

KIC 008038823

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})
008038823-01	OBS	No	369.311319	233.302991	1417.7	20.952	9.1	10.4	0.89	6029	5.35	0.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008038823-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE--CENT_FEW_DIFFS--EPHEM_MATCH

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.

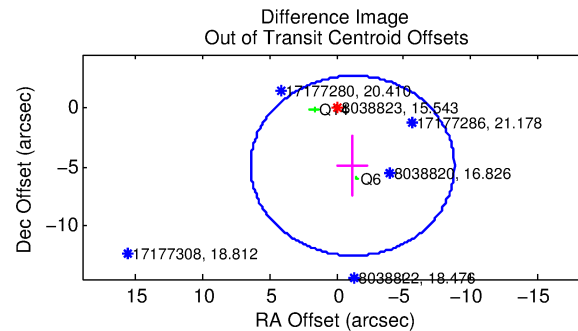
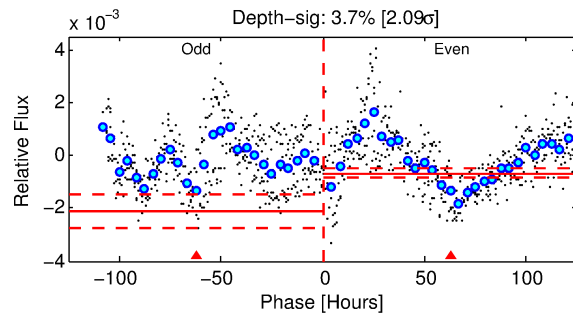
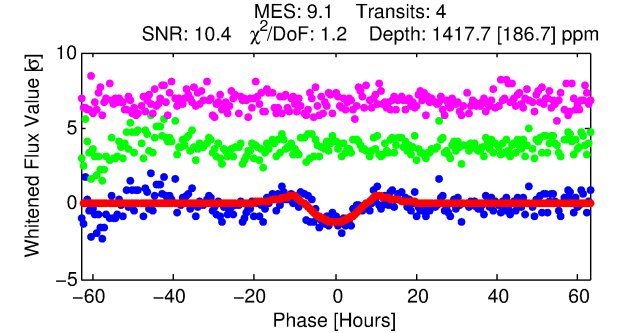
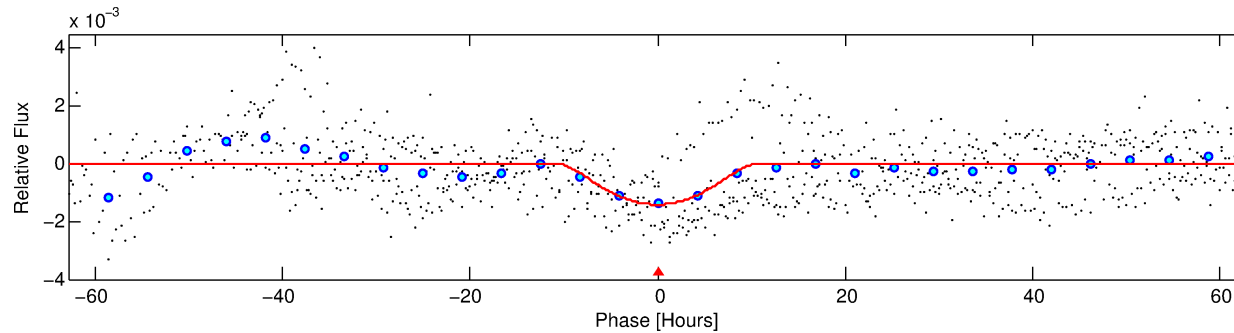
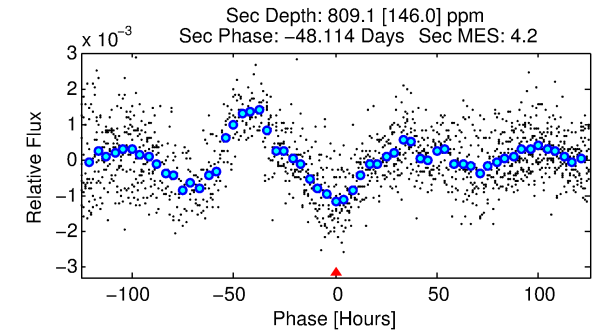
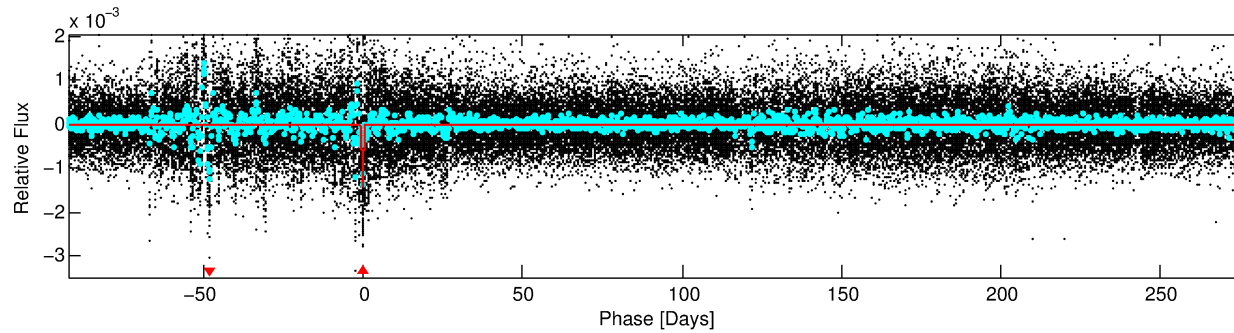
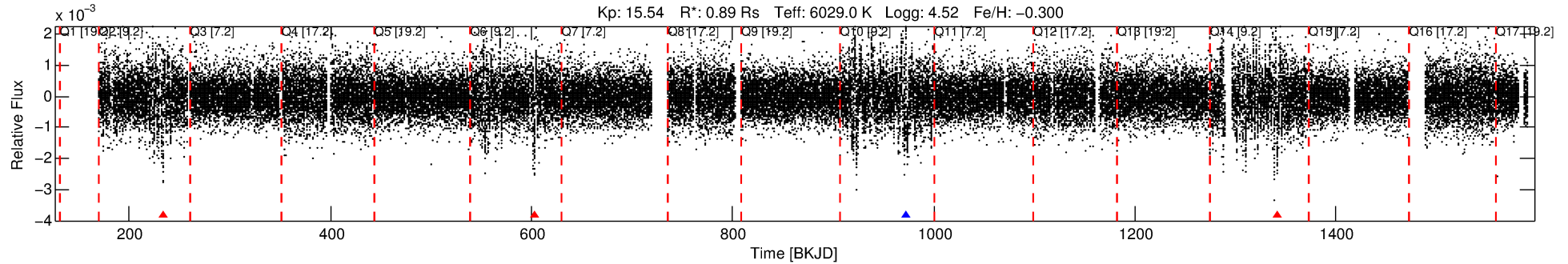
Ephemeris Match Information For 008038823-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008038823-01	8038823	008038865-01	8038865	1:1	52.9	-14	1	14.32	15.54	0.56	Direct-PRF	1	4.72	3.49

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8038823 Candidate: 1 of 1 Period: 369.311 d



DV Fit Results:

Period = 369.31132 [0.01861] d
Epoch = 233.3030 [0.0328] BKJD
Rp/R* = 0.0548 [0.0628]
a/R* = 51.43 [18.84]
b = 0.98 [0.11]
Seff = 0.95 [0.37]
Teq = 252 [24] K
Rp = 5.35 [6.33] Re
a = 0.9981 [0.2480] AU
Ag = 15505.79 [36101.92] [0.43σ]
Teffp = 4343 [2501] K [1.64σ]

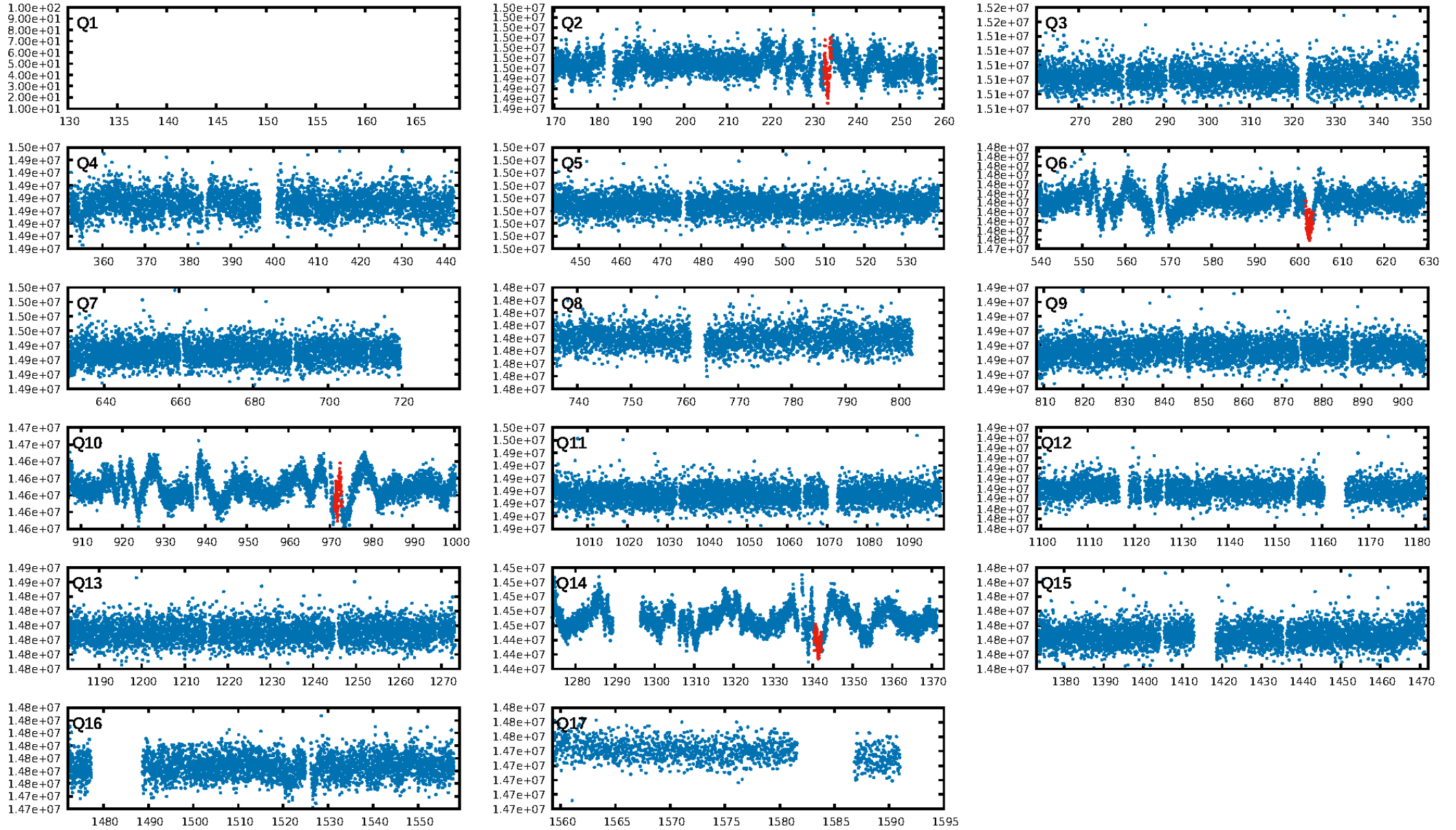
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.6%
ModelChiSquareGof-sig: 85.8%
Bootstrap-pfa: 4.91e-15
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 2.685
Centroid-sig: 0.0%
Centroid-so: 5.291 arcsec [3.39σ]
OotOffset-rm: 5.068 arcsec [2.00σ]
KicOffset-rm: 5.180 arcsec [2.05σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

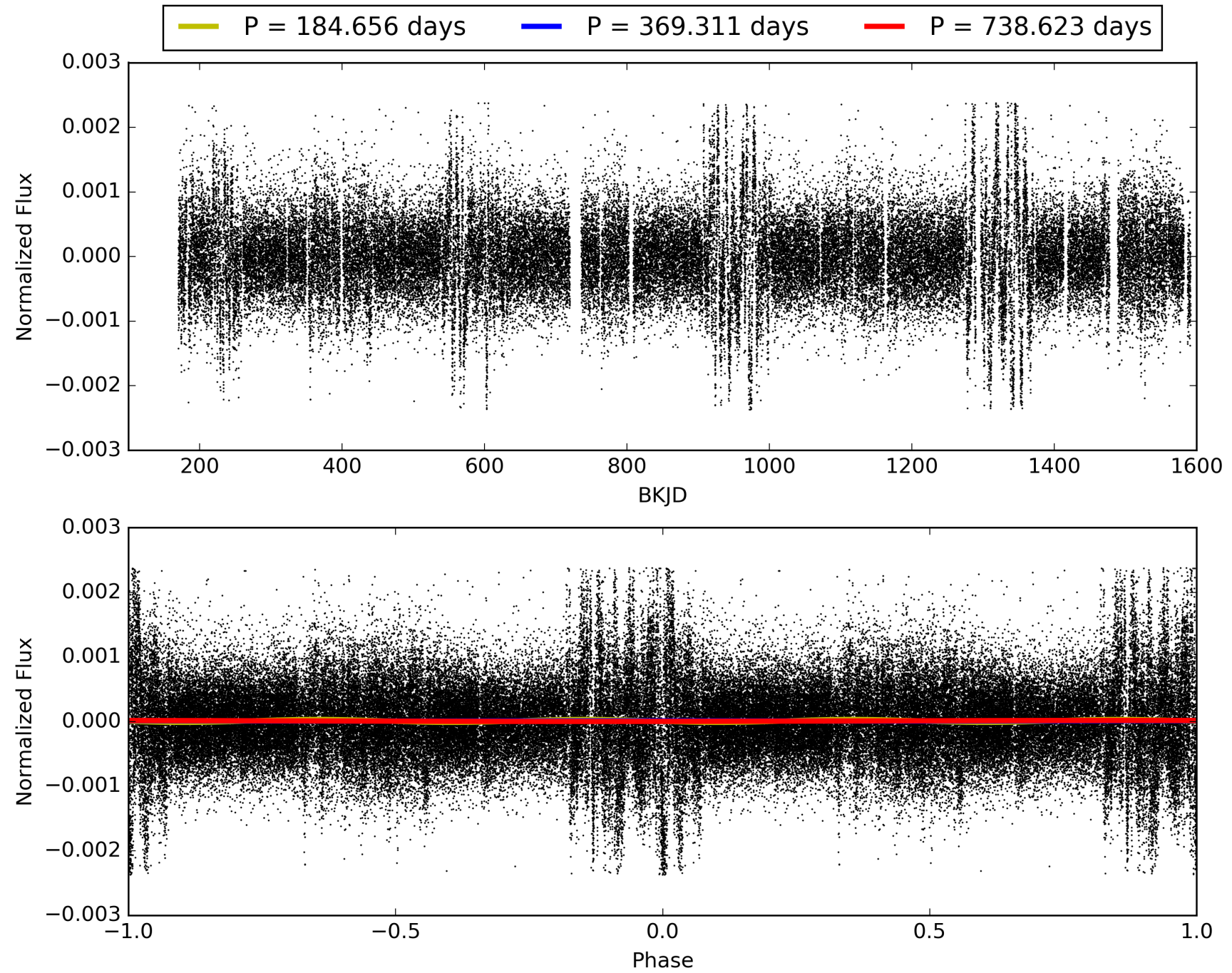
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:47:33 Z

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

TCE 008038823-01, PDC Light Curves

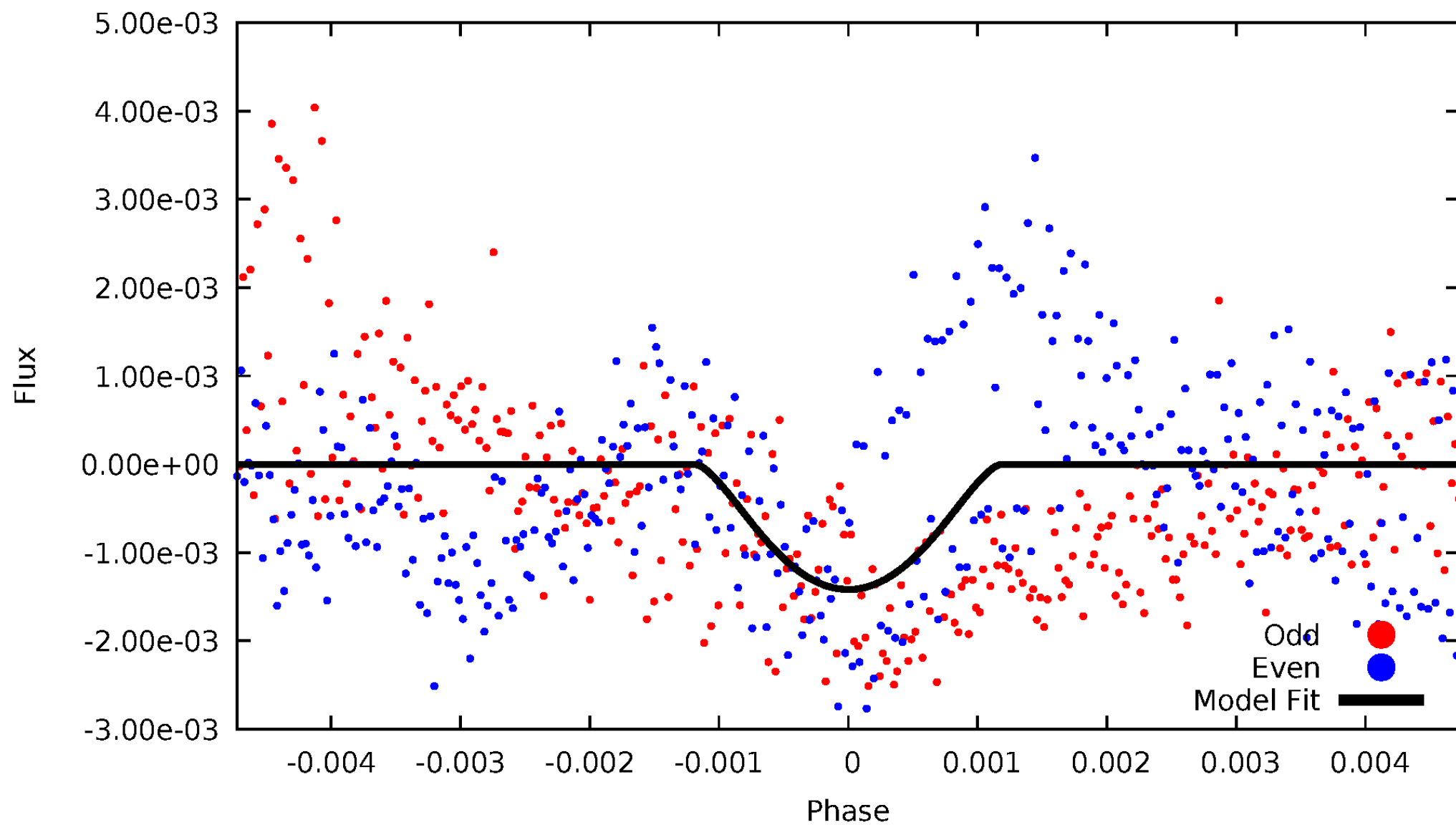


TCE 008038823-01



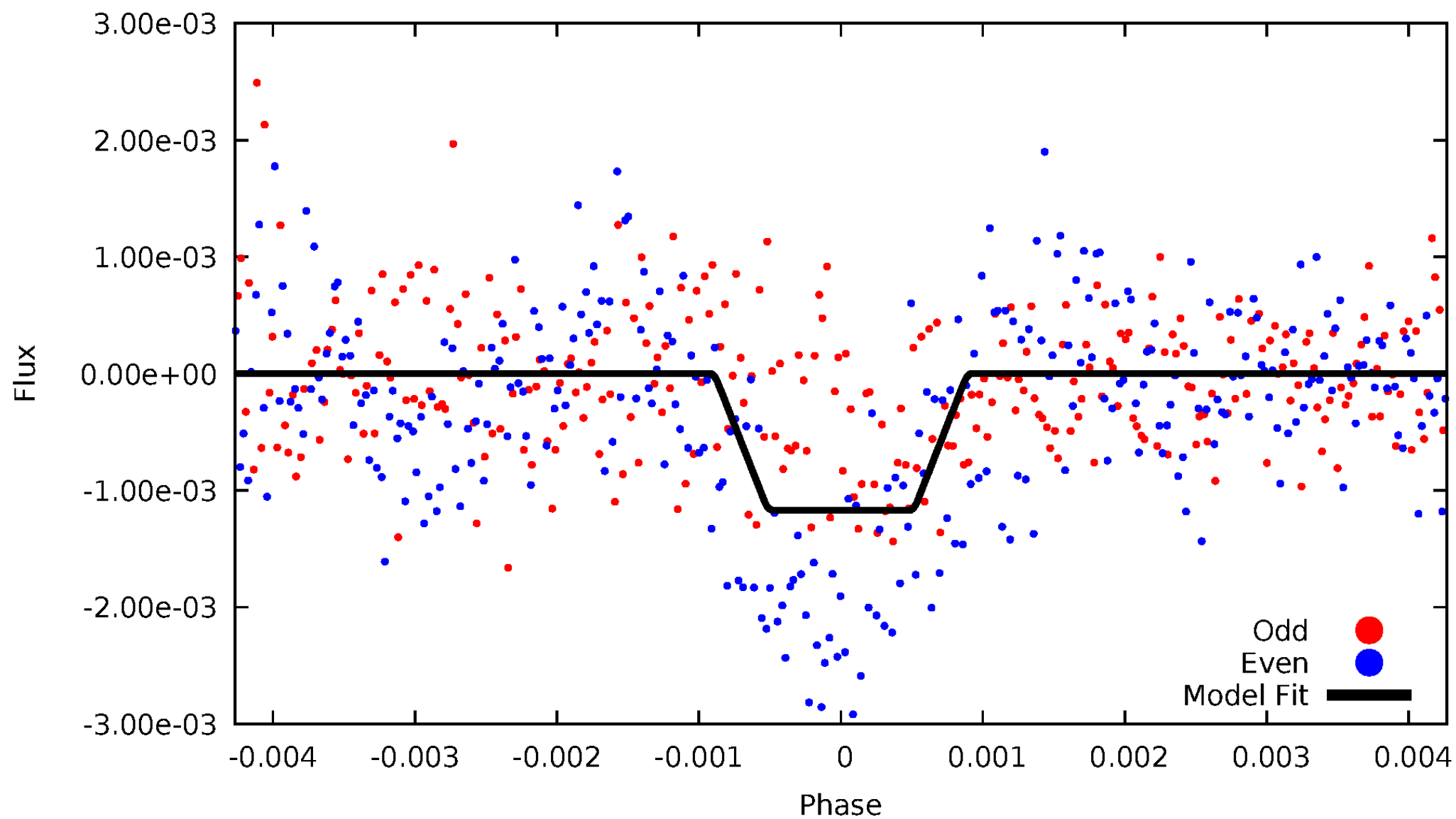
DV Odd/Even

TCE 008038823-01



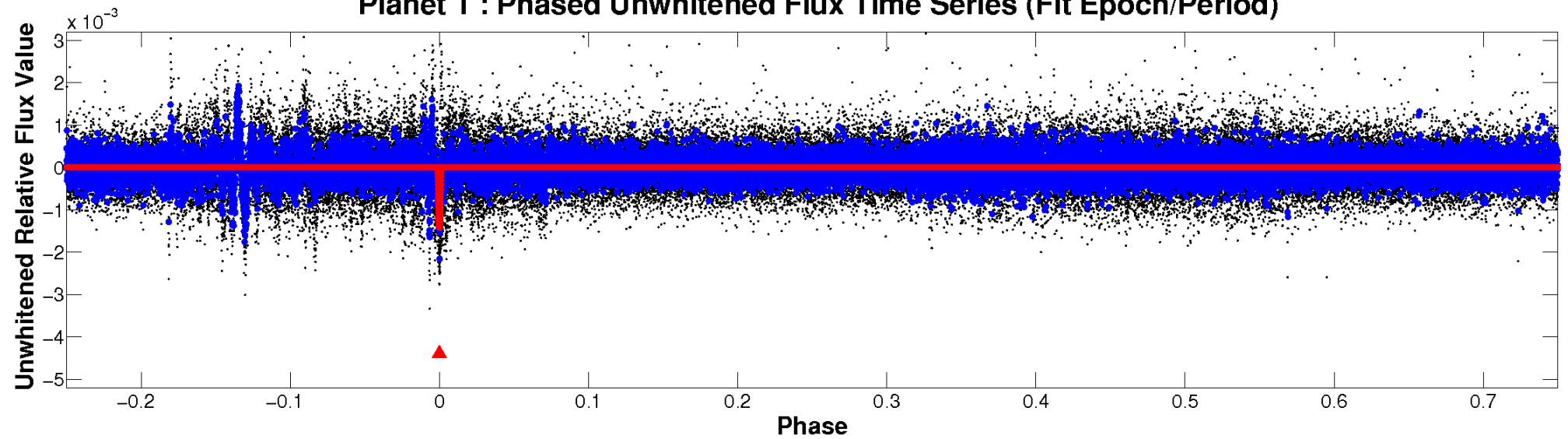
ALT Odd/Even

TCE 008038823-01

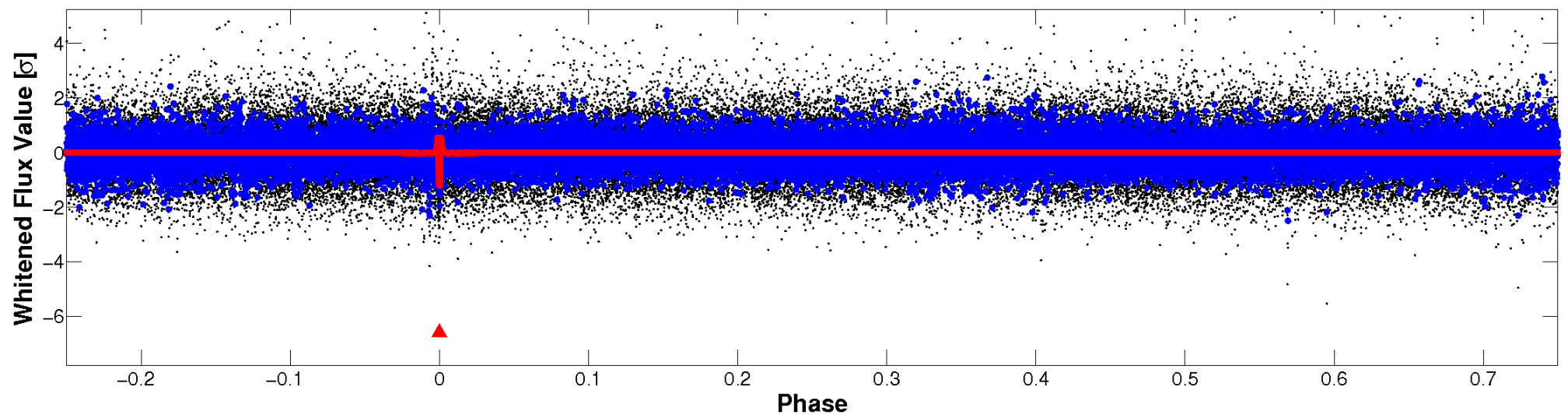


Non-Whitened Vs. Whitened Light Curve

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

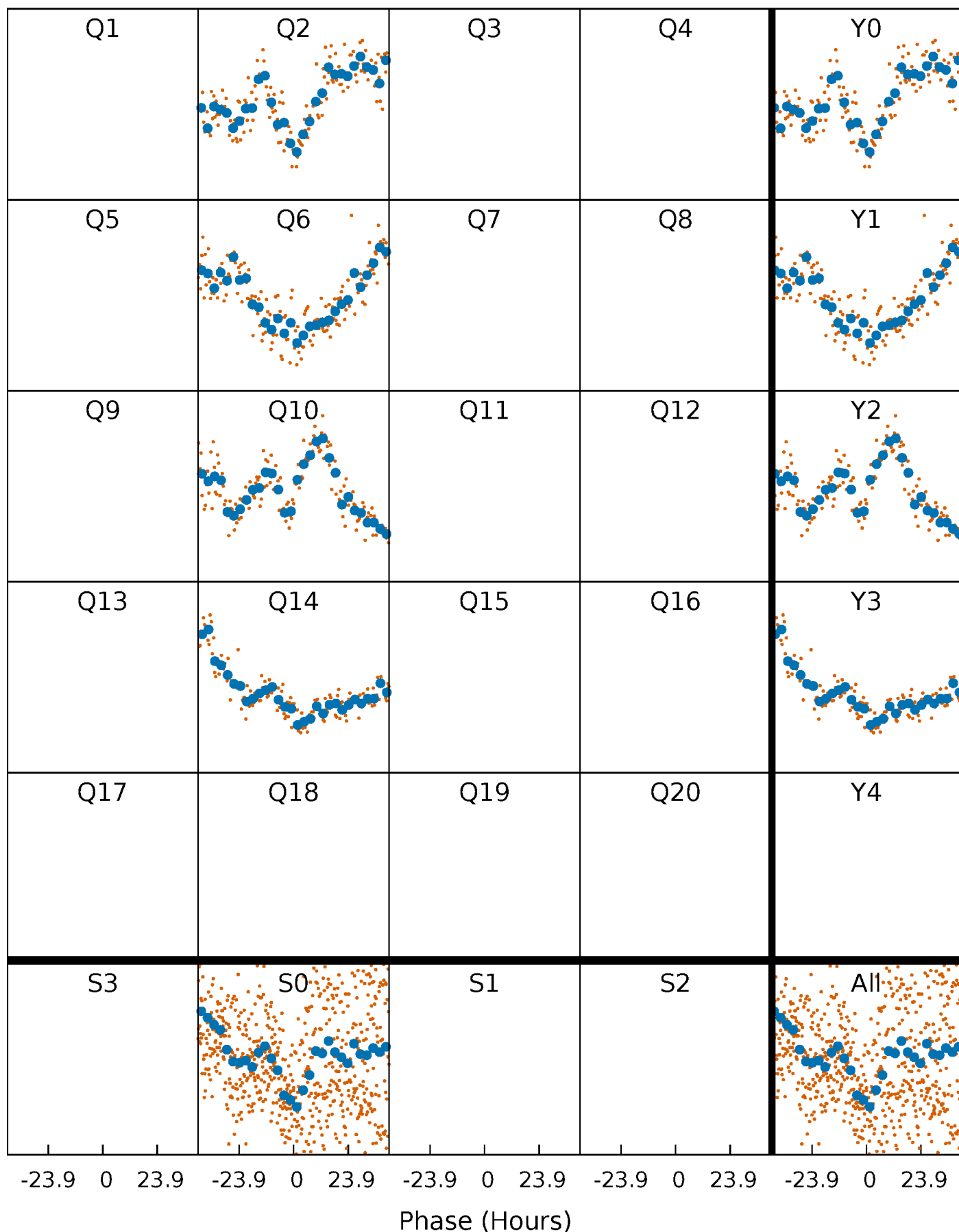


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



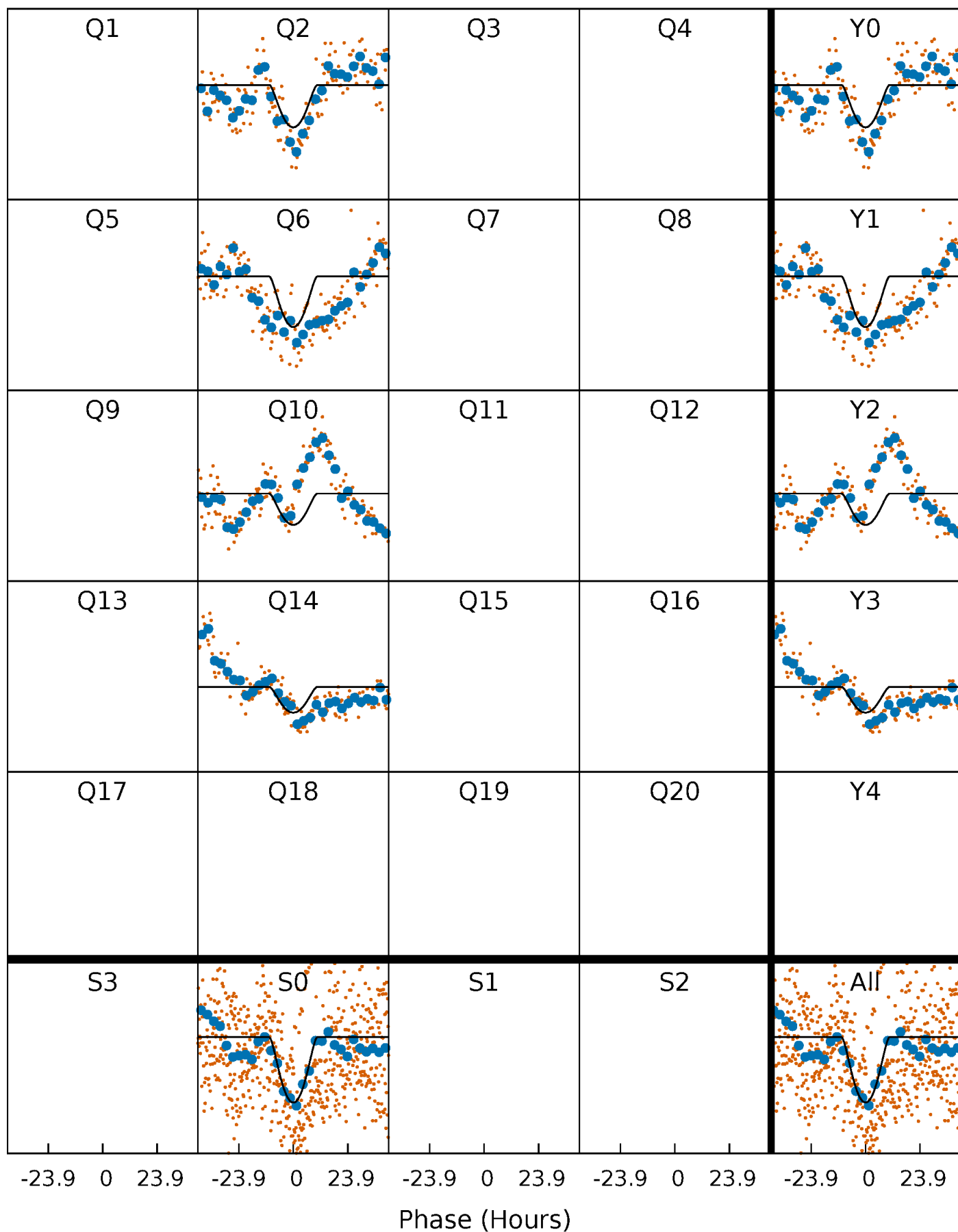
PDC Quarter-Phased Transit Curves

TCE 008038823-01 P=369.311319 Days $T_0=233.302991$ (BKJD)



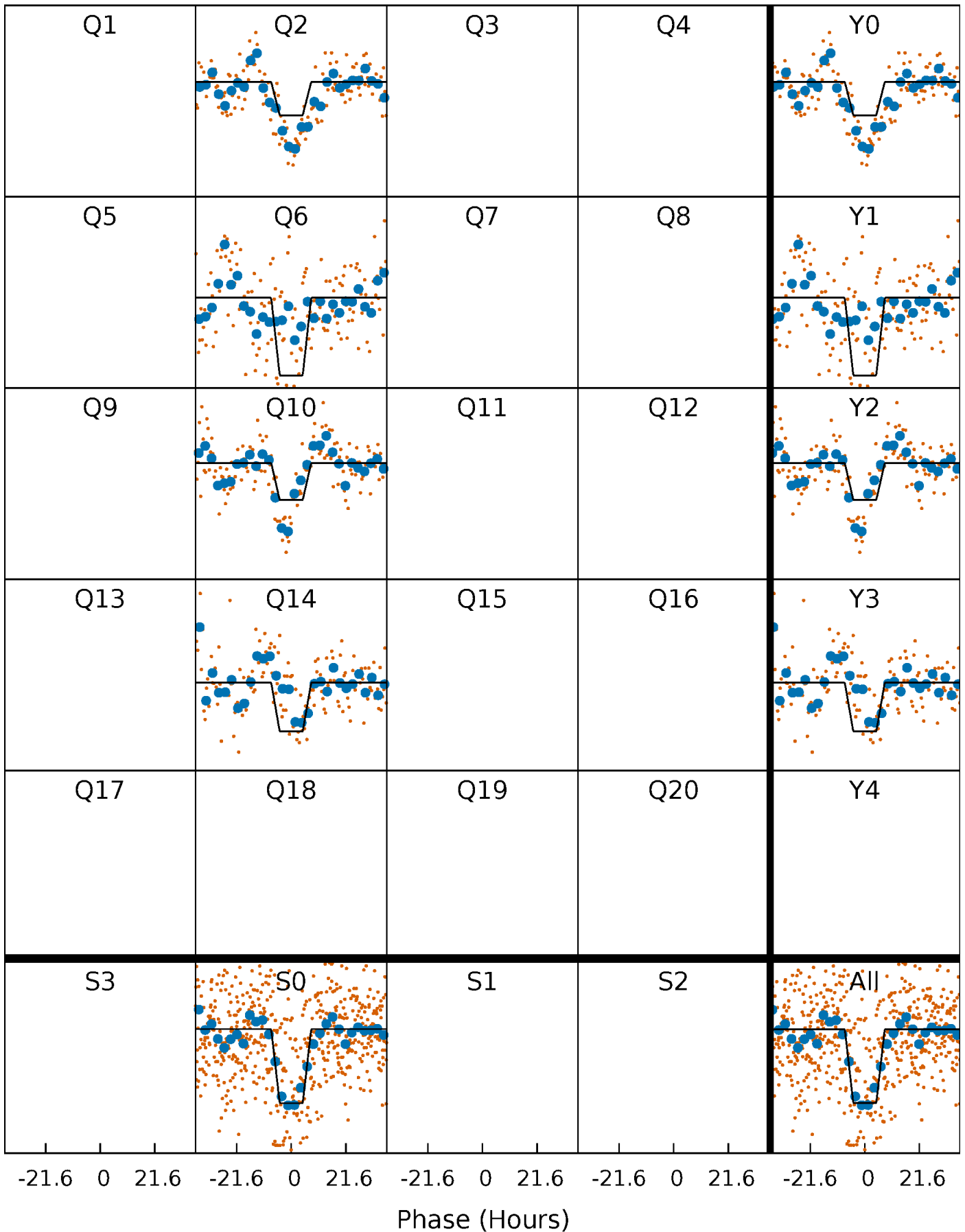
DV Quarter-Phased Transit Curves

TCE 008038823-01 P=369.311319 Days $T_0=233.302991$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

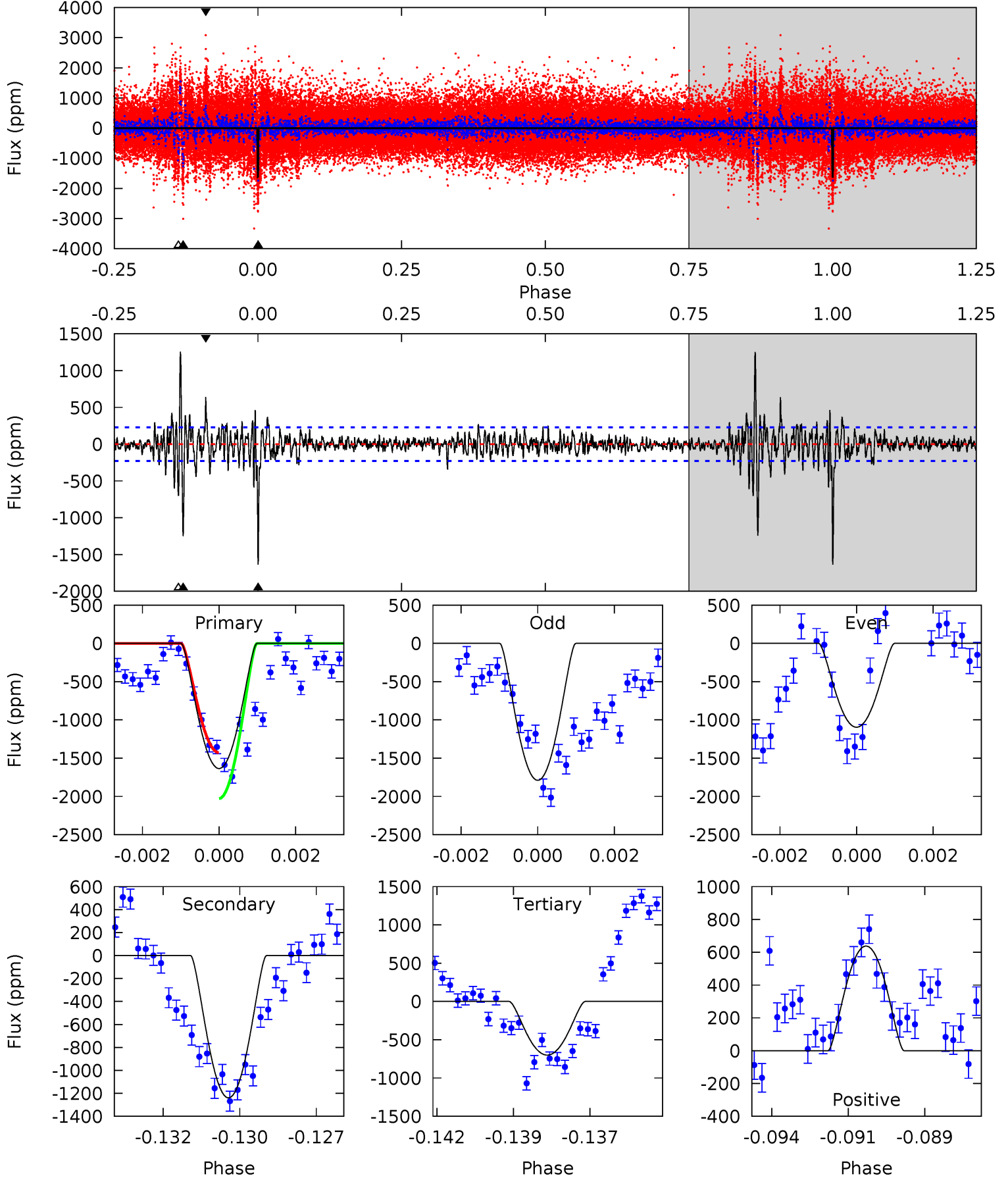
TCE 008038823-01 P=369.302541 Days $T_0=233.323938$ (BKJD)



DV Model-Shift Uniqueness Test

008038823-01, P = 369.311319 Days, E = 233.302991 Days

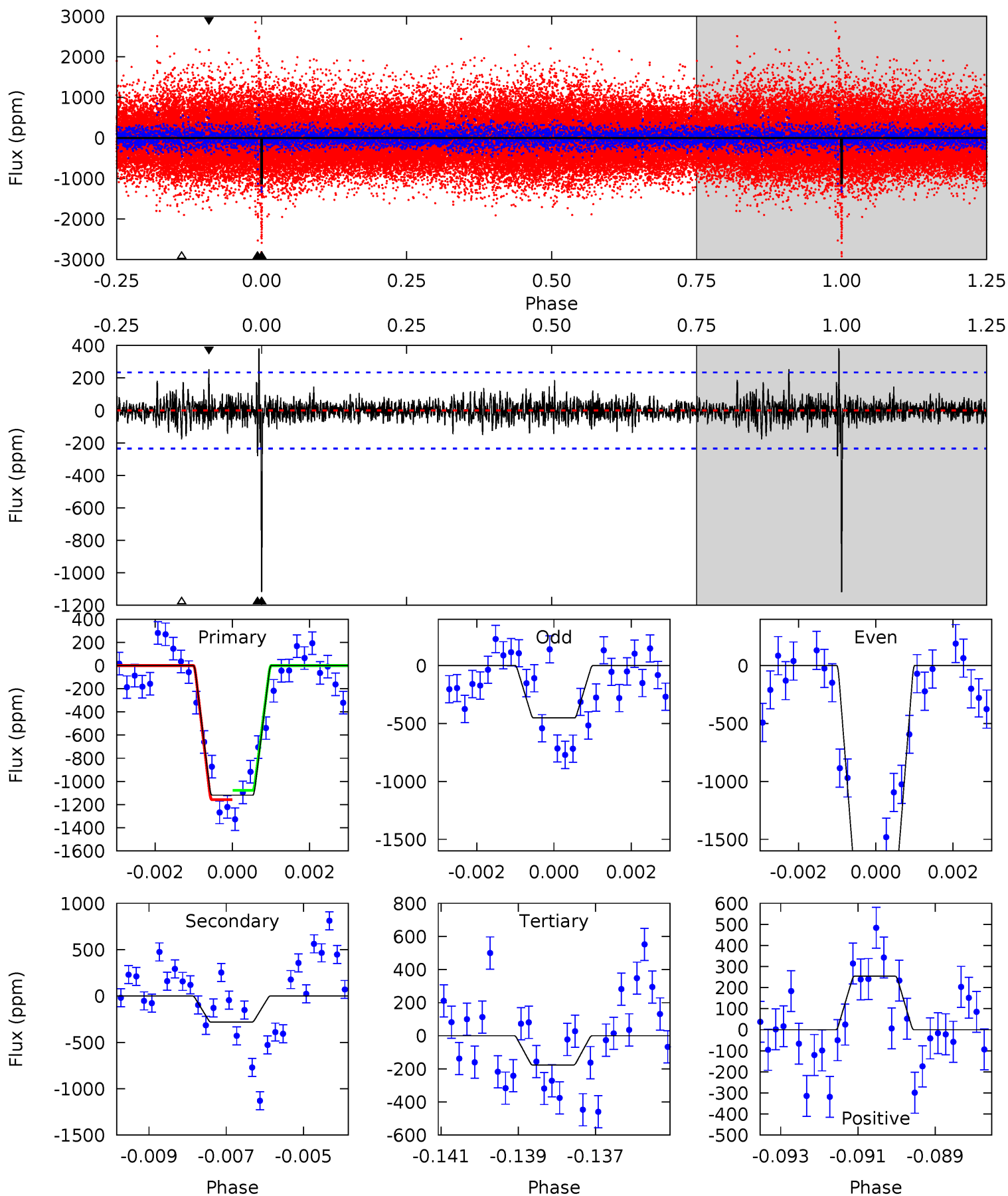
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.8	28.6	16.2	14.7	5.29	3.04	2.81	21.6	23.1	12.4	13.9	8.29	0.80	0.43	6.86



Alt Model-Shift Uniqueness Test

008038823-01, P = 369.302541 Days, E = 233.323938 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	6.41	4.02	5.78	5.34	3.12	1.05	21.5	19.7	2.39	0.63	14.9	1.11	0.25	0.91



Stellar Parameters For KIC 008038823

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6029^{+181}_{-200}	$4.523^{+0.050}_{-0.200}$	$-0.300^{+0.300}_{-0.300}$	$0.894^{+0.262}_{-0.087}$	$0.972^{+0.116}_{-0.129}$	$1.917^{+0.396}_{-1.021}$
	+3%/-3%	+1%/-4%	+100%/-100%	+29%/-10%	+12%/-13%	+21%/-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 008038823-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1239 ± 43	$7.40^{+5.86}_{-4.56}$	359^{+25}_{-18}	4397^{+2383}_{-769}	11973^{+68932}_{-8163}
Alt.	-281 ± 44	$5.82^{+5.85}_{-3.97}$	359^{+24}_{-19}	3705^{+1989}_{-743}	4431^{+35167}_{-3338}

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 $A_{obs} \gg 1.0$

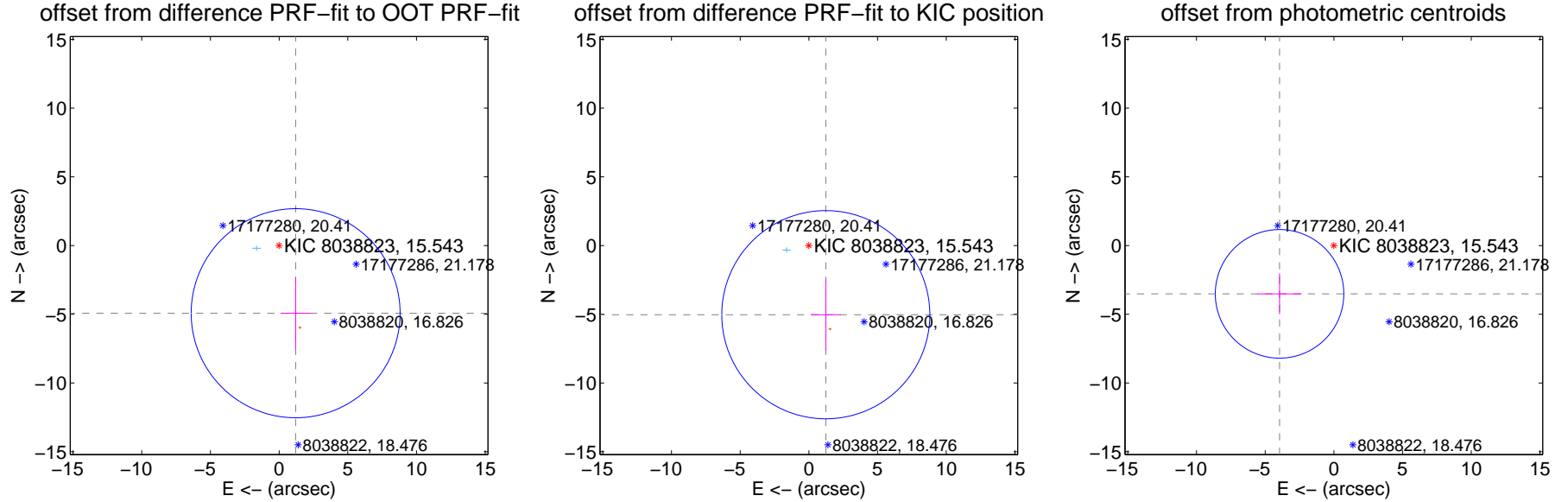
DV Centroid Data

Supplemental centroid analysis for 008038823-01. Kepler magnitude: 15.54. Transit SNR 10.36

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.068 ± 2.534	2.00	-1.203 ± 1.099	-4.923 ± 2.595
PRF-fit source offset from KIC position	5.180 ± 2.524	2.05	-1.232 ± 1.102	-5.032 ± 2.584
photometric centroid source offset	5.29 ± 1.56	3.39	3.96 ± 1.61	-3.51 ± 1.49

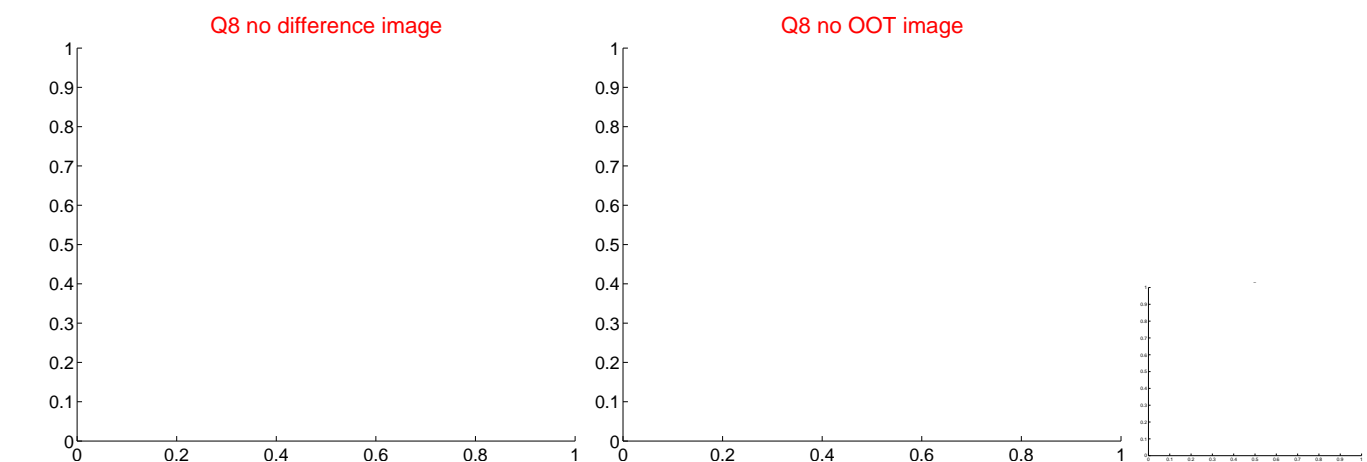
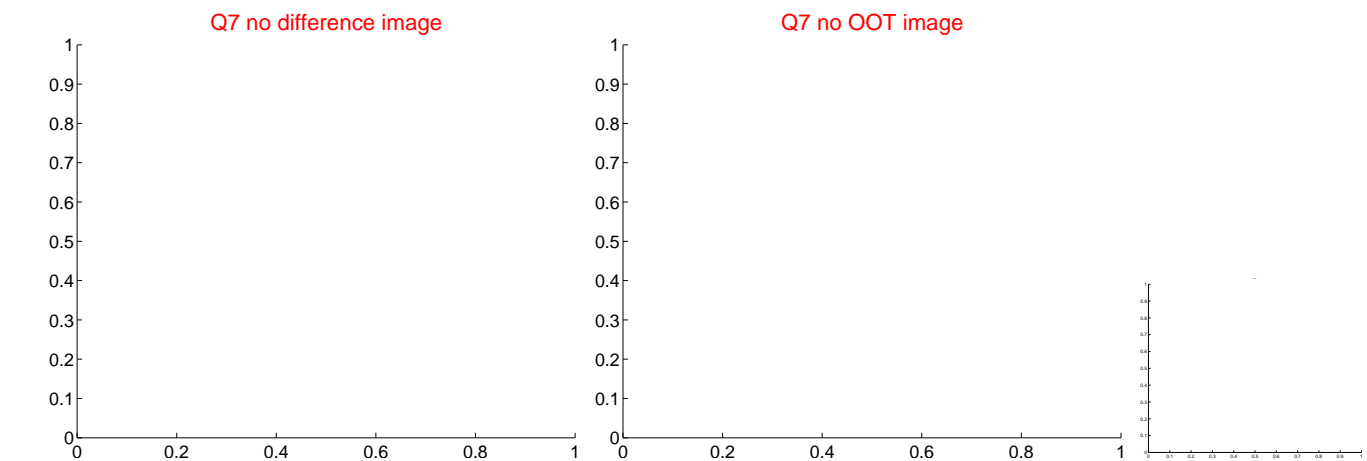
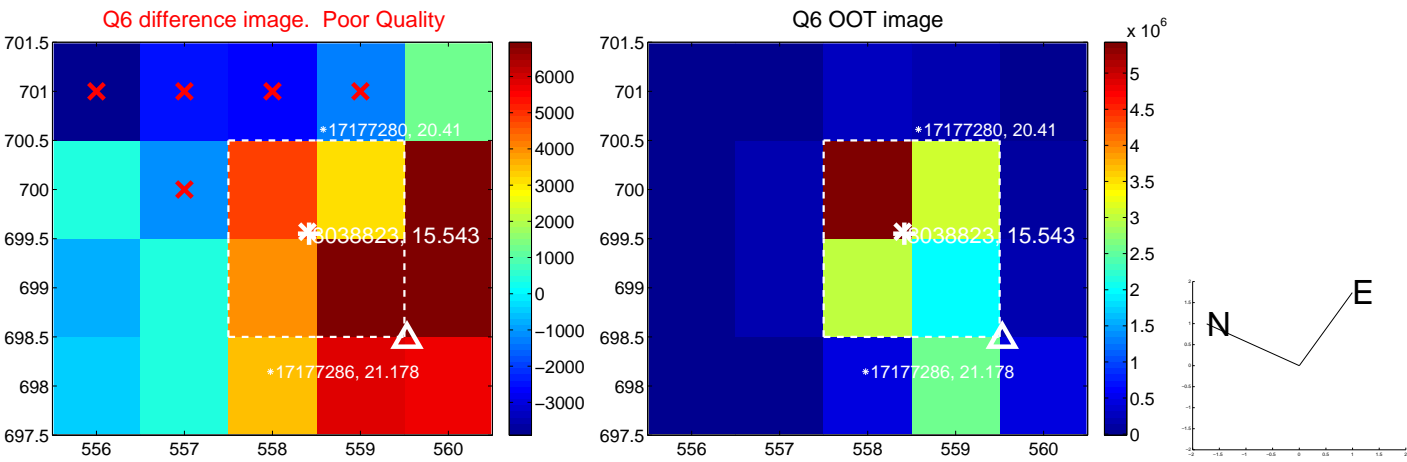
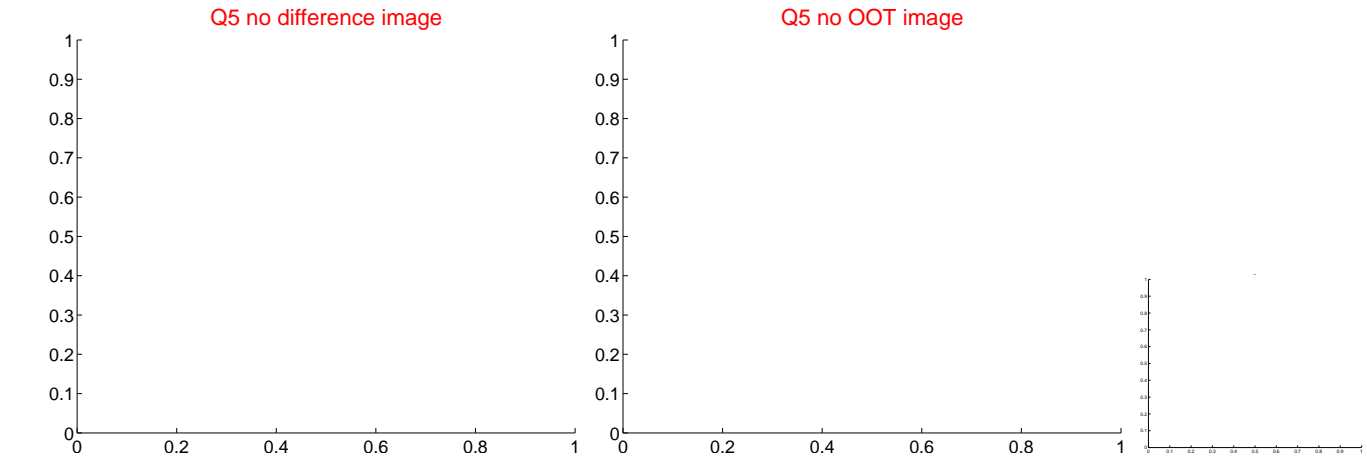


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



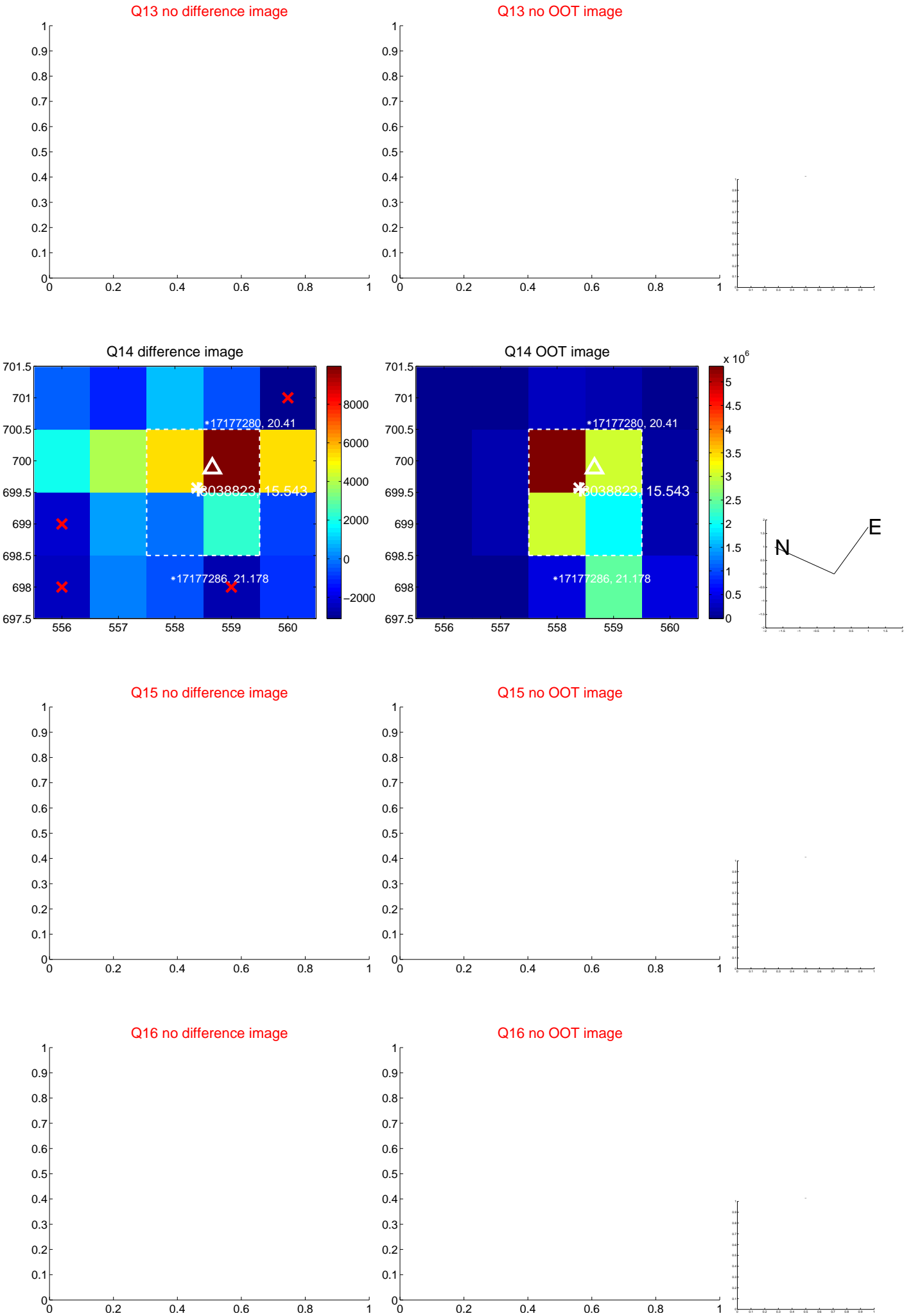
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



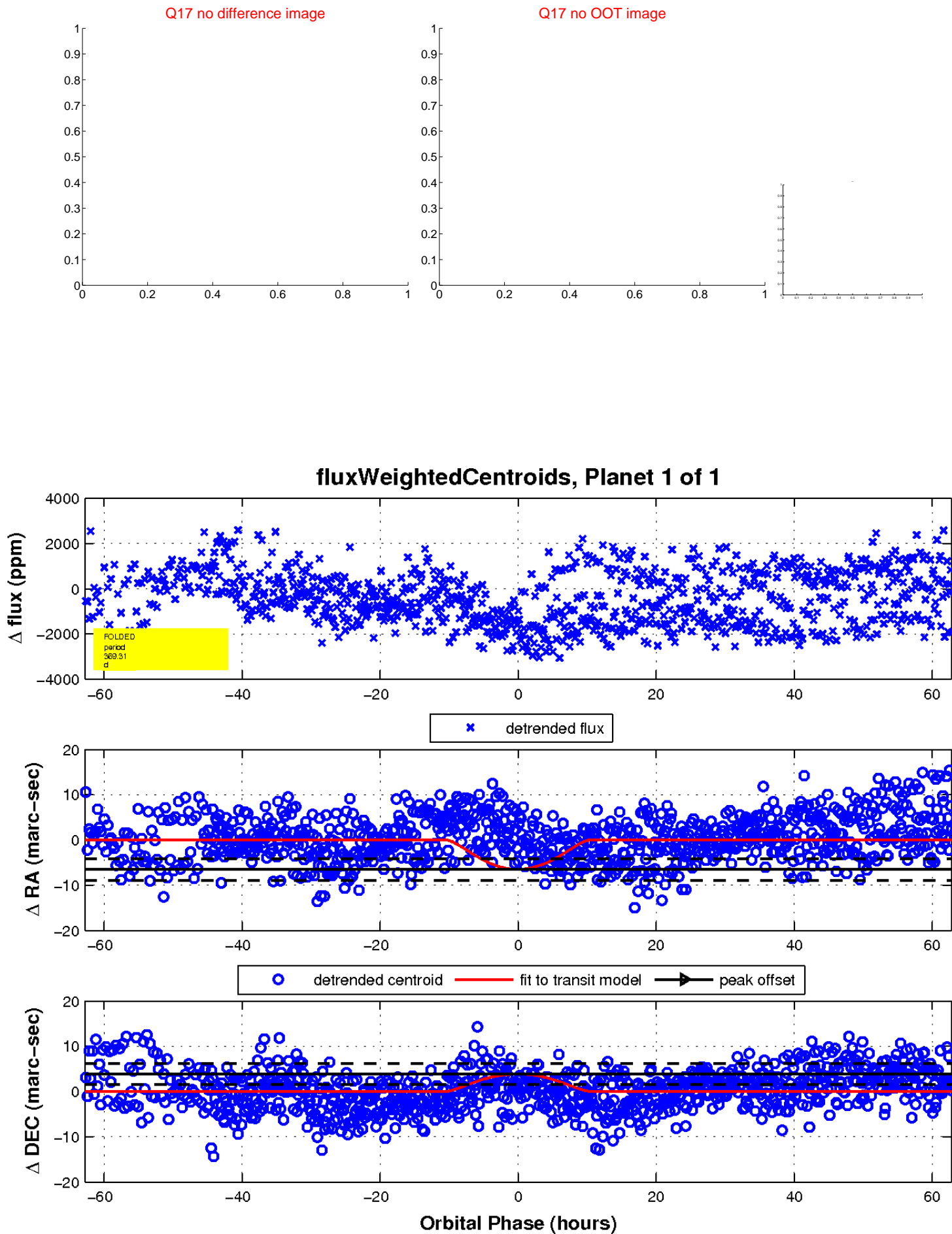
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

