

KIC 010339872

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})
010339872-01	OBS	No	309.041468	185.399632	1085.0	13.640	8.2	7.8	0.81	5244	2.64	0.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010339872-01	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.

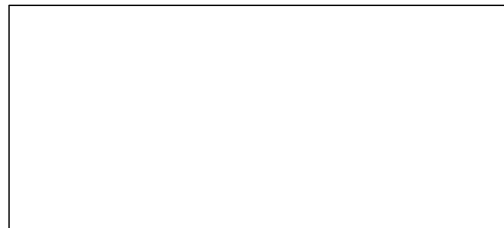
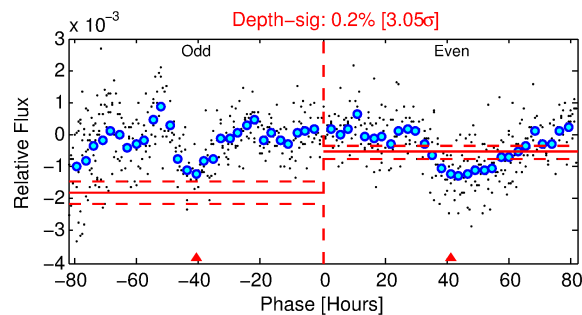
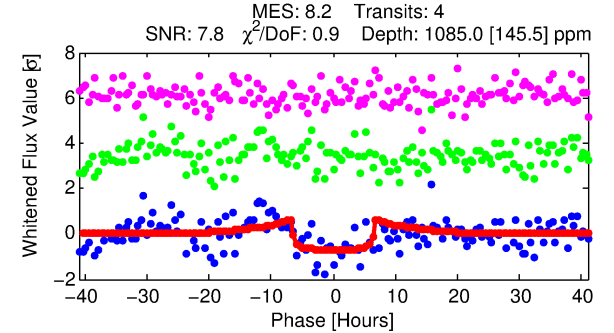
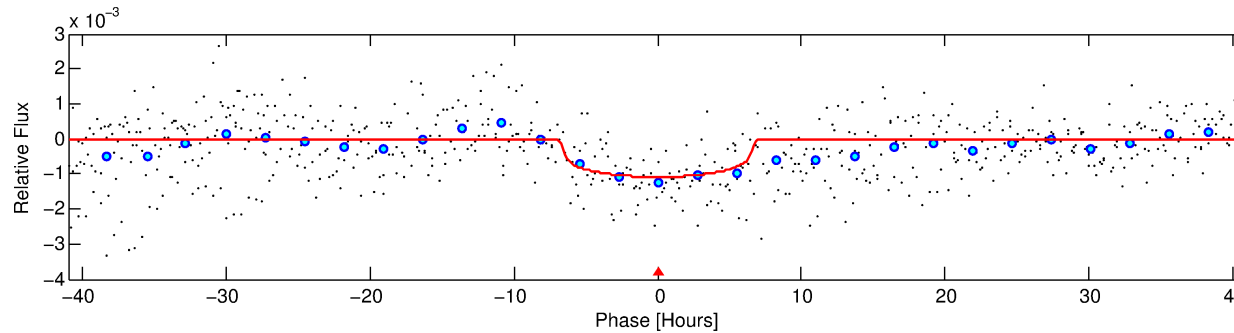
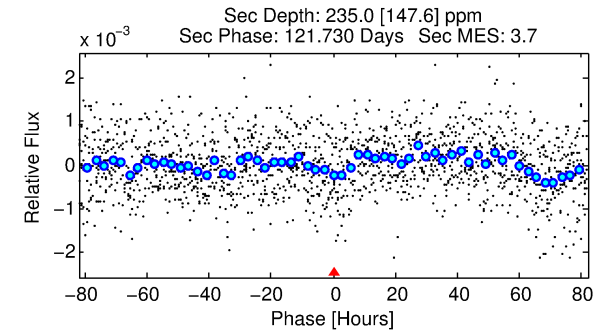
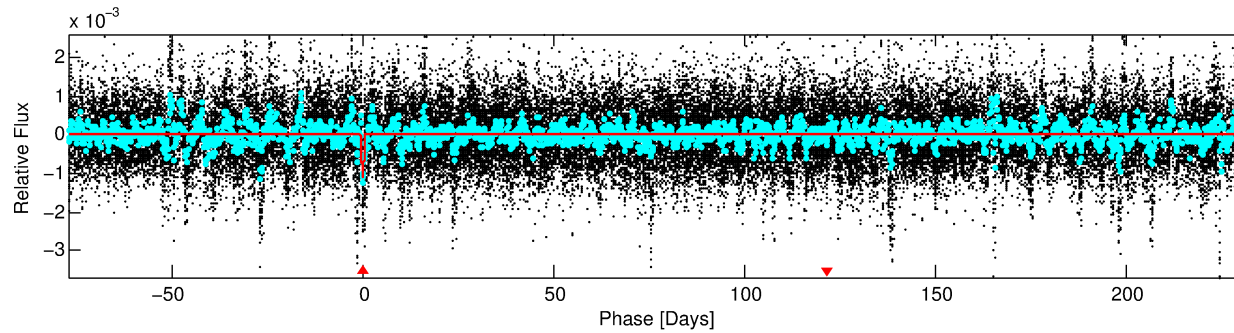
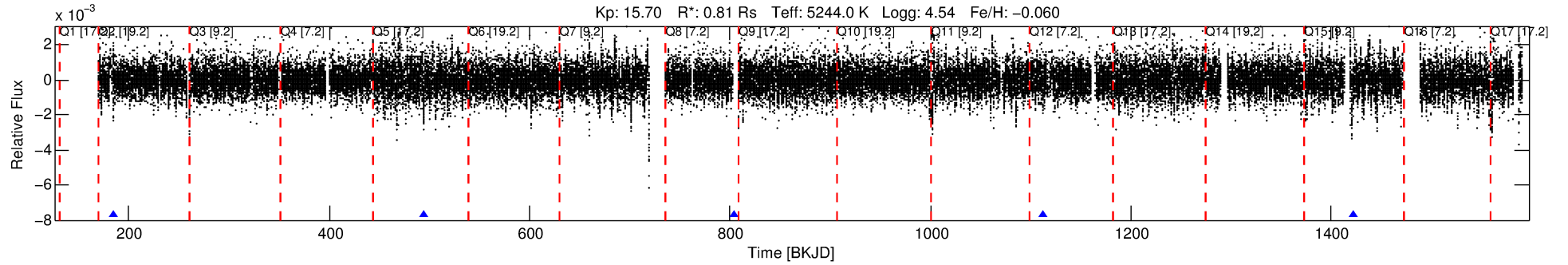
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010339872-01

No Significant Match Found

DV One-Page Summary

KIC: 10339872 Candidate: 1 of 1 Period: 309.041 d



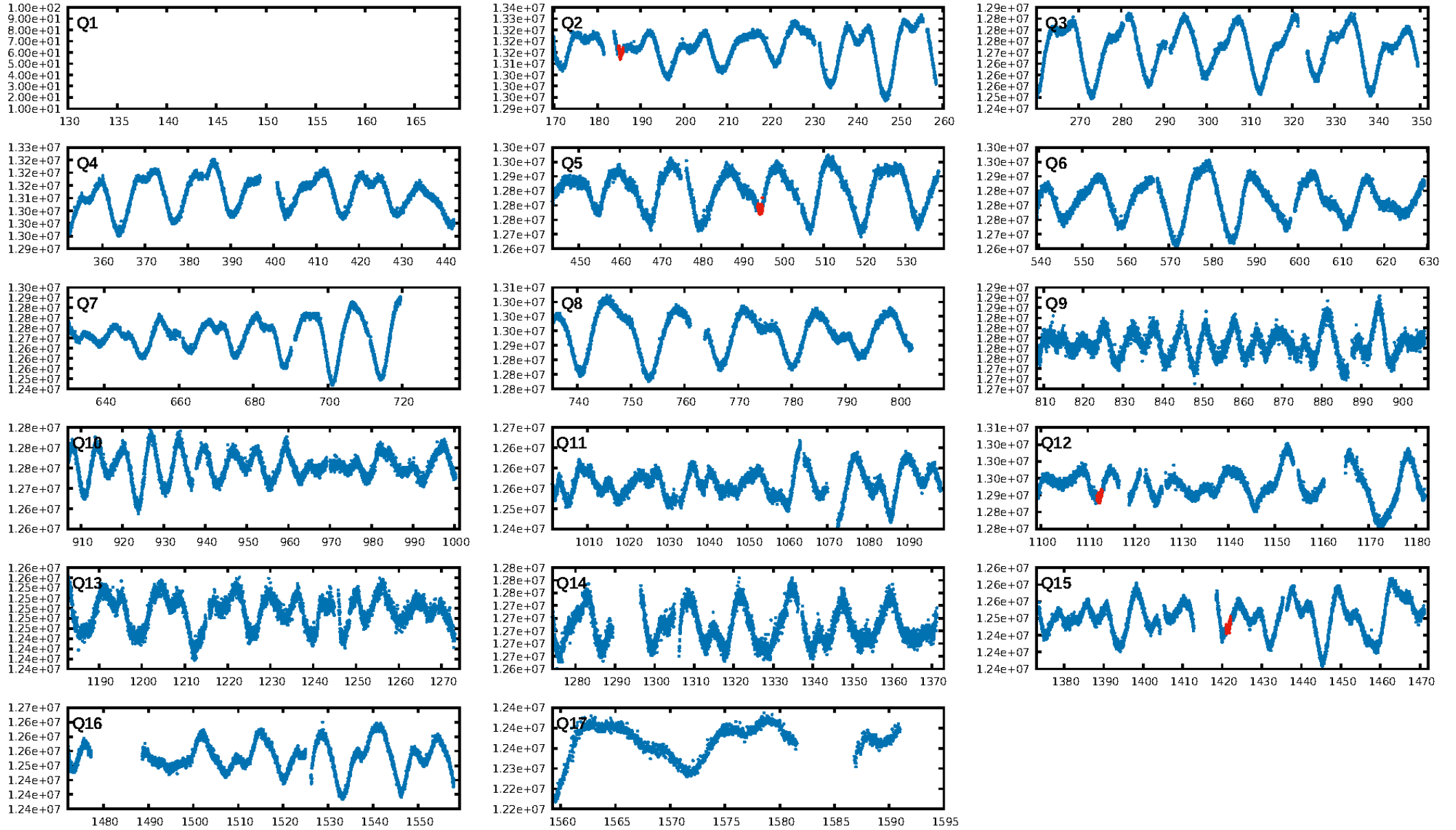
DV Fit Results:

Period = 309.04147 [0.00575] d
Epoch = 185.3996 [0.0137] BKJD
Rp/R* = 0.0300 [0.0175]
a/R* = 166.90 [355.28]
b = 0.36 [5.16]
Seff = 0.63 [0.13]
Teq = 227 [12] K
Rp = 2.64 [1.58] Re
a = 0.8369 [0.0966] AU
Ag = 12961.97 [17307.09] [0.75σ]
Teffp = 3750 [1247] K [2.82σ]

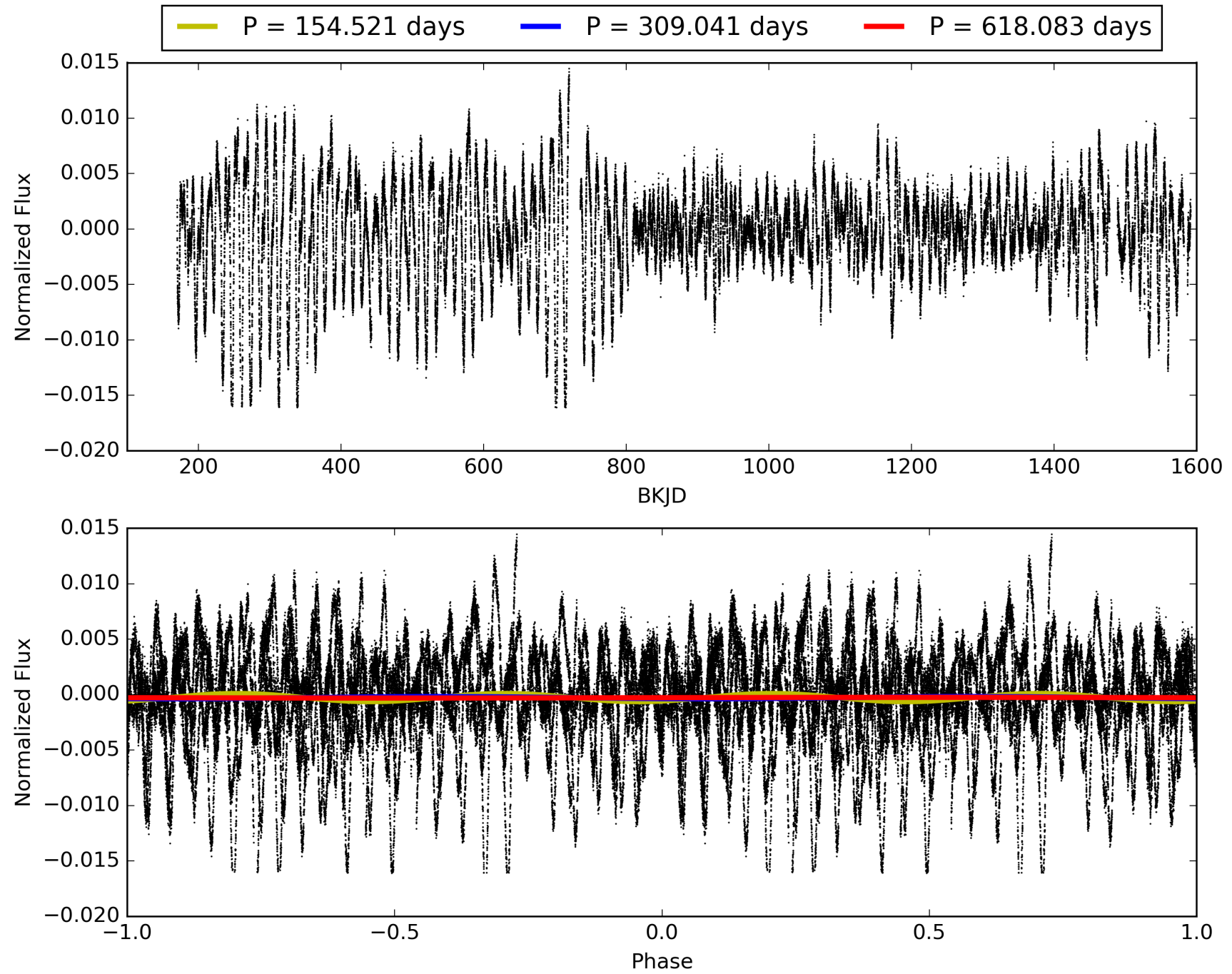
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 29.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.71e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.18
Centroid-sig: 28.5%
Centroid-so: 1.322 arcsec [1.07σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

TCE 010339872-01, PDC Light Curves

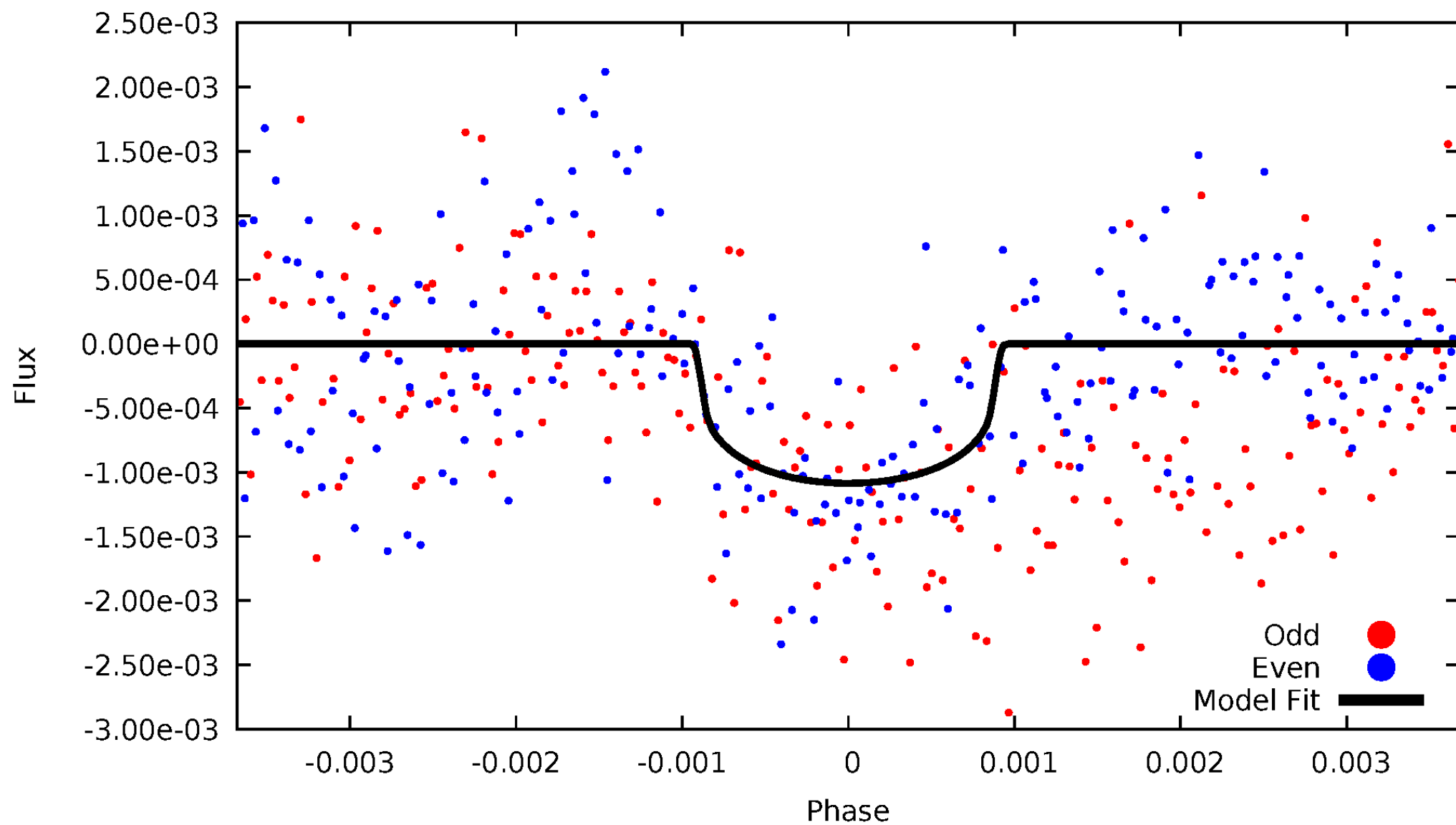


TCE 010339872-01



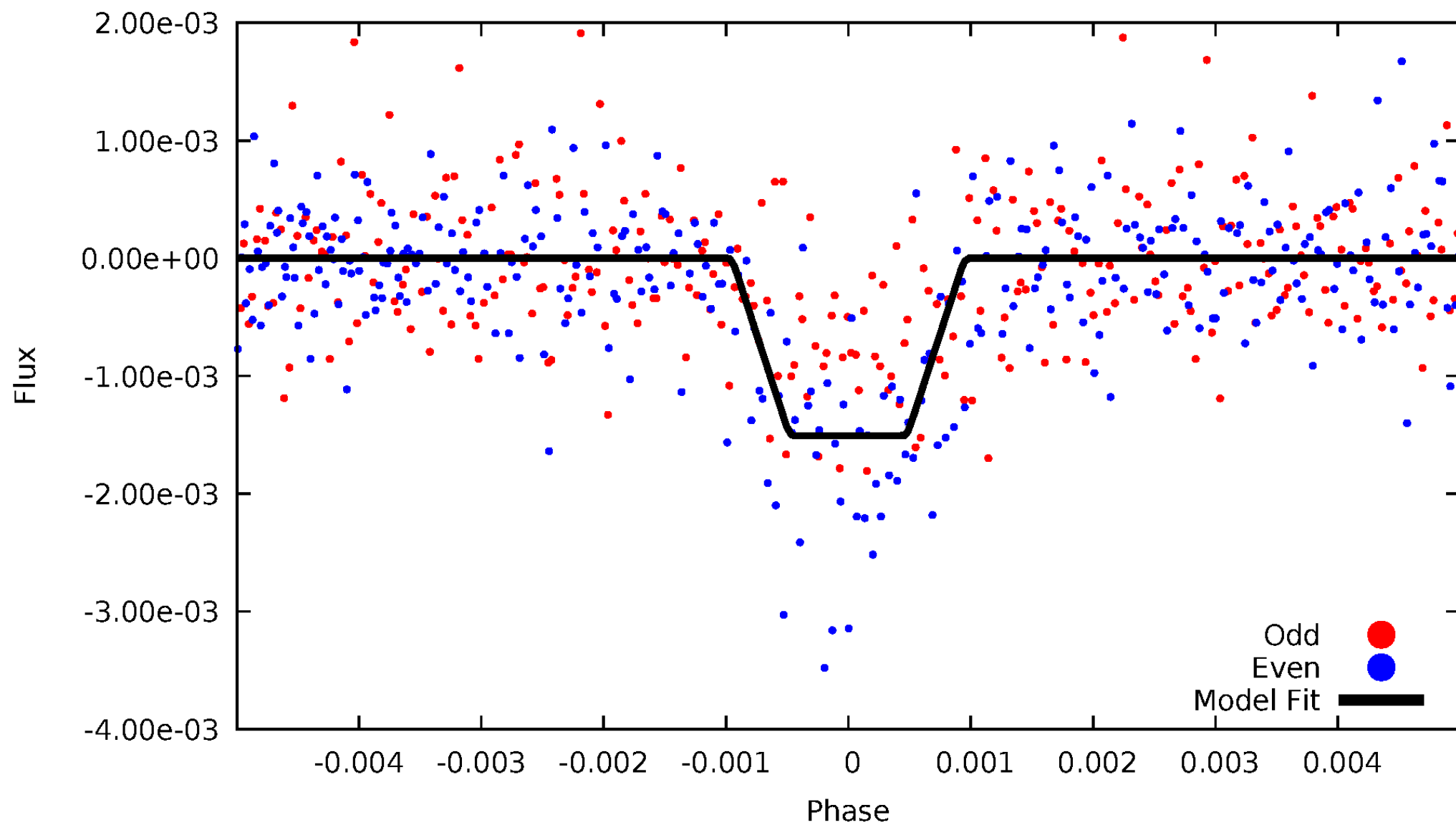
DV Odd/Even

TCE 010339872-01



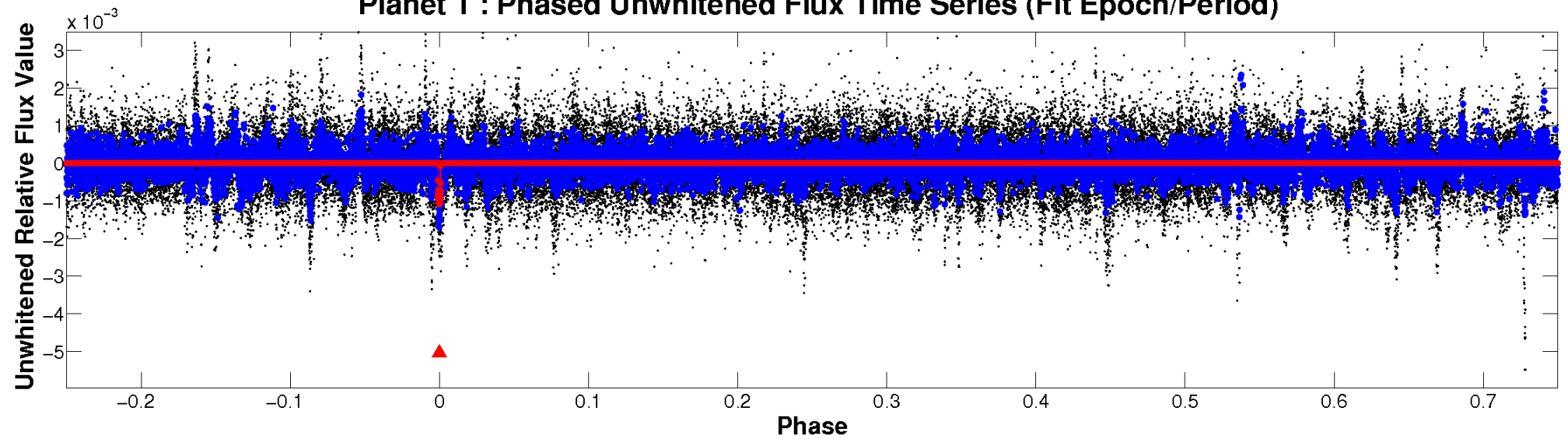
ALT Odd/Even

TCE 010339872-01

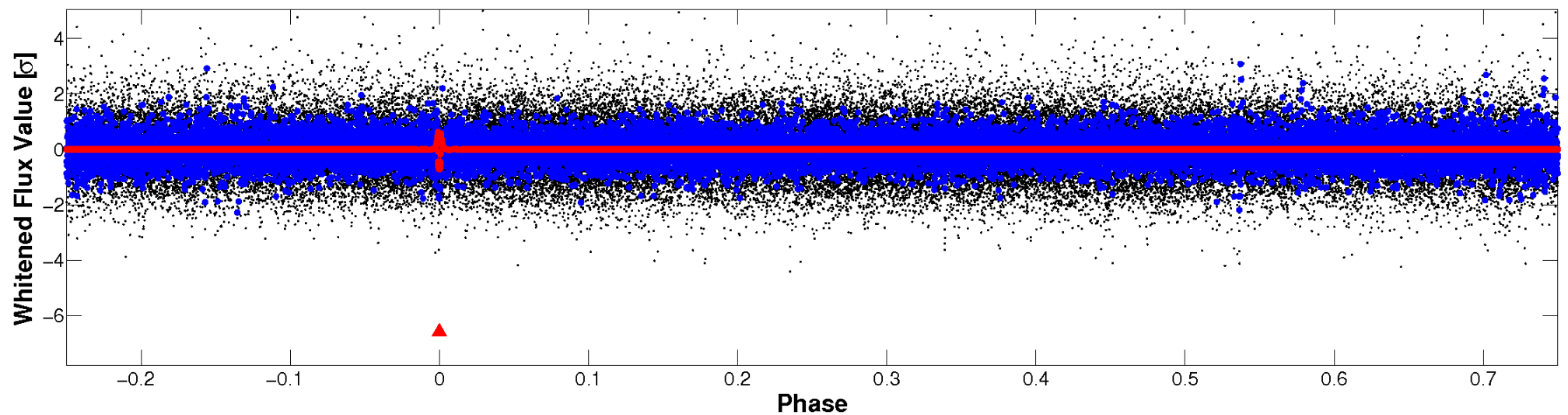


Non-Whitened Vs. Whitened Light Curve

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

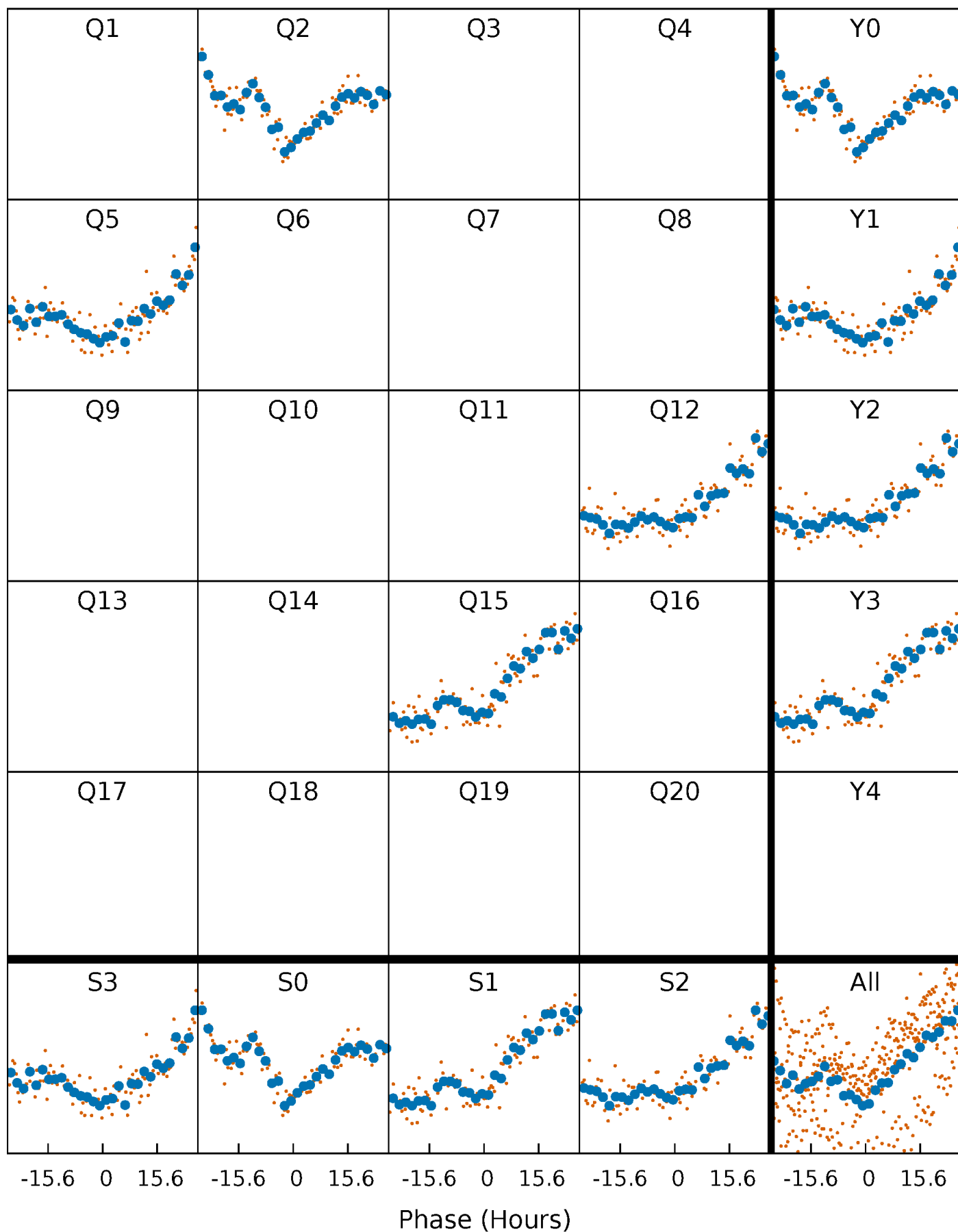


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



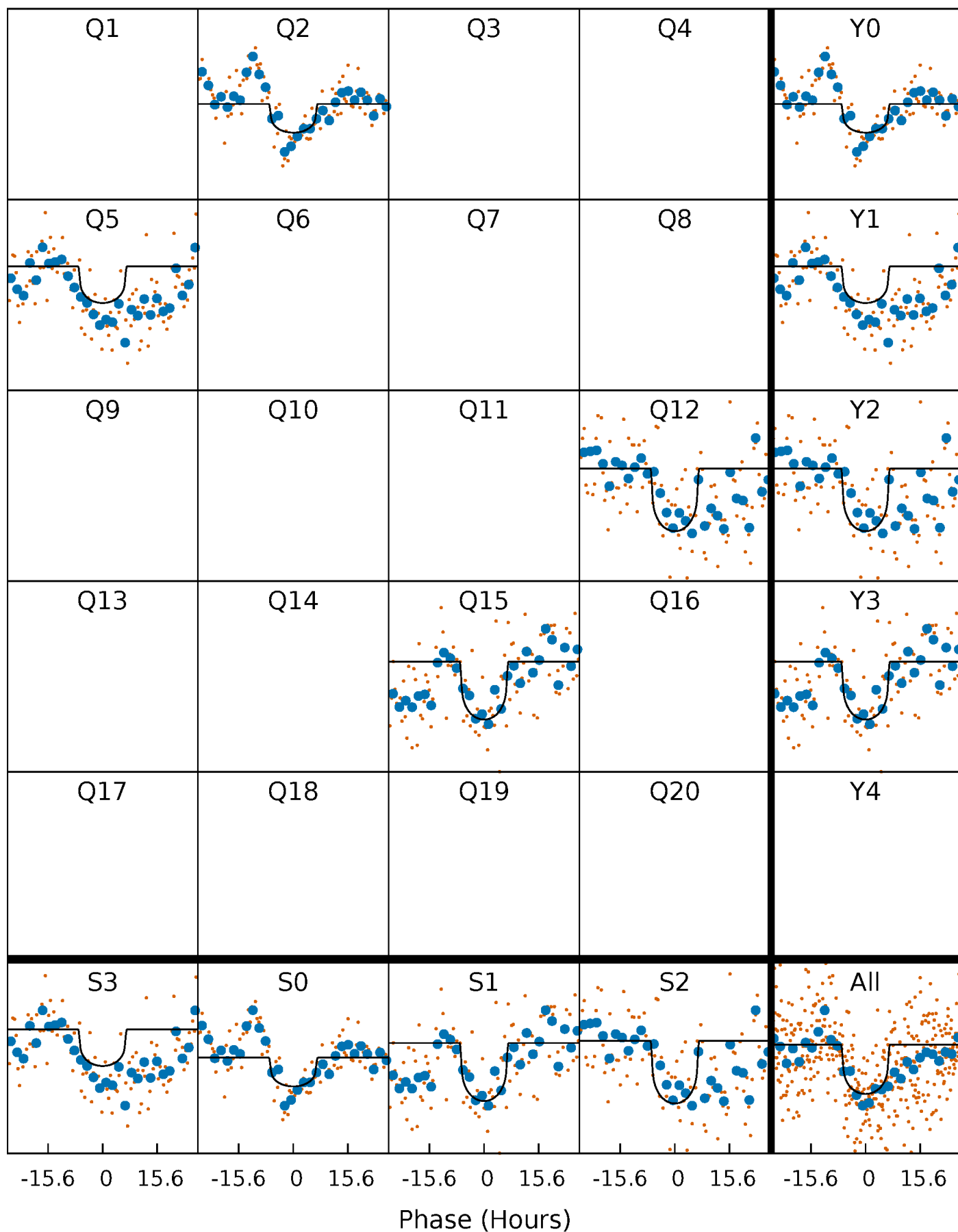
PDC Quarter-Phased Transit Curves

TCE 010339872-01 P=309.041468 Days $T_0=185.399632$ (BKJD)



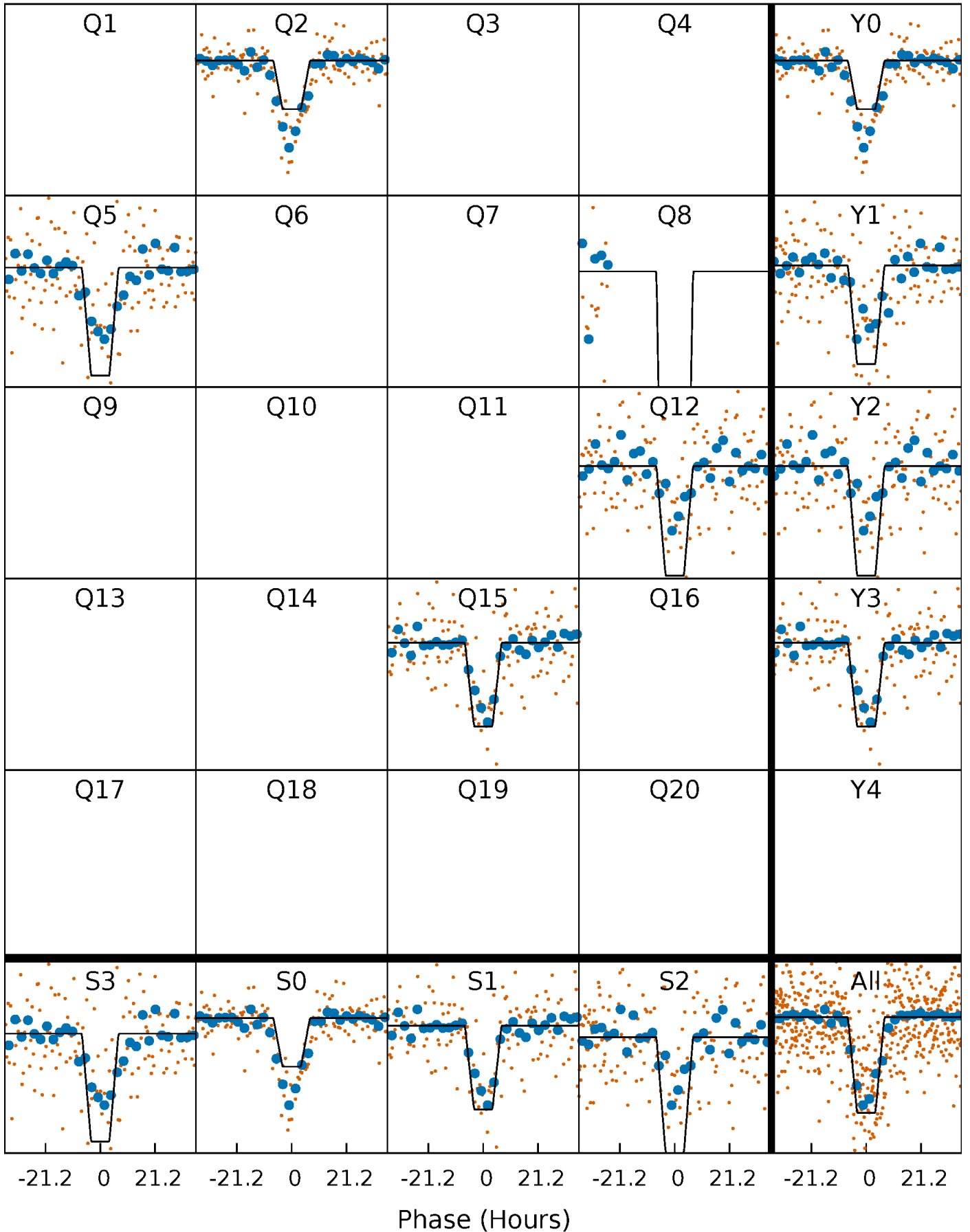
DV Quarter-Phased Transit Curves

TCE 010339872-01 $P=309.041468$ Days $T_0=185.399632$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

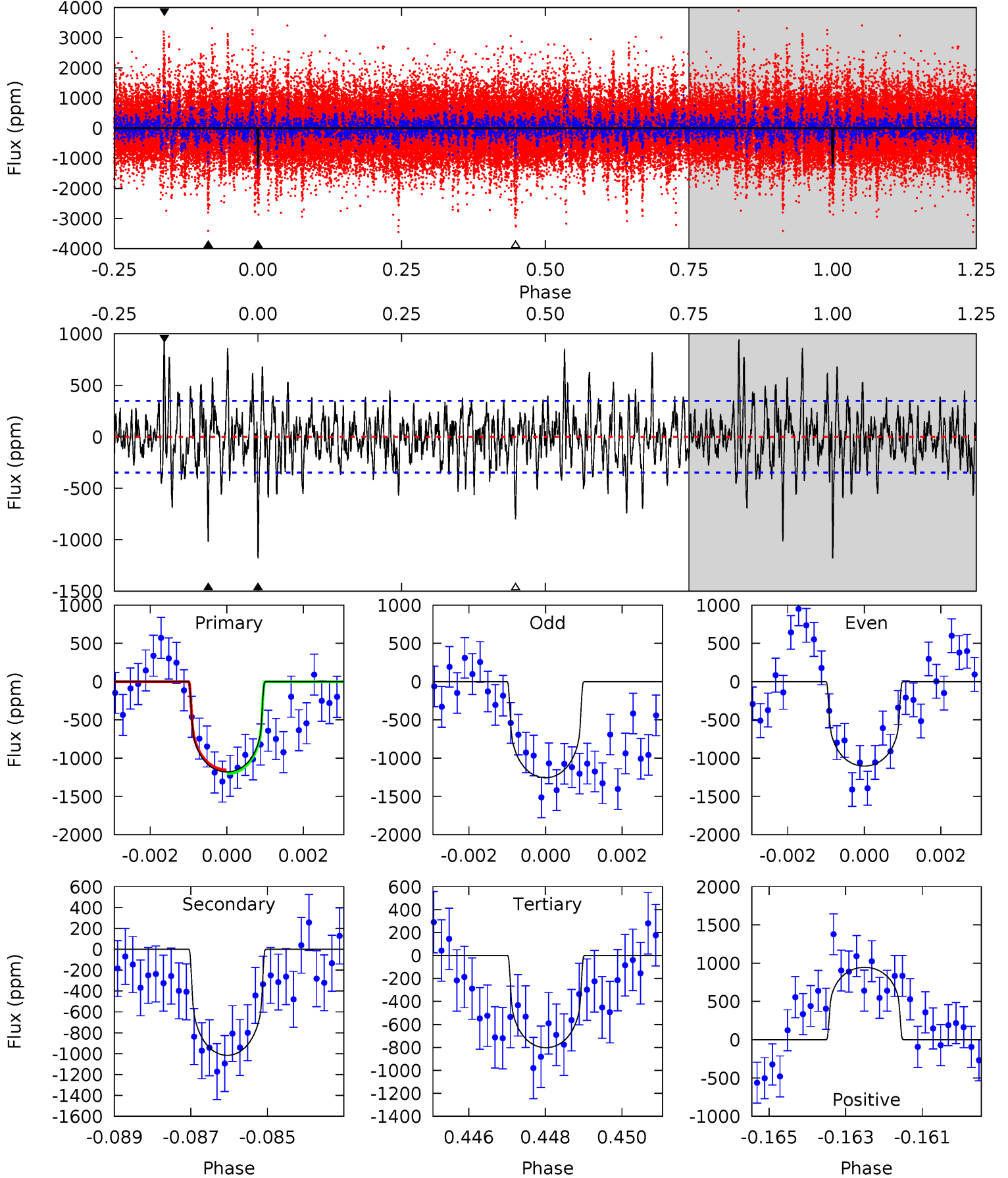
TCE 010339872-01 P=309.050784 Days $T_0=185.335080$ (BKJD)



DV Model-Shift Uniqueness Test

010339872-01, P = 309.041468 Days, E = 185.399632 Days

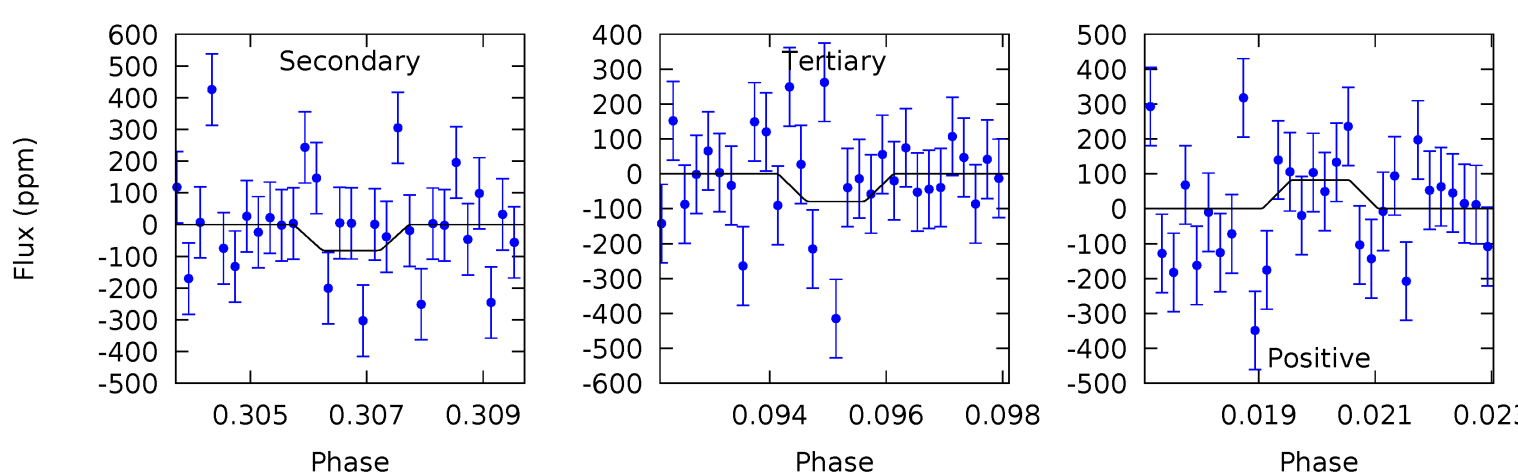
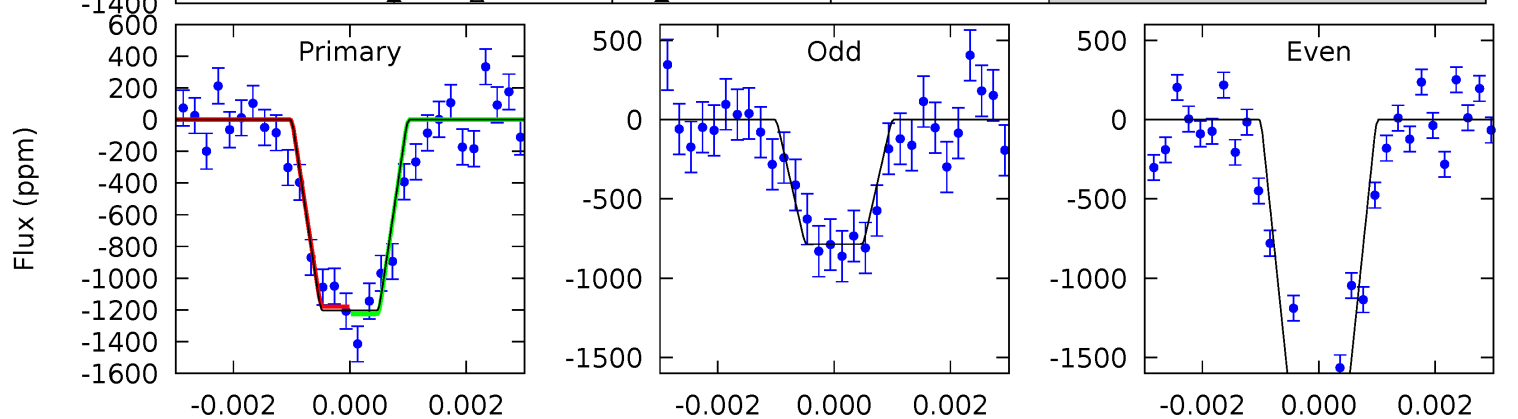
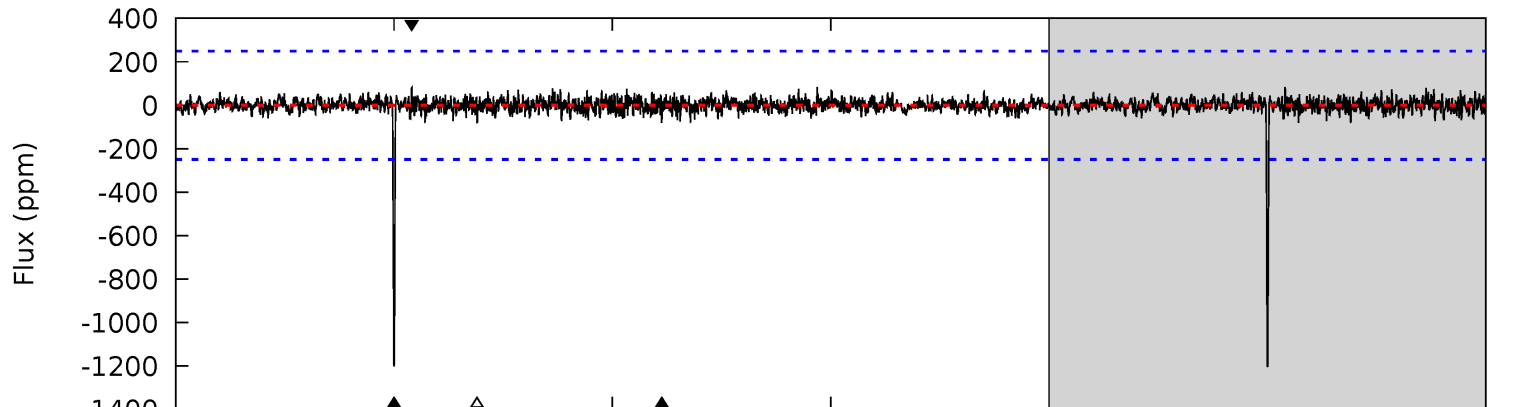
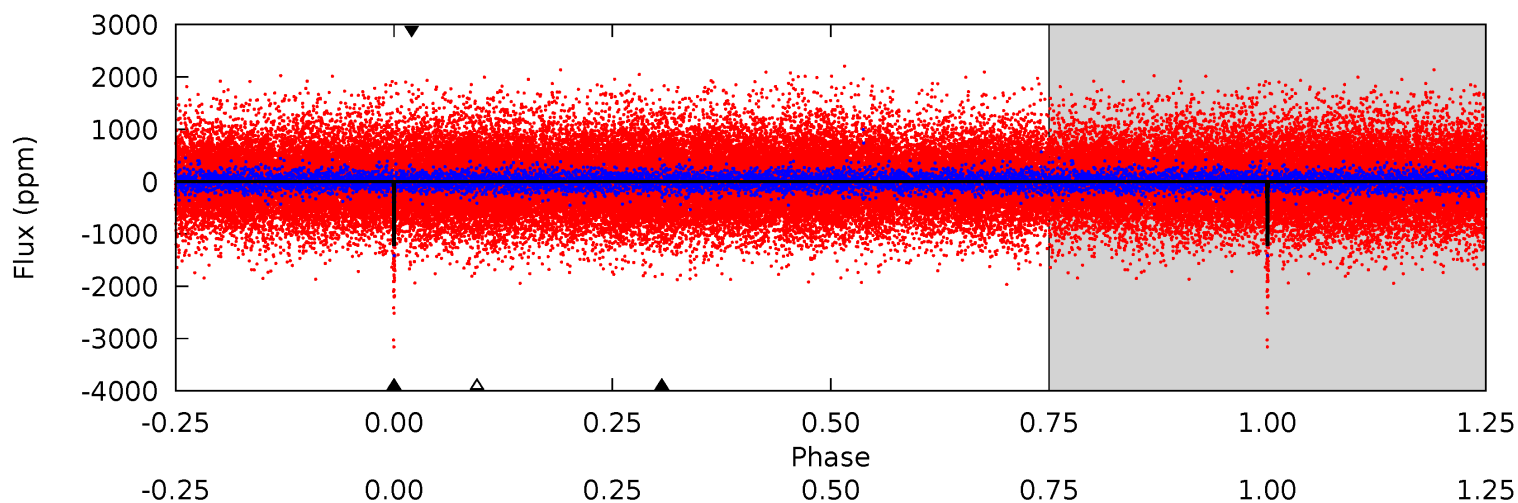
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	15.6	12.3	14.5	5.34	3.11	3.32	5.78	3.58	3.27	1.08	1.16	1.07	0.44	0.40



Alt Model-Shift Uniqueness Test

010339872-01, P = 309.050784 Days, E = 185.335080 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	1.74	1.70	1.77	5.33	3.10	0.47	24.0	24.0	0.04	-0.02	10.2	1.20	0.06	0.50



Stellar Parameters For KIC 010339872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5244^{+158}_{-158}	$4.536^{+0.060}_{-0.090}$	$-0.060^{+0.300}_{-0.300}$	$0.808^{+0.112}_{-0.075}$	$0.818^{+0.085}_{-0.078}$	$2.185^{+0.540}_{-0.616}$
	+3%/-3%	+1%/-2%	+500%/-500%	+14%/-9%	+10%/-10%	+25%/-28%
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 010339872-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1016 ± 65	$2.74^{+1.48}_{-1.42}$	320^{+13}_{-14}	5319^{+2259}_{-845}	$52119^{+161657}_{-30227}$
Alt.	-81 ± 47	$3.55^{+1.56}_{-1.63}$	319^{+14}_{-13}	3096^{+617}_{-471}	2401^{+5448}_{-1676}

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

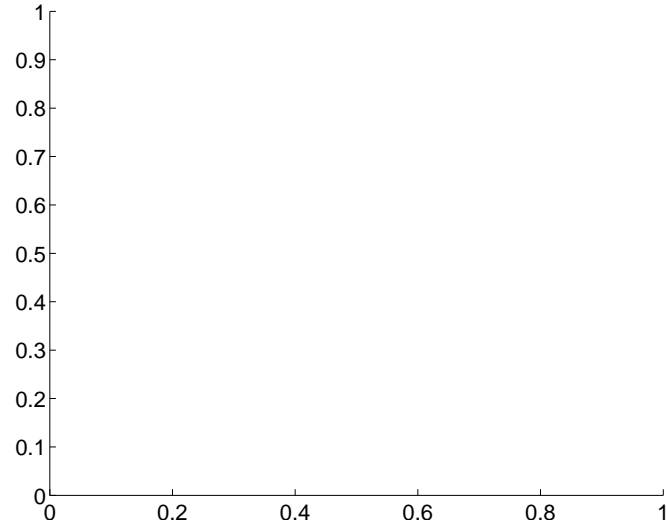
Supplemental centroid analysis for 010339872-01. Kepler magnitude: 15.70. Transit SNR 7.82

There are 0 quarters with good PRF difference image offsets

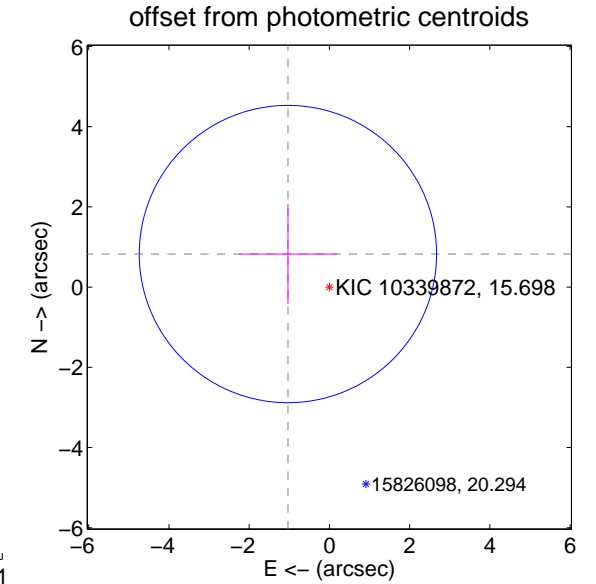
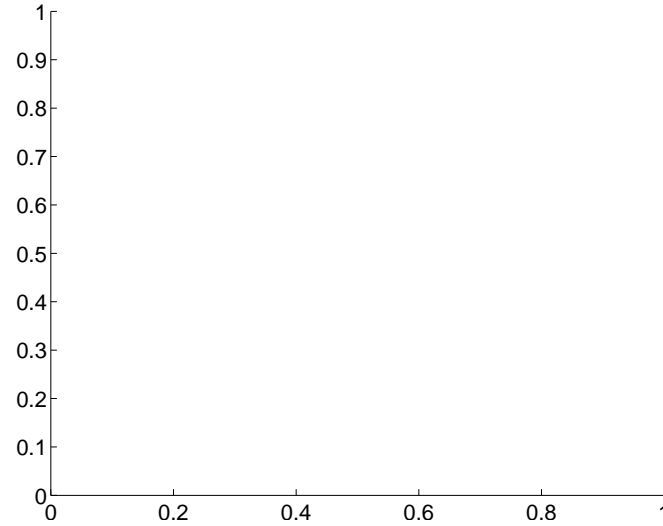
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.32 ± 1.24	1.07	1.03 ± 1.23	0.82 ± 1.24

There is no PRF-fit offset from OOT-fit

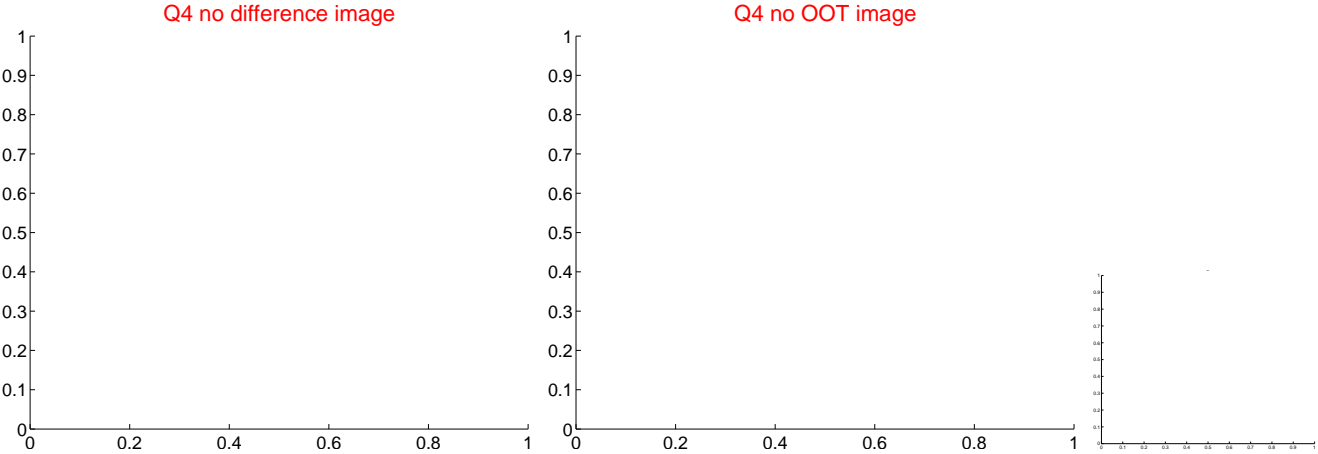
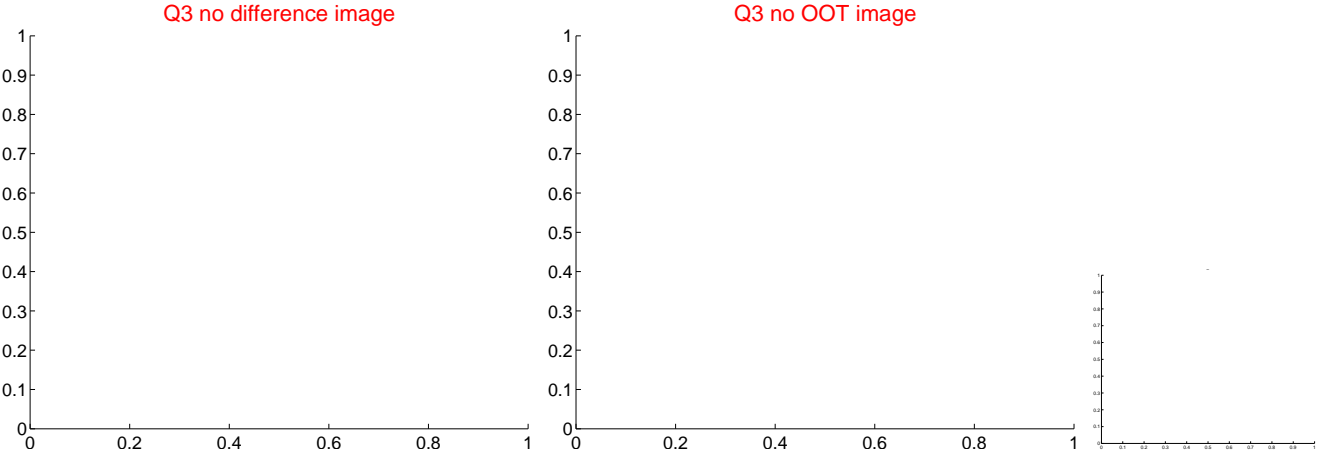
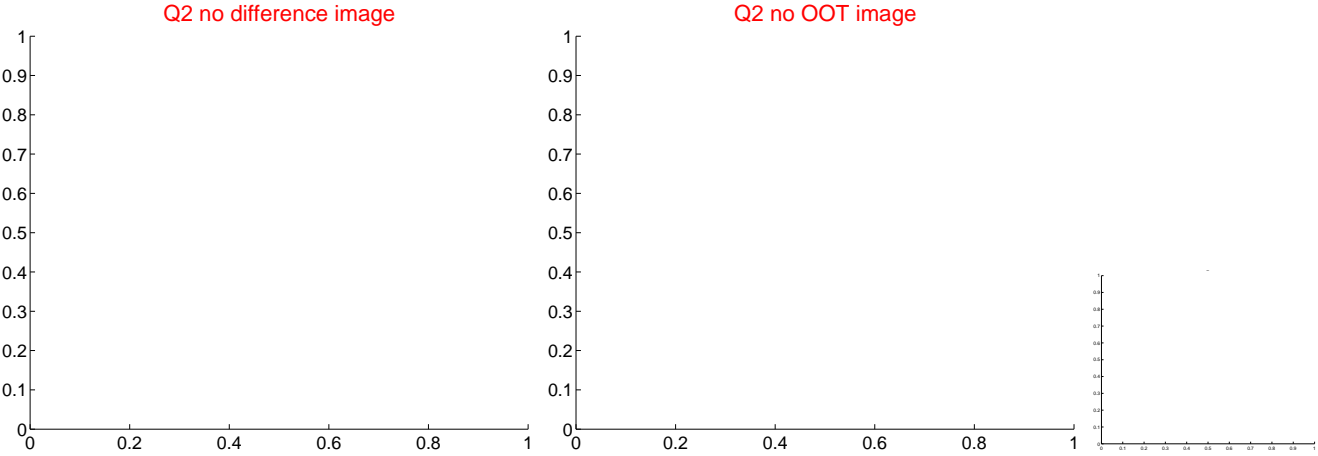
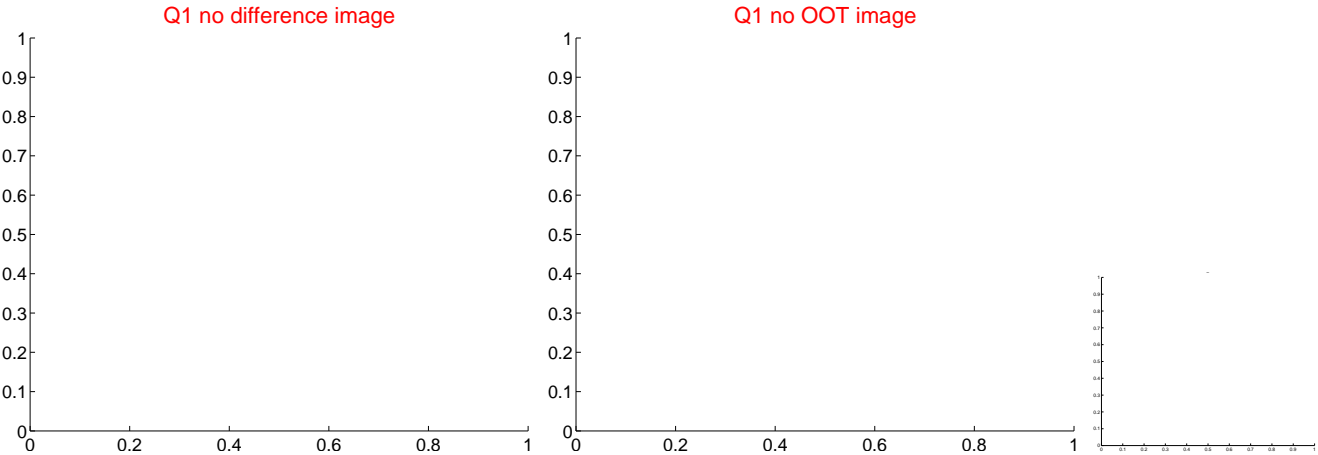


There is no PRF-fit offset from KIC

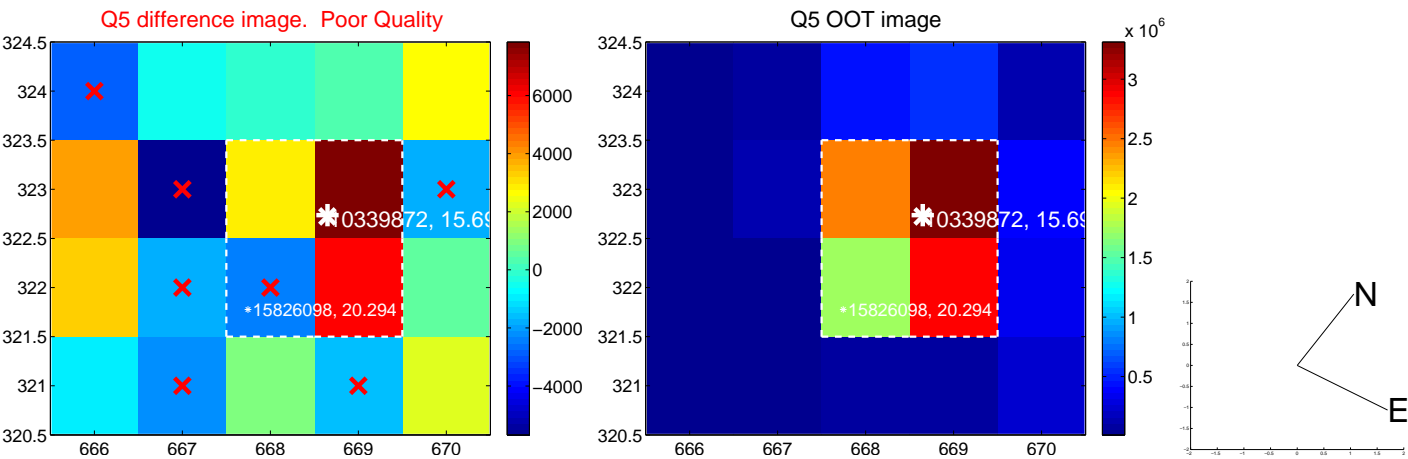


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.



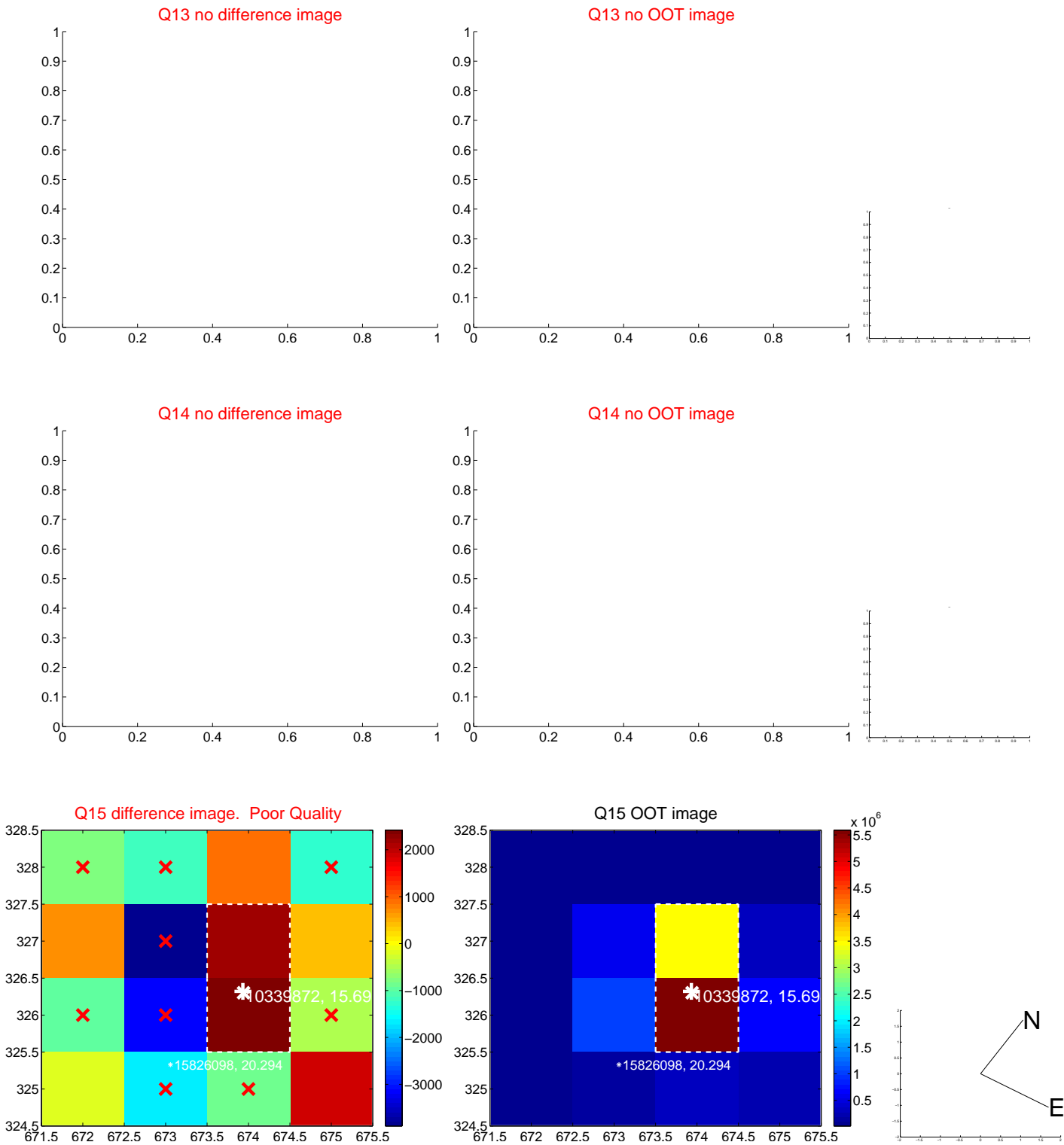
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



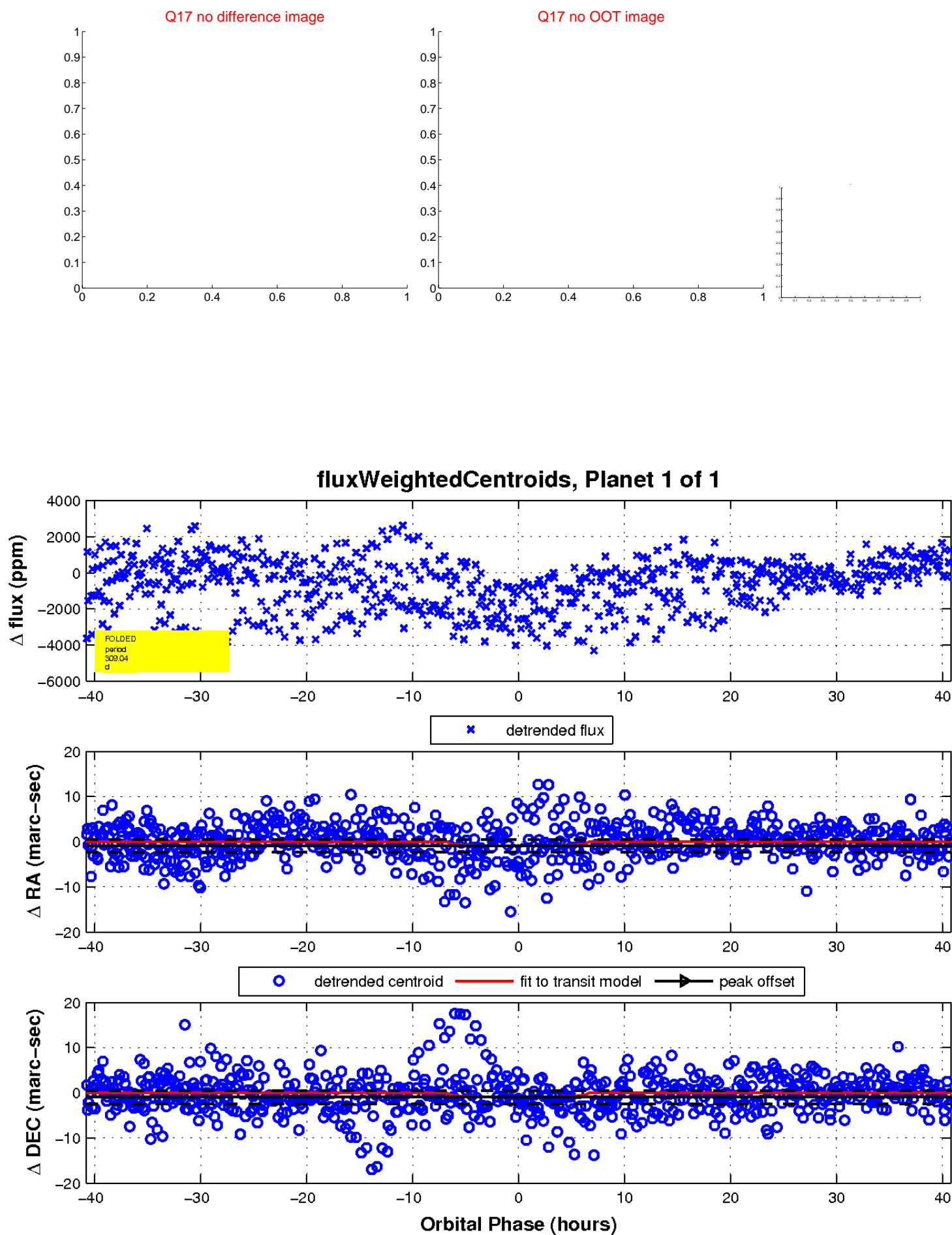
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

