

KIC 006345758

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})
006345758-01	OBS	6689.01	3.371110	132.032501	65.8	4.776	8.5	8.6	1.16	5653	1.13	657.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006345758-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

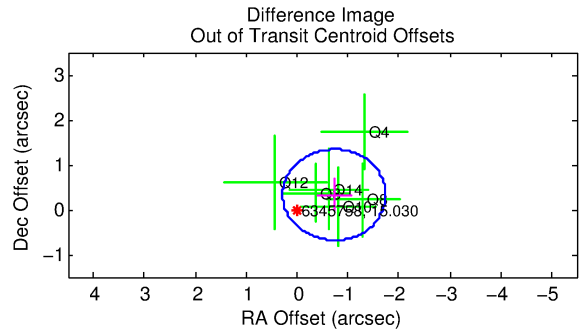
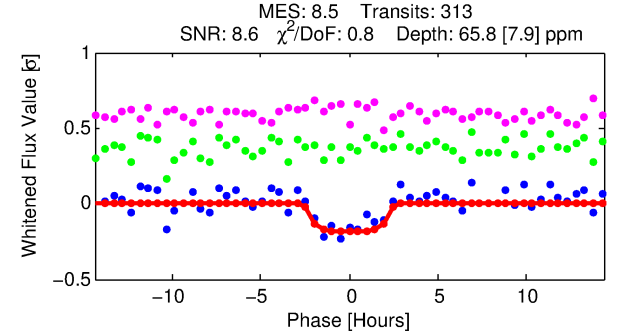
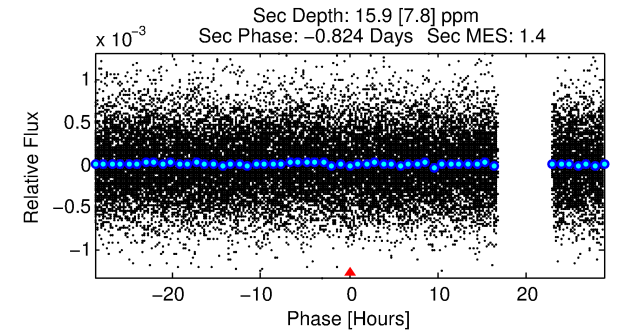
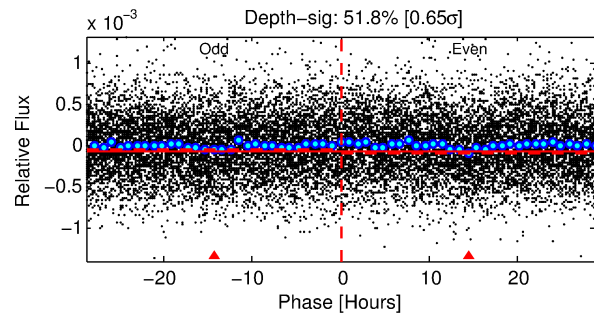
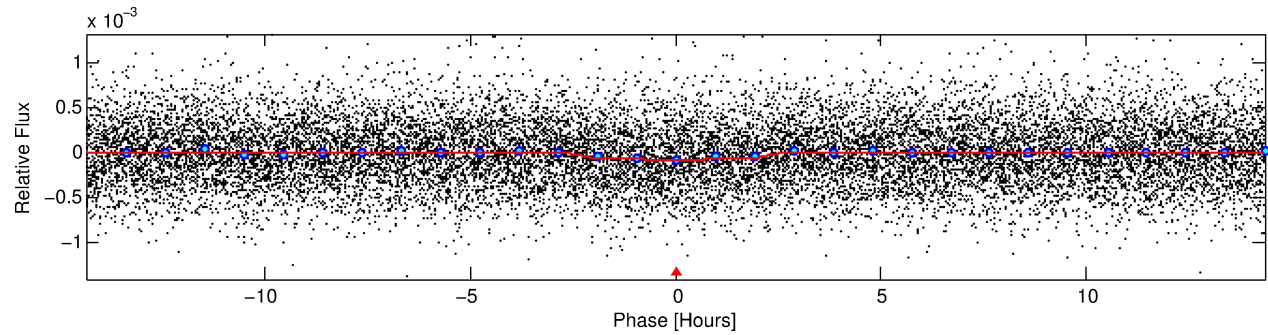
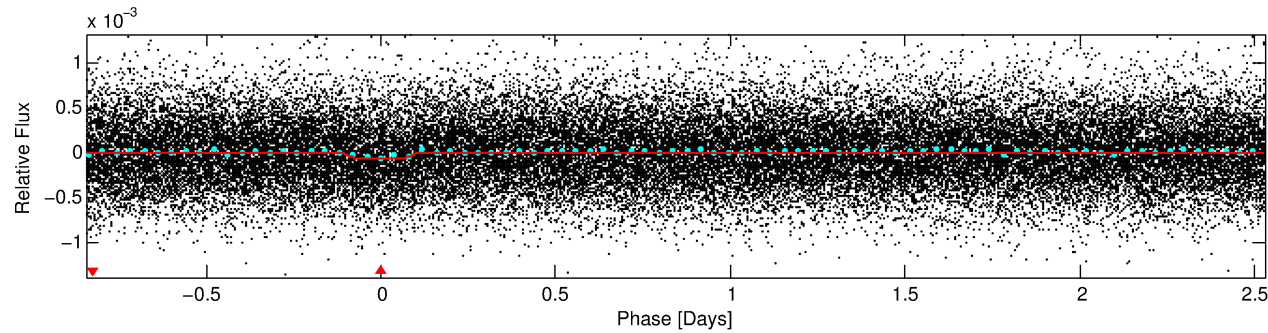
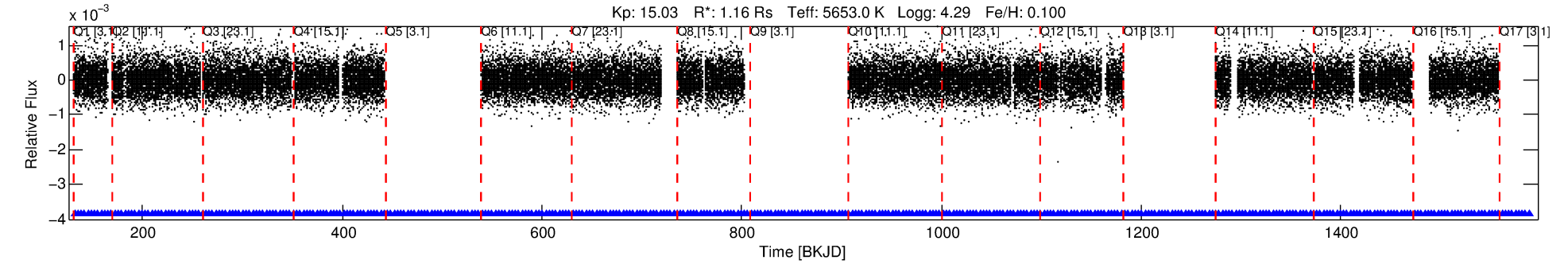
Ephemeris Match Information For 006345758-01

No Significant Match Found

DV One-Page Summary

KIC: 6345758 Candidate: 1 of 1 Period: 3.371 d

KOI: K06689.01 Corr: 0.952



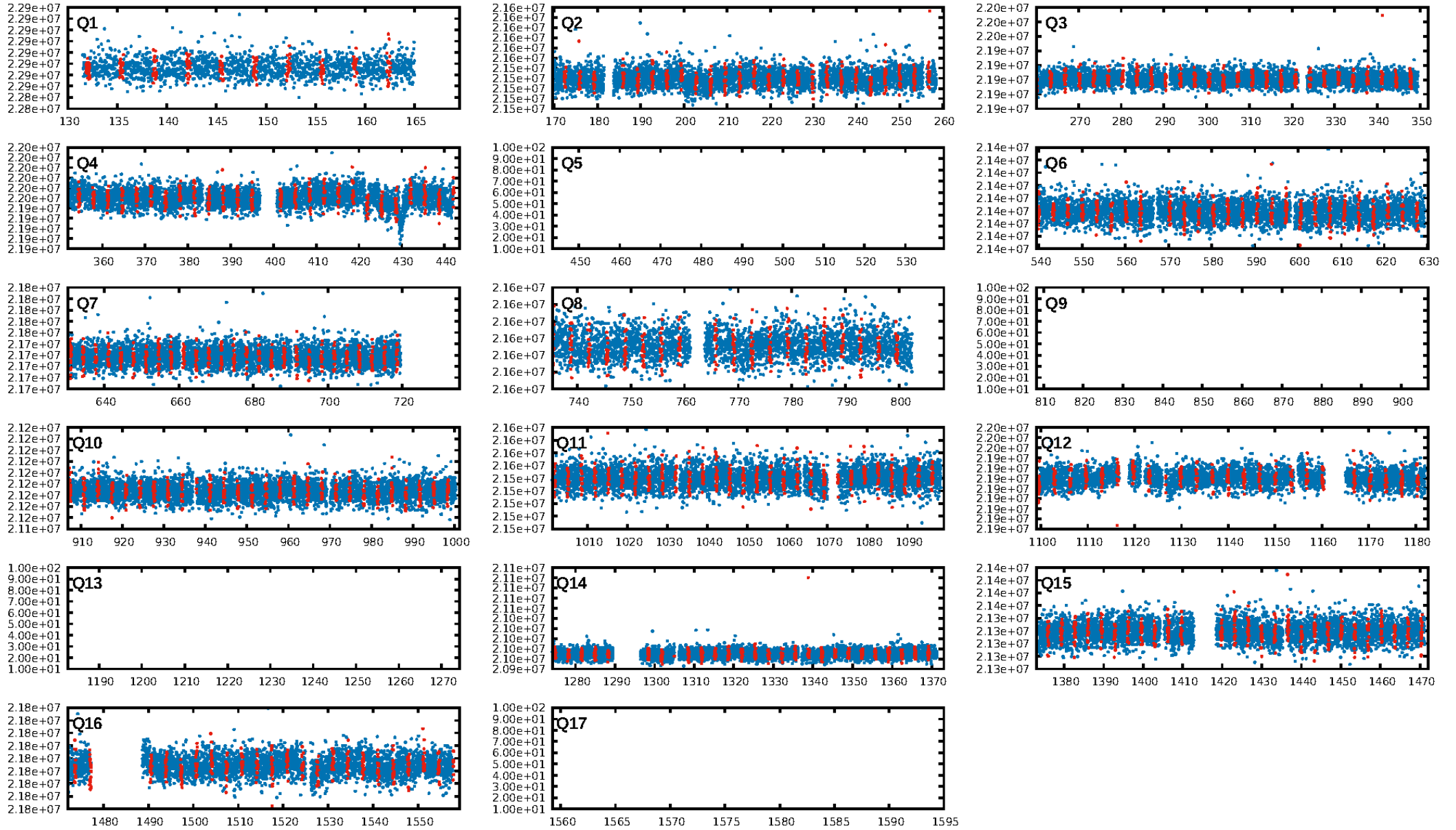
DV Fit Results:

Period = 3.37111 [0.00004] d
Epoch = 132.0325 [0.0078] BKJD
Rp/R* = 0.0089 [0.0055]
a/R* = 2.60 [6.41]
b = 0.90 [0.60]
Seff = 657.71 [246.89]
Teff = 1291 [121] K
Rp = 1.13 [0.76] Re
a = 0.0434 [0.0102] AU
Ag = 12.92 [17.72] [0.67 σ]
Teffp = 3785 [1257] K [1.97 σ]

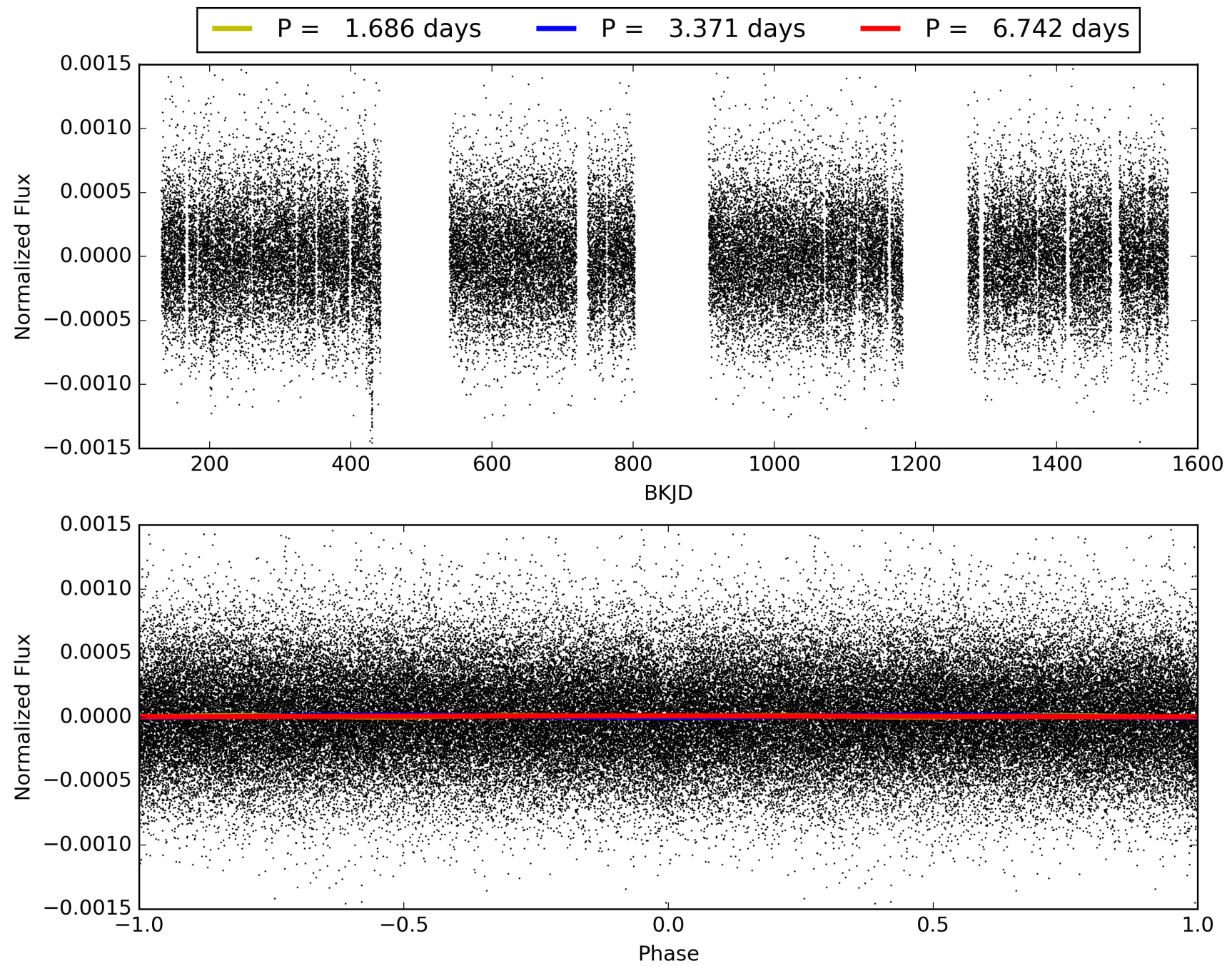
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.16e-17
RollingBand-fgt: 1.00 [303/303]
GhostDiagnostic-chr: 181.3
Centroid-sig: 43.3%
Centroid-so: 1.426 arcsec [0.77 σ]
OotOffset-rm: 0.802 arcsec [2.38 σ]
KicOffset-rm: 0.818 arcsec [2.41 σ]
OotOffset-st: 2/1/3/0 [6]
KicOffset-st: 2/1/3/0 [6]
DiffImageQuality-fgm: 0.67 [4/6]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006345758-01, PDC Light Curves

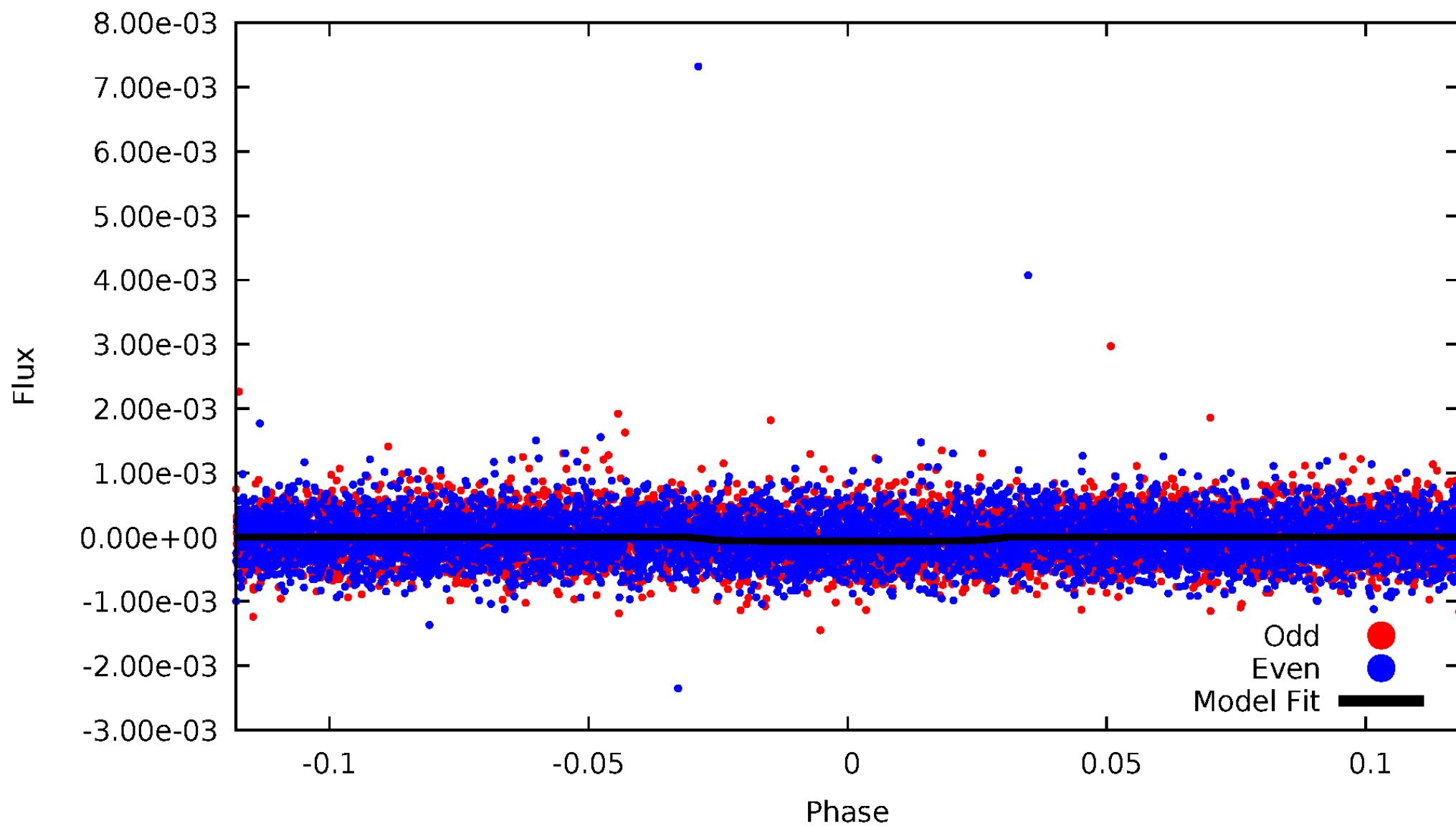


TCE 006345758-01



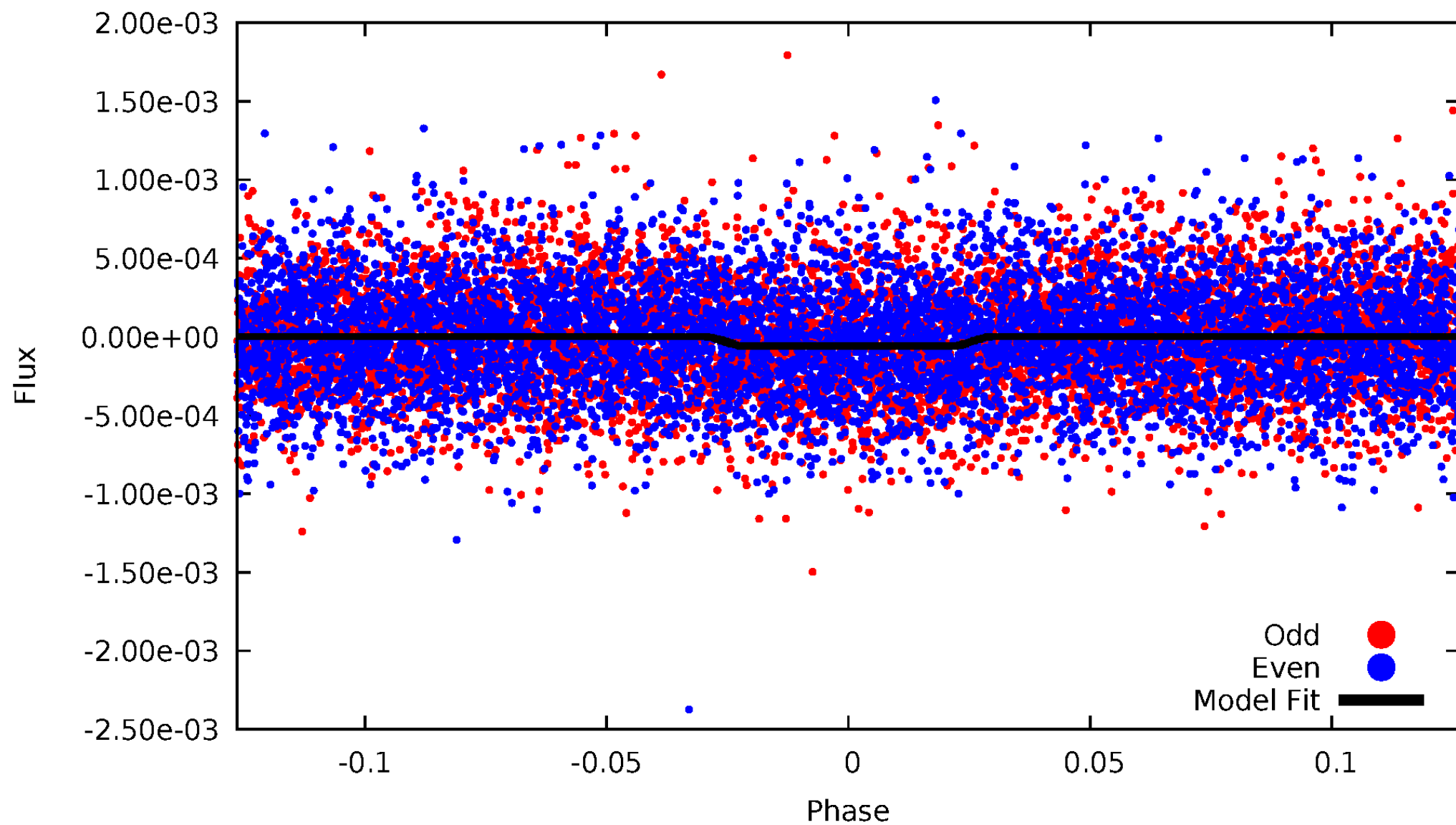
DV Odd/Even

TCE 006345758-01



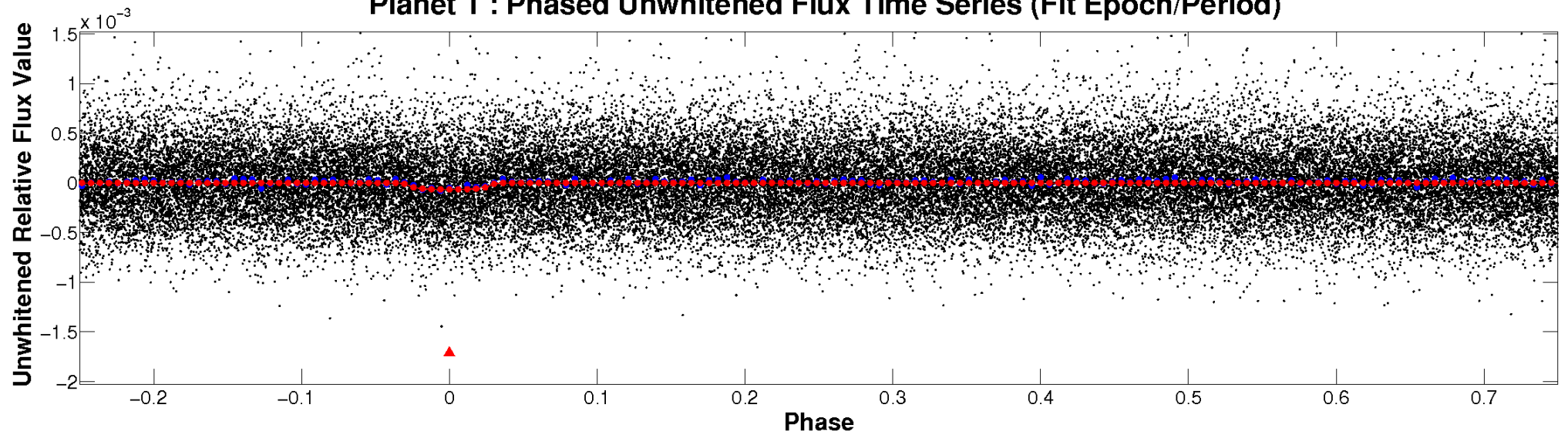
ALT Odd/Even

TCE 006345758-01

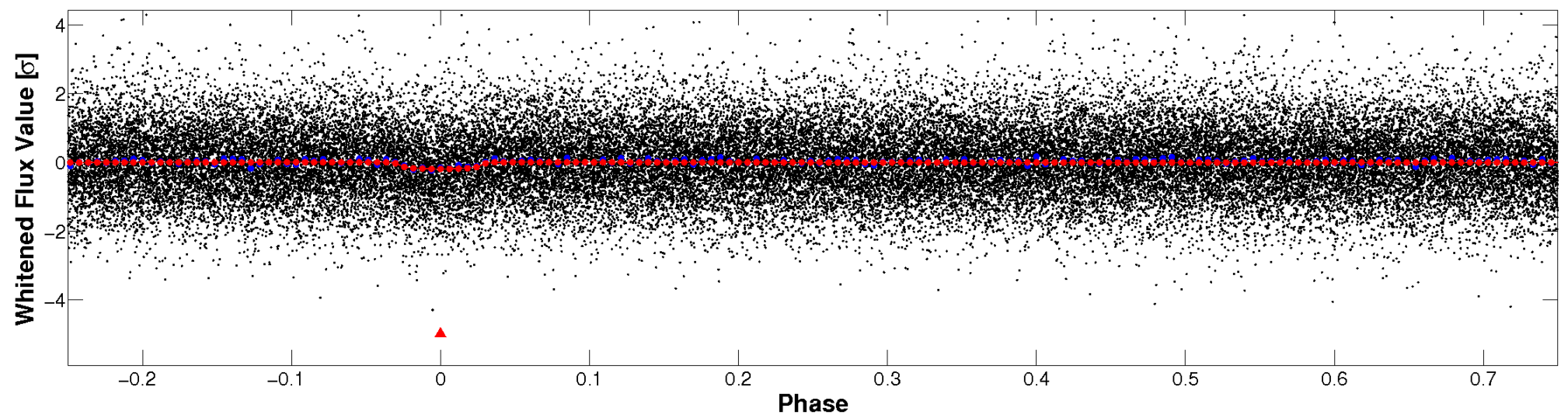


Non-Whitened Vs. Whitened Light Curve

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

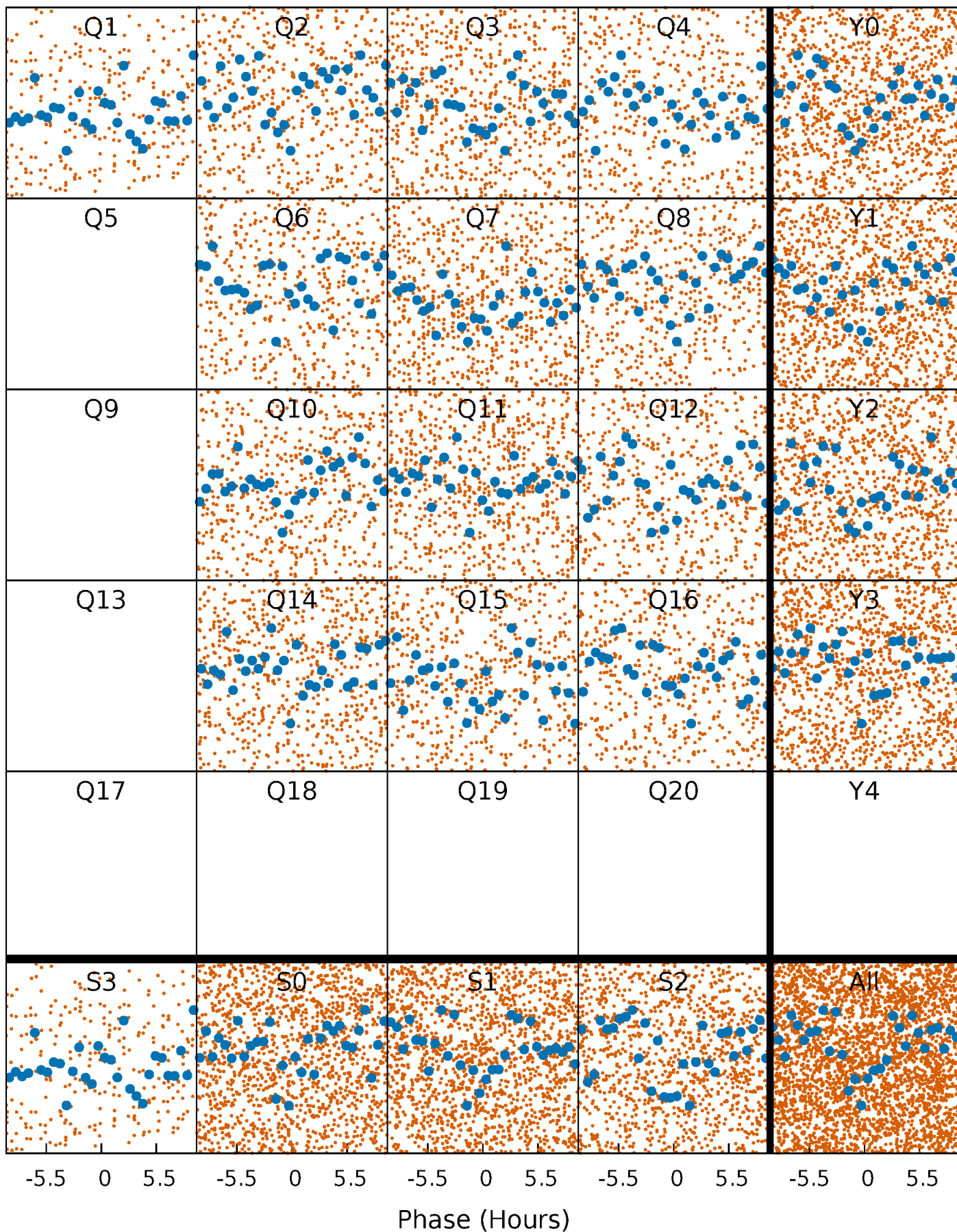


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



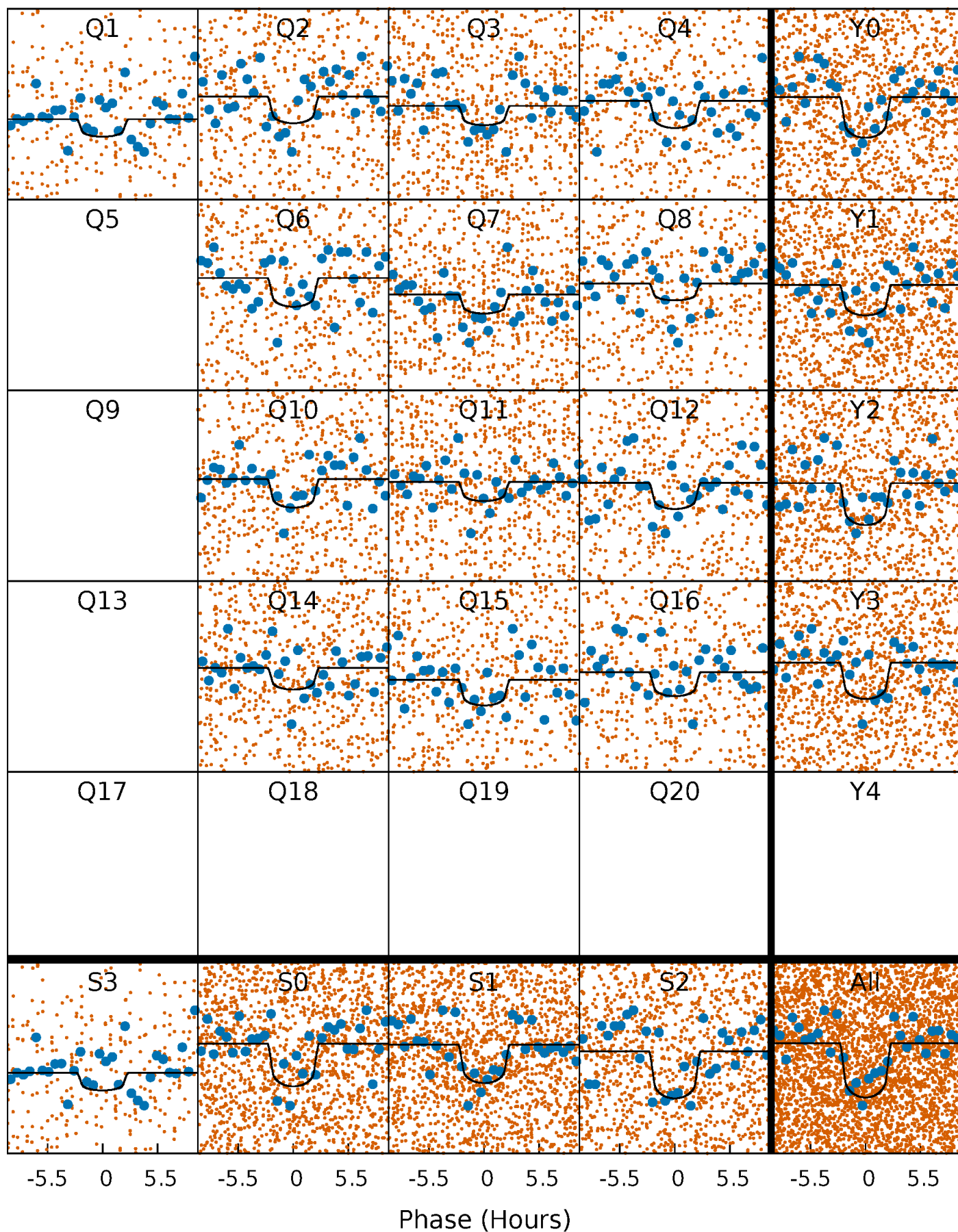
PDC Quarter-Phased Transit Curves

TCE 006345758-01 P= 3.371110 Days $T_0=132.032501$ (BKJD)



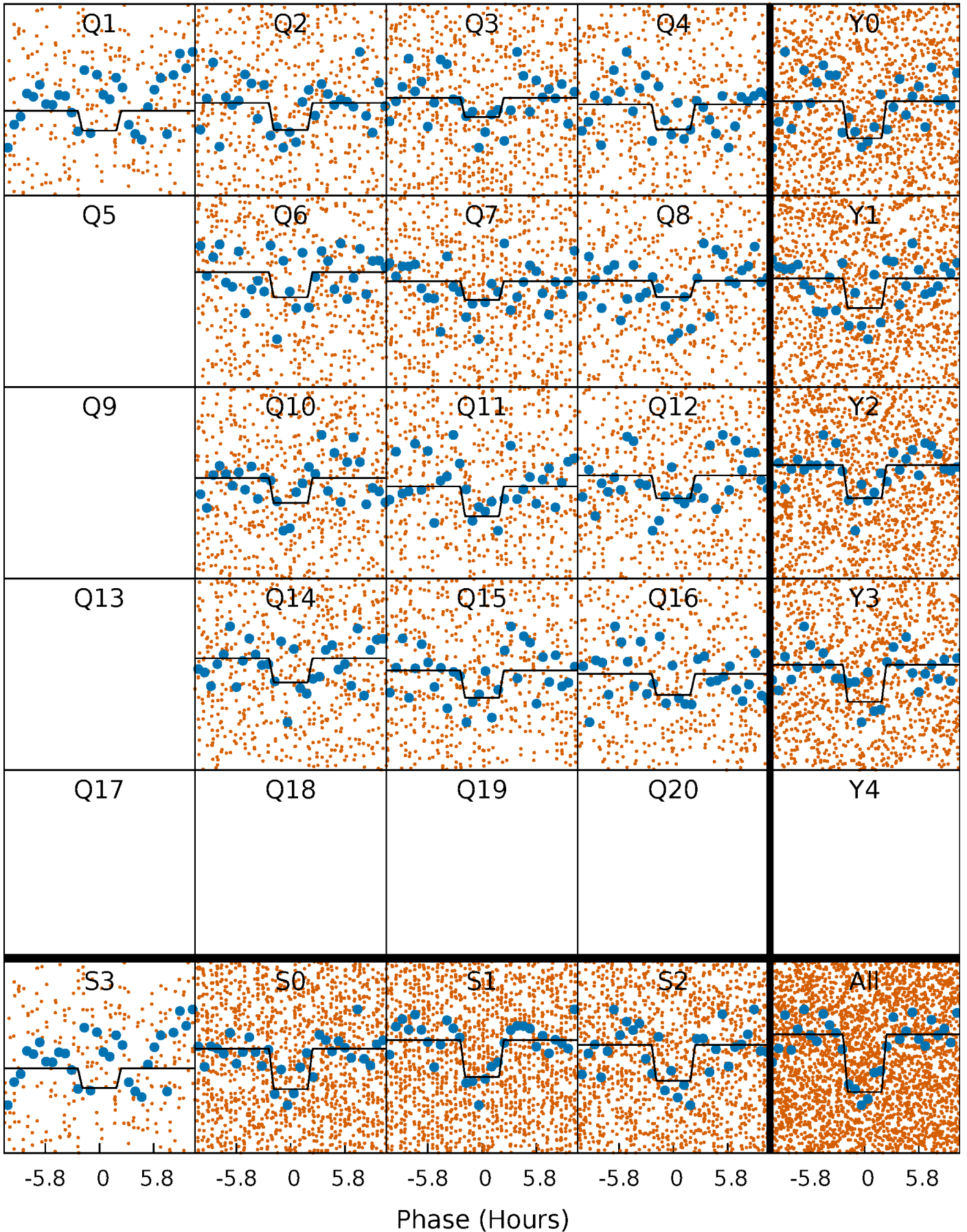
DV Quarter-Phased Transit Curves

TCE 006345758-01 P= 3.371110 Days $T_0=132.032501$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

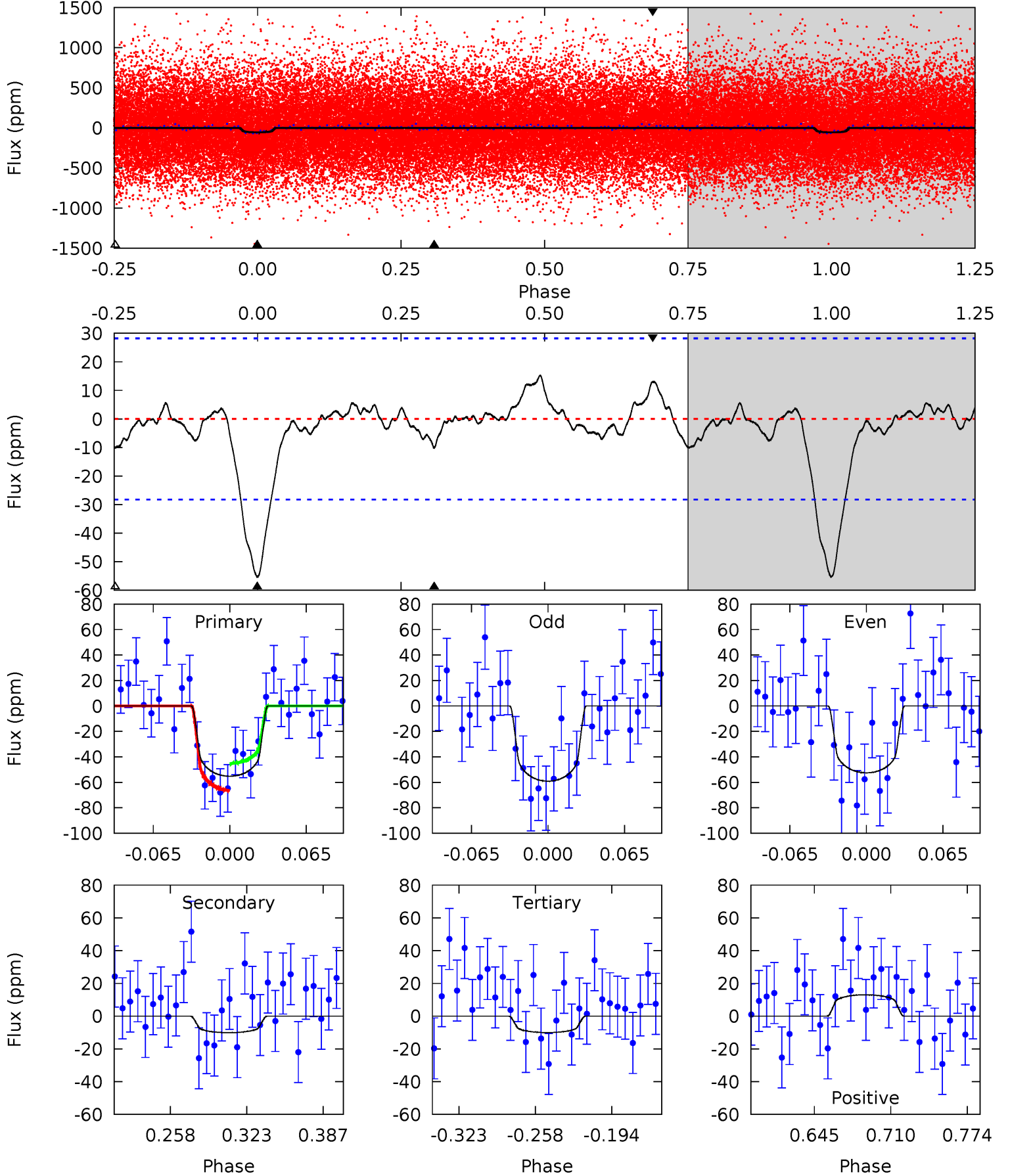
TCE 006345758-01 P= 3.371164 Days $T_0=132.017369$ (BKJD)



DV Model-Shift Uniqueness Test

006345758-01, P = 3.371110 Days, E = 128.661391 Days

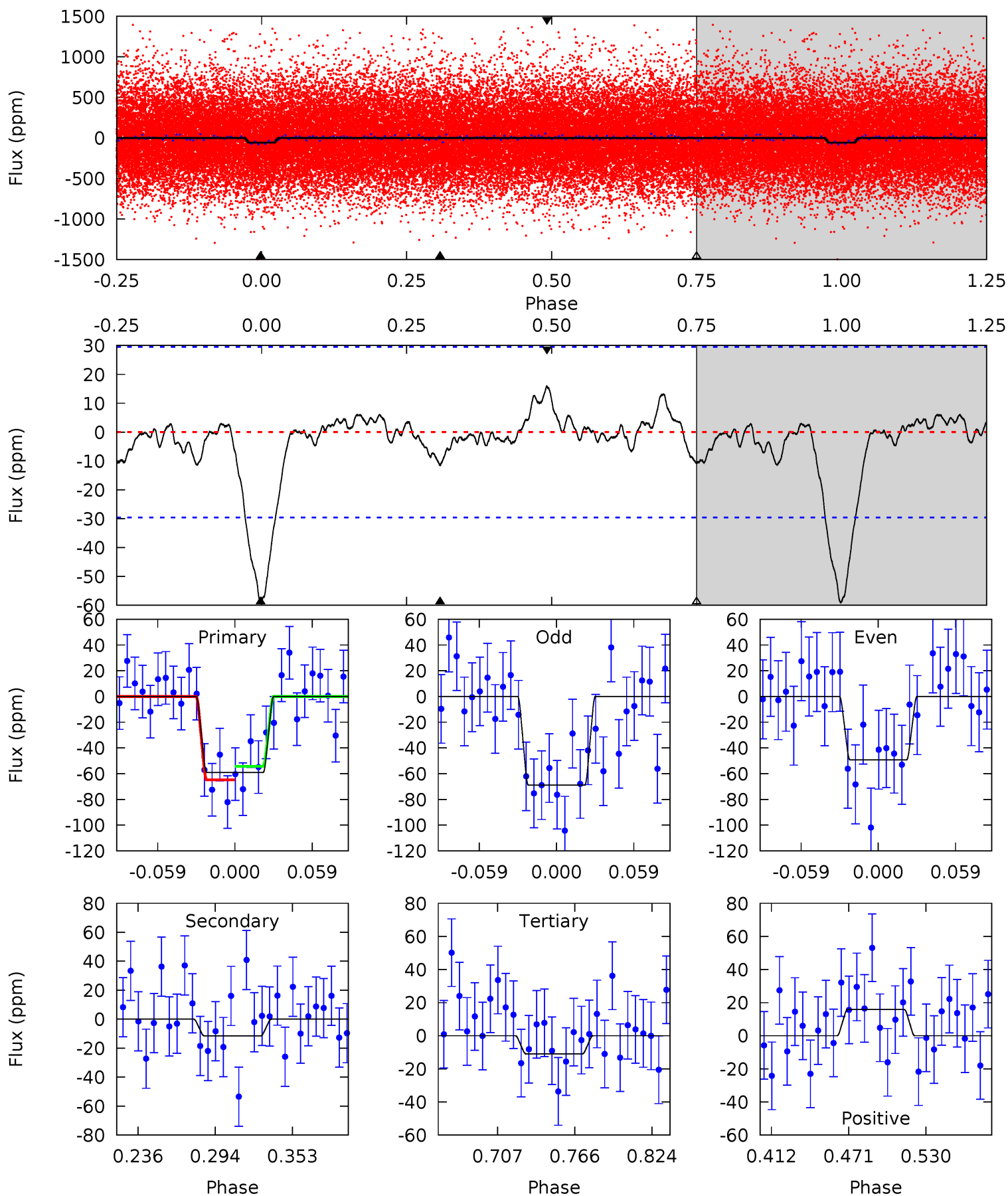
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.11	1.66	1.65	2.15	4.66	1.85	0.84	7.45	6.96	0.01	-0.48	0.54	1.01	0.22	1.74



Alt Model-Shift Uniqueness Test

006345758-01, P = 3.371164 Days, E = 128.646205 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	1.82	1.72	2.51	4.67	1.89	0.80	7.61	6.83	0.09	-0.69	1.54	1.06	0.21	0.83



Stellar Parameters For KIC 006345758

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5653^{+154}_{-154}	$4.288^{+0.204}_{-0.185}$	$0.100^{+0.250}_{-0.300}$	$1.163^{+0.307}_{-0.251}$	$0.958^{+0.120}_{-0.090}$	$0.857^{+0.808}_{-0.414}$
	+3%/-3%	+5%/-4%	+250%/-300%	+26%/-22%	+13%/-9%	+94%/-48%
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 006345758-01 / KOI 6689.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 6	$1.20^{+0.77}_{-0.65}$	1809^{+131}_{-130}	3631^{+1168}_{-753}	$6.936^{+27.296}_{-5.330}$
Alt.	-11 ± 6	$1.04^{+0.69}_{-0.58}$	1807^{+132}_{-135}	3887^{+1462}_{-746}	10^{+45}_{-8}

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

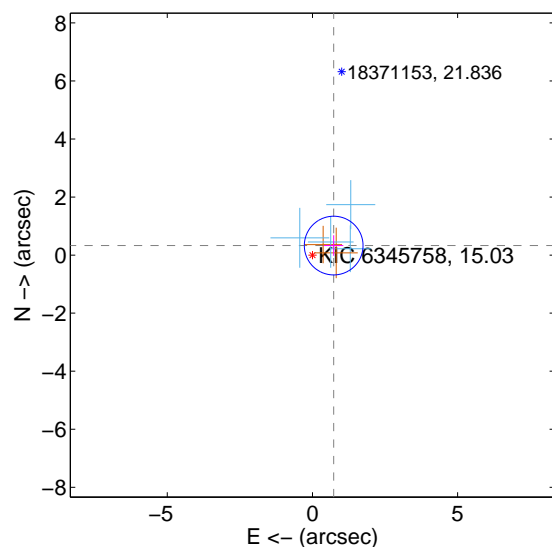
Supplemental centroid analysis for 006345758-01. Kepler magnitude: 15.03. Transit SNR 8.61

There are 4 quarters with good PRF difference image offsets

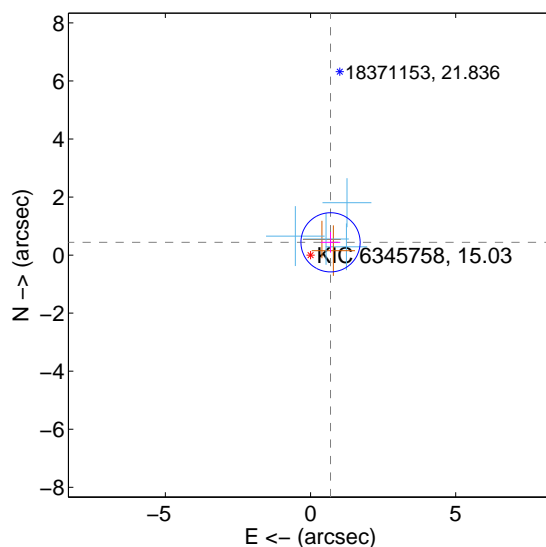
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.802 ± 0.337	2.38	-0.732 ± 0.333	0.328 ± 0.355
PRF-fit source offset from KIC position	0.818 ± 0.340	2.41	-0.689 ± 0.333	0.440 ± 0.355
photometric centroid source offset	1.43 ± 1.84	0.77	-0.55 ± 1.55	1.31 ± 1.89

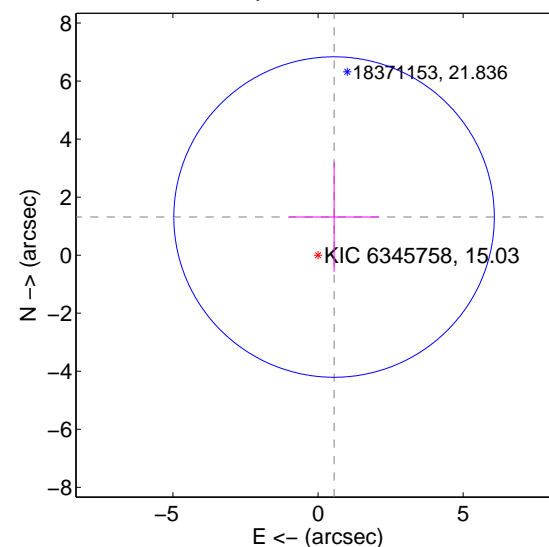
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

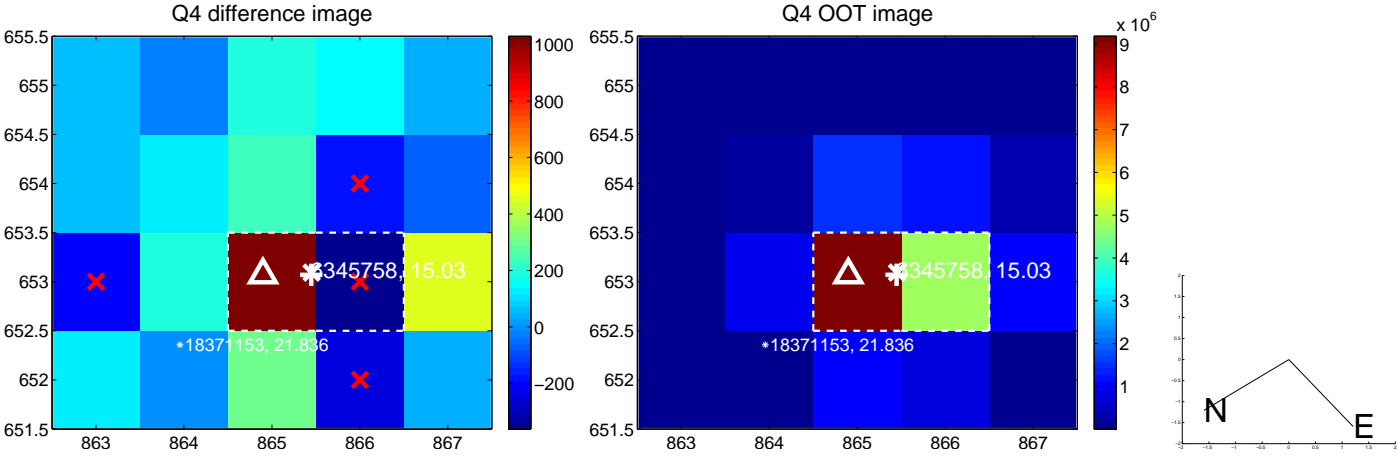
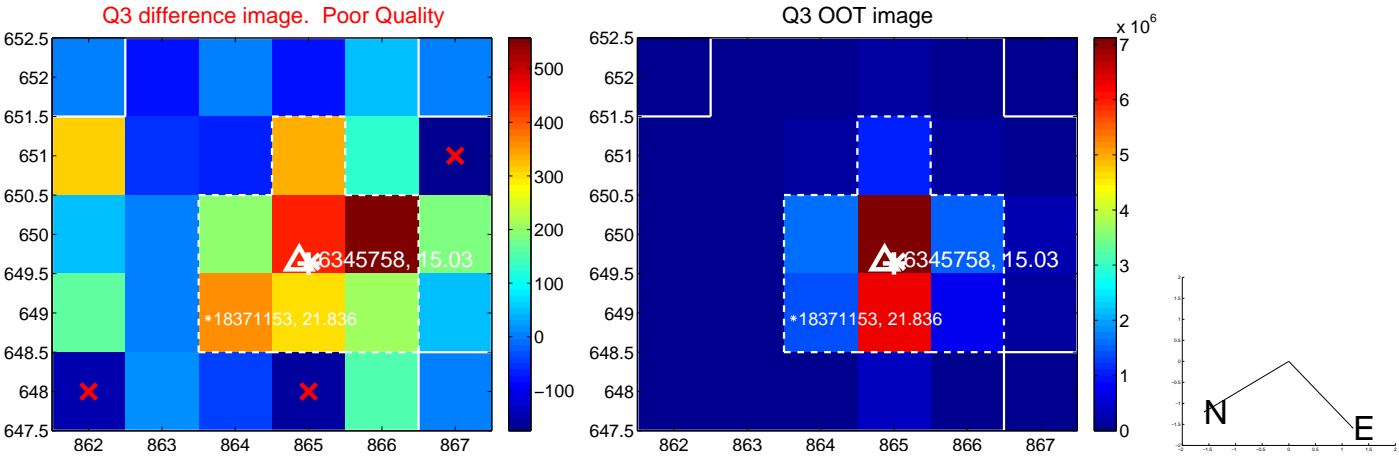
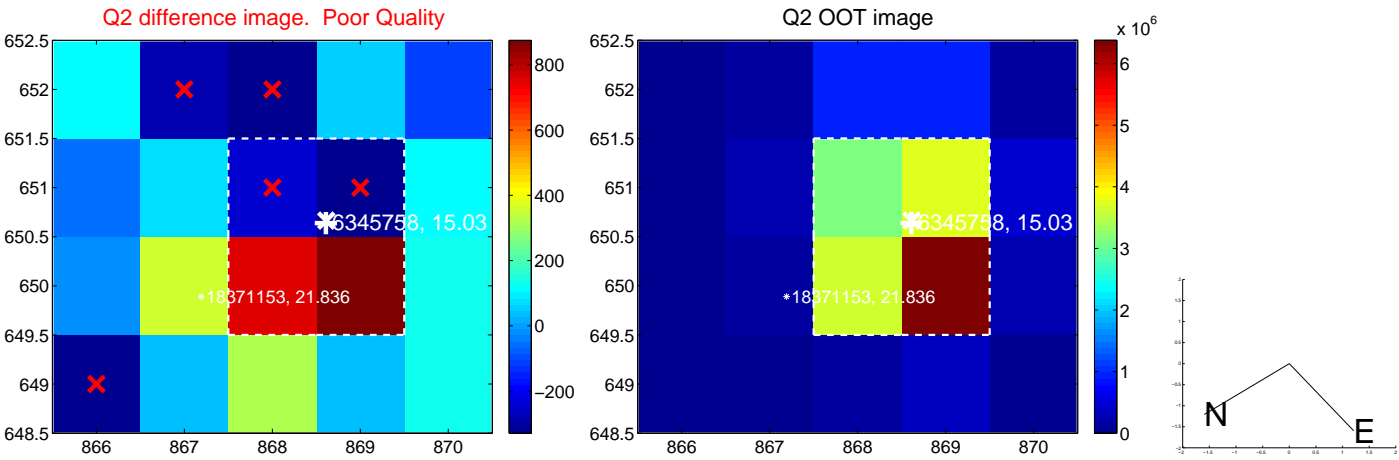
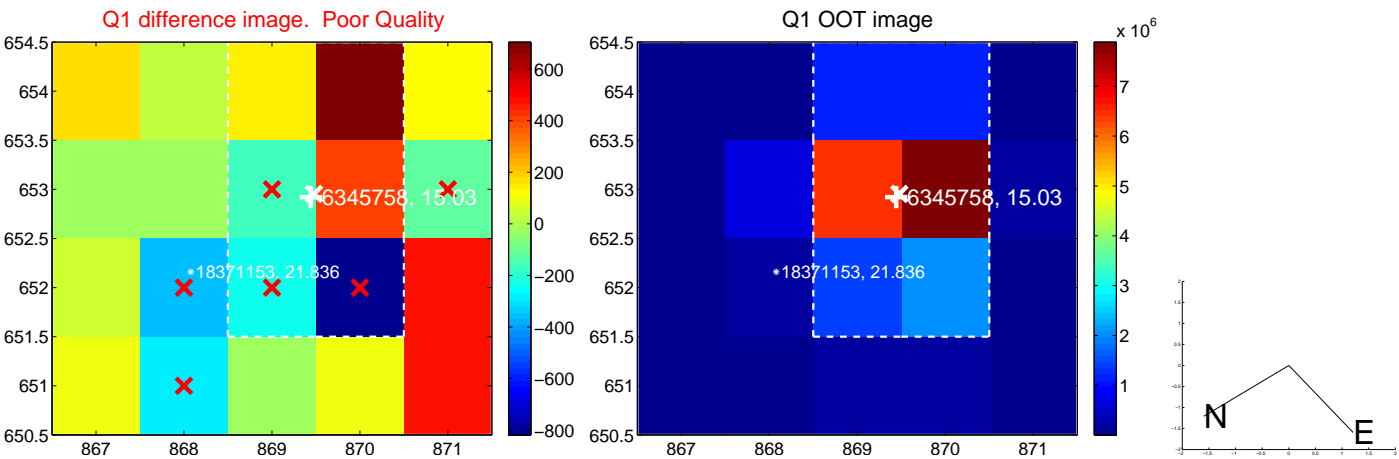


offset from photometric centroids

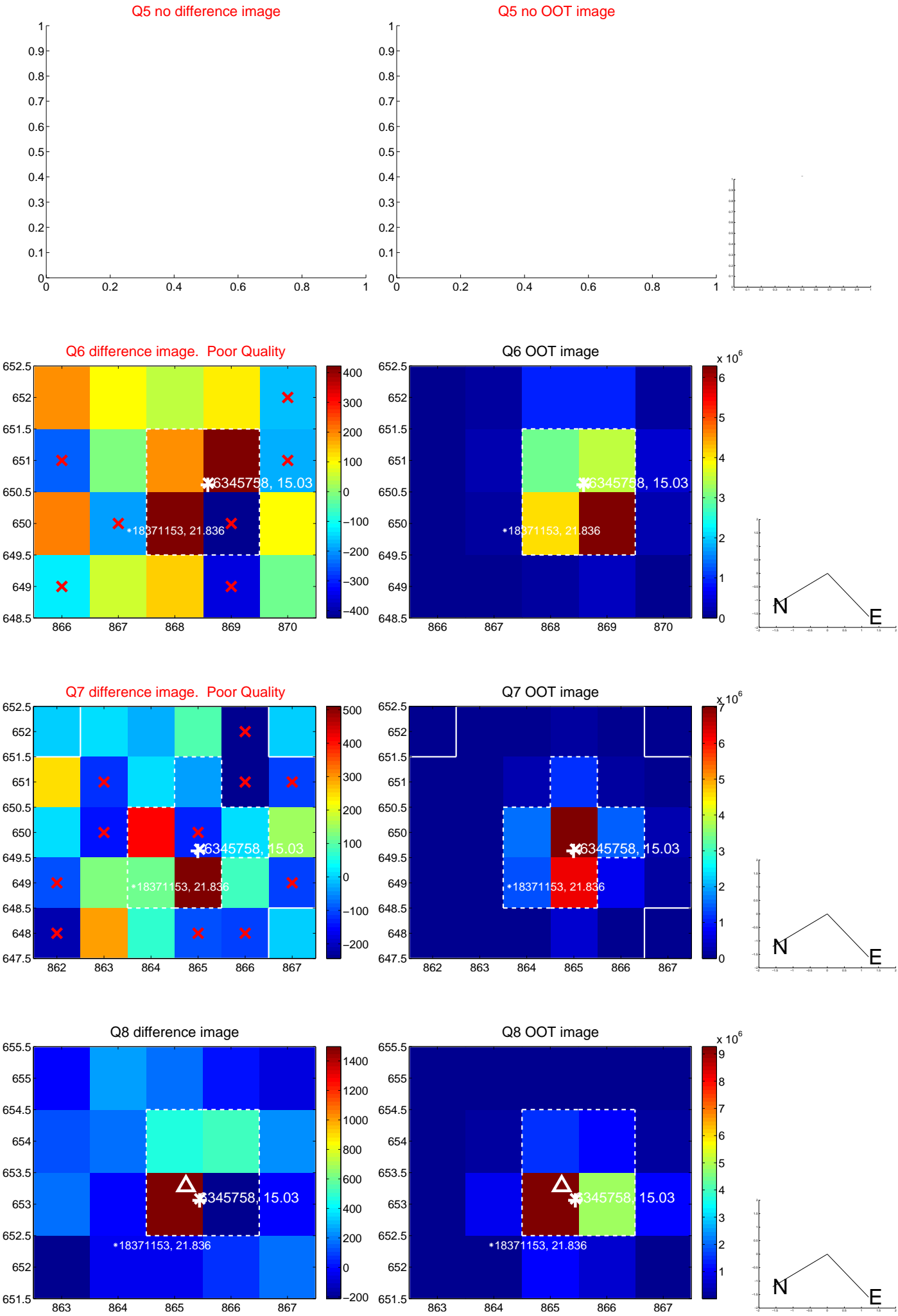


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

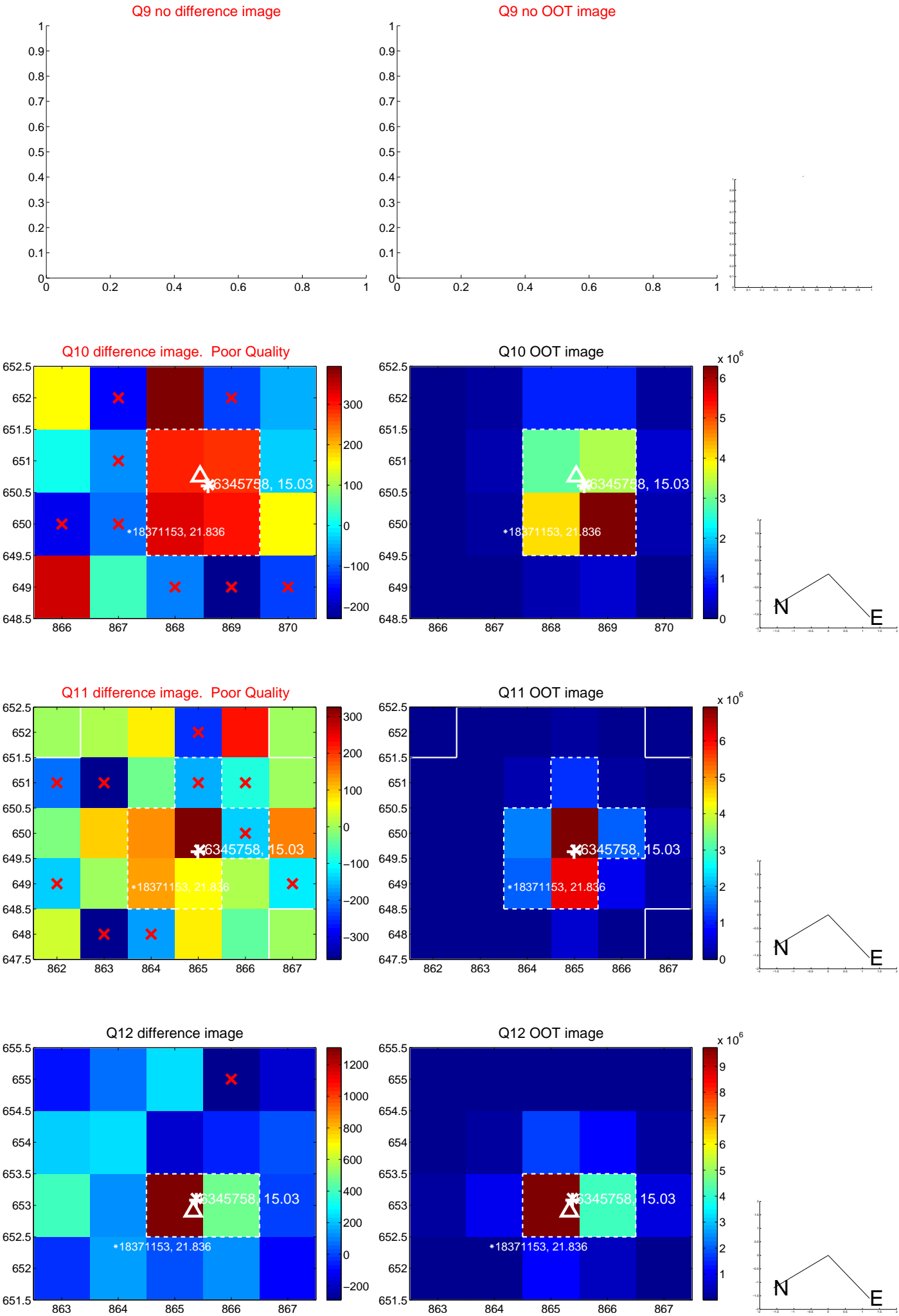
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



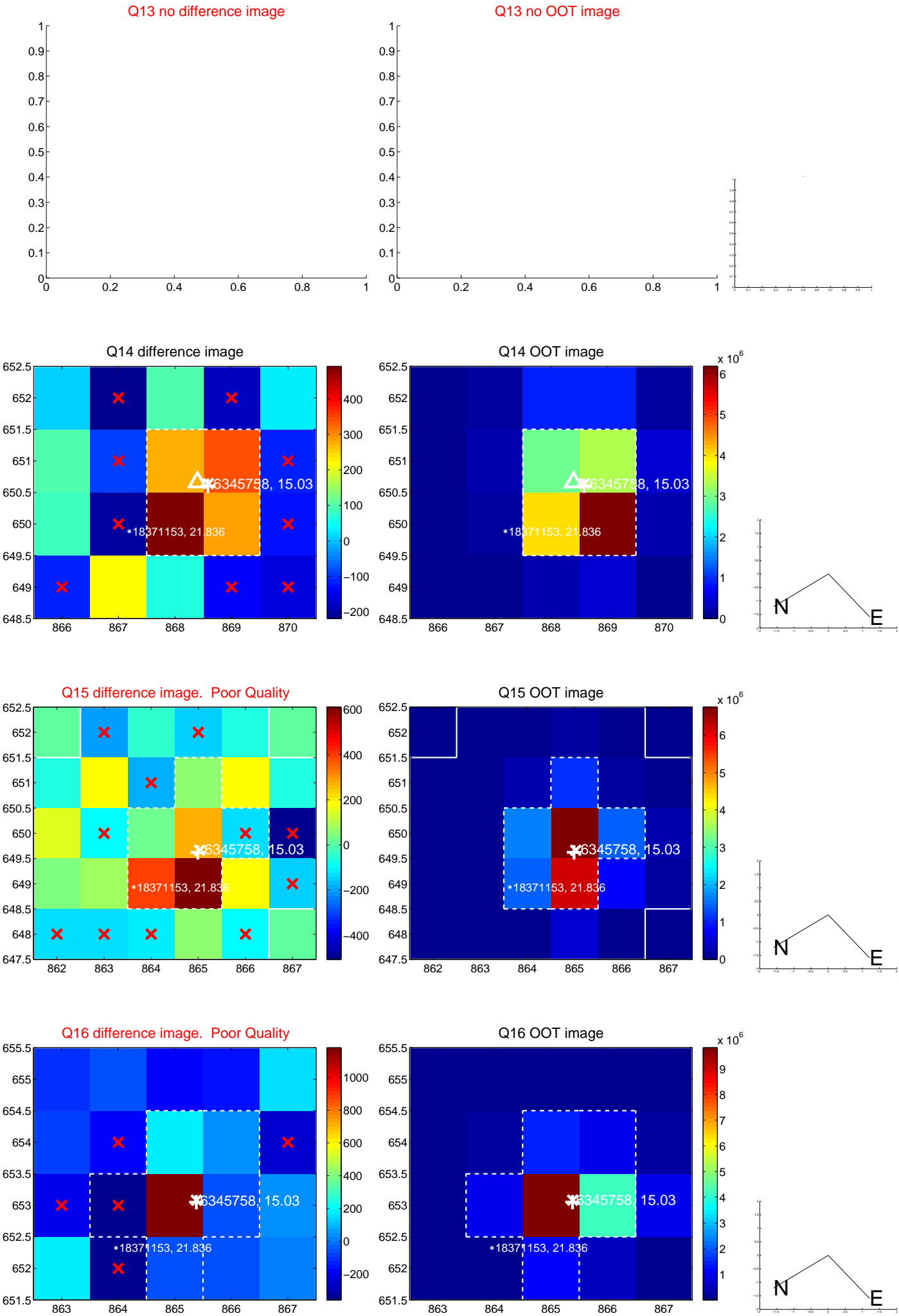
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



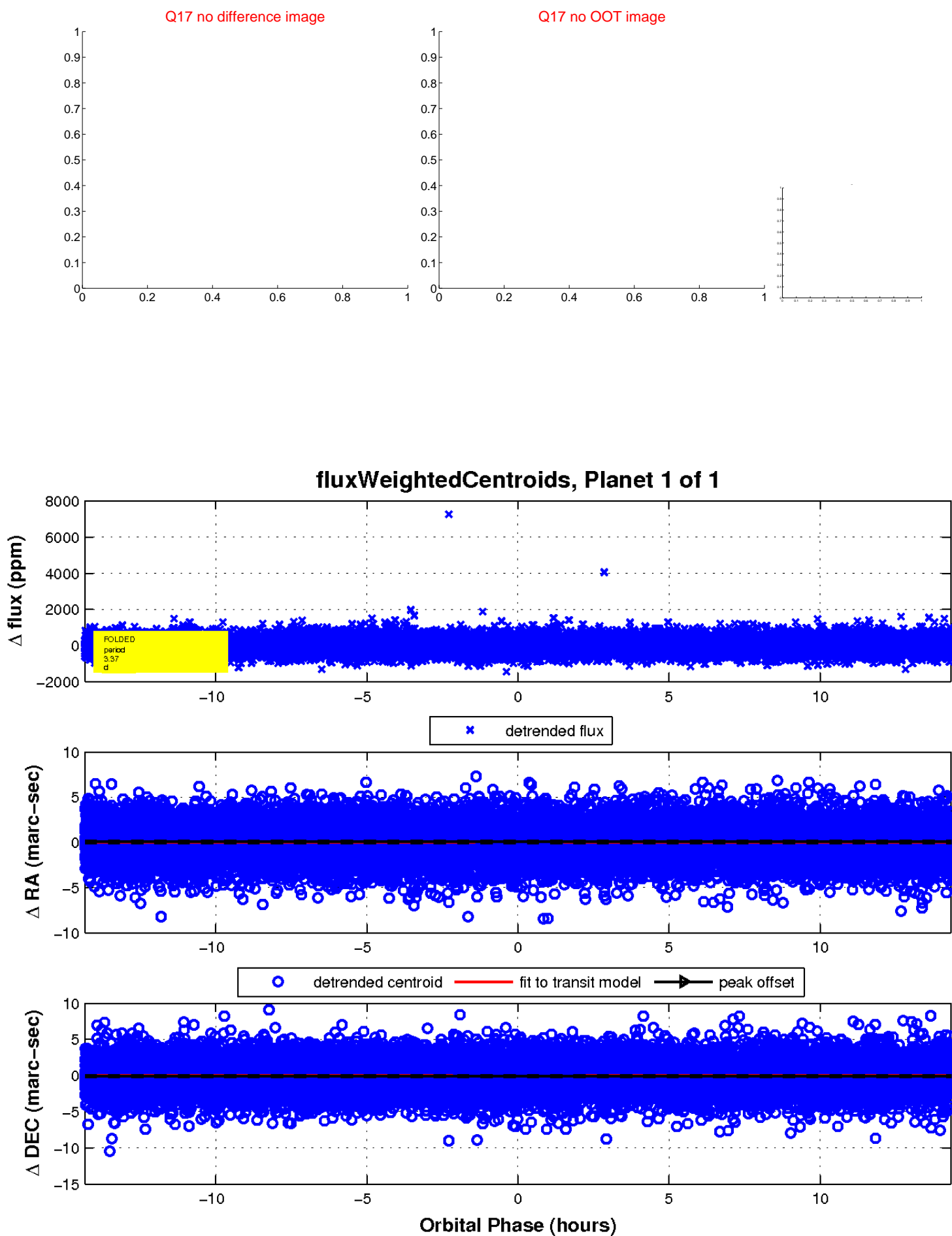
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

