

KIC 006546353

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})
006546353-01	OBS	No	3.409218	134.731067	50.9	4.260	7.1	7.4	0.74	5565	0.63	277.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006546353-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

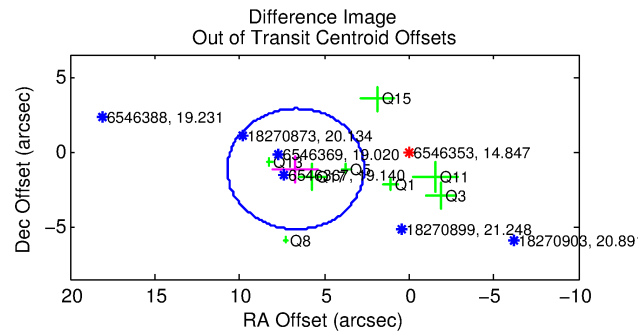
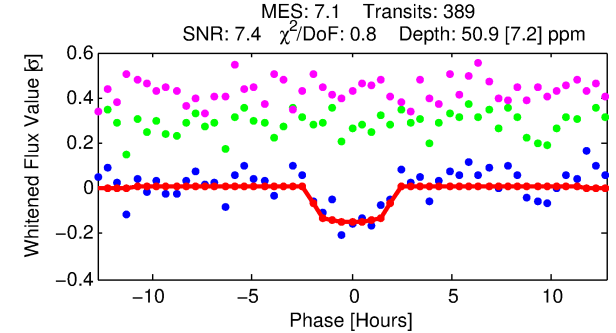
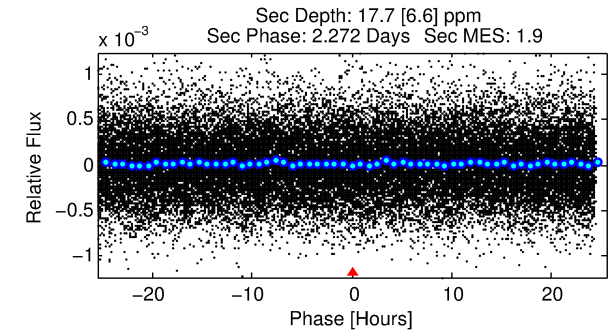
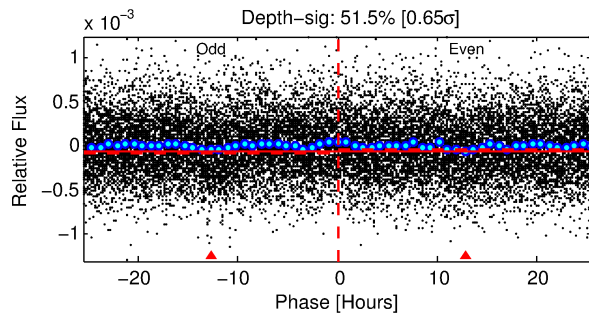
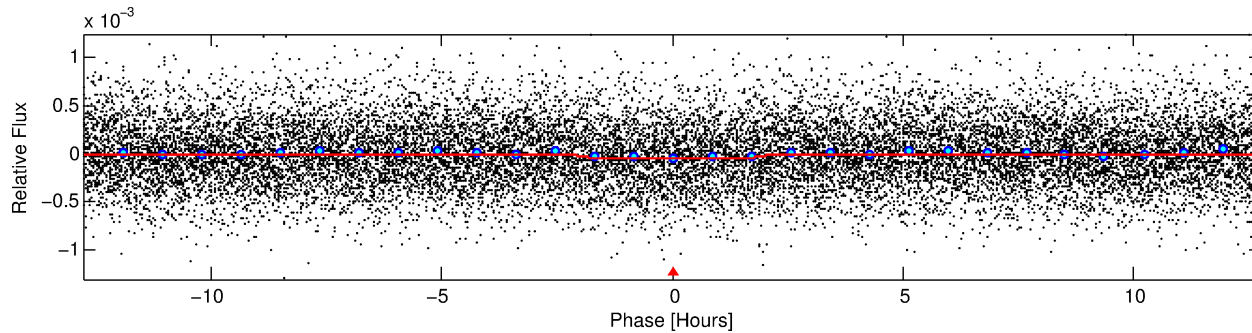
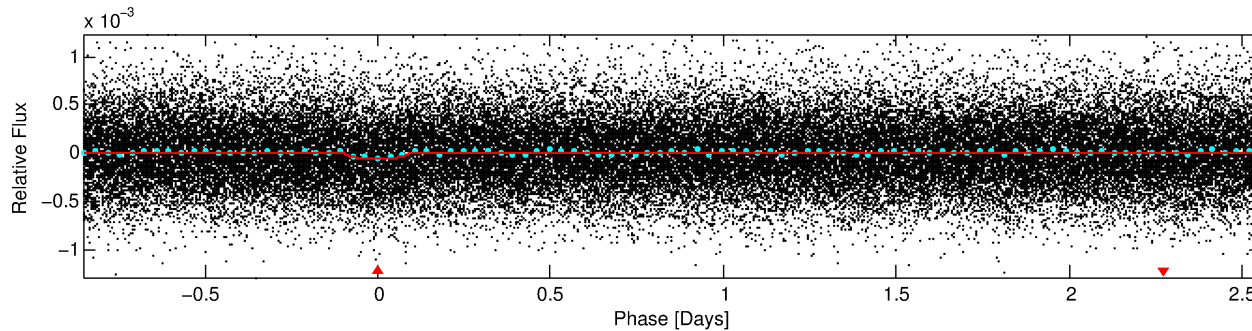
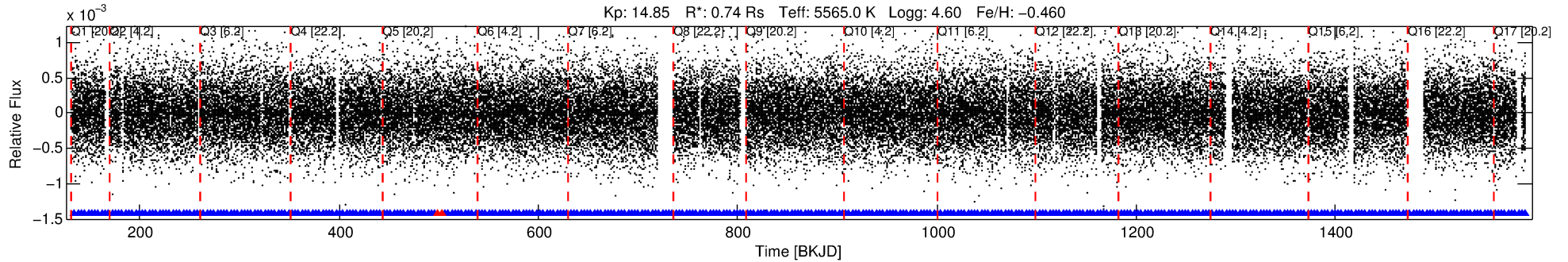
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006546353-01

No Significant Match Found

DV One-Page Summary

KIC: 6546353 Candidate: 1 of 1 Period: 3.409 d



DV Fit Results:

Period = 3.40922 [0.00004] d
Epoch = 134.7311 [0.0084] BKJD
Rp/R* = 0.0078 [0.0055]
a/R* = 2.90 [8.86]
b = 0.90 [0.73]
Seff = 277.39 [73.72]
Teq = 1041 [69] K
Rp = 0.63 [0.47] Re
a = 0.0412 [0.0069] AU
Ag = 41.74 [62.32] [0.65σ]
Teffp = 4090 [1512] K [2.01σ]

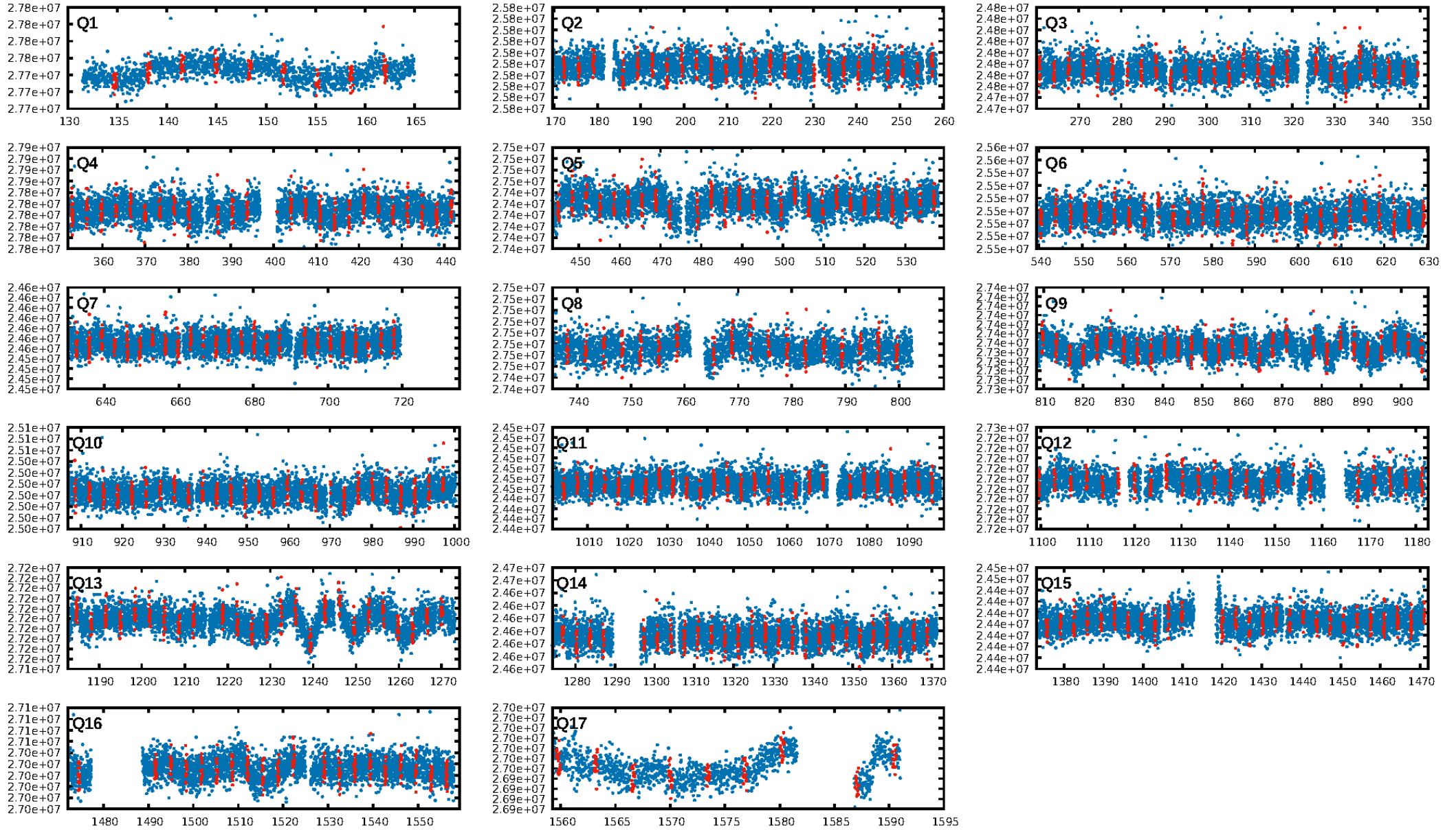
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.34e-13
RollingBand-fgt: 0.99 [369/371]
GhostDiagnostic-chr: -0.2879
Centroid-sig: 0.0%
Centroid-so: 22.527 arcsec [10.43σ]
OotOffset-rm: 6.776 arcsec [5.05σ]
KicOffset-rm: 6.853 arcsec [5.78σ]
OotOffset-st: 0/3/1/4 [8]
KicOffset-st: 0/3/1/4 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 1.00 [17/17]

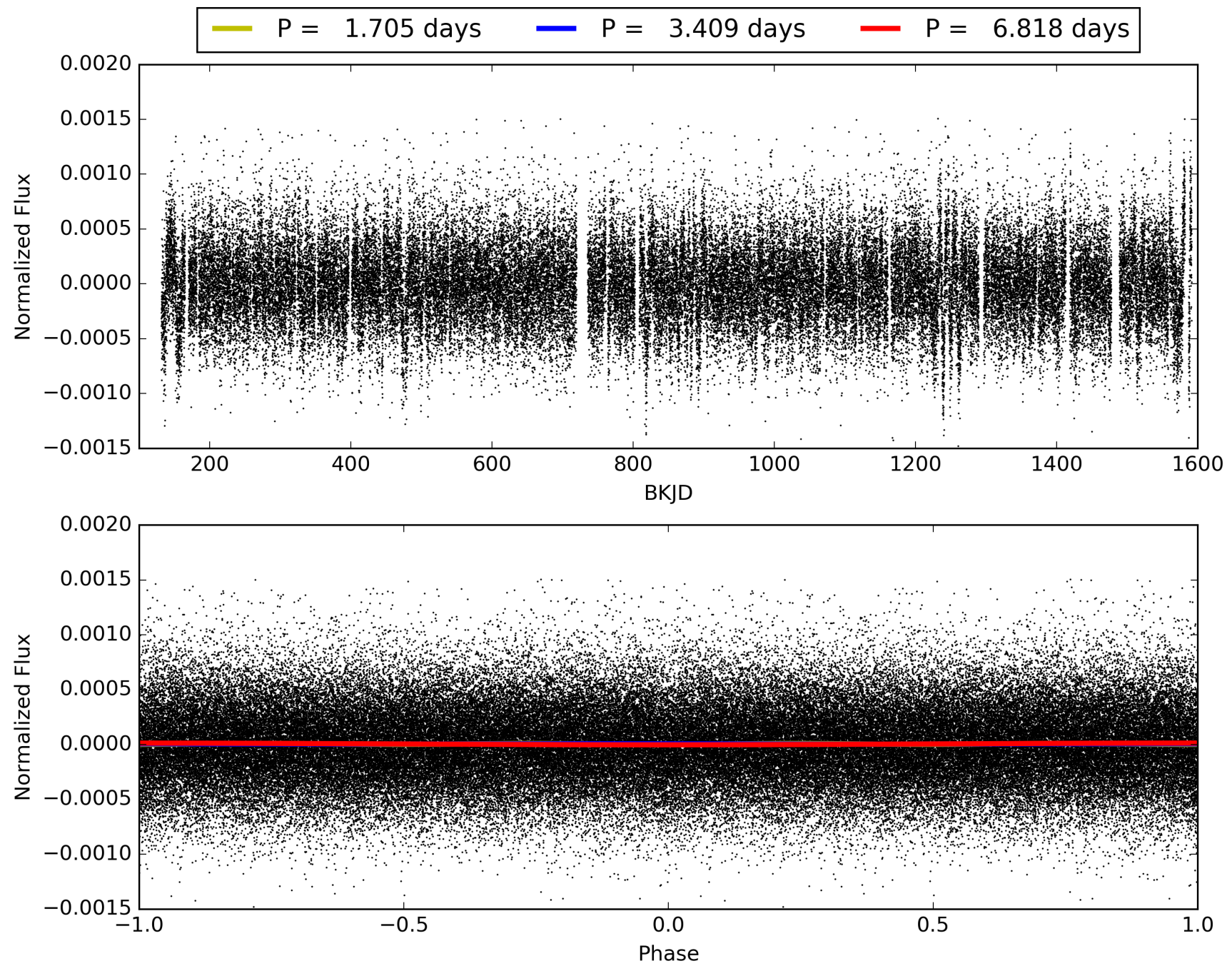
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:47:43 Z

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

TCE 006546353-01, PDC Light Curves

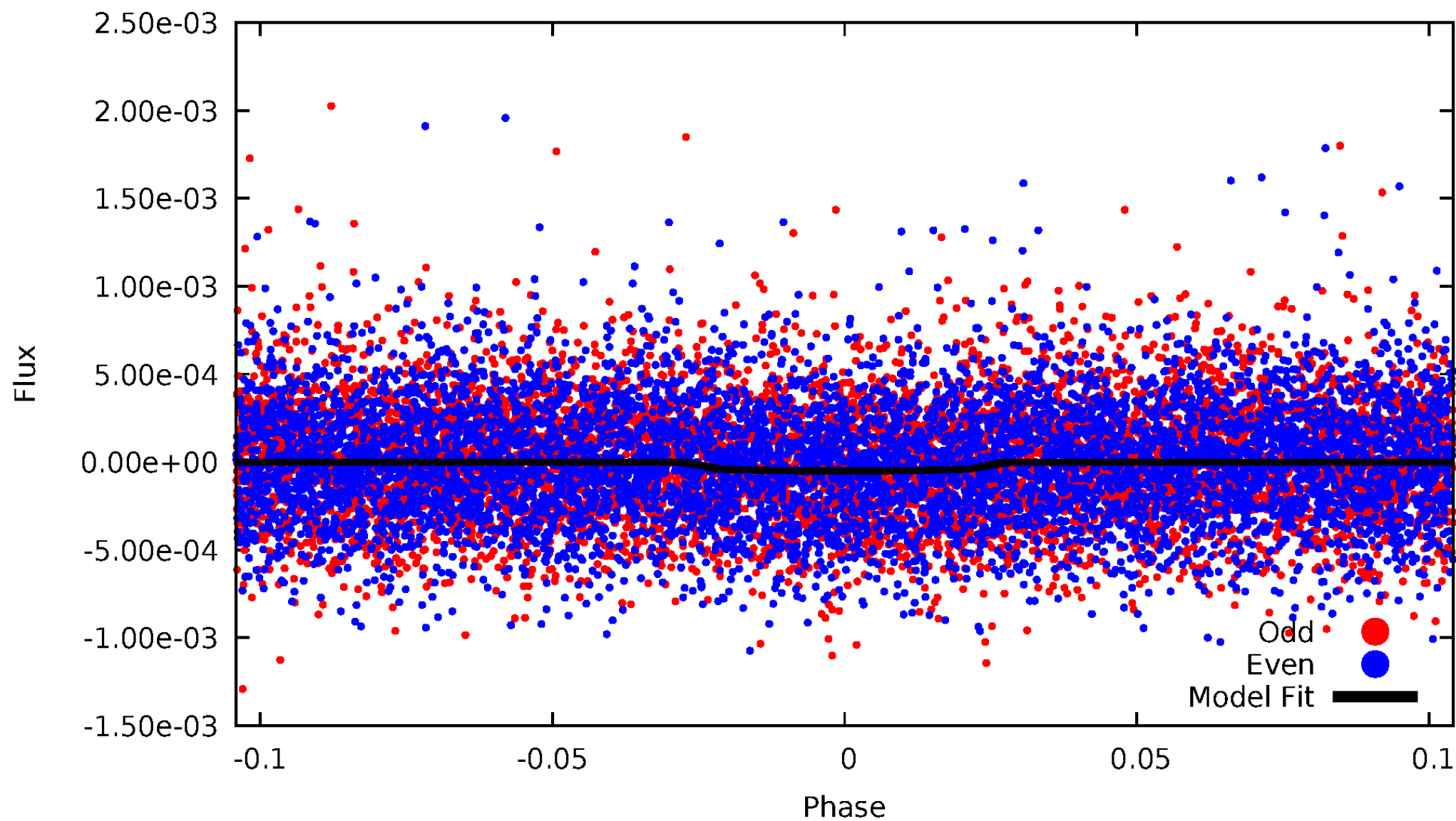


TCE 006546353-01



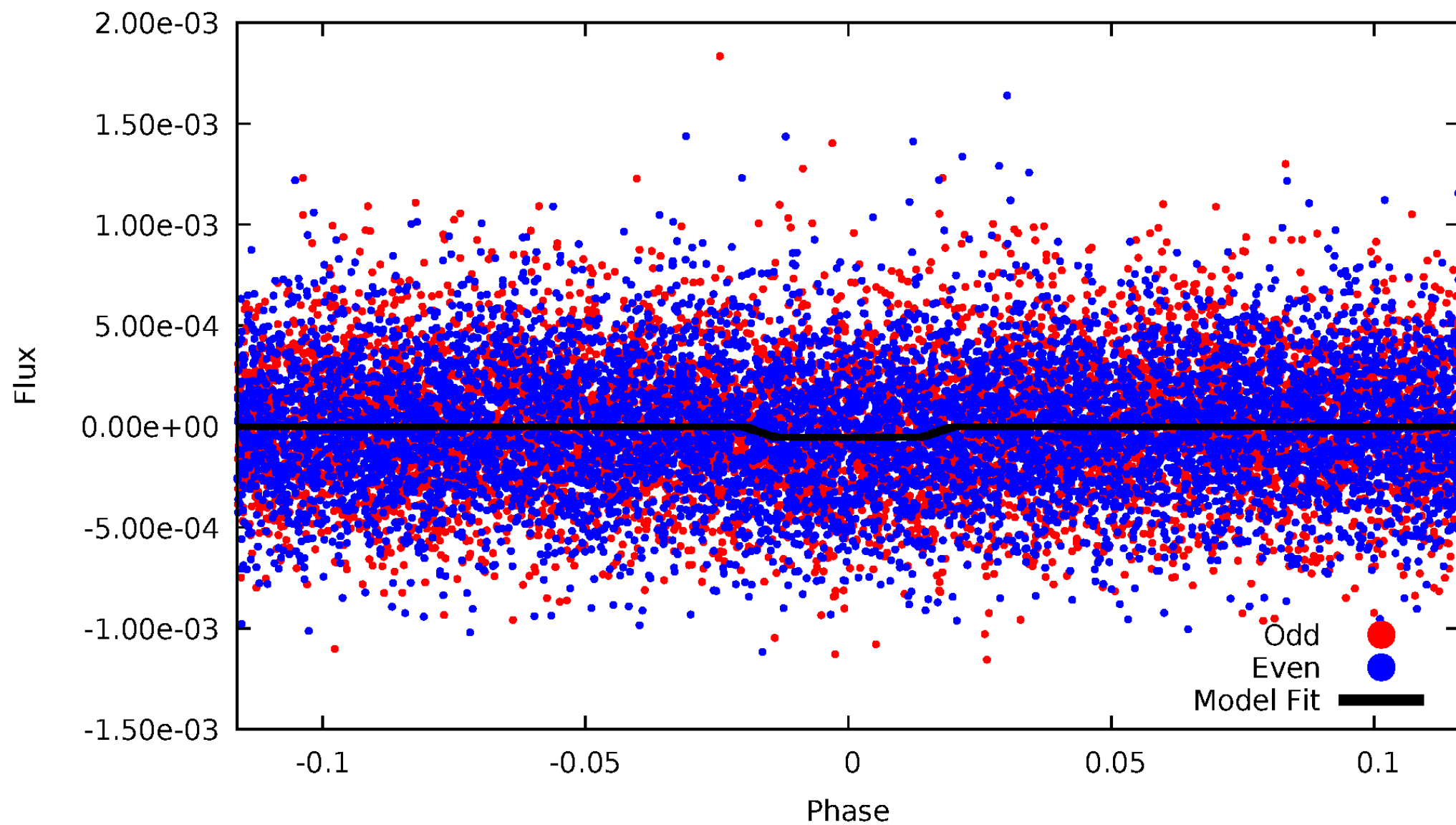
DV Odd/Even

TCE 006546353-01

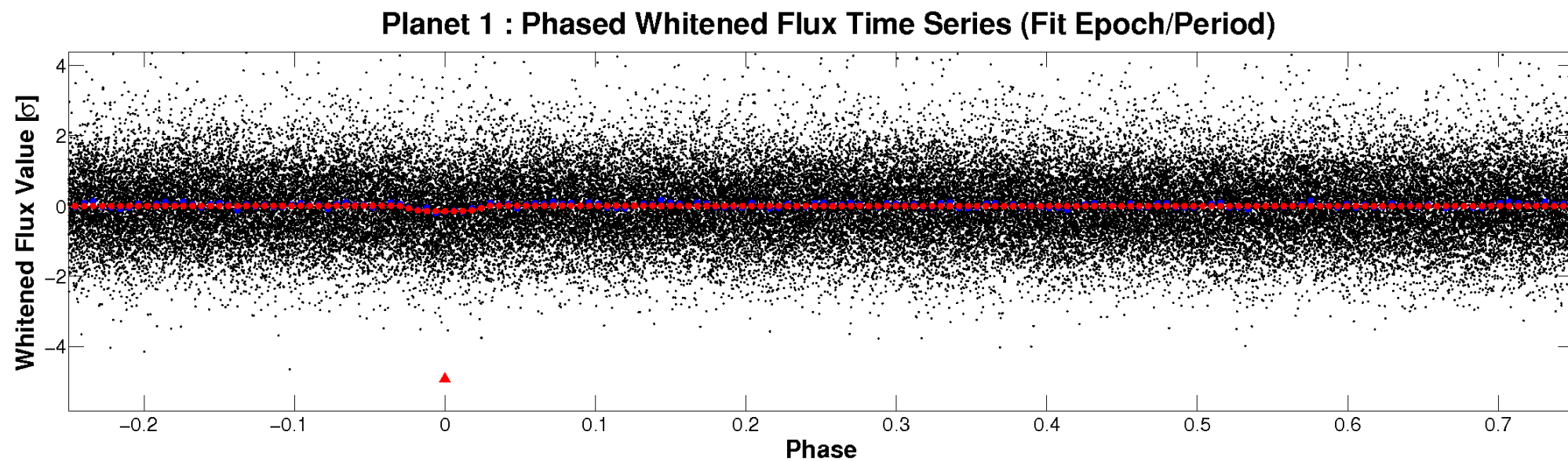
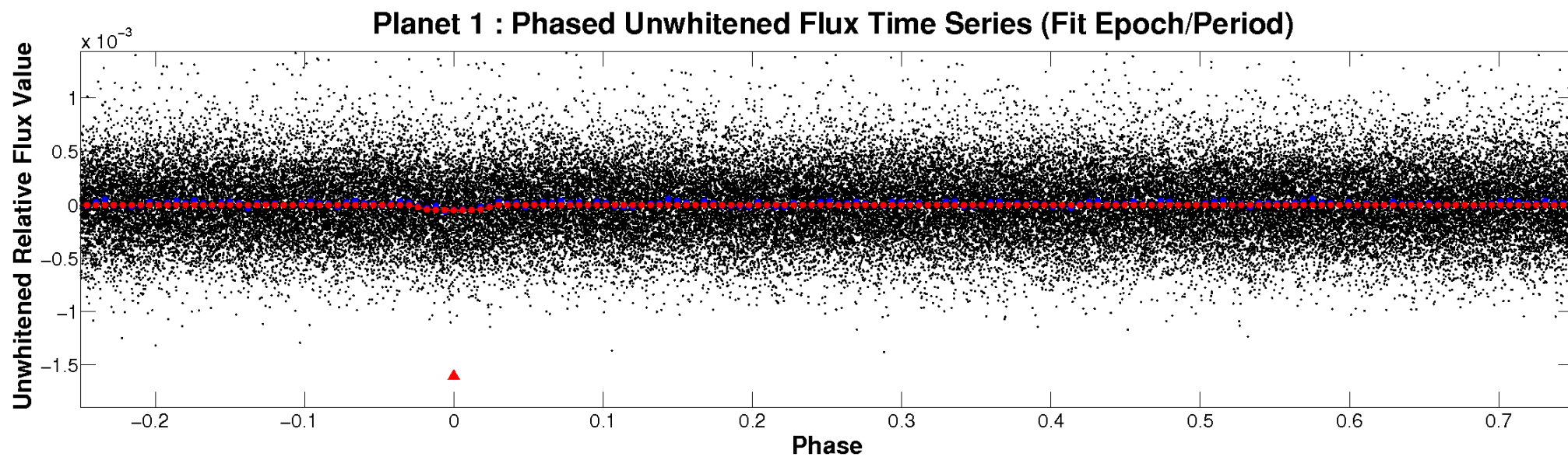


ALT Odd/Even

TCE 006546353-01

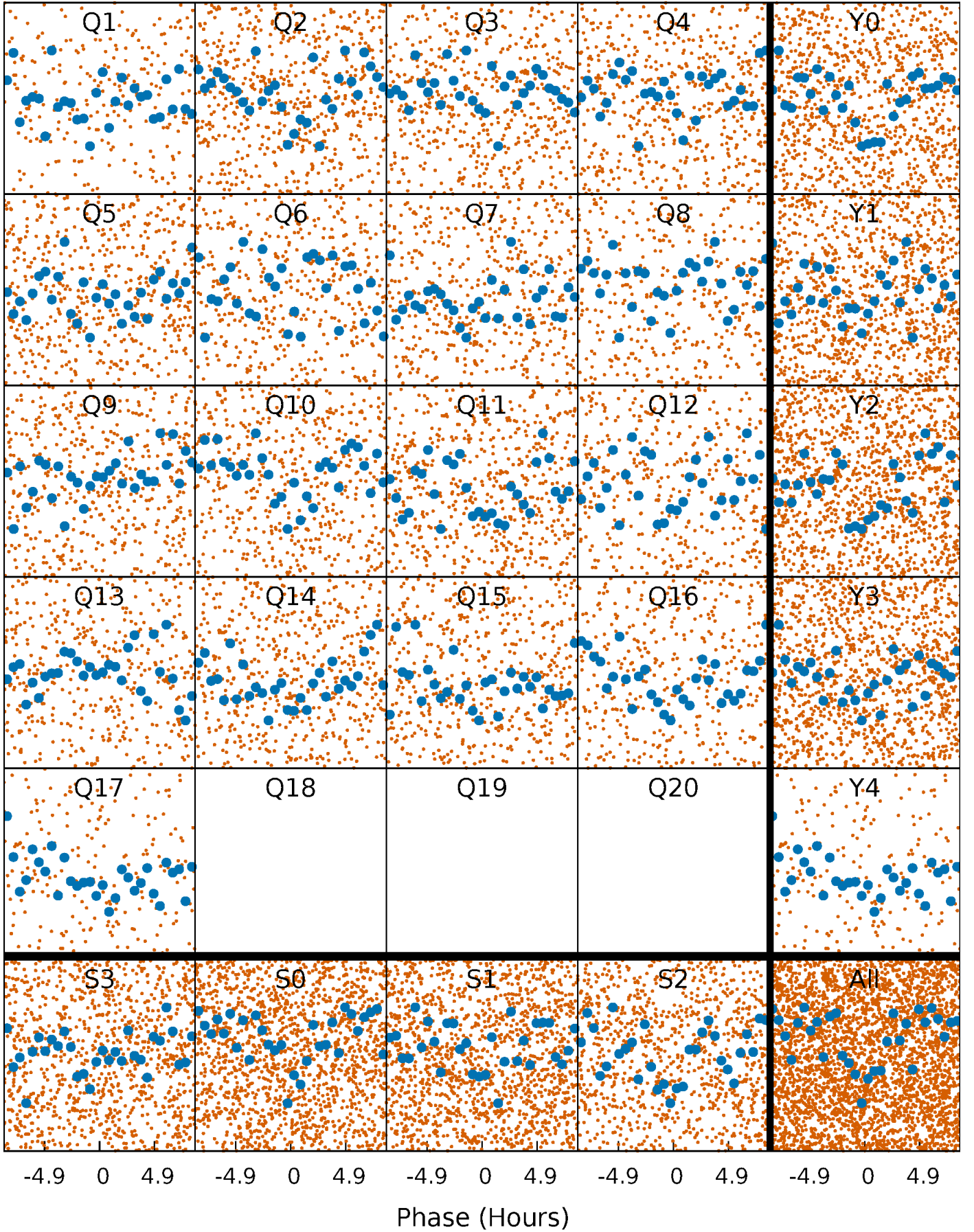


Non-Whitened Vs. Whitened Light Curve



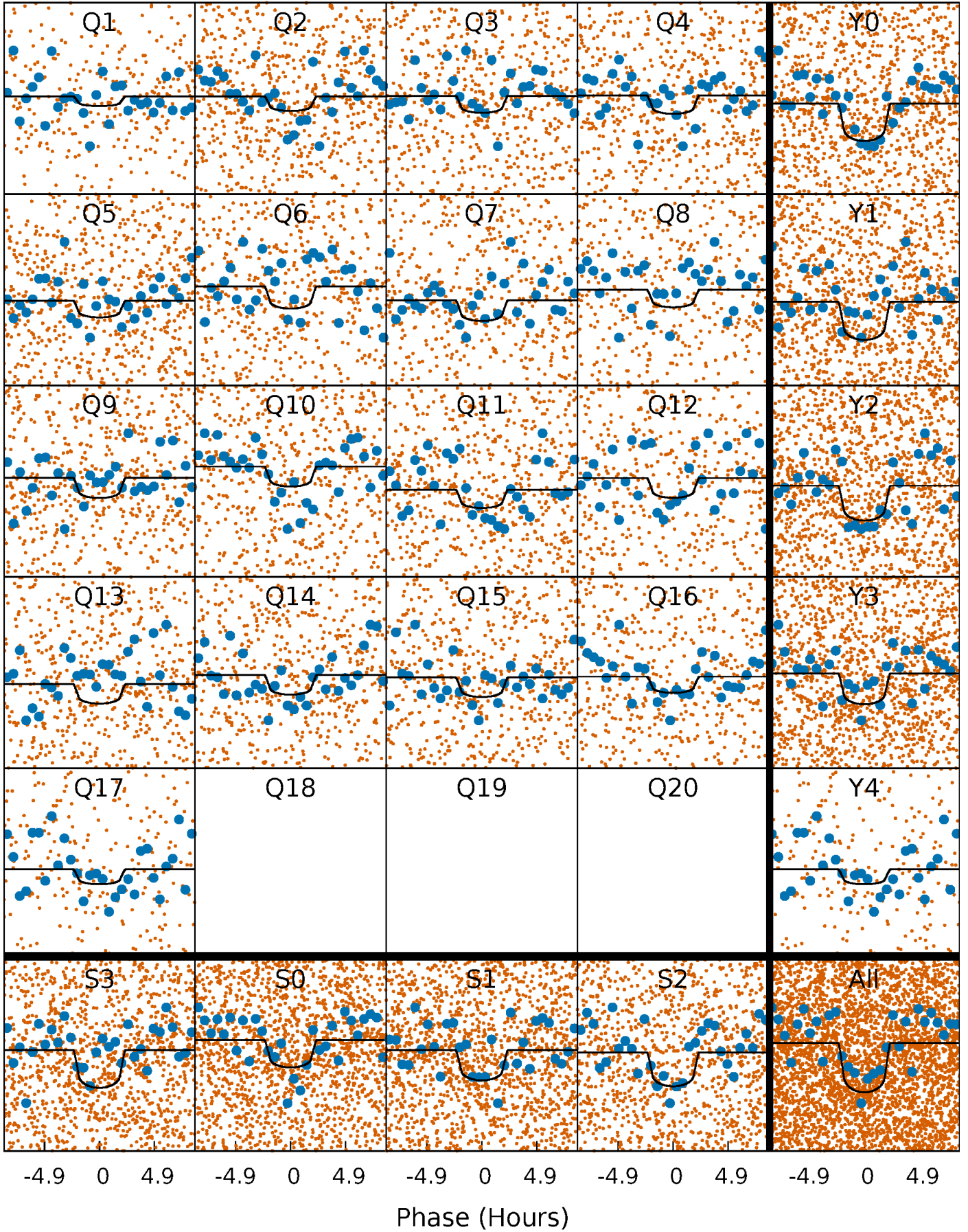
PDC Quarter-Phased Transit Curves

TCE 006546353-01 P= 3.409218 Days $T_0=134.731067$ (BKJD)



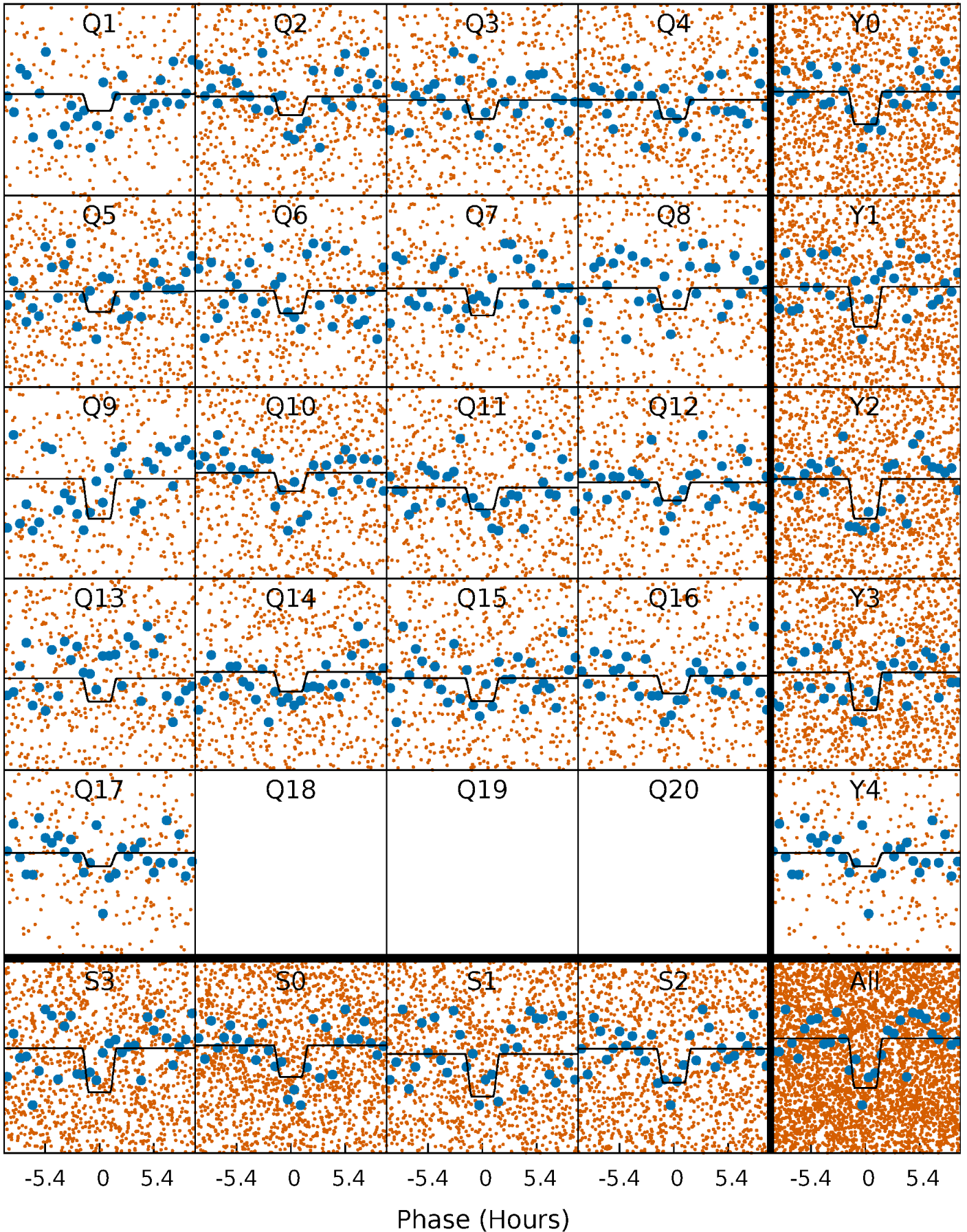
DV Quarter-Phased Transit Curves

TCE 006546353-01 P= 3.409218 Days $T_0=134.731067$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

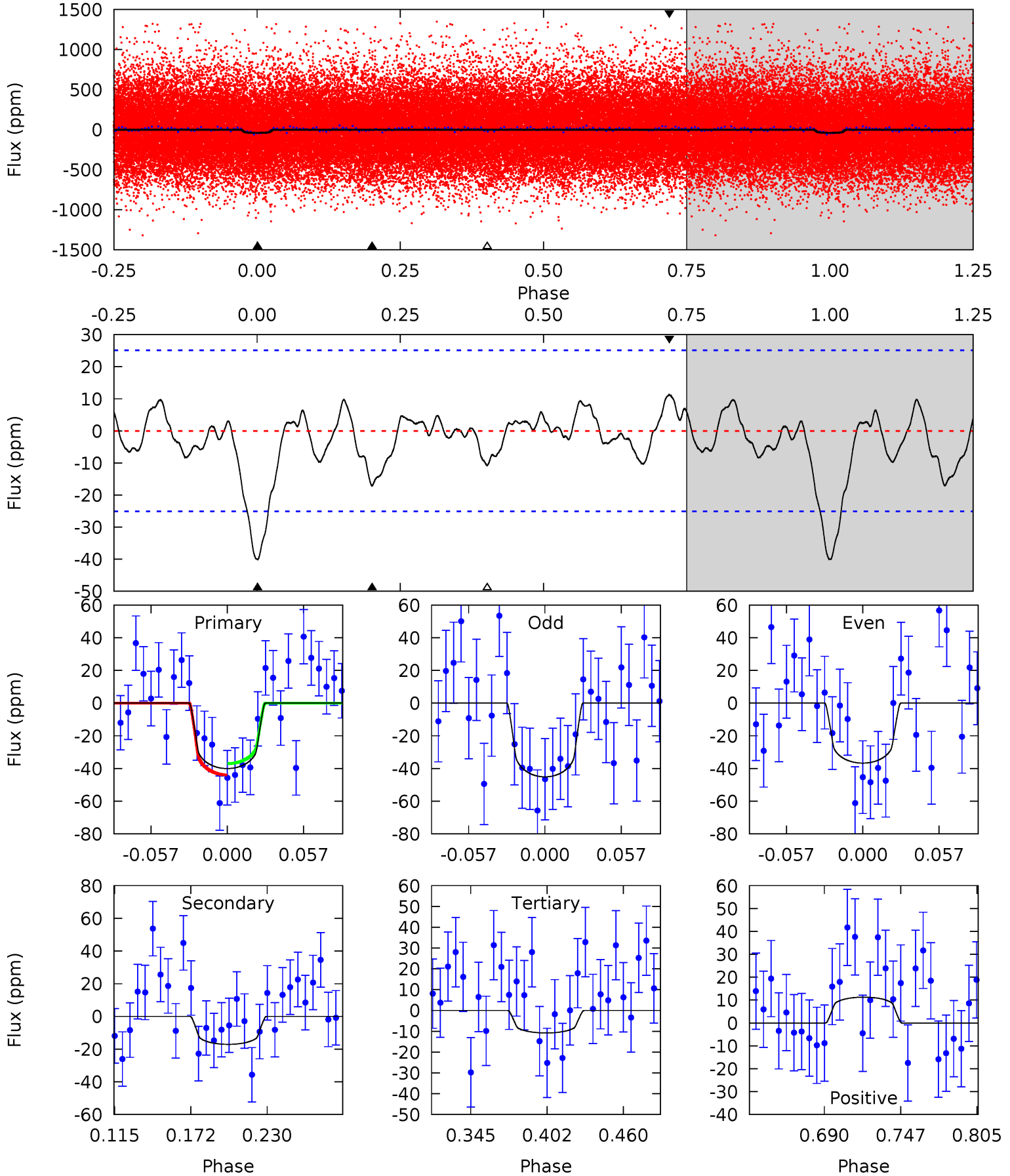
TCE 006546353-01 P= 3.409272 Days $T_0=134.718838$ (BKJD)



DV Model-Shift Uniqueness Test

006546353-01, P = 3.409218 Days, E = 131.321849 Days

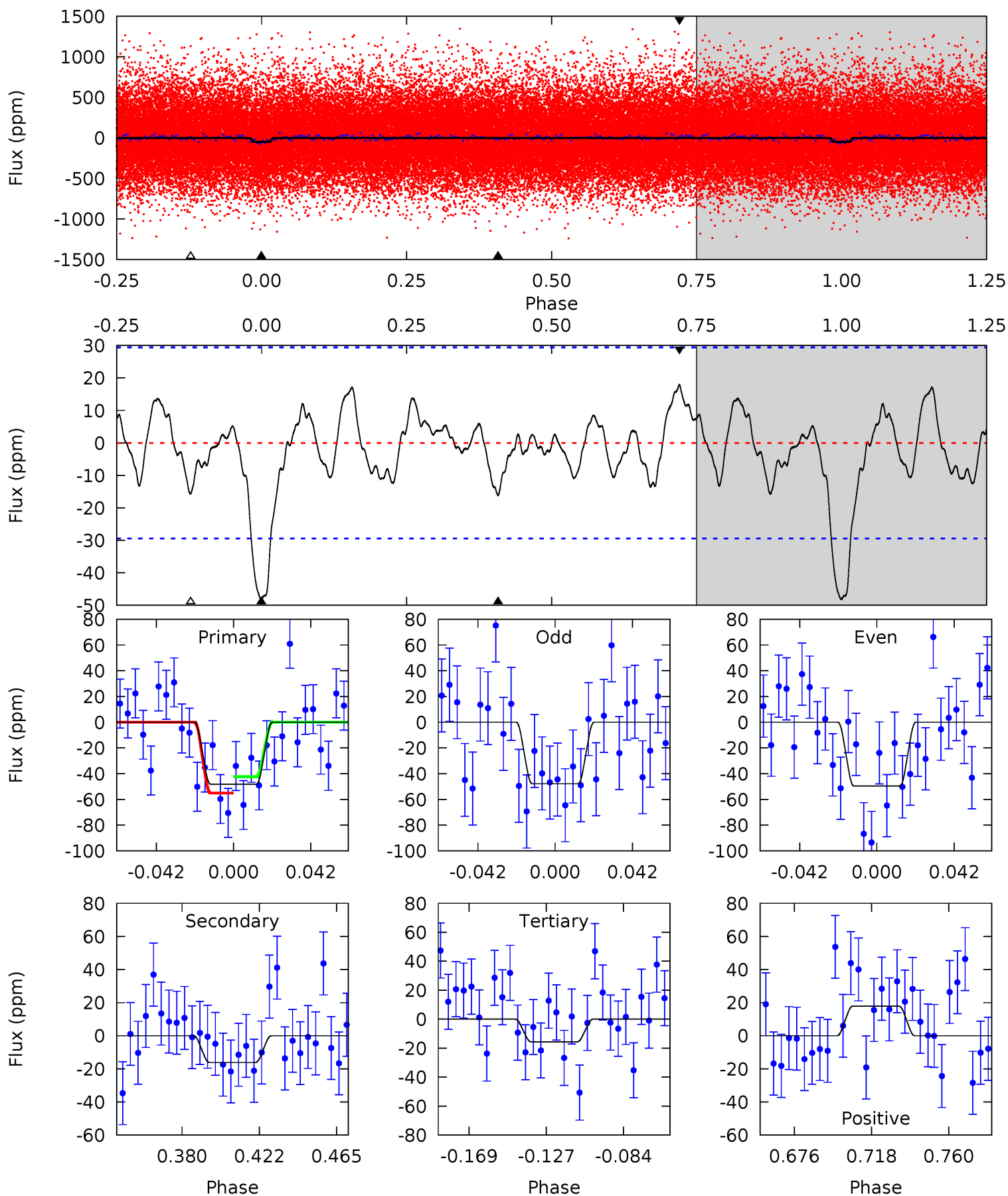
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.47	3.19	2.01	2.10	4.68	1.90	0.93	5.45	5.37	1.17	1.09	0.79	0.81	0.22	0.64



Alt Model-Shift Uniqueness Test

006546353-01, P = 3.409272 Days, E = 131.309566 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.75	2.60	2.52	2.89	4.74	2.03	1.22	5.23	4.86	0.08	-0.29	0.15	0.75	0.27	1.03



Stellar Parameters For KIC 006546353

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5565^{+167}_{-167}	$4.604^{+0.034}_{-0.127}$	$-0.460^{+0.300}_{-0.300}$	$0.741^{+0.150}_{-0.054}$	$0.806^{+0.088}_{-0.080}$	$2.786^{+0.466}_{-1.033}$
	+3%/-3%	+1%/-3%	+65%/-65%	+20%/-7%	+11%/-10%	+17%/-37%
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 006546353-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 5	$0.68^{+0.47}_{-0.40}$	1478^{+73}_{-58}	4169^{+1971}_{-705}	34^{+171}_{-23}
Alt.	-16 ± 6	$0.68^{+0.45}_{-0.41}$	1481^{+64}_{-63}	4108^{+1861}_{-740}	31^{+145}_{-22}

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

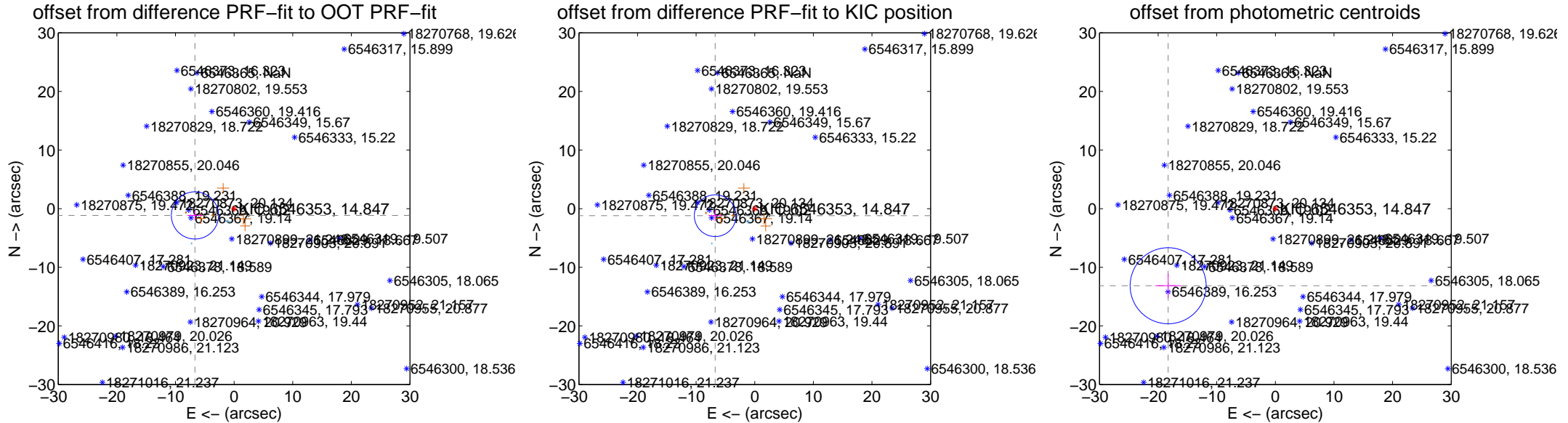
DV Centroid Data

Supplemental centroid analysis for 006546353-01. Kepler magnitude: 14.85. Transit SNR 7.38

There are 2 quarters with good PRF difference image offsets

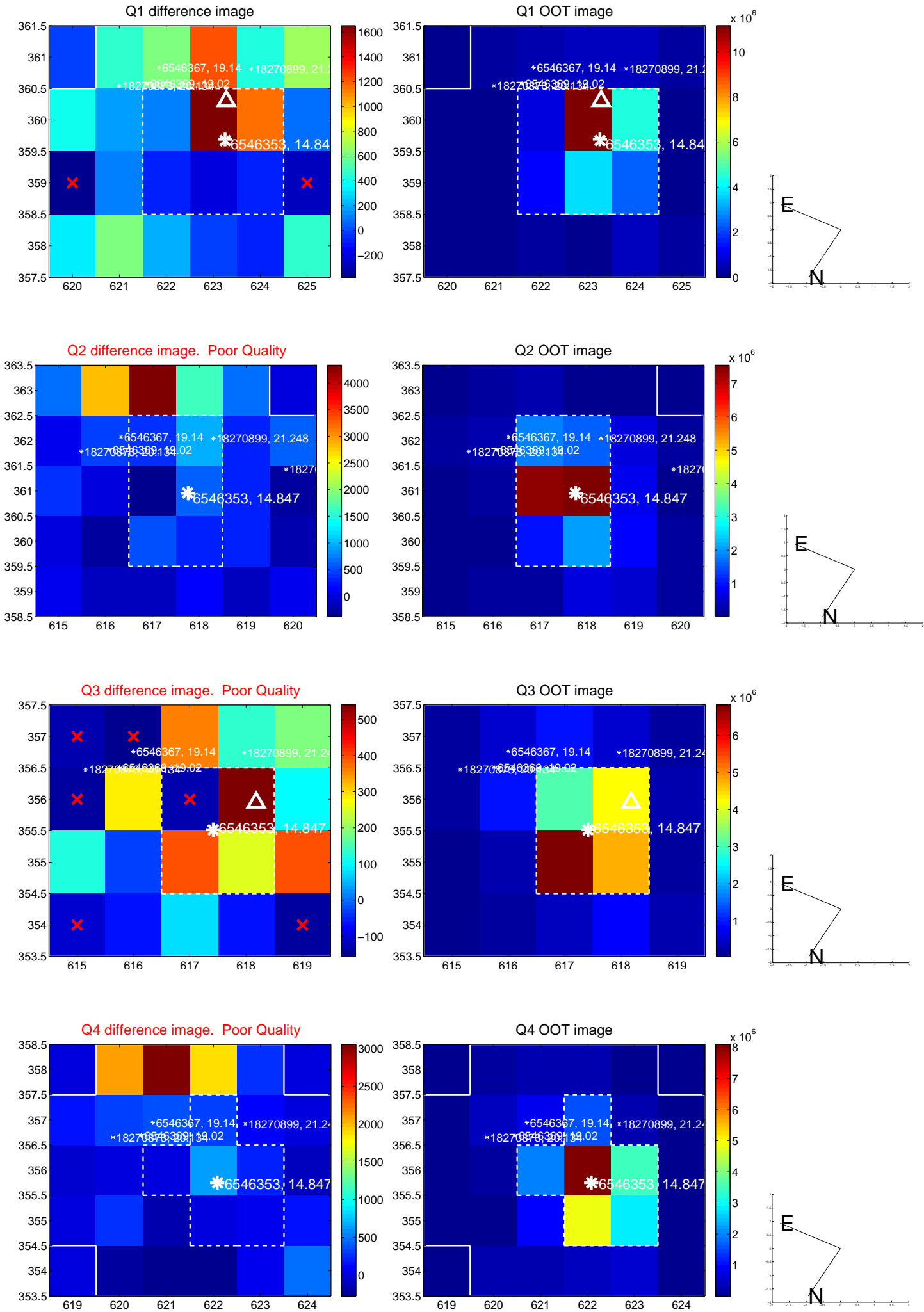
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.776 \pm 1.343	5.05	6.678 \pm 1.305	-1.152 \pm 0.852
PRF-fit source offset from KIC position	6.853 \pm 1.186	5.78	6.747 \pm 1.160	-1.197 \pm 0.958
photometric centroid source offset	22.53 \pm 2.16	10.43	18.29 \pm 2.21	-13.15 \pm 2.06

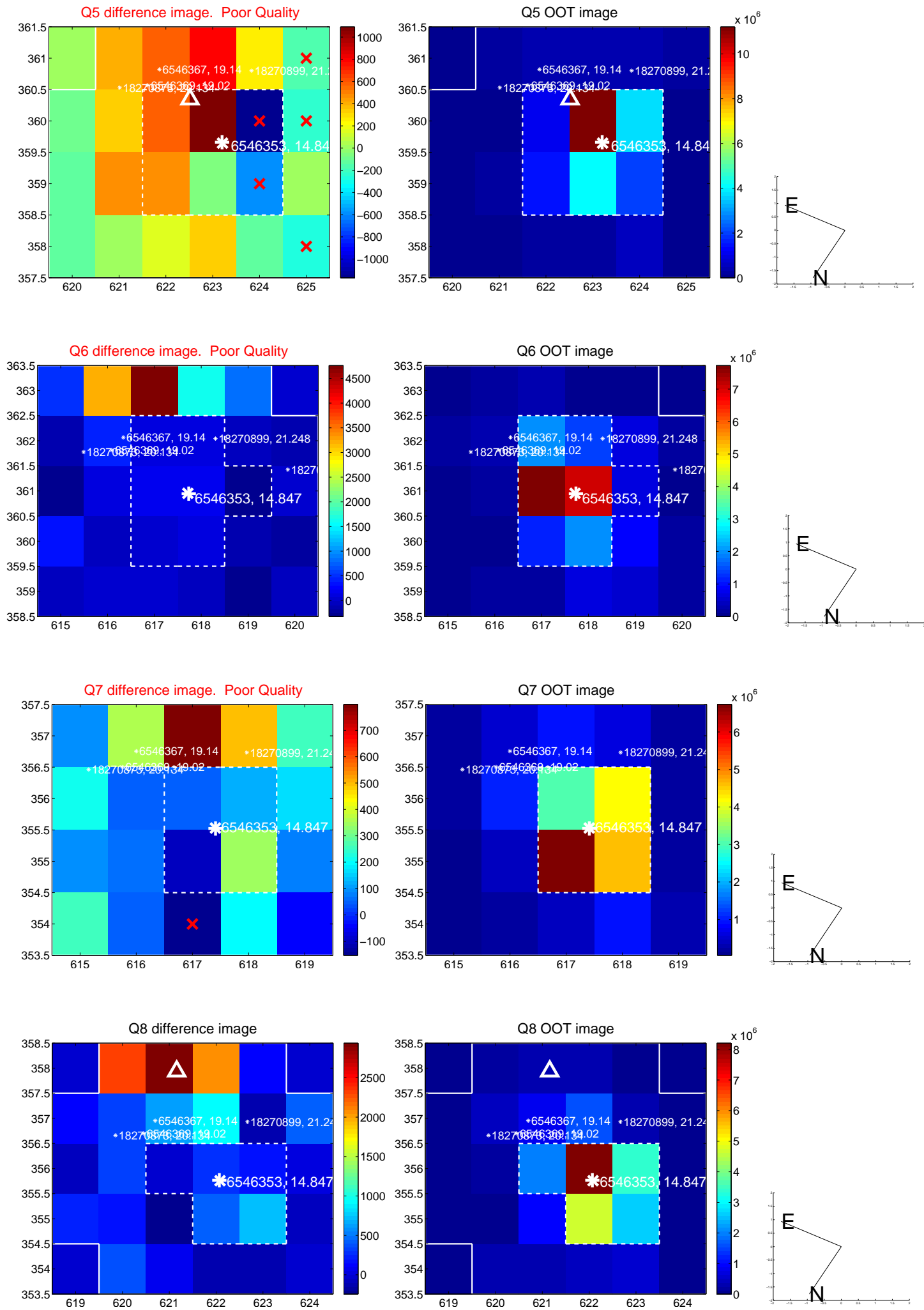


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

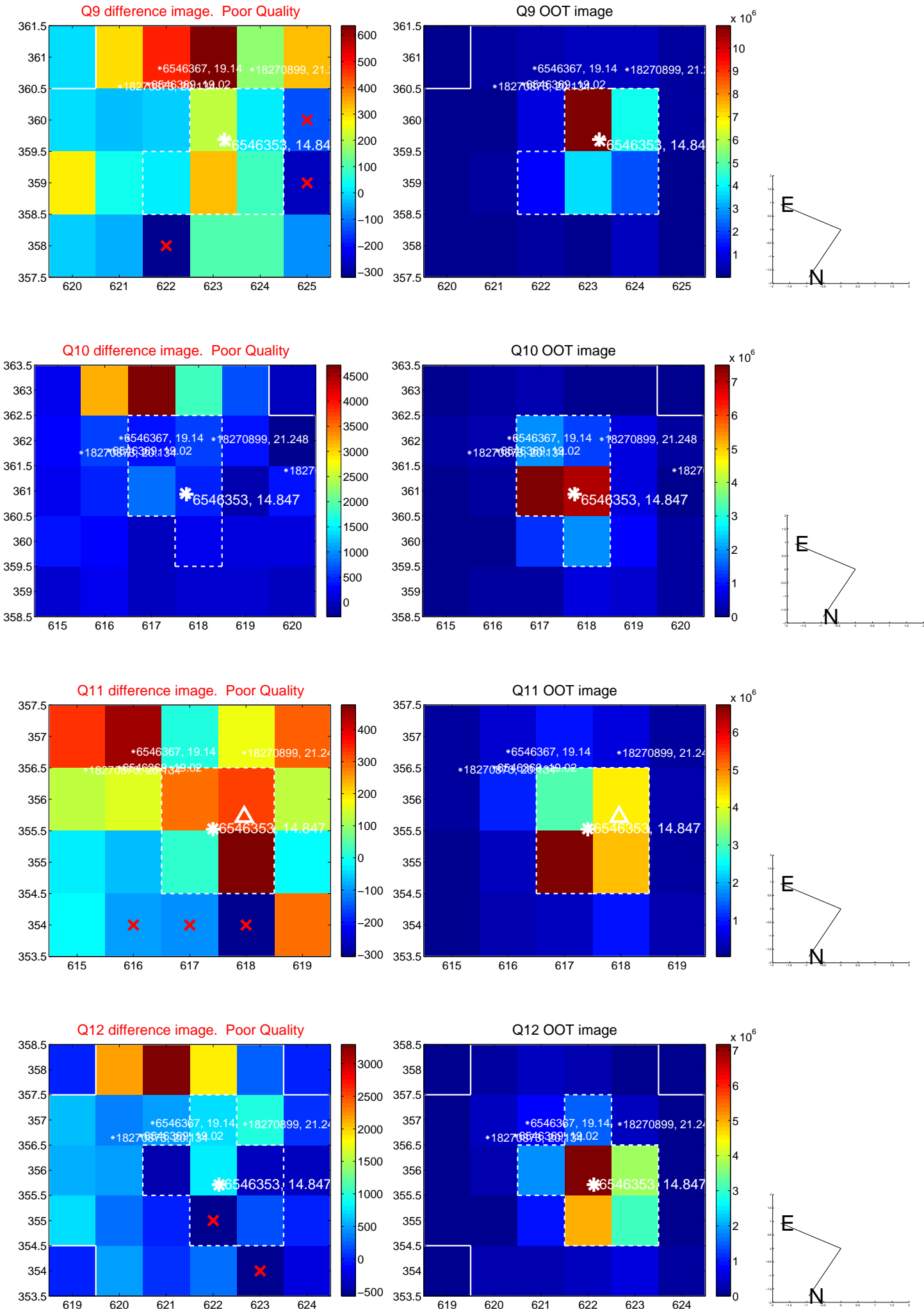
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



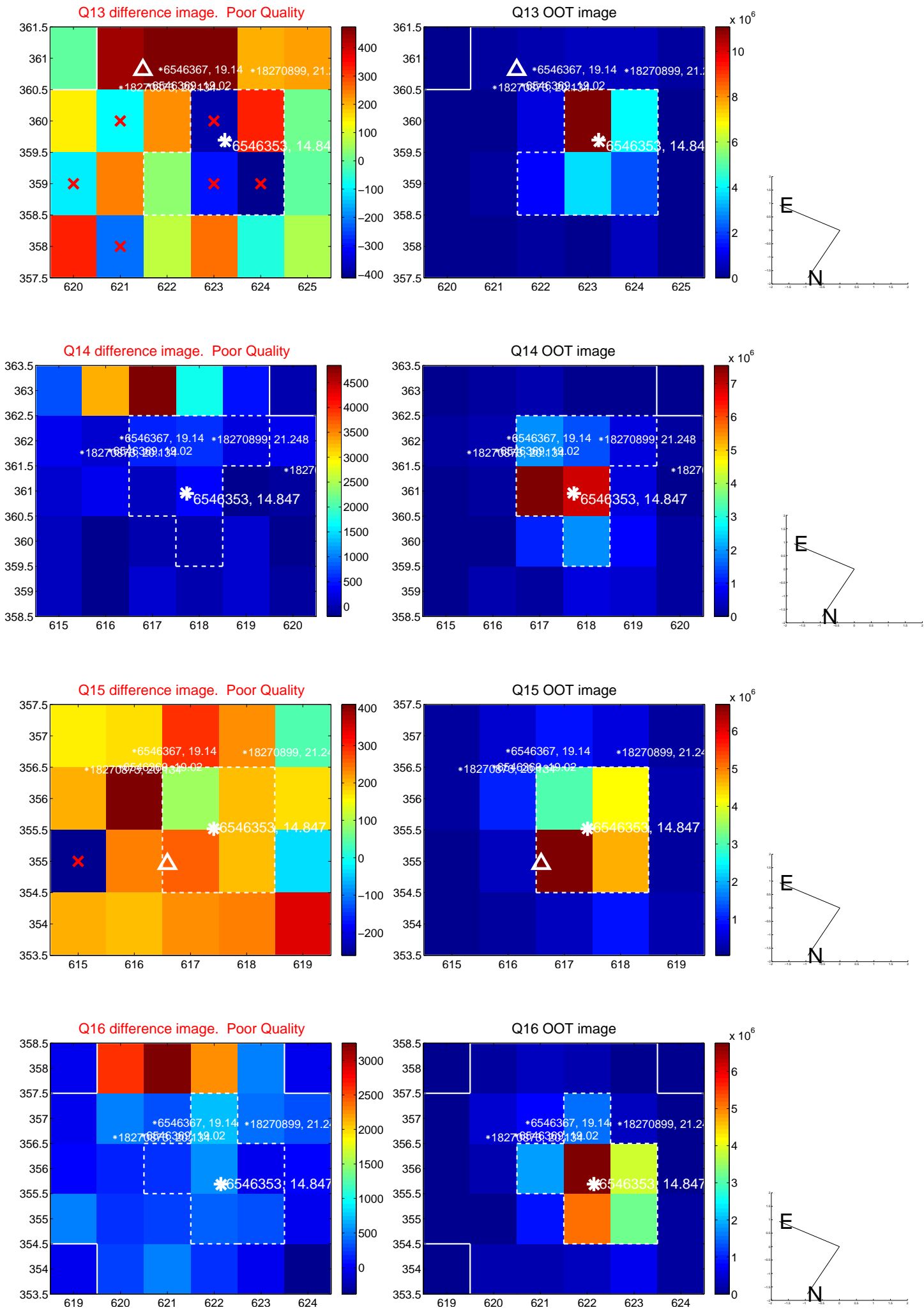
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



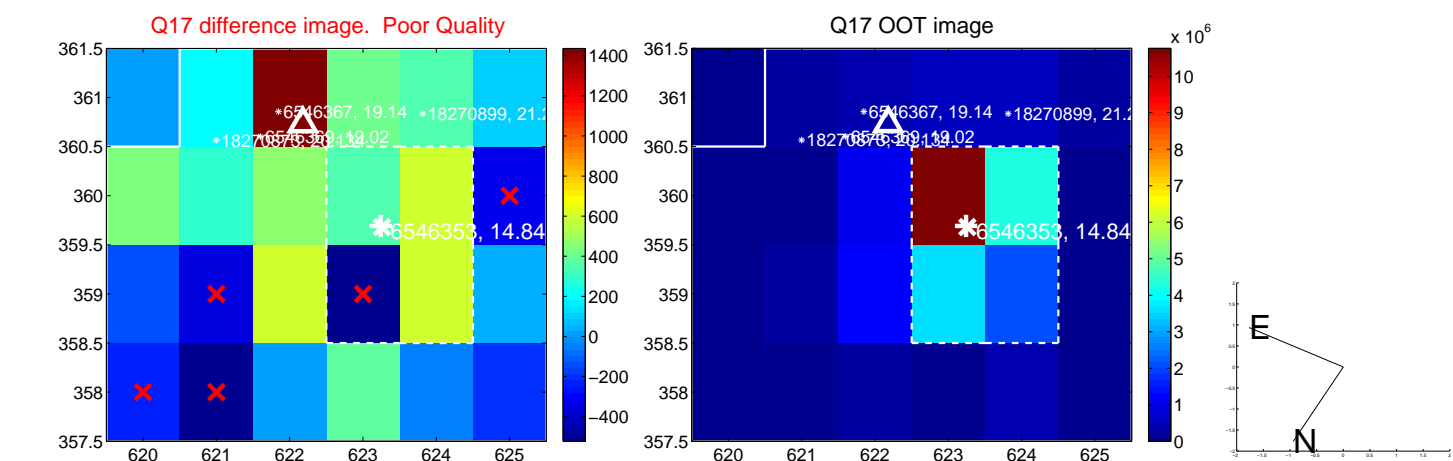
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



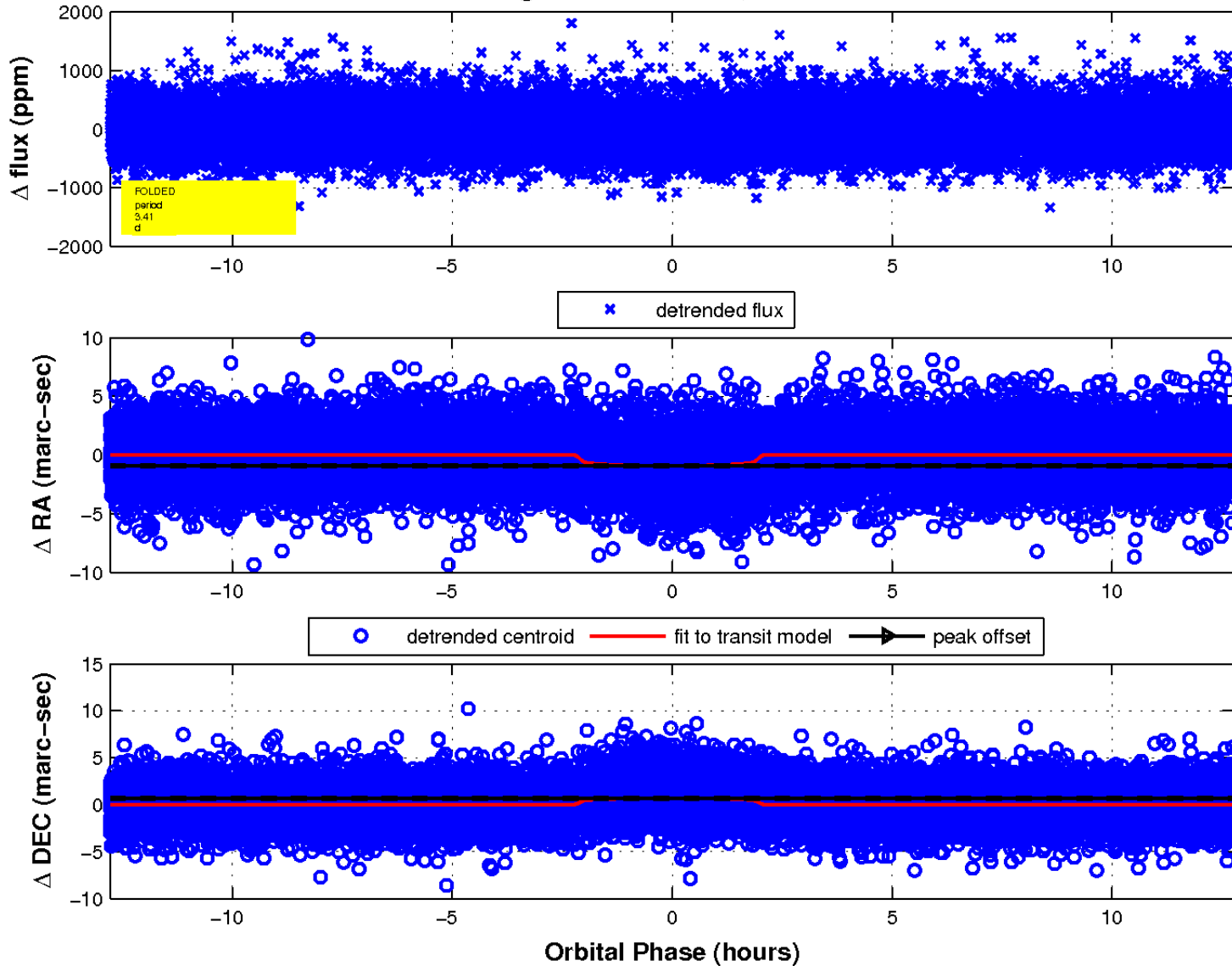
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

