

KIC 006447540

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})
006447540-01	OBS	No	172.110071	237.069277	859.2	2.016	10.7	6.0	9.91	4456	28.18	85.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006447540-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_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.

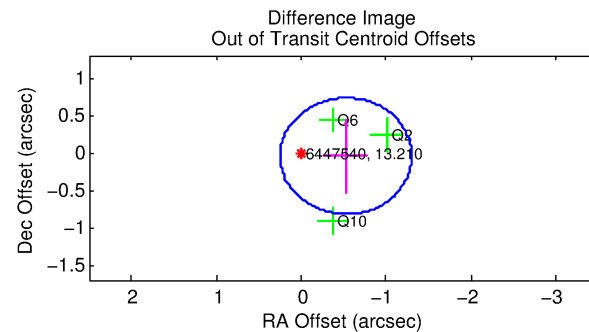
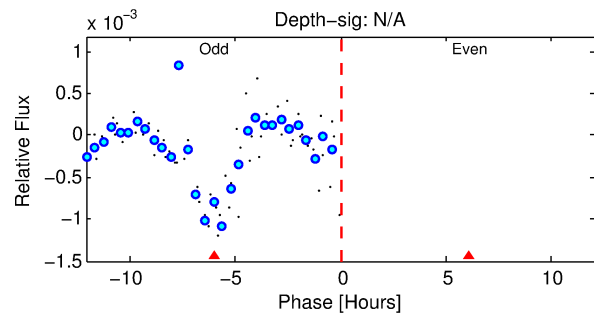
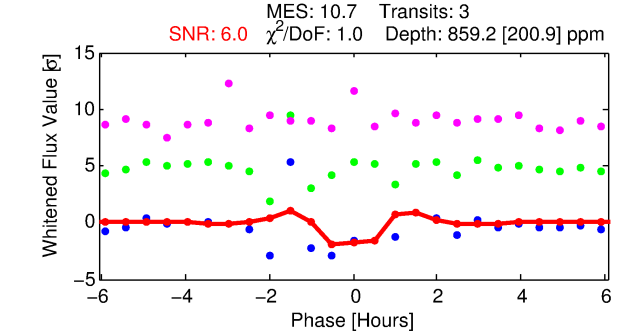
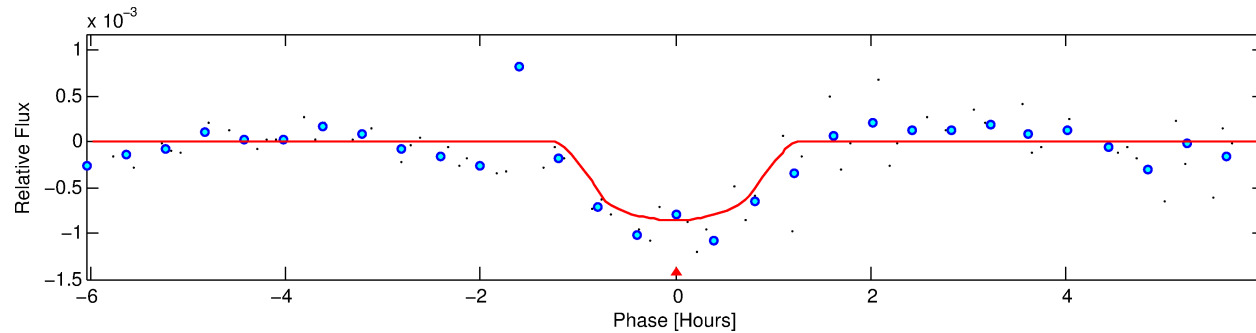
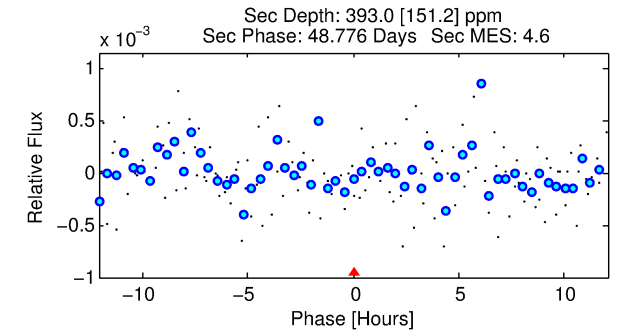
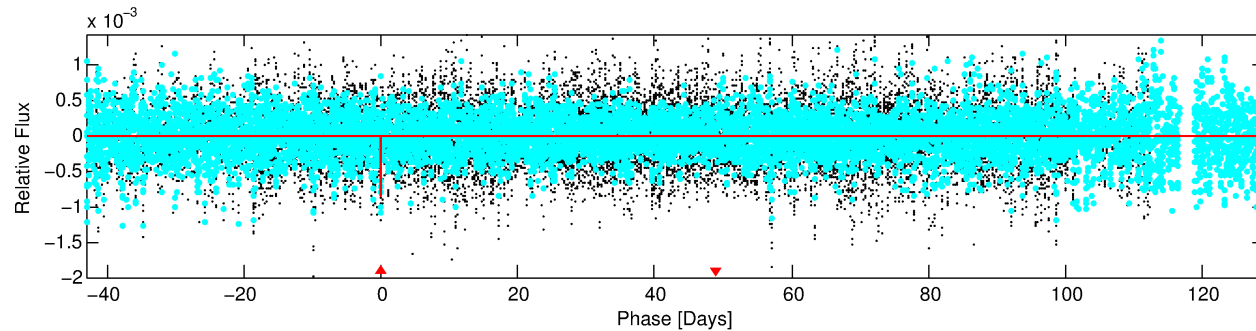
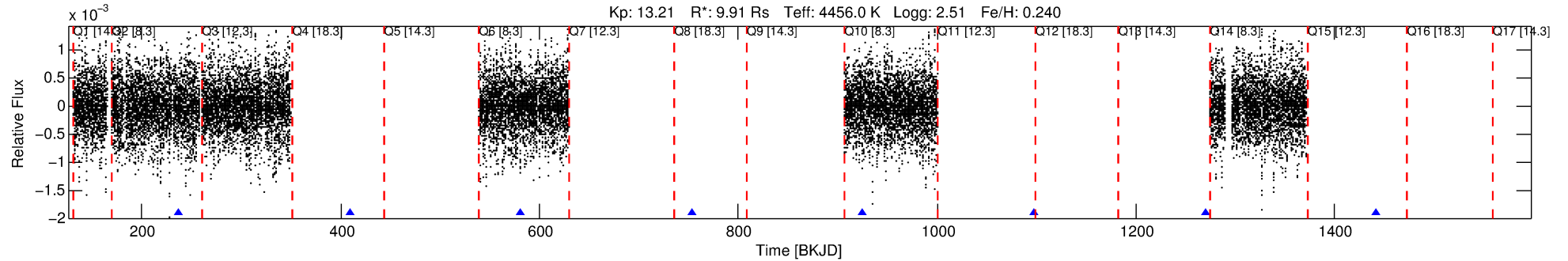
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006447540-01

No Significant Match Found

DV One-Page Summary

KIC: 6447540 Candidate: 1 of 1 Period: 172.110 d



DV Fit Results:

Period = 172.11007 [0.00267] d
Epoch = 237.0693 [0.0068] BKJD
Rp/R* = 0.0261 [0.0518]
a/R* = 636.84 [3497.30]
b = 0.32 [16.21]
Seff = 85.32 [11.64]
Teff = 775 [26] K
Rp = 28.18 [56.19] Re
a = 0.6378 [0.0666] AU
Ag = 110.74 [442.60] [0.25]
Teffp = 3887 [3883] K [0.80]

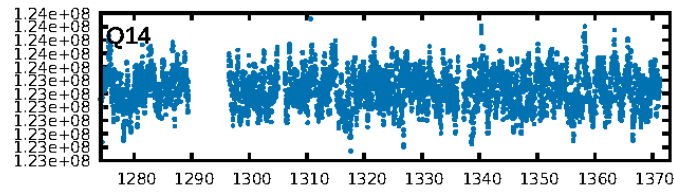
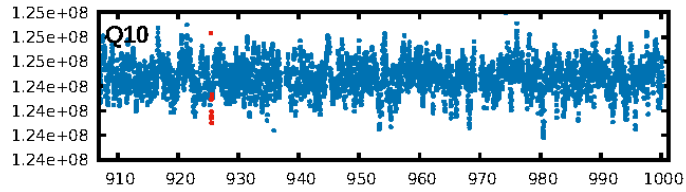
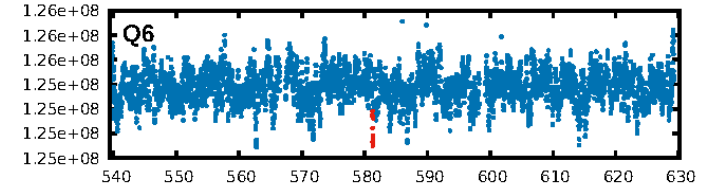
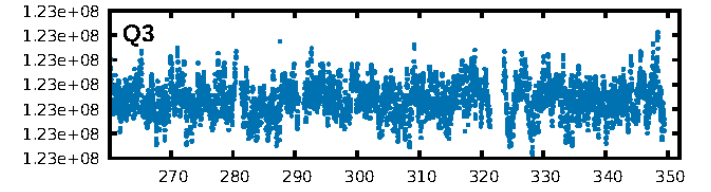
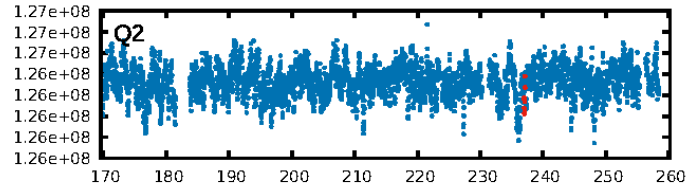
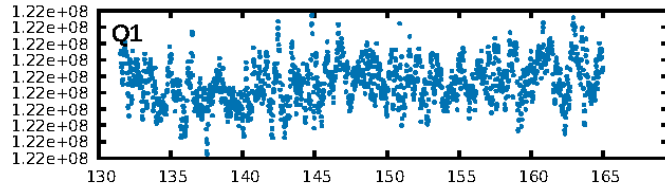
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 58.8%
ModelChiSquareGof-sig: 84.5%
Bootstrap-pfa: 7.01e-17
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 17.74
Centroid-sig: 52.3%
Centroid-so: 0.210 arcsec [0.38]
OotOffset-rm: 0.532 arcsec [2.05]
KicOffset-rm: 0.607 arcsec [2.53]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

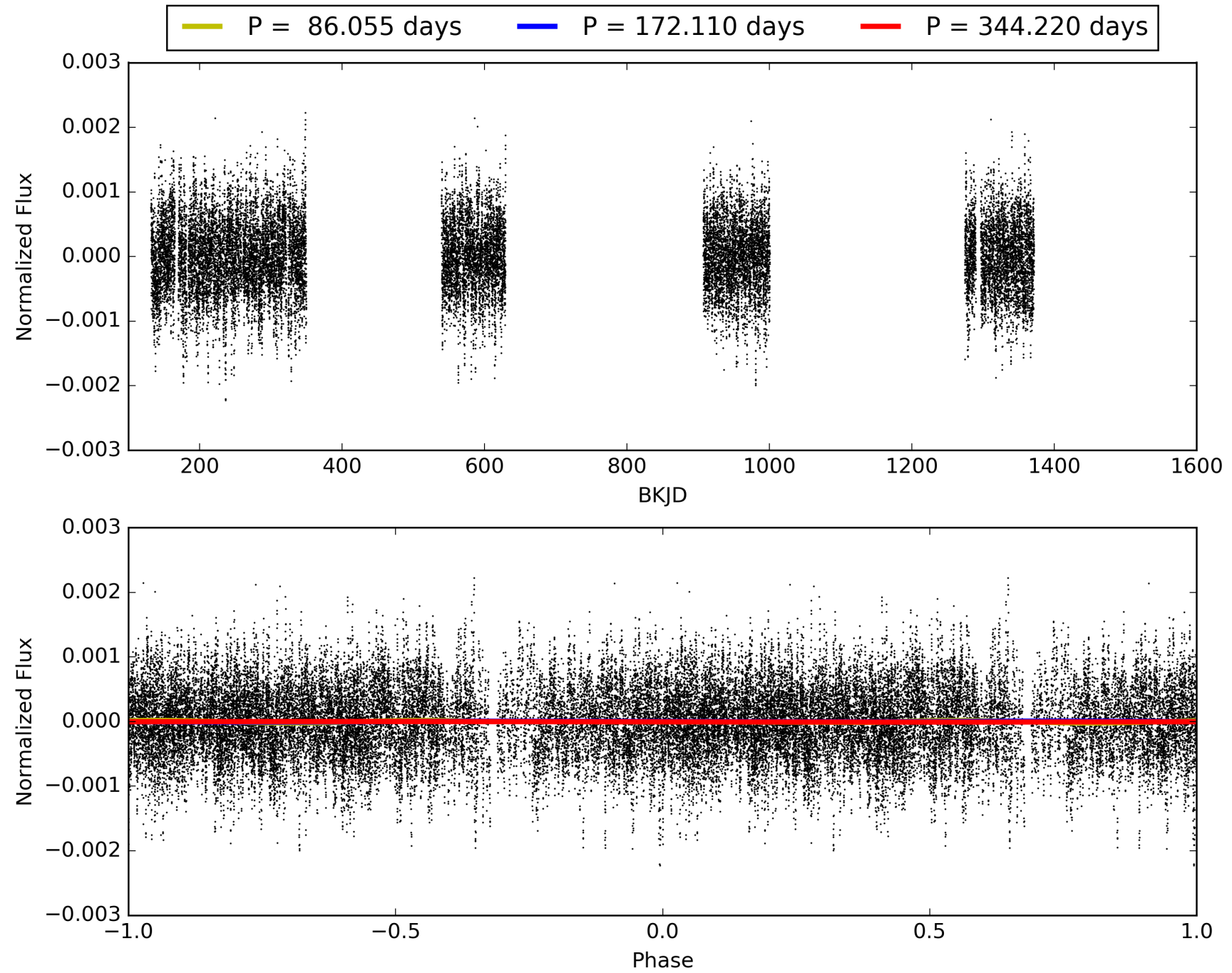
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:57:18 Z

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

TCE 006447540-01, PDC Light Curves

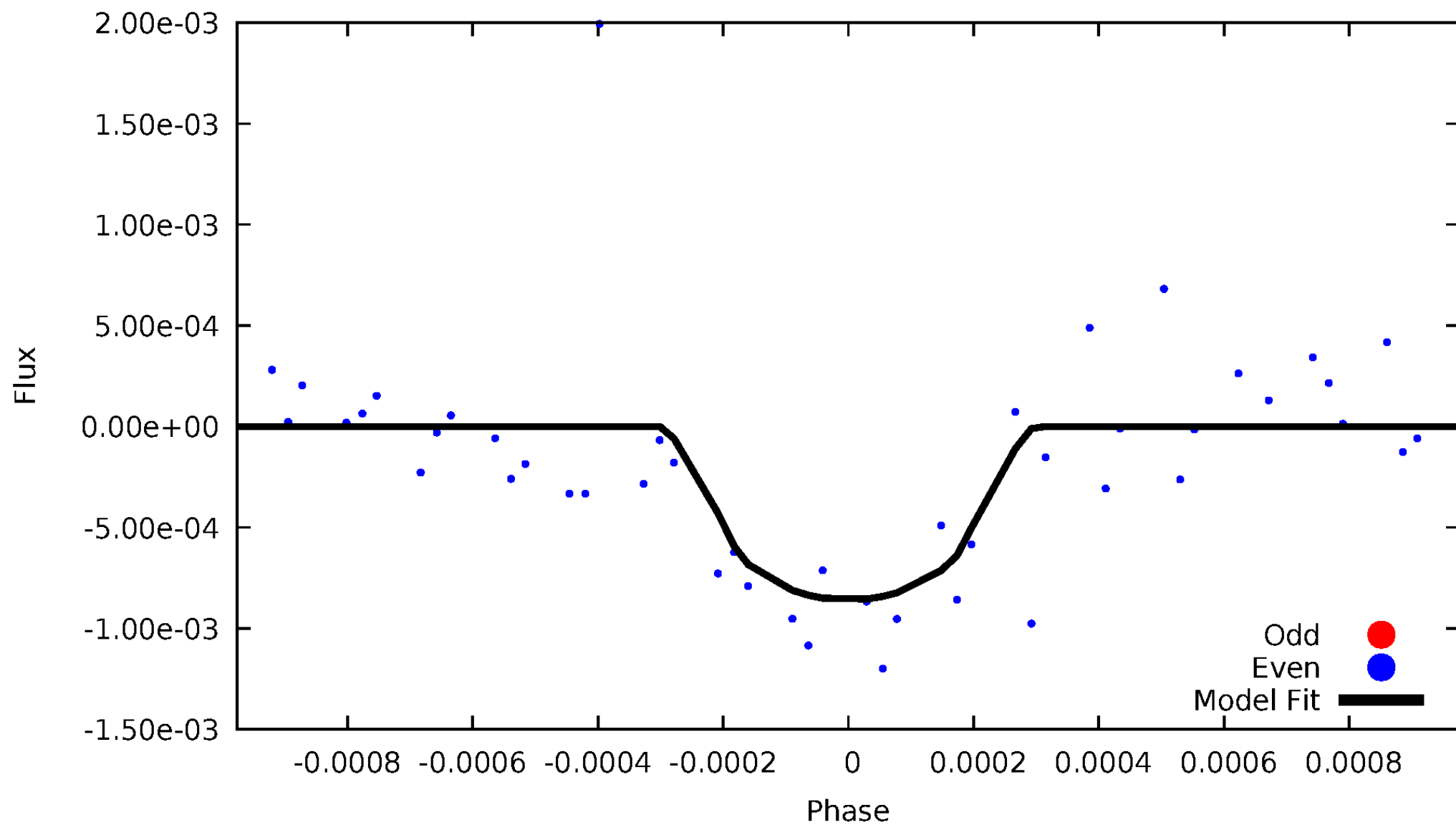


TCE 006447540-01



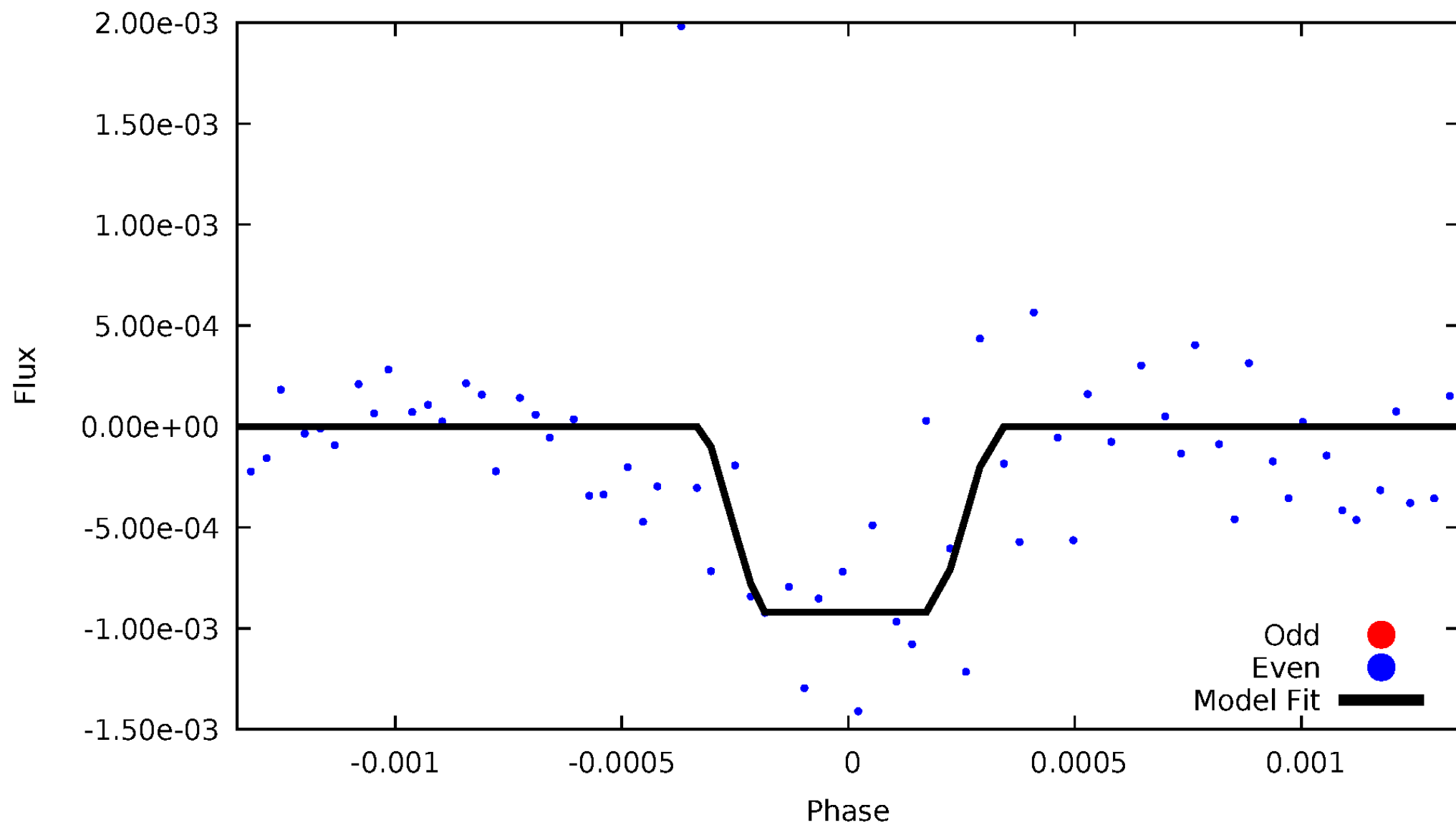
DV Odd/Even

TCE 006447540-01



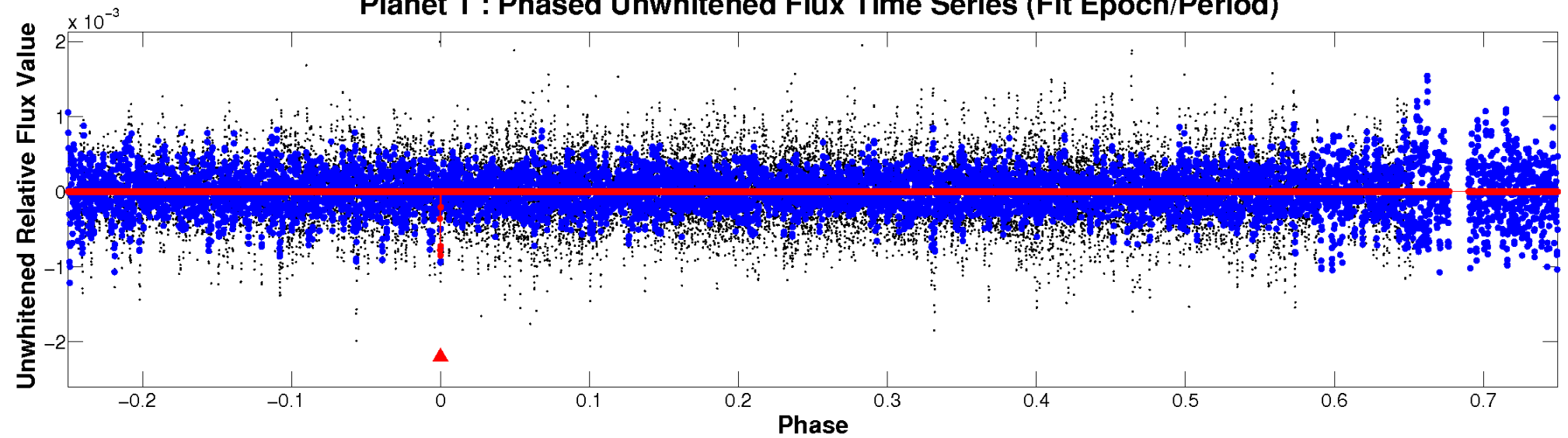
ALT Odd/Even

TCE 006447540-01

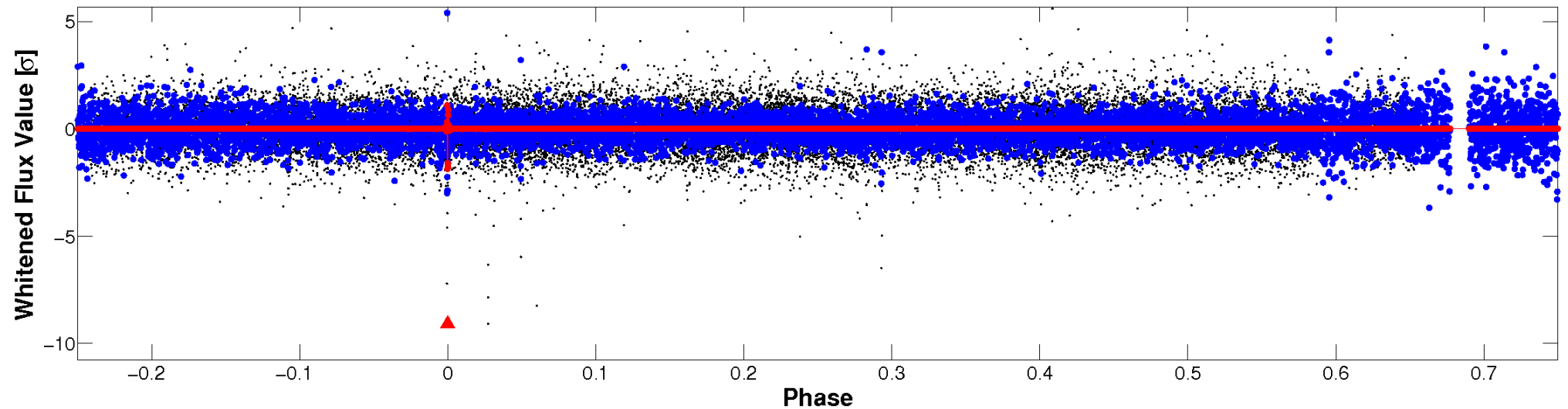


Non-Whitened Vs. Whitened Light Curve

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

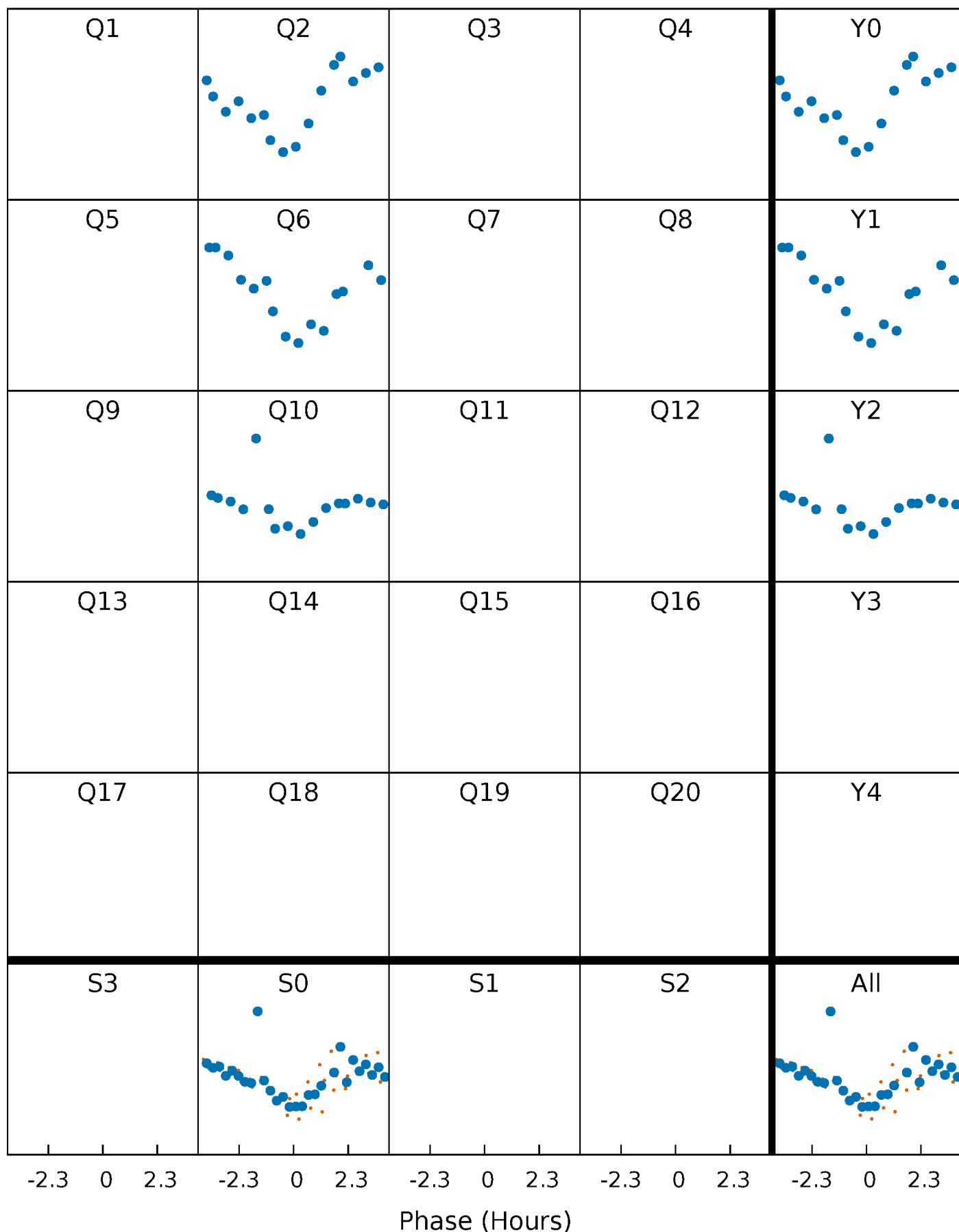


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



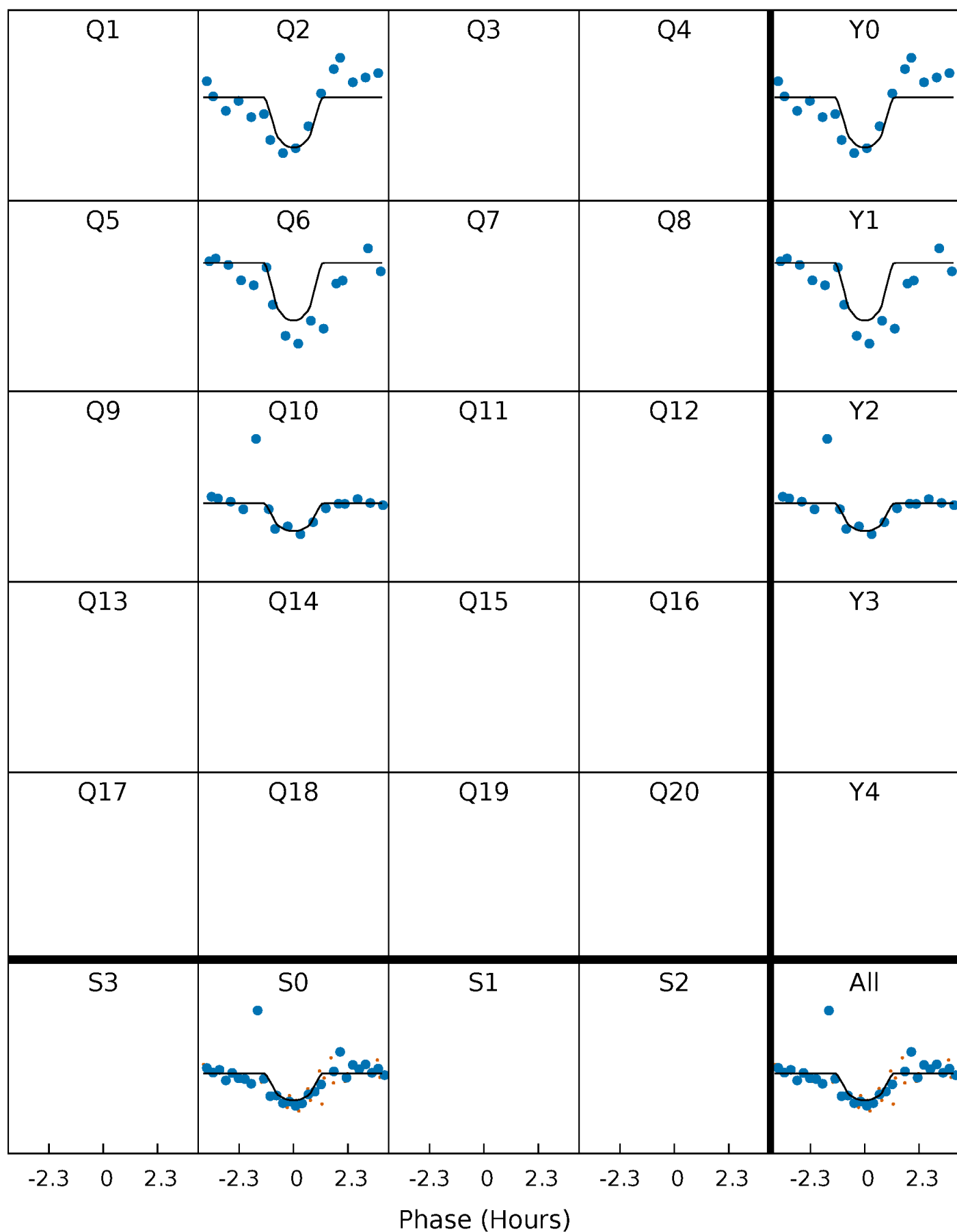
PDC Quarter-Phased Transit Curves

TCE 006447540-01 P=172.110071 Days $T_0=237.069277$ (BKJD)



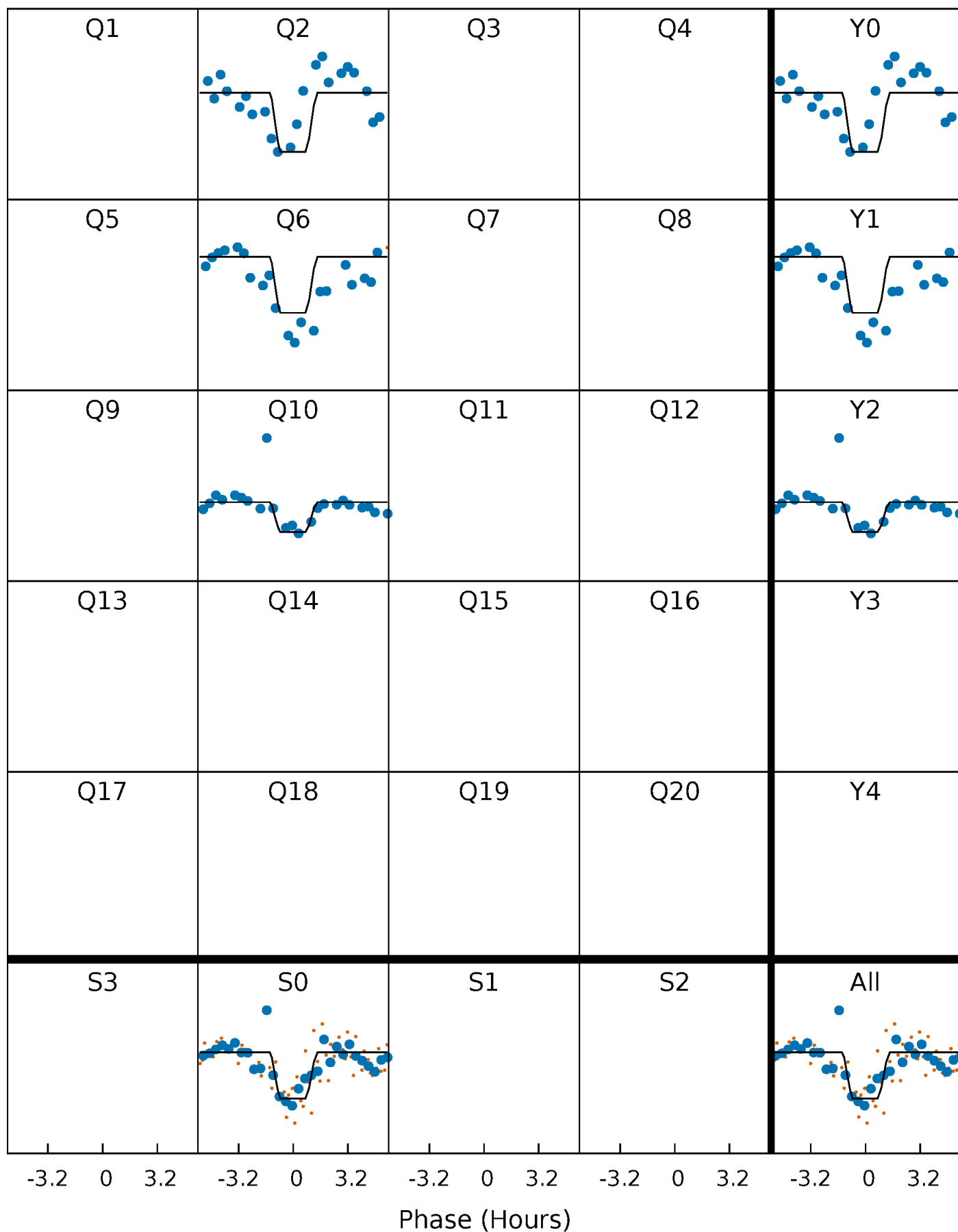
DV Quarter-Phased Transit Curves

TCE 006447540-01 P=172.110071 Days $T_0=237.069277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

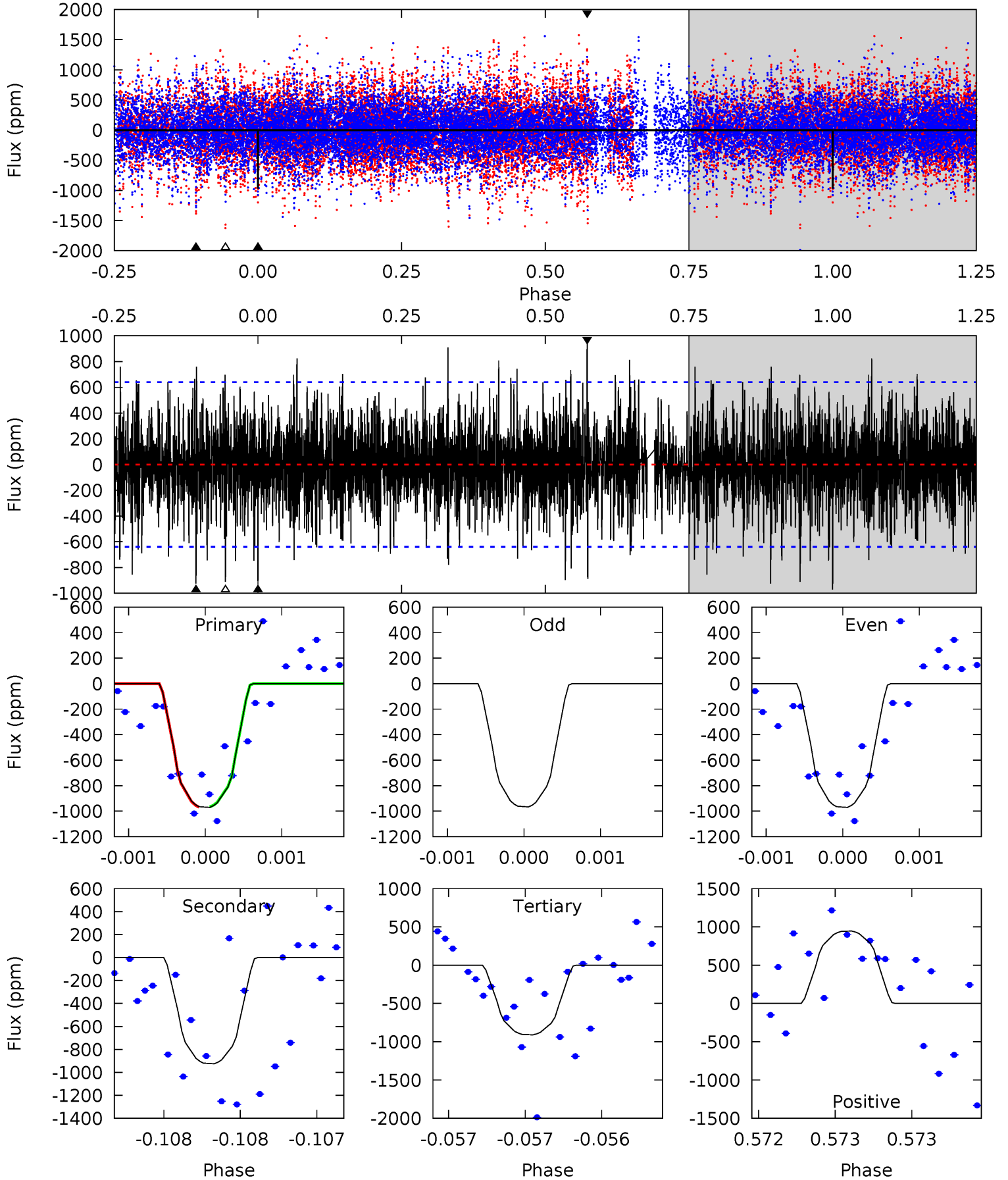
TCE 006447540-01 P=172.104774 Days $T_0=237.085580$ (BKJD)



DV Model-Shift Uniqueness Test

006447540-01, P = 172.110071 Days, E = 64.959206 Days

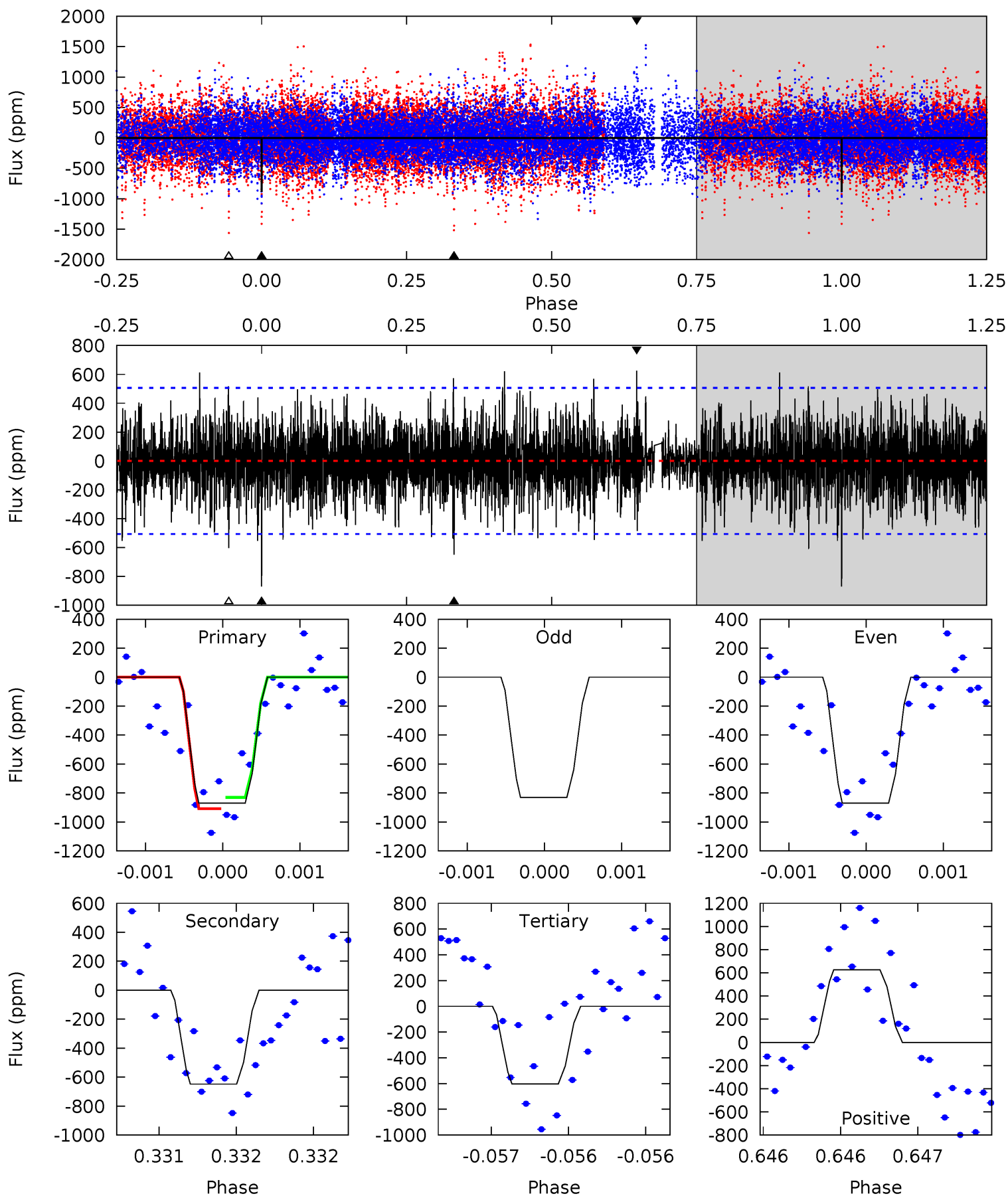
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.44	8.05	7.92	8.23	5.57	3.48	2.09	0.52	0.21	0.13	-0.19	0.02	1.08	0.49	0.01



Alt Model-Shift Uniqueness Test

006447540-01, $P = 172.104774$ Days, $E = 64.980806$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.53	7.10	6.61	6.85	5.54	3.43	1.88	2.92	2.68	0.49	0.25	0.27	1.12	0.42	0.42



Stellar Parameters For KIC 006447540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4456^{+80}_{-46}	$2.513^{+0.038}_{-0.028}$	$0.240^{+0.150}_{-0.100}$	$9.912^{+1.490}_{-0.688}$	$1.167^{+0.383}_{-0.128}$	$0.002^{+0.000}_{-0.000}$
	+2%/-1%	+2%/-1%	+62%/-42%	+15%/-7%	+33%/-11%	+14%/-16%
Source	SPE68	AST9	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006447540-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-925 ± 115	$50.73^{+46.29}_{-34.38}$	1081^{+25}_{-21}	3792^{+2355}_{-687}	78^{+731}_{-56}
Alt.	-648 ± 91	$51.47^{+45.23}_{-31.98}$	1083^{+24}_{-20}	3565^{+1650}_{-623}	54^{+325}_{-38}

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 $A_{obs} \gg 1.0$

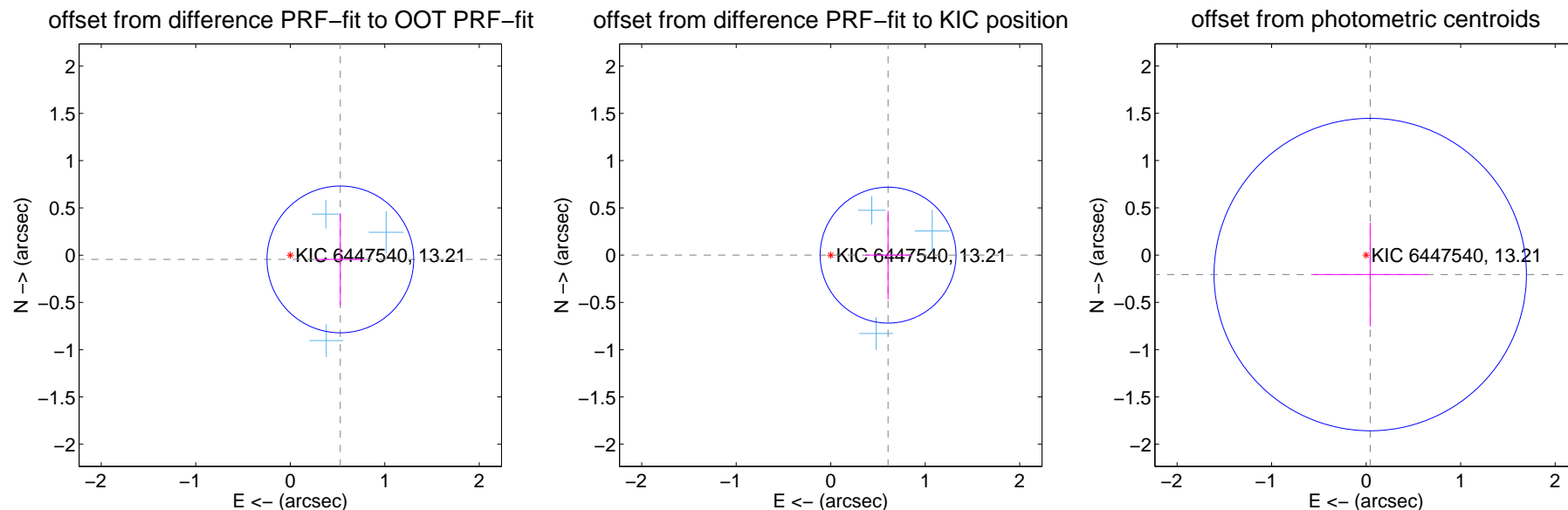
DV Centroid Data

Supplemental centroid analysis for 006447540-01. Kepler magnitude: 13.21. Transit SNR 6.04

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	0.532 ± 0.259	2.05	-0.530 ± 0.256	-0.045 ± 0.486
PRF-fit source offset from KIC position	0.607 ± 0.240	2.53	-0.607 ± 0.240	0.000 ± 0.469
photometric centroid source offset	0.21 ± 0.55	0.38	-0.04 ± 0.60	-0.21 ± 0.55



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.

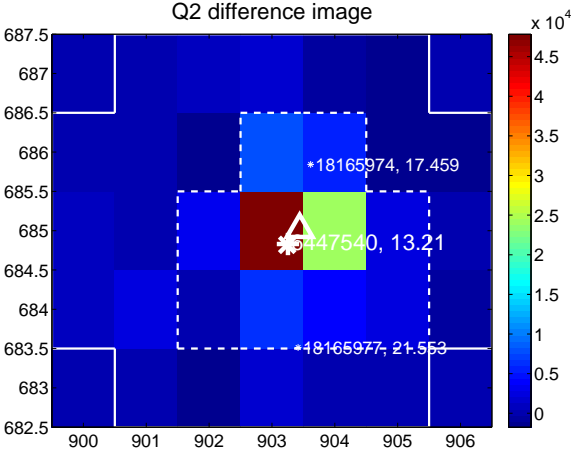
Q1 no difference image



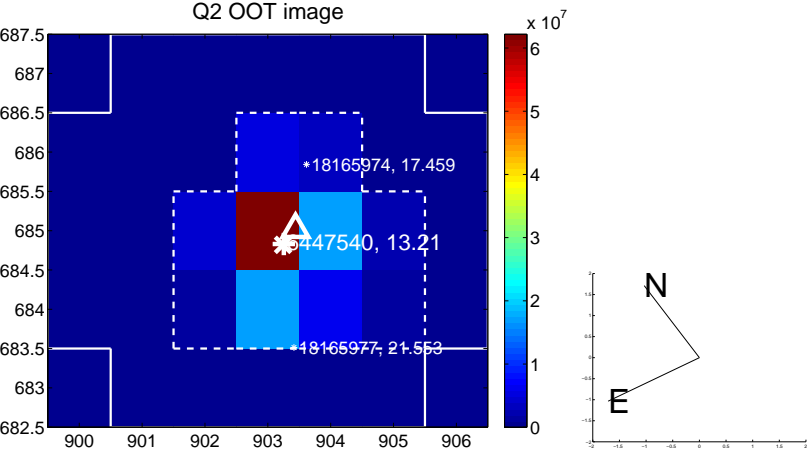
Q1 no OOT image



Q2 difference image



Q2 OOT image



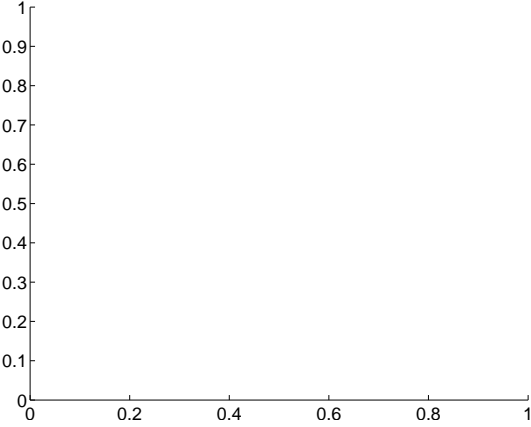
Q3 no difference image



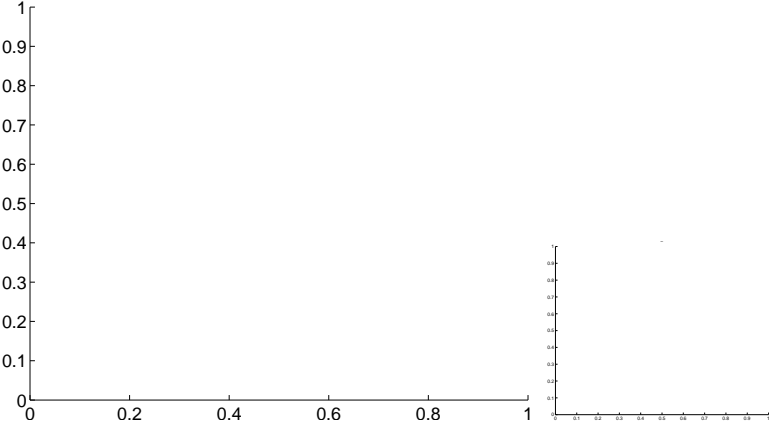
Q3 no OOT image



Q4 no difference image



Q4 no OOT image



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

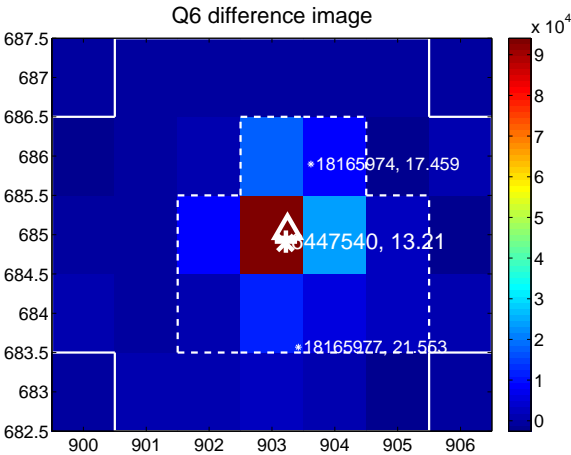
Q5 no difference image



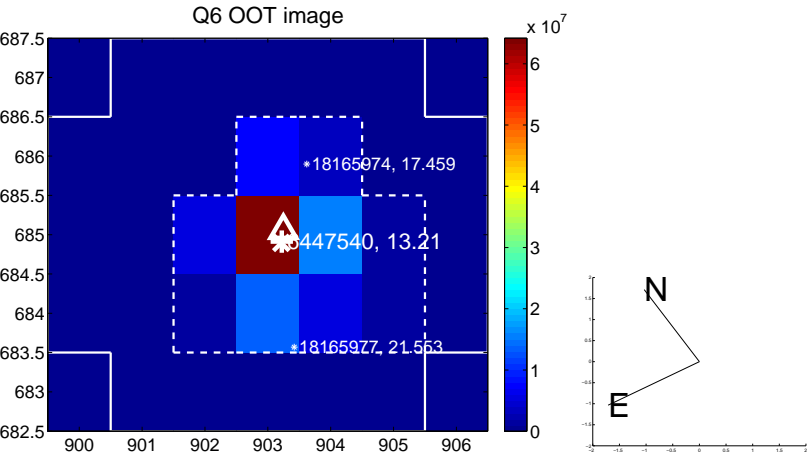
Q5 no OOT image



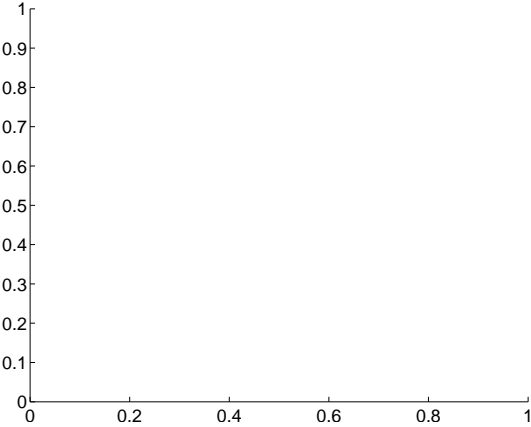
Q6 difference image



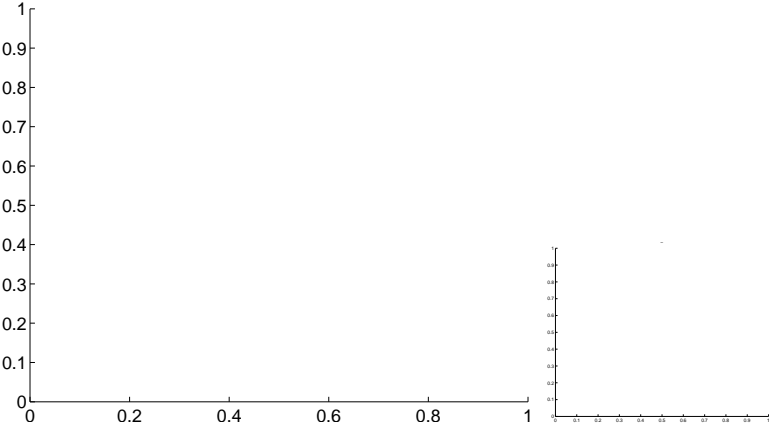
Q6 OOT image



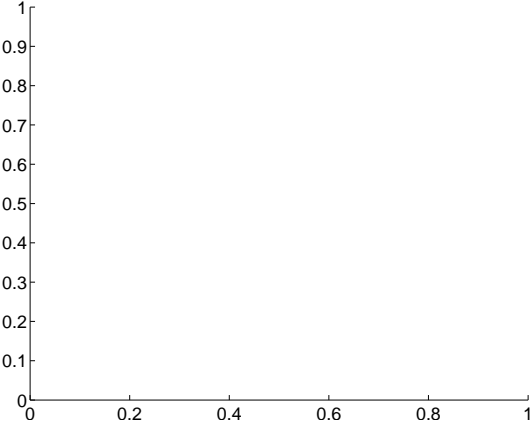
Q7 no difference image



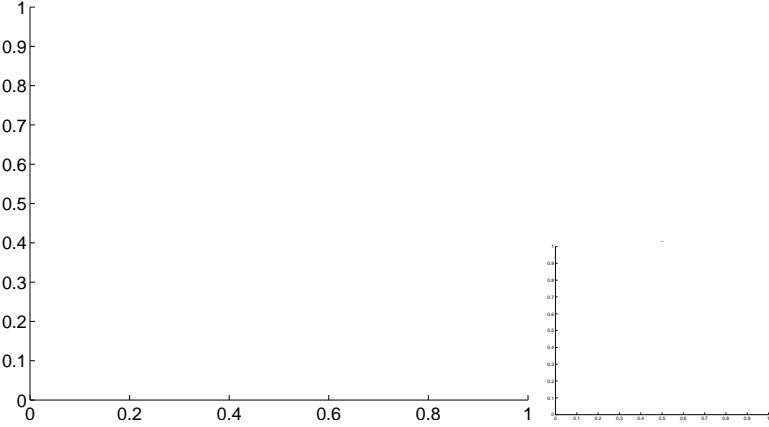
Q7 no OOT image



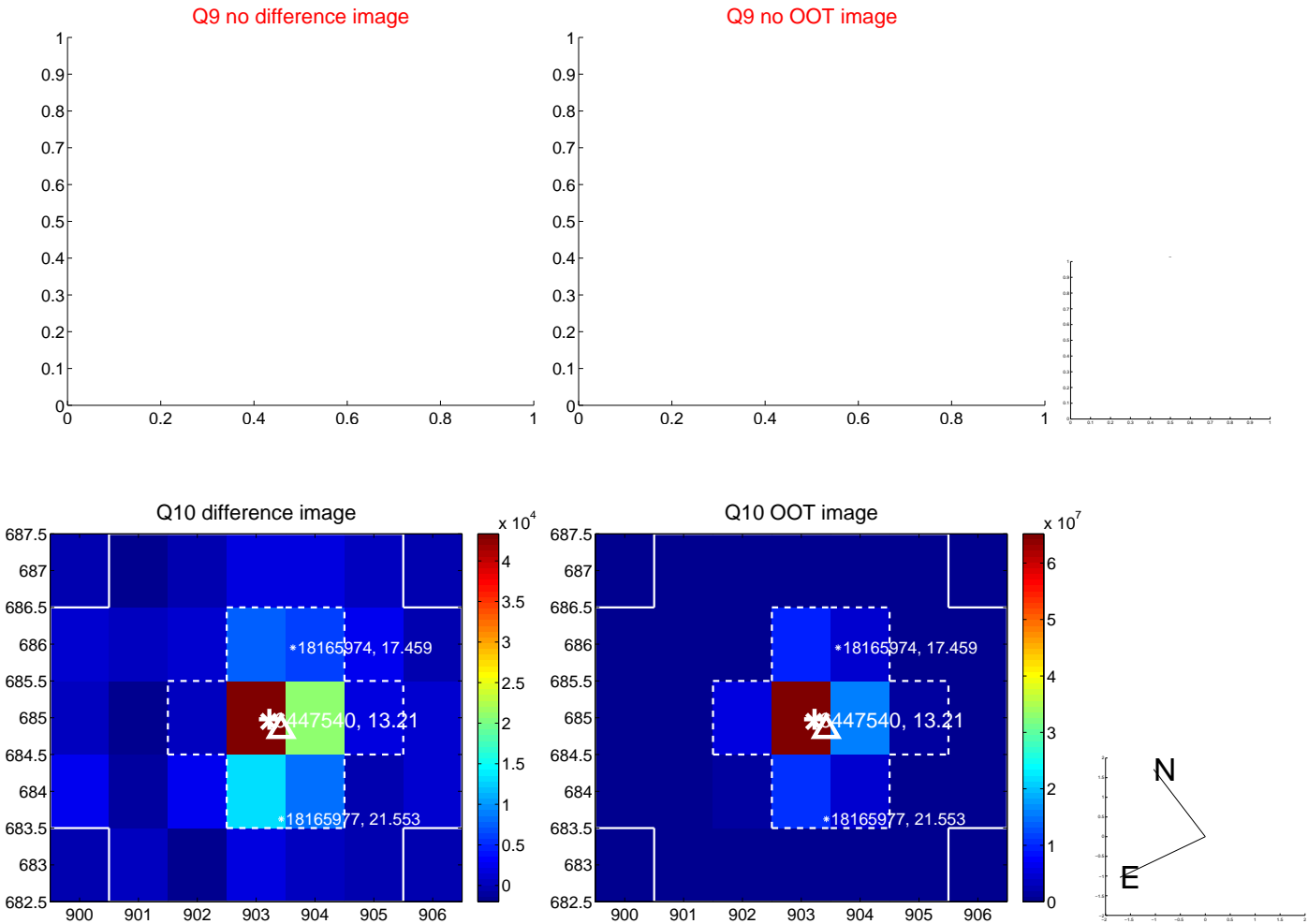
Q8 no difference image



Q8 no OOT image



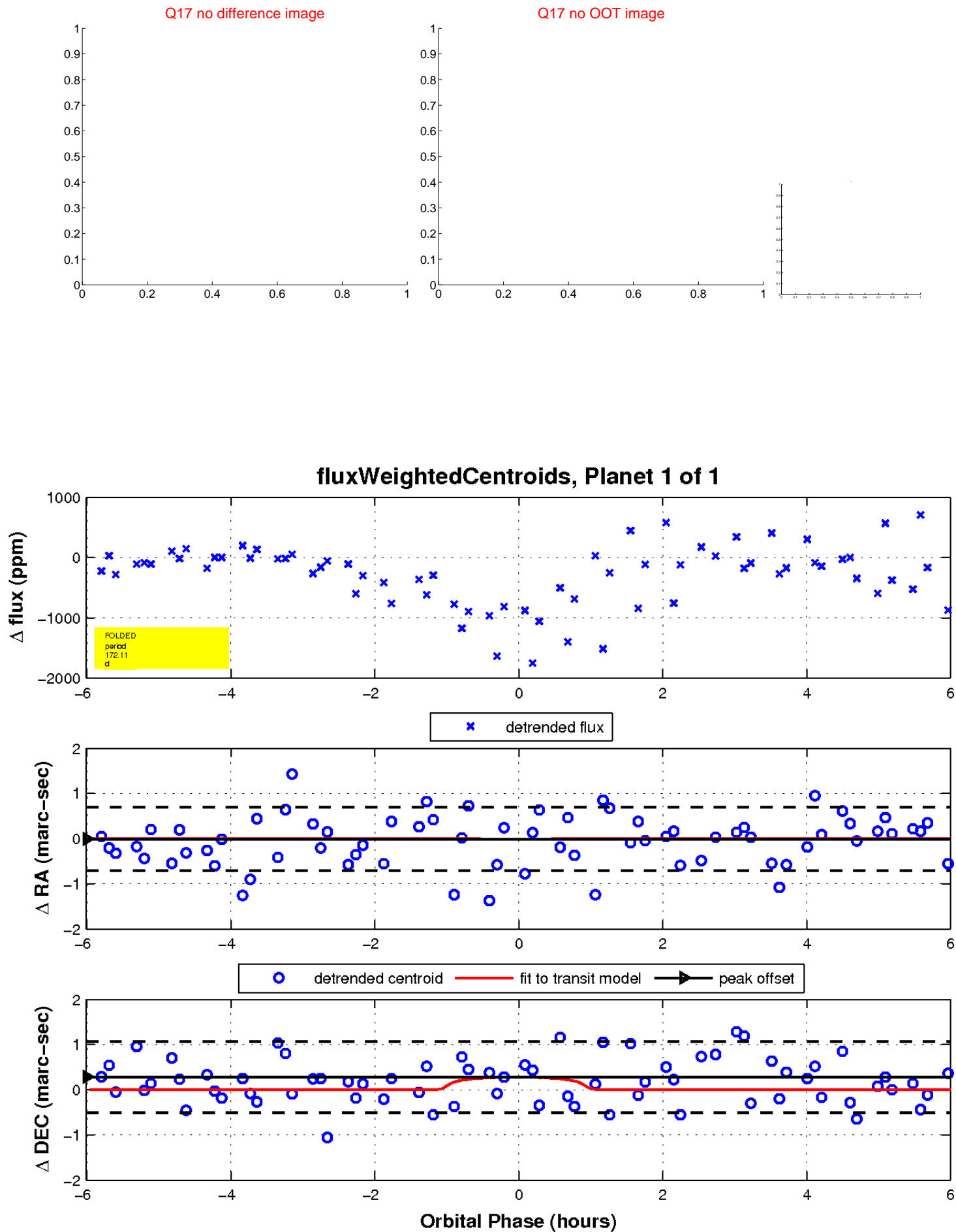
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

