

KIC 008036840

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})
008036840-01	OBS	No	398.408632	359.827476	1322.3	47.210	8.2	9.6	0.81	5010	6.01	0.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008036840-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

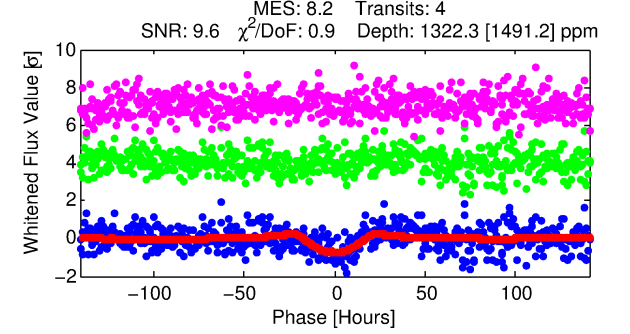
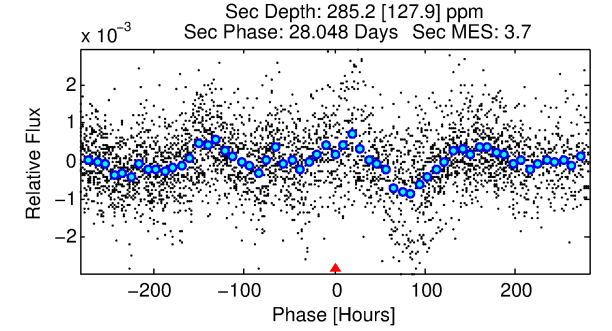
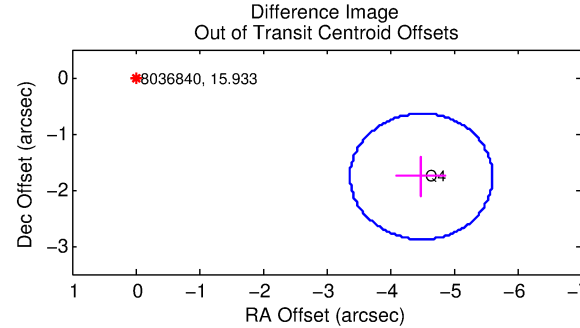
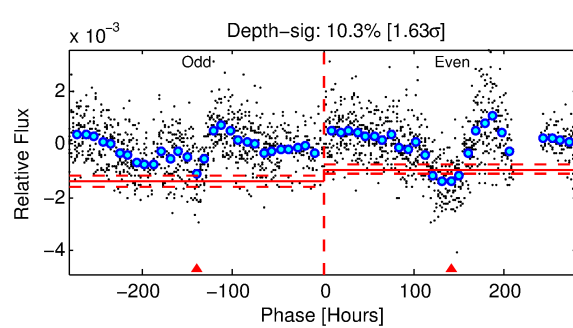
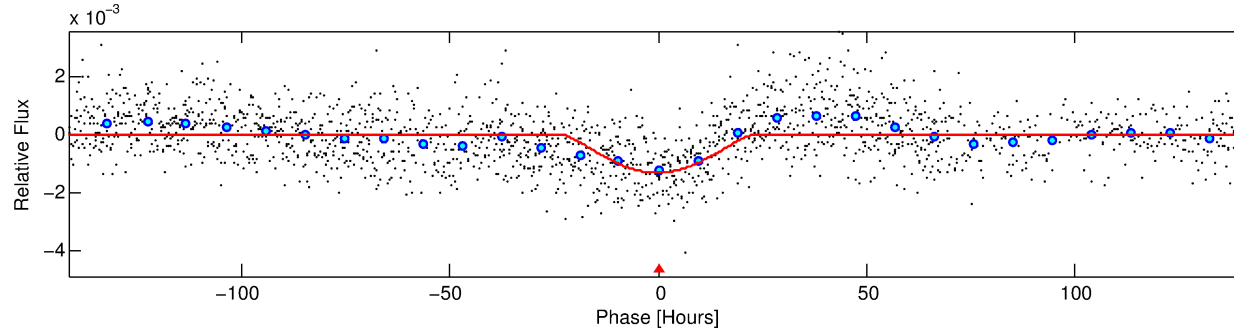
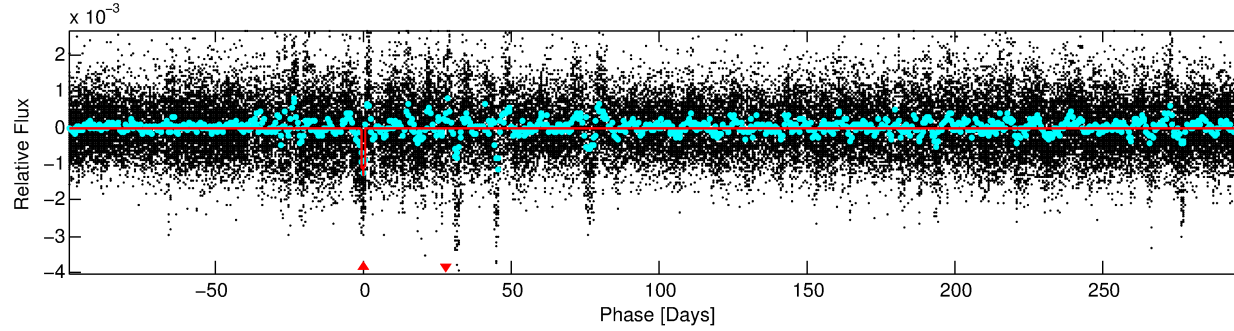
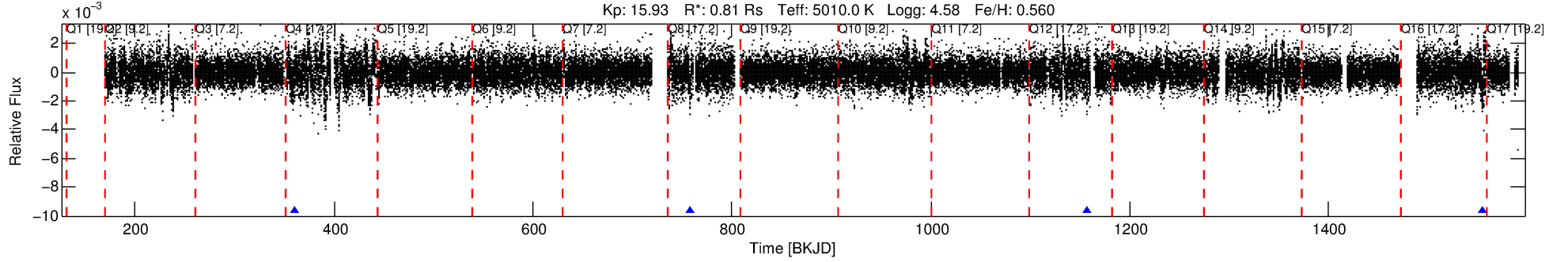
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008036840-01

No Significant Match Found

DV One-Page Summary

KIC: 8036840 Candidate: 1 of 1 Period: 398.409 d



DV Fit Results:

Period = 398.40863 [0.04765] d
Epoch = 359.8275 [0.0870] BKJD
Rp/R* = 0.0677 [0.1885]
a/R* = 24.14 [14.59]
b = 1.00 [0.22]
Seff = 0.35 [0.07]
Teq = 196 [9] K
Rp = 6.01 [16.76] Re
a = 1.0304 [0.0883] AU
Ag = 4610.68 [25784.80] [0.18 σ]
Teffp = 2503 [3499] K [0.66 σ]

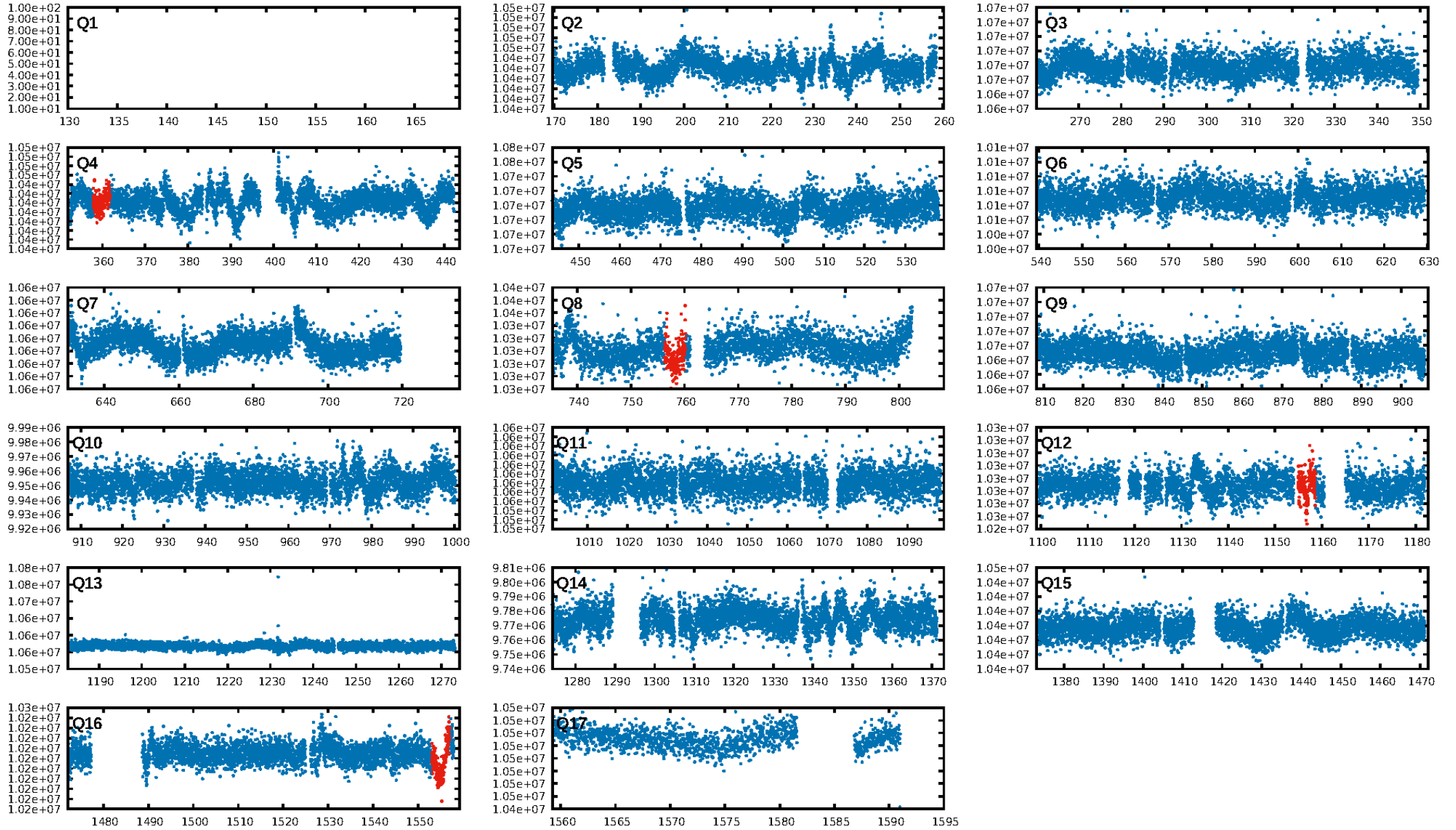
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.57e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.4155
Centroid-sig: 53.2%
Centroid-so: 0.915 arcsec [0.35 σ]
OotOffset-rm: 4.826 arcsec [12.93 σ]
KicOffset-rm: 4.941 arcsec [13.24 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

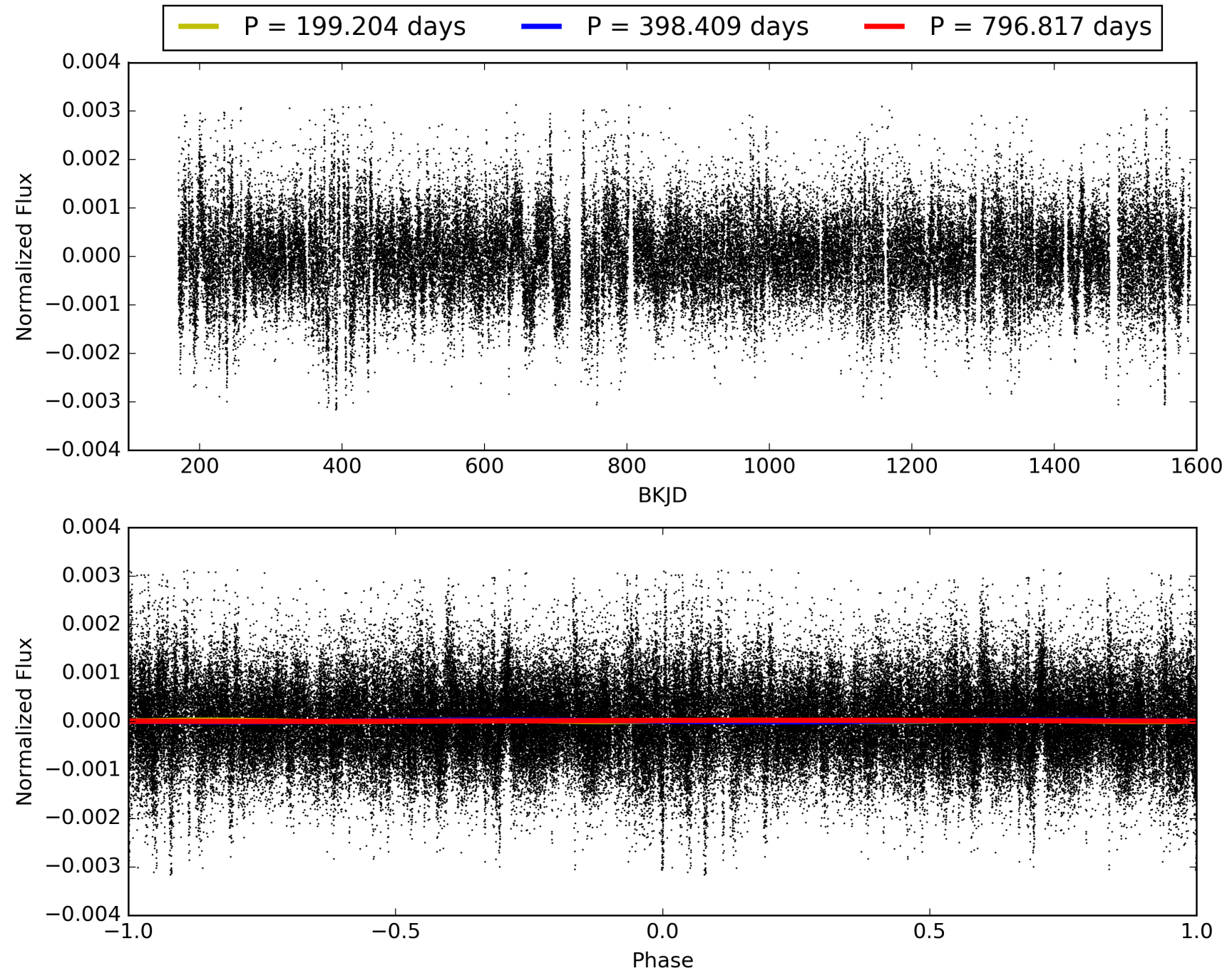
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:36:57 Z

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

TCE 008036840-01, PDC Light Curves

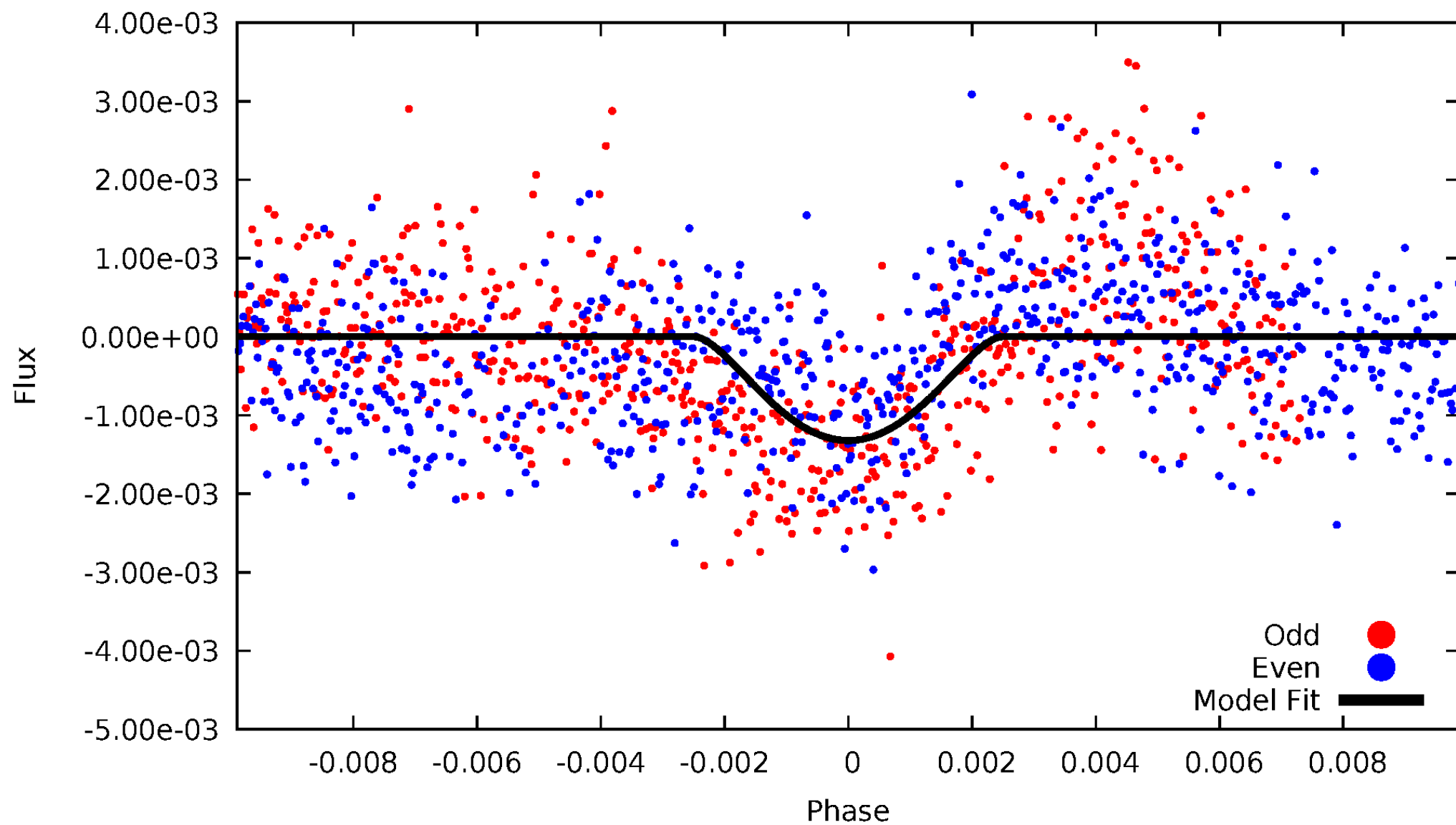


TCE 008036840-01



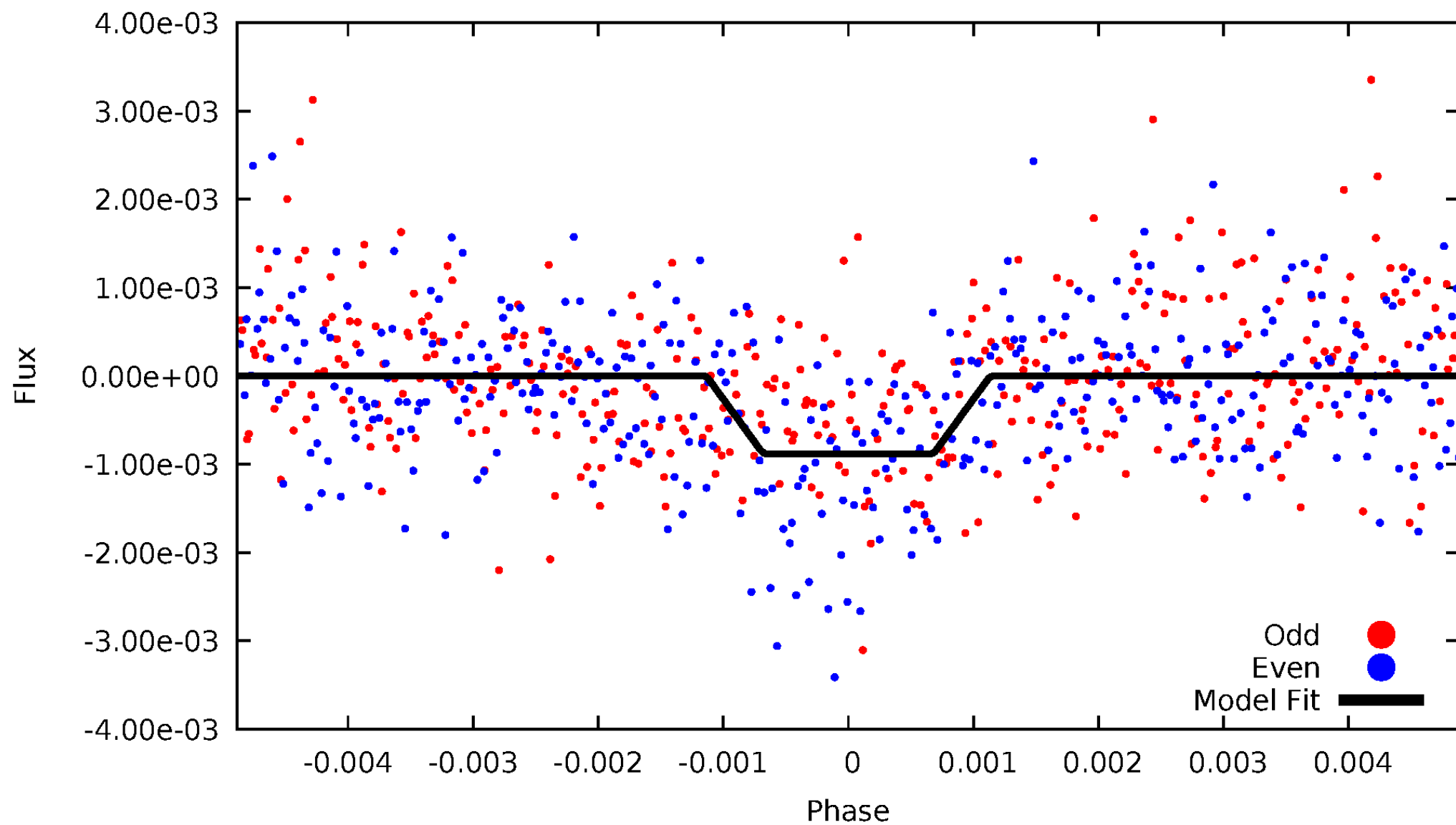
DV Odd/Even

TCE 008036840-01



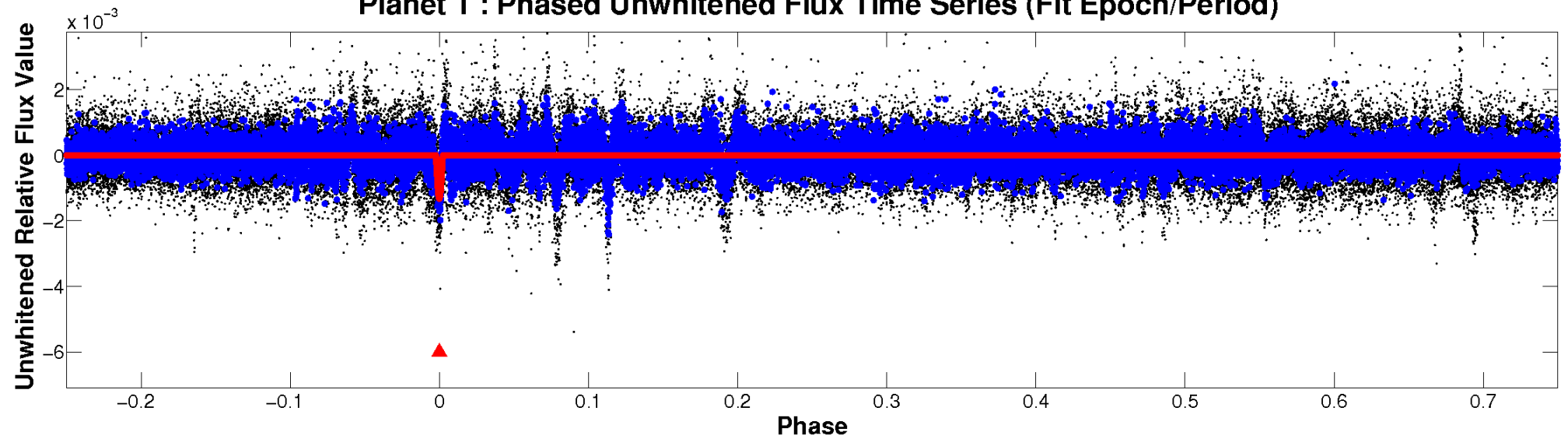
ALT Odd/Even

TCE 008036840-01

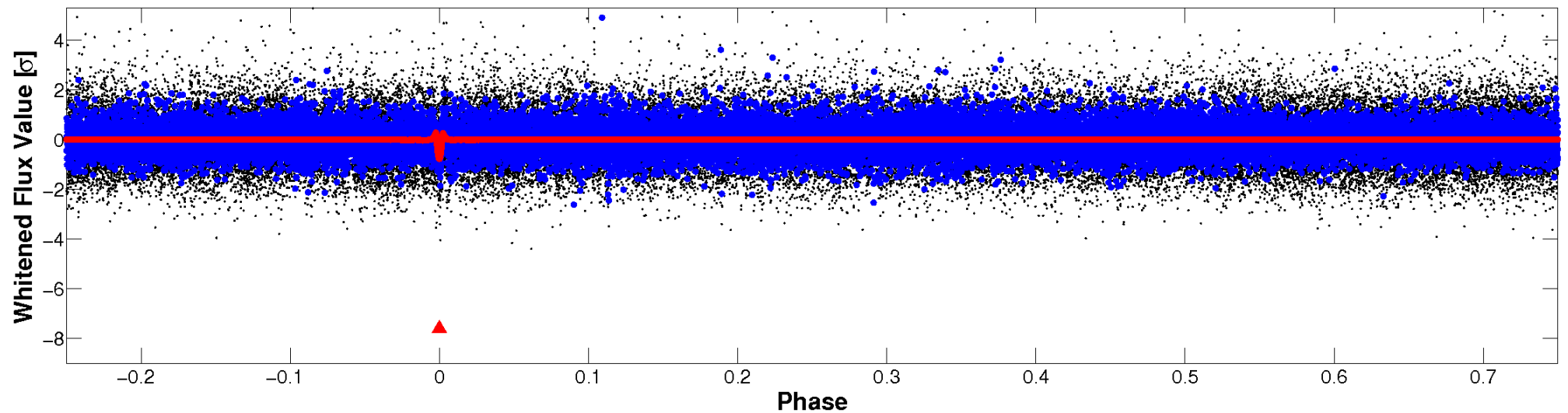


Non-Whitened Vs. Whitened Light Curve

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

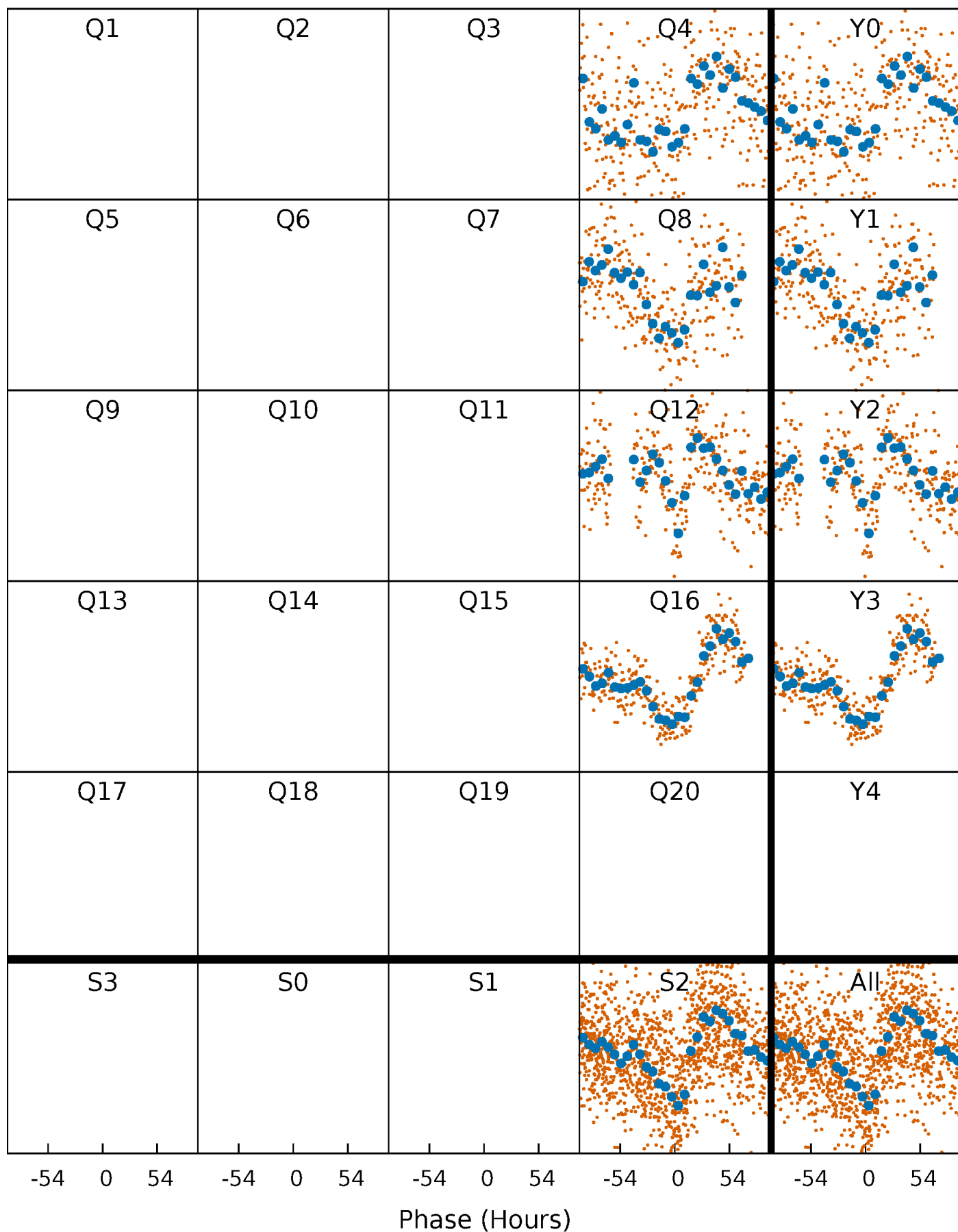


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



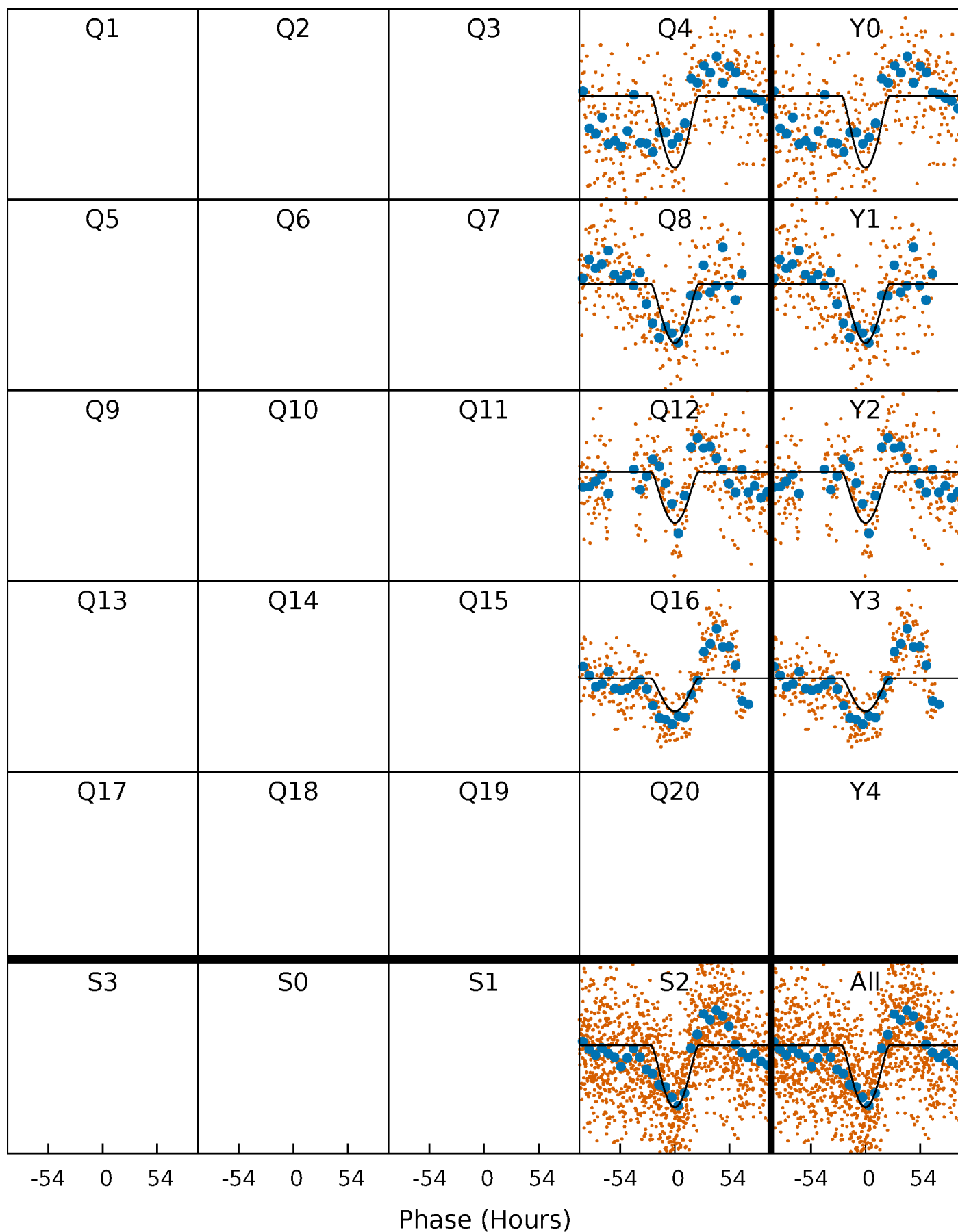
PDC Quarter-Phased Transit Curves

TCE 008036840-01 P=398.408632 Days $T_0=359.827476$ (BKJD)



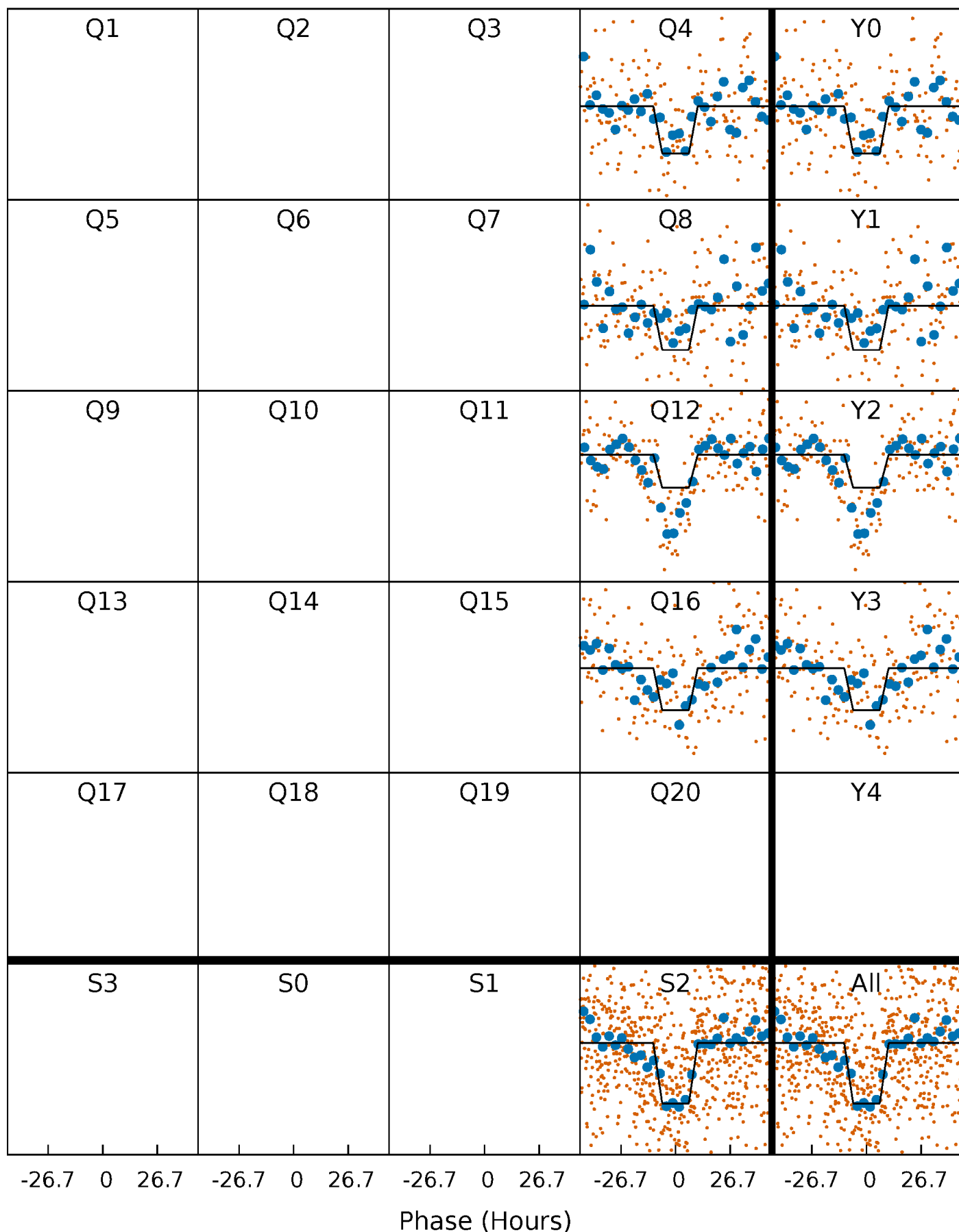
DV Quarter-Phased Transit Curves

TCE 008036840-01 P=398.408632 Days $T_0=359.827476$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

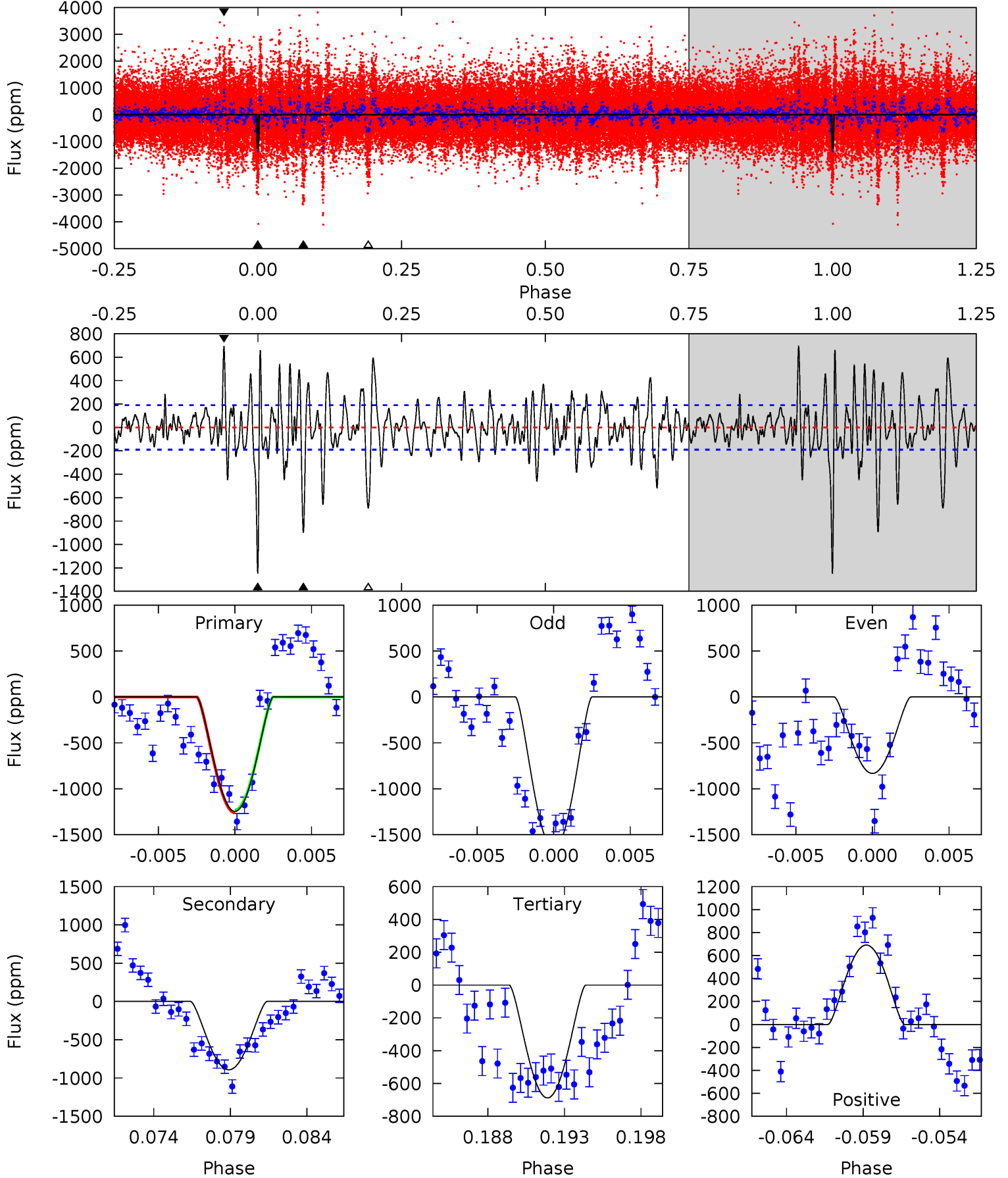
TCE 008036840-01 P=398.427175 Days $T_0=359.994851$ (BKJD)



DV Model-Shift Uniqueness Test

008036840-01, P = 398.408632 Days, E = 359.827476 Days

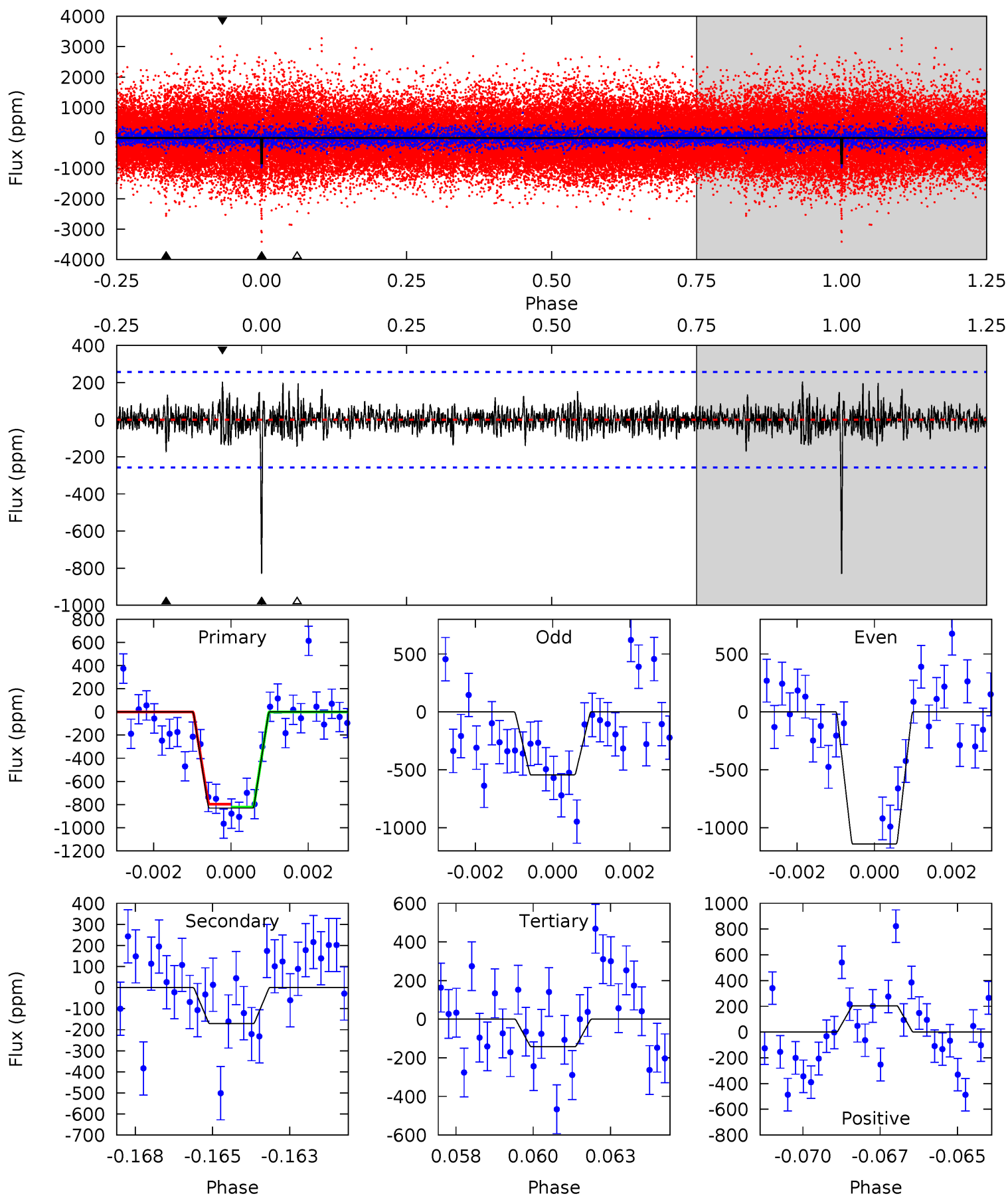
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.8	24.2	18.7	18.8	5.16	2.81	4.91	15.2	15.1	5.56	5.46	11.3	1.16	0.36	0.39



Alt Model-Shift Uniqueness Test

008036840-01, P = 398.427175 Days, E = 359.994851 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	3.52	2.94	4.21	5.30	3.05	0.91	14.2	12.9	0.58	-0.69	6.20	1.40	0.20	0.25



Stellar Parameters For KIC 008036840

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5010^{+164}_{-149}	$4.580^{+0.020}_{-0.080}$	$0.560^{+0.050}_{-0.300}$	$0.814^{+0.073}_{-0.046}$	$0.918^{+0.035}_{-0.085}$	$2.401^{+0.246}_{-0.573}$
	+3%/-3%	+0%/-2%	+9%/-54%	+9%/-6%	+4%/-9%	+10%/-24%
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 008036840-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-893 ± 37	$13.89^{+13.76}_{-9.47}$	278^{+11}_{-10}	2881^{+1272}_{-472}	2710^{+23597}_{-2045}
Alt.	-171 ± 49	$12.64^{+12.32}_{-9.13}$	278^{+11}_{-10}	2385^{+989}_{-345}	607^{+7330}_{-460}

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

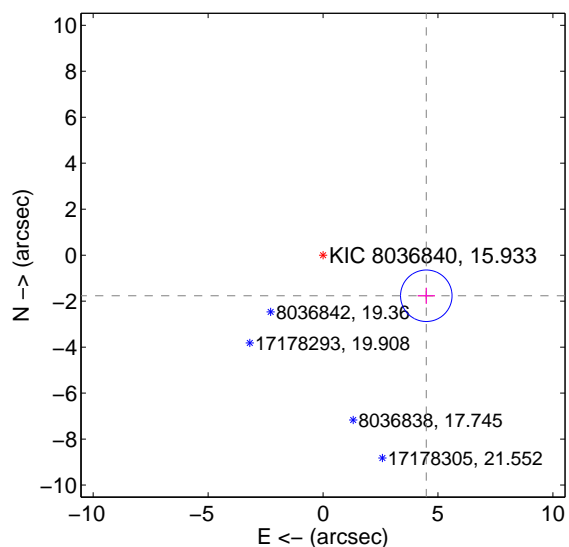
Supplemental centroid analysis for 008036840-01. Kepler magnitude: 15.93. Transit SNR 9.62

There are 0 quarters with good PRF difference image offsets

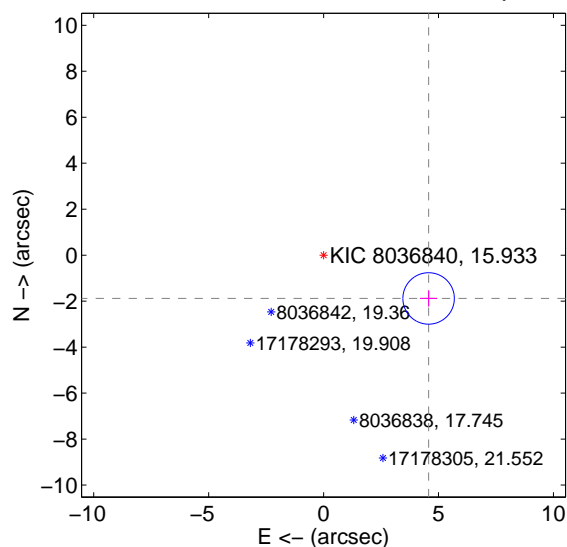
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.826 ± 0.373	12.93	-4.491 ± 0.377	-1.765 ± 0.350
PRF-fit source offset from KIC position	4.941 ± 0.373	13.24	-4.568 ± 0.377	-1.882 ± 0.350
photometric centroid source offset	0.91 ± 2.62	0.35	0.02 ± 1.88	0.91 ± 2.62

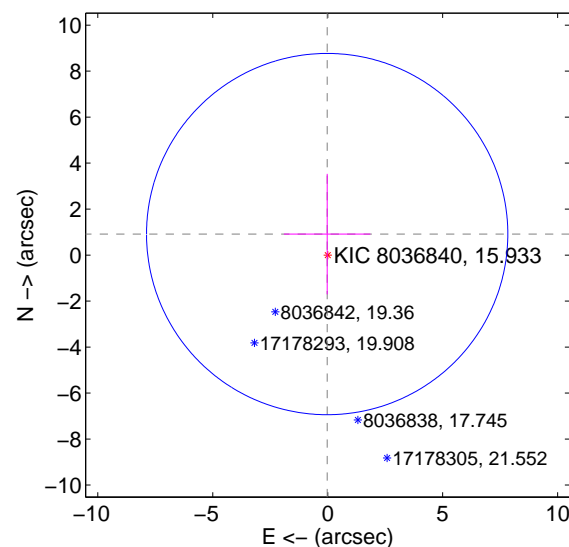
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

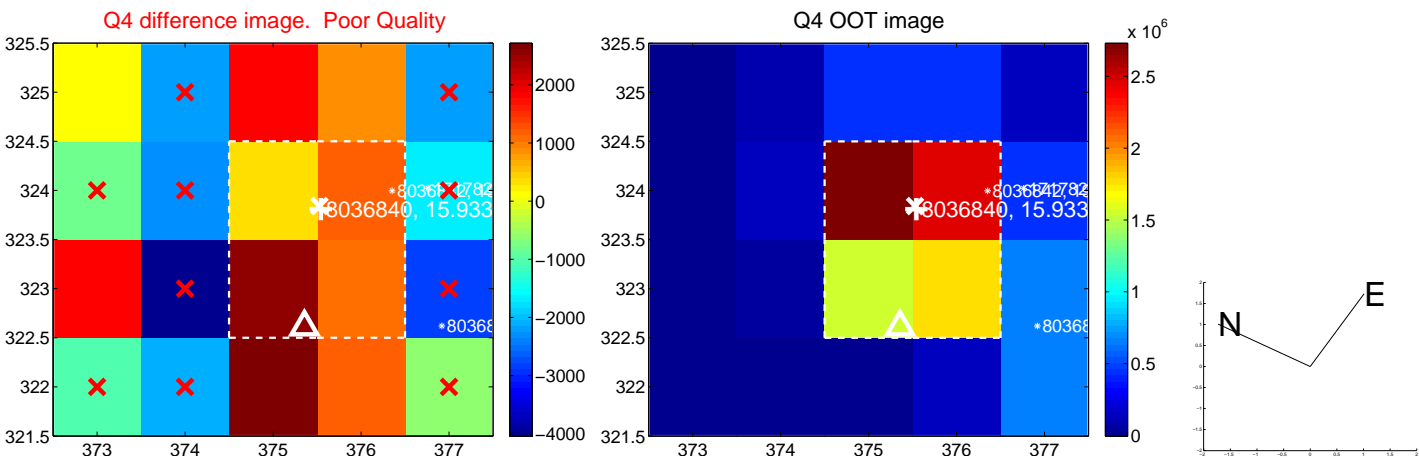
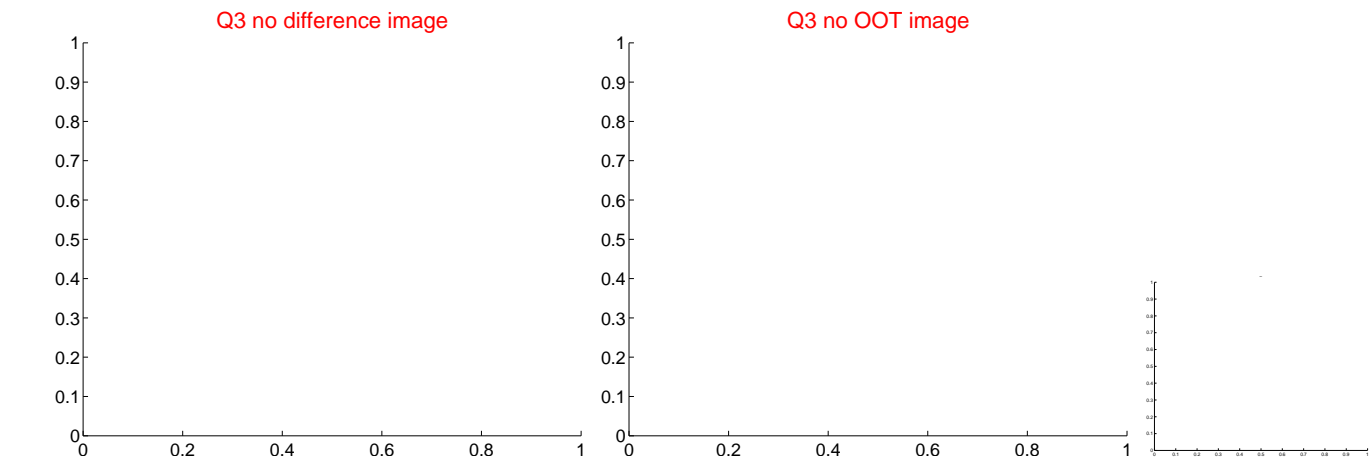
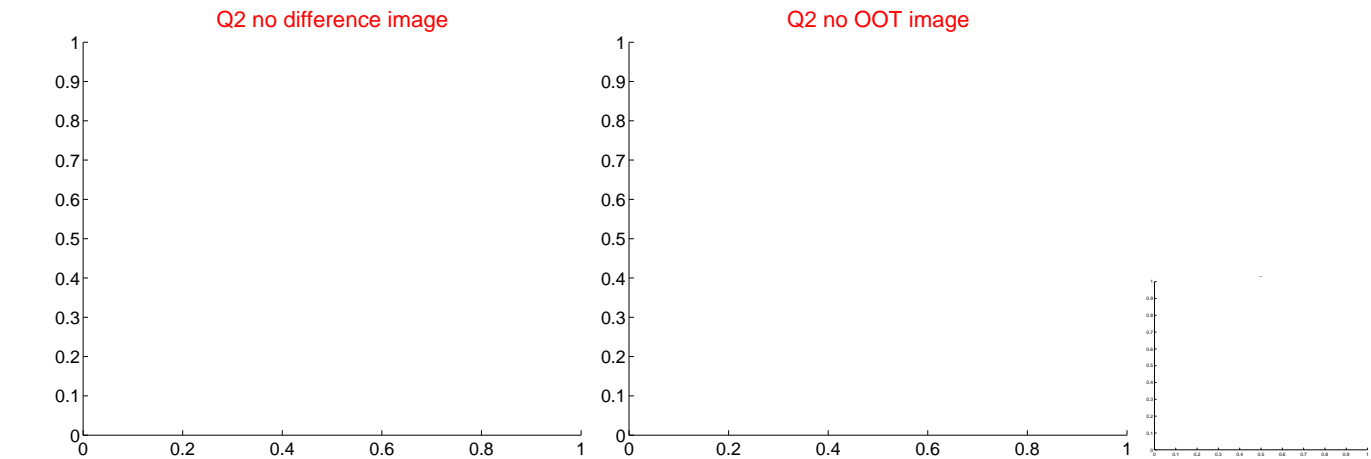
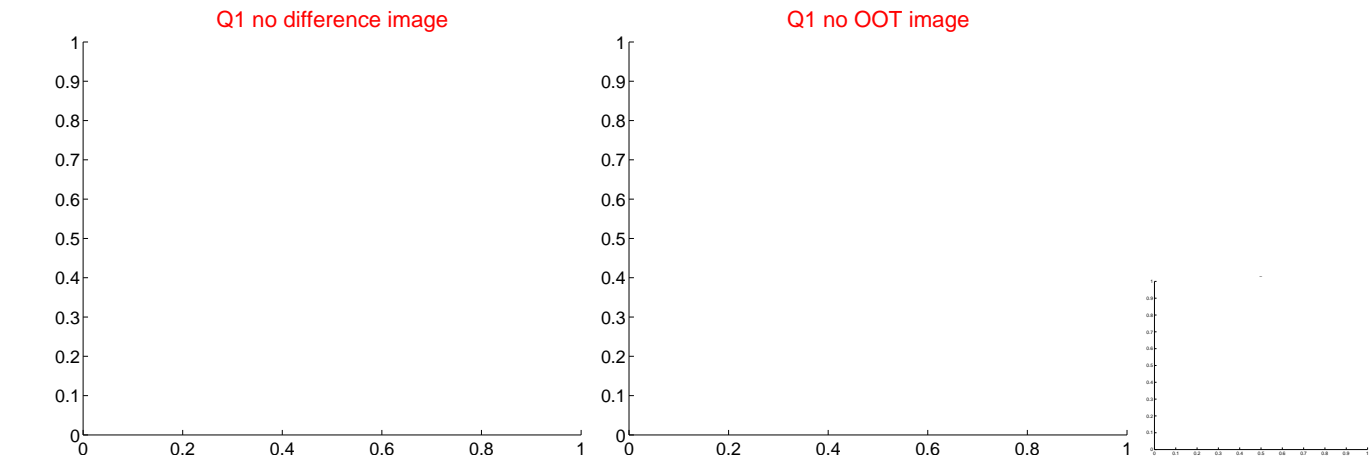


offset from photometric centroids



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 ×: 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.



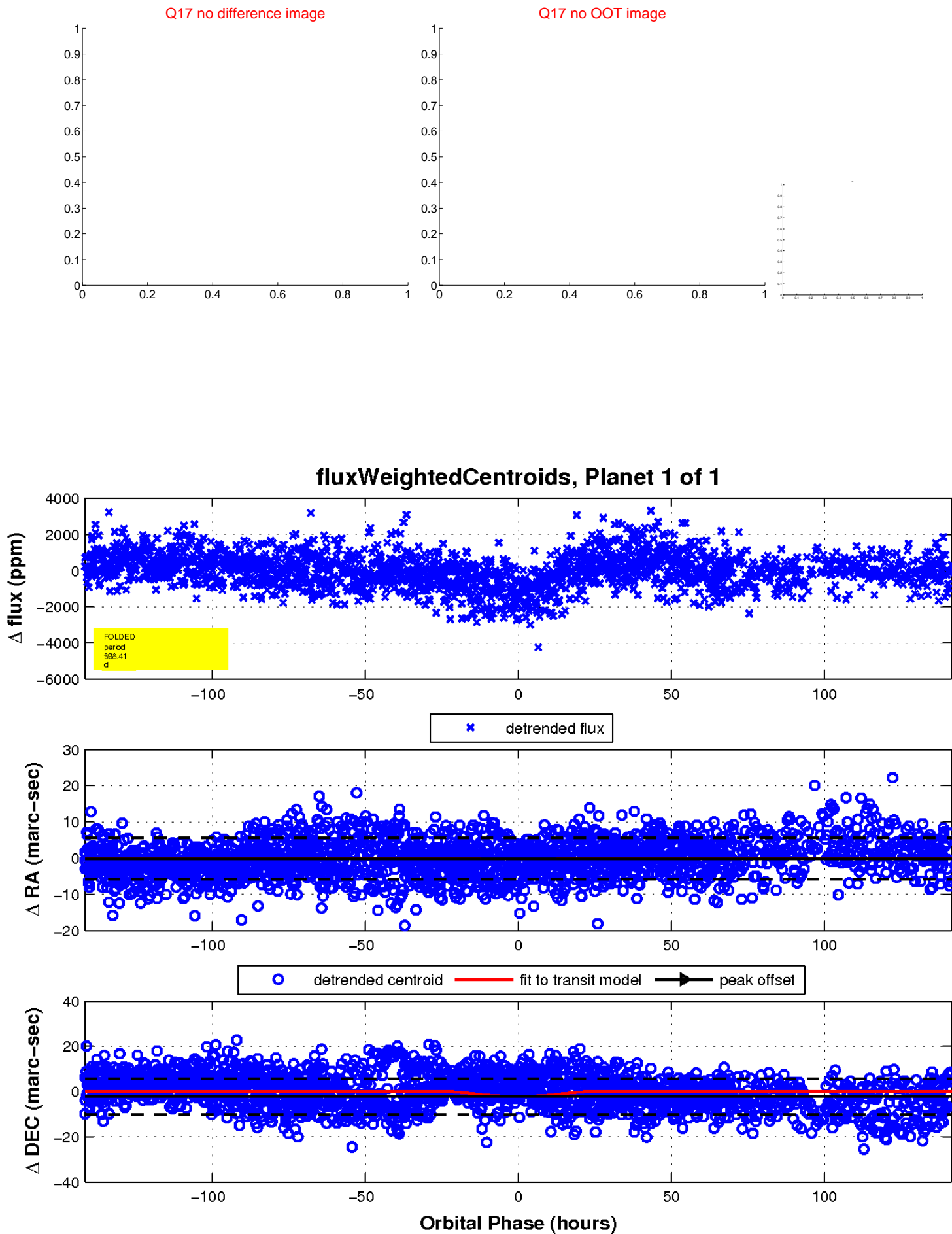
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

