

KIC 010352333

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})
010352333-01	OBS	3991.01	1.570612	131.525639	153.1	0.930	20.0	28.0	0.92	5519	1.15	1136.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010352333-01	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 010352333-01

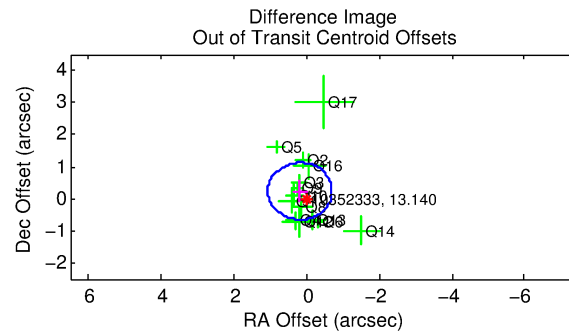
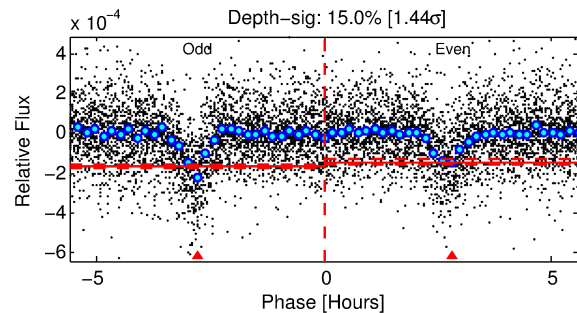
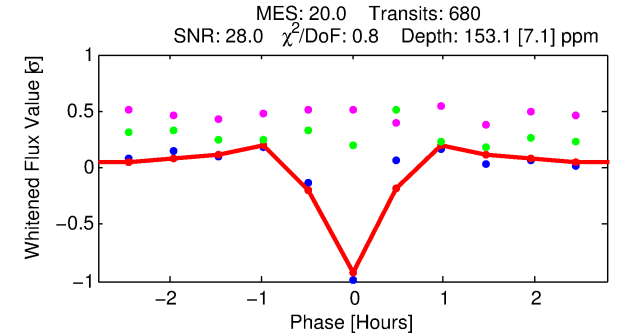
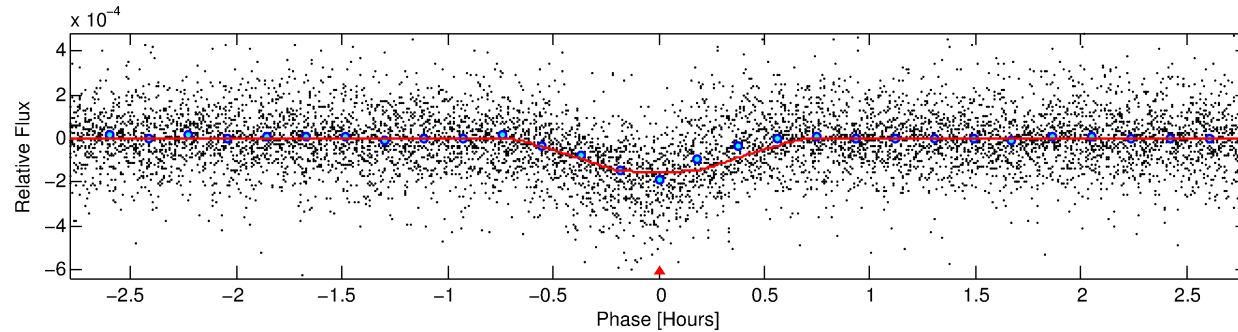
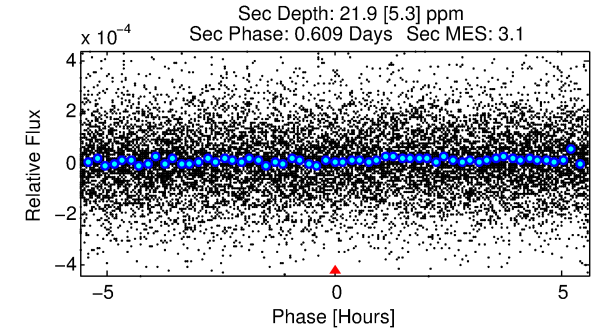
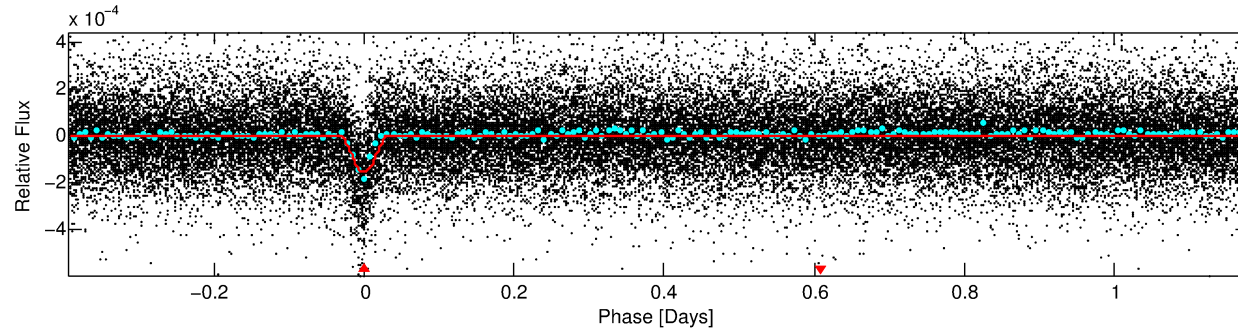
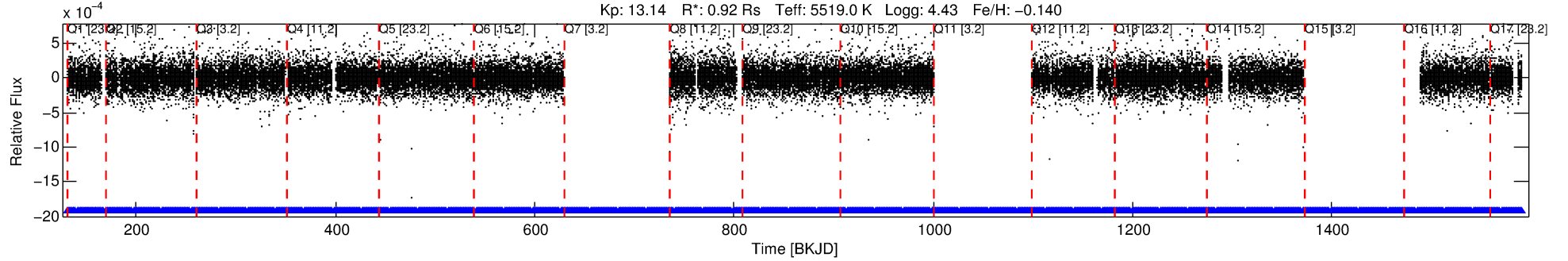
No Significant Match Found

DV One-Page Summary

KIC: 10352333 Candidate: 1 of 1 Period: 1.571 d

KOI: K03991 Corr: No Ephemeris Match

Kp: 13.14 R*: 0.92 Rs Teff: 5519.0 K Logg: 4.43 Fe/H: -0.140



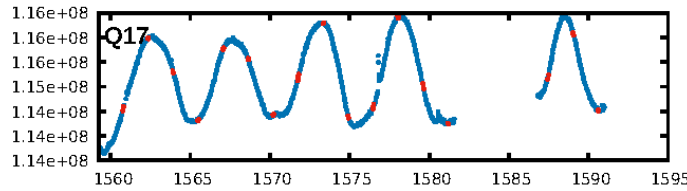
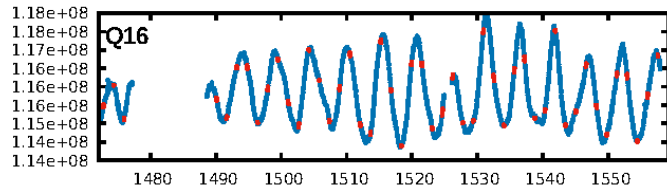
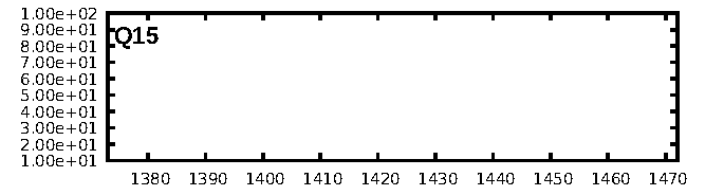
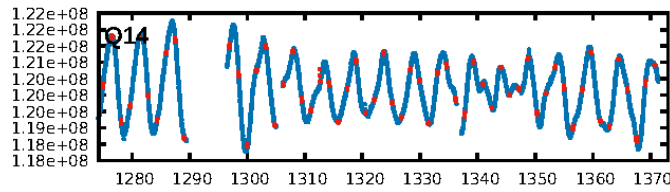
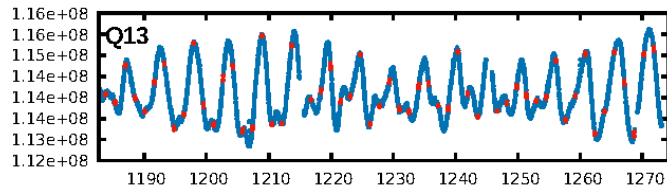
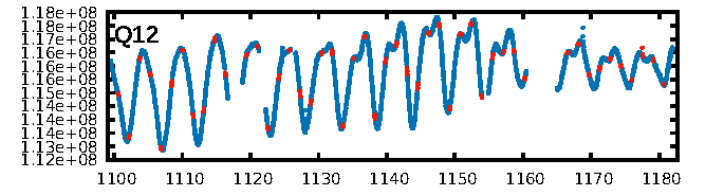
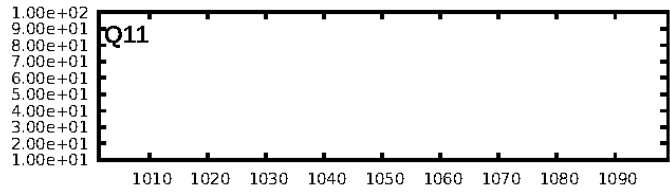
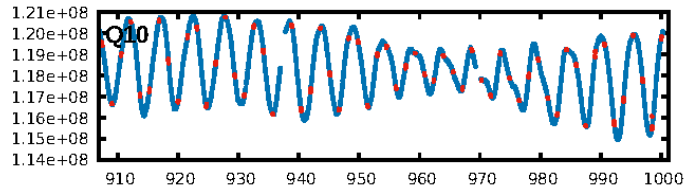
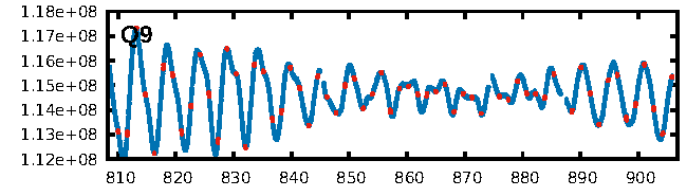
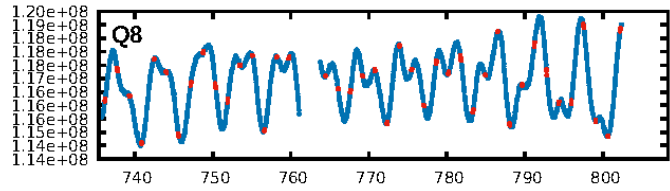
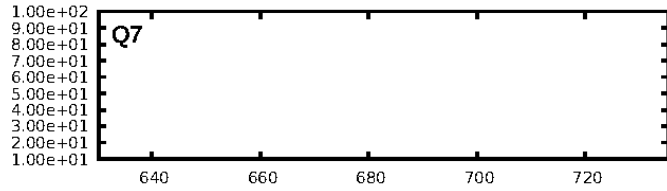
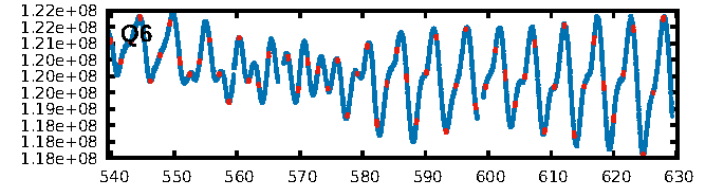
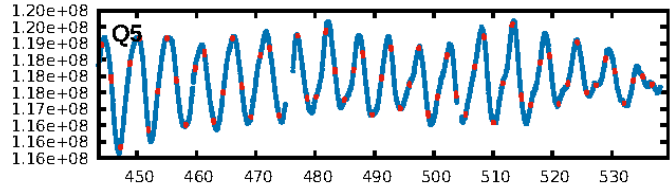
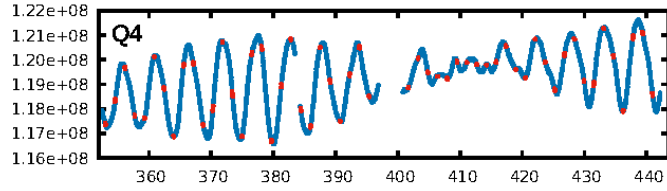
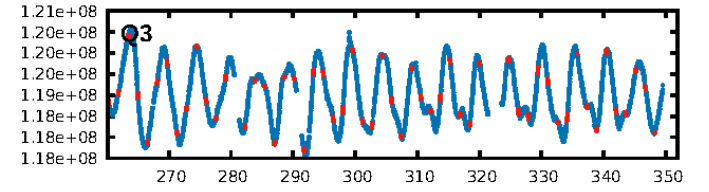
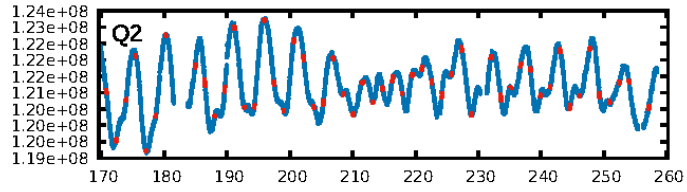
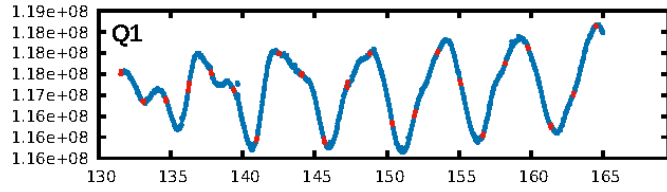
DV Fit Results:

Period = 1.57061 [0.00000] d
Epoch = 131.5256 [0.0005] BKJD
Rp/R* = 0.0114 [0.0046]
a/R* = 12.39 [20.52]
b = 0.32 [4.70]
Seff = 1136.97 [217.38]
Teq = 1481 [71] K
Rp = 1.15 [0.48] Re
a = 0.0249 [0.0028] AU
Ag = 5.65 [4.84] [0.96σ]
Teffp = 3530 [740] K [2.76σ]

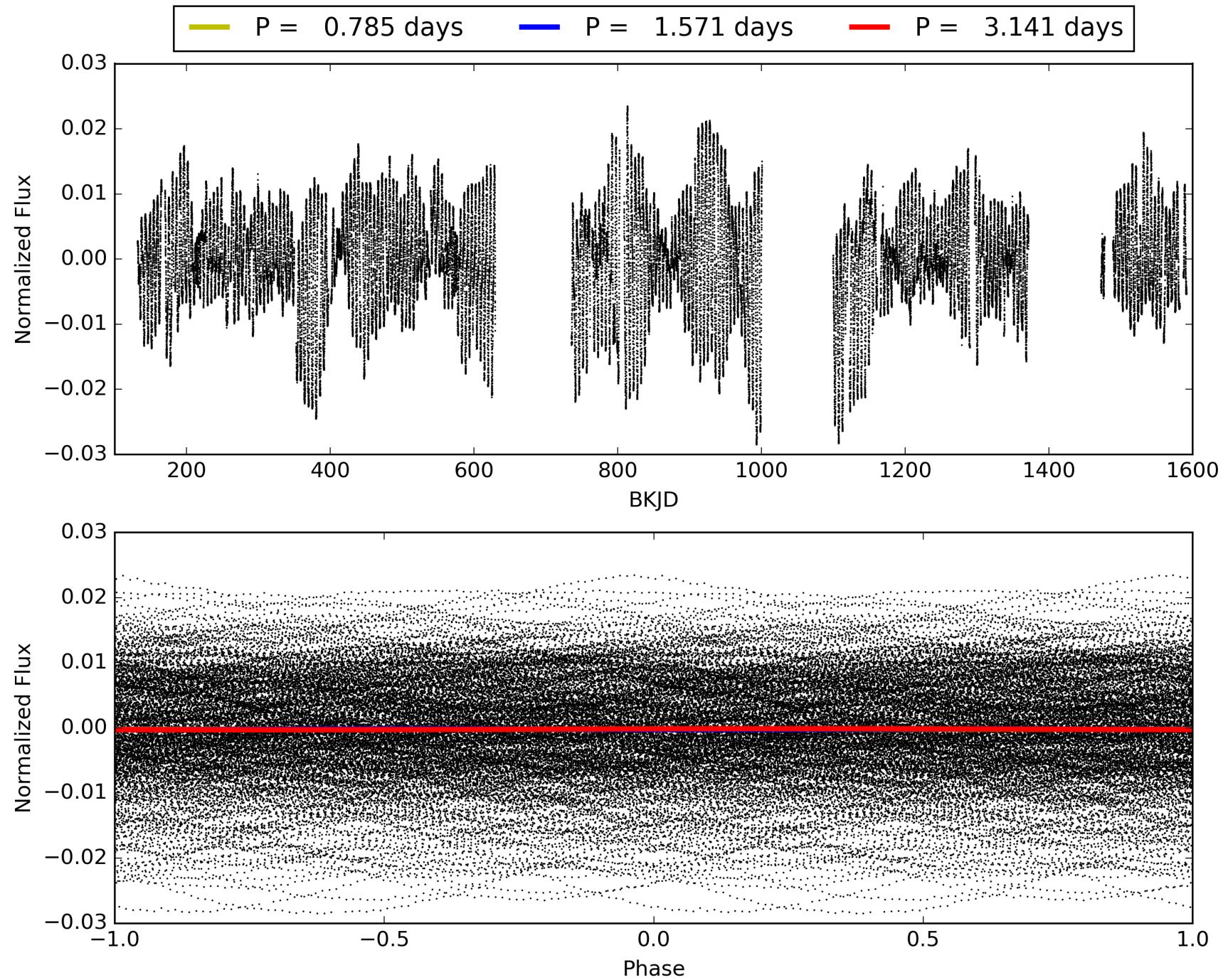
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.64e-73
RollingBand-fgt: 1.00 [640/640]
GhostDiagnostic-chr: 4.338
Centroid-sig: 0.0%
Centroid-so: 0.965 arcsec [2.77σ]
OotOffset-rm: 0.297 arcsec [1.01σ]
KicOffset-rm: 0.442 arcsec [1.65σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010352333-01, PDC Light Curves

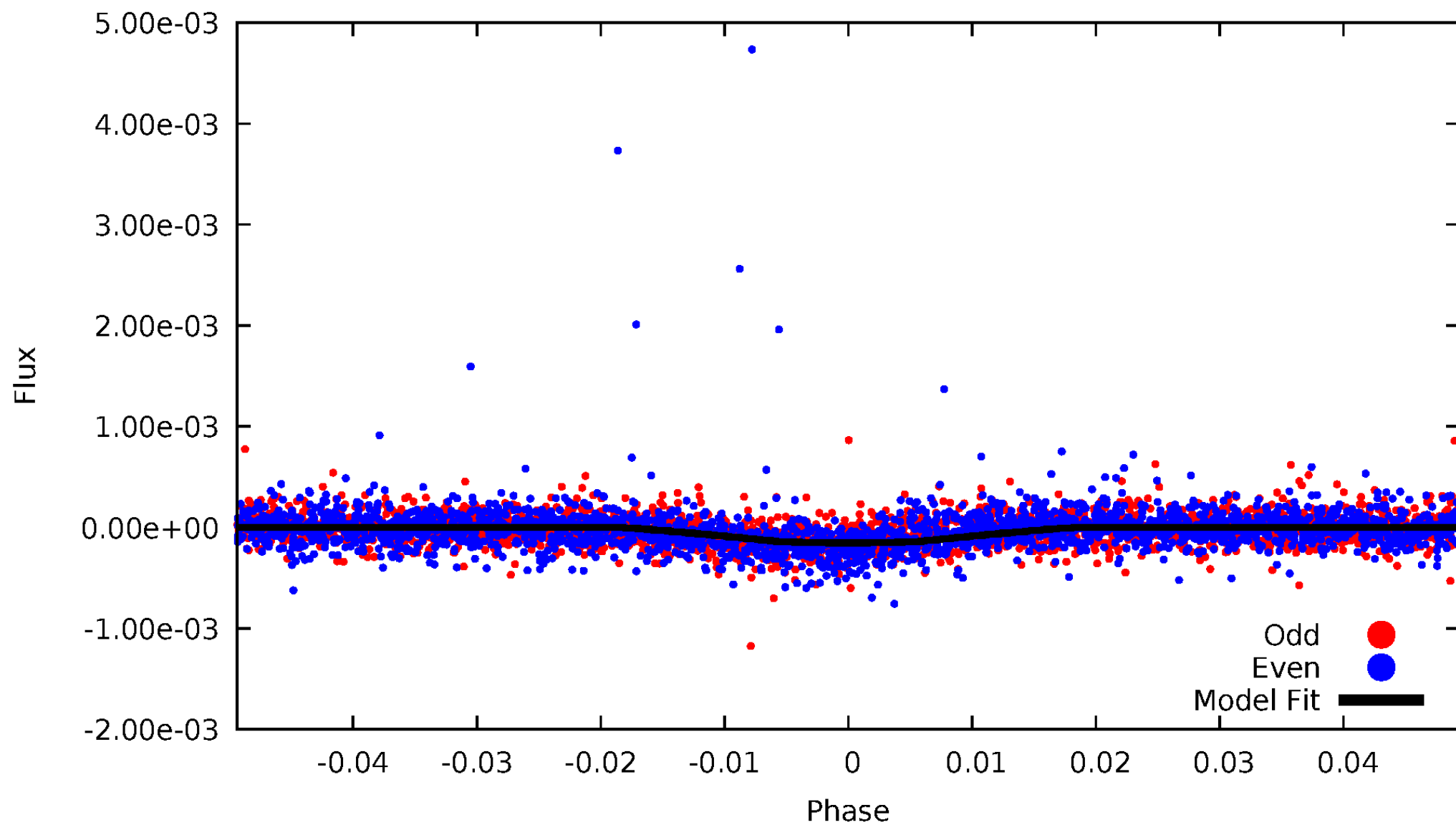


TCE 010352333-01



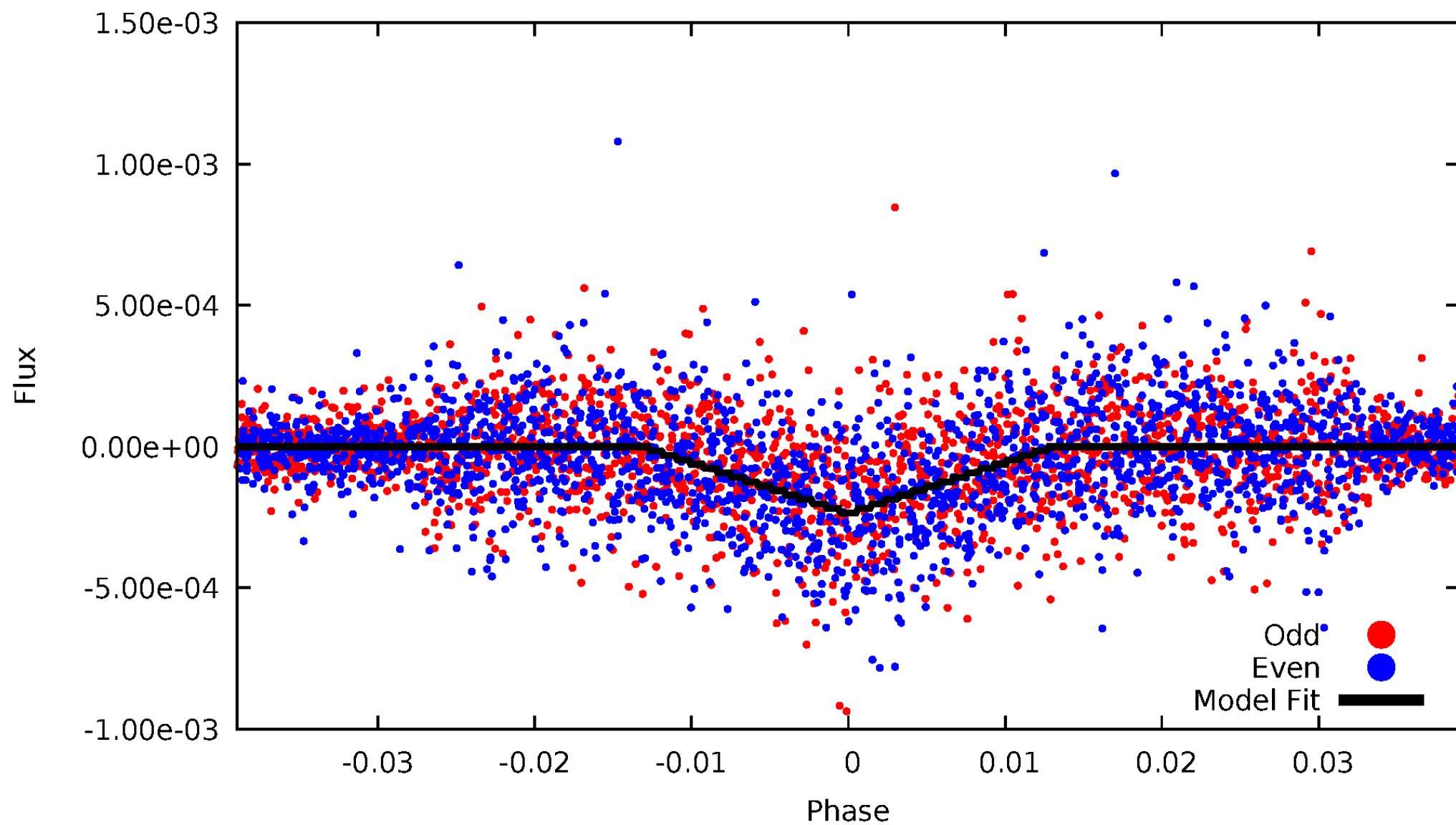
DV Odd/Even

TCE 010352333-01



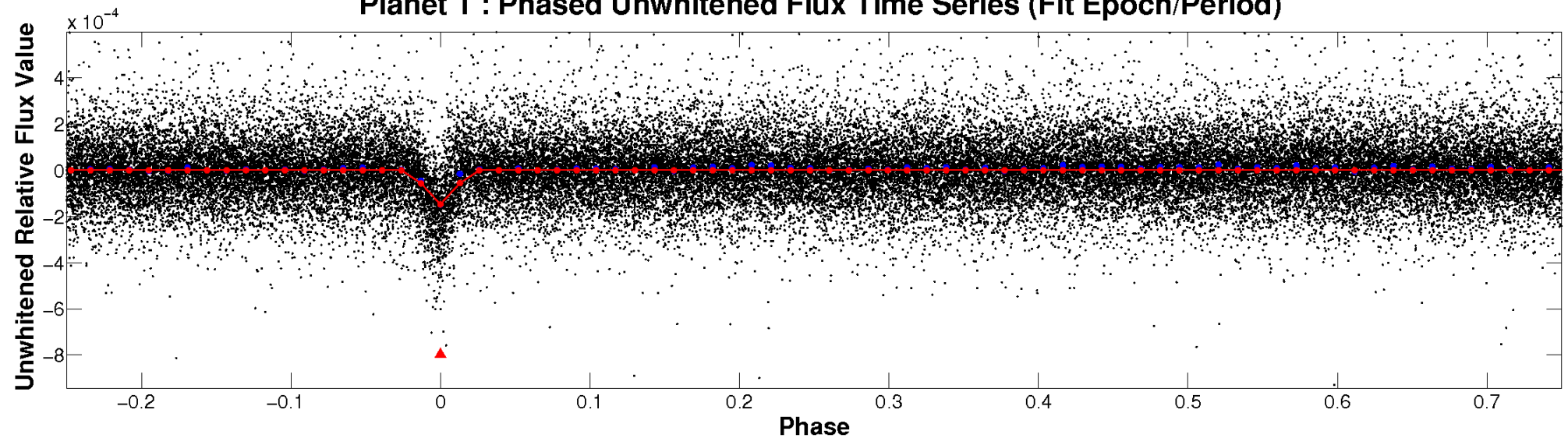
ALT Odd/Even

TCE 010352333-01

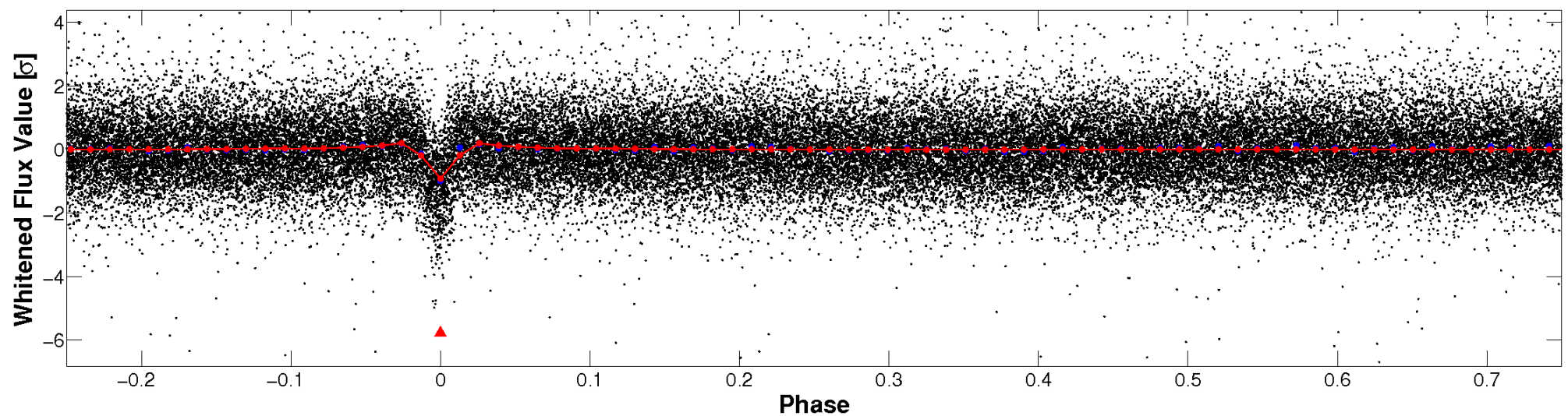


Non-Whitened Vs. Whitened Light Curve

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

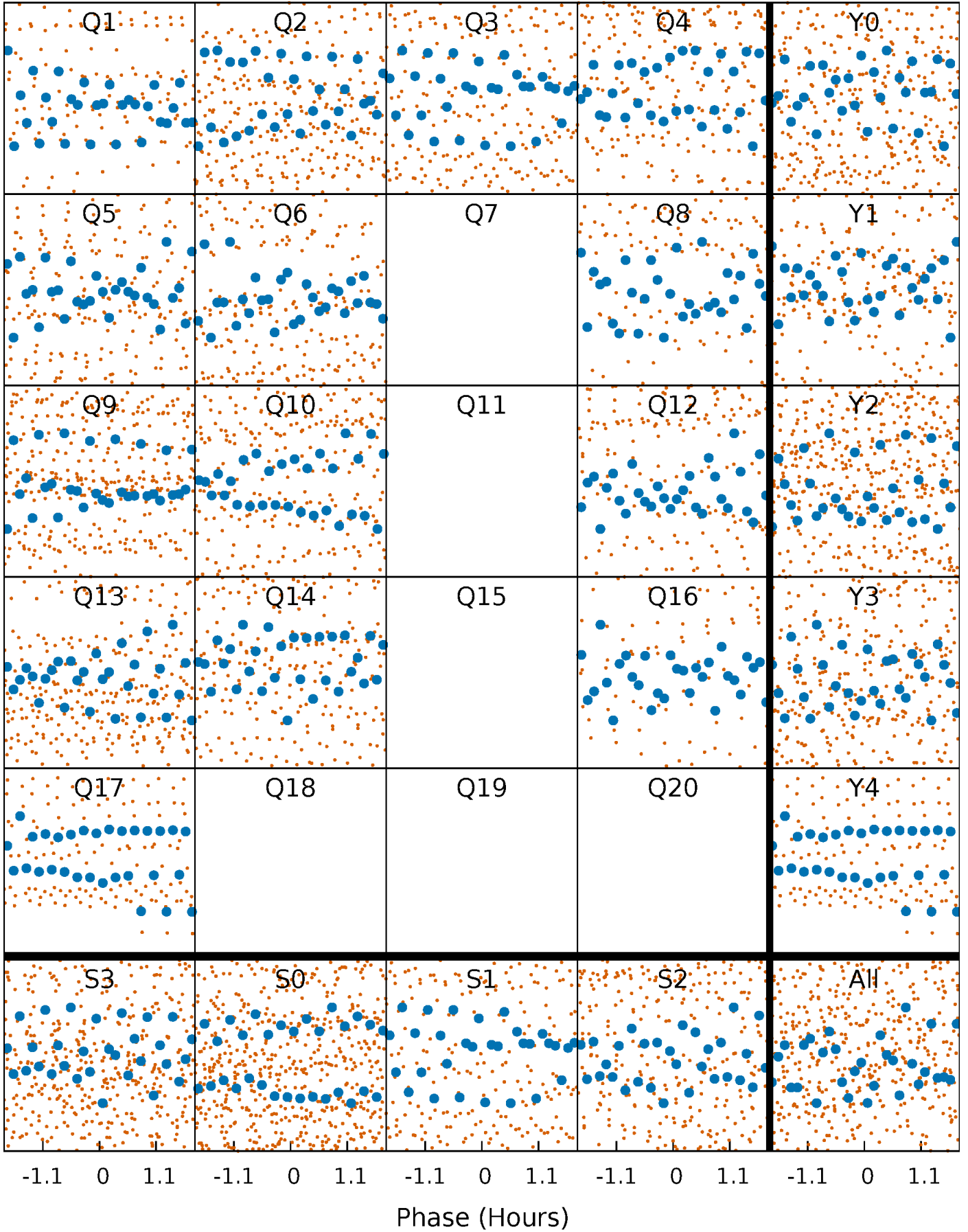


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



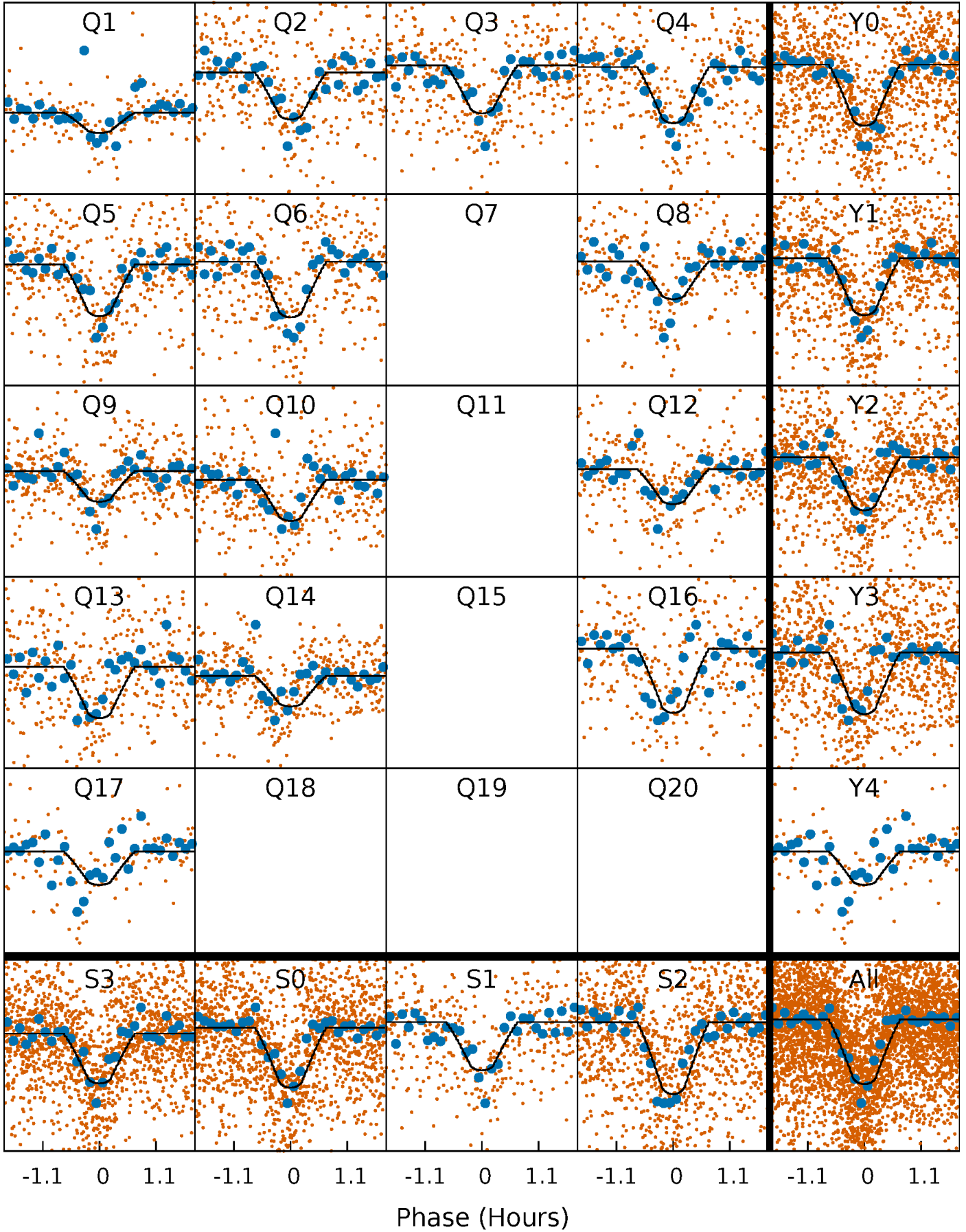
PDC Quarter-Phased Transit Curves

TCE 010352333-01 P= 1.570612 Days $T_0=131.525639$ (BKJD)



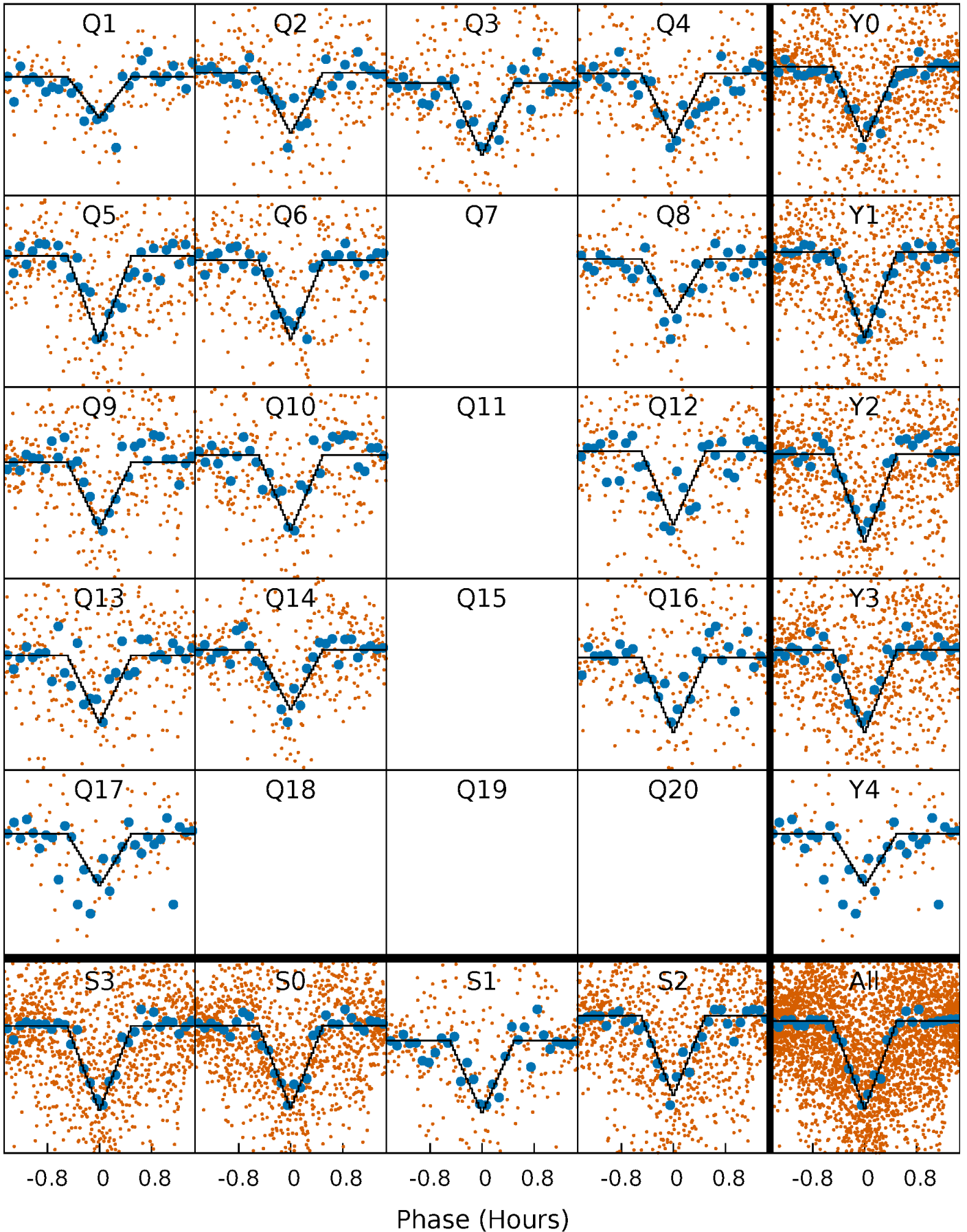
DV Quarter-Phased Transit Curves

TCE 010352333-01 P= 1.570612 Days $T_0=131.525639$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

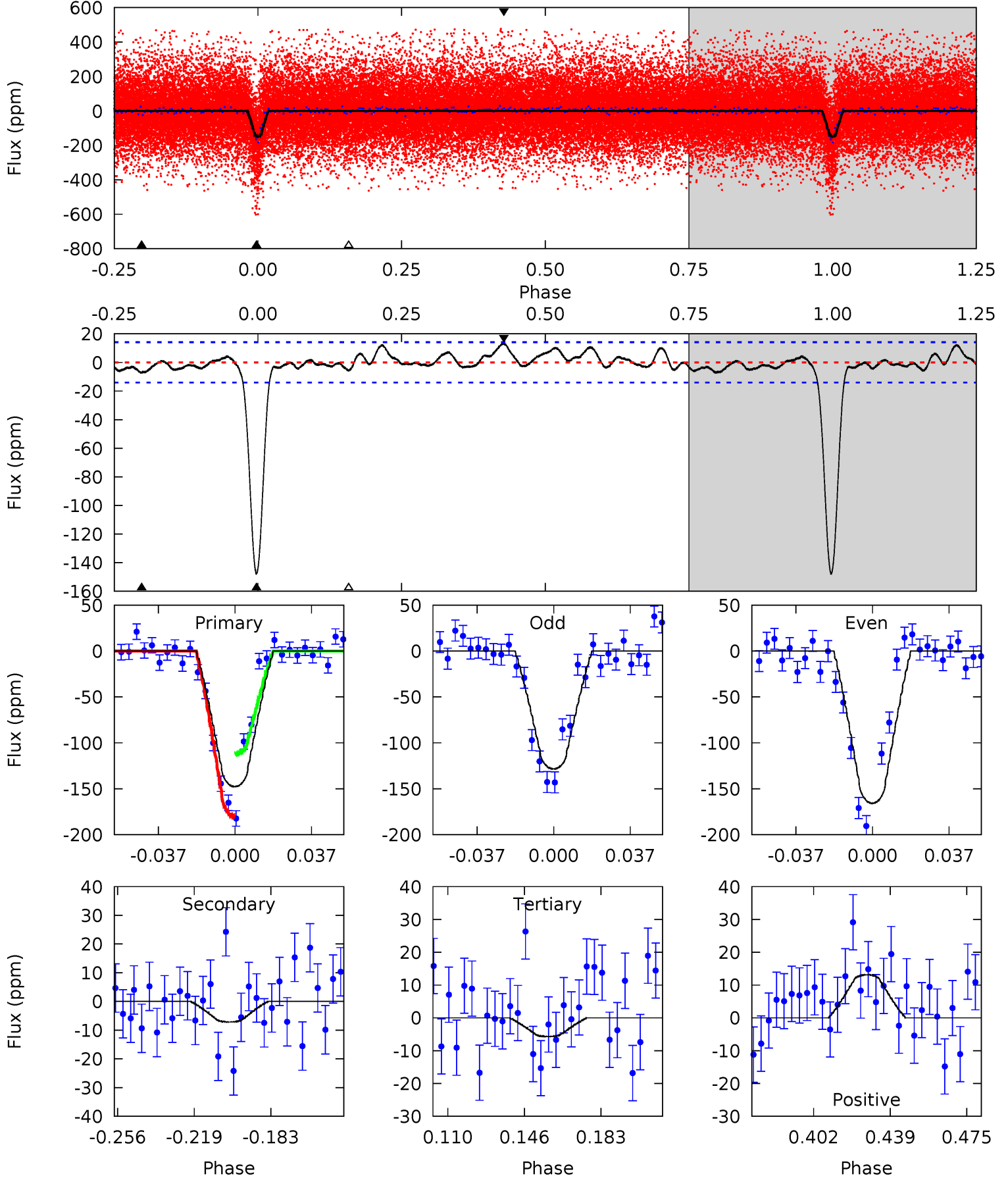
TCE 010352333-01 P= 1.570598 Days $T_0=131.527892$ (BKJD)



DV Model-Shift Uniqueness Test

010352333-01, P = 1.570612 Days, E = 129.955027 Days

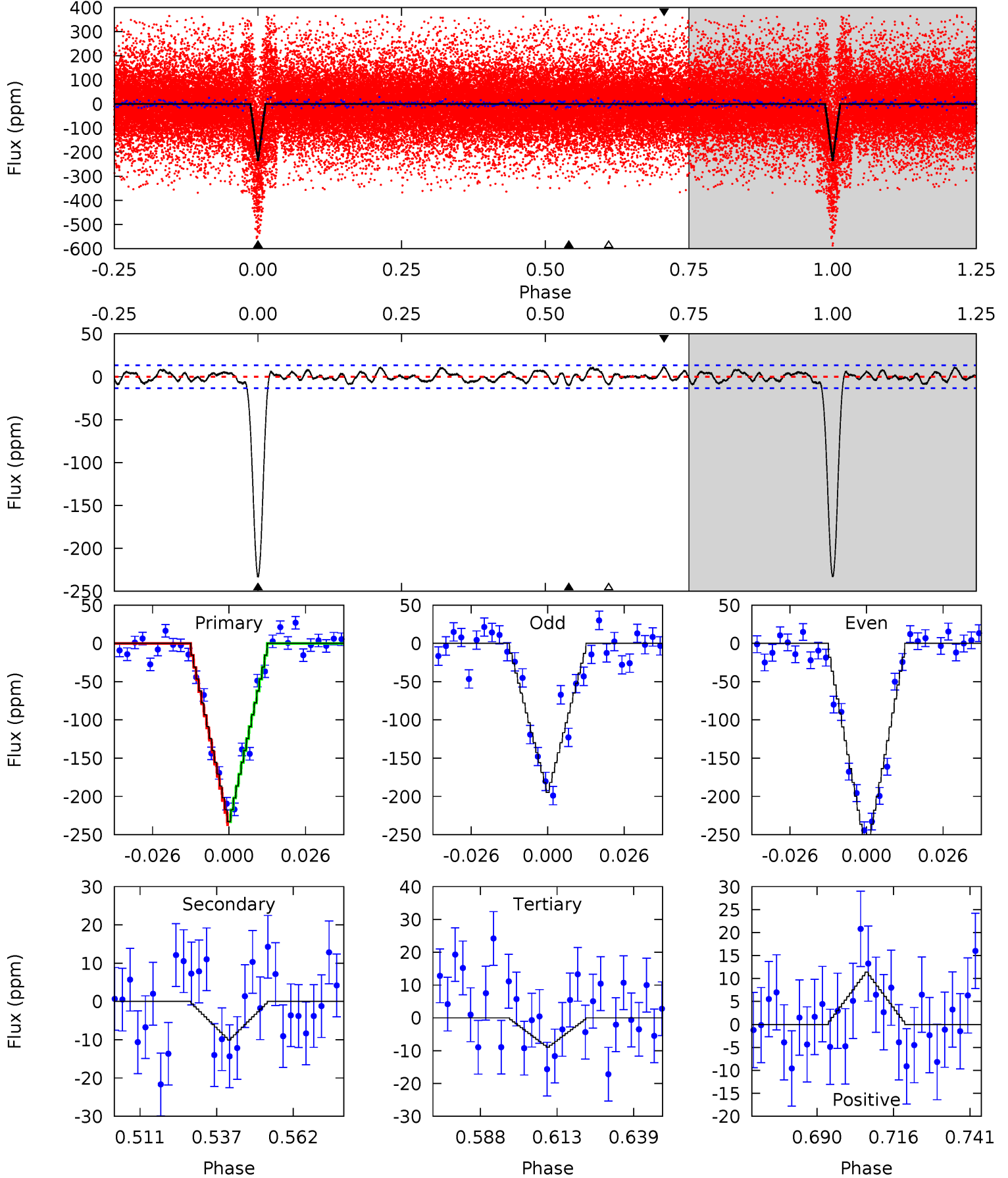
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.0	2.42	1.92	4.45	4.77	2.09	1.47	48.1	45.6	0.50	-2.03	6.35	0.99	0.08	11.5



Alt Model-Shift Uniqueness Test

010352333-01, P = 1.570598 Days, E = 129.957294 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
84.5	3.65	3.25	4.12	4.84	2.23	1.60	81.3	80.4	0.40	-0.47	14.1	1.01	0.05	0



Stellar Parameters For KIC 010352333

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5519^{+83}_{-74}	$4.431^{+0.108}_{-0.072}$	$-0.140^{+0.150}_{-0.150}$	$0.921^{+0.093}_{-0.102}$	$0.837^{+0.063}_{-0.037}$	$1.506^{+0.614}_{-0.368}$
	+2%/-1%	+2%/-2%	+107%/-107%	+10%/-11%	+8%/-4%	+41%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010352333-01 / KOI 3991.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 3	$1.14^{+0.50}_{-0.42}$	2062^{+63}_{-73}	3117^{+623}_{-440}	$1.731^{+3.210}_{-0.977}$
Alt.	-10 ± 3	$1.59^{+0.45}_{-0.55}$	2064^{+65}_{-67}	2989^{+472}_{-329}	$1.375^{+1.942}_{-0.626}$

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

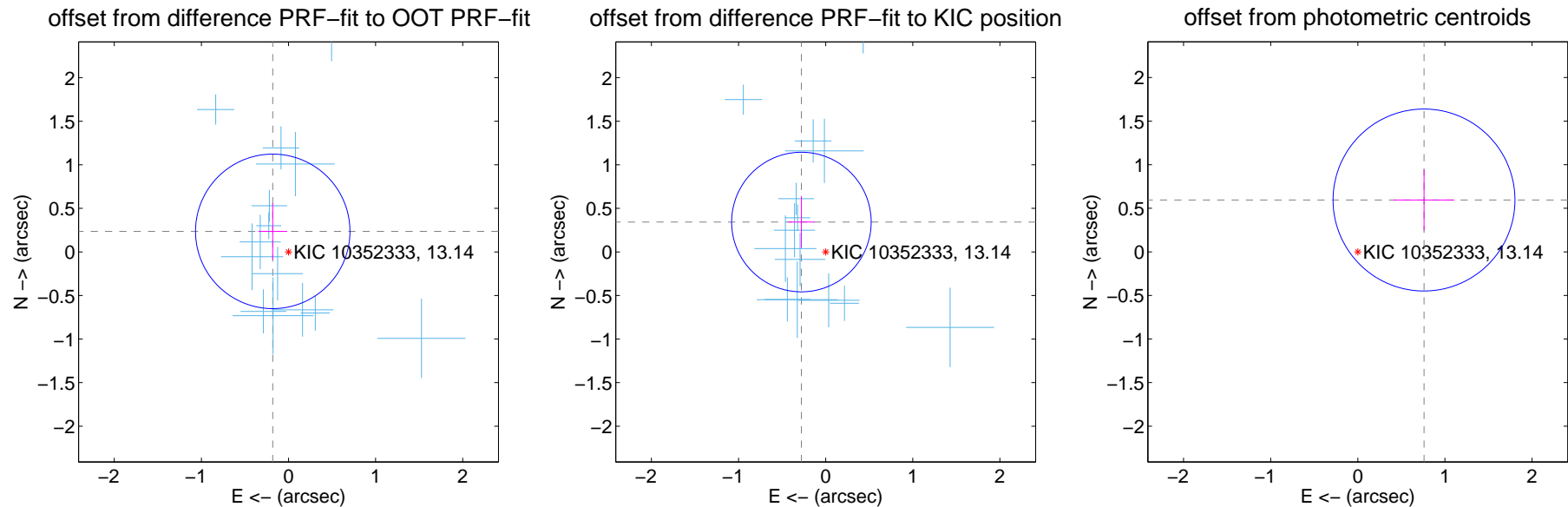
DV Centroid Data

Supplemental centroid analysis for 010352333-01. Kepler magnitude: 13.14. Transit SNR 28.01

There are 14 quarters with good PRF difference image offsets

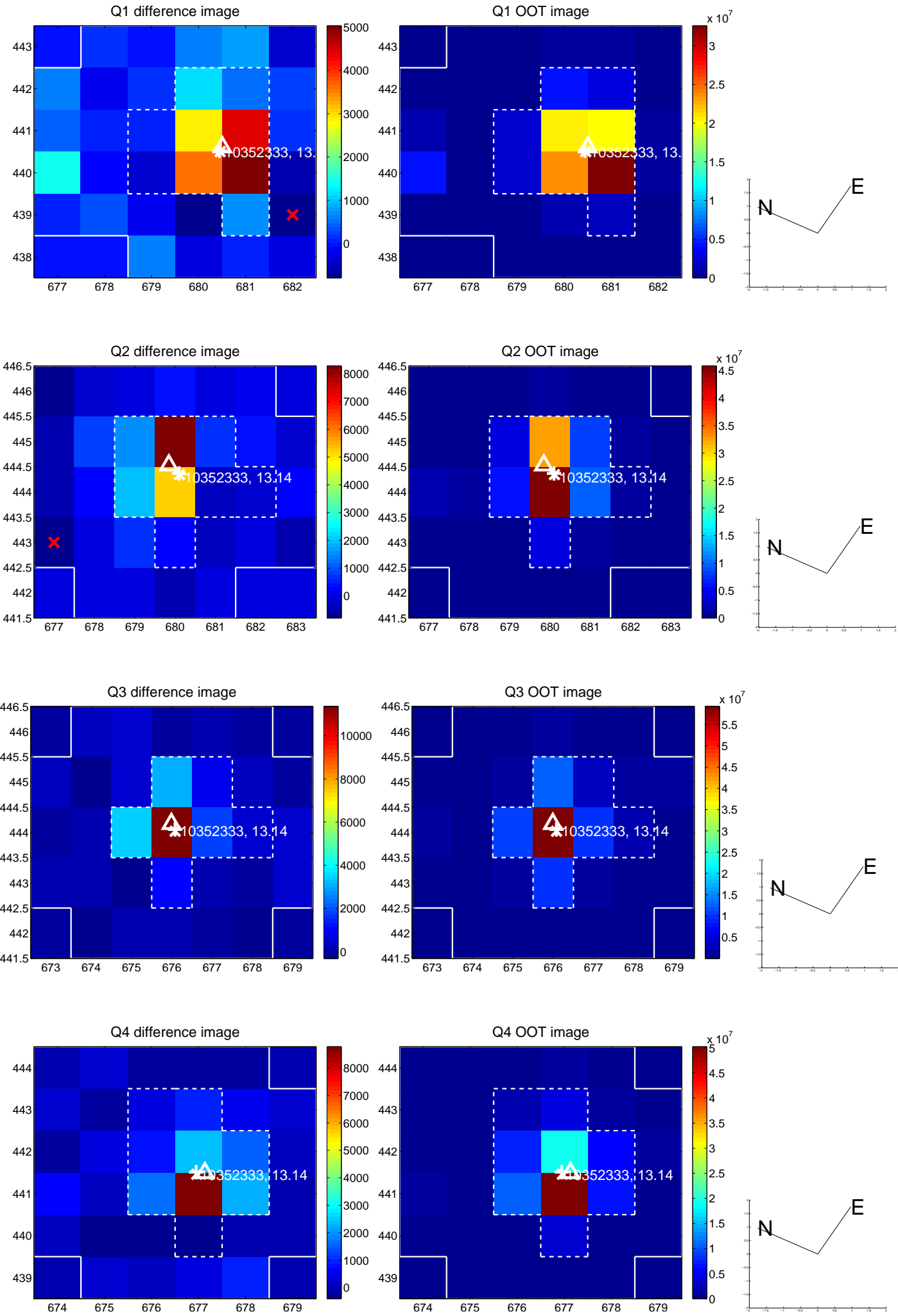
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.297 ± 0.296	1.01	0.181 ± 0.167	0.236 ± 0.324
PRF-fit source offset from KIC position	0.442 ± 0.267	1.65	0.279 ± 0.153	0.343 ± 0.298
photometric centroid source offset	0.96 ± 0.35	2.77	-0.76 ± 0.35	0.59 ± 0.35

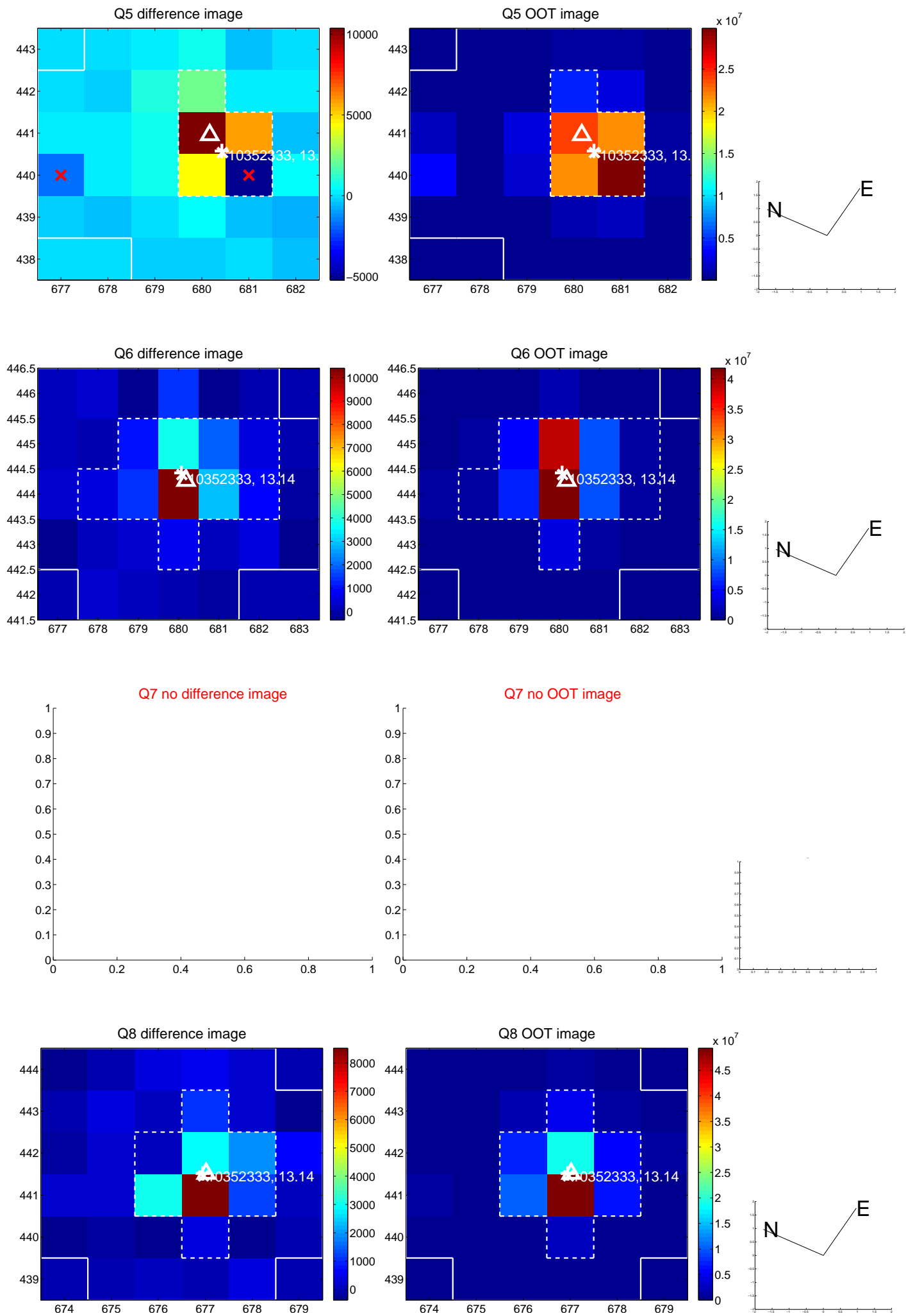


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

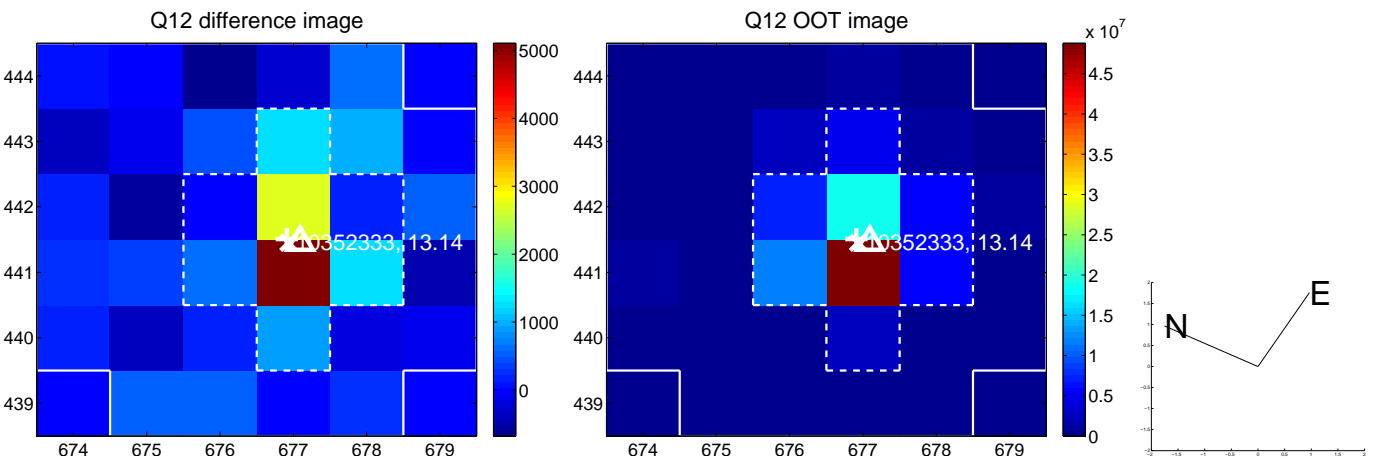
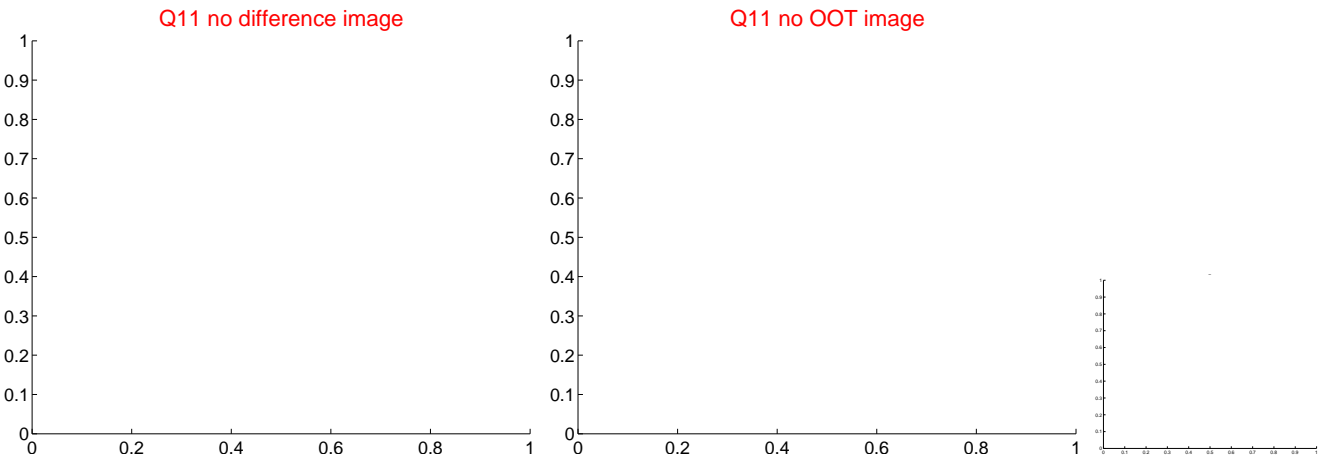
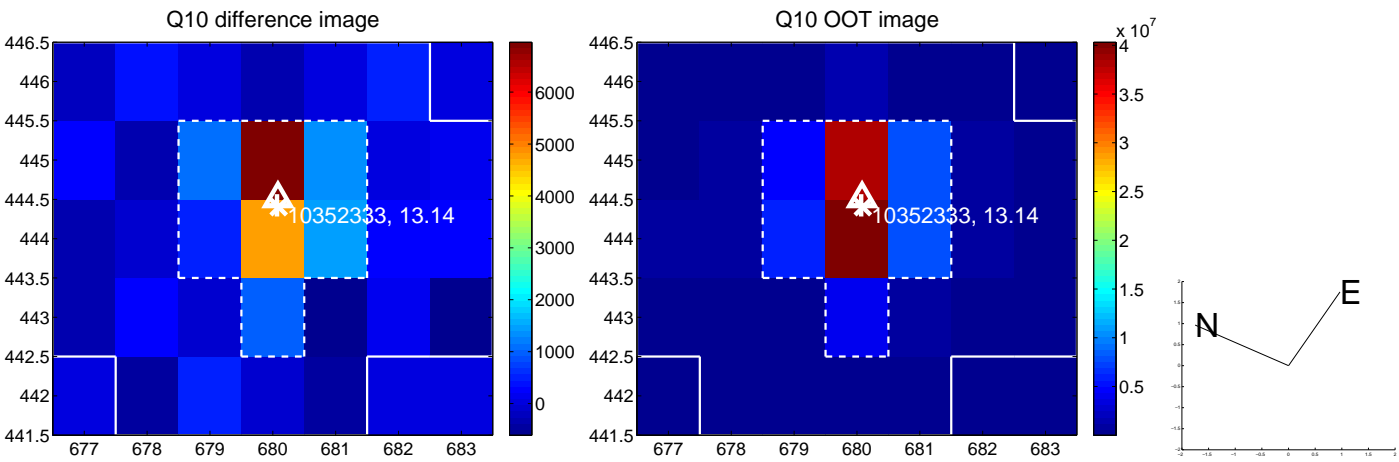
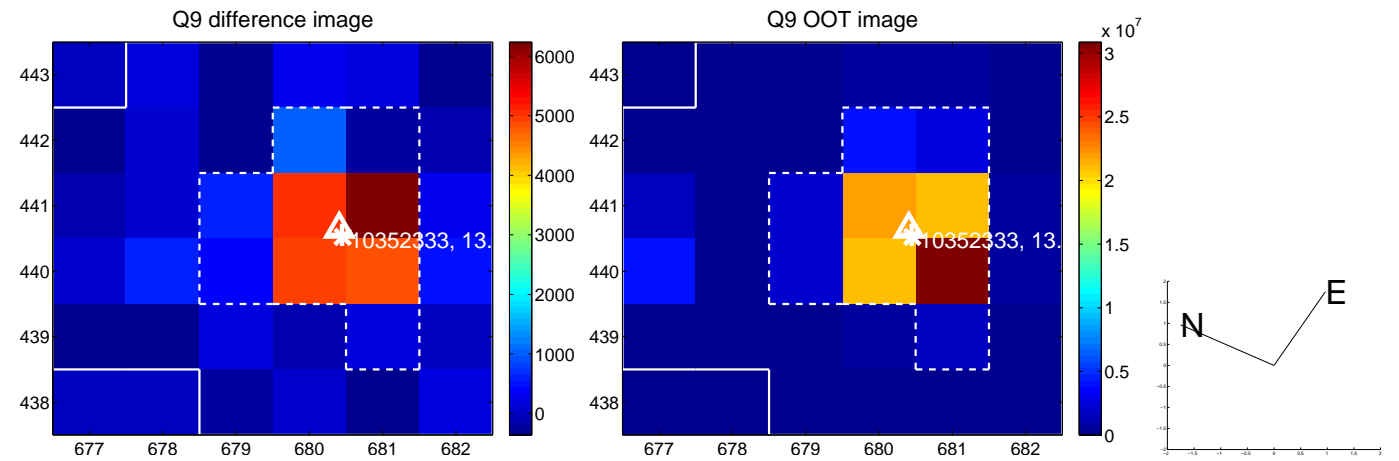
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



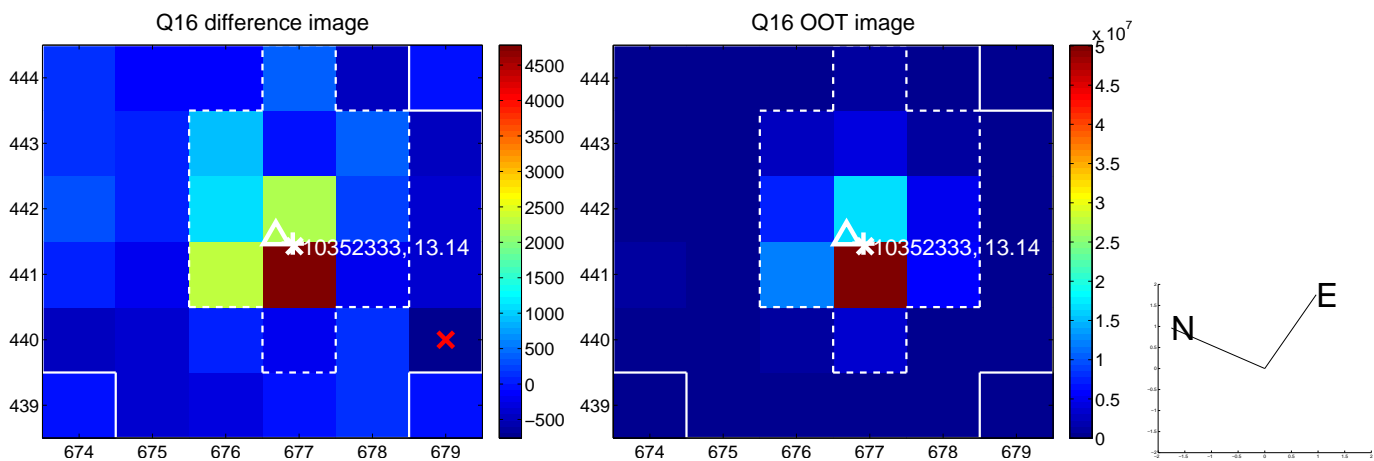
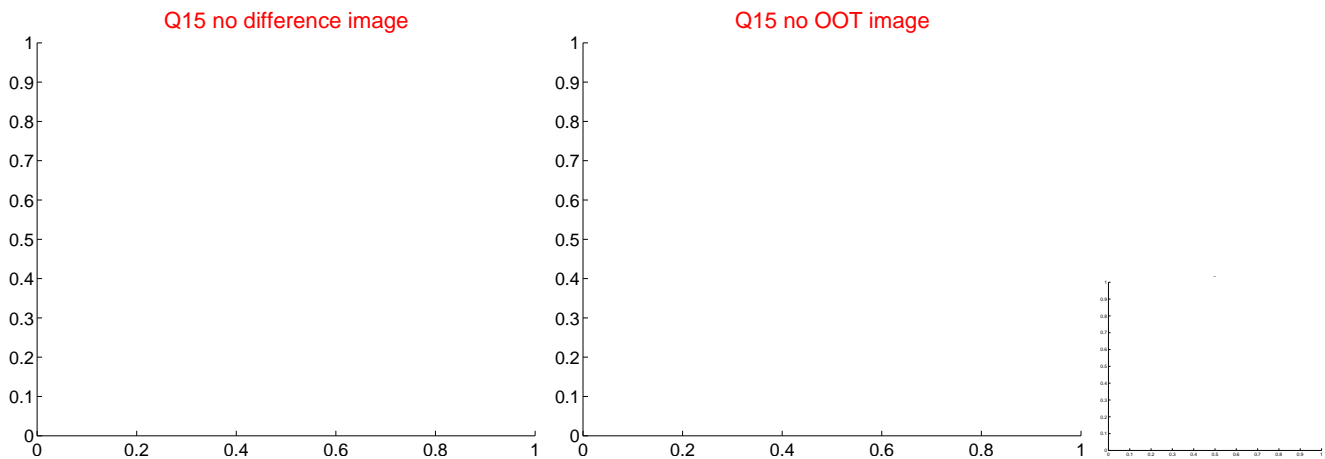
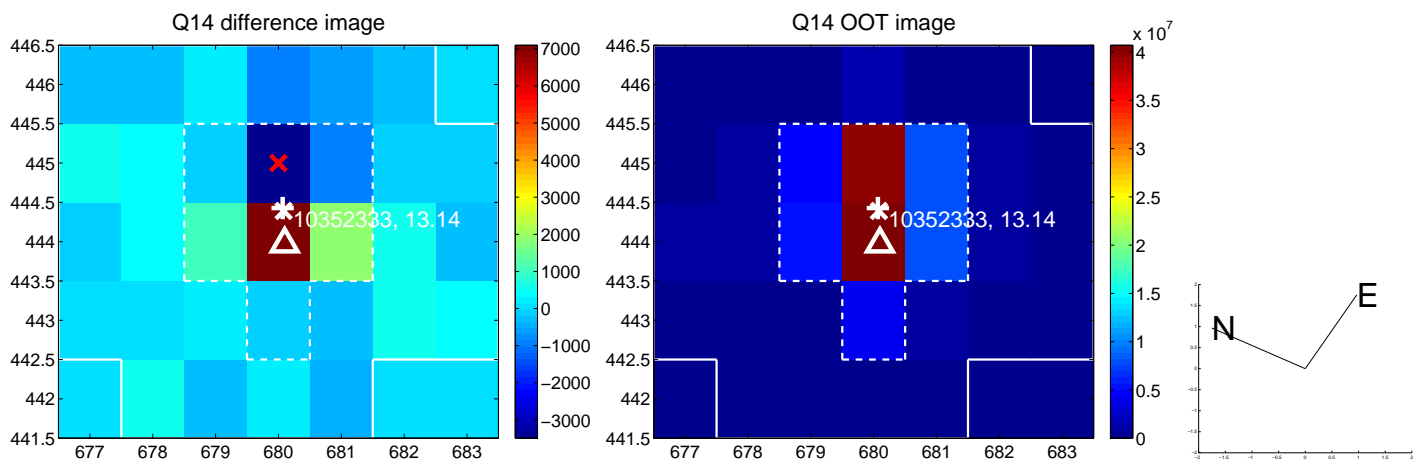
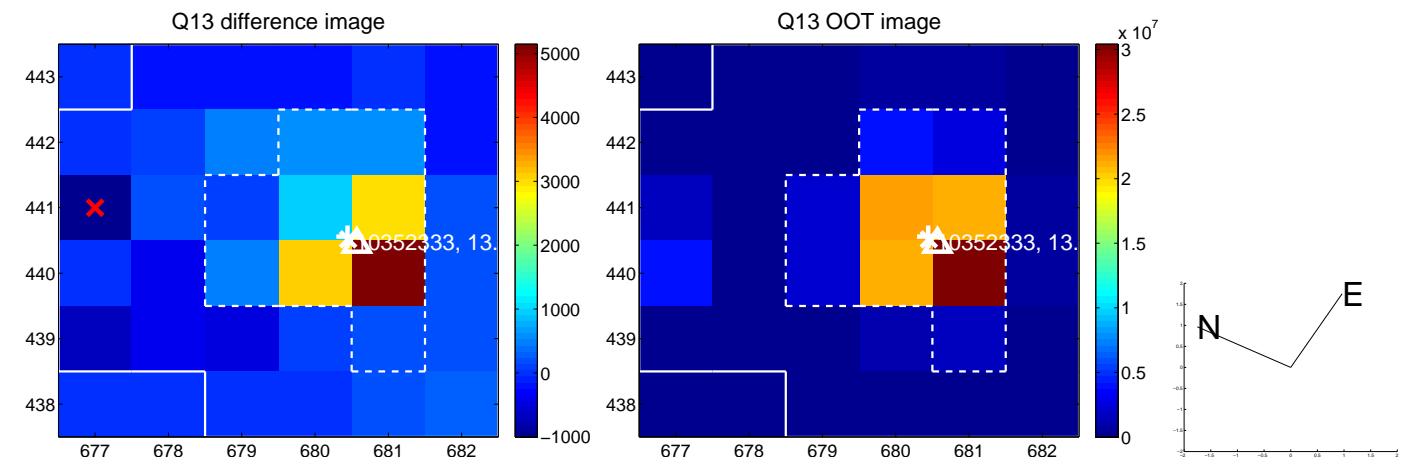
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



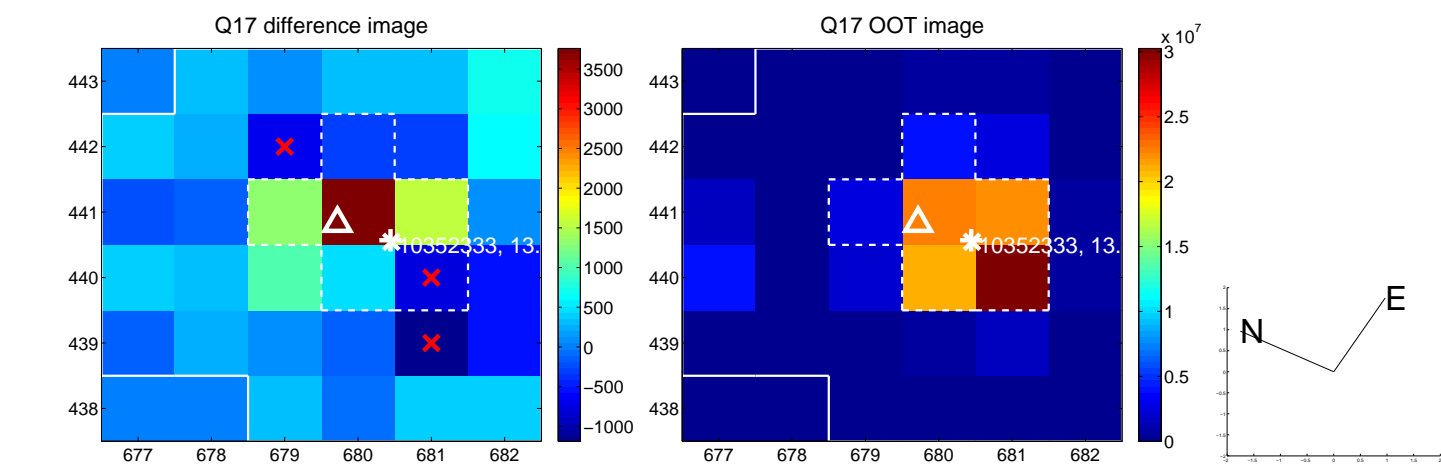
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



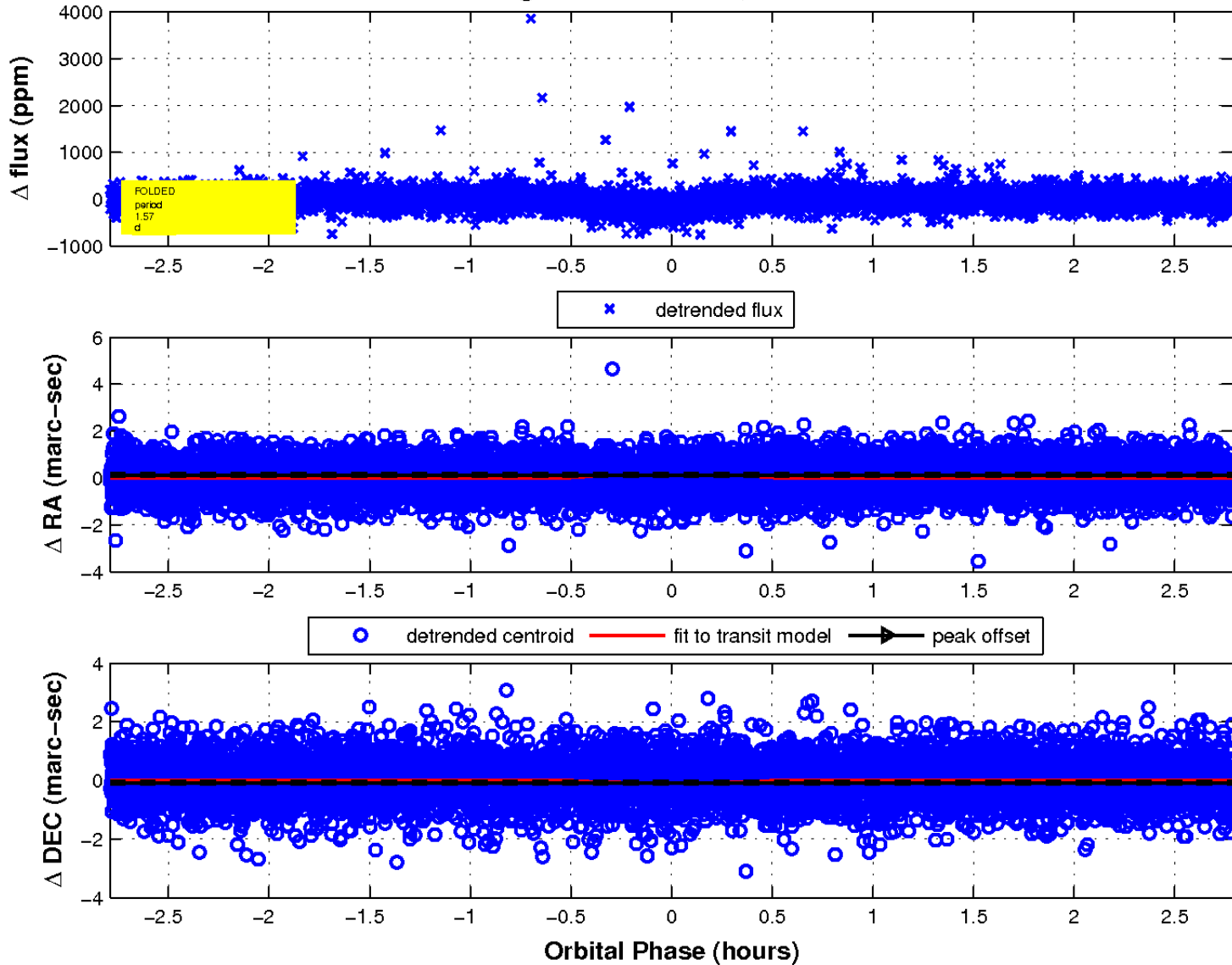
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

