

KIC 006039264

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})
006039264-02	OBS	No	360.564466	158.567315	2368.1	32.497	7.6	9.3	1.00	6047	9.13	1.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006039264-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

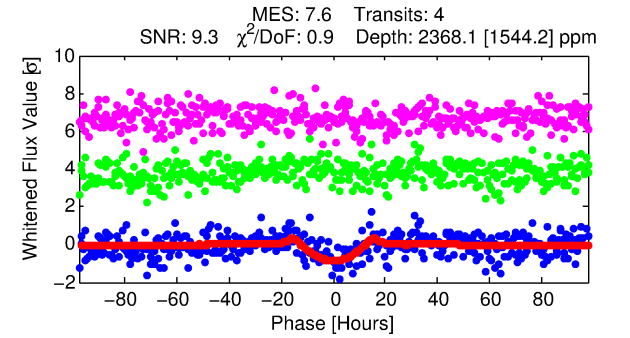
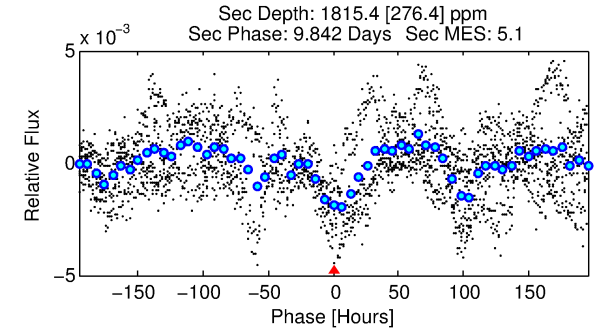
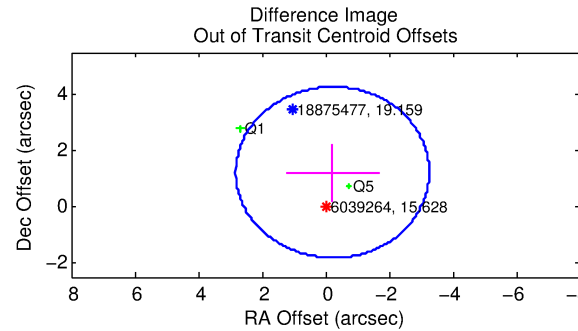
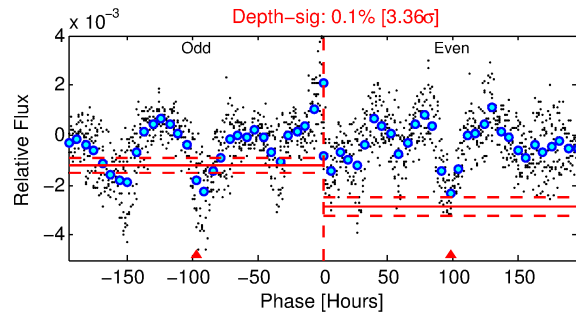
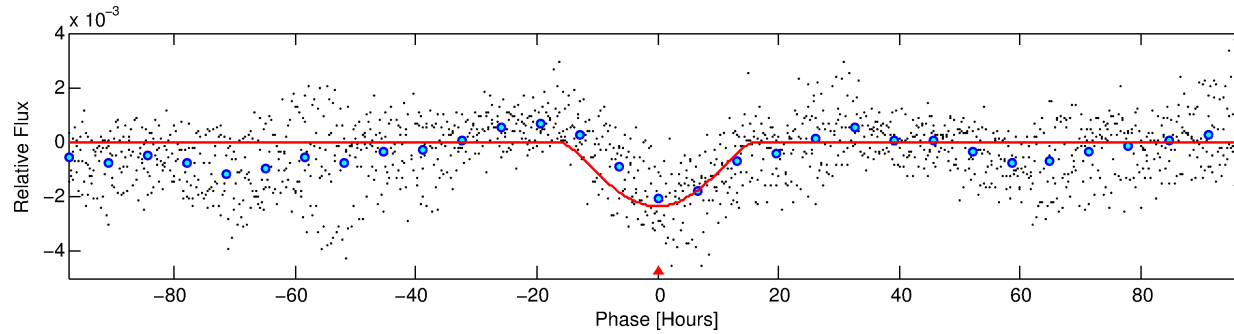
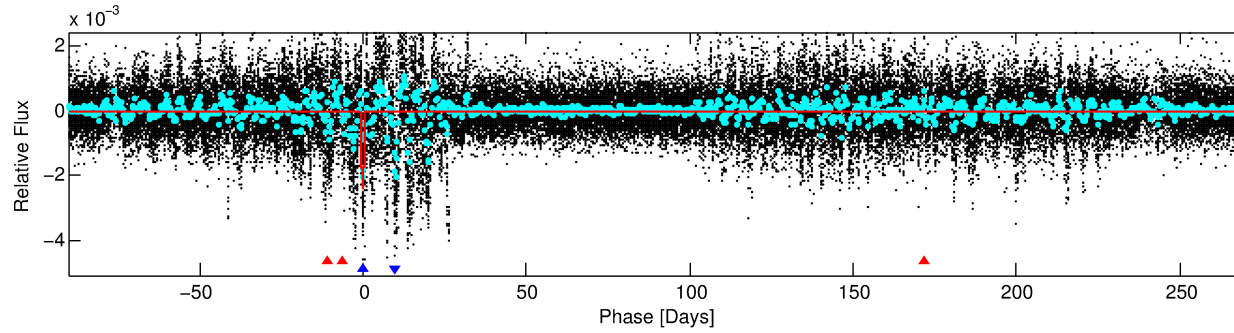
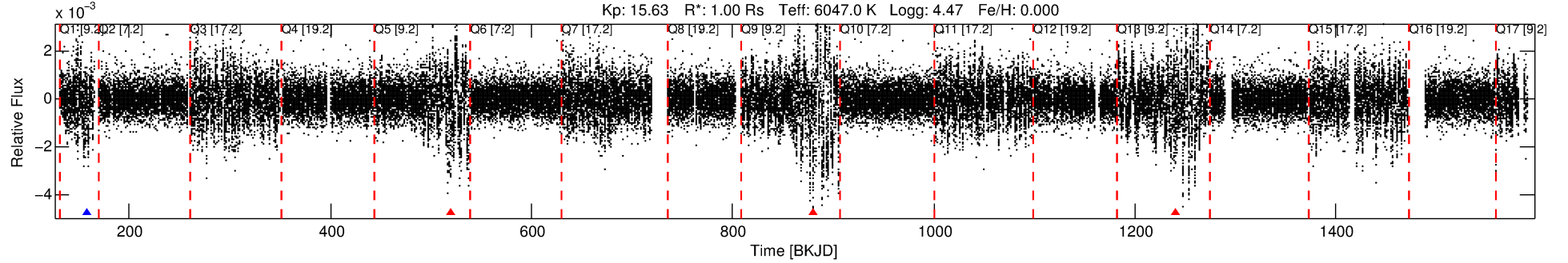
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006039264-02

No Significant Match Found

DV One-Page Summary

KIC: 6039264 Candidate: 2 of 2 Period: 360.564 d



DV Fit Results:

Period = 360.56447 [0.02840] d
Epoch = 158.5673 [0.0490] BKJD
Rp/R* = 0.0835 [0.1427]
a/R* = 35.38 [12.40]
b = 1.00 [0.17]
Seff = 1.16 [0.47]
Teq = 265 [27] K
Rp = 9.14 [15.87] Re
a = 1.0176 [0.2697] AU
Ag = 12394.05 [42645.87] [0.29 σ]
Teff = 4318 [3695] K [1.10 σ]

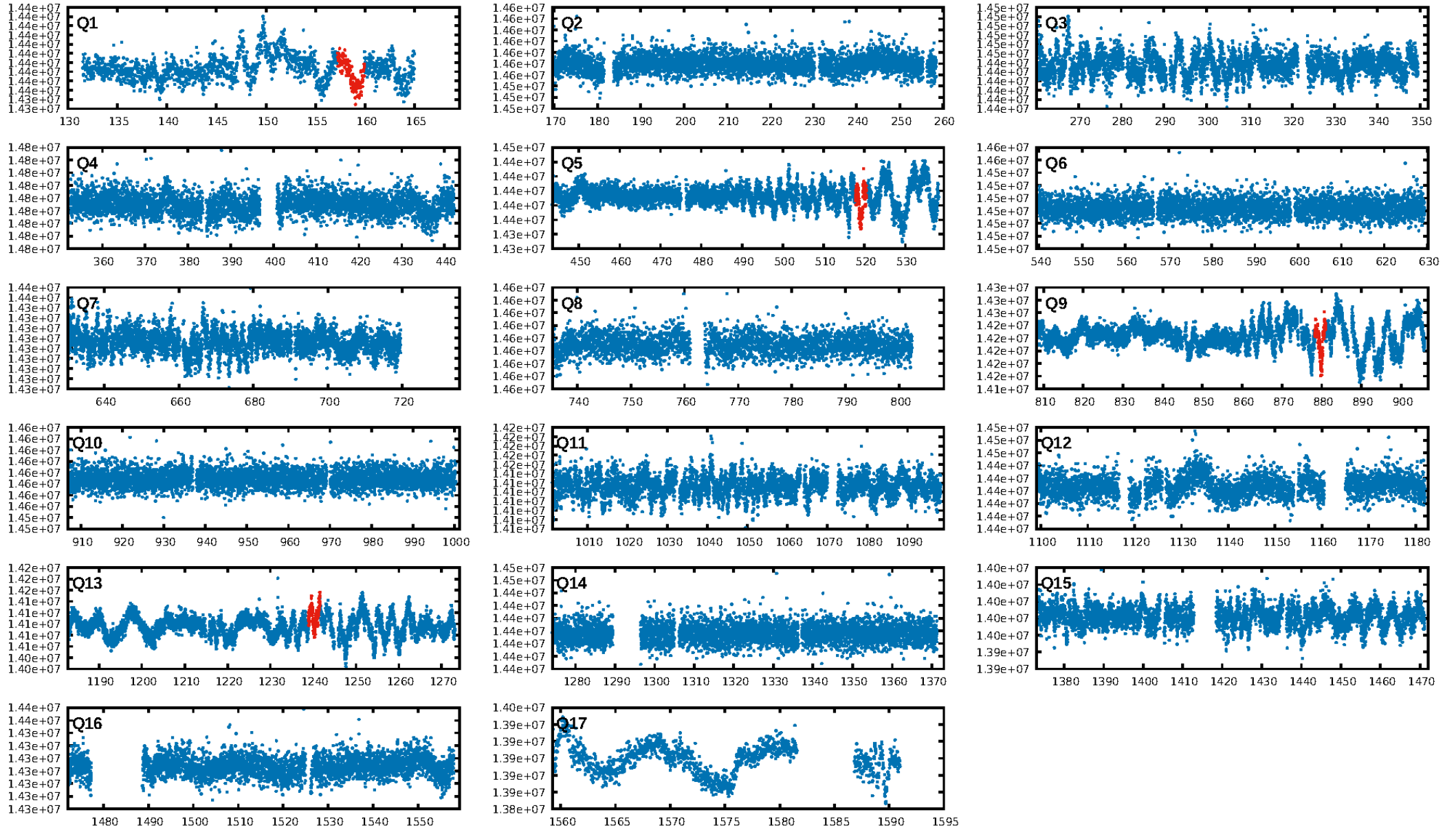
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [117.25 σ]
ModelChiSquare2-sig: 2.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.69e-07
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -1.68
Centroid-sig: 4.9%
Centroid-so: 1.567 arcsec [1.23 σ]
OotOffset-rm: 1.246 arcsec [1.23 σ]
KicOffset-rm: 1.354 arcsec [1.28 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 [3/3]

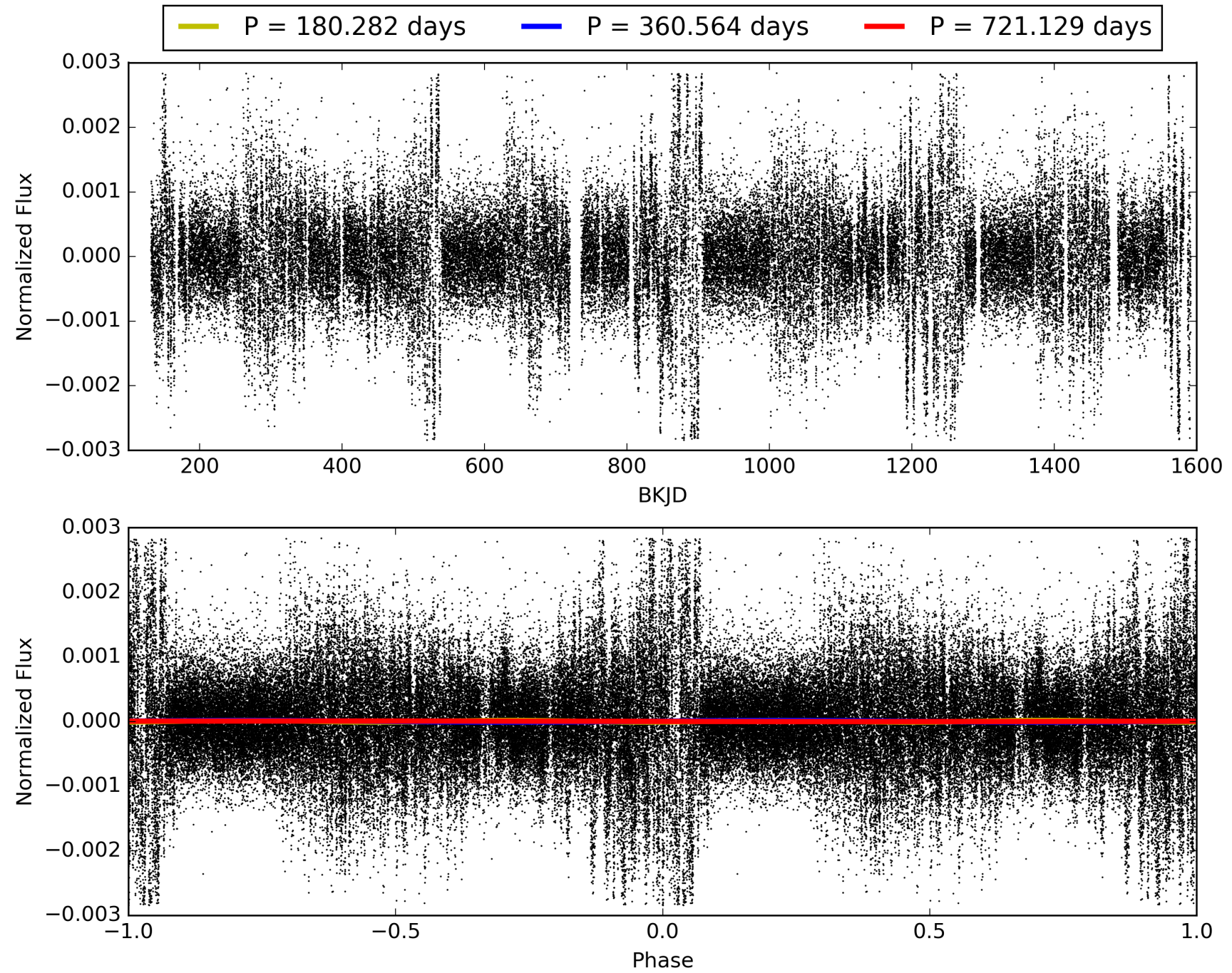
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:23:16 Z

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

TCE 006039264-02, PDC Light Curves

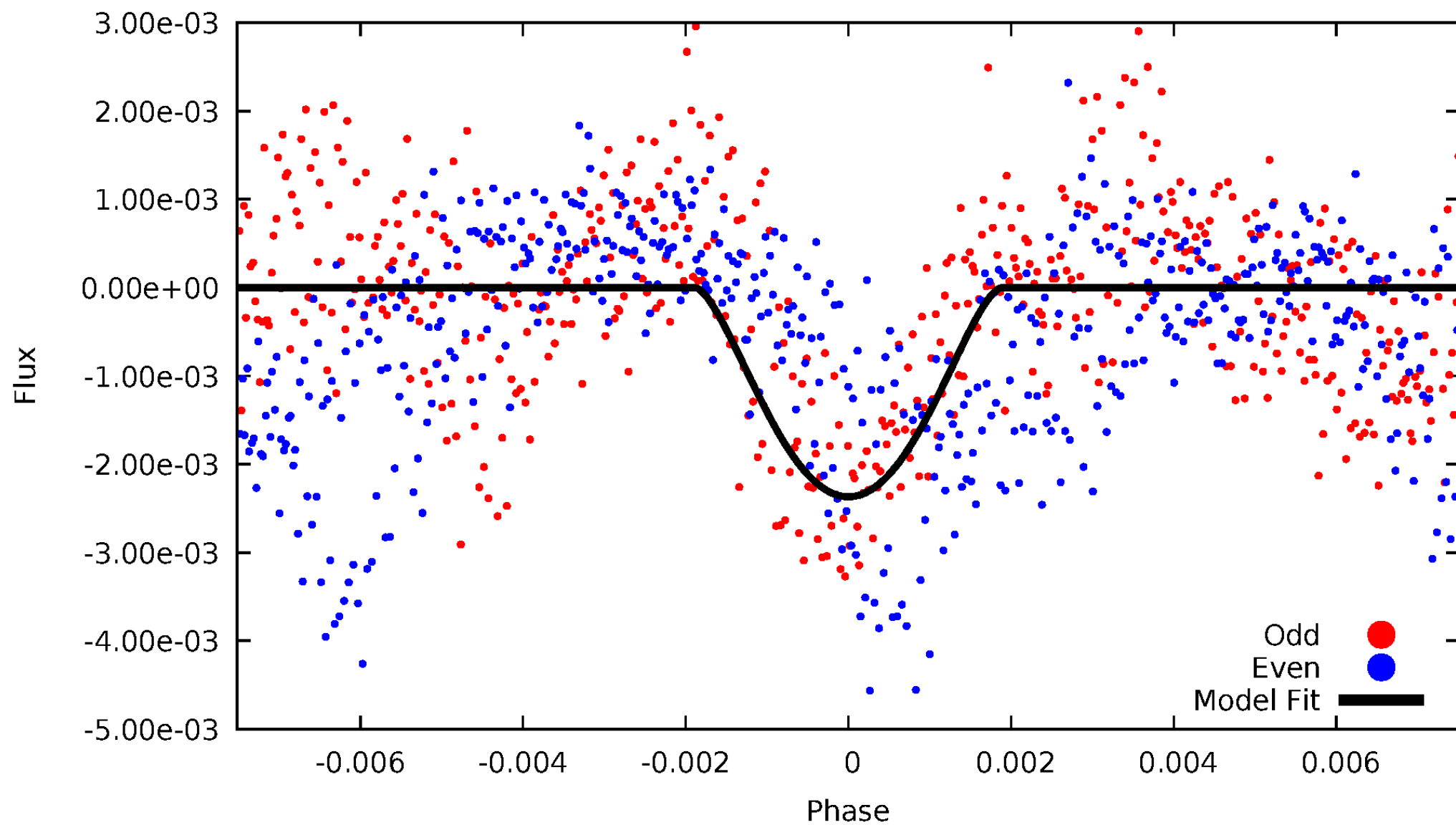


TCE 006039264-02



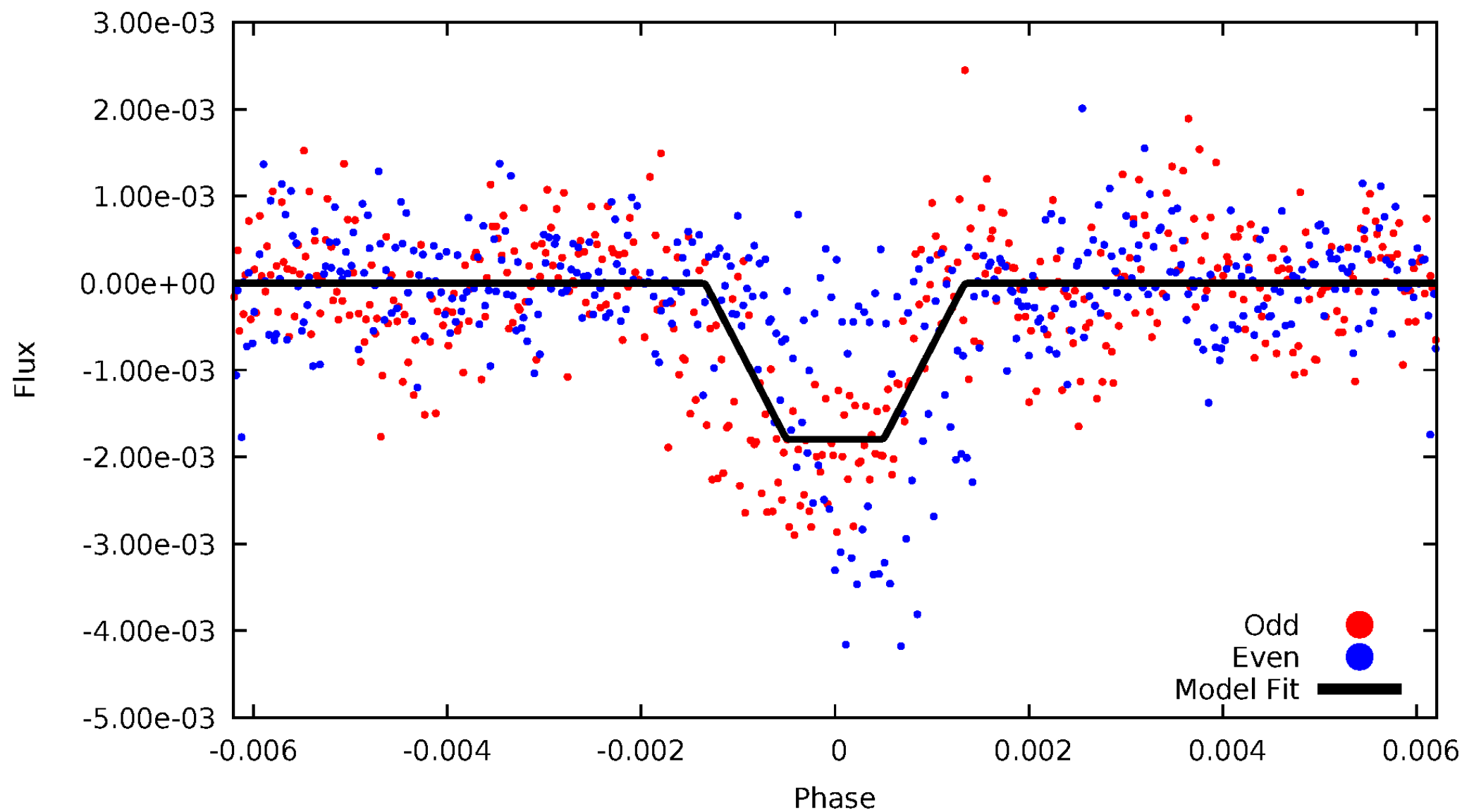
DV Odd/Even

TCE 006039264-02



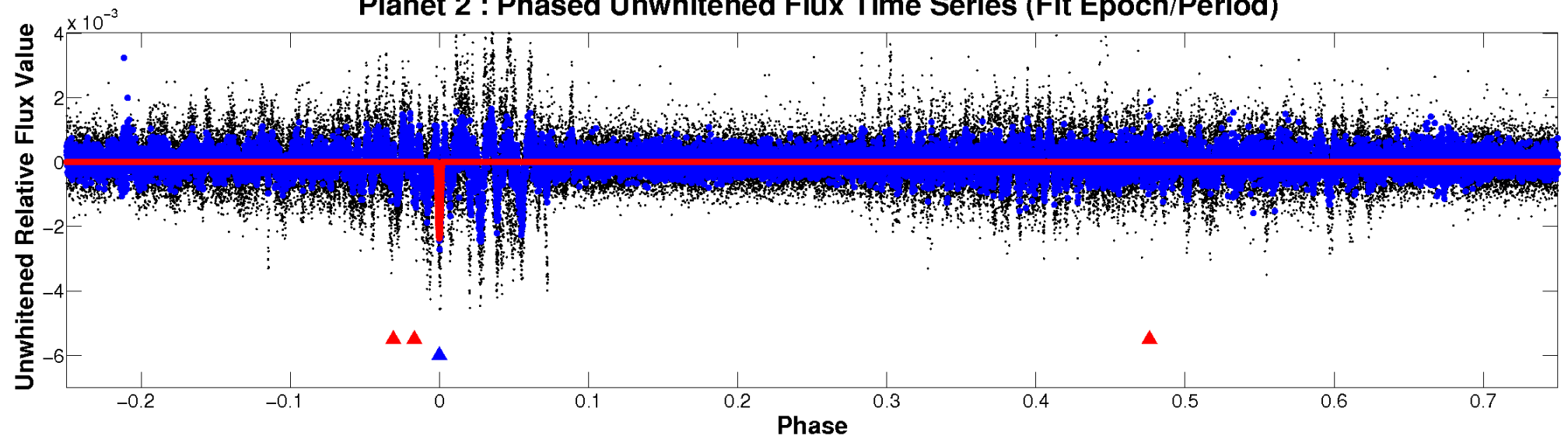
ALT Odd/Even

TCE 006039264-02

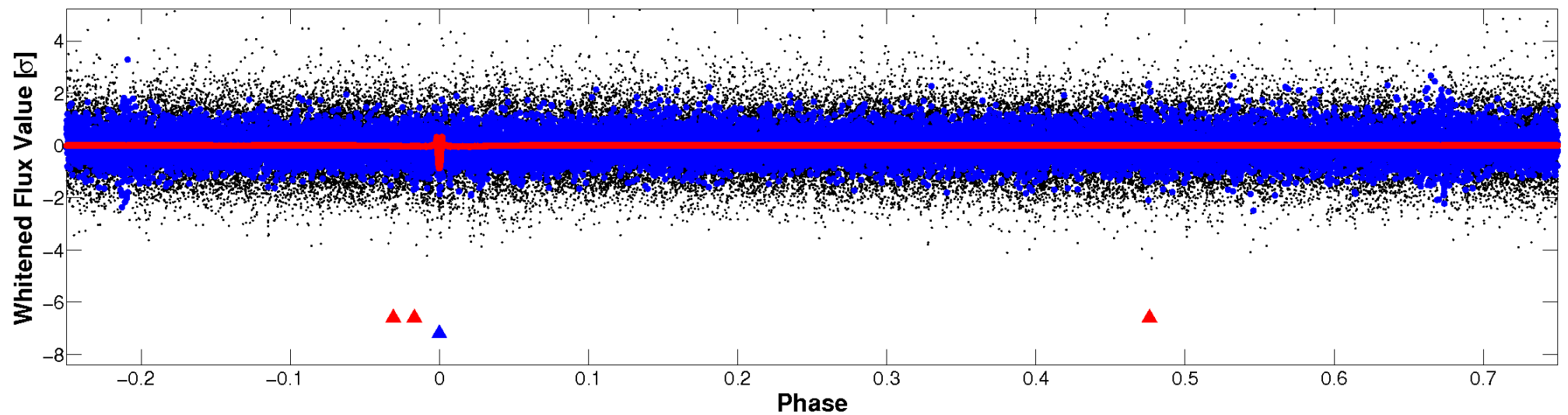


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

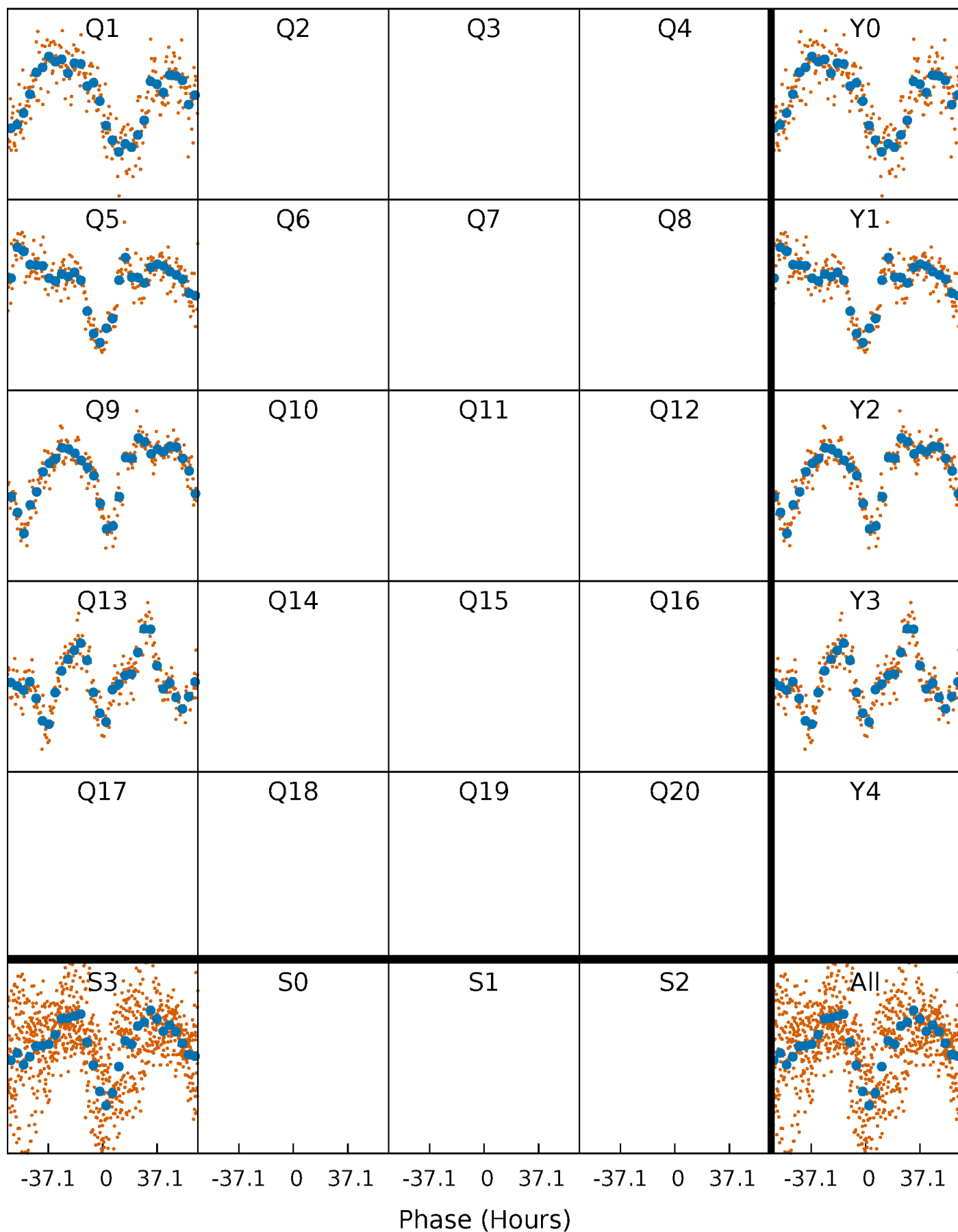


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



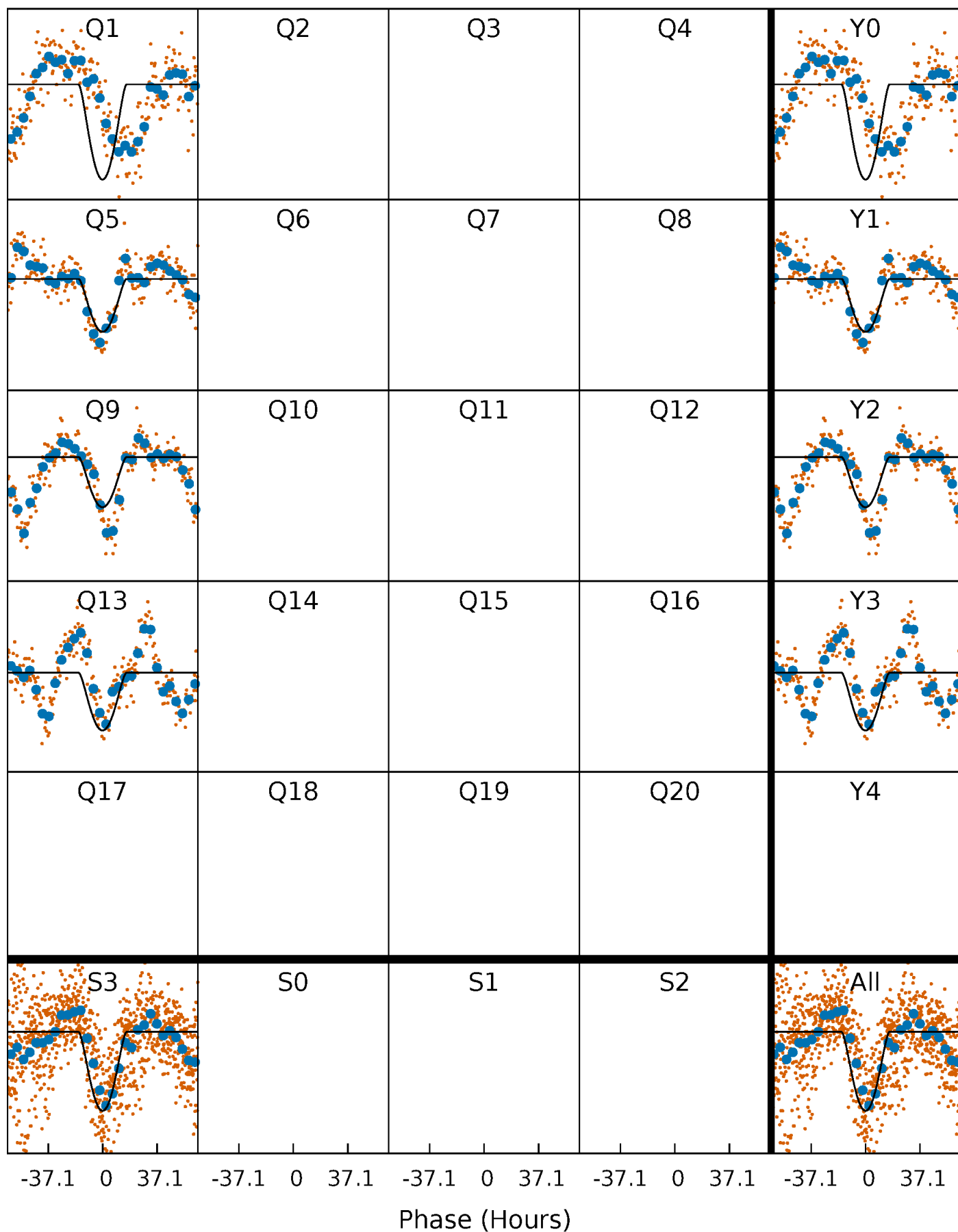
PDC Quarter-Phased Transit Curves

TCE 006039264-02 P=360.564466 Days $T_0=158.567315$ (BKJD)



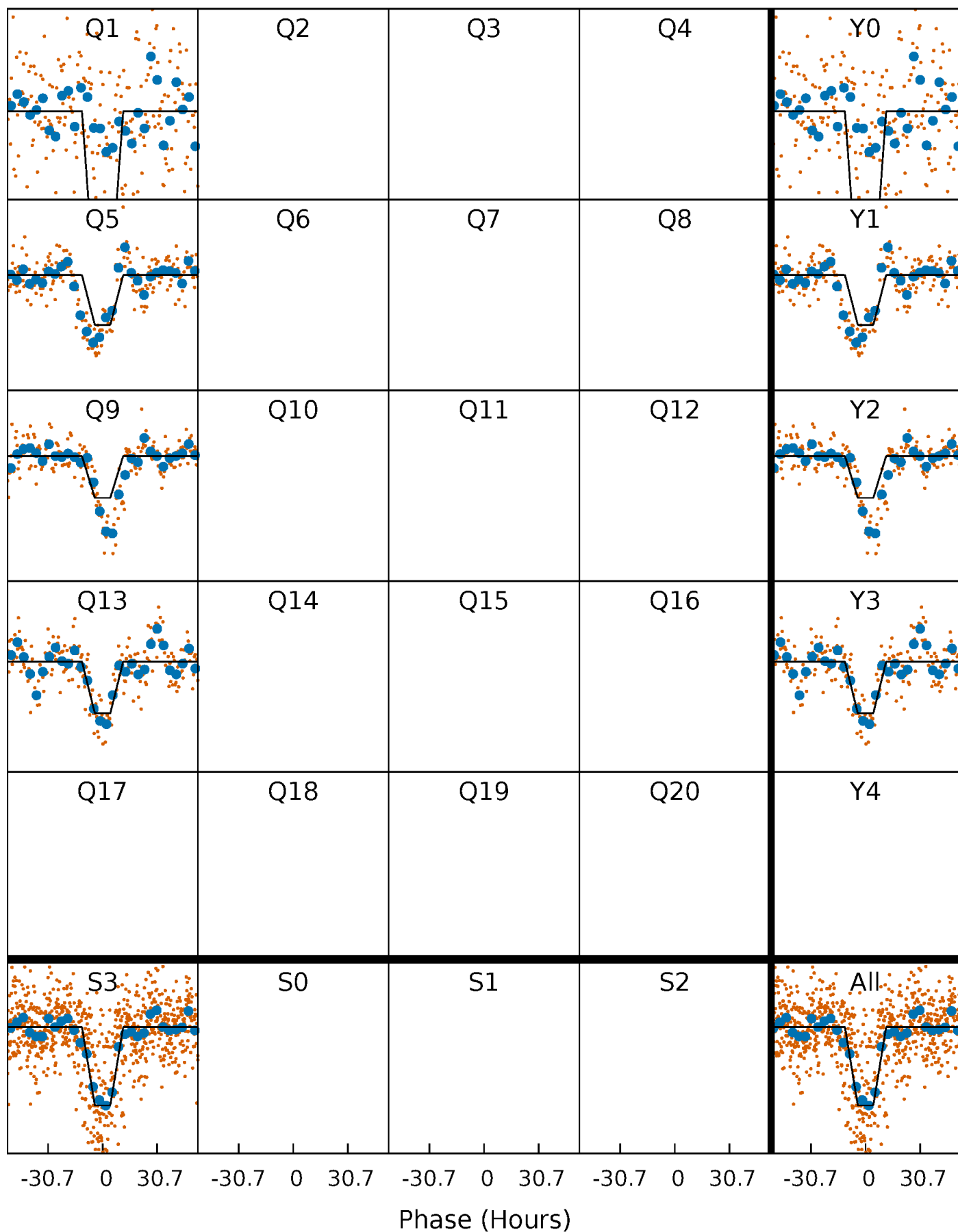
DV Quarter-Phased Transit Curves

TCE 006039264-02 $P=360.564466$ Days $T_0=158.567315$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

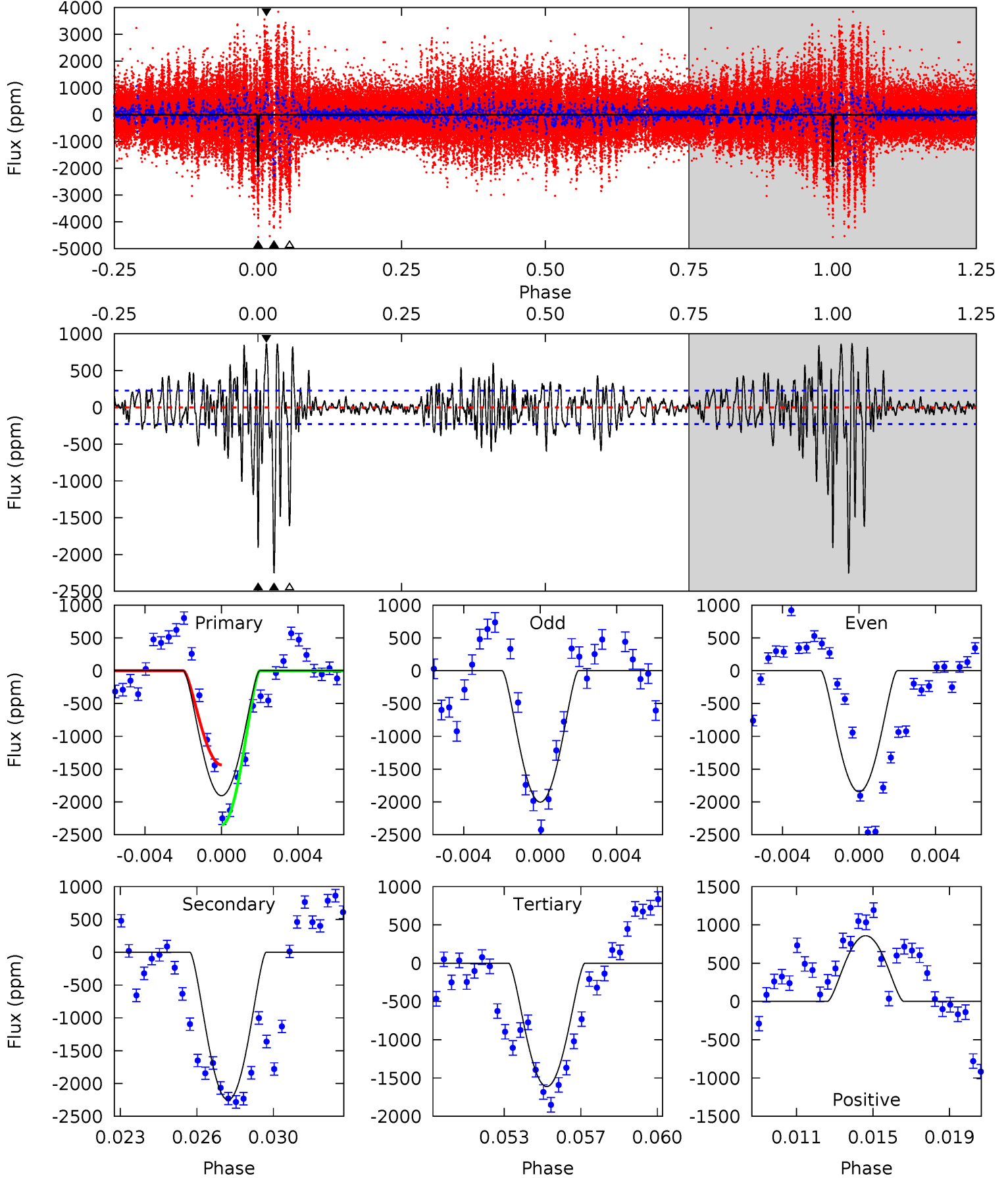
TCE 006039264-02 P=360.482054 Days $T_0=158.786164$ (BKJD)



DV Model-Shift Uniqueness Test

006039264-02, P = 360.564466 Days, E = 158.567315 Days

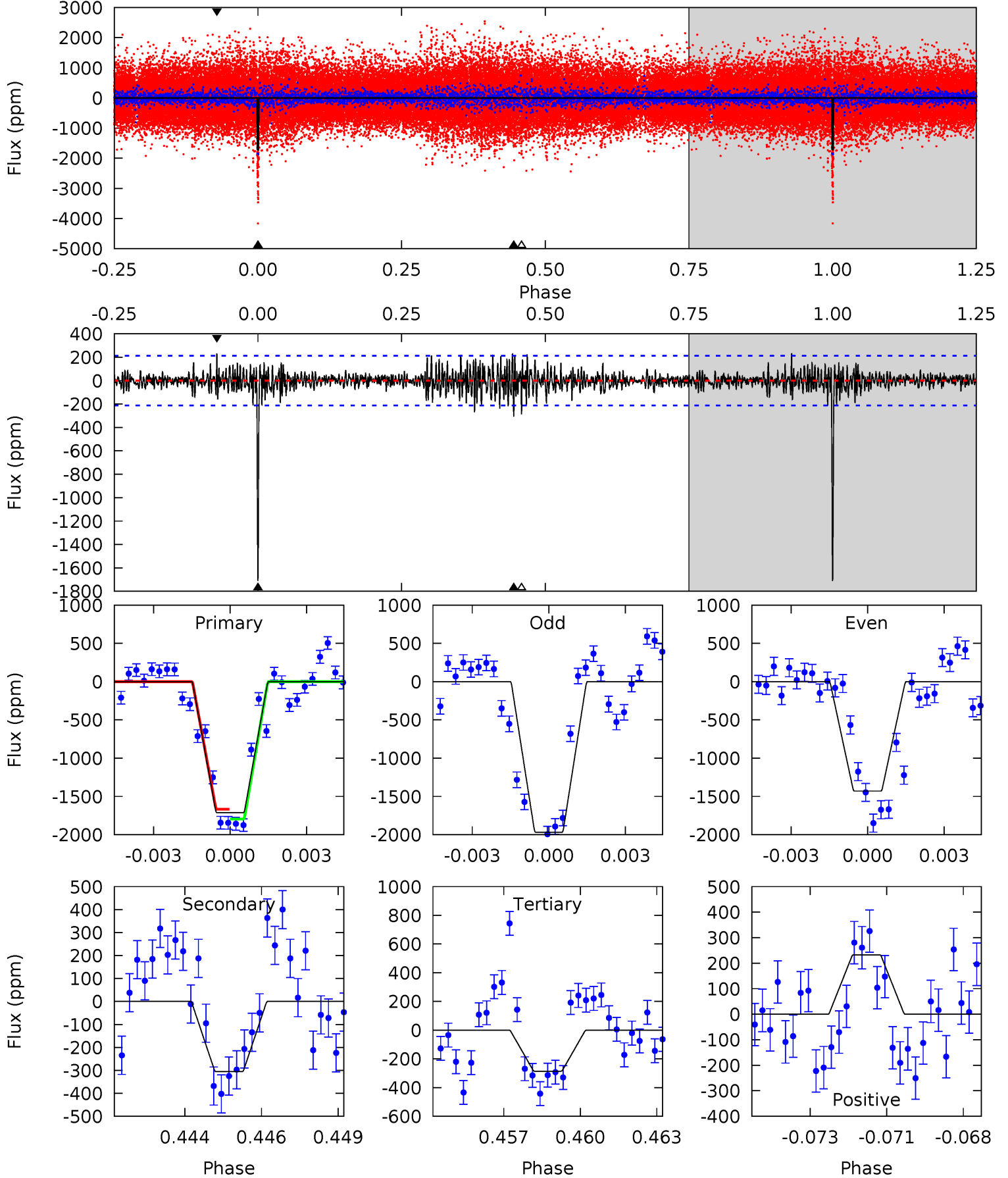
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.6	51.5	36.9	19.6	5.21	2.90	5.69	6.72	23.9	14.6	31.8	1.75	0.96	0.28	10.5



Alt Model-Shift Uniqueness Test

006039264-02, P = 360.482054 Days, E = 158.786164 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.5	7.59	7.11	5.78	5.27	3.00	1.53	35.4	36.8	0.48	1.81	6.84	0.87	0.12	1.58



Stellar Parameters For KIC 006039264

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6047^{+190}_{-211}	$4.470^{+0.052}_{-0.208}$	$0.000^{+0.250}_{-0.350}$	$1.002^{+0.318}_{-0.106}$	$1.081^{+0.130}_{-0.145}$	$1.512^{+0.427}_{-0.797}$
	+3%/-3%	+1%/-5%	+inf%/-inf%	+32%/-11%	+12%/-13%	+28%/-53%
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 006039264-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2252 ± 44	$15.25^{+15.01}_{-10.09}$	379^{+29}_{-20}	3939^{+2223}_{-756}	5444^{+40998}_{-4061}
Alt.	-305 ± 40	$13.46^{+12.95}_{-9.51}$	379^{+26}_{-20}	2978^{+1523}_{-468}	925^{+10055}_{-684}

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

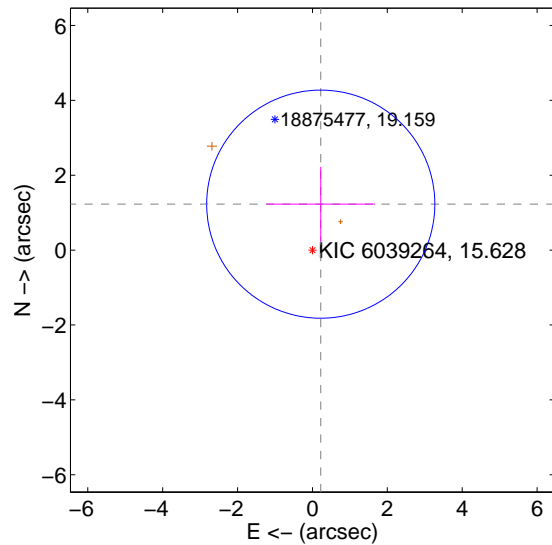
Supplemental centroid analysis for 006039264-02. Kepler magnitude: 15.63. Transit SNR 9.31

There are 0 quarters with good PRF difference image offsets

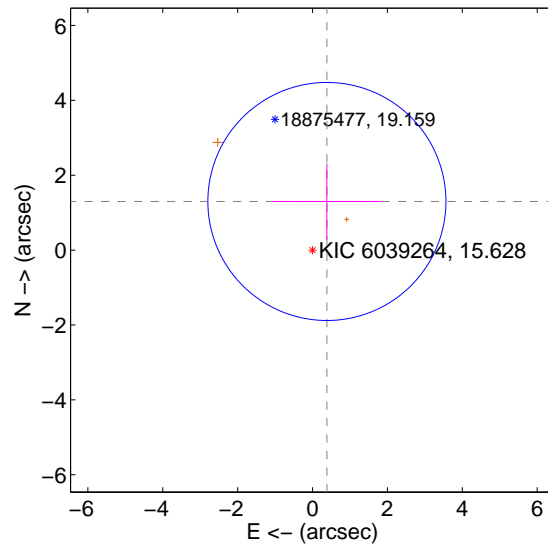
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.246 ± 1.015	1.23	-0.222 ± 1.449	1.227 ± 0.998
PRF-fit source offset from KIC position	1.354 ± 1.059	1.28	-0.383 ± 1.454	1.298 ± 1.018
photometric centroid source offset	1.57 ± 1.27	1.23	-1.24 ± 1.34	-0.96 ± 1.15

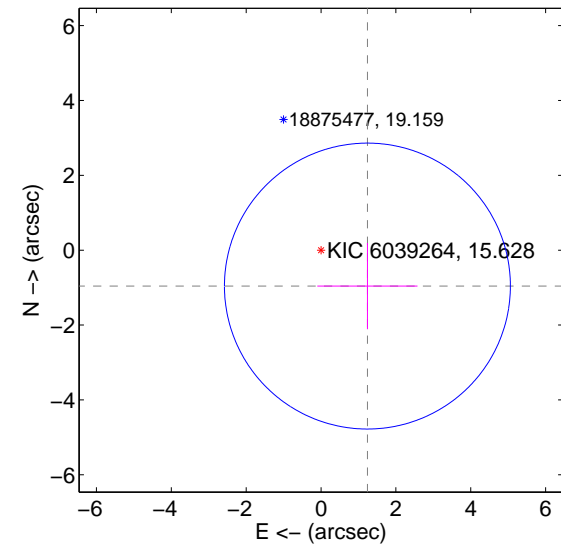
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

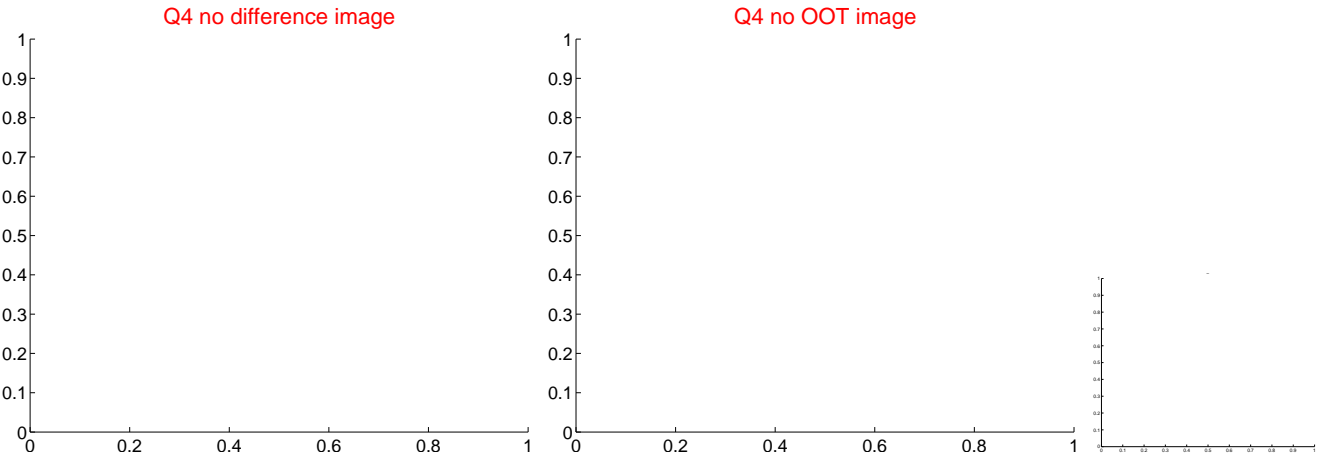
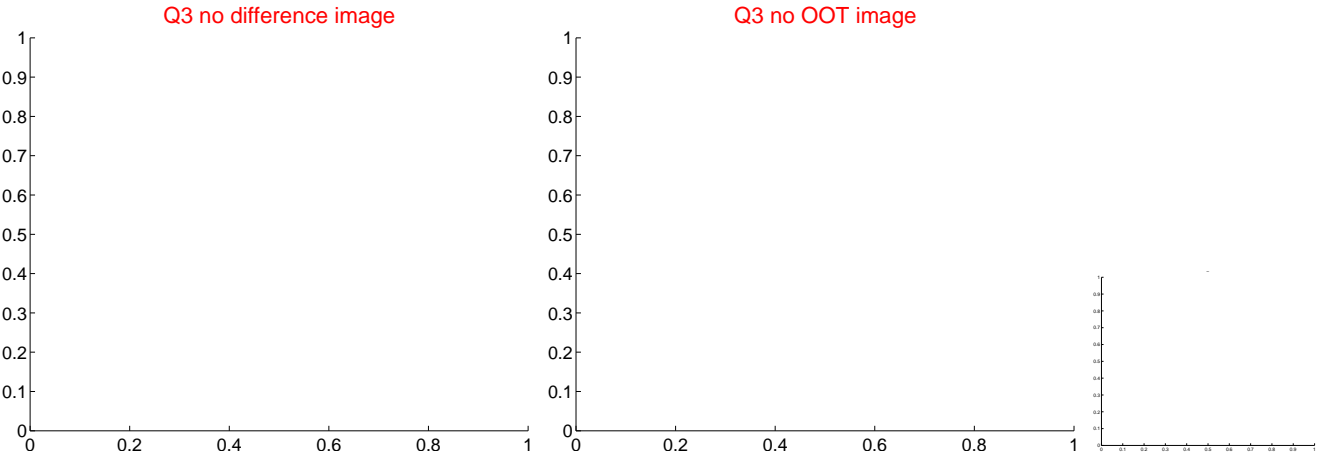
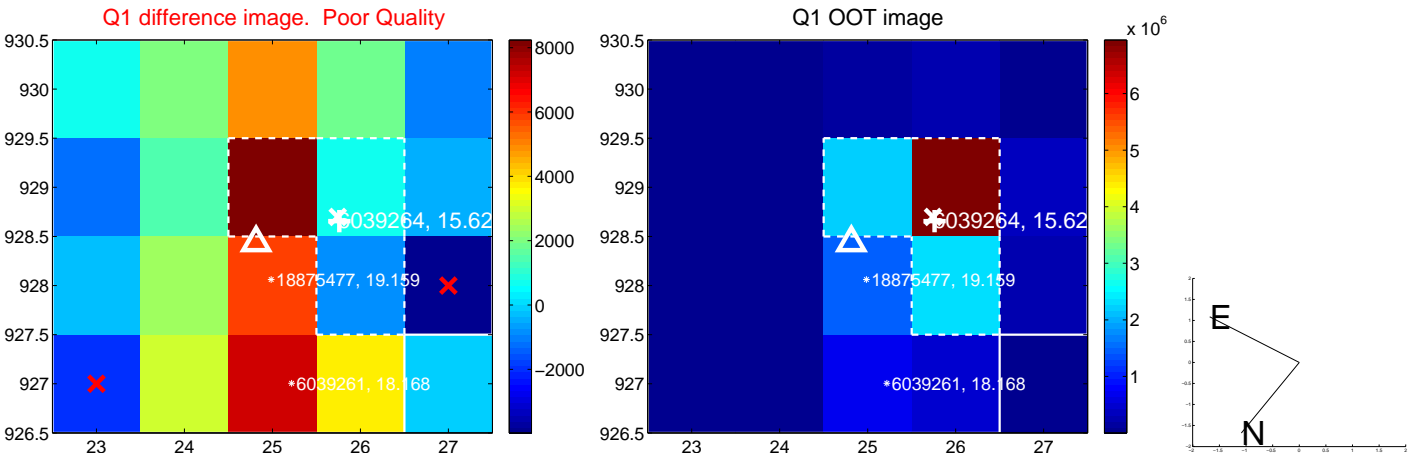


offset from photometric centroids

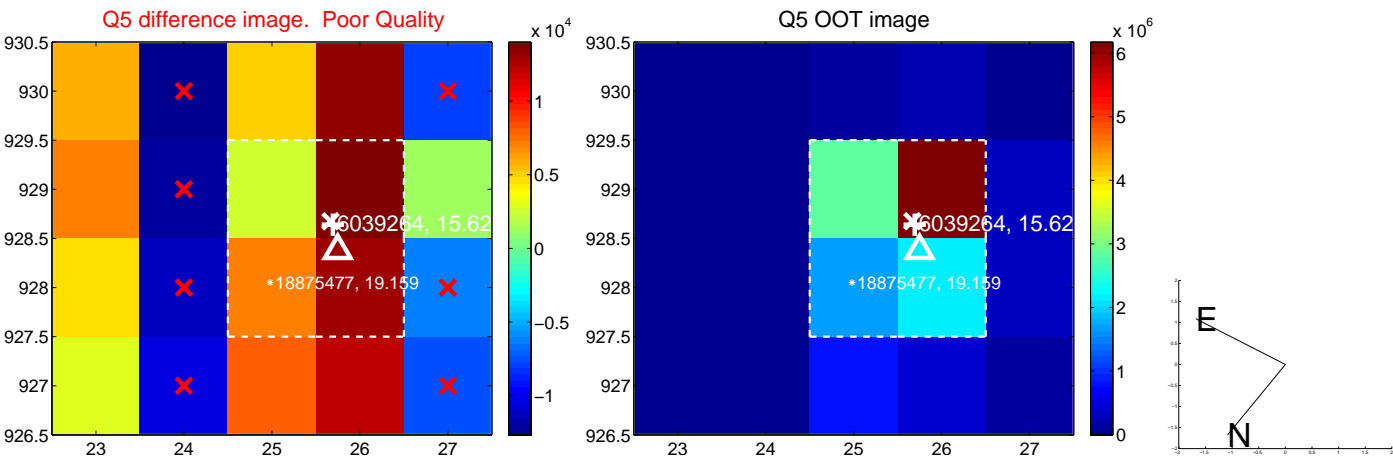


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

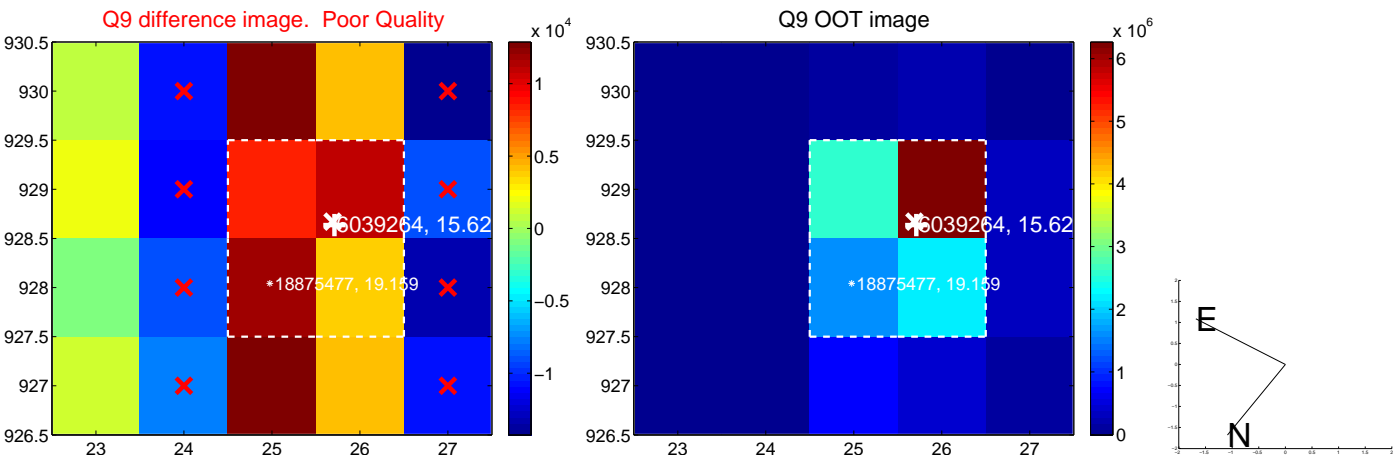
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



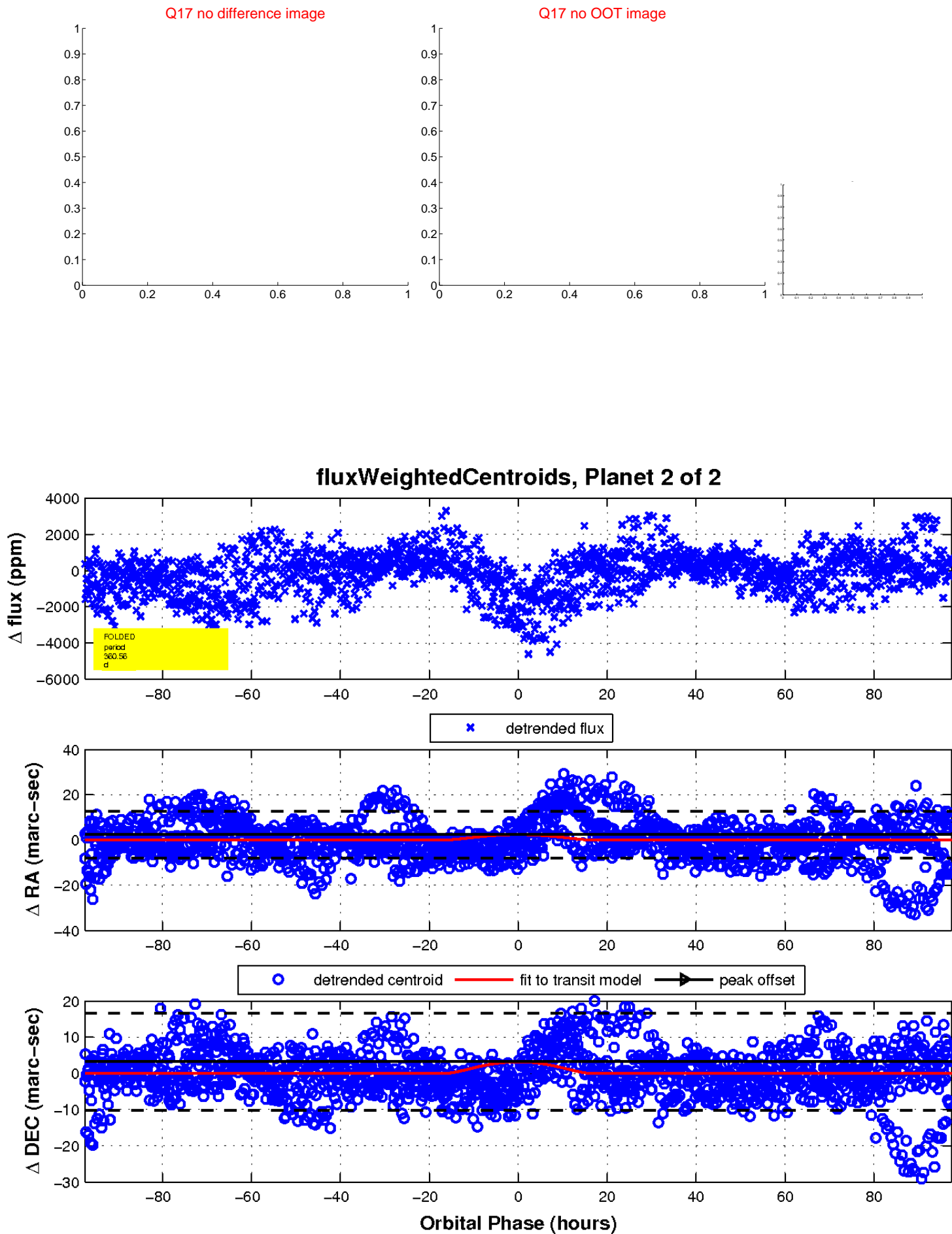
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

