

KIC 009838346

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})
009838346-01	OBS	No	362.553932	470.297054	215.3	4.515	7.4	8.4	1.68	6241	2.67	3.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009838346-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS

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

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

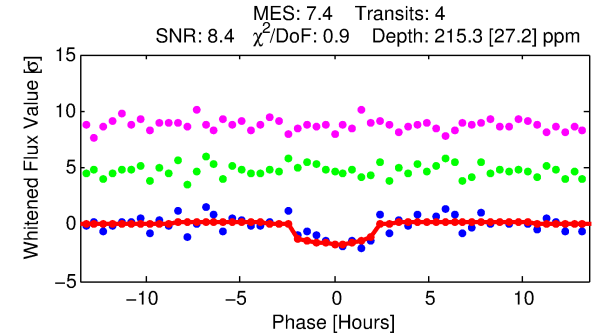
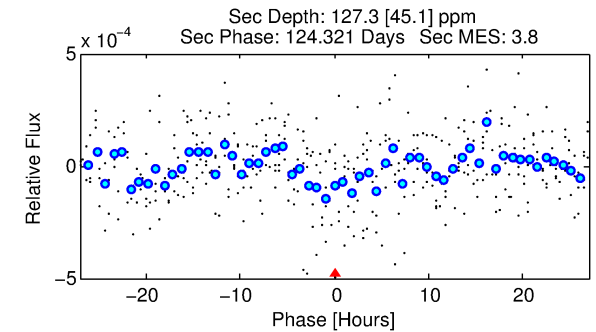
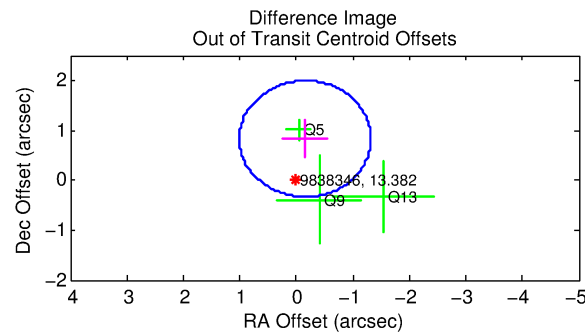
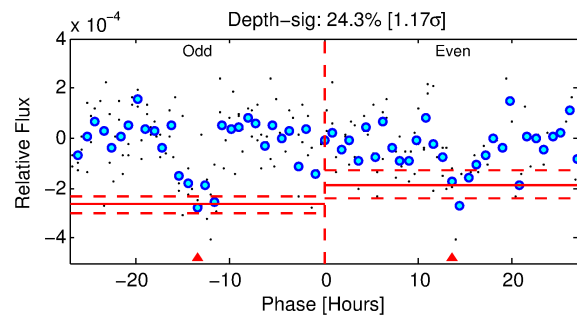
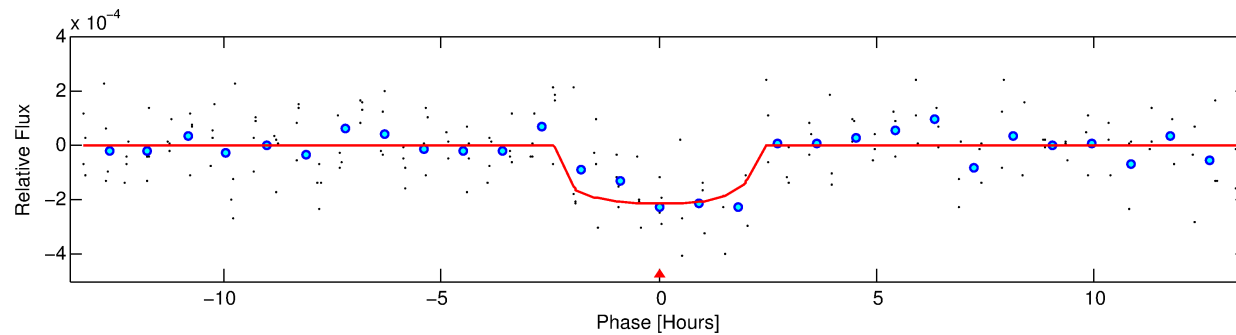
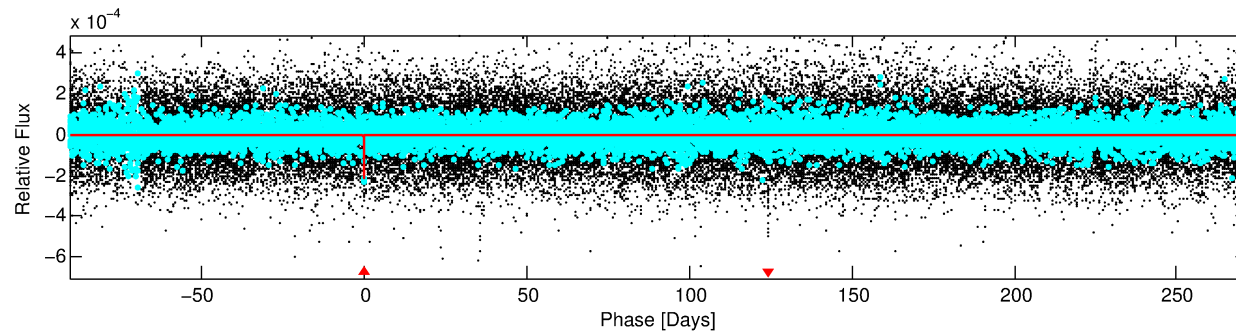
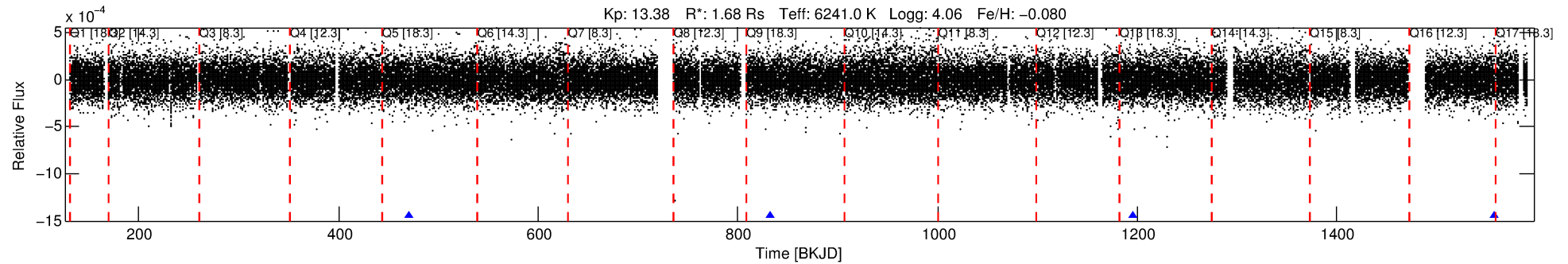
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009838346-01

No Significant Match Found

DV One-Page Summary

KIC: 9838346 Candidate: 1 of 1 Period: 362.554 d



DV Fit Results:

Period = 362.55393 [0.00626] d
Epoch = 470.2971 [0.0106] BKJD
Rp/R* = 0.0146 [0.0110]
a/R* = 421.85 [1635.83]
b = 0.75 [2.32]
Seff = 3.47 [1.42]
Teq = 348 [36] K
Rp = 2.67 [2.14] Re
a = 1.0490 [0.2650] AU
Ag = 10843.95 [17335.54] [0.63 σ]
Teffp = 5491 [2132] K [2.41 σ]

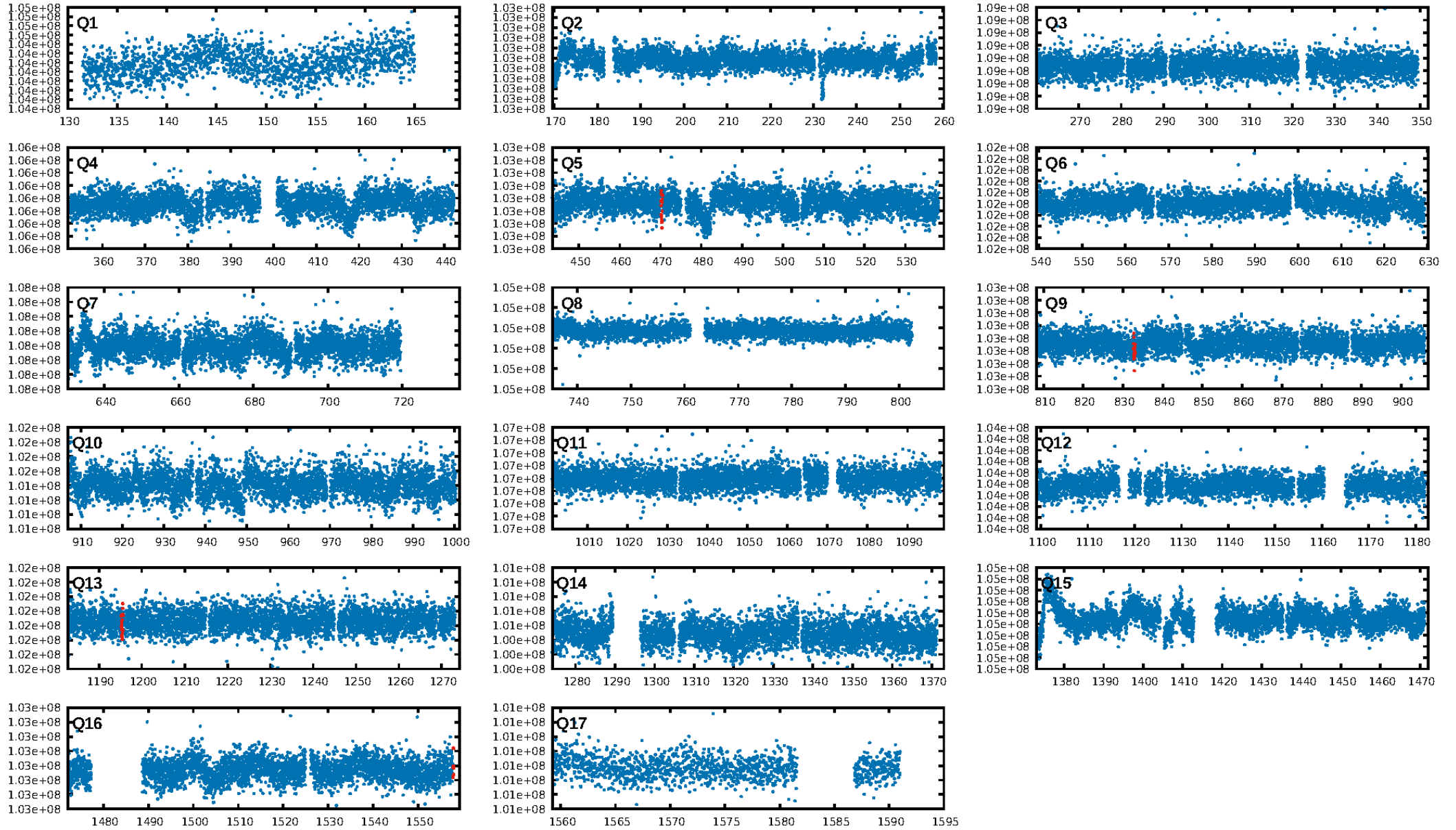
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.5%
ModelChiSquareGof-sig: 97.1%
Bootstrap-pfa: 6.43e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 4.604
Centroid-sig: 76.2%
Centroid-so: 0.888 arcsec [0.49 σ]
OotOffset-rm: 0.841 arcsec [2.17 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-rm: 0.803 arcsec [2.07 σ]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

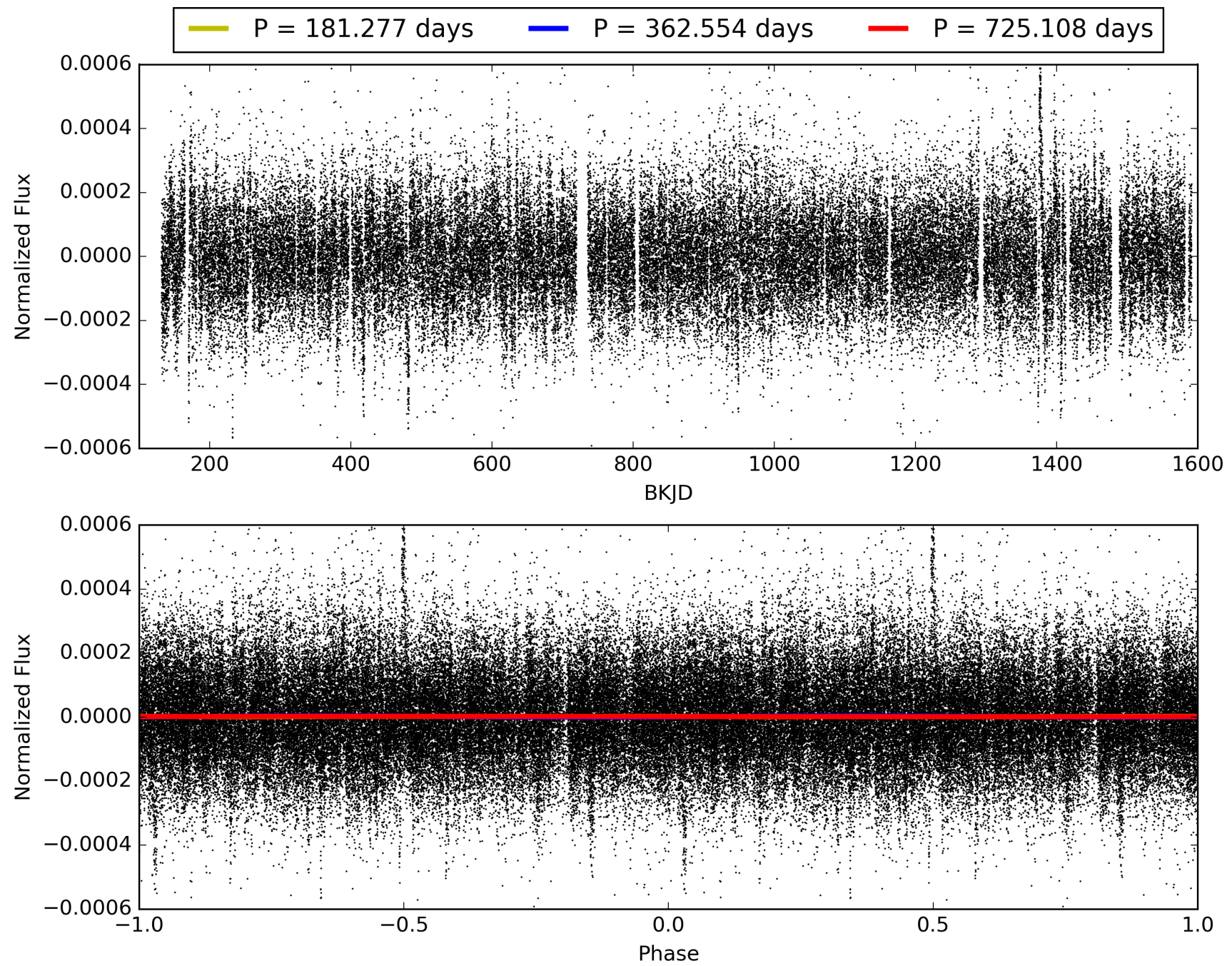
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:36:18 Z

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

TCE 009838346-01, PDC Light Curves

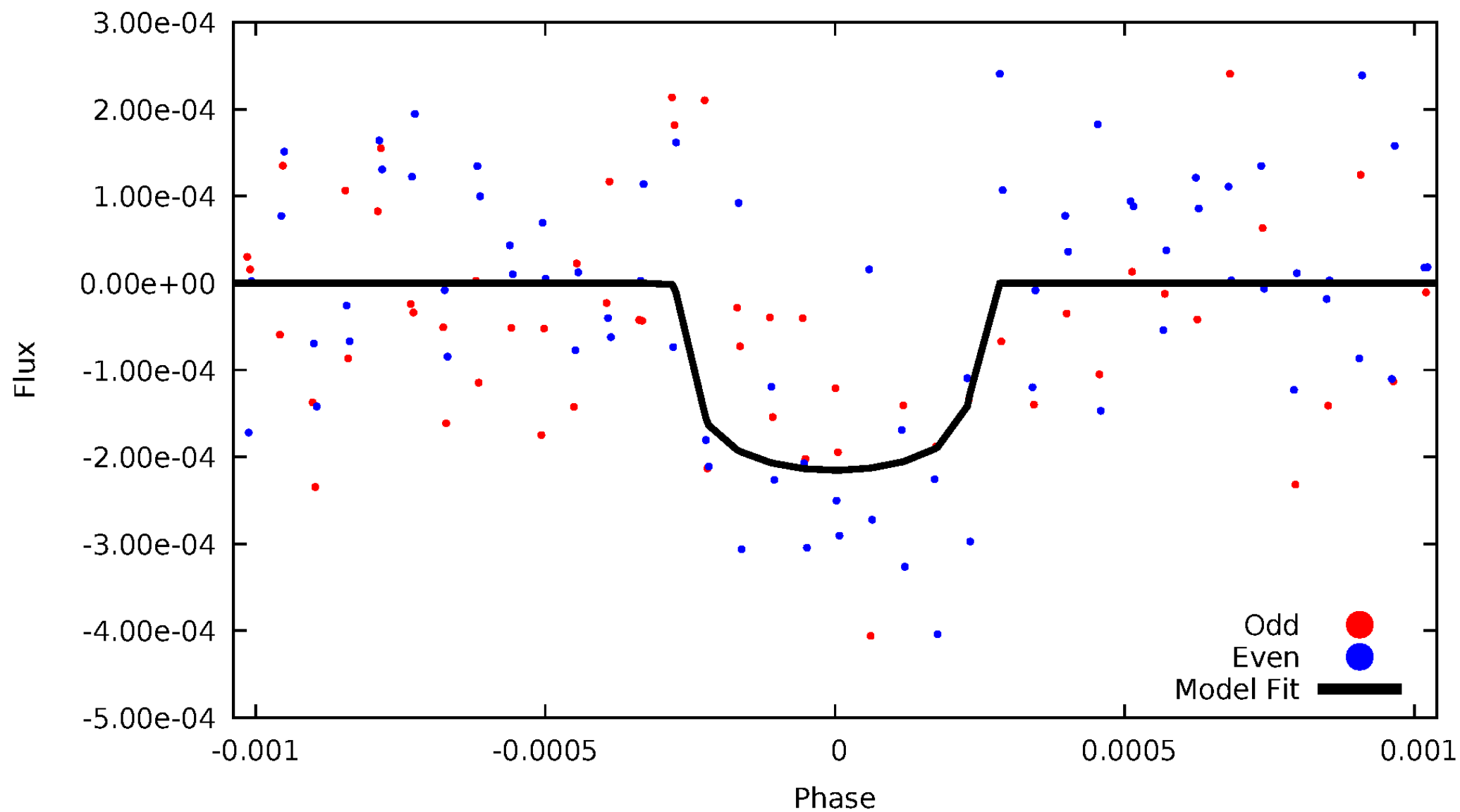


TCE 009838346-01



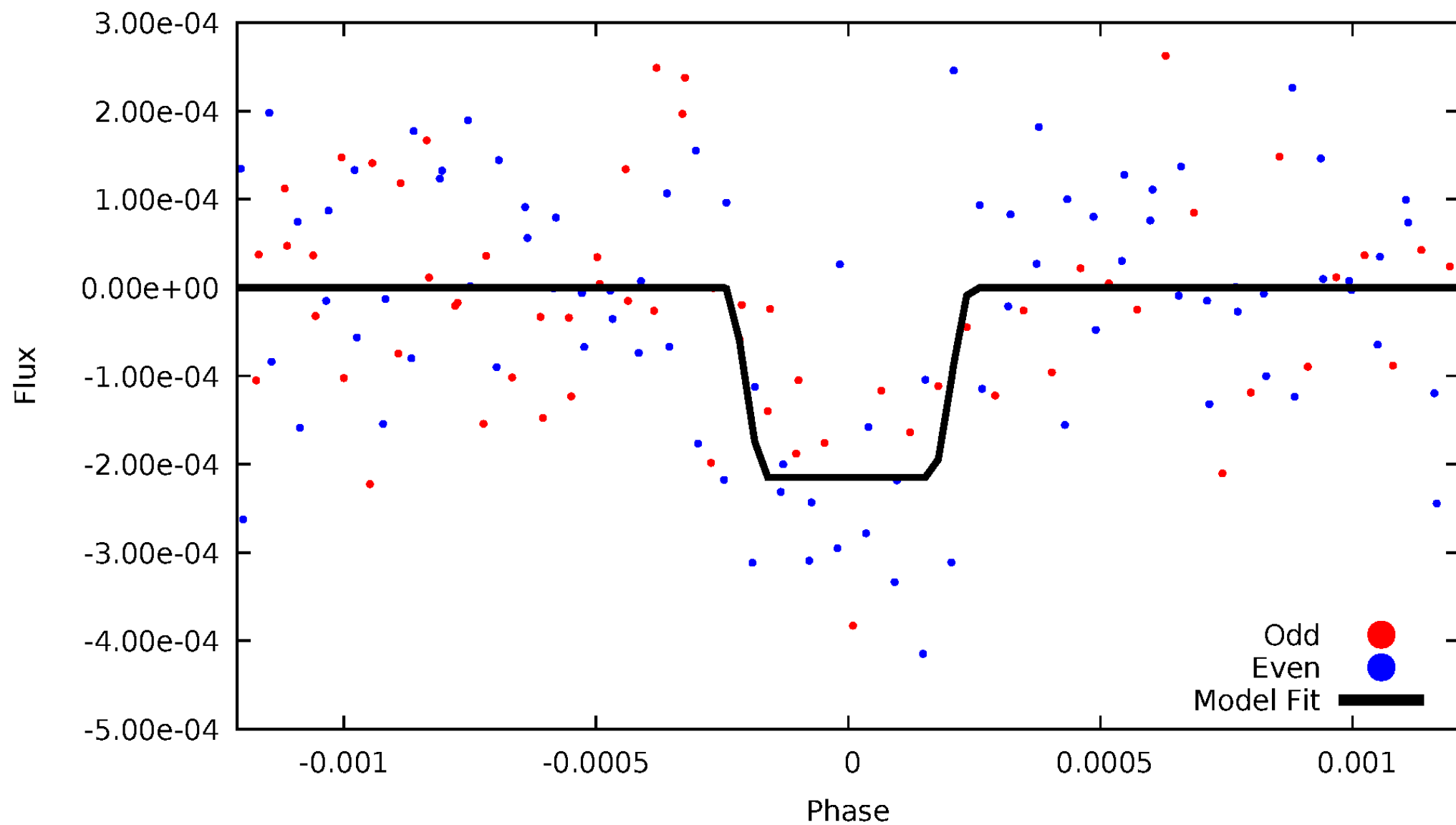
DV Odd/Even

TCE 009838346-01

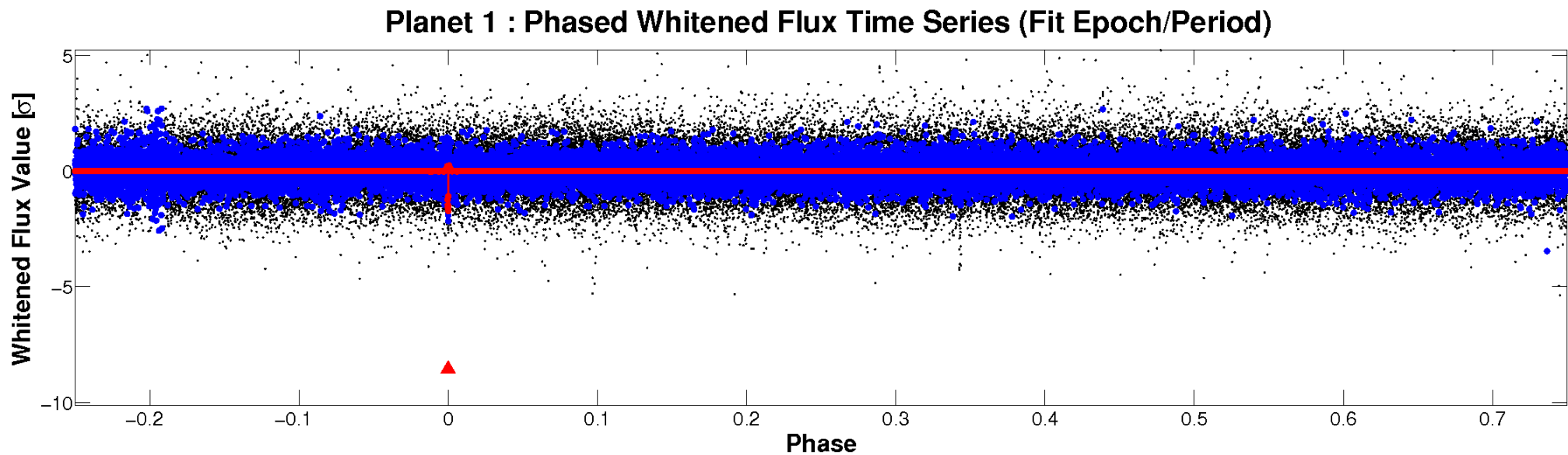
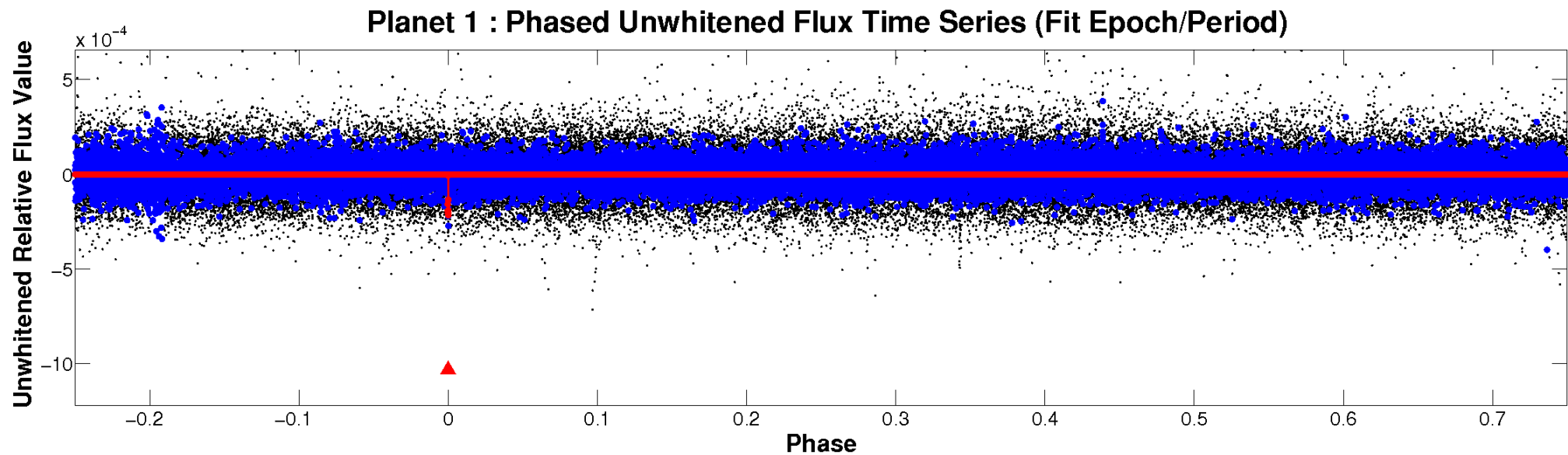


ALT Odd/Even

TCE 009838346-01

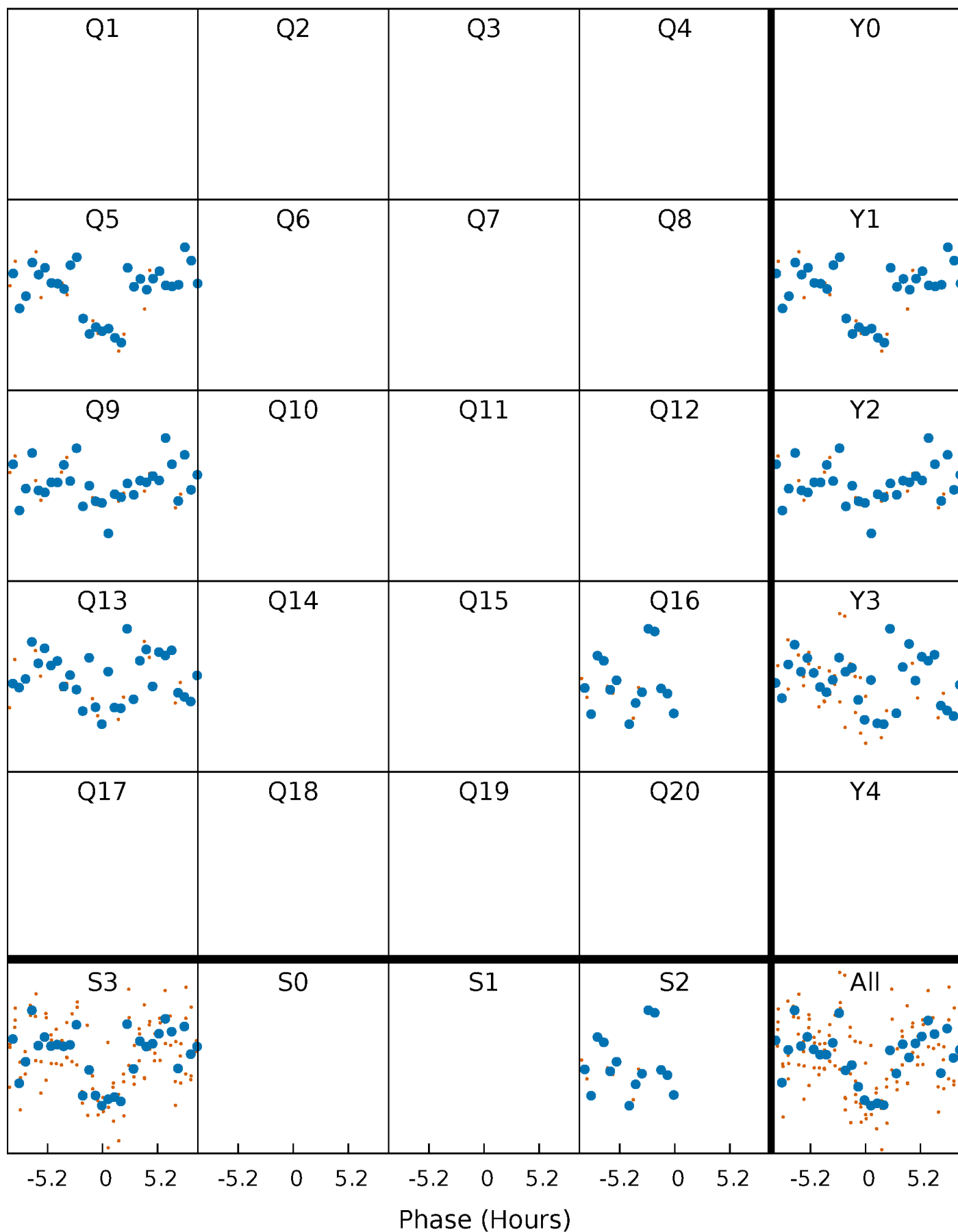


Non-Whitened Vs. Whitened Light Curve



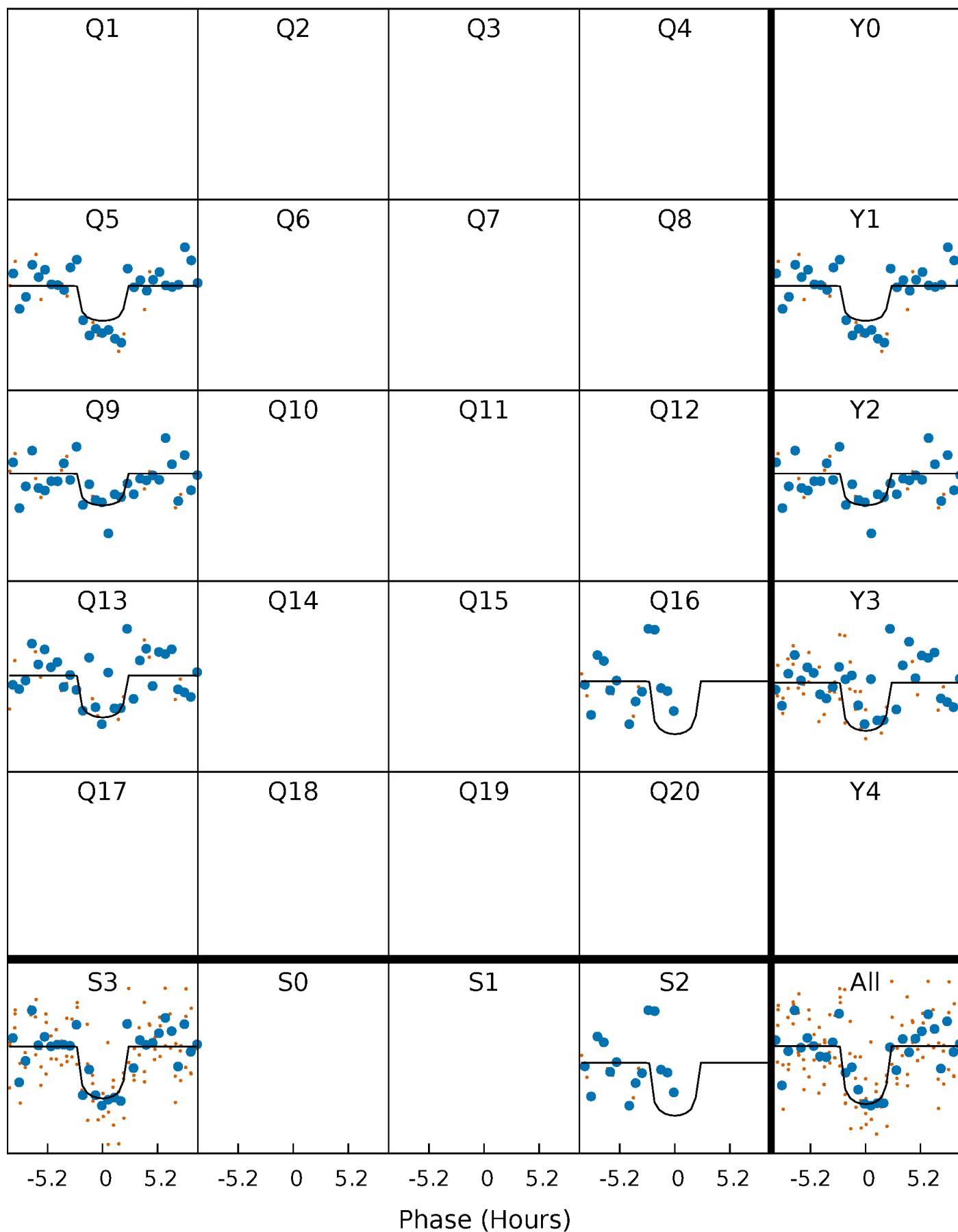
PDC Quarter-Phased Transit Curves

TCE 009838346-01 P=362.553932 Days $T_0=470.297054$ (BKJD)



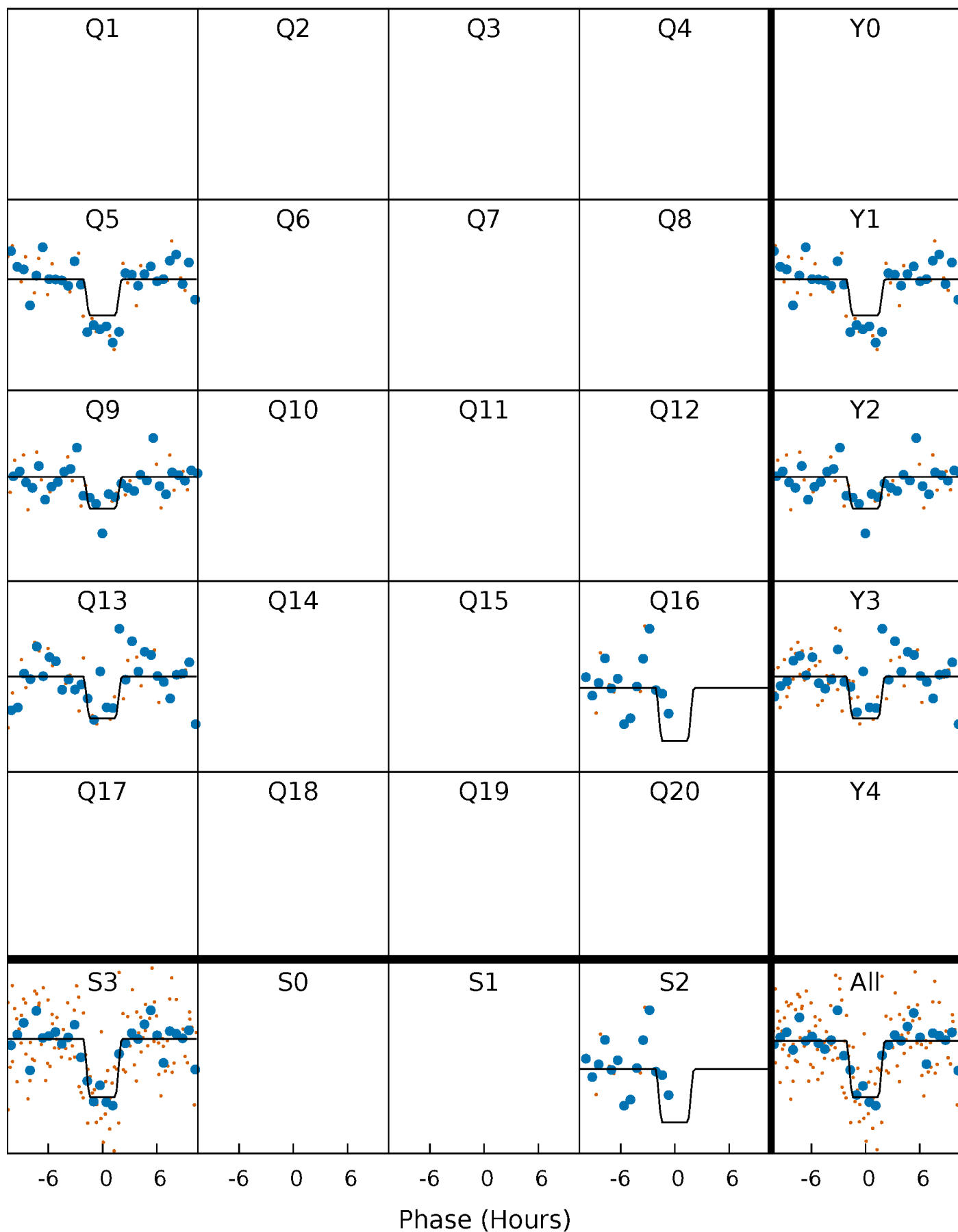
DV Quarter-Phased Transit Curves

TCE 009838346-01 P=362.553932 Days $T_0=470.297054$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

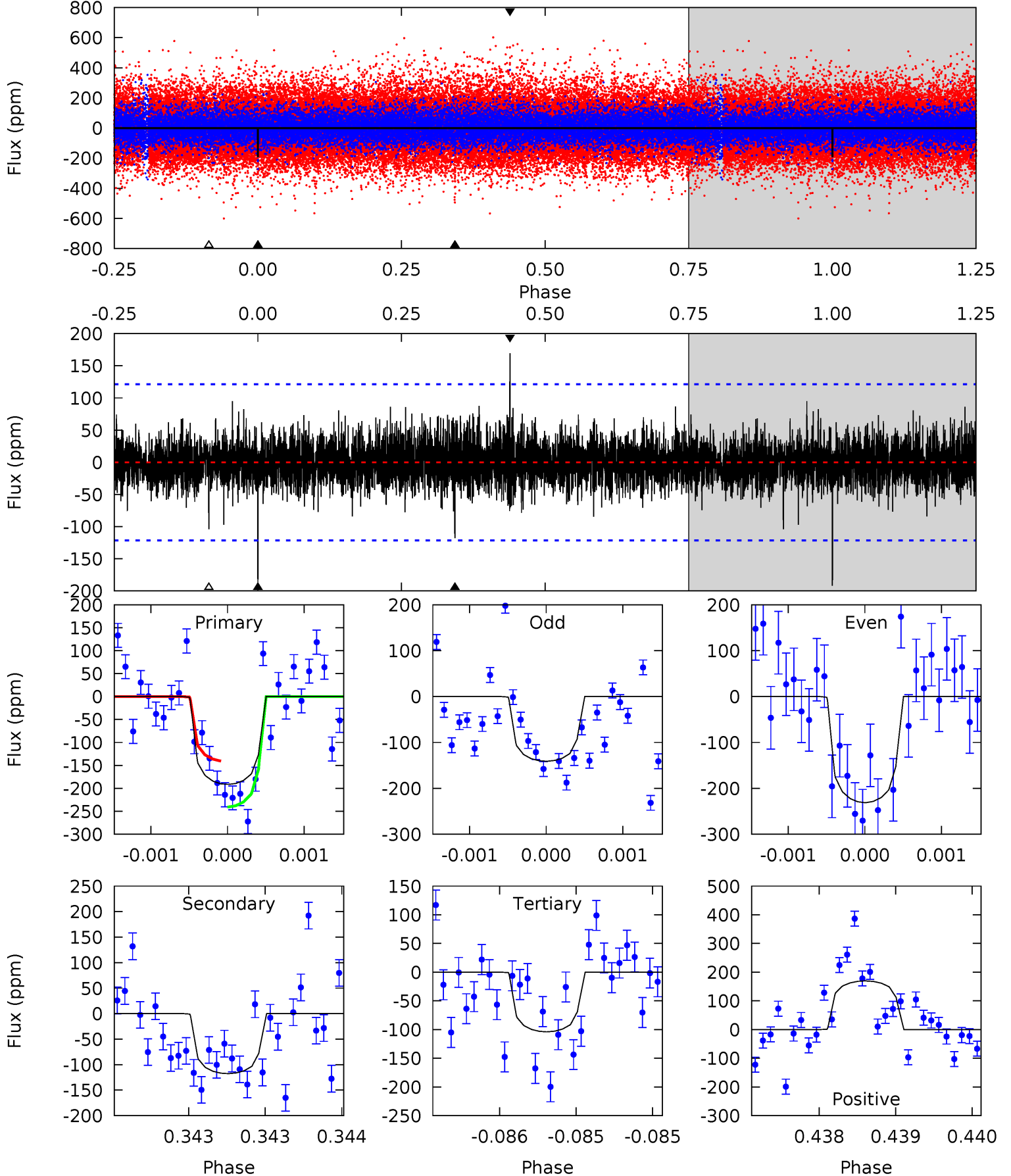
TCE 009838346-01 P=362.562413 Days $T_0=470.307499$ (BKJD)



DV Model-Shift Uniqueness Test

009838346-01, P = 362.553932 Days, E = 107.743122 Days

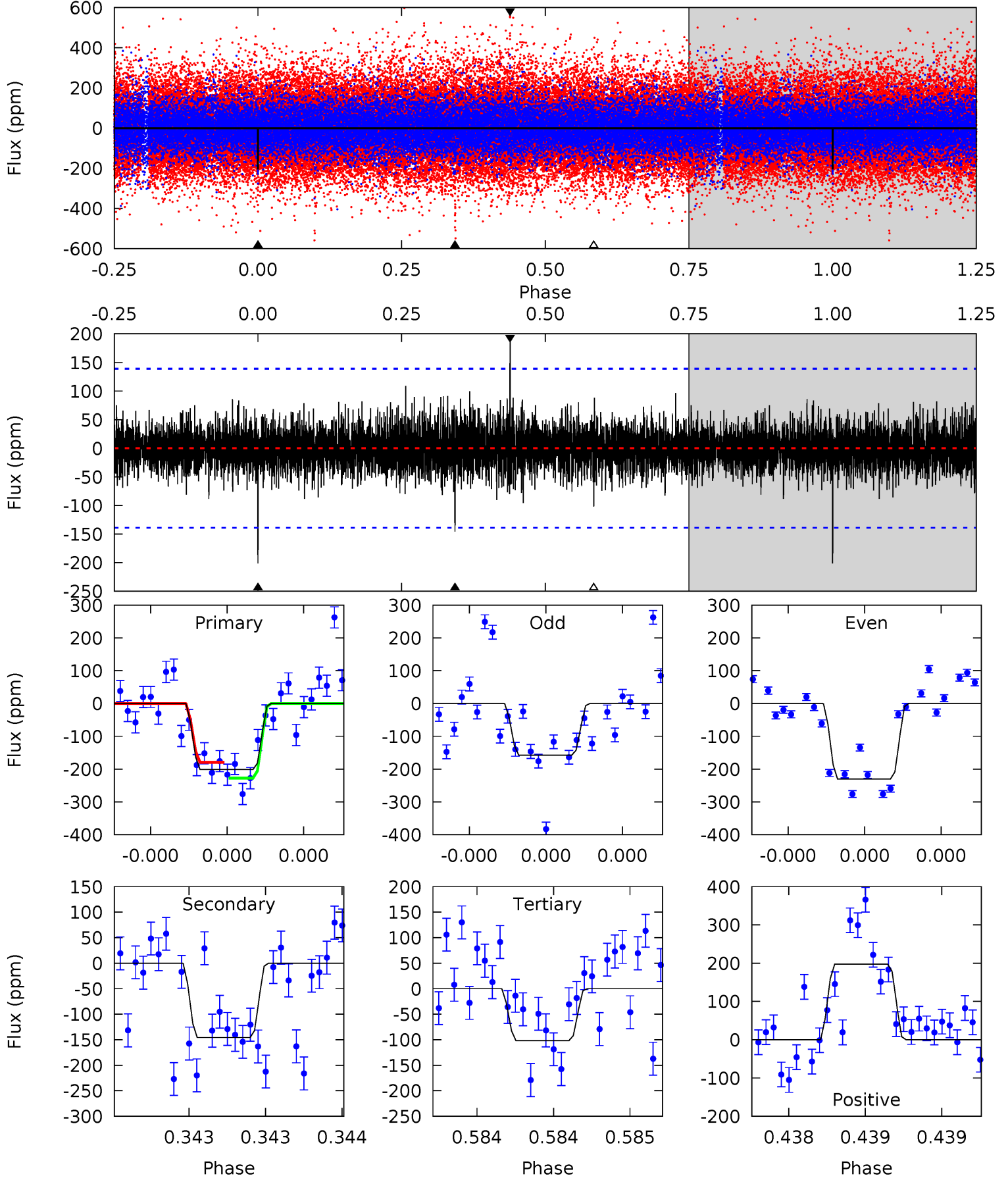
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.76	5.38	4.75	7.76	5.55	3.45	1.12	4.01	1.00	0.62	-2.38	2.07	0.98	0.47	2.28



Alt Model-Shift Uniqueness Test

009838346-01, P = 362.562413 Days, E = 107.745086 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.09	5.86	4.09	7.94	5.59	3.51	1.05	4.00	0.15	1.77	-2.08	1.42	1.12	0.50	0.96



Stellar Parameters For KIC 009838346

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6241^{+169}_{-169}	$4.058^{+0.228}_{-0.123}$	$-0.080^{+0.250}_{-0.300}$	$1.676^{+0.375}_{-0.458}$	$1.170^{+0.190}_{-0.172}$	$0.350^{+0.459}_{-0.126}$
	+3%/-3%	+6%/-3%	+312%/-375%	+22%/-27%	+16%/-15%	+131%/-36%
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 009838346-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-118 ± 22	$2.77^{+1.94}_{-1.62}$	482^{+29}_{-36}	5230^{+2928}_{-1011}	9344^{+45706}_{-6166}
Alt.	-146 ± 25	$2.80^{+2.06}_{-1.70}$	483^{+30}_{-38}	5430^{+3941}_{-1073}	10672^{+64333}_{-6874}

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 $A_{obs} \gg 1.0$

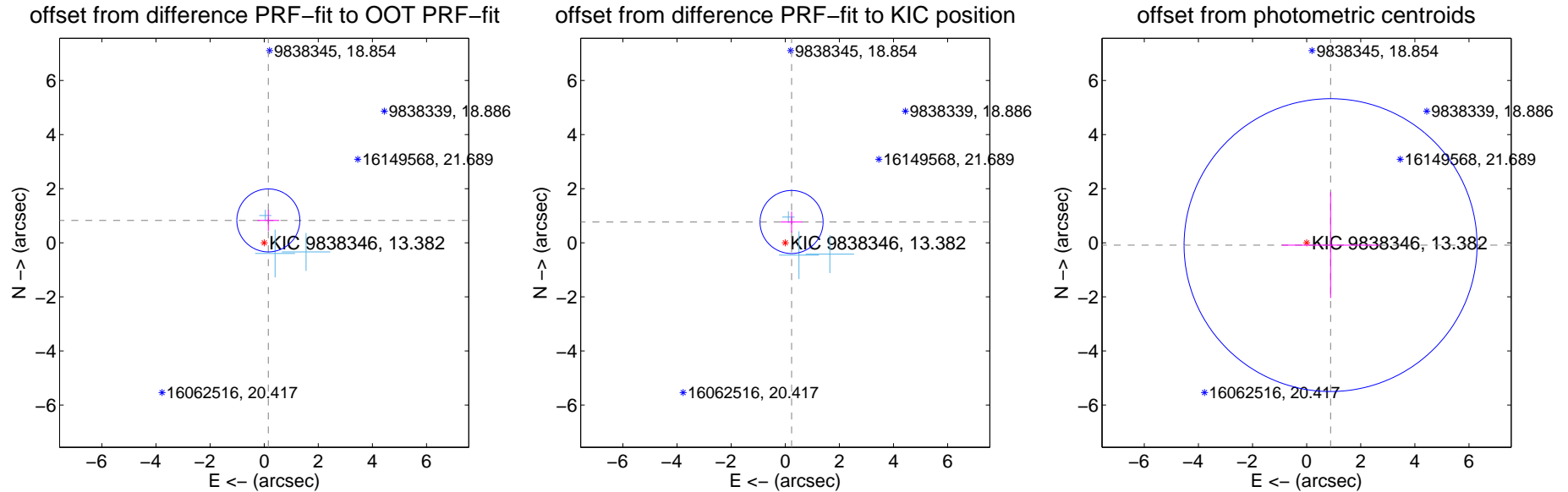
DV Centroid Data

Supplemental centroid analysis for 009838346-01. Kepler magnitude: 13.38. Transit SNR 8.37

There are 3 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.841 ± 0.388	2.17	-0.153 ± 0.400	0.827 ± 0.388
PRF-fit source offset from KIC position	0.803 ± 0.389	2.07	-0.233 ± 0.400	0.768 ± 0.388
photometric centroid source offset	0.89 ± 1.80	0.49	-0.88 ± 1.80	-0.09 ± 1.96

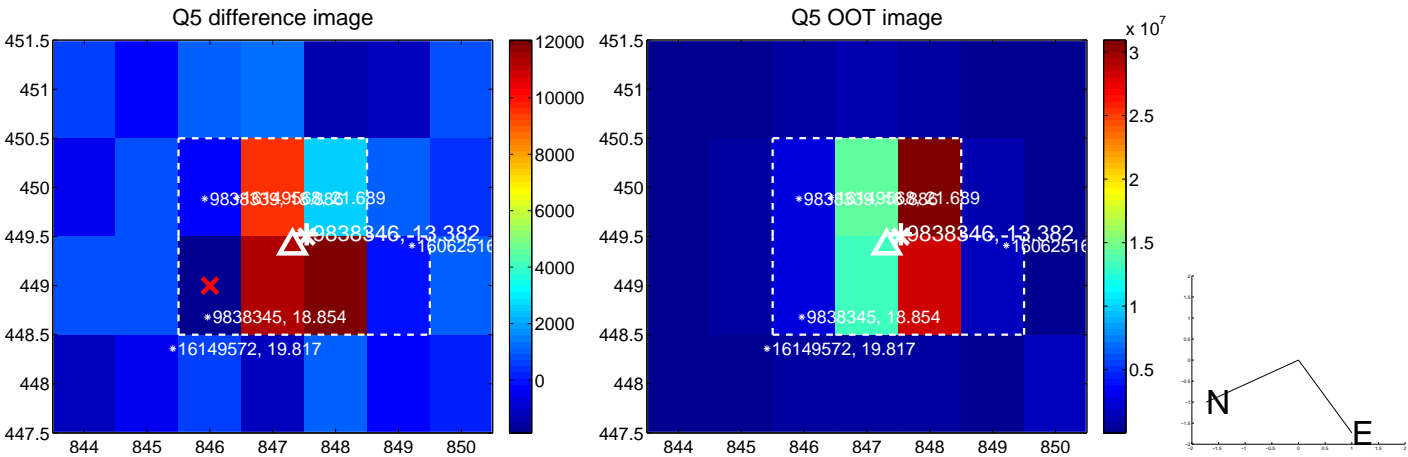


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

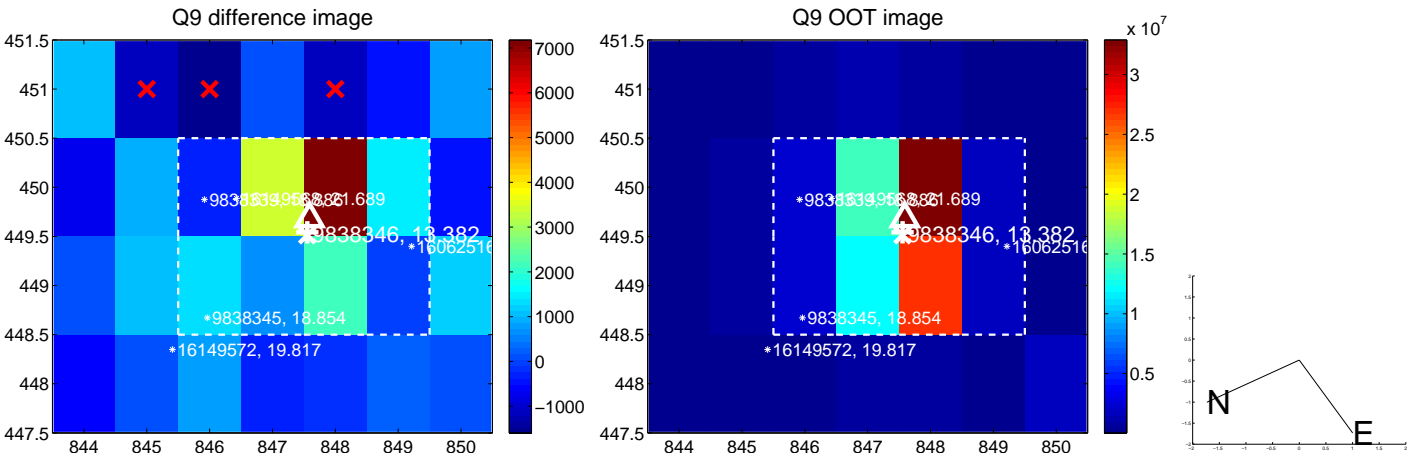
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



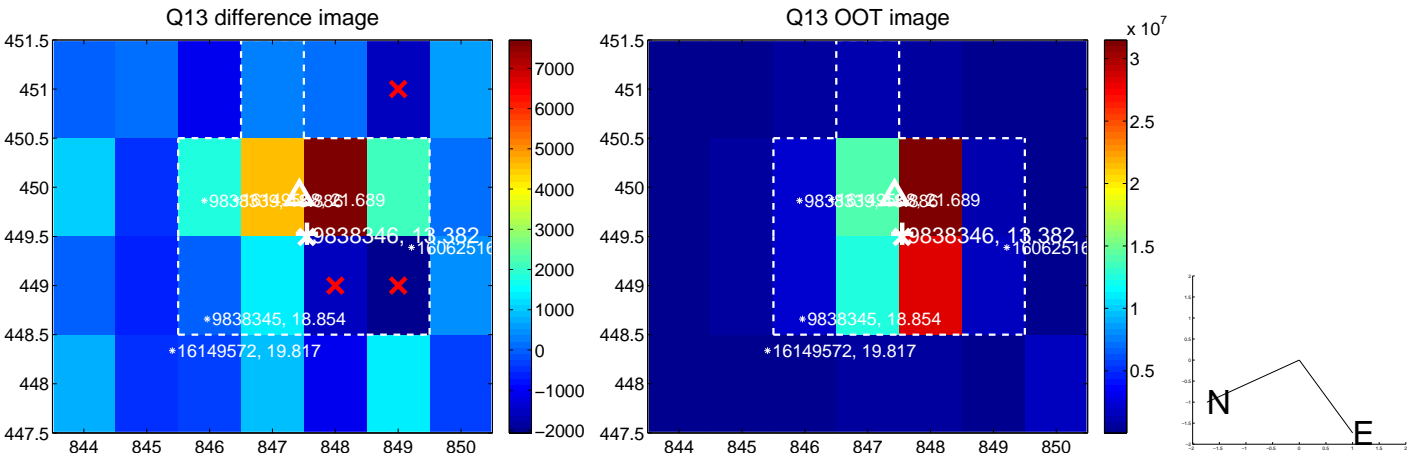
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



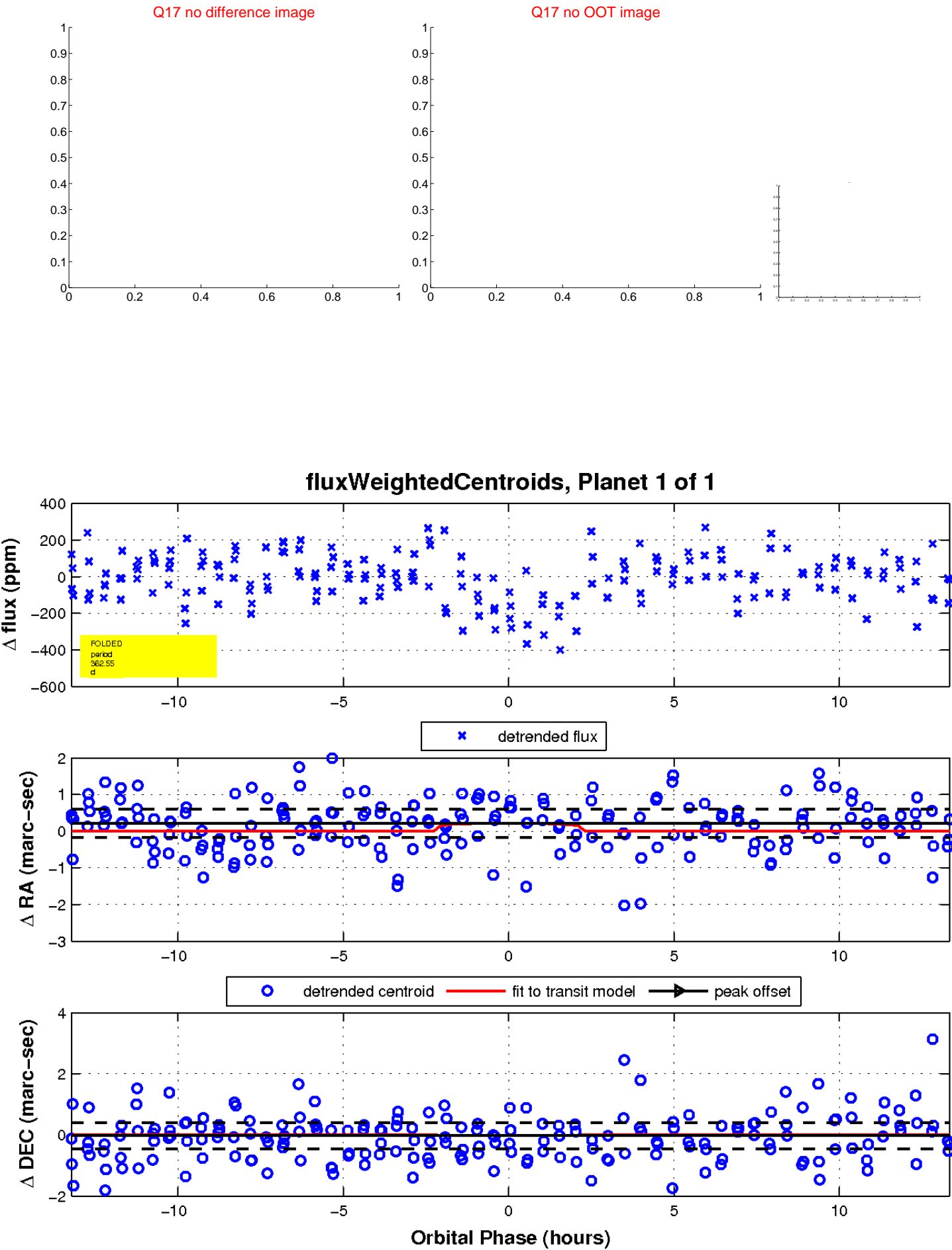
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

