

KIC 003124420

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})
003124420-01	OBS	3918.01	0.948967	131.504877	303982.8	3.618	1036.2	573.7	1.00	5780	55.88	2798.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003124420-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—SEASONAL_DEPTH_ALT—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.

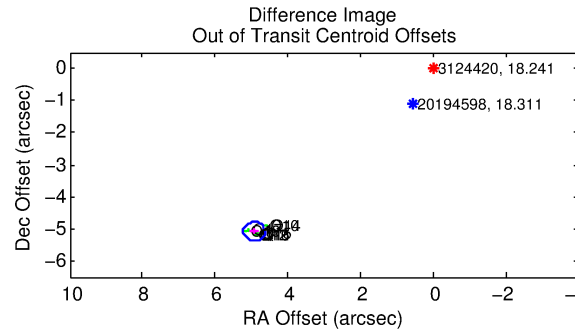
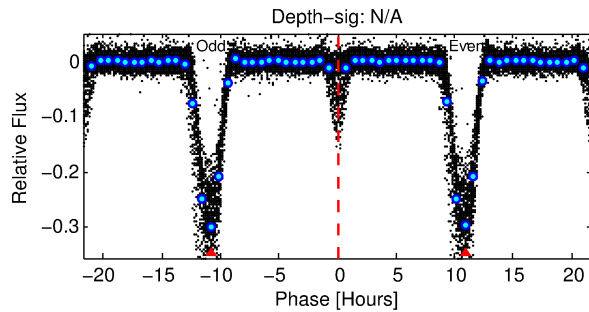
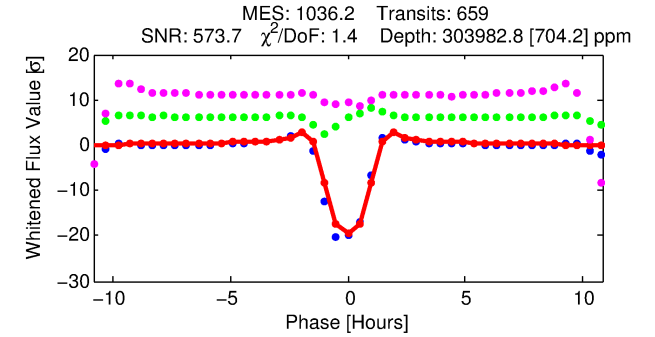
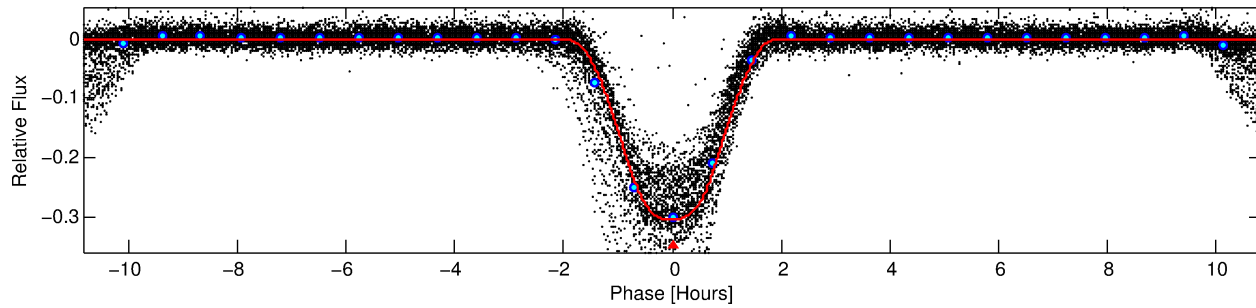
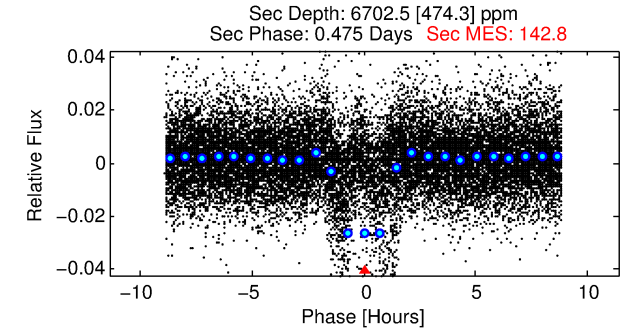
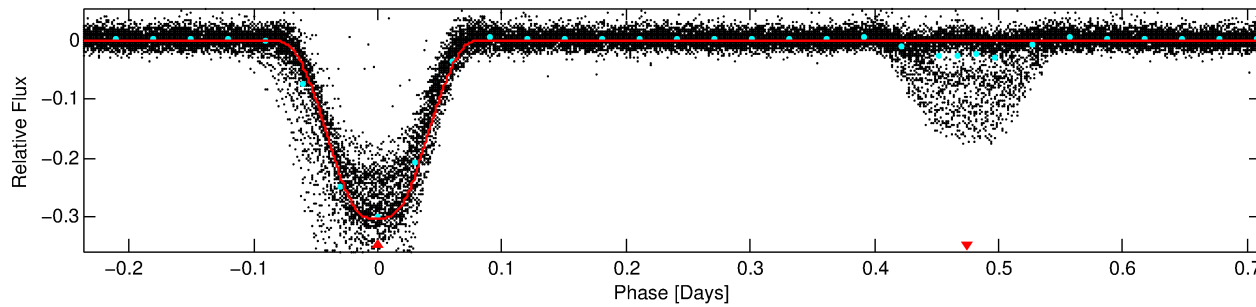
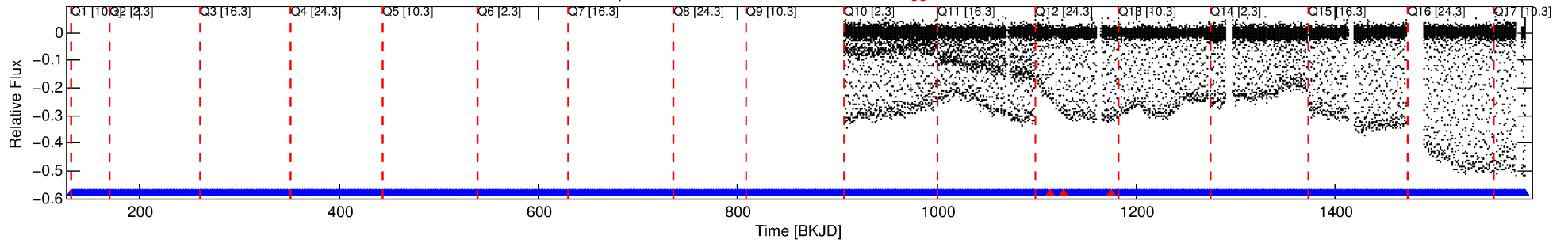
Ephemeris Match Information For 003124420-01

No Significant Match Found

DV One-Page Summary

KIC: 3124420 Candidate: 1 of 1 Period: 0.949 d
KOI: K03918.01 Corr: 0.926

Kp: 18.24 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 0.94897 [0.00000] d
Epoch = 131.5049 [0.0001] BKJD
Rp/R* = 0.5121 [0.0008]
a/R* = 3.14 [0.01]
b = 0.20 [0.01]
Seff = 2798.58 [0.00]
Teff = 1855 [0] K
Rp = 55.88 [0.09] Re
a = 0.0189 [0.0000] AU
Ag = 0.42 [0.03] [-19.34σ]
Teffp = 2311 [41] K [11.15σ]

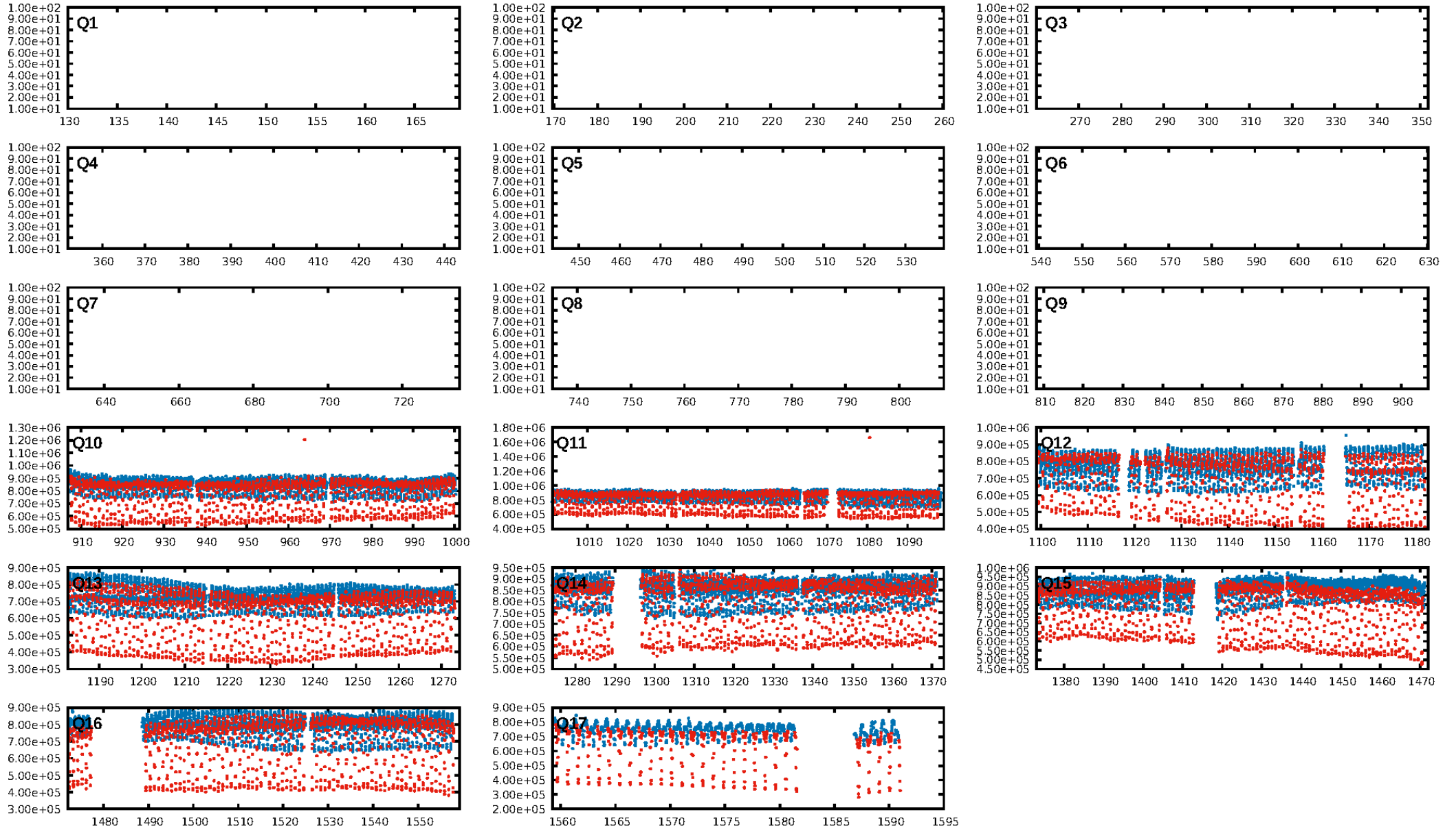
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [627/630]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 7.075 arcsec [72.83σ]
KicOffset-rm: 1.219 arcsec [17.03σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

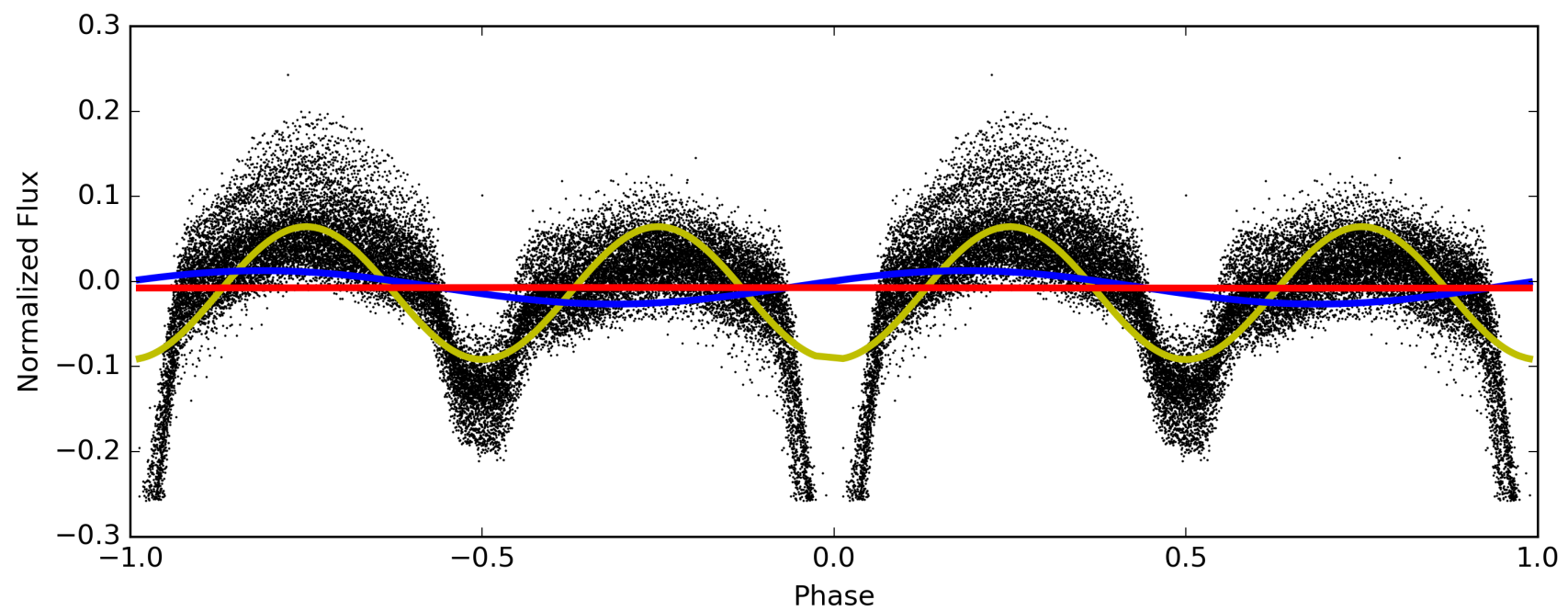
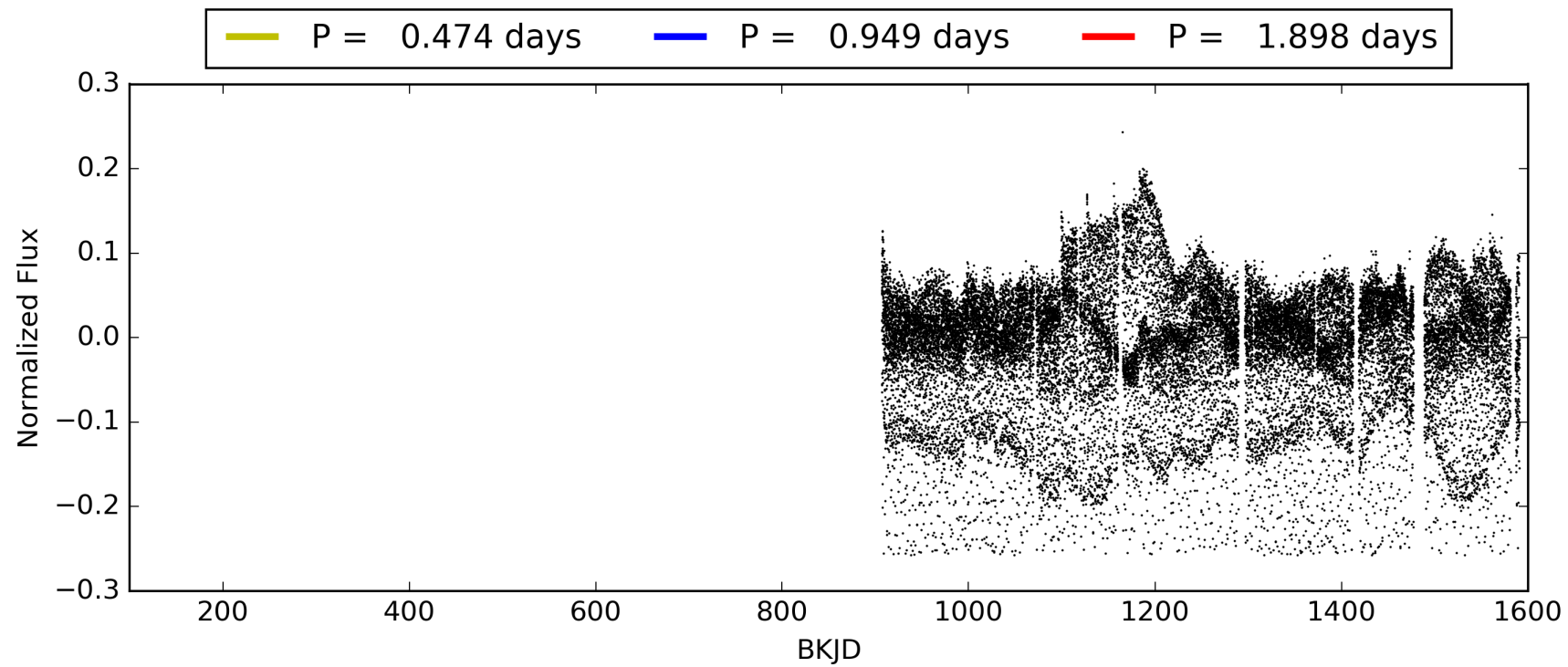
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:35:03 Z

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

TCE 003124420-01, PDC Light Curves

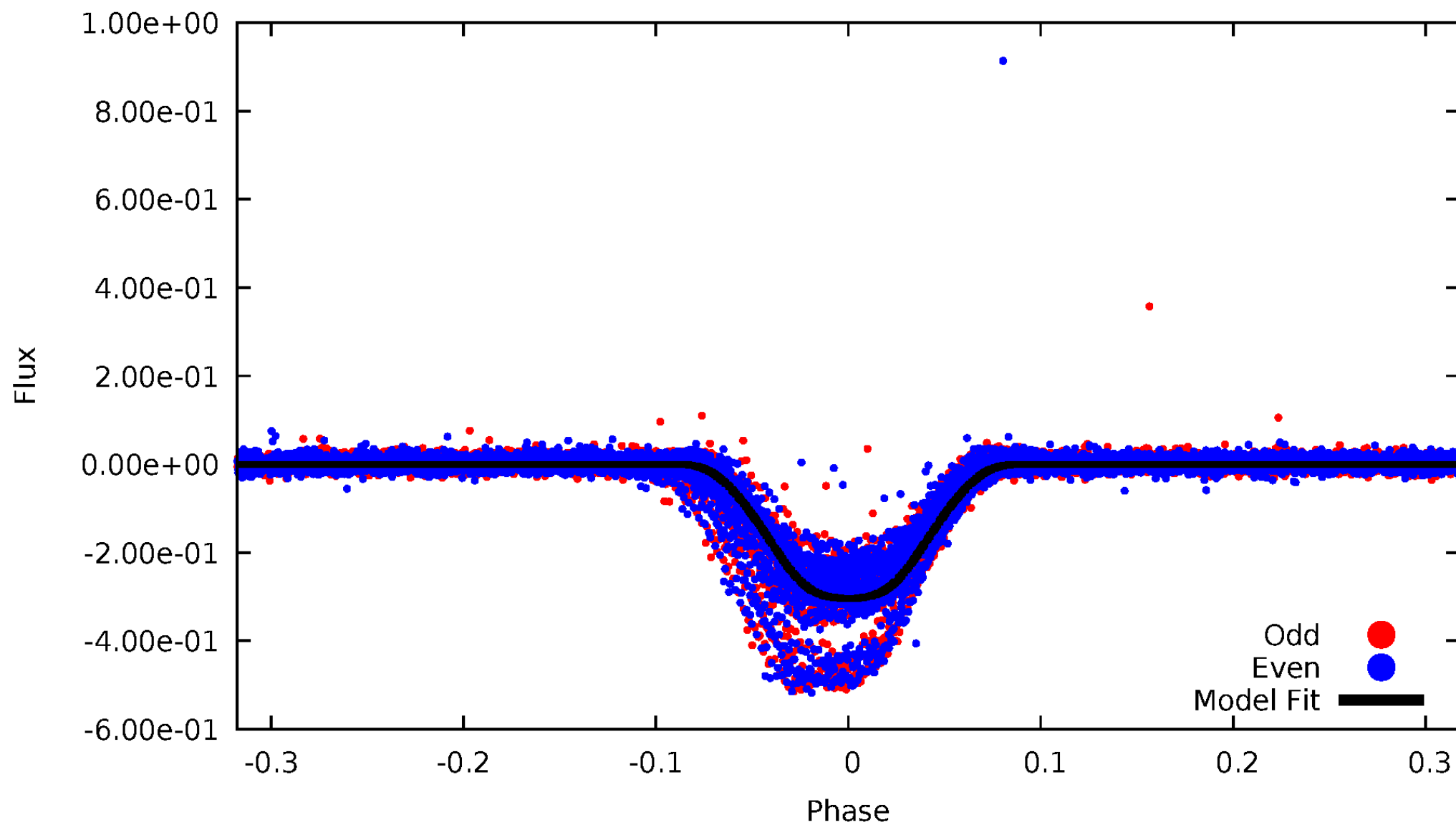


TCE 003124420-01



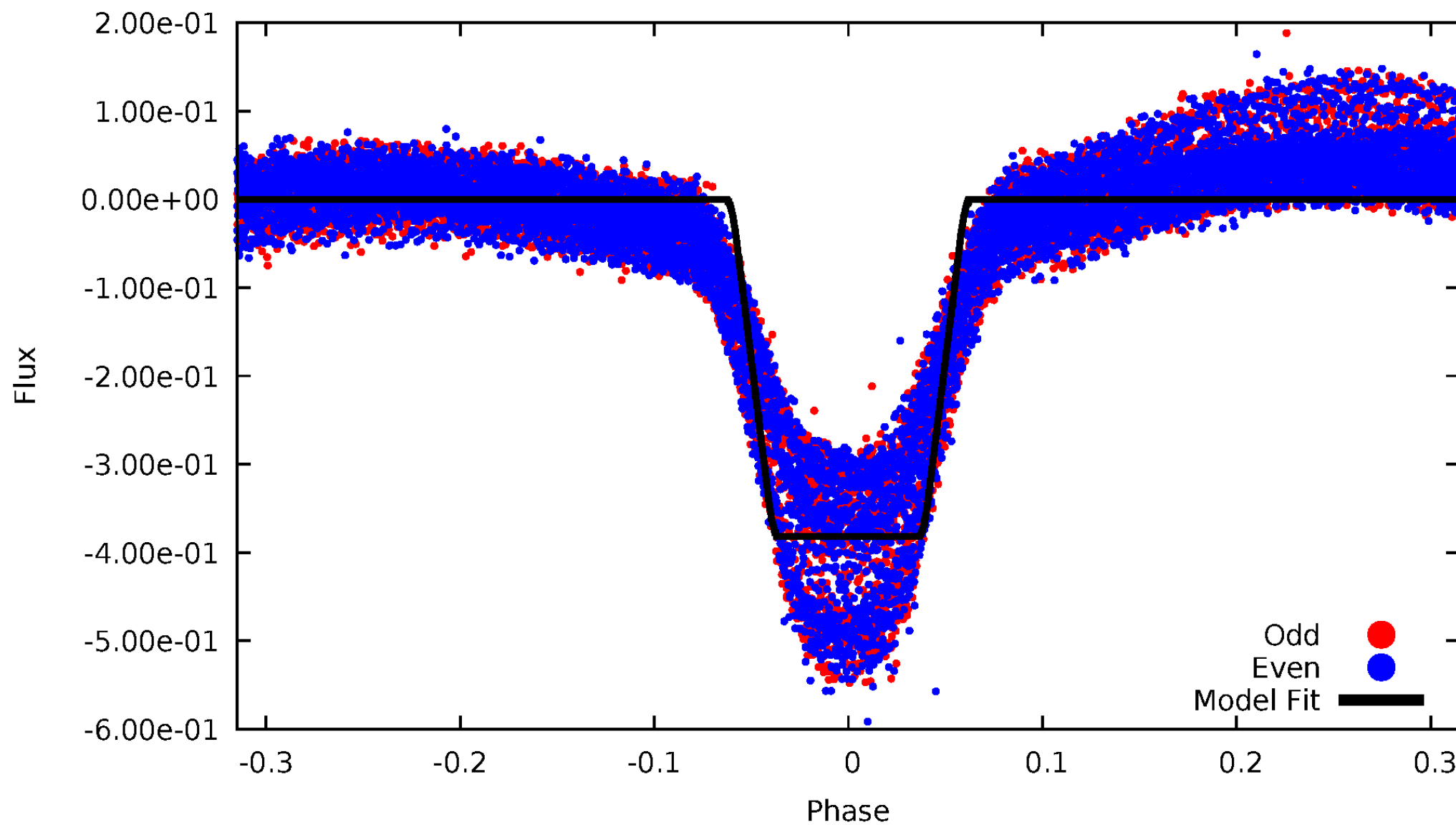
DV Odd/Even

TCE 003124420-01



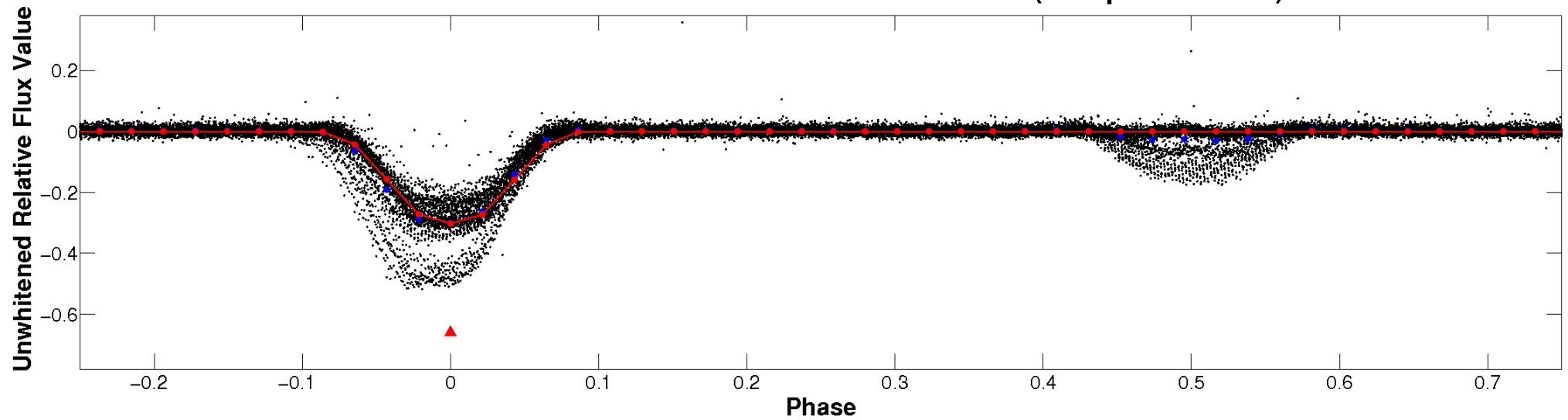
ALT Odd/Even

TCE 003124420-01

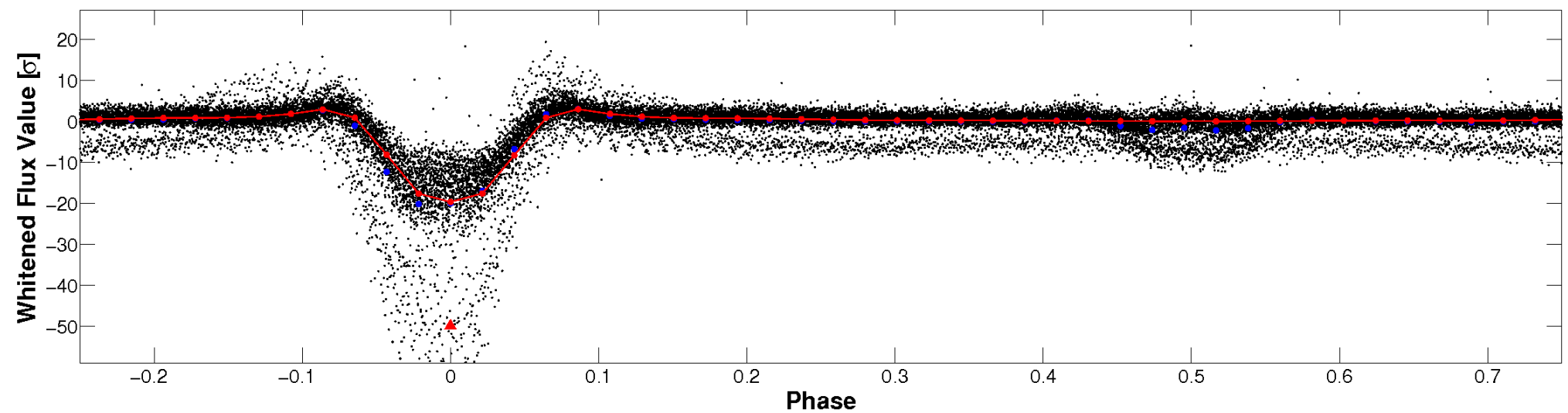


Non-Whitened Vs. Whitened Light Curve

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

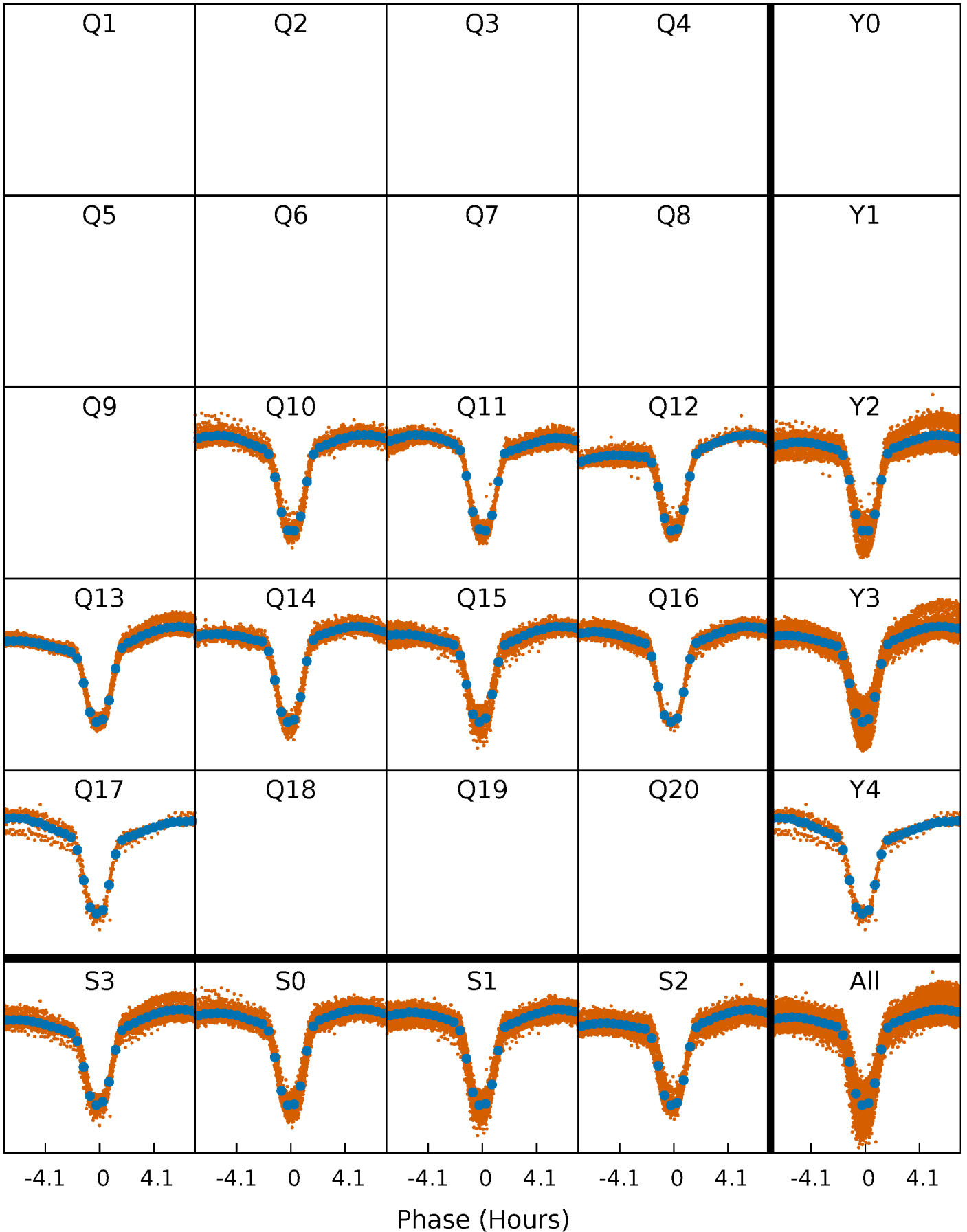


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



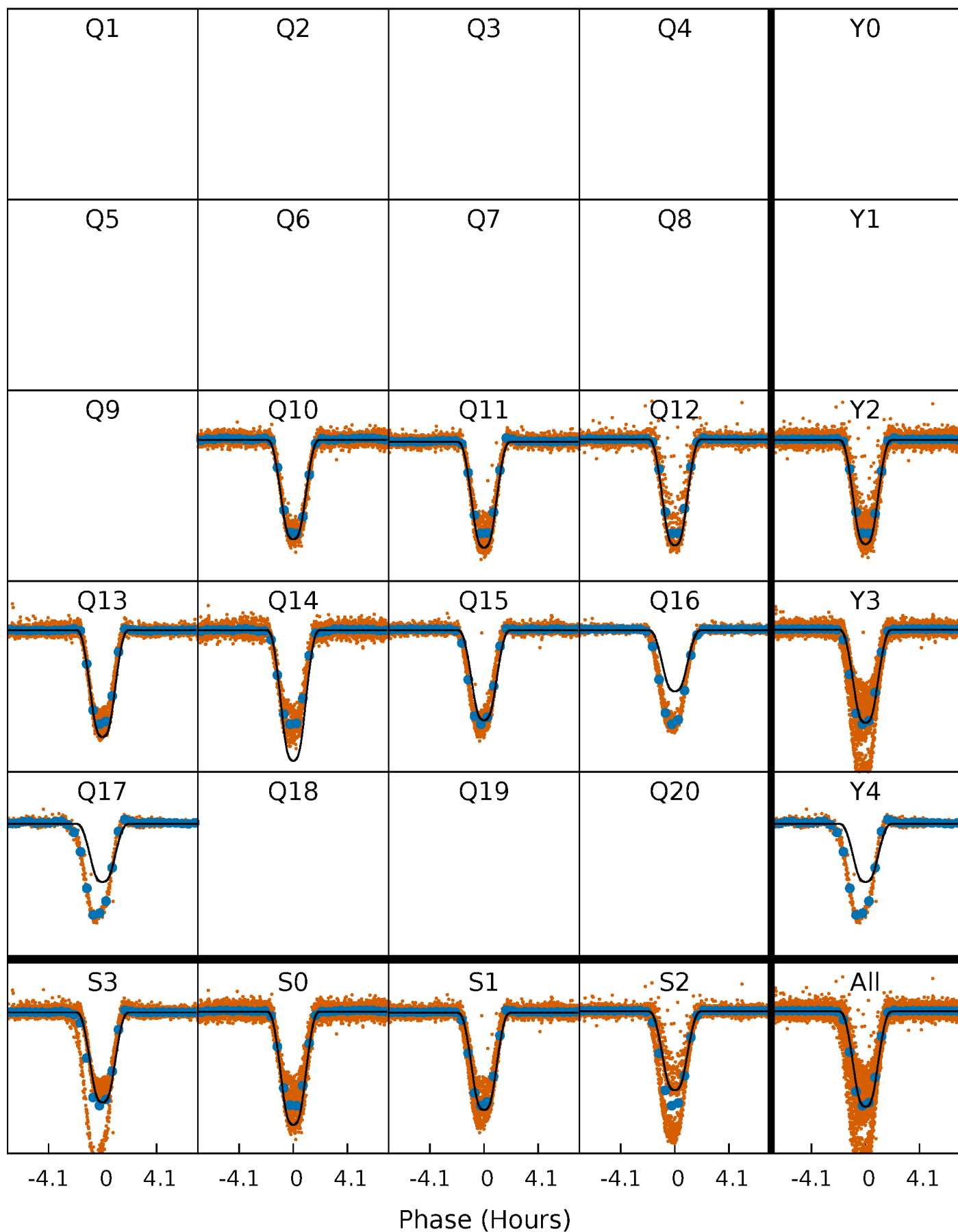
PDC Quarter-Phased Transit Curves

TCE 003124420-01 P= 0.948967 Days $T_0=131.504877$ (BKJD)



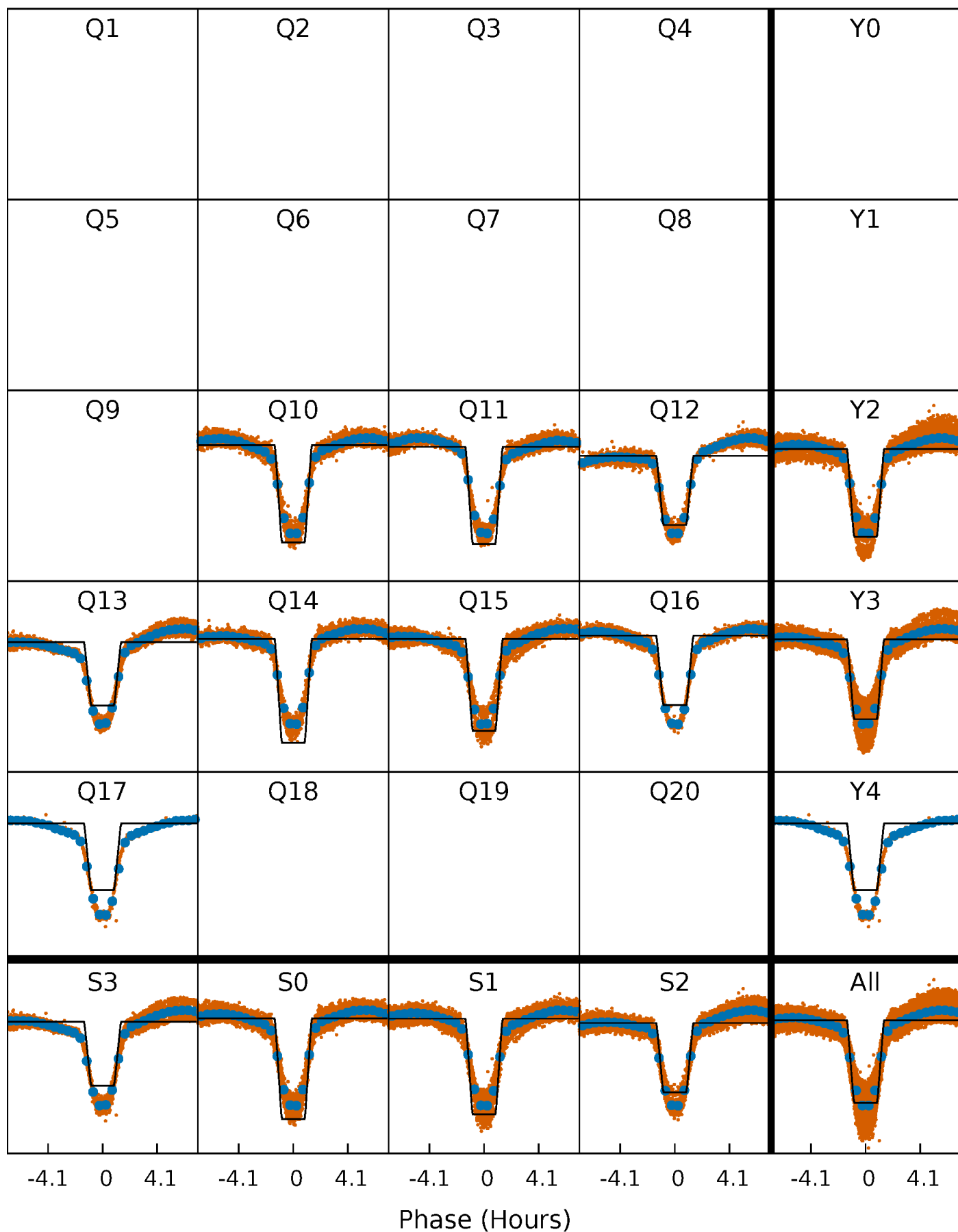
DV Quarter-Phased Transit Curves

TCE 003124420-01 P= 0.948967 Days $T_0=131.504877$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

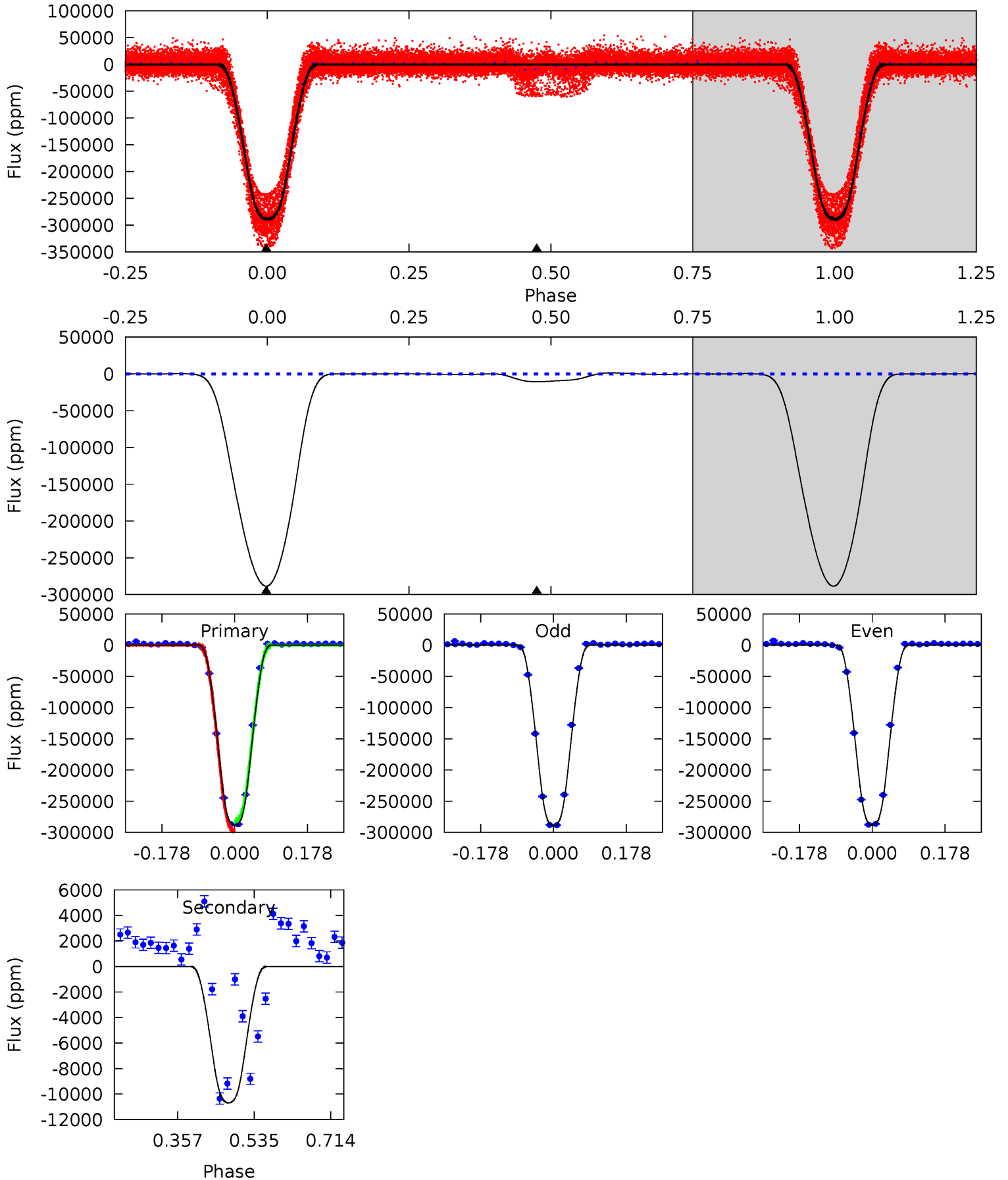
TCE 003124420-01 P= 0.948951 Days $T_0=131.521023$ (BKJD)



DV Model-Shift Uniqueness Test

003124420-01, P = 0.948967 Days, E = 131.504877 Days

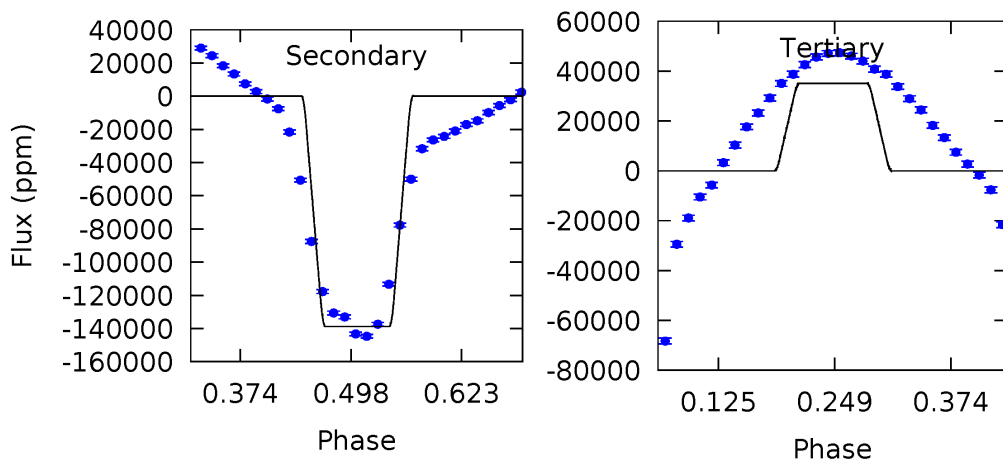
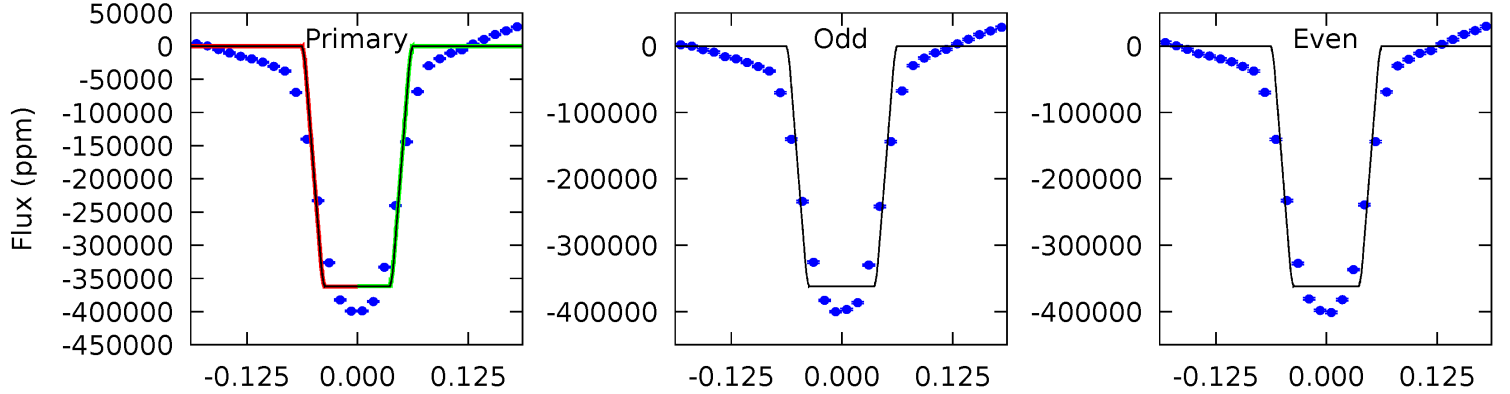
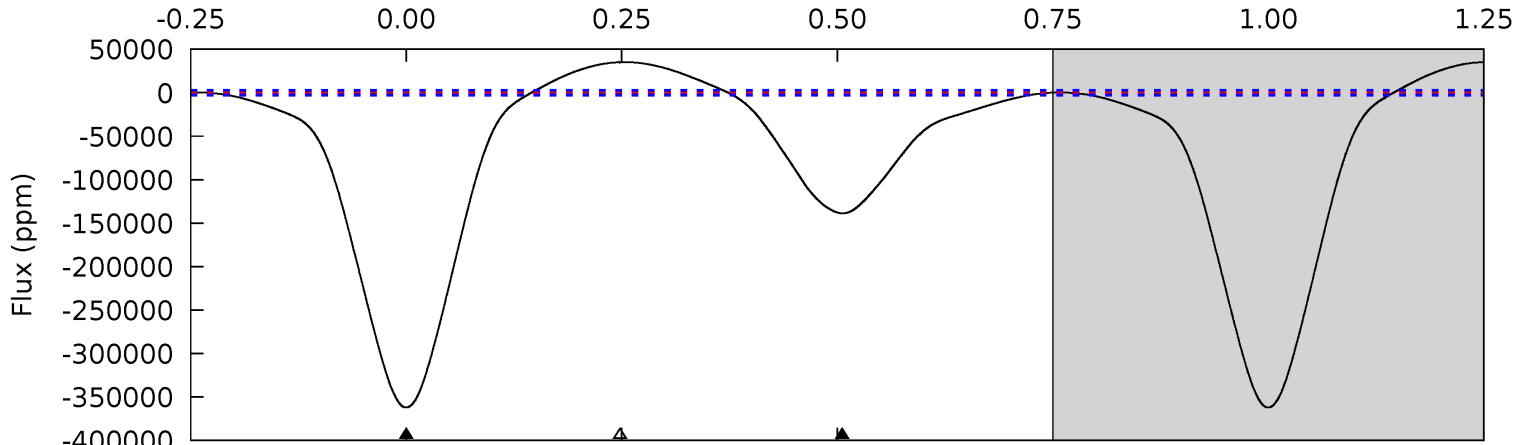
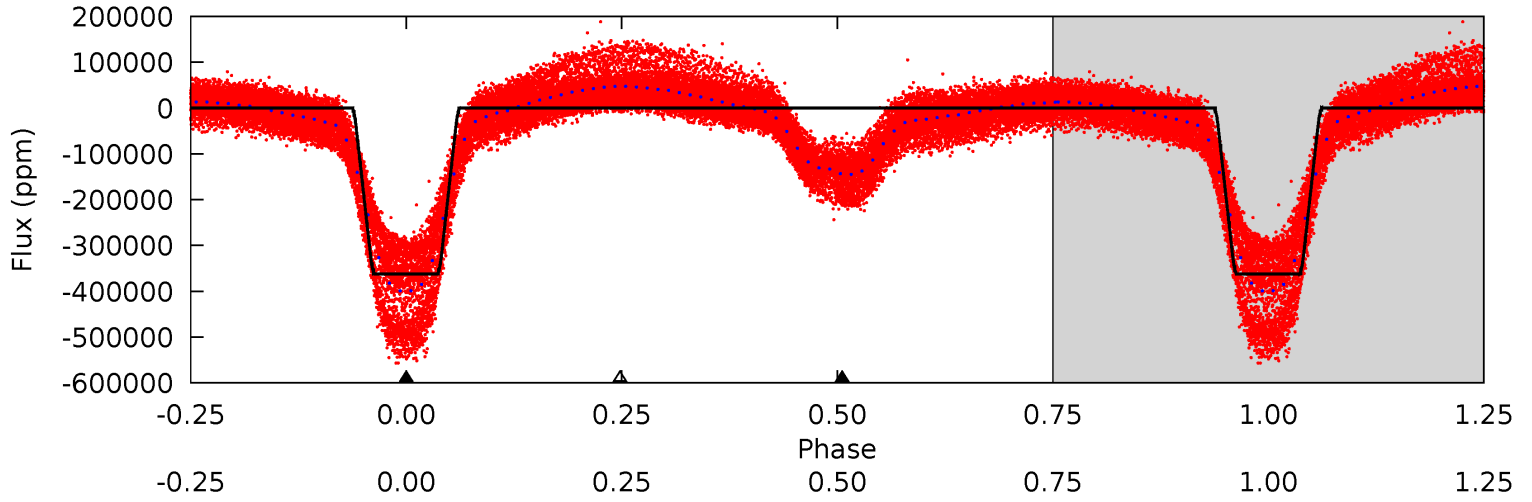
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1722	63.8	0	0	4.44	1.35	2.12	1722	1722	63.8	63.8	3.80	1.04	0.01	47.4



Alt Model-Shift Uniqueness Test

003124420-01, P = 0.948951 Days, E = 131.521023 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
584.1	223.8	-56.6	0	4.52	1.54	30.4	640.6	584.1	280.3	223.8	0.16	1.06	0.09	0.60



Stellar Parameters For KIC 003124420

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003124420-01 / KOI 3918.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10688 ± 168	$55.96^{+4.03}_{-4.28}$	2597^{+124}_{-134}	2939^{+75}_{-77}	$0.678^{+0.097}_{-0.080}$
Alt.	-138767 ± 620	$67.59^{+4.89}_{-4.38}$	2596^{+123}_{-125}	4742^{+145}_{-143}	$6.976^{+0.883}_{-0.863}$

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 $A_{obs} \gg 1.0$

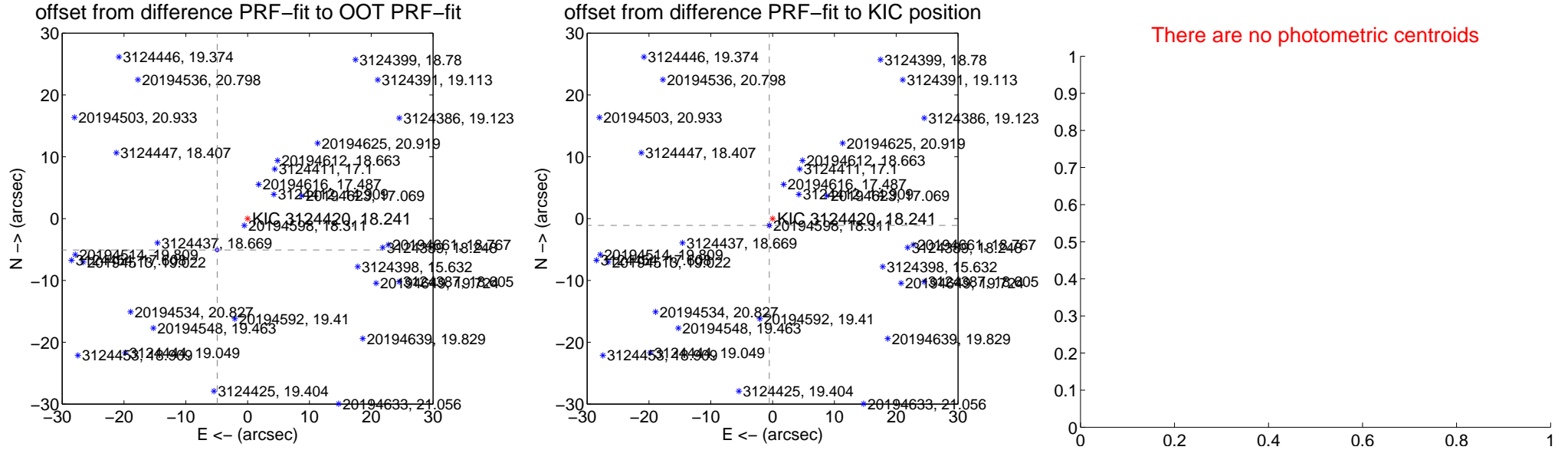
DV Centroid Data

Supplemental centroid analysis for 003124420-01. Kepler magnitude: 18.24. Transit SNR 573.67

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.03 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.075 ± 0.097	72.83	4.925 ± 0.098	-5.078 ± 0.079
PRF-fit source offset from KIC position	1.219 ± 0.072	17.03	0.527 ± 0.071	-1.099 ± 0.072
photometric centroid source offset	—	—	—	—



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.

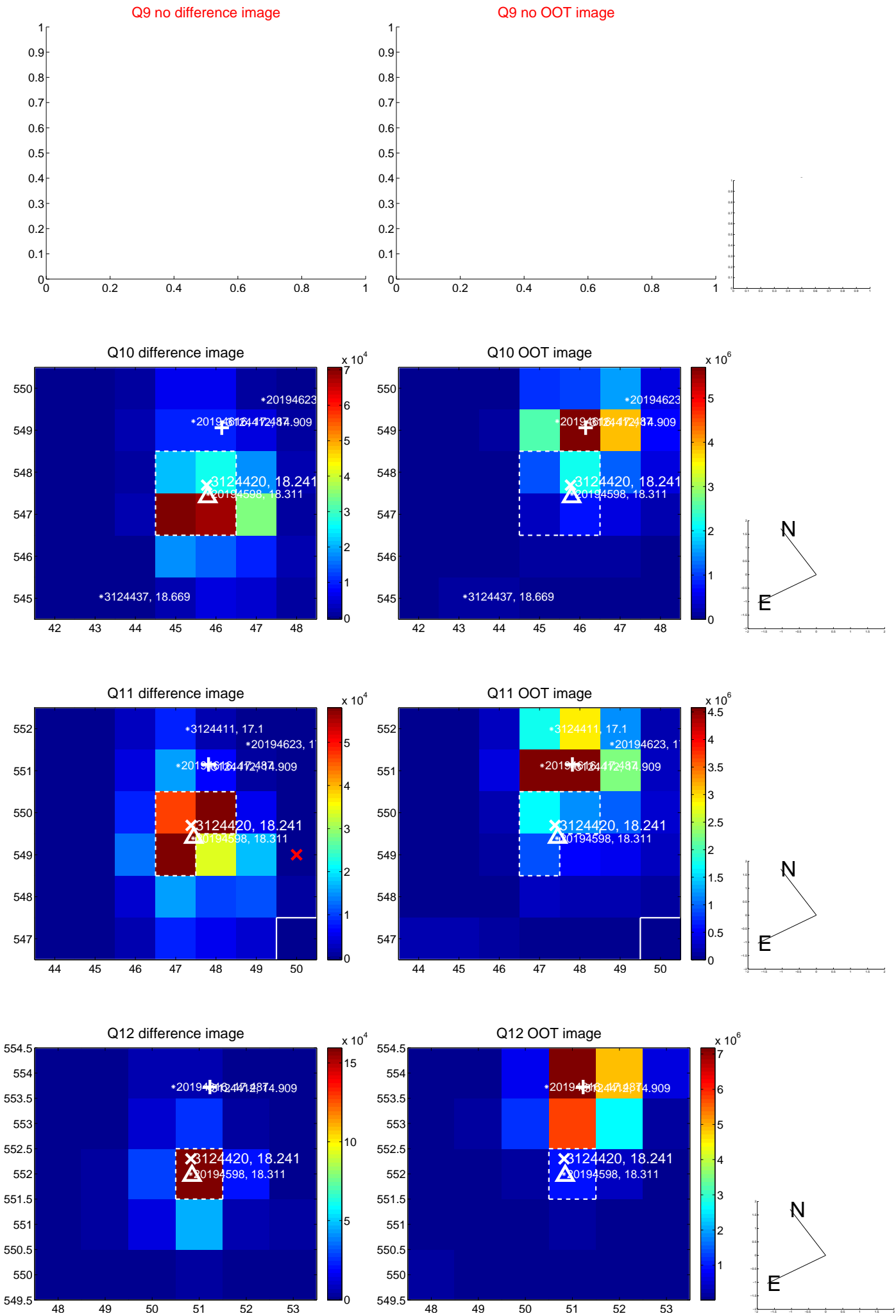
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



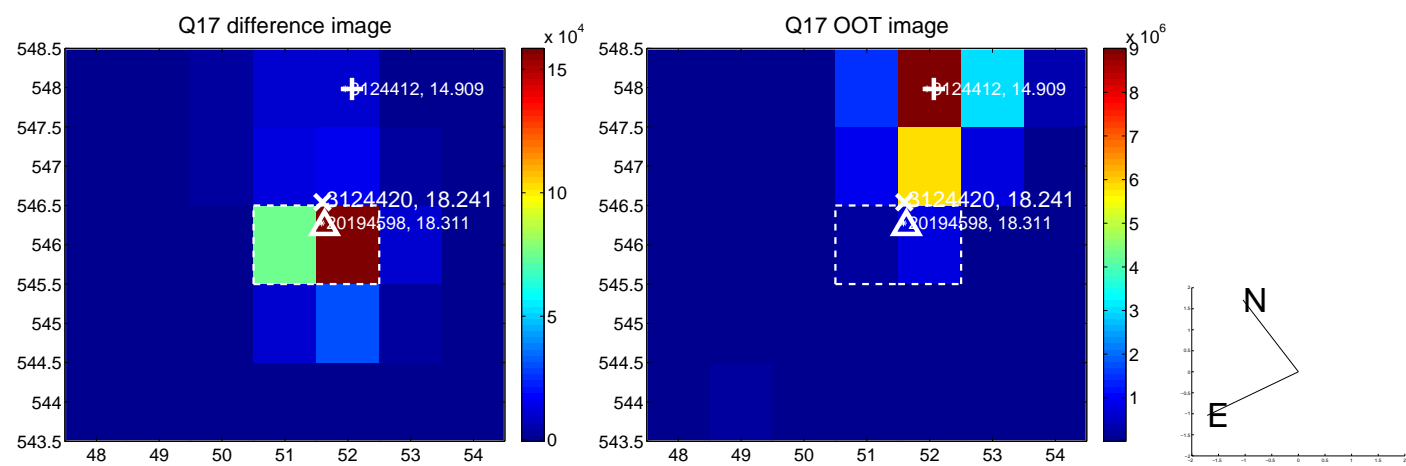
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

Declination