

KIC 008938597

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})
008938597-01	OBS	No	325.905078	225.242764	262.0	7.125	7.1	6.3	0.75	5557	1.31	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008938597-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_ALT—MOD_NONUNIQ_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.

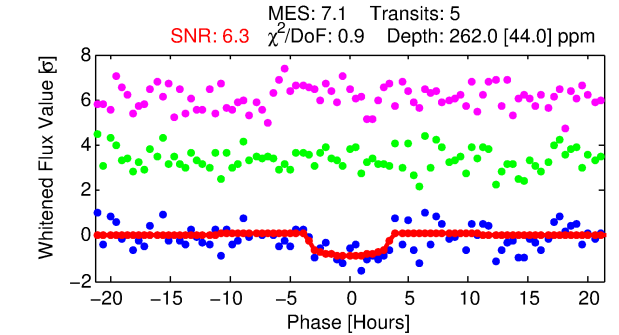
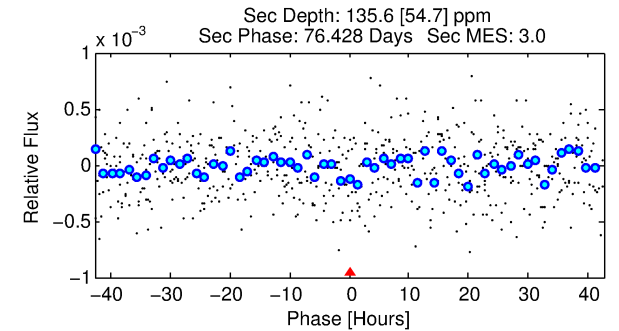
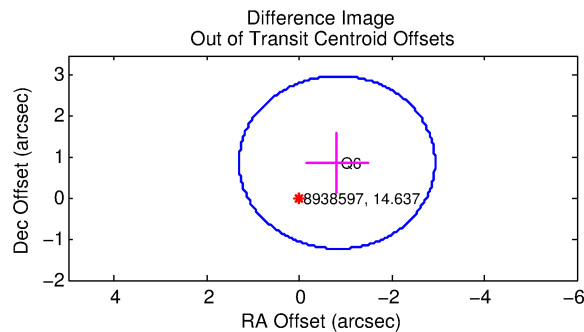
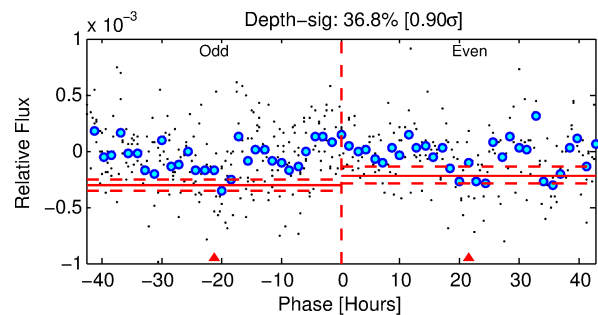
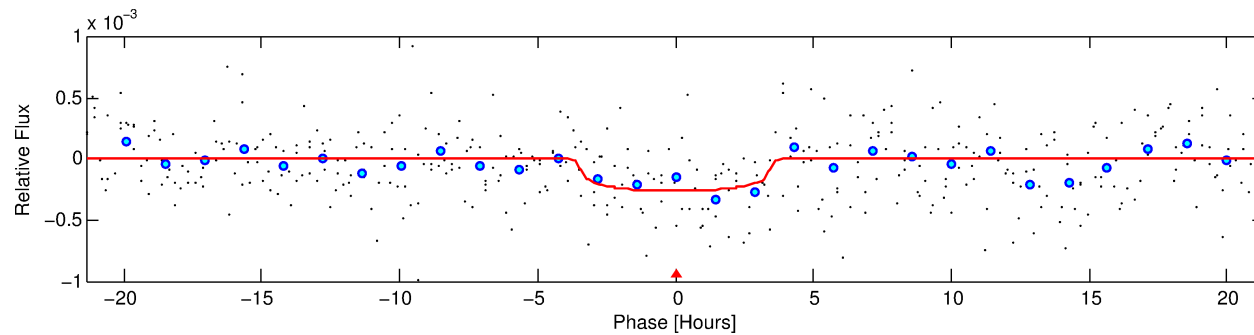
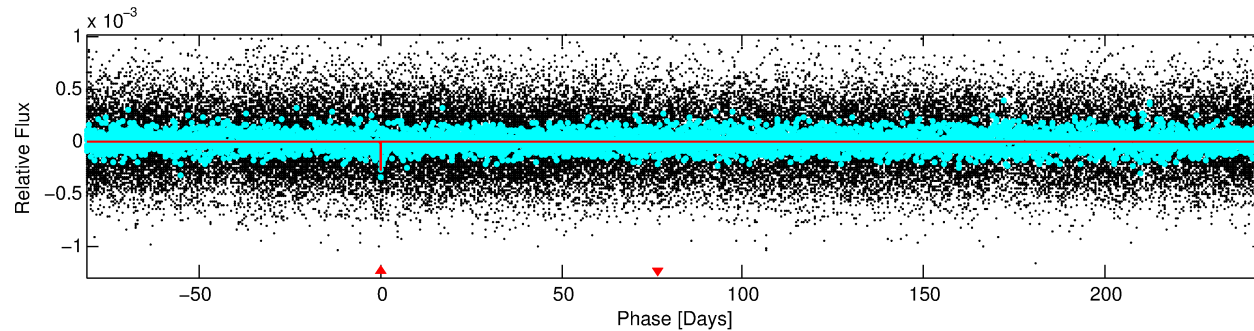
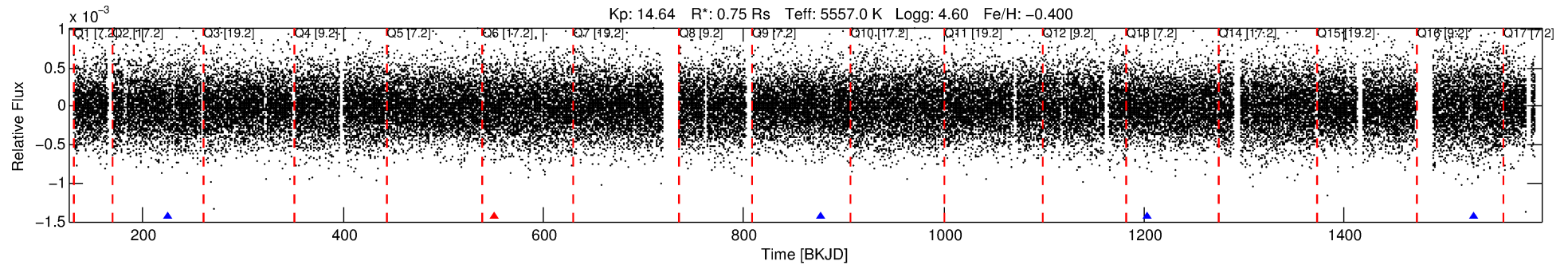
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008938597-01

No Significant Match Found

DV One-Page Summary

KIC: 8938597 Candidate: 1 of 1 Period: 325.905 d



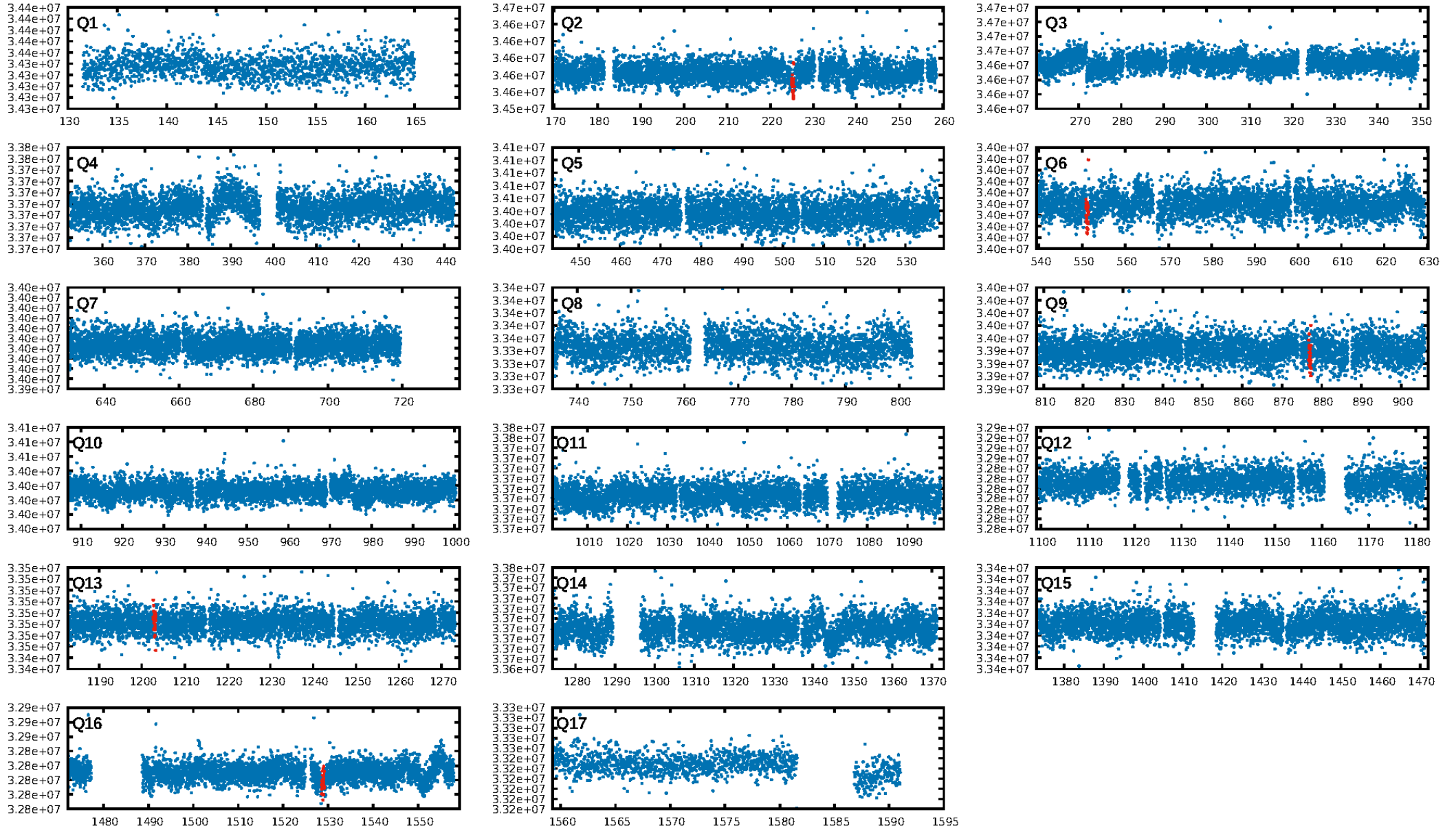
DV Fit Results:

Period = 325.90508 [0.00807] d
Epoch = 225.2428 [0.0186] BKJD
Rp/R* = 0.0160 [0.0193]
a/R* = 247.66 [1334.69]
b = 0.73 [3.51]
Seff = 0.64 [0.17]
Teq = 228 [15] K
Rp = 1.31 [1.60] Re
a = 0.8686 [0.1451] AU
Ag = 32923.14 [81169.61] [0.41 σ]
Teff = 4744 [2913] K [1.55 σ]

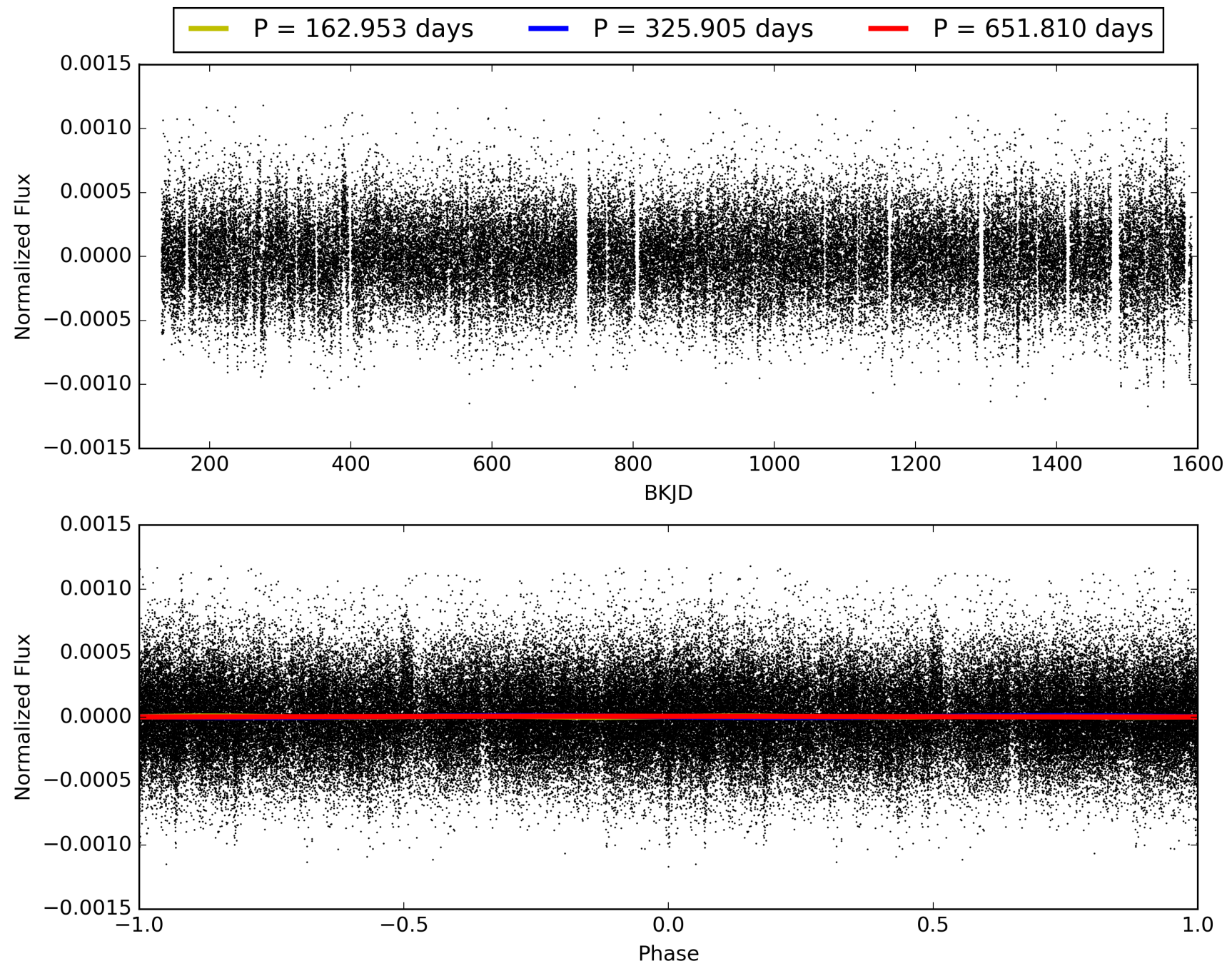
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.01e-11
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: 1.342
Centroid-sig: 64.9%
Centroid-so: 1.282 arcsec [0.52 σ]
OotOffset-rm: 1.200 arcsec [1.70 σ]
KicOffset-rm: 1.173 arcsec [1.65 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [5/5]

TCE 008938597-01, PDC Light Curves

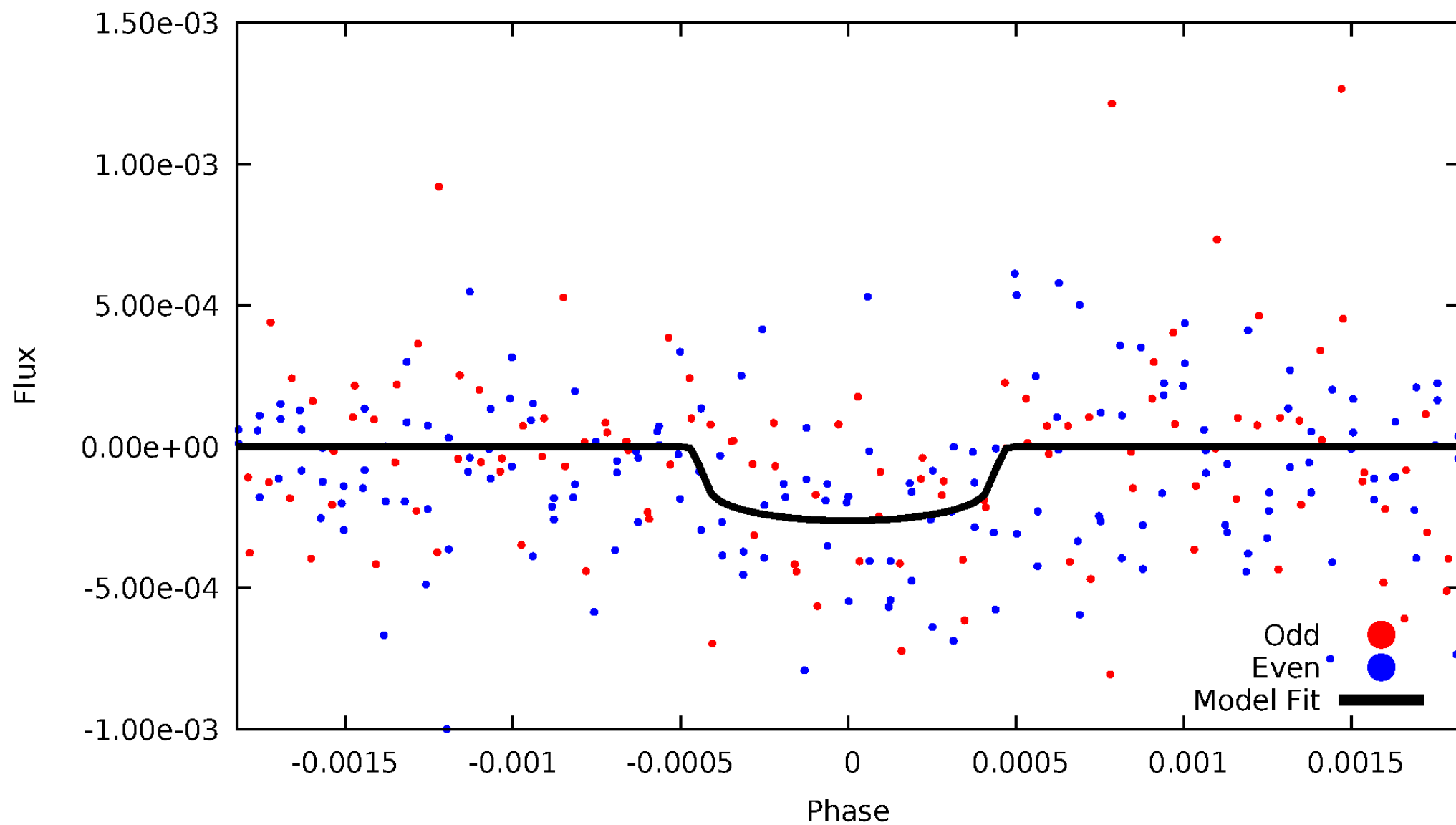


TCE 008938597-01



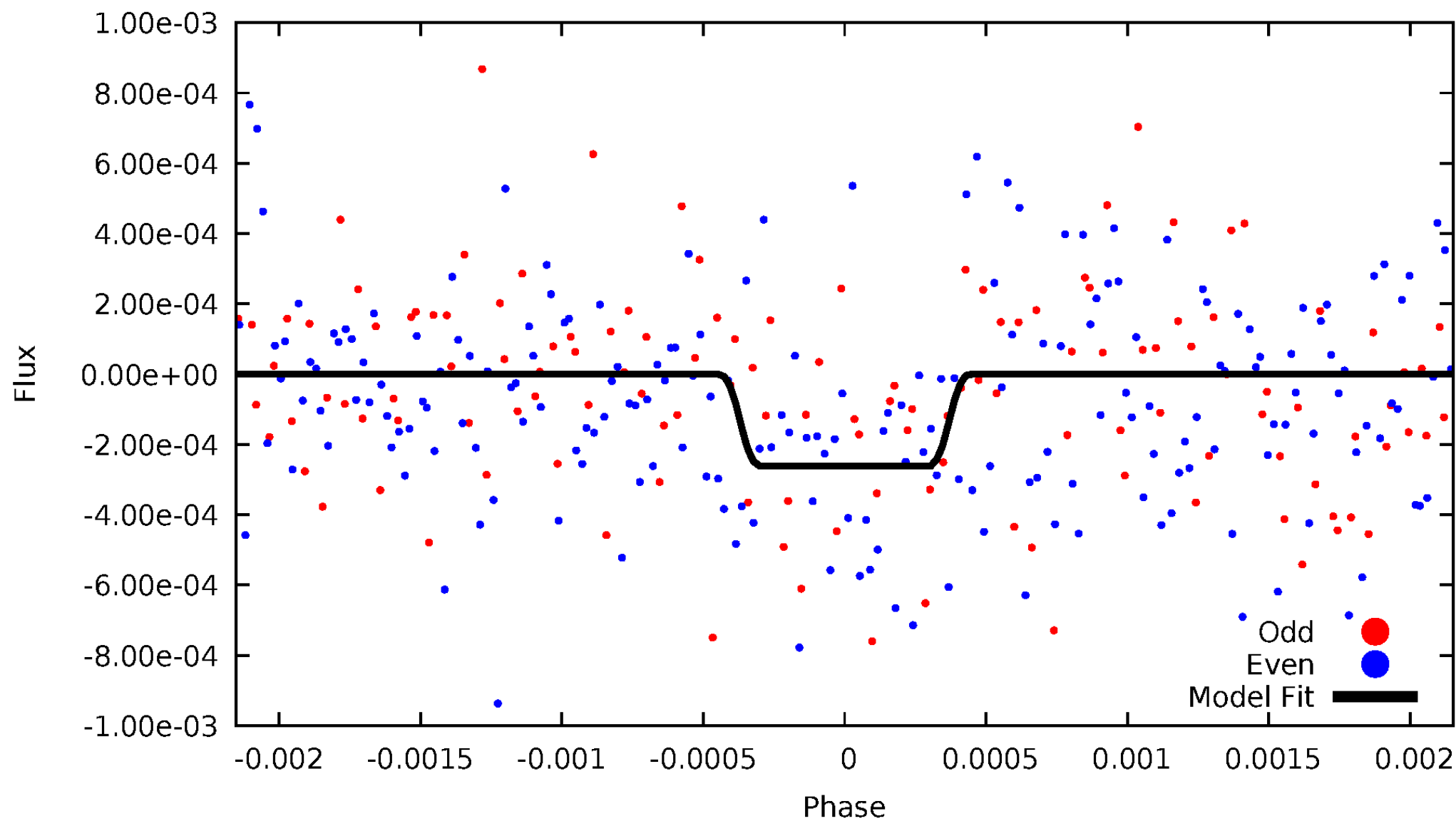
DV Odd/Even

TCE 008938597-01



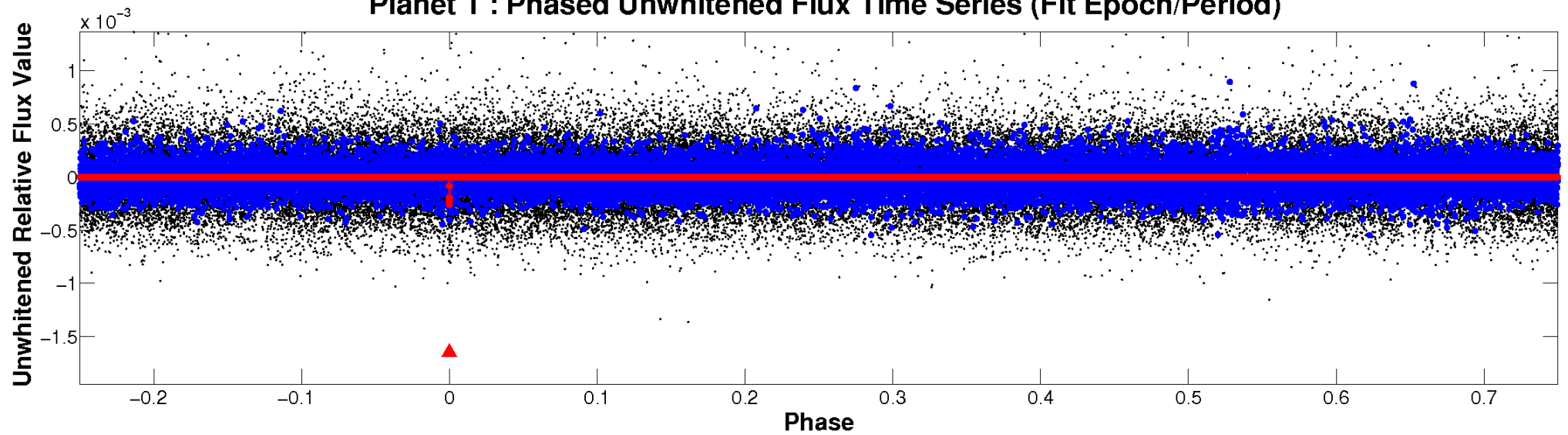
ALT Odd/Even

TCE 008938597-01

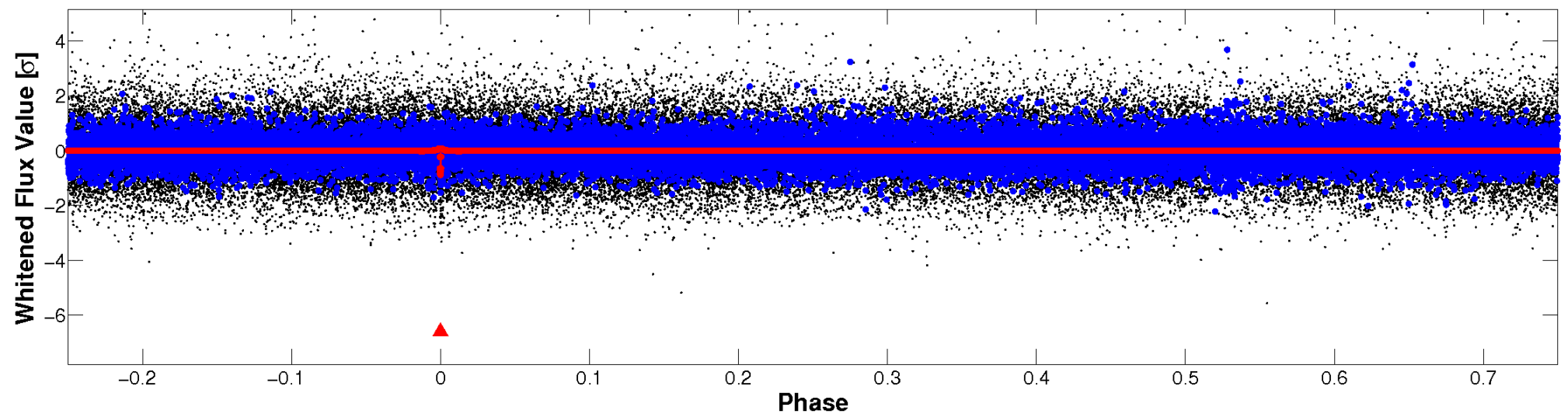


Non-Whitened Vs. Whitened Light Curve

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

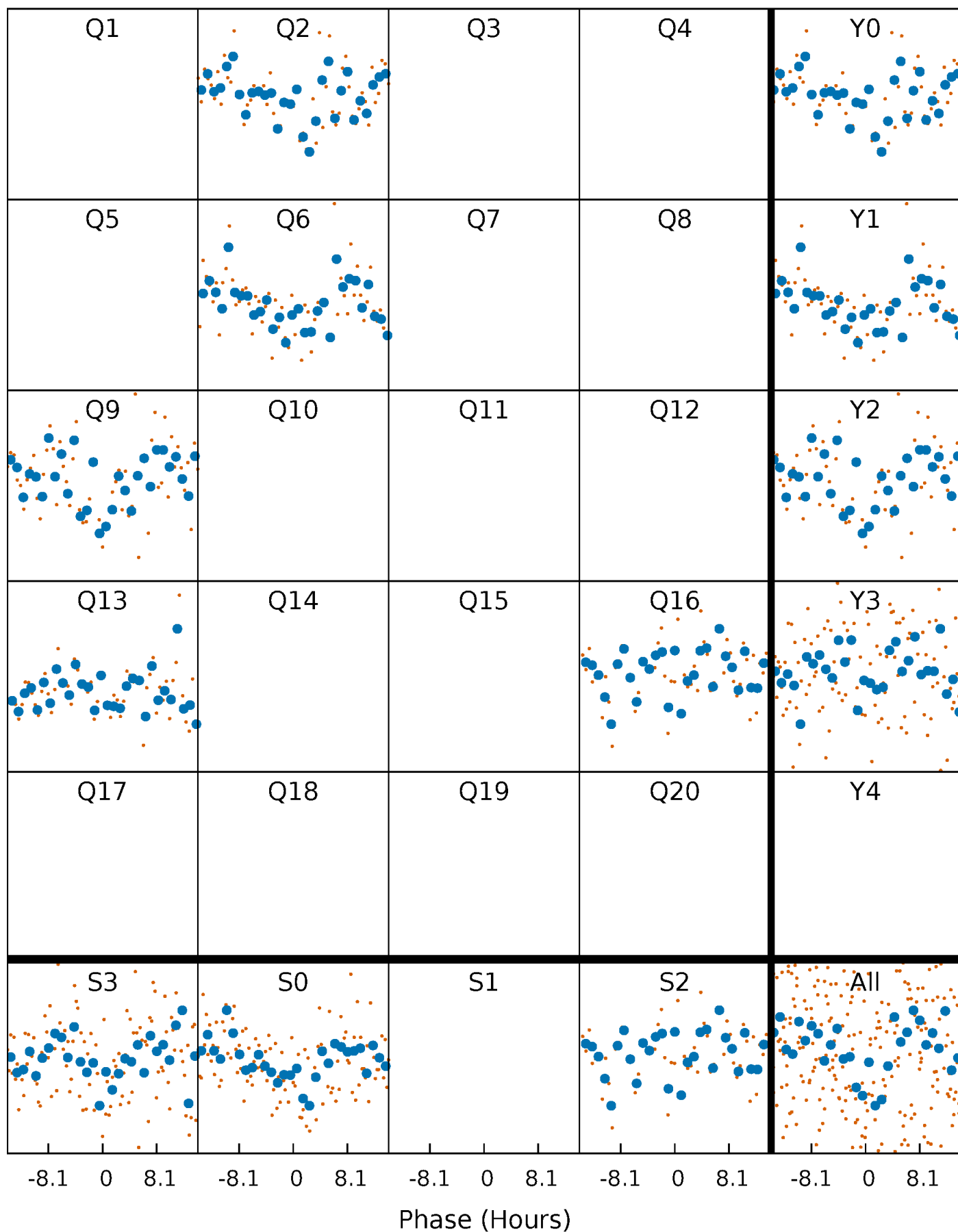


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



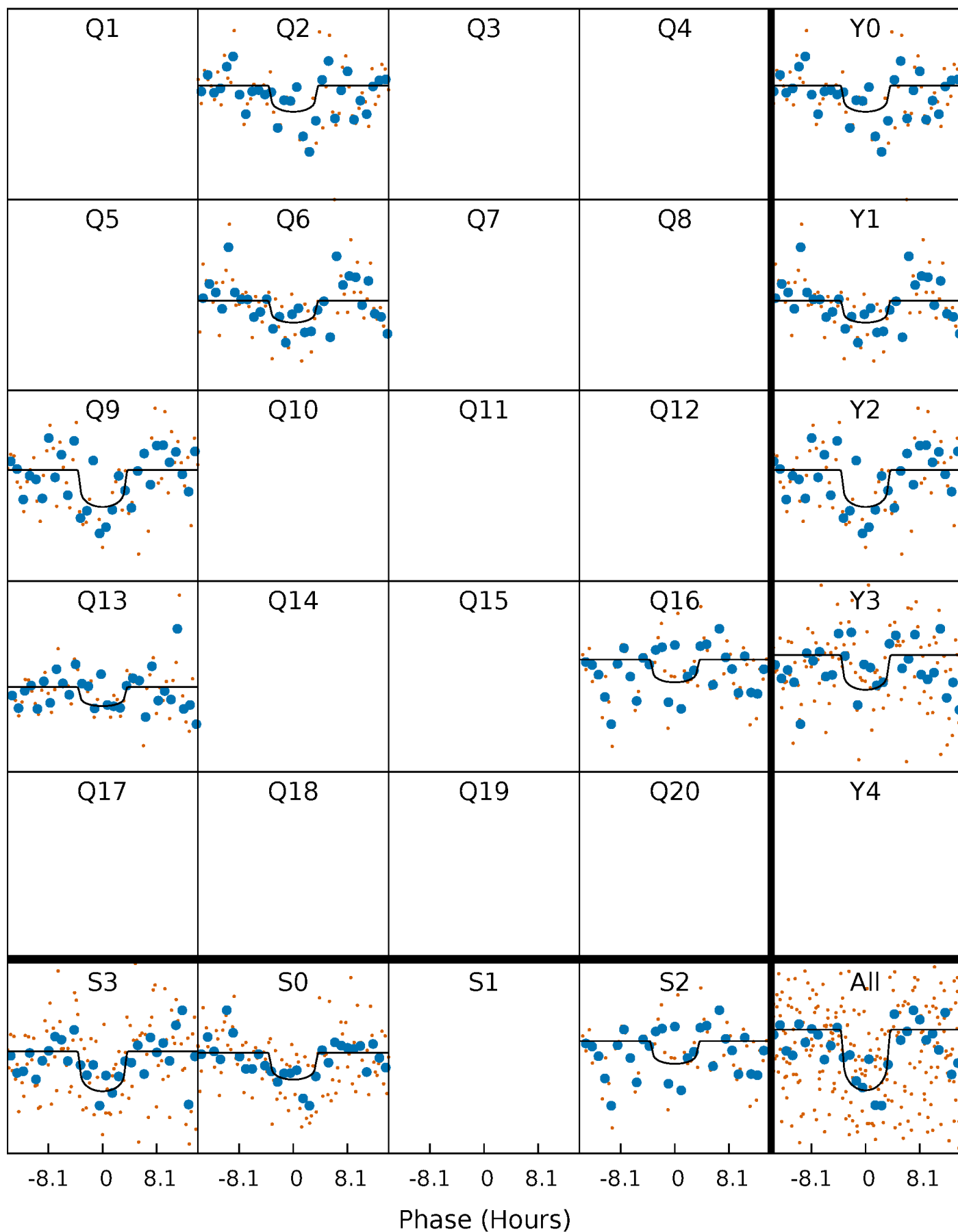
PDC Quarter-Phased Transit Curves

TCE 008938597-01 $P=325.905078$ Days $T_0=225.242764$ (BKJD)



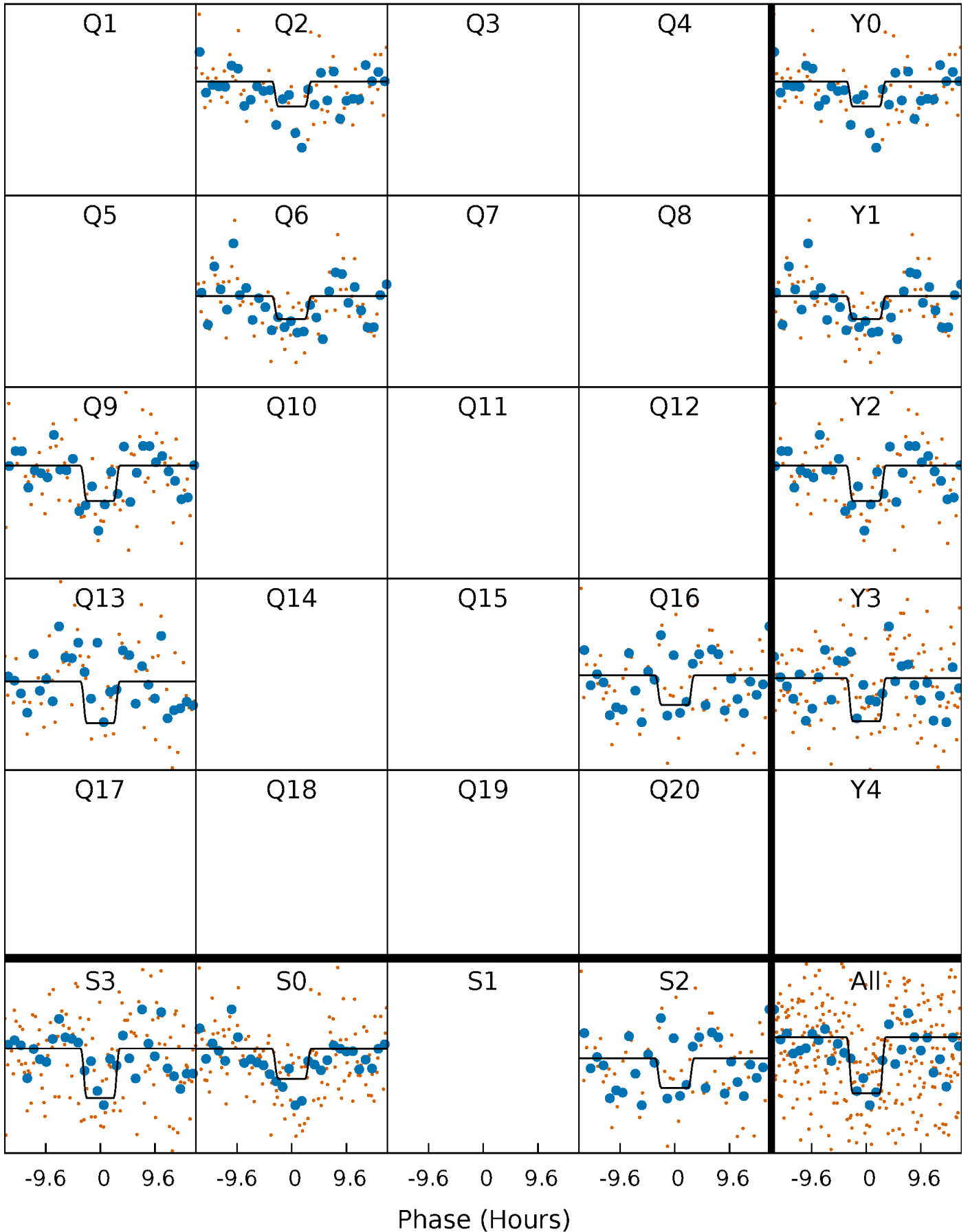
DV Quarter-Phased Transit Curves

TCE 008938597-01 P=325.905078 Days $T_0=225.242764$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

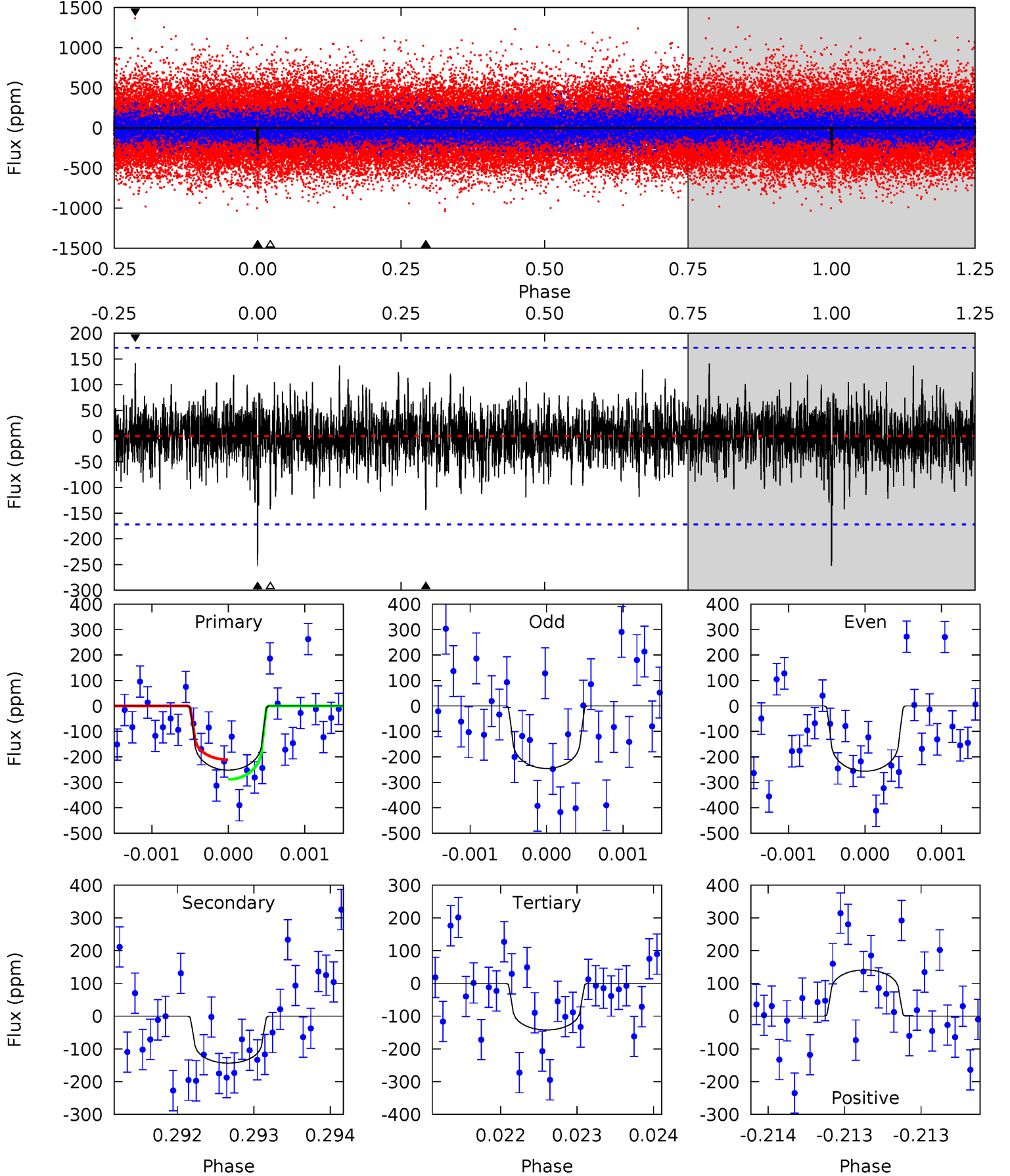
TCE 008938597-01 P=325.901660 Days $T_0=225.266036$ (BKJD)



DV Model-Shift Uniqueness Test

008938597-01, $P = 325.905078$ Days, $E = 225.242764$ Days

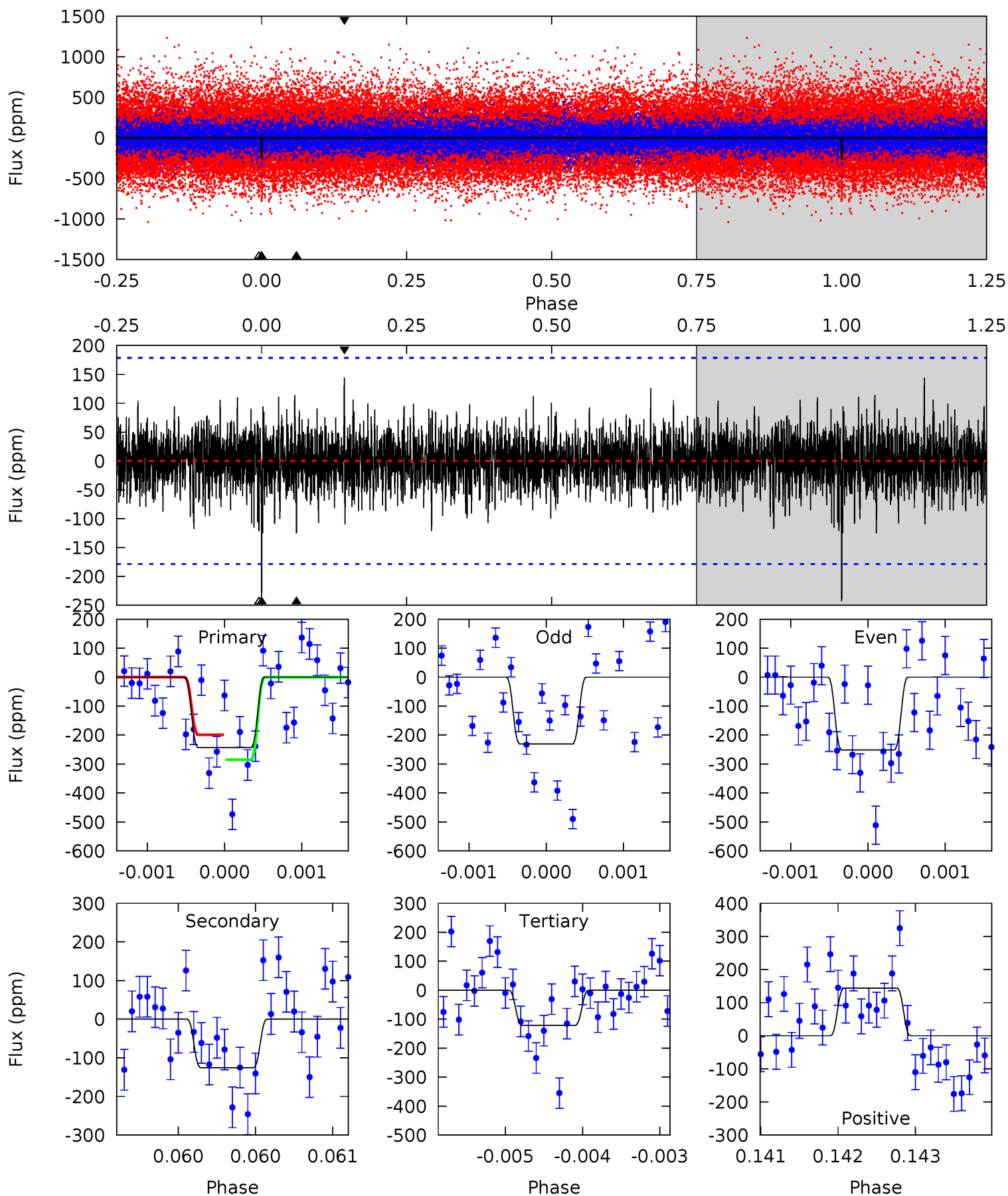
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.01	4.56	4.52	4.49	5.46	3.31	1.16	3.49	3.52	0.04	0.07	0.17	0.87	0.36	1.23



Alt Model-Shift Uniqueness Test

008938597-01, P = 325.901660 Days, E = 225.266036 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.46	3.85	3.73	4.42	5.48	3.33	1.04	3.73	3.04	0.12	-0.57	0.31	0.93	0.37	1.32



Stellar Parameters For KIC 008938597

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5557^{+150}_{-150}	$4.603^{+0.034}_{-0.128}$	$-0.400^{+0.300}_{-0.300}$	$0.750^{+0.152}_{-0.065}$	$0.832^{+0.080}_{-0.089}$	$2.777^{+0.483}_{-1.059}$
	+3%/-3%	+1%/-3%	+75%/-75%	+20%/-9%	+10%/-11%	+17%/-38%
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 008938597-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-143 ± 31	$1.84^{+1.43}_{-1.10}$	324^{+15}_{-12}	4353^{+2165}_{-778}	17369^{+95116}_{-11886}
Alt.	-125 ± 33	$1.78^{+1.60}_{-1.15}$	324^{+15}_{-12}	4283^{+2450}_{-871}	$16180^{+106508}_{-11856}$

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 $A_{obs} \gg 1.0$

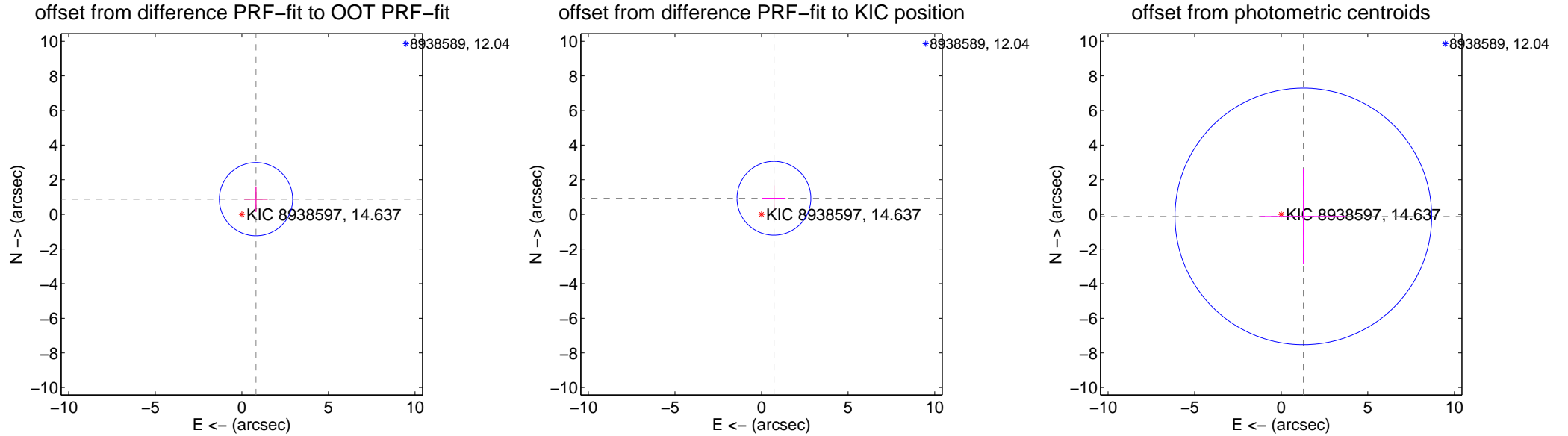
DV Centroid Data

Supplemental centroid analysis for 008938597-01. Kepler magnitude: 14.64. Transit SNR 6.33

There are 0 quarters with good PRF difference image offsets

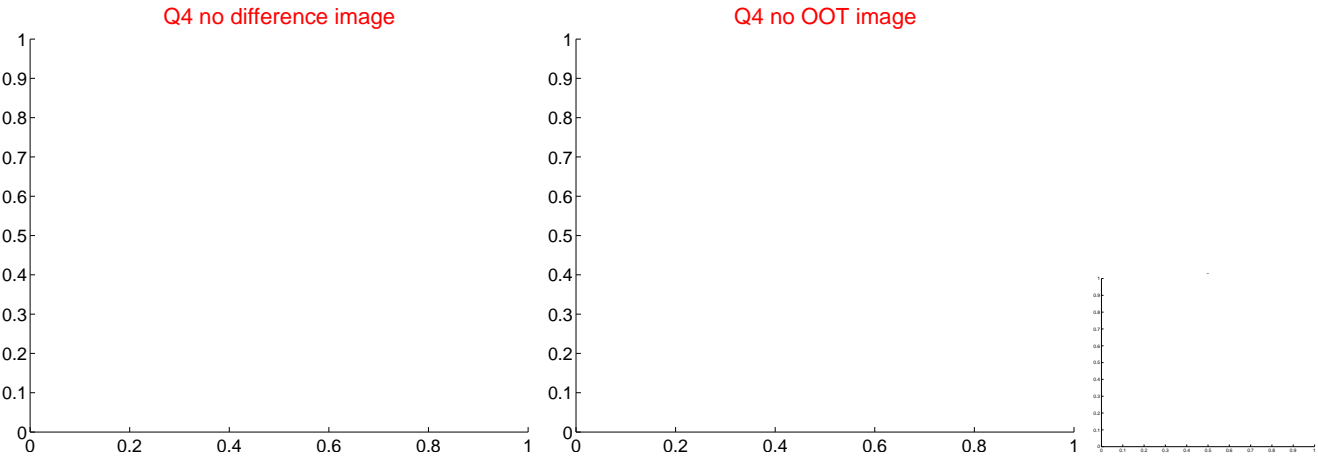
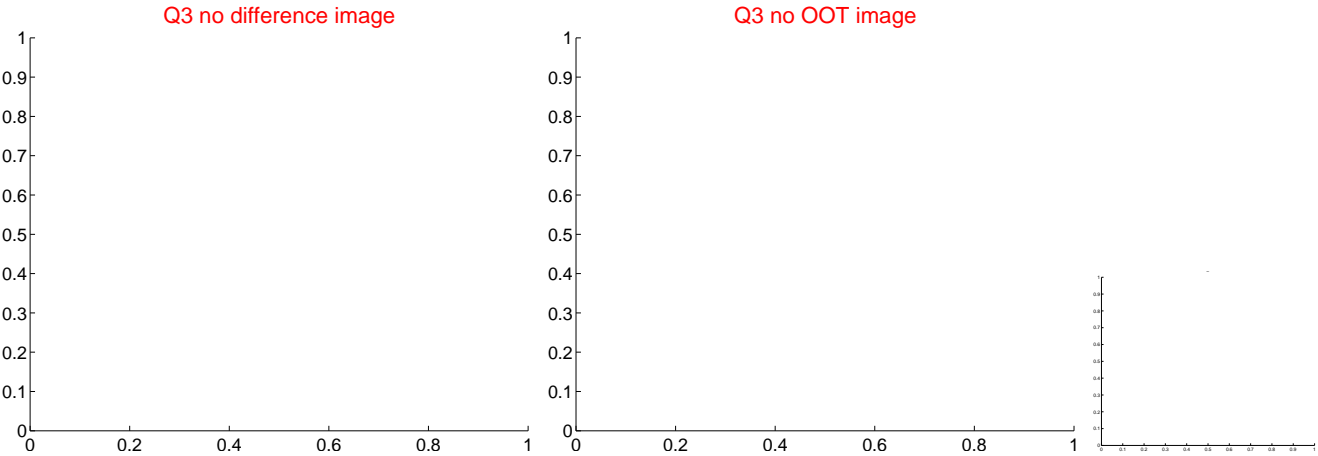
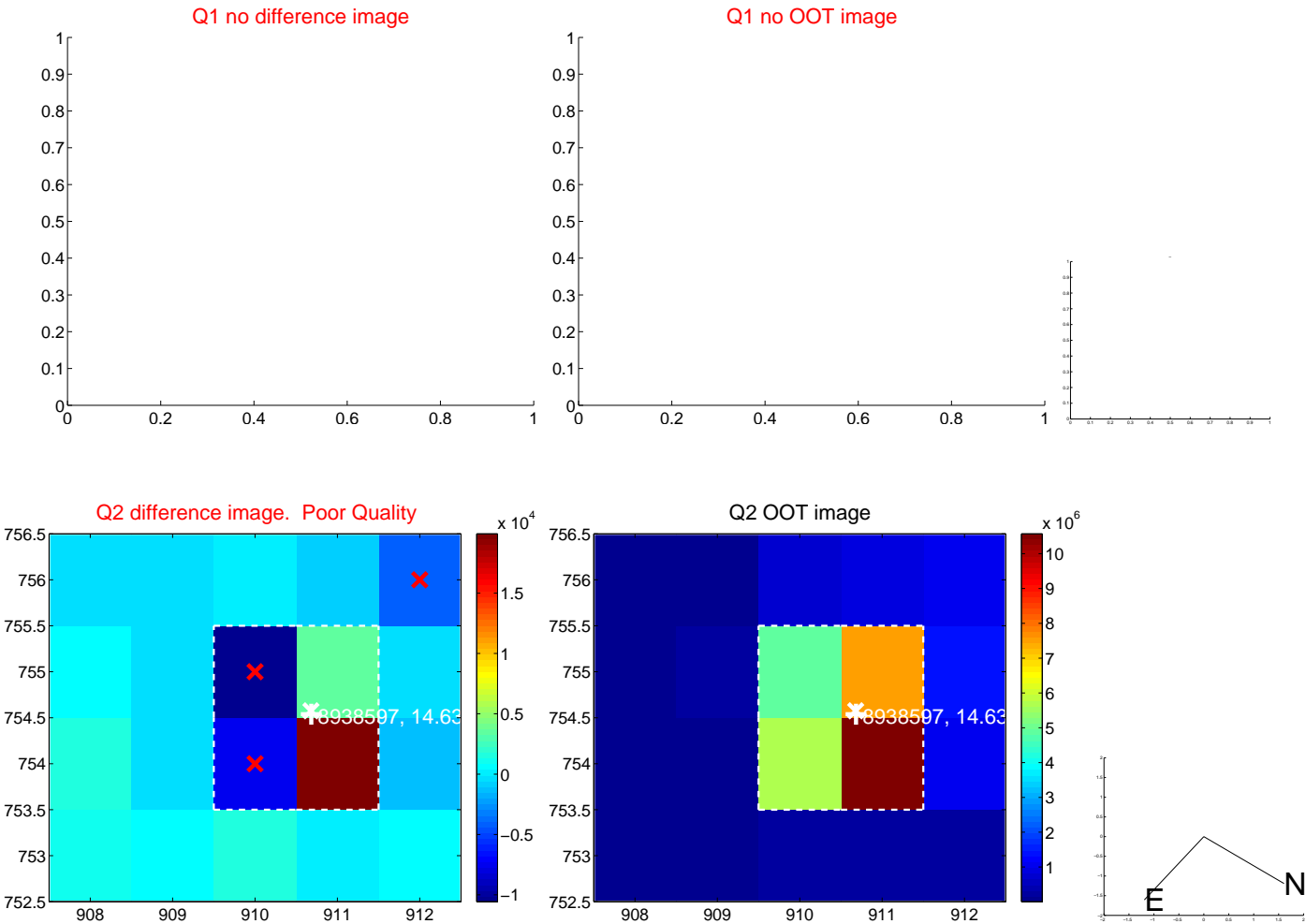
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.200 ± 0.706	1.70	-0.818 ± 0.673	0.878 ± 0.732
PRF-fit source offset from KIC position	1.173 ± 0.711	1.65	-0.716 ± 0.673	0.929 ± 0.732
photometric centroid source offset	1.28 ± 2.47	0.52	-1.28 ± 2.47	-0.12 ± 2.76

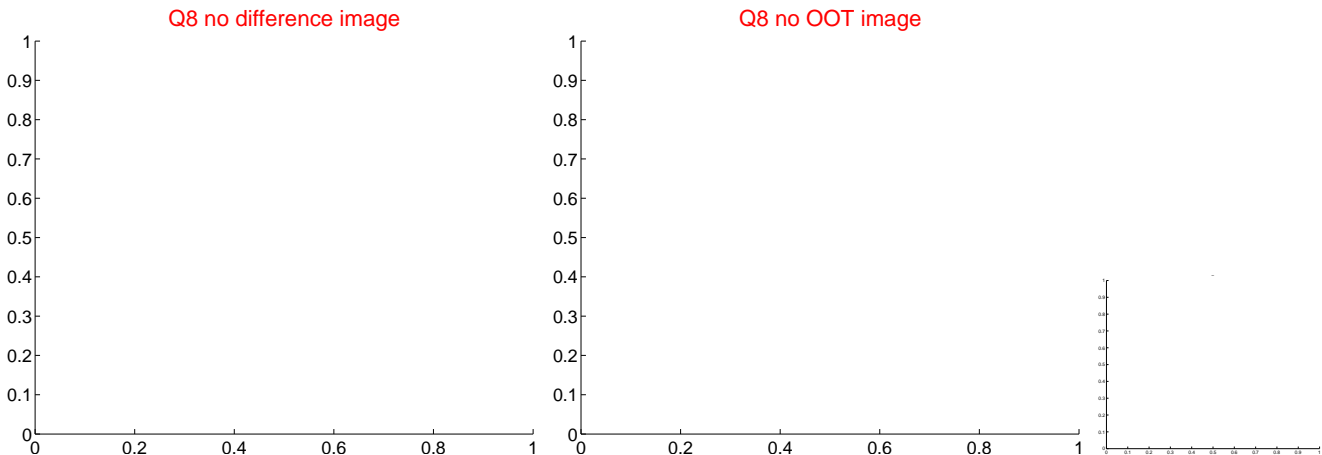
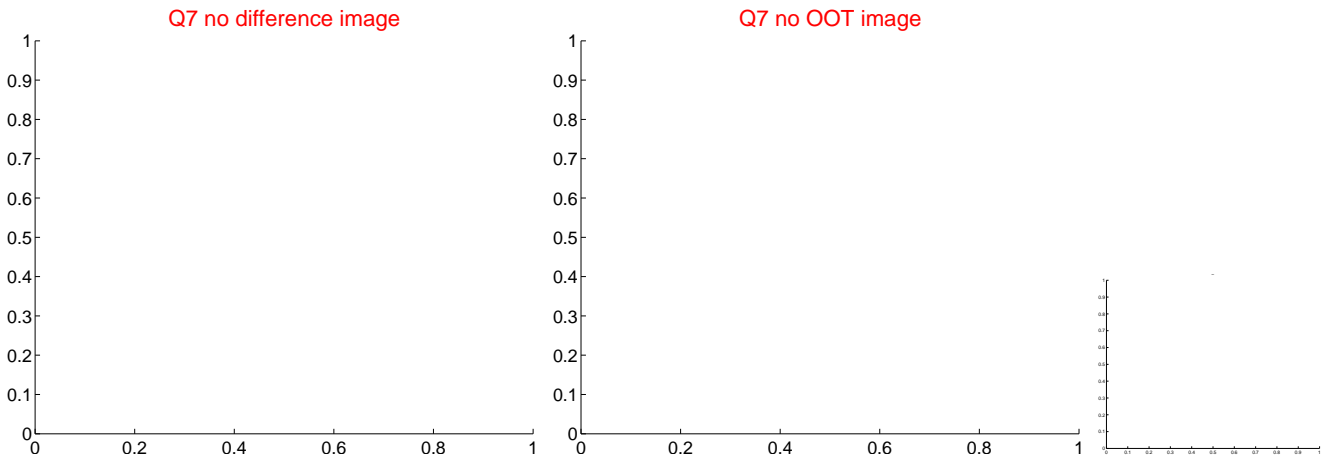
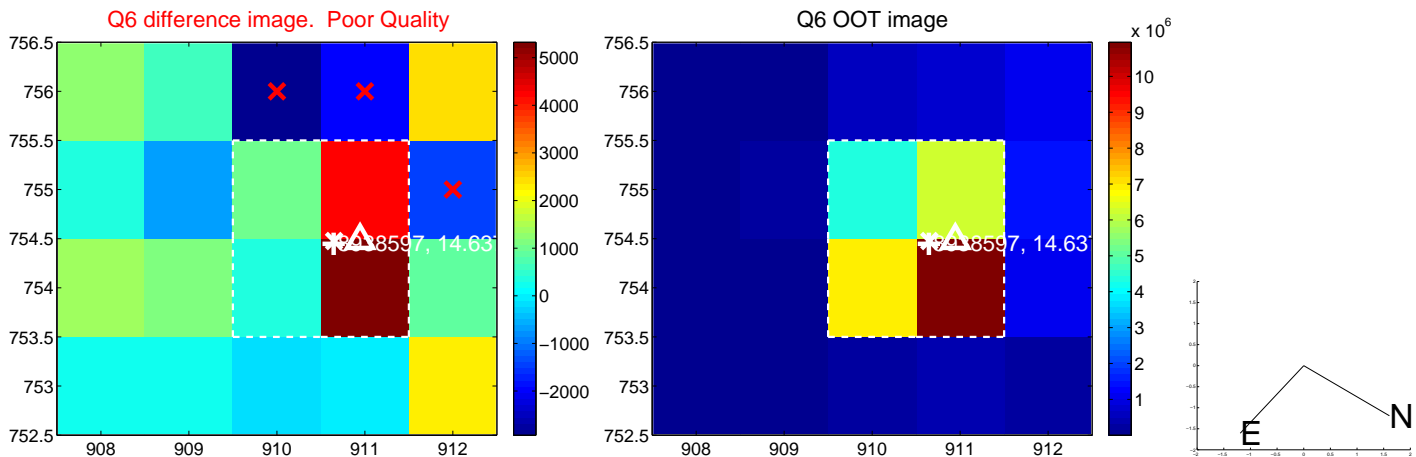
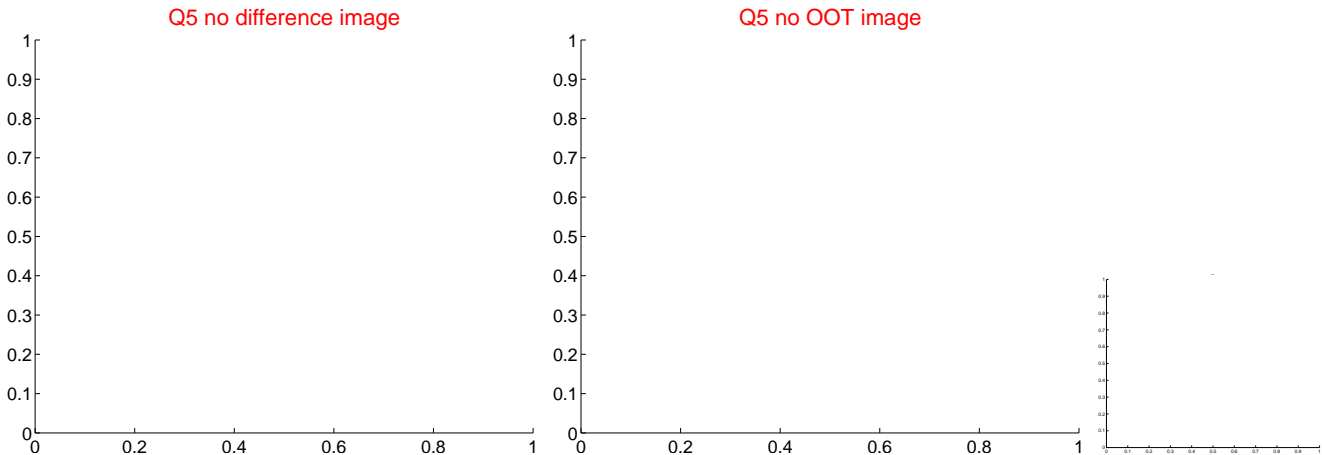


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

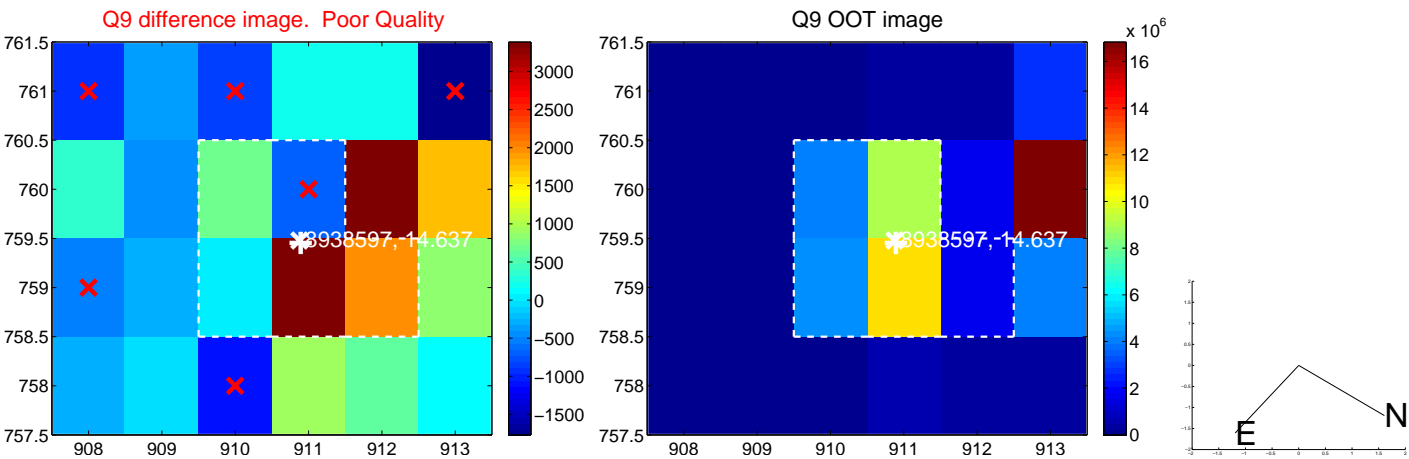
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



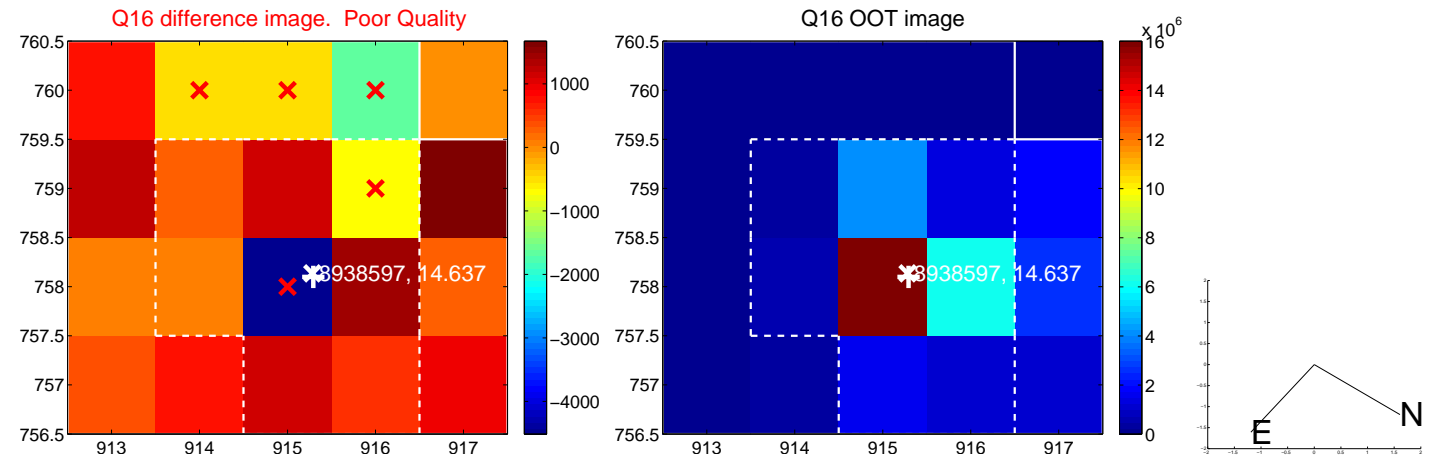
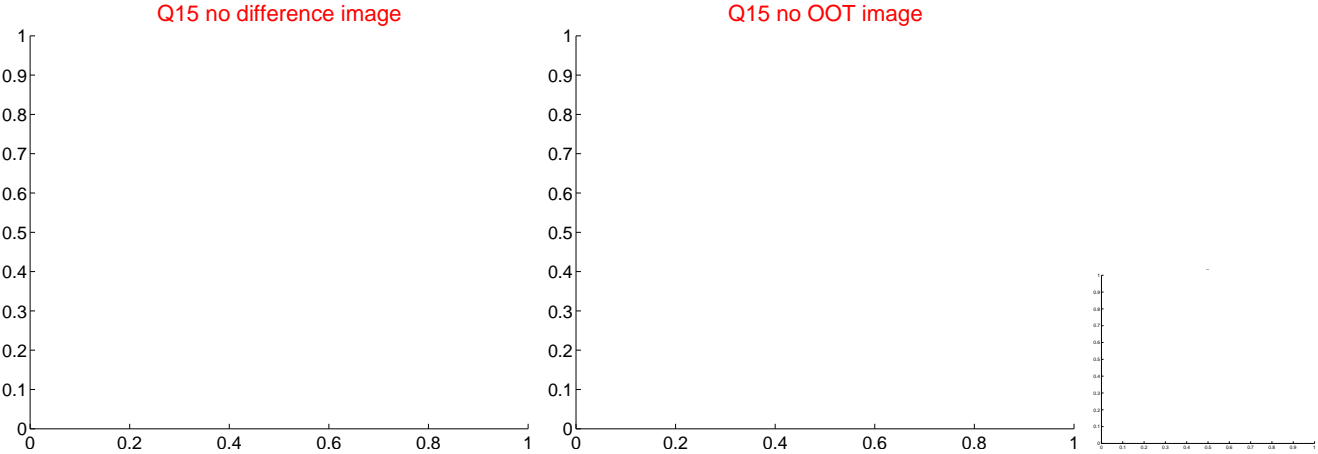
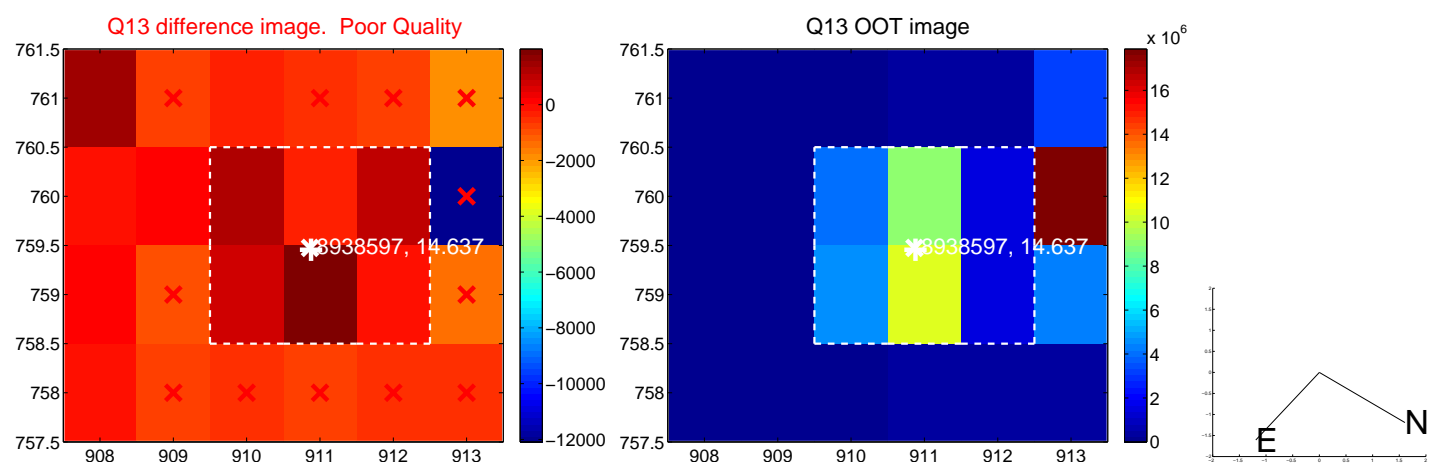
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



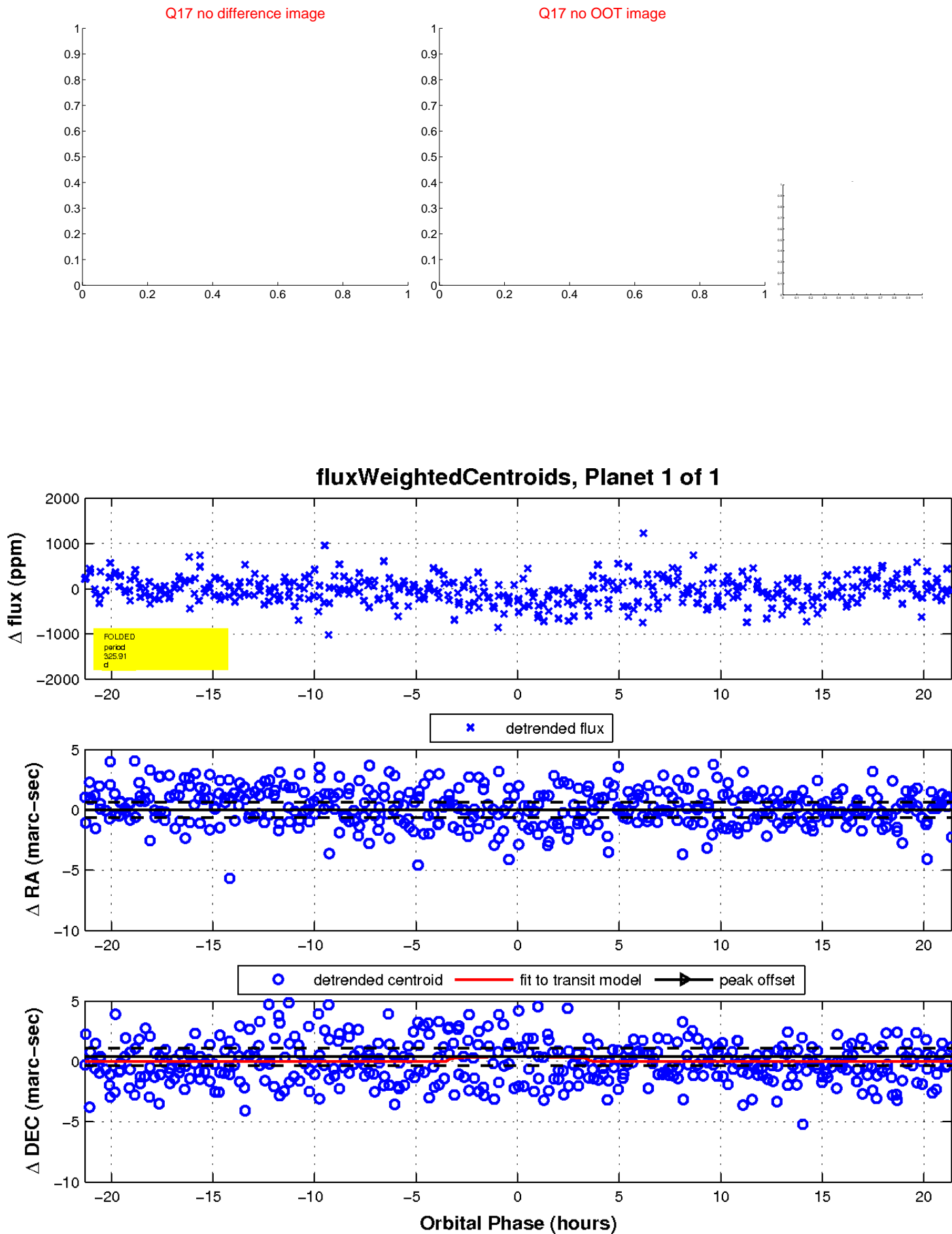
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

