

KIC 009728465

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})
009728465-01	OBS	2270.01	7.353928	132.012621	91.1	1.742	10.9	12.5	2.33	6385	2.60	1144.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009728465-01	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.

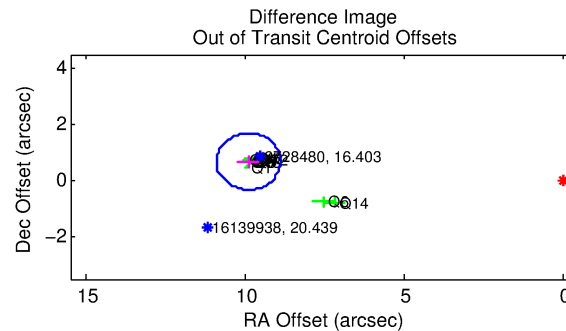
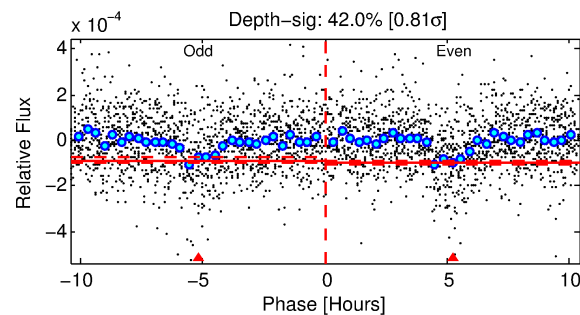
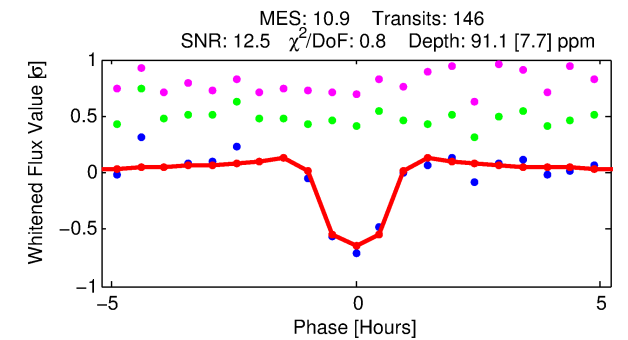
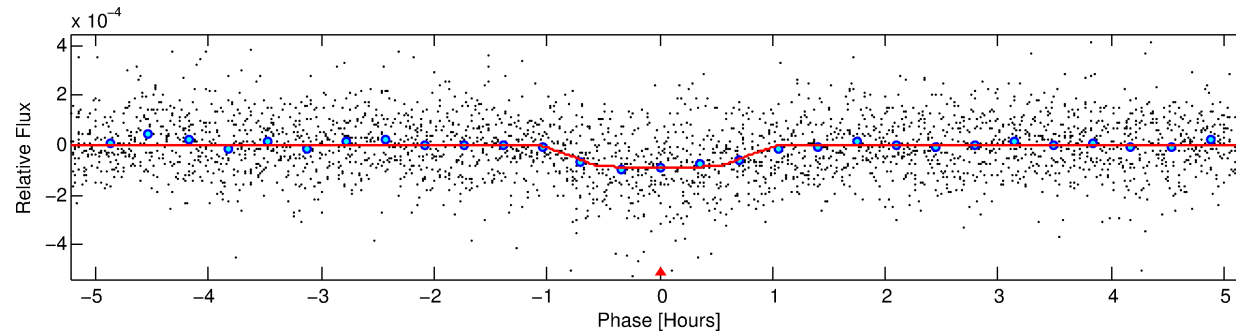
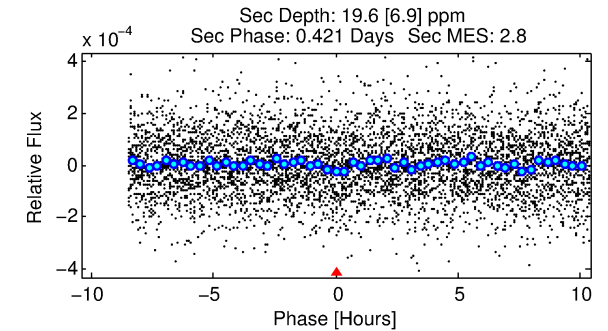
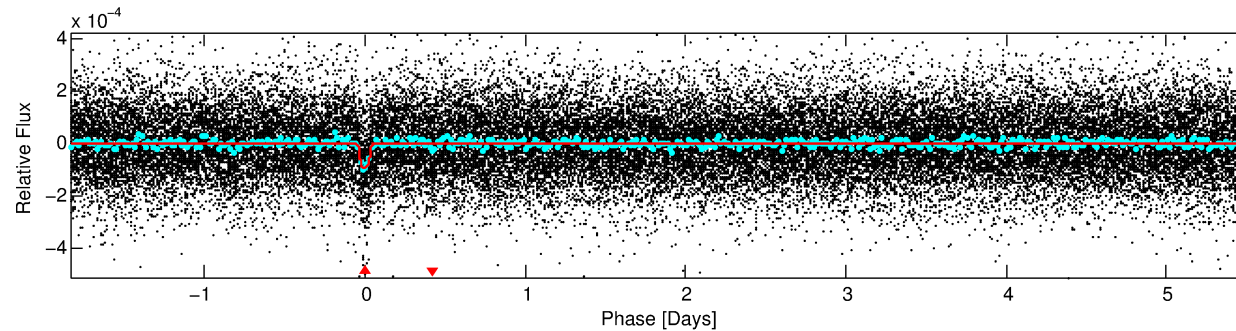
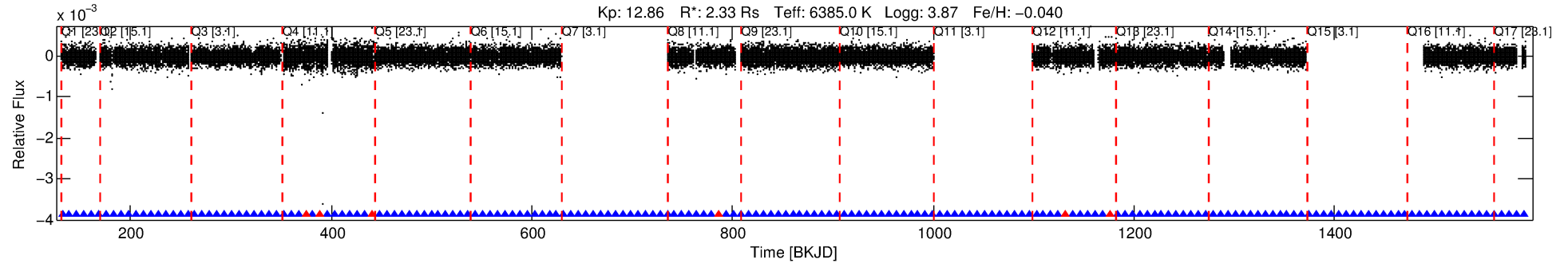
Ephemeris Match Information For 009728465-01

No Significant Match Found

DV One-Page Summary

KIC: 9728465 Candidate: 1 of 1 Period: 7.354 d
KOI: K02270.01 Corr: 0.910

Kp: 12.86 R*: 2.33 Rs Teff: 6385.0 K Logg: 3.87 Fe/H: -0.040



DV Fit Results:

Period = 7.35393 [0.00003] d
Epoch = 132.0126 [0.0026] BKJD
Rp/R* = 0.0103 [0.0034]
a/R* = 14.88 [27.32]
b = 0.90 [0.40]
Seff = 1144.75 [556.46]
Teq = 1483 [180] K
Rp = 2.60 [1.22] Re
a = 0.0839 [0.0256] AU
Ag = 11.20 [9.92] [1.03σ]
Teff = 4195 [793] K [3.33σ]

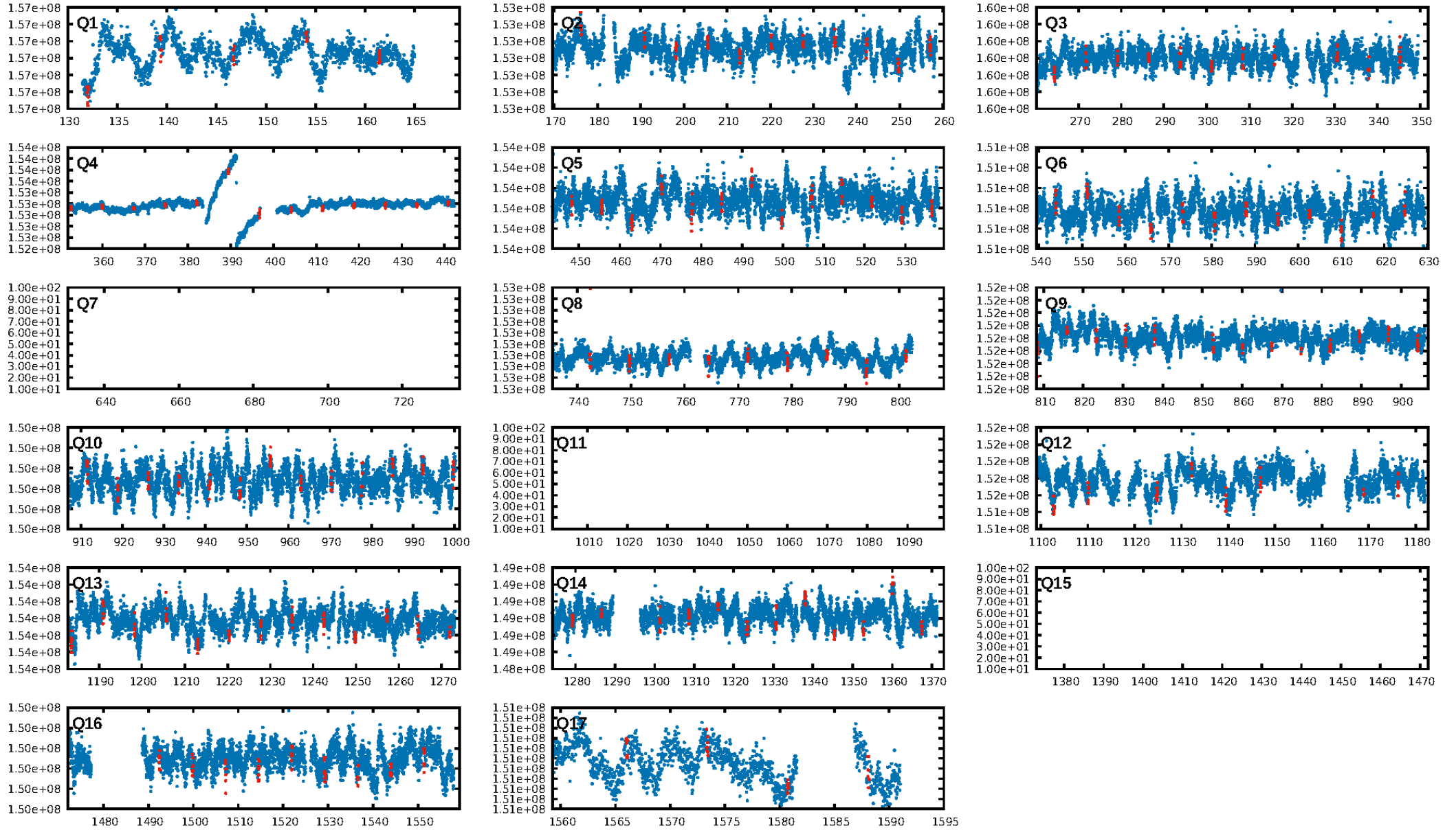
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.19e-26
RollingBand-fgt: 0.96 [131/137]
GhostDiagnostic-chr: -0.1121
Centroid-sig: 0.0%
Centroid-so: 21.971 arcsec [30.56σ]
OotOffset-rm: 9.928 arcsec [29.58σ]
KicOffset-rm: 9.899 arcsec [29.03σ]
OotOffset-st: 2/0/4/5 [11]
KicOffset-st: 2/0/4/5 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [14/14]

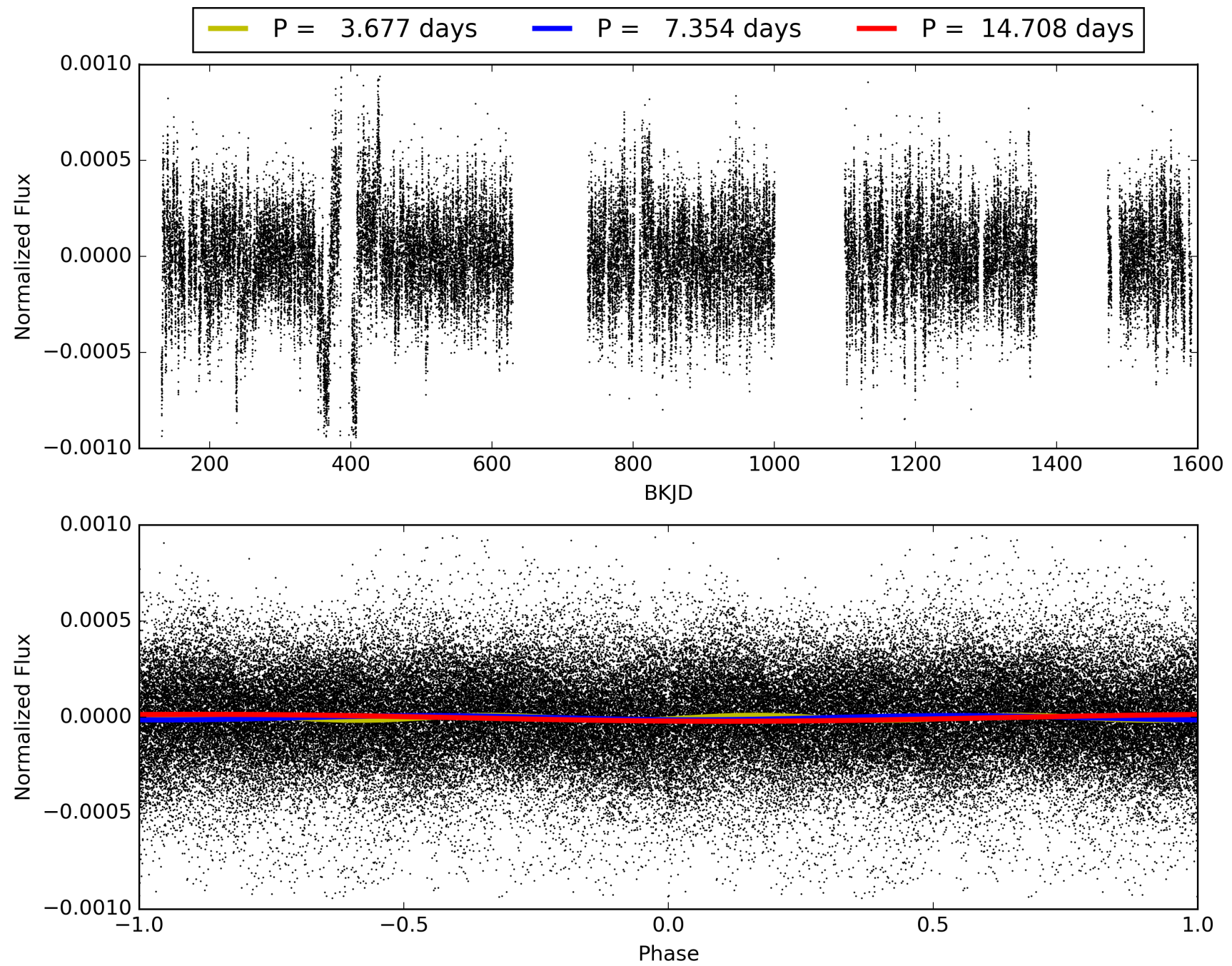
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:40:05 Z

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

TCE 009728465-01, PDC Light Curves

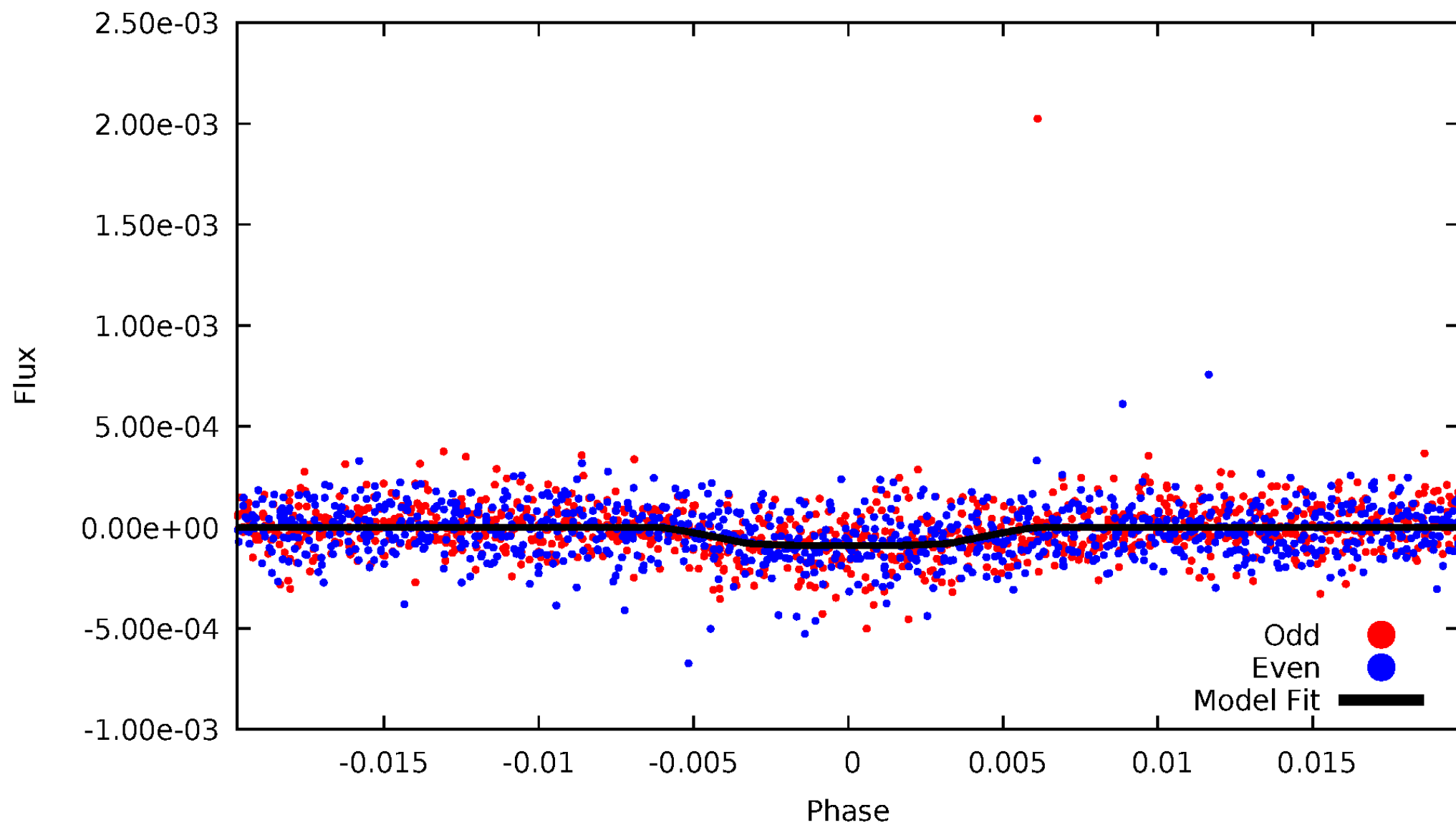


TCE 009728465-01



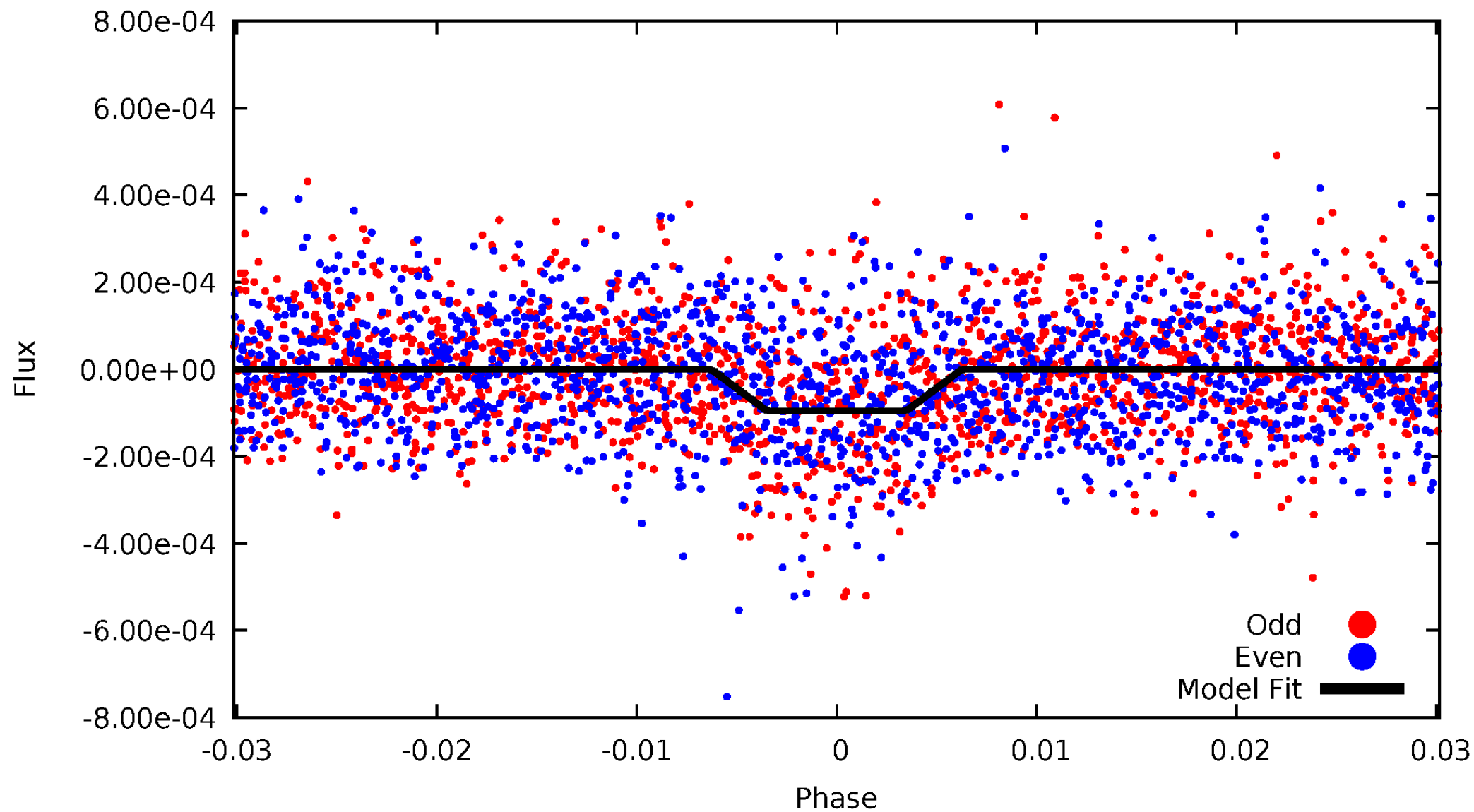
DV Odd/Even

TCE 009728465-01



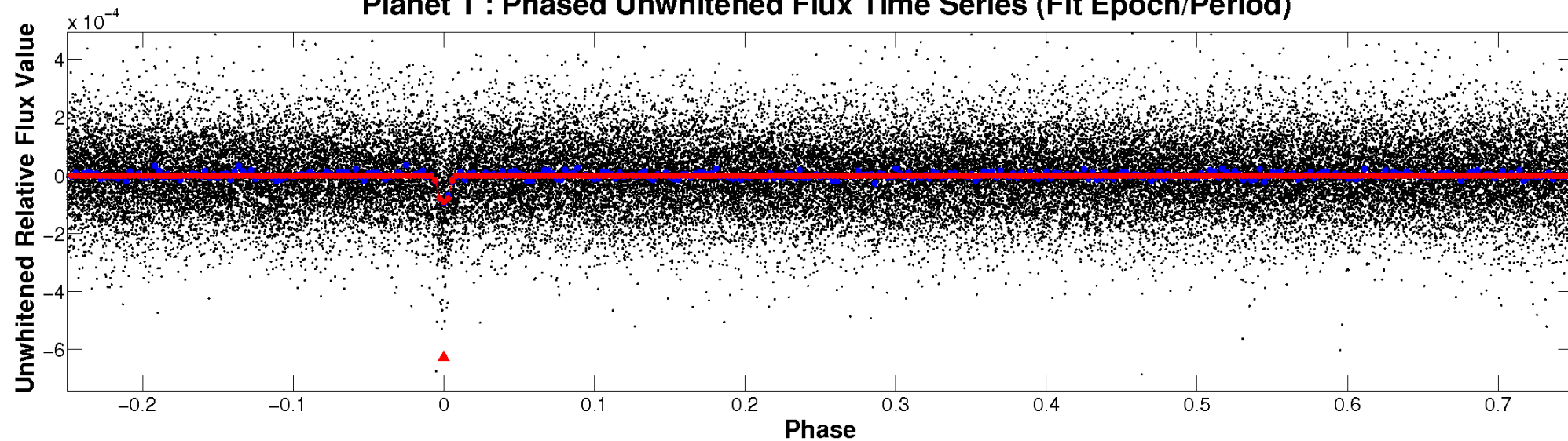
ALT Odd/Even

TCE 009728465-01

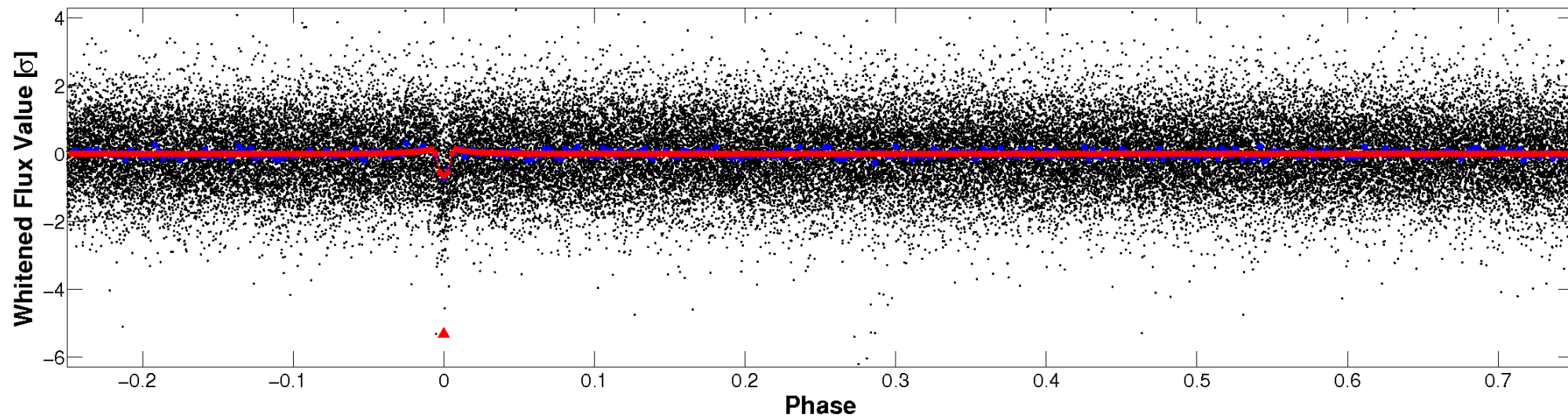


Non-Whitened Vs. Whitened Light Curve

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

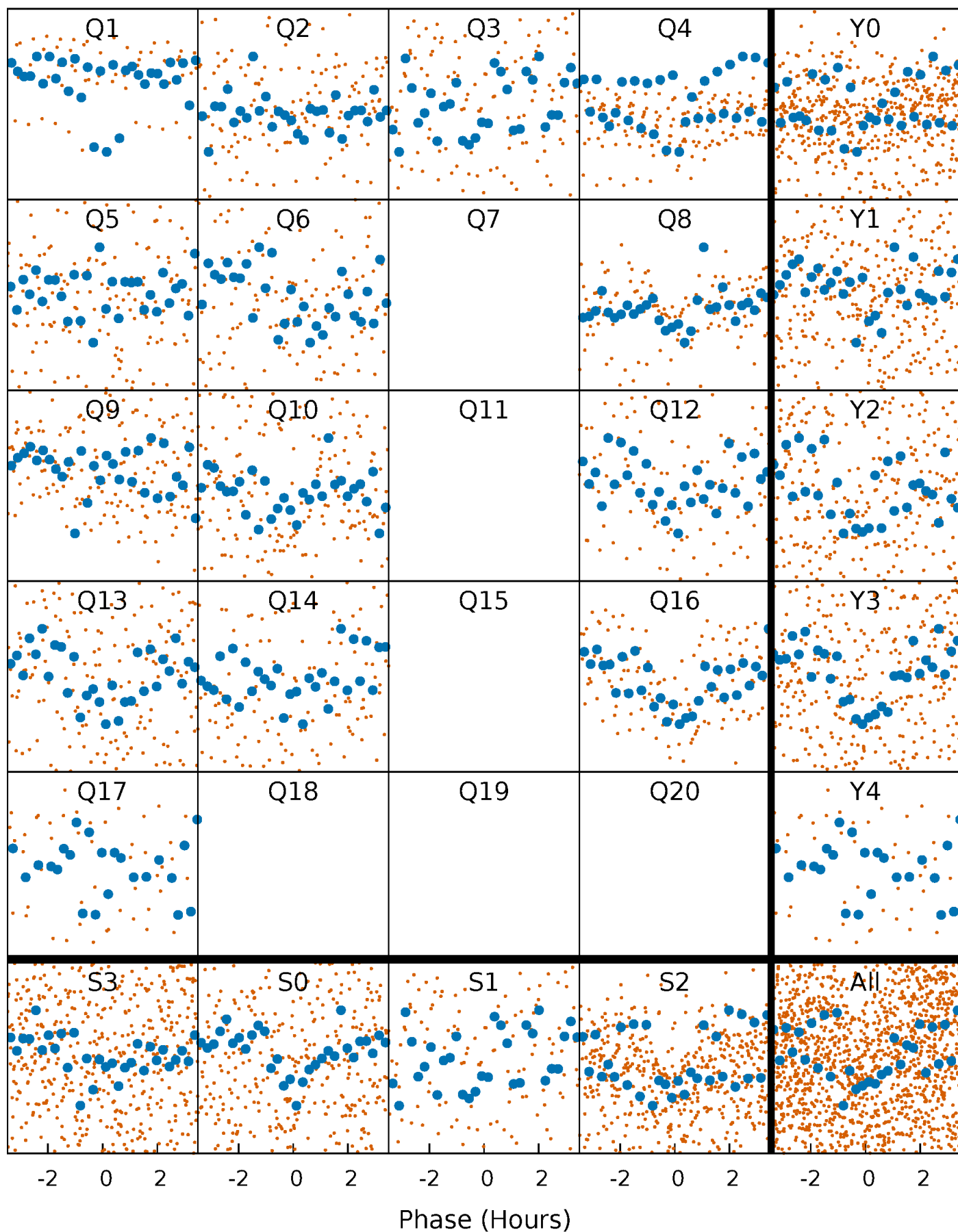


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



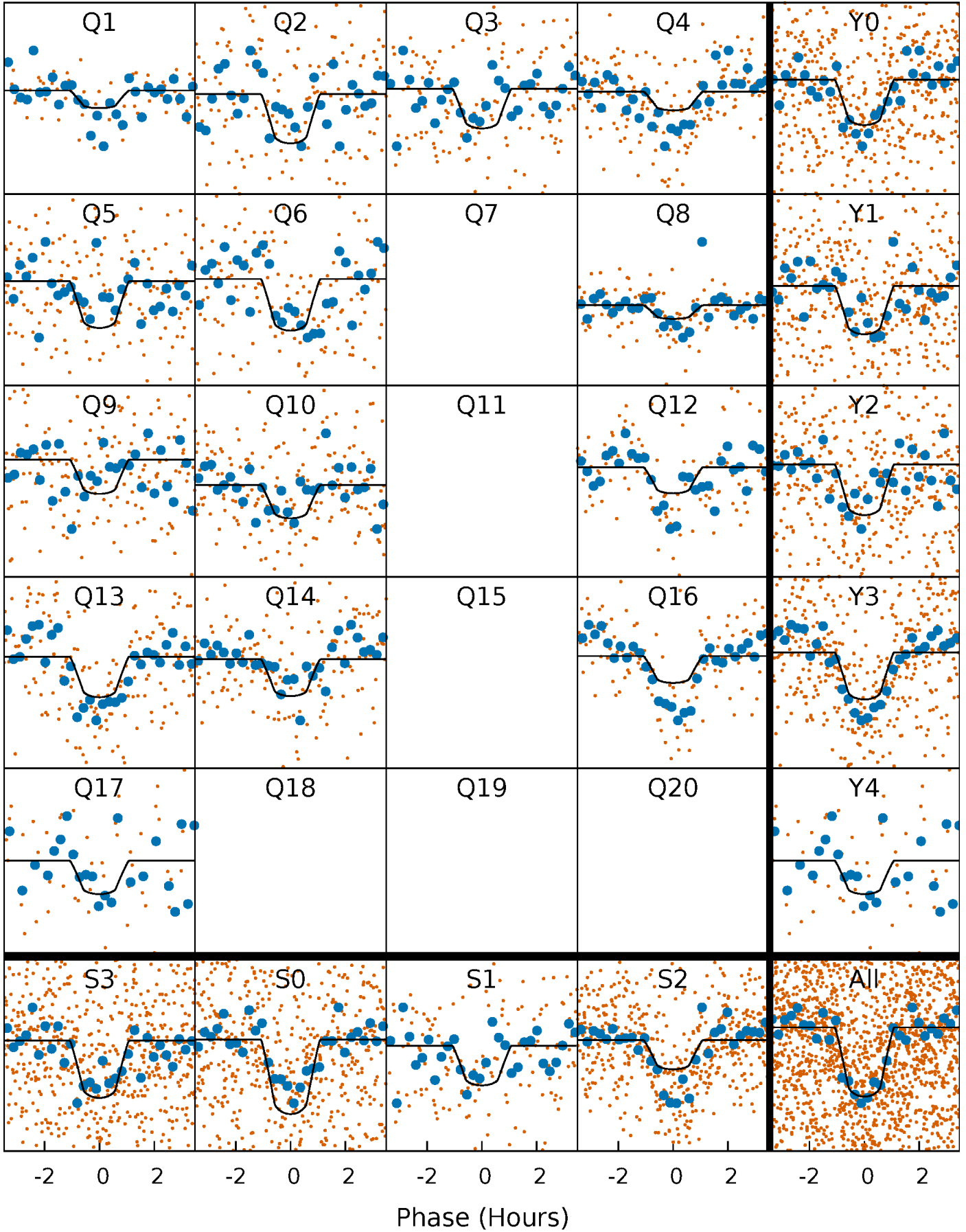
PDC Quarter-Phased Transit Curves

TCE 009728465-01 P= 7.353928 Days $T_0=132.012621$ (BKJD)



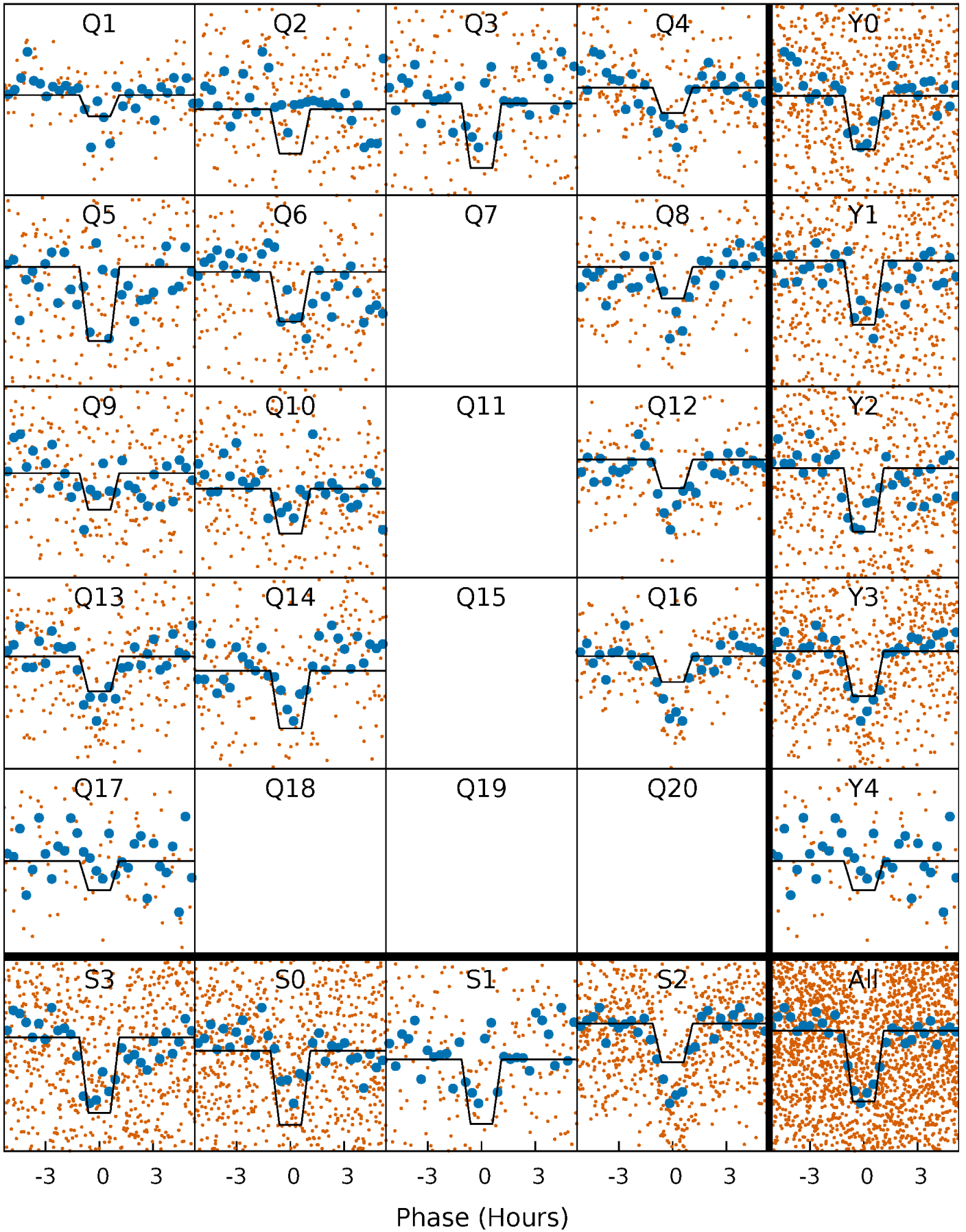
DV Quarter-Phased Transit Curves

TCE 009728465-01 P= 7.353928 Days $T_0=132.012621$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

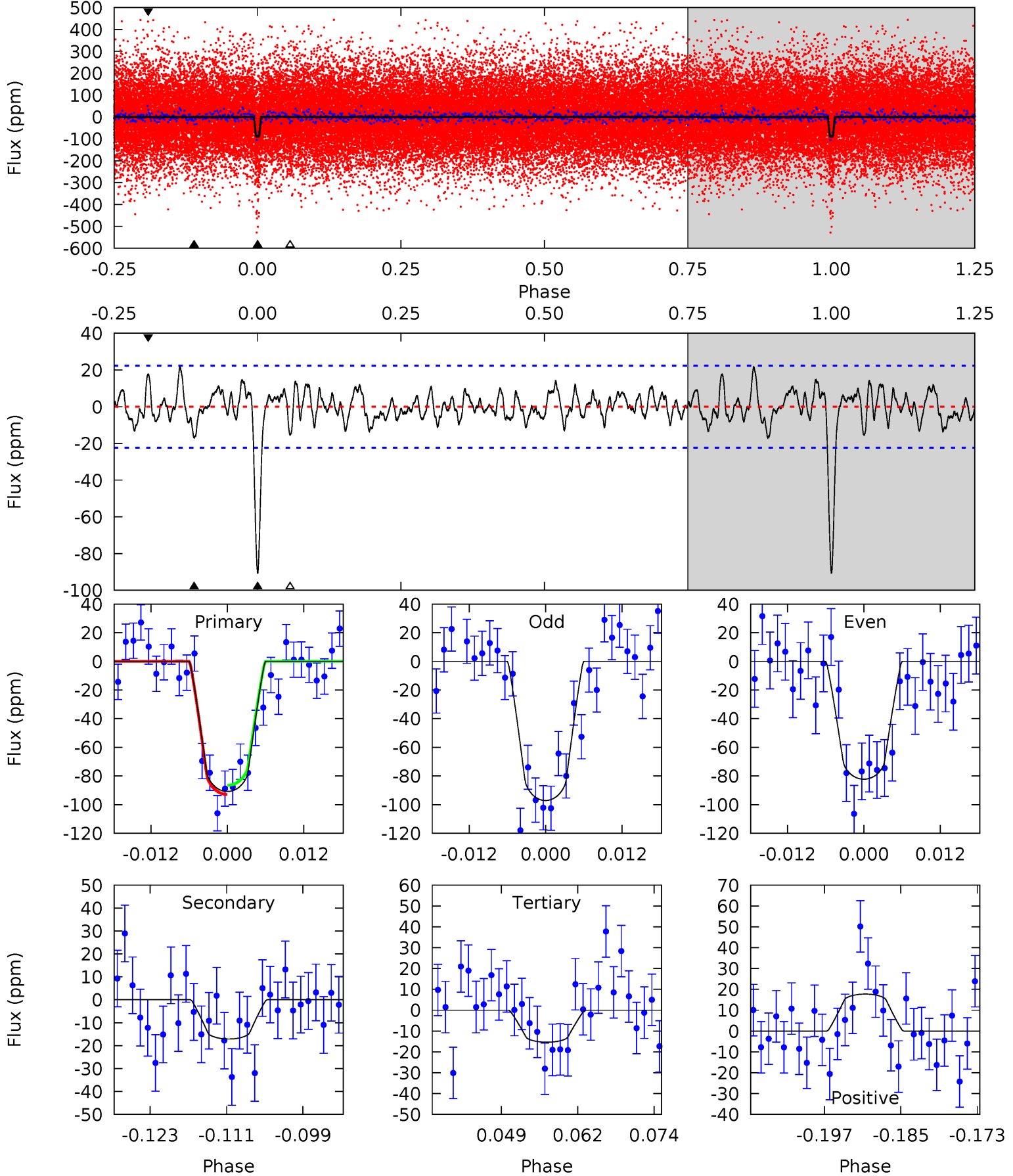
TCE 009728465-01 P= 7.353911 Days $T_0=132.016502$ (BKJD)



DV Model-Shift Uniqueness Test

009728465-01, P = 7.353928 Days, E = 124.658693 Days

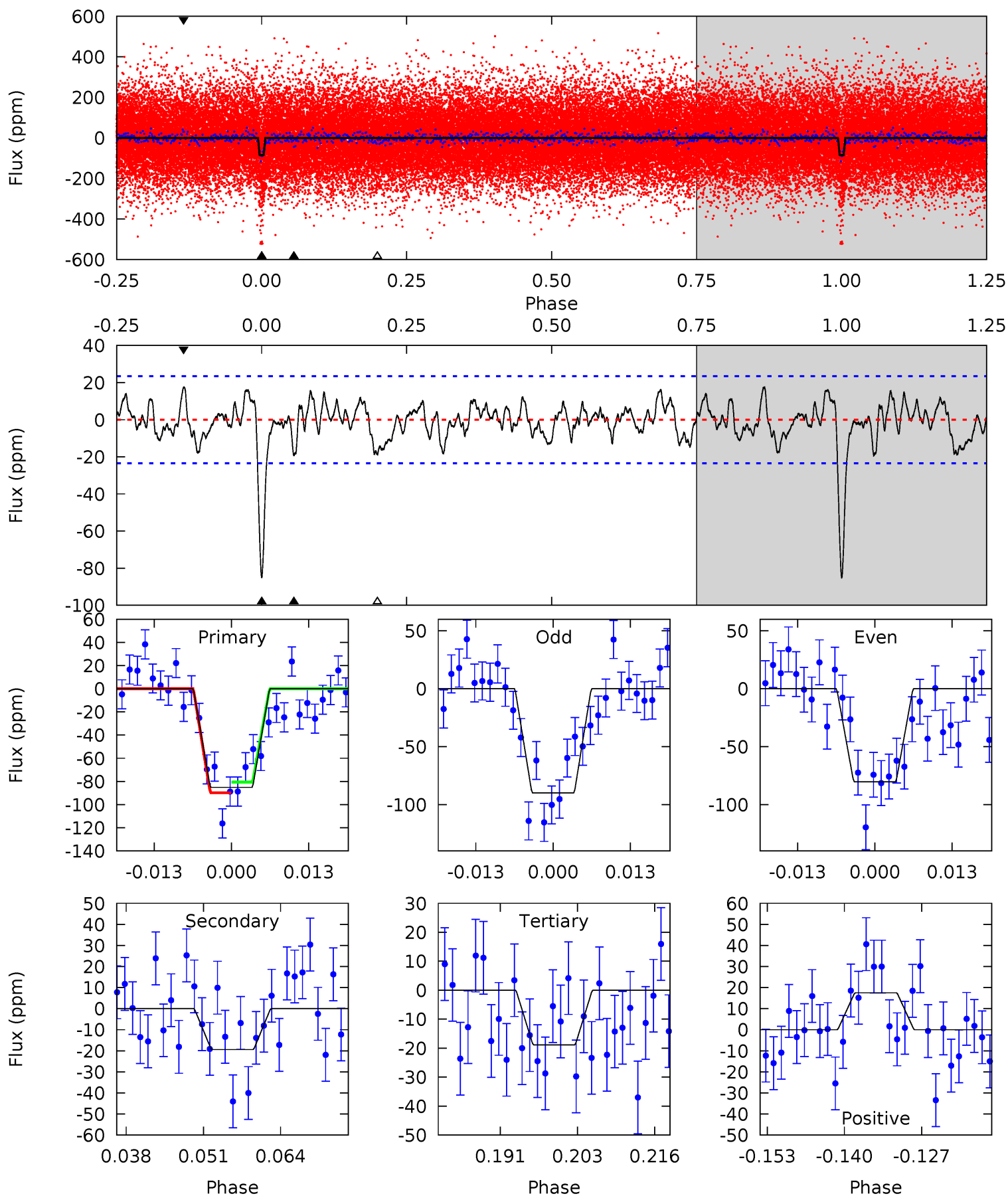
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	3.83	3.43	3.96	4.99	2.50	1.39	16.9	16.3	0.39	-0.13	1.67	1.18	0.19	0.72



Alt Model-Shift Uniqueness Test

009728465-01, P = 7.353911 Days, E = 124.662591 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	4.11	4.00	3.71	4.98	2.49	1.54	14.0	14.3	0.12	0.40	1.03	1.10	0.17	0.98



Stellar Parameters For KIC 009728465

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6385^{+174}_{-174}	$3.868^{+0.273}_{-0.117}$	$-0.040^{+0.300}_{-0.250}$	$2.327^{+0.450}_{-0.771}$	$1.458^{+0.200}_{-0.300}$	$0.163^{+0.296}_{-0.058}$
	+3%/-3%	+7%/-3%	+750%/-625%	+19%/-33%	+14%/-21%	+182%/-36%
Source	PHO1	FLK73	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 009728465-01 / KOI 2270.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 4	$2.45^{+1.00}_{-0.81}$	2046^{+138}_{-173}	4261^{+753}_{-513}	11^{+14}_{-5}
Alt.	-19 ± 5	$2.37^{+1.00}_{-0.88}$	2049^{+129}_{-167}	4450^{+892}_{-545}	13^{+19}_{-7}

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

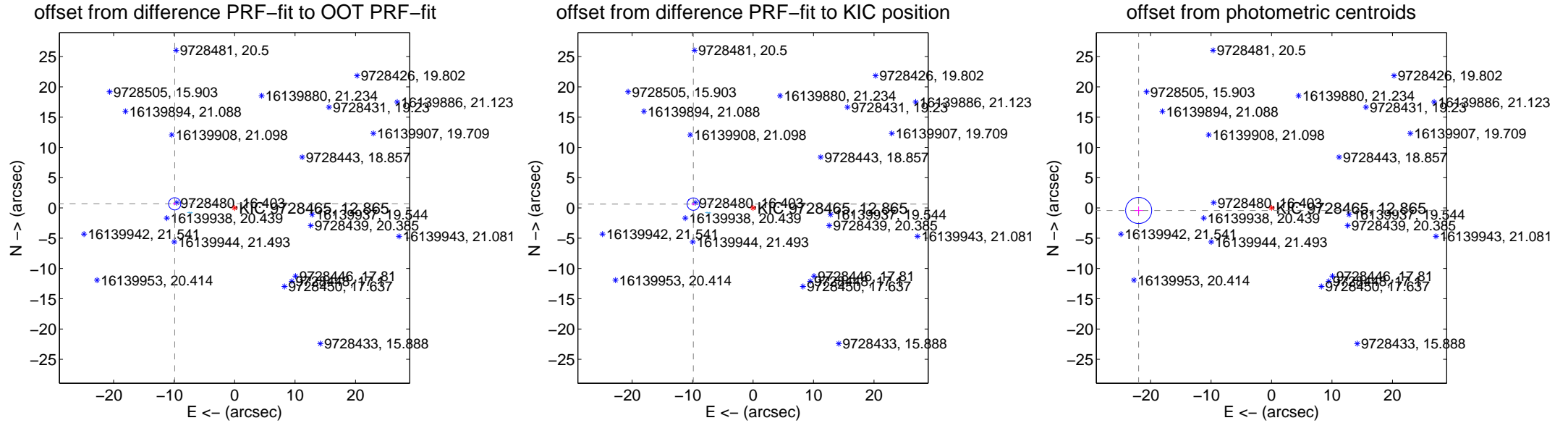
DV Centroid Data

Supplemental centroid analysis for 009728465-01. Kepler magnitude: 12.87. Transit SNR 12.48

There are 11 quarters with good PRF difference image offsets

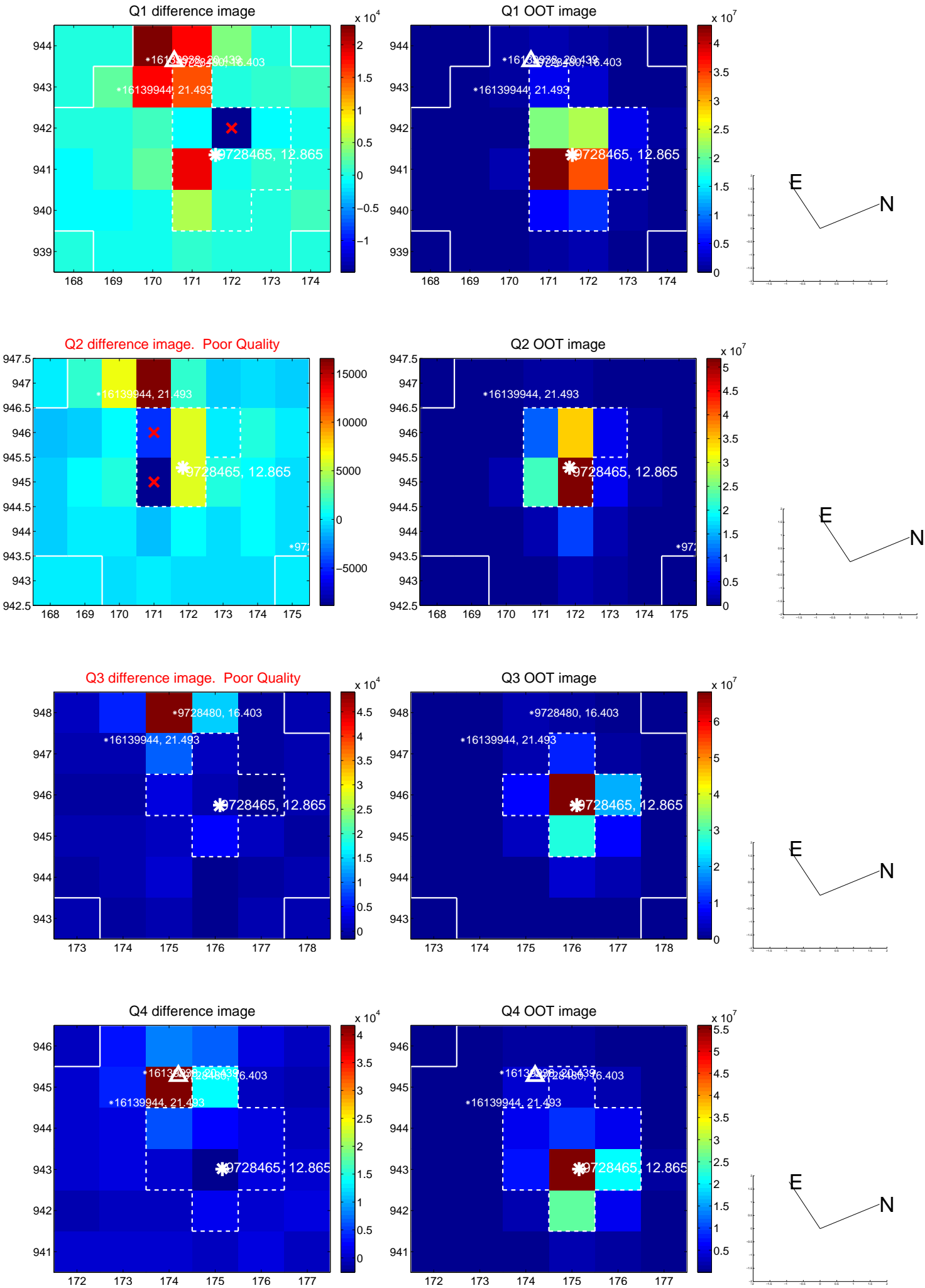
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.928 ± 0.336	29.58	9.904 ± 0.324	0.684 ± 0.197
PRF-fit source offset from KIC position	9.899 ± 0.341	29.03	9.879 ± 0.329	0.637 ± 0.206
photometric centroid source offset	21.97 ± 0.72	30.56	21.97 ± 0.72	-0.42 ± 0.67

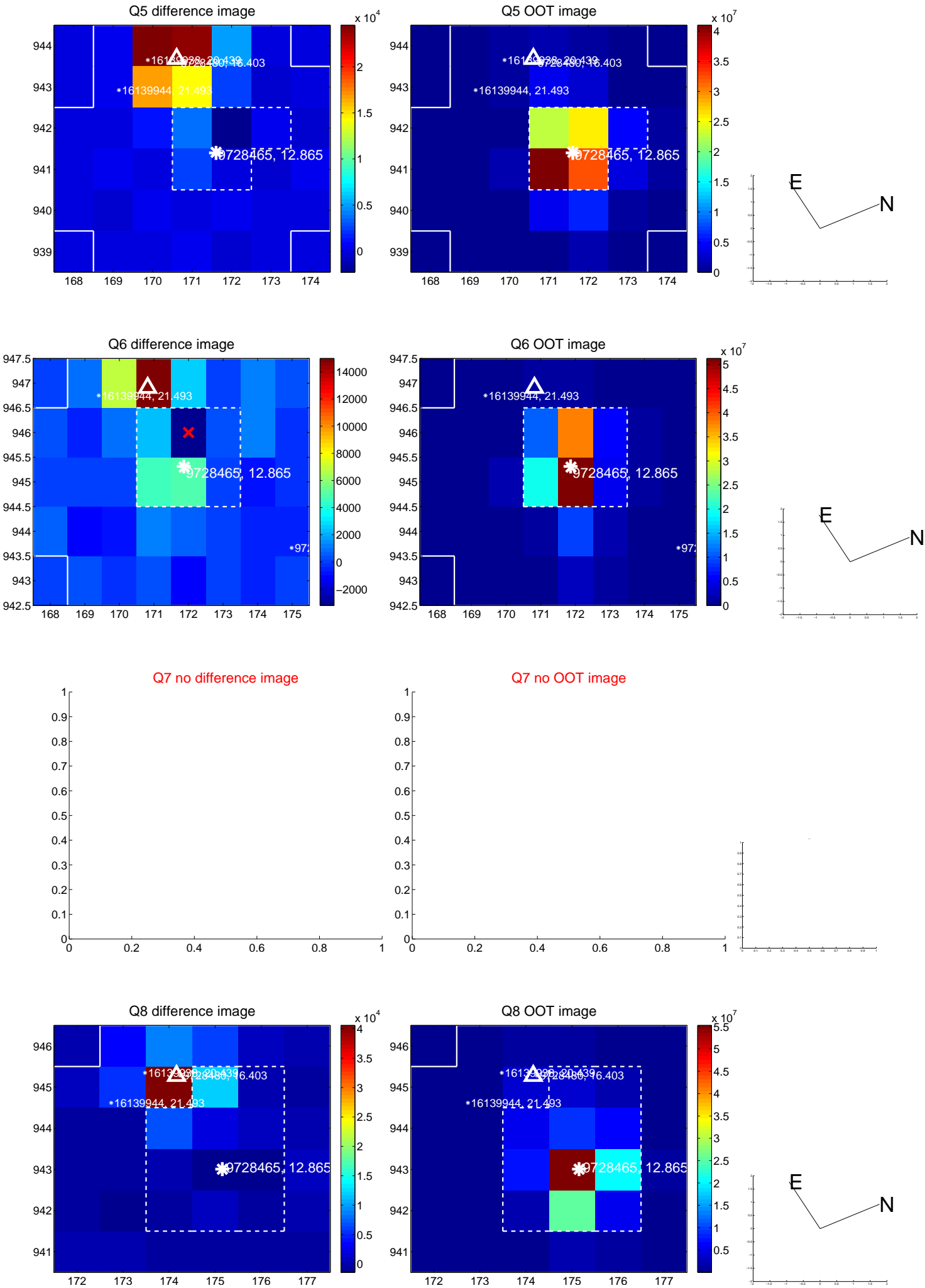


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

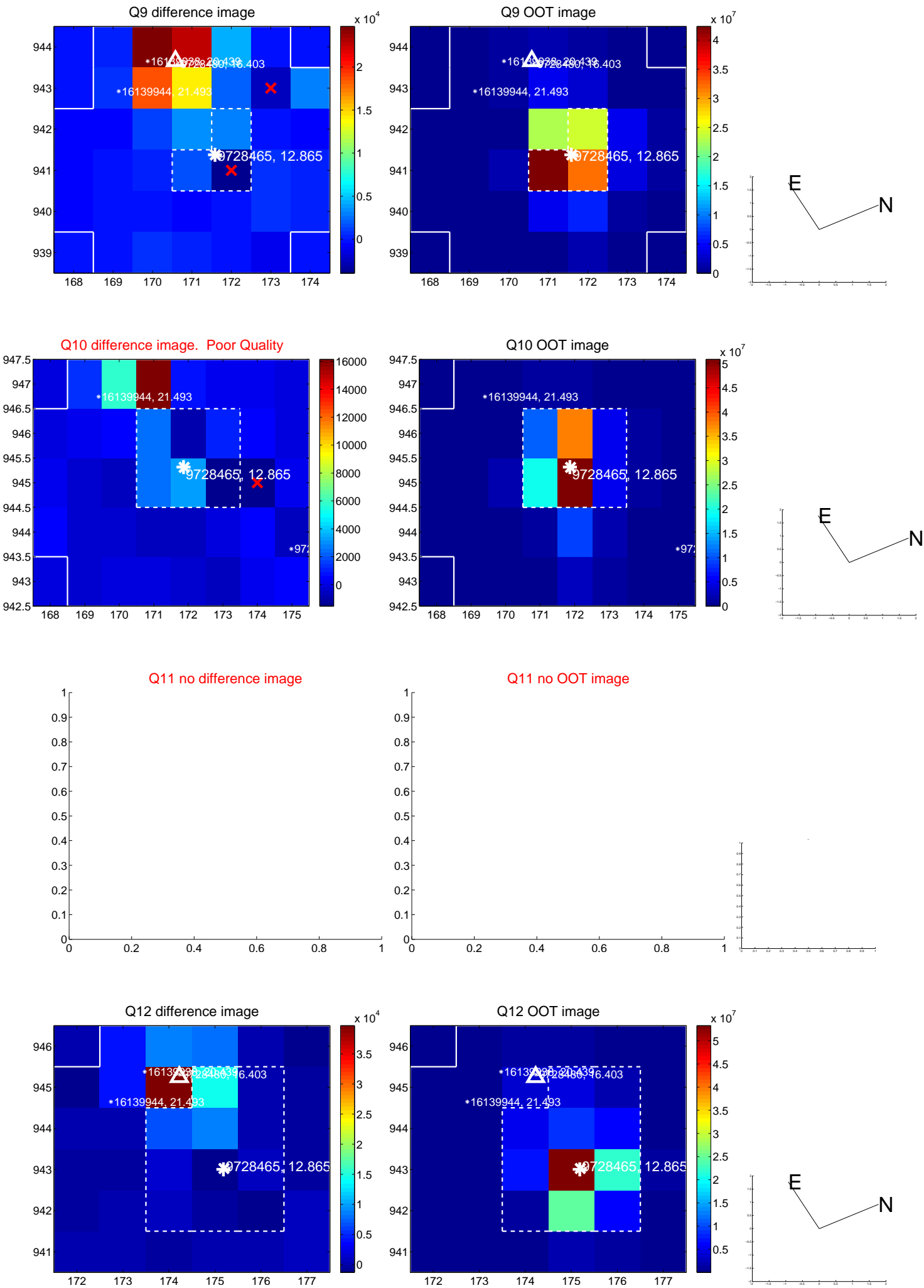
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



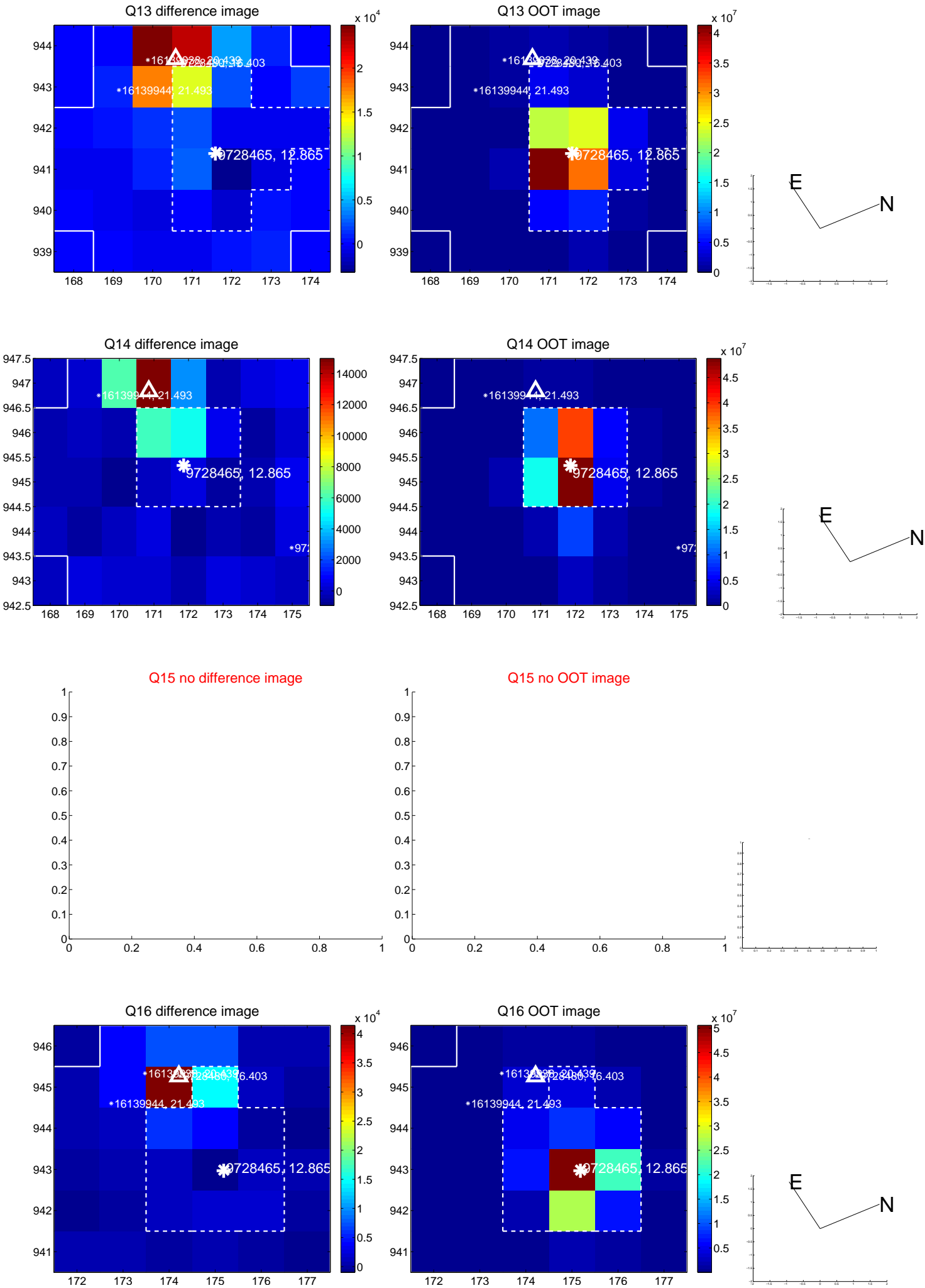
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



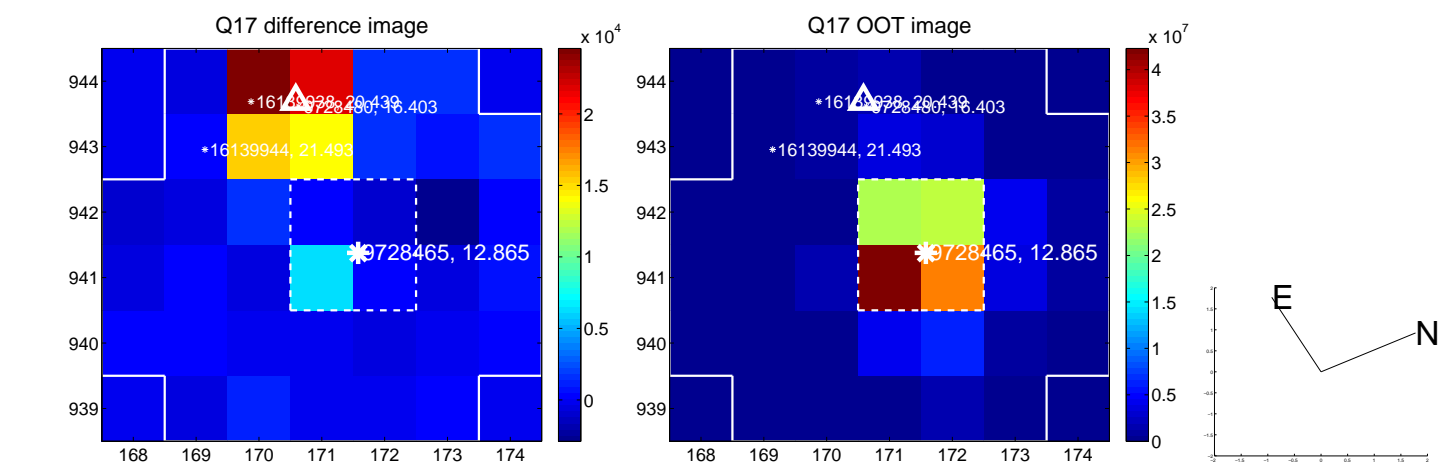
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



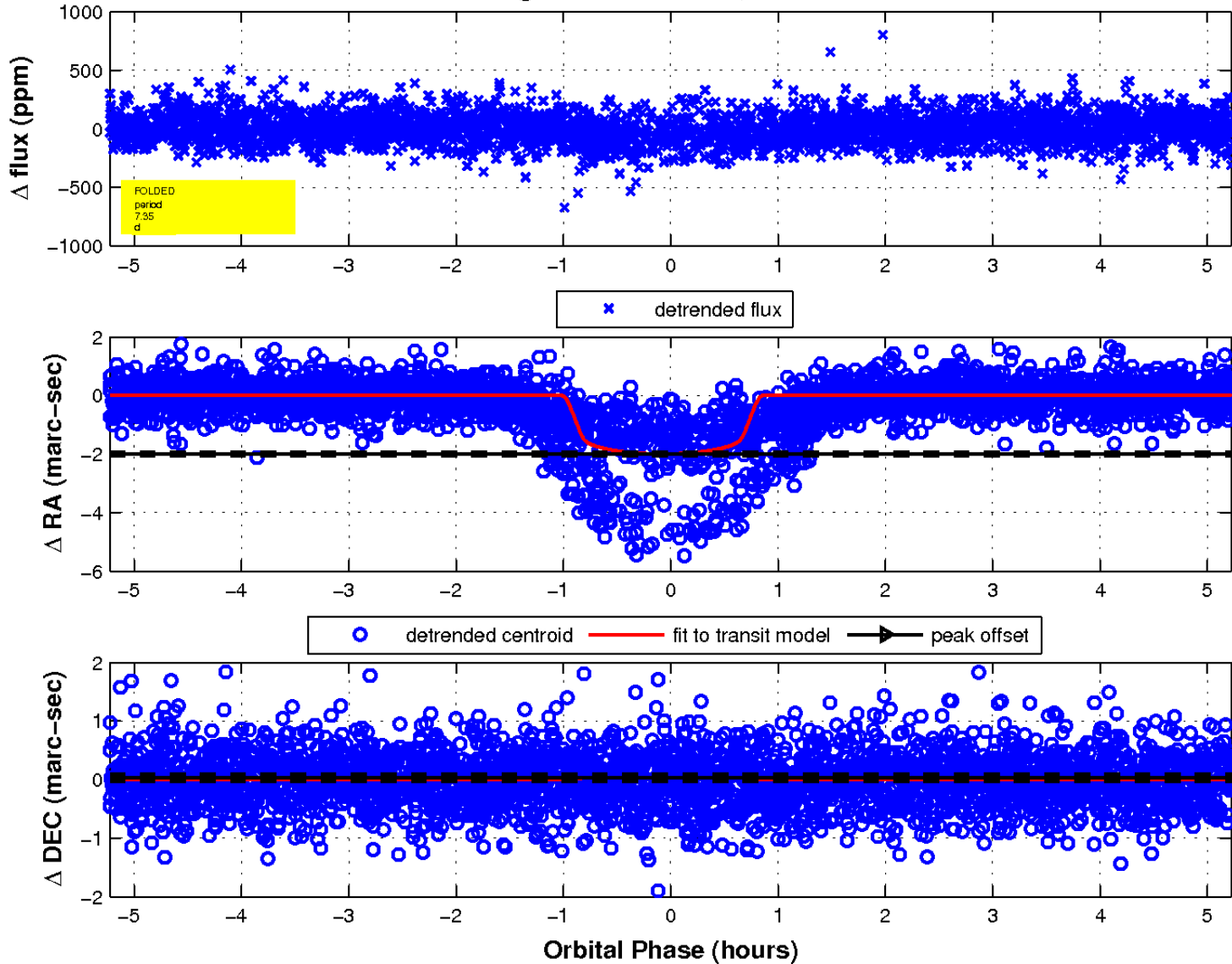
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

