

KIC 006142862

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})
006142862-01	OBS	2336.01	5.334589	133.433072	236.3	3.297	16.0	17.2	0.53	4275	1.13	36.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006142862-01	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.

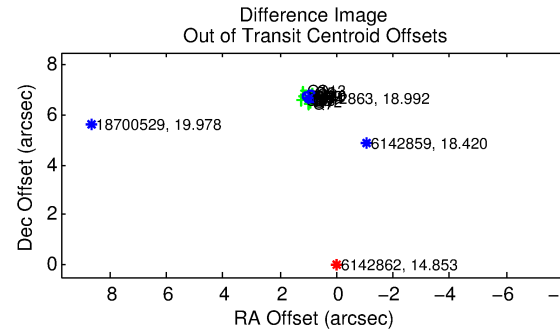
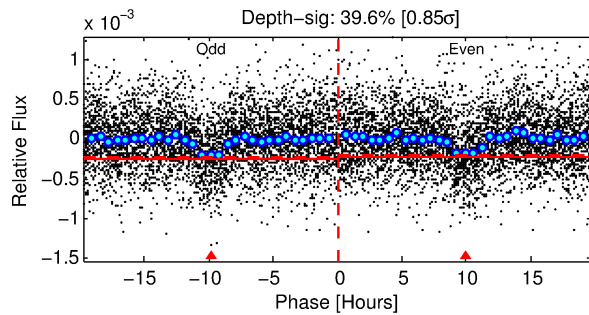
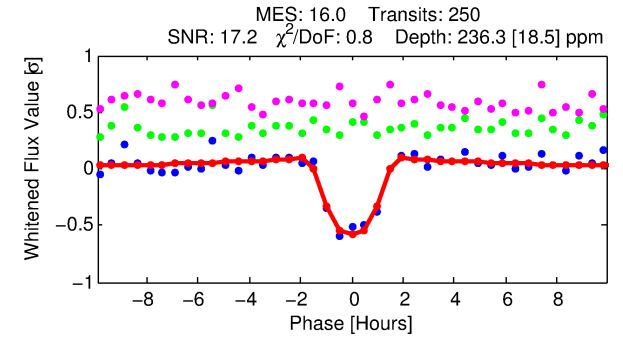
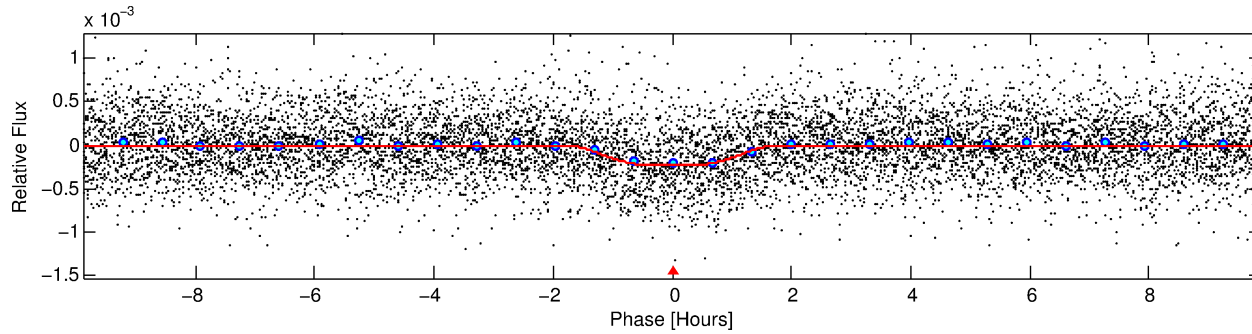
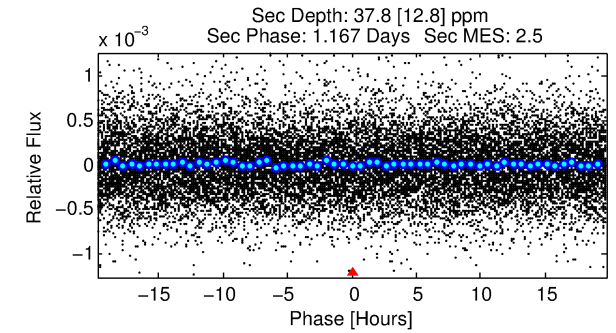
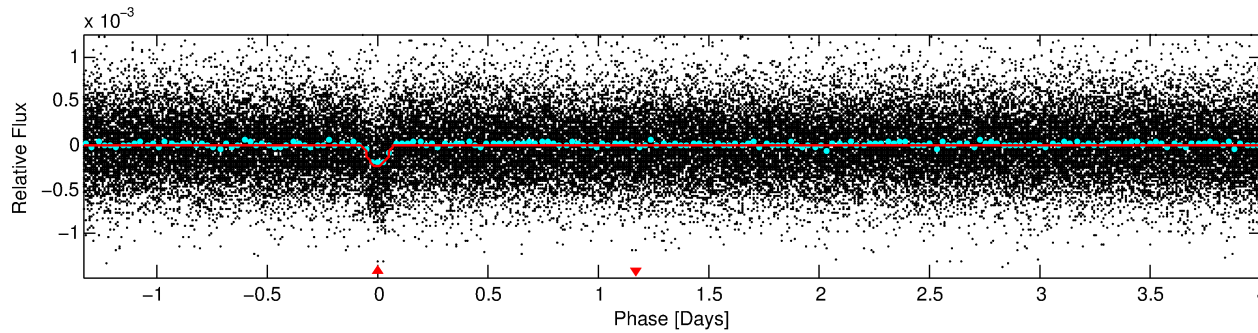
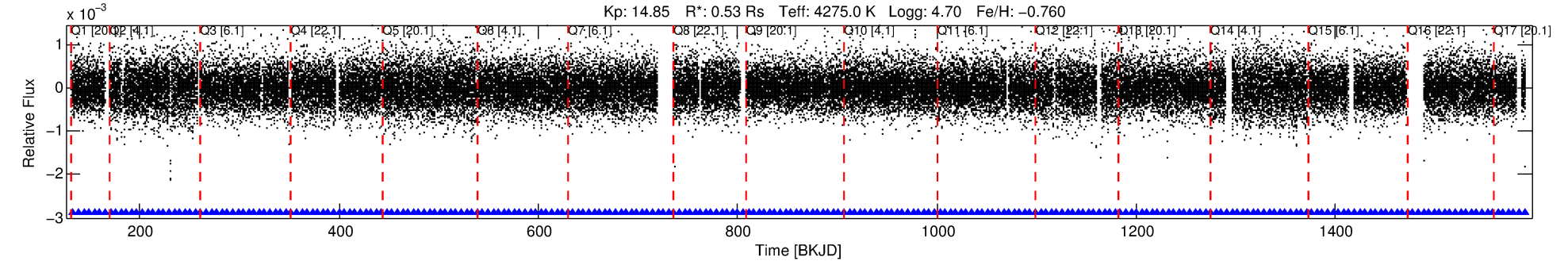
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006142862-01

No Significant Match Found

DV One-Page Summary

KIC: 6142862 Candidate: 1 of 1 Period: 5.335 d
KOI: K02336.01 Corr: 0.939



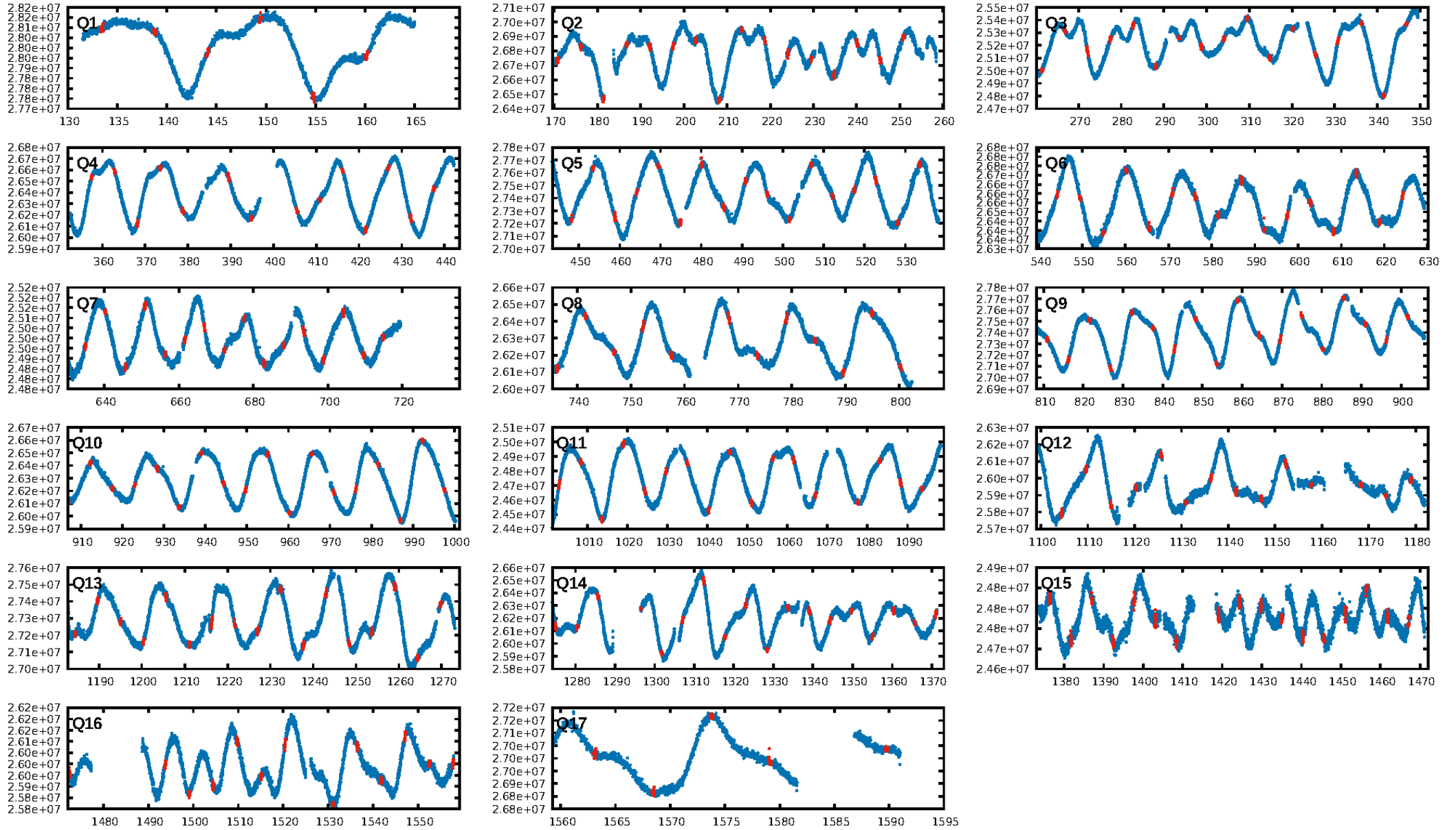
DV Fit Results:

Period = 5.33459 [0.00003] d
Epoch = 133.4331 [0.0037] BKJD
Rp/R* = 0.0195 [0.0012]
a/R* = 3.73 [0.47]
b = 0.98 [0.01]
Seff = 36.61 [6.63]
Teq = 627 [28] K
Rp = 1.13 [0.14] Re
a = 0.0482 [0.0043] AU
Ag = 37.56 [14.24] [2.57σ]
Teffp = 2401 [229] K [7.68σ]

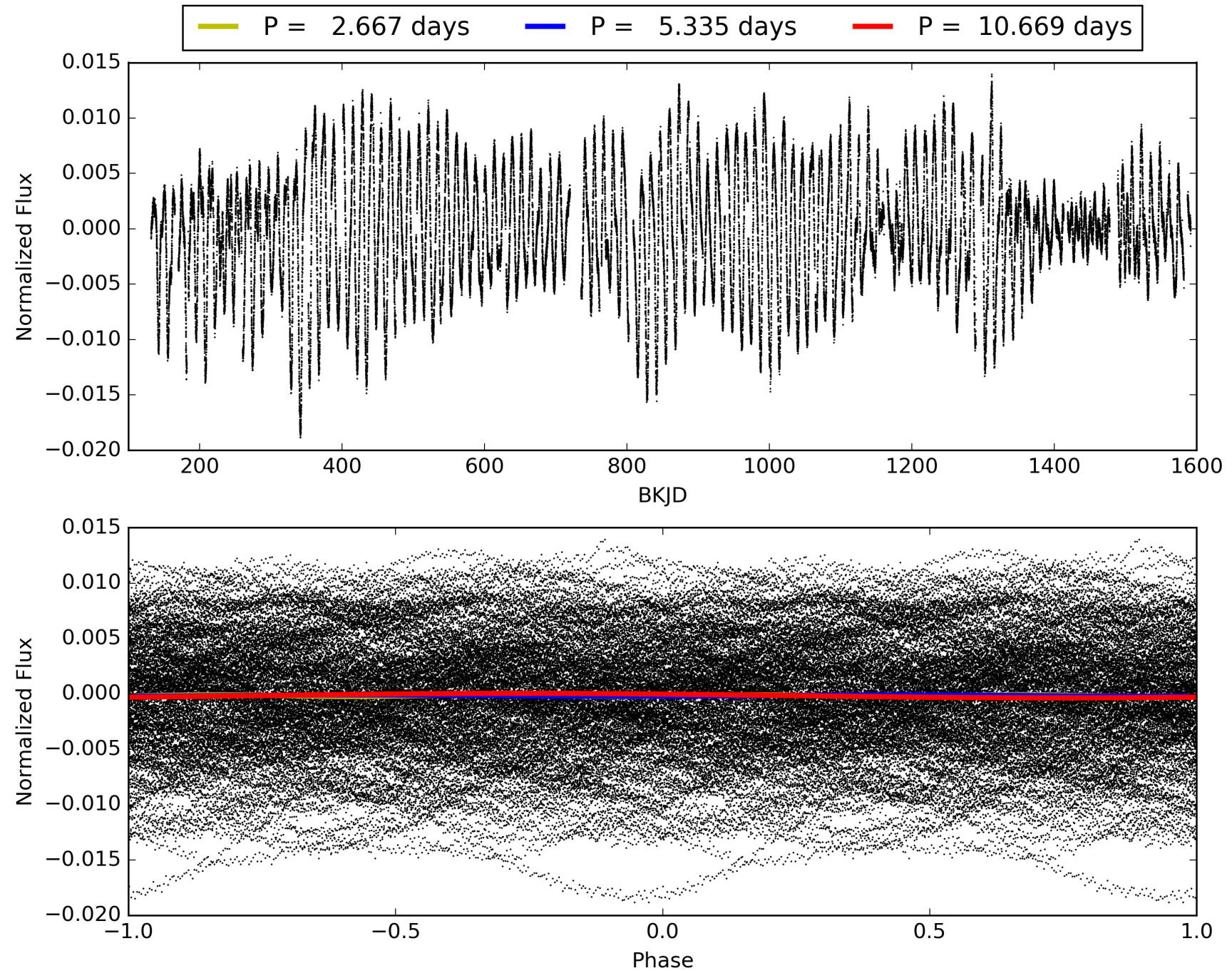
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.80e-54
RollingBand-fgt: 1.00 [239/239]
GhostDiagnostic-chr: -0.09106
Centroid-sig: 0.0%
Centroid-so: 21.966 arcsec [32.31σ]
OotOffset-rm: 6.781 arcsec [86.83σ]
KicOffset-rm: 6.792 arcsec [88.82σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006142862-01, PDC Light Curves

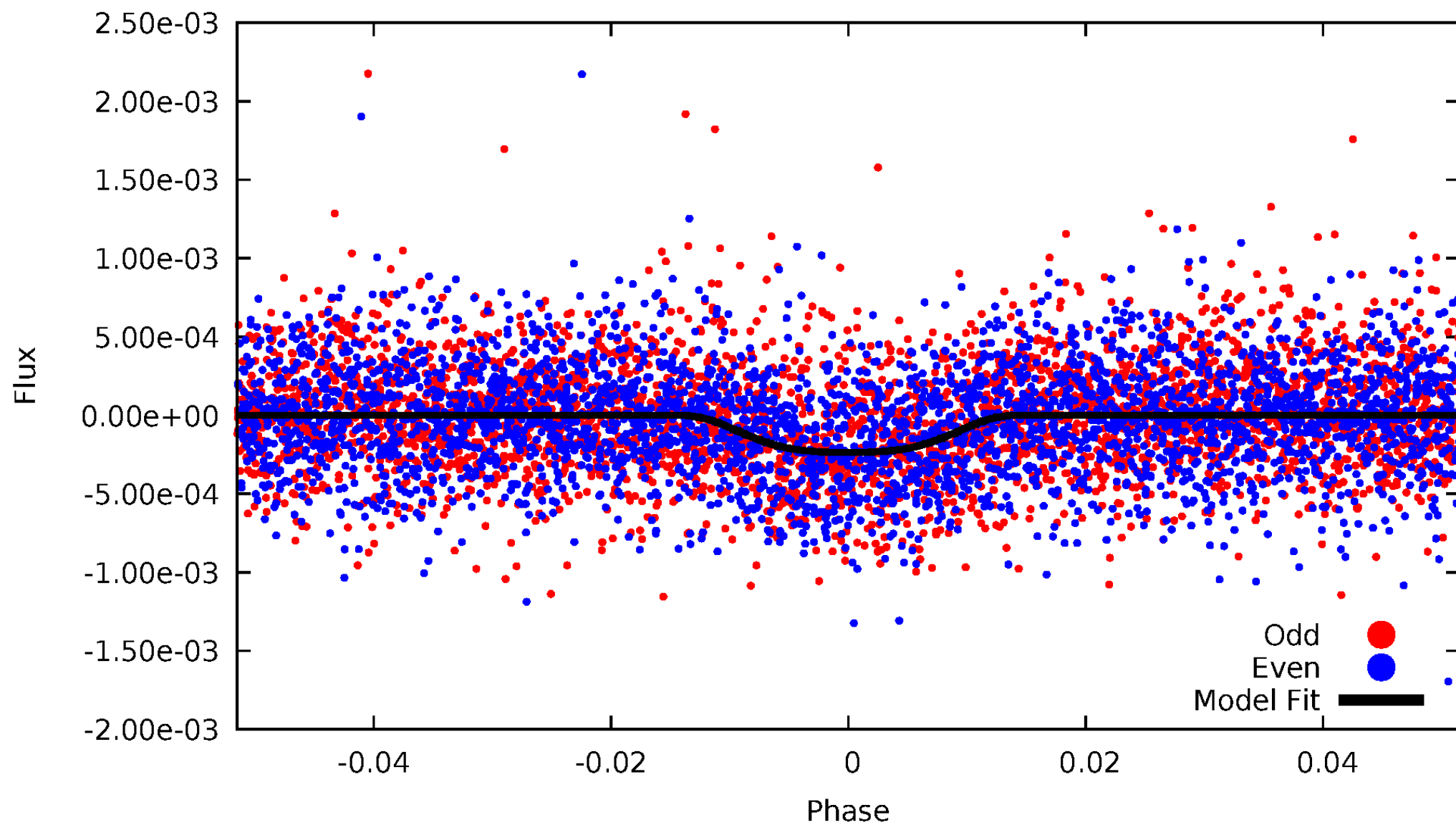


TCE 006142862-01



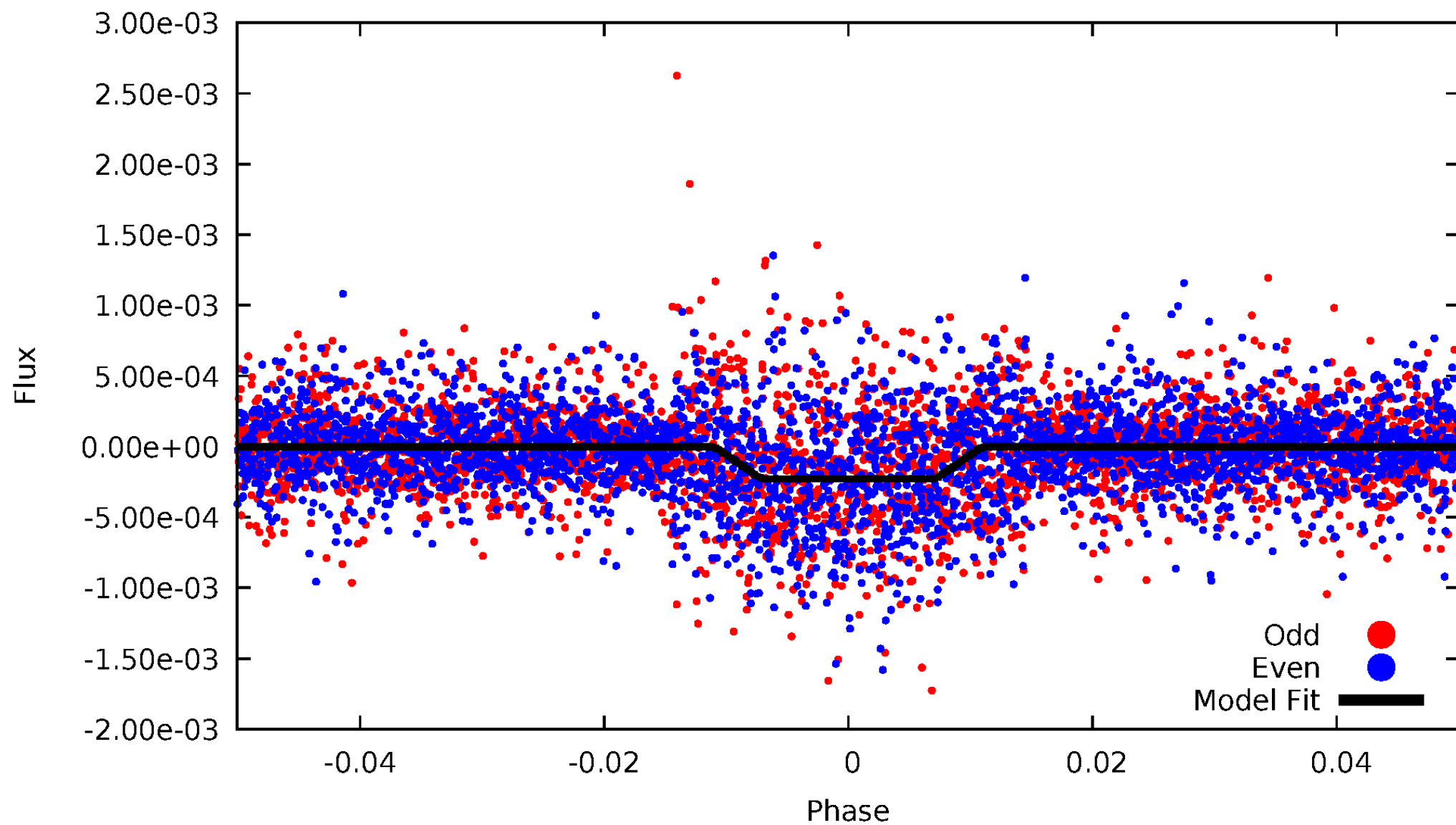
DV Odd/Even

TCE 006142862-01



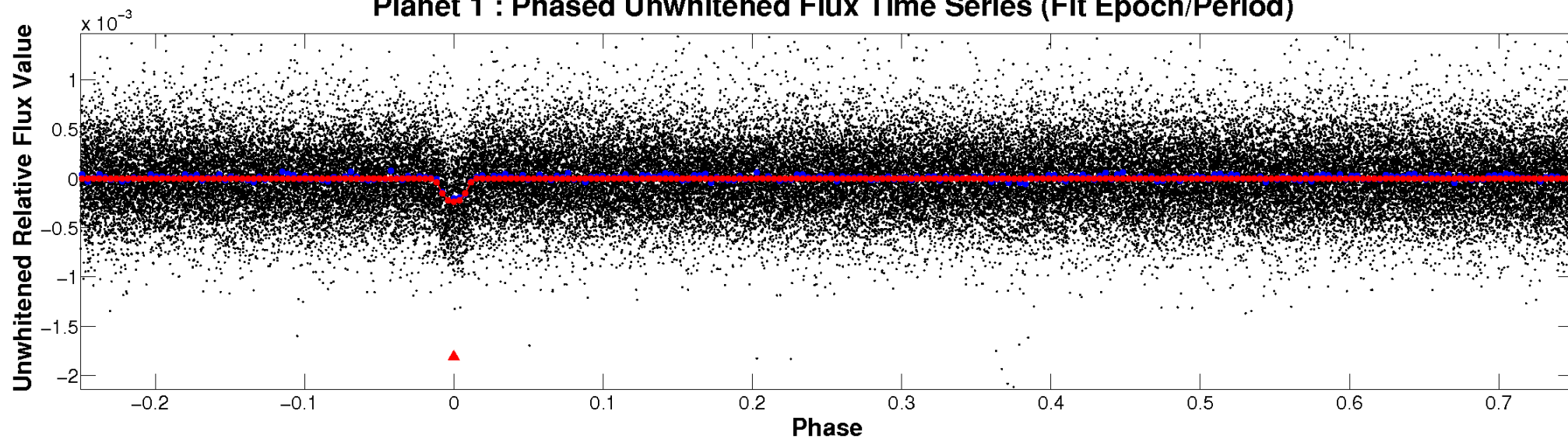
ALT Odd/Even

TCE 006142862-01

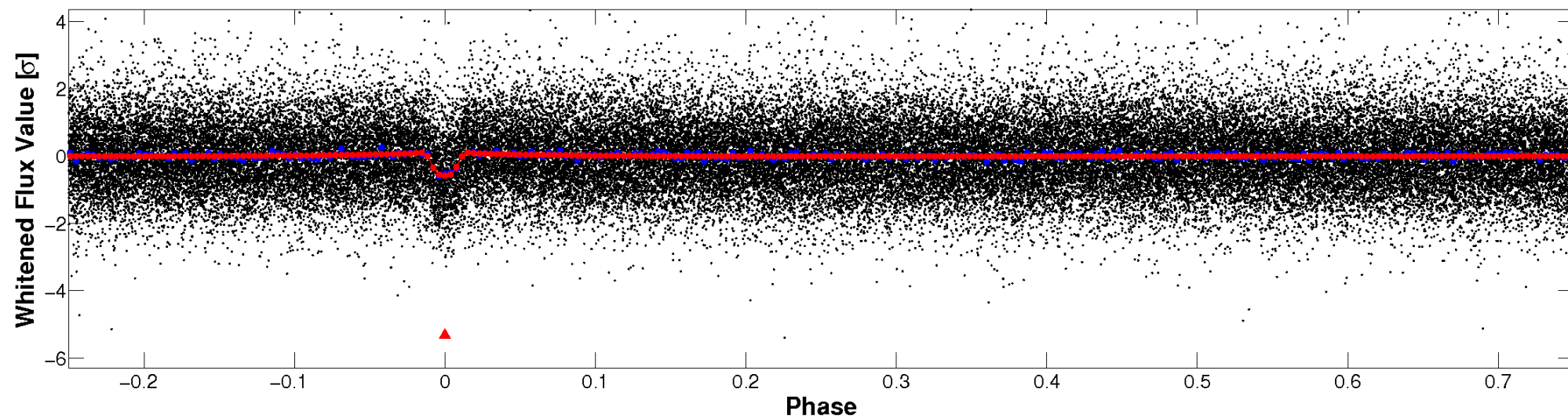


Non-Whitened Vs. Whitened Light Curve

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

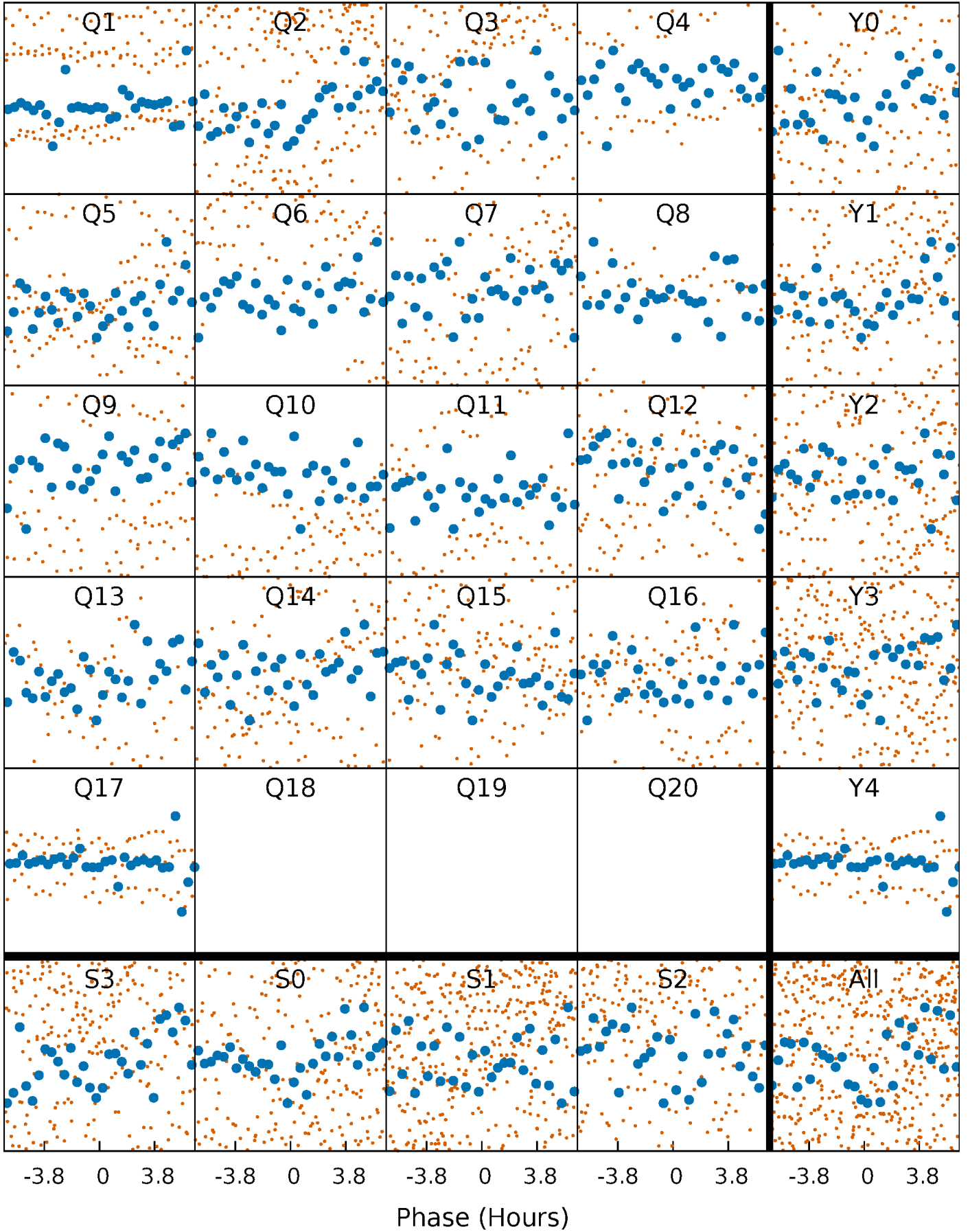


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



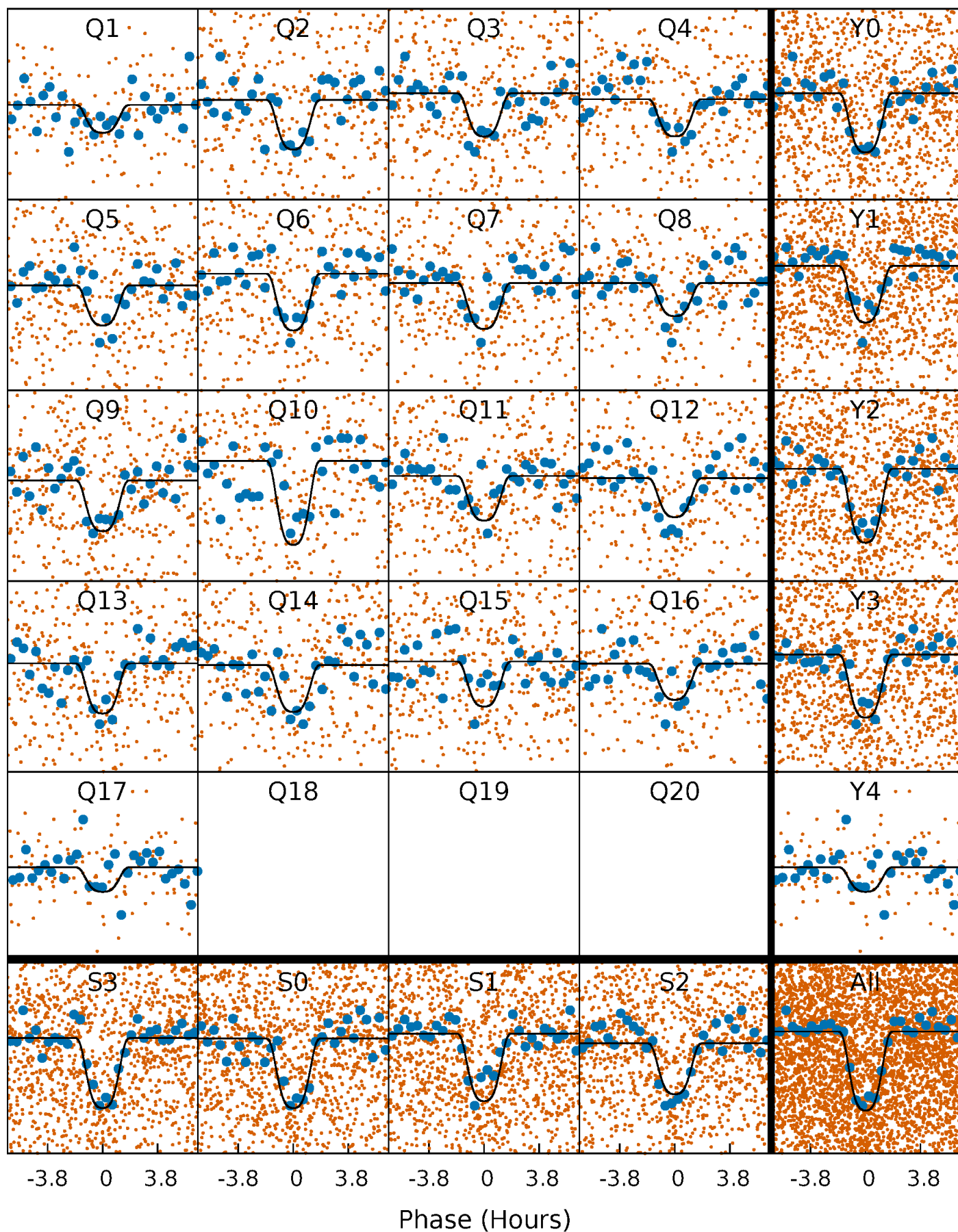
PDC Quarter-Phased Transit Curves

TCE 006142862-01 P= 5.334589 Days $T_0=133.433072$ (BKJD)



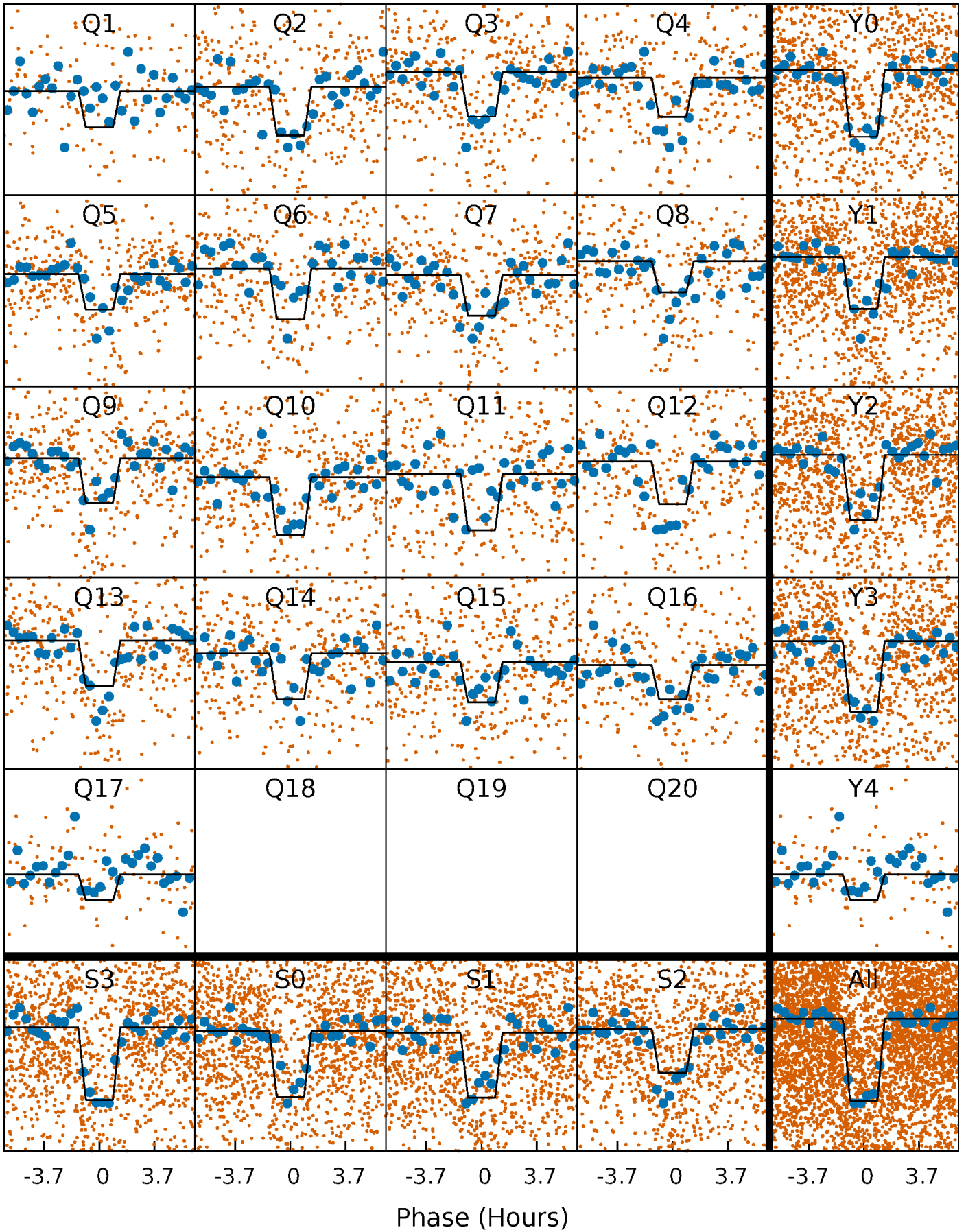
DV Quarter-Phased Transit Curves

TCE 006142862-01 P= 5.334589 Days $T_0=133.433072$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

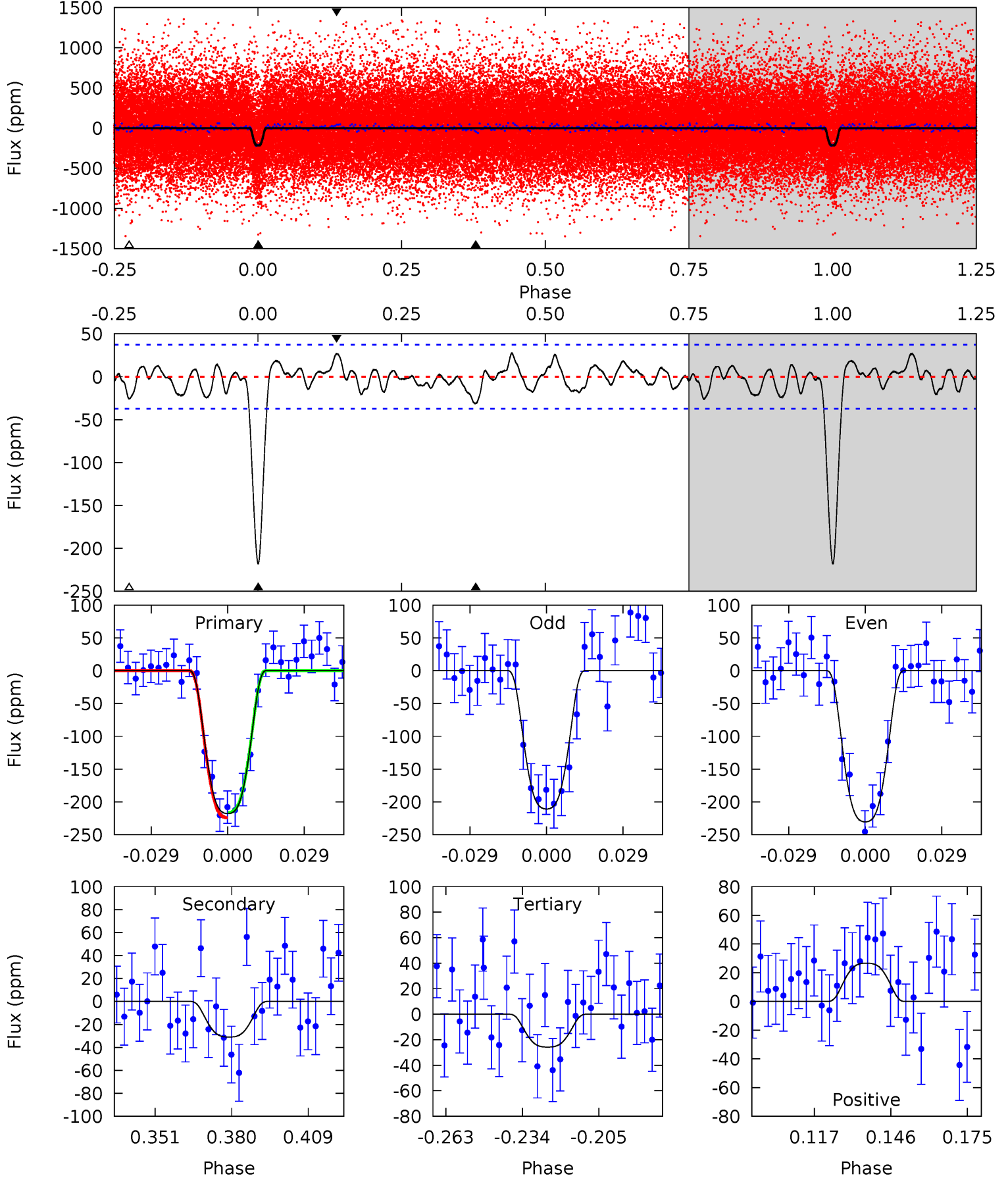
TCE 006142862-01 P= 5.334626 Days $T_0=133.432475$ (BKJD)



DV Model-Shift Uniqueness Test

006142862-01, P = 5.334589 Days, E = 128.098483 Days

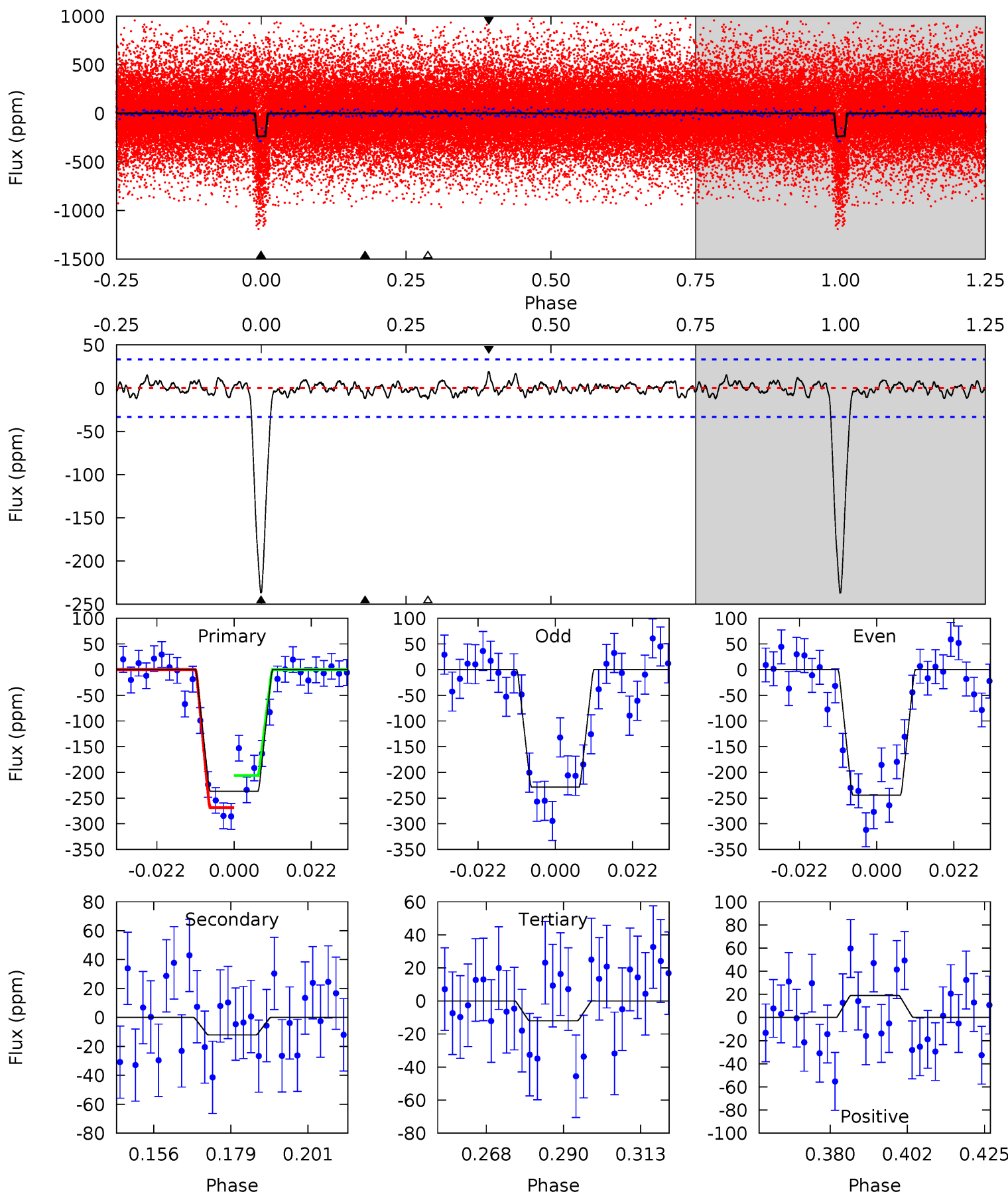
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.2	4.01	3.33	3.45	4.82	2.18	1.40	24.8	24.7	0.68	0.56	1.27	0.92	0.11	0.50



Alt Model-Shift Uniqueness Test

006142862-01, P = 5.334626 Days, E = 128.097849 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.7	1.77	1.76	2.79	4.87	2.28	0.80	33.0	31.9	0.00	-1.02	1.14	0.97	0.07	4.57



Stellar Parameters For KIC 006142862

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4275^{+115}_{-141}	$4.704^{+0.065}_{-0.030}$	$-0.760^{+0.300}_{-0.300}$	$0.533^{+0.044}_{-0.059}$	$0.525^{+0.050}_{-0.041}$	$4.877^{+1.497}_{-0.654}$
	+3%/-3%	+1%/-1%	+39%/-39%	+8%/-11%	+10%/-8%	+31%/-13%
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 006142862-01 / KOI 2336.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-31 ± 8	$1.13^{+0.09}_{-0.09}$	868^{+30}_{-31}	2868^{+122}_{-129}	32^{+10}_{-9}
Alt.	-12 ± 7	$0.87^{+0.08}_{-0.08}$	867^{+31}_{-33}	2697^{+194}_{-308}	21^{+13}_{-13}

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

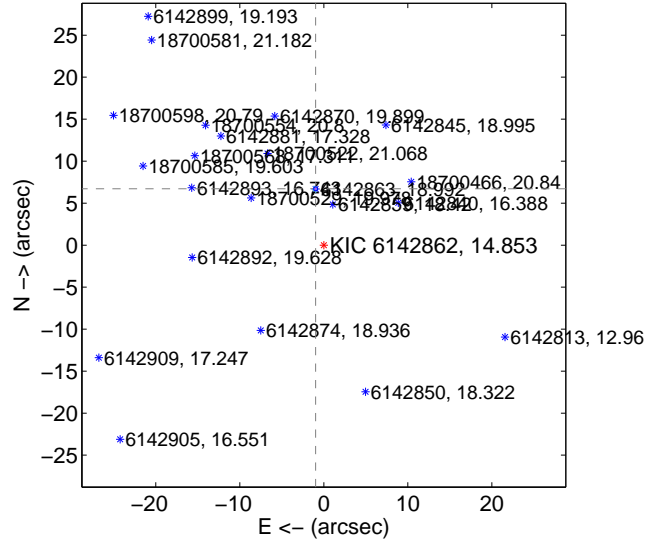
Supplemental centroid analysis for 006142862-01. Kepler magnitude: 14.85. Transit SNR 17.20

There are 16 quarters with good PRF difference image offsets

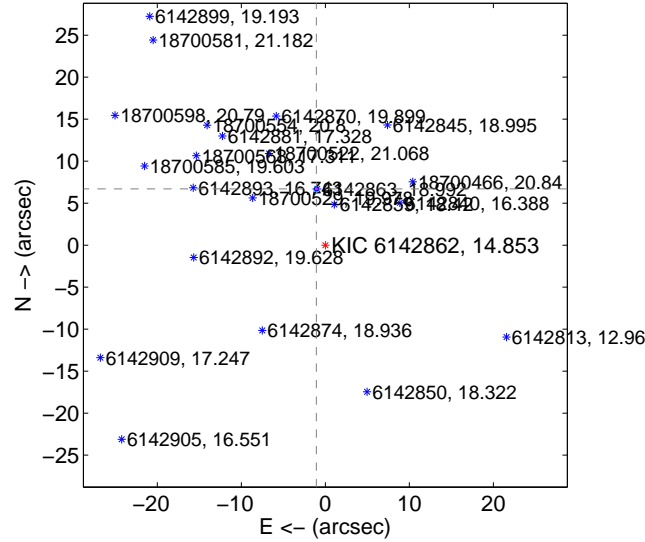
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.781 \pm 0.078	86.83	0.973 \pm 0.073	6.711 \pm 0.078
PRF-fit source offset from KIC position	6.792 \pm 0.076	88.82	1.070 \pm 0.072	6.707 \pm 0.077
photometric centroid source offset	21.97 \pm 0.68	32.31	5.15 \pm 0.77	21.35 \pm 0.67

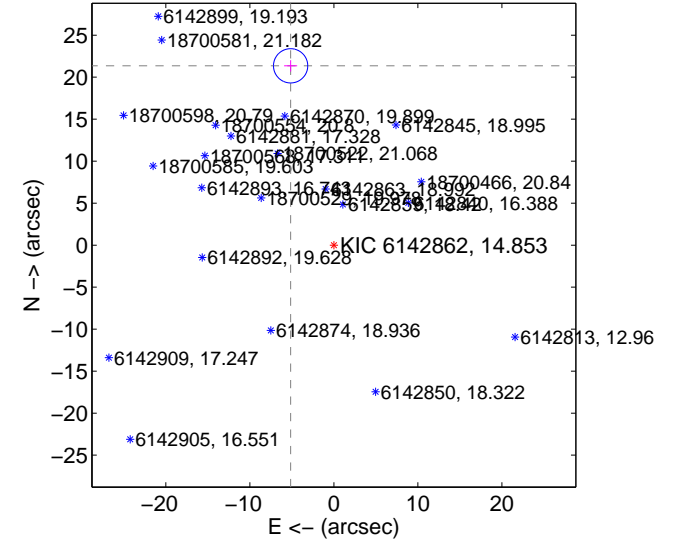
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

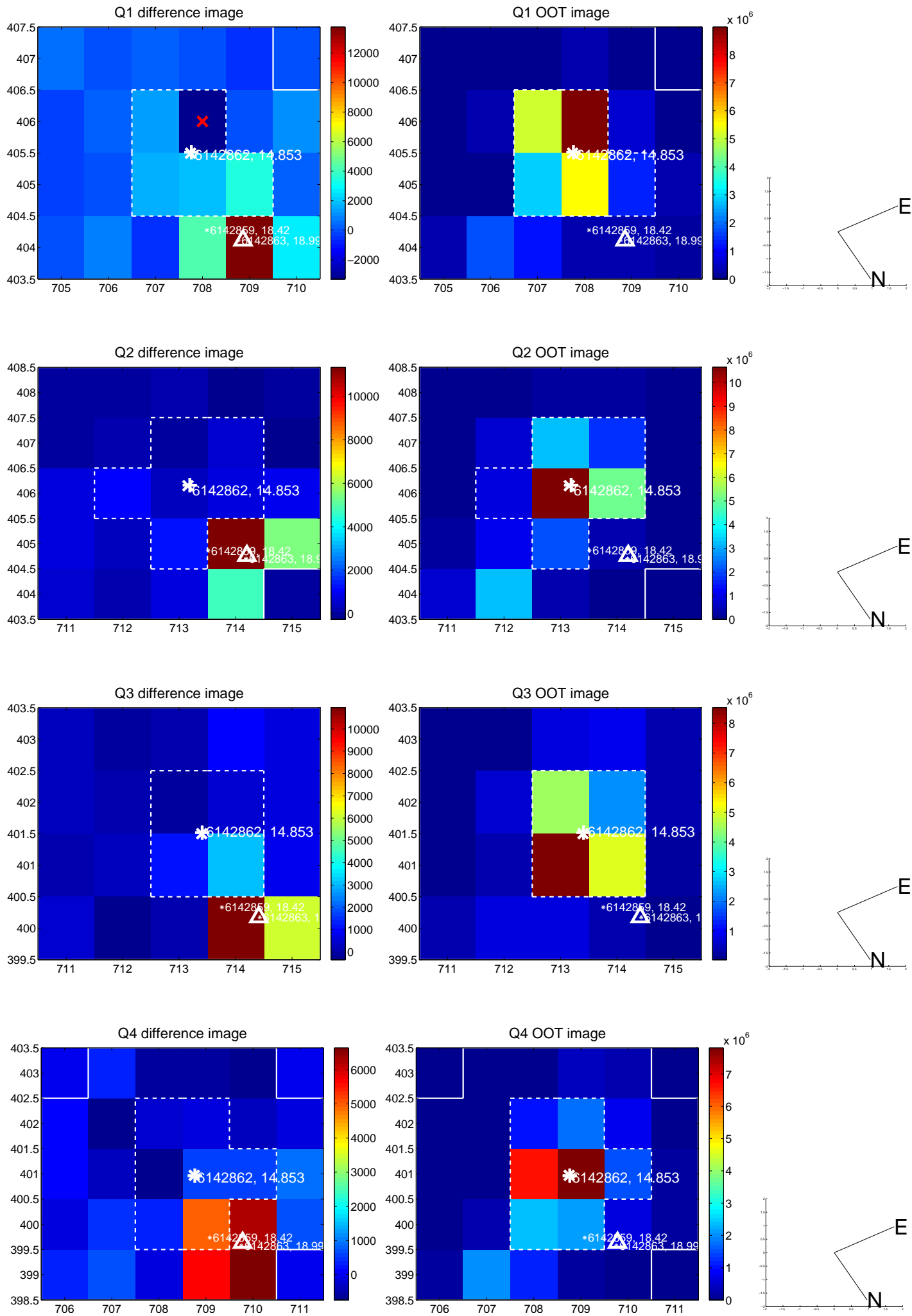


offset from photometric centroids

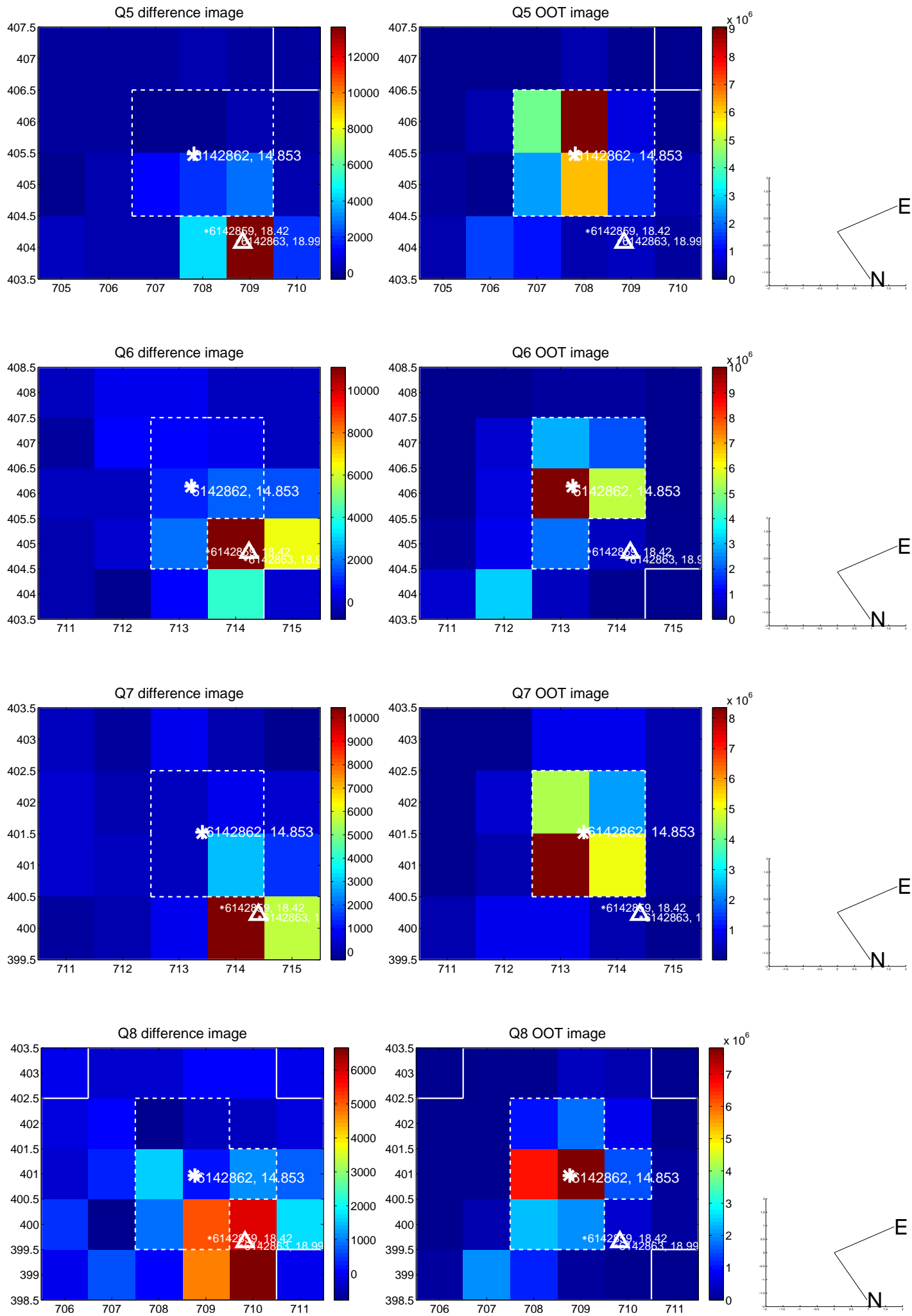


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

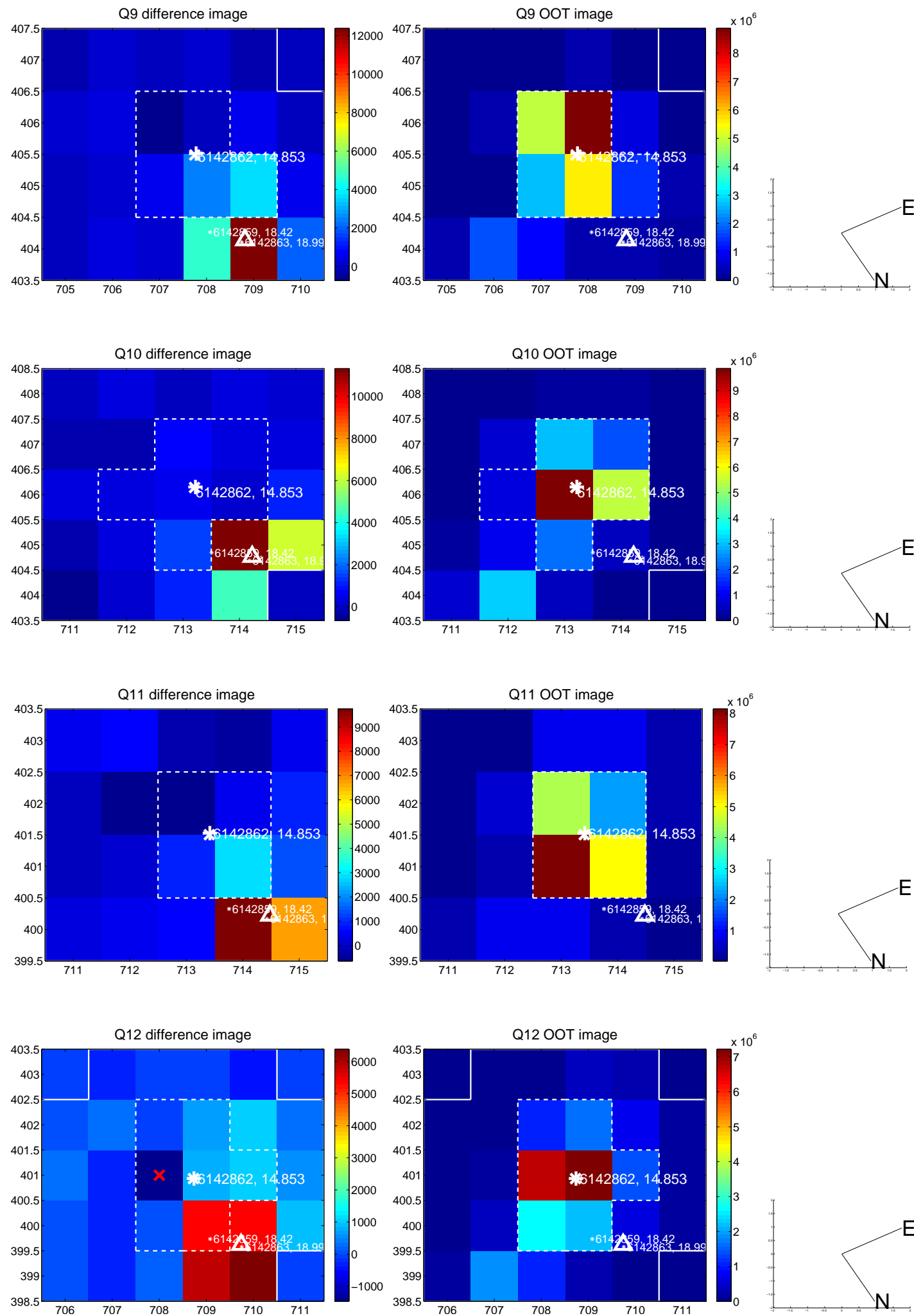
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



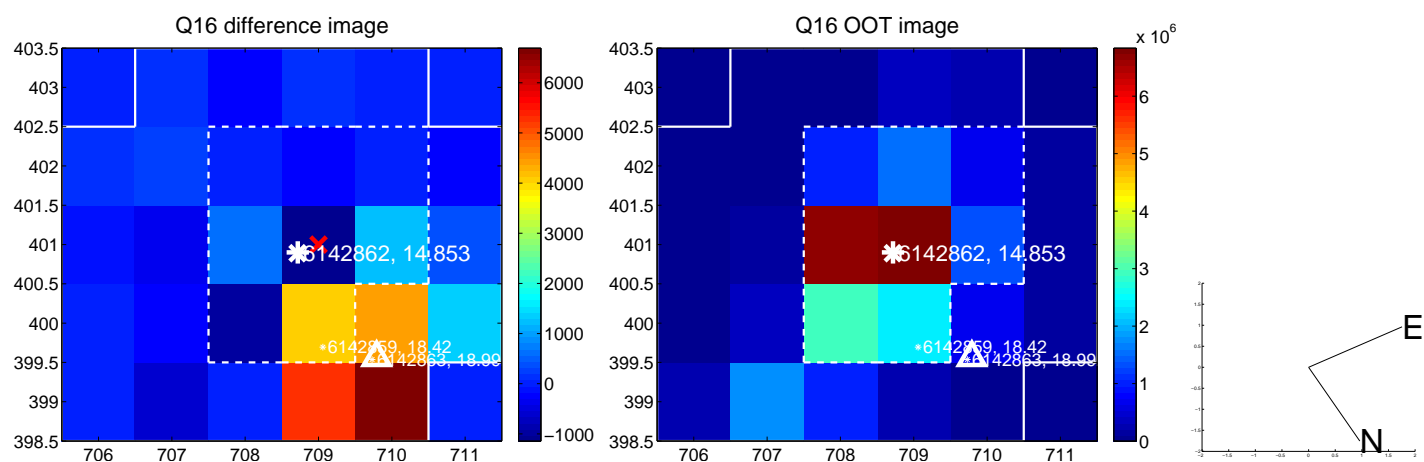
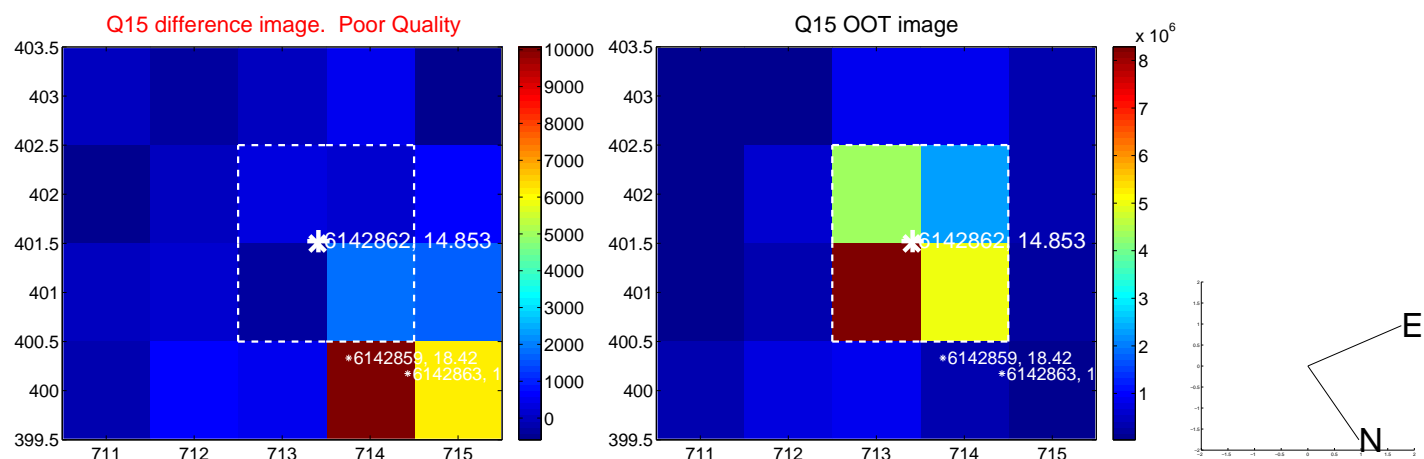
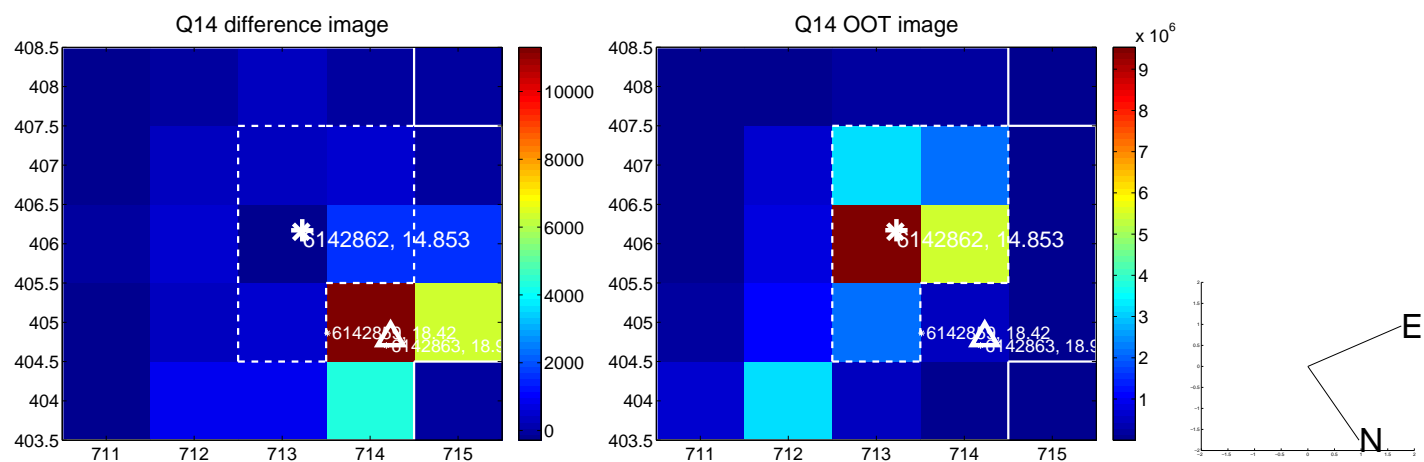
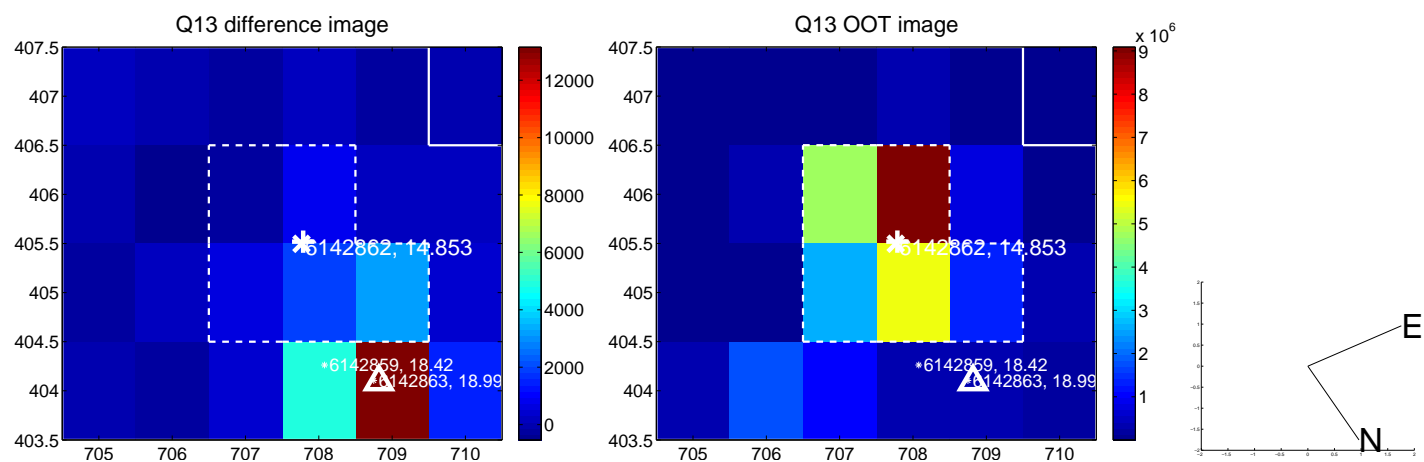
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



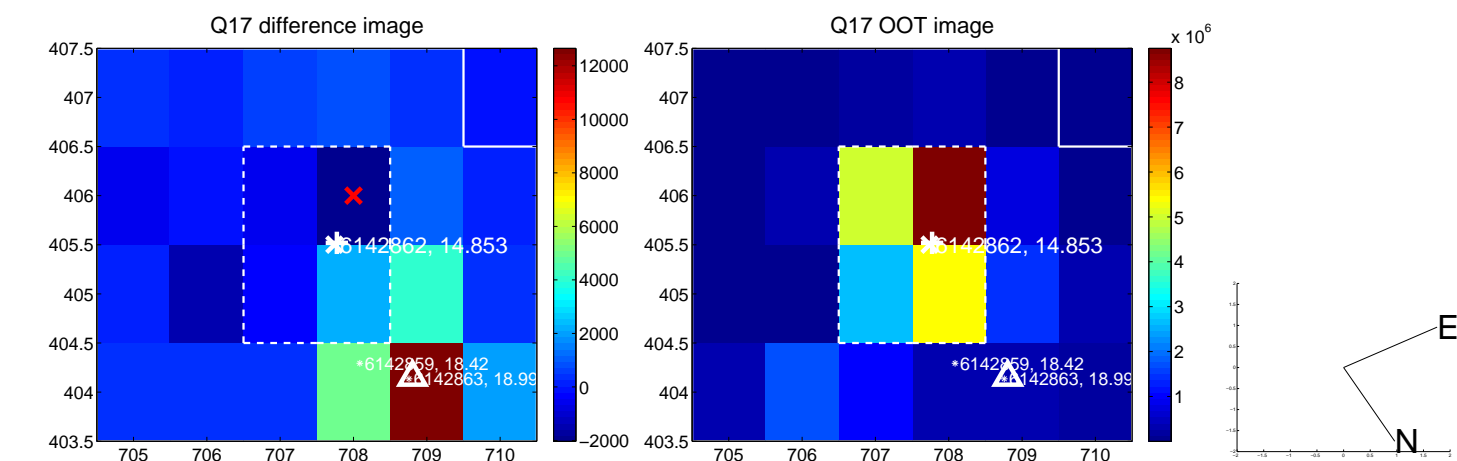
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



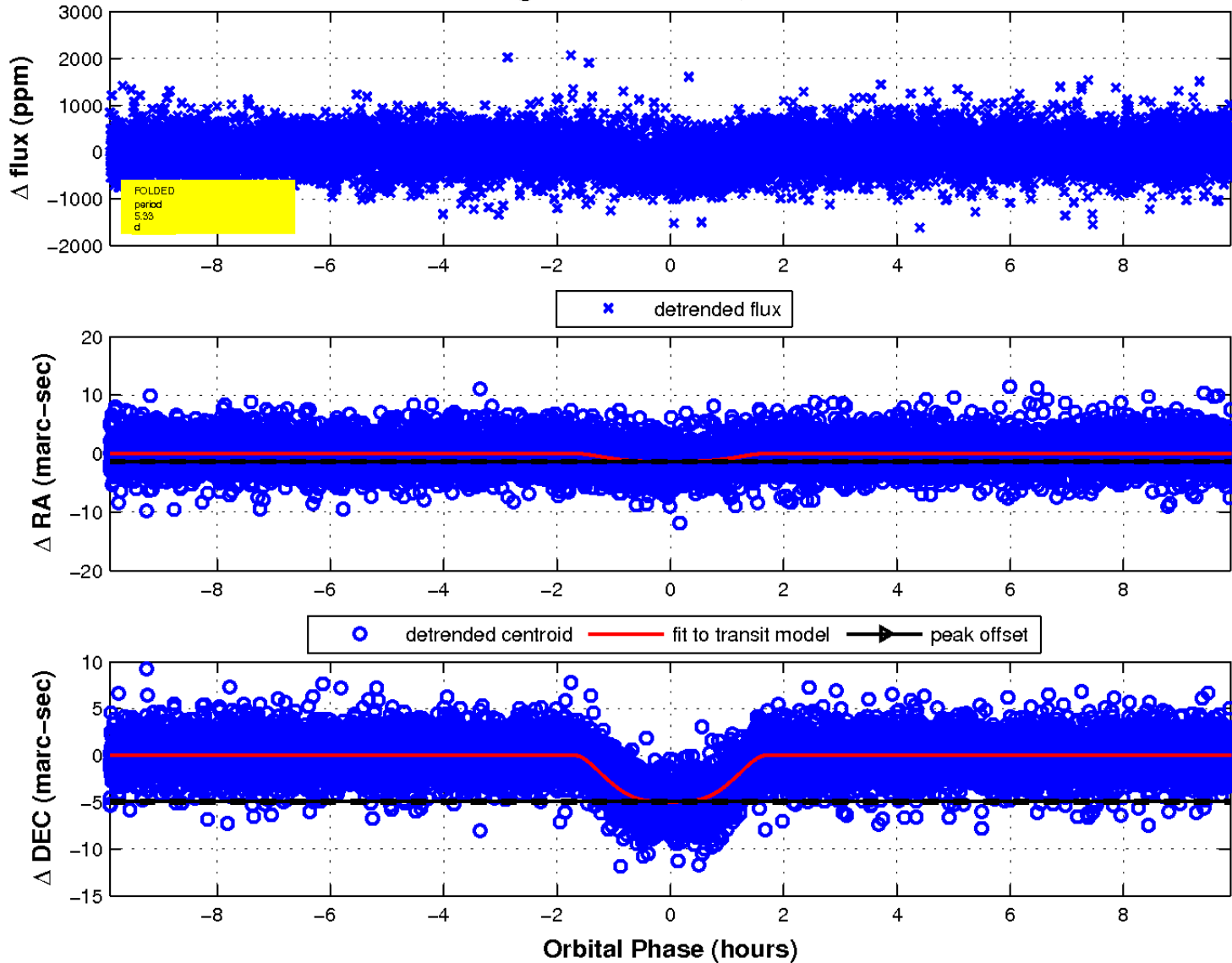
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

