

KIC 008618808

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})
008618808-01	OBS	No	375.044127	223.613050	729.7	23.661	8.2	9.1	0.92	6052	2.80	0.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008618808-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

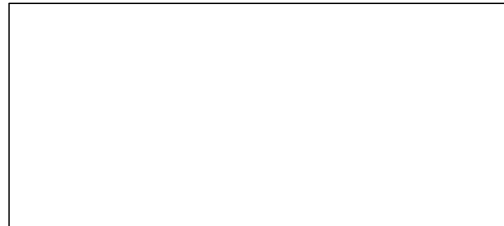
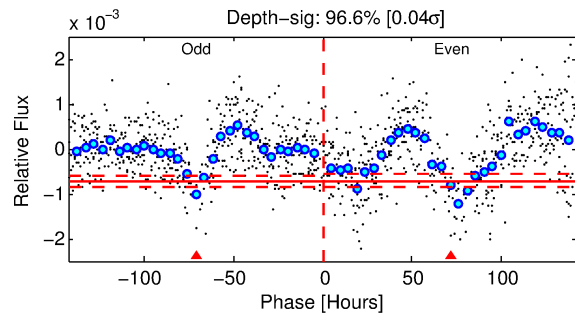
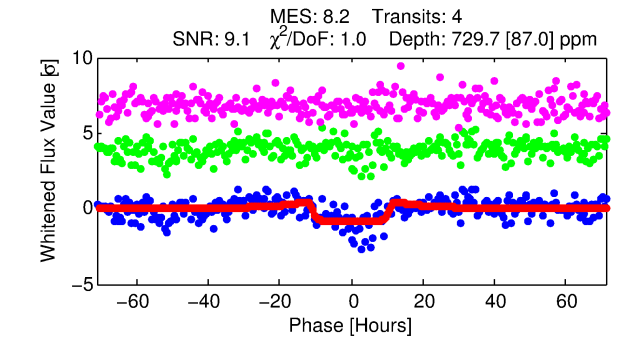
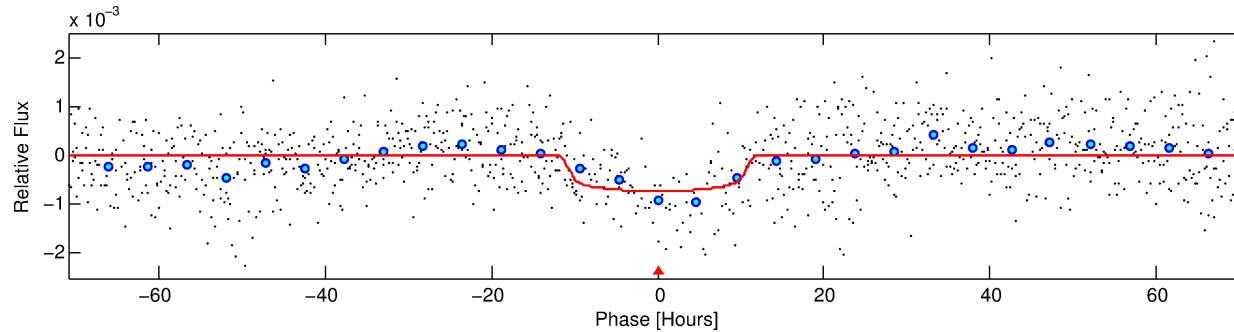
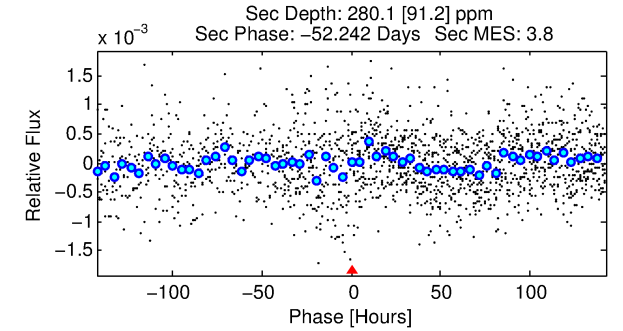
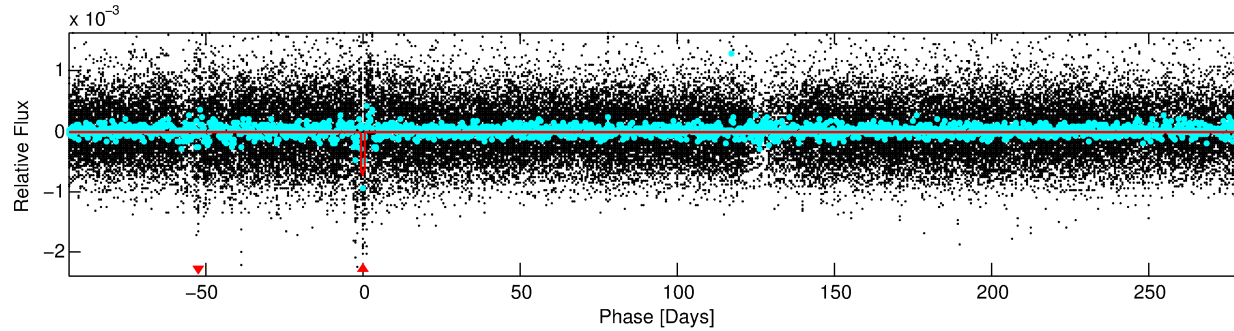
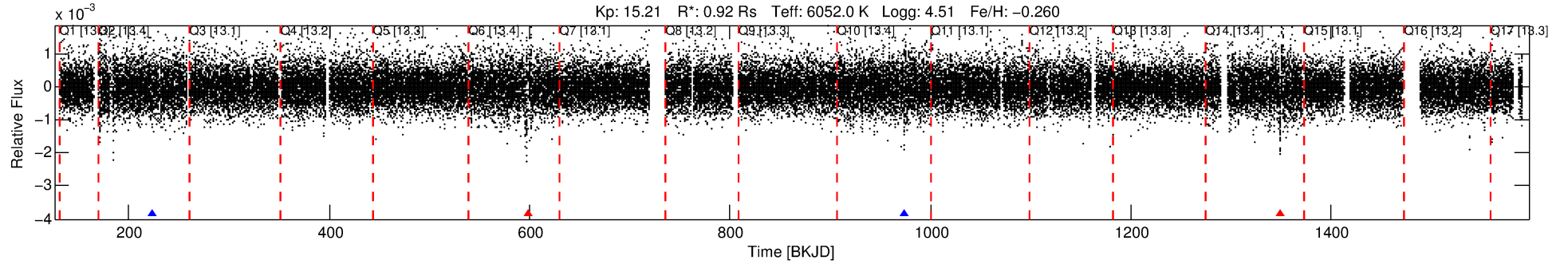
Ephemeris Match Information For 008618808-01

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
008618808-01	8618808	008618649-01	8618649	1:1	332.8	-3	83	15.29	15.21	1.83	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: 8618808 Candidate: 1 of 1 Period: 375.044 d



DV Fit Results:

Period = 375.04413 [0.01431] d
Epoch = 223.6131 [0.0267] BKJD
Rp/R* = 0.0279 [0.0032]
a/R* = 72.02 [33.42]
b = 0.84 [0.17]
Seff = 0.99 [0.40]
Teq = 254 [26] K
Rp = 2.80 [0.94] Re
a = 1.0138 [0.2677] AU
Ag = 20219.00 [11162.72] [1.81σ]
Teffp = 4687 [491] K [9.01σ]

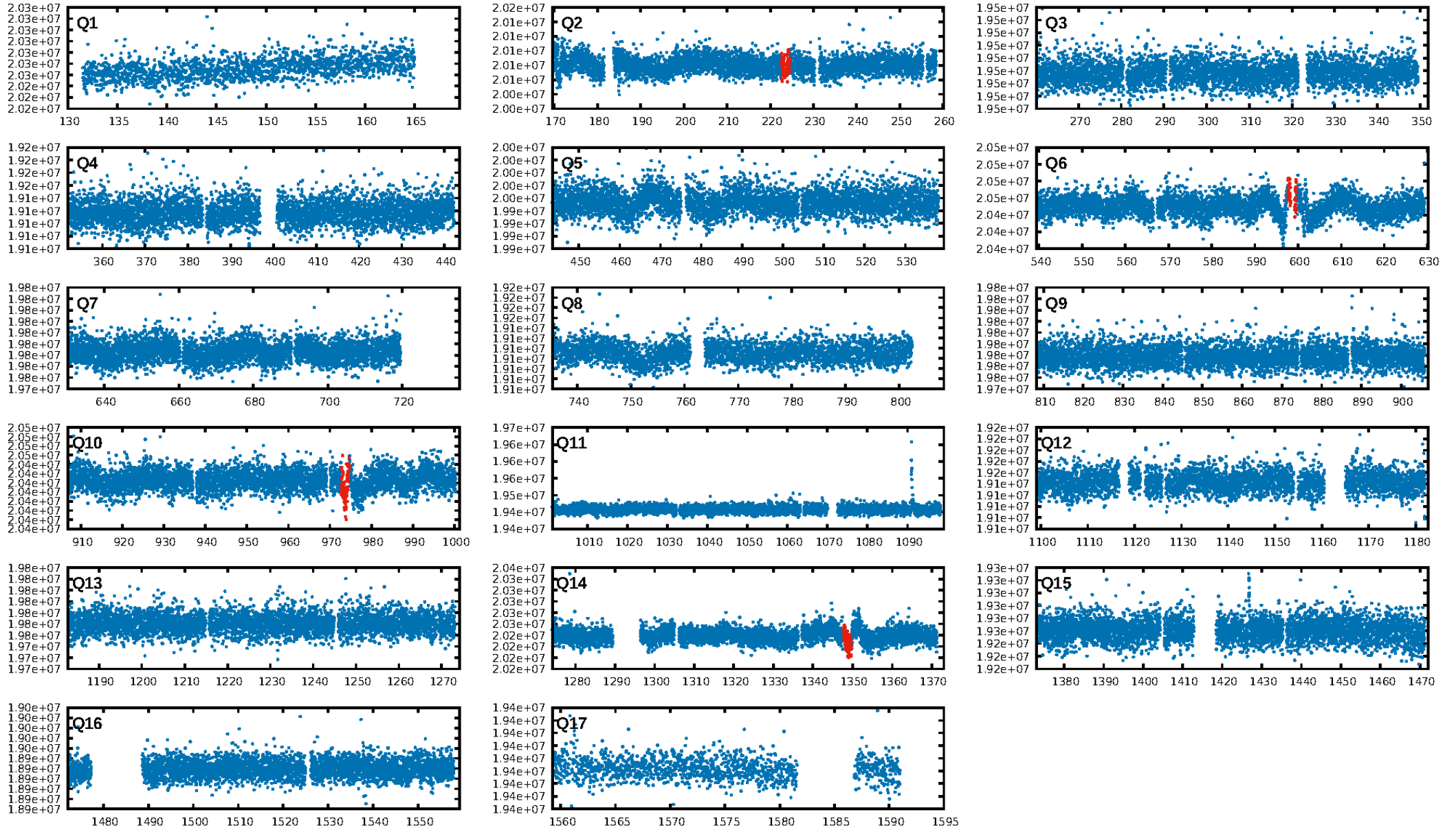
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 43.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.07e-15
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: -3.276
Centroid-sig: 2.3%
Centroid-so: 2.368 arcsec [1.60σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

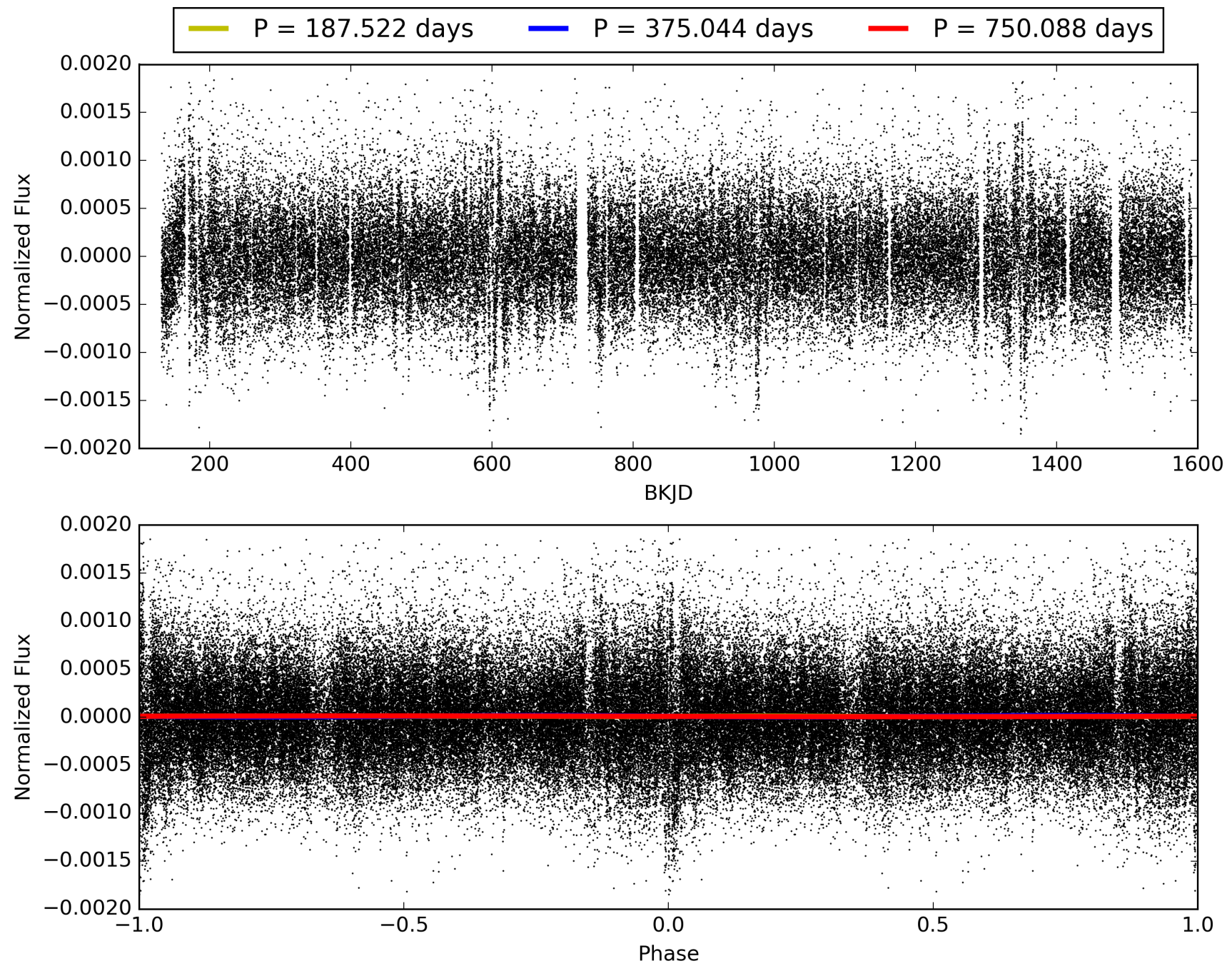
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:08:25 Z

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

TCE 008618808-01, PDC Light Curves

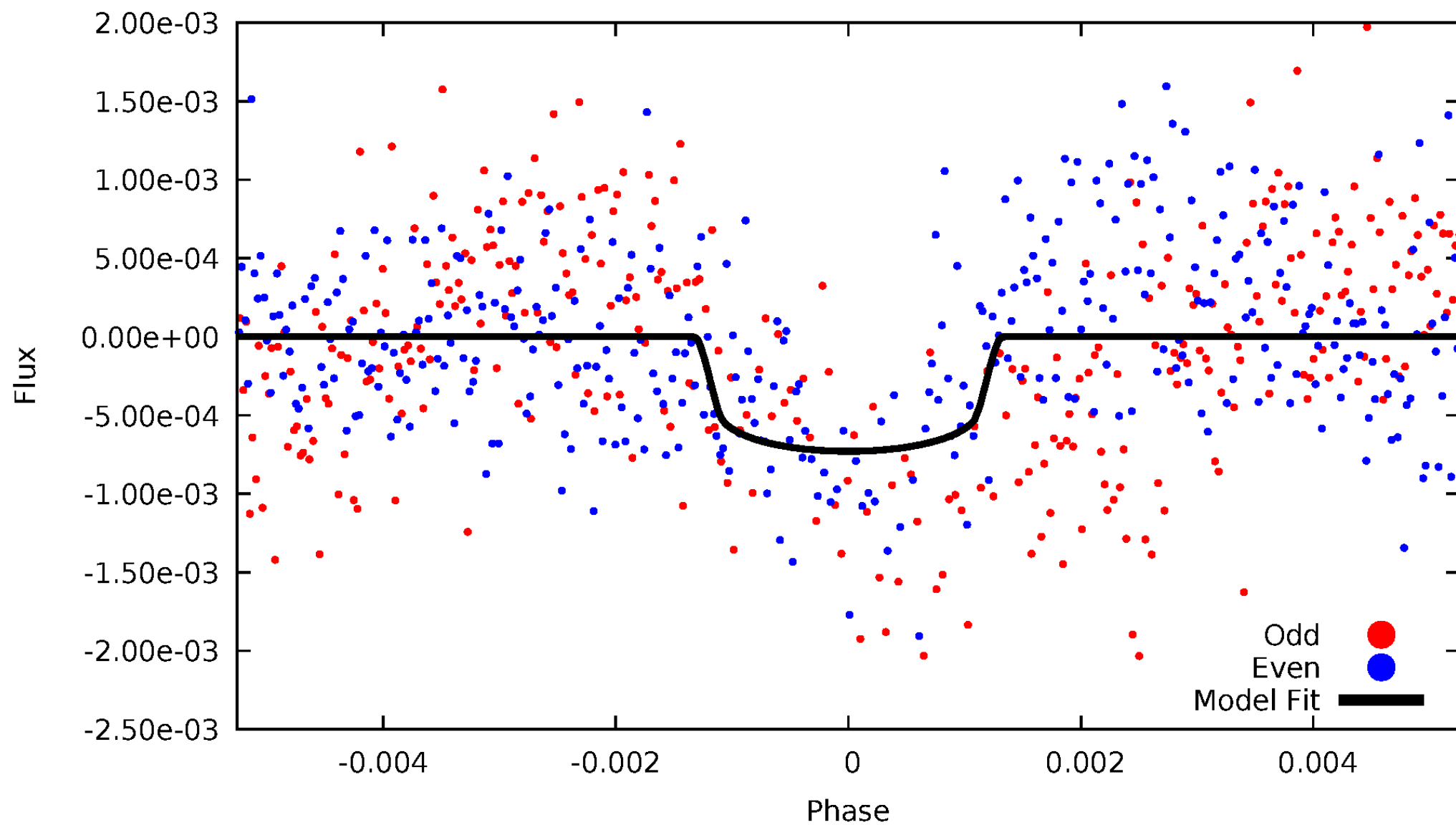


TCE 008618808-01



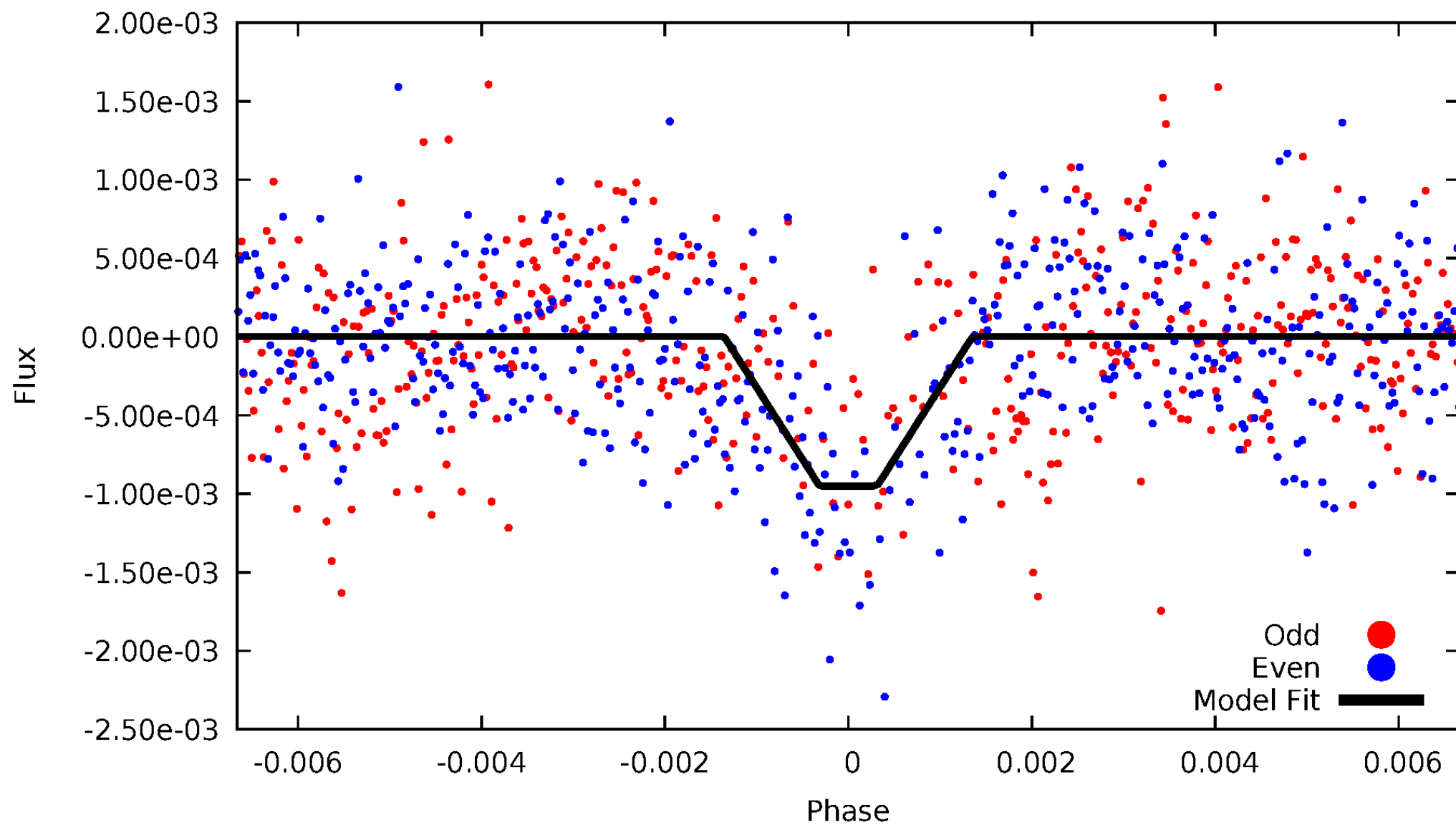
DV Odd/Even

TCE 008618808-01



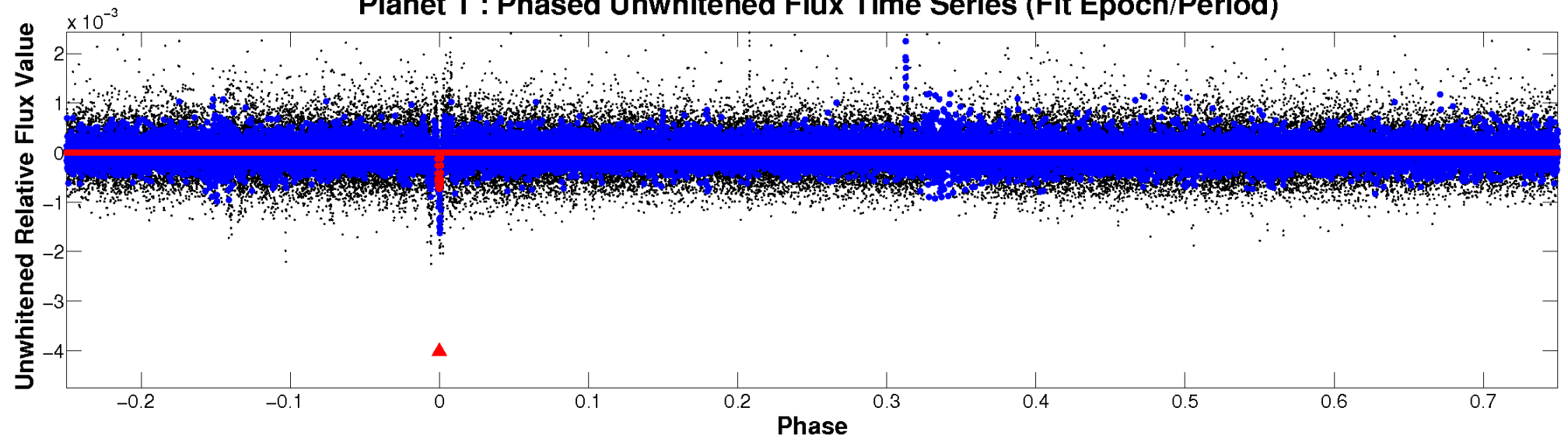
ALT Odd/Even

TCE 008618808-01

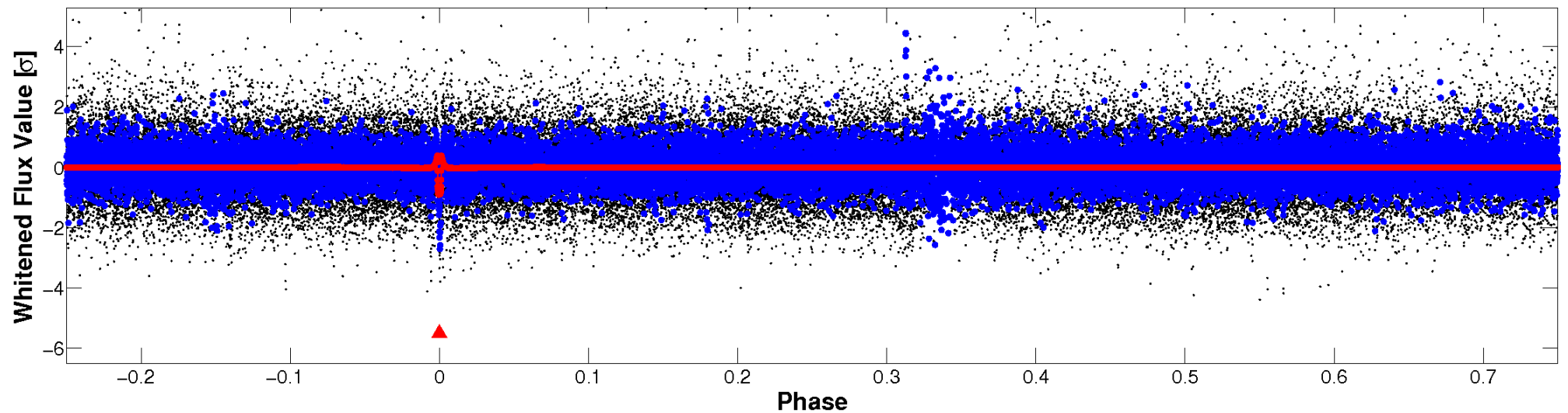


Non-Whitened Vs. Whitened Light Curve

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

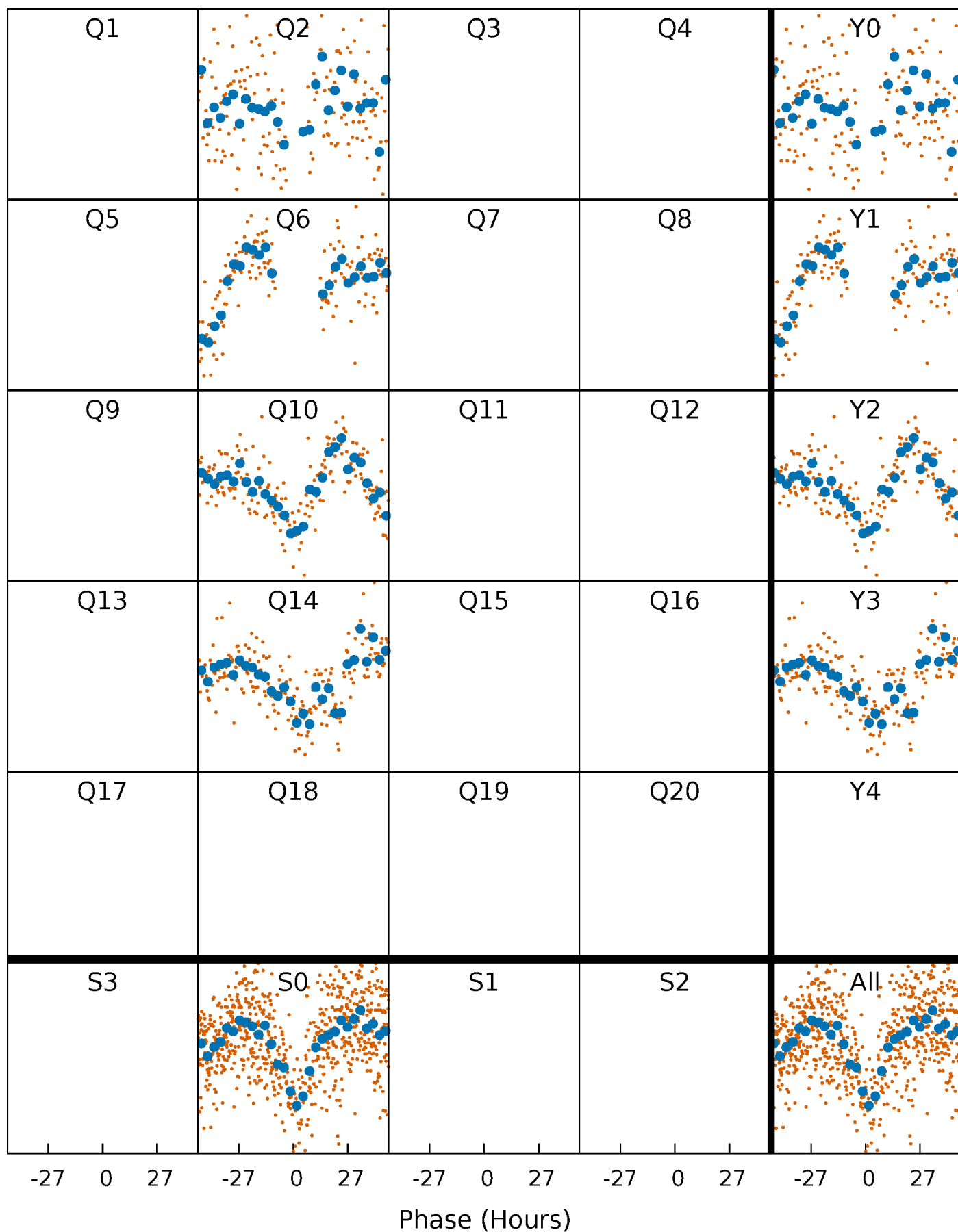


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



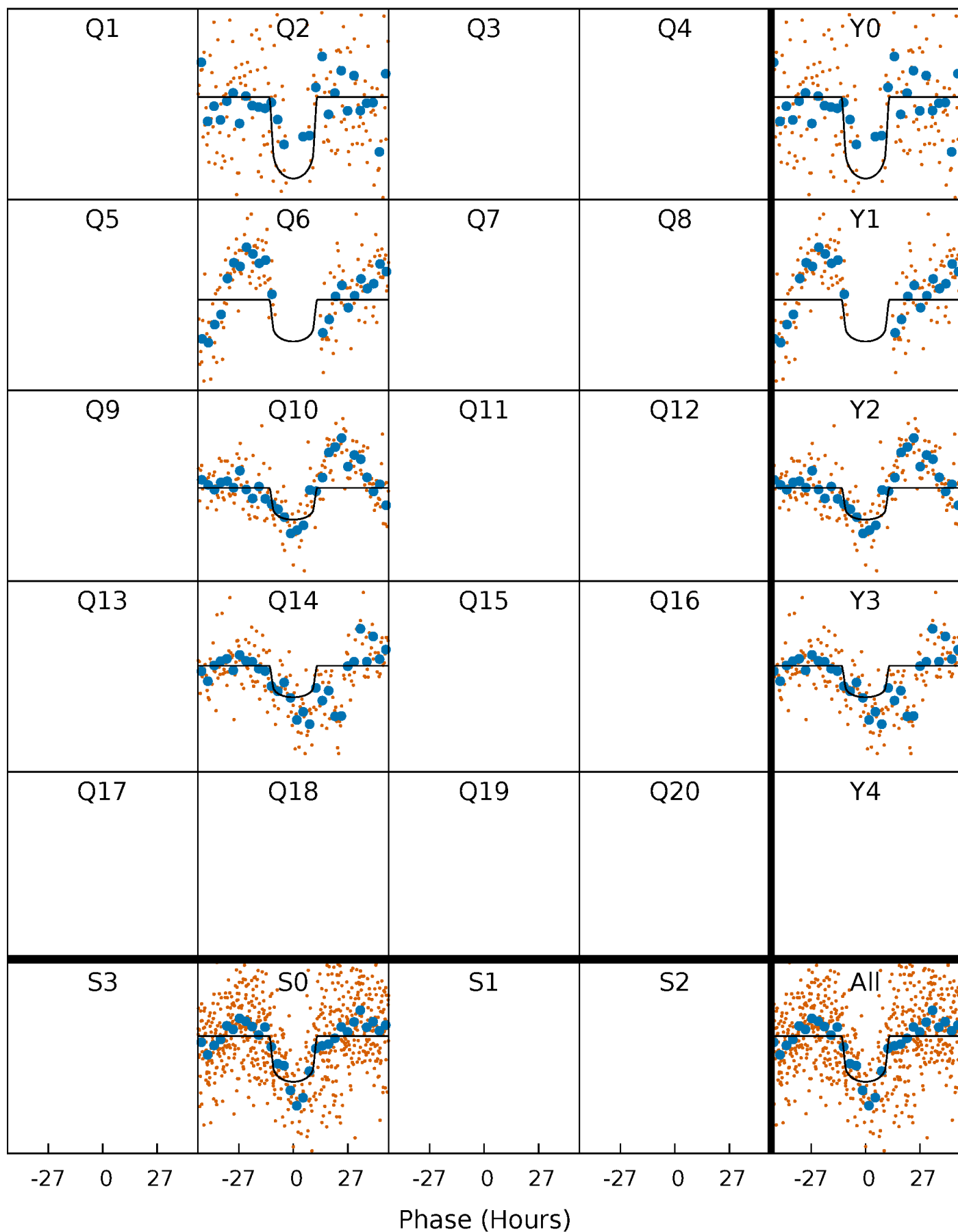
PDC Quarter-Phased Transit Curves

TCE 008618808-01 P=375.044127 Days $T_0=223.613050$ (BKJD)



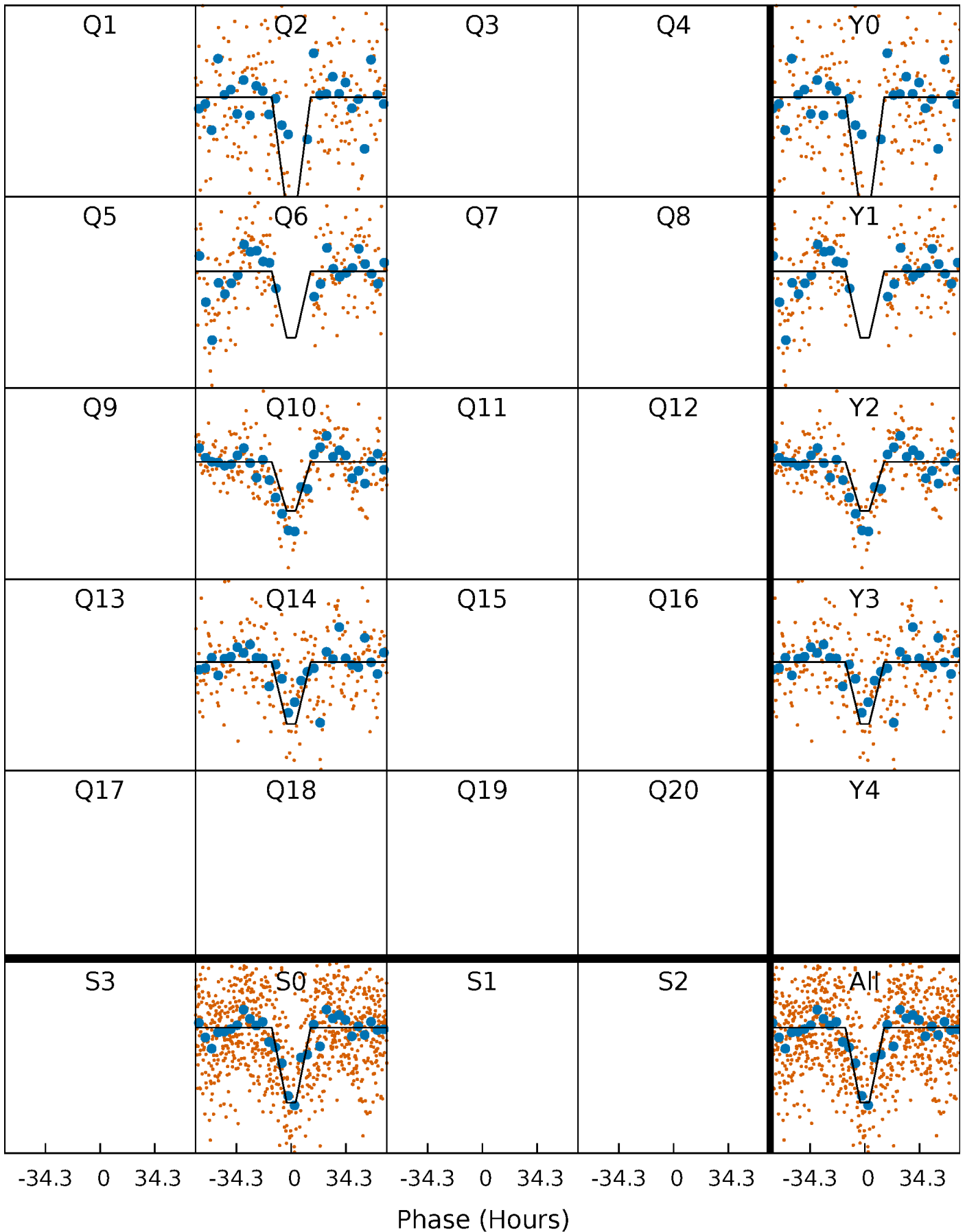
DV Quarter-Phased Transit Curves

TCE 008618808-01 P=375.044127 Days $T_0=223.613050$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

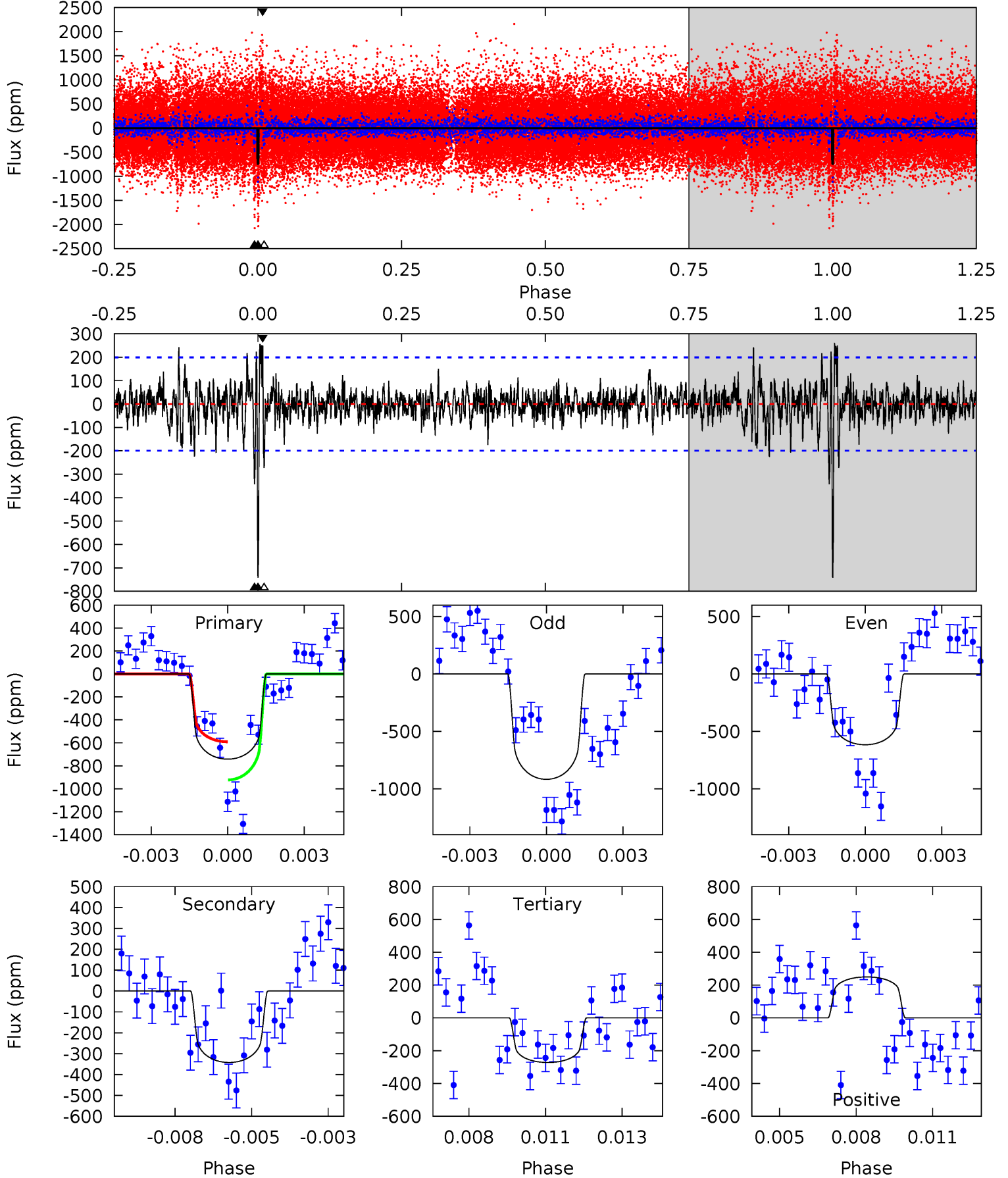
TCE 008618808-01 P=375.126106 Days $T_0=223.529028$ (BKJD)



DV Model-Shift Uniqueness Test

008618808-01, P = 375.044127 Days, E = 223.613050 Days

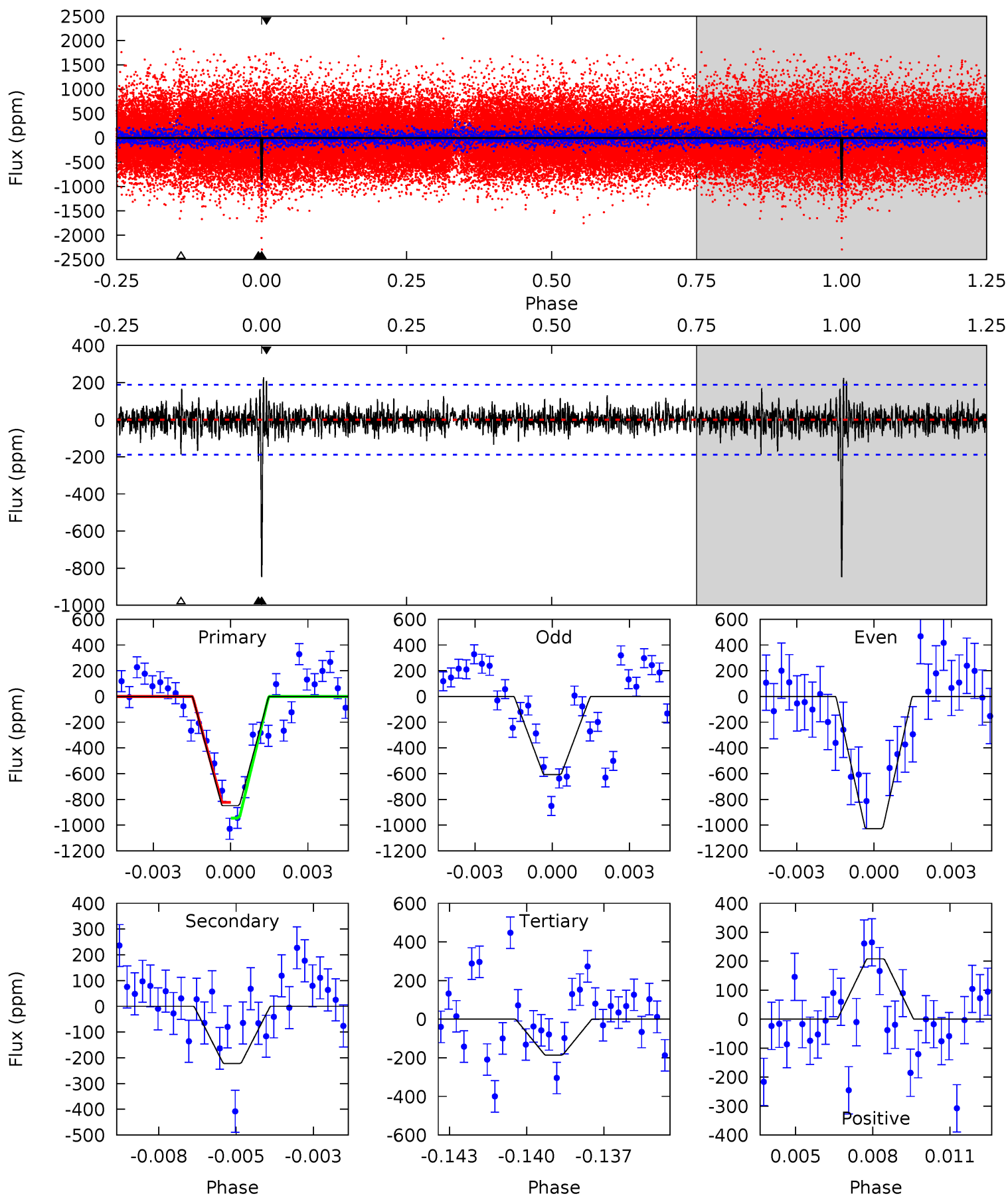
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	9.06	7.20	6.61	5.28	3.01	1.45	12.4	13.0	1.86	2.45	3.91	0.90	0.26	4.37



Alt Model-Shift Uniqueness Test

008618808-01, P = 375.126106 Days, E = 223.529028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	6.21	5.19	5.81	5.27	2.99	1.16	18.5	17.9	1.02	0.40	5.78	1.00	0.21	1.68



Stellar Parameters For KIC 008618808

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6052^{+181}_{-199}	$4.506^{+0.052}_{-0.208}$	$-0.260^{+0.300}_{-0.300}$	$0.919^{+0.290}_{-0.097}$	$0.989^{+0.132}_{-0.132}$	$1.797^{+0.389}_{-0.982}$
	+3%/-3%	+1%/-5%	+115%/-115%	+32%/-11%	+13%/-13%	+22%/-55%
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 008618808-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-342 ± 38	$2.95^{+0.54}_{-0.44}$	364^{+26}_{-19}	5007^{+350}_{-300}	21809^{+8650}_{-6475}
Alt.	-222 ± 36	$3.22^{+0.57}_{-0.43}$	364^{+26}_{-18}	4416^{+245}_{-240}	11567^{+4364}_{-3521}

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 $A_{\text{obs}} \gg 1.0$

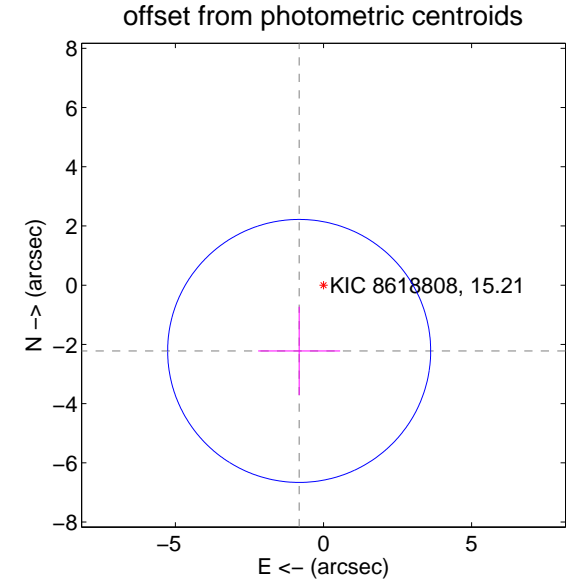
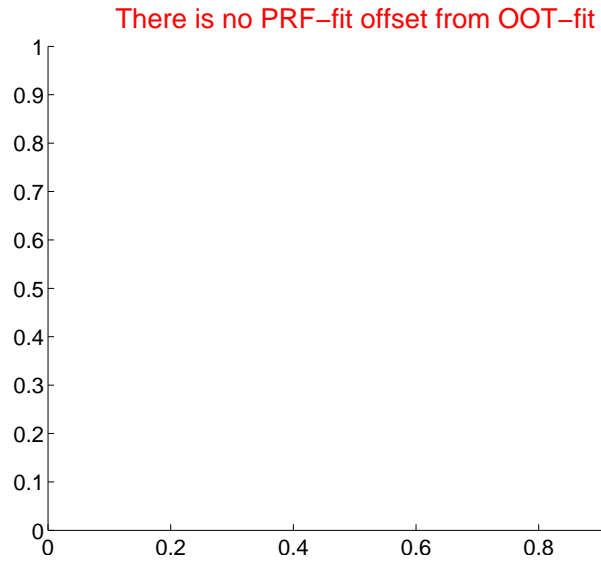
DV Centroid Data

Supplemental centroid analysis for 008618808-01. Kepler magnitude: 15.21. Transit SNR 9.10

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.37 ± 1.48	1.60	0.82 ± 1.38	-2.22 ± 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.

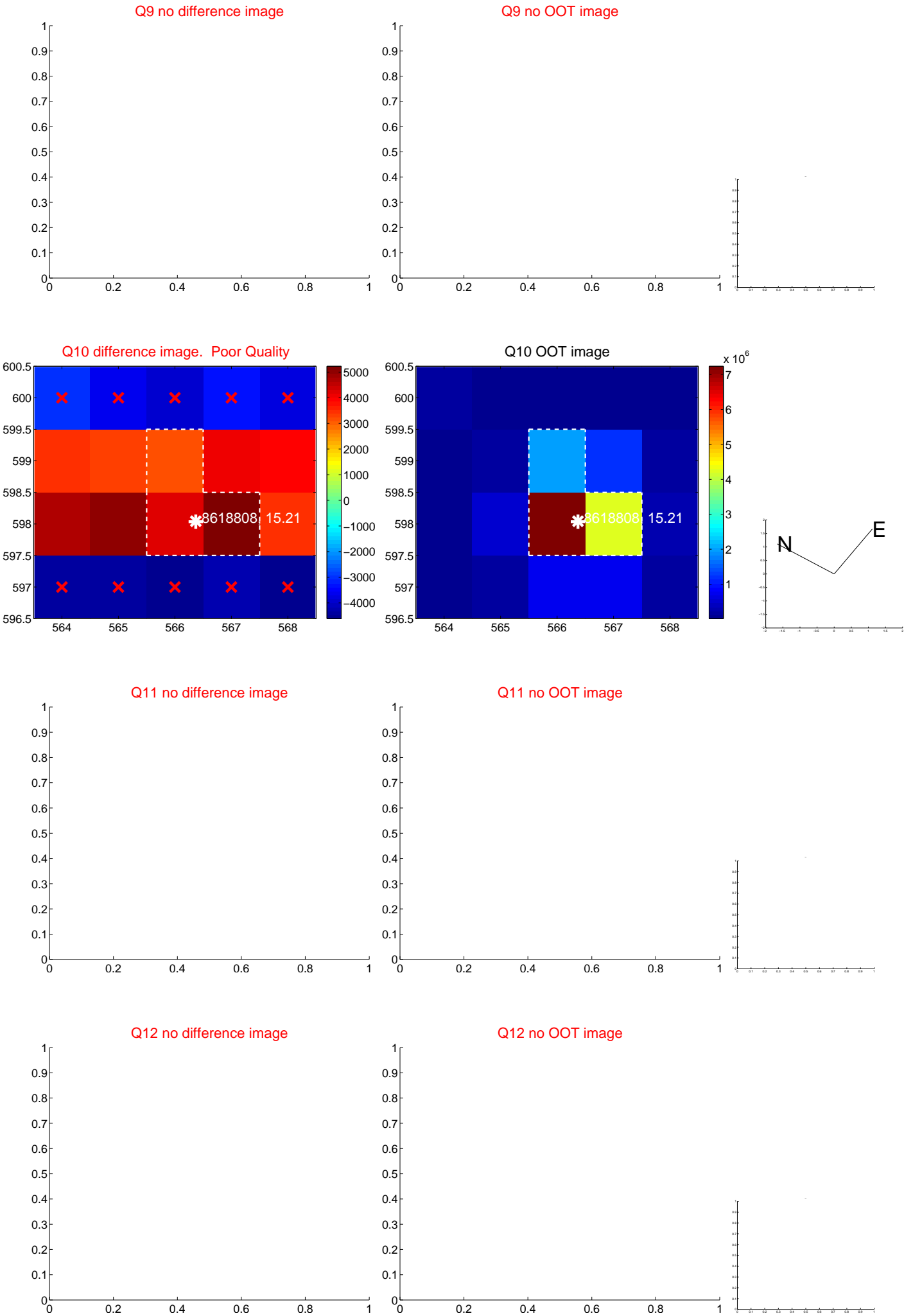
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



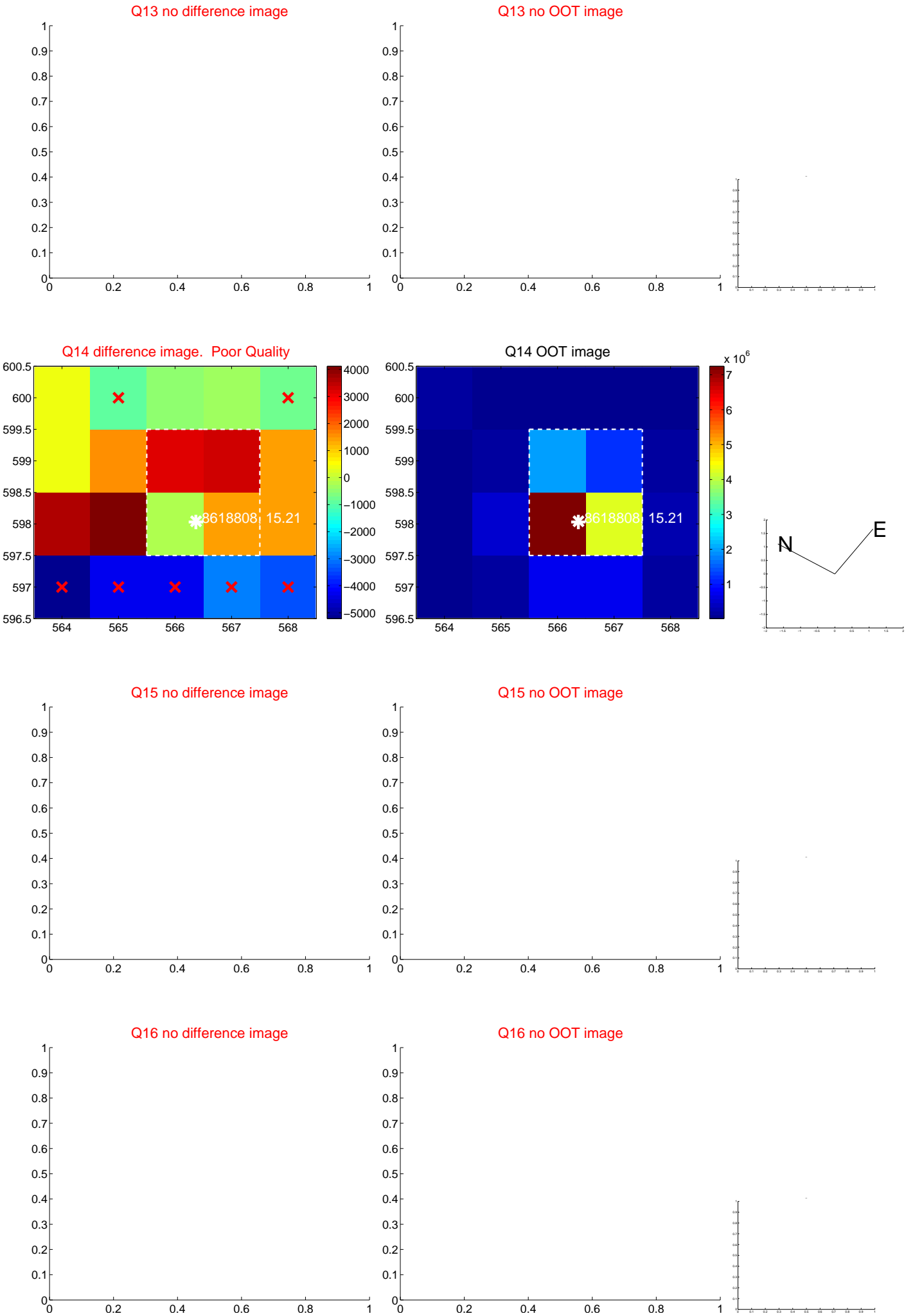
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



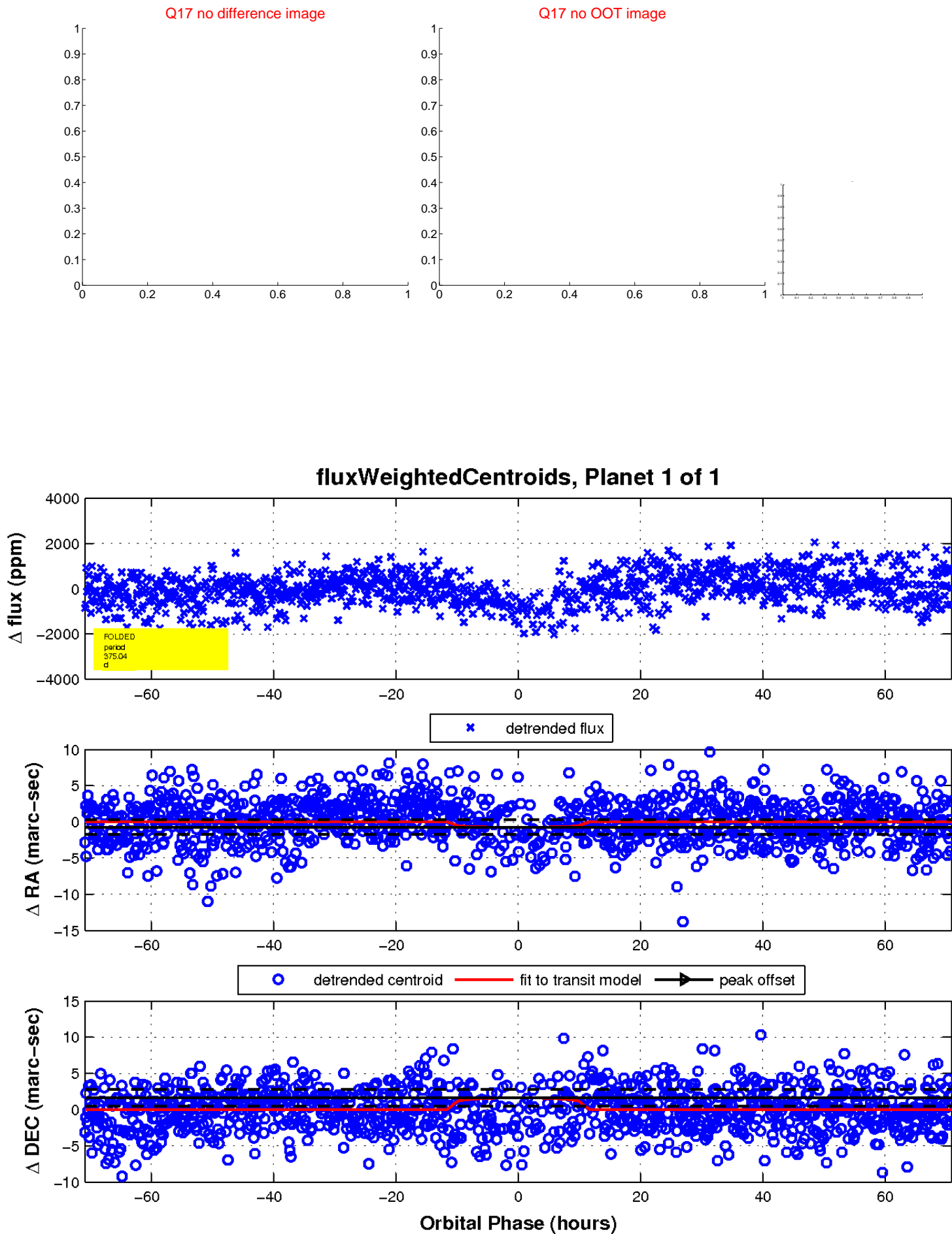
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

