

KIC 008240890

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})
008240890-01	OBS	No	408.335664	509.070781	572.6	14.216	9.3	8.8	0.77	5731	1.89	0.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008240890-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

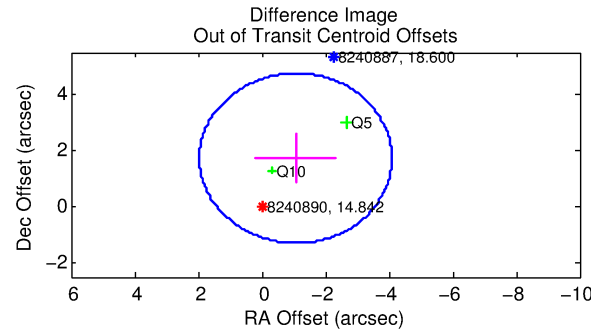
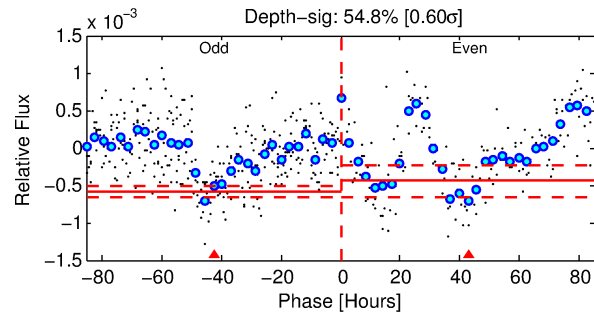
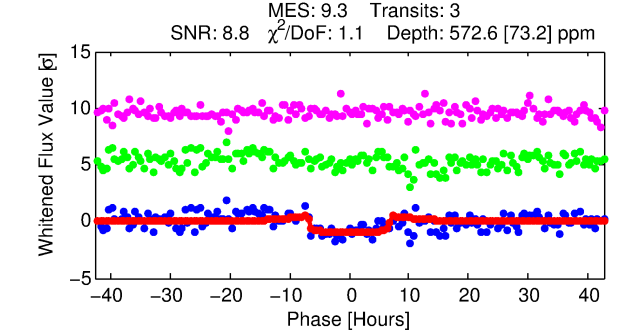
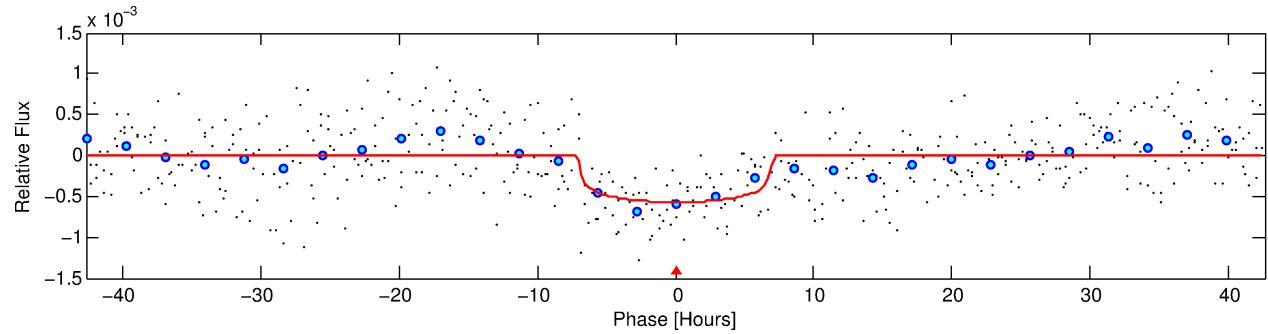
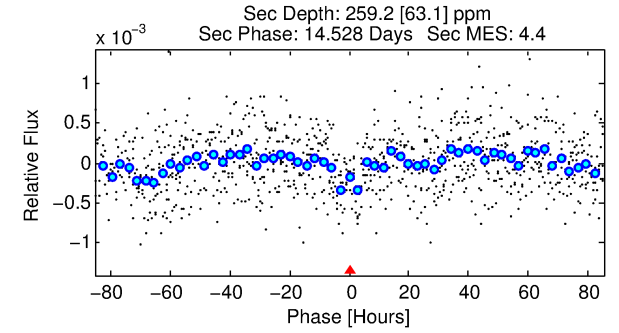
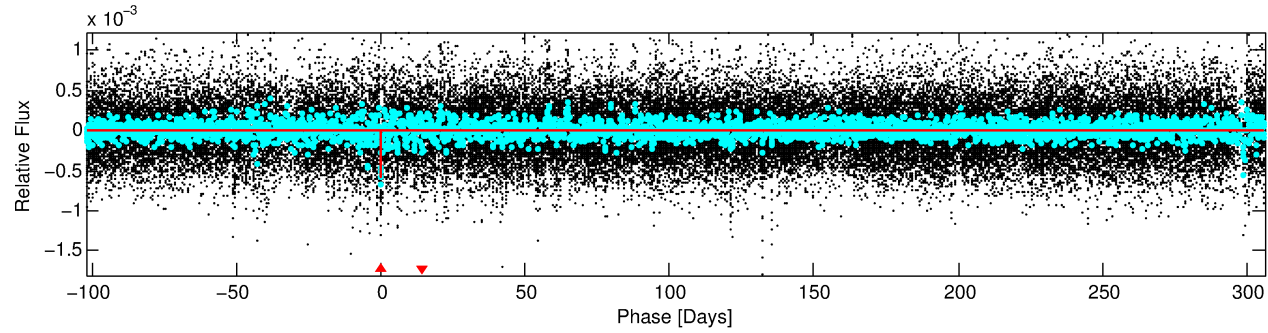
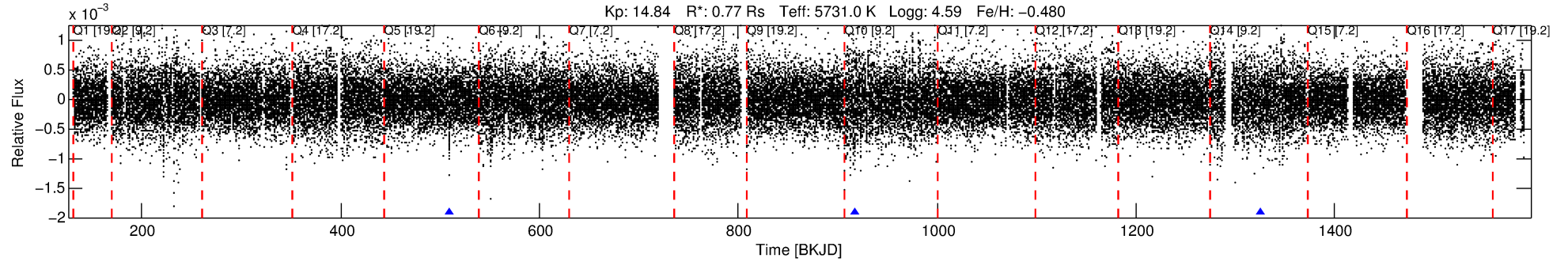
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008240890-01

No Significant Match Found

DV One-Page Summary

KIC: 8240890 Candidate: 1 of 1 Period: 408.336 d



DV Fit Results:

Period = 408.33566 [0.01237] d
Epoch = 509.0708 [0.0154] BKJD
Rp/R* = 0.0226 [0.0114]
a/R* = 191.83 [444.24]
b = 0.53 [3.16]
Seff = 0.55 [0.17]
Teff = 219 [17] K
Rp = 1.89 [1.05] Re
a = 1.0166 [0.2032] AU
Ag = 41470.27 [44625.42] [0.93 σ]
Teffp = 4839 [1260] K [3.67 σ]

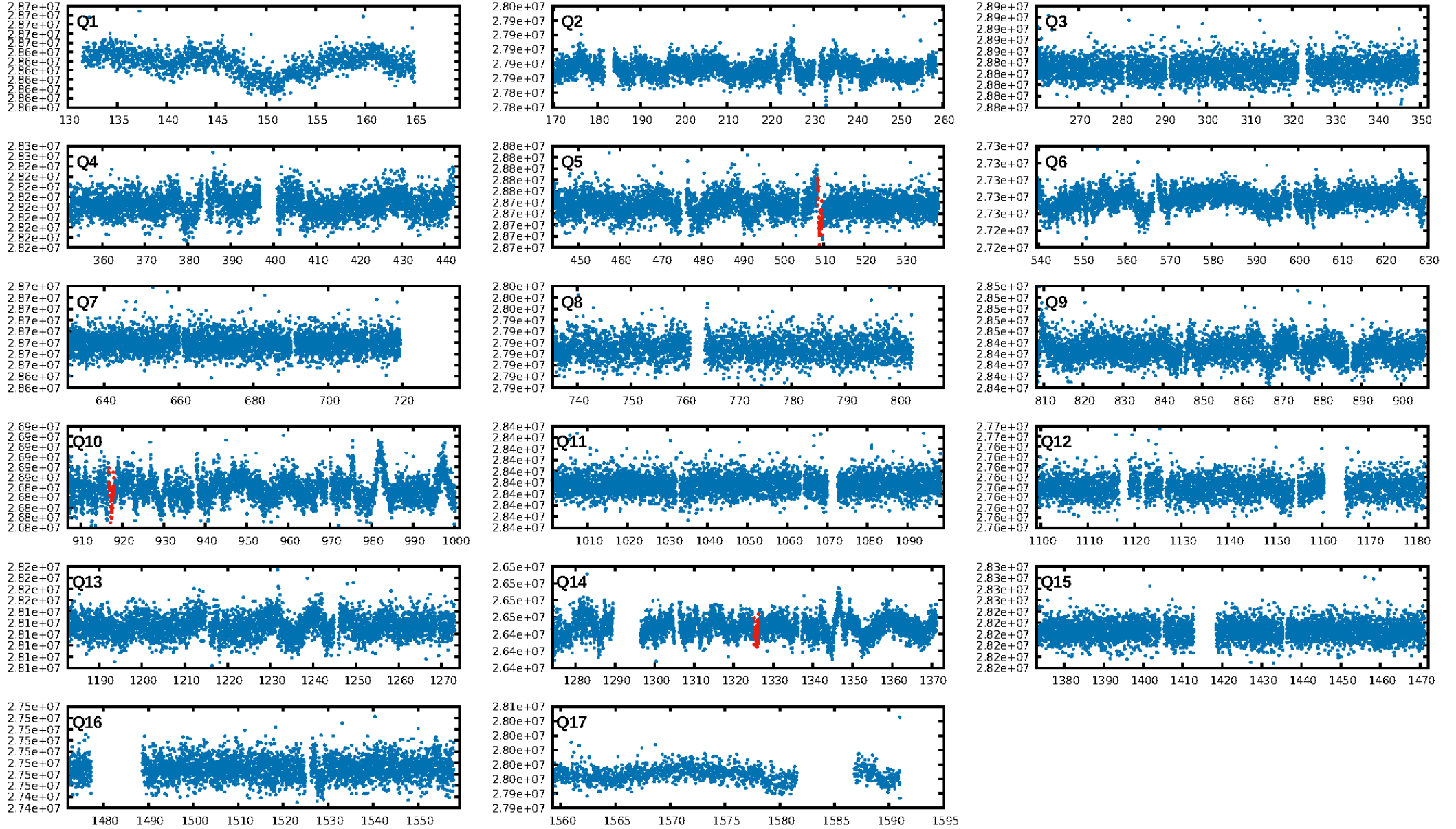
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 46.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.01e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.308
Centroid-sig: 0.9%
Centroid-so: 3.959 arcsec [1.56 σ]
OotOffset-rm: 2.030 arcsec [2.01 σ]
KicOffset-rm: 2.080 arcsec [2.13 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

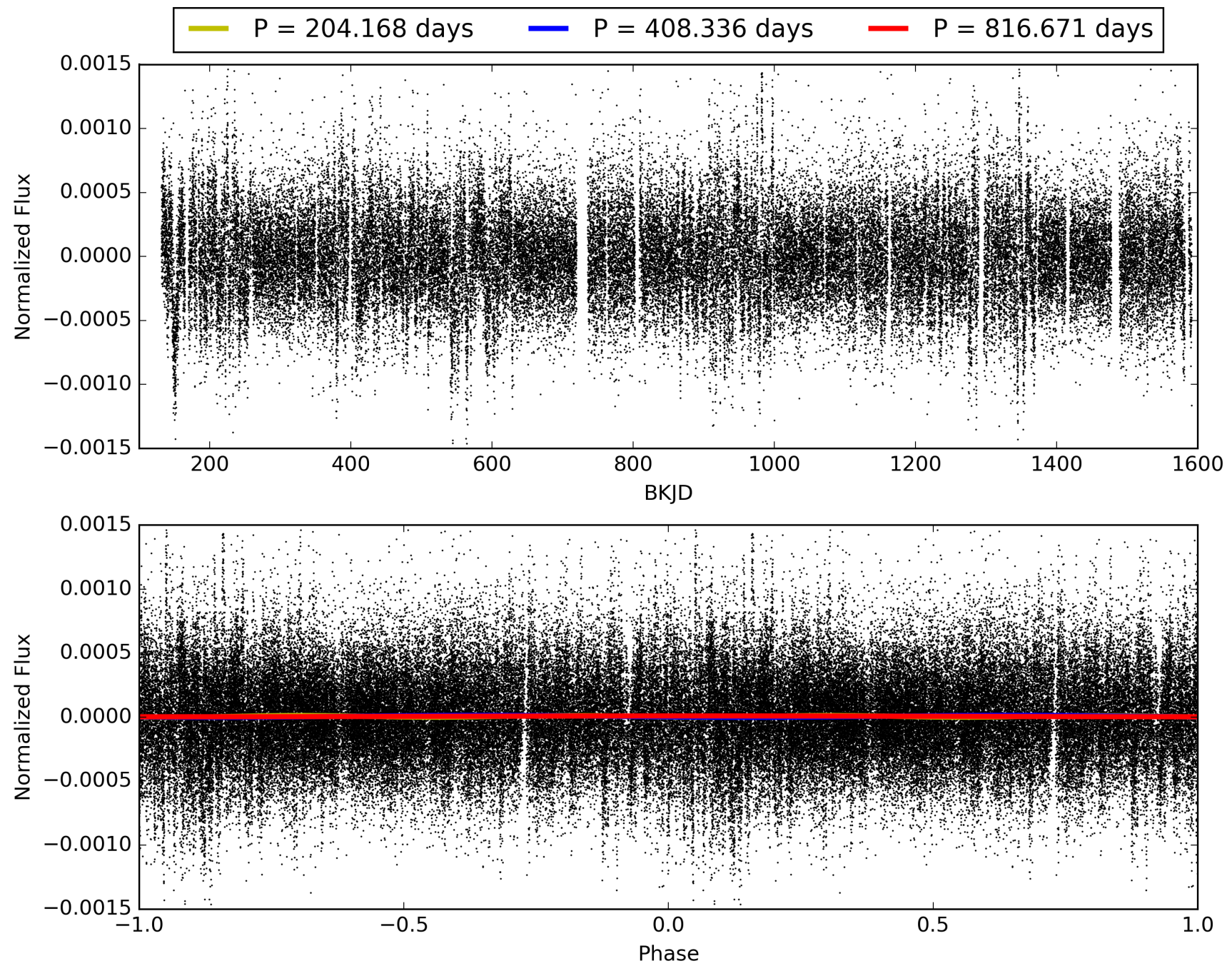
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:27:52 Z

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

TCE 008240890-01, PDC Light Curves

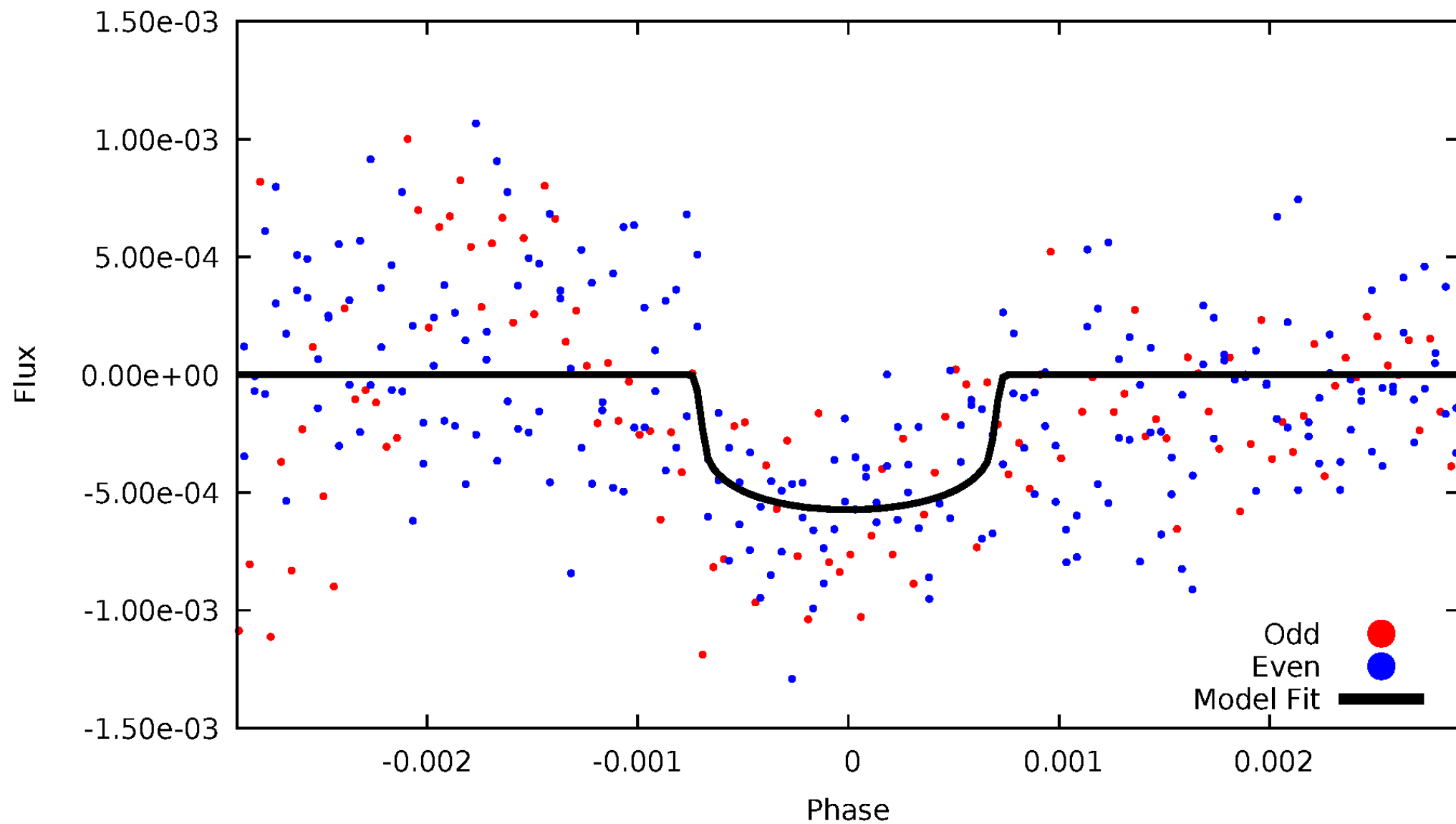


TCE 008240890-01



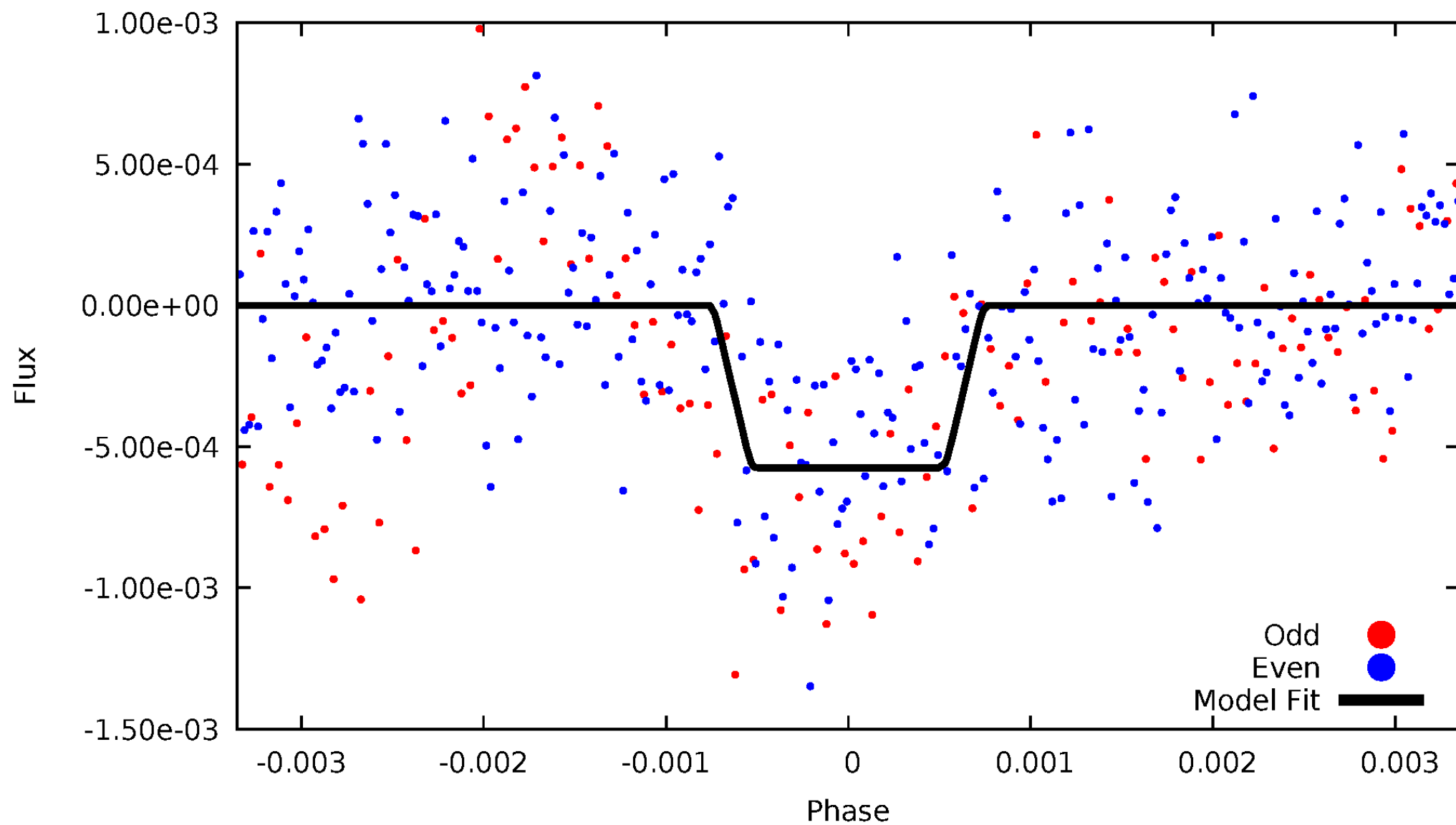
DV Odd/Even

TCE 008240890-01



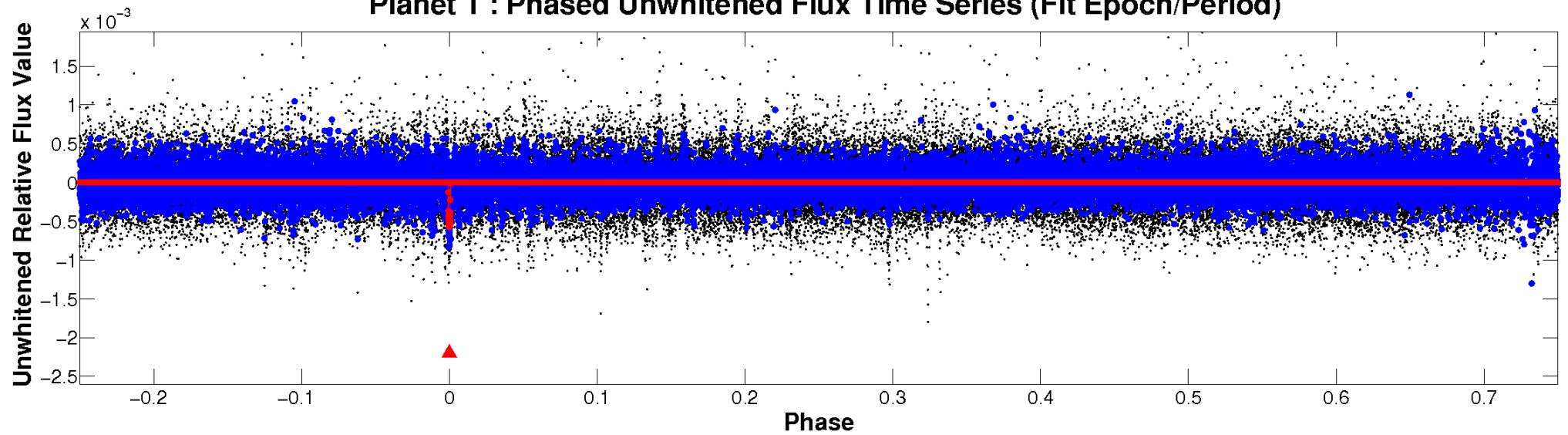
ALT Odd/Even

TCE 008240890-01

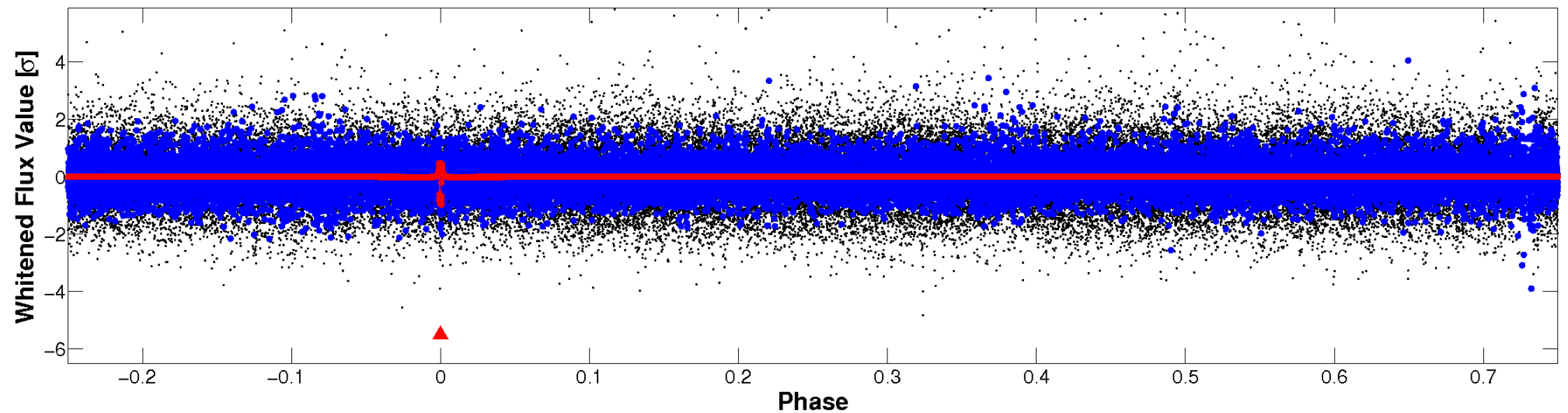


Non-Whitened Vs. Whitened Light Curve

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

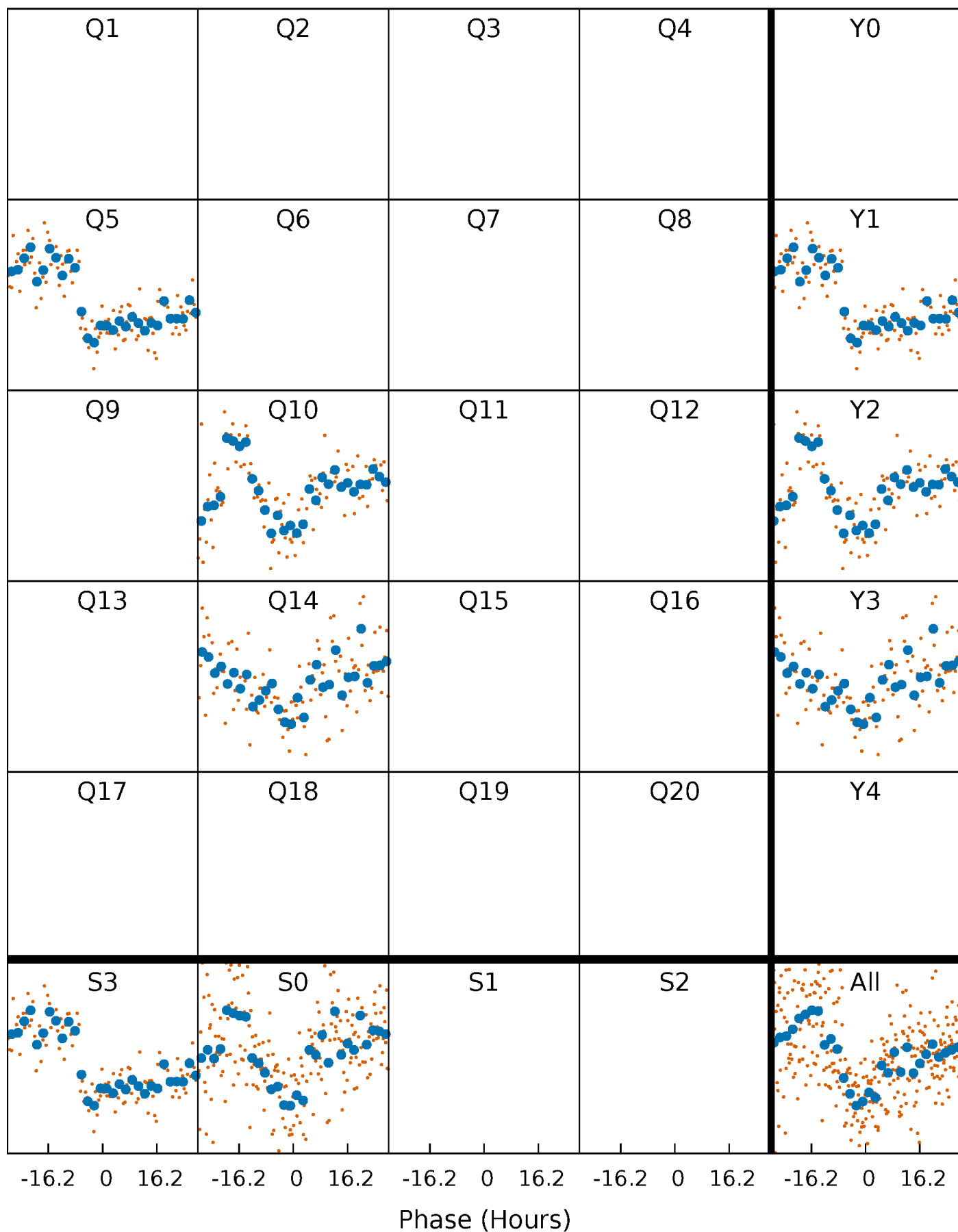


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



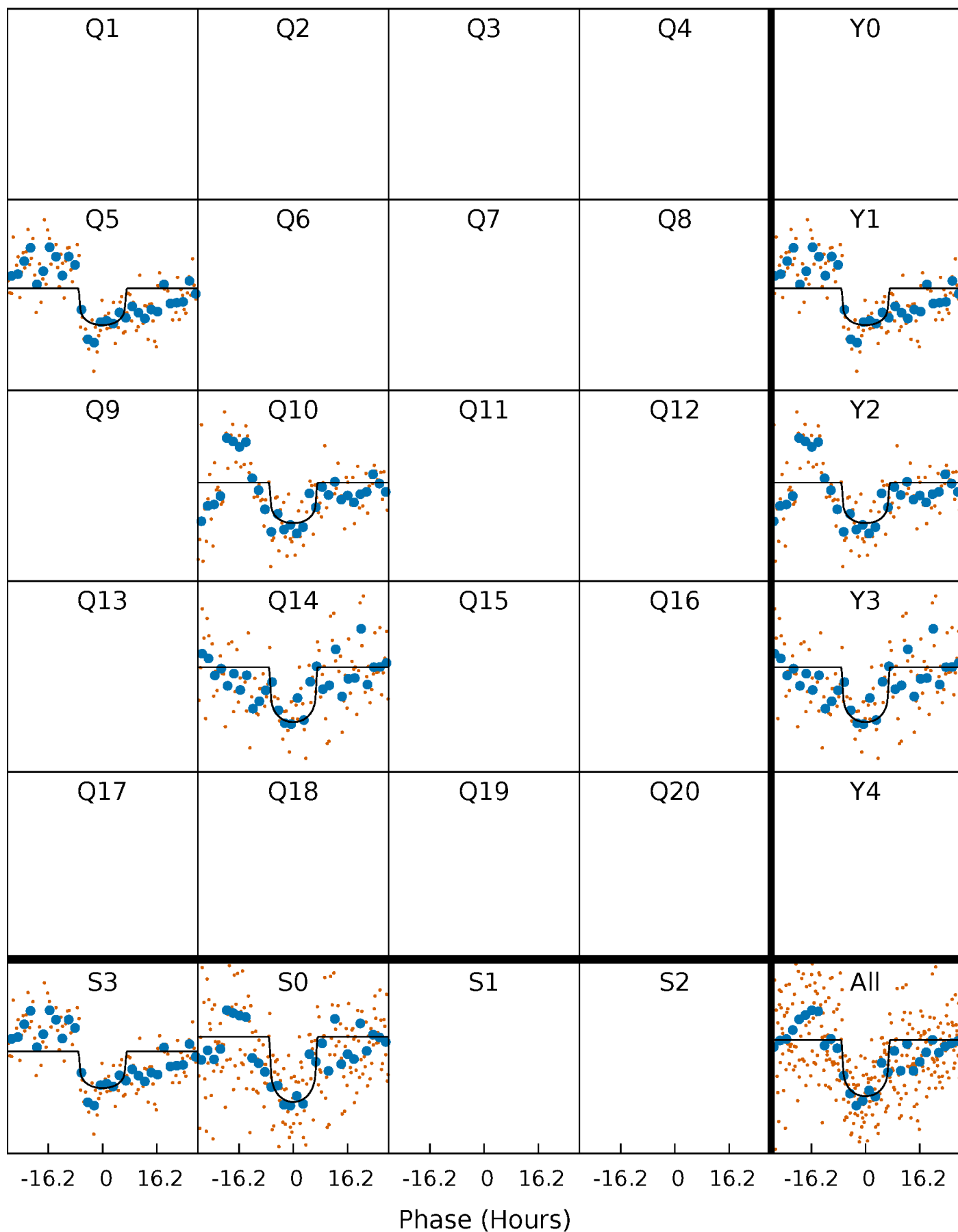
PDC Quarter-Phased Transit Curves

TCE 008240890-01 P=408.335664 Days $T_0=509.070781$ (BKJD)



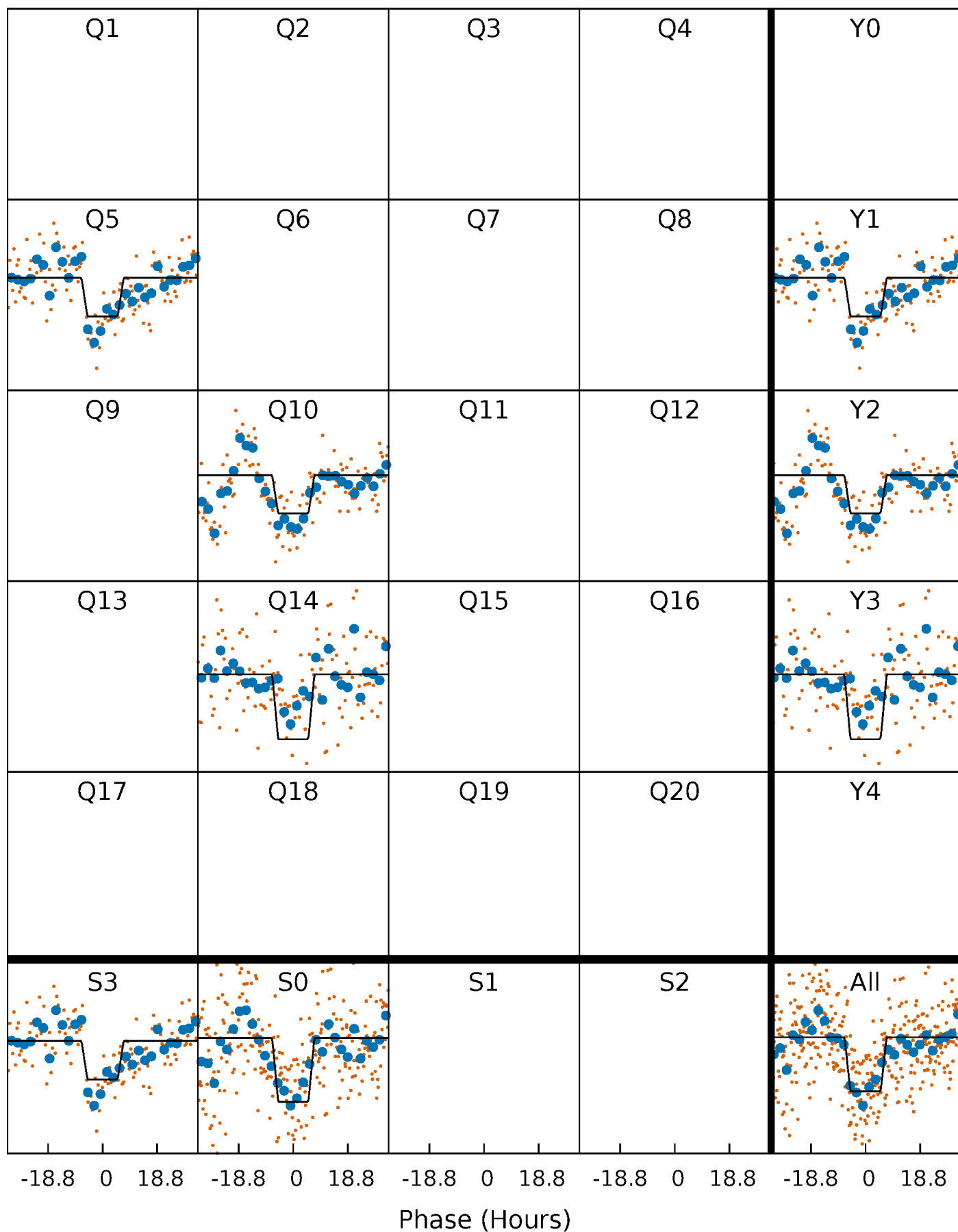
DV Quarter-Phased Transit Curves

TCE 008240890-01 $P=408.335664$ Days $T_0=509.070781$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

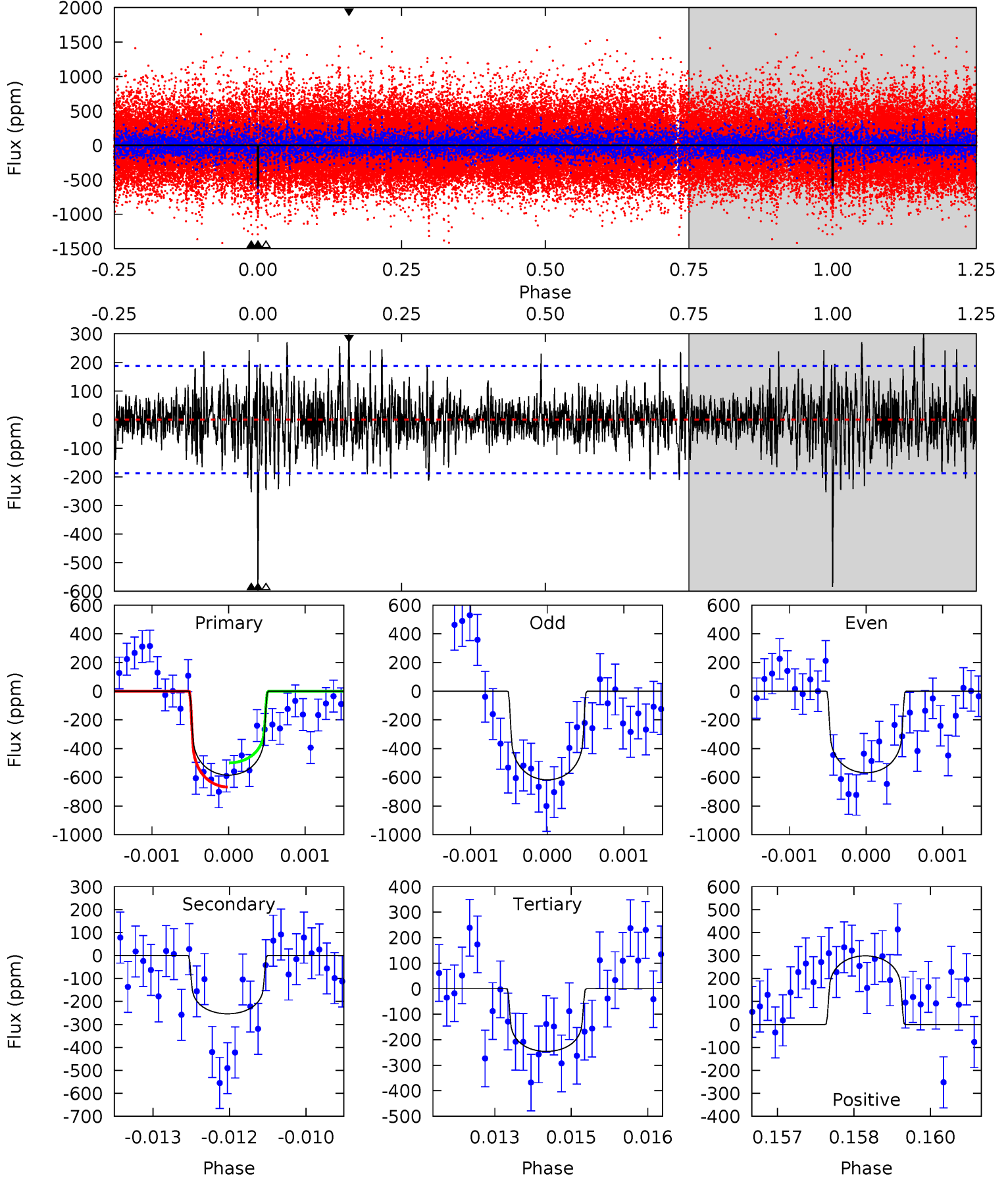
TCE 008240890-01 P=408.330641 Days $T_0=509.046969$ (BKJD)



DV Model-Shift Uniqueness Test

008240890-01, P = 408.335664 Days, E = 100.735117 Days

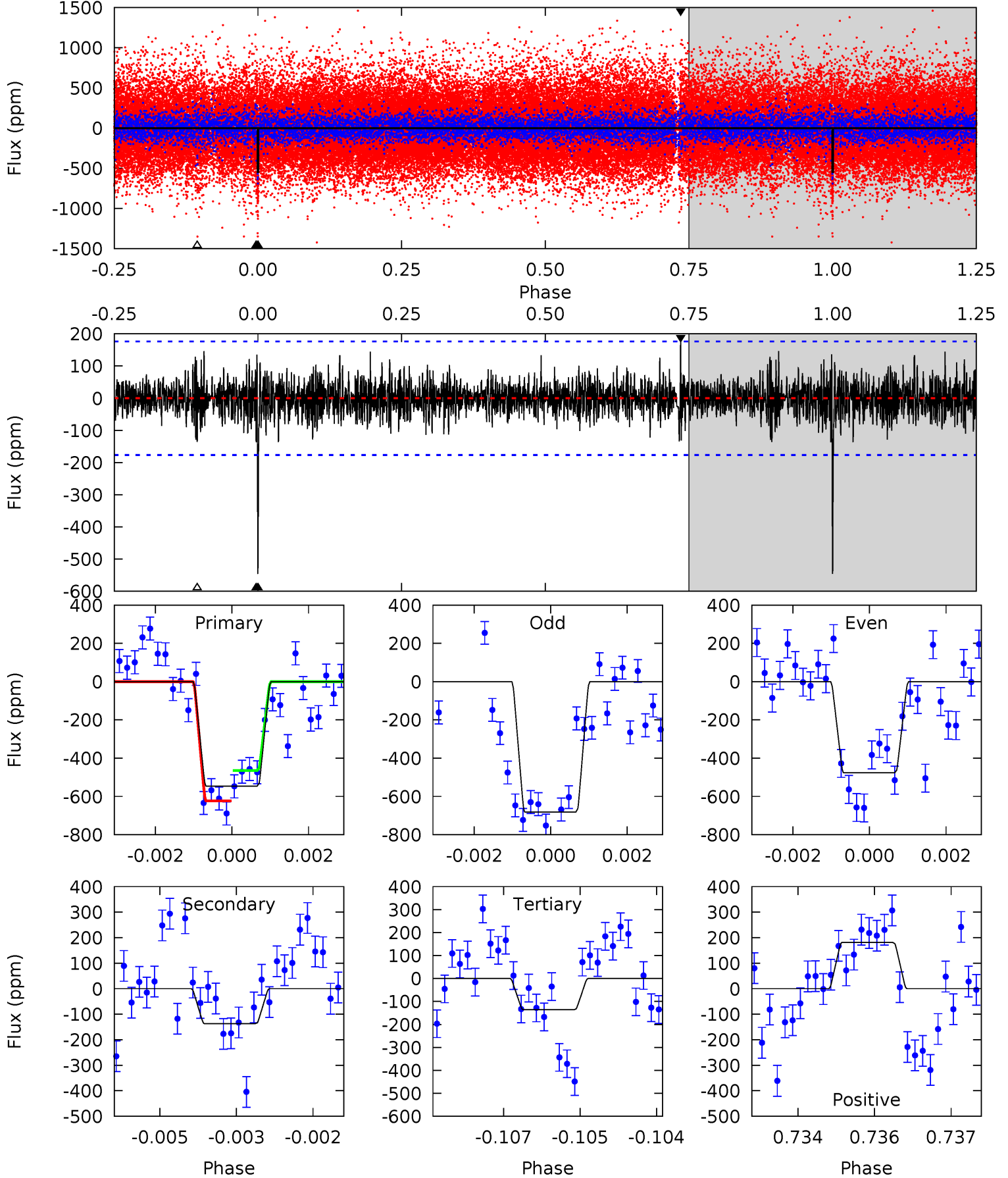
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	7.30	7.07	8.59	5.38	3.18	1.85	9.76	8.24	0.23	-1.29	0.68	0.94	0.34	2.42



Alt Model-Shift Uniqueness Test

008240890-01, $P = 408.330641$ Days, $E = 100.716328$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	4.18	4.15	5.52	5.38	3.17	1.20	12.5	11.1	0.03	-1.34	2.97	0.80	0.25	2.43



Stellar Parameters For KIC 008240890

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5731^{+155}_{-155}	$4.595^{+0.040}_{-0.160}$	$-0.480^{+0.300}_{-0.300}$	$0.765^{+0.181}_{-0.060}$	$0.839^{+0.088}_{-0.088}$	$2.640^{+0.529}_{-1.110}$
	+3%/-3%	+1%/-3%	+62%/-62%	+24%/-8%	+10%/-10%	+20%/-42%
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 008240890-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-254 ± 35	$2.01^{+0.96}_{-0.95}$	312^{+17}_{-13}	4864^{+1661}_{-700}	35512^{+87849}_{-19839}
Alt.	-137 ± 33	$2.06^{+1.10}_{-0.96}$	312^{+19}_{-12}	4246^{+1266}_{-598}	18108^{+48557}_{-10837}

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

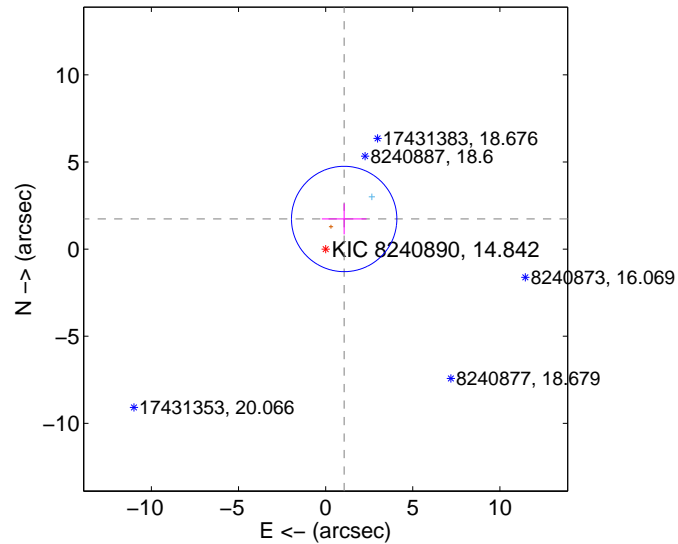
Supplemental centroid analysis for 008240890-01. Kepler magnitude: 14.84. Transit SNR 8.77

There are 1 quarters with good PRF difference image offsets

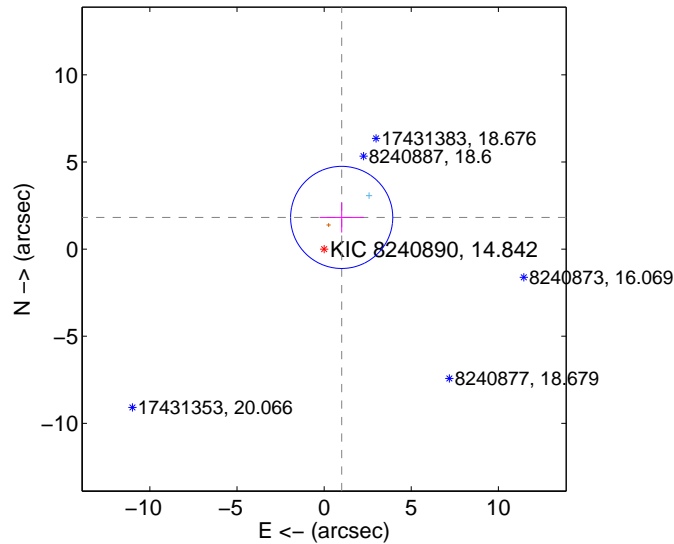
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.030 ± 1.008	2.01	-1.063 ± 1.283	1.729 ± 0.881
PRF-fit source offset from KIC position	2.080 ± 0.977	2.13	-1.008 ± 1.270	1.819 ± 0.867
photometric centroid source offset	3.96 ± 2.54	1.56	-0.34 ± 1.90	3.94 ± 2.54

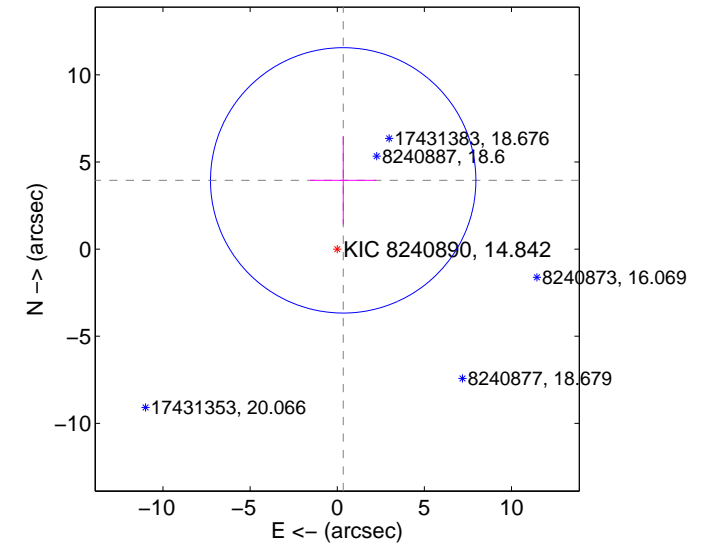
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

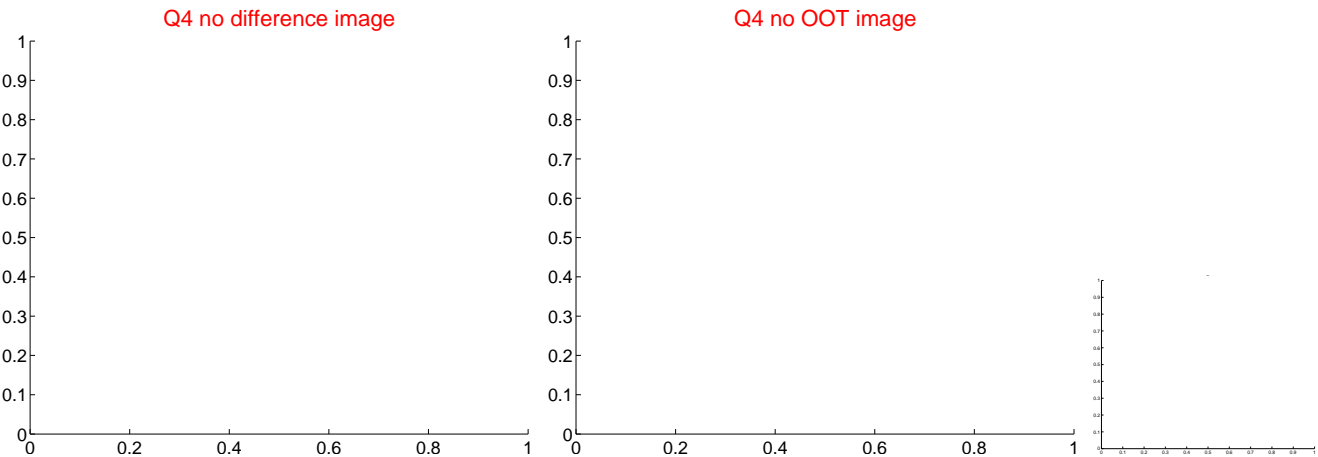
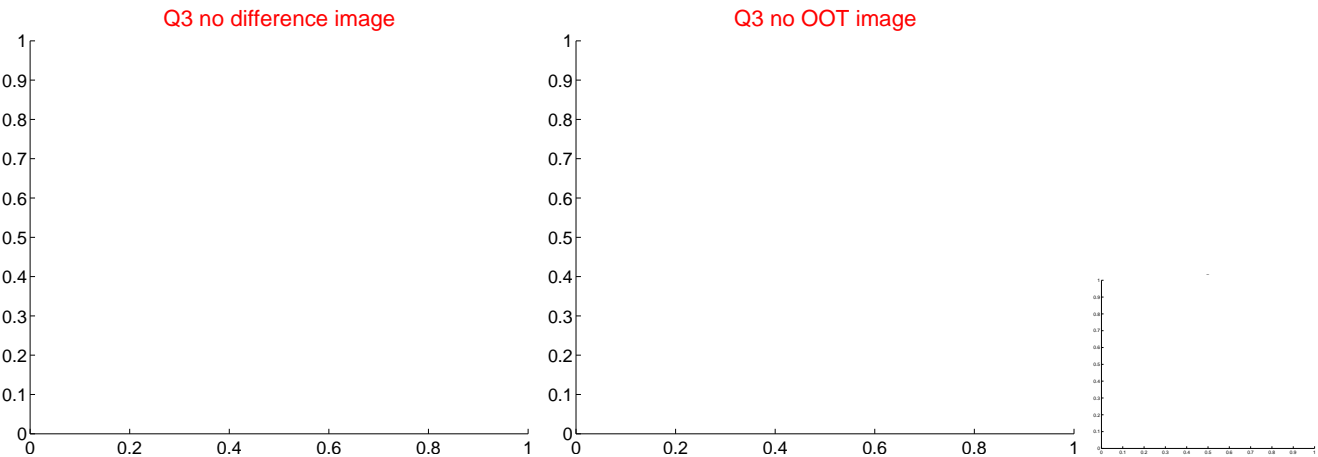
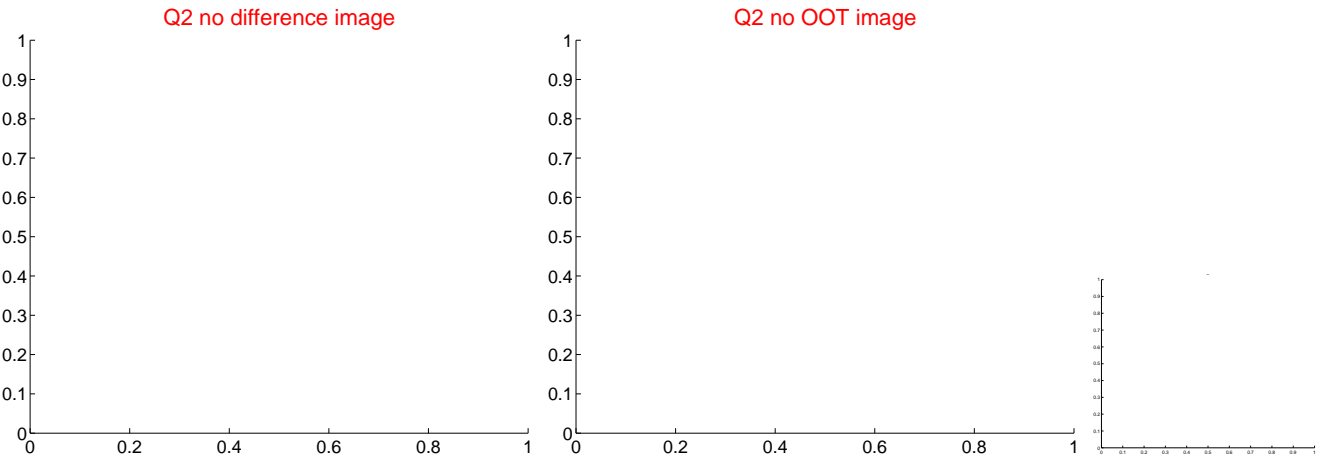
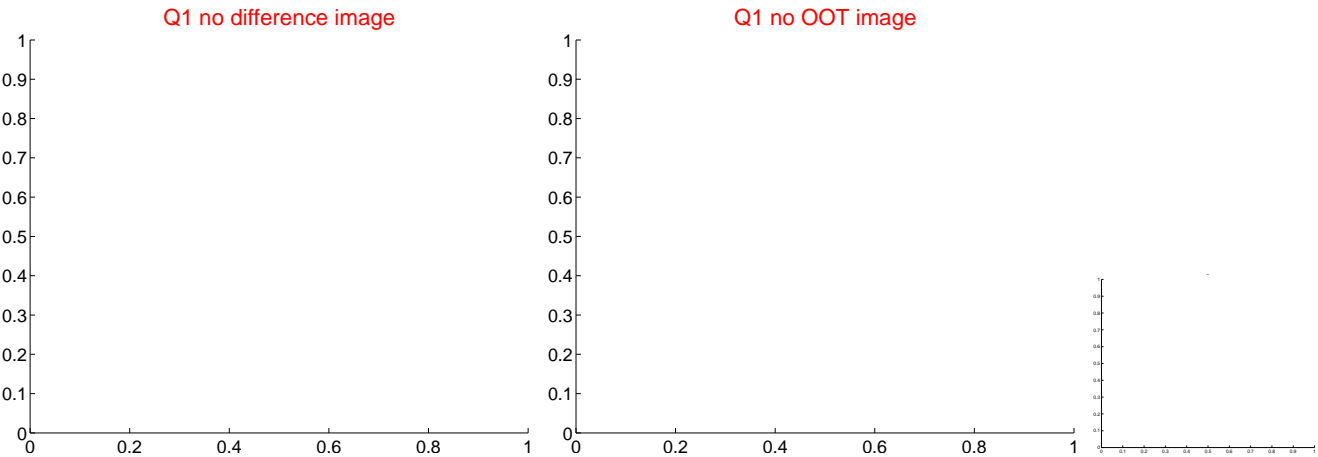


offset from photometric centroids

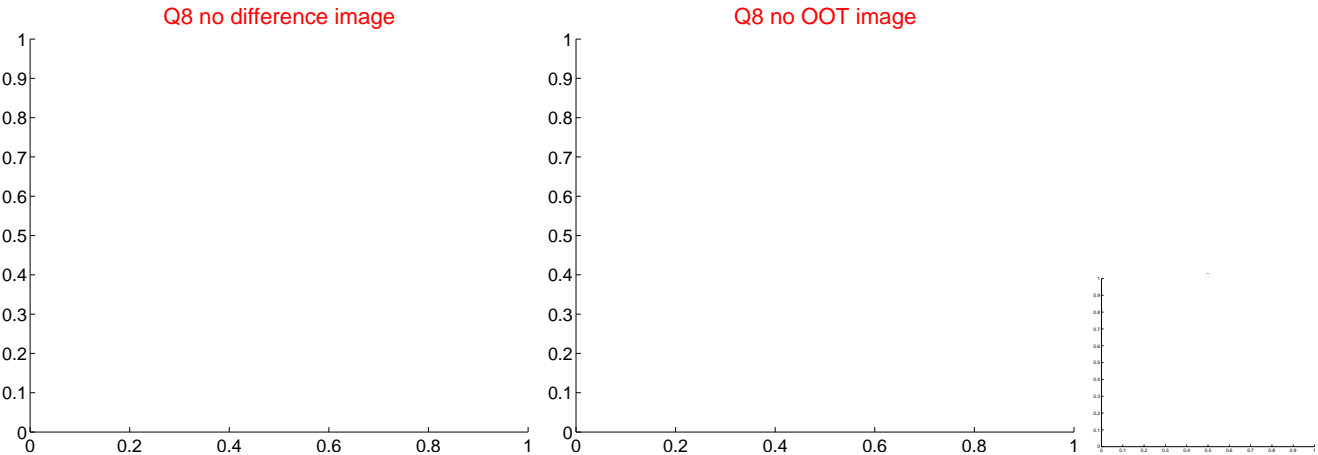
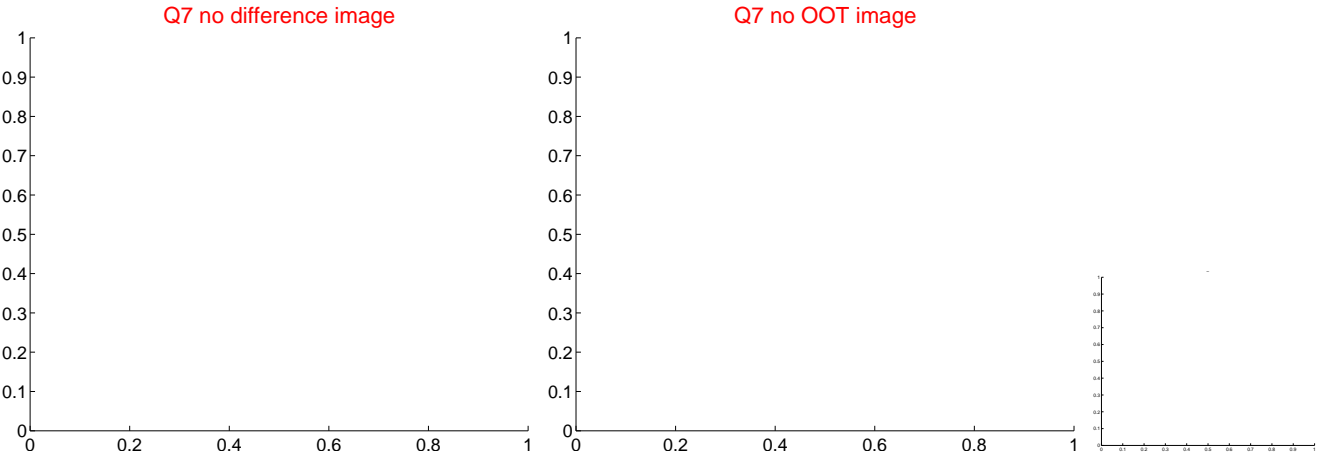
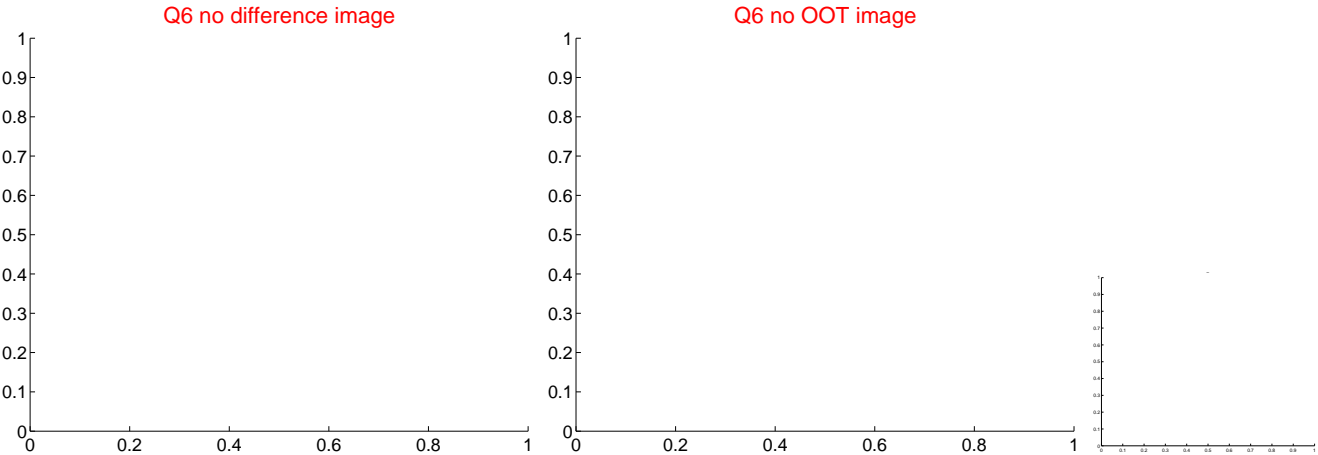
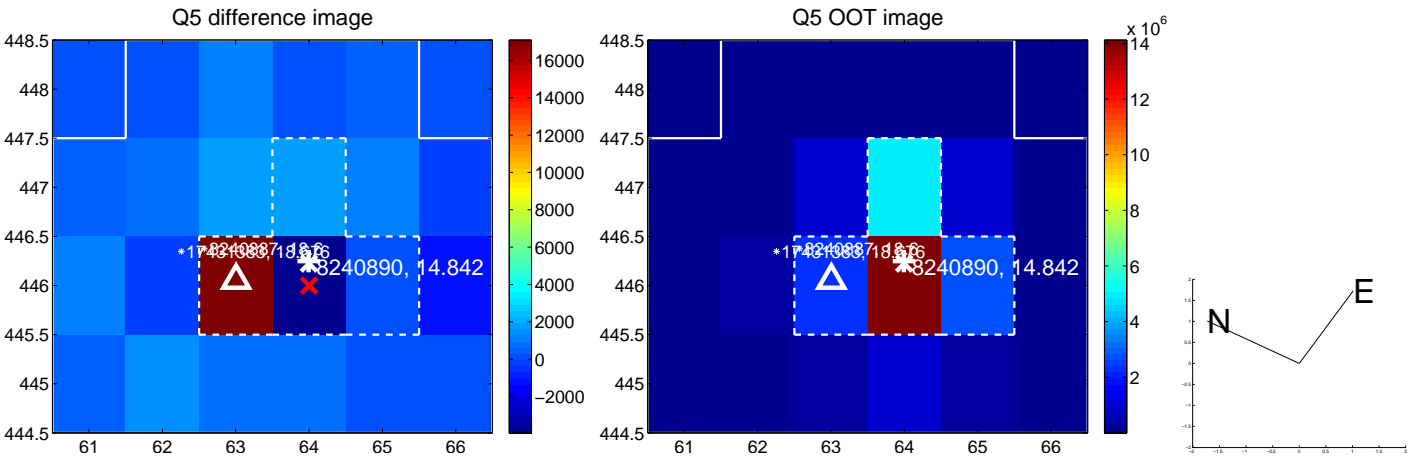


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

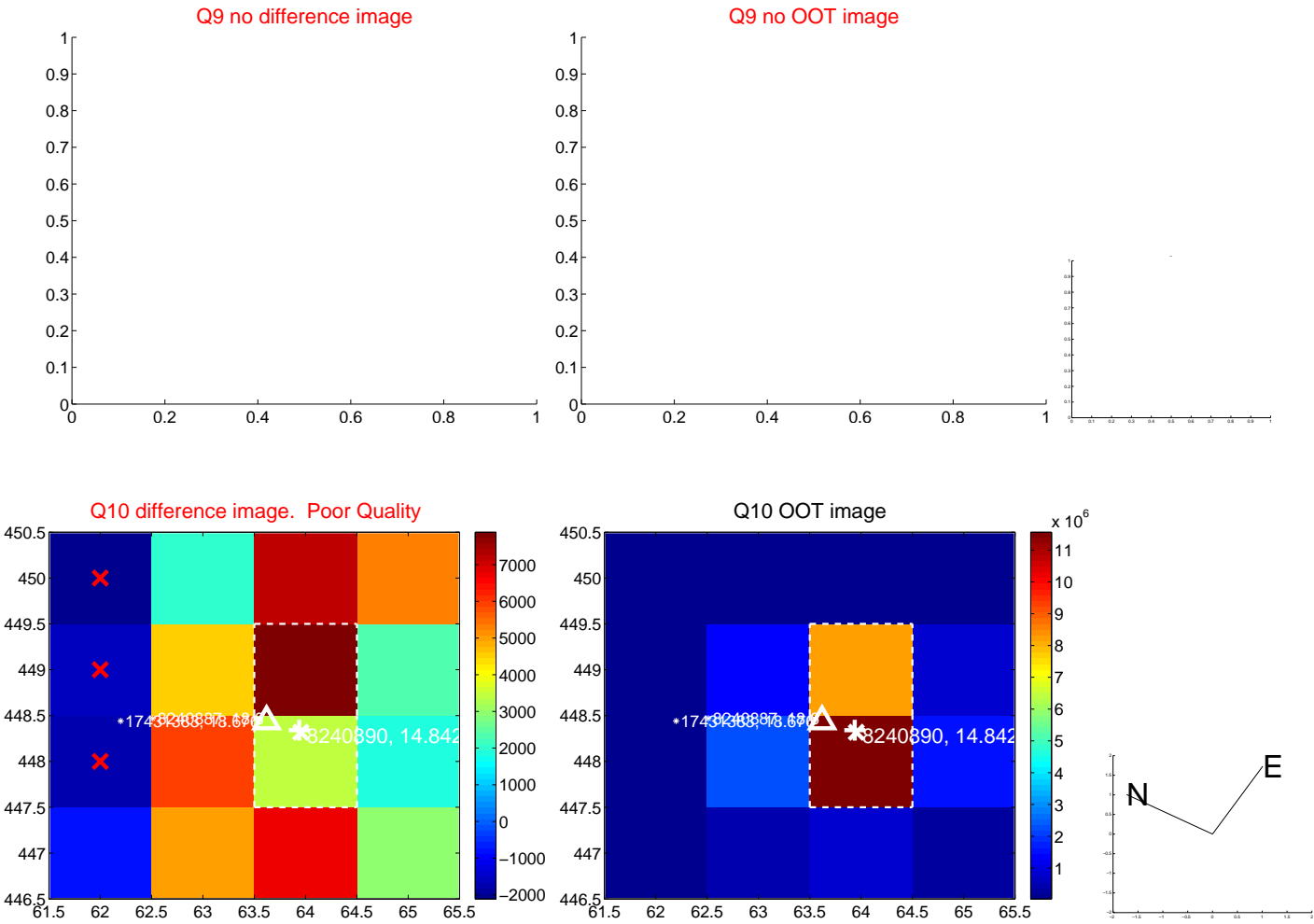
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



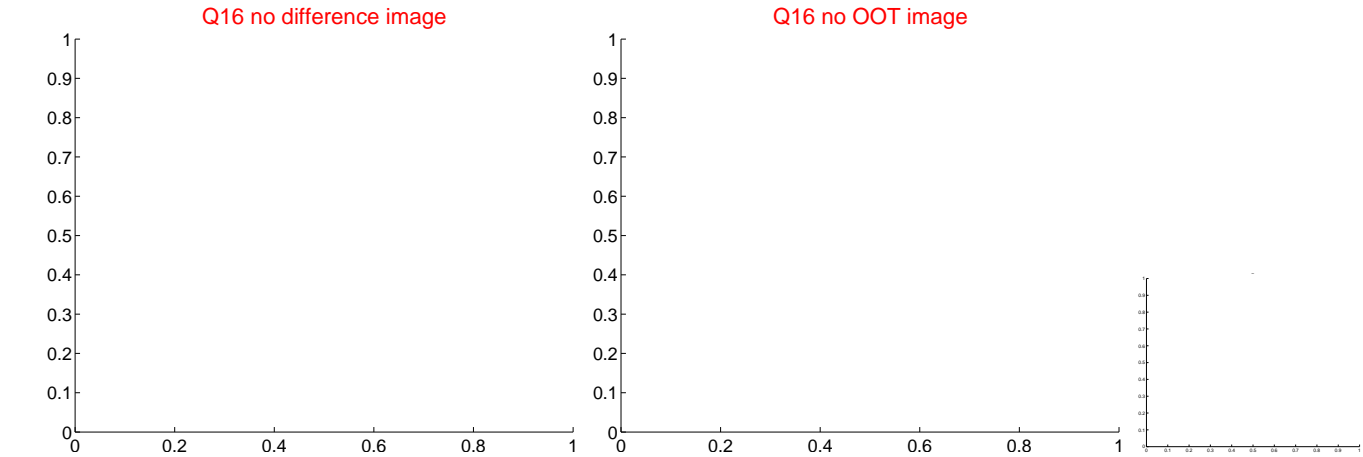
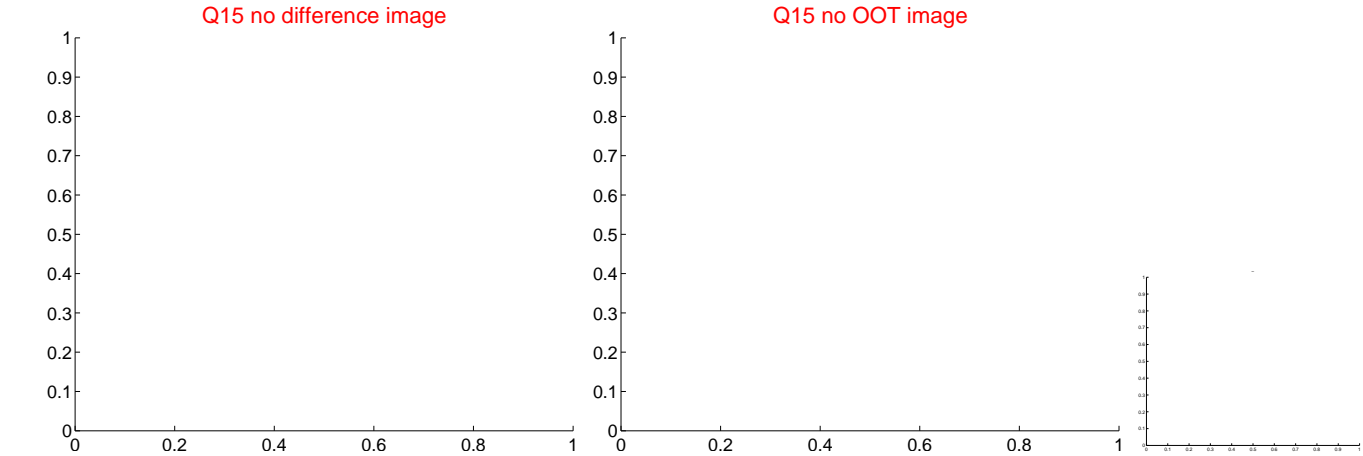
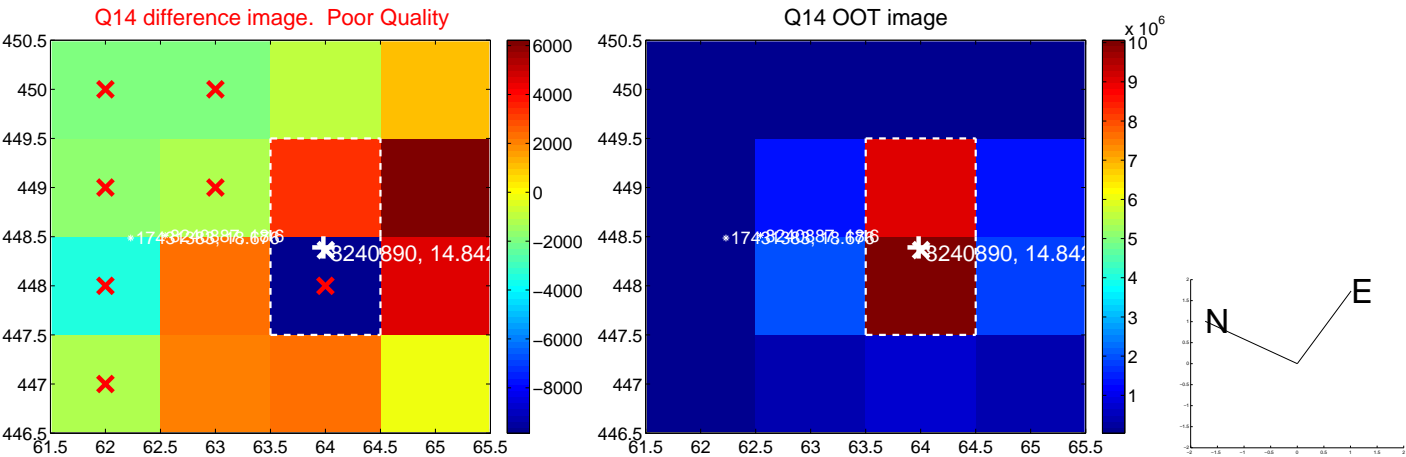
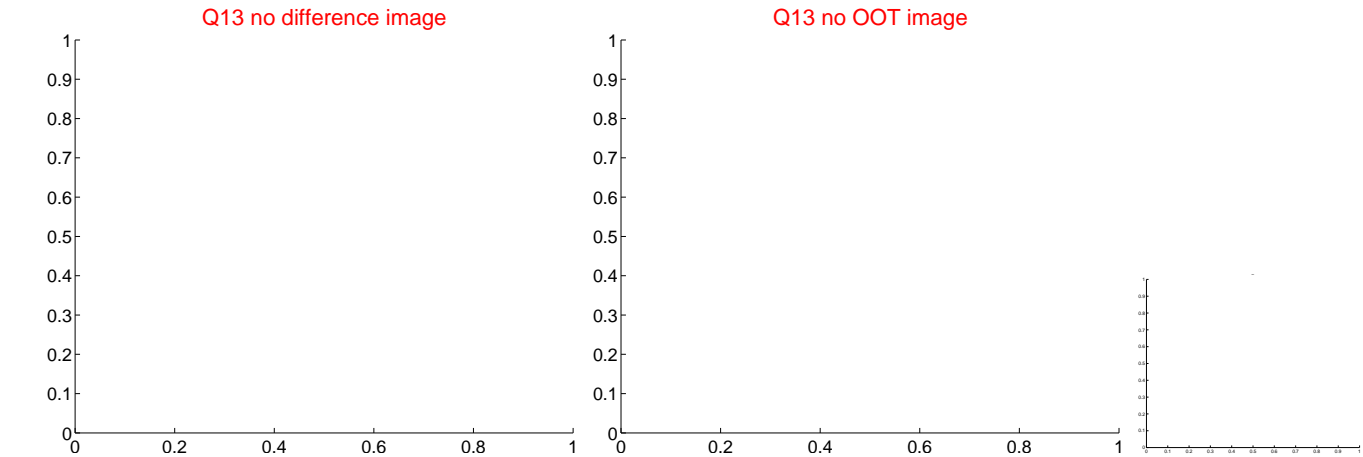
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



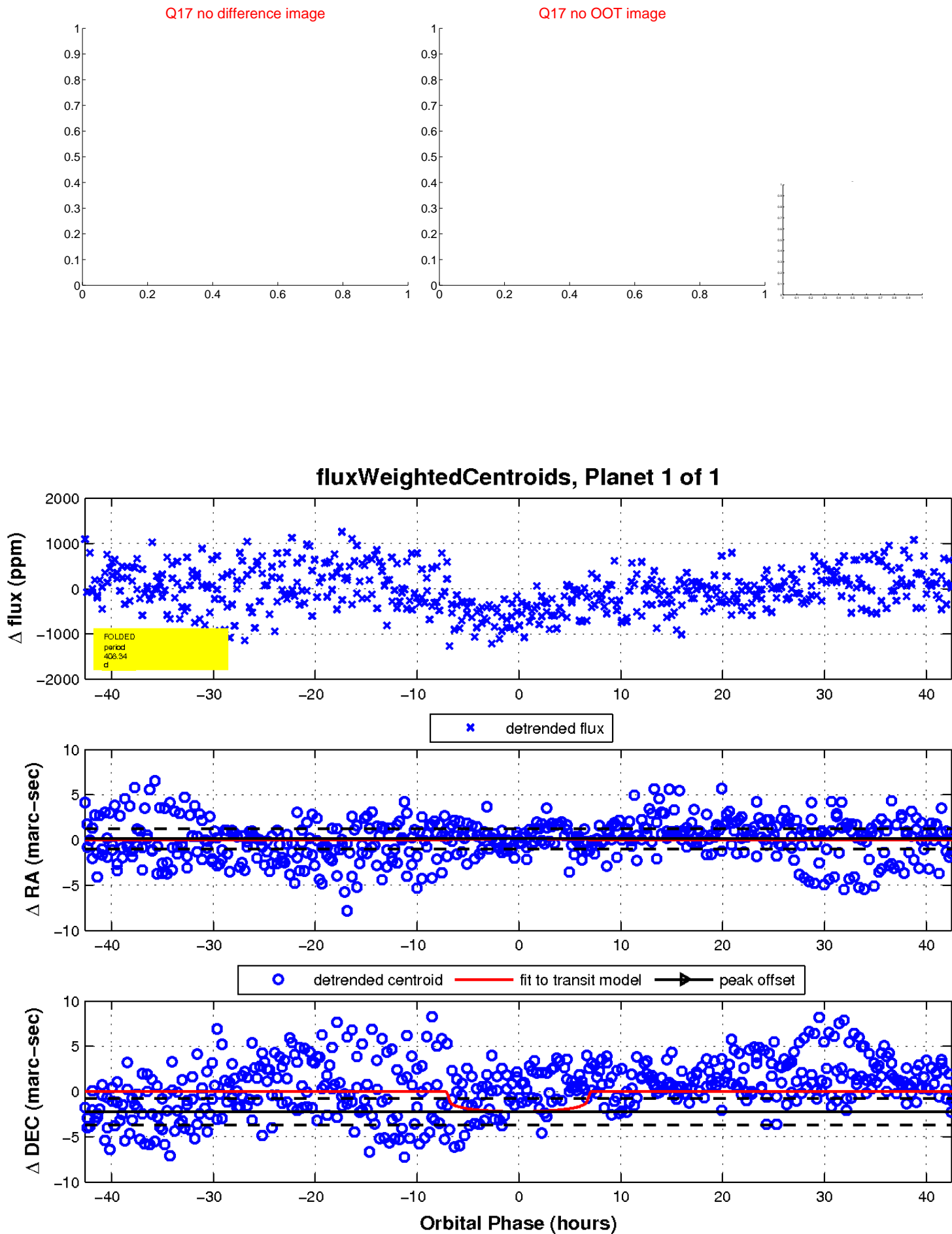
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

