

KIC 010004772

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})
010004772-01	OBS	5752.01	1.391732	132.095534	39.9	1.098	12.0	13.0	59.68	3749	48.00	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010004772-01	OBS	PC	1.00	0	0	0	0	PLANET_IN_STAR

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

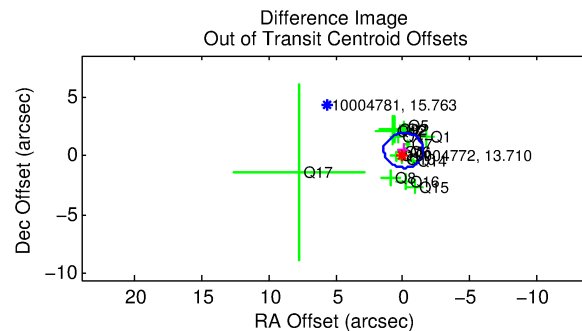
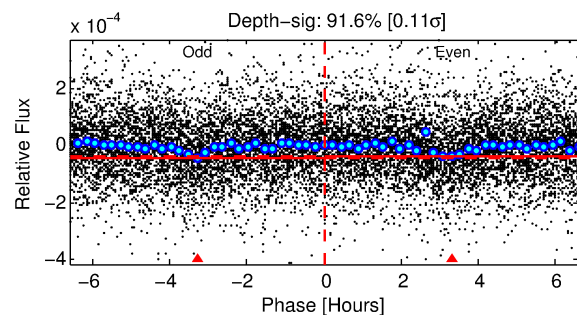
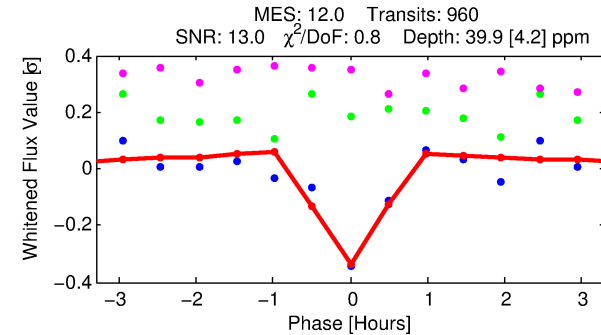
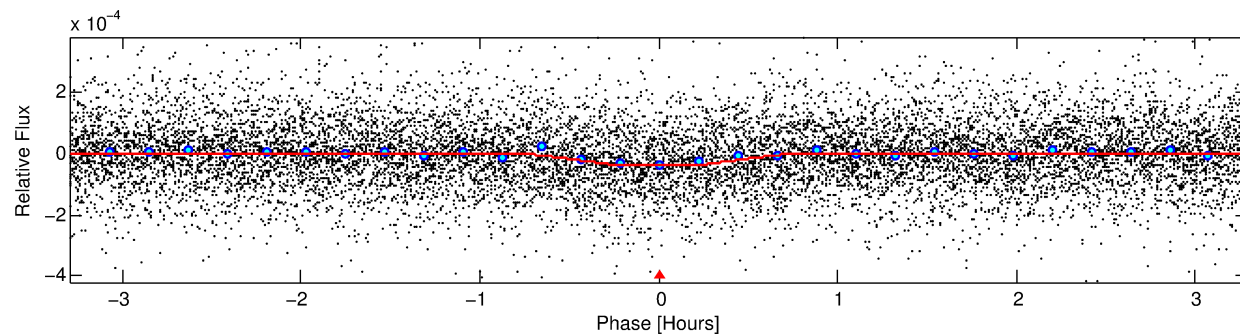
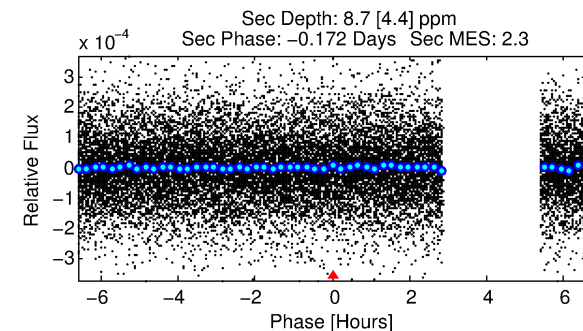
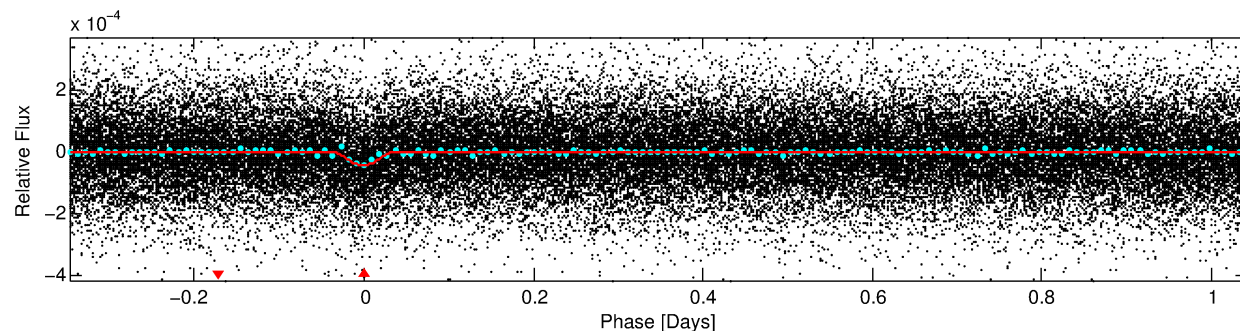
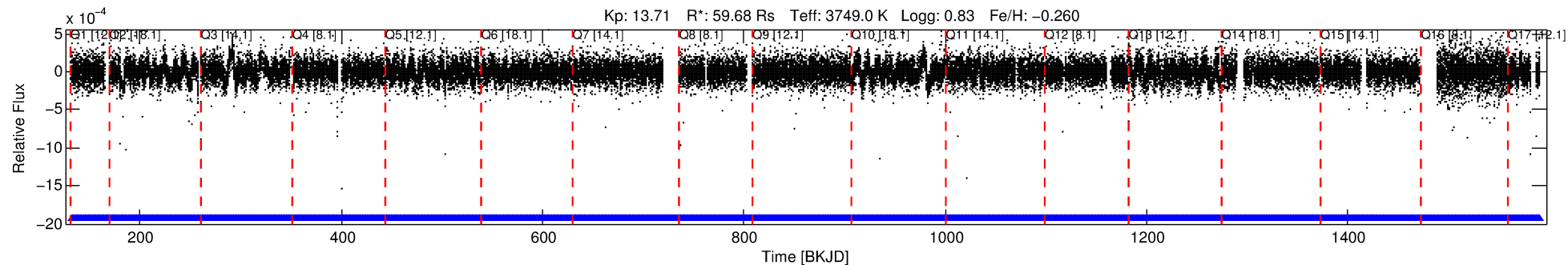
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010004772-01

No Significant Match Found

DV One-Page Summary

KIC: 10004772 Candidate: 1 of 1 Period: 1.392 d
KOI: K05752.01 Corr: 0.882



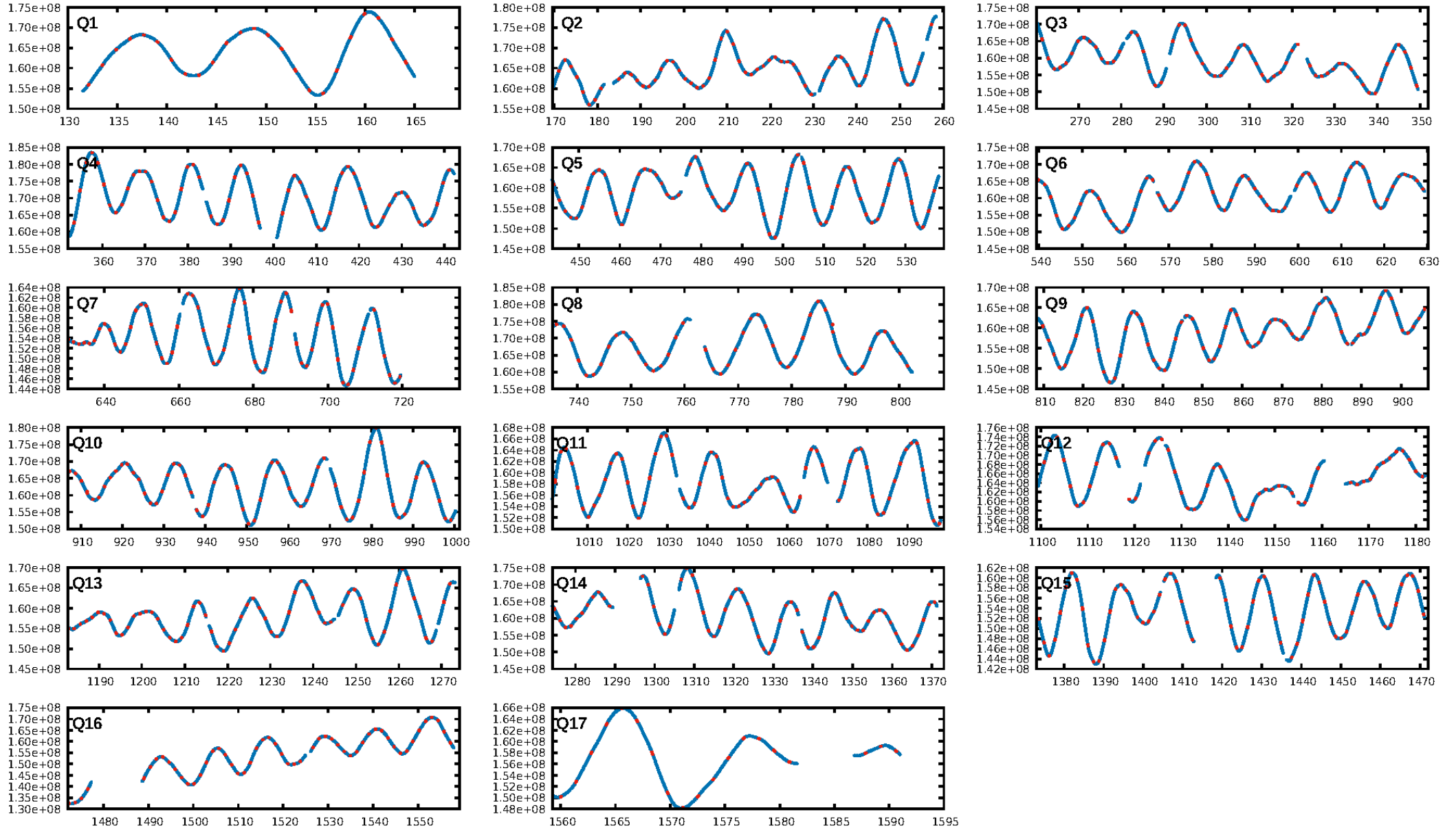
DV Fit Results:

Period = 1.39173 [0.00001] d
Epoch = 132.0955 [0.0013] BKJD
Rp/R* = 0.0074 [0.0031]
a/R* = 4.62 [5.73]
b = 0.89 [0.31]
Seff = N/A
Teq = N/A
Rp = 48.00 [23.71] Re
a = N/A
Ag = N/A
Teffp = N/A

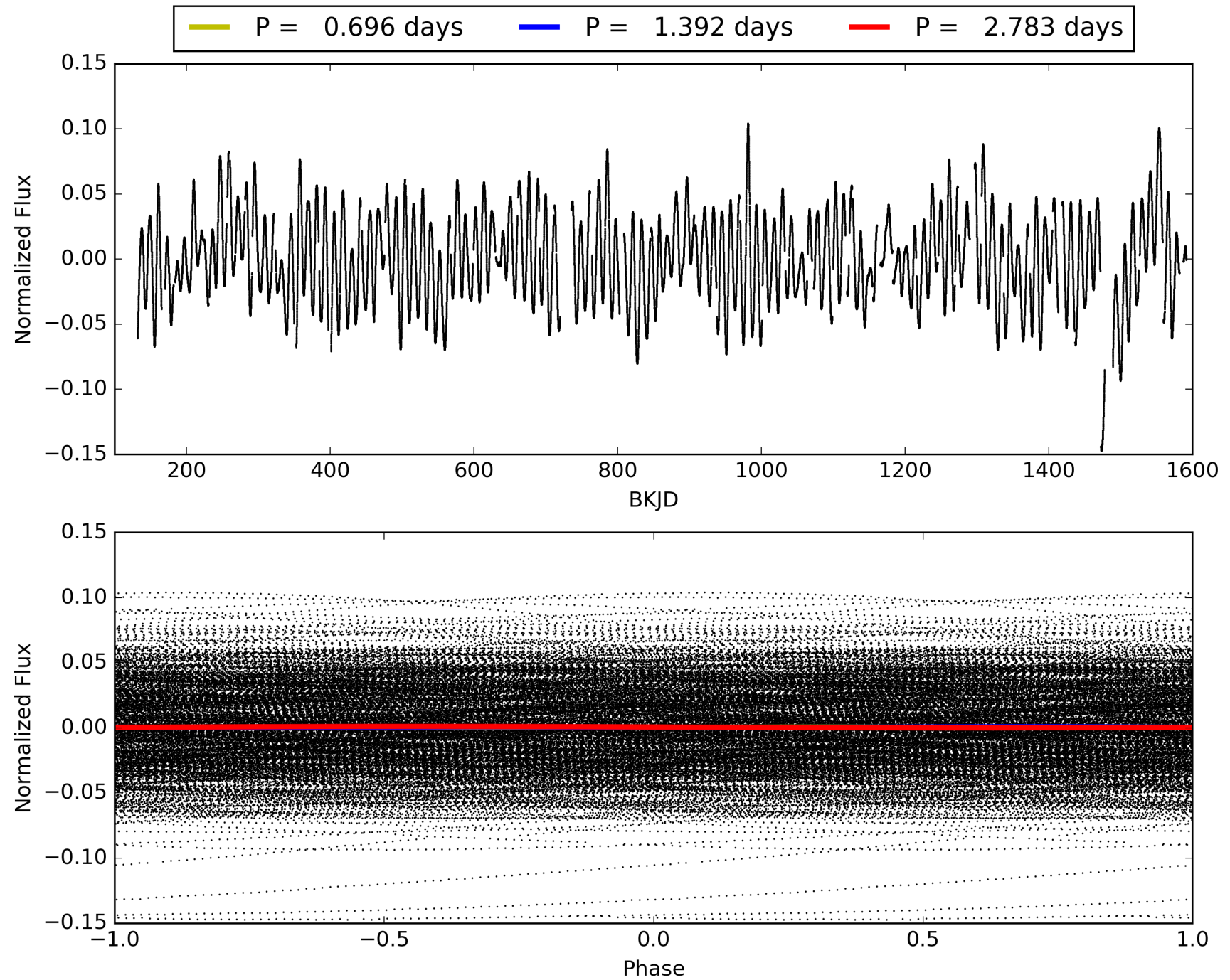
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.99e-30
RollingBand-fgt: 1.00 [917/917]
GhostDiagnostic-chr: 3.075
Centroid-sig: 0.4%
Centroid-so: 3.416 arcsec [2.89σ]
OotOffset-rm: 0.469 arcsec [0.95σ]
KicOffset-rm: 0.722 arcsec [1.47σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010004772-01, PDC Light Curves

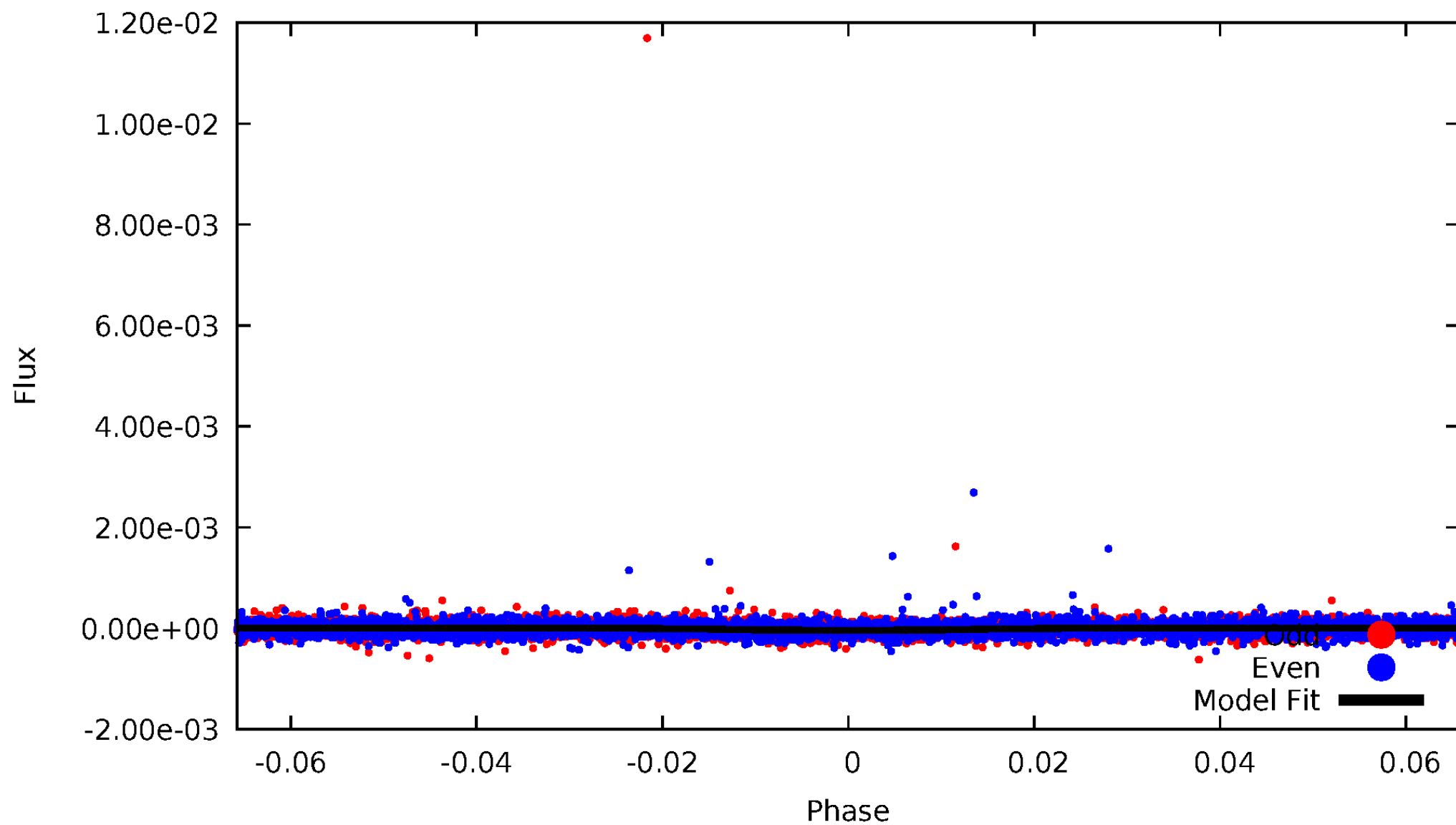


TCE 010004772-01



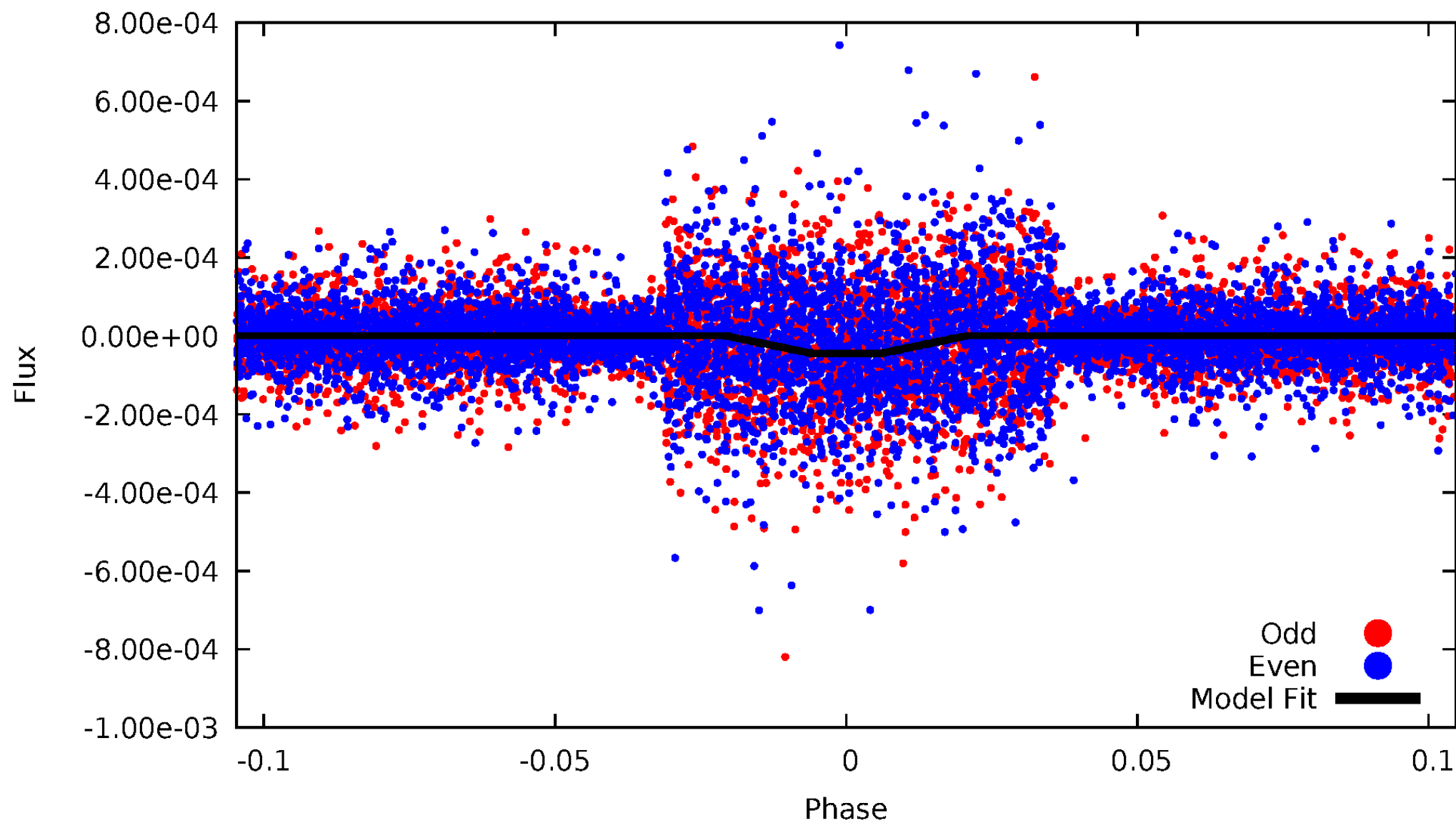
DV Odd/Even

TCE 010004772-01



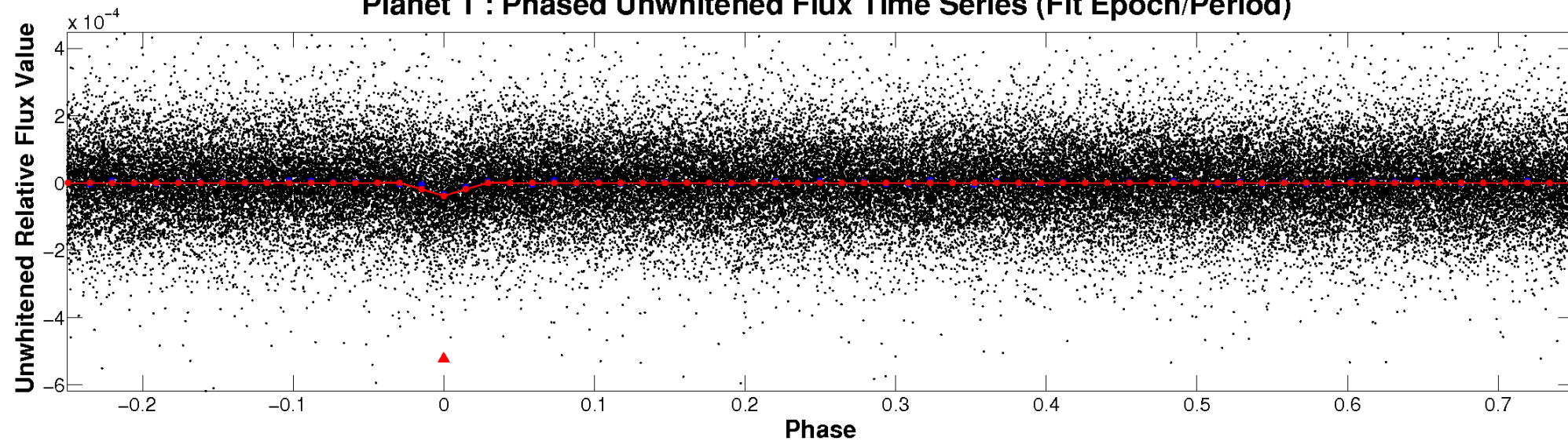
ALT Odd/Even

TCE 010004772-01

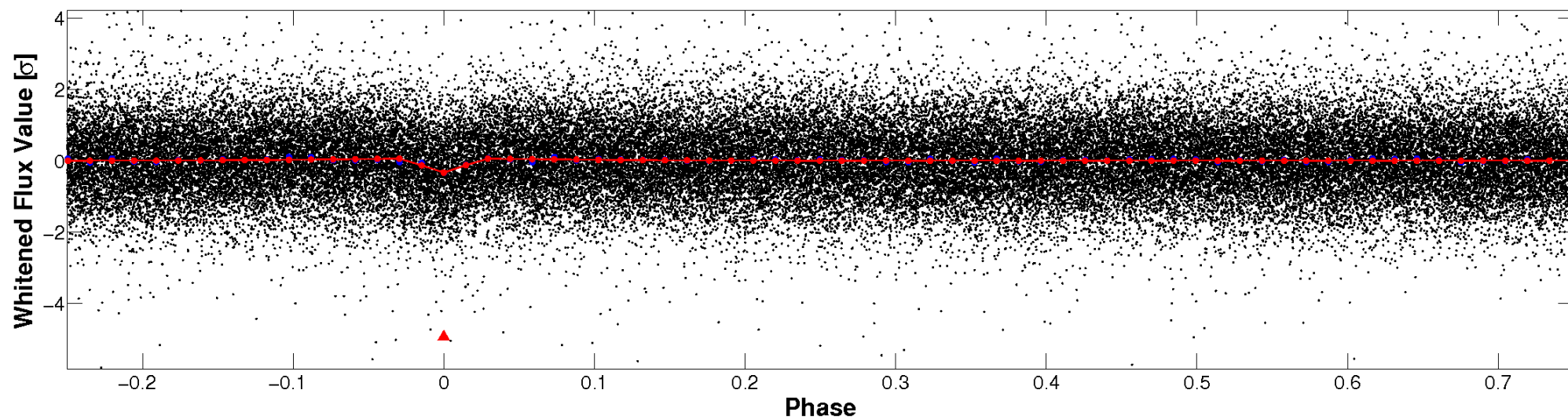


Non-Whitened Vs. Whitened Light Curve

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

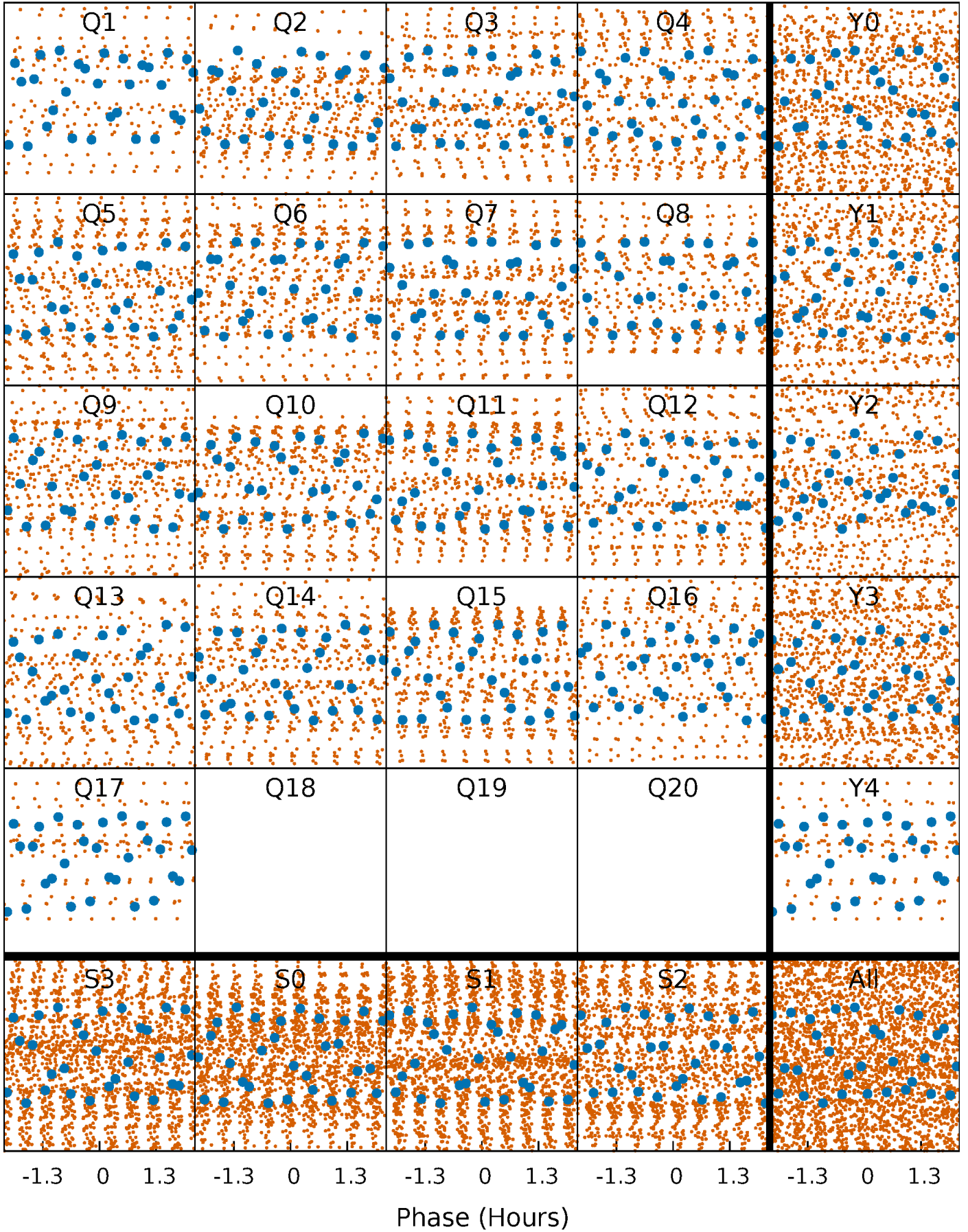


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



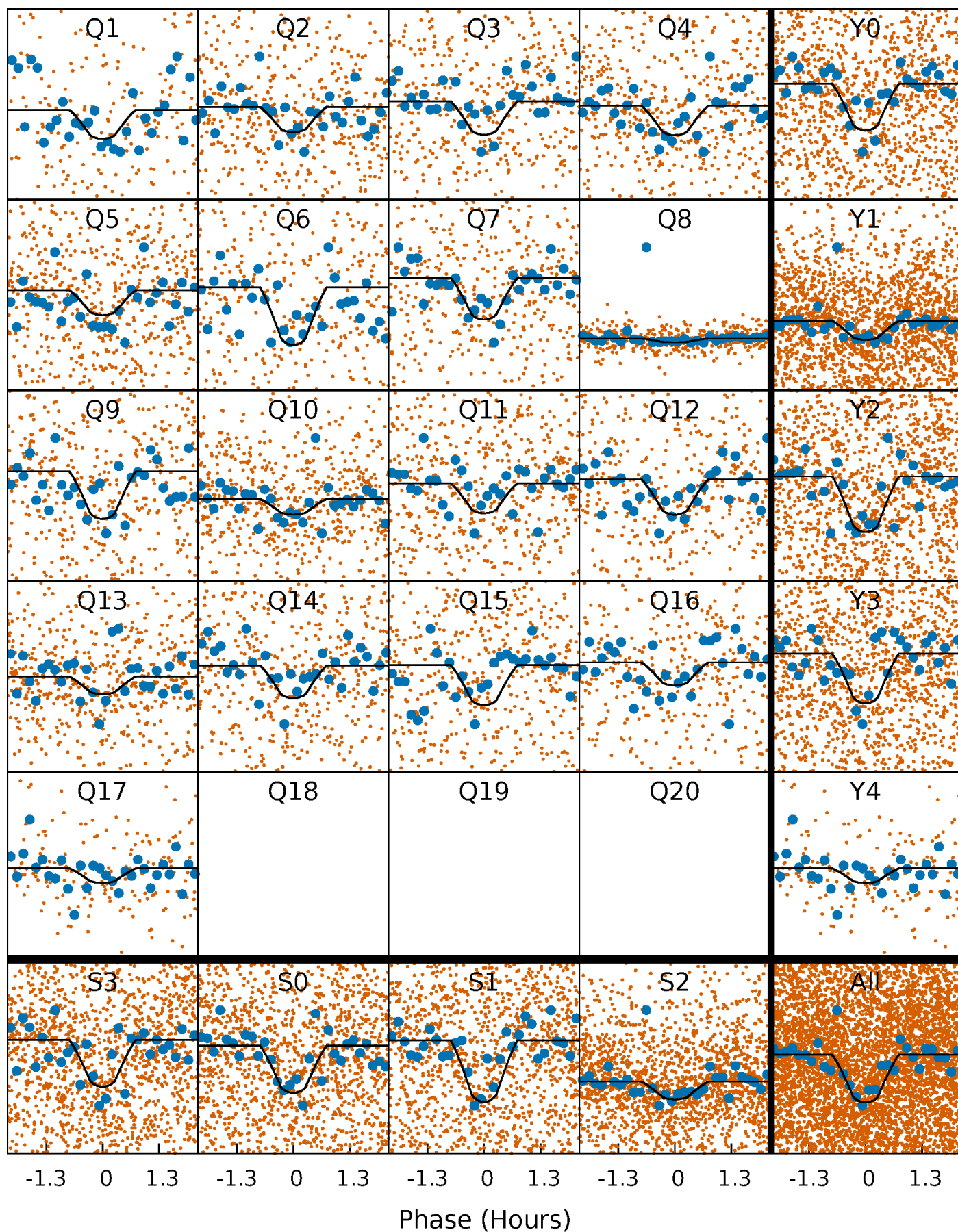
PDC Quarter-Phased Transit Curves

TCE 010004772-01 P= 1.391732 Days $T_0=132.095534$ (BKJD)



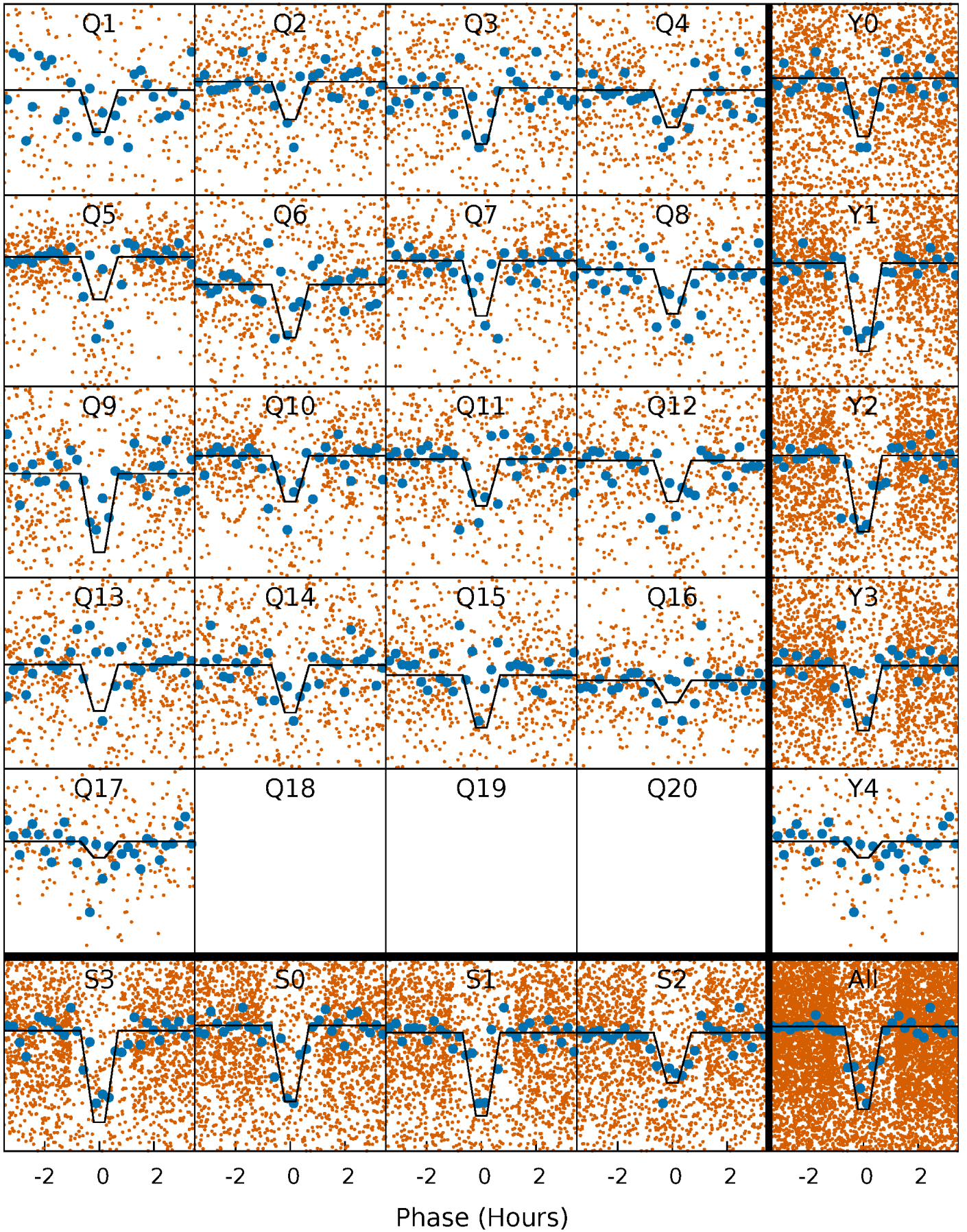
DV Quarter-Phased Transit Curves

TCE 010004772-01 P= 1.391732 Days $T_0=132.095534$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

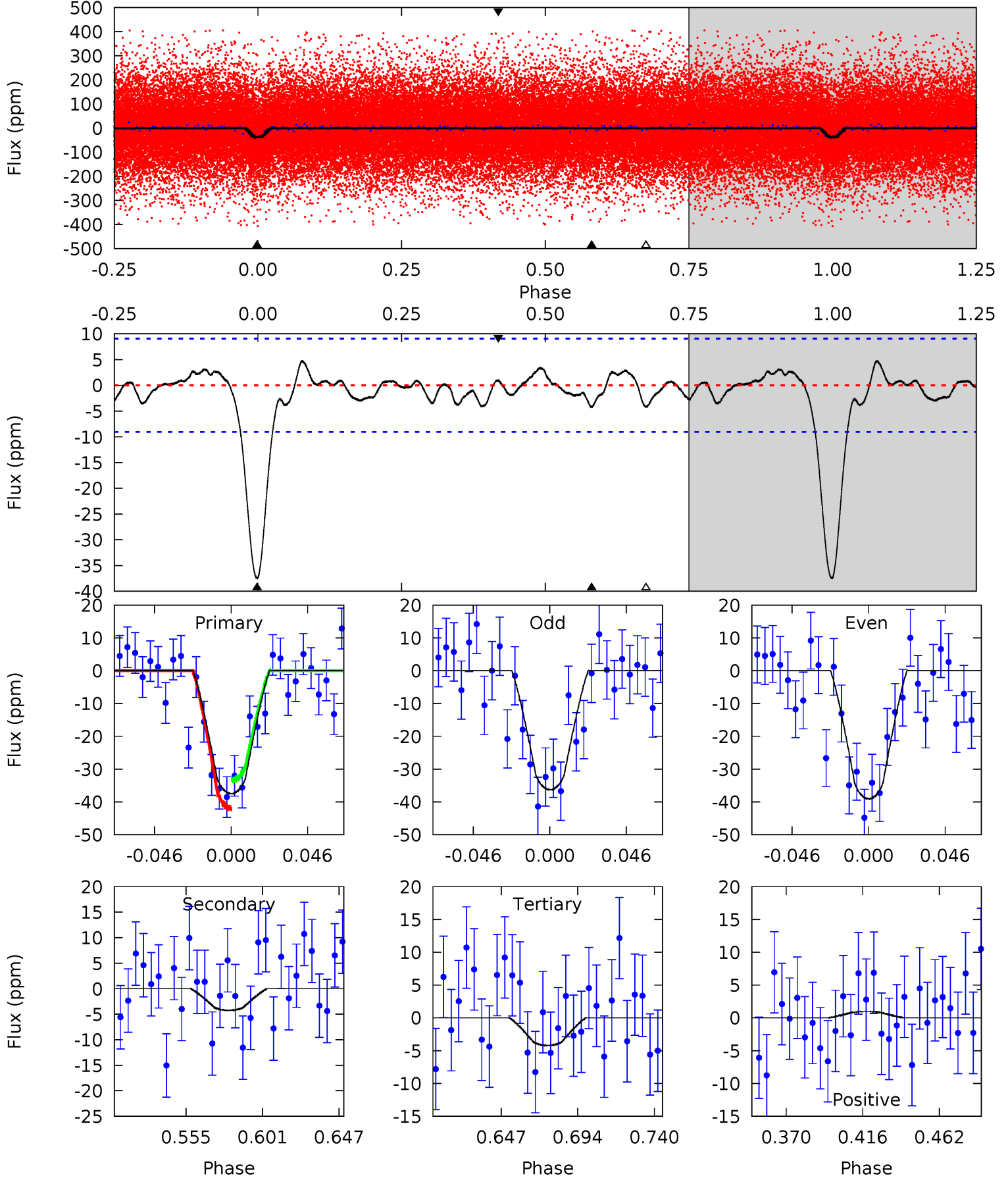
TCE 010004772-01 P= 1.391713 Days $T_0=132.101663$ (BKJD)



DV Model-Shift Uniqueness Test

010004772-01, P = 1.391732 Days, E = 130.703802 Days

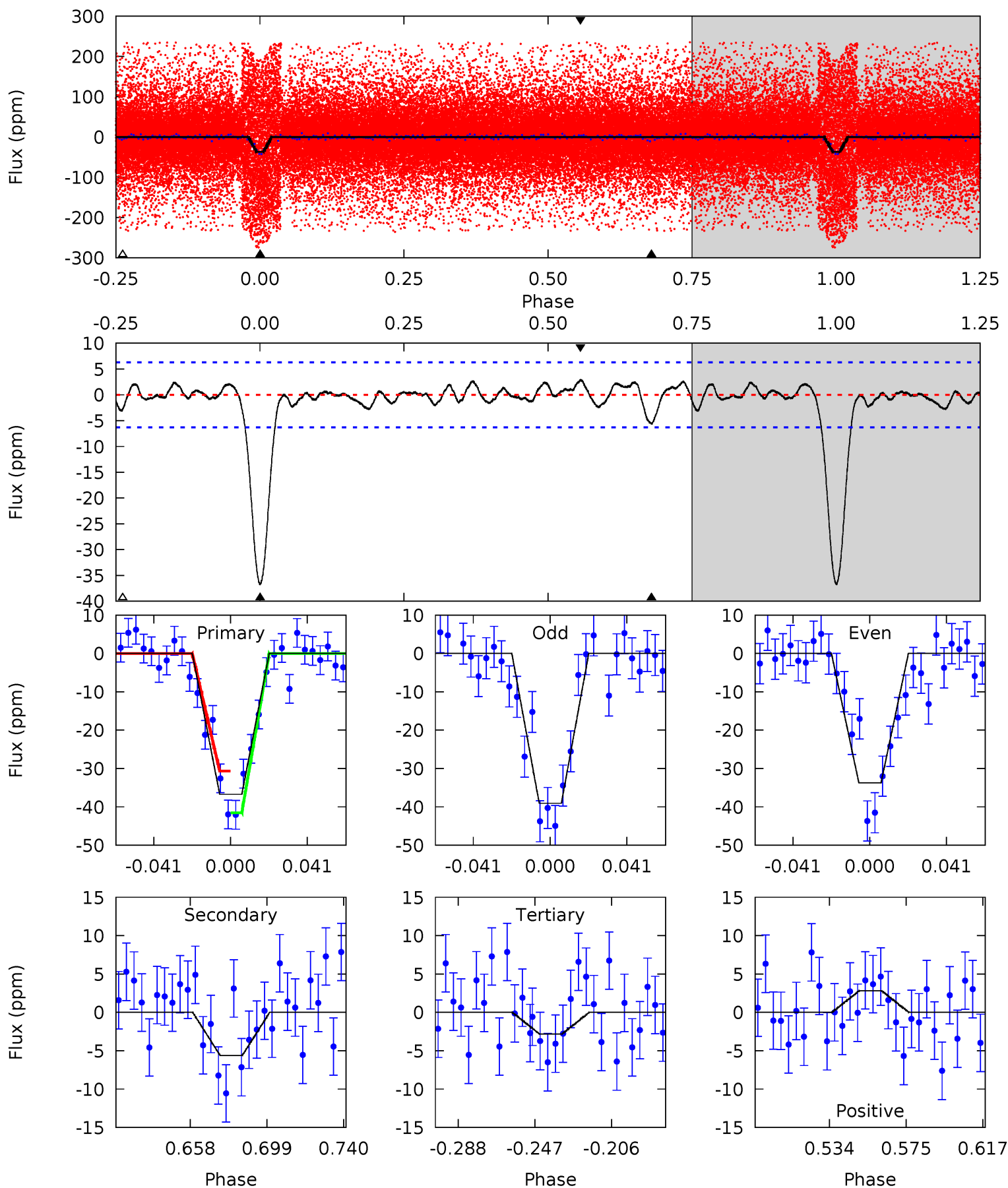
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	2.21	2.19	0.50	4.72	1.99	0.99	17.3	19.0	0.02	1.72	0.73	0.91	0.11	2.23



Alt Model-Shift Uniqueness Test

010004772-01, P = 1.391713 Days, E = 130.709950 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	4.24	2.14	2.13	4.75	2.04	0.94	25.6	25.6	2.10	2.11	2.01	1.02	0.07	4.11



Stellar Parameters For KIC 010004772

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3749^{+103}_{-84}	$0.833^{+0.030}_{-0.030}$	$-0.260^{+0.250}_{-0.200}$	$59.684^{+15.454}_{-1.818}$	$0.885^{+0.523}_{-0.028}$	$0.000^{+0.000}_{-0.000}$
	$+3\%/-2\%$	$+4\%/-4\%$	$+96\%/-77\%$	$+26\%/-3\%$	$+59\%/-3\%$	$+9\%/-21\%$
Source	PHO54	AST54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010004772-01 / KOI 5752.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 2	$48.09^{+21.95}_{-19.31}$	11672^{+355}_{-311}	-8976^{+446}_{-536}	$0.001^{+0.001}_{-0.000}$
Alt.	-6 ± 1	$44.01^{+20.08}_{-18.83}$	11681^{+346}_{-301}	-8985^{+447}_{-516}	$0.001^{+0.002}_{-0.000}$

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 $A_{obs} \gg 1.0$

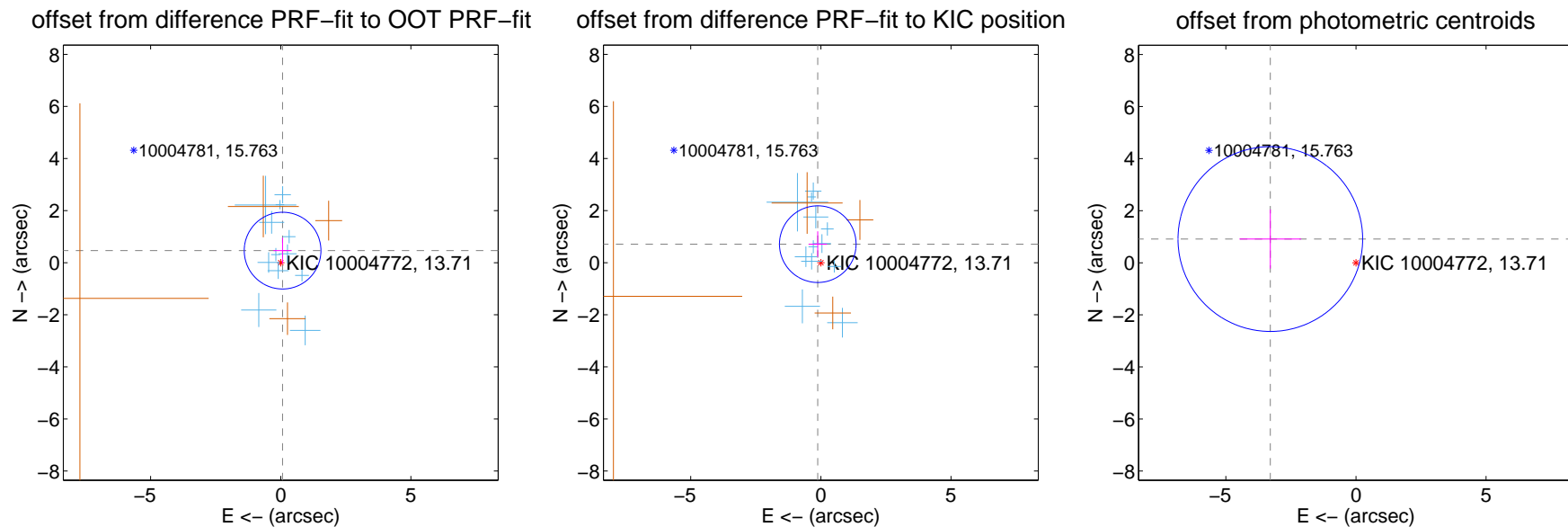
DV Centroid Data

Supplemental centroid analysis for 010004772-01. Kepler magnitude: 13.71. Transit SNR 12.98

There are 12 quarters with good PRF difference image offsets

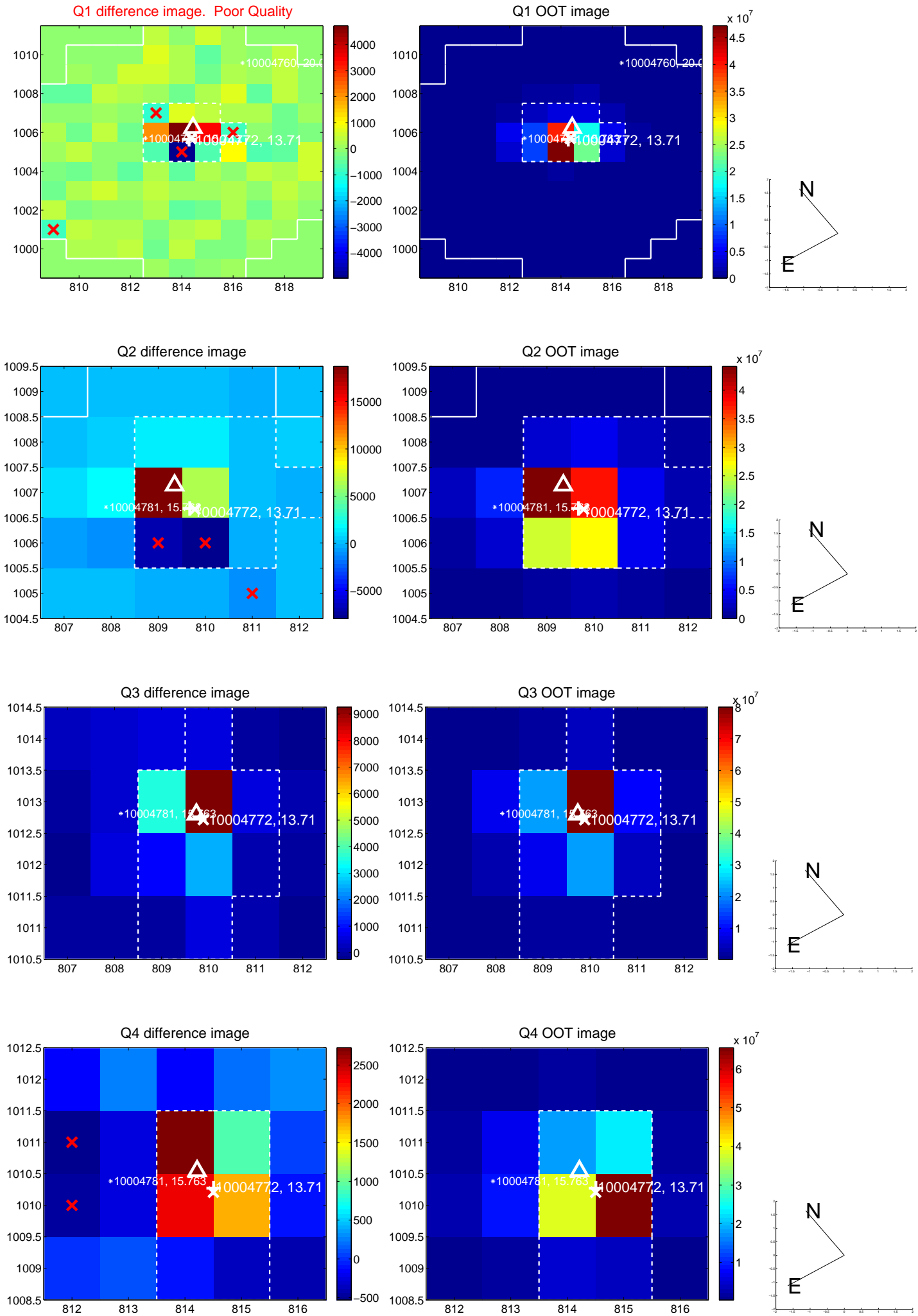
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.469 ± 0.491	0.95	-0.071 ± 0.350	0.464 ± 0.494
PRF-fit source offset from KIC position	0.722 ± 0.491	1.47	0.119 ± 0.350	0.712 ± 0.494
photometric centroid source offset	3.42 ± 1.18	2.89	3.29 ± 1.19	0.91 ± 1.13

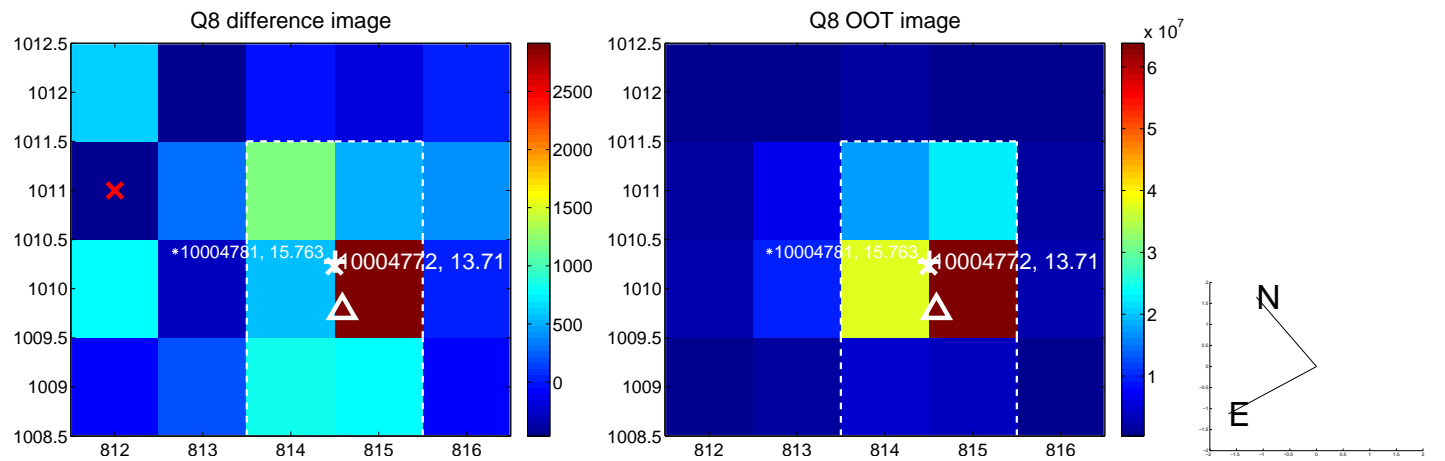
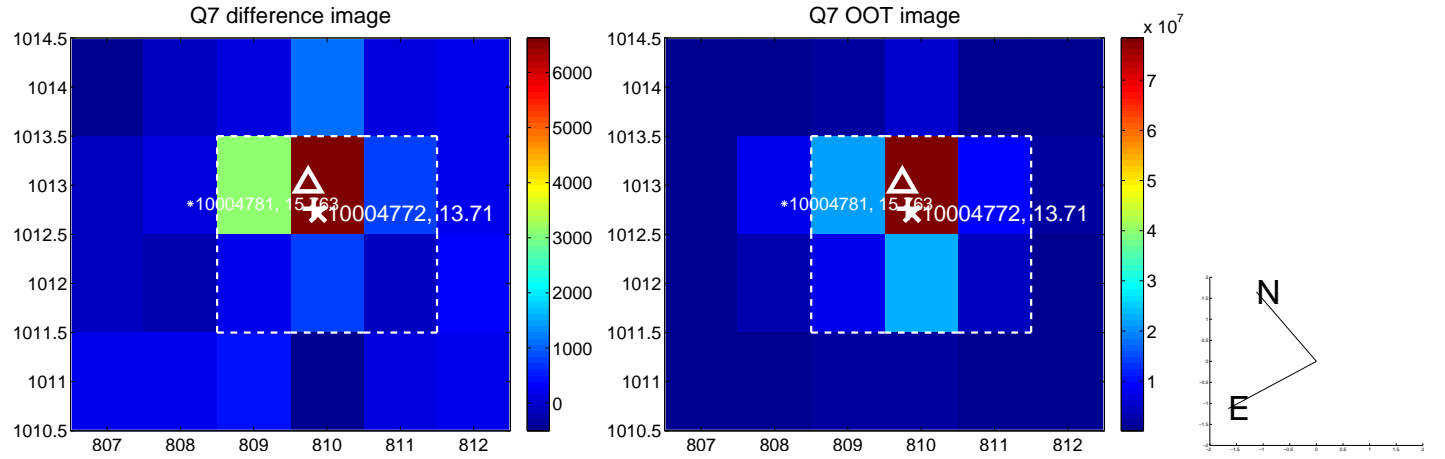
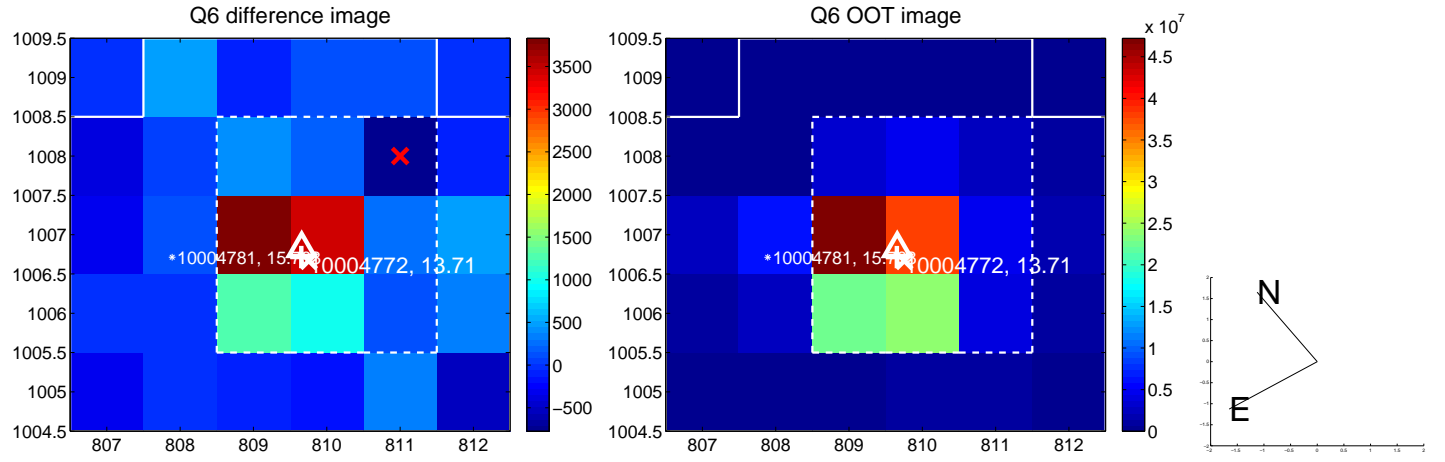
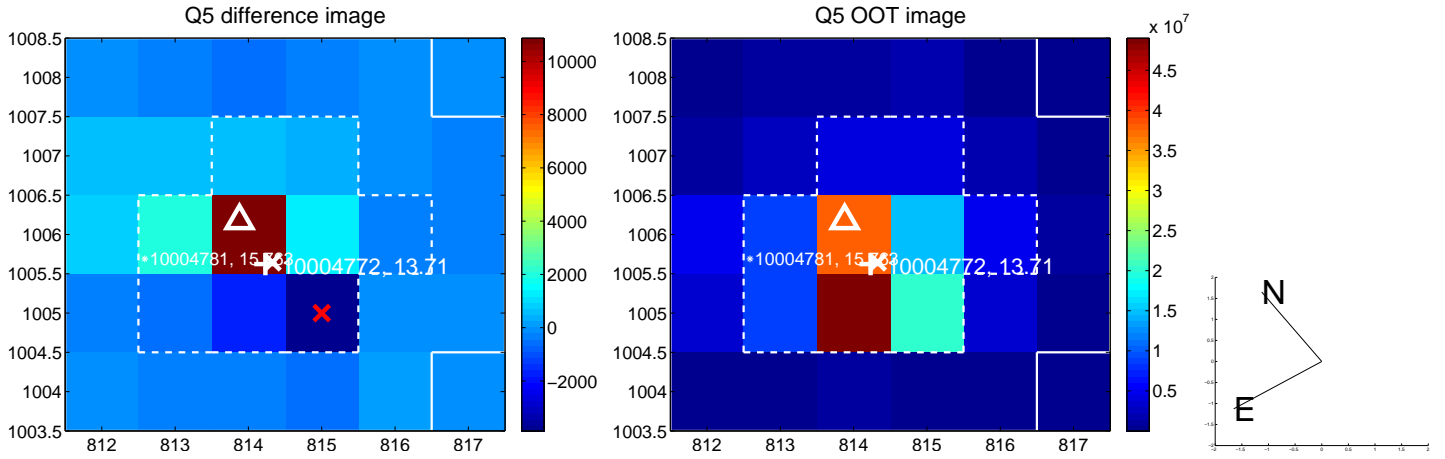


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

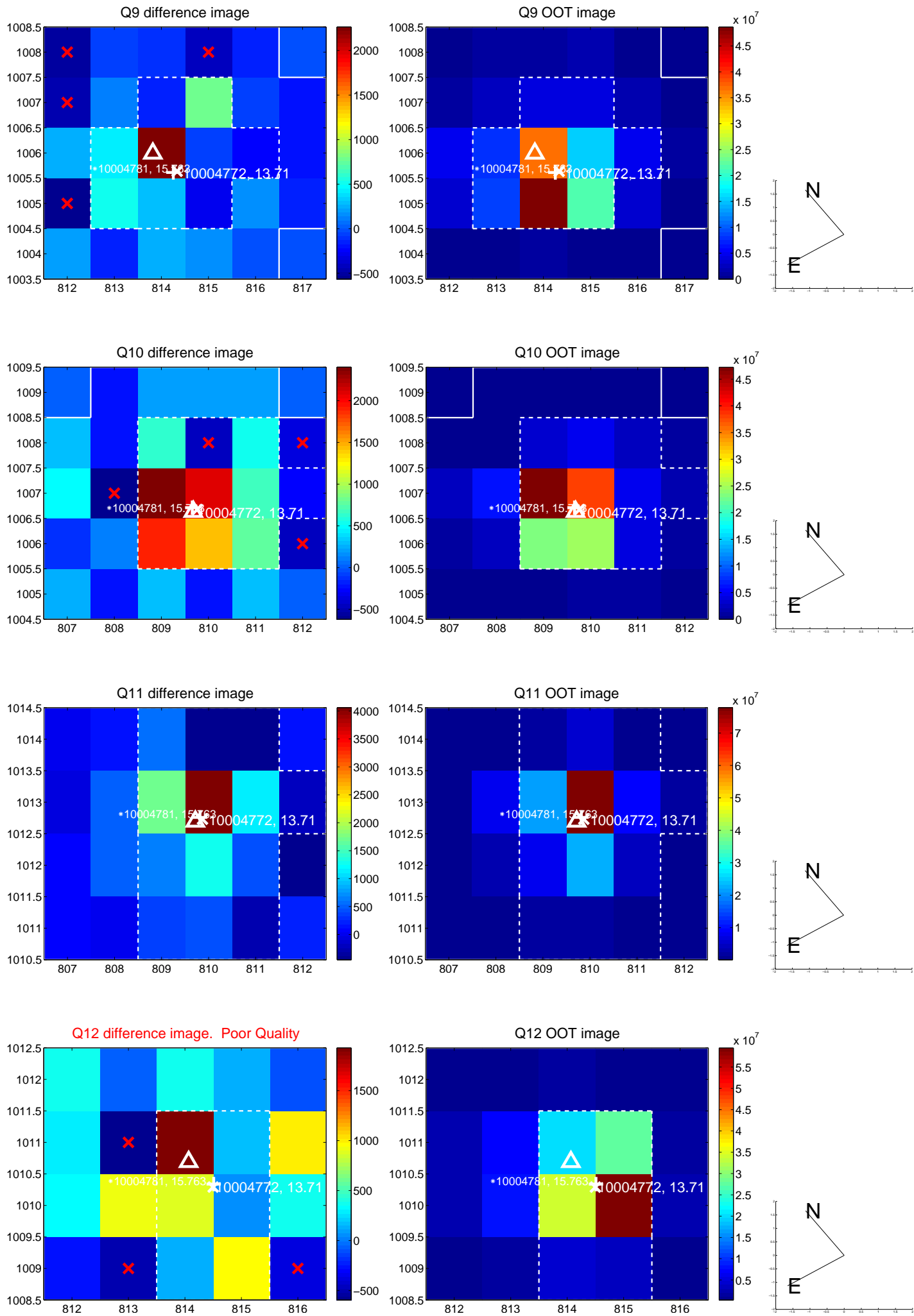
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



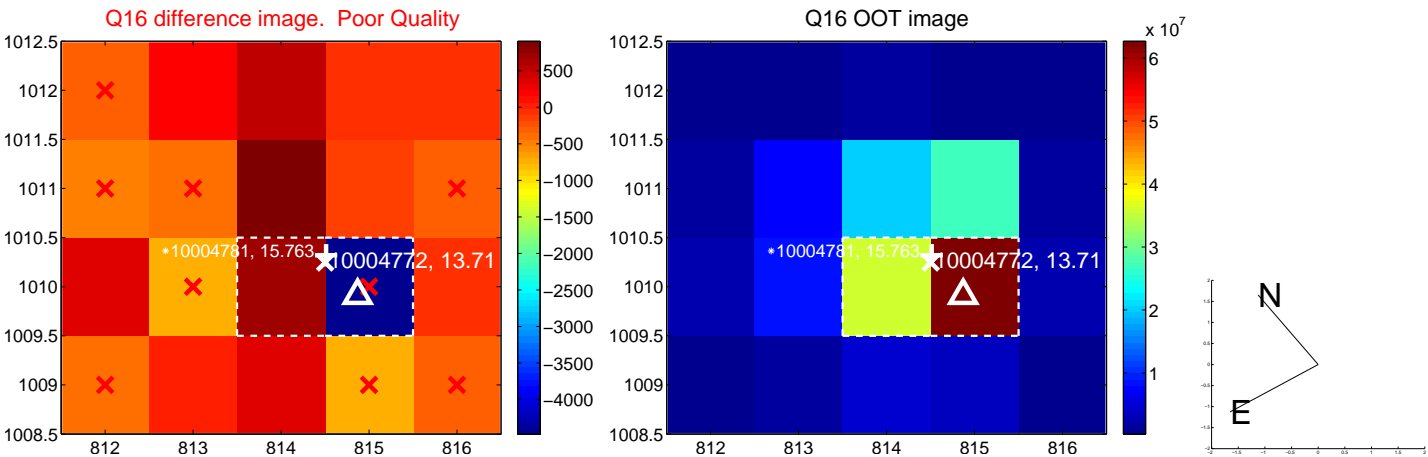
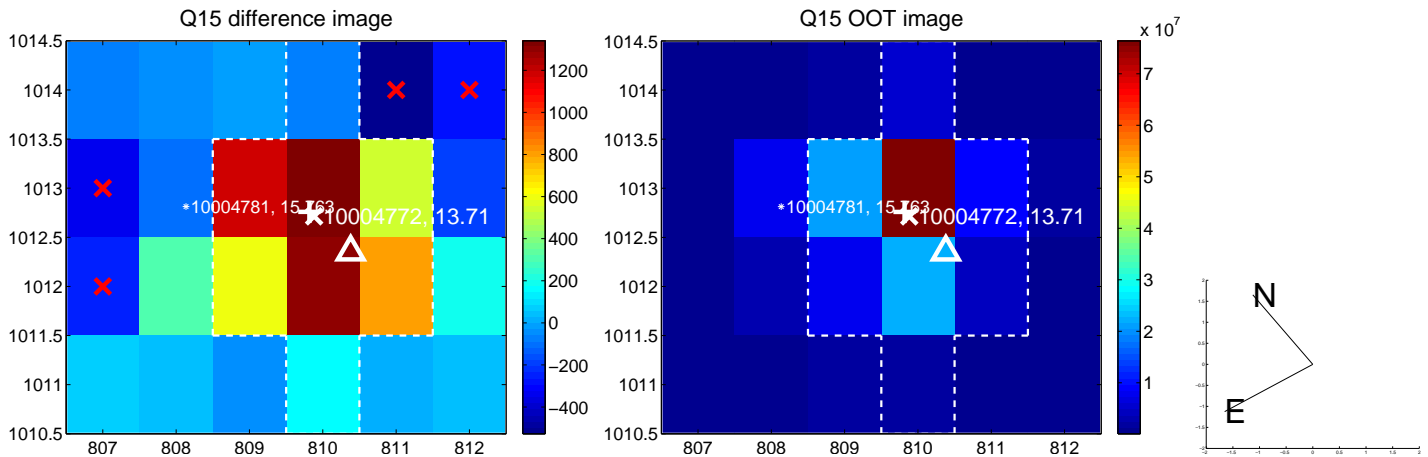
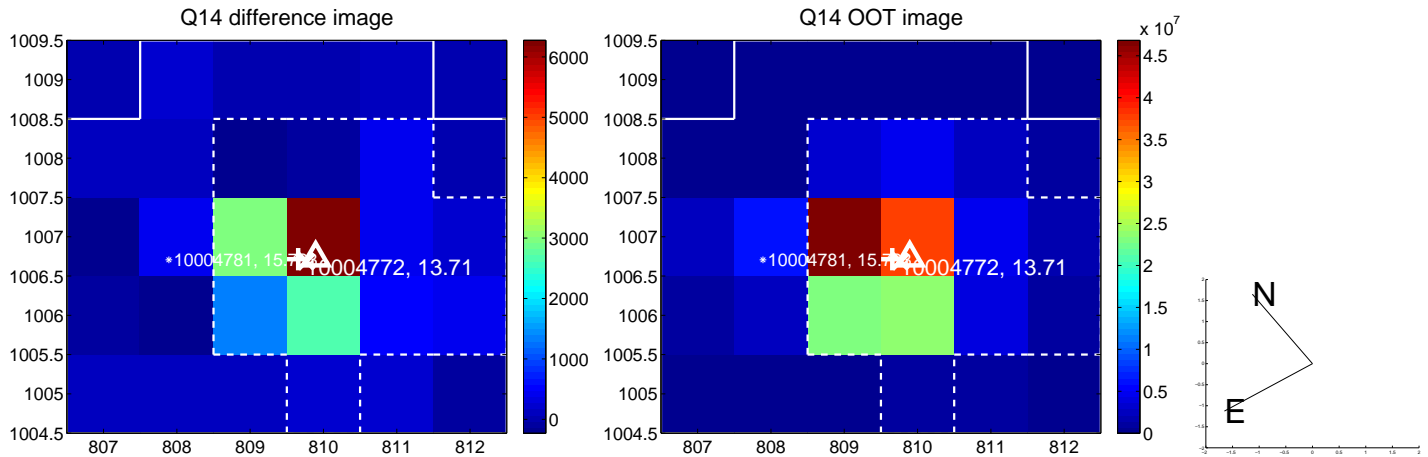
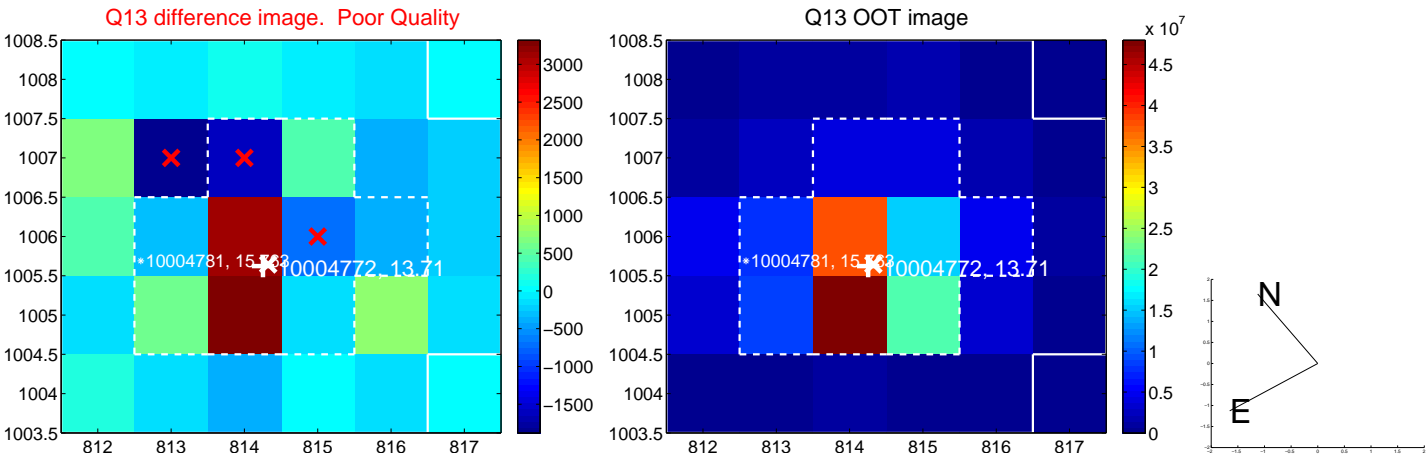
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



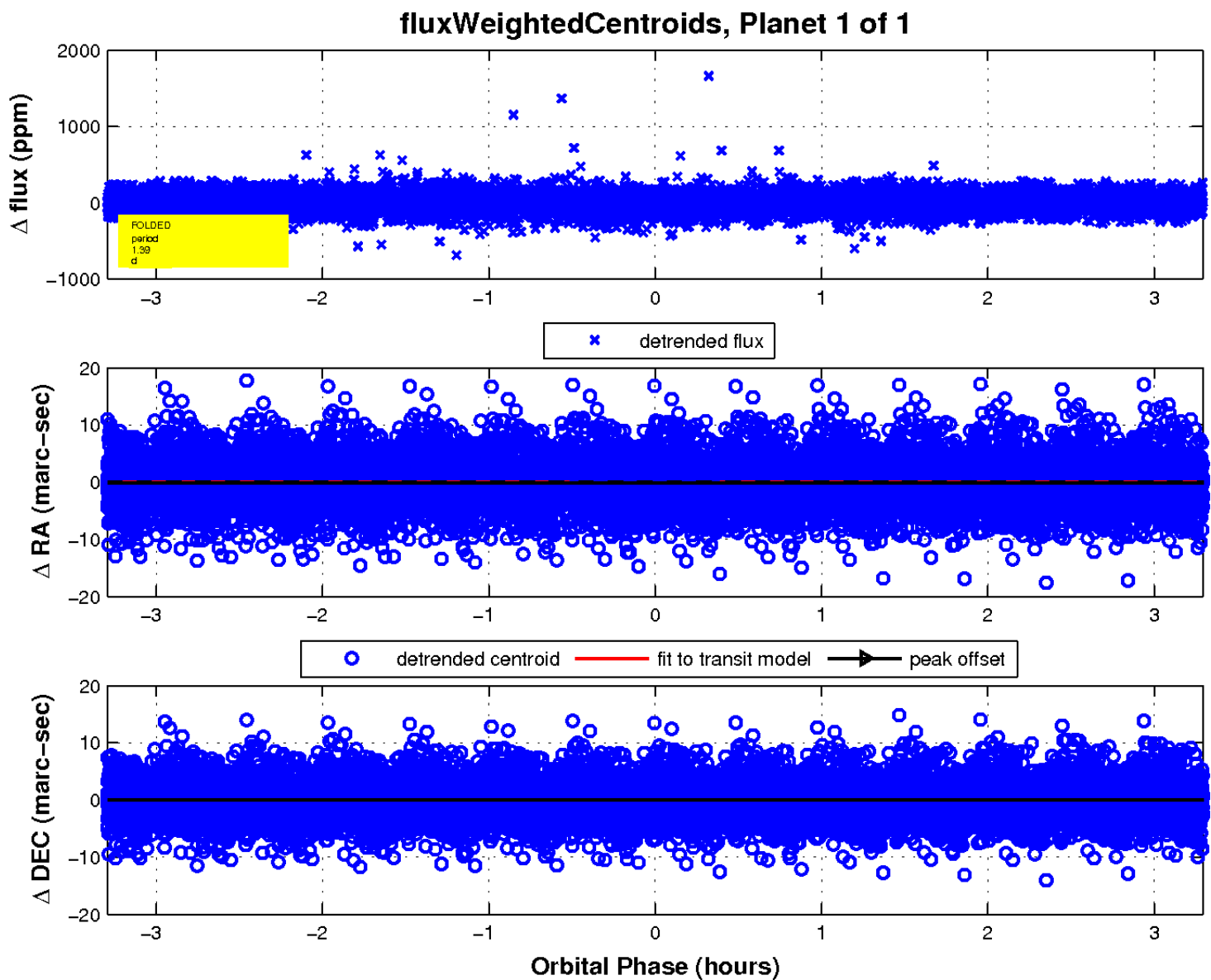
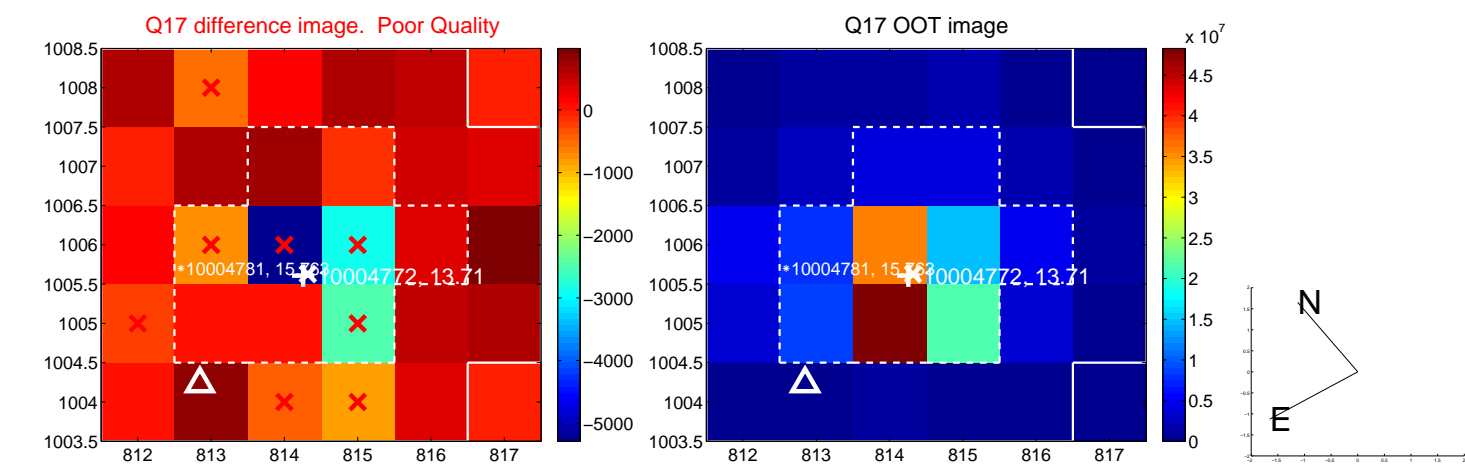
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

