

KIC 006516932

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})
006516932-01	OBS	No	373.054476	495.133362	887.3	23.770	8.5	7.9	0.91	5319	4.53	0.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006516932-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

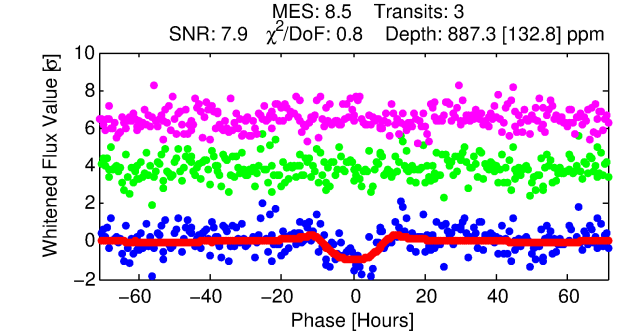
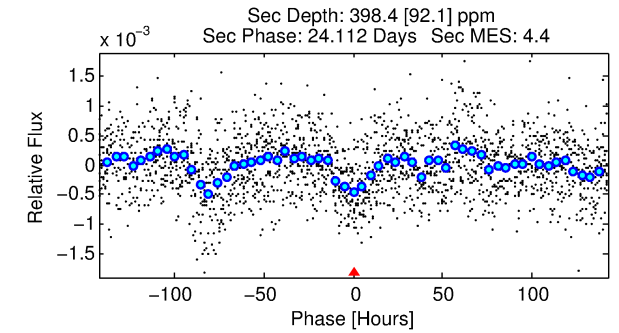
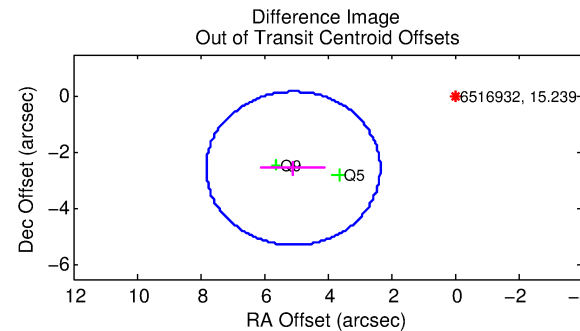
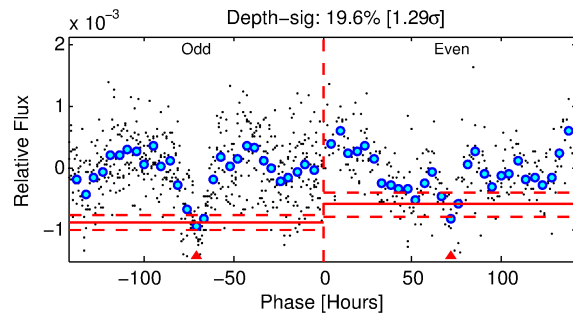
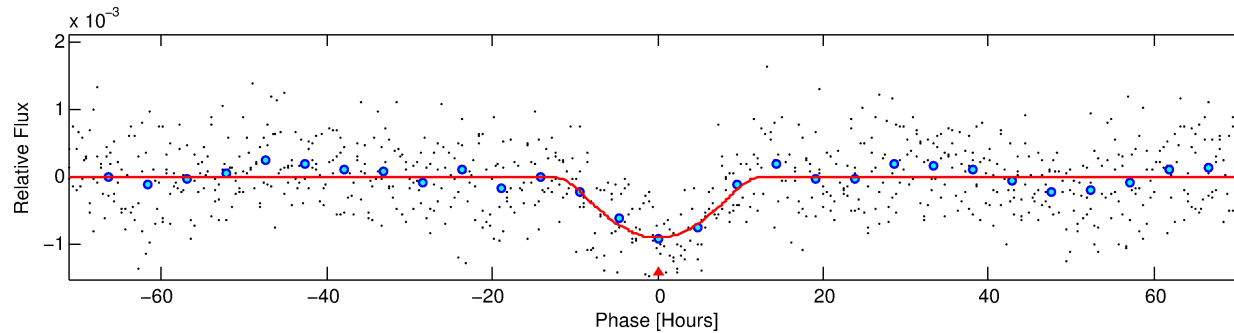
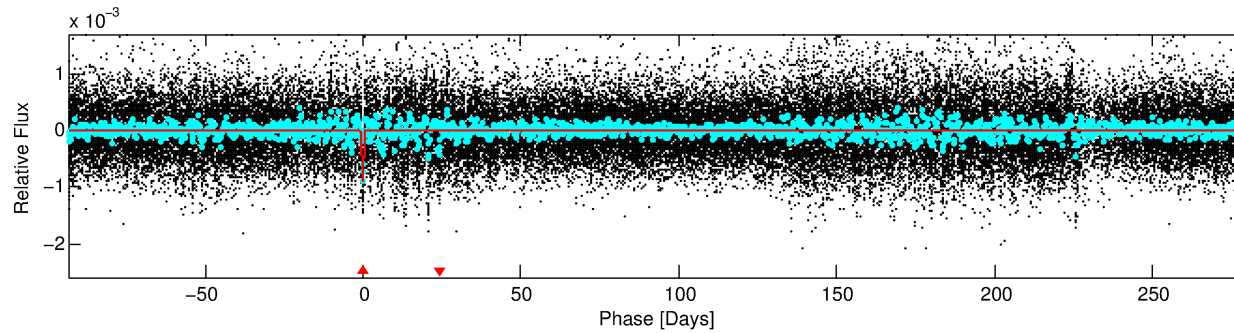
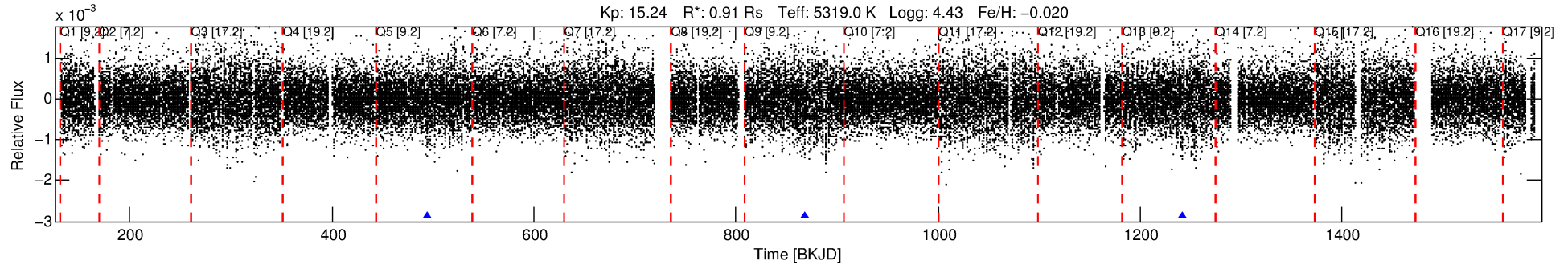
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006516932-01

No Significant Match Found

DV One-Page Summary

KIC: 6516932 Candidate: 1 of 1 Period: 373.054 d



DV Fit Results:

Period = 373.05448 [0.03231] d
Epoch = 495.1334 [0.0397] BKJD
Rp/R* = 0.0456 [0.0607]
a/R* = 41.94 [18.17]
b = 0.99 [0.11]
Seff = 0.66 [0.23]
Teq = 230 [20] K
Rp = 4.53 [6.11] Re
a = 0.9475 [0.1959] AU
Ag = 9575.19 [25766.87] [0.37 σ]
Teffp = 3517 [2351] K [1.40 σ]

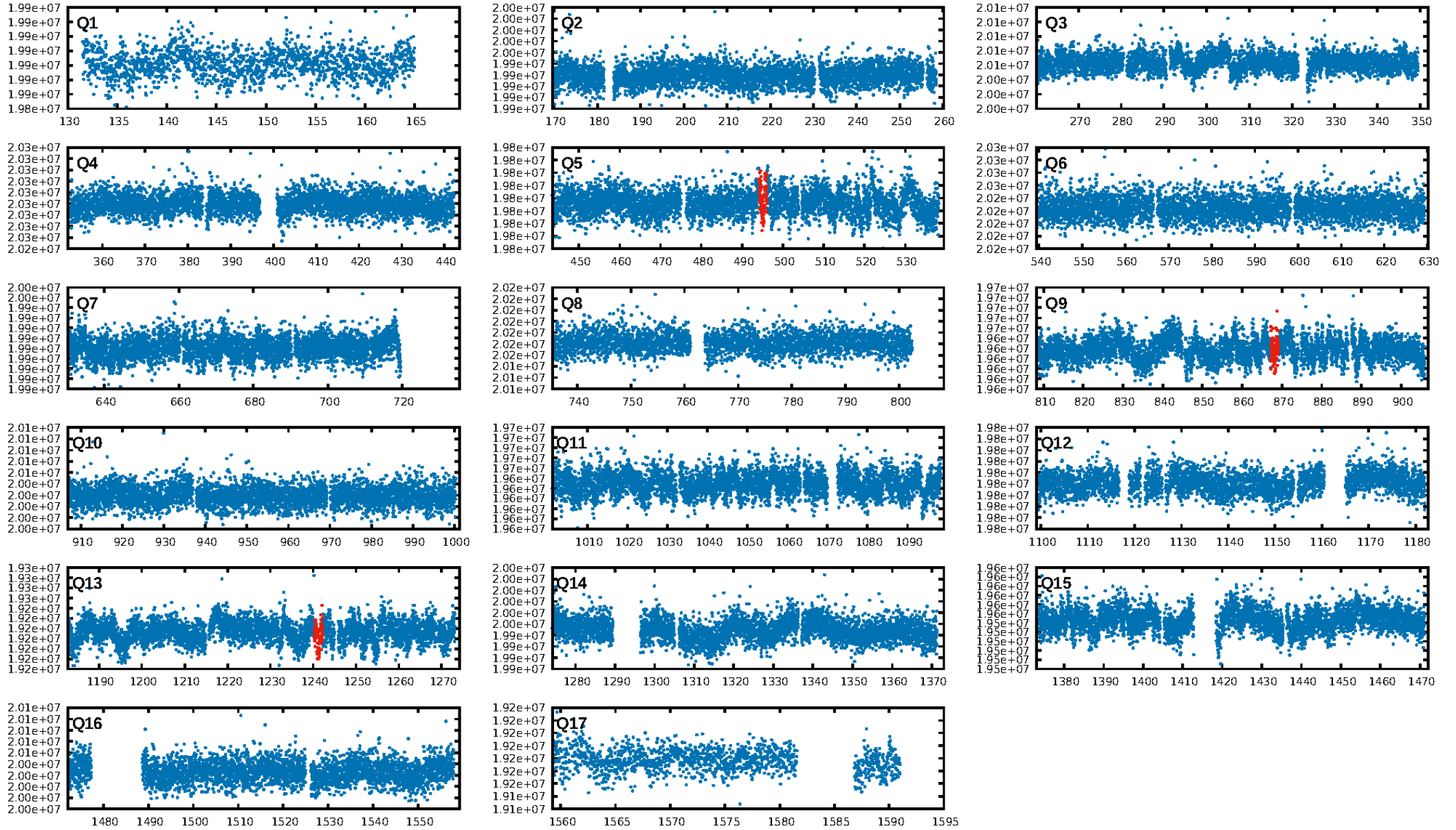
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 30.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.10e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1898
Centroid-sig: 16.6%
Centroid-so: 2.298 arcsec [1.09 σ]
OotOffset-rm: 5.690 arcsec [6.24 σ]
KicOffset-rm: 5.704 arcsec [6.22 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

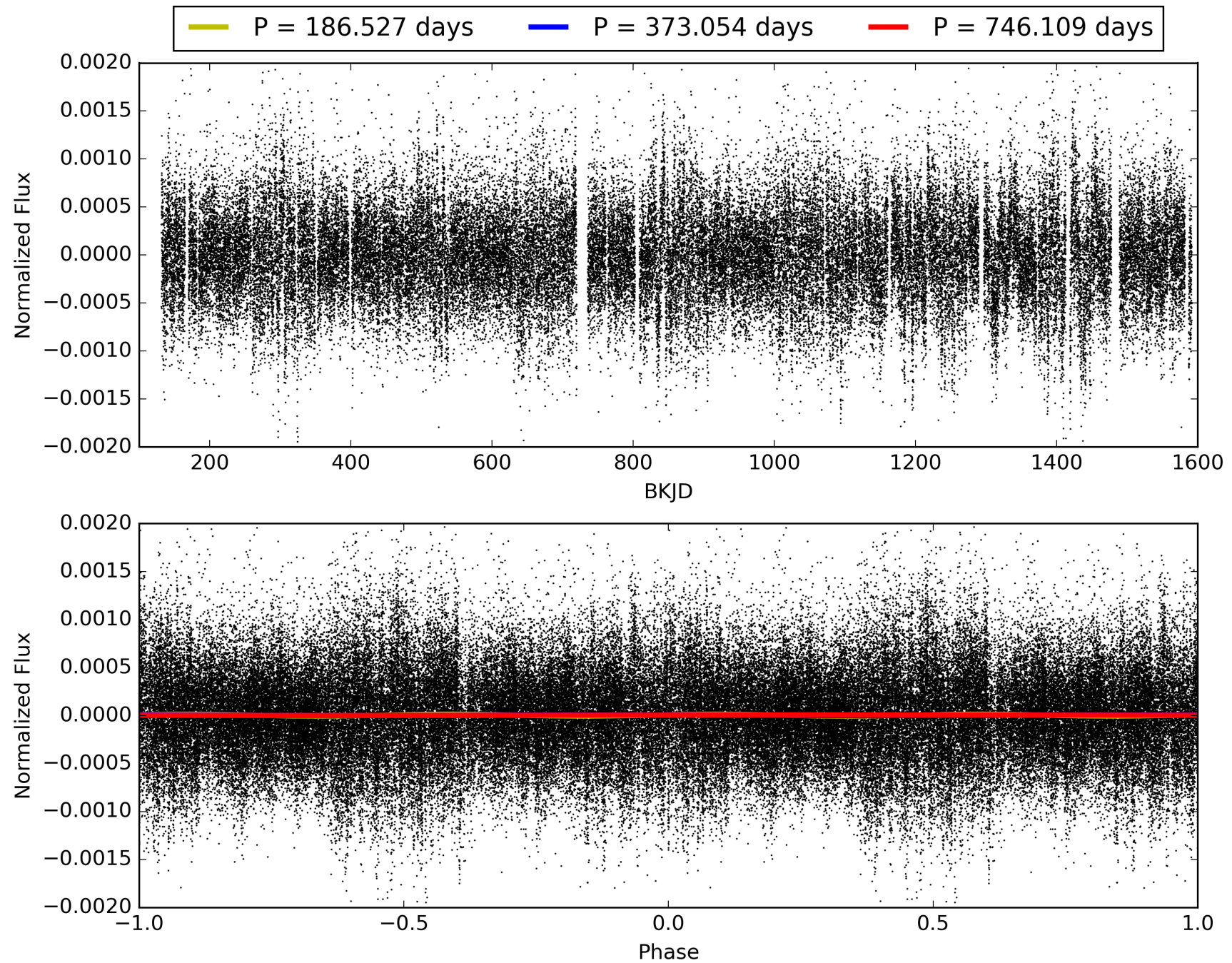
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:30:22 Z

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

TCE 006516932-01, PDC Light Curves

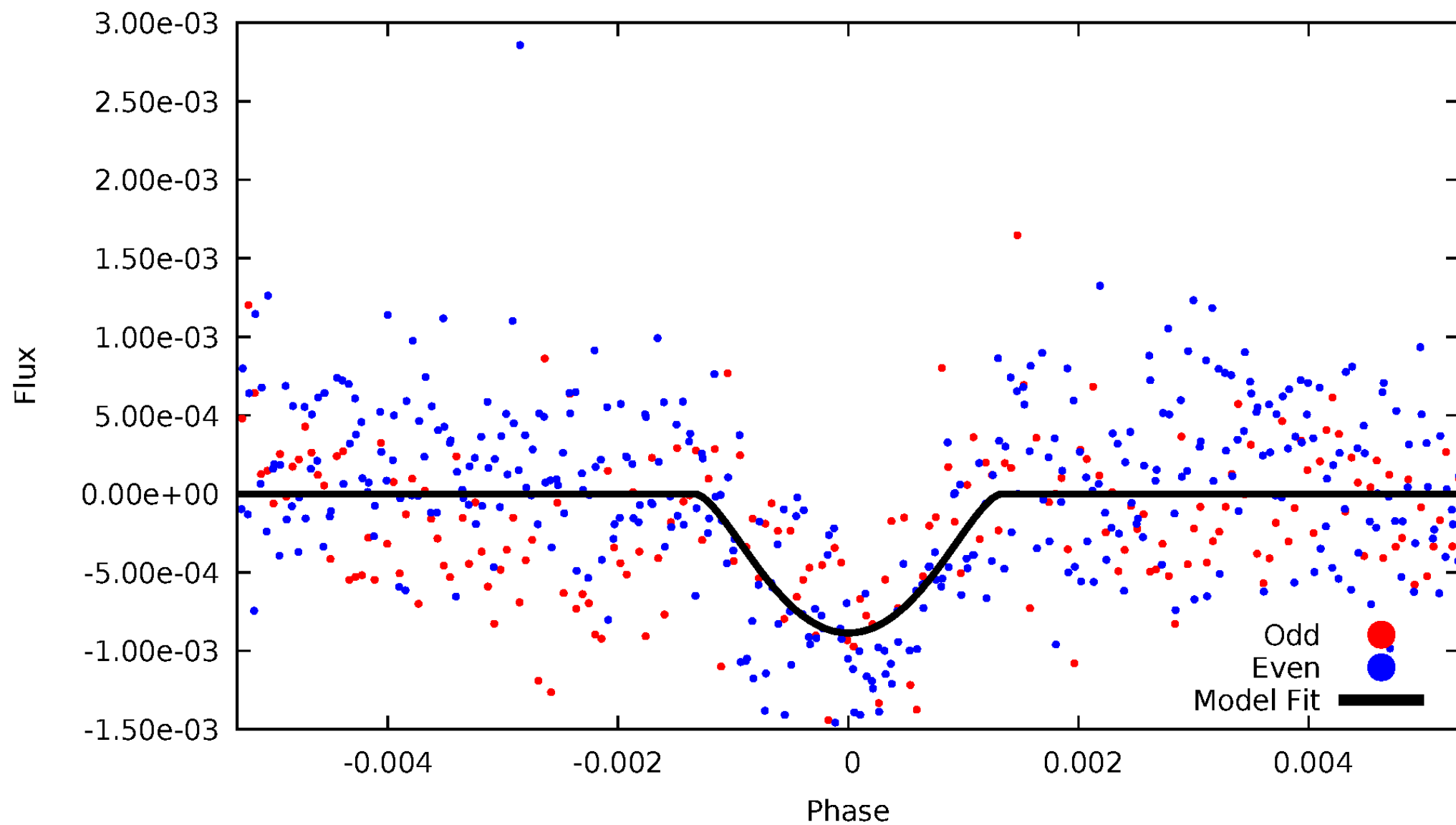


TCE 006516932-01



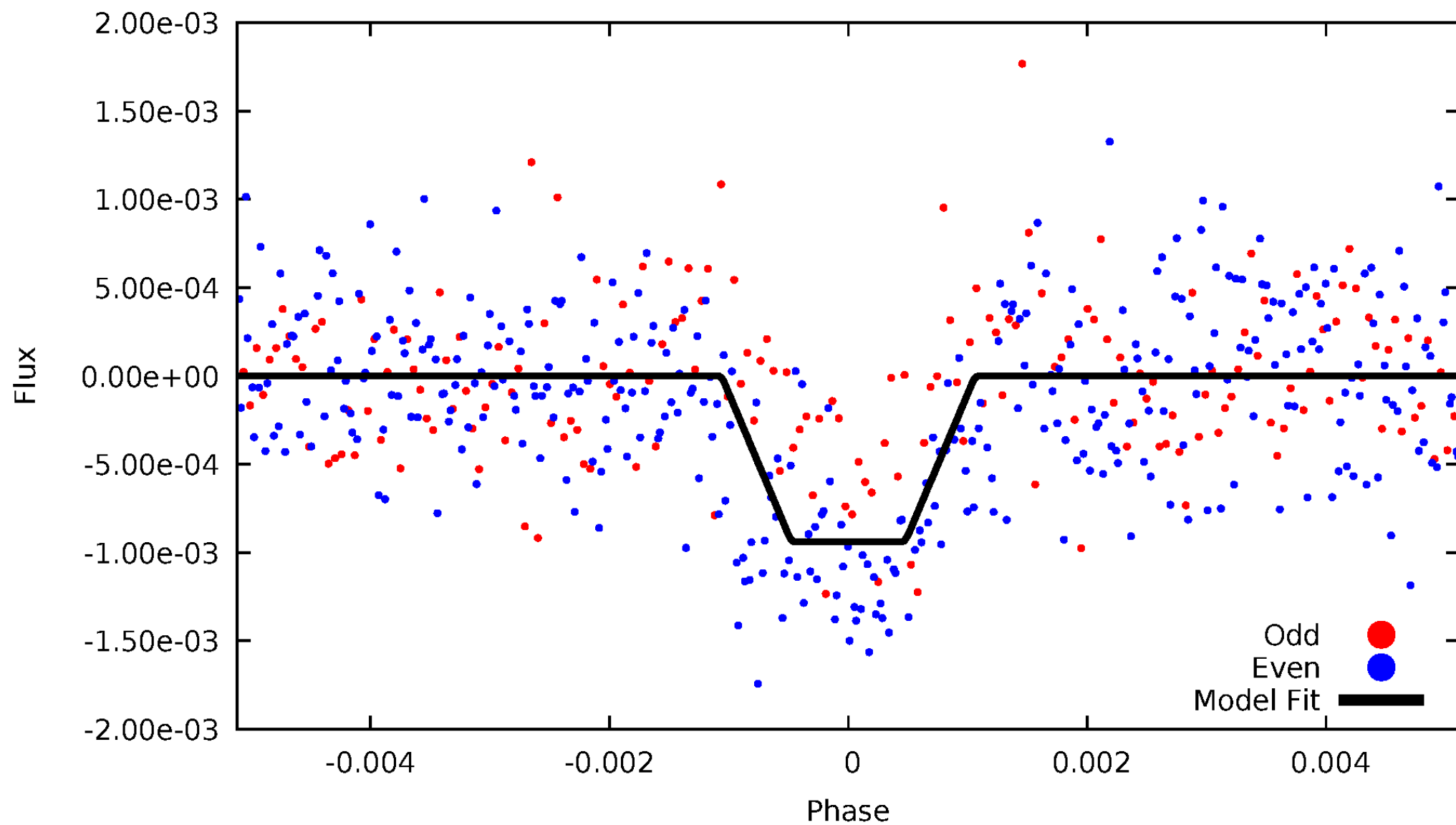
DV Odd/Even

TCE 006516932-01



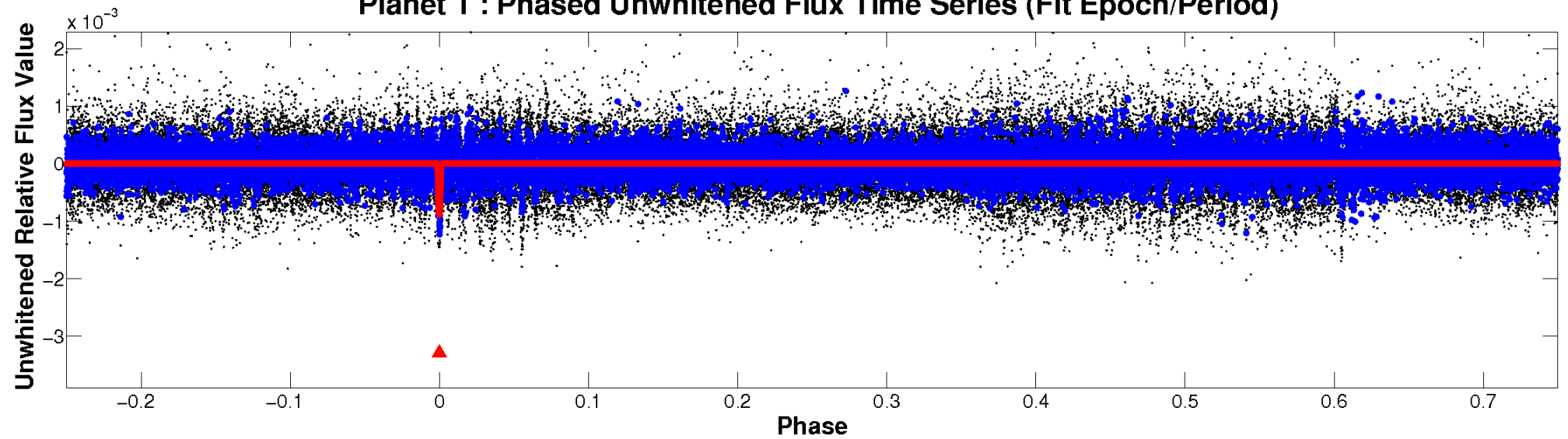
ALT Odd/Even

TCE 006516932-01

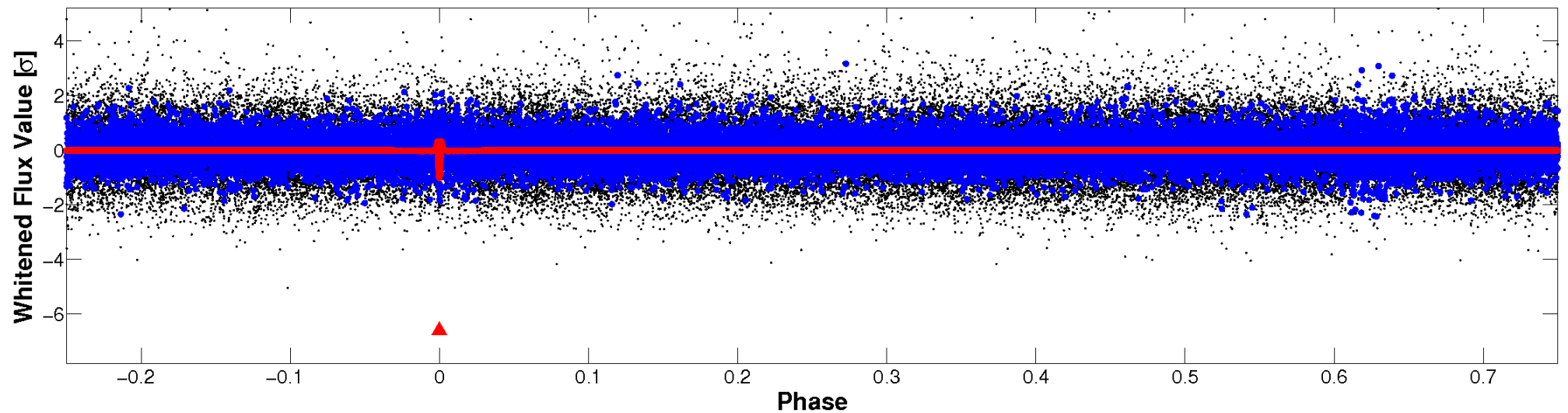


Non-Whitened Vs. Whitened Light Curve

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

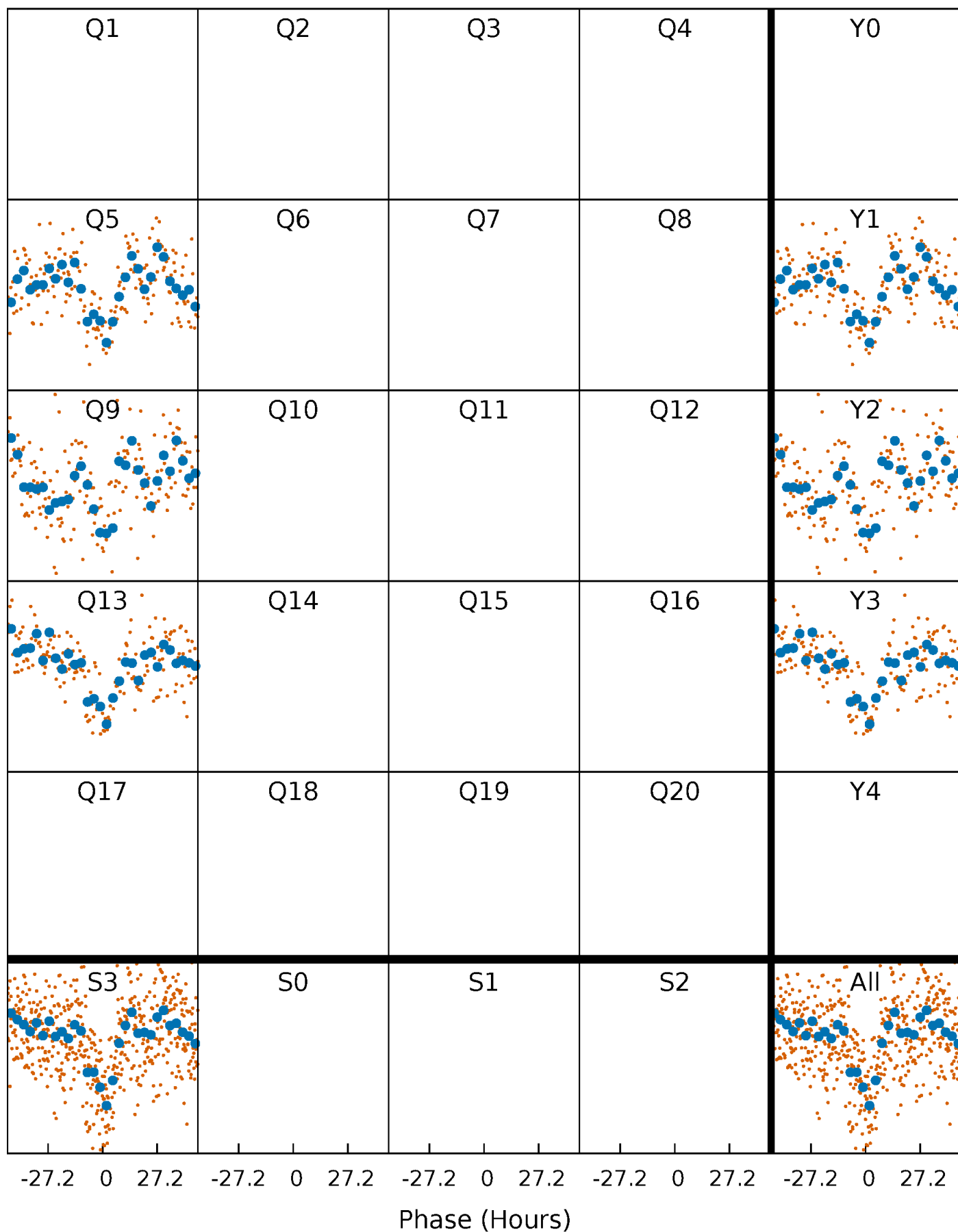


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



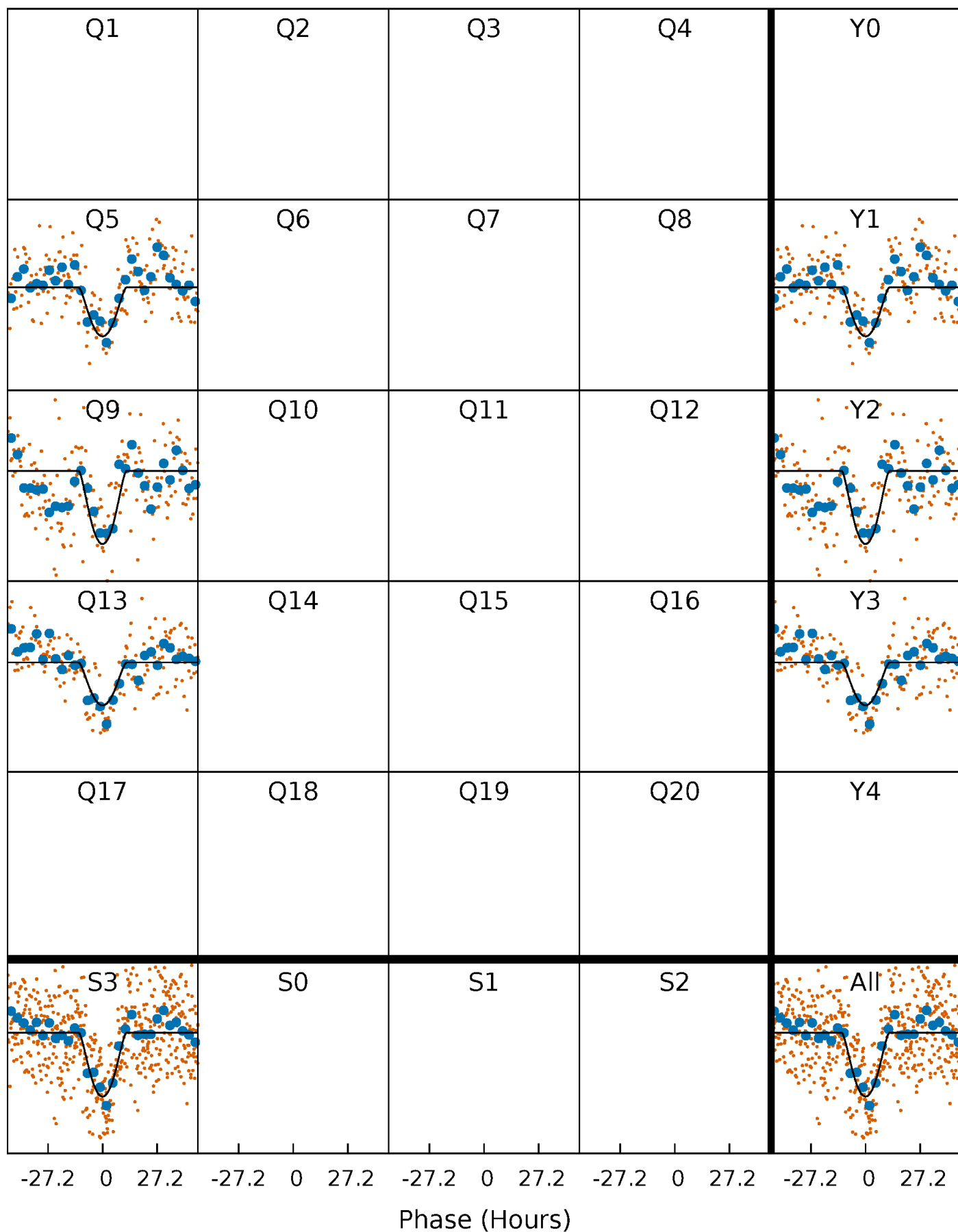
PDC Quarter-Phased Transit Curves

TCE 006516932-01 P=373.054477 Days $T_0=495.133362$ (BKJD)



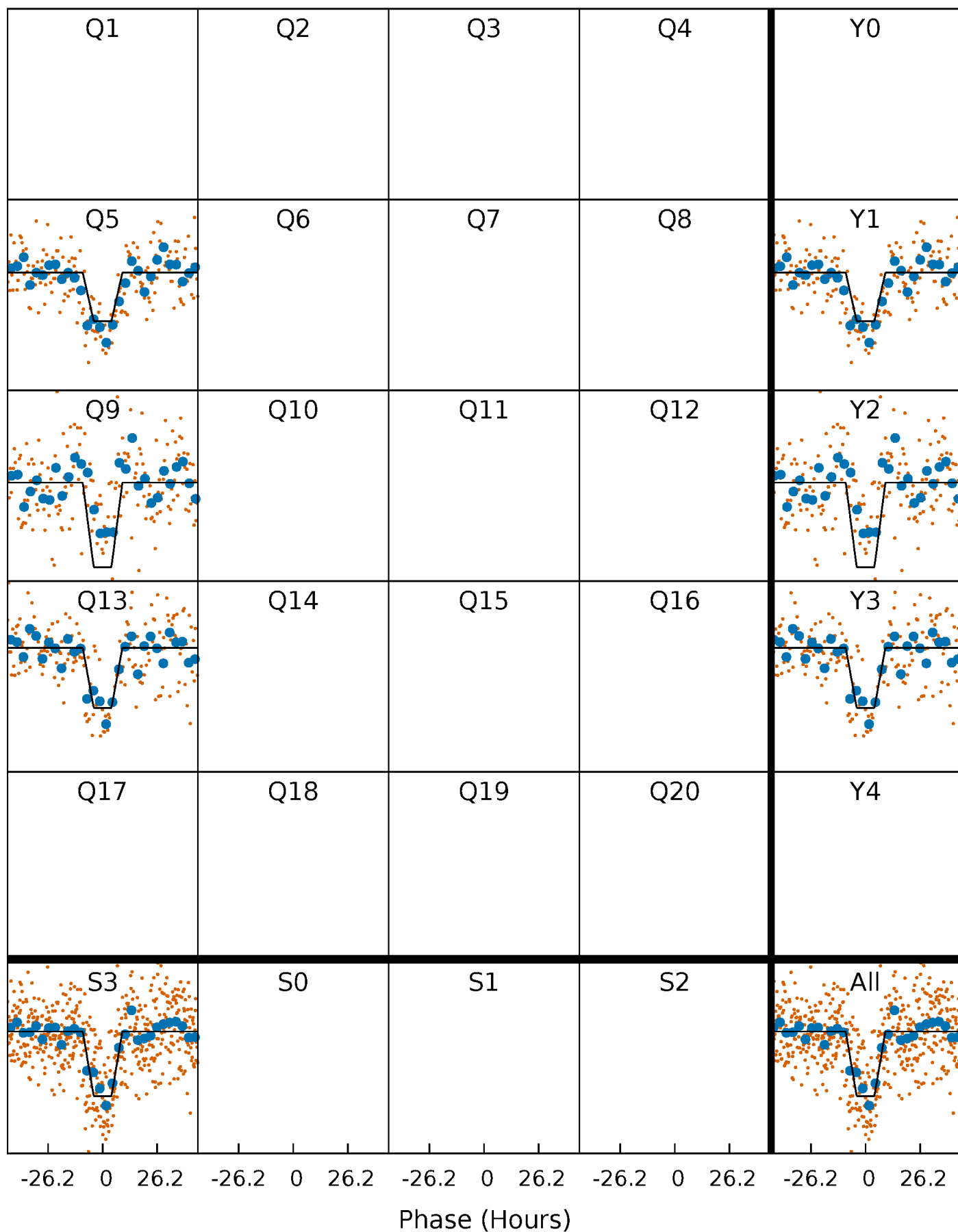
DV Quarter-Phased Transit Curves

TCE 006516932-01 $P=373.054477$ Days $T_0=495.133362$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

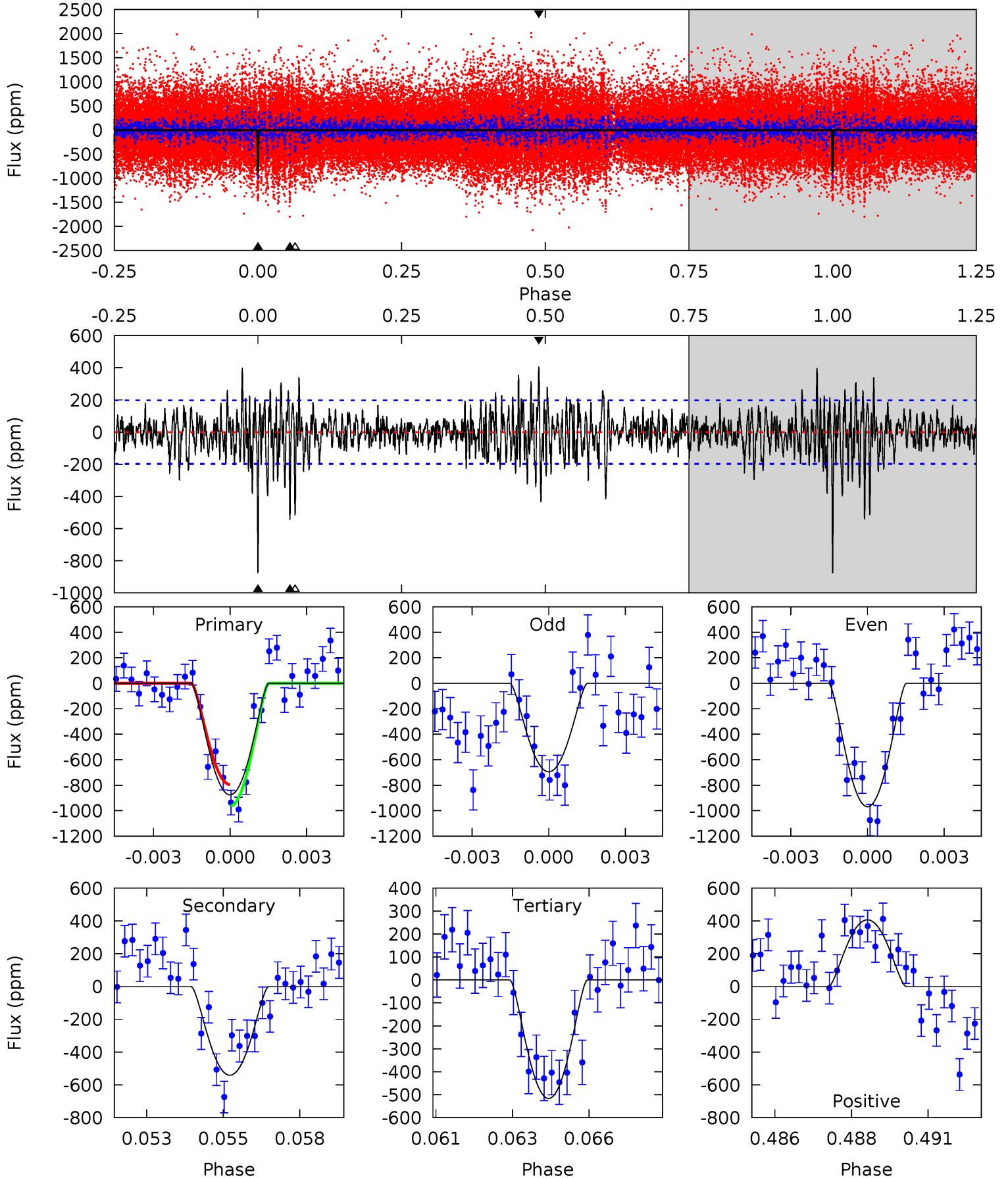
TCE 006516932-01 P=373.048694 Days $T_0=495.144567$ (BKJD)



DV Model-Shift Uniqueness Test

006516932-01, P = 373.054477 Days, E = 122.078885 Days

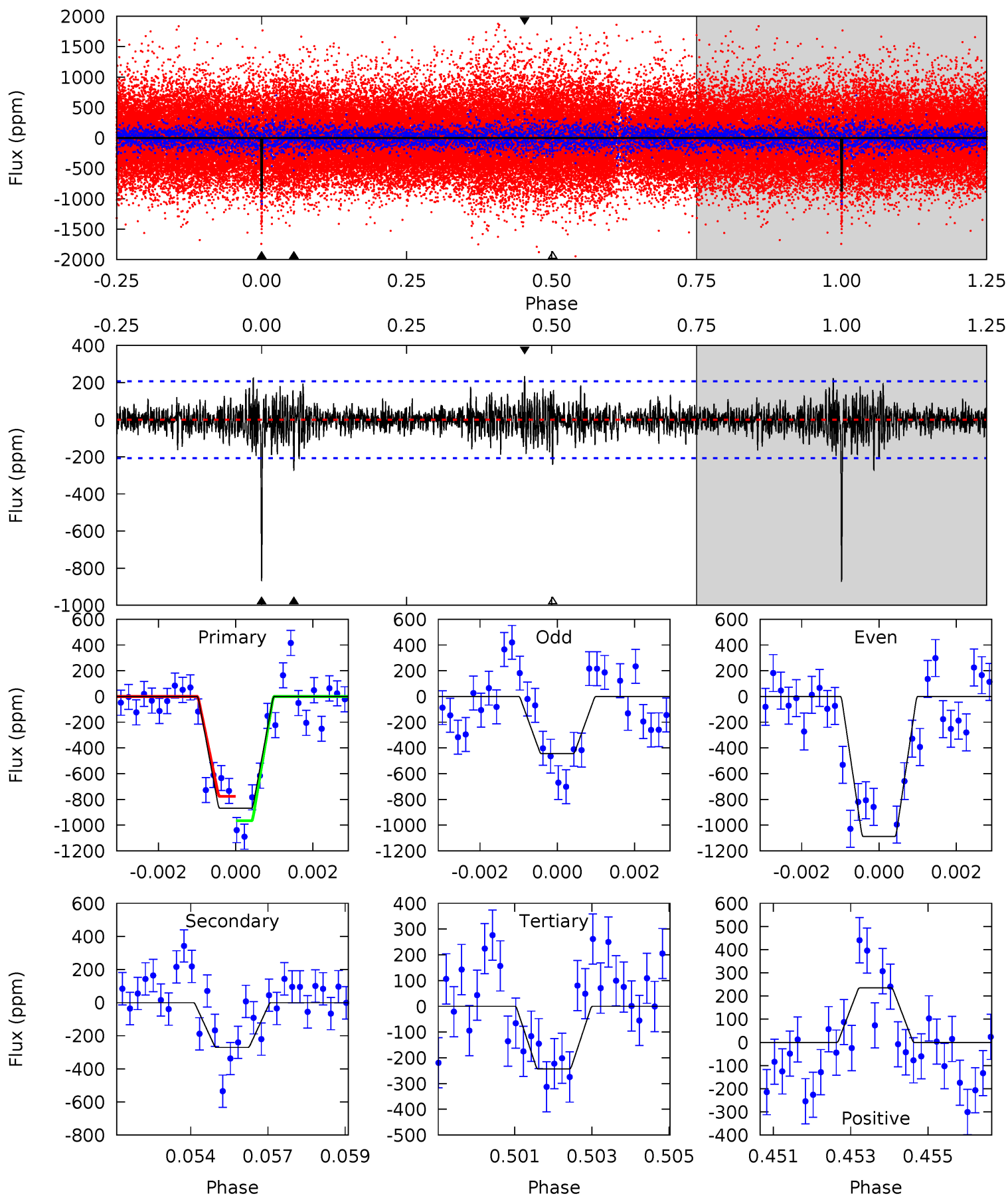
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	14.5	13.8	10.9	5.28	3.01	2.80	9.60	12.5	0.67	3.61	3.50	1.06	0.32	2.26



Alt Model-Shift Uniqueness Test

006516932-01, P = 373.048694 Days, E = 122.095873 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.2	6.94	6.23	6.02	5.31	3.06	1.41	16.0	16.2	0.71	0.92	7.87	0.91	0.21	2.42



Stellar Parameters For KIC 006516932

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5319^{+159}_{-159}	$4.431^{+0.144}_{-0.192}$	$-0.020^{+0.300}_{-0.250}$	$0.910^{+0.198}_{-0.132}$	$0.815^{+0.113}_{-0.061}$	$1.521^{+0.820}_{-0.723}$
	+3%/-3%	+3%/-4%	+1500%/-1250%	+22%/-15%	+14%/-7%	+54%/-48%
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 006516932-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-542 ± 37	$6.39^{+6.18}_{-4.29}$	323^{+22}_{-18}	3636^{+2018}_{-622}	6743^{+52110}_{-5010}
Alt.	-271 ± 39	$5.10^{+5.30}_{-3.47}$	323^{+23}_{-18}	3470^{+1962}_{-623}	4965^{+44467}_{-3723}

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

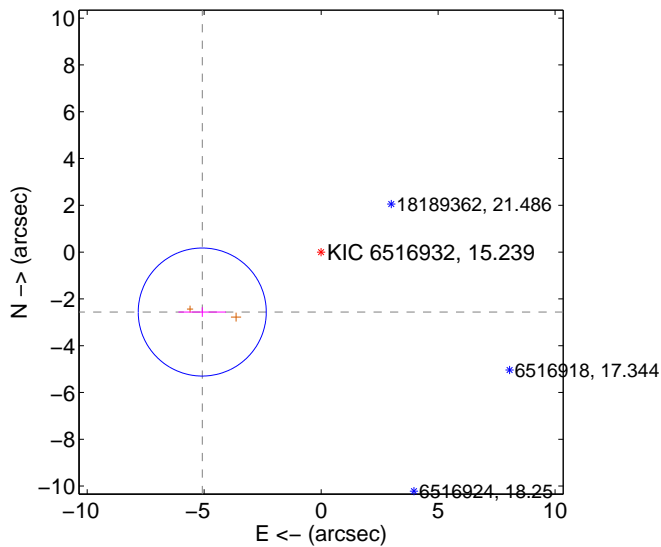
Supplemental centroid analysis for 006516932-01. Kepler magnitude: 15.24. Transit SNR 7.87

There are 0 quarters with good PRF difference image offsets

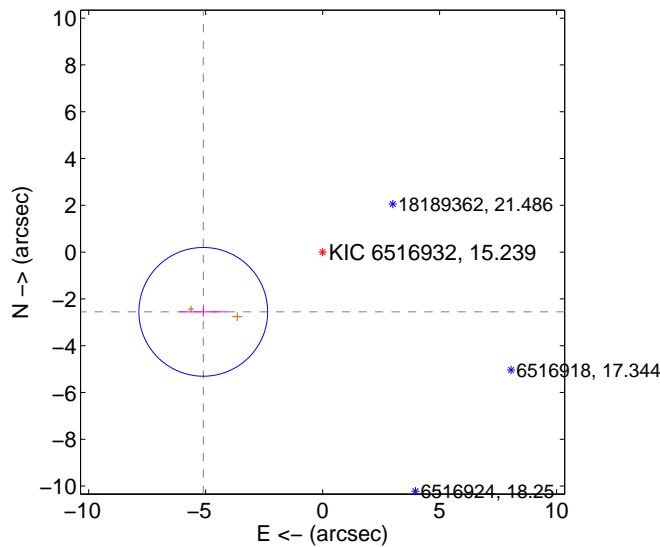
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.690 ± 0.912	6.24	5.081 ± 1.016	-2.562 ± 0.205
PRF-fit source offset from KIC position	5.704 ± 0.917	6.22	5.101 ± 1.021	-2.554 ± 0.194
photometric centroid source offset	2.30 ± 2.11	1.09	1.96 ± 2.17	-1.21 ± 1.94

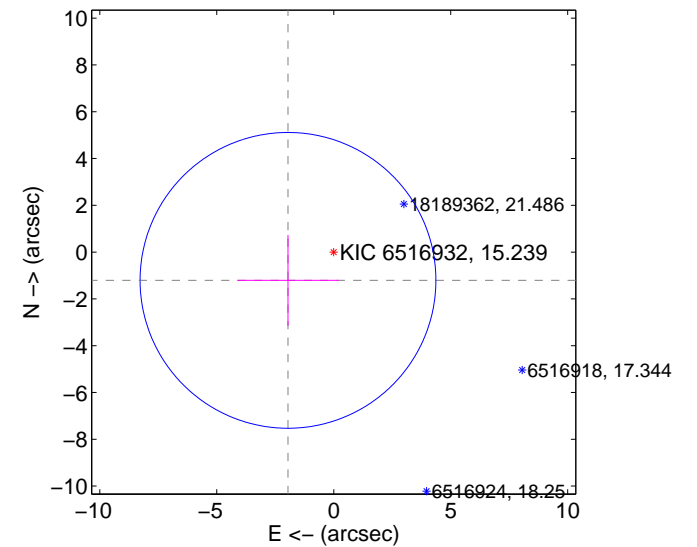
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

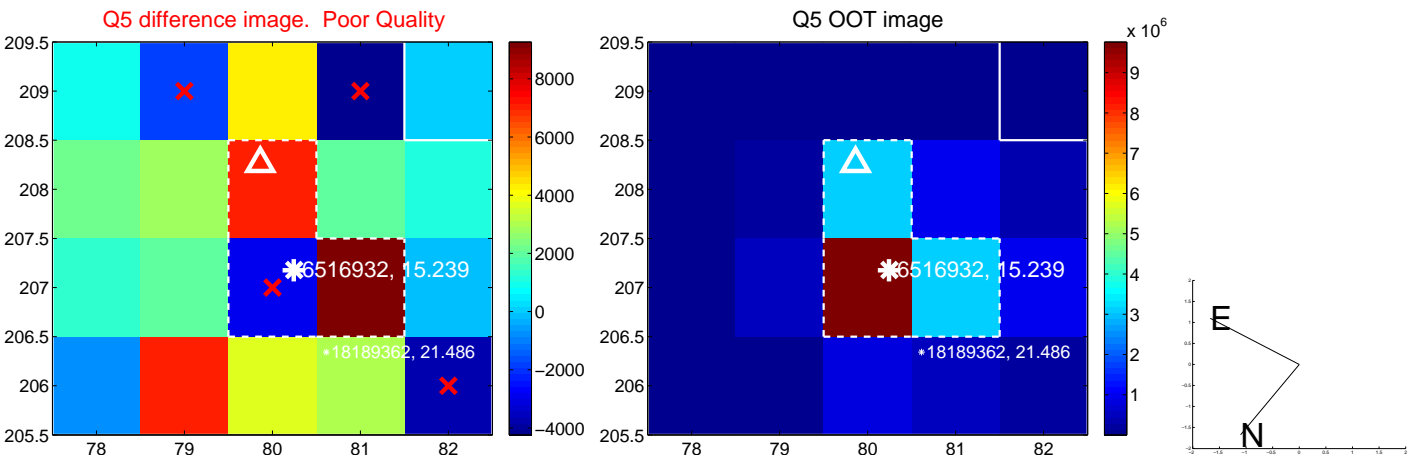


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

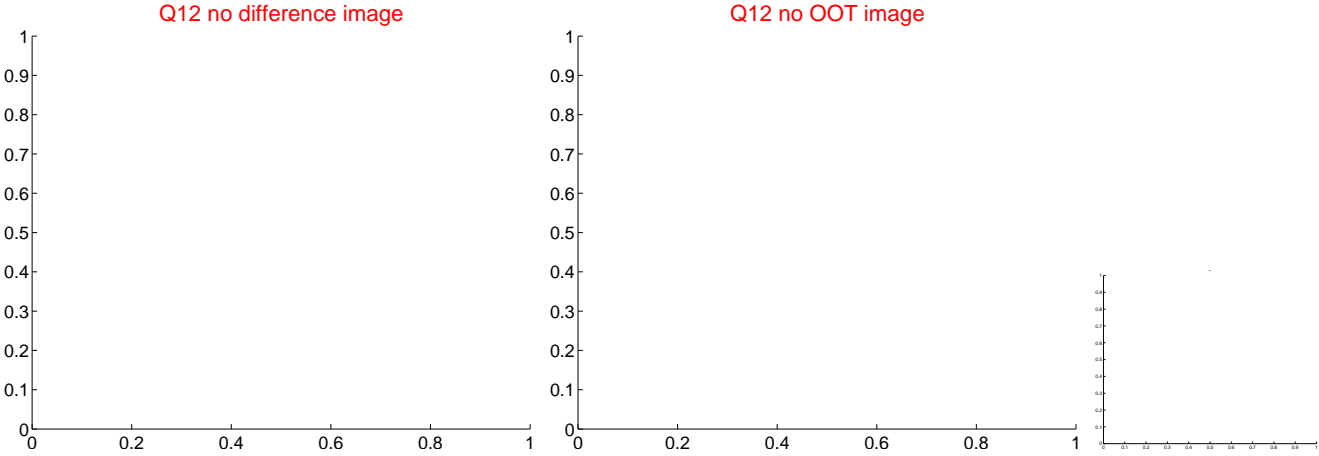
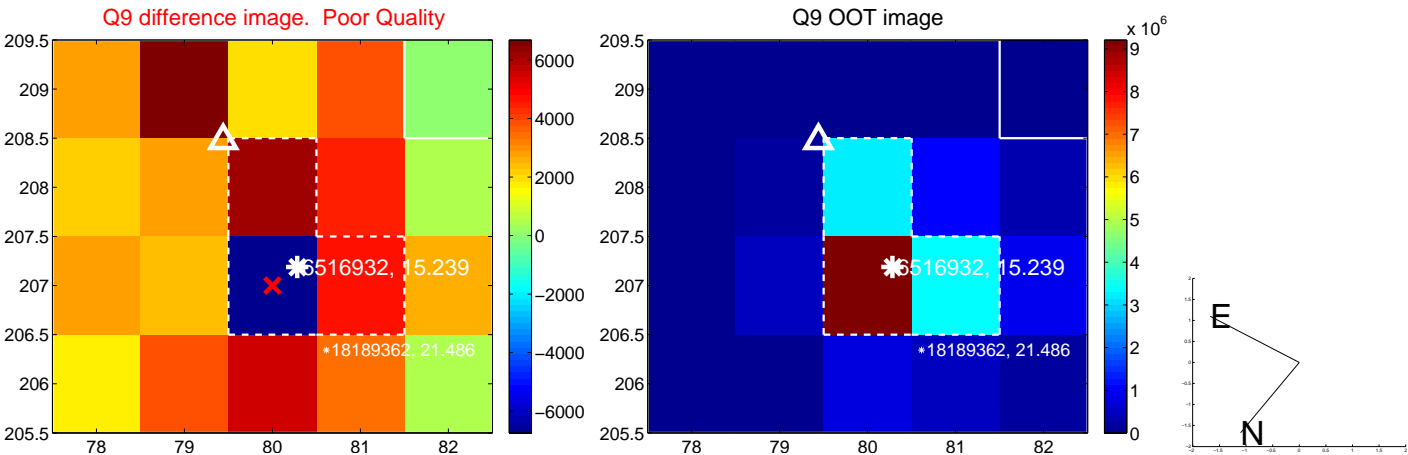
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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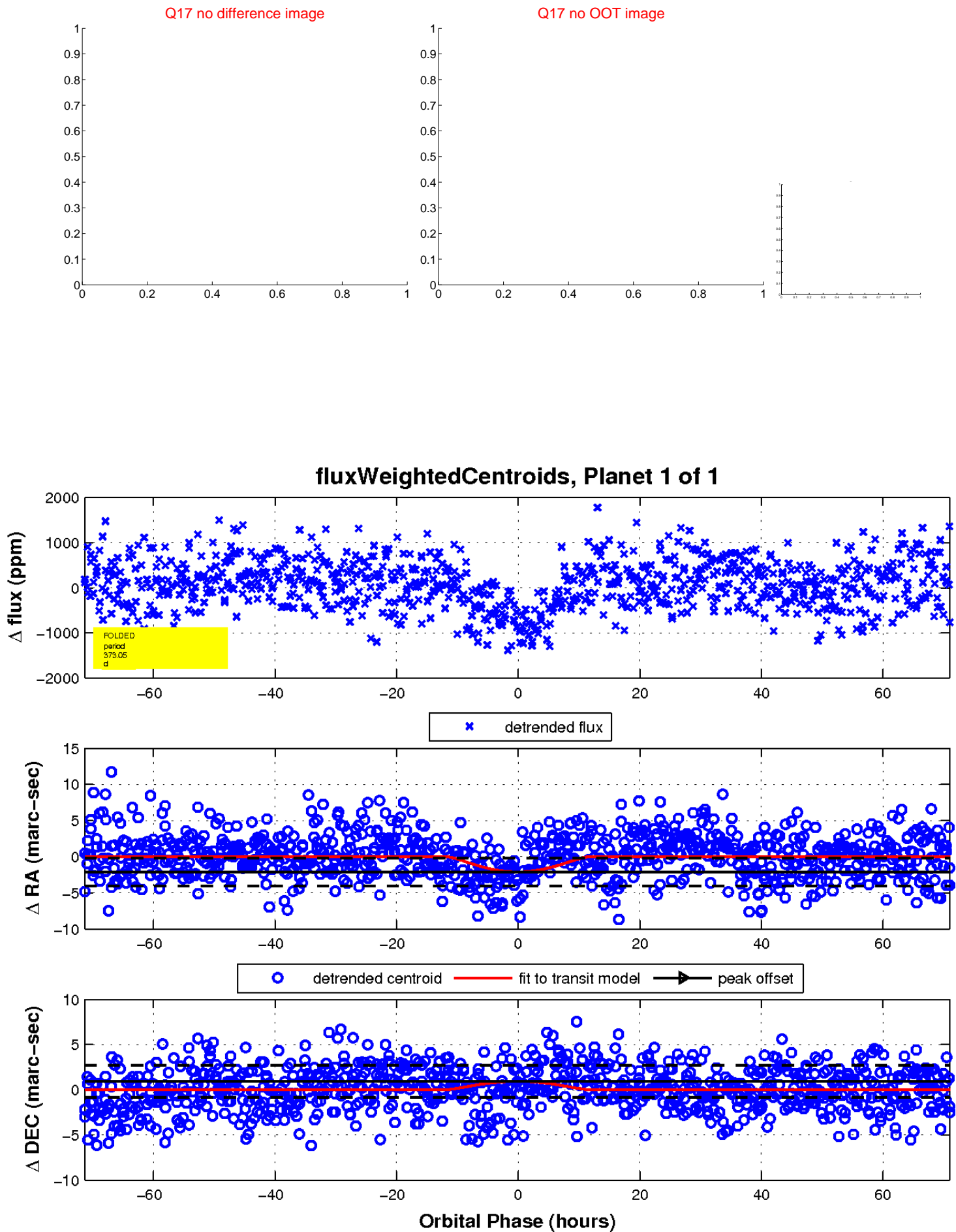
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

