

KIC 005445867

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})
005445867-01	OBS	No	391.745973	335.369757	471.4	3.016	7.7	6.3	0.81	5785	1.81	0.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005445867-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_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.

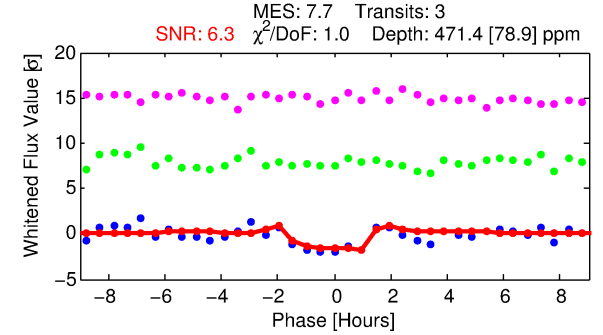
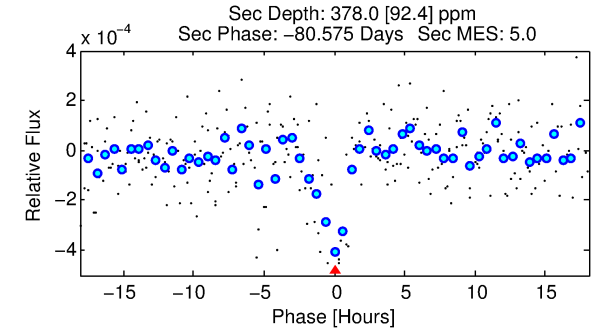
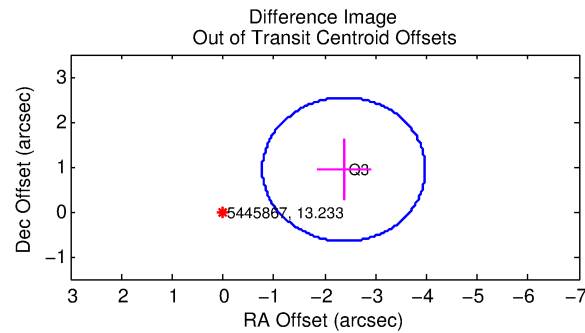
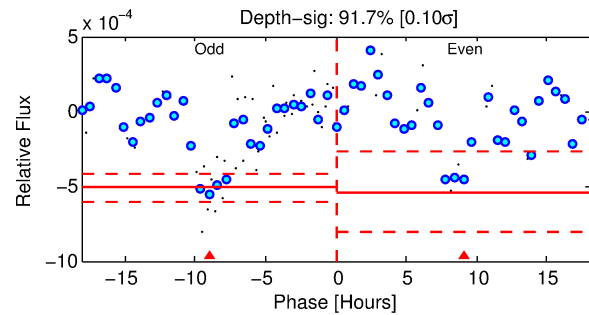
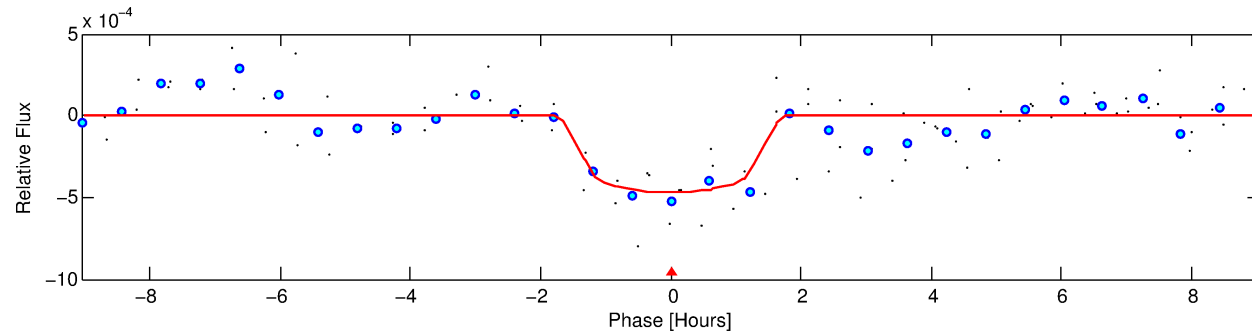
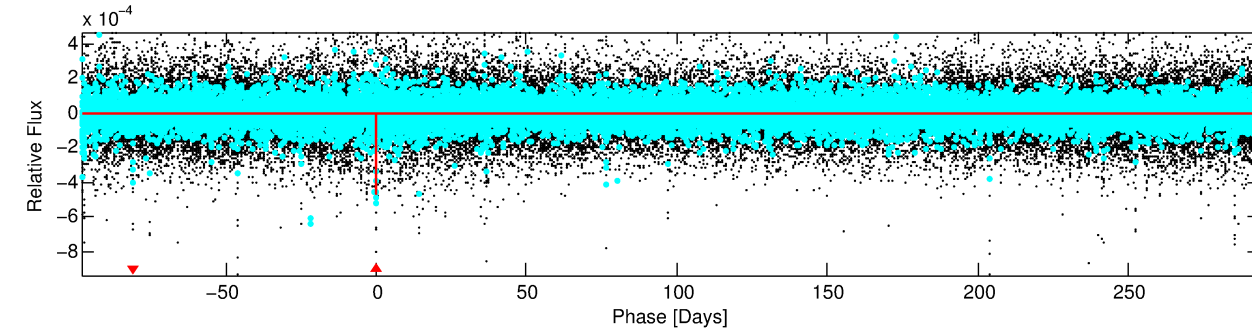
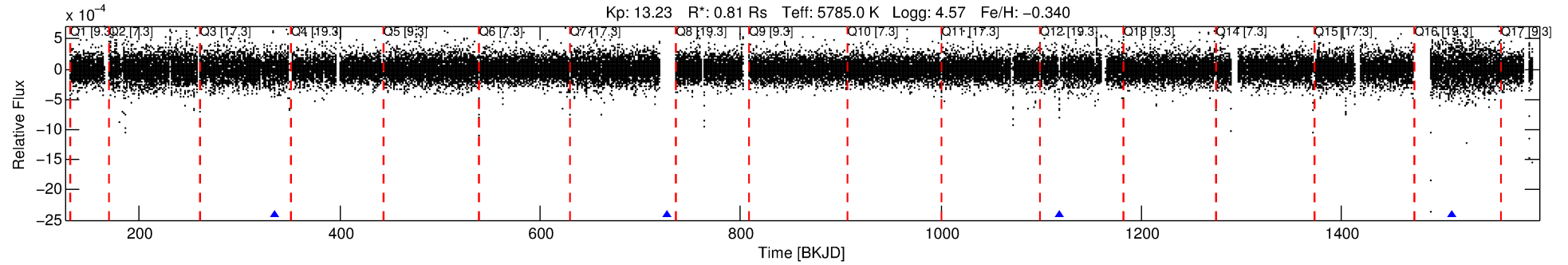
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005445867-01

No Significant Match Found

DV One-Page Summary

KIC: 5445867 Candidate: 1 of 1 Period: 391.746 d



DV Fit Results:

Period = 391.74597 [0.00334] d
Epoch = 335.3698 [0.0058] BKJD
Rp/R* = 0.0205 [0.0550]
a/R* = 869.88 [10807.88]
b = 0.52 [17.50]
Seff = 0.65 [0.23]
Teq = 229 [20] K
Rp = 1.81 [4.89] Re
a = 1.0094 [0.2279] AU
Ag = 64524.80 [347624.27] [0.19 σ]
Teffp = 5637 [7579] K [0.71 σ]

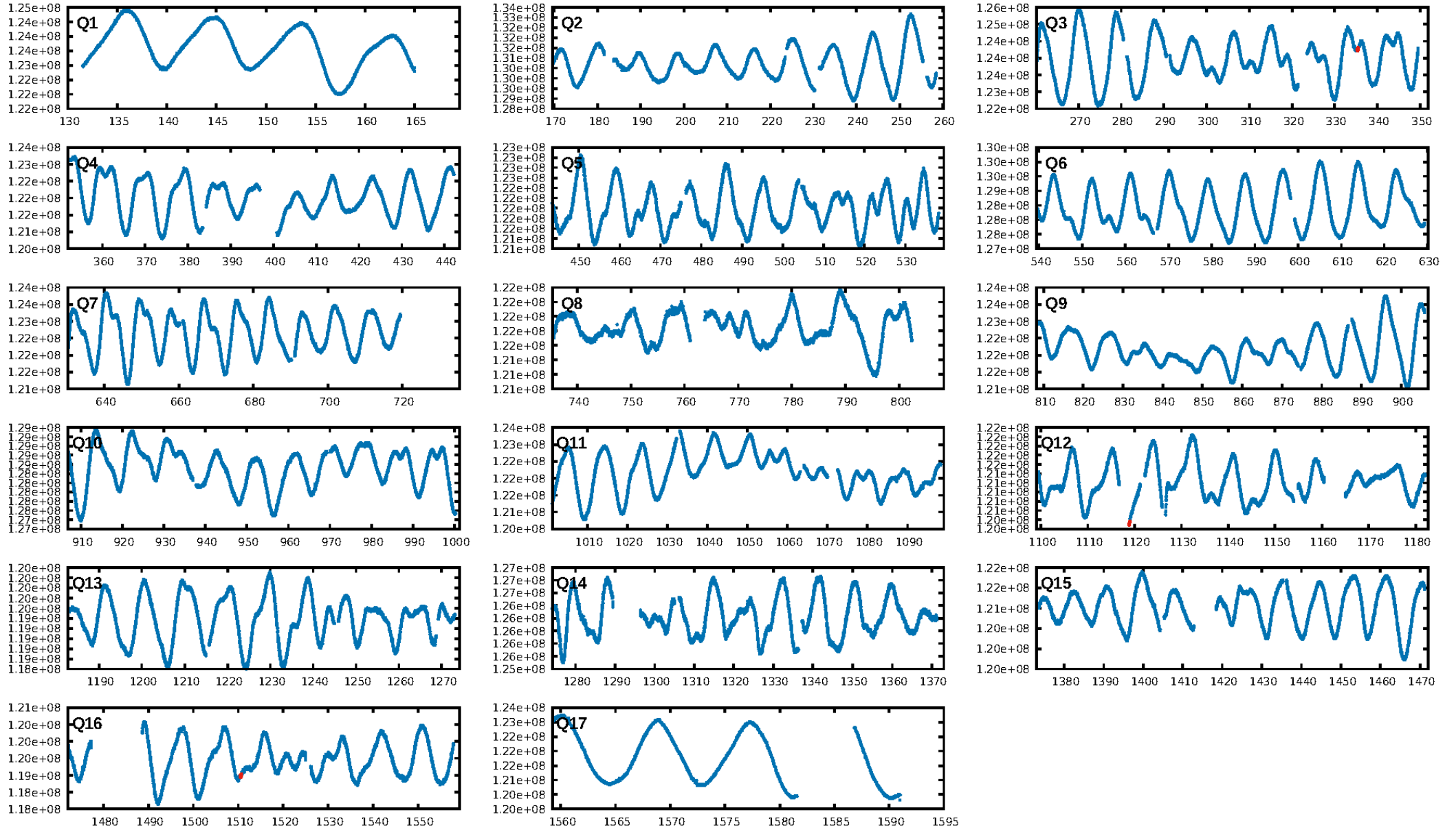
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 31.9%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 1.59e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.207
Centroid-sig: 47.1%
Centroid-so: 0.697 arcsec [0.75 σ]
OotOffset-rm: 2.558 arcsec [4.79 σ]
KicOffset-rm: 2.643 arcsec [4.90 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

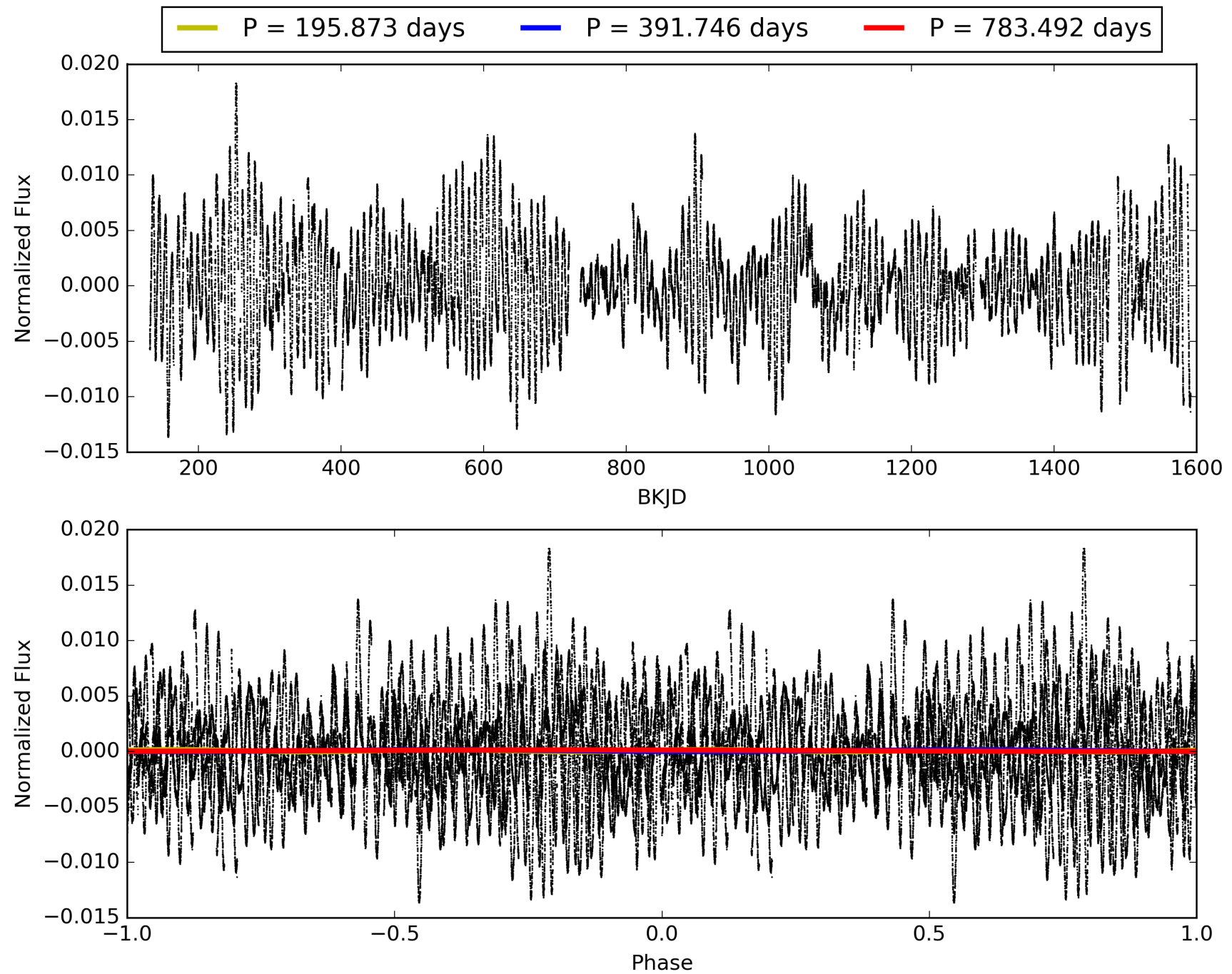
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:56:30 Z

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

TCE 005445867-01, PDC Light Curves

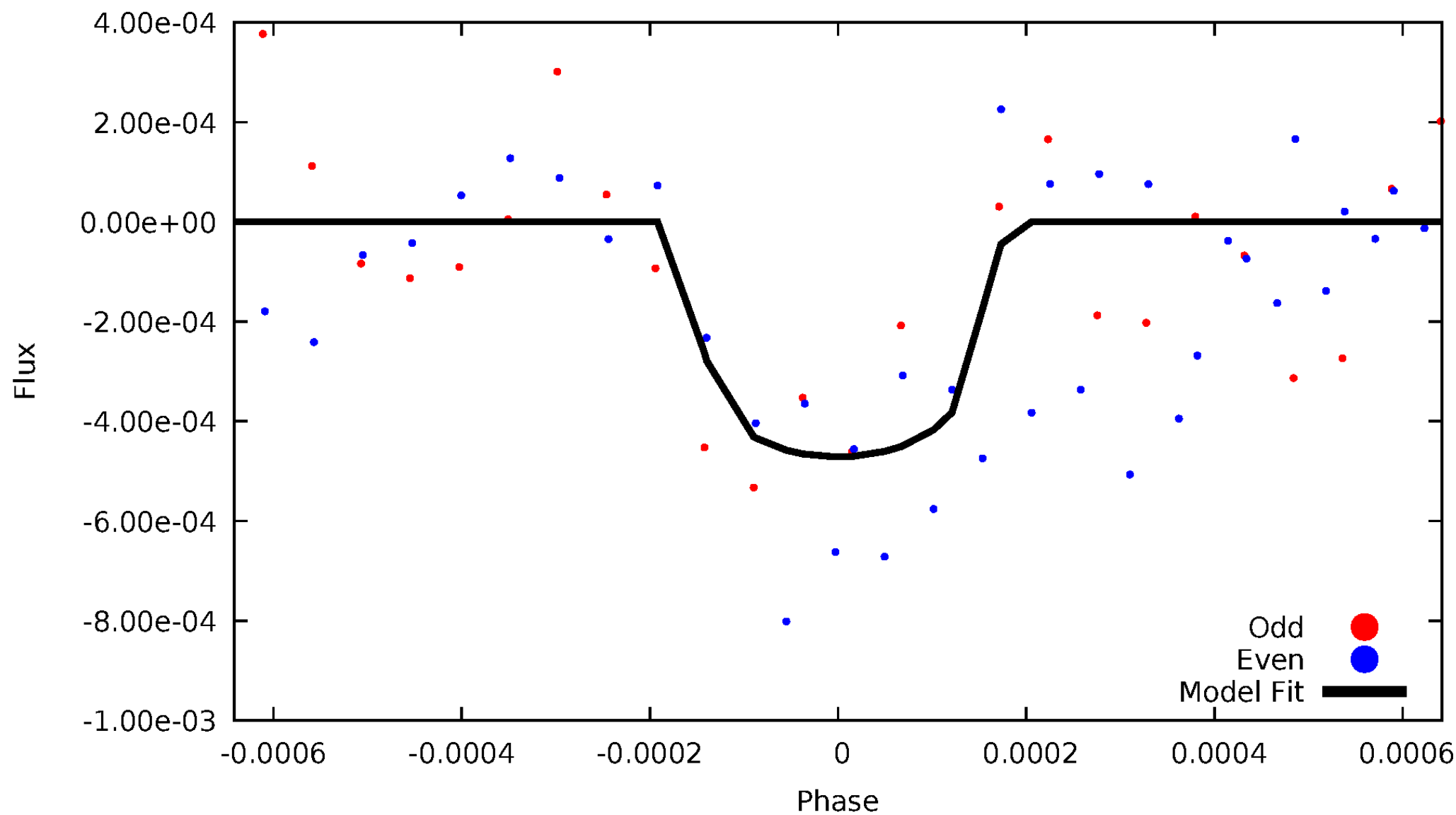


TCE 005445867-01



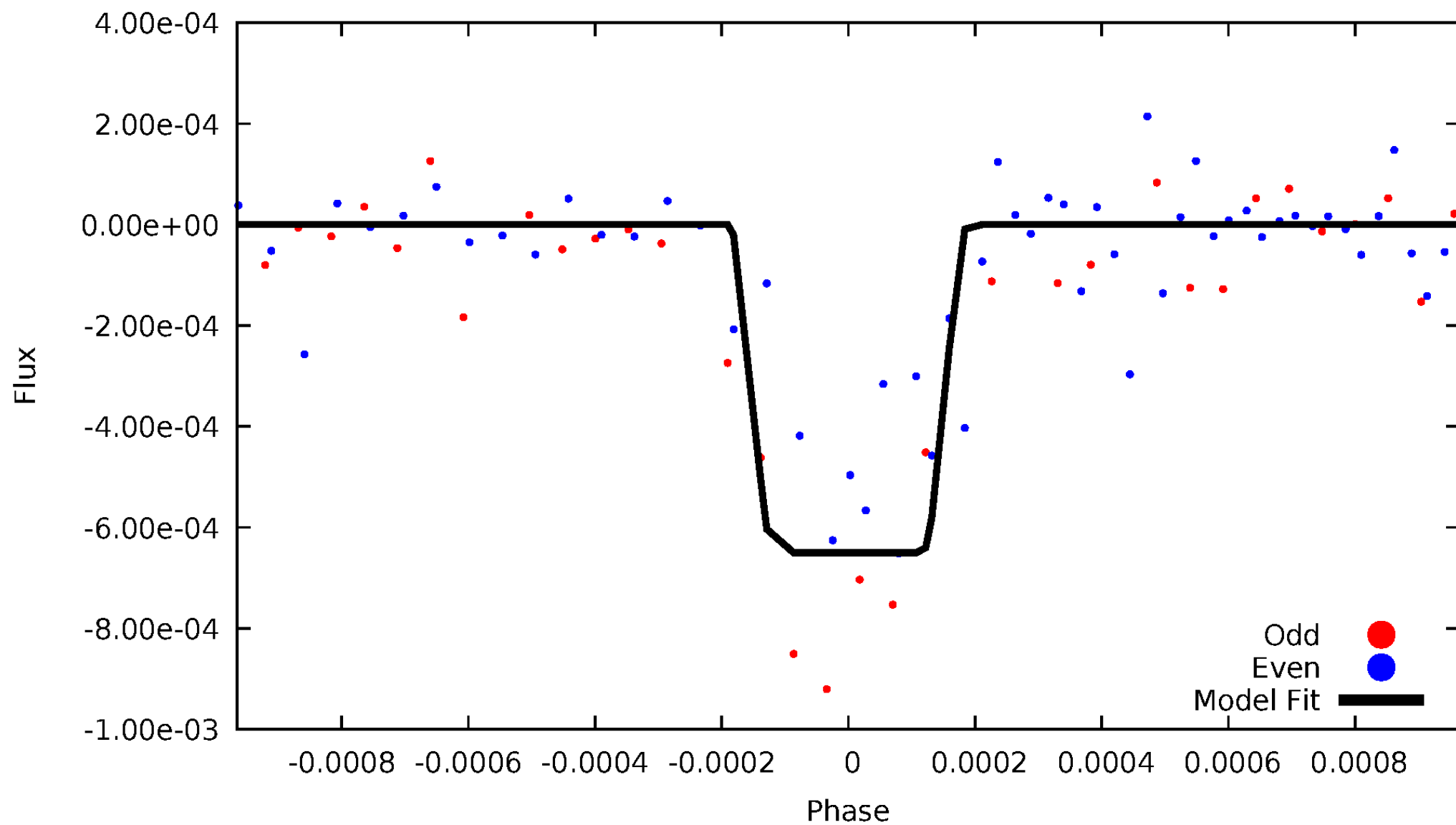
DV Odd/Even

TCE 005445867-01



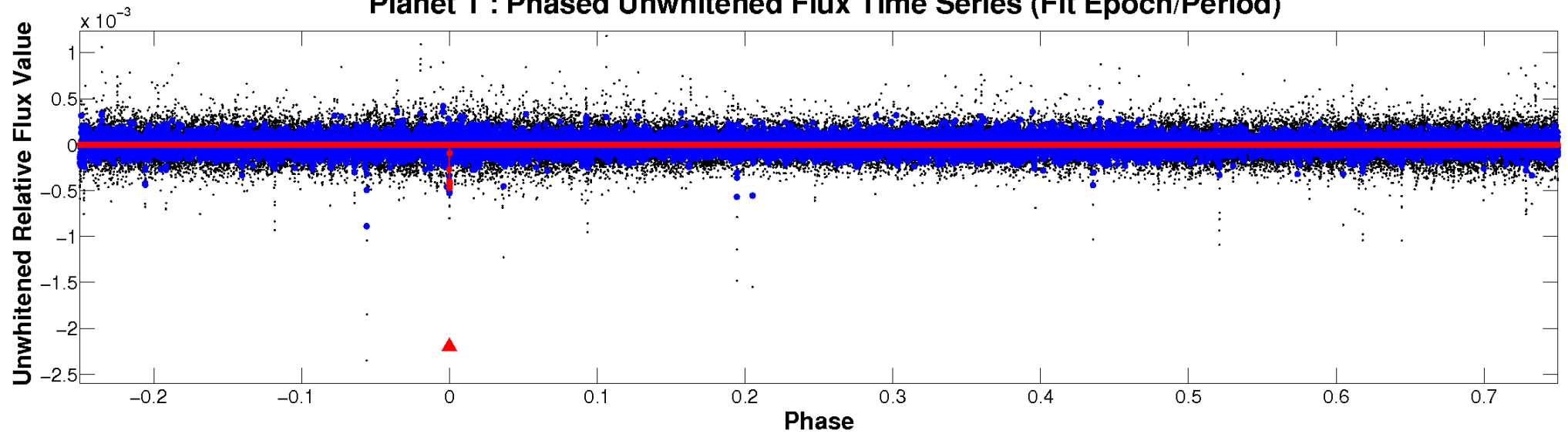
ALT Odd/Even

TCE 005445867-01

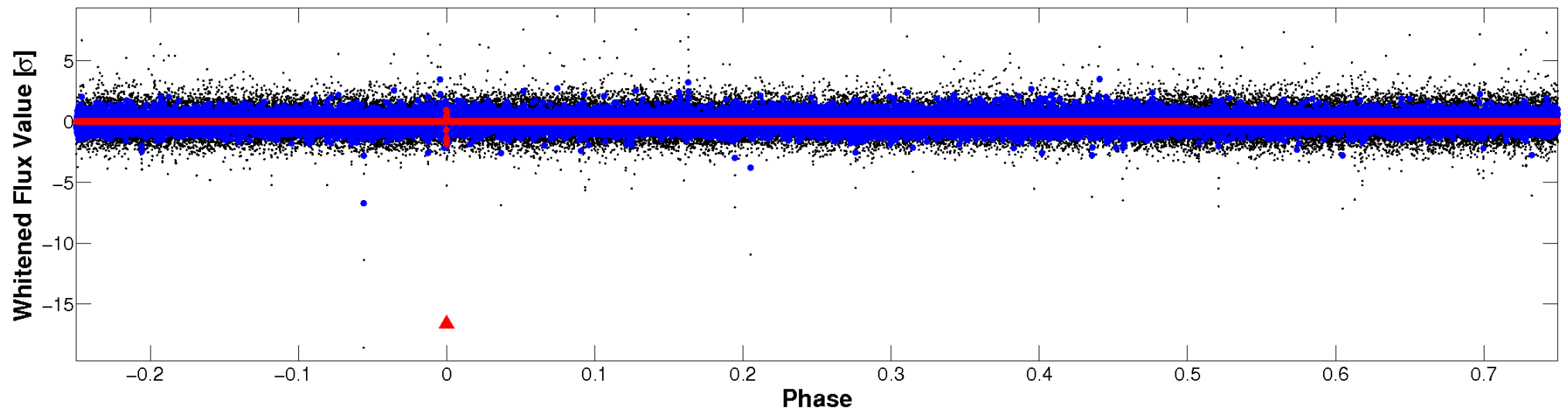


Non-Whitened Vs. Whitened Light Curve

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

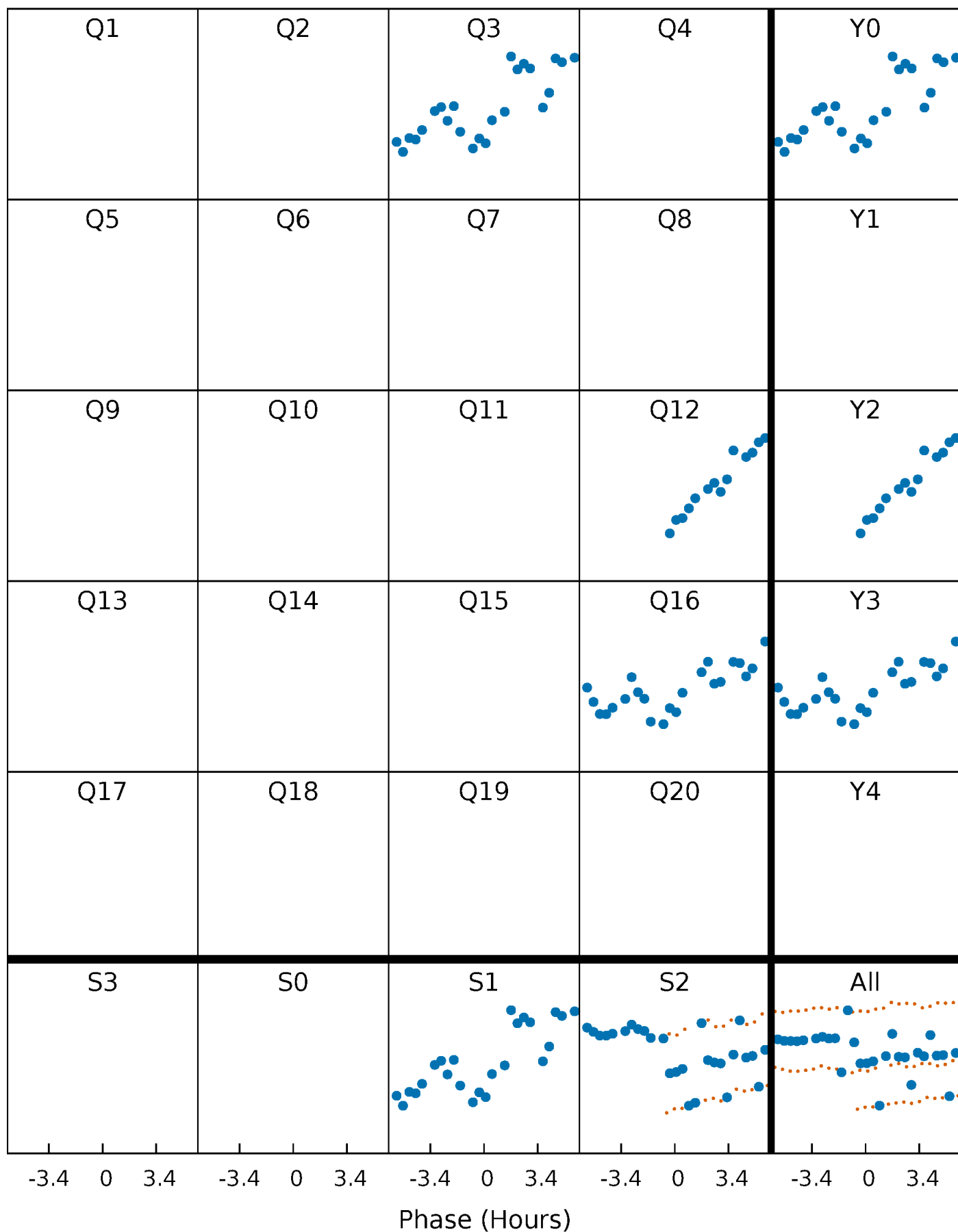


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



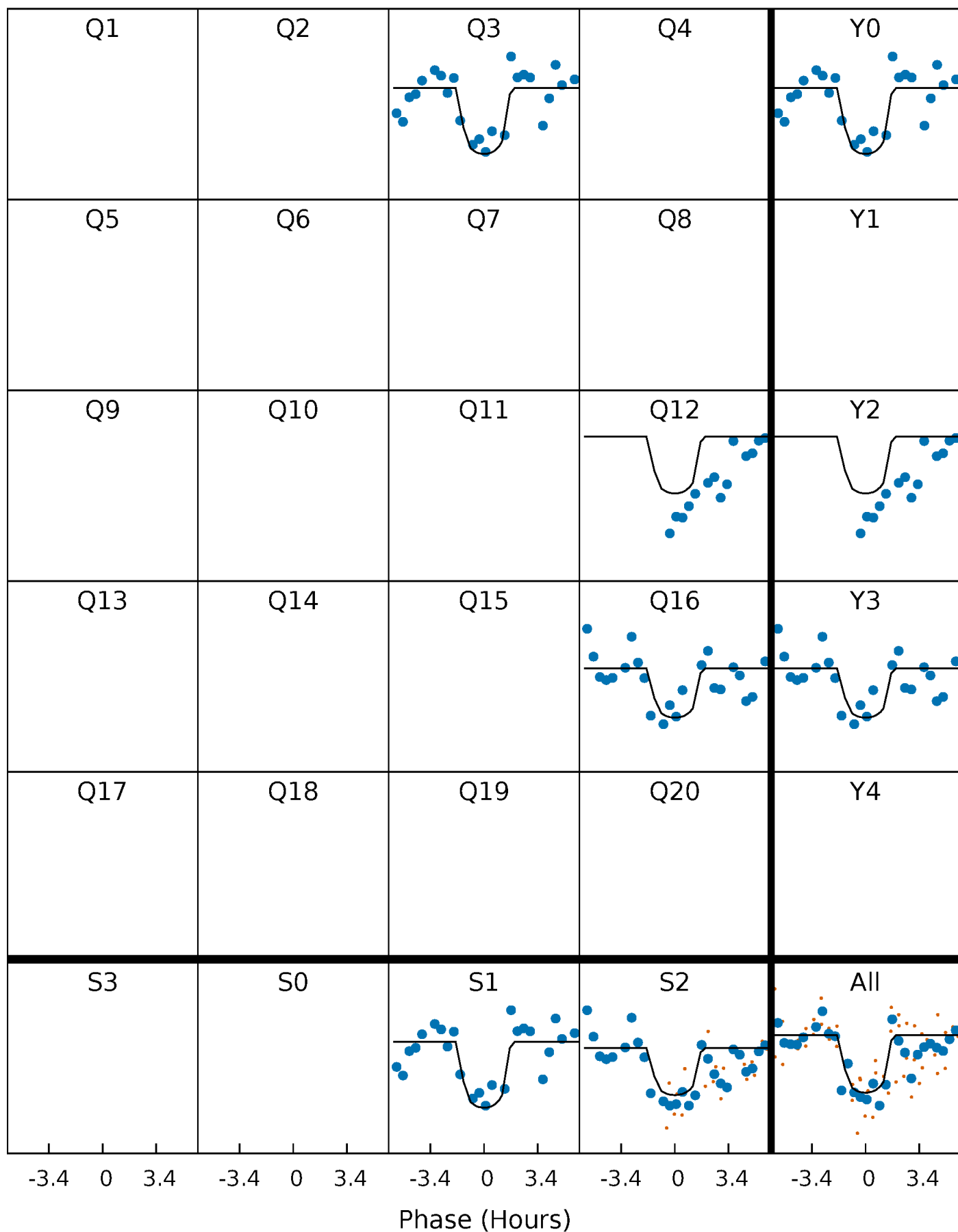
PDC Quarter-Phased Transit Curves

TCE 005445867-01 P=391.745973 Days $T_0=335.369757$ (BKJD)



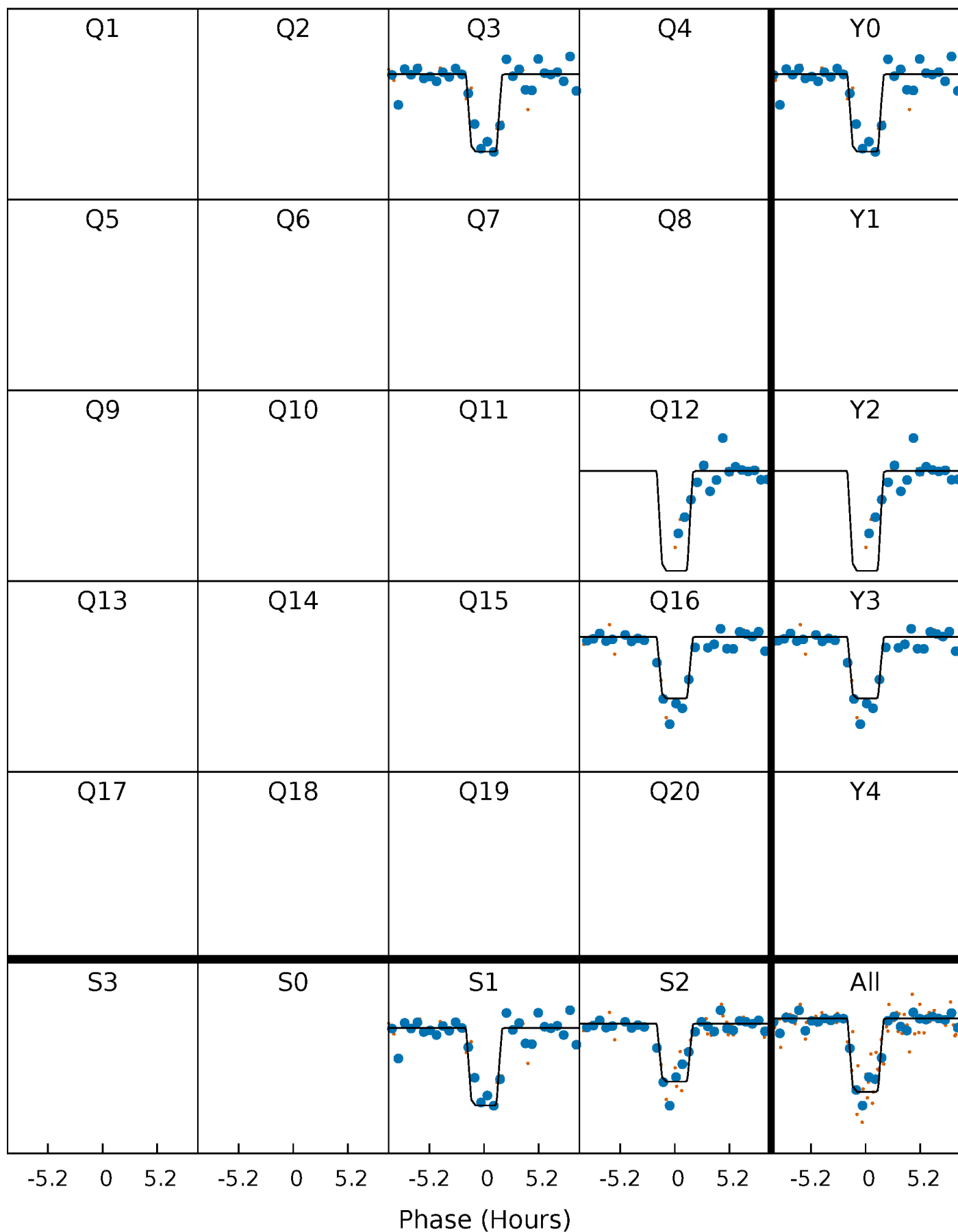
DV Quarter-Phased Transit Curves

TCE 005445867-01 P=391.745973 Days $T_0=335.369757$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

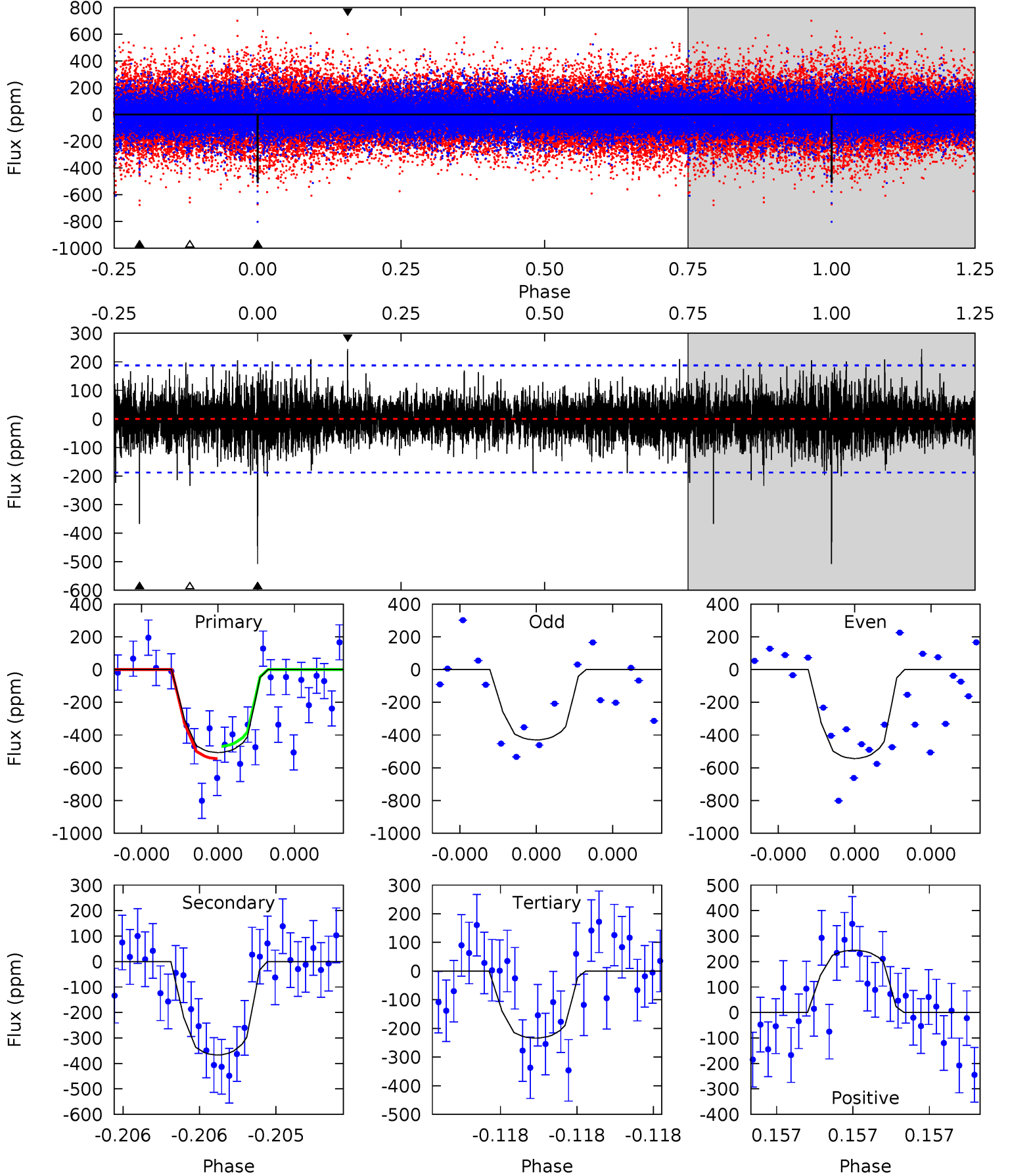
TCE 005445867-01 P=391.746943 Days $T_0=335.345138$ (BKJD)



DV Model-Shift Uniqueness Test

005445867-01, P = 391.745973 Days, E = 335.369757 Days

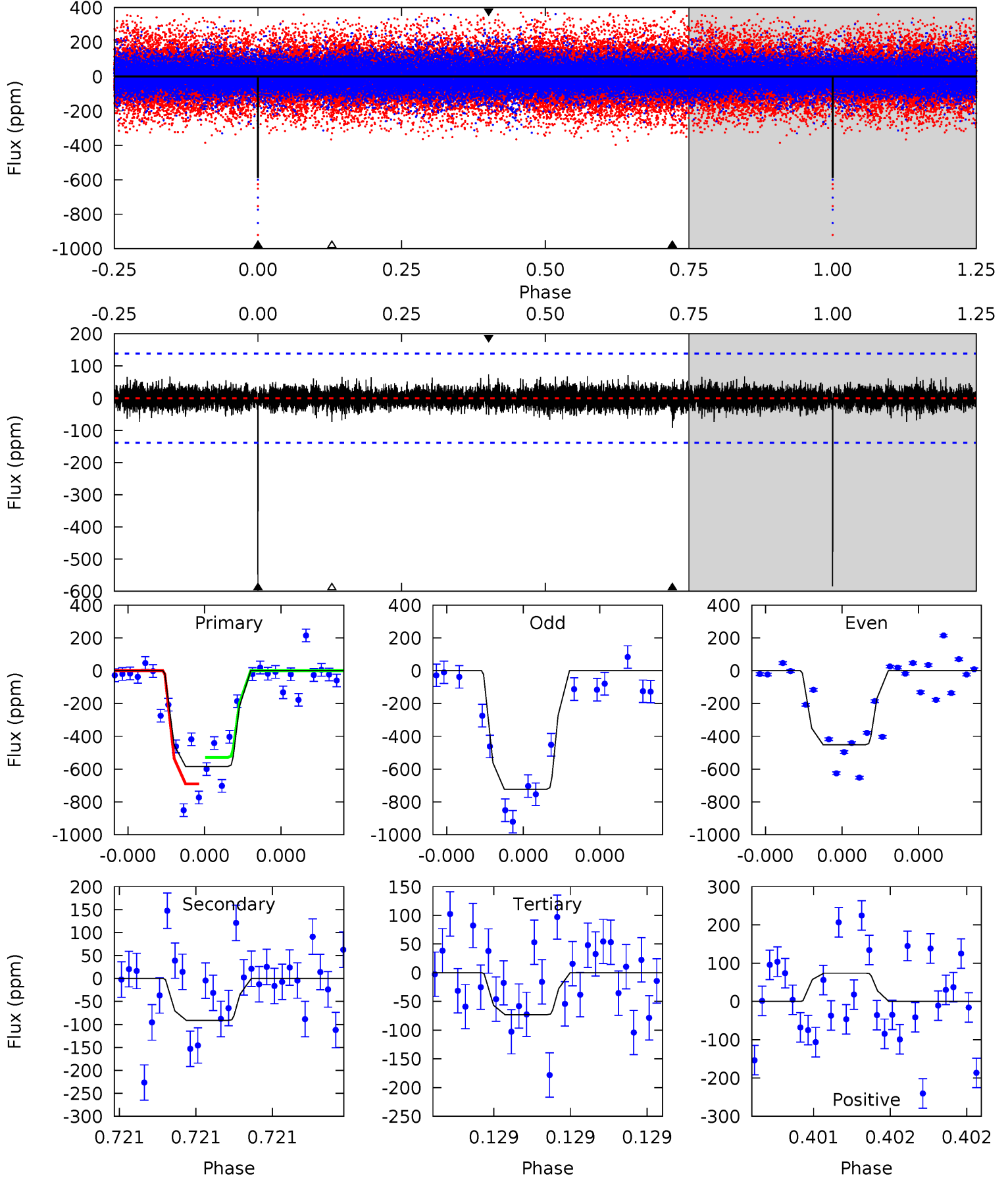
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	11.1	7.05	7.37	5.65	3.60	1.42	8.24	7.92	4.02	3.70	1.55	1.20	0.33	1.13



Alt Model-Shift Uniqueness Test

005445867-01, P = 391.746943 Days, E = 335.345138 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	3.70	2.97	3.00	5.63	3.58	0.66	20.8	20.7	0.73	0.70	5.58	1.08	0.11	2.99



Stellar Parameters For KIC 005445867

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5785^{+138}_{-155}	$4.571^{+0.033}_{-0.187}$	$-0.340^{+0.300}_{-0.300}$	$0.811^{+0.212}_{-0.071}$	$0.903^{+0.100}_{-0.100}$	$2.381^{+0.415}_{-1.128}$
	+2%/-3%	+1%/-4%	+88%/-88%	+26%/-9%	+11%/-11%	+17%/-47%
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 005445867-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-367 ± 33	$4.10^{+3.95}_{-2.82}$	327^{+20}_{-13}	4091^{+2751}_{-814}	$11981^{+117456}_{-8911}$
Alt.	-91 ± 25	$4.79^{+4.39}_{-3.38}$	327^{+20}_{-13}	3127^{+1562}_{-528}	2250^{+22245}_{-1684}

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 $A_{obs} \gg 1.0$

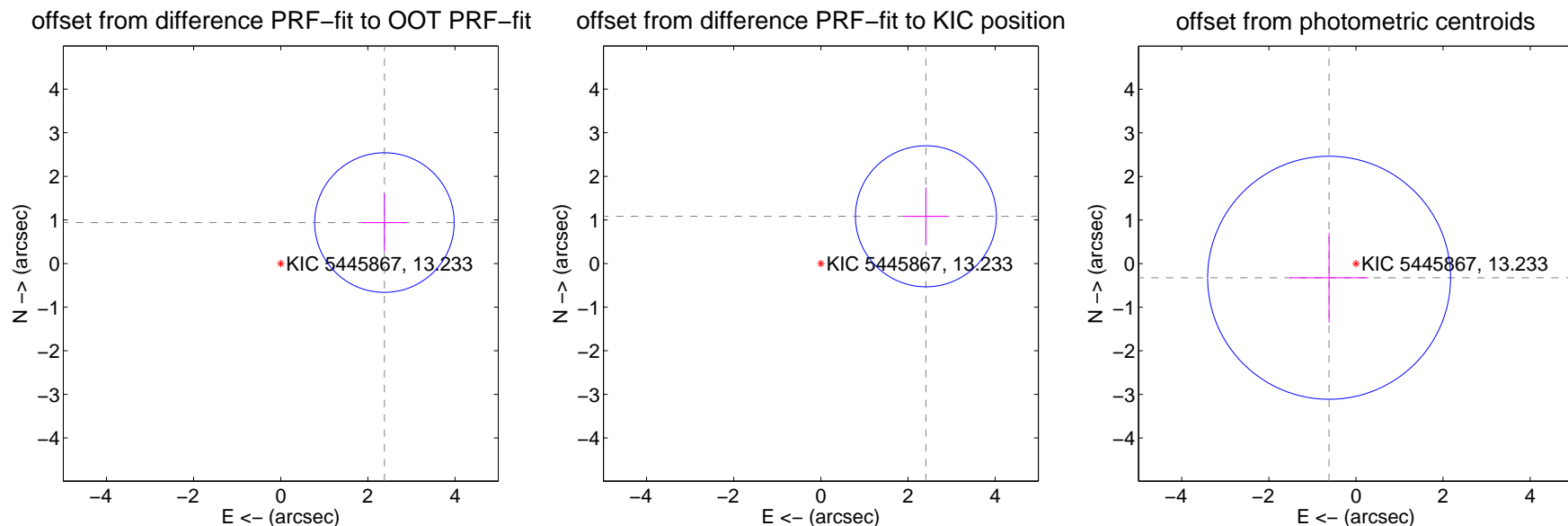
DV Centroid Data

Supplemental centroid analysis for 005445867-01. Kepler magnitude: 13.23. Transit SNR 6.31

There are 1 quarters with good PRF difference image offsets

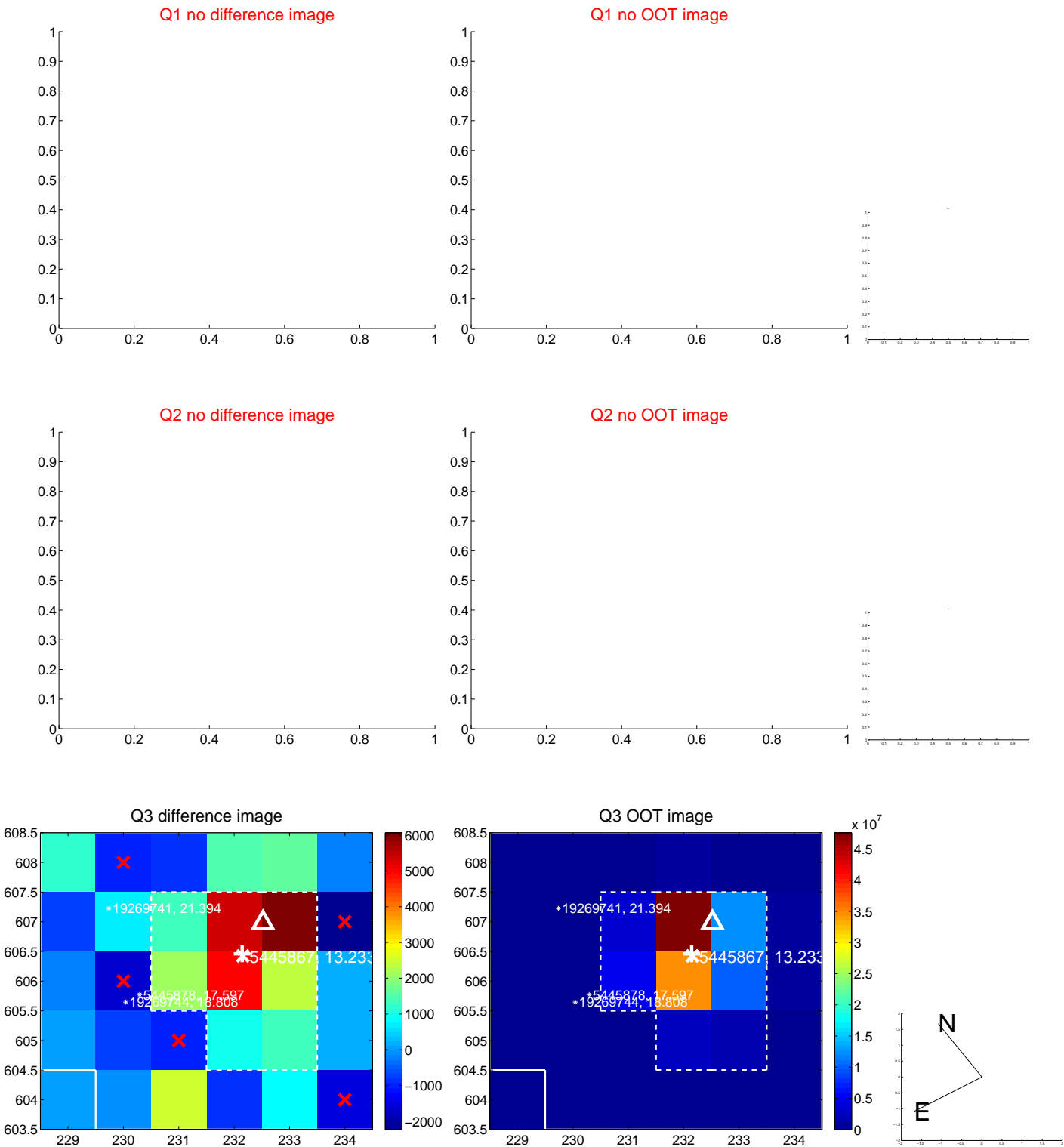
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.558 ± 0.534	4.79	-2.379 ± 0.511	0.940 ± 0.662
PRF-fit source offset from KIC position	2.643 ± 0.539	4.90	-2.411 ± 0.511	1.084 ± 0.662
photometric centroid source offset	0.70 ± 0.93	0.75	0.62 ± 0.90	-0.32 ± 1.03



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.



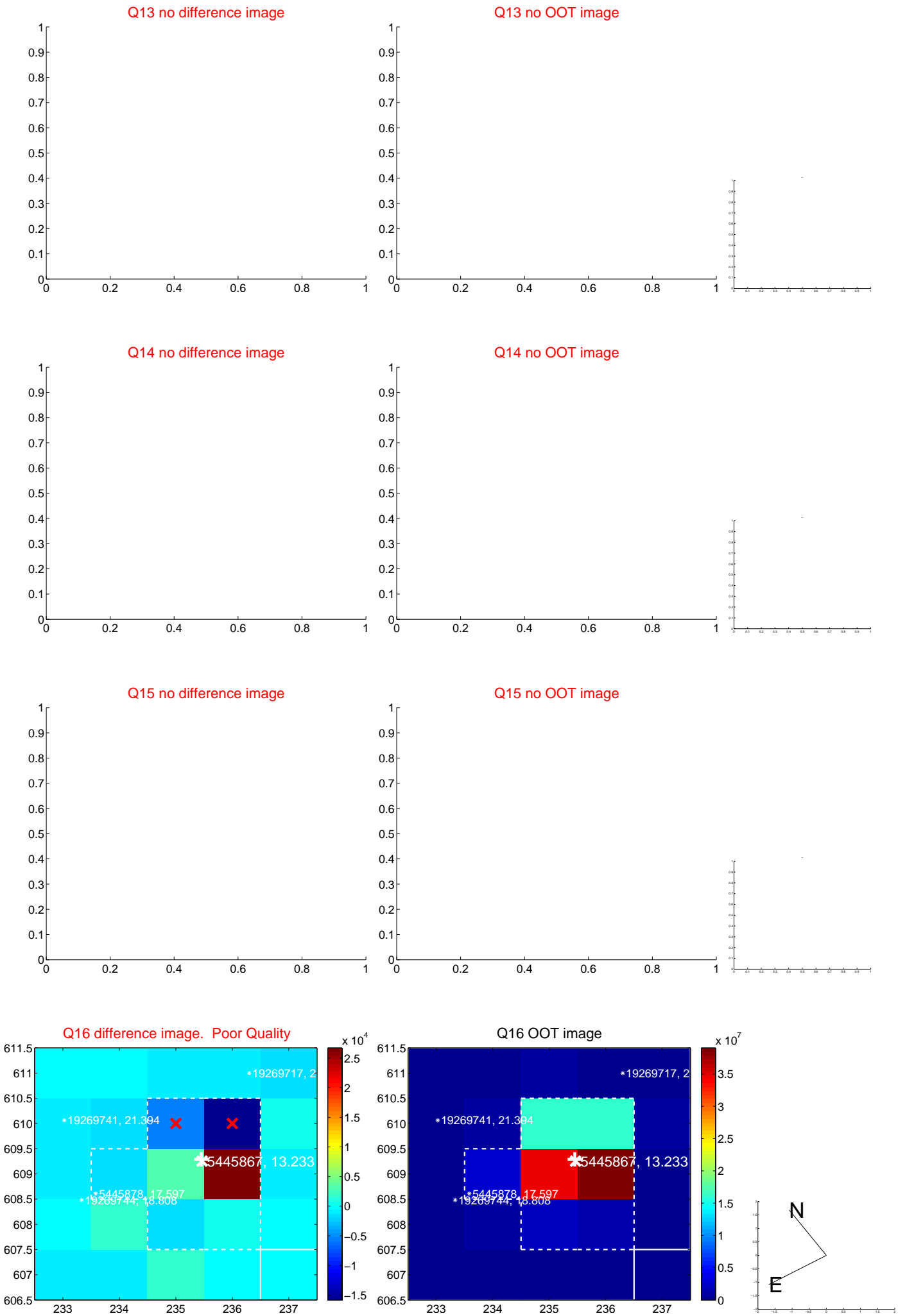
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



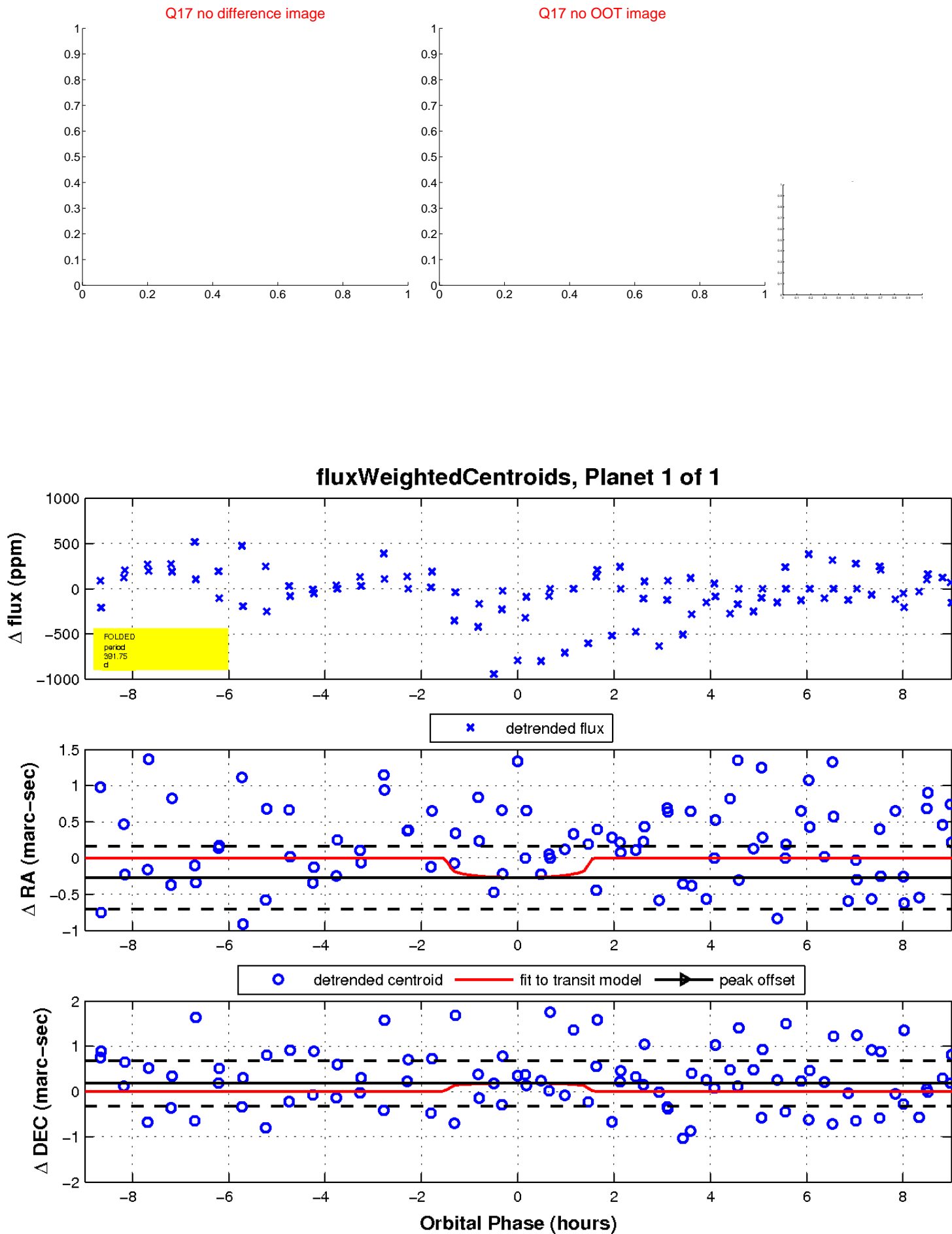
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

