

KIC 009084832

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})
009084832-02	OBS	8176.01	568.086364	254.665871	508.7	16.726	7.9	8.3	0.95	5359	2.84	0.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009084832-02	OBS	FP	0.01	1	0	0	0	MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

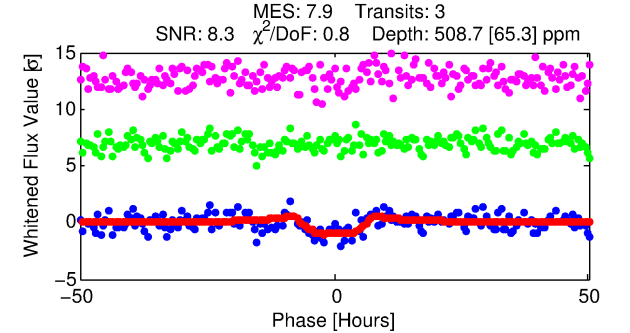
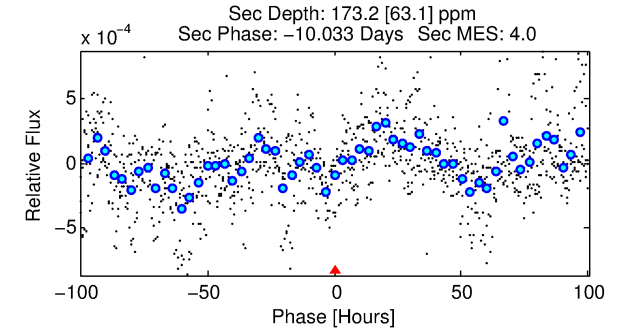
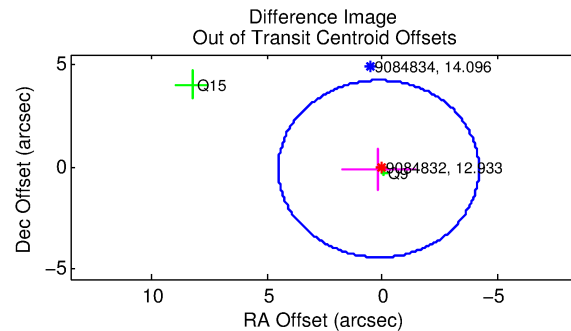
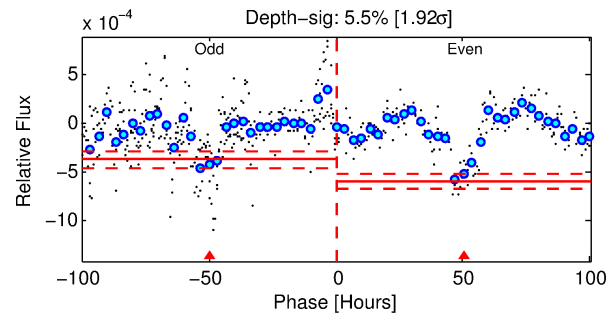
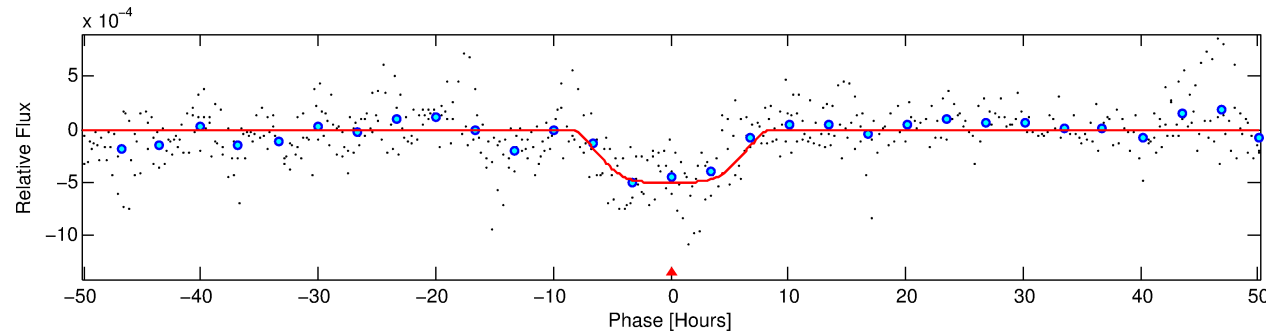
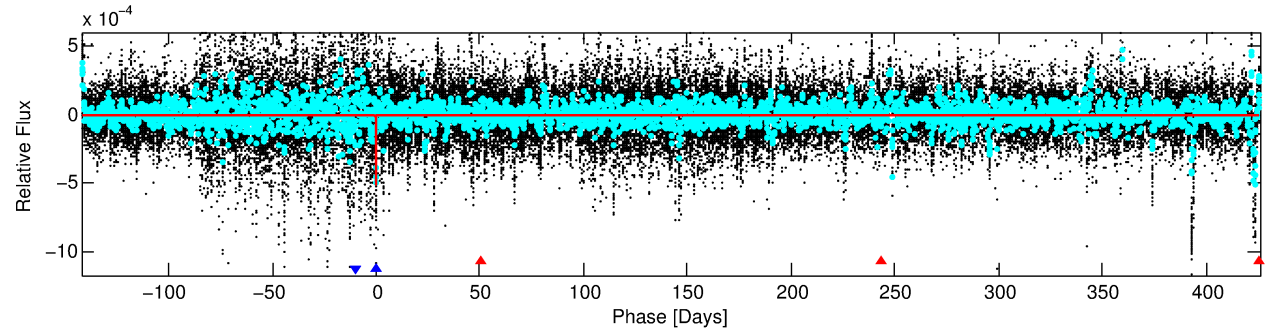
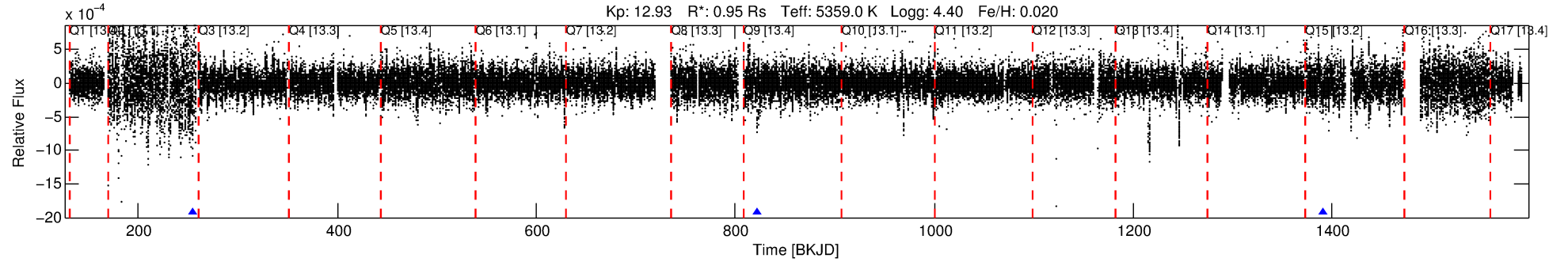
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009084832-02

No Significant Match Found

DV One-Page Summary

KIC: 9084832 Candidate: 2 of 2 Period: 568.086 d



DV Fit Results:

Period = 568.08636 [0.02448] d
Epoch = 254.6659 [0.0333] BKJD
Rp/R* = 0.0274 [0.0022]
a/R* = 95.02 [13.79]
b = 0.96 [0.01]
Seff = 0.42 [0.18]
Teff = 205 [22] K
Rp = 2.84 [0.83] Re
a = 1.2632 [0.3285] AU
Ag = 18832.73 [10687.85] [1.76 σ]
Teffp = 3714 [385] K [9.10 σ]

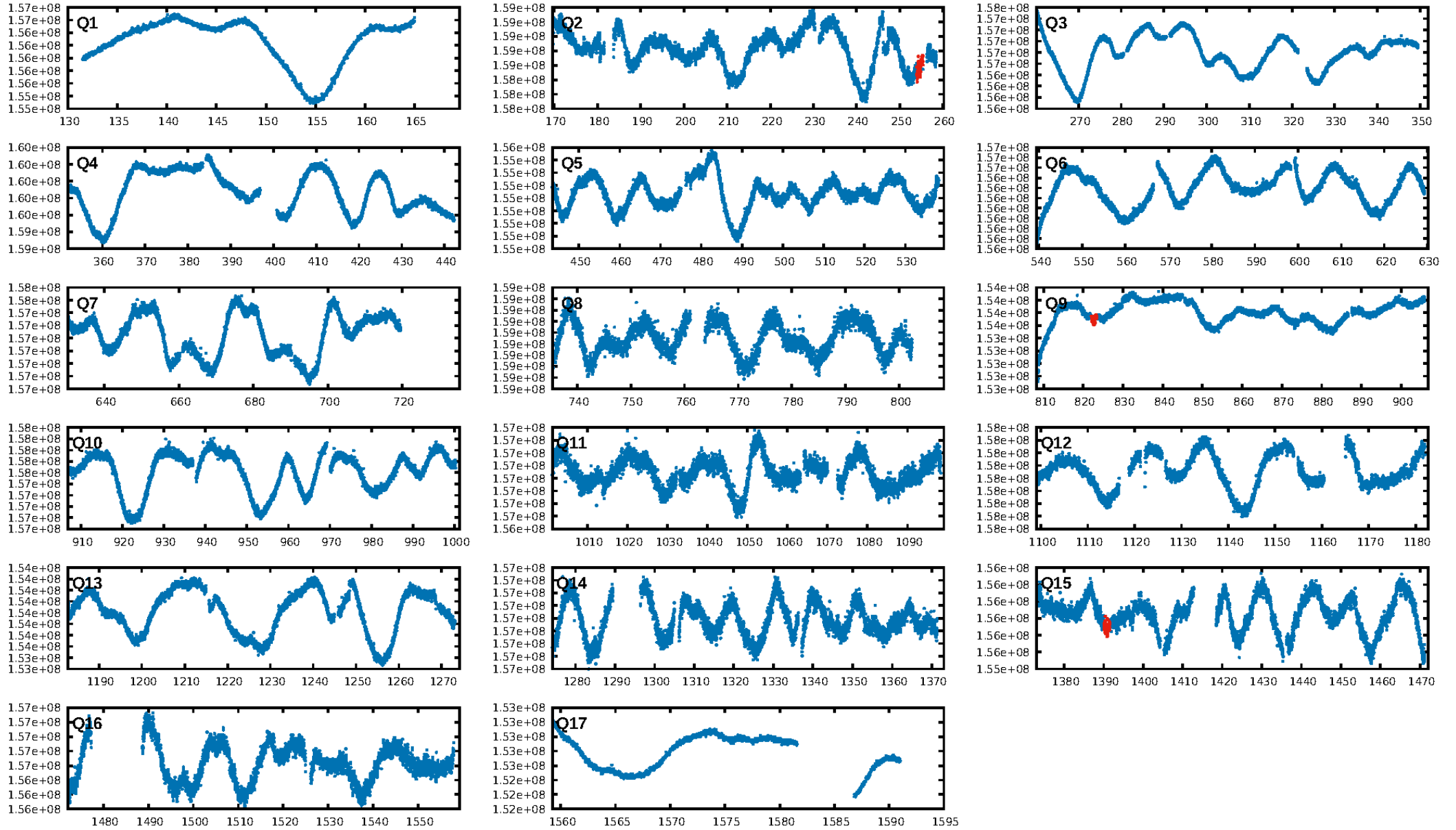
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [258.22 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.53e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9546
Centroid-sig: N/A
Centroid-so: 0.630 arcsec [1.34 σ]
OotOffset-rm: 0.199 arcsec [0.14 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 0.375 arcsec [0.19 σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

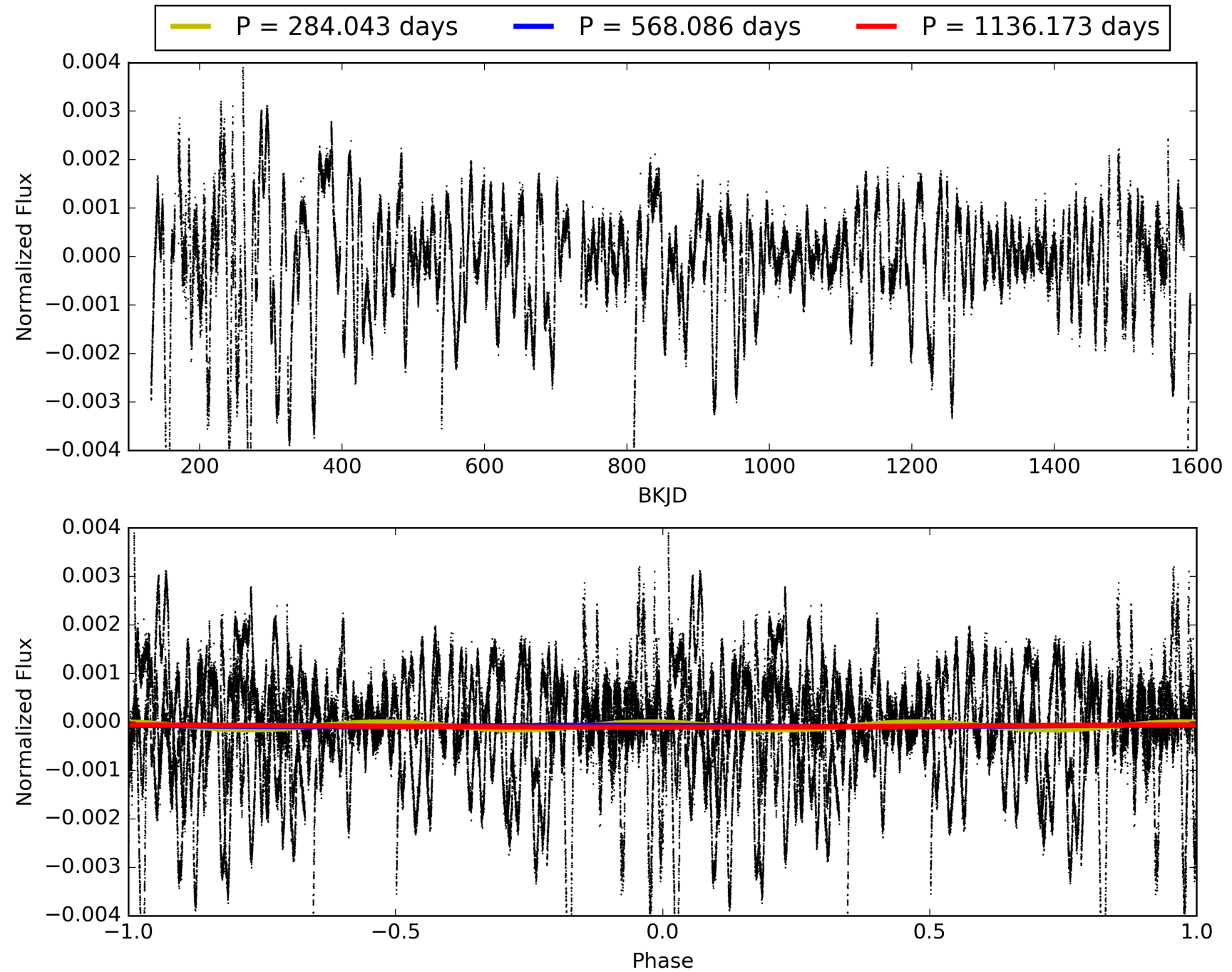
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:16:28 Z

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

TCE 009084832-02, PDC Light Curves

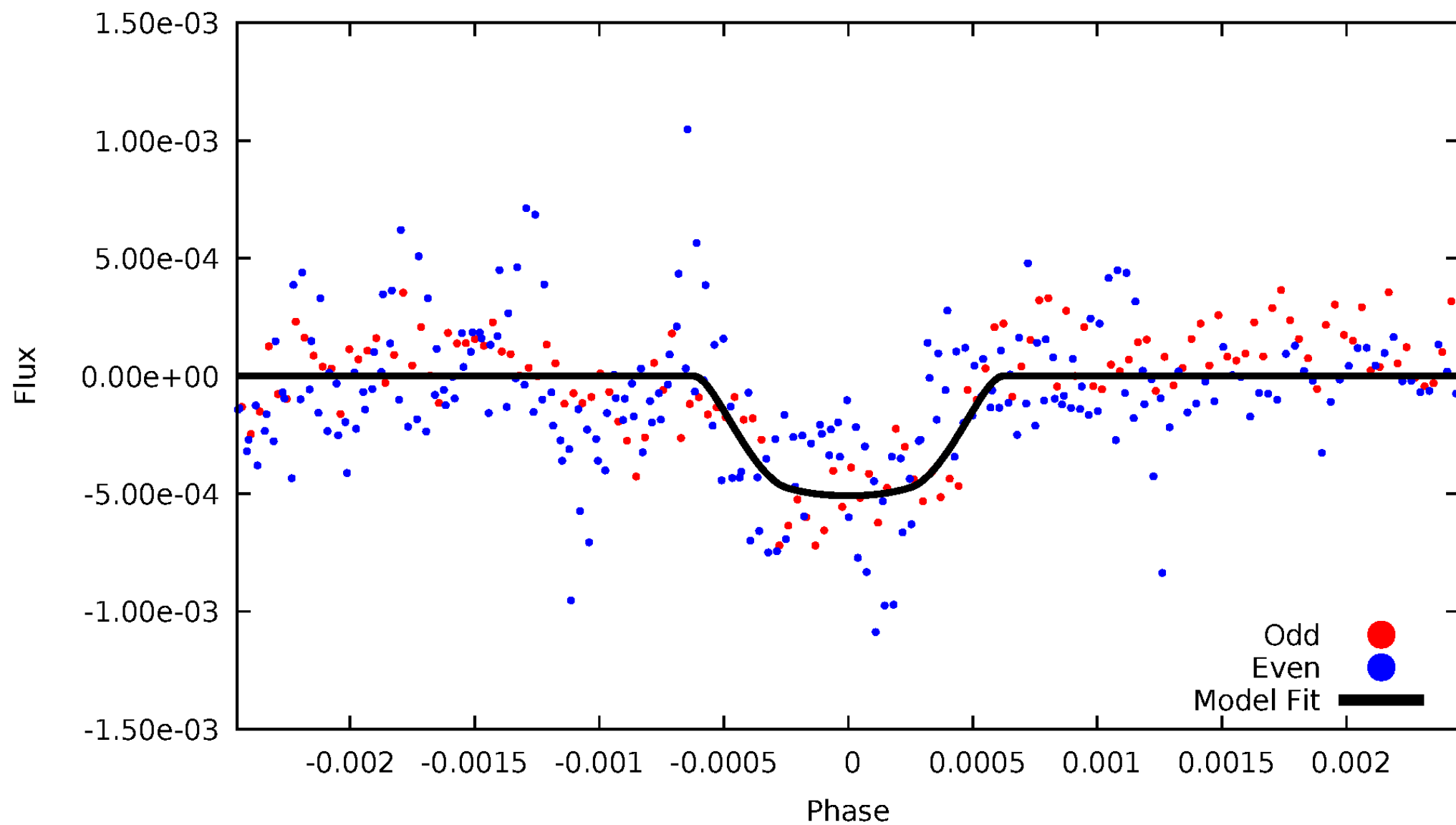


TCE 009084832-02



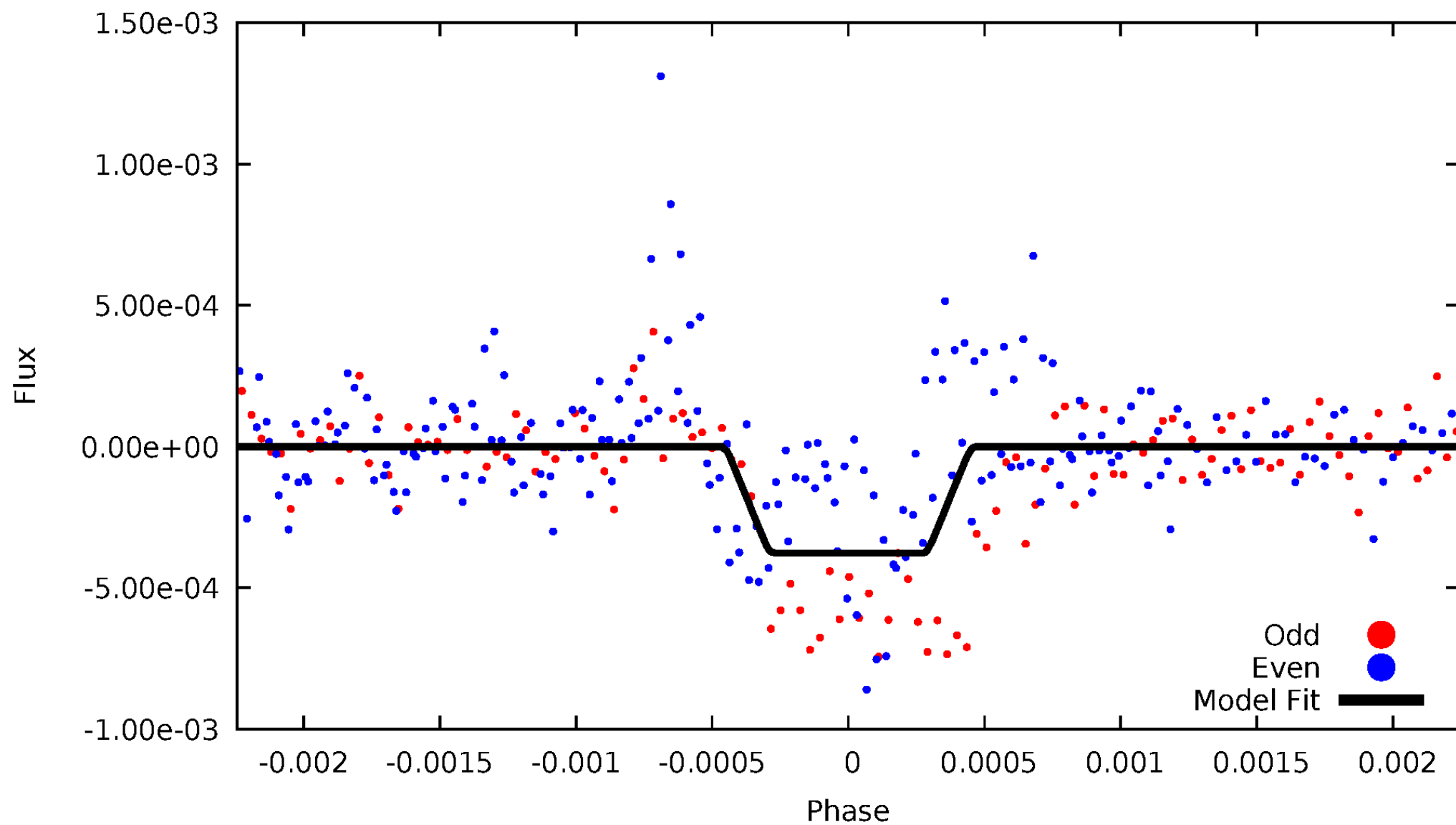
DV Odd/Even

TCE 009084832-02



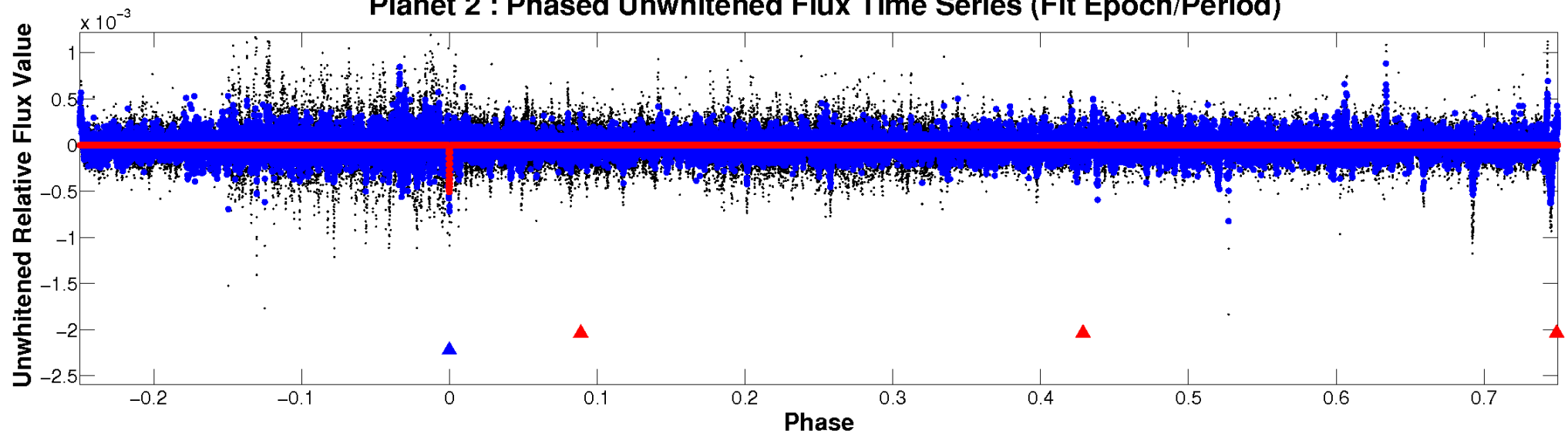
ALT Odd/Even

TCE 009084832-02

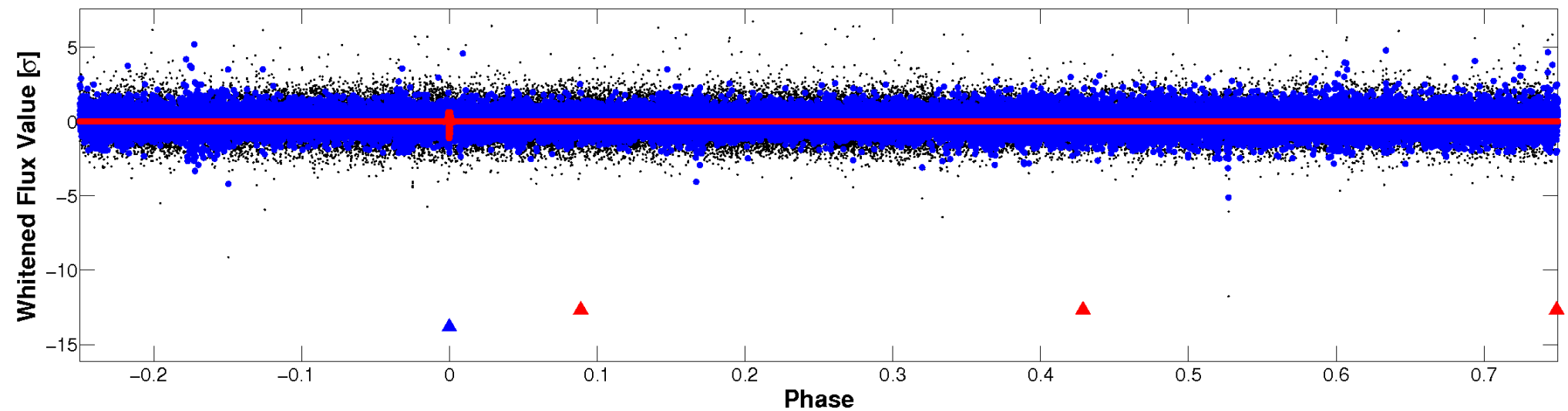


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

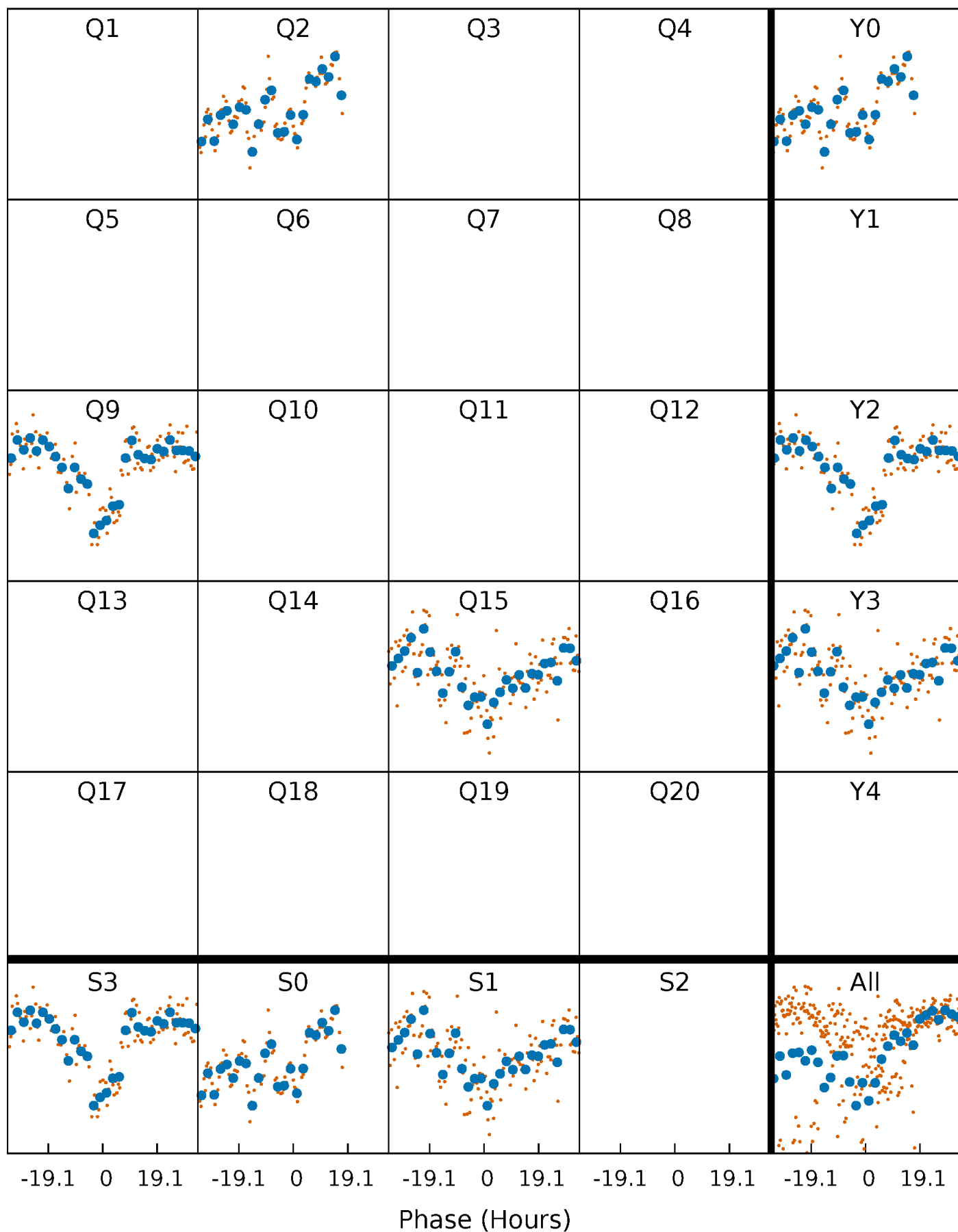


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



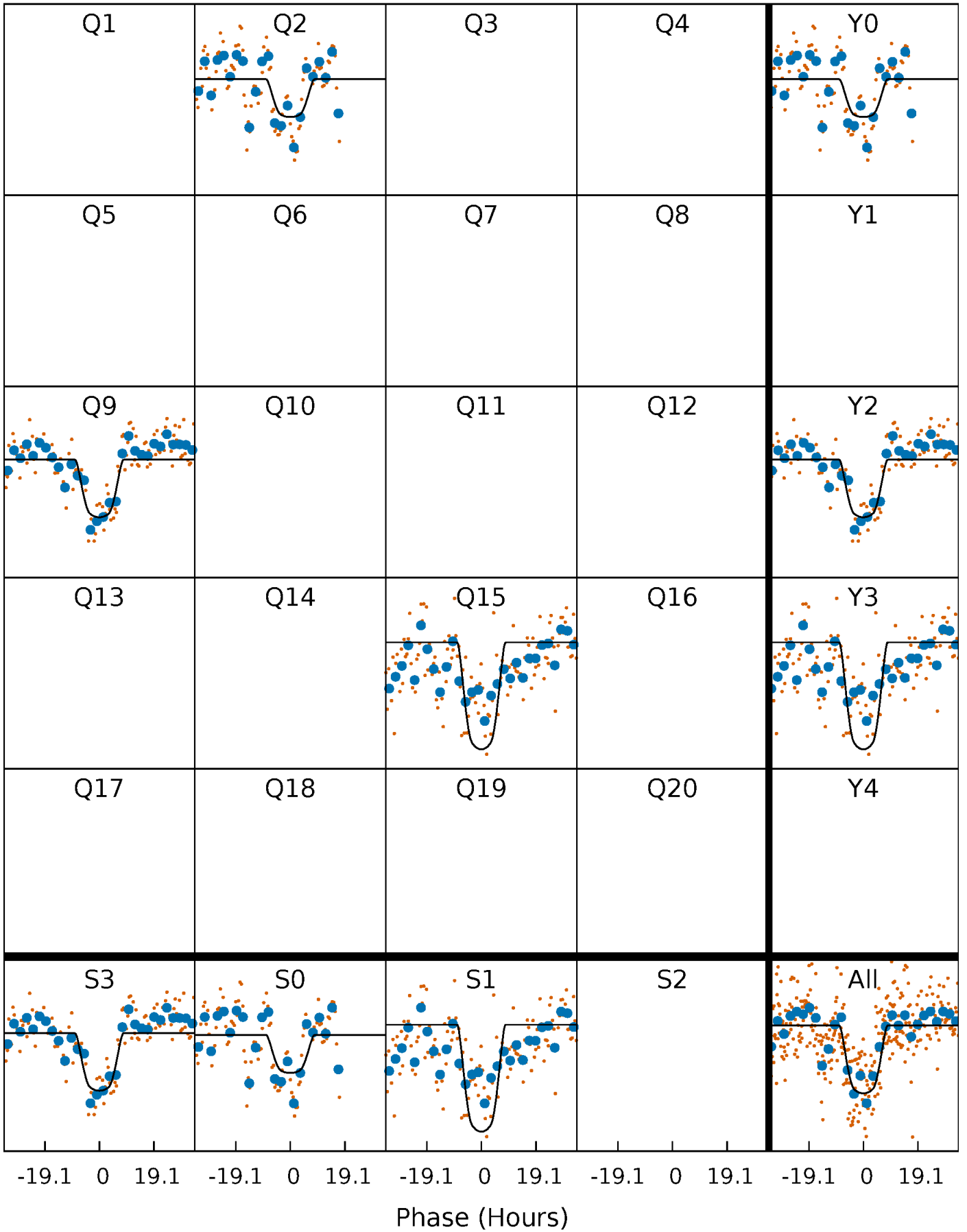
PDC Quarter-Phased Transit Curves

TCE 009084832-02 $P=568.086364$ Days $T_0=254.665871$ (BKJD)



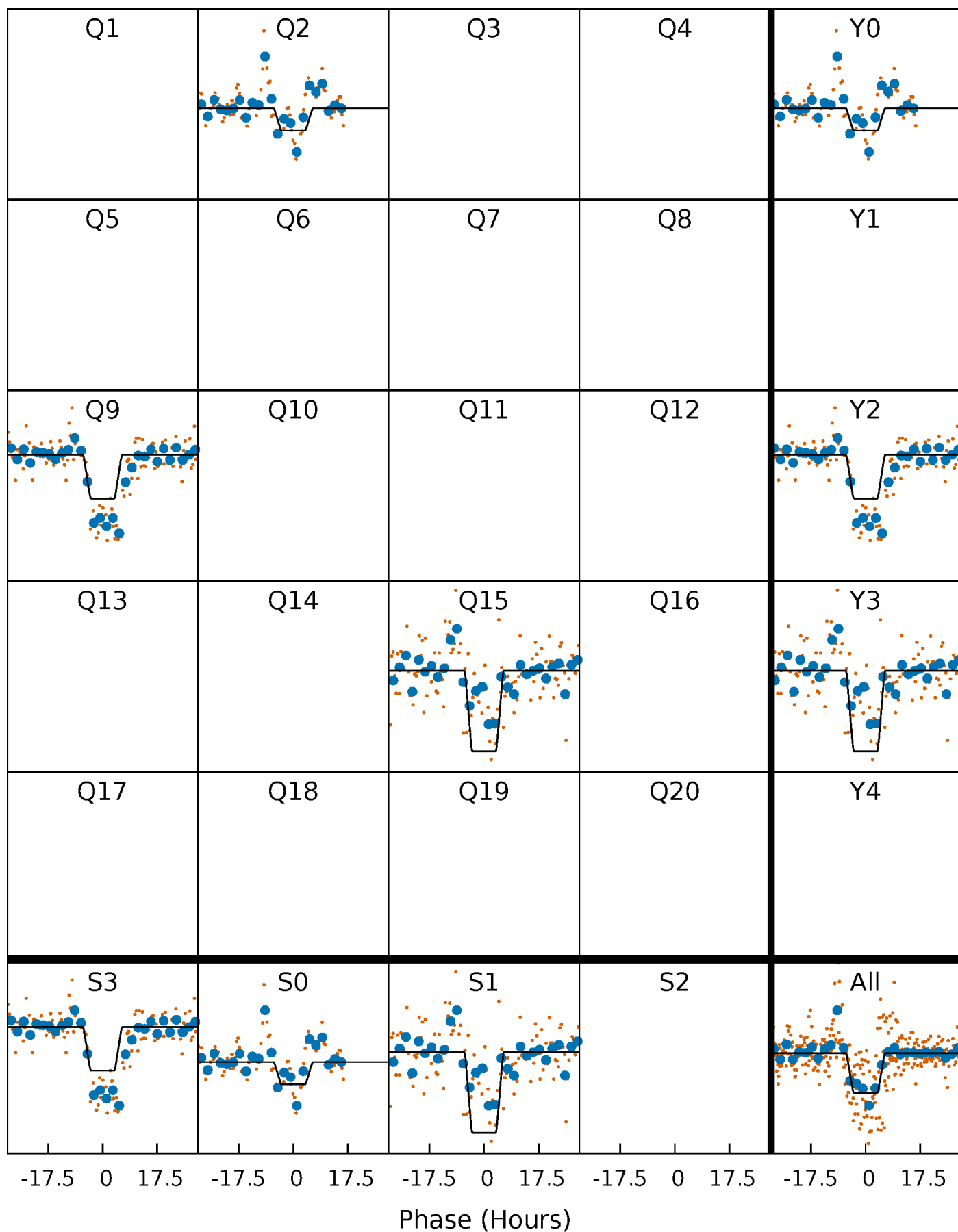
DV Quarter-Phased Transit Curves

TCE 009084832-02 $P=568.086364$ Days $T_0=254.665871$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

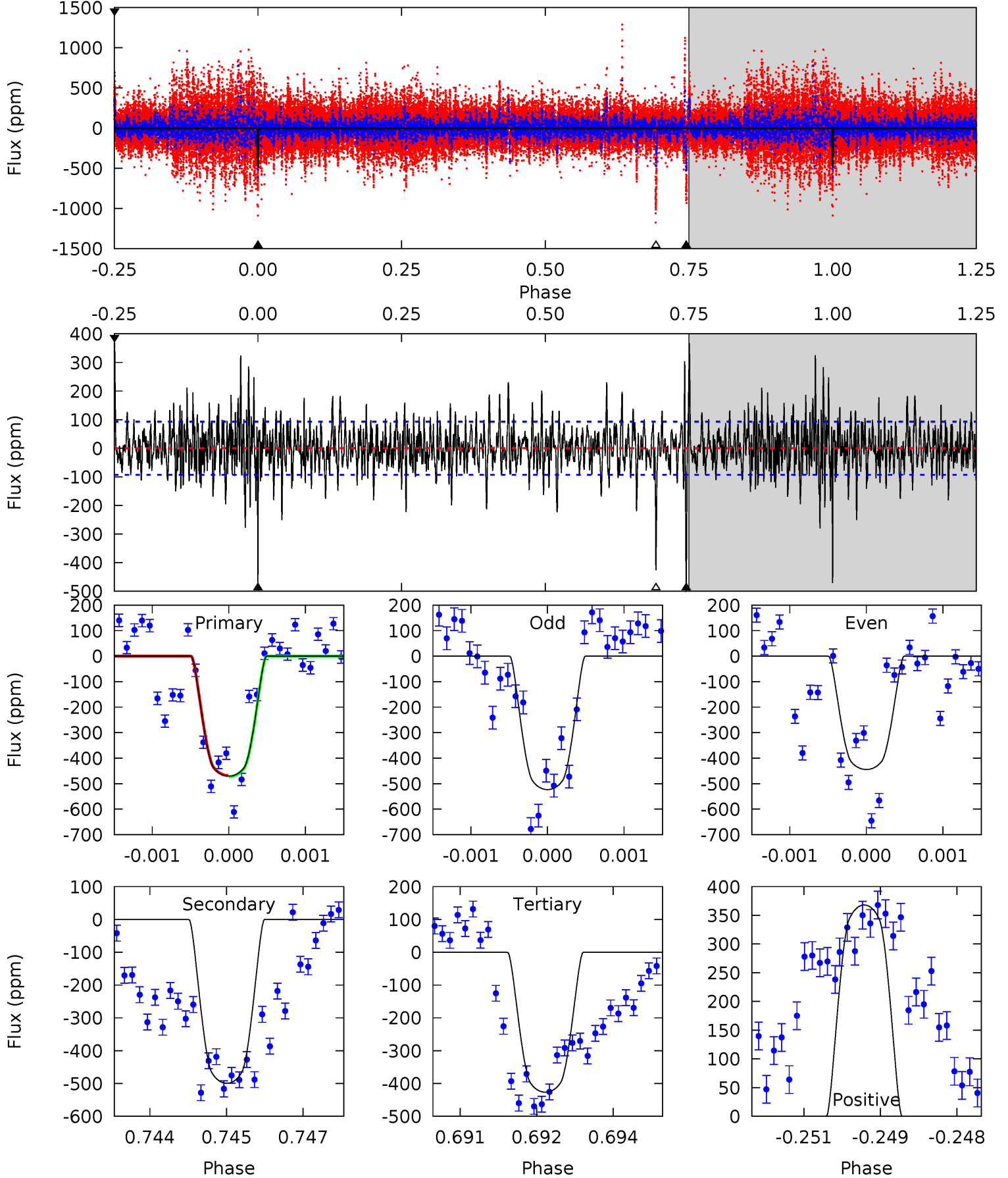
TCE 009084832-02 P=568.066590 Days $T_0=254.690075$ (BKJD)



DV Model-Shift Uniqueness Test

009084832-02, P = 568.086364 Days, E = 254.665871 Days

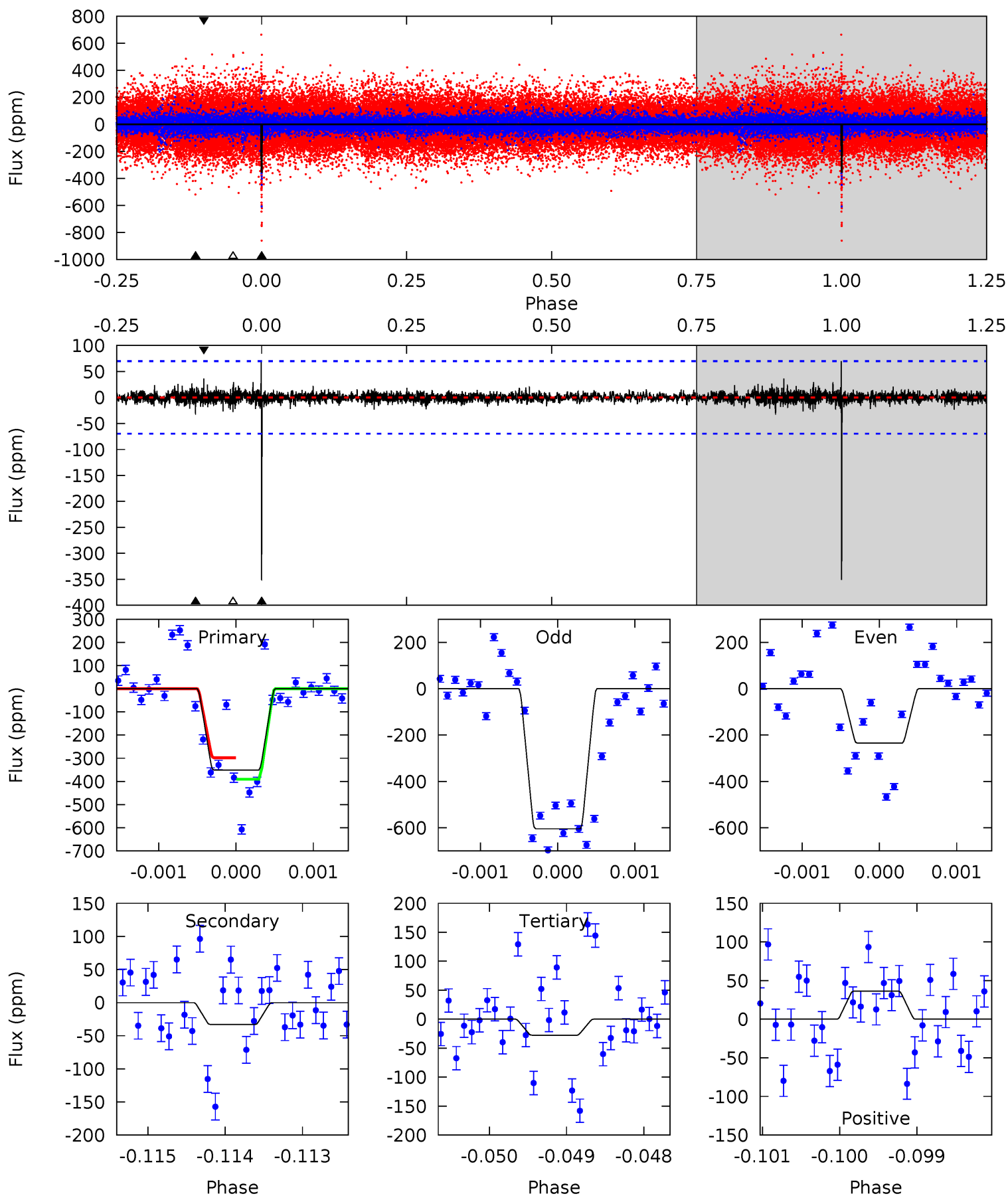
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.5	29.1	24.9	21.5	5.41	3.23	4.05	2.56	5.98	4.25	7.67	2.31	0.90	0.42	0.12



Alt Model-Shift Uniqueness Test

009084832-02, P = 568.066590 Days, E = 254.690075 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.5	2.58	2.17	2.84	5.46	3.31	0.44	25.3	24.6	0.42	-0.26	13.4	1.17	0.17	3.61



Stellar Parameters For KIC 009084832

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5359^{+160}_{-144}	$4.403^{+0.144}_{-0.234}$	$0.020^{+0.300}_{-0.250}$	$0.950^{+0.268}_{-0.157}$	$0.832^{+0.106}_{-0.062}$	$1.366^{+0.886}_{-0.715}$
	+3%/-3%	+3%/-5%	+1500%/-1250%	+28%/-17%	+13%/-7%	+65%/-52%
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 009084832-02 / KOI 8176.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-500 ± 17	$2.92^{+0.56}_{-0.40}$	290^{+24}_{-19}	4910^{+218}_{-207}	51763^{+17647}_{-14975}
Alt.	-33 ± 13	$2.07^{+0.41}_{-0.33}$	291^{+24}_{-18}	3410^{+243}_{-263}	6628^{+4572}_{-3038}

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 $A_{\text{obs}} \gg 1.0$

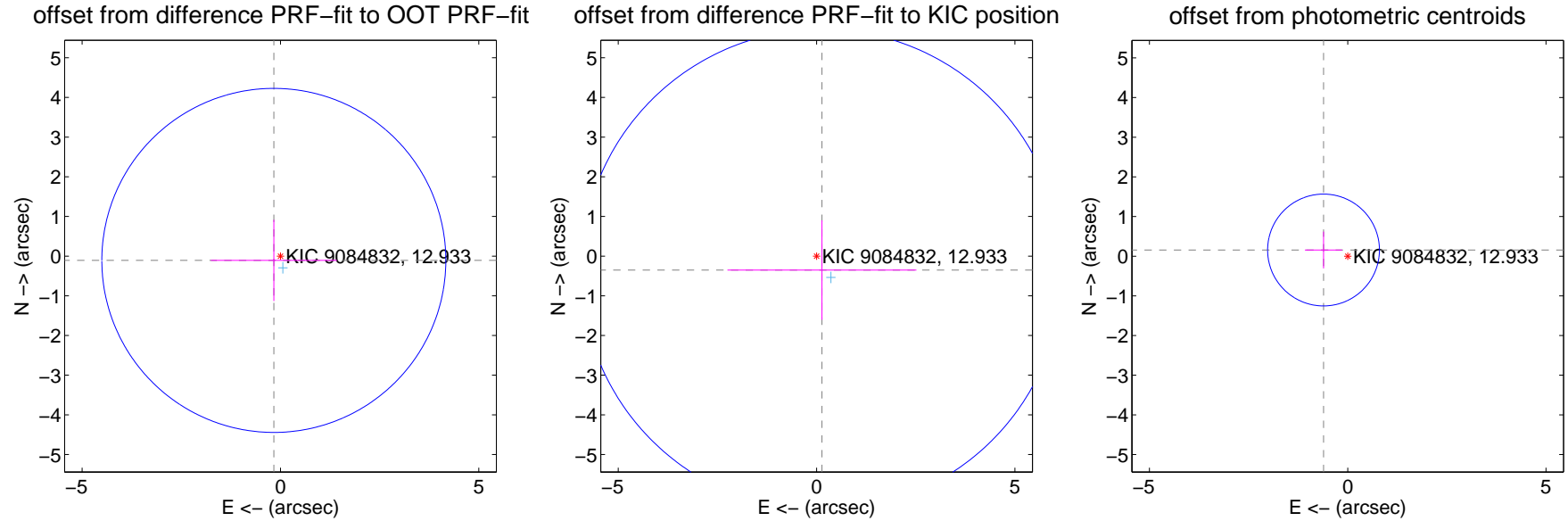
DV Centroid Data

Supplemental centroid analysis for 009084832-02. Kepler magnitude: 12.93. Transit SNR 8.35

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.199 ± 1.445	0.14	0.167 ± 1.589	-0.108 ± 1.024
PRF-fit source offset from KIC position	0.375 ± 2.023	0.19	-0.134 ± 2.383	-0.351 ± 1.254
photometric centroid source offset	0.63 ± 0.47	1.34	0.61 ± 0.47	0.16 ± 0.46



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.

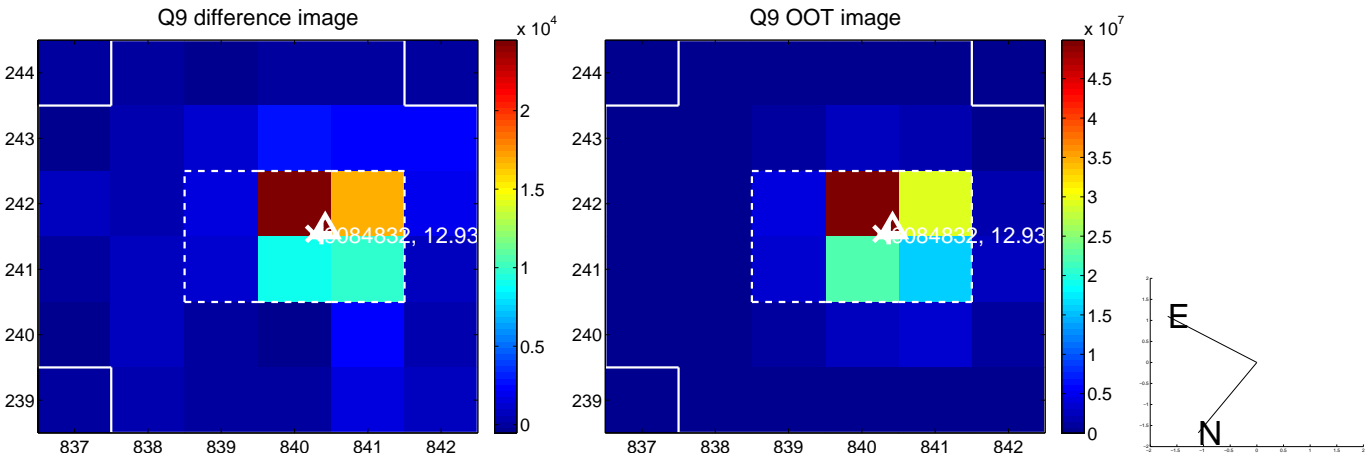
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Q13 no difference image



Q13 no OOT image



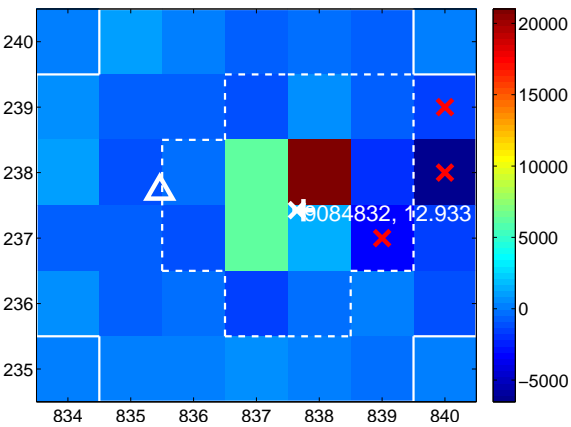
Q14 no difference image



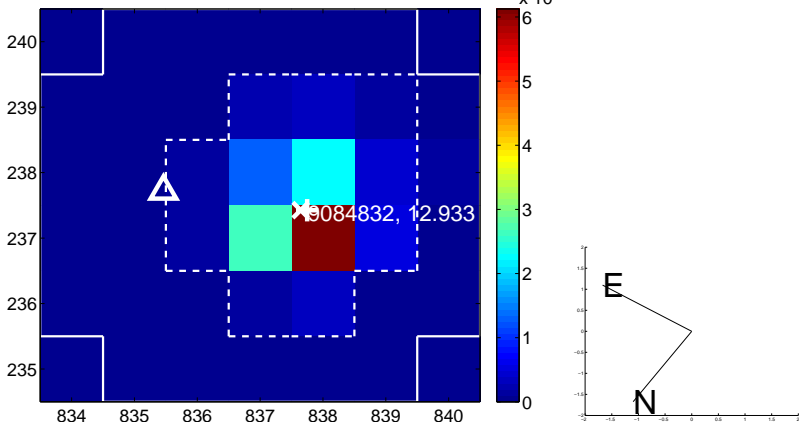
Q14 no OOT image



Q15 difference image. Poor Quality



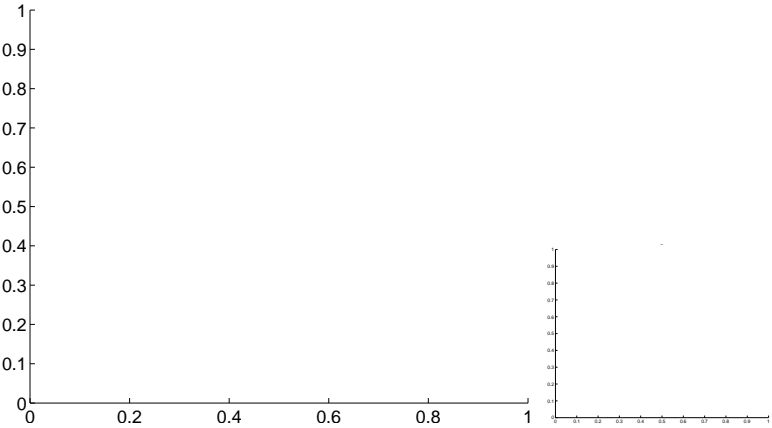
Q15 OOT image



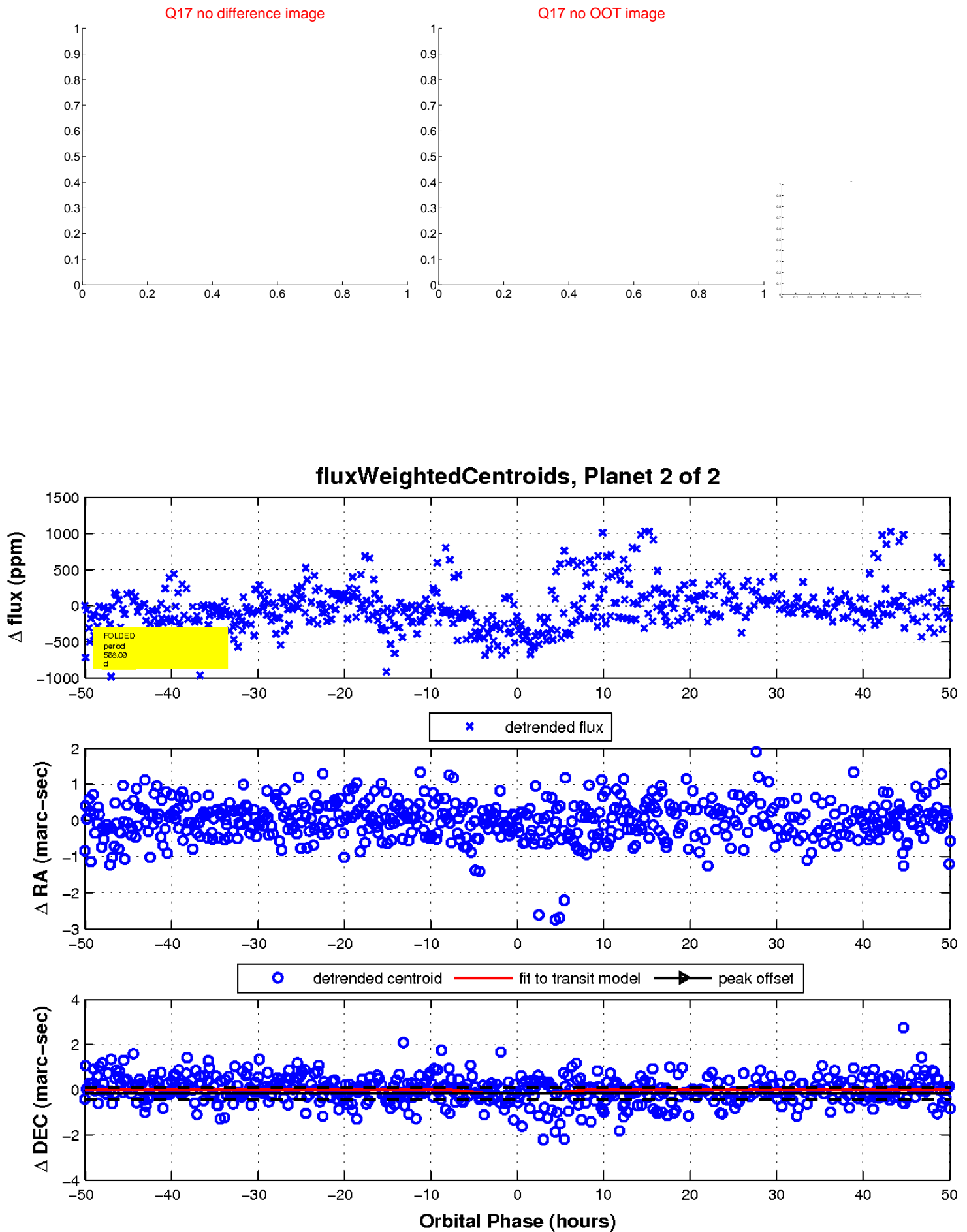
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

