

KIC 010666230

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})
010666230-01	OBS	1295.01	1.577784	131.735193	470.5	1.718	52.6	59.1	0.80	6089	2.04	1241.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666230-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_KIC_POS

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.

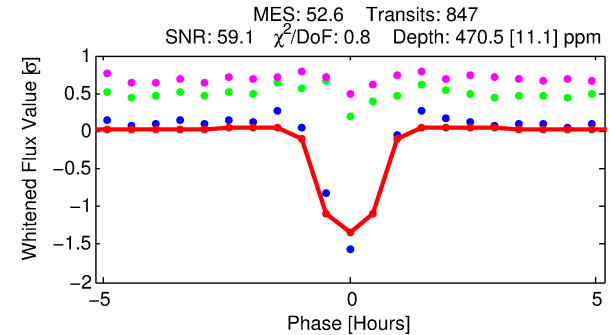
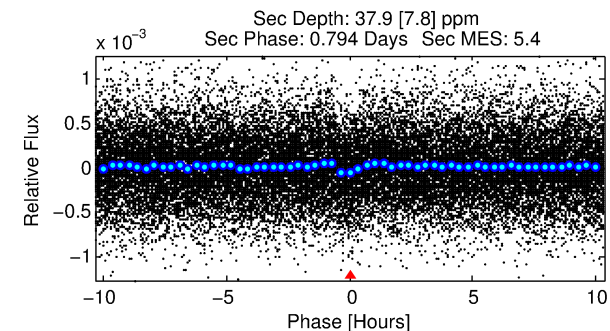
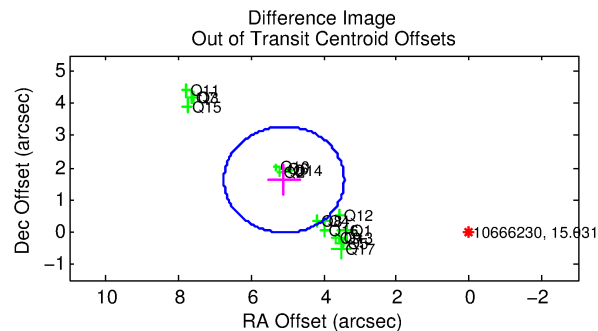
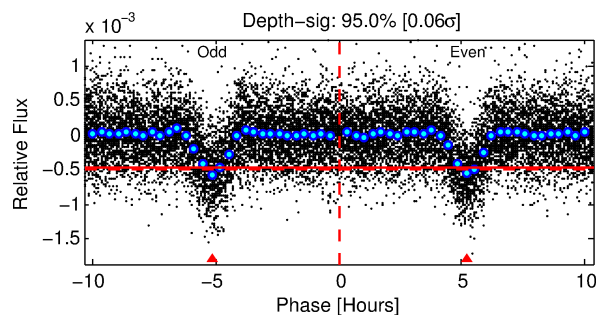
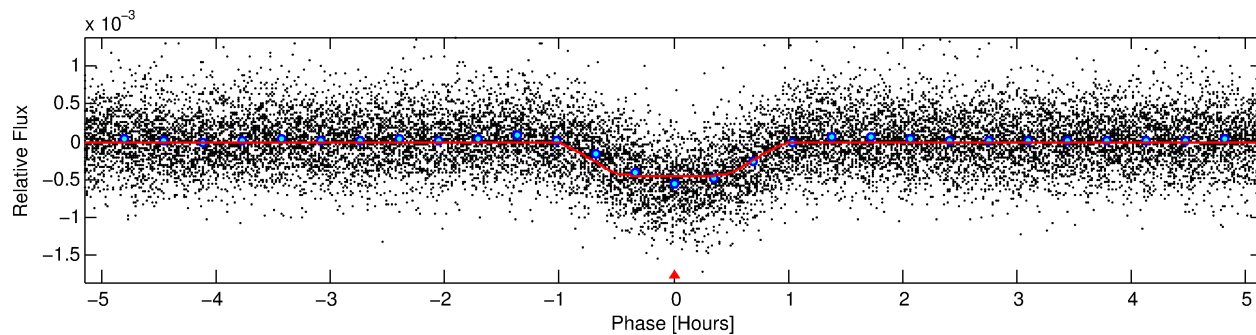
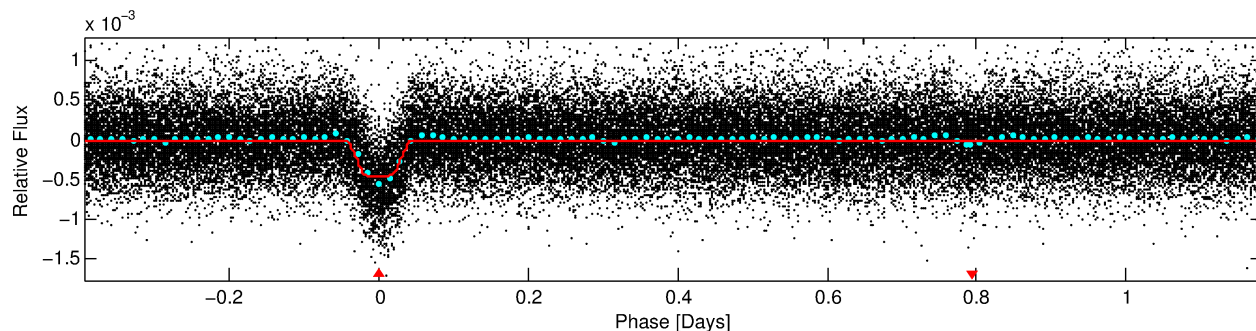
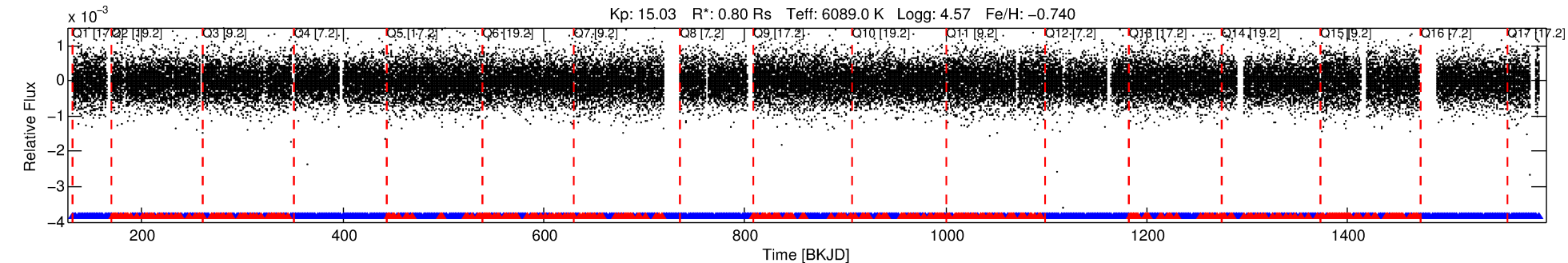
Ephemeris Match Information For 010666230-01

No Significant Match Found

DV One-Page Summary

KIC: 10666230 Candidate: 1 of 1 Period: 1.578 d
KOI: K01295.01 Corr: 0.891

Kp: 15.03 R*: 0.80 Rs Teff: 6089.0 K Logg: 4.57 Fe/H: -0.740



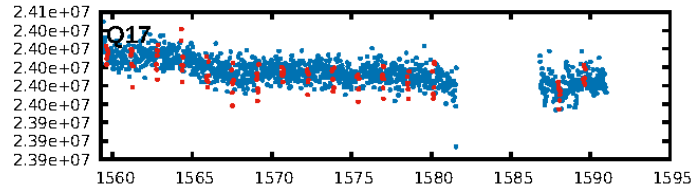
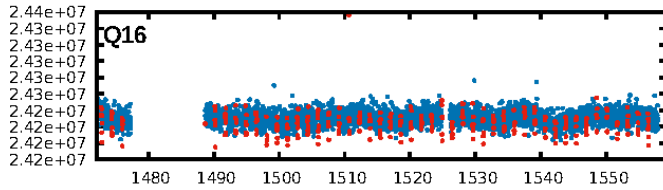
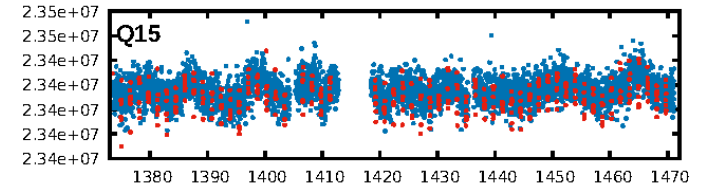
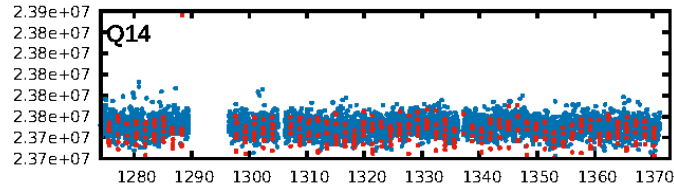
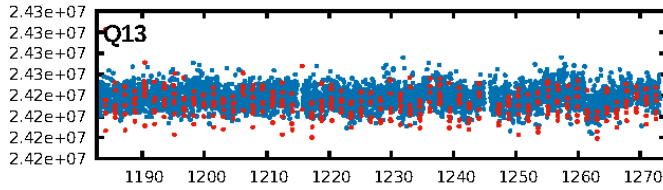
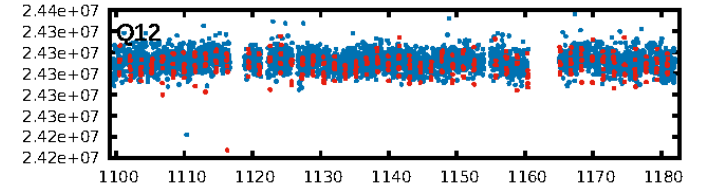
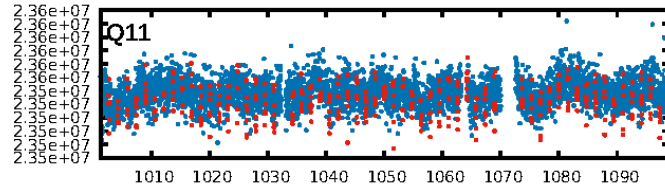
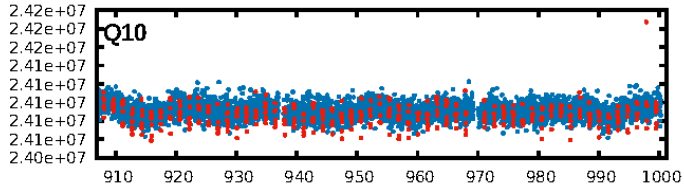
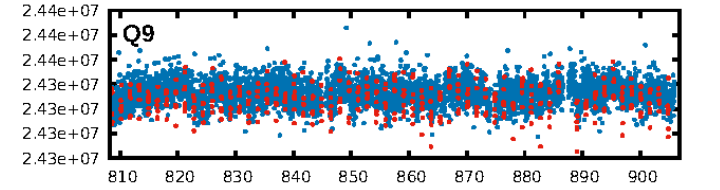
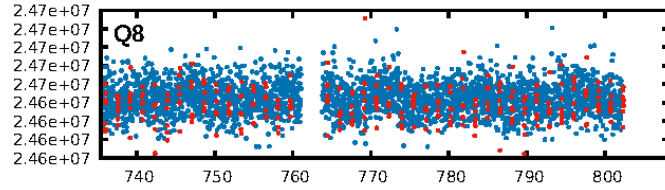
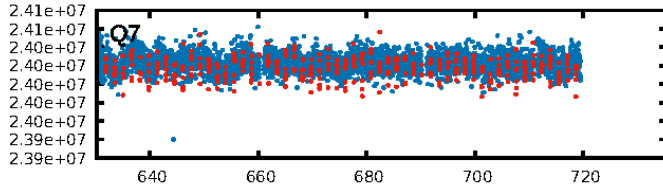
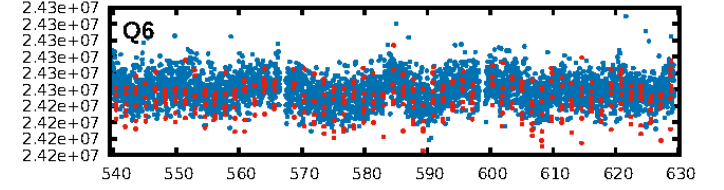
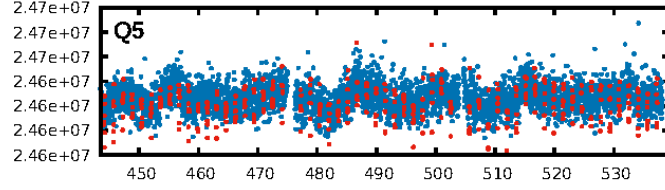
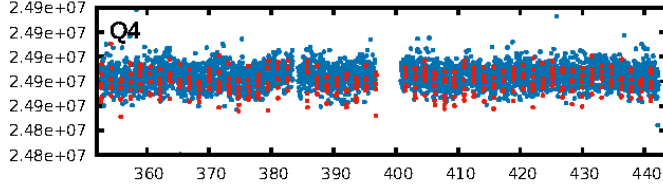
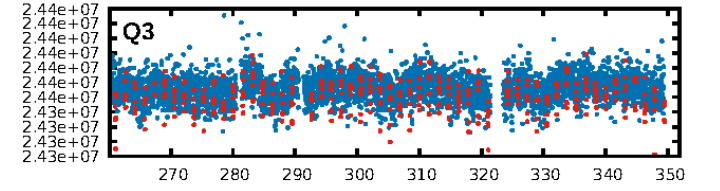
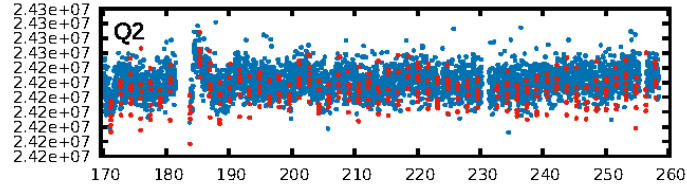
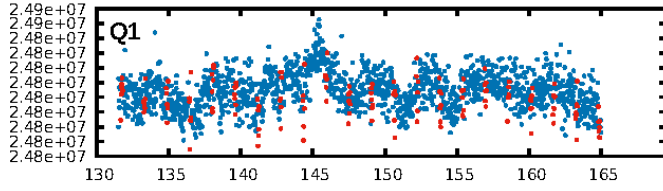
DV Fit Results:

Period = 1.57778 [0.00000] d
Epoch = 131.7352 [0.0004] BKJD
Rp/R* = 0.0234 [0.0017]
a/R* = 3.53 [1.28]
b = 0.90 [0.08]
Seff = 1241.07 [443.59]
Teq = 1513 [135] K
Rp = 2.04 [0.56] Re
a = 0.0253 [0.0057] AU
Ag = 3.19 [1.34] [1.63σ]
Teffp = 3127 [219] K [6.26σ]

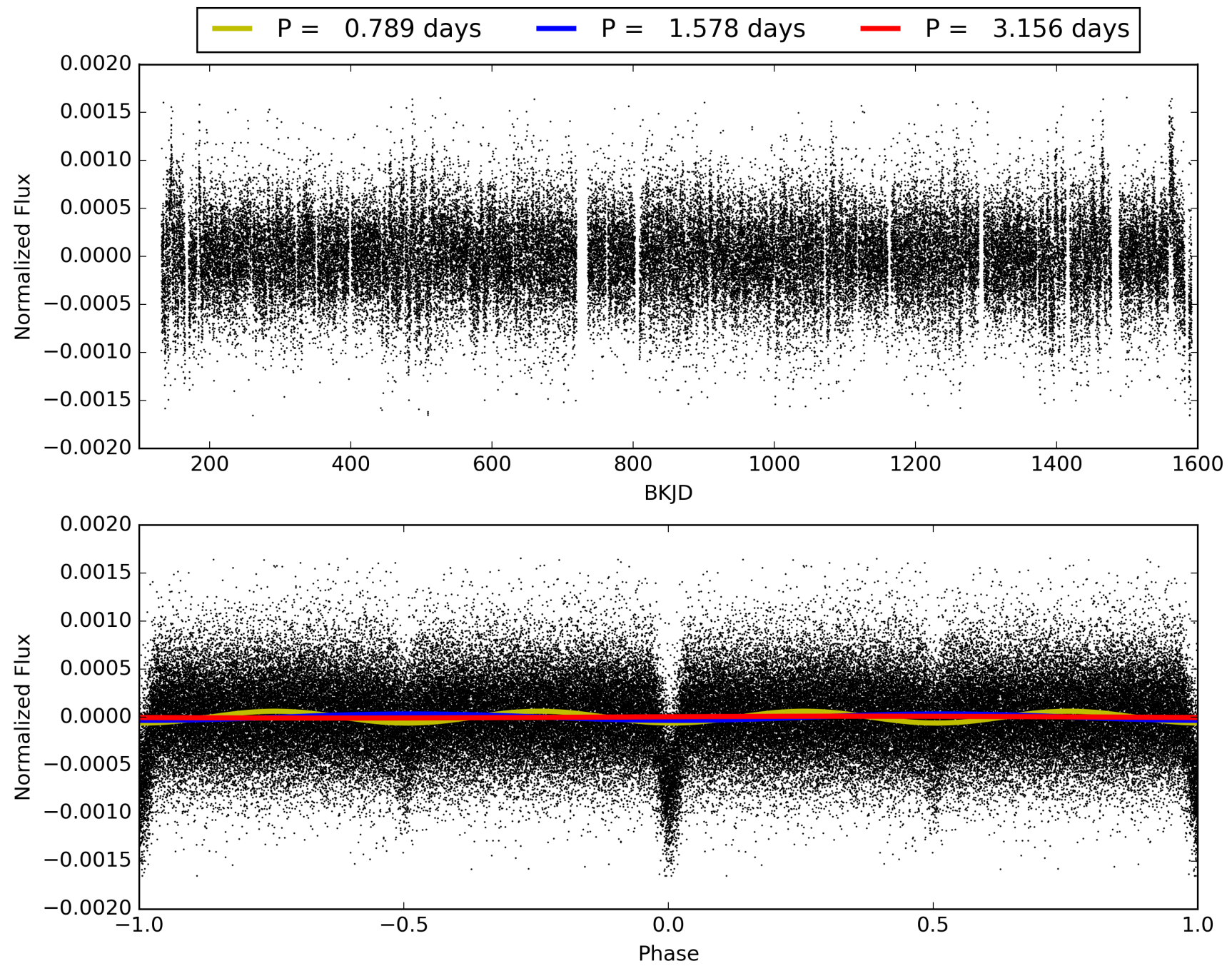
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.63 [509/809]
GhostDiagnostic-chr: 1.896
Centroid-sig: 0.0%
Centroid-so: 2.647 arcsec [15.34σ]
OotOffset-rm: 5.341 arcsec [9.68σ]
KicOffset-rm: 2.691 arcsec [33.79σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010666230-01, PDC Light Curves

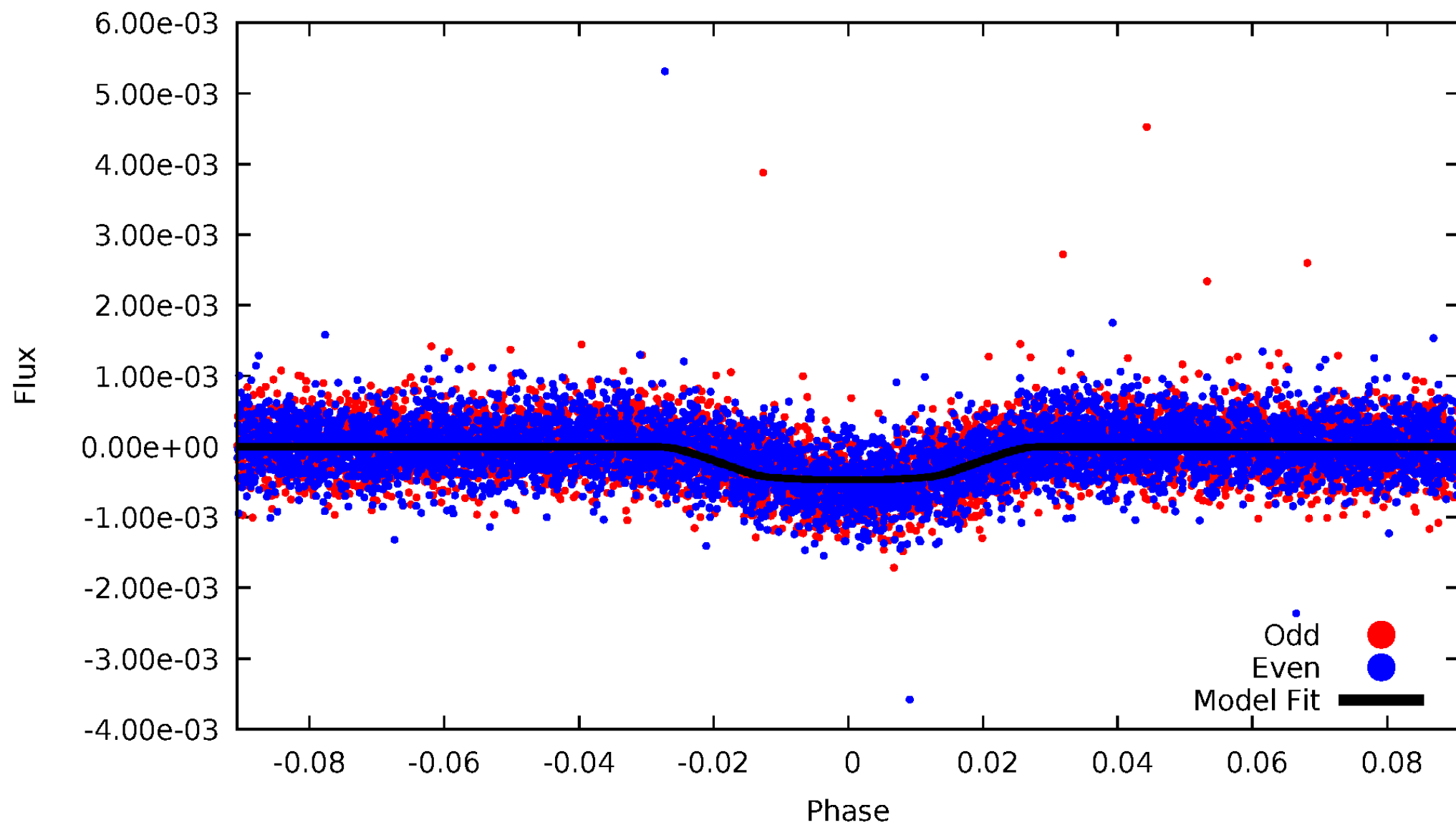


TCE 010666230-01



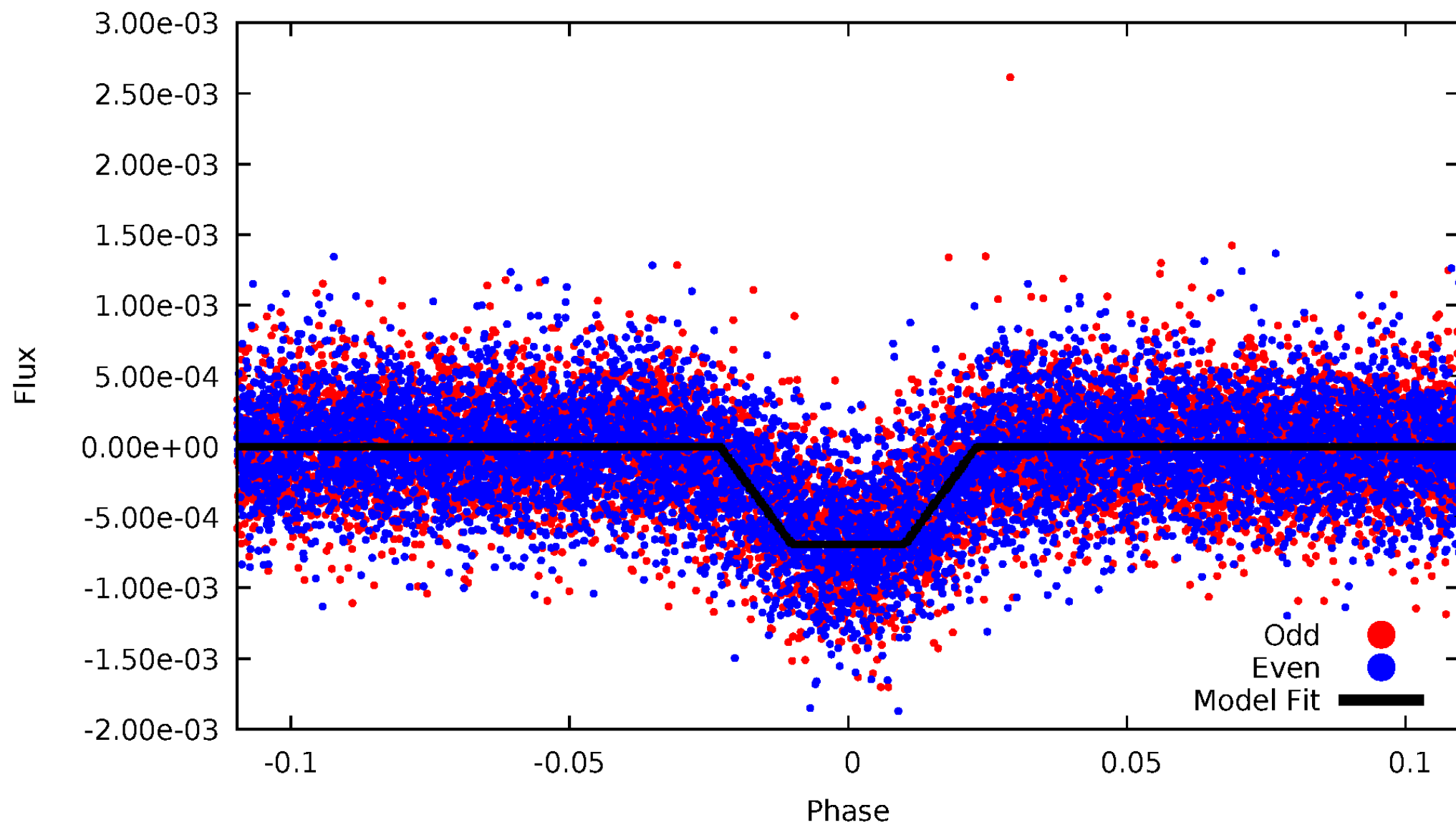
DV Odd/Even

TCE 010666230-01



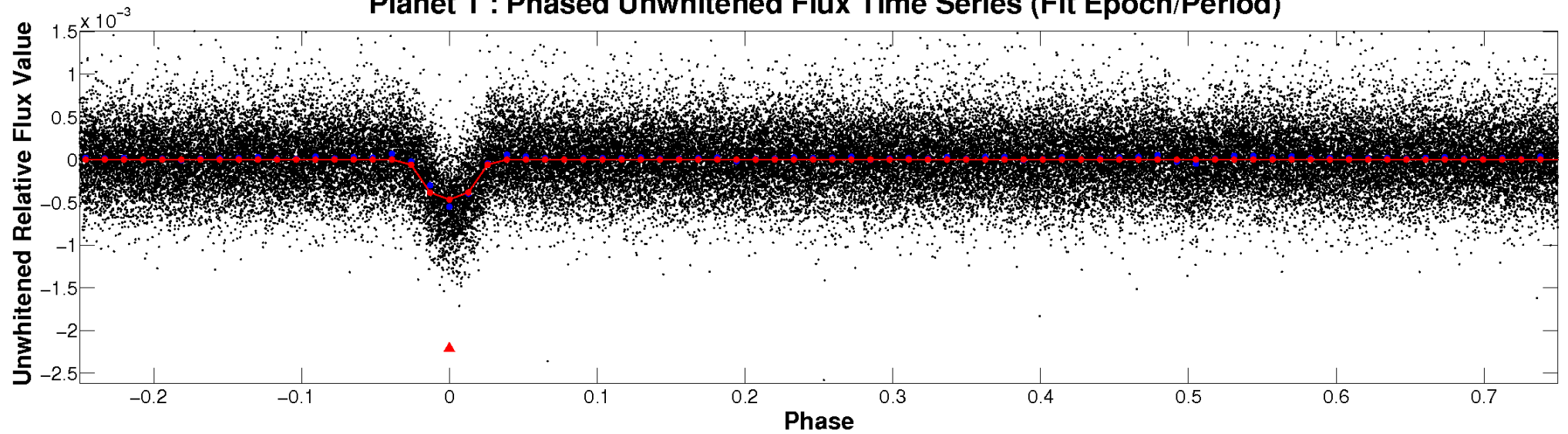
ALT Odd/Even

TCE 010666230-01

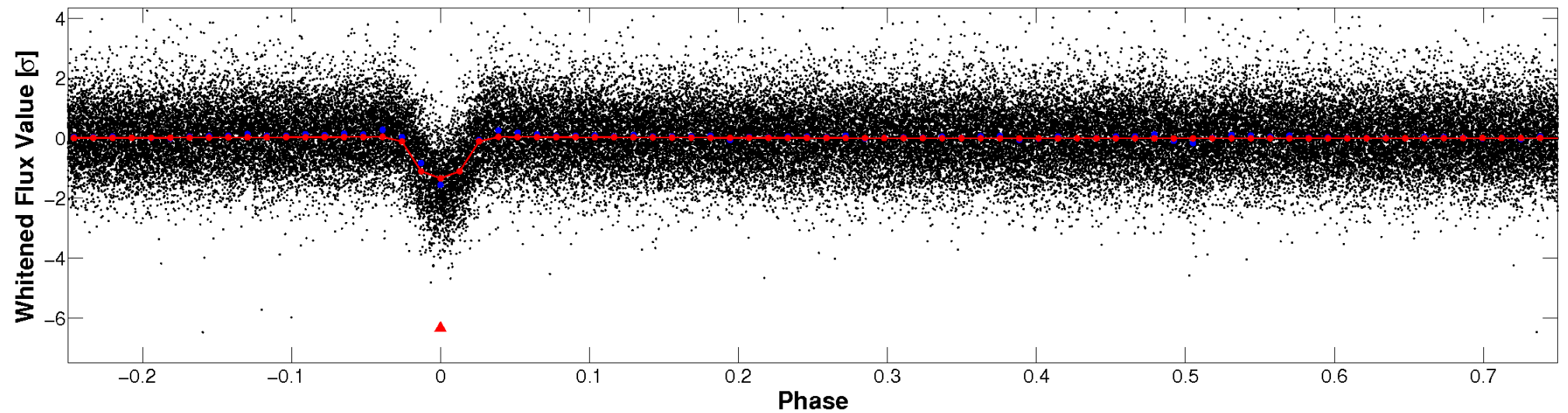


Non-Whitened Vs. Whitened Light Curve

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

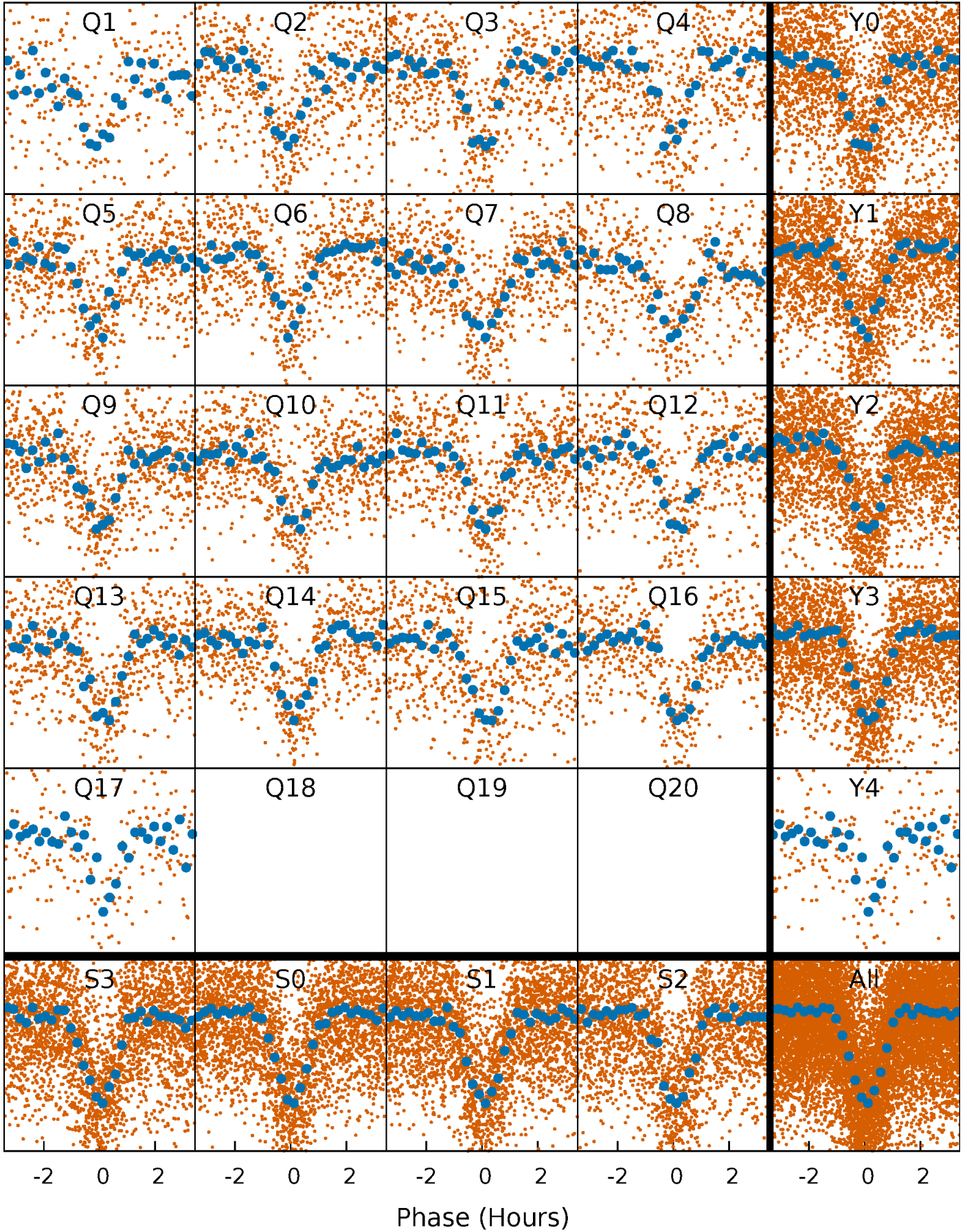


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



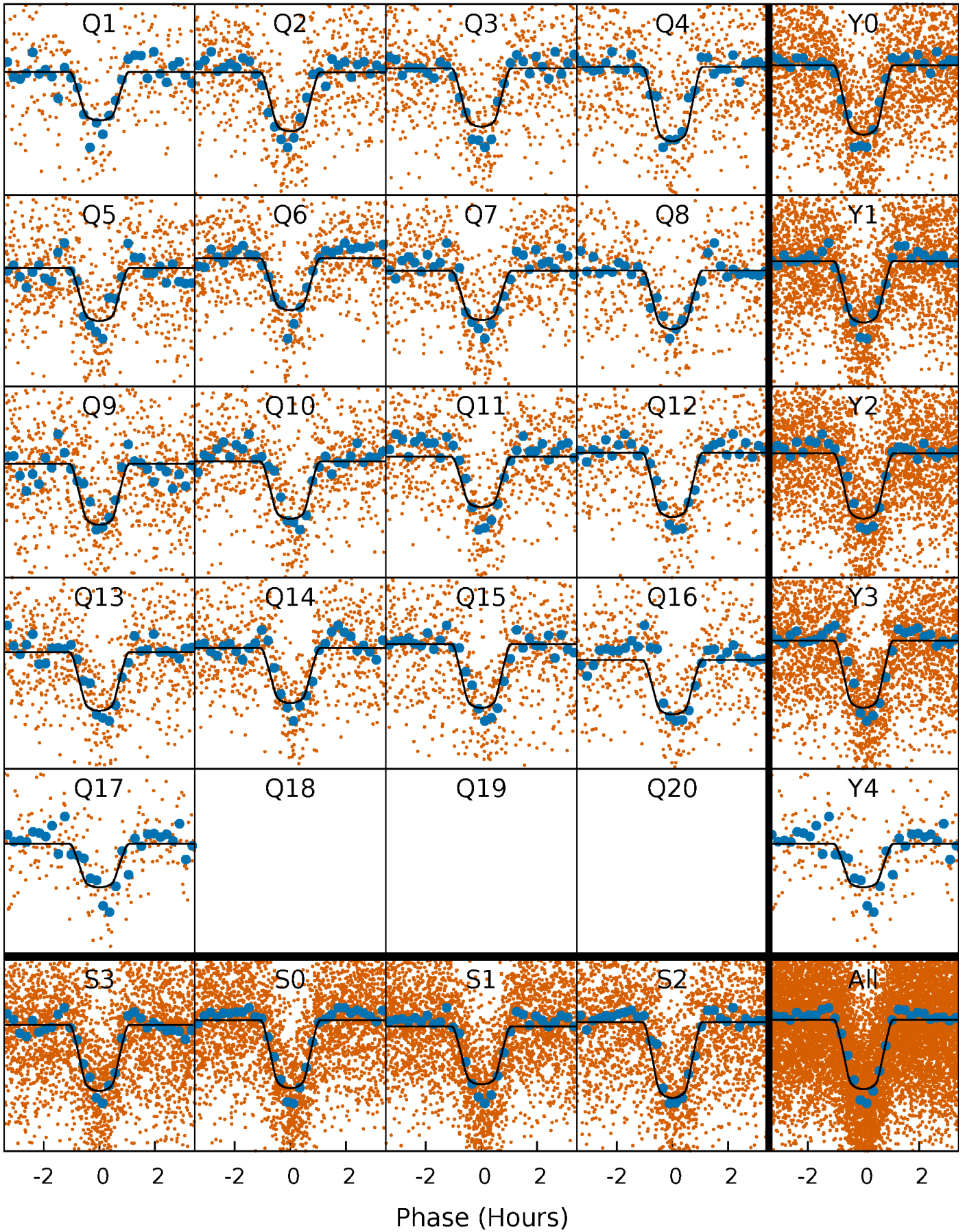
PDC Quarter-Phased Transit Curves

TCE 010666230-01 P= 1.577784 Days $T_0=131.735193$ (BKJD)



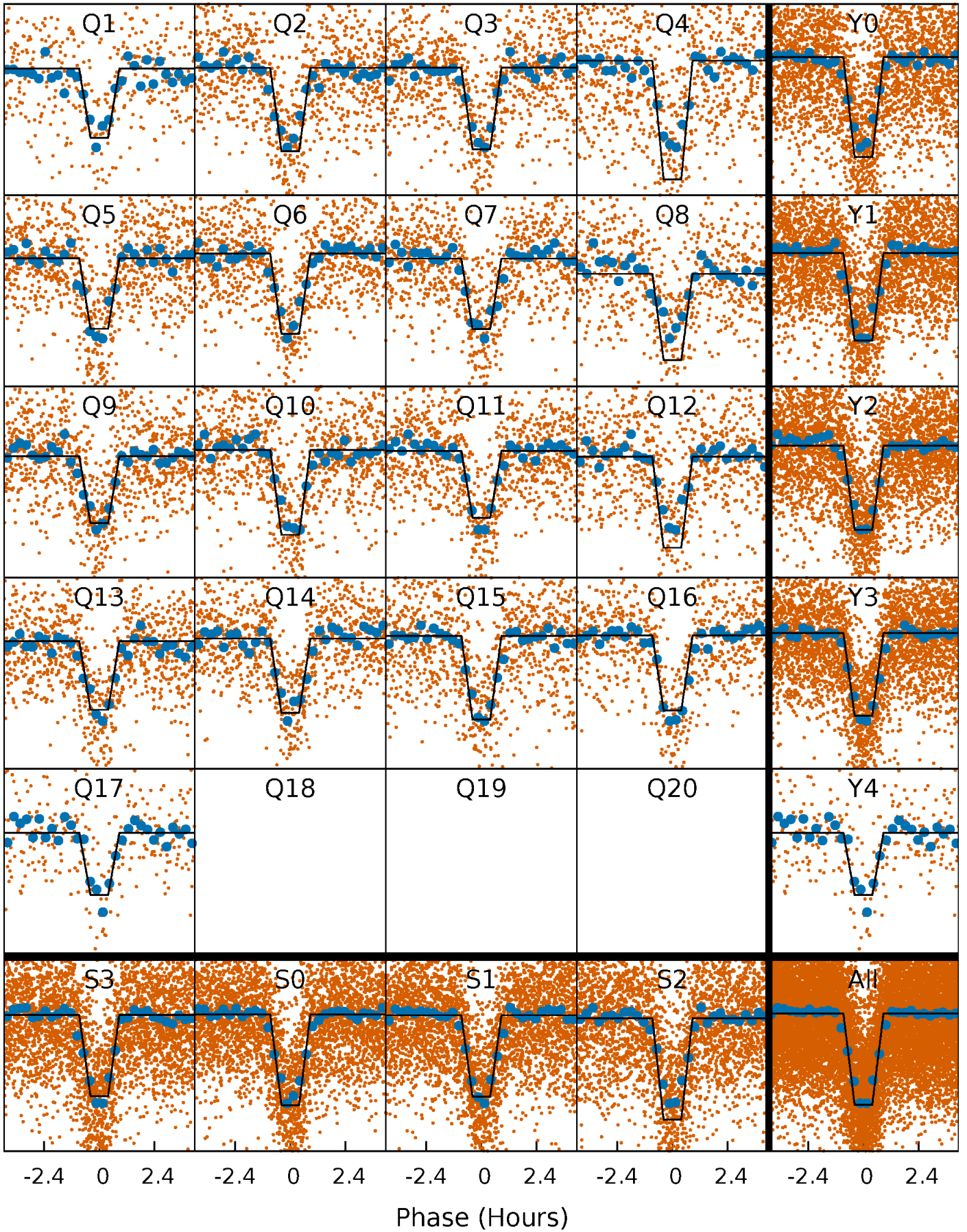
DV Quarter-Phased Transit Curves

TCE 010666230-01 P= 1.577784 Days $T_0=131.735193$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

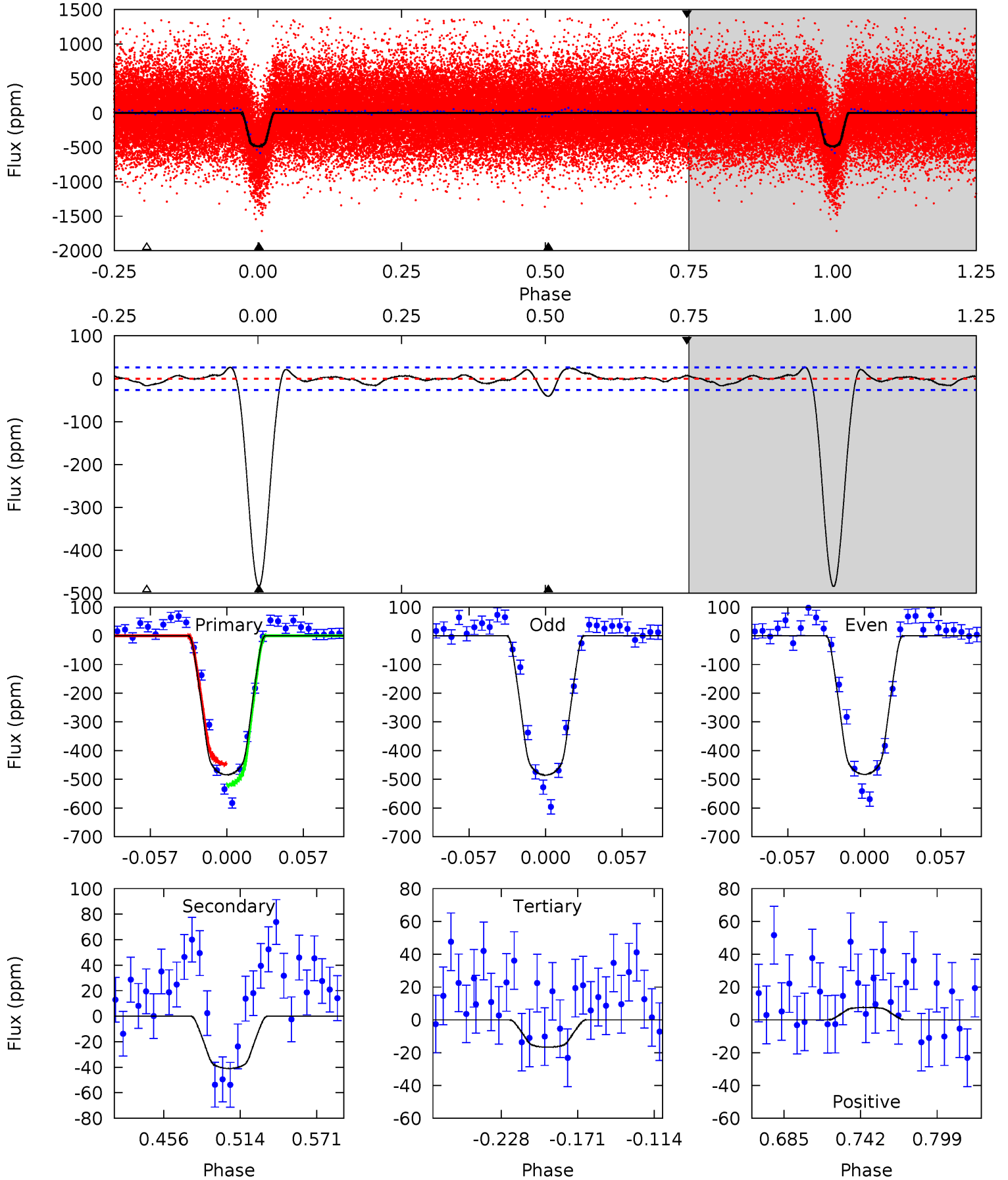
TCE 010666230-01 P= 1.577793 Days $T_0=131.733271$ (BKJD)



DV Model-Shift Uniqueness Test

010666230-01, P = 1.577784 Days, E = 130.157409 Days

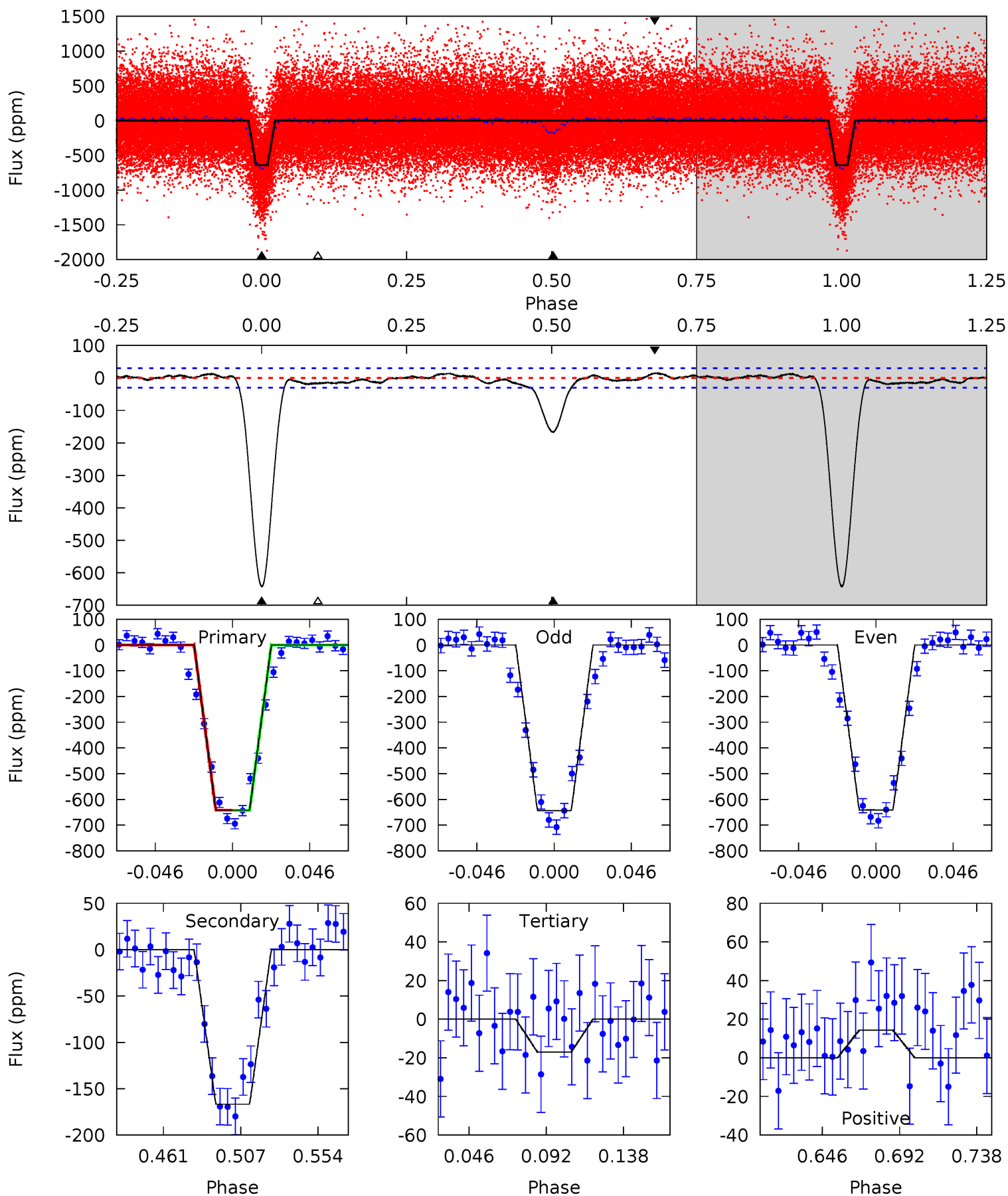
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.2	7.29	2.97	1.35	4.68	1.90	1.12	83.2	84.8	4.32	5.94	0.25	1.01	0.05	6.53



Alt Model-Shift Uniqueness Test

010666230-01, P = 1.577793 Days, E = 130.155478 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
101.5	26.4	2.69	2.26	4.72	1.99	1.40	98.8	99.2	23.7	24.1	0.19	0.99	0.02	0.09



Stellar Parameters For KIC 010666230

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6089^{+164}_{-182}	$4.566^{+0.044}_{-0.187}$	$-0.740^{+0.300}_{-0.300}$	$0.802^{+0.212}_{-0.071}$	$0.862^{+0.081}_{-0.090}$	$2.358^{+0.429}_{-1.153}$
	+3%/-3%	+1%/-4%	+41%/-41%	+26%/-9%	+9%/-10%	+18%/-49%
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 010666230-01 / KOI 1295.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-41 ± 6	$2.12^{+0.33}_{-0.23}$	2162^{+134}_{-105}	3562^{+149}_{-147}	$3.096^{+0.938}_{-0.808}$
Alt.	-167 ± 6	$2.39^{+0.34}_{-0.25}$	2158^{+152}_{-99}	4428^{+156}_{-138}	10^{+2}_{-2}

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 $A_{\text{obs}} \gg 1.0$

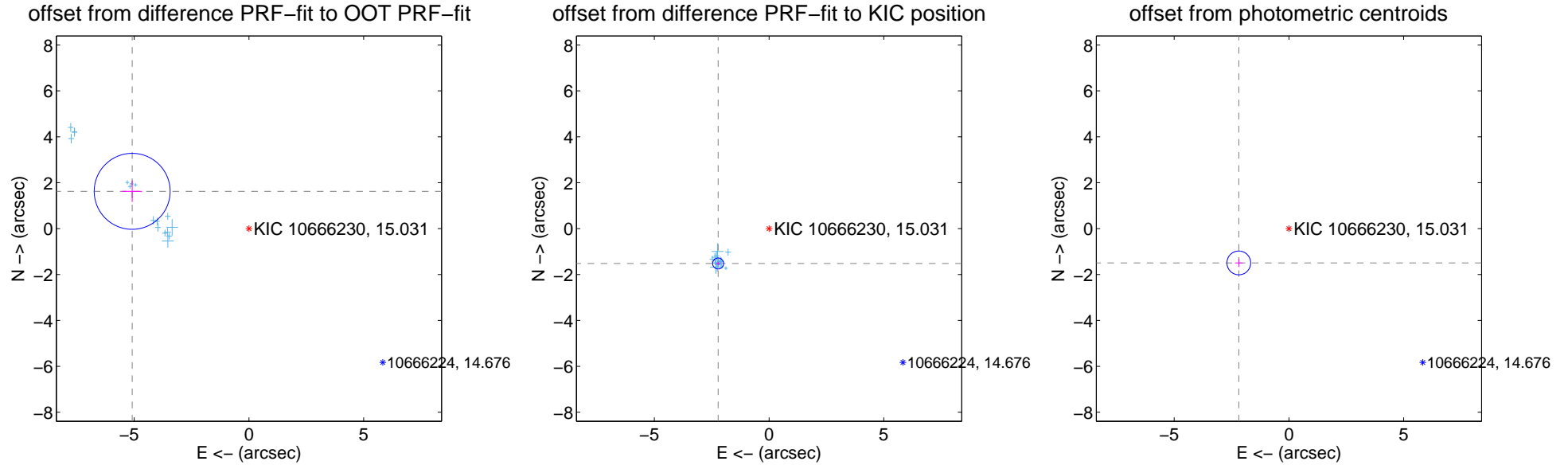
DV Centroid Data

Supplemental centroid analysis for 010666230-01. Kepler magnitude: 15.03. Transit SNR 59.13

There are 17 quarters with good PRF difference image offsets

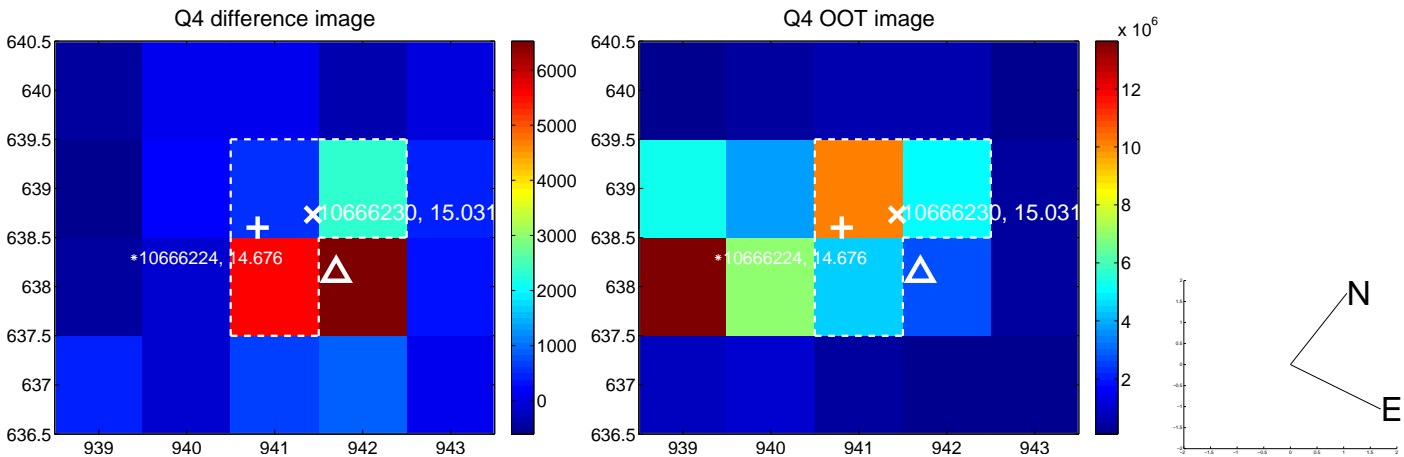
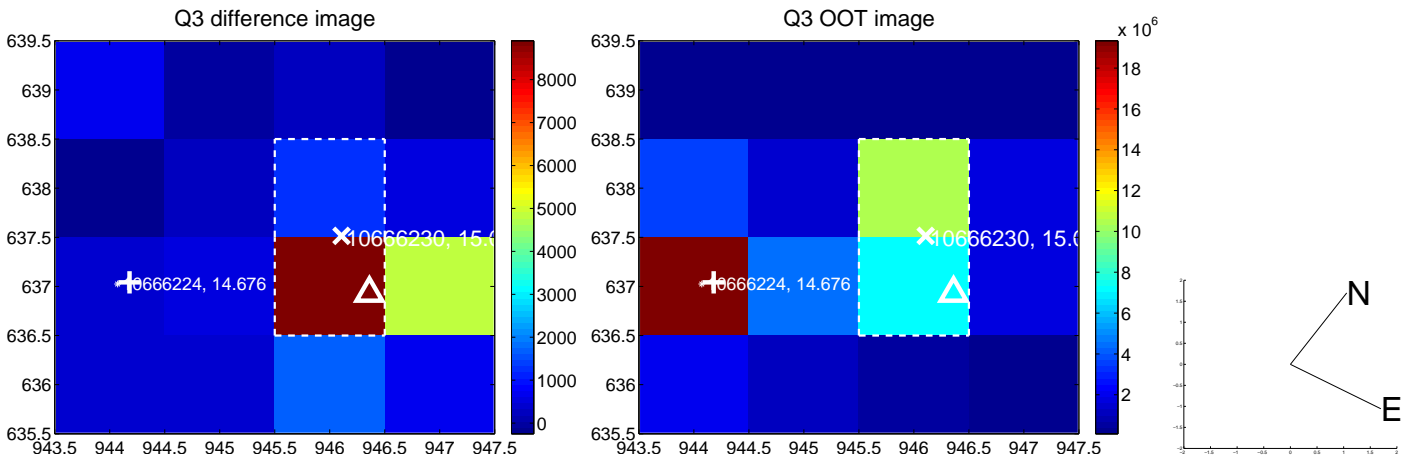
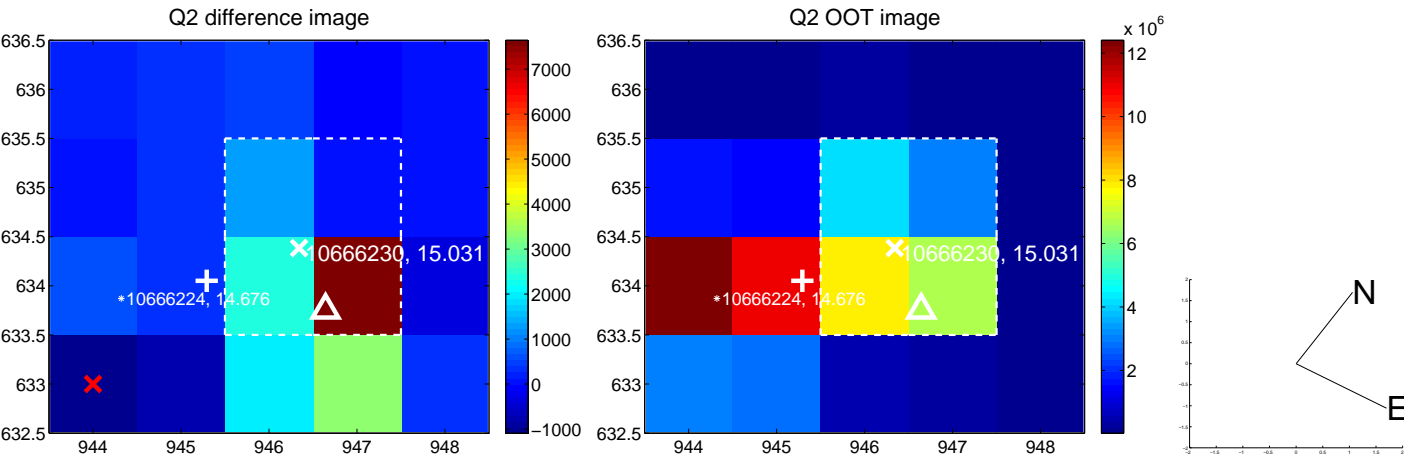
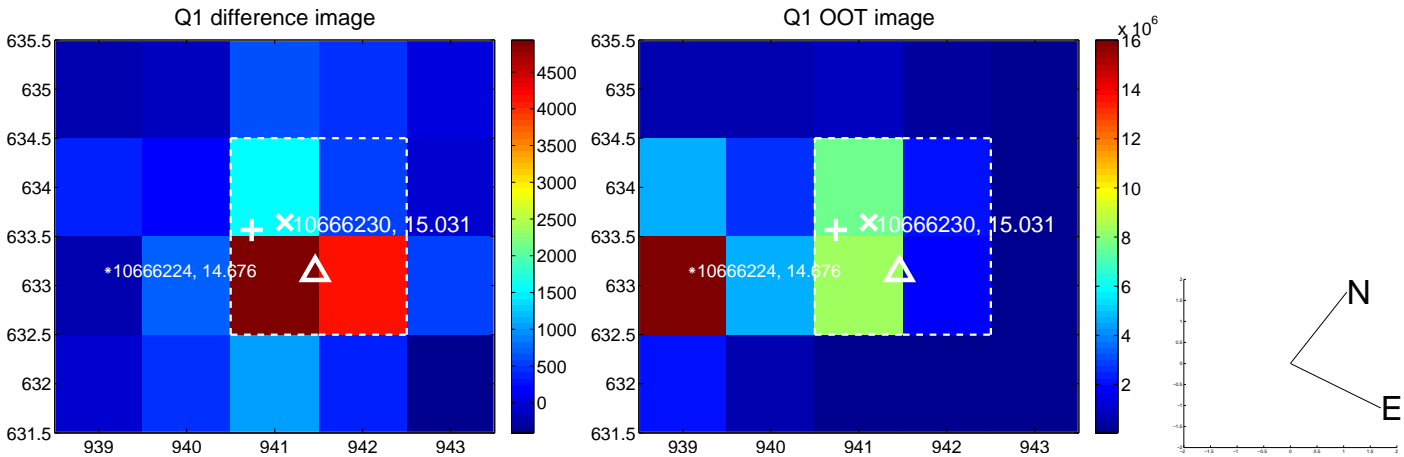
The direct PRF centroid is offset from the target star catalog position by about 1.67 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.341 ± 0.552	9.68	5.089 ± 0.435	1.624 ± 0.465
PRF-fit source offset from KIC position	2.691 ± 0.080	33.79	2.220 ± 0.077	-1.520 ± 0.084
photometric centroid source offset	2.65 ± 0.17	15.34	2.18 ± 0.17	-1.49 ± 0.18

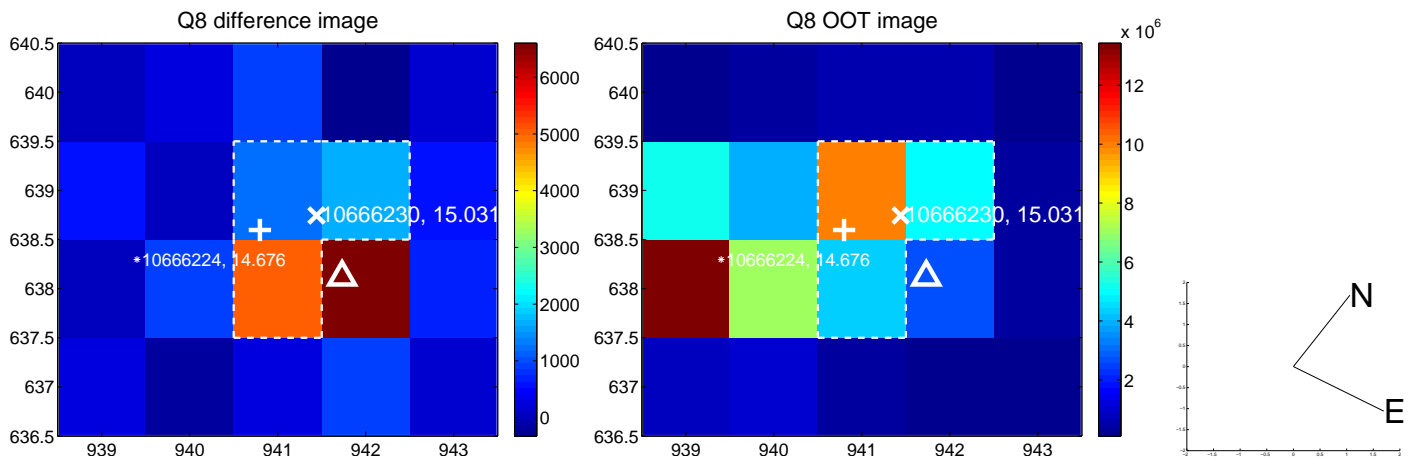
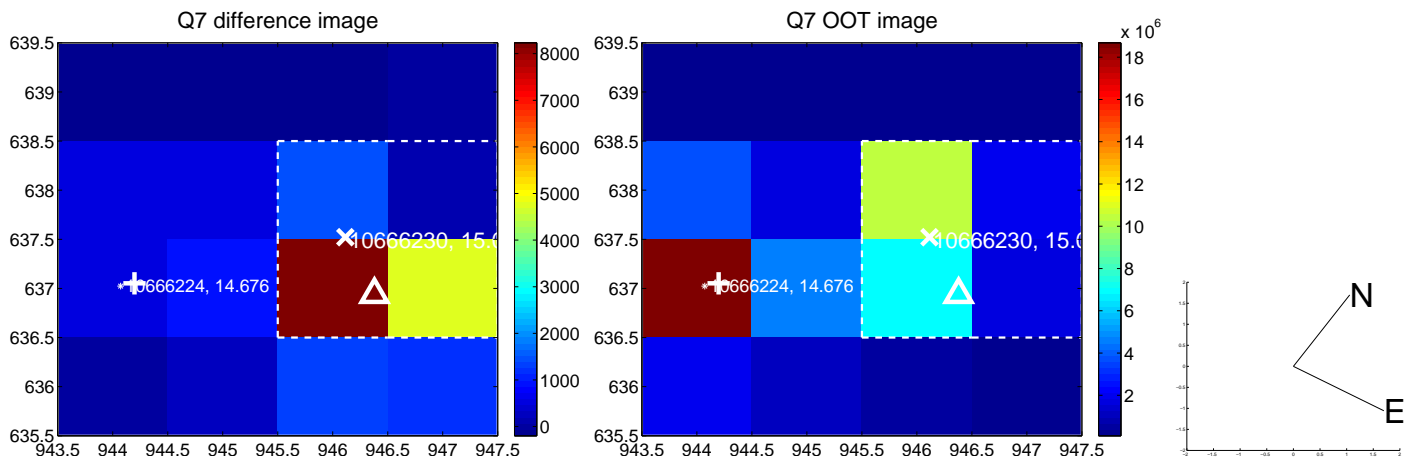
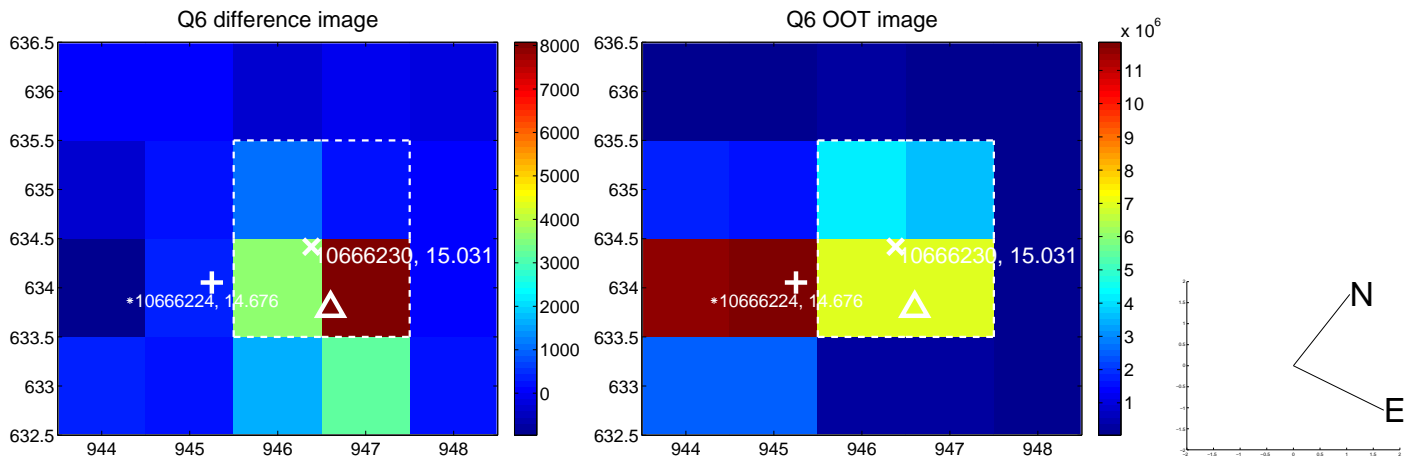
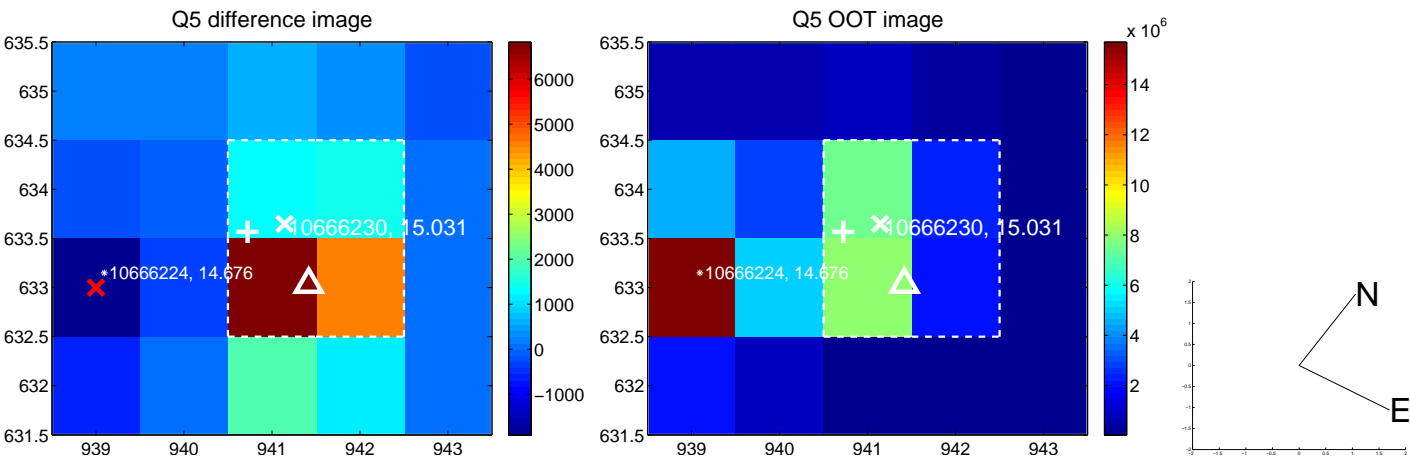


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

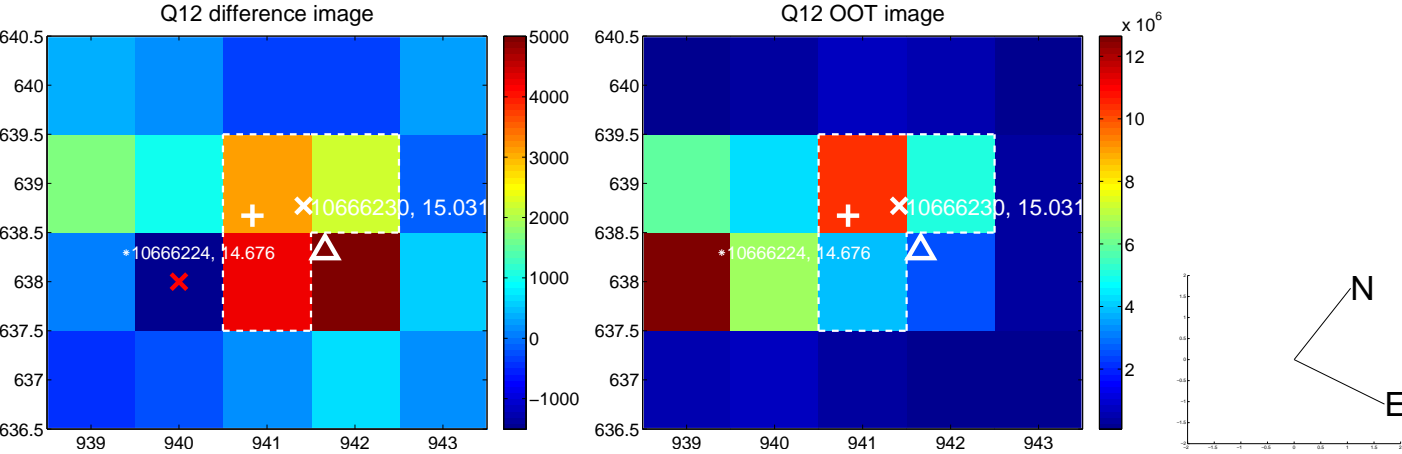
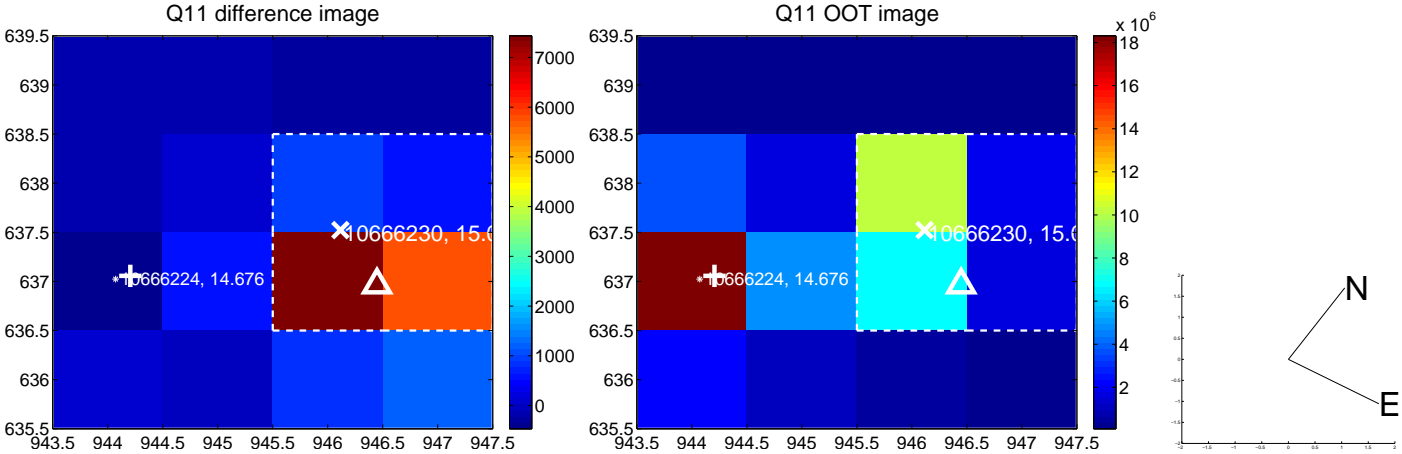
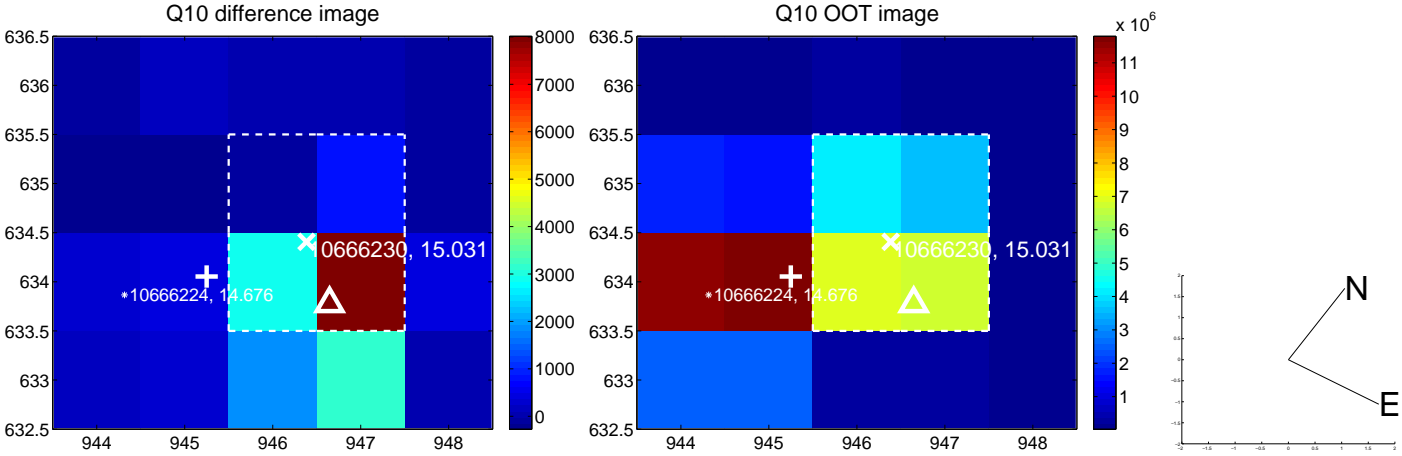
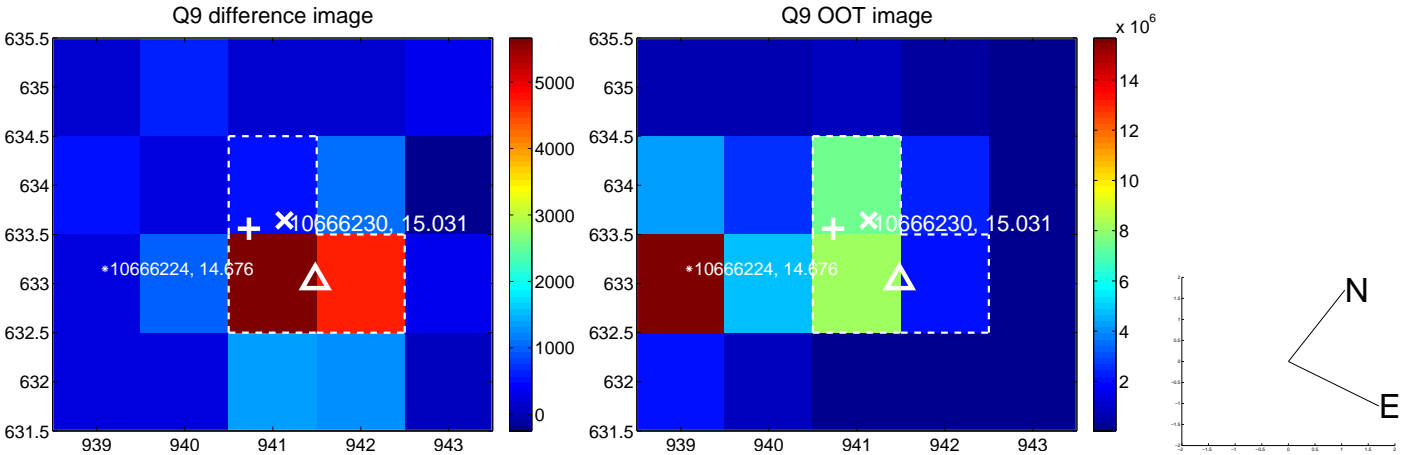
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



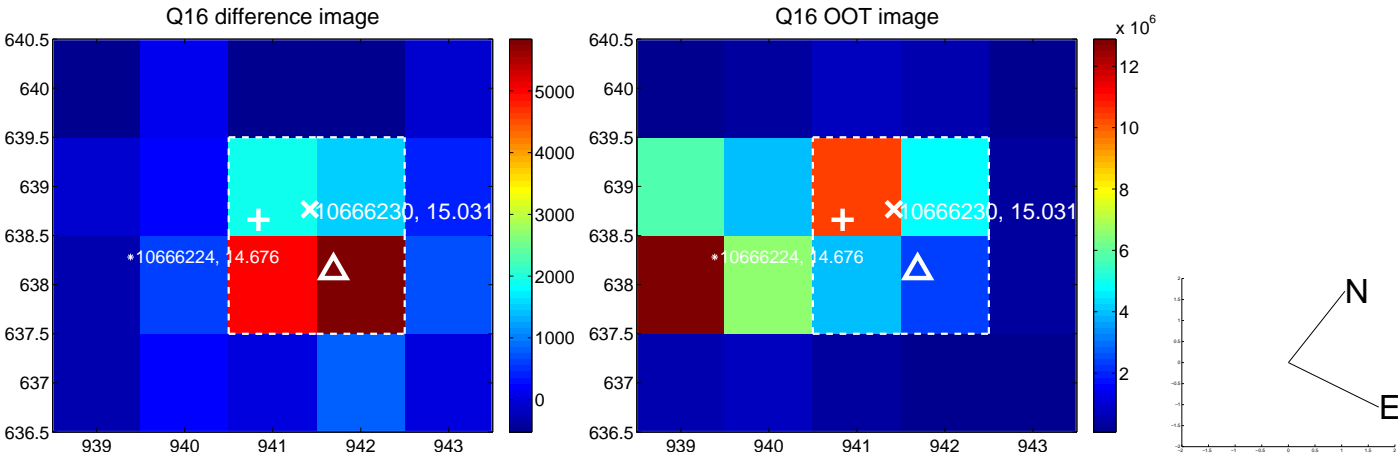
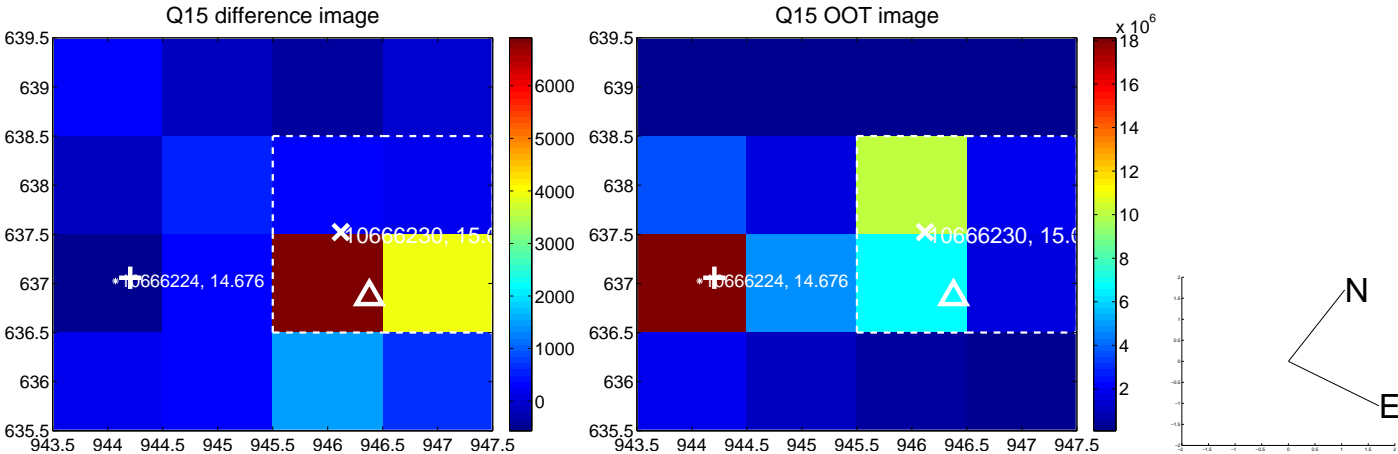
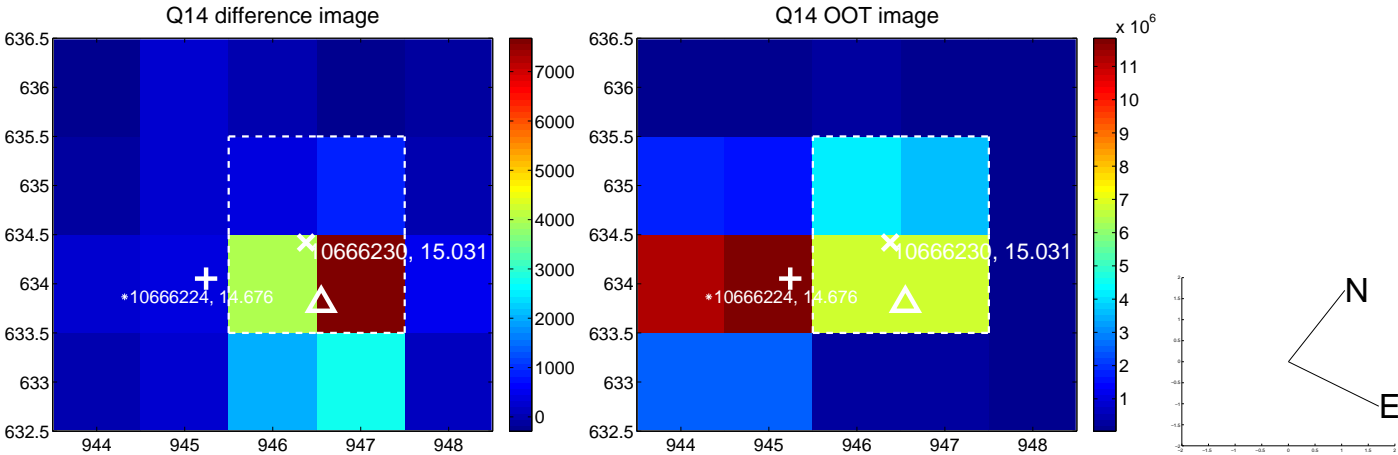
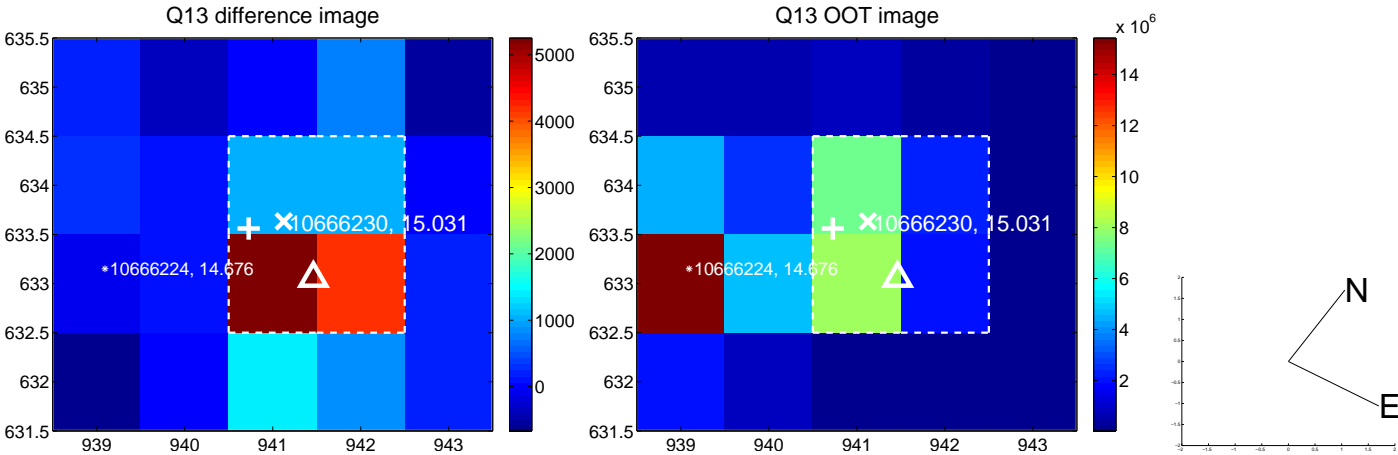
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



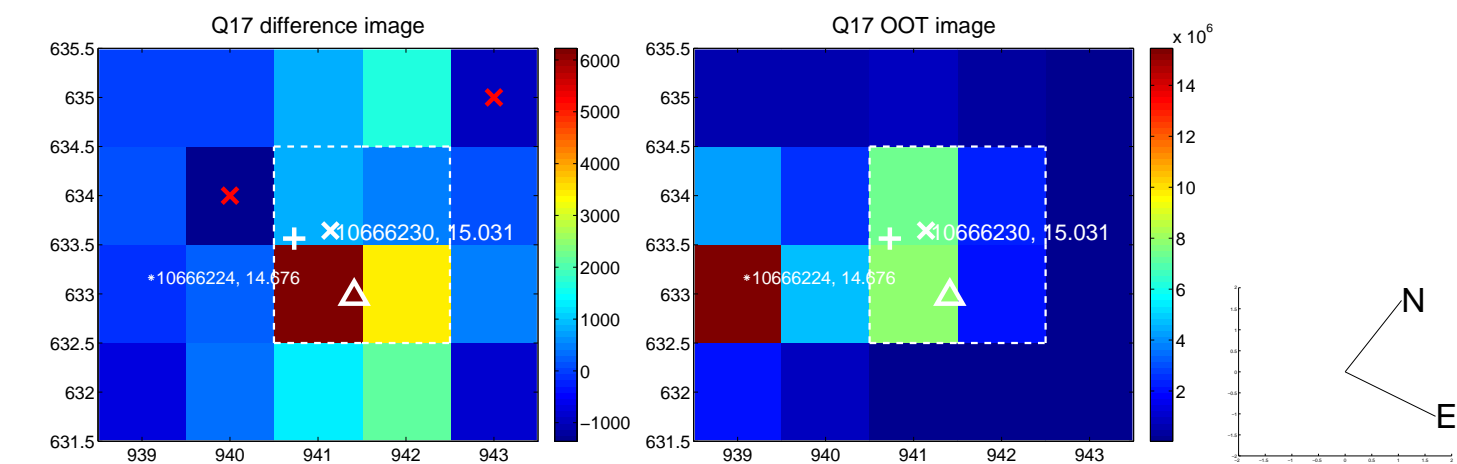
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



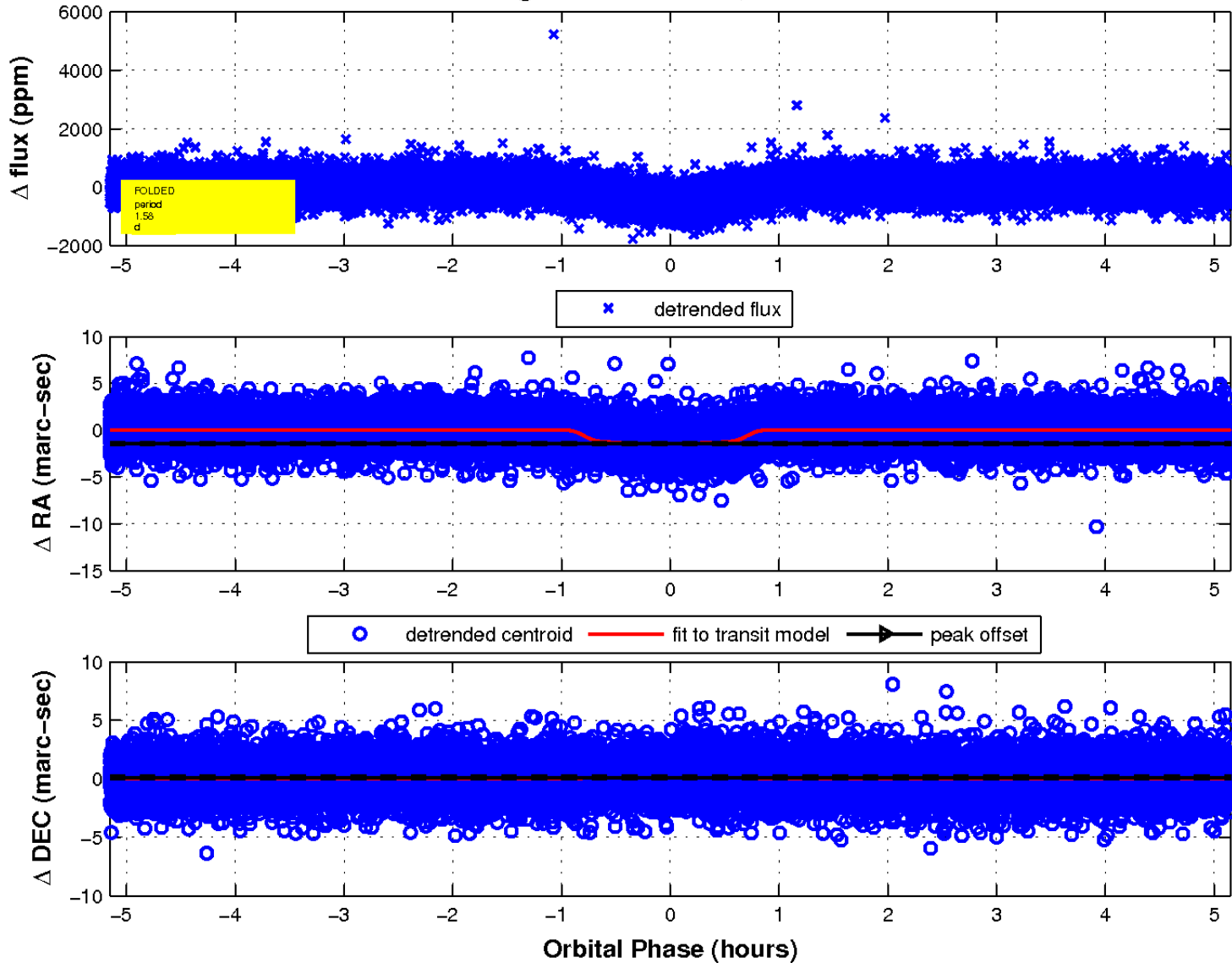
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

