

KIC 003440118

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})
003440118-01	OBS	3876.01	19.577823	131.714881	426.4	2.011	31.9	37.2	0.88	5620	2.09	35.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003440118-01	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.

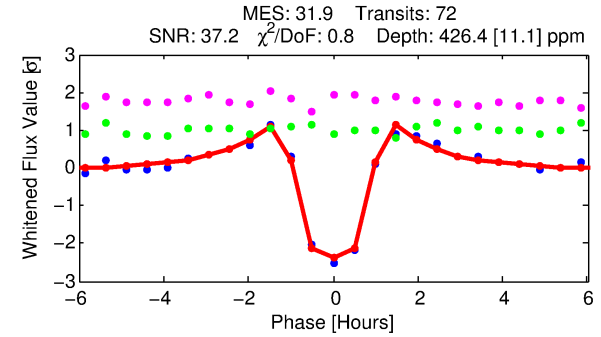
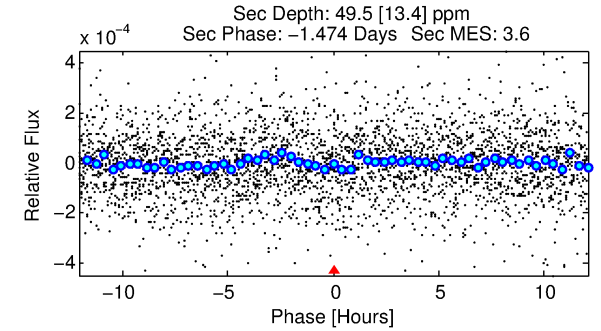
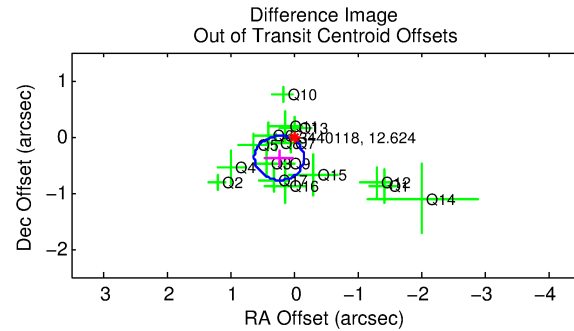
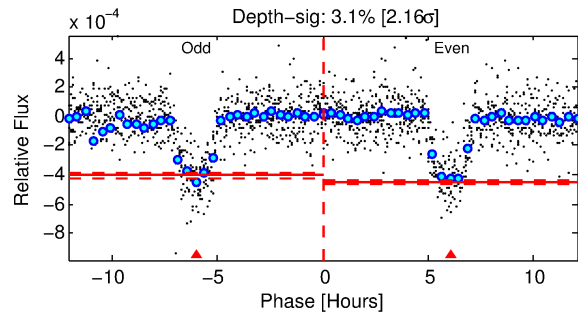
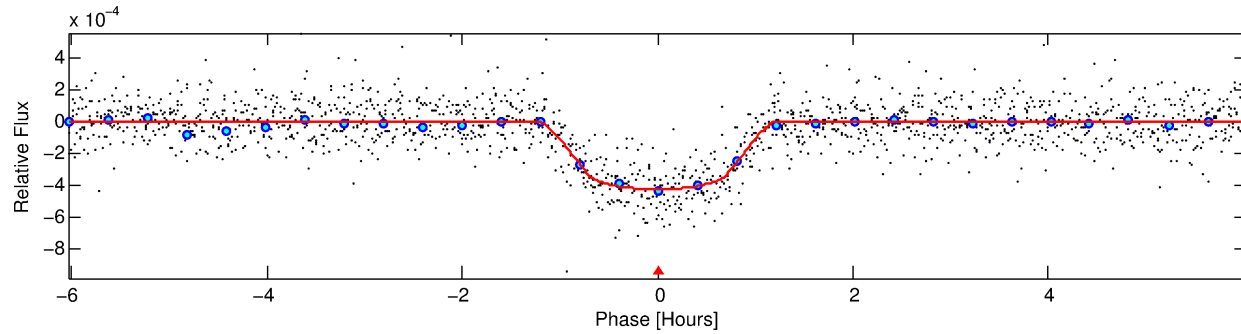
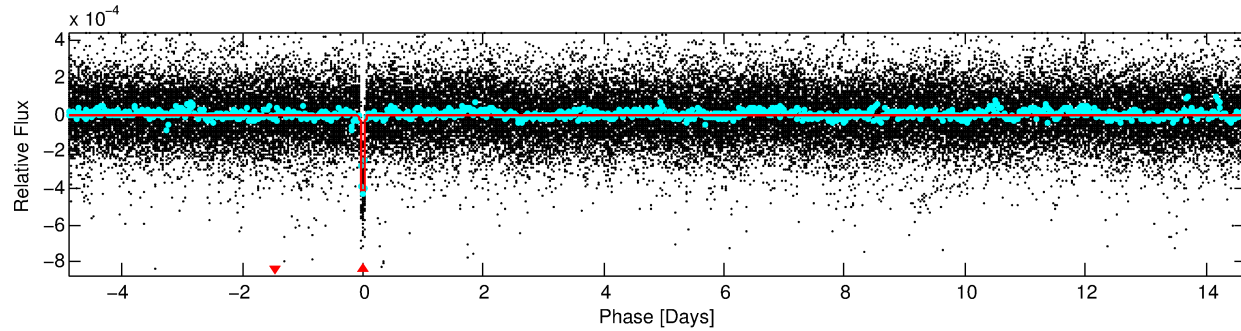
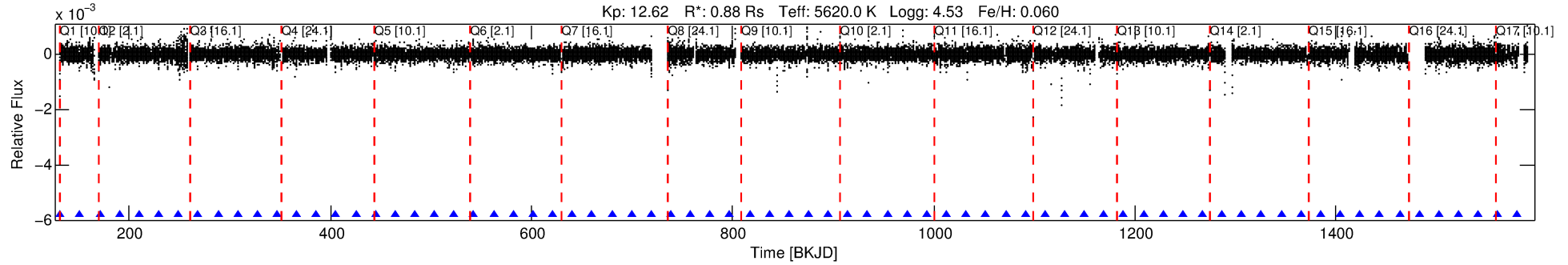
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003440118-01

No Significant Match Found

DV One-Page Summary

KIC: 3440118 Candidate: 1 of 1 Period: 19.578 d
KOI: K03876.01 Corr: 0.984



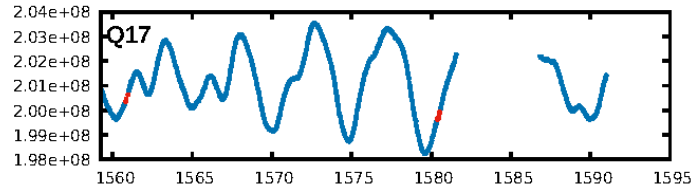
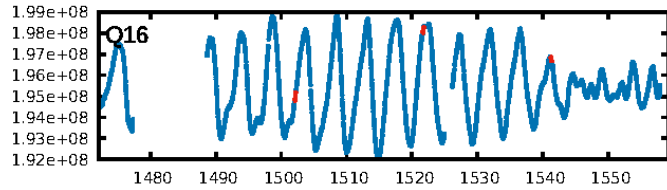
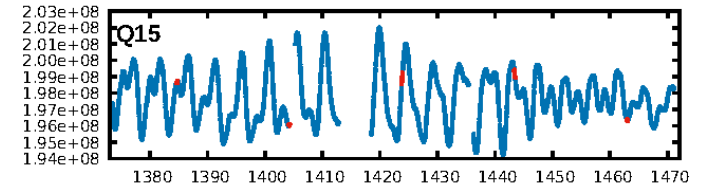
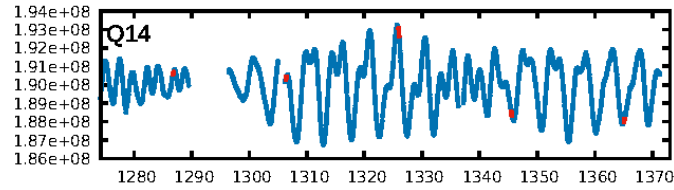
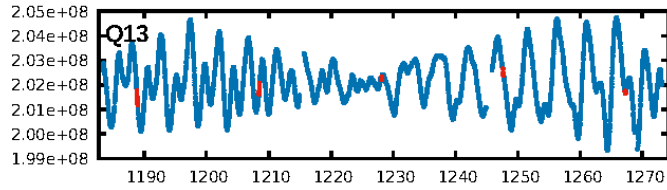
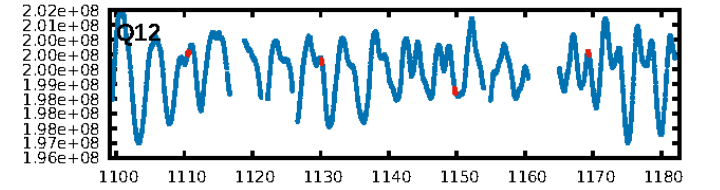
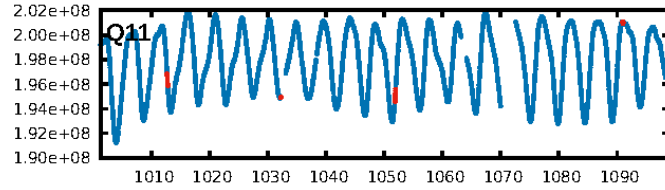
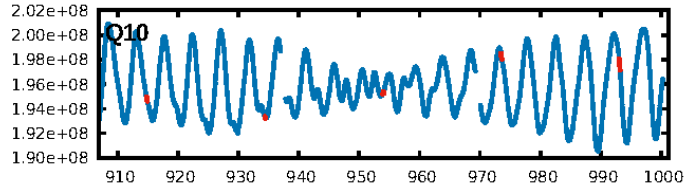
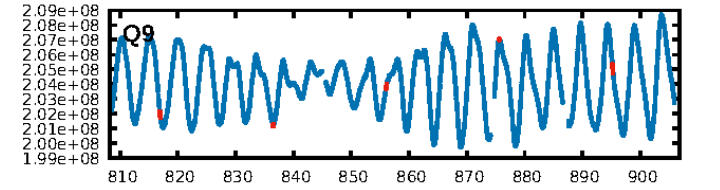
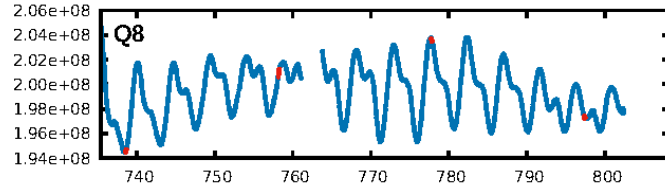
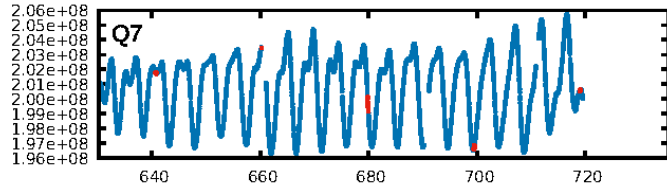
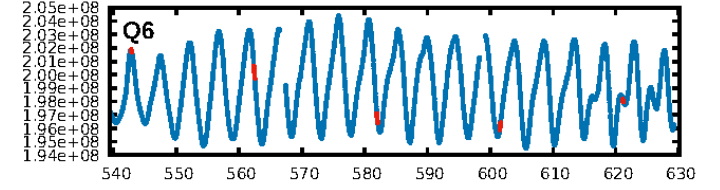
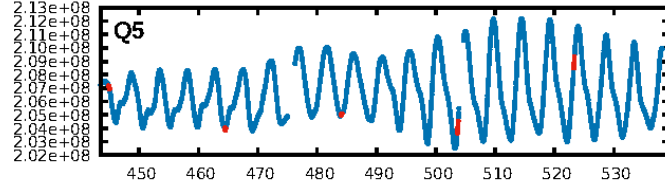
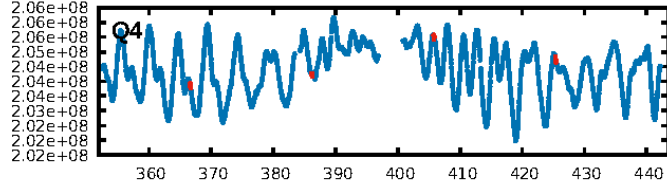
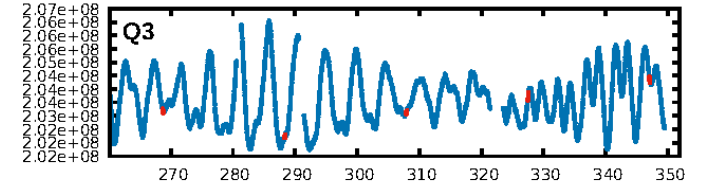
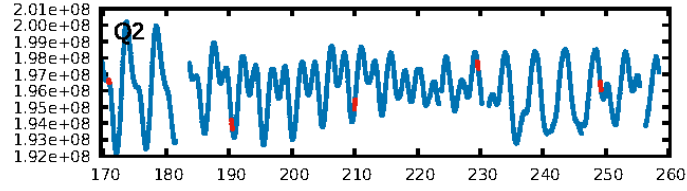
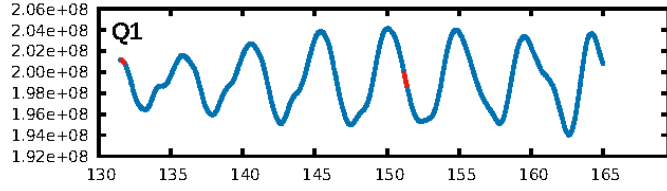
DV Fit Results:

Period = 19.57782 [0.00002] d
Epoch = 131.7149 [0.0010] BKJD
Rp/R* = 0.0217 [0.0035]
a/R* = 42.80 [29.71]
b = 0.84 [0.24]
Seff = 35.19 [7.46]
Teq = 621 [33] K
Rp = 2.09 [0.45] Re
a = 0.1409 [0.0179] AU
Ag = 123.92 [57.76] [2.13 σ]
Teffp = 3204 [344] K [7.47 σ]

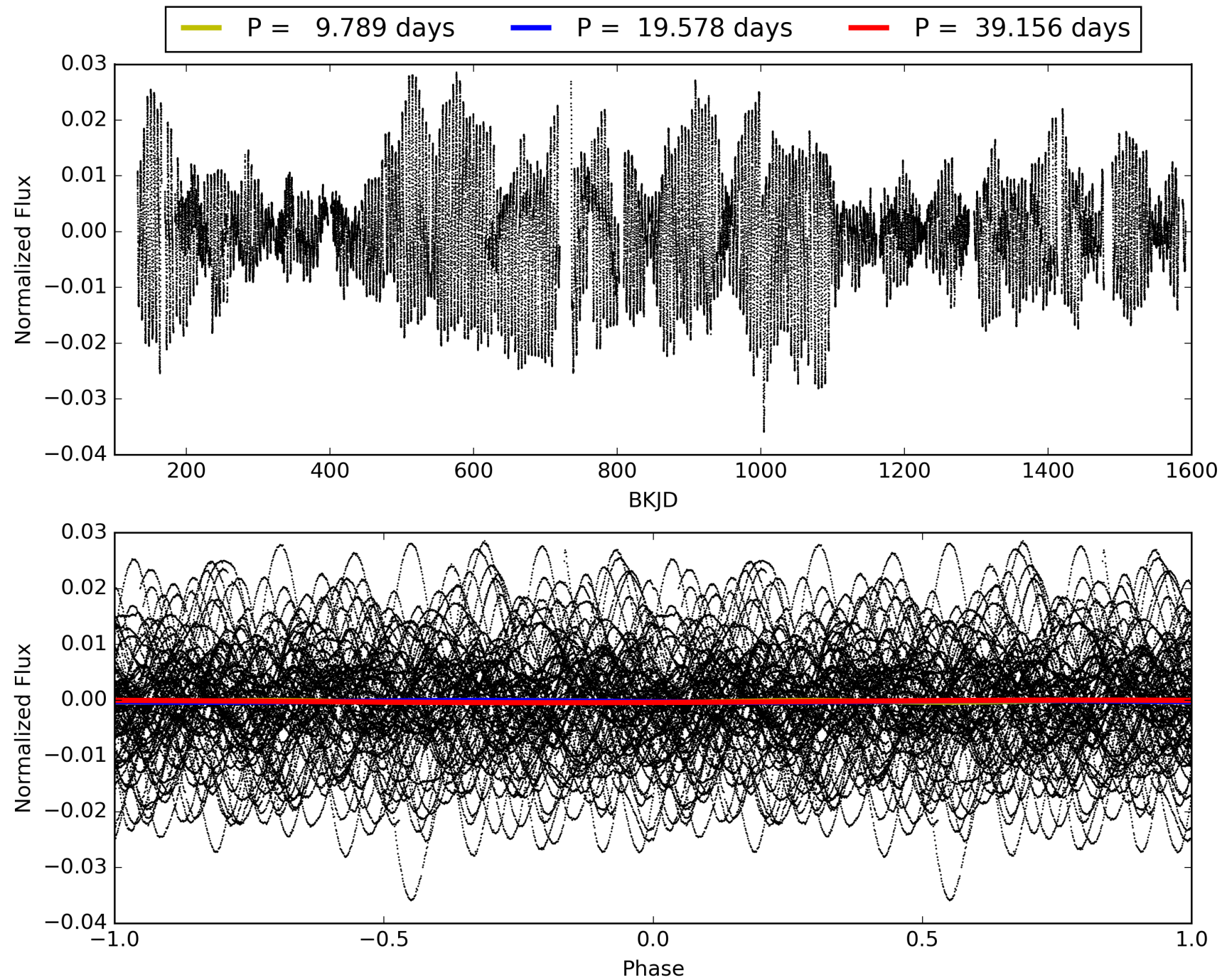
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.47e-157
RollingBand-fgt: 1.00 [69/69]
GhostDiagnostic-chr: 1.661
Centroid-sig: 9.6%
Centroid-so: 0.431 arcsec [1.78 σ]
OotOffset-rm: 0.445 arcsec [3.42 σ]
KicOffset-rm: 0.333 arcsec [2.47 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003440118-01, PDC Light Curves

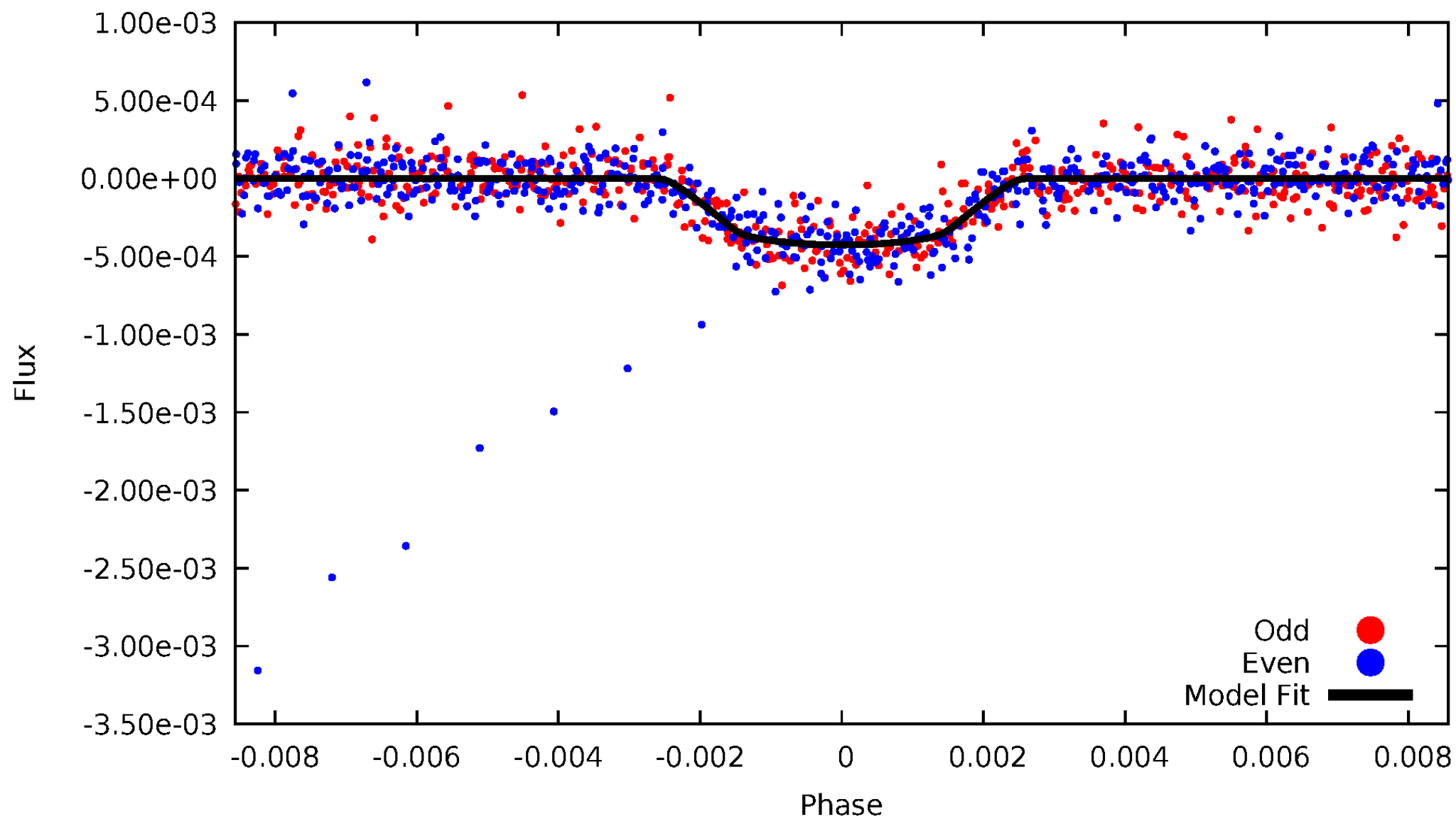


TCE 003440118-01



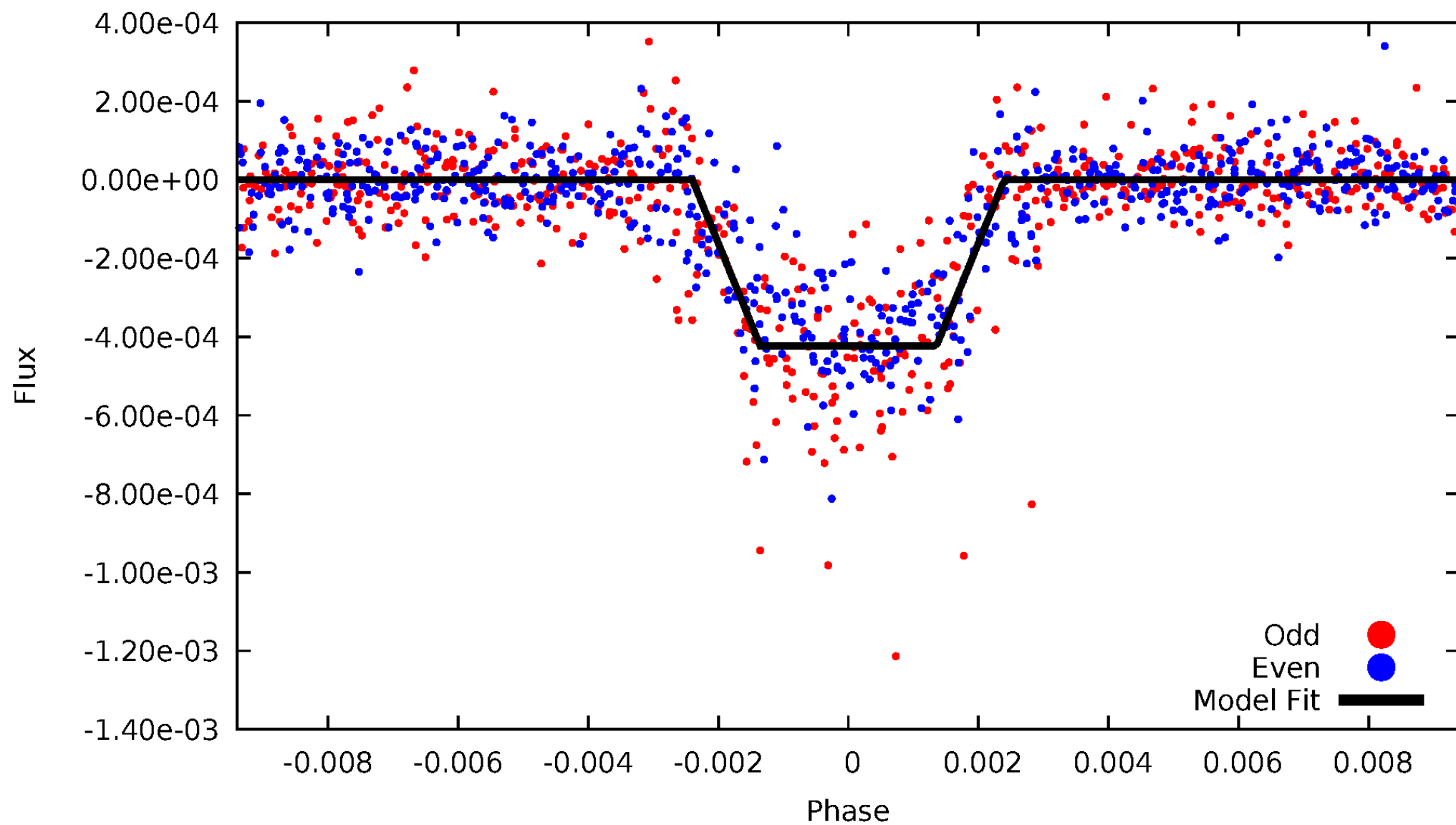
DV Odd/Even

TCE 003440118-01



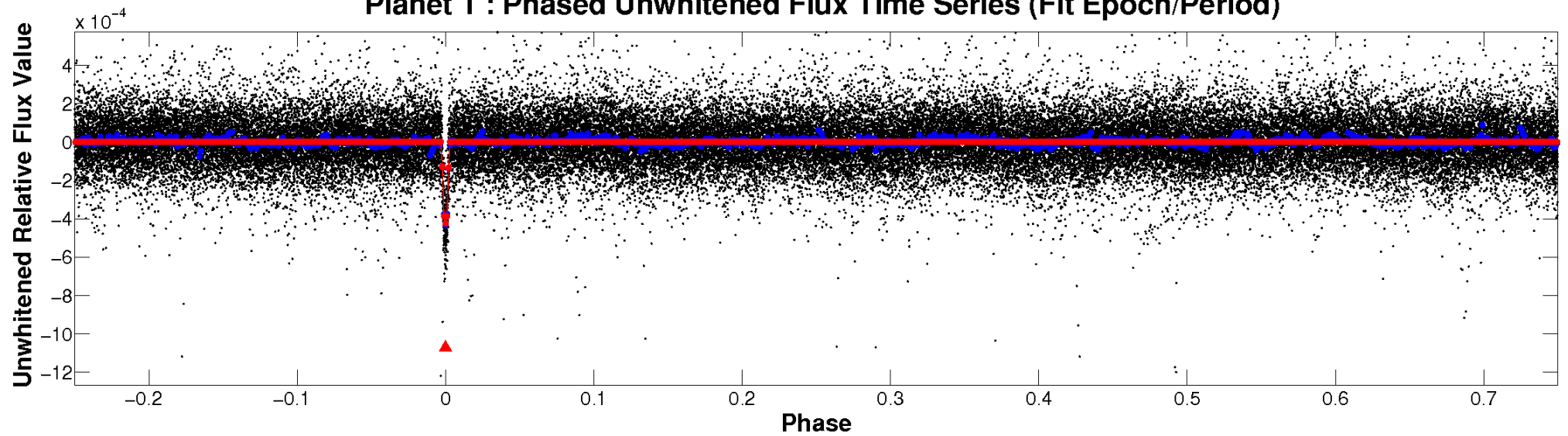
ALT Odd/Even

TCE 003440118-01

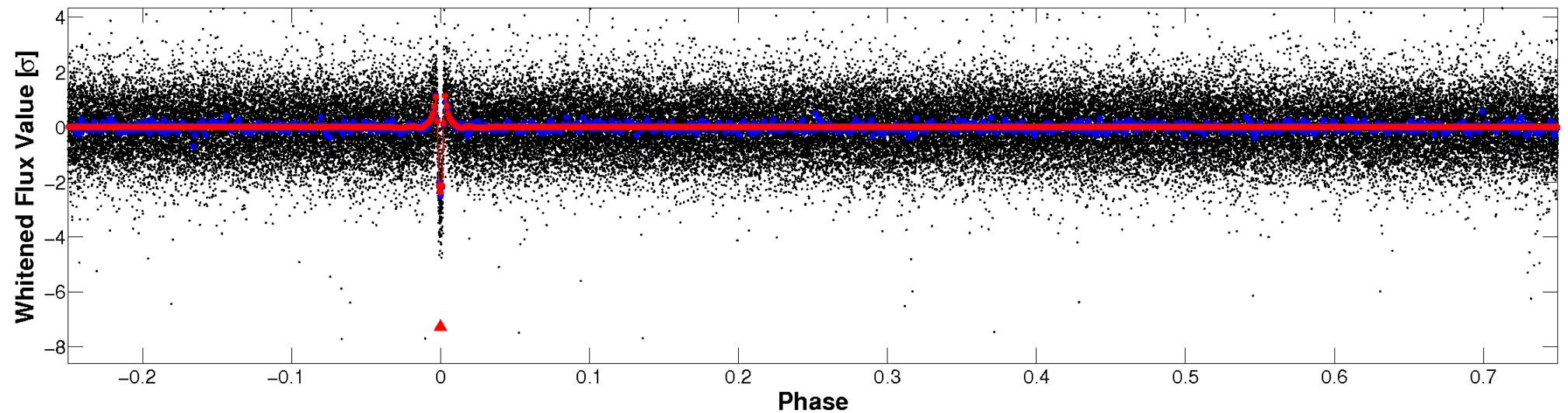


Non-Whitened Vs. Whitened Light Curve

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

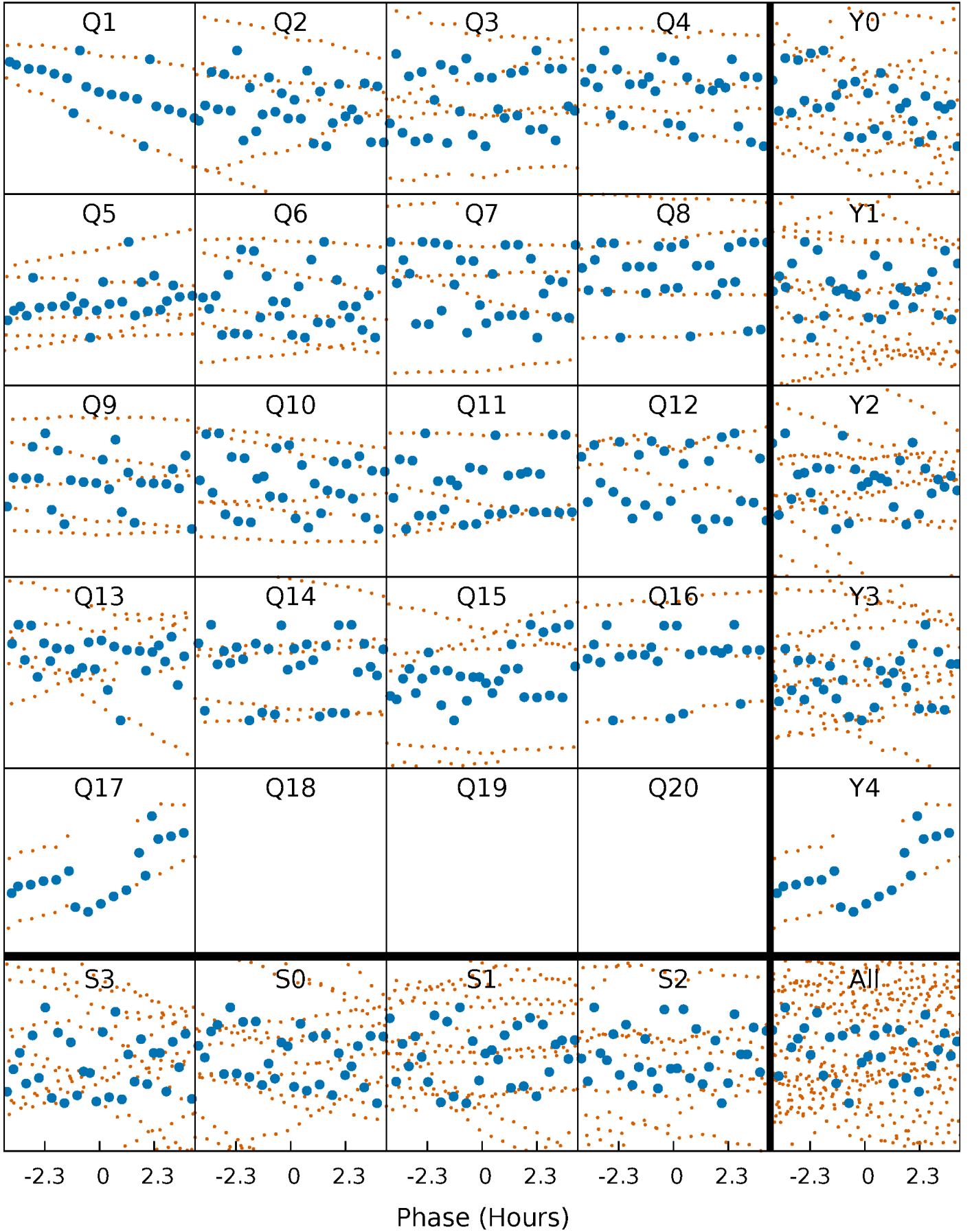


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



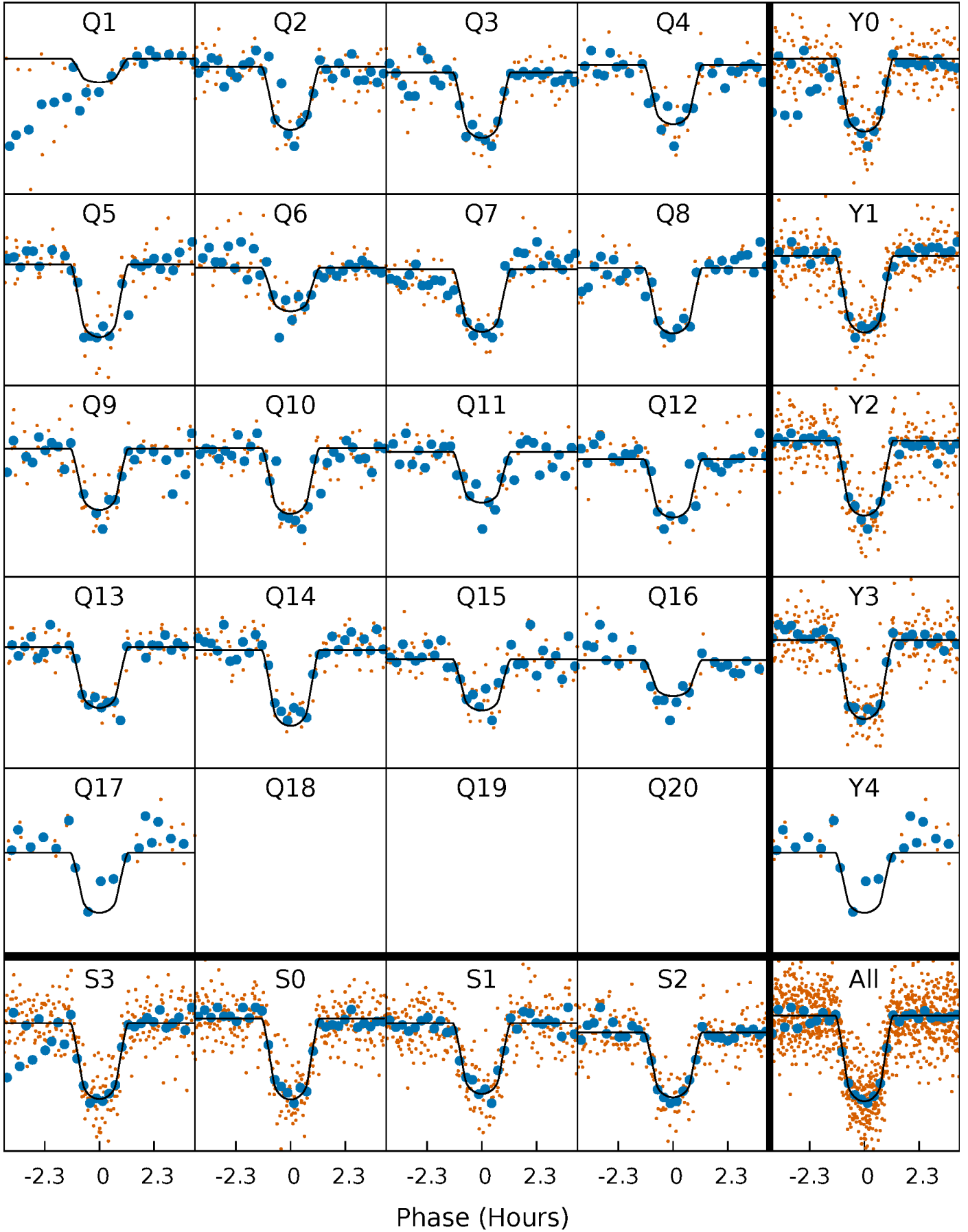
PDC Quarter-Phased Transit Curves

TCE 003440118-01 P= 19.577823 Days $T_0=131.714881$ (BKJD)



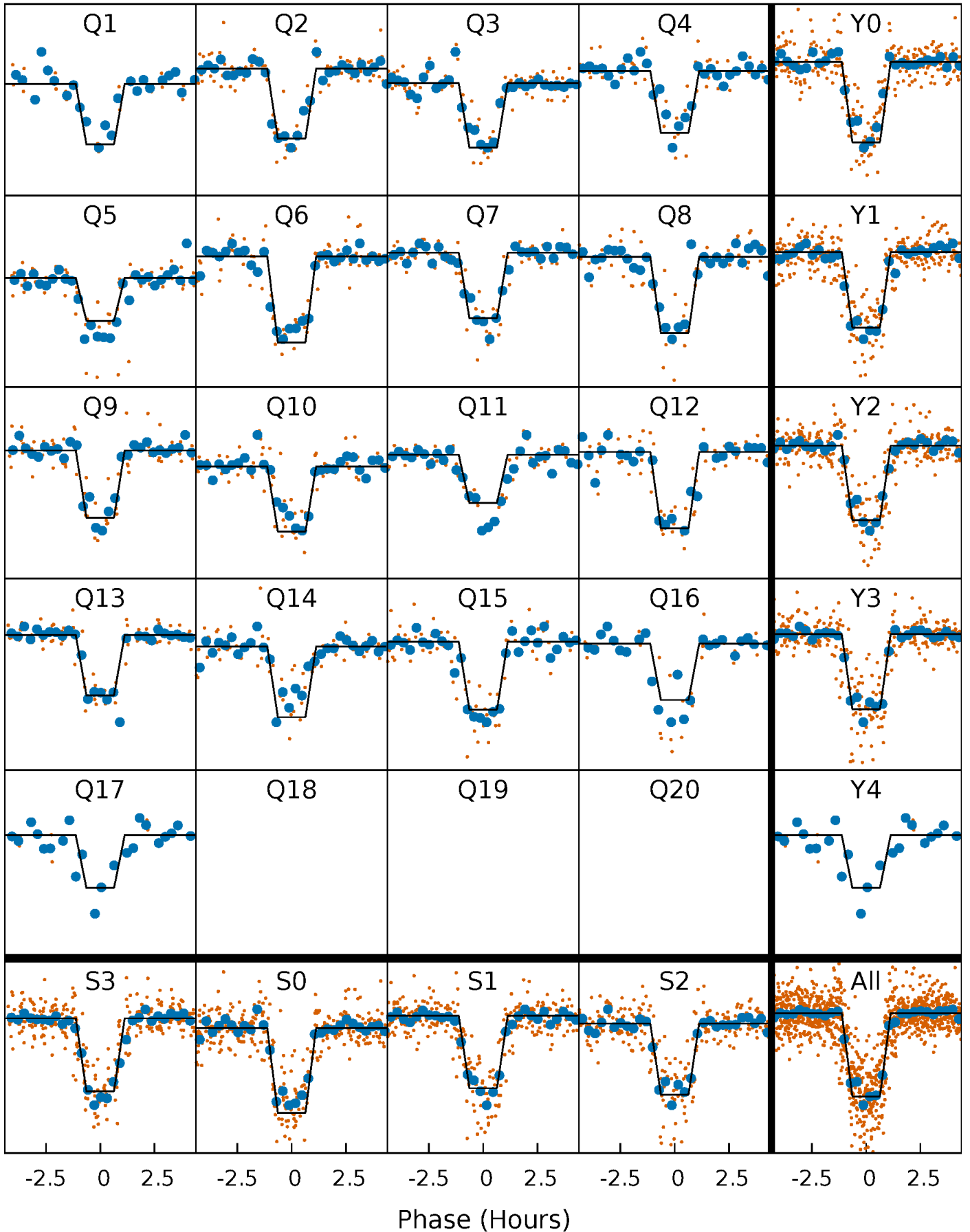
DV Quarter-Phased Transit Curves

TCE 003440118-01 P= 19.577823 Days $T_0=131.714881$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

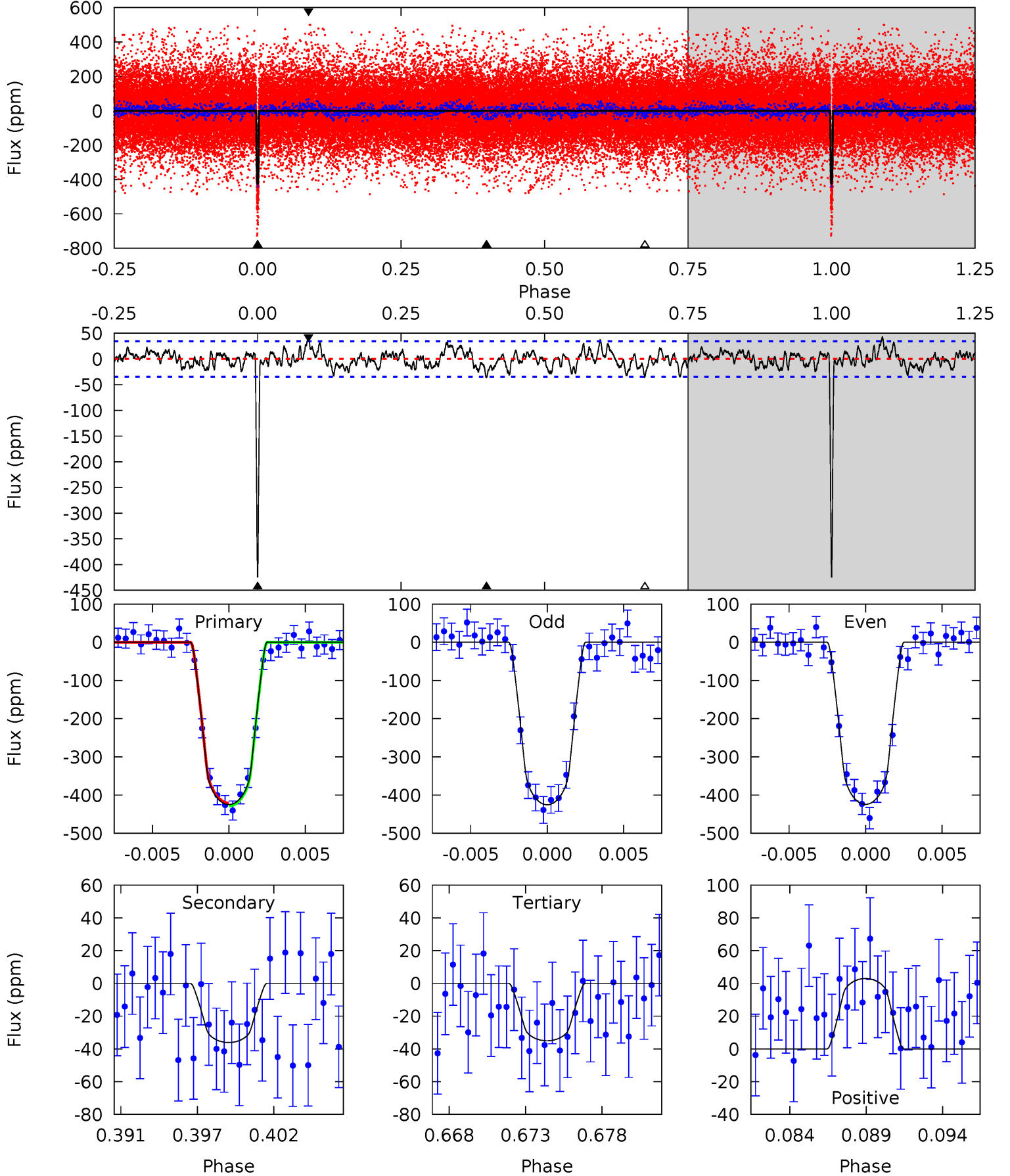
TCE 003440118-01 P= 19.577693 Days $T_0=131.720238$ (BKJD)



DV Model-Shift Uniqueness Test

003440118-01, $P = 19.577823$ Days, $E = 112.137058$ Days

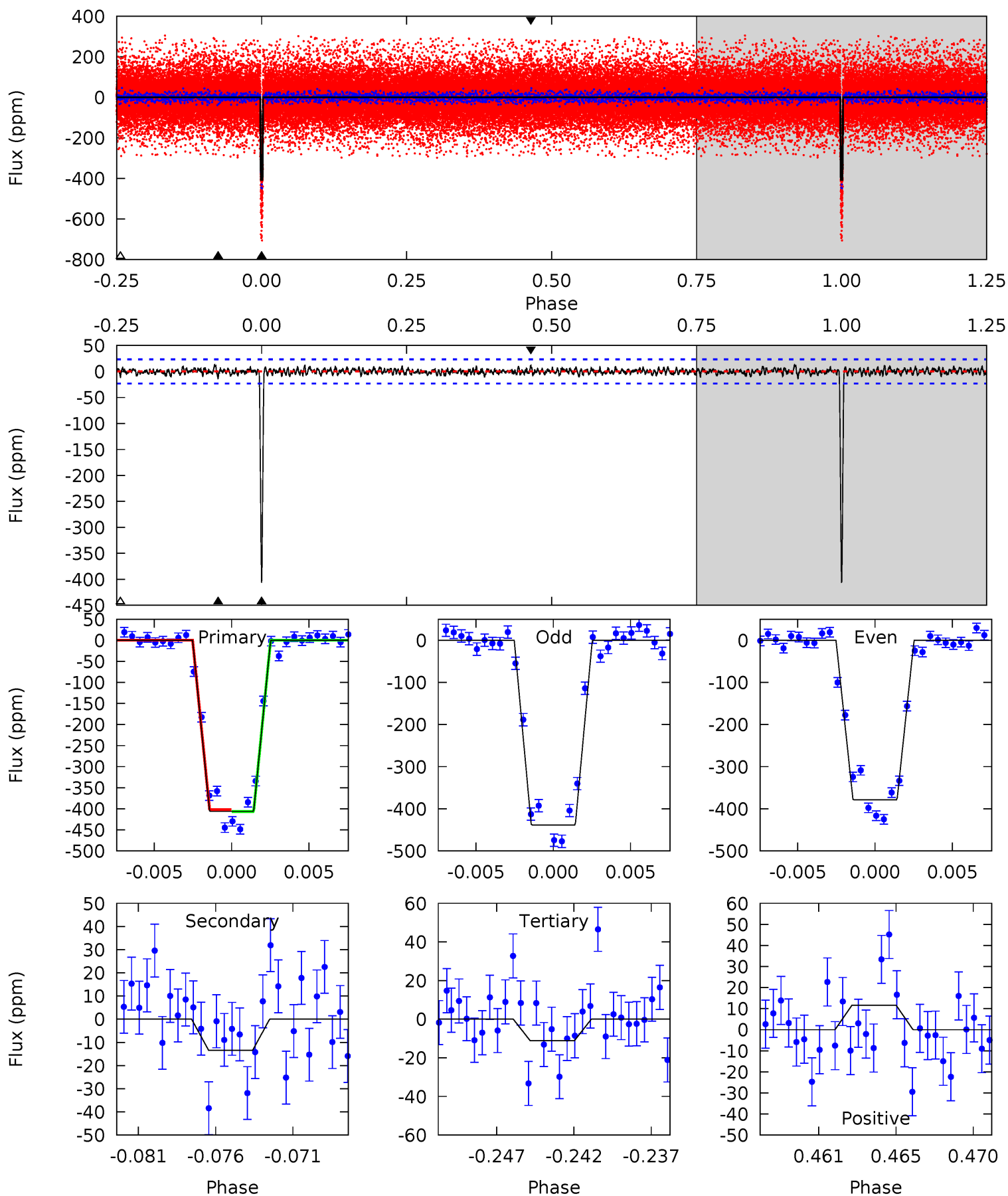
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.4	5.39	5.23	6.42	5.15	2.79	1.97	58.2	57.0	0.16	-1.02	0.08	1.01	0.09	0.57



Alt Model-Shift Uniqueness Test

003440118-01, P = 19.577693 Days, E = 112.142545 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
90.1	2.98	2.48	2.59	5.17	2.82	0.83	87.6	87.5	0.49	0.39	6.66	1.02	0.03	0.53



Stellar Parameters For KIC 003440118

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+100}_{-111}	$4.533^{+0.023}_{-0.113}$	$0.060^{+0.150}_{-0.150}$	$0.884^{+0.123}_{-0.039}$	$0.971^{+0.047}_{-0.080}$	$1.980^{+0.201}_{-0.634}$
	+2%/-2%	+1%/-2%	+250%/-250%	+14%/-4%	+5%/-8%	+10%/-32%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 003440118-01 / KOI 3876.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-36 ± 7	$2.12^{+0.38}_{-0.38}$	880^{+28}_{-25}	3460^{+237}_{-192}	85^{+44}_{-26}
Alt.	-13 ± 5	$2.03^{+0.36}_{-0.36}$	879^{+32}_{-24}	3008^{+233}_{-219}	34^{+23}_{-13}

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 $A_{obs} \gg 1.0$

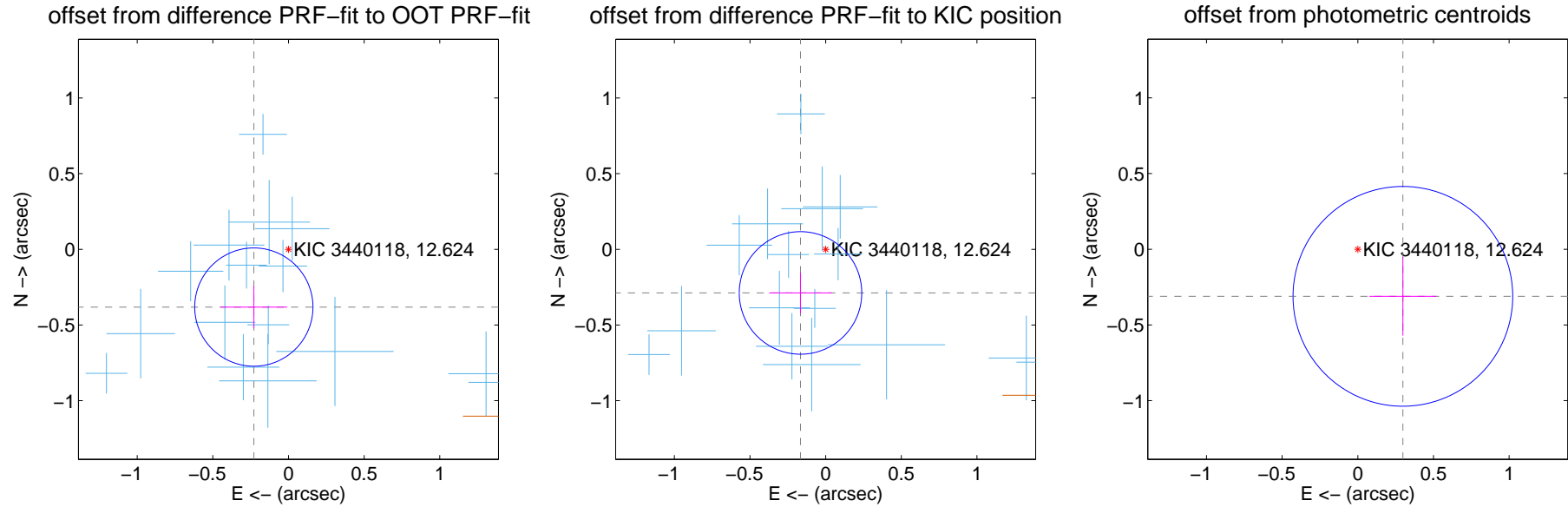
DV Centroid Data

Supplemental centroid analysis for 003440118-01. Kepler magnitude: 12.62. Transit SNR 37.25

There are 16 quarters with good PRF difference image offsets

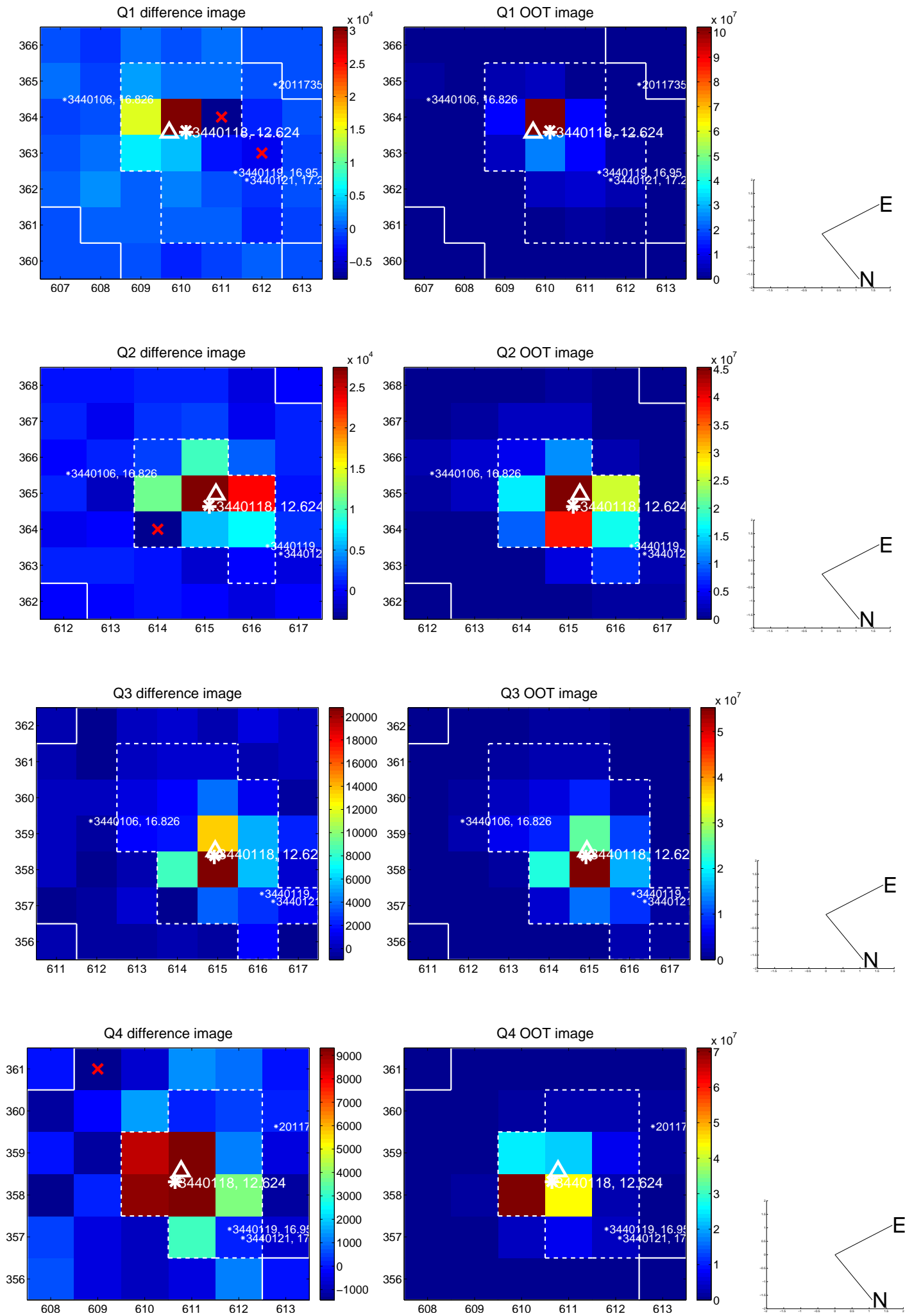
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.445 \pm 0.130	3.42	0.229 \pm 0.220	-0.382 \pm 0.139
PRF-fit source offset from KIC position	0.333 \pm 0.135	2.47	0.166 \pm 0.207	-0.288 \pm 0.134
photometric centroid source offset	0.43 \pm 0.24	1.78	-0.30 \pm 0.22	-0.31 \pm 0.26

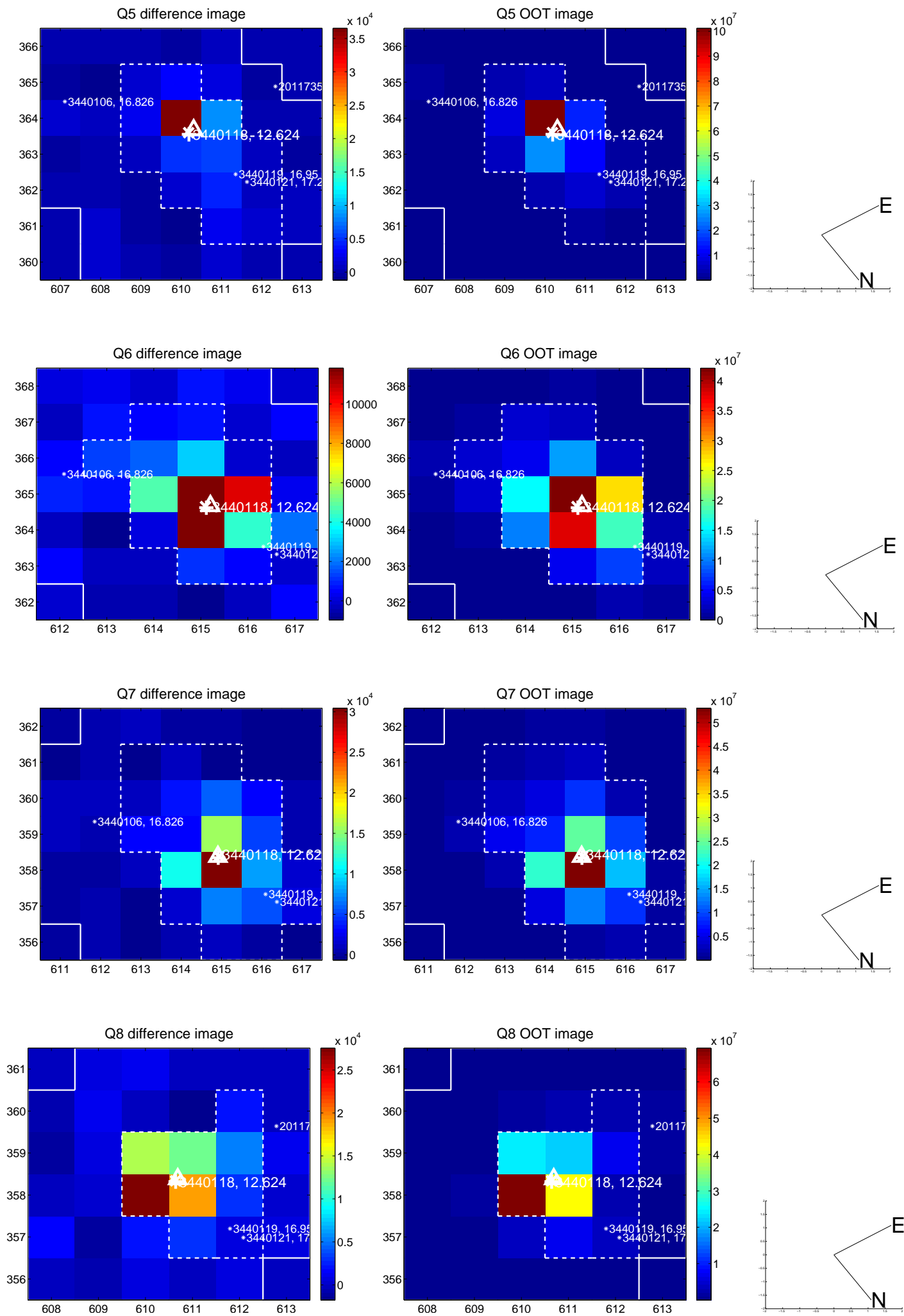


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

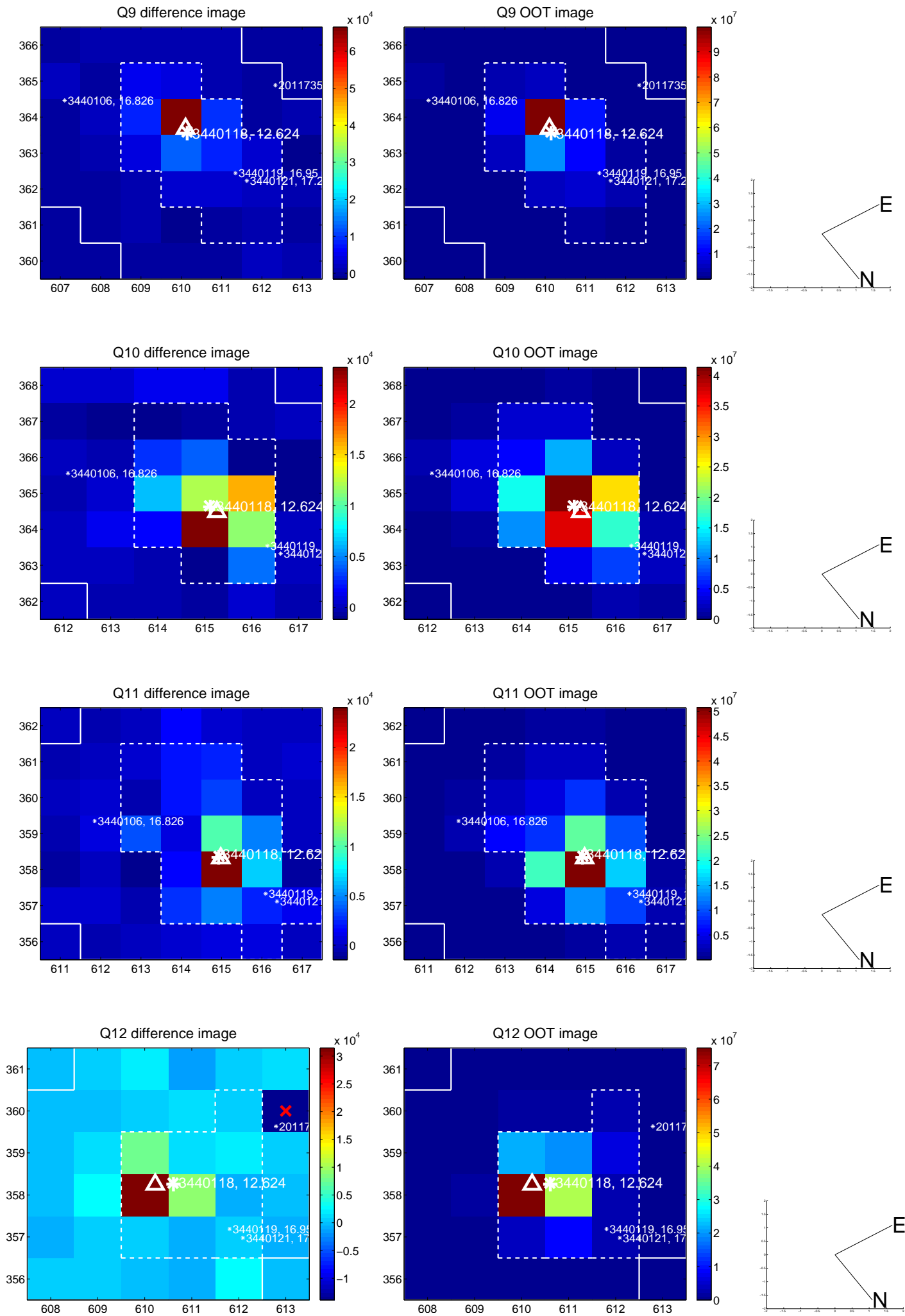
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



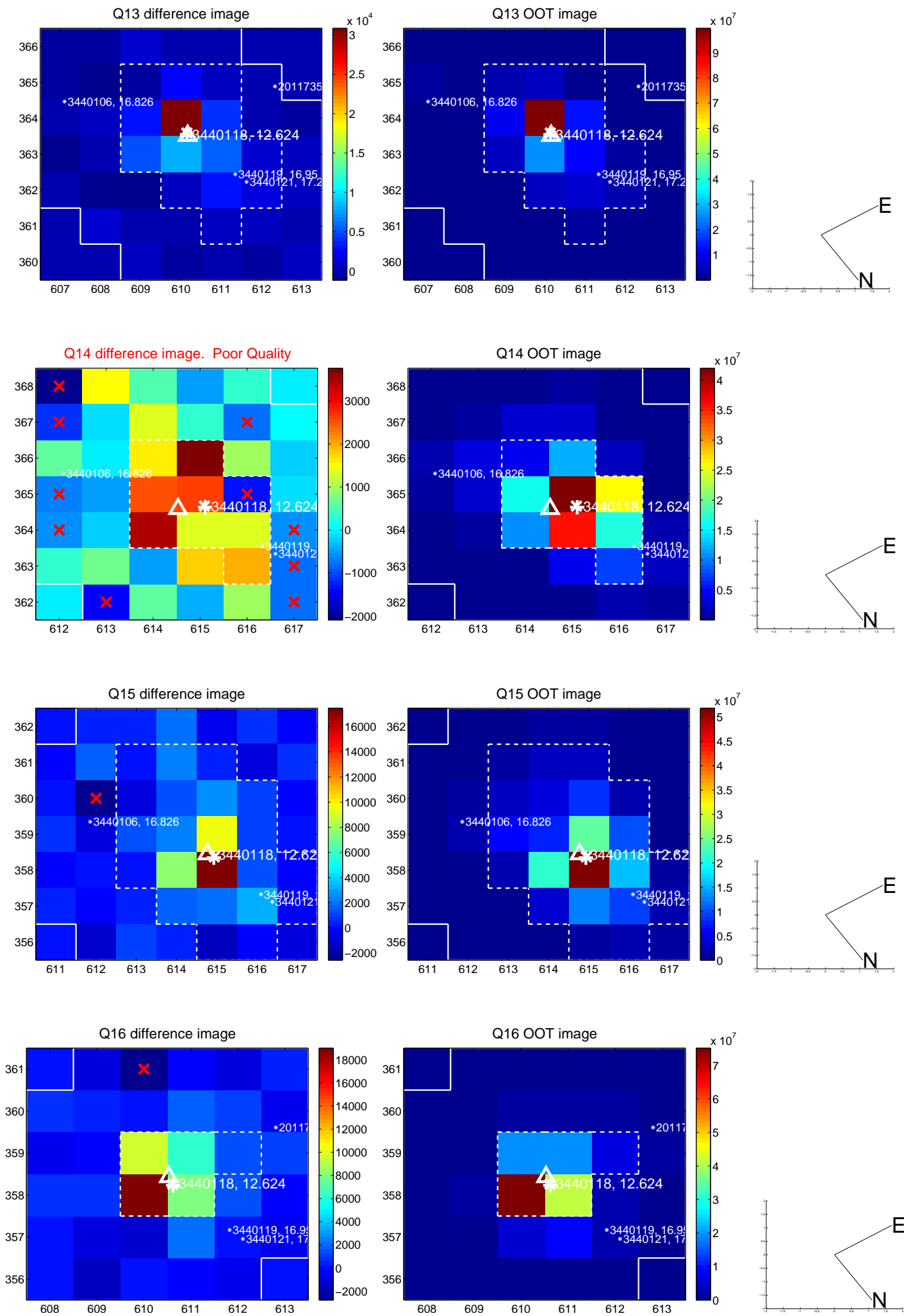
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

