

KIC 010340241

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})
010340241-01	OBS	No	352.688324	173.451497	163.0	17.468	8.0	7.4	1.74	6344	2.42	3.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010340241-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

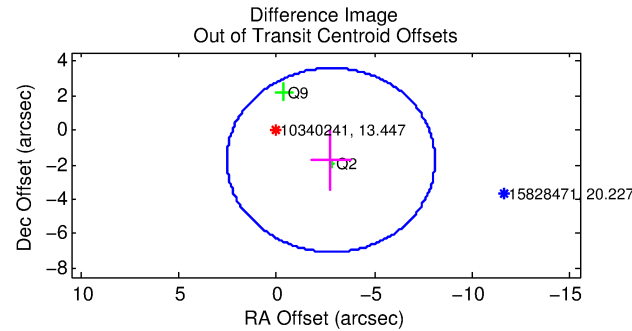
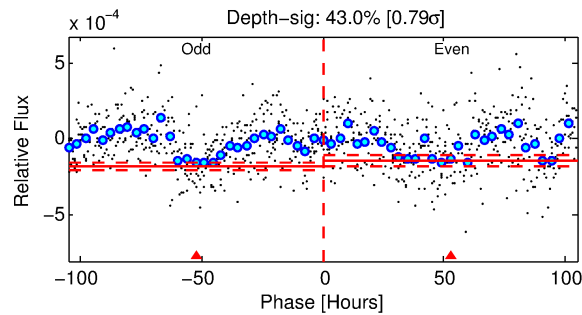
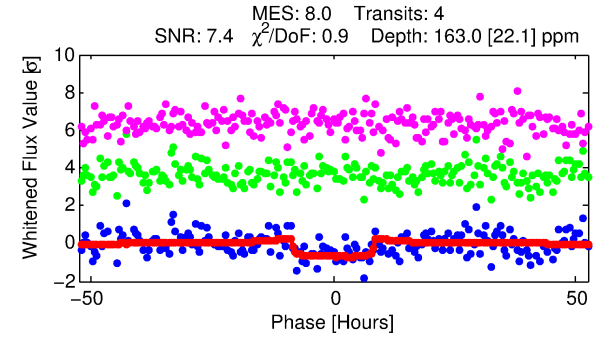
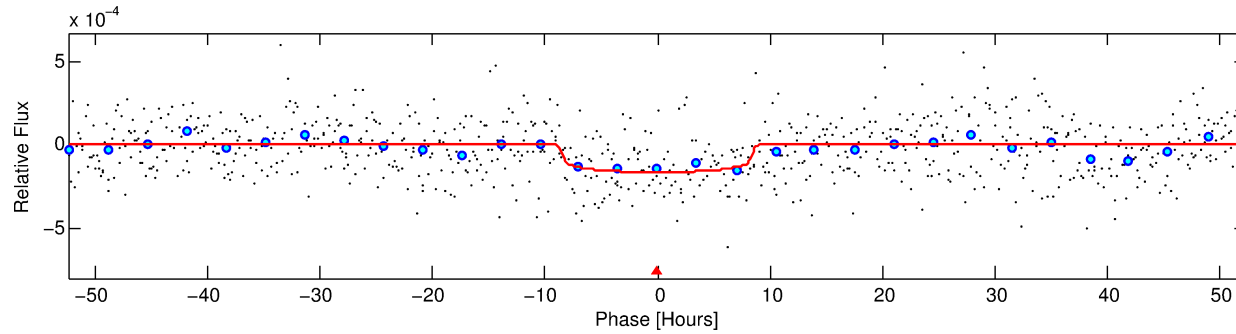
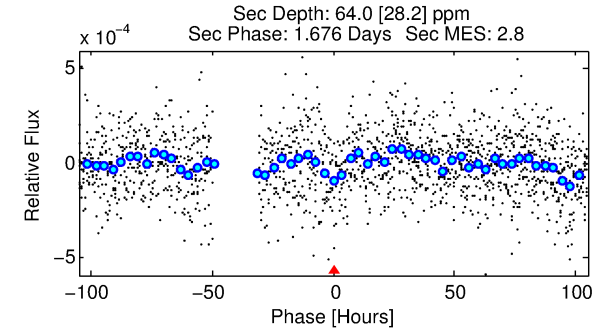
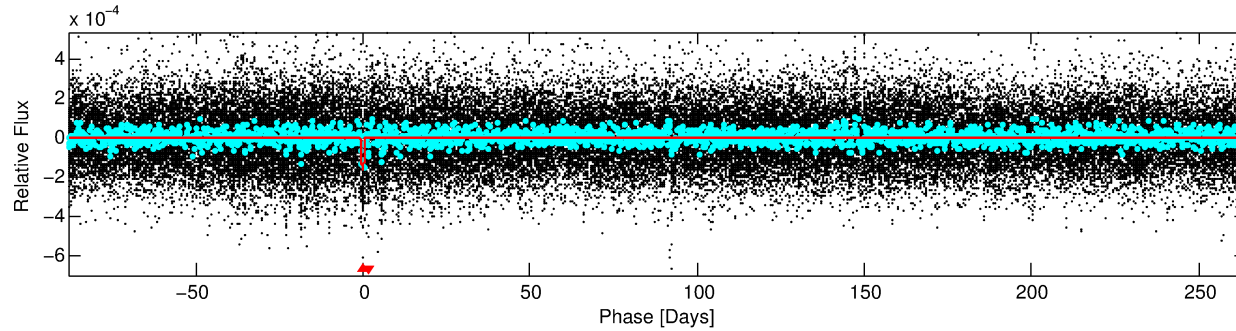
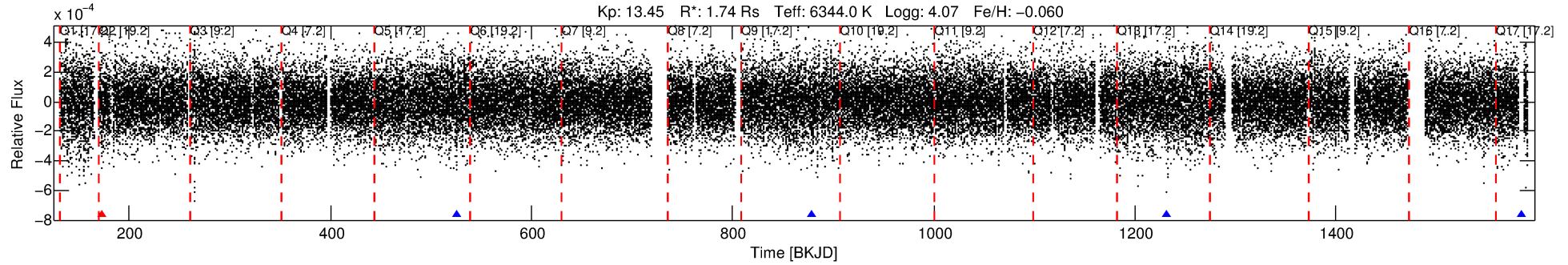
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010340241-01

No Significant Match Found

DV One-Page Summary

KIC: 10340241 Candidate: 1 of 1 Period: 352.688 d



DV Fit Results:

Period = 352.68832 [0.01092] d
Epoch = 173.4515 [0.0205] BKJD
Rp/R* = 0.0128 [0.0034]
a/R* = 101.53 [138.11]
b = 0.77 [0.73]
Seff = 3.85 [1.49]
Teq = 357 [35] K
Rp = 2.42 [0.93] Re
a = 1.0662 [0.2616] AU
Ag = 6822.94 [5369.98] [1.27σ]
Teffp = 5020 [881] K [5.29σ]

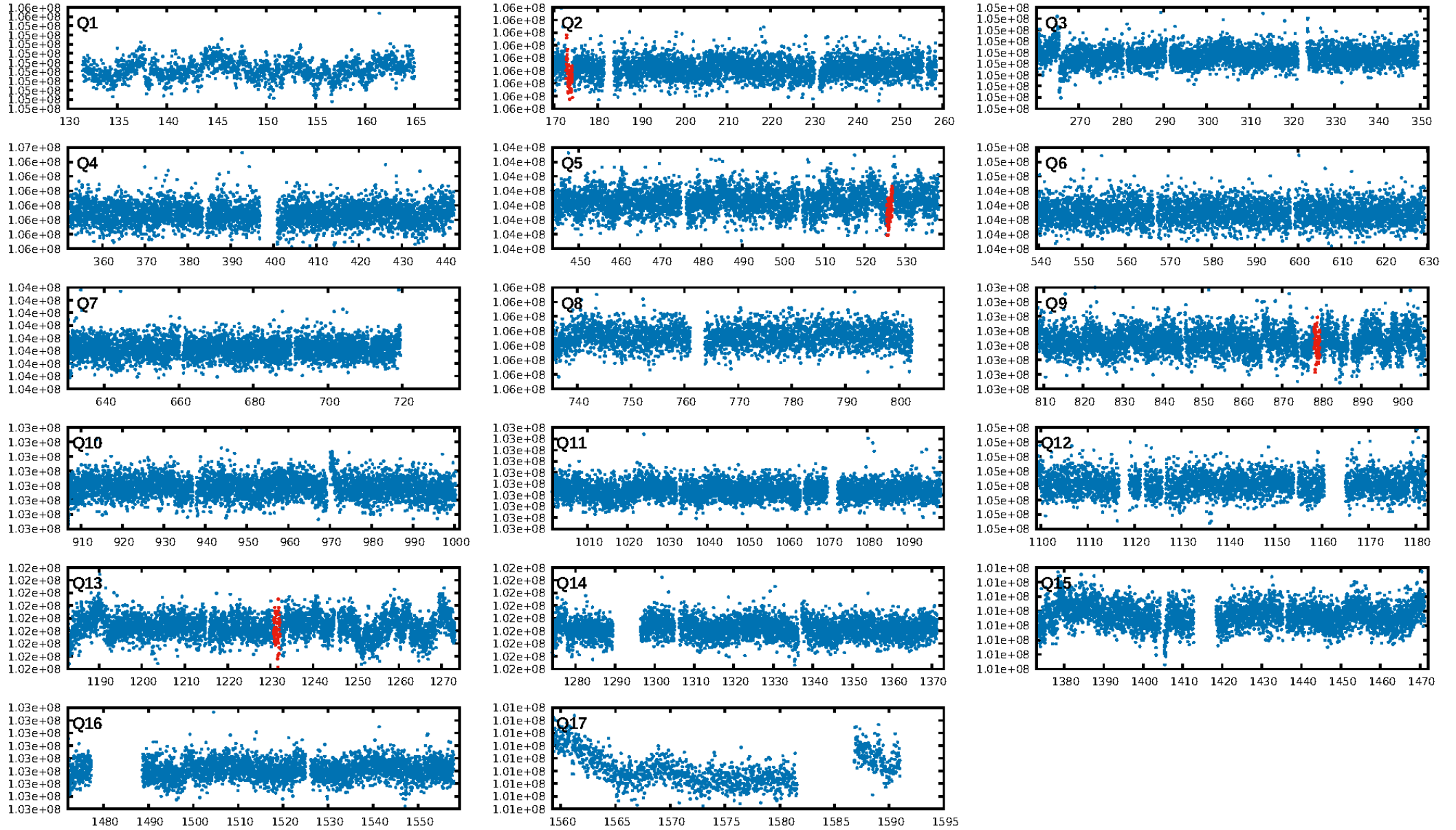
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.53e-12
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 8.357
Centroid-sig: 33.8%
Centroid-so: 2.895 arcsec [1.17σ]
OotOffset-rm: 3.277 arcsec [1.85σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 3.376 arcsec [2.68σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

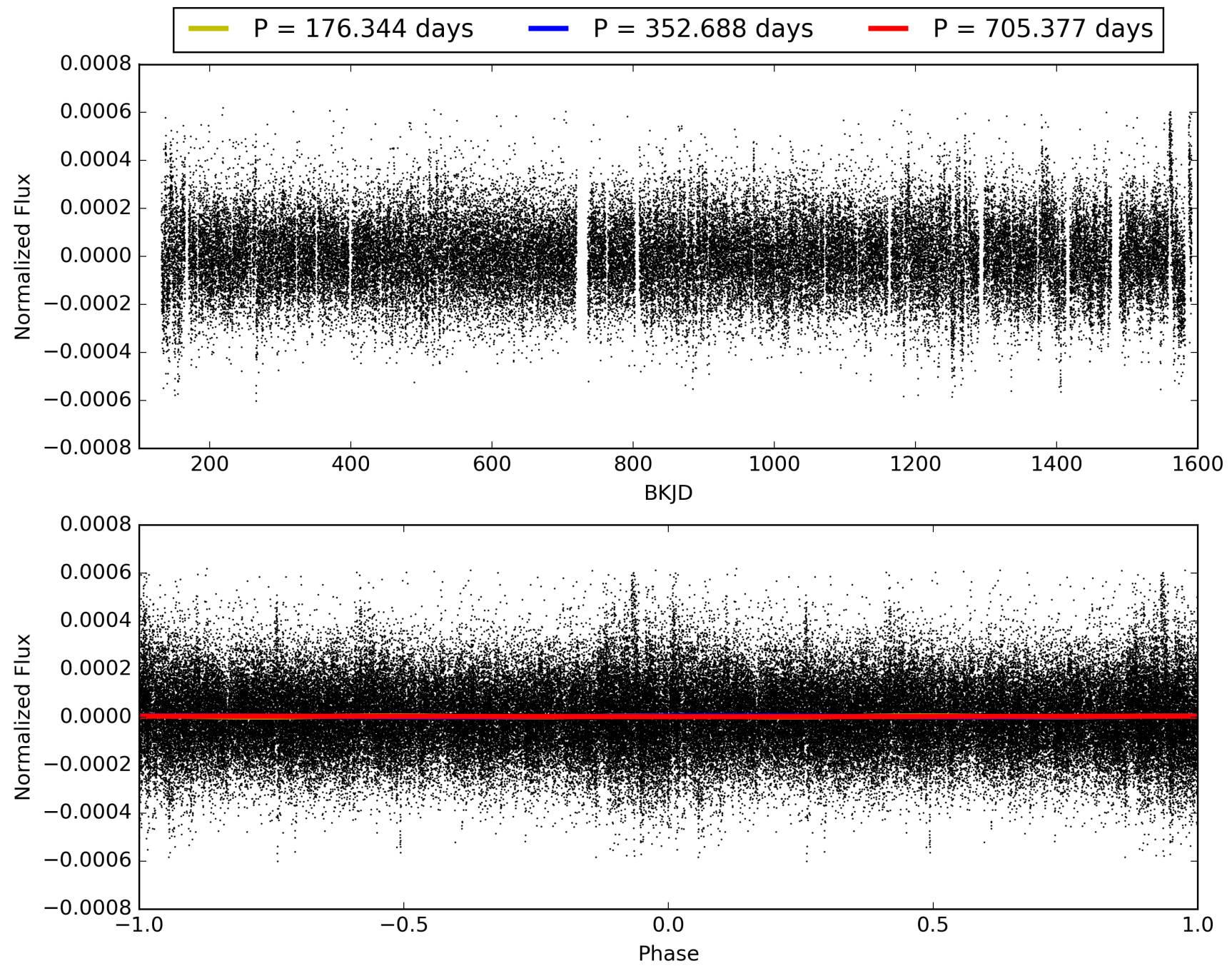
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:54:11 Z

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

TCE 010340241-01, PDC Light Curves

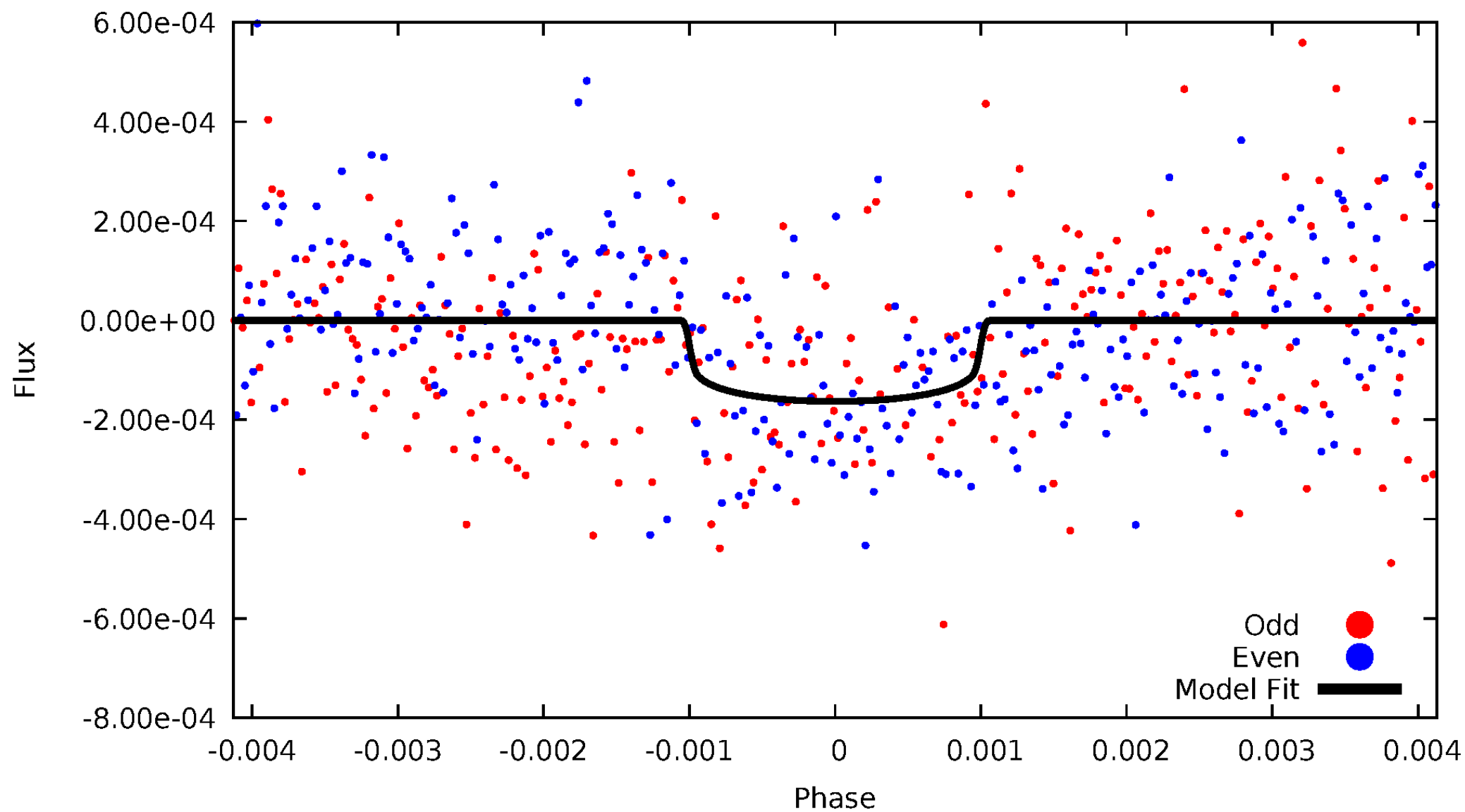


TCE 010340241-01



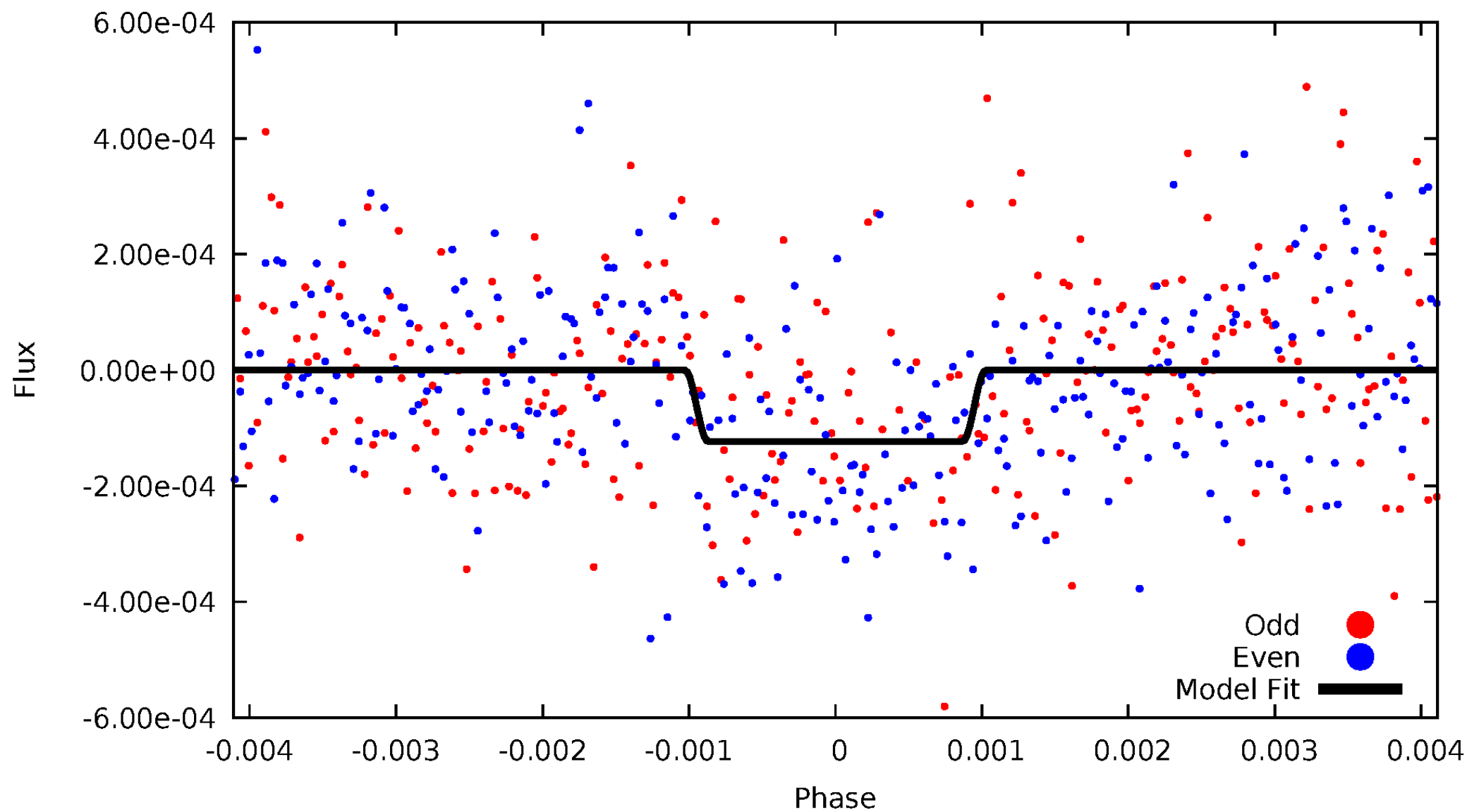
DV Odd/Even

TCE 010340241-01

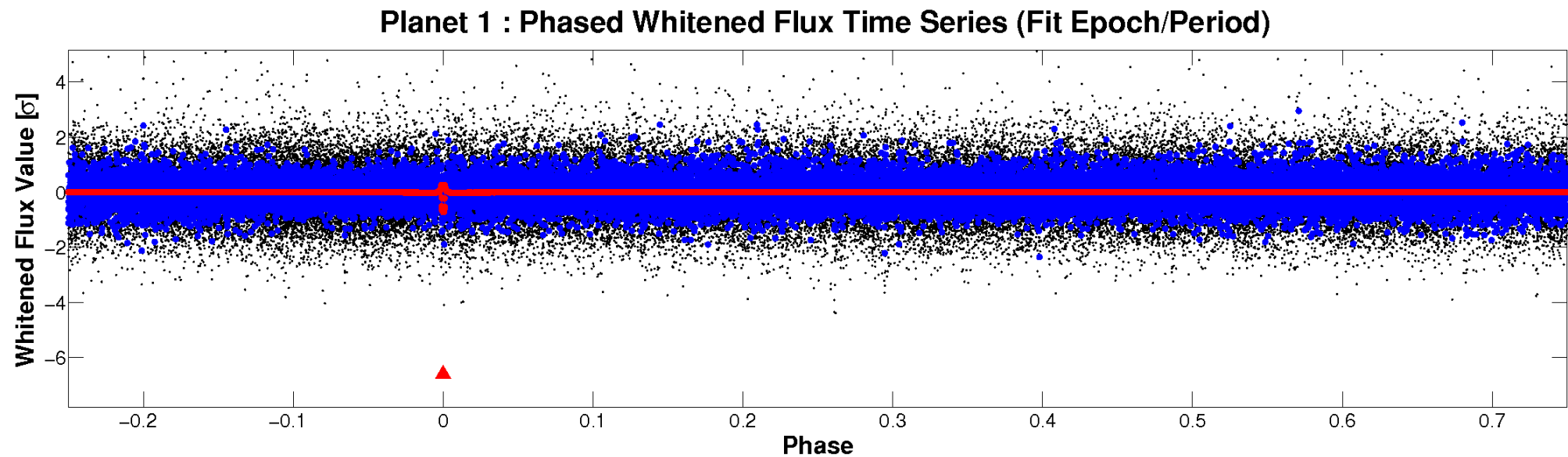
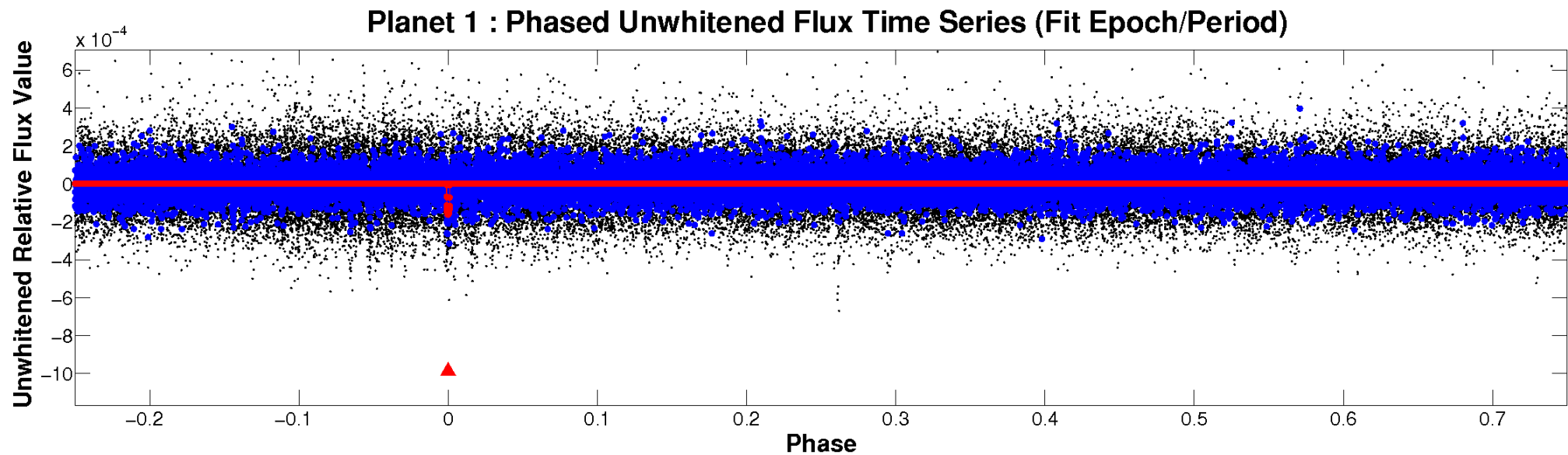


ALT Odd/Even

TCE 010340241-01

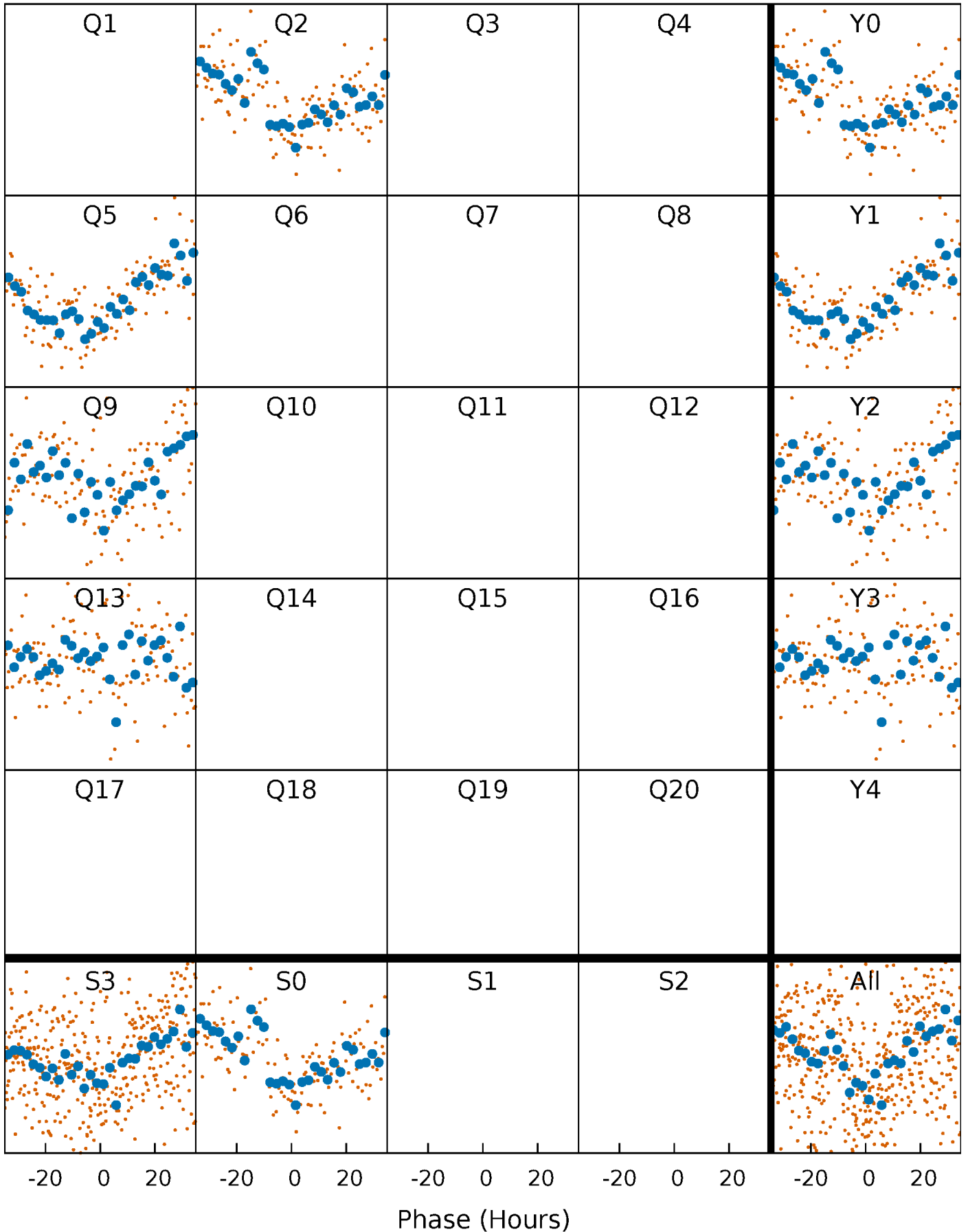


Non-Whitened Vs. Whitened Light Curve



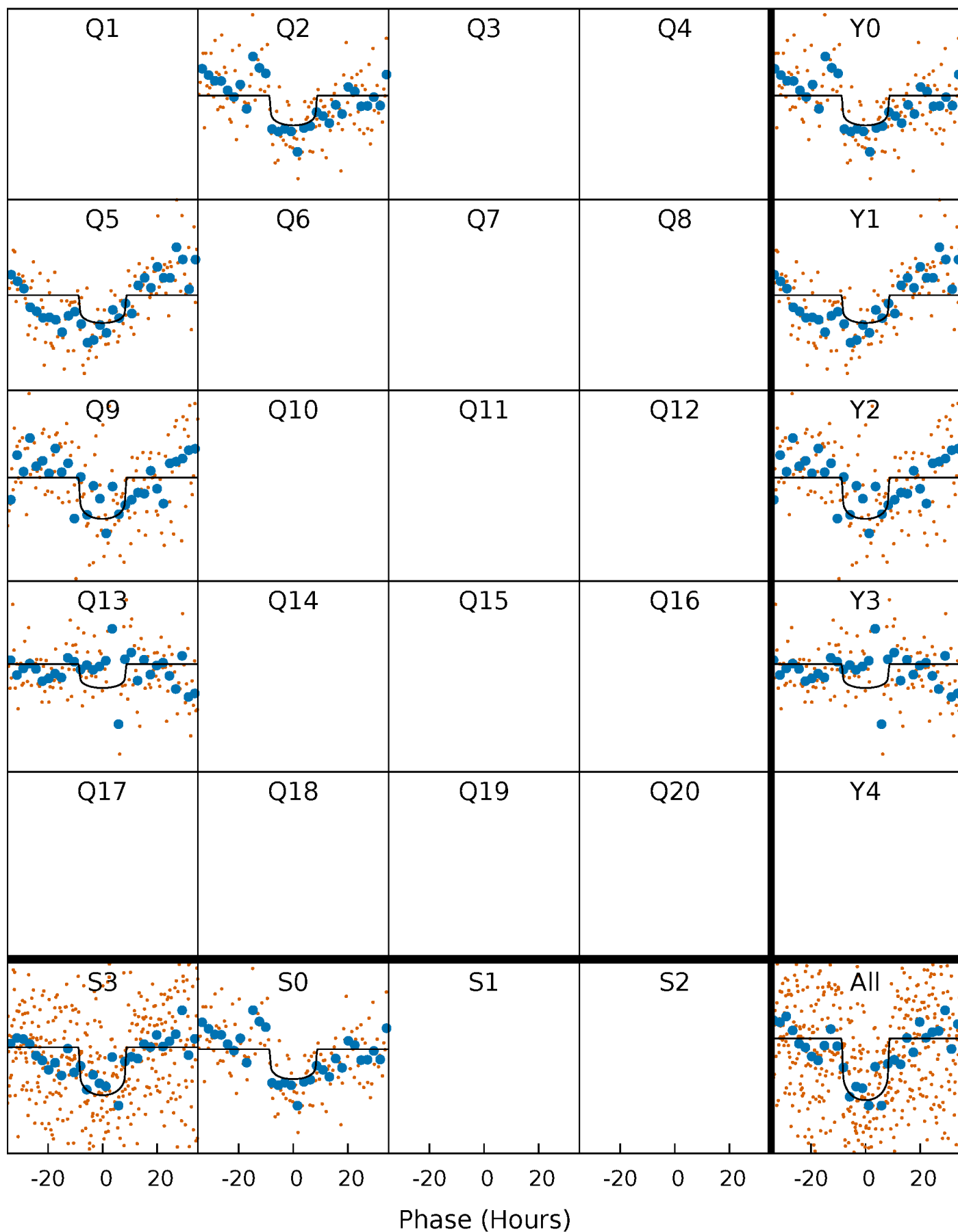
PDC Quarter-Phased Transit Curves

TCE 010340241-01 P=352.688324 Days $T_0=173.451497$ (BKJD)



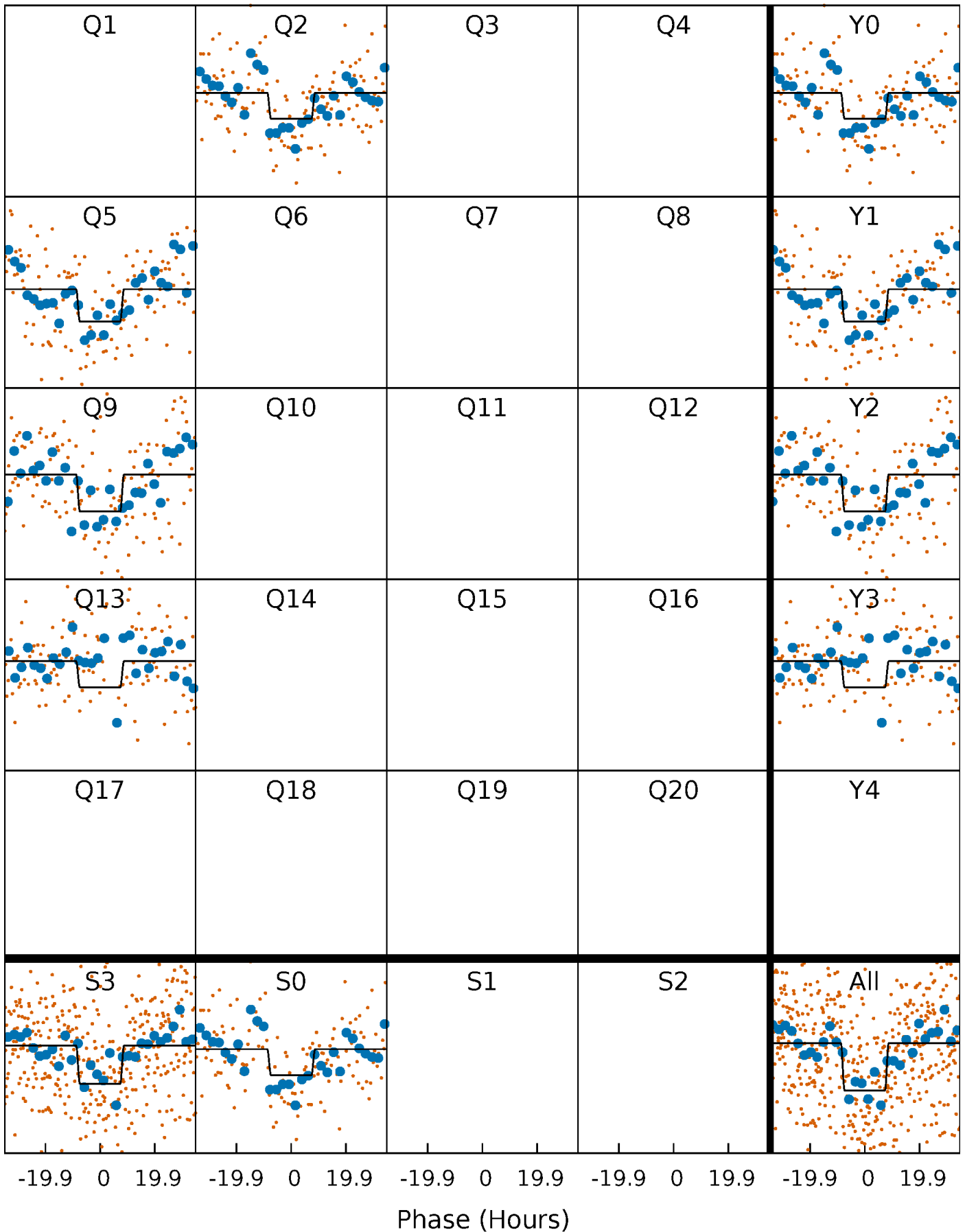
DV Quarter-Phased Transit Curves

TCE 010340241-01 $P=352.688324$ Days $T_0=173.451497$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

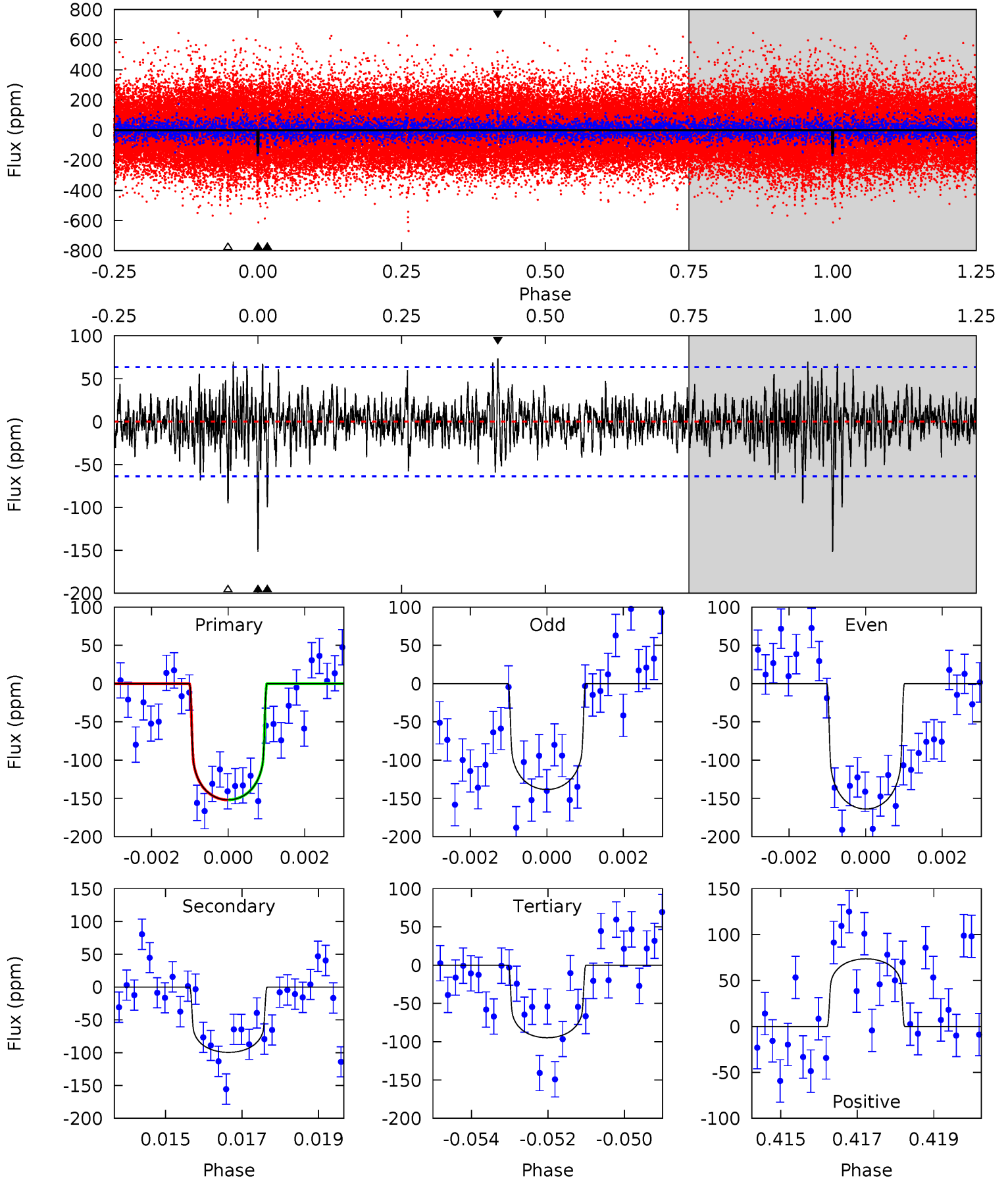
TCE 010340241-01 P=352.690057 Days $T_0=173.446091$ (BKJD)



DV Model-Shift Uniqueness Test

010340241-01, P = 352.688324 Days, E = 173.451497 Days

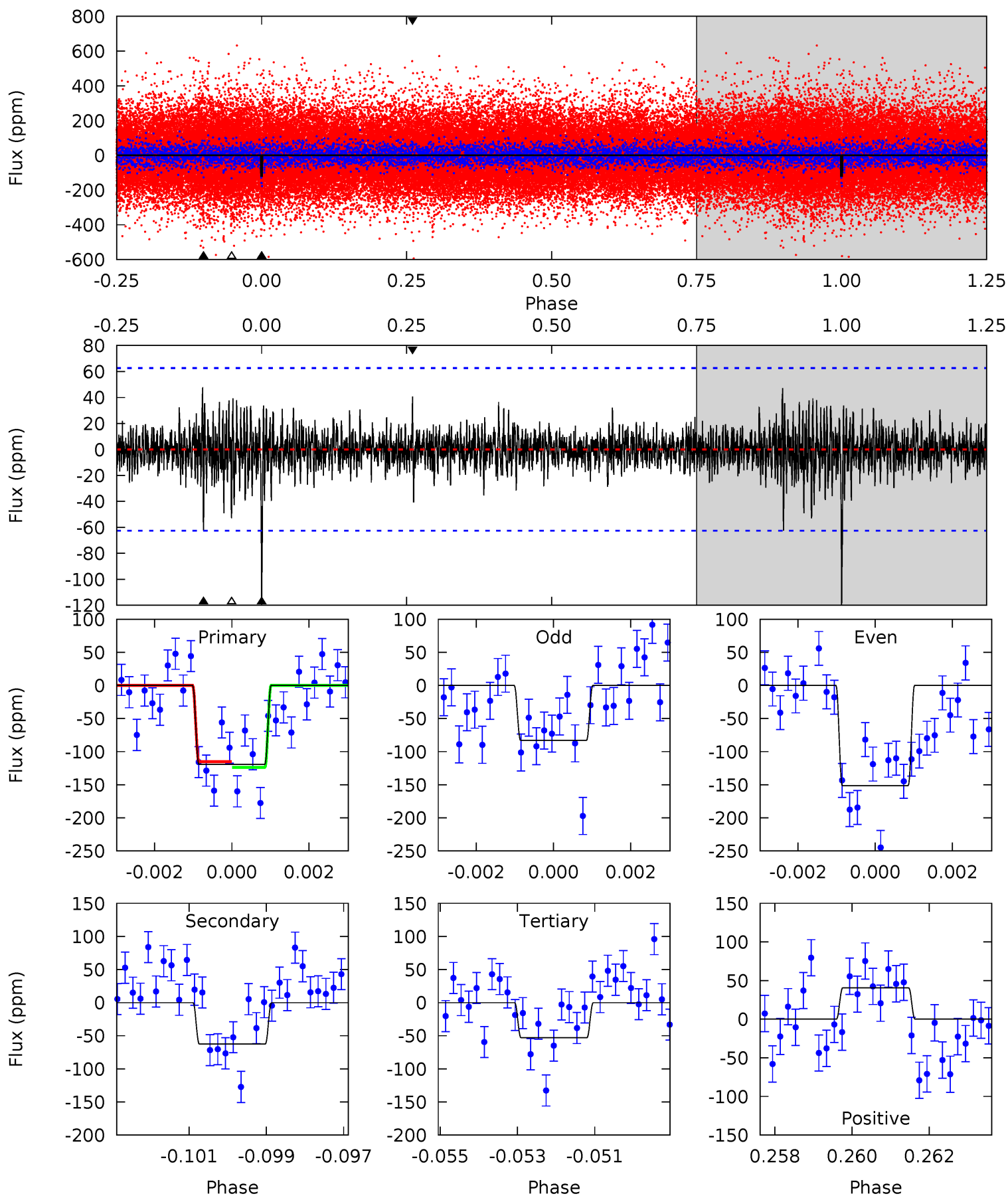
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	8.32	7.92	6.15	5.32	3.08	1.59	4.77	6.54	0.40	2.17	1.07	0.91	0.33	0.01



Alt Model-Shift Uniqueness Test

010340241-01, P = 352.690057 Days, E = 173.446091 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.32	4.51	3.45	5.32	3.09	0.94	5.62	6.69	0.81	1.87	2.91	0.86	0.28	0.37



Stellar Parameters For KIC 010340241

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6344^{+173}_{-173}	$4.072^{+0.210}_{-0.123}$	$-0.060^{+0.250}_{-0.250}$	$1.737^{+0.351}_{-0.482}$	$1.301^{+0.164}_{-0.226}$	$0.350^{+0.414}_{-0.143}$
	+3%/-3%	+5%/-3%	+417%/-417%	+20%/-28%	+13%/-17%	+118%/-41%
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 010340241-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-100 ± 12	$2.35^{+0.72}_{-0.68}$	496^{+32}_{-34}	5673^{+964}_{-648}	11157^{+11787}_{-4565}
Alt.	-63 ± 12	$2.03^{+0.71}_{-0.66}$	496^{+30}_{-33}	5417^{+1094}_{-686}	9420^{+11526}_{-4418}

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

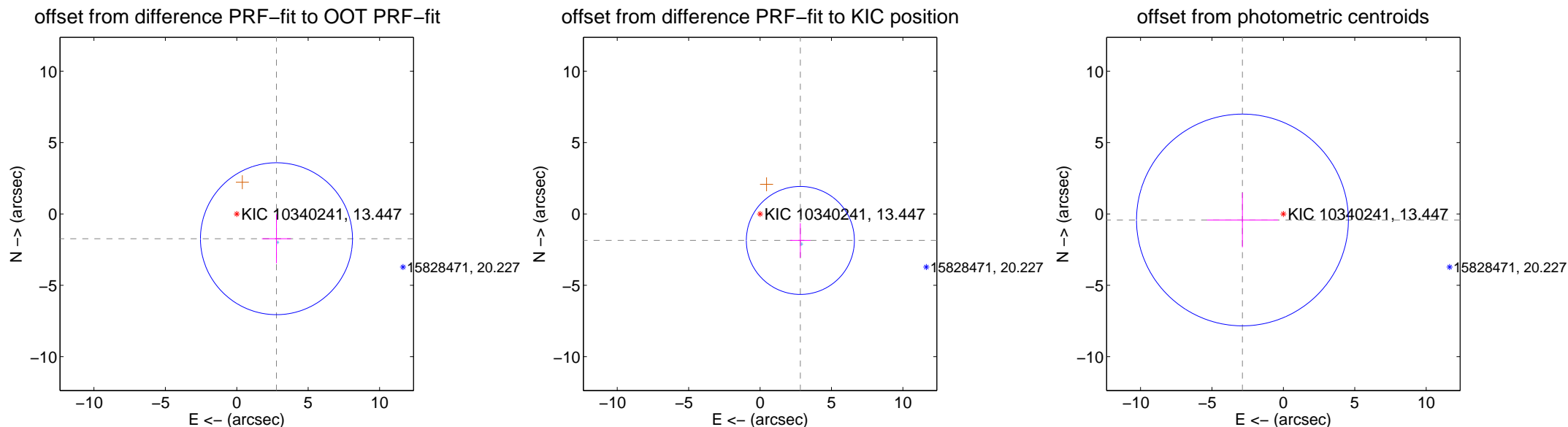
DV Centroid Data

Supplemental centroid analysis for 010340241-01. Kepler magnitude: 13.45. Transit SNR 7.41

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.277 ± 1.774	1.85	-2.780 ± 1.019	-1.735 ± 1.720
PRF-fit source offset from KIC position	3.376 ± 1.261	2.68	-2.821 ± 0.715	-1.856 ± 1.210
photometric centroid source offset	2.90 ± 2.47	1.17	2.86 ± 2.48	-0.42 ± 1.91



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.

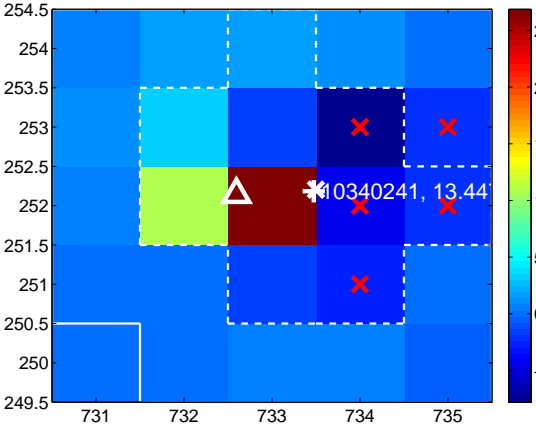
Q1 no difference image



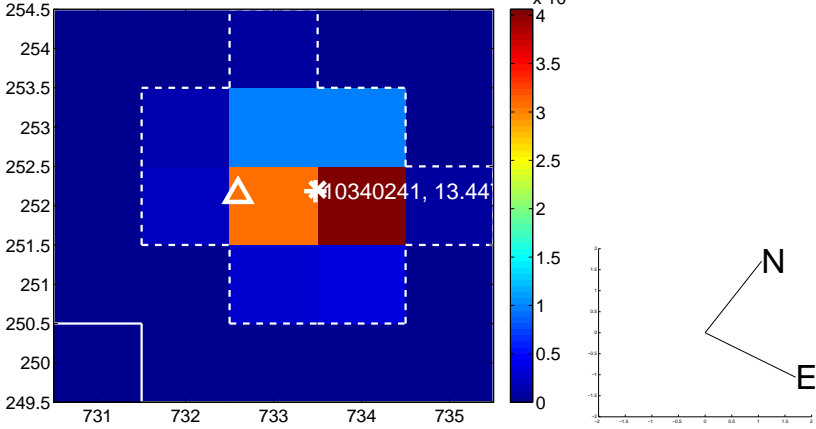
Q1 no OOT image



Q2 difference image



Q2 OOT image



Q3 no difference image



Q3 no OOT image



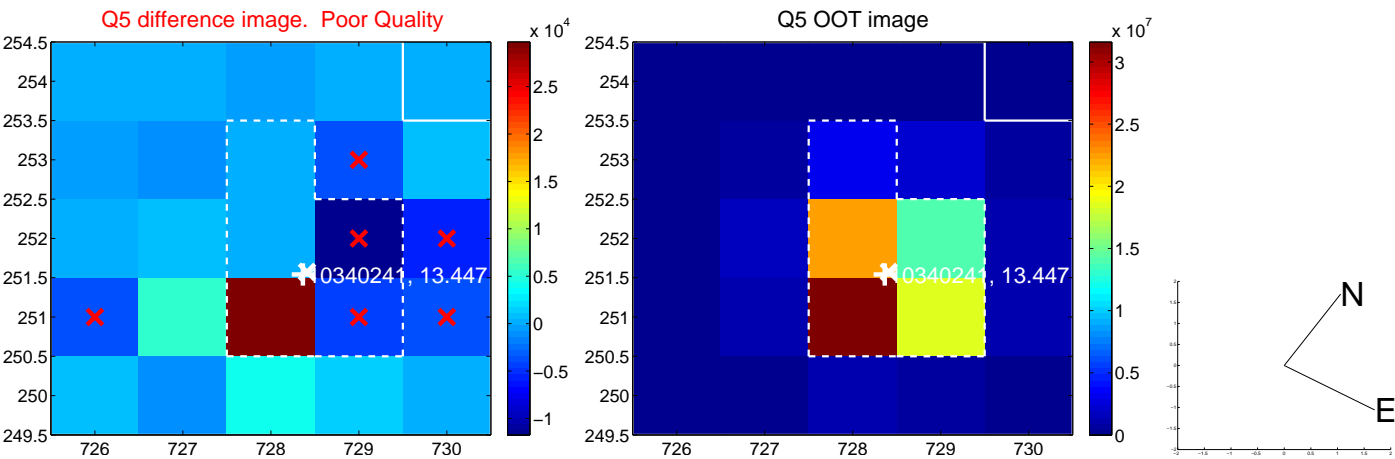
Q4 no difference image



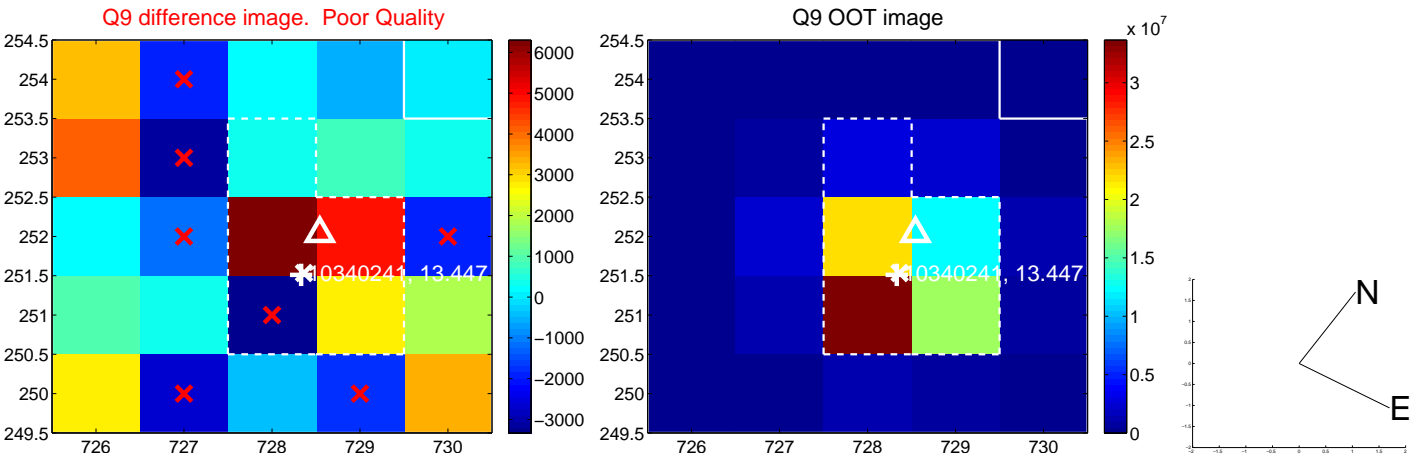
Q4 no OOT image



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



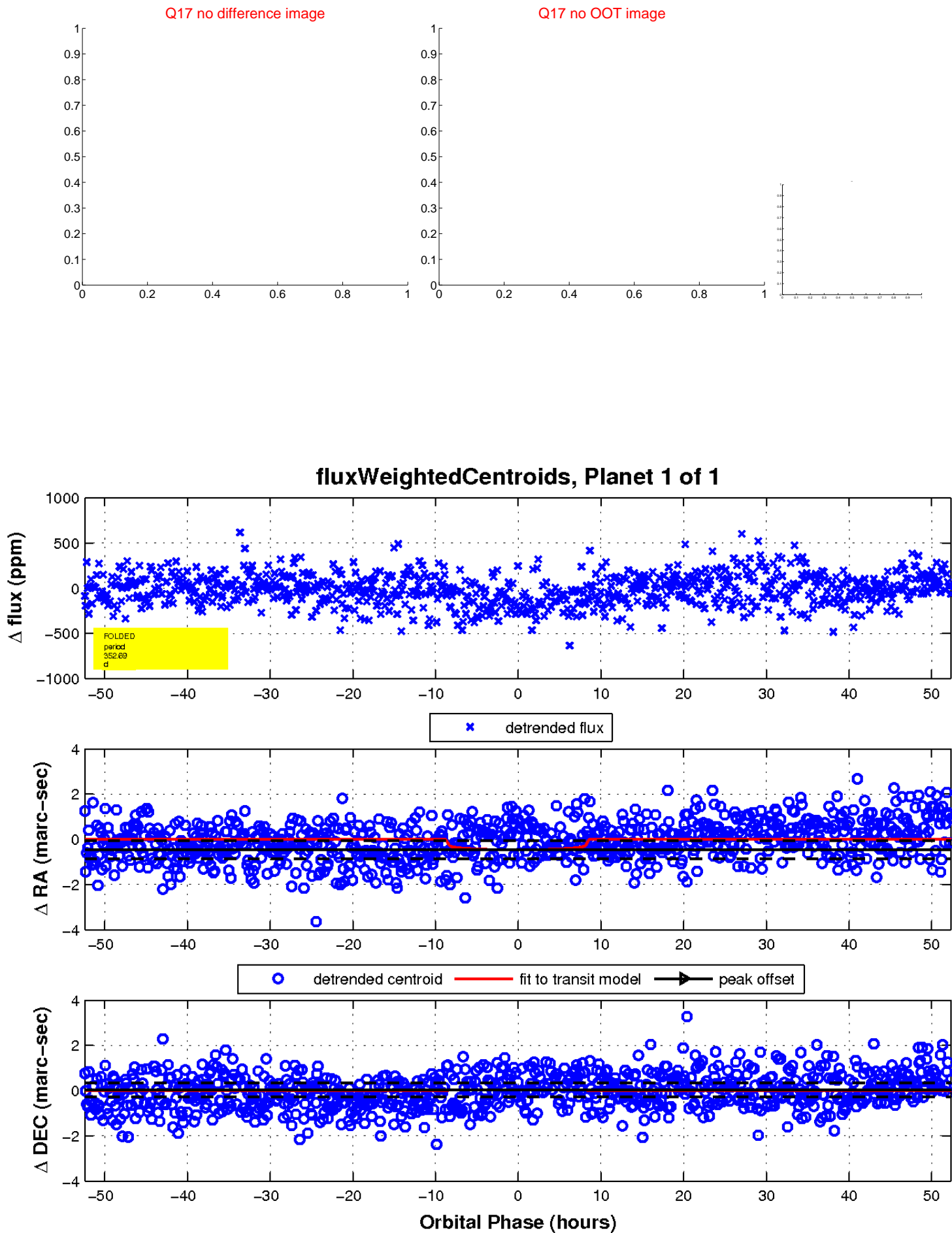
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

