

KIC 008818524

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})
008818524-01	OBS	No	374.632393	132.820881	1978.7	62.570	13.8	20.4	0.96	6137	7.88	1.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008818524-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

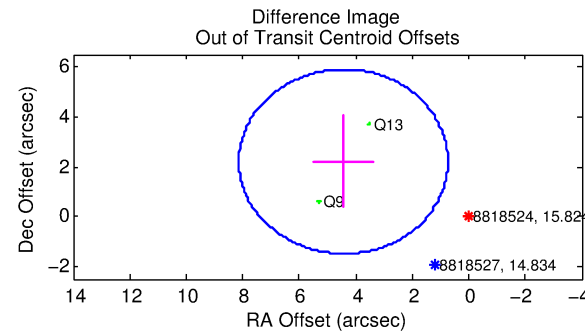
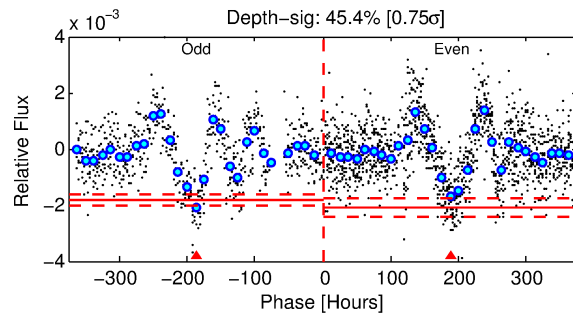
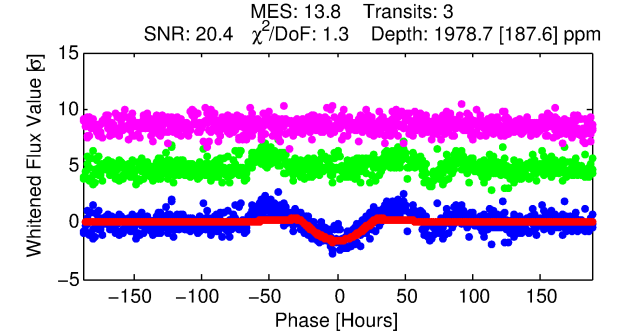
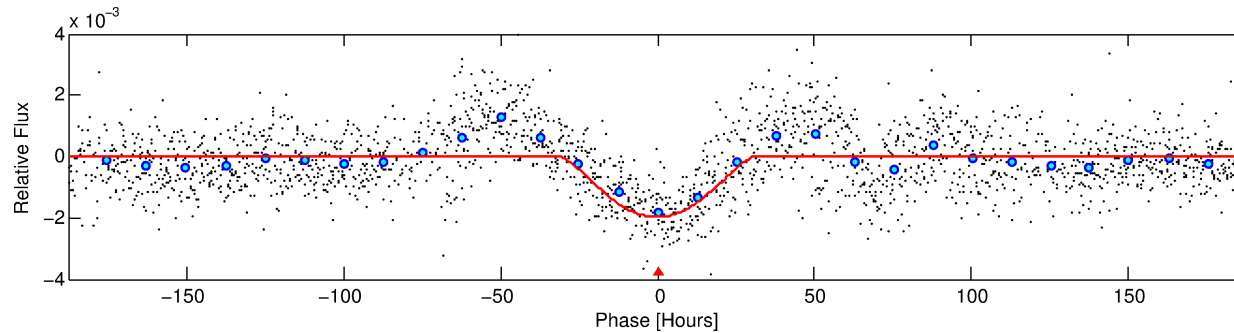
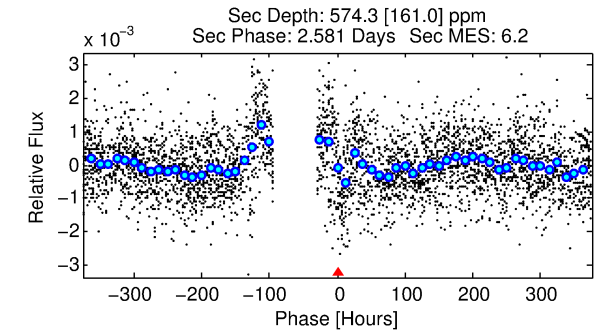
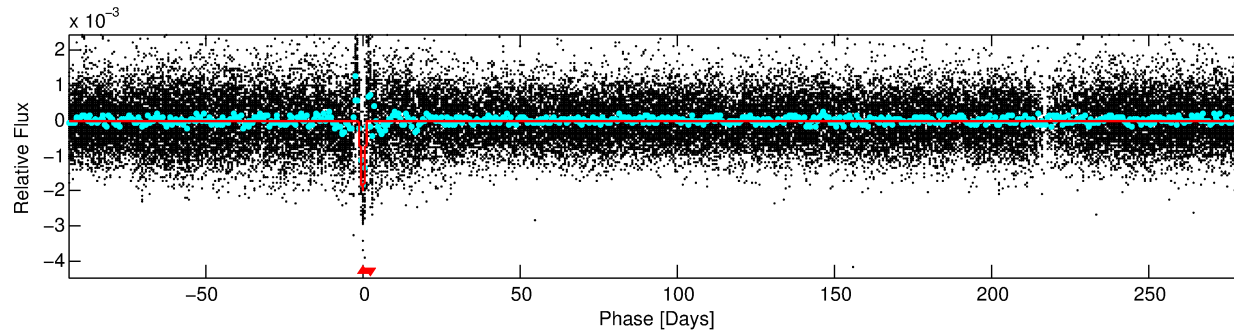
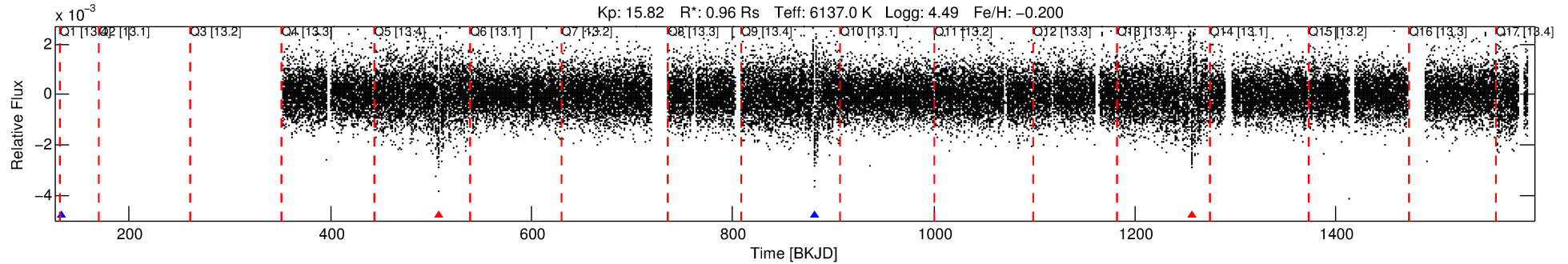
Ephemeris Match Information For 008818524-01

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
008818524-01	8818524	008492072-01	8492072	1:1	3225.7	-811	-2	15.28	15.83	0.77	Col-Anomaly	1	1.69	0.55

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: 8818524 Candidate: 1 of 1 Period: 374.632 d



DV Fit Results:

Period = 374.63239 [0.04801] d
Epoch = 132.8209 [0.0967] BKJD
Rp/R* = 0.0750 [0.1249]
a/R* = 18.28 [6.78]
b = 1.00 [0.19]
Seff = 1.11 [0.46]
Teq = 262 [27] K
Rp = 7.88 [13.36] Re
a = 1.0300 [0.2710] AU
Ag = 5401.28 [18180.15] [0.30σ]
Teffp = 3470 [2904] K [1.10σ]

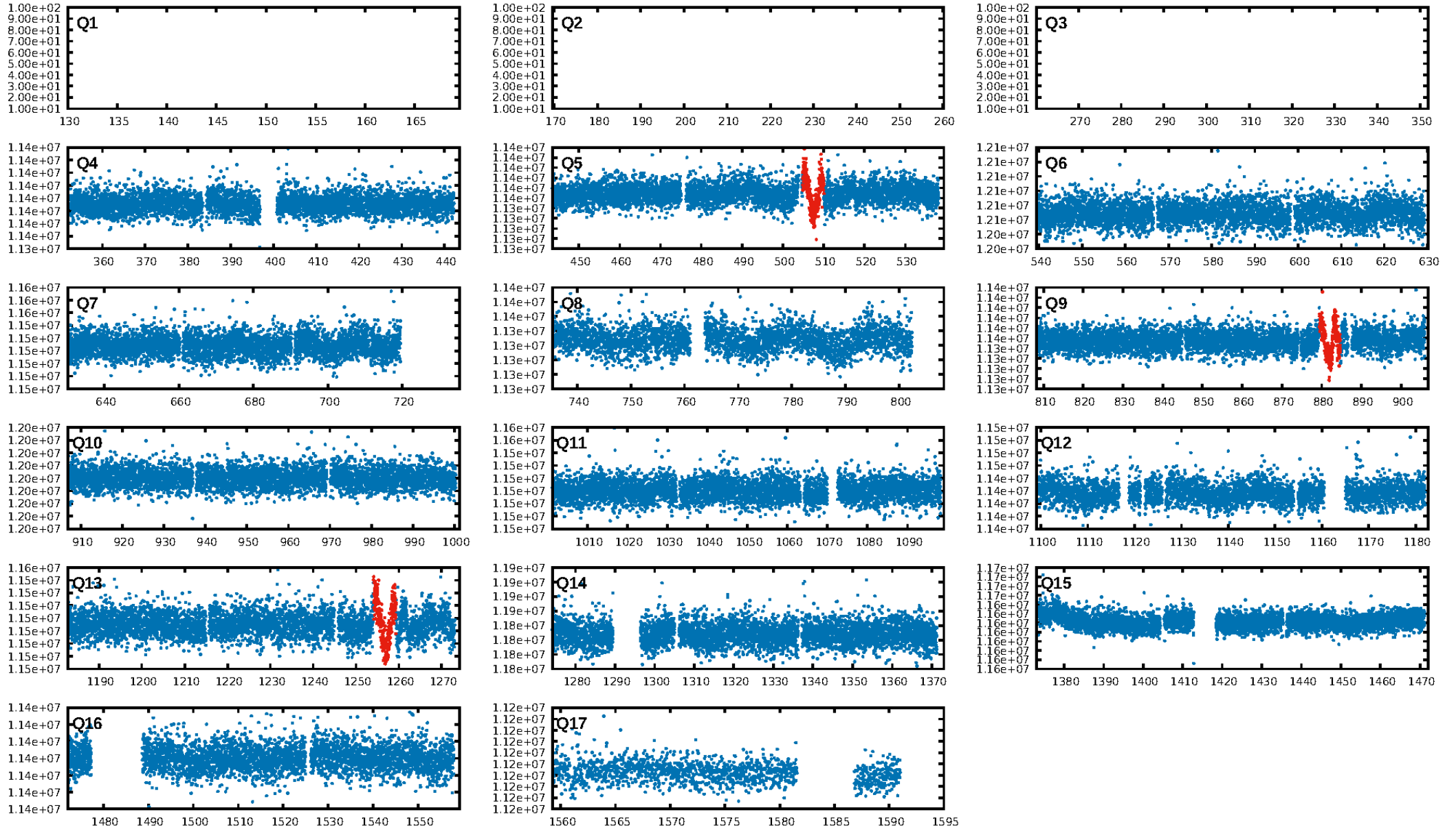
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.95e-29
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 1.121
Centroid-sig: 0.0%
Centroid-so: 2.126 arcsec [2.71σ]
OotOffset-rm: 4.955 arcsec [4.02σ]
KicOffset-rm: 4.778 arcsec [3.66σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

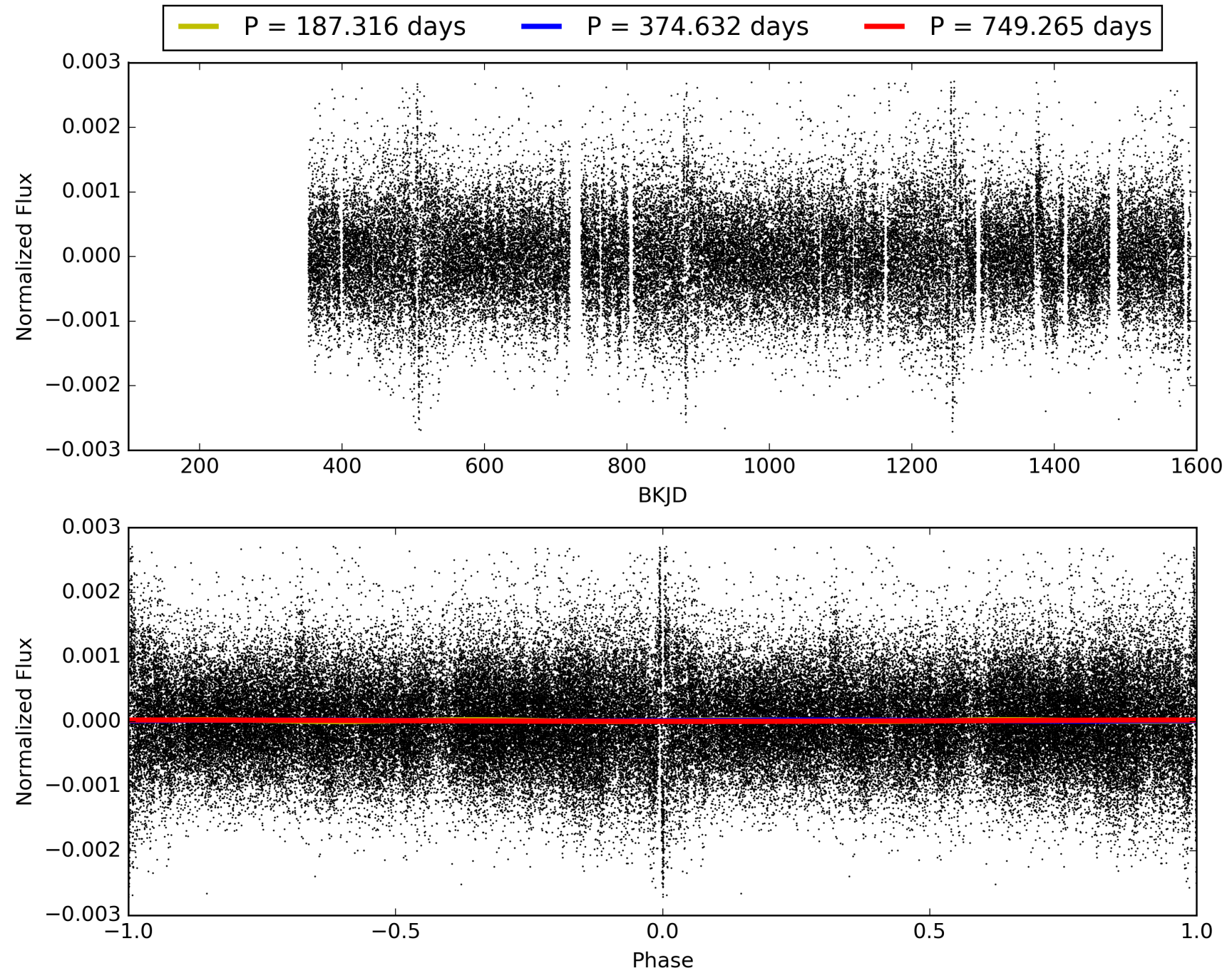
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:13:11 Z

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

TCE 008818524-01, PDC Light Curves

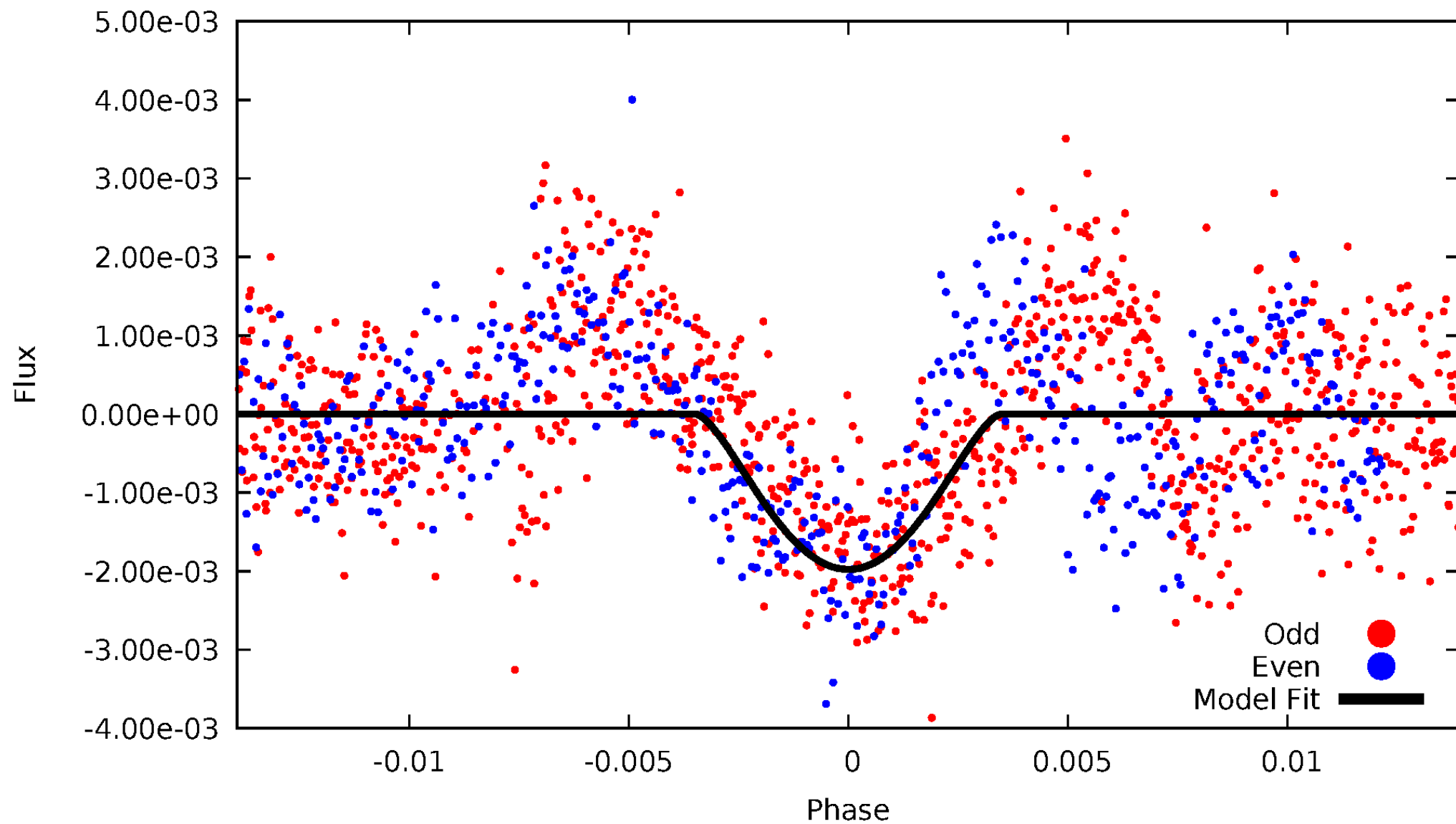


TCE 008818524-01



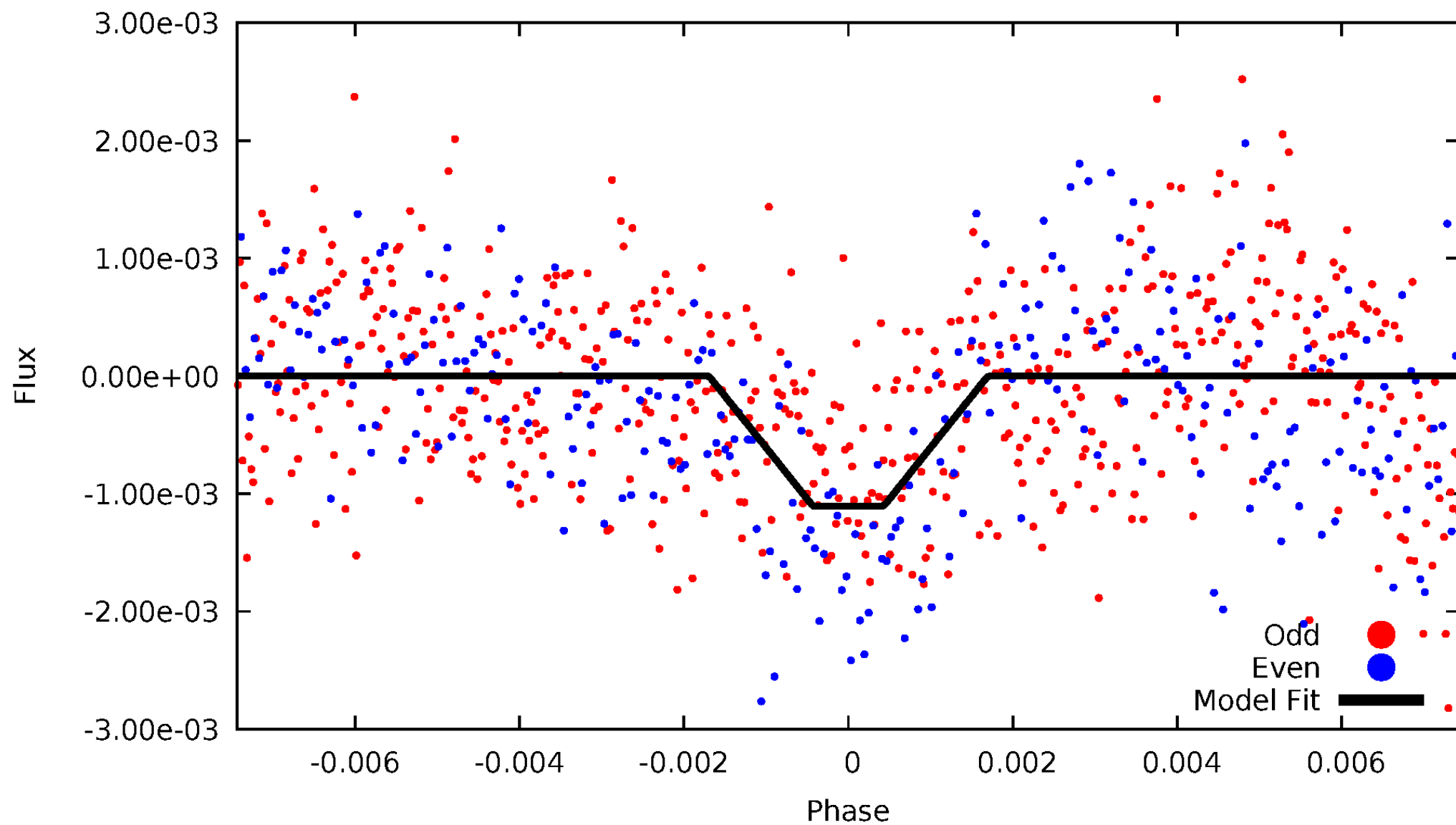
DV Odd/Even

TCE 008818524-01



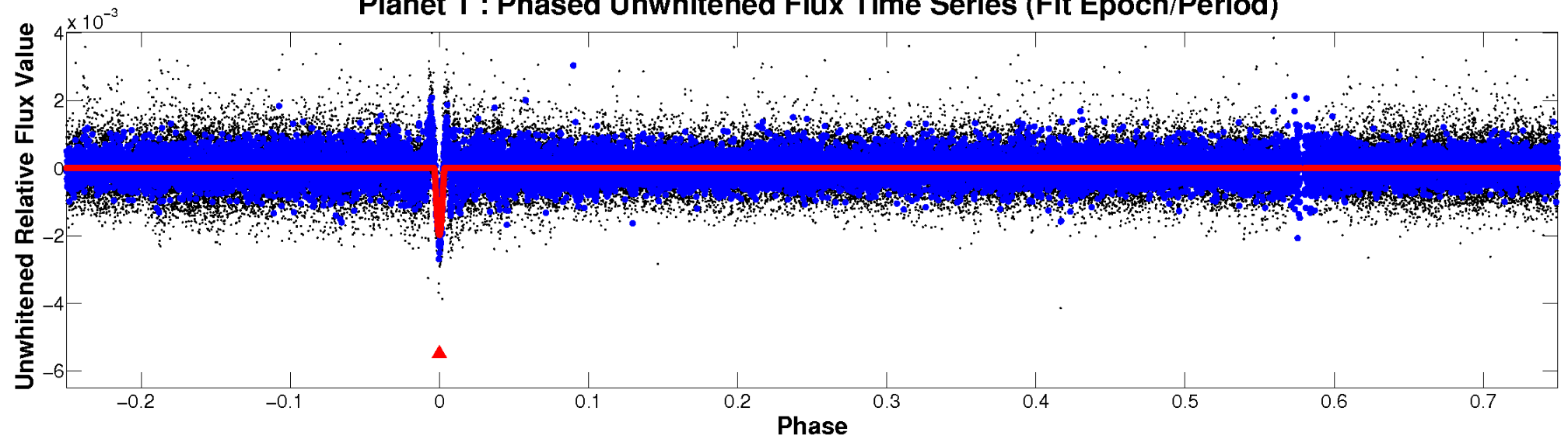
ALT Odd/Even

TCE 008818524-01

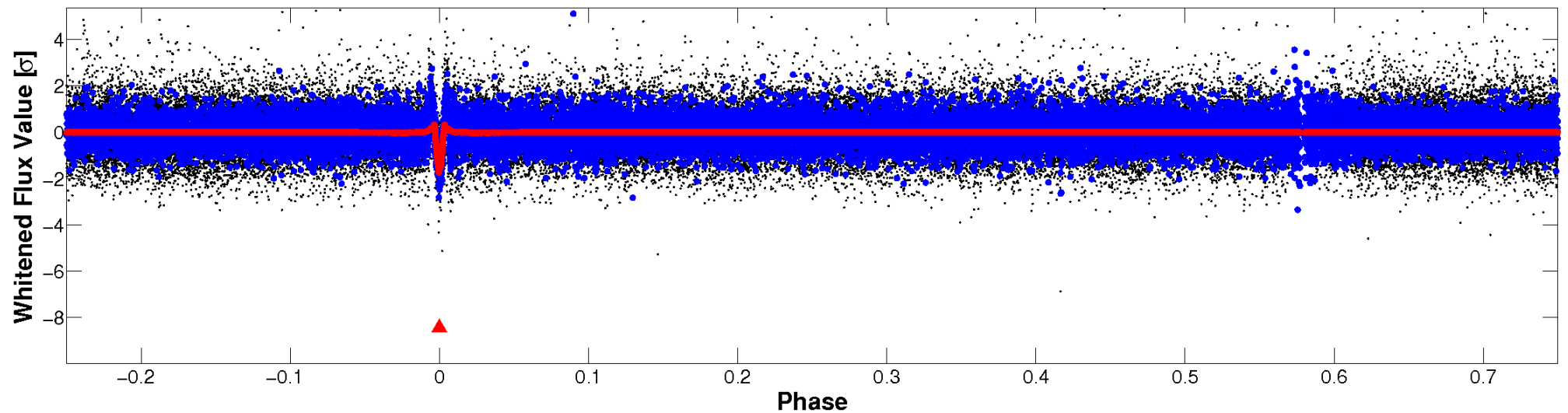


Non-Whitened Vs. Whitened Light Curve

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

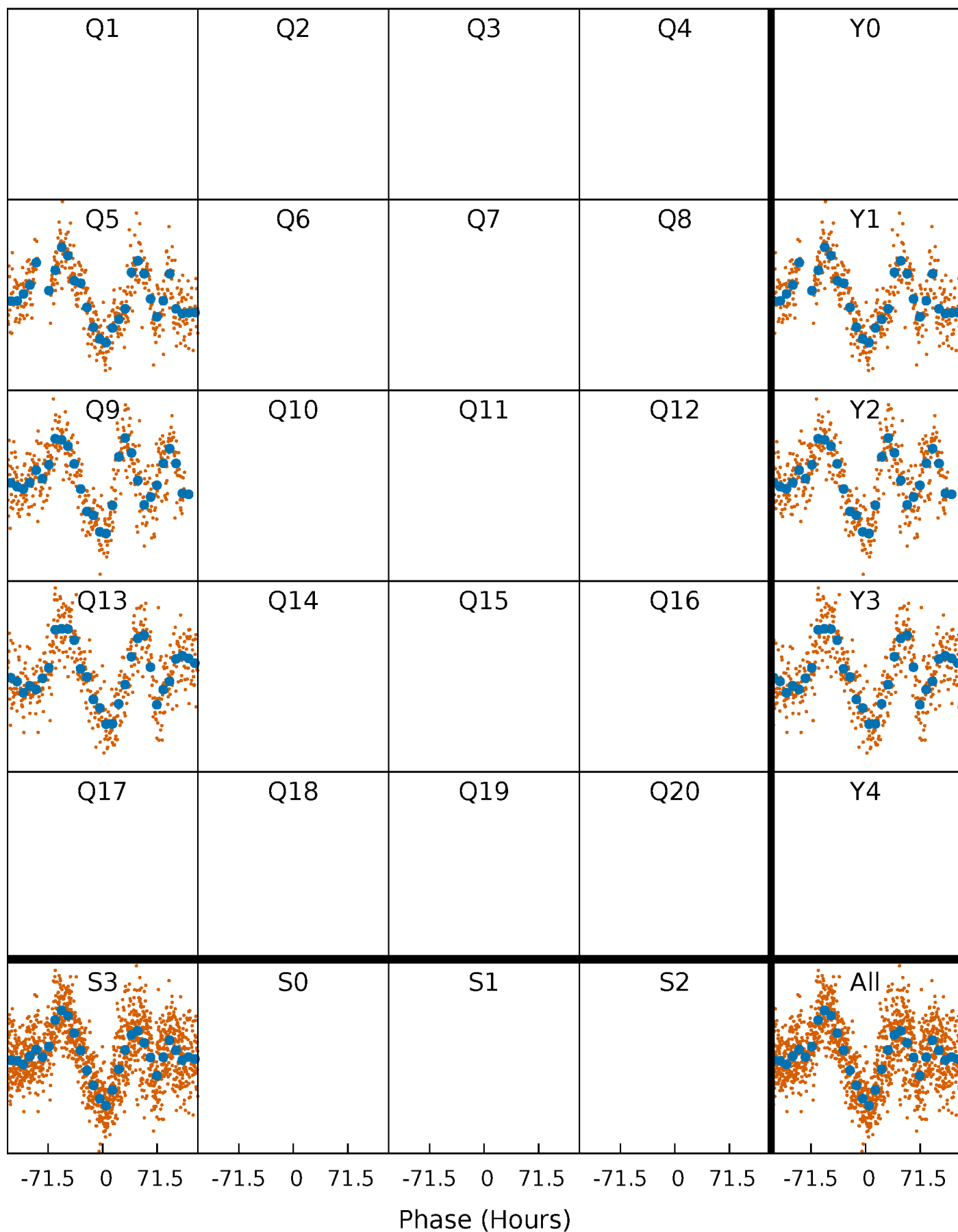


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



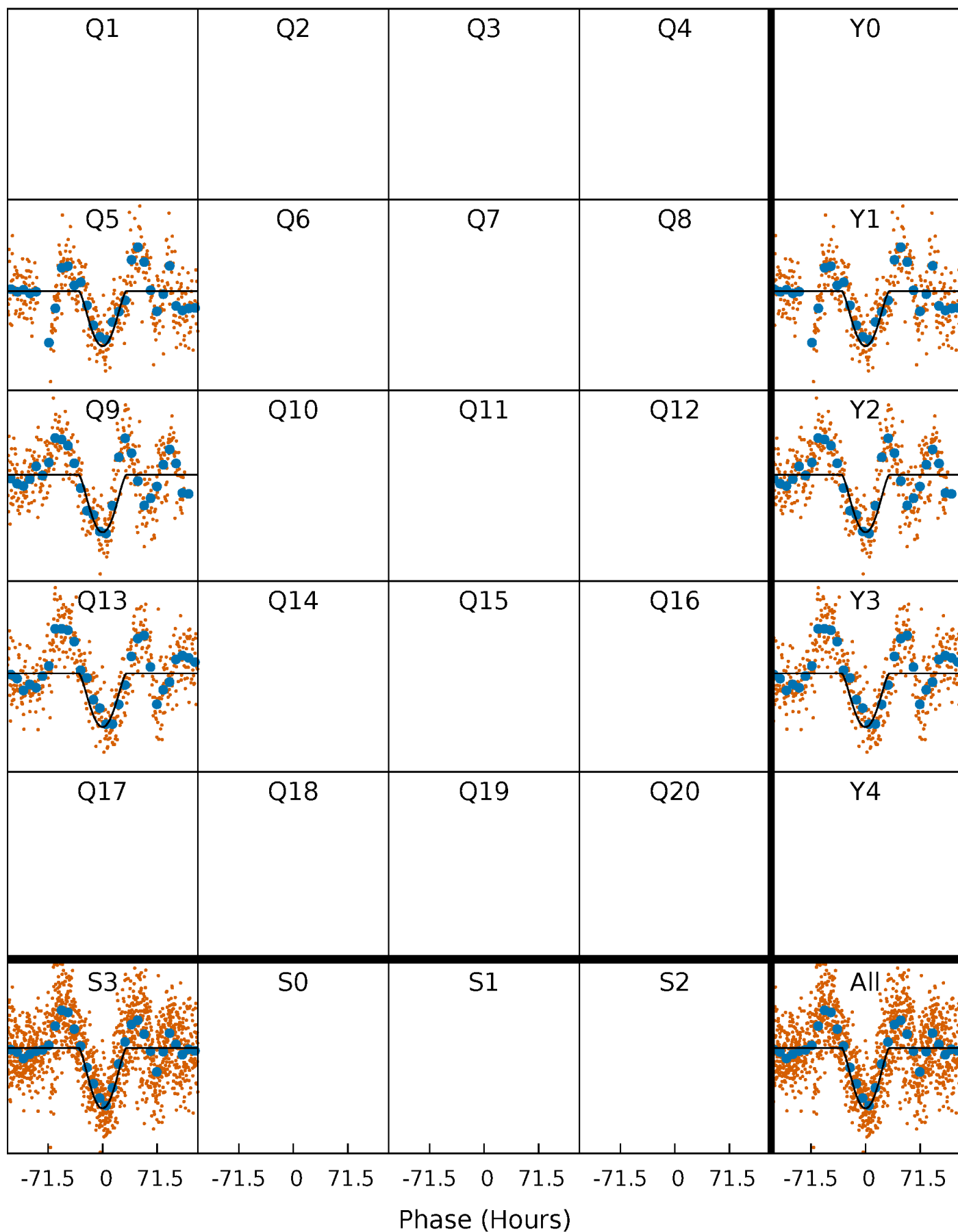
PDC Quarter-Phased Transit Curves

TCE 008818524-01 P=374.632393 Days $T_0=132.820881$ (BKJD)



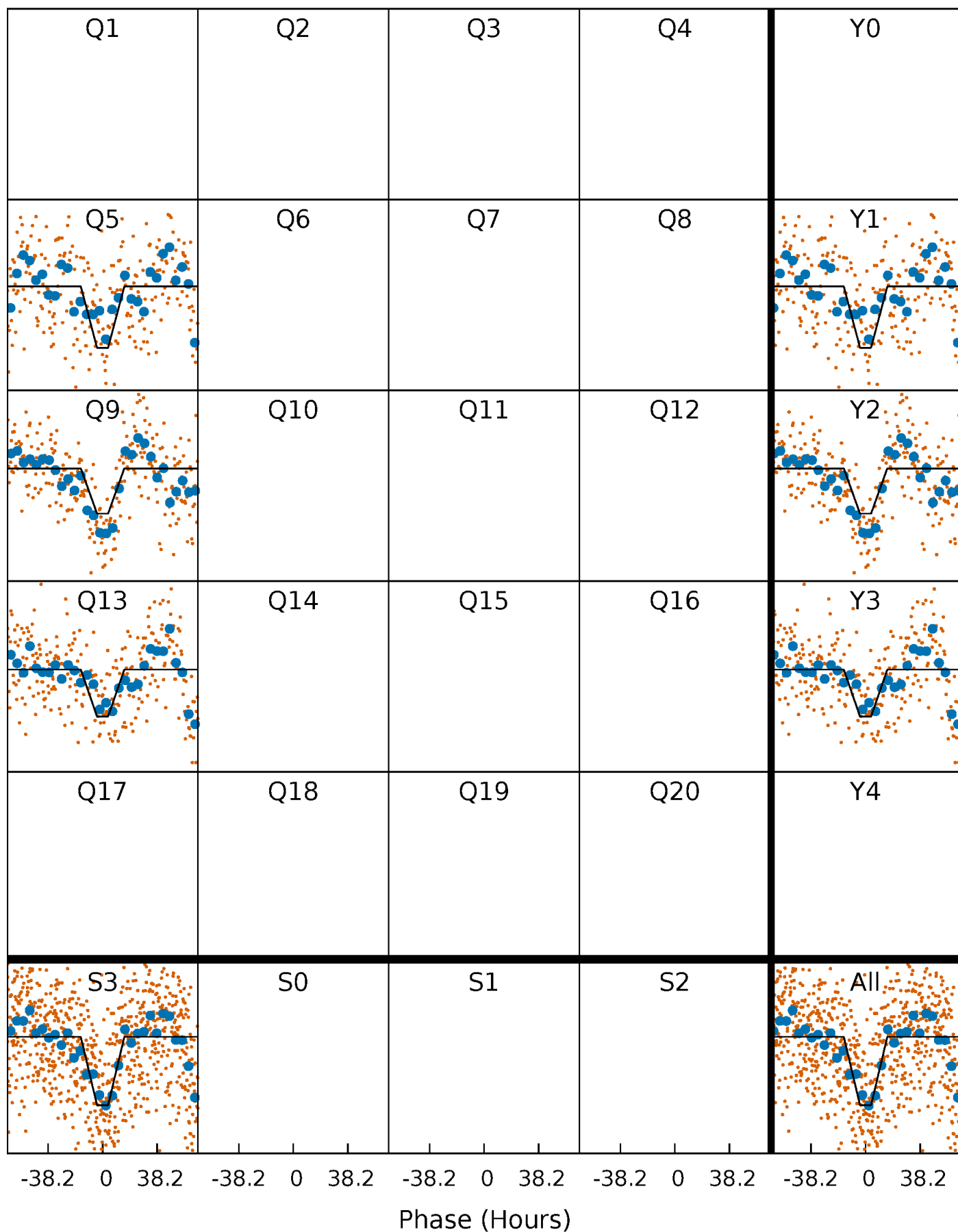
DV Quarter-Phased Transit Curves

TCE 008818524-01 P=374.632393 Days $T_0=132.820881$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

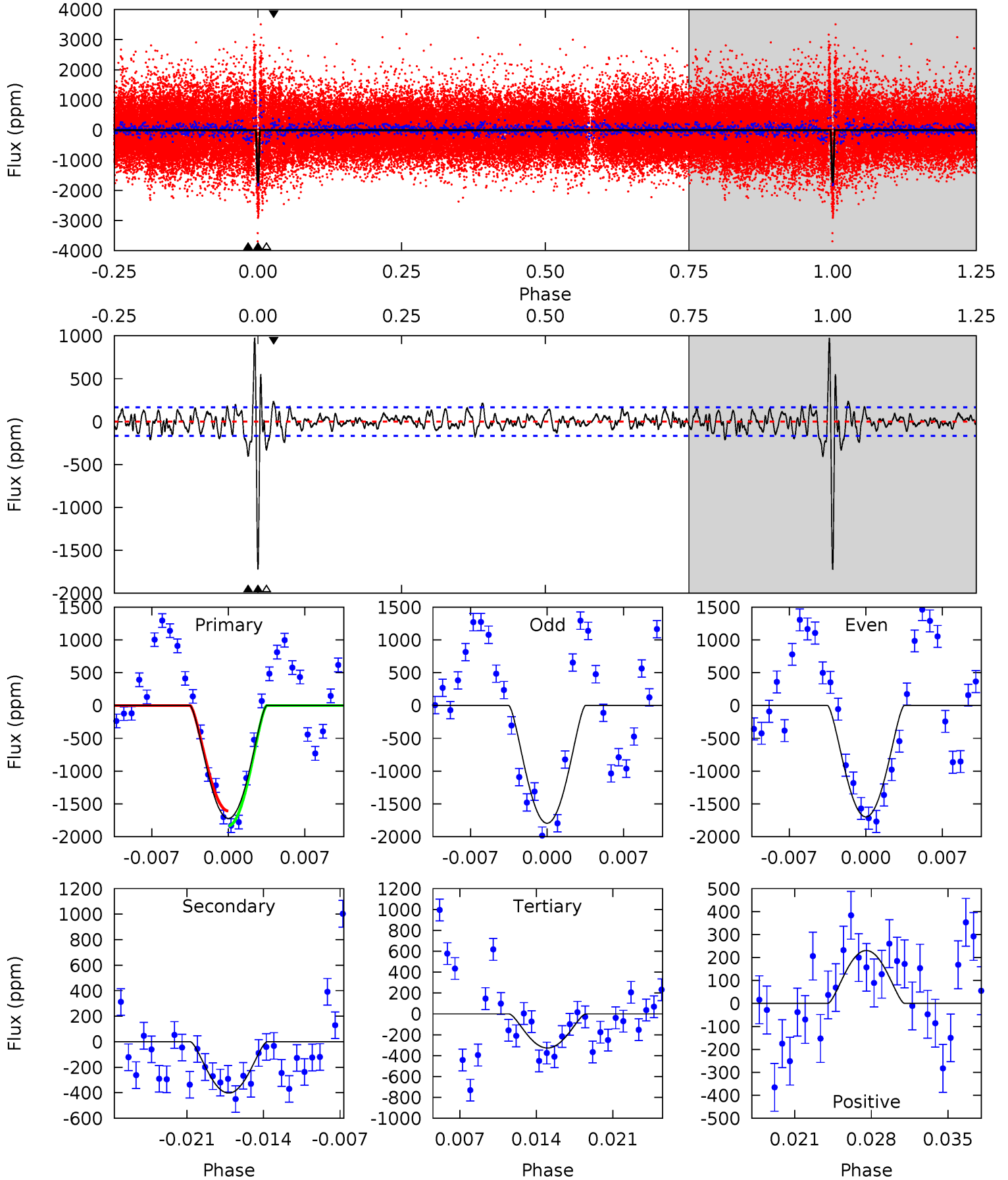
TCE 008818524-01 P=374.778735 Days $T_0=132.735391$ (BKJD)



DV Model-Shift Uniqueness Test

008818524-01, P = 374.632393 Days, E = 132.820881 Days

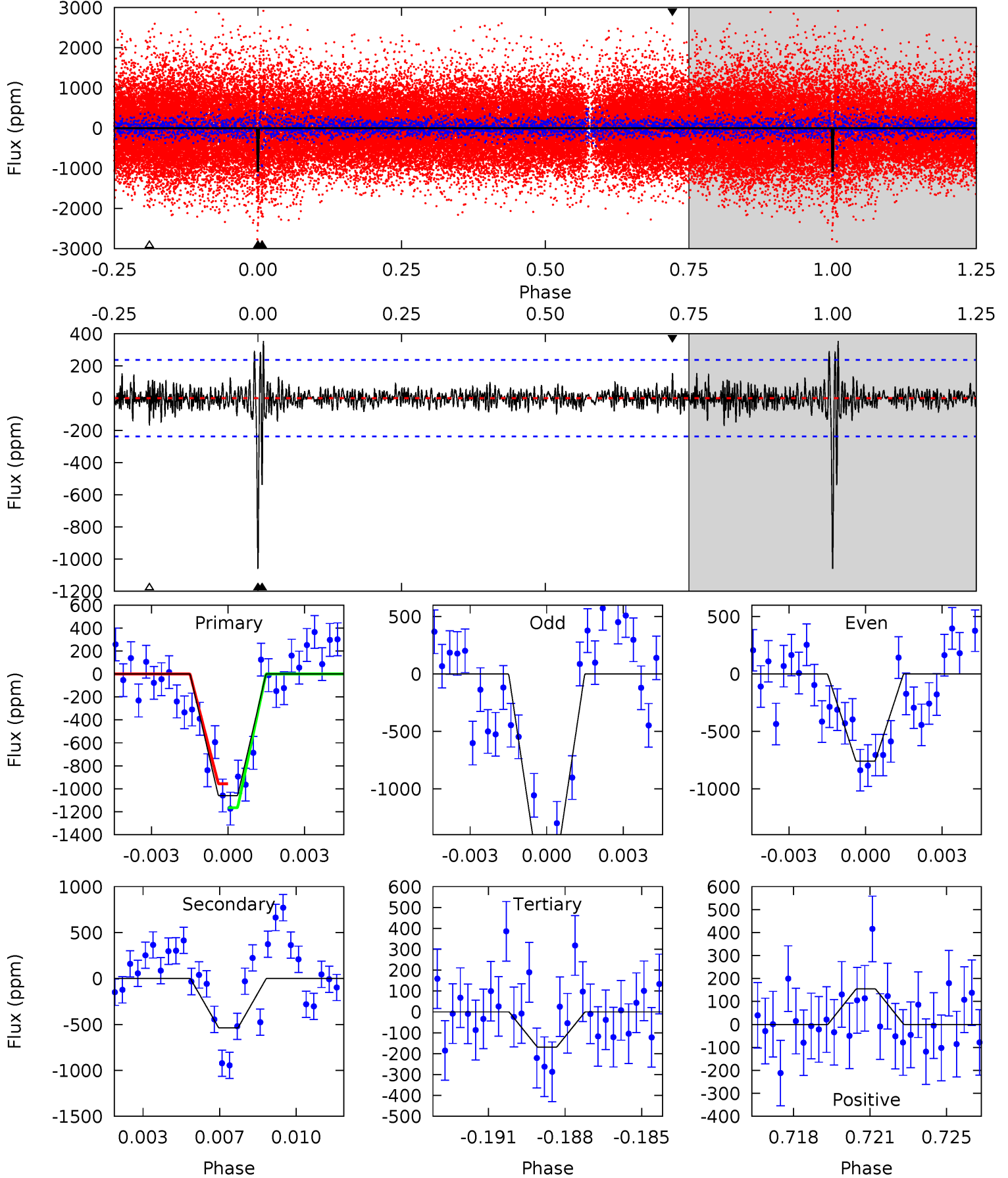
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.5	12.3	9.97	7.04	5.10	2.70	2.35	42.6	45.5	2.30	5.24	1.40	1.01	0.36	3.46



Alt Model-Shift Uniqueness Test

008818524-01, $P = 374.778735$ Days, $E = 132.735391$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	11.8	3.72	3.41	5.23	2.93	0.95	19.6	19.9	8.11	8.42	9.37	1.27	0.25	2.29



Stellar Parameters For KIC 008818524

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6137^{+191}_{-233}	$4.487^{+0.052}_{-0.208}$	$-0.200^{+0.250}_{-0.350}$	$0.963^{+0.302}_{-0.101}$	$1.038^{+0.139}_{-0.139}$	$1.638^{+0.463}_{-0.864}$
	+3%/-4%	+1%/-5%	+125%/-175%	+31%/-10%	+13%/-13%	+28%/-53%
Source	KIC0	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 008818524-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-402 ± 33	$12.05^{+12.92}_{-7.88}$	372^{+28}_{-20}	3221^{+1381}_{-590}	1591^{+11411}_{-1224}
Alt.	-538 ± 45	$10.65^{+10.97}_{-7.53}$	373^{+26}_{-20}	3517^{+1939}_{-665}	2822^{+27139}_{-2155}

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 $A_{obs} \gg 1.0$

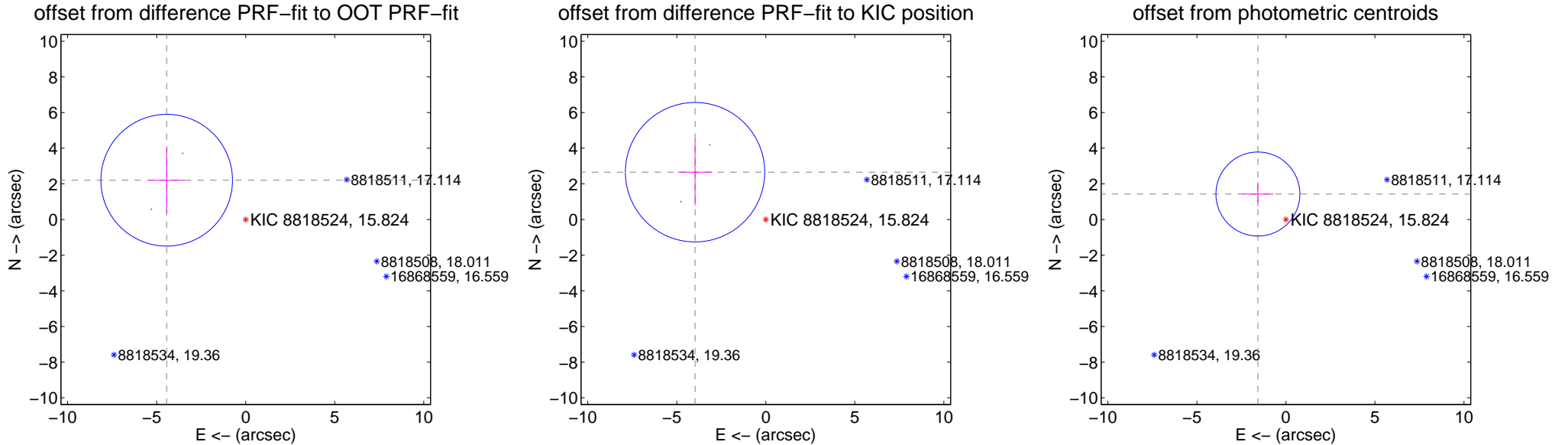
DV Centroid Data

Supplemental centroid analysis for 008818524-01. Kepler magnitude: 15.82. Transit SNR 20.42

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.955 ± 1.232	4.02	4.437 ± 1.031	2.205 ± 1.831
PRF-fit source offset from KIC position	4.778 ± 1.304	3.66	3.973 ± 0.956	2.654 ± 1.860
photometric centroid source offset	2.13 ± 0.79	2.71	1.57 ± 0.87	1.43 ± 0.67



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.

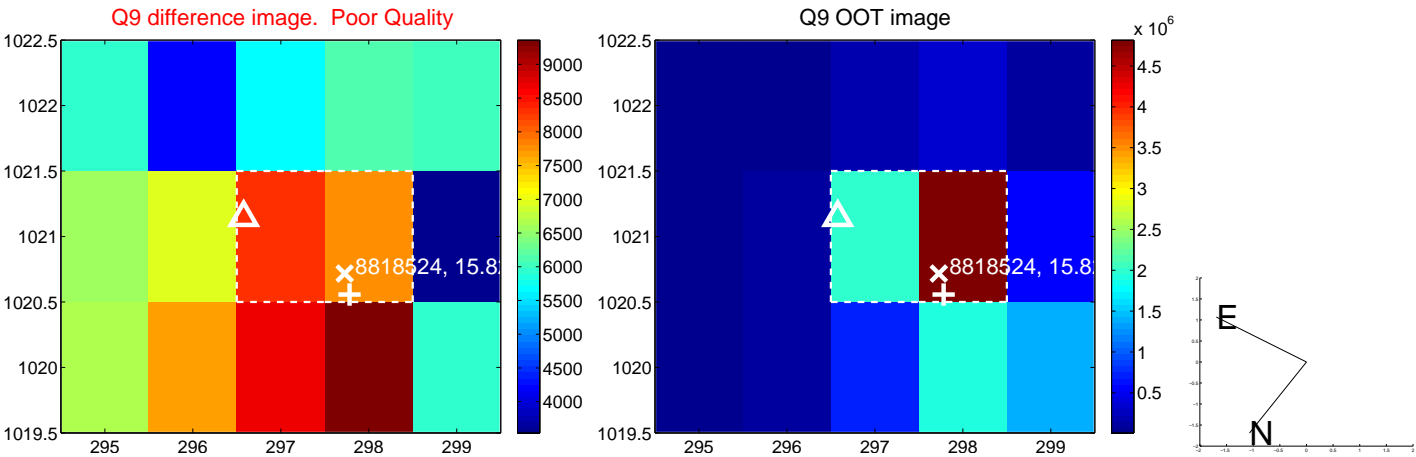
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



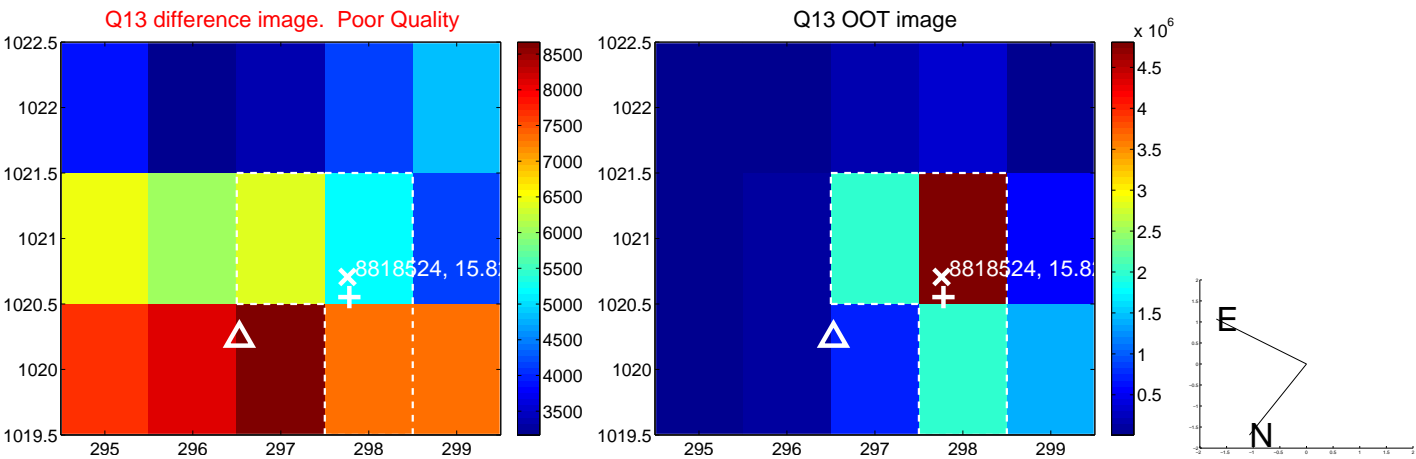
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



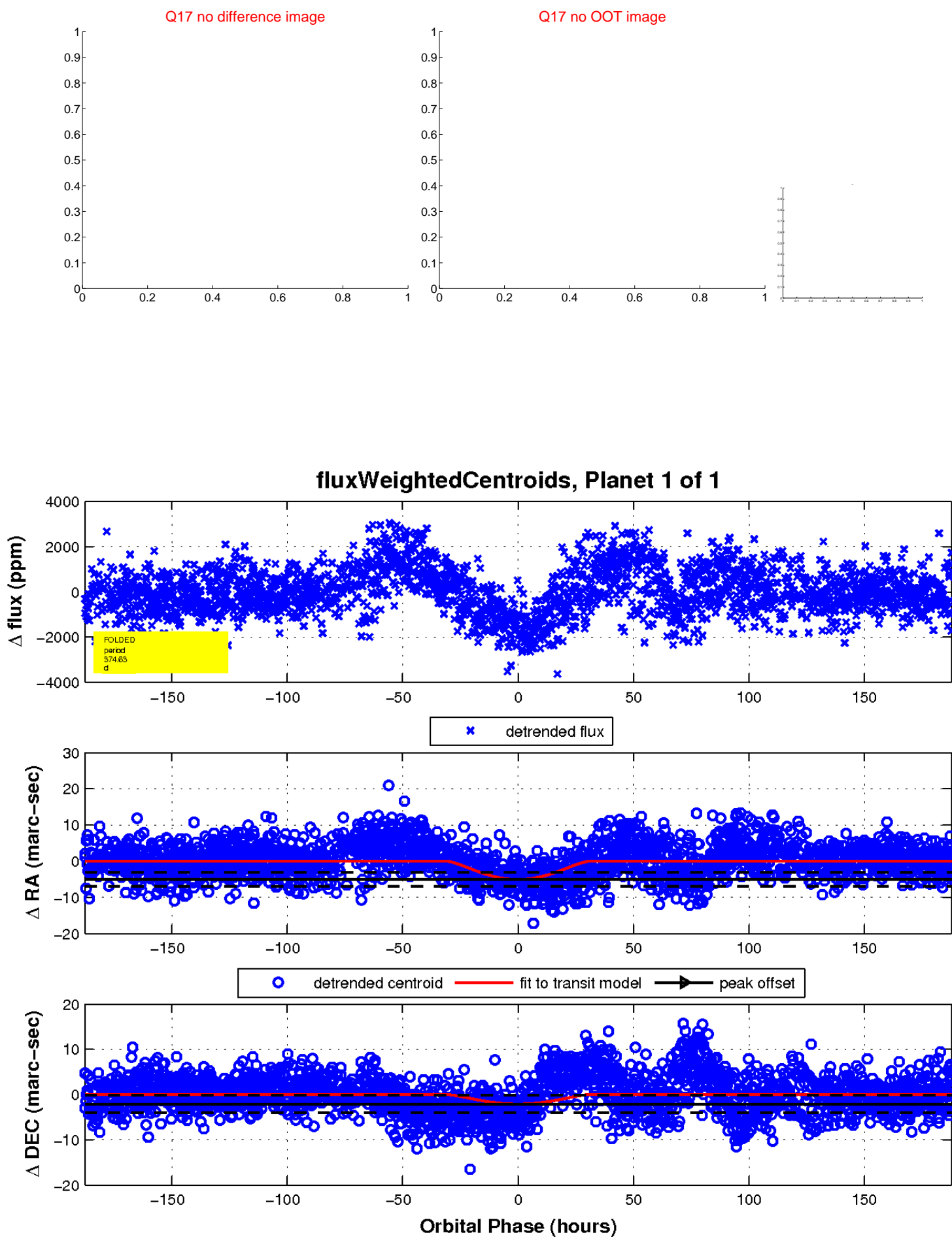
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

