

KIC 008142942

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})
008142942-01	OBS	1985.01	5.756234	133.904831	594.2	1.135	42.0	51.6	0.73	4931	2.20	84.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008142942-01	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.

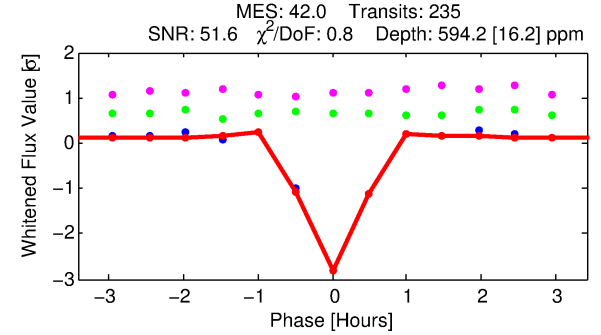
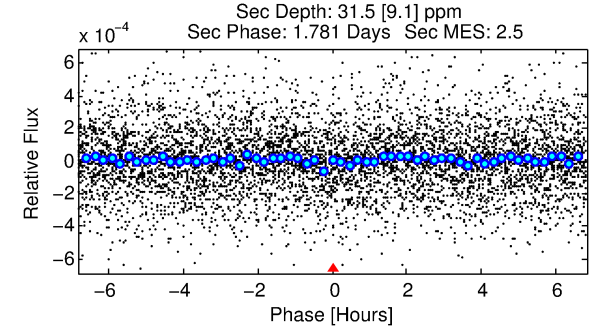
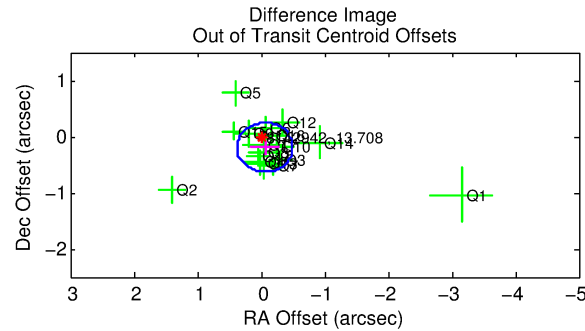
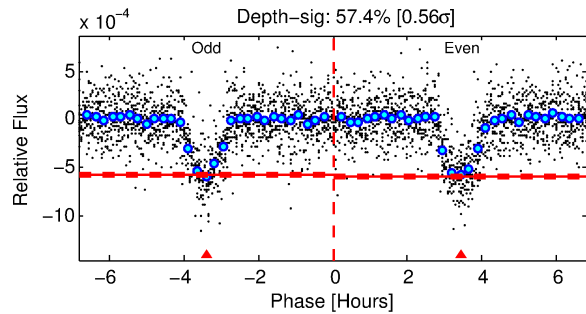
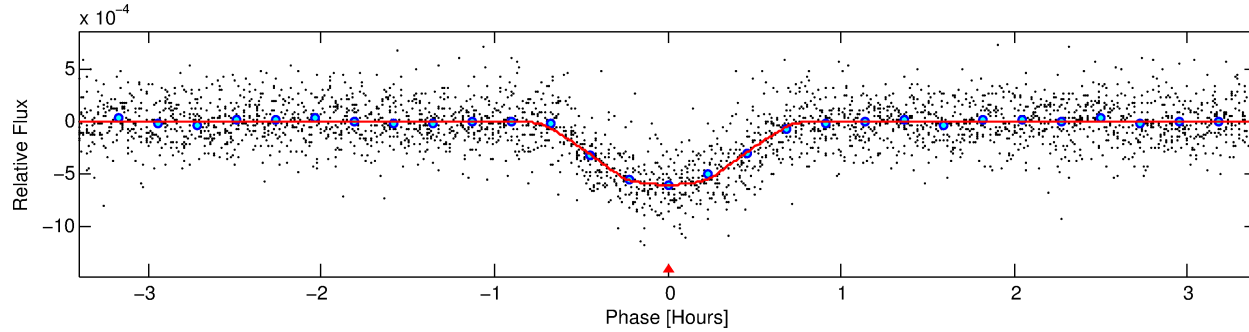
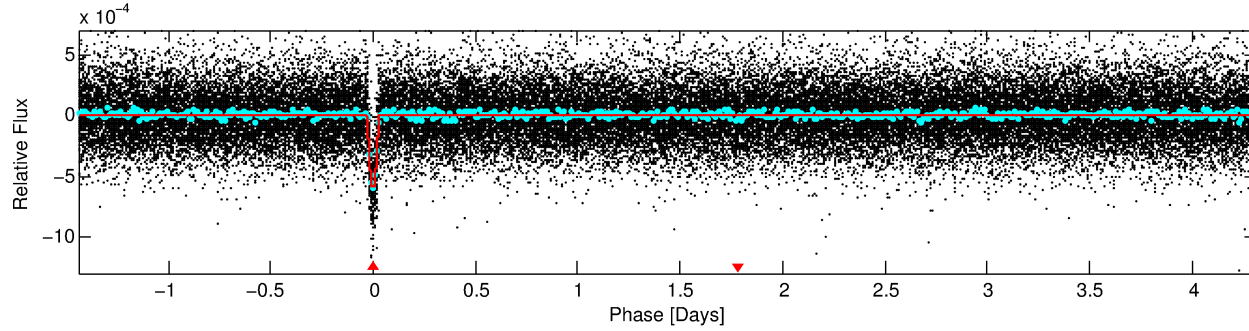
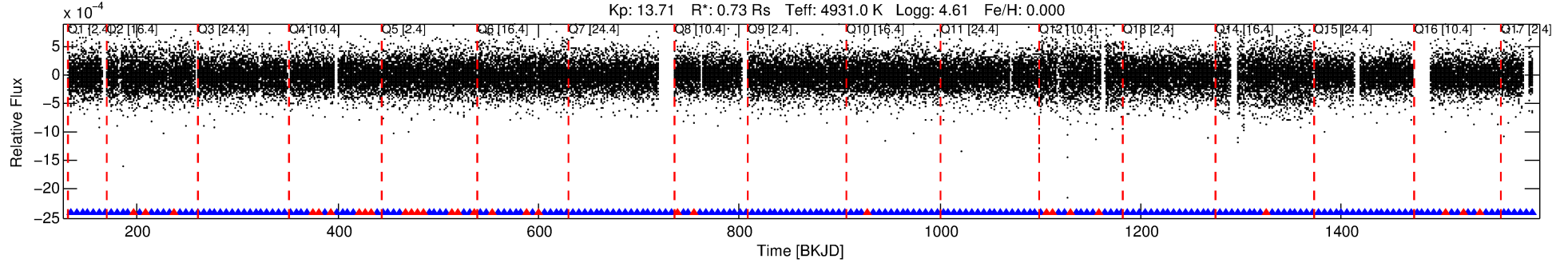
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008142942-01

No Significant Match Found

DV One-Page Summary

KIC: 8142942 Candidate: 1 of 1 Period: 5.756 d
KOI: K01985.01 Corr: 0.986



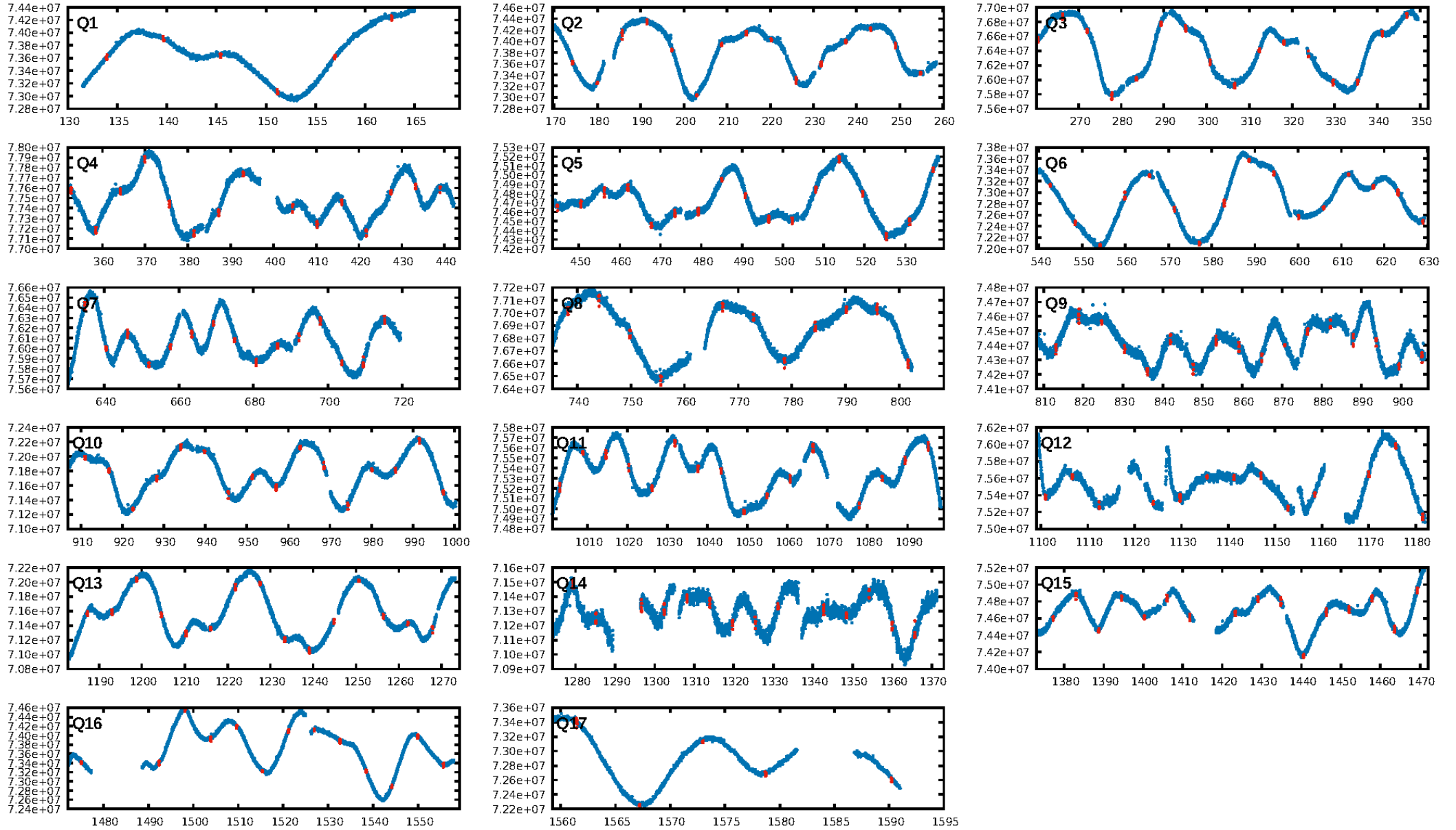
DV Fit Results:

Period = 5.75623 [0.00000] d
Epoch = 133.9048 [0.0005] BKJD
Rp/R* = 0.0275 [0.0042]
a/R* = 19.31 [11.02]
b = 0.90 [0.13]
Seff = 84.38 [9.94]
Teq = 773 [23] K
Rp = 2.20 [0.37] Re
a = 0.0582 [0.0033] AU
Ag = 12.05 [5.17] [2.14 σ]
Teffp = 2226 [238] K [6.08 σ]

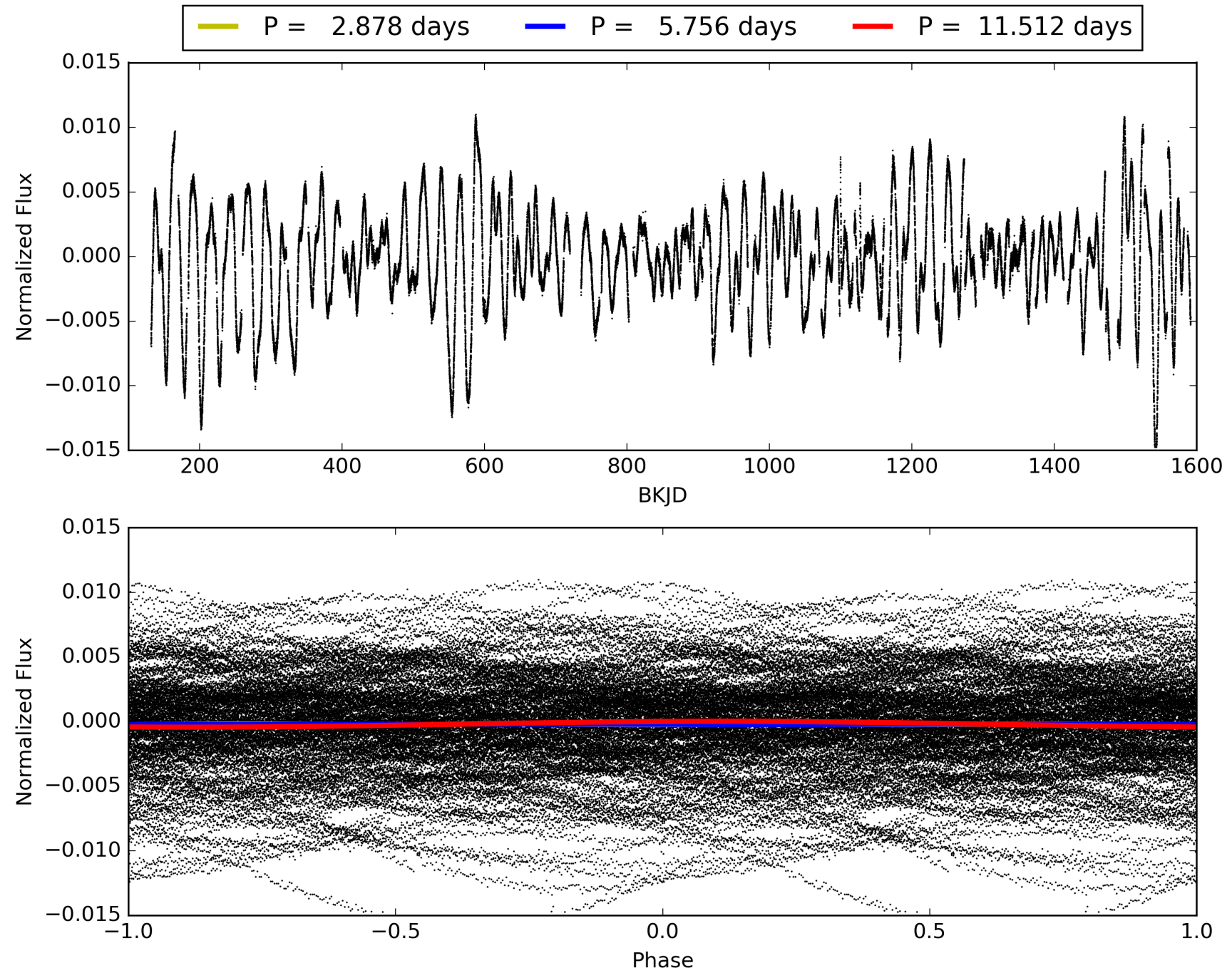
DV Diagnostic Results:

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 [194/224]
GhostDiagnostic-chr: 3.529
Centroid-sig: 7.9%
Centroid-so: 0.318 arcsec [1.32 σ]
OotOffset-rm: 0.202 arcsec [1.38 σ]
KicOffset-rm: 0.450 arcsec [3.91 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008142942-01, PDC Light Curves

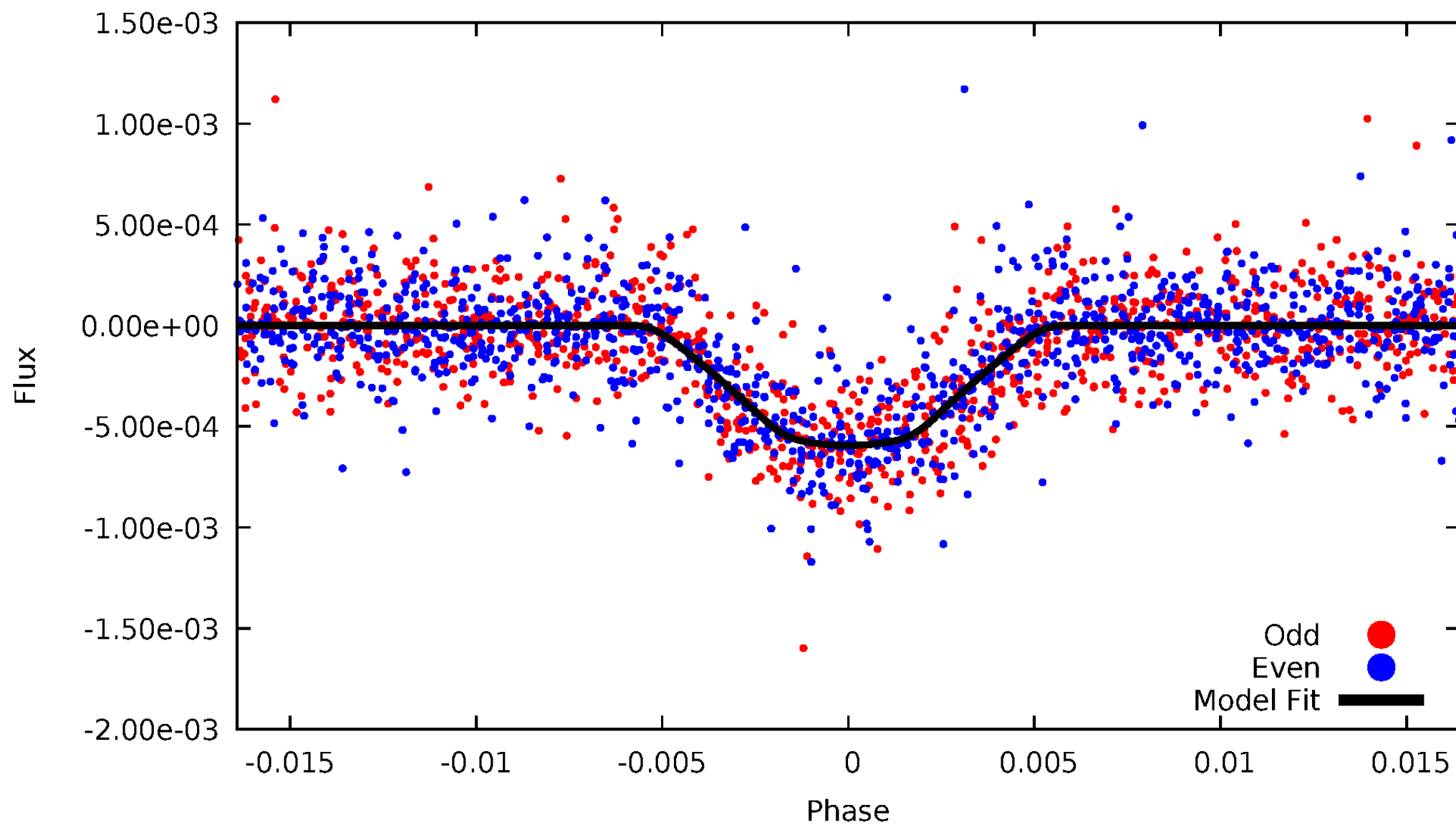


TCE 008142942-01



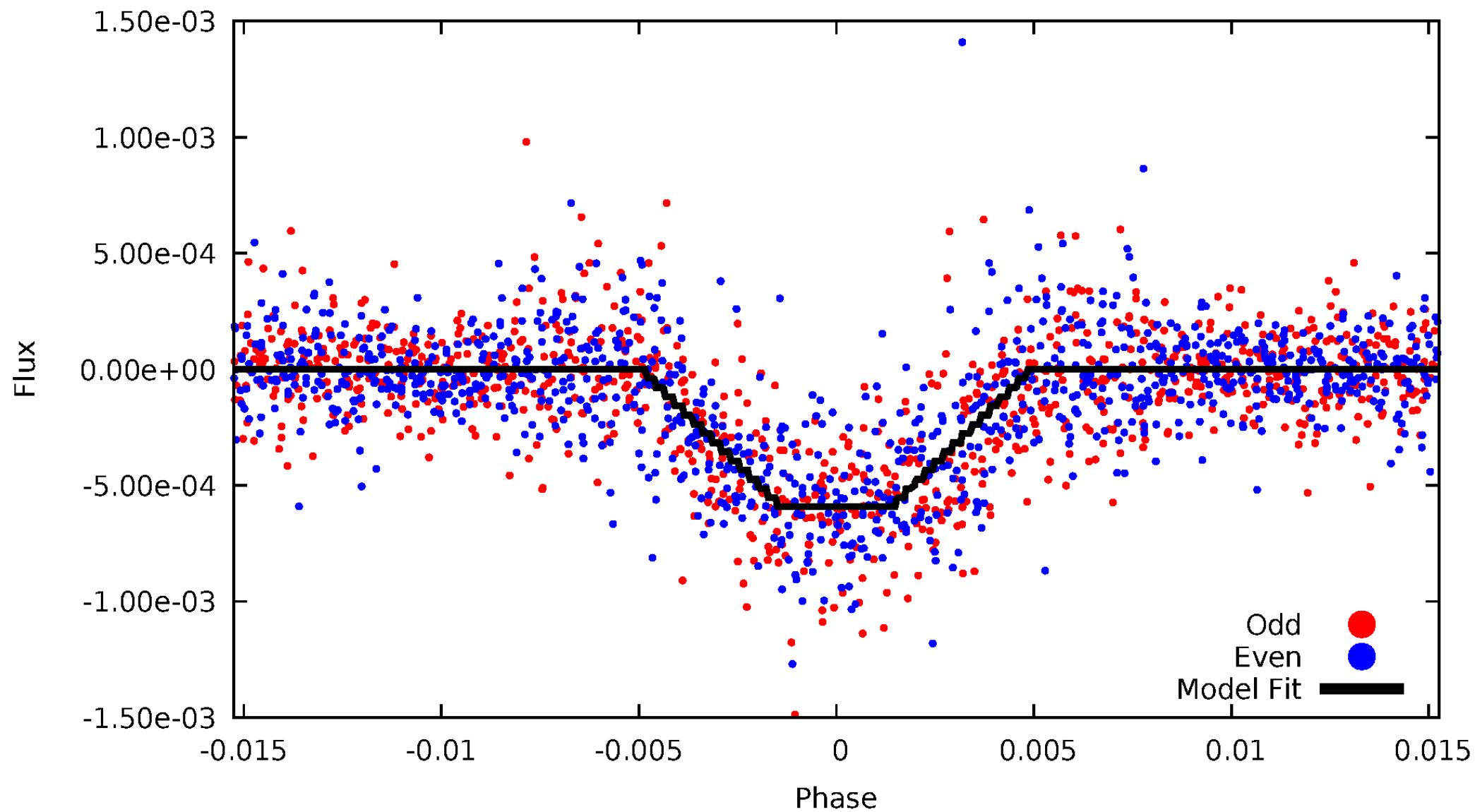
DV Odd/Even

TCE 008142942-01

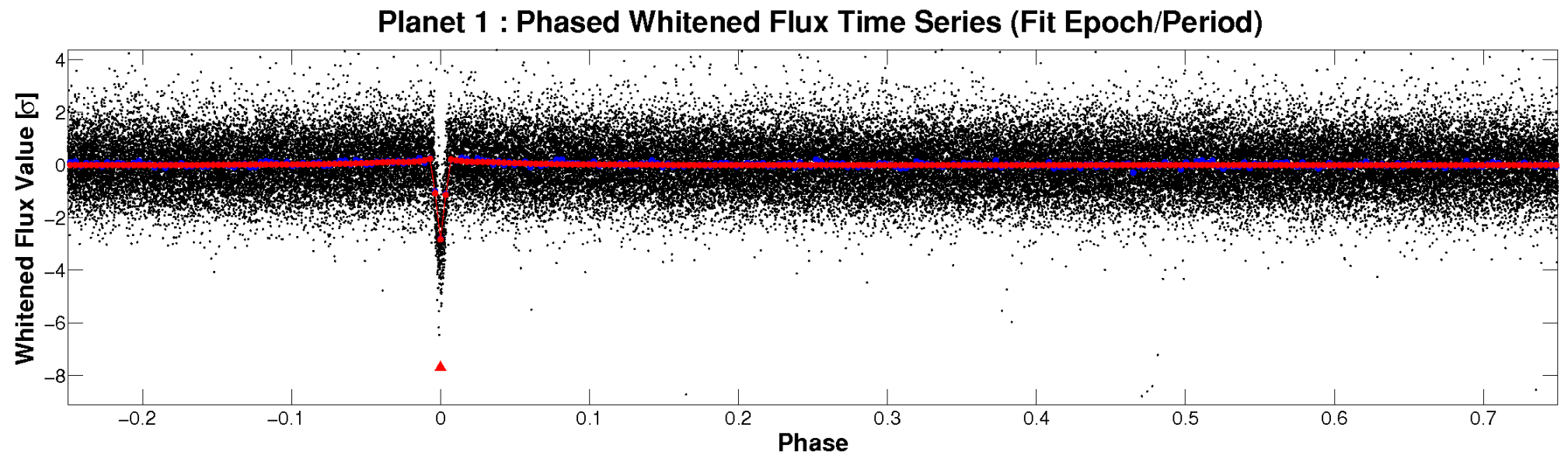
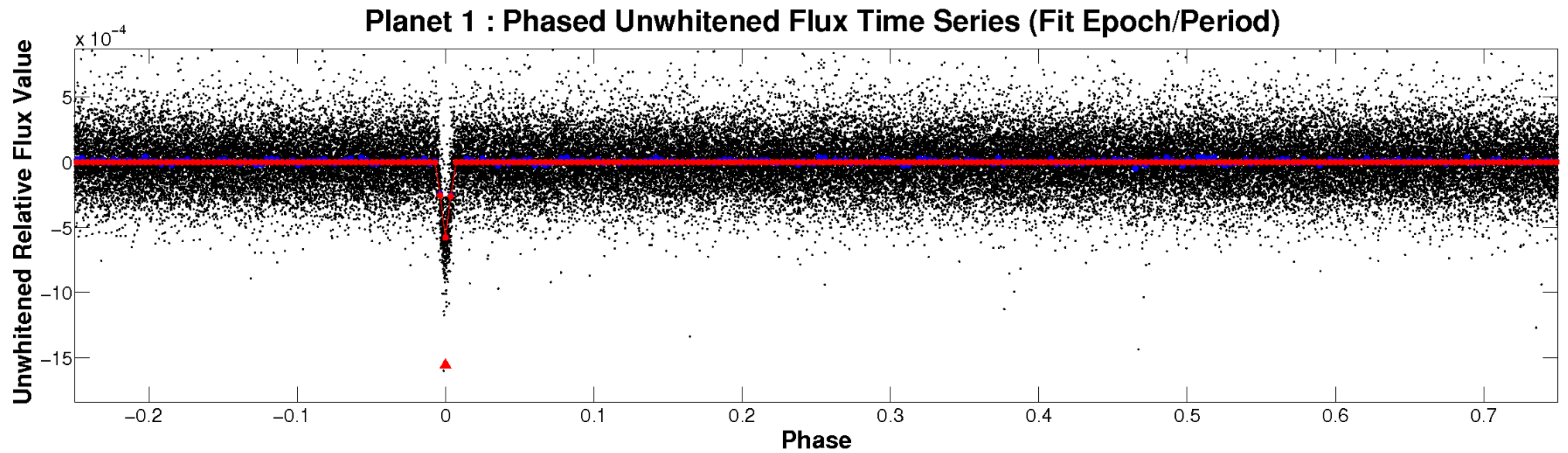


ALT Odd/Even

TCE 008142942-01

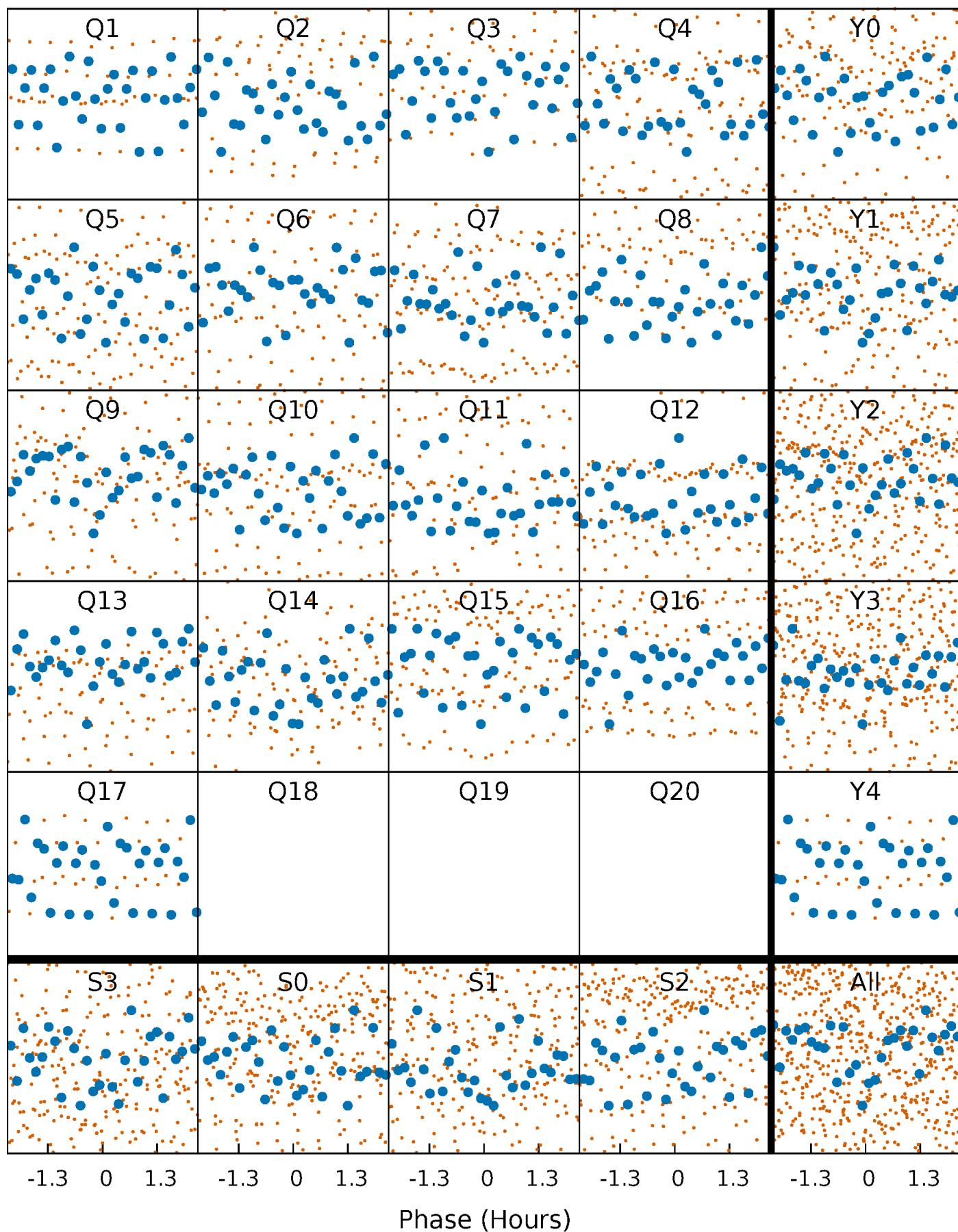


Non-Whitened Vs. Whitened Light Curve



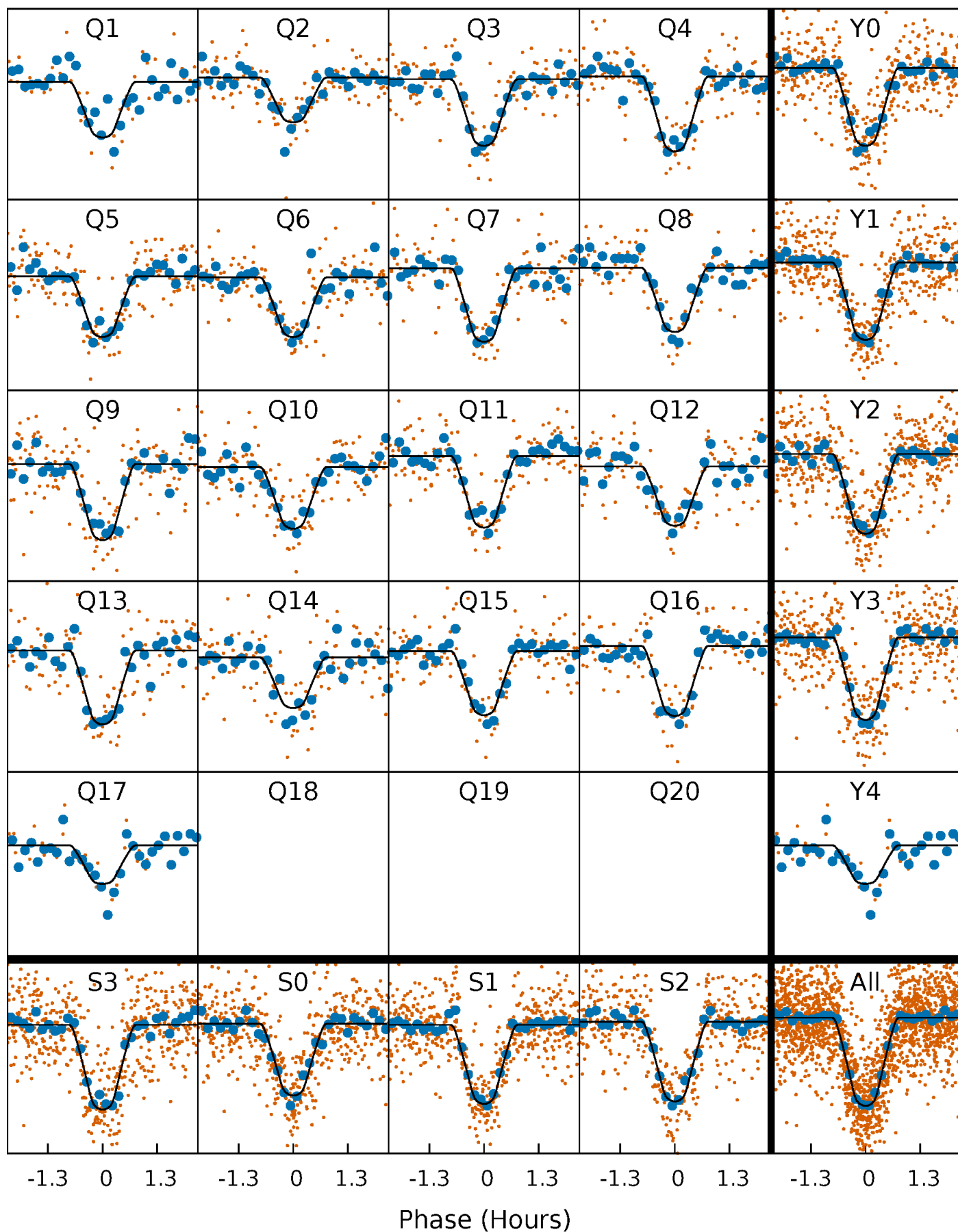
PDC Quarter-Phased Transit Curves

TCE 008142942-01 P= 5.756234 Days $T_0=133.904831$ (BKJD)



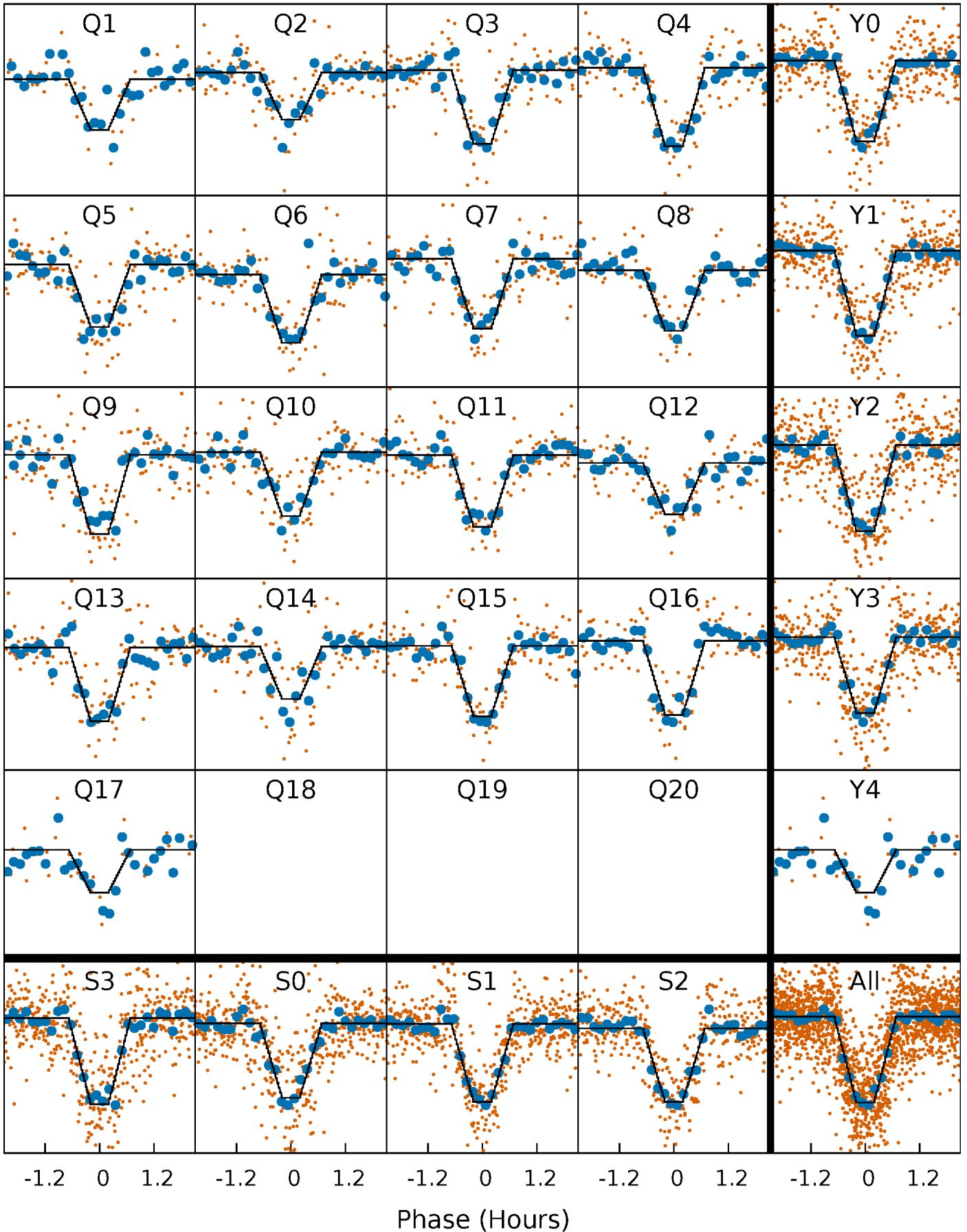
DV Quarter-Phased Transit Curves

TCE 008142942-01 P= 5.756234 Days $T_0=133.904831$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

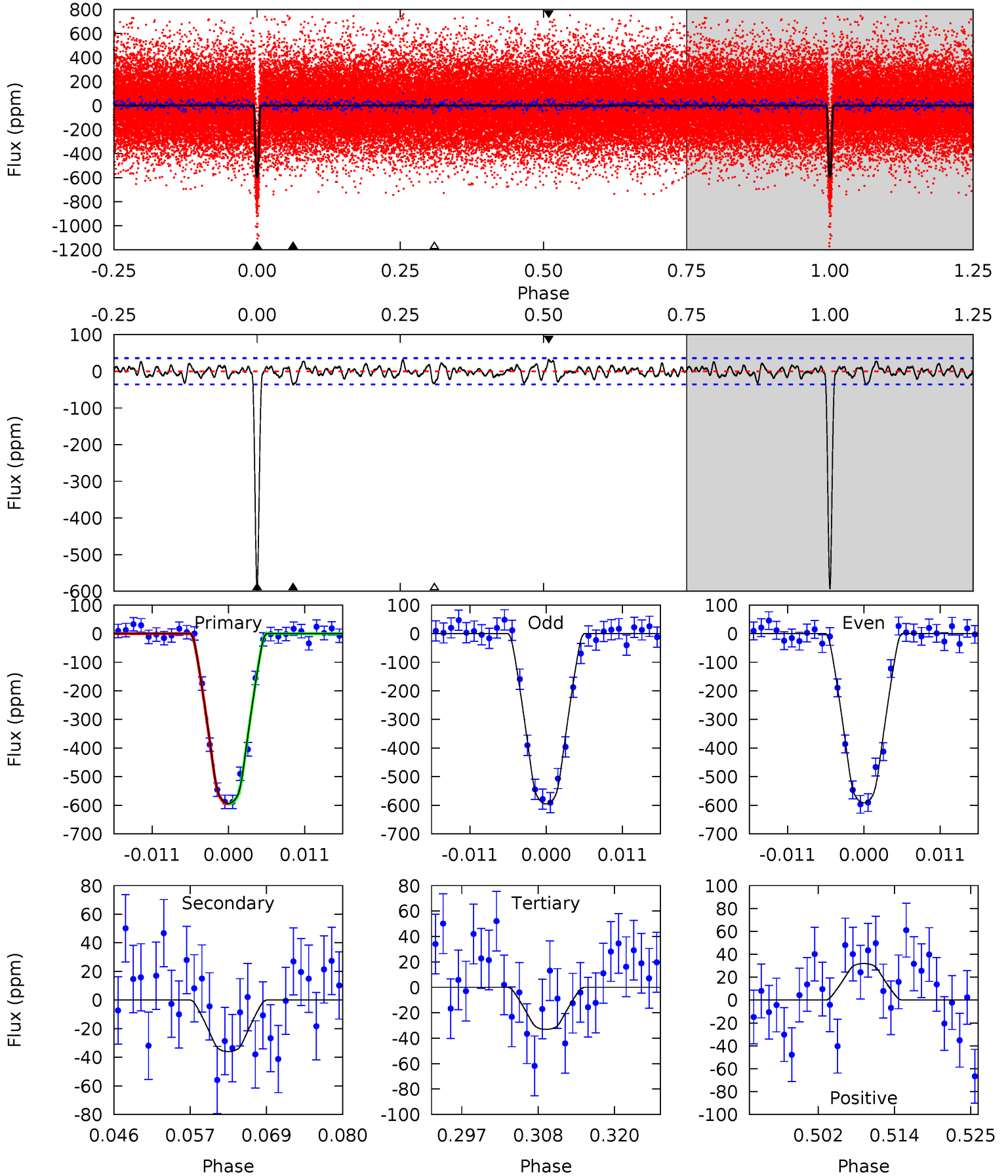
TCE 008142942-01 P= 5.756242 Days $T_0=133.903843$ (BKJD)



DV Model-Shift Uniqueness Test

008142942-01, P = 5.756234 Days, E = 128.148597 Days

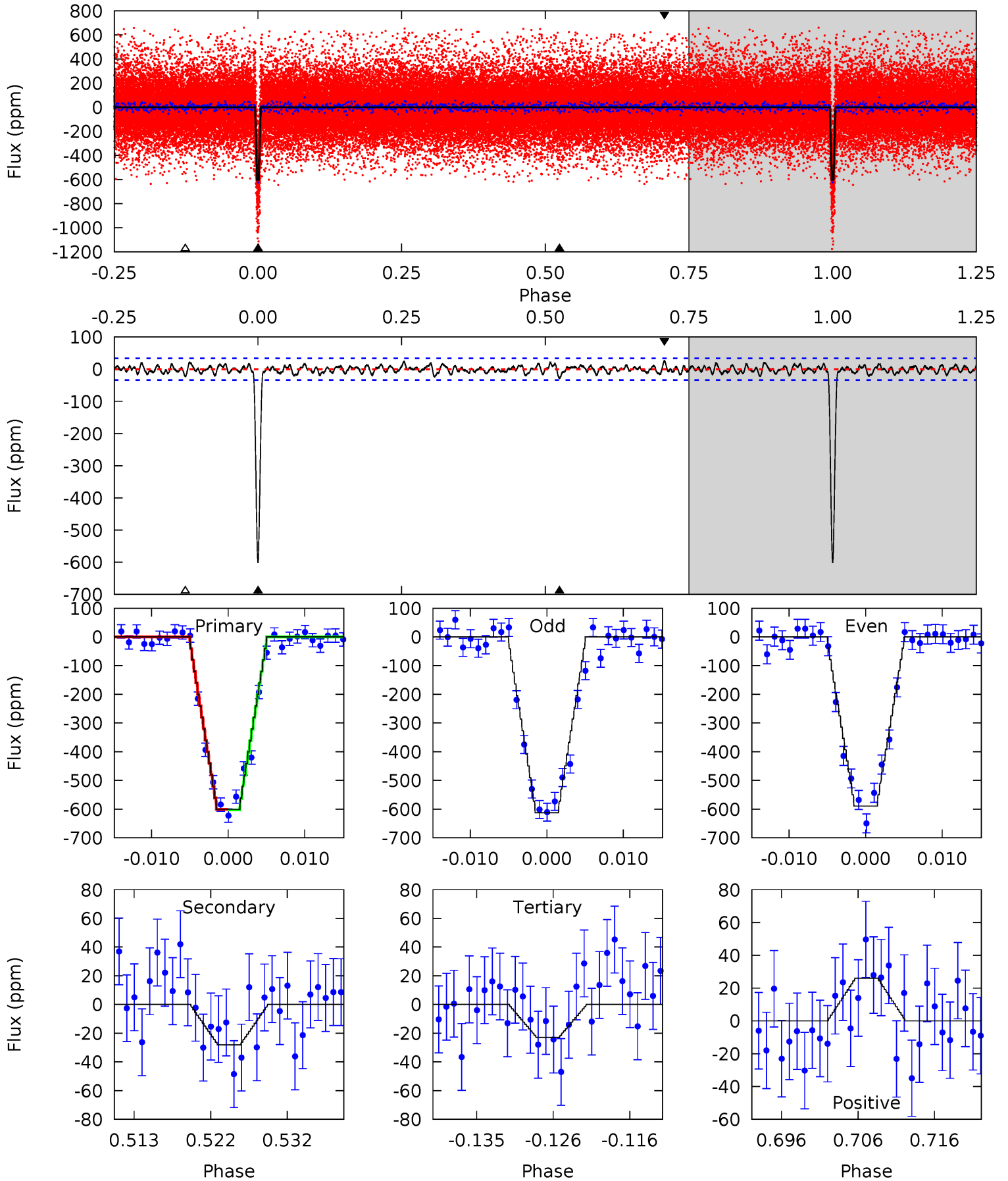
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.8	5.03	4.62	4.46	5.00	2.53	1.56	78.2	78.4	0.41	0.57	0.29	0.99	0.05	0.02



Alt Model-Shift Uniqueness Test

008142942-01, P = 5.756242 Days, E = 128.147601 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
89.6	4.20	3.43	3.89	5.03	2.59	1.29	86.2	85.7	0.76	0.31	1.77	0.97	0.04	0.18



Stellar Parameters For KIC 008142942

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4931^{+98}_{-98}	$4.605^{+0.018}_{-0.049}$	$0.000^{+0.150}_{-0.150}$	$0.734^{+0.048}_{-0.030}$	$0.794^{+0.035}_{-0.050}$	$2.829^{+0.246}_{-0.468}$
	+2%/-2%	+0%/-1%	+inf%/-inf%	+7%/-4%	+4%/-6%	+9%/-17%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 008142942-01 / KOI 1985.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 7	$2.22^{+0.37}_{-0.35}$	1087^{+27}_{-25}	2946^{+163}_{-155}	13^{+7}_{-4}
Alt.	-28 ± 7	$1.98^{+0.33}_{-0.35}$	1088^{+26}_{-24}	2941^{+180}_{-173}	13^{+7}_{-5}

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

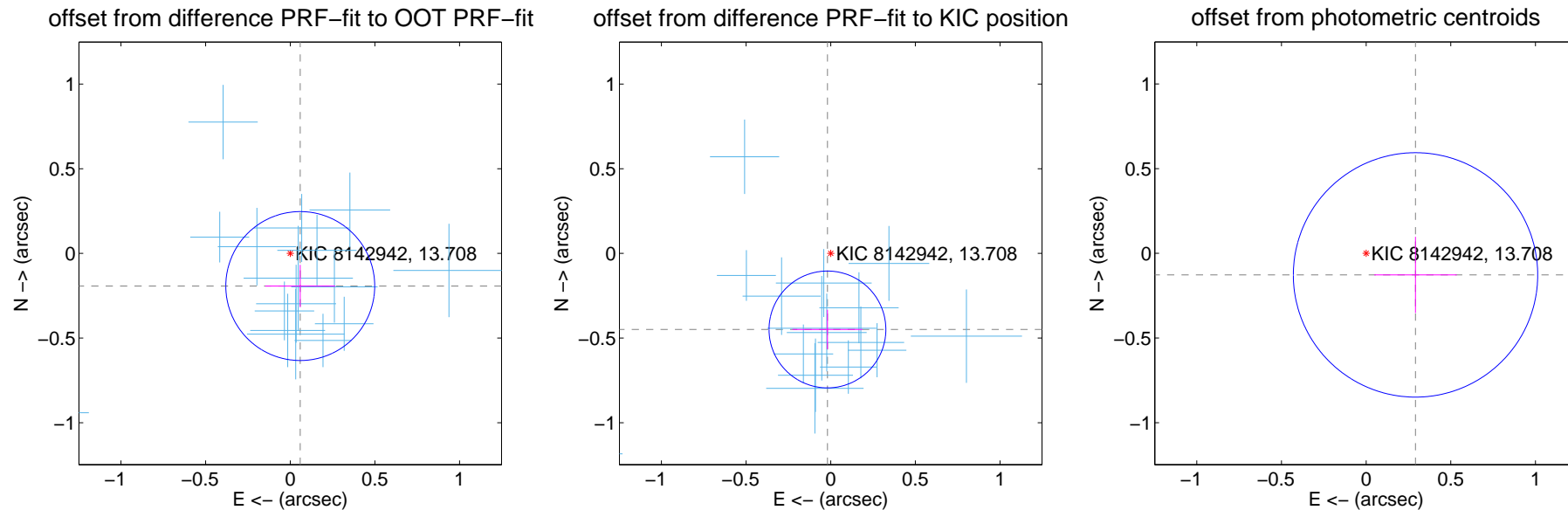
DV Centroid Data

Supplemental centroid analysis for 008142942-01. Kepler magnitude: 13.71. Transit SNR 51.64

There are 16 quarters with good PRF difference image offsets

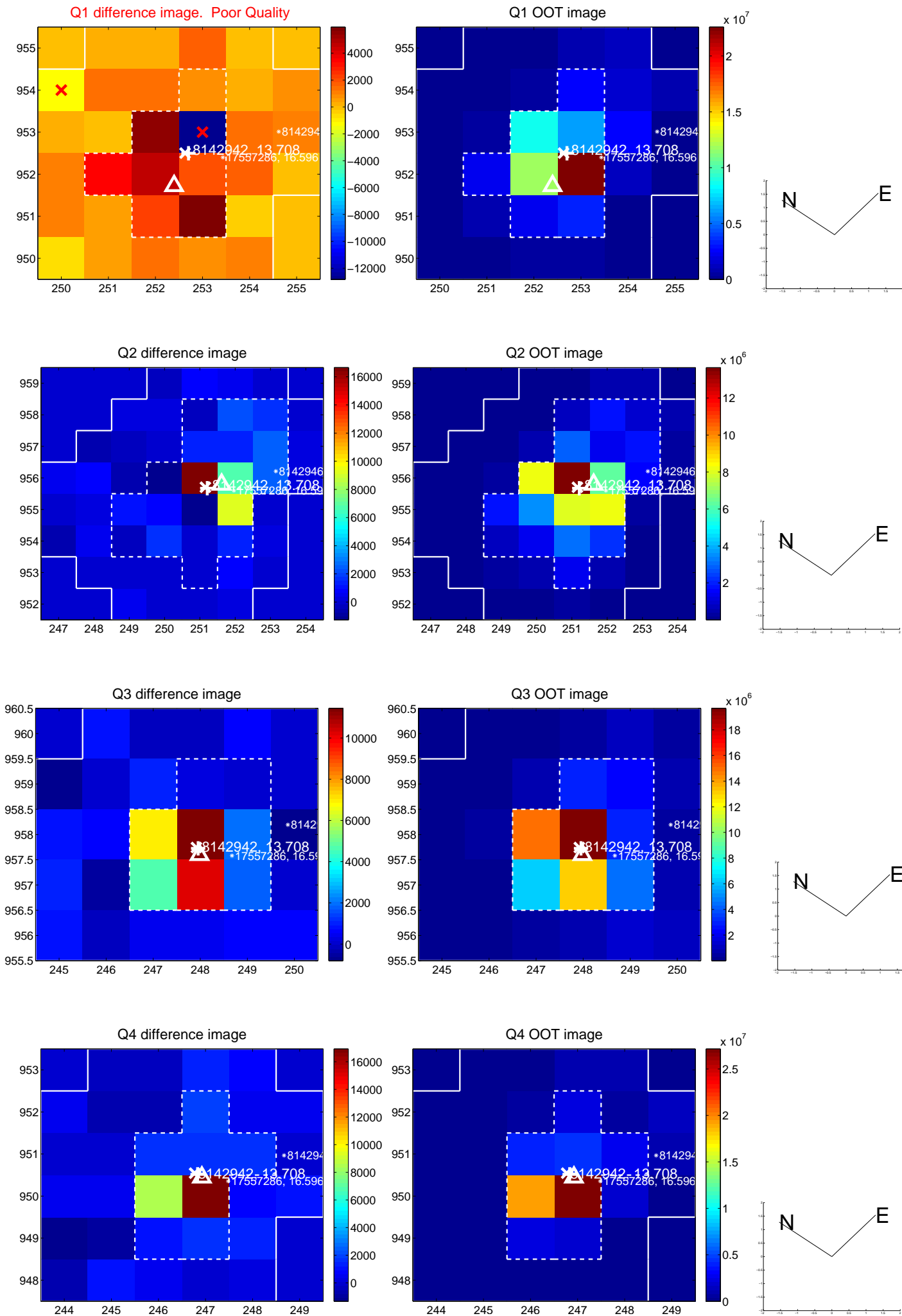
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.147	1.38	-0.059 ± 0.206	-0.193 ± 0.125
PRF-fit source offset from KIC position	0.450 ± 0.115	3.91	0.019 ± 0.207	-0.449 ± 0.116
photometric centroid source offset	0.32 ± 0.24	1.32	-0.29 ± 0.24	-0.13 ± 0.23

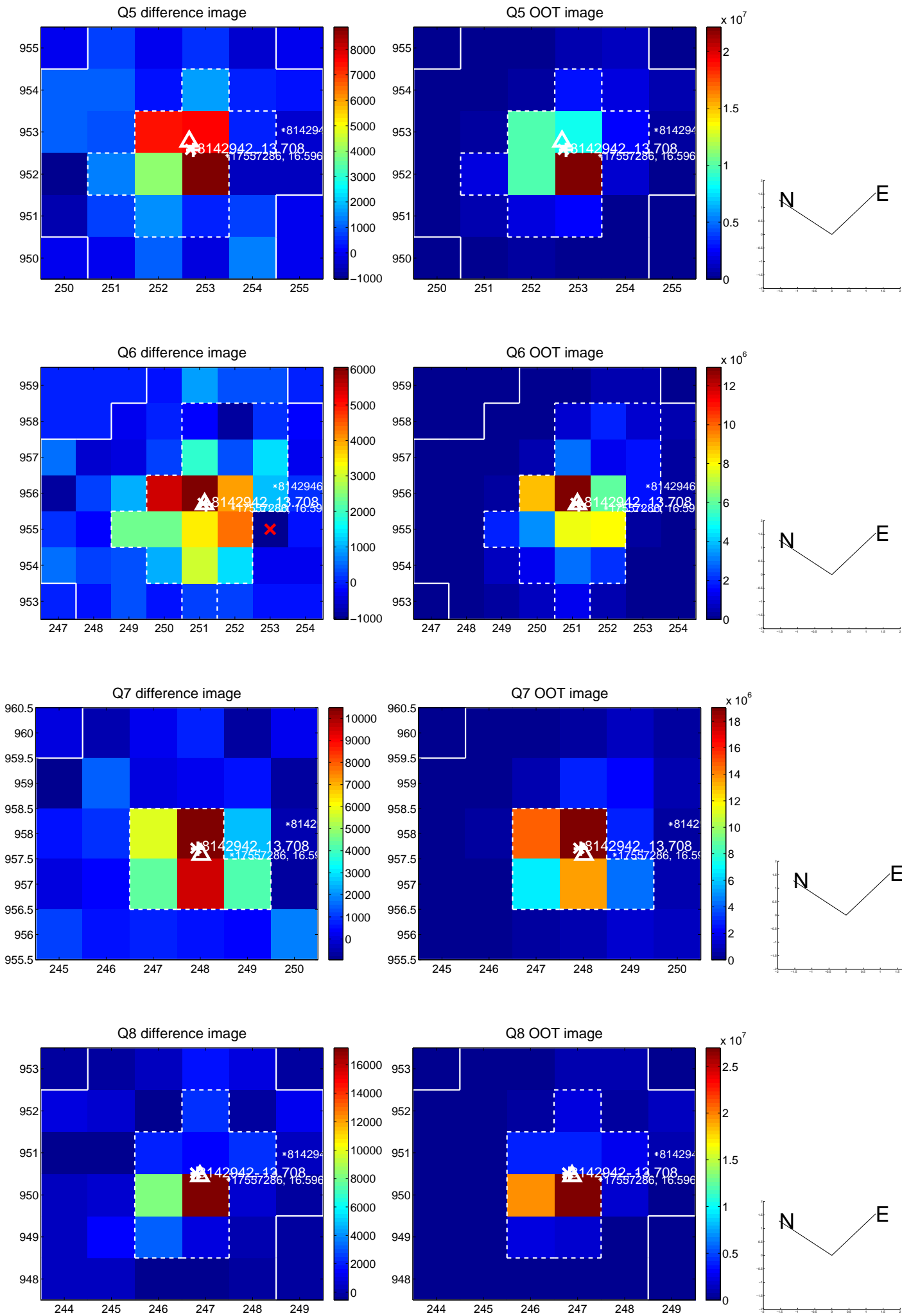


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

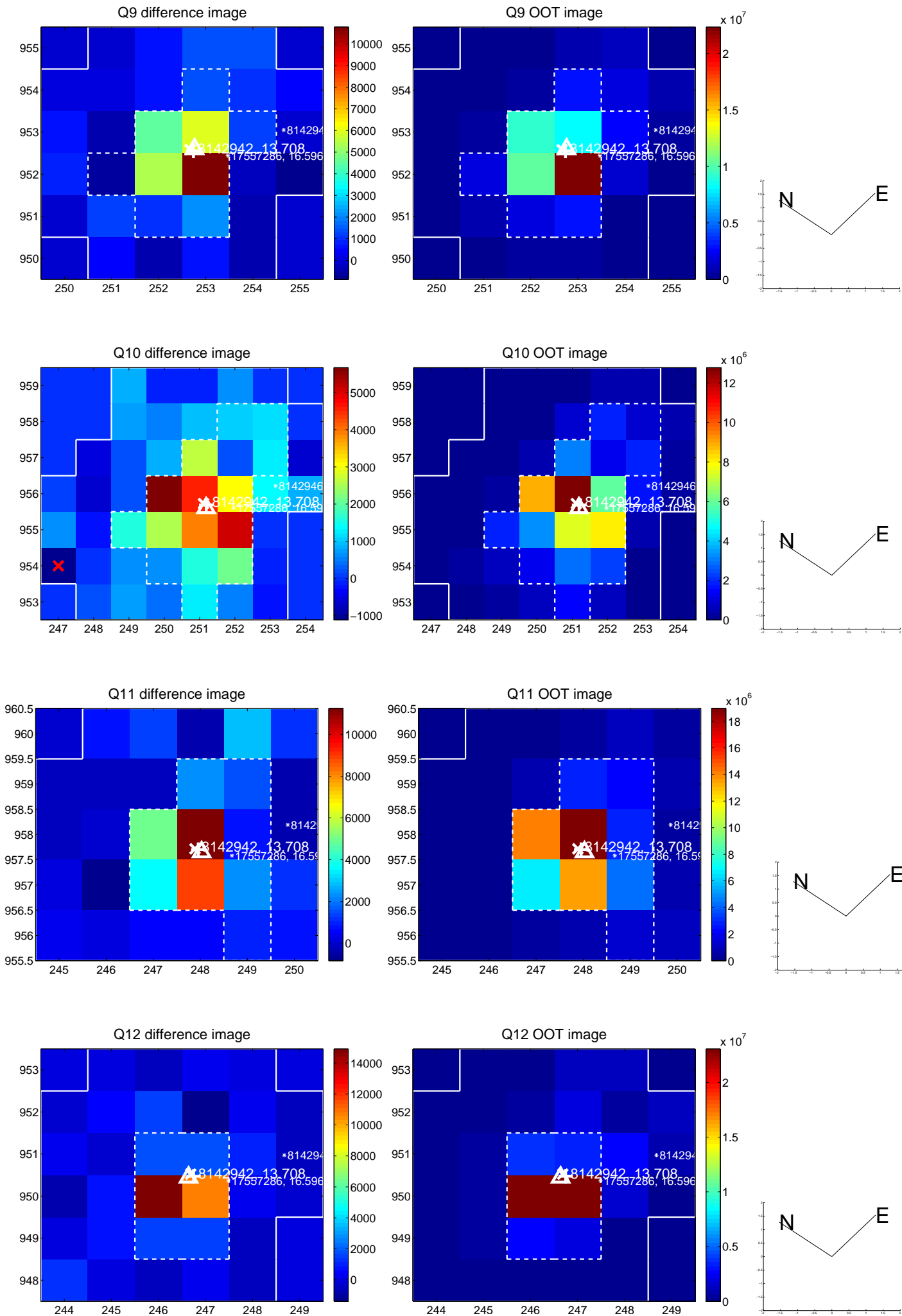
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



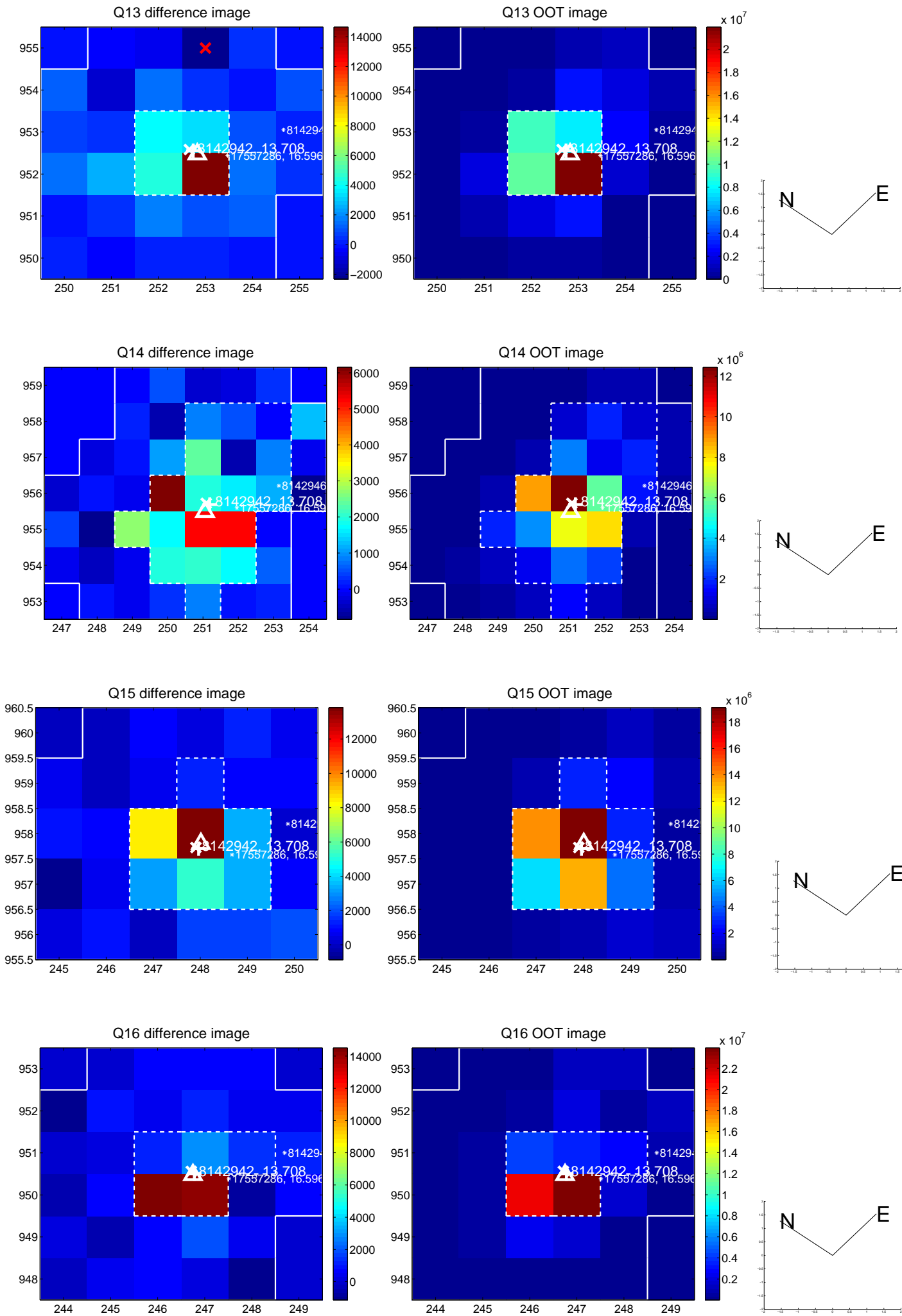
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



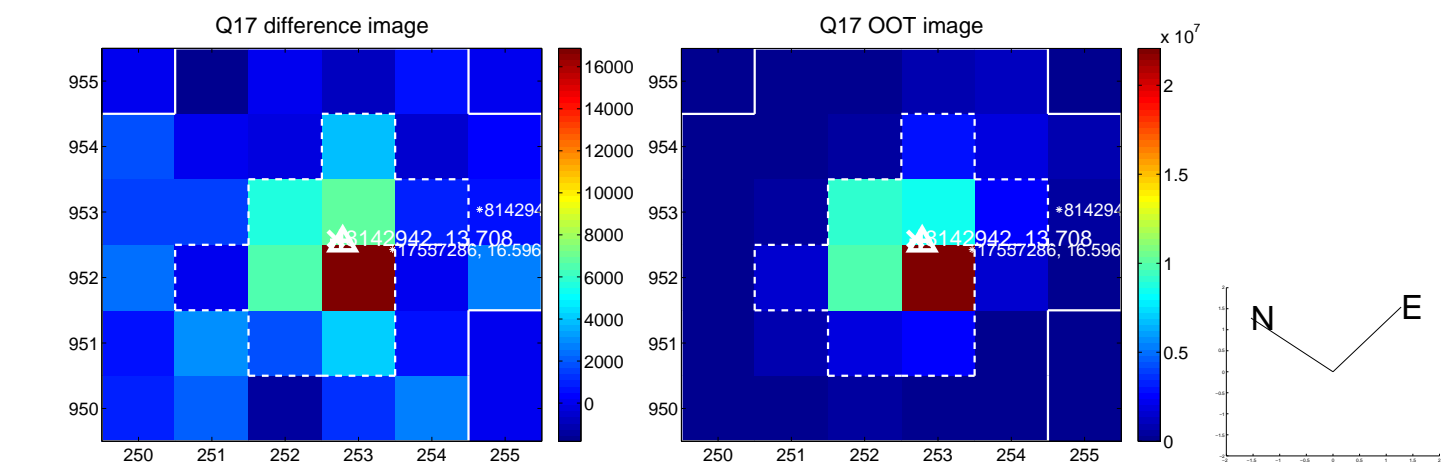
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



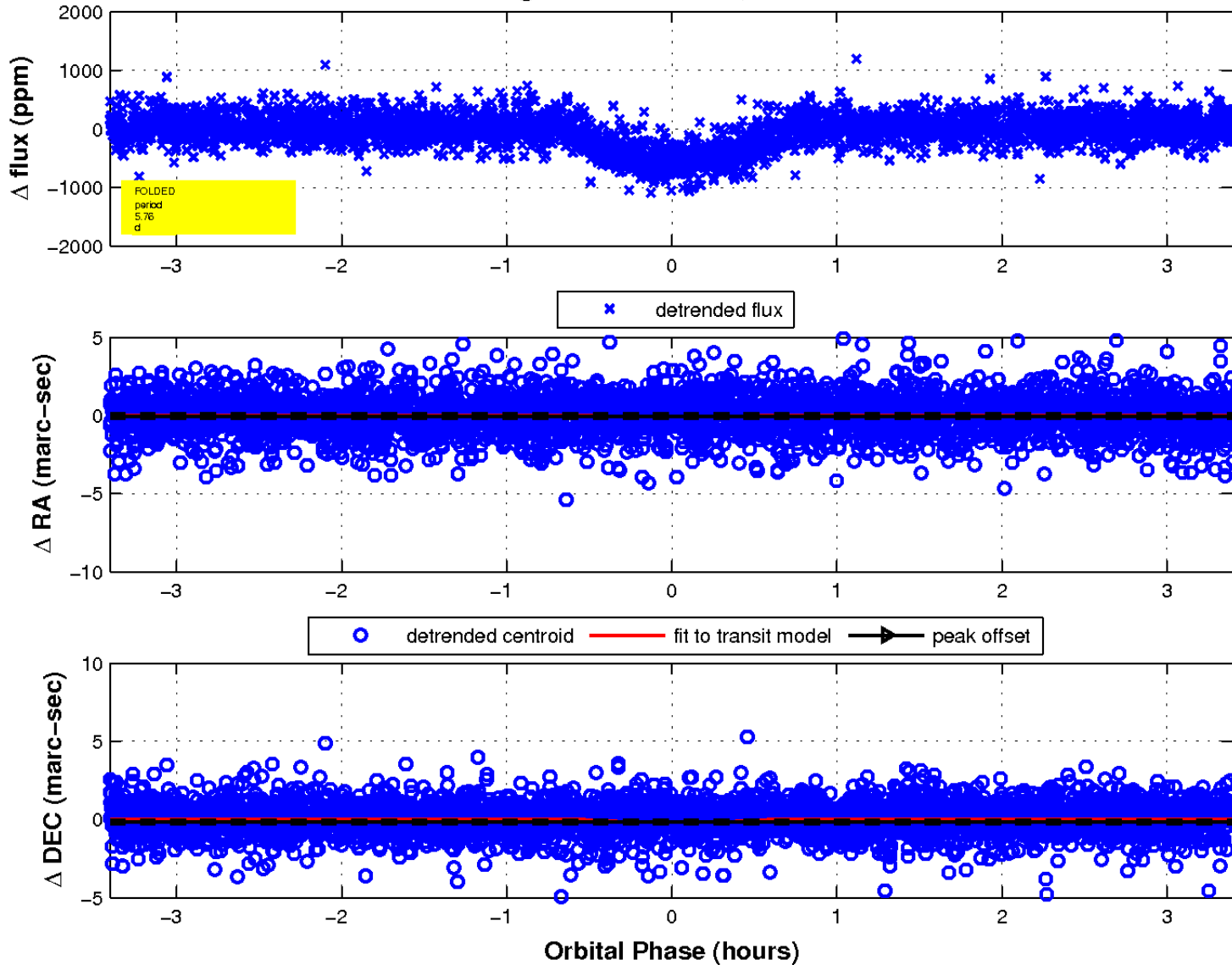
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

