

KIC 004547603

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})
004547603-01	OBS	2855.01	1.400751	132.025529	136.2	1.170	16.5	19.9	1.07	5487	1.50	1664.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004547603-01	OBS	PC	0.96	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.

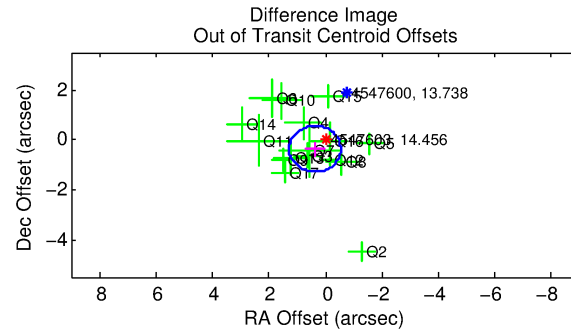
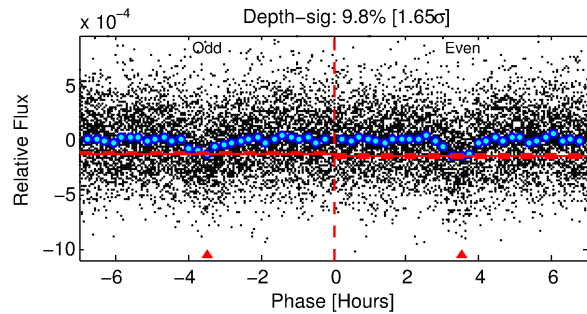
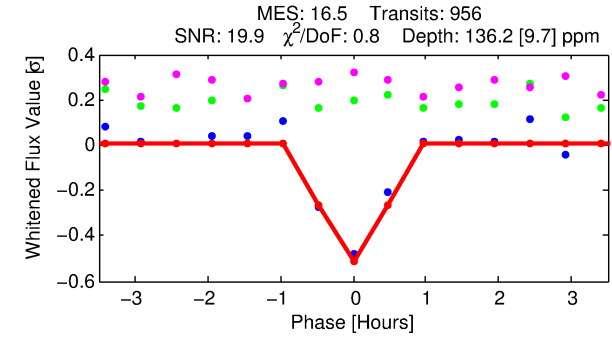
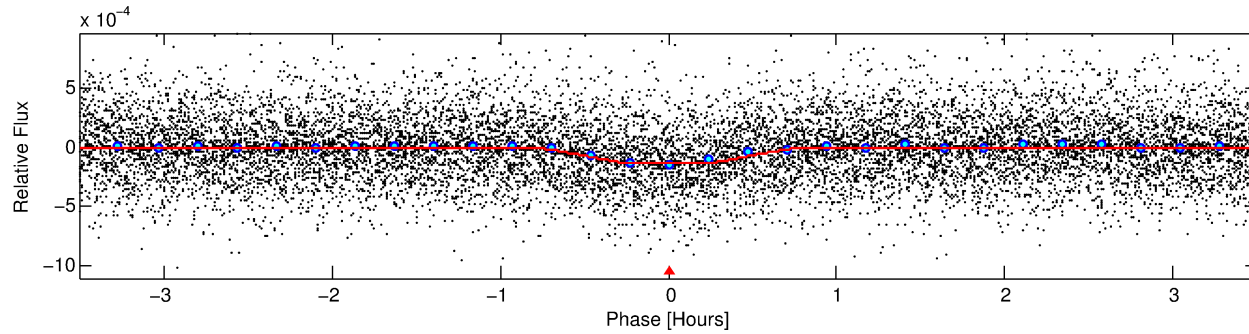
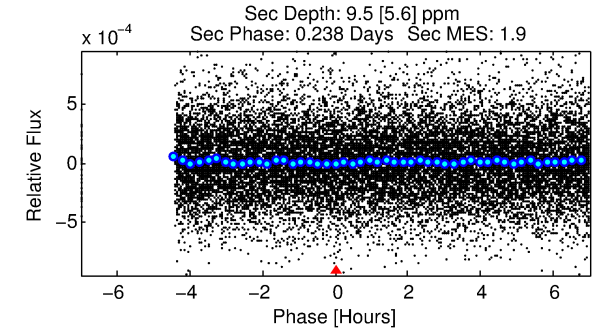
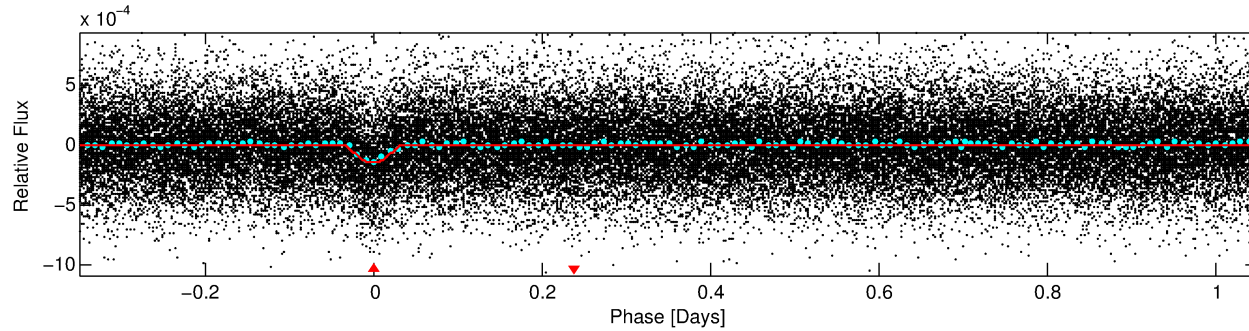
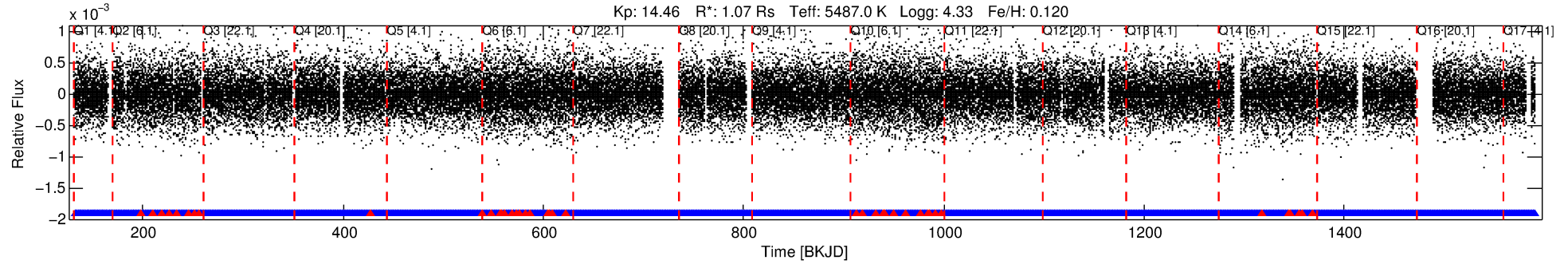
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004547603-01

No Significant Match Found

DV One-Page Summary

KIC: 4547603 Candidate: 1 of 1 Period: 1.401 d
KOI: K02855.01 Corr: 0.954



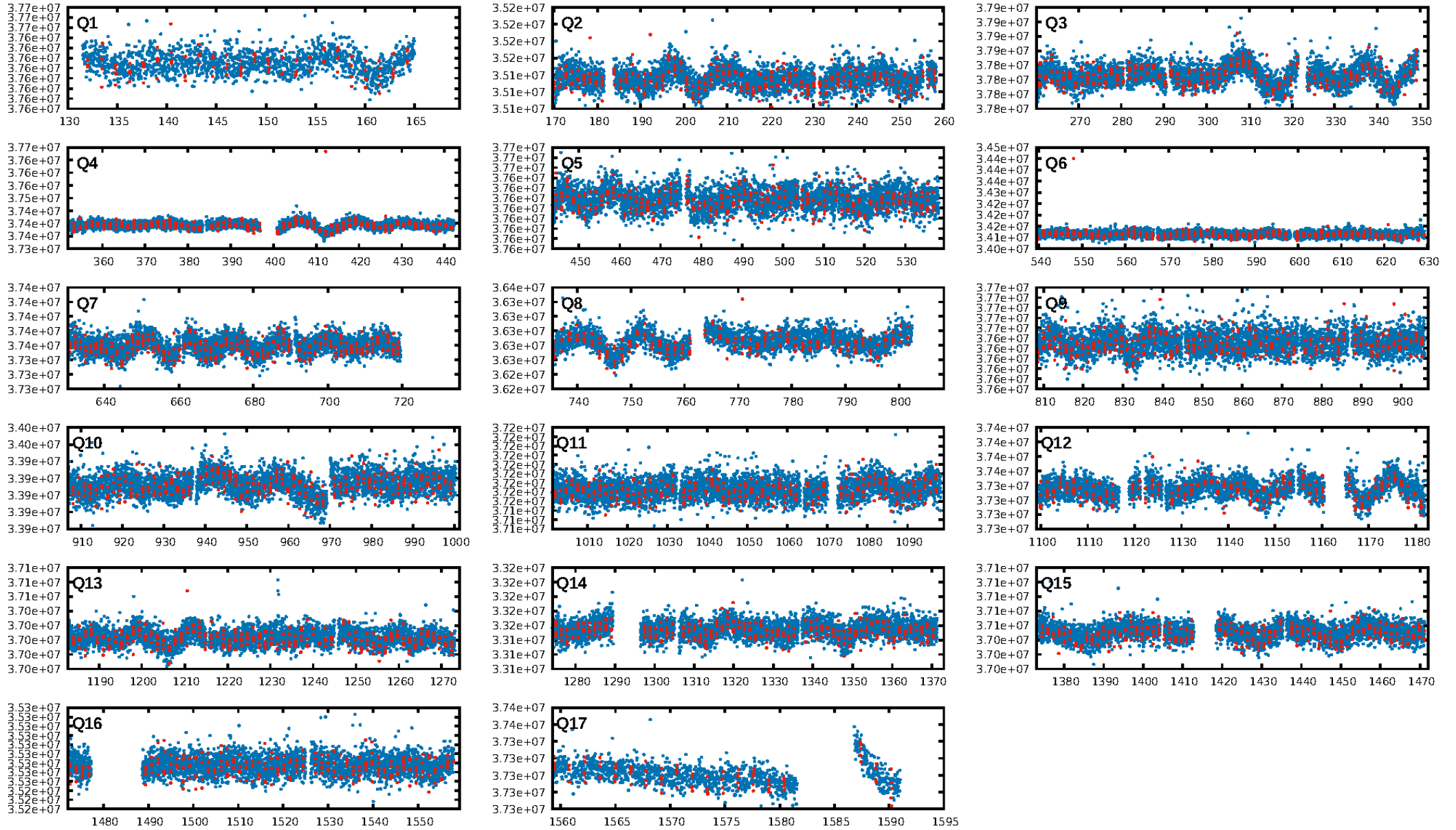
DV Fit Results:

Period = 1.40075 [0.00001] d
Epoch = 132.0255 [0.0010] BKJD
Rp/R* = 0.0128 [0.0068]
a/R* = 4.49 [9.91]
b = 0.89 [0.55]
Seff = 1664.24 [411.61]
Teff = 1629 [101] K
Rp = 1.50 [0.83] Re
a = 0.0237 [0.0035] AU
Ag = 1.30 [1.62] [0.19σ]
Teffp = 2690 [821] K [1.28σ]

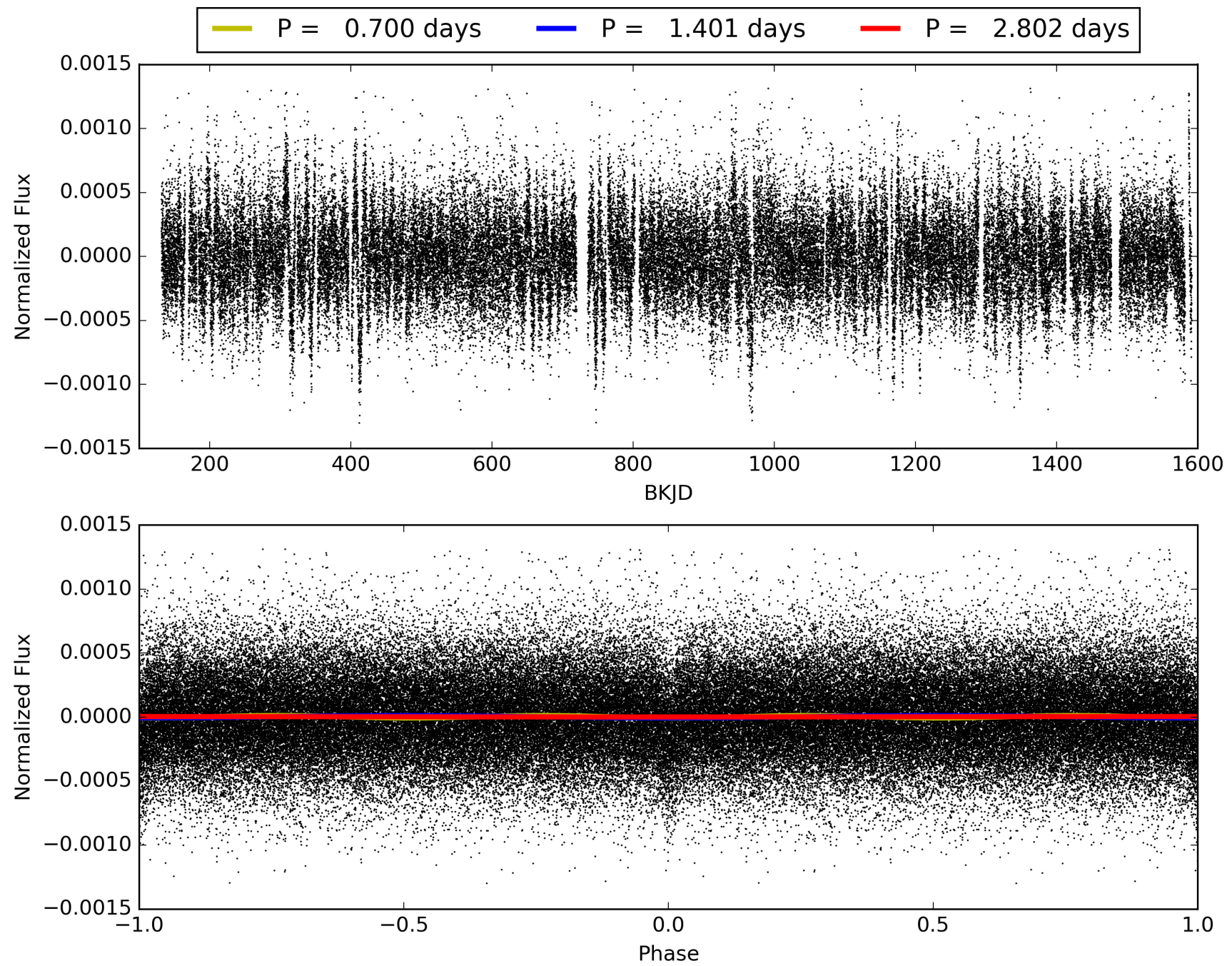
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.15e-58
RollingBand-fgt: 0.95 [870/913]
GhostDiagnostic-chr: 20.93
Centroid-sig: 0.0%
Centroid-so: 1.524 arcsec [2.85σ]
OotOffset-rm: 0.529 arcsec [1.73σ]
KicOffset-rm: 0.193 arcsec [0.58σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004547603-01, PDC Light Curves

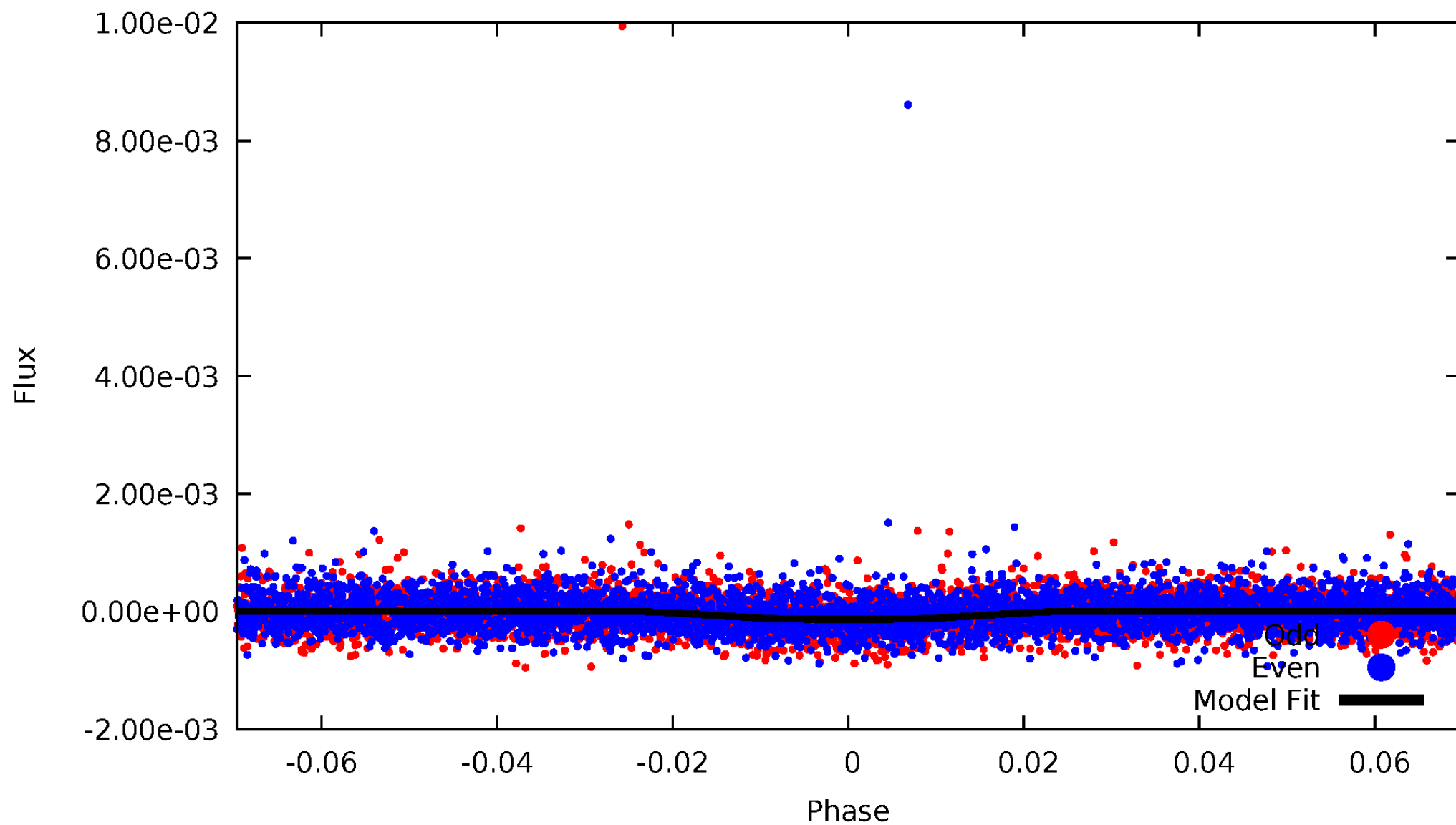


TCE 004547603-01



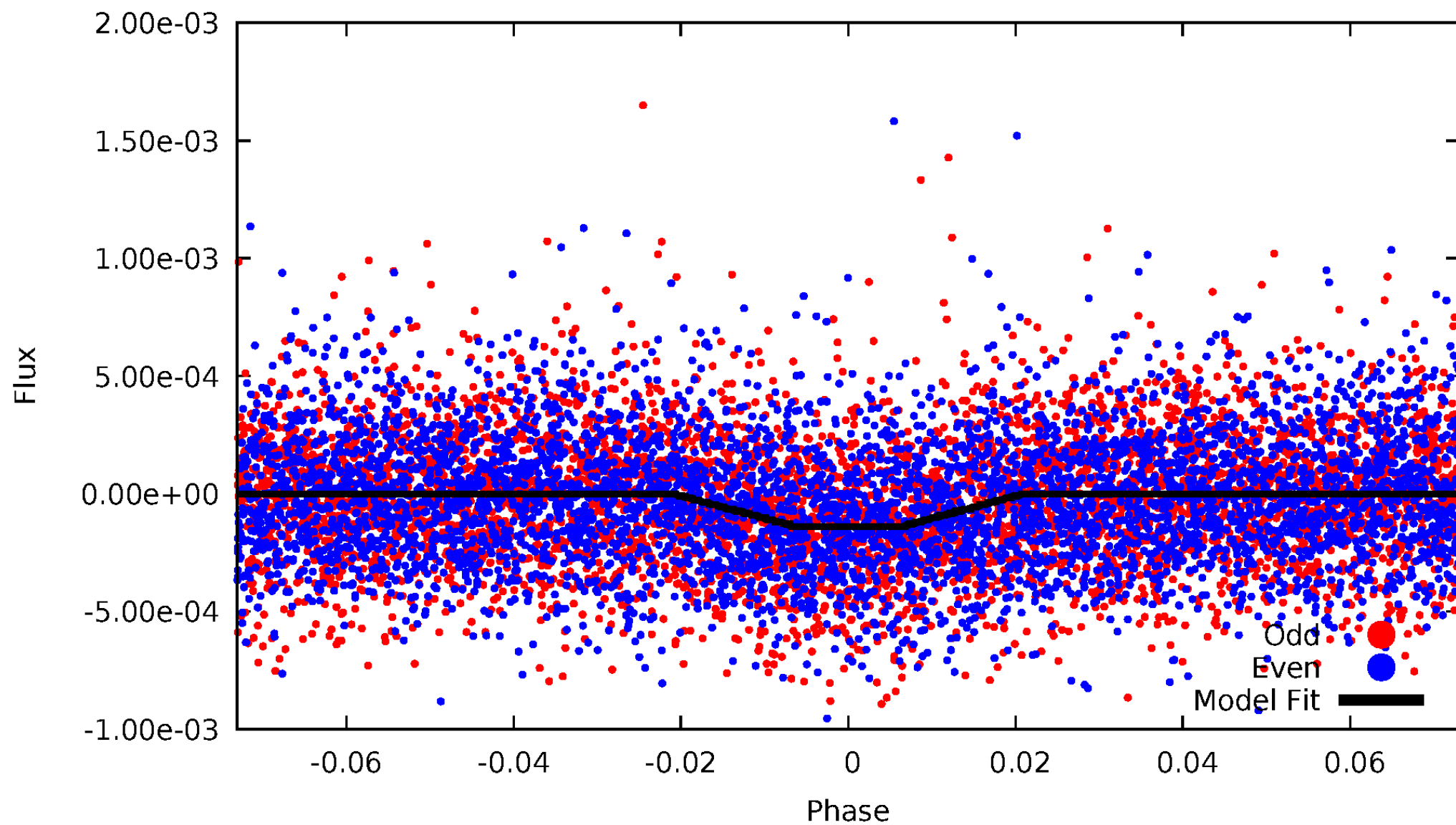
DV Odd/Even

TCE 004547603-01

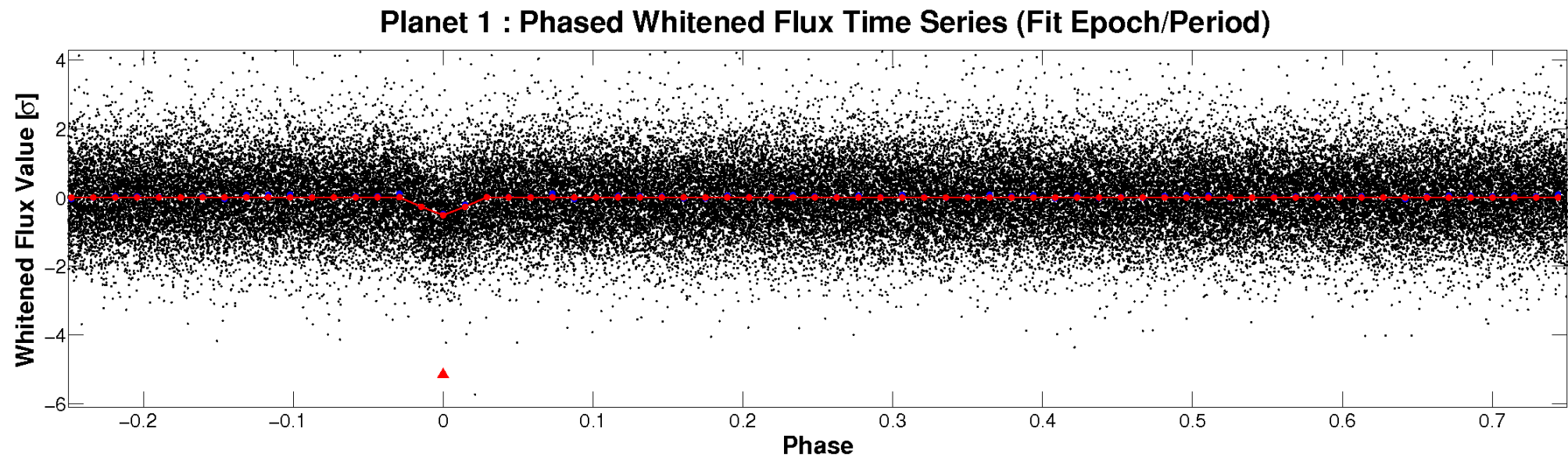
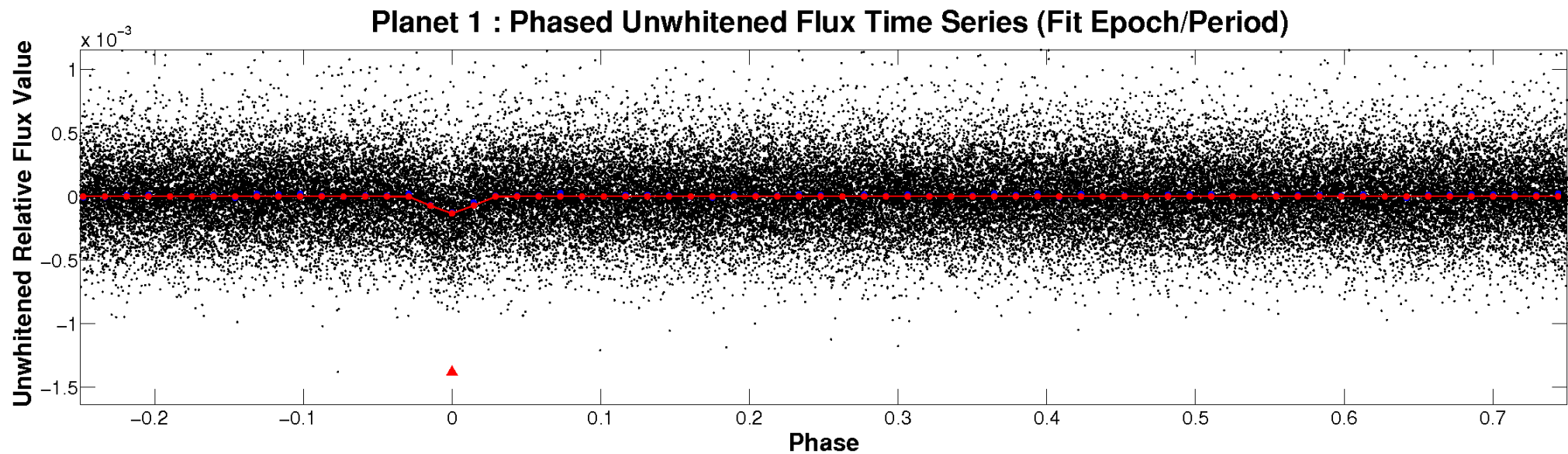


ALT Odd/Even

TCE 004547603-01

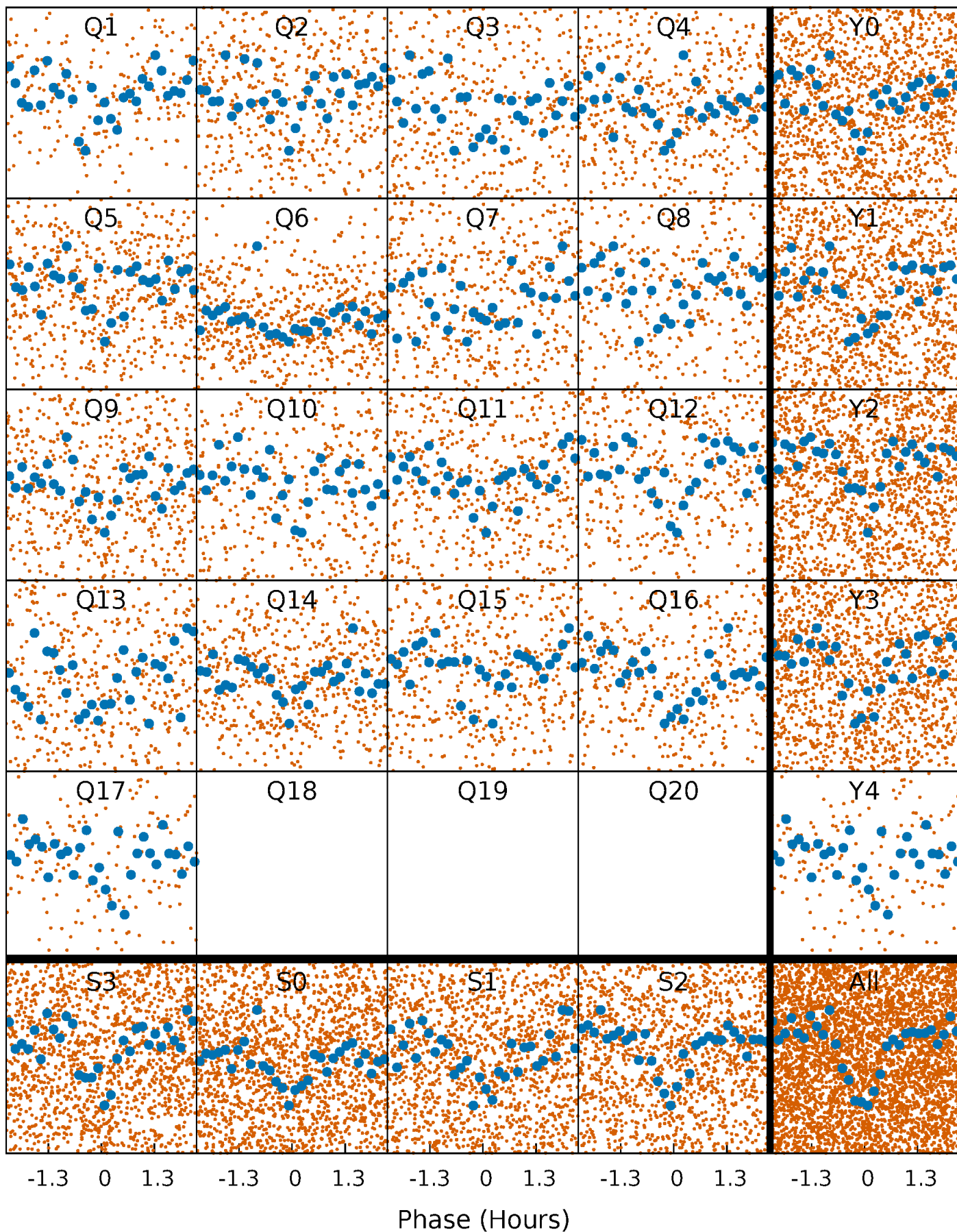


Non-Whitened Vs. Whitened Light Curve



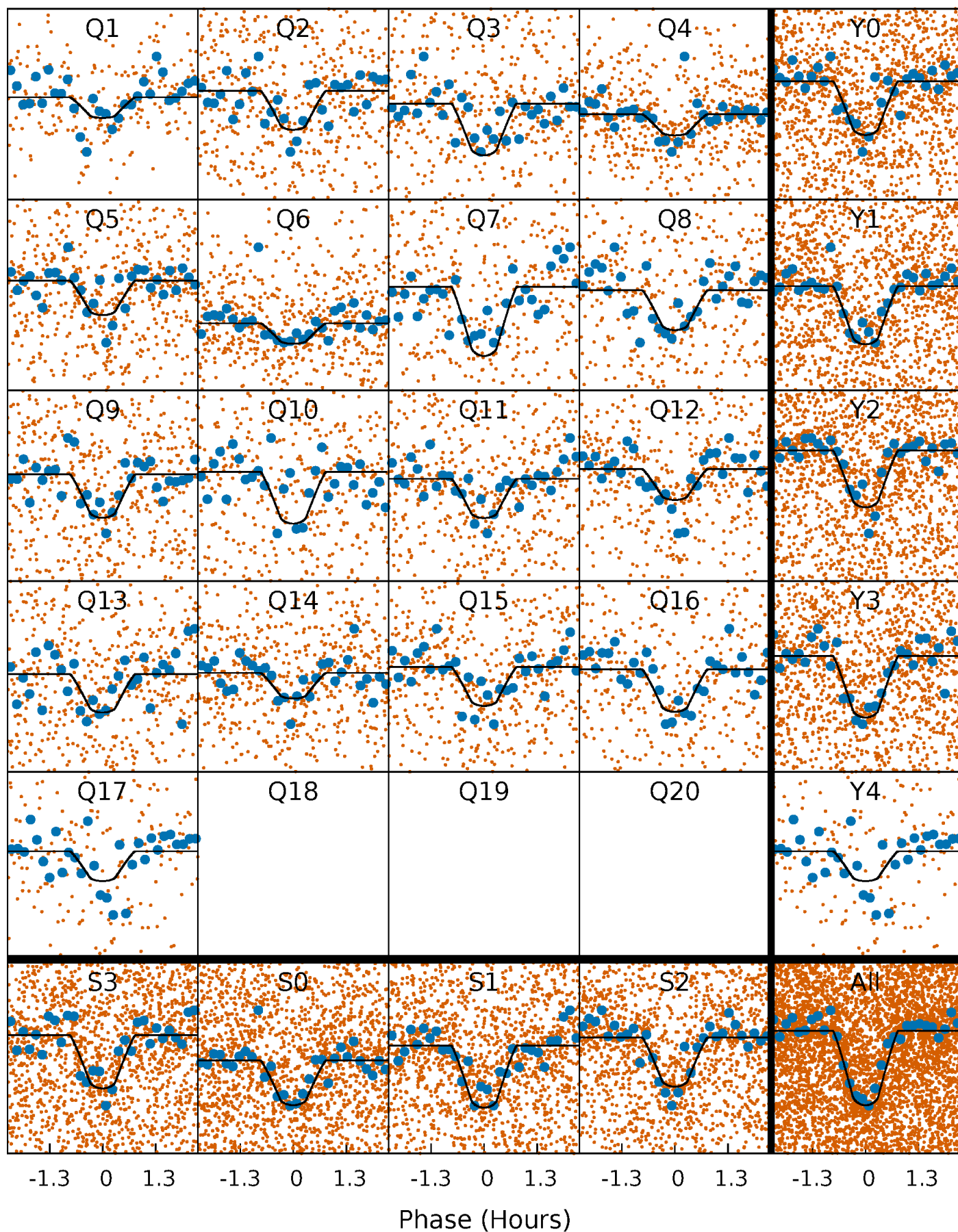
PDC Quarter-Phased Transit Curves

TCE 004547603-01 P= 1.400751 Days $T_0=132.025529$ (BKJD)



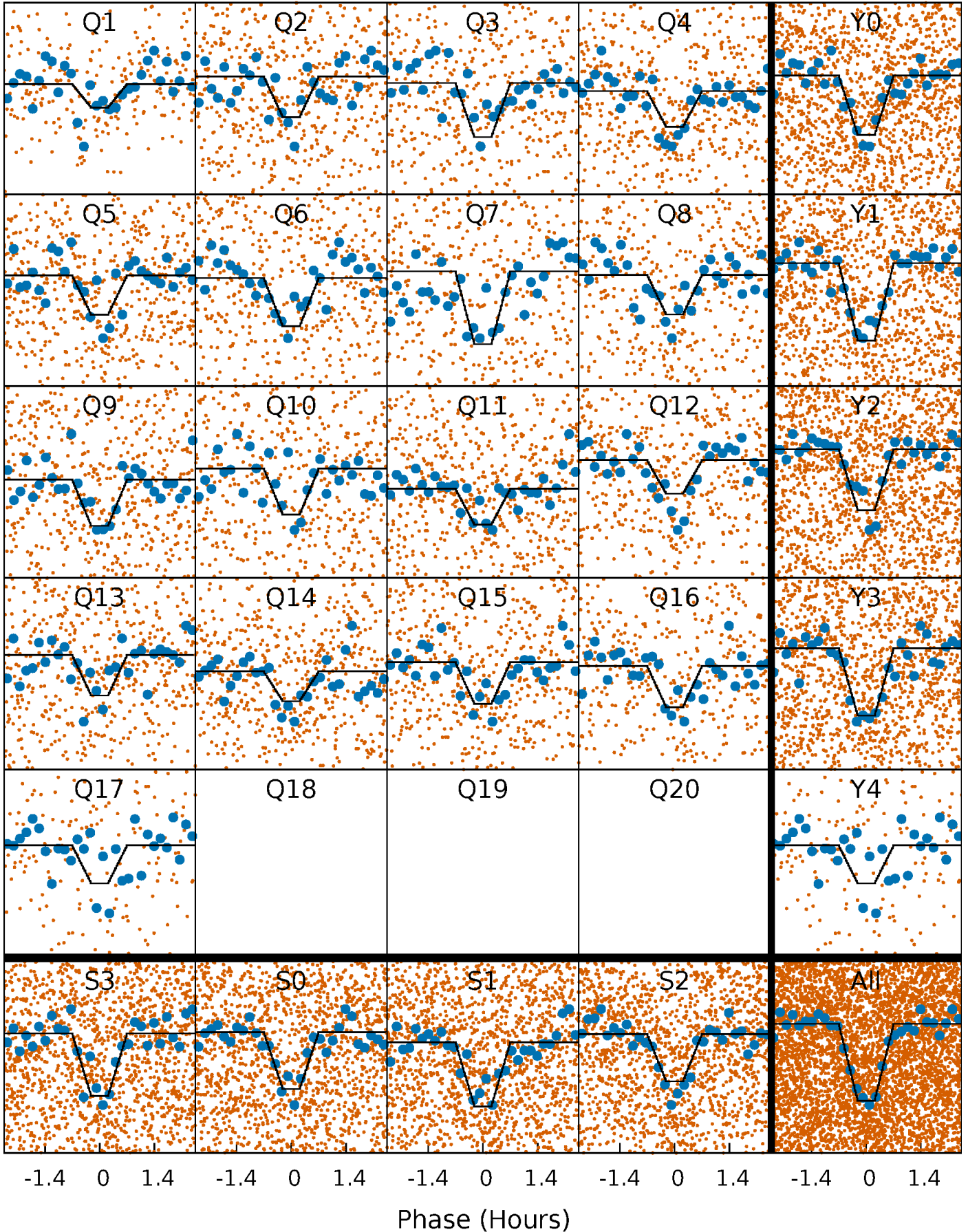
DV Quarter-Phased Transit Curves

TCE 004547603-01 P= 1.400751 Days $T_0=132.025529$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

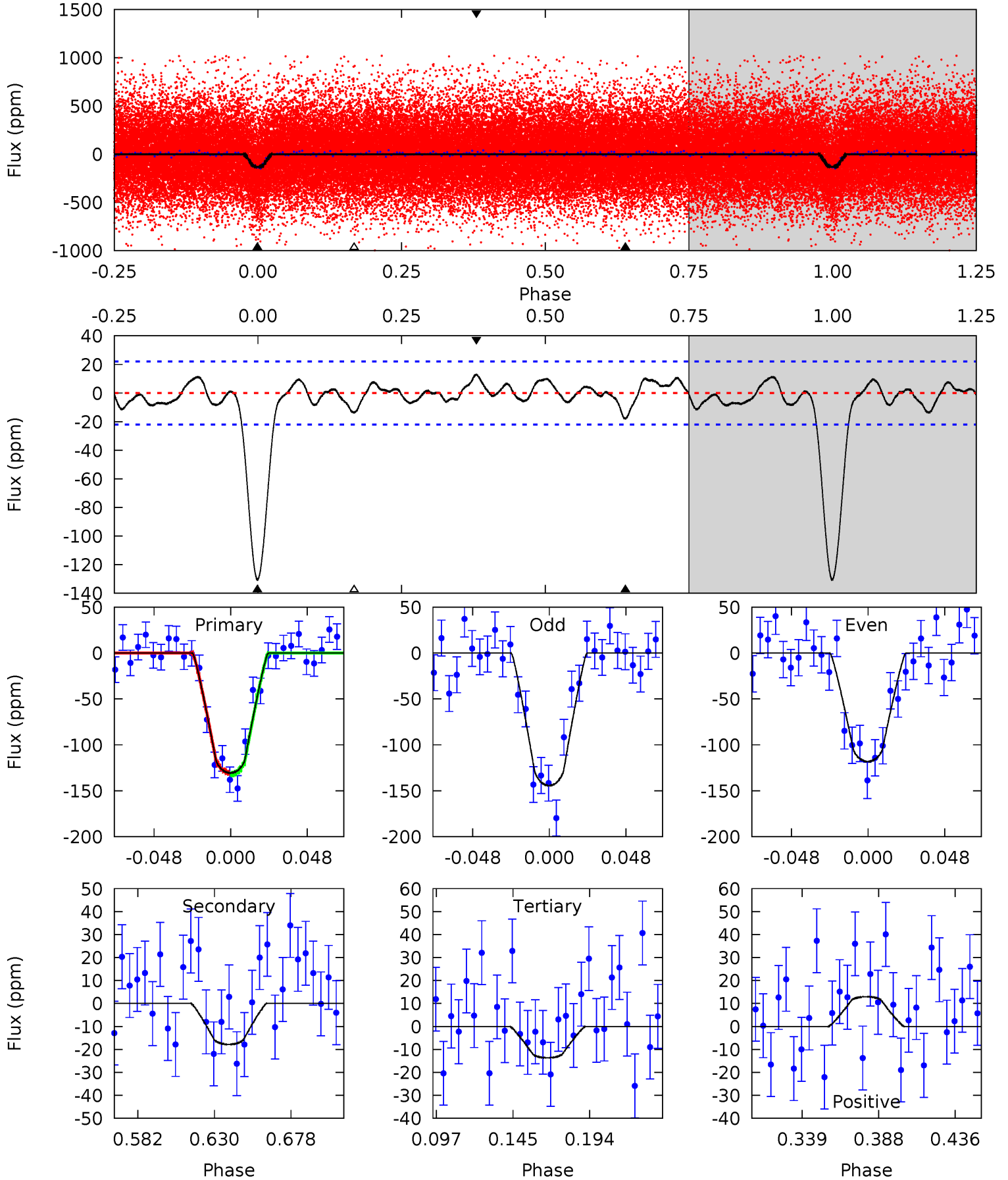
TCE 004547603-01 P= 1.400749 Days $T_0=132.024946$ (BKJD)



DV Model-Shift Uniqueness Test

004547603-01, P = 1.400751 Days, E = 130.624778 Days

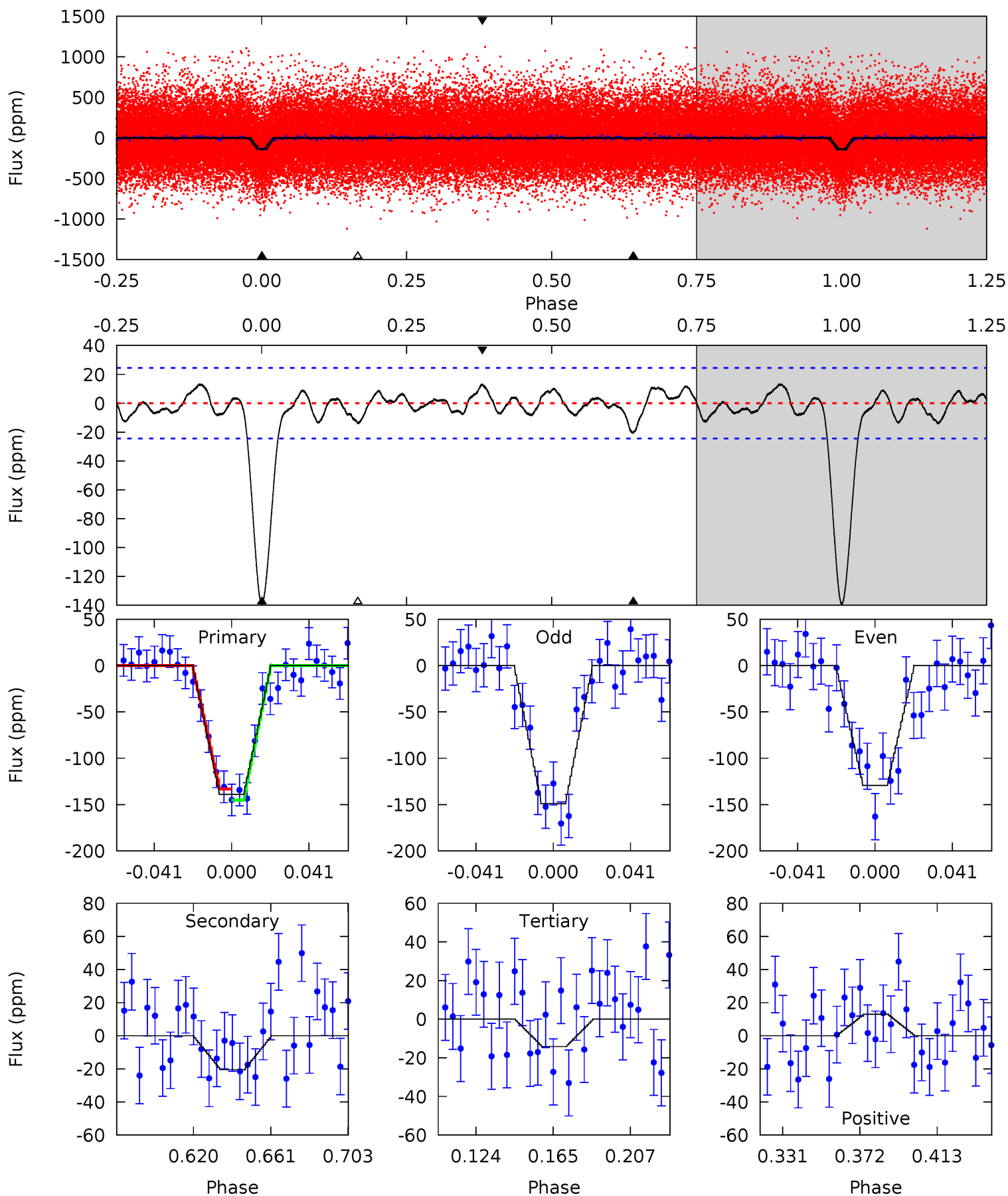
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.0	3.82	2.93	2.77	4.71	1.97	1.25	25.0	25.2	0.89	1.05	2.81	0.87	0.09	0.17



Alt Model-Shift Uniqueness Test

004547603-01, P = 1.400749 Days, E = 130.624197 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	3.97	2.75	2.52	4.75	2.04	1.19	24.3	24.5	1.22	1.45	1.93	0.93	0.09	1.16



Stellar Parameters For KIC 004547603

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5487^{+82}_{-74}	$4.333^{+0.143}_{-0.104}$	$0.120^{+0.150}_{-0.150}$	$1.072^{+0.156}_{-0.156}$	$0.902^{+0.068}_{-0.039}$	$1.031^{+0.625}_{-0.333}$
	+1%/-1%	+3%/-2%	+125%/-125%	+15%/-15%	+8%/-4%	+61%/-32%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 004547603-01 / KOI 2855.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 5	$1.52^{+0.75}_{-0.77}$	2270^{+98}_{-102}	3492^{+1151}_{-490}	$2.437^{+7.909}_{-1.384}$
Alt.	-20 ± 5	$1.41^{+0.80}_{-0.80}$	2269^{+102}_{-103}	3691^{+1363}_{-600}	$3.228^{+13.597}_{-2.021}$

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

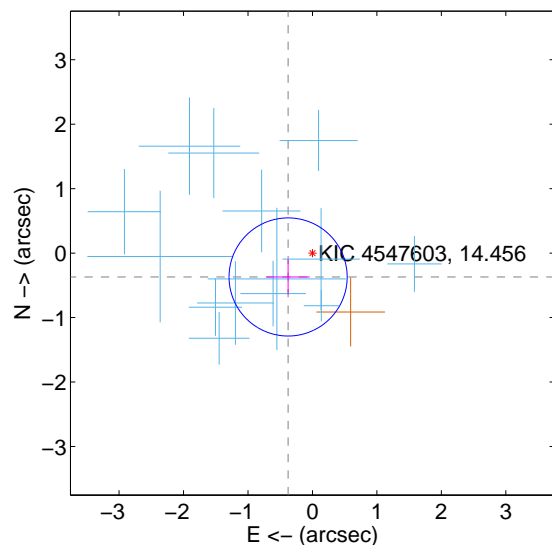
Supplemental centroid analysis for 004547603-01. Kepler magnitude: 14.46. Transit SNR 19.92

There are 14 quarters with good PRF difference image offsets

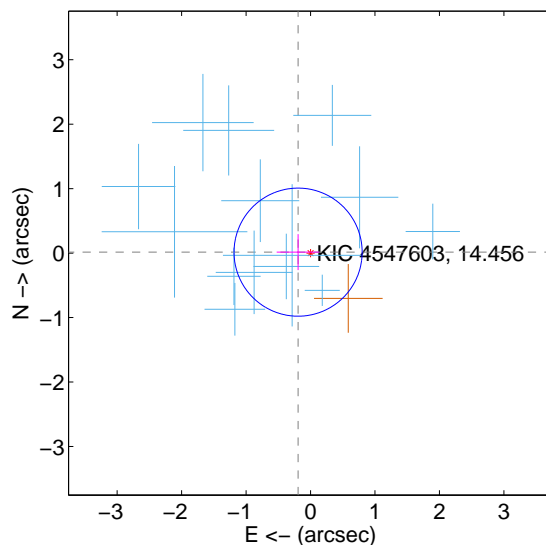
The direct PRF centroid is offset from the target star catalog position by about 0.53 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.529 ± 0.305	1.73	0.377 ± 0.336	-0.370 ± 0.269
PRF-fit source offset from KIC position	0.193 ± 0.331	0.58	0.193 ± 0.331	0.015 ± 0.279
photometric centroid source offset	1.52 ± 0.53	2.85	0.03 ± 0.55	-1.52 ± 0.53

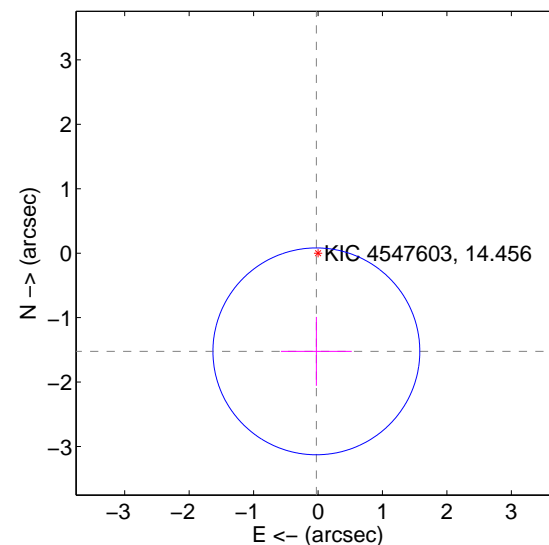
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

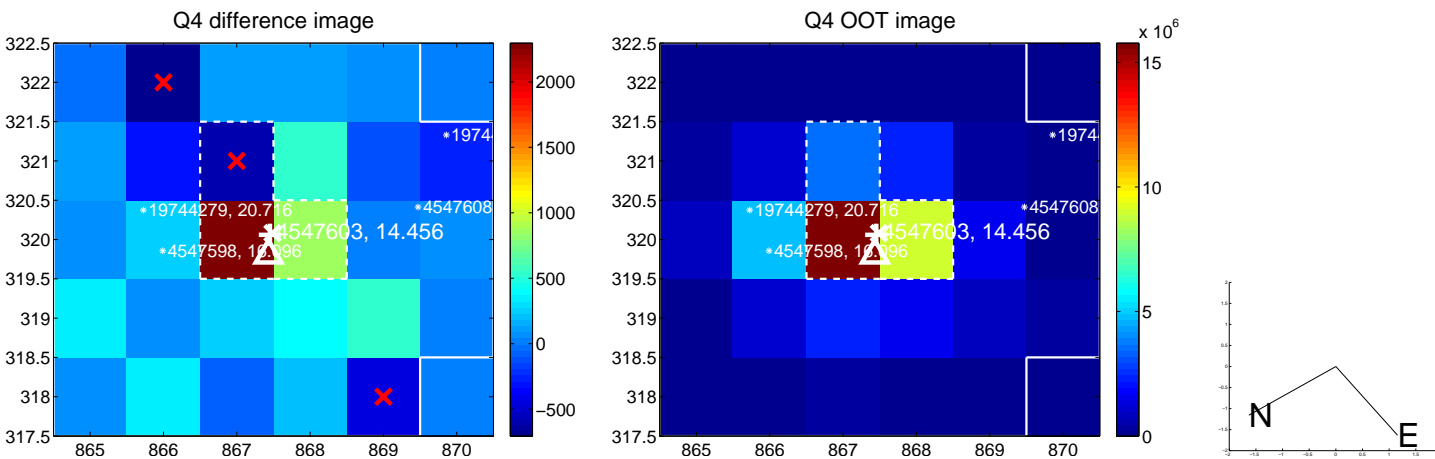
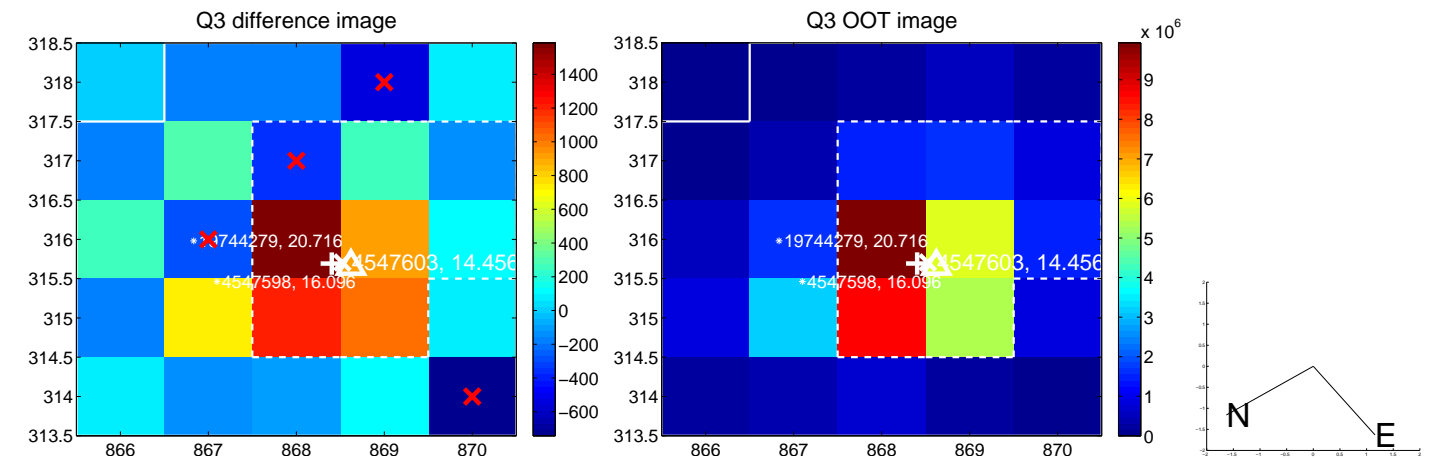
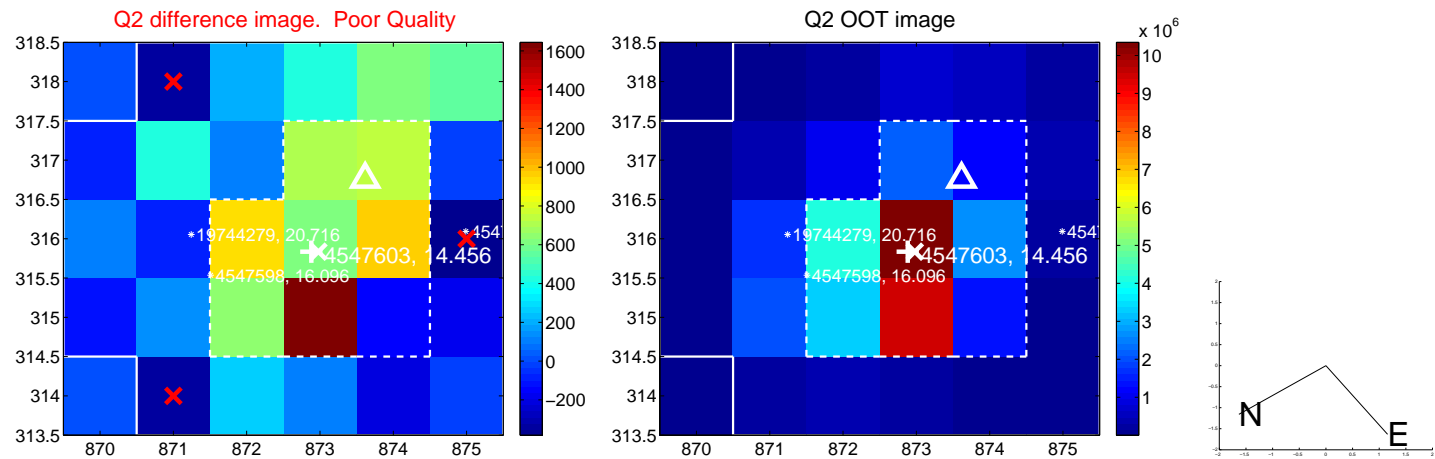
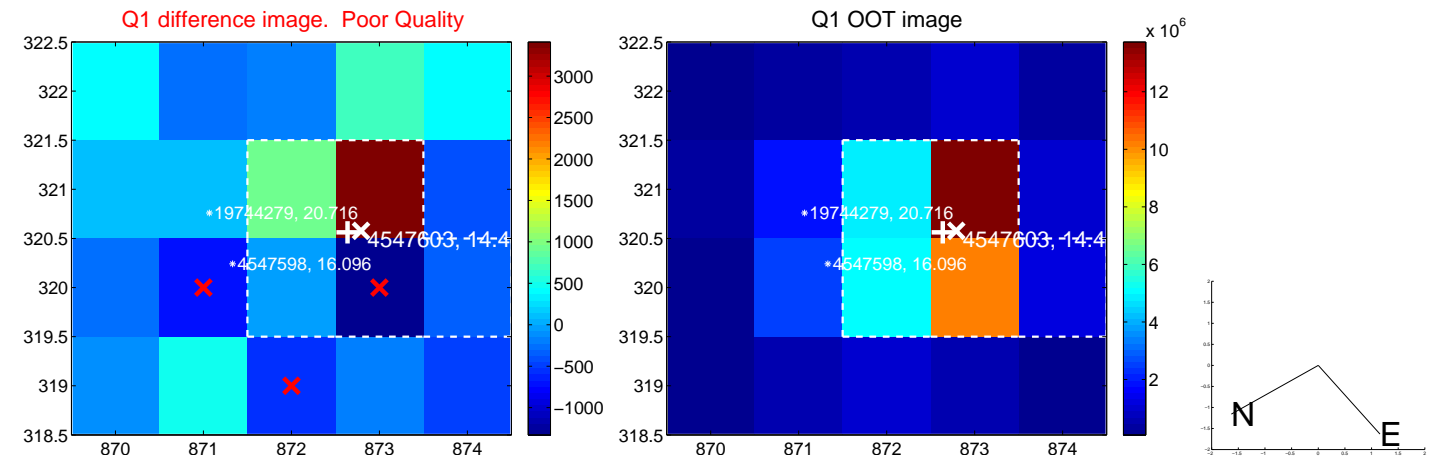


offset from photometric centroids

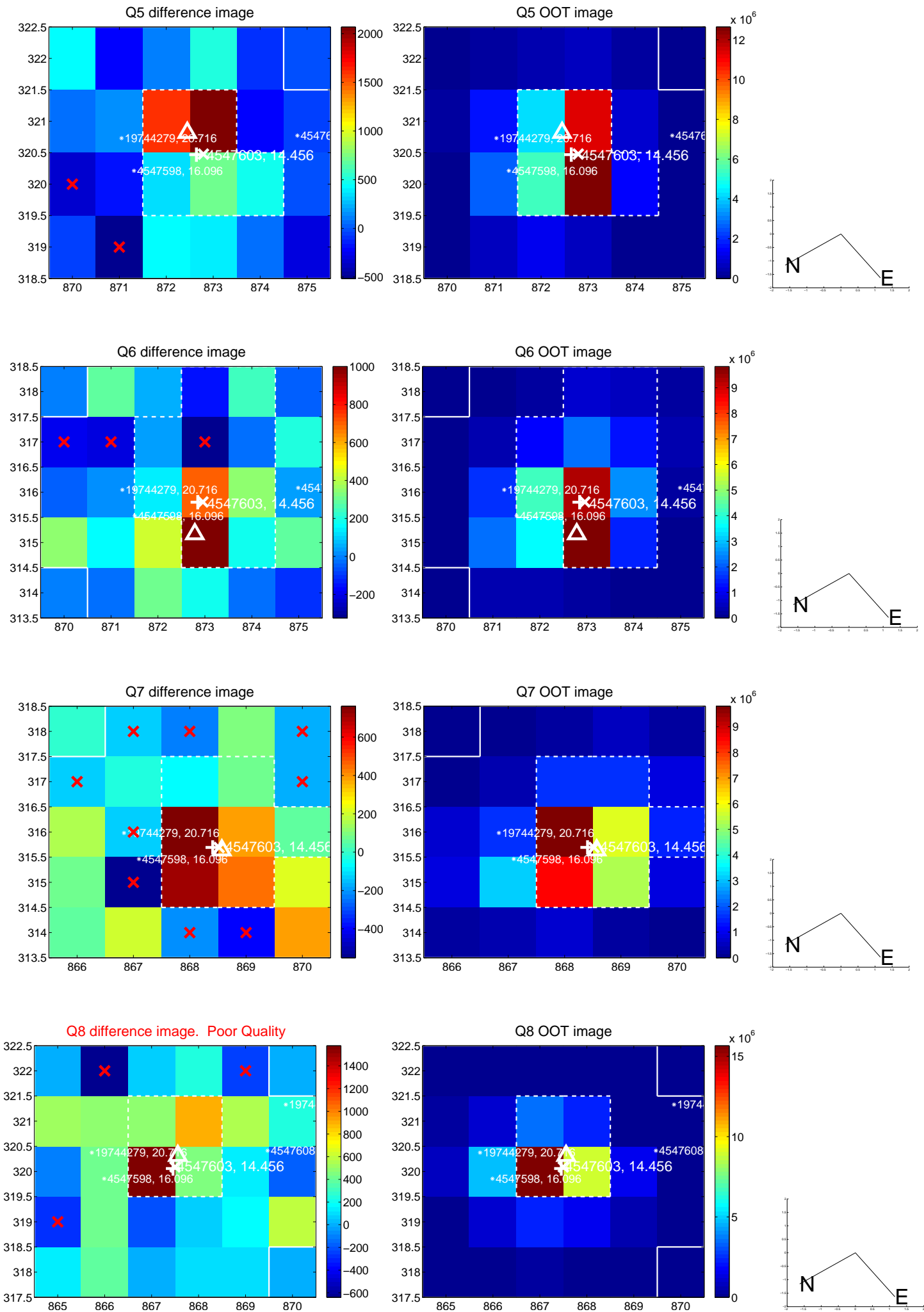


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

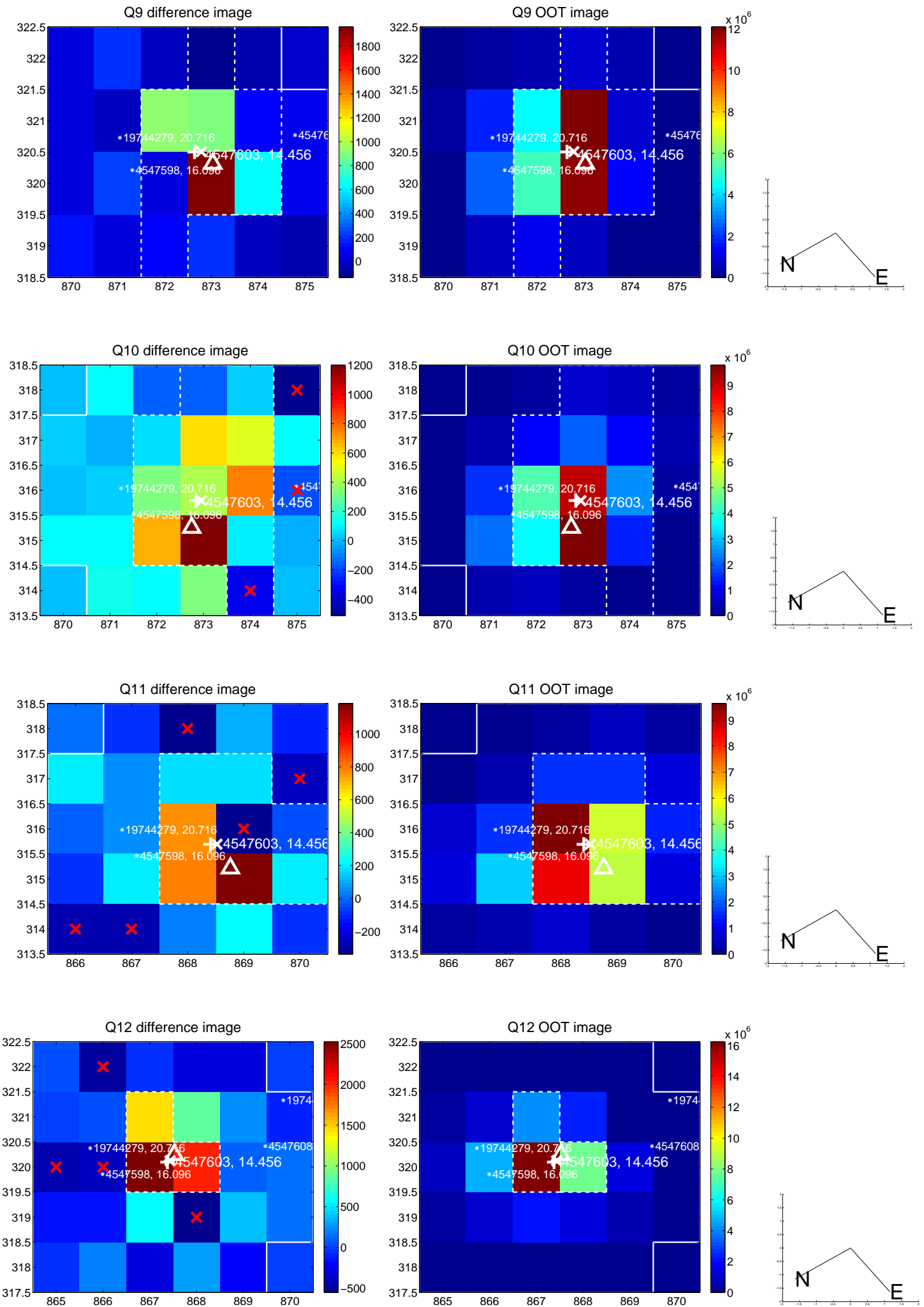
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



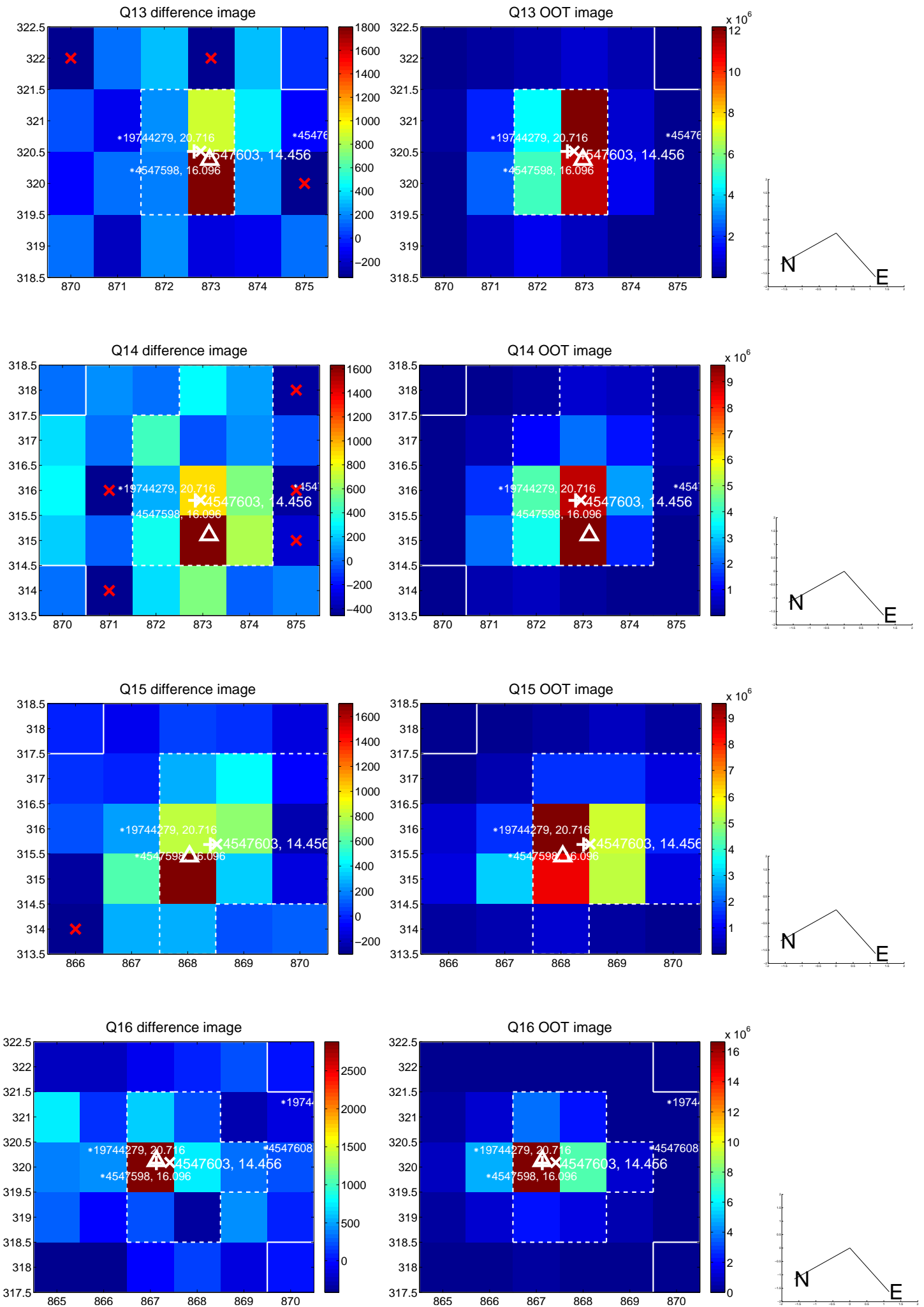
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



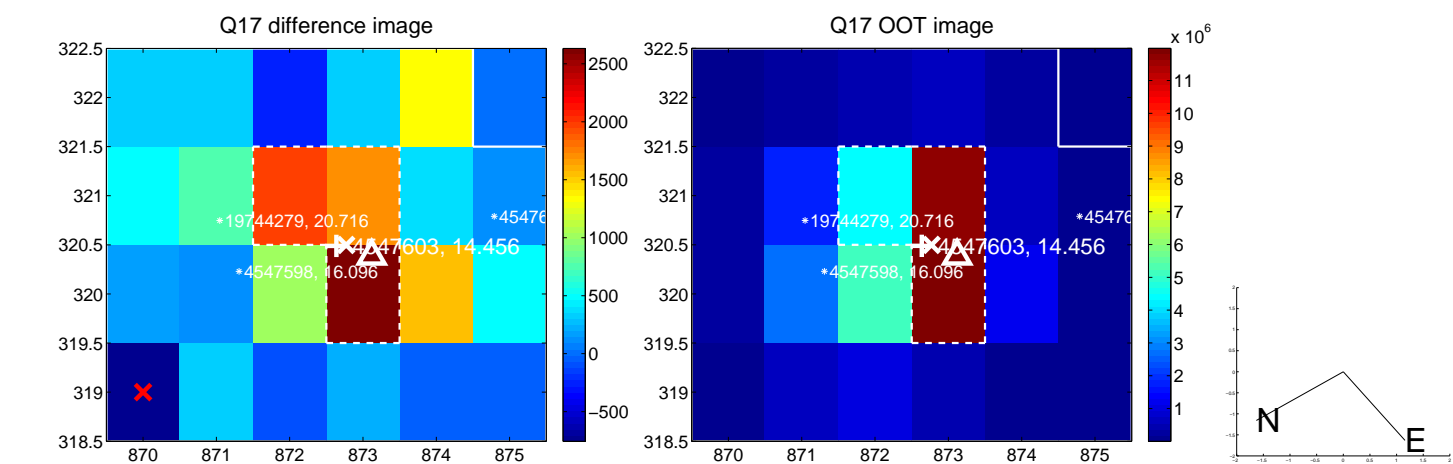
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



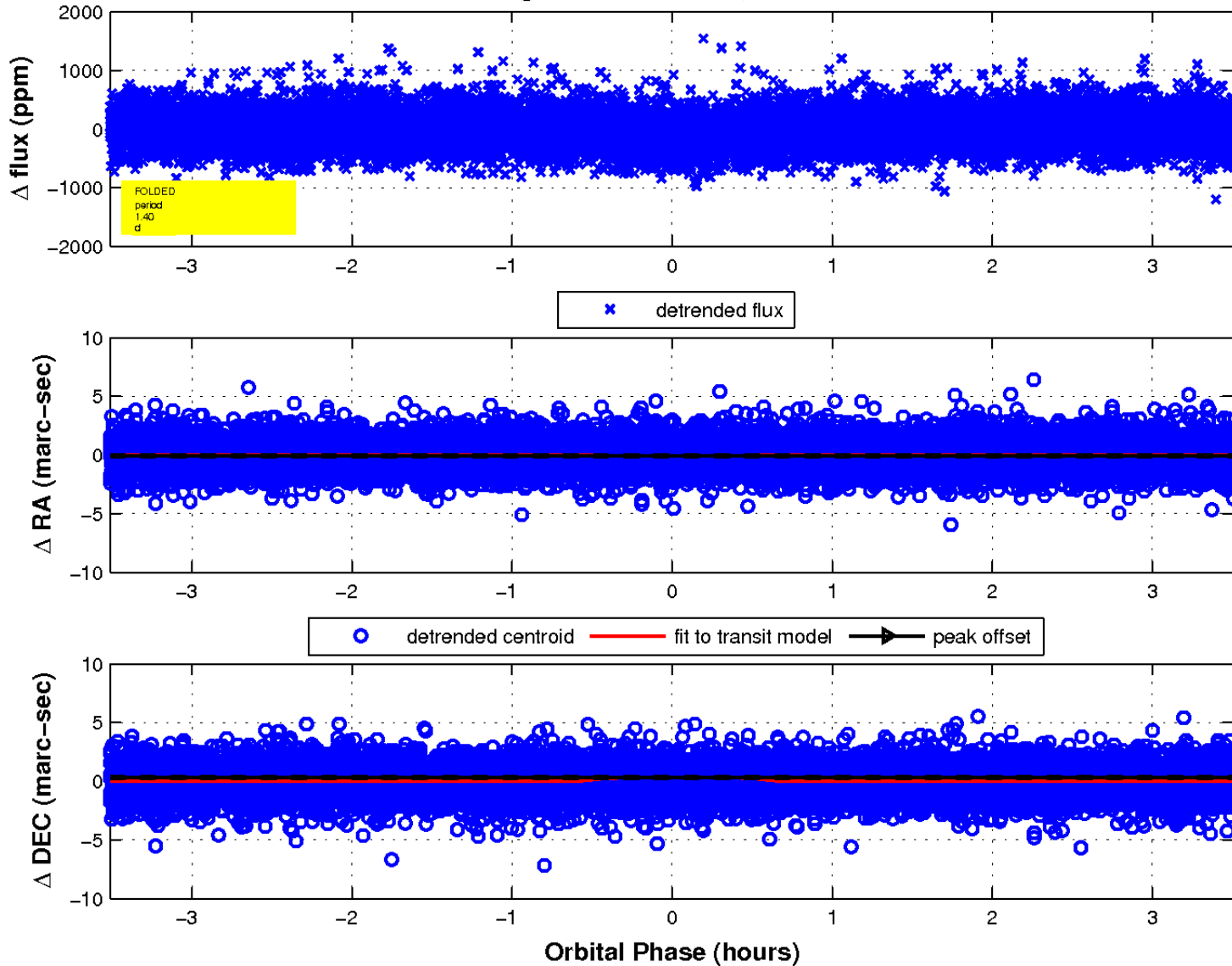
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

