

KIC 004945035

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})
004945035-01	OBS	5108.01	1.174667	131.841041	187.8	1.894	29.9	45.4	1.14	5974	1.85	3091.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004945035-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_UNRESOLVED_OFFSET

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 004945035-01

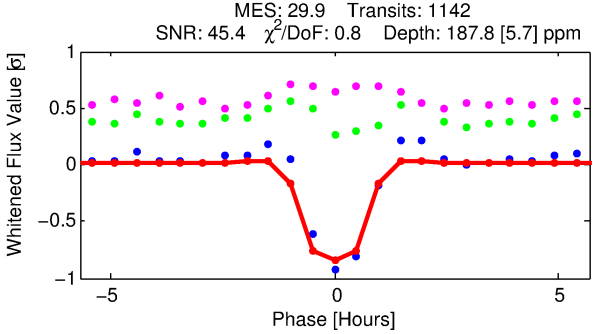
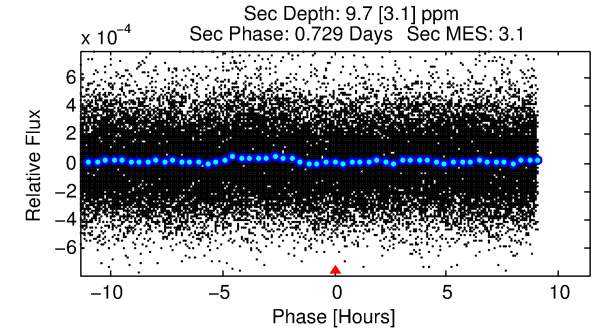
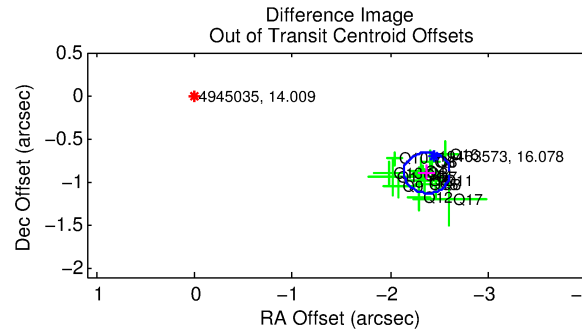
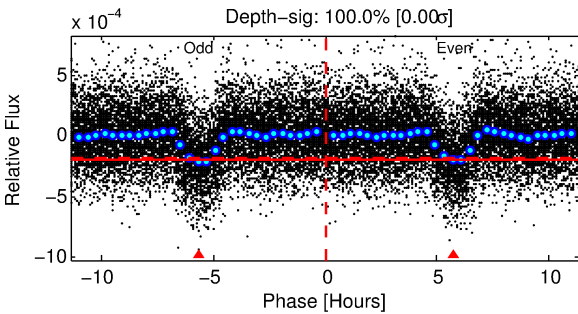
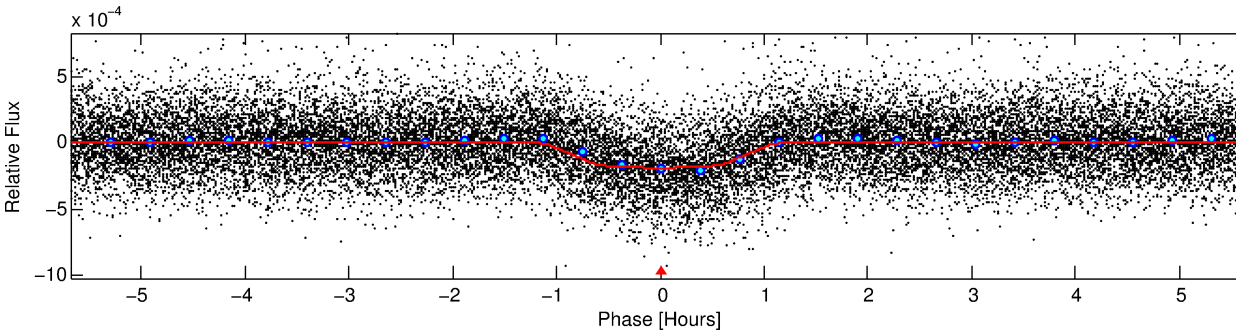
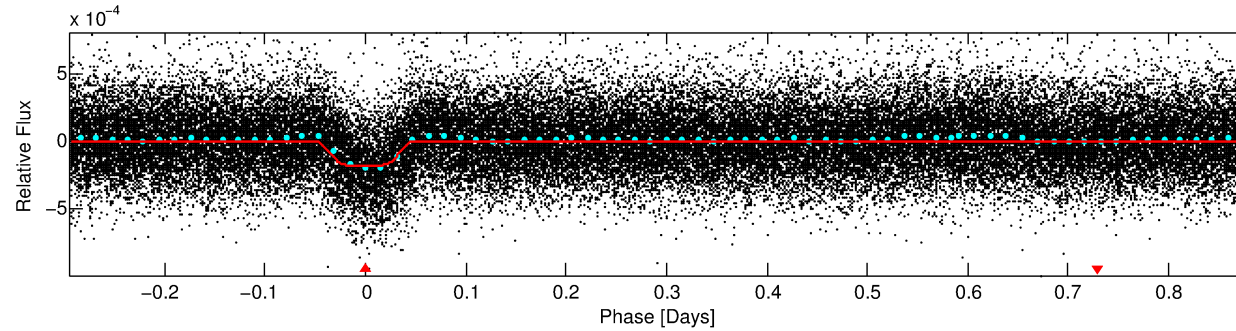
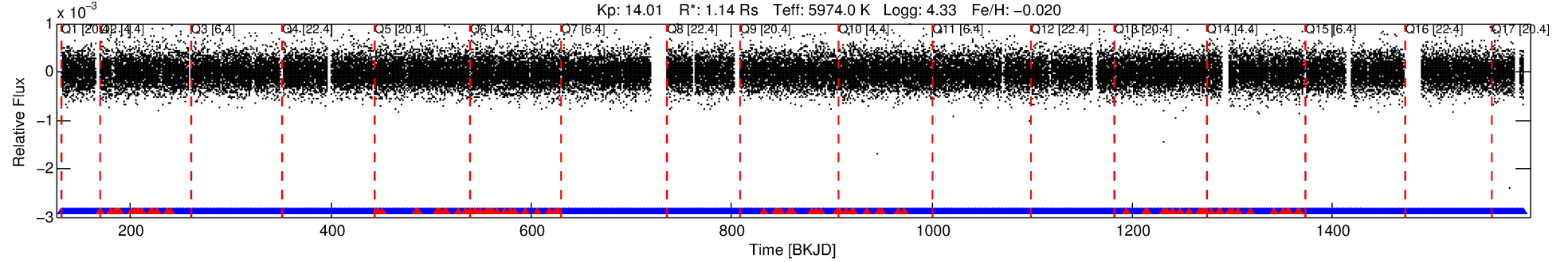
No Significant Match Found

DV One-Page Summary

KIC: 4945035 Candidate: 1 of 1 Period: 1.175 d

KOI: K05108.01 Corr: 0.852

Kp: 14.01 R*: 1.14 Rs Teff: 5974.0 K Logg: 4.33 Fe/H: -0.020



DV Fit Results:

Period = 1.17467 [0.00000] d
Epoch = 131.8410 [0.0006] BKJD
Rp/R* = 0.0149 [0.0024]
a/R* = 2.41 [1.60]
b = 0.90 [0.17]
Seff = 3091.00 [1198.70]
Teq = 1901 [184] K
Rp = 1.86 [0.63] Re
a = 0.0220 [0.0055] AU
Ag = 0.75 [0.43] [-0.59σ]
Teffp = 2732 [321] K [2.24σ]

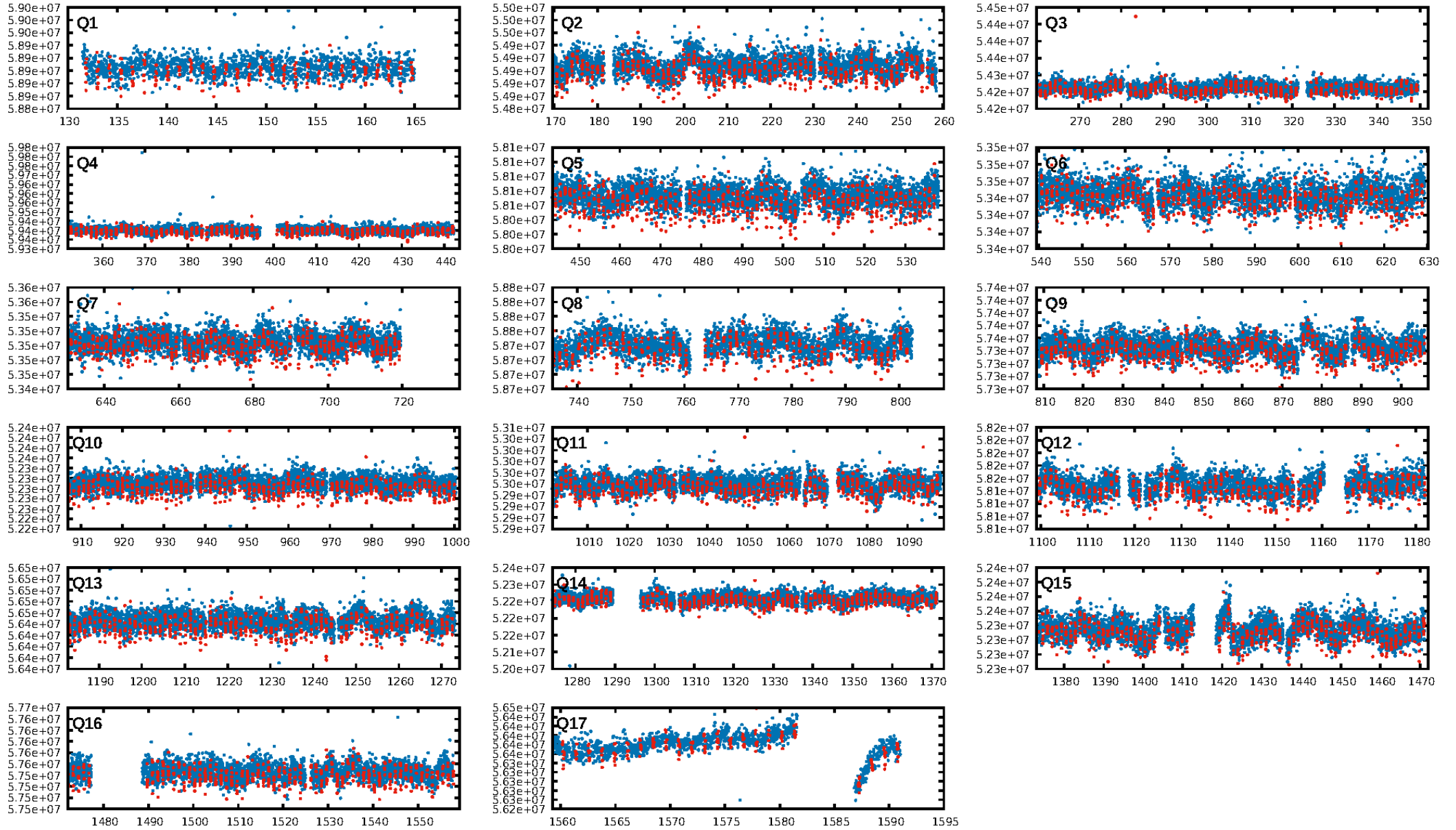
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.10e-182
RollingBand-fgt: 0.92 [1000/1090]
GhostDiagnostic-chr: 1.354
Centroid-sig: 0.0%
Centroid-so: 4.324 arcsec [15.03σ]
OotOffset-rm: 2.535 arcsec [32.12σ]
KicOffset-rm: 2.599 arcsec [32.92σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

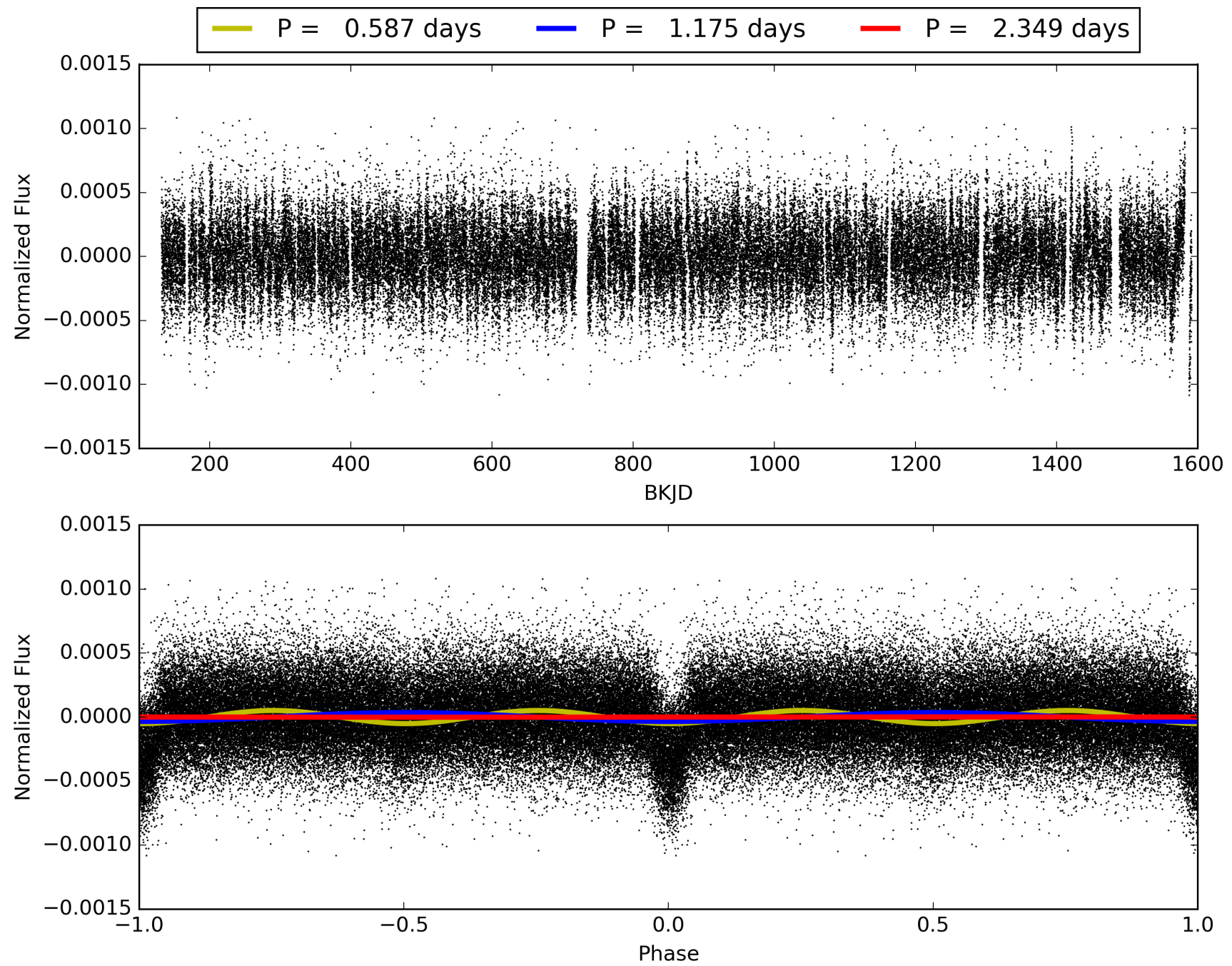
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:50:34 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004945035-01, PDC Light Curves

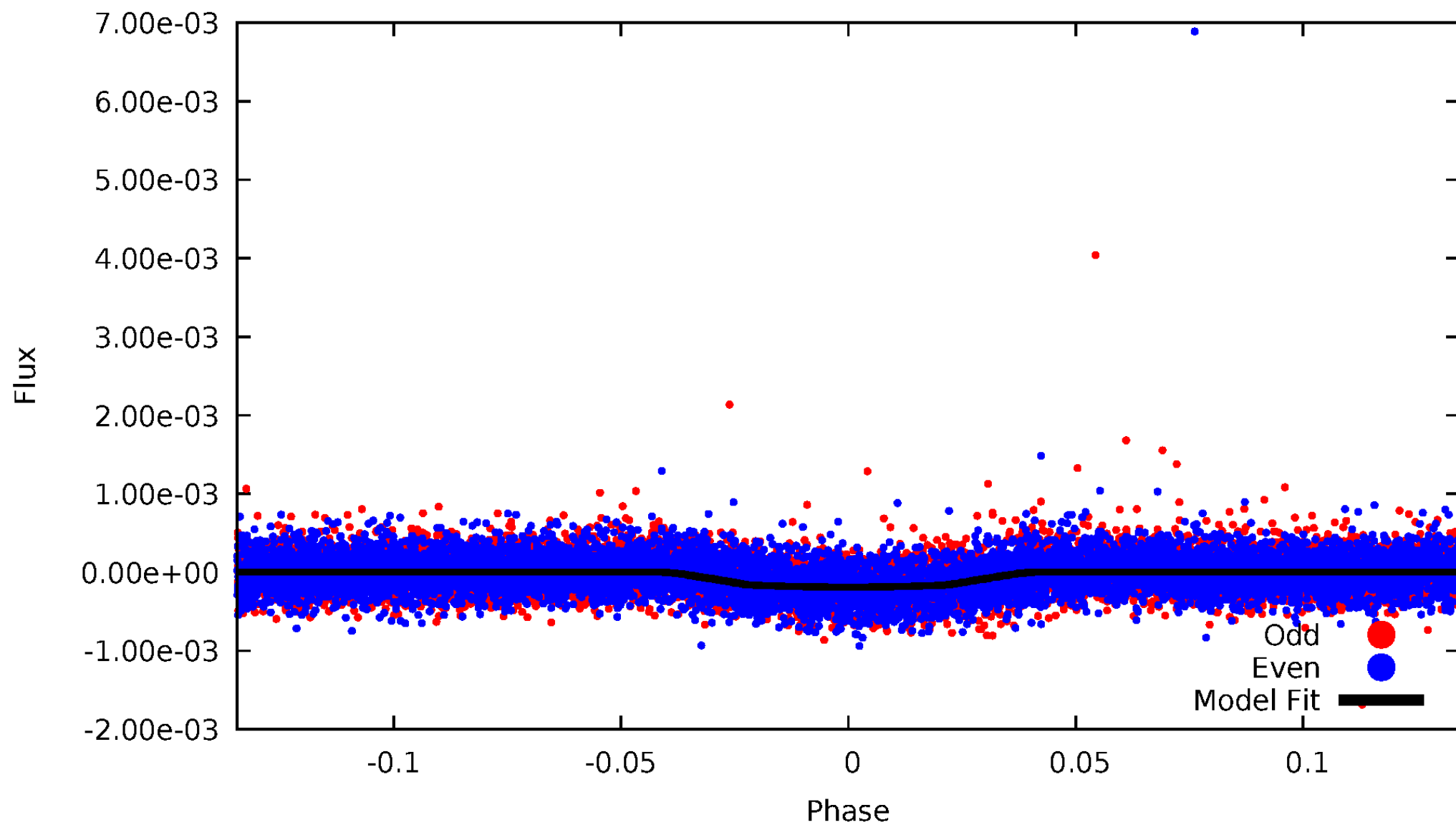


TCE 004945035-01



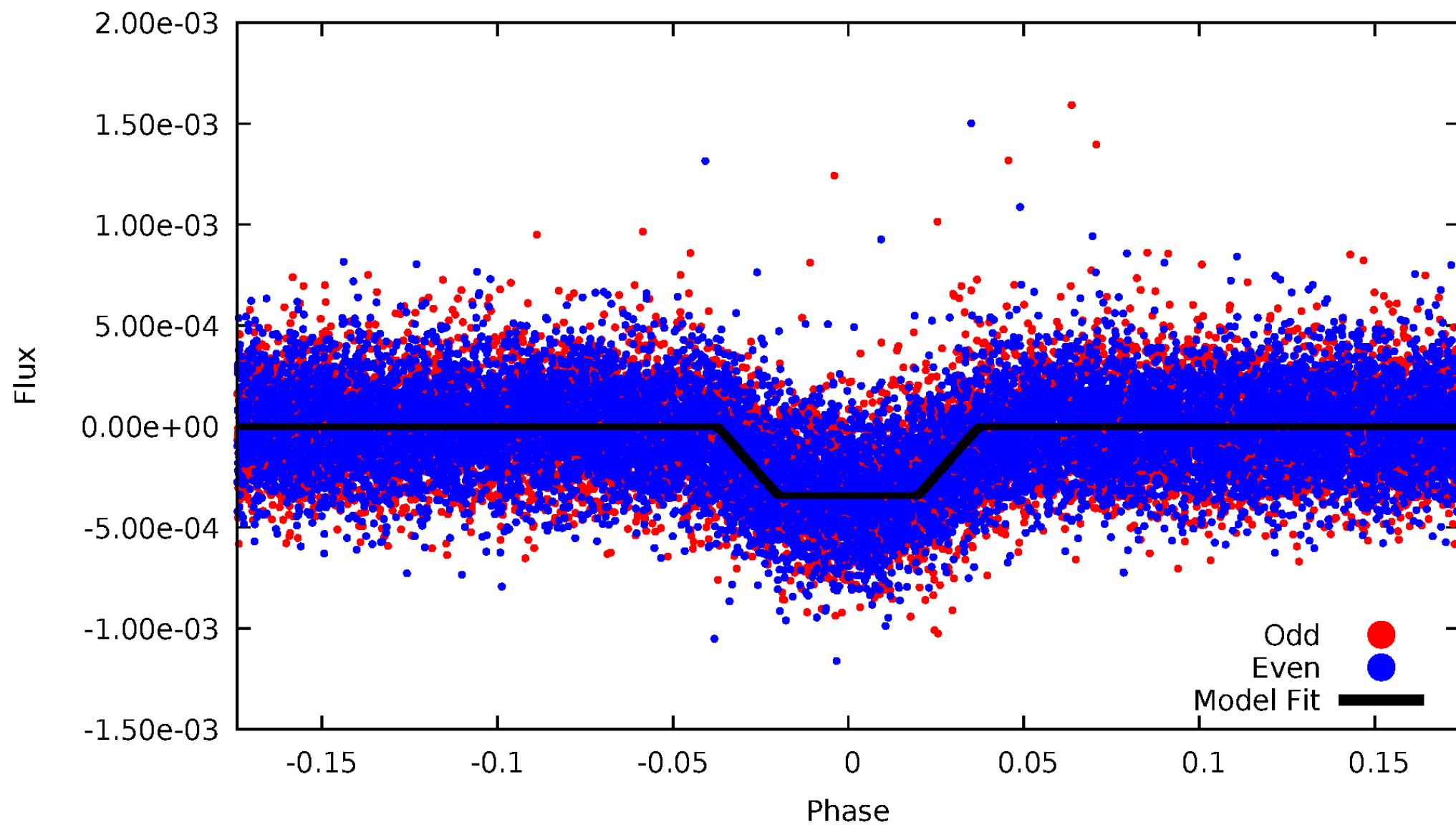
DV Odd/Even

TCE 004945035-01



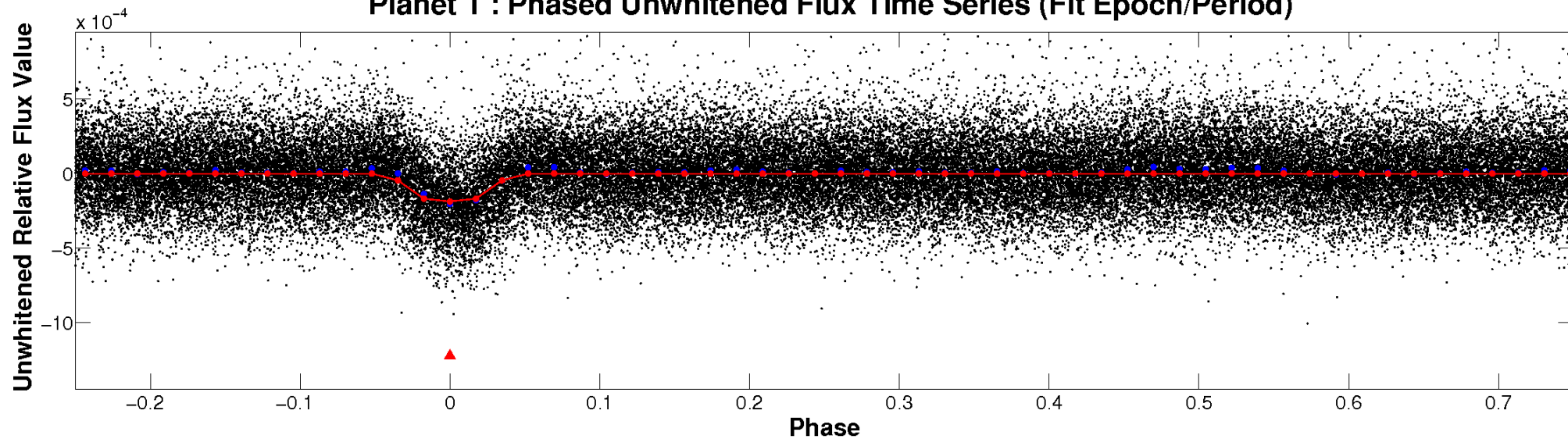
ALT Odd/Even

TCE 004945035-01

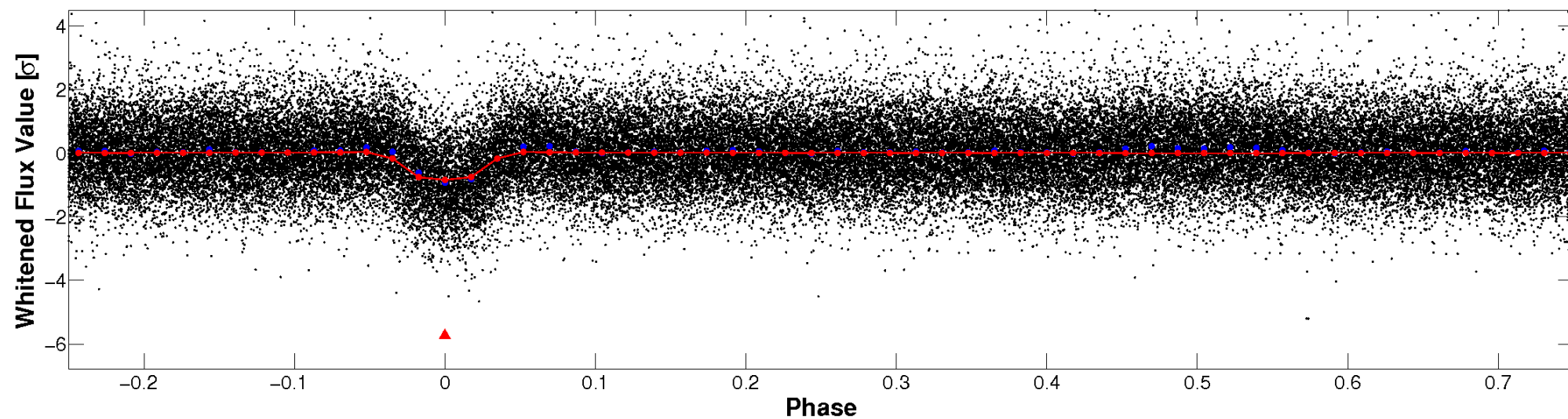


Non-Whitened Vs. Whitened Light Curve

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

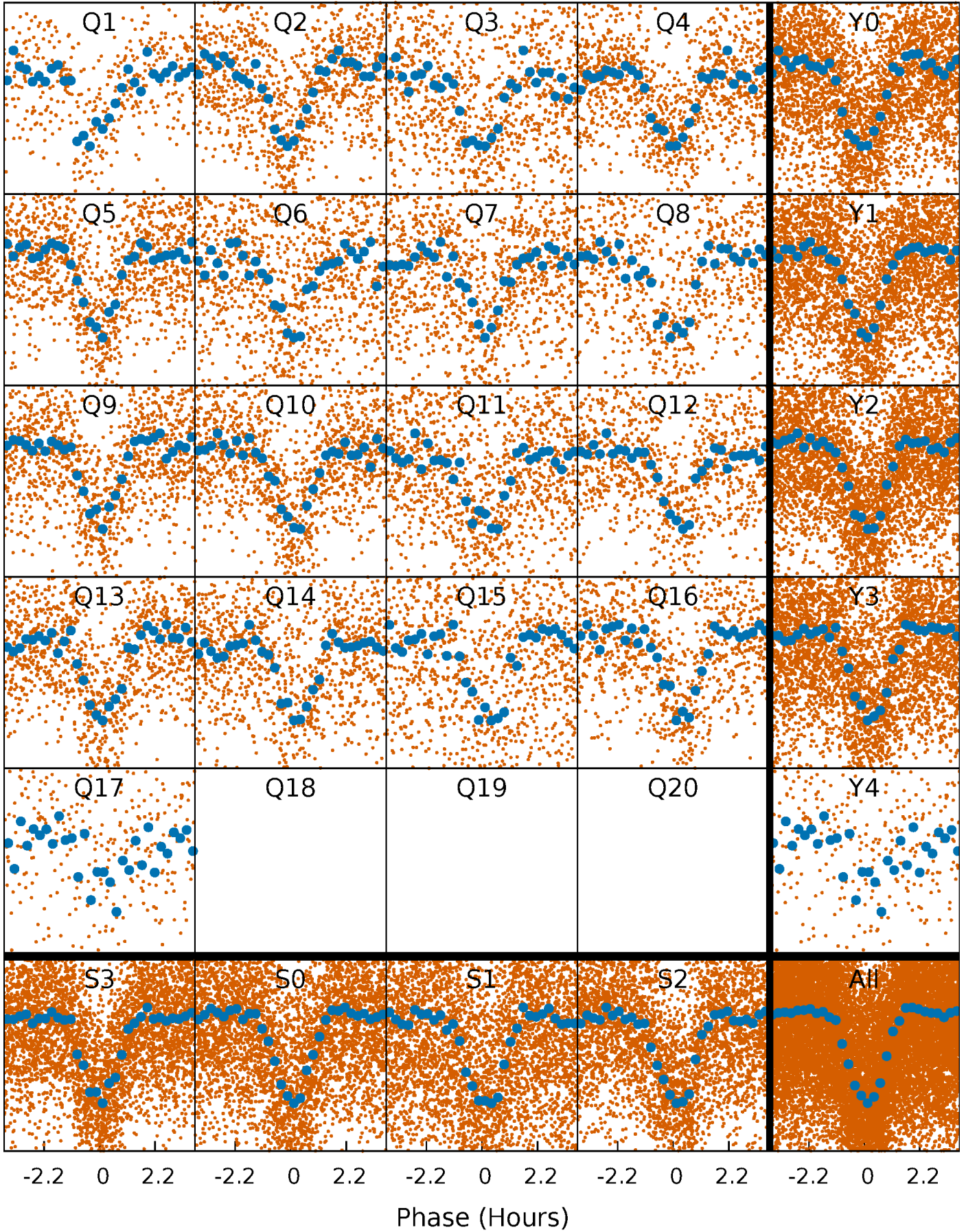


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



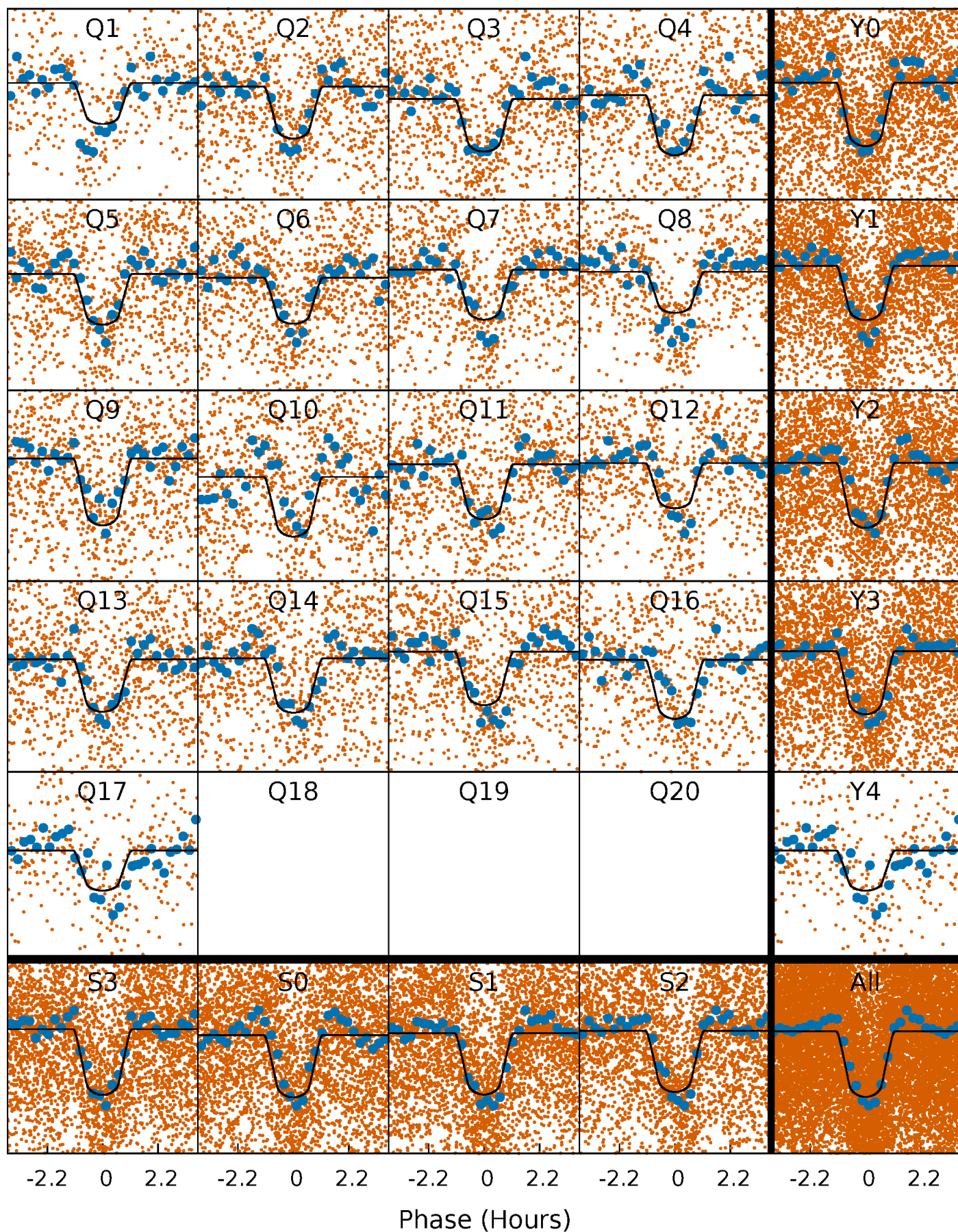
PDC Quarter-Phased Transit Curves

TCE 004945035-01 P= 1.174667 Days $T_0=131.841041$ (BKJD)



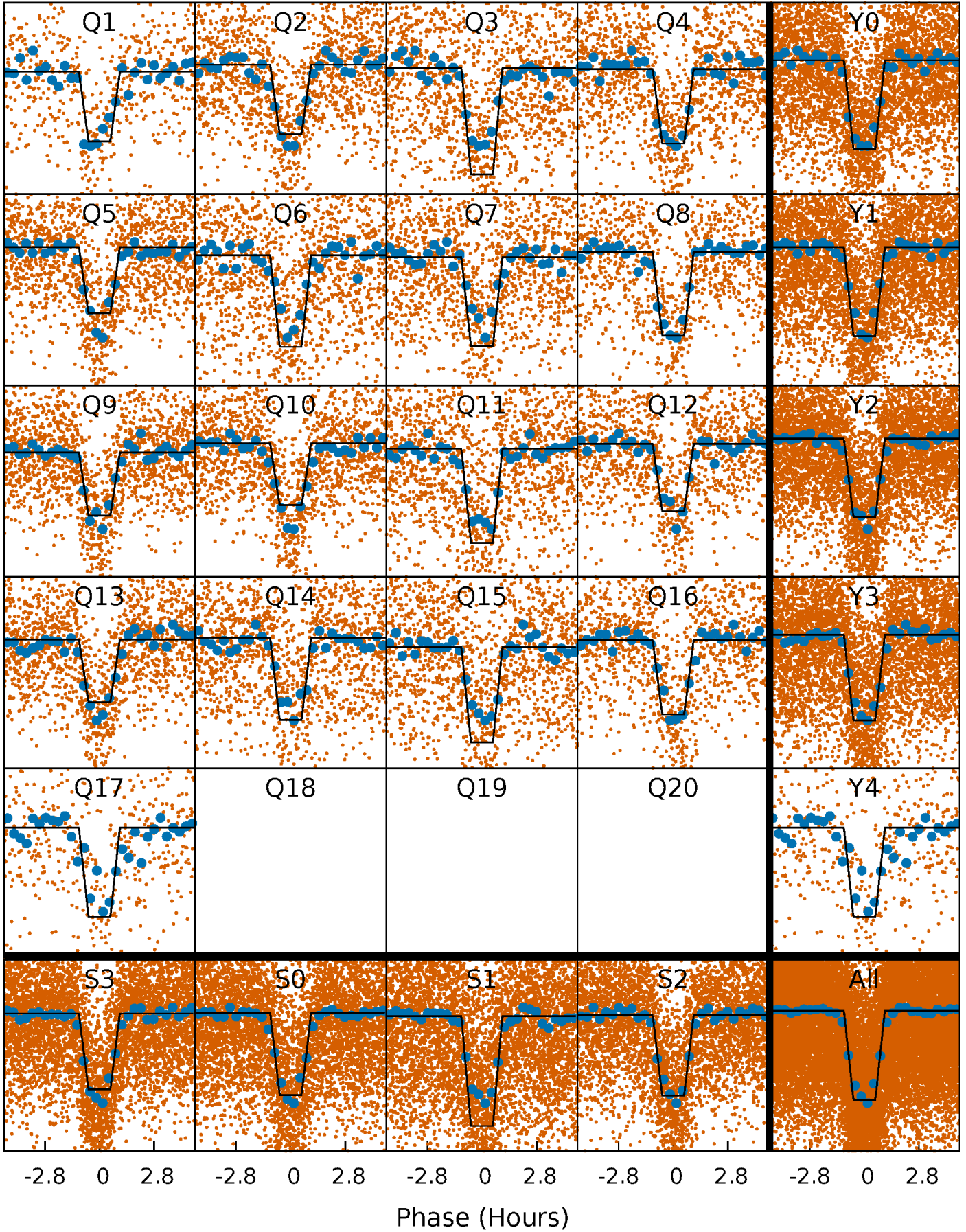
DV Quarter-Phased Transit Curves

TCE 004945035-01 P= 1.174667 Days $T_0=131.841041$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

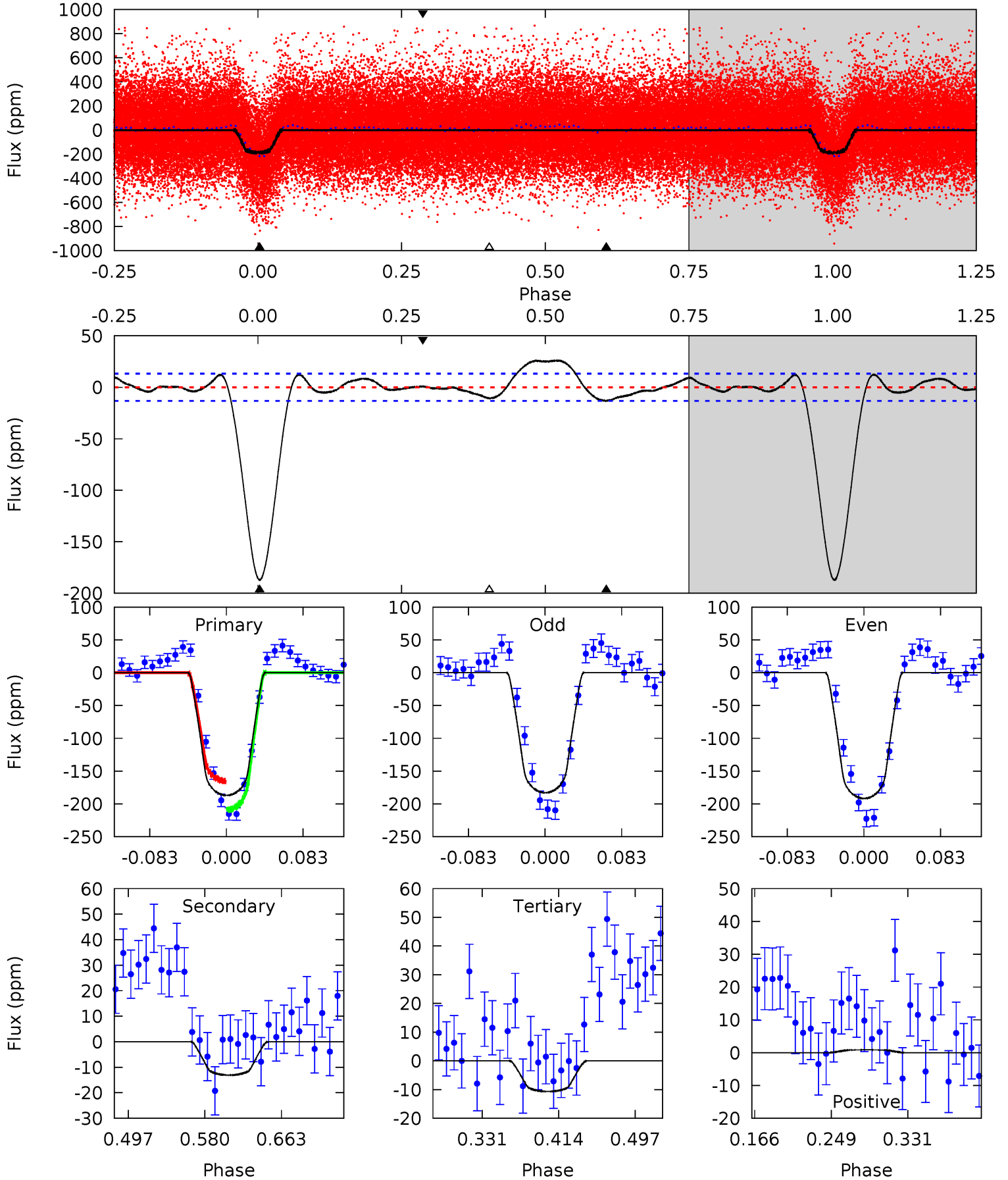
TCE 004945035-01 P= 1.174677 Days $T_0=131.838450$ (BKJD)



DV Model-Shift Uniqueness Test

004945035-01, P = 1.174667 Days, E = 130.666374 Days

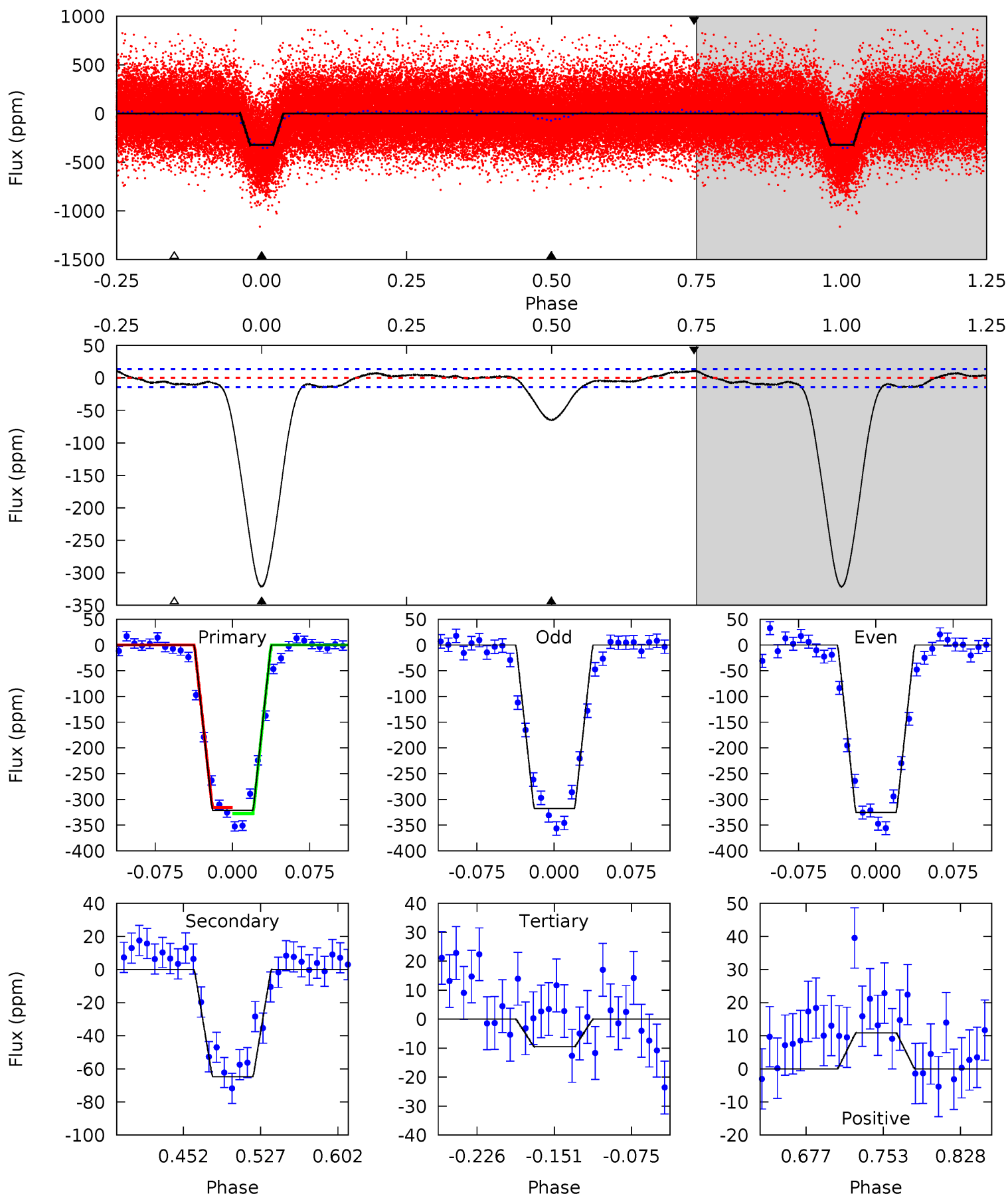
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.2	4.56	3.72	0.30	4.60	1.73	3.00	61.5	64.9	0.84	4.26	1.54	1.00	0.12	7.71



Alt Model-Shift Uniqueness Test

004945035-01, P = 1.174677 Days, E = 130.663773 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
107.1	21.6	3.17	3.62	4.62	1.78	2.14	103.9	103.4	18.4	18.0	1.22	1.00	0.03	2.00



Stellar Parameters For KIC 004945035

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5974^{+181}_{-199}	$4.332^{+0.132}_{-0.198}$	$-0.020^{+0.250}_{-0.300}$	$1.143^{+0.344}_{-0.212}$	$1.022^{+0.159}_{-0.130}$	$0.964^{+0.620}_{-0.512}$
	+3%/-3%	+3%/-5%	+1250%/-1500%	+30%/-19%	+16%/-13%	+64%/-53%
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 004945035-01 / KOI 5108.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 3	$1.87^{+0.46}_{-0.37}$	2665^{+200}_{-155}	3230^{+301}_{-323}	$0.945^{+0.588}_{-0.358}$
Alt.	-65 ± 3	$2.34^{+0.49}_{-0.39}$	2664^{+208}_{-162}	4101^{+266}_{-209}	$3.126^{+1.312}_{-0.944}$

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

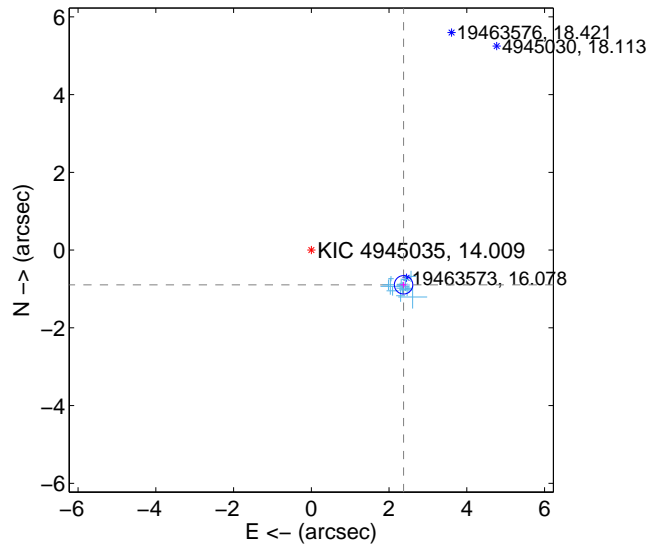
Supplemental centroid analysis for 004945035-01. Kepler magnitude: 14.01. Transit SNR 45.43

There are 17 quarters with good PRF difference image offsets

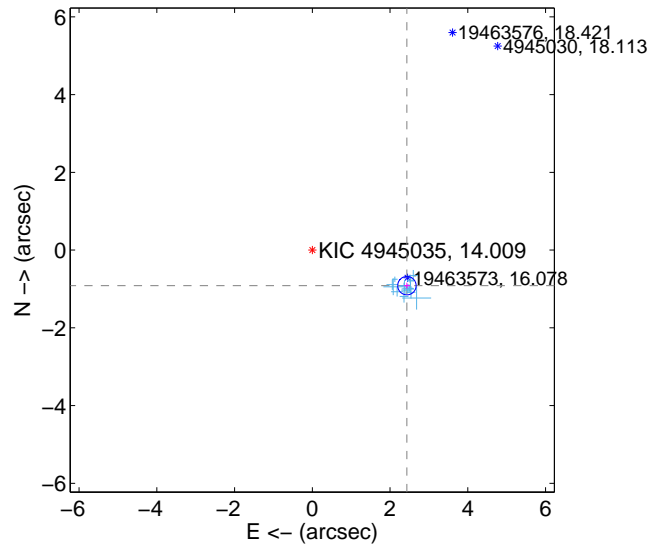
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.535 ± 0.079	32.12	-2.373 ± 0.079	-0.893 ± 0.075
PRF-fit source offset from KIC position	2.599 ± 0.079	32.92	-2.433 ± 0.078	-0.914 ± 0.075
photometric centroid source offset	4.32 ± 0.29	15.03	-3.81 ± 0.29	-2.05 ± 0.28

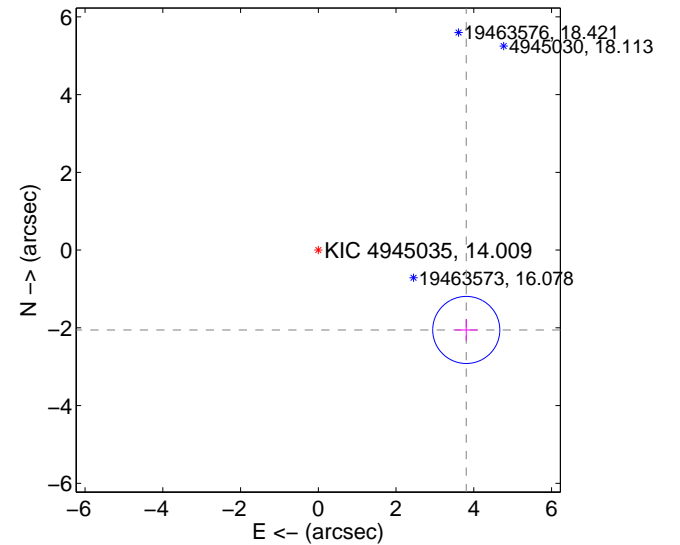
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

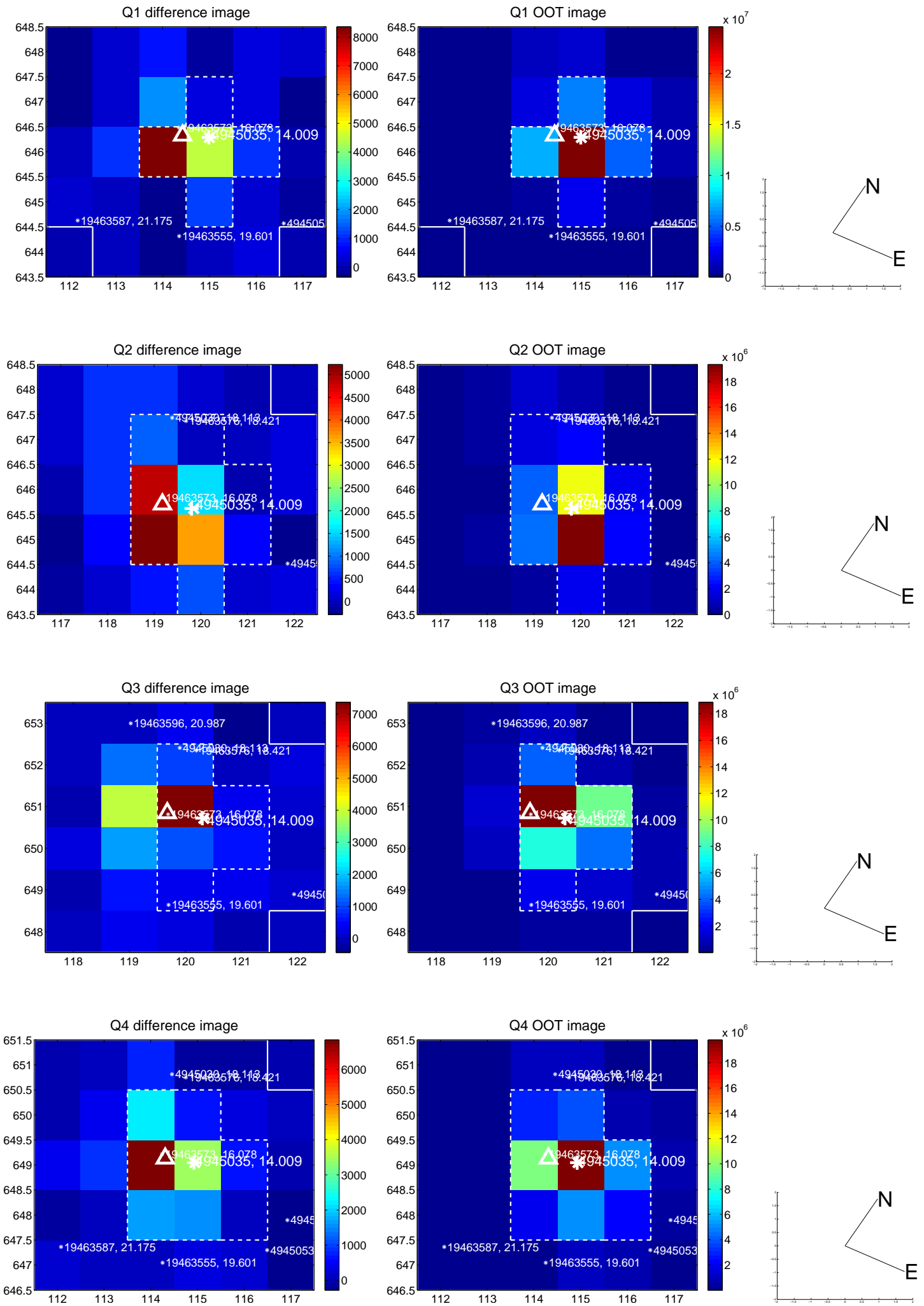


offset from photometric centroids

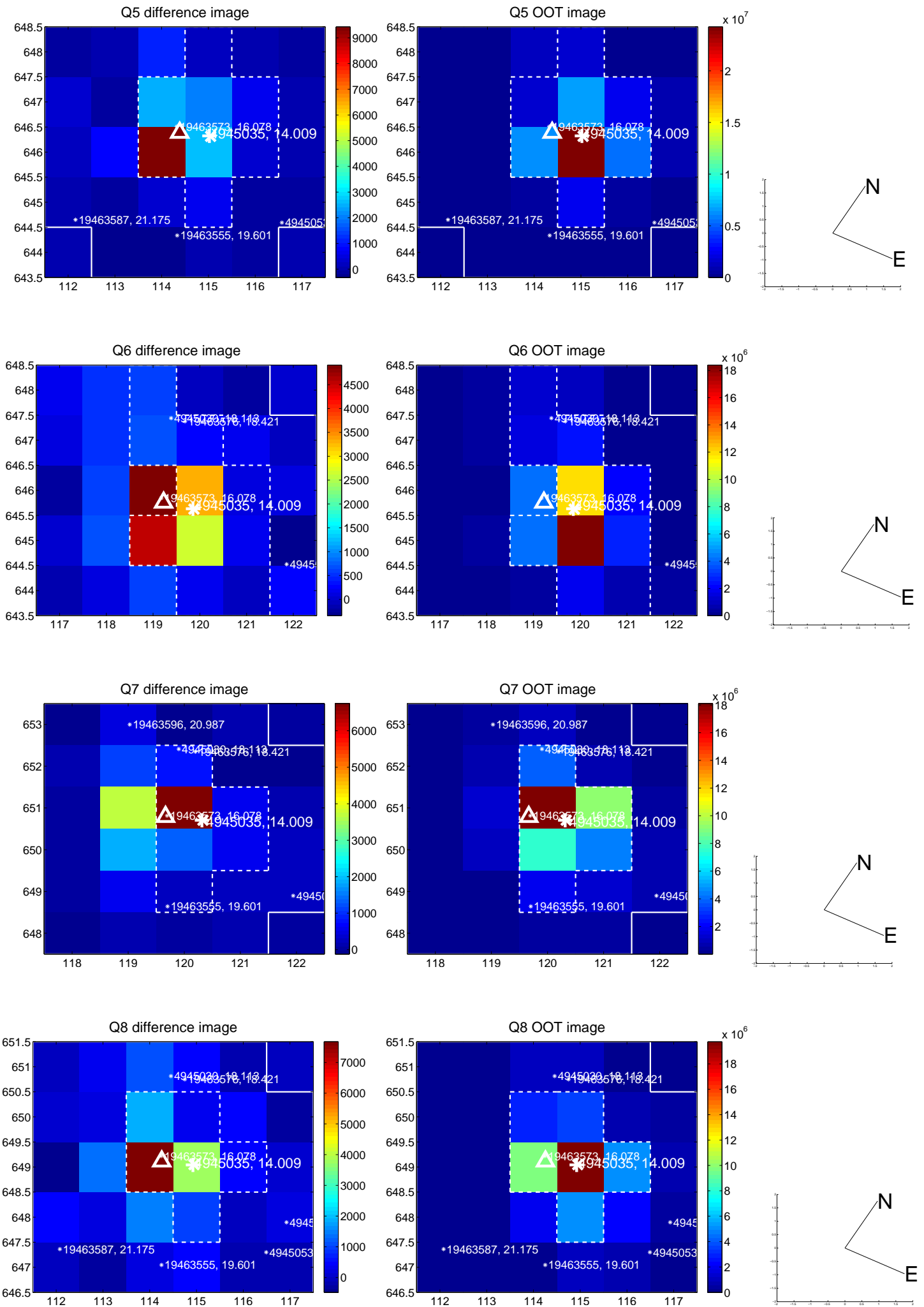


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

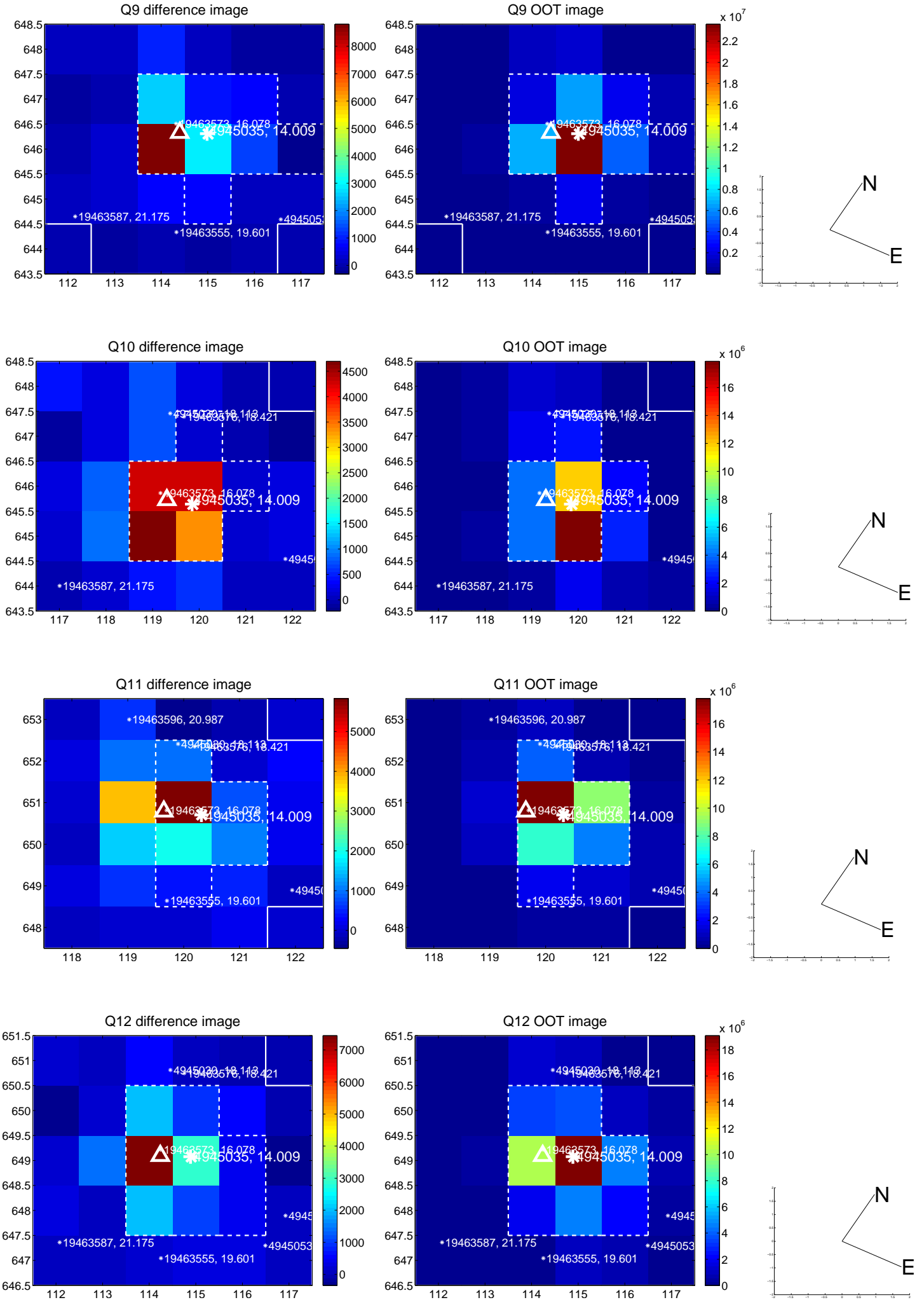
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



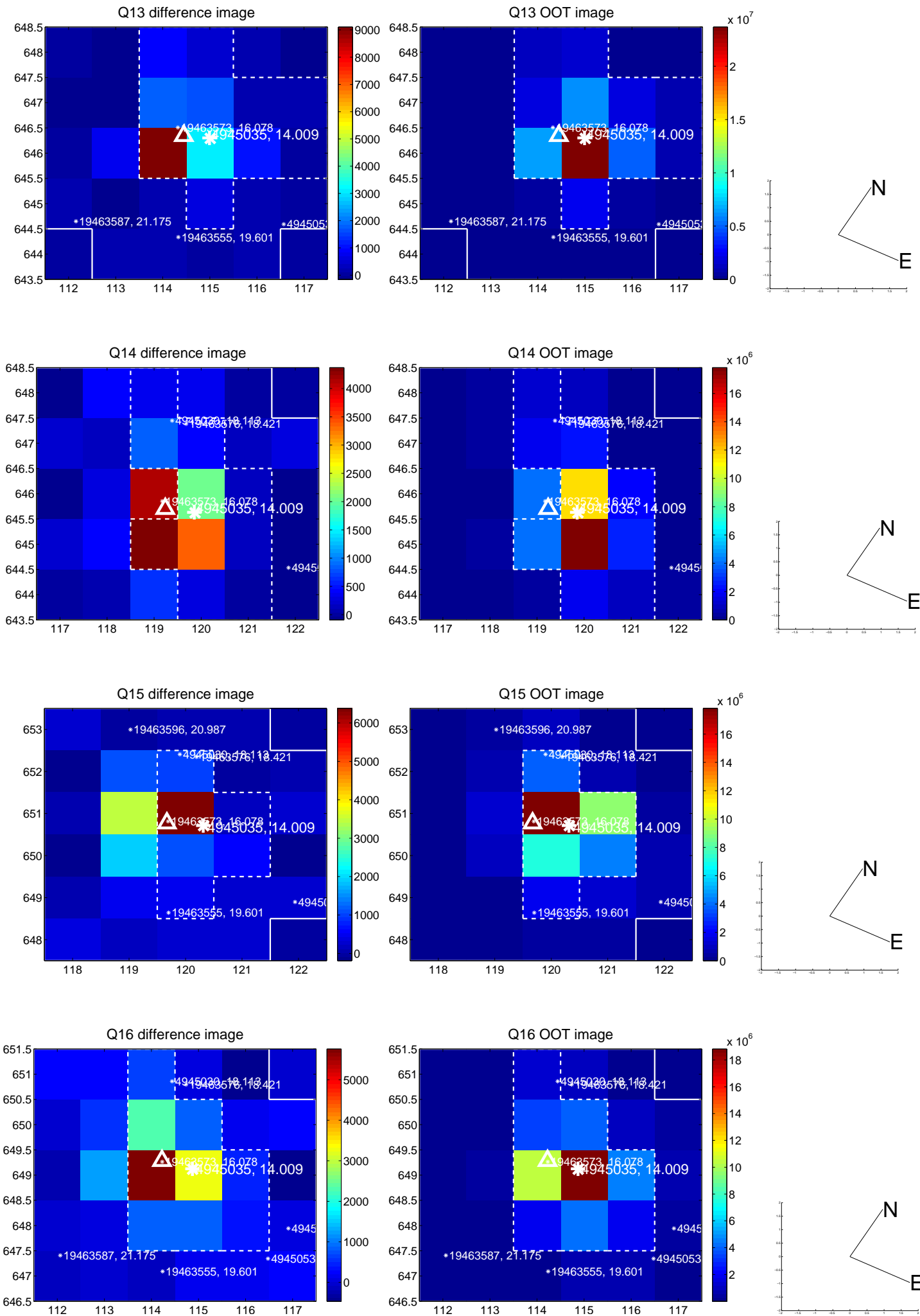
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



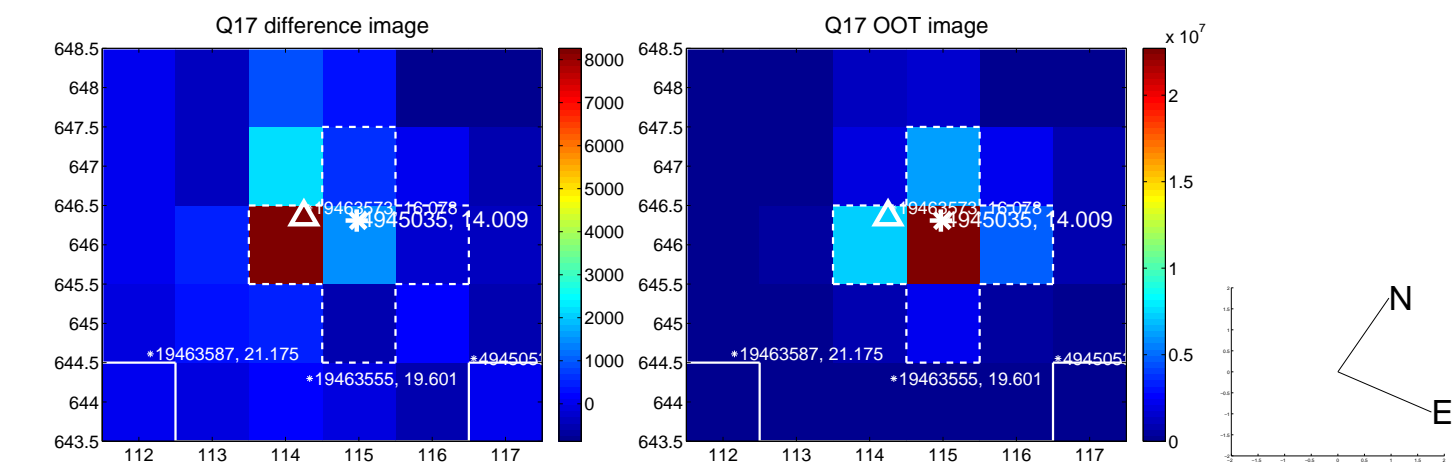
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



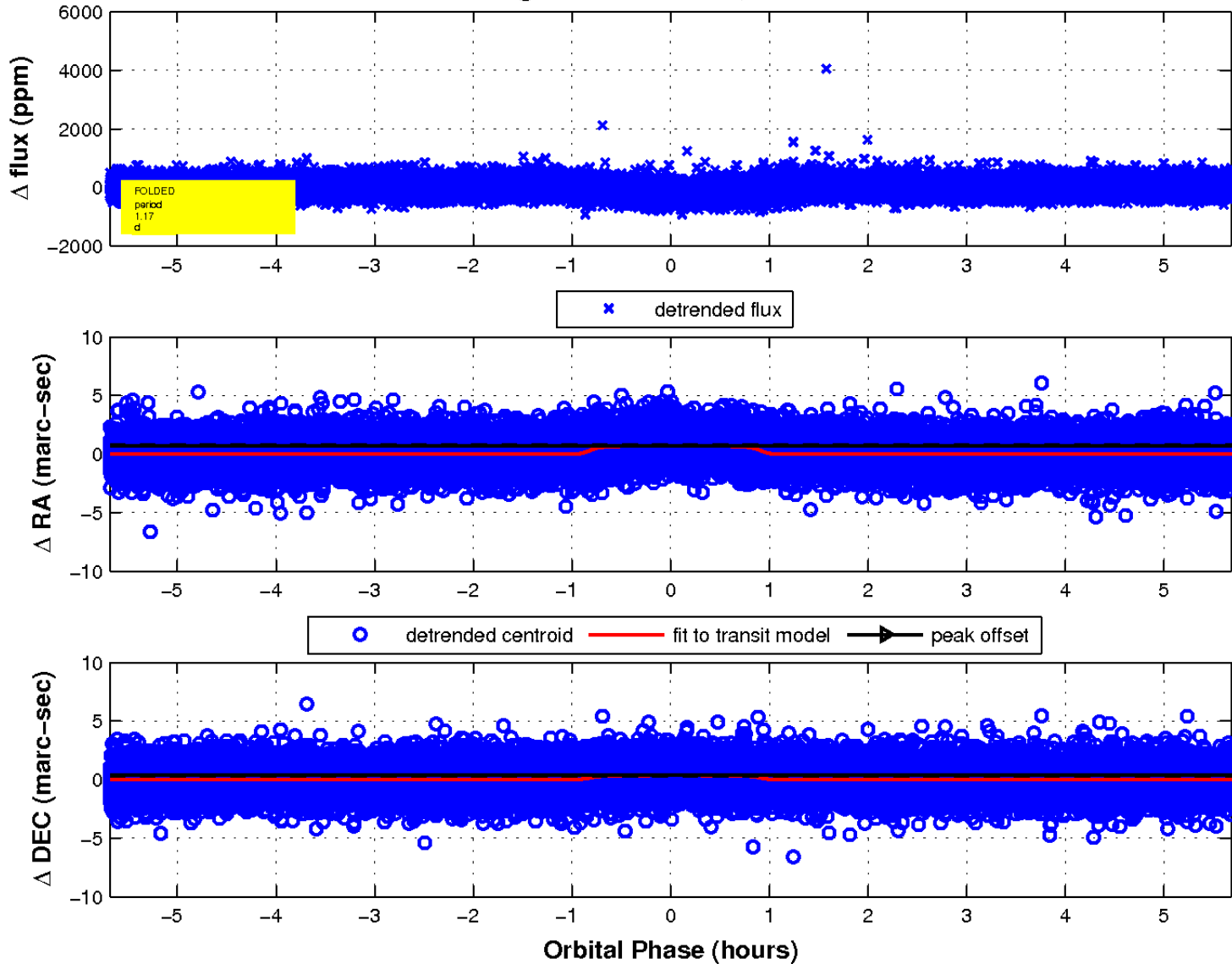
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

