

KIC 004824872

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})
004824872-01	OBS	No	438.169659	552.267728	341.4	13.851	7.6	7.4	0.93	5751	1.84	0.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004824872-01	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.

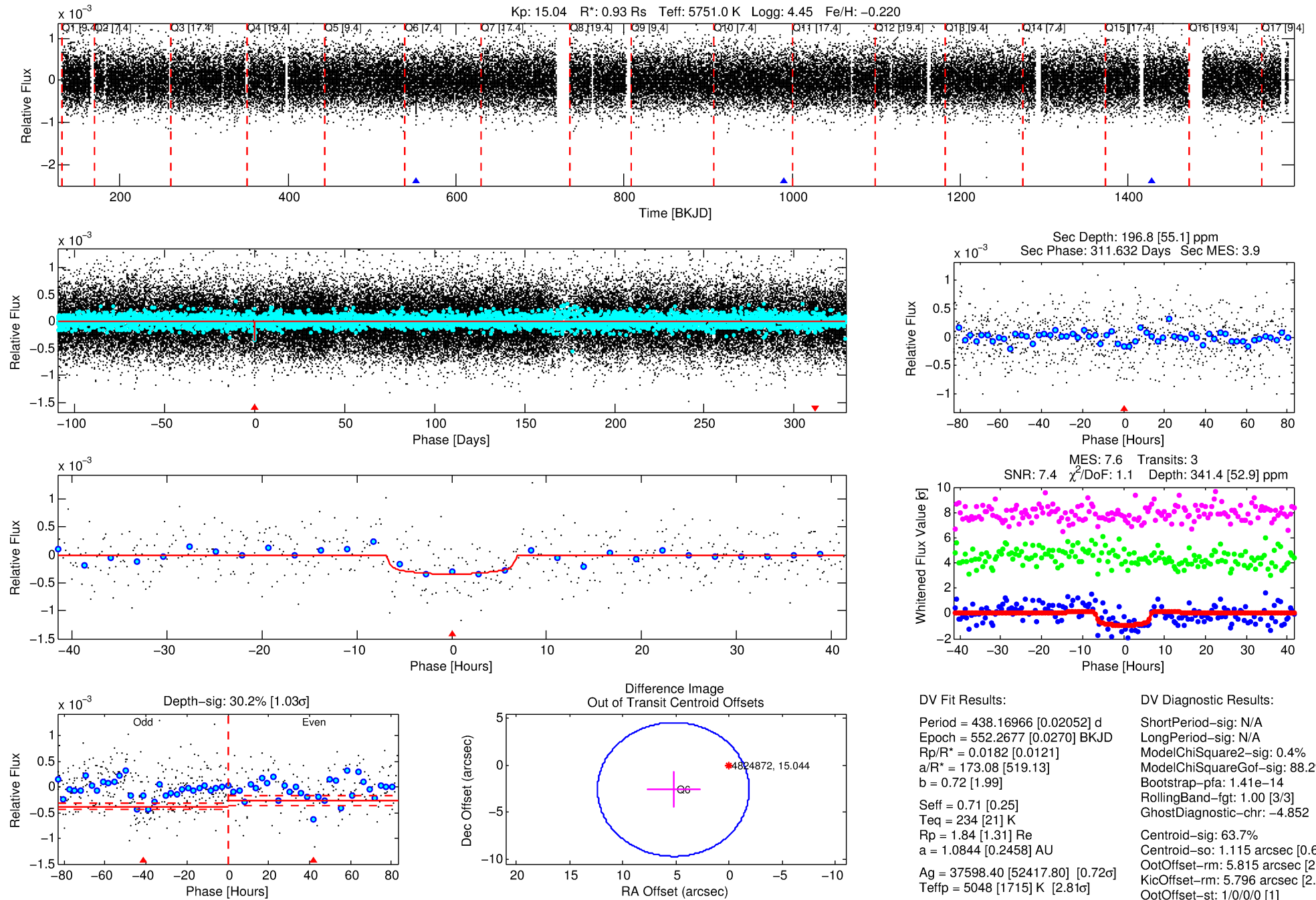
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004824872-01

No Significant Match Found

DV One-Page Summary

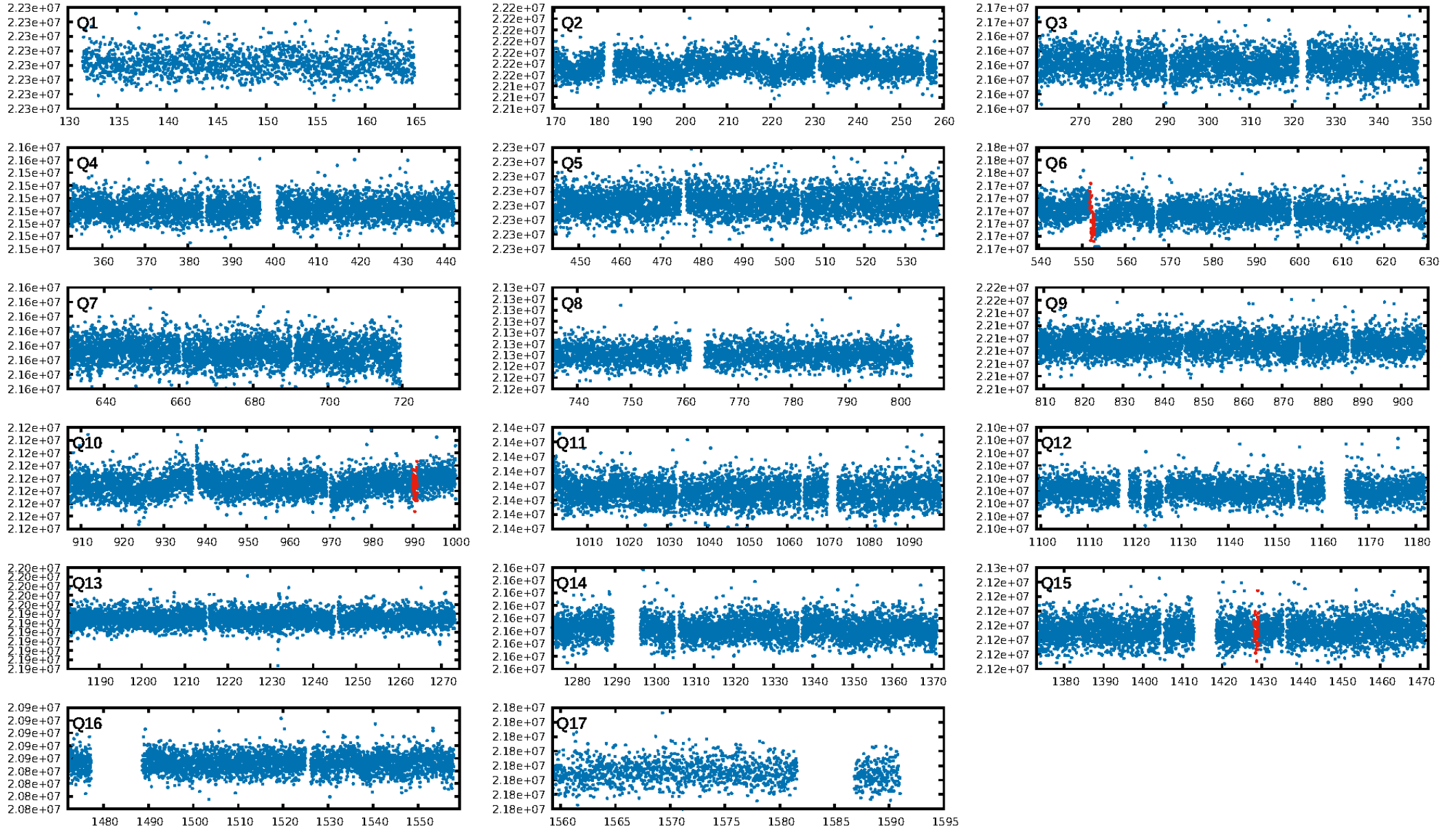
KIC: 4824872 Candidate: 1 of 1 Period: 438.170 d



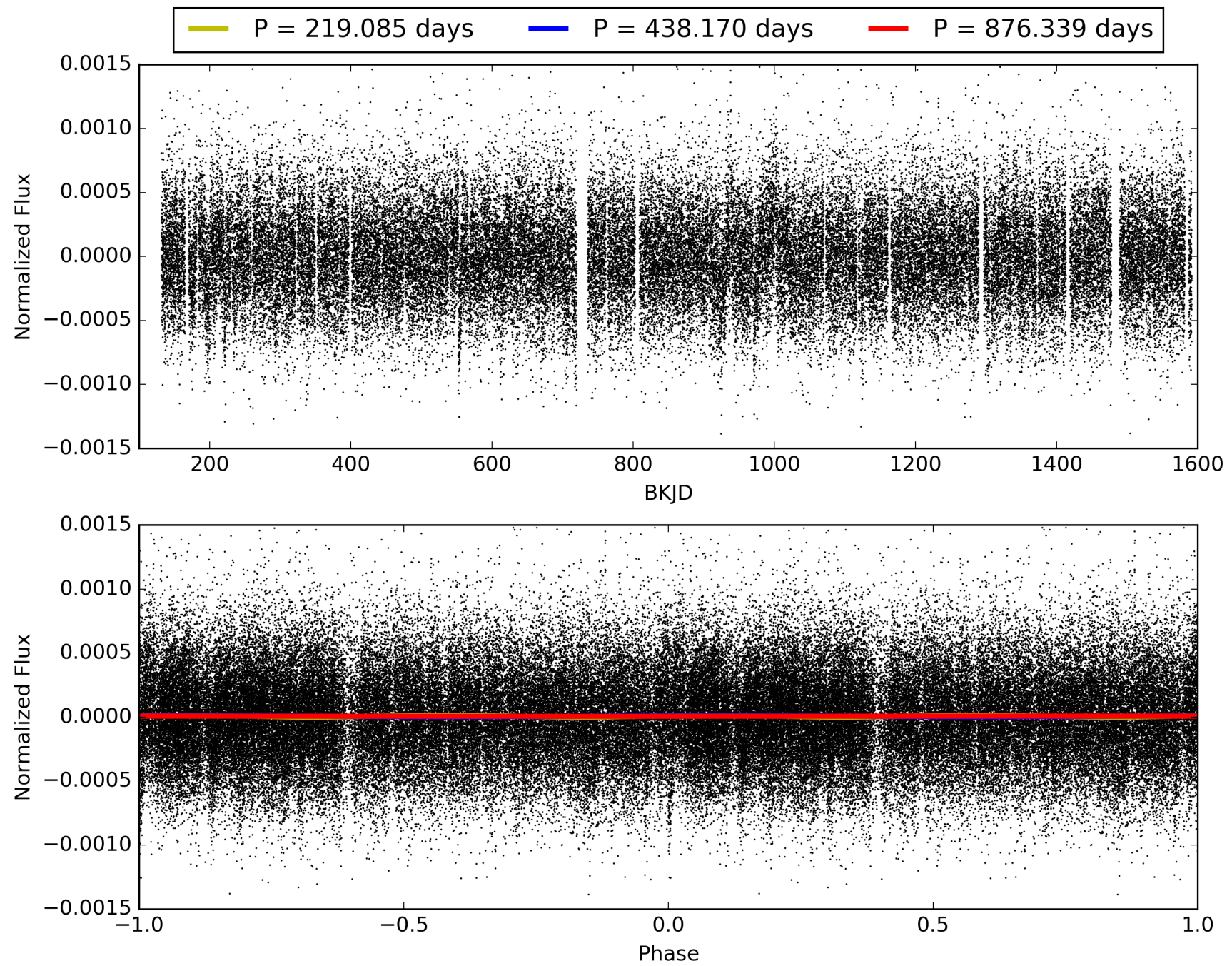
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:11:12 Z

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

TCE 004824872-01, PDC Light Curves

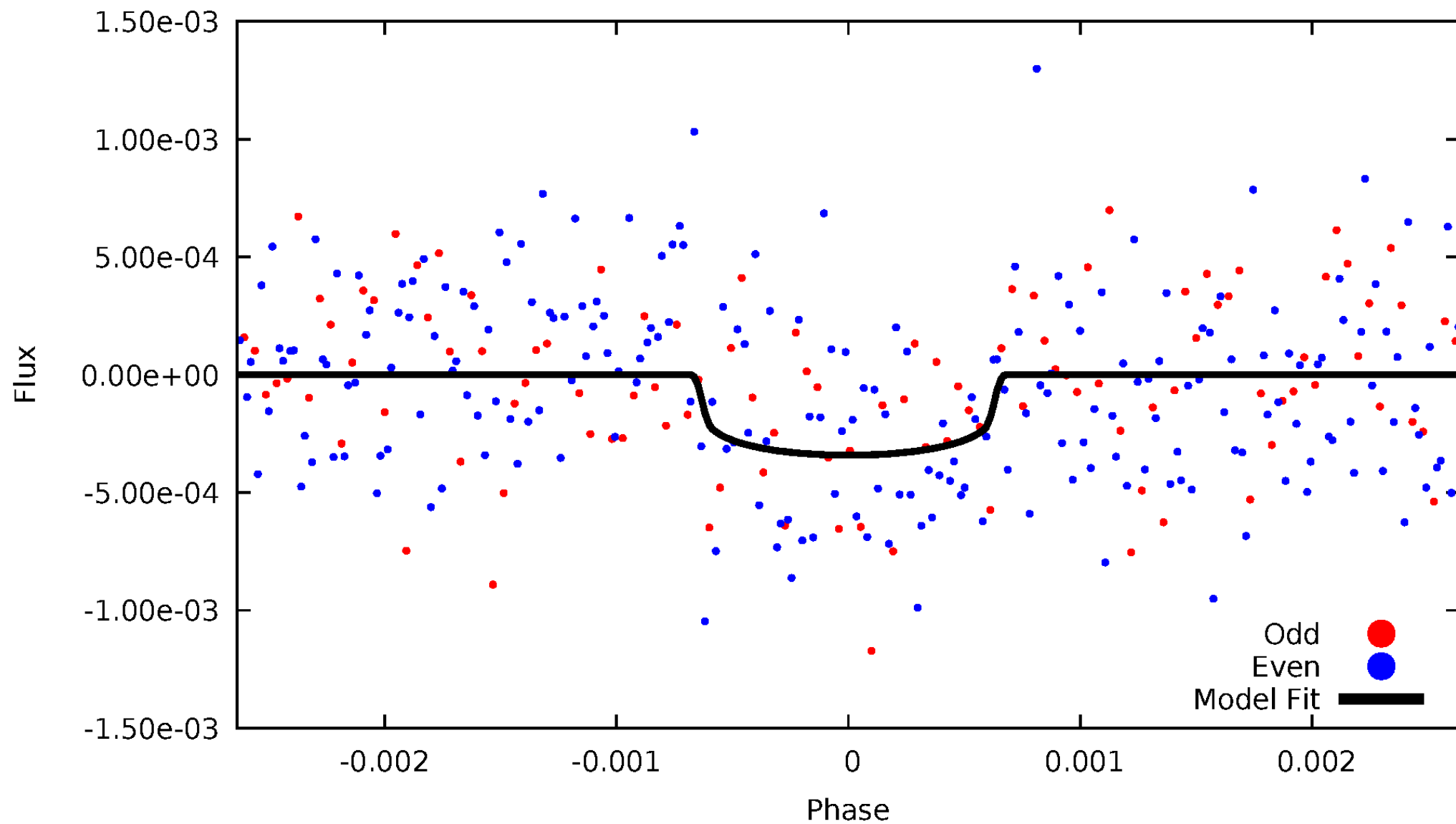


TCE 004824872-01



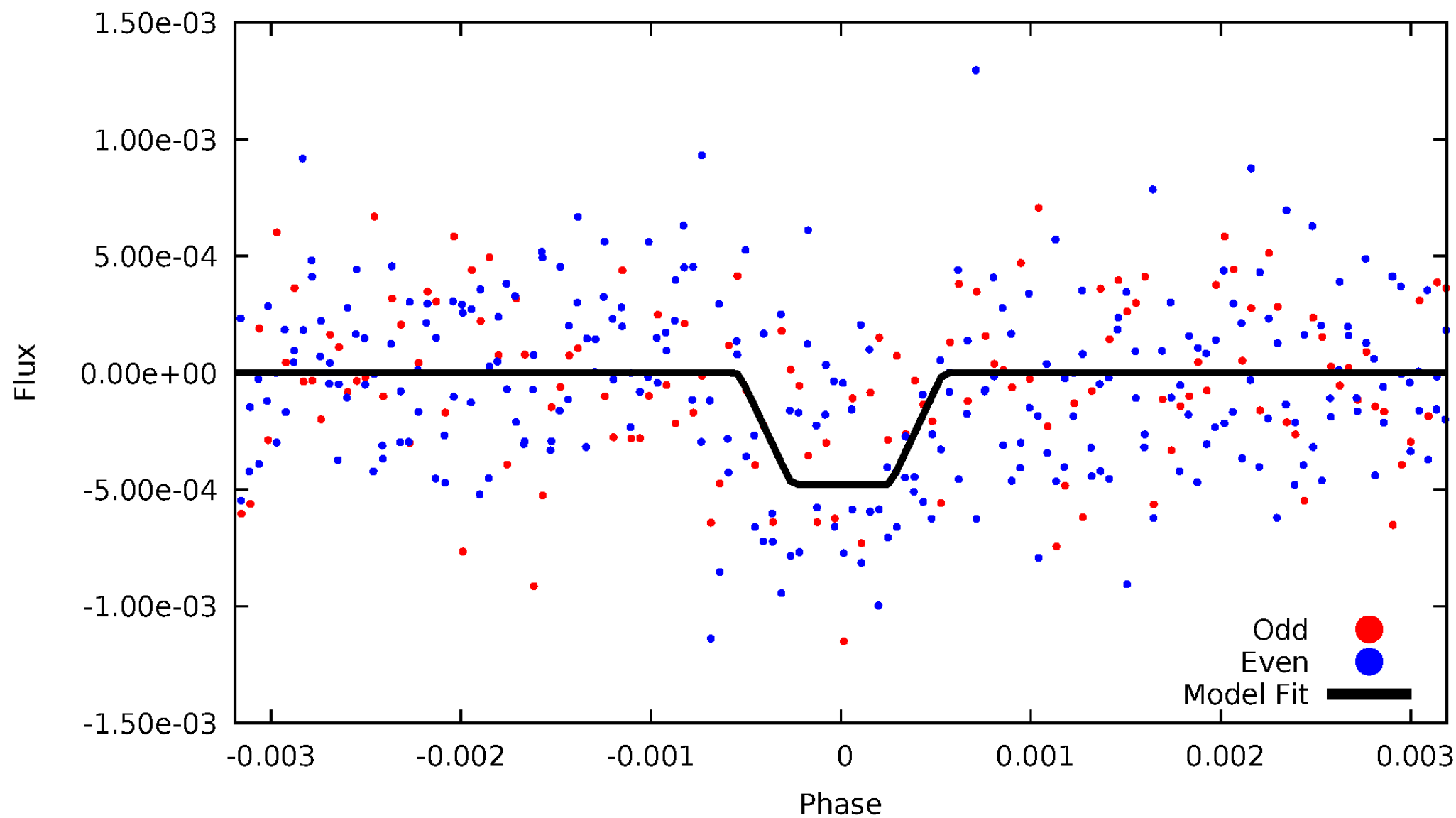
DV Odd/Even

TCE 004824872-01



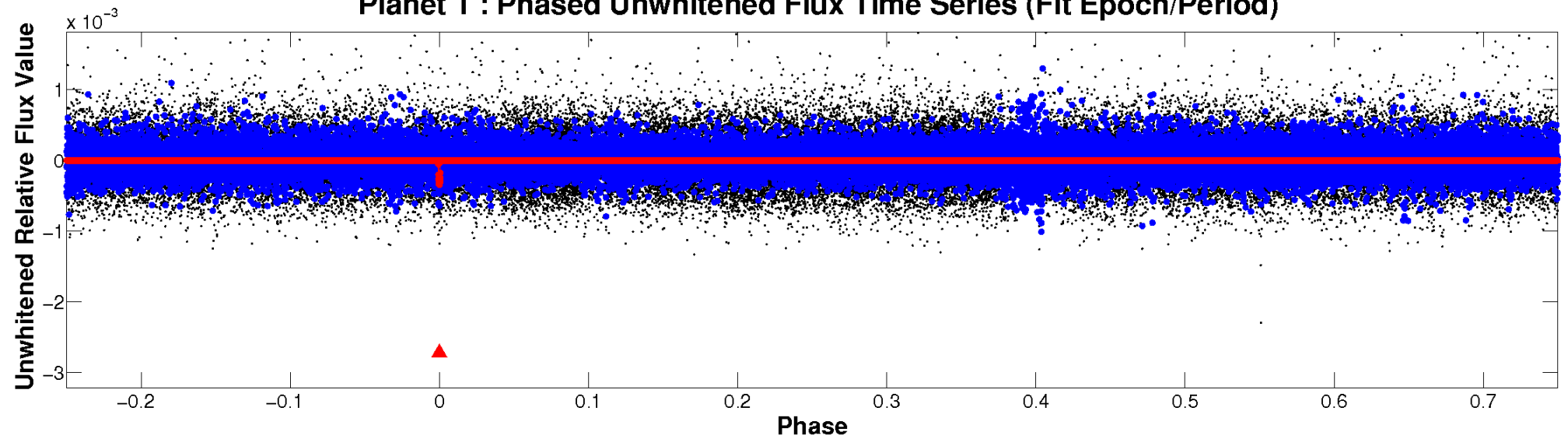
ALT Odd/Even

TCE 004824872-01

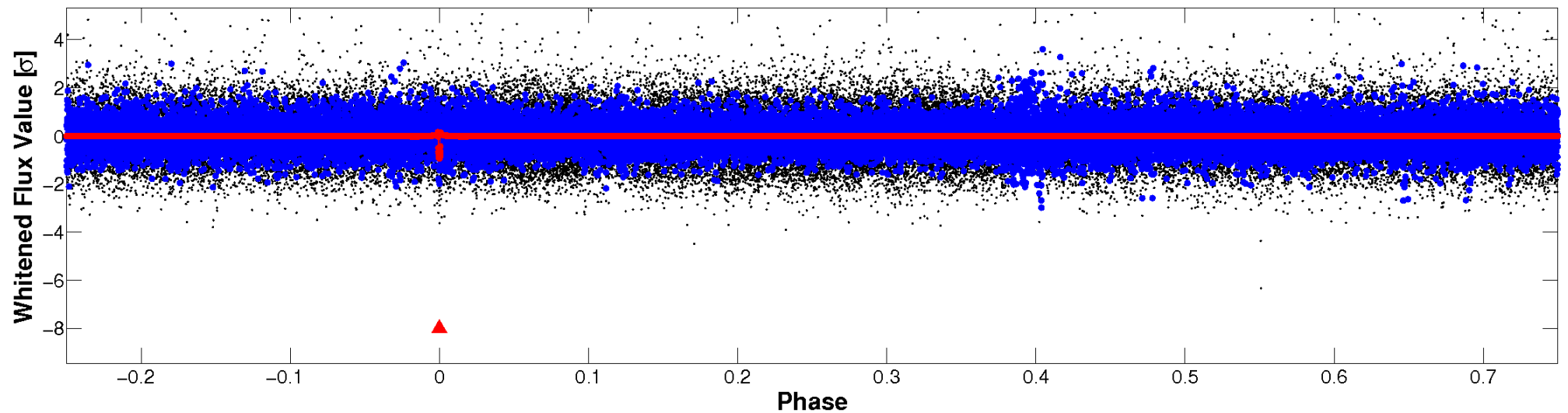


Non-Whitened Vs. Whitened Light Curve

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

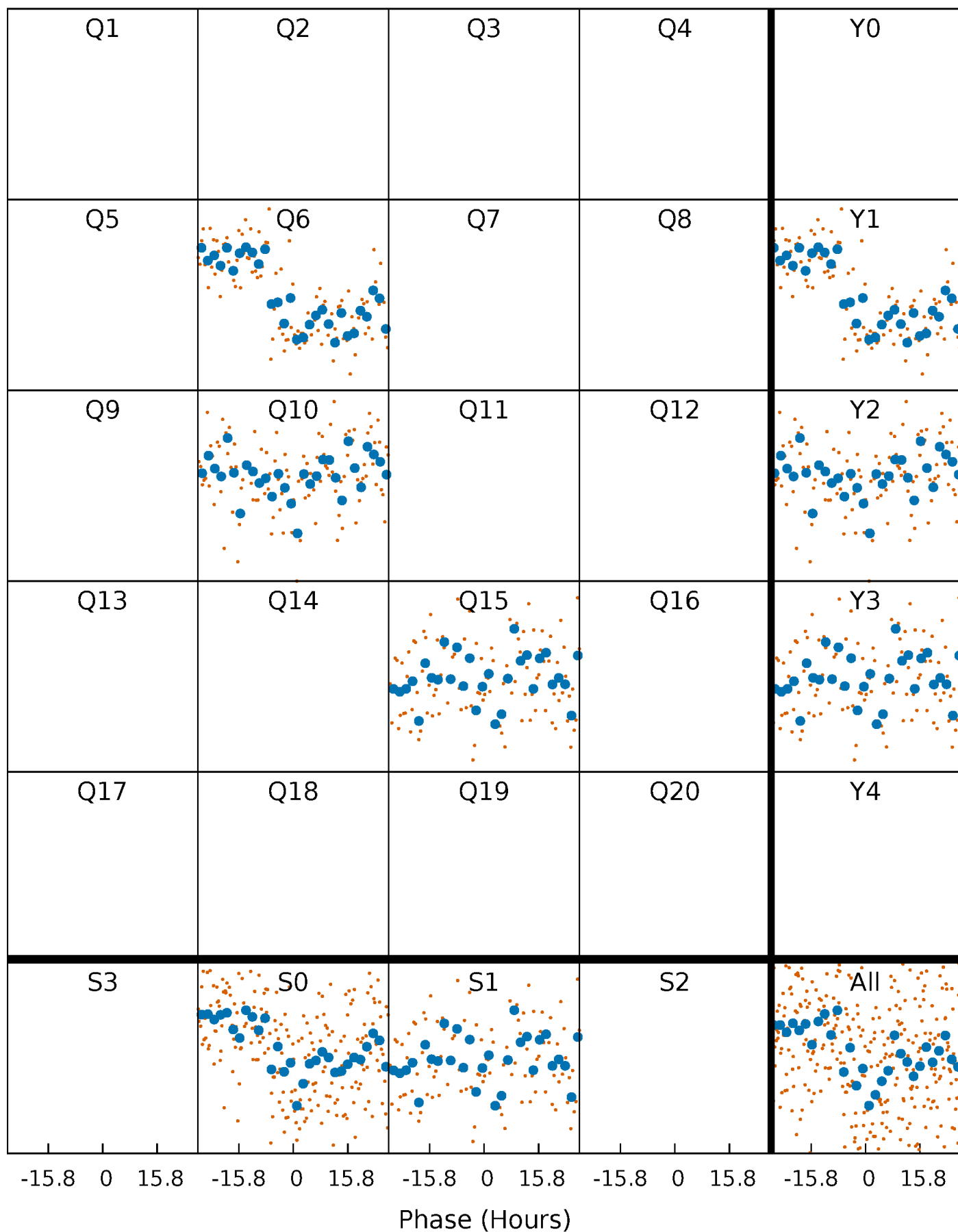


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



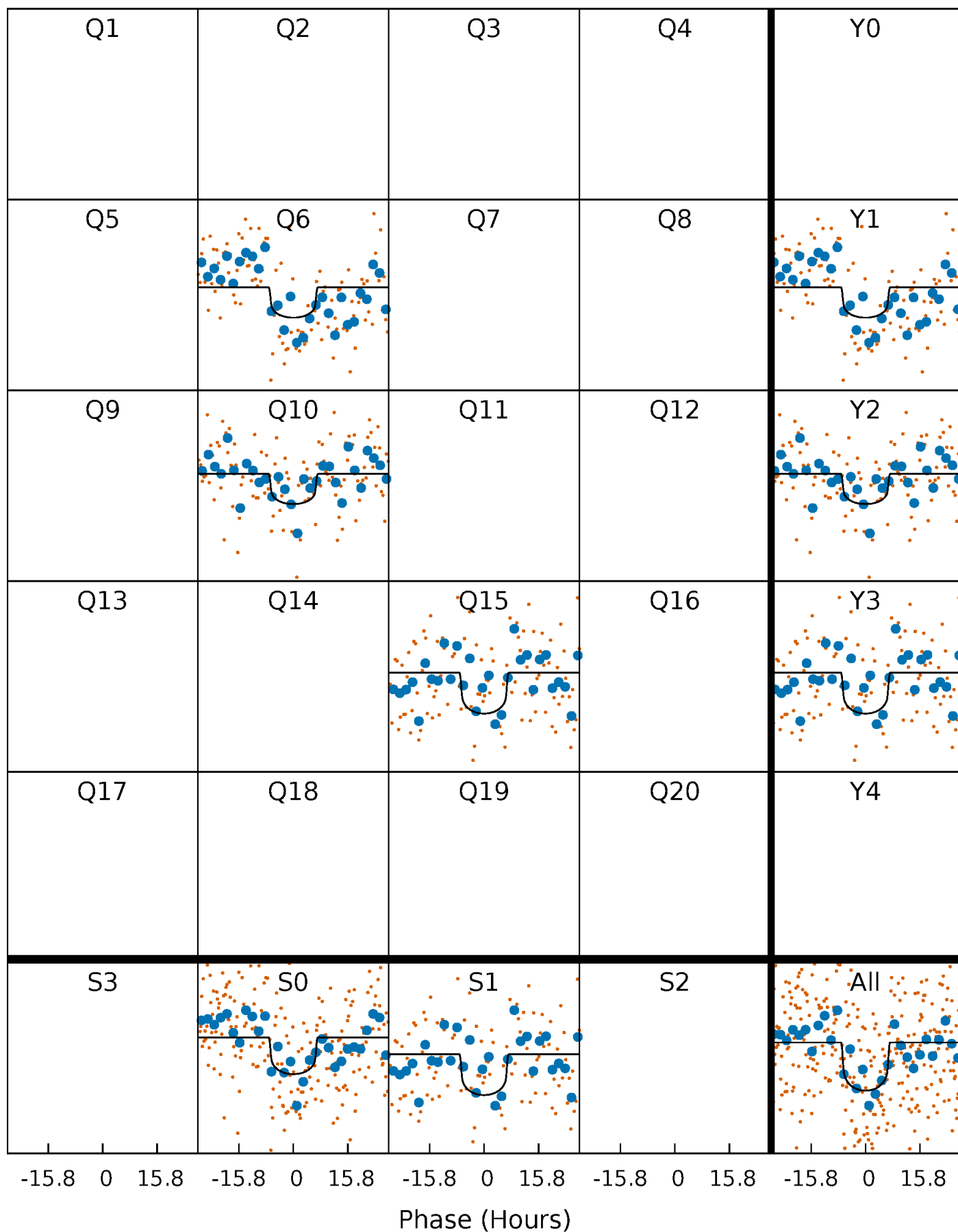
PDC Quarter-Phased Transit Curves

TCE 004824872-01 P=438.169659 Days $T_0=552.267728$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004824872-01 P=438.169659 Days $T_0=552.267728$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

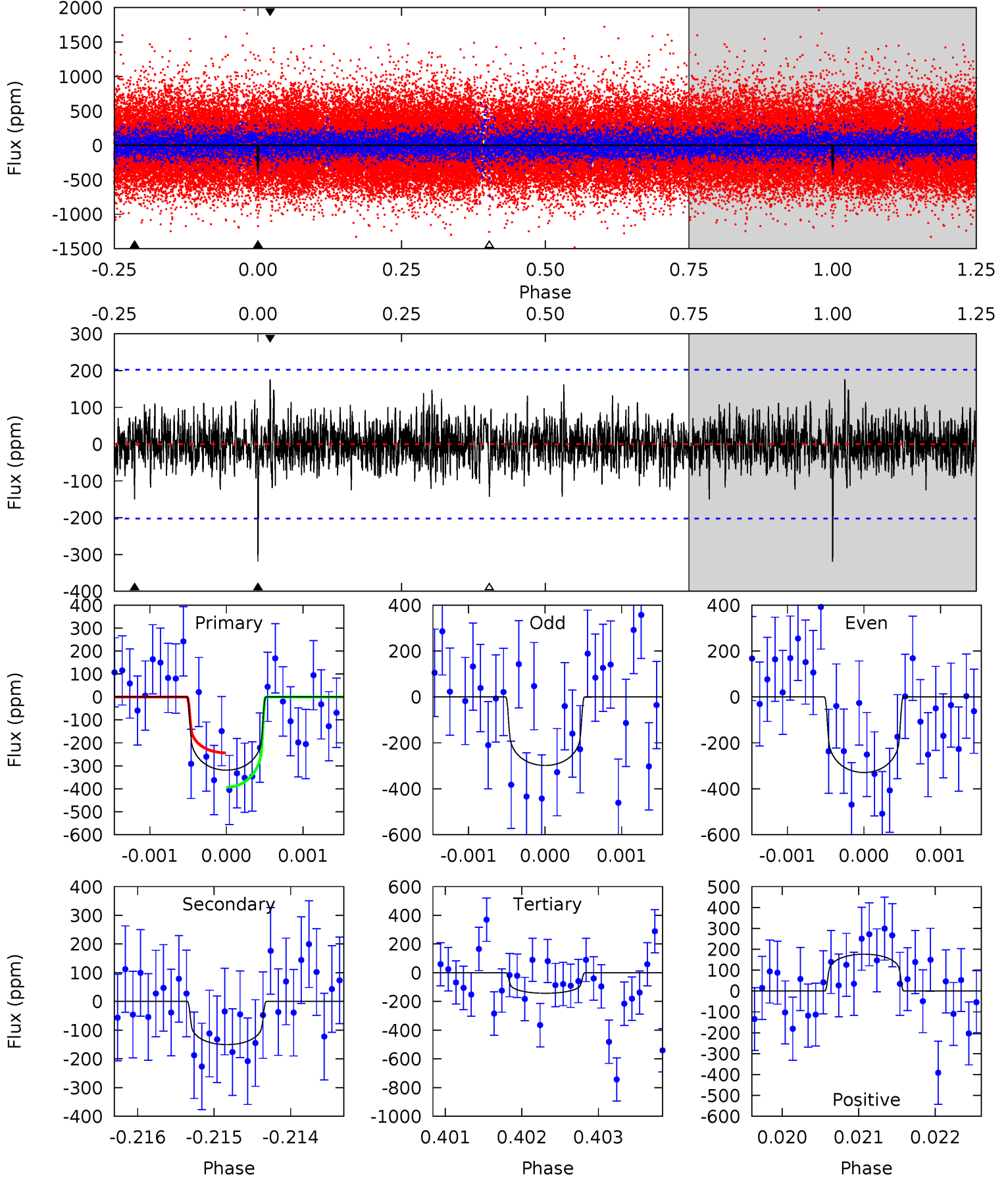
TCE 004824872-01 P=438.177261 Days $T_0=552.297242$ (BKJD)



DV Model-Shift Uniqueness Test

004824872-01, P = 438.169659 Days, E = 114.098069 Days

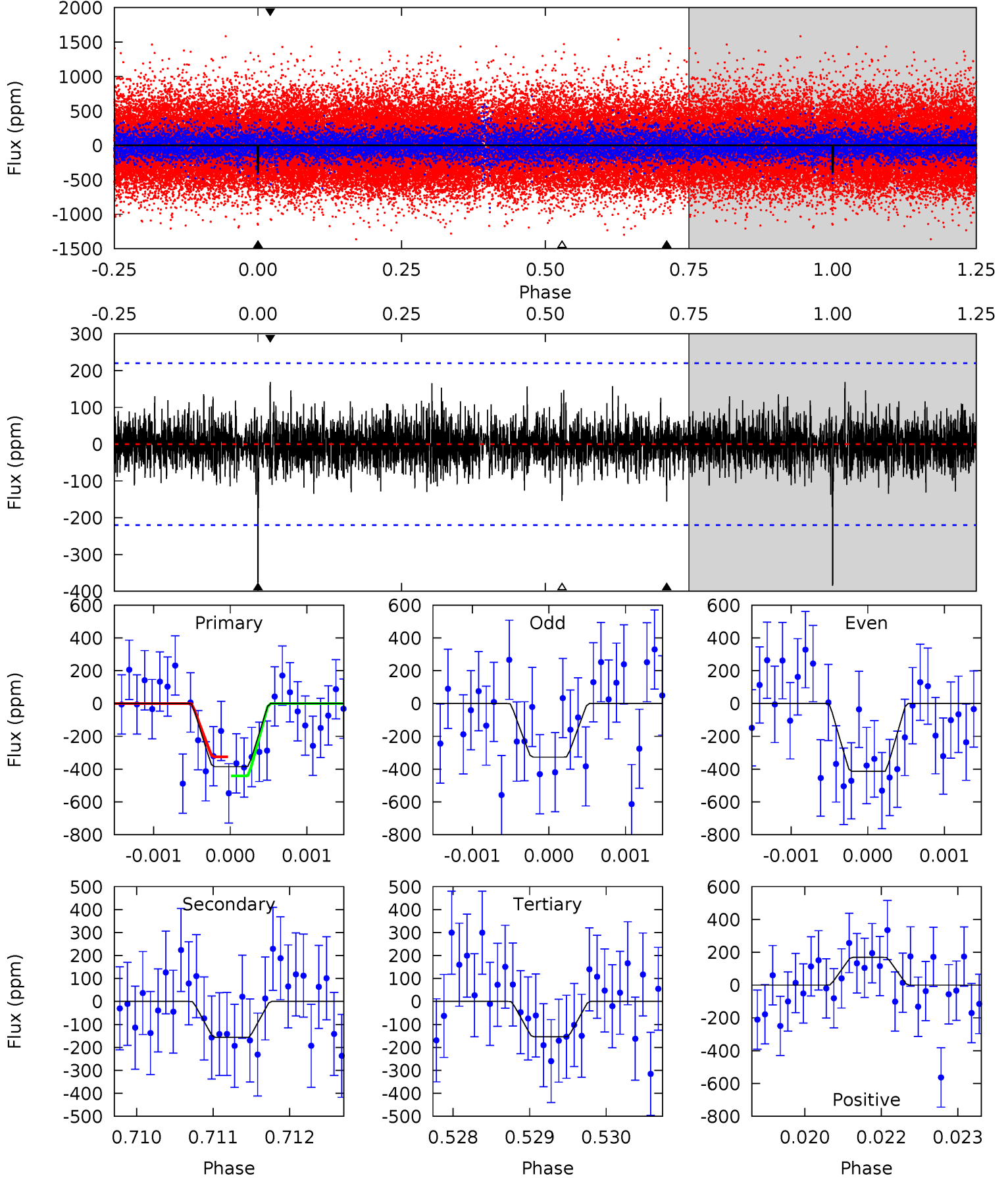
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.52	4.02	3.82	4.71	5.40	3.21	1.10	4.70	3.81	0.19	-0.69	0.39	1.07	0.36	2.00



Alt Model-Shift Uniqueness Test

004824872-01, P = 438.177261 Days, E = 114.119981 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.51	3.86	3.80	4.16	5.44	3.27	1.04	5.71	5.35	0.05	-0.30	1.02	1.18	0.30	1.43



Stellar Parameters For KIC 004824872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5751^{+172}_{-172}	$4.452^{+0.098}_{-0.182}$	$-0.220^{+0.300}_{-0.300}$	$0.926^{+0.248}_{-0.134}$	$0.887^{+0.120}_{-0.090}$	$1.571^{+0.699}_{-0.783}$
	+3%/-3%	+2%/-4%	+136%/-136%	+27%/-14%	+14%/-10%	+44%/-50%
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 004824872-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-150 ± 37	$1.88^{+1.30}_{-1.08}$	331^{+22}_{-16}	4807^{+2311}_{-837}	$26536^{+114474}_{-17191}$
Alt.	-156 ± 40	$2.30^{+1.31}_{-1.18}$	332^{+22}_{-18}	4486^{+1618}_{-686}	18548^{+57621}_{-11354}

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 $A_{obs} \gg 1.0$

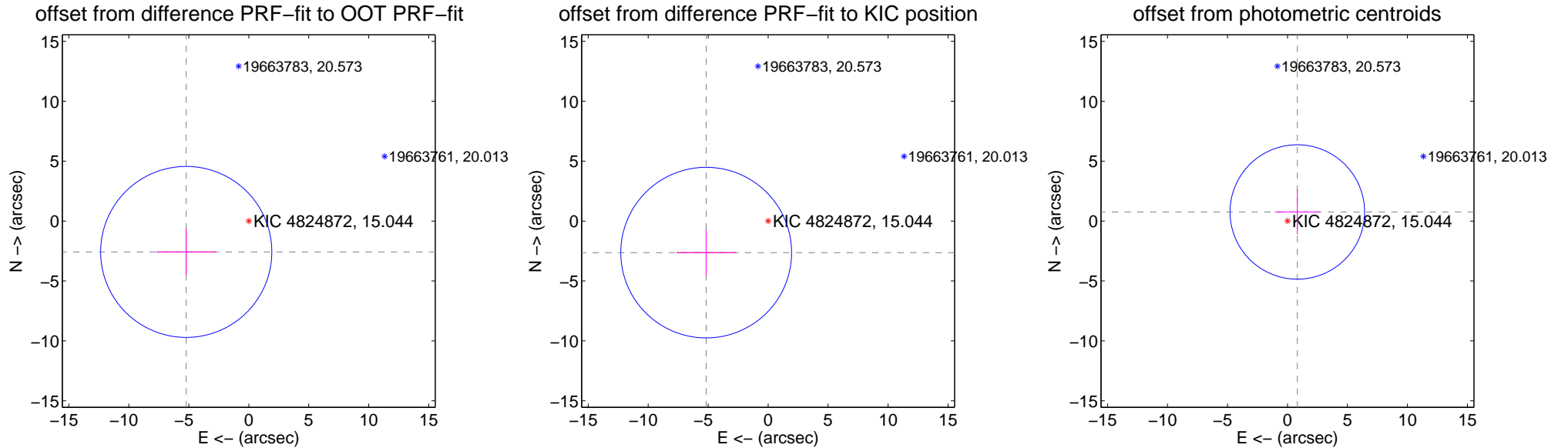
DV Centroid Data

Supplemental centroid analysis for 004824872-01. Kepler magnitude: 15.04. Transit SNR 7.36

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.815 ± 2.378	2.45	5.214 ± 2.478	-2.575 ± 1.911
PRF-fit source offset from KIC position	5.796 ± 2.372	2.44	5.163 ± 2.478	-2.633 ± 1.911
photometric centroid source offset	1.12 ± 1.87	0.60	-0.82 ± 1.88	0.76 ± 1.86



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

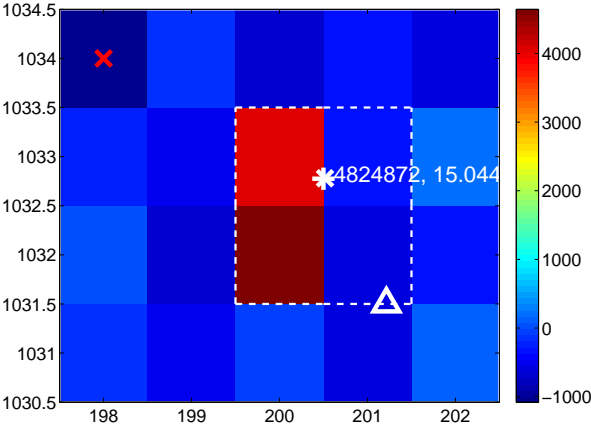
Q5 no difference image



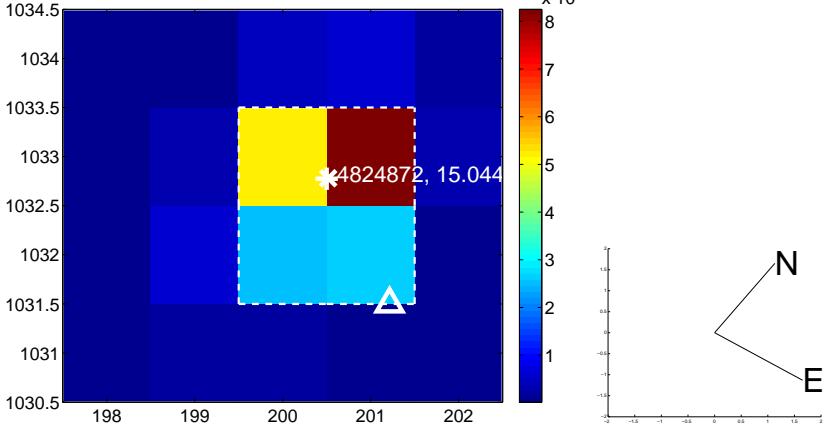
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

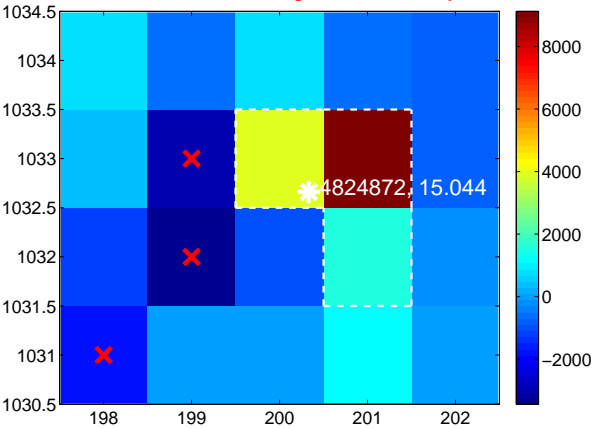
Q9 no difference image



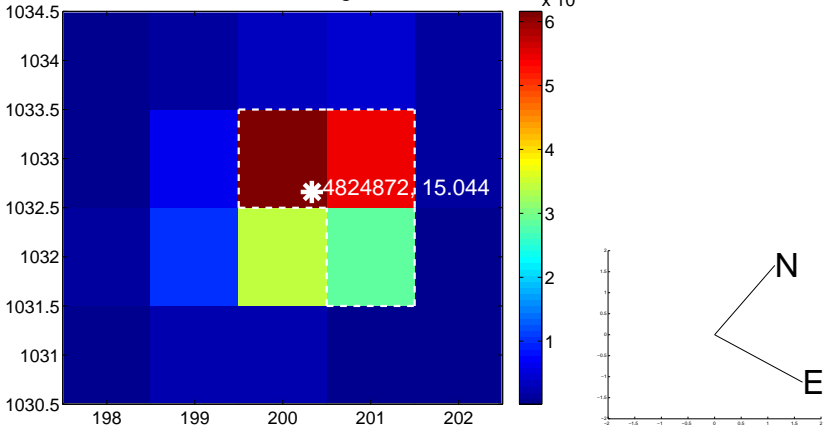
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



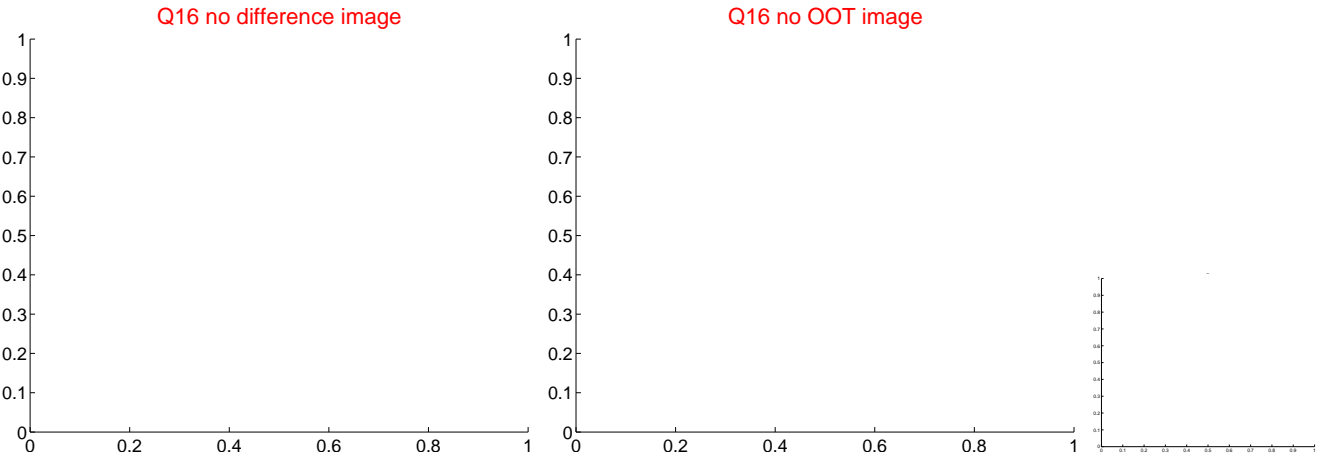
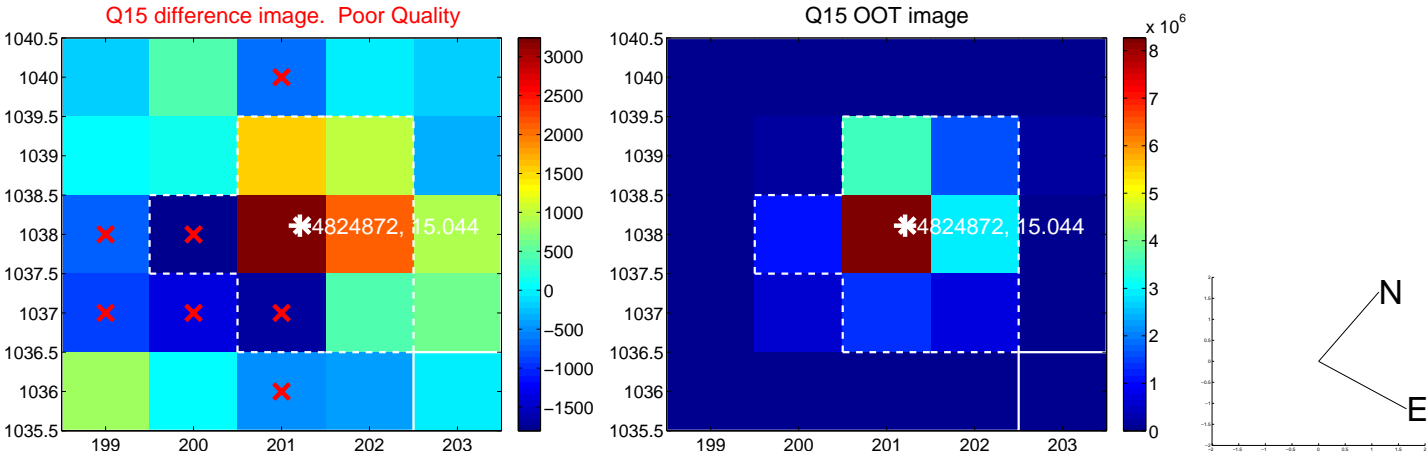
Q12 no difference image



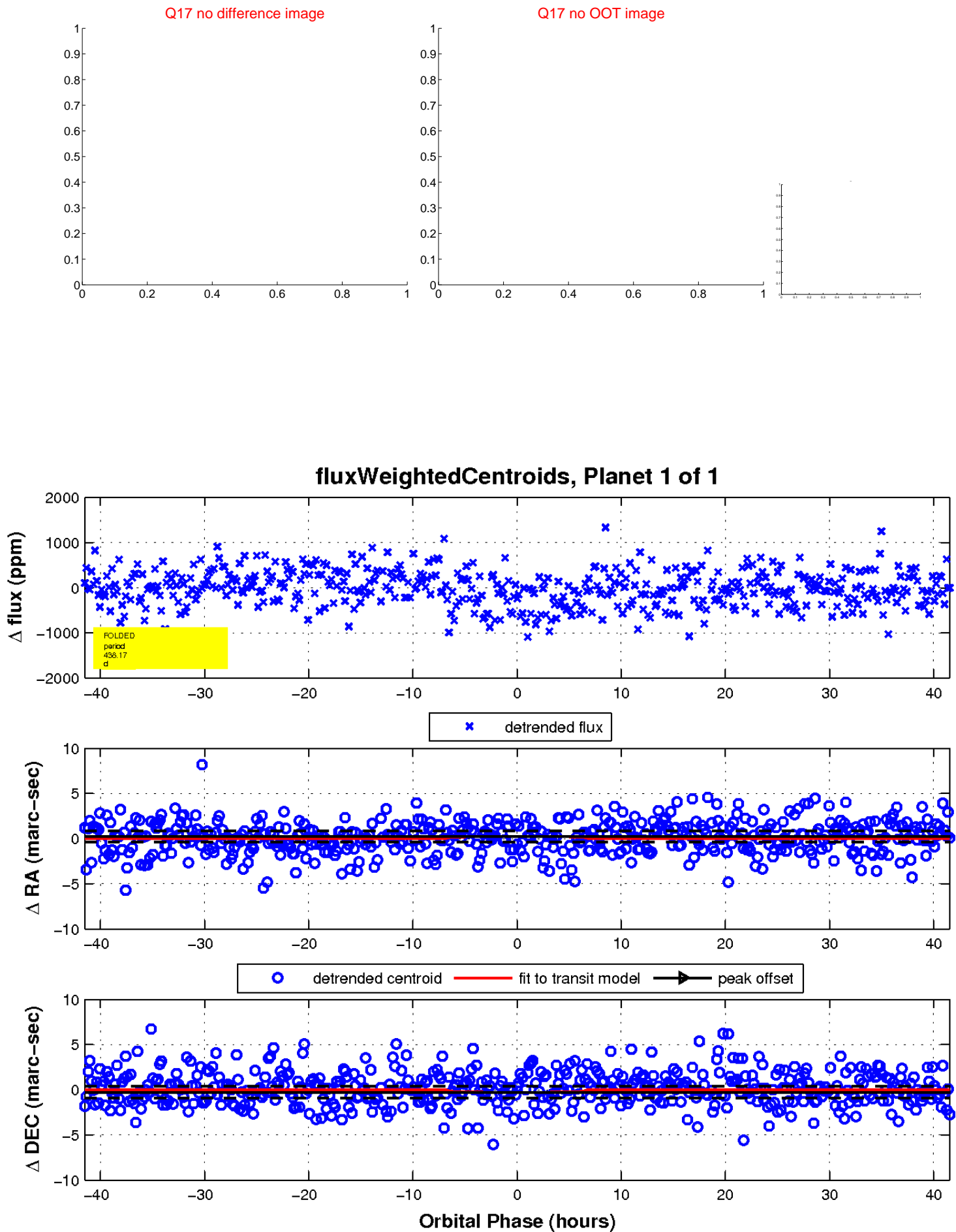
Q12 no OOT image



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

