

KIC 008362712

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})
008362712-01	OBS	No	374.508936	259.592133	813.5	39.609	10.4	12.5	1.06	6053	4.96	1.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008362712-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—EPHEM_MATCH

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.

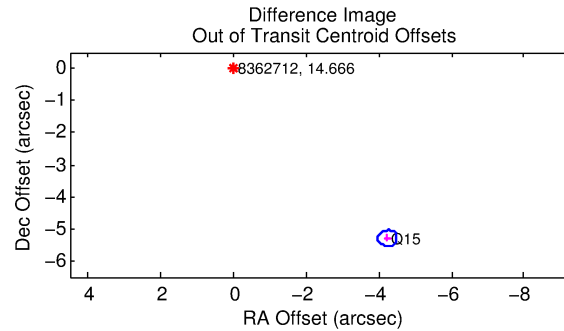
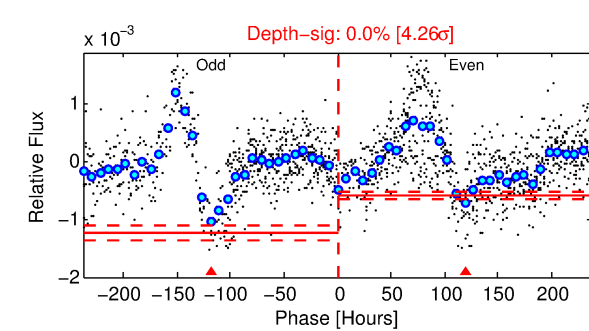
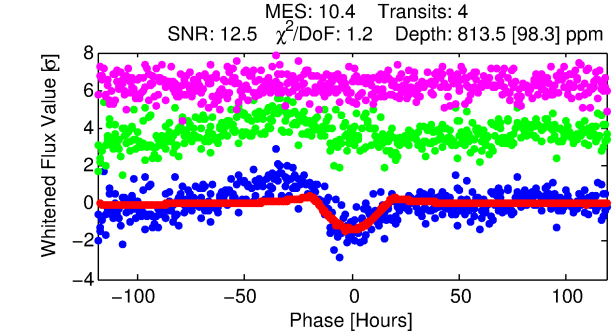
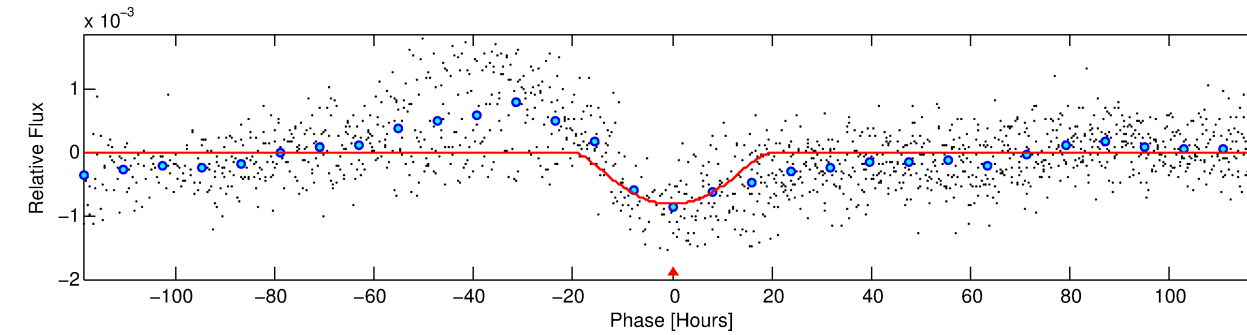
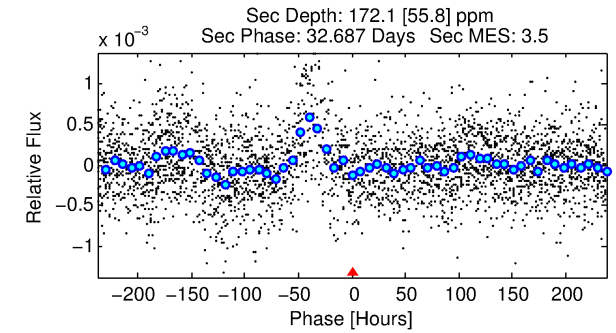
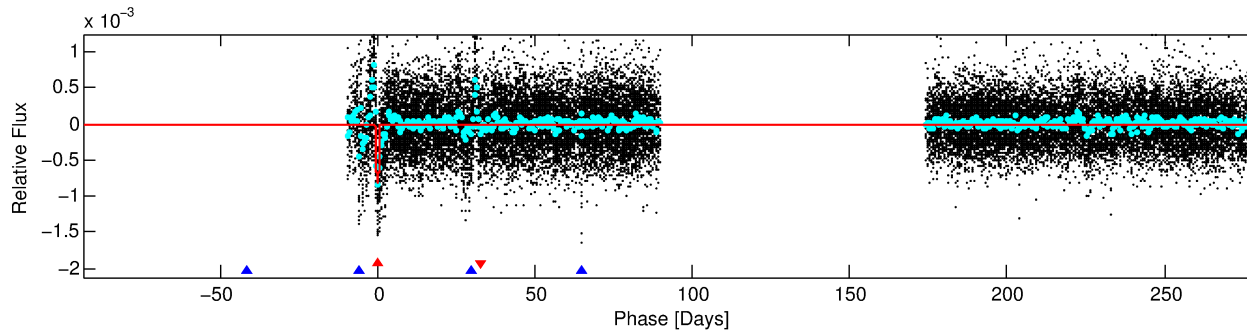
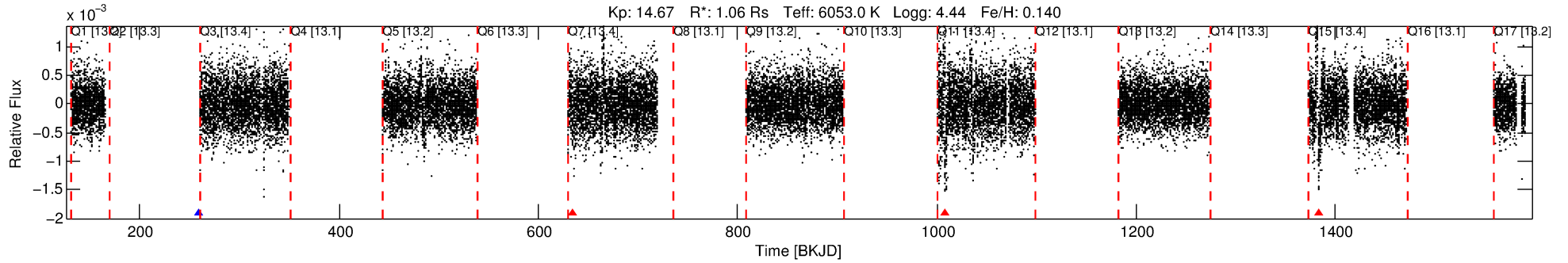
Ephemeris Match Information For 008362712-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008362712-01	8362712	008160932-01	8160932	1:1	1926.3	484	-1	13.48	14.67	6.37	Col-Anomaly	1	0.96	0.86

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8362712 Candidate: 1 of 2 Period: 374.509 d



DV Fit Results:

Period = 374.50894 [0.03402] d
Epoch = 259.5921 [0.0720] BKJD
Rp/R* = 0.0428 [0.0476]
a/R* = 24.30 [8.62]
b = 0.99 [0.08]
Seff = 1.21 [0.53]
Teq = 267 [29] K
Rp = 4.96 [5.76] Re
a = 1.0603 [0.2984] AU
Ag = 4319.24 [9864.99] [0.44σ]
Teffp = 3350 [1886] K [1.63σ]

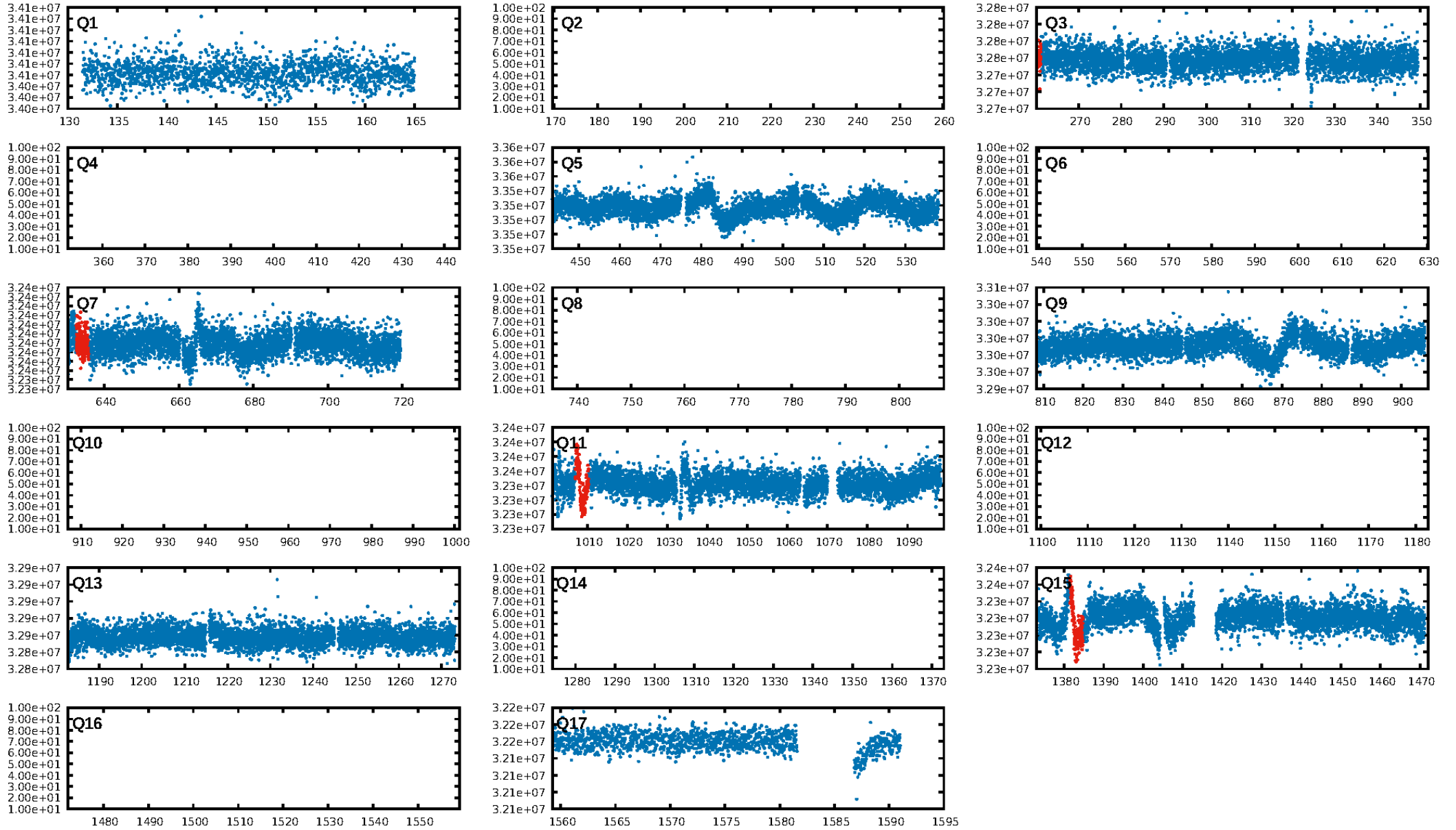
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.32σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.90e-20
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.8145
Centroid-sig: 0.0%
Centroid-so: 5.509 arcsec [2.99σ]
OotOffset-rm: 6.787 arcsec [79.37σ]
KicOffset-rm: 6.554 arcsec [76.60σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

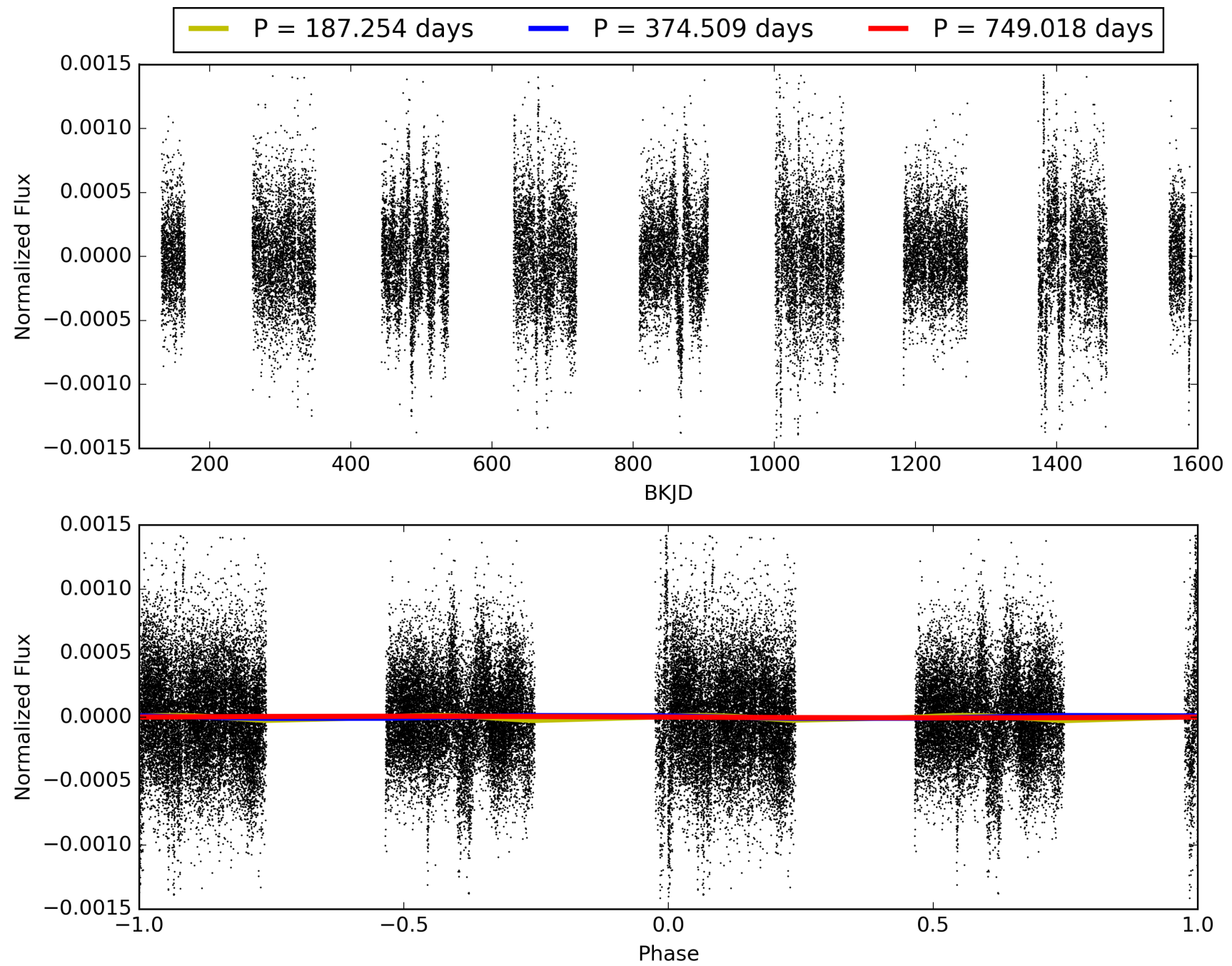
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:02:51 Z

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

TCE 008362712-01, PDC Light Curves

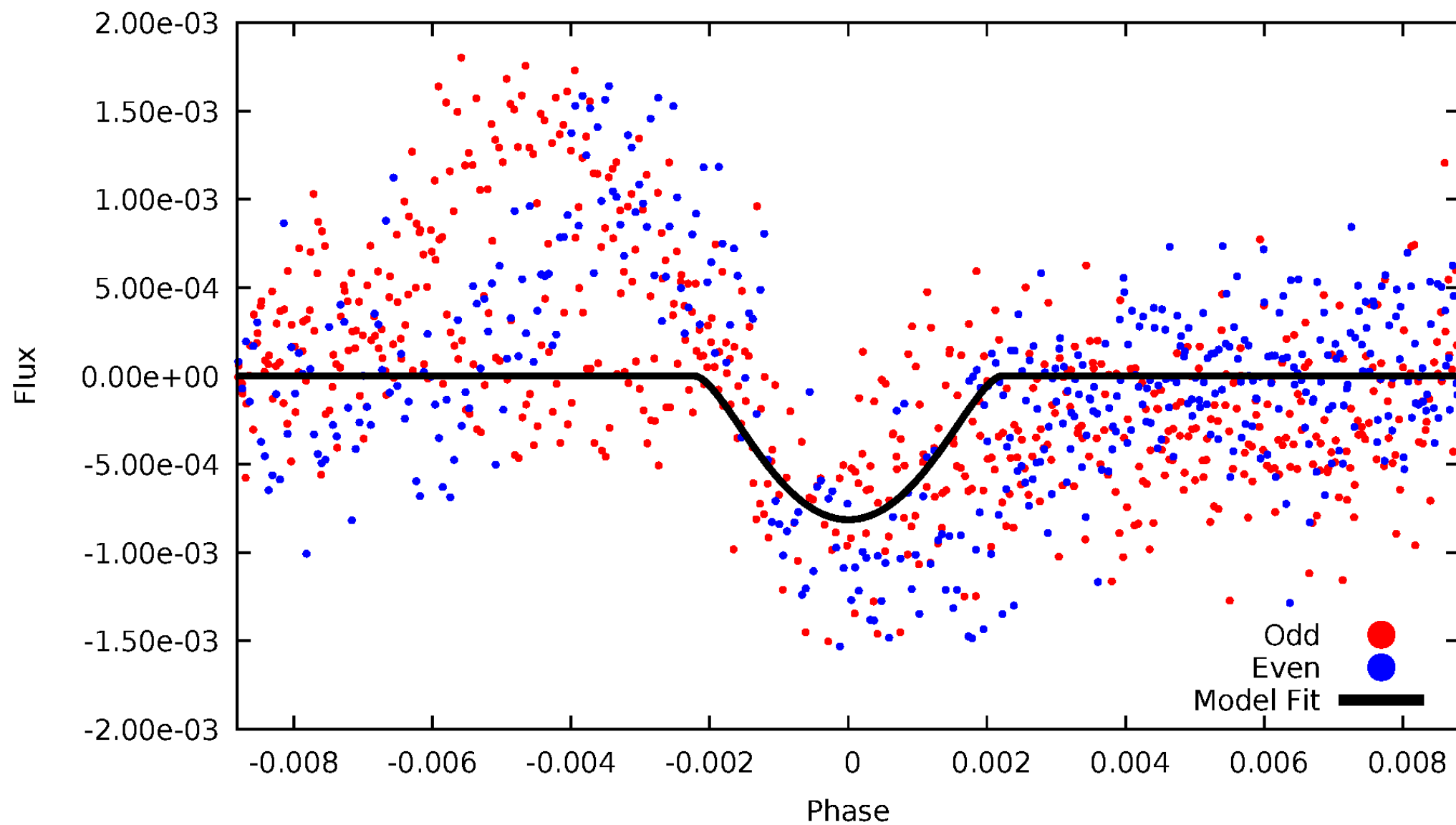


TCE 008362712-01



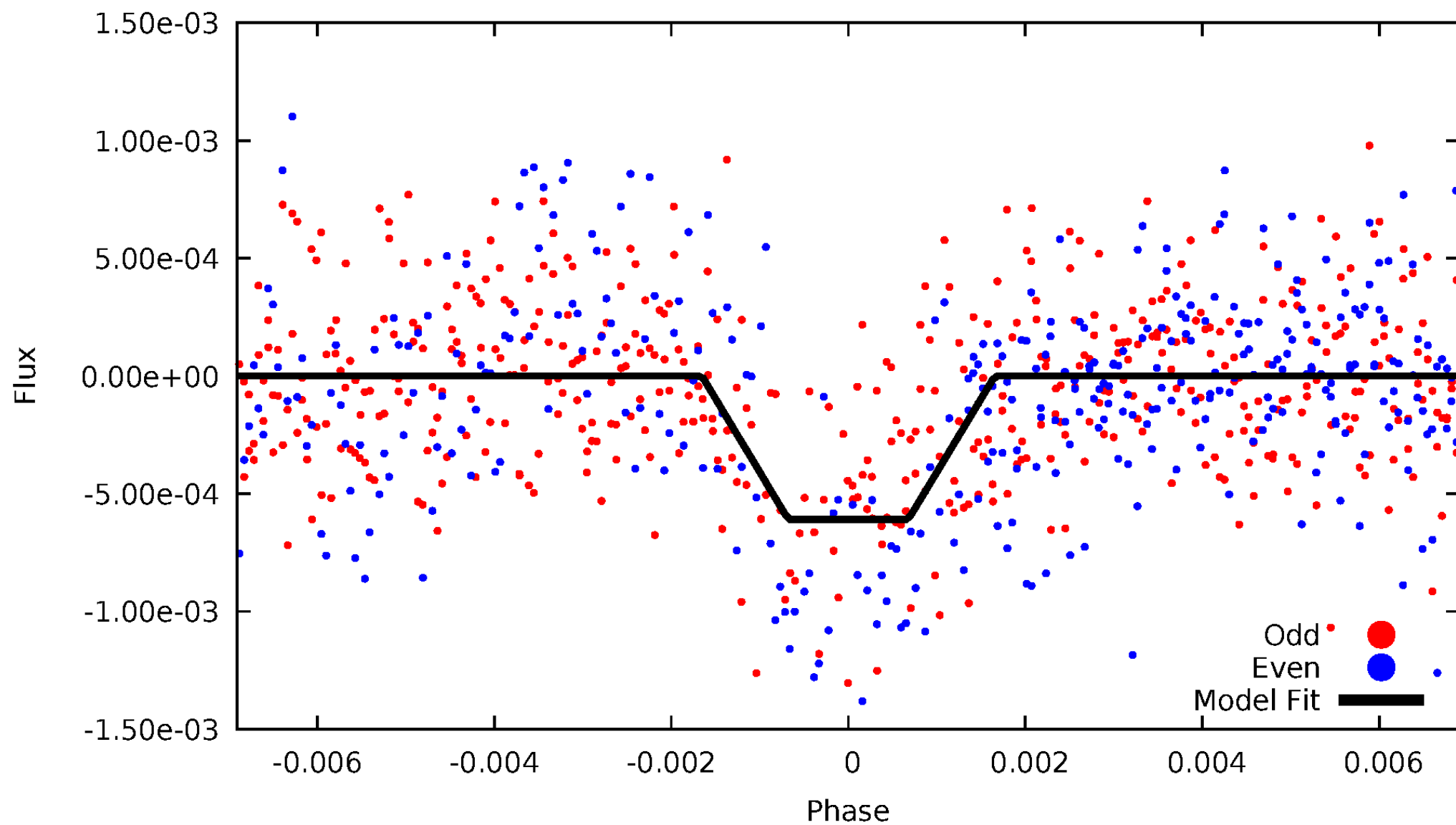
DV Odd/Even

TCE 008362712-01



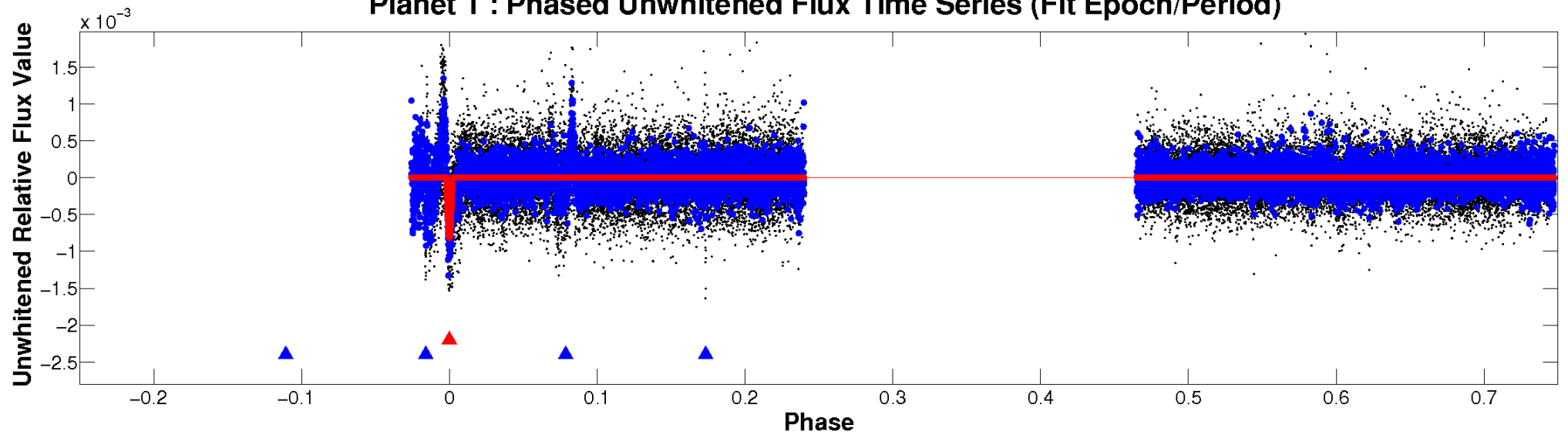
ALT Odd/Even

TCE 008362712-01

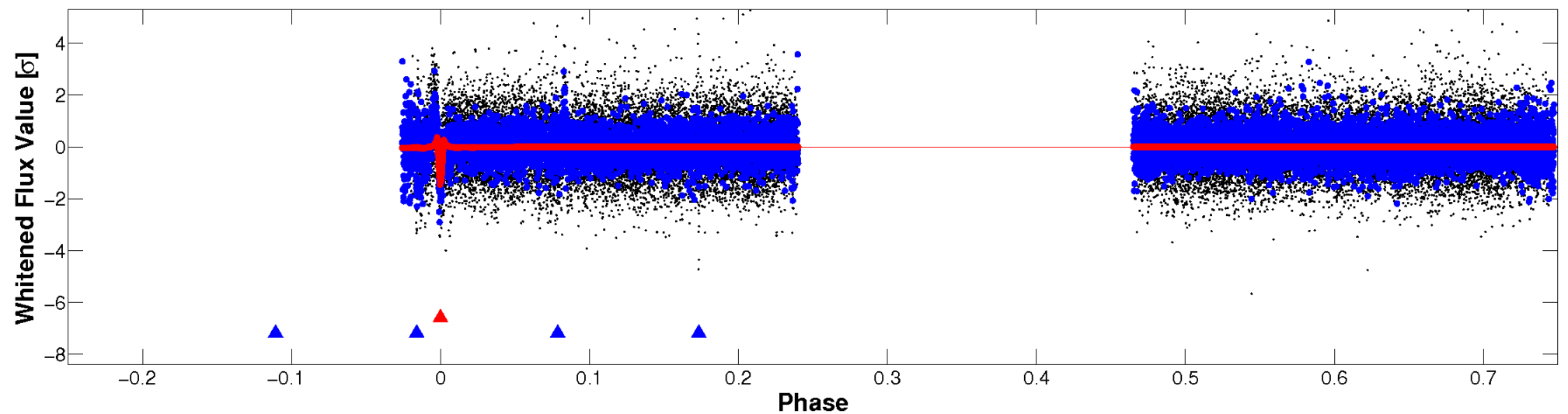


Non-Whitened Vs. Whitened Light Curve

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

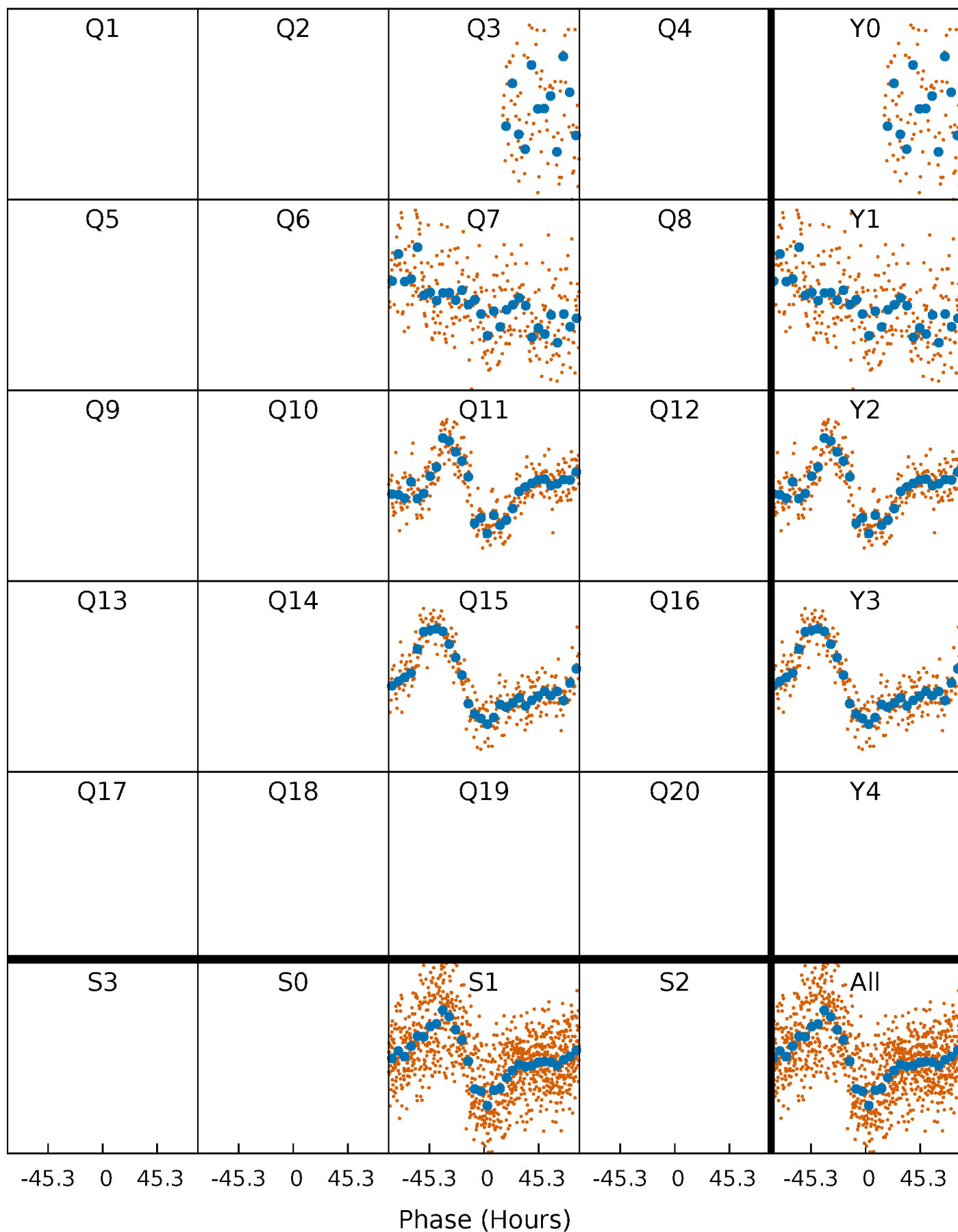


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



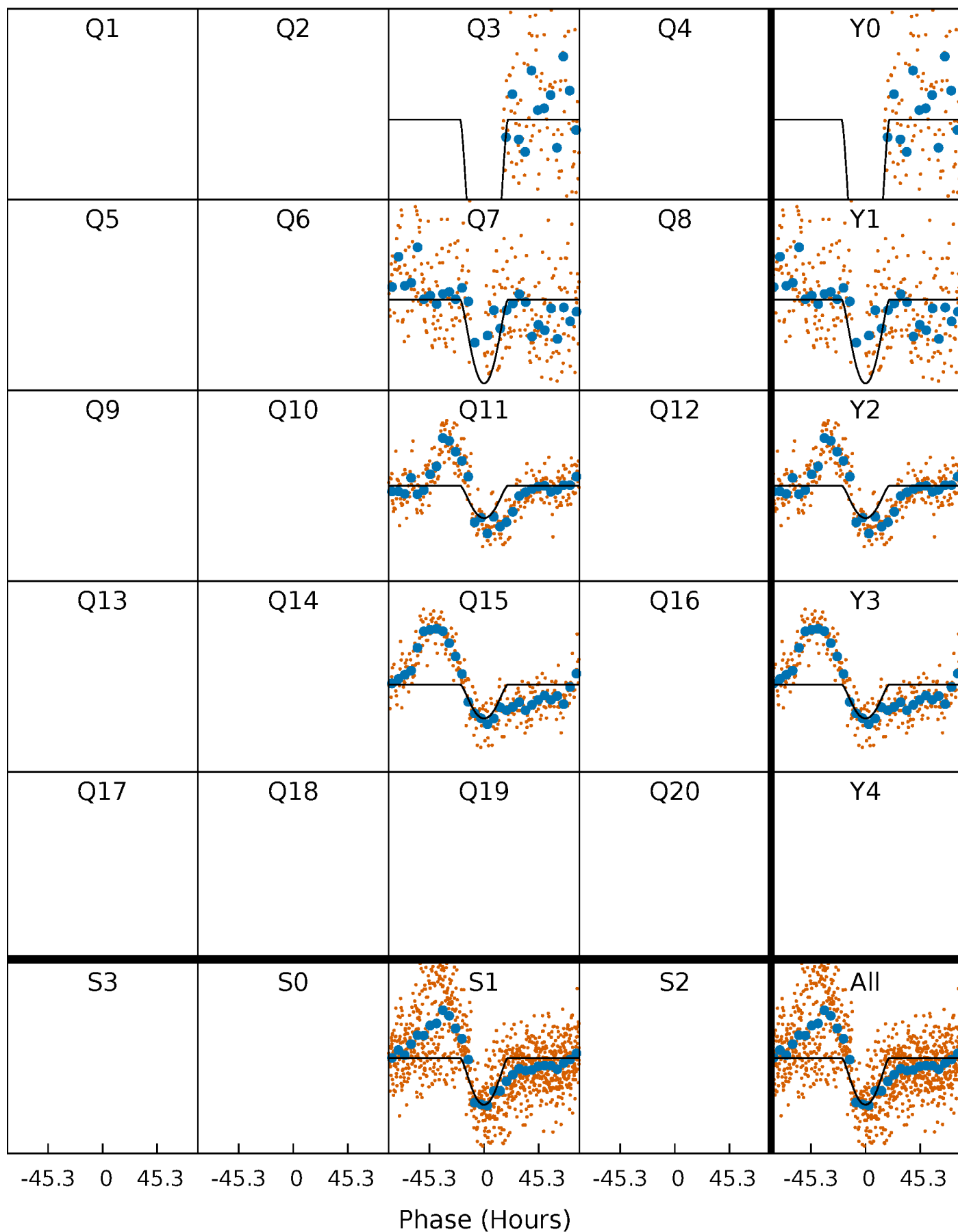
PDC Quarter-Phased Transit Curves

TCE 008362712-01 P=374.508936 Days $T_0=259.592133$ (BKJD)



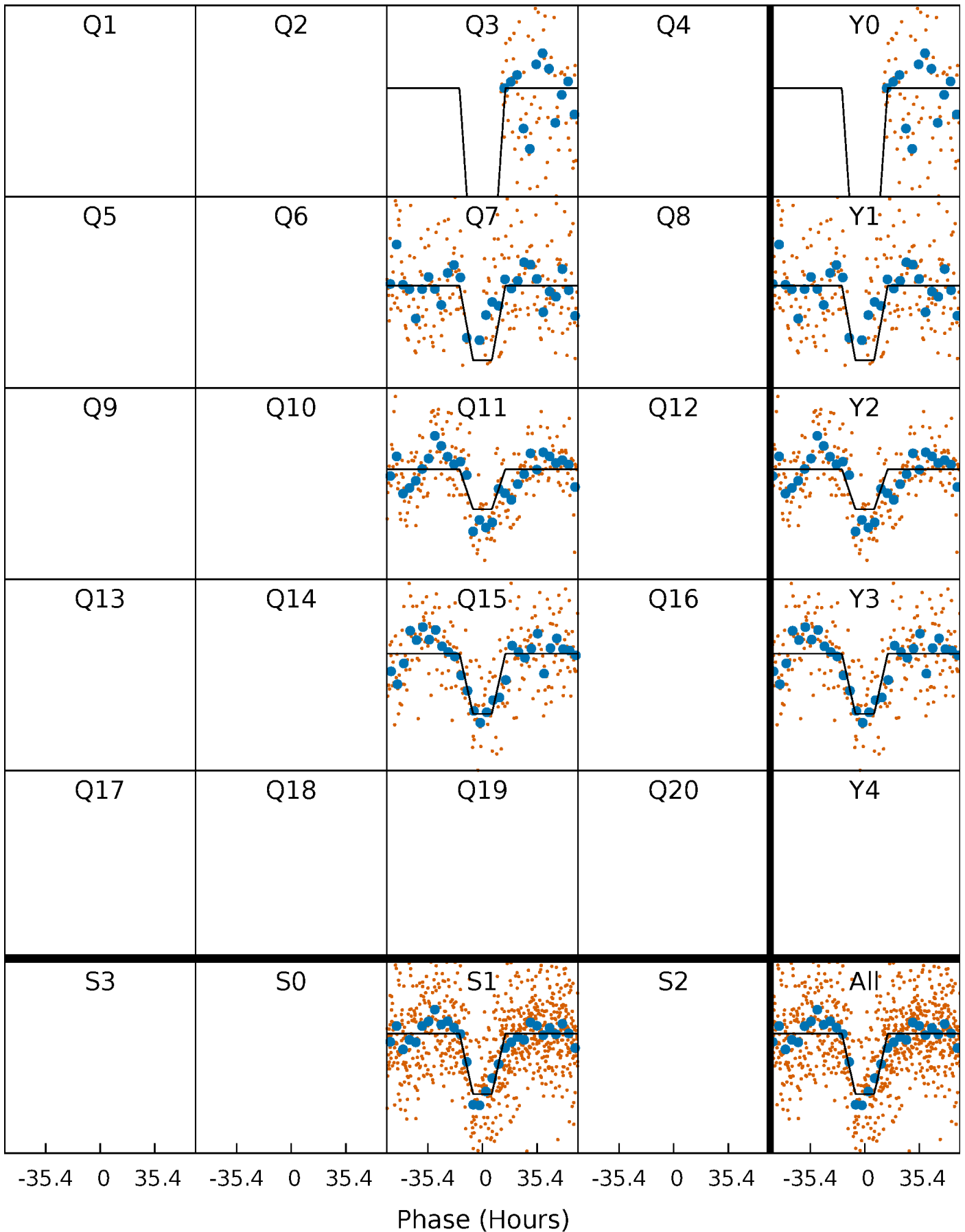
DV Quarter-Phased Transit Curves

TCE 008362712-01 P=374.508936 Days $T_0=259.592133$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

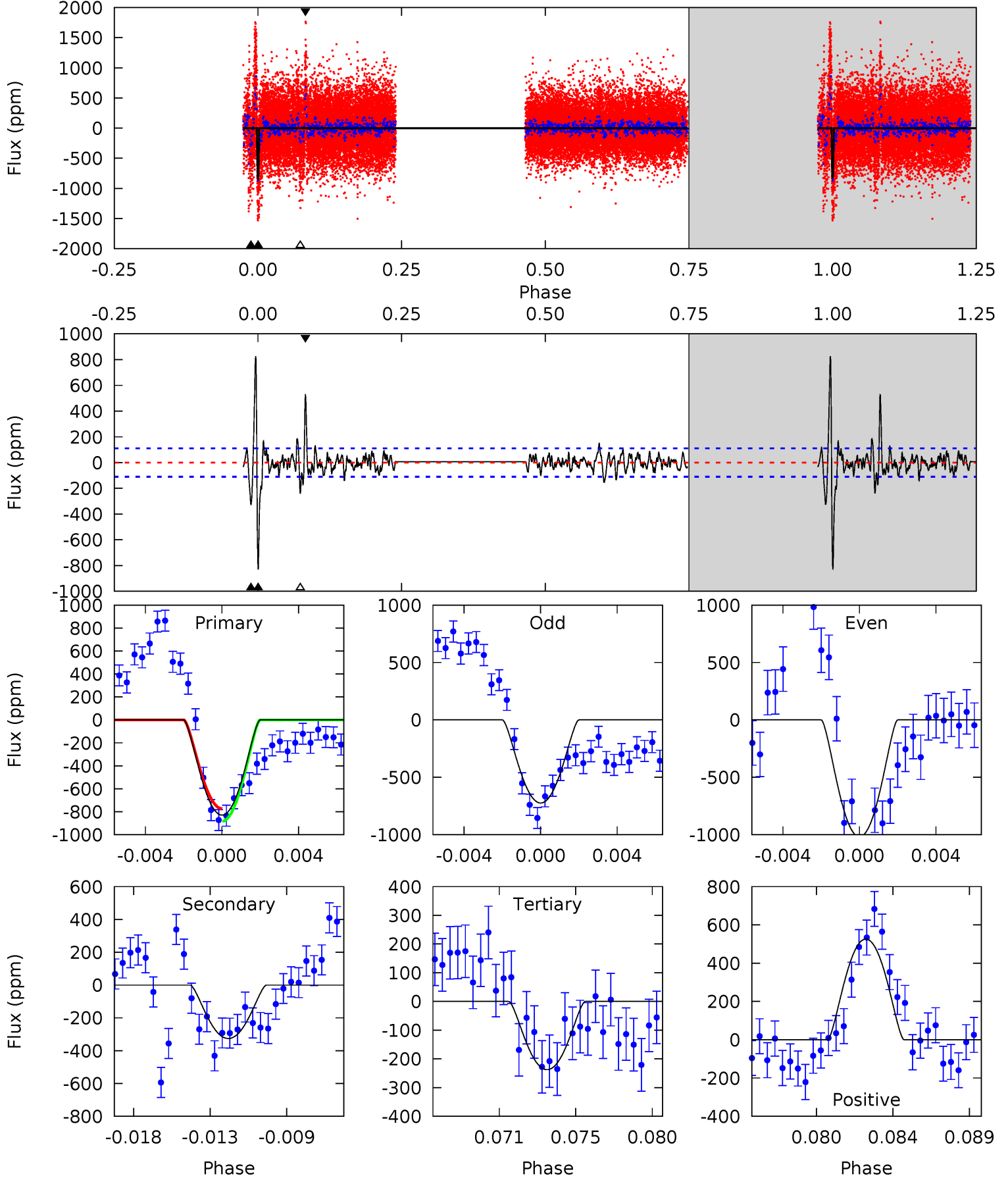
TCE 008362712-01 P=374.383686 Days $T_0=259.737367$ (BKJD)



DV Model-Shift Uniqueness Test

008362712-01, P = 374.508936 Days, E = 259.592133 Days

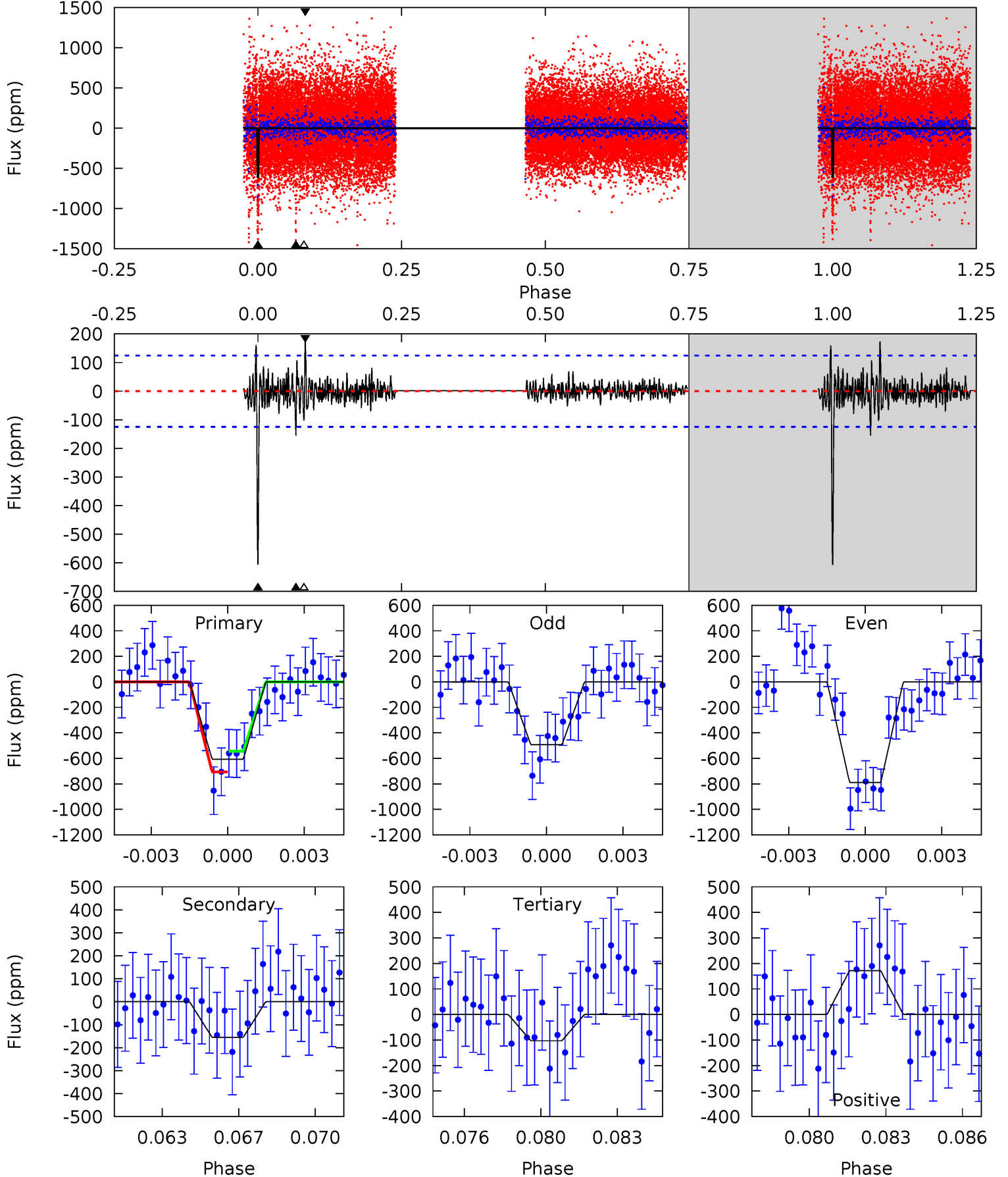
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.0	15.3	11.2	24.7	5.18	2.85	3.54	27.8	14.3	4.14	-9.42	6.70	0.97	0.50	2.58



Alt Model-Shift Uniqueness Test

008362712-01, P = 374.383686 Days, E = 259.737367 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	6.51	4.32	7.24	5.23	2.94	1.13	21.2	18.3	2.19	-0.73	6.04	0.99	0.22	3.40



Stellar Parameters For KIC 008362712

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6053^{+190}_{-232}	$4.440^{+0.056}_{-0.224}$	$0.140^{+0.200}_{-0.300}$	$1.062^{+0.355}_{-0.118}$	$1.134^{+0.151}_{-0.151}$	$1.335^{+0.398}_{-0.727}$
	+3%/-4%	+1%/-5%	+143%/-214%	+33%/-11%	+13%/-13%	+30%/-54%
Source	KIC0	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 008362712-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-326 ± 21	$6.22^{+5.54}_{-3.94}$	382^{+29}_{-20}	3943^{+1976}_{-747}	4946^{+32641}_{-3496}
Alt.	-155 ± 24	$5.15^{+5.11}_{-3.52}$	383^{+30}_{-21}	3669^{+2064}_{-678}	3479^{+31564}_{-2635}

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 $A_{obs} \gg 1.0$

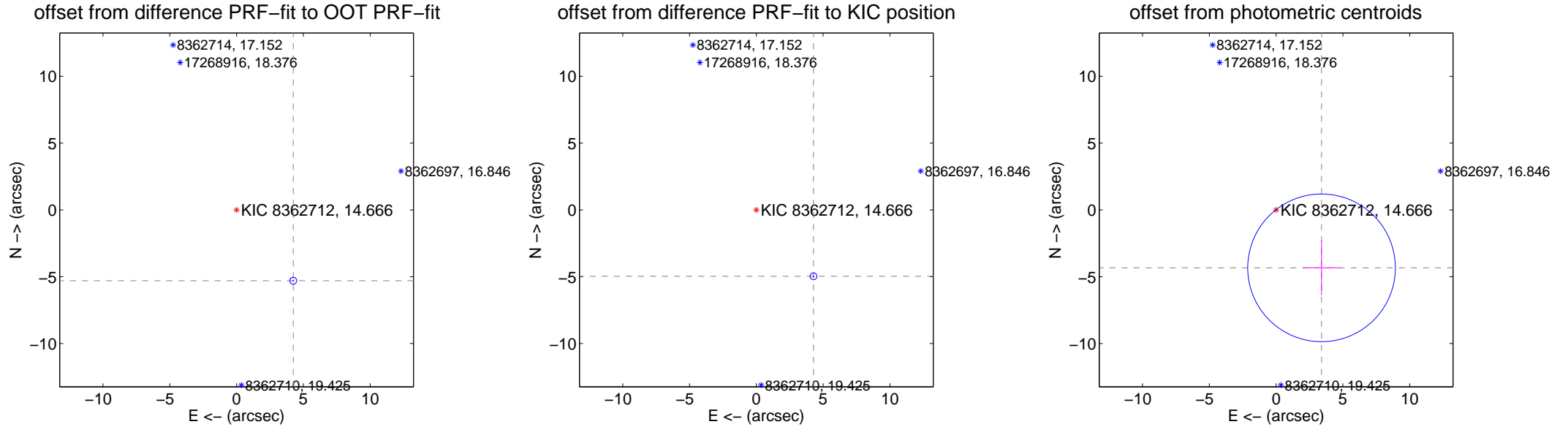
DV Centroid Data

Supplemental centroid analysis for 008362712-01. Kepler magnitude: 14.67. Transit SNR 12.50

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.787 ± 0.086	79.37	-4.244 ± 0.086	-5.297 ± 0.085
PRF-fit source offset from KIC position	6.554 ± 0.086	76.60	-4.279 ± 0.086	-4.964 ± 0.085
photometric centroid source offset	5.51 ± 1.84	2.99	-3.40 ± 1.41	-4.33 ± 2.06

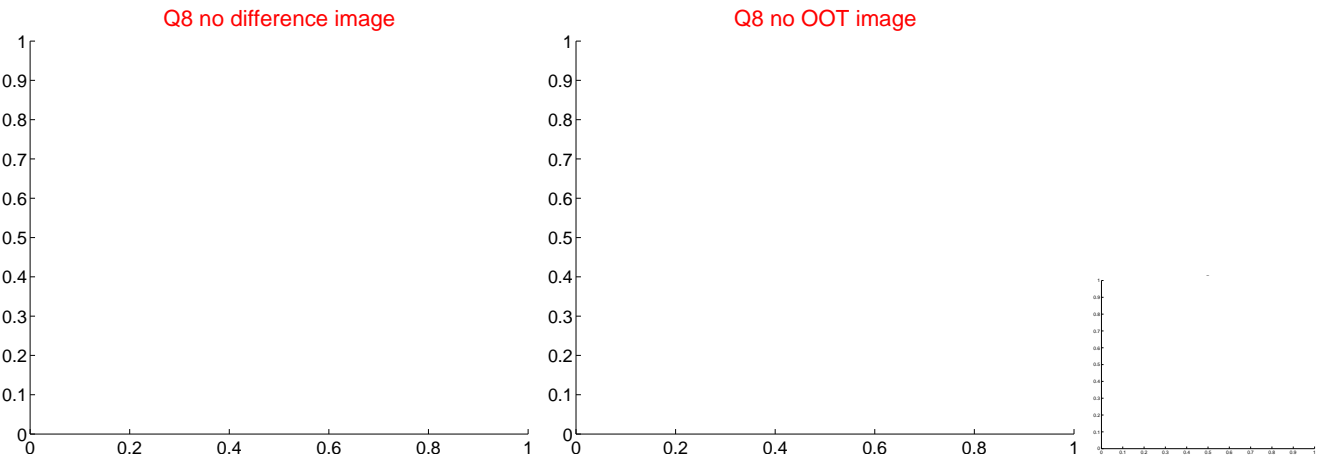


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



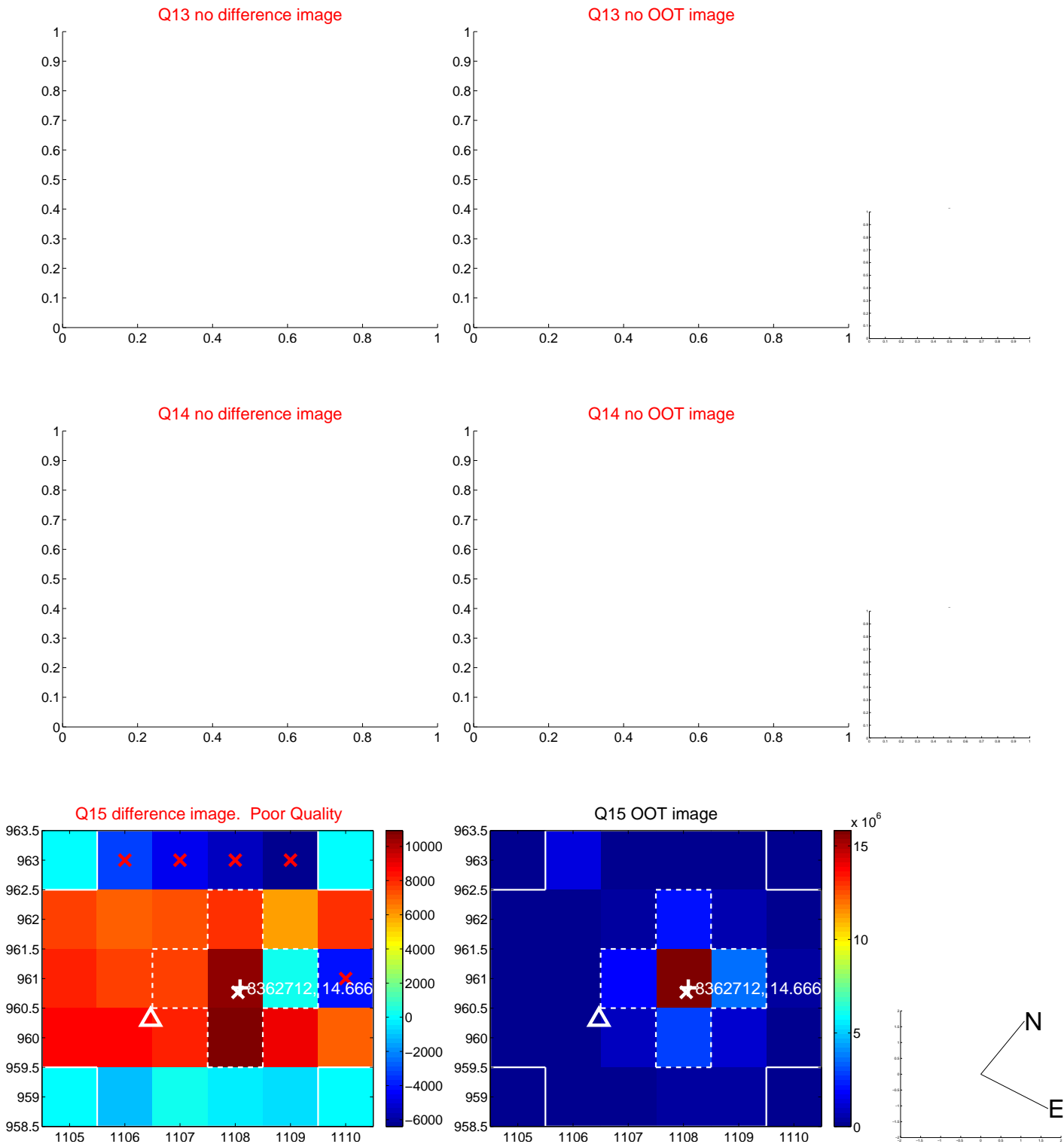
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



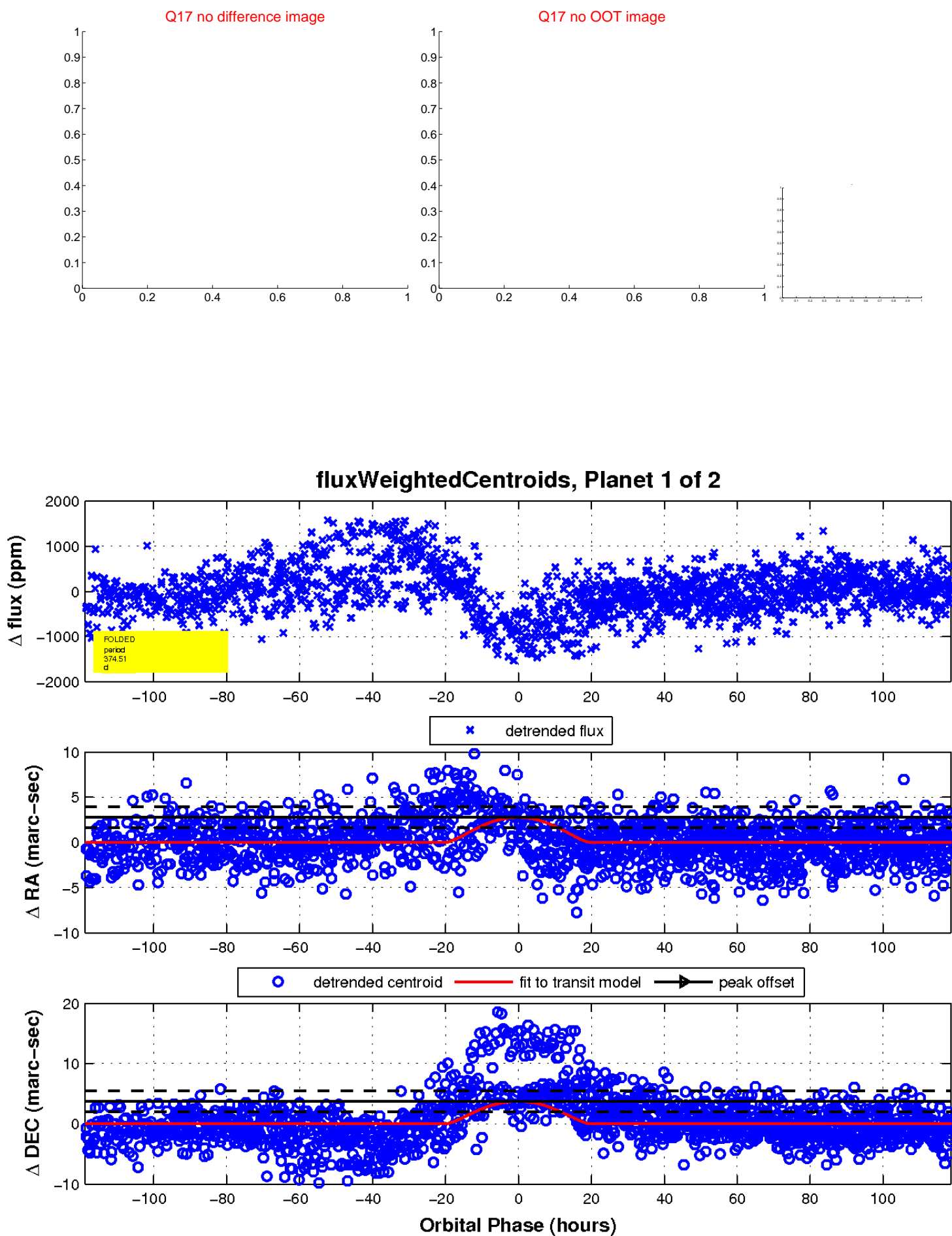
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

