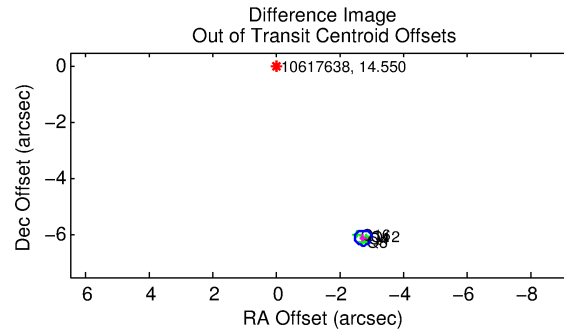
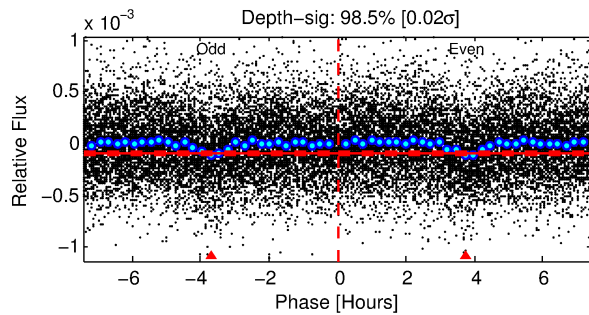
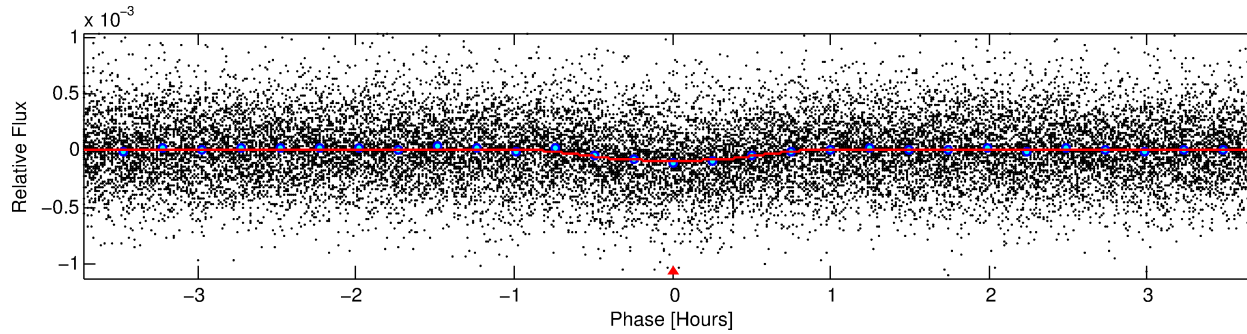
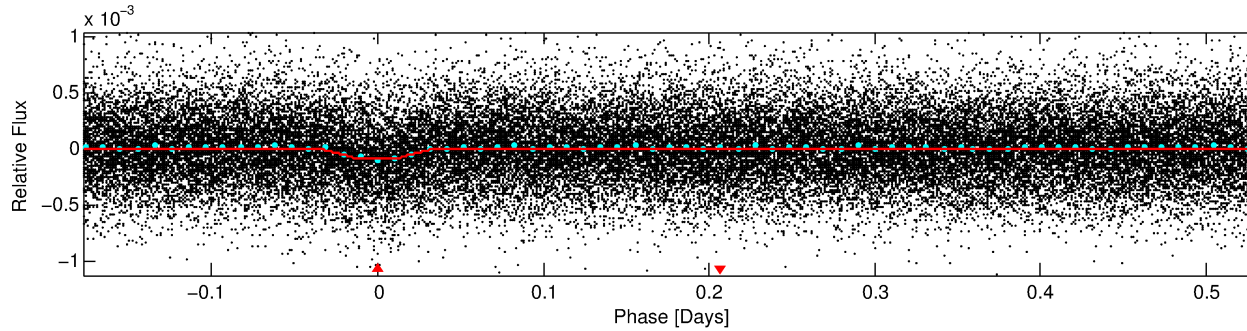
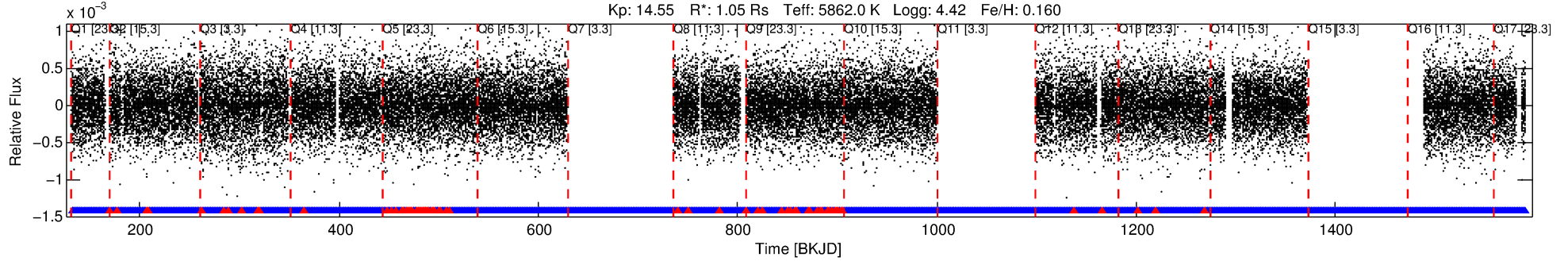
Ephemeris Match Information For 010617638-01

No Significant Match Found

DV One-Page Summary

KIC: 10617638 Candidate: 1 of 1 Period: 0.711 d
KOI: K03016.01 Corr: 0.914

Kp: 14.55 R*: 1.05 Rs Teff: 5862.0 K Logg: 4.42 Fe/H: 0.160



DV Fit Results:

Period = 0.71090 [0.00001] d
Epoch = 132.0472 [0.0013] BKJD
Rp/R* = 0.0102 [0.0058]
a/R* = 2.22 [4.83]
b = 0.90 [0.59]
Seff = 4590.42 [1796.80]
Teq = 2099 [205] K
Rp = 1.17 [0.75] Re
a = 0.0159 [0.0040] AU
Ag = 2.04 [2.59] [0.40σ]
Teffp = 3879 [1185] K [1.48σ]

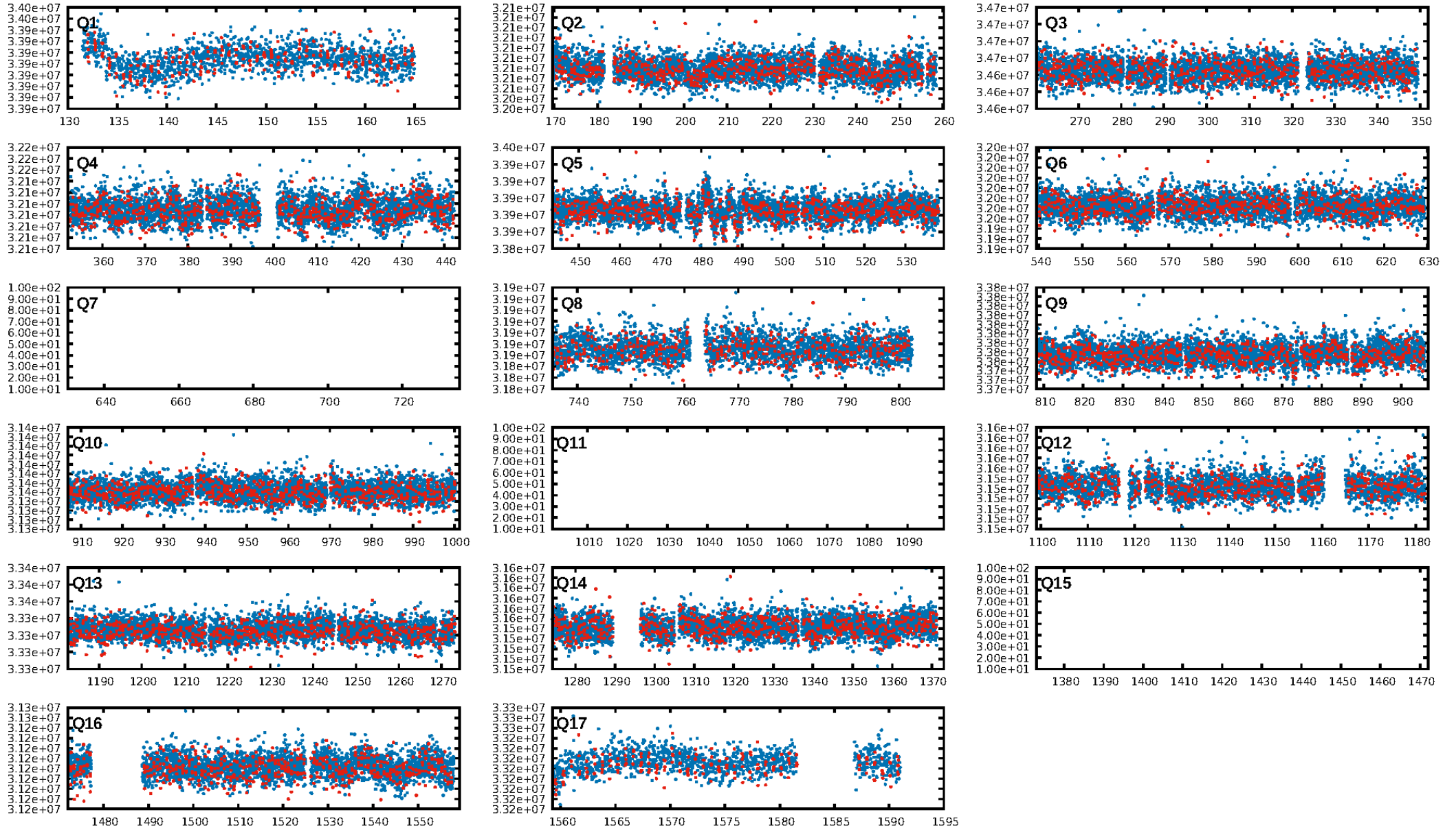
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.65e-44
RollingBand-fgt: 0.94 [1336/1417]
GhostDiagnostic-chr: -0.616
Centroid-sig: 0.0%
Centroid-so: 26.589 arcsec [24.98σ]
OotOffset-rm: 6.681 arcsec [74.37σ]
KicOffset-rm: 6.734 arcsec [64.31σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [14/14]

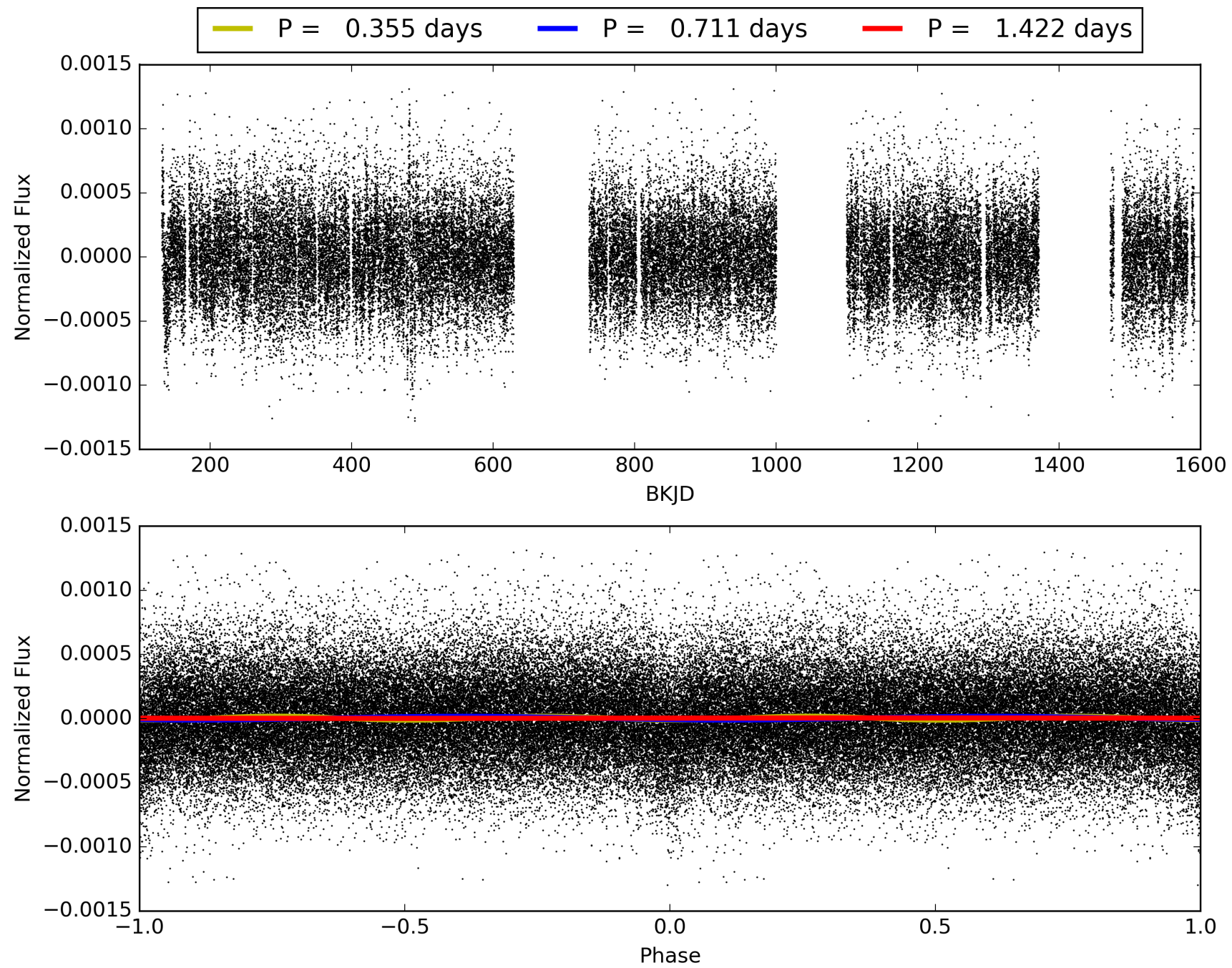
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:05:24 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010617638-01, PDC Light Curves

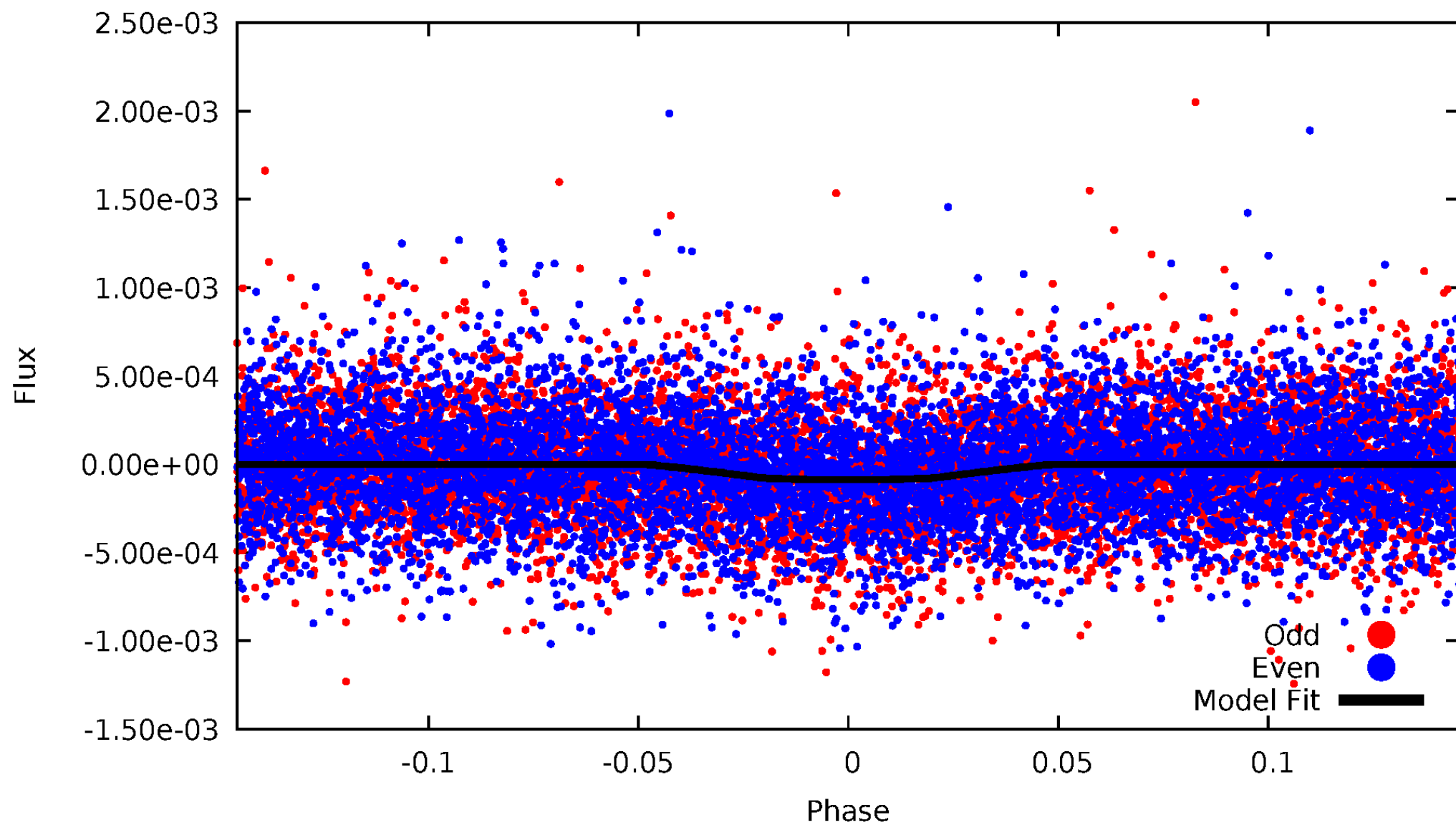


TCE 010617638-01



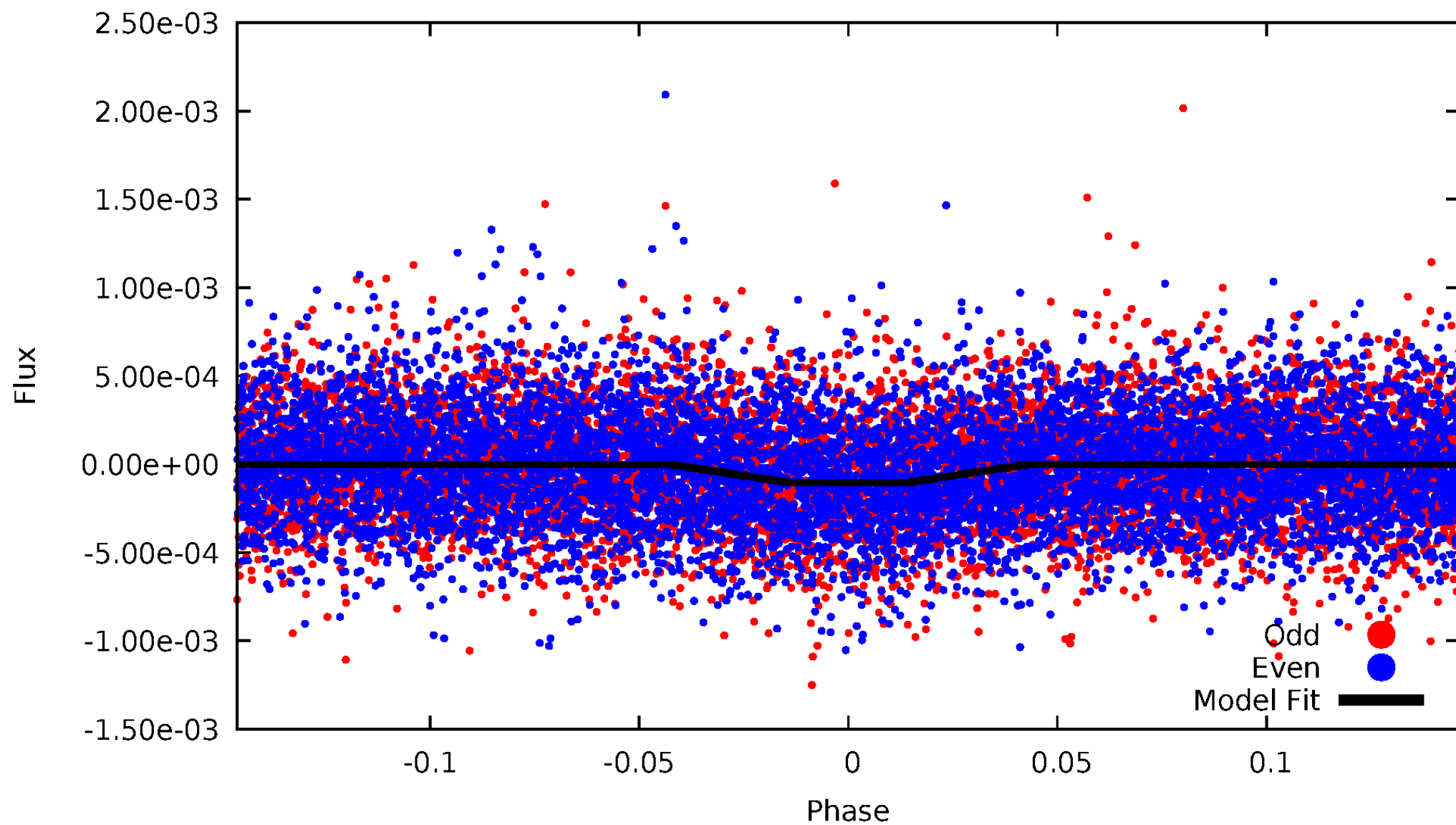
DV Odd/Even

TCE 010617638-01

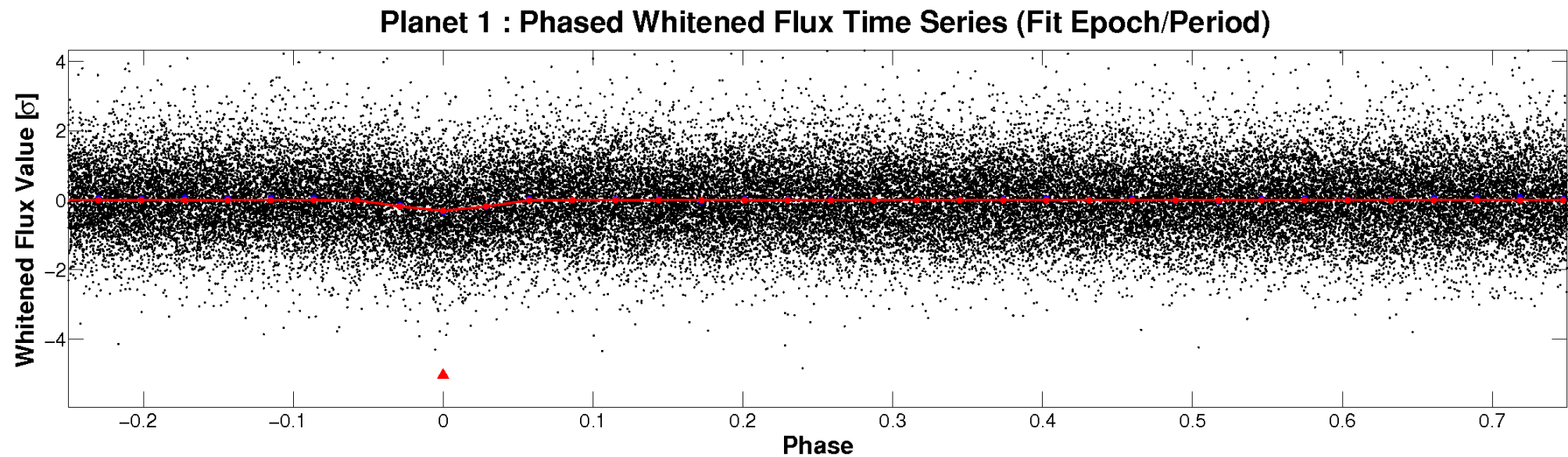
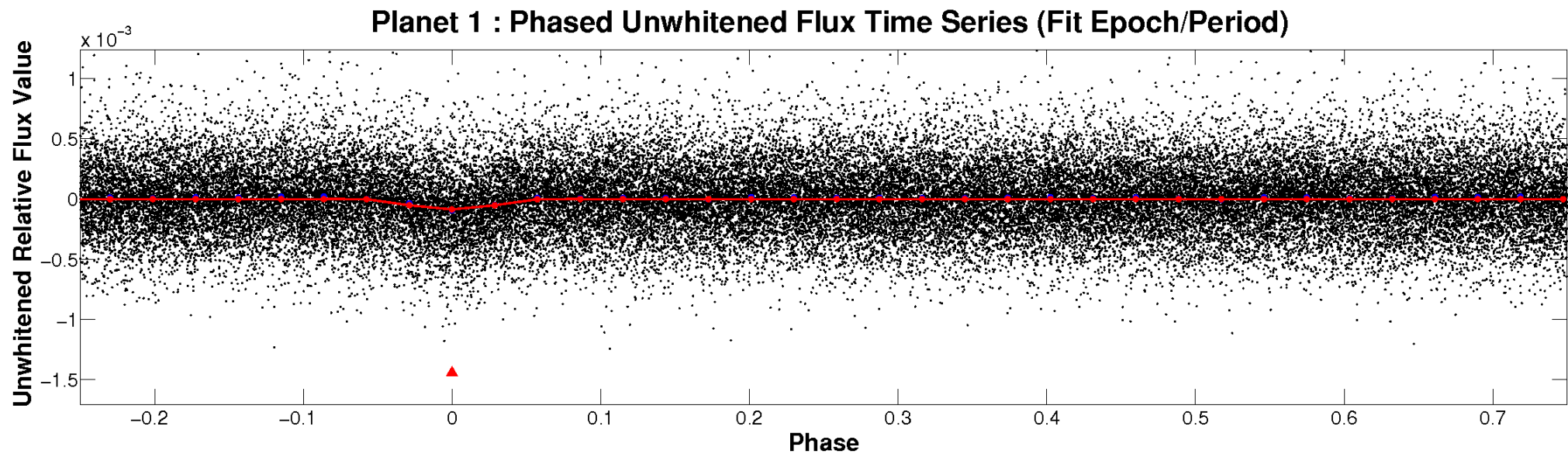


ALT Odd/Even

TCE 010617638-01

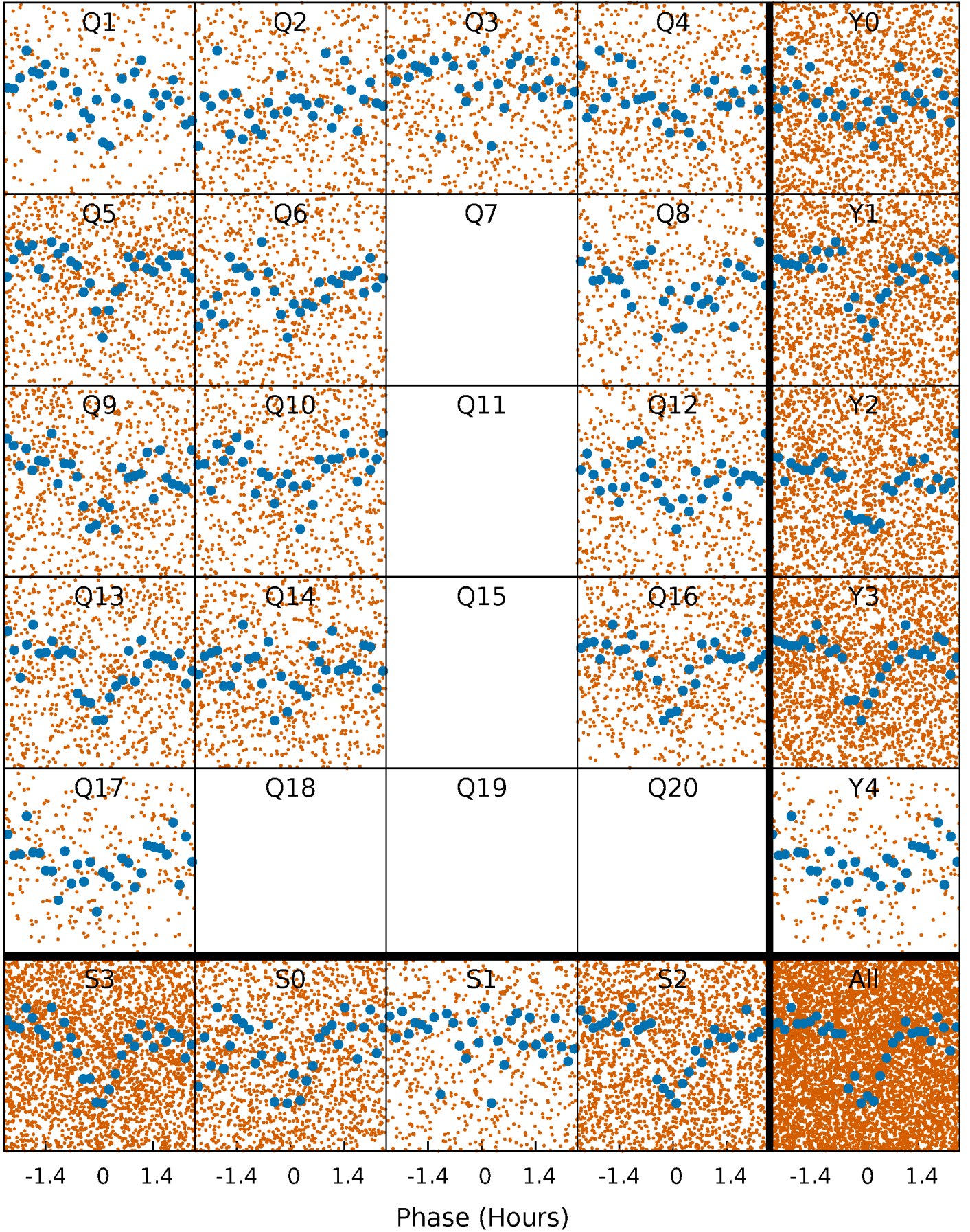


Non-Whitened Vs. Whitened Light Curve



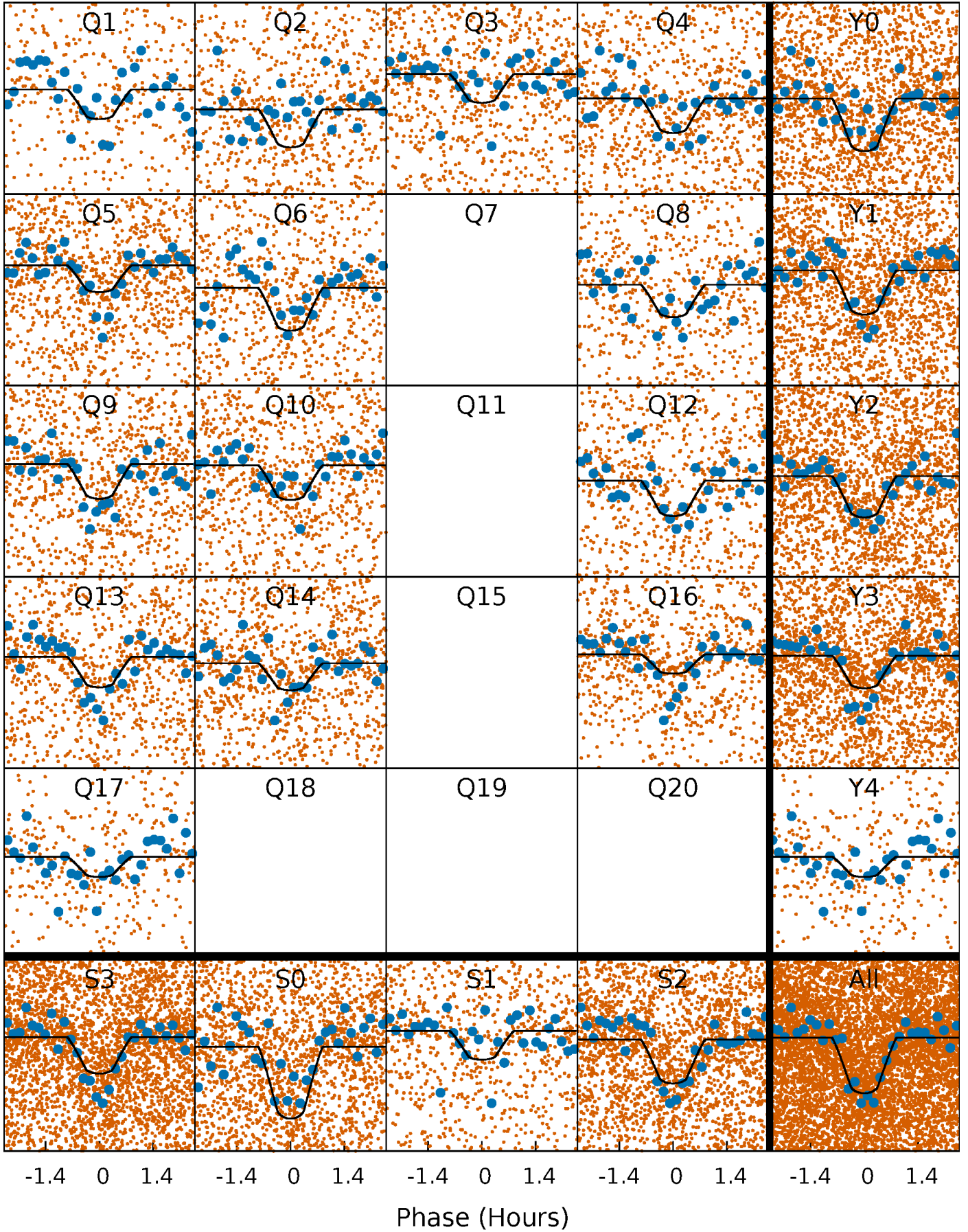
PDC Quarter-Phased Transit Curves

TCE 010617638-01 P= 0.710897 Days $T_0=132.047222$ (BKJD)



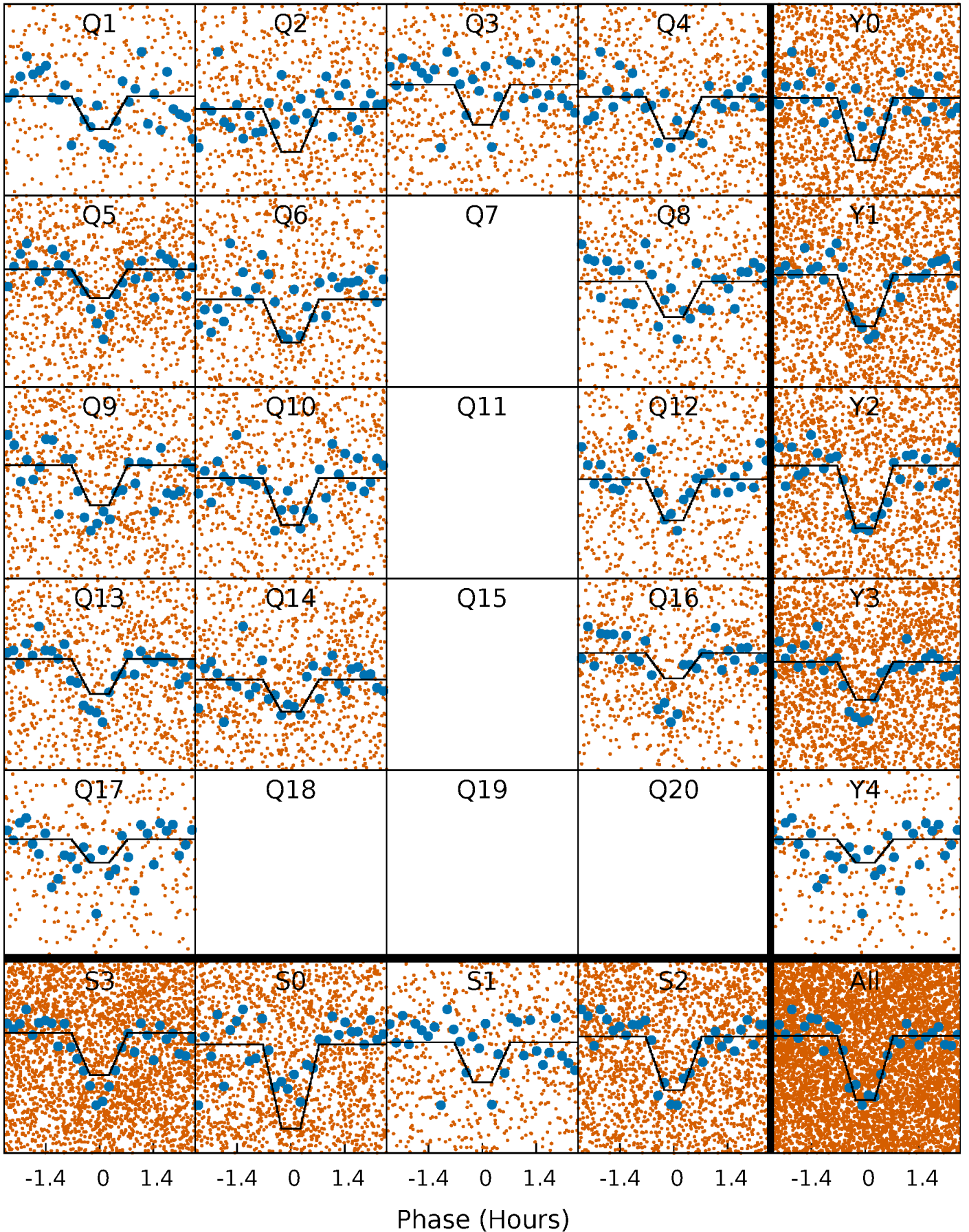
DV Quarter-Phased Transit Curves

TCE 010617638-01 P= 0.710897 Days $T_0=132.047222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

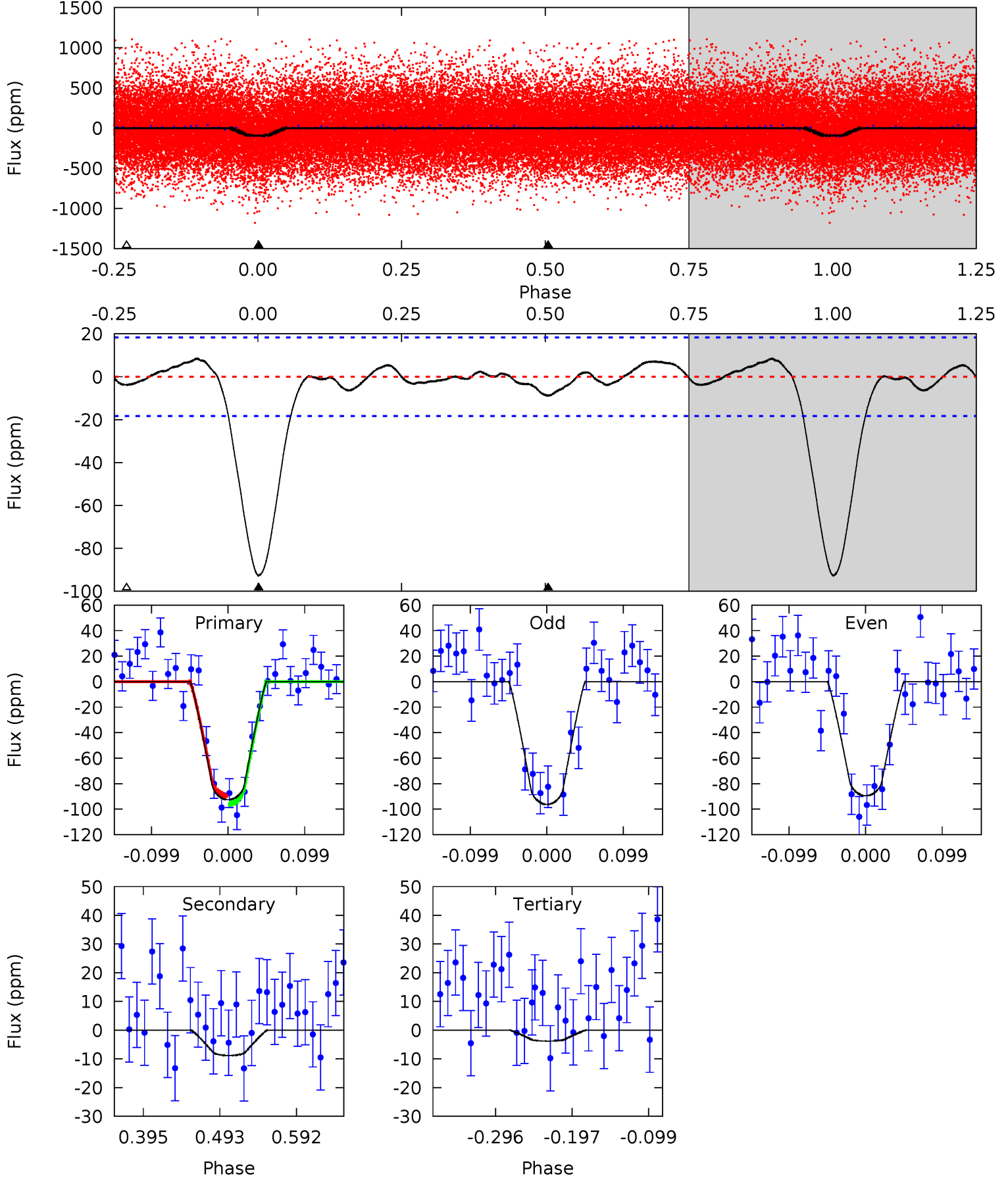
TCE 010617638-01 P= 0.710899 Days $T_0=132.047311$ (BKJD)



DV Model-Shift Uniqueness Test

010617638-01, P = 0.710897 Days, E = 131.336325 Days

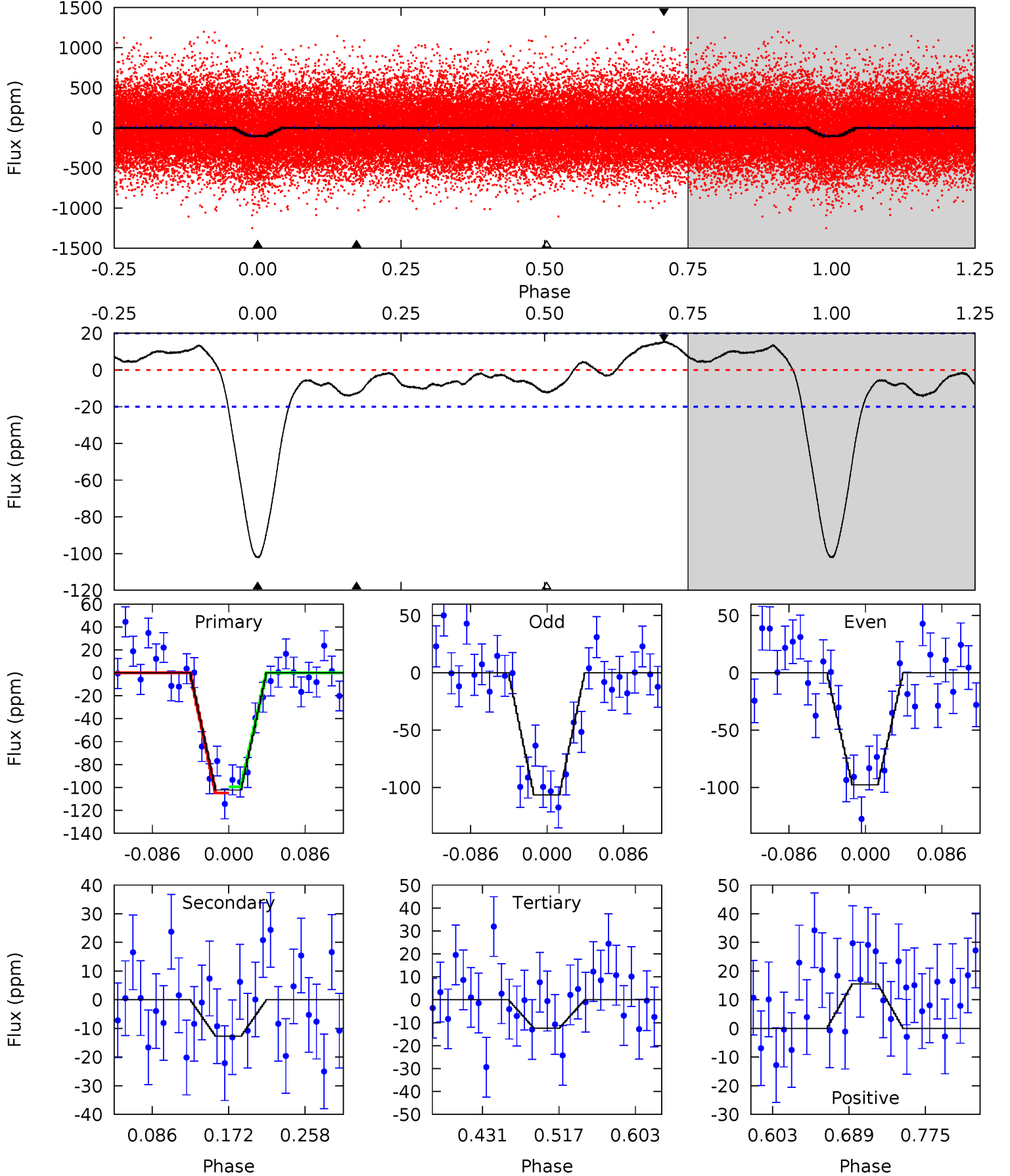
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.1	2.21	0.95	0	4.57	1.65	0.93	22.2	23.1	1.25	2.21	0.85	1.00	0.08	0.76



Alt Model-Shift Uniqueness Test

010617638-01, P = 0.710899 Days, E = 131.336412 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.5	2.93	2.85	3.57	4.60	1.72	1.92	20.7	19.9	0.08	-0.64	1.01	0.99	0.13	0.60



Stellar Parameters For KIC 010617638

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5862^{+156}_{-191}	$4.424^{+0.081}_{-0.202}$	$0.160^{+0.200}_{-0.300}$	$1.049^{+0.315}_{-0.135}$	$1.064^{+0.125}_{-0.125}$	$1.299^{+0.469}_{-0.664}$
	+3%/-3%	+2%/-5%	+125%/-188%	+30%/-13%	+12%/-12%	+36%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010617638-01 / KOI 3016.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 4	$1.24^{+0.65}_{-0.60}$	2977^{+216}_{-165}	3270^{+1136}_{-5771}	$0.751^{+2.210}_{-0.511}$
Alt.	-13 ± 4	$1.22^{+0.69}_{-0.59}$	2975^{+208}_{-158}	3577^{+1182}_{-895}	$1.094^{+3.019}_{-0.693}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

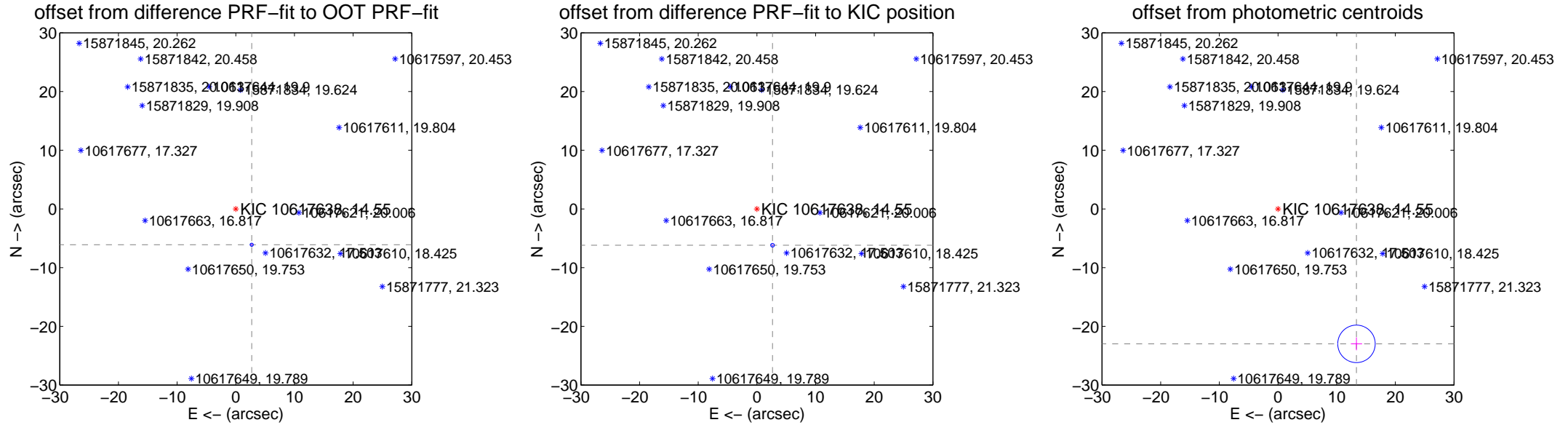
DV Centroid Data

Supplemental centroid analysis for 010617638-01. Kepler magnitude: 14.55. Transit SNR 15.17

There are 4 quarters with good PRF difference image offsets

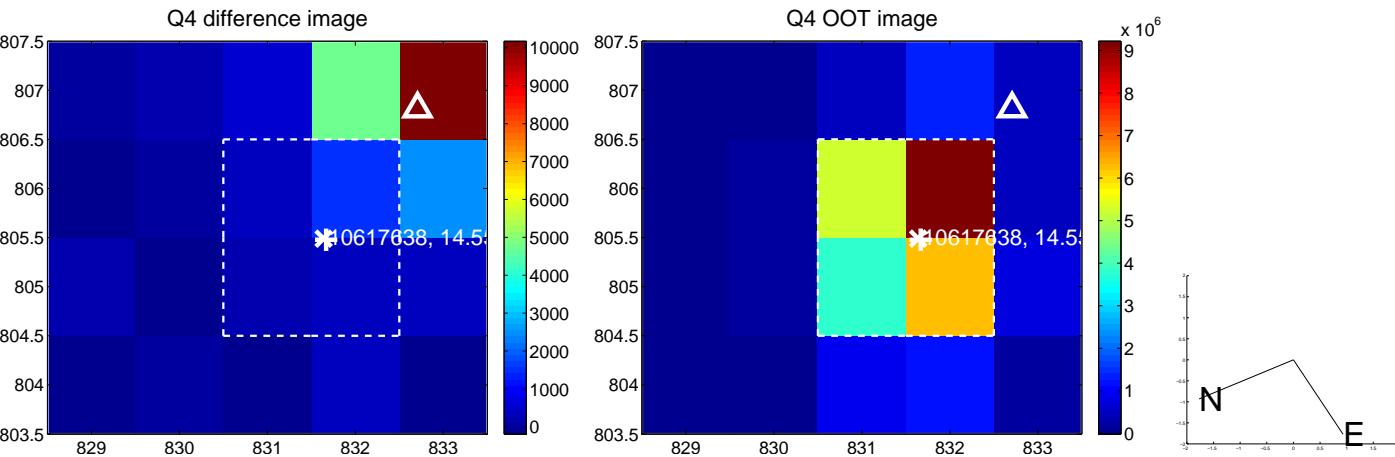
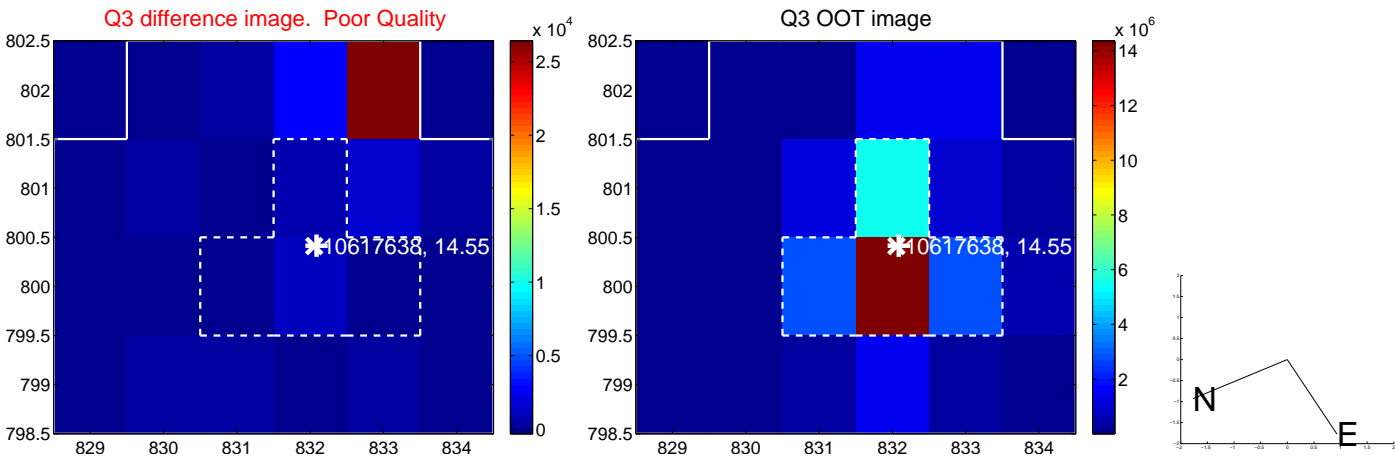
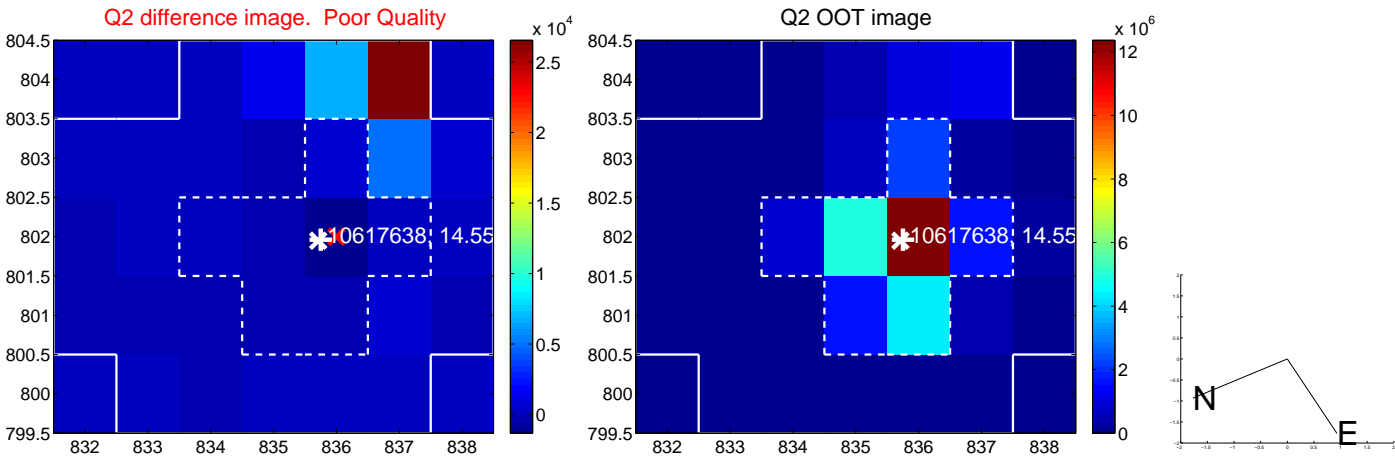
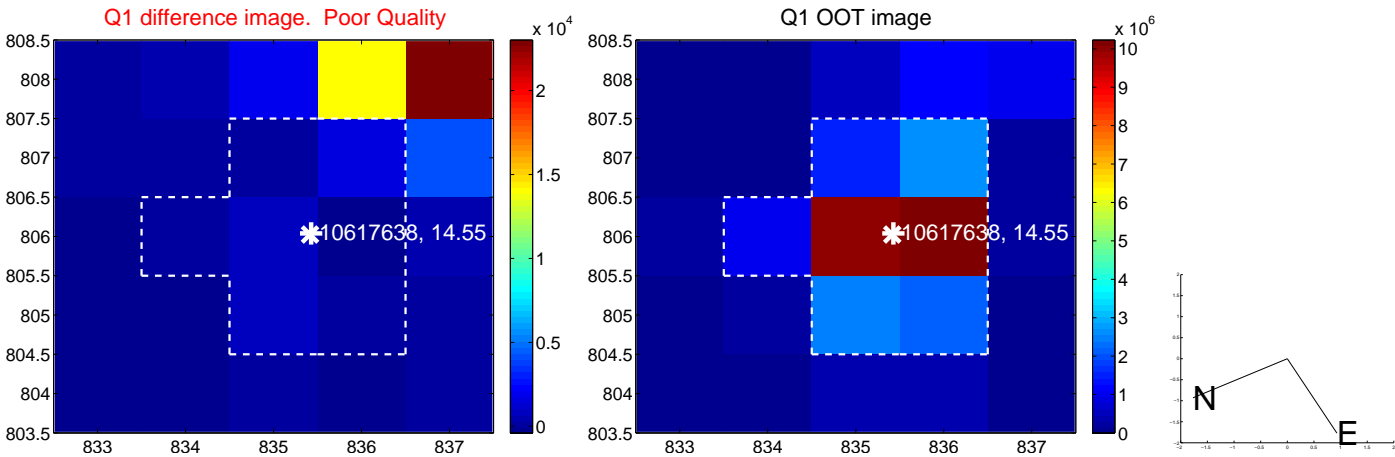
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.681 ± 0.090	74.37	-2.717 ± 0.094	-6.104 ± 0.089
PRF-fit source offset from KIC position	6.734 ± 0.105	64.31	-2.666 ± 0.099	-6.184 ± 0.089
photometric centroid source offset	26.59 ± 1.06	24.98	-13.37 ± 0.96	-22.98 ± 1.10

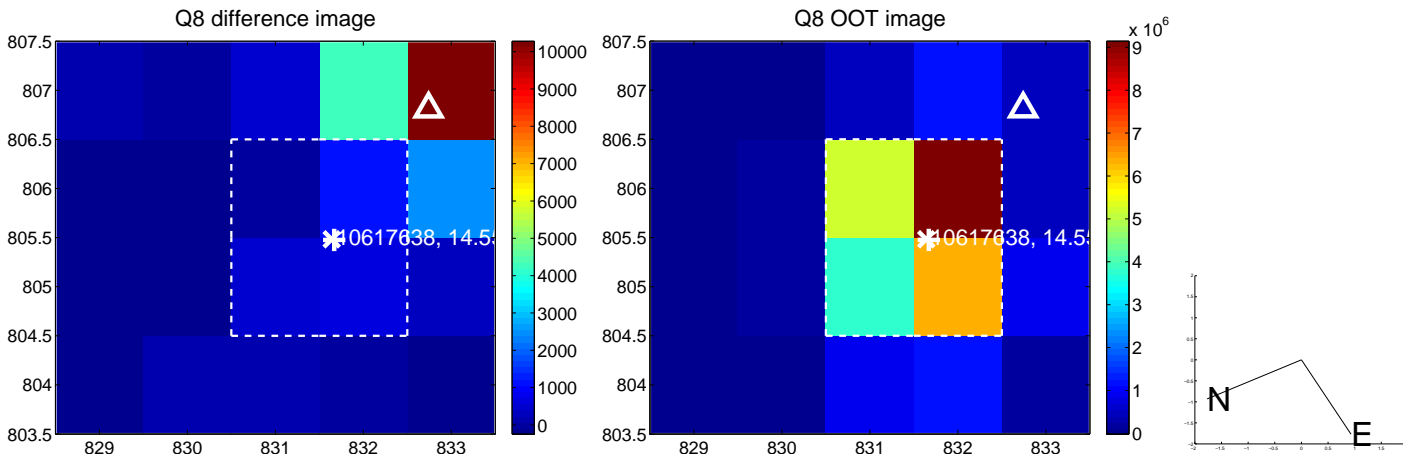
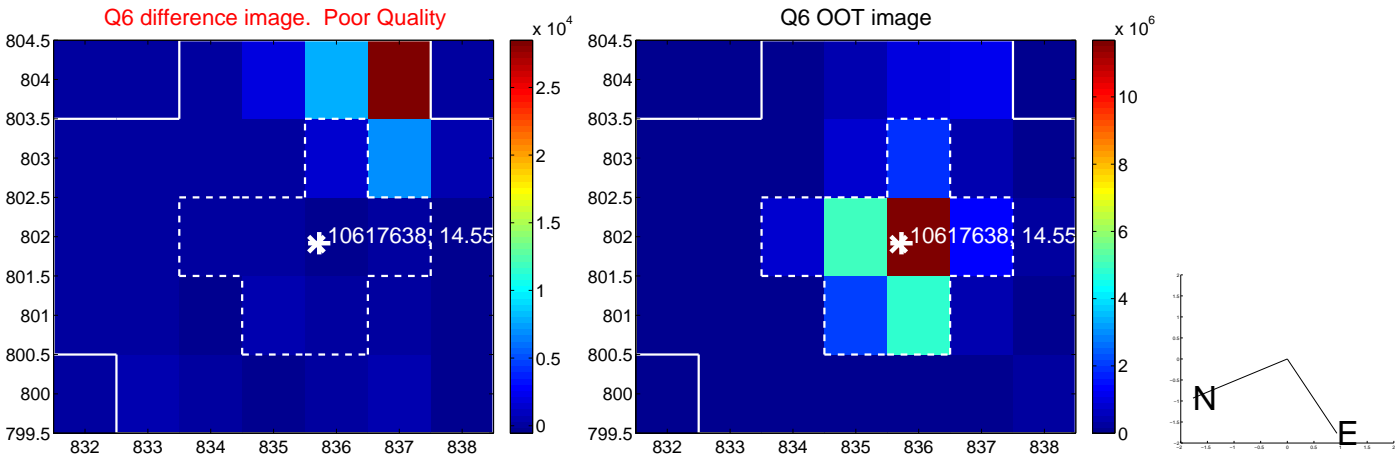
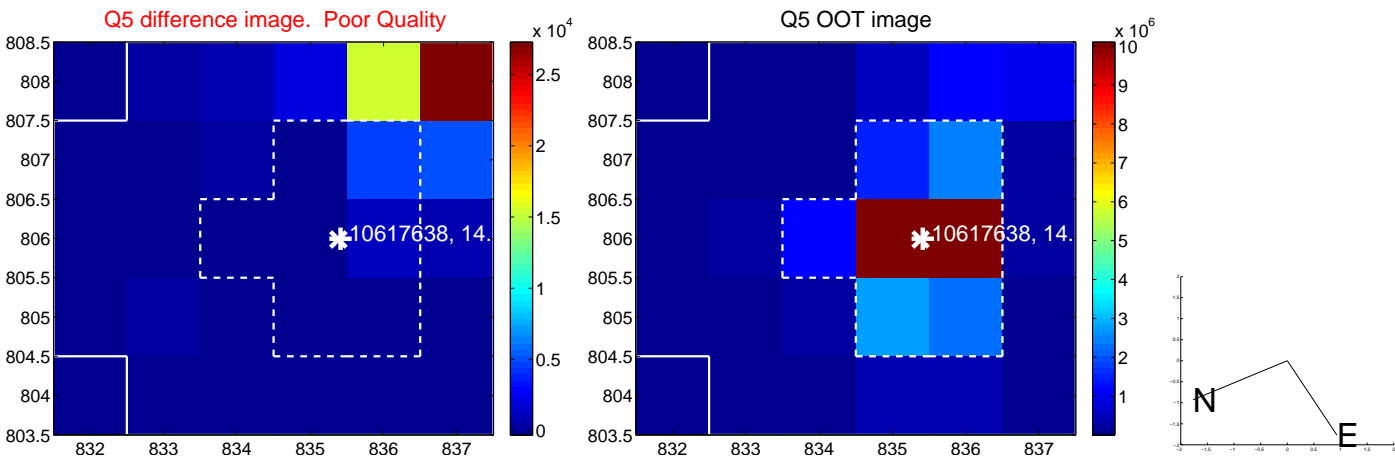


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

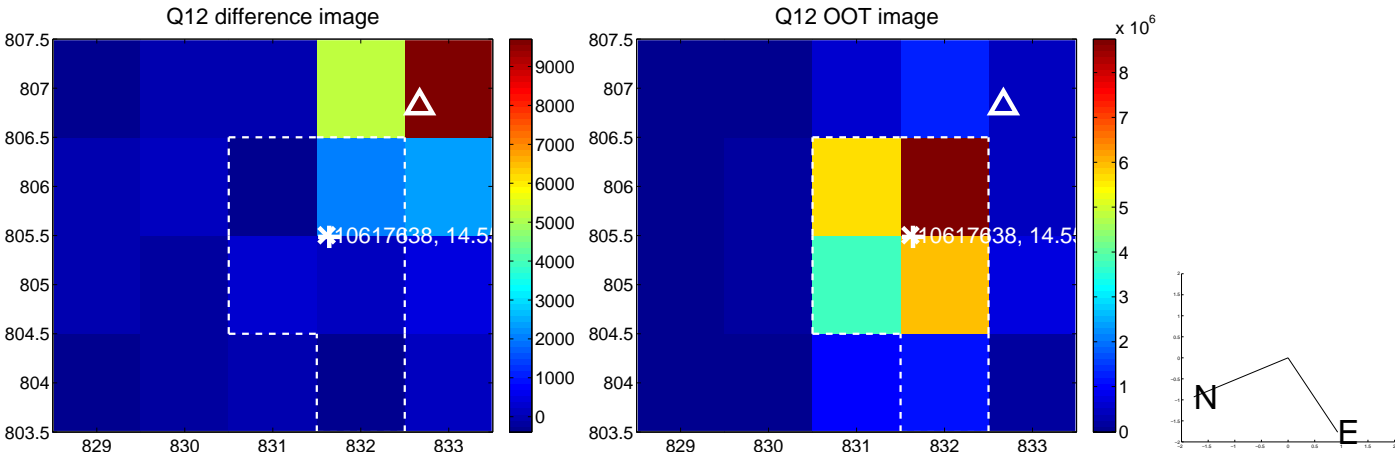
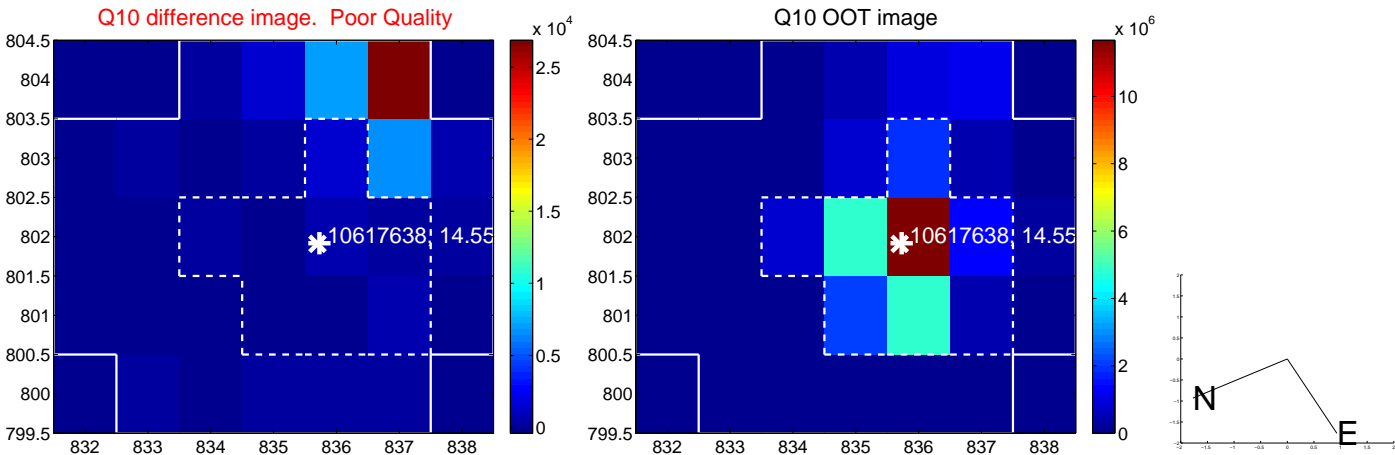
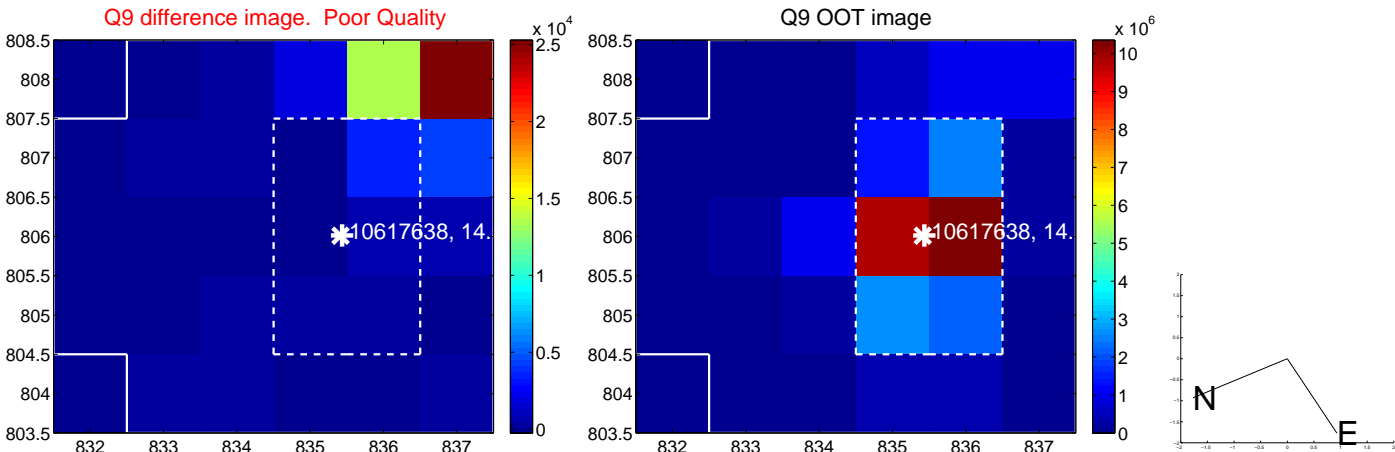
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



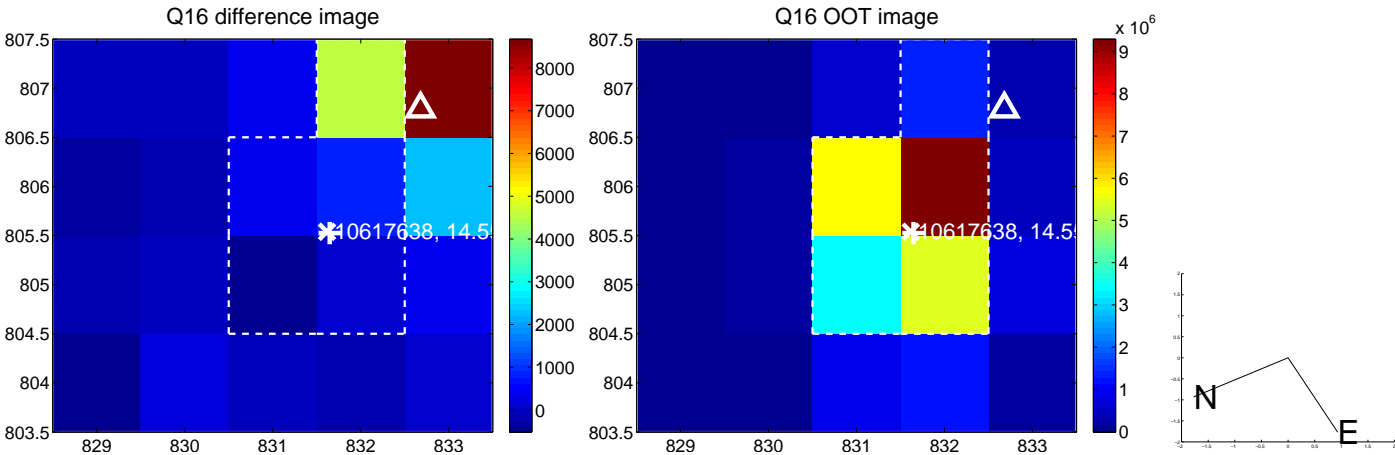
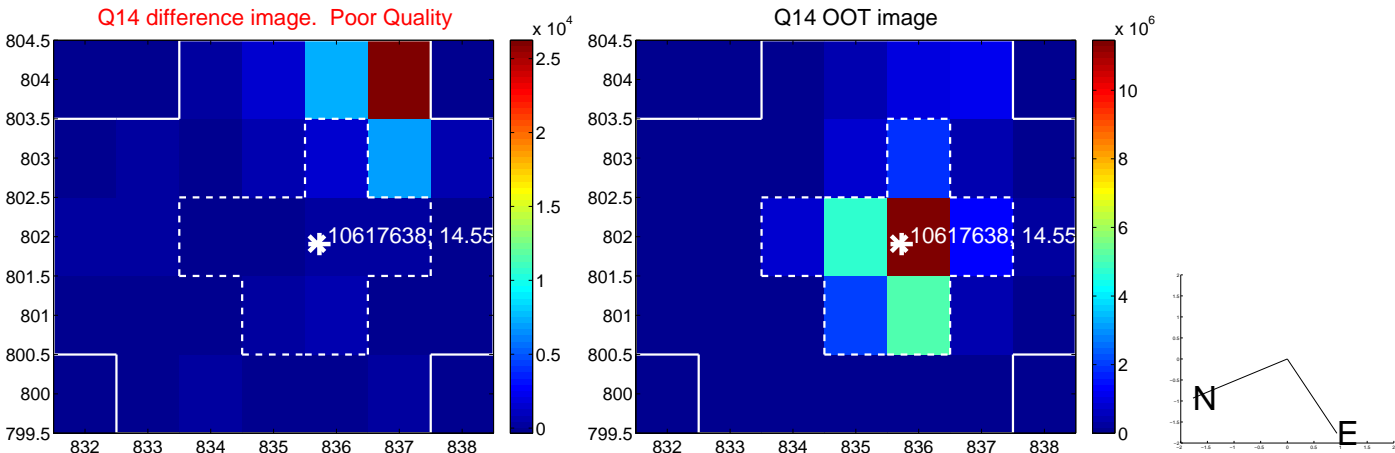
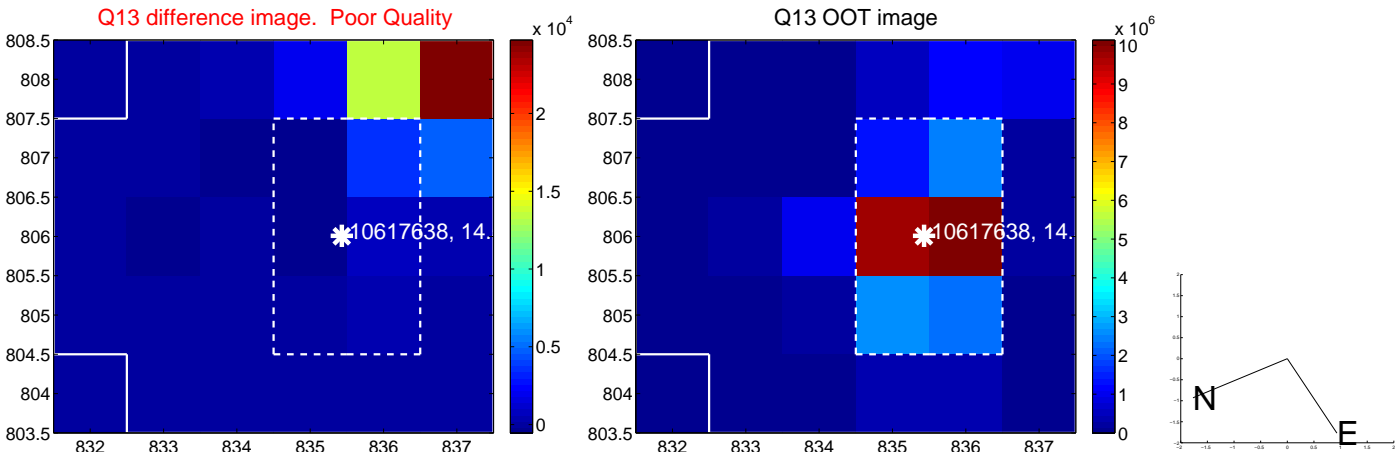
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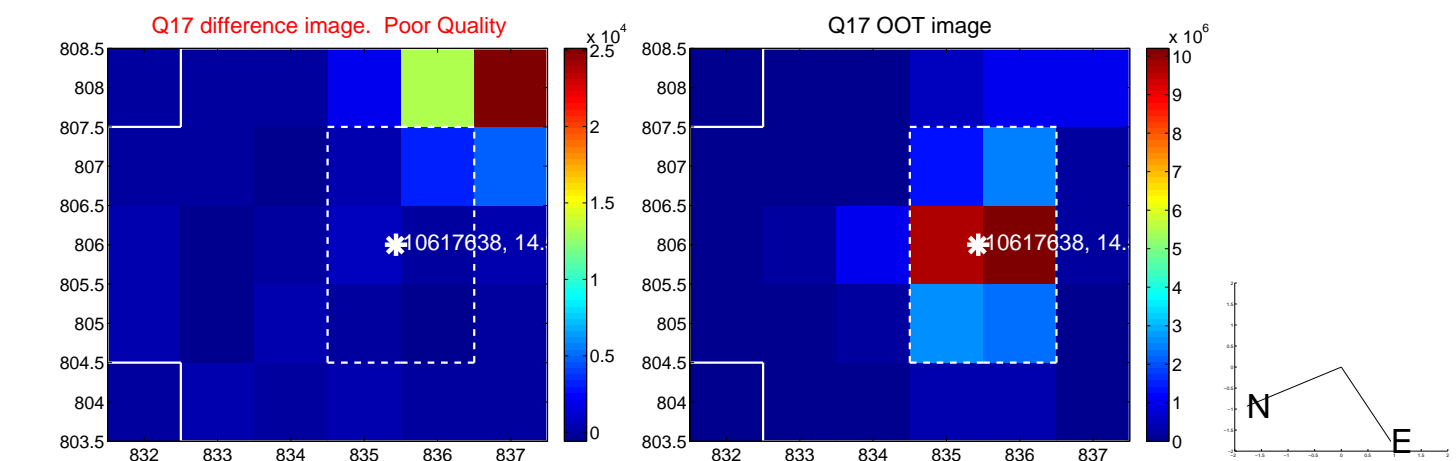
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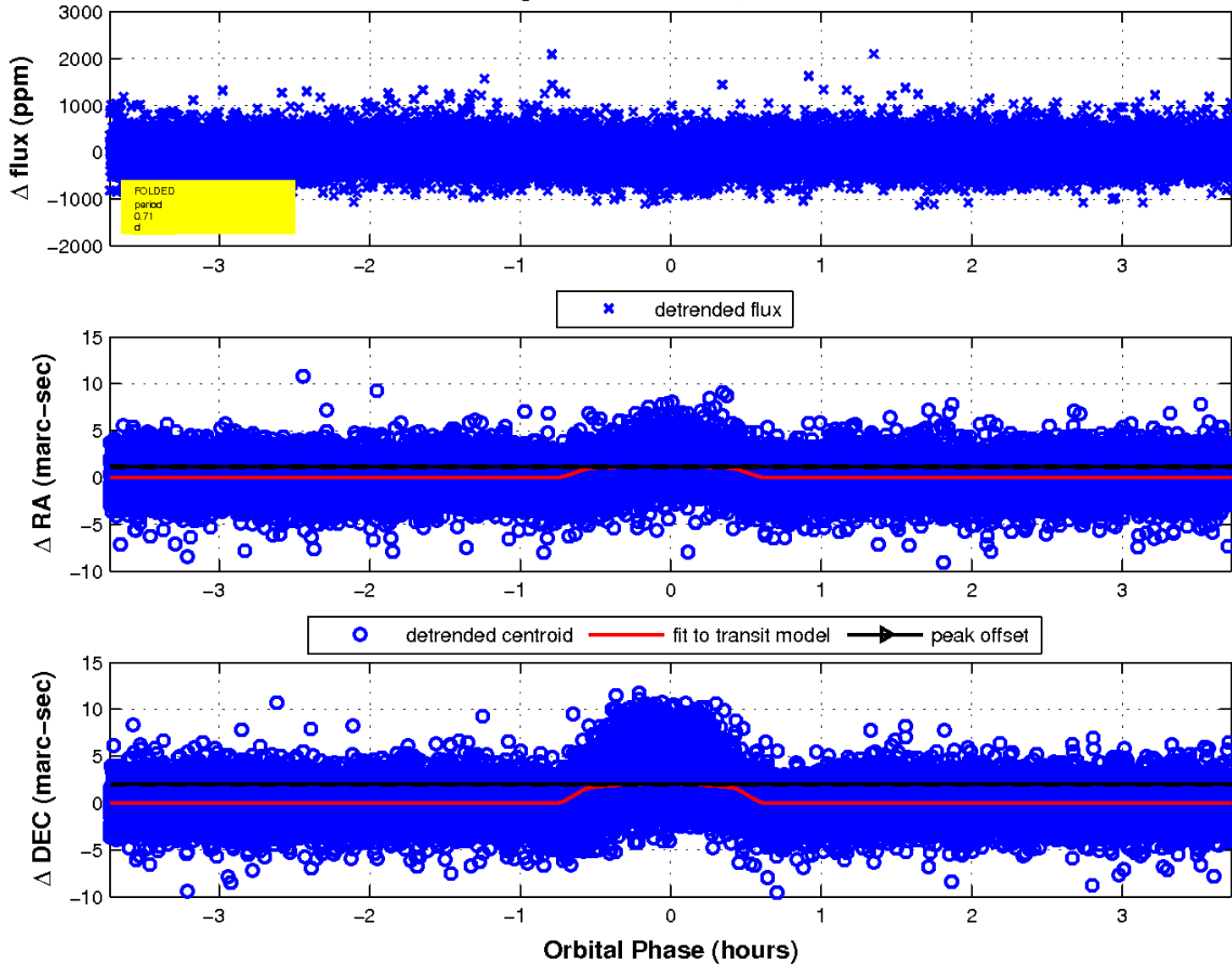
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

