

KIC 010292540

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})
010292540-01	OBS	4689.01	1.085242	132.085319	111.8	4.162	9.4	9.7	0.85	5713	0.97	1678.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292540-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—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 010292540-01

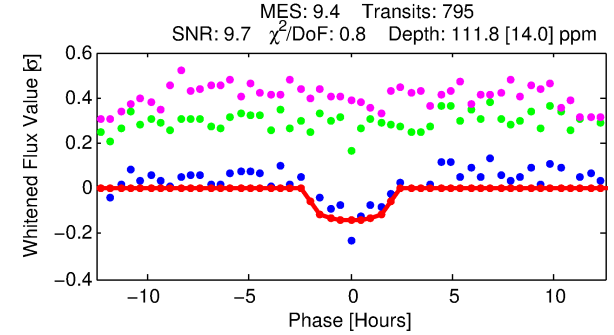
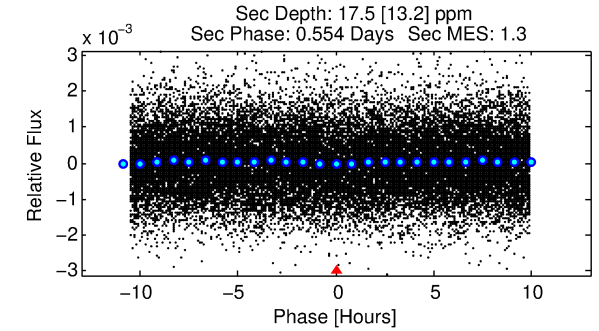
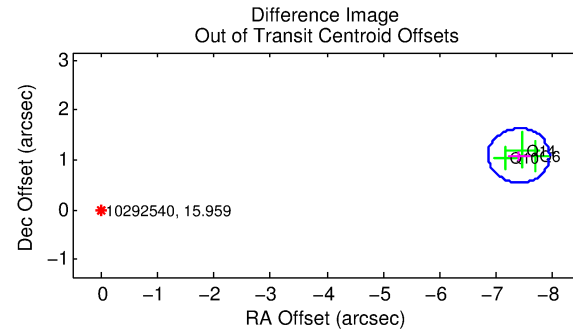
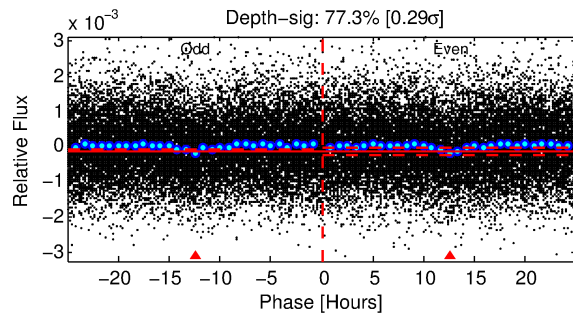
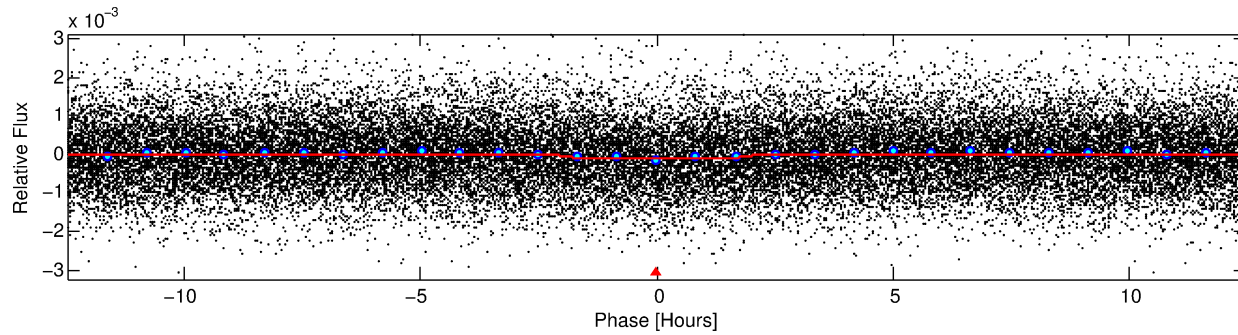
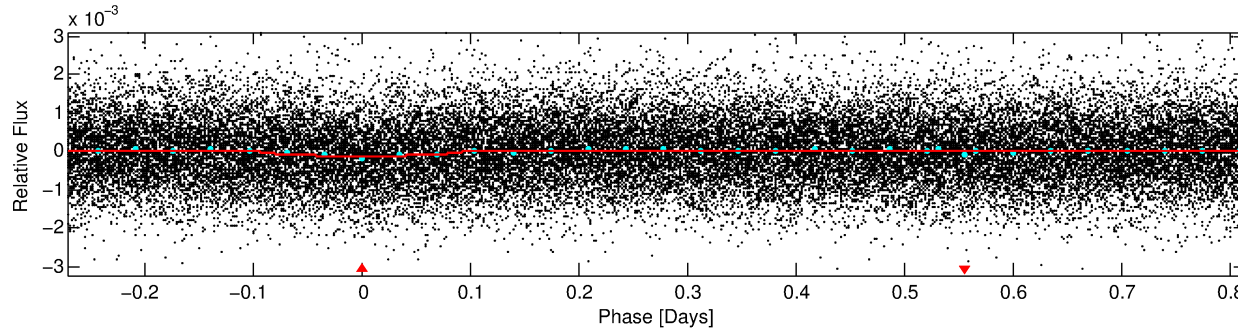
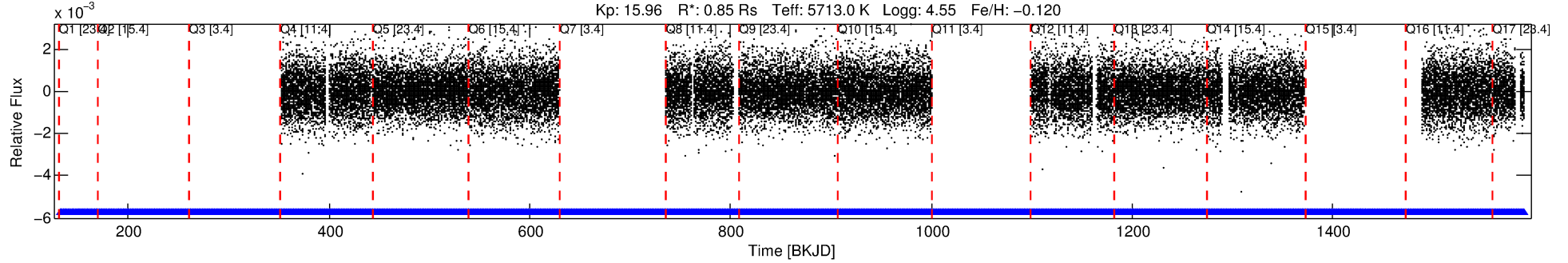
No Significant Match Found

DV One-Page Summary

KIC: 10292540 Candidate: 1 of 1 Period: 1.085 d

KOI: K04689.01 Corr: 0.961

Kp: 15.96 R*: 0.85 Rs Teff: 5713.0 K Logg: 4.55 Fe/H: -0.120



DV Fit Results:

Period = 1.08524 [0.00001] d
Epoch = 132.0853 [0.0057] BKJD
Rp/R* = 0.0104 [0.0121]
a/R* = 1.63 [5.25]
b = 0.73 [3.41]
Seff = 1678.56 [605.34]
Teq = 1632 [147] K
Rp = 0.97 [1.16] Re
a = 0.0203 [0.0047] AU
Ag = 4.23 [10.43] [0.31σ]
Teff = 3619 [2213] K [0.90σ]

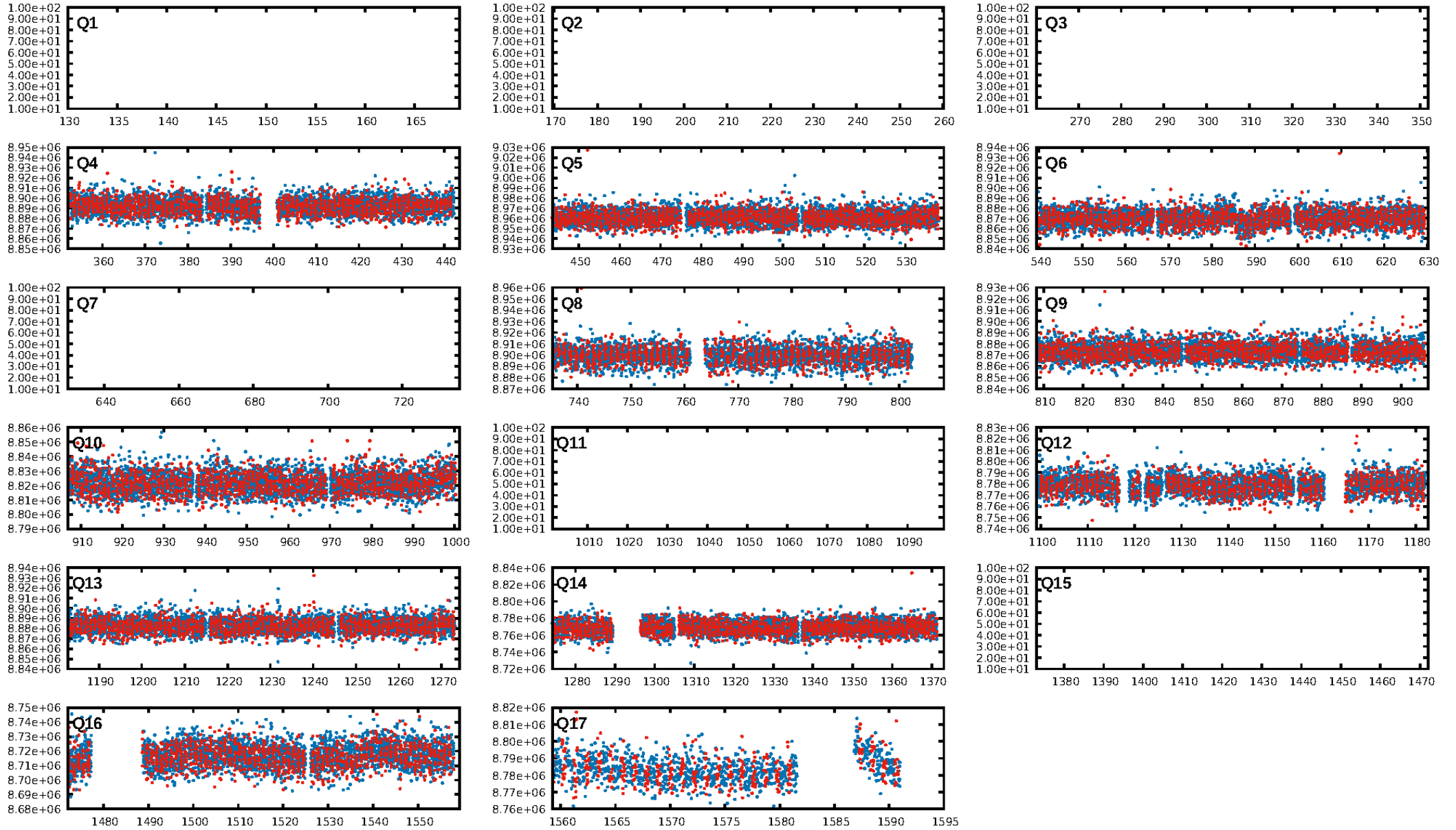
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 7.80e-23
RollingBand-fgt: 1.00 [770/770]
GhostDiagnostic-chr: -0.09157
Centroid-sig: 0.0%
Centroid-so: 18.245 arcsec [9.60σ]
OotOffset-rm: 7.474 arcsec [41.22σ]
KicOffset-rm: 7.529 arcsec [42.28σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [11/11]

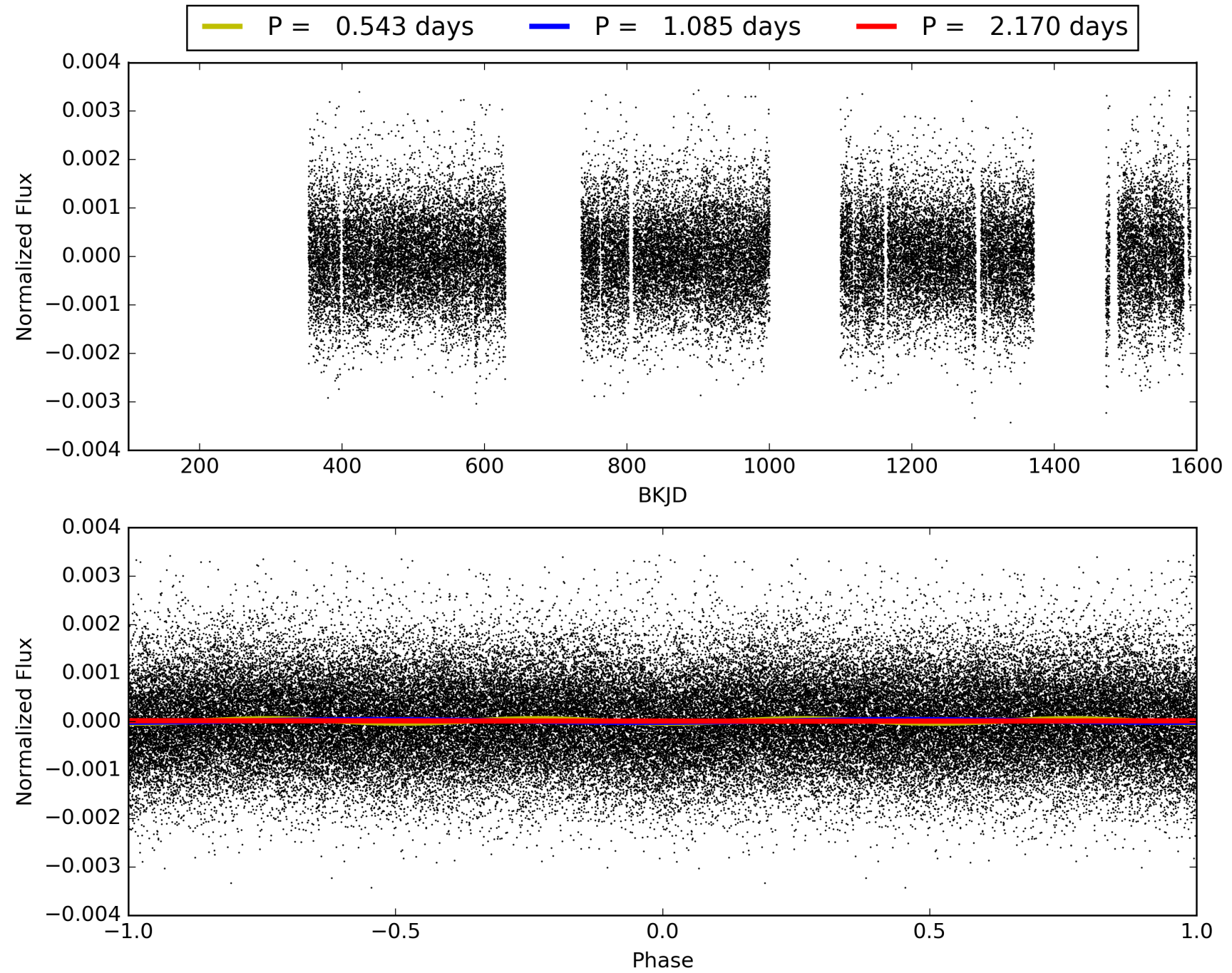
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:34:48 Z

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

TCE 010292540-01, PDC Light Curves

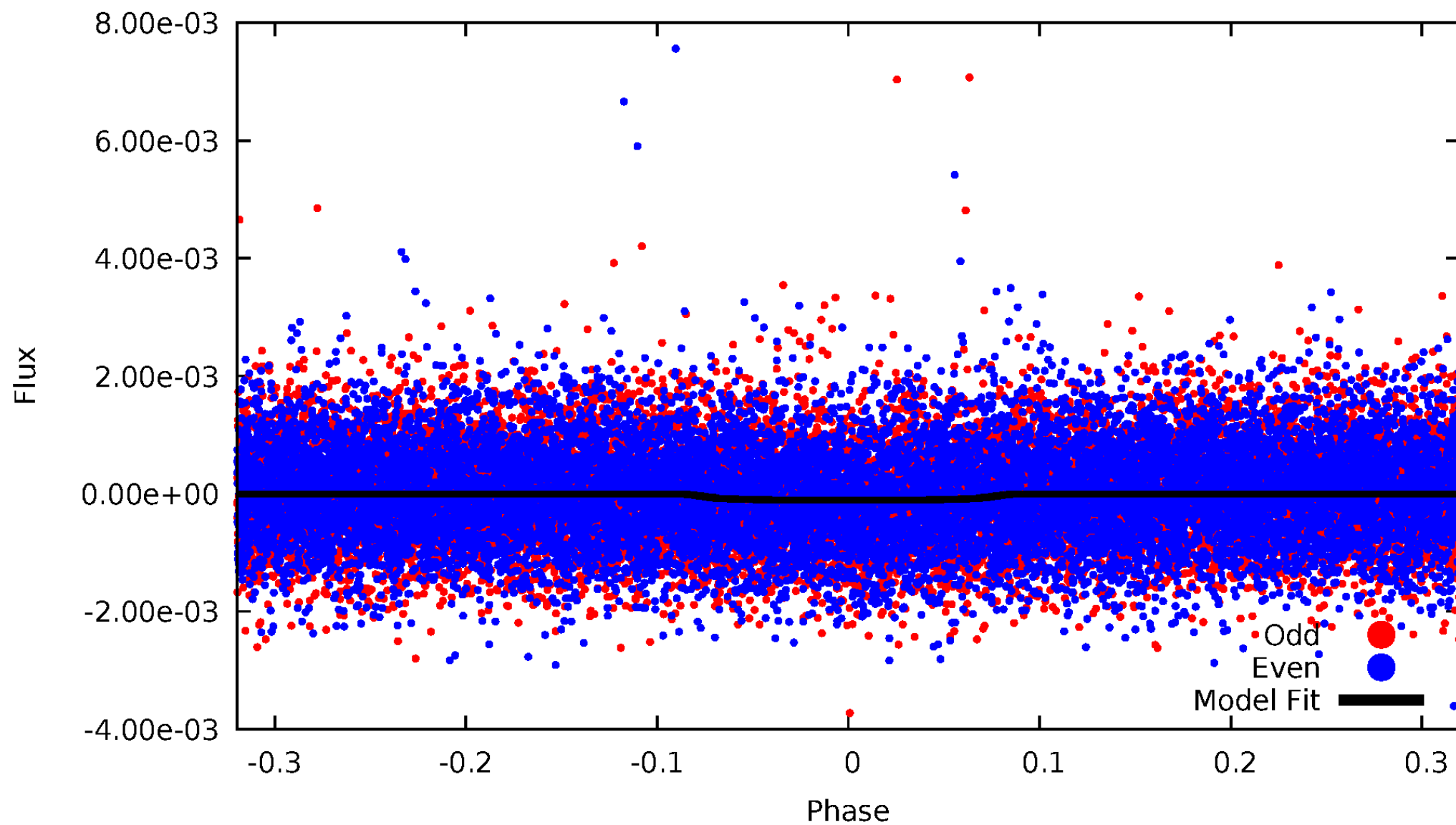


TCE 010292540-01



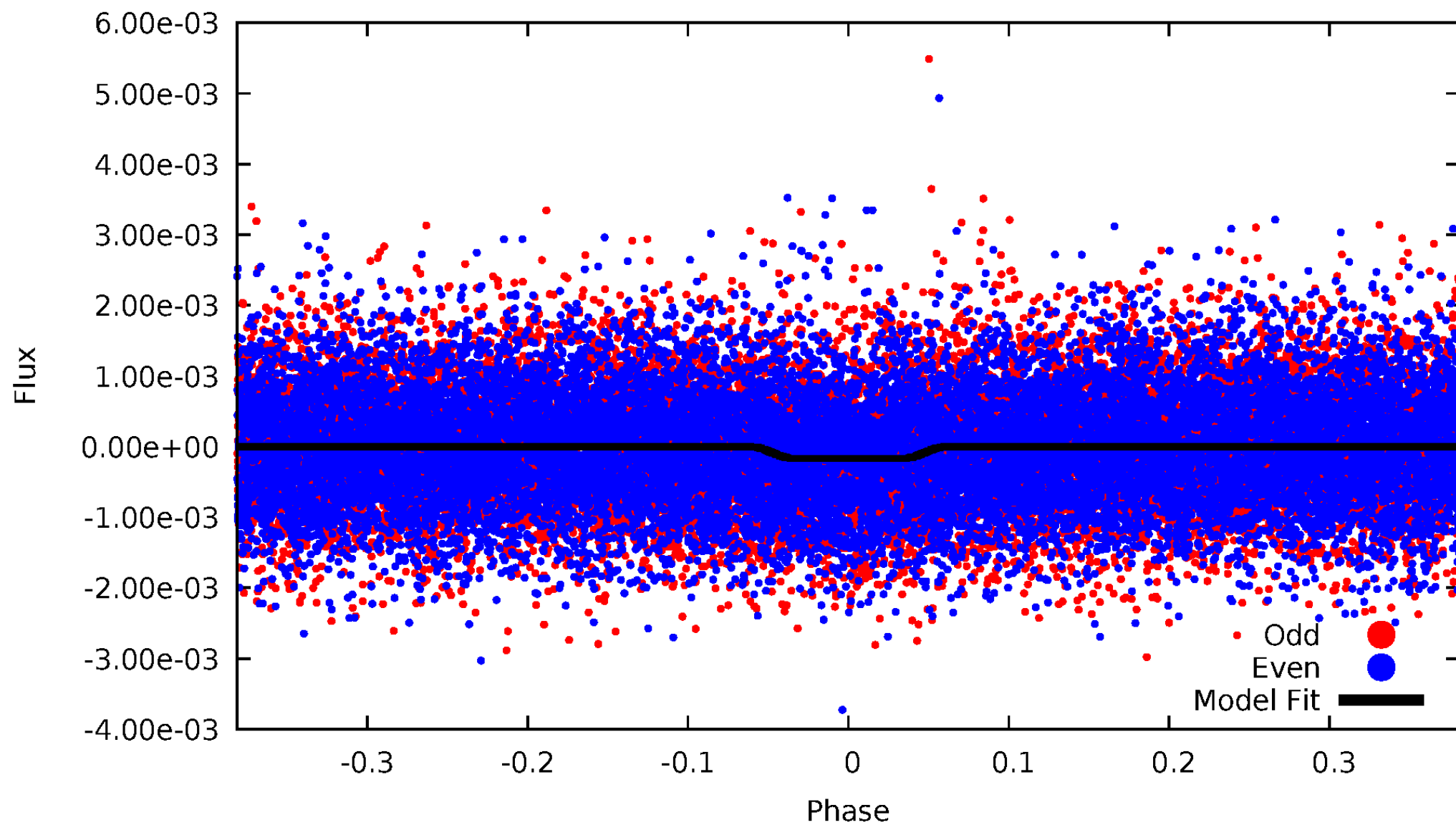
DV Odd/Even

TCE 010292540-01



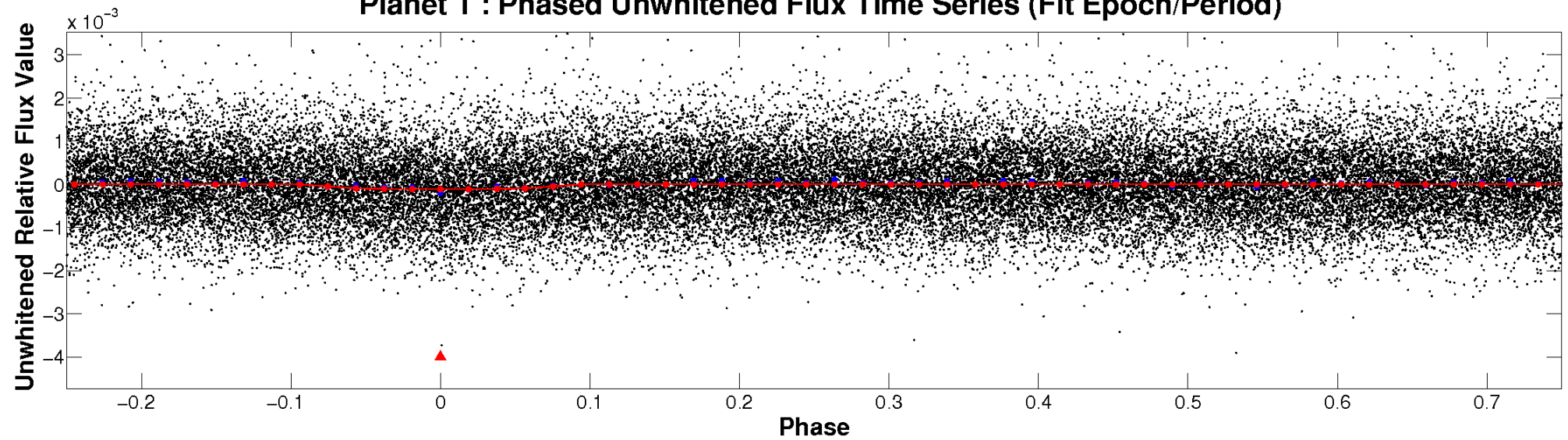
ALT Odd/Even

TCE 010292540-01

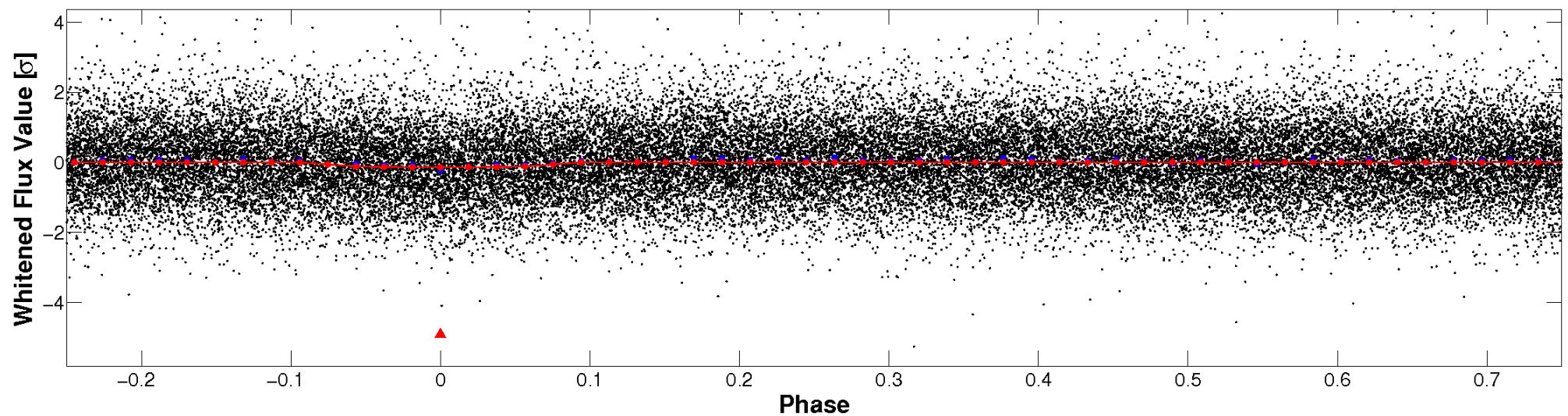


Non-Whitened Vs. Whitened Light Curve

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

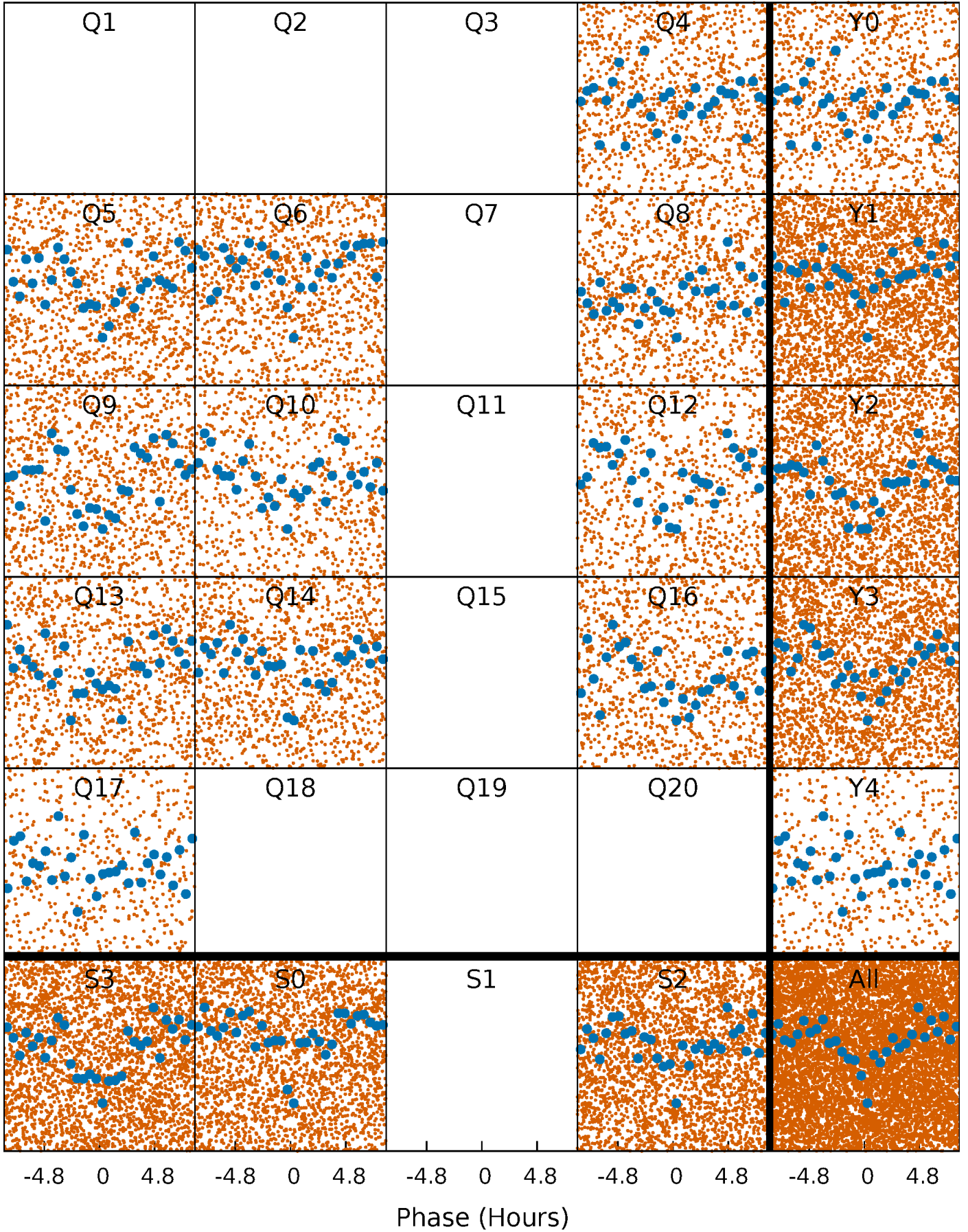


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



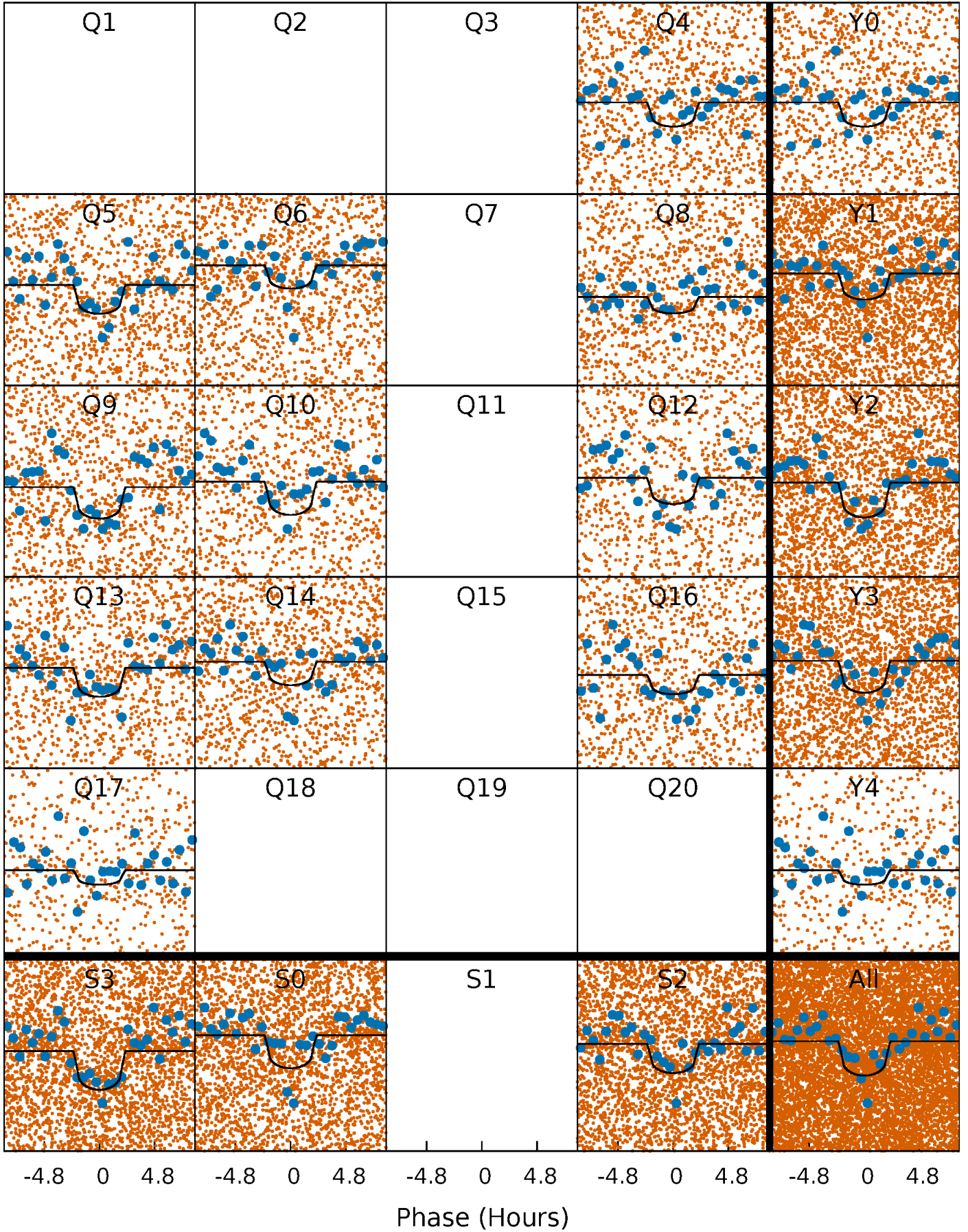
PDC Quarter-Phased Transit Curves

TCE 010292540-01 P= 1.085242 Days $T_0=132.085319$ (BKJD)



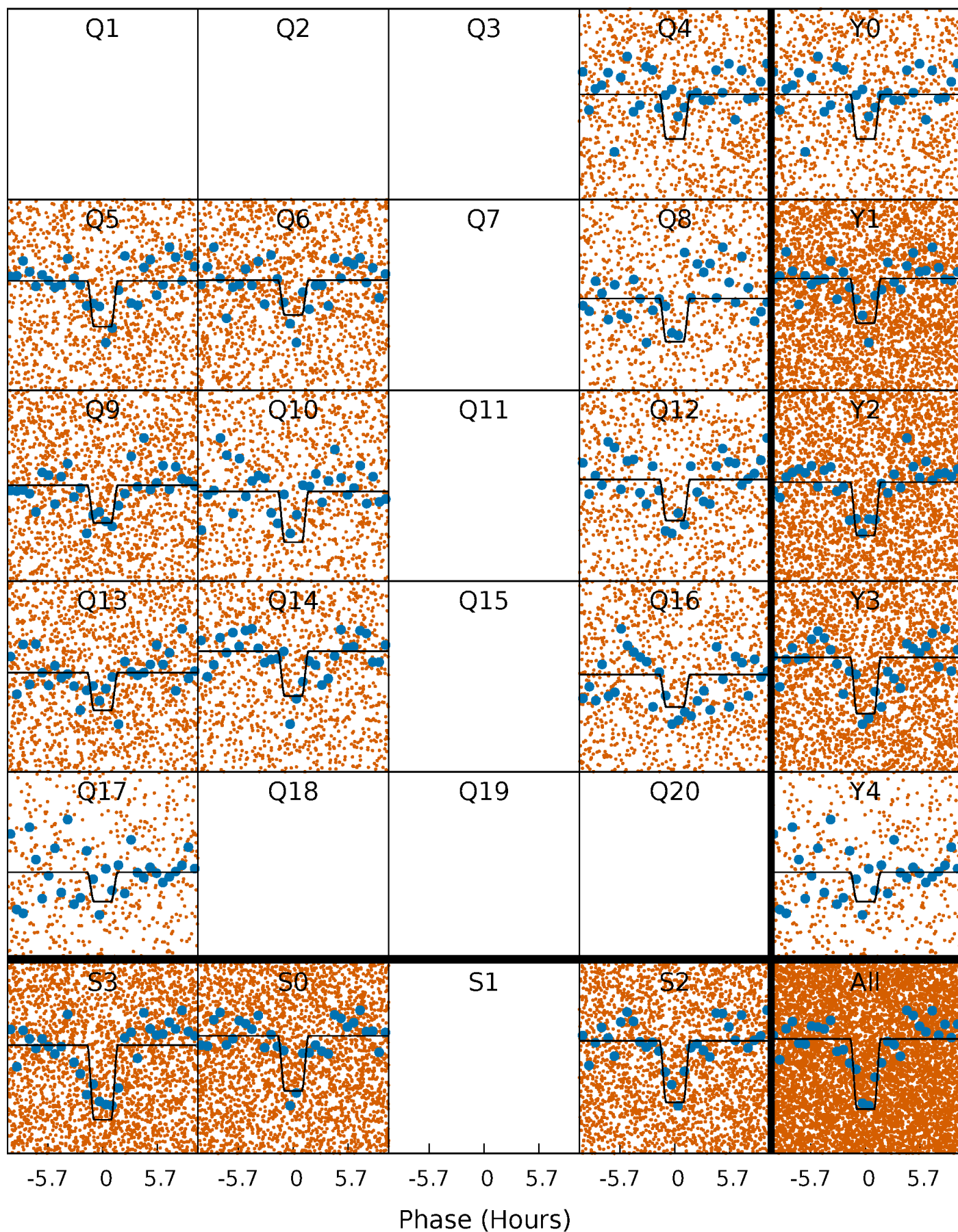
DV Quarter-Phased Transit Curves

TCE 010292540-01 P= 1.085242 Days $T_0=132.085319$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

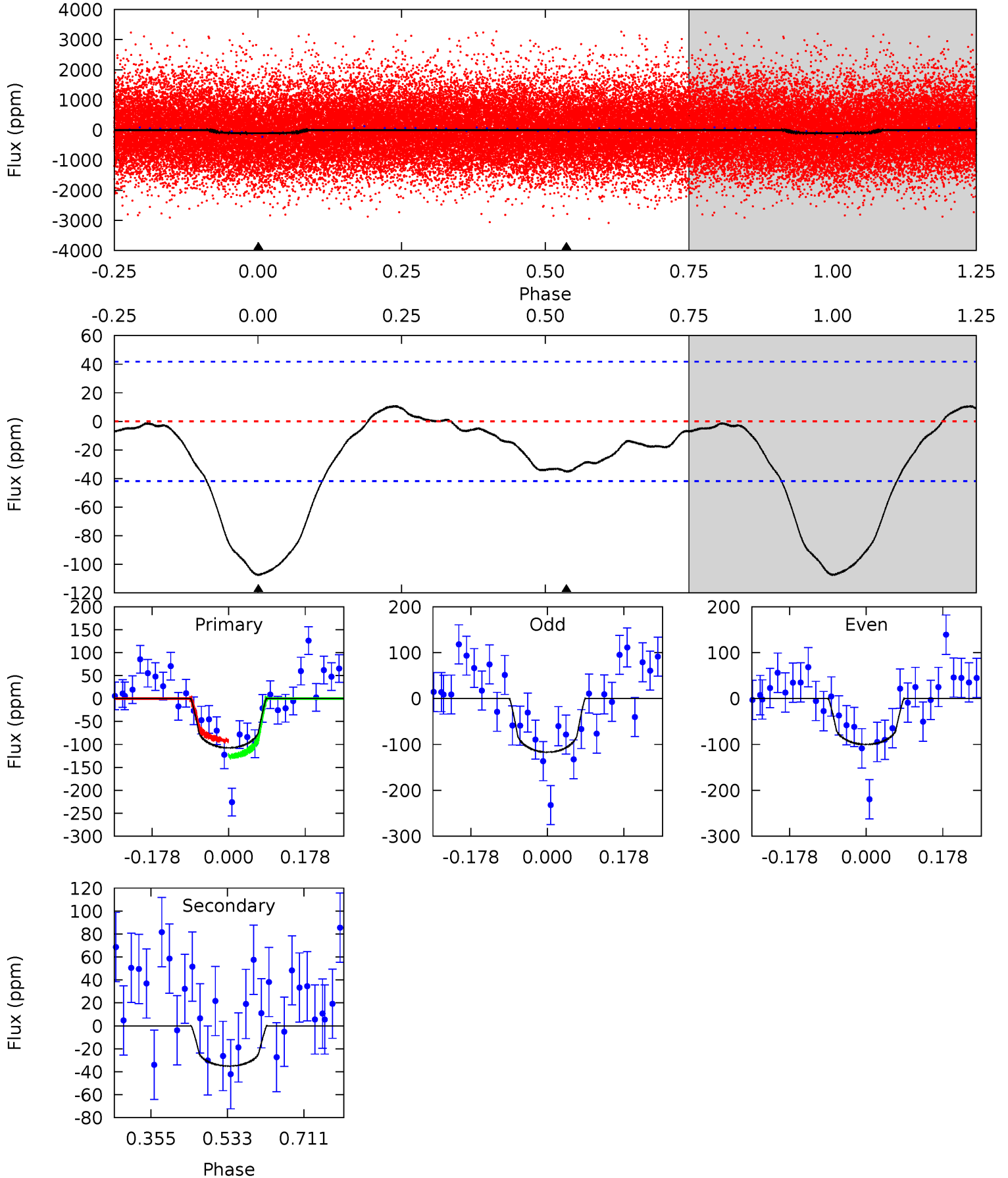
TCE 010292540-01 P= 1.085248 Days $T_0=132.084786$ (BKJD)



DV Model-Shift Uniqueness Test

010292540-01, P = 1.085242 Days, E = 132.085319 Days

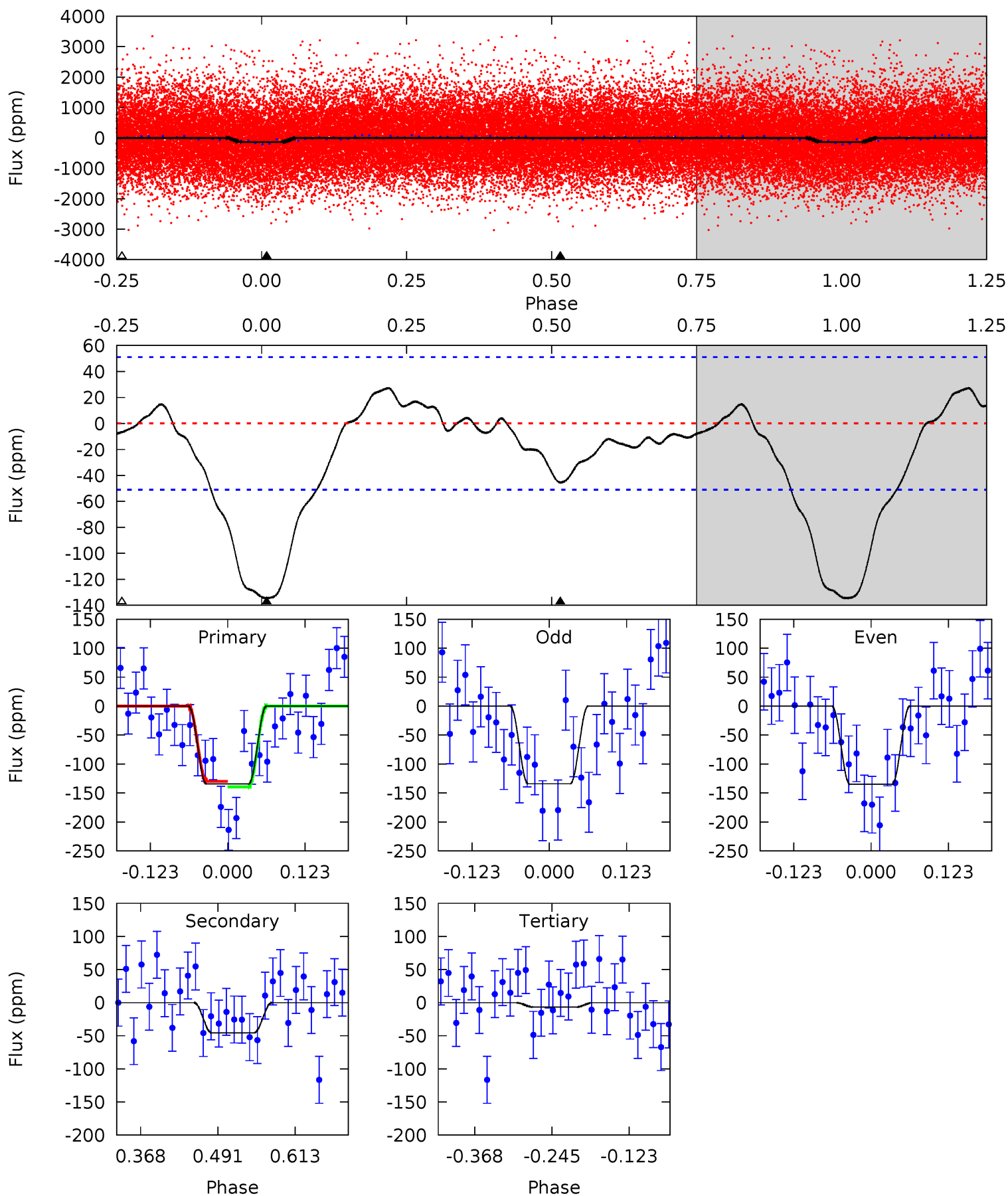
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	3.73	0	0	4.44	1.35	0.68	11.4	11.4	3.73	3.73	0.90	0.84	0.09	1.84



Alt Model-Shift Uniqueness Test

010292540-01, P = 1.085248 Days, E = 132.084786 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	4.04	0.60	0	4.52	1.54	1.09	11.3	11.9	3.44	4.04	0.04	0.87	0.17	0.43



Stellar Parameters For KIC 010292540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+169}_{-186}	$4.554^{+0.035}_{-0.184}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.233}_{-0.078}$	$0.948^{+0.104}_{-0.115}$	$2.164^{+0.398}_{-1.058}$
	+3%/-3%	+1%/-4%	+250%/-250%	+27%/-9%	+11%/-12%	+18%/-49%
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 010292540-01 / KOI 4689.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-35 ± 9	$1.32^{+1.03}_{-0.83}$	2330^{+159}_{-106}	4007^{+2105}_{-821}	$4.461^{+28.979}_{-3.182}$
Alt.	-46 ± 11	$1.50^{+1.16}_{-0.89}$	2325^{+162}_{-100}	4032^{+1885}_{-820}	$4.576^{+22.485}_{-3.157}$

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 $A_{obs} \gg 1.0$

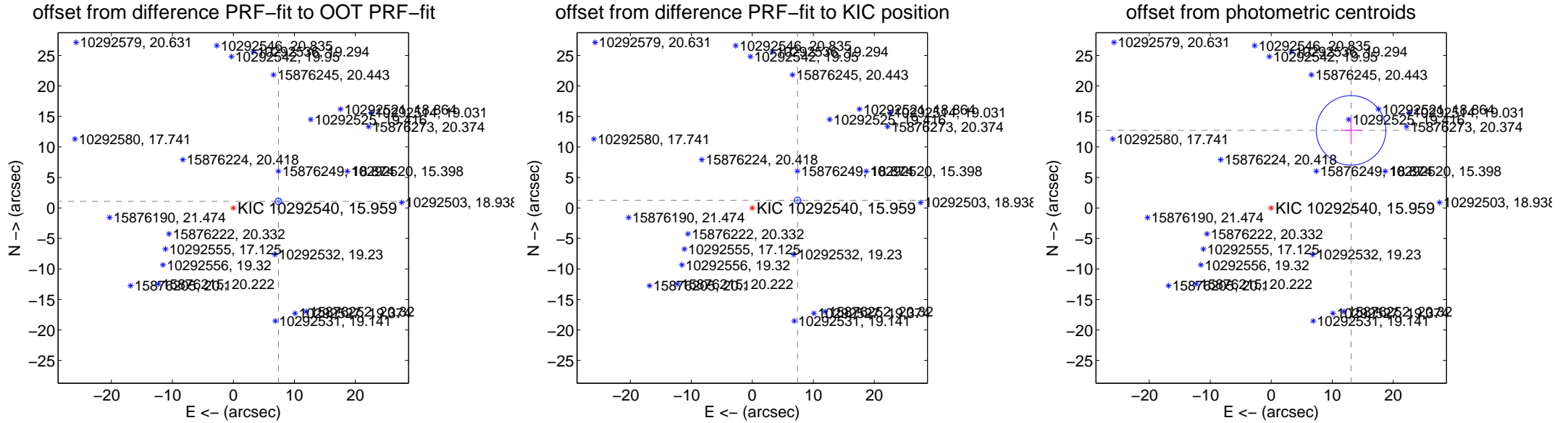
DV Centroid Data

Supplemental centroid analysis for 010292540-01. Kepler magnitude: 15.96. Transit SNR 9.67

There are 3 quarters with good PRF difference image offsets

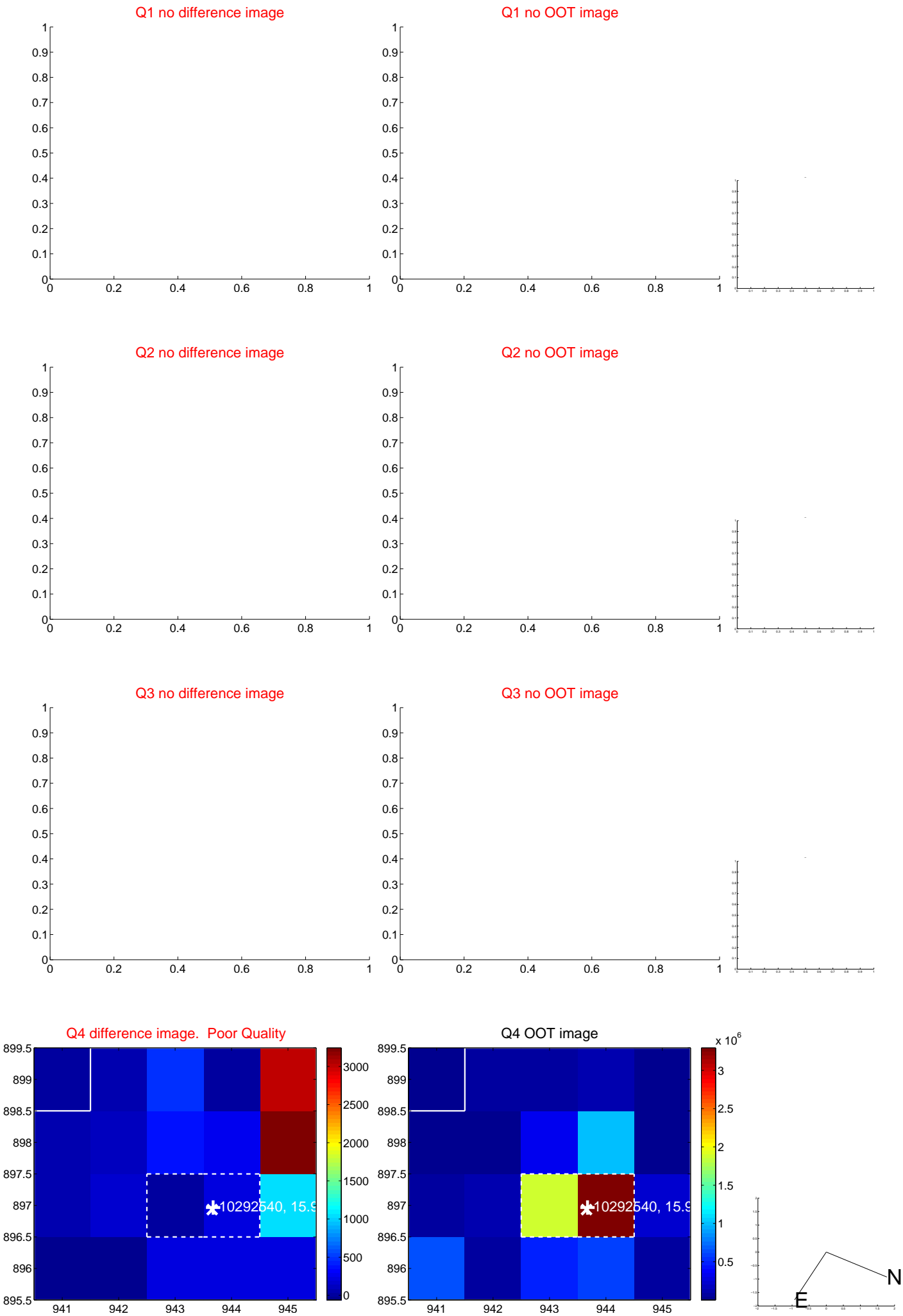
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.474 ± 0.181	41.22	-7.396 ± 0.183	1.081 ± 0.081
PRF-fit source offset from KIC position	7.529 ± 0.178	42.28	-7.424 ± 0.180	1.251 ± 0.078
photometric centroid source offset	18.24 ± 1.90	9.60	-13.08 ± 1.78	12.72 ± 2.02

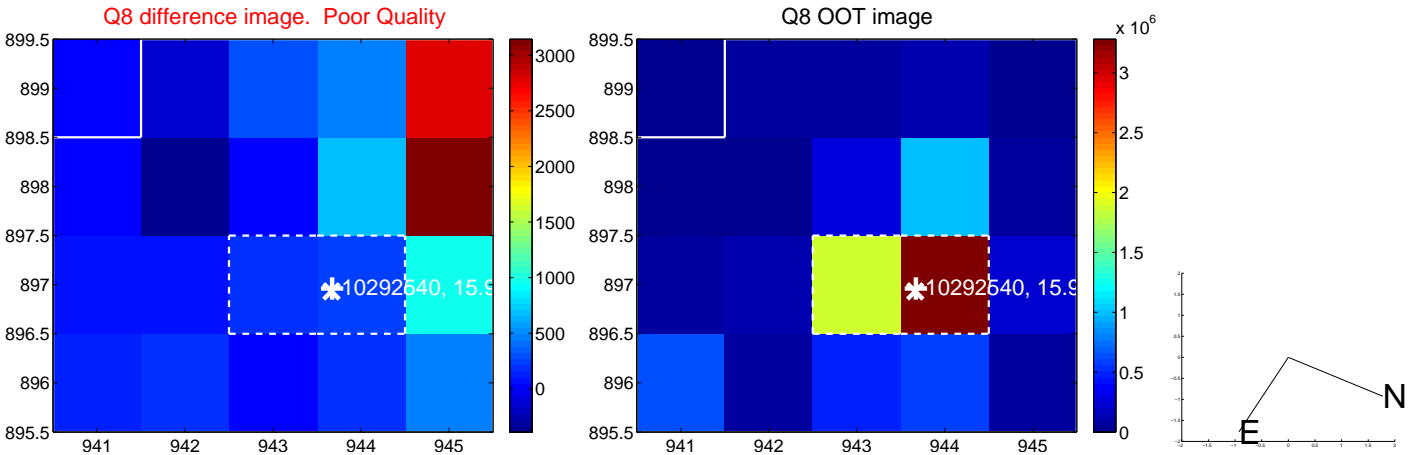
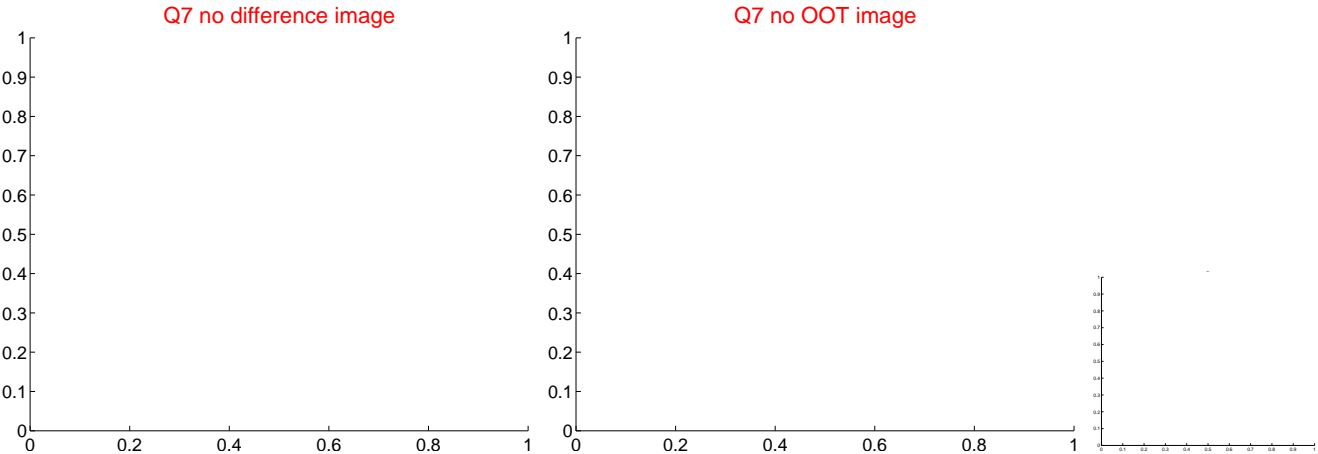
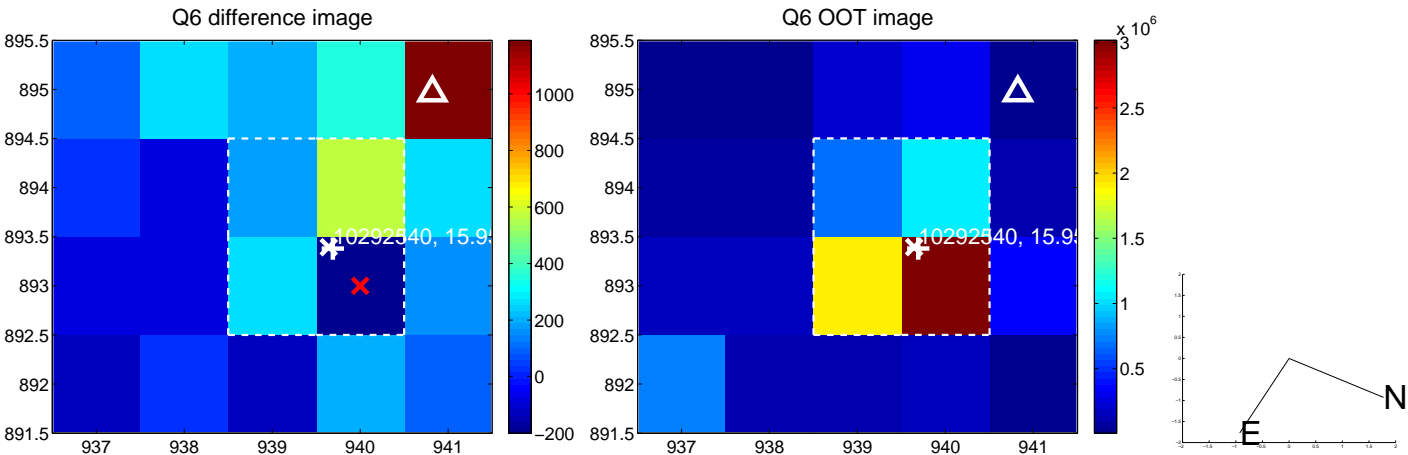
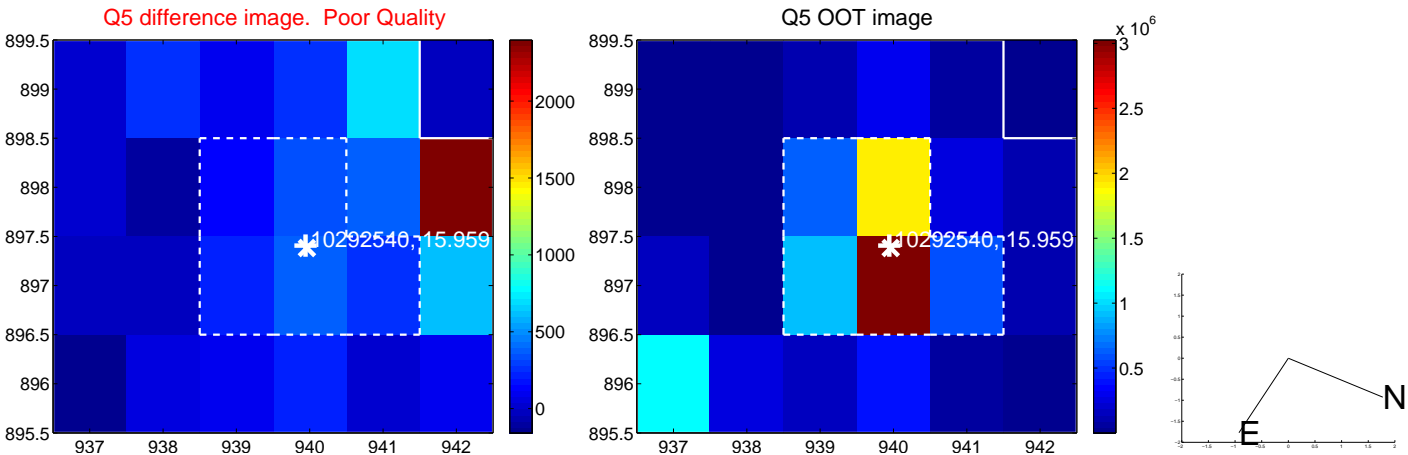


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

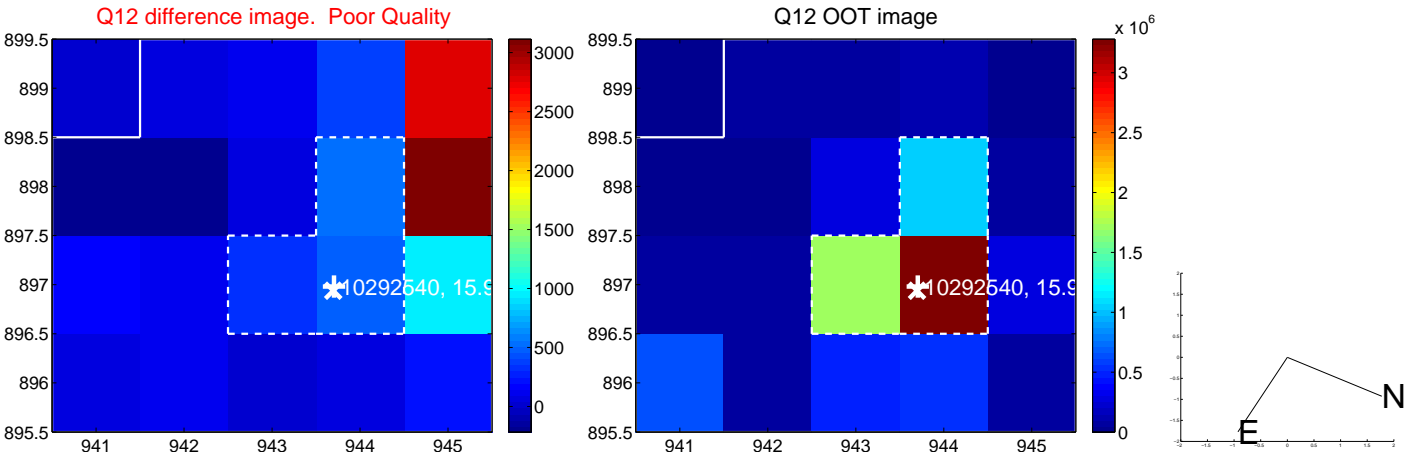
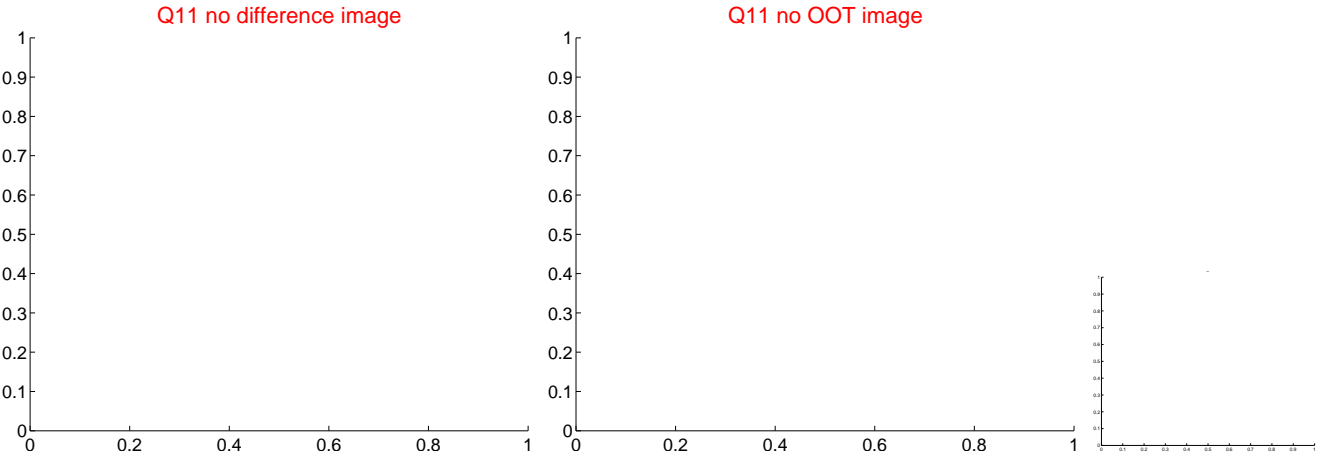
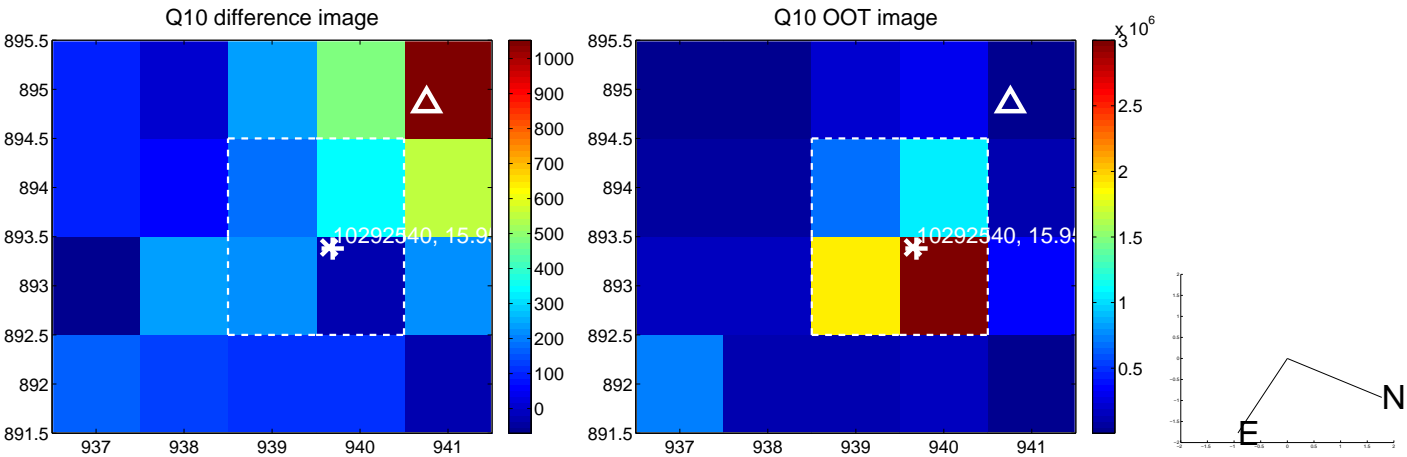
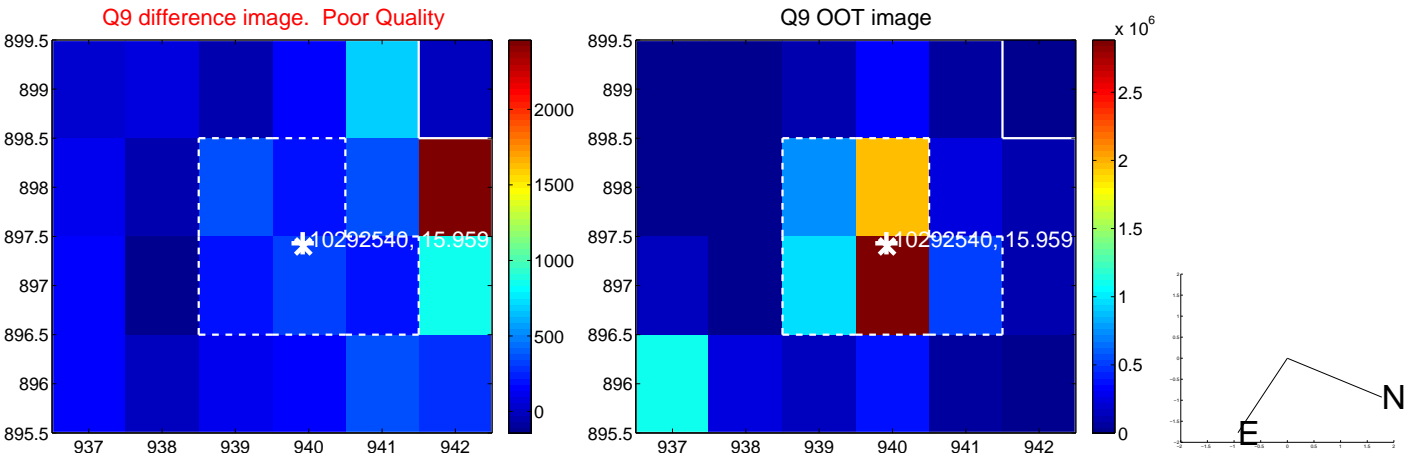
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



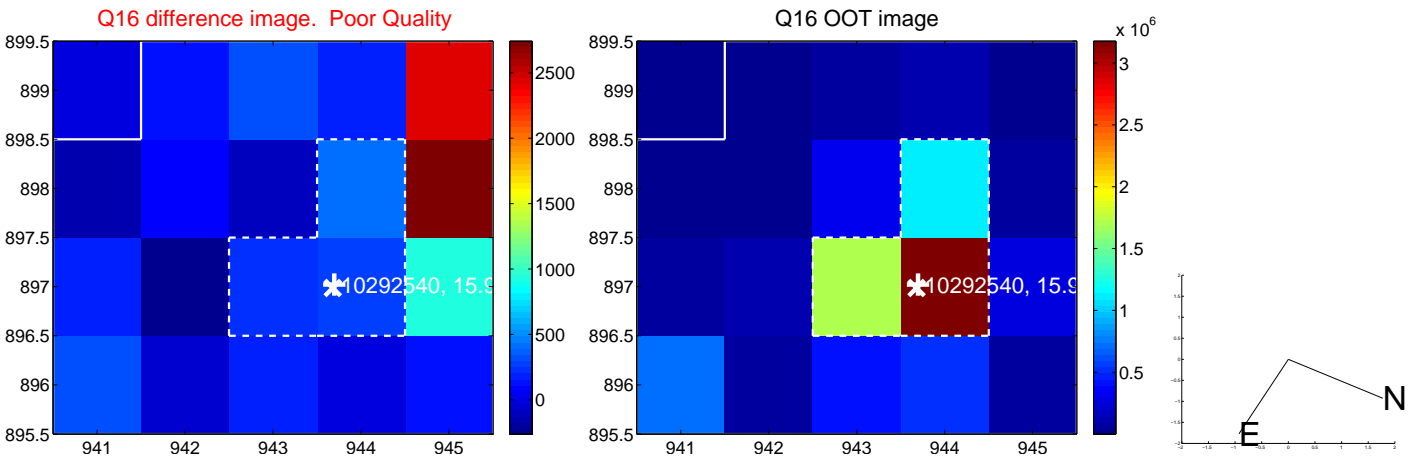
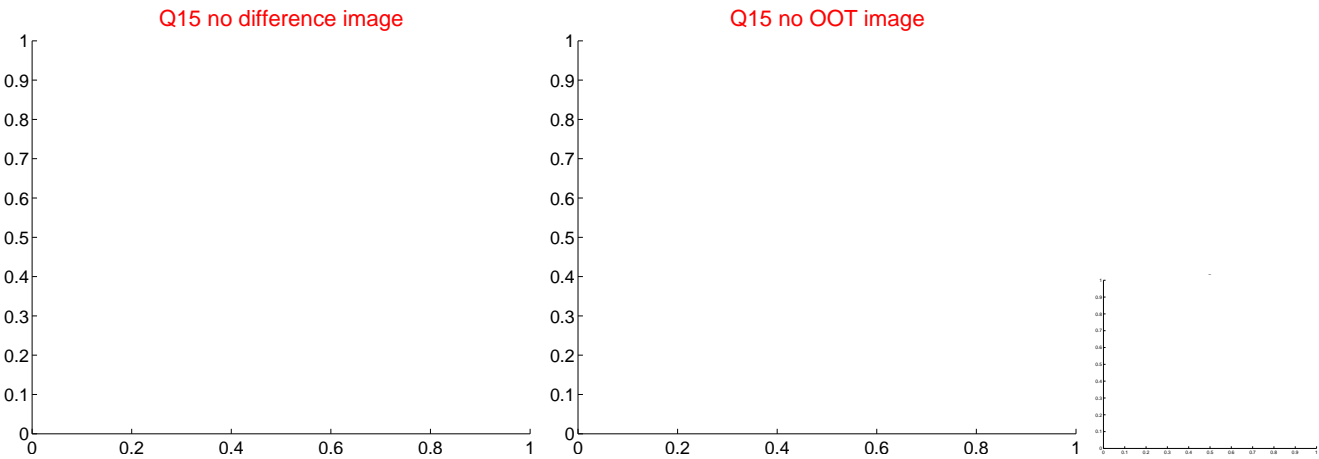
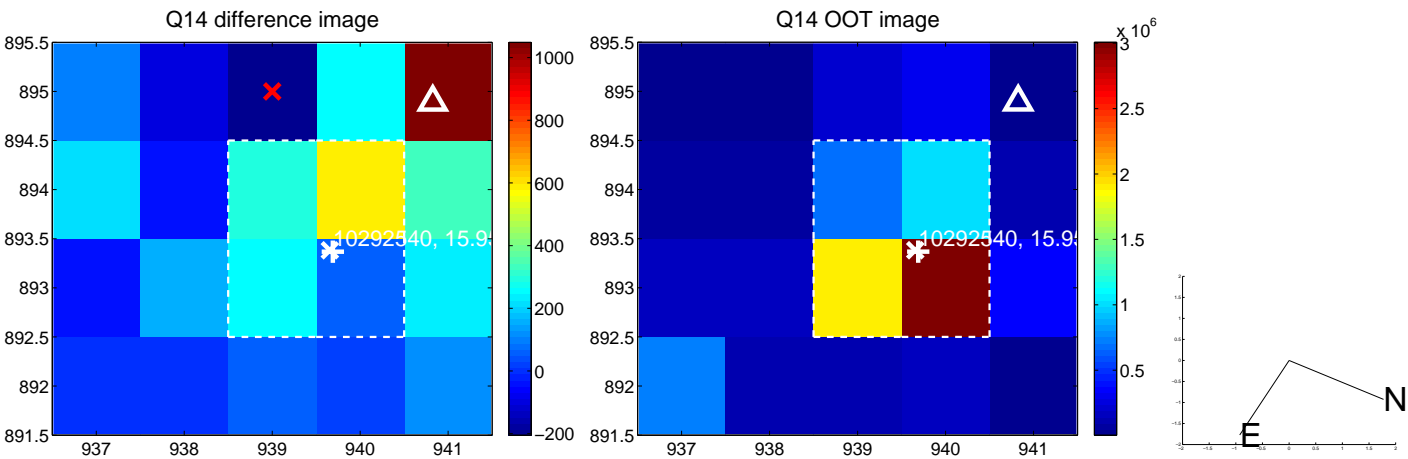
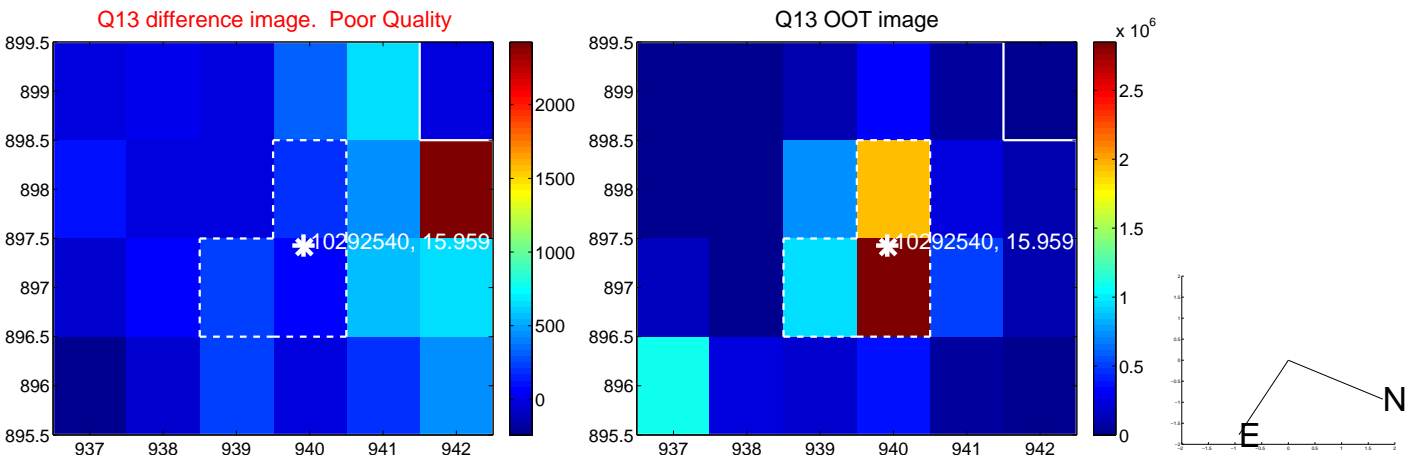
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



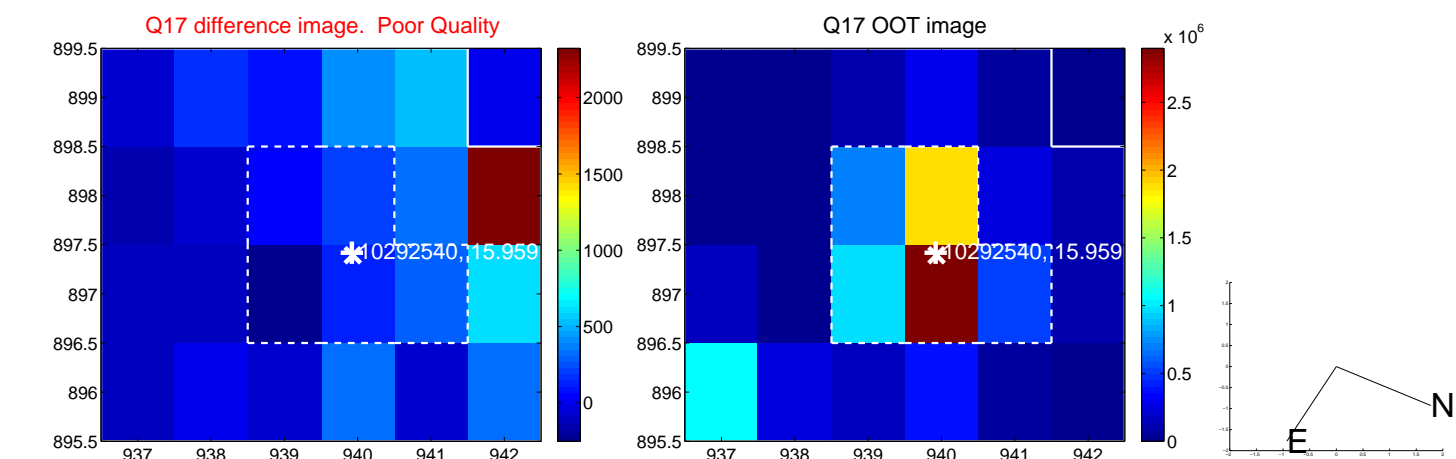
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



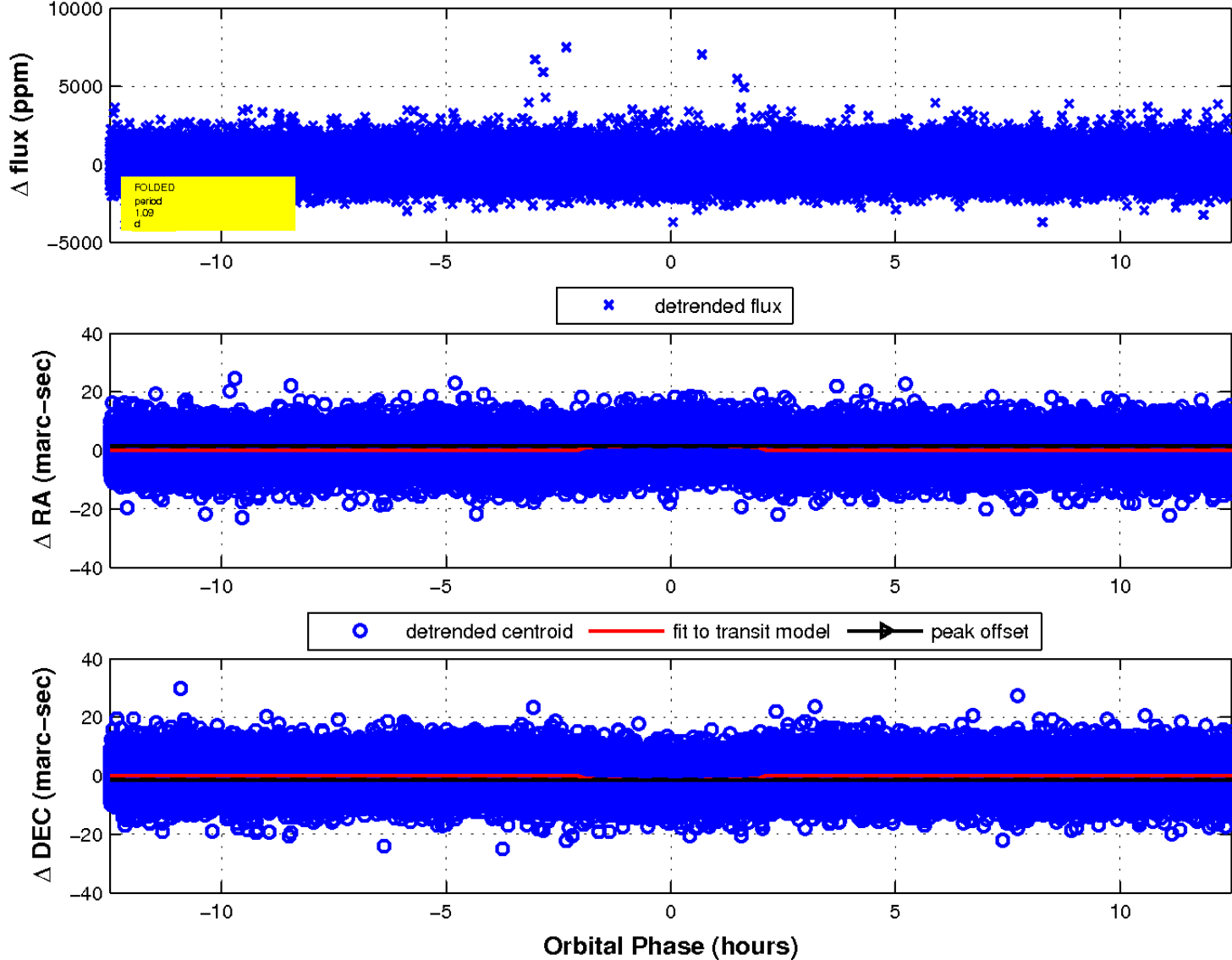
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

