

KIC 005942093

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})
005942093-01	OBS	1995.01	14.387238	131.851838	1867.1	1.894	39.8	43.7	0.86	5830	5.59	65.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005942093-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

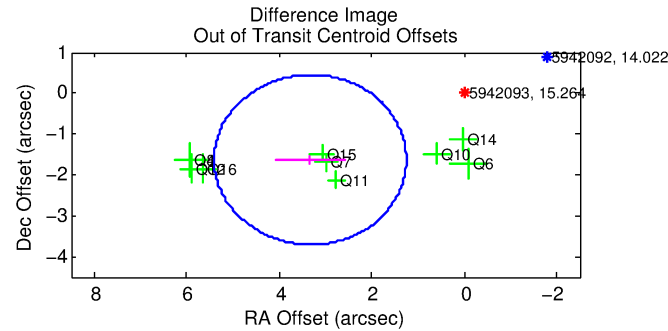
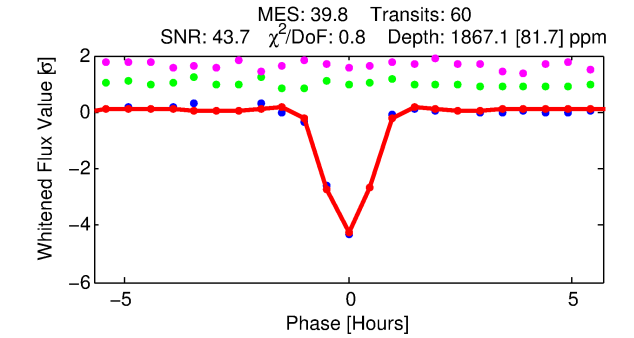
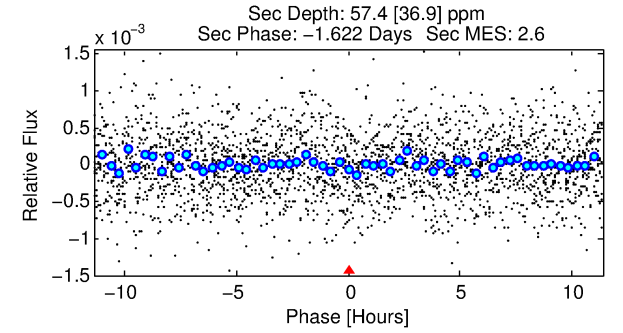
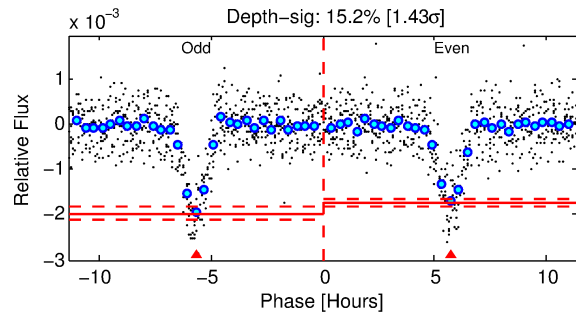
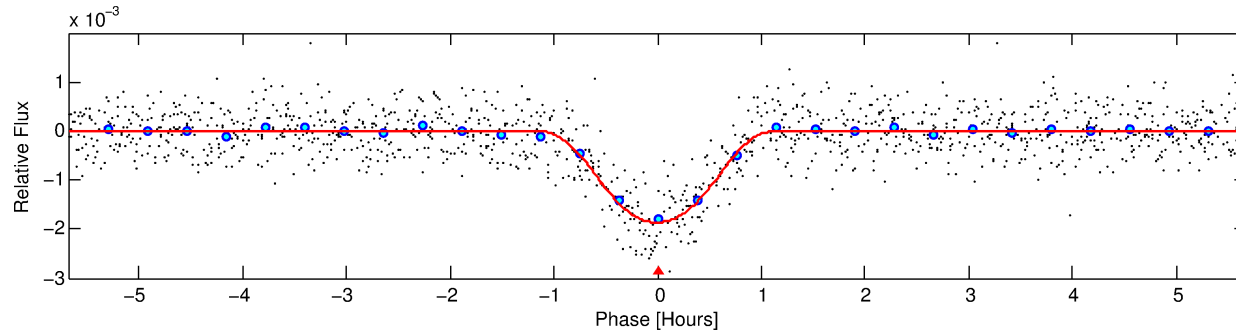
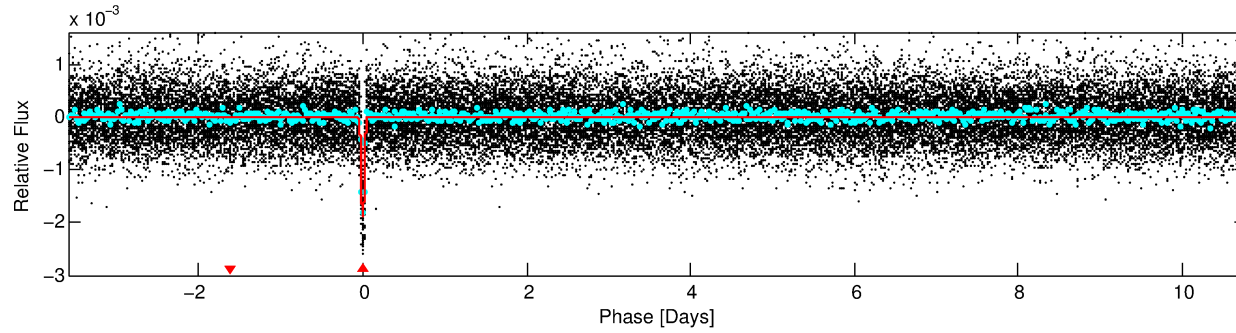
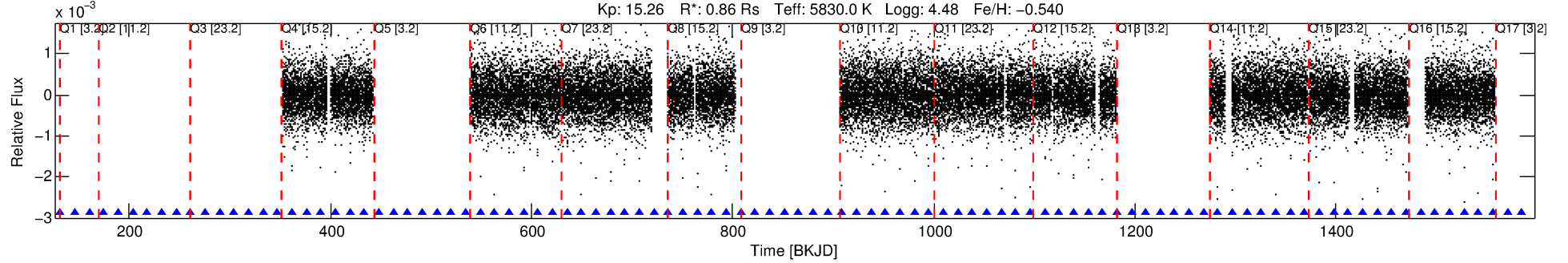
Ephemeris Match Information For 005942093-01

No Significant Match Found

DV One-Page Summary

KIC: 5942093 Candidate: 1 of 1 Period: 14.387 d
KOI: K01995.01 Corr: 0.992

Kp: 15.26 R*: 0.86 Rs Teff: 5830.0 K Logg: 4.48 Fe/H: -0.540



DV Fit Results:

Period = 14.38724 [0.00002] d
Epoch = 131.8518 [0.0014] BKJD
Rp/R* = 0.0597 [0.0363]
a/R* = 24.28 [5.50]
b = 0.97 [0.07]
Seff = 65.50 [21.36]
Teq = 725 [59] K
Rp = 5.59 [3.66] Re
a = 0.1080 [0.0221] AU
Ag = 11.78 [16.57] [0.65σ]
Teff = 2078 [718] K [1.88σ]

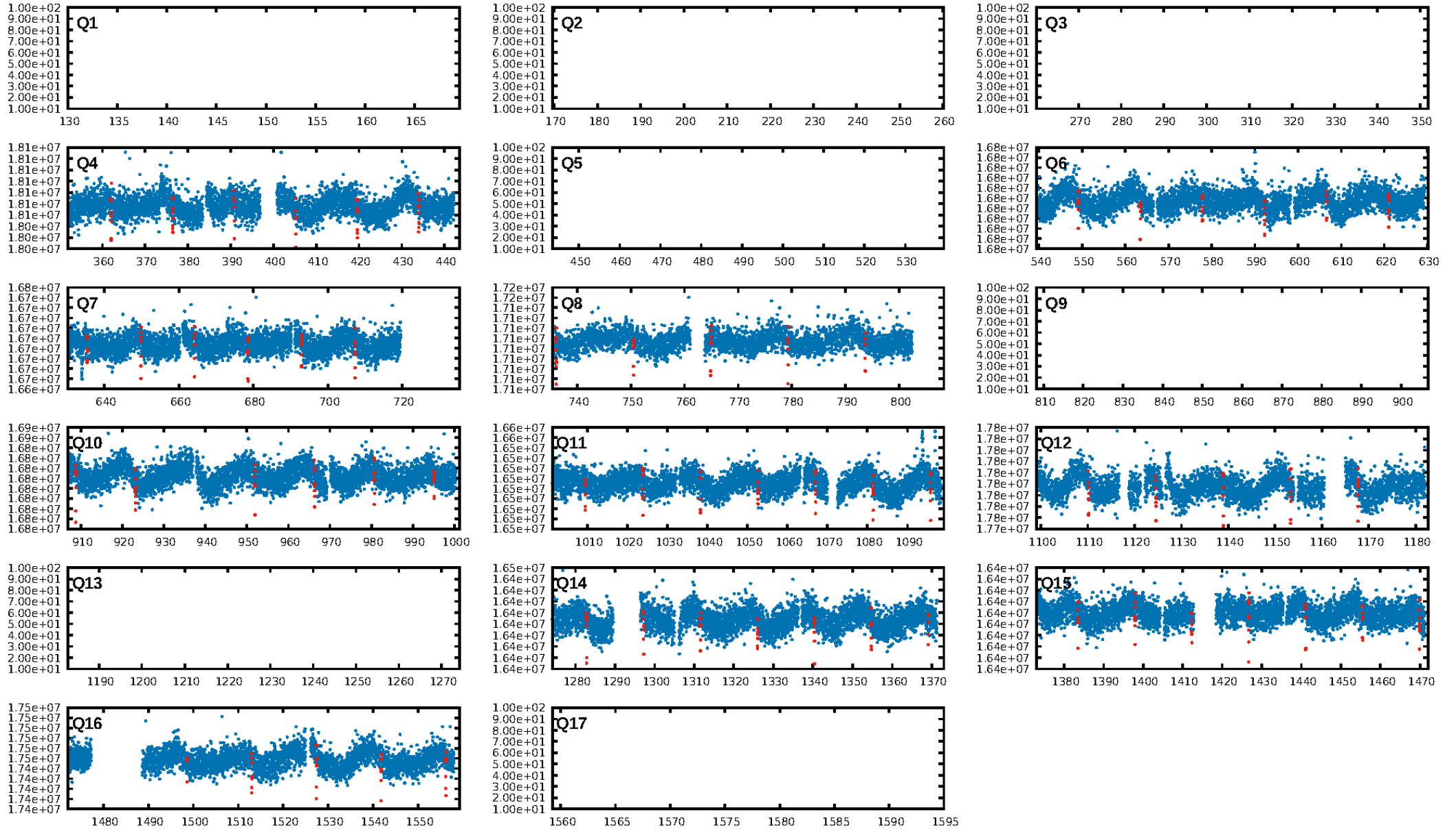
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [60/60]
GhostDiagnostic-chr: 6.065
Centroid-sig: 0.0%
Centroid-so: 1.391 arcsec [7.64σ]
OotOffset-rm: 3.706 arcsec [5.35σ]
KicOffset-rm: 0.254 arcsec [2.18σ]
OotOffset-st: 3/3/4/0 [10]
KicOffset-st: 3/3/4/0 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

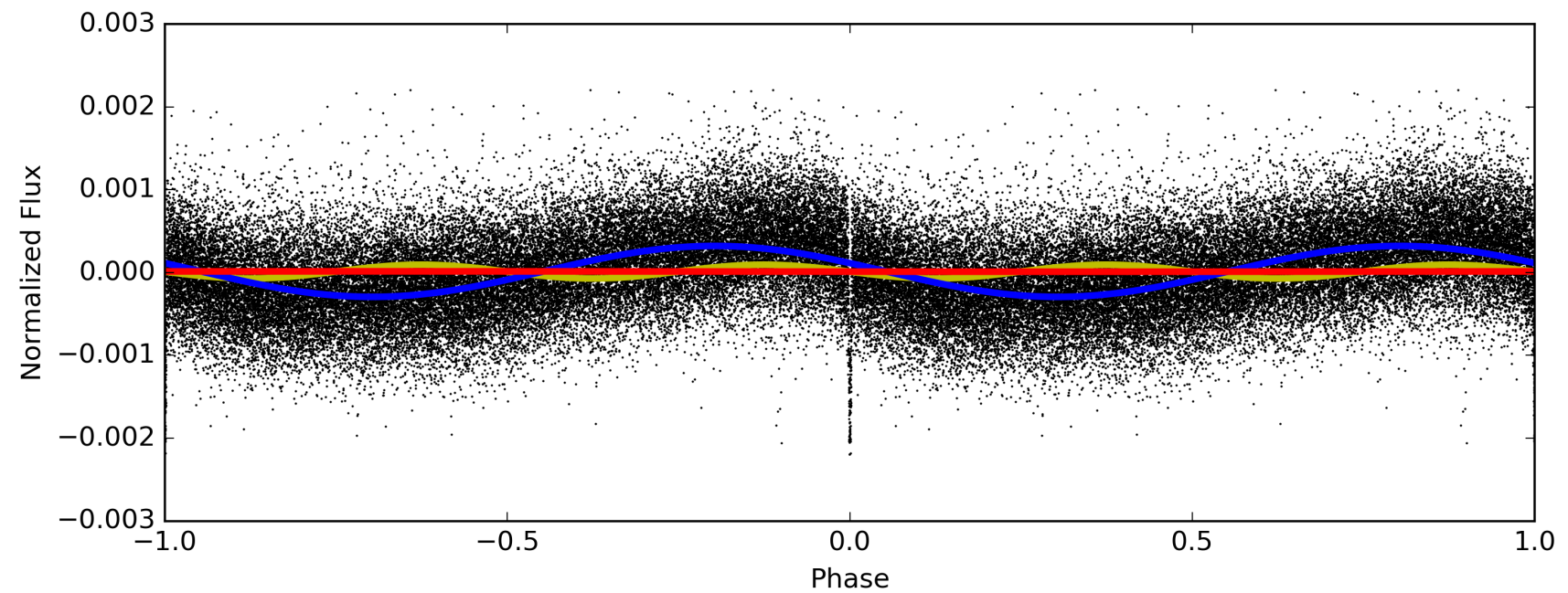
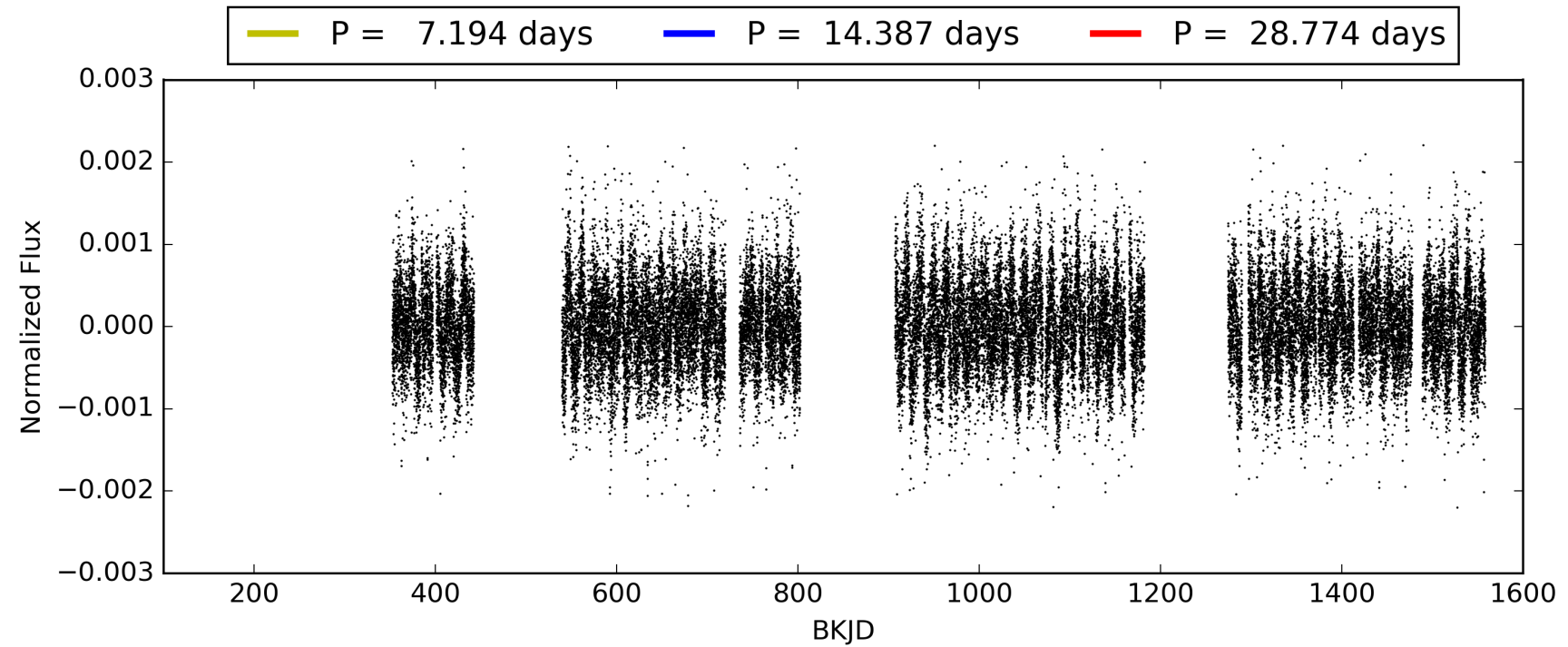
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:00:50 Z

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

TCE 005942093-01, PDC Light Curves

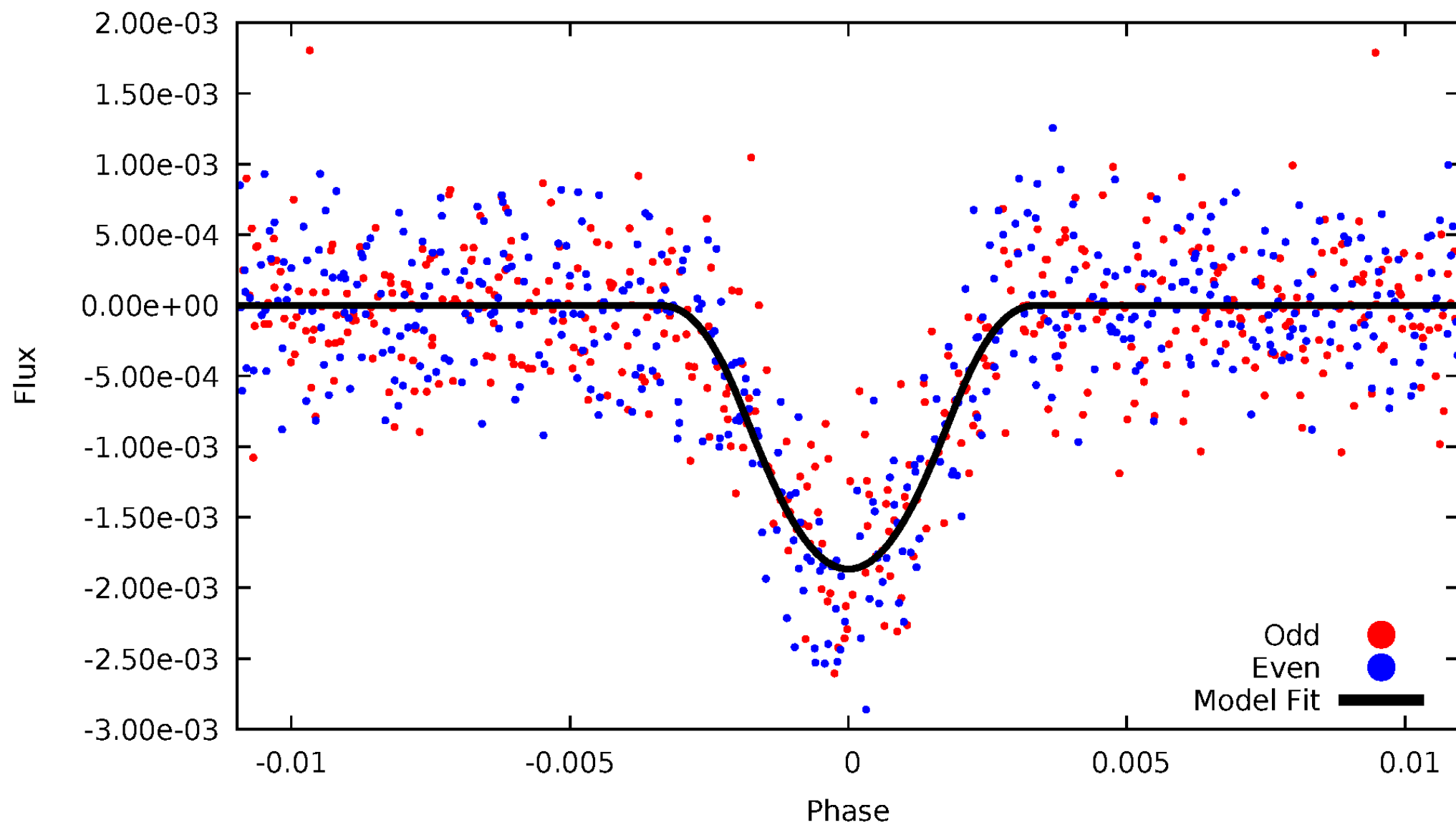


TCE 005942093-01



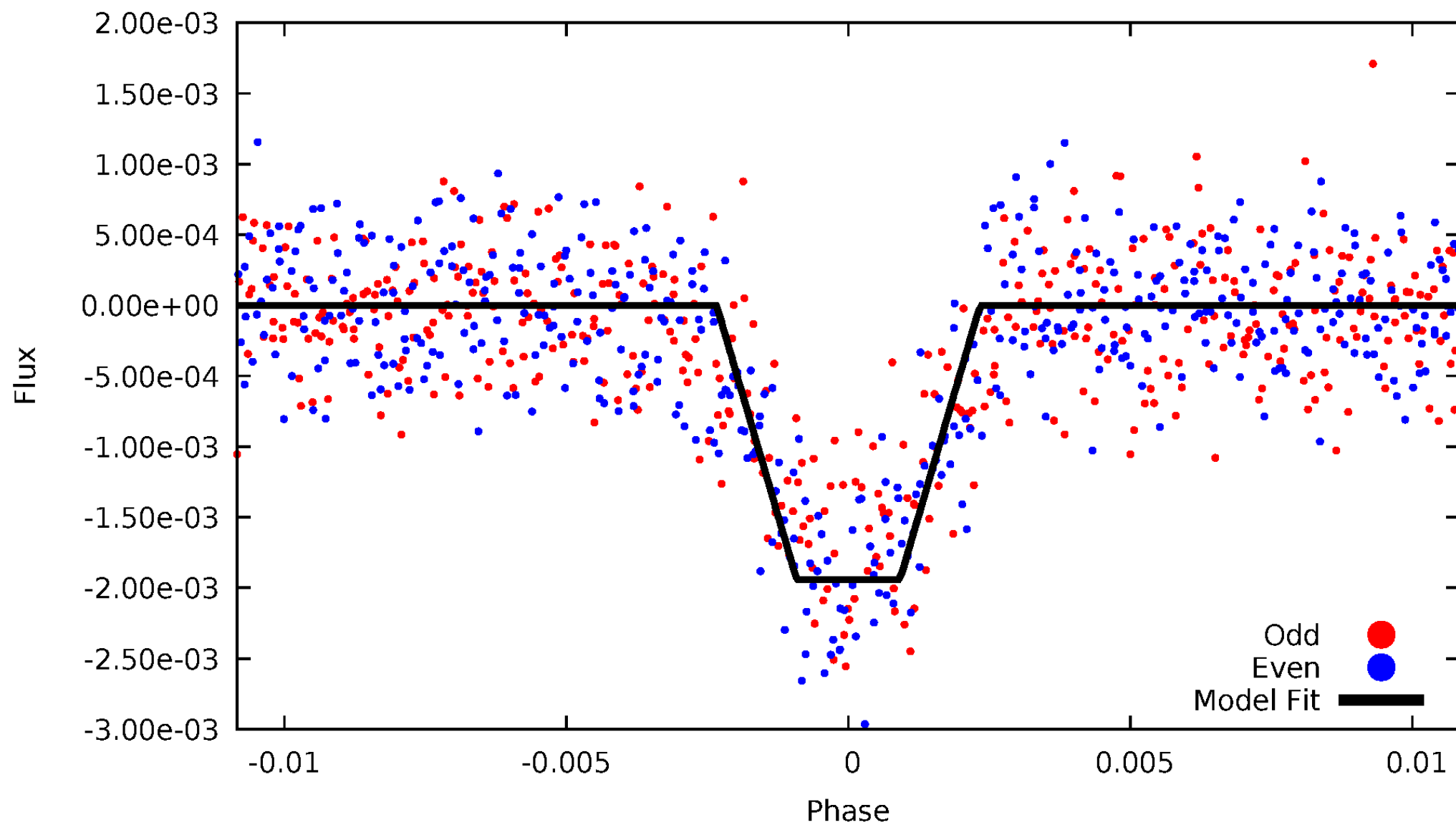
DV Odd/Even

TCE 005942093-01



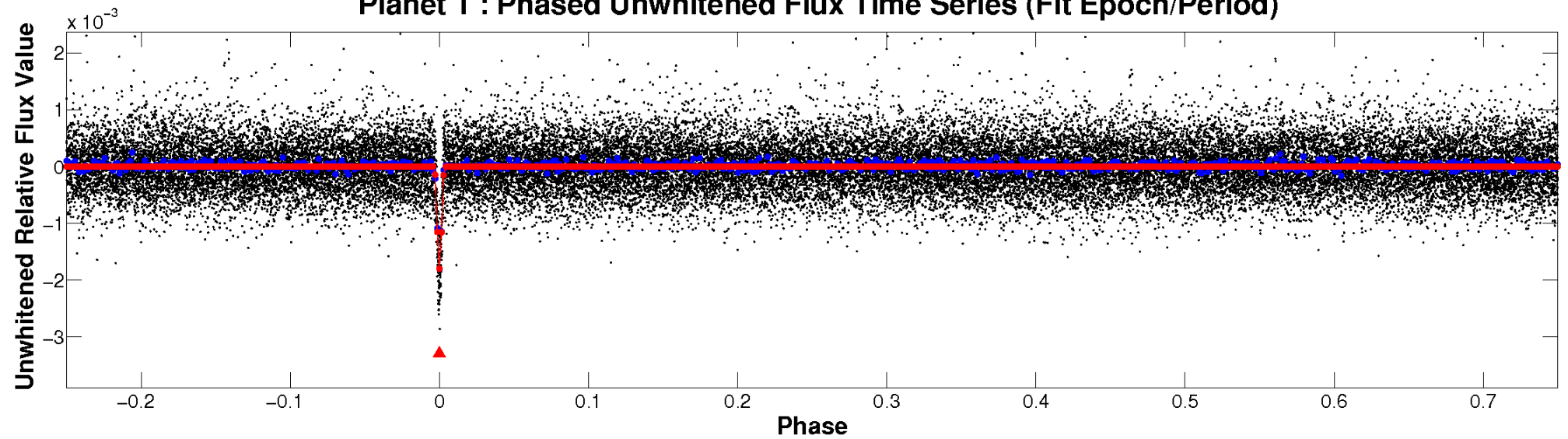
ALT Odd/Even

TCE 005942093-01

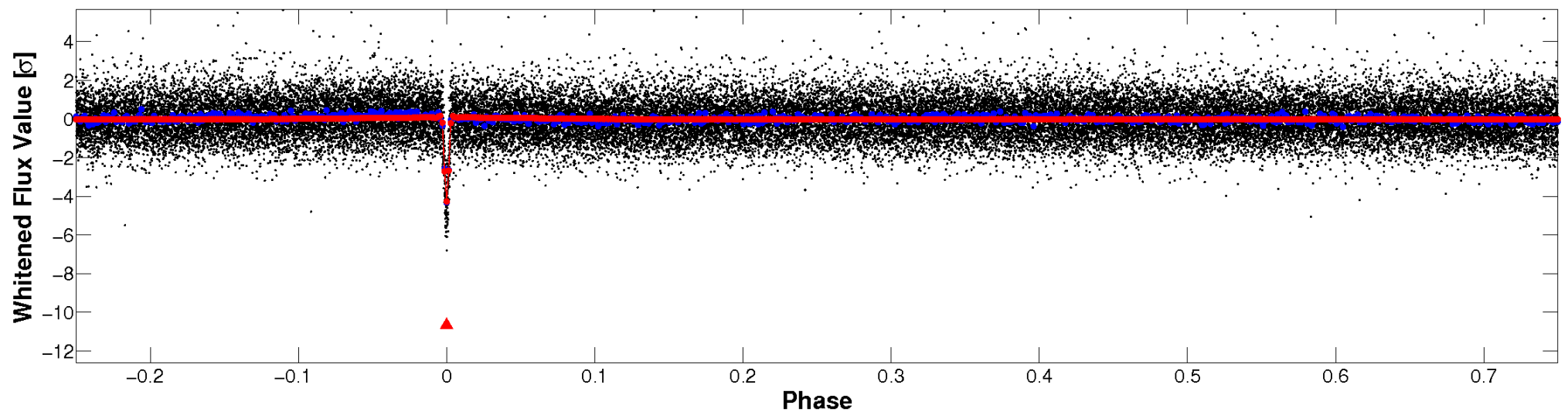


Non-Whitened Vs. Whitened Light Curve

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

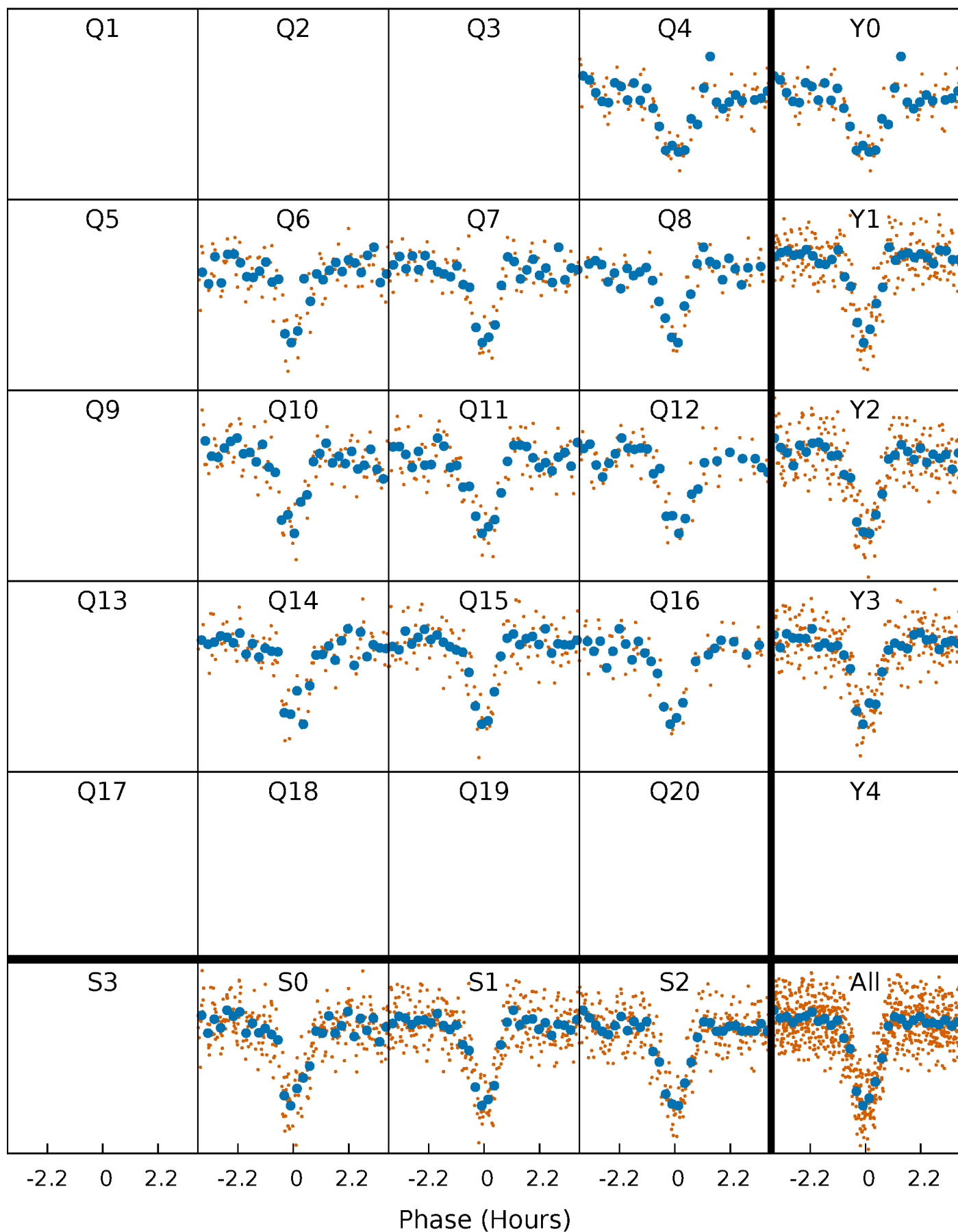


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



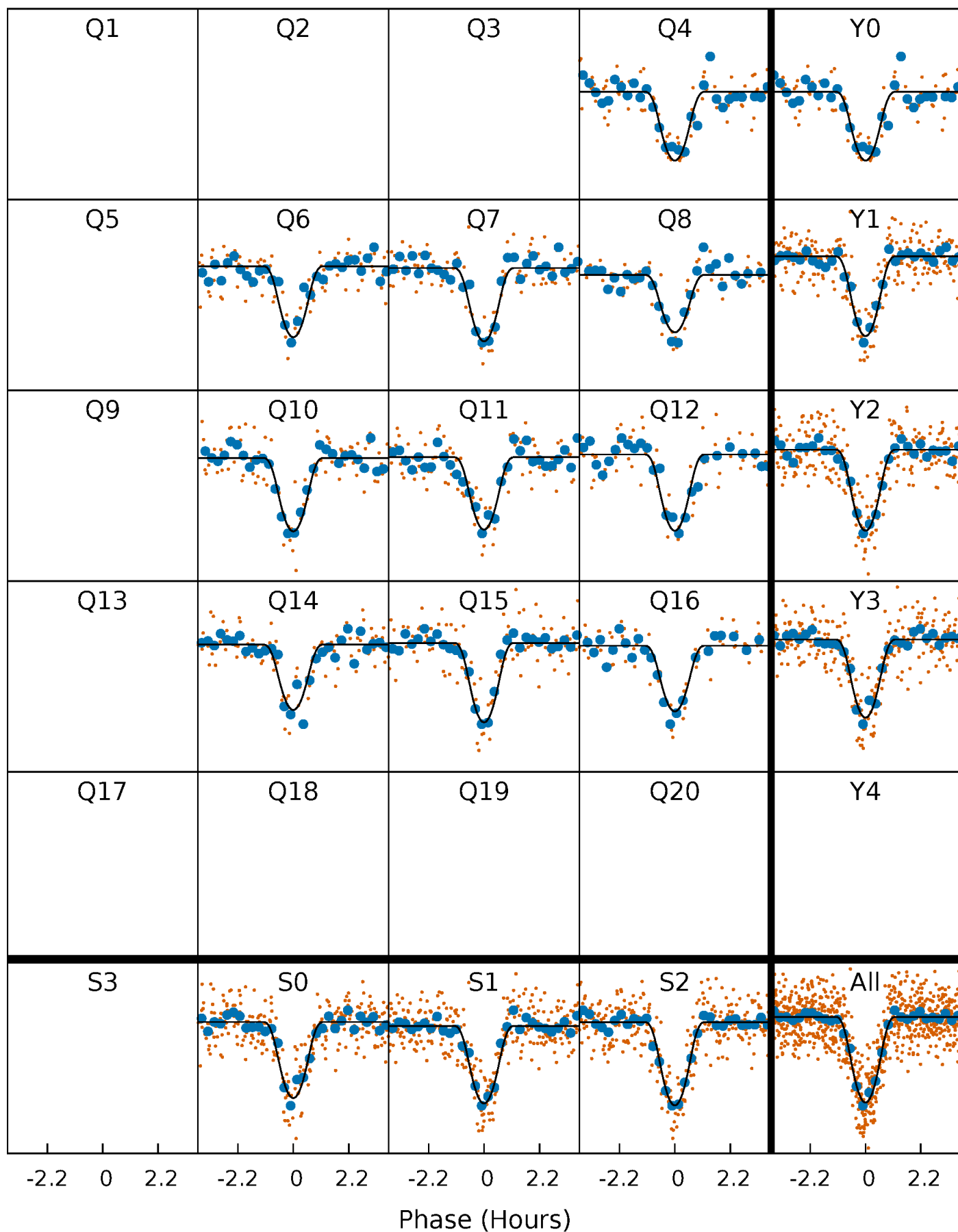
PDC Quarter-Phased Transit Curves

TCE 005942093-01 P= 14.387238 Days $T_0=131.851838$ (BKJD)



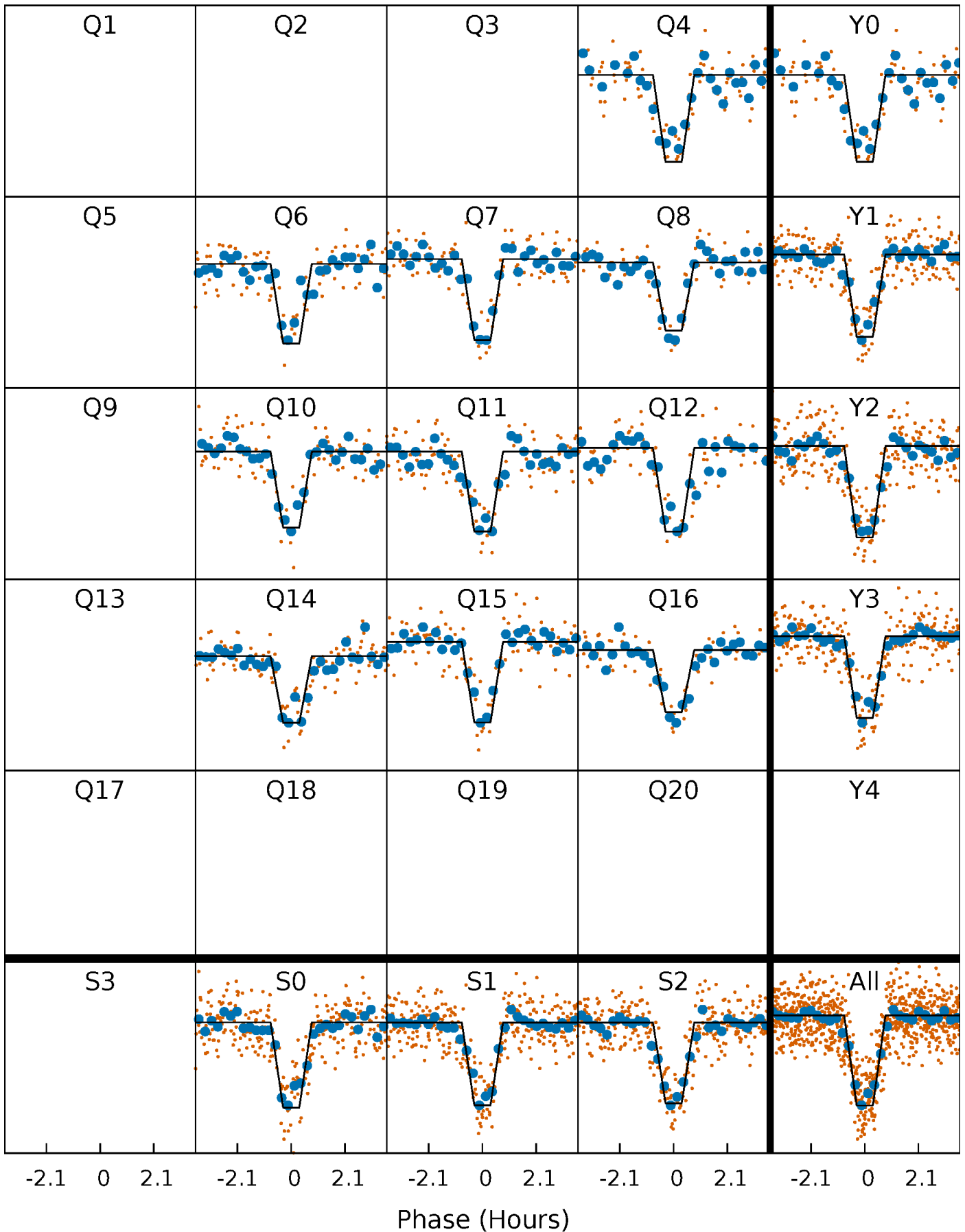
DV Quarter-Phased Transit Curves

TCE 005942093-01 P= 14.387238 Days $T_0=131.851838$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

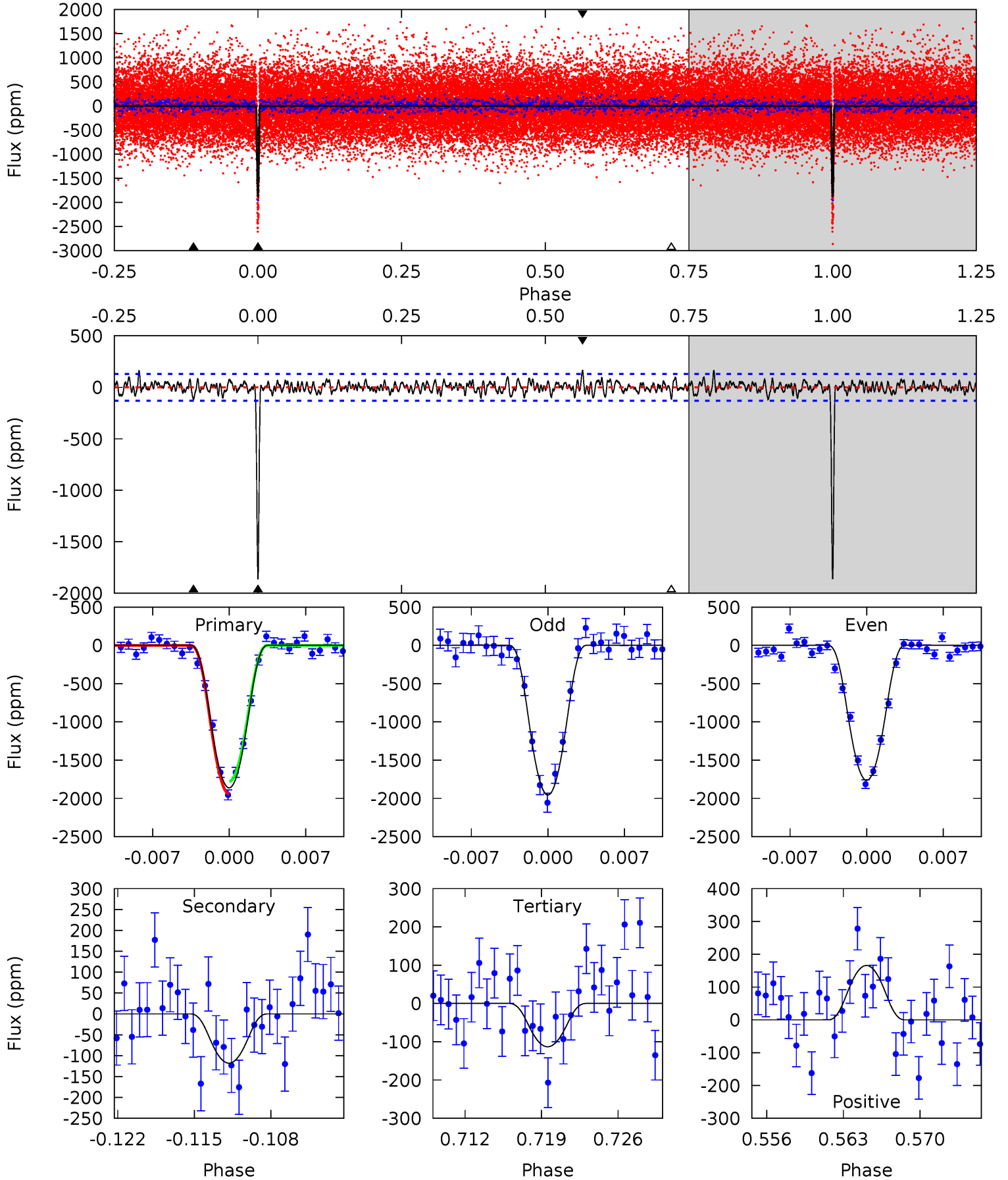
TCE 005942093-01 P= 14.387160 Days $T_0=131.856422$ (BKJD)



DV Model-Shift Uniqueness Test

005942093-01, P = 14.387238 Days, E = 131.851838 Days

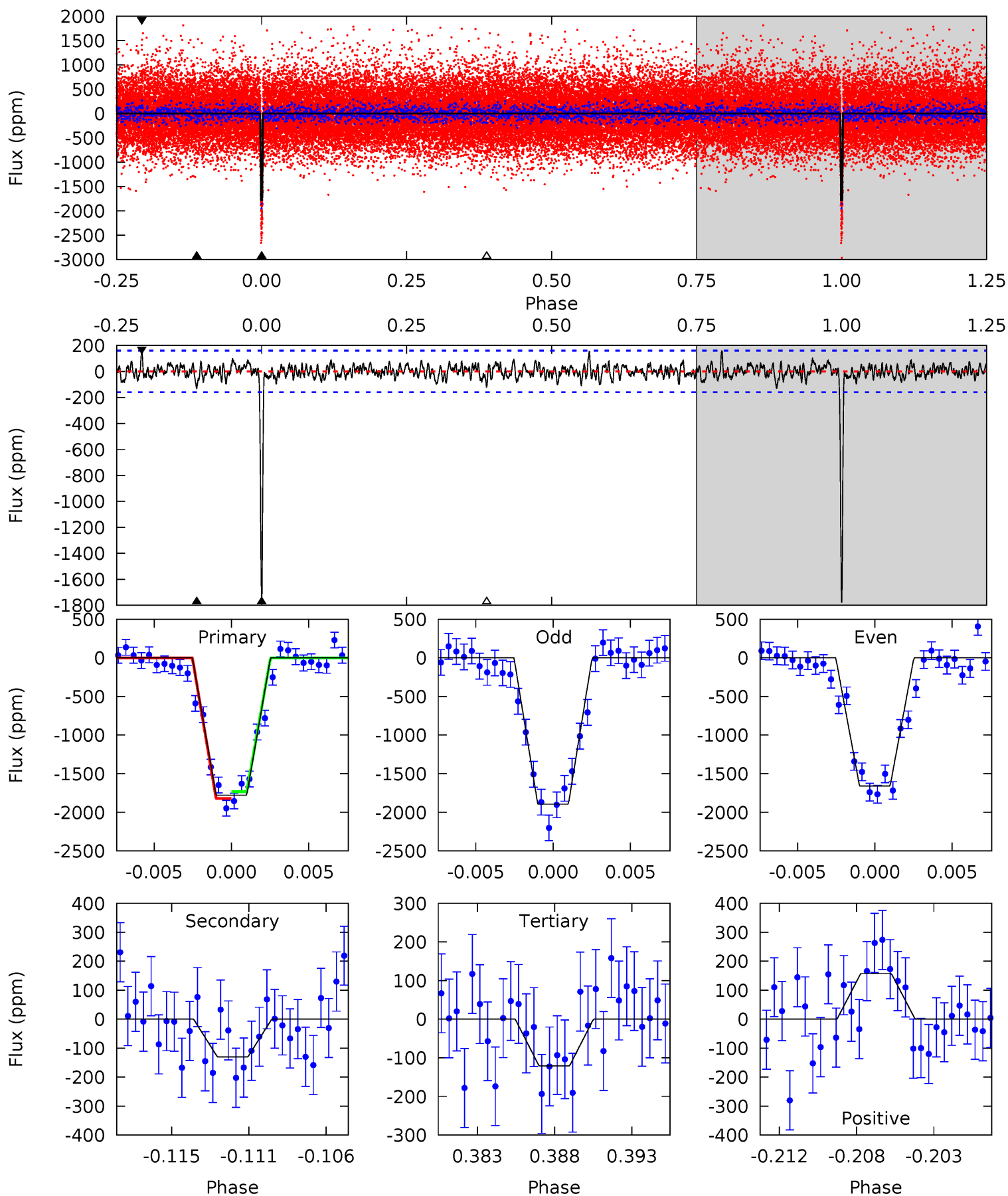
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
72.9	4.62	4.43	6.49	5.10	2.71	1.58	68.4	66.4	0.19	-1.87	3.77	1.01	0.08	3.18



Alt Model-Shift Uniqueness Test

005942093-01, P = 14.387160 Days, E = 131.856422 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.4	4.20	3.90	5.09	5.17	2.83	1.29	53.6	52.4	0.30	-0.89	3.83	1.00	0.08	1.40



Stellar Parameters For KIC 005942093

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5830^{+177}_{-195}	$4.479^{+0.094}_{-0.162}$	$-0.540^{+0.300}_{-0.300}$	$0.859^{+0.210}_{-0.113}$	$0.811^{+0.103}_{-0.063}$	$1.801^{+0.739}_{-0.808}$
	+3%/-3%	+2%/-4%	+56%/-56%	+24%/-13%	+13%/-8%	+41%/-45%
Source	KIC0	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 005942093-01 / KOI 1995.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-118 ± 26	$5.98^{+3.39}_{-3.02}$	1024^{+62}_{-57}	3060^{+809}_{-373}	21^{+68}_{-13}
Alt.	-130 ± 31	$4.63^{+3.43}_{-2.66}$	1024^{+63}_{-51}	3353^{+1210}_{-515}	39^{+176}_{-27}

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

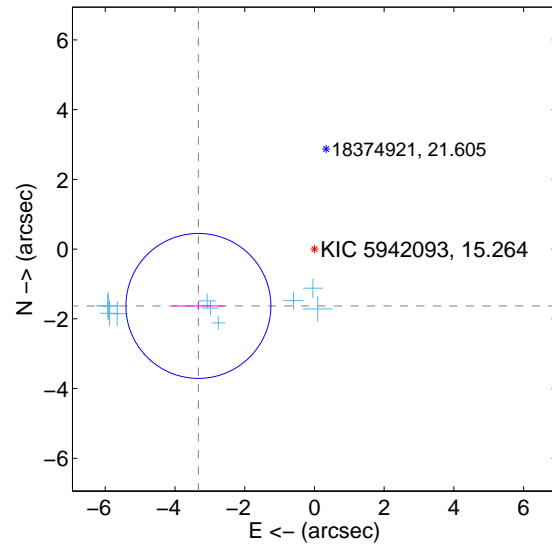
Supplemental centroid analysis for 005942093-01. Kepler magnitude: 15.26. Transit SNR 43.71

There are 10 quarters with good PRF difference image offsets

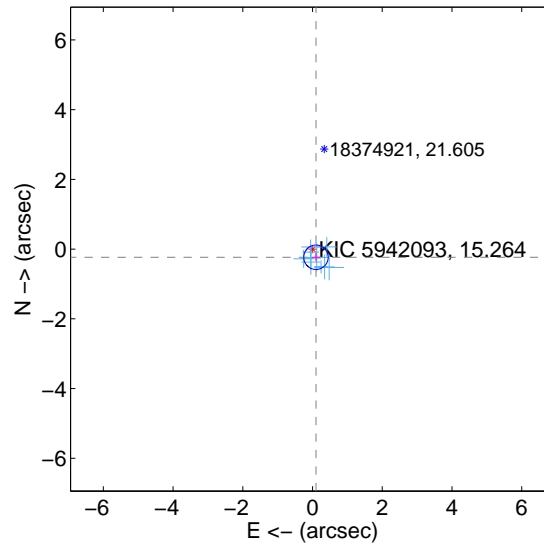
The OOT PRF centroid is offset from the target star catalog position by about 6.15 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.706 ± 0.693	5.35	3.328 ± 0.752	-1.630 ± 0.103
PRF-fit source offset from KIC position	0.254 ± 0.117	2.18	-0.099 ± 0.115	-0.234 ± 0.117
photometric centroid source offset	1.39 ± 0.18	7.64	-1.31 ± 0.18	0.48 ± 0.17

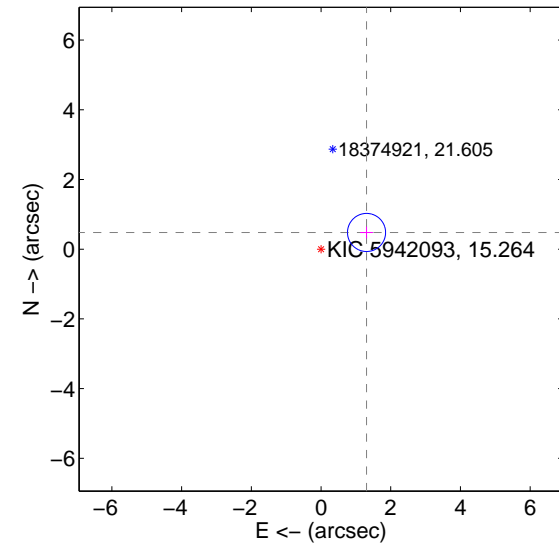
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

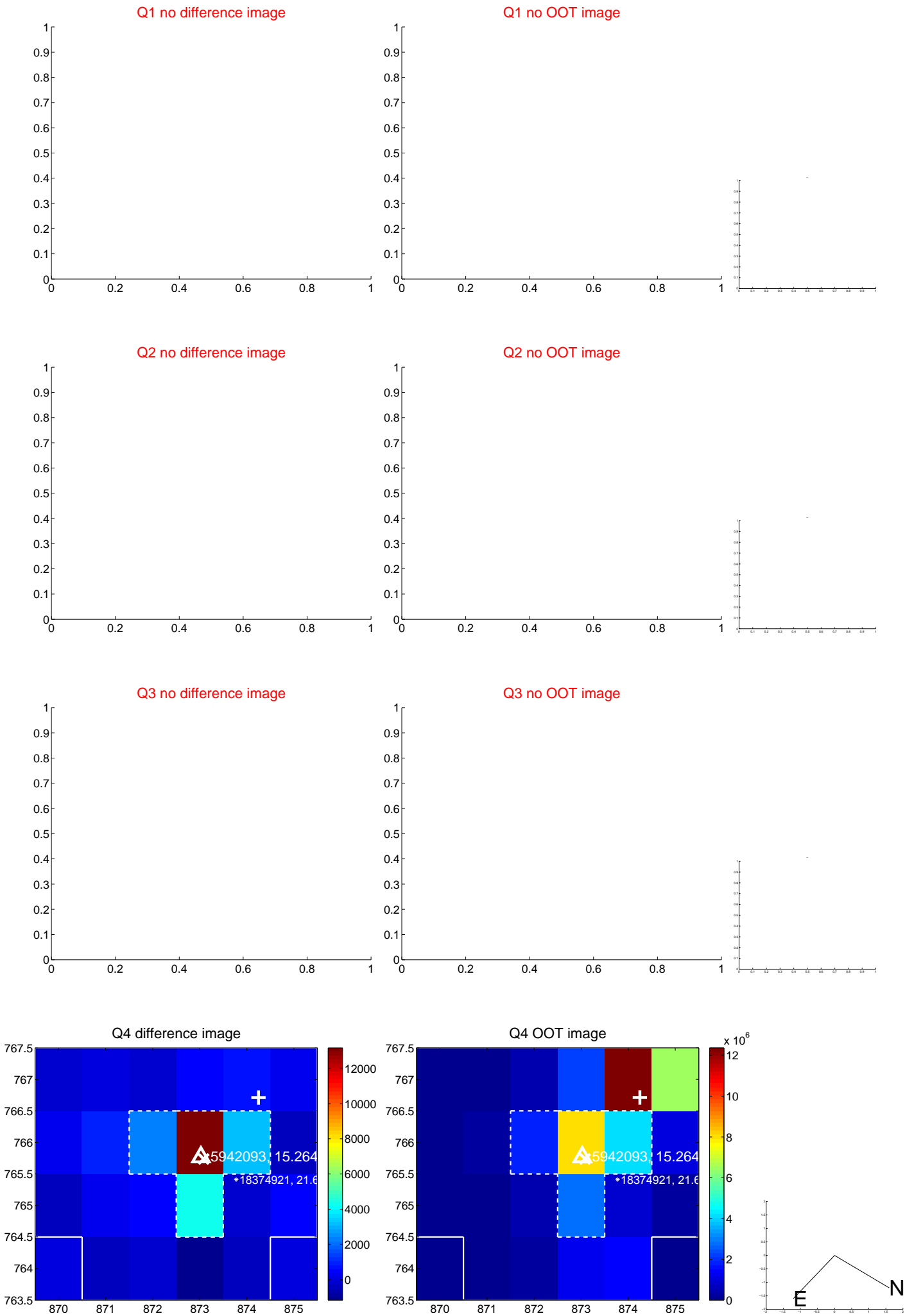


offset from photometric centroids

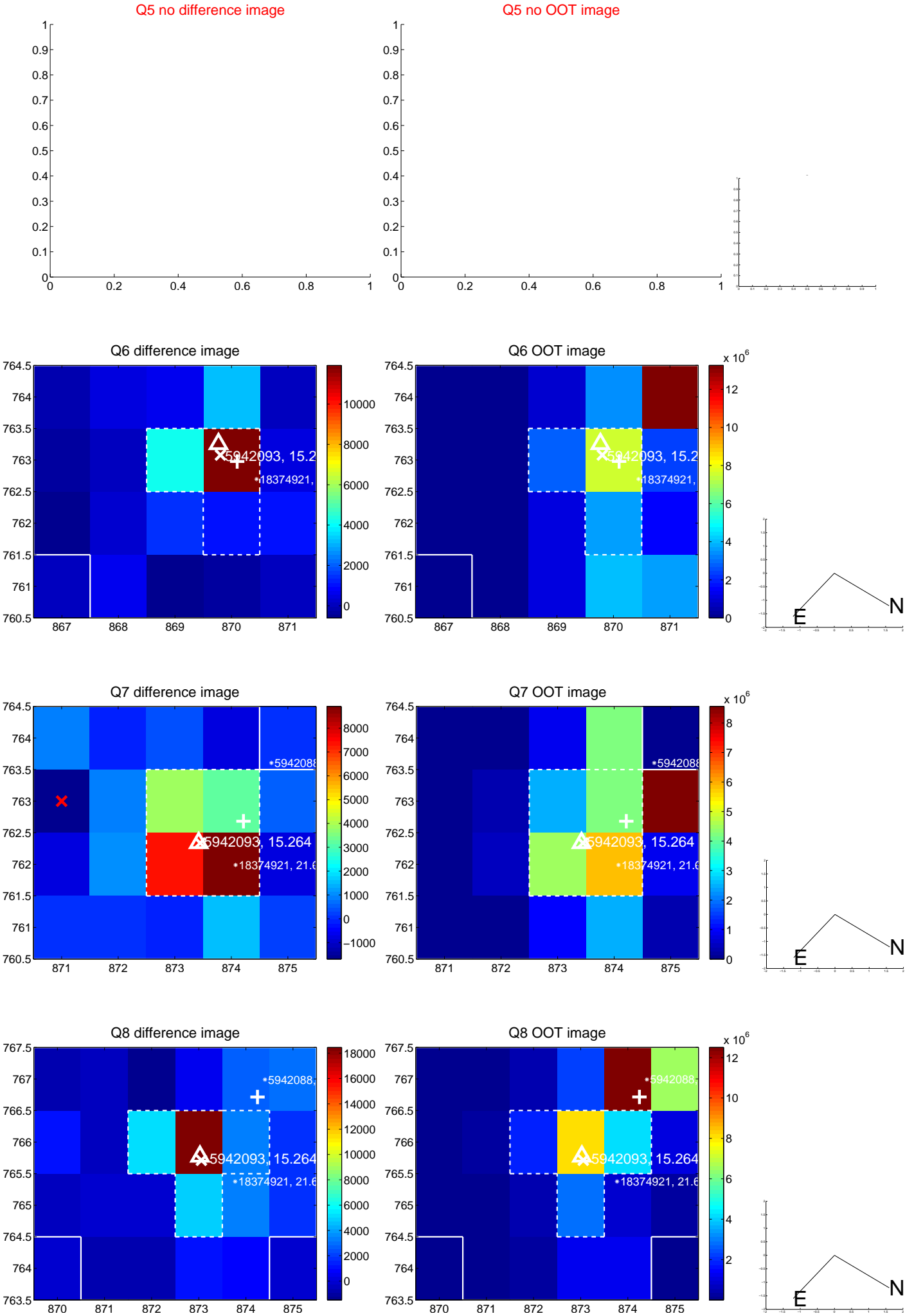


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

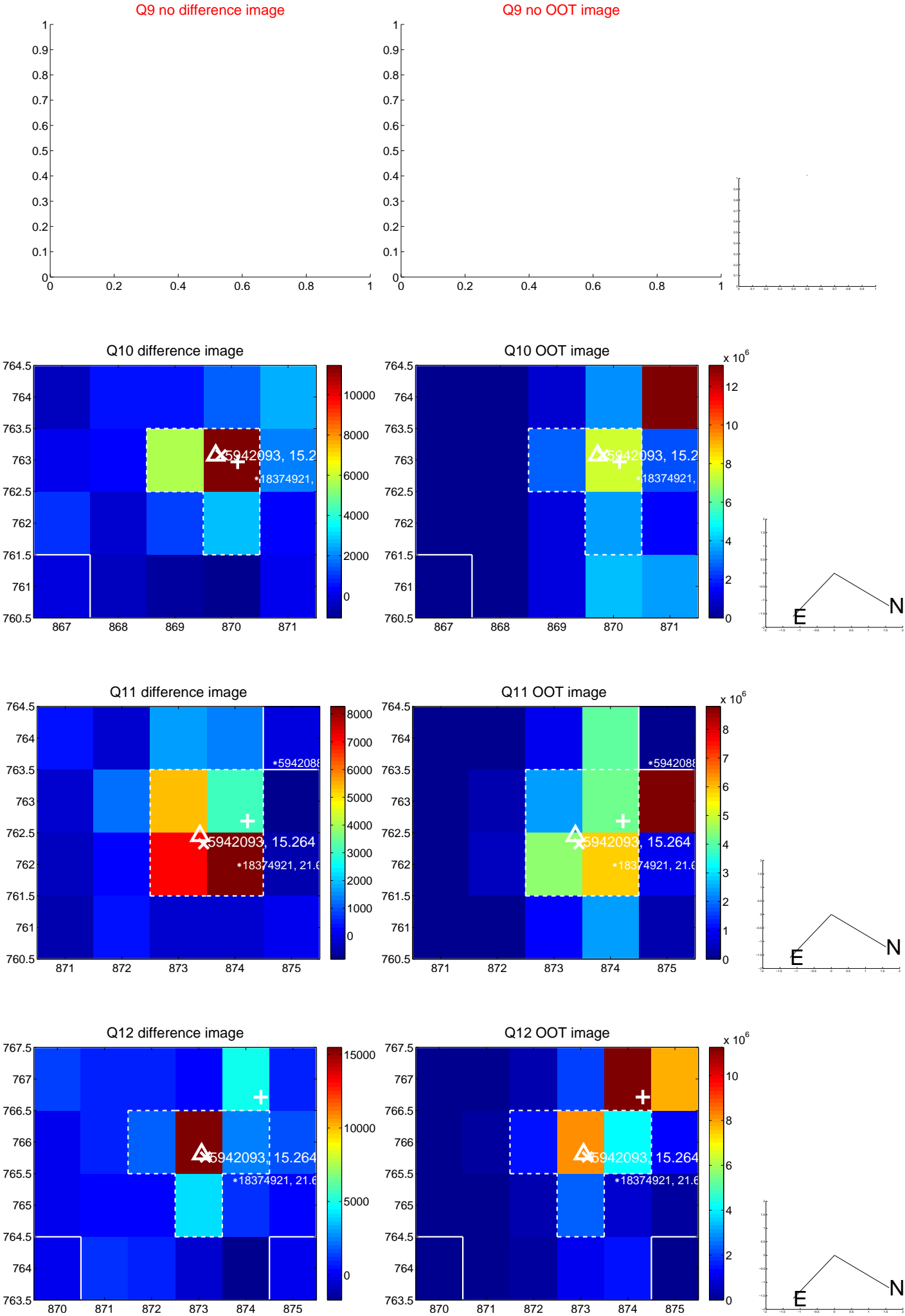
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



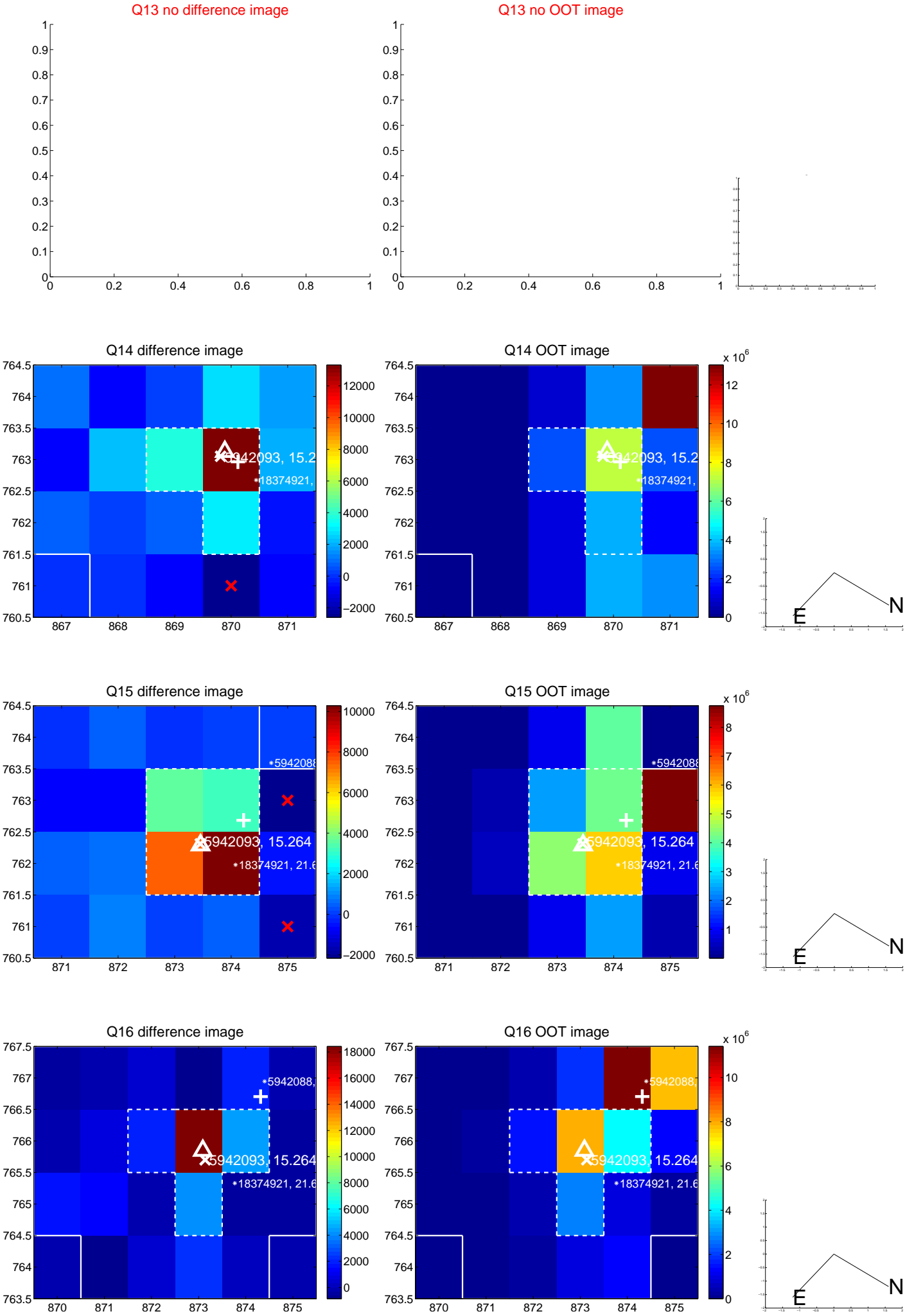
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



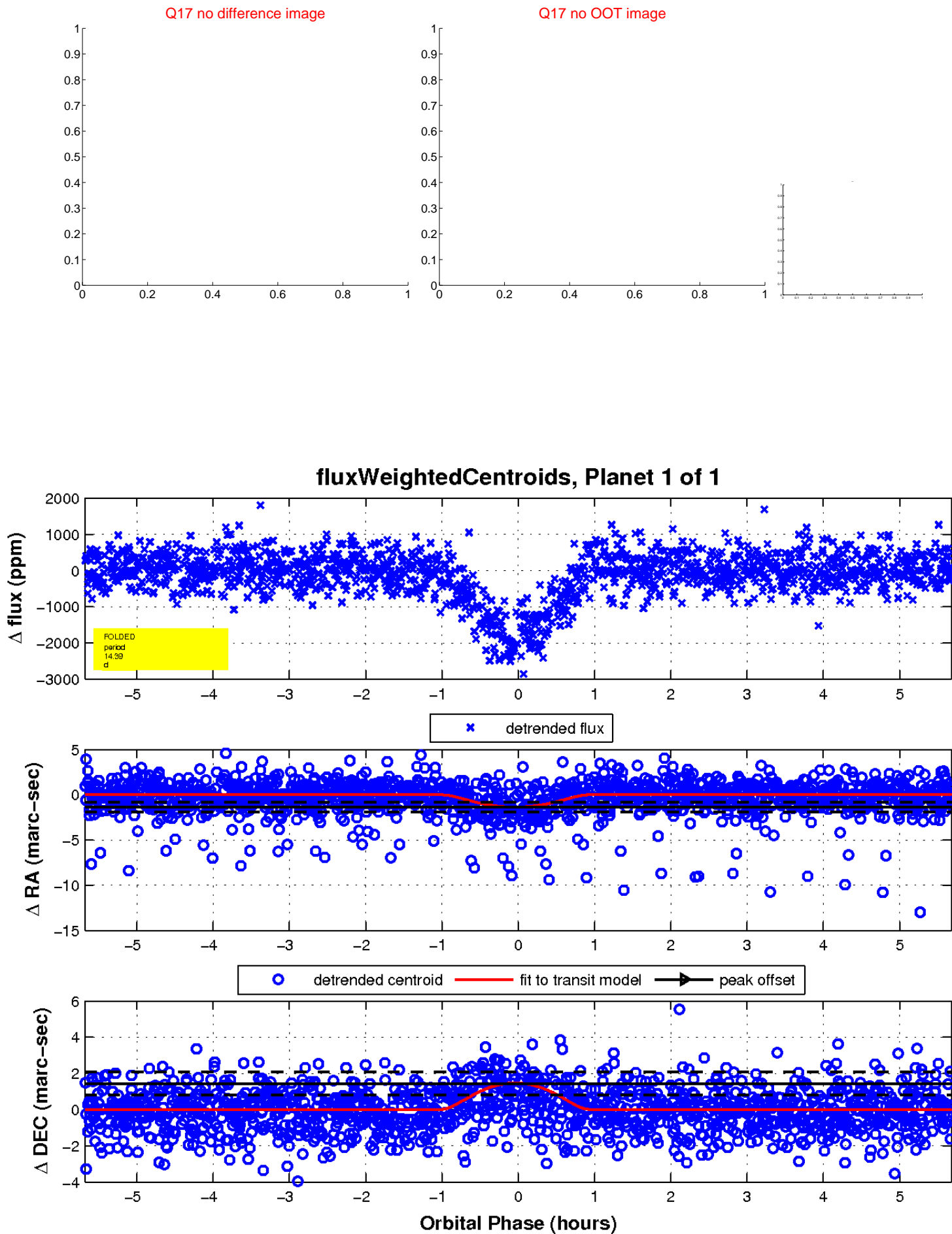
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

