

KIC 001868524

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})
001868524-01	OBS	No	443.033420	373.650962	1943.0	10.396	7.6	7.6	0.67	4686	3.81	0.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001868524-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

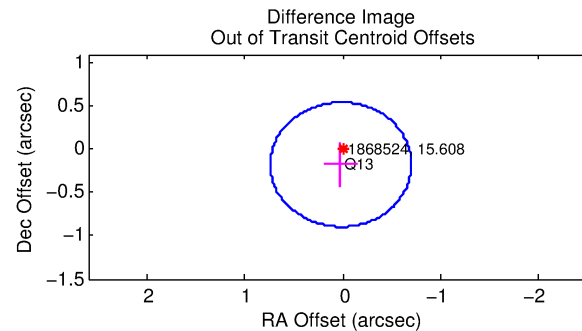
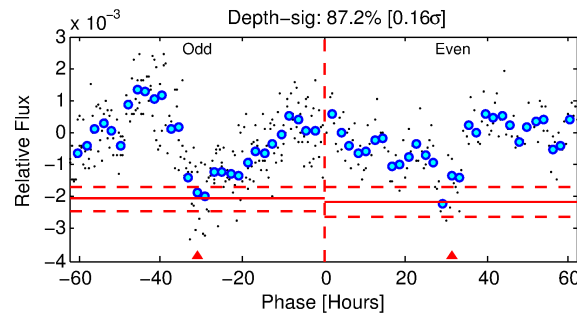
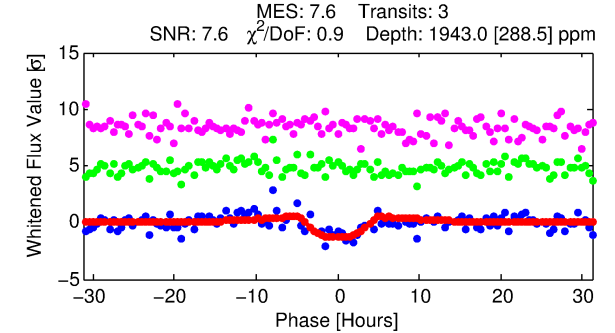
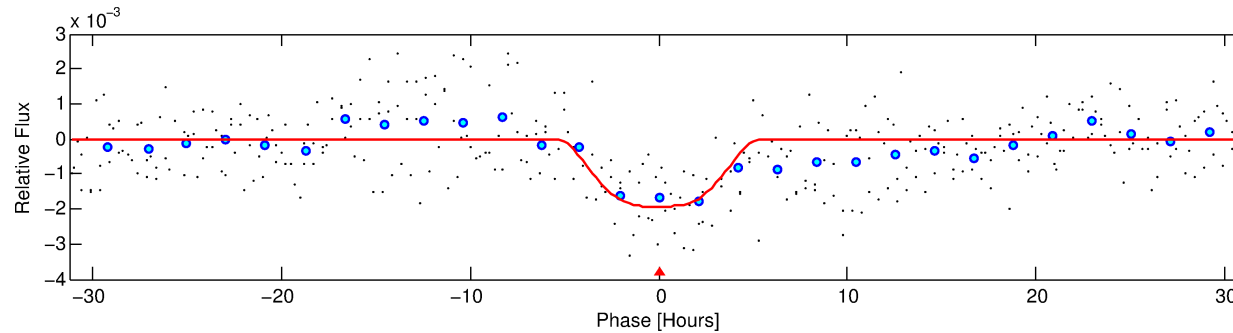
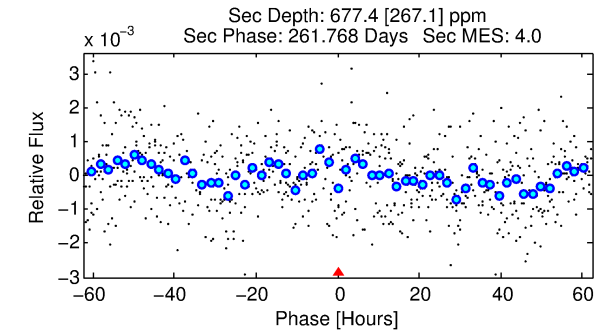
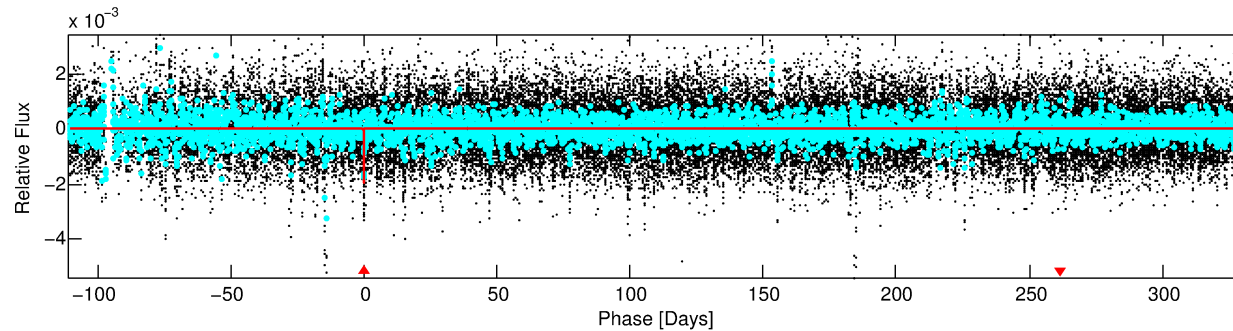
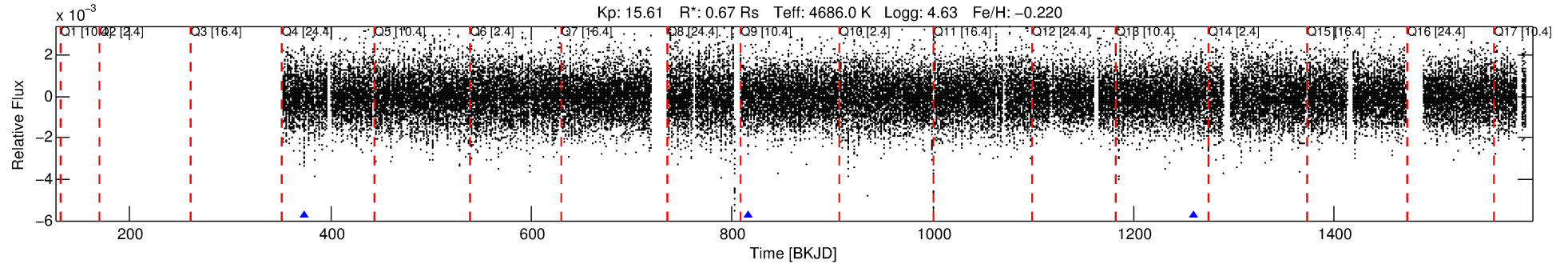
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001868524-01

No Significant Match Found

DV One-Page Summary

KIC: 1868524 Candidate: 1 of 1 Period: 443.033 d



DV Fit Results:

Period = 443.03342 [0.01551] d
Epoch = 373.6510 [0.0166] BKJD
Rp/R* = 0.0524 [0.0057]
a/R* = 157.74 [29.53]
b = 0.93 [0.03]
Seff = 0.19 [0.02]
Teq = 169 [4] K
Rp = 3.81 [0.45] Re
a = 1.0022 [0.0382] AU
Ag = 25828.42 [11691.01] [2.21σ]
Teff = 3303 [376] K [8.34σ]

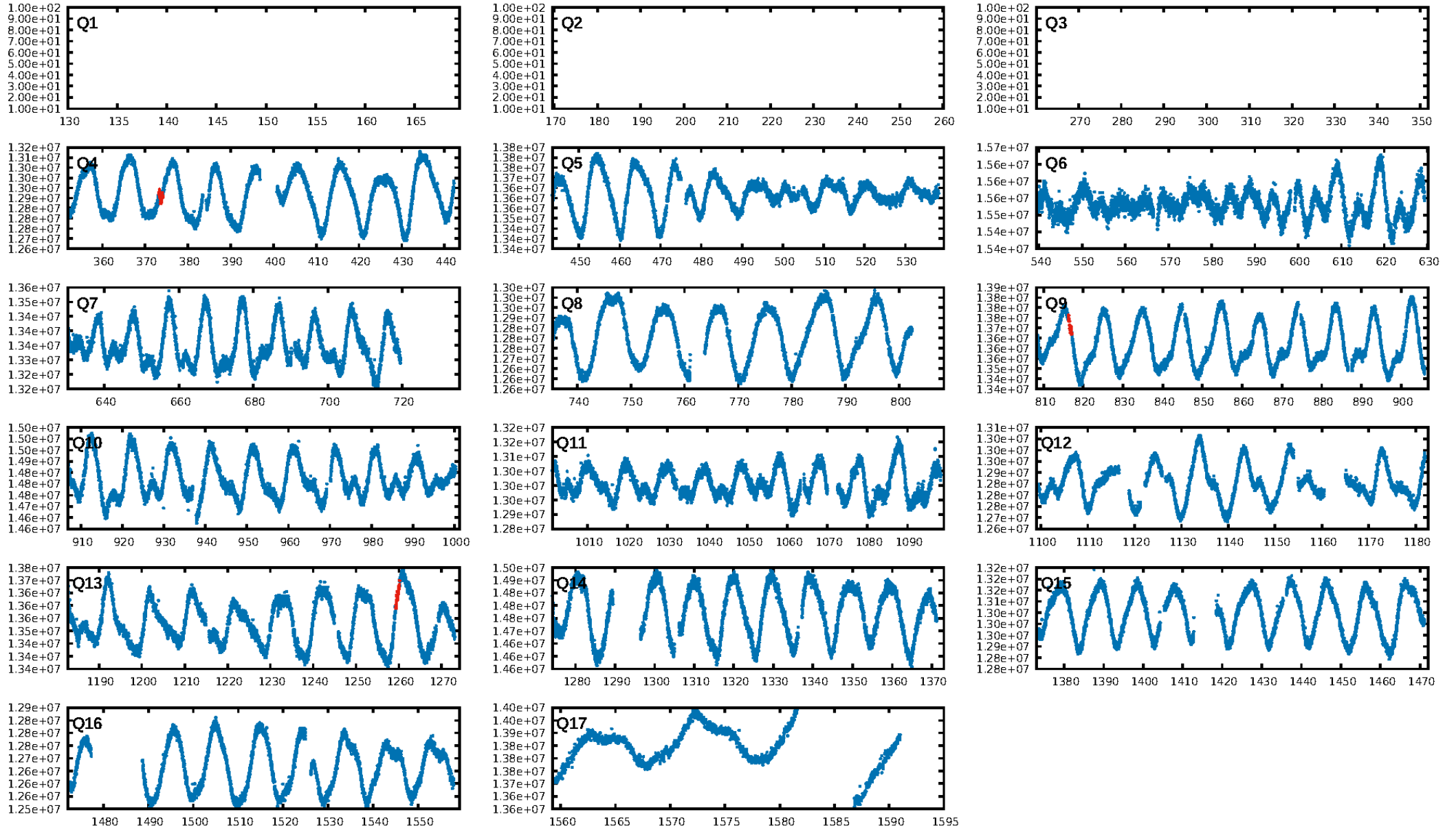
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.8%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.07e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2227
Centroid-sig: 0.8%
Centroid-so: 4.885 arcsec [6.57σ]
OotOffset-rm: 0.177 arcsec [0.74σ]
KicOffset-rm: 6.951 arcsec [36.82σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

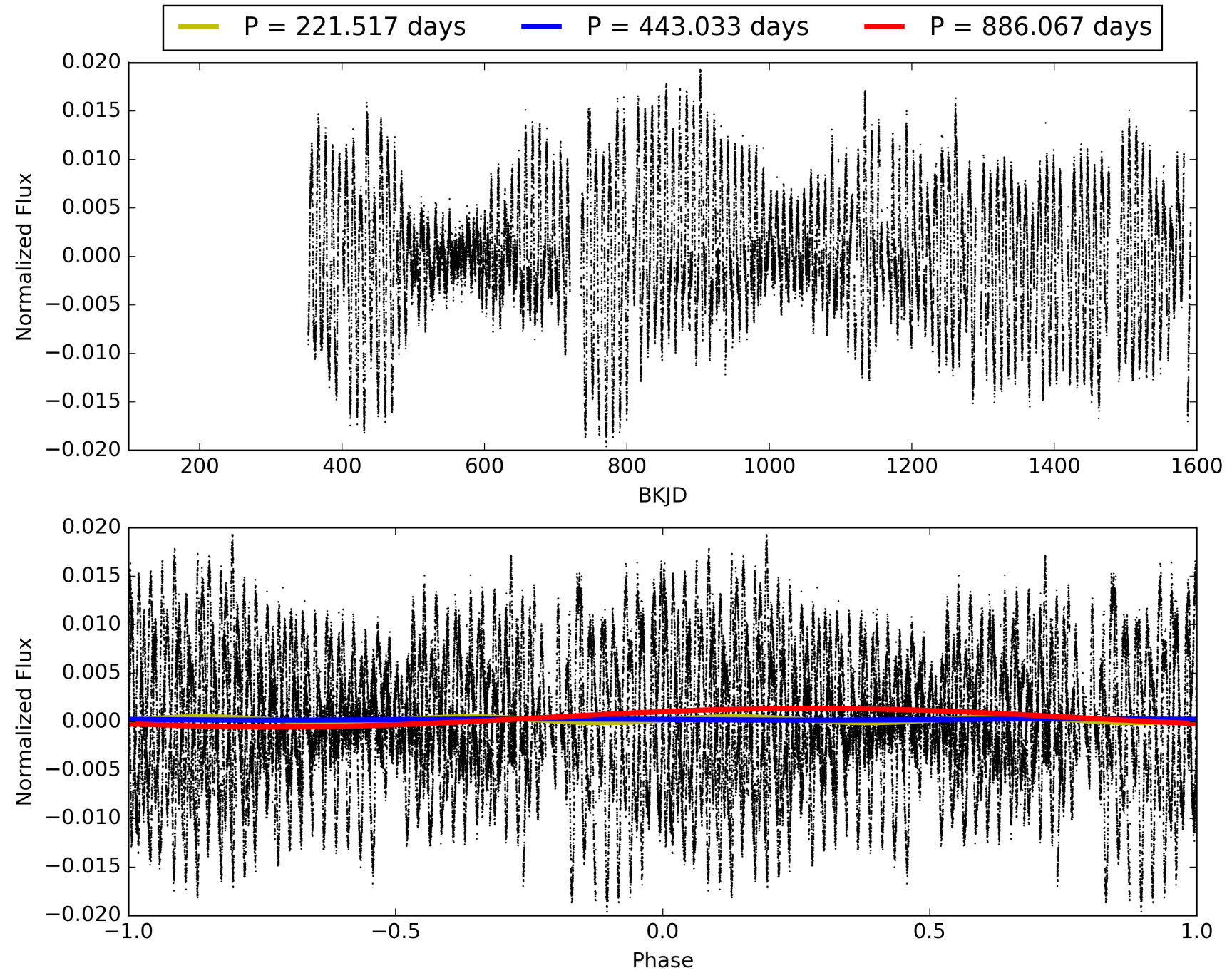
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:40:06 Z

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

TCE 001868524-01, PDC Light Curves

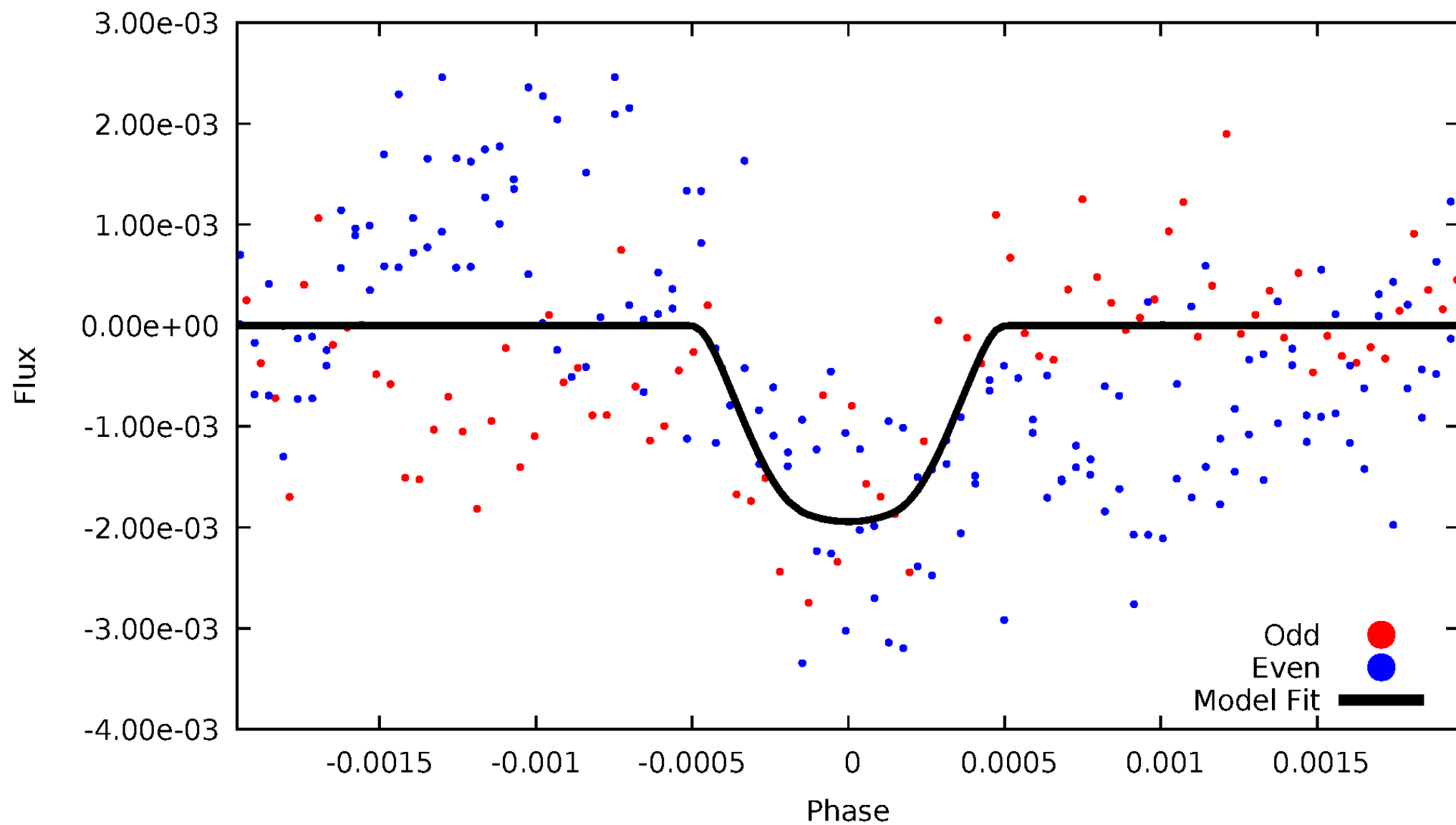


TCE 001868524-01



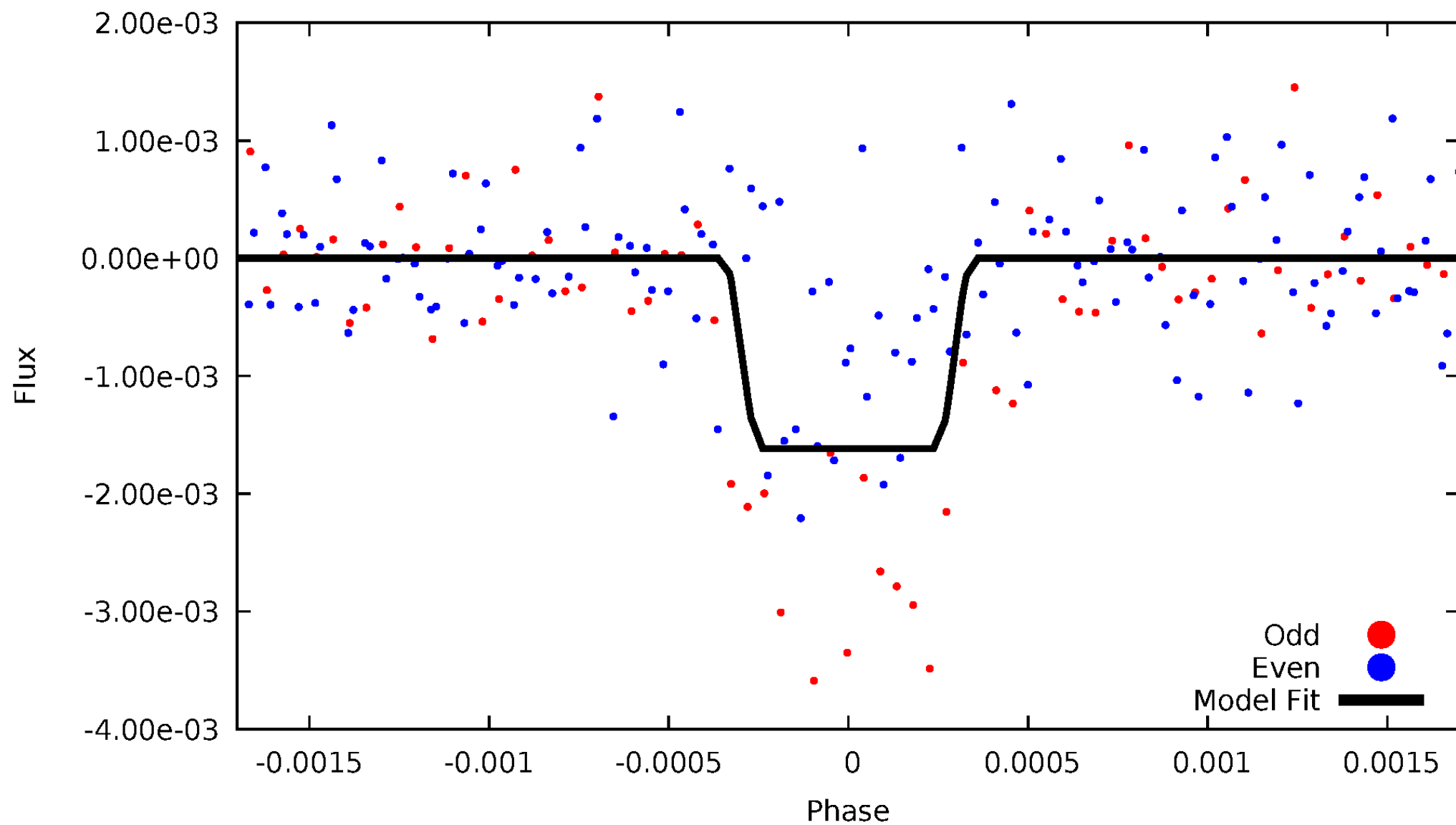
DV Odd/Even

TCE 001868524-01



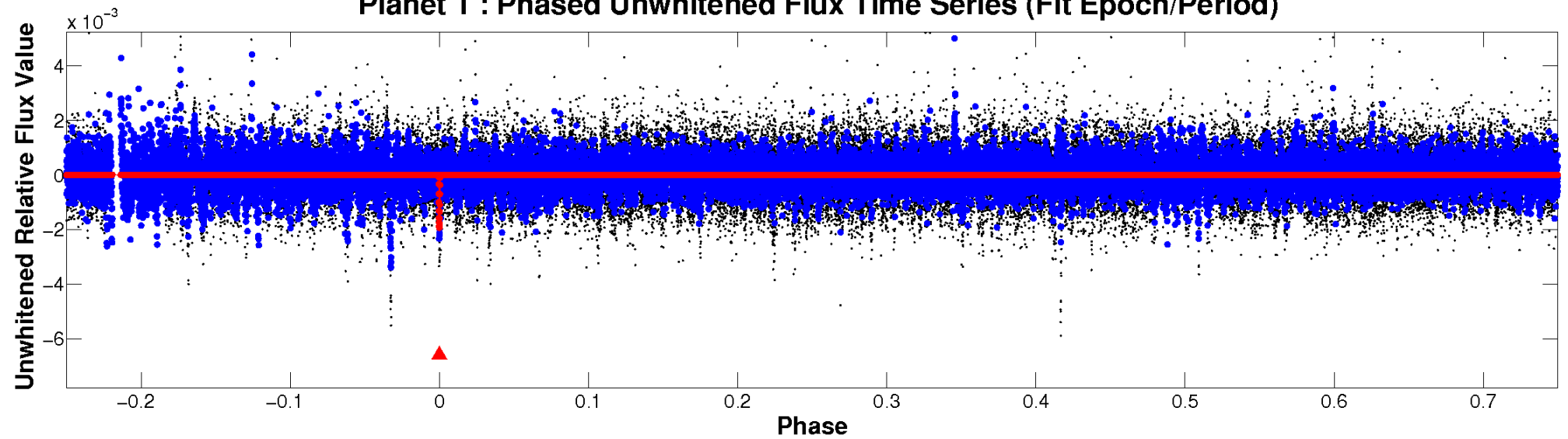
ALT Odd/Even

TCE 001868524-01

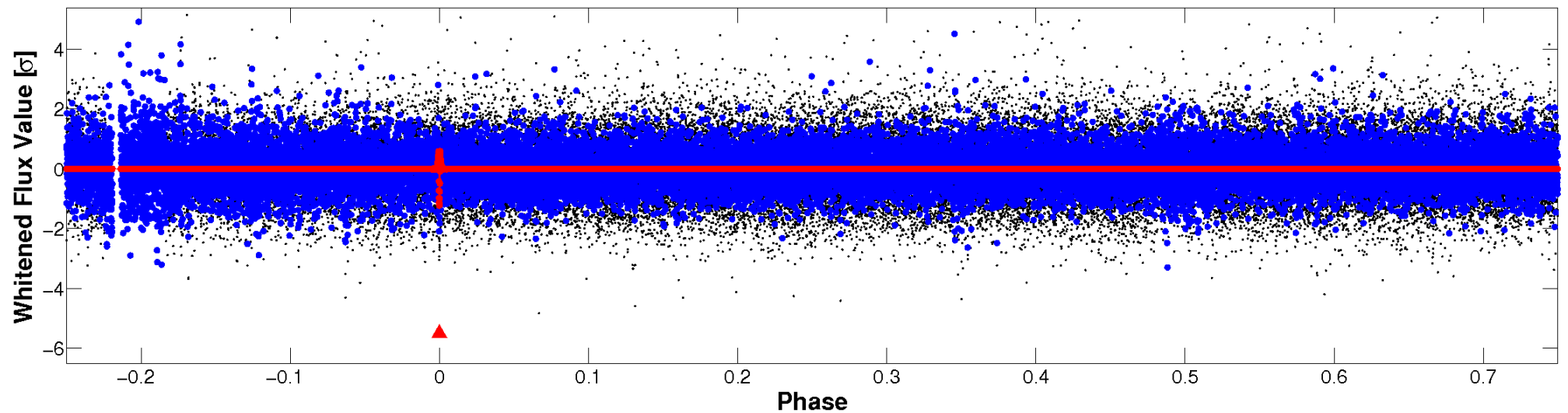


Non-Whitened Vs. Whitened Light Curve

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

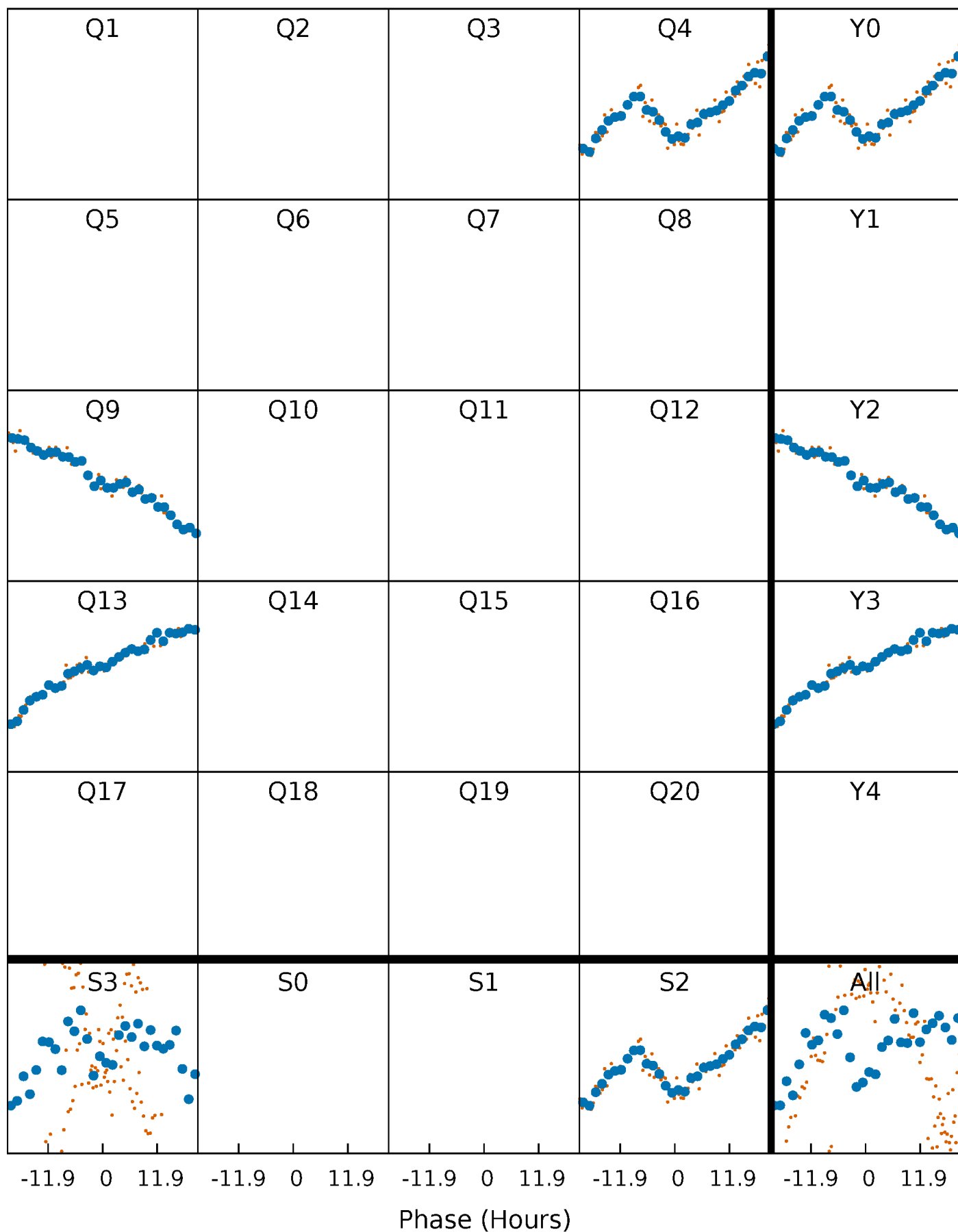


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



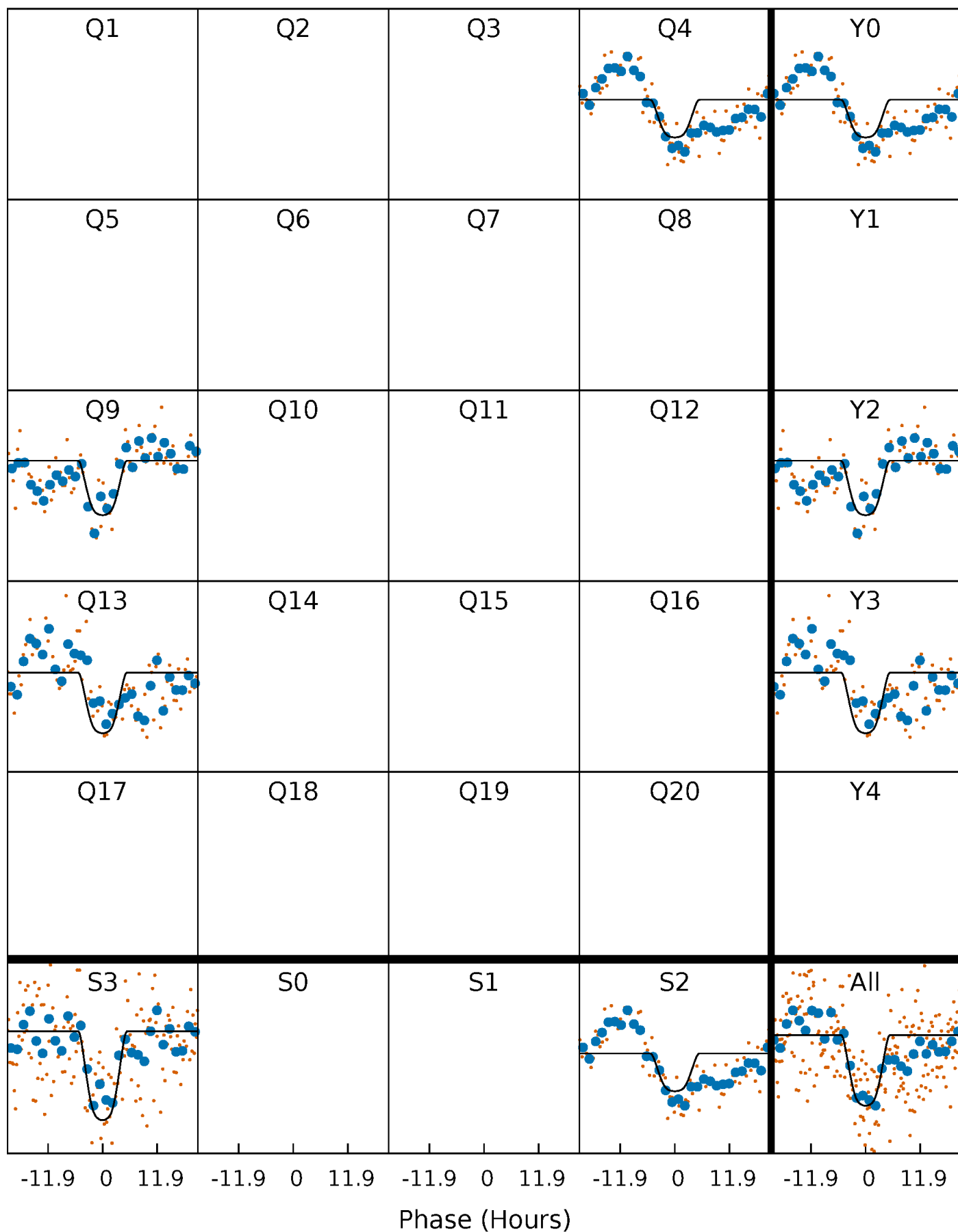
PDC Quarter-Phased Transit Curves

TCE 001868524-01 P=443.033420 Days $T_0=373.650962$ (BKJD)



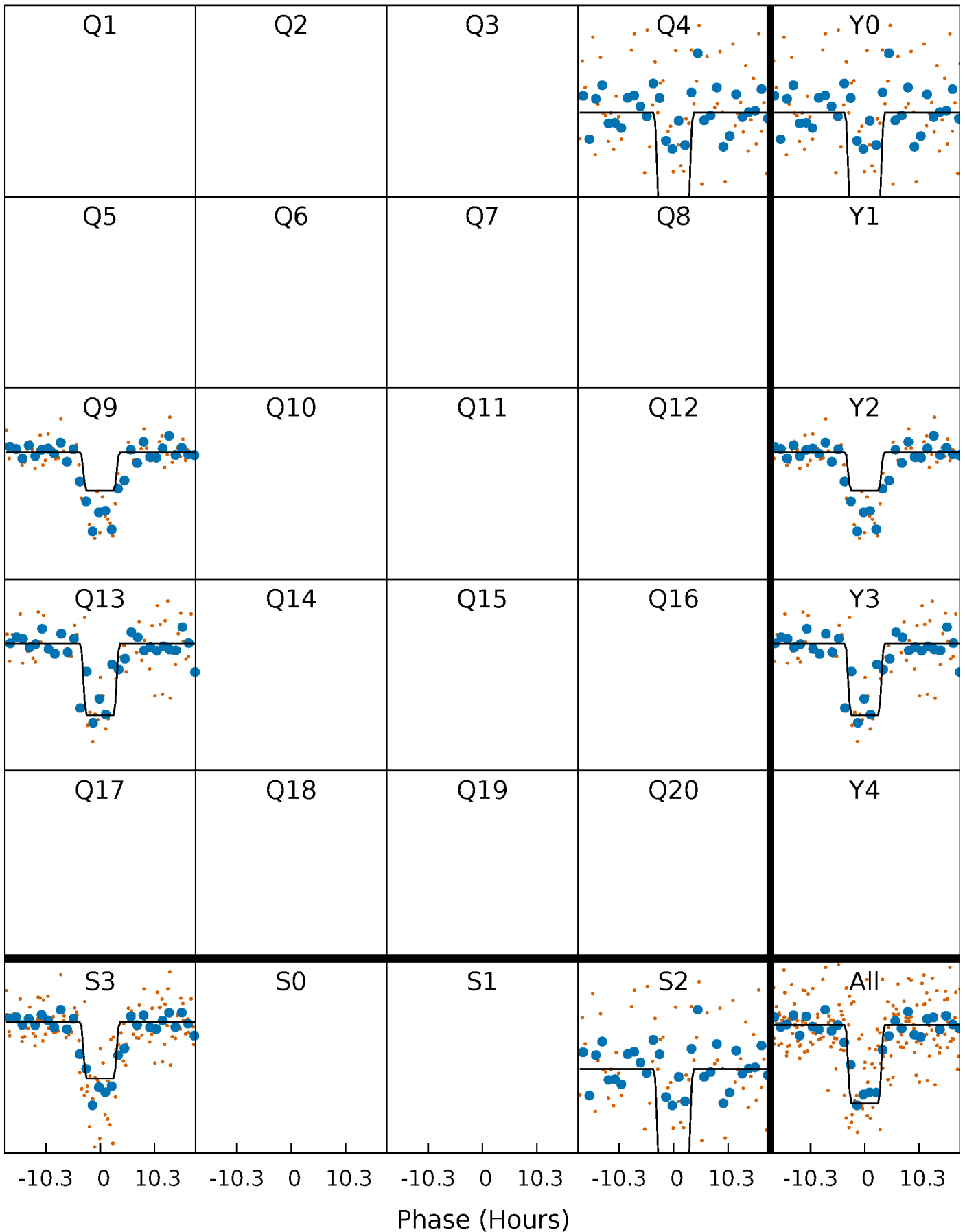
DV Quarter-Phased Transit Curves

TCE 001868524-01 $P=443.033420$ Days $T_0=373.650962$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

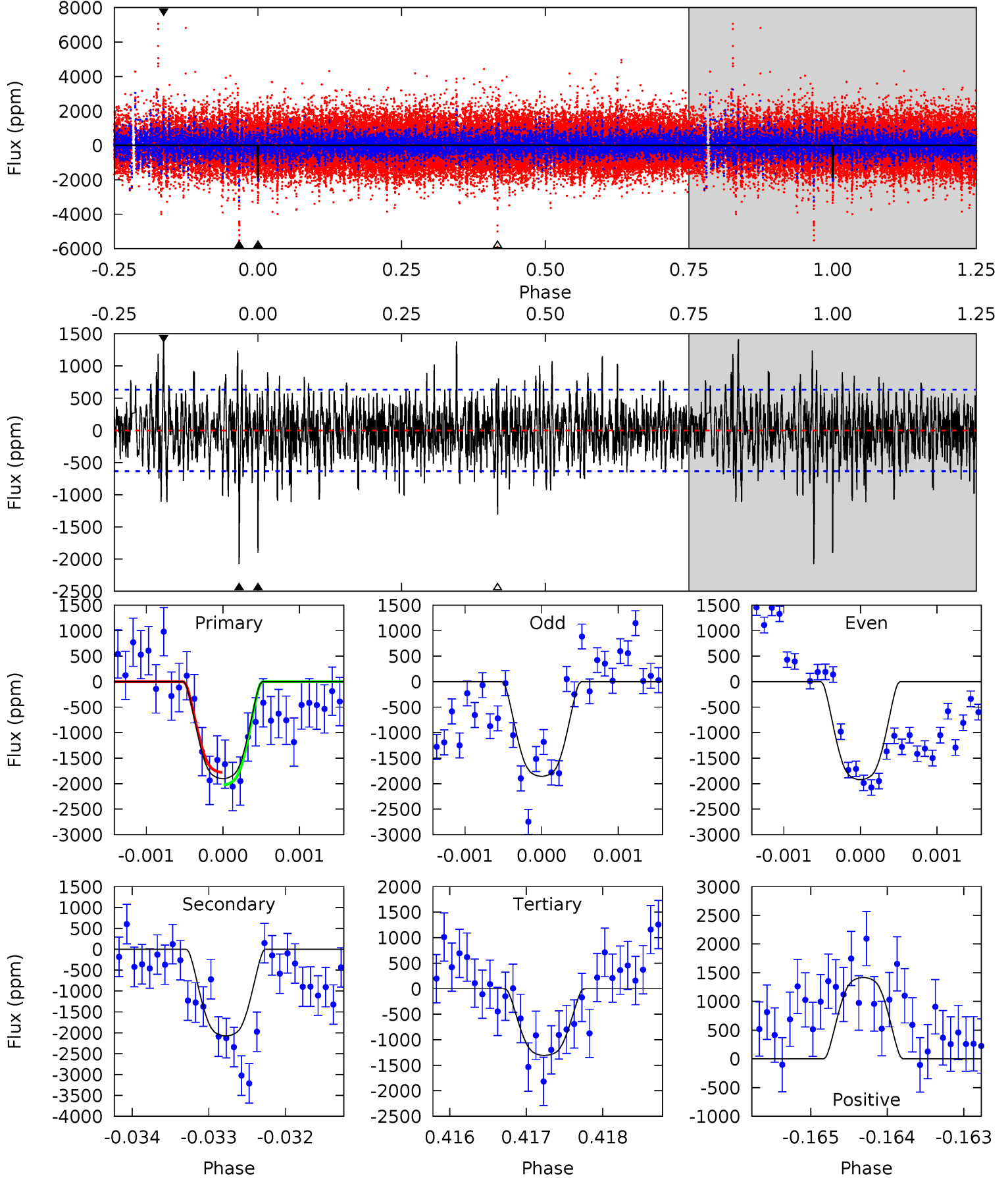
TCE 001868524-01 P=443.020014 Days $T_0=373.650427$ (BKJD)



DV Model-Shift Uniqueness Test

001868524-01, P = 443.033420 Days, E = 373.650962 Days

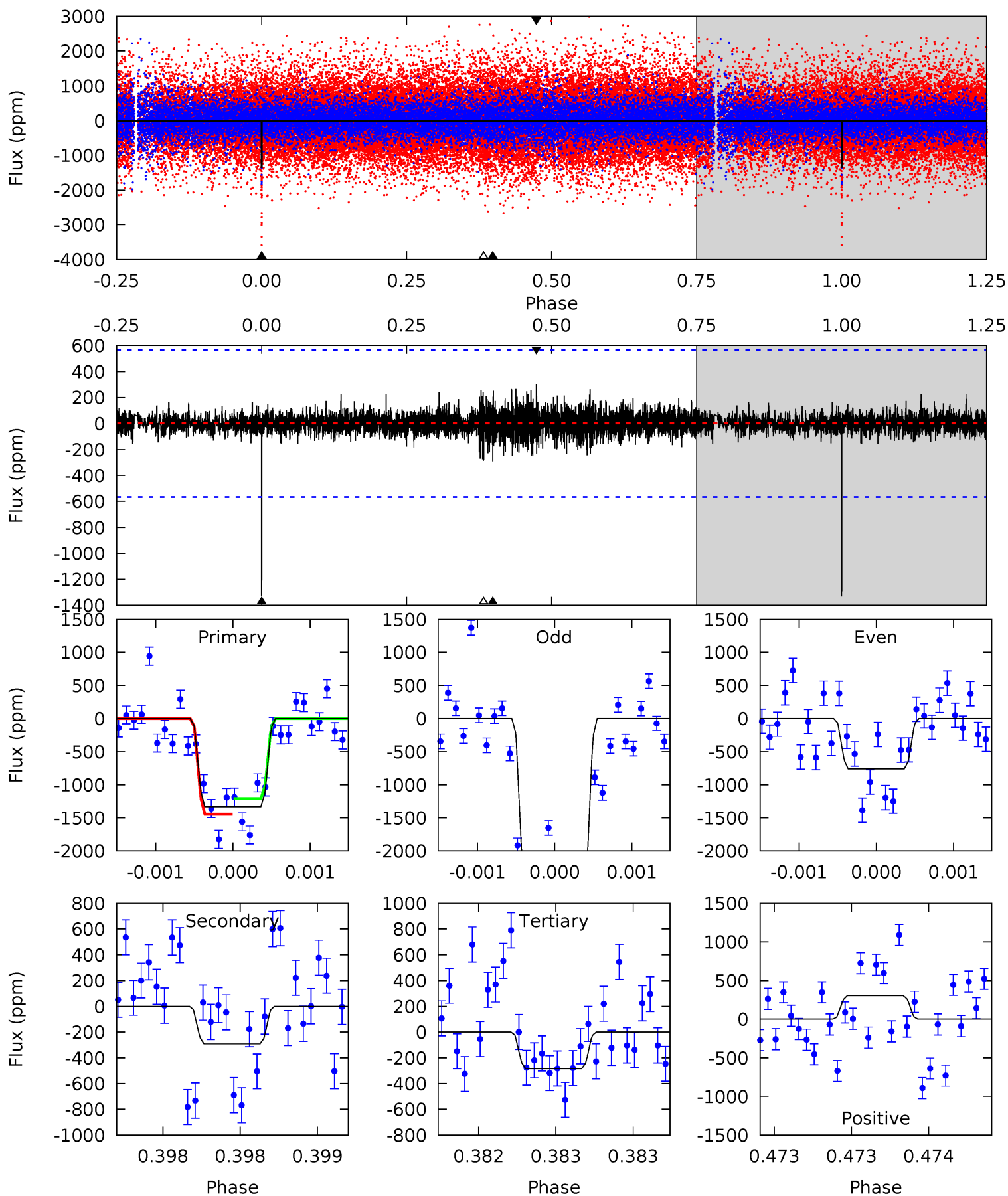
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	17.9	11.3	12.2	5.46	3.30	2.89	5.13	4.18	6.64	5.69	0.26	1.02	0.41	1.06



Alt Model-Shift Uniqueness Test

001868524-01, P = 443.020014 Days, E = 373.650427 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	2.85	2.78	2.97	5.53	3.41	0.57	10.2	10.0	0.07	-0.12	9.40	1.12	0.19	1.16



Stellar Parameters For KIC 001868524

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4686^{+84}_{-74}	$4.626^{+0.024}_{-0.027}$	$-0.220^{+0.150}_{-0.150}$	$0.666^{+0.032}_{-0.029}$	$0.685^{+0.037}_{-0.034}$	$3.263^{+0.358}_{-0.323}$
	+2%/-2%	+1%/-1%	+68%/-68%	+5%/-4%	+5%/-5%	+11%/-10%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 001868524-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2076 ± 116	$3.81^{+0.45}_{-0.41}$	236^{+5}_{-5}	4459^{+203}_{-210}	79541^{+19704}_{-16467}
Alt.	-292 ± 102	$2.95^{+0.38}_{-0.42}$	236^{+5}_{-5}	3445^{+261}_{-239}	18325^{+10021}_{-7036}

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

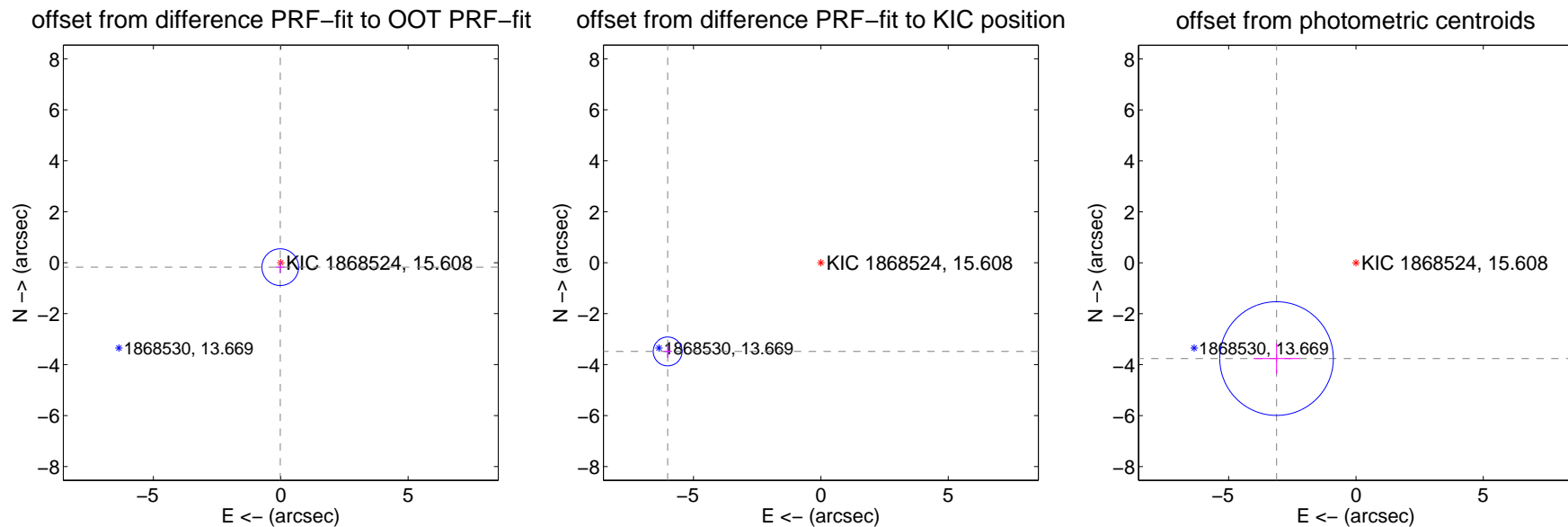
DV Centroid Data

Supplemental centroid analysis for 001868524-01. Kepler magnitude: 15.61. Transit SNR 7.62

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.85 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.177 ± 0.240	0.74	0.020 ± 0.168	-0.176 ± 0.241
PRF-fit source offset from KIC position	6.951 ± 0.189	36.82	6.016 ± 0.168	-3.482 ± 0.241
photometric centroid source offset	4.89 ± 0.74	6.57	3.12 ± 0.91	-3.76 ± 0.60



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.

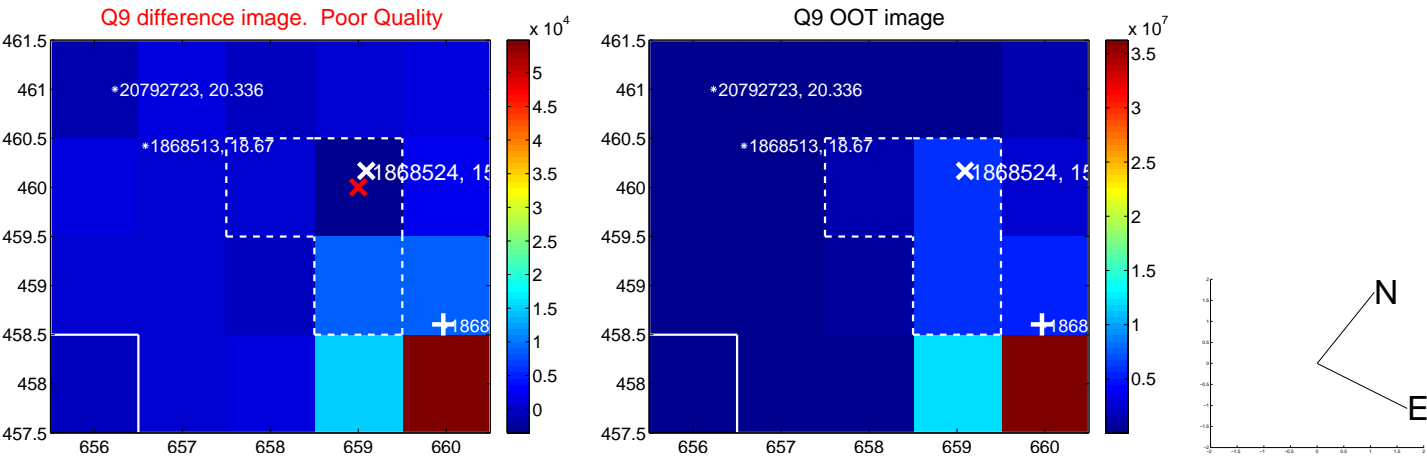
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



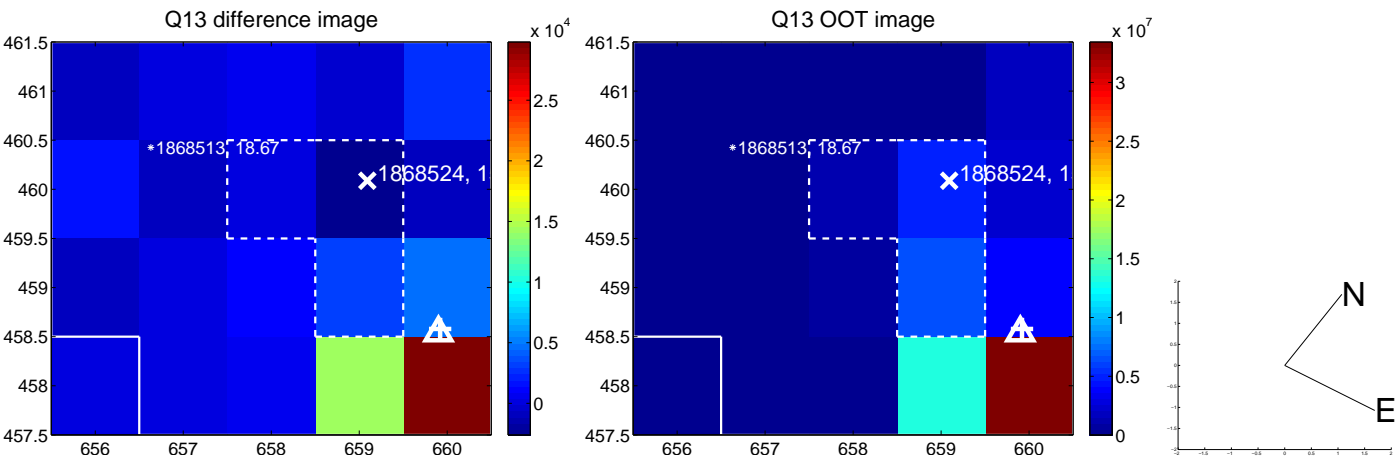
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



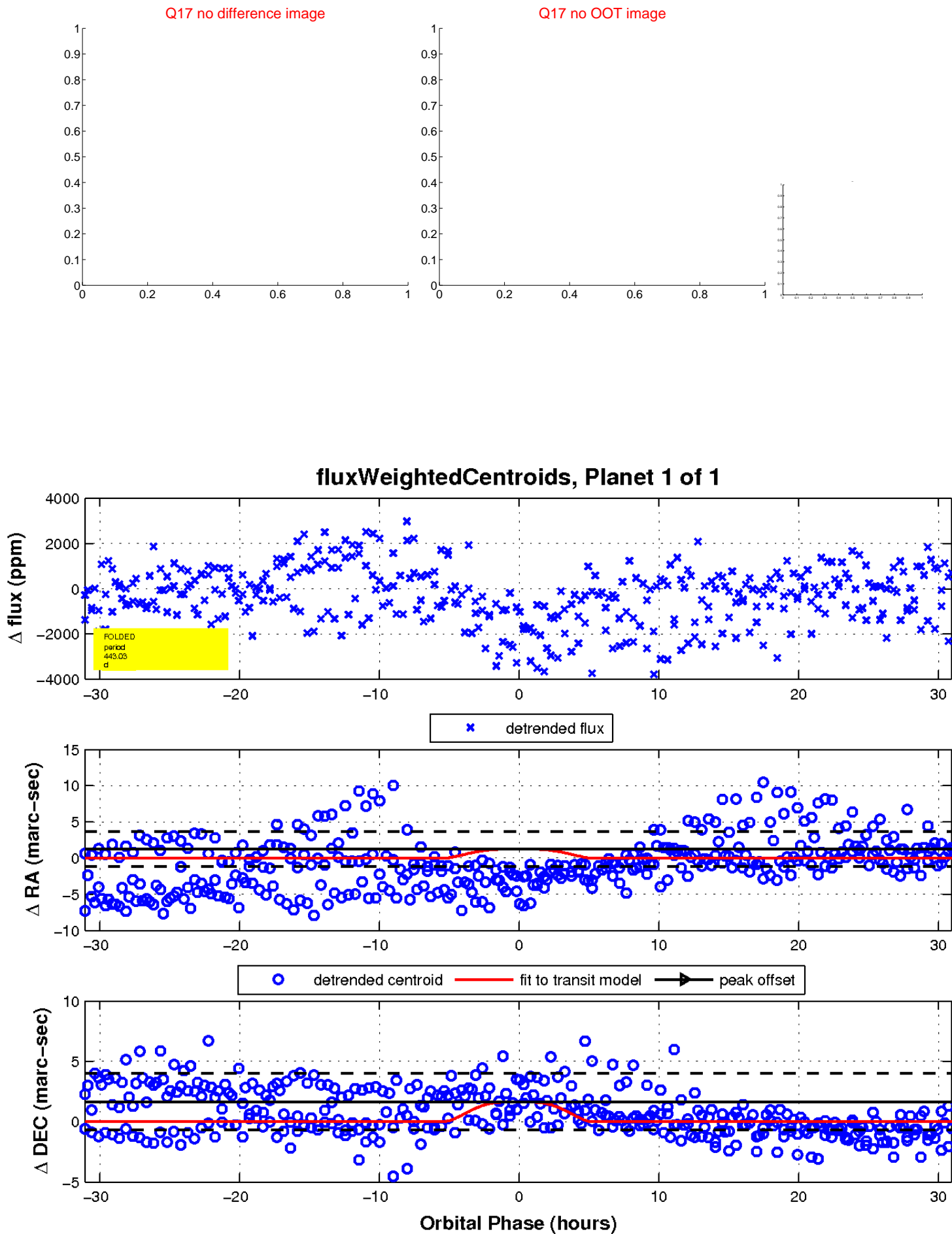
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white \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

