

KIC 008352537

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})
008352537-01	OBS	0420.01	6.010384	132.011979	2641.8	2.329	274.1	270.9	0.74	4882	4.23	82.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008352537-01	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.

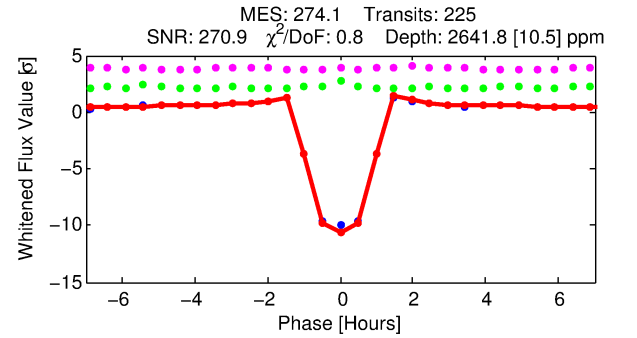
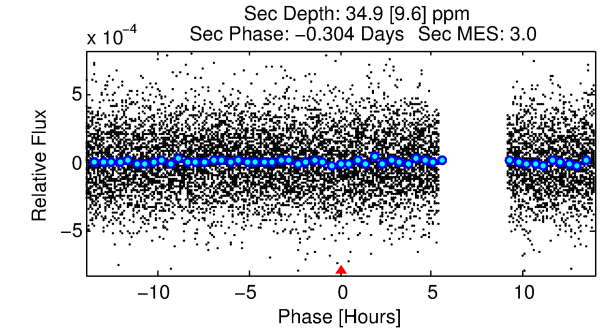
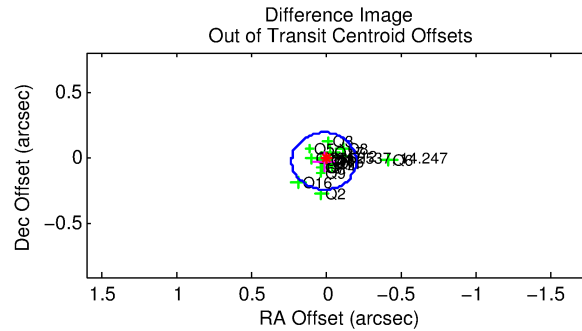
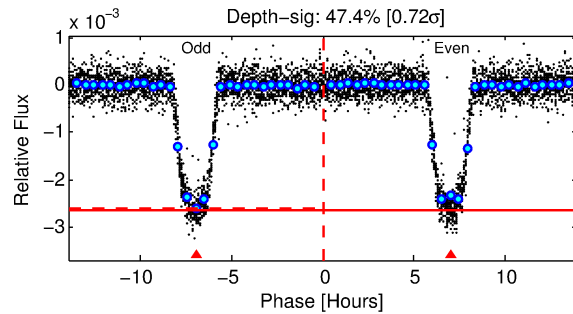
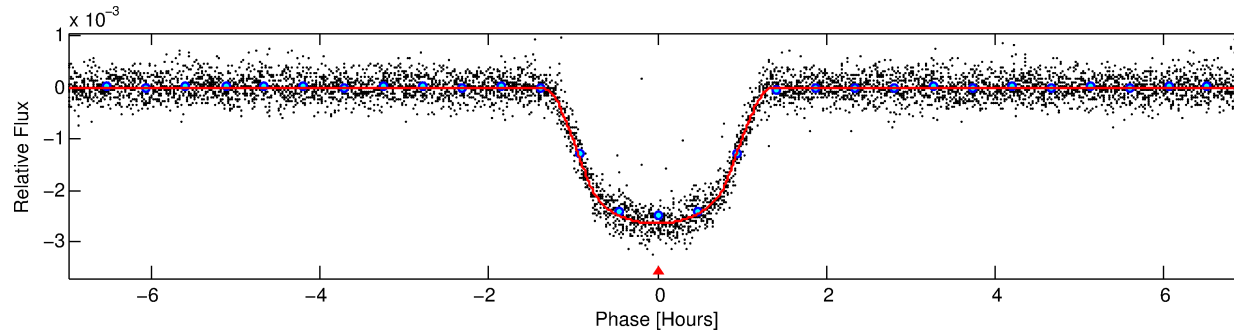
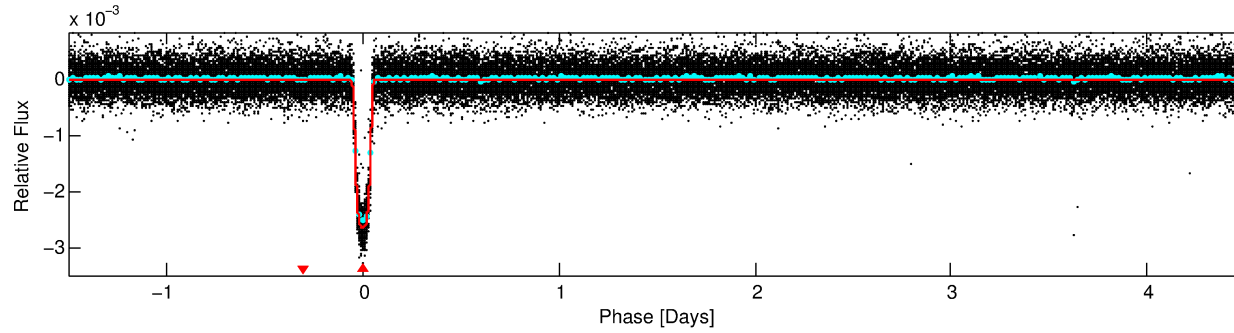
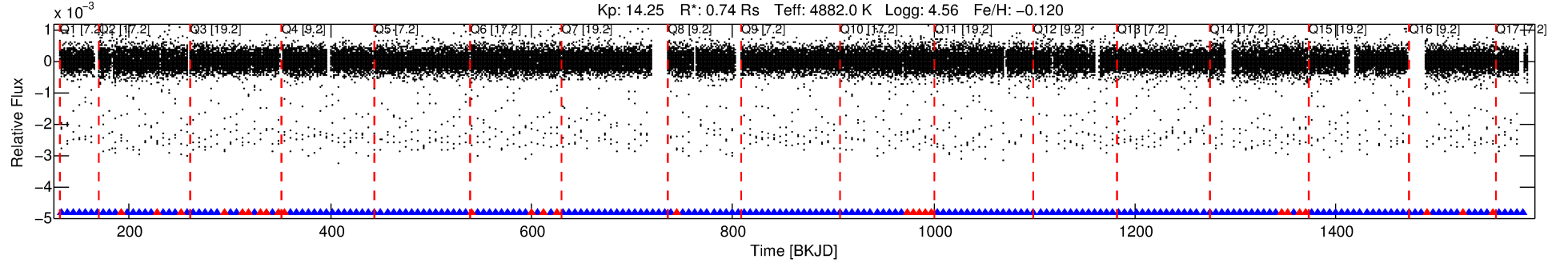
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008352537-01

No Significant Match Found

DV One-Page Summary

KIC: 8352537 Candidate: 1 of 1 Period: 6.010 d
KOI: K00420.01 Corr: 0.977



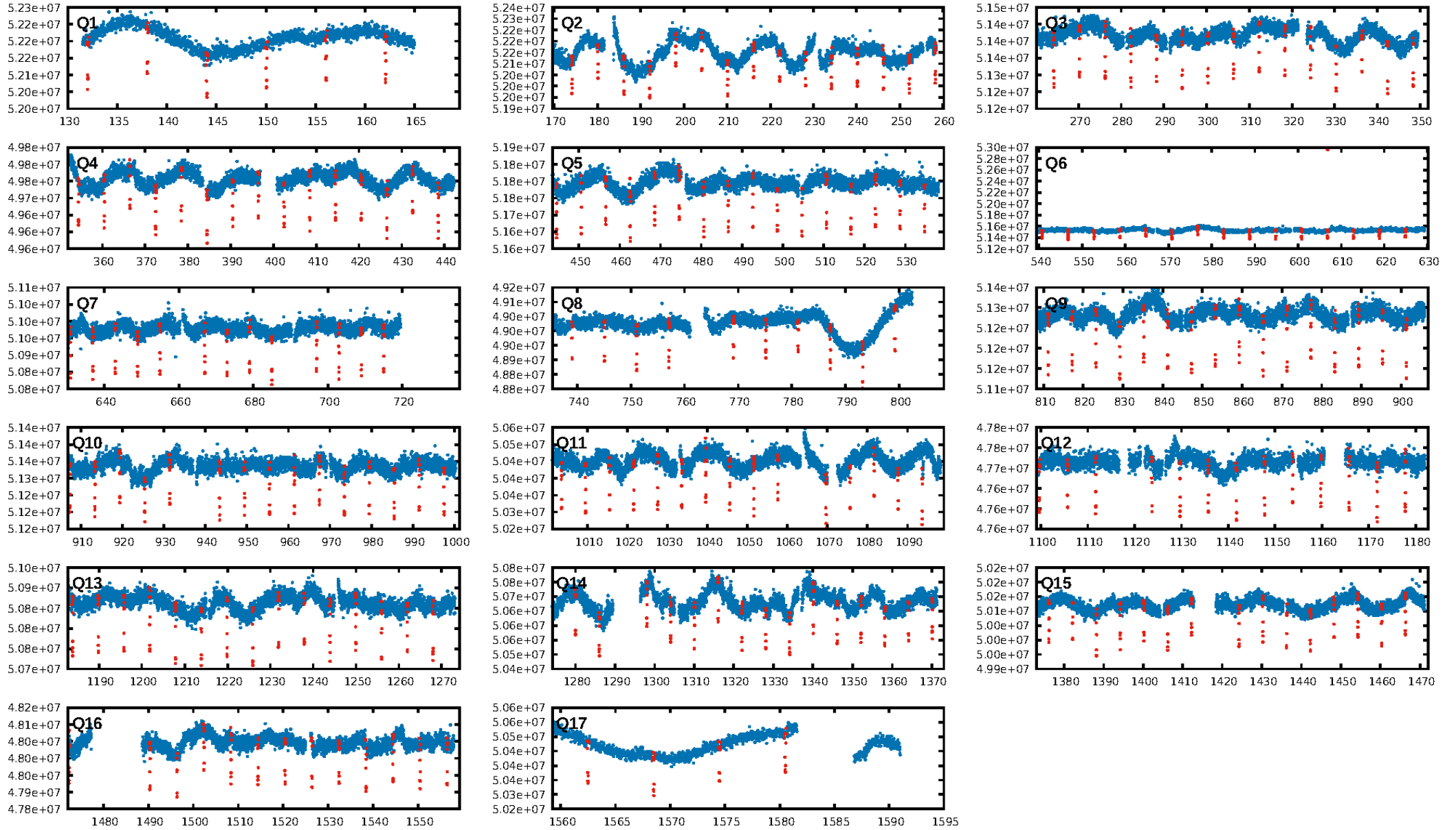
DV Fit Results:

Period = 6.01038 [0.00000] d
Epoch = 132.0120 [0.0002] BKJD
Rp/R* = 0.0525 [0.0011]
a/R* = 13.81 [0.98]
b = 0.79 [0.04]
Seff = 82.56 [14.07]
Teff = 769 [33] K
Rp = 4.23 [0.43] Re
a = 0.0579 [0.0049] AU
Ag = 3.60 [1.10] [2.37 σ]
Teffp = 1636 [124] K [6.74 σ]

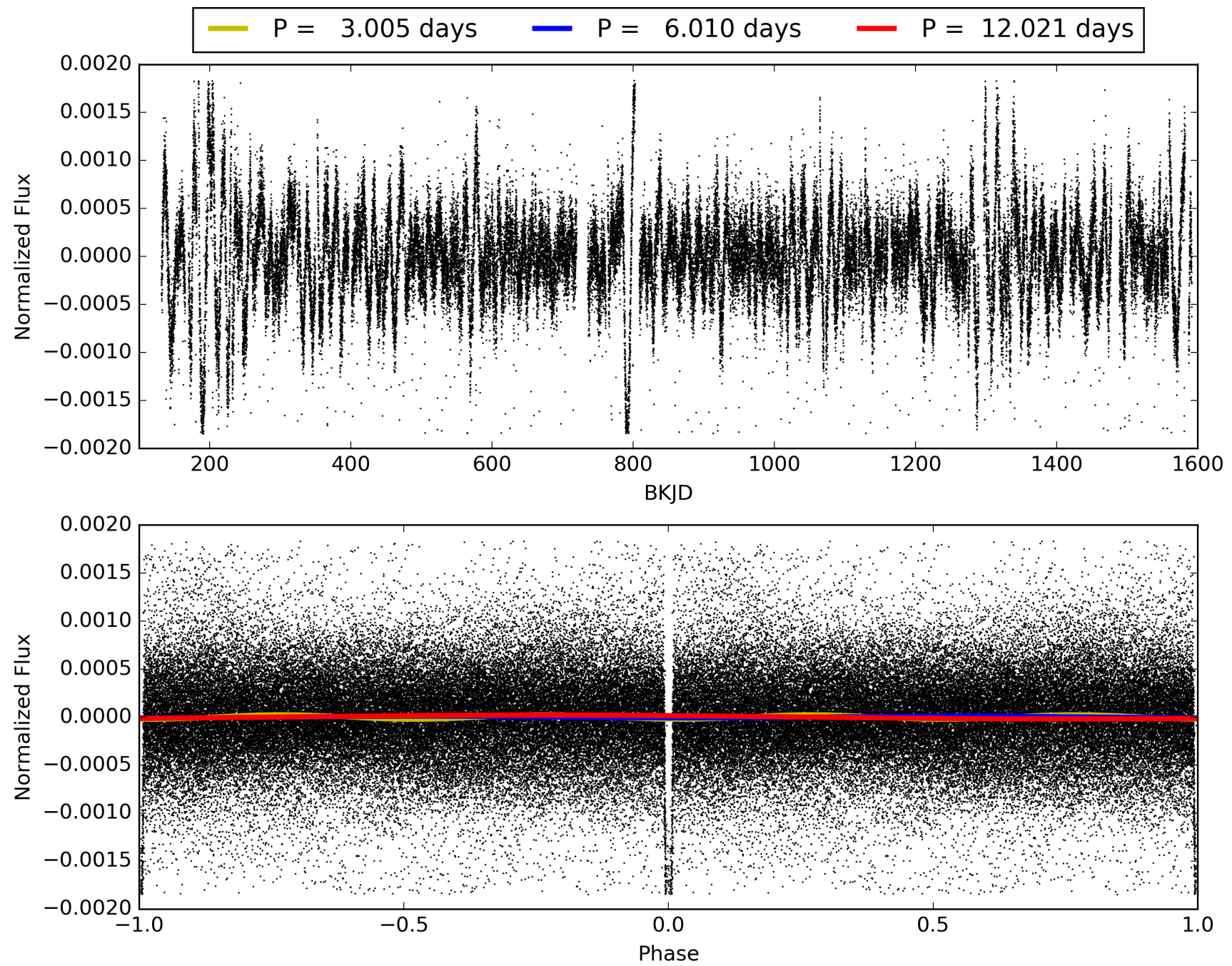
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.87 [188/215]
GhostDiagnostic-chr: 9.085
Centroid-sig: 0.0%
Centroid-so: 0.431 arcsec [9.53 σ]
OotOffset-rm: 0.026 arcsec [0.36 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.269 arcsec [3.82 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008352537-01, PDC Light Curves

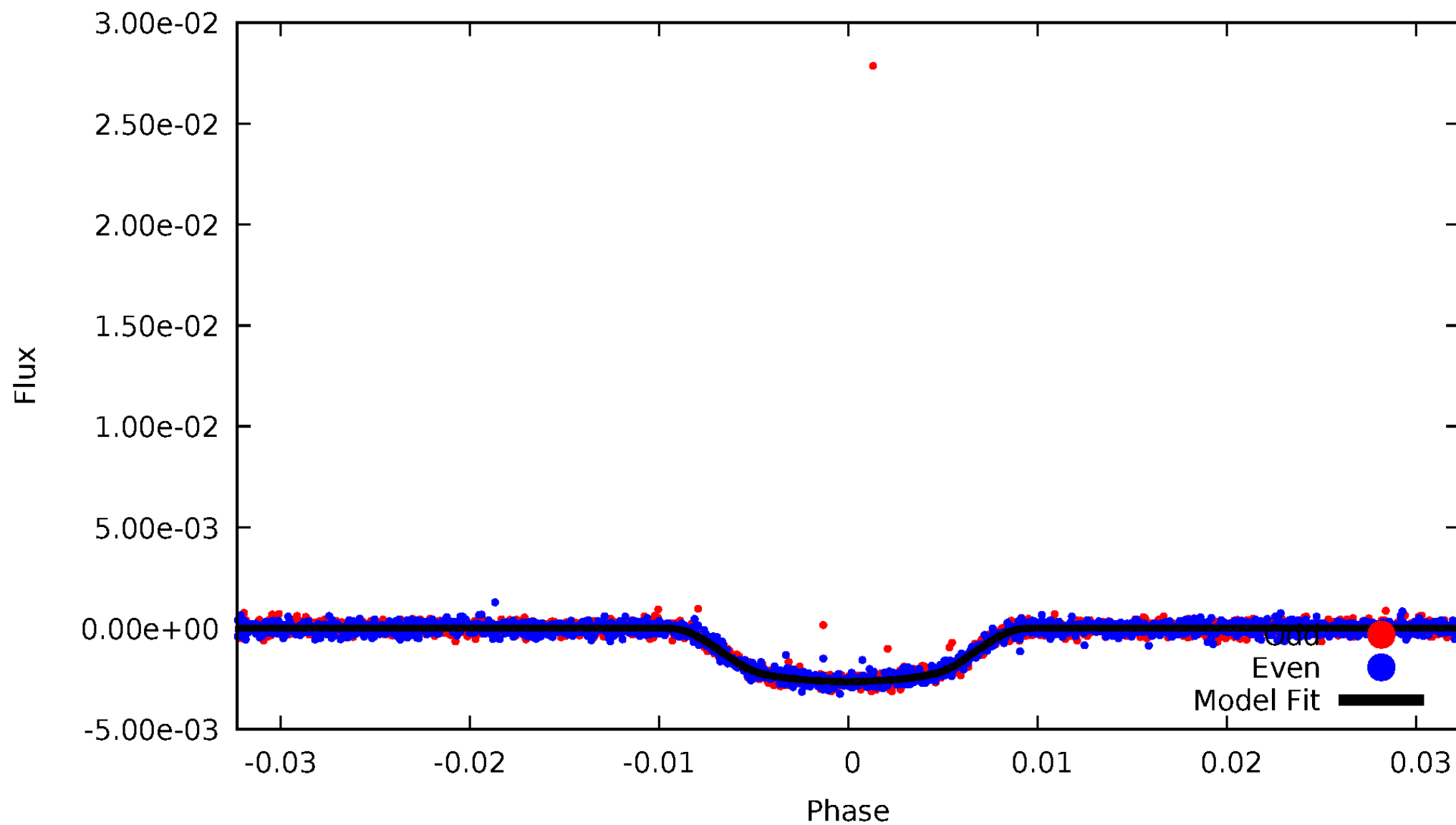


TCE 008352537-01



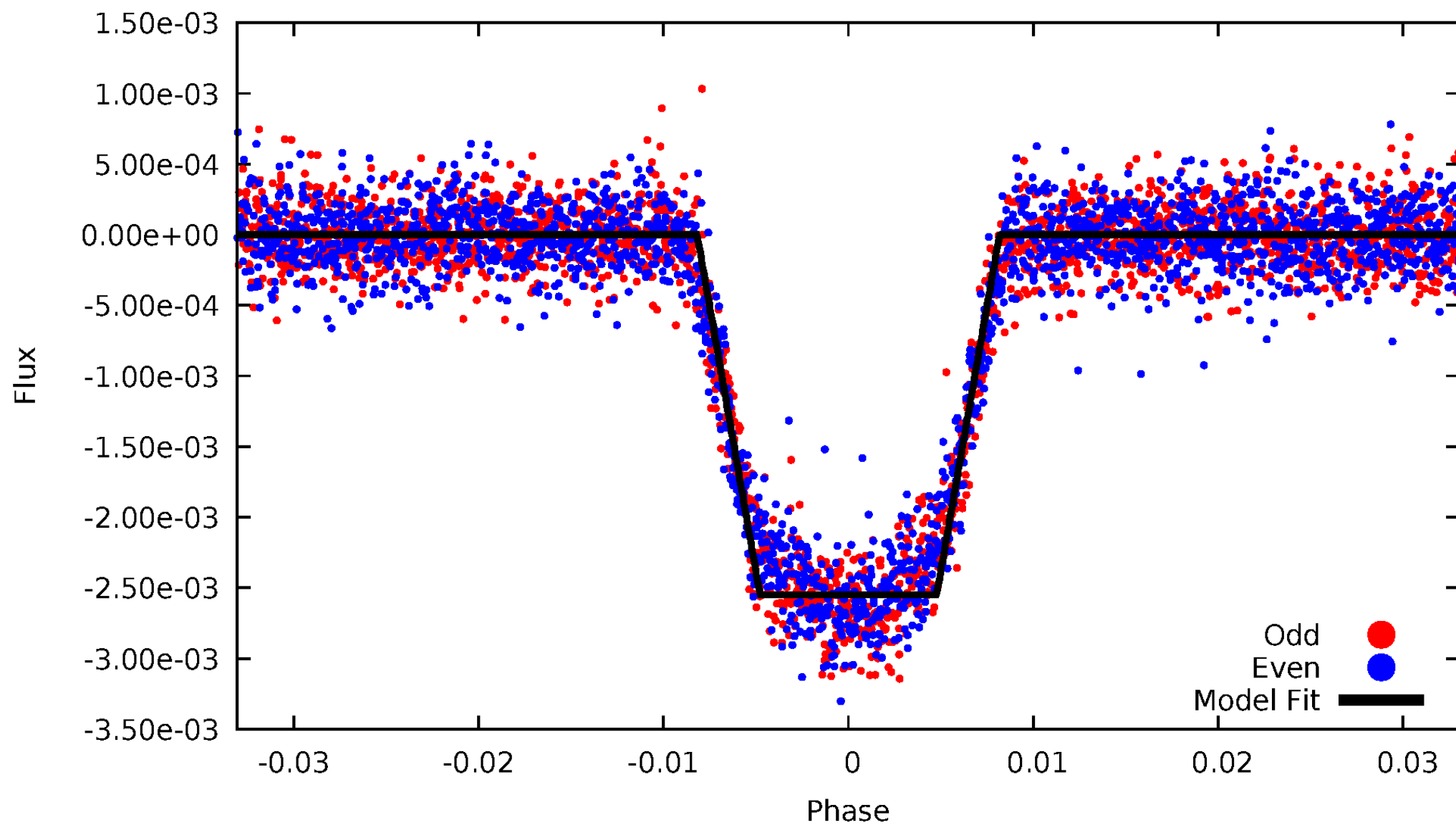
DV Odd/Even

TCE 008352537-01



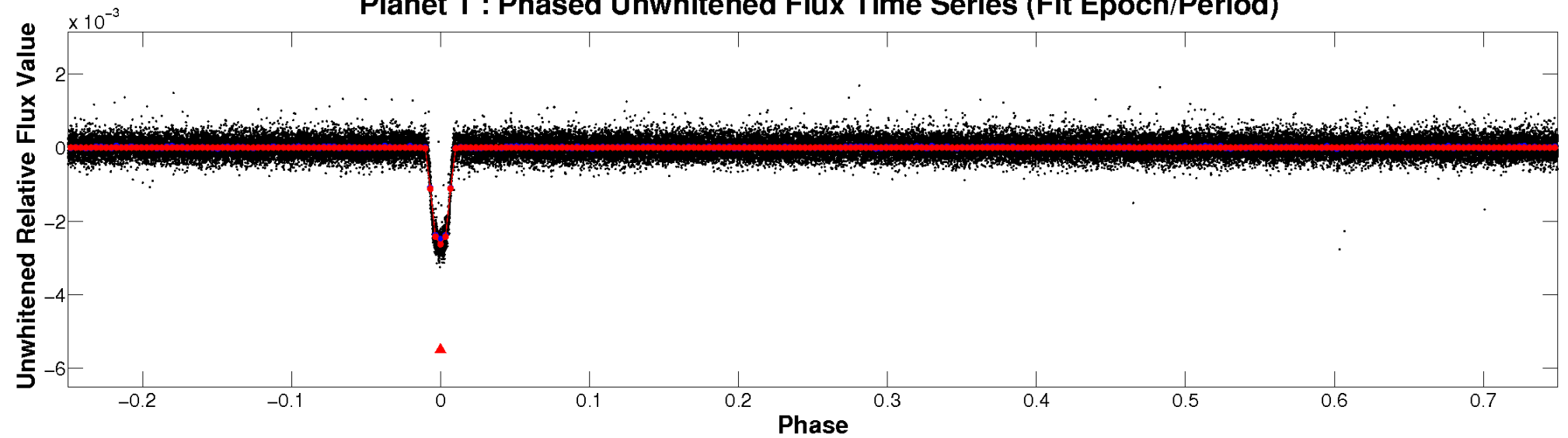
ALT Odd/Even

TCE 008352537-01

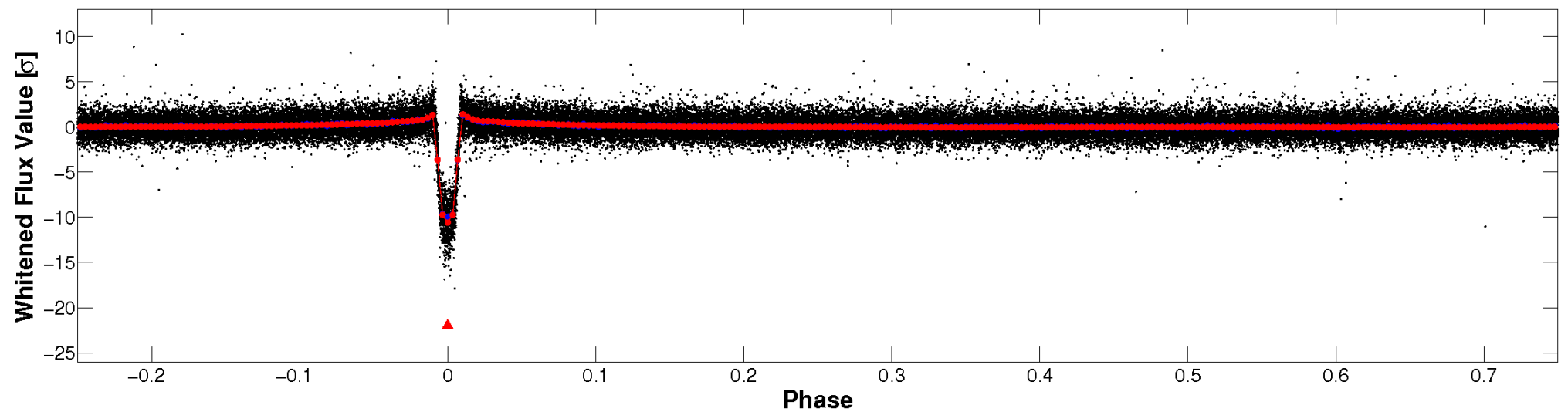


Non-Whitened Vs. Whitened Light Curve

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

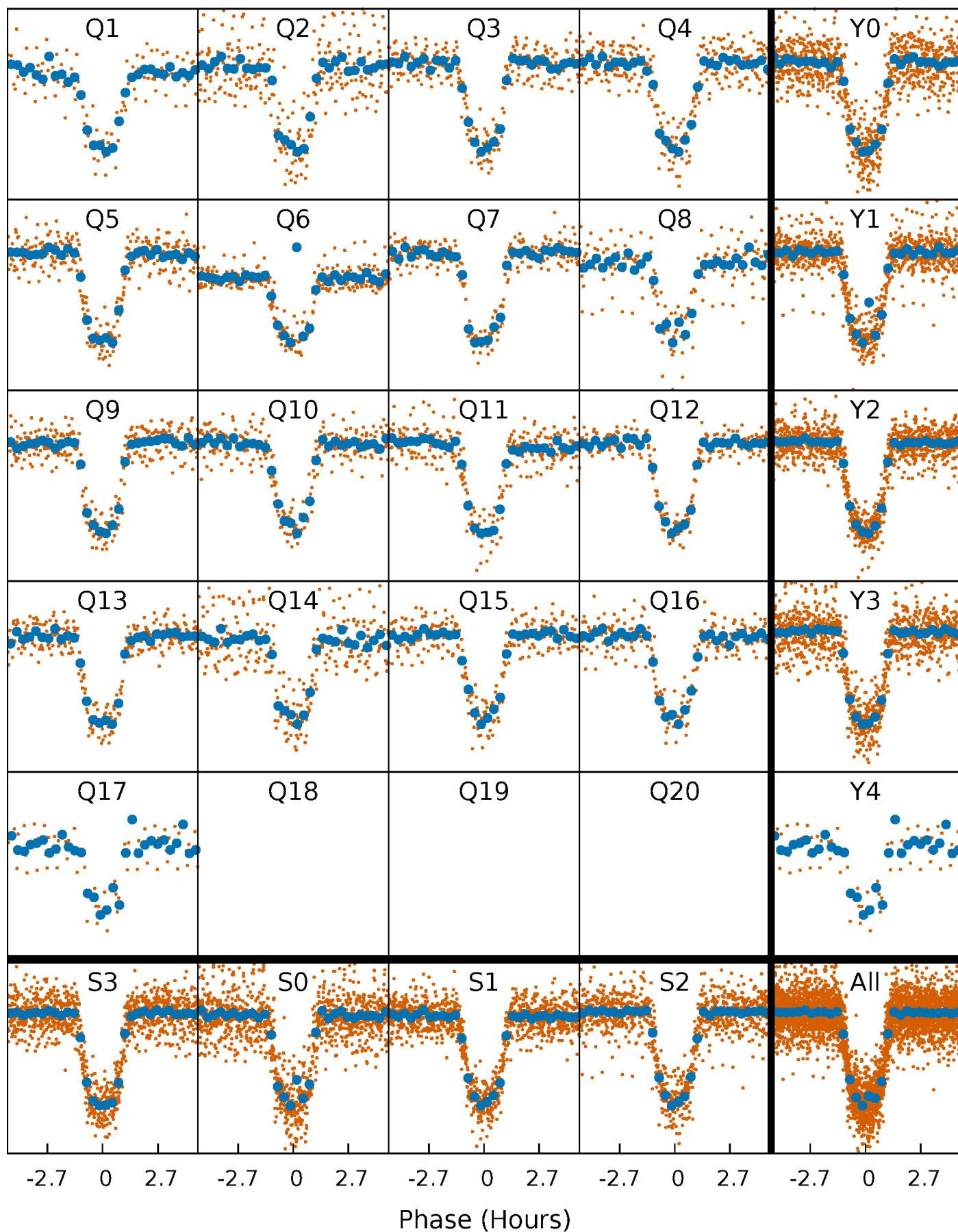


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



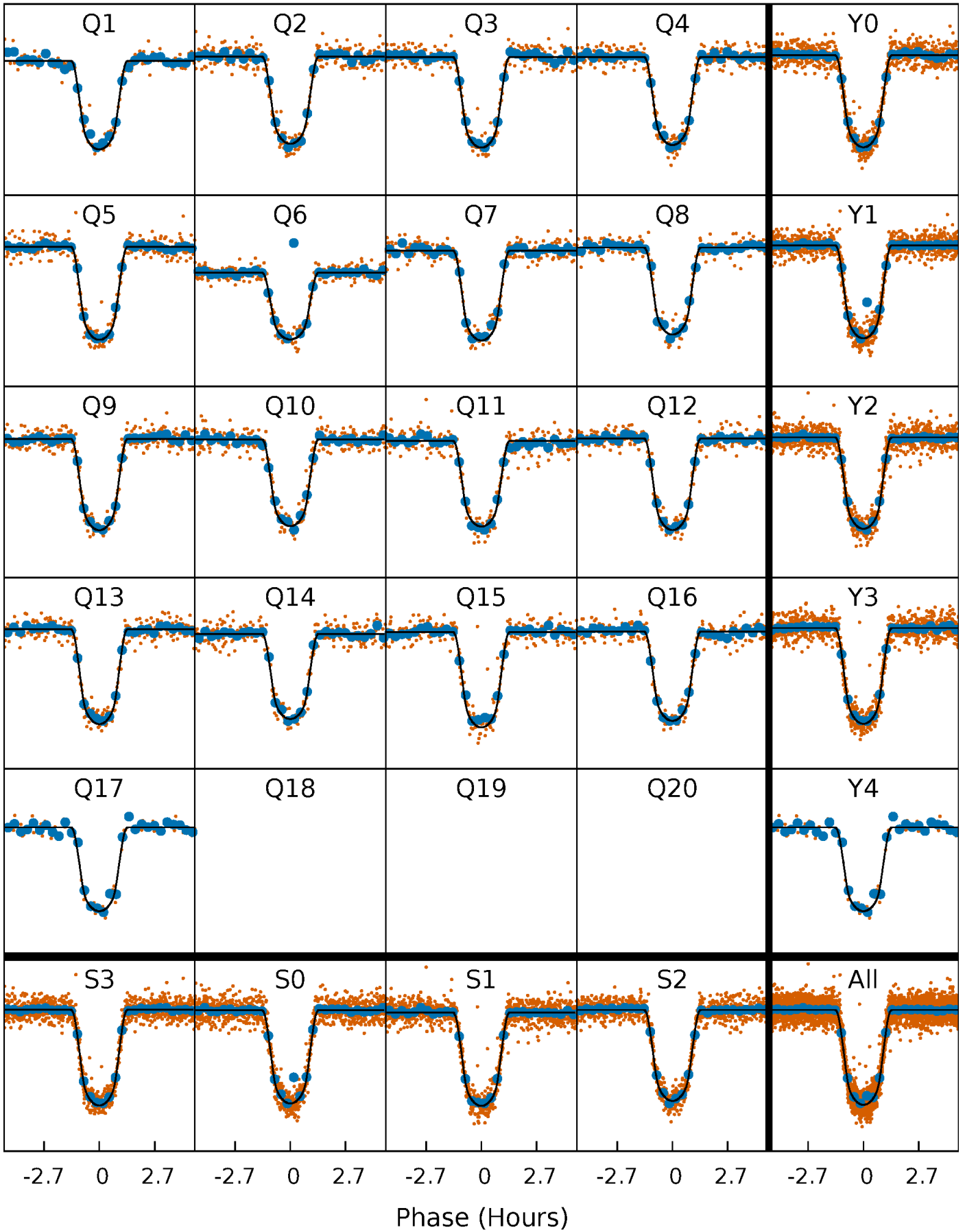
PDC Quarter-Phased Transit Curves

TCE 008352537-01 P= 6.010384 Days $T_0=132.011979$ (BKJD)



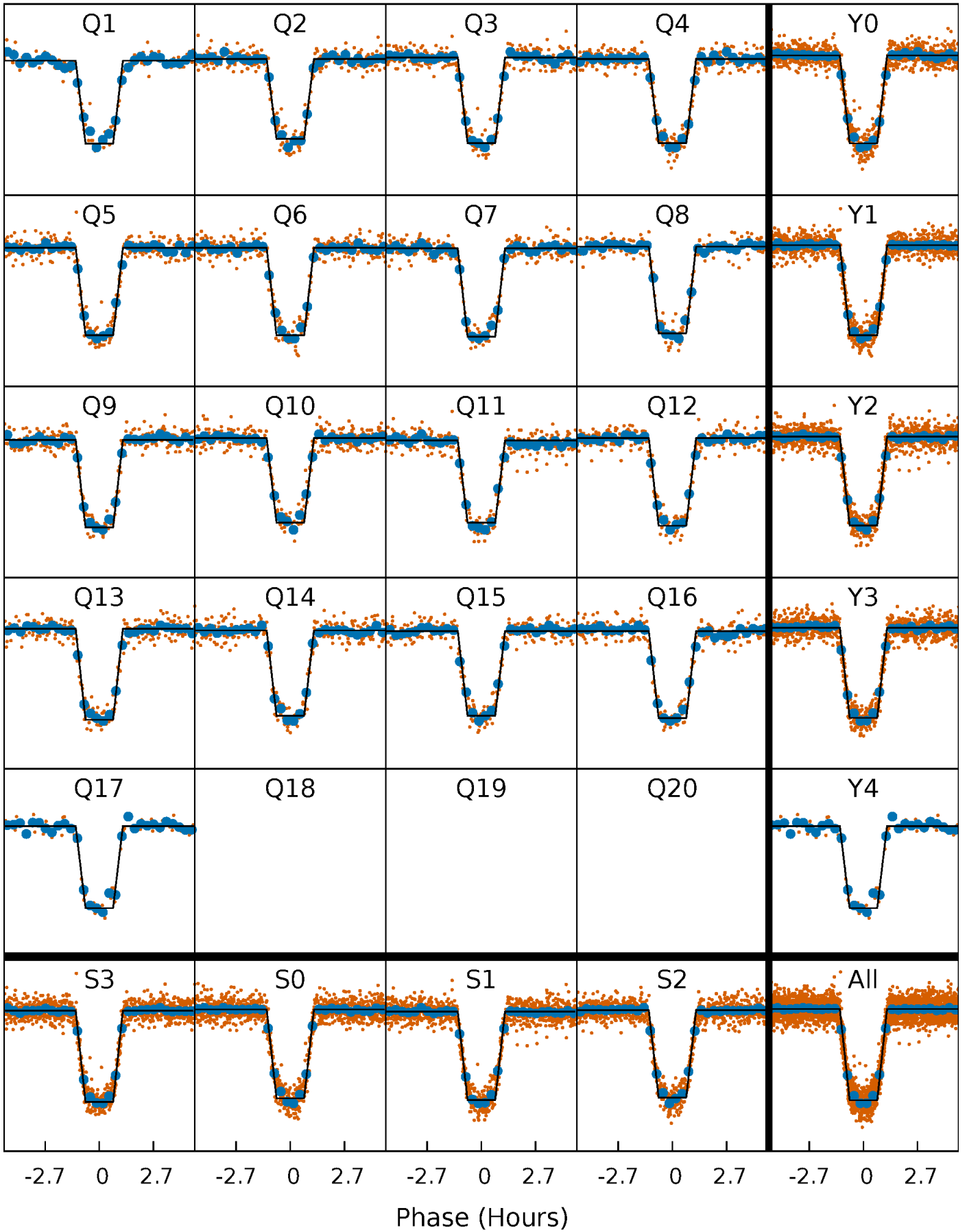
DV Quarter-Phased Transit Curves

TCE 008352537-01 P= 6.010384 Days $T_0=132.011979$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

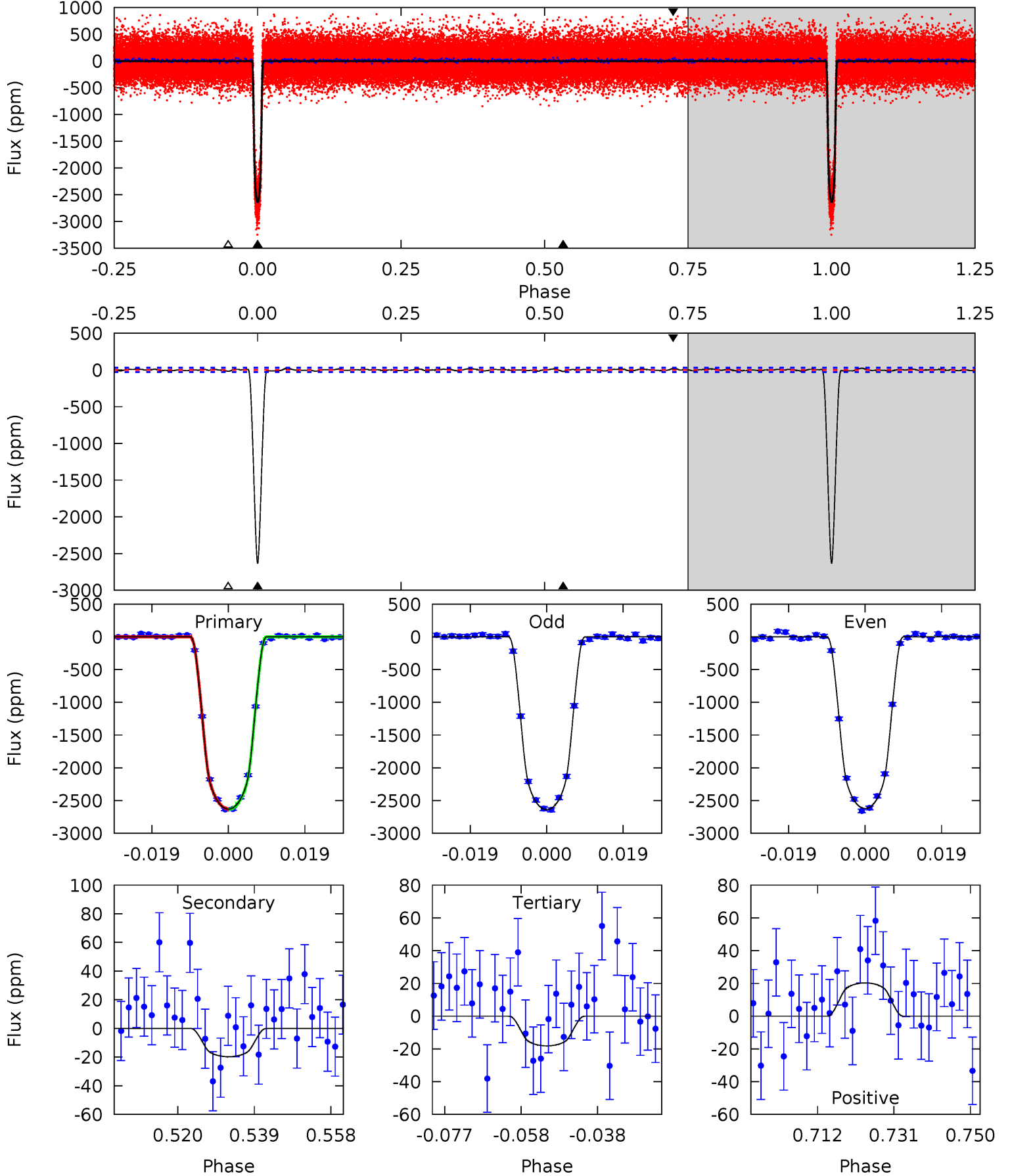
TCE 008352537-01 P= 6.010389 Days $T_0=132.011575$ (BKJD)



DV Model-Shift Uniqueness Test

008352537-01, P = 6.010384 Days, E = 126.001595 Days

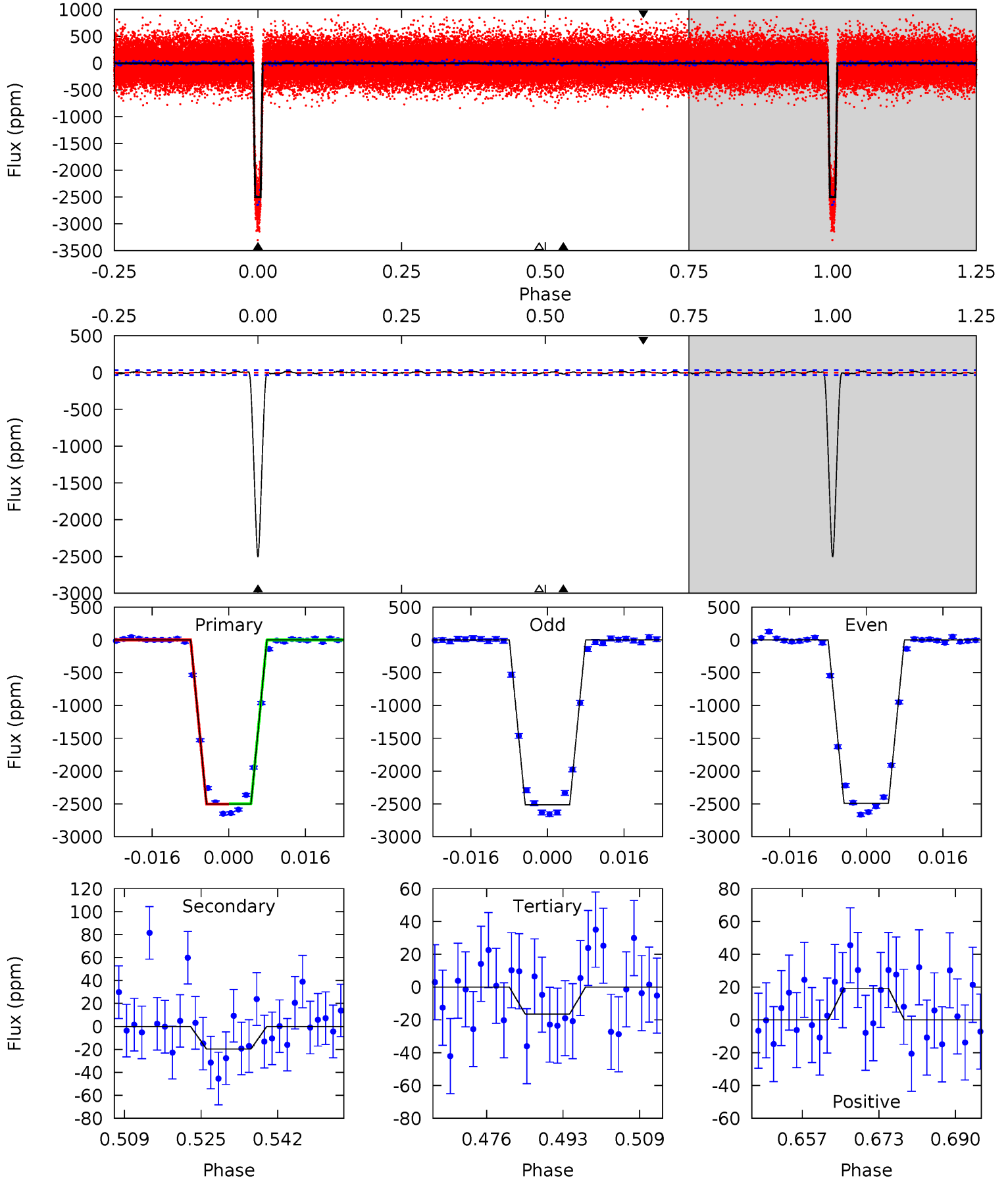
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
433.2	3.25	2.99	3.34	4.90	2.34	1.30	430.2	429.9	0.26	-0.09	1.52	0.98	0.01	0.81



Alt Model-Shift Uniqueness Test

008352537-01, P = 6.010389 Days, E = 126.001186 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
382.8	3.01	2.51	2.94	4.93	2.40	1.20	380.3	379.9	0.50	0.07	1.82	1.00	0.01	0.35



Stellar Parameters For KIC 008352537

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4882^{+131}_{-146}	$4.558^{+0.066}_{-0.039}$	$-0.120^{+0.300}_{-0.300}$	$0.738^{+0.056}_{-0.074}$	$0.718^{+0.081}_{-0.054}$	$2.516^{+0.707}_{-0.338}$
	+3%/-3%	+1%/-1%	+250%/-250%	+8%/-10%	+11%/-8%	+28%/-13%
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 008352537-01 / KOI 0420.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 6	$4.22^{+0.23}_{-0.23}$	1067^{+39}_{-38}	2260^{+88}_{-111}	$2.029^{+0.691}_{-0.603}$
Alt.	-20 ± 7	$4.06^{+0.21}_{-0.23}$	1070^{+35}_{-38}	2283^{+100}_{-126}	$2.204^{+0.856}_{-0.732}$

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

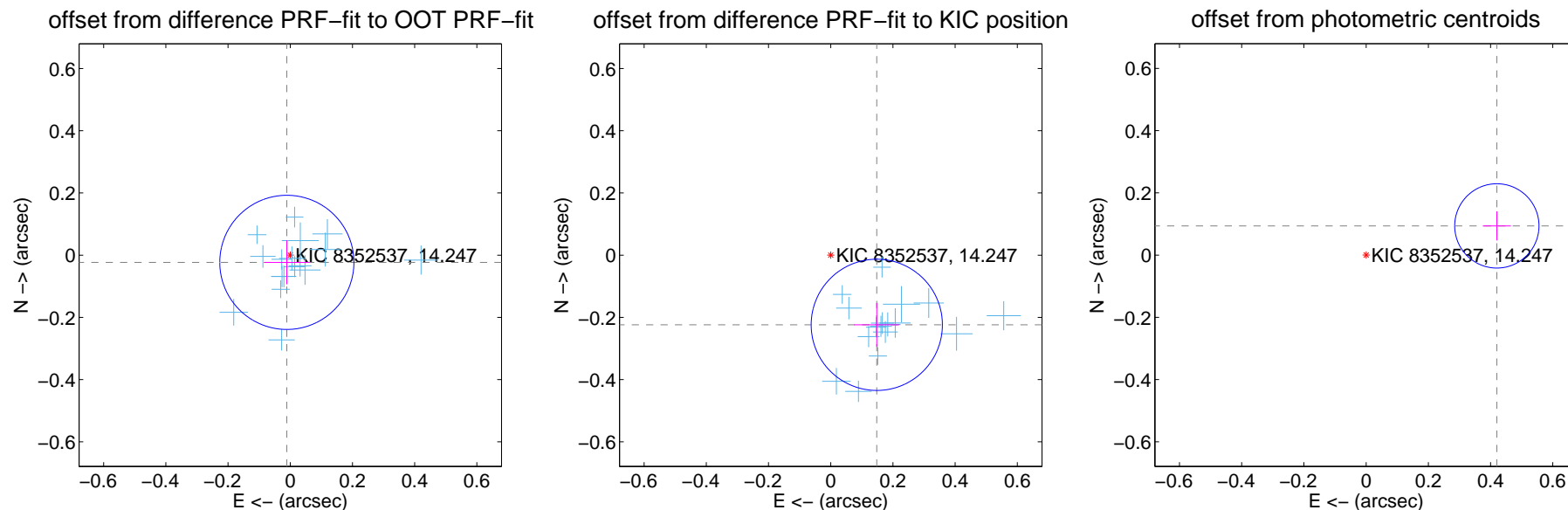
DV Centroid Data

Supplemental centroid analysis for 008352537-01. Kepler magnitude: 14.25. Transit SNR 270.90

There are 17 quarters with good PRF difference image offsets

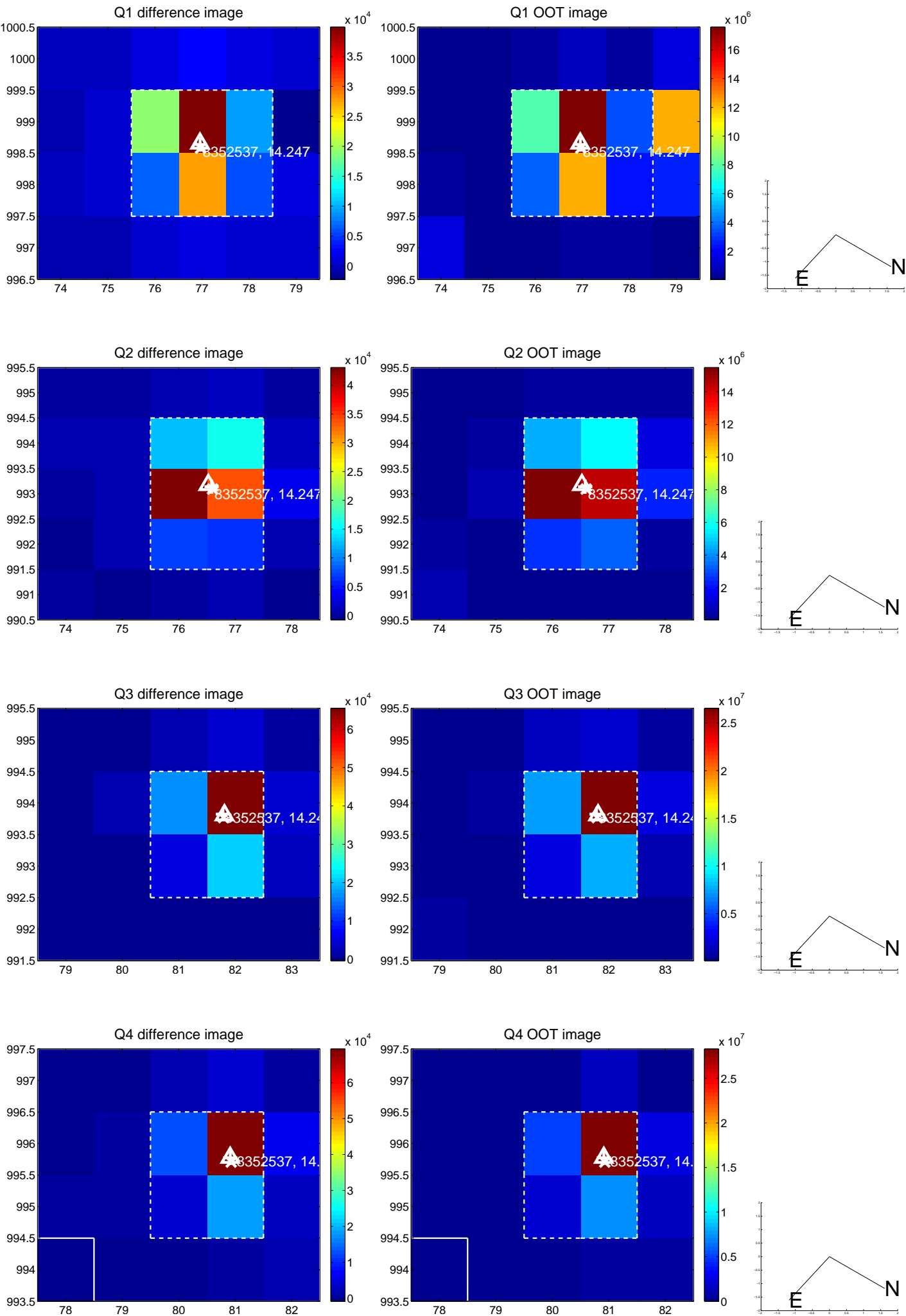
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.026 ± 0.072	0.36	0.011 ± 0.073	-0.023 ± 0.071
PRF-fit source offset from KIC position	0.269 ± 0.070	3.82	-0.148 ± 0.073	-0.224 ± 0.070
photometric centroid source offset	0.43 ± 0.05	9.53	-0.42 ± 0.05	0.09 ± 0.05

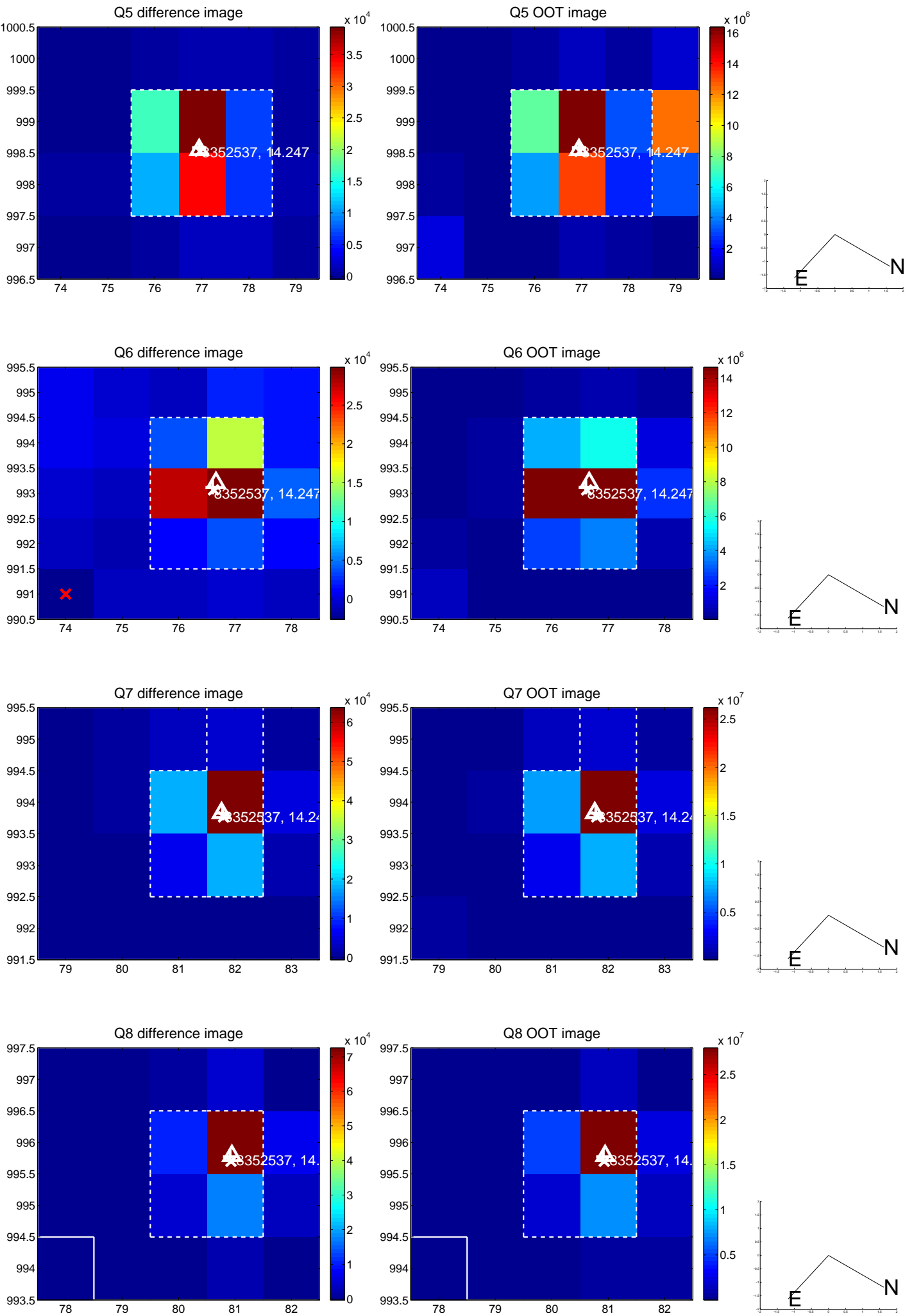


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

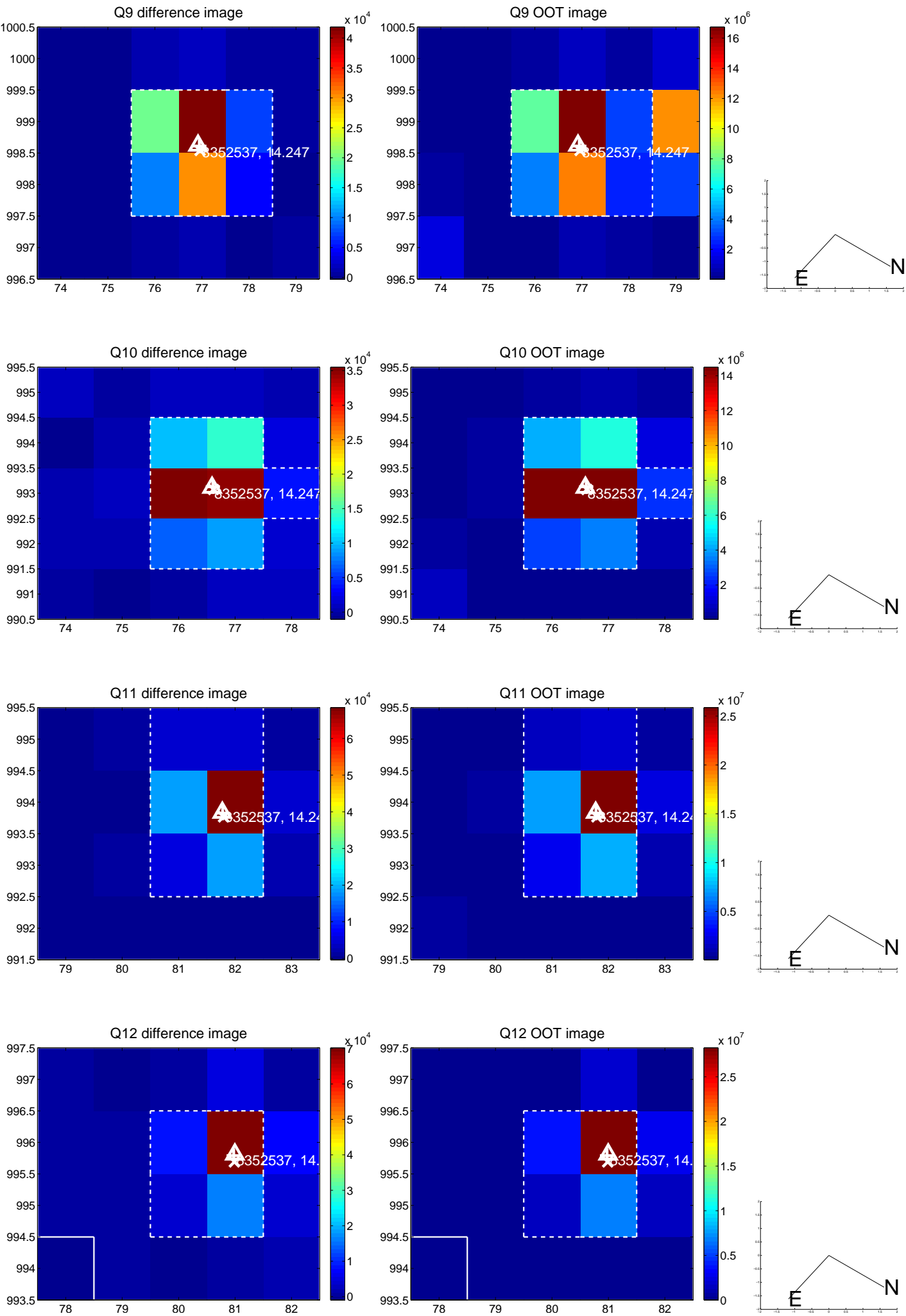
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



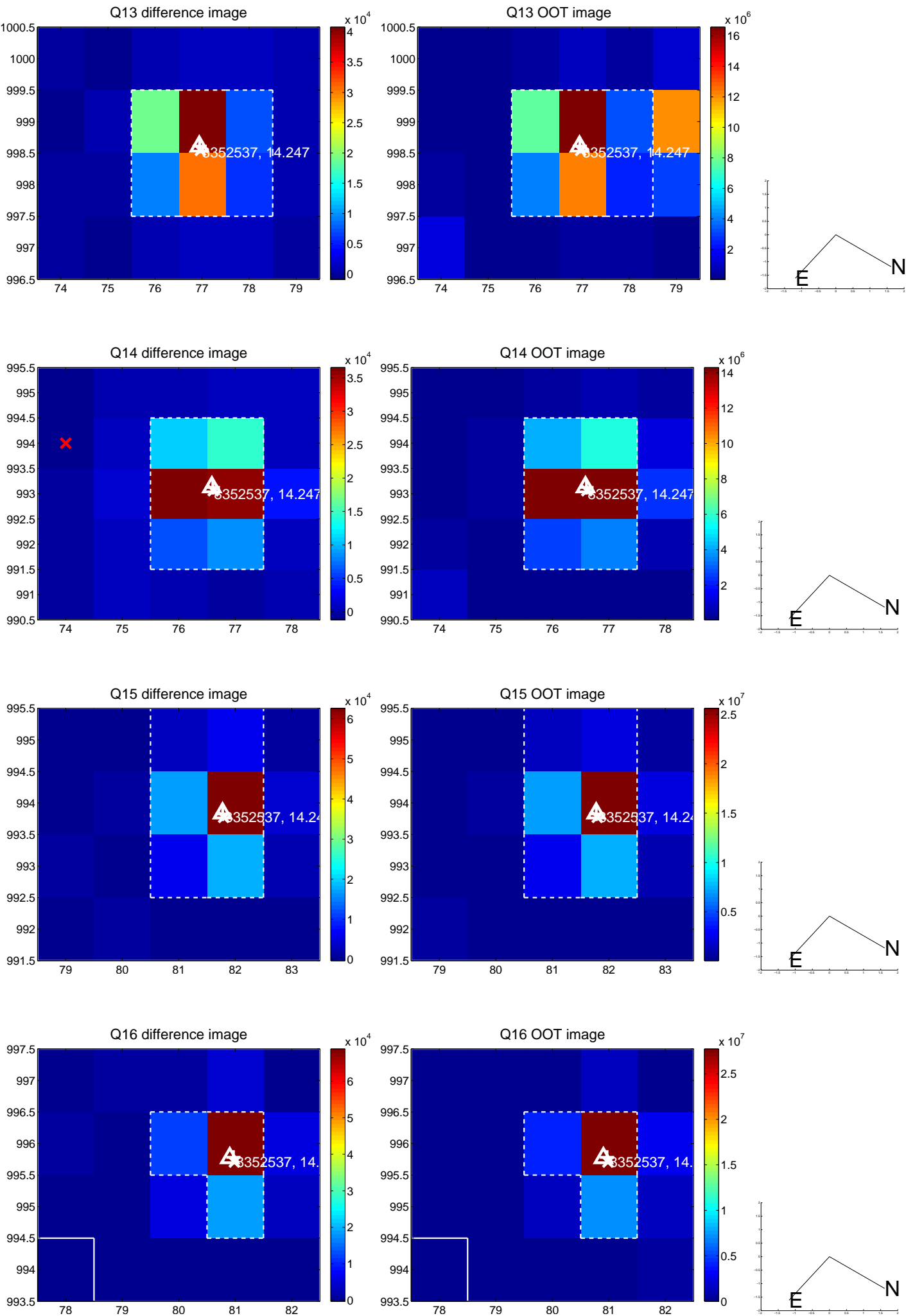
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



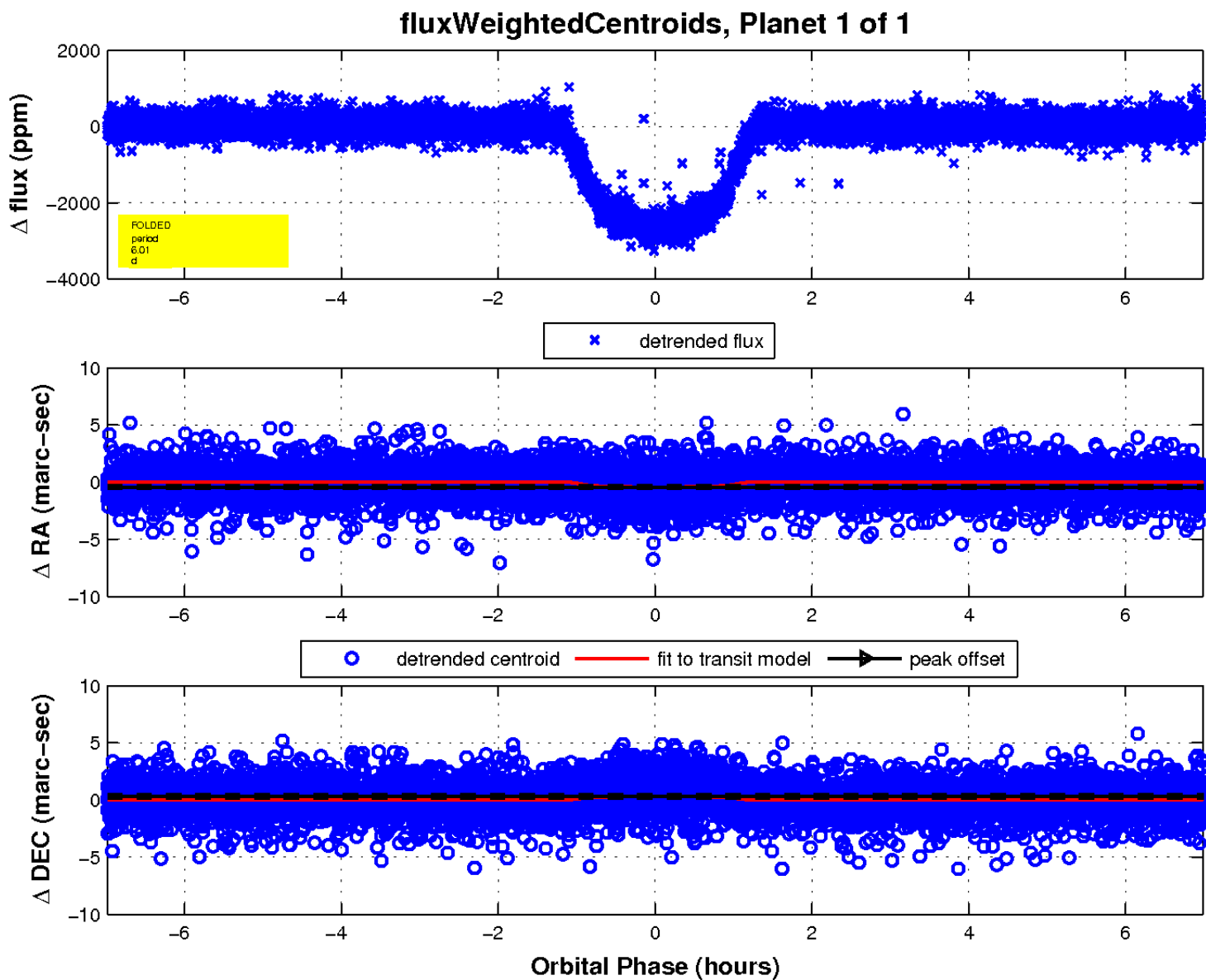
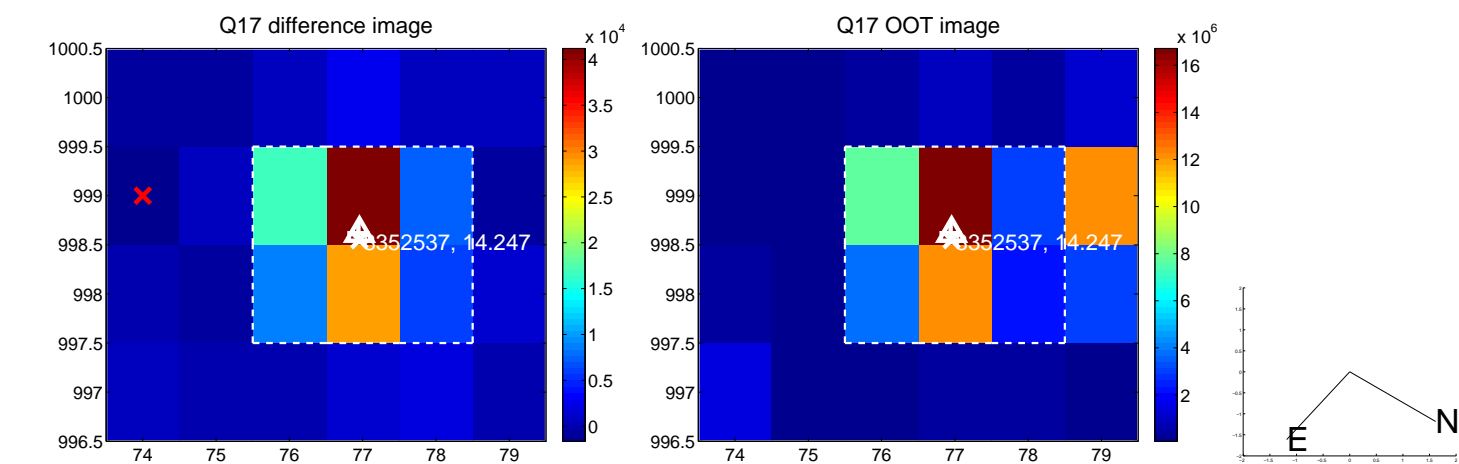
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

