

KIC 003972432

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})
003972432-01	OBS	6375.01	2.908086	134.320453	98.8	3.321	9.0	9.7	0.87	5889	1.02	525.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003972432-01	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.

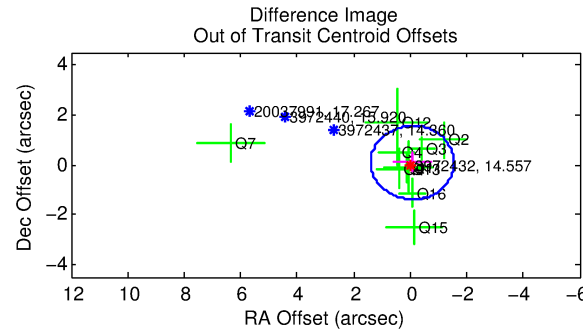
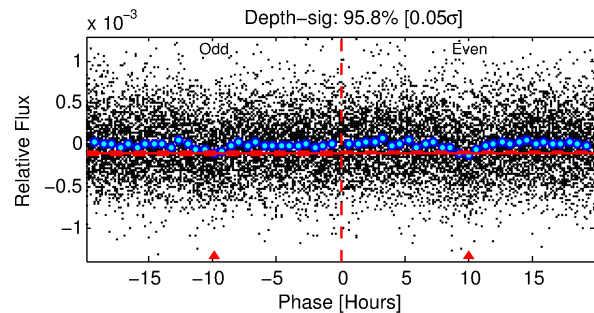
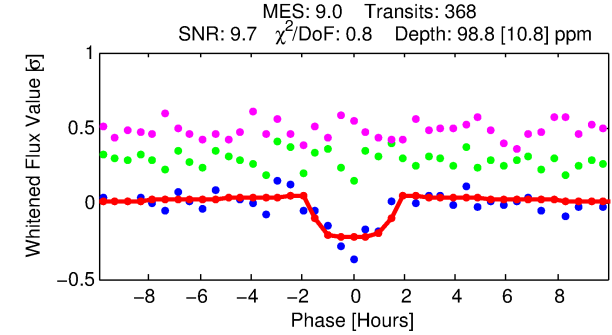
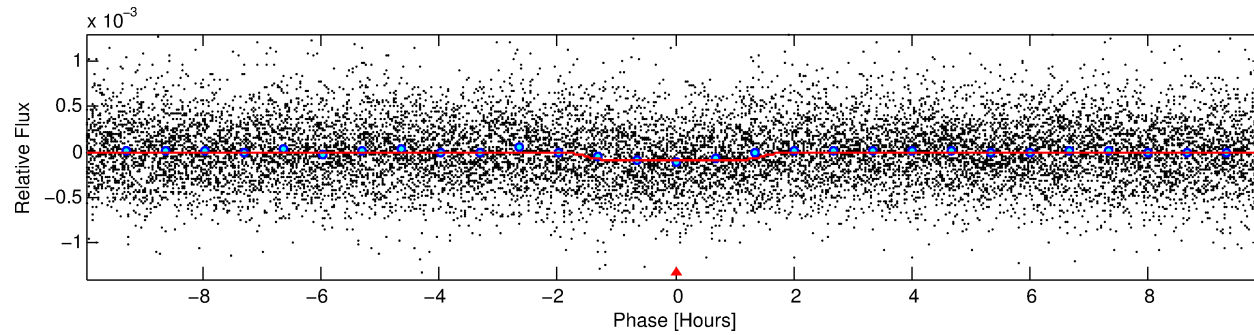
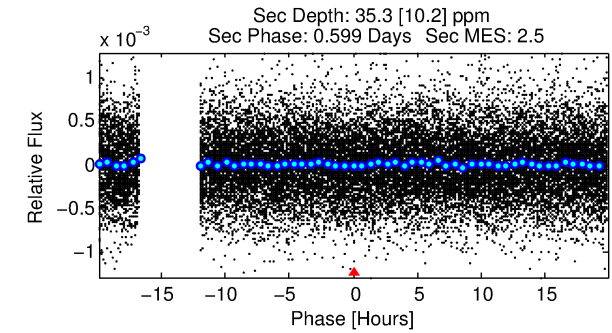
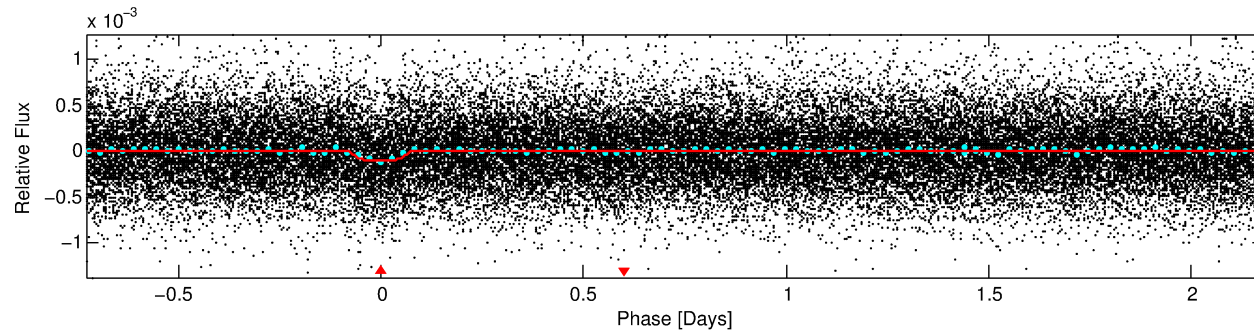
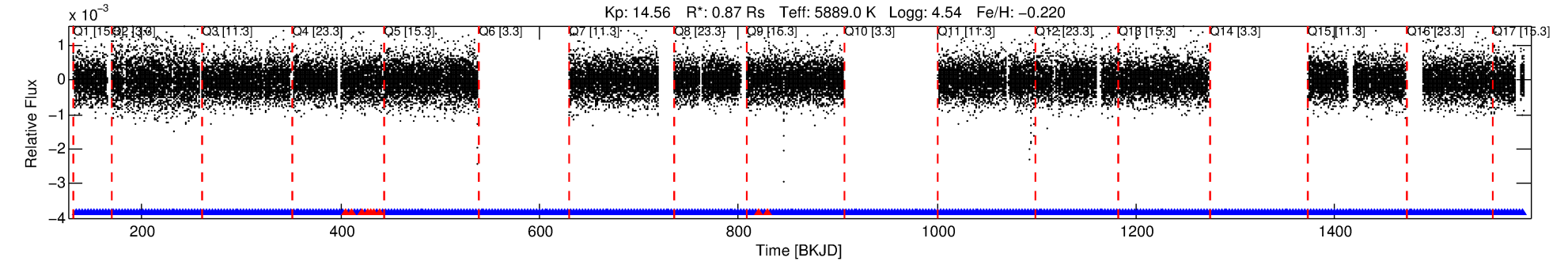
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003972432-01

No Significant Match Found

DV One-Page Summary

KIC: 3972432 Candidate: 1 of 1 Period: 2.908 d
KOI: K06375.01 Corr: 0.819



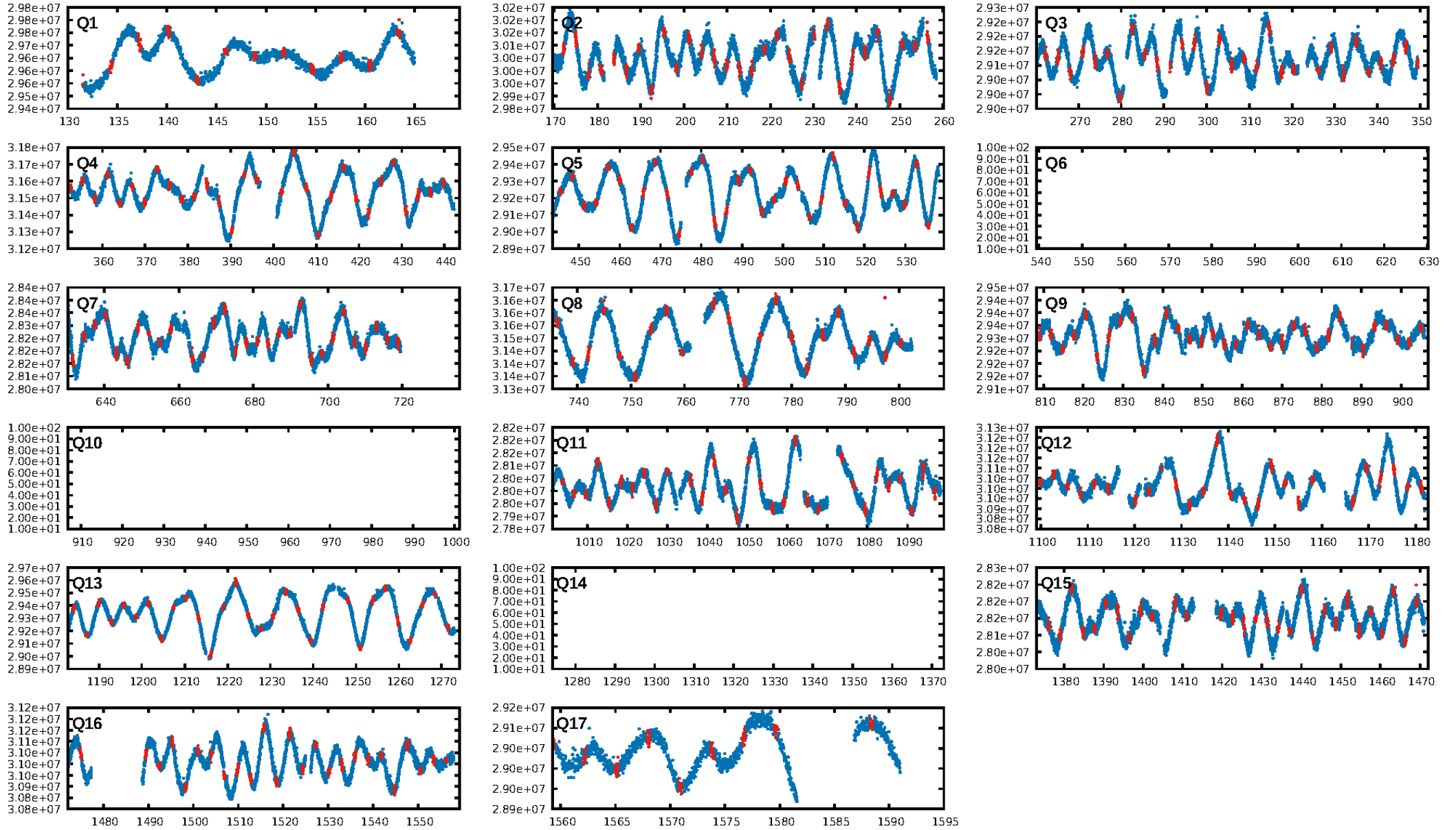
DV Fit Results:

Period = 2.90809 [0.00002] d
Epoch = 134.3205 [0.0042] BKJD
Rp/R* = 0.0108 [0.0053]
a/R* = 3.24 [7.35]
b = 0.90 [0.55]
Seff = 525.13 [210.60]
Teq = 1221 [122] K
Rp = 1.02 [0.59] Re
a = 0.0394 [0.0101] AU
Ag = 28.93 [31.91] [0.88σ]
Teffp = 4377 [1140] K [2.75σ]

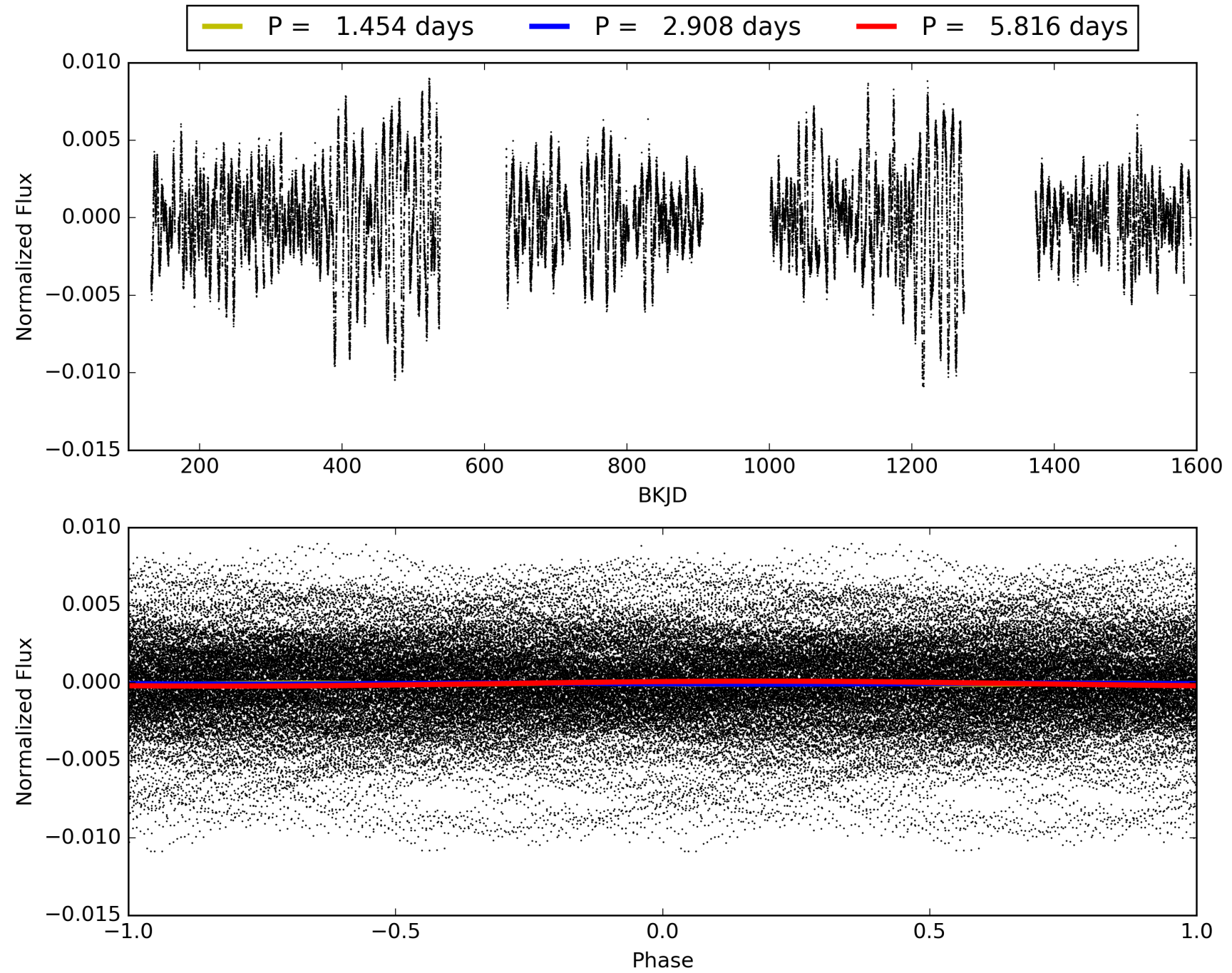
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.29e-18
RollingBand-fgt: 0.97 [339/348]
GhostDiagnostic-chr: -1.403
Centroid-sig: 0.0%
Centroid-so: 3.465 arcsec [2.88σ]
OotOffset-rm: 0.113 arcsec [0.23σ]
KicOffset-rm: 0.091 arcsec [0.25σ]
OotOffset-st: 1/4/3/2 [10]
KicOffset-st: 1/4/3/2 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003972432-01, PDC Light Curves

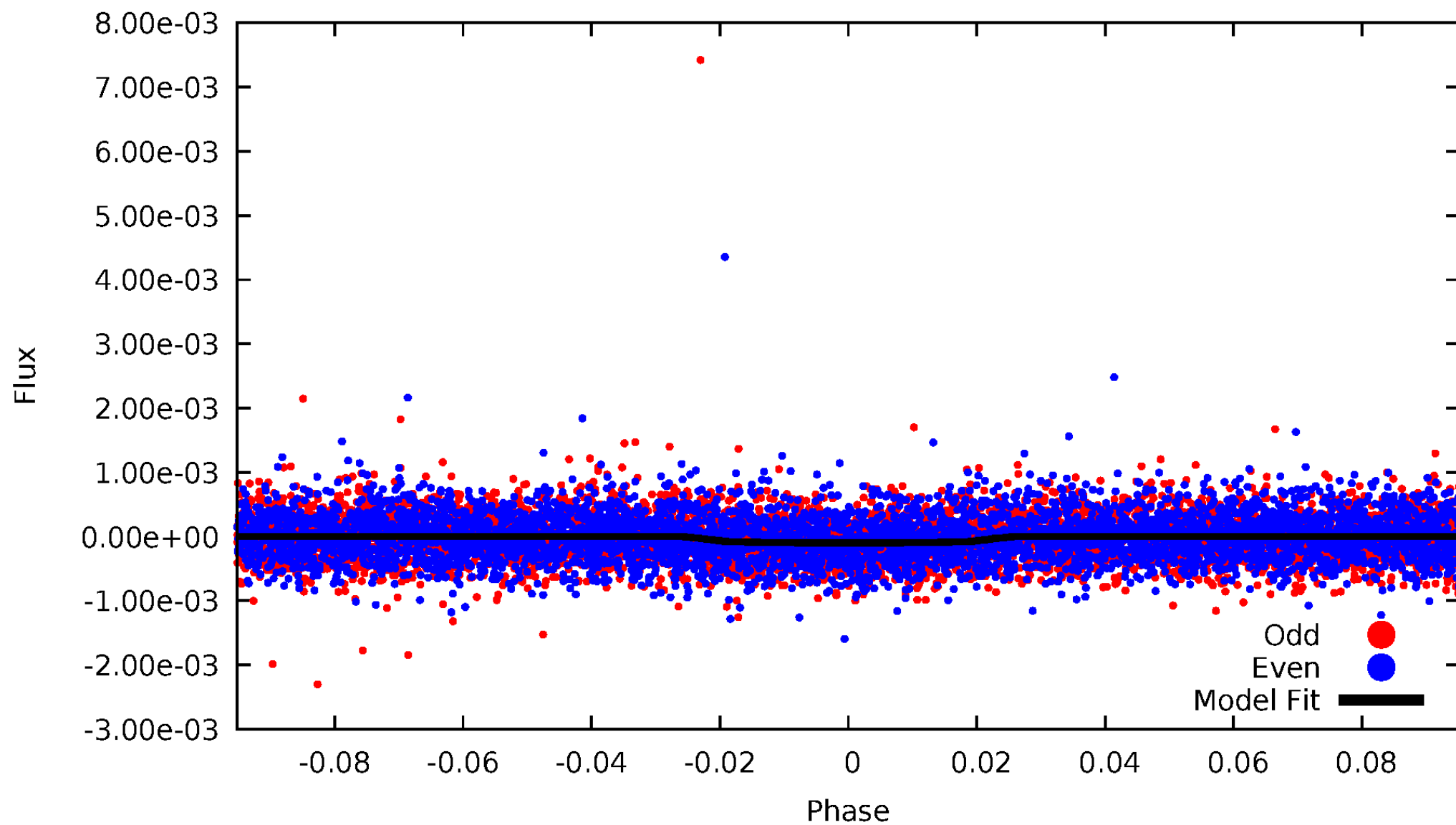


TCE 003972432-01



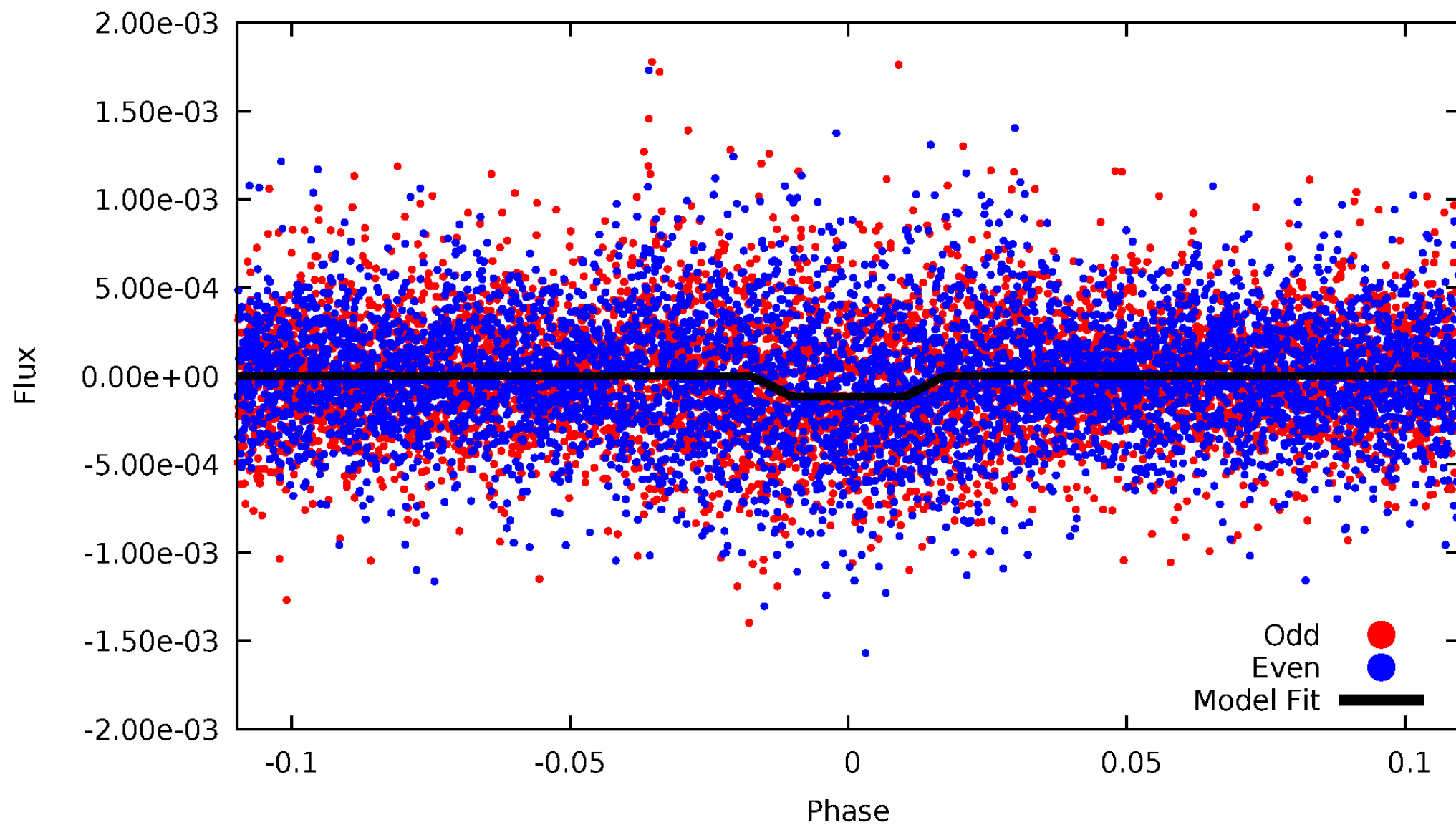
DV Odd/Even

TCE 003972432-01

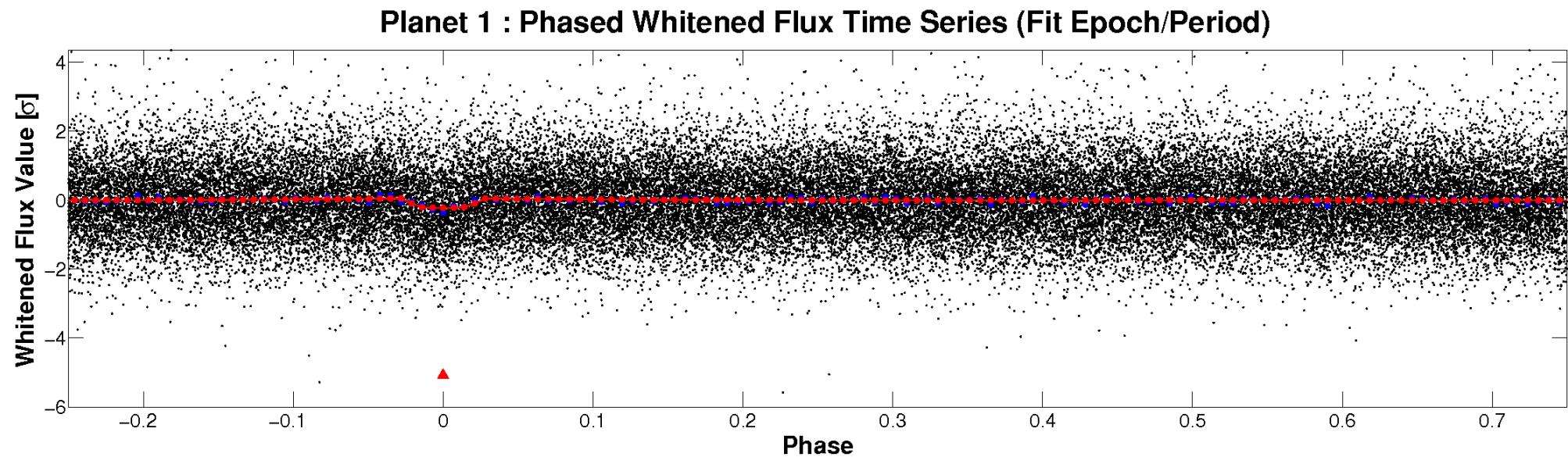
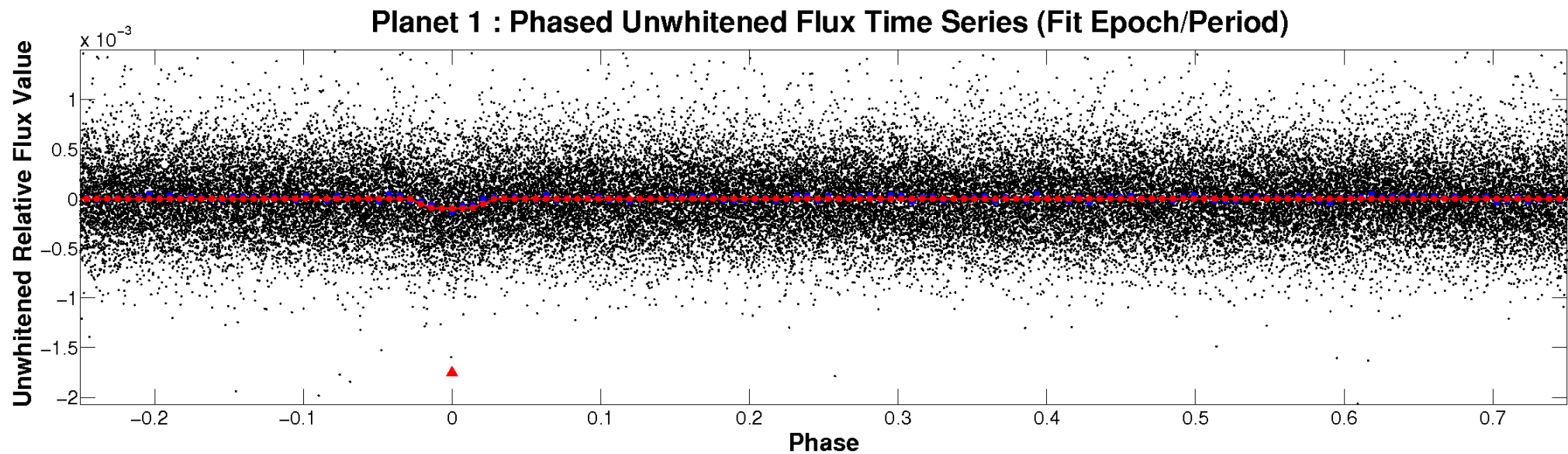


ALT Odd/Even

TCE 003972432-01

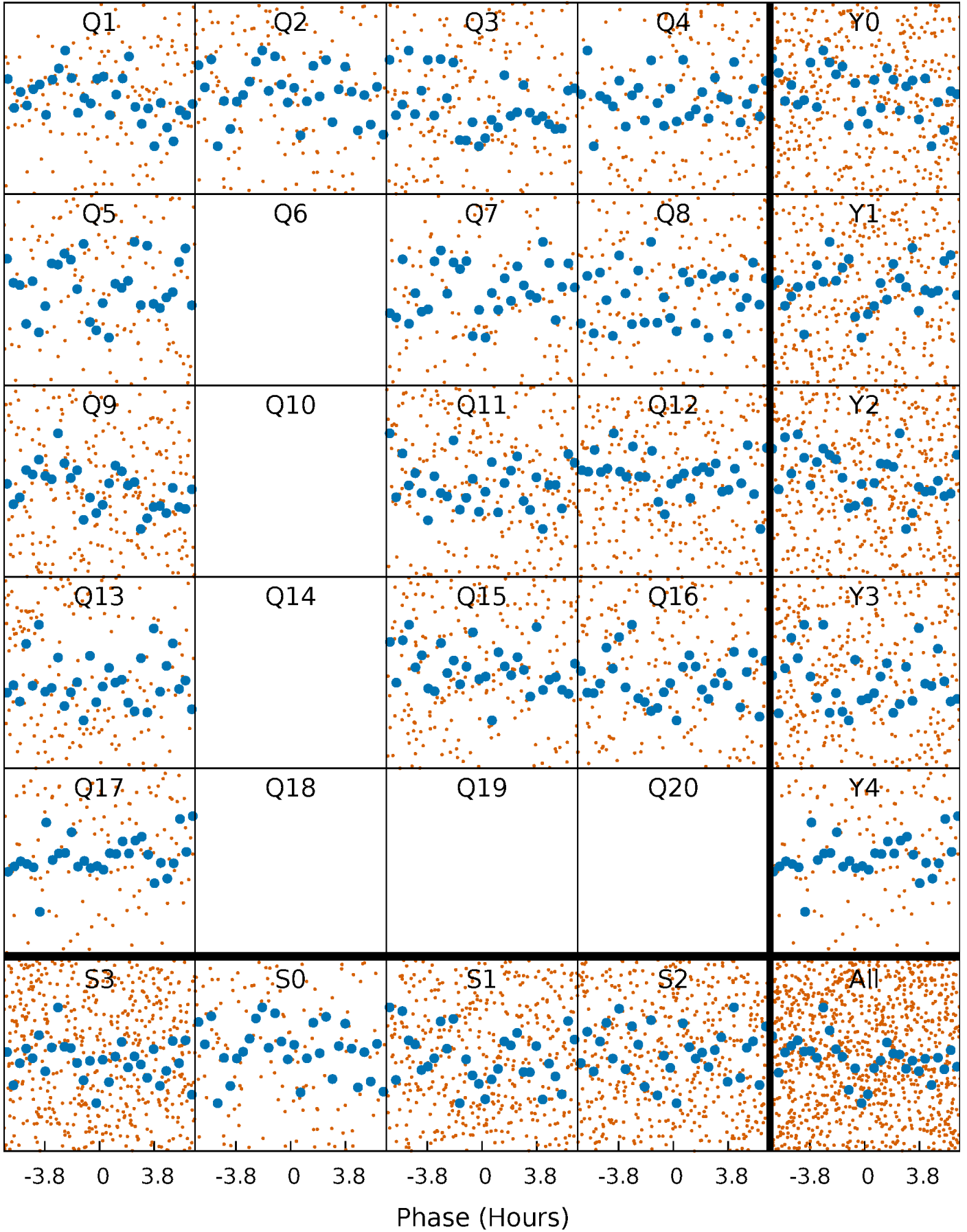


Non-Whitened Vs. Whitened Light Curve



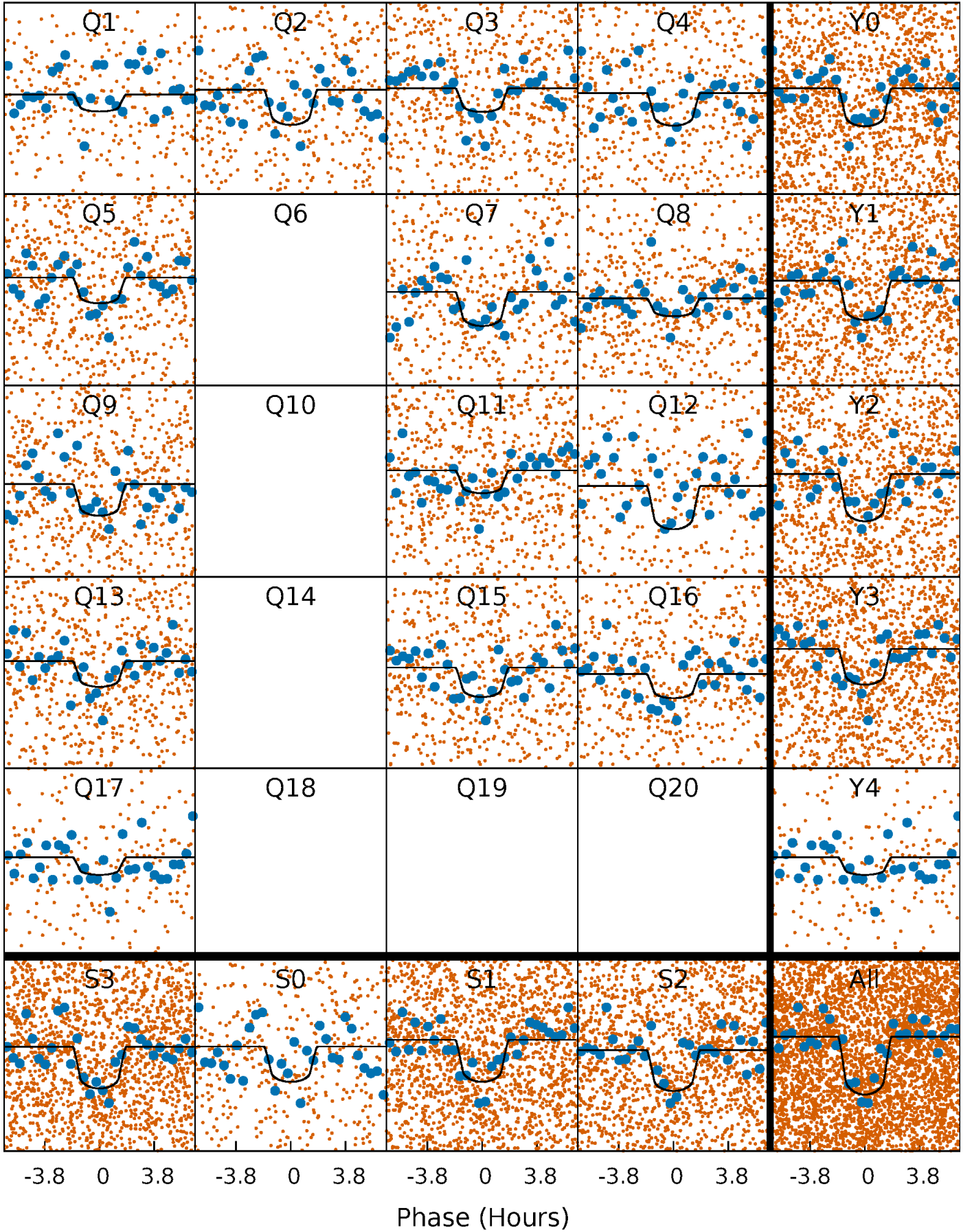
PDC Quarter-Phased Transit Curves

TCE 003972432-01 P= 2.908086 Days $T_0=134.320453$ (BKJD)



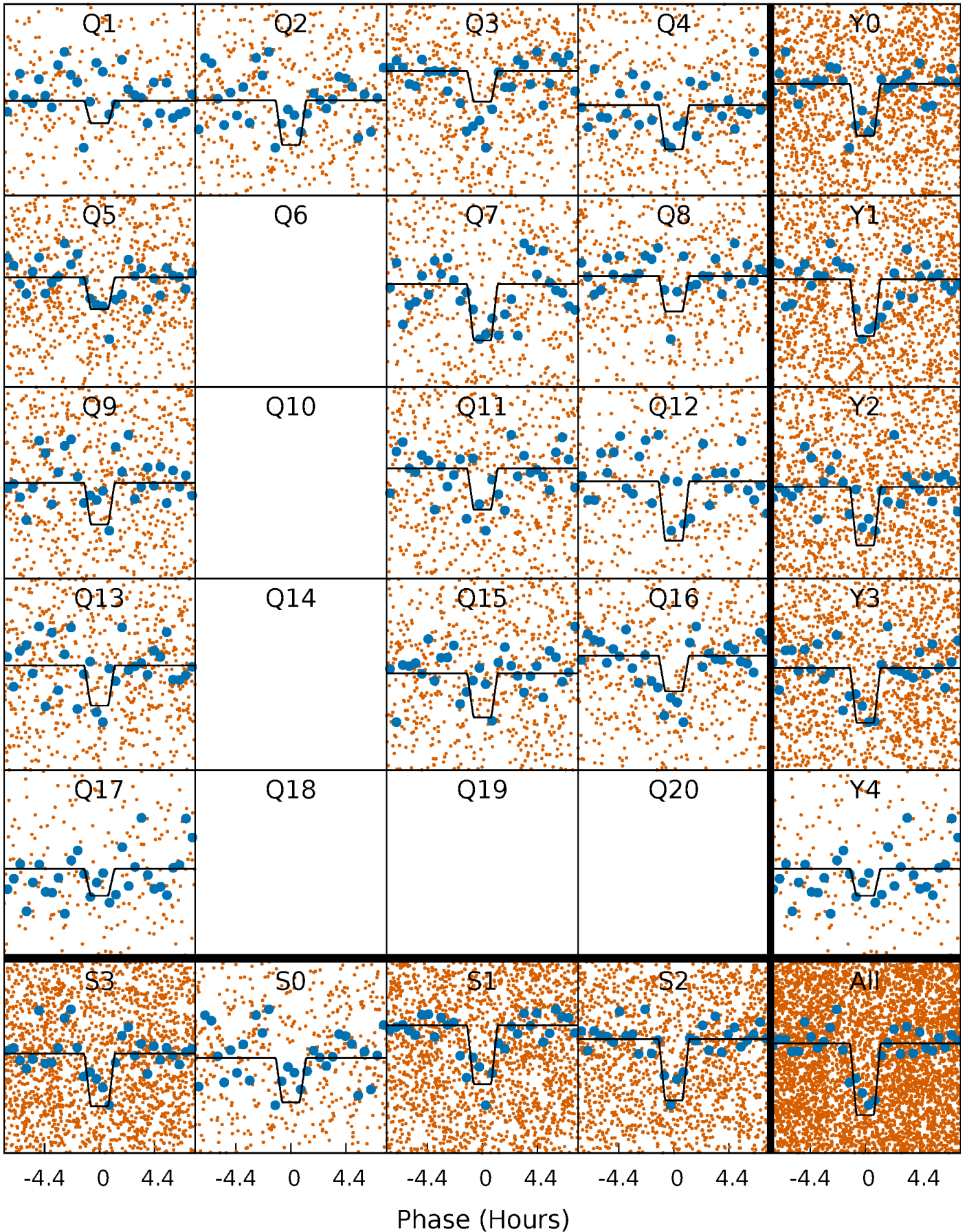
DV Quarter-Phased Transit Curves

TCE 003972432-01 P= 2.908086 Days $T_0=134.320453$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

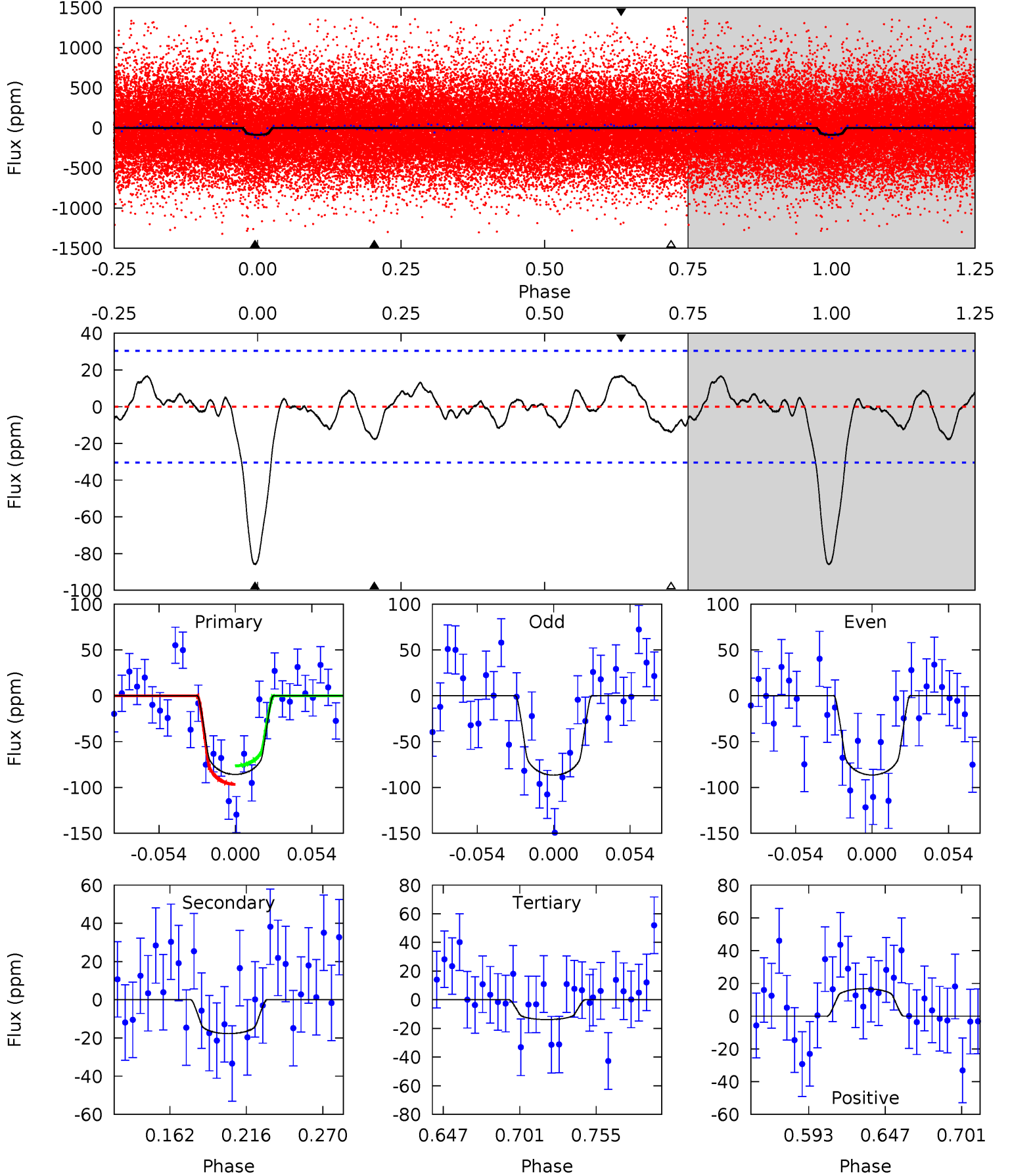
TCE 003972432-01 P= 2.908042 Days $T_0=134.324199$ (BKJD)



DV Model-Shift Uniqueness Test

003972432-01, P = 2.908086 Days, E = 131.412367 Days

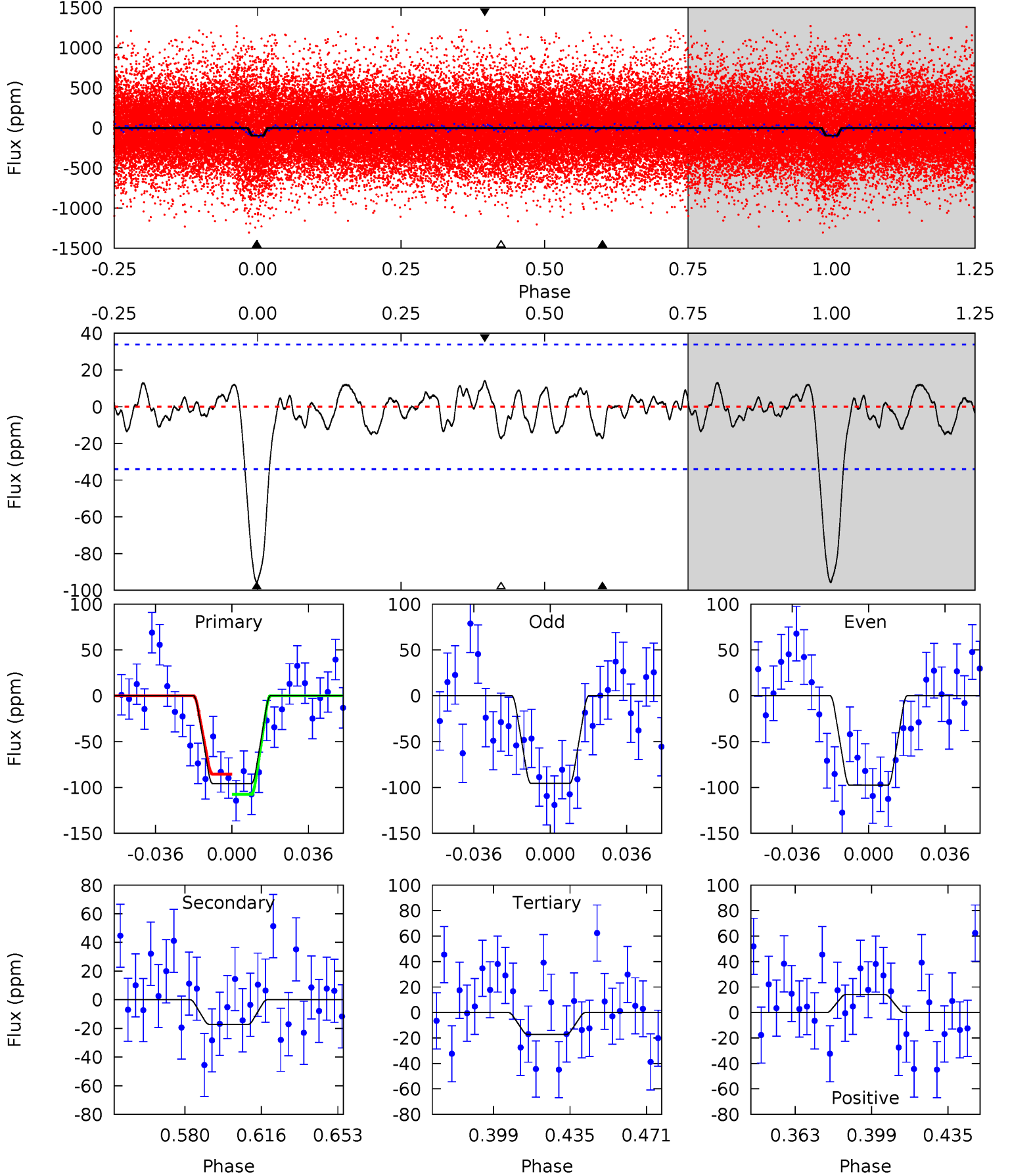
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	2.73	2.13	2.58	4.69	1.93	1.12	11.1	10.7	0.60	0.15	0.01	1.04	0.16	1.57



Alt Model-Shift Uniqueness Test

003972432-01, P = 2.908042 Days, E = 131.416157 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	2.42	2.42	1.99	4.77	2.09	0.98	11.1	11.5	0.00	0.43	0.13	0.97	0.13	1.55



Stellar Parameters For KIC 003972432

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5889^{+142}_{-177}	$4.543^{+0.037}_{-0.213}$	$-0.220^{+0.300}_{-0.300}$	$0.869^{+0.259}_{-0.069}$	$0.961^{+0.109}_{-0.120}$	$2.063^{+0.417}_{-1.075}$
	+2%/-3%	+1%/-5%	+136%/-136%	+30%/-8%	+11%/-12%	+20%/-52%
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 003972432-01 / KOI 6375.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-18 ± 6	$1.07^{+0.55}_{-0.56}$	1743^{+117}_{-73}	3959^{+1387}_{-590}	13^{+41}_{-8}
Alt.	-17 ± 7	$1.08^{+0.57}_{-0.51}$	1737^{+125}_{-75}	3922^{+1195}_{-606}	12^{+34}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

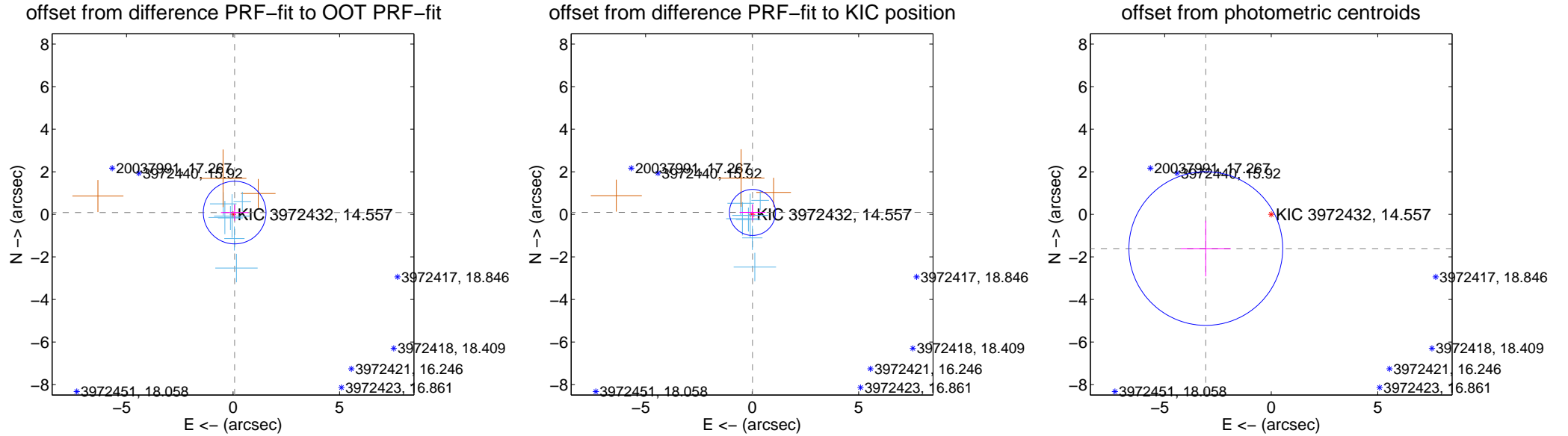
DV Centroid Data

Supplemental centroid analysis for 003972432-01. Kepler magnitude: 14.56. Transit SNR 9.69

There are 7 quarters with good PRF difference image offsets

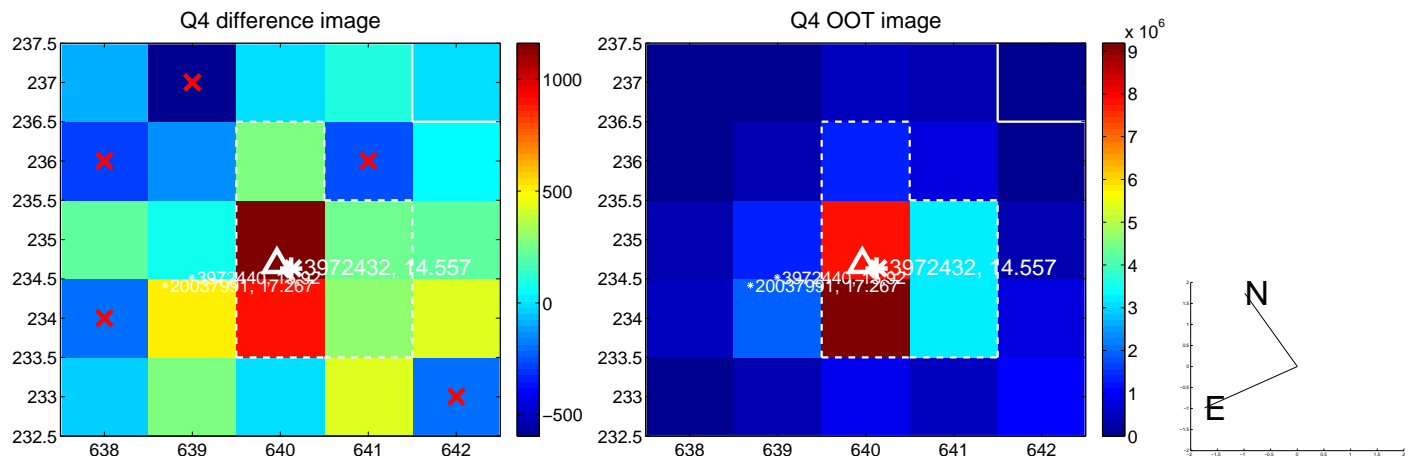
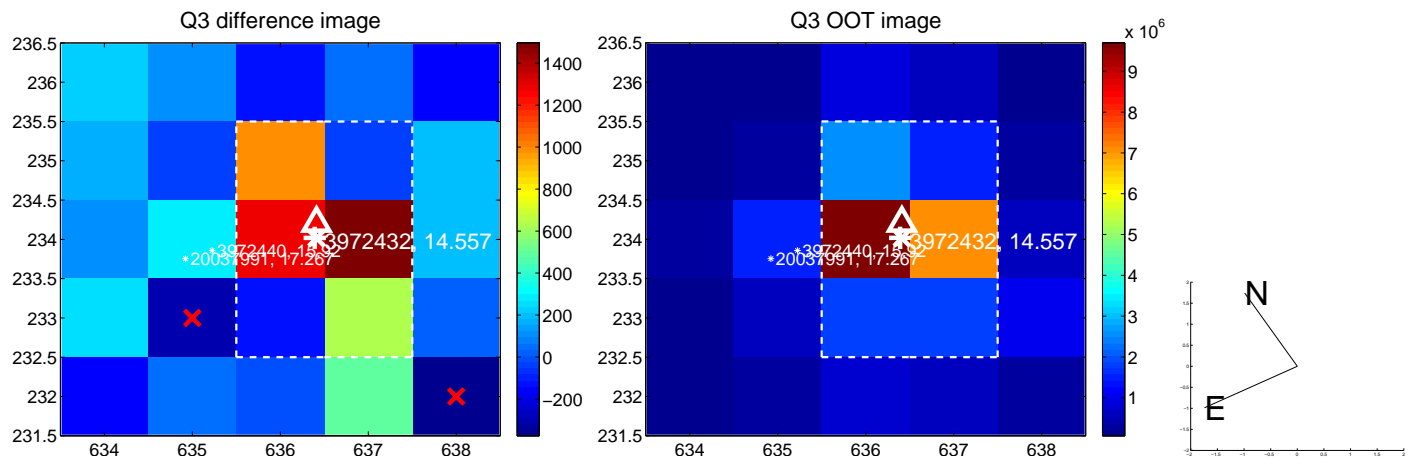
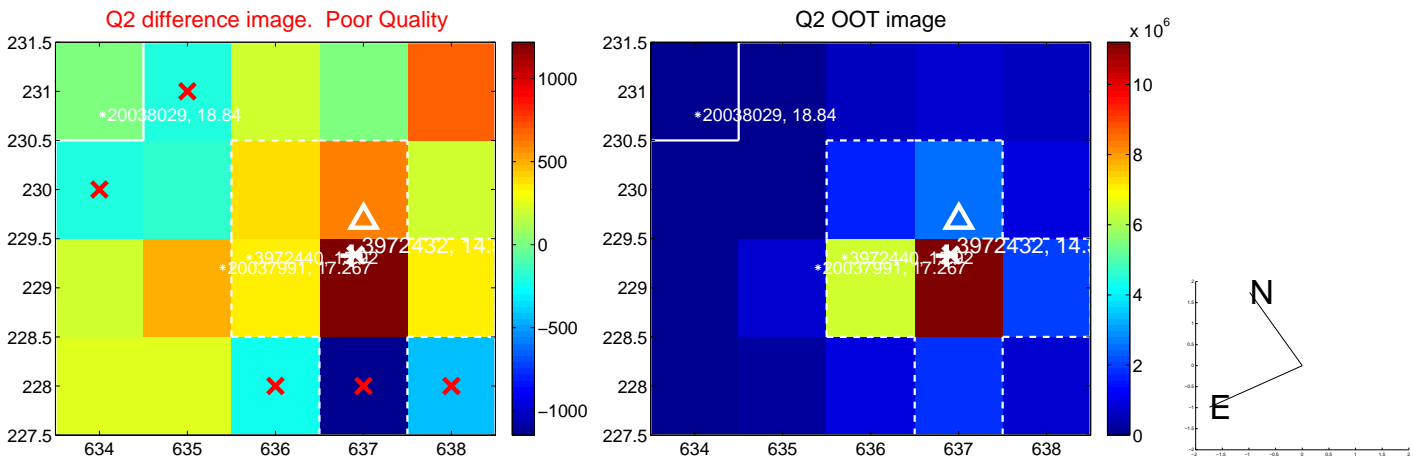
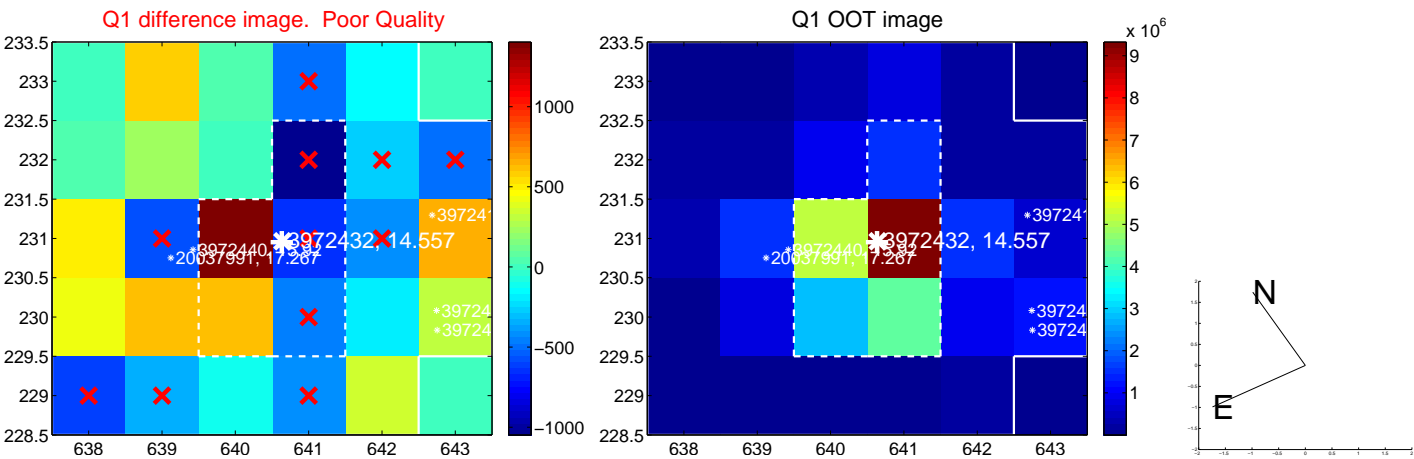
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.491	0.23	-0.076 ± 0.644	0.083 ± 0.381
PRF-fit source offset from KIC position	0.091 ± 0.360	0.25	-0.017 ± 0.605	0.089 ± 0.378
photometric centroid source offset	3.46 ± 1.20	2.88	3.07 ± 1.17	-1.61 ± 1.31

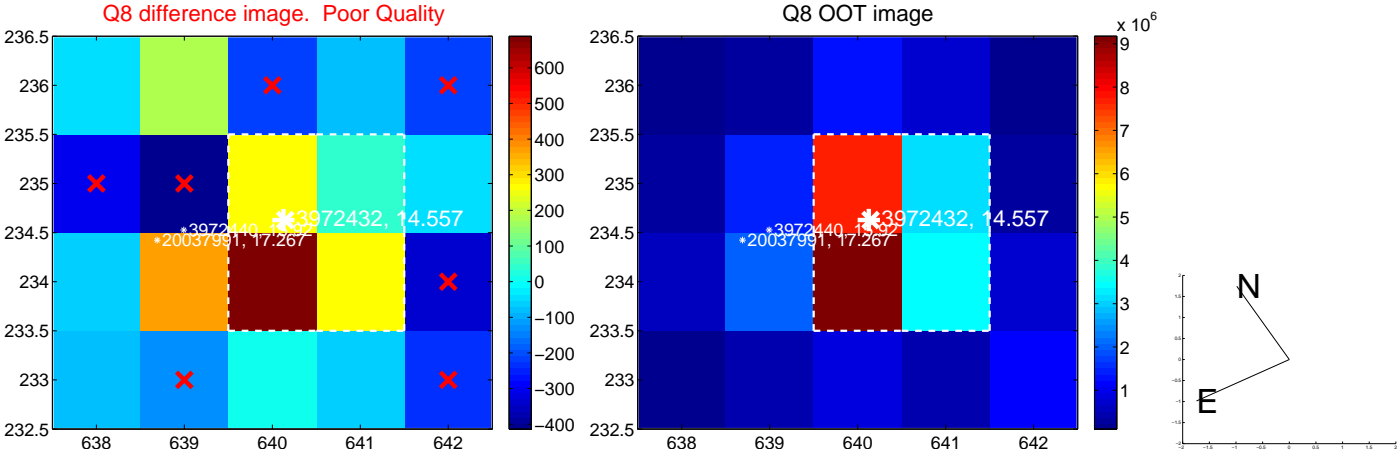
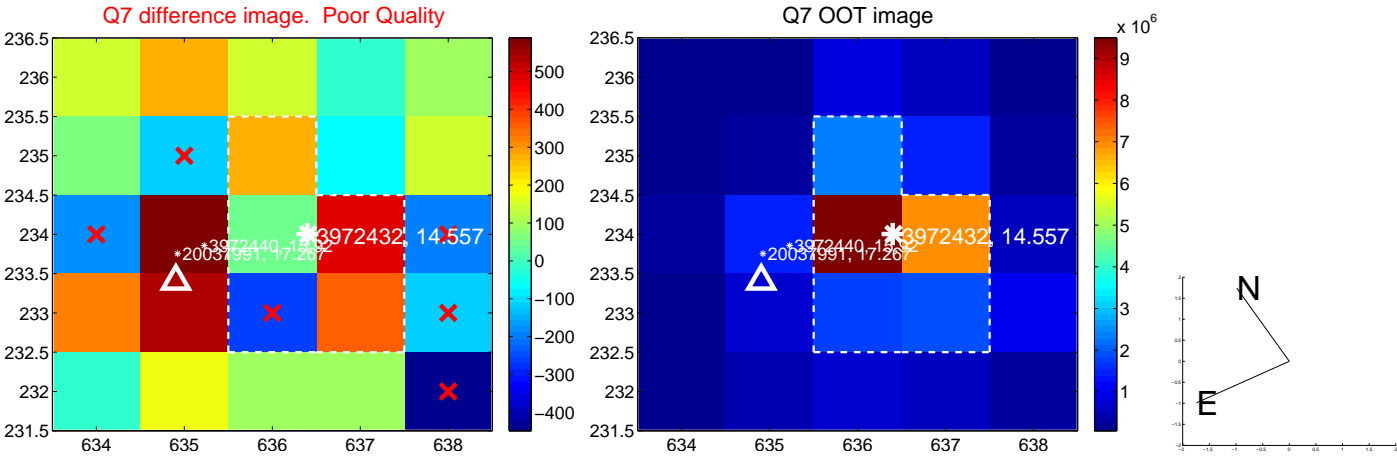
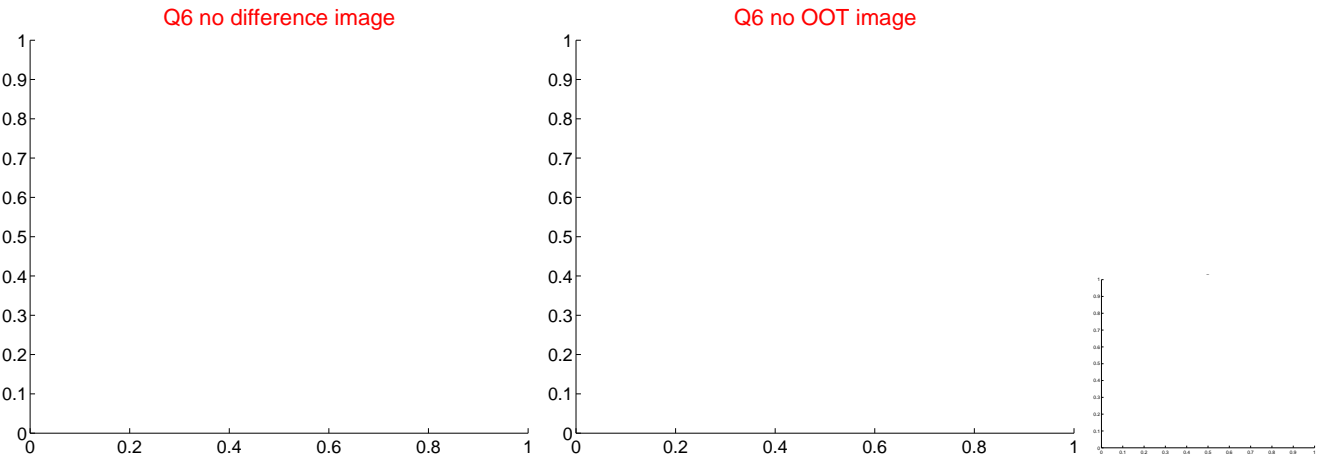
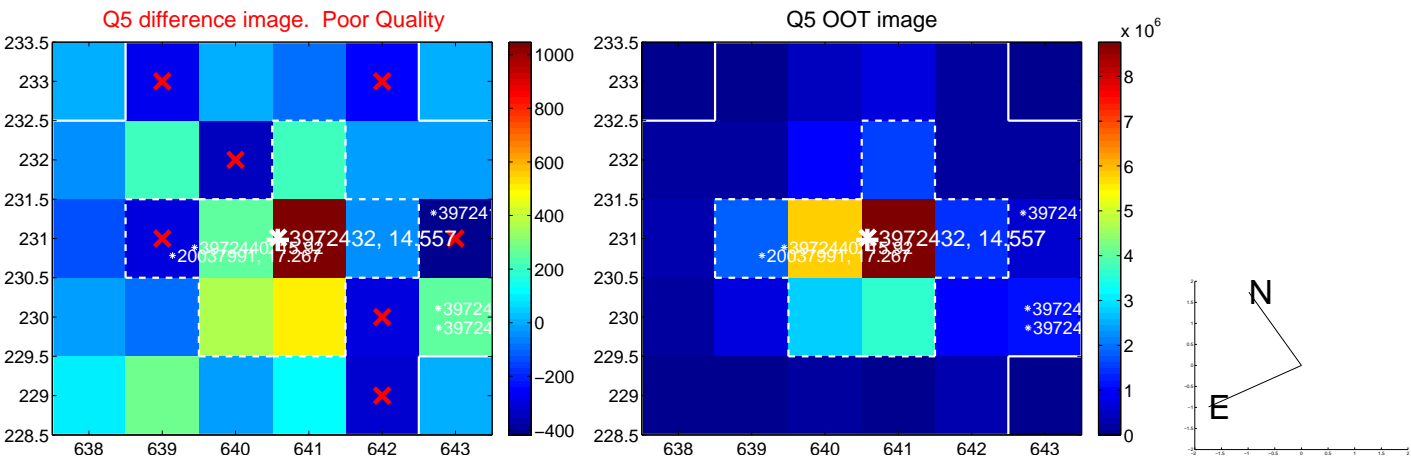


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

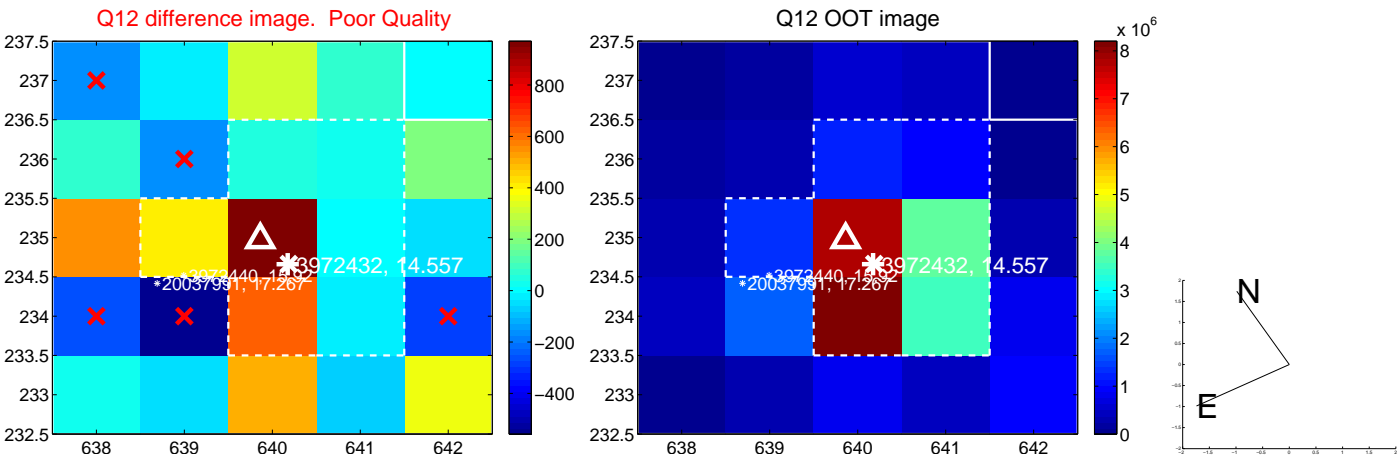
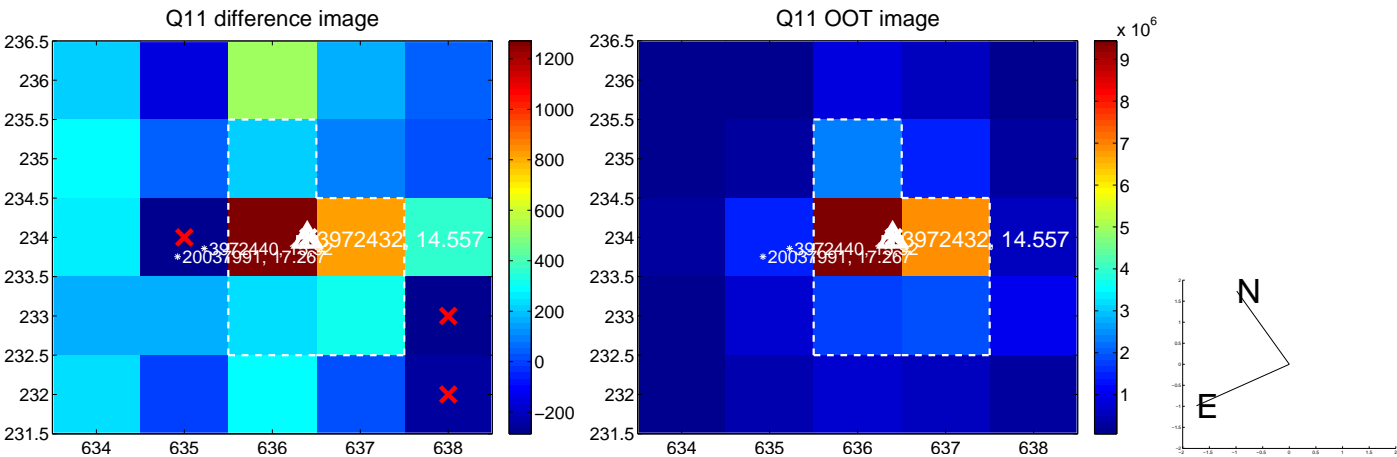
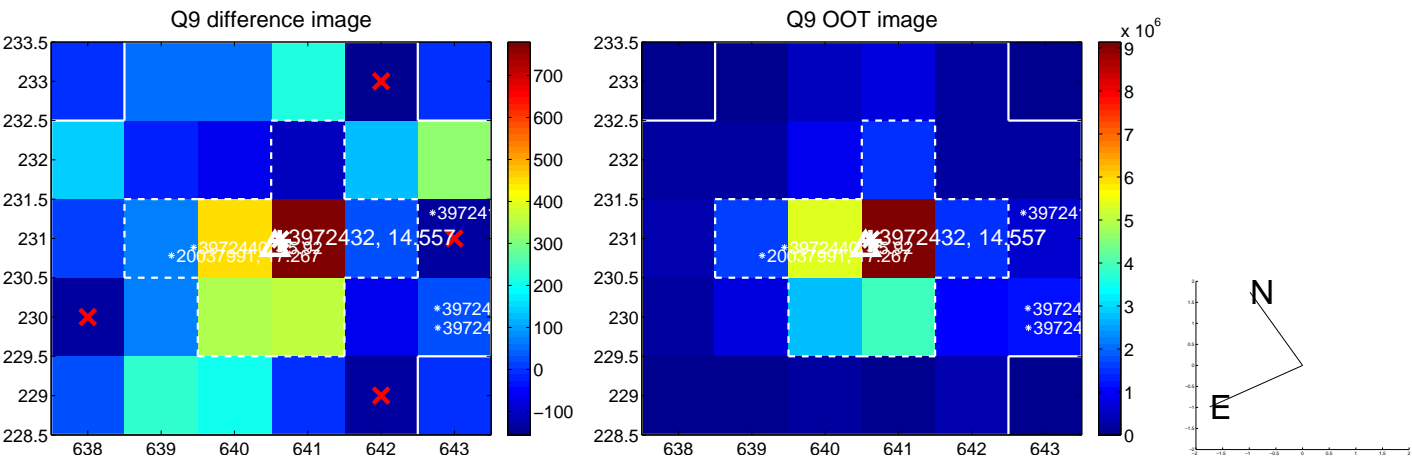
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



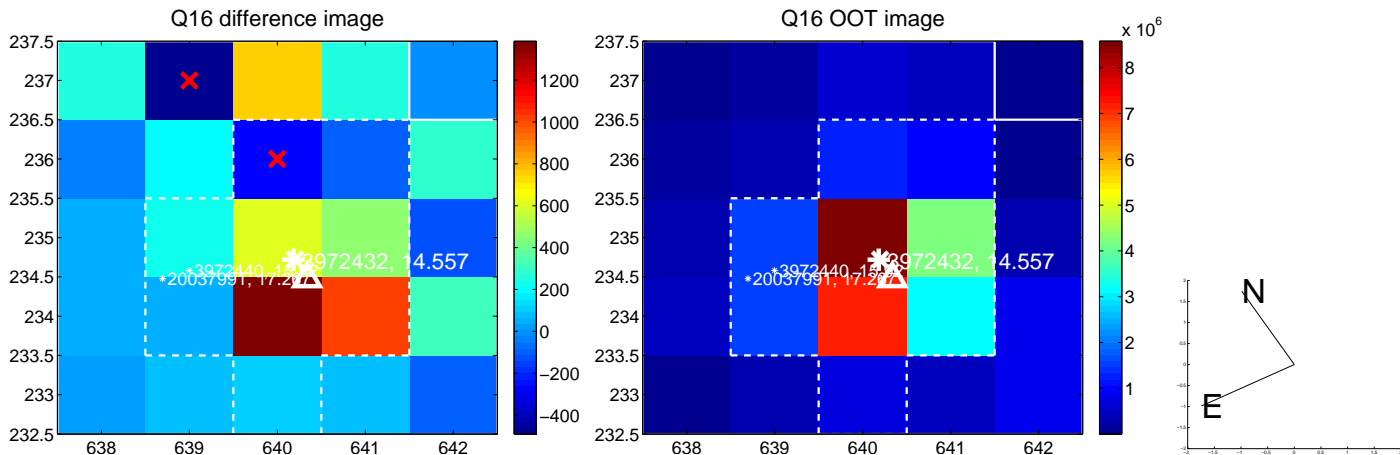
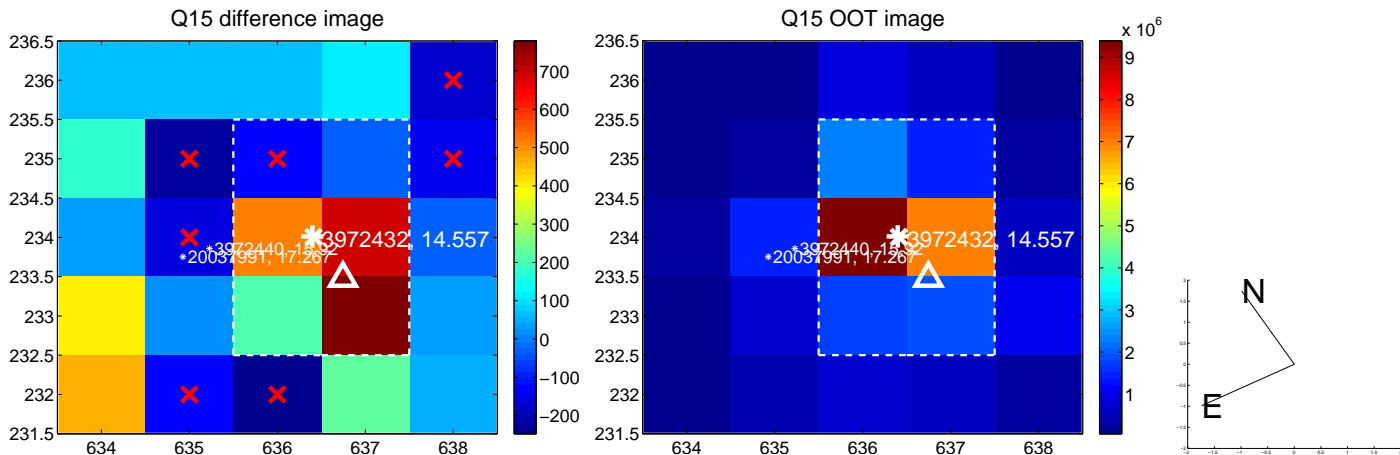
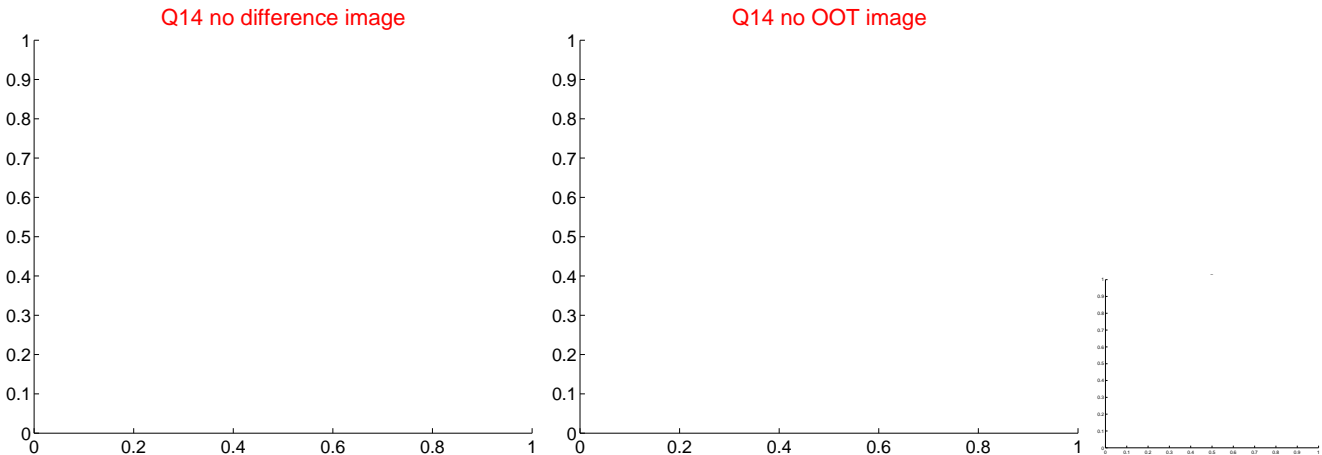
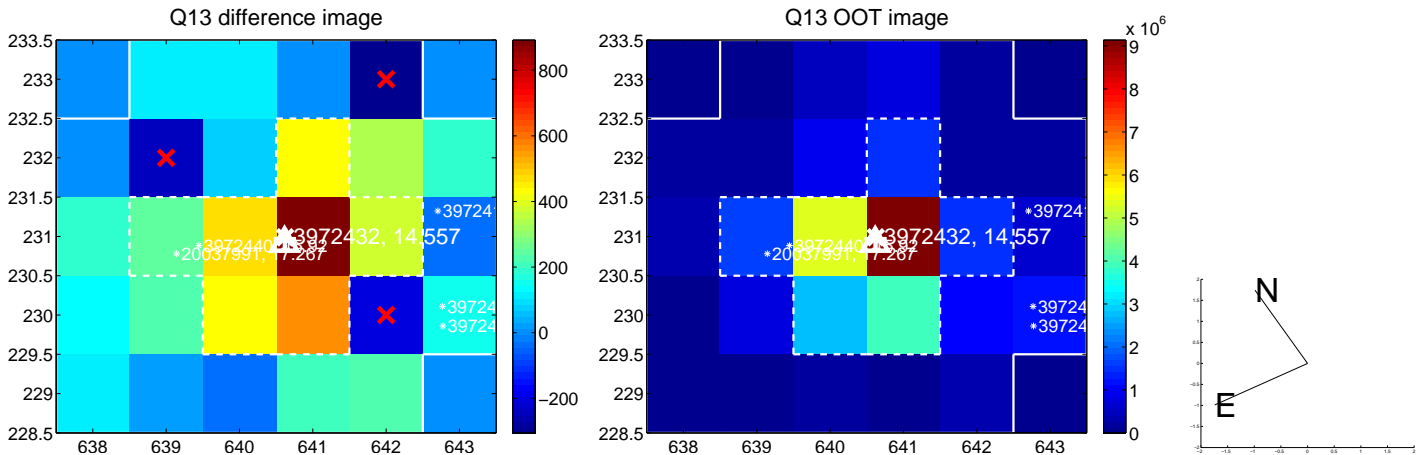
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



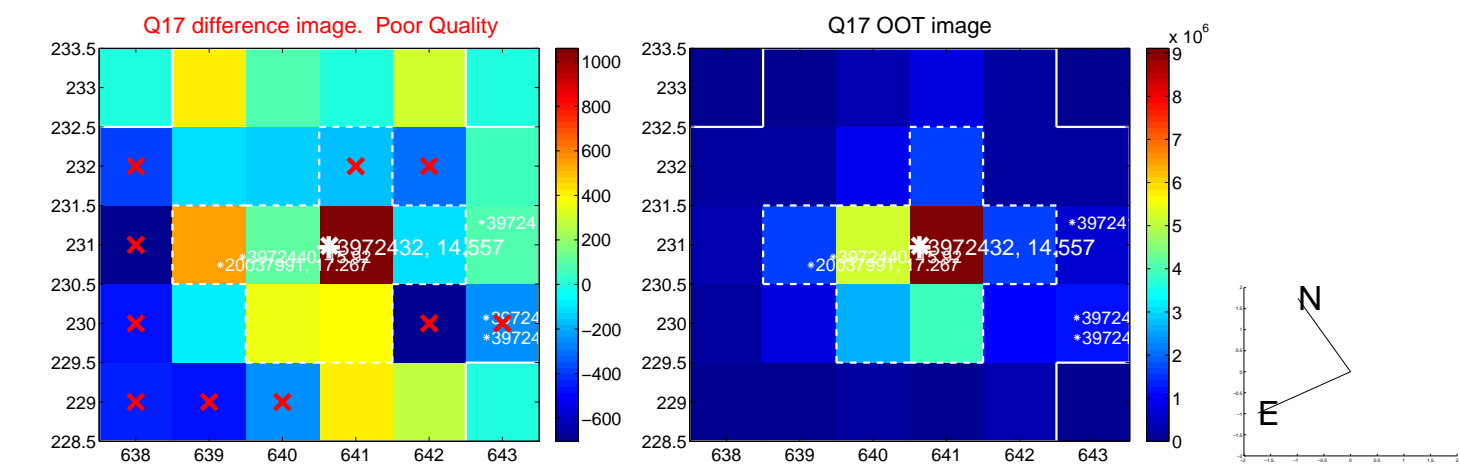
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



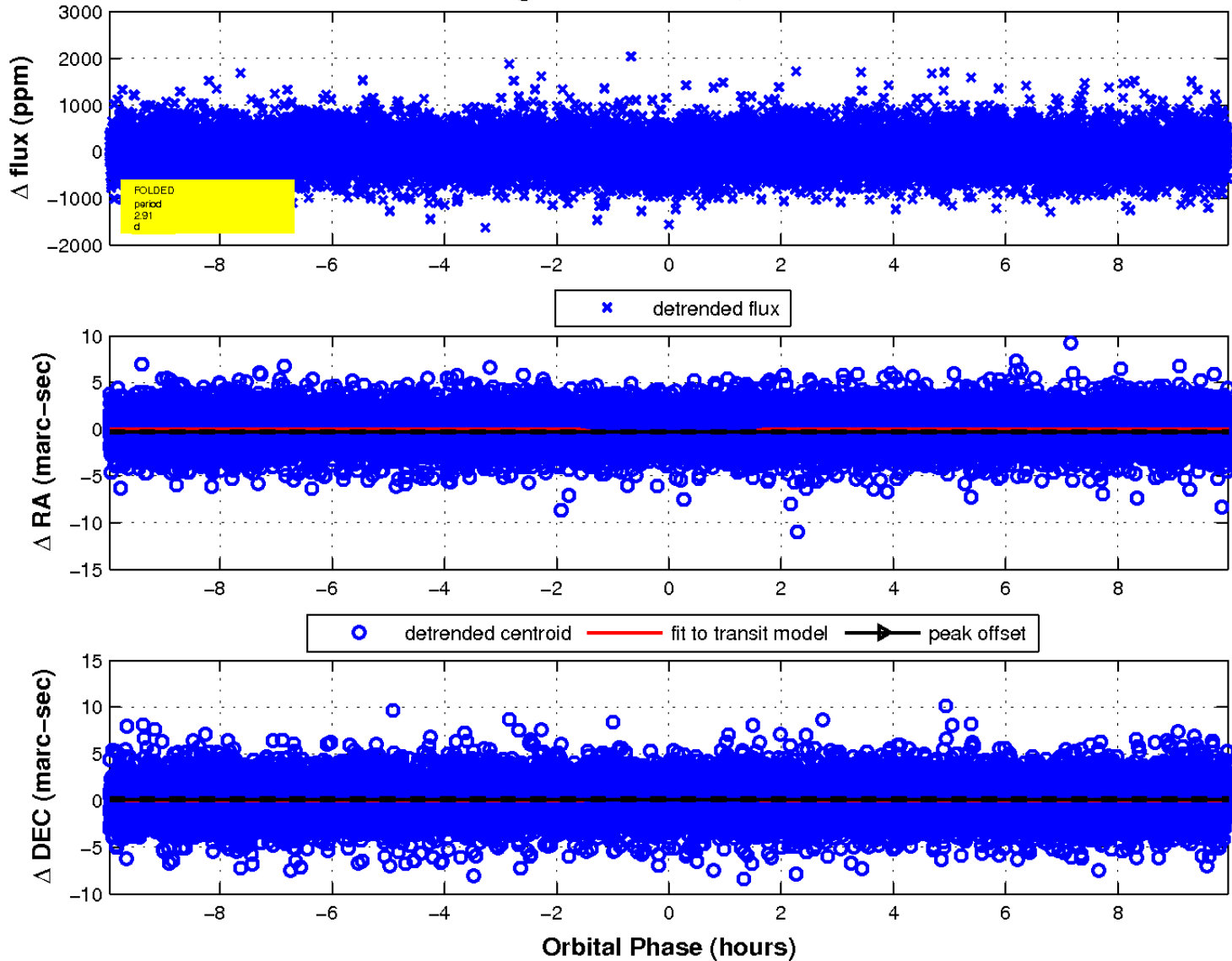
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

