

KIC 006363867

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})
006363867-01	OBS	No	5.243285	132.779805	40.0	10.398	8.5	8.2	0.87	5904	0.65	241.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006363867-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—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.

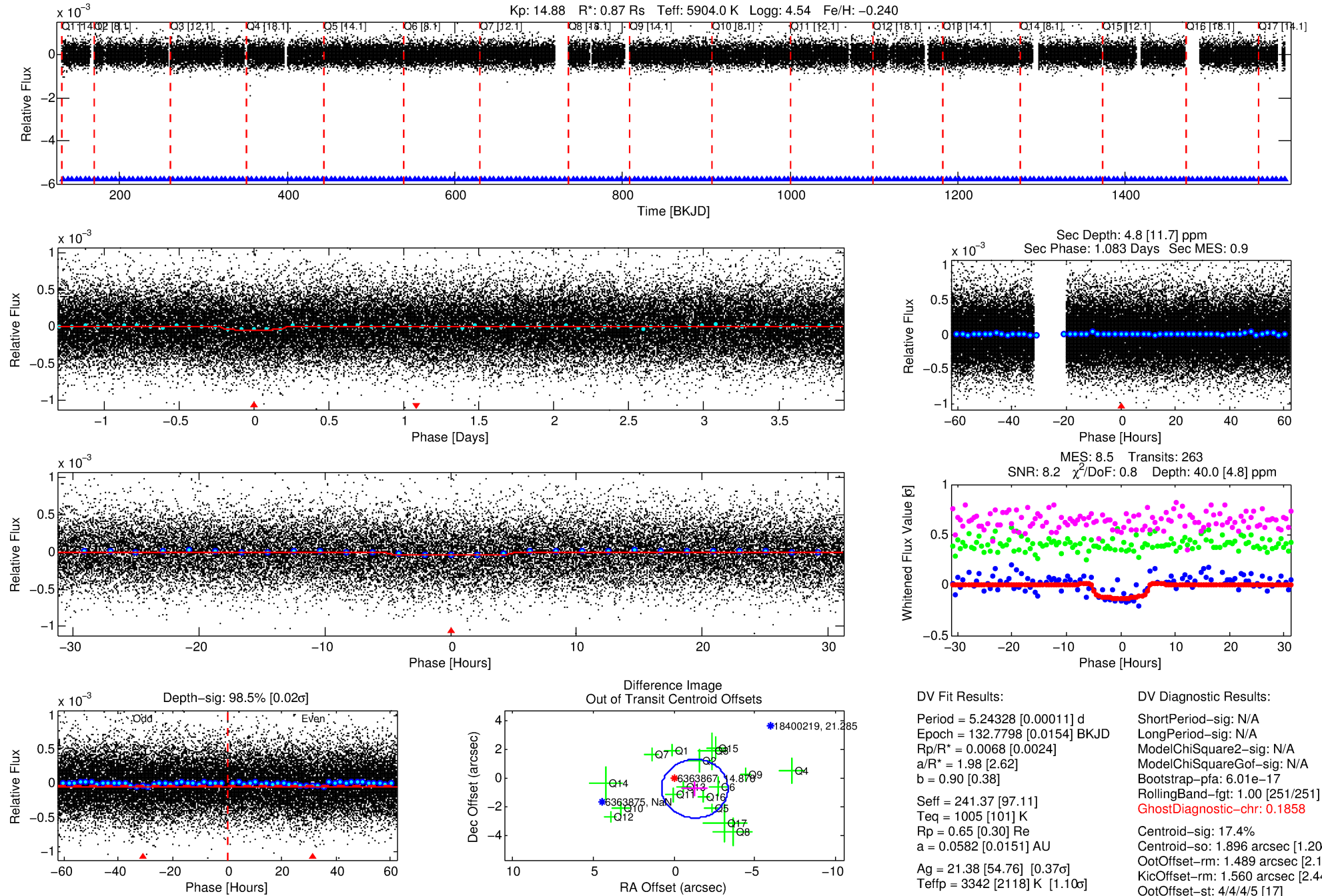
Ephemeris Match Information For 006363867-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006363867-01	6363867	TT-Lyr-pri	6364290	1:1	379.4	-68	-68	9.49	14.87	21353.00	Direct-PRF	0	4.16	3.62

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: 6363867 Candidate: 1 of 1 Period: 5.243 d



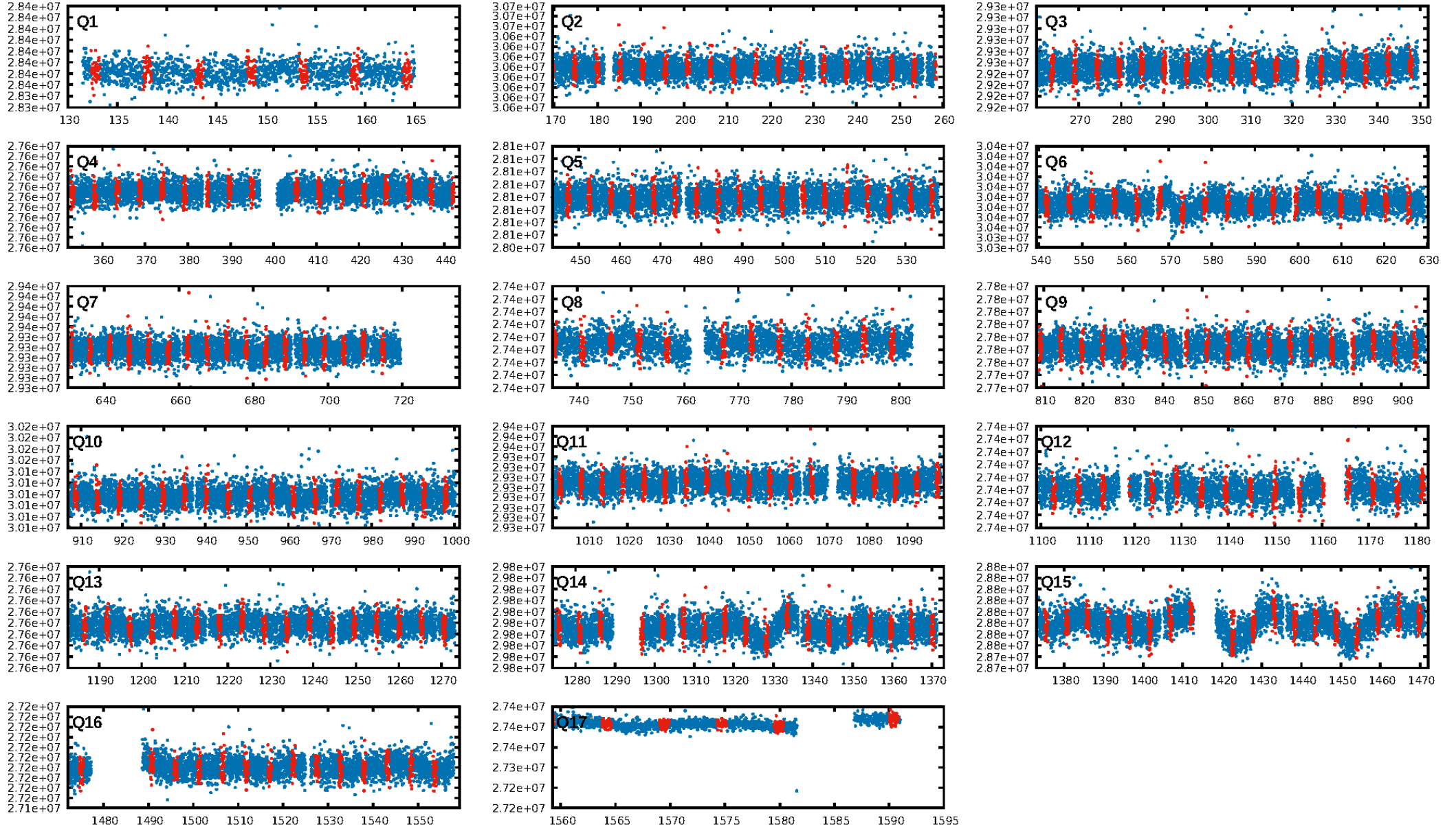
DV Fit Results:

Period = 5.24328 [0.00011] d
Epoch = 132.7798 [0.0154] BKJD
Rp/R* = 0.0068 [0.0024]
a/R* = 1.98 [2.62]
b = 0.90 [0.38]
Seff = 241.37 [97.11]
Teq = 1005 [101] K
Rp = 0.65 [0.30] Re
a = 0.0582 [0.0151] AU
Ag = 21.38 [54.76] [0.37 σ]
Teffp = 3342 [2118] K [1.10 σ]

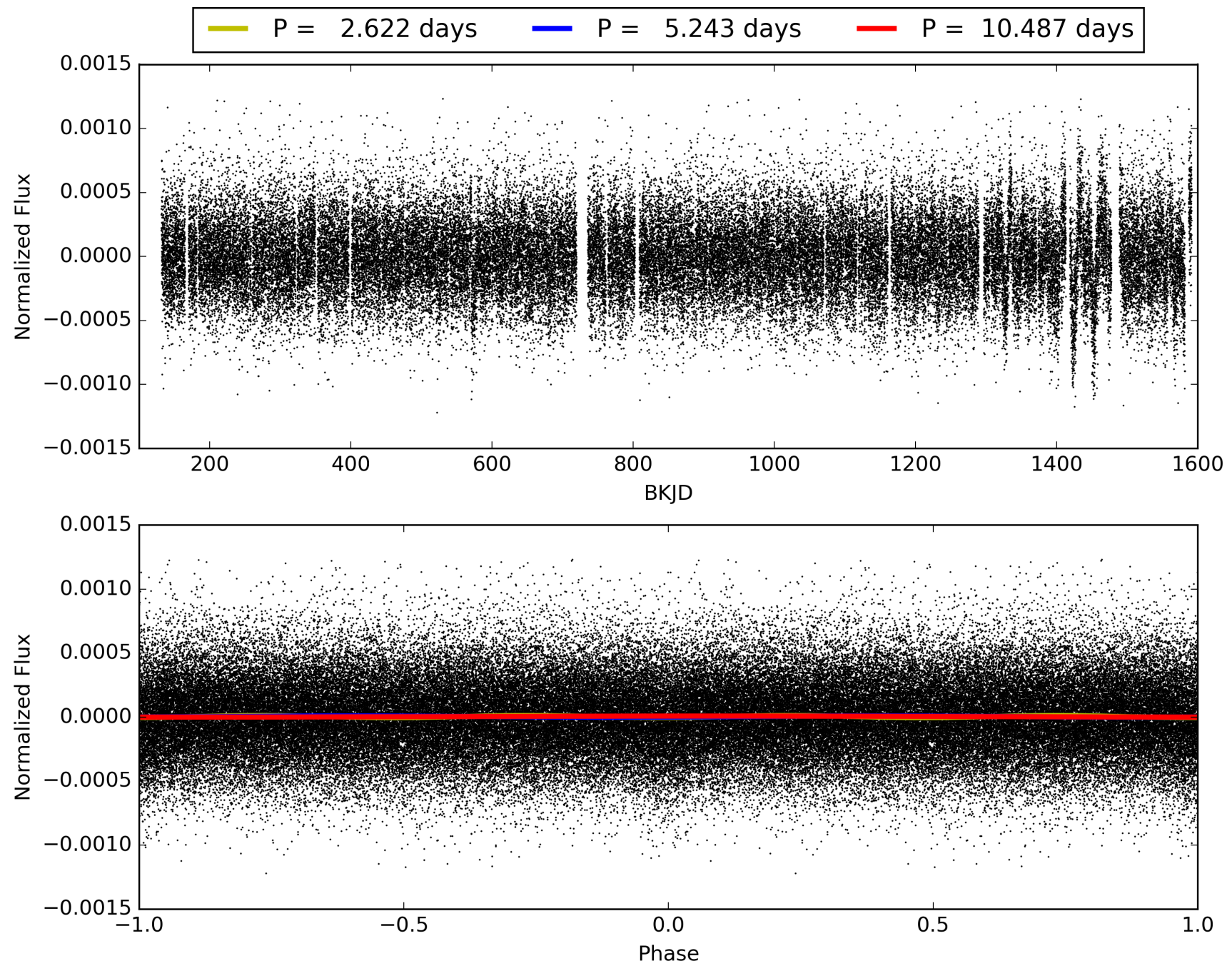
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.01e-17
RollingBand-fgt: 1.00 [251/251]
GhostDiagnostic-chr: 0.1858
Centroid-sig: 17.4%
Centroid-so: 1.896 arcsec [1.20 σ]
OotOffset-rm: 1.489 arcsec [2.18 σ]
KicOffset-rm: 1.560 arcsec [2.44 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006363867-01, PDC Light Curves

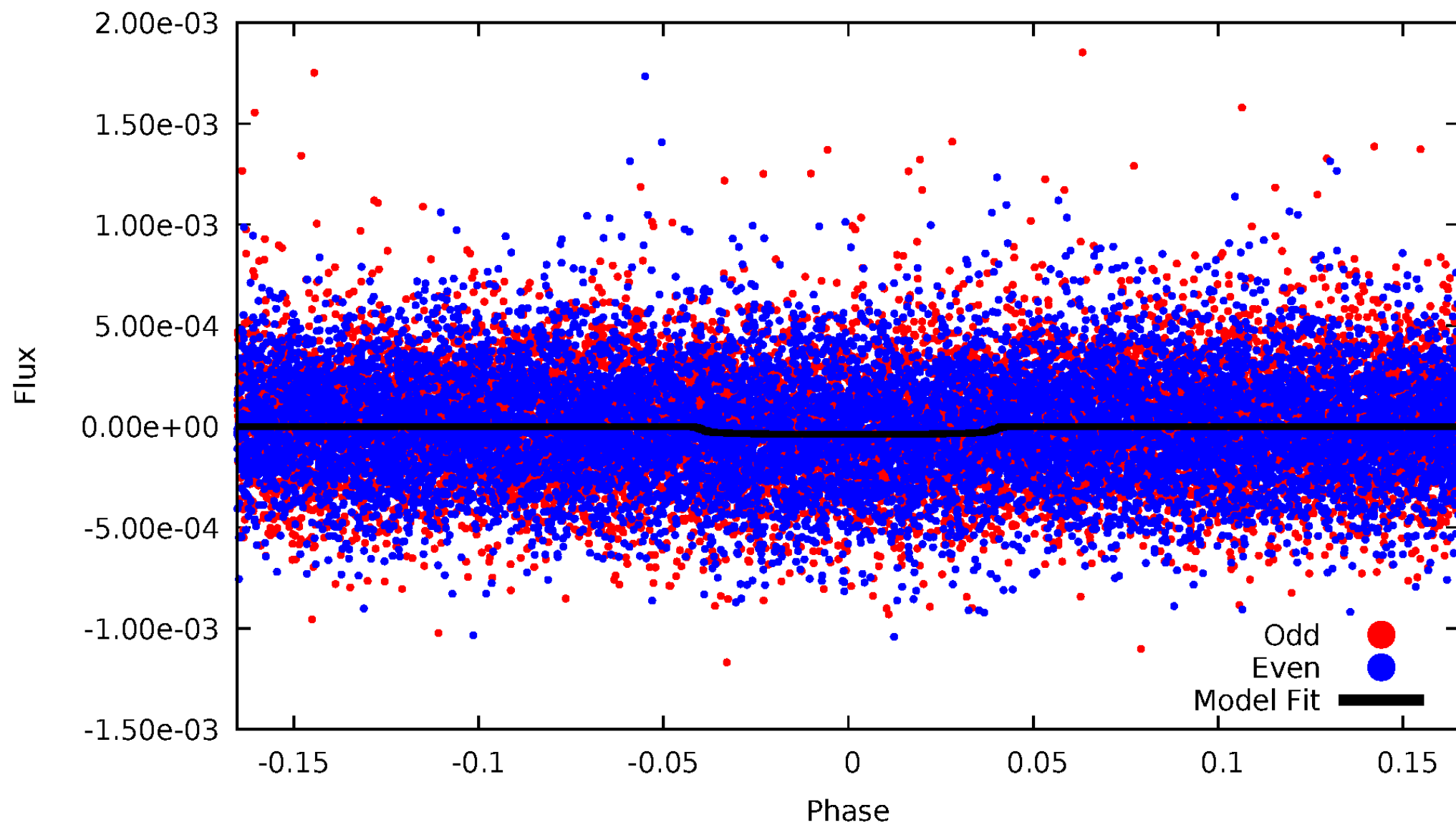


TCE 006363867-01



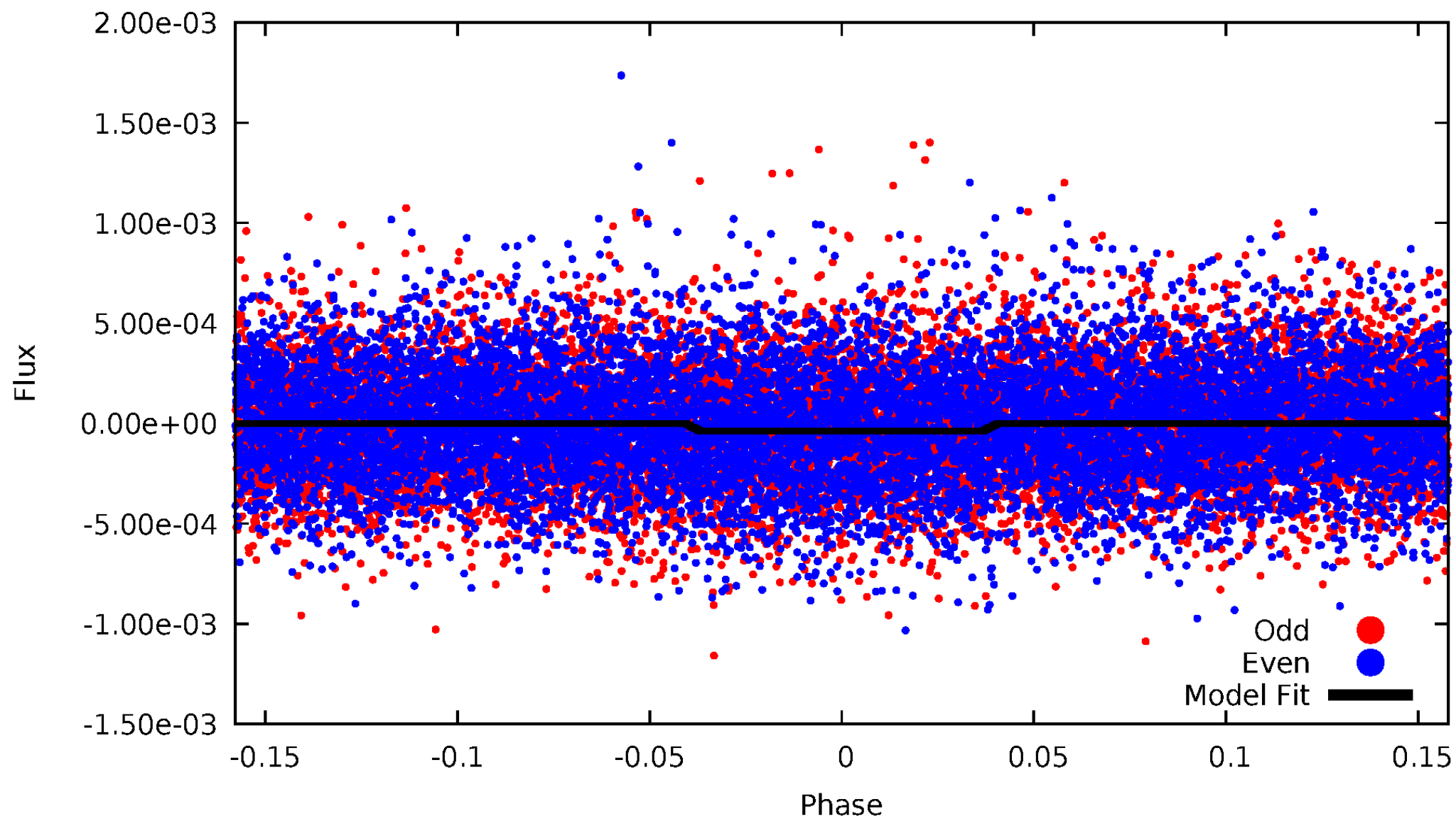
DV Odd/Even

TCE 006363867-01



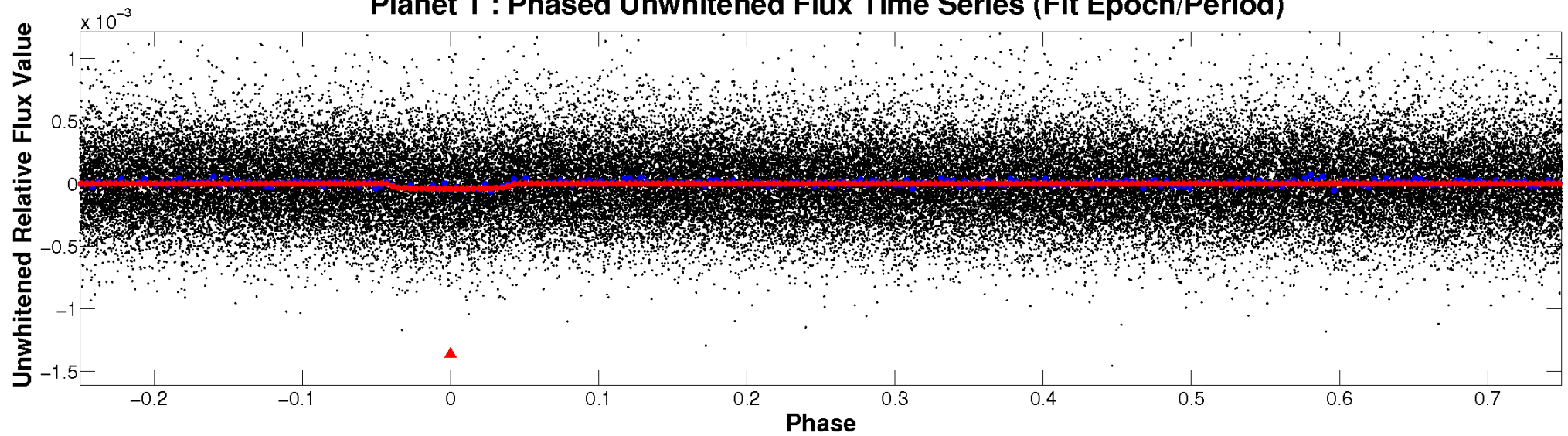
ALT Odd/Even

TCE 006363867-01

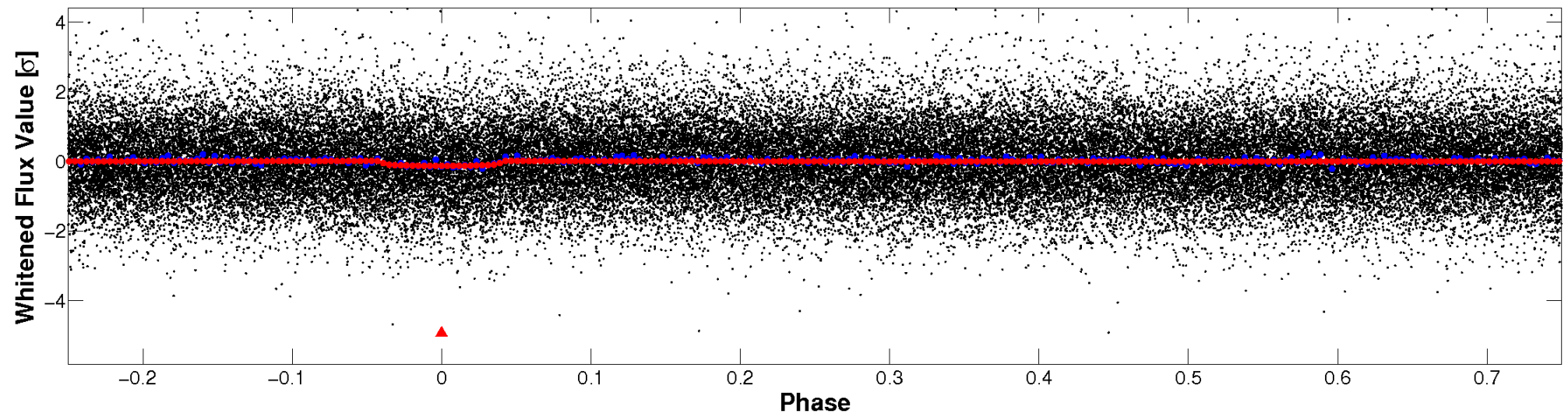


Non-Whitened Vs. Whitened Light Curve

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

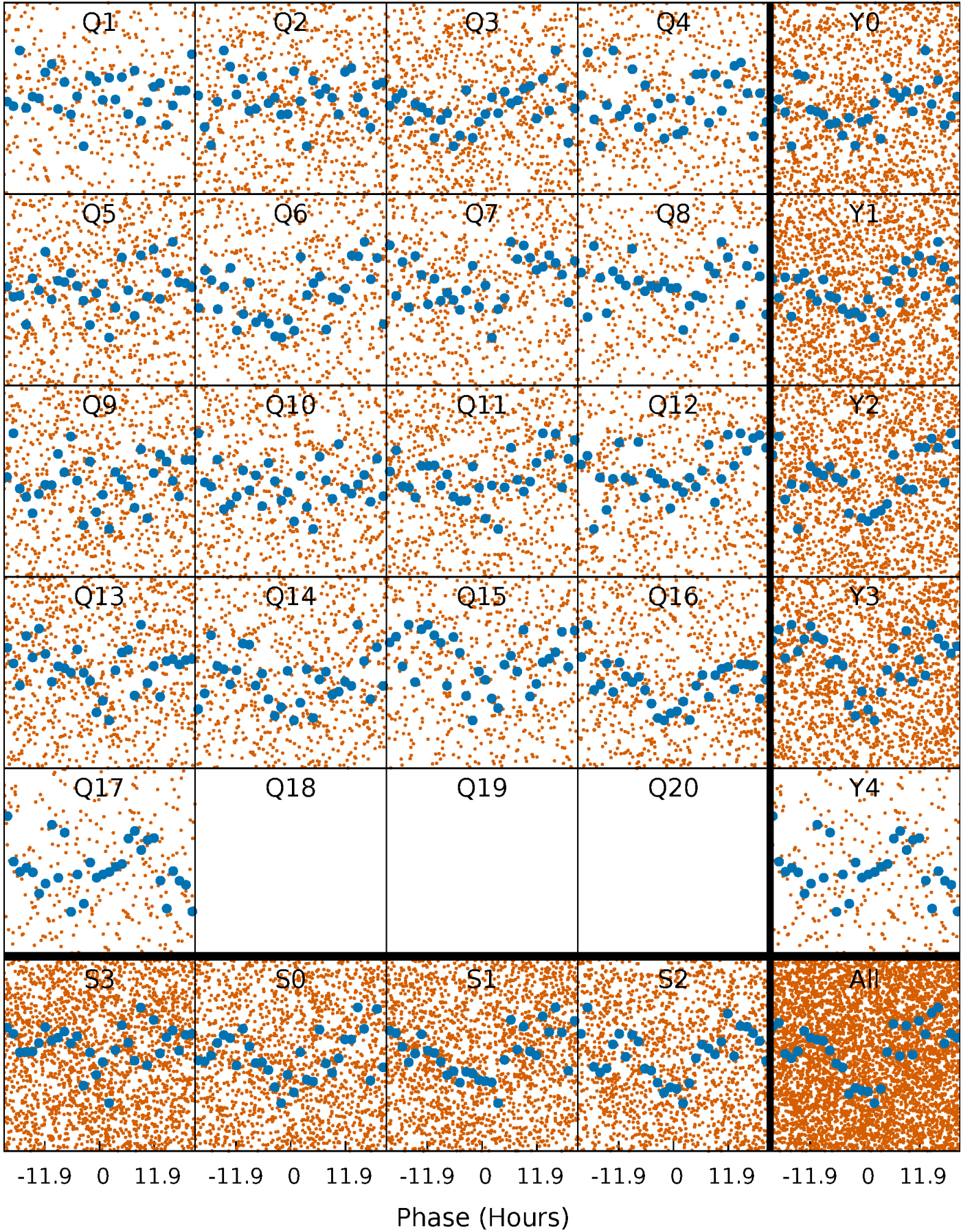


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



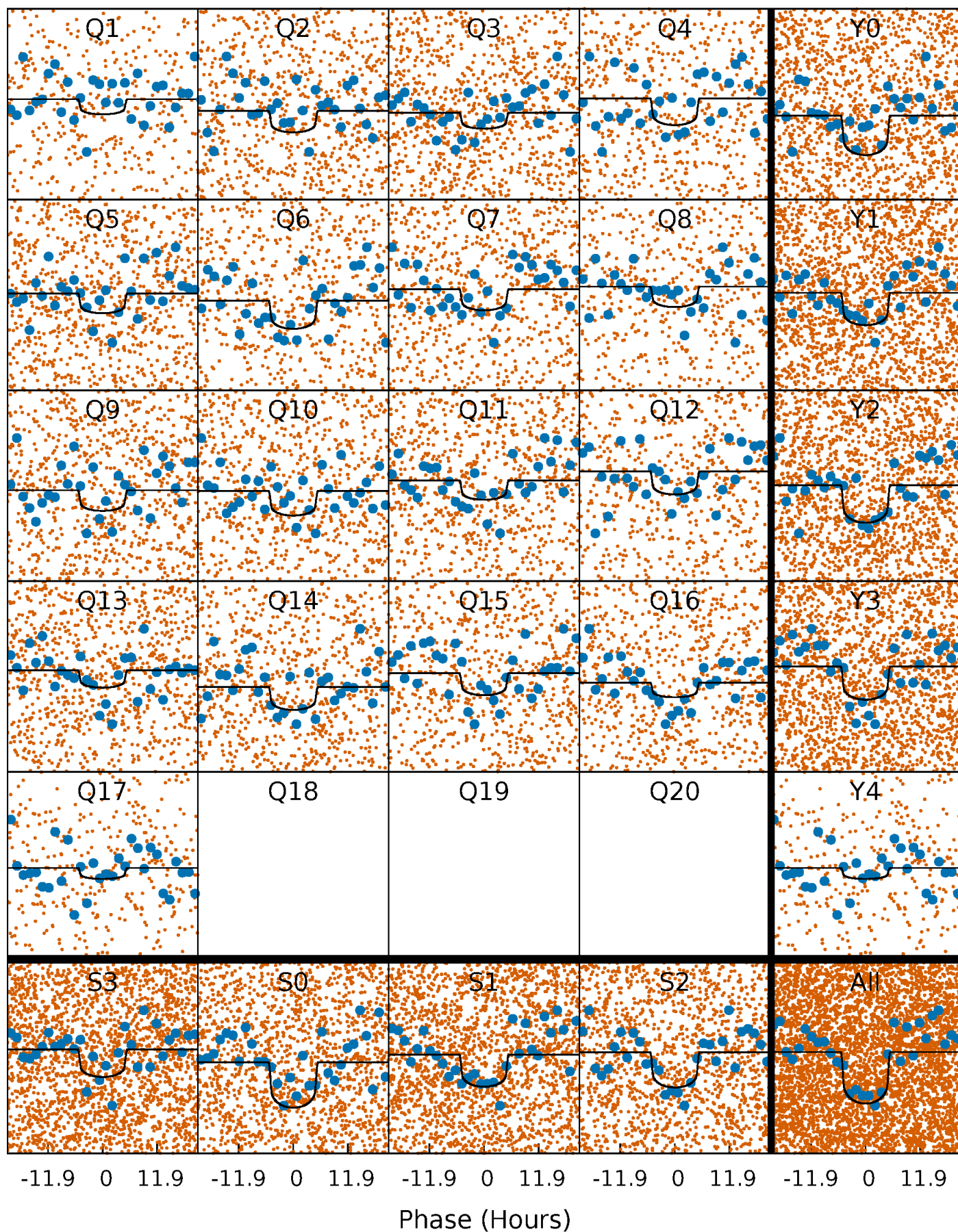
PDC Quarter-Phased Transit Curves

TCE 006363867-01 P= 5.243285 Days $T_0=132.779805$ (BKJD)



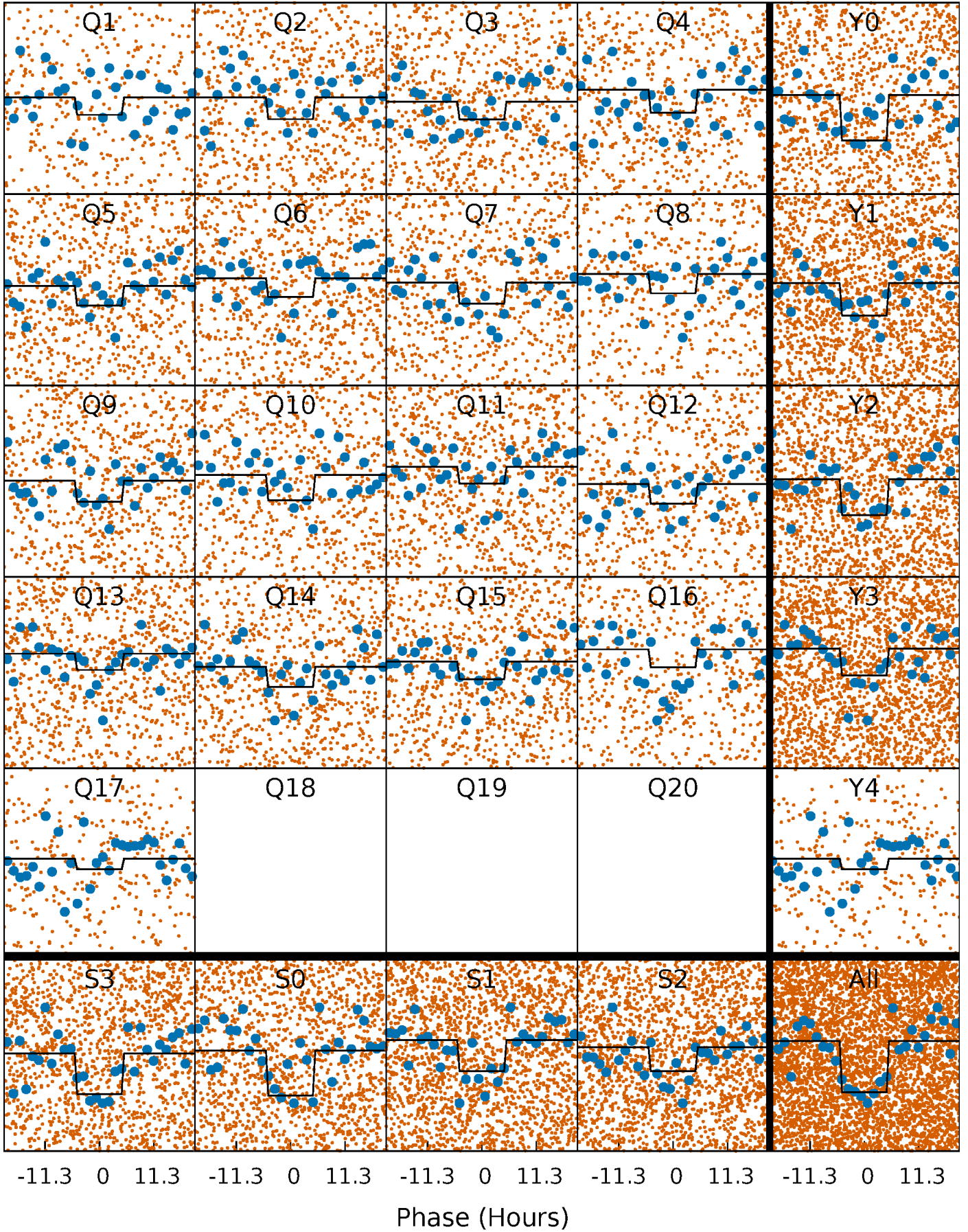
DV Quarter-Phased Transit Curves

TCE 006363867-01 P= 5.243285 Days $T_0=132.779805$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

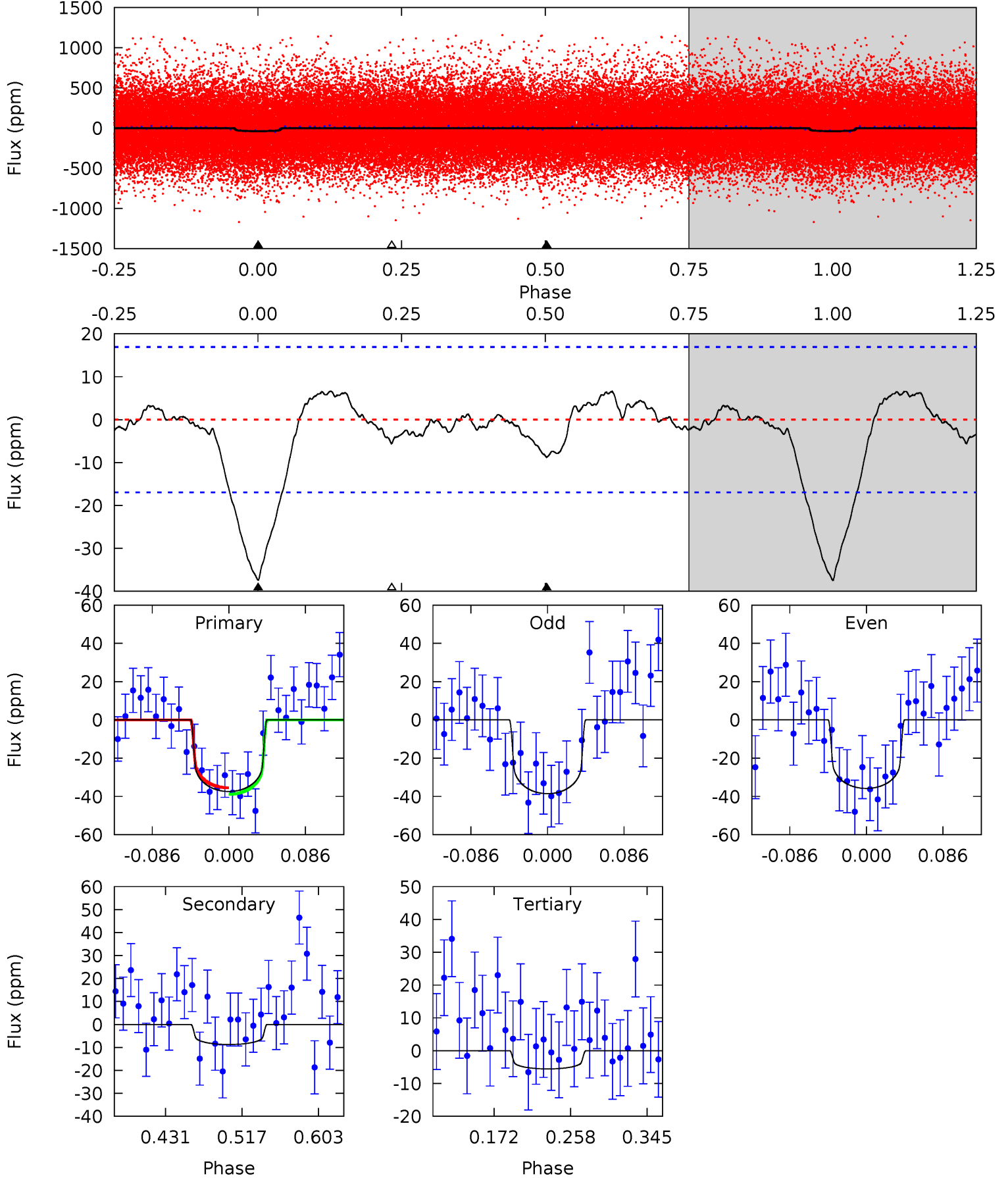
TCE 006363867-01 P= 5.243553 Days $T_0=132.744914$ (BKJD)



DV Model-Shift Uniqueness Test

006363867-01, P = 5.243285 Days, E = 127.536520 Days

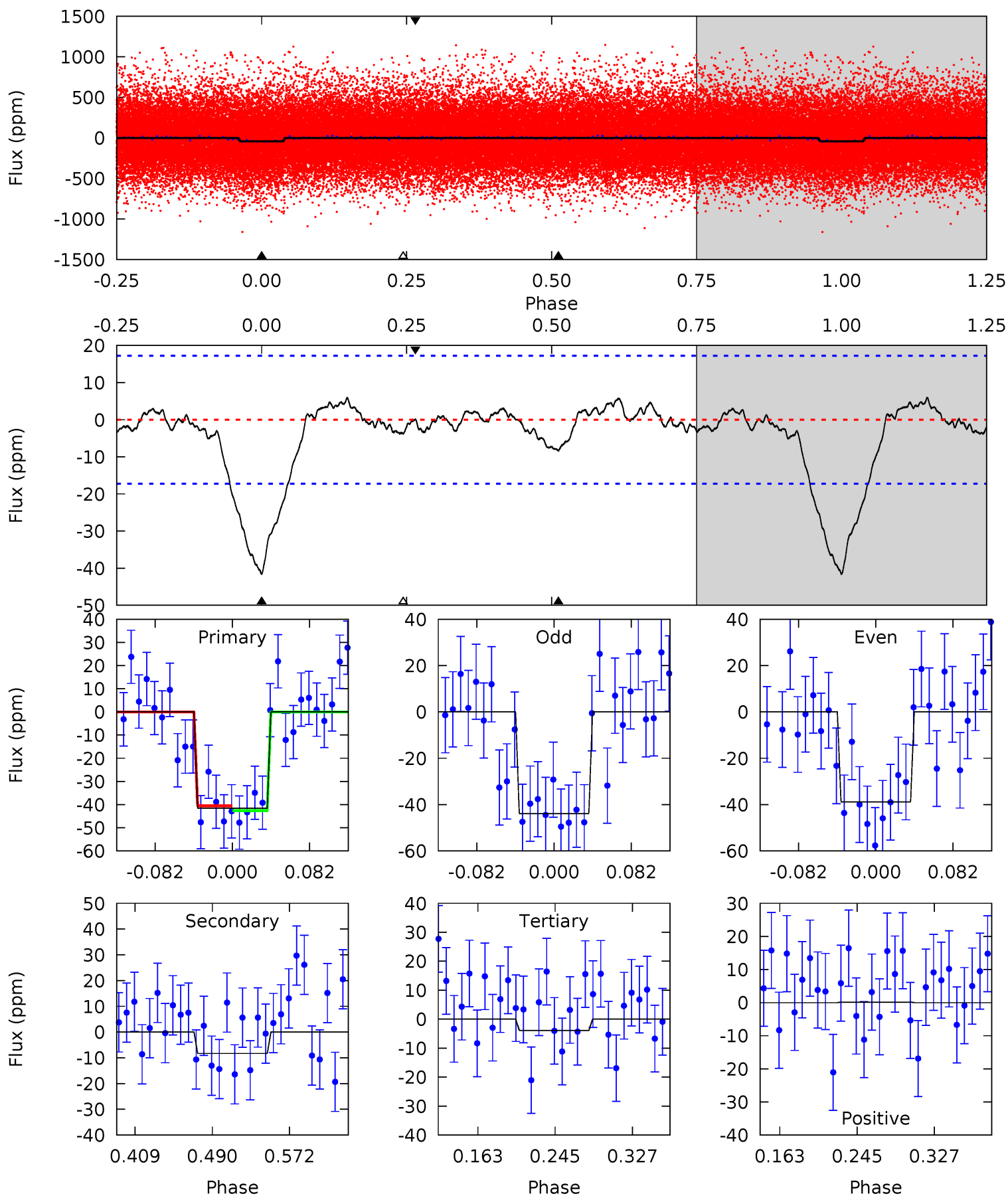
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	2.37	1.51	0	4.60	1.72	0.82	8.64	10.1	0.87	2.37	0.37	1.06	0.15	0.46



Alt Model-Shift Uniqueness Test

006363867-01, P = 5.243553 Days, E = 127.501361 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	2.23	1.04	0.04	4.61	1.74	0.65	10.1	11.1	1.19	2.19	0.67	1.07	0.12	0.28



Stellar Parameters For KIC 006363867

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5904^{+159}_{-177}	$4.543^{+0.037}_{-0.213}$	$-0.240^{+0.300}_{-0.300}$	$0.867^{+0.262}_{-0.082}$	$0.958^{+0.107}_{-0.119}$	$2.073^{+0.415}_{-1.070}$
	+3%/-3%	+1%/-5%	+125%/-125%	+30%/-9%	+11%/-12%	+20%/-52%
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 006363867-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 4	$0.70^{+0.28}_{-0.26}$	1442^{+96}_{-67}	4126^{+787}_{-551}	33^{+48}_{-20}
Alt.	-8 ± 4	$0.62^{+0.27}_{-0.24}$	1439^{+110}_{-63}	4203^{+1032}_{-575}	37^{+72}_{-22}

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

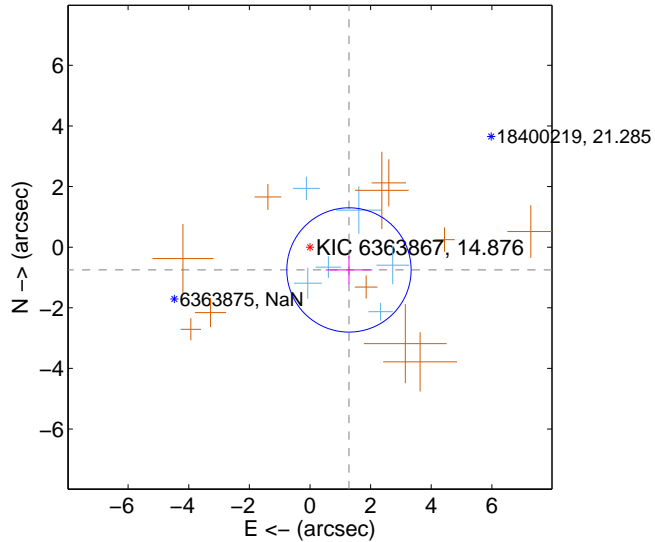
Supplemental centroid analysis for 006363867-01. Kepler magnitude: 14.88. Transit SNR 8.23

There are 6 quarters with good PRF difference image offsets

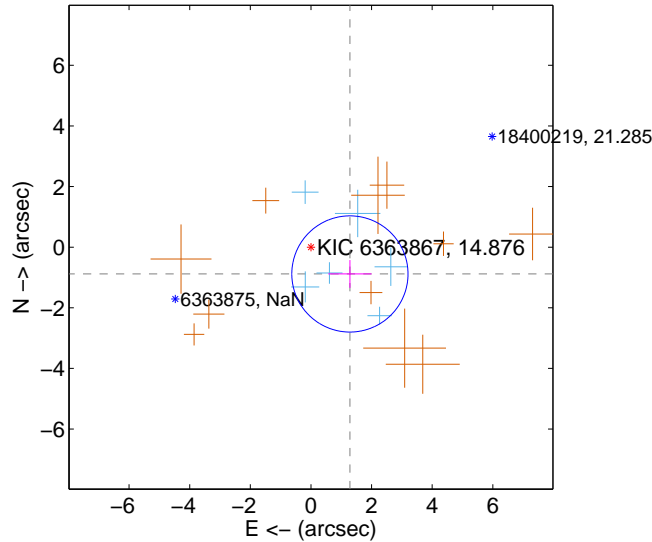
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.489 ± 0.683	2.18	-1.286 ± 0.766	-0.752 ± 0.456
PRF-fit source offset from KIC position	1.560 ± 0.639	2.44	-1.285 ± 0.715	-0.884 ± 0.458
photometric centroid source offset	1.90 ± 1.59	1.20	1.29 ± 1.63	-1.39 ± 1.54

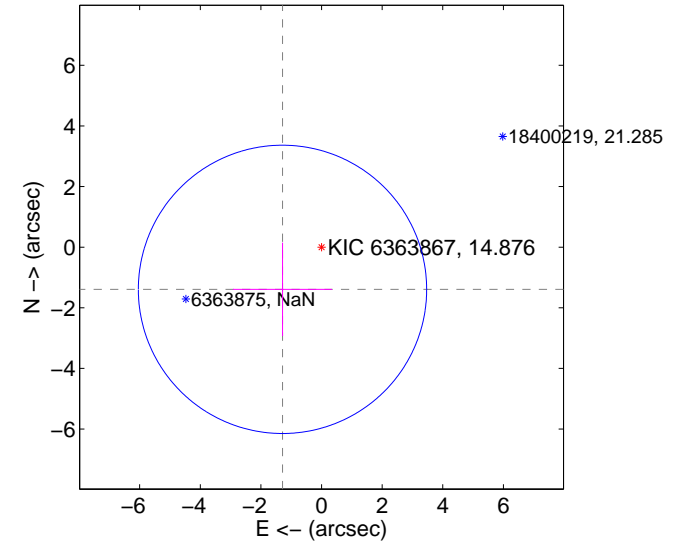
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

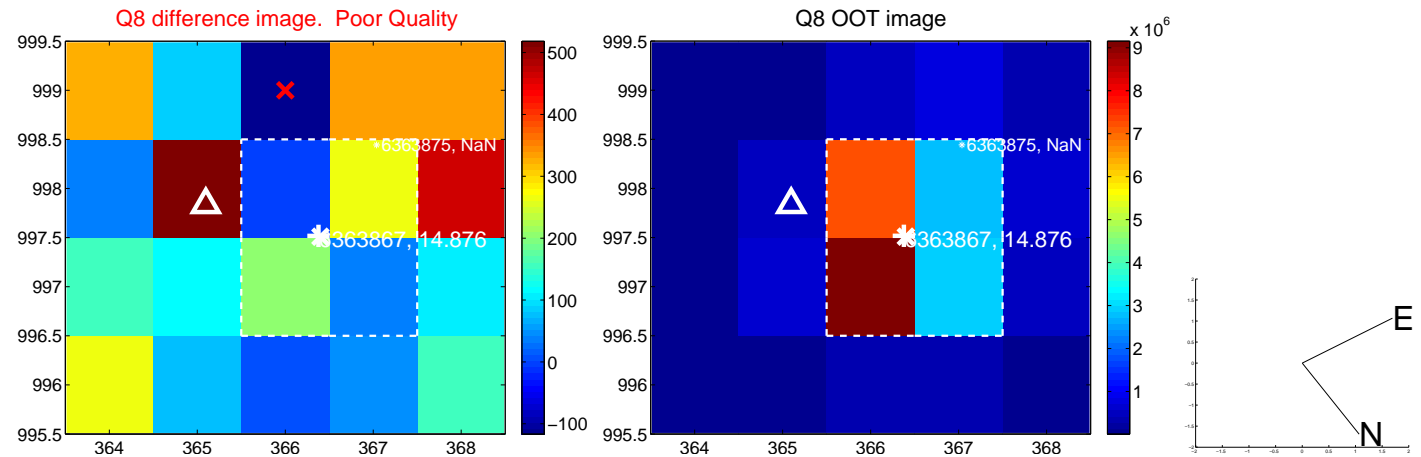
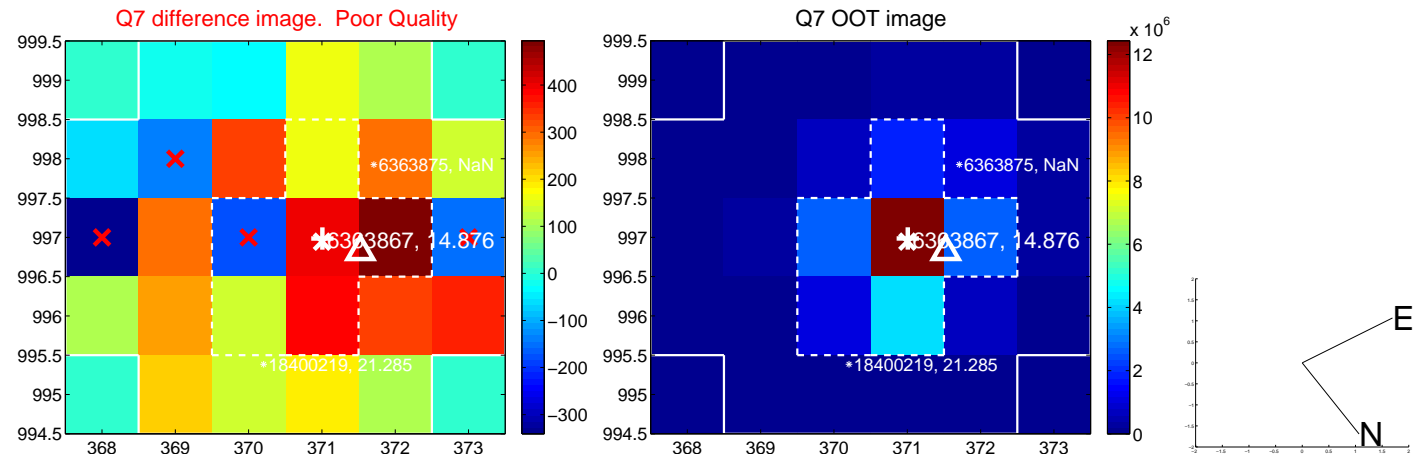
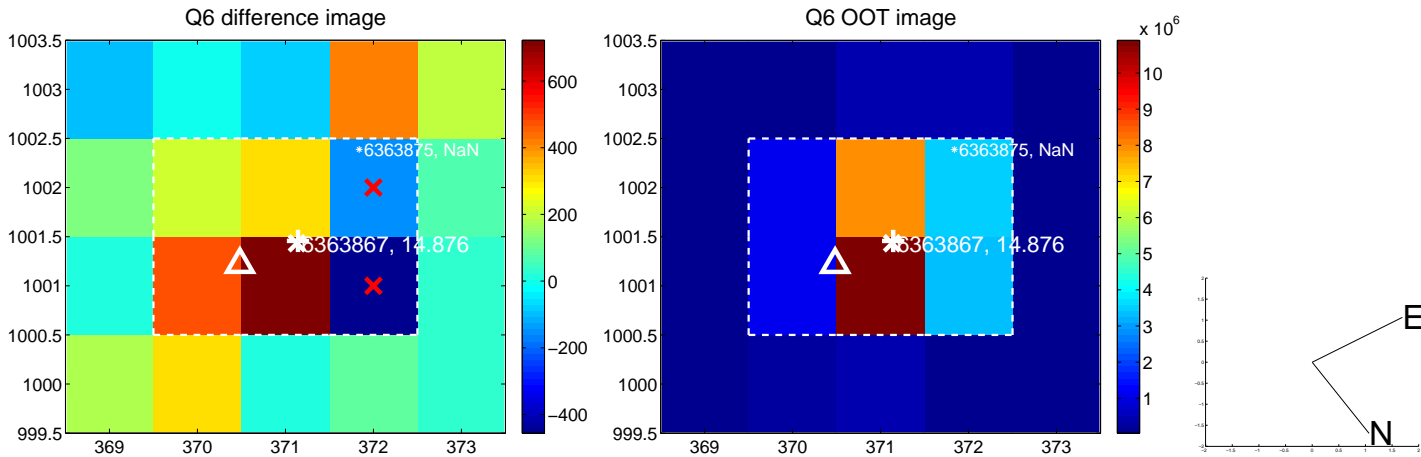
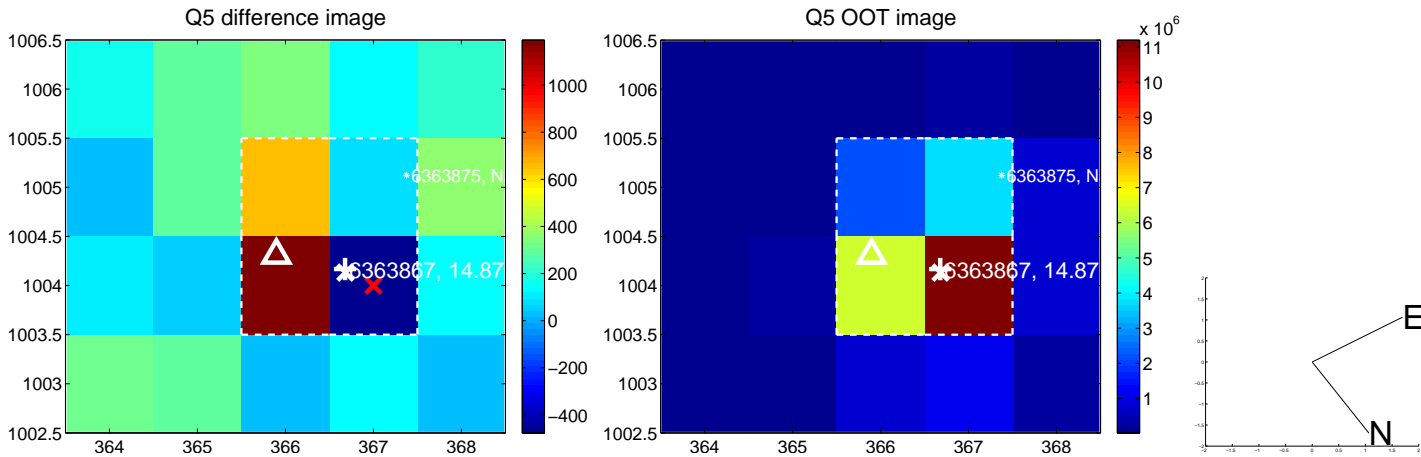


offset from photometric centroids

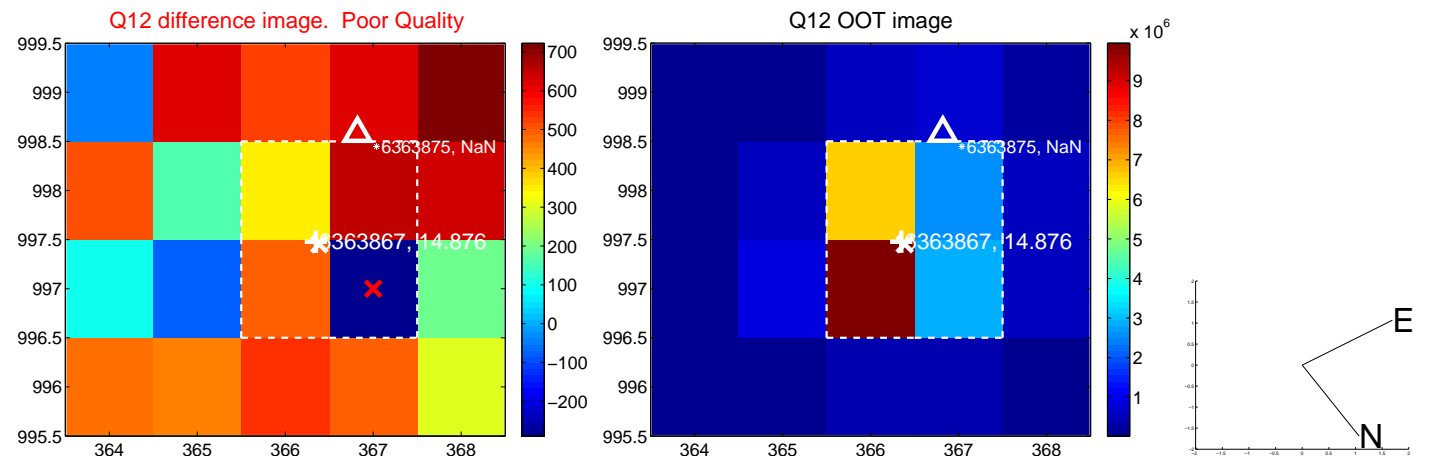
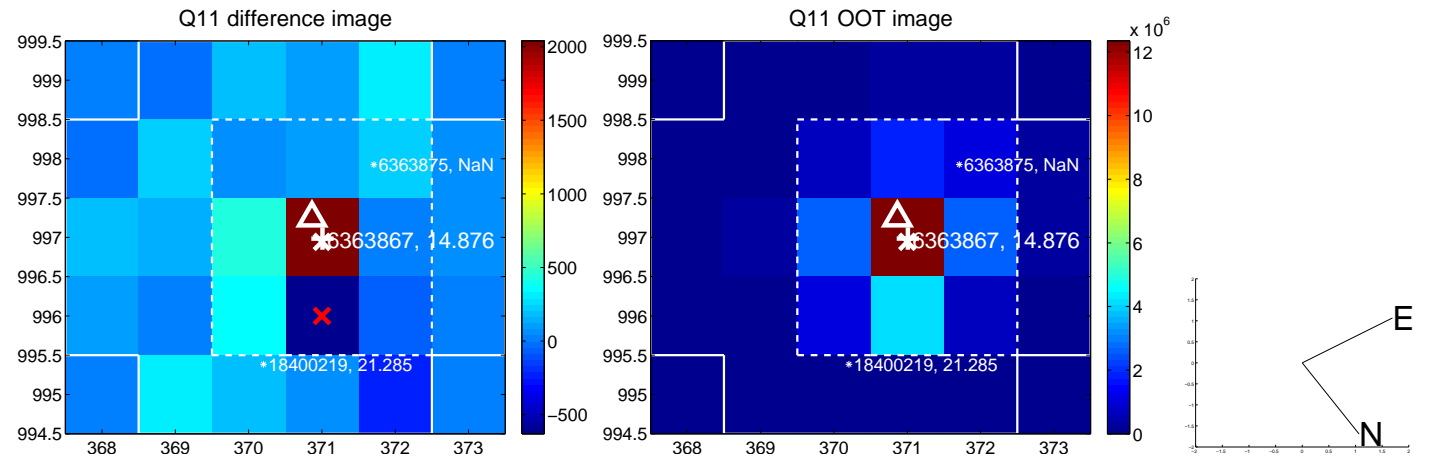
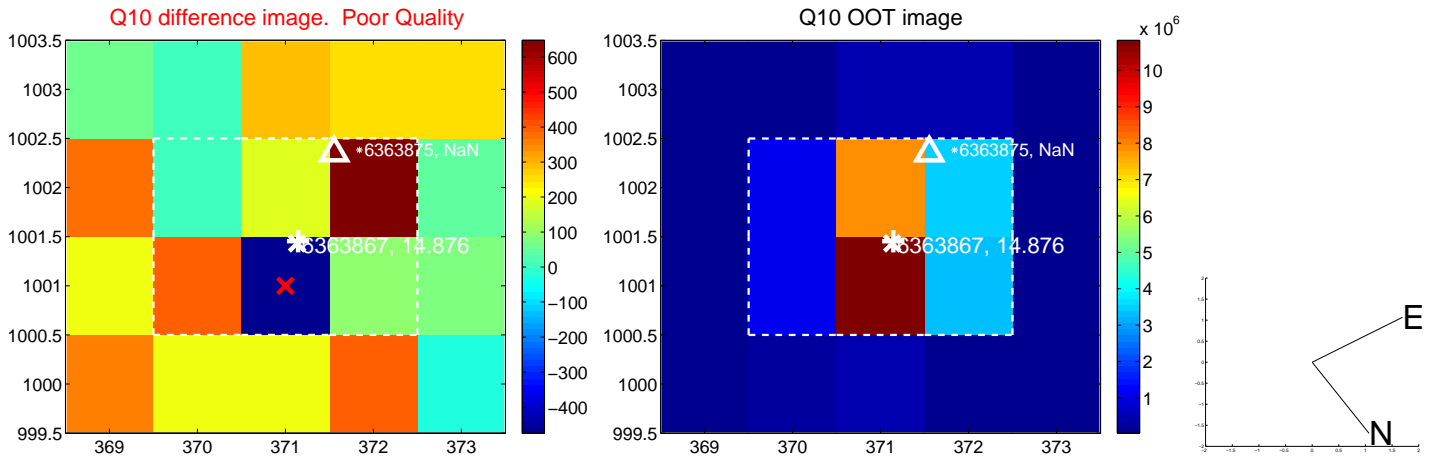
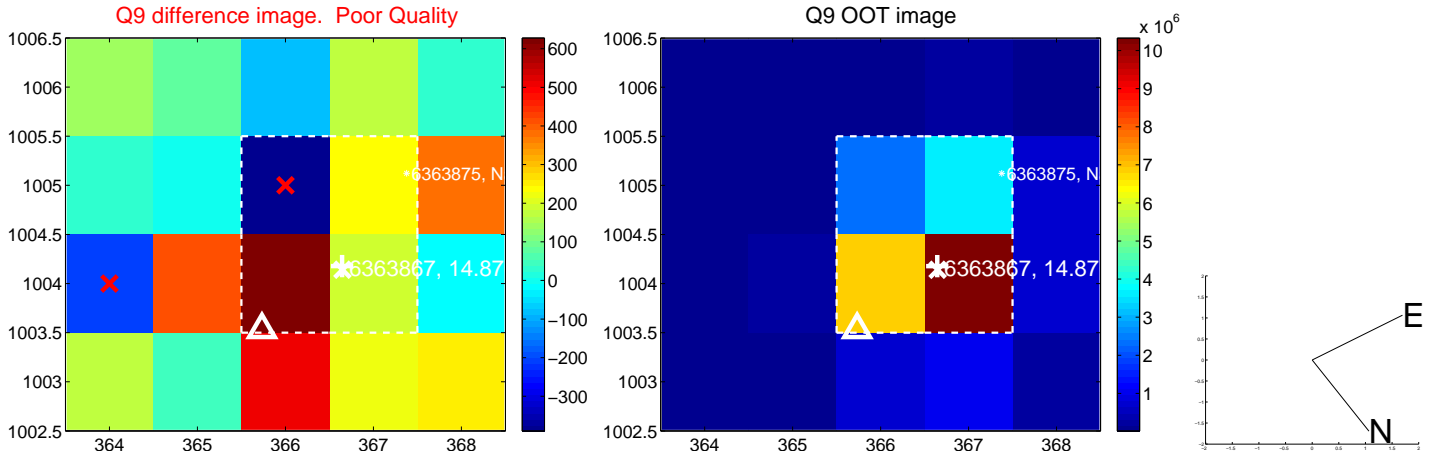


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

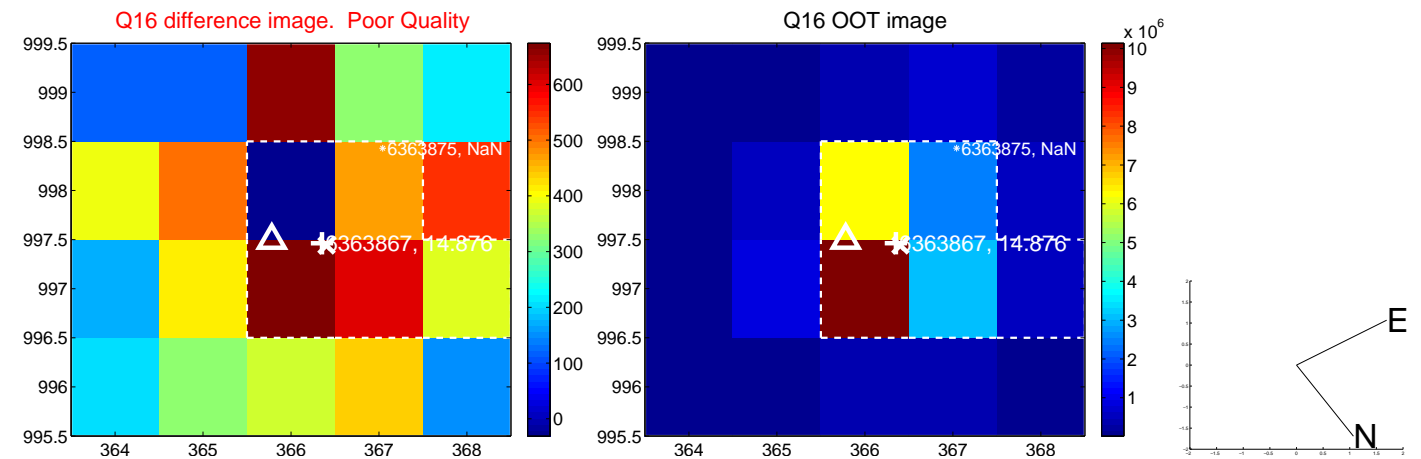
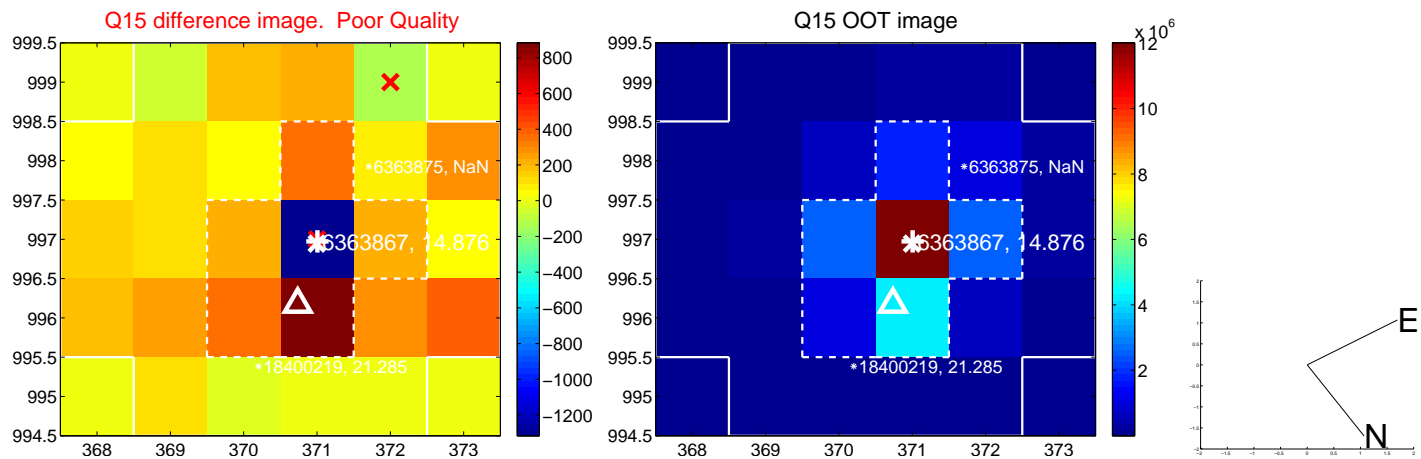
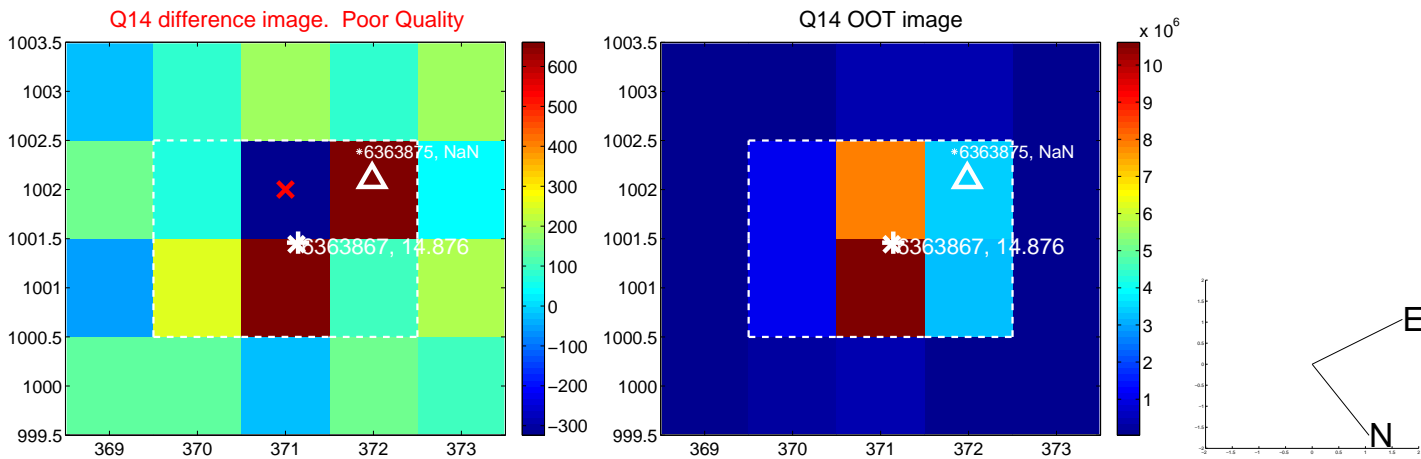
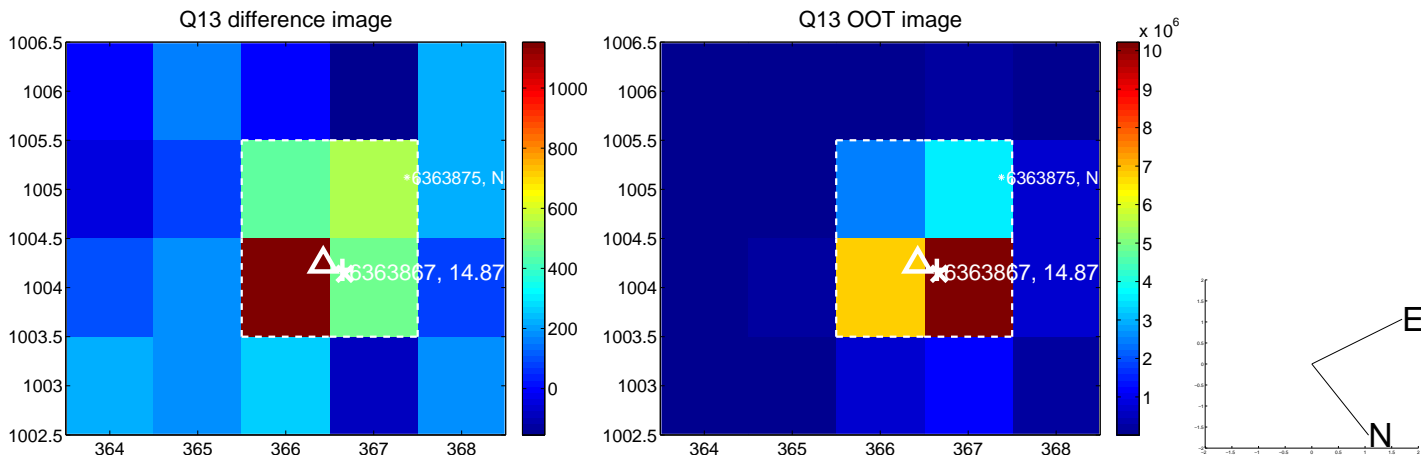
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



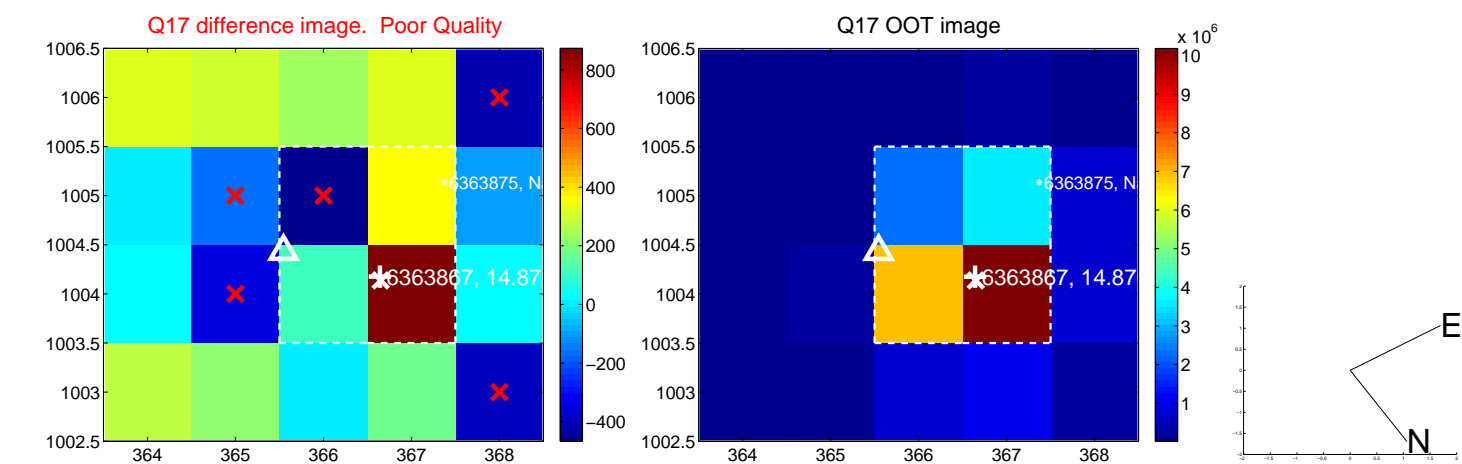
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



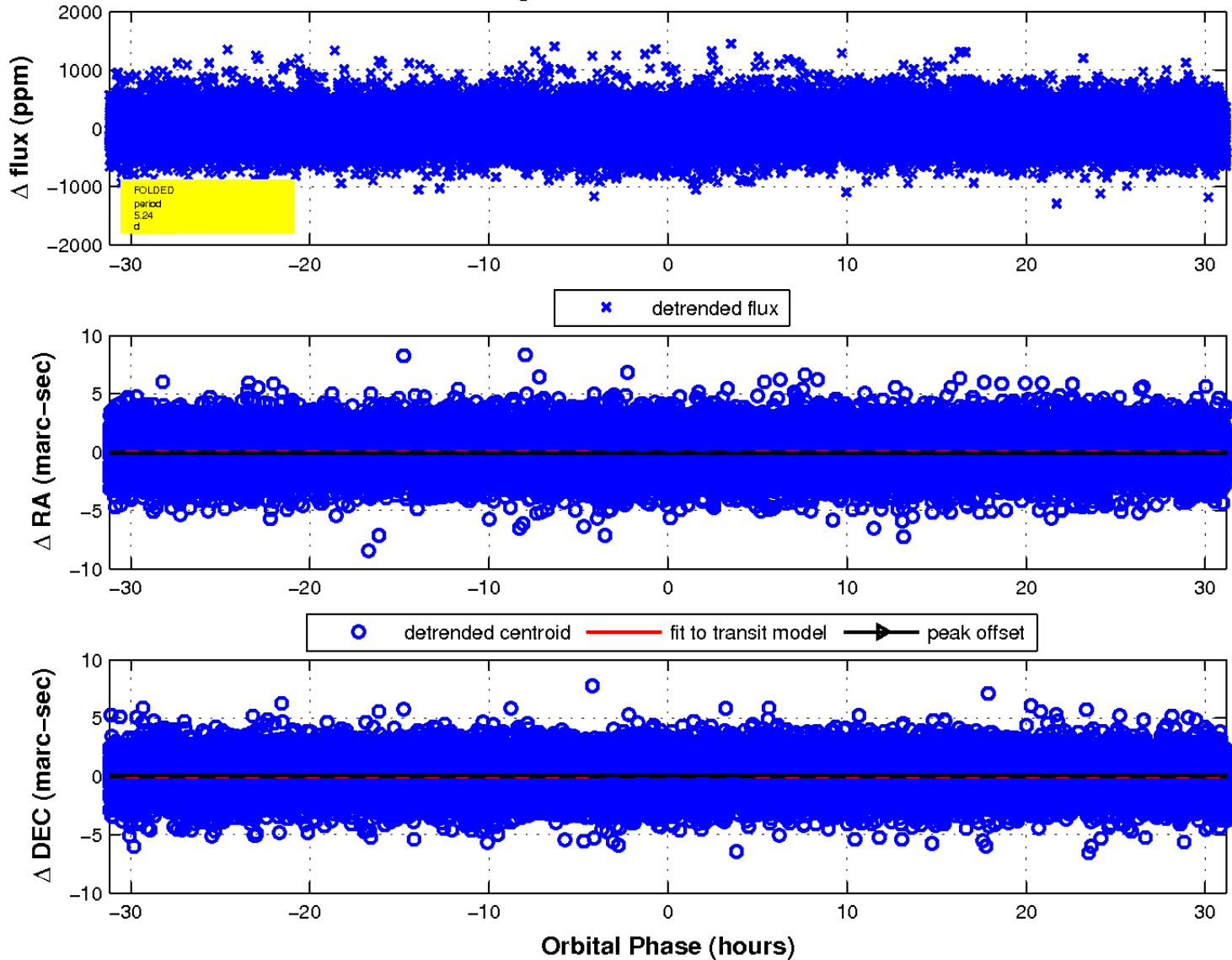
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

