

KIC 003444098

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})
003444098-01	OBS	4042.01	0.723518	131.593479	429.6	1.359	14.7	16.8	2.86	8855	6.87	115458.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003444098-01	OBS	FP	0.00	1	0	0	0	LPP_ALT—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 003444098-01

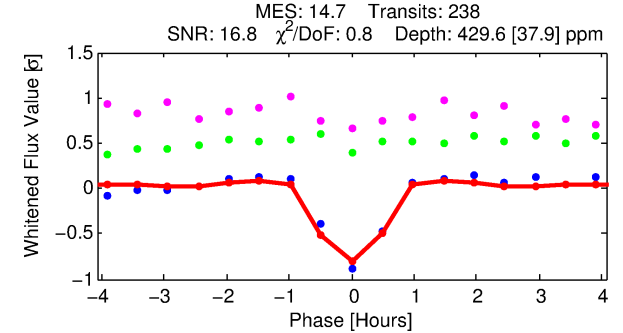
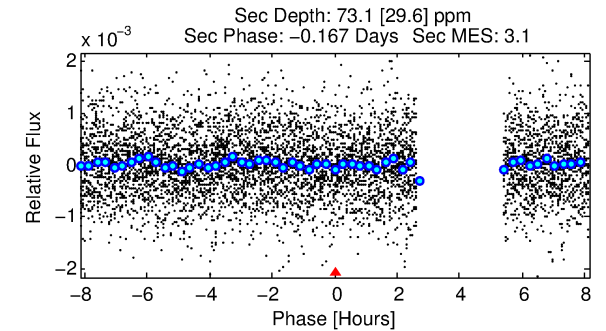
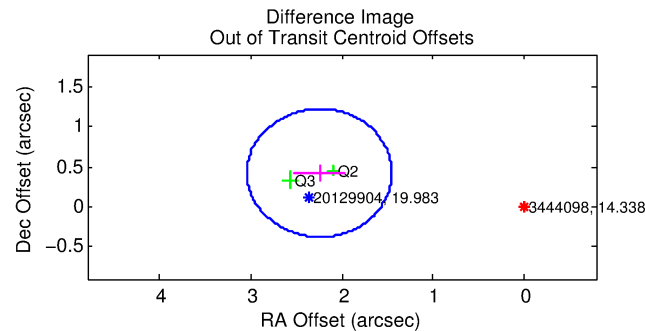
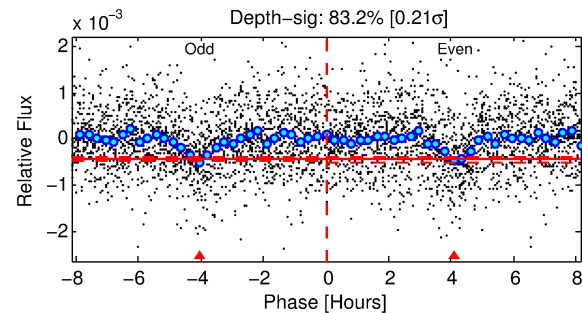
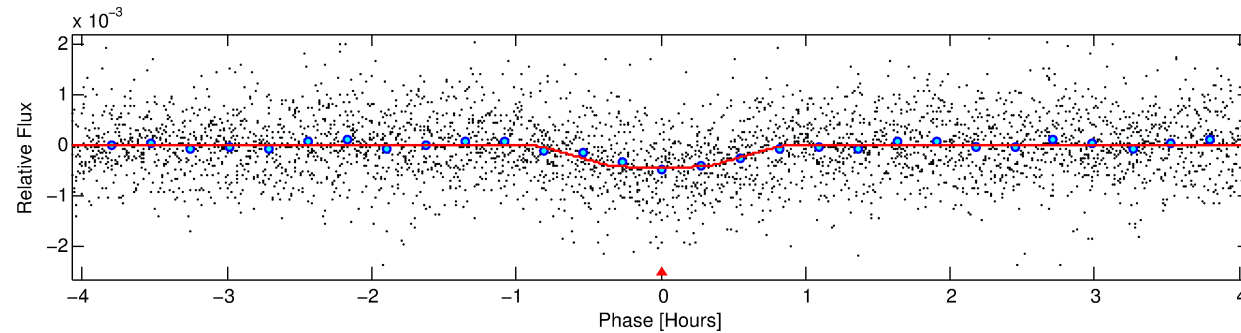
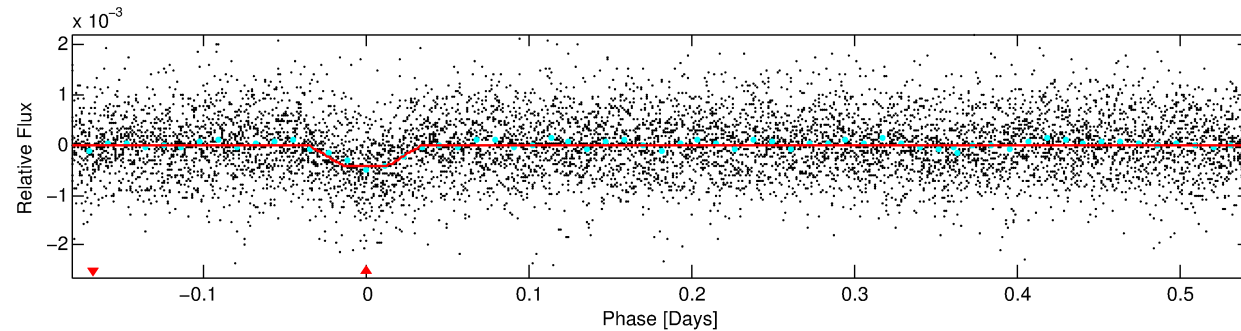
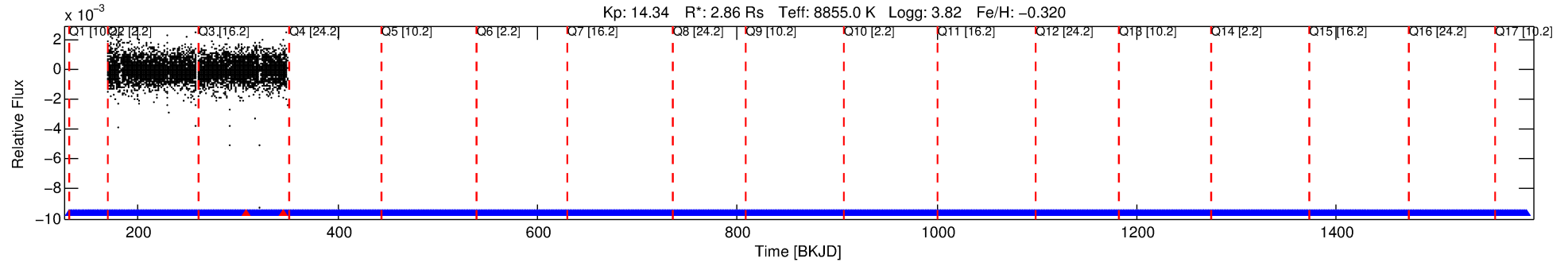
No Significant Match Found

DV One-Page Summary

KIC: 3444098 Candidate: 1 of 1 Period: 0.724 d

KOI: K04042 Corr: No Ephemeris Match

Kp: 14.34 R*: 2.86 Rs Teff: 8855.0 K Logg: 3.82 Fe/H: -0.320



DV Fit Results:

Period = 0.72352 [0.00001] d
Epoch = 131.5935 [0.0020] BKJD
Rp/R* = 0.0220 [0.0064]
a/R* = 2.18 [3.34]
b = 0.90 [0.41]
Seff = 115458.14 [82417.79]
Teq = 4700 [839] K
Rp = 6.87 [3.66] Re
a = 0.0197 [0.0085] AU
Ag = 0.33 [0.33] [-2.03σ]
Teffp = 5516 [1003] K [0.62σ]

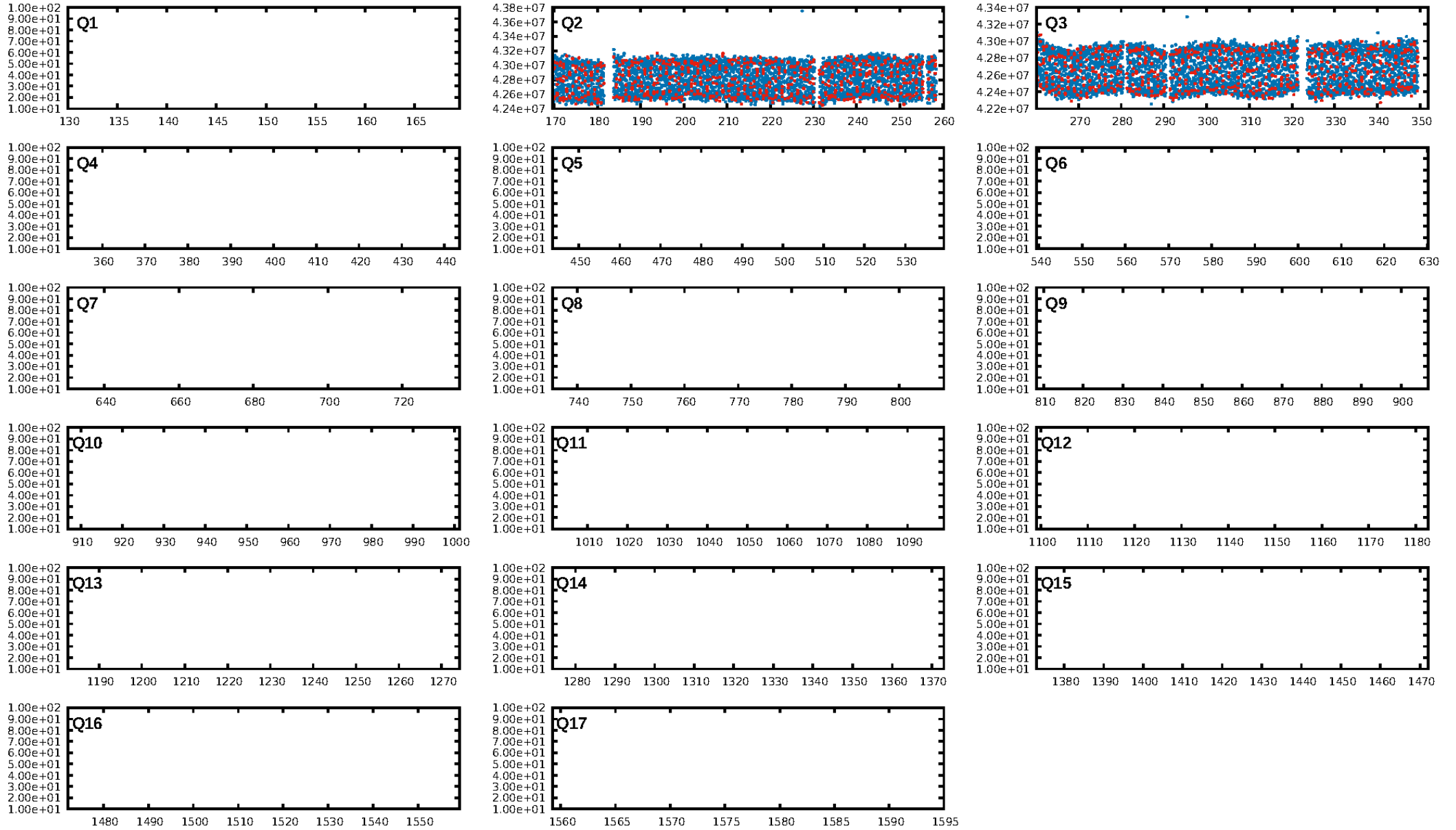
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.80e-48
RollingBand-fgt: 0.99 [236/238]
GhostDiagnostic-chr: 0.5092
Centroid-sig: 0.0%
Centroid-so: 2.481 arcsec [6.36σ]
OotOffset-rm: 2.286 arcsec [8.60σ]
KicOffset-rm: 2.282 arcsec [11.02σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

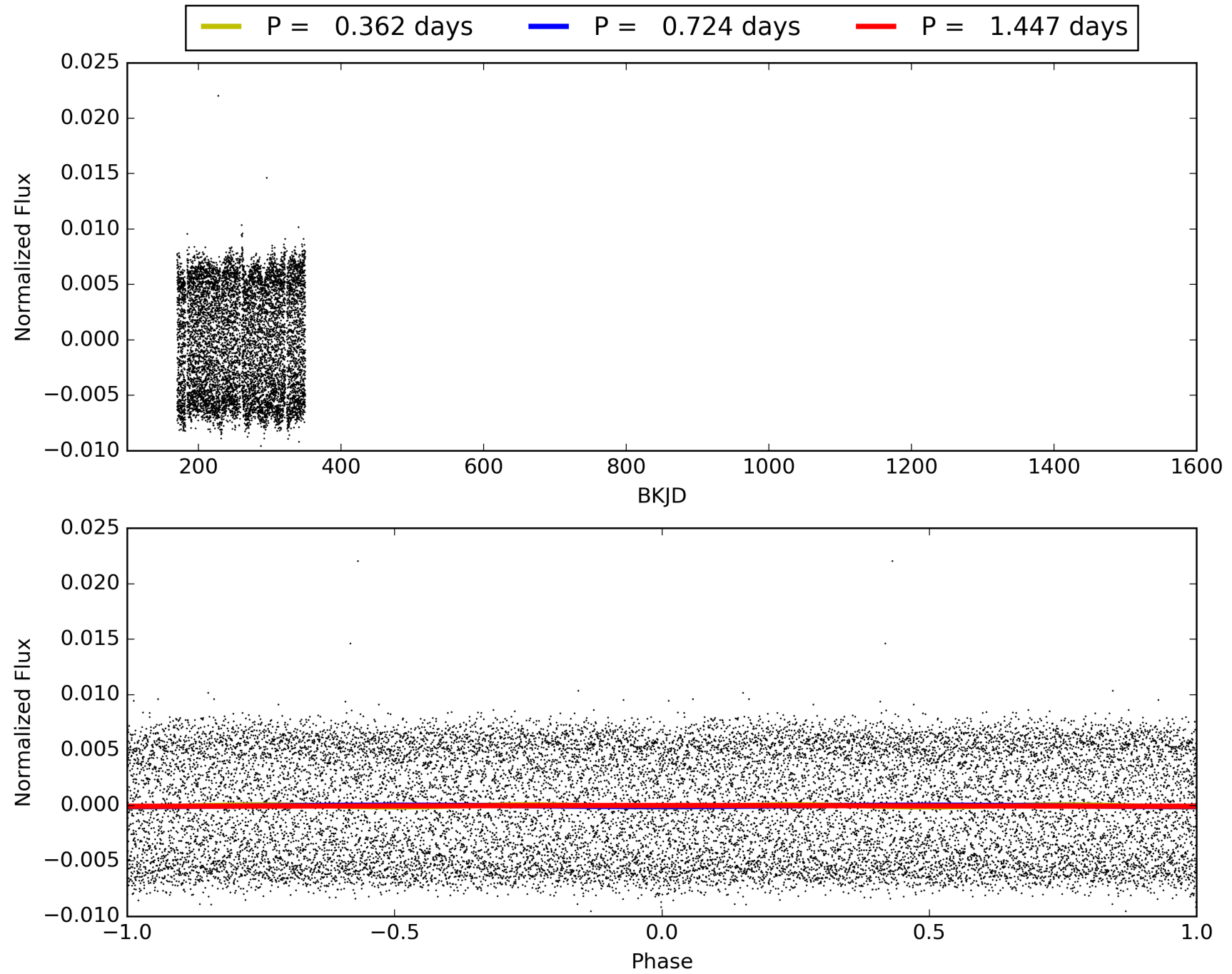
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:57:03 Z

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

TCE 003444098-01, PDC Light Curves

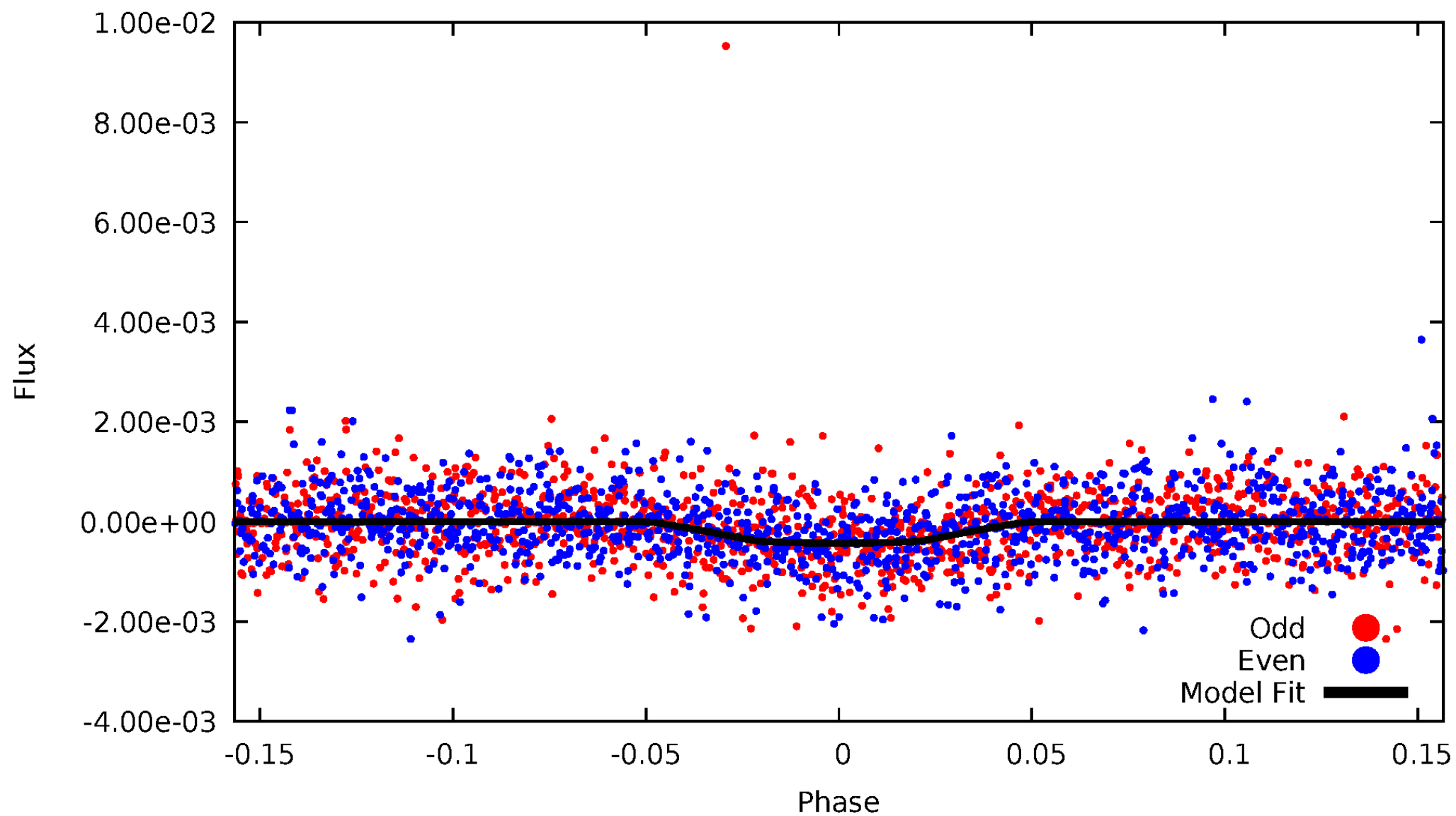


TCE 003444098-01



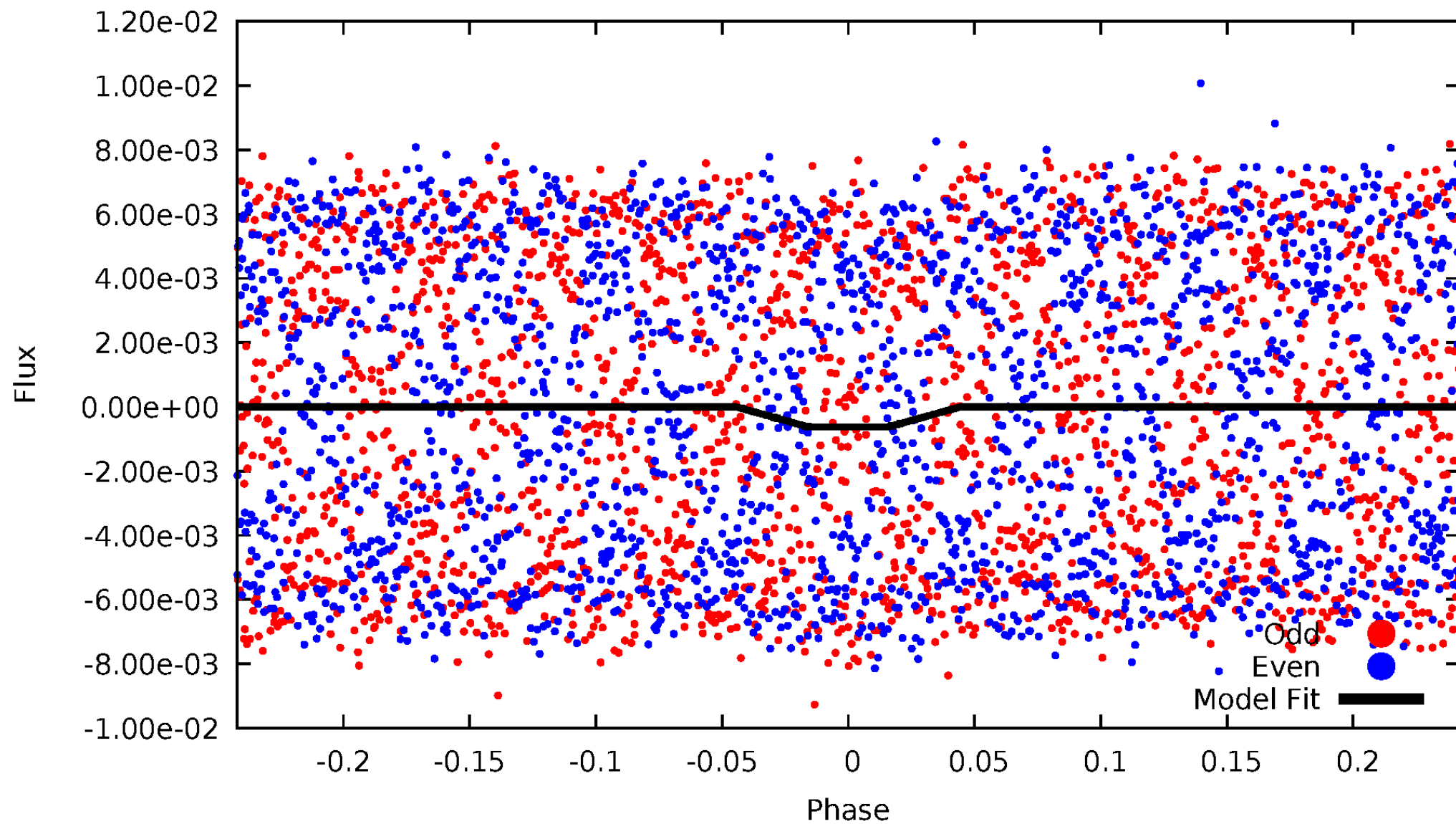
DV Odd/Even

TCE 003444098-01



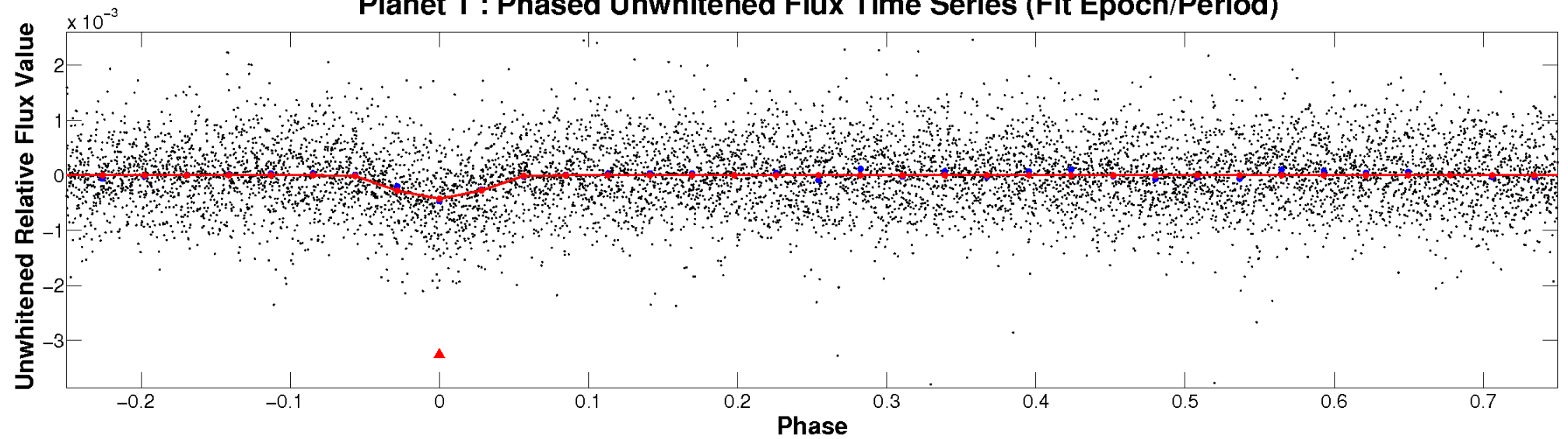
ALT Odd/Even

TCE 003444098-01

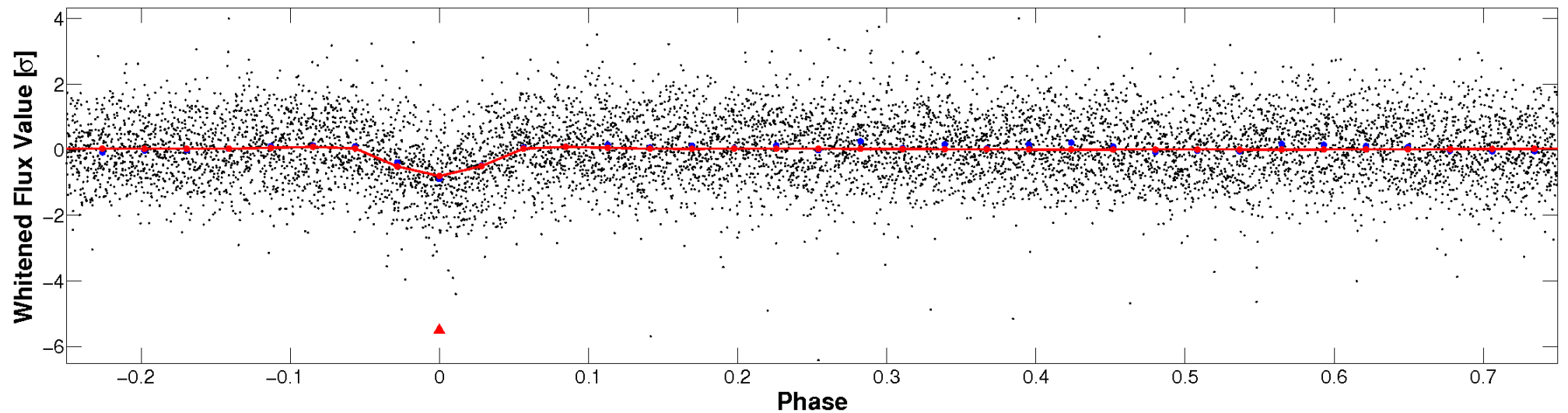


Non-Whitened Vs. Whitened Light Curve

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

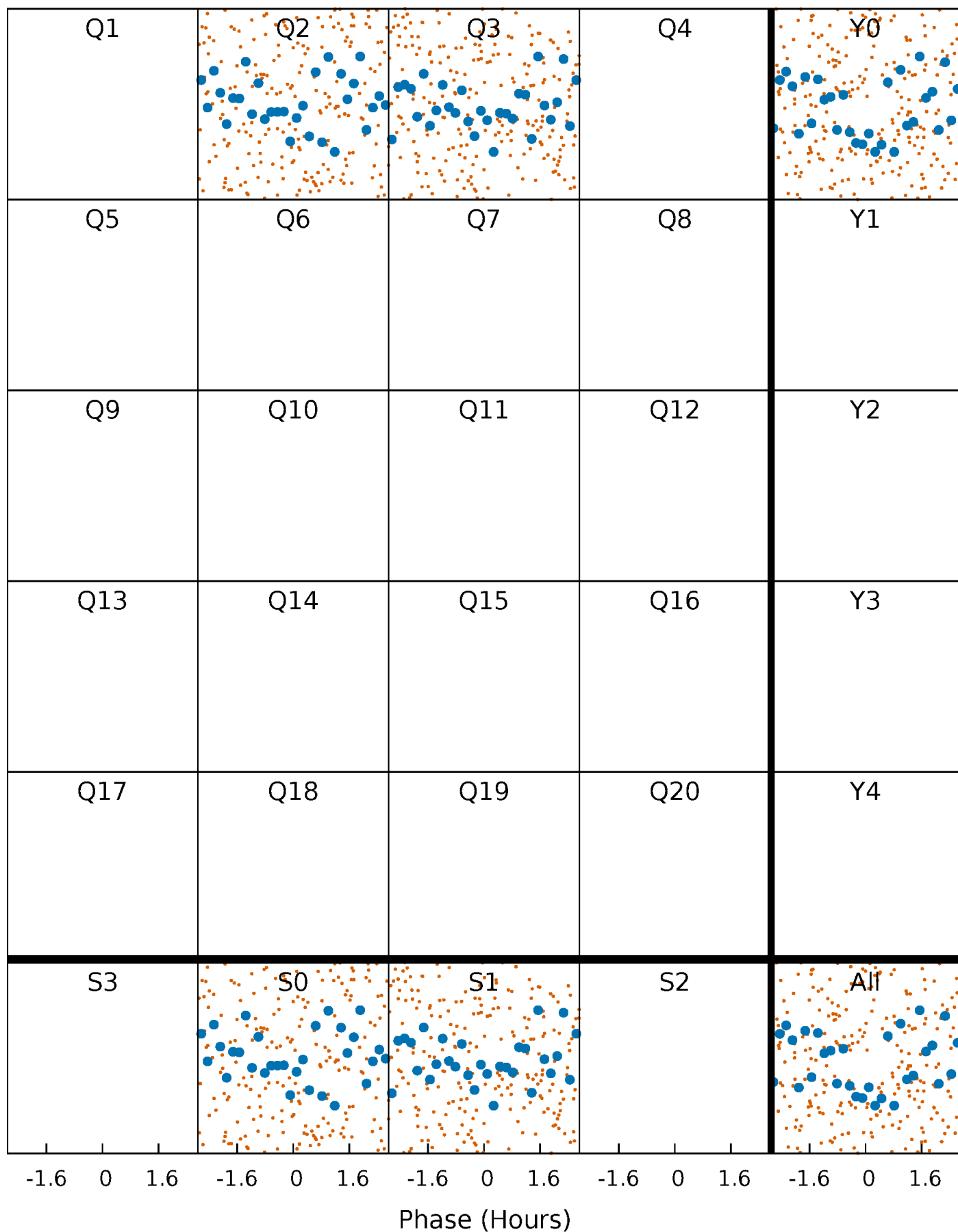


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 003444098-01 P= 0.723518 Days $T_0=131.593479$ (BKJD)



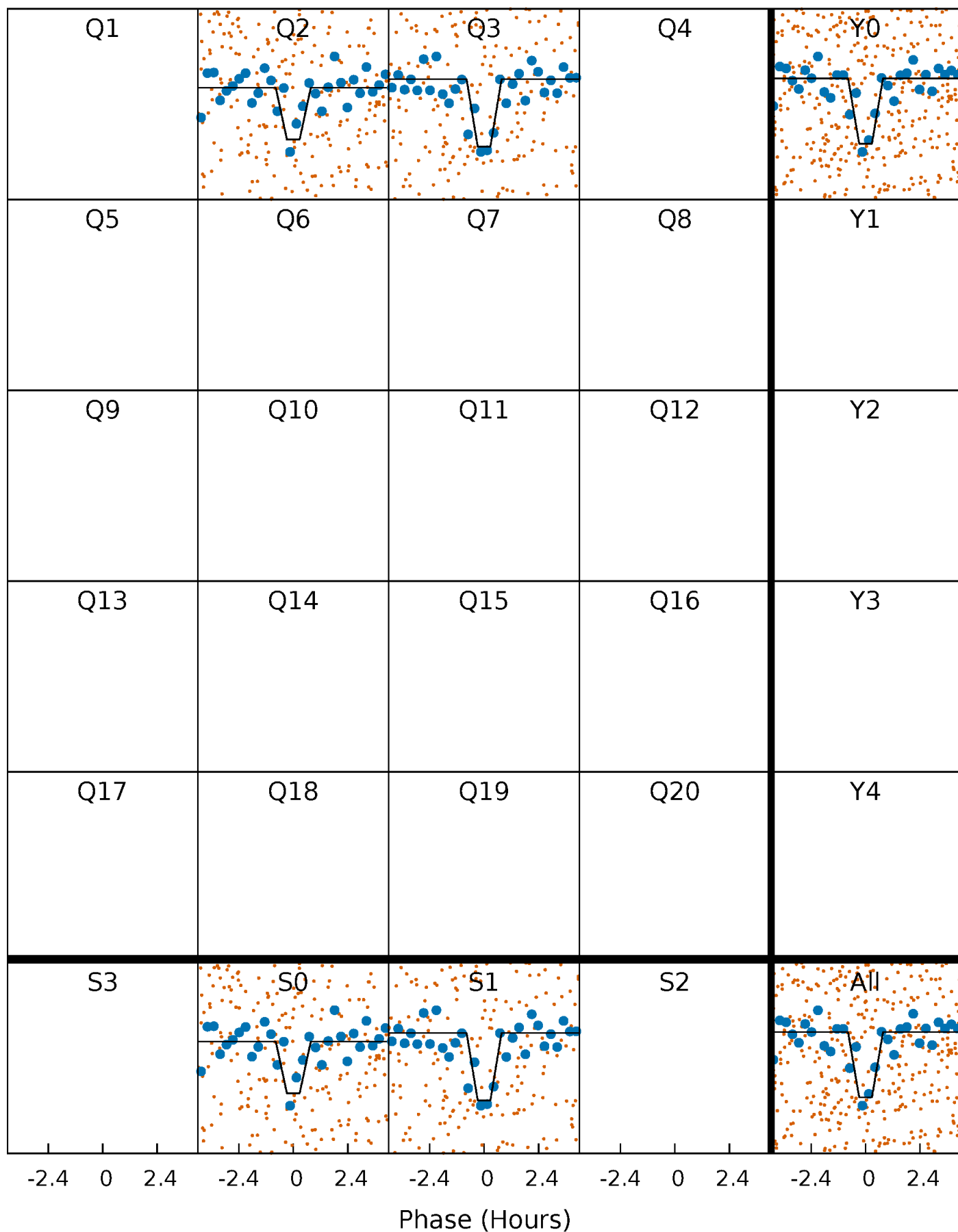
DV Quarter-Phased Transit Curves

TCE 003444098-01 P= 0.723518 Days $T_0=131.593479$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

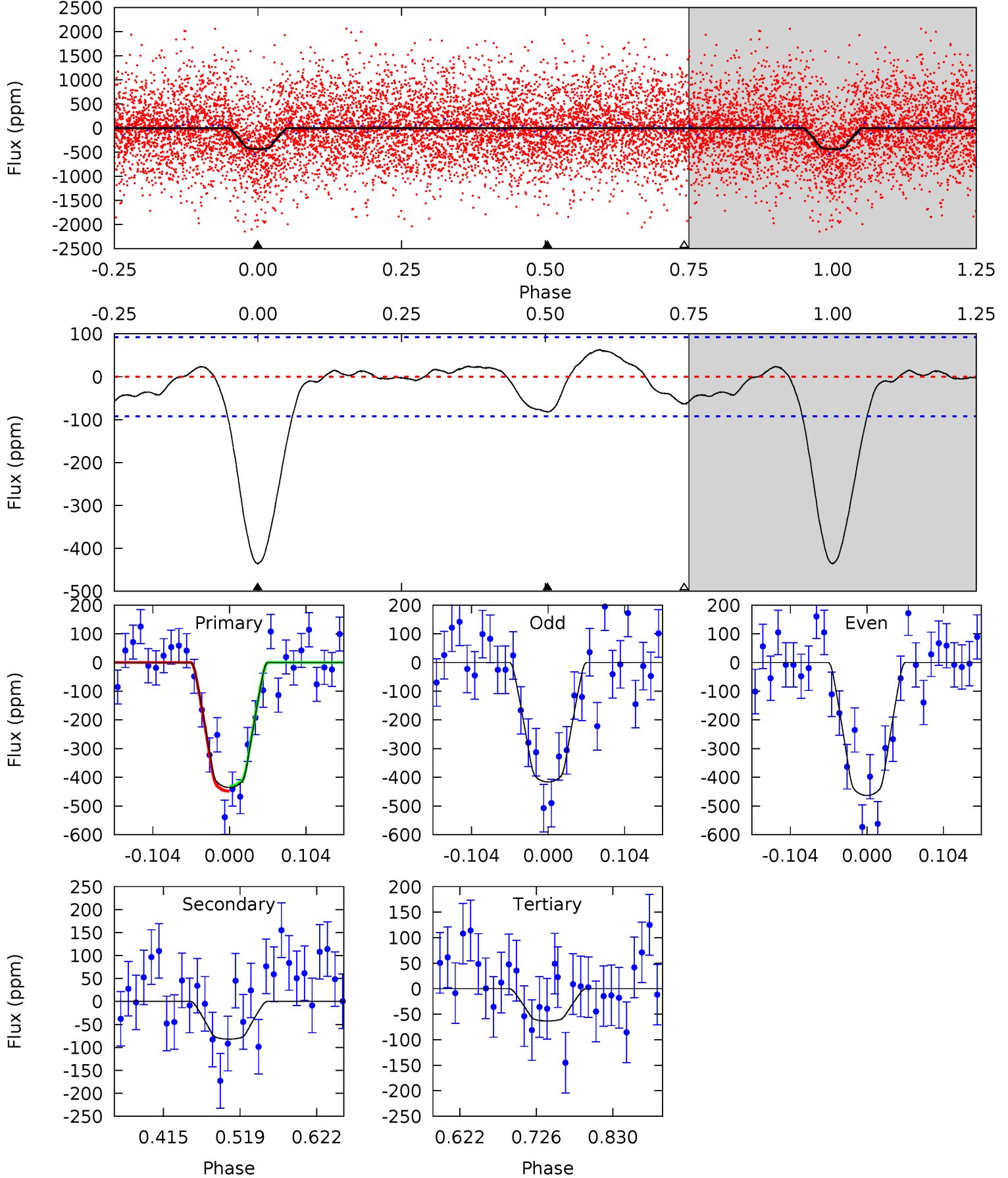
TCE 003444098-01 $P = 0.723579$ Days $T_0 = 131.584158$ (BKJD)



DV Model-Shift Uniqueness Test

003444098-01, P = 0.723518 Days, E = 131.593479 Days

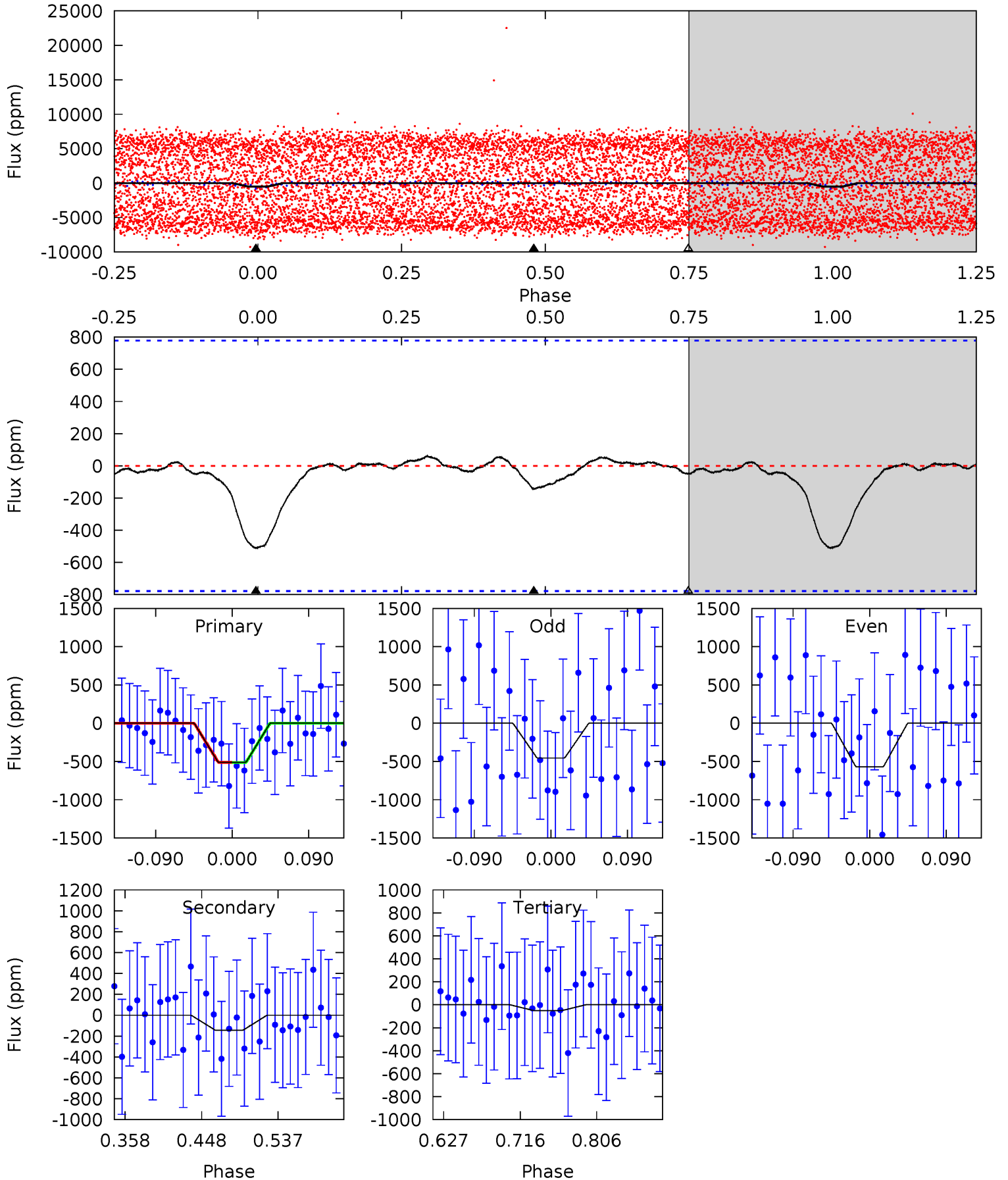
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	4.06	3.13	0	4.56	1.63	1.36	18.4	21.5	0.93	4.06	1.17	0.97	0.13	0.43



Alt Model-Shift Uniqueness Test

003444098-01, P = 0.723579 Days, E = 131.584158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.02	0.85	0.30	0	4.59	1.70	0.16	2.72	3.02	0.55	0.85	0.34	0.80	0.11	0.01



Stellar Parameters For KIC 003444098

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8855^{+251}_{-376}	$3.818^{+0.408}_{-0.102}$	$-0.320^{+0.500}_{-0.350}$	$2.858^{+0.687}_{-1.275}$	$1.964^{+0.399}_{-0.439}$	$0.118^{+0.429}_{-0.044}$
	+3%/-4%	+11%/-3%	+156%/-109%	+24%/-45%	+20%/-22%	+362%/-37%
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 003444098-01 / KOI 4042.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-82 ± 20	$6.28^{+2.55}_{-2.14}$	6303^{+521}_{-704}	4184^{+1650}_{-8090}	$0.445^{+0.565}_{-0.220}$
Alt.	-144 ± 170	$7.08^{+2.75}_{-2.16}$	6373^{+469}_{-745}	4864^{+2287}_{-10378}	$0.568^{+1.184}_{-0.729}$

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

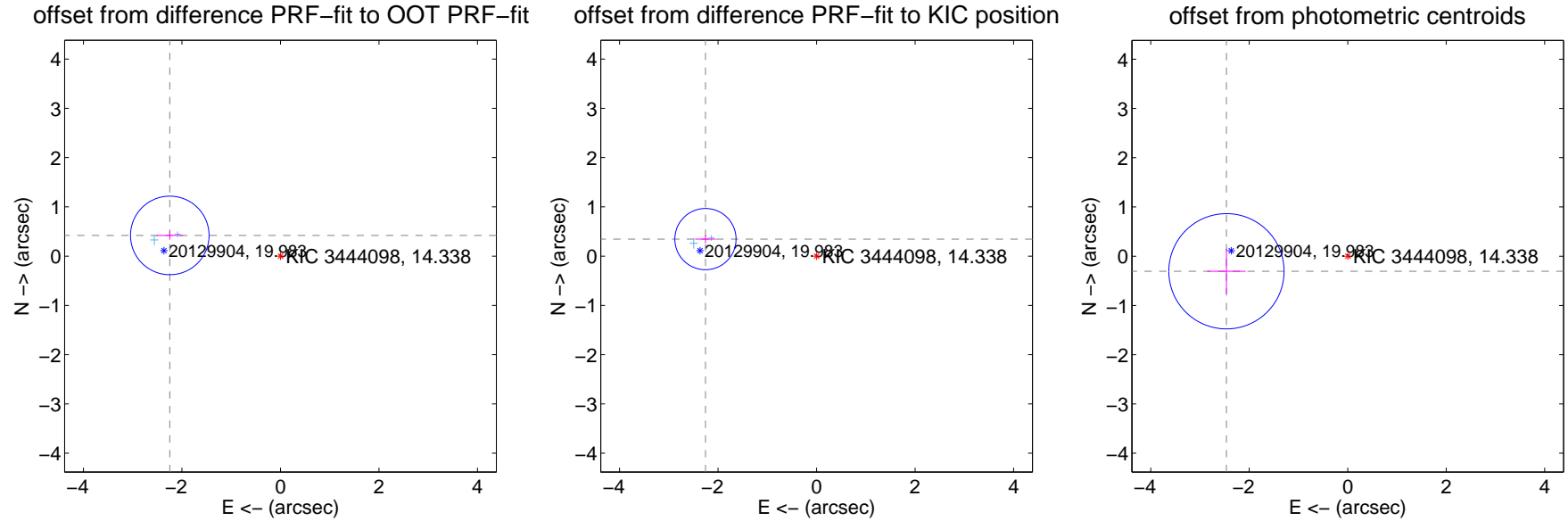
DV Centroid Data

Supplemental centroid analysis for 003444098-01. Kepler magnitude: 14.34. Transit SNR 16.80

There are 2 quarters with good PRF difference image offsets

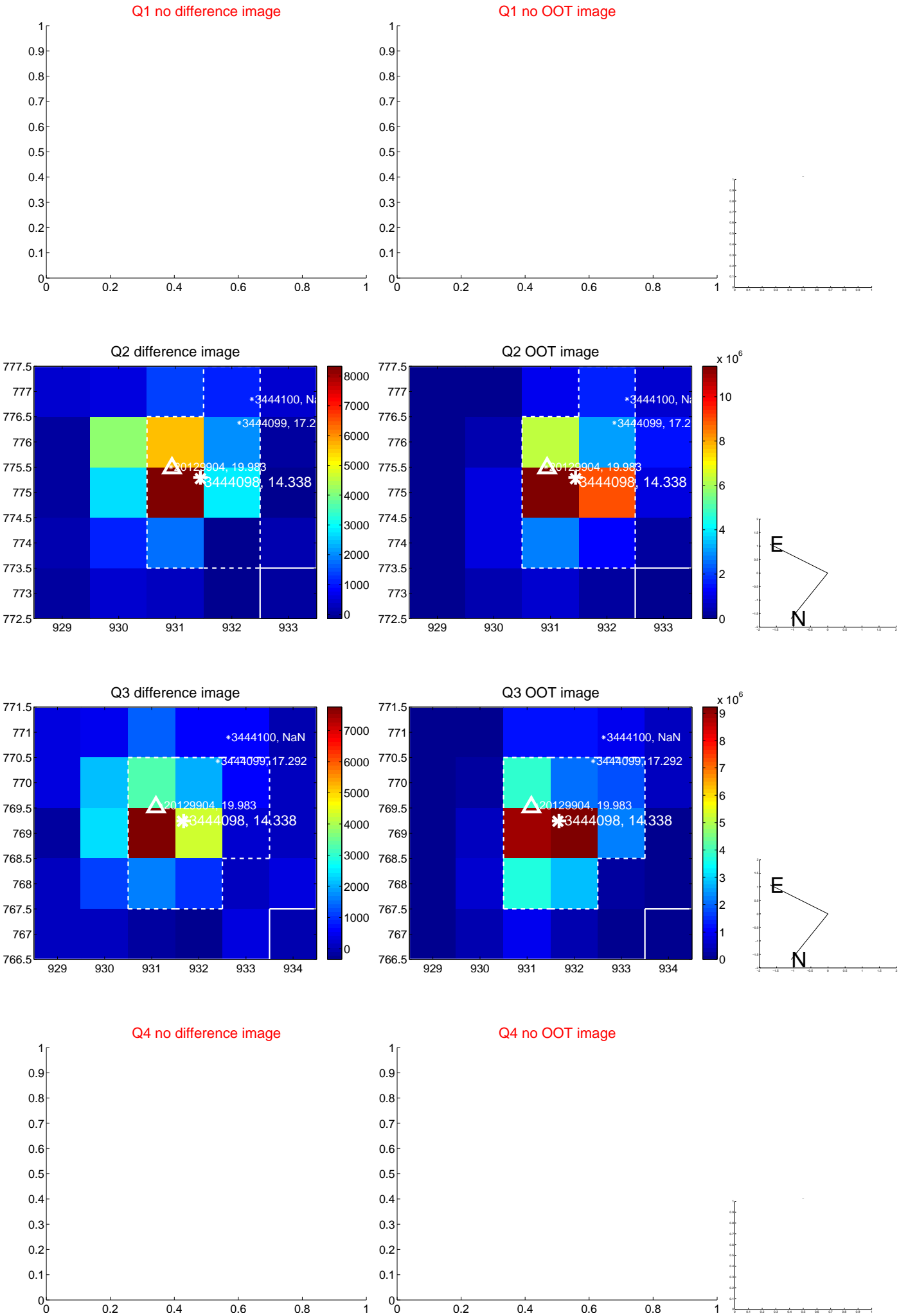
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.286 ± 0.266	8.60	2.247 ± 0.270	0.420 ± 0.087
PRF-fit source offset from KIC position	2.282 ± 0.207	11.02	2.256 ± 0.209	0.346 ± 0.085
photometric centroid source offset	2.48 ± 0.39	6.36	2.46 ± 0.39	-0.31 ± 0.46



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.



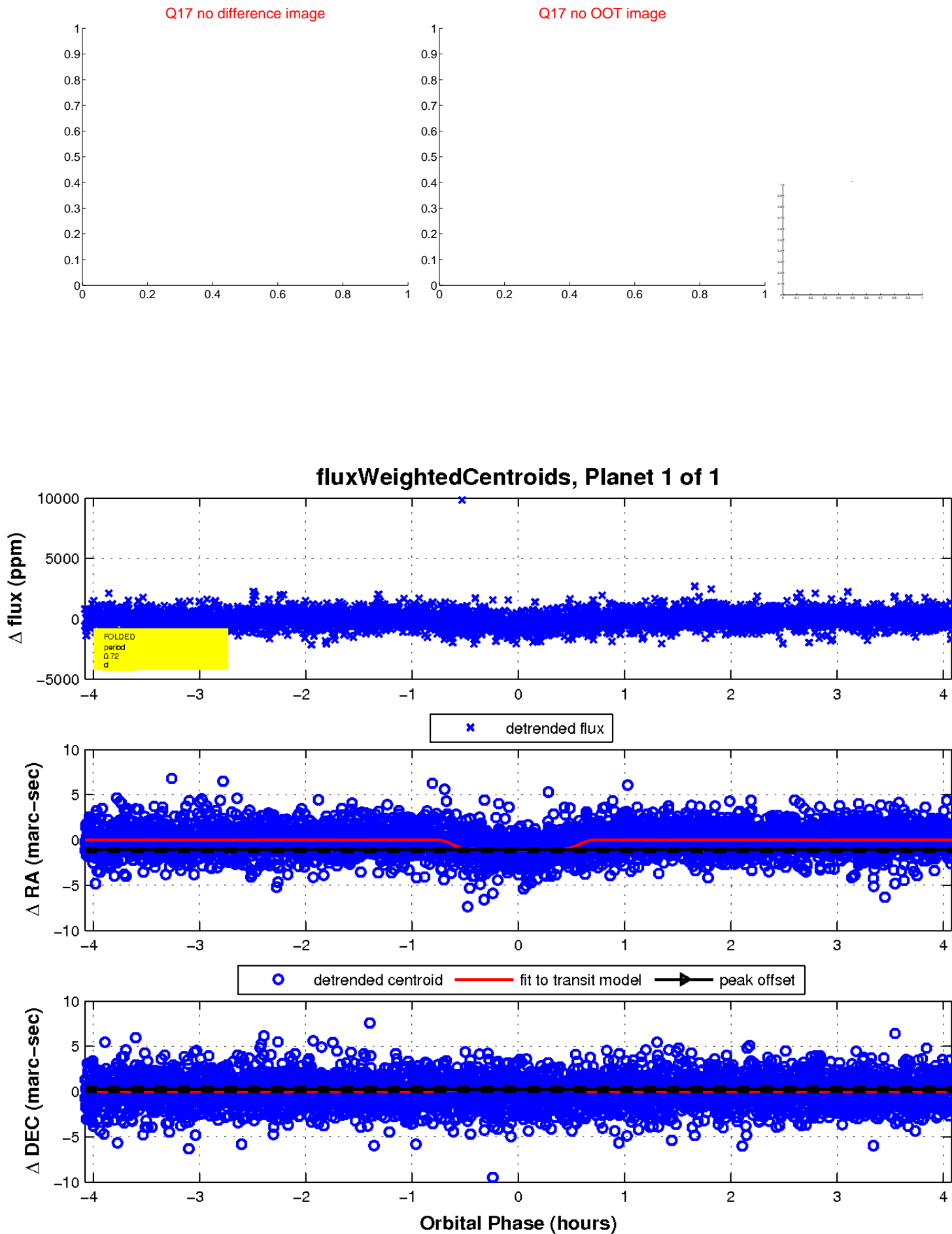
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

