

KIC 006043574

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})
006043574-01	OBS	8114.01	381.778663	241.132956	257.5	3.388	7.1	6.6	2.29	6056	3.83	5.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006043574-01	OBS	FP	0.10	1	0	0	0	INDIV_TRANS_MARSHALL—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.

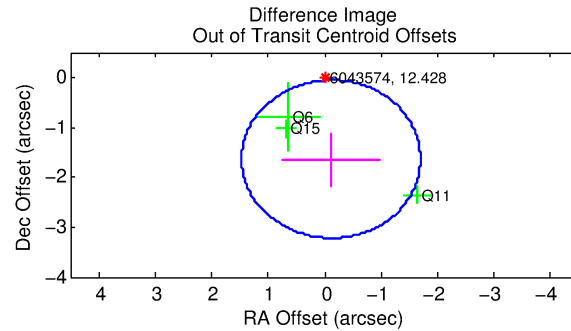
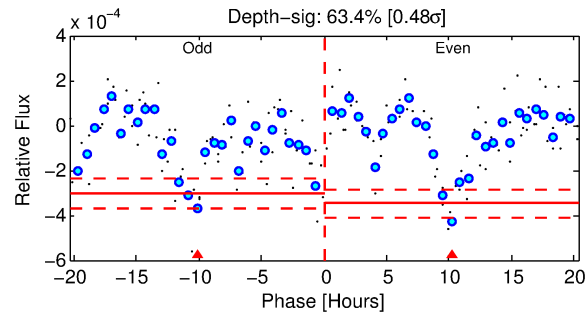
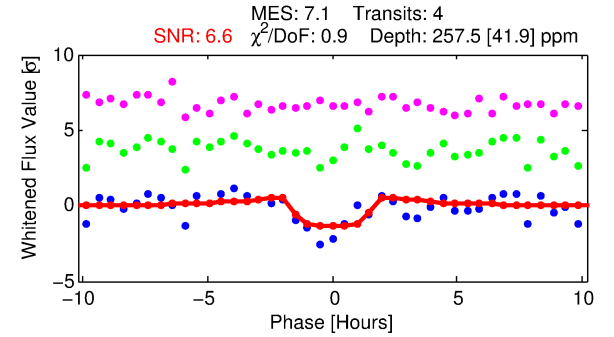
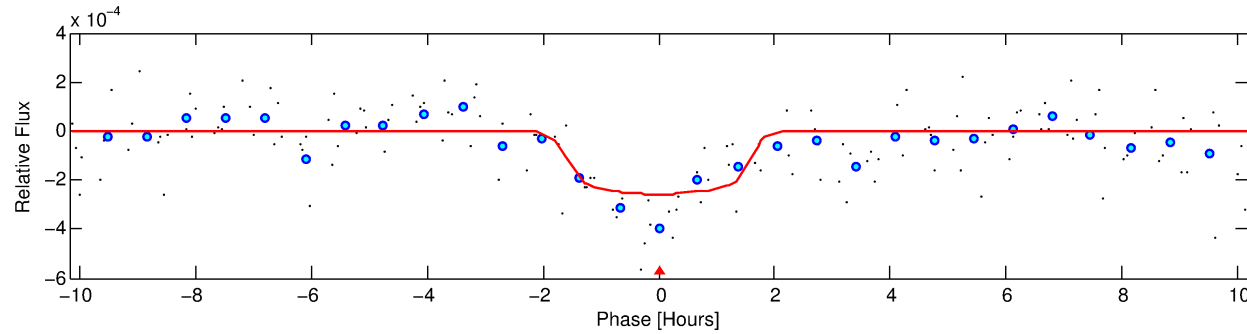
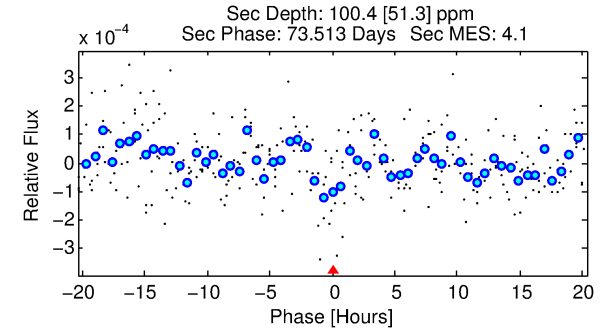
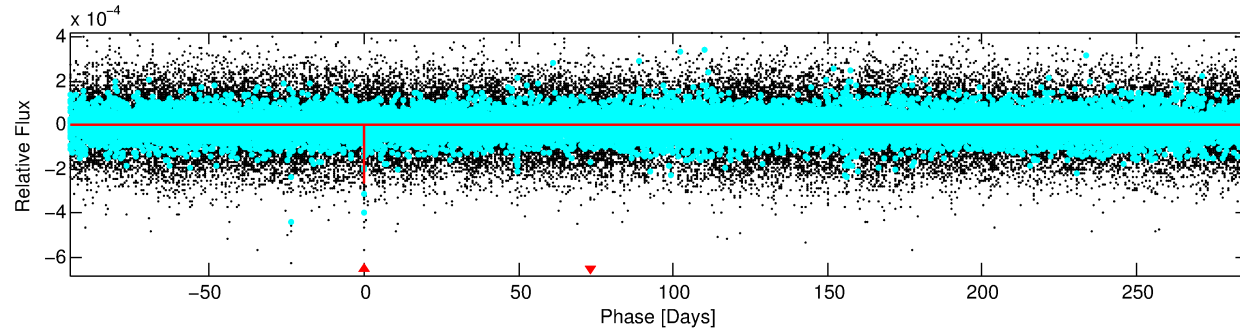
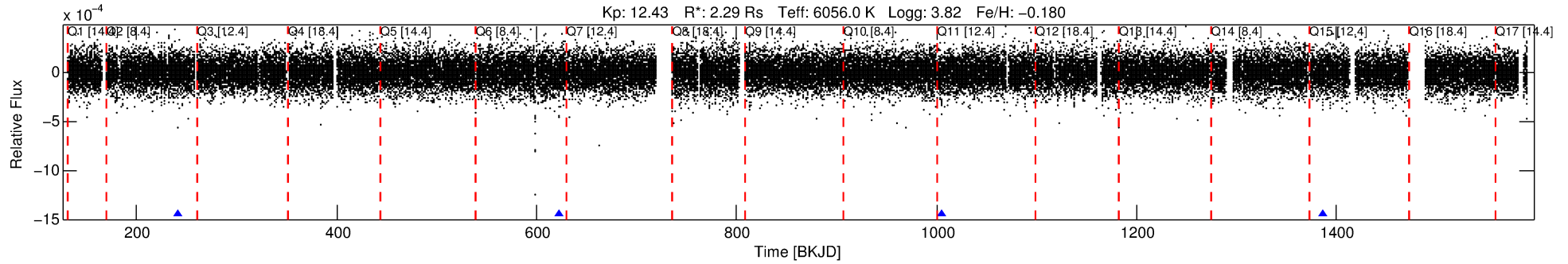
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006043574-01

No Significant Match Found

DV One-Page Summary

KIC: 6043574 Candidate: 1 of 1 Period: 381.779 d



DV Fit Results:

Period = 381.77866 [0.00511] d
Epoch = 241.1330 [0.0088] BKJD
Rp/R* = 0.0153 [0.0260]
a/R* = 716.60 [5998.62]
b = 0.58 [9.61]
Seff = 5.13 [2.76]
Teff = 384 [52] K
Rp = 3.83 [6.65] Re
a = 1.1104 [0.3796] AU
Ag = 4638.90 [16087.35] [0.29σ]
Teffp = 4896 [4198] K [1.07σ]

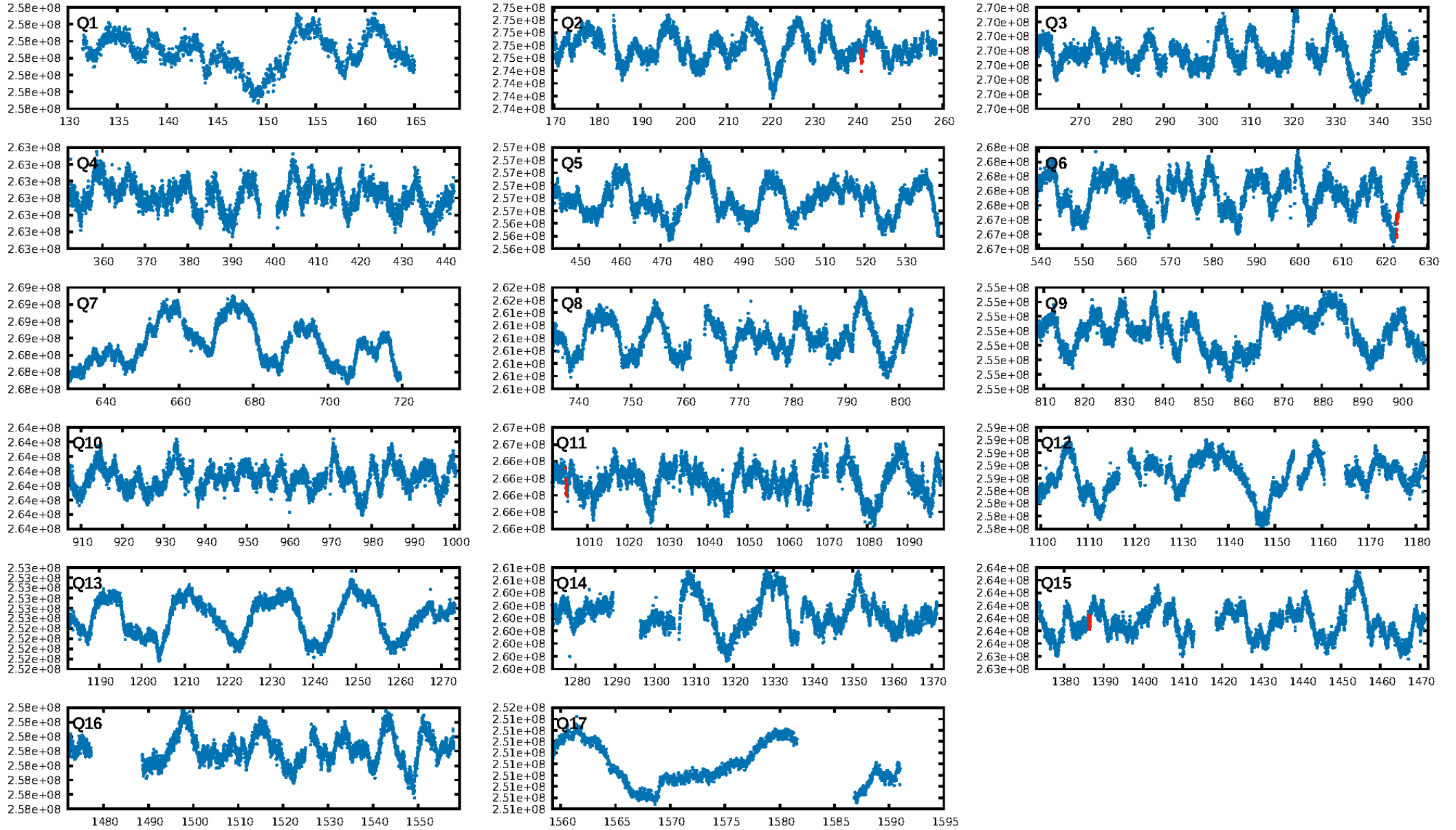
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 65.8%
ModelChiSquareGof-sig: 96.8%
Bootstrap-pfa: 5.41e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 7.509
Centroid-sig: 6.4%
Centroid-so: 0.961 arcsec [1.30σ]
OotOffset-rm: 1.643 arcsec [3.12σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-rm: 1.496 arcsec [2.58σ]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

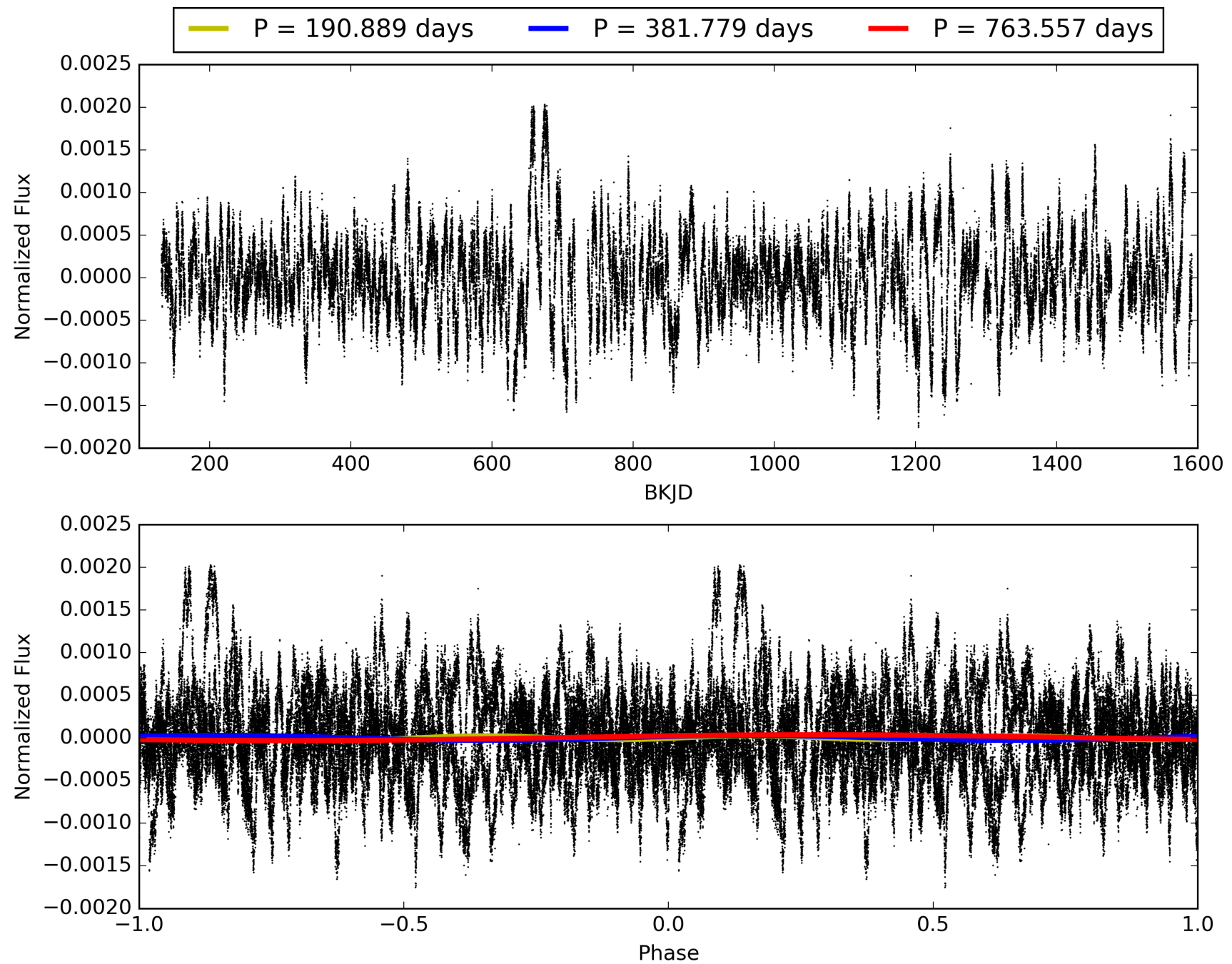
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:23:31 Z

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

TCE 006043574-01, PDC Light Curves

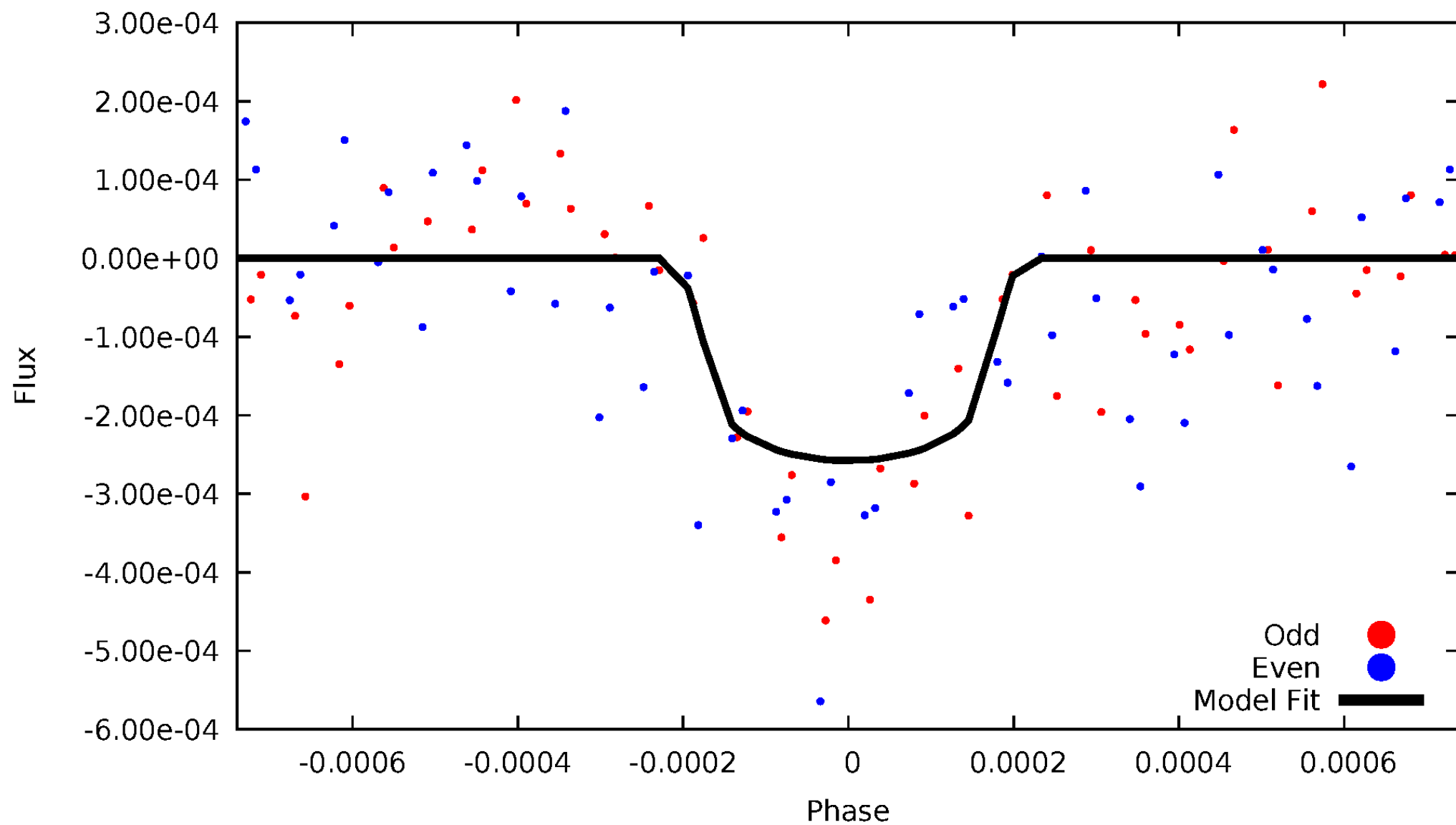


TCE 006043574-01



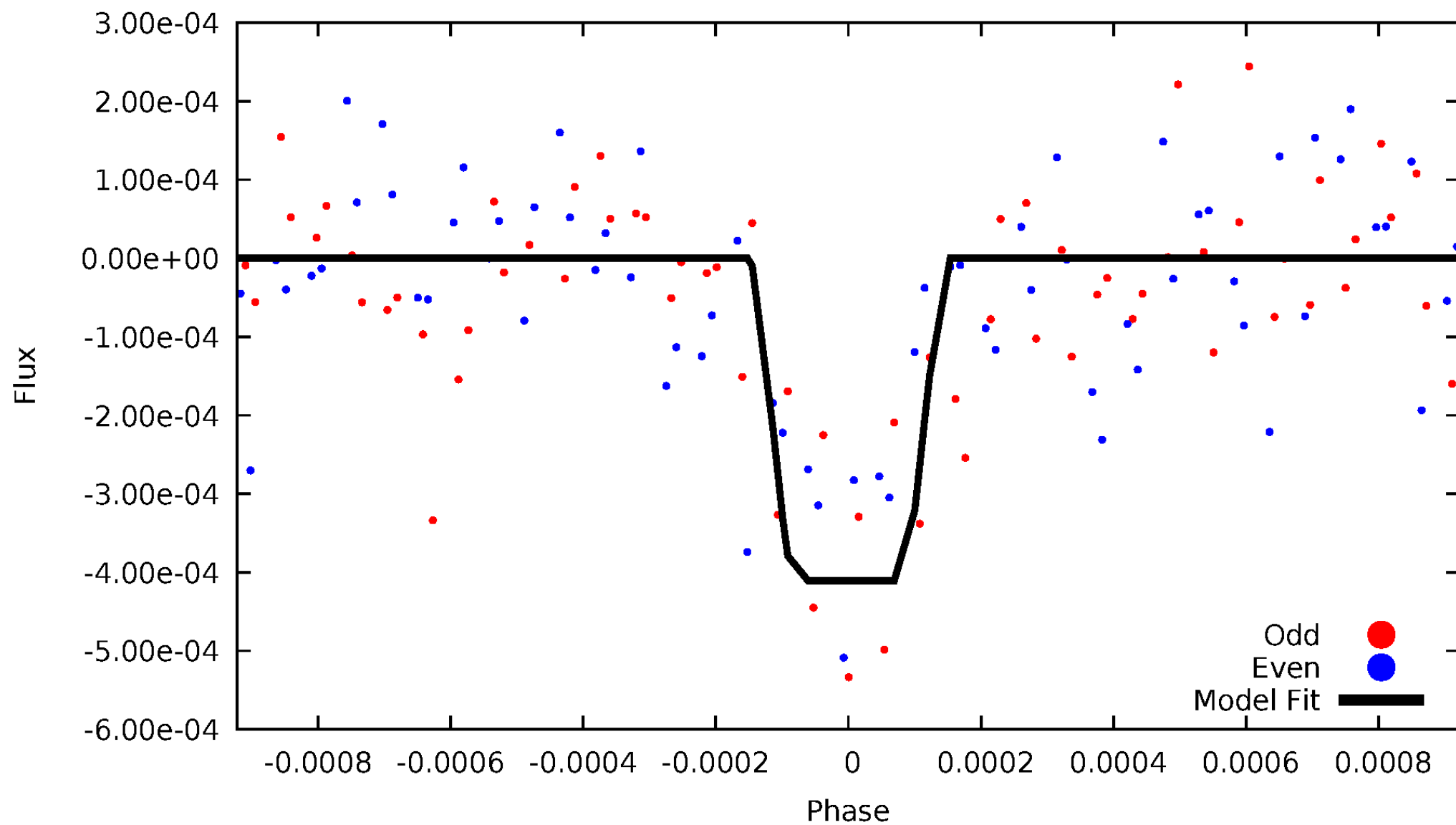
DV Odd/Even

TCE 006043574-01



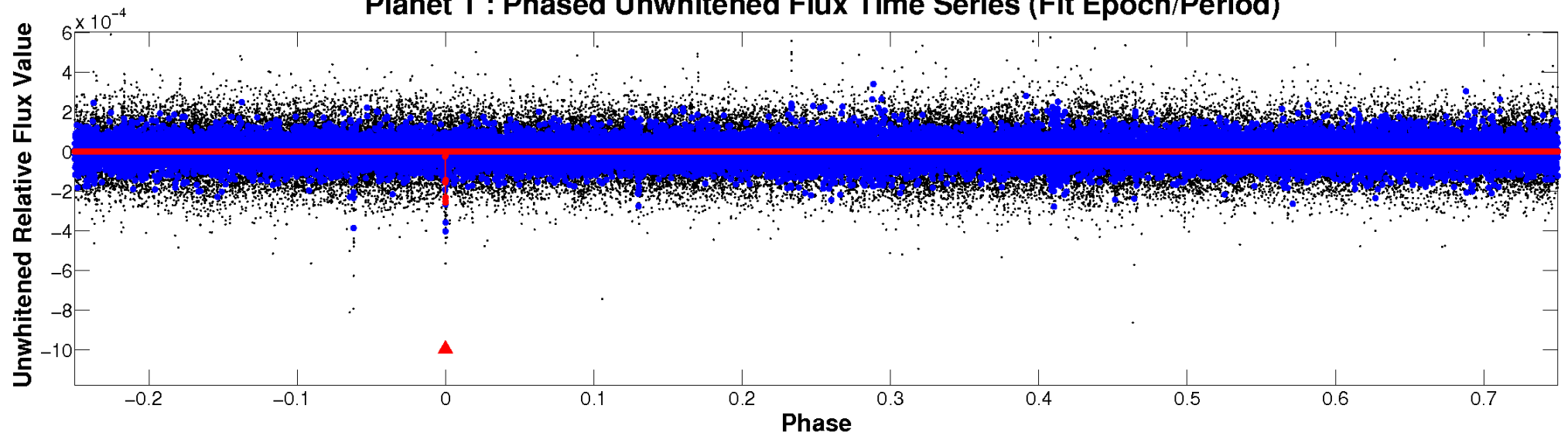
ALT Odd/Even

TCE 006043574-01

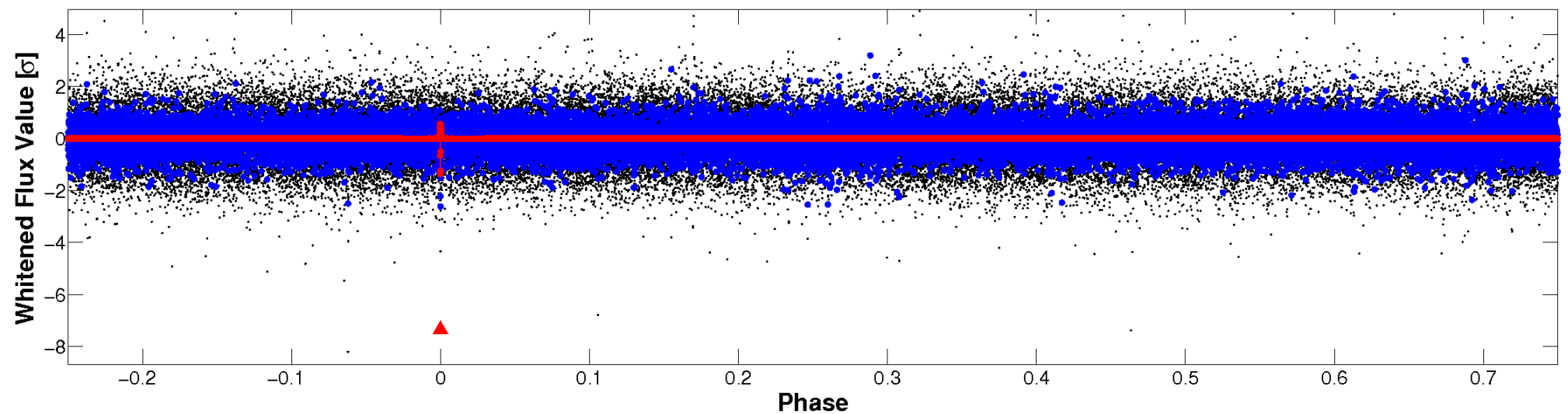


Non-Whitened Vs. Whitened Light Curve

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

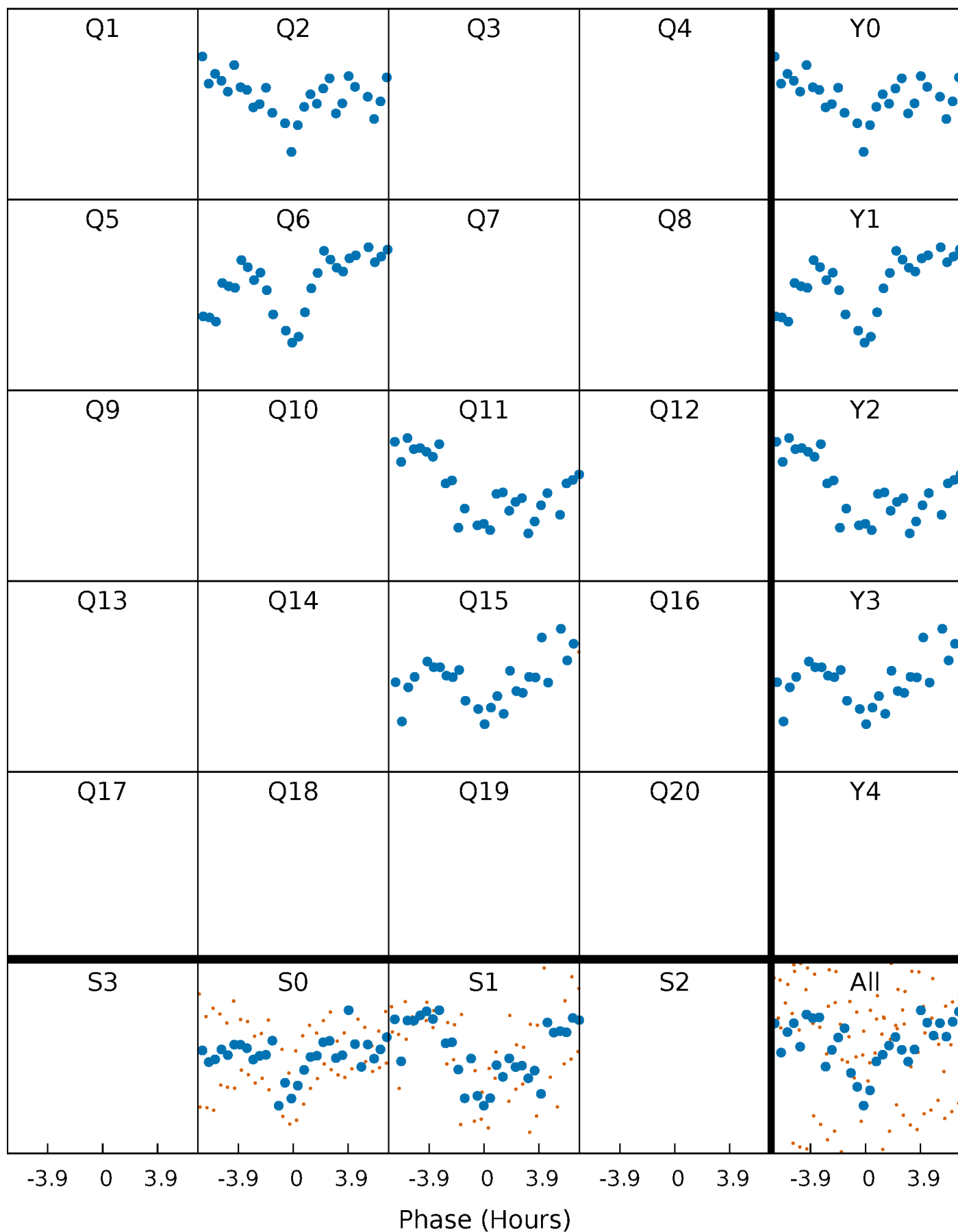


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



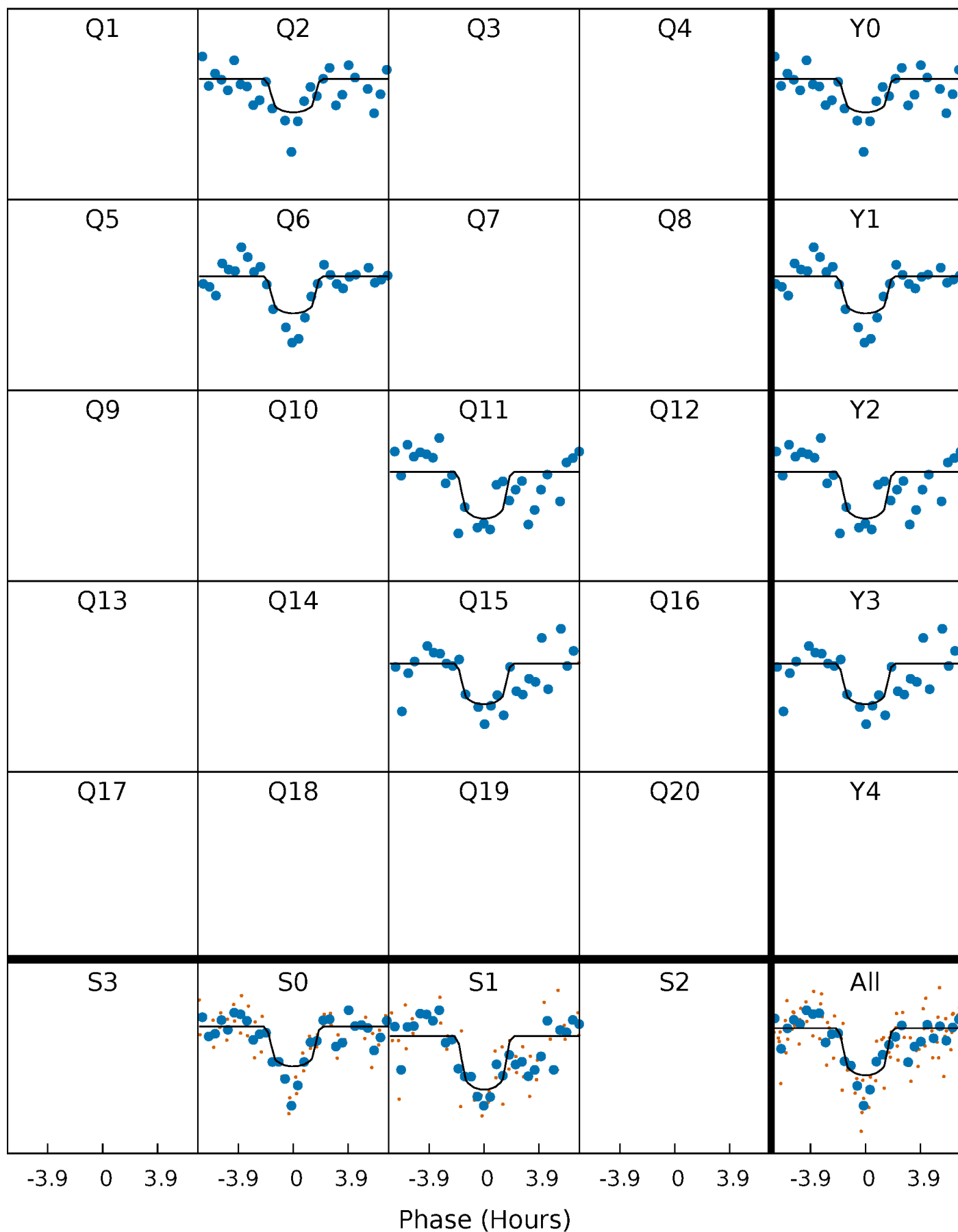
PDC Quarter-Phased Transit Curves

TCE 006043574-01 P=381.778663 Days $T_0=241.132956$ (BKJD)



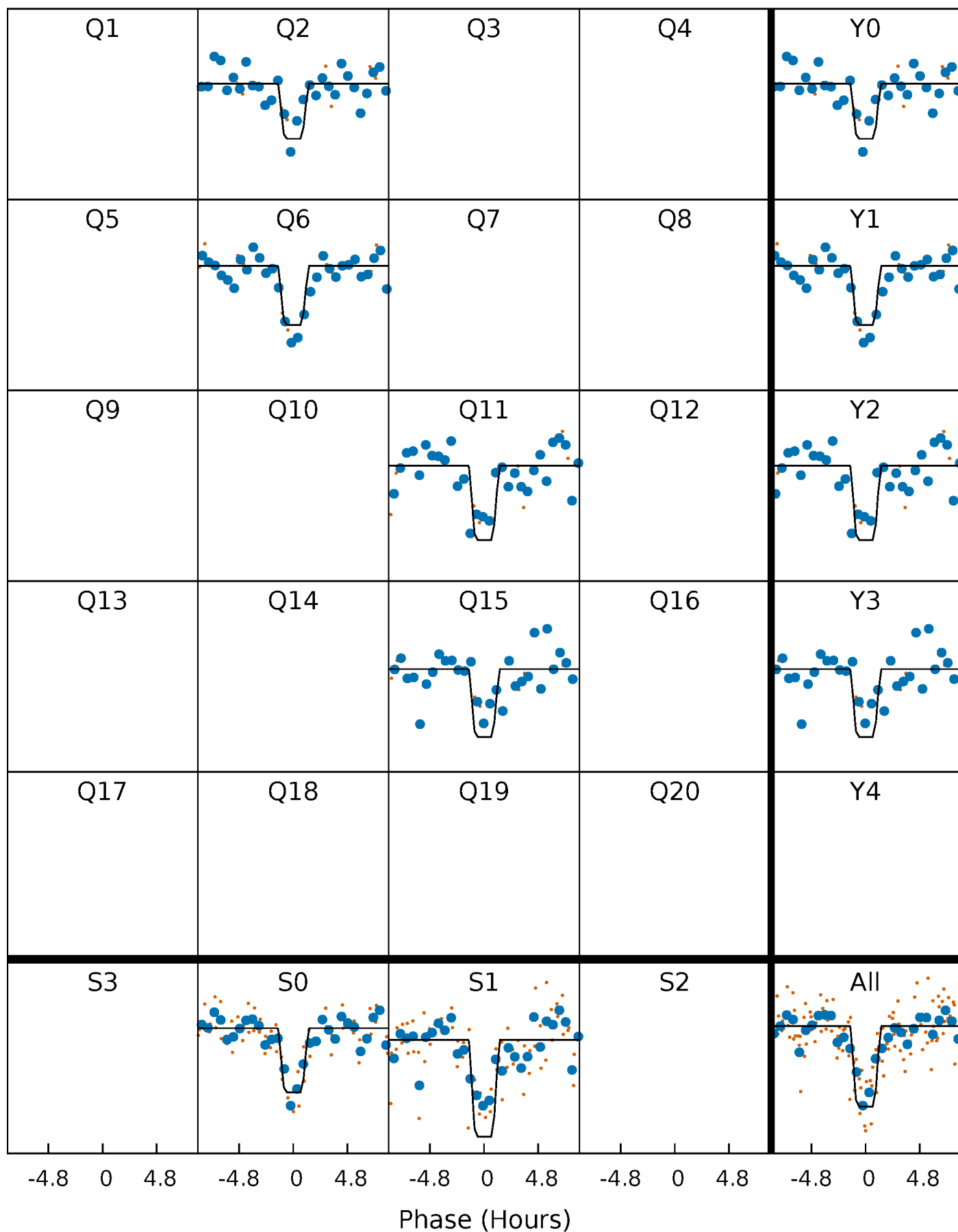
DV Quarter-Phased Transit Curves

TCE 006043574-01 P=381.778663 Days $T_0=241.132956$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

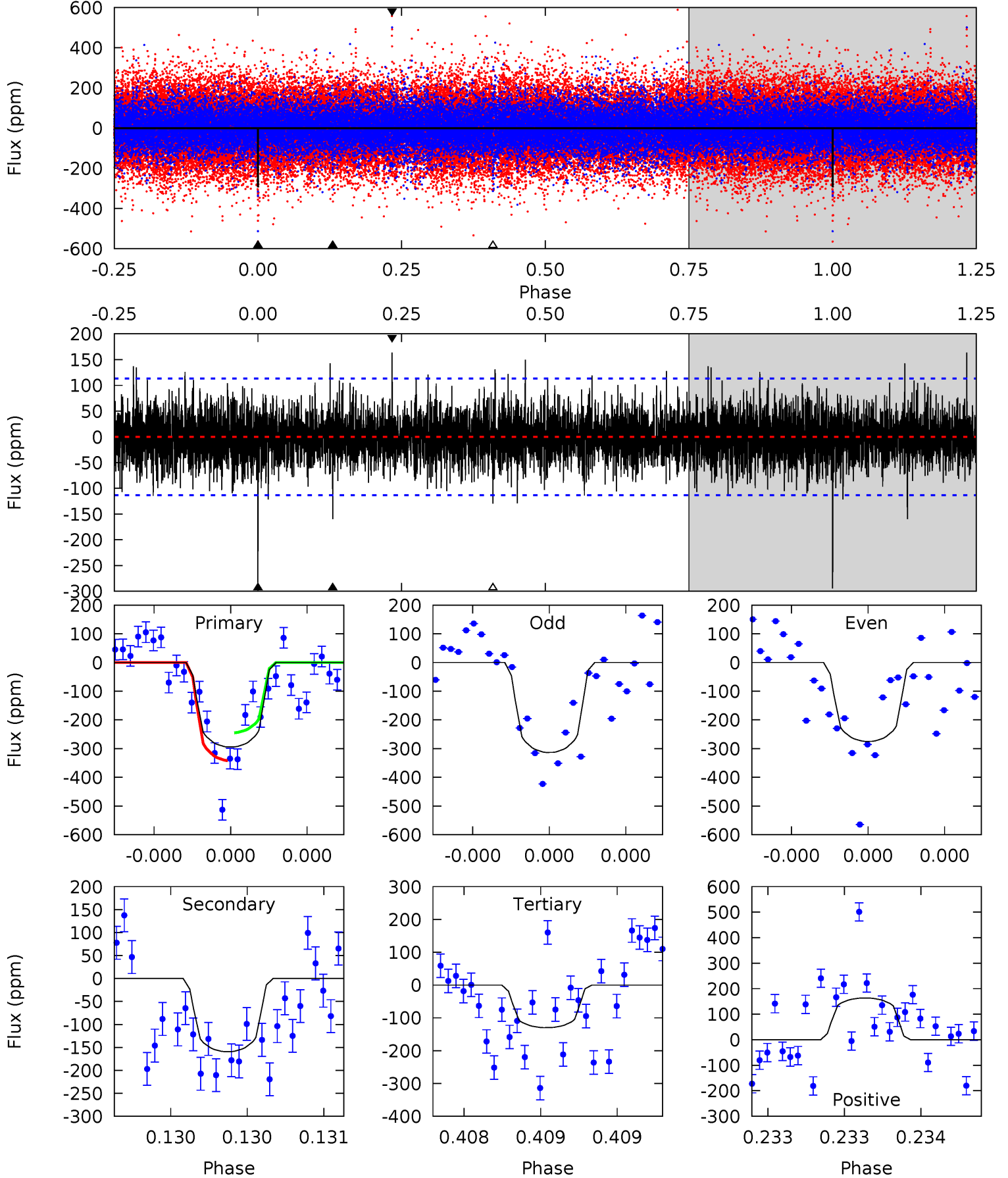
TCE 006043574-01 P=381.778191 Days $T_0=241.122706$ (BKJD)



DV Model-Shift Uniqueness Test

006043574-01, P = 381.778663 Days, E = 241.132956 Days

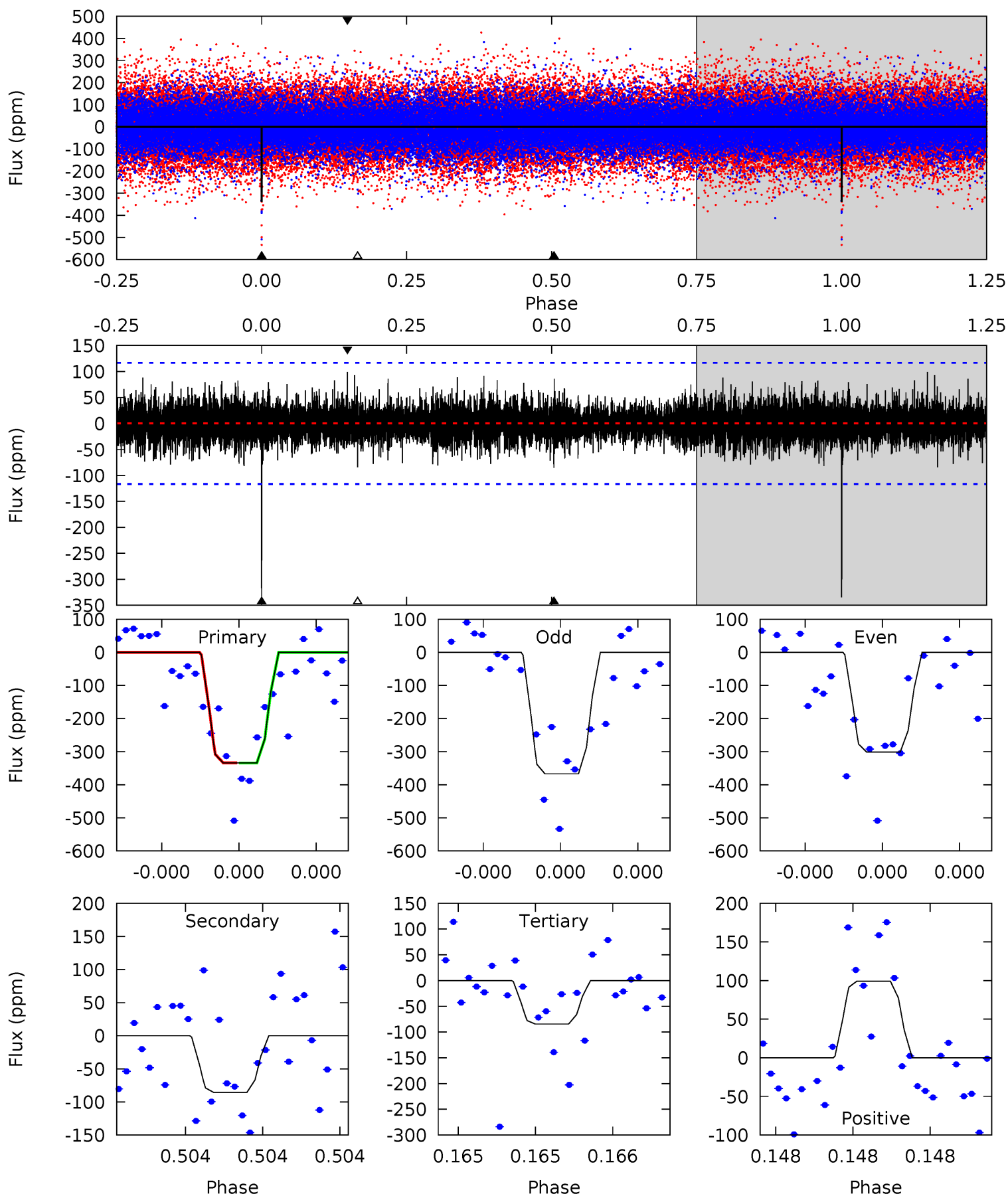
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	7.90	6.44	8.11	5.61	3.54	1.75	8.16	6.48	1.46	-0.21	0.96	1.00	0.36	2.41



Alt Model-Shift Uniqueness Test

006043574-01, P = 381.778191 Days, E = 241.122706 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	4.15	4.09	4.81	5.66	3.62	1.10	12.1	11.4	0.06	-0.67	1.60	1.11	0.23	0.01



Stellar Parameters For KIC 006043574

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6056^{+183}_{-165}	$3.816^{+0.300}_{-0.100}$	$-0.180^{+0.350}_{-0.250}$	$2.290^{+0.434}_{-0.868}$	$1.252^{+0.204}_{-0.272}$	$0.147^{+0.321}_{-0.047}$
	+3%/-3%	+8%/-3%	+194%/-139%	+19%/-38%	+16%/-22%	+218%/-32%
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 006043574-01 / KOI 8114.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-159 ± 20	$5.51^{+5.43}_{-3.76}$	526^{+34}_{-49}	4533^{+3493}_{-923}	3419^{+30634}_{-2503}
Alt.	-85 ± 21	$6.62^{+5.84}_{-4.09}$	527^{+33}_{-47}	3816^{+1915}_{-659}	1357^{+8005}_{-978}

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

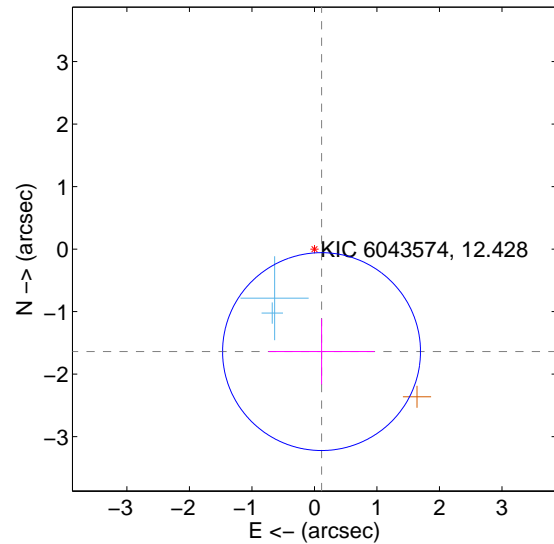
Supplemental centroid analysis for 006043574-01. Kepler magnitude: 12.43. Transit SNR 6.63

There are 2 quarters with good PRF difference image offsets

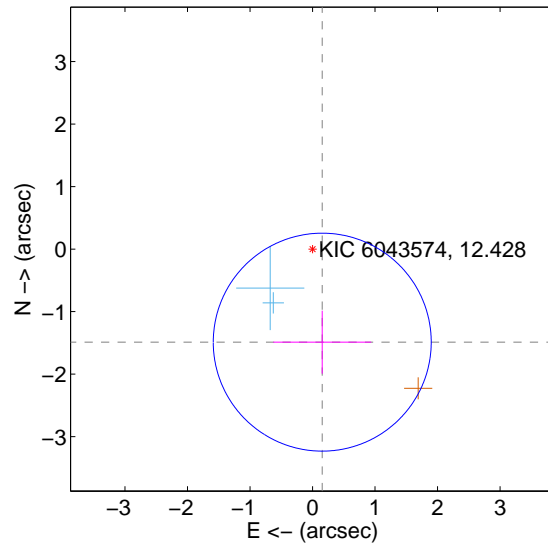
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.643 ± 0.527	3.12	-0.114 ± 0.848	-1.639 ± 0.525
PRF-fit source offset from KIC position	1.496 ± 0.581	2.58	-0.155 ± 0.783	-1.488 ± 0.504
photometric centroid source offset	0.96 ± 0.74	1.30	0.43 ± 0.86	0.86 ± 0.70

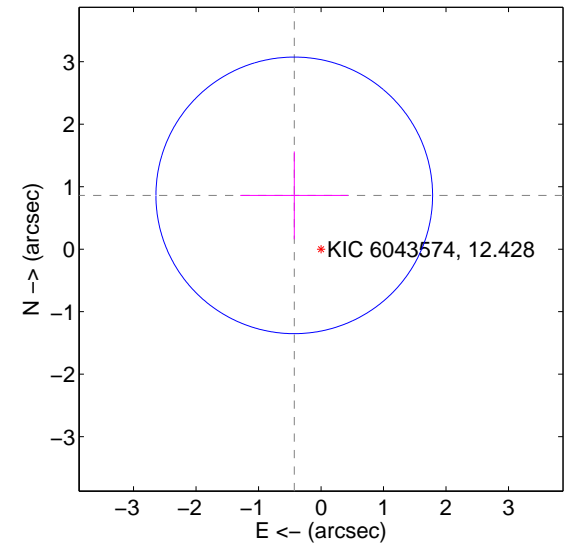
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

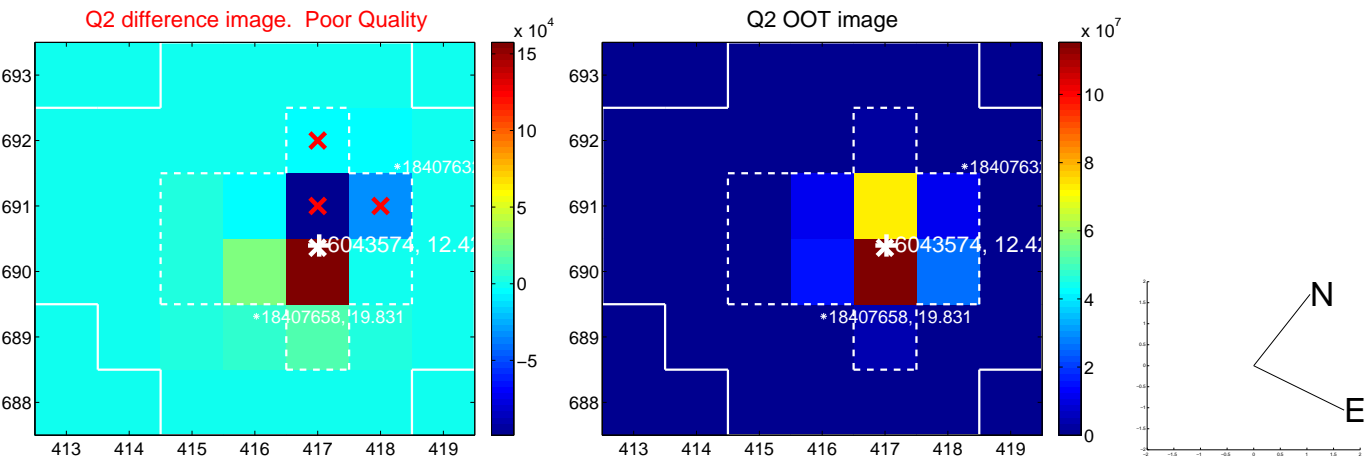


offset from photometric centroids



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.

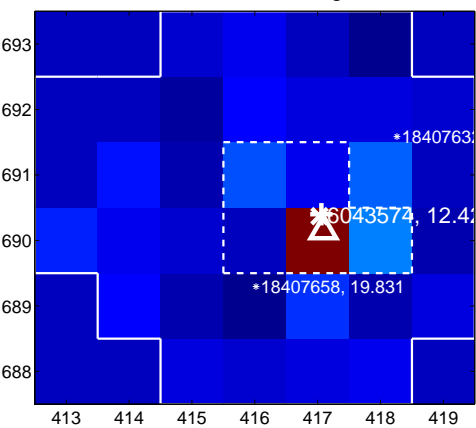
Q5 no difference image



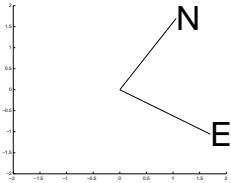
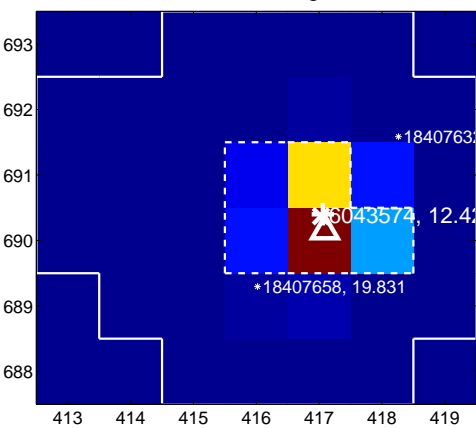
Q5 no OOT image



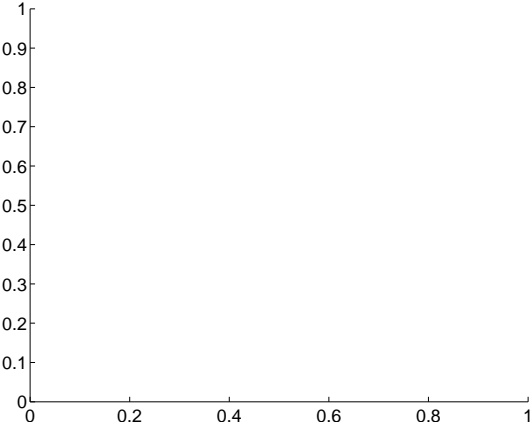
Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



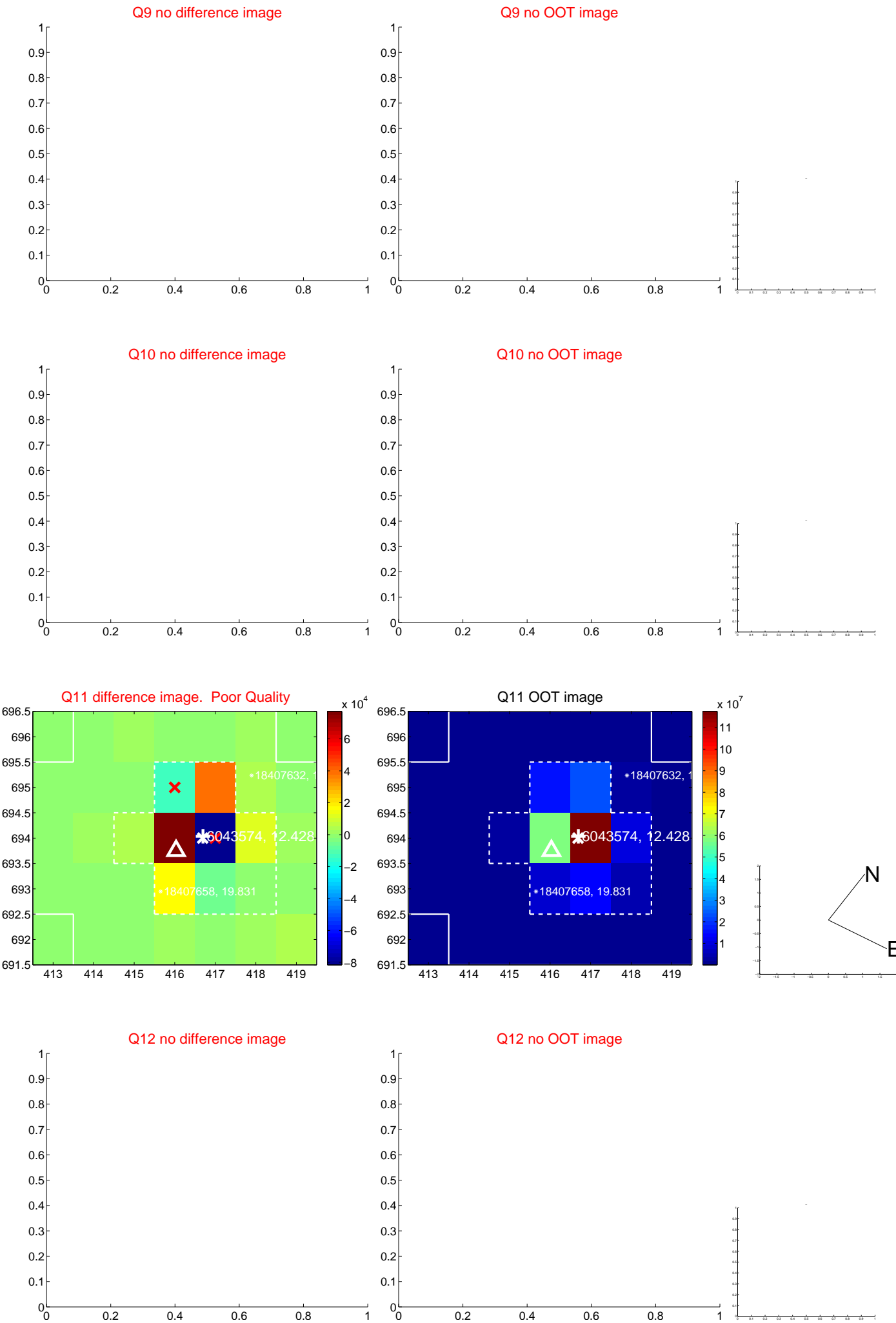
Q8 no difference image



Q8 no OOT image



white \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.

Q13 no difference image



Q13 no OOT image



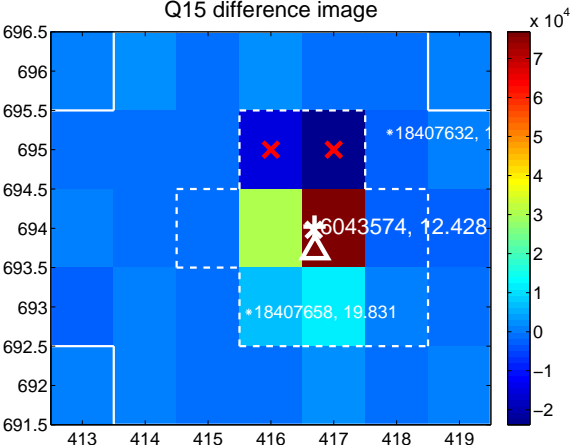
Q14 no difference image



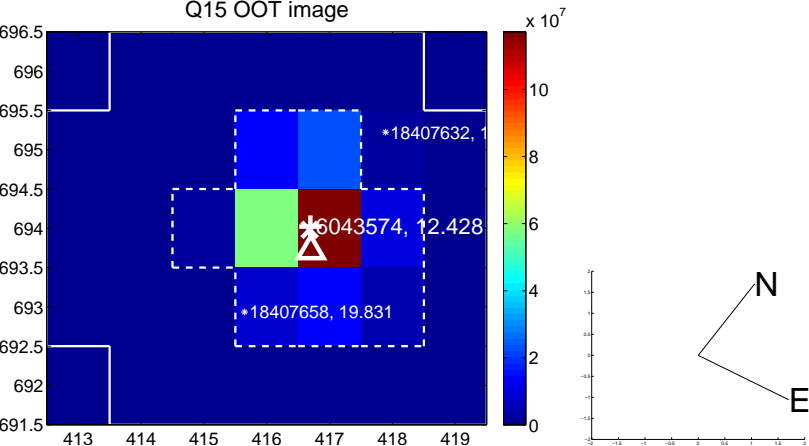
Q14 no OOT image



Q15 difference image



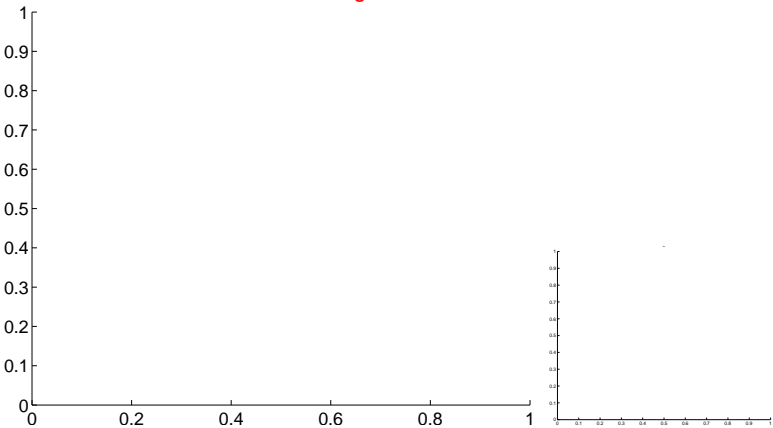
Q15 OOT image



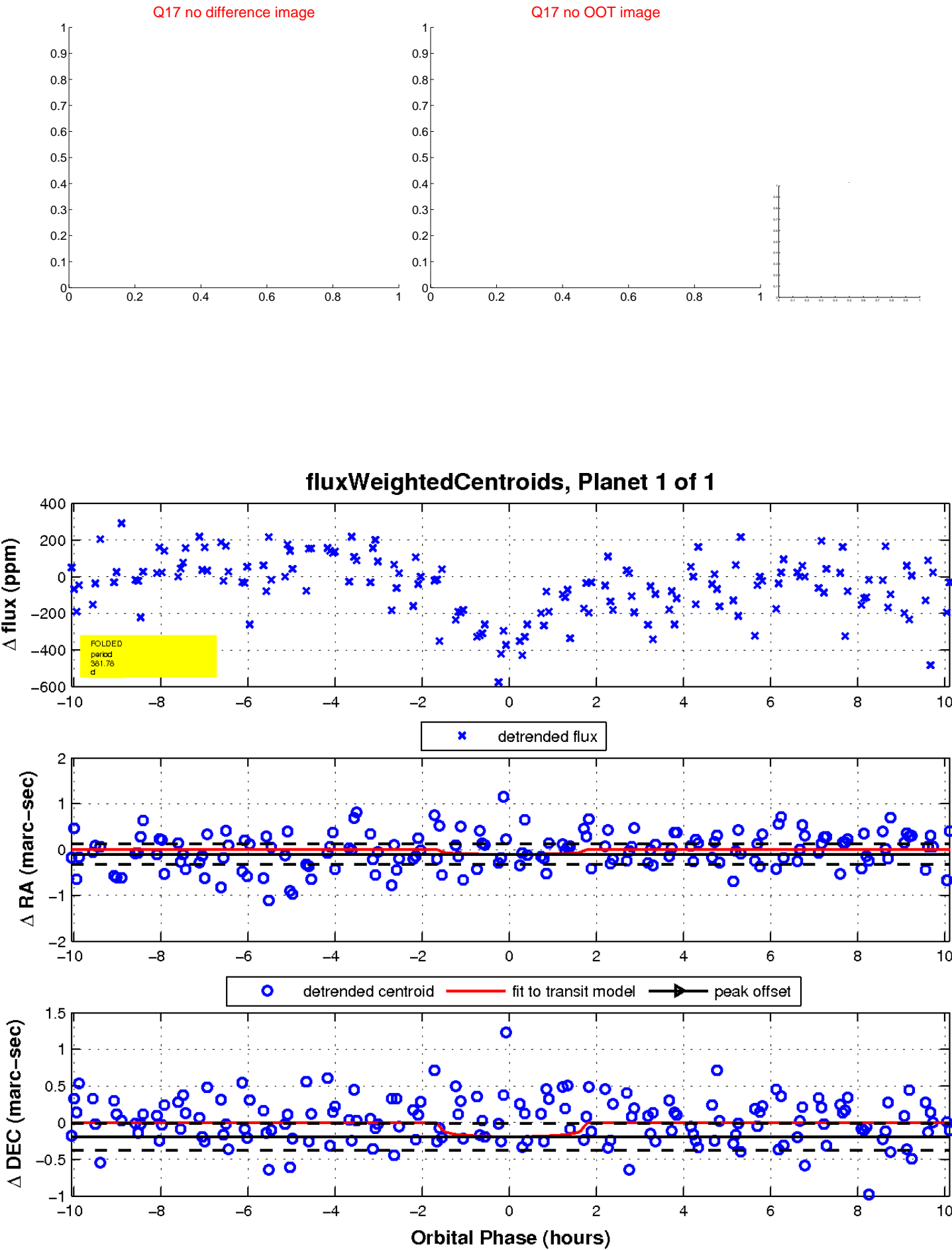
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

