

KIC 008618649

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})
008618649-01	OBS	No	375.212176	223.705113	1332.7	38.092	11.7	16.0	0.73	5709	5.11	0.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008618649-01	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.

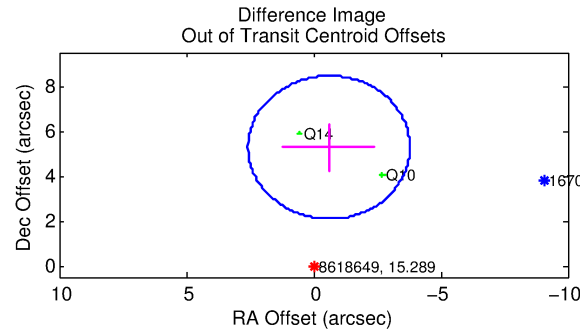
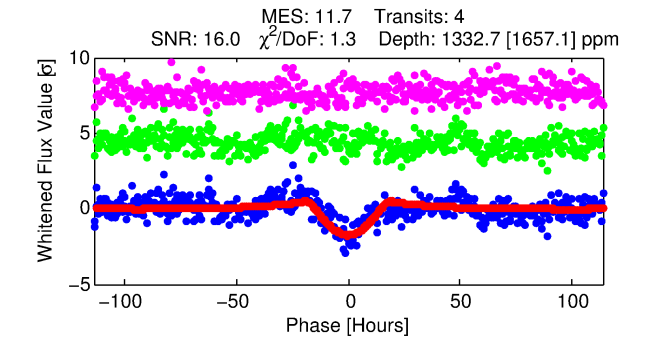
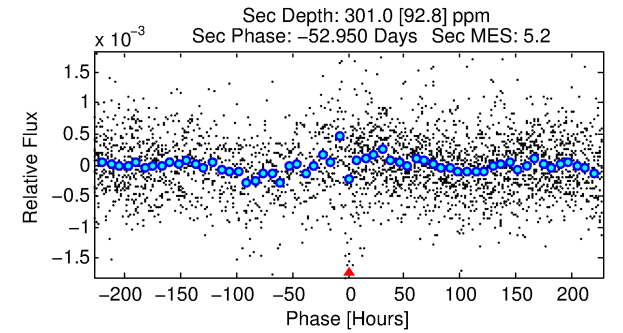
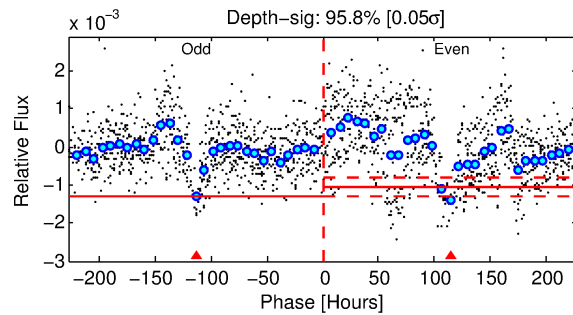
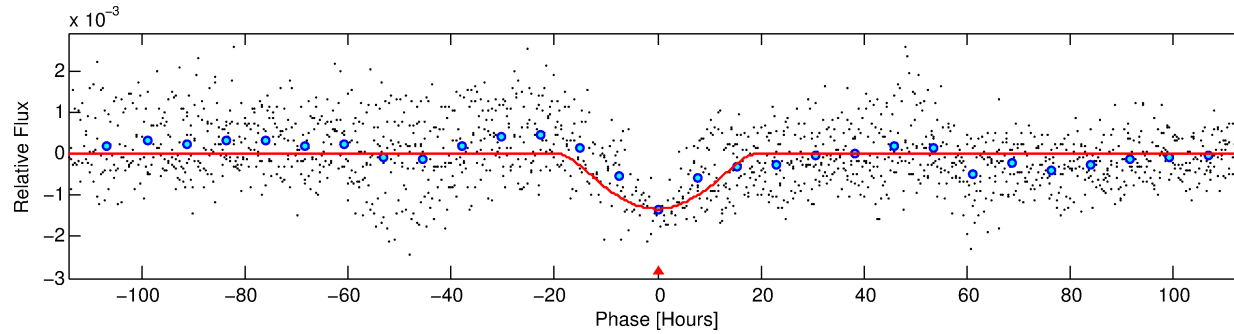
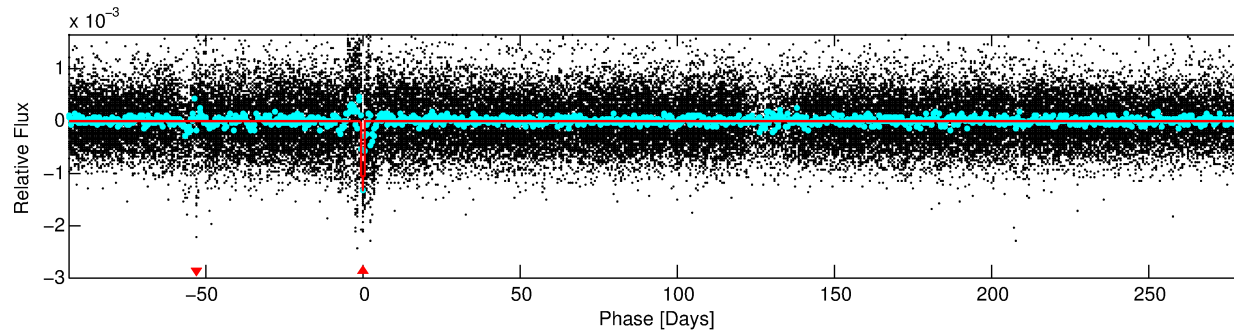
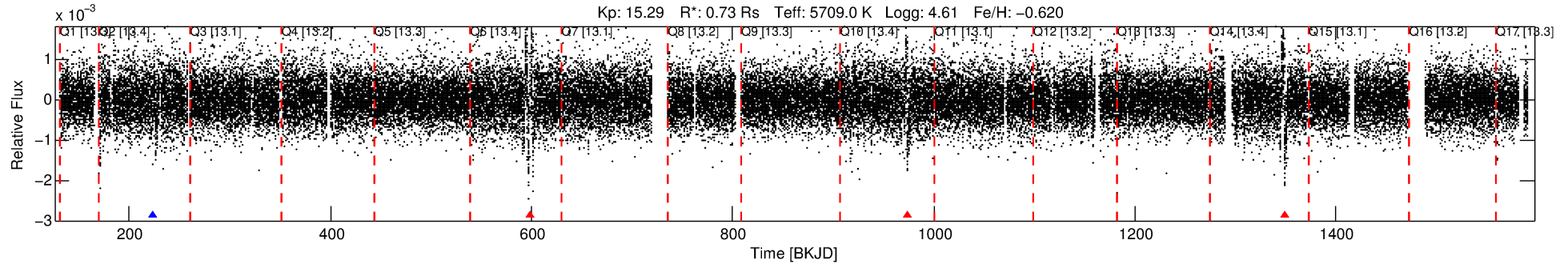
Ephemeris Match Information For 008618649-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008618649-01	8618649	008618808-01	8618808	1:1	332.8	3	-83	15.21	15.29	0.55	Col-Anomaly	1	4.40	0.78

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: 8618649 Candidate: 1 of 1 Period: 375.212 d



DV Fit Results:

Period = 375.21218 [0.02039] d
Epoch = 223.7051 [0.0405] BKJD
Rp/R* = 0.0638 [0.1247]
a/R* = 27.34 [11.90]
b = 1.00 [0.13]
Seff = 0.57 [0.16]
Teq = 222 [16] K
Rp = 5.11 [10.05] Re
a = 0.9463 [0.1679] AU
Ag = 5669.74 [22255.62] [0.25 σ]
Teffp = 2976 [2916] K [0.94 σ]

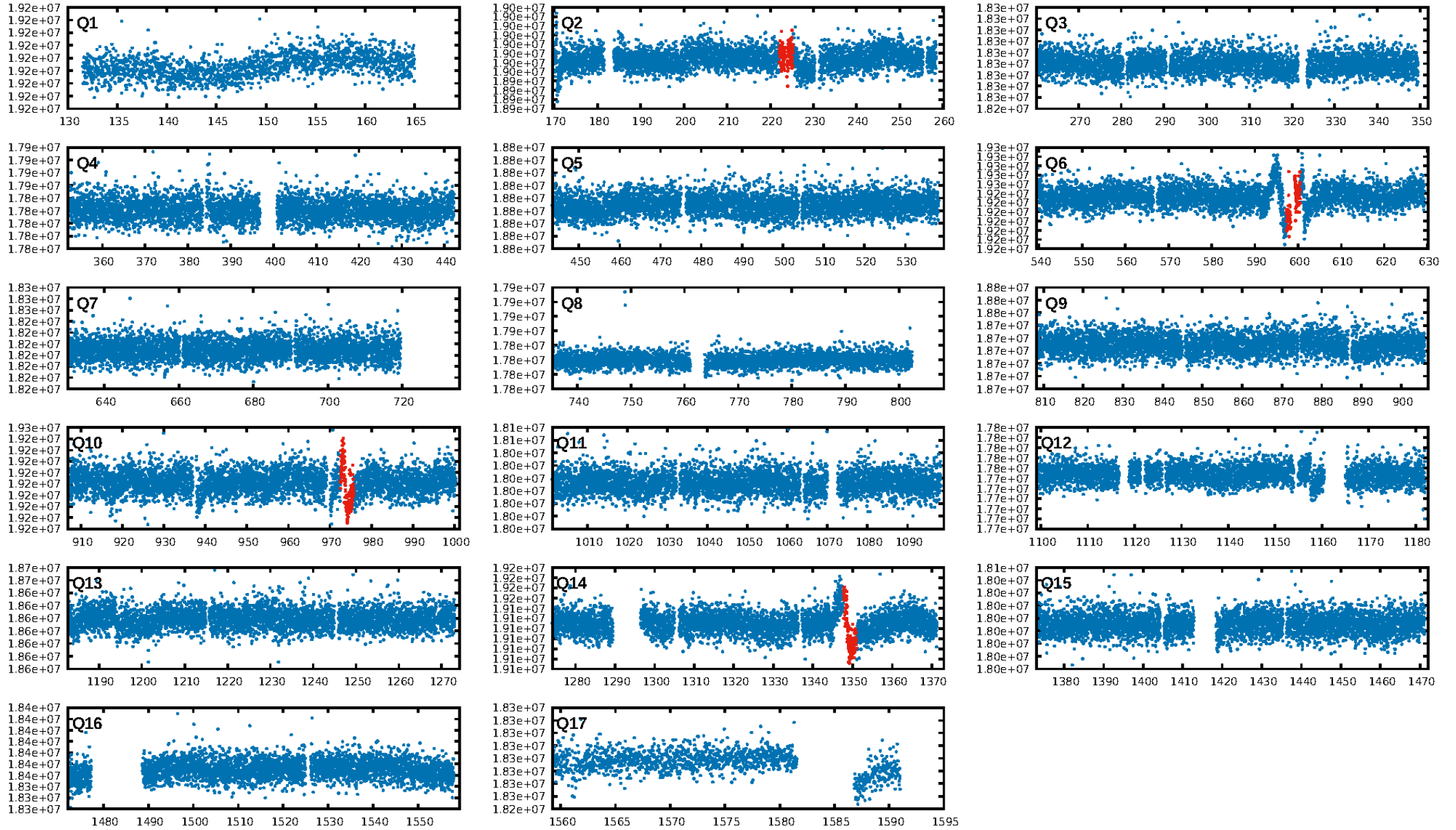
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.31e-16
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.5477
Centroid-sig: 0.0%
Centroid-so: 3.744 arcsec [3.85 σ]
OotOffset-rm: 5.303 arcsec [5.00 σ]
KicOffset-rm: 5.466 arcsec [5.07 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

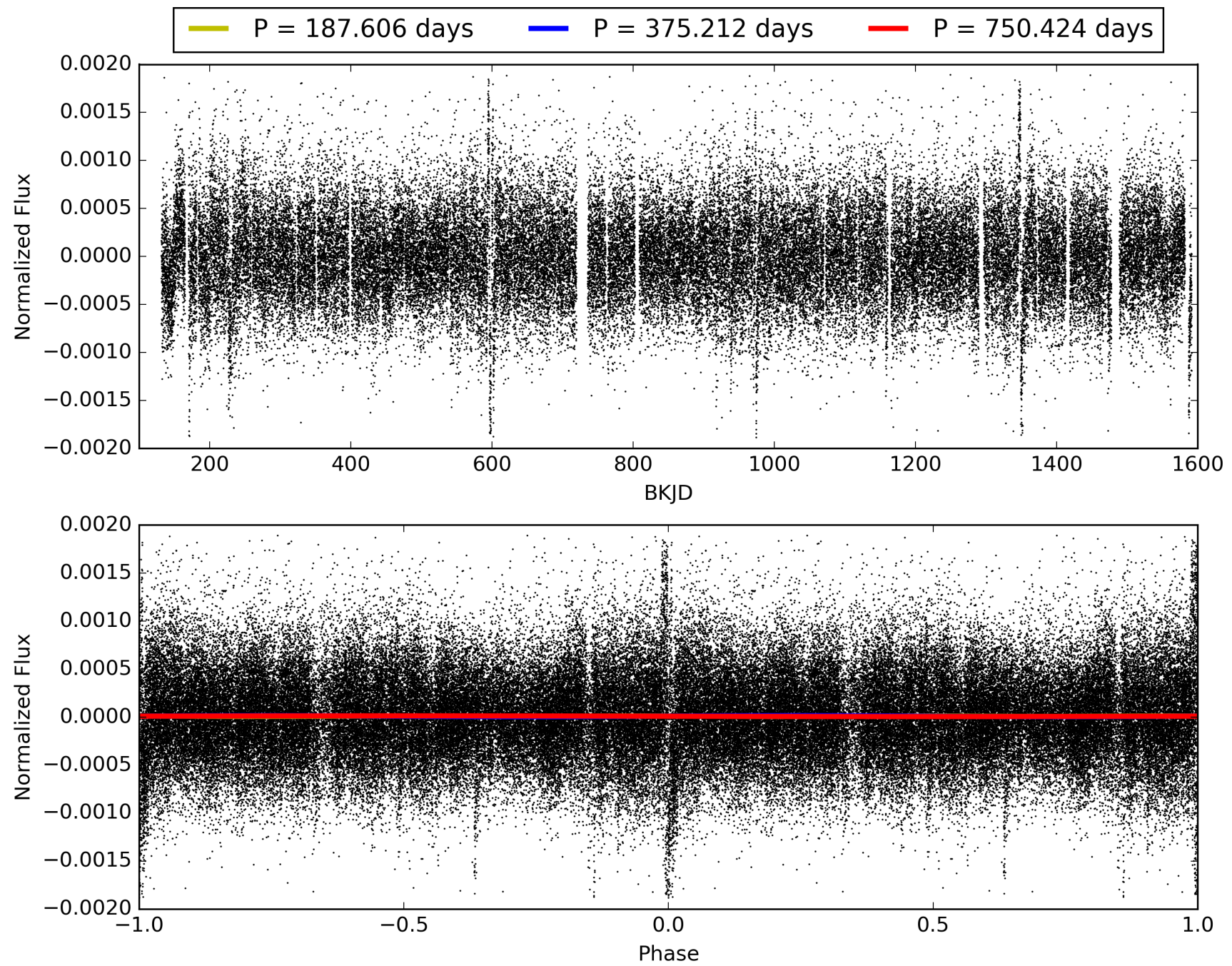
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:26:01 Z

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

TCE 008618649-01, PDC Light Curves

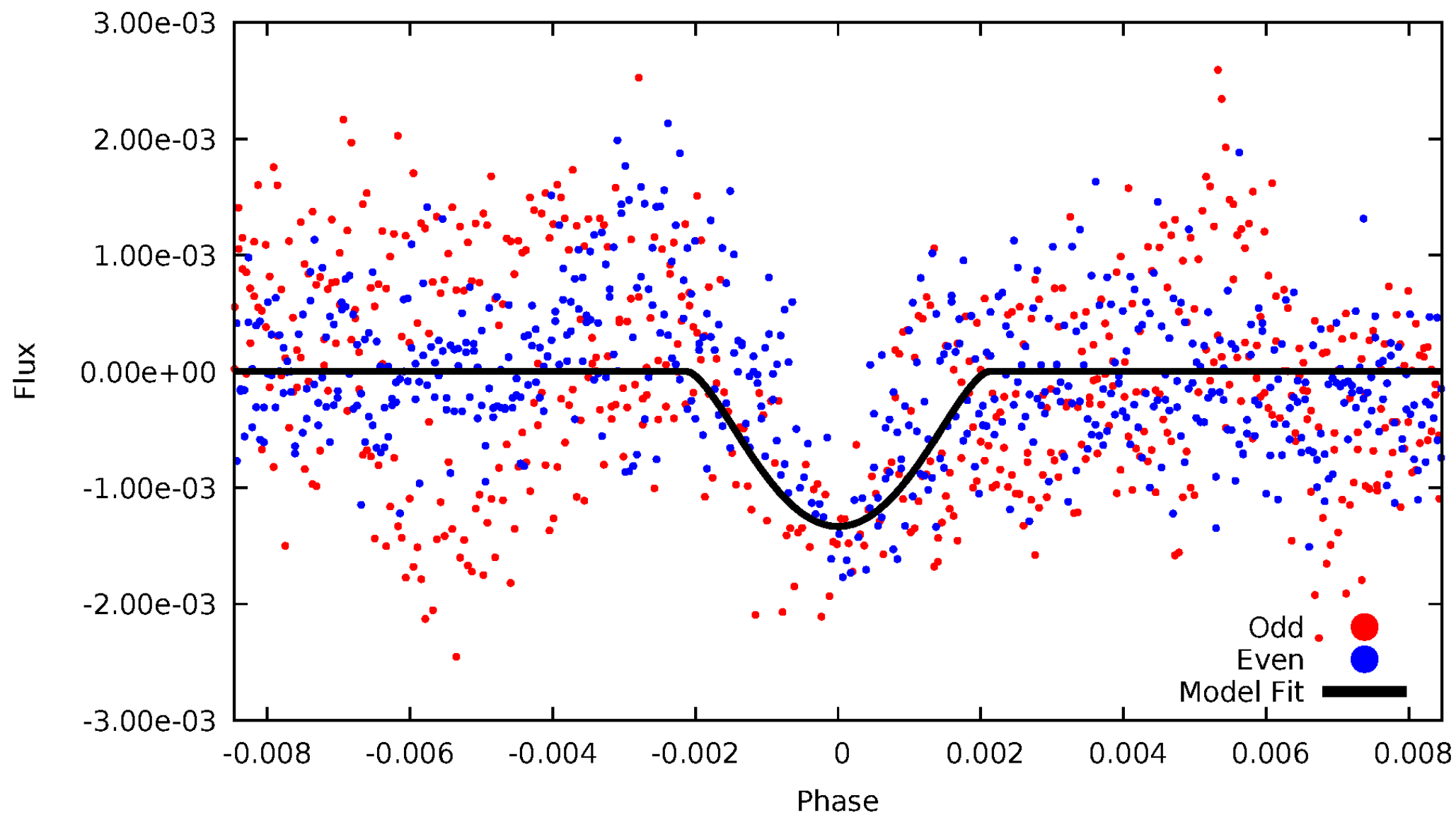


TCE 008618649-01



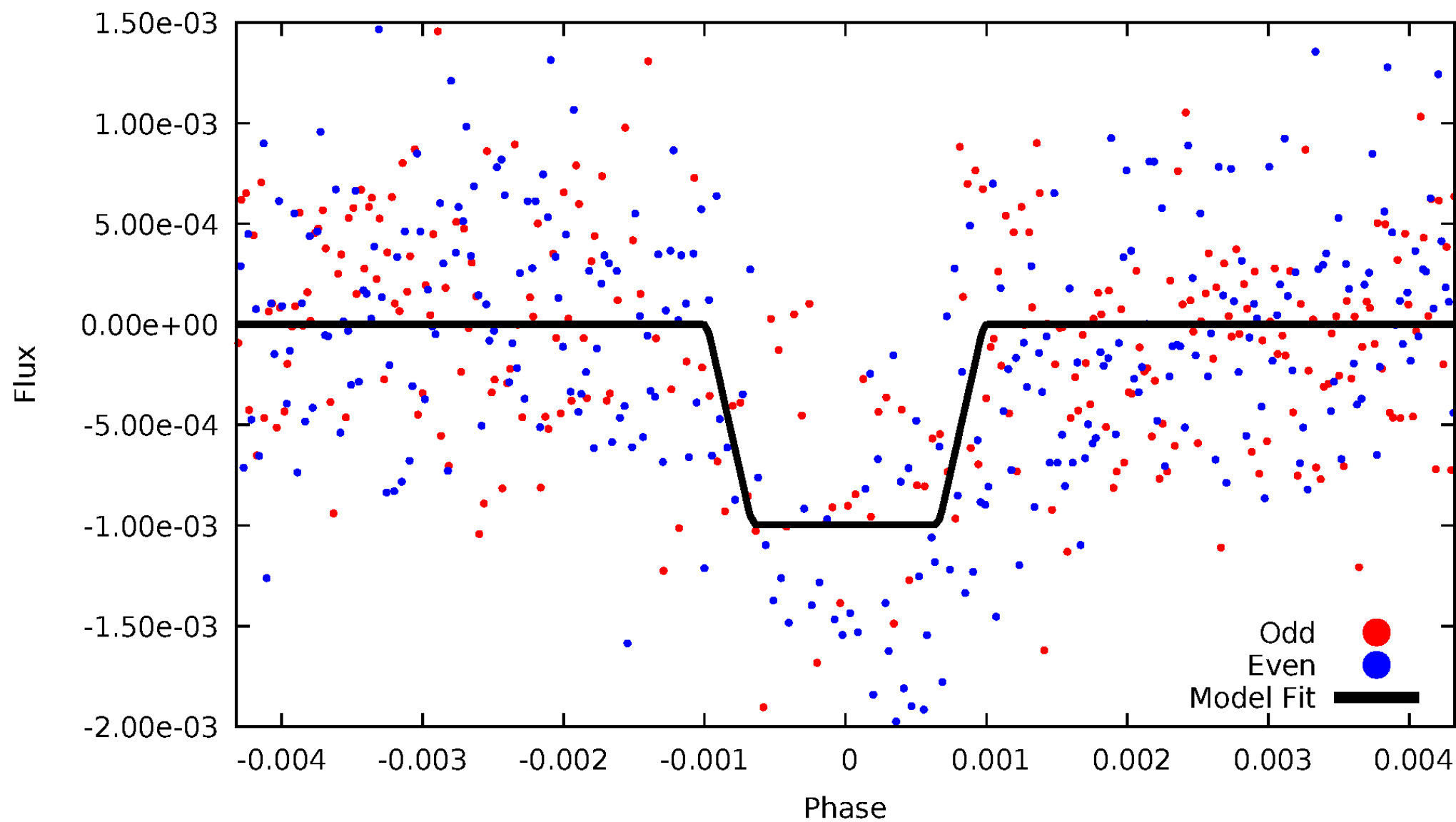
DV Odd/Even

TCE 008618649-01



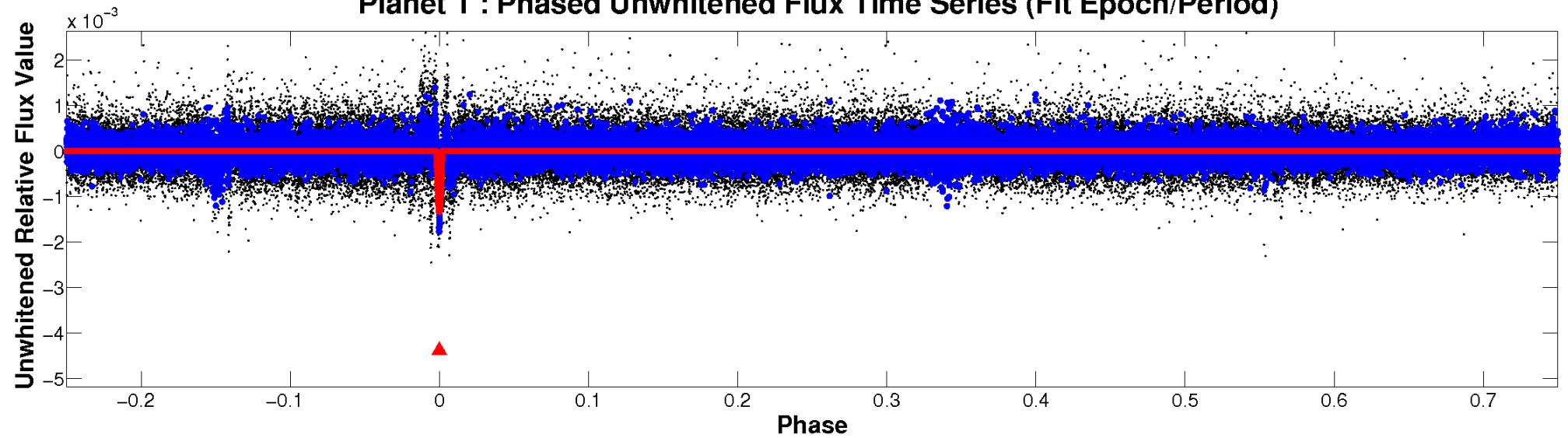
ALT Odd/Even

TCE 008618649-01

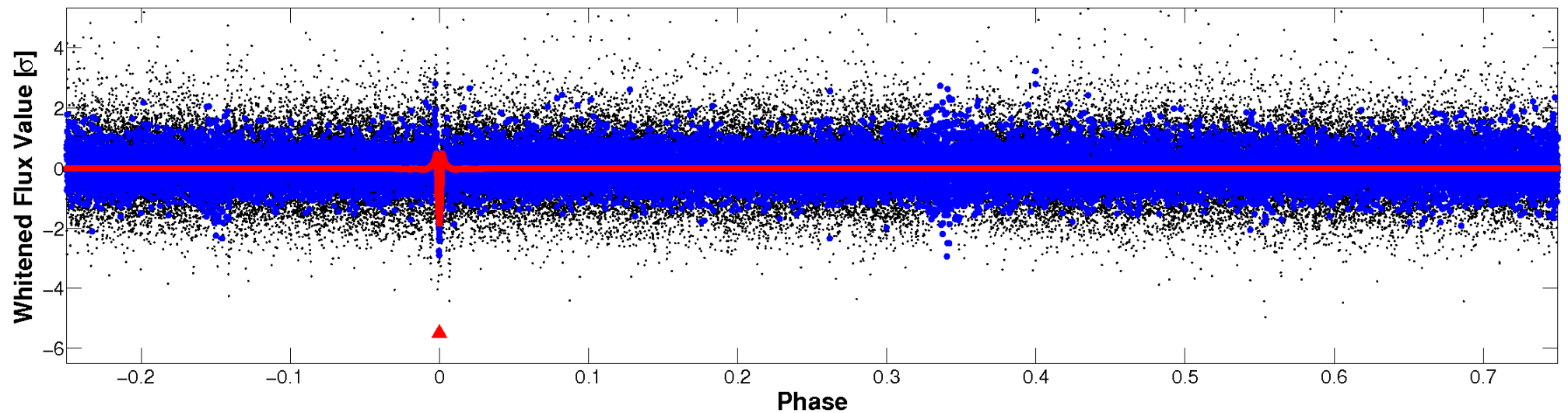


Non-Whitened Vs. Whitened Light Curve

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

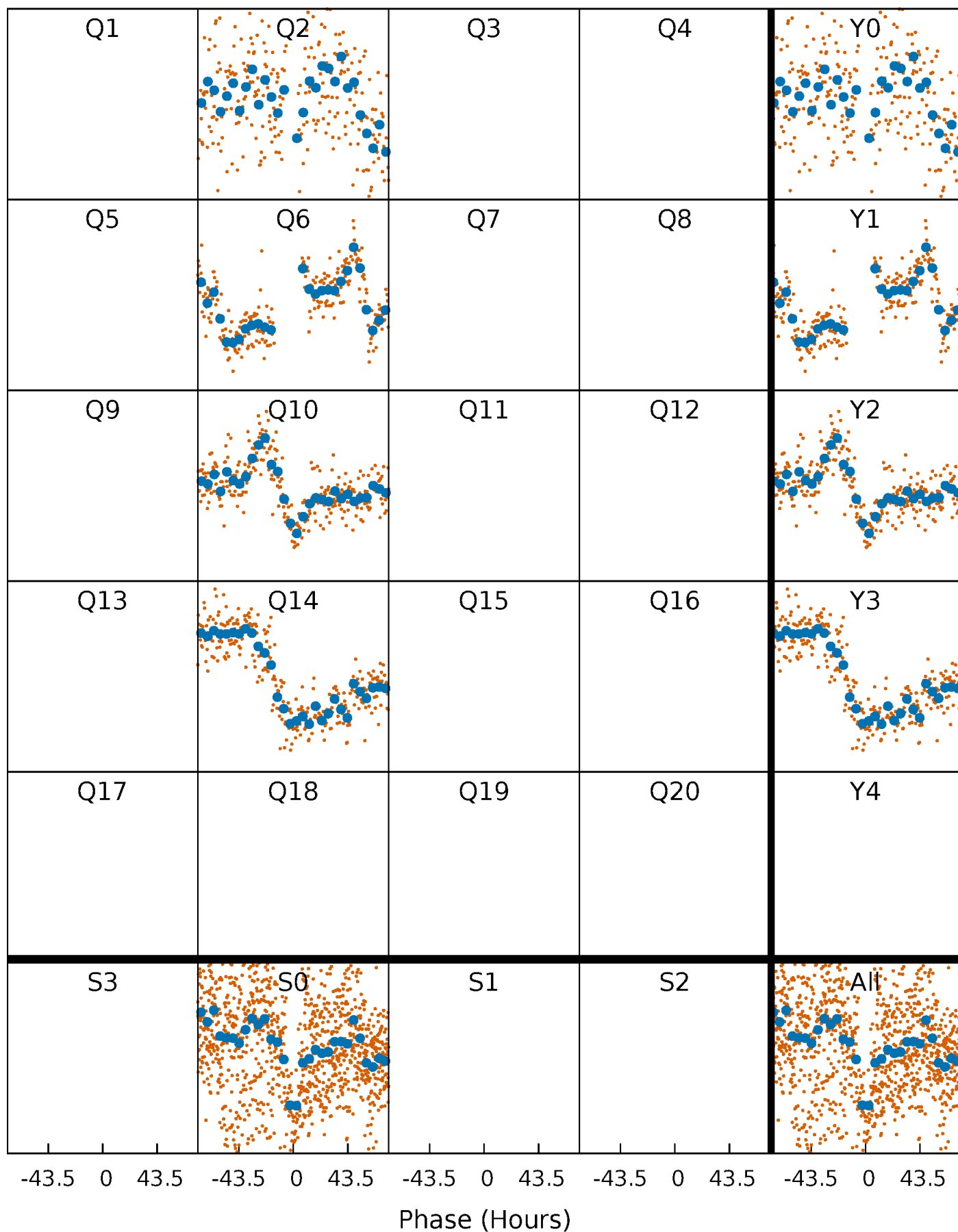


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



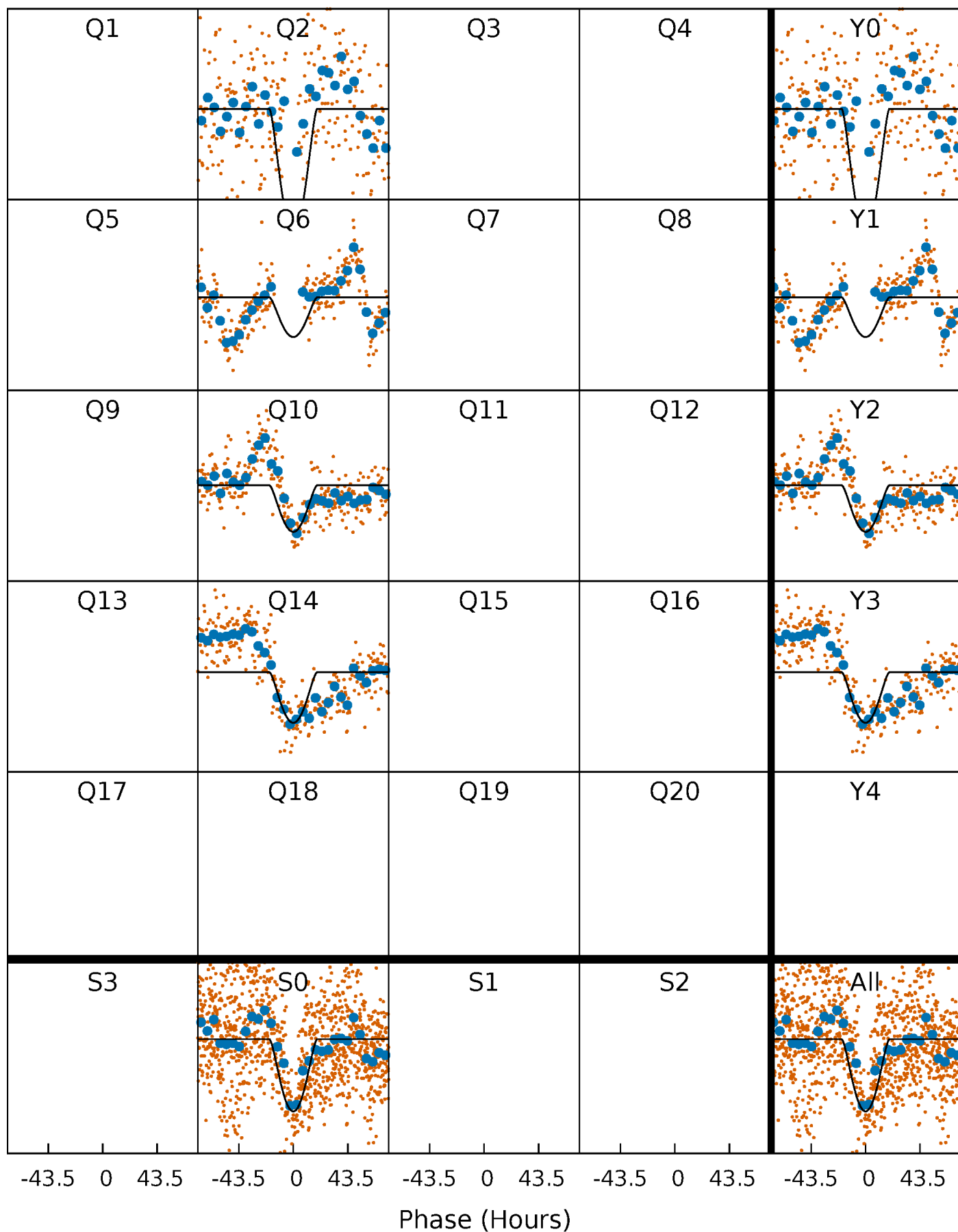
PDC Quarter-Phased Transit Curves

TCE 008618649-01 P=375.212176 Days $T_0=223.705113$ (BKJD)



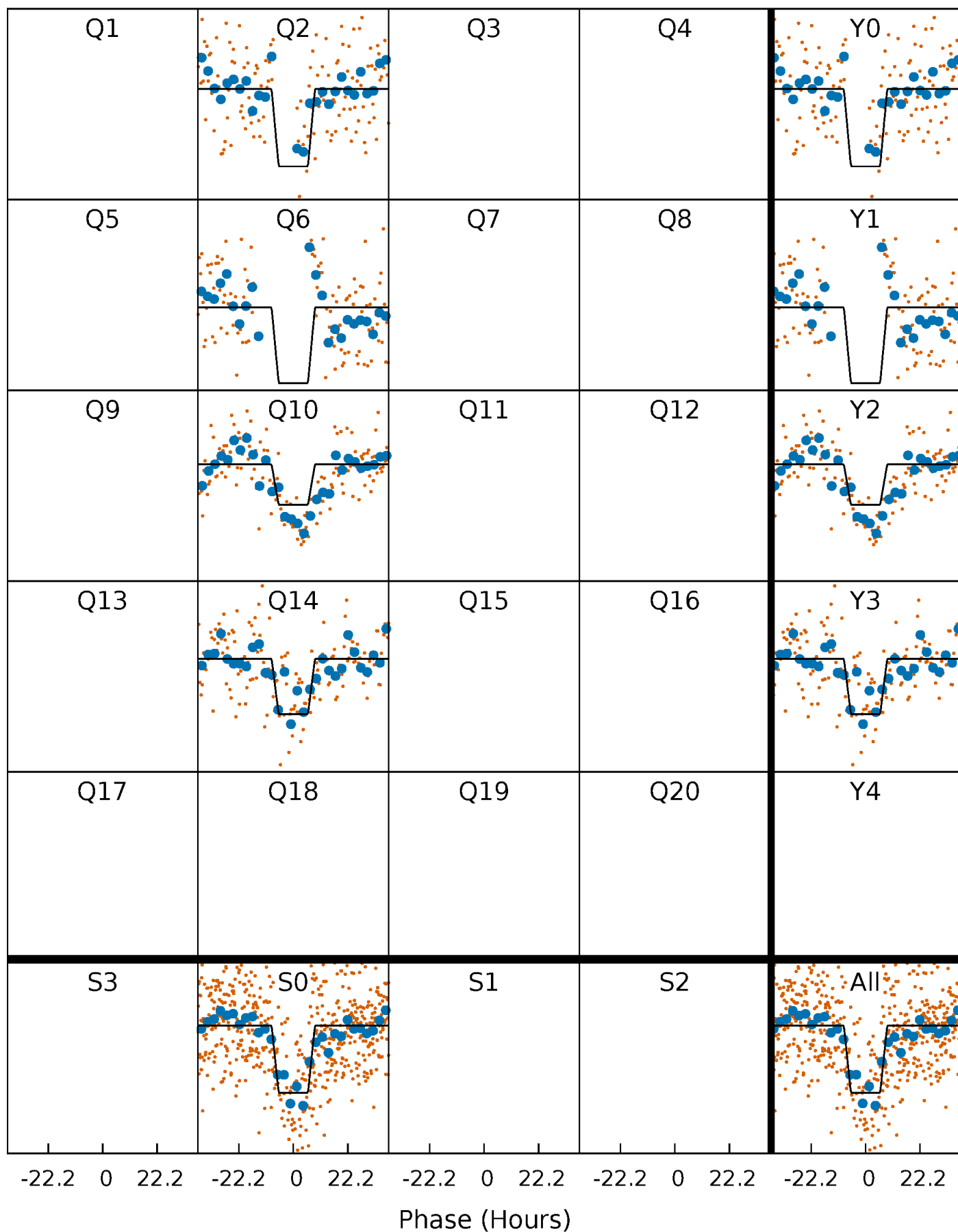
DV Quarter-Phased Transit Curves

TCE 008618649-01 P=375.212176 Days $T_0=223.705113$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

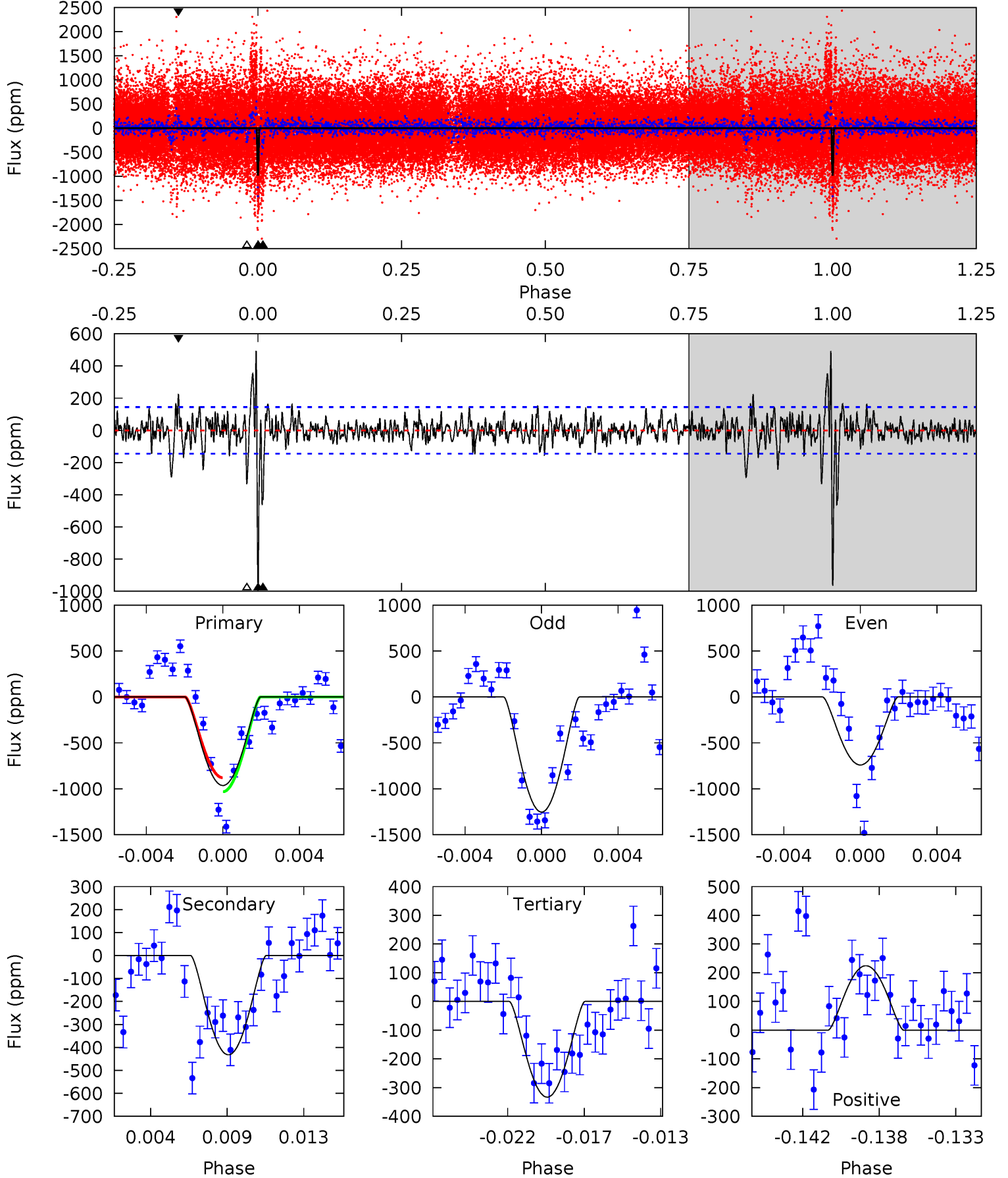
TCE 008618649-01 P=375.105672 Days $T_0=223.808253$ (BKJD)



DV Model-Shift Uniqueness Test

008618649-01, P = 375.212176 Days, E = 223.705113 Days

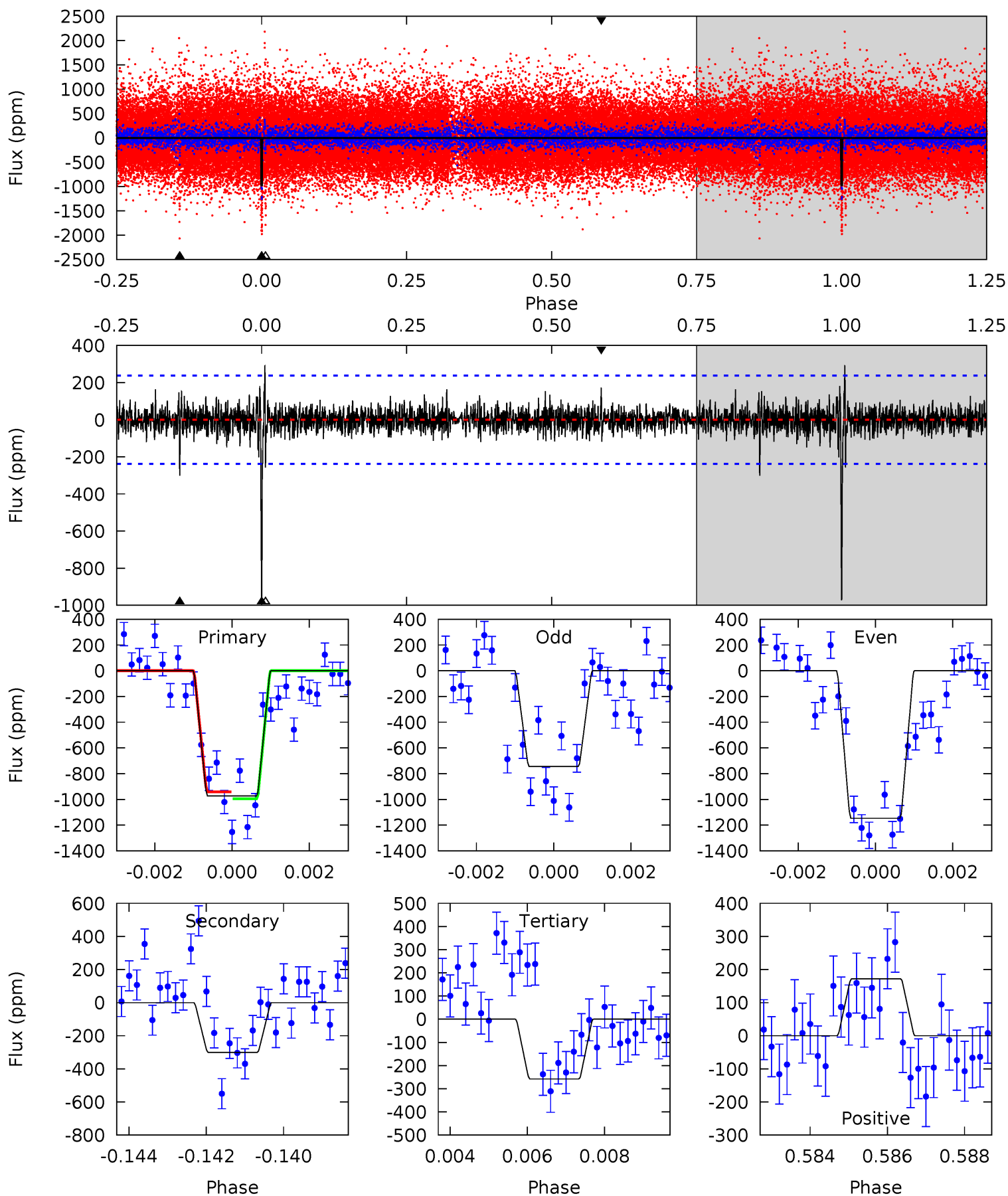
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.6	15.5	12.0	8.06	5.19	2.86	2.25	22.7	26.6	3.56	7.47	9.16	0.99	0.34	2.71



Alt Model-Shift Uniqueness Test

008618649-01, P = 375.105672 Days, E = 223.808253 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	6.73	5.78	3.85	5.33	3.09	1.00	16.0	17.9	0.95	2.87	4.48	0.29	0.23	0.58



Stellar Parameters For KIC 008618649

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5709^{+171}_{-171}	$4.611^{+0.034}_{-0.136}$	$-0.620^{+0.300}_{-0.300}$	$0.734^{+0.158}_{-0.059}$	$0.802^{+0.078}_{-0.071}$	$2.860^{+0.528}_{-1.145}$
	+3%/-3%	+1%/-3%	+48%/-48%	+22%/-8%	+10%/-9%	+18%/-40%
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 008618649-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-432 ± 28	$9.58^{+8.62}_{-6.63}$	316^{+15}_{-14}	3065^{+1511}_{-475}	2323^{+21459}_{-1678}
Alt.	-300 ± 45	$7.61^{+8.30}_{-5.28}$	316^{+17}_{-14}	3065^{+1621}_{-508}	2336^{+24239}_{-1760}

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 $A_{obs} \gg 1.0$

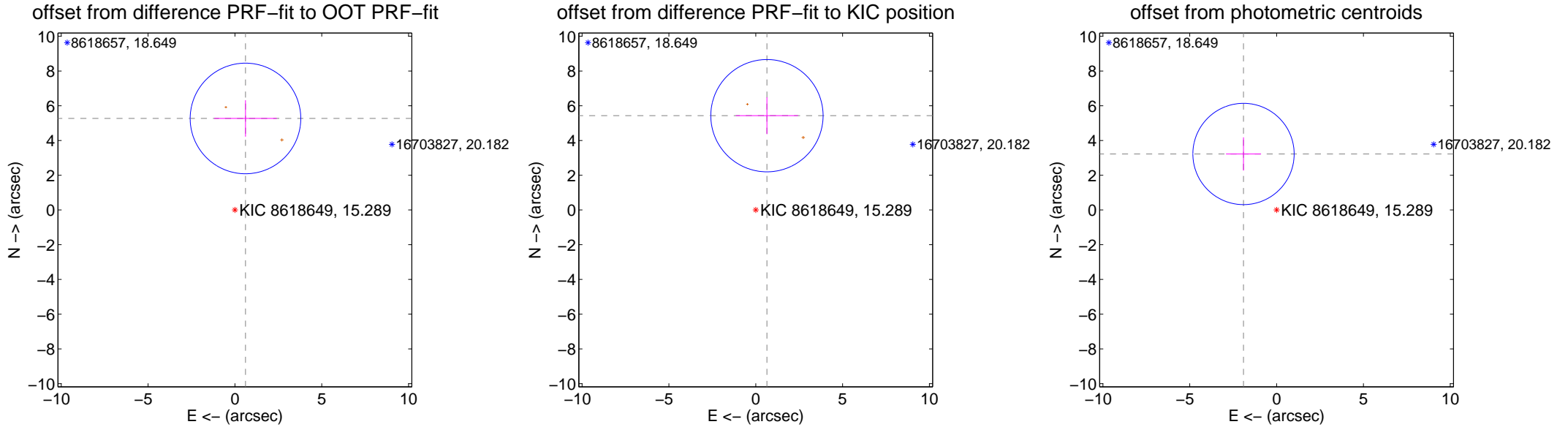
DV Centroid Data

Supplemental centroid analysis for 008618649-01. Kepler magnitude: 15.29. Transit SNR 16.03

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	5.303 ± 1.061	5.00	-0.608 ± 1.800	5.268 ± 1.048
PRF-fit source offset from KIC position	5.466 ± 1.077	5.07	-0.644 ± 1.792	5.428 ± 1.064
photometric centroid source offset	3.74 ± 0.97	3.85	1.90 ± 1.01	3.22 ± 0.96

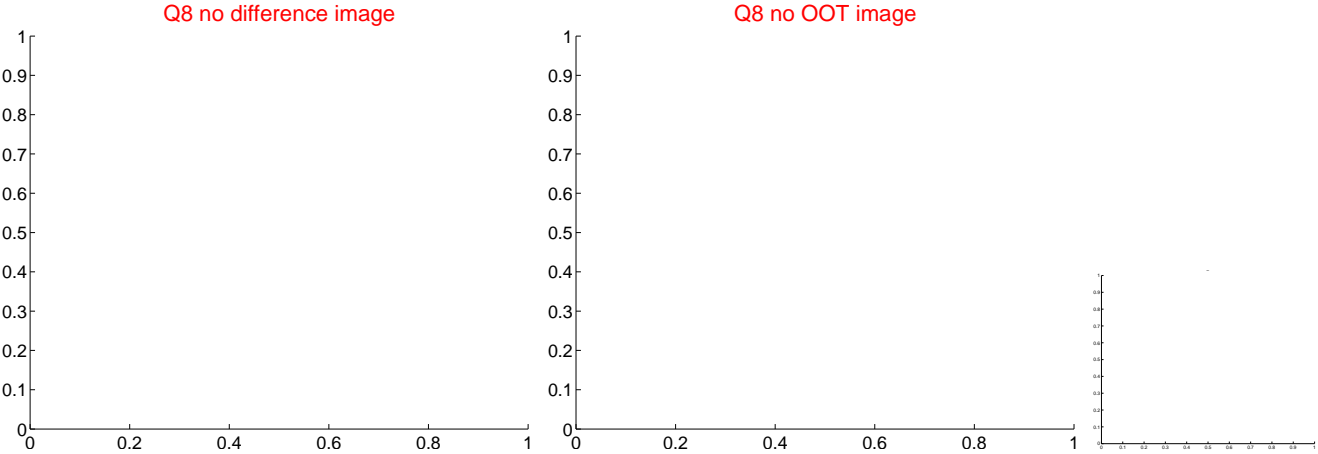
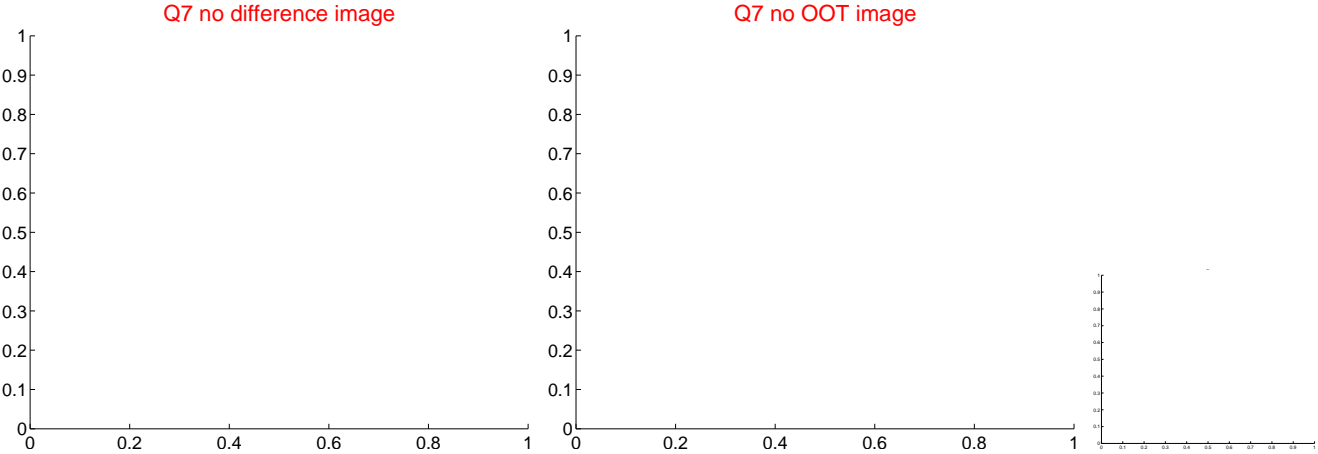
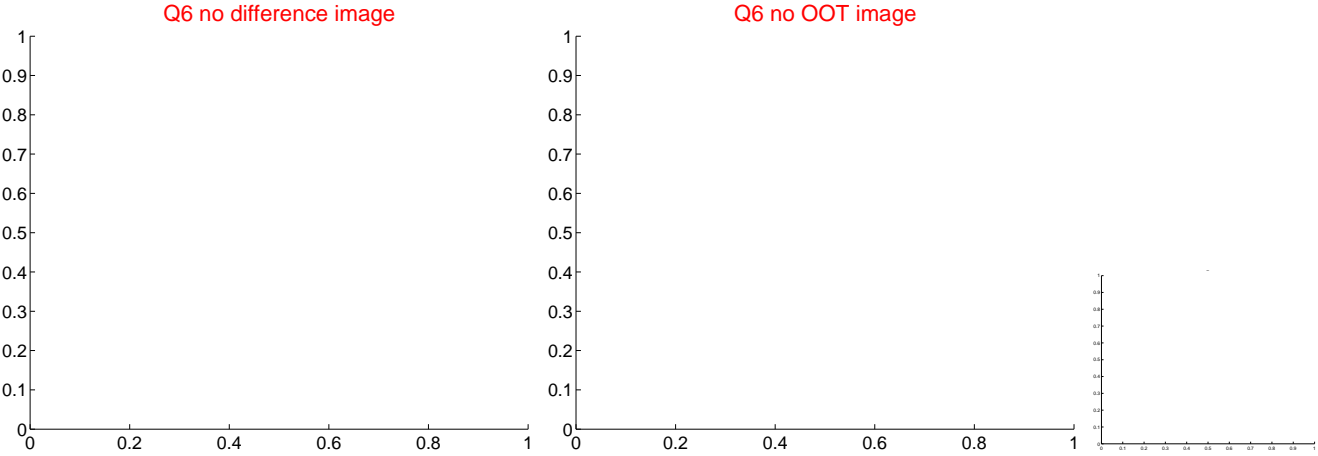


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

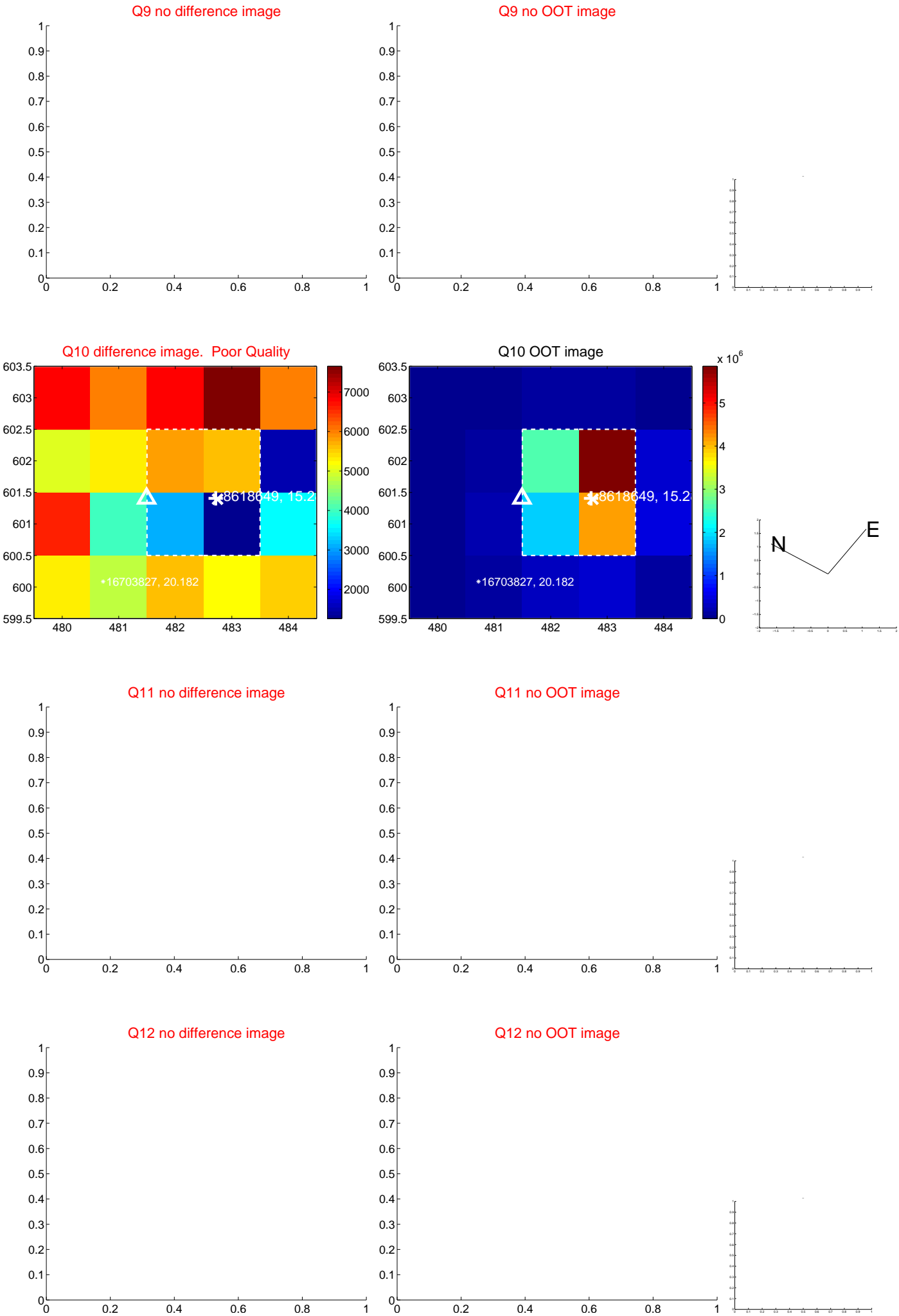
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



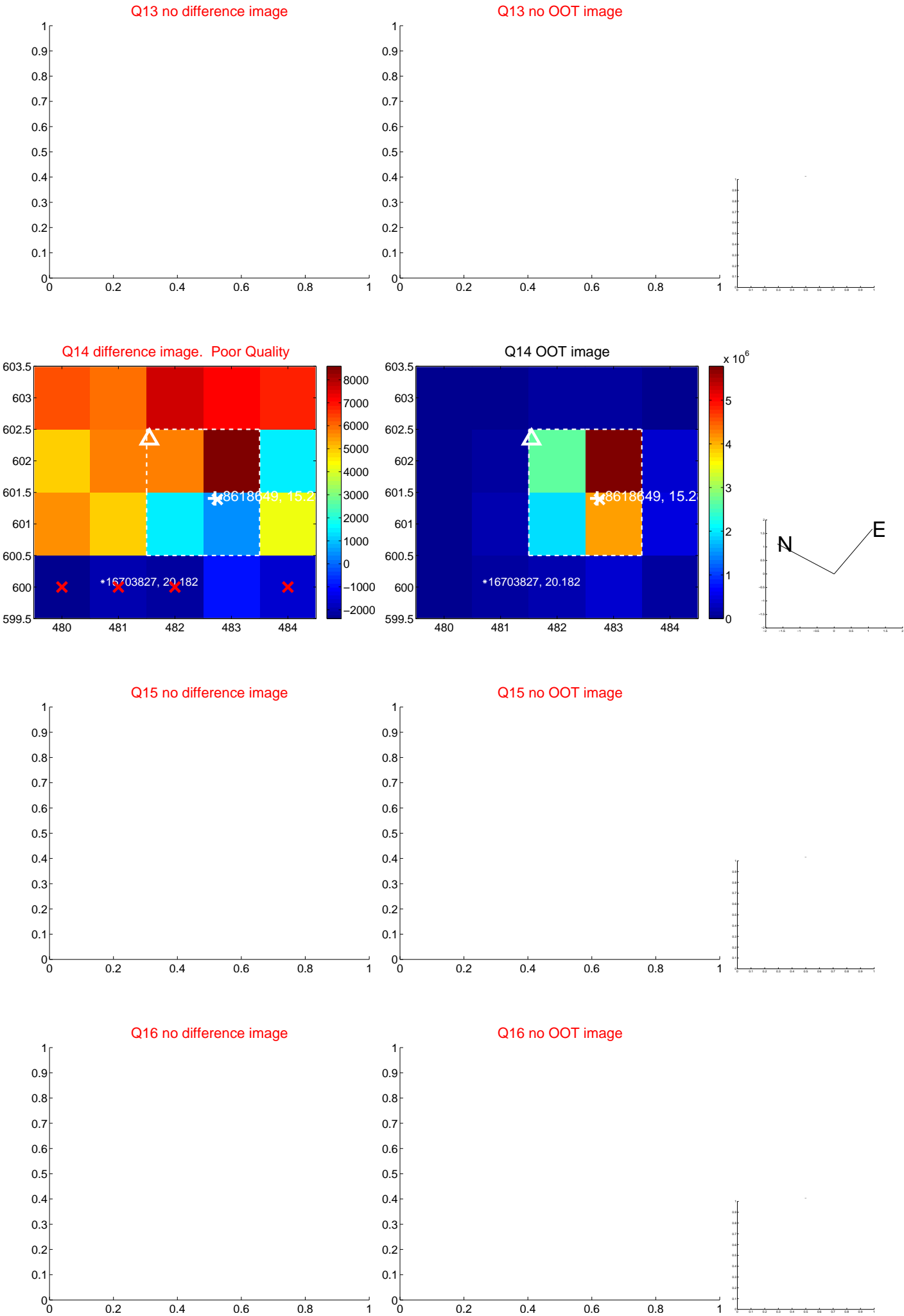
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



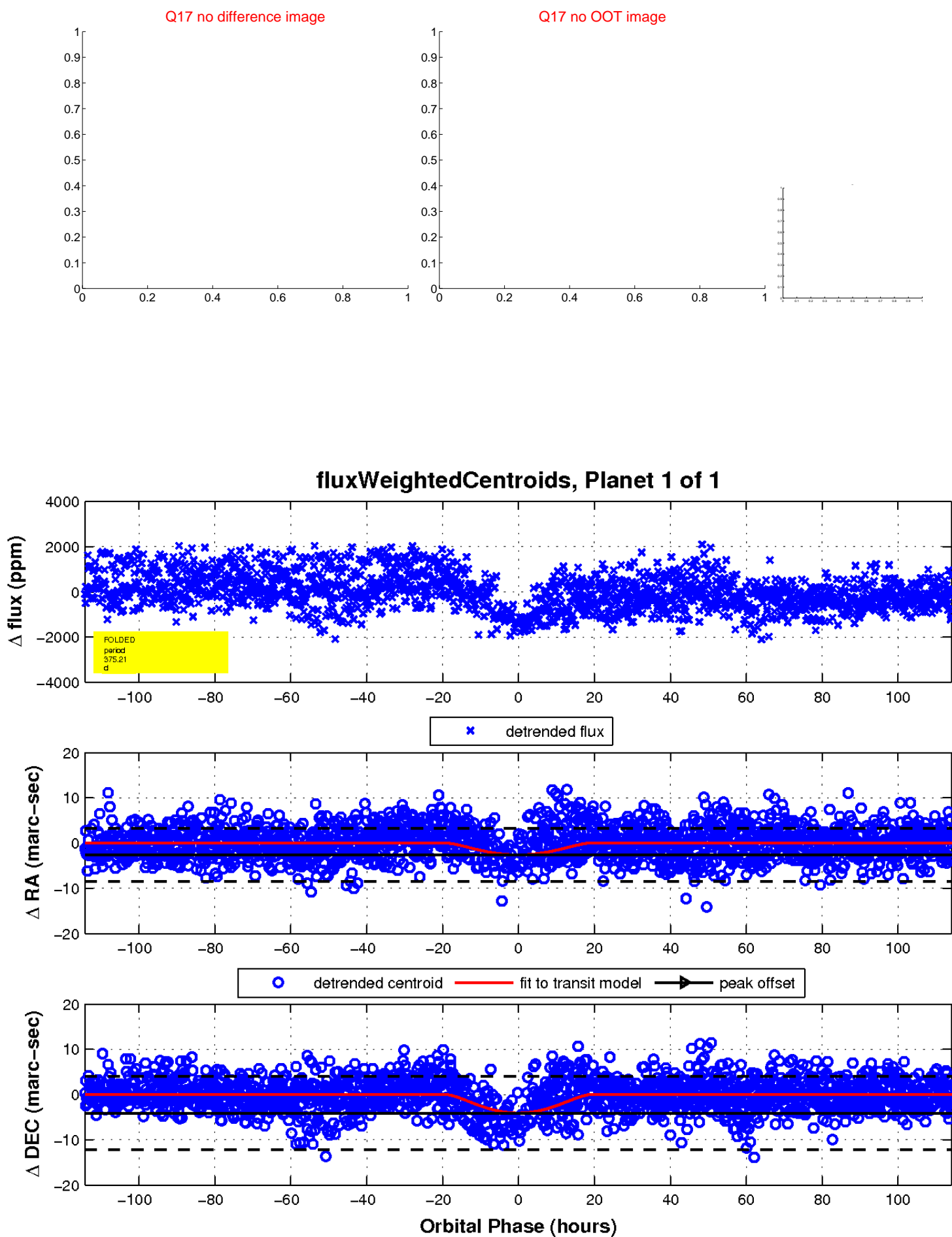
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

