

KIC 007117492

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})
007117492-01	OBS	No	0.566811	131.819205	23.9	5.087	8.0	9.7	0.89	5110	0.42	3052.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007117492-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—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.

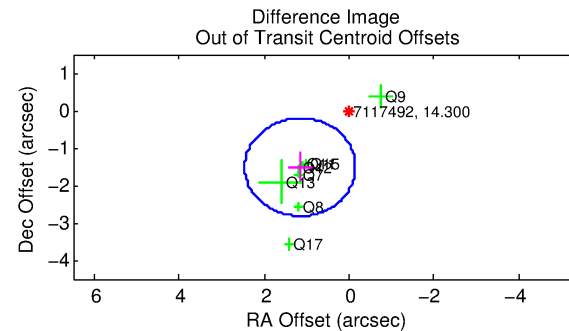
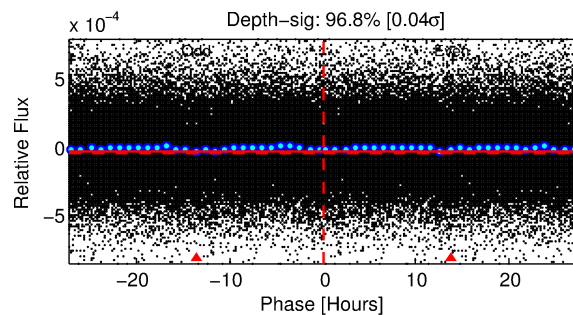
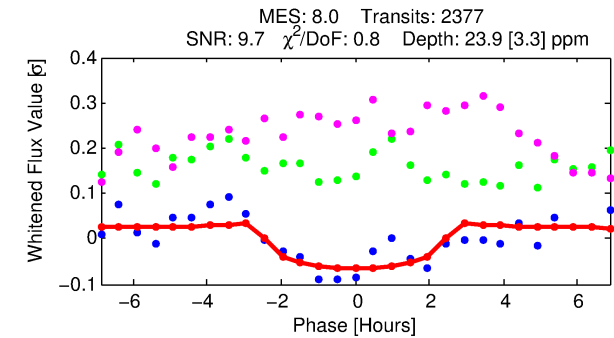
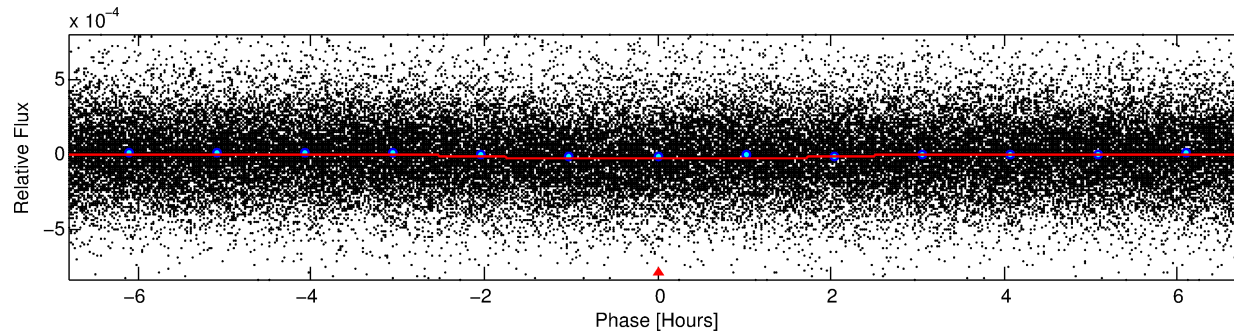
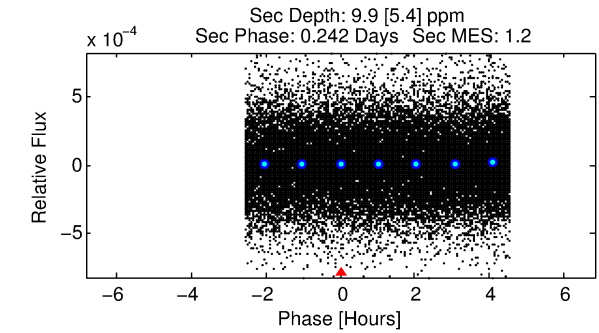
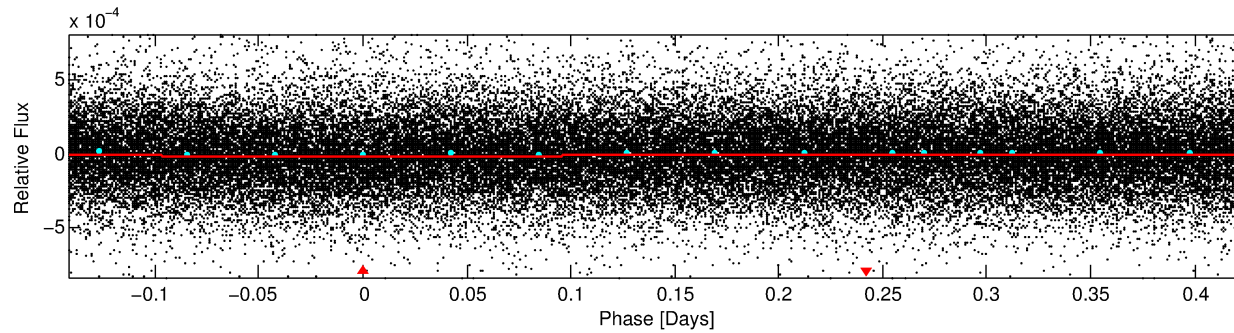
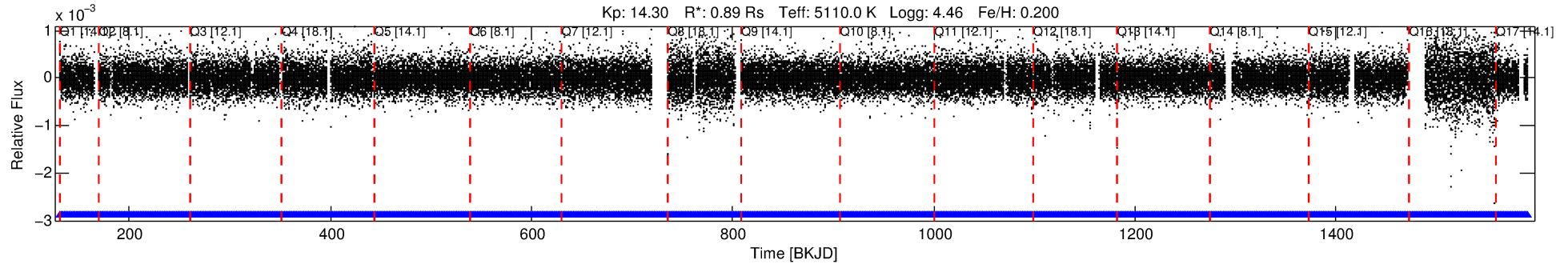
Ephemeris Match Information For 007117492-01

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
007117492-01	7117492	RR-Lyr-pri	7198959	1:1	966.9	194	146	7.86	14.30	25971.00	Direct-PRF	0	3.41	24.98

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: 7117492 Candidate: 1 of 1 Period: 0.567 d



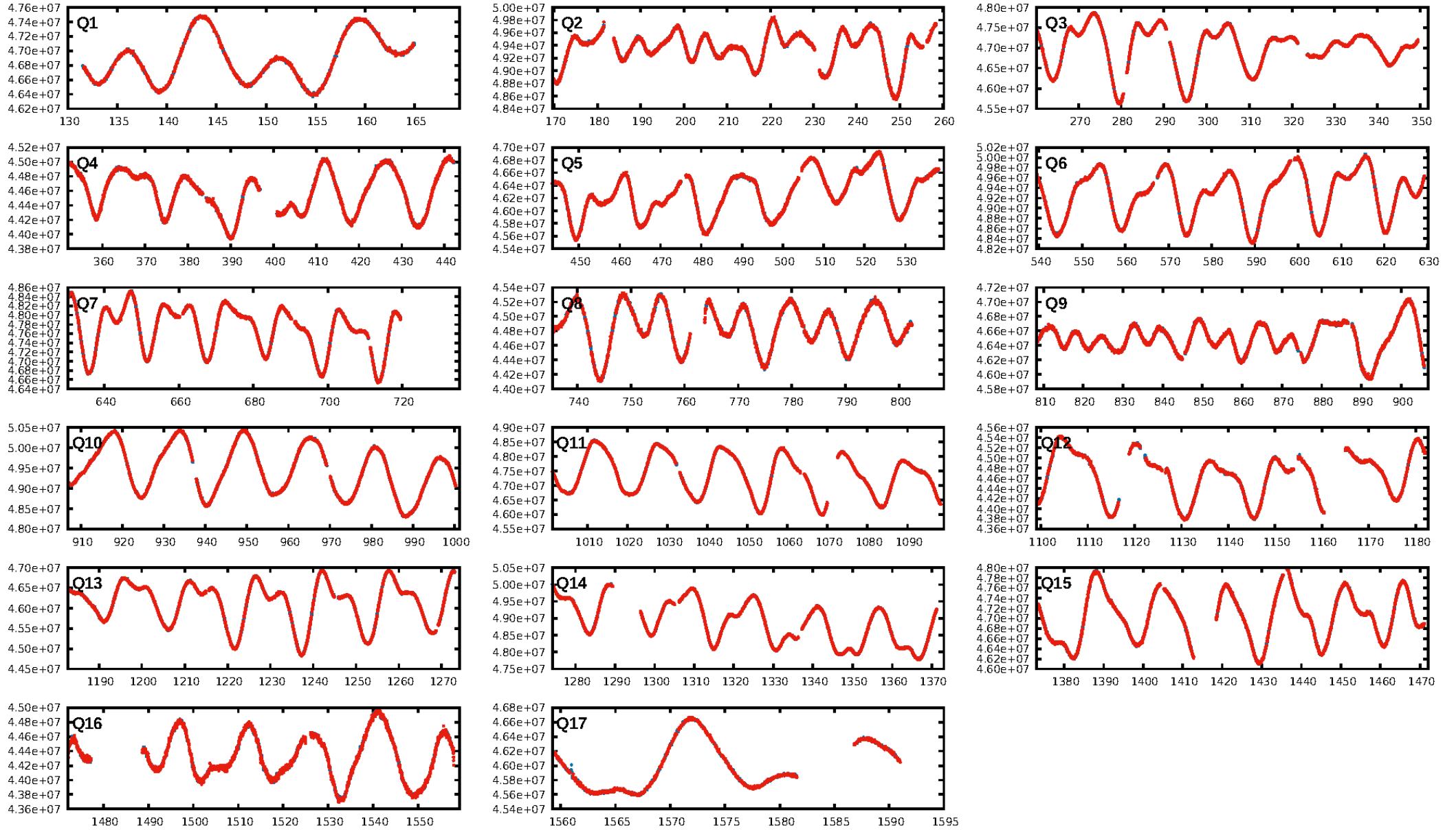
DV Fit Results:

Period = 0.56681 [0.00001] d
Epoch = 131.8192 [0.0047] BKJD
Rp/R* = 0.0043 [0.0035]
a/R* = 1.09 [0.45]
b = 0.01 [319.57]
Seff = 3052.07 [1600.89]
Teq = 1895 [249] K
Rp = 0.42 [0.35] Re
a = 0.0126 [0.0035] AU
Ag = 4.89 [8.72] [0.45σ]
Teffp = 4357 [1867] K [1.31σ]

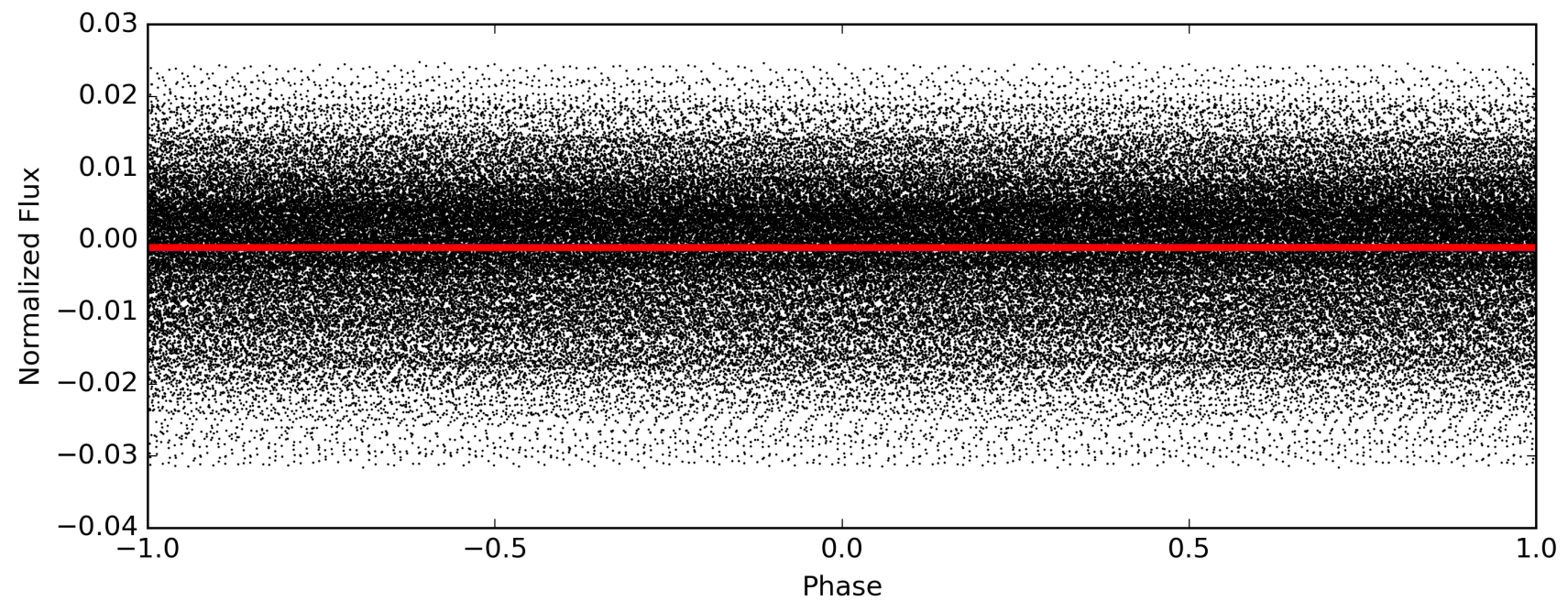
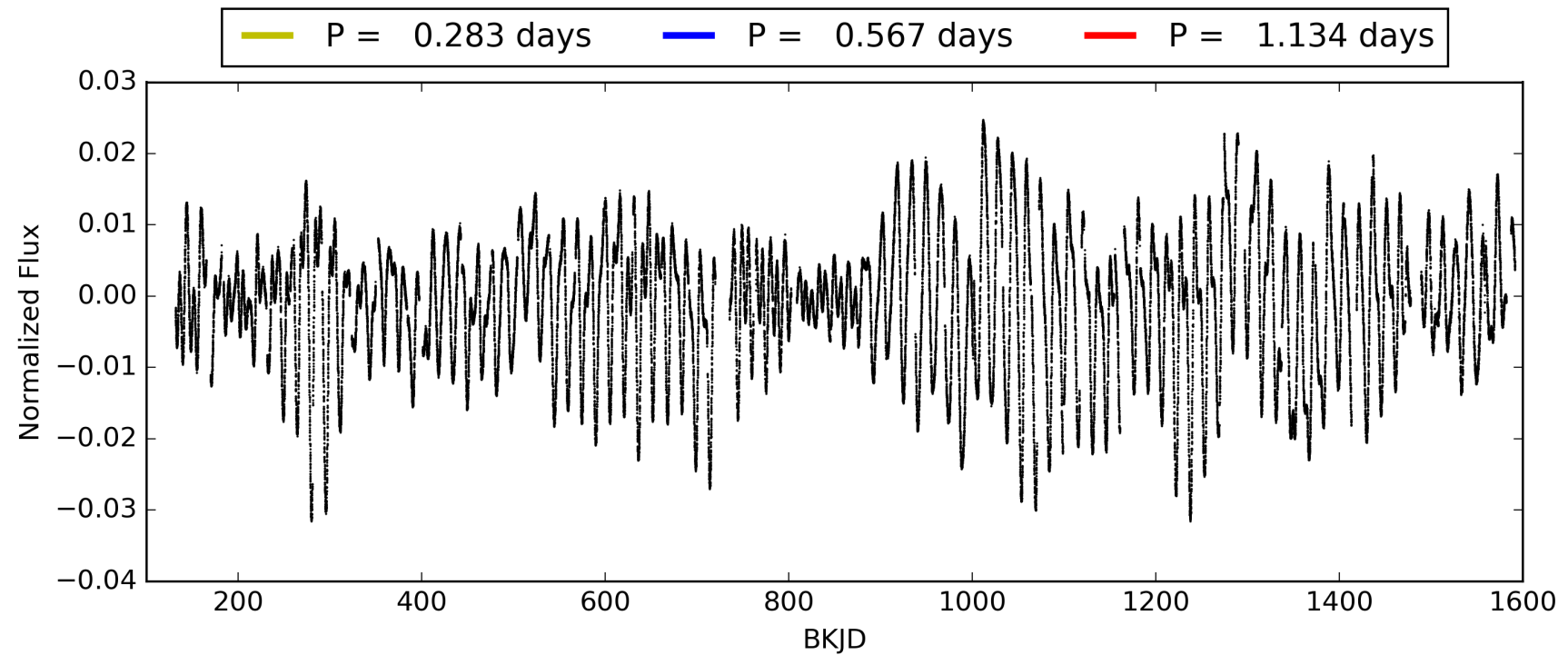
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2271/2271]
GhostDiagnostic-chr: 0.06565
Centroid-sig: 0.0%
Centroid-so: 3.646 arcsec [3.76σ]
OotOffset-rm: 1.898 arcsec [4.36σ]
KicOffset-rm: 1.962 arcsec [5.13σ]
OotOffset-st: 0/3/2/3 [8]
KicOffset-st: 0/3/2/3 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007117492-01, PDC Light Curves

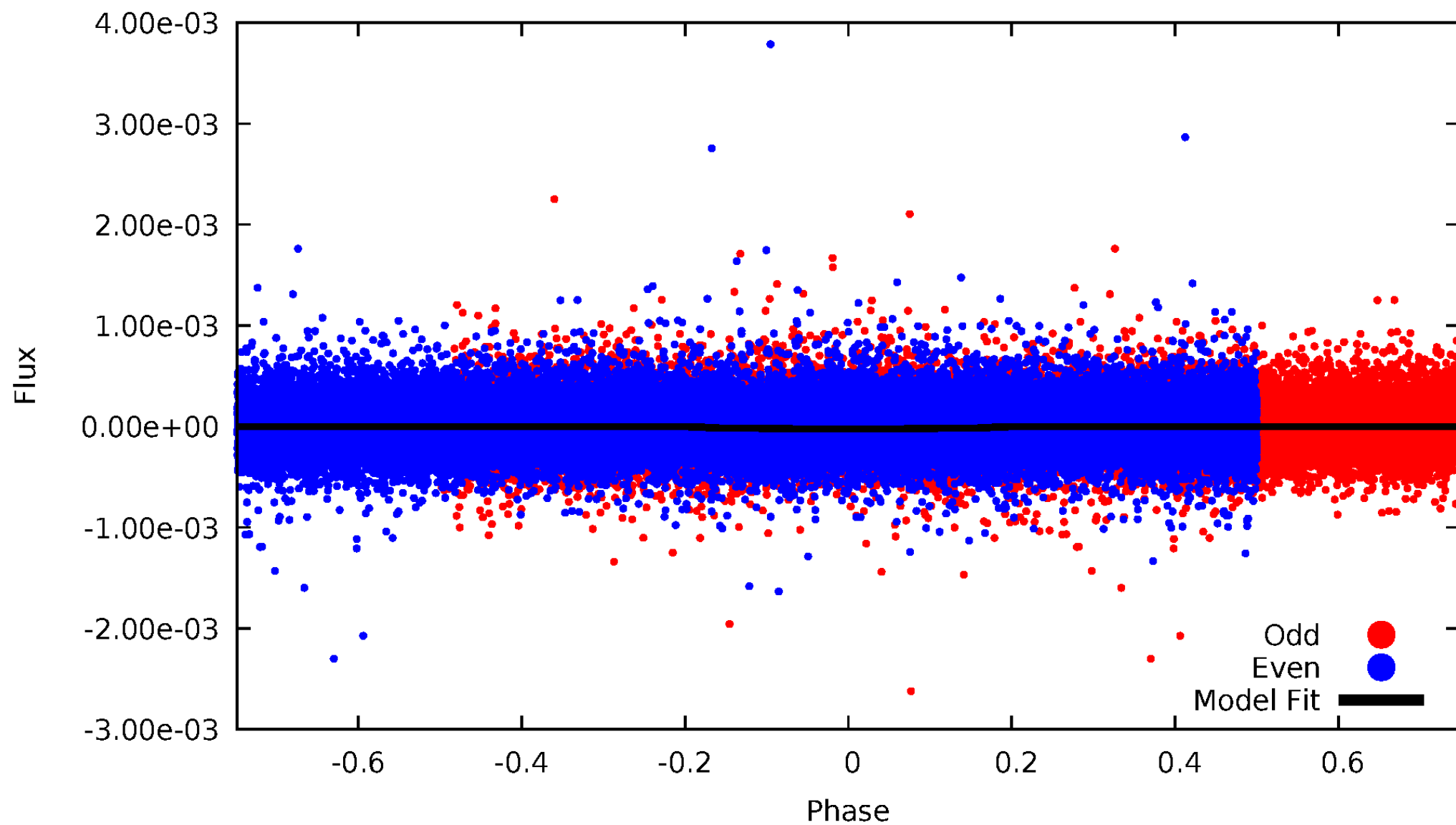


TCE 007117492-01



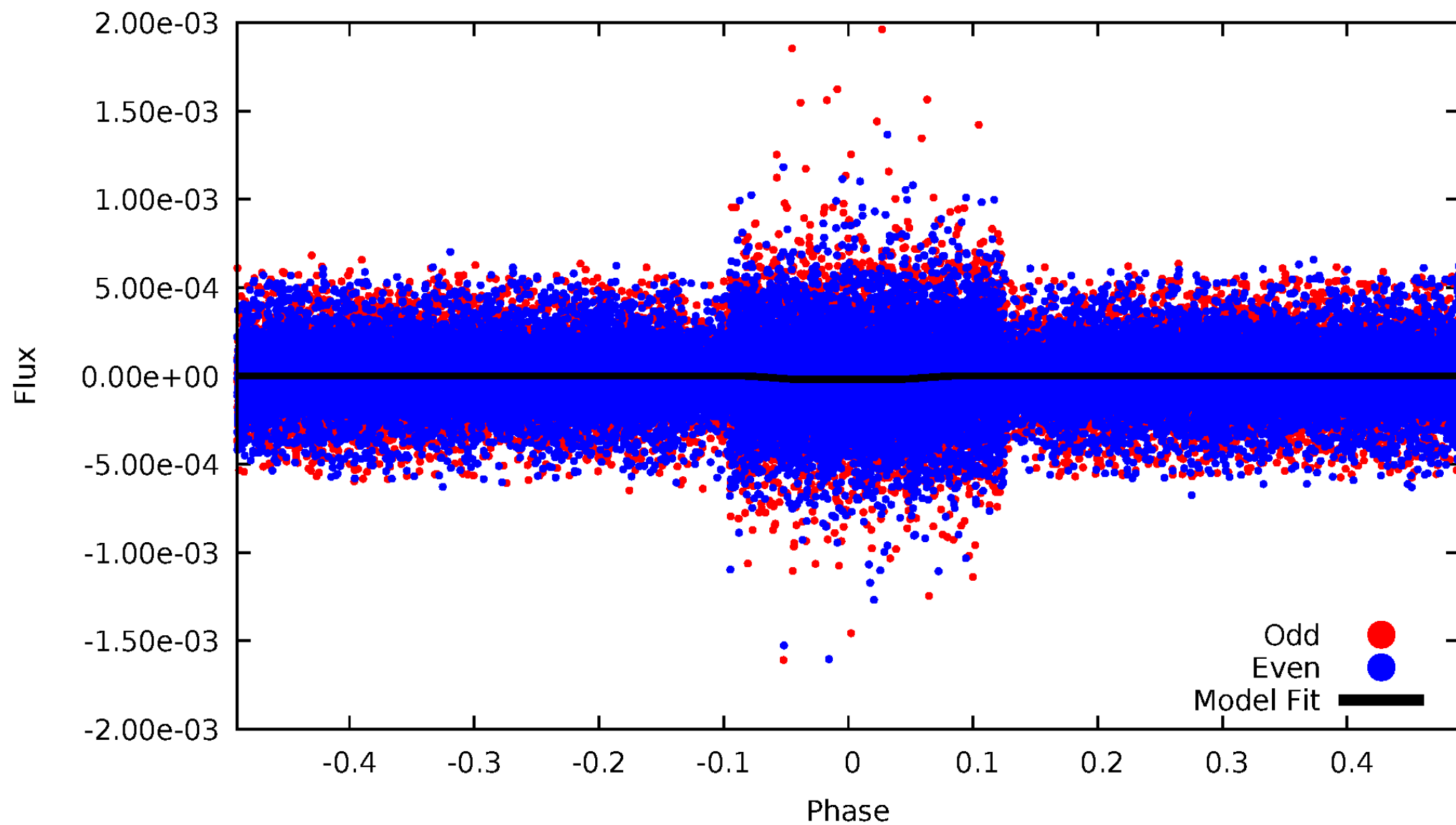
DV Odd/Even

TCE 007117492-01



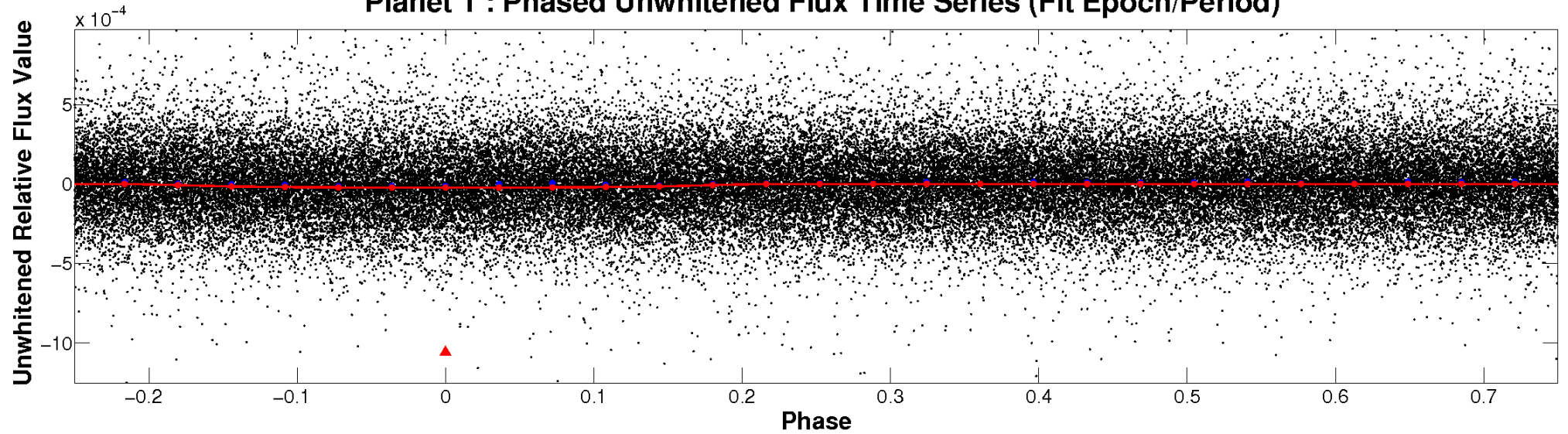
ALT Odd/Even

TCE 007117492-01

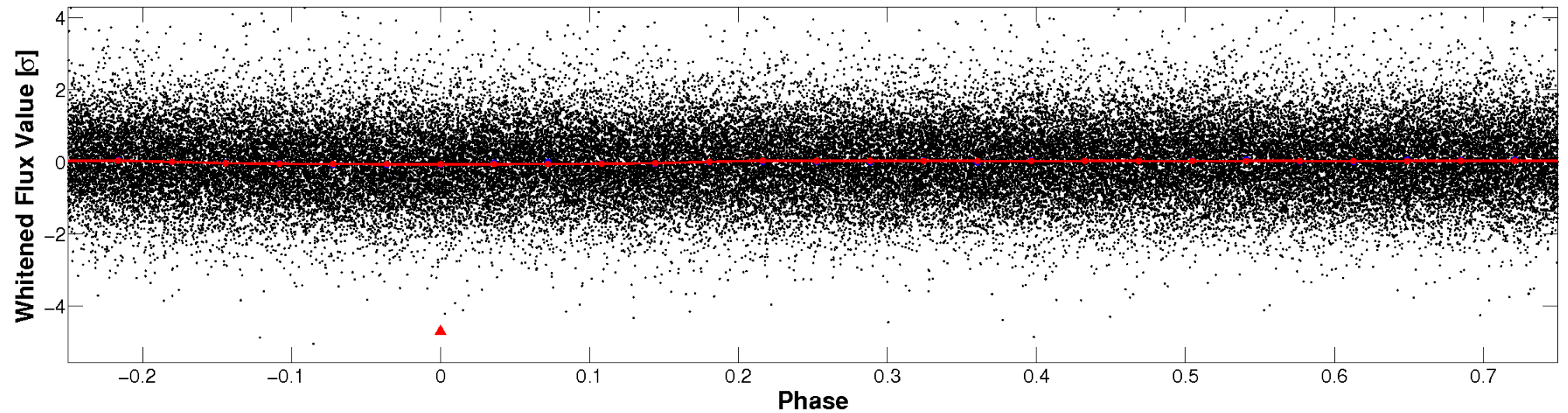


Non-Whitened Vs. Whitened Light Curve

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

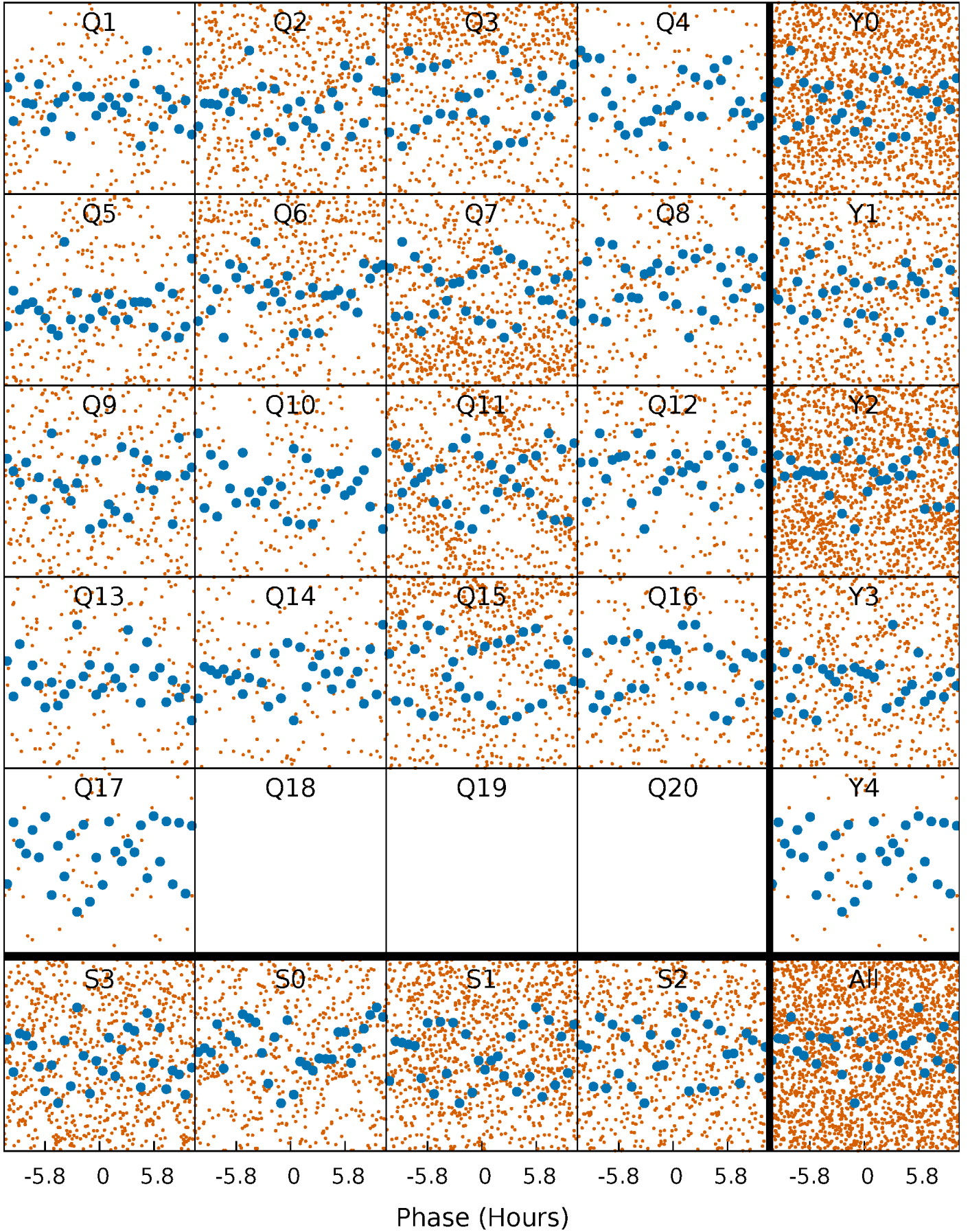


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



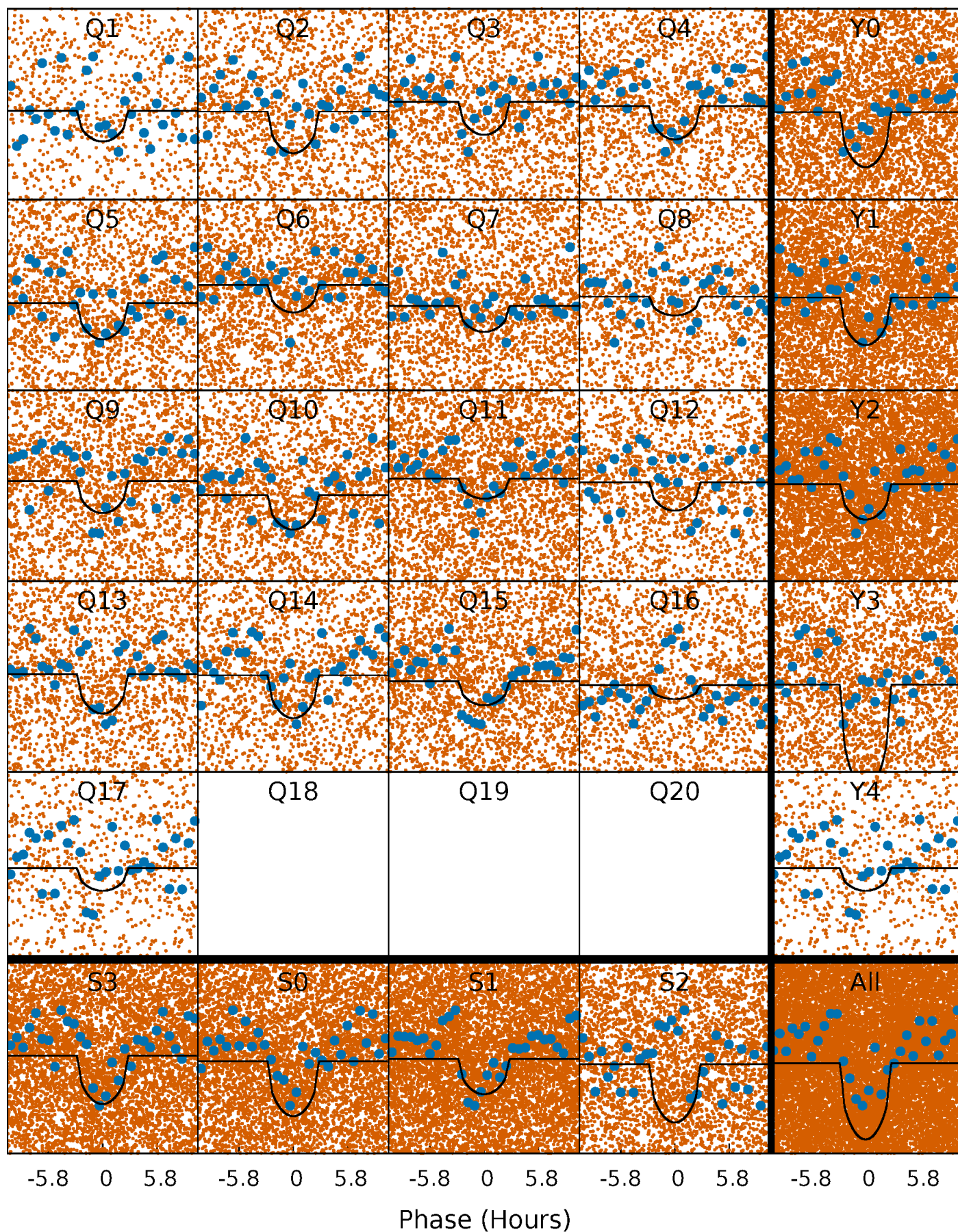
PDC Quarter-Phased Transit Curves

TCE 007117492-01 P= 0.566811 Days $T_0=131.819206$ (BKJD)



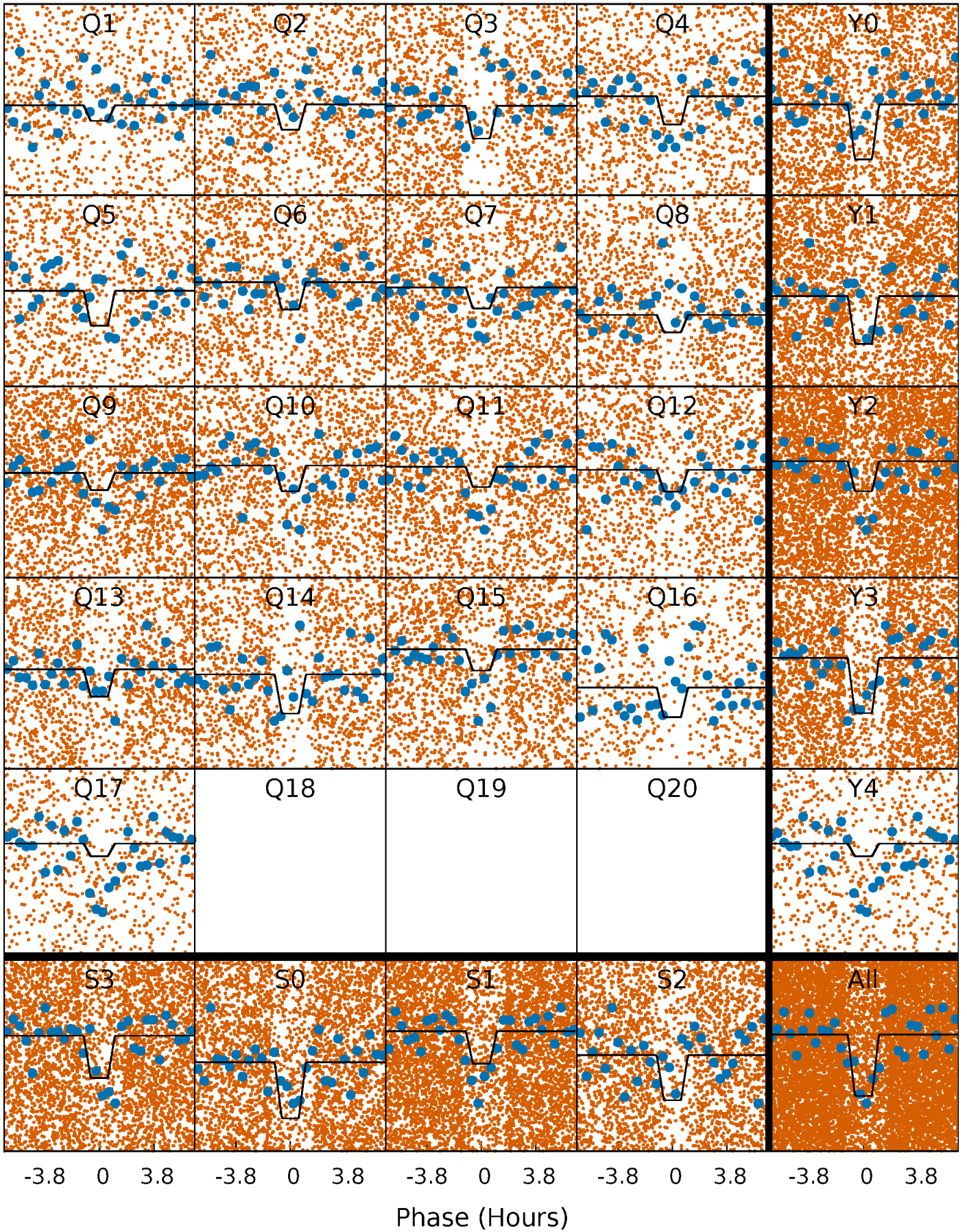
DV Quarter-Phased Transit Curves

TCE 007117492-01 P= 0.566811 Days $T_0=131.819206$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

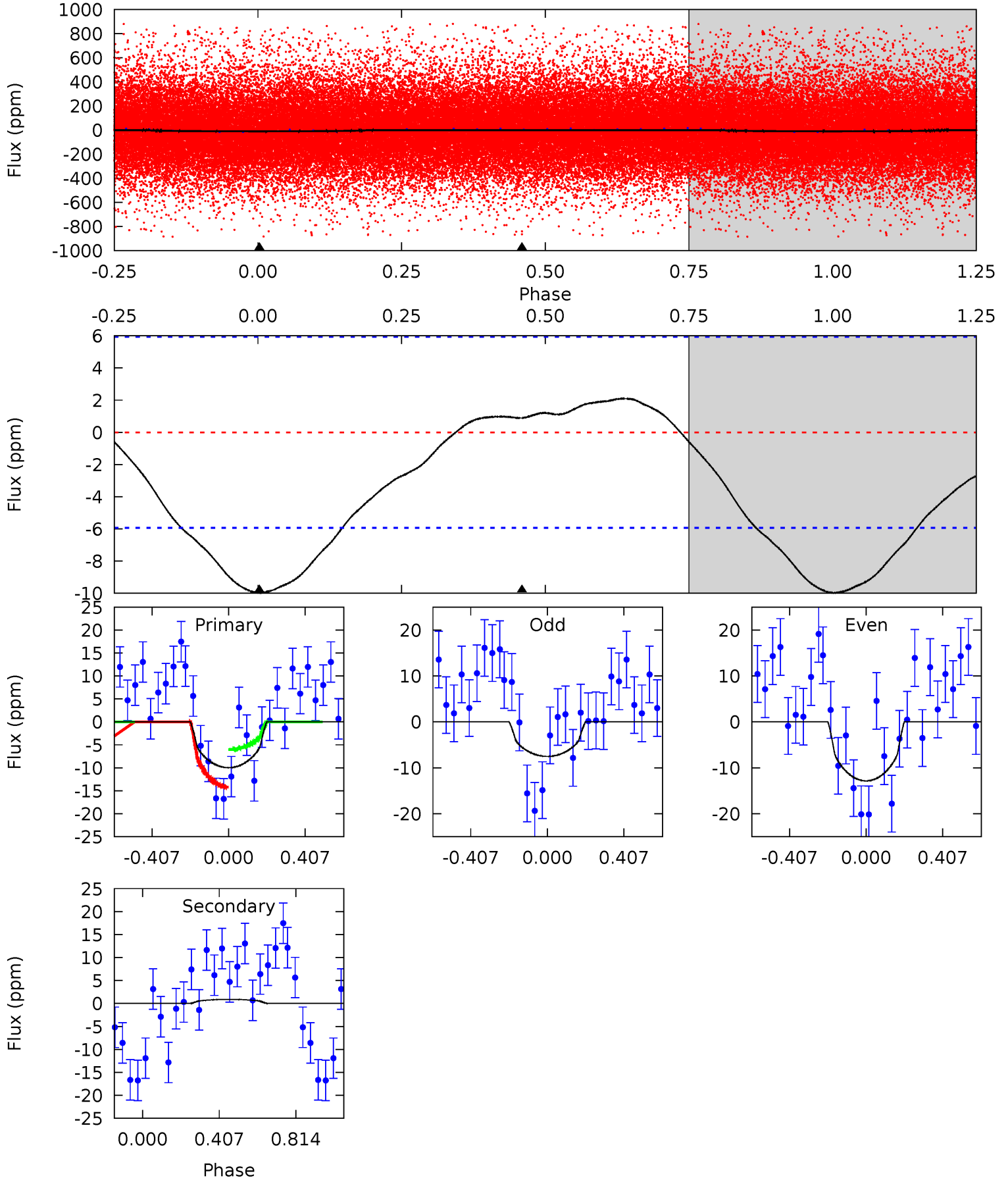
TCE 007117492-01 P= 0.566801 Days $T_0=131.790109$ (BKJD)



DV Model-Shift Uniqueness Test

007117492-01, P = 0.566811 Days, E = 131.252395 Days

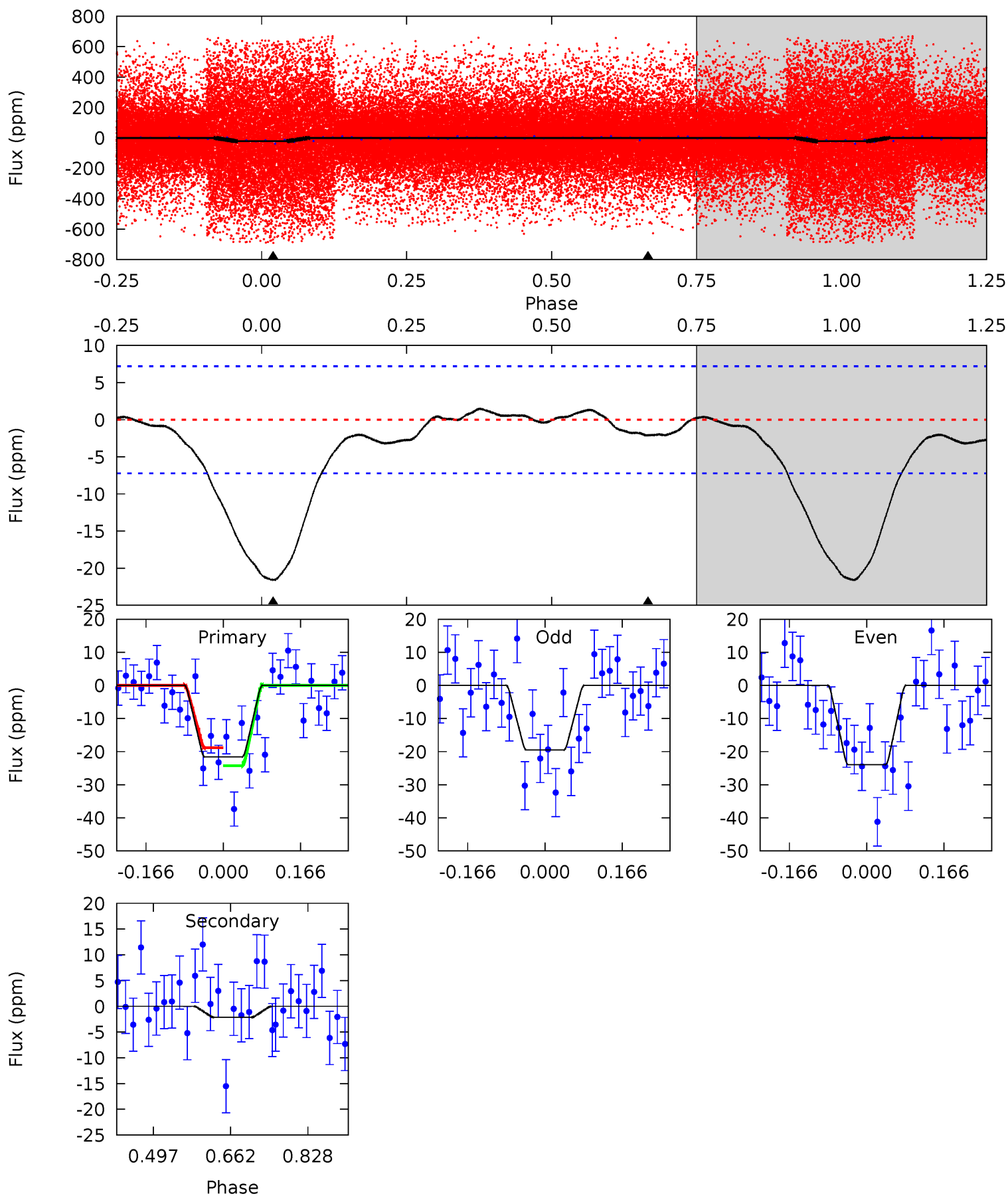
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.17	-0.64	0	0	4.26	0.83	0.94	7.17	7.17	-0.64	-0.64	1.95	0.52	0.17	2.96



Alt Model-Shift Uniqueness Test

007117492-01, P = 0.566801 Days, E = 131.223308 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	1.32	0	0	4.46	1.39	0.90	13.4	13.4	1.32	1.32	1.36	0.72	0.06	1.68



Stellar Parameters For KIC 007117492

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5110^{+153}_{-153}	$4.457^{+0.119}_{-0.323}$	$0.200^{+0.200}_{-0.300}$	$0.889^{+0.163}_{-0.113}$	$0.825^{+0.078}_{-0.058}$	$1.652^{+0.789}_{-0.779}$
	+3%/-3%	+3%/-7%	+100%/-150%	+18%/-13%	+9%/-7%	+48%/-47%
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 007117492-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 1	$0.49^{+0.32}_{-0.30}$	2689^{+187}_{-155}	-3160^{+648}_{-722}	$-0.219^{+0.403}_{-1.560}$
Alt.	-2 ± 2	$0.48^{+0.32}_{-0.29}$	2692^{+187}_{-144}	2959^{+1392}_{-5723}	$0.672^{+3.716}_{-0.578}$

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

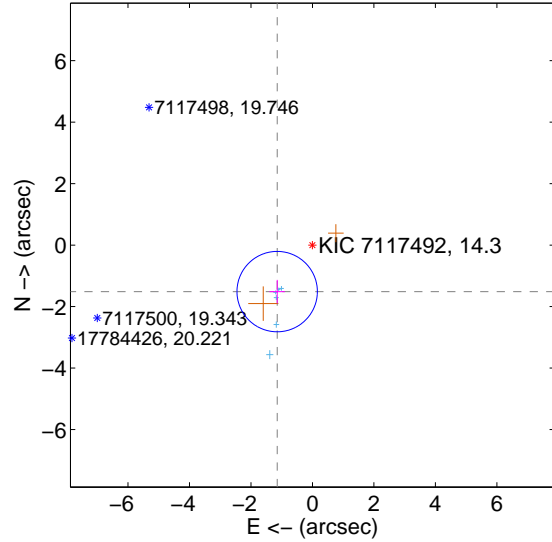
Supplemental centroid analysis for 007117492-01. Kepler magnitude: 14.30. Transit SNR 9.74

There are 6 quarters with good PRF difference image offsets

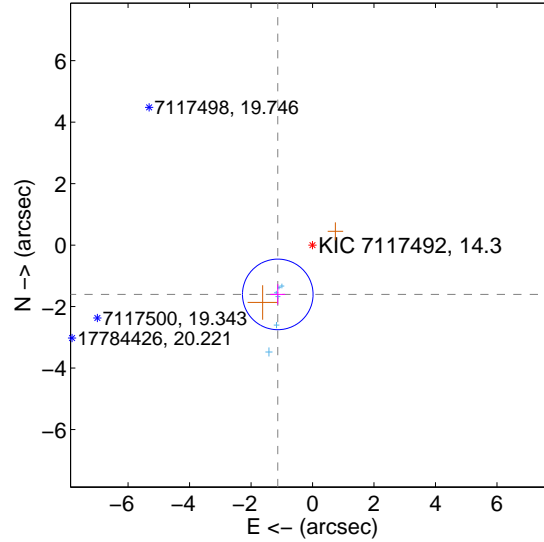
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.898 ± 0.436	4.36	1.147 ± 0.250	-1.512 ± 0.382
PRF-fit source offset from KIC position	1.962 ± 0.383	5.13	1.130 ± 0.242	-1.604 ± 0.332
photometric centroid source offset	3.65 ± 0.97	3.76	-3.49 ± 0.97	-1.06 ± 0.94

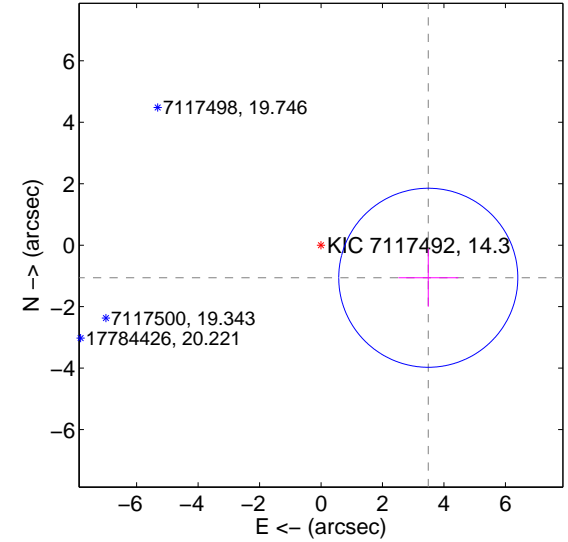
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

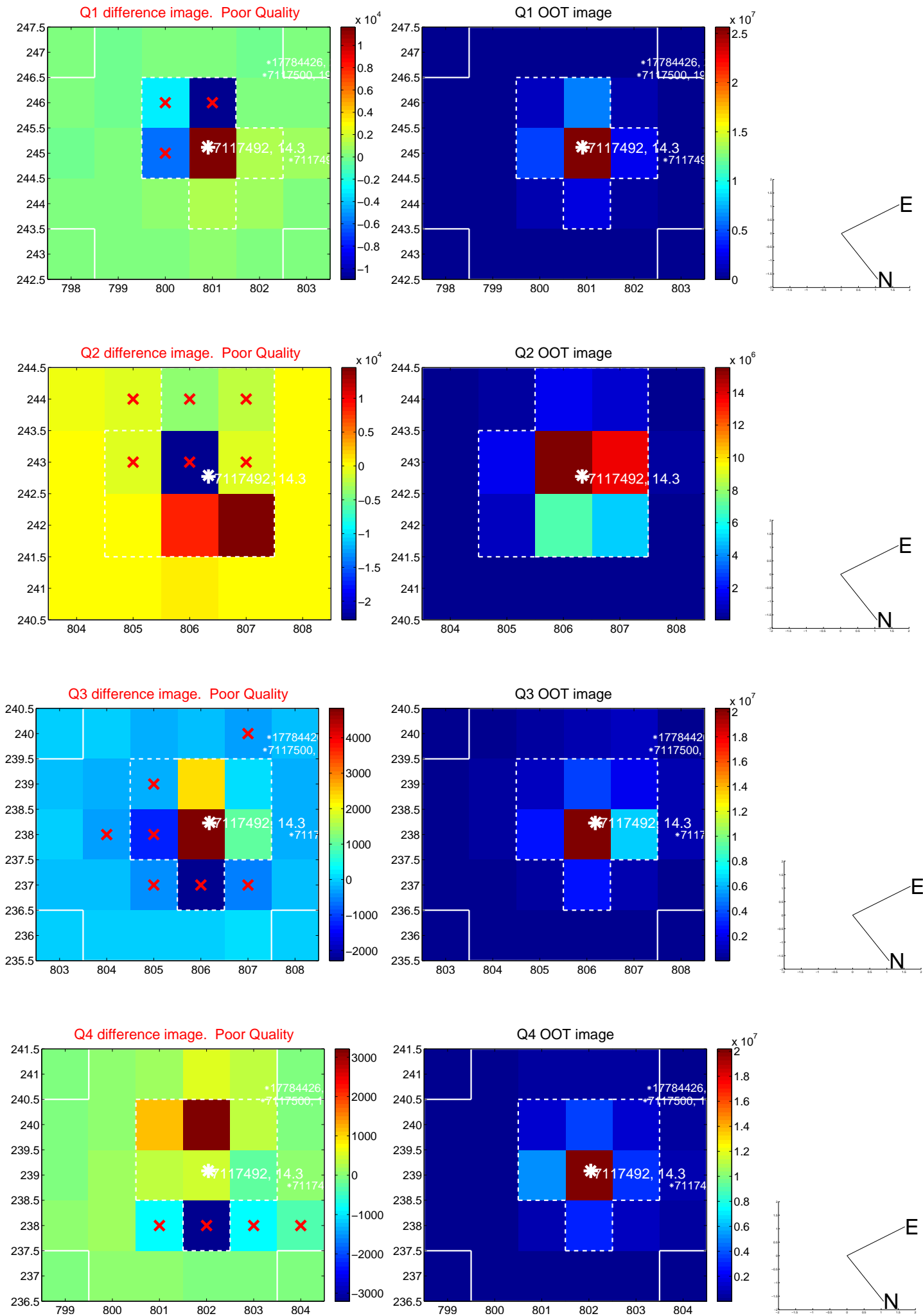


offset from photometric centroids

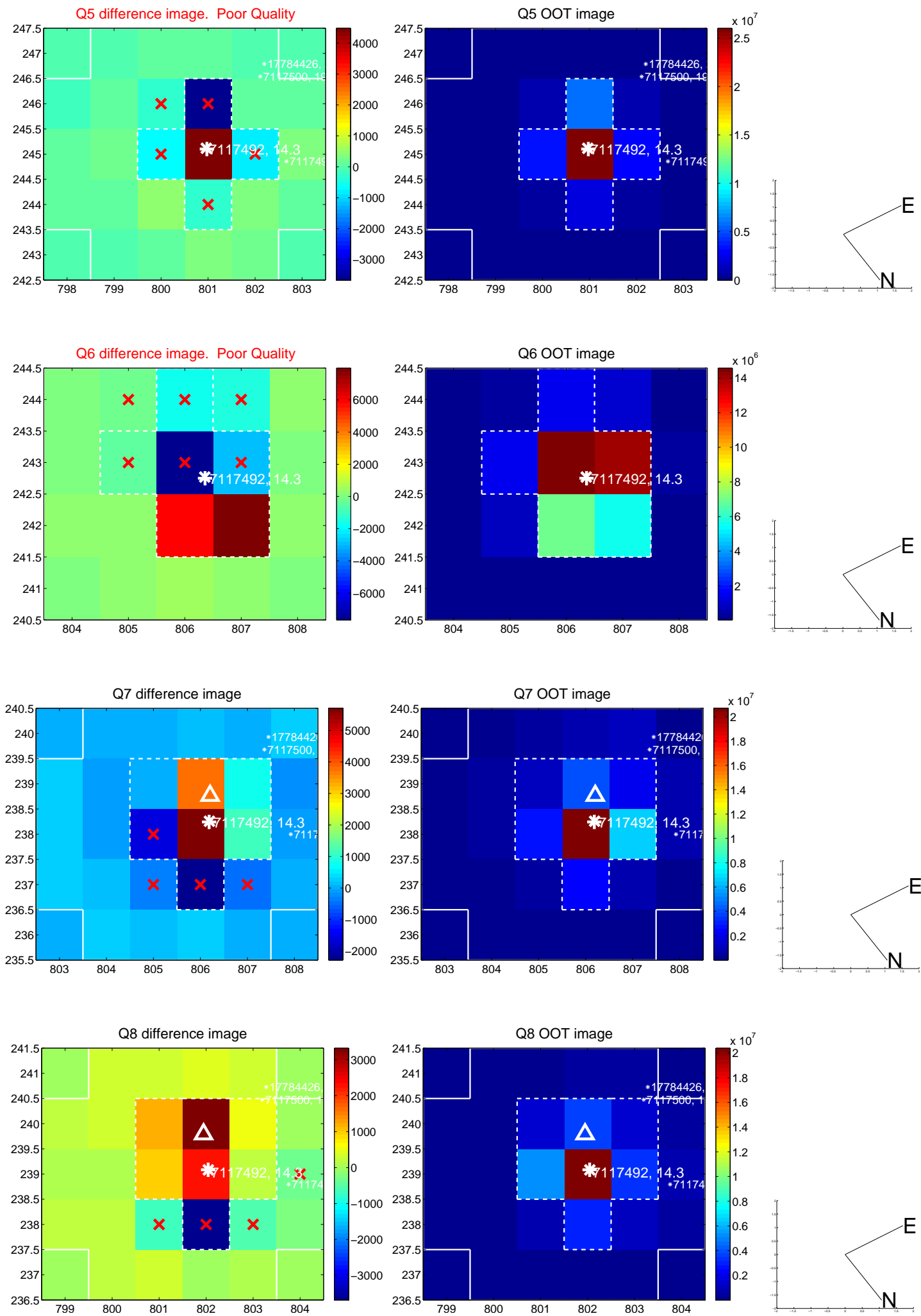


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

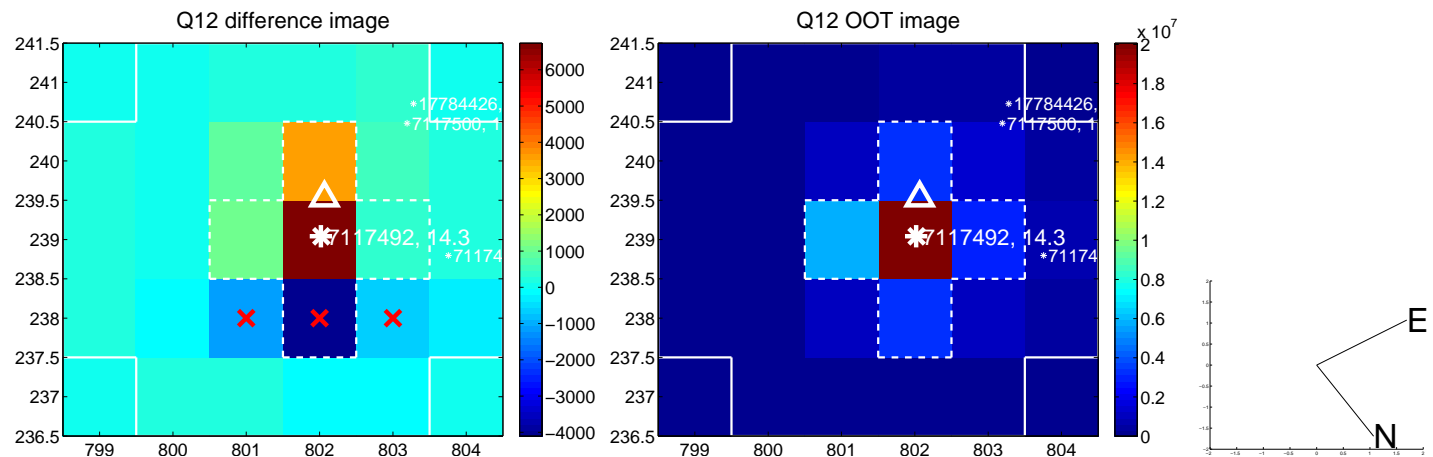
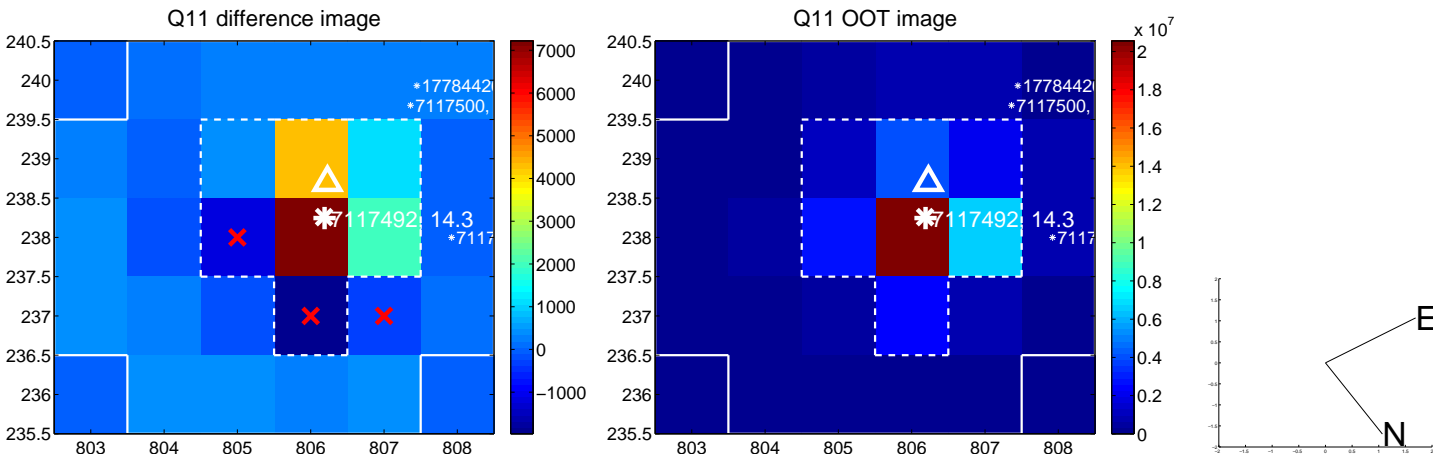
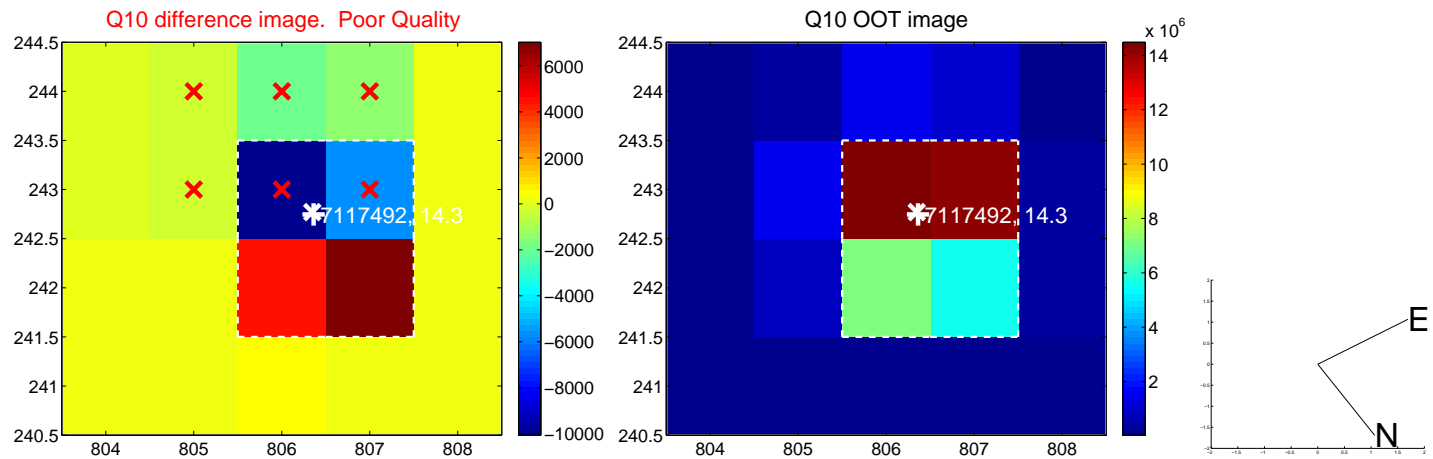
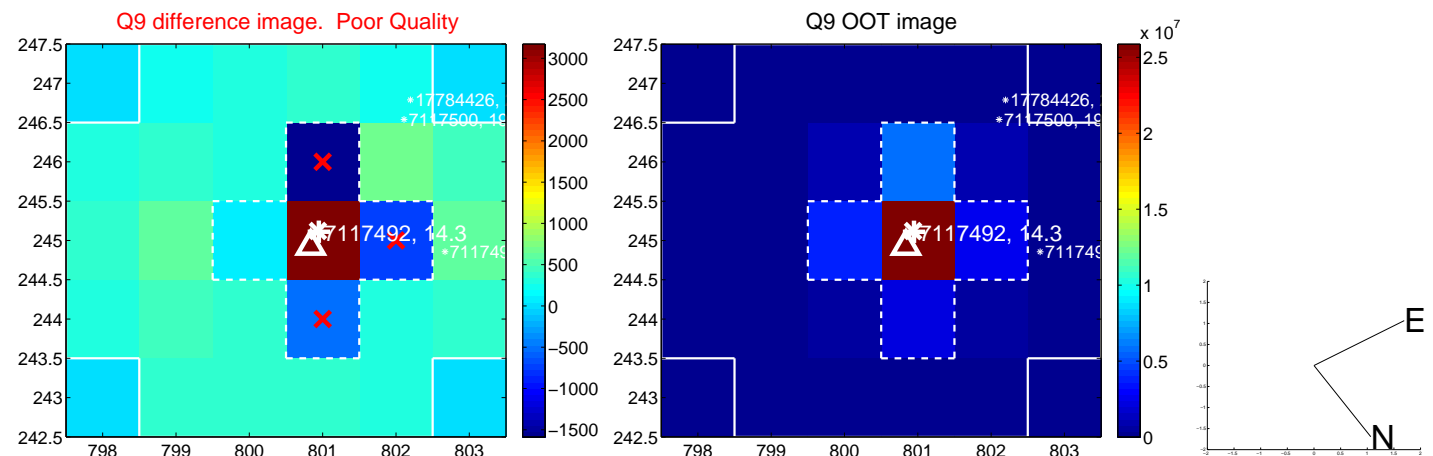
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



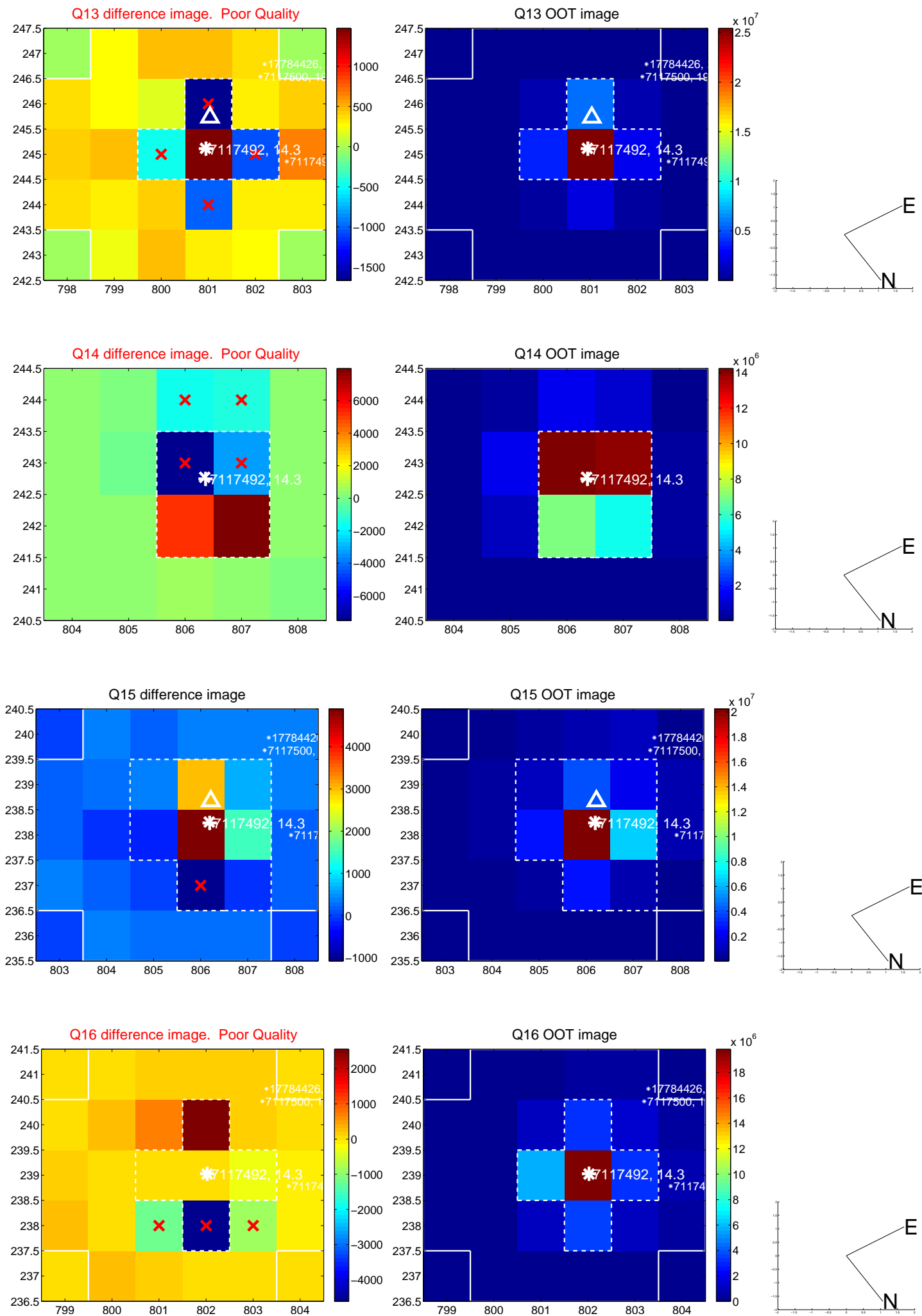
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



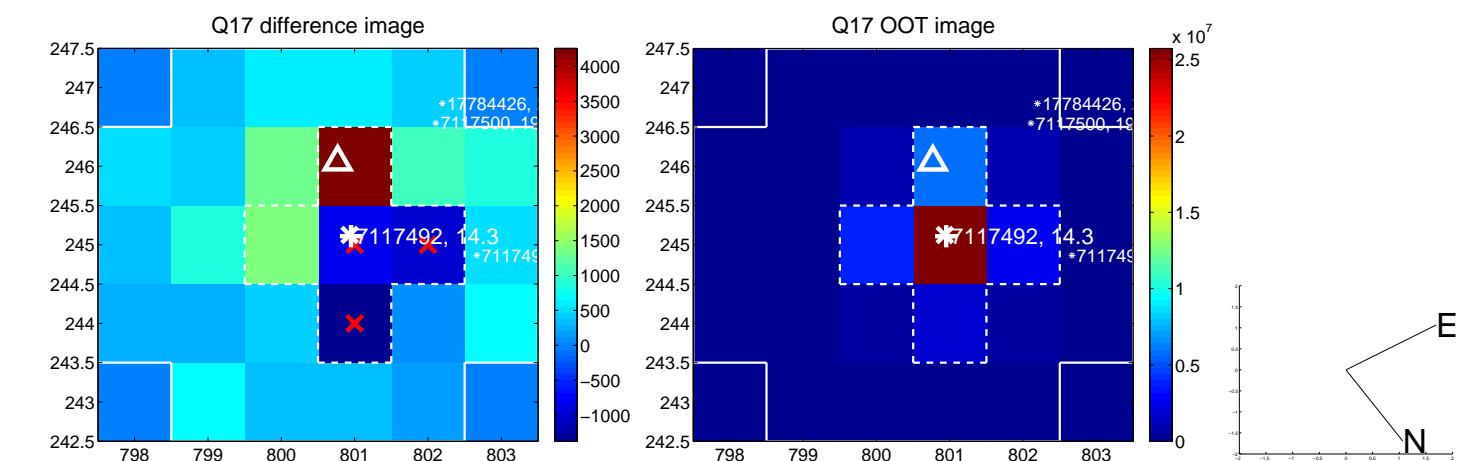
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



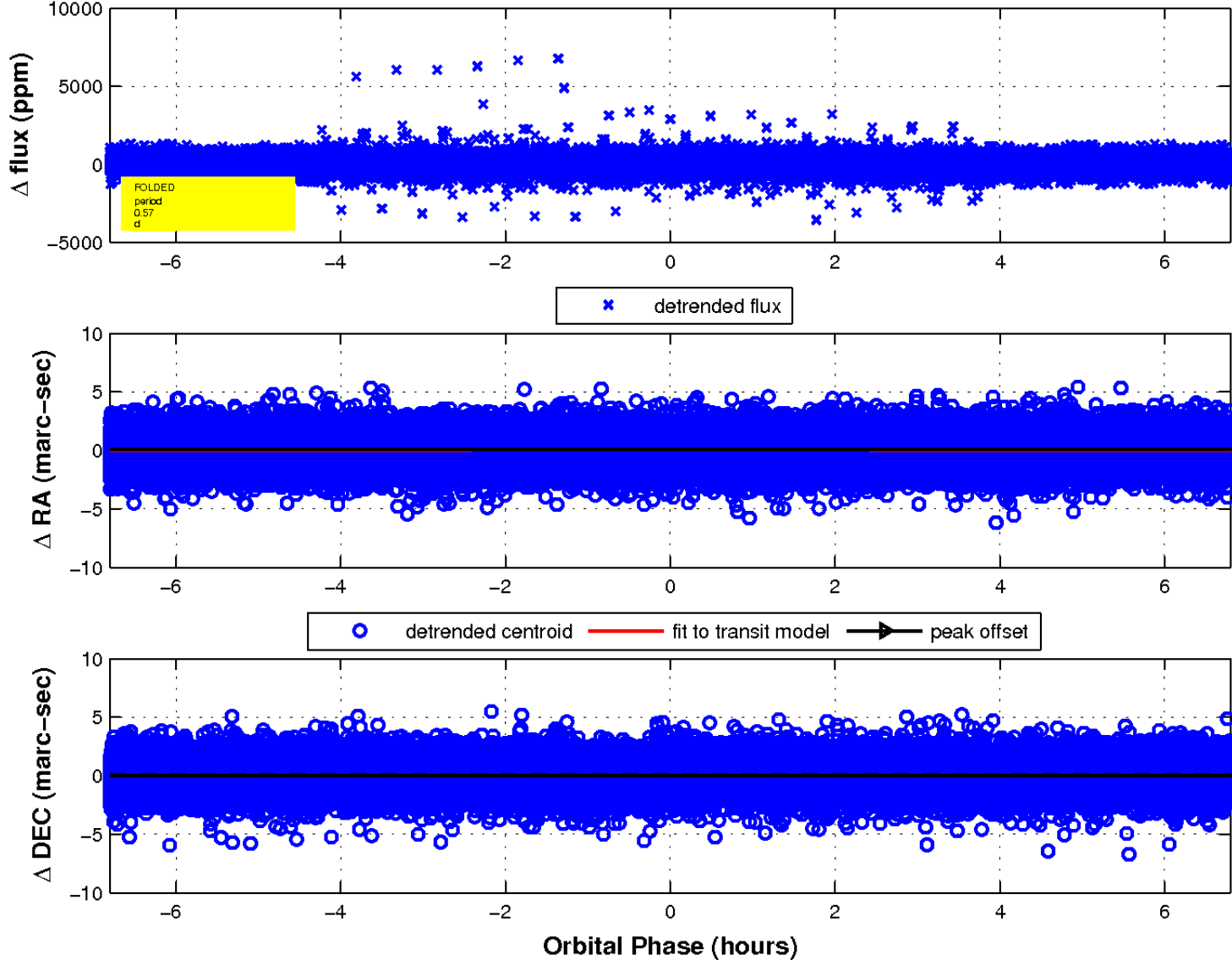
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

