

KIC 007203194

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
007203194-01	OBS	6846.01	2.245682	133.288349	41.5	4.724	11.7	12.3	1.03	6158	0.69	1133.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007203194-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—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.

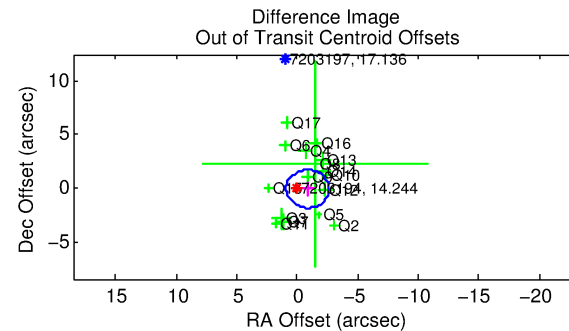
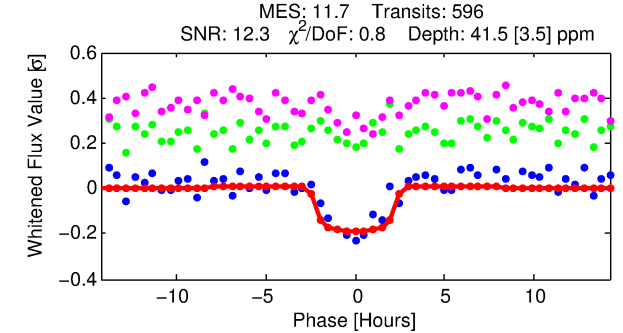
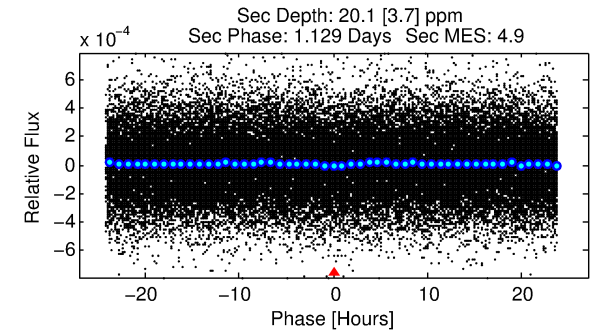
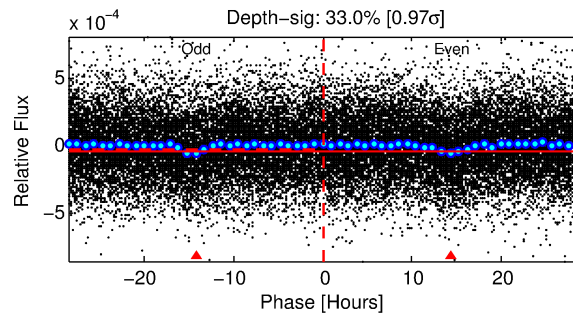
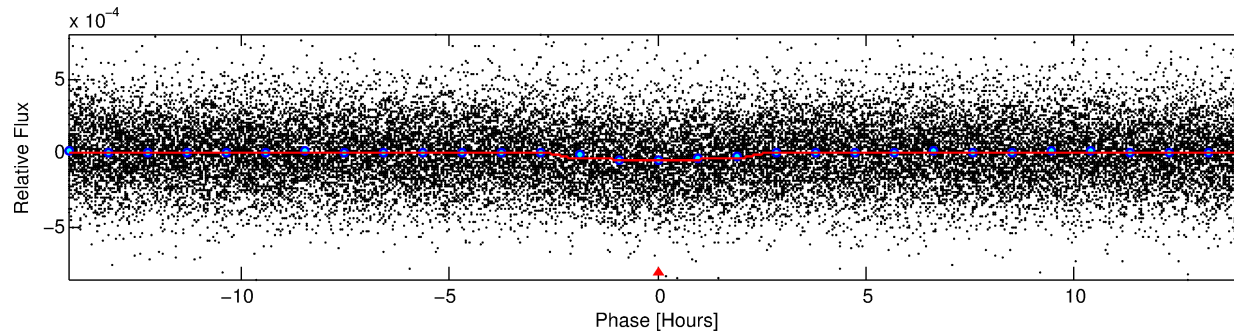
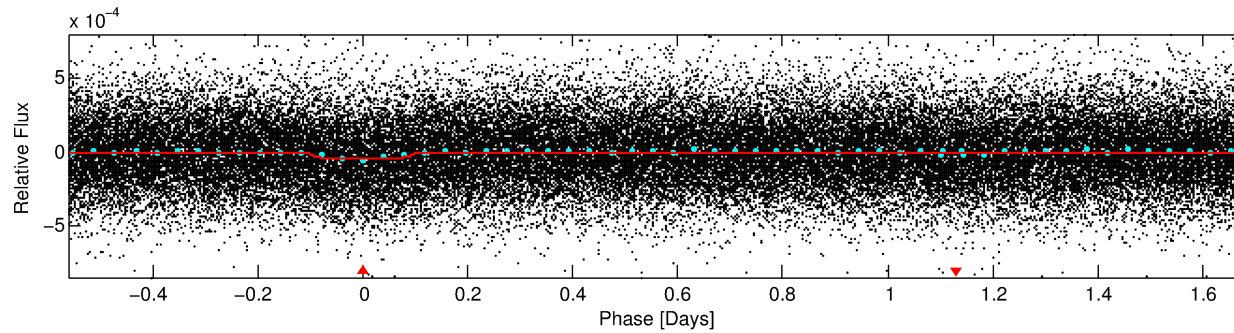
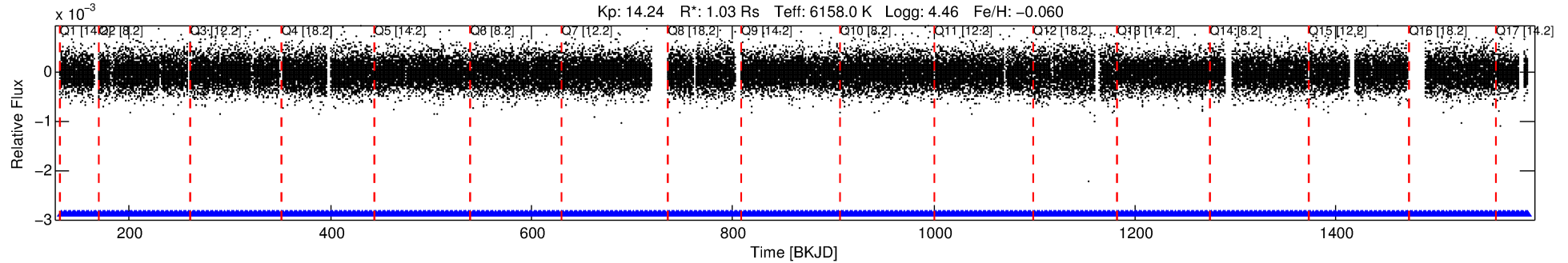
Ephemeris Match Information For 007203194-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
007203194-01	7203194	6845.01	7203179	1:1	48.2	-8	-9	13.43	14.24	12604.00	Direct-PRF	0	1.74	1.27

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol 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 σ_P < 5.0 and σ_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: 7203194 Candidate: 1 of 1 Period: 2.246 d
KOI: K06846.01 Corr: 0.901



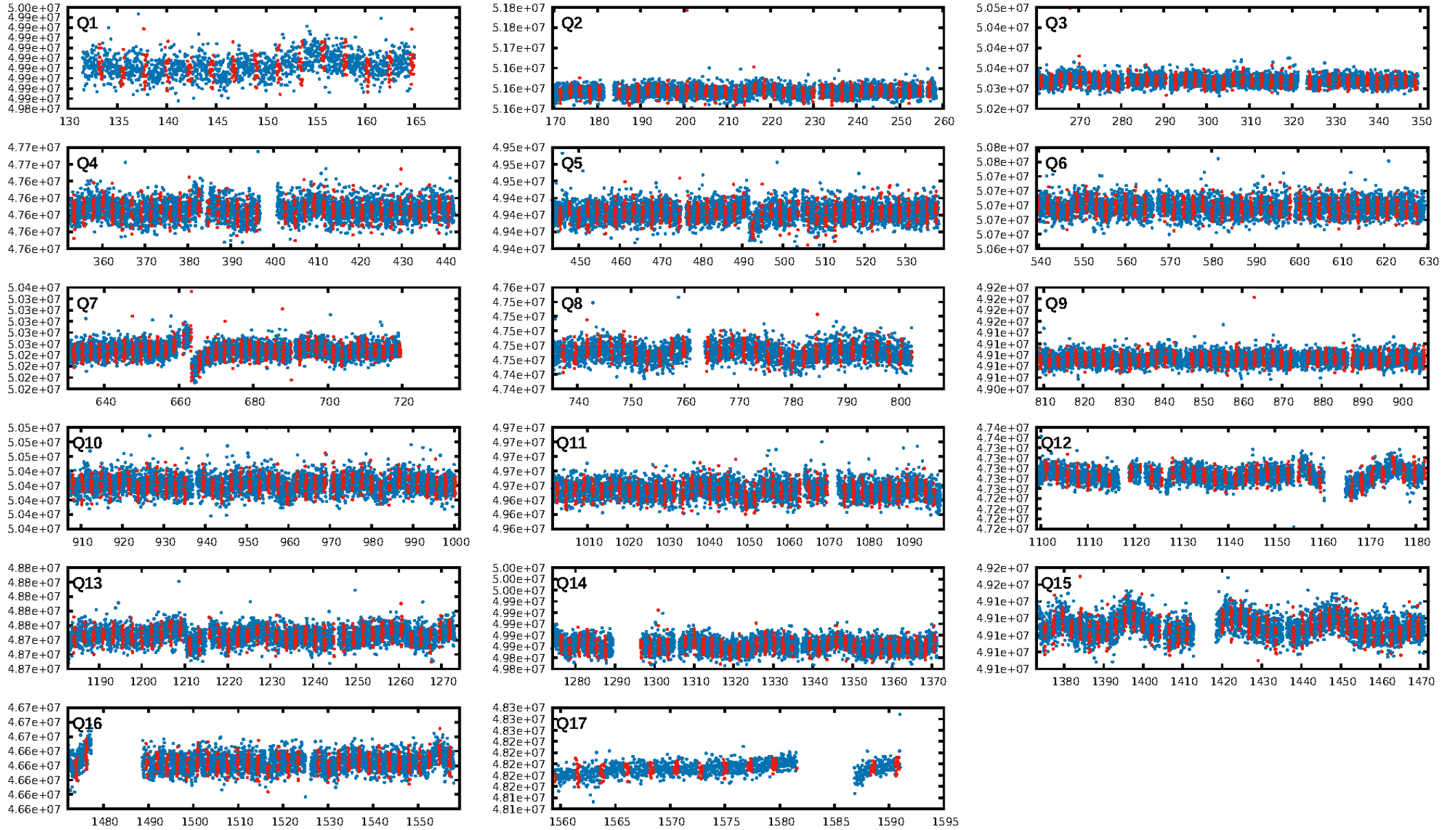
DV Fit Results:

Period = 2.24568 [0.00002] d
Epoch = 133.2883 [0.0049] BKJD
Rp/R* = 0.0061 [0.0021]
a/R* = 3.09 [4.55]
b = 0.57 [1.93]
Seff = 1133.15 [435.09]
Teq = 1479 [142] K
Rp = 0.69 [0.31] Re
a = 0.0346 [0.0085] AU
Ag = 28.00 [21.91] [1.23 σ]
Teffp = 5262 [934] K [4.01 σ]

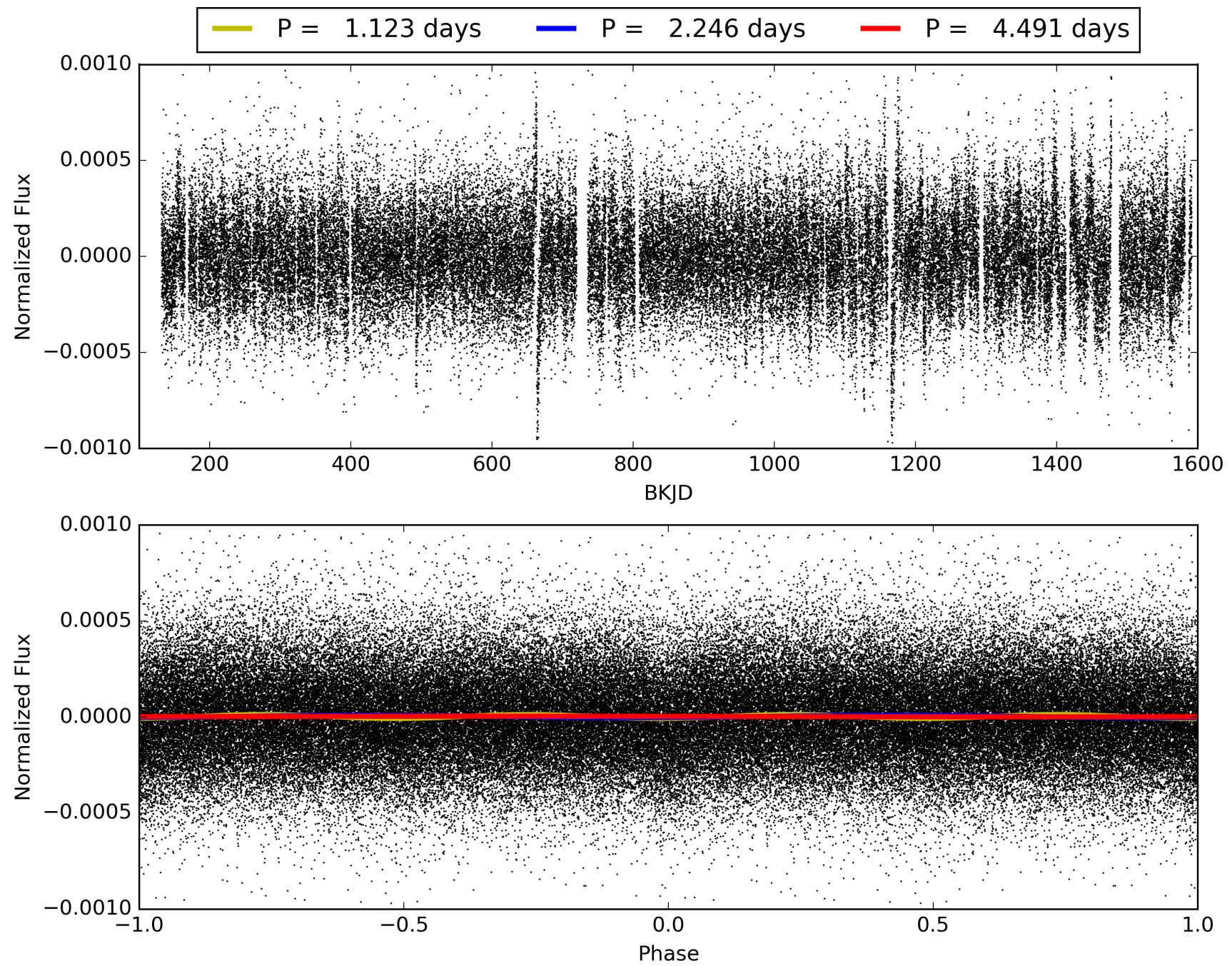
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.55e-30
RollingBand-fgt: 1.00 [569/569]
GhostDiagnostic-chr: 0.1662
Centroid-sig: 0.0%
Centroid-so: 2.946 arcsec [2.68 σ]
OotOffset-rm: 0.856 arcsec [1.44 σ]
KicOffset-rm: 0.875 arcsec [1.47 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.38 [6/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007203194-01, PDC Light Curves

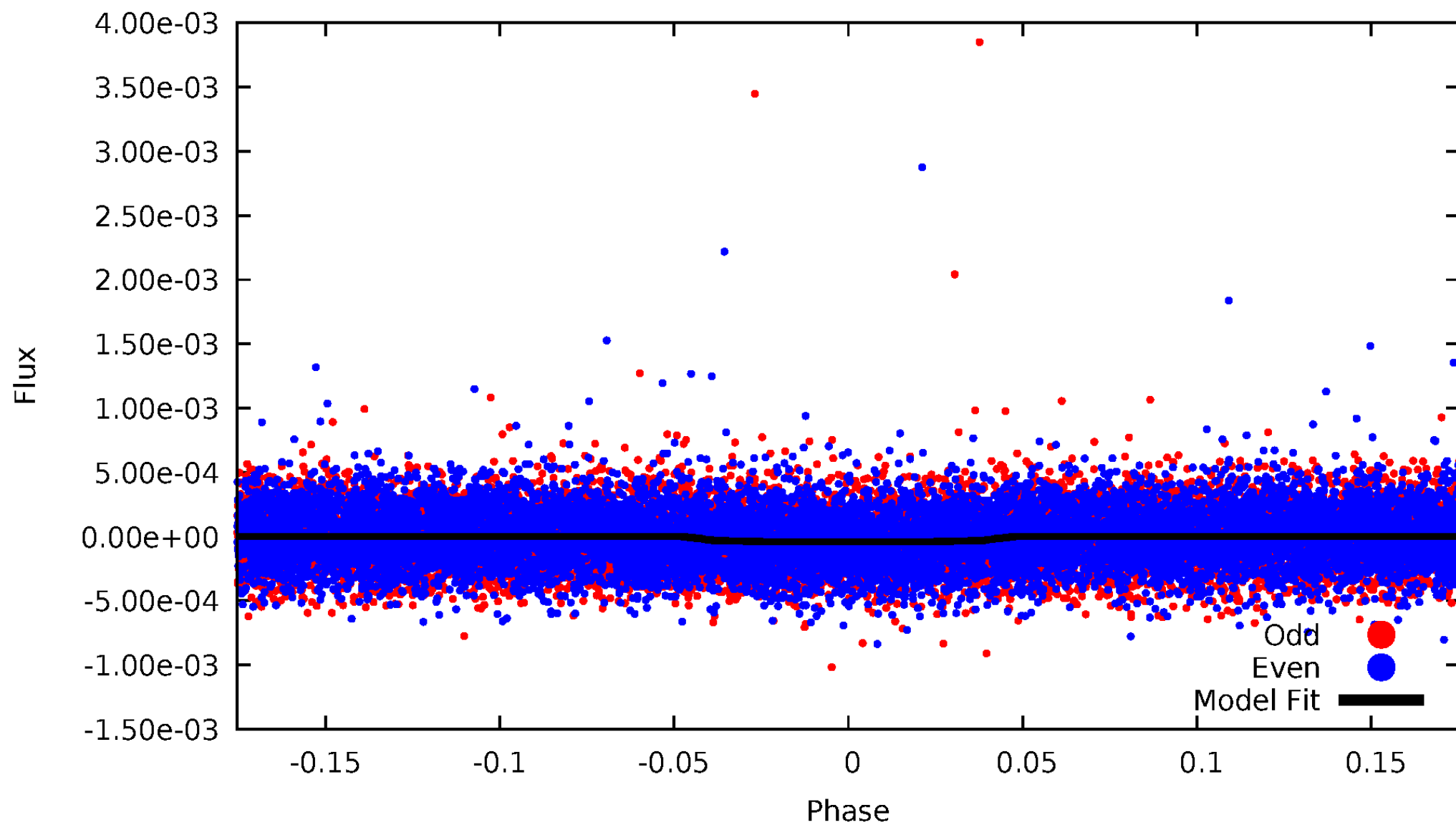


TCE 007203194-01



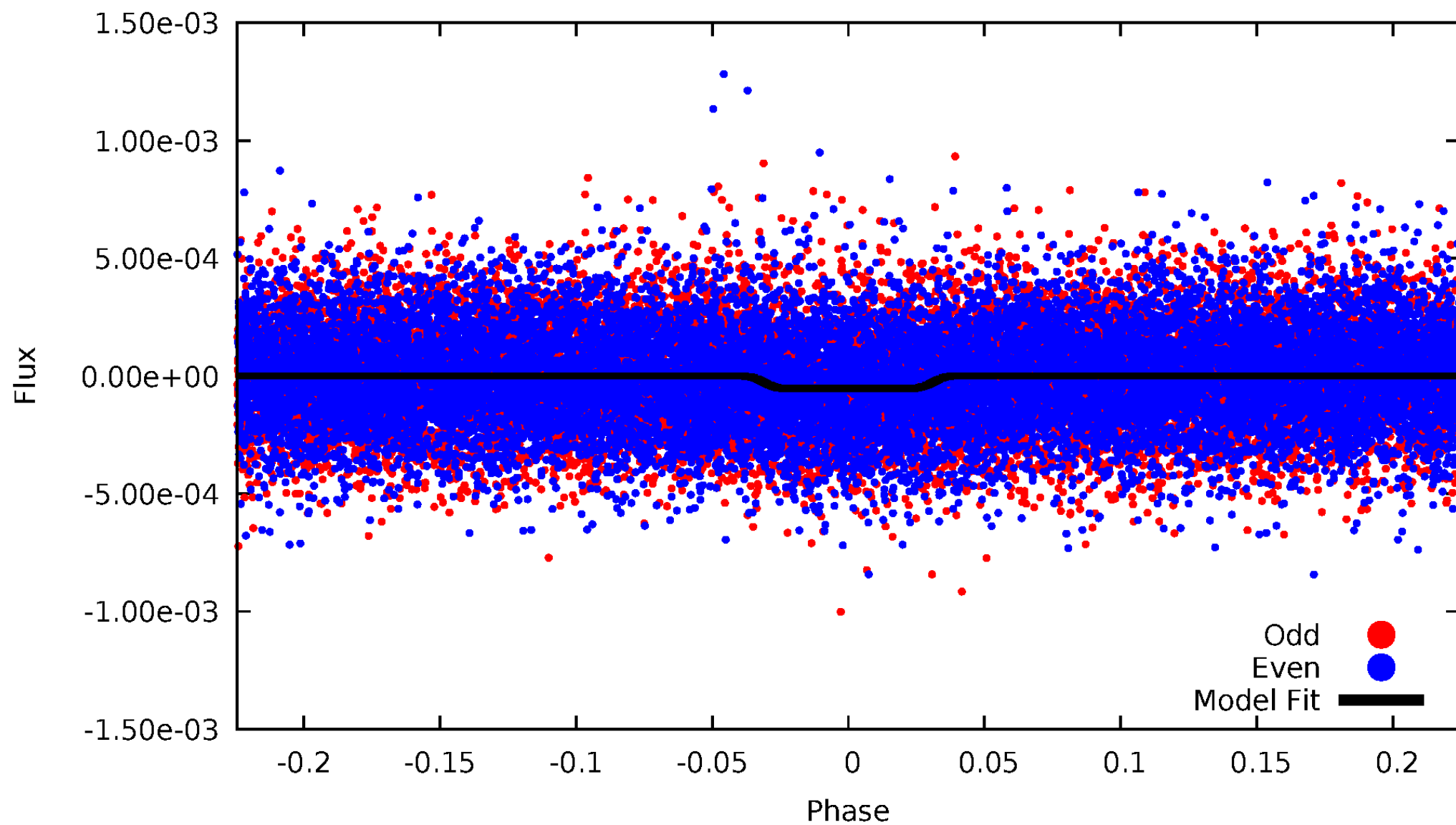
DV Odd/Even

TCE 007203194-01

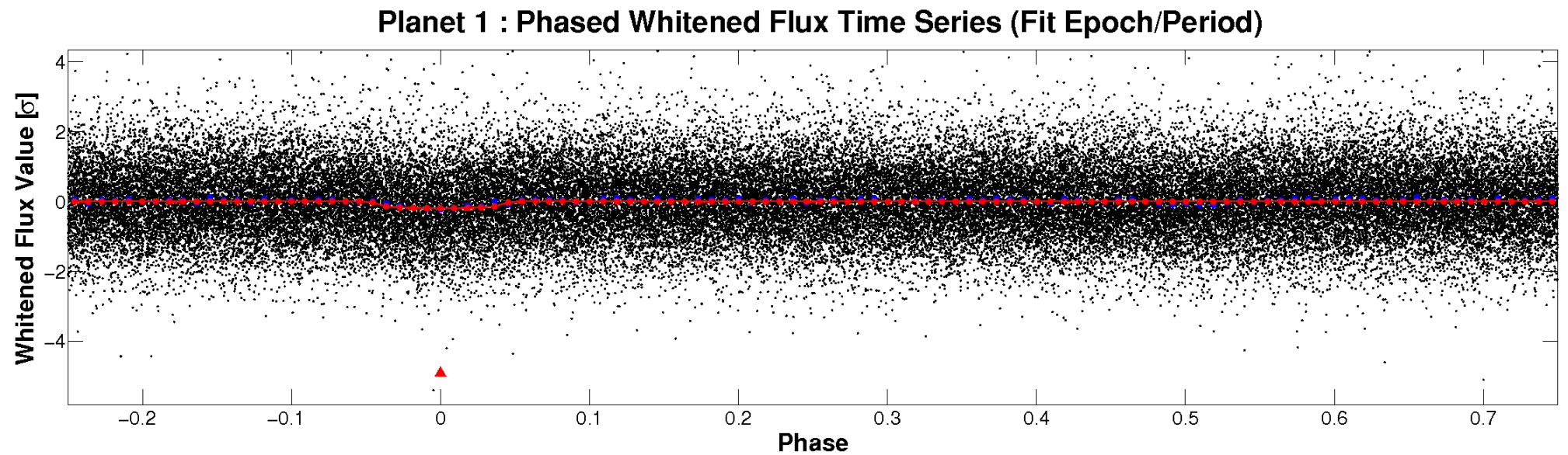
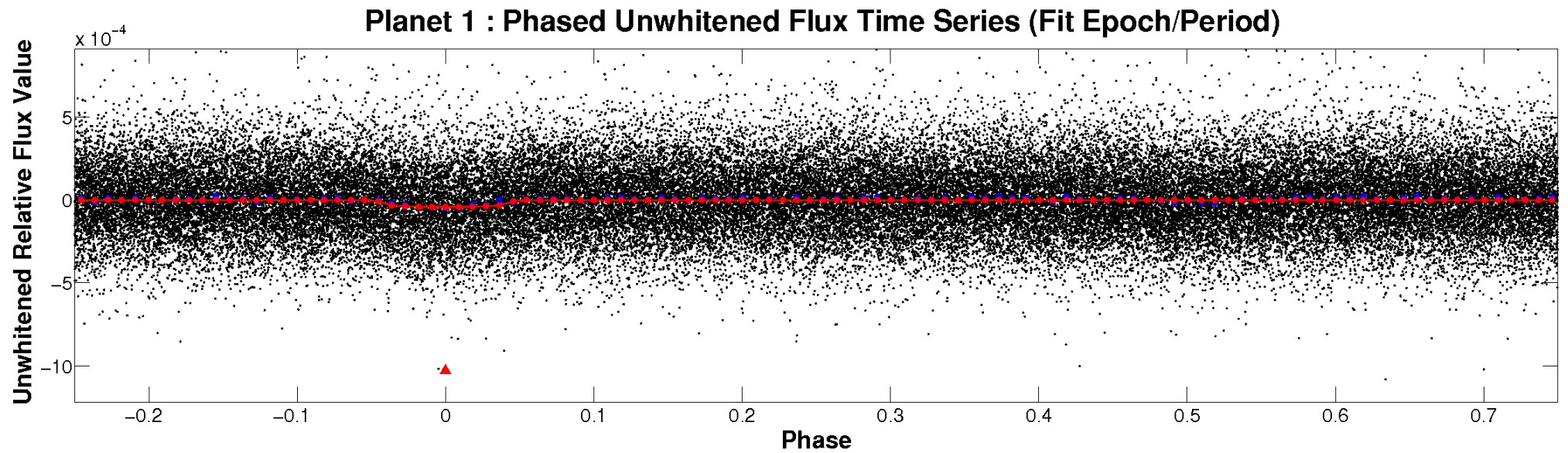


ALT Odd/Even

TCE 007203194-01

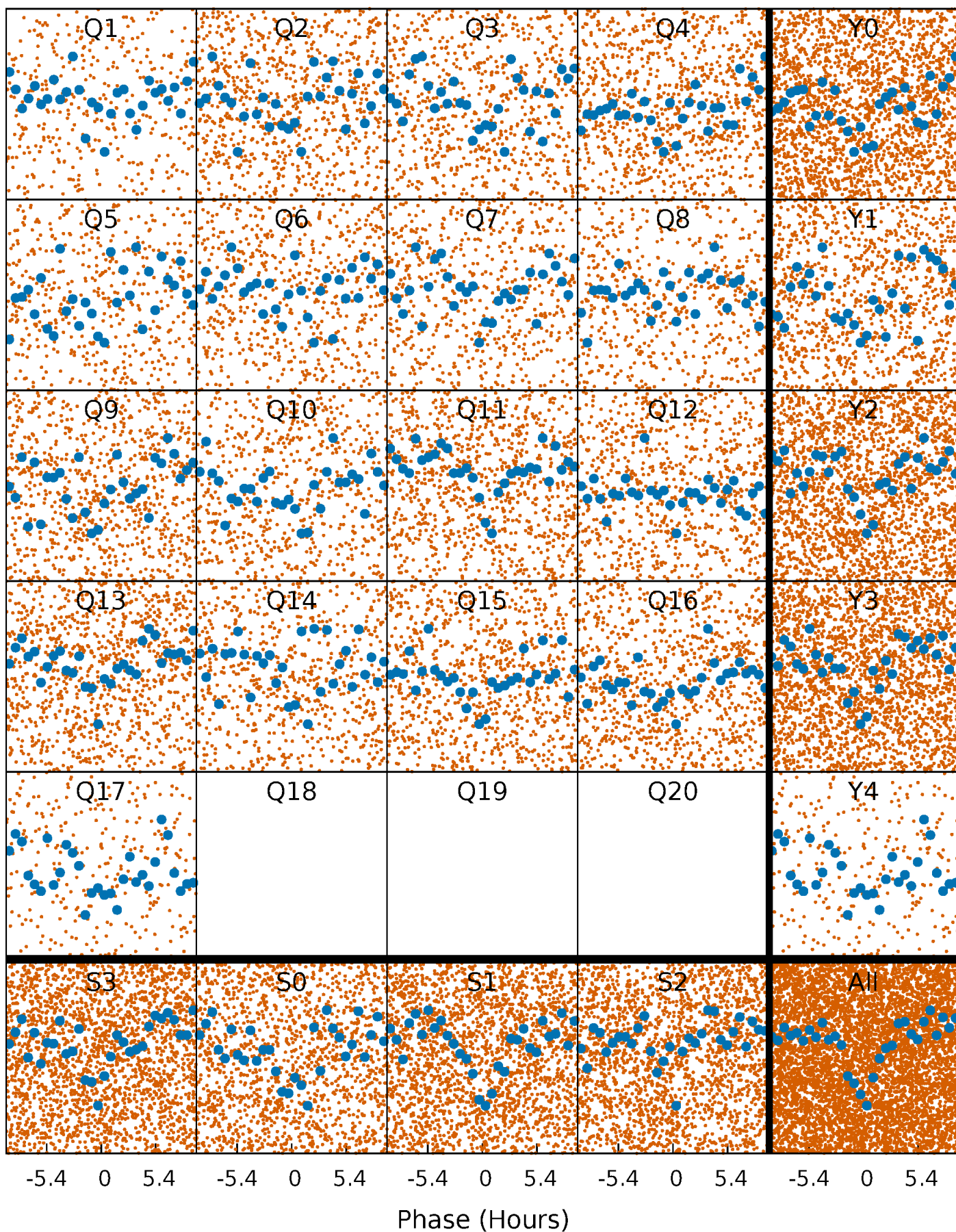


Non-Whitened Vs. Whitened Light Curve



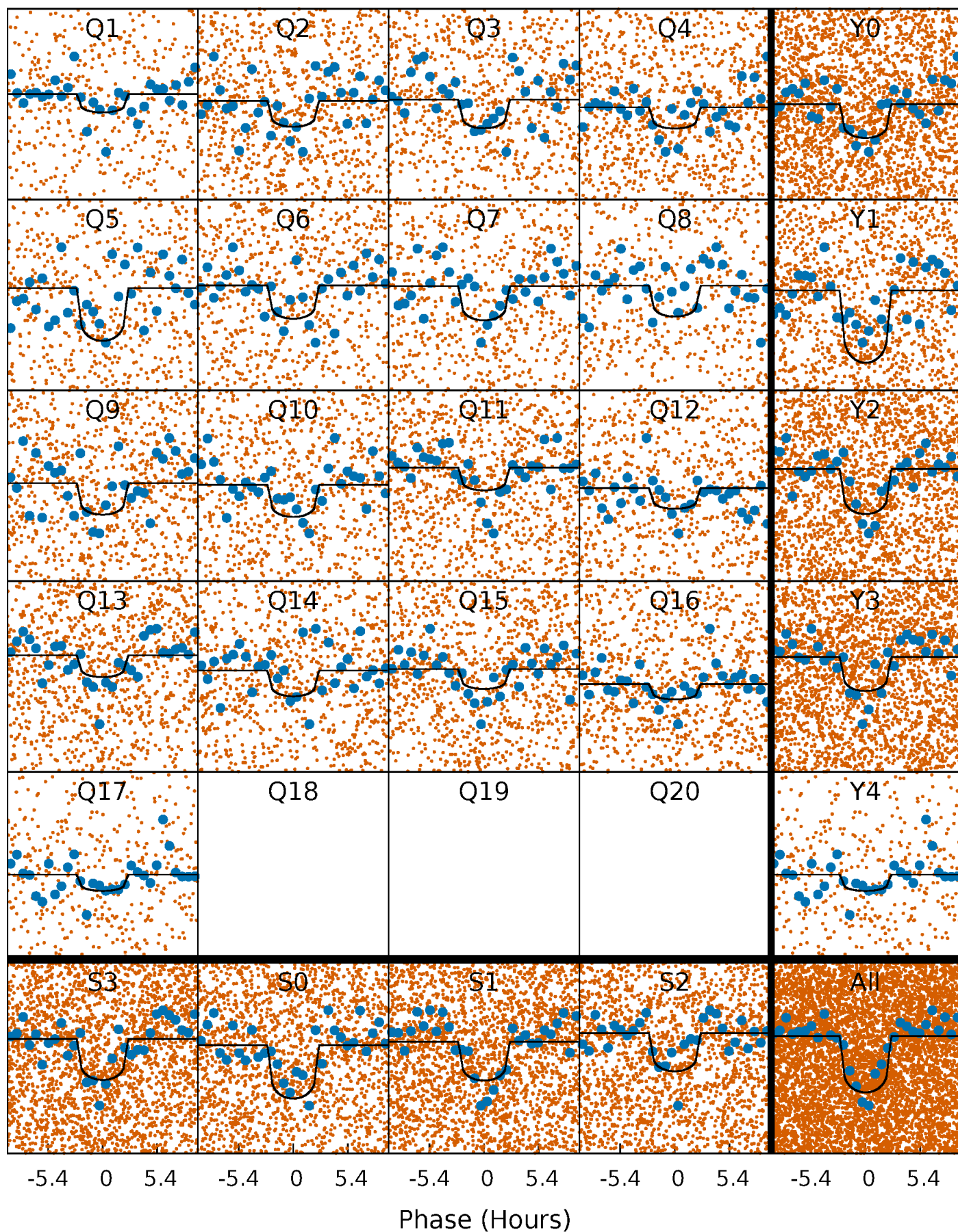
PDC Quarter-Phased Transit Curves

TCE 007203194-01 P= 2.245682 Days $T_0=133.288350$ (BKJD)



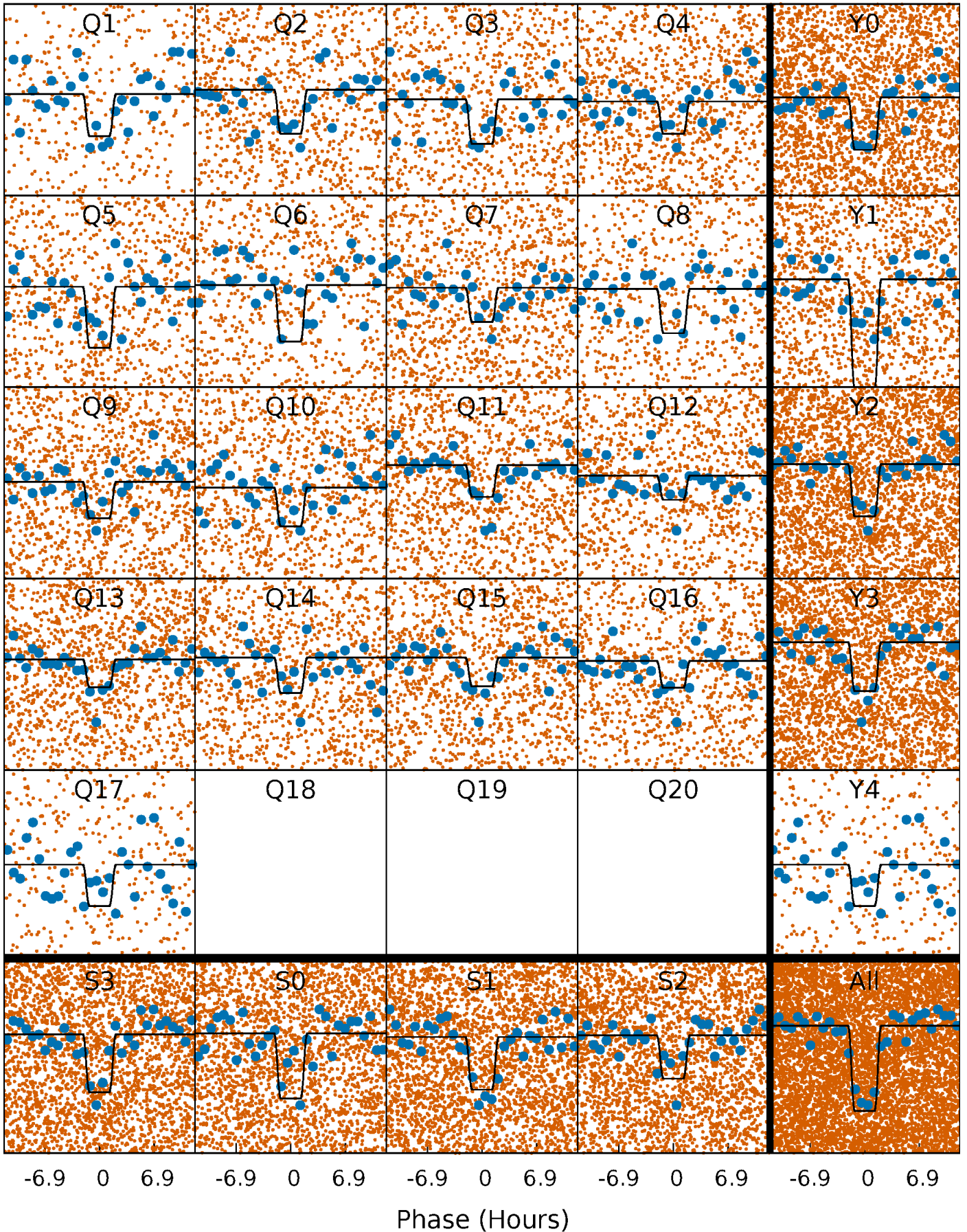
DV Quarter-Phased Transit Curves

TCE 007203194-01 P= 2.245682 Days $T_0=133.288350$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

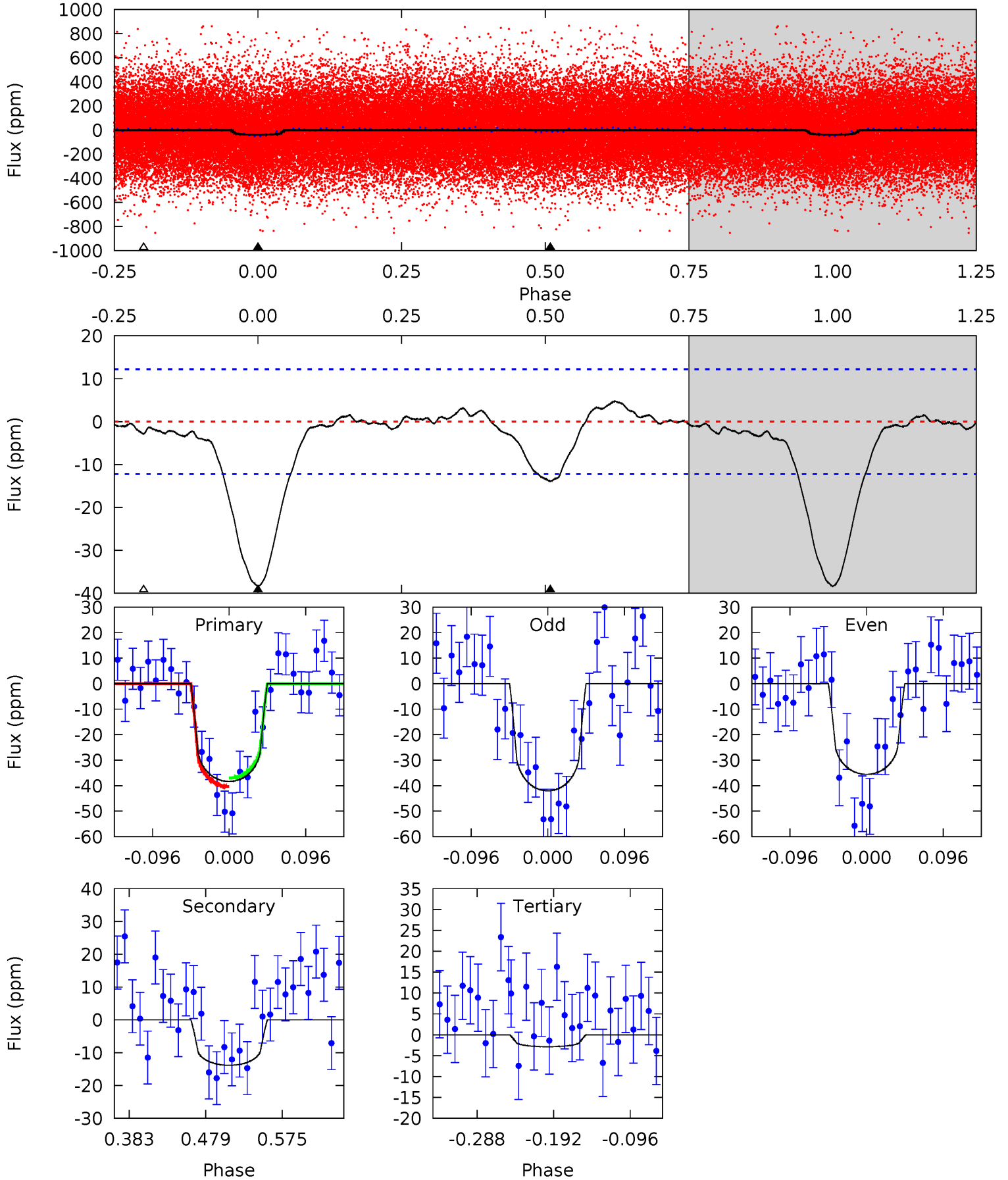
TCE 007203194-01 P= 2.245701 Days $T_0=133.279160$ (BKJD)



DV Model-Shift Uniqueness Test

007203194-01, P = 2.245682 Days, E = 131.042668 Days

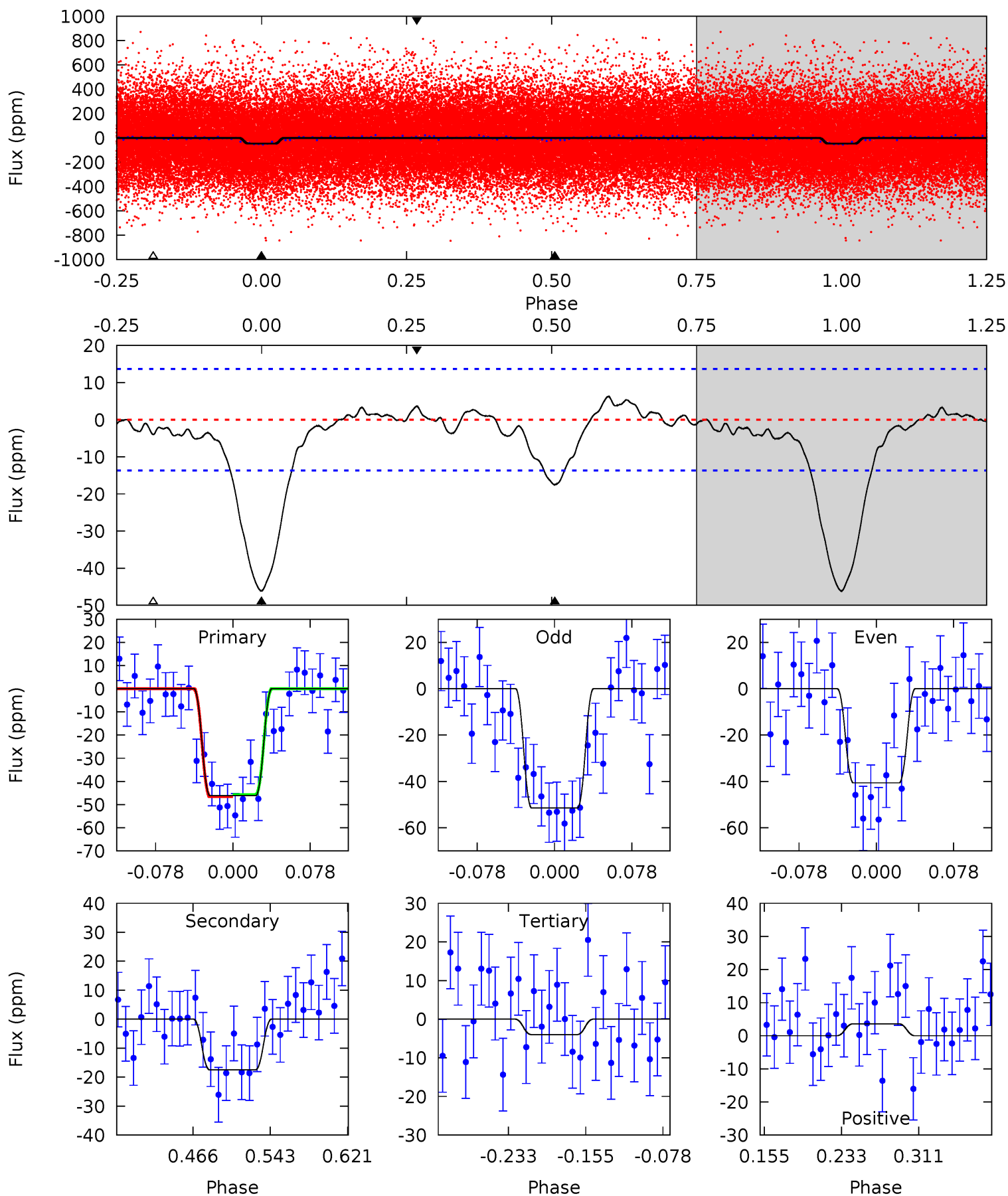
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	5.17	1.07	0	4.57	1.67	0.69	13.3	14.3	4.11	5.17	1.21	0.96	0.11	0.63



Alt Model-Shift Uniqueness Test

007203194-01, P = 2.245701 Days, E = 131.033459 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	5.92	1.35	1.22	4.62	1.76	0.89	14.2	14.4	4.57	4.70	1.83	1.02	0.12	0.15



Stellar Parameters For KIC 007203194

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6158^{+150}_{-214}	$4.455^{+0.052}_{-0.195}$	$-0.060^{+0.250}_{-0.300}$	$1.026^{+0.302}_{-0.108}$	$1.092^{+0.139}_{-0.139}$	$1.423^{+0.380}_{-0.717}$
	+2%/-3%	+1%/-4%	+417%/-500%	+29%/-11%	+13%/-13%	+27%/-50%
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 007203194-01 / KOI 6846.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 3	$0.71^{+0.26}_{-0.25}$	2109^{+138}_{-101}	4886^{+1035}_{-580}	18^{+24}_{-9}
Alt.	-18 ± 3	$0.85^{+0.27}_{-0.26}$	2098^{+144}_{-100}	4753^{+840}_{-500}	16^{+18}_{-7}

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 $A_{obs} \gg 1.0$

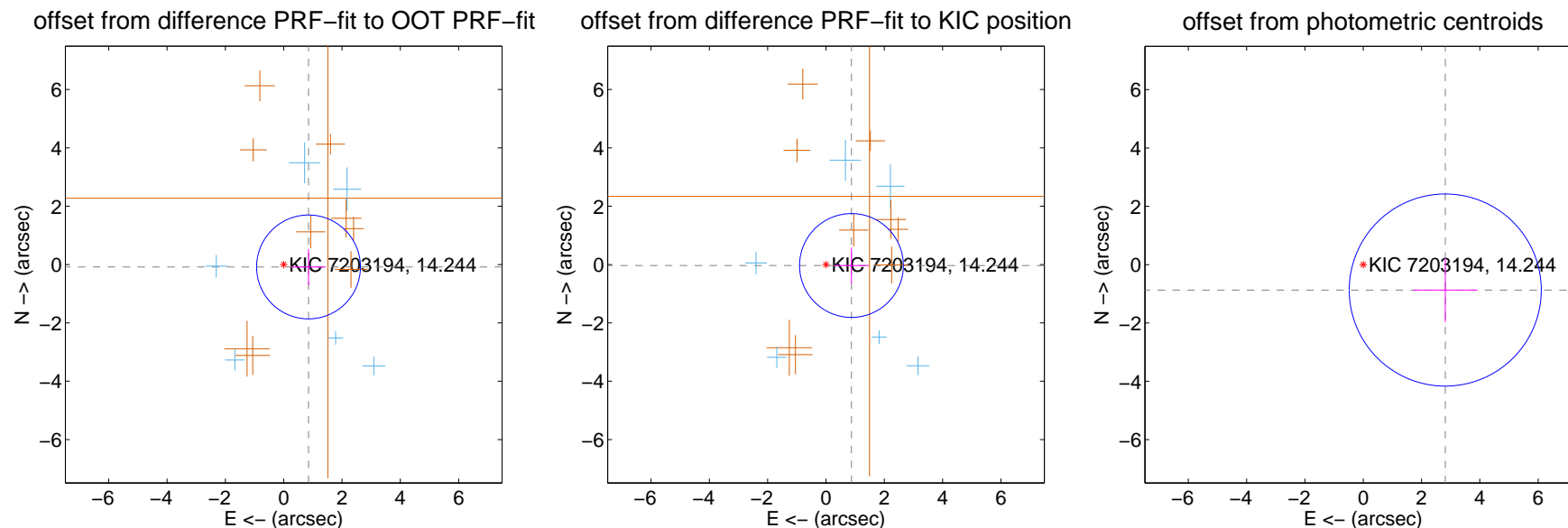
DV Centroid Data

Supplemental centroid analysis for 007203194-01. Kepler magnitude: 14.24. Transit SNR 12.27

There are 6 quarters with good PRF difference image offsets

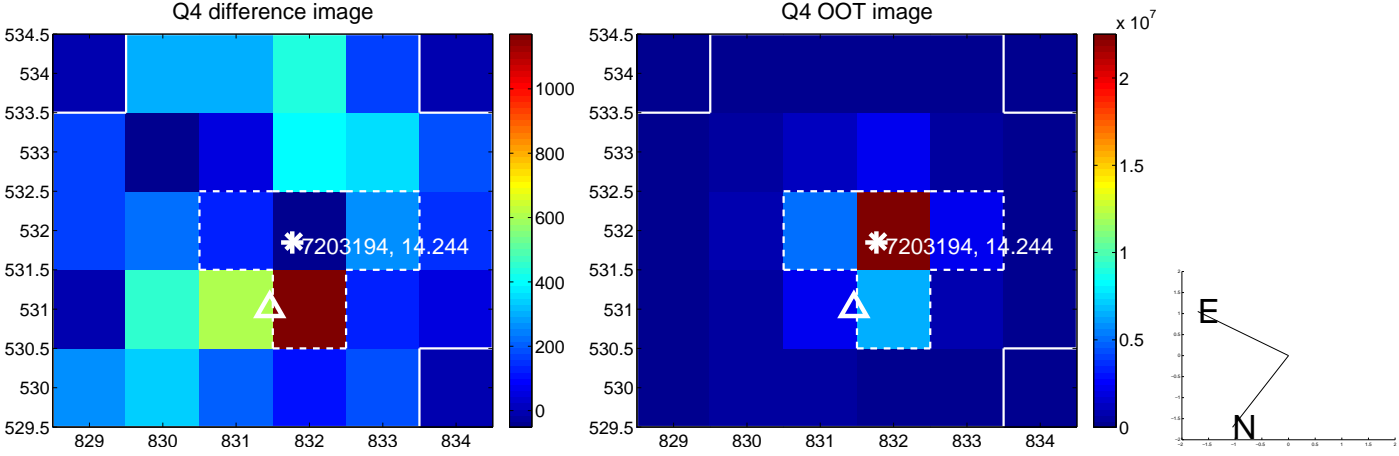
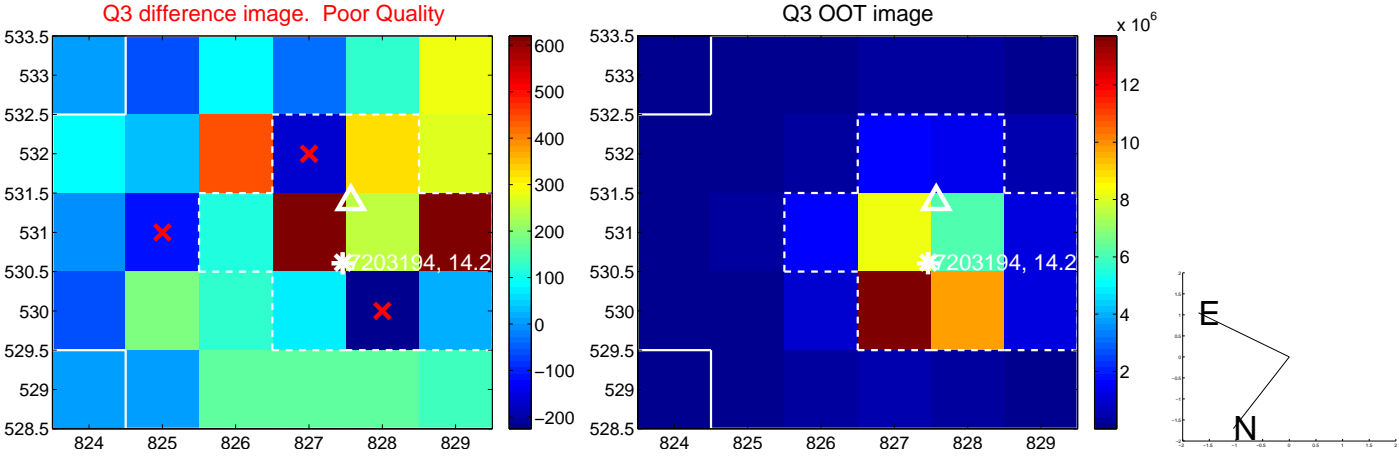
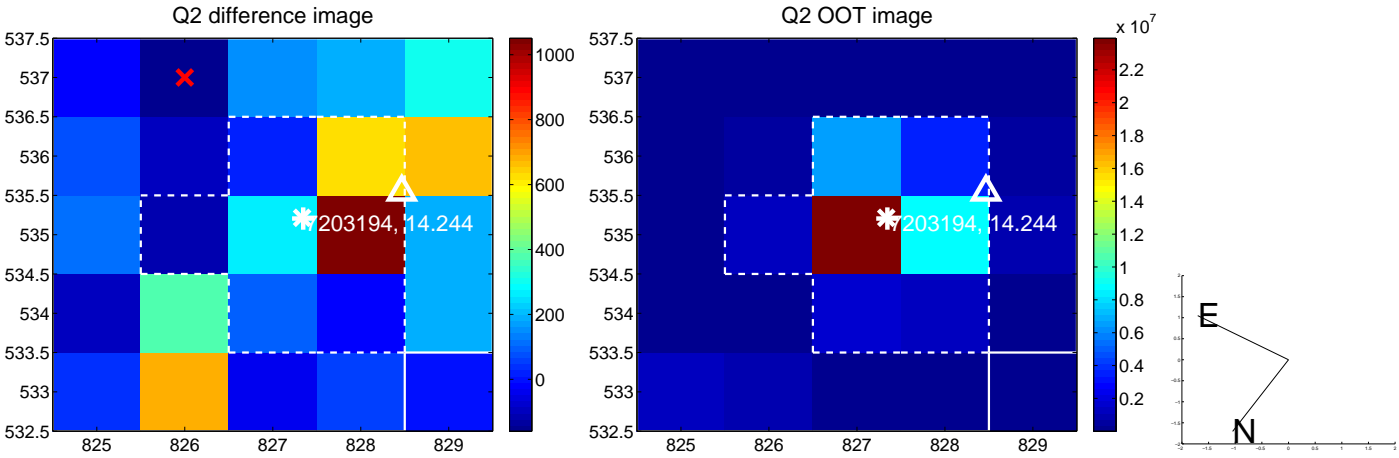
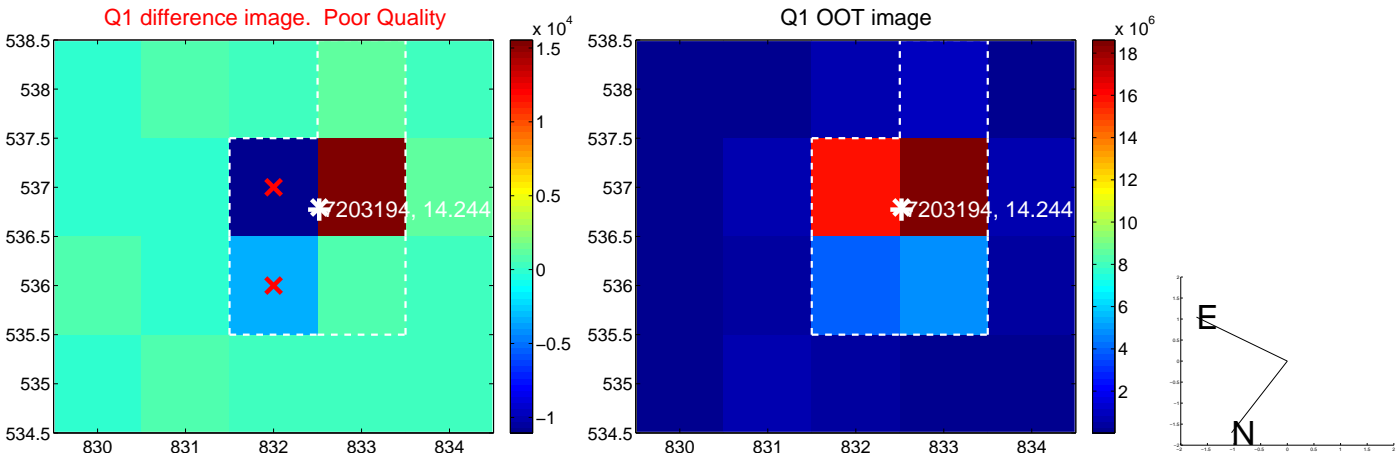
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.856 ± 0.593	1.44	-0.852 ± 0.593	-0.082 ± 0.619
PRF-fit source offset from KIC position	0.875 ± 0.593	1.47	-0.874 ± 0.593	-0.033 ± 0.619
photometric centroid source offset	2.95 ± 1.10	2.68	-2.81 ± 1.10	-0.87 ± 1.10

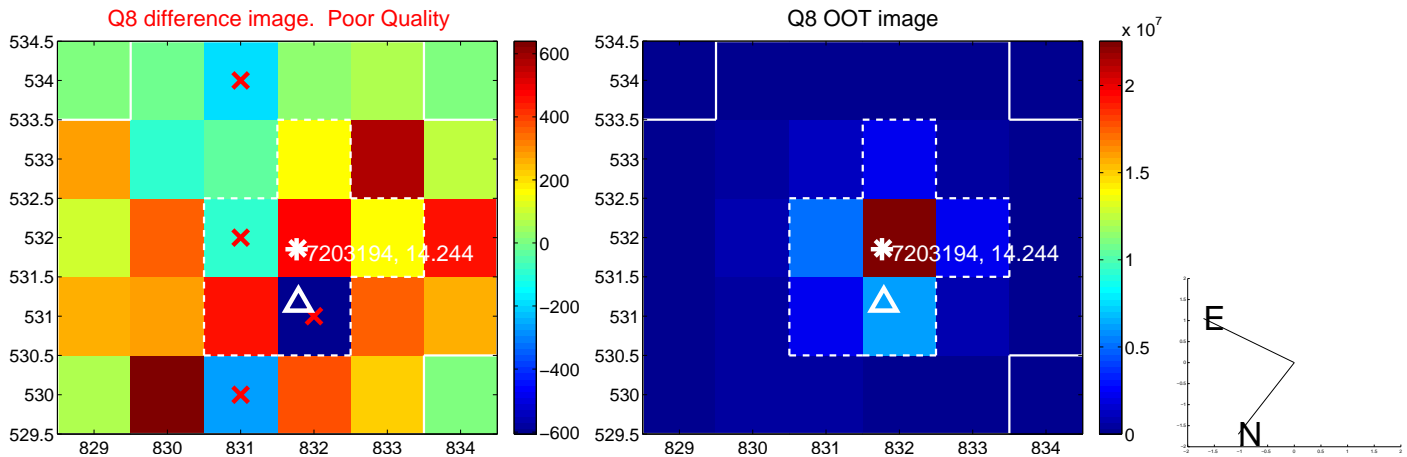
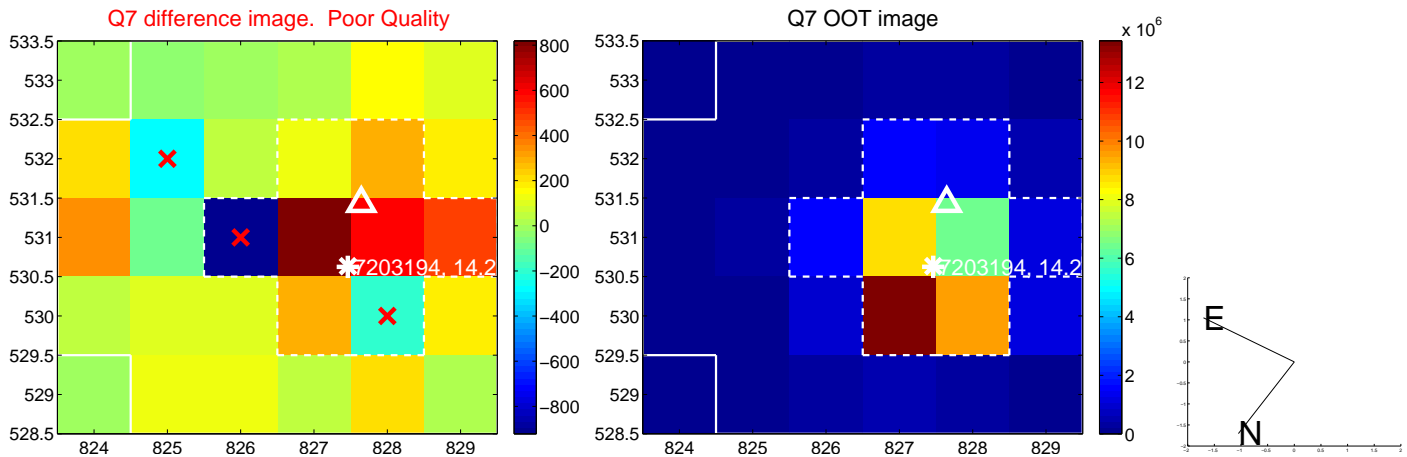
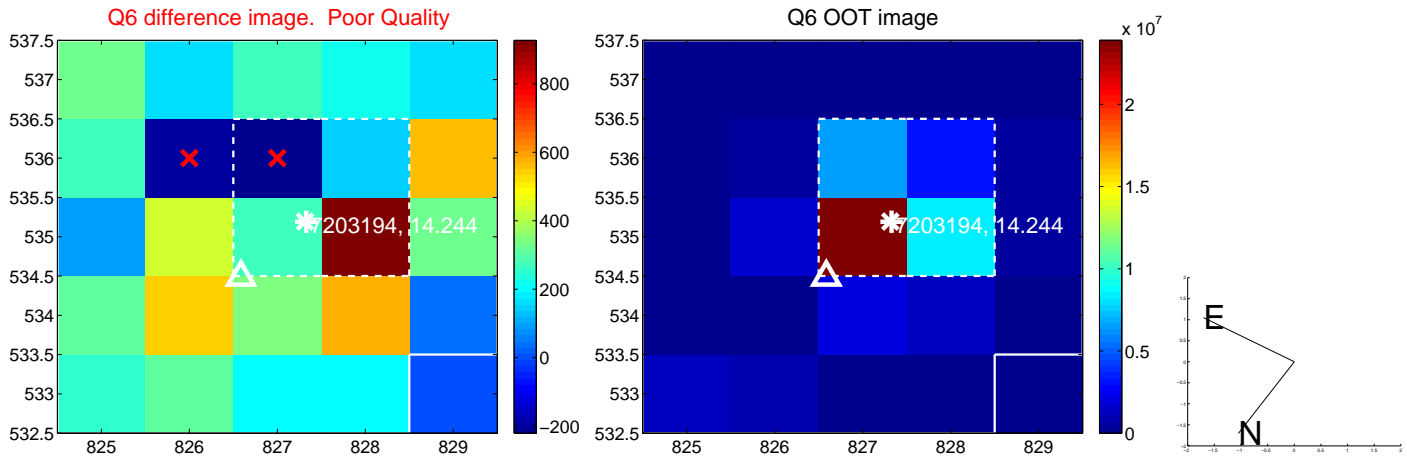
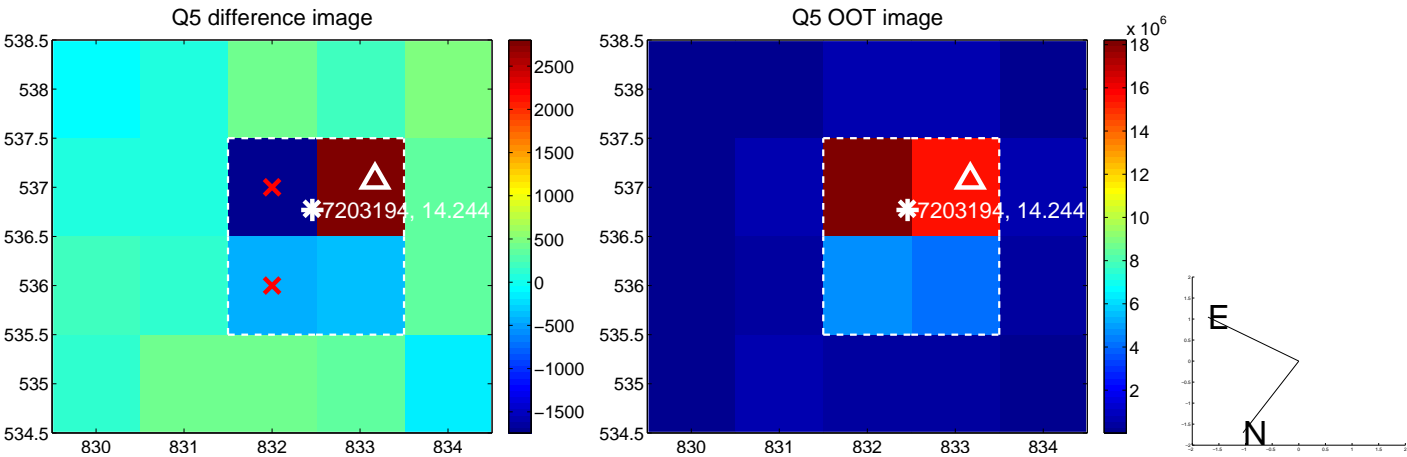


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

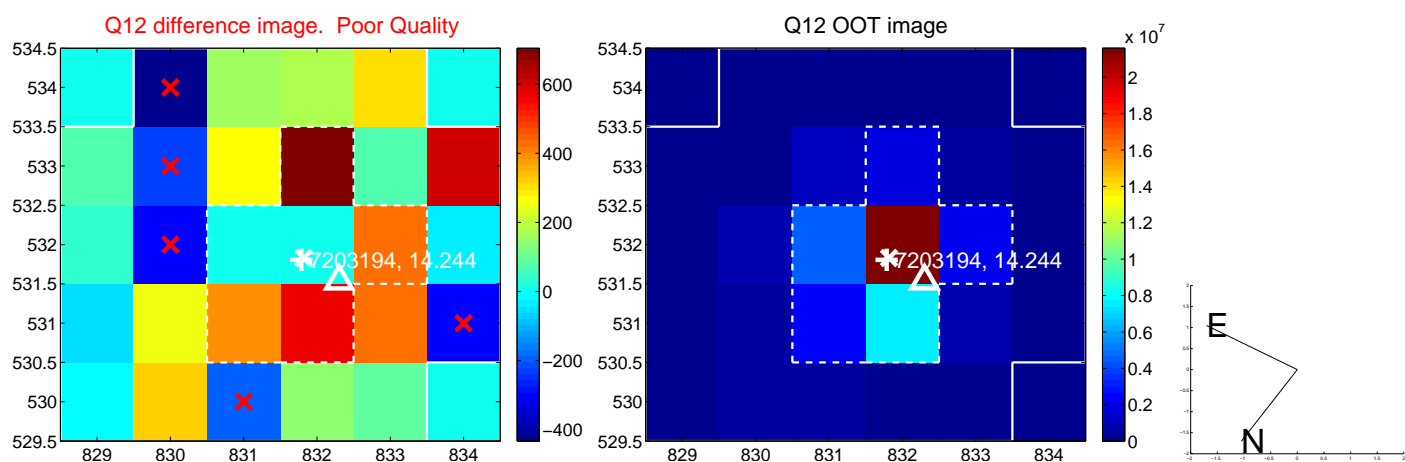
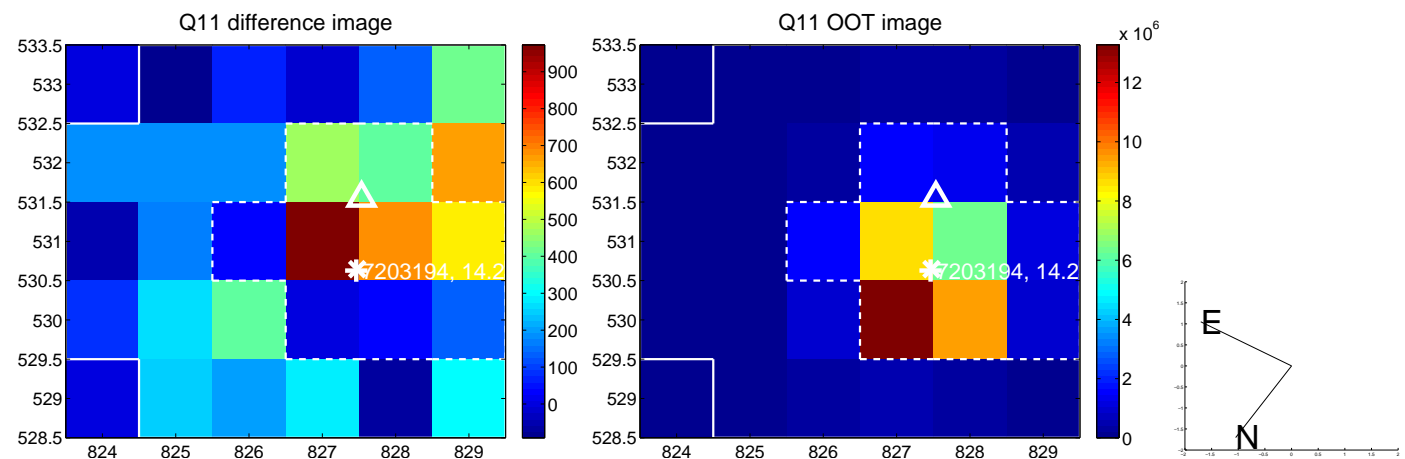
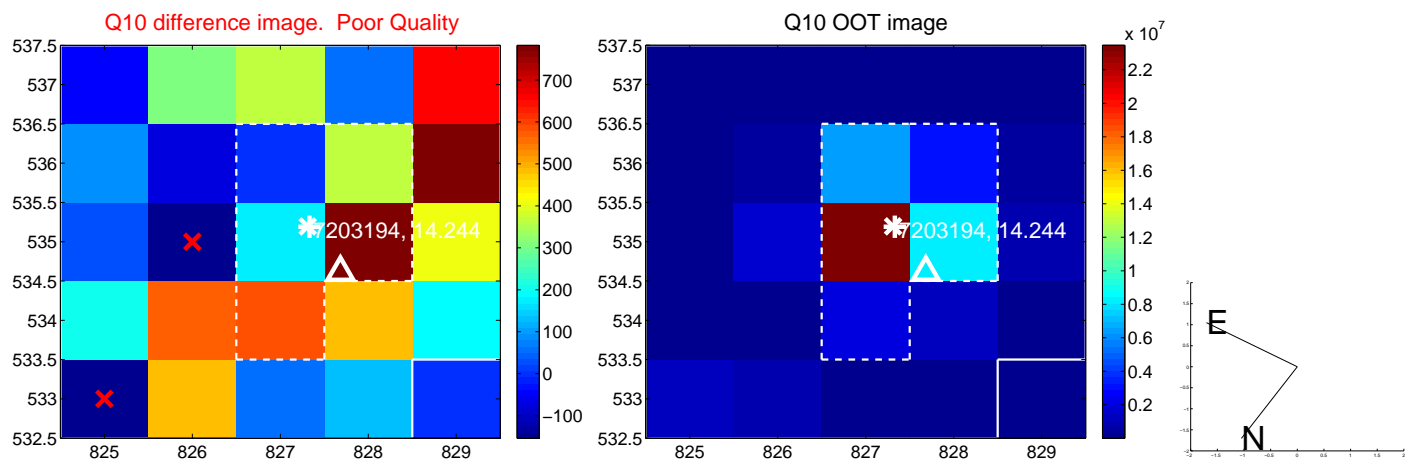
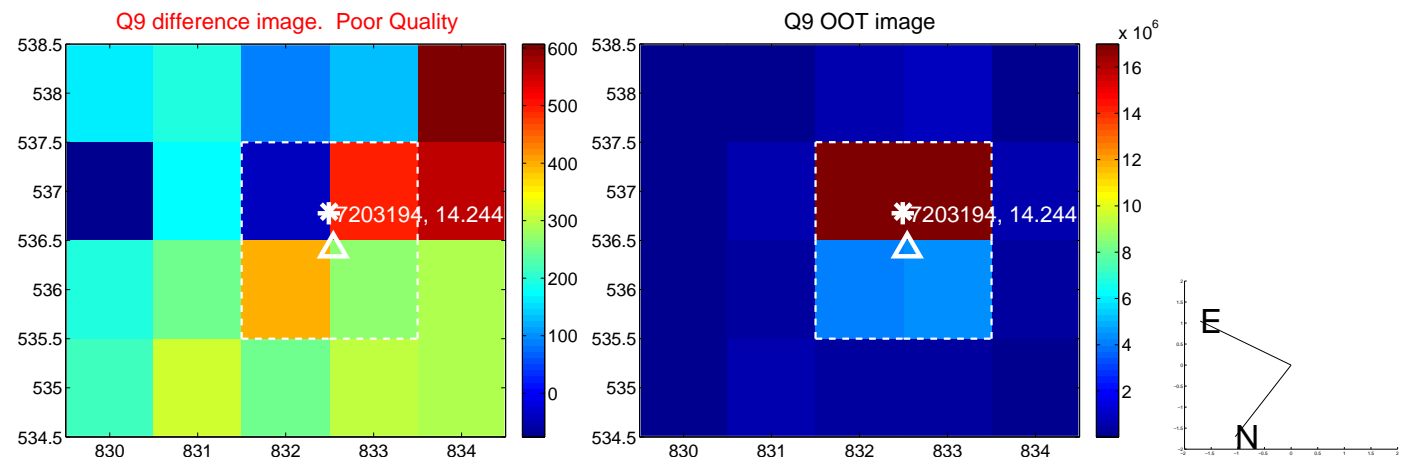
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



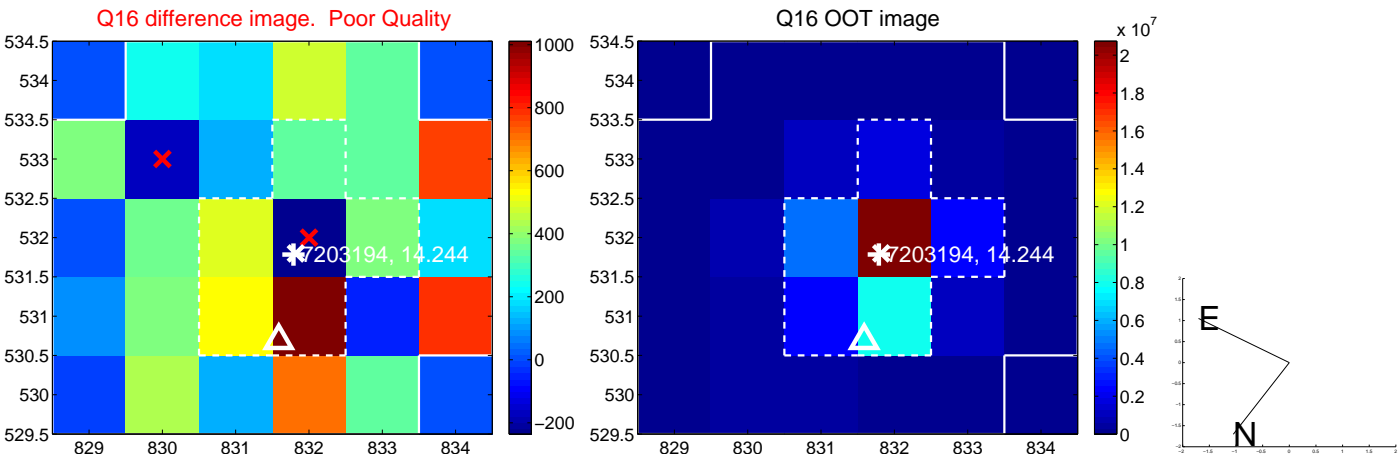
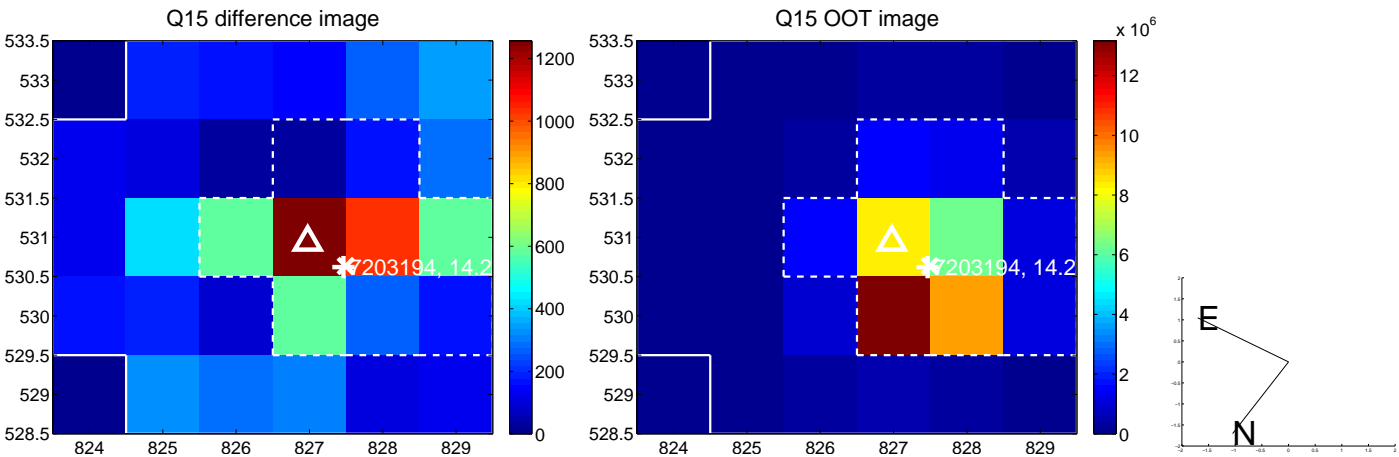
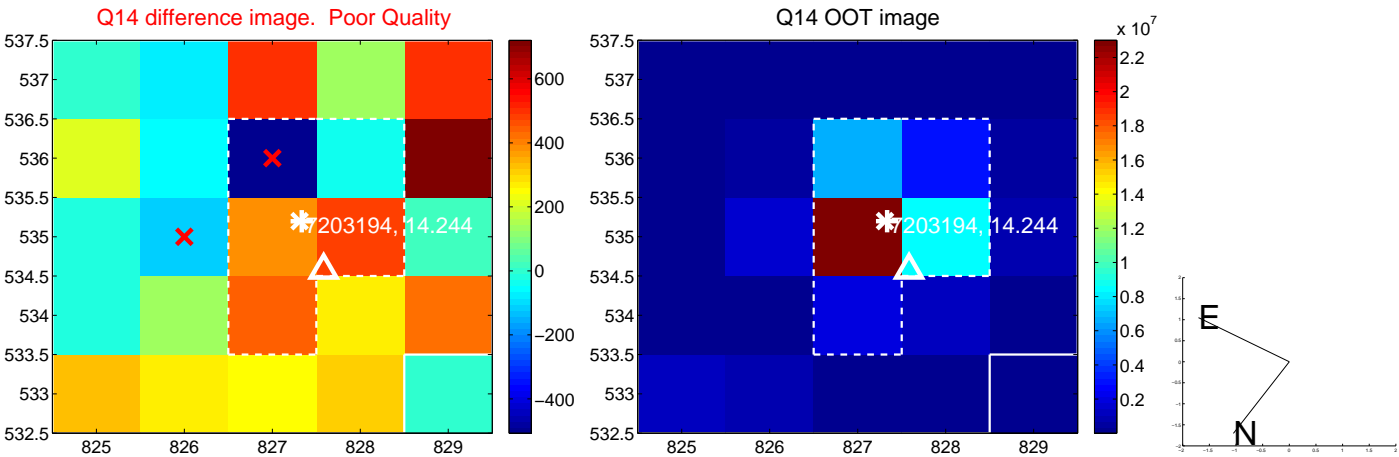
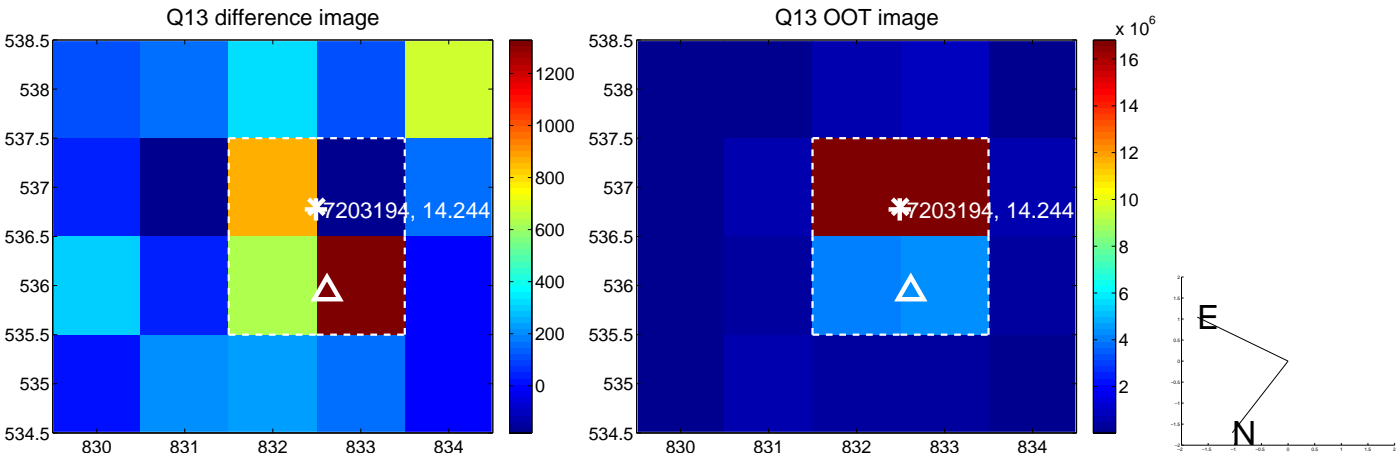
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



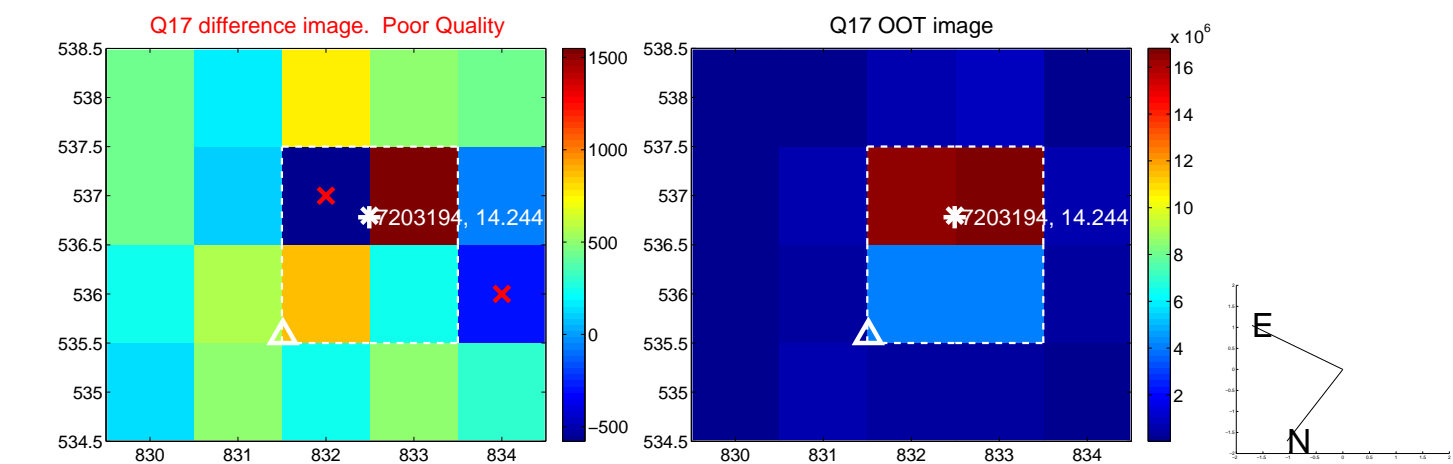
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



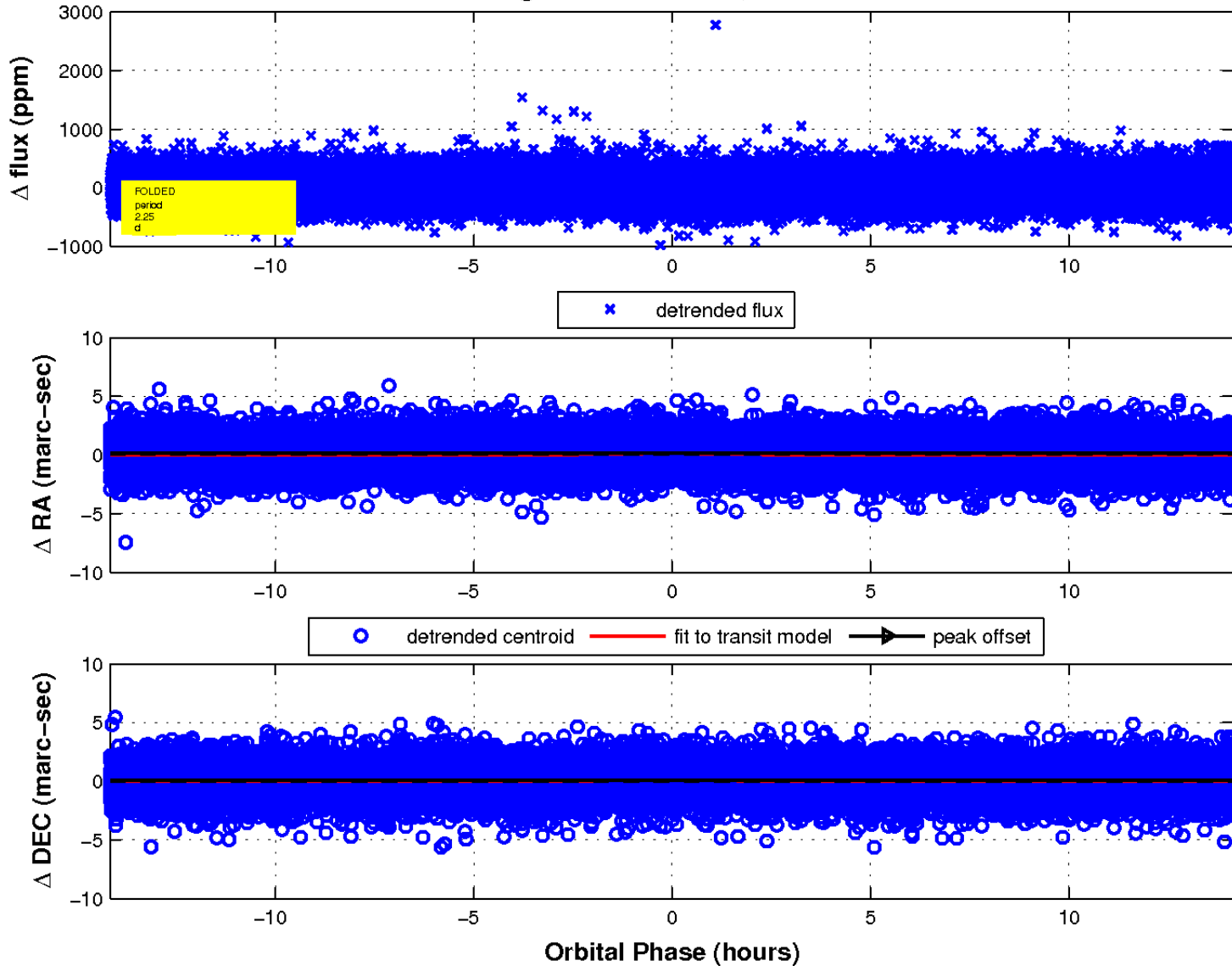
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

