

KIC 008638728

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})
008638728-01	OBS	No	0.546271	131.619888	15.9	1.509	9.8	10.3	3.60	6723	1.67	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008638728-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

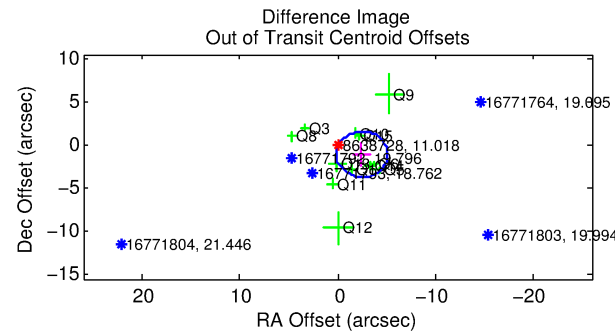
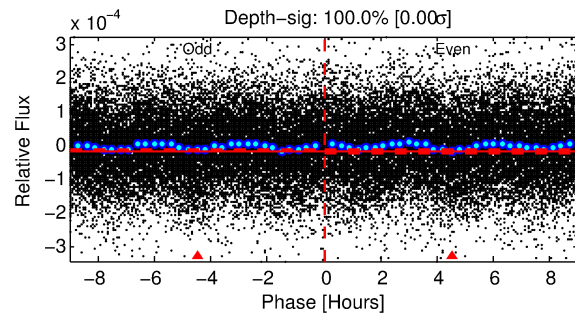
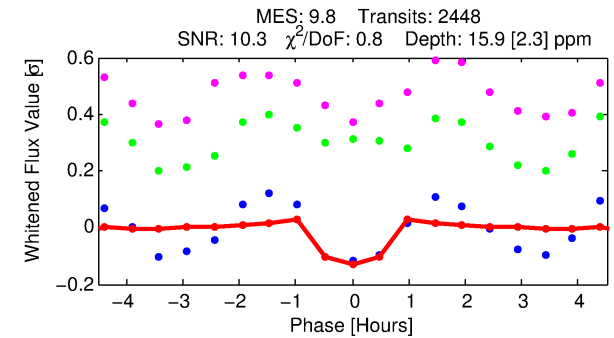
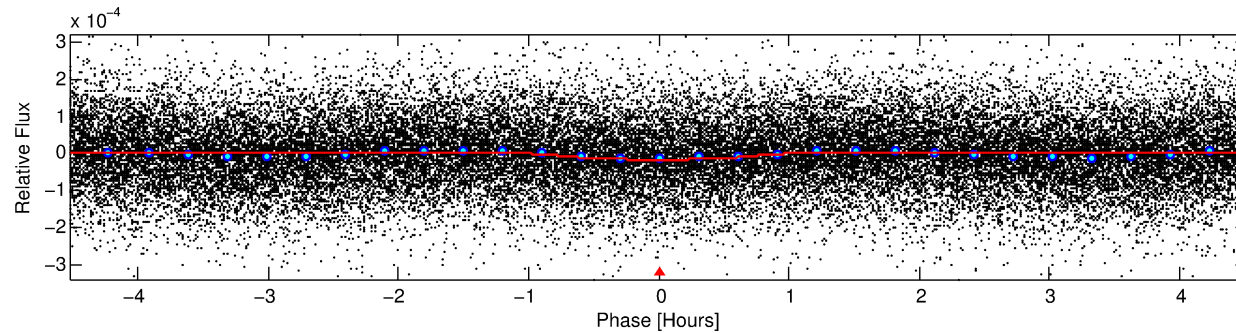
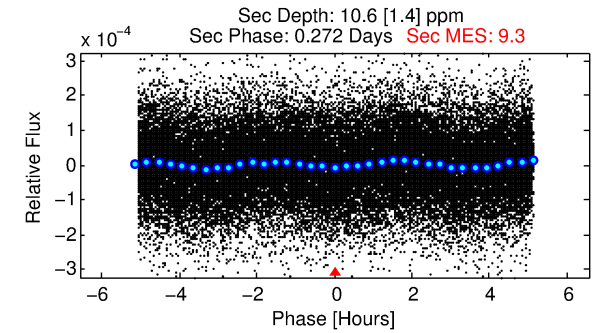
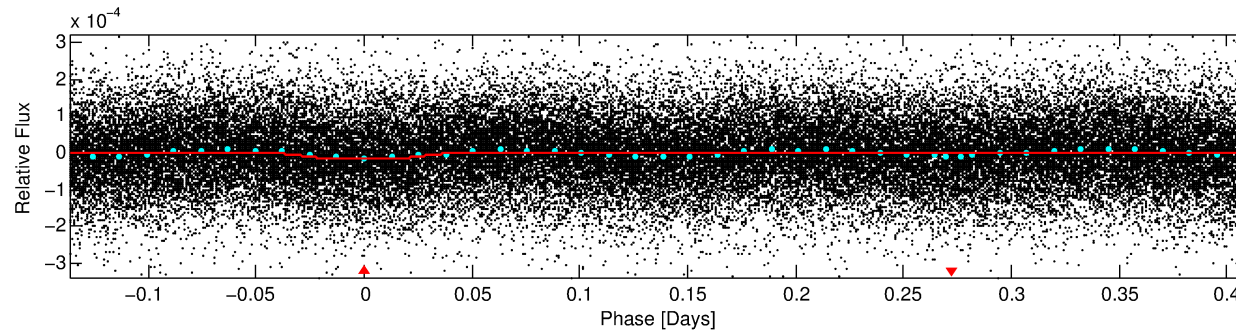
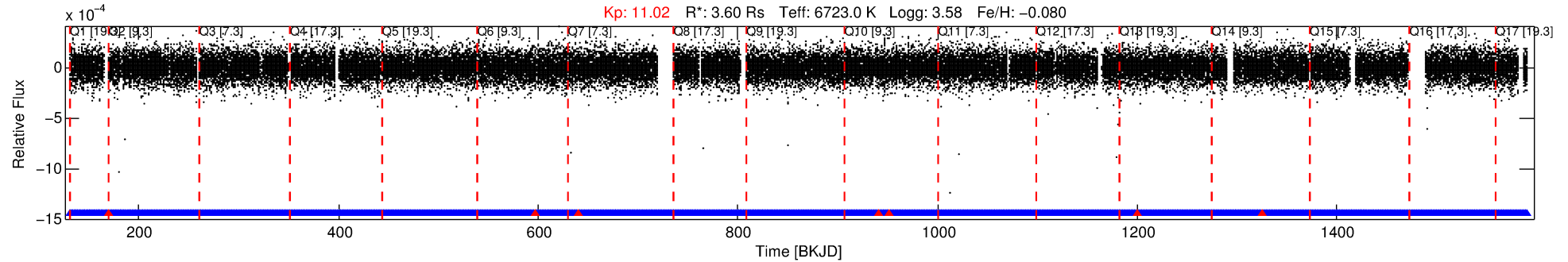
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008638728-01

No Significant Match Found

DV One-Page Summary

KIC: 8638728 Candidate: 1 of 1 Period: 0.546 d



DV Fit Results:

Period = 0.54627 [0.00001] d
Epoch = 131.6199 [0.0016] BKJD
Rp/R* = 0.0043 [0.0006]
a/R* = 1.56 [0.68]
b = 0.90 [0.16]
Seff = N/A
Teq = N/A
Rp = 1.67 [0.63] Re
a = N/A
Ag = N/A
Teffp = N/A

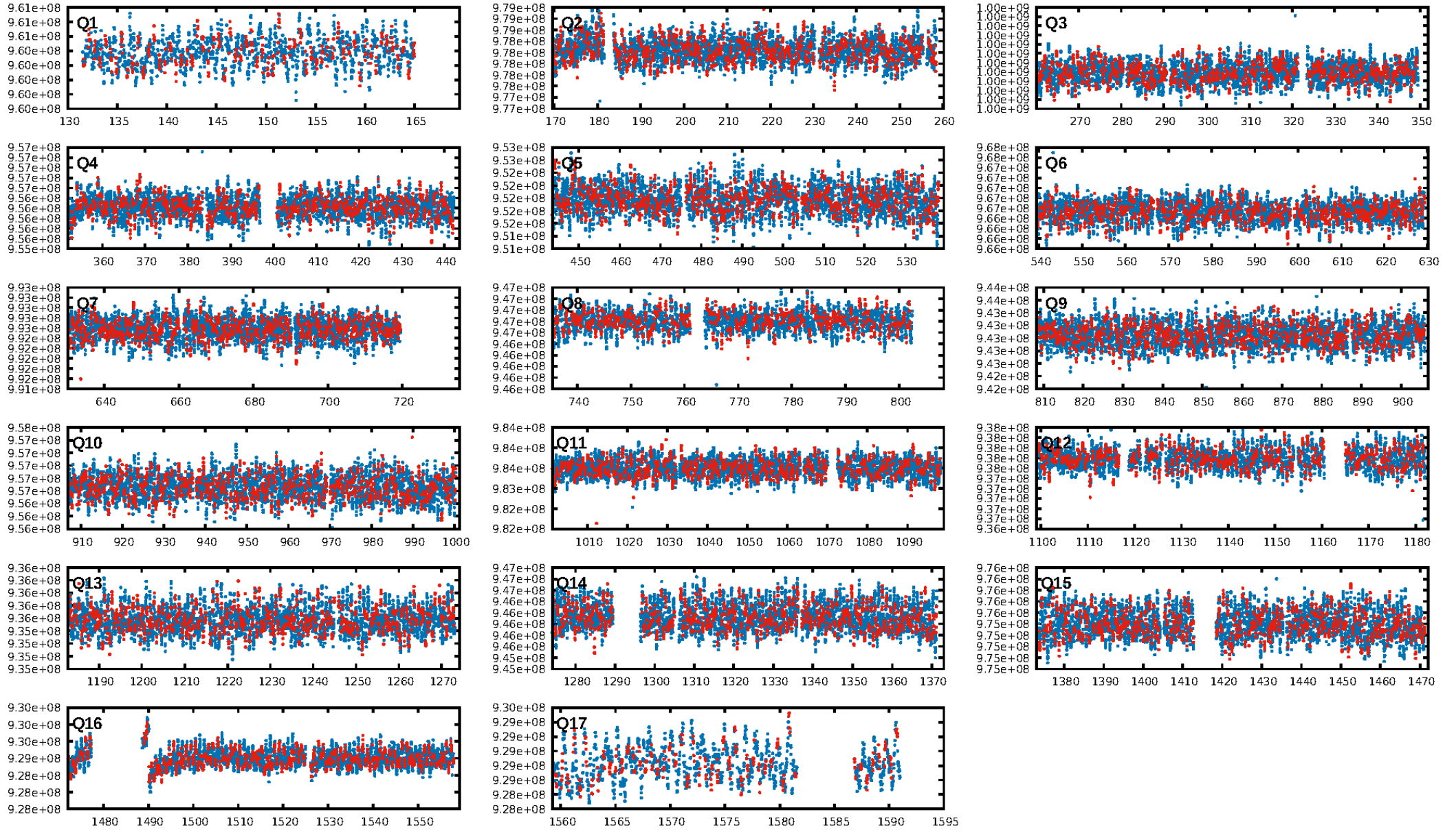
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.83e-19
RollingBand-fgt: 1.00 [2330/2337]
GhostDiagnostic-chr: 3.599
Centroid-sig: 0.1%
Centroid-so: 0.918 arcsec [2.03σ]
OotOffset-rm: 2.698 arcsec [3.07σ]
KicOffset-rm: 1.496 arcsec [1.93σ]
OotOffset-st: 3/3/2/4 [12]
KicOffset-st: 3/3/2/4 [12]
DiffImageQuality-fgm: 0.25 [3/12]
DiffImageOverlap-fno: 1.00 [17/17]

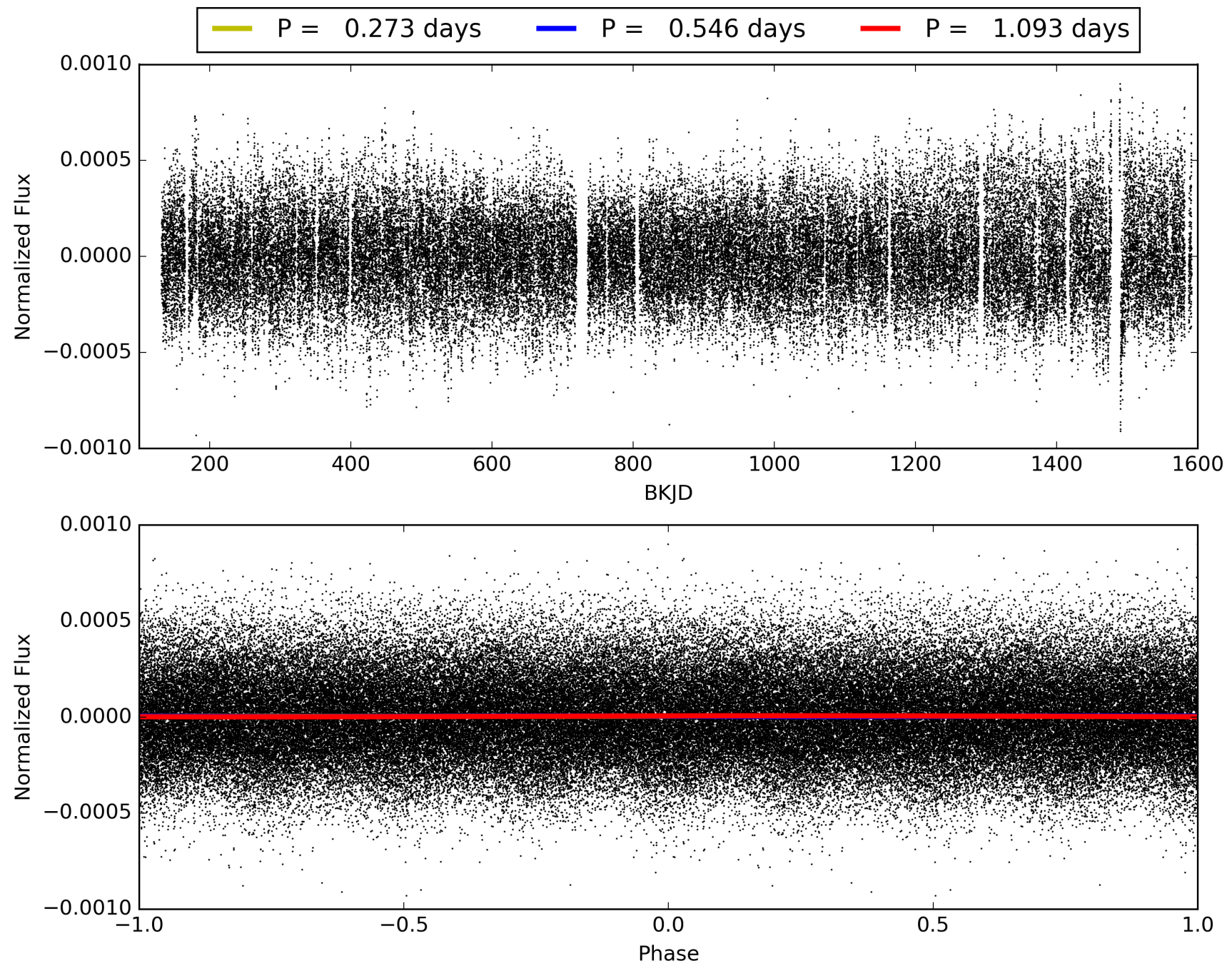
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:08:35 Z

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

TCE 008638728-01, PDC Light Curves

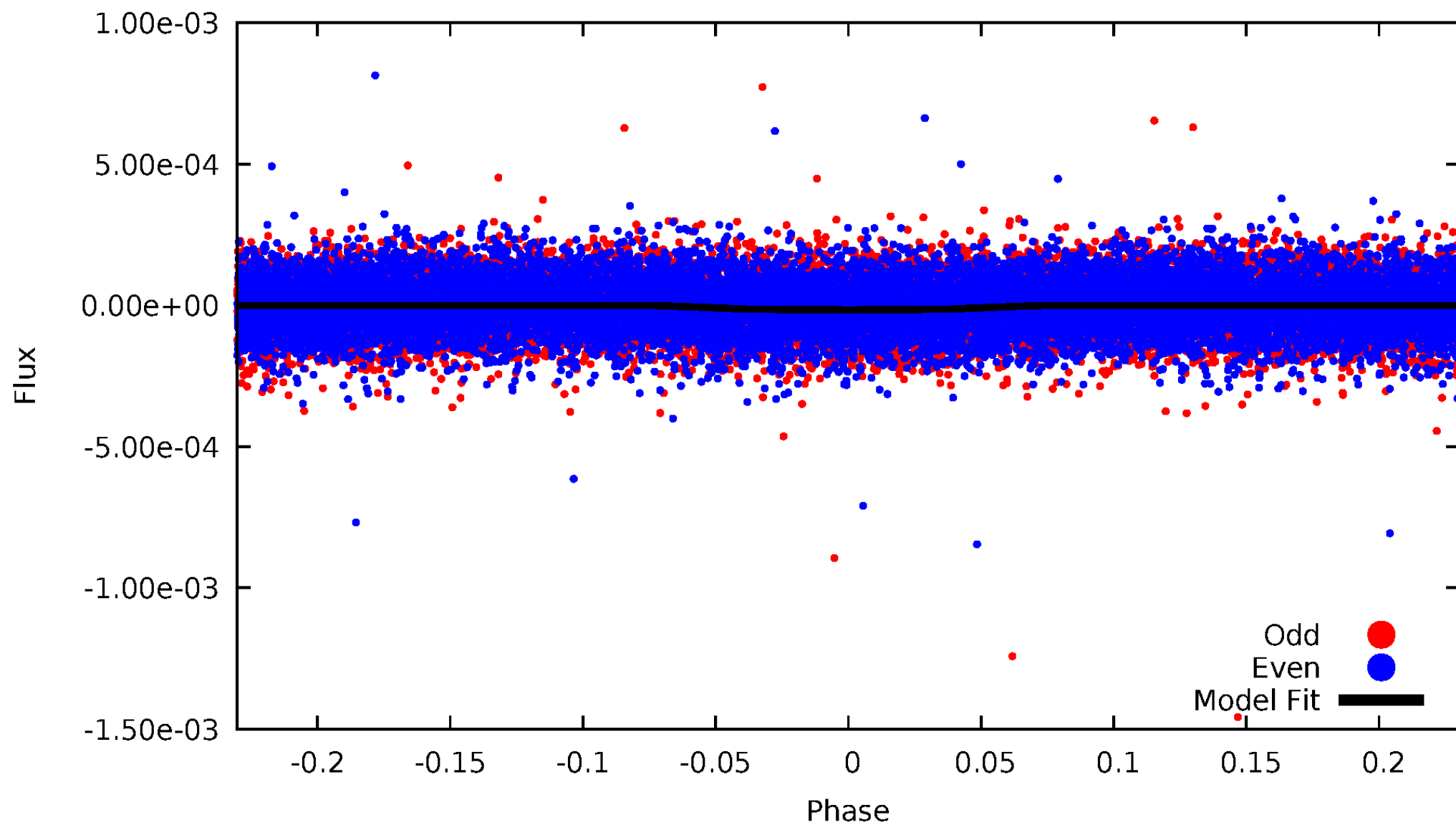


TCE 008638728-01



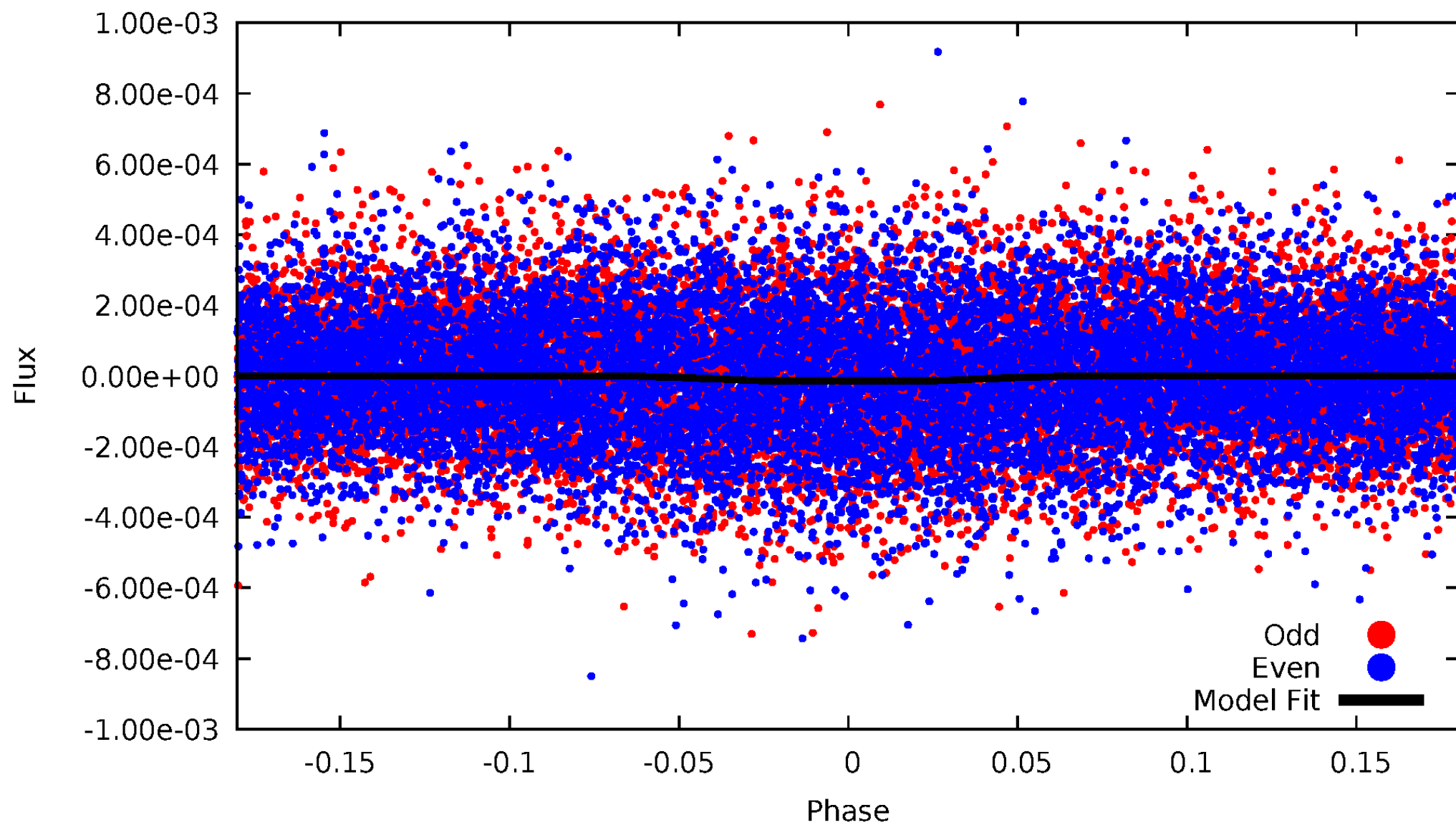
DV Odd/Even

TCE 008638728-01



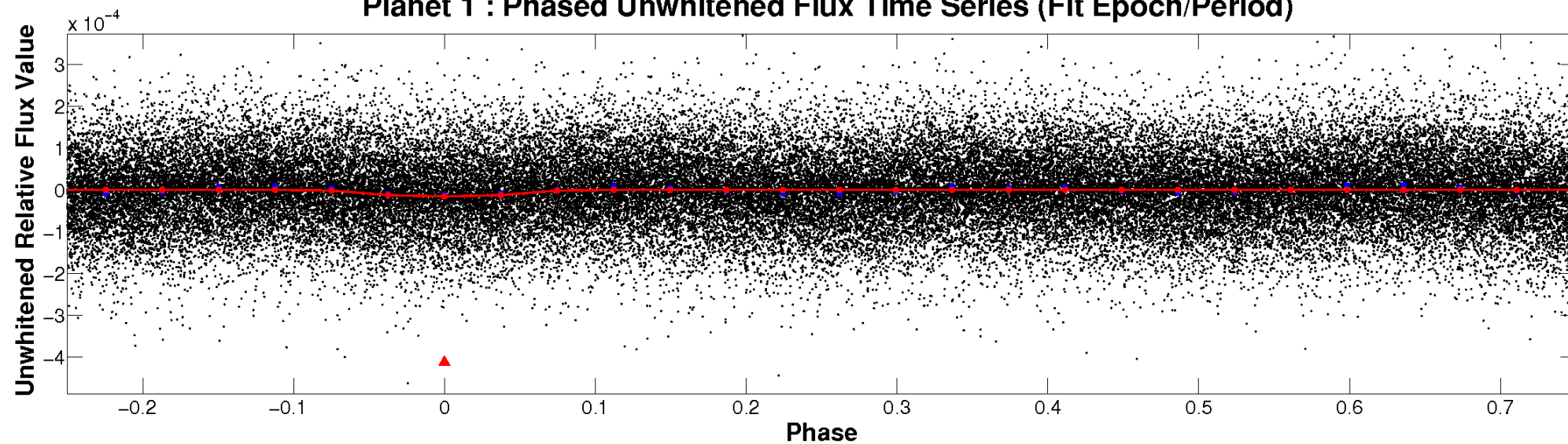
ALT Odd/Even

TCE 008638728-01

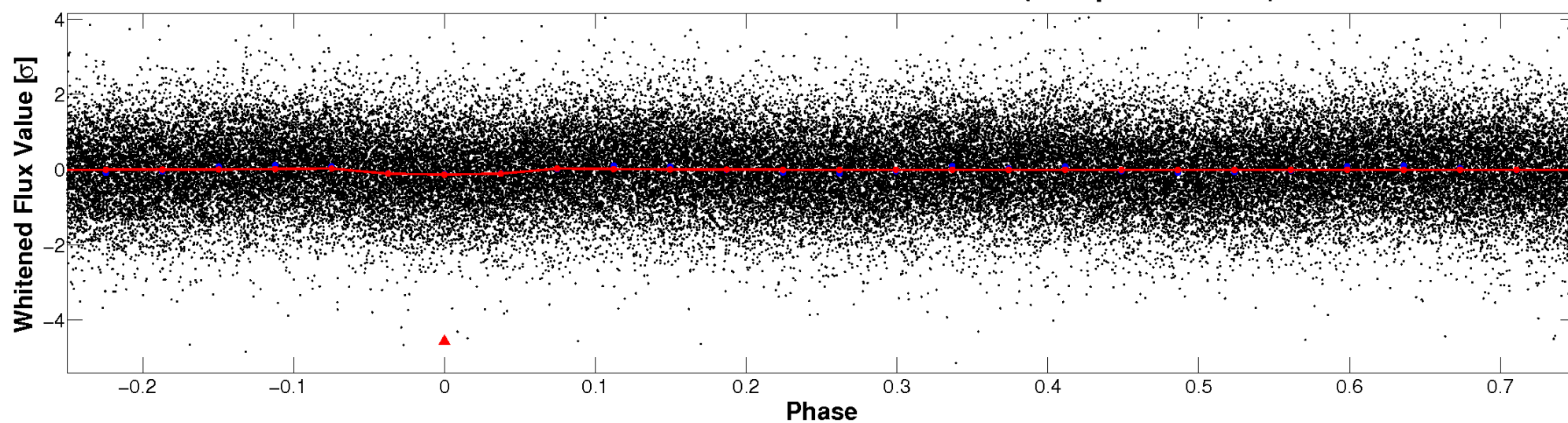


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

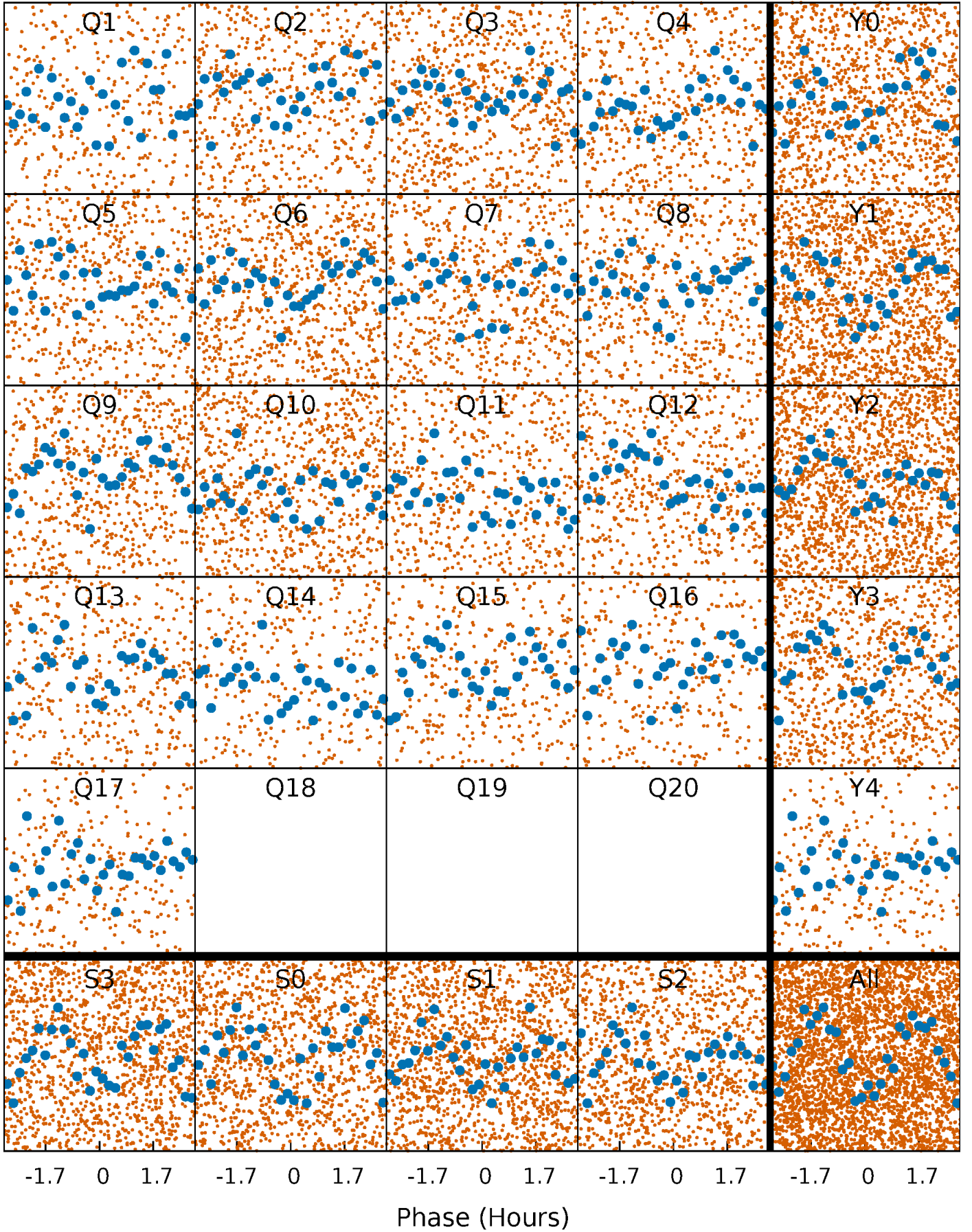


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



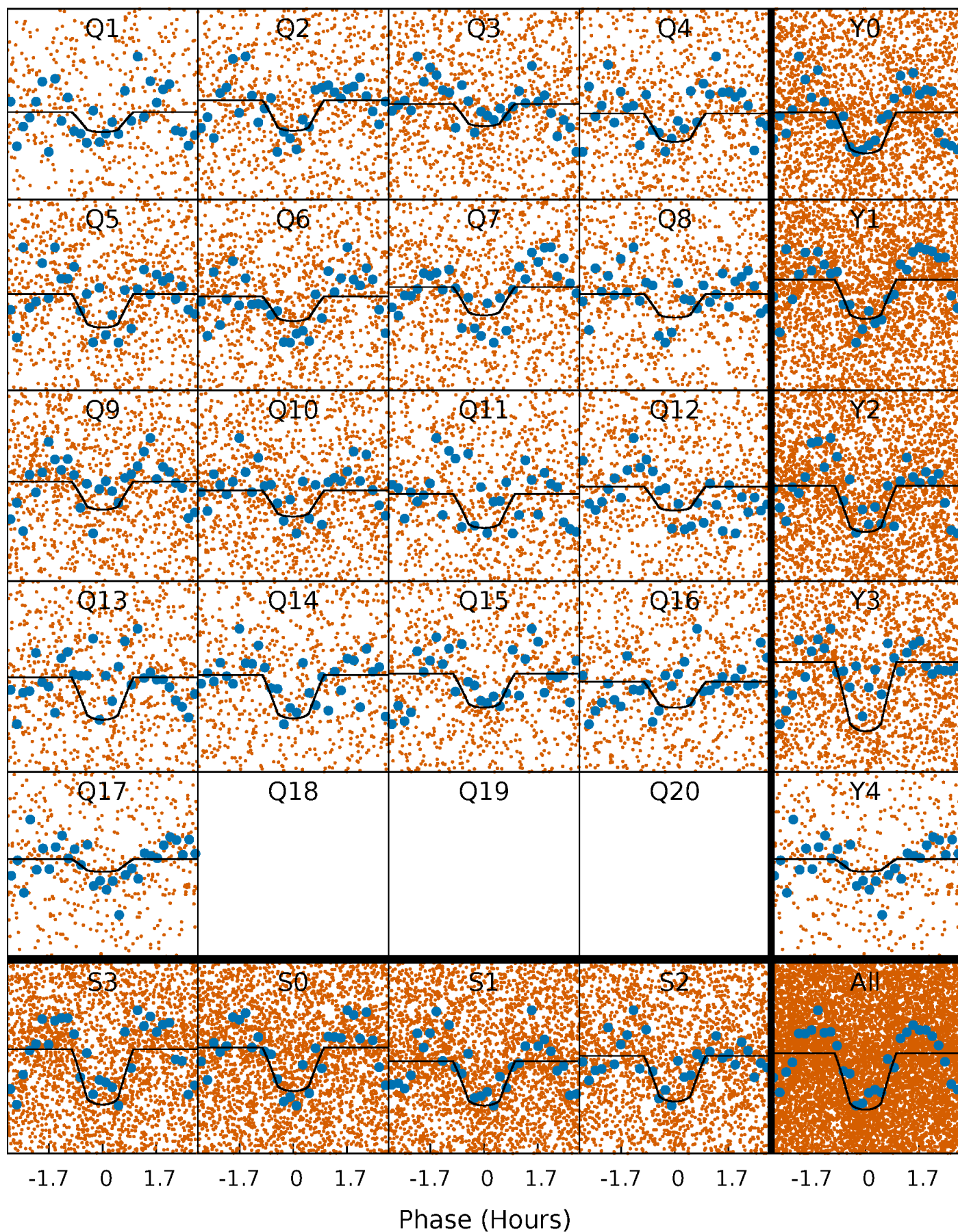
PDC Quarter-Phased Transit Curves

TCE 008638728-01 P= 0.546271 Days $T_0=131.619888$ (BKJD)



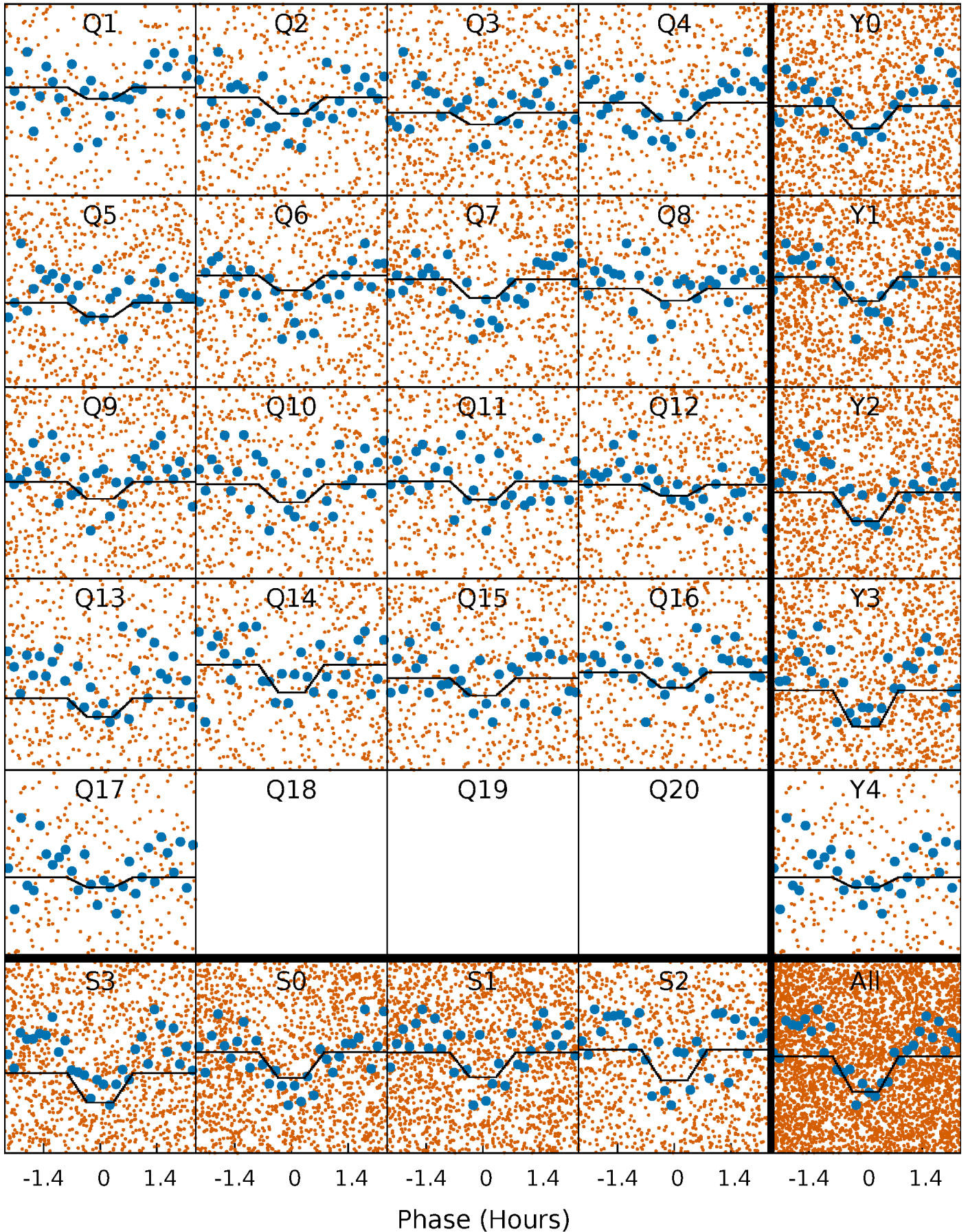
DV Quarter-Phased Transit Curves

TCE 008638728-01 P= 0.546271 Days $T_0=131.619888$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

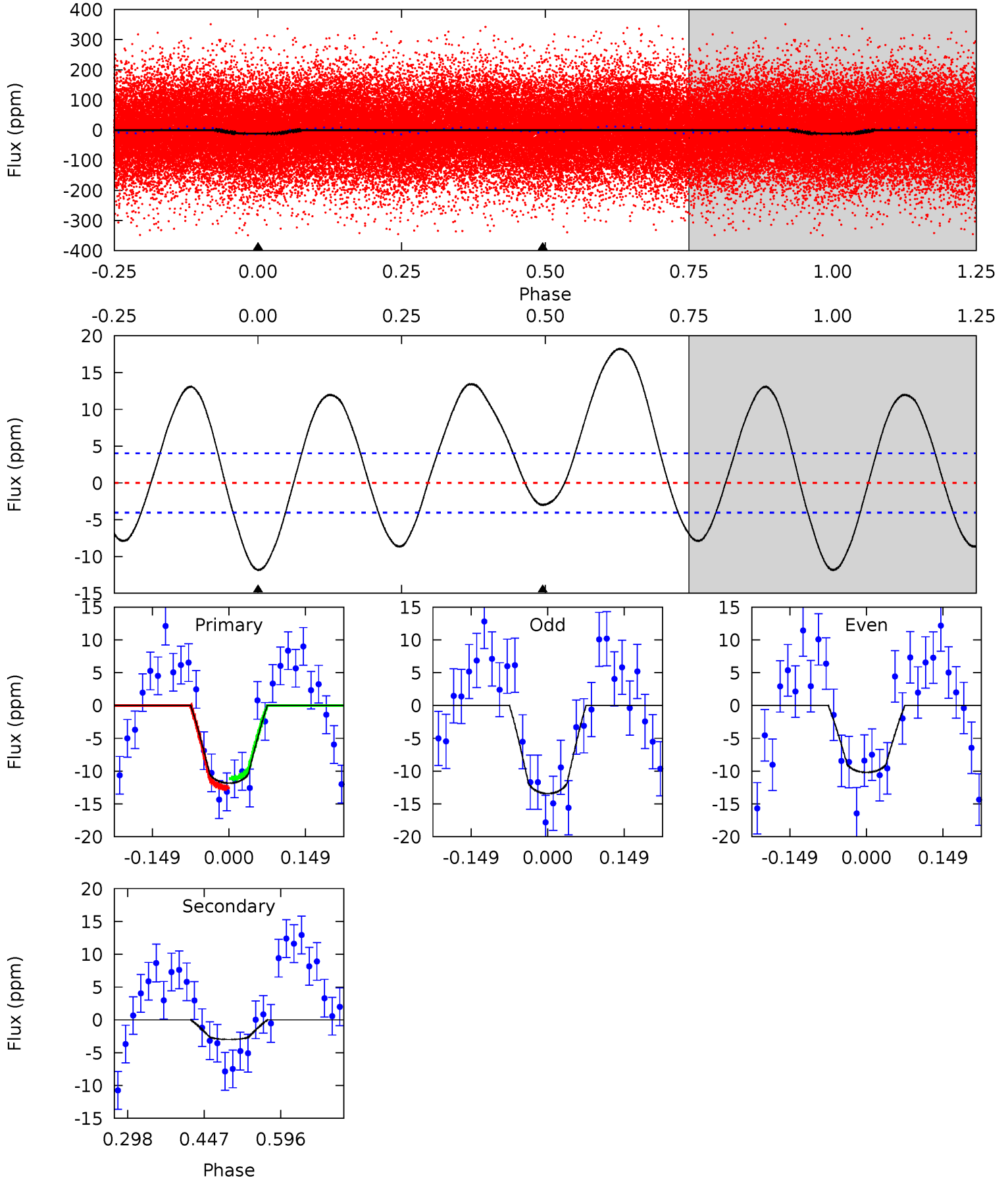
TCE 008638728-01 P= 0.546276 Days $T_0=131.614201$ (BKJD)



DV Model-Shift Uniqueness Test

008638728-01, P = 0.546271 Days, E = 131.073617 Days

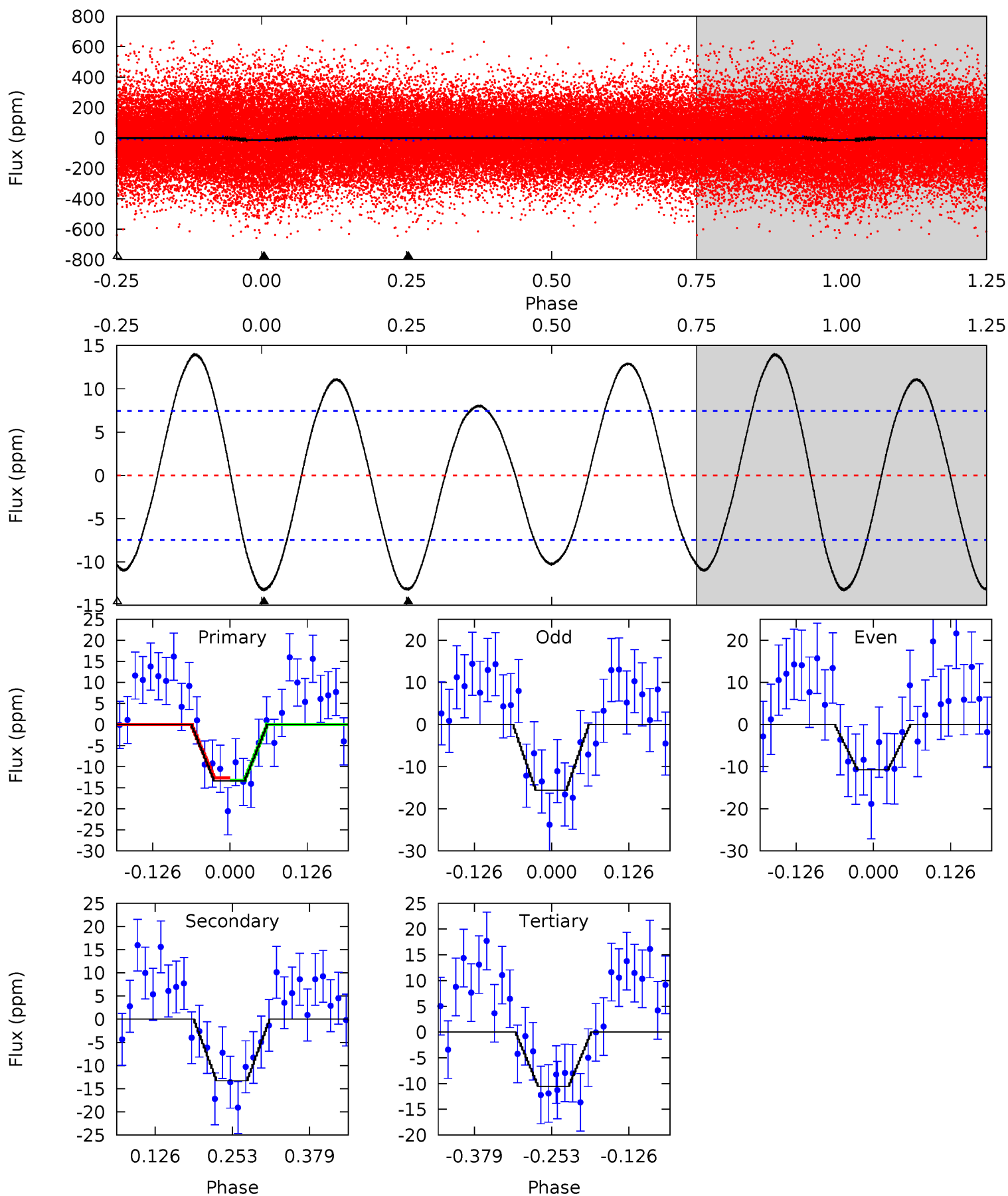
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	3.33	0	0	4.48	1.44	7.93	13.2	13.2	3.33	3.33	1.81	1.09	0.61	0.81



Alt Model-Shift Uniqueness Test

008638728-01, P = 0.546276 Days, E = 131.067925 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.10	8.05	6.38	0	4.52	1.53	4.77	1.72	8.10	1.67	8.05	1.39	0.85	0.51	0.14



Stellar Parameters For KIC 008638728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6723^{+181}_{-181}	$3.575^{+0.298}_{-0.053}$	$-0.080^{+0.300}_{-0.250}$	$3.602^{+0.316}_{-1.264}$	$1.781^{+0.173}_{-0.321}$	$0.054^{+0.108}_{-0.009}$
	+3%/-3%	+8%/-1%	+375%/-312%	+9%/-35%	+10%/-18%	+202%/-18%
Source	PHO1	FLK73	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 008638728-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 1	$1.60^{+0.28}_{-0.34}$	6136^{+294}_{-458}	-4332^{+1339}_{-429}	$0.162^{+0.120}_{-0.060}$
Alt.	-13 ± 2	$1.35^{+0.31}_{-0.26}$	6128^{+286}_{-511}	6085^{+807}_{-720}	$1.008^{+0.534}_{-0.337}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

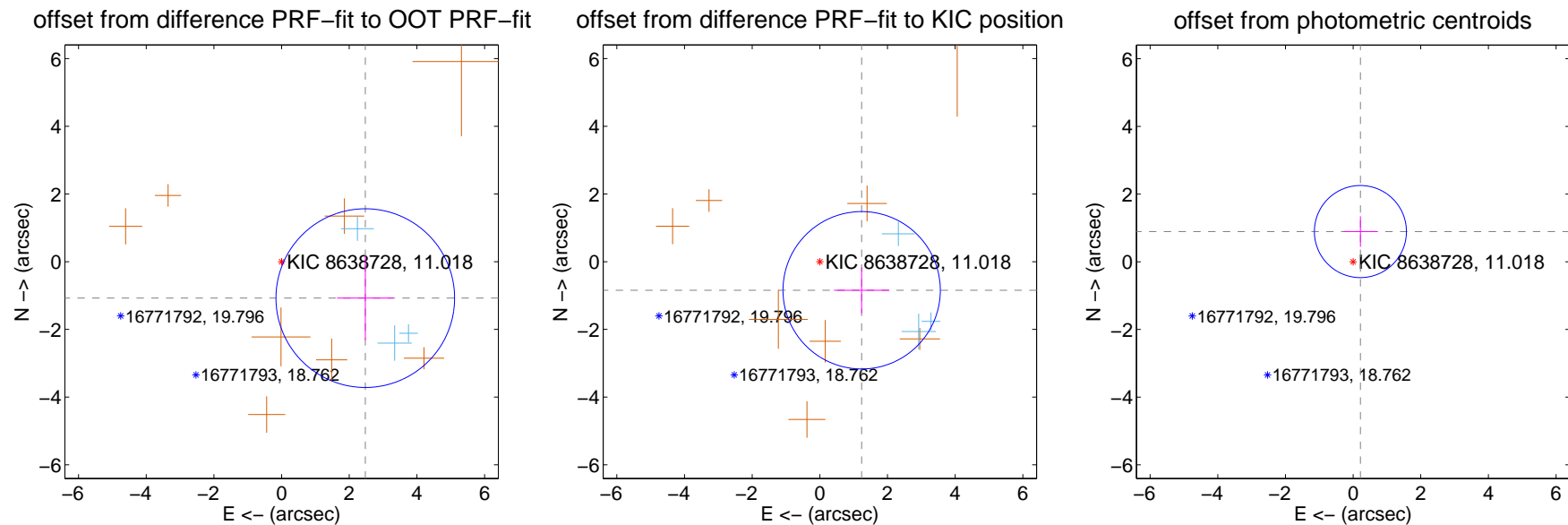
DV Centroid Data

Supplemental centroid analysis for 008638728-01. **Kepler magnitude: 11.02.** Transit SNR 10.26

There are 3 quarters with good PRF difference image offsets

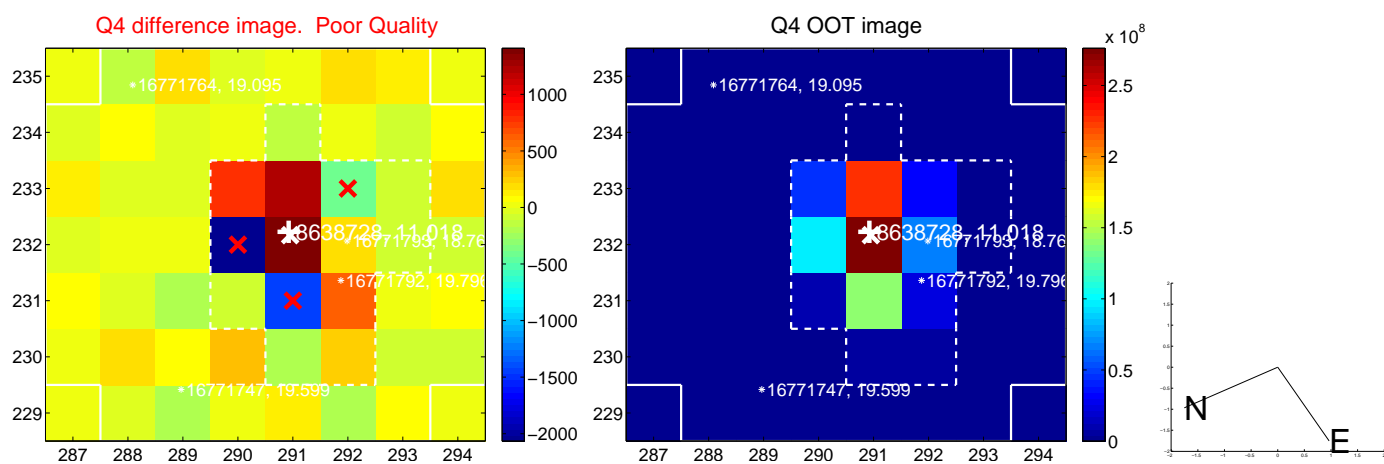
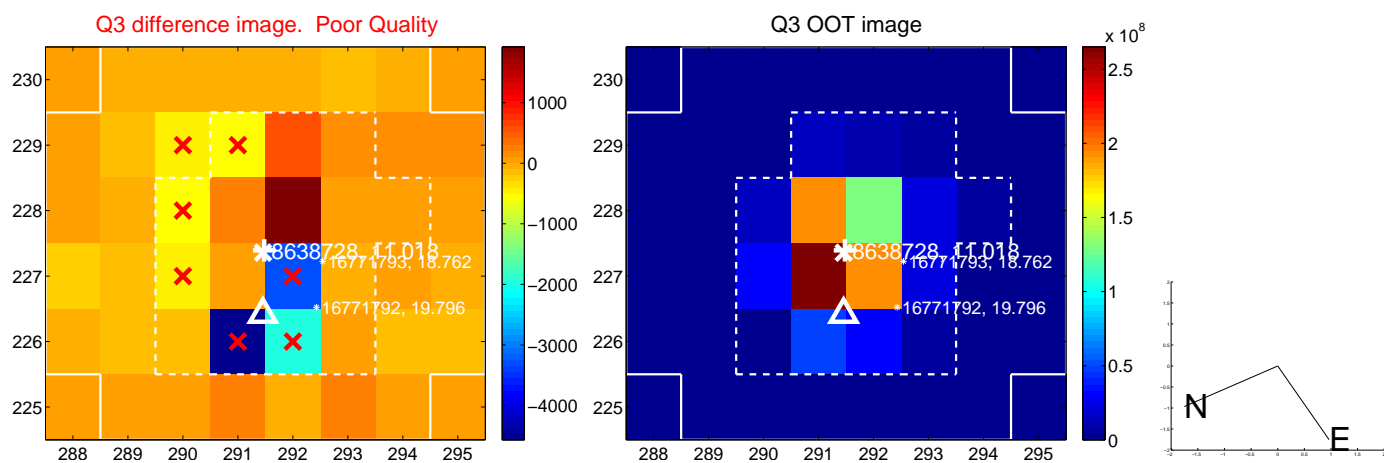
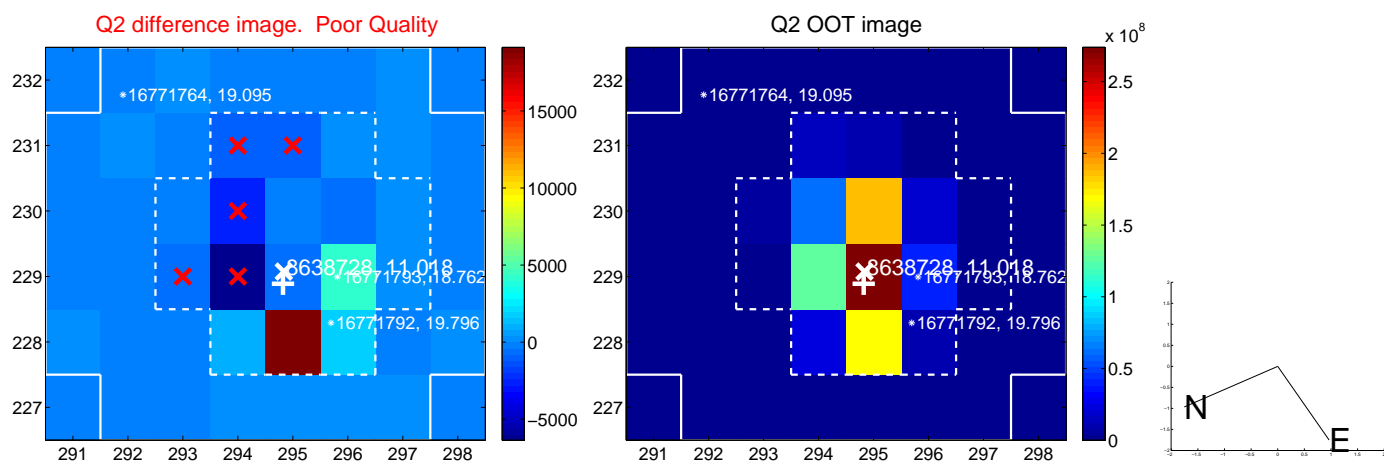
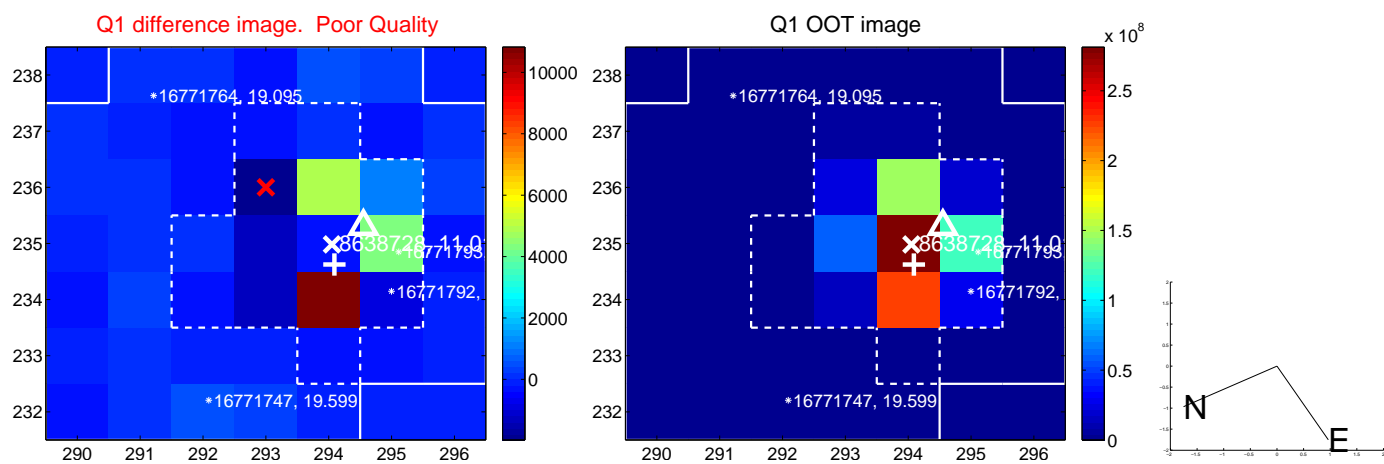
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.698 ± 0.880	3.07	-2.474 ± 0.836	-1.076 ± 1.234
PRF-fit source offset from KIC position	1.496 ± 0.775	1.93	-1.236 ± 0.817	-0.844 ± 0.676
photometric centroid source offset	0.92 ± 0.45	2.03	-0.22 ± 0.51	0.89 ± 0.45

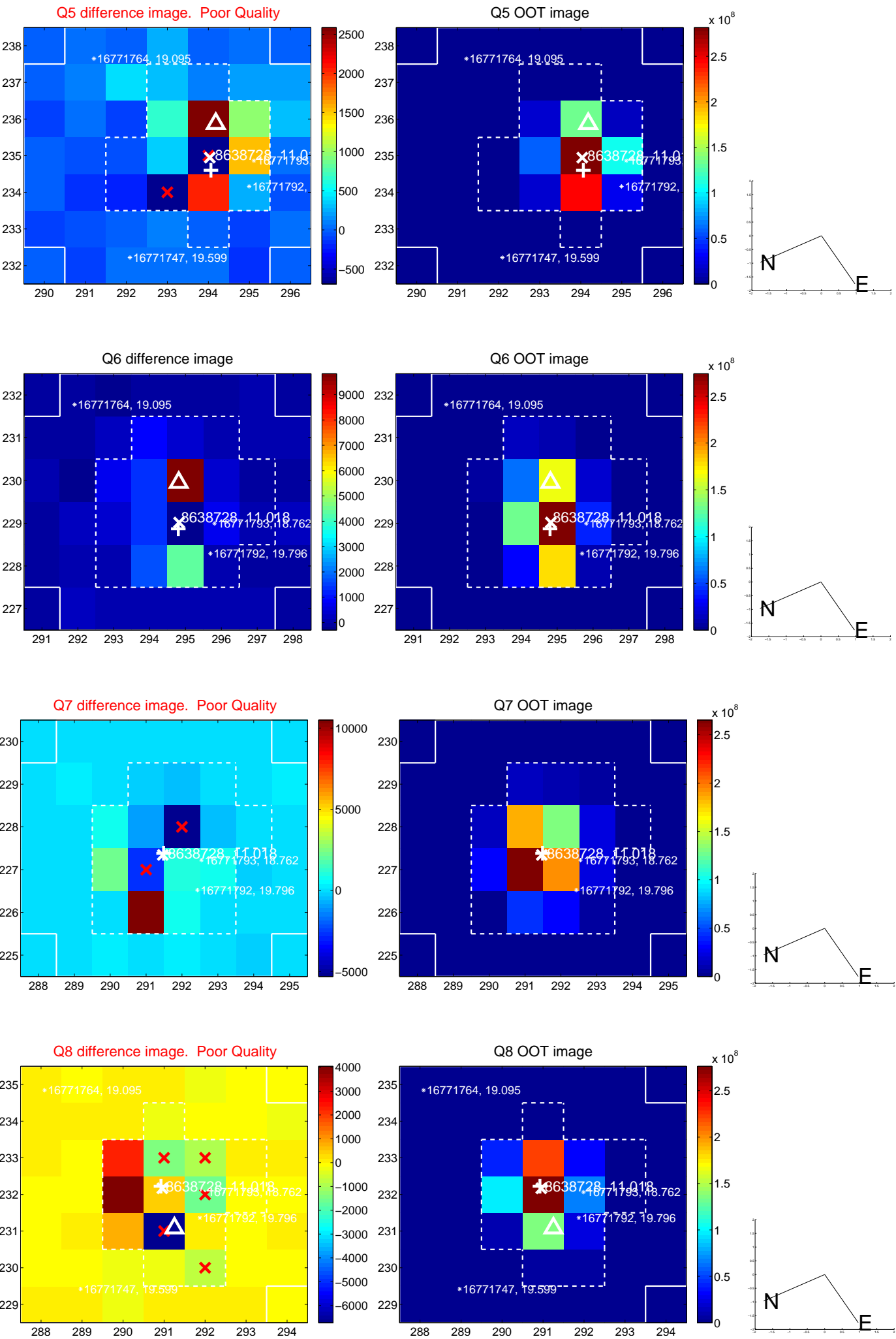


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

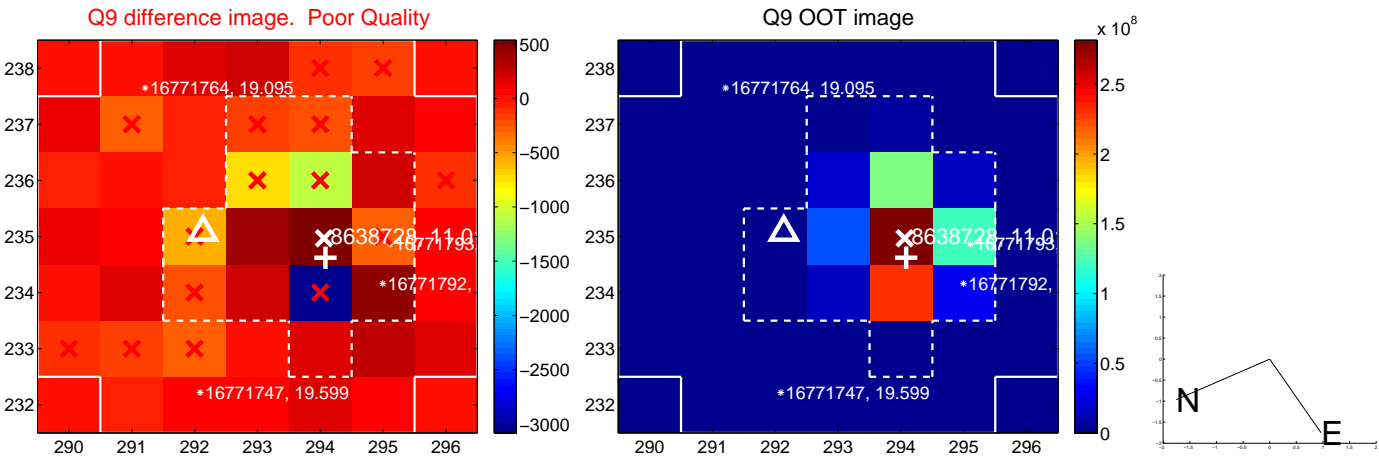
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



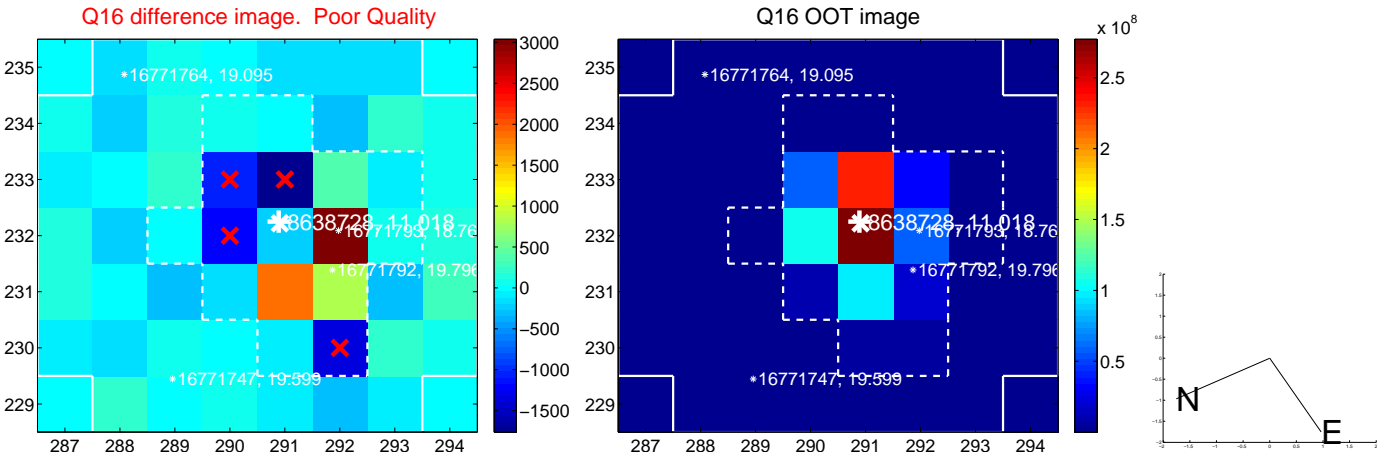
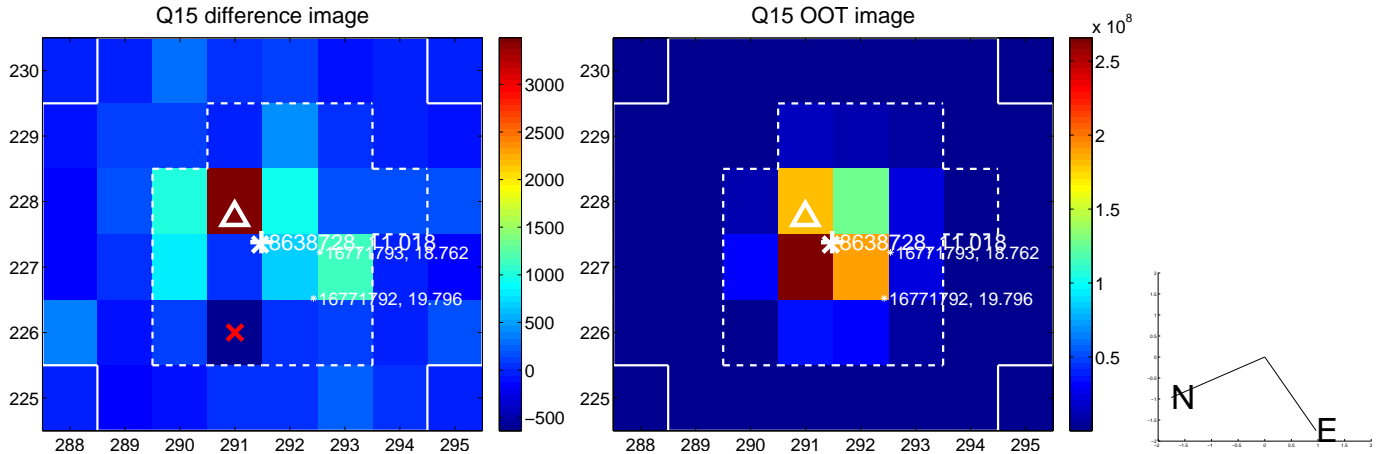
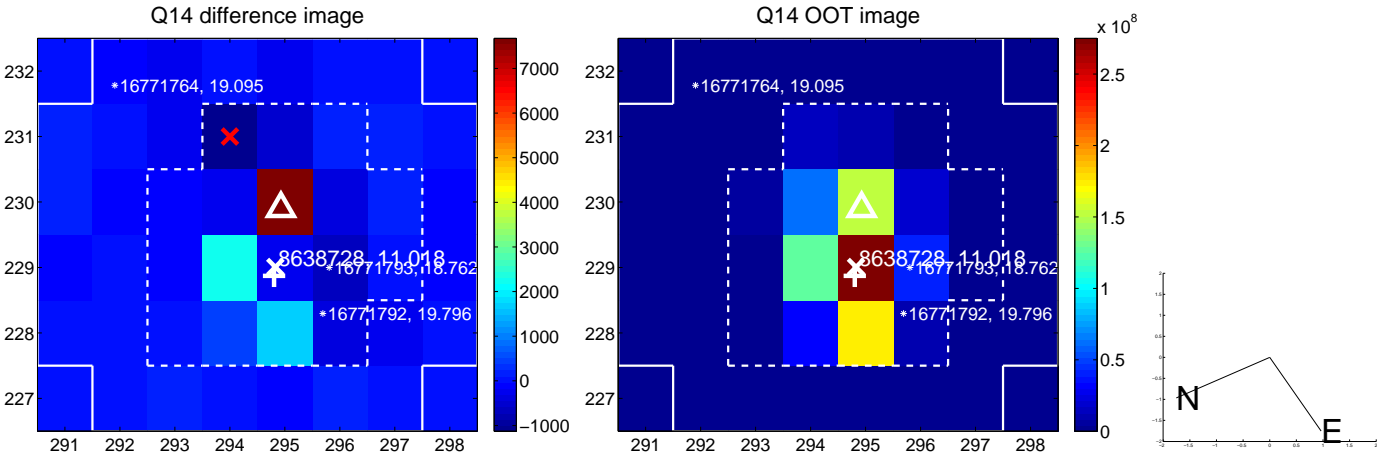
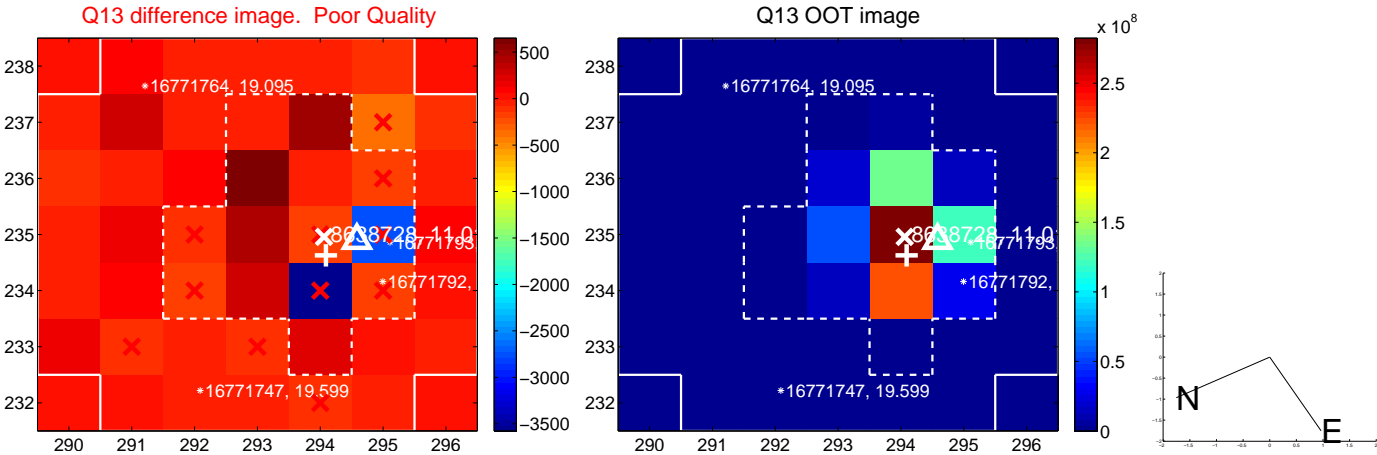
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



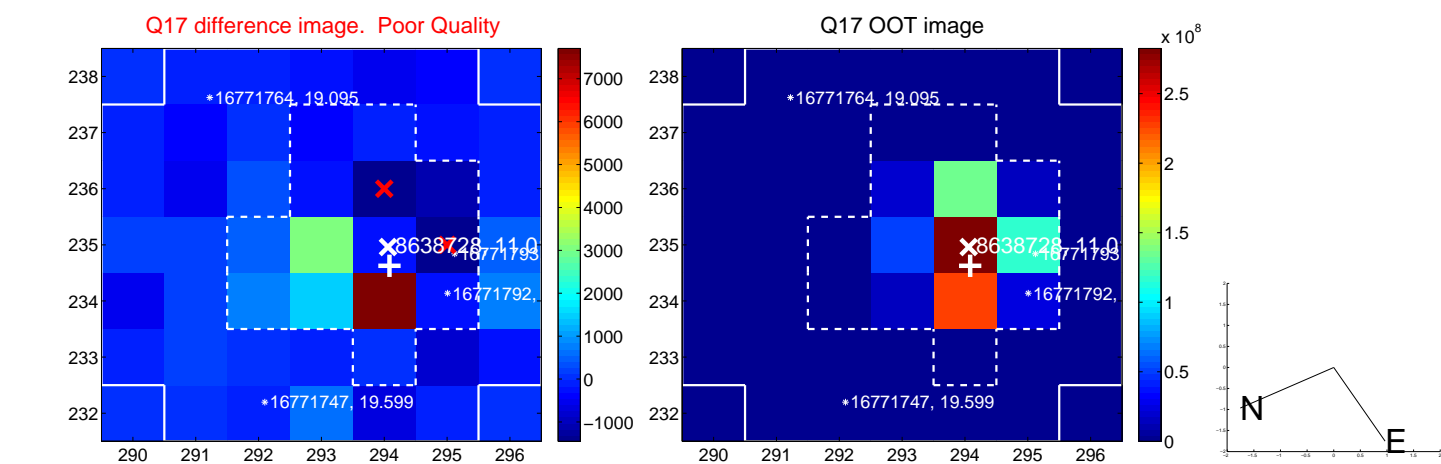
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



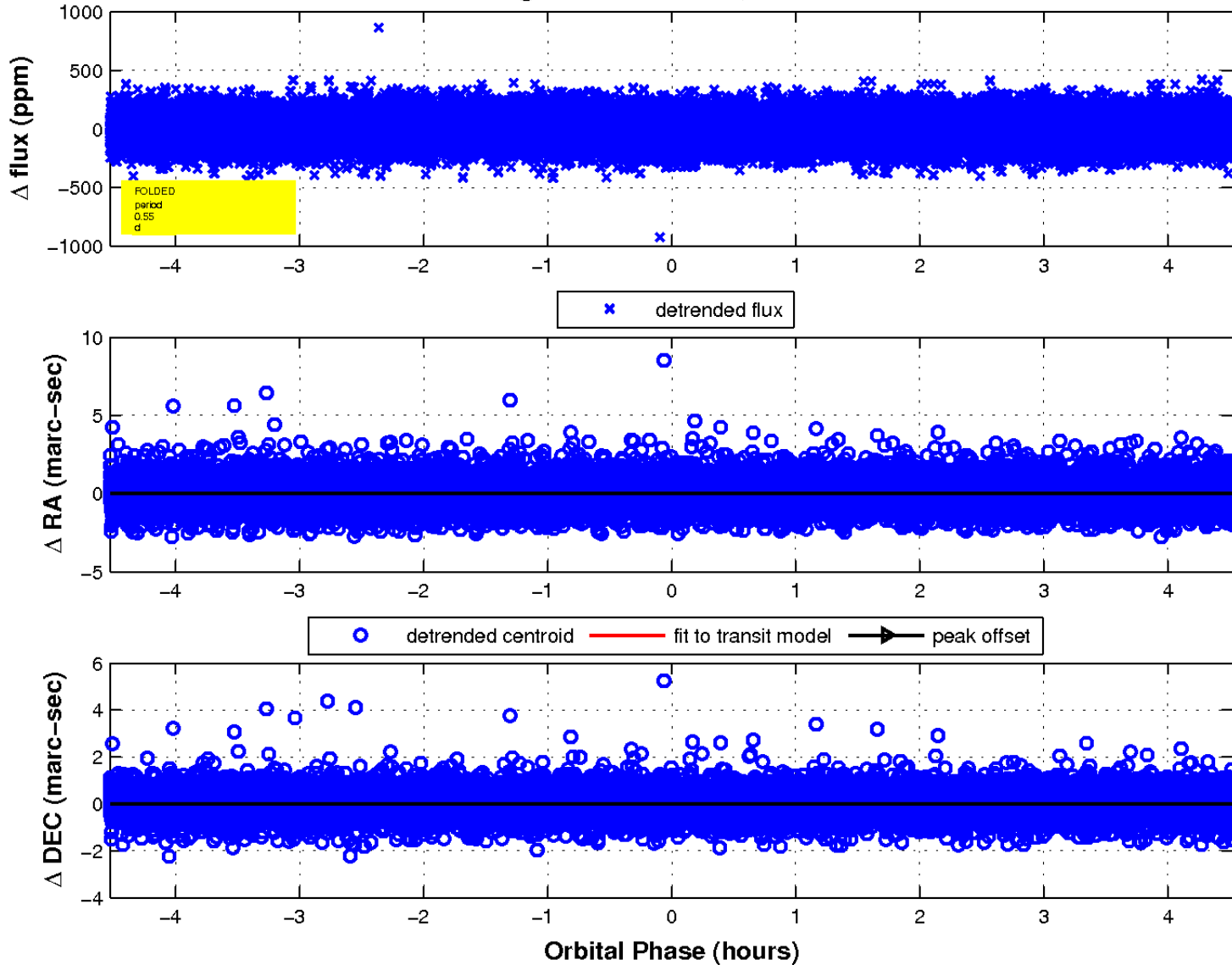
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

