

KIC 006940867

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})
006940867-01	OBS	No	514.858269	162.073507	402.3	16.797	10.7	10.2	1.20	6204	2.49	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006940867-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

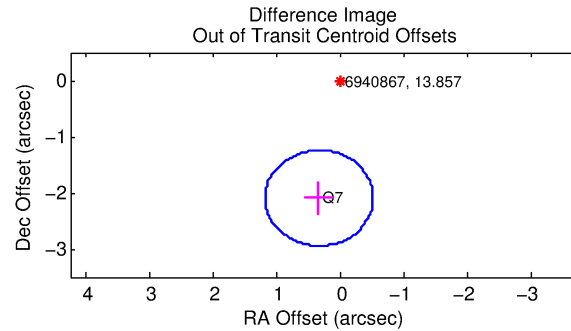
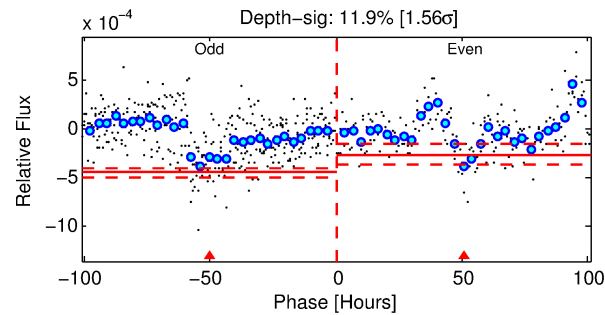
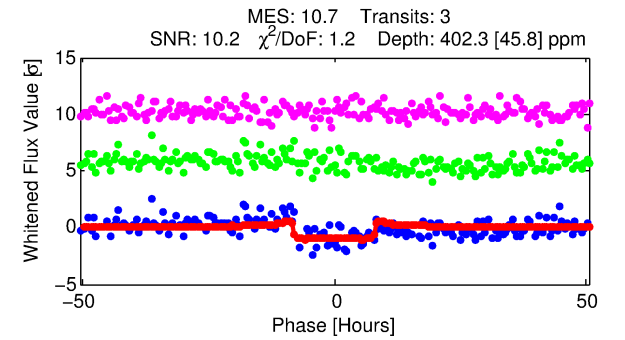
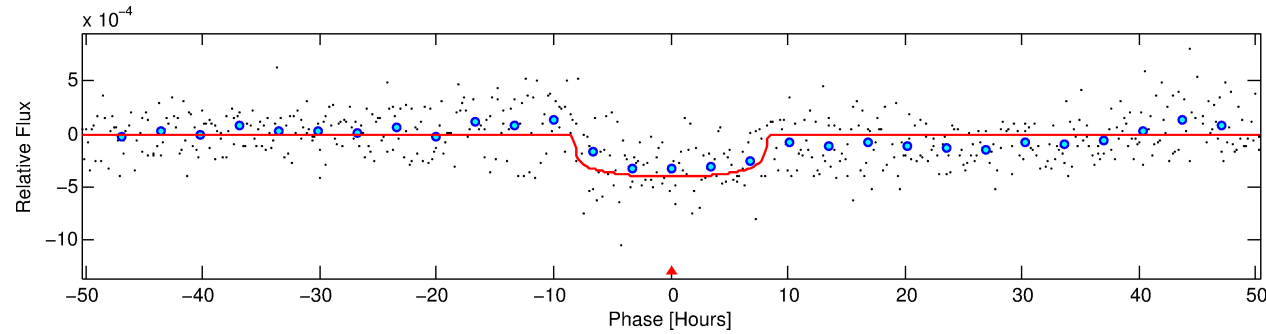
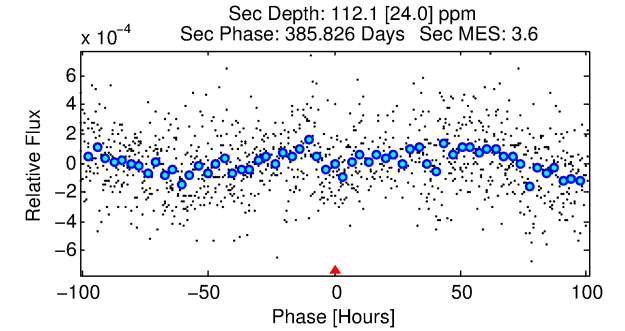
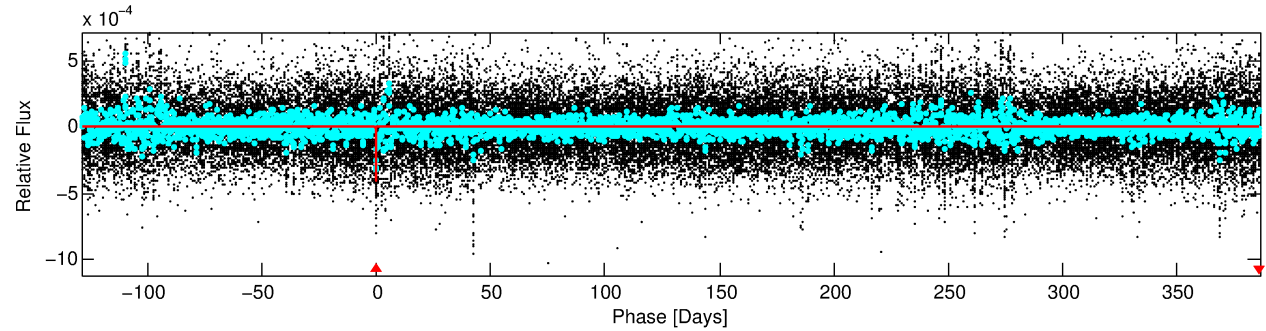
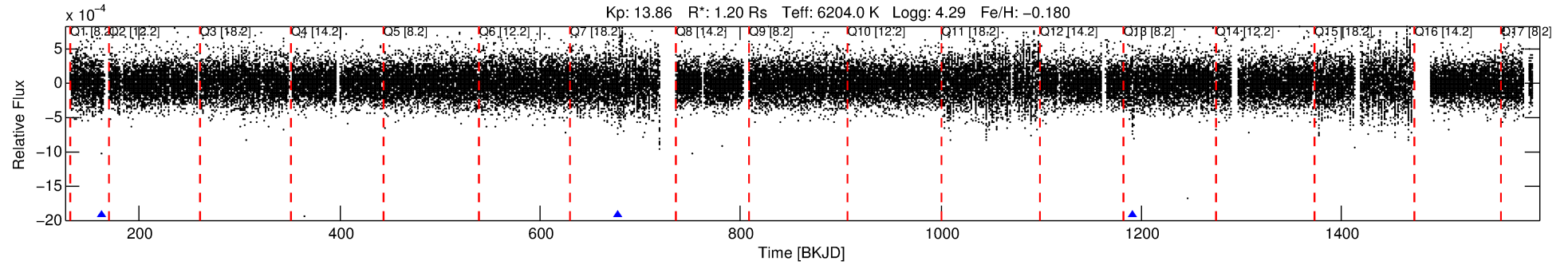
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006940867-01

No Significant Match Found

DV One-Page Summary

KIC: 6940867 Candidate: 1 of 1 Period: 514.858 d



DV Fit Results:

Period = 514.85827 [0.01036] d
Epoch = 162.0735 [0.0119] BKJD
Rp/R* = 0.0190 [0.0074]
a/R* = 203.57 [396.23]
b = 0.53 [2.64]
Seff = 1.18 [0.45]
Teq = 266 [25] K
Rp = 2.49 [1.25] Re
a = 1.2704 [0.3237] AU
Ag = 16070.76 [14201.50] [1.13σ]
Teffp = 4631 [949] K [4.60σ]

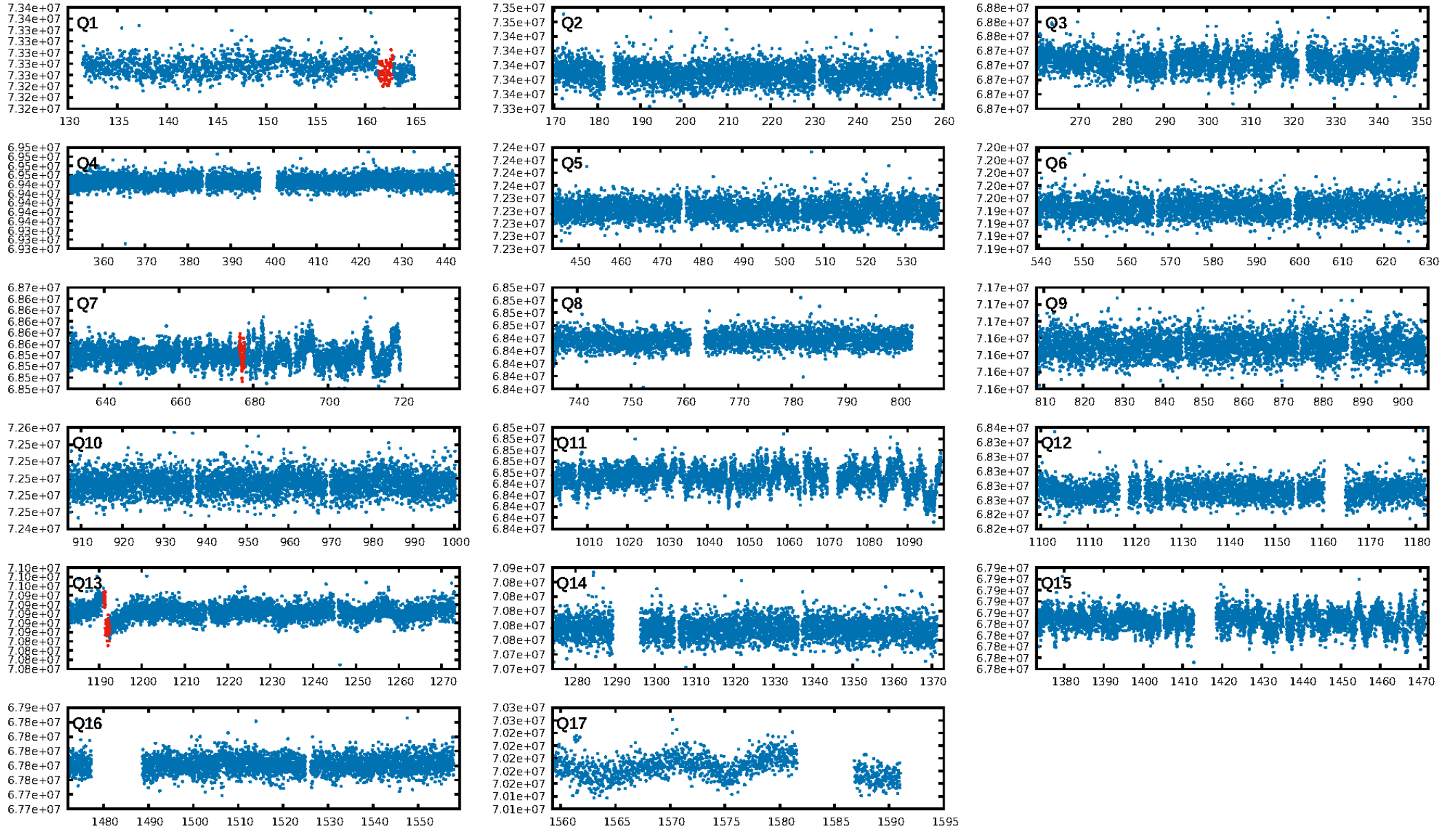
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 88.2%
Bootstrap-pfa: 1.65e-18
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.861
Centroid-sig: 91.5%
Centroid-so: 0.326 arcsec [0.31σ]
OotOffset-rm: 2.124 arcsec [7.50σ]
KicOffset-rm: 2.136 arcsec [7.54σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

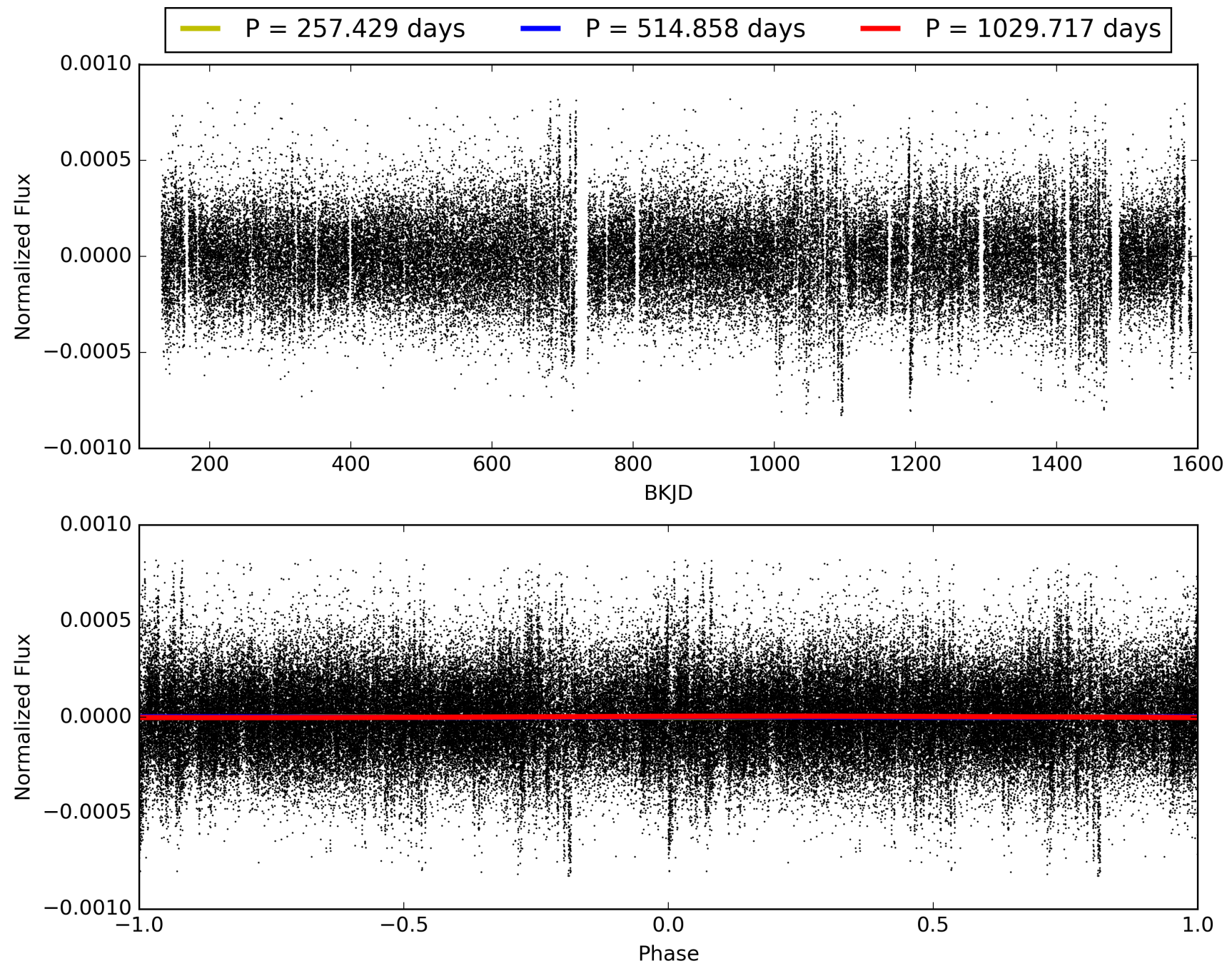
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:44:11 Z

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

TCE 006940867-01, PDC Light Curves

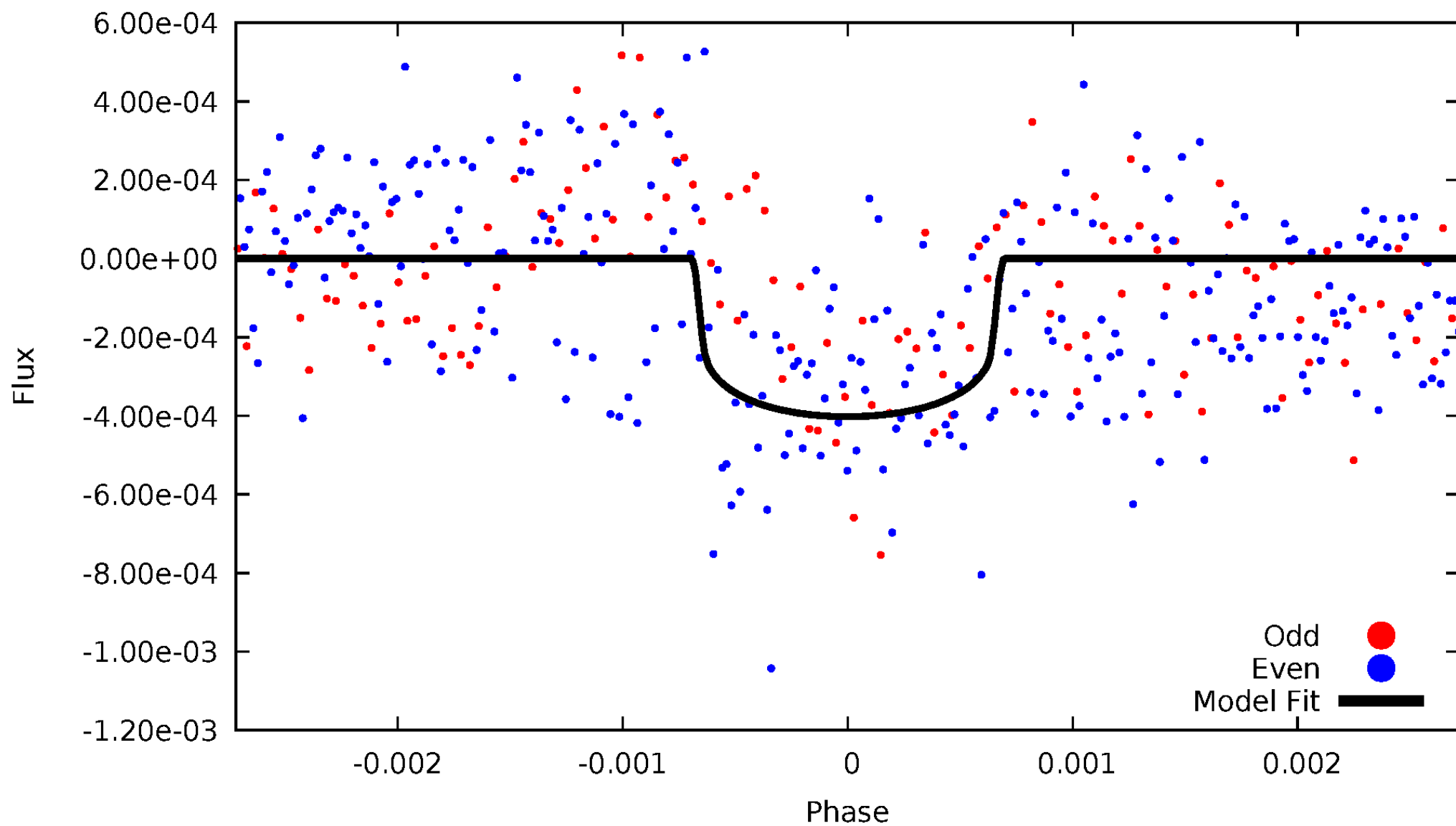


TCE 006940867-01



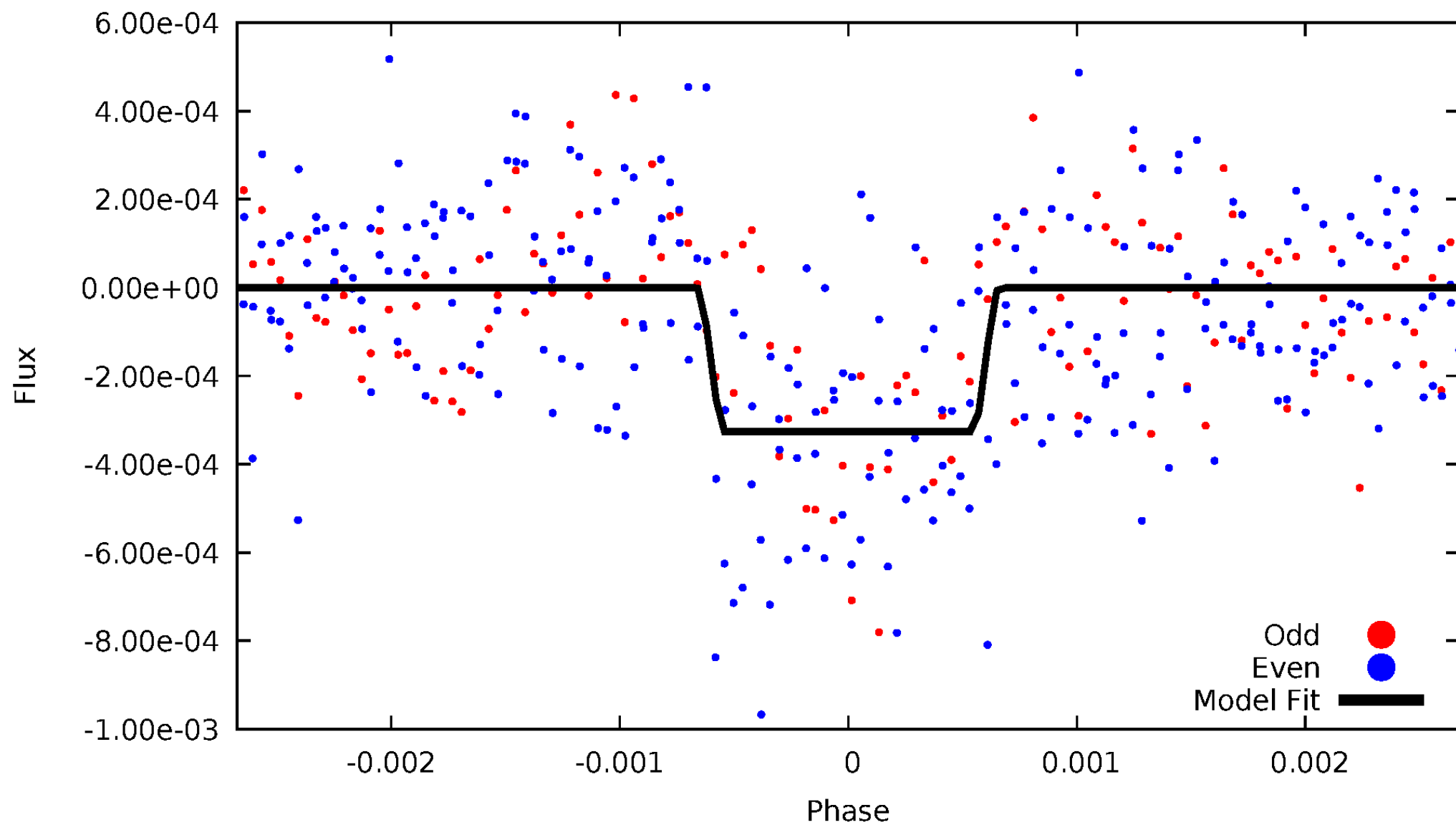
DV Odd/Even

TCE 006940867-01



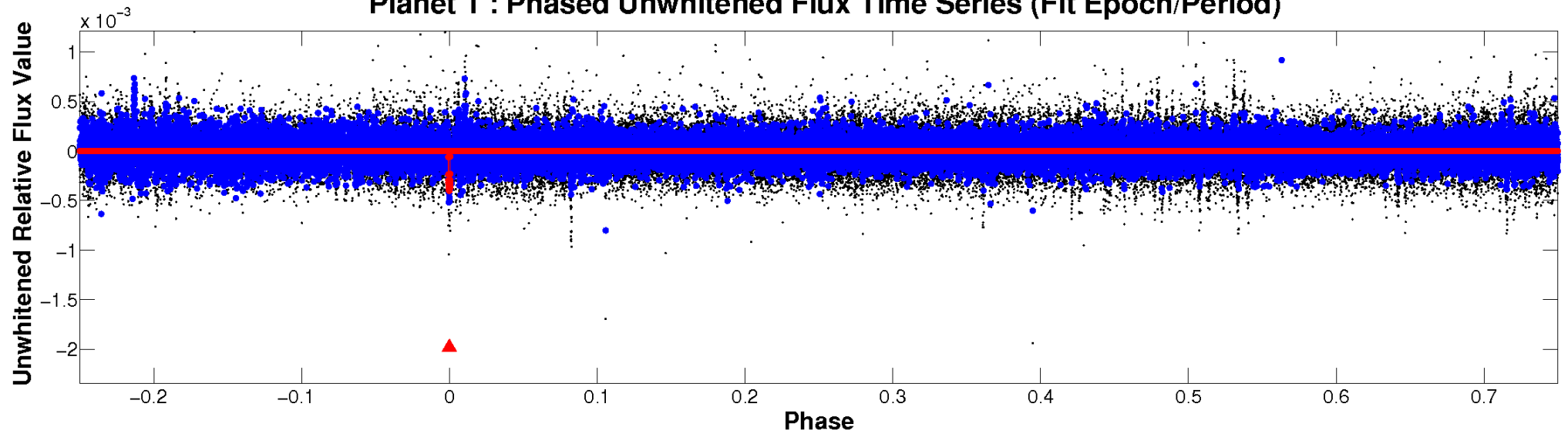
ALT Odd/Even

TCE 006940867-01

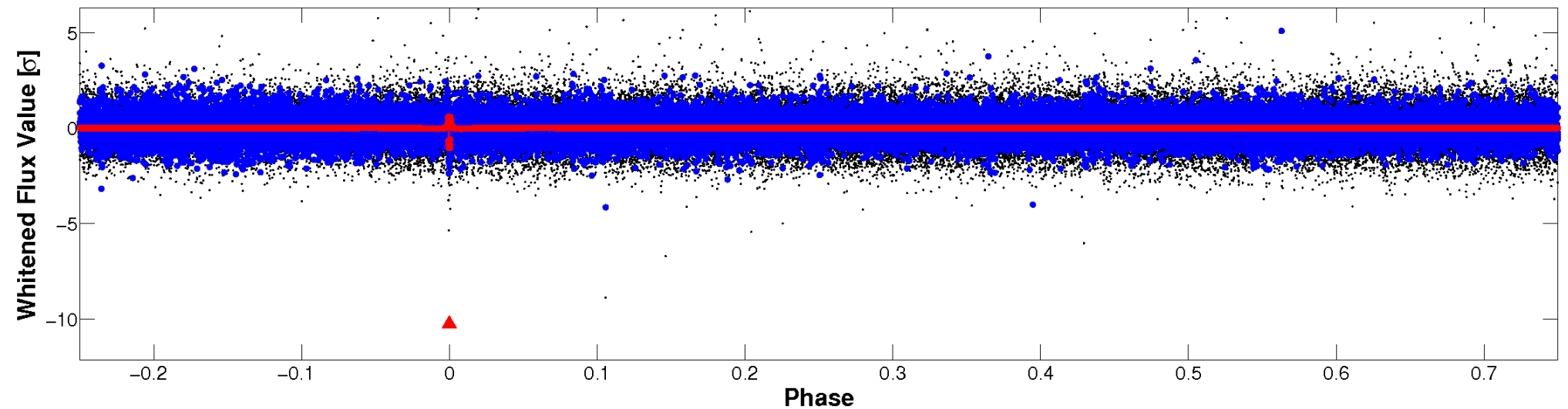


Non-Whitened Vs. Whitened Light Curve

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

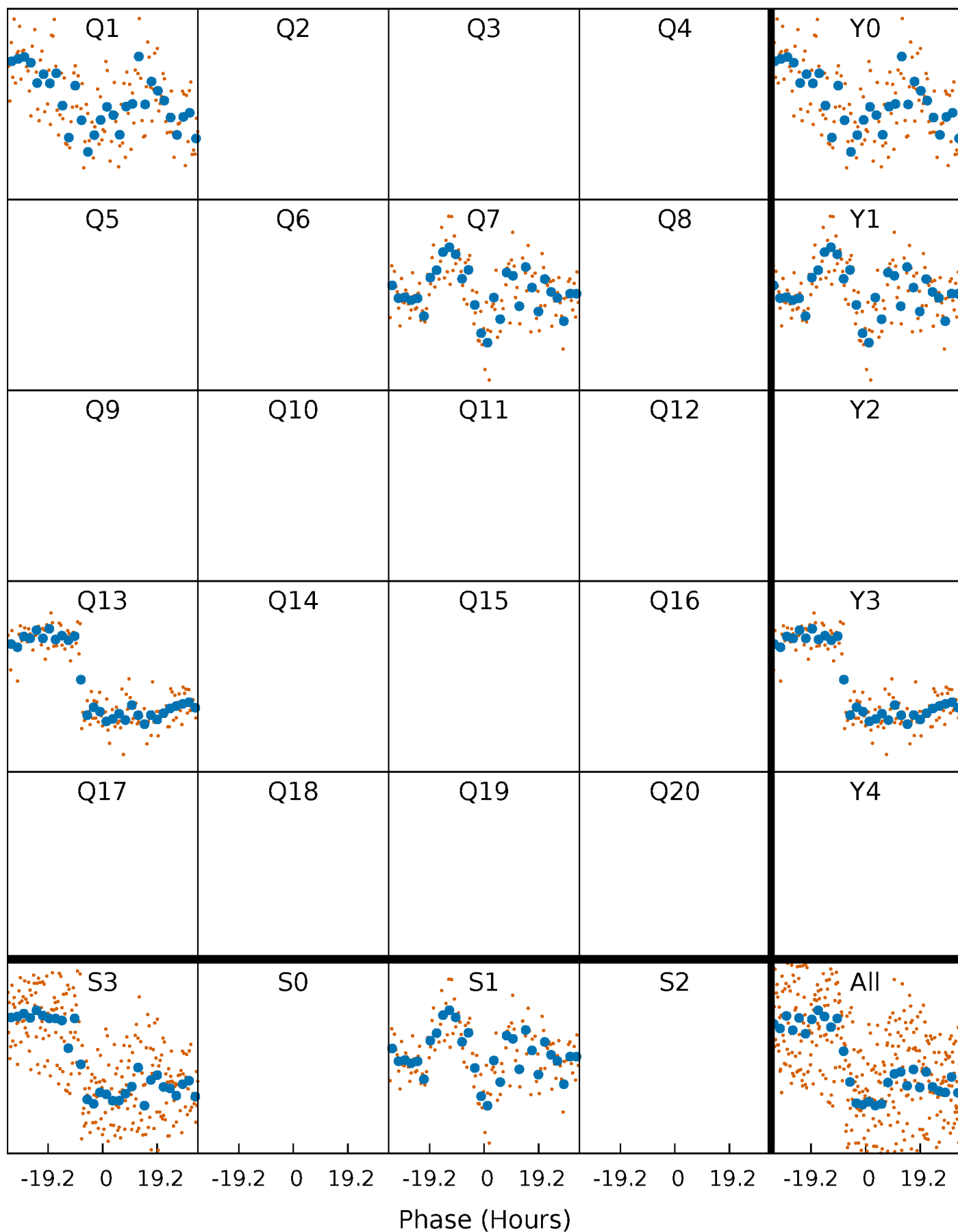


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



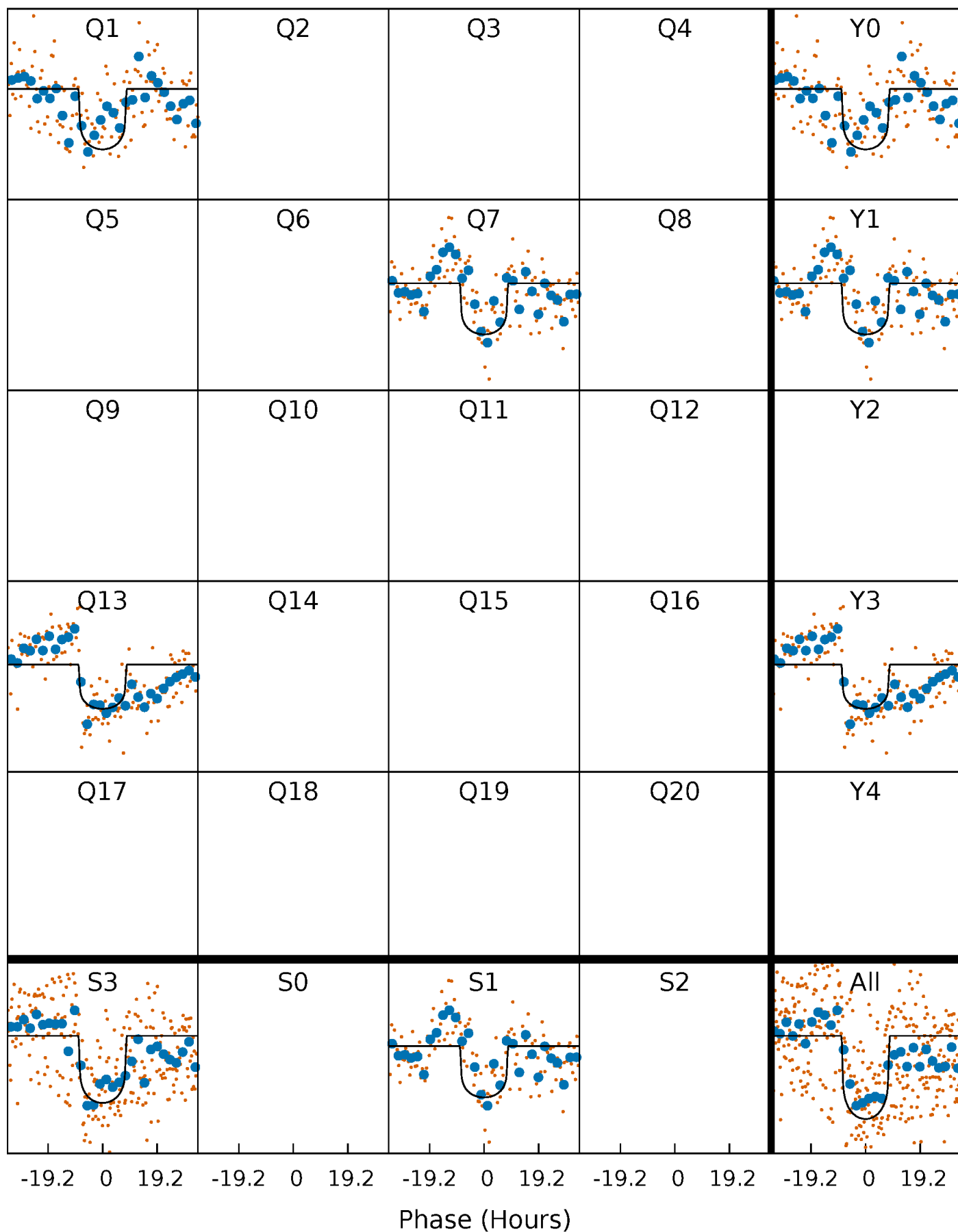
PDC Quarter-Phased Transit Curves

TCE 006940867-01 P=514.858269 Days $T_0=162.073507$ (BKJD)



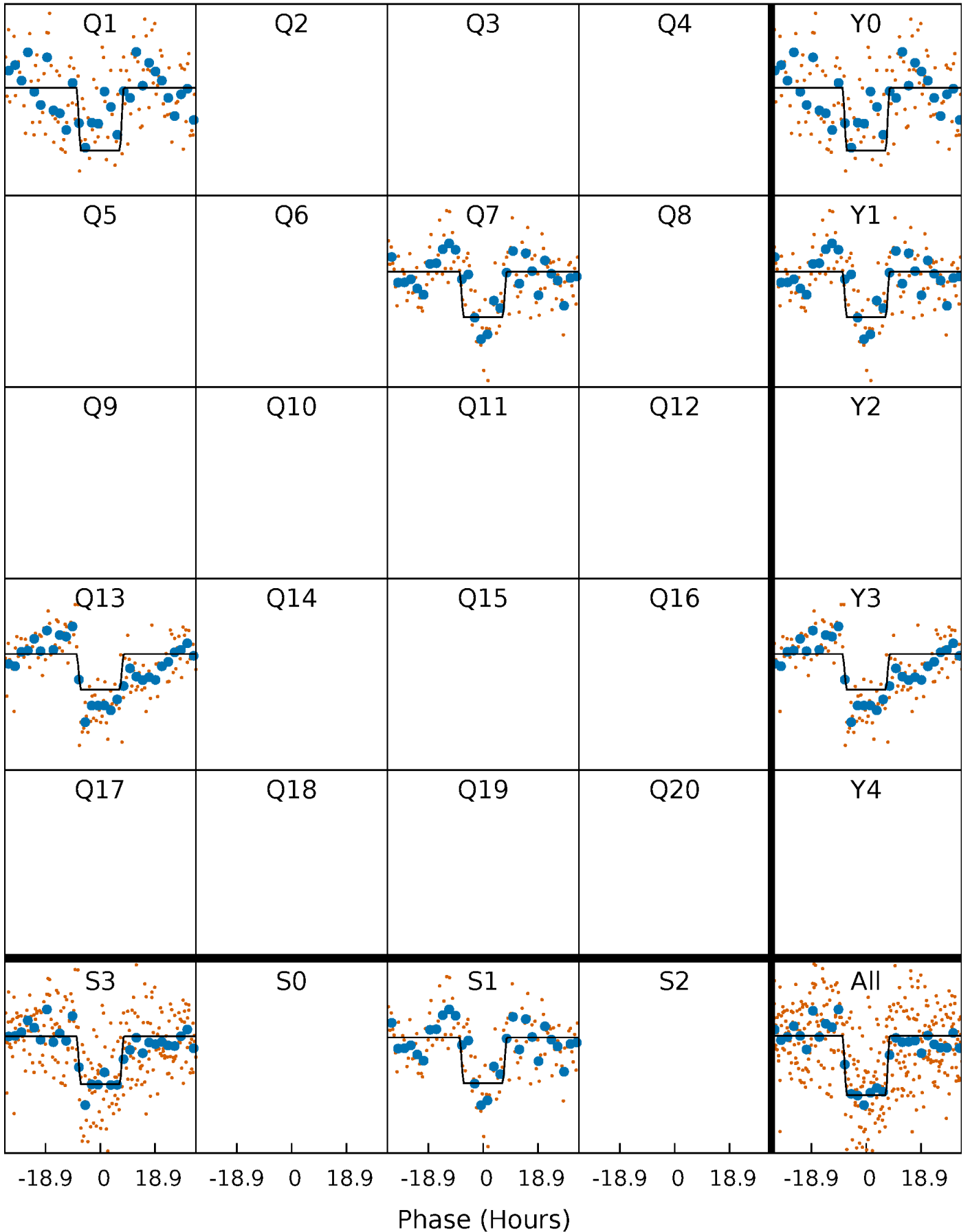
DV Quarter-Phased Transit Curves

TCE 006940867-01 $P=514.858269$ Days $T_0=162.073507$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

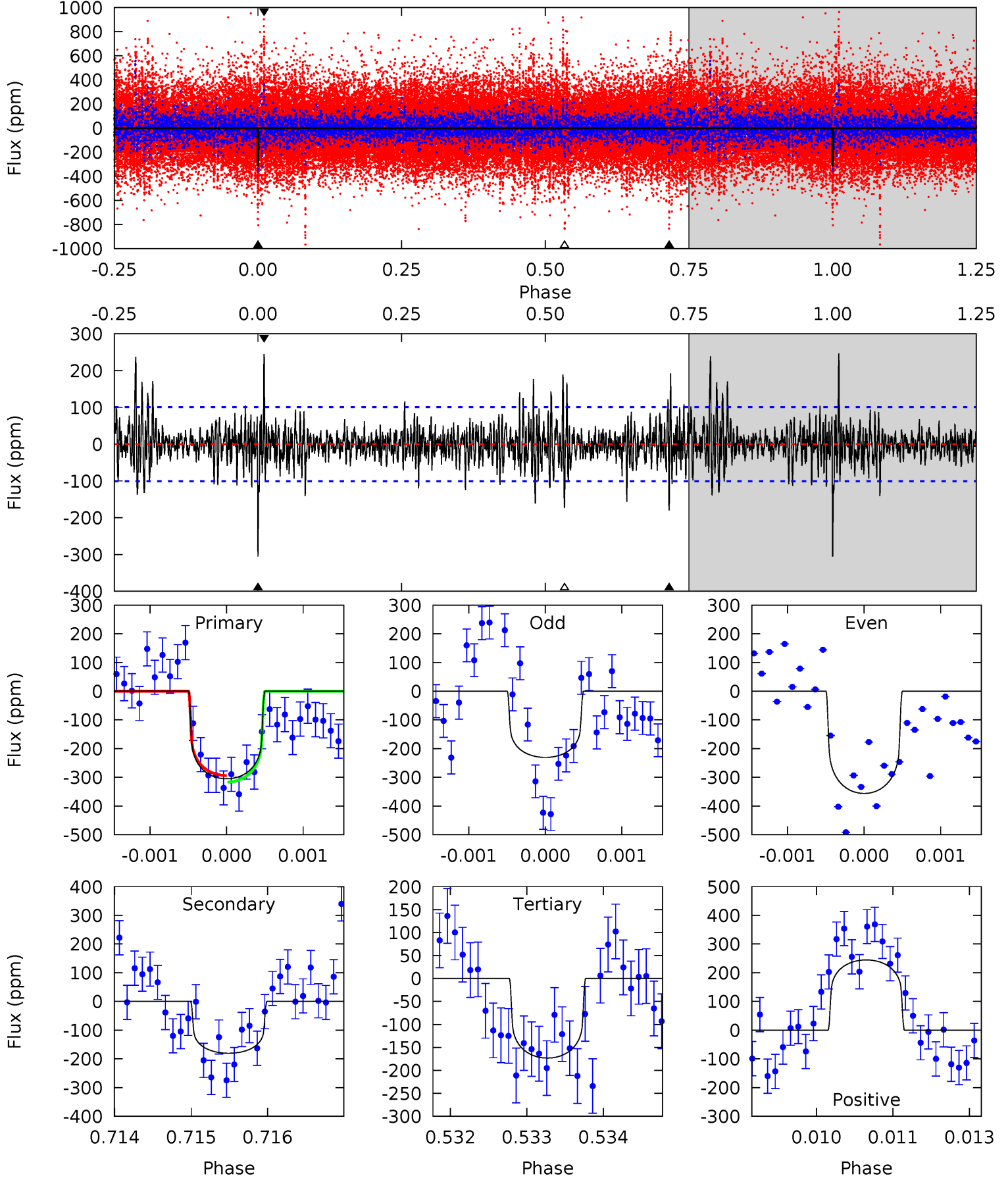
TCE 006940867-01 P=514.843978 Days $T_0=162.094227$ (BKJD)



DV Model-Shift Uniqueness Test

006940867-01, P = 514.858269 Days, E = 162.073507 Days

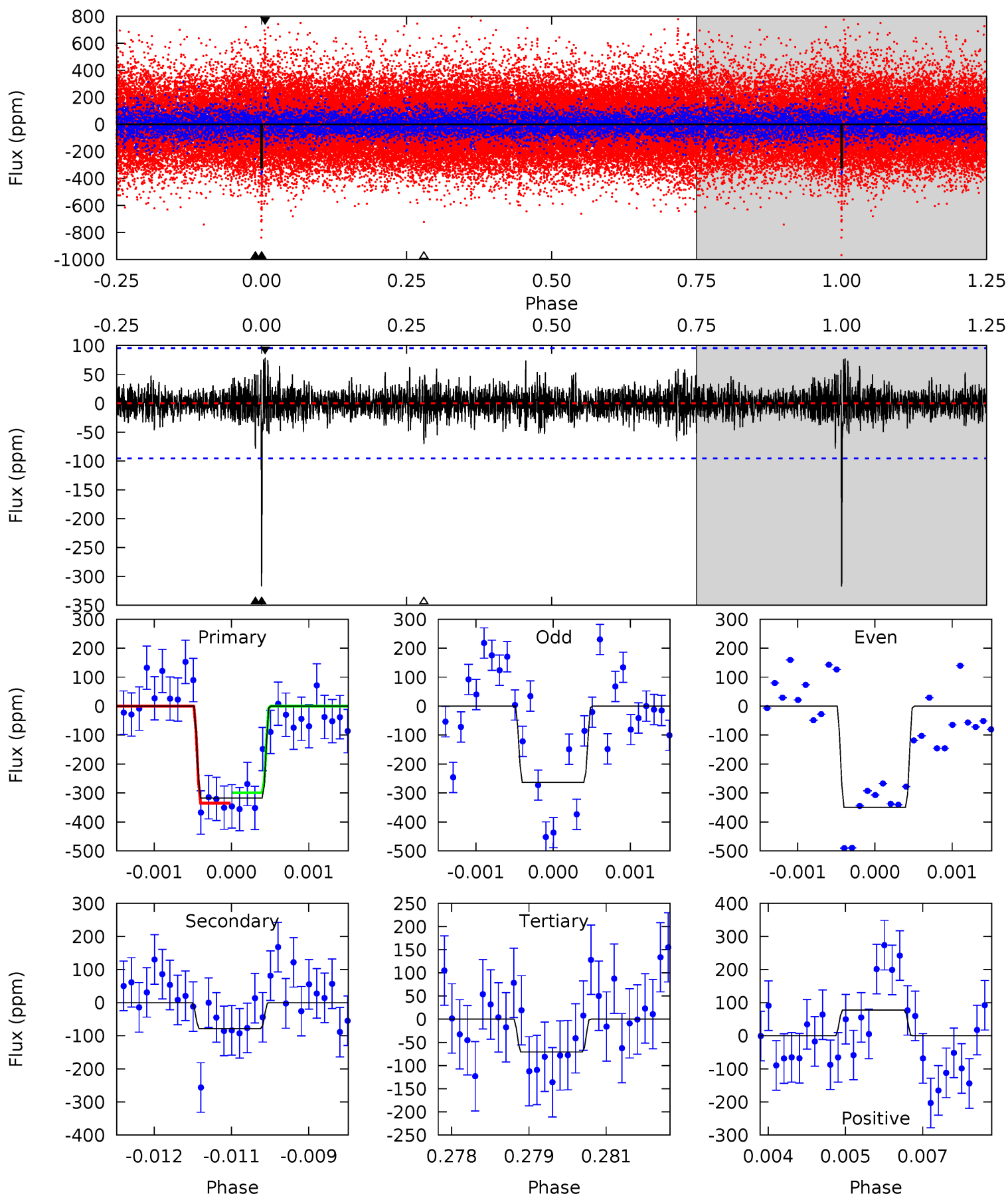
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	9.68	9.29	13.1	5.39	3.19	2.28	7.08	3.25	0.39	-3.44	3.21	1.18	0.44	0.61



Alt Model-Shift Uniqueness Test

006940867-01, $P = 514.843978$ Days, $E = 162.094227$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	4.45	4.00	4.38	5.40	3.21	0.95	14.0	13.6	0.45	0.07	2.32	1.21	0.20	1.00



Stellar Parameters For KIC 006940867

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6204^{+168}_{-206}	$4.293^{+0.153}_{-0.187}$	$-0.180^{+0.250}_{-0.300}$	$1.200^{+0.379}_{-0.233}$	$1.030^{+0.170}_{-0.124}$	$0.839^{+0.599}_{-0.400}$
	+3%/-3%	+4%/-4%	+139%/-167%	+32%/-19%	+17%/-12%	+71%/-48%
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 006940867-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-180 ± 19	$2.44^{+1.03}_{-0.91}$	373^{+26}_{-25}	5312^{+1300}_{-713}	26811^{+43172}_{-13474}
Alt.	-79 ± 18	$2.32^{+1.11}_{-0.92}$	372^{+28}_{-24}	4548^{+1103}_{-578}	12600^{+24269}_{-6784}

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

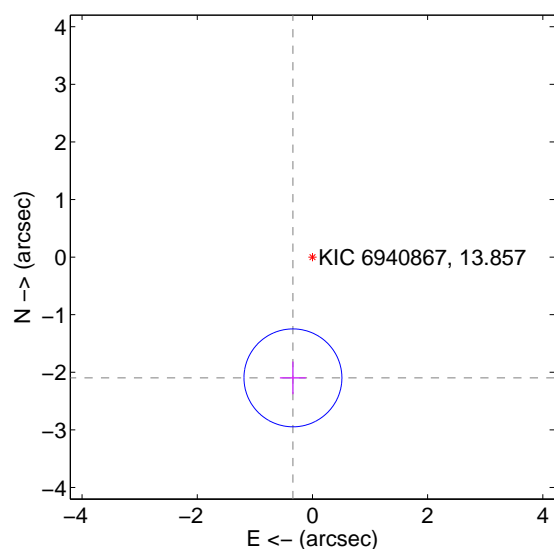
Supplemental centroid analysis for 006940867-01. Kepler magnitude: 13.86. Transit SNR 10.21

There are 1 quarters with good PRF difference image offsets

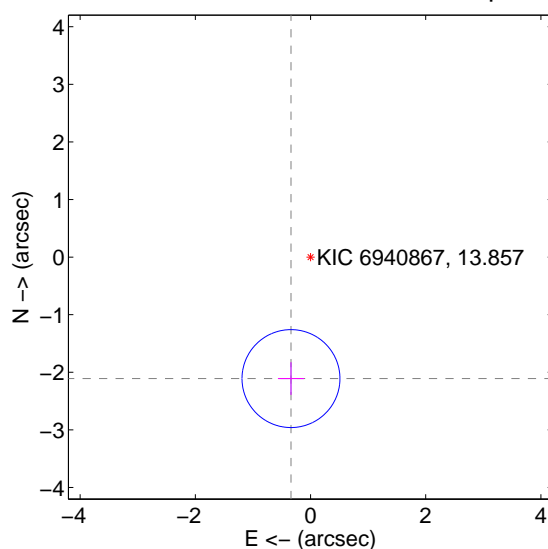
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.124 ± 0.283	7.50	0.339 ± 0.227	-2.096 ± 0.285
PRF-fit source offset from KIC position	2.136 ± 0.283	7.54	0.339 ± 0.227	-2.109 ± 0.285
photometric centroid source offset	0.33 ± 1.06	0.31	0.24 ± 1.02	0.22 ± 1.10

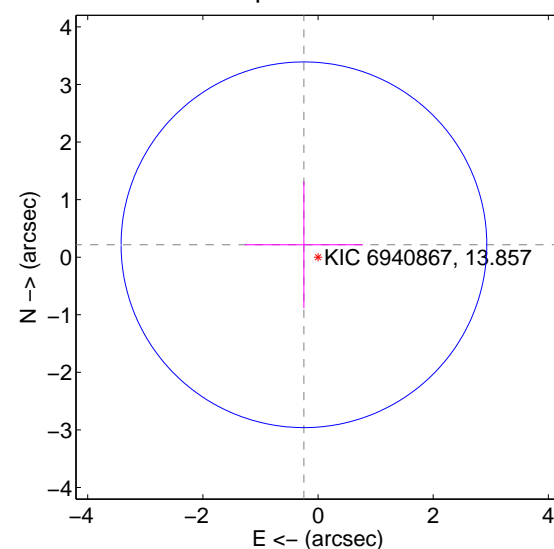
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

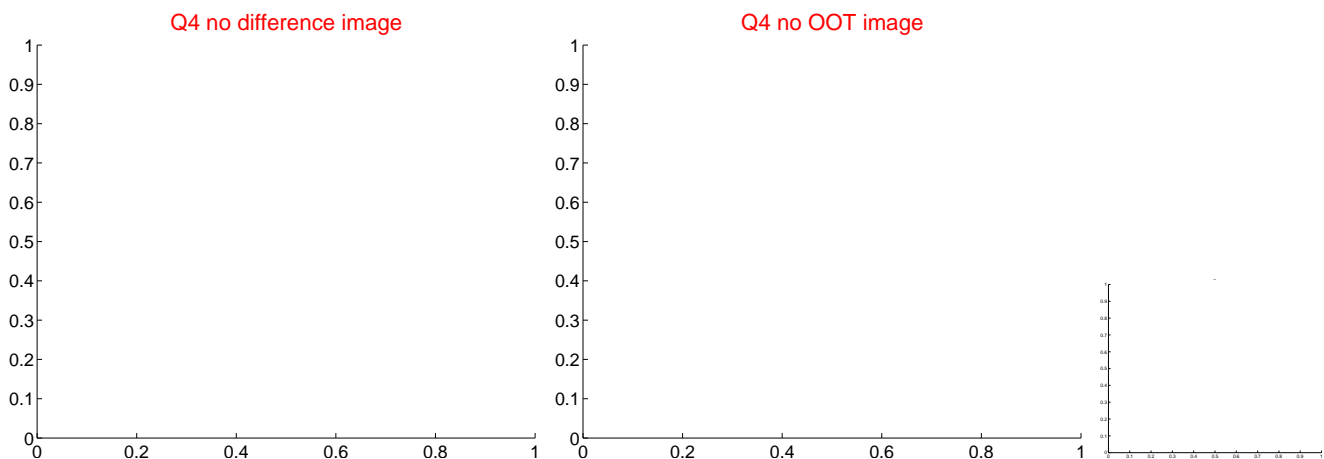
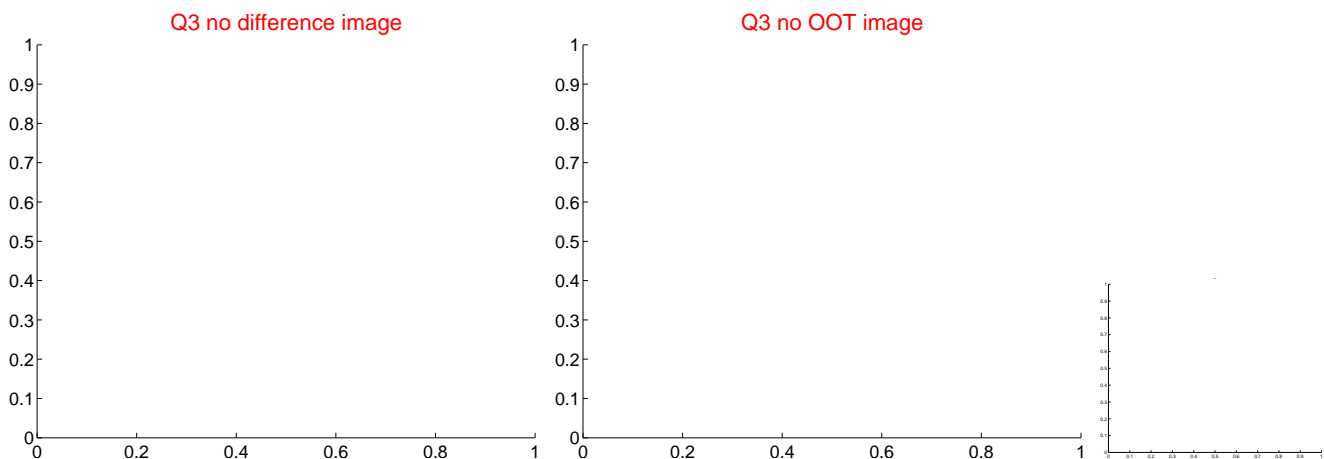
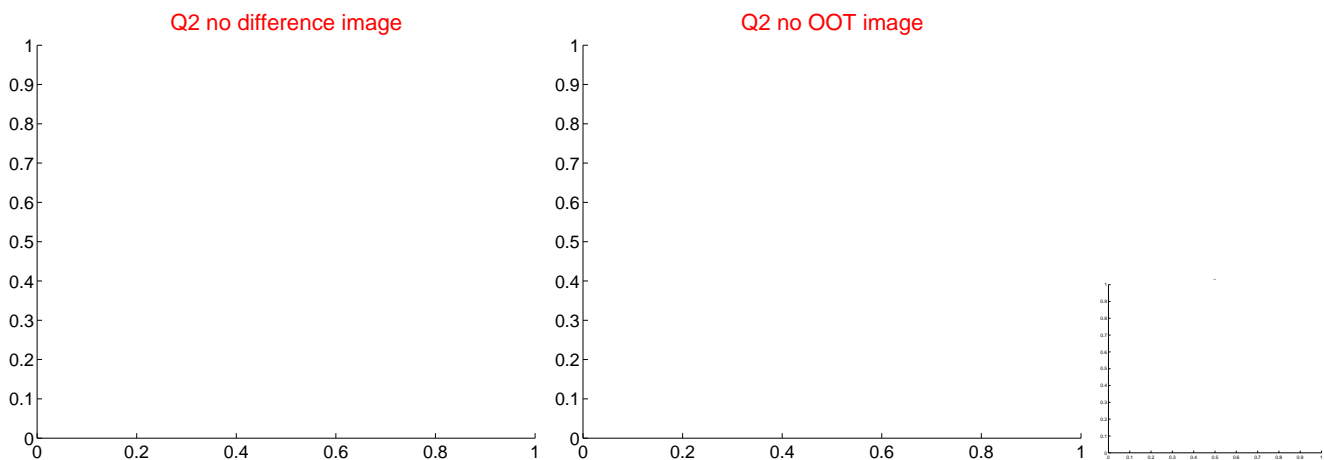
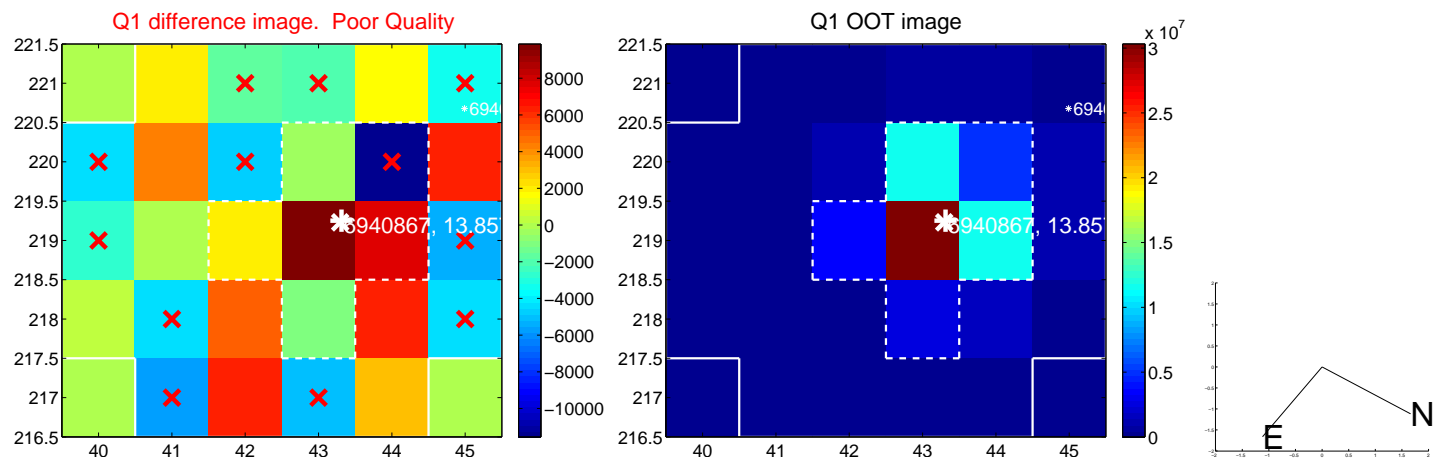


offset from photometric centroids

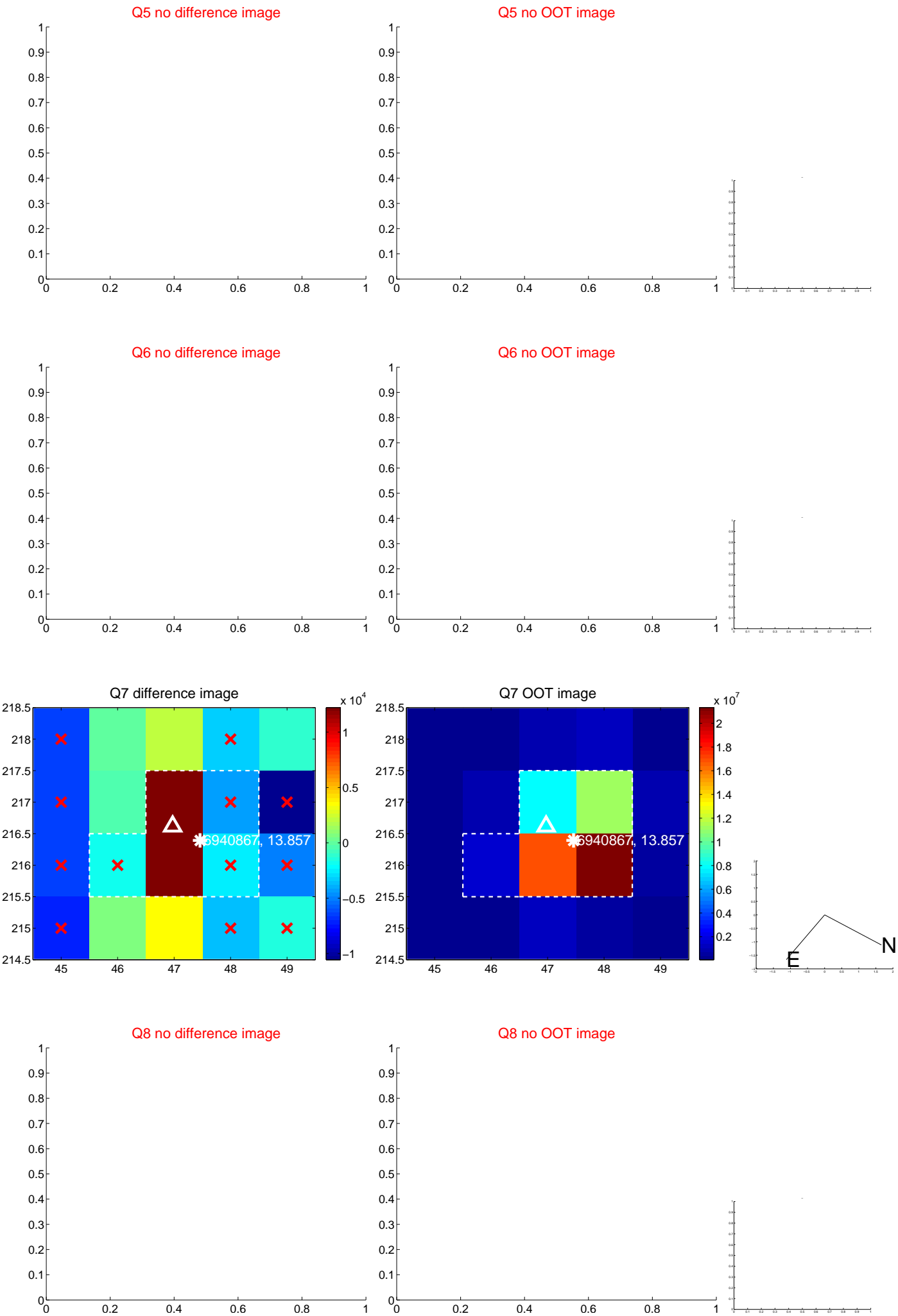


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



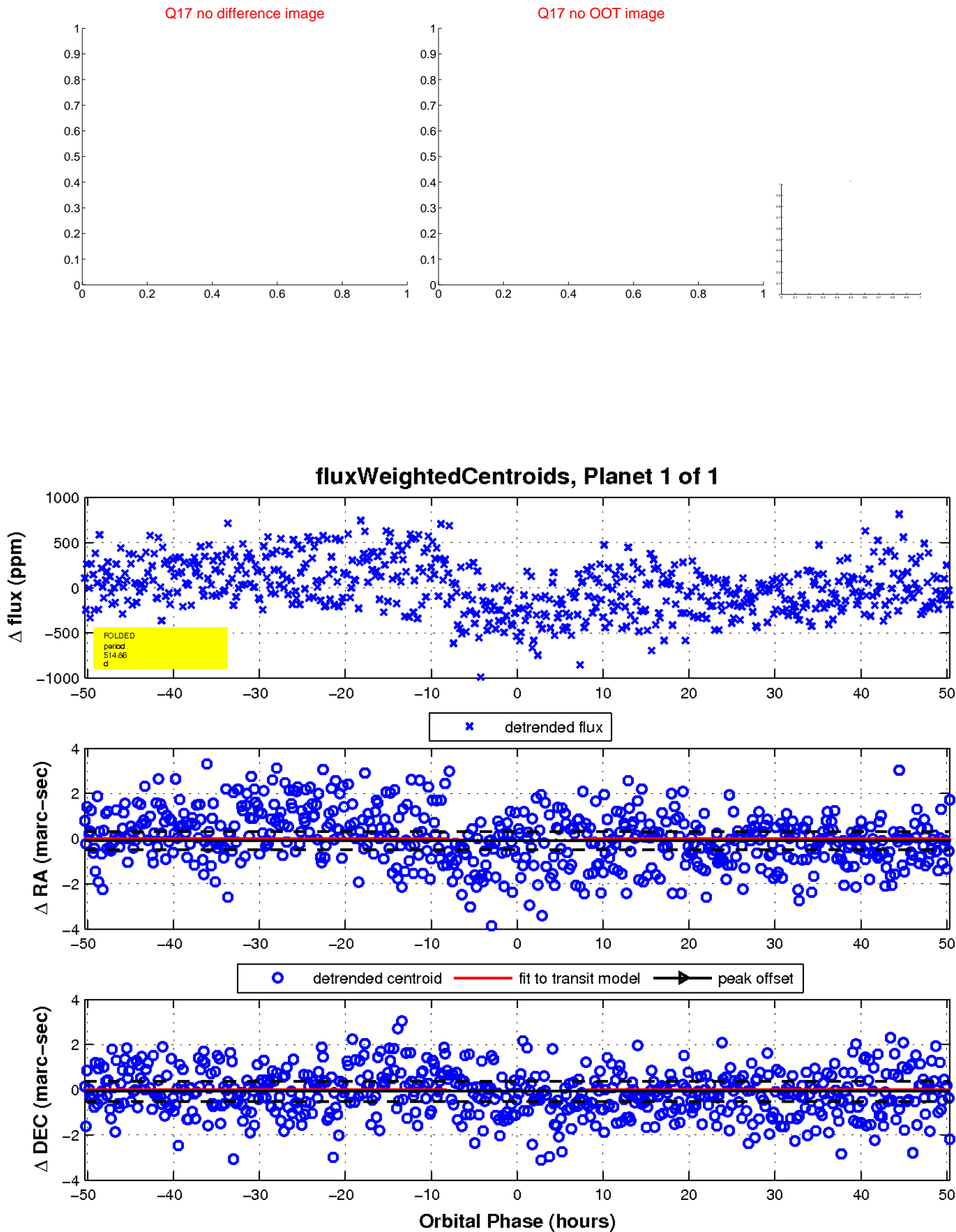
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

