

KIC 009790806

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})
009790806-01	OBS	2035.01	1.931556	131.766105	419.9	1.697	70.0	80.0	0.86	5461	2.12	655.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009790806-01	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.

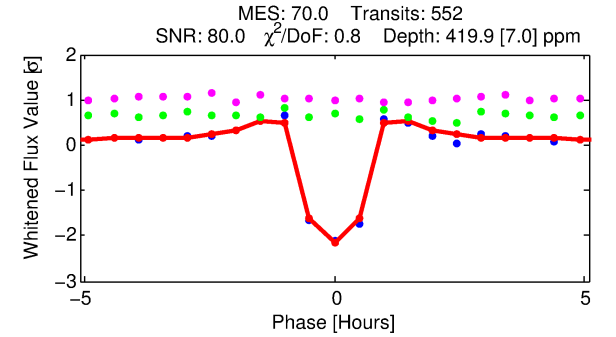
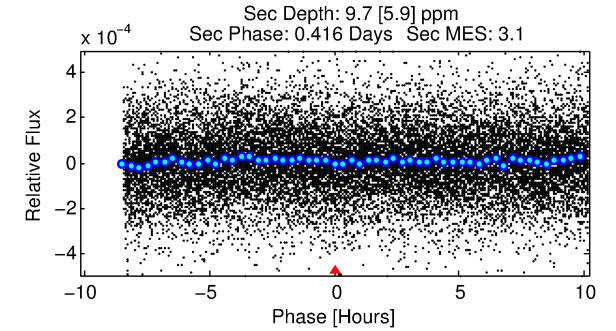
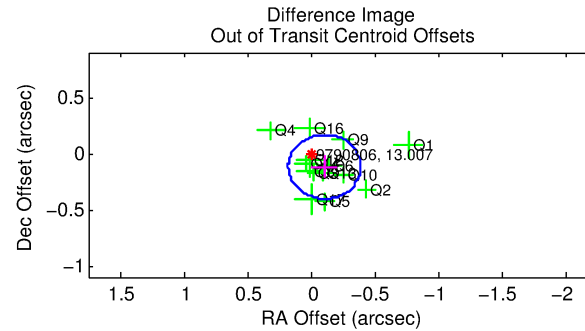
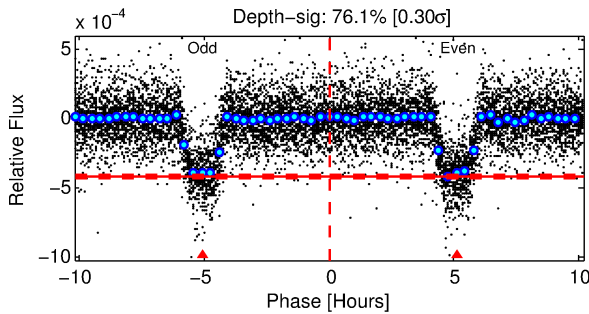
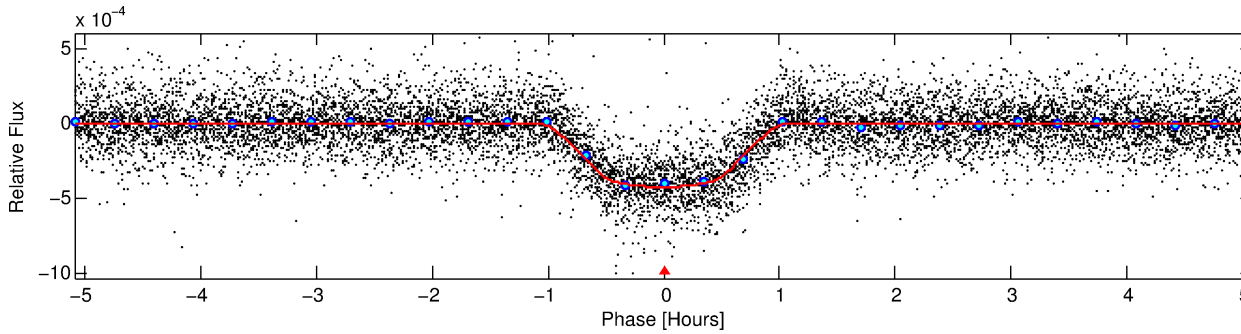
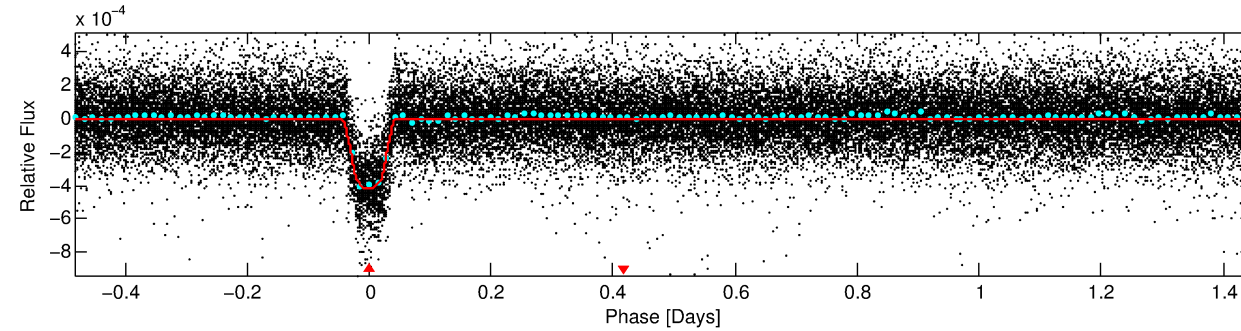
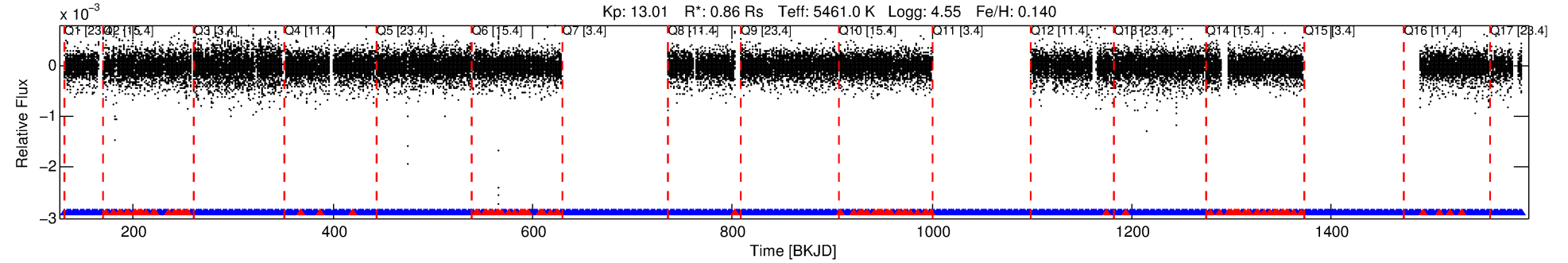
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009790806-01

No Significant Match Found

DV One-Page Summary

KIC: 9790806 Candidate: 1 of 1 Period: 1.932 d
KOI: K02035.01 Corr: 0.977



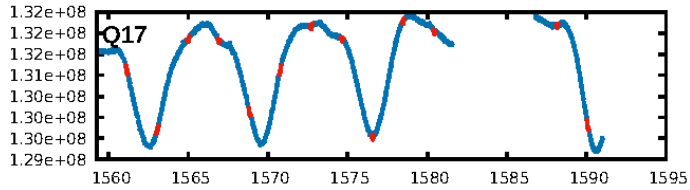
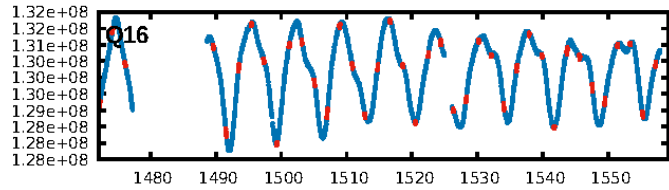
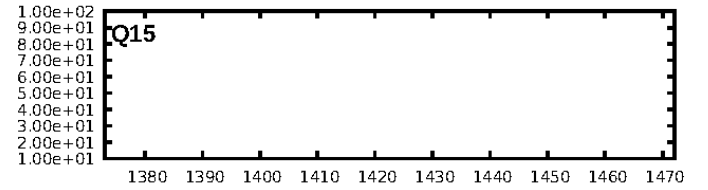
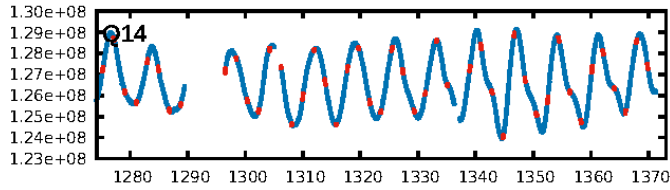
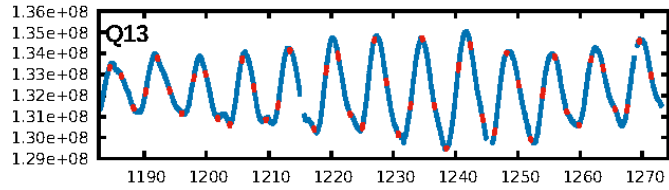
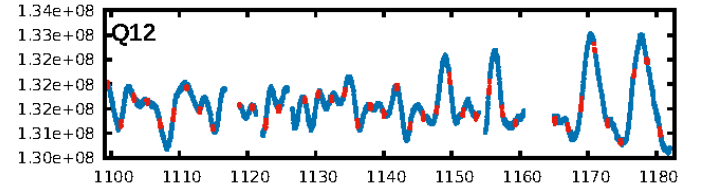
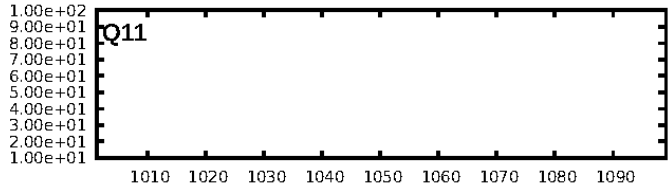
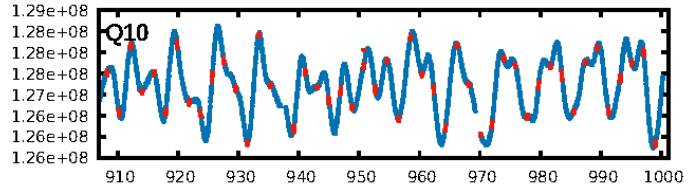
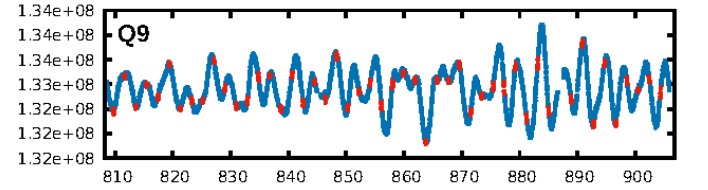
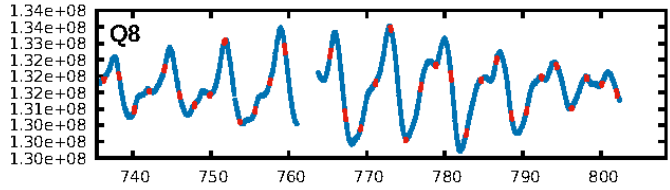
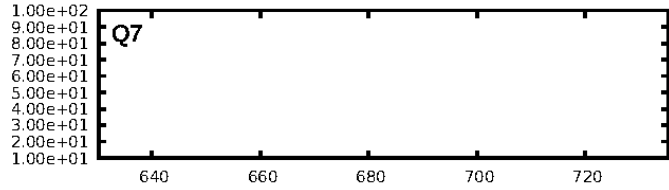
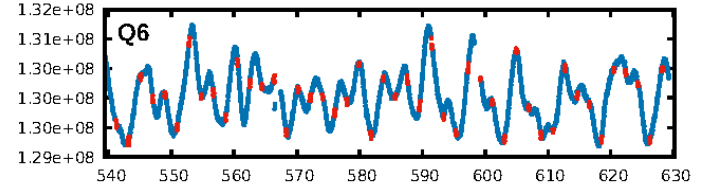
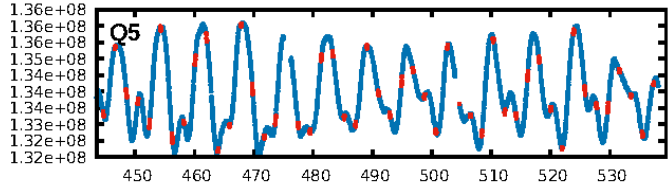
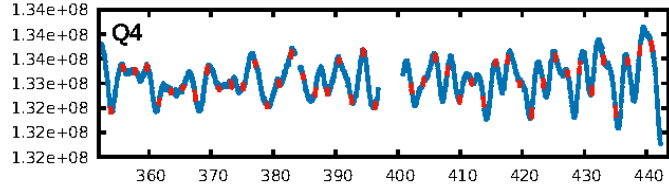
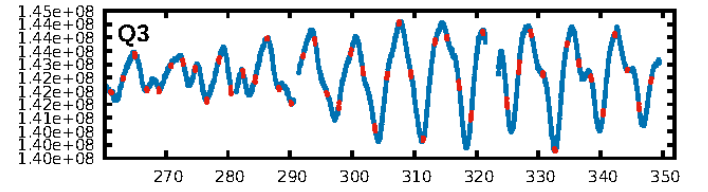
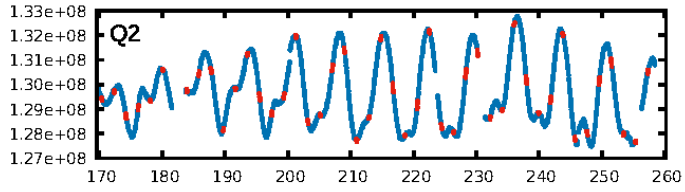
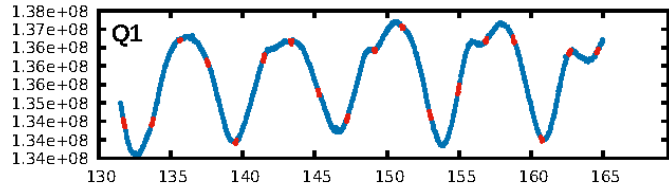
DV Fit Results:

Period = 1.93156 [0.00000] d
Epoch = 131.7661 [0.0002] BKJD
Rp/R* = 0.0226 [0.0014]
a/R* = 4.33 [1.10]
b = 0.90 [0.06]
Seff = 655.29 [121.17]
Teff = 1290 [60] K
Rp = 2.12 [0.28] Re
a = 0.0299 [0.0033] AU
Ag = 1.06 [0.69] [0.09 σ]
Teffp = 2025 [317] K [2.28 σ]

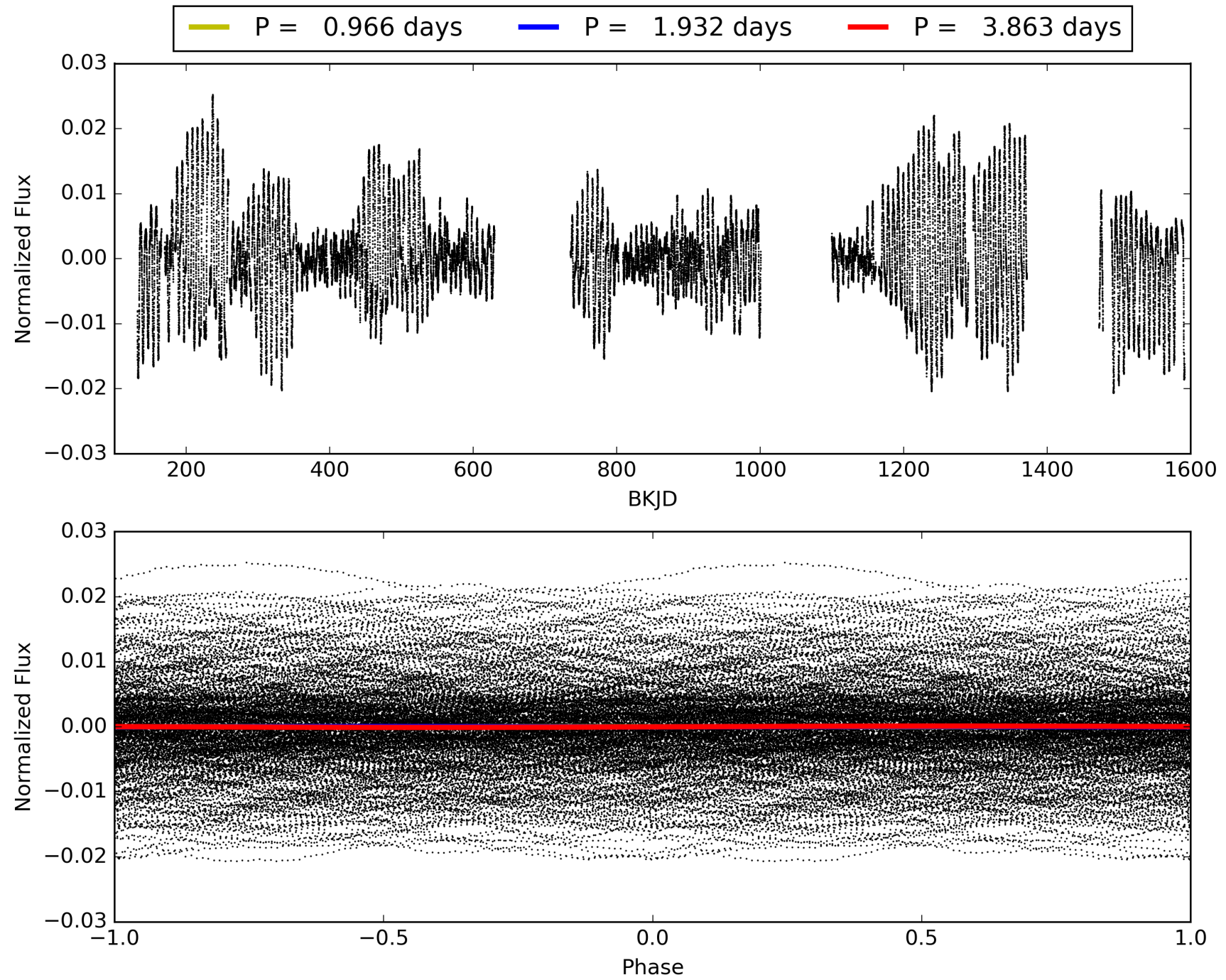
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.81 [421/521]
GhostDiagnostic-chr: 4.265
Centroid-sig: 17.7%
Centroid-so: 0.156 arcsec [1.28 σ]
OotOffset-rm: 0.160 arcsec [1.69 σ]
KicOffset-rm: 0.161 arcsec [1.78 σ]
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 009790806-01, PDC Light Curves

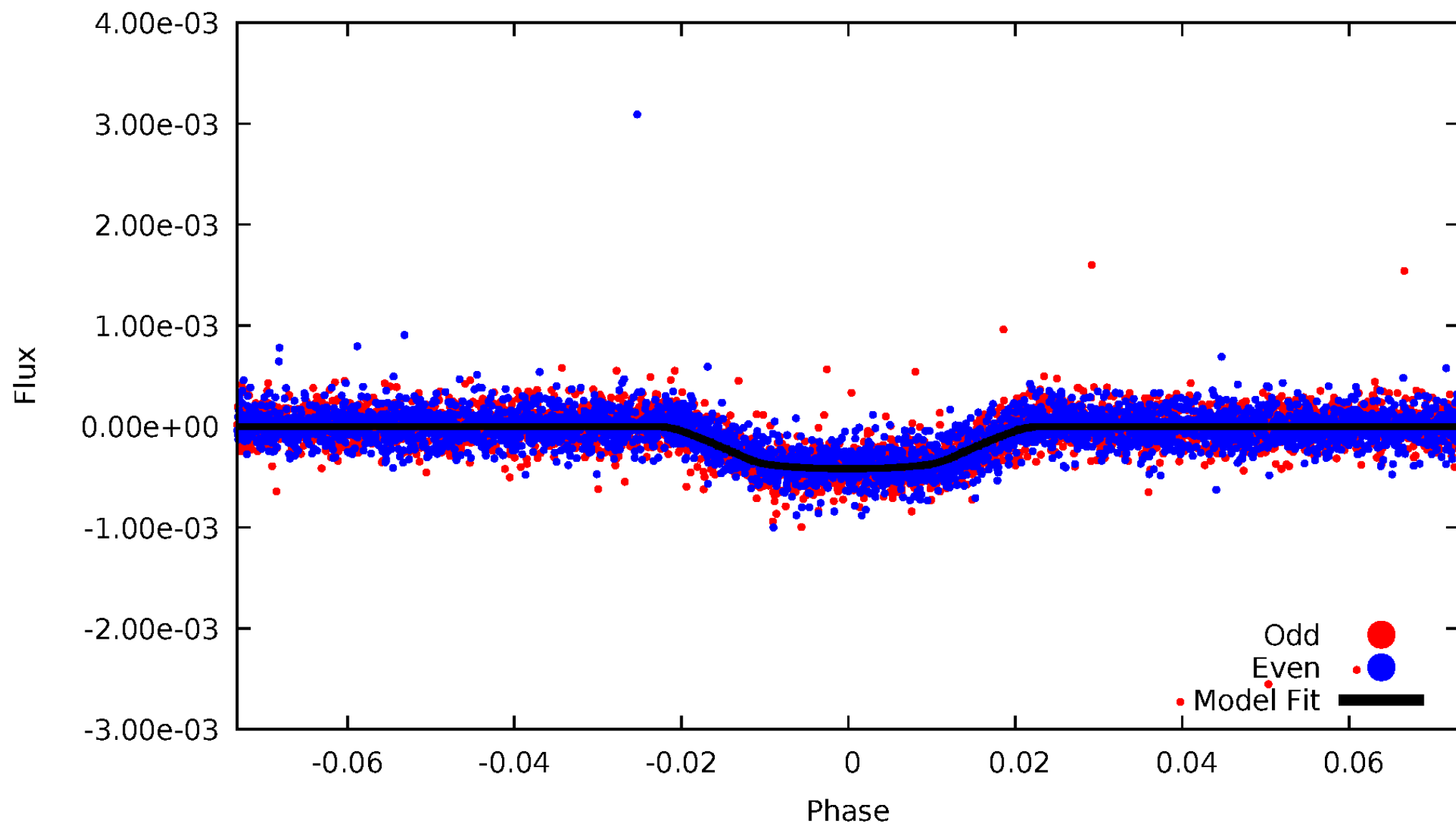


TCE 009790806-01



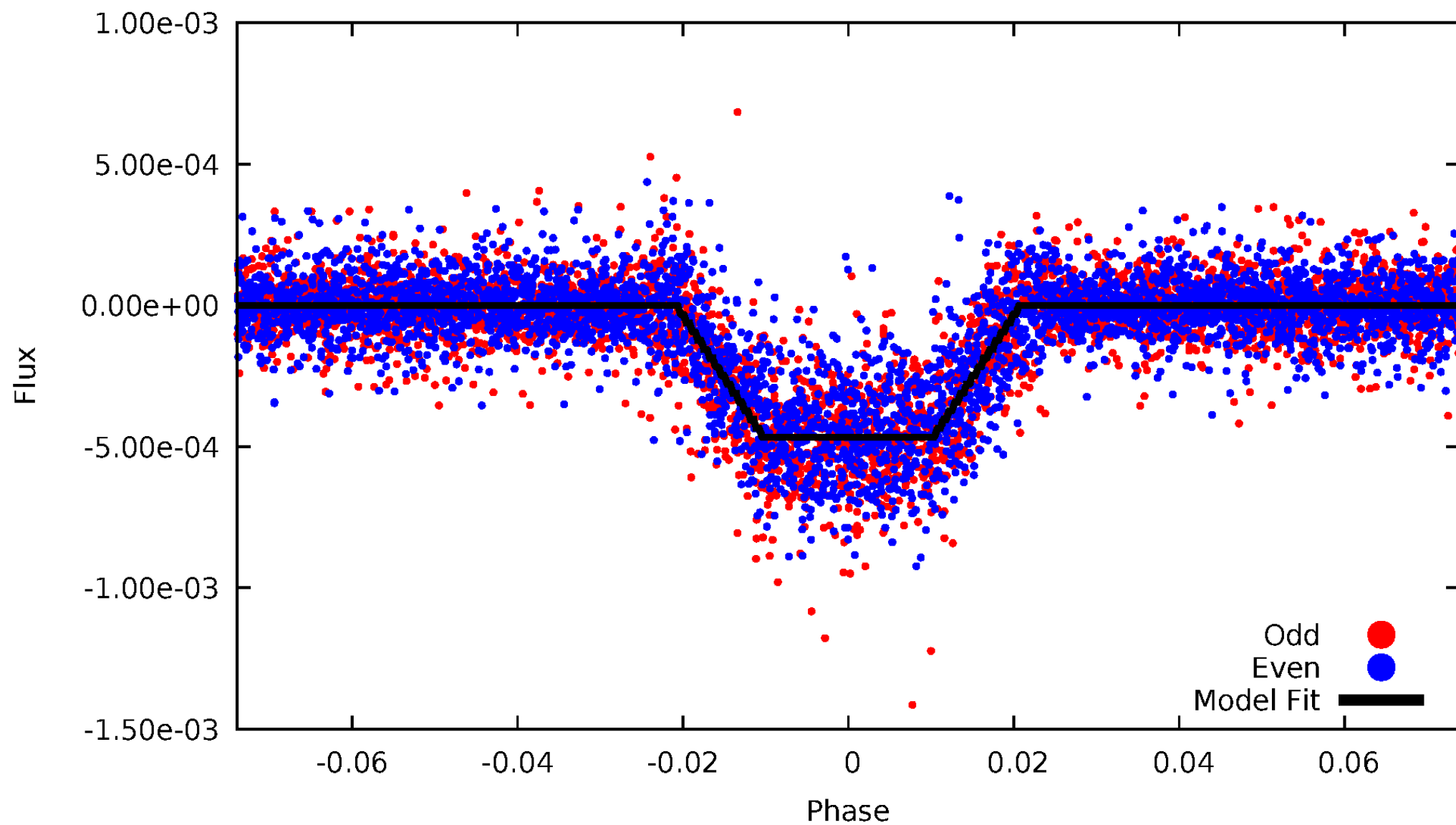
DV Odd/Even

TCE 009790806-01



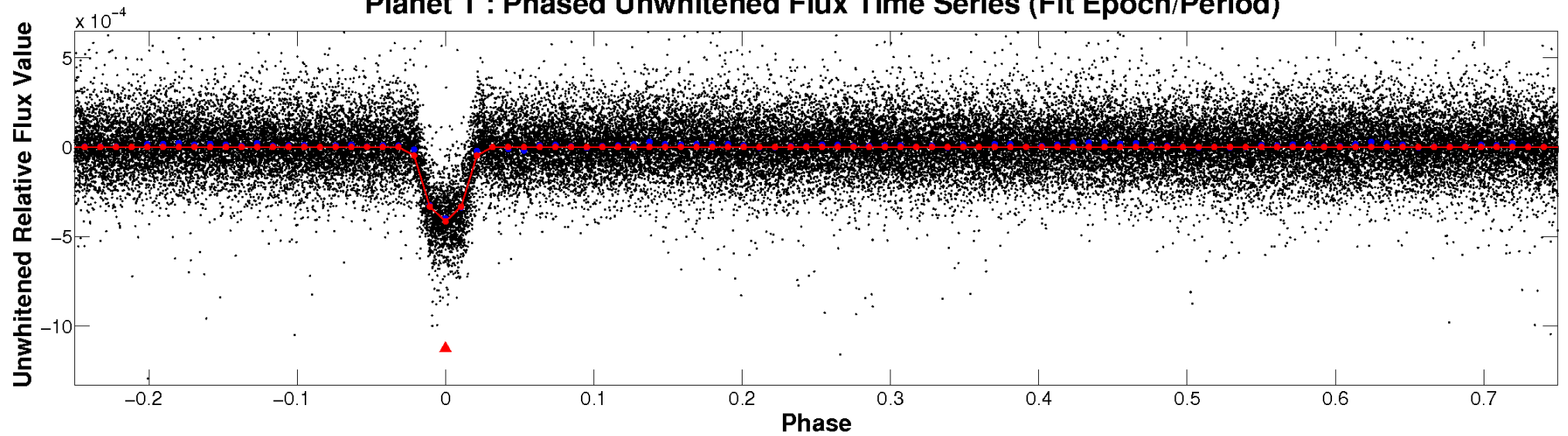
ALT Odd/Even

TCE 009790806-01

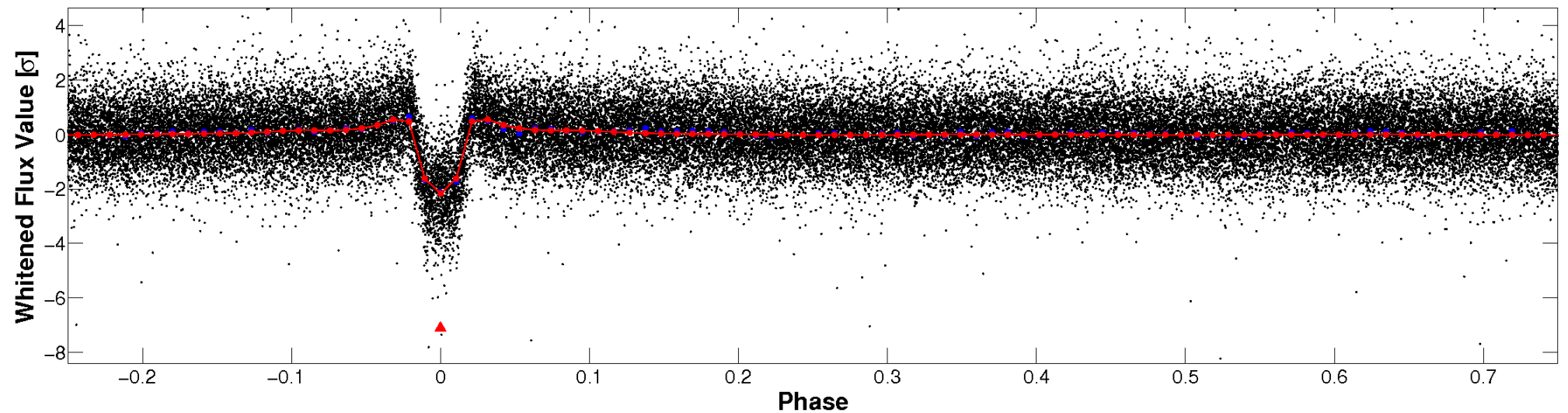


Non-Whitened Vs. Whitened Light Curve

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

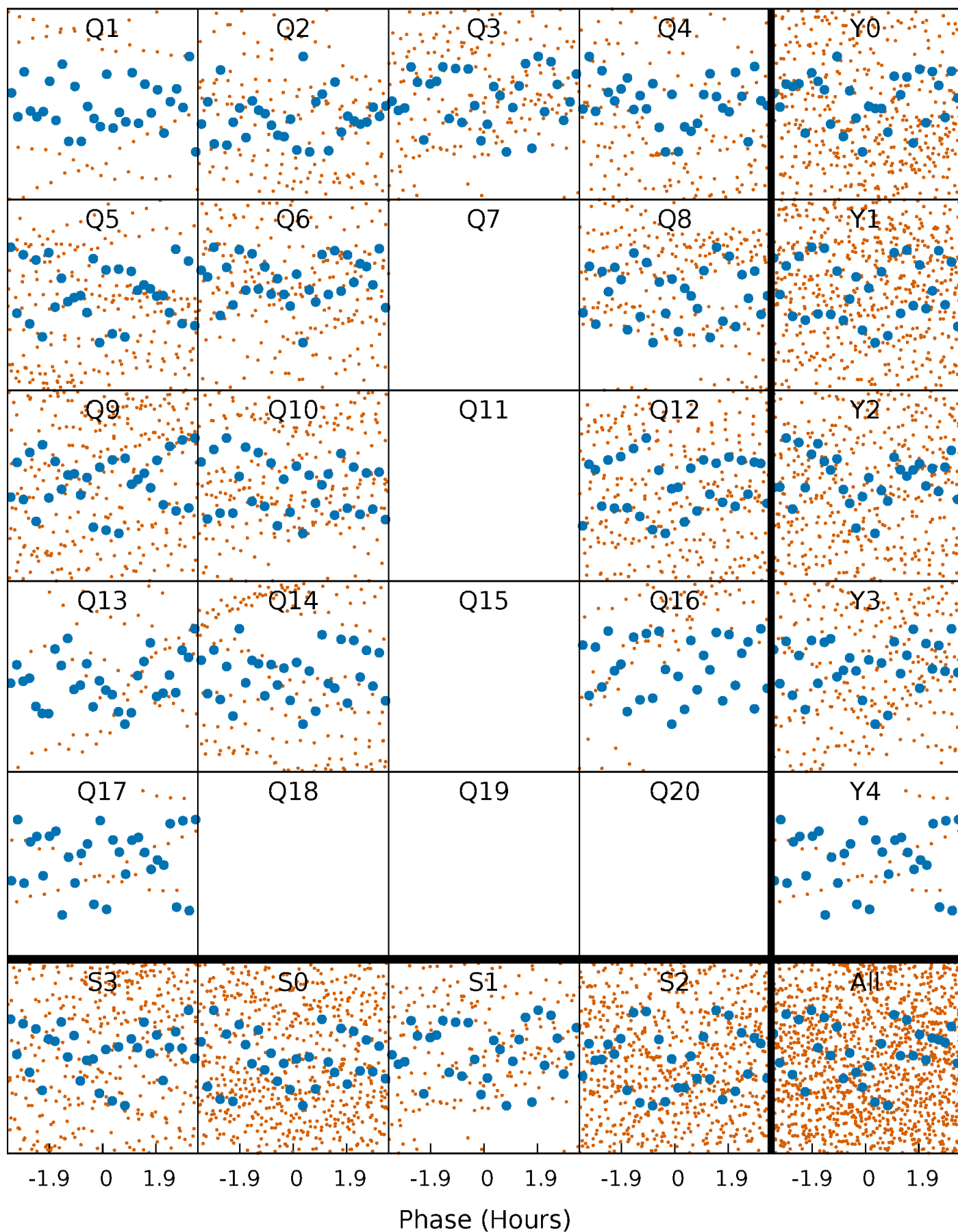


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



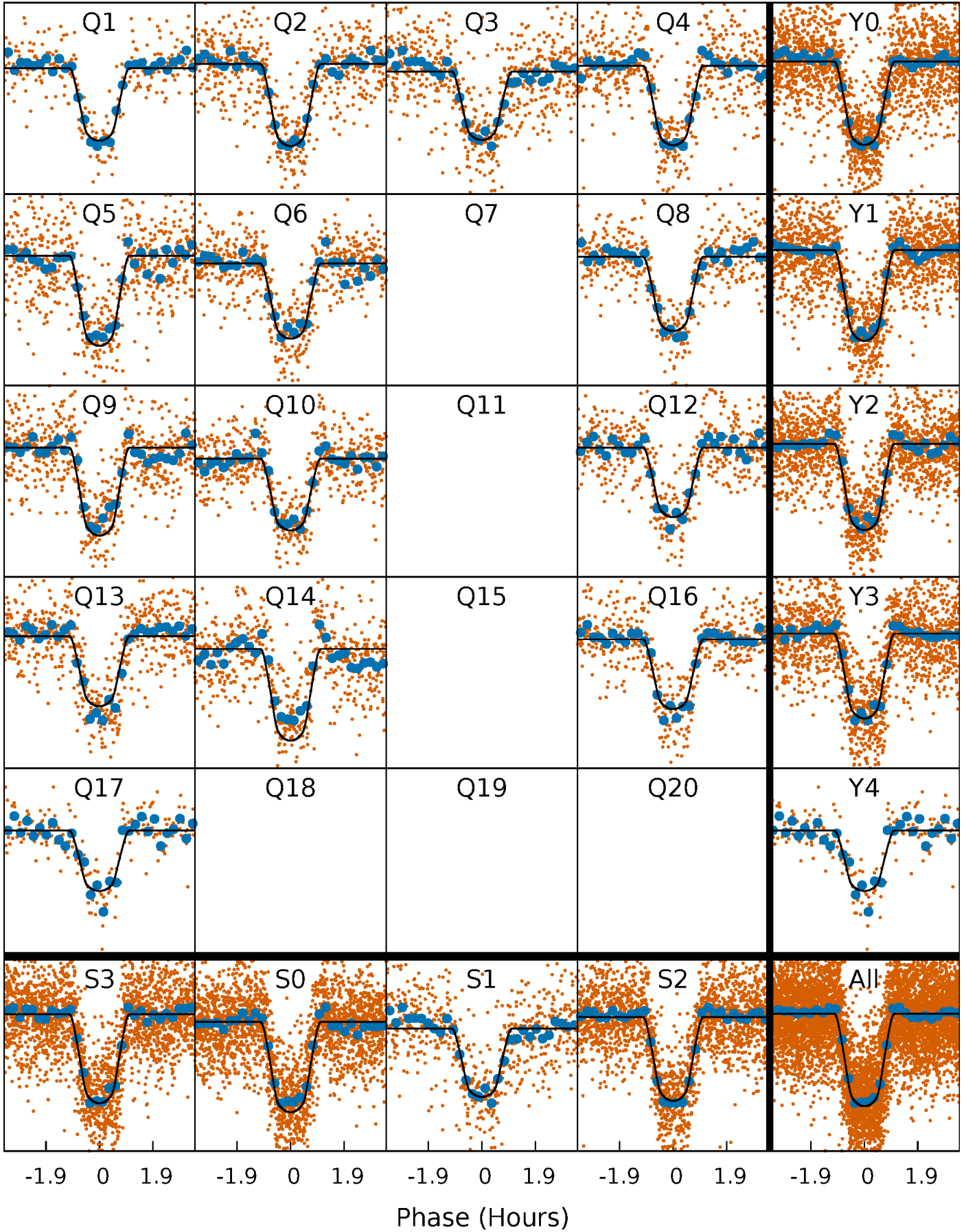
PDC Quarter-Phased Transit Curves

TCE 009790806-01 P= 1.931556 Days $T_0=131.766105$ (BKJD)



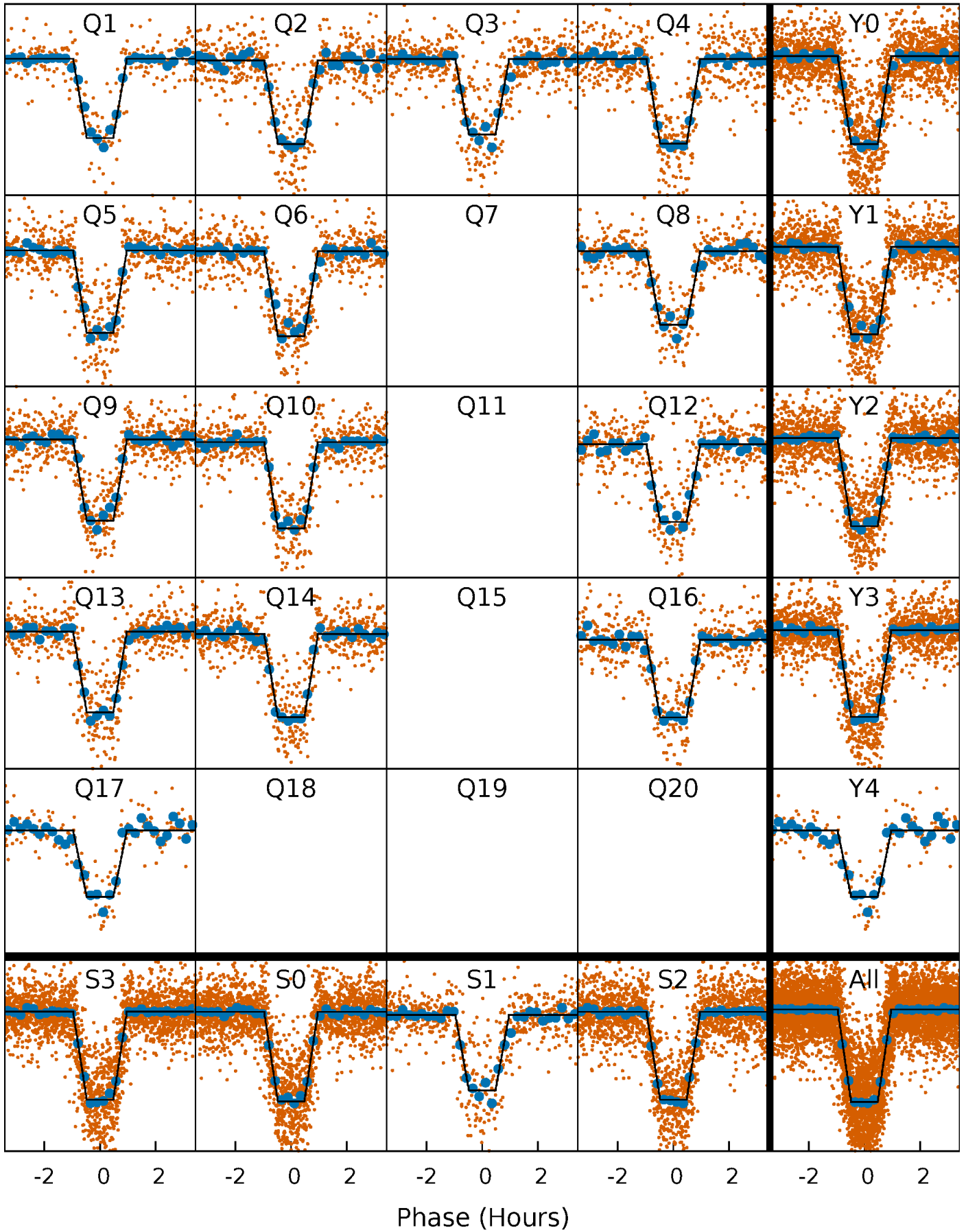
DV Quarter-Phased Transit Curves

TCE 009790806-01 P= 1.931556 Days $T_0=131.766105$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

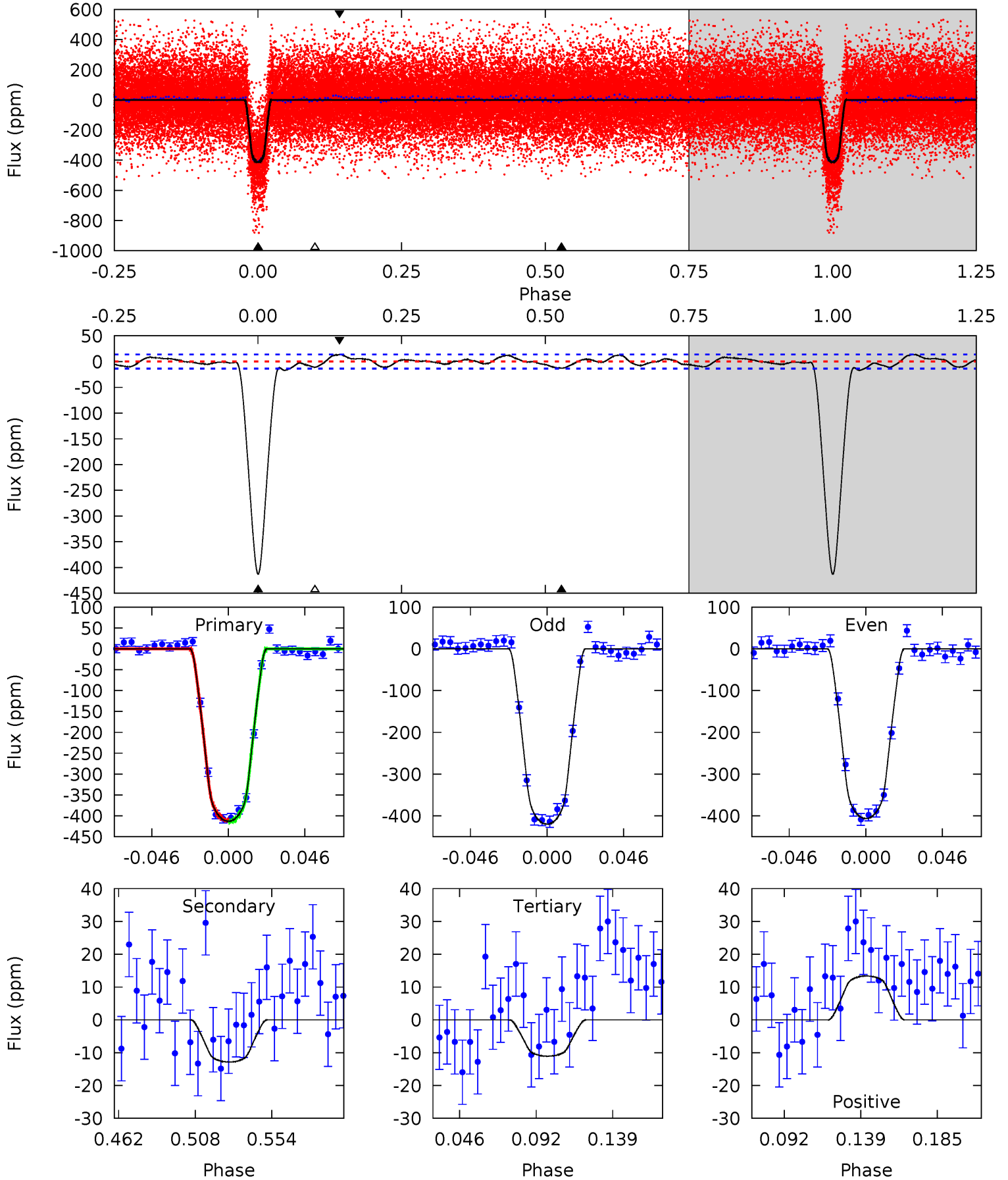
TCE 009790806-01 P= 1.931560 Days $T_0=131.765689$ (BKJD)



DV Model-Shift Uniqueness Test

009790806-01, P = 1.931556 Days, E = 129.834549 Days

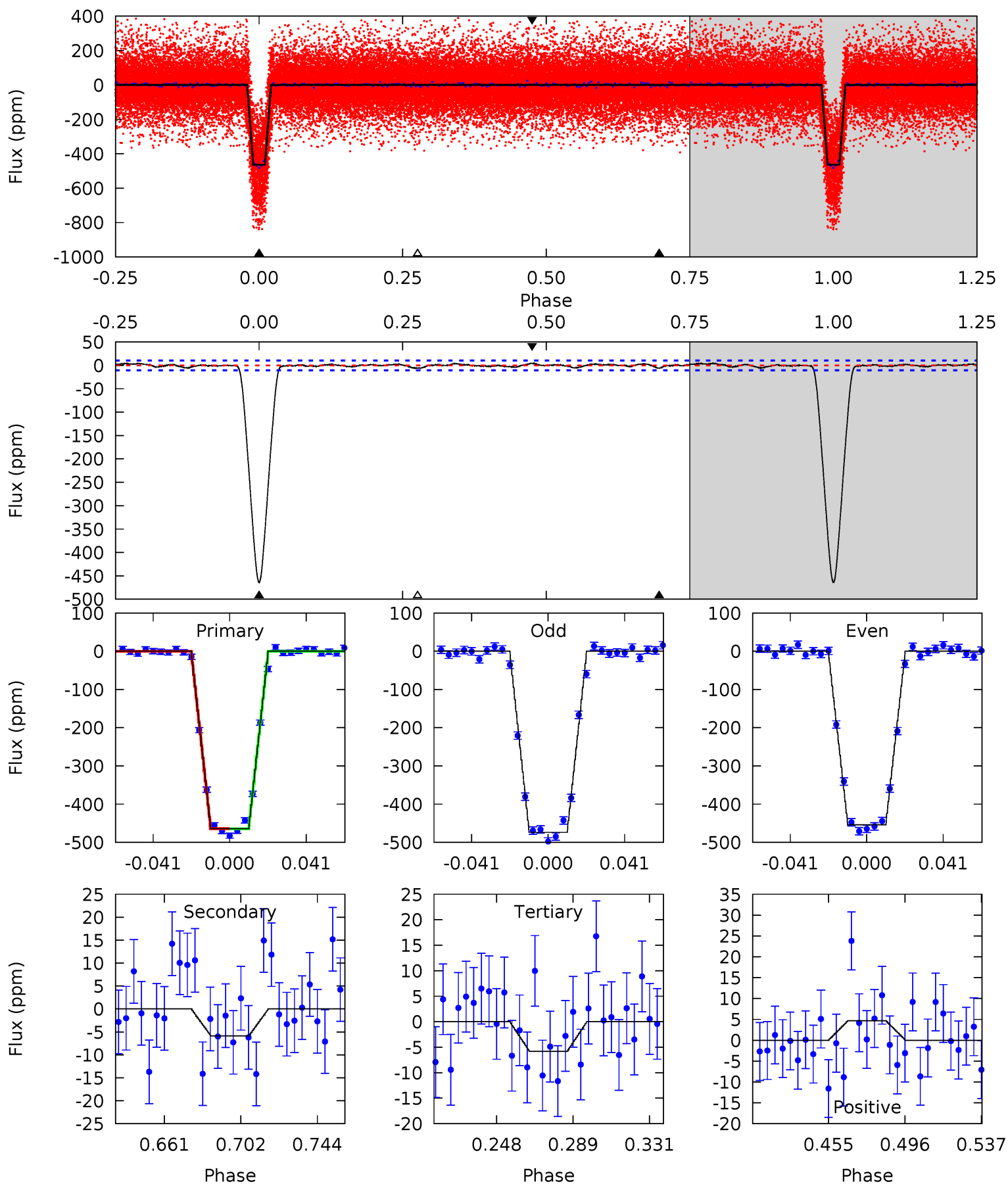
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
142.6	4.44	3.82	4.62	4.72	1.99	2.09	138.8	138.0	0.62	-0.18	2.37	0.99	0.03	0.44



Alt Model-Shift Uniqueness Test

009790806-01, P = 1.931560 Days, E = 129.834129 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
206.9	2.62	2.59	2.08	4.75	2.04	0.95	204.3	204.9	0.03	0.54	4.44	0.99	0.01	0.10



Stellar Parameters For KIC 009790806

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5461^{+73}_{-81}	$4.552^{+0.018}_{-0.102}$	$0.140^{+0.150}_{-0.150}$	$0.858^{+0.101}_{-0.034}$	$0.957^{+0.033}_{-0.071}$	$2.136^{+0.194}_{-0.626}$
	+1%/-1%	+0%/-2%	+107%/-107%	+12%/-4%	+3%/-7%	+9%/-29%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 009790806-01 / KOI 2035.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 3	$2.16^{+0.19}_{-0.16}$	1823^{+50}_{-38}	2774^{+128}_{-133}	$1.299^{+0.425}_{-0.310}$
Alt.	-6 ± 2	$2.06^{+0.18}_{-0.17}$	1822^{+55}_{-40}	2441^{+184}_{-360}	$0.661^{+0.316}_{-0.272}$

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 $A_{obs} \gg 1.0$

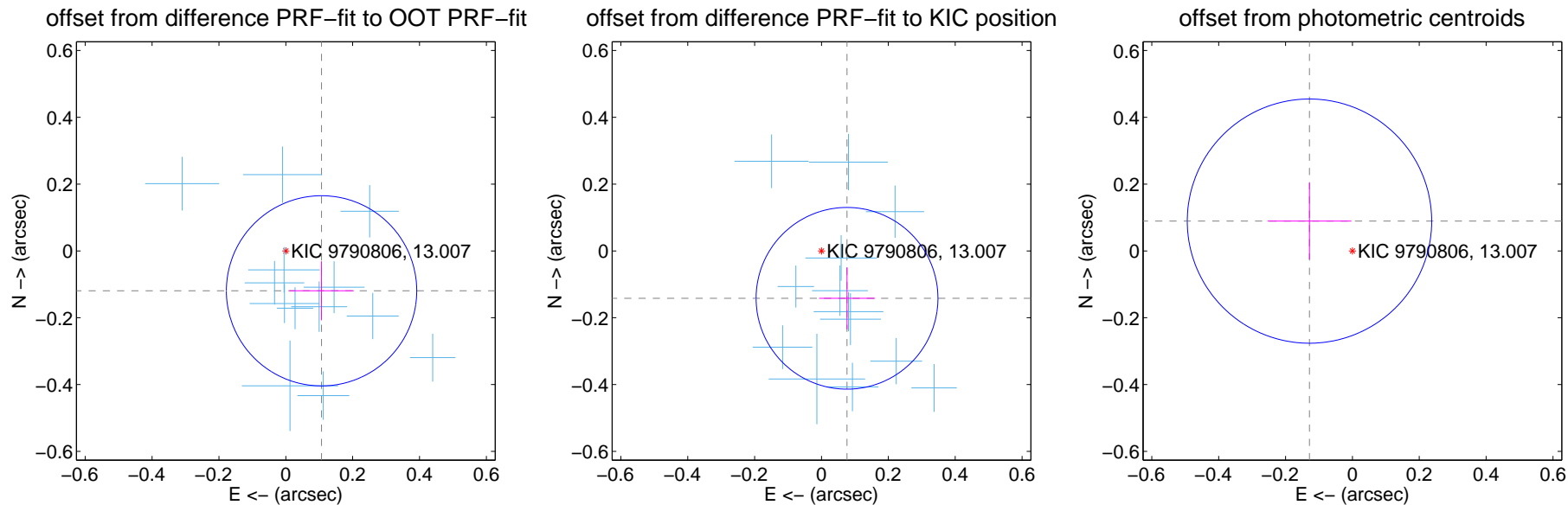
DV Centroid Data

Supplemental centroid analysis for 009790806-01. Kepler magnitude: 13.01. Transit SNR 80.04

There are 14 quarters with good PRF difference image offsets

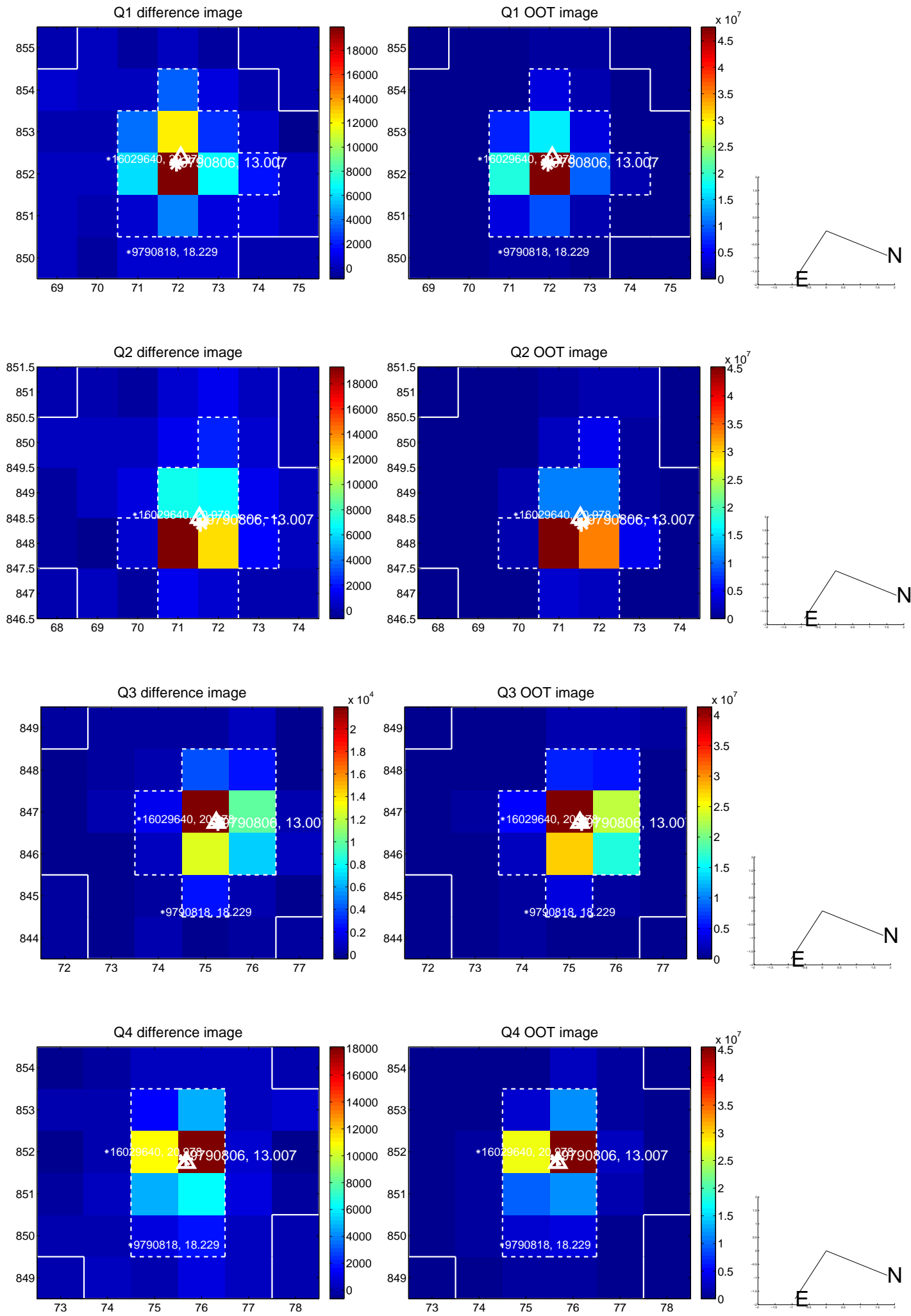
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.160 ± 0.095	1.69	-0.107 ± 0.096	-0.119 ± 0.088
PRF-fit source offset from KIC position	0.161 ± 0.091	1.78	-0.076 ± 0.083	-0.142 ± 0.093
photometric centroid source offset	0.16 ± 0.12	1.28	0.13 ± 0.13	0.09 ± 0.11

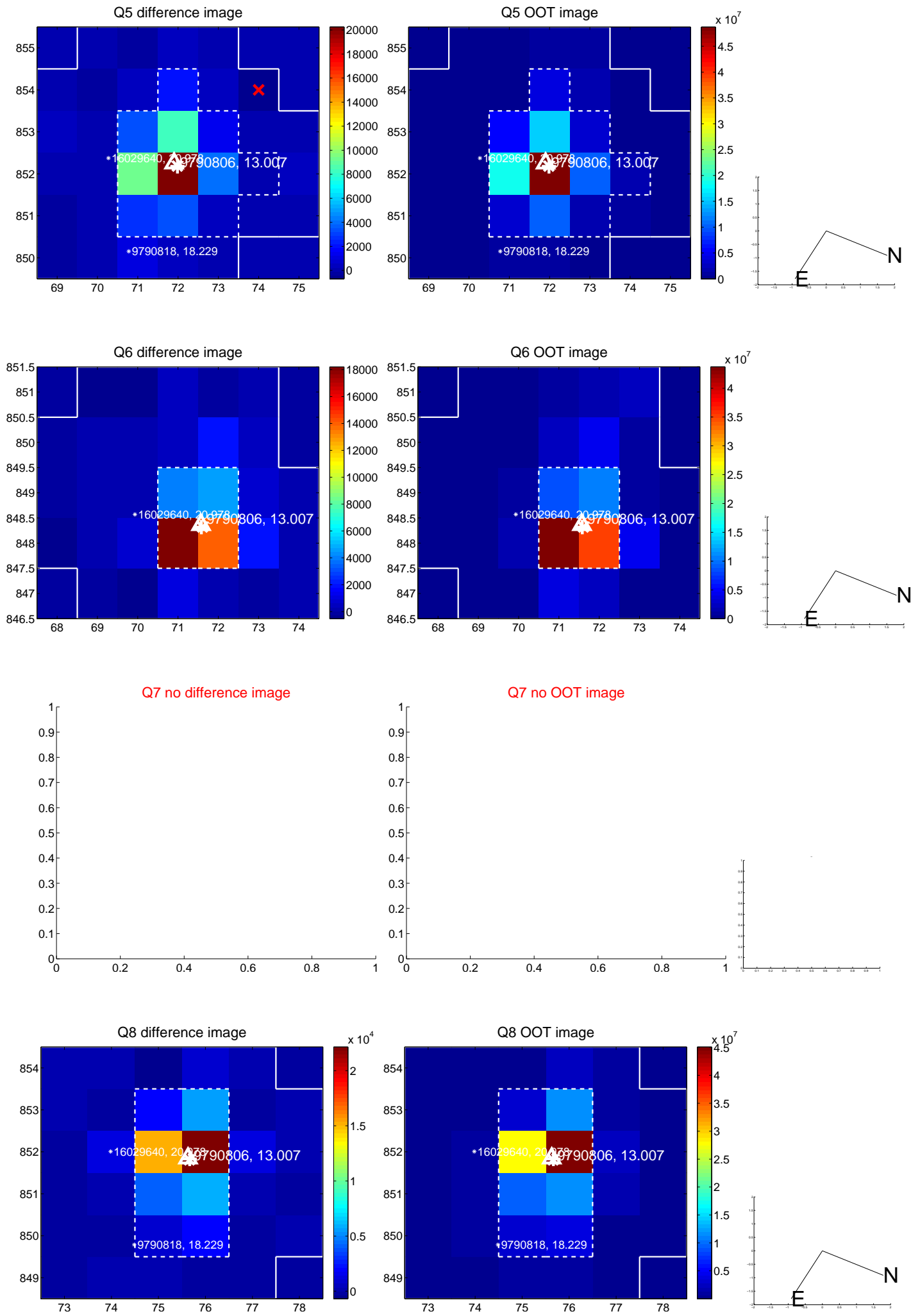


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

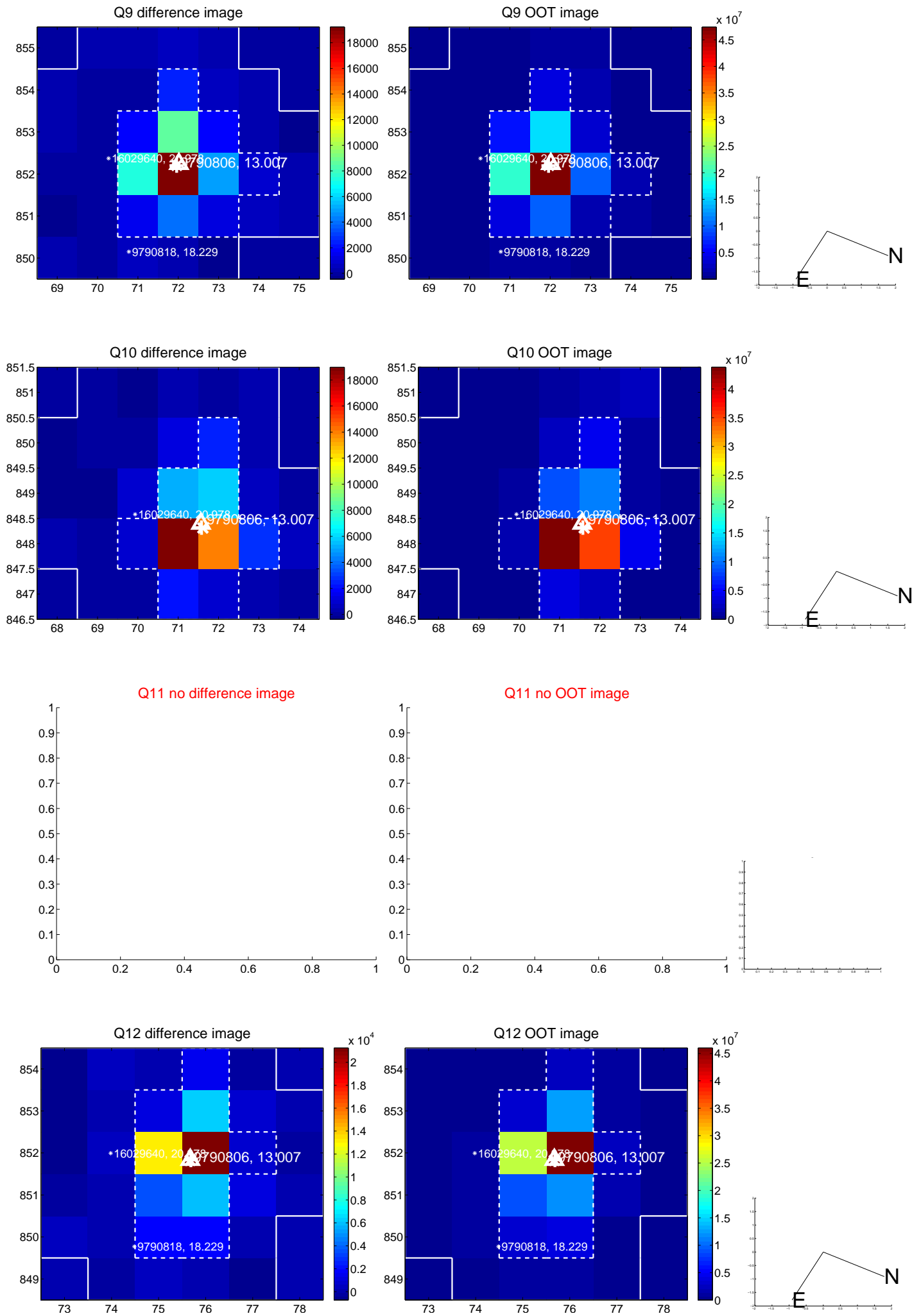
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



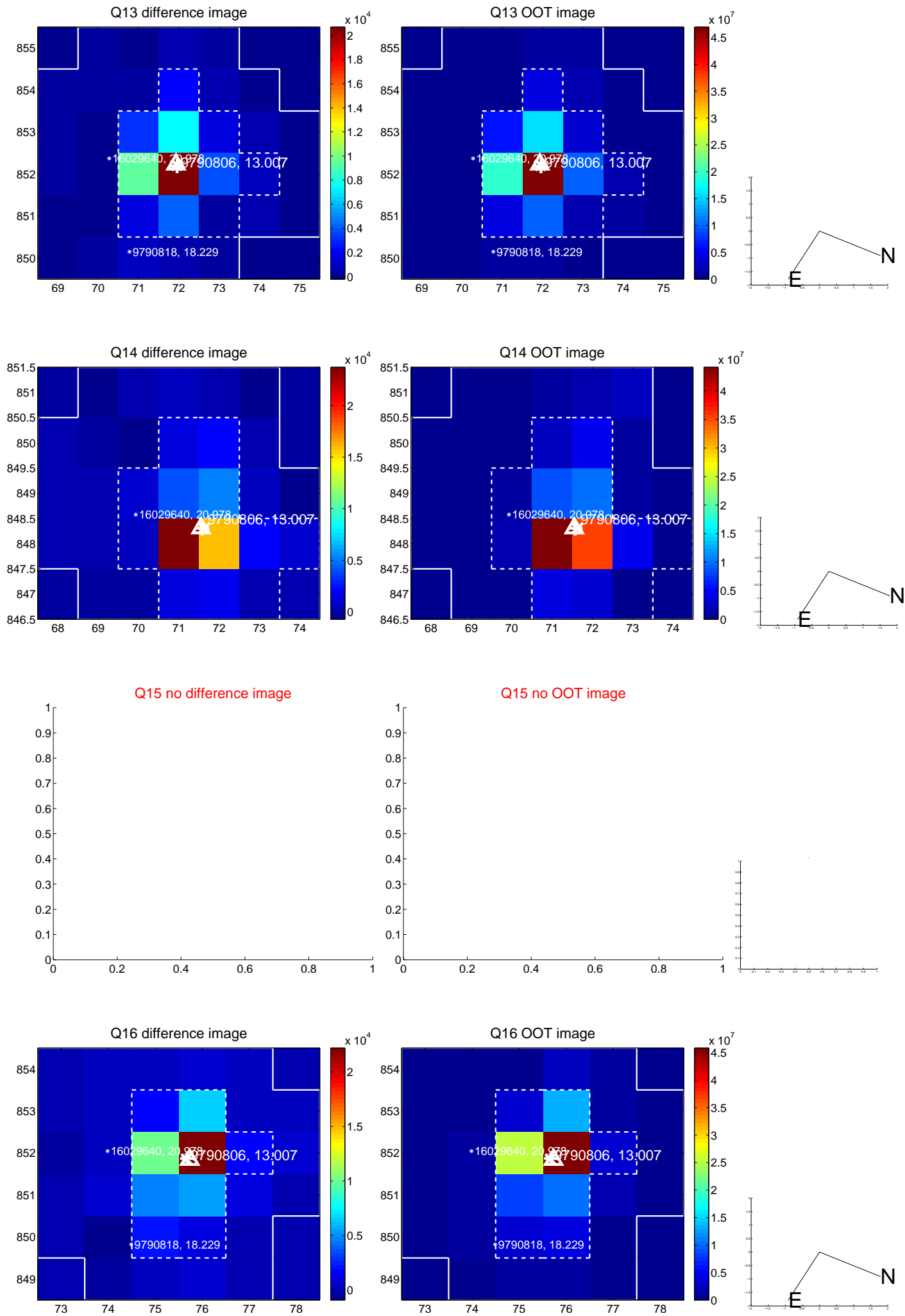
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



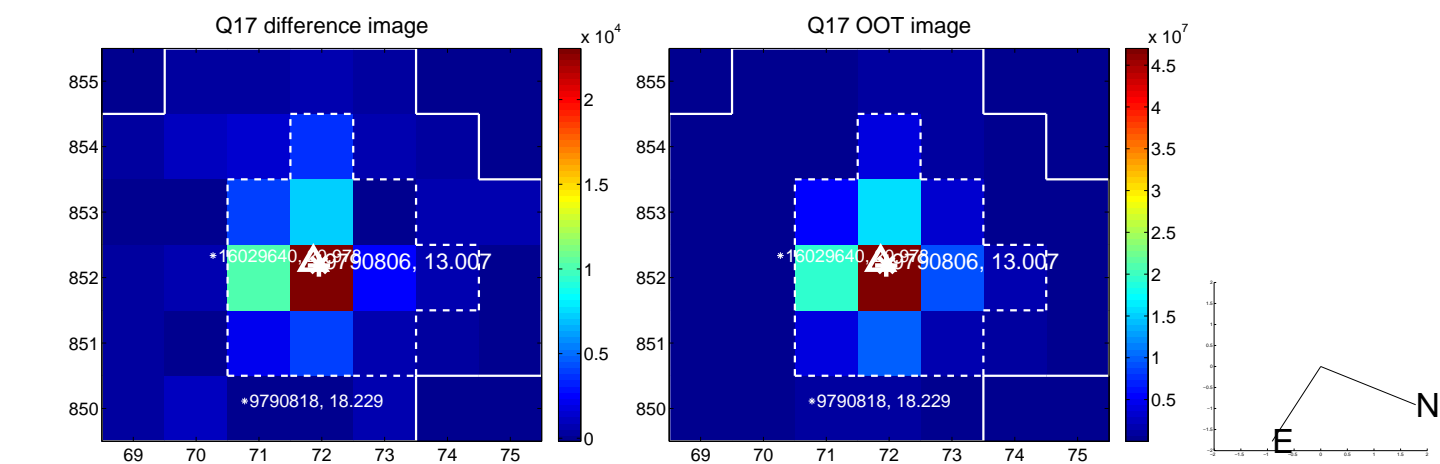
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



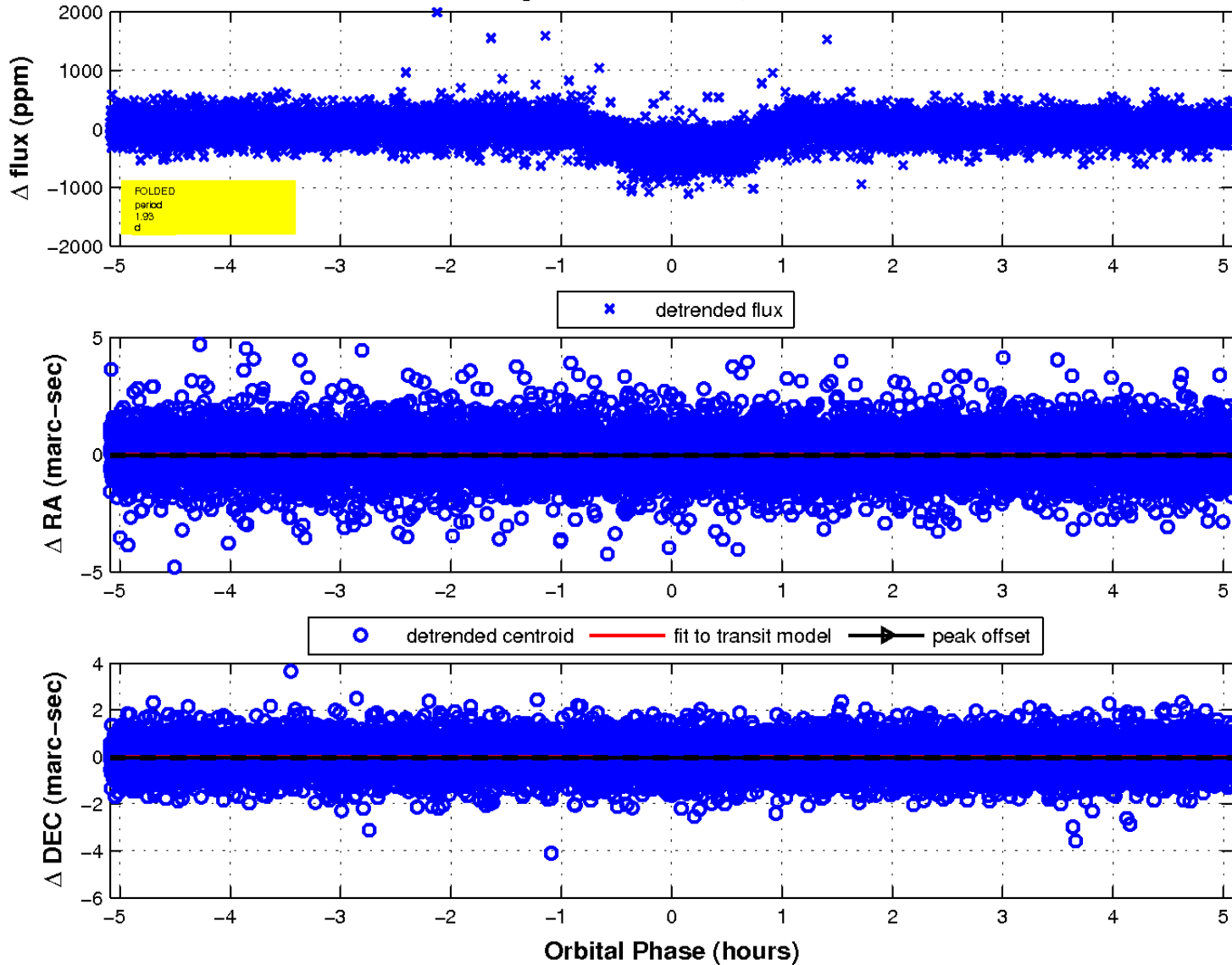
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

