

KIC 005894073

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})
005894073-01	OBS	2187.01	10.585251	137.001971	137.8	4.884	16.8	14.0	1.09	6246	1.60	163.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005894073-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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.

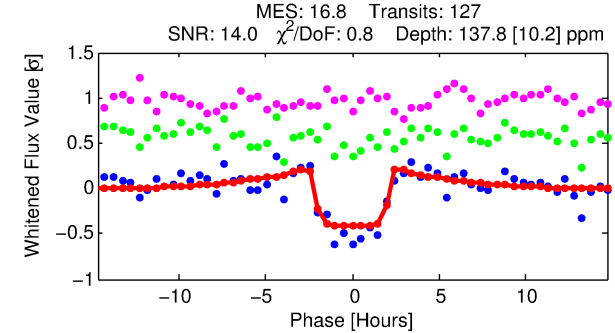
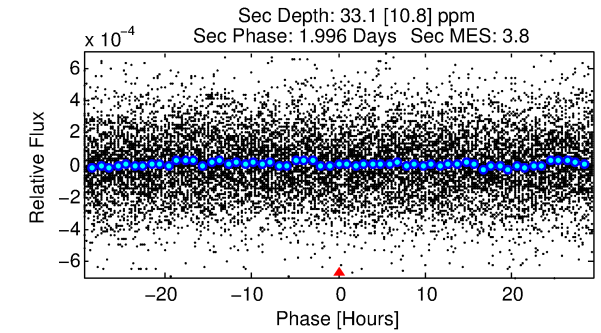
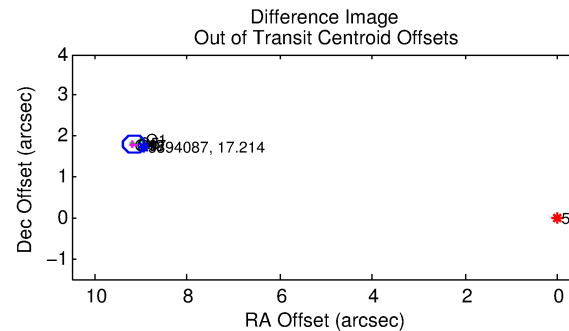
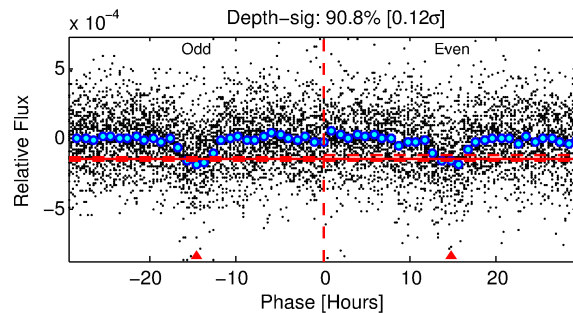
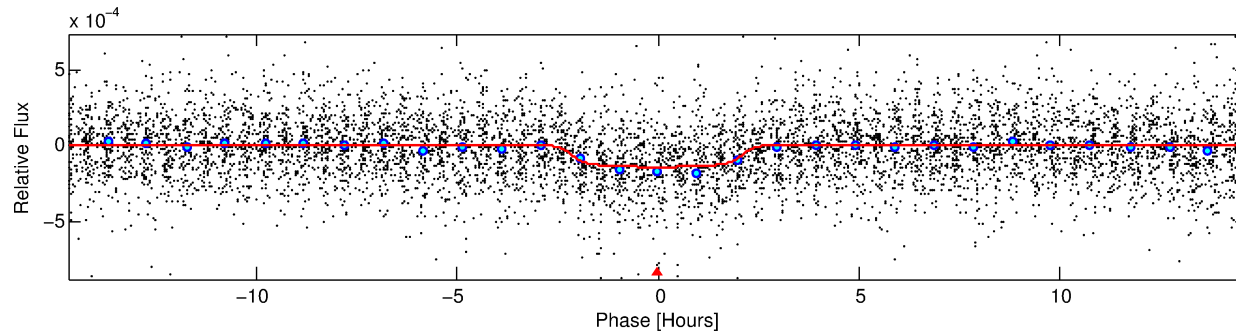
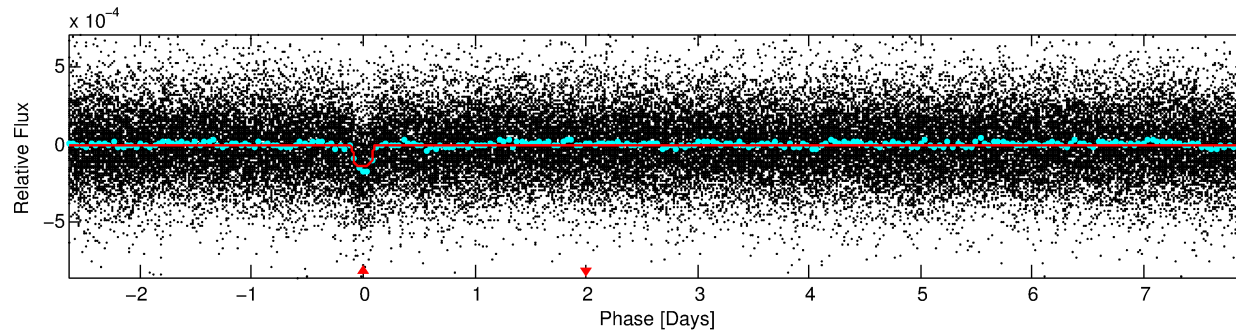
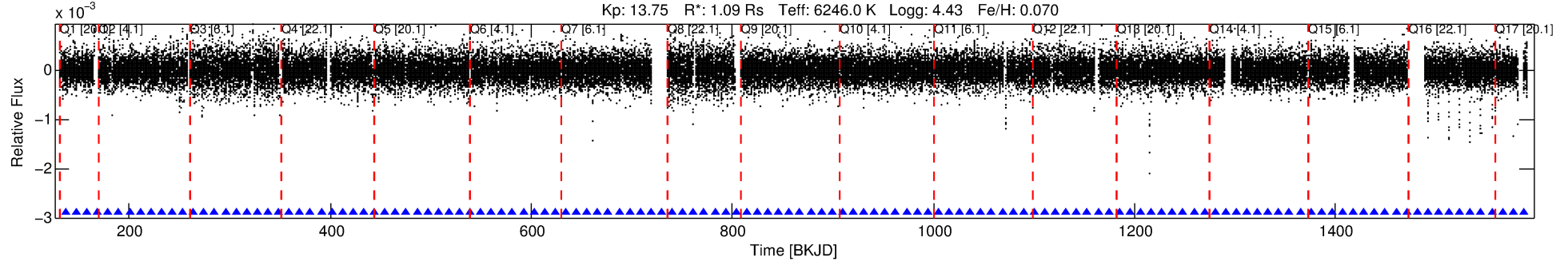
Ephemeris Match Information For 005894073-01

No Significant Match Found

DV One-Page Summary

KIC: 5894073 Candidate: 1 of 1 Period: 10.585 d
KOI: K02187.01 Corr: 0.960

Kp: 13.75 R*: 1.09 Rs Teff: 6246.0 K Logg: 4.43 Fe/H: 0.070



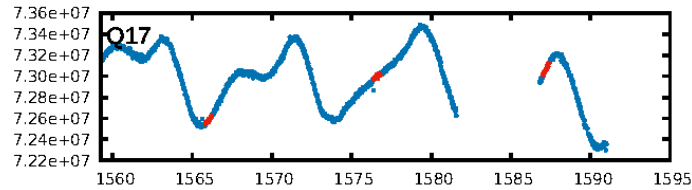
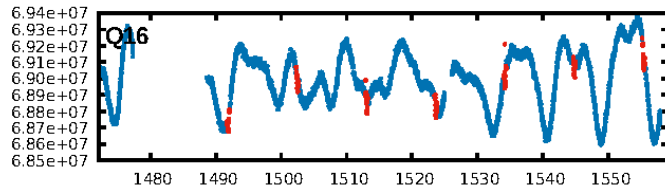
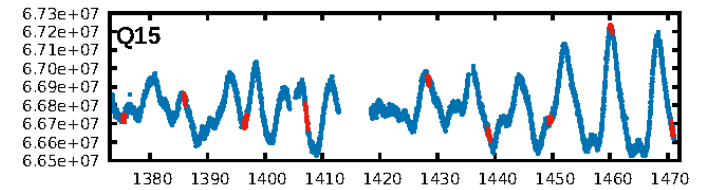
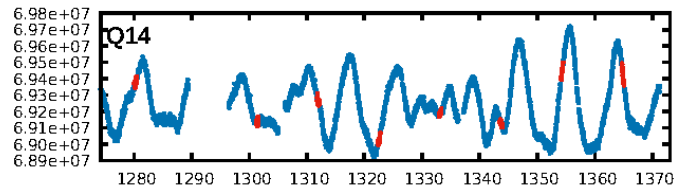
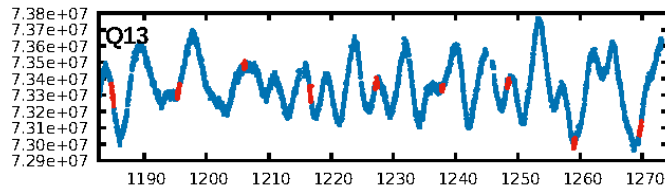
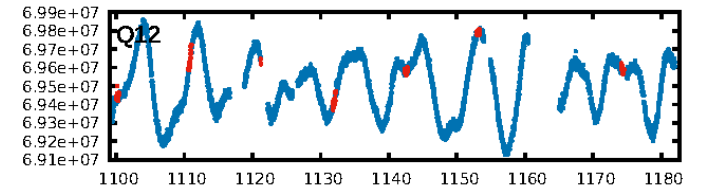
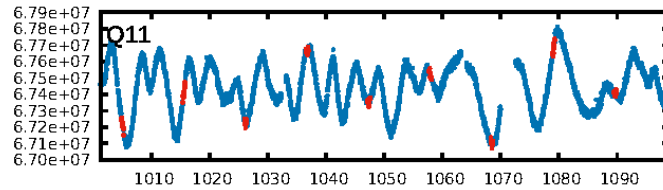
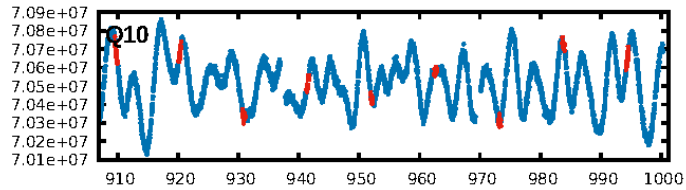
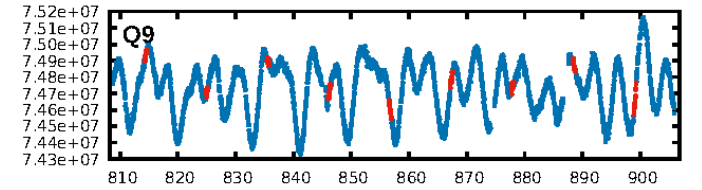
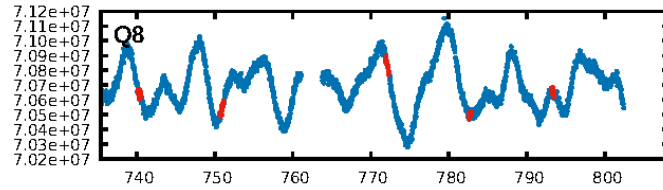
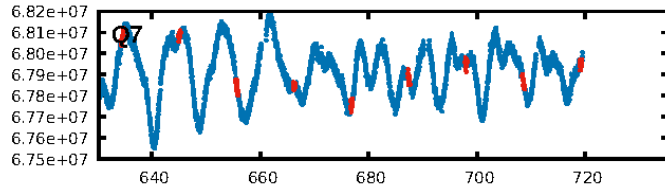
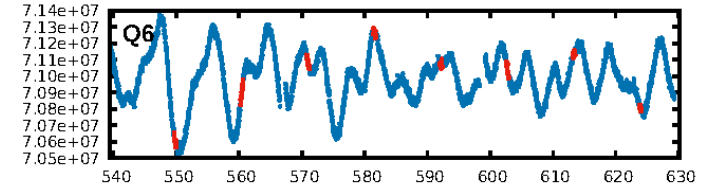
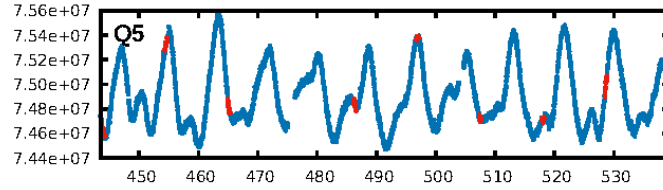
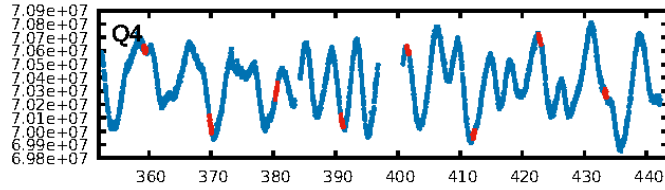
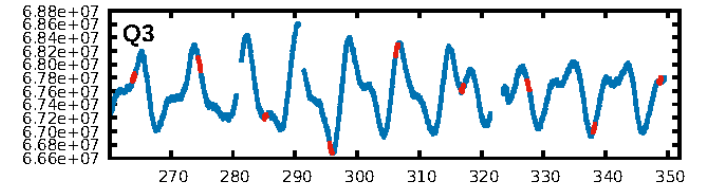
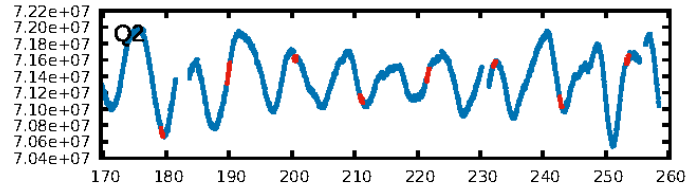
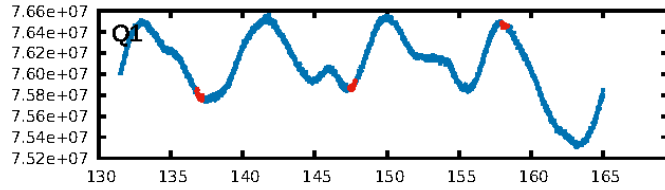
DV Fit Results:

Period = 10.58525 [0.00007] d
Epoch = 137.0020 [0.0051] BKJD
Rp/R* = 0.0134 [0.0010]
a/R* = 5.95 [2.02]
b = 0.95 [0.04]
Seff = 163.62 [74.89]
Teff = 912 [104] K
Rp = 1.60 [0.58] Re
a = 0.0997 [0.0299] AU
Ag = 70.84 [40.07] [1.74σ]
Teffp = 4091 [395] K [7.78σ]

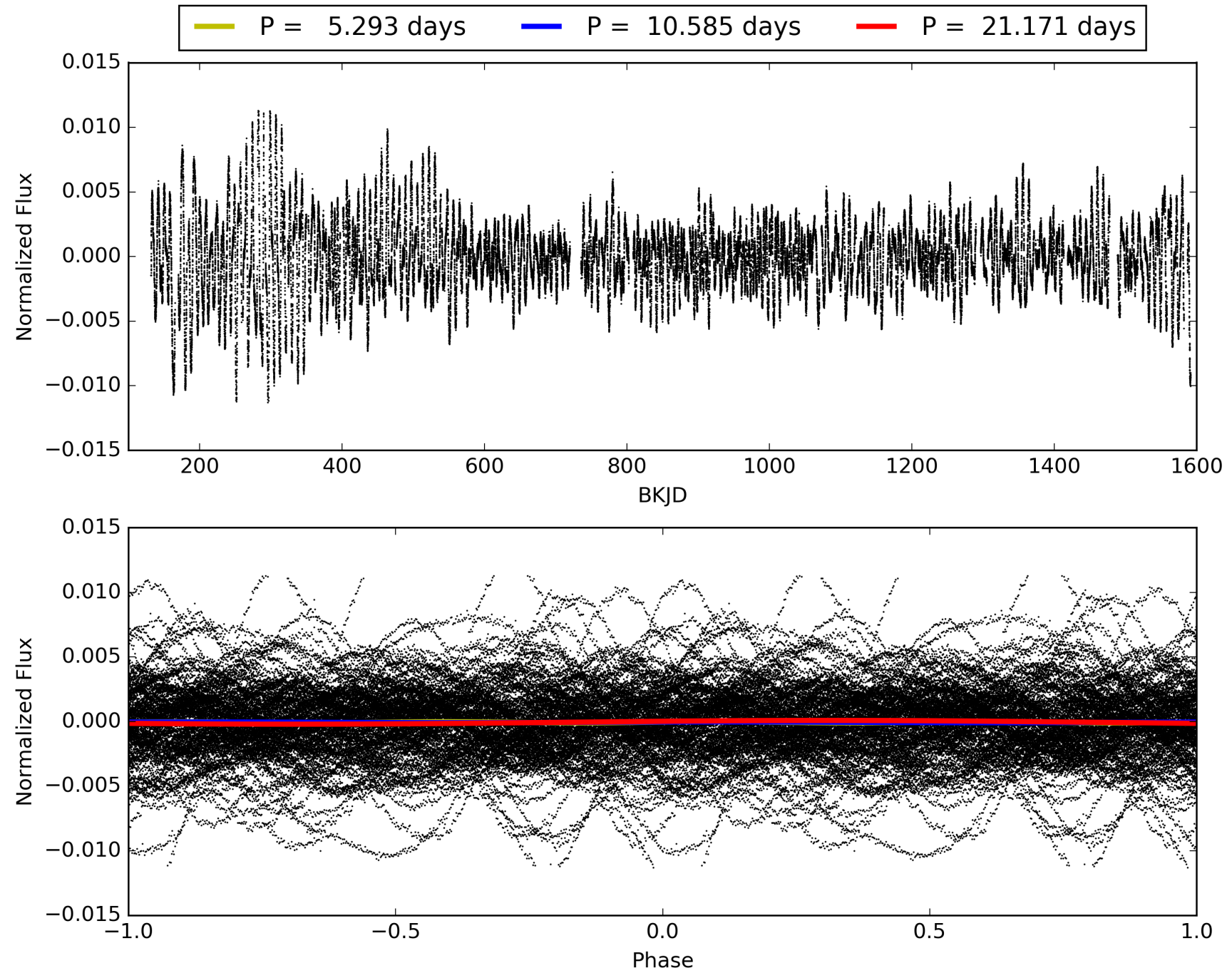
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.99e-61
RollingBand-fgt: 1.00 [121/121]
GhostDiagnostic-chr: -0.2092
Centroid-sig: 0.0%
Centroid-so: N/A
OotOffset-rm: 9.341 arcsec [124.79σ]
KicOffset-rm: 9.432 arcsec [119.37σ]
OotOffset-st: 0/0/0/5 [5]
KicOffset-st: 0/0/0/5 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005894073-01, PDC Light Curves

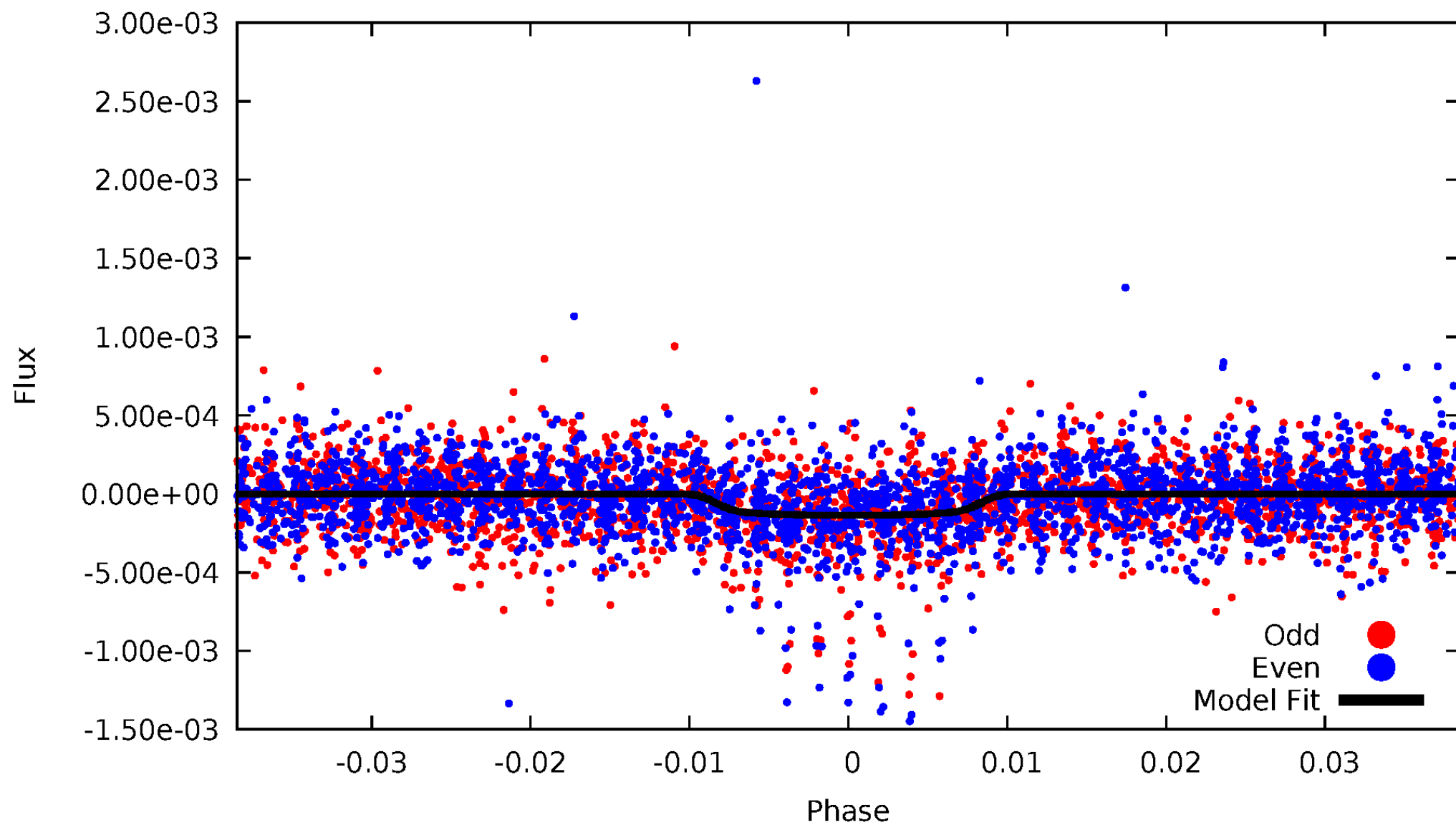


TCE 005894073-01



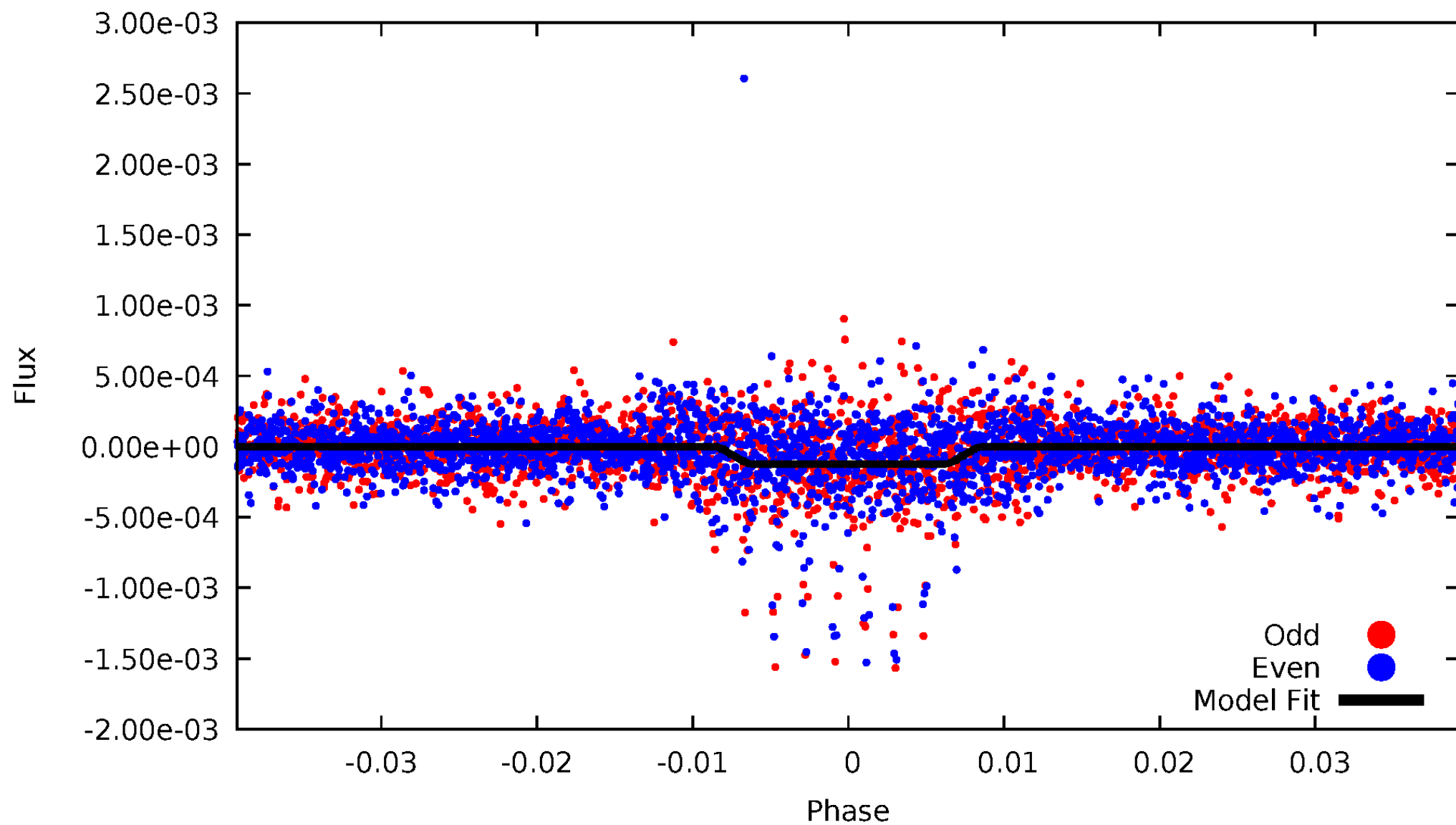
DV Odd/Even

TCE 005894073-01



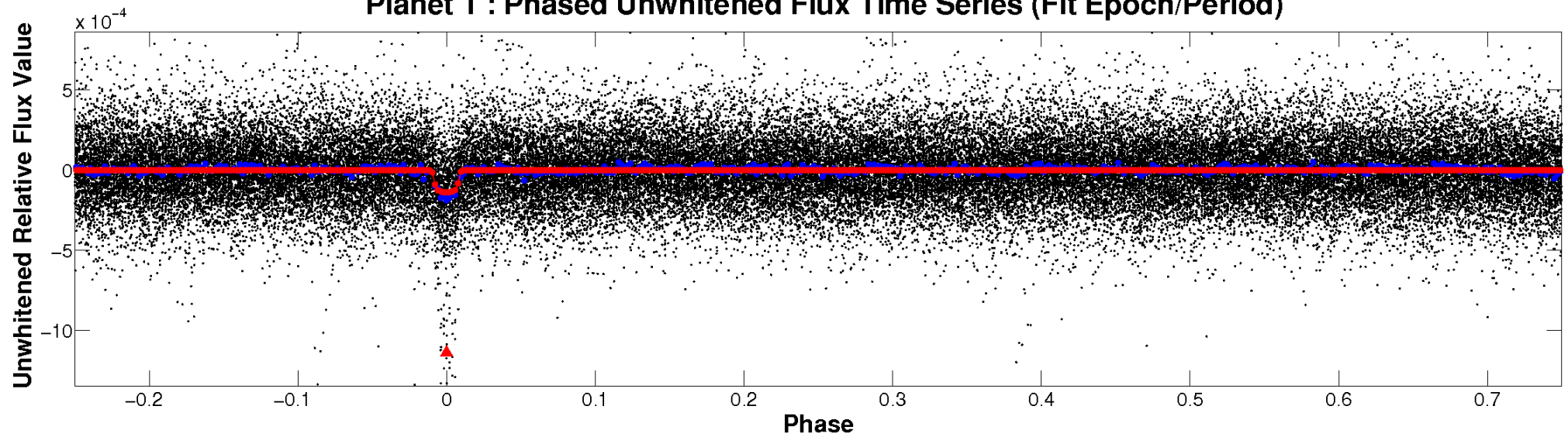
ALT Odd/Even

TCE 005894073-01

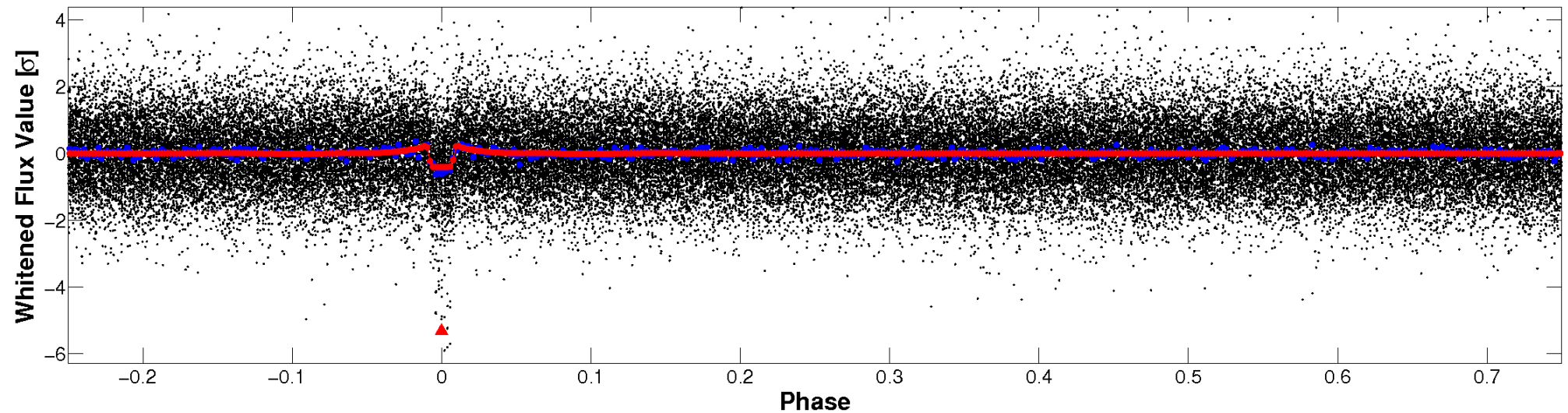


Non-Whitened Vs. Whitened Light Curve

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

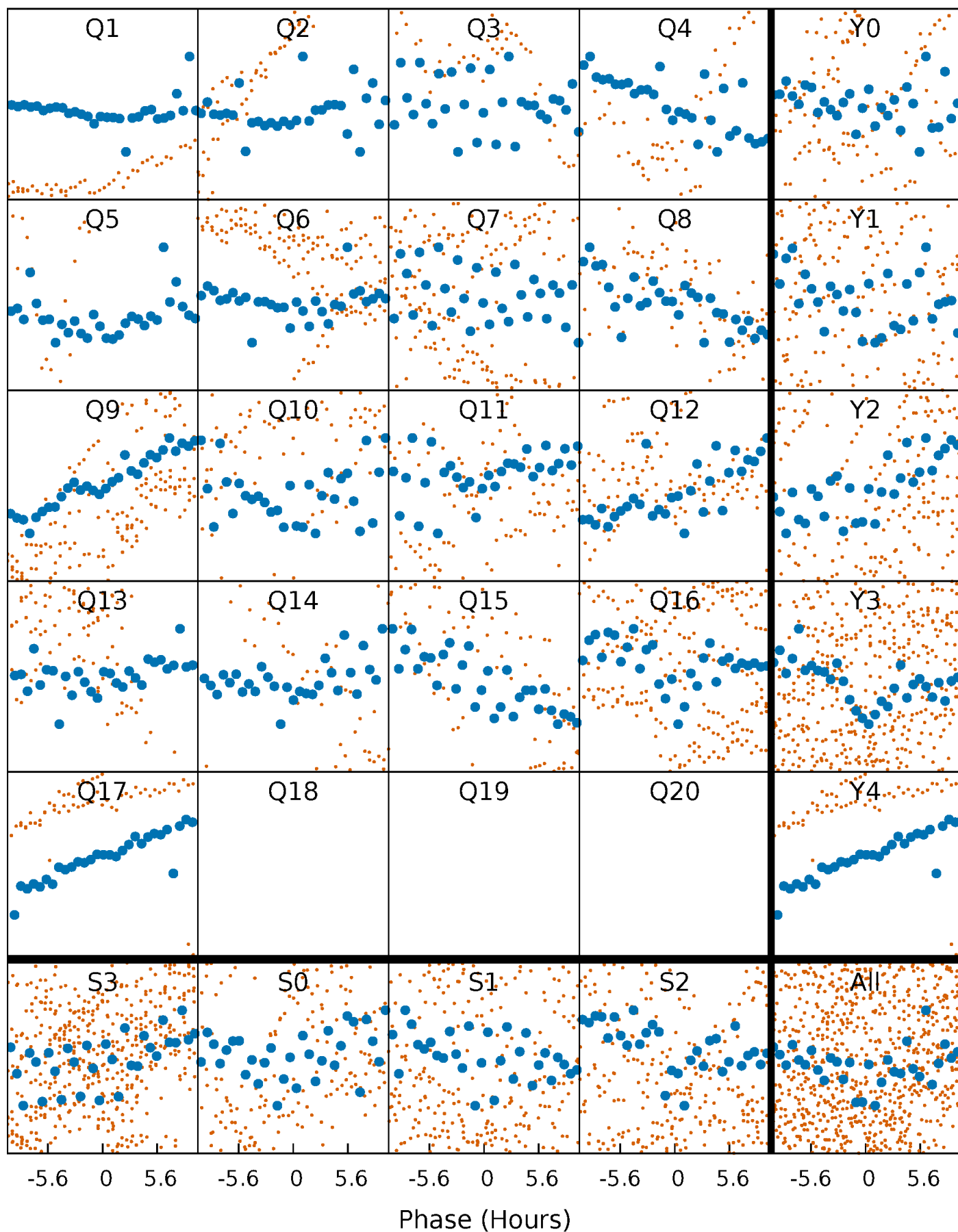


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



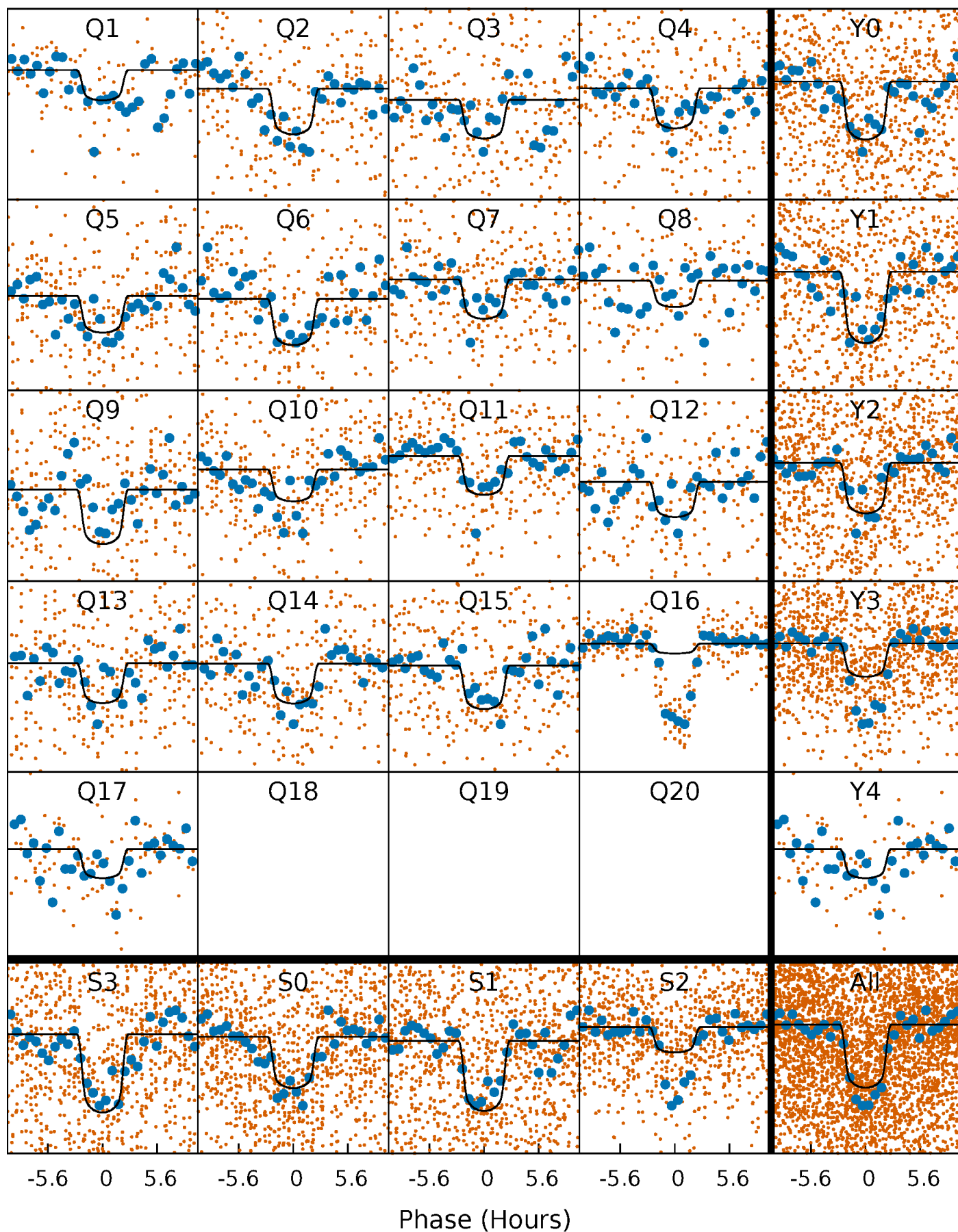
PDC Quarter-Phased Transit Curves

TCE 005894073-01 P= 10.585251 Days $T_0=137.001971$ (BKJD)



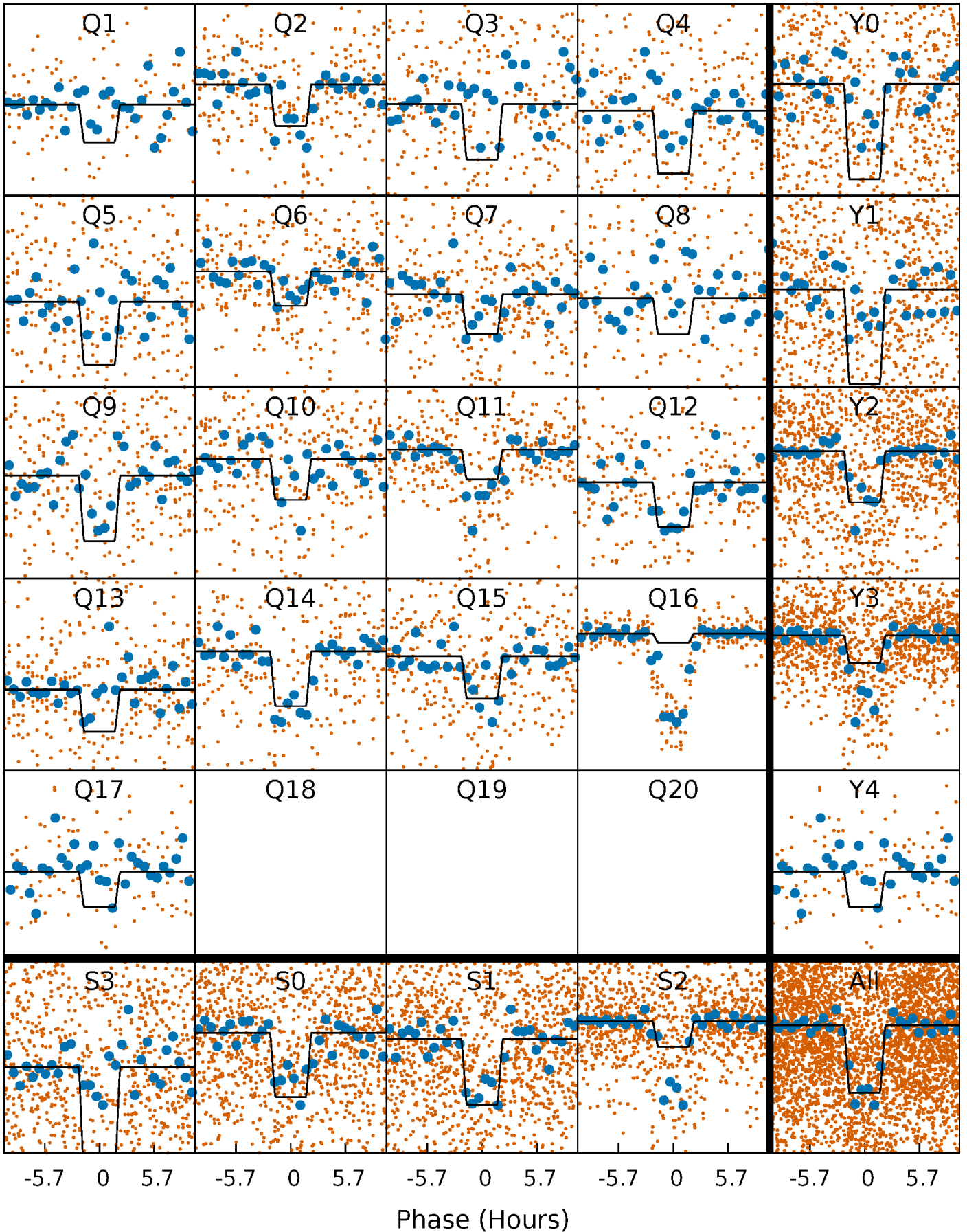
DV Quarter-Phased Transit Curves

TCE 005894073-01 P= 10.585251 Days $T_0=137.001971$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

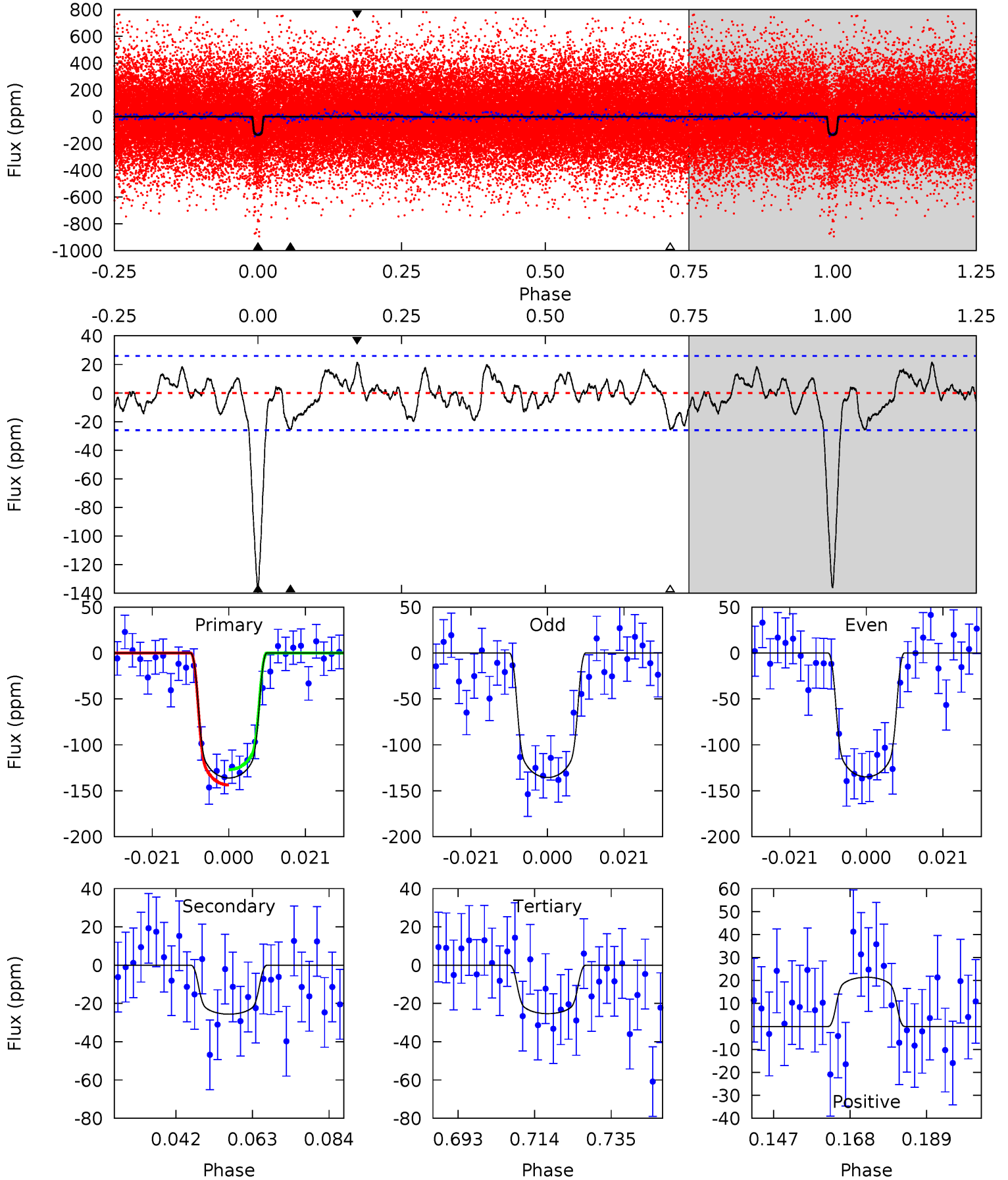
TCE 005894073-01 P= 10.585407 Days $T_0=136.990958$ (BKJD)



DV Model-Shift Uniqueness Test

005894073-01, $P = 10.585251$ Days, $E = 126.416720$ Days

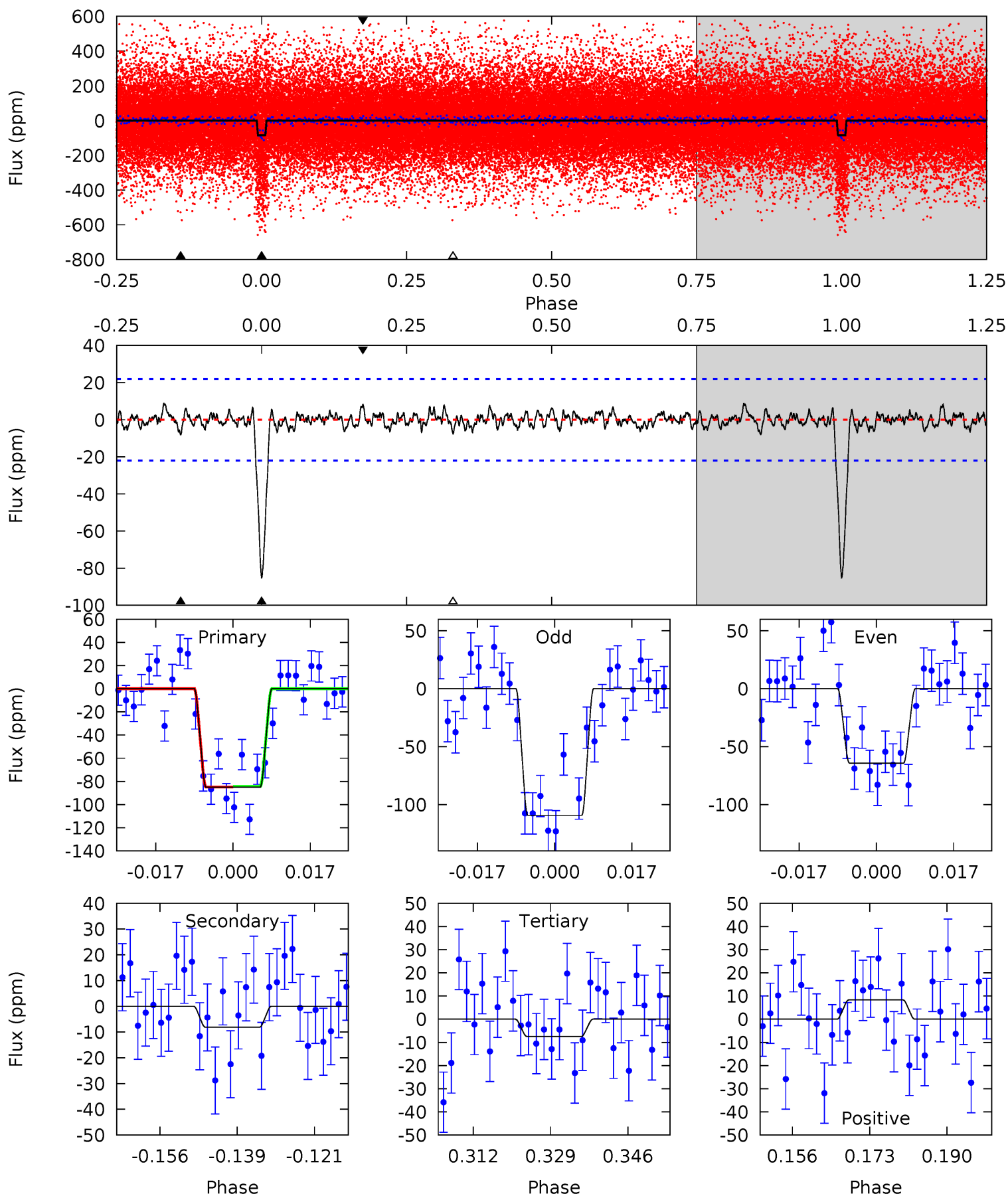
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.6	4.82	4.77	4.03	4.88	2.31	1.72	20.8	21.6	0.05	0.79	0.07	1.18	0.14	1.57



Alt Model-Shift Uniqueness Test

005894073-01, P = 10.585407 Days, E = 126.405551 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	1.82	1.67	1.86	4.92	2.38	0.64	17.3	17.2	0.14	-0.04	5.04	1.65	0.09	0.06



Stellar Parameters For KIC 005894073

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6246^{+152}_{-217}	$4.433^{+0.056}_{-0.238}$	$0.070^{+0.250}_{-0.300}$	$1.092^{+0.390}_{-0.097}$	$1.180^{+0.158}_{-0.158}$	$1.276^{+0.306}_{-0.742}$
	+2%/-3%	+1%/-5%	+357%/-429%	+36%/-9%	+13%/-13%	+24%/-58%
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 005894073-01 / KOI 2187.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 5	$1.66^{+0.35}_{-0.20}$	1299^{+116}_{-63}	4103^{+207}_{-211}	48^{+18}_{-16}
Alt.	-8 ± 4	$1.38^{+0.28}_{-0.17}$	1295^{+96}_{-61}	3563^{+340}_{-395}	21^{+16}_{-12}

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

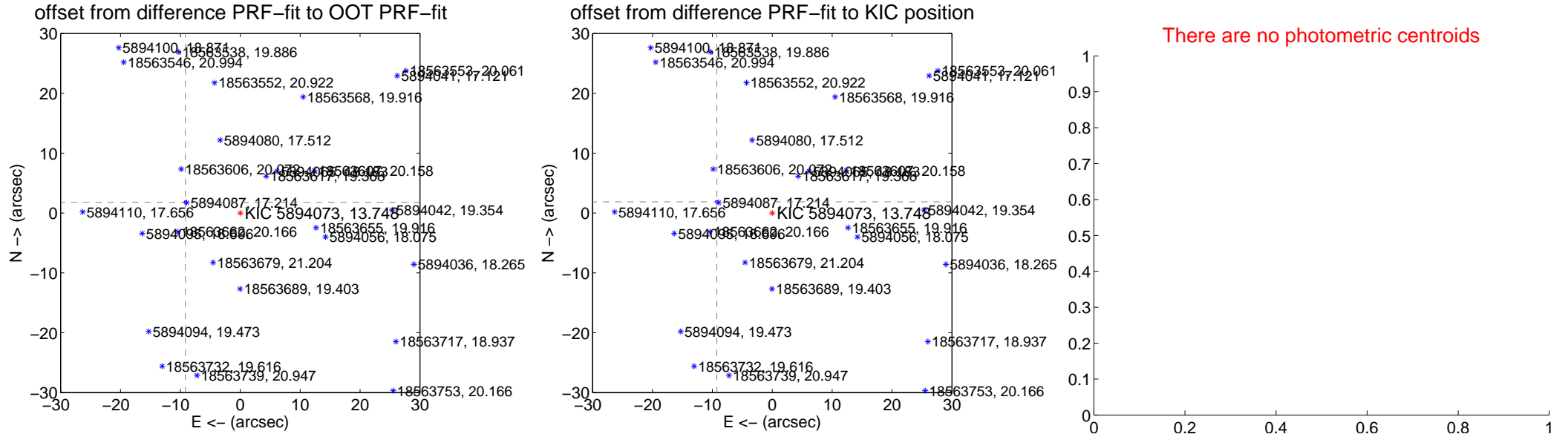
DV Centroid Data

Supplemental centroid analysis for 005894073-01. Kepler magnitude: 13.75. Transit SNR 14.00

There are 5 quarters with good PRF difference image offsets

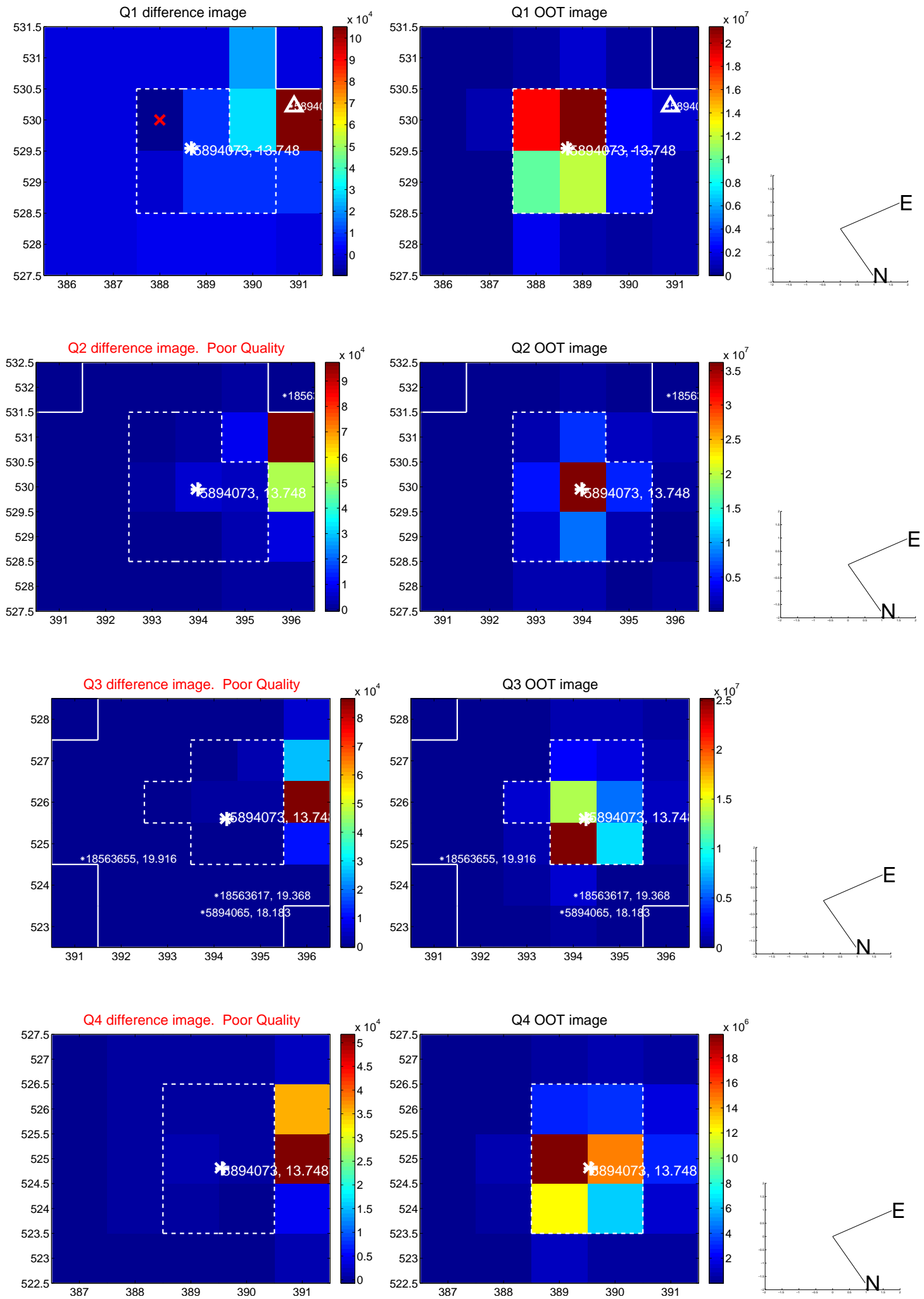
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.341 \pm 0.075	124.79	9.166 \pm 0.075	1.798 \pm 0.067
PRF-fit source offset from KIC position	9.432 \pm 0.079	119.37	9.245 \pm 0.079	1.869 \pm 0.067
photometric centroid source offset	—	—	—	—

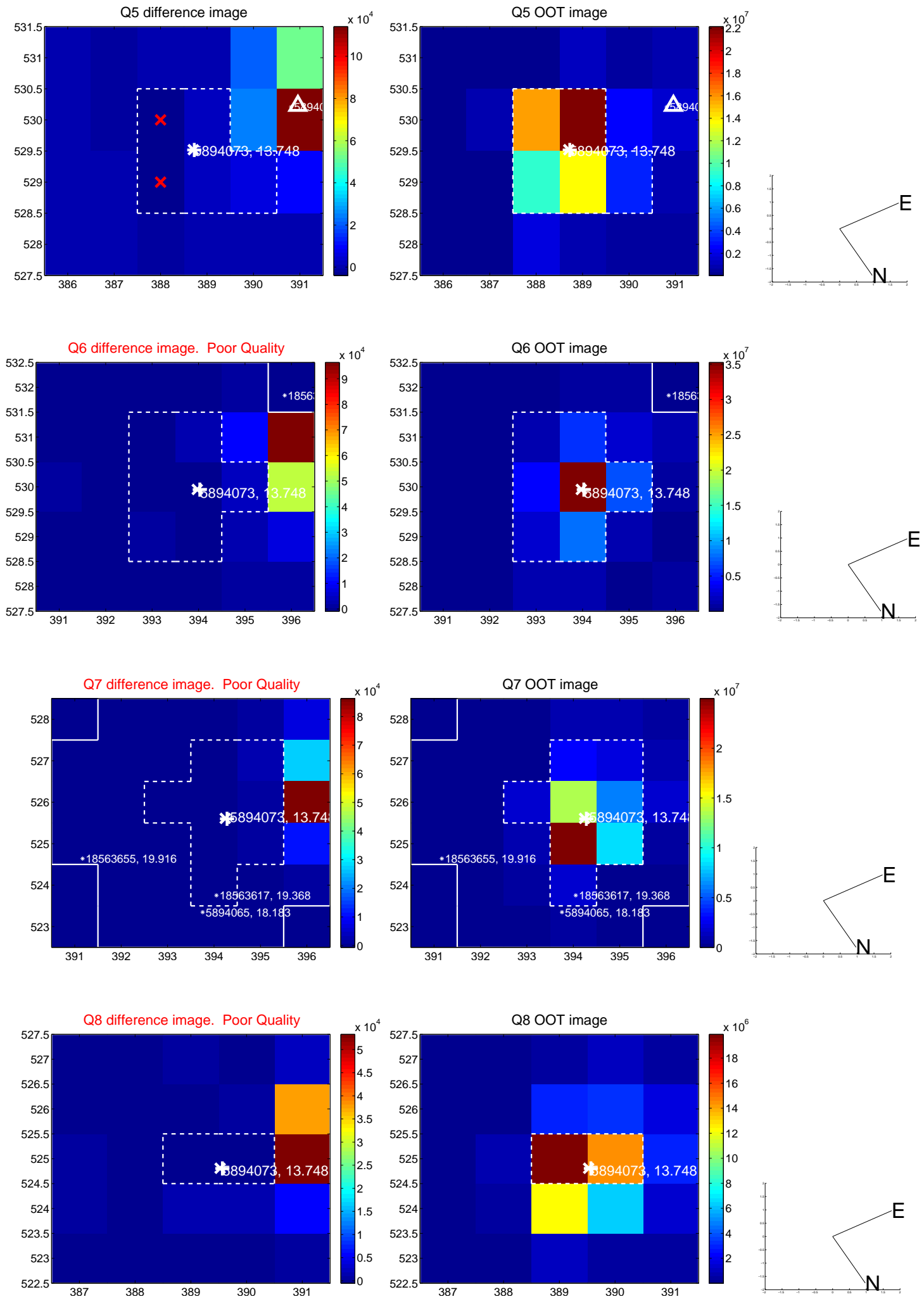


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

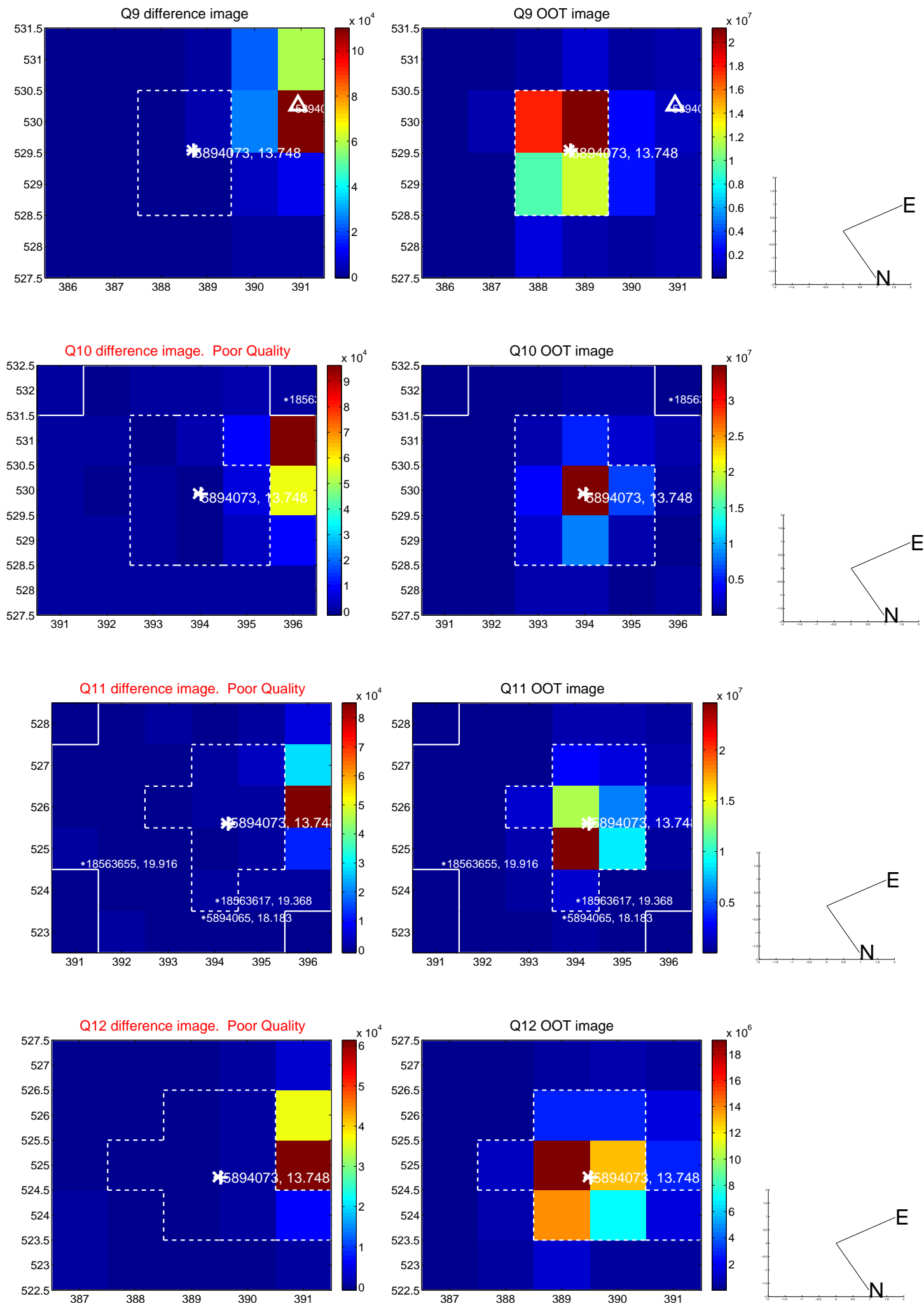
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



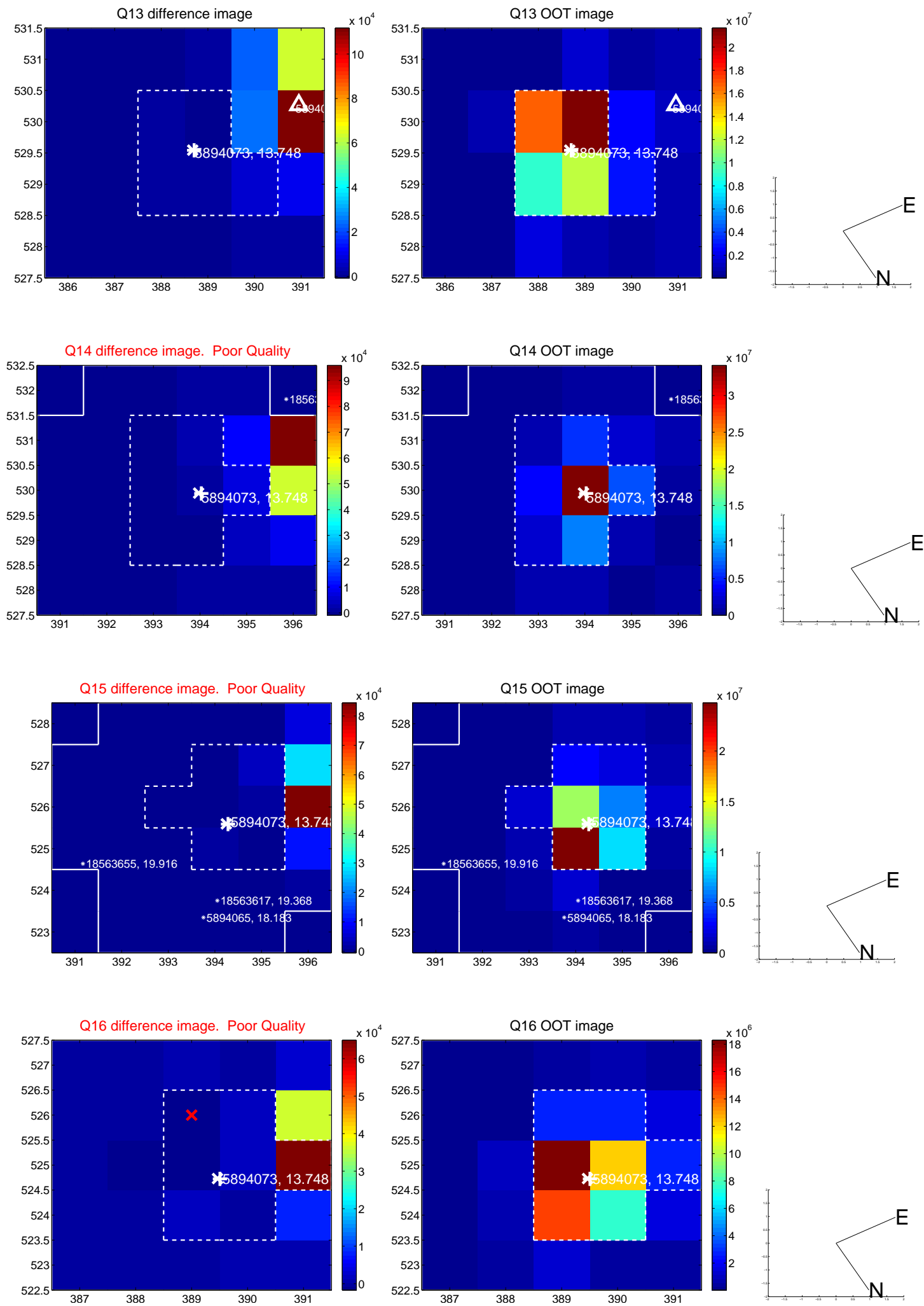
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



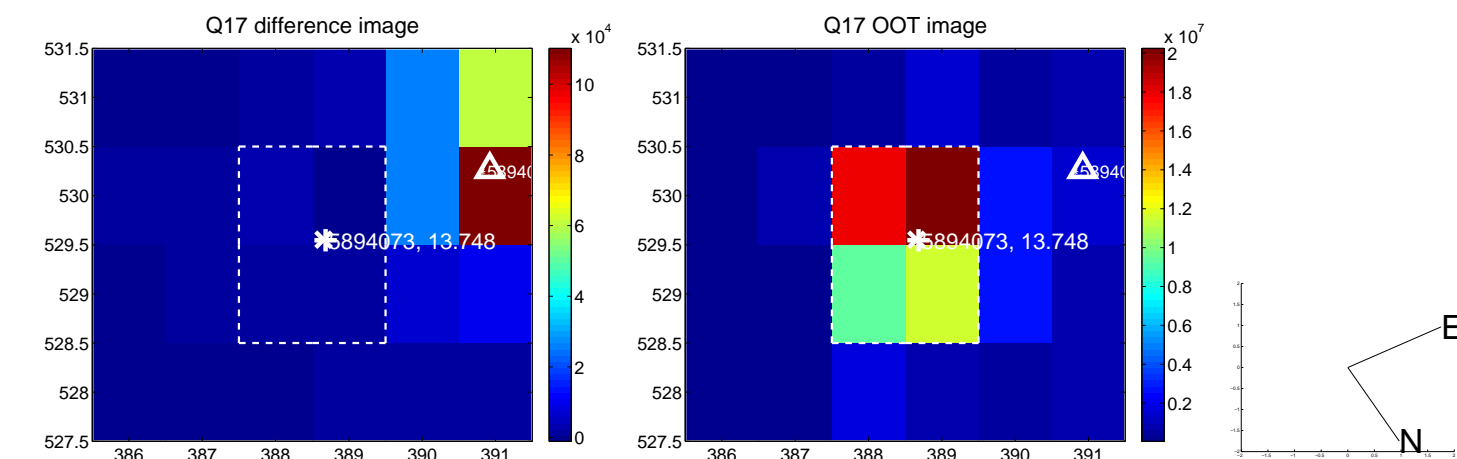
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



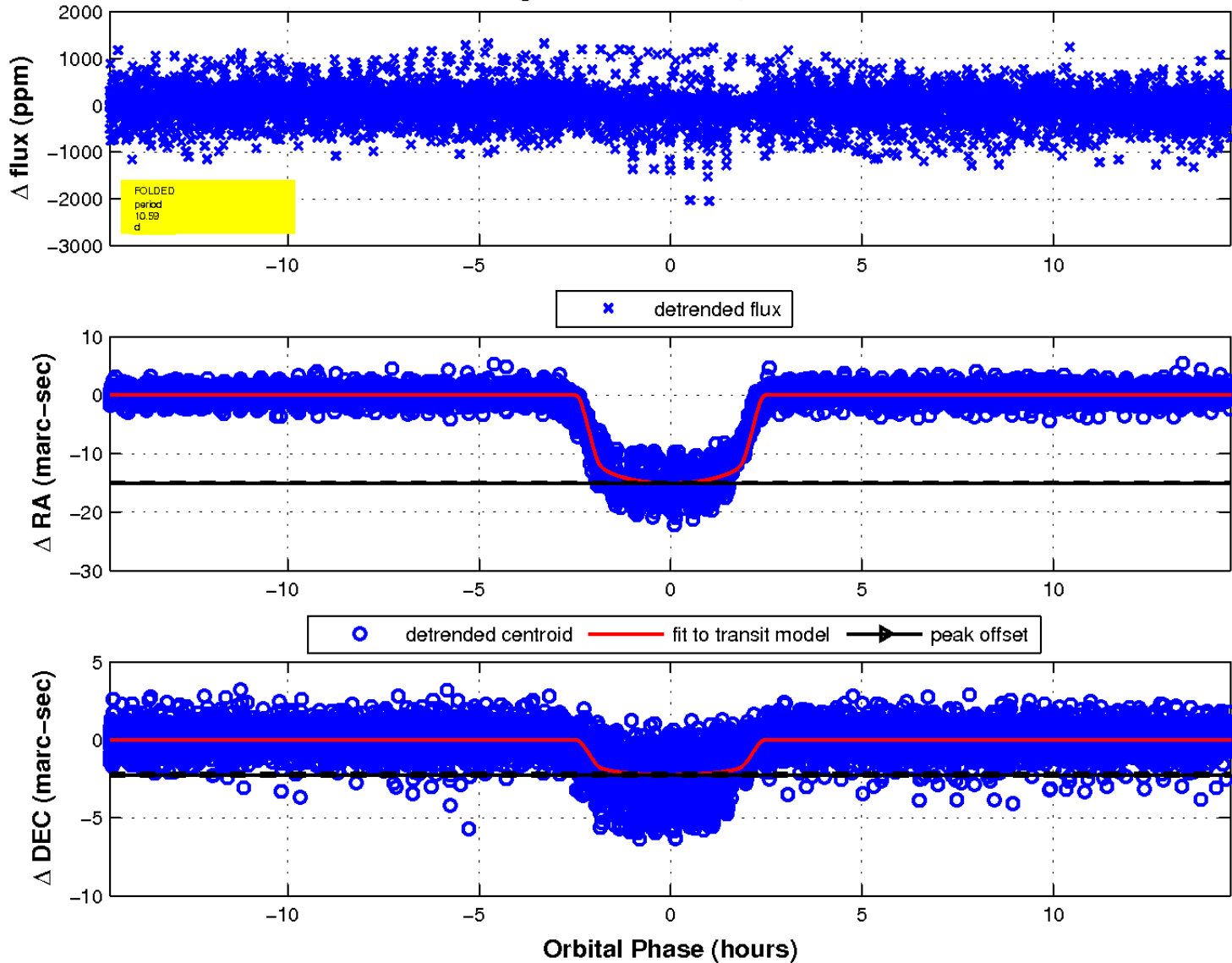
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

