

KIC 006937080

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})
006937080-01	OBS	No	459.048543	360.235190	261.3	10.755	8.1	8.3	0.99	6081	1.75	0.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006937080-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

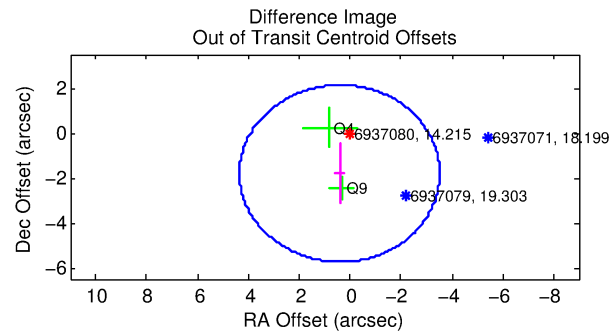
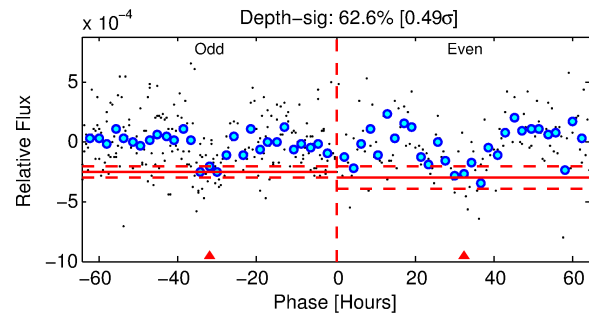
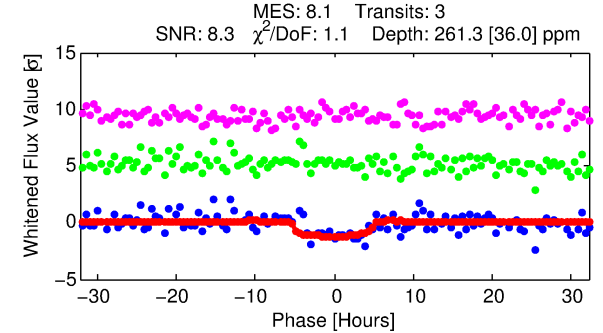
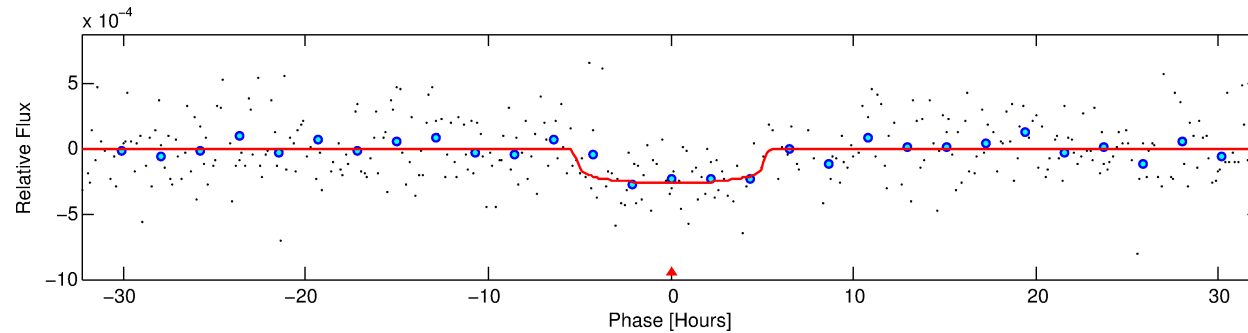
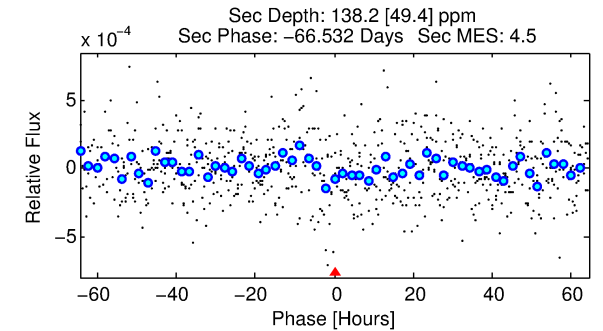
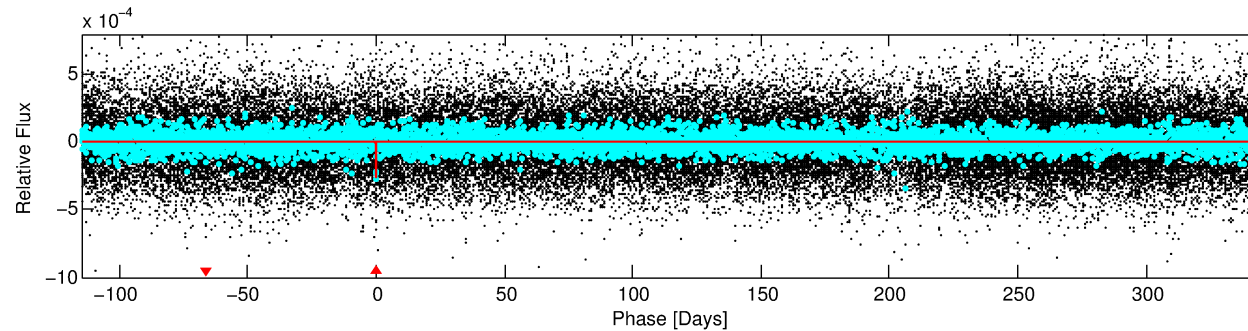
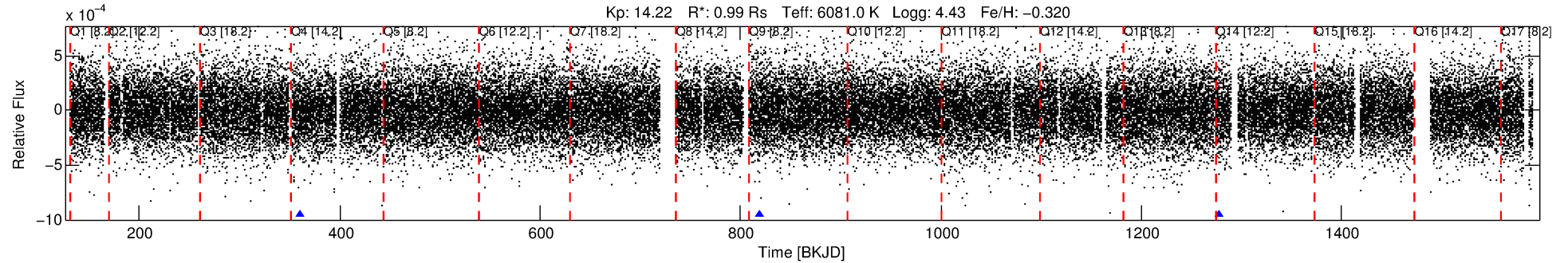
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006937080-01

No Significant Match Found

DV One-Page Summary

KIC: 6937080 Candidate: 1 of 1 Period: 459.049 d



DV Fit Results:

Period = 459.04854 [0.01888] d
Epoch = 360.2352 [0.0192] BKJD
Rp/R* = 0.0162 [0.0083]
a/R* = 215.44 [565.66]
b = 0.77 [1.38]
Seff = 0.91 [0.36]
Teq = 249 [24] K
Rp = 1.75 [1.03] Re
a = 1.1484 [0.2897] AU
Ag = 32870.31 [37656.62] [0.87σ]
Teffp = 5180 [1415] K [3.49σ]

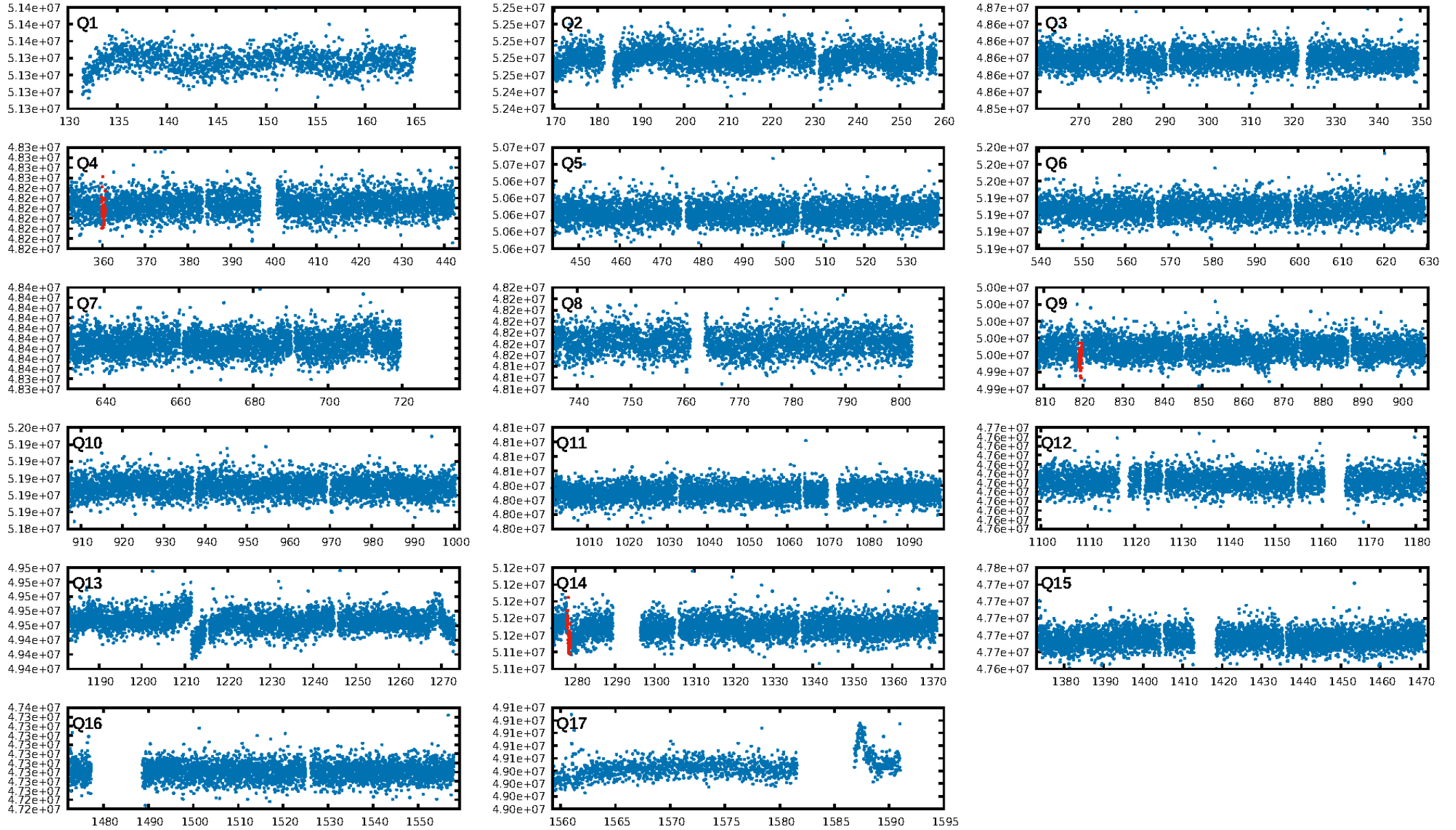
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.05e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -23.73
Centroid-sig: 0.1%
Centroid-so: 3.596 arcsec [1.99σ]
OotOffset-rm: 1.854 arcsec [1.41σ]
KicOffset-rm: 1.893 arcsec [1.42σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

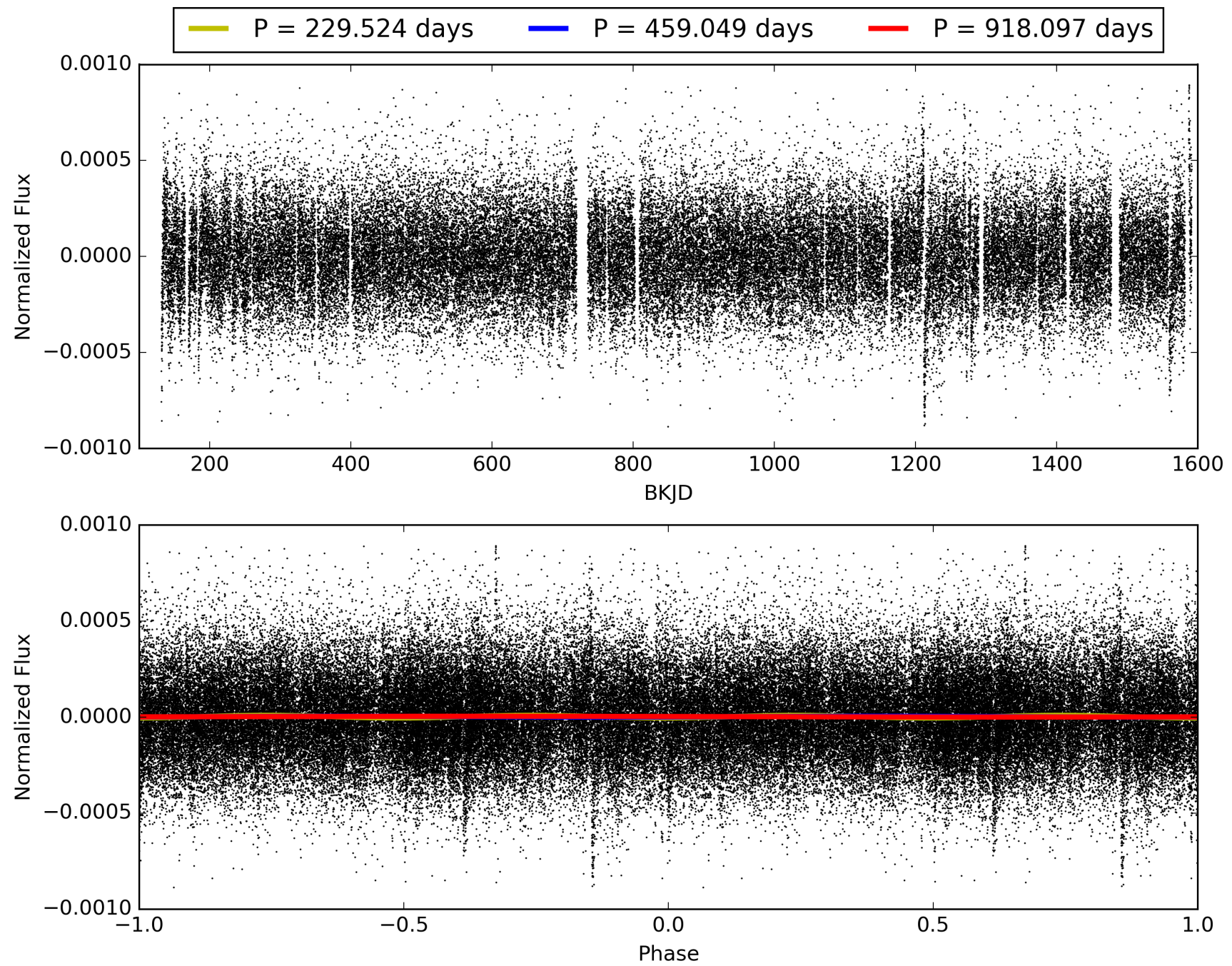
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:17:56 Z

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

TCE 006937080-01, PDC Light Curves

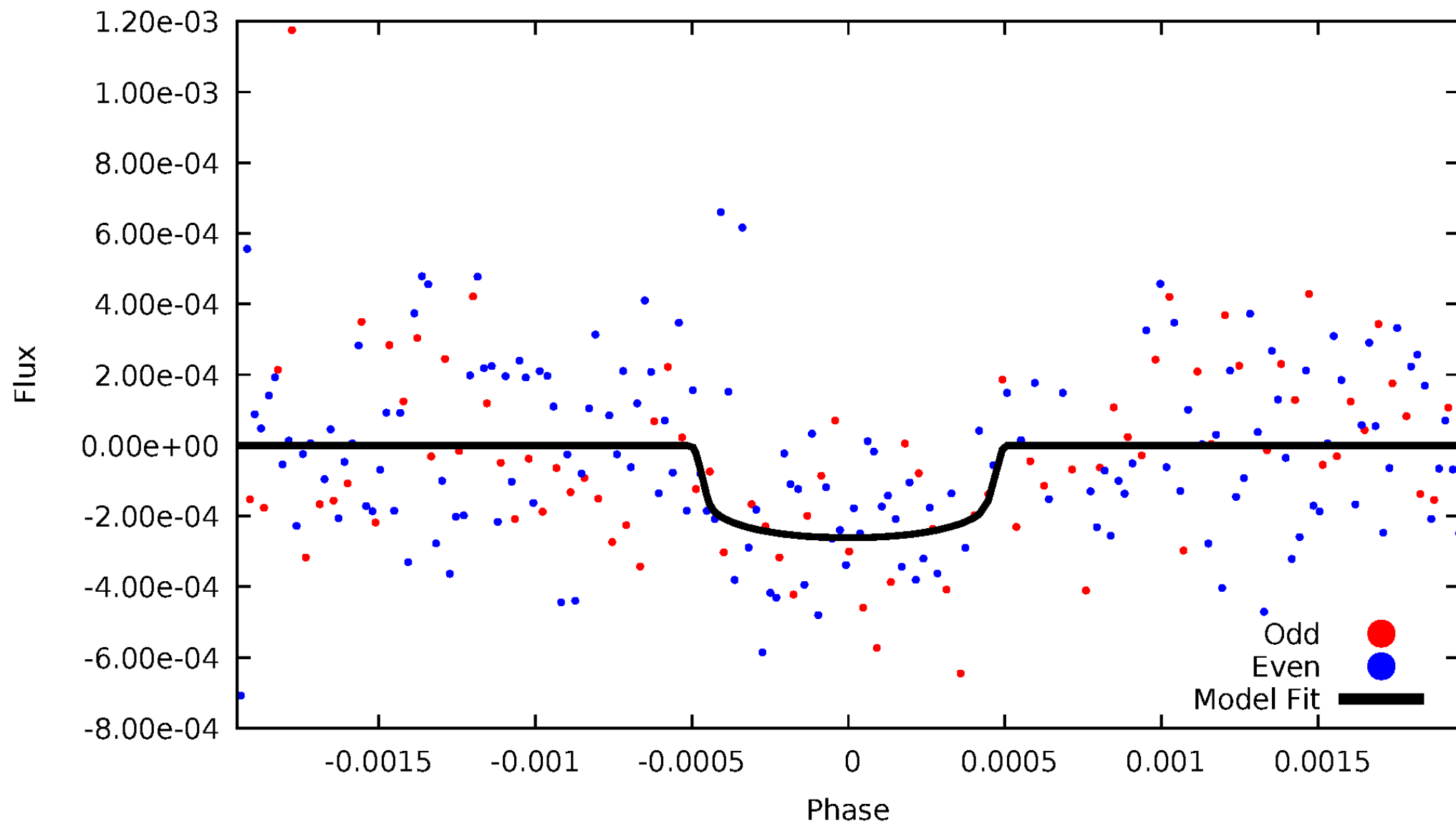


TCE 006937080-01



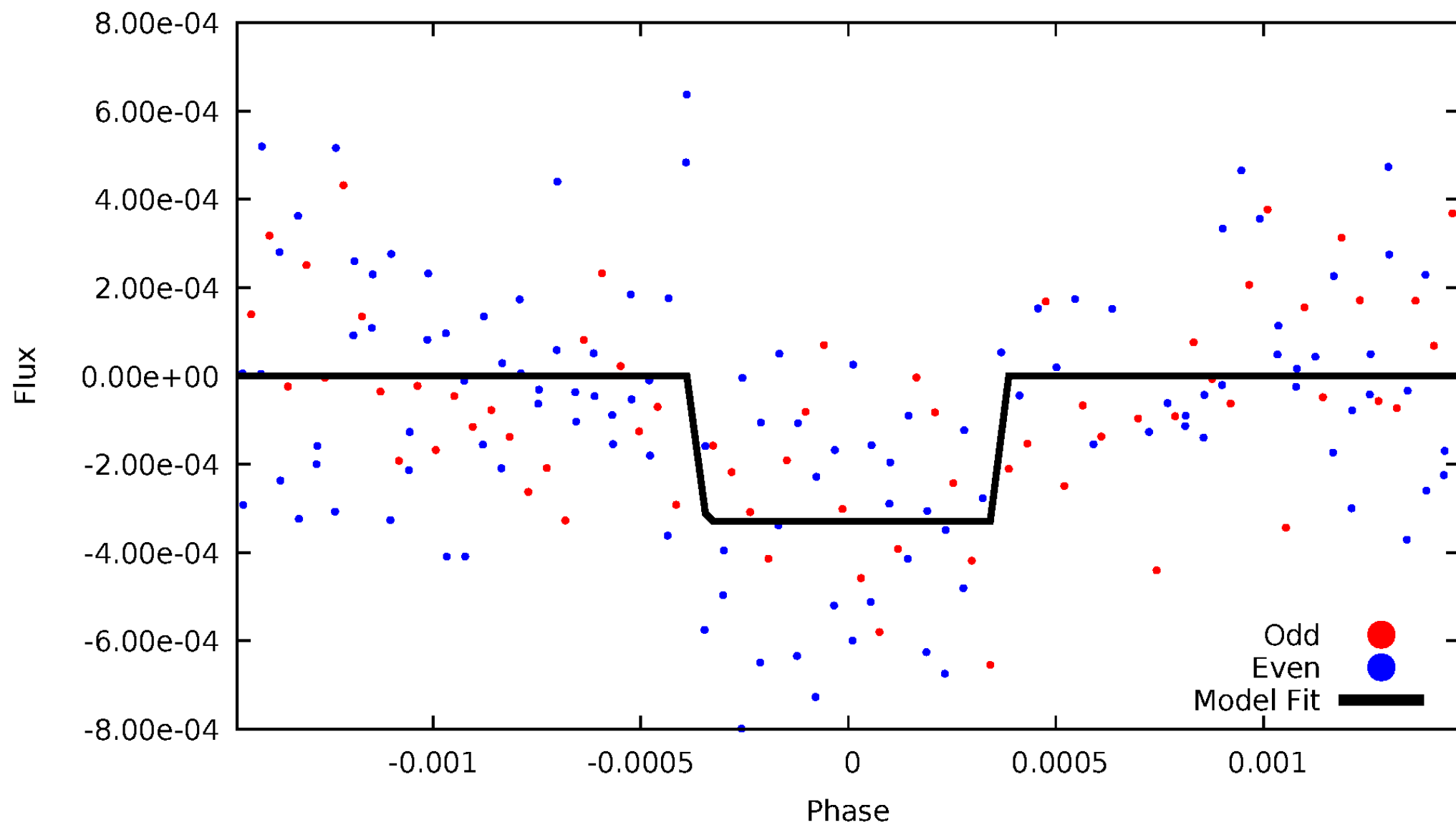
DV Odd/Even

TCE 006937080-01



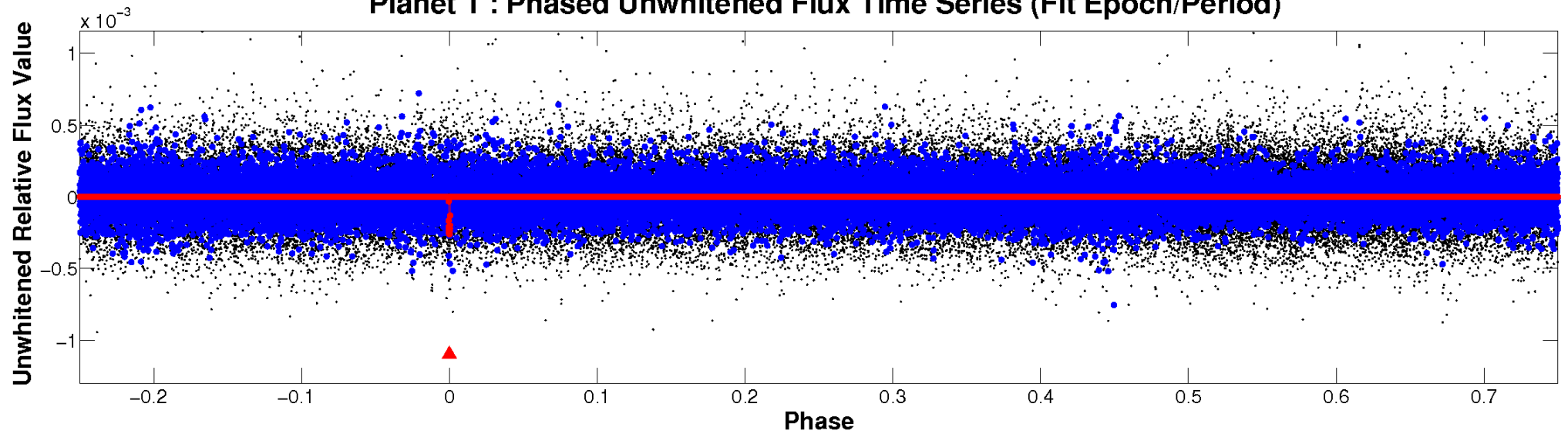
ALT Odd/Even

TCE 006937080-01

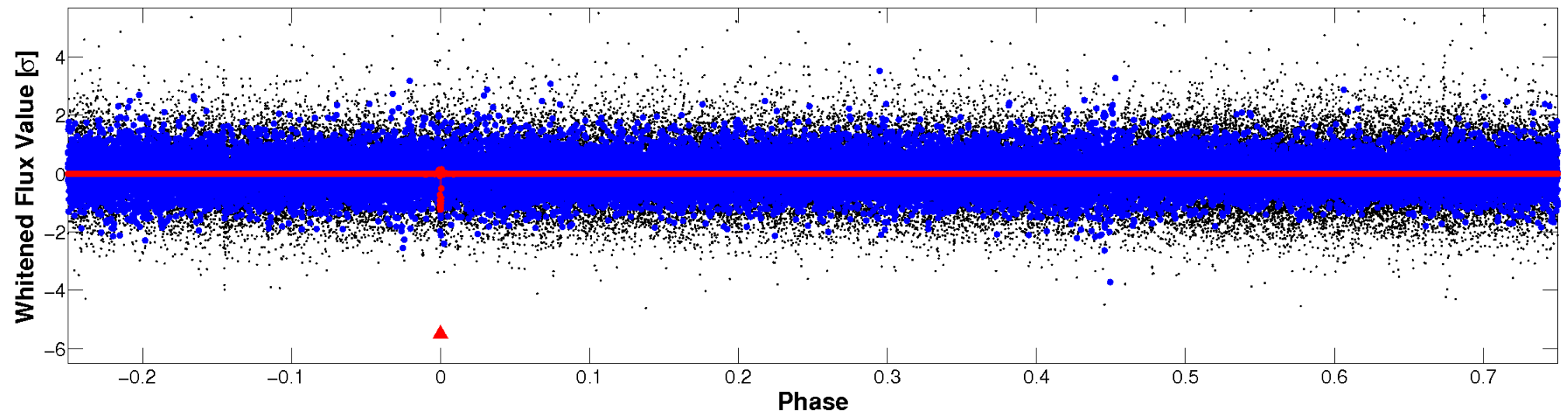


Non-Whitened Vs. Whitened Light Curve

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

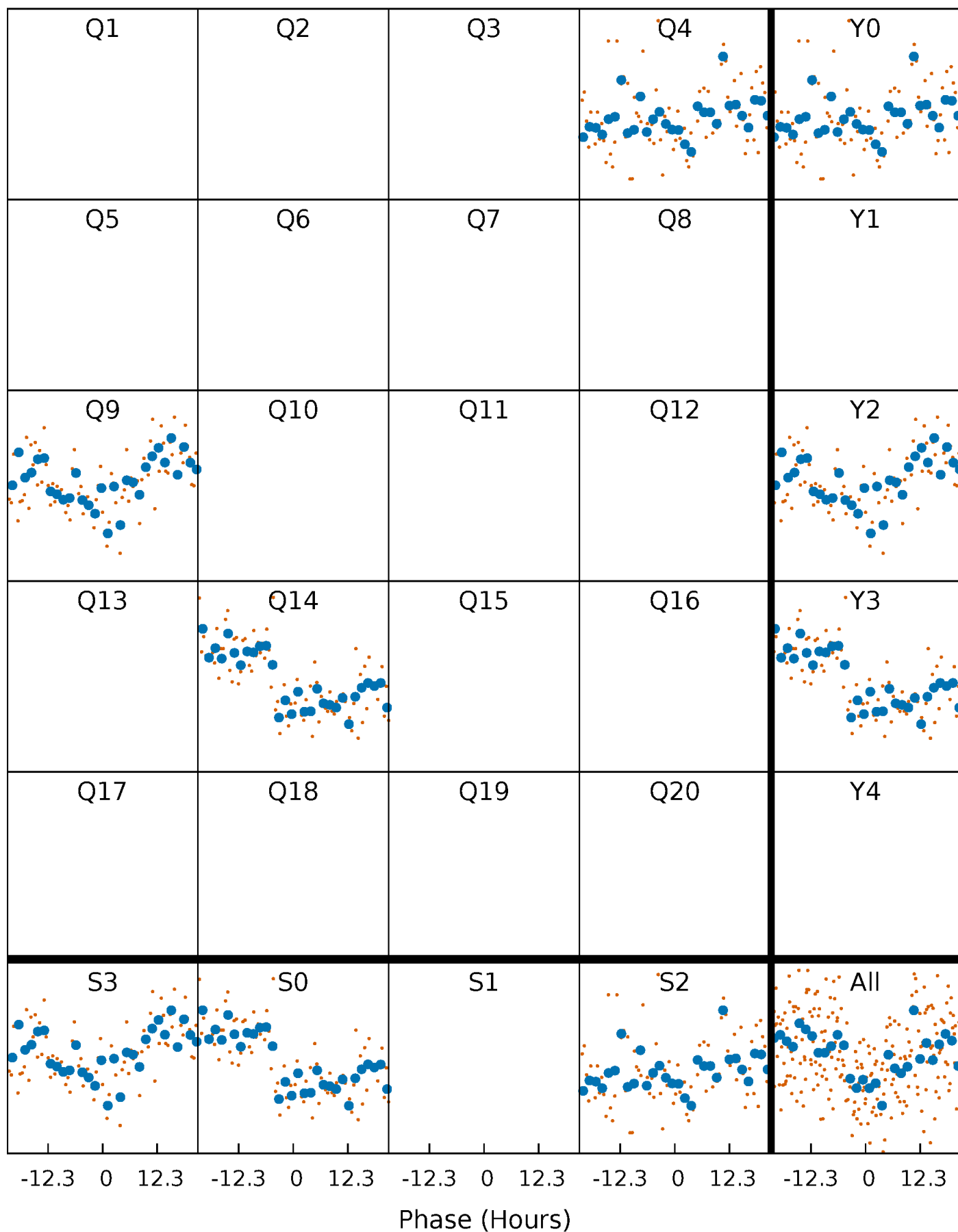


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



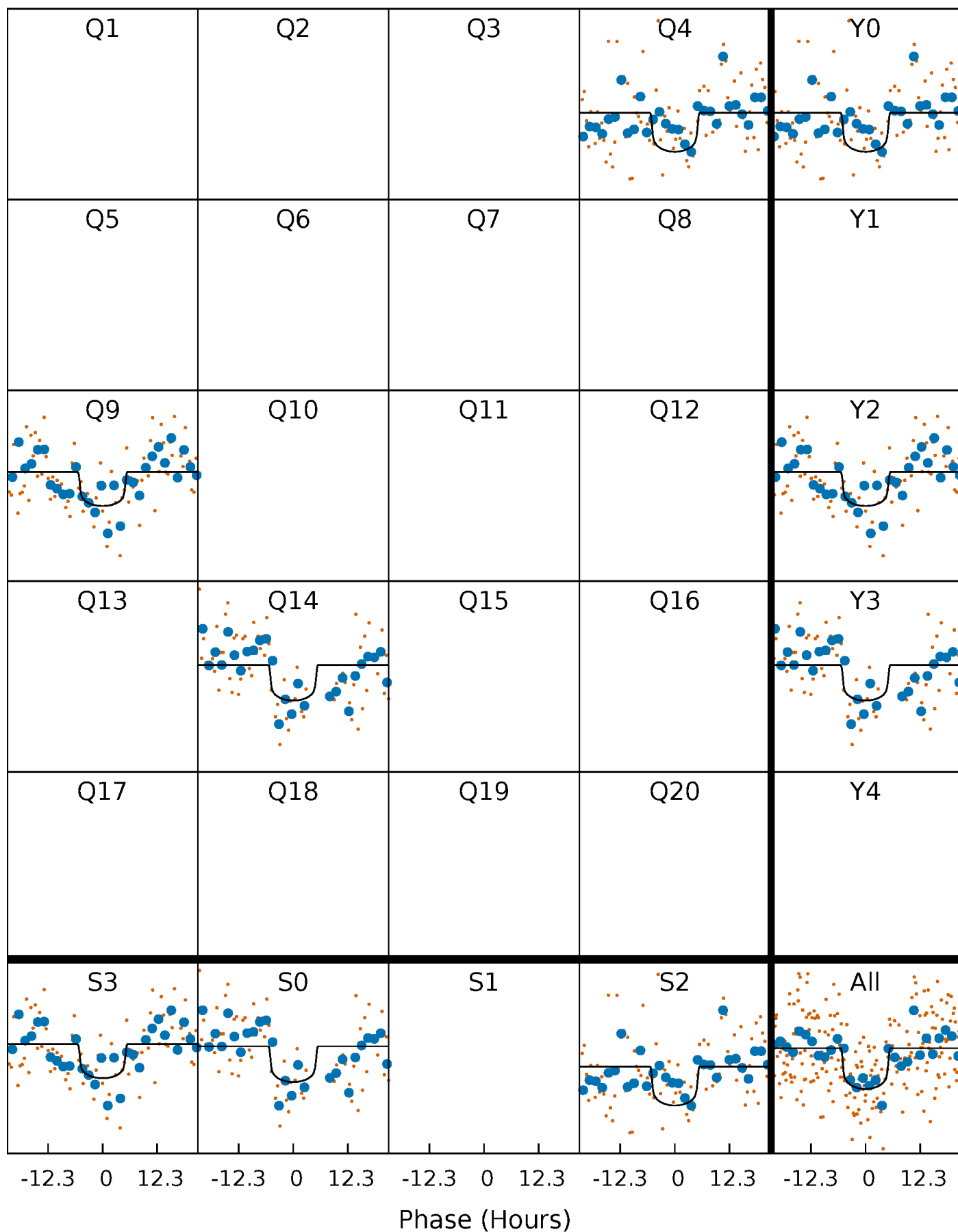
PDC Quarter-Phased Transit Curves

TCE 006937080-01 P=459.048543 Days $T_0=360.235190$ (BKJD)



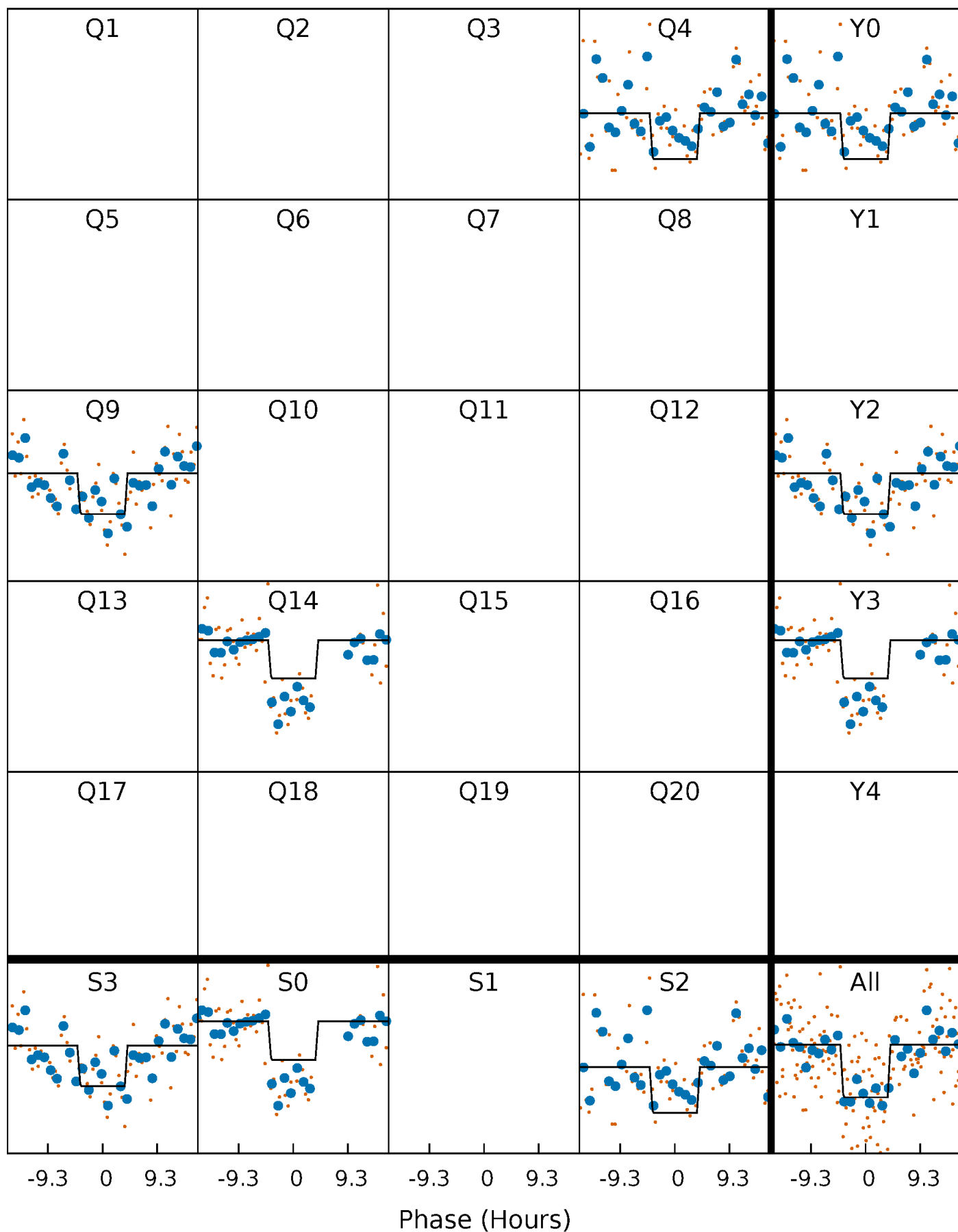
DV Quarter-Phased Transit Curves

TCE 006937080-01 P=459.048543 Days $T_0=360.235190$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

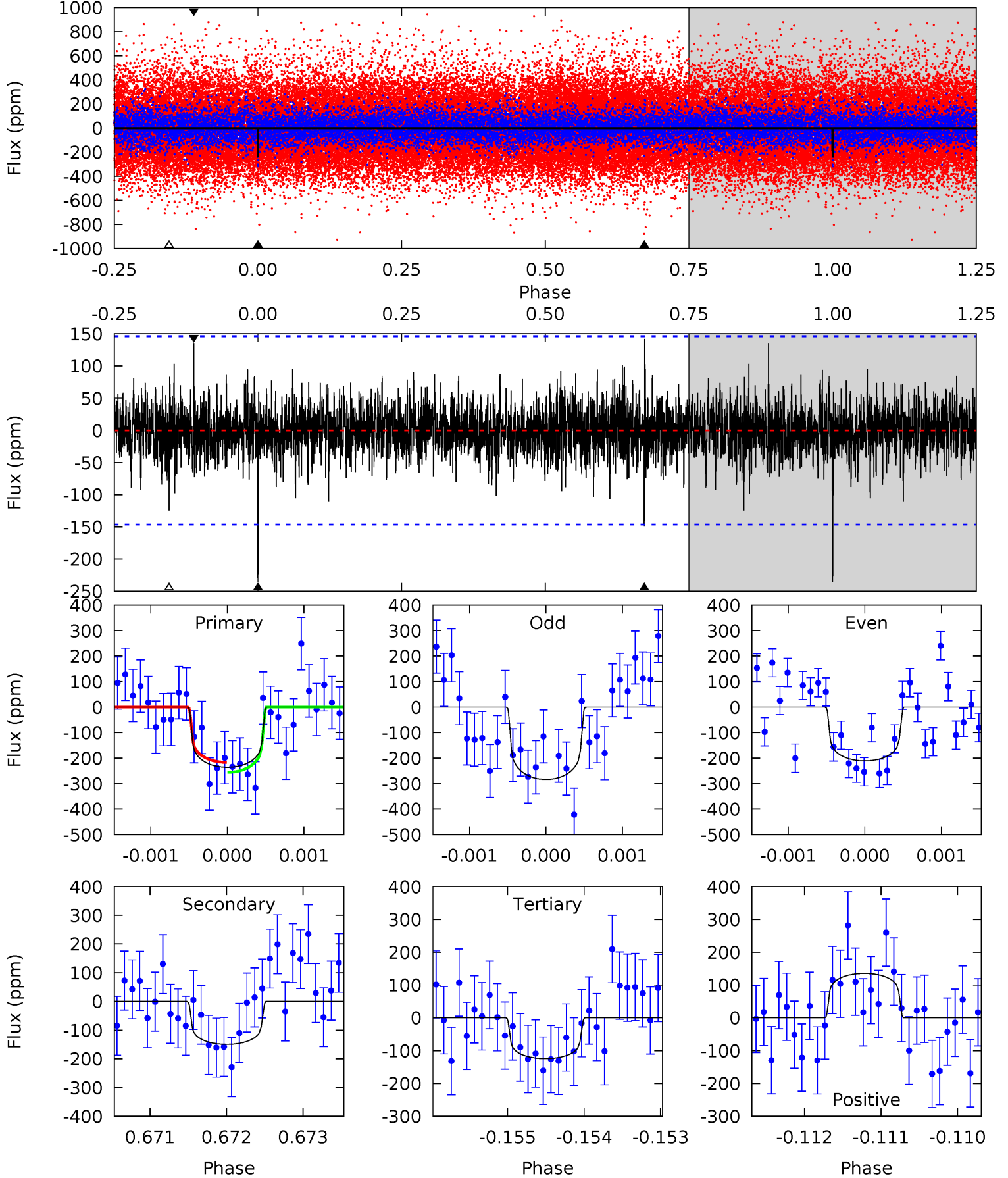
TCE 006937080-01 P=459.033114 Days $T_0=360.258243$ (BKJD)



DV Model-Shift Uniqueness Test

006937080-01, P = 459.048543 Days, E = 360.235190 Days

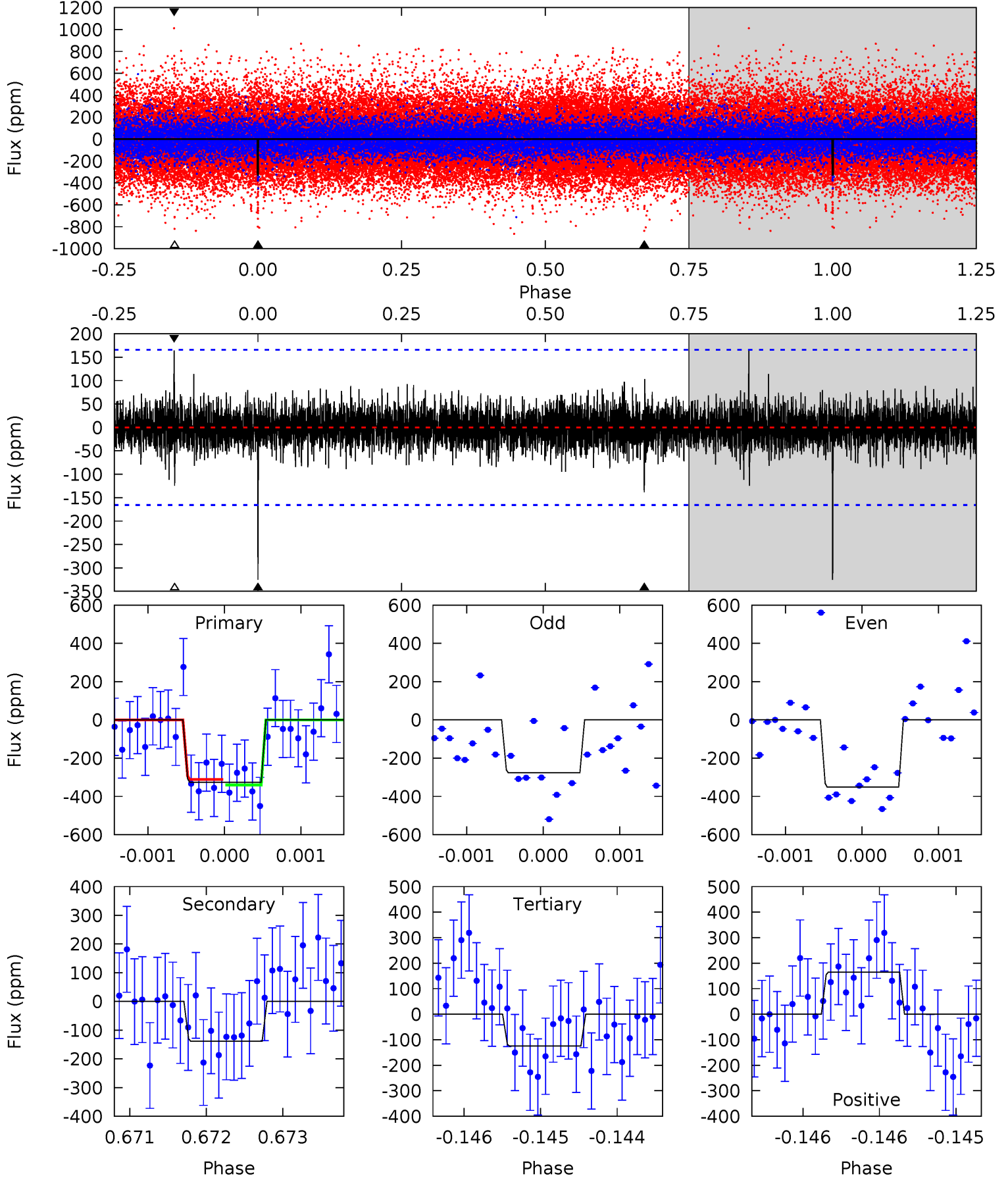
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.79	5.57	4.63	5.05	5.45	3.29	1.09	4.16	3.74	0.94	0.51	1.30	0.84	0.38	0.73



Alt Model-Shift Uniqueness Test

006937080-01, P = 459.033114 Days, E = 360.258243 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	4.60	4.14	5.46	5.51	3.38	0.88	6.68	5.36	0.45	-0.86	1.17	1.20	0.34	0.47



Stellar Parameters For KIC 006937080

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6081^{+164}_{-200}	$4.430^{+0.087}_{-0.203}$	$-0.320^{+0.300}_{-0.300}$	$0.988^{+0.294}_{-0.126}$	$0.957^{+0.128}_{-0.116}$	$1.400^{+0.524}_{-0.697}$
	+3%/-3%	+2%/-5%	+94%/-94%	+30%/-13%	+13%/-12%	+37%/-50%
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 006937080-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-149 ± 27	$1.83^{+0.98}_{-0.94}$	352^{+27}_{-19}	5298^{+2114}_{-861}	$32241^{+102017}_{-19214}$
Alt.	-138 ± 30	$2.05^{+1.04}_{-0.92}$	352^{+26}_{-18}	4969^{+1591}_{-770}	23065^{+56407}_{-13224}

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 $A_{obs} \gg 1.0$

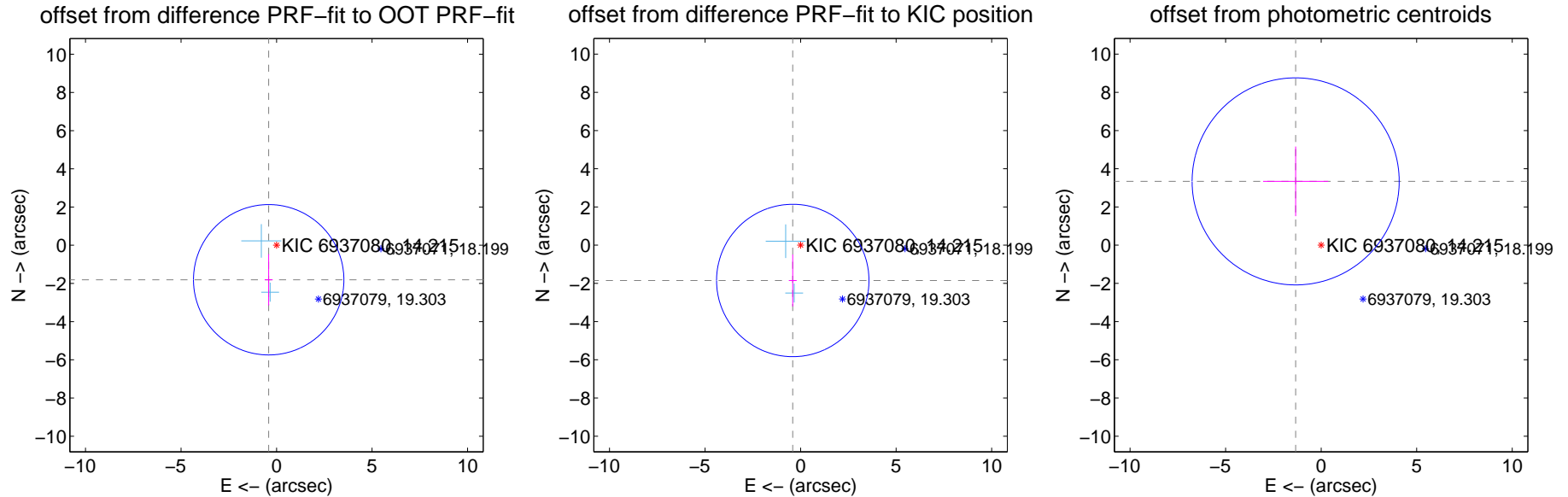
DV Centroid Data

Supplemental centroid analysis for 006937080-01. Kepler magnitude: 14.21. Transit SNR 8.26

There are 2 quarters with good PRF difference image offsets

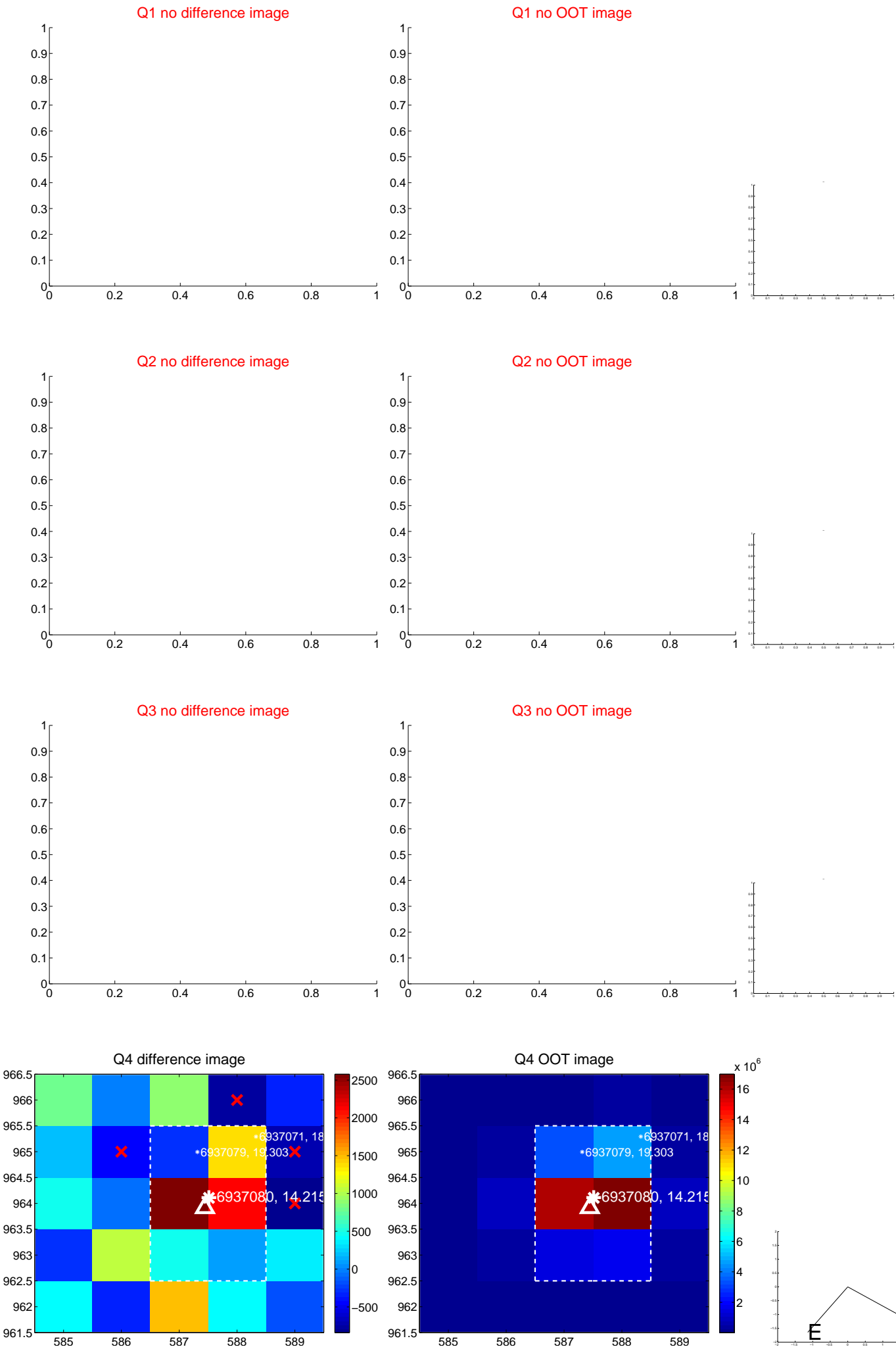
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.854 ± 1.312	1.41	0.411 ± 0.211	-1.808 ± 1.345
PRF-fit source offset from KIC position	1.893 ± 1.329	1.42	0.410 ± 0.203	-1.848 ± 1.361
photometric centroid source offset	3.60 ± 1.81	1.99	1.33 ± 1.70	3.34 ± 1.82



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.

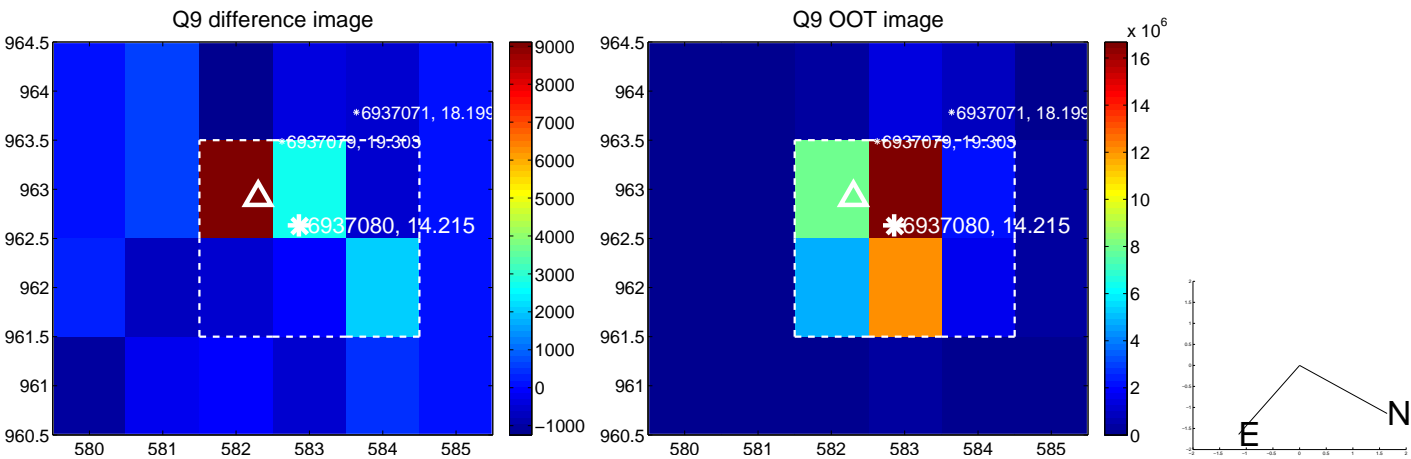
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



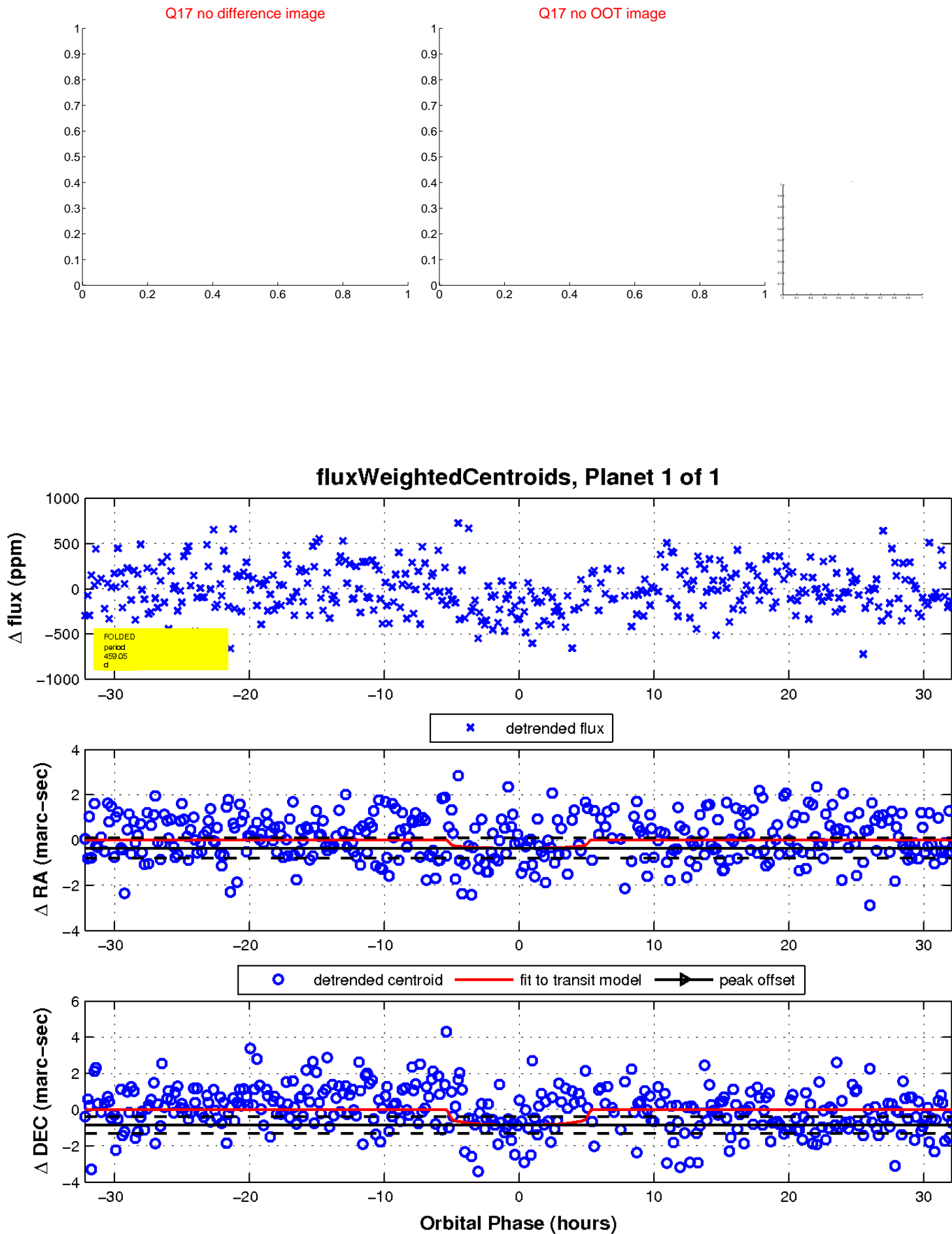
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

