

KIC 007365447

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})
007365447-01	OBS	6866.01	2.525450	133.883395	123225.5	3.707	4980.4	2467.9	1.23	6826	58.52	1981.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007365447-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—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.

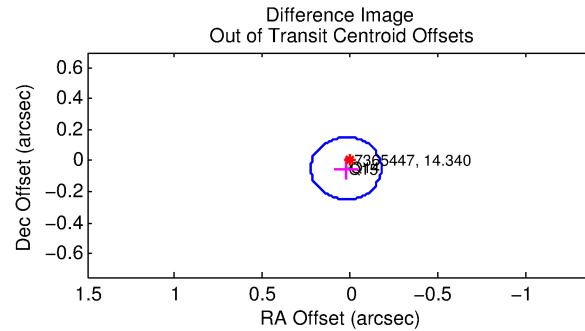
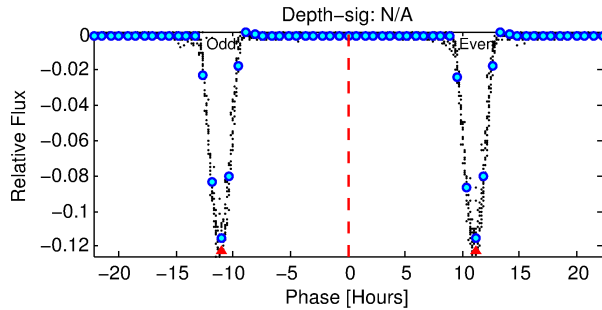
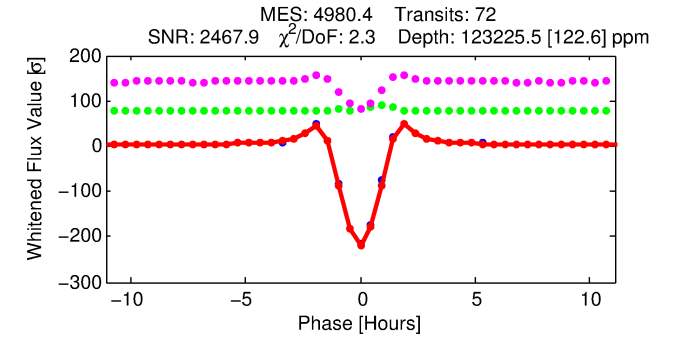
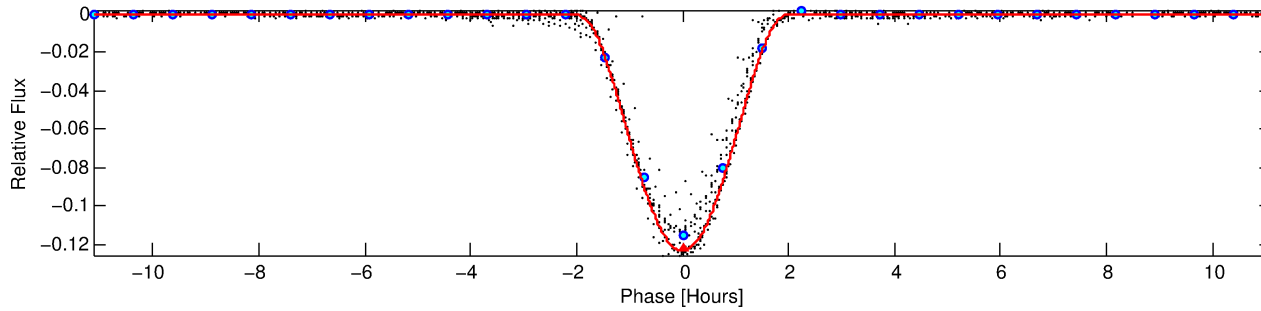
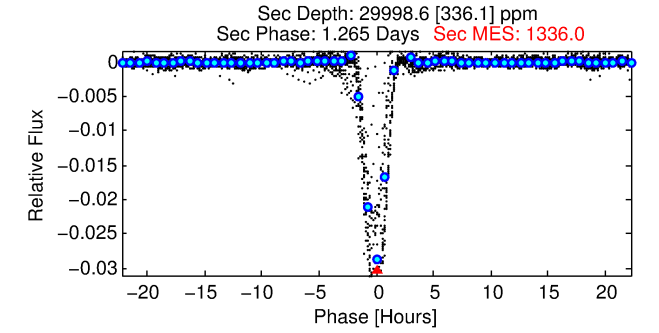
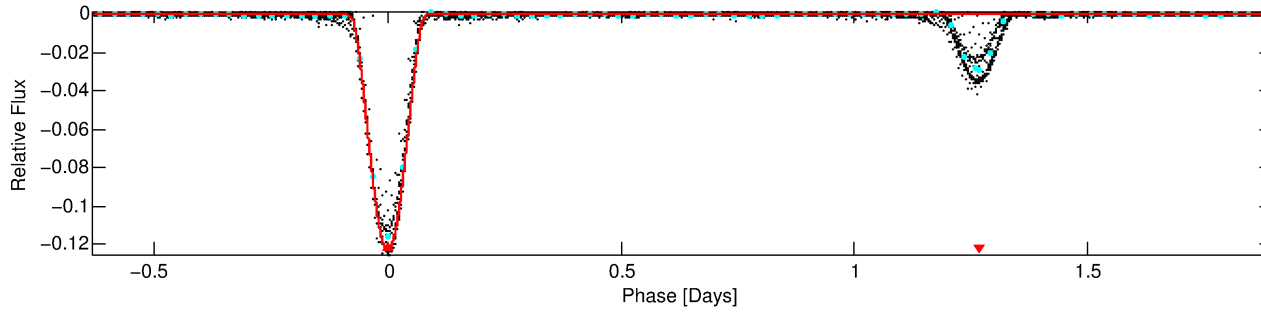
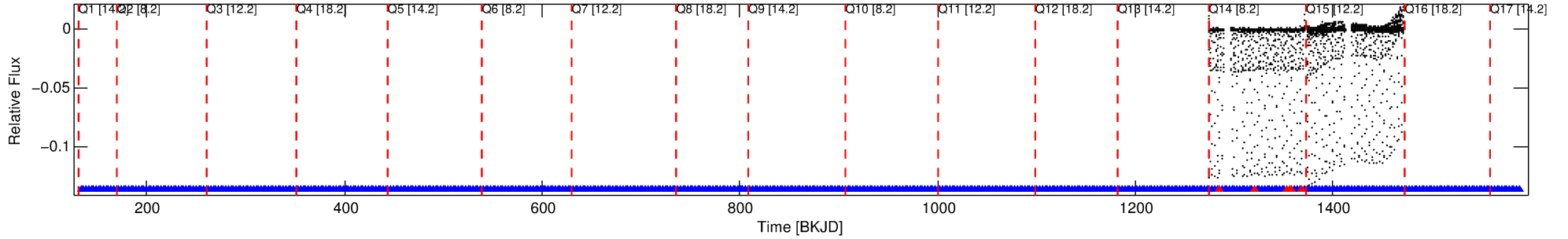
Ephemeris Match Information For 007365447-01

No Significant Match Found

DV One-Page Summary

KIC: 7365447 Candidate: 1 of 1 Period: 2.525 d
KOI: K06866.01 Corr: 0.915

Kp: 14.34 R*: 1.23 Rs Teff: 6826.0 K Logg: 4.34 Fe/H: -0.340



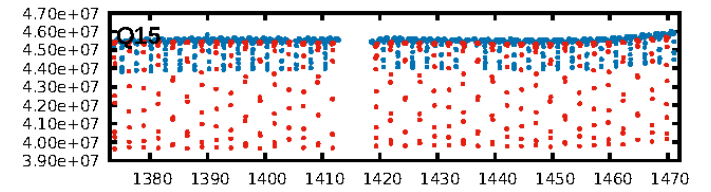
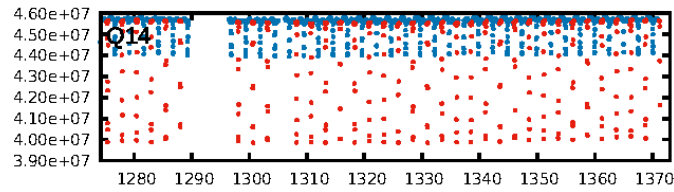
DV Fit Results:

Period = 2.52545 [0.00000] d
Epoch = 133.8834 [0.0000] BKJD
Rp/R* = 0.4349 [0.0102]
a/R* = 6.14 [0.01]
b = 0.84 [0.02]
Seff = 1981.91 [837.28]
Teff = 1701 [180] K
Rp = 58.52 [18.89] Re
a = 0.0386 [0.0104] AU
Ag = 7.19 [2.81] [2.21σ]
Teffp = 4308 [189] K [10.00σ]

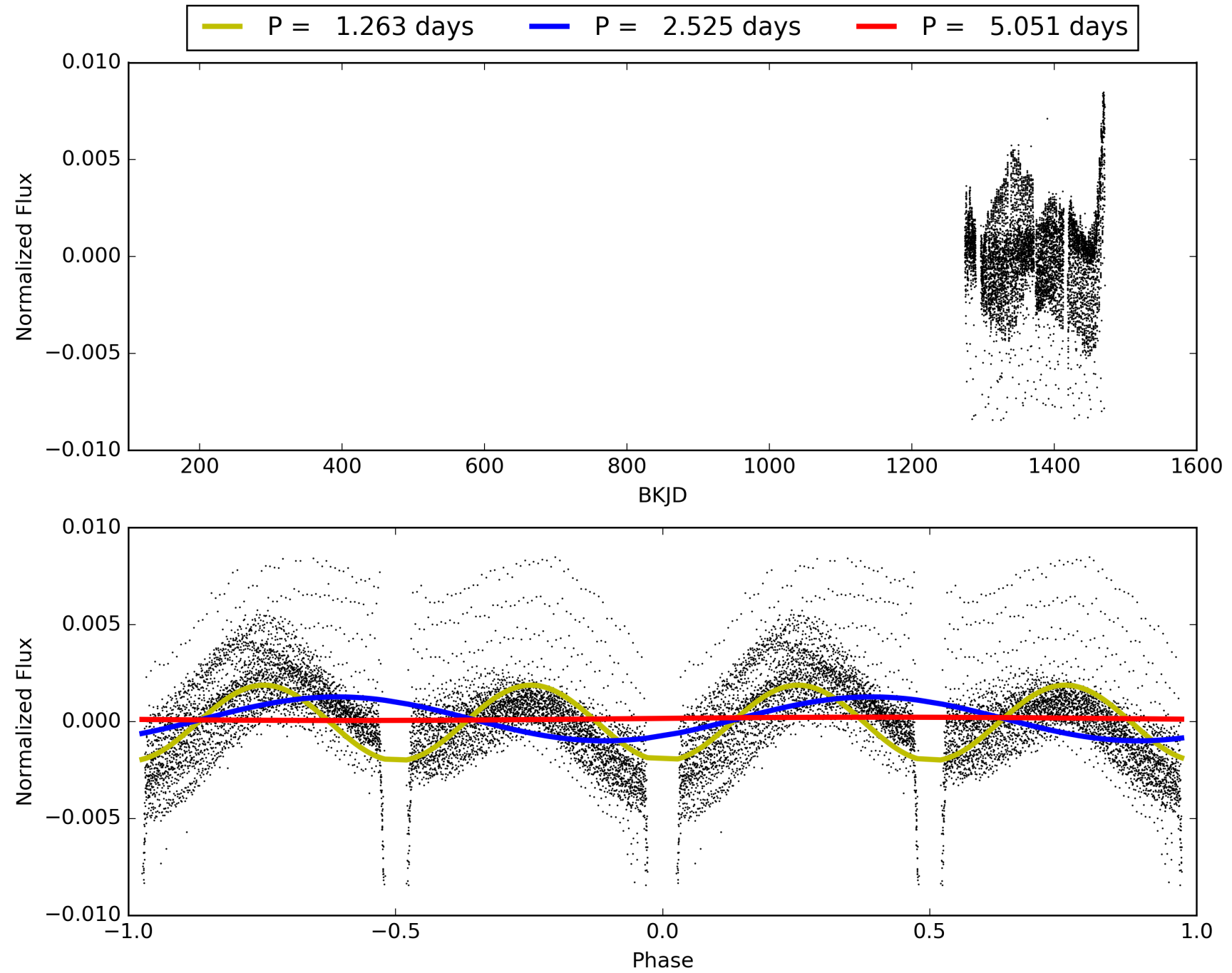
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [66/72]
GhostDiagnostic-chr: 3.231
Centroid-sig: 0.0%
Centroid-so: 0.053 arcsec [23.11σ]
OotOffset-rm: 0.055 arcsec [0.82σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 0.176 arcsec [1.97σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007365447-01, PDC Light Curves

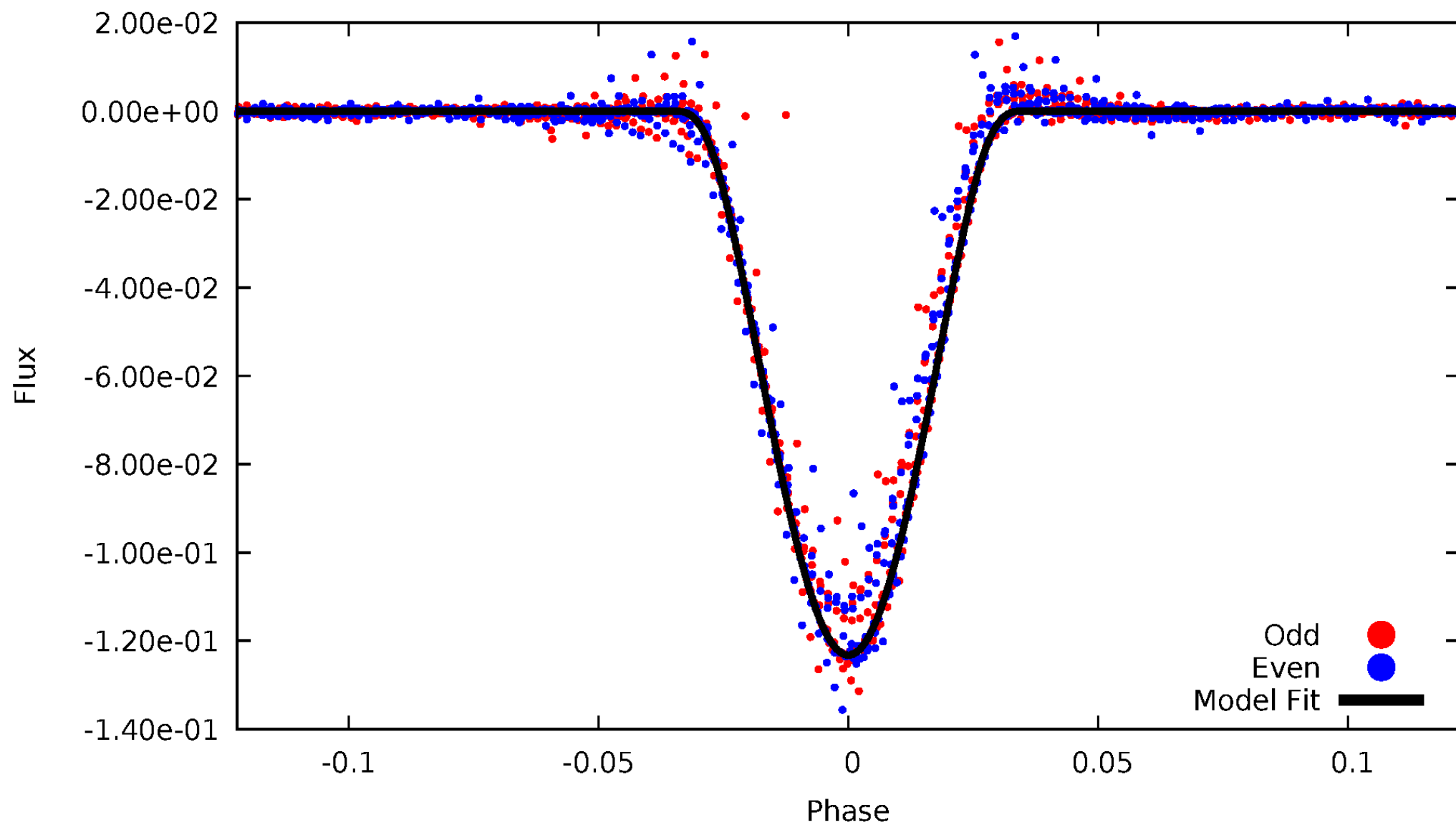


TCE 007365447-01



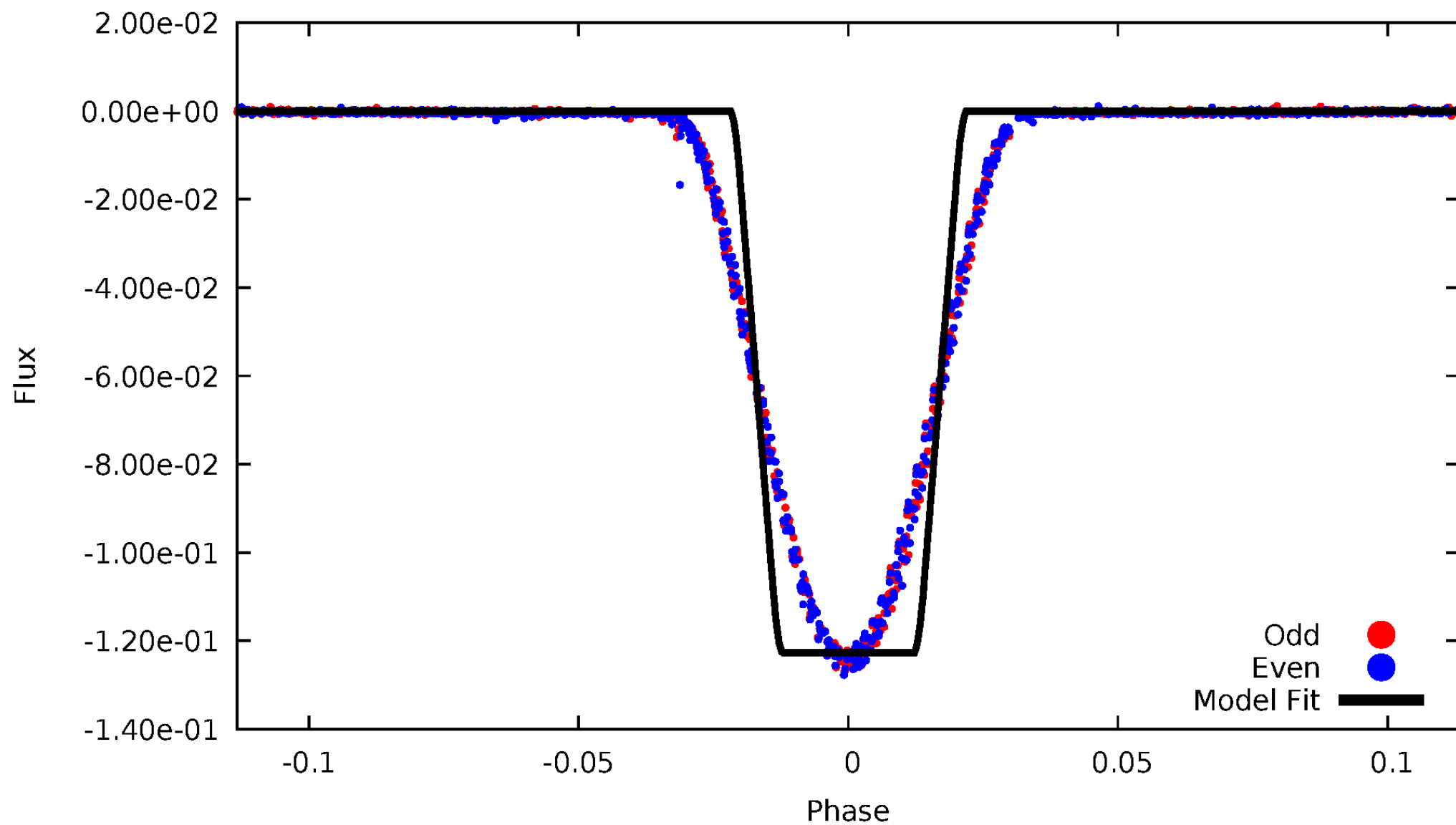
DV Odd/Even

TCE 007365447-01



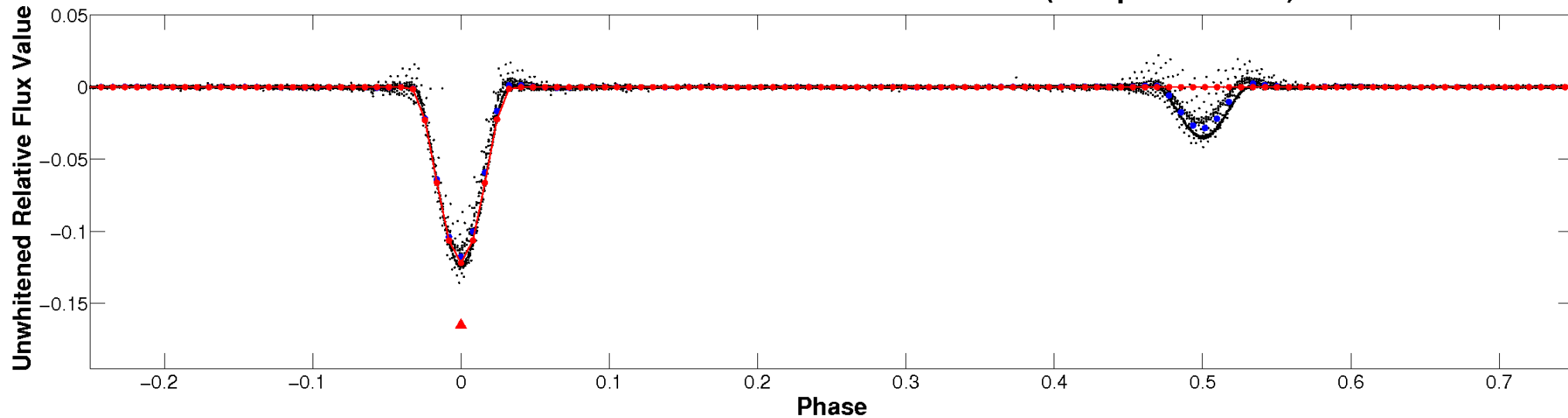
ALT Odd/Even

TCE 007365447-01

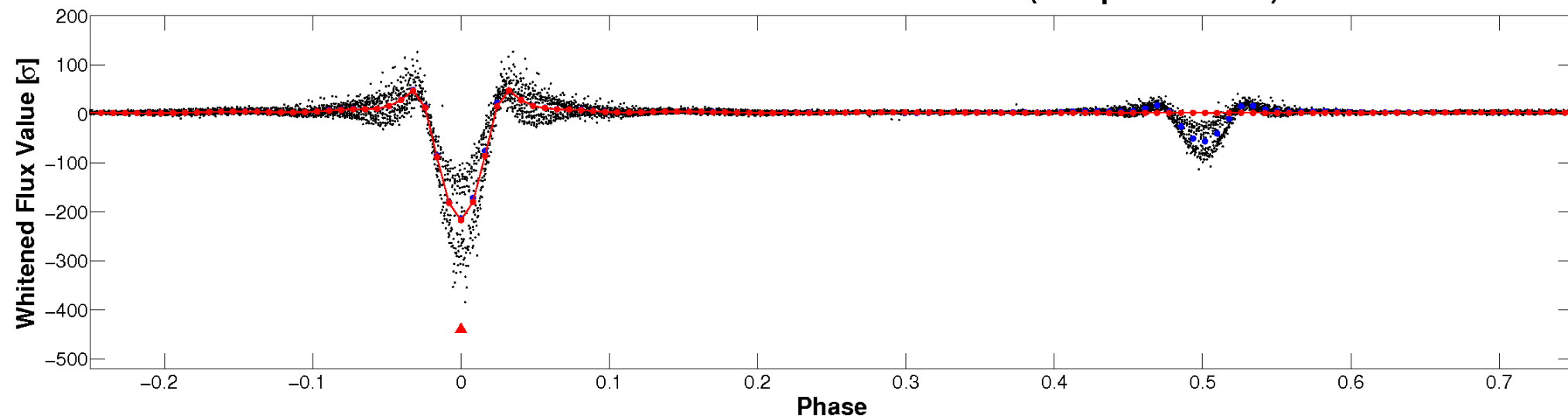


Non-Whitened Vs. Whitened Light Curve

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

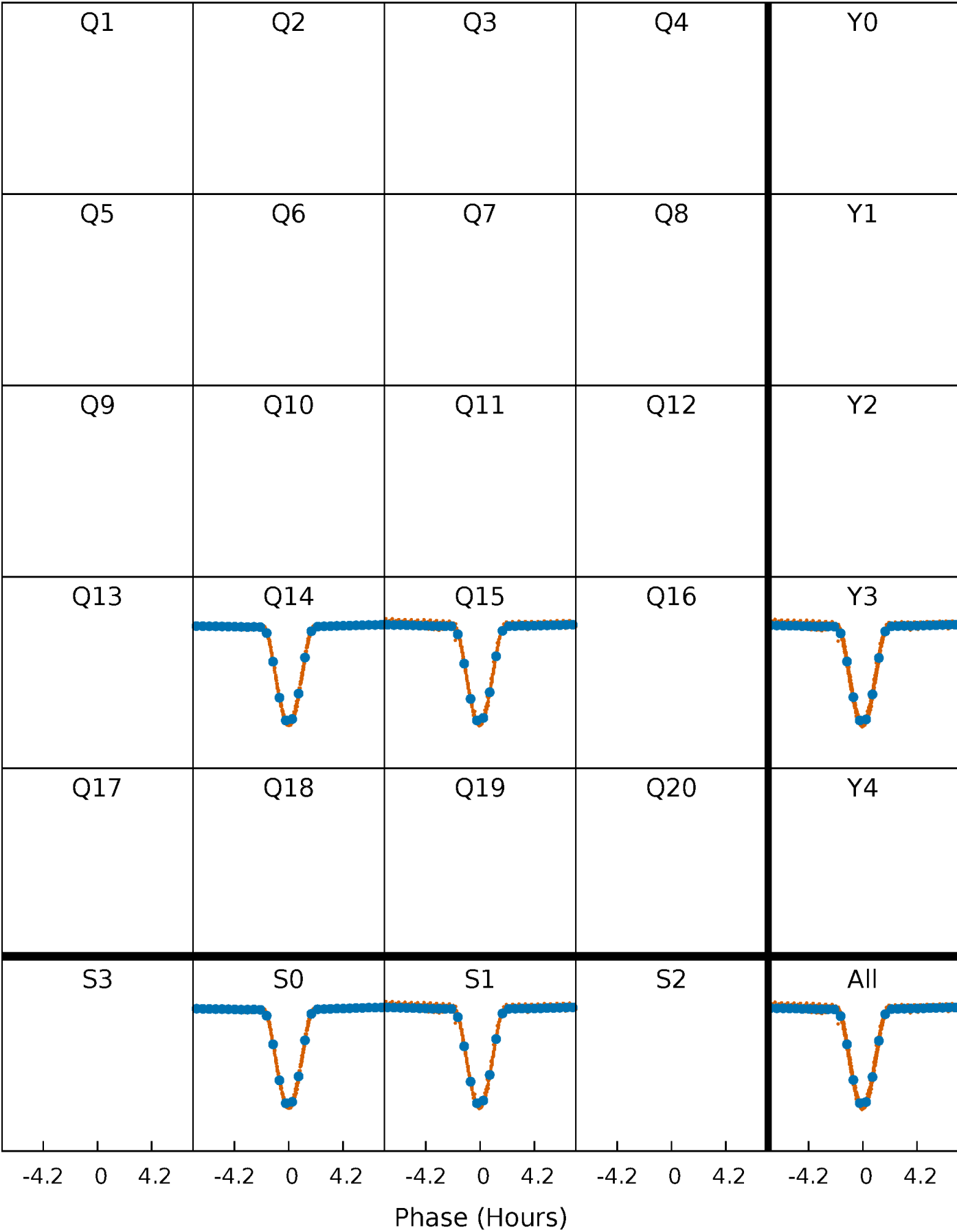


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



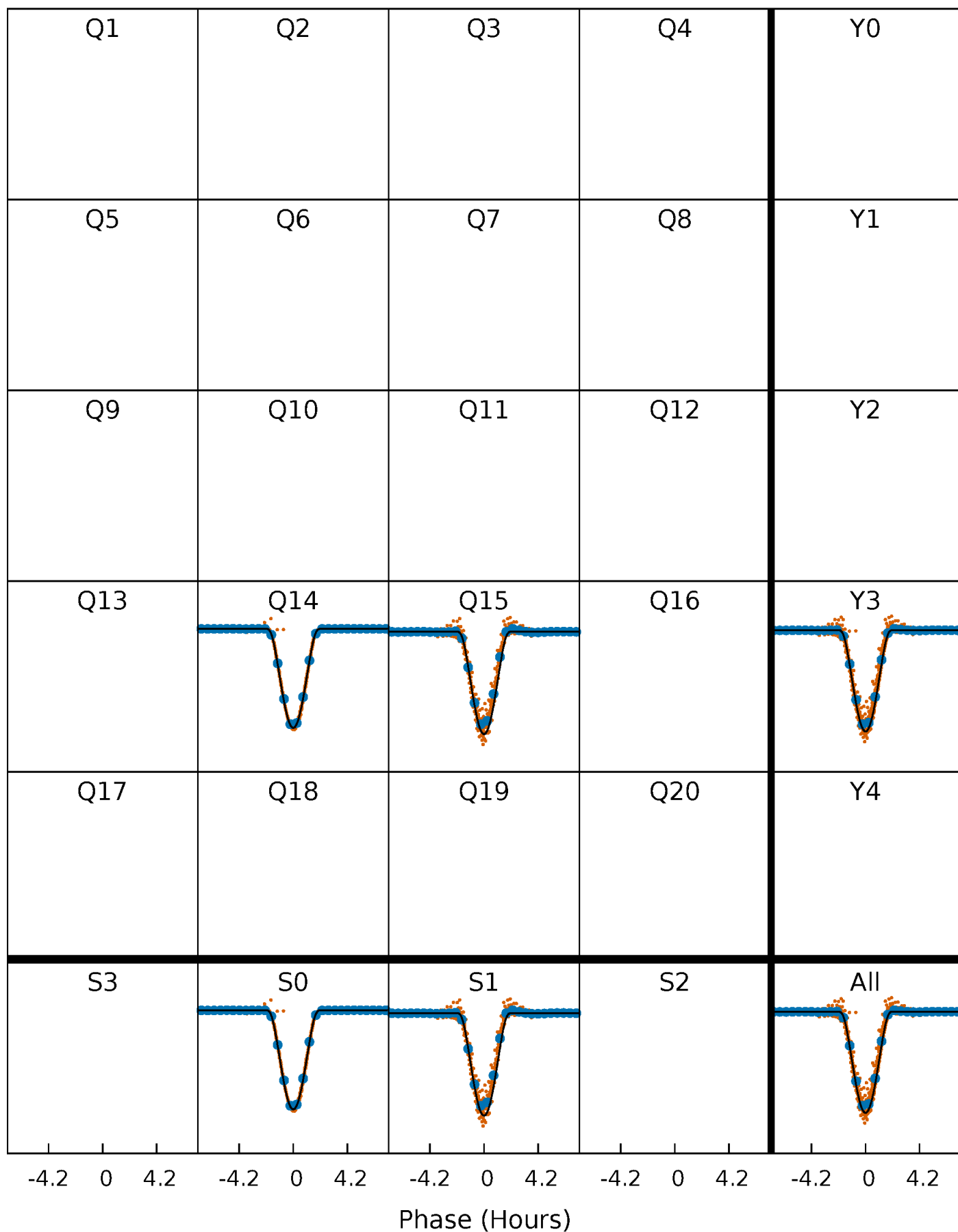
PDC Quarter-Phased Transit Curves

TCE 007365447-01 P= 2.525450 Days $T_0=133.883395$ (BKJD)



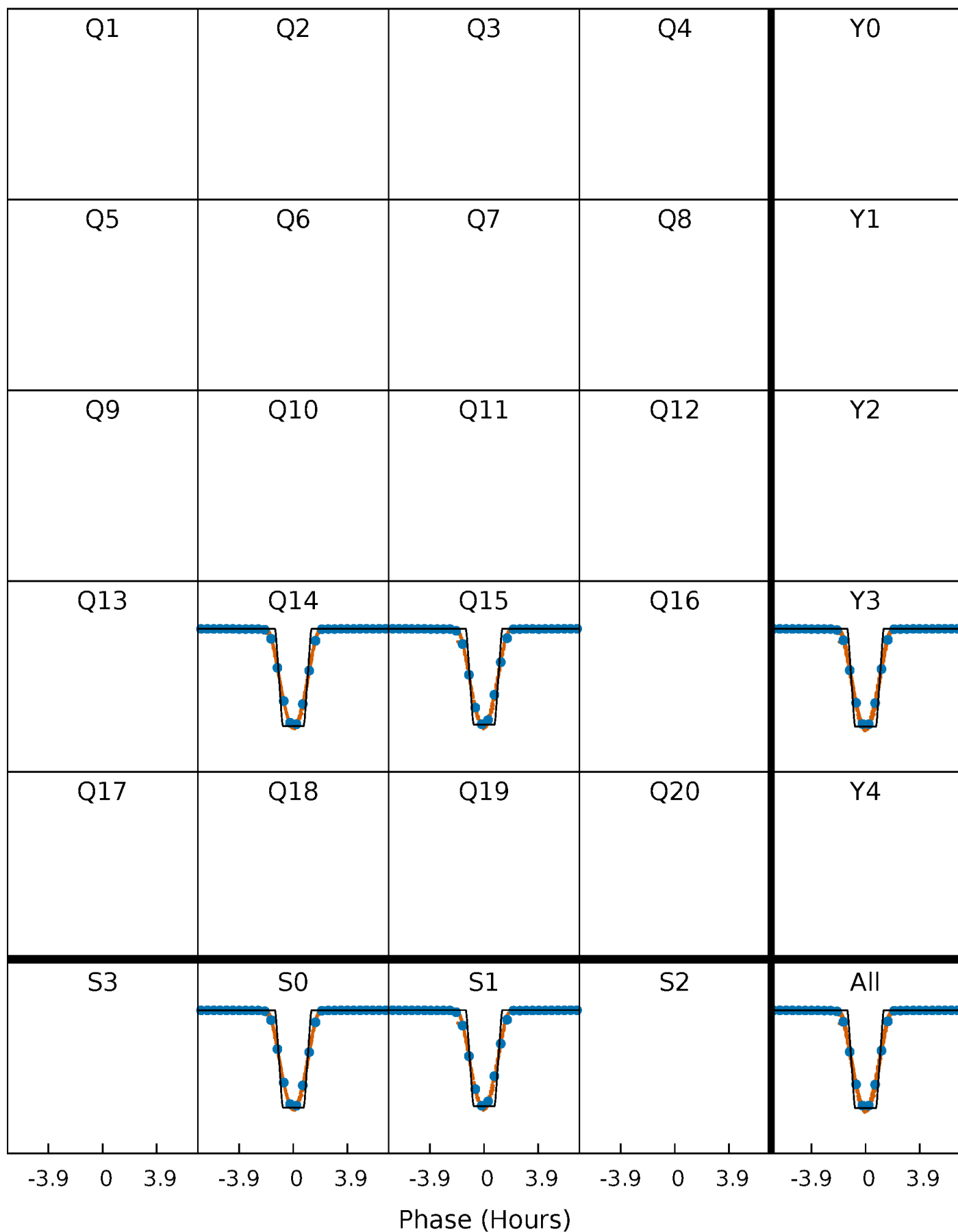
DV Quarter-Phased Transit Curves

TCE 007365447-01 P= 2.525450 Days $T_0=133.883395$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

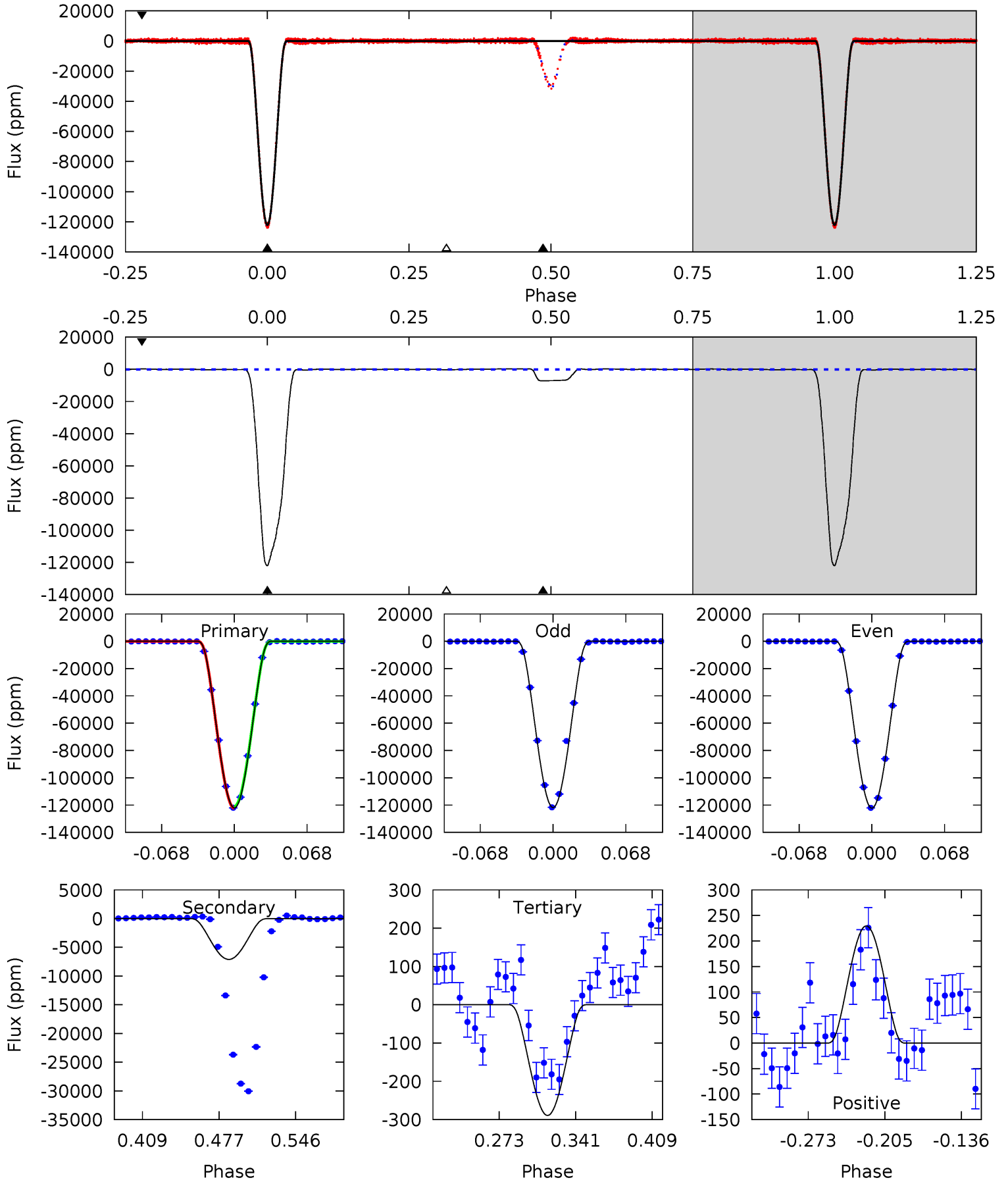
TCE 007365447-01 P= 2.525445 Days $T_0=133.885150$ (BKJD)



DV Model-Shift Uniqueness Test

007365447-01, P = 2.525450 Days, E = 133.883395 Days

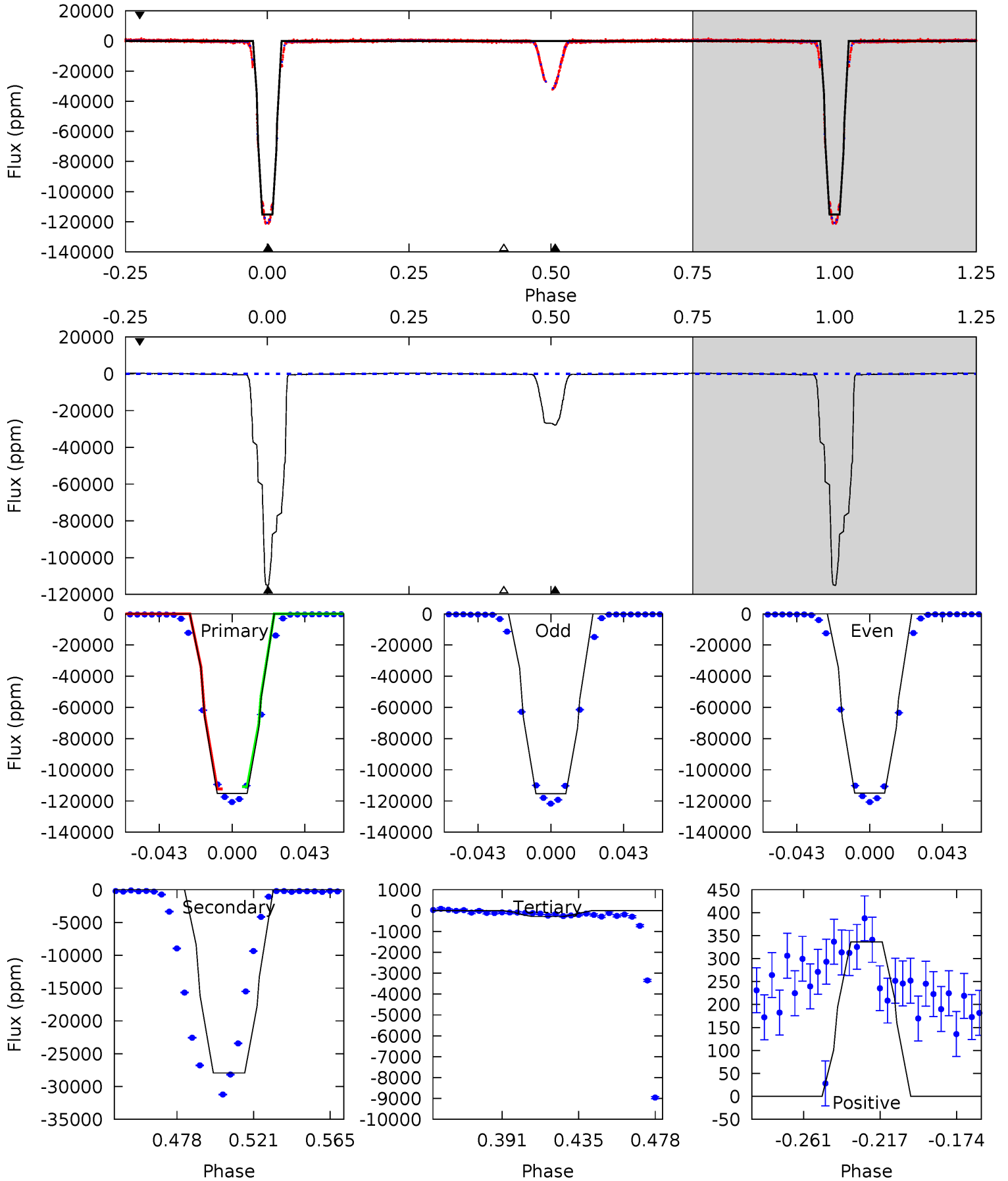
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4456	259.3	10.6	8.38	4.64	1.82	4.65	4445	4448	248.7	250.9	7.20	0.95	0.00	23.1



Alt Model-Shift Uniqueness Test

007365447-01, P = 2.525445 Days, E = 133.885150 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3090	749.7	7.61	9.02	4.74	2.02	5.89	3082	3081	742.1	740.7	4.39	1.00	0.00	0



Stellar Parameters For KIC 007365447

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6826^{+192}_{-288}	$4.337^{+0.084}_{-0.210}$	$-0.340^{+0.250}_{-0.300}$	$1.233^{+0.397}_{-0.170}$	$1.211^{+0.189}_{-0.171}$	$0.910^{+0.340}_{-0.476}$
	+3%/-4%	+2%/-5%	+74%/-88%	+32%/-14%	+16%/-14%	+37%/-52%
Source	KIC0	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 007365447-01 / KOI 6866.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7103 ± 27	$60.37^{+10.82}_{-5.79}$	2414^{+189}_{-140}	3364^{+74}_{-98}	$1.615^{+0.308}_{-0.428}$
Alt.	-27932 ± 37	$47.90^{+8.39}_{-4.47}$	2407^{+173}_{-137}	4814^{+122}_{-165}	10^{+2}_{-3}

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

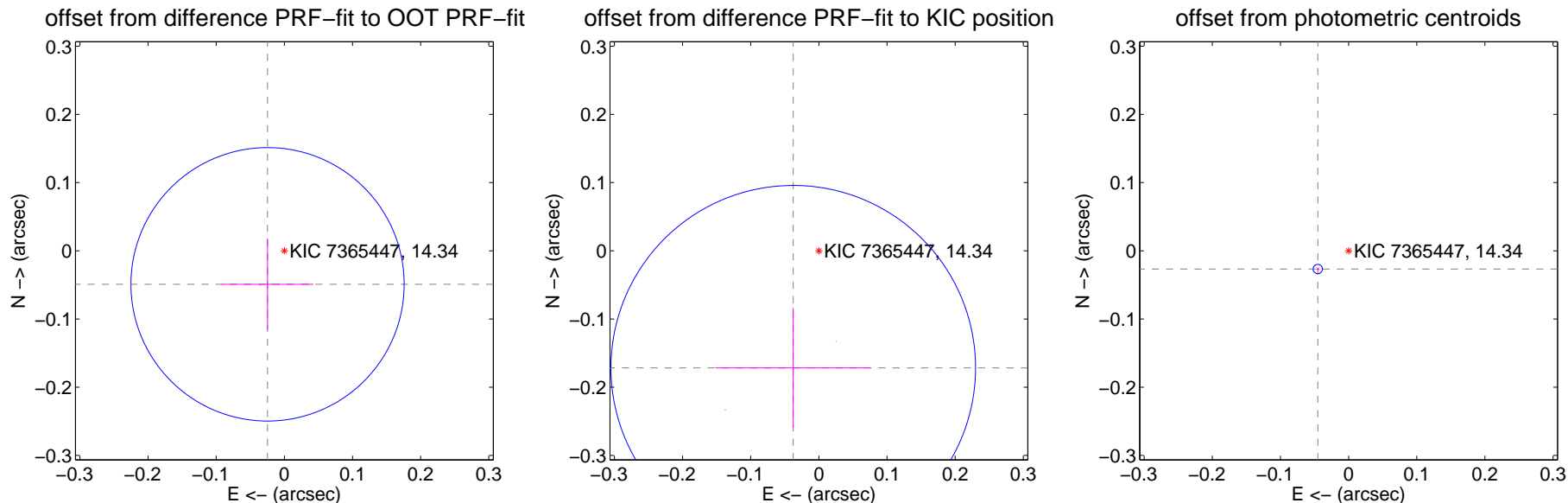
DV Centroid Data

Supplemental centroid analysis for 007365447-01. Kepler magnitude: 14.34. Transit SNR 2467.92

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.055 ± 0.067	0.82	0.025 ± 0.067	-0.049 ± 0.067
PRF-fit source offset from KIC position	0.176 ± 0.089	1.97	0.038 ± 0.114	-0.172 ± 0.088
photometric centroid source offset	0.05 ± 0.00	23.11	0.05 ± 0.00	-0.03 ± 0.00



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.



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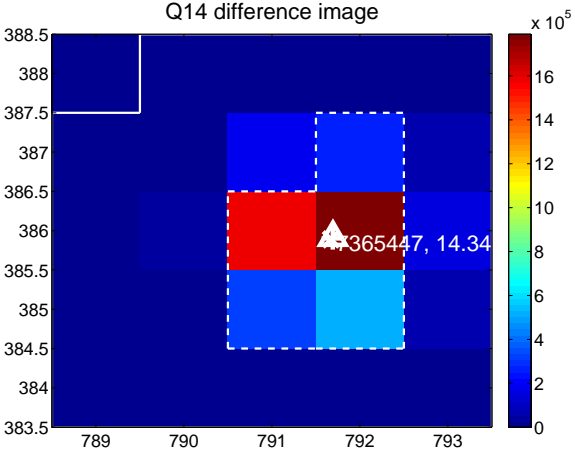
Q13 no difference image



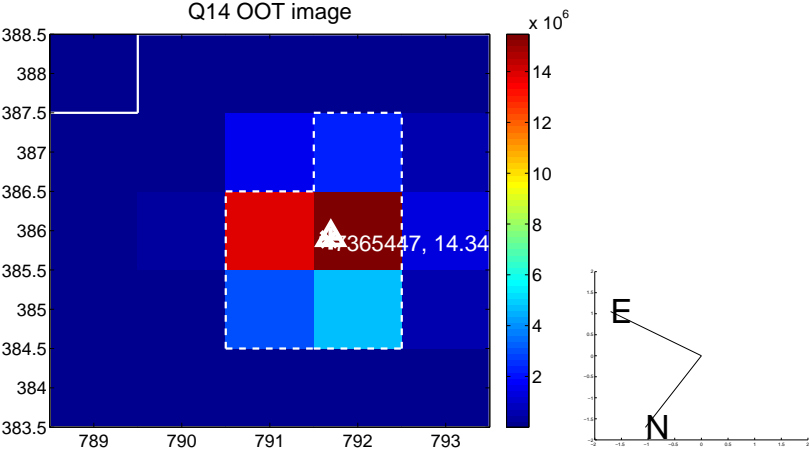
Q13 no OOT image



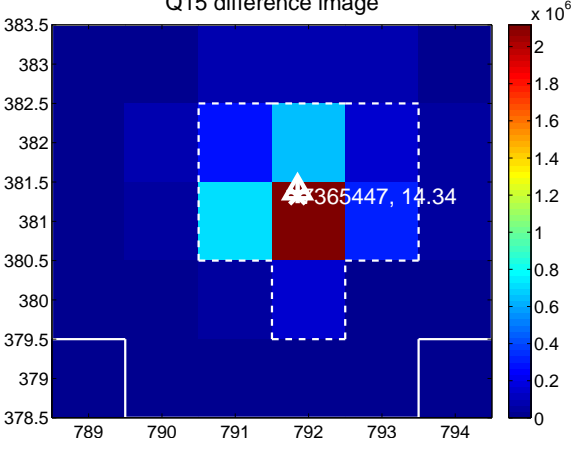
Q14 difference image



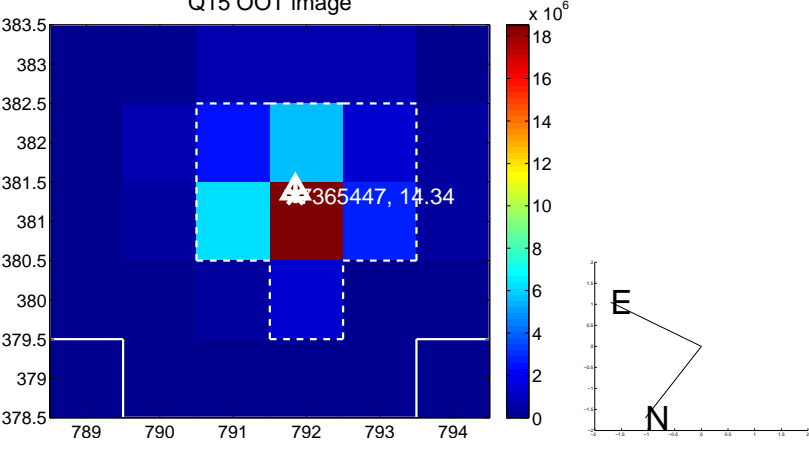
Q14 OOT image



Q15 difference image



Q15 OOT image



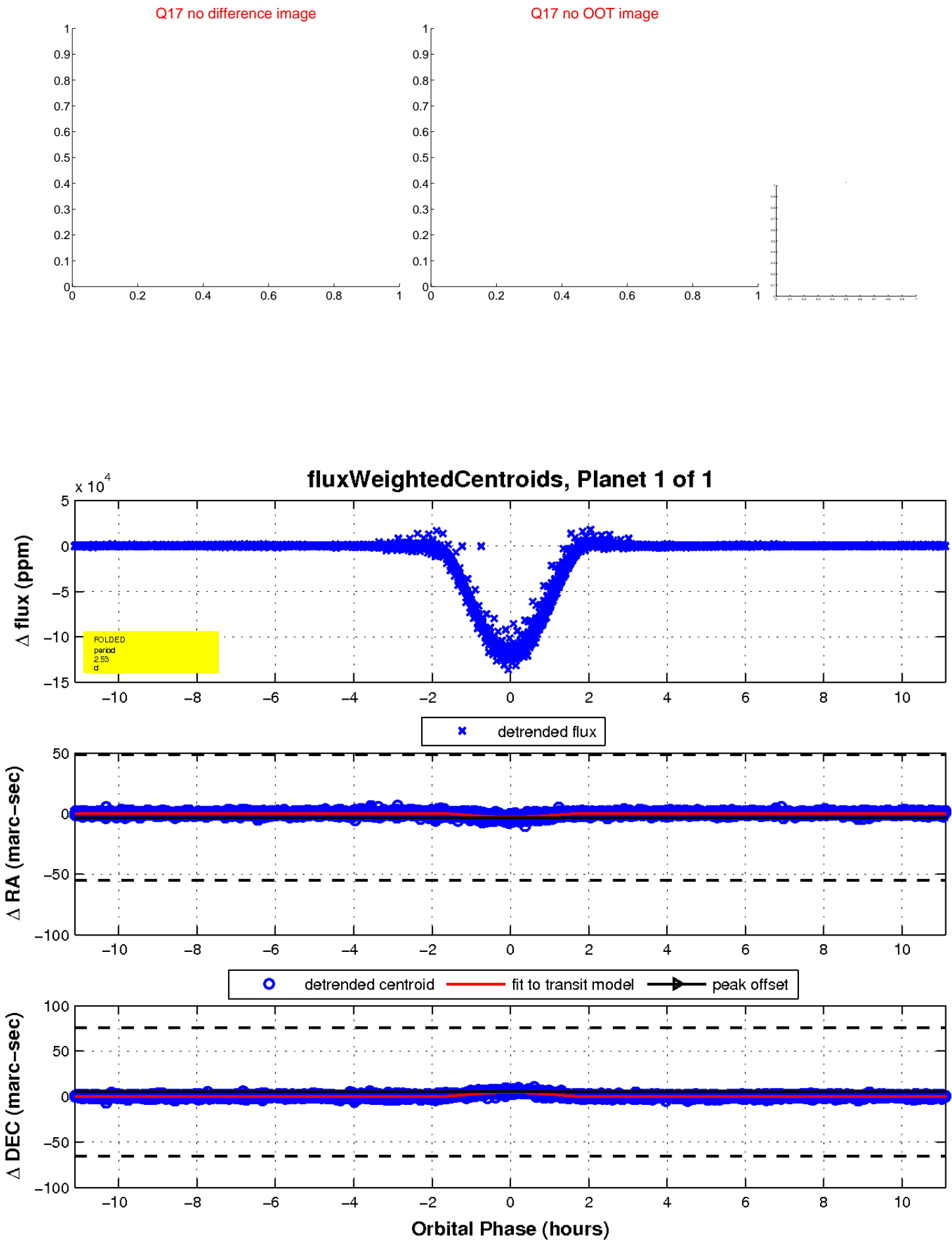
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

