

KIC 008097897

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})
008097897-01	OBS	No	0.663120	131.853593	570.0	0.833	17.6	28.8	0.78	5667	2.48	2813.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008097897-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—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.

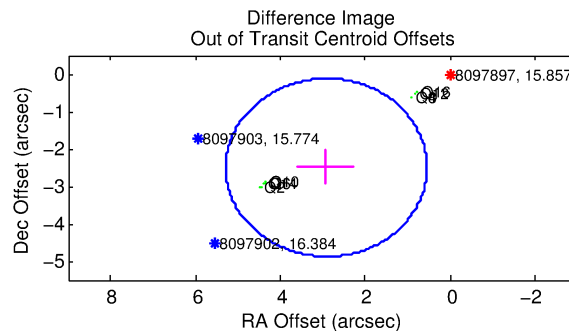
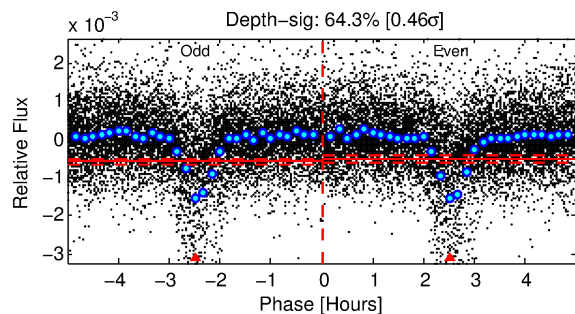
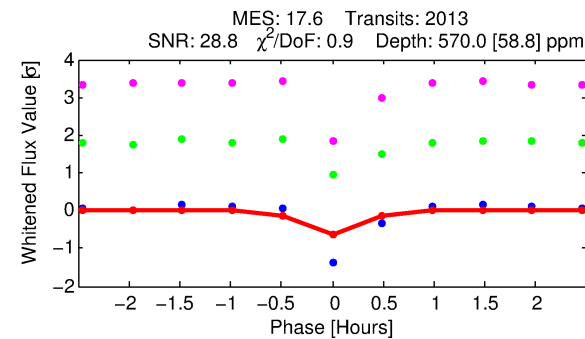
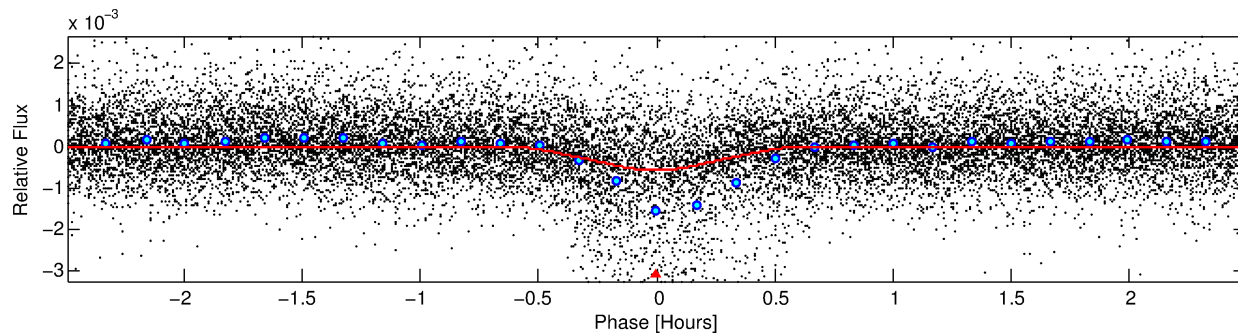
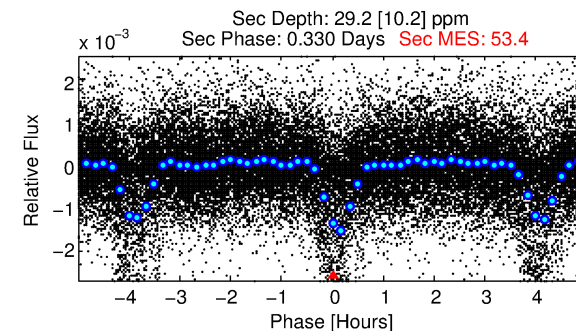
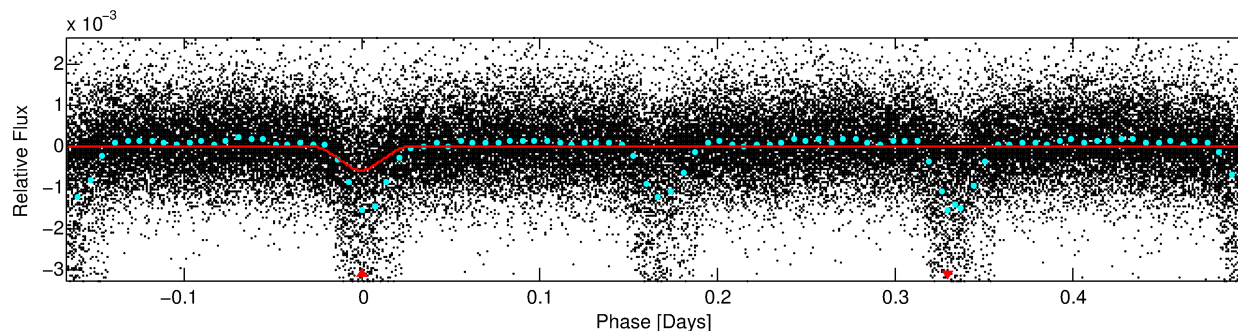
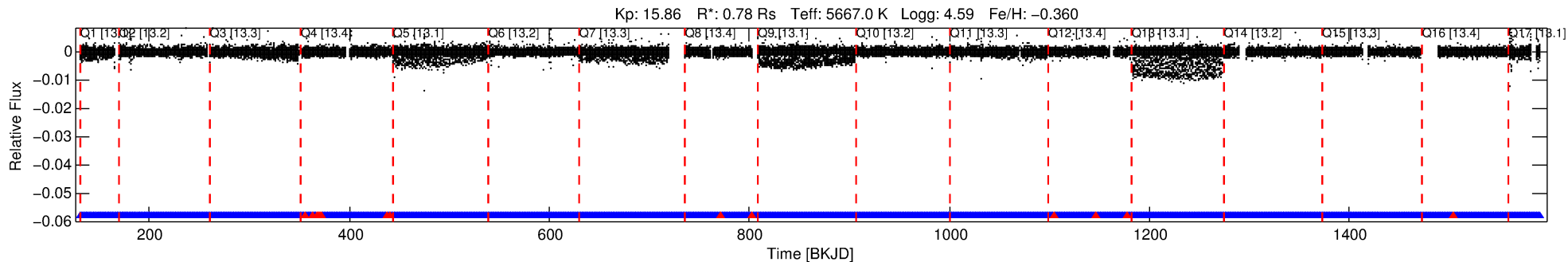
Ephemeris Match Information For 008097897-01

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
008097897-01	8097897	008097902-pri	8097902	2:1	7.1	1	1	16.38	15.85	617.02	Direct-PRF	0	3.03	0.57

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 8097897 Candidate: 1 of 1 Period: 0.663 d



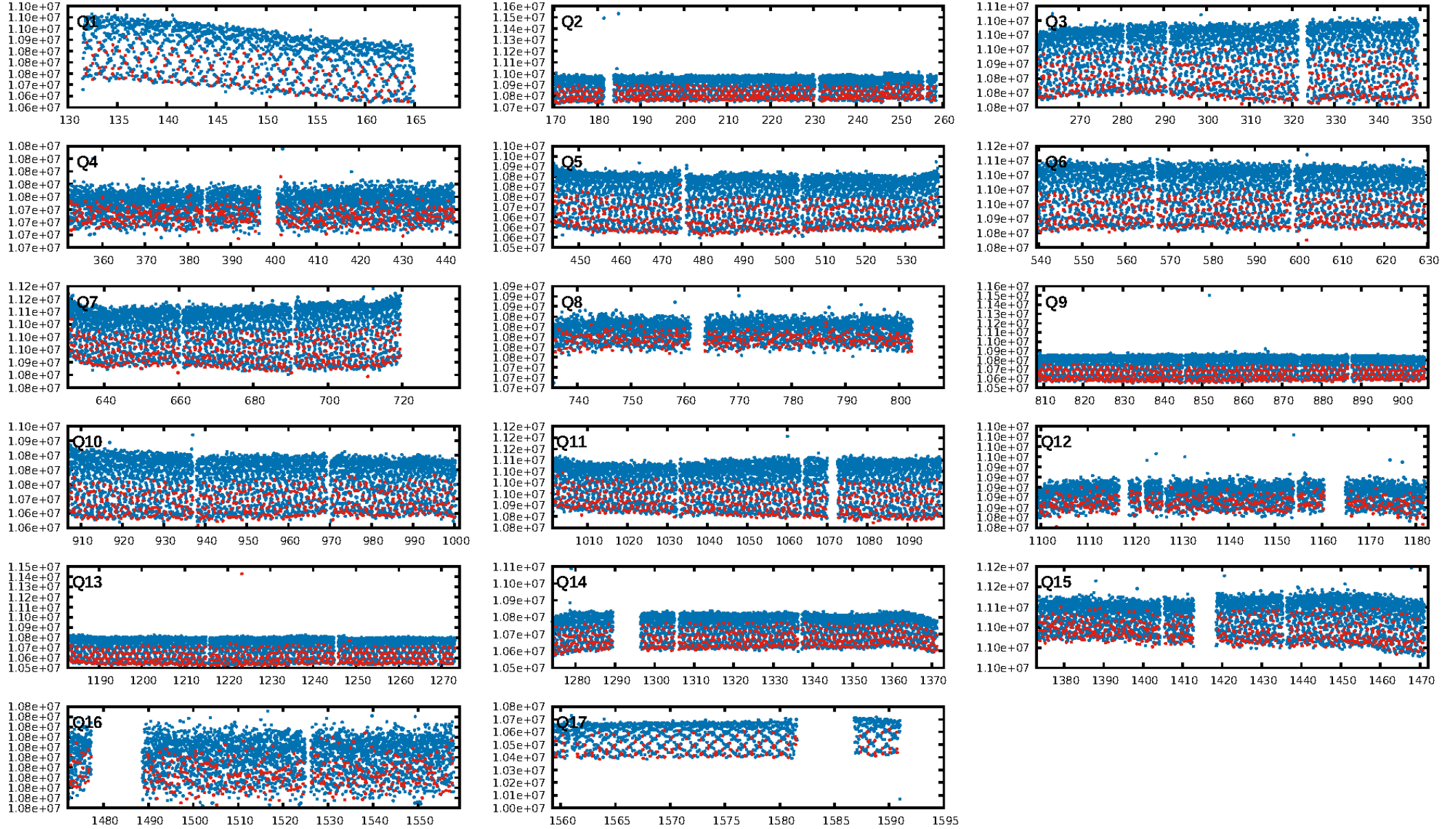
DV Fit Results:

Period = 0.66312 [0.00000] d
Epoch = 131.8536 [0.0005] BKJD
Rp/R* = 0.0290 [0.0051]
a/R* = 2.49 [1.12]
b = 0.96 [0.05]
Seff = 2813.75 [748.67]
Teq = 1857 [124] K
Rp = 2.47 [0.66] Re
a = 0.0142 [0.0024] AU
Ag = 0.52 [0.29] [-1.65σ]
Teffp = 2444 [311] K [1.75σ]

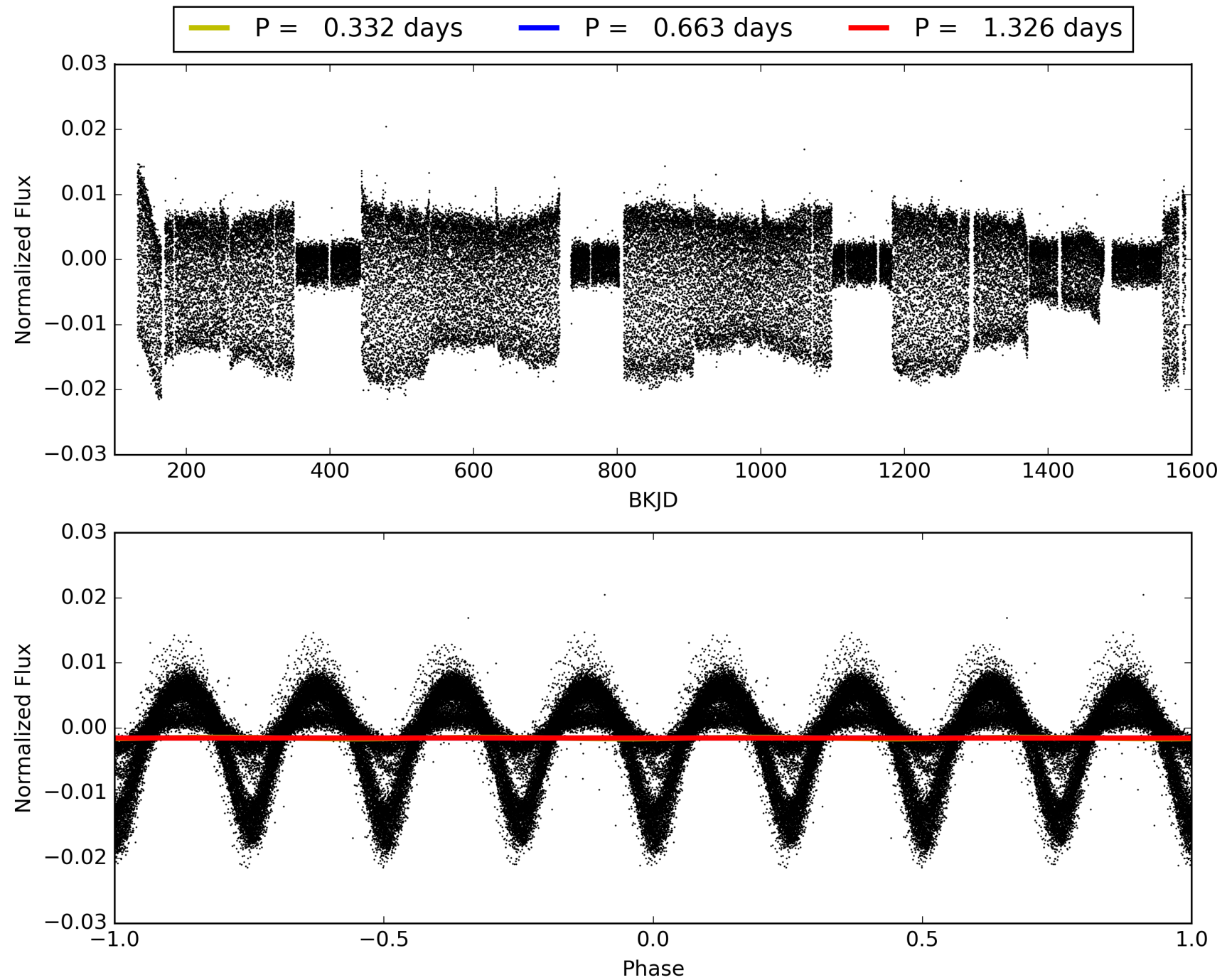
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.33e-17
RollingBand-fgt: 0.99 [1905/1922]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.837 arcsec [4.85σ]
KicOffset-rm: 7.203 arcsec [105.82σ]
OotOffset-st: 4/0/4/0 [8]
KicOffset-st: 4/0/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008097897-01, PDC Light Curves

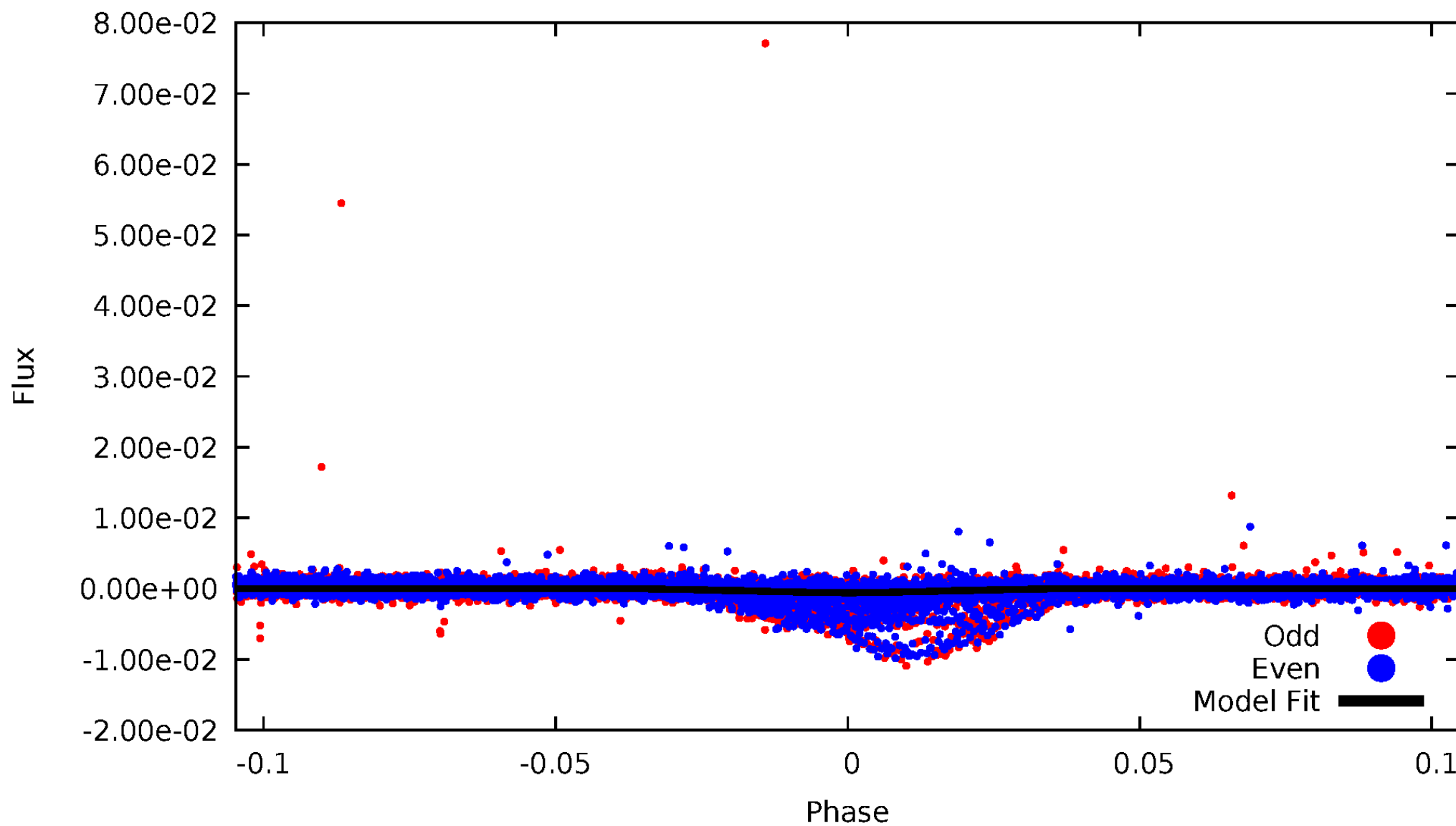


TCE 008097897-01



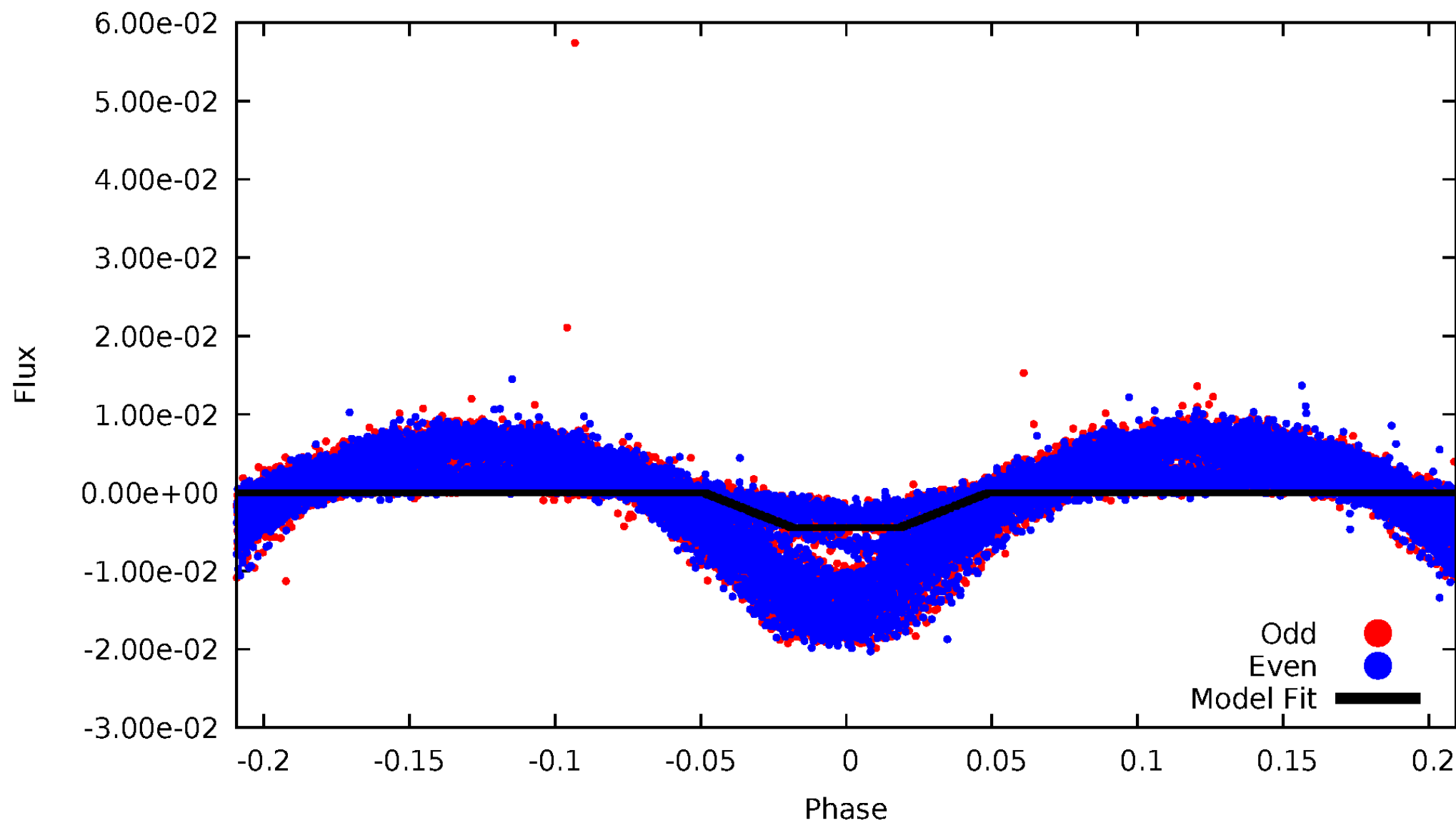
DV Odd/Even

TCE 008097897-01



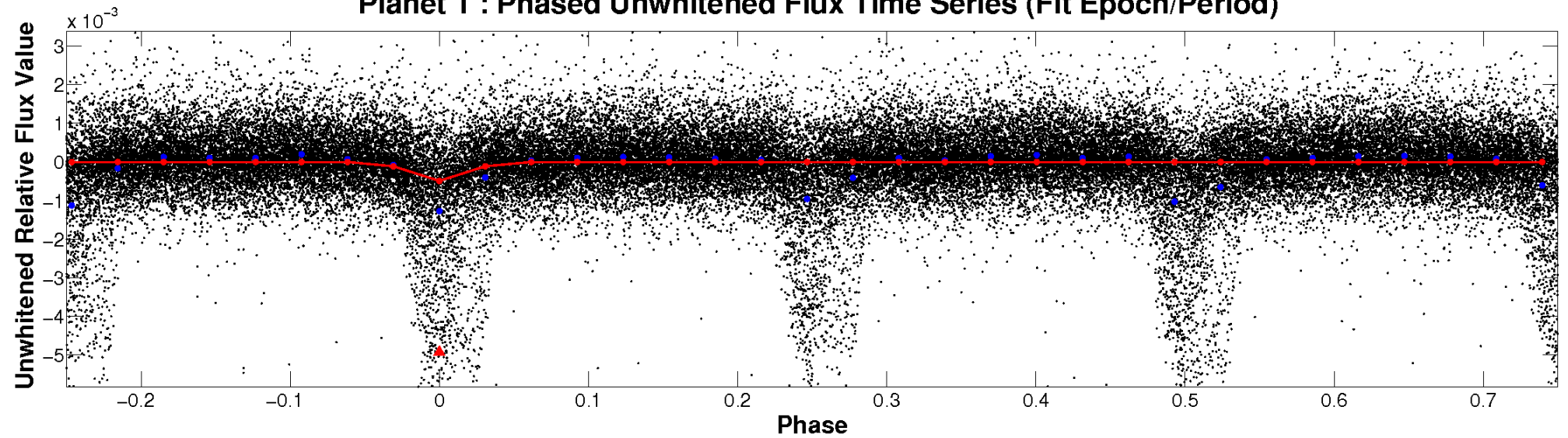
ALT Odd/Even

TCE 008097897-01

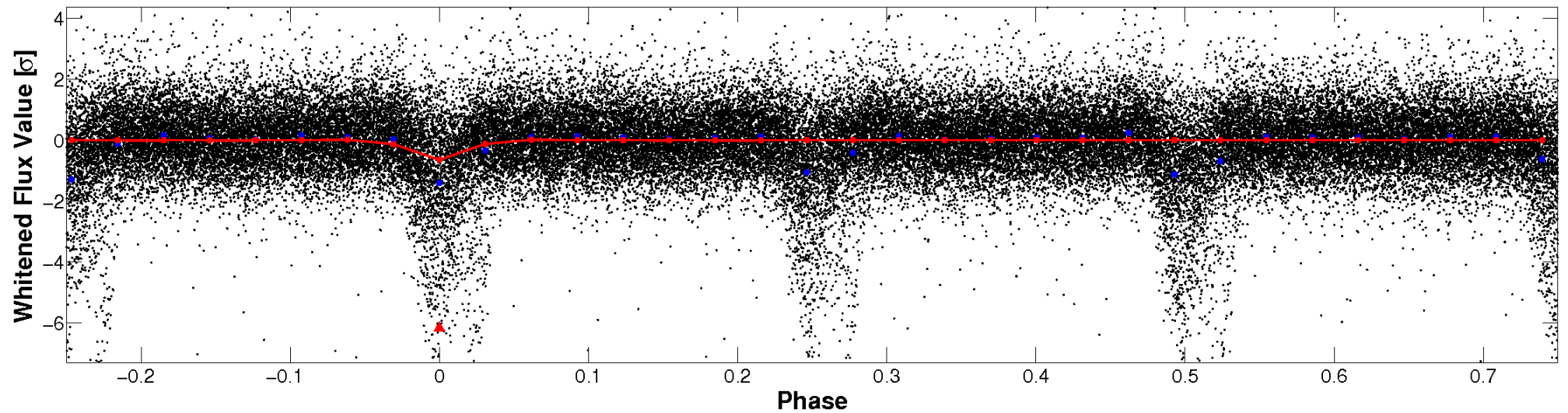


Non-Whitened Vs. Whitened Light Curve

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

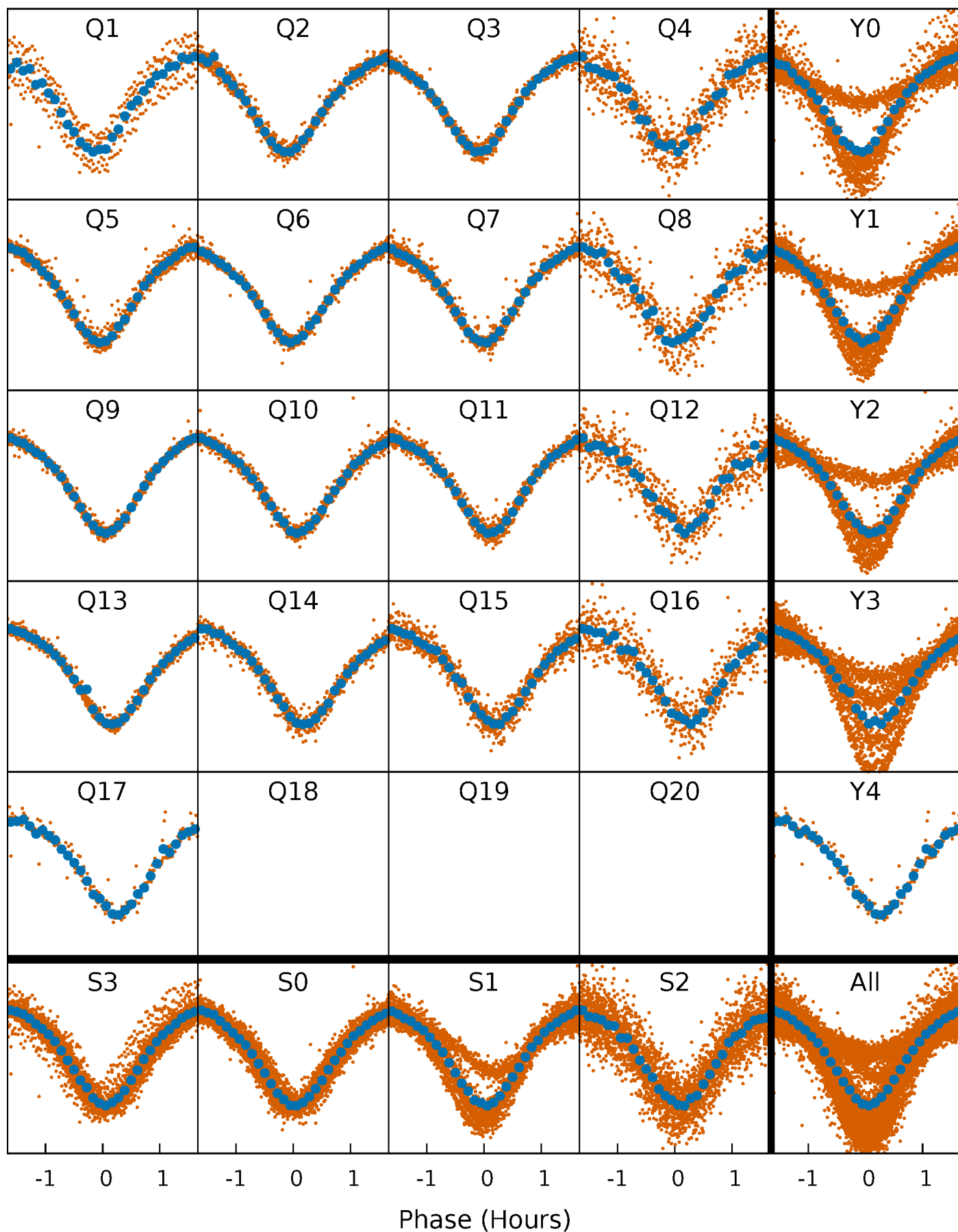


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



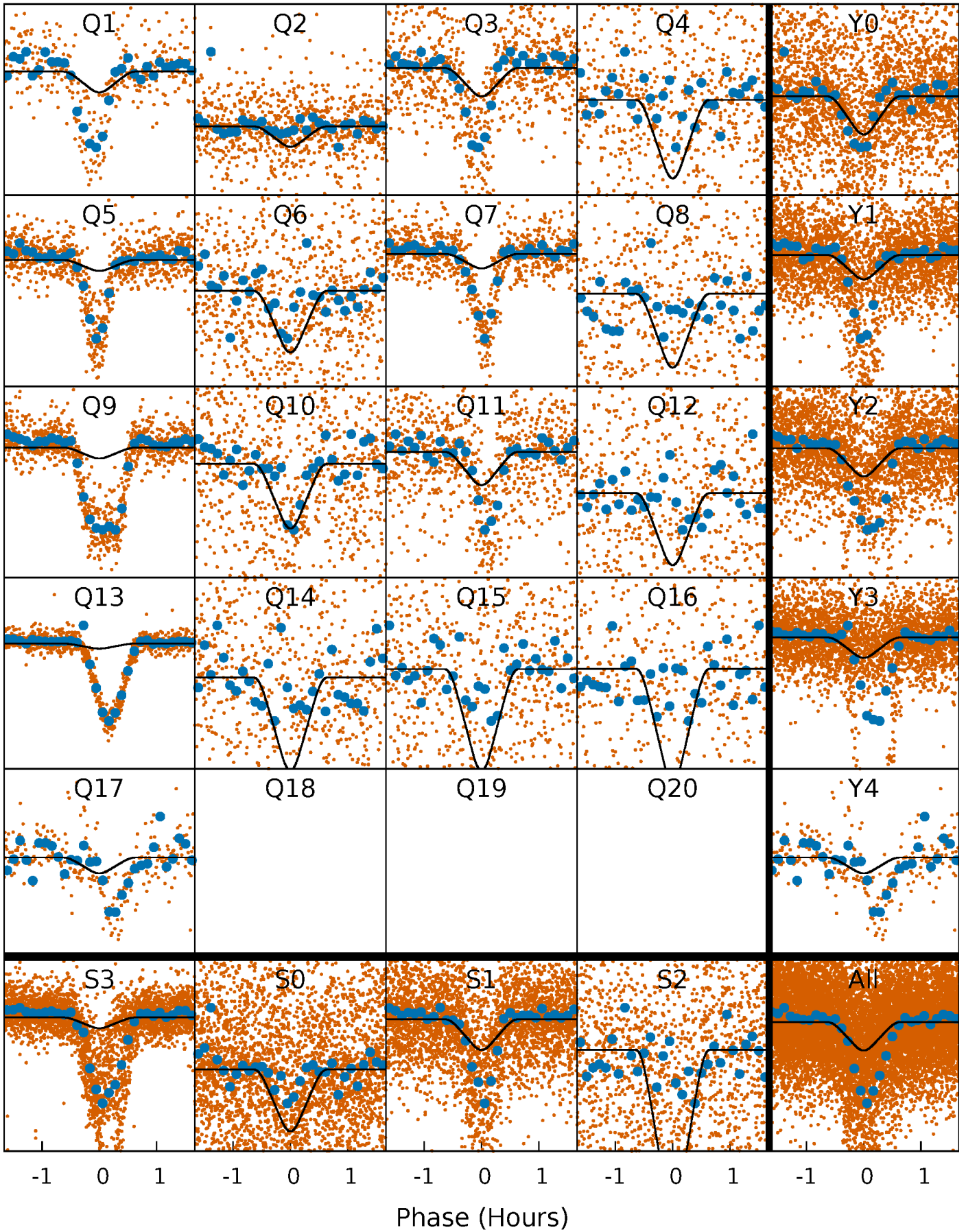
PDC Quarter-Phased Transit Curves

TCE 008097897-01 P= 0.663120 Days $T_0=131.853593$ (BKJD)



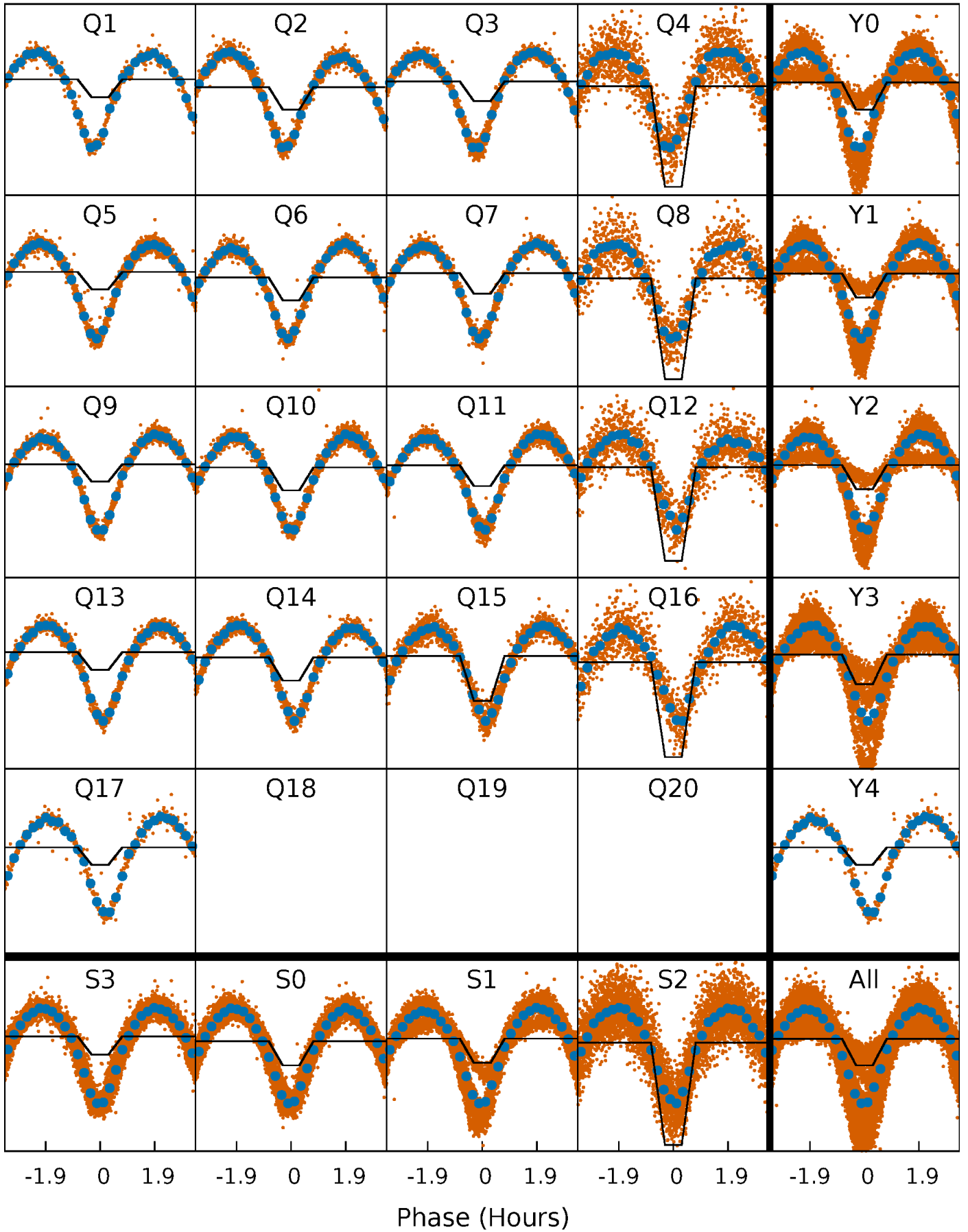
DV Quarter-Phased Transit Curves

TCE 008097897-01 P= 0.663120 Days $T_0=131.853593$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

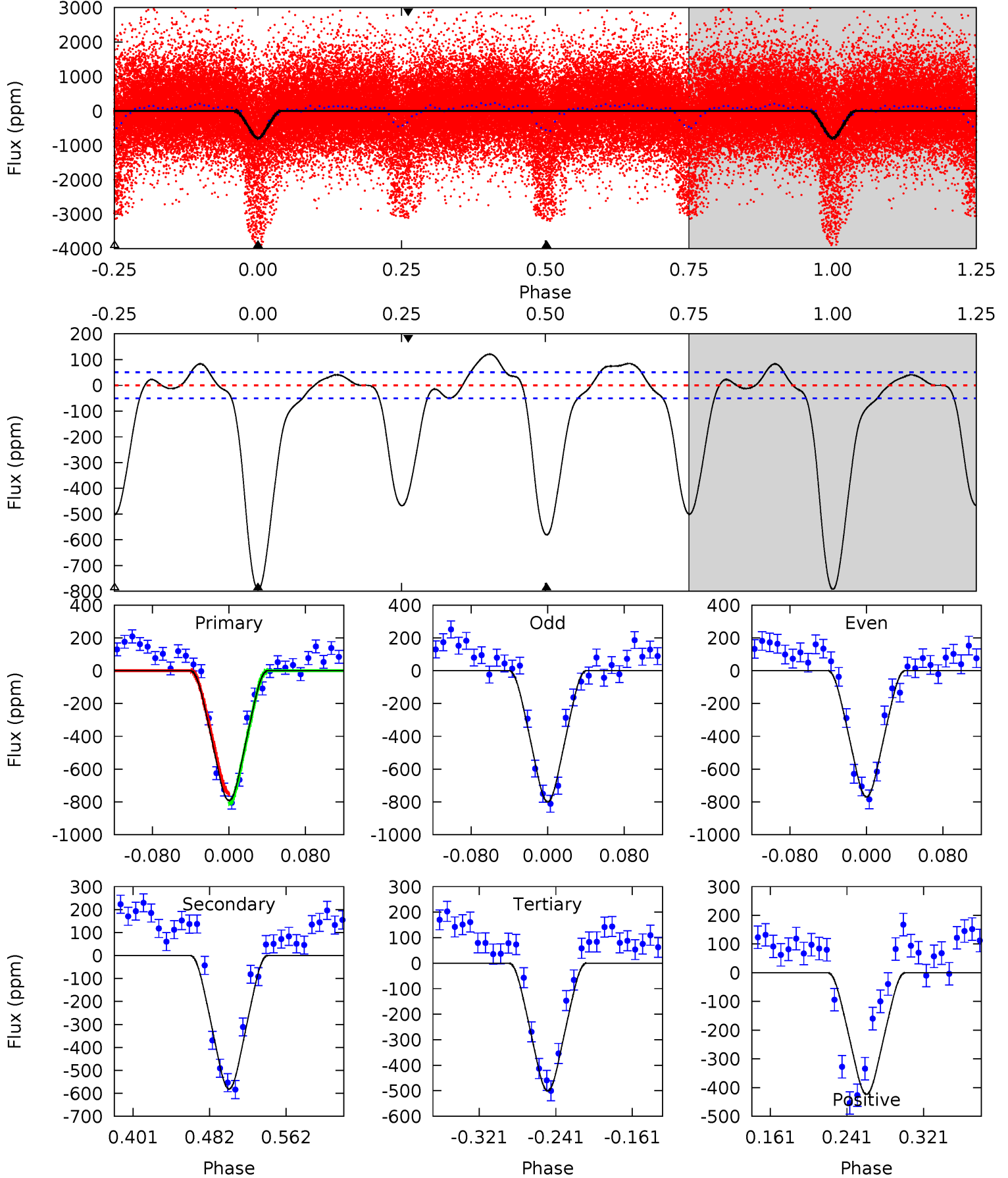
TCE 008097897-01 P= 0.663119 Days $T_0=131.857928$ (BKJD)



DV Model-Shift Uniqueness Test

008097897-01, P = 0.663120 Days, E = 131.190473 Days

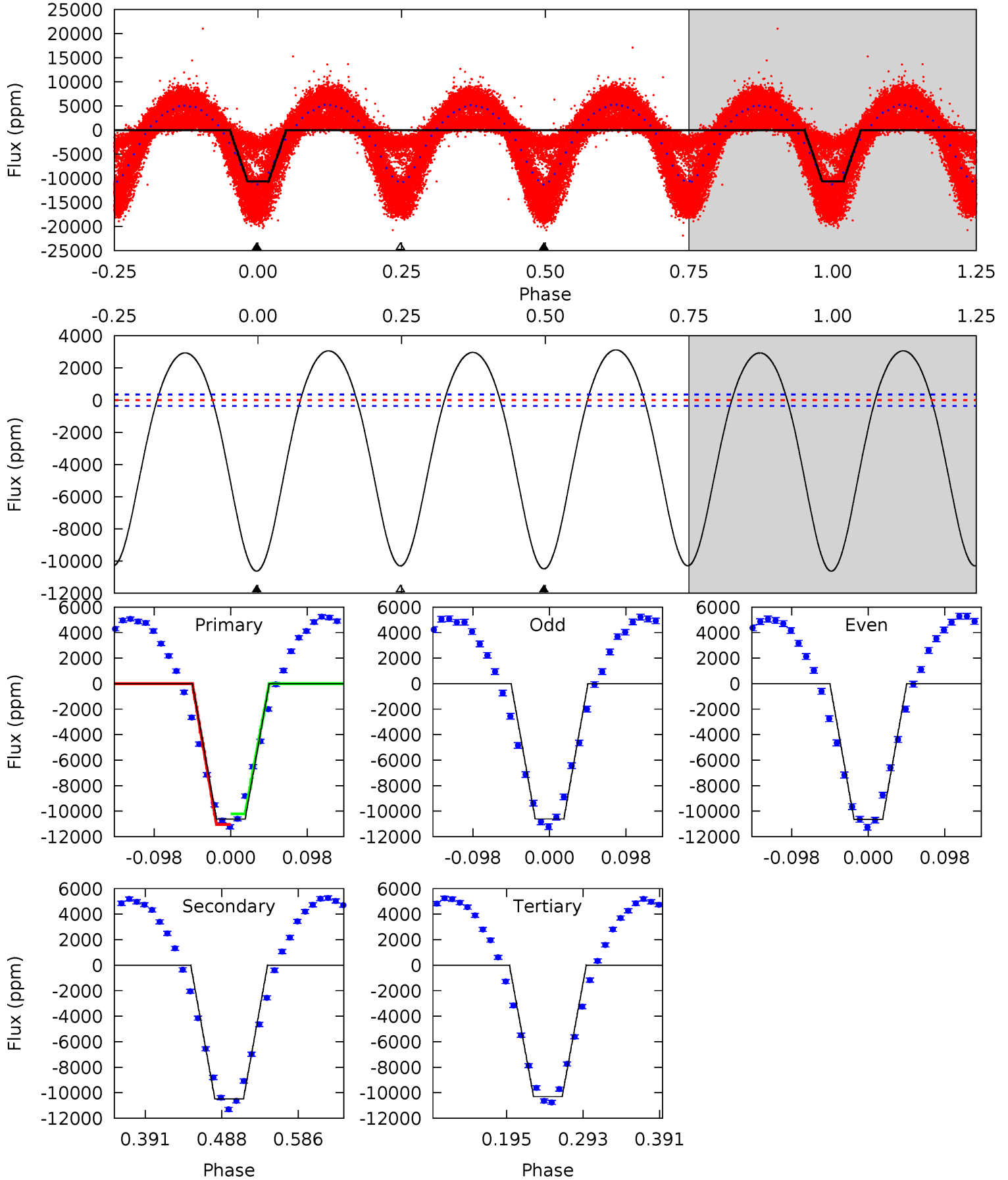
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
72.2	53.0	45.6	-38.6	4.61	1.75	14.1	26.6	110.8	7.34	91.6	1.38	1.94	0.13	2.80



Alt Model-Shift Uniqueness Test

008097897-01, P = 0.663119 Days, E = 131.194809 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
135.9	134.1	131.7	0	4.57	1.66	60.7	4.15	135.9	2.36	134.1	0.19	0.90	0.23	5.26



Stellar Parameters For KIC 008097897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5667^{+155}_{-169}	$4.587^{+0.034}_{-0.128}$	$-0.360^{+0.300}_{-0.300}$	$0.781^{+0.157}_{-0.063}$	$0.873^{+0.088}_{-0.097}$	$2.576^{+0.429}_{-0.952}$
	+3%/-3%	+1%/-3%	+83%/-83%	+20%/-8%	+10%/-11%	+17%/-37%
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 008097897-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-581±11	$2.54^{+0.52}_{-0.46}$	2637^{+129}_{-103}	5175^{+498}_{-368}	$9.758^{+4.801}_{-2.865}$
Alt.	-10484±78	$5.93^{+0.70}_{-0.63}$	2635^{+135}_{-98}	7024^{+390}_{-351}	33^{+8}_{-6}

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

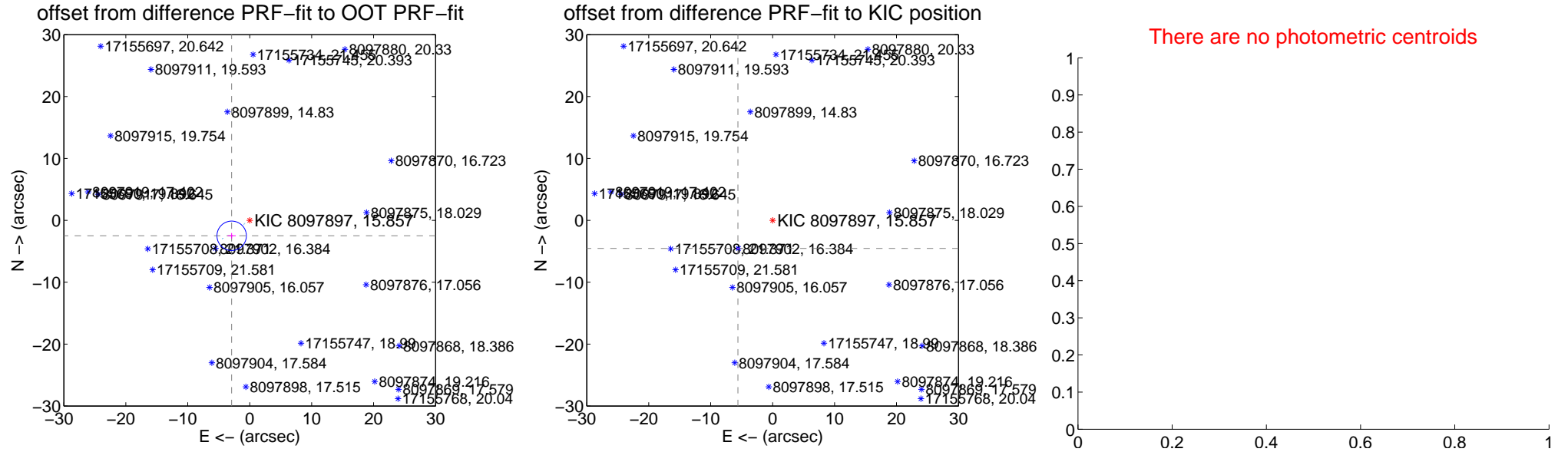
DV Centroid Data

Supplemental centroid analysis for 008097897-01. Kepler magnitude: 15.86. Transit SNR 28.76

There are 8 quarters with good PRF difference image offsets

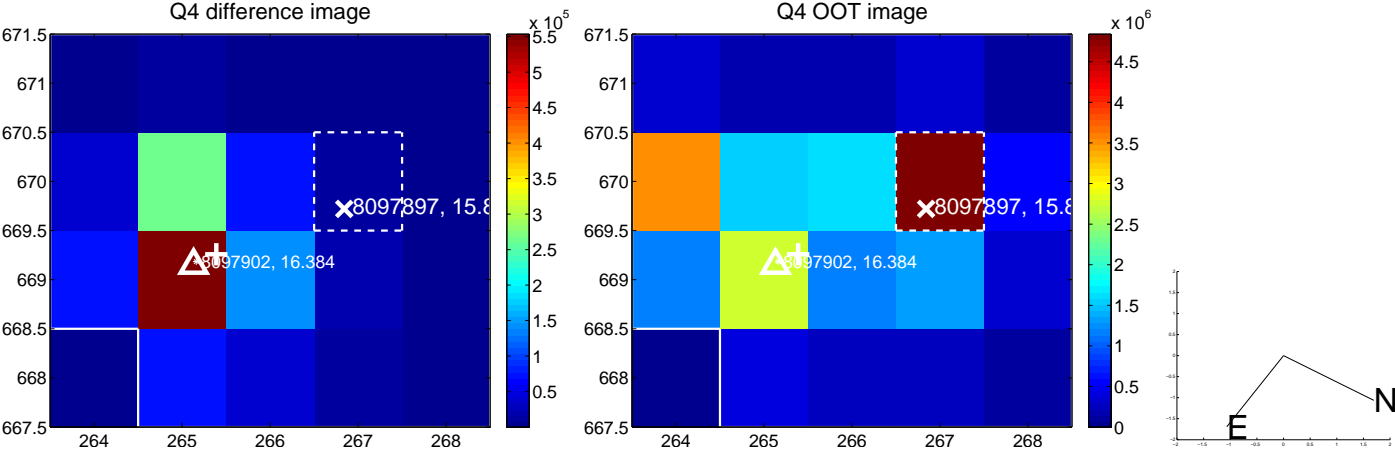
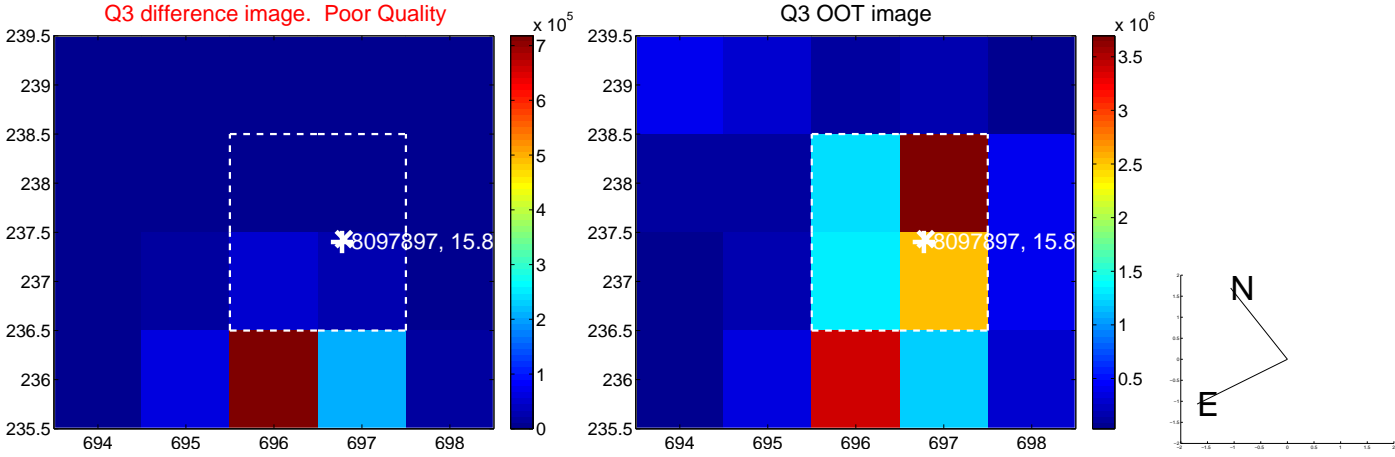
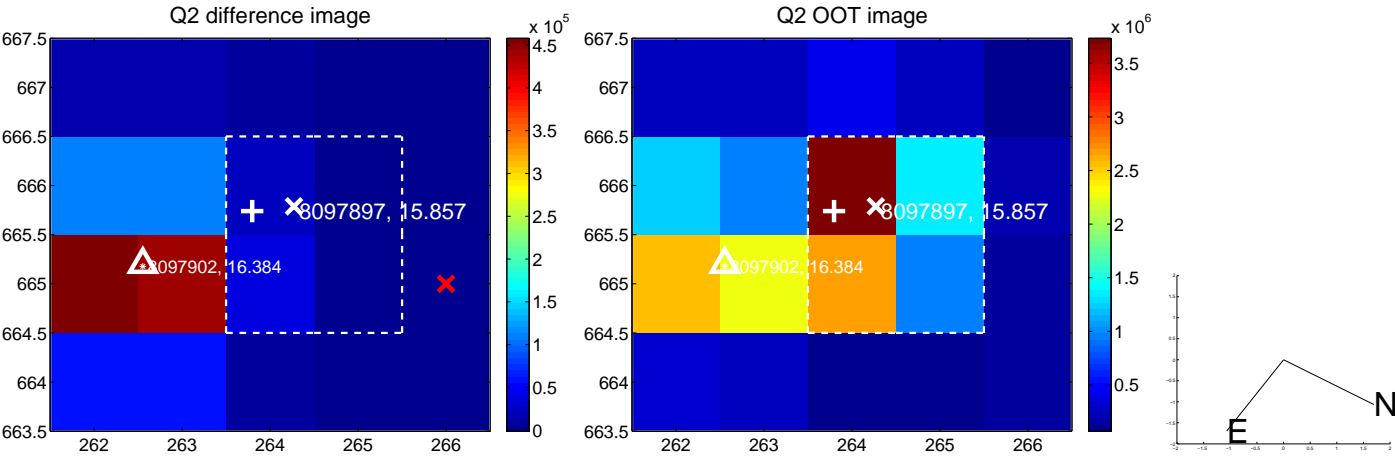
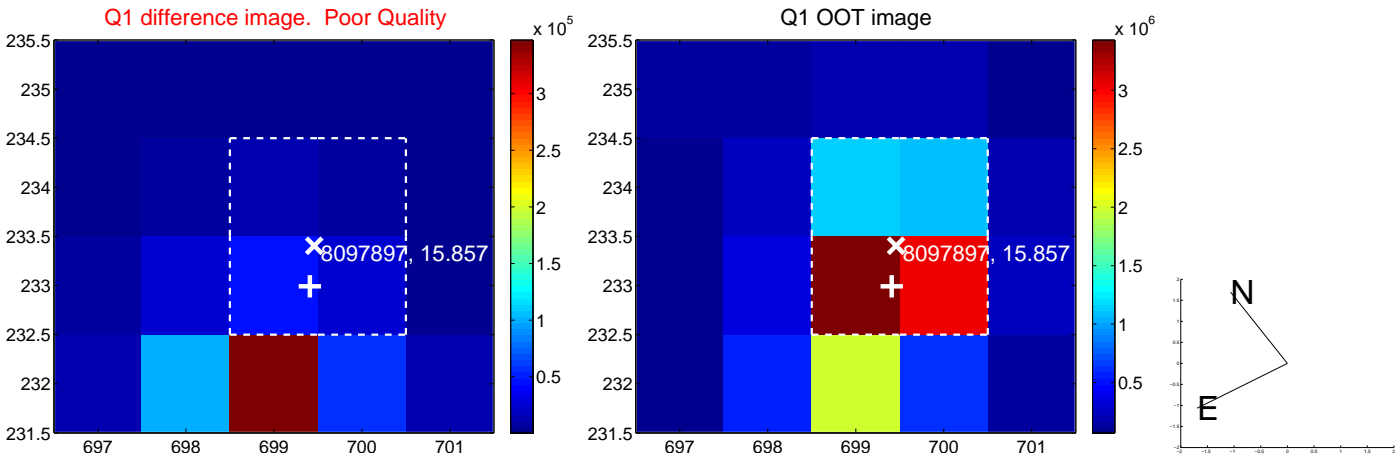
The OOT PRF centroid is offset from the target star catalog position by about 6.29 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.837 ± 0.792	4.85	2.913 ± 0.662	-2.498 ± 0.448
PRF-fit source offset from KIC position	7.203 ± 0.068	105.82	5.600 ± 0.069	-4.530 ± 0.067
photometric centroid source offset	—	—	—	—

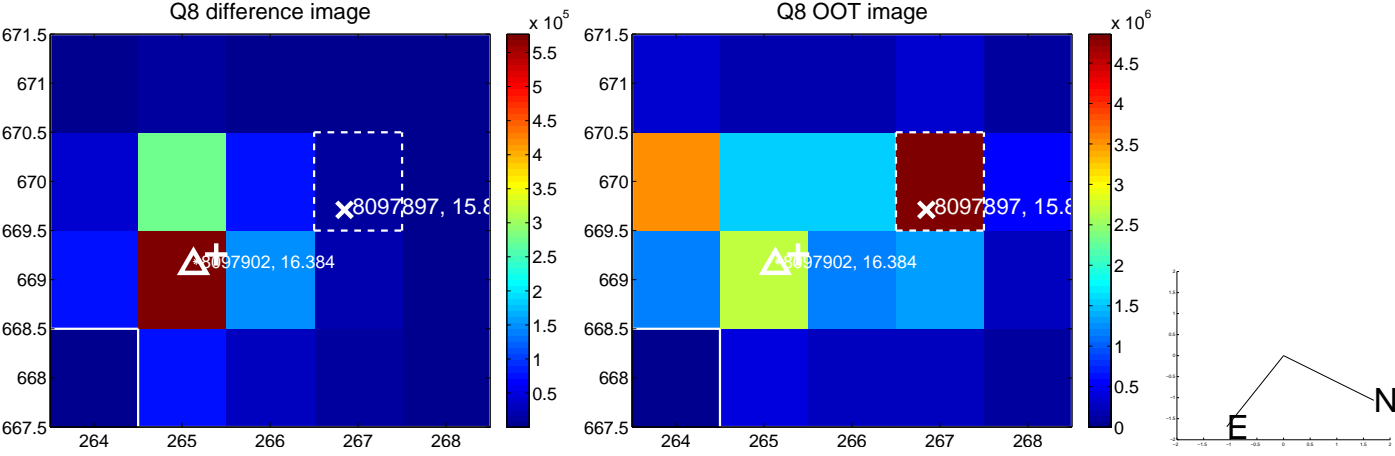
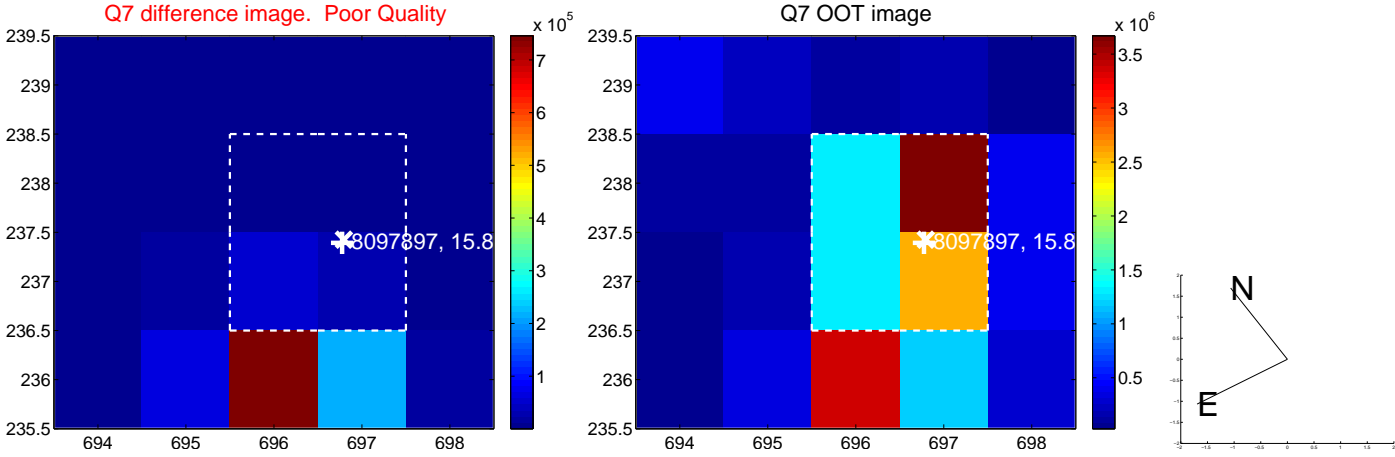
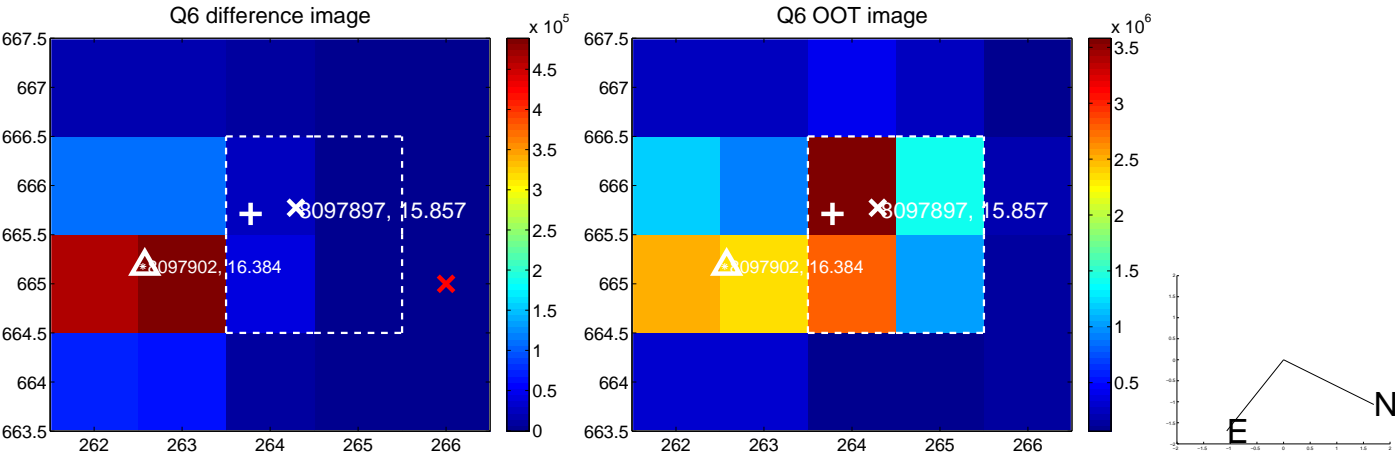
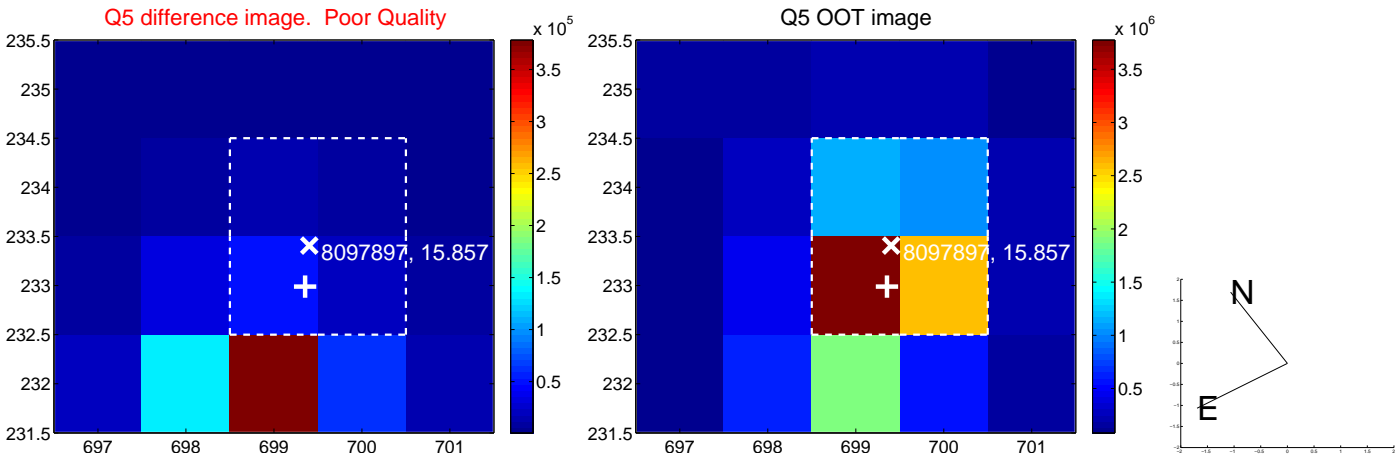


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

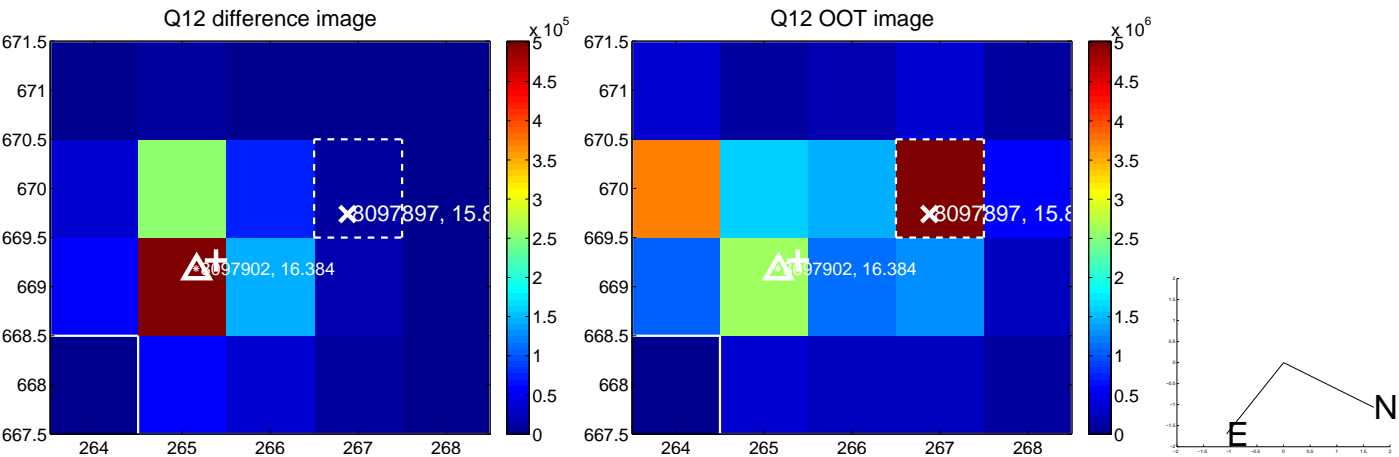
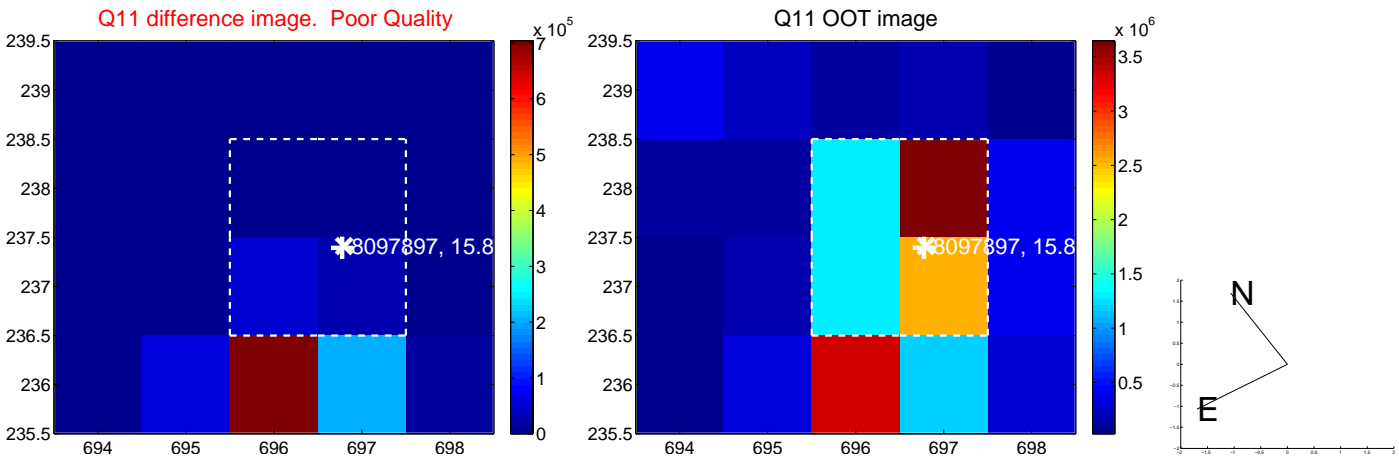
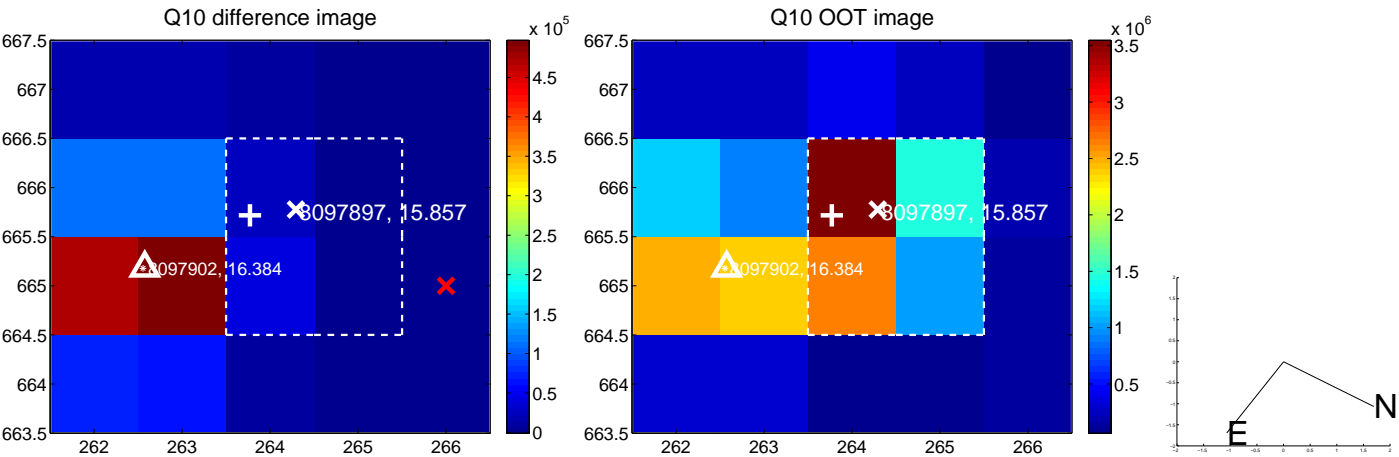
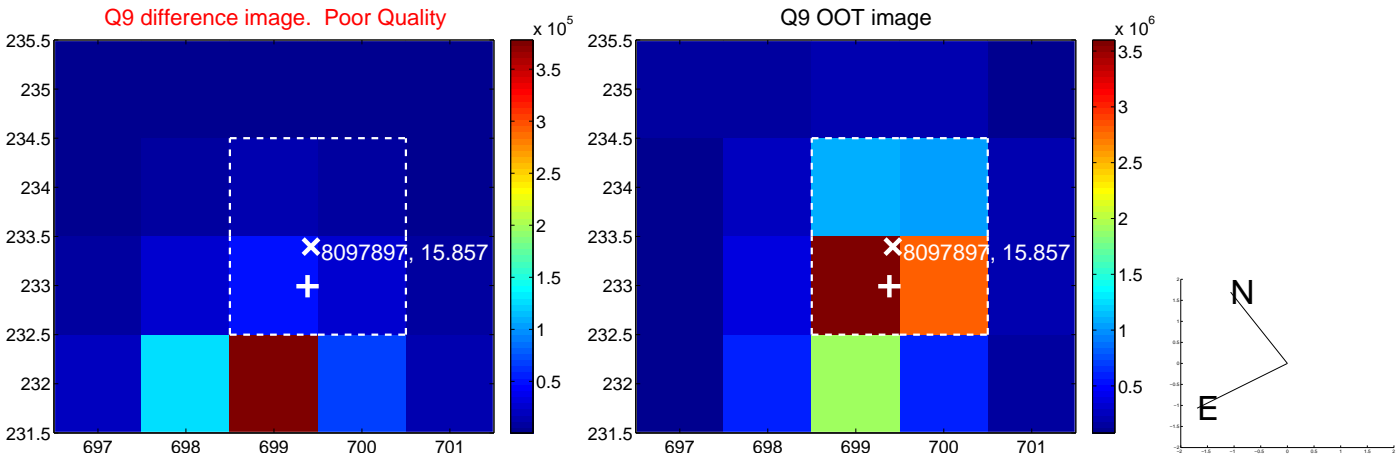
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



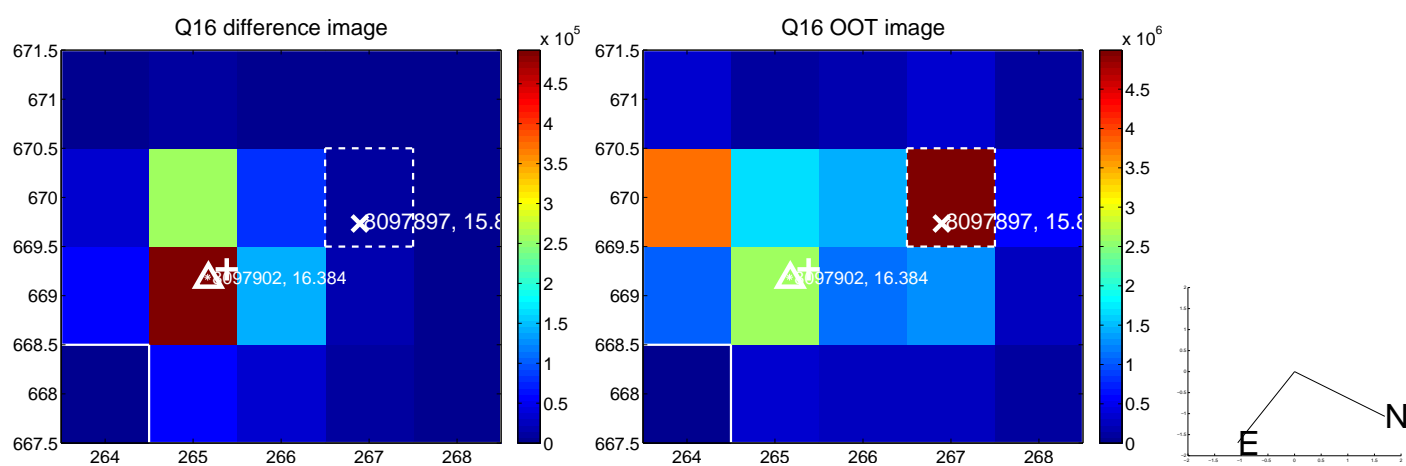
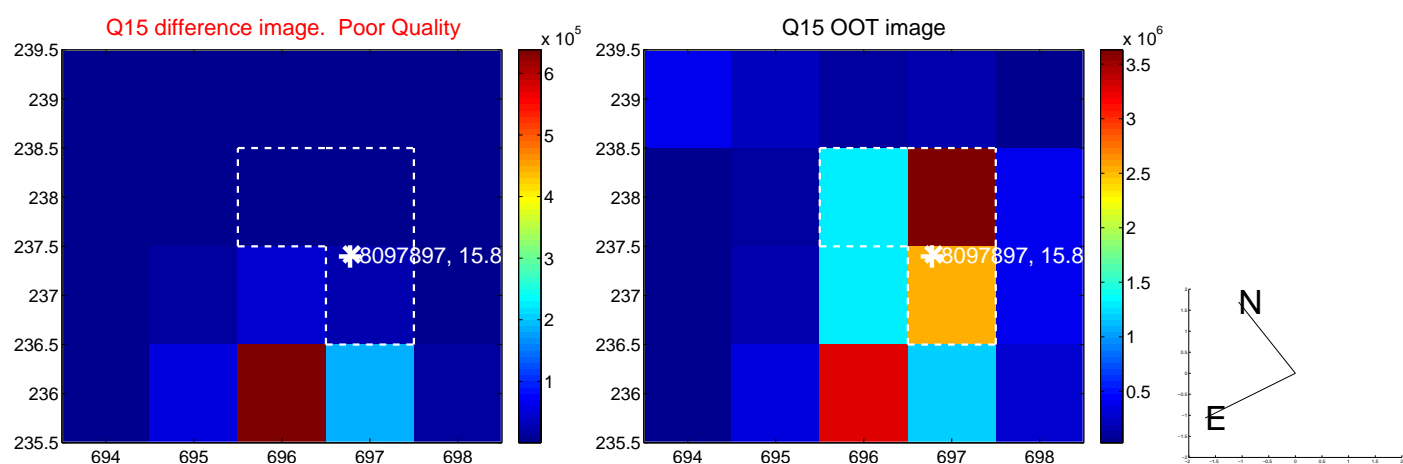
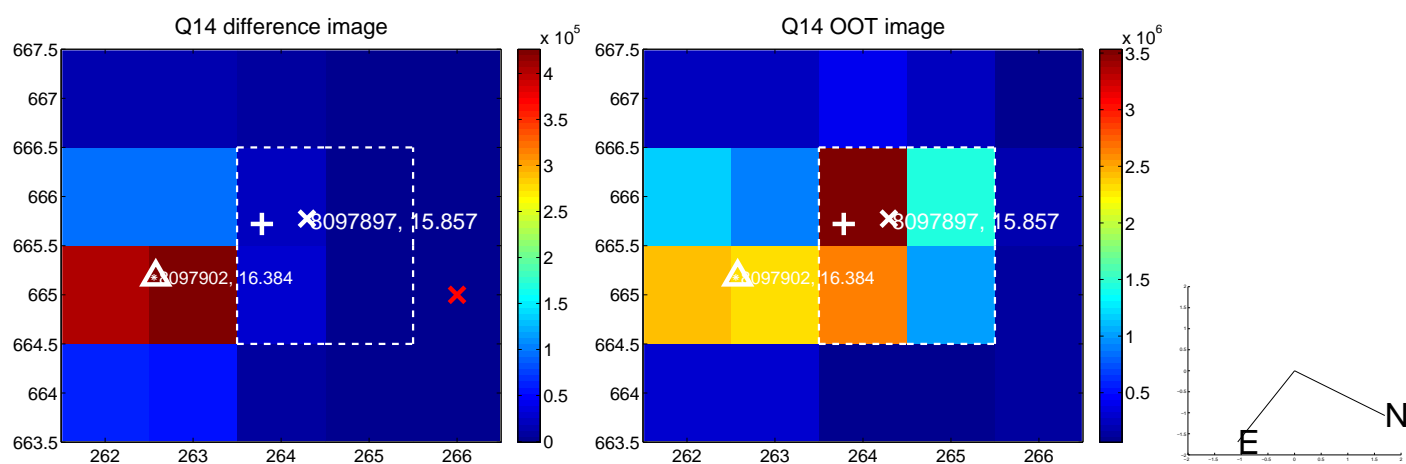
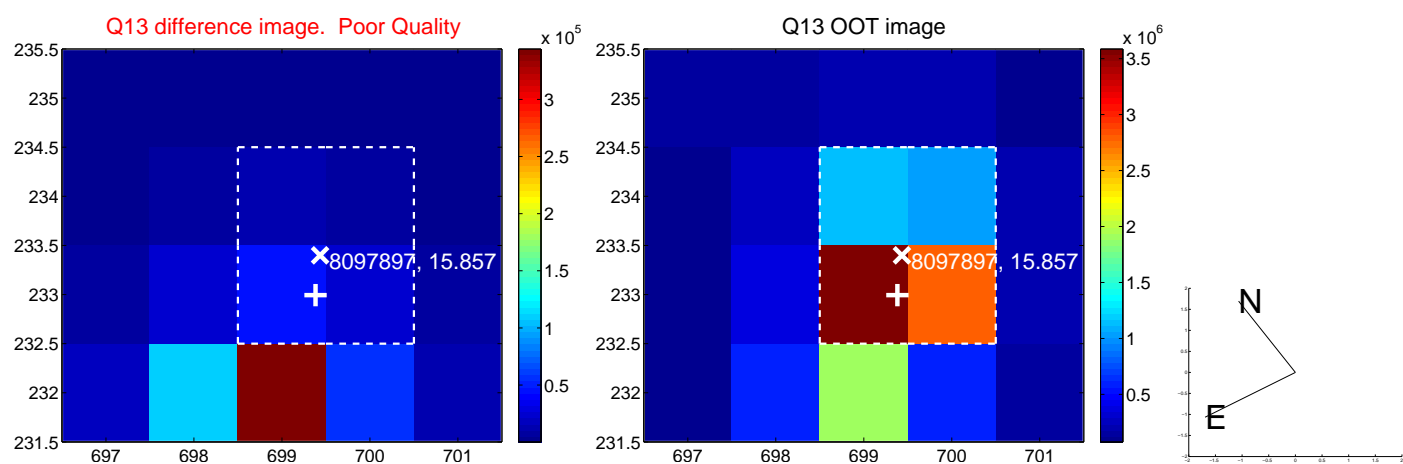
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



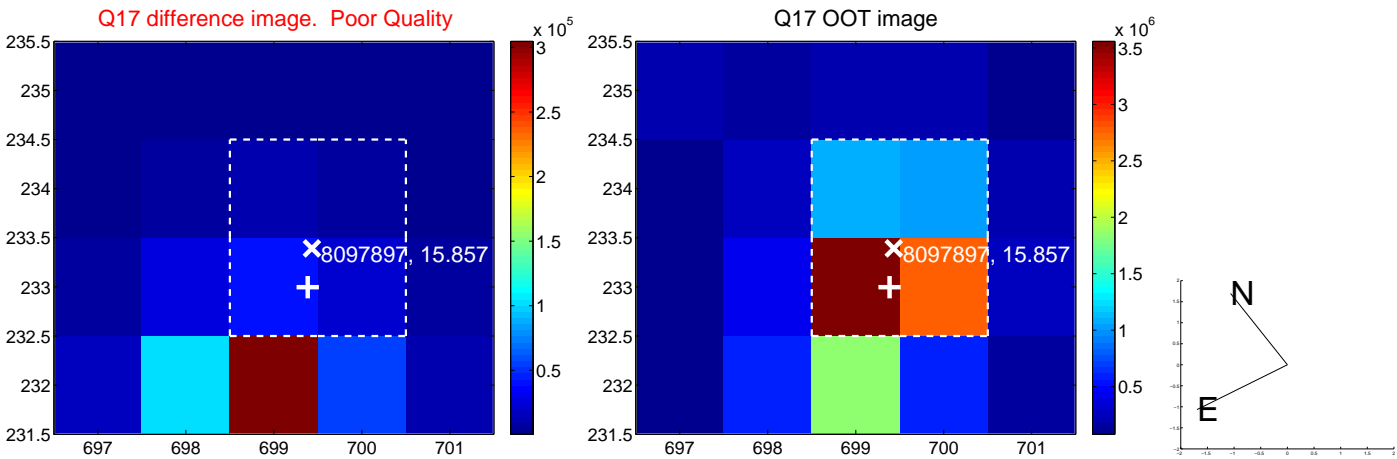
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

