

KIC 008984755

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})
008984755-01	OBS	4664.01	0.734581	131.586878	53.0	1.620	8.6	9.6	1.05	5602	0.92	4271.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008984755-01	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.

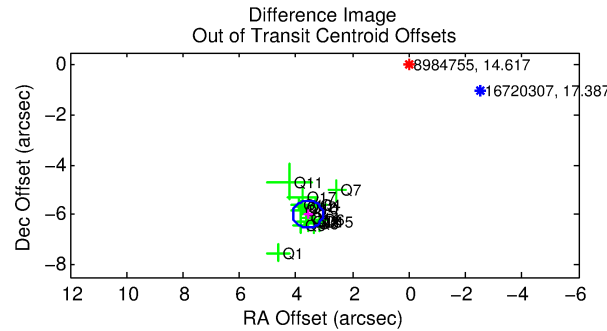
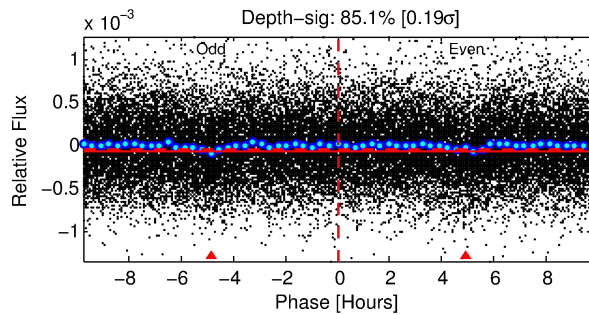
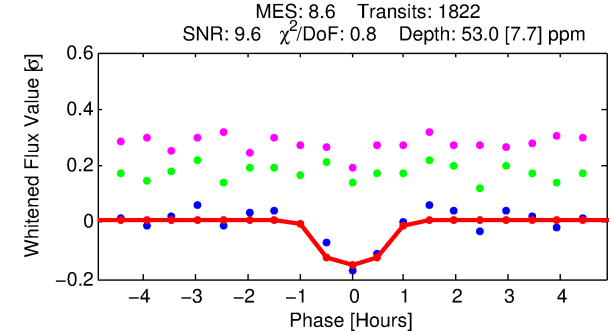
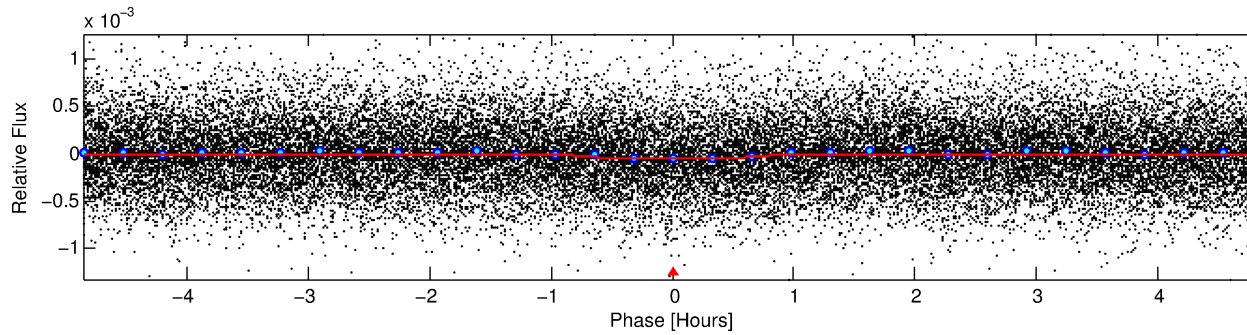
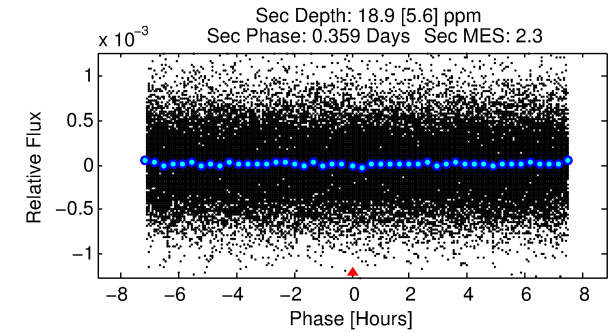
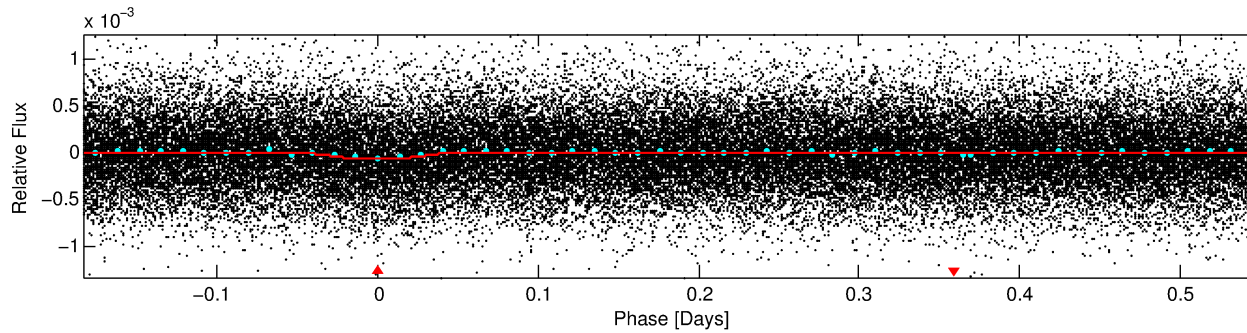
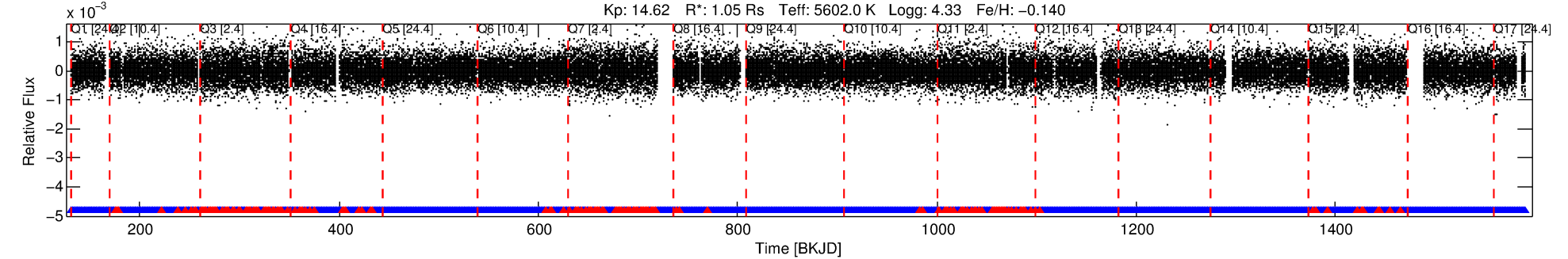
Ephemeris Match Information For 008984755-01

No Significant Match Found

DV One-Page Summary

KIC: 8984755 Candidate: 1 of 1 Period: 0.735 d
KOI: K04664.01 Corr: 0.883

Kp: 14.62 R*: 1.05 Rs Teff: 5602.0 K Logg: 4.33 Fe/H: -0.140



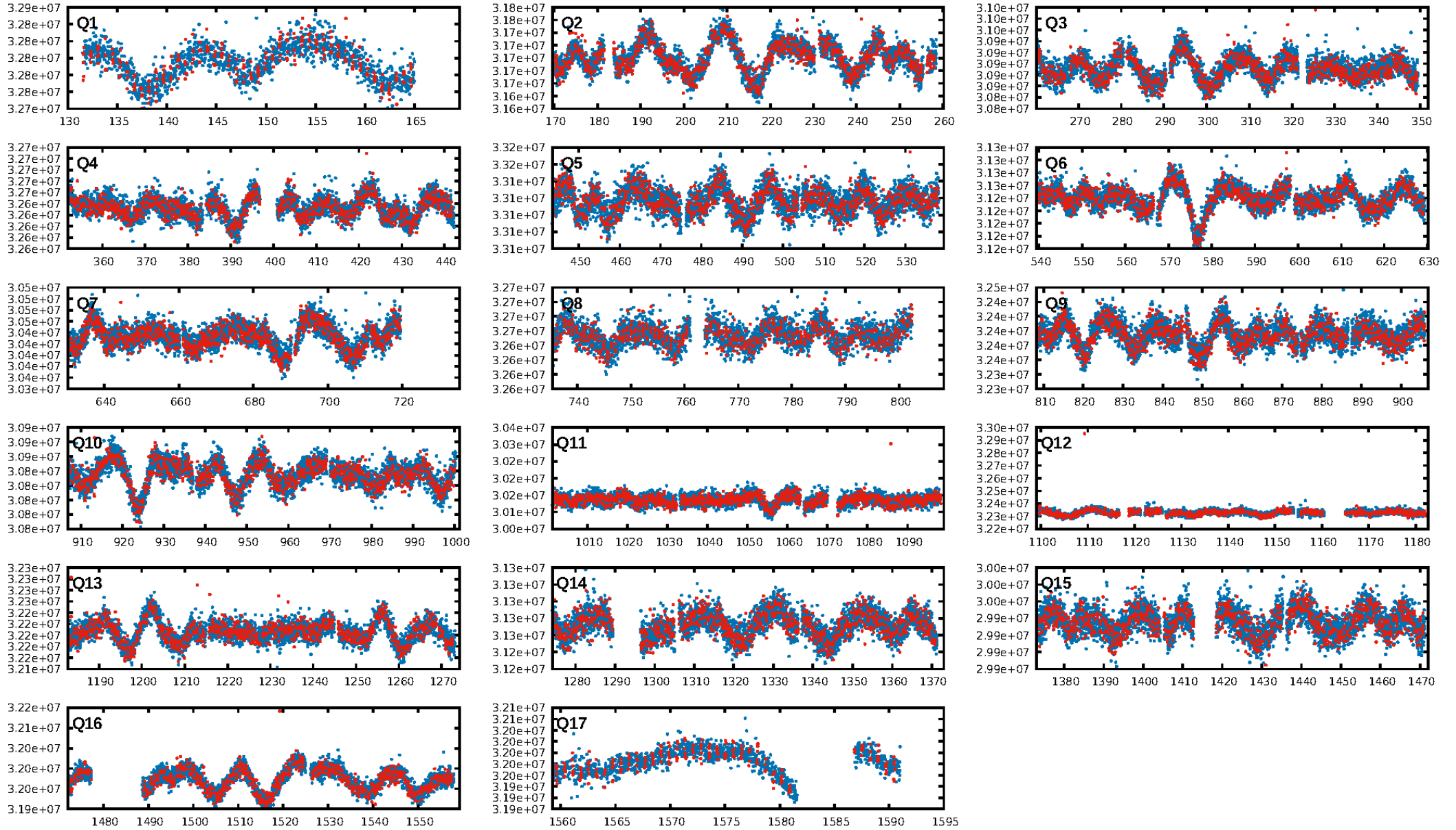
DV Fit Results:

Period = 0.73458 [0.00001] d
Epoch = 131.5869 [0.0024] BKJD
Rp/R* = 0.0080 [0.0061]
a/R* = 1.82 [4.53]
b = 0.90 [0.75]
Seff = 4271.85 [1656.01]
Teq = 2061 [200] K
Rp = 0.92 [0.75] Re
a = 0.0151 [0.0039] AU
Ag = 2.81 [4.50] [0.40σ]
Teffp = 4128 [1609] K [1.27σ]

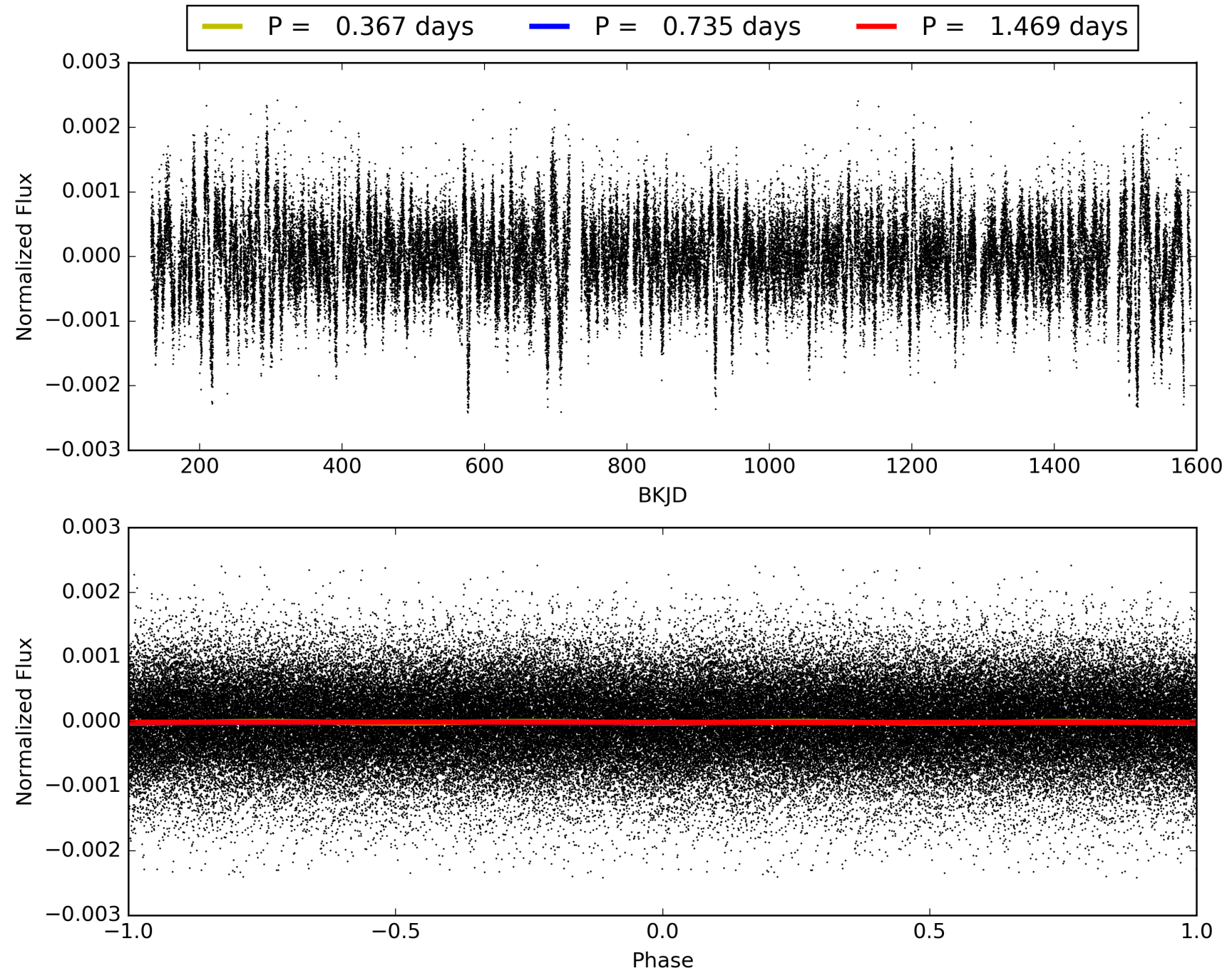
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.51e-18
RollingBand-fgt: 0.90 [1565/1740]
GhostDiagnostic-chr: -0.02325
Centroid-sig: 0.0%
Centroid-so: 13.075 arcsec [9.50σ]
OotOffset-rm: 6.975 arcsec [38.62σ]
KicOffset-rm: 6.876 arcsec [40.84σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008984755-01, PDC Light Curves

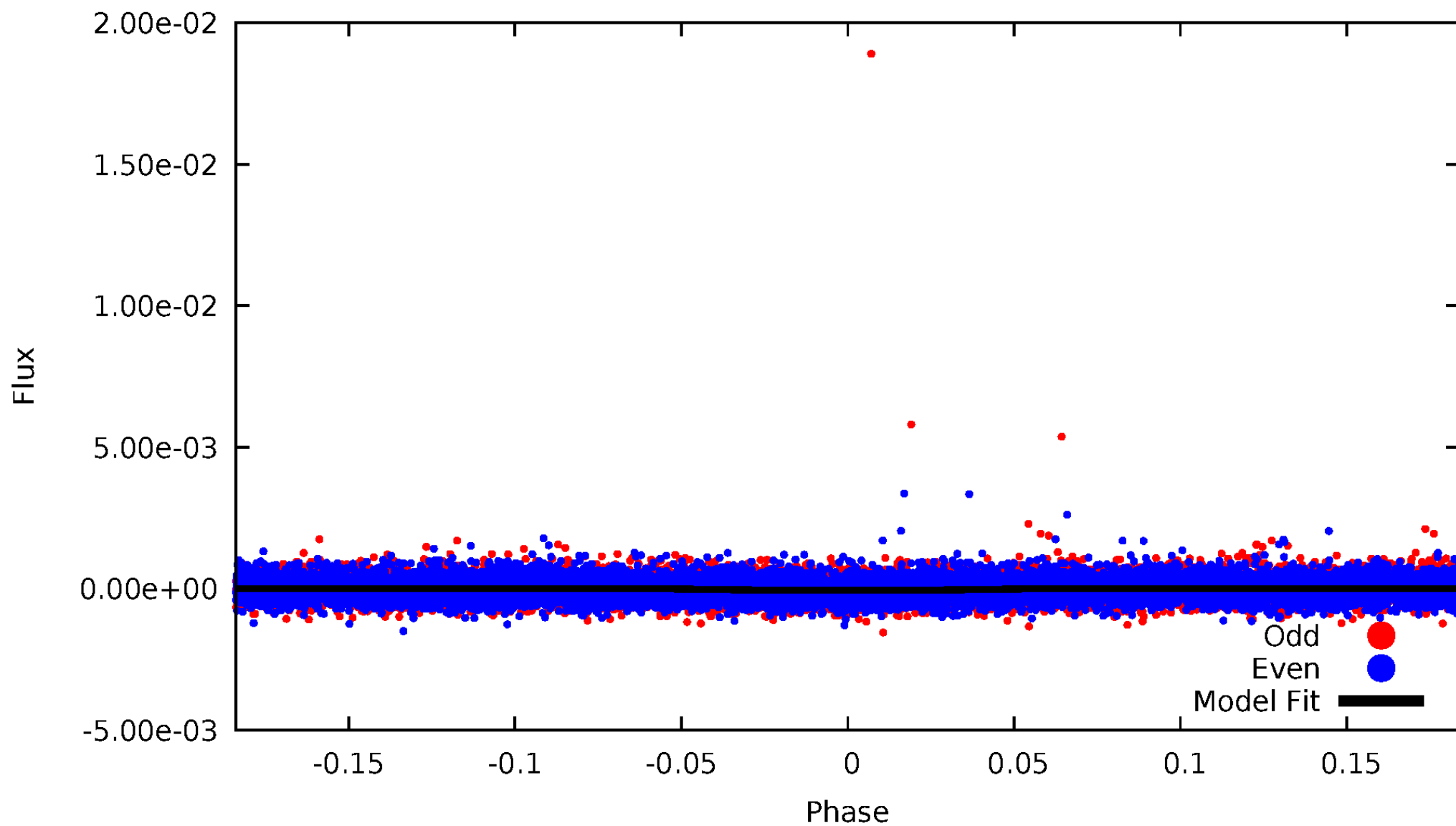


TCE 008984755-01



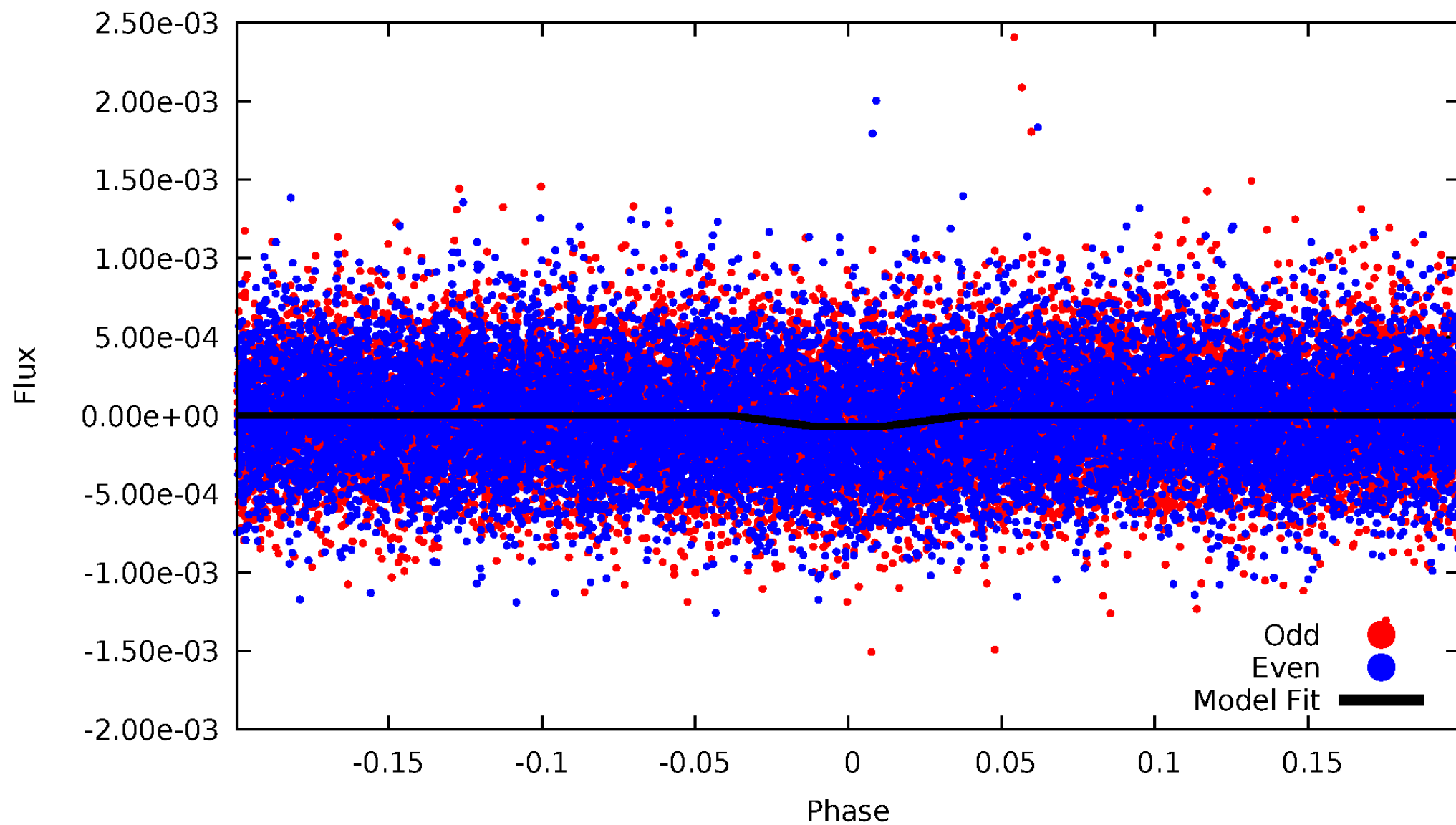
DV Odd/Even

TCE 008984755-01



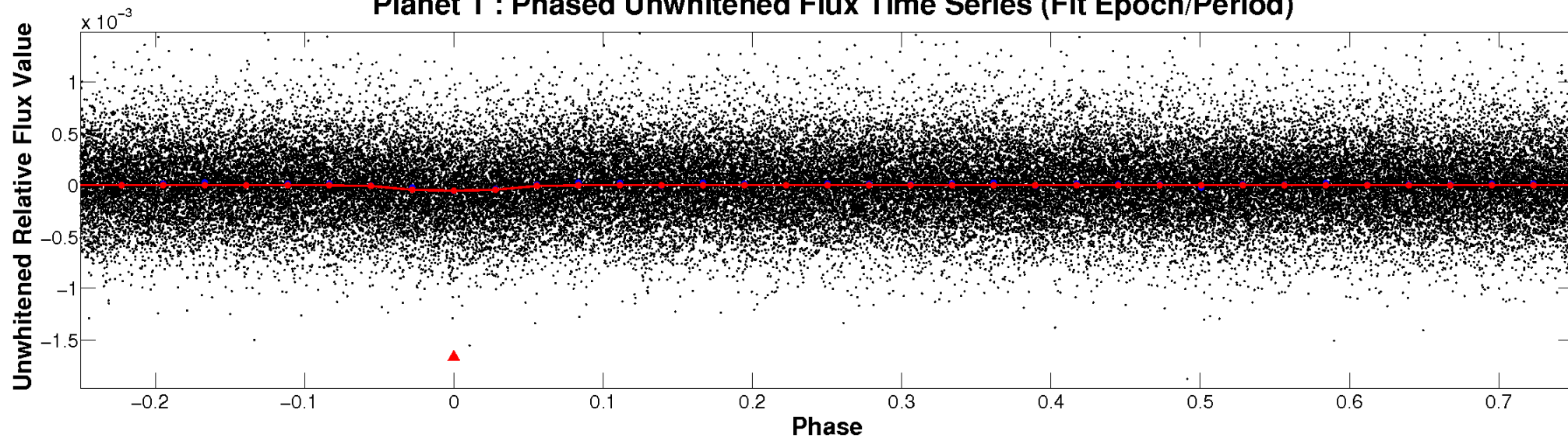
ALT Odd/Even

TCE 008984755-01

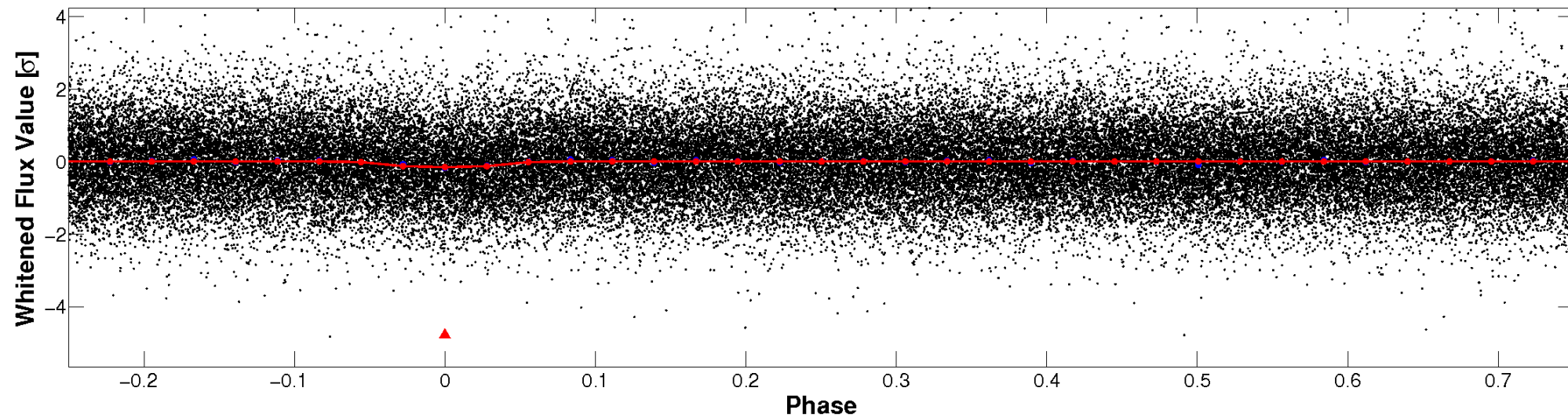


Non-Whitened Vs. Whitened Light Curve

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

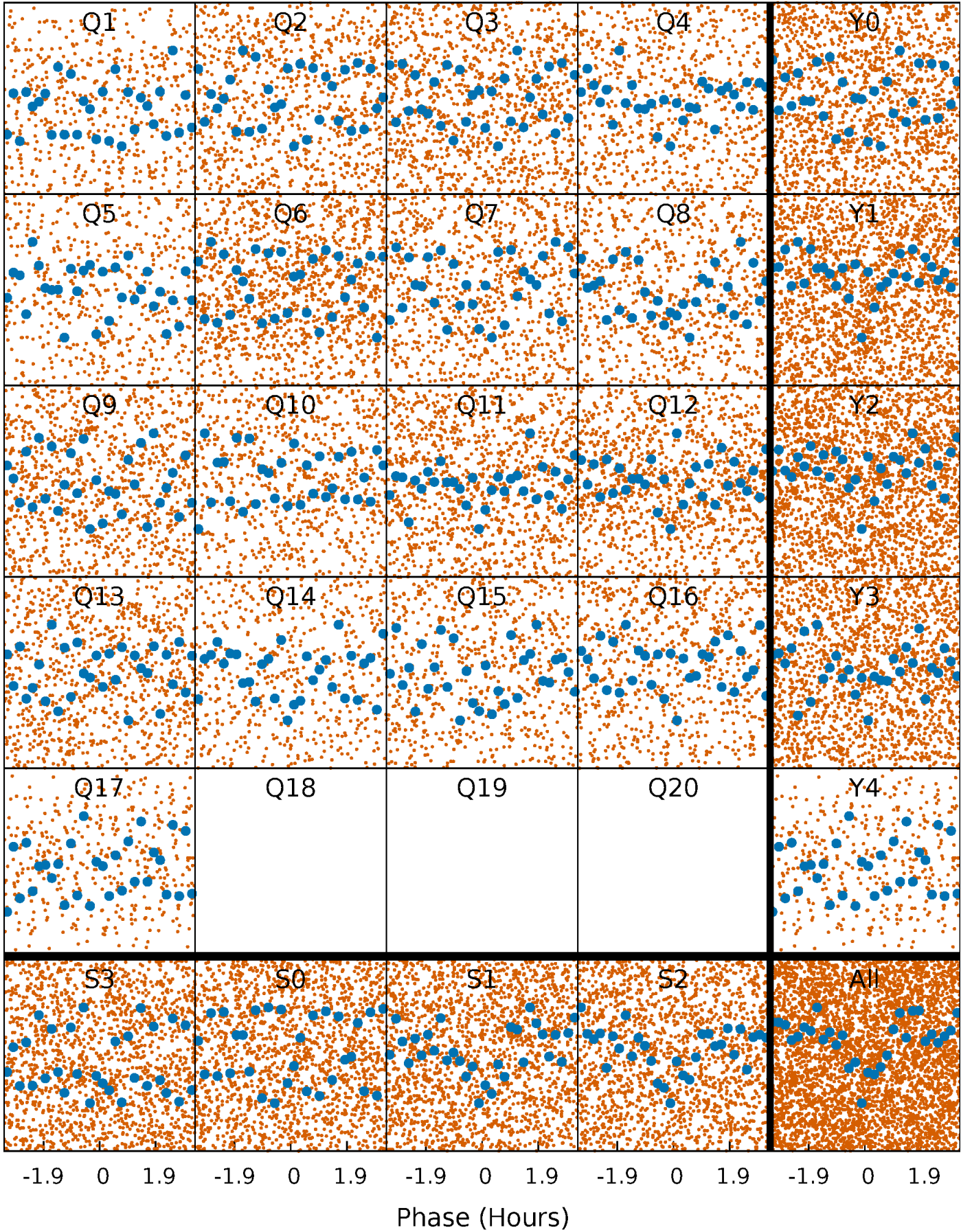


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



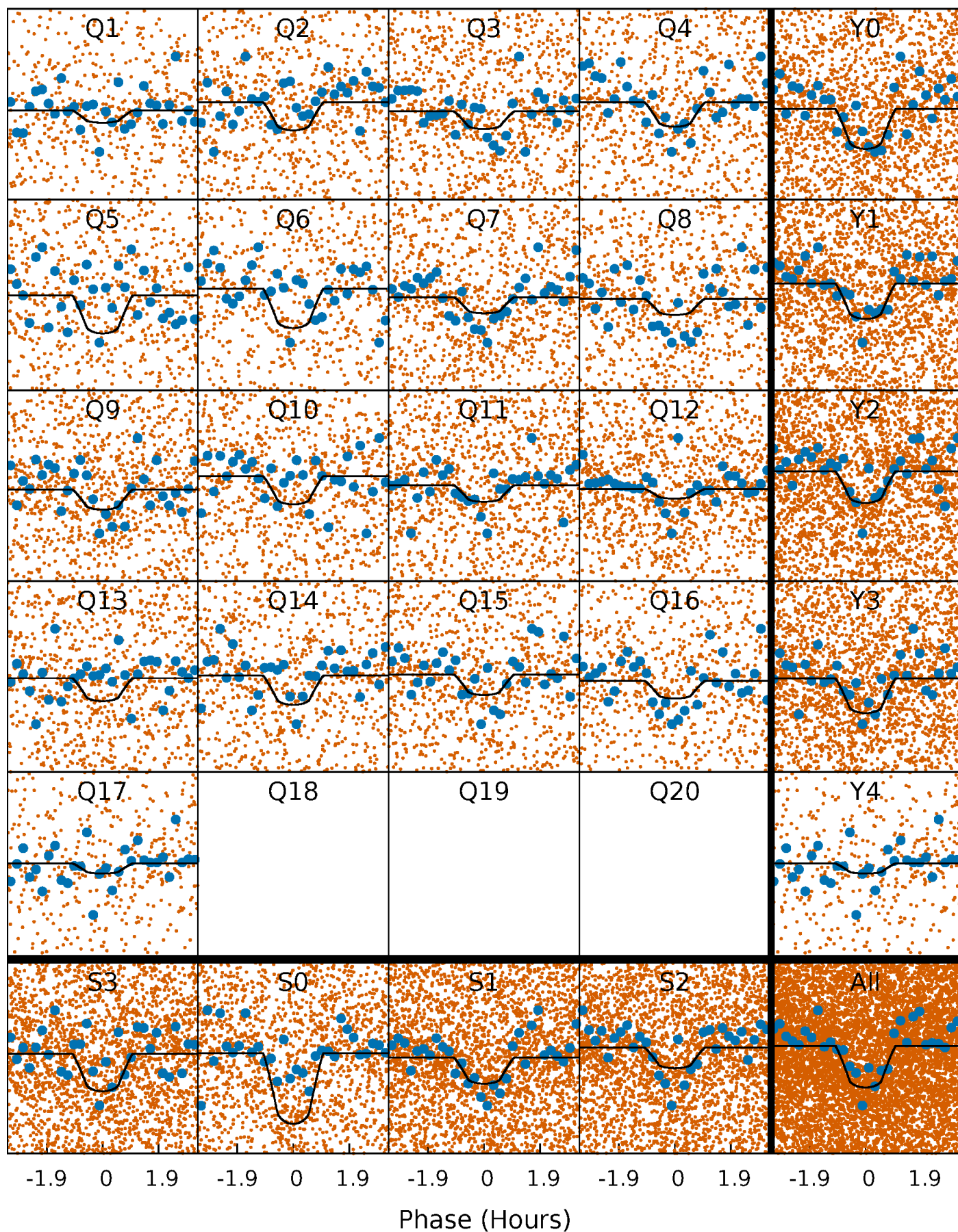
PDC Quarter-Phased Transit Curves

TCE 008984755-01 P= 0.734581 Days $T_0=131.586878$ (BKJD)



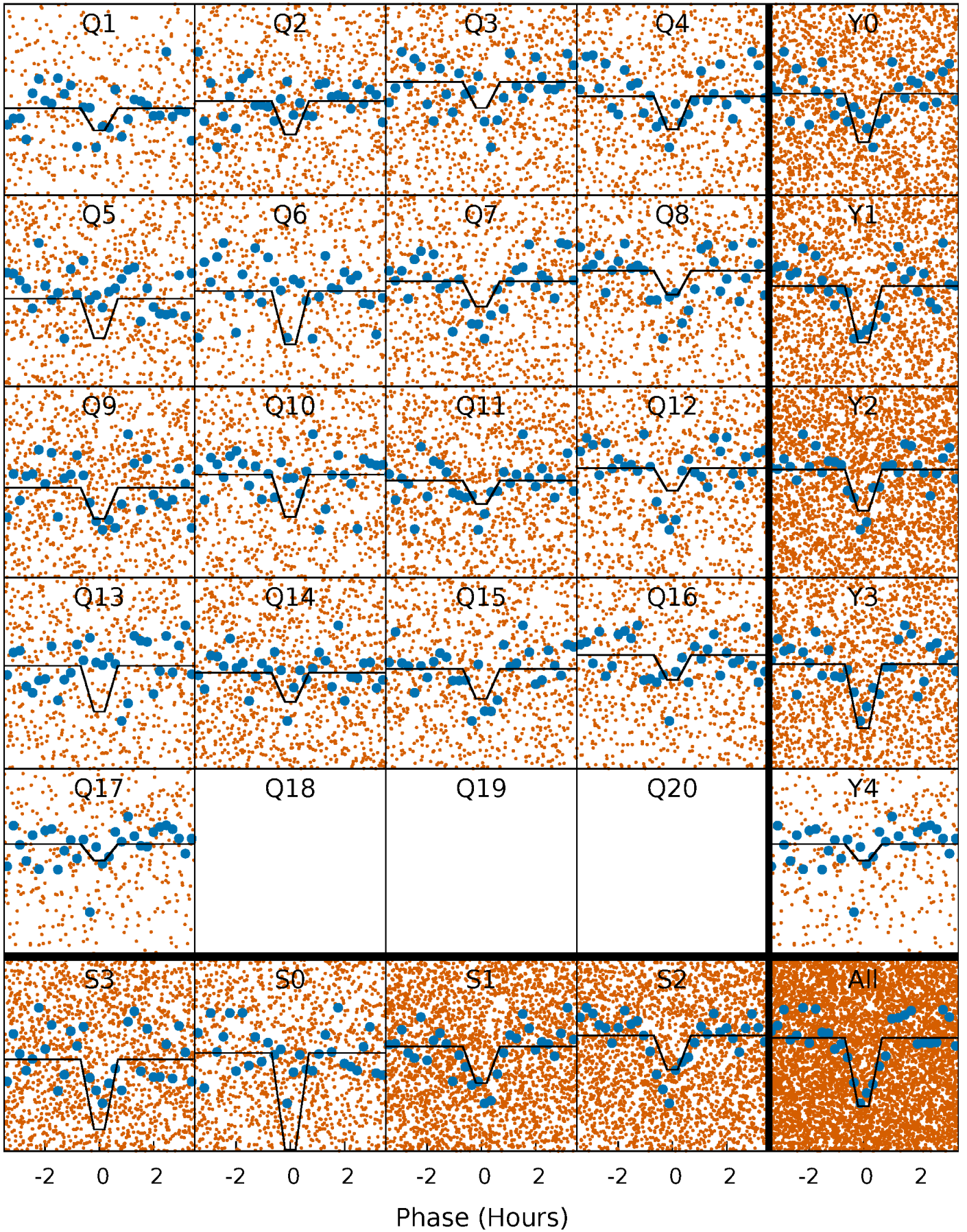
DV Quarter-Phased Transit Curves

TCE 008984755-01 P= 0.734581 Days $T_0=131.586878$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

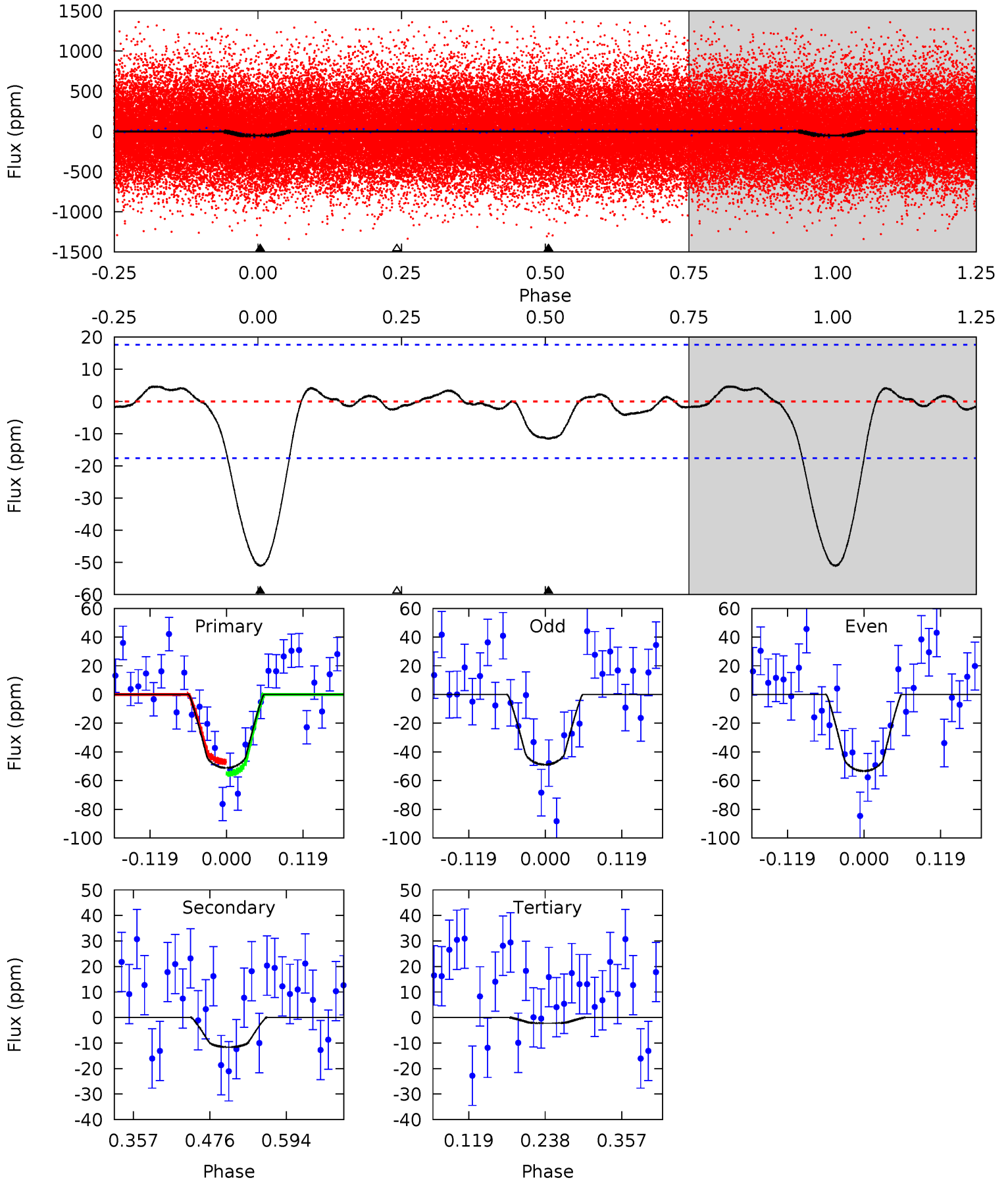
TCE 008984755-01 P= 0.734584 Days $T_0=131.586442$ (BKJD)



DV Model-Shift Uniqueness Test

008984755-01, P = 0.734581 Days, E = 130.852297 Days

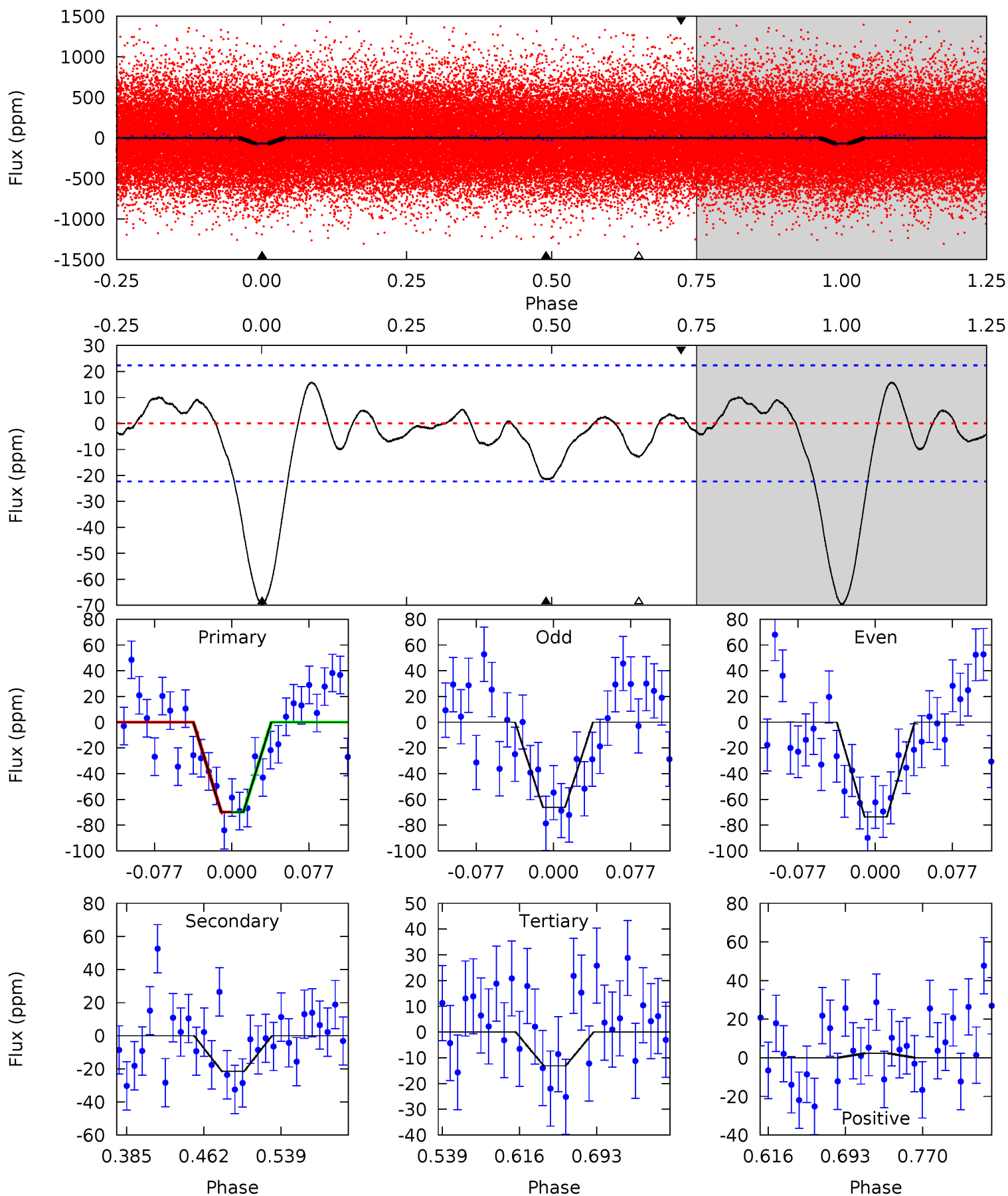
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	2.98	0.58	0	4.53	1.56	0.60	12.6	13.1	2.40	2.98	0.57	0.83	0.08	1.08



Alt Model-Shift Uniqueness Test

008984755-01, P = 0.734584 Days, E = 130.851858 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	4.46	2.70	0.49	4.62	1.77	1.25	11.7	13.9	1.75	3.96	0.78	1.12	0.19	0.02



Stellar Parameters For KIC 008984755

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5602^{+169}_{-152}	$4.325^{+0.200}_{-0.200}$	$-0.140^{+0.300}_{-0.250}$	$1.051^{+0.321}_{-0.214}$	$0.851^{+0.125}_{-0.073}$	$1.034^{+1.031}_{-0.511}$
	+3%/-3%	+5%/-5%	+214%/-179%	+31%/-20%	+15%/-9%	+100%/-49%
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 008984755-01 / KOI 4664.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12 ± 4	$0.99^{+0.75}_{-0.56}$	2870^{+243}_{-187}	3660^{+1544}_{-923}	$1.396^{+5.833}_{-0.951}$
Alt.	-22 ± 5	$1.03^{+0.75}_{-0.62}$	2879^{+235}_{-180}	4117^{+2123}_{-815}	$2.401^{+12.706}_{-1.606}$

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 $A_{obs} \gg 1.0$

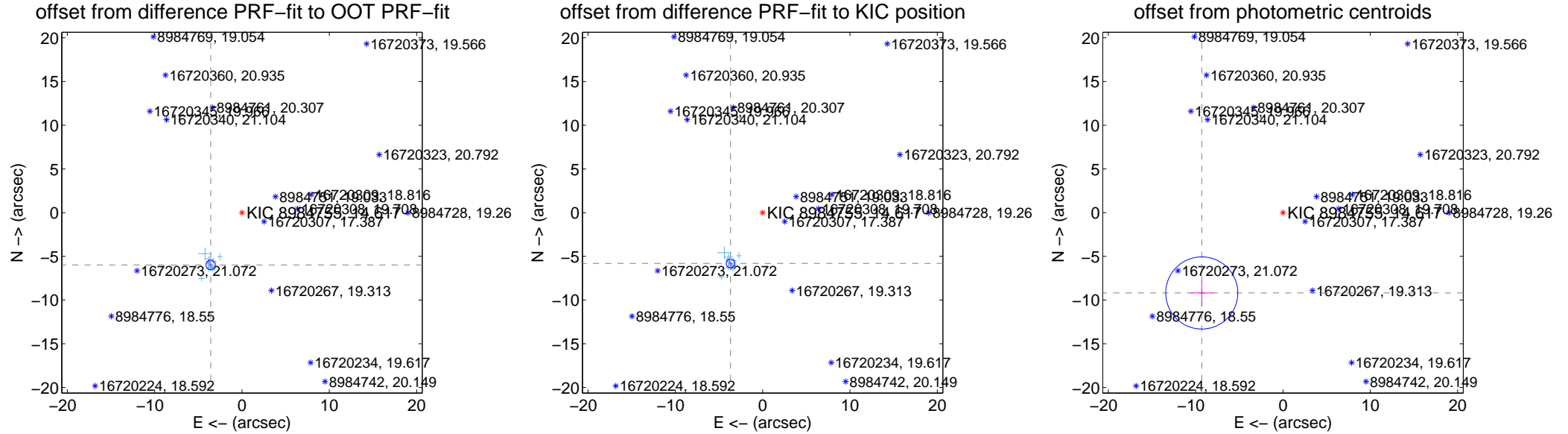
DV Centroid Data

Supplemental centroid analysis for 008984755-01. Kepler magnitude: 14.62. Transit SNR 9.65

There are 16 quarters with good PRF difference image offsets

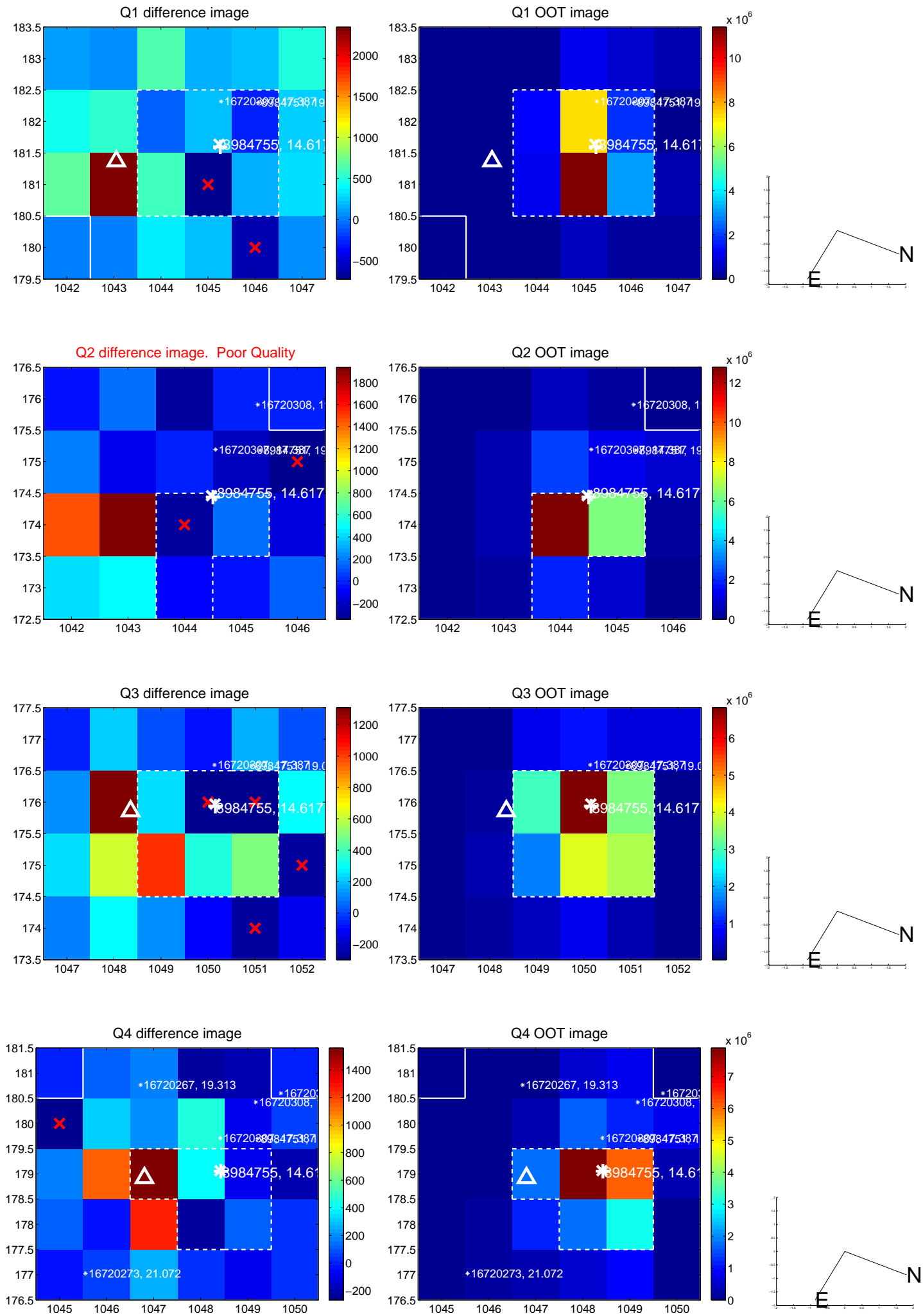
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.975 \pm 0.181	38.62	3.582 ± 0.127	-5.985 ± 0.182
PRF-fit source offset from KIC position	6.876 \pm 0.168	40.84	3.675 ± 0.129	-5.811 ± 0.176
photometric centroid source offset	13.08 \pm 1.38	9.50	9.30 ± 1.28	-9.19 ± 1.47

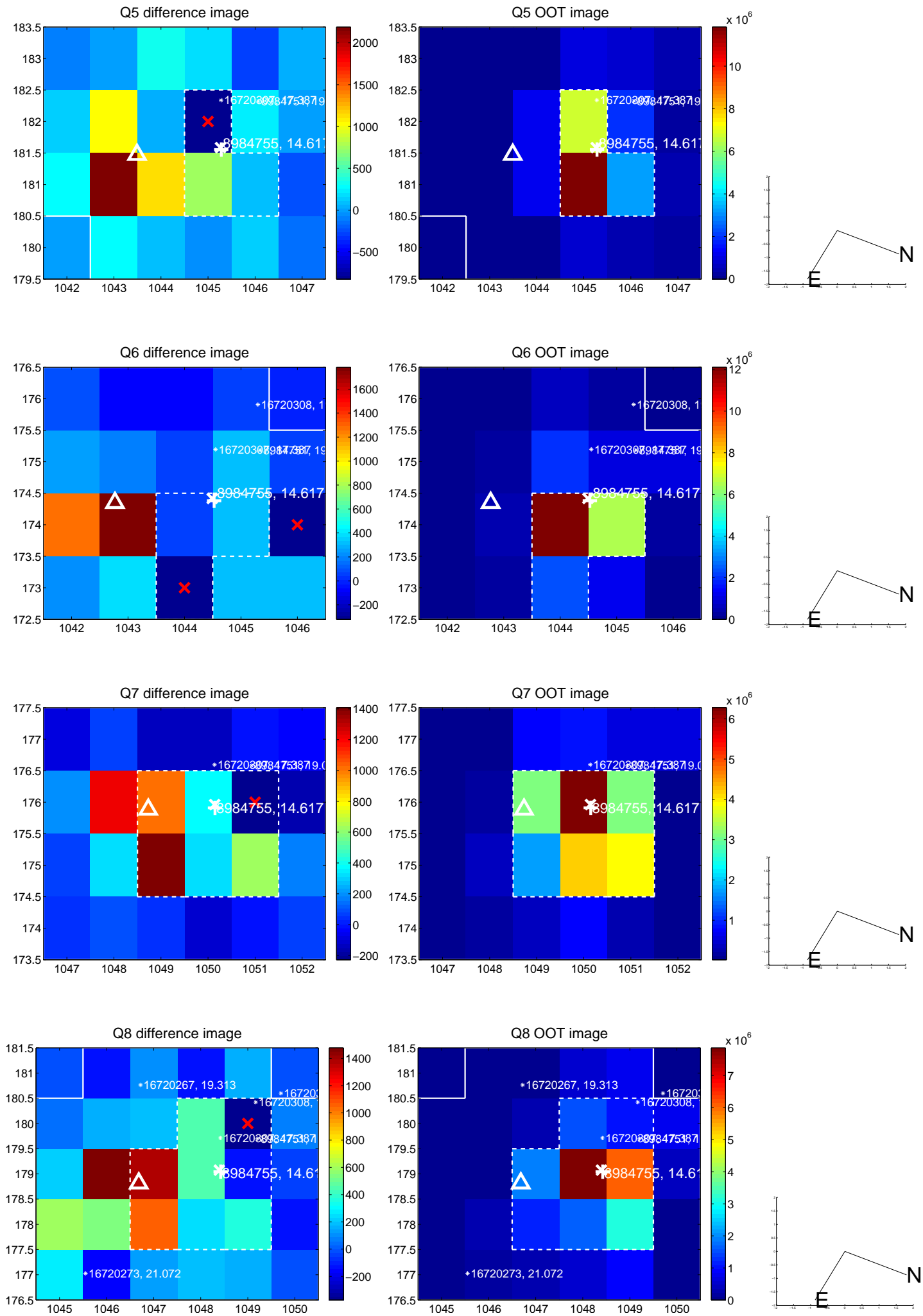


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

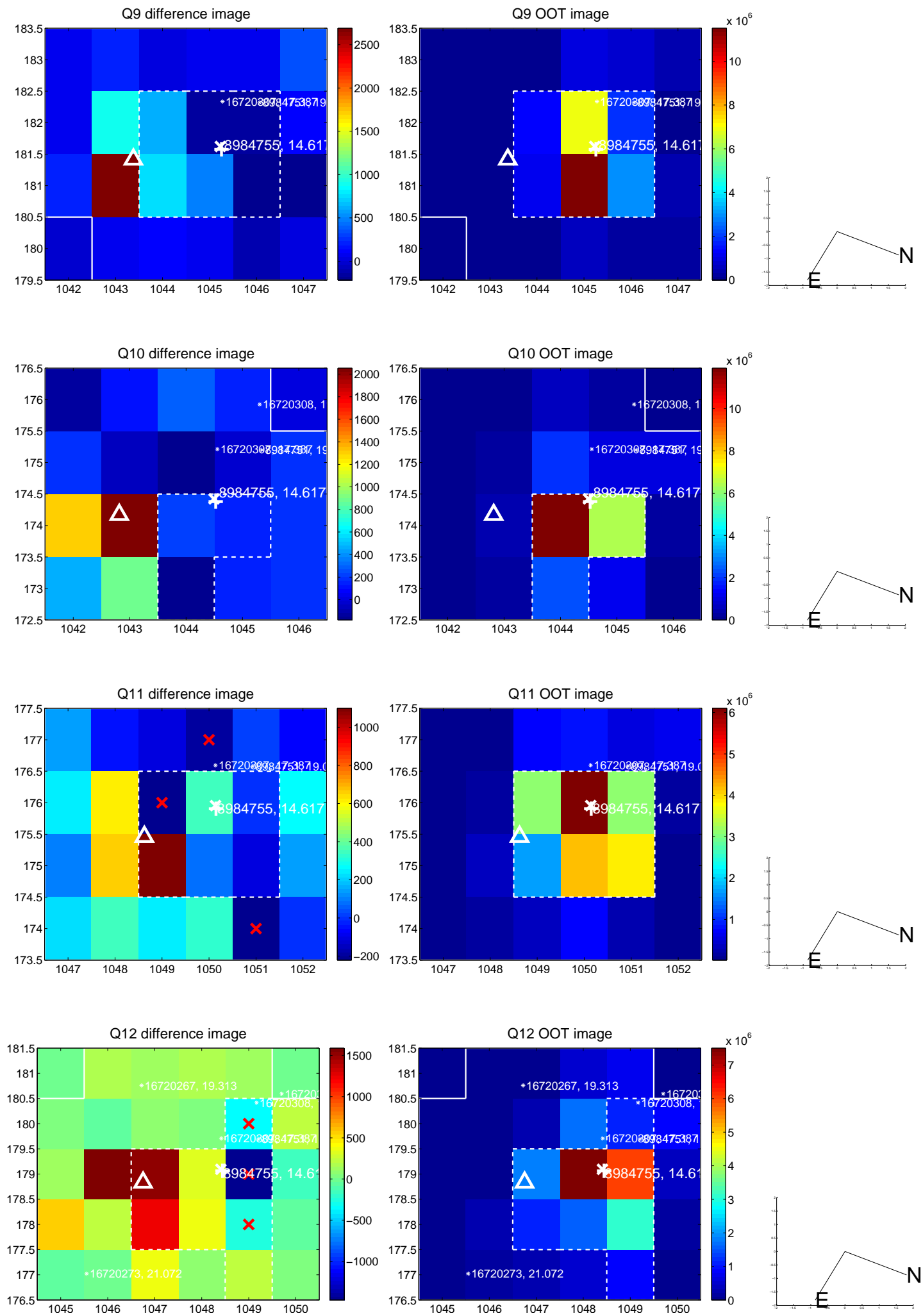
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



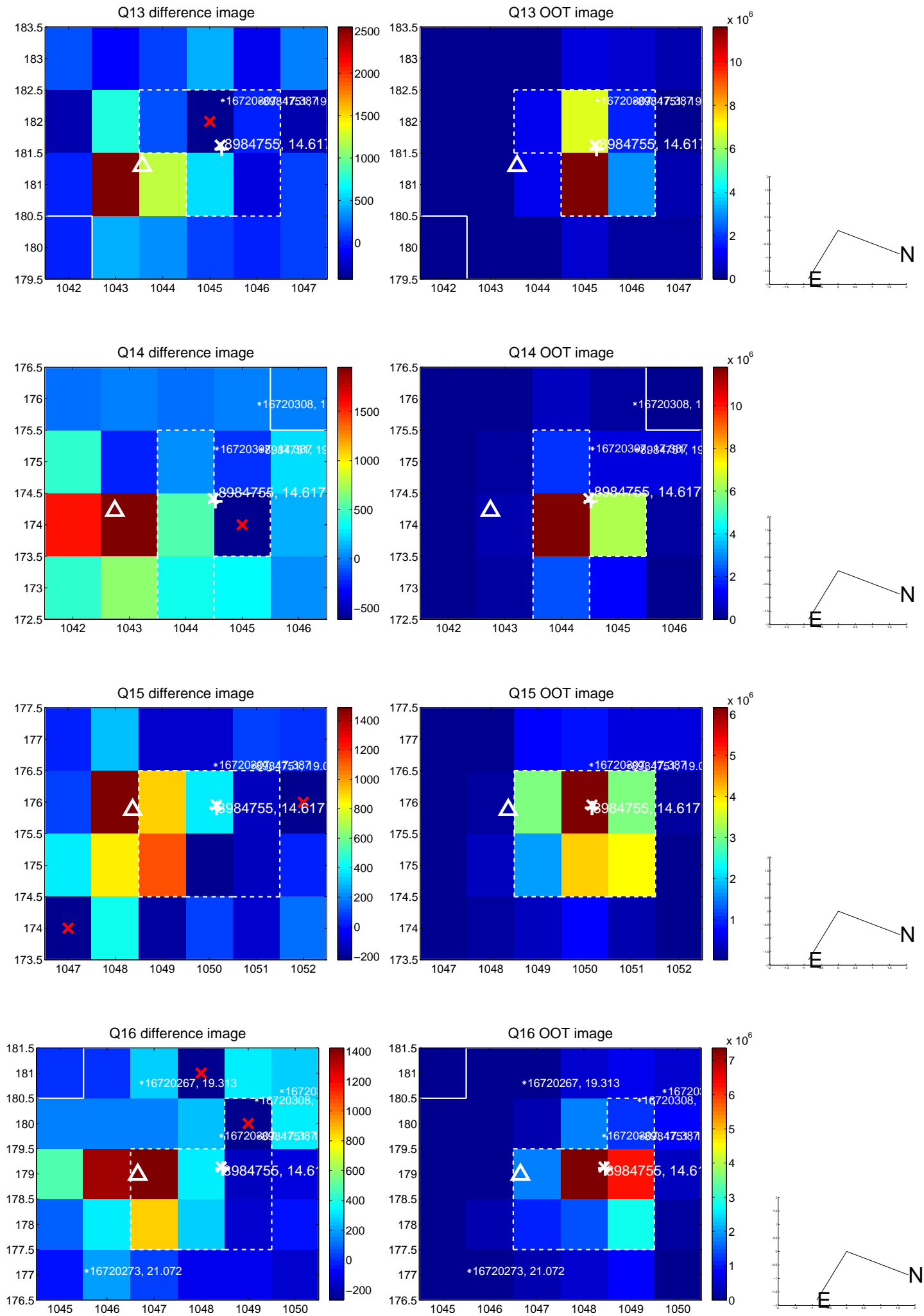
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



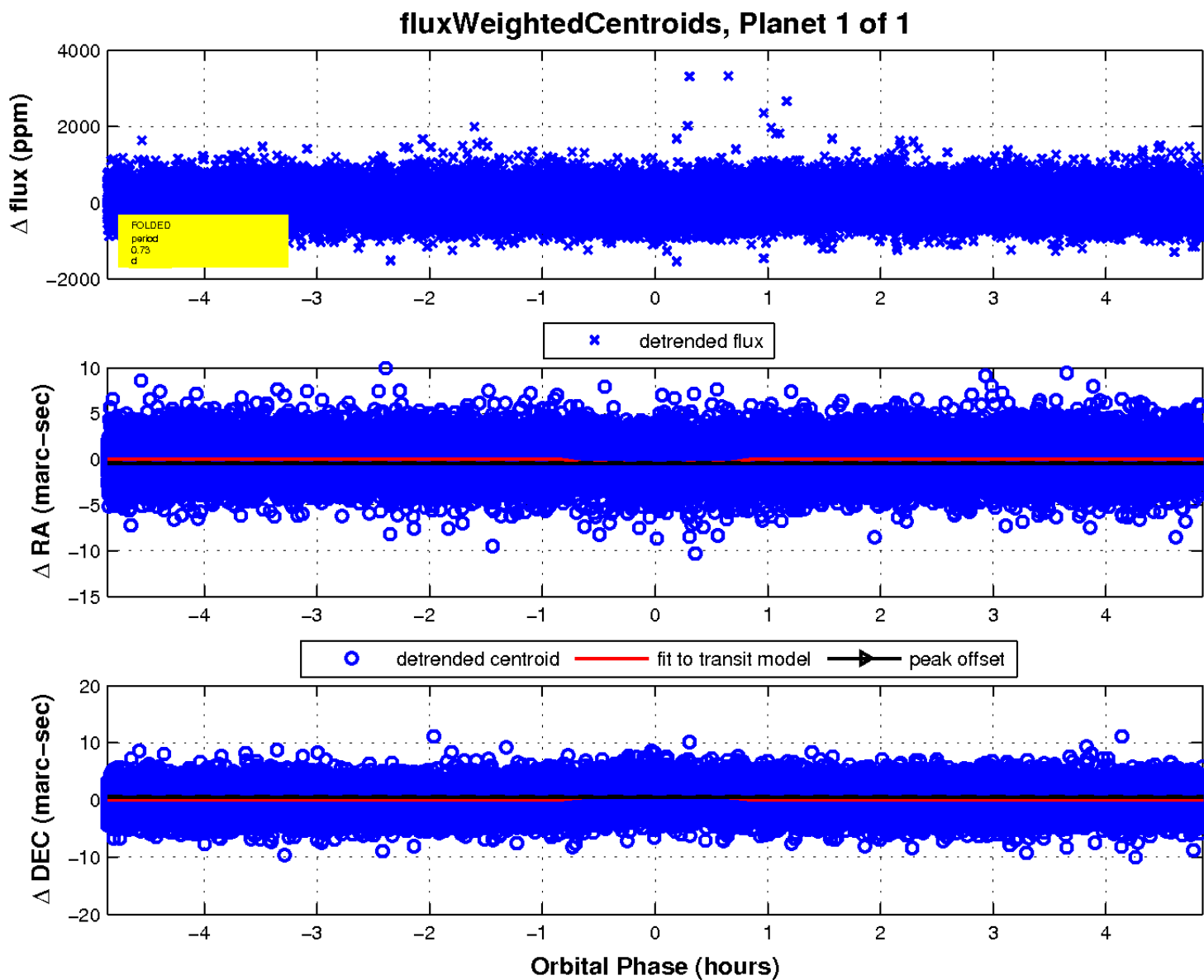
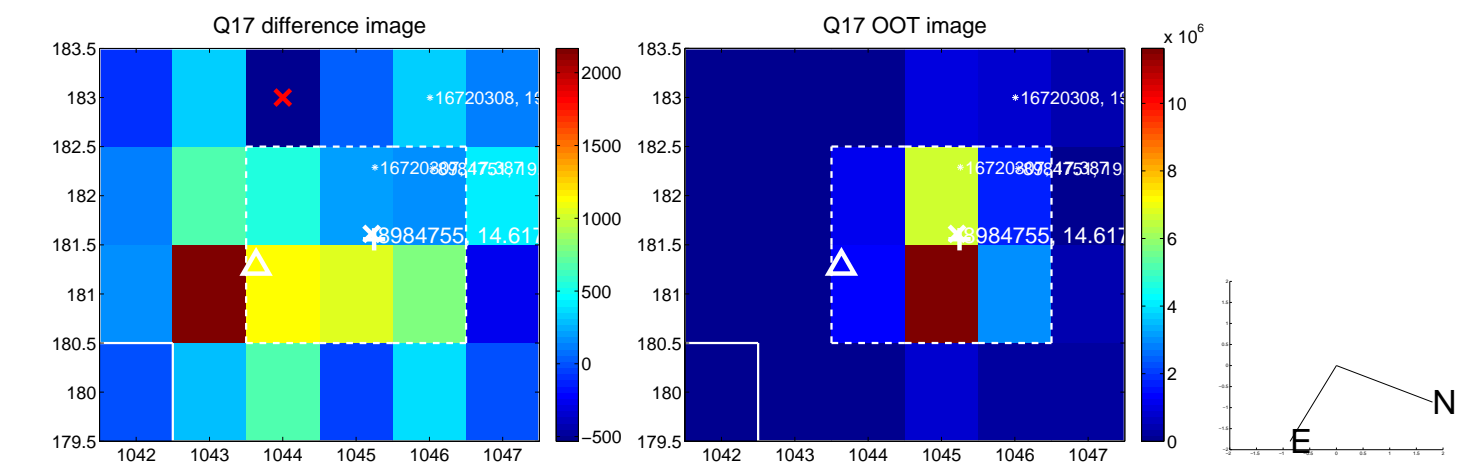
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

