

KIC 006233466

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})
006233466-01	OBS	3552.01	15.873383	143.859789	200719.1	8.244	5661.4	3903.5	1.90	5622	88.91	202.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006233466-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—CENT_KIC_POS

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.

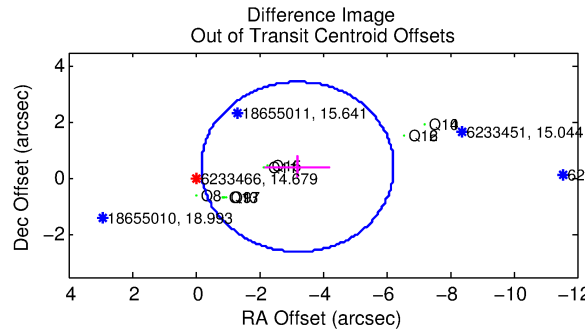
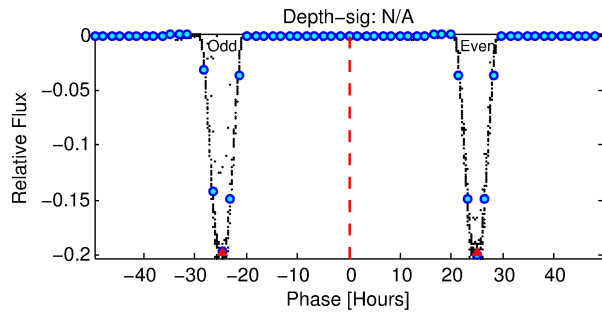
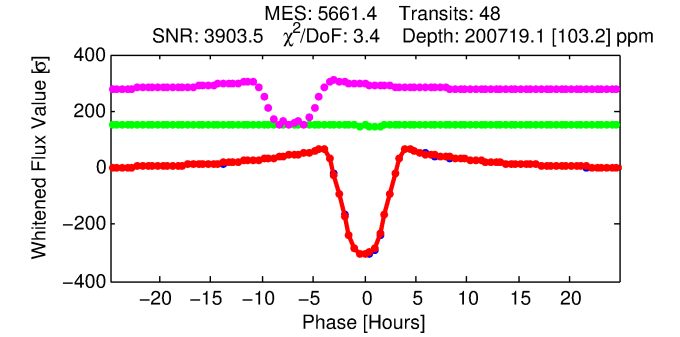
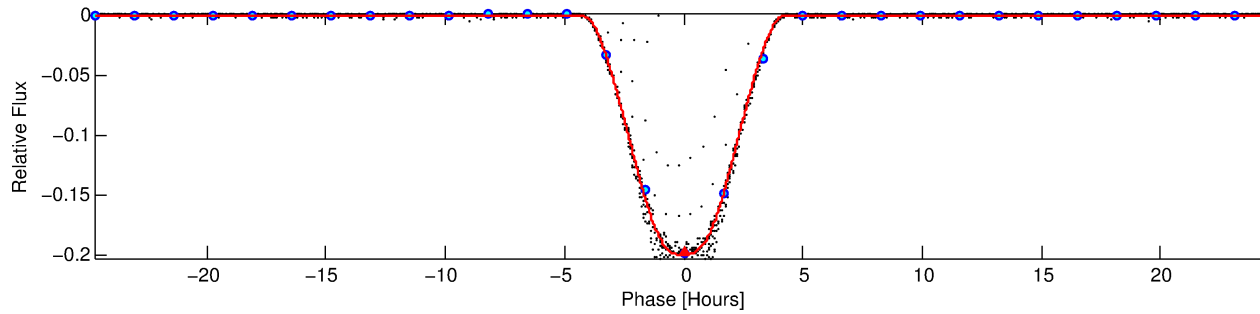
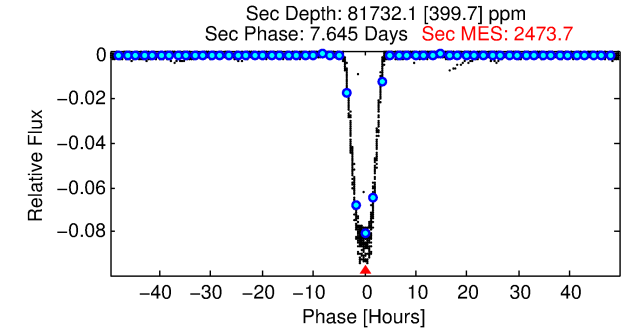
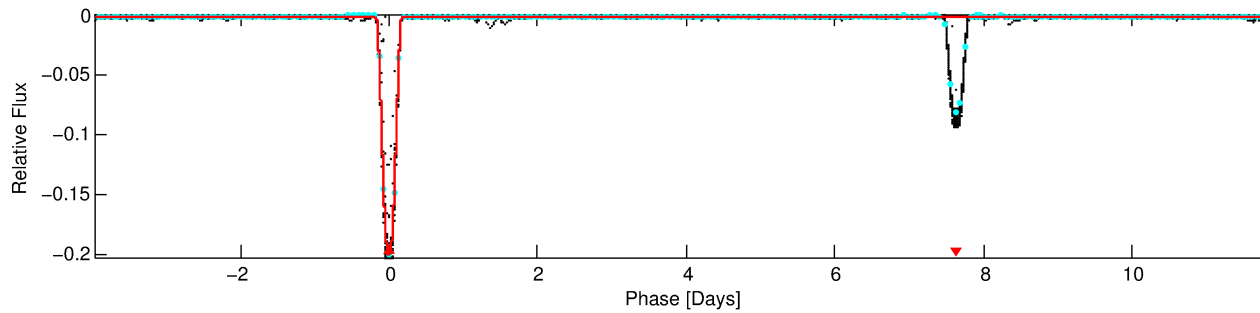
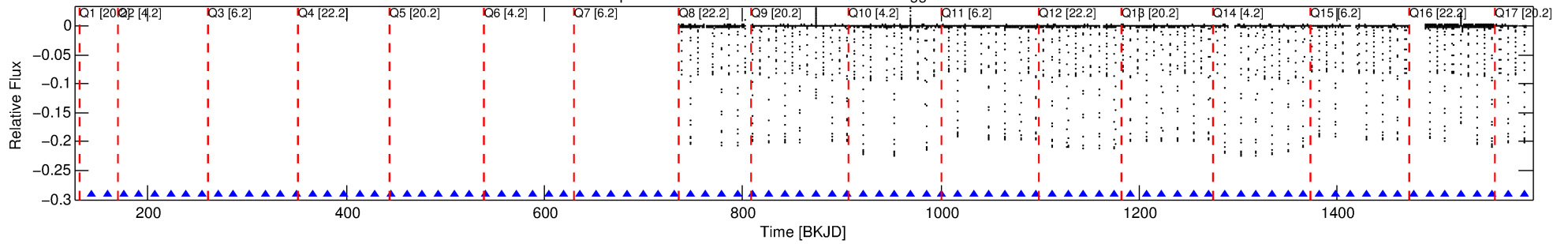
Ephemeris Match Information For 006233466-01

No Significant Match Found

DV One-Page Summary

KIC: 6233466 Candidate: 1 of 1 Period: 15.873 d
KOI: K03552.01 Corr: 0.988

Kp: 14.68 R*: 1.90 Rs Teff: 5622.0 K Logg: 3.91 Fe/H: -0.120



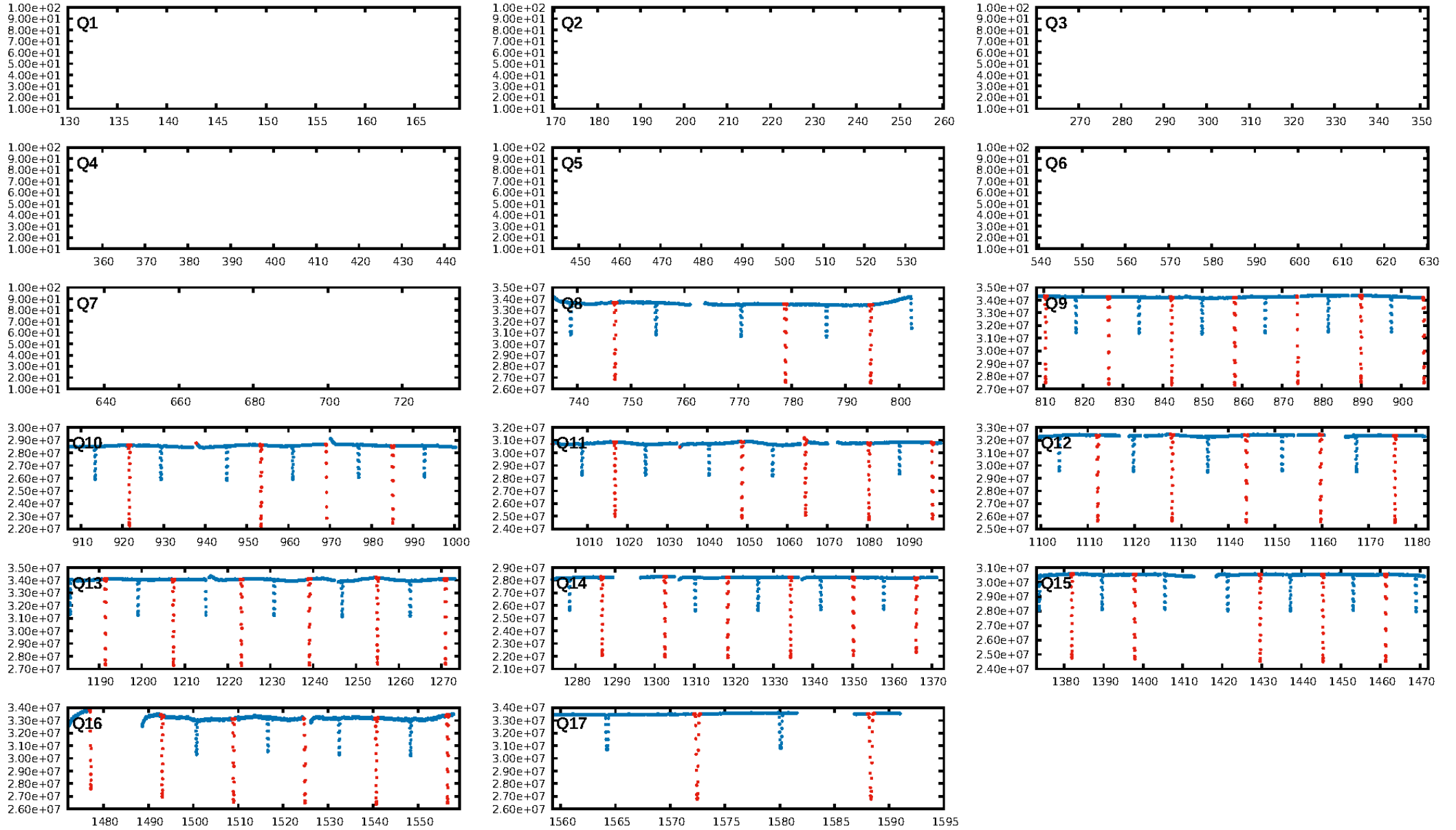
DV Fit Results:

Period = 15.87338 [0.00000] d
Epoch = 143.8598 [0.0001] BKJD
Rp/R* = 0.4300 [0.0002]
a/R* = 19.63 [0.01]
b = 0.52 [0.00]
Seff = 202.60 [190.87]
Teq = 962 [227] K
Rp = 88.91 [44.20] Re
a = 0.1260 [0.0690] AU
Ag = 90.24 [84.17] [1.06σ]
Teffp = 4584 [152] K [13.28σ]

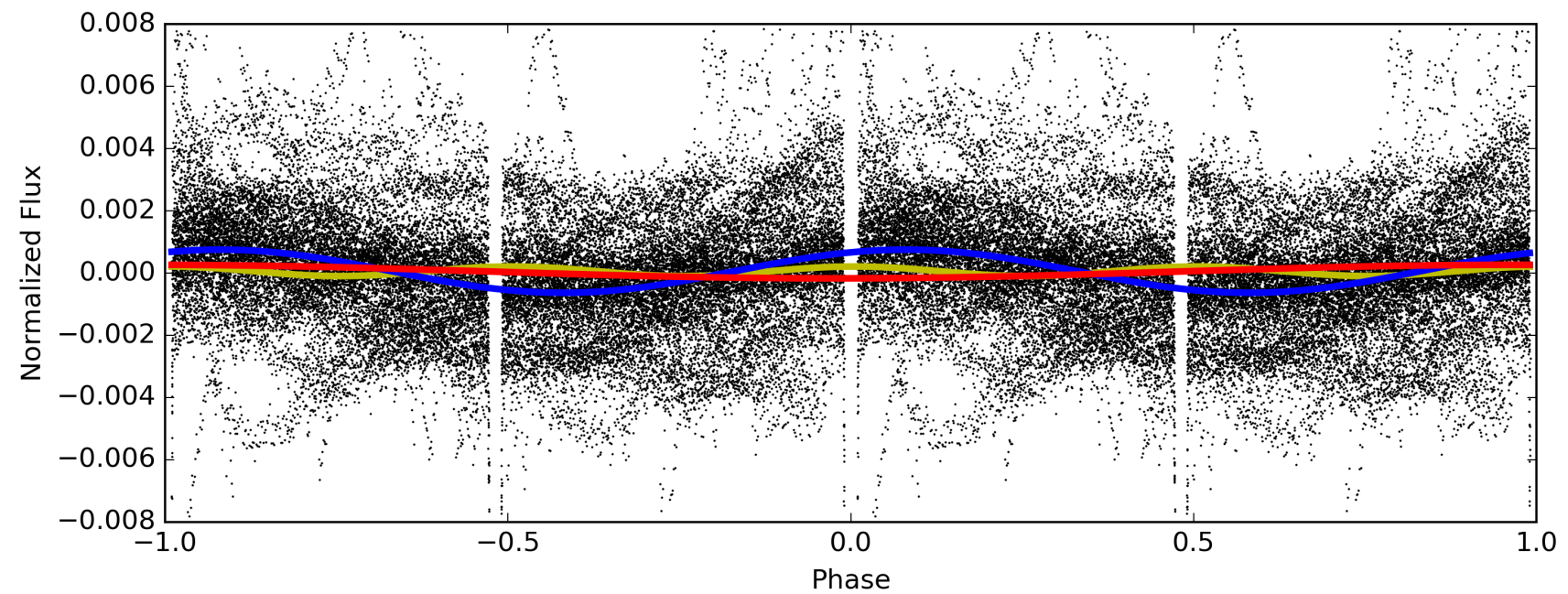
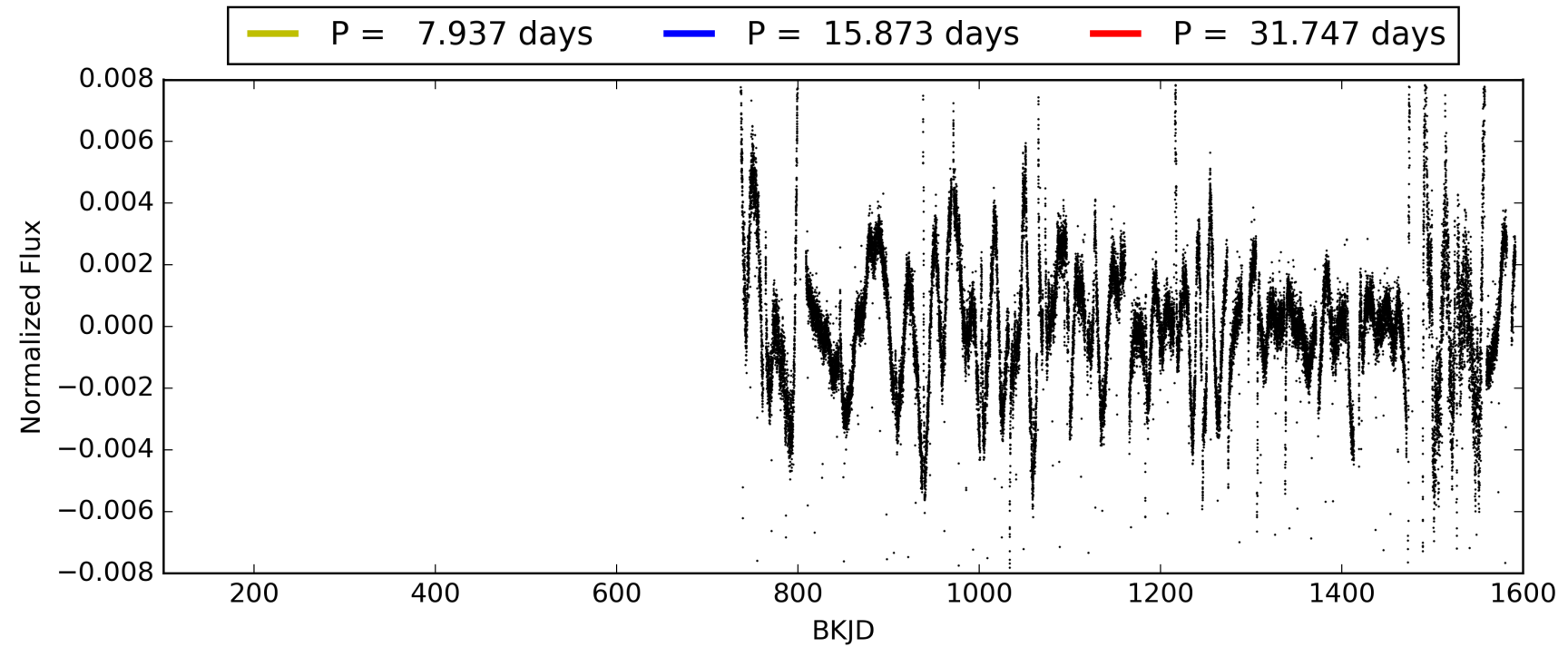
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [46/46]
GhostDiagnostic-chr: 2.63
Centroid-sig: 0.0%
Centroid-so: 1.330 arcsec [1208.59σ]
OotOffset-rm: 3.230 arcsec [3.20σ]
KicOffset-rm: 0.355 arcsec [4.93σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 006233466-01, PDC Light Curves

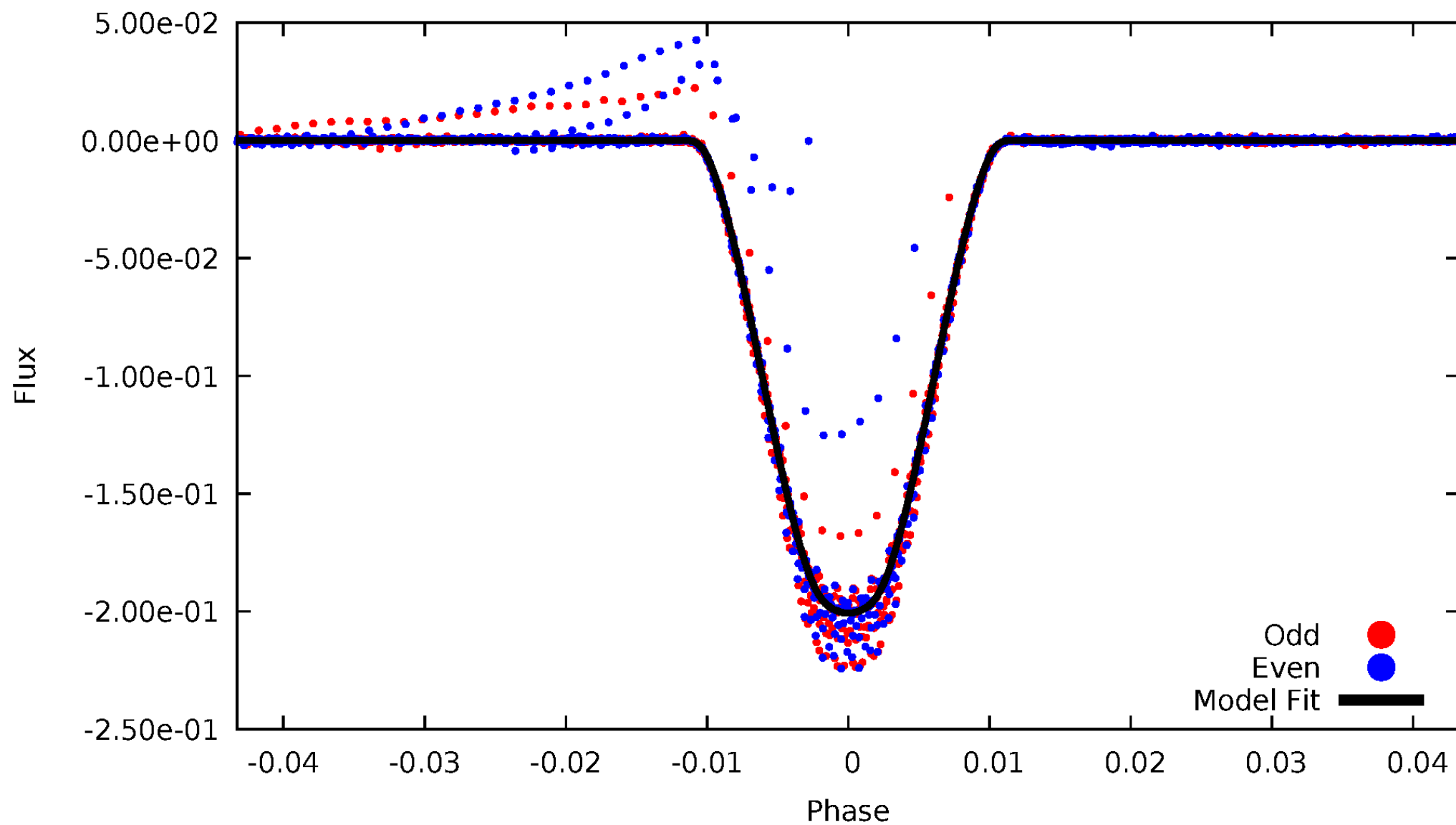


TCE 006233466-01



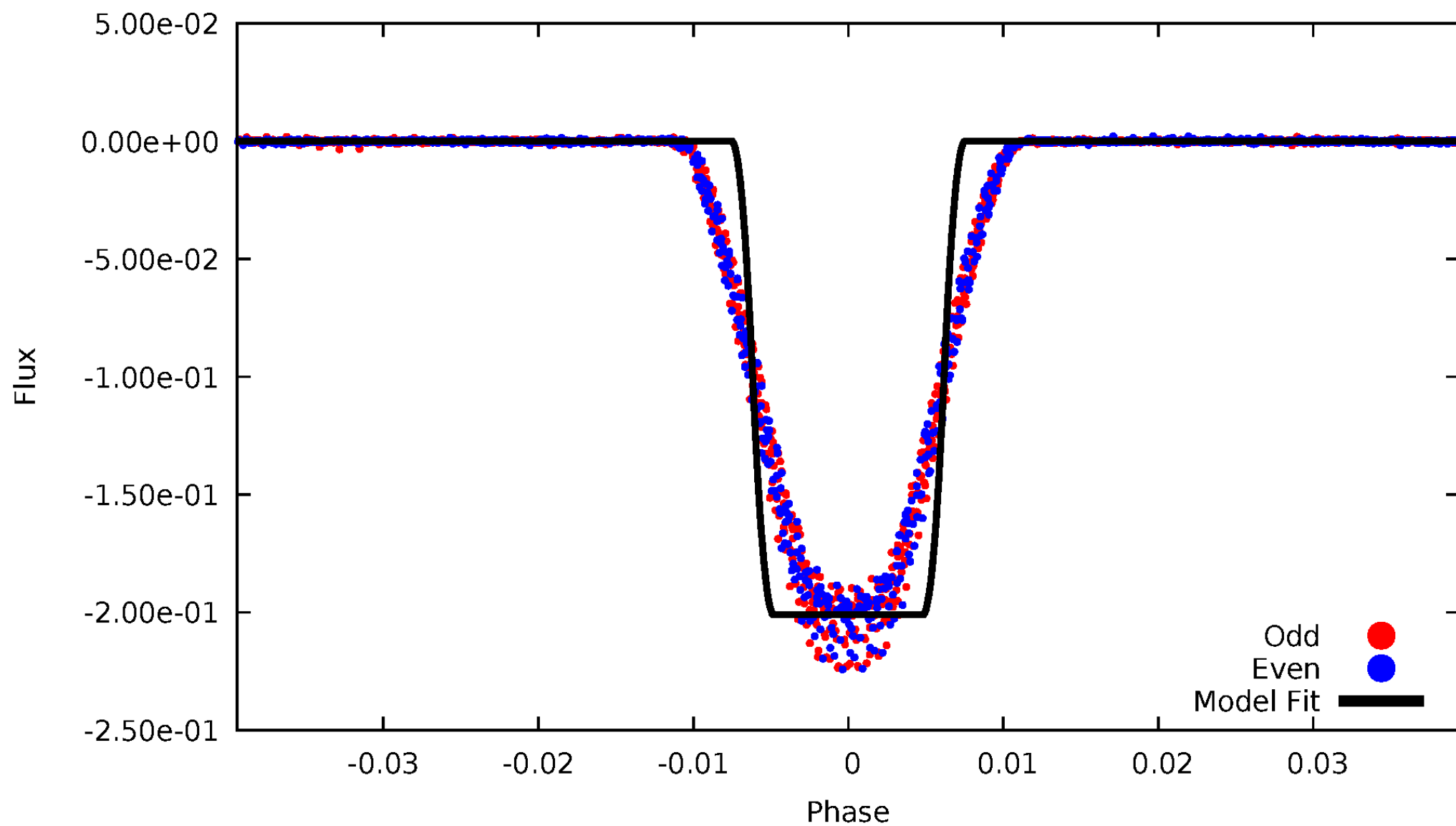
DV Odd/Even

TCE 006233466-01



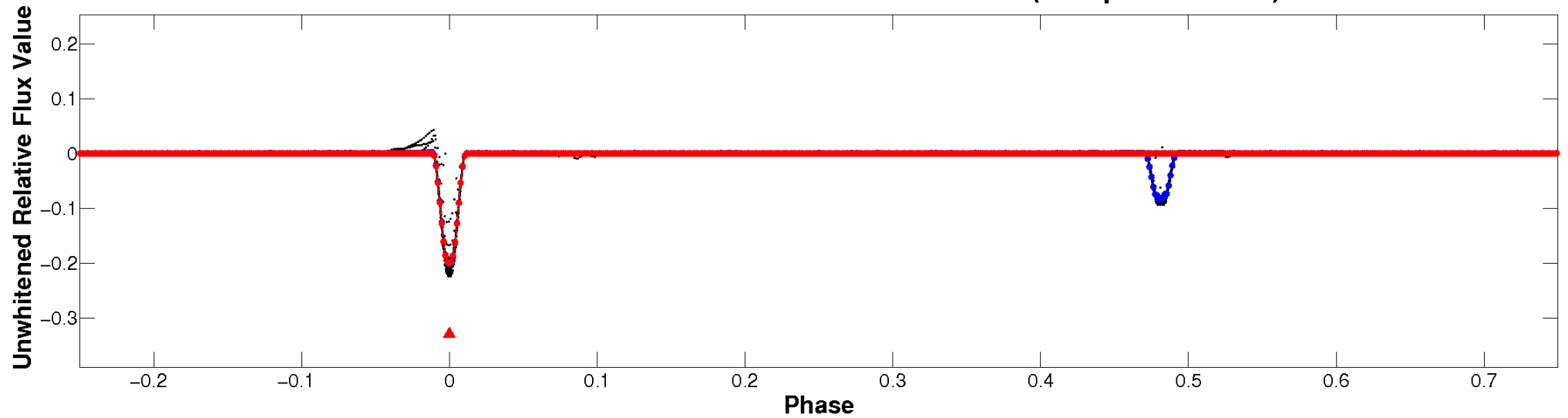
ALT Odd/Even

TCE 006233466-01

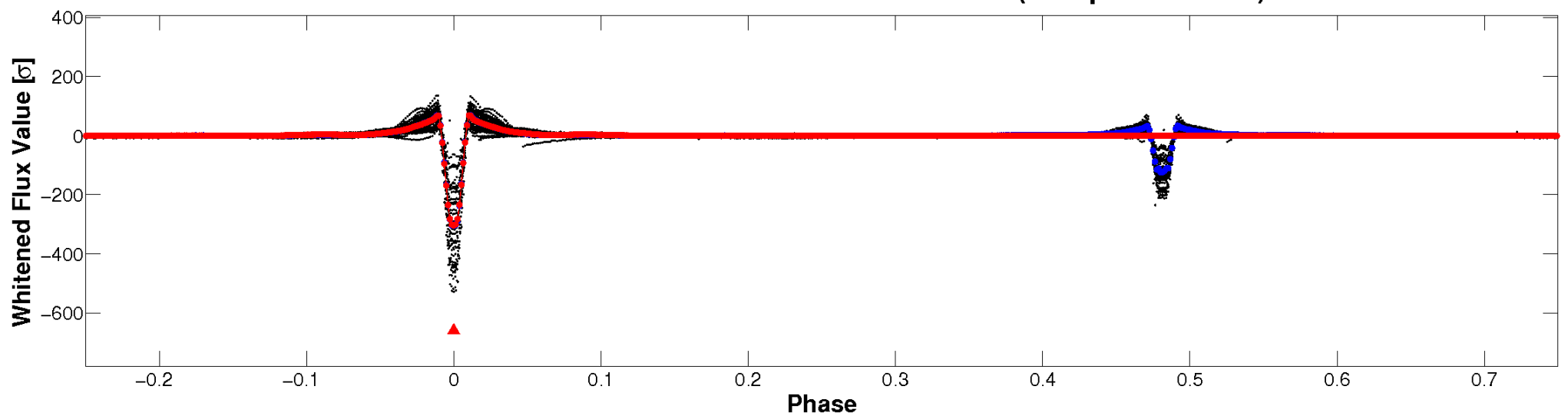


Non-Whitened Vs. Whitened Light Curve

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

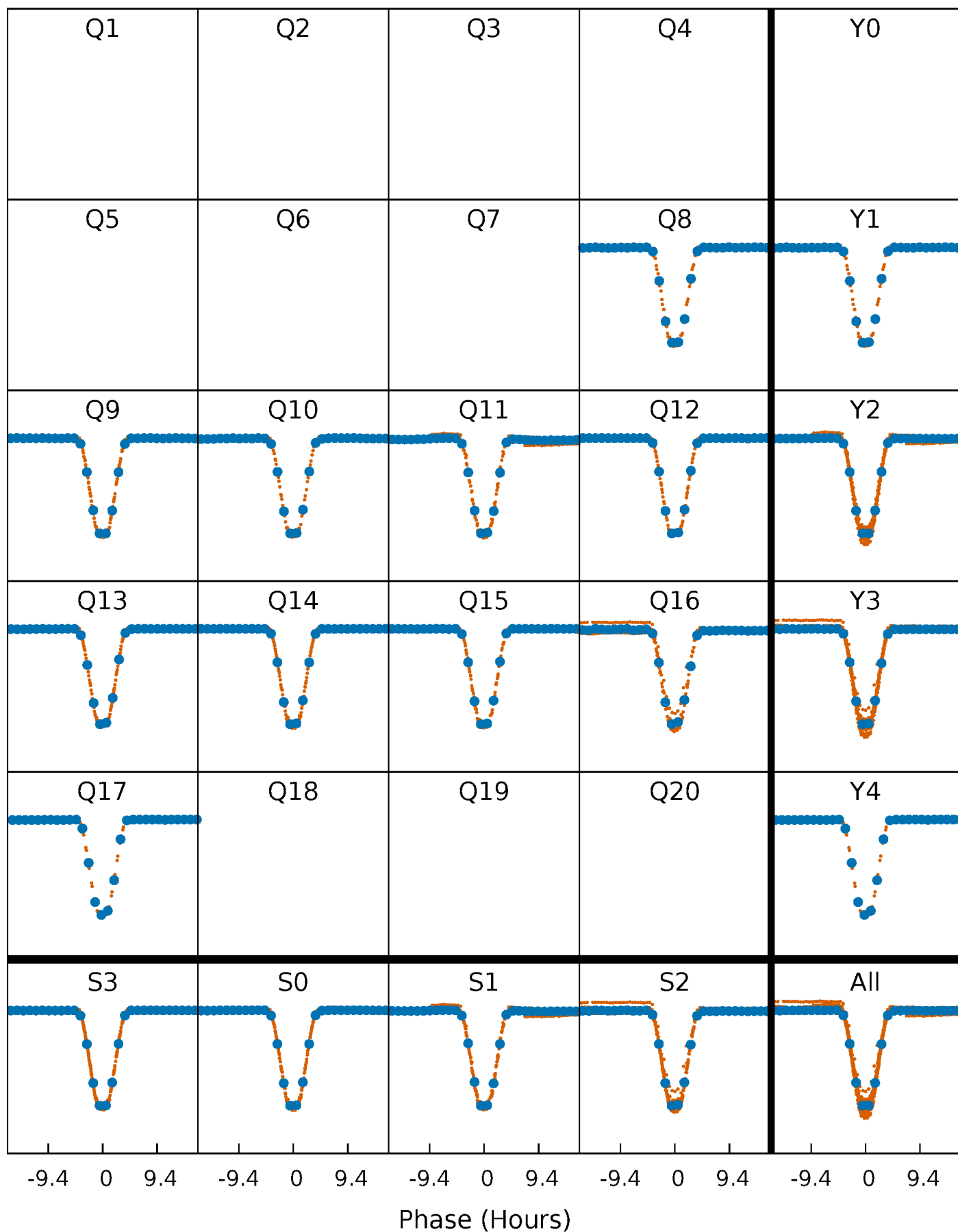


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



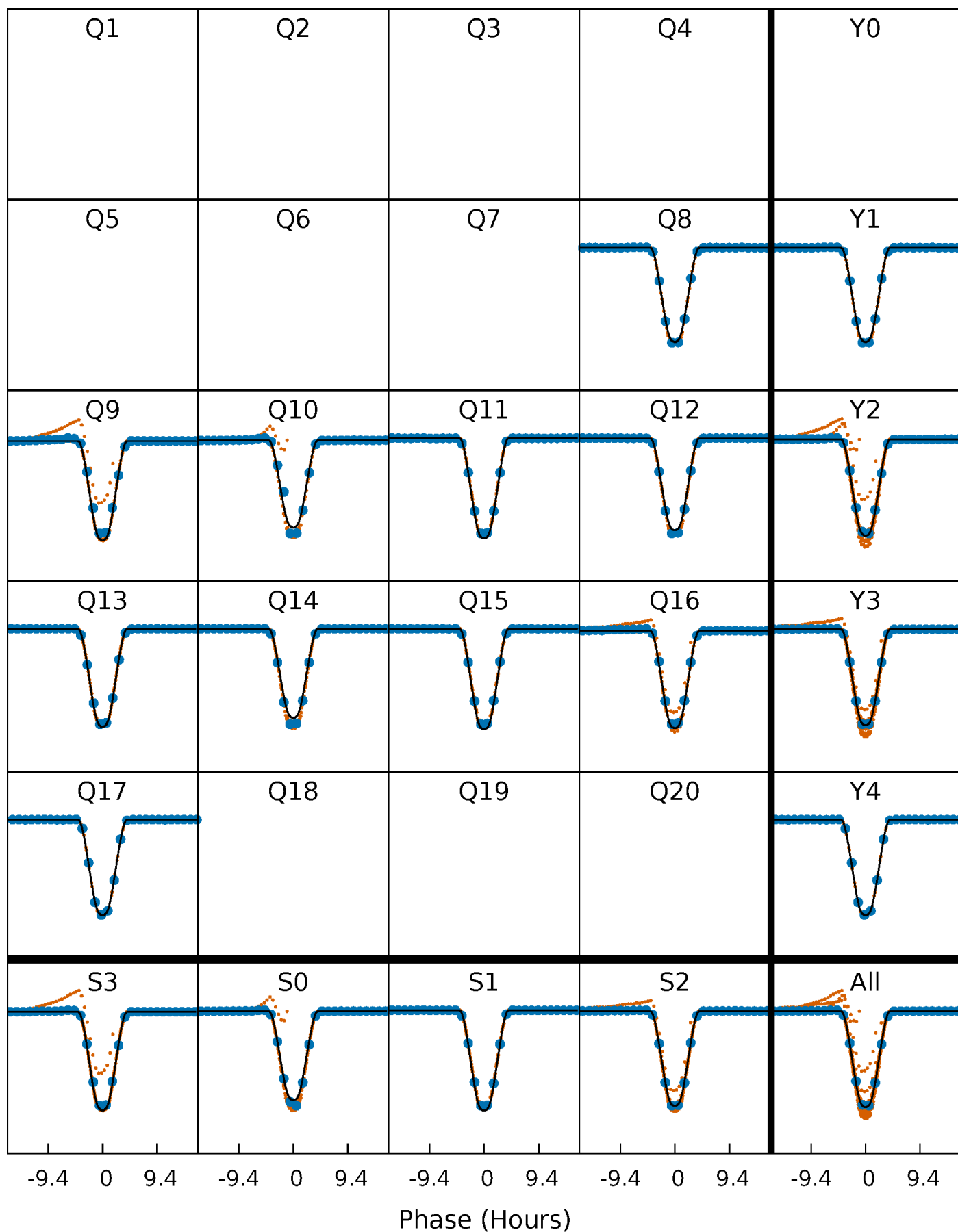
PDC Quarter-Phased Transit Curves

TCE 006233466-01 P= 15.873383 Days $T_0=143.859789$ (BKJD)



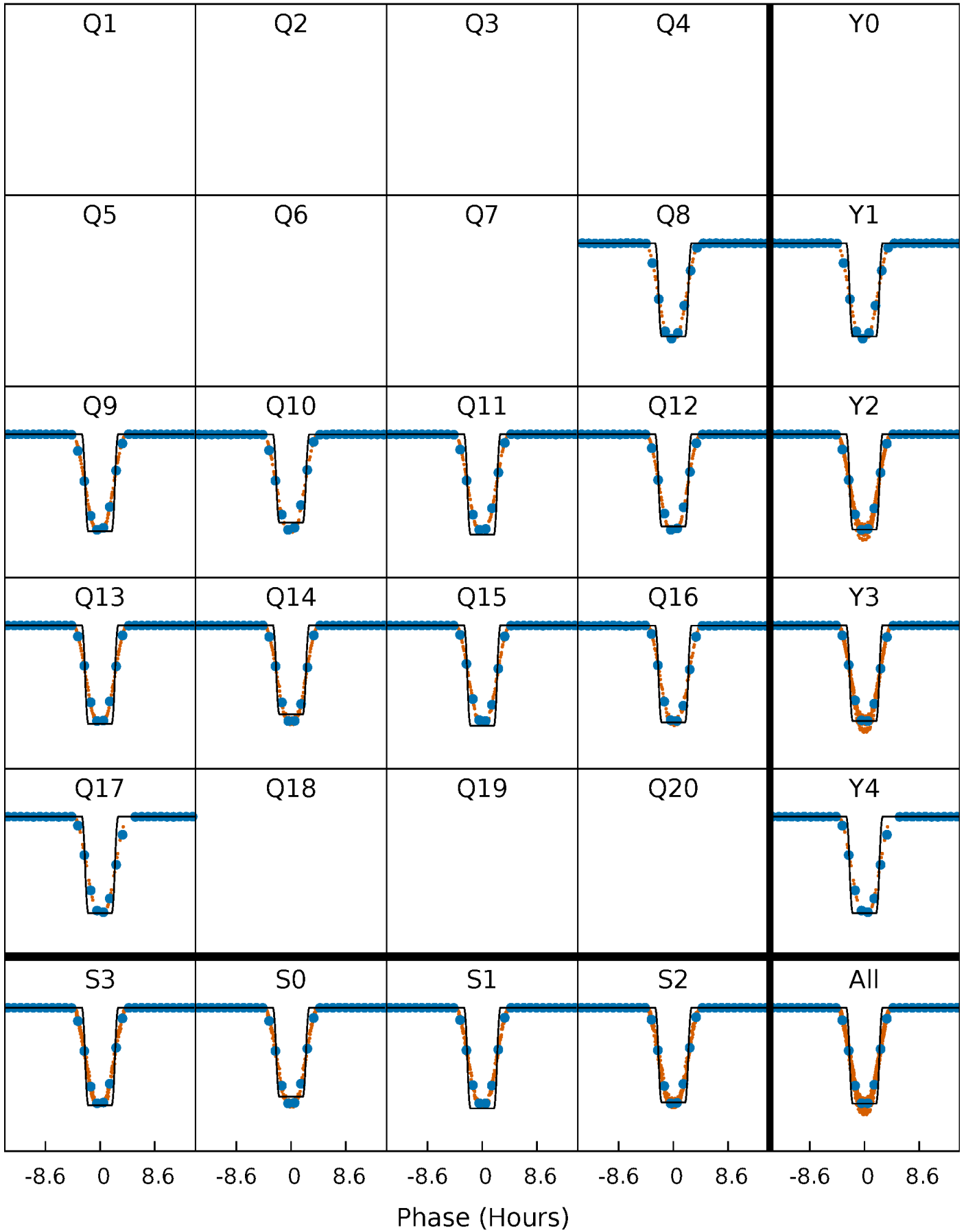
DV Quarter-Phased Transit Curves

TCE 006233466-01 P= 15.873383 Days $T_0=143.859789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

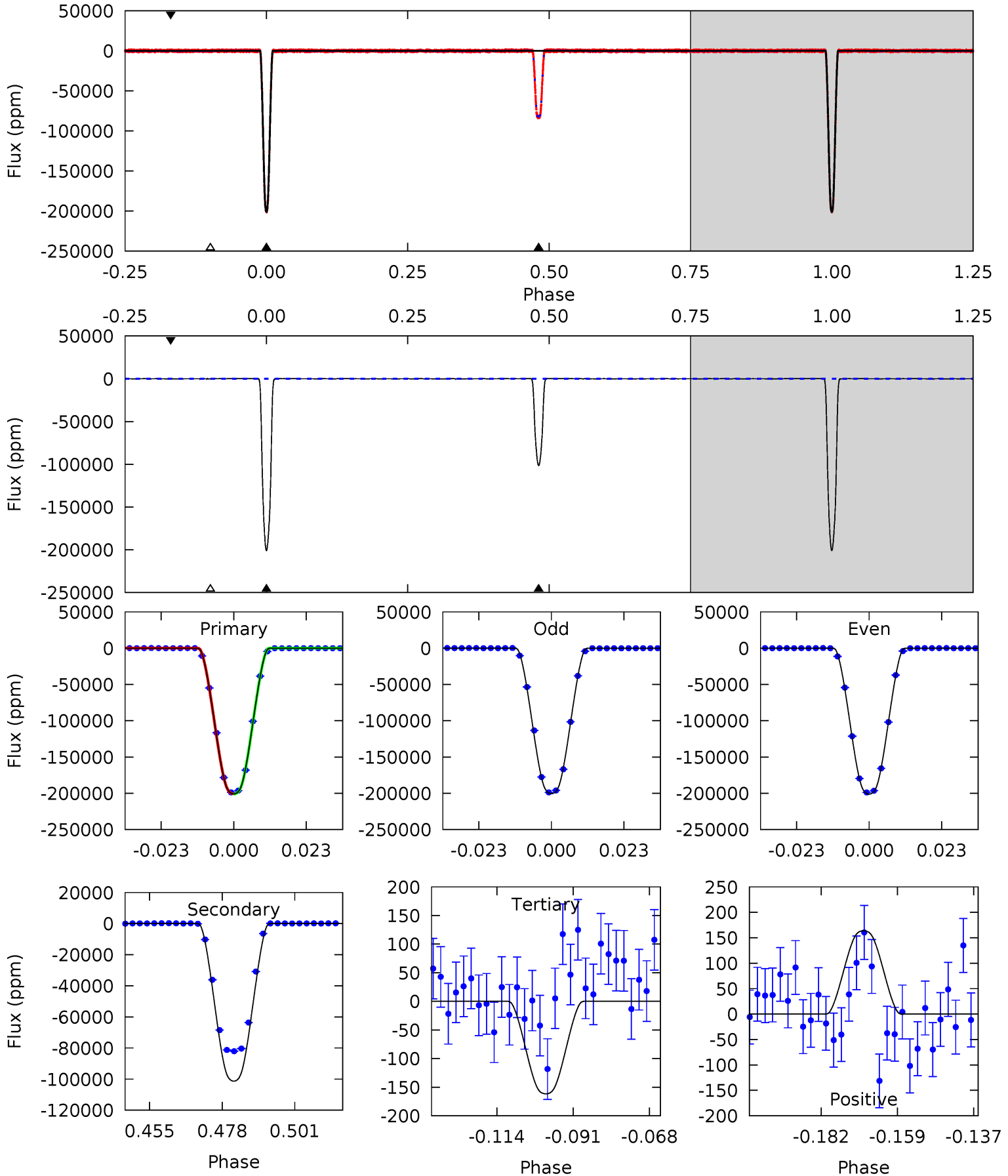
TCE 006233466-01 P= 15.873131 Days $T_0=143.875888$ (BKJD)



DV Model-Shift Uniqueness Test

006233466-01, P = 15.873383 Days, E = 143.859789 Days

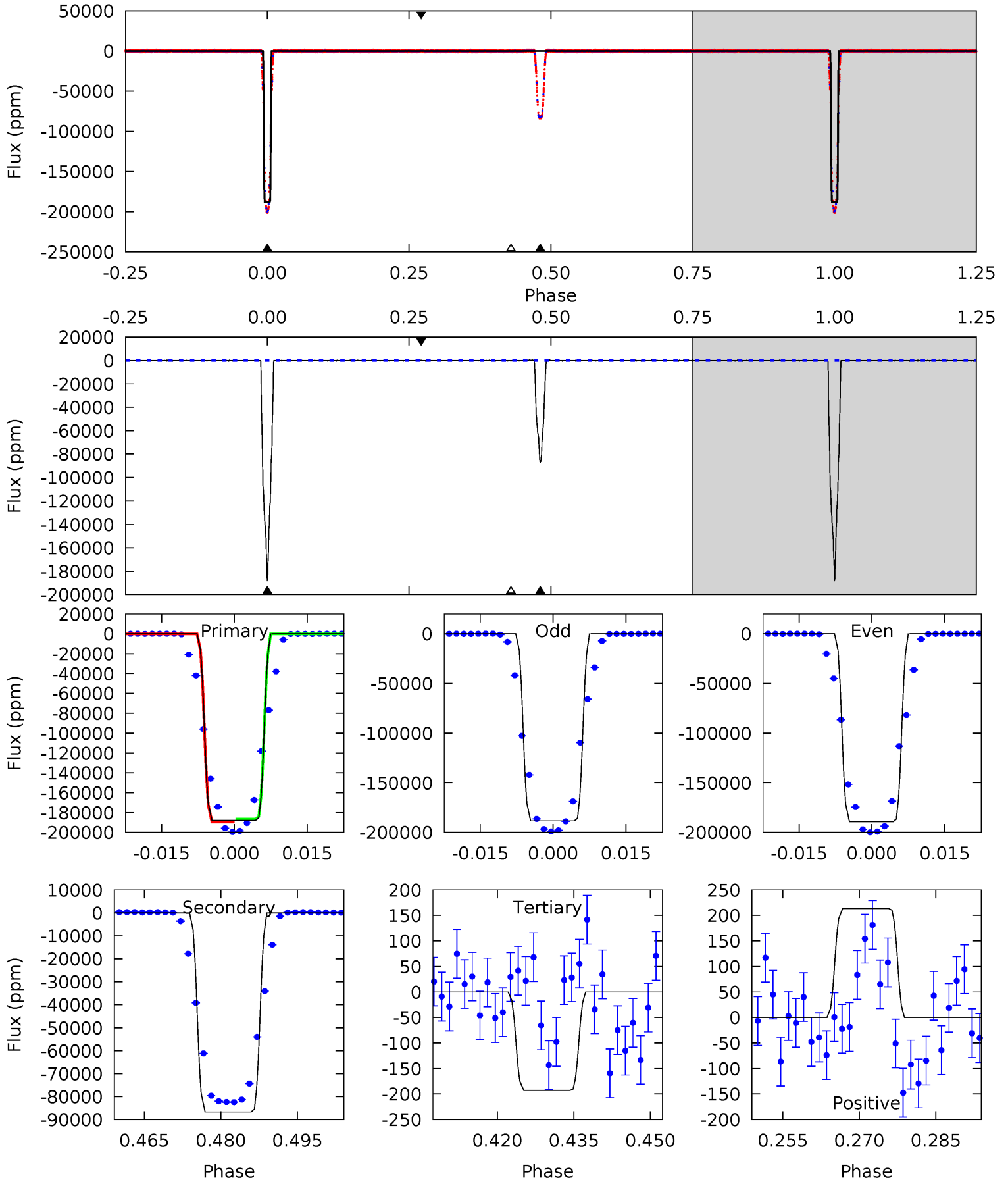
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8539	4308	6.87	6.97	4.87	2.28	3.32	8532	8532	4302	4301	12.2	0.99	0.00	0



Alt Model-Shift Uniqueness Test

006233466-01, P = 15.873131 Days, E = 143.875888 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3854	1778	3.96	4.38	4.95	2.43	1.34	3850	3850	1774	1773	9.99	1.01	0.00	2.97



Stellar Parameters For KIC 006233466

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5622^{+186}_{-169}	$3.907^{+0.568}_{-0.177}$	$-0.120^{+0.300}_{-0.250}$	$1.895^{+0.507}_{-0.942}$	$1.056^{+0.129}_{-0.194}$	$0.218^{+1.366}_{-0.110}$
	+3%/-3%	+15%/-5%	+250%/-208%	+27%/-50%	+12%/-18%	+625%/-50%
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 006233466-01 / KOI 3552.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-101347 ± 24	$85.83^{+15.64}_{-22.03}$	1324^{+119}_{-182}	5033^{+152}_{-138}	130^{+109}_{-33}
Alt.	-86653 ± 49	$90.02^{+15.14}_{-25.21}$	1319^{+125}_{-182}	4775^{+147}_{-133}	102^{+92}_{-26}

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 $A_{obs} \gg 1.0$

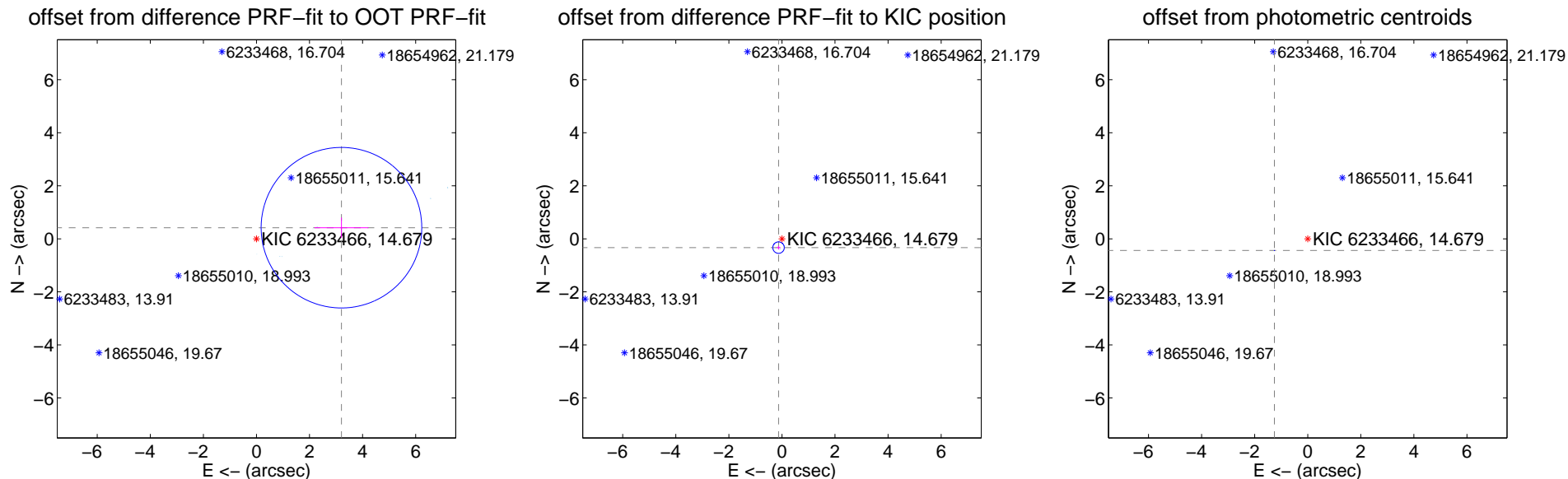
DV Centroid Data

Supplemental centroid analysis for 006233466-01. Kepler magnitude: 14.68. Transit SNR 3903.49

There are 10 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.230 ± 1.009	3.20	-3.203 ± 1.016	0.419 ± 0.382
PRF-fit source offset from KIC position	0.355 ± 0.072	4.93	0.128 ± 0.078	-0.331 ± 0.071
photometric centroid source offset	1.33 ± 0.00	1208.59	1.26 ± 0.00	-0.44 ± 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.



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 no difference image



Q6 no OOT image



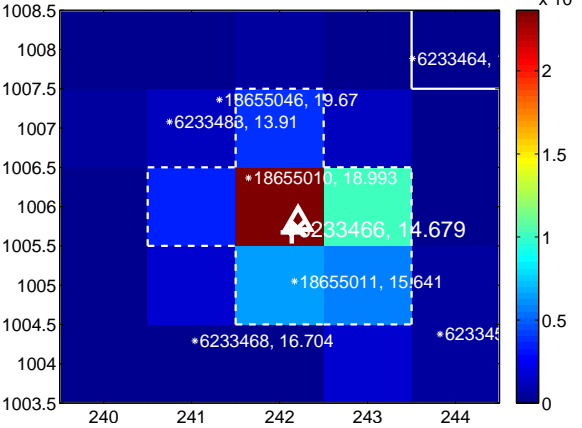
Q7 no difference image



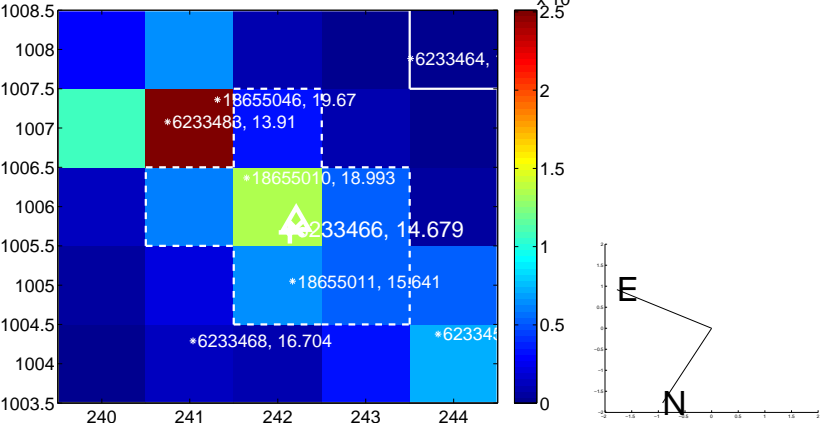
Q7 no OOT image



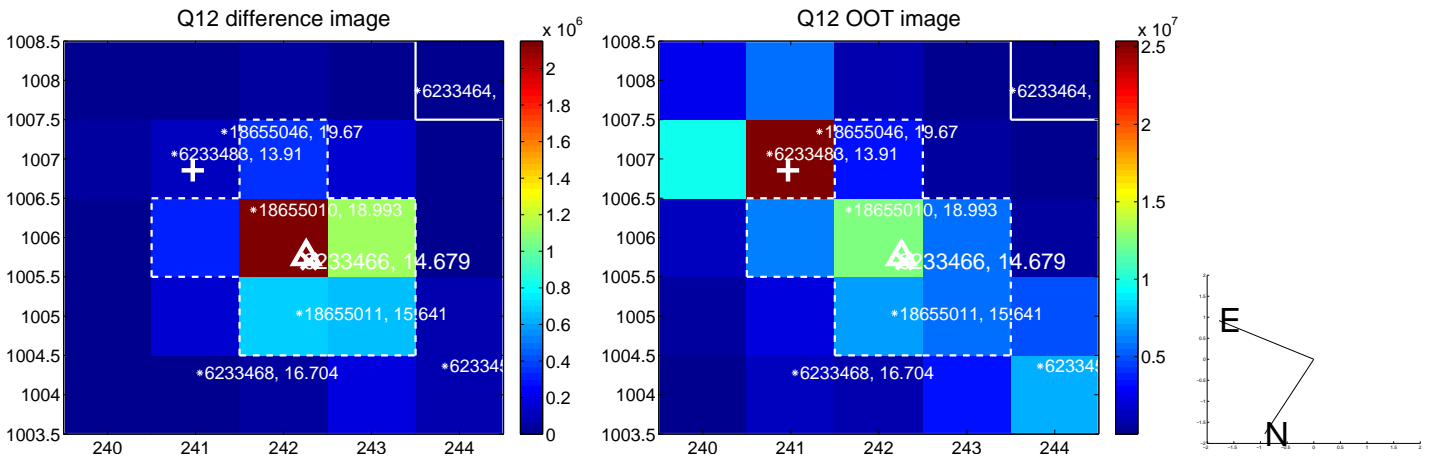
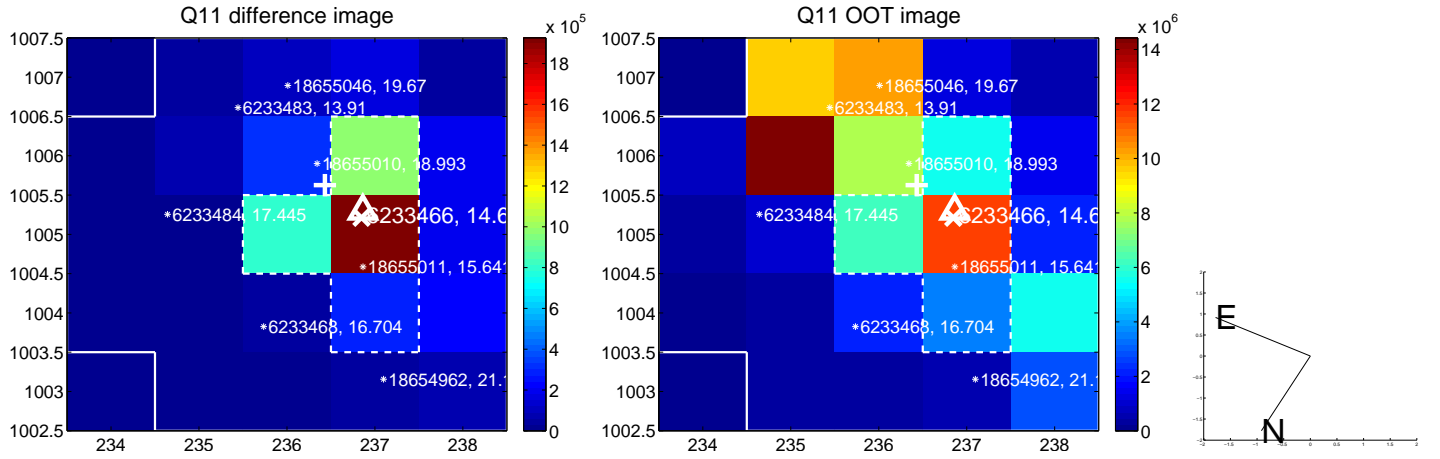
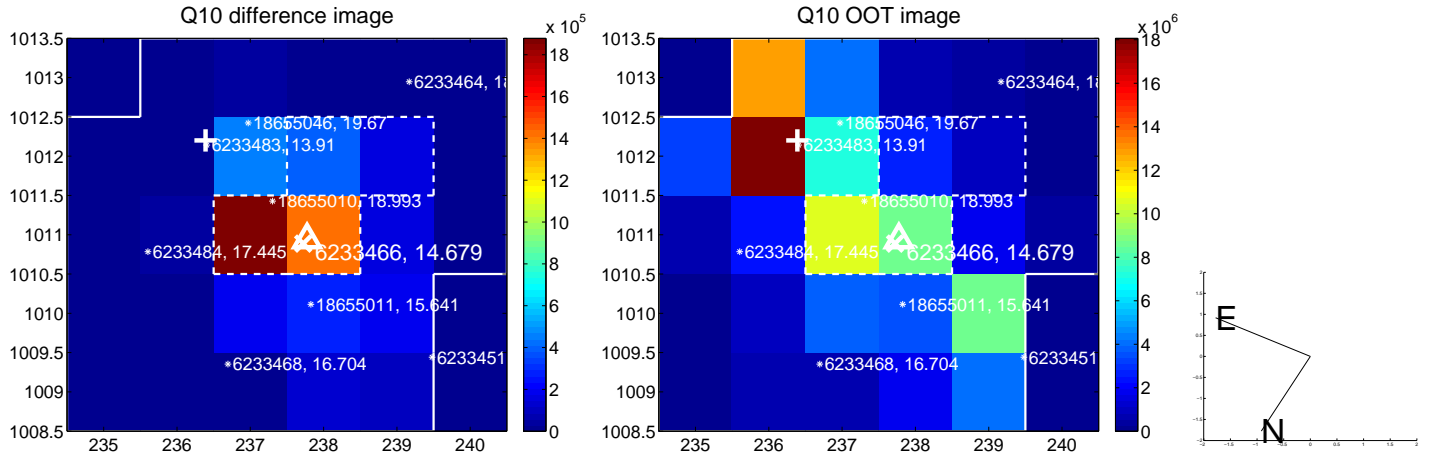
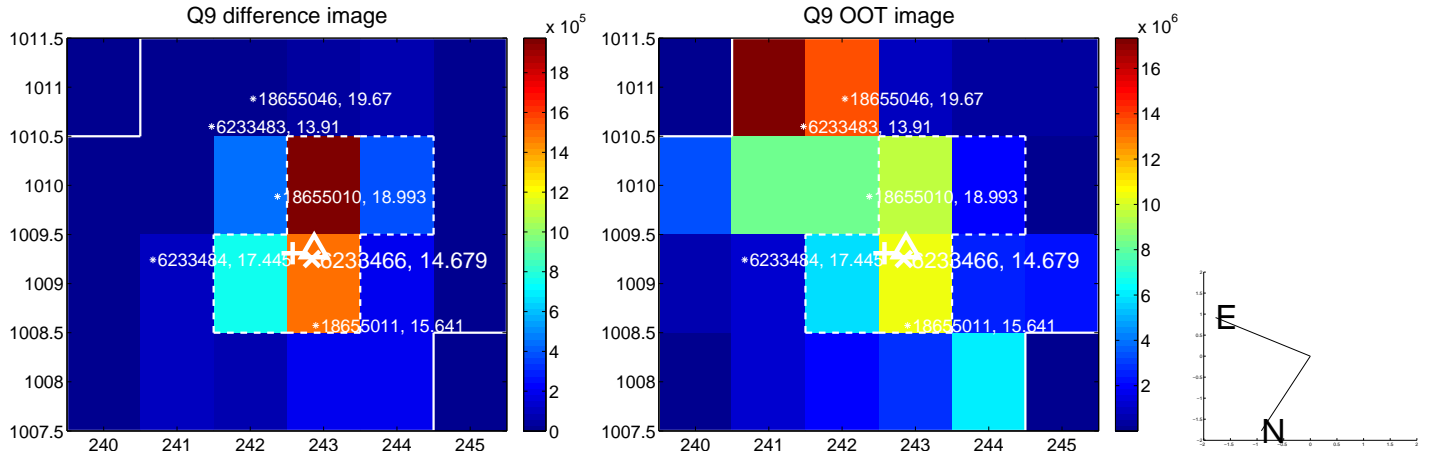
Q8 difference image



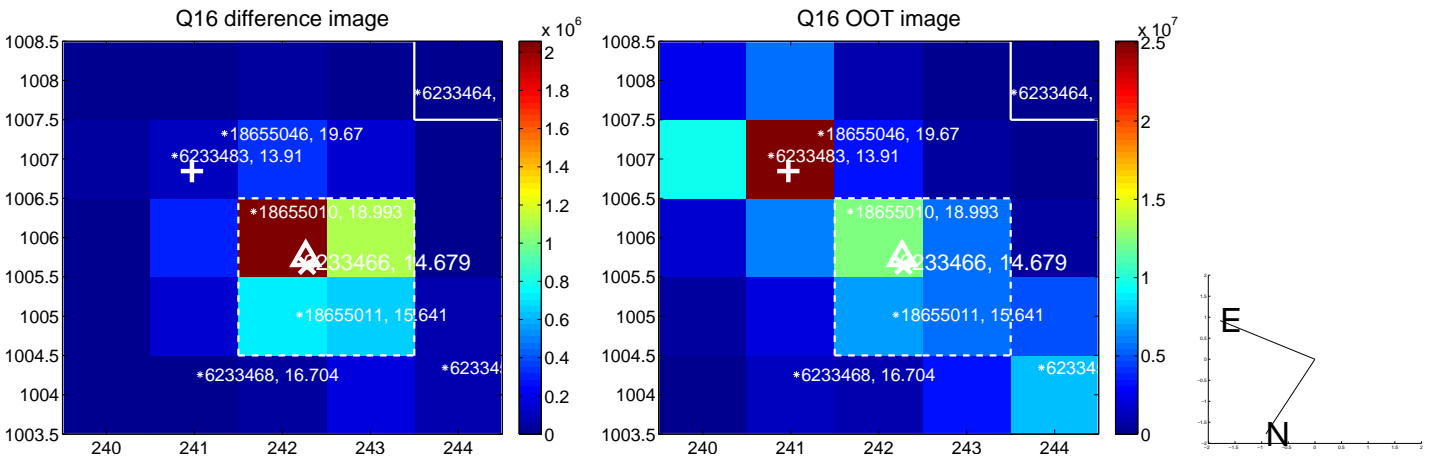
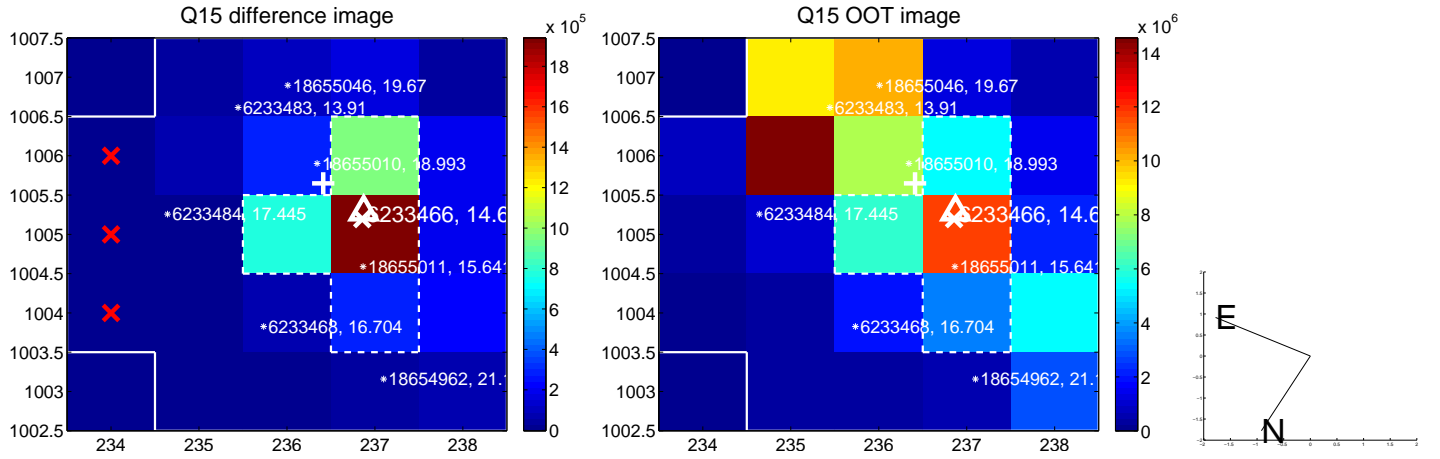
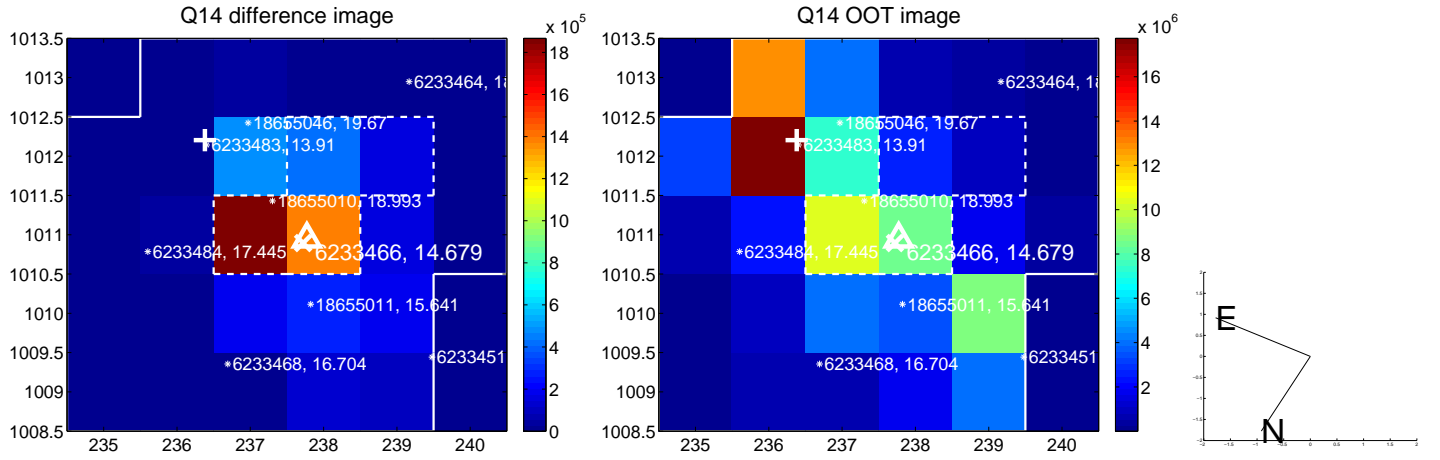
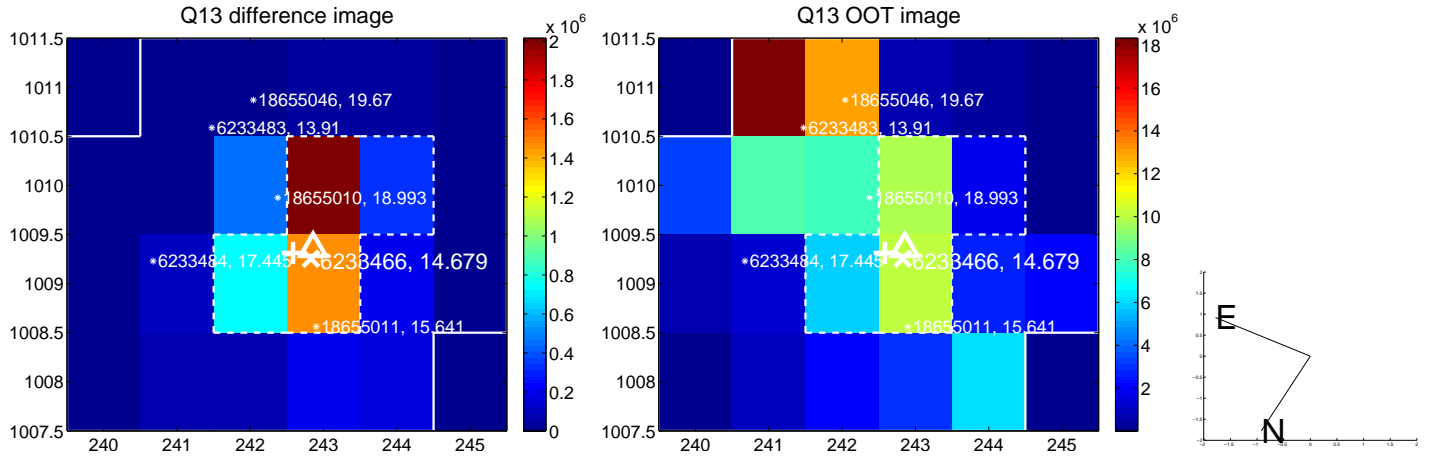
Q8 OOT image



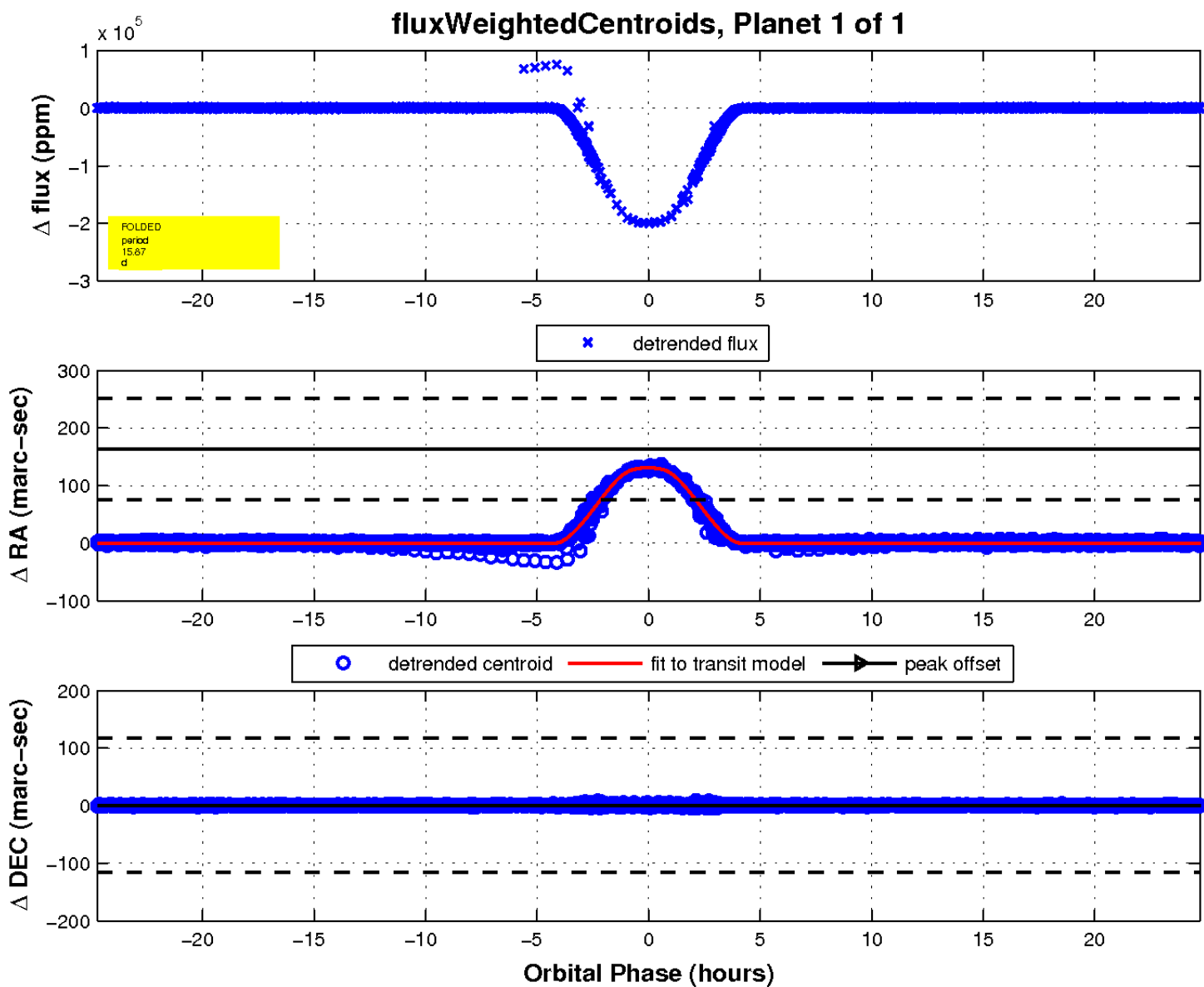
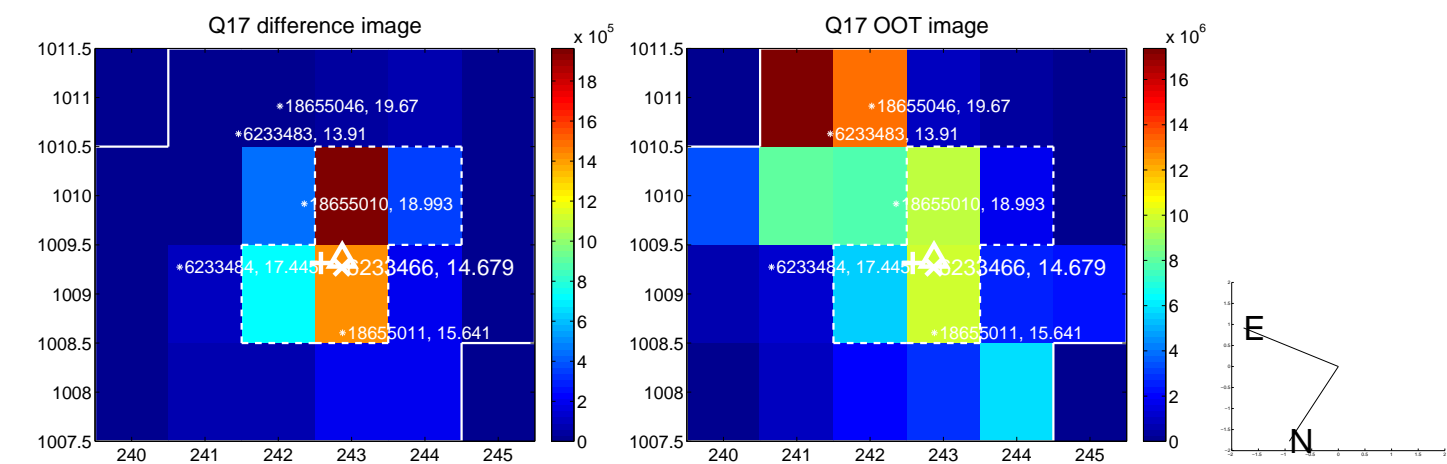
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

