

KIC 008940918

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})
008940918-01	OBS	4784.01	1.405886	132.016010	207.3	1.274	12.3	14.6	0.65	4440	1.16	329.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008940918-01	OBS	FP	0.00	0	0	1	0	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 008940918-01

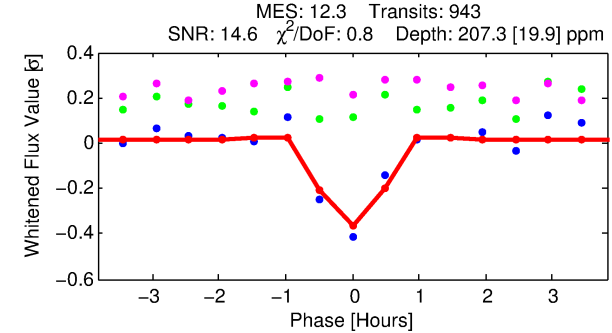
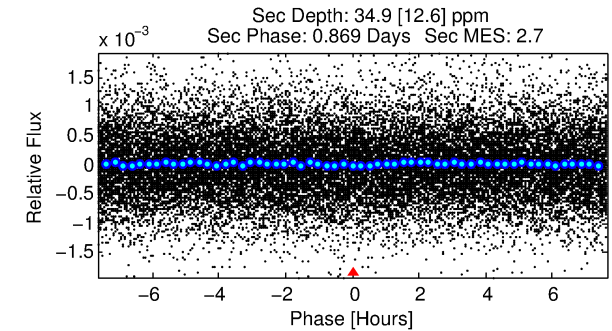
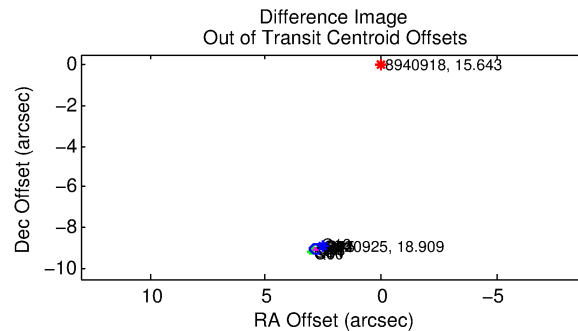
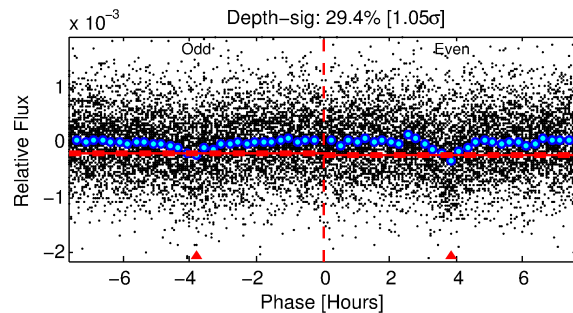
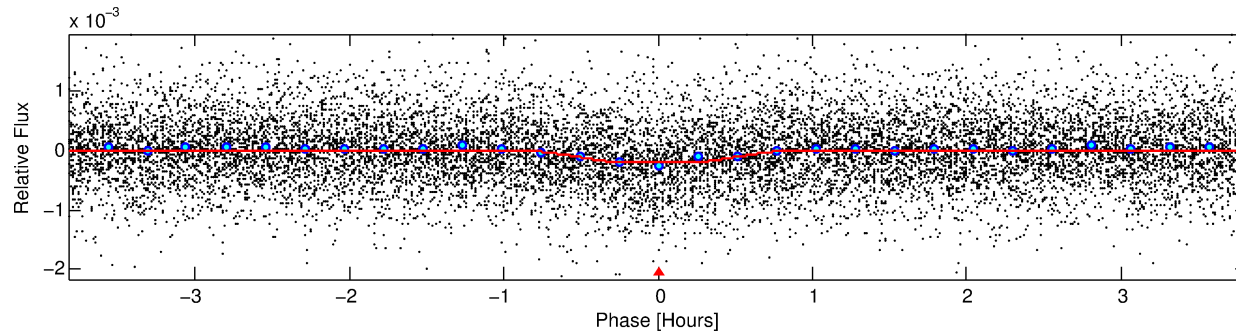
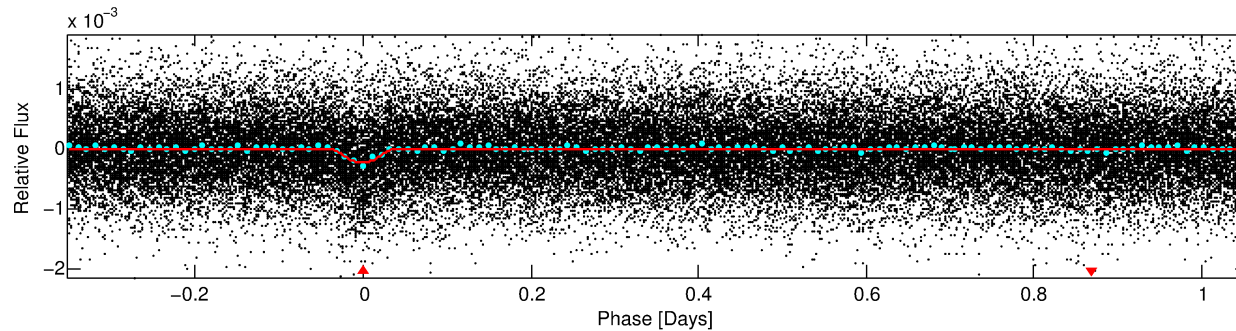
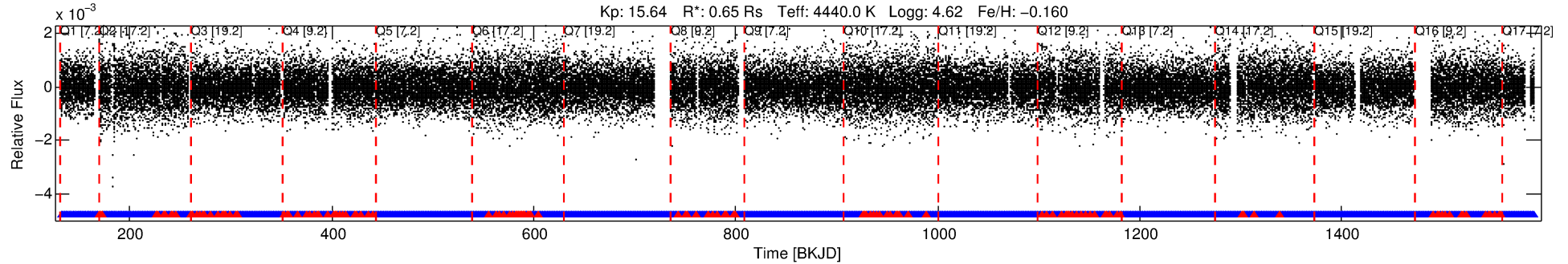
No Significant Match Found

DV One-Page Summary

KIC: 8940918 Candidate: 1 of 1 Period: 1.406 d

KOI: K04784.01 Corr: 0.940

Kp: 15.64 R*: 0.65 Rs Teff: 4440.0 K Logg: 4.62 Fe/H: -0.160



DV Fit Results:

Period = 1.40589 [0.00001] d
Epoch = 132.0160 [0.0013] BKJD
Rp/R* = 0.0163 [0.0122]
a/R* = 4.14 [10.78]
b = 0.90 [0.63]
Seff = 329.43 [50.27]
Teff = 1086 [41] K
Rp = 1.16 [0.88] Re
a = 0.0212 [0.0015] AU
Ag = 6.42 [9.92] [0.55σ]
Teffp = 2674 [1033] K [1.54σ]

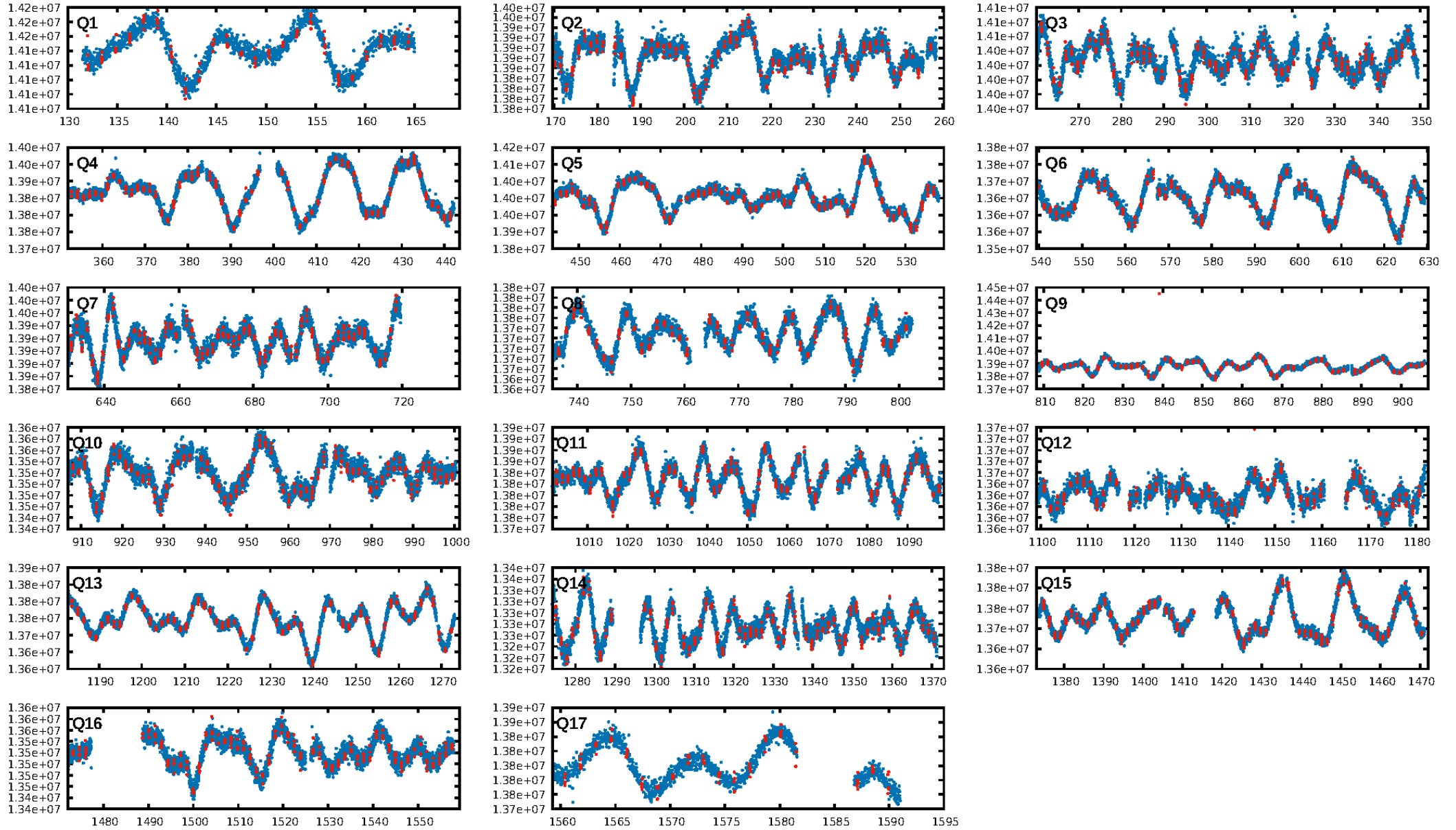
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 5.17e-33
RollingBand-fgt: 0.86 [774/900]
GhostDiagnostic-chr: -0.5172
Centroid-sig: 0.0%
Centroid-so: 32.722 arcsec [26.22σ]
OotOffset-rm: 9.487 arcsec [117.48σ]
KicOffset-rm: 9.446 arcsec [119.13σ]
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]

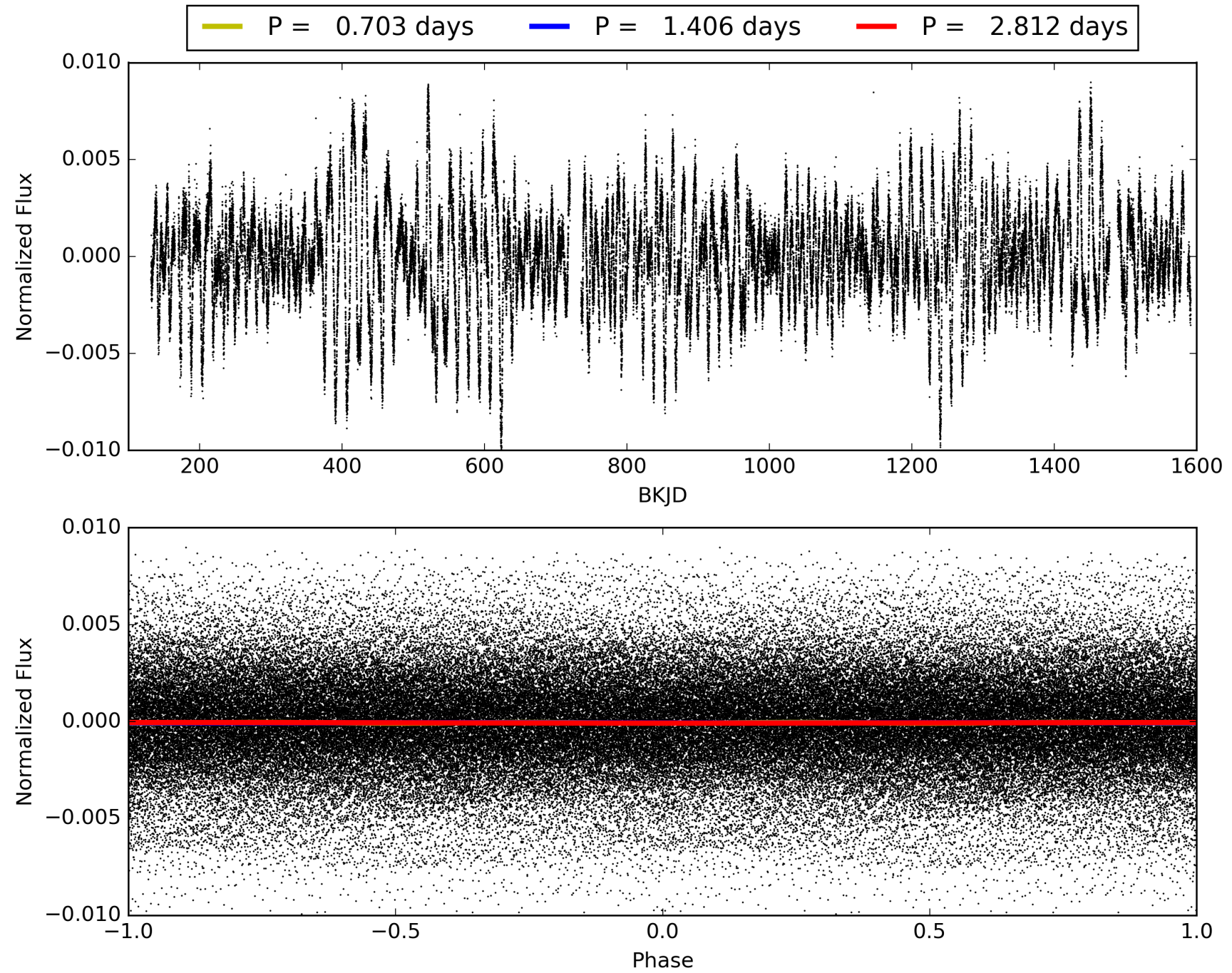
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:15:12 Z

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

TCE 008940918-01, PDC Light Curves

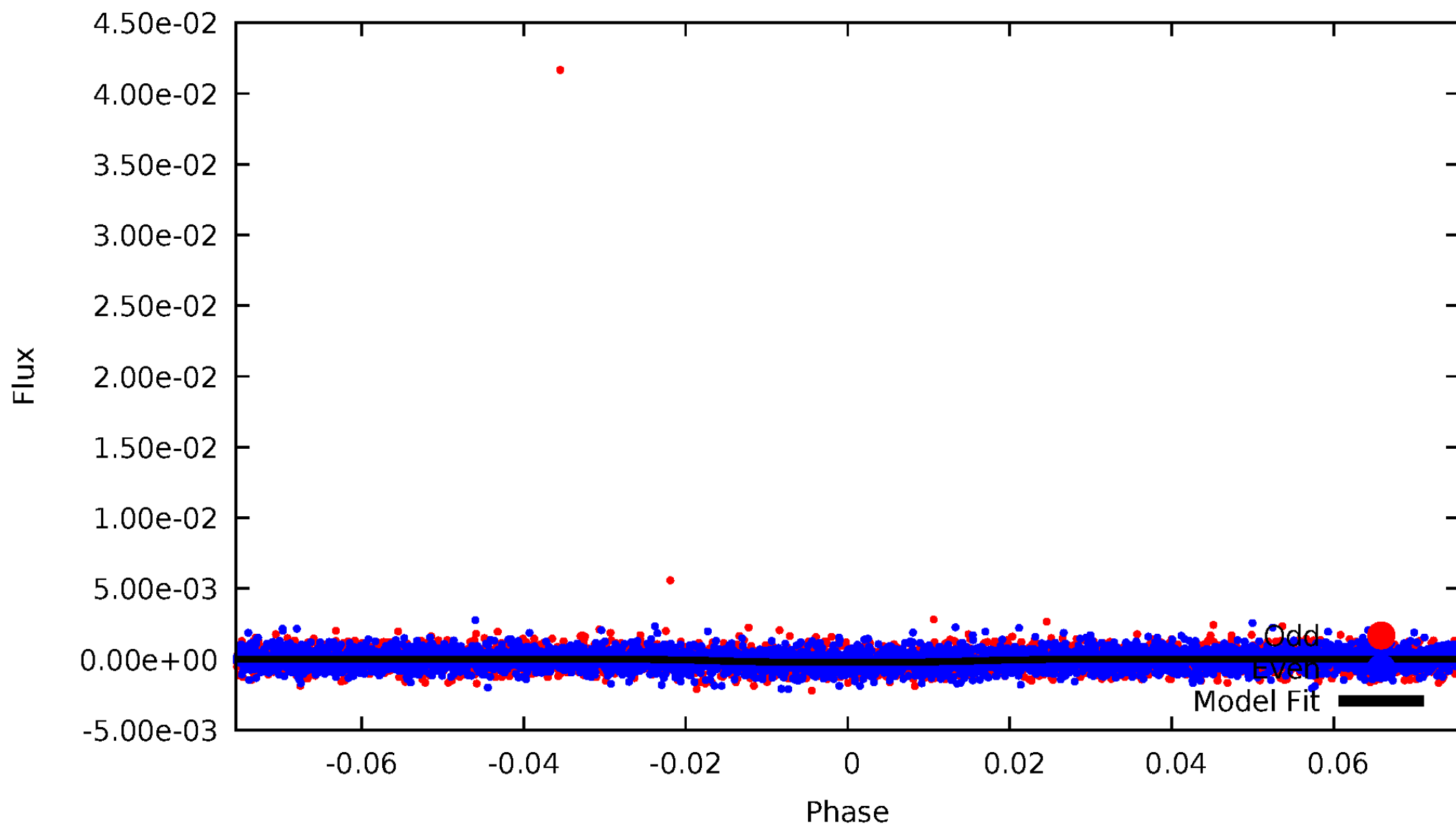


TCE 008940918-01



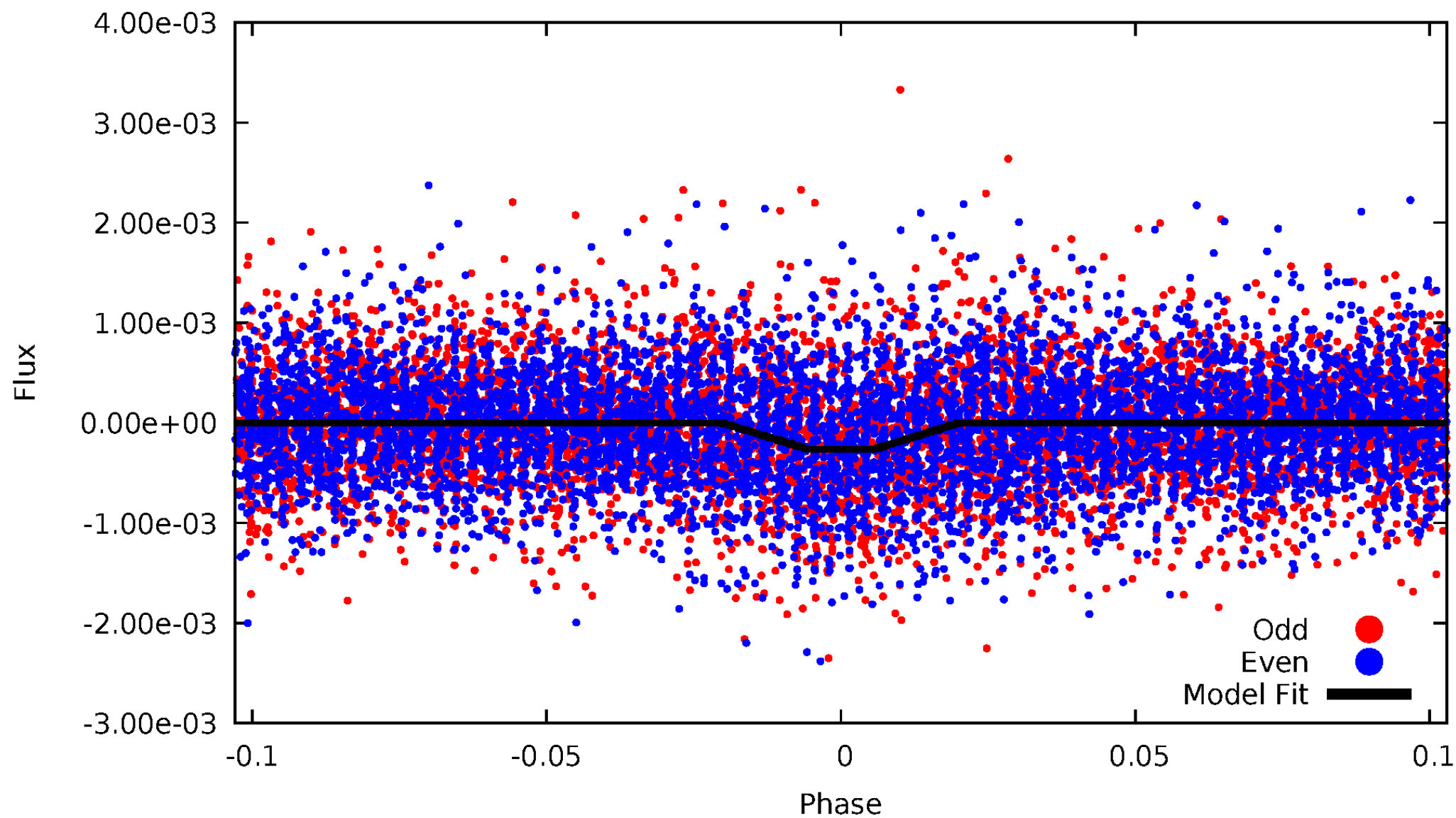
DV Odd/Even

TCE 008940918-01



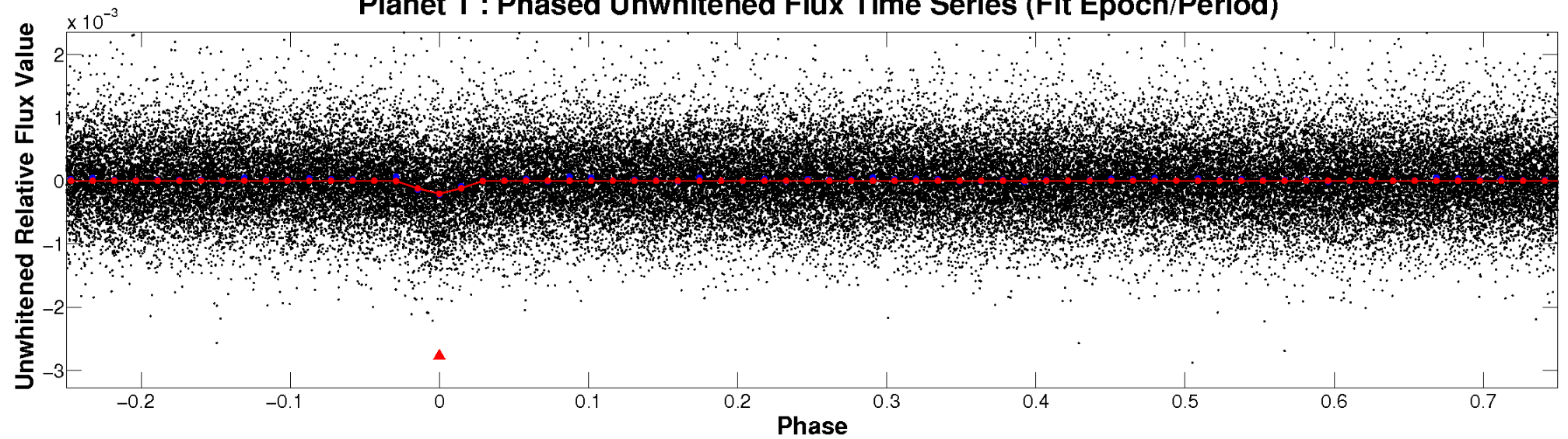
ALT Odd/Even

TCE 008940918-01

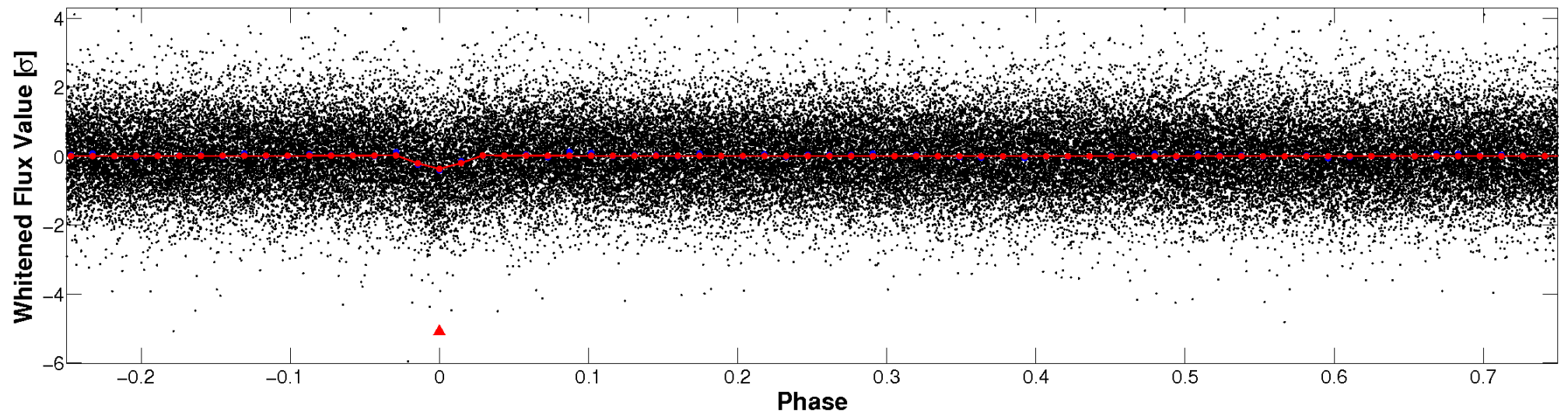


Non-Whitened Vs. Whitened Light Curve

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

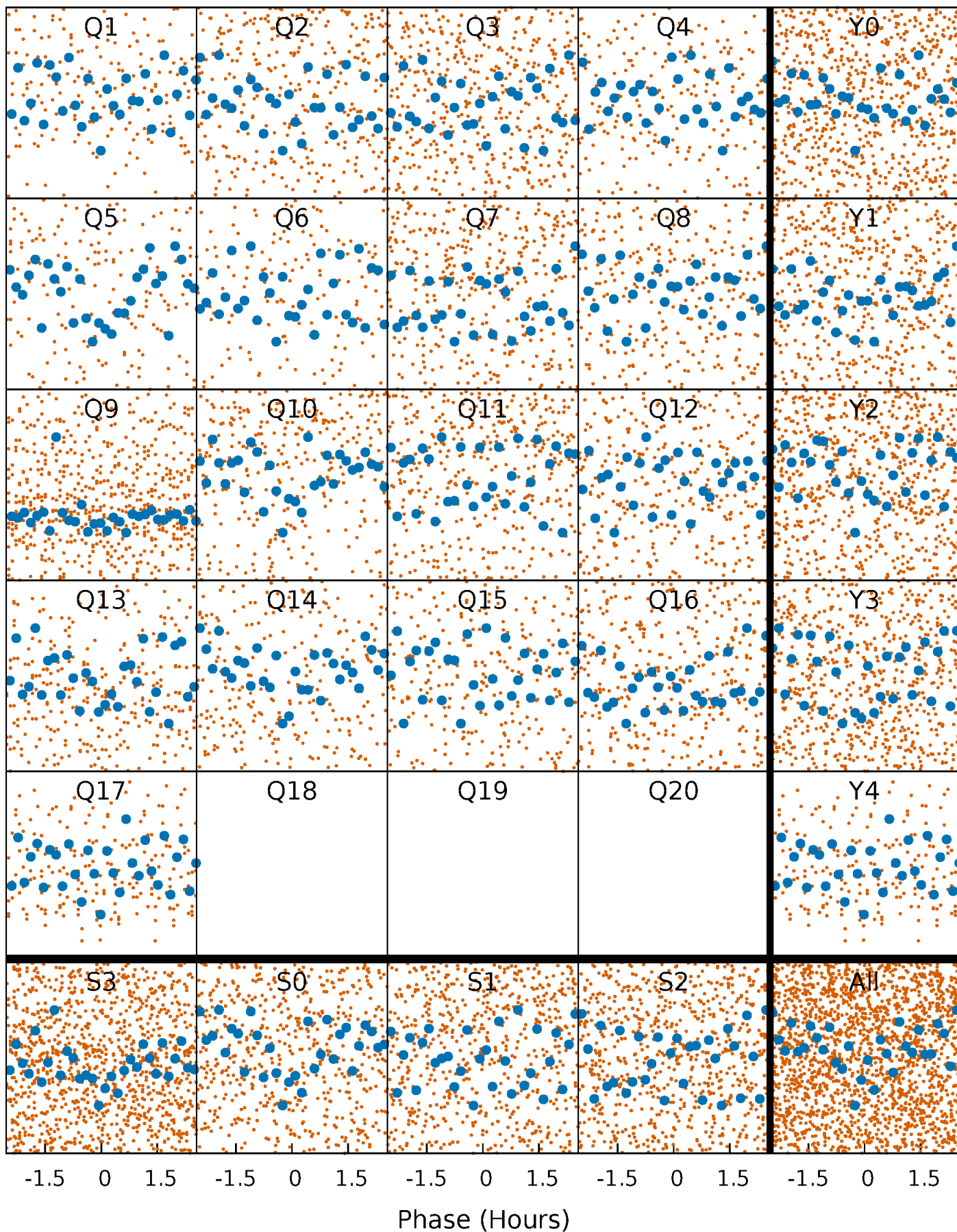


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



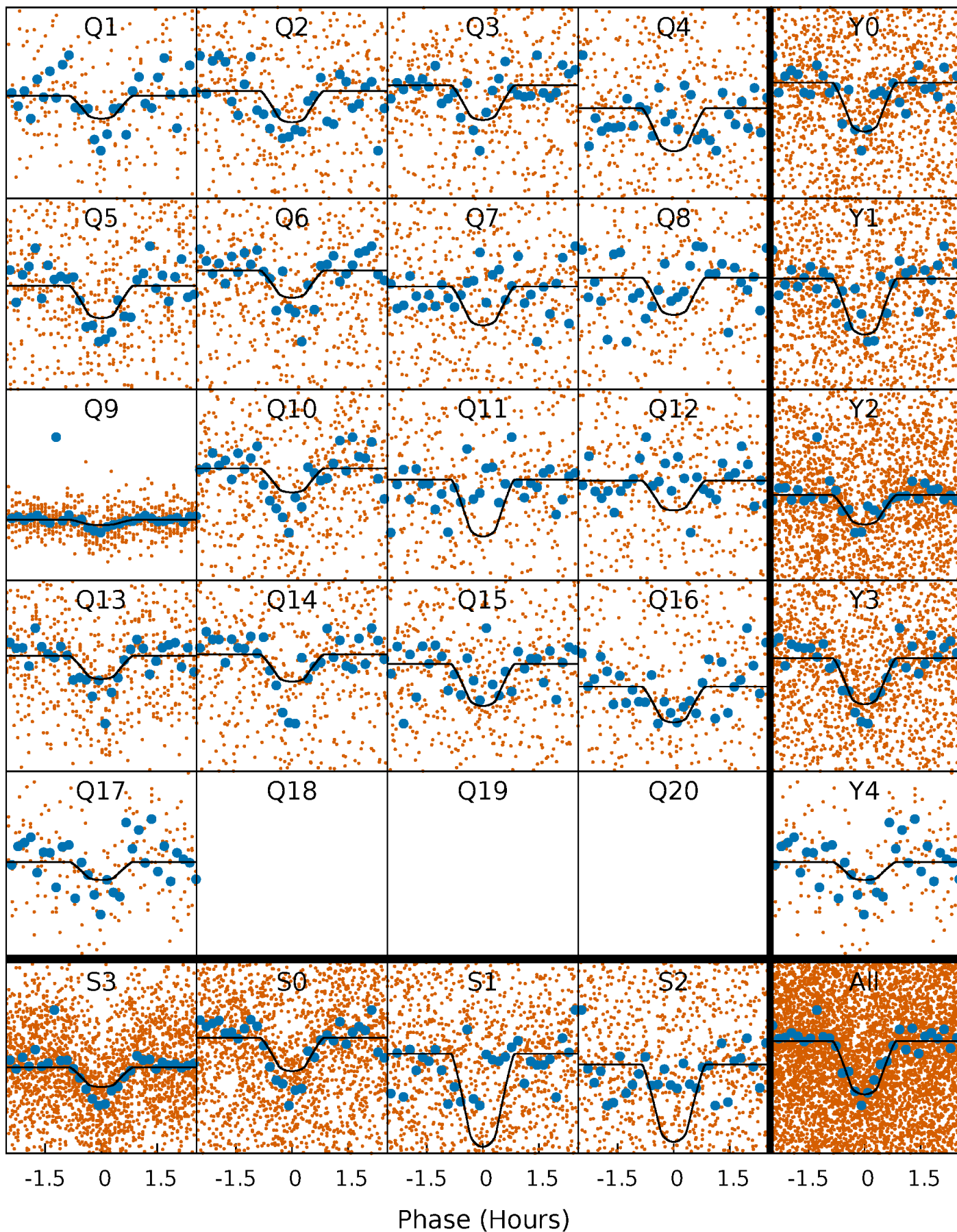
PDC Quarter-Phased Transit Curves

TCE 008940918-01 P= 1.405886 Days $T_0=132.016010$ (BKJD)



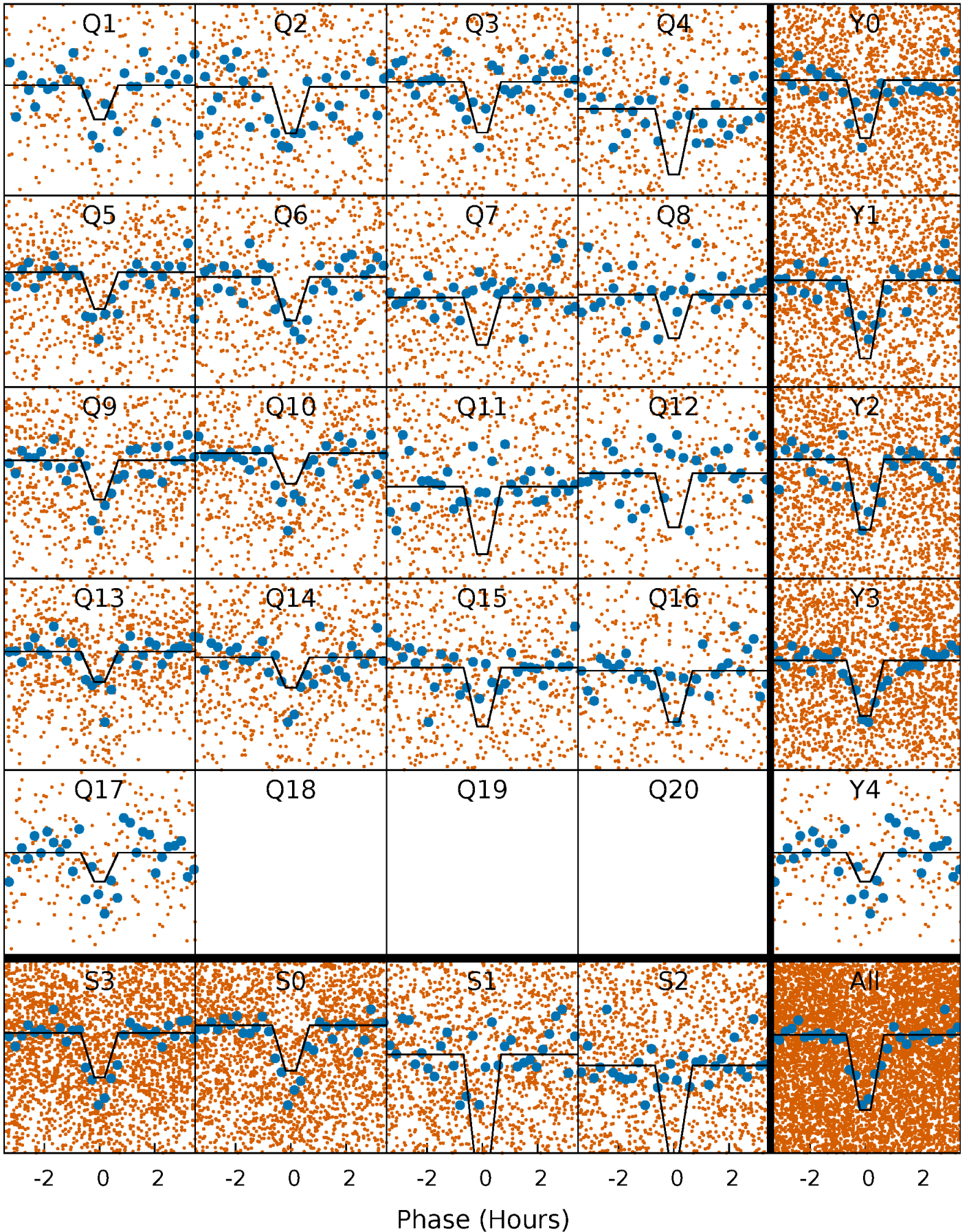
DV Quarter-Phased Transit Curves

TCE 008940918-01 P= 1.405886 Days $T_0=132.016010$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

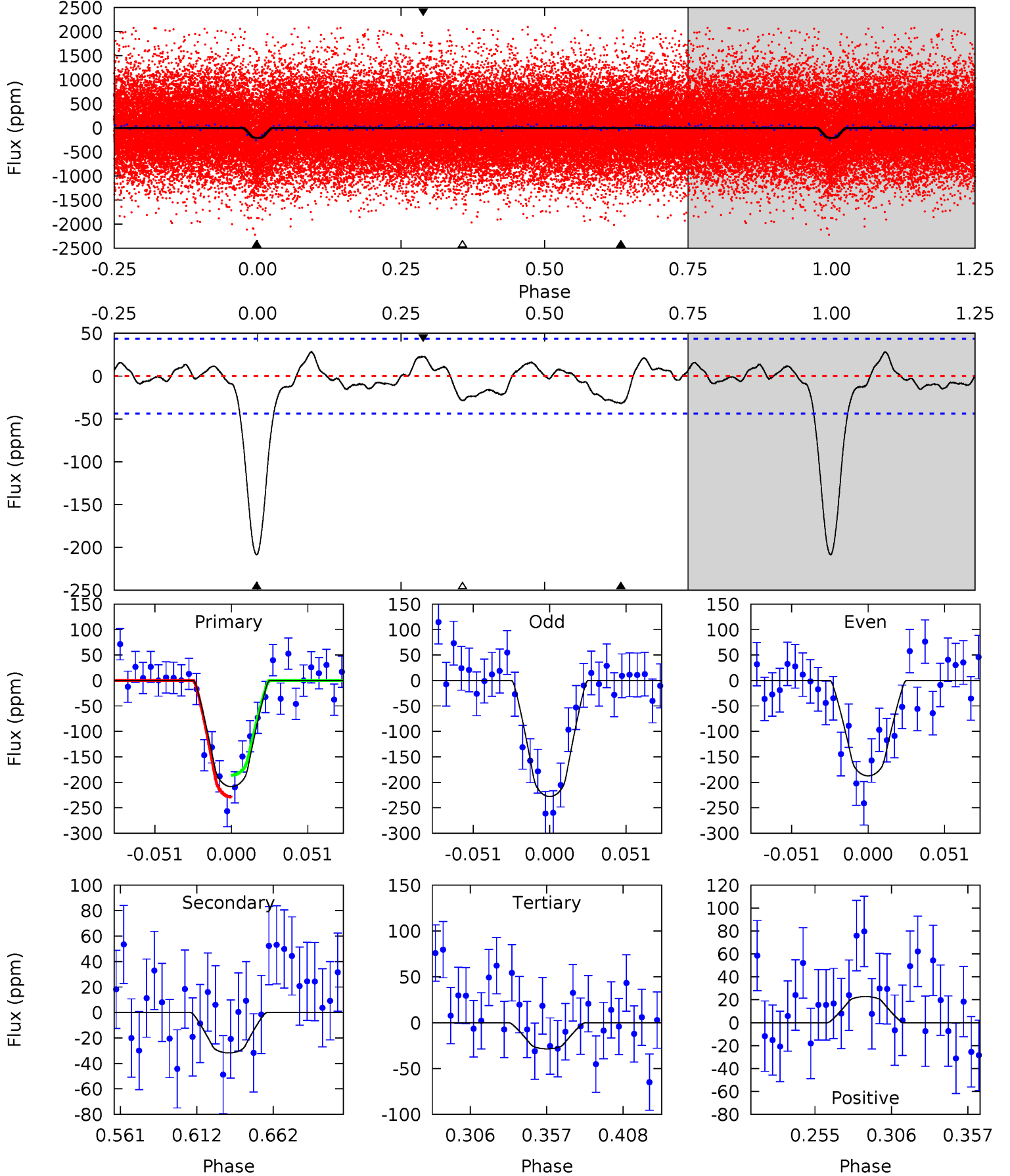
TCE 008940918-01 P= 1.405879 Days $T_0=132.016983$ (BKJD)



DV Model-Shift Uniqueness Test

008940918-01, P = 1.405886 Days, E = 130.610124 Days

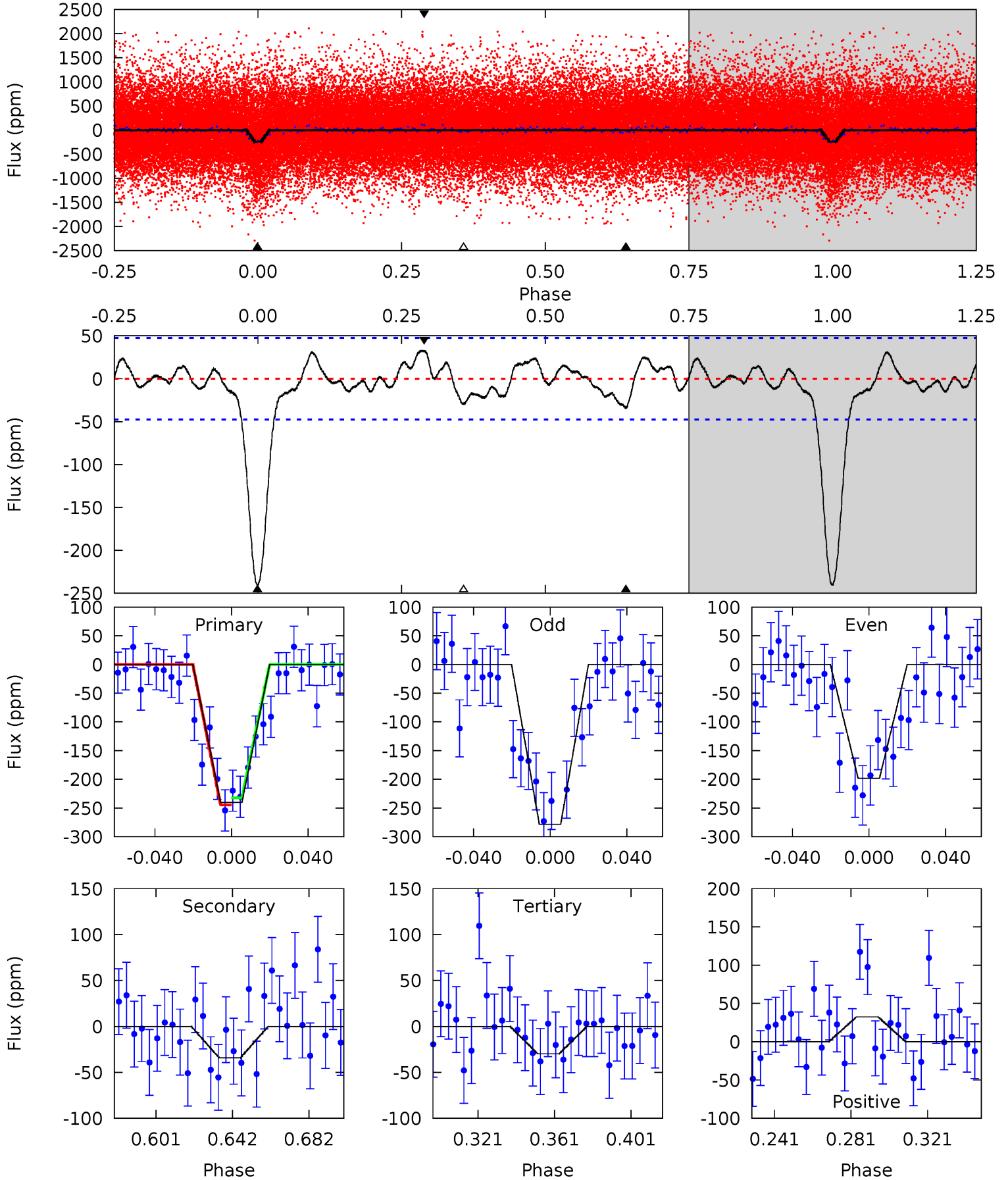
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	3.42	3.08	2.45	4.70	1.95	1.26	19.4	20.0	0.34	0.97	2.19	0.99	0.12	2.31



Alt Model-Shift Uniqueness Test

008940918-01, P = 1.405879 Days, E = 130.611104 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	3.41	2.98	3.25	4.75	2.05	1.35	21.0	20.8	0.43	0.16	4.00	1.01	0.12	0.62



Stellar Parameters For KIC 008940918

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4440^{+133}_{-133}	$4.618^{+0.049}_{-0.025}$	$-0.160^{+0.300}_{-0.300}$	$0.653^{+0.046}_{-0.056}$	$0.646^{+0.068}_{-0.051}$	$3.266^{+0.756}_{-0.346}$
	+3%/-3%	+1%/-1%	+188%/-188%	+7%/-9%	+11%/-8%	+23%/-11%
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 008940918-01 / KOI 4784.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-32 ± 9	$1.26^{+0.84}_{-0.73}$	1507^{+51}_{-50}	2986^{+987}_{-415}	$4.742^{+24.339}_{-3.010}$
Alt.	-34 ± 10	$1.28^{+0.82}_{-0.75}$	1509^{+49}_{-50}	3024^{+1013}_{-426}	$4.971^{+25.649}_{-3.111}$

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 $A_{obs} \gg 1.0$

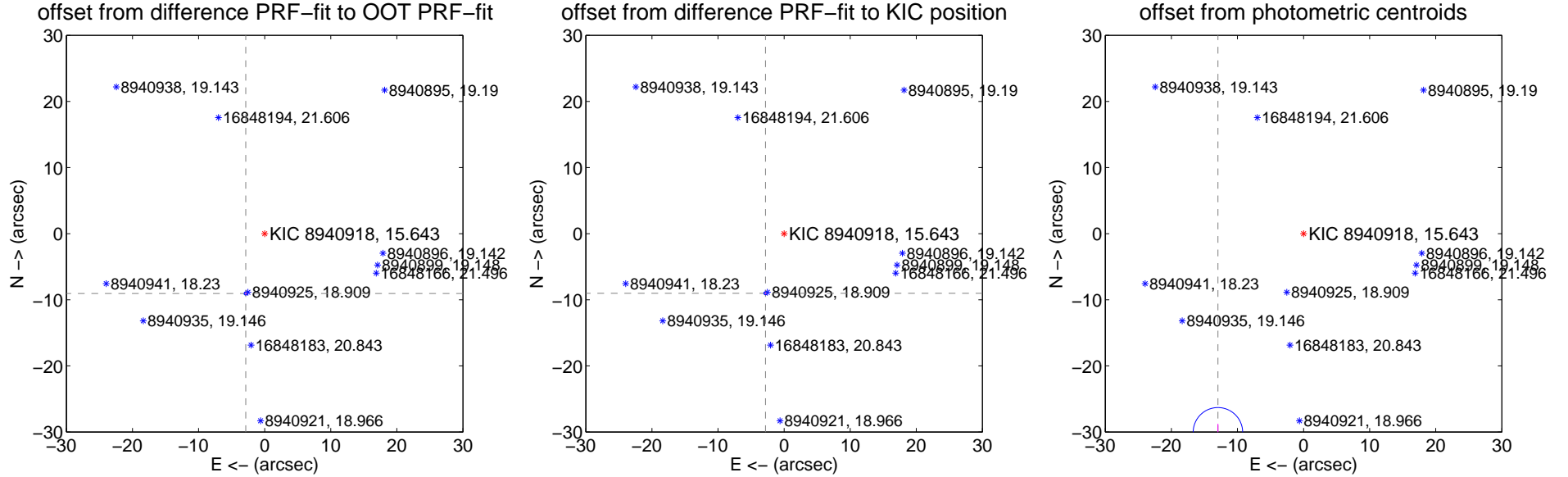
DV Centroid Data

Supplemental centroid analysis for 008940918-01. Kepler magnitude: 15.64. Transit SNR 14.59

There are 17 quarters with good PRF difference image offsets

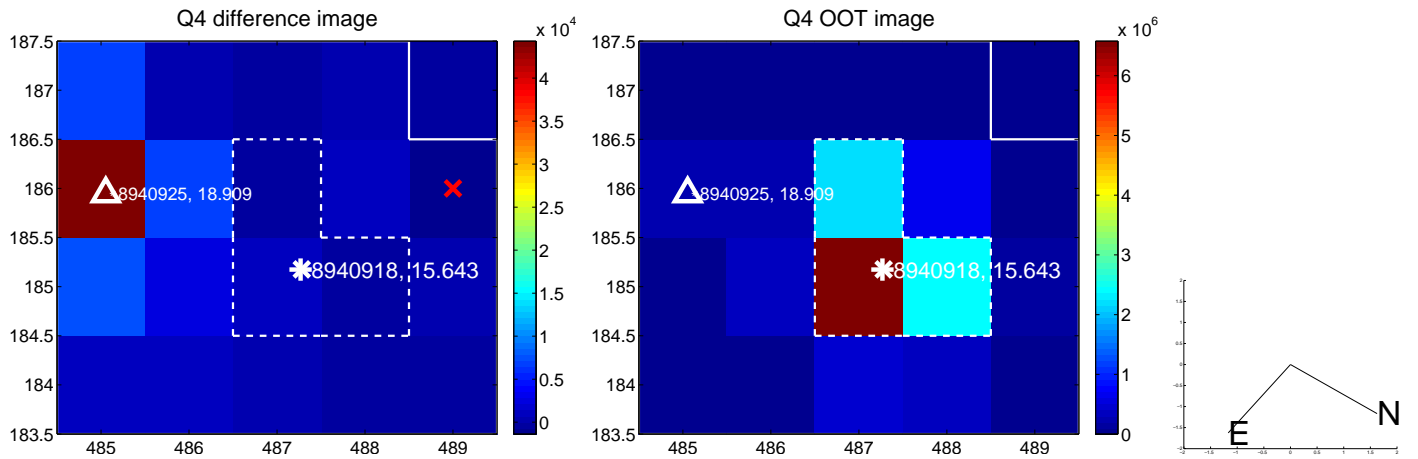
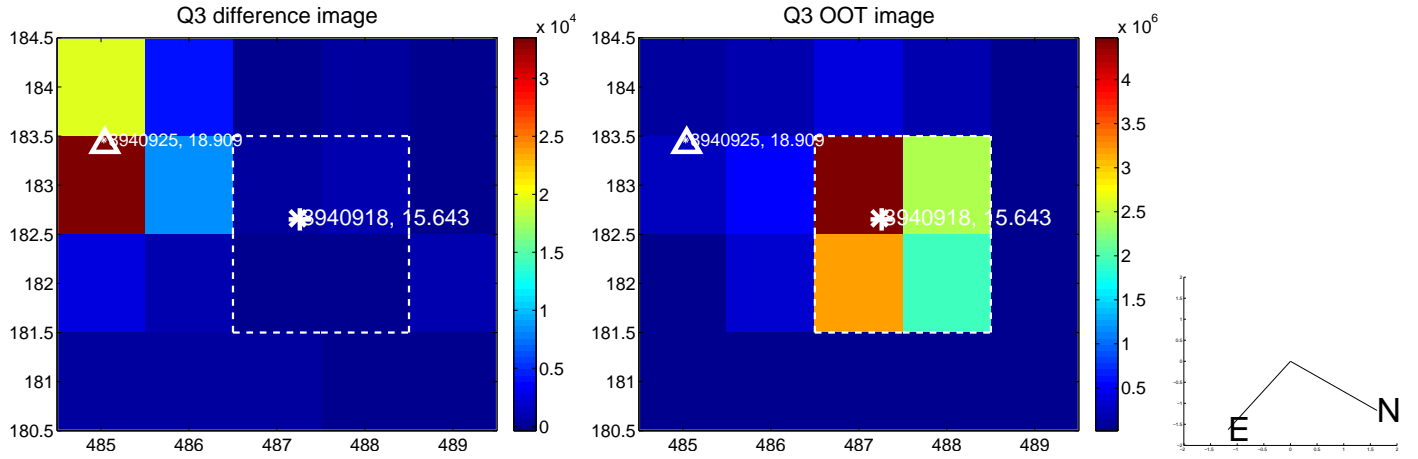
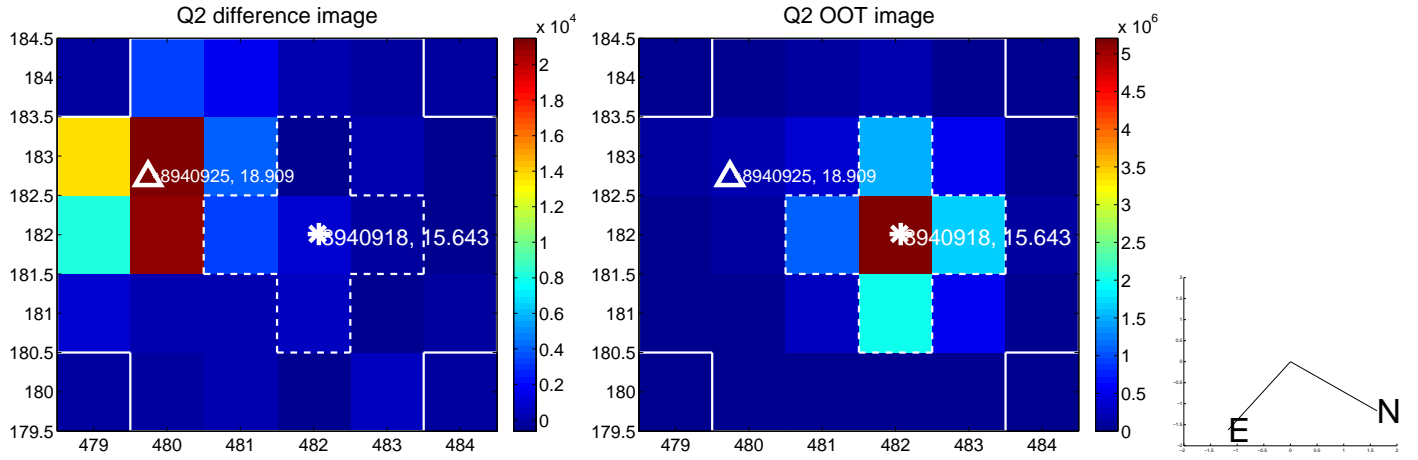
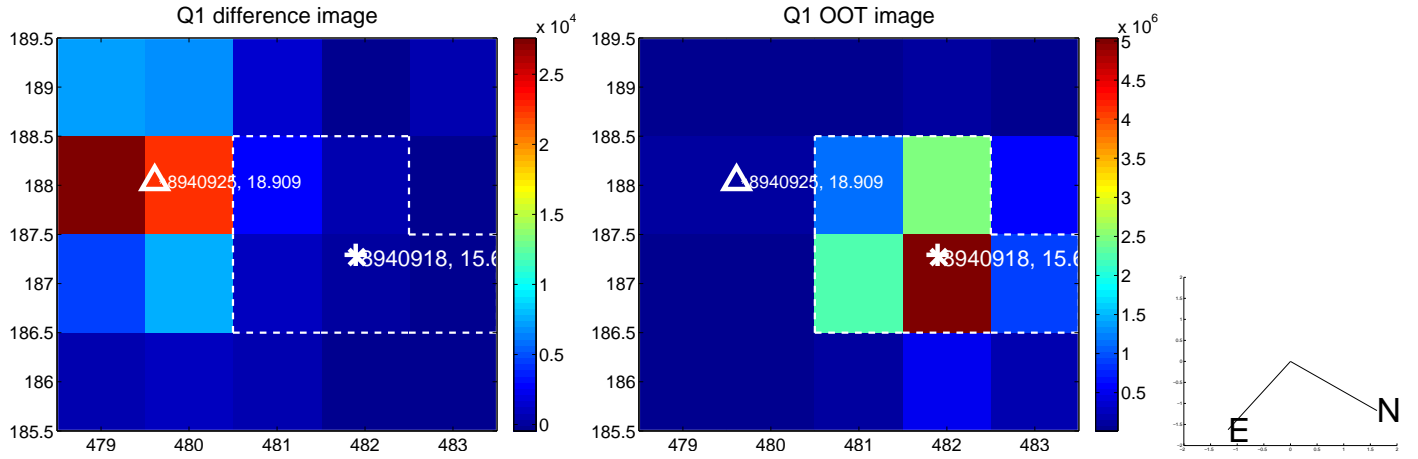
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.487 \pm 0.081	117.48	2.858 \pm 0.081	-9.046 \pm 0.075
PRF-fit source offset from KIC position	9.446 \pm 0.079	119.13	2.816 \pm 0.078	-9.017 \pm 0.075
photometric centroid source offset	32.72 \pm 1.25	26.22	12.96 \pm 1.04	-30.05 \pm 1.28

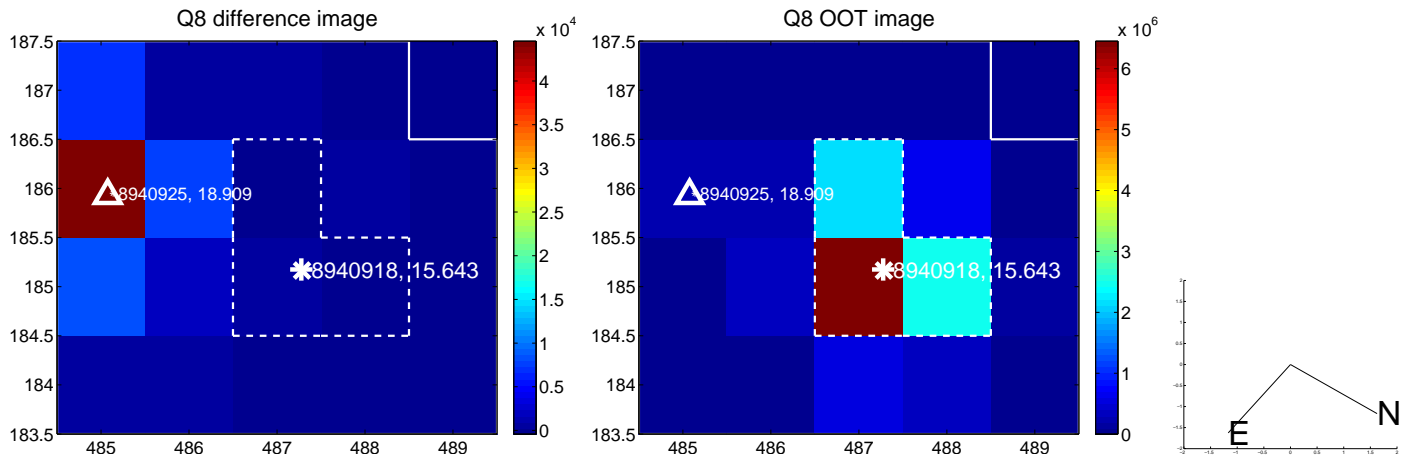
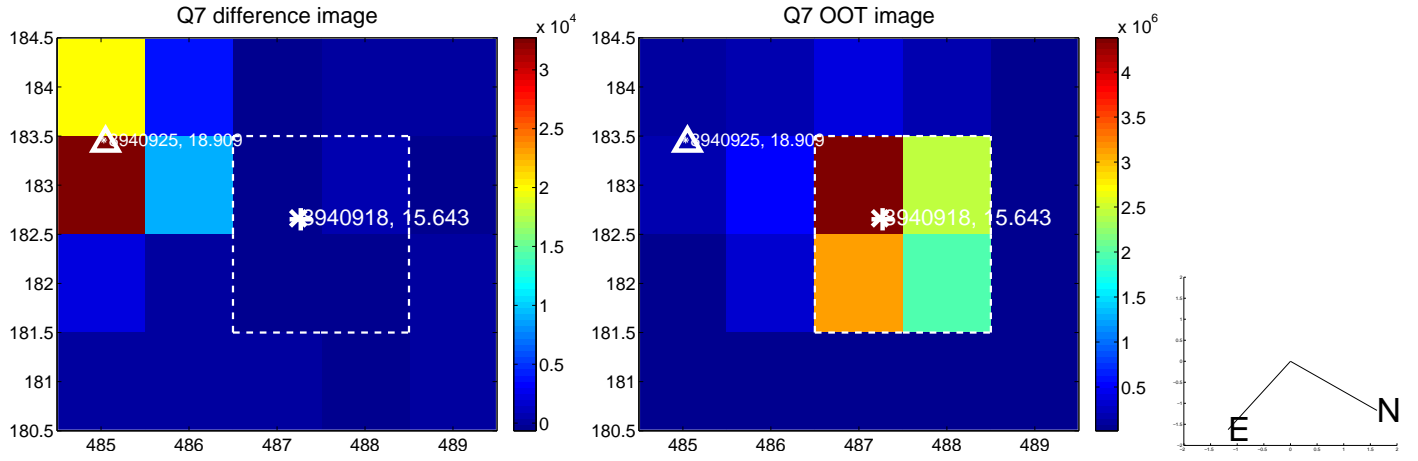
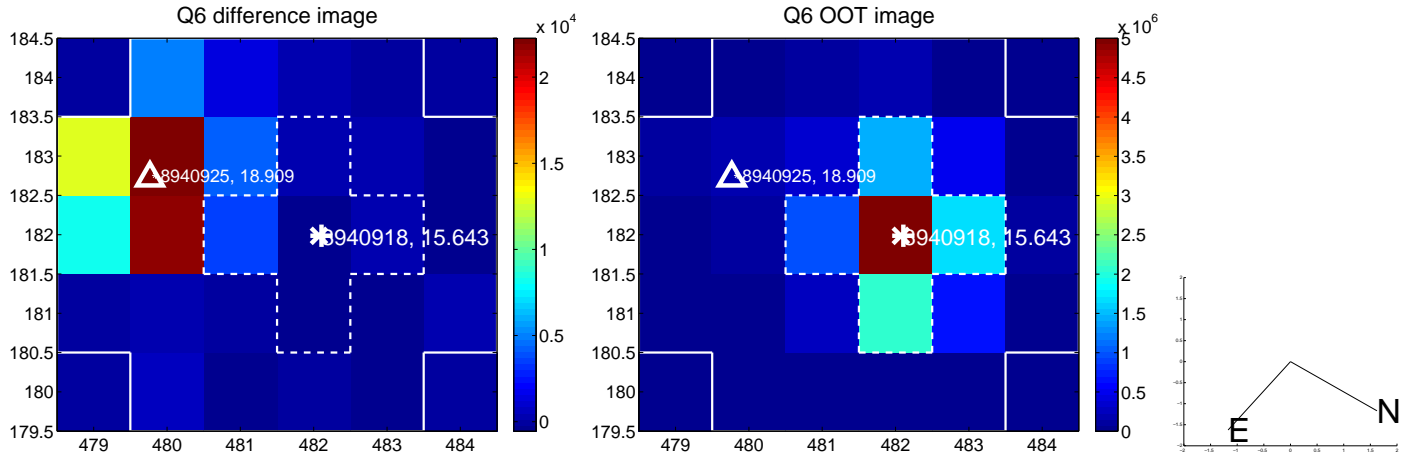
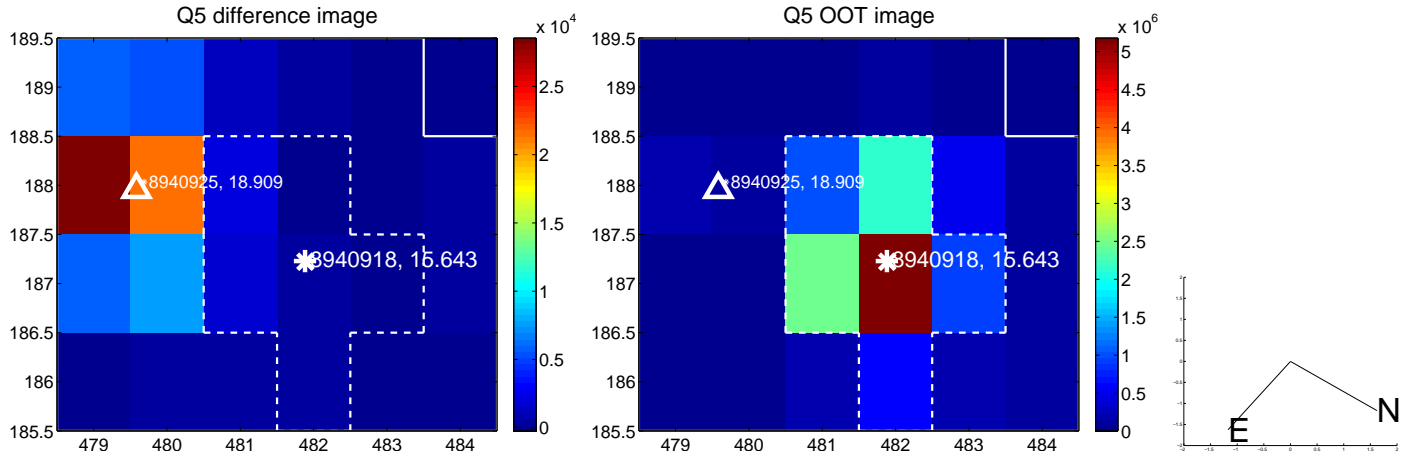


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

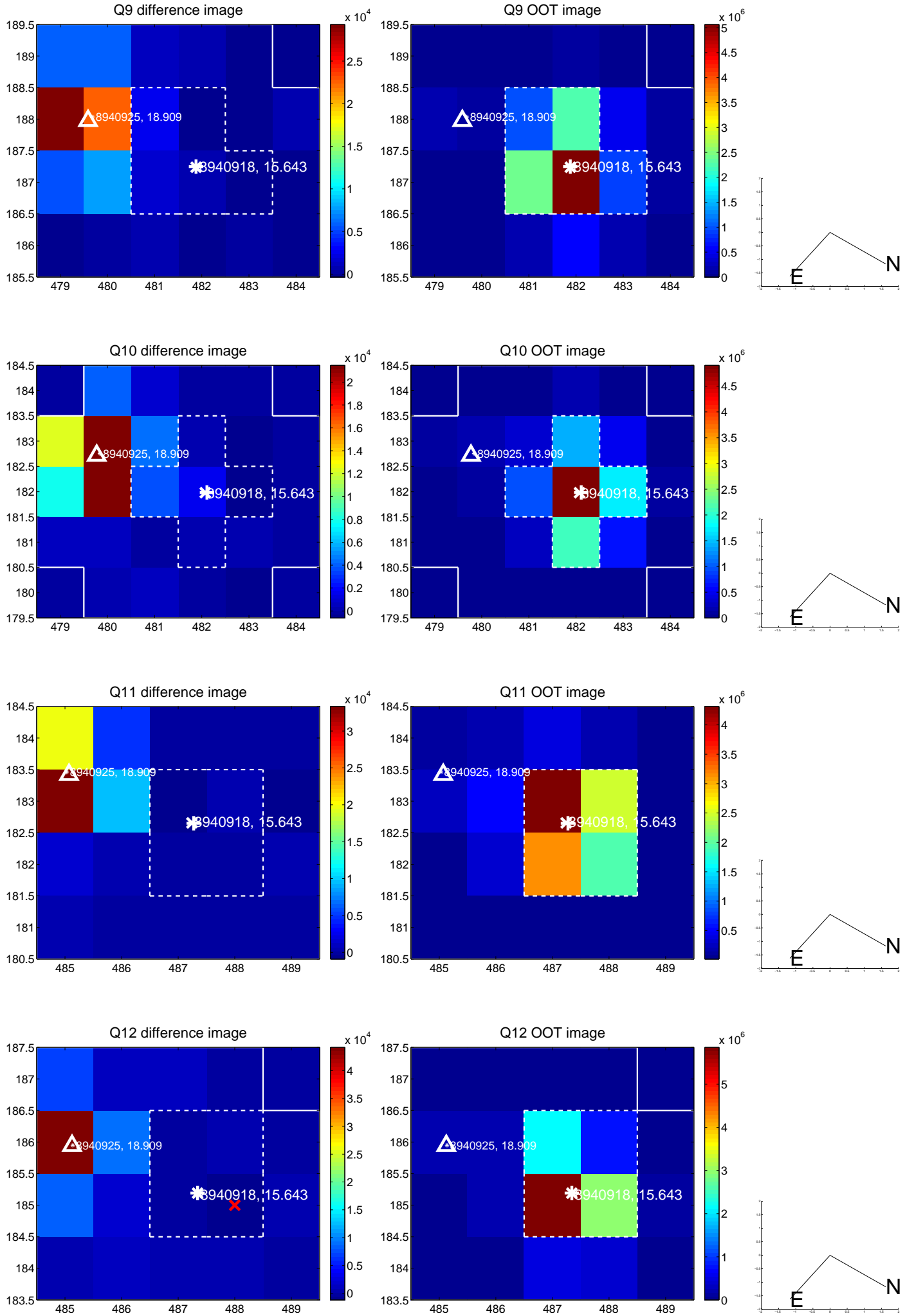
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



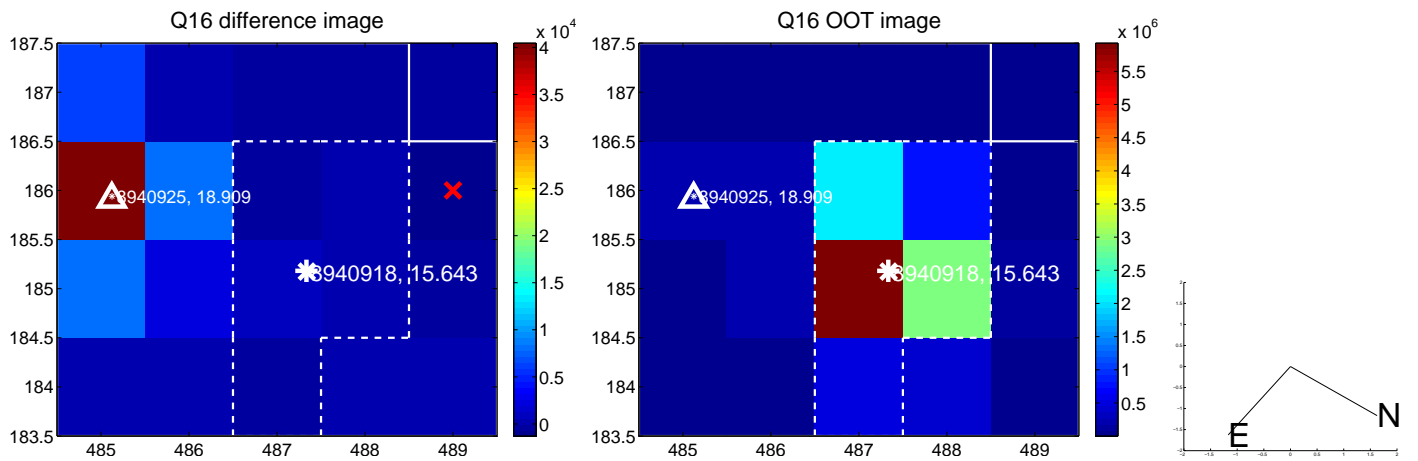
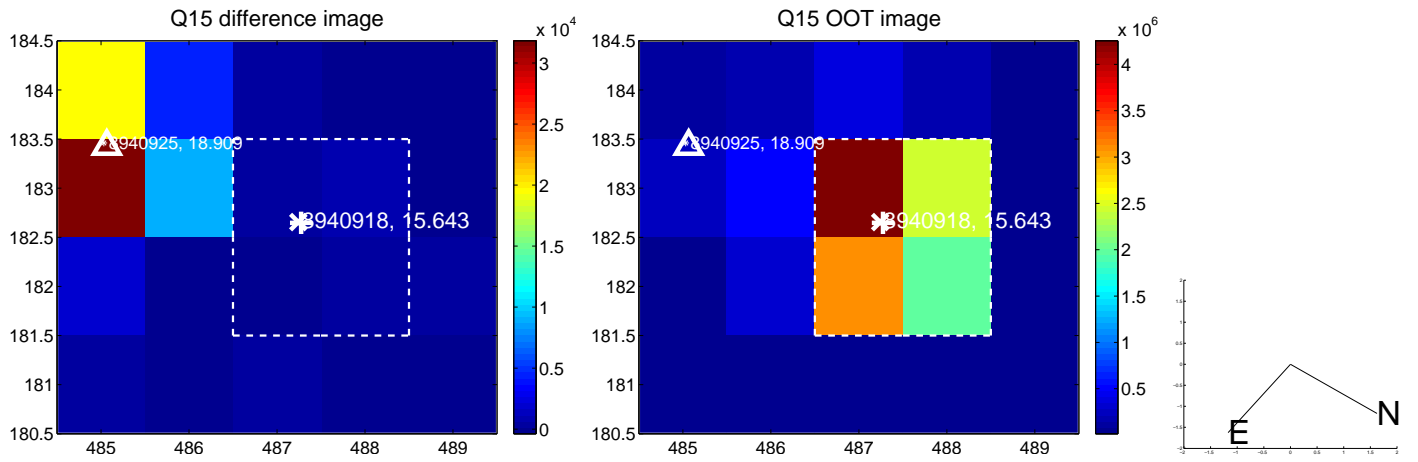
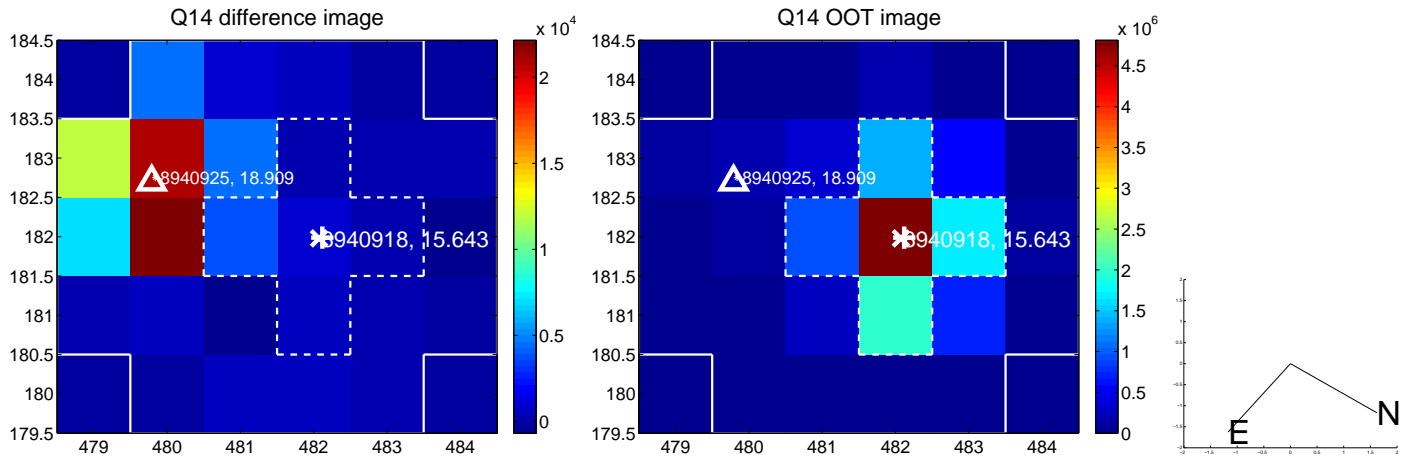
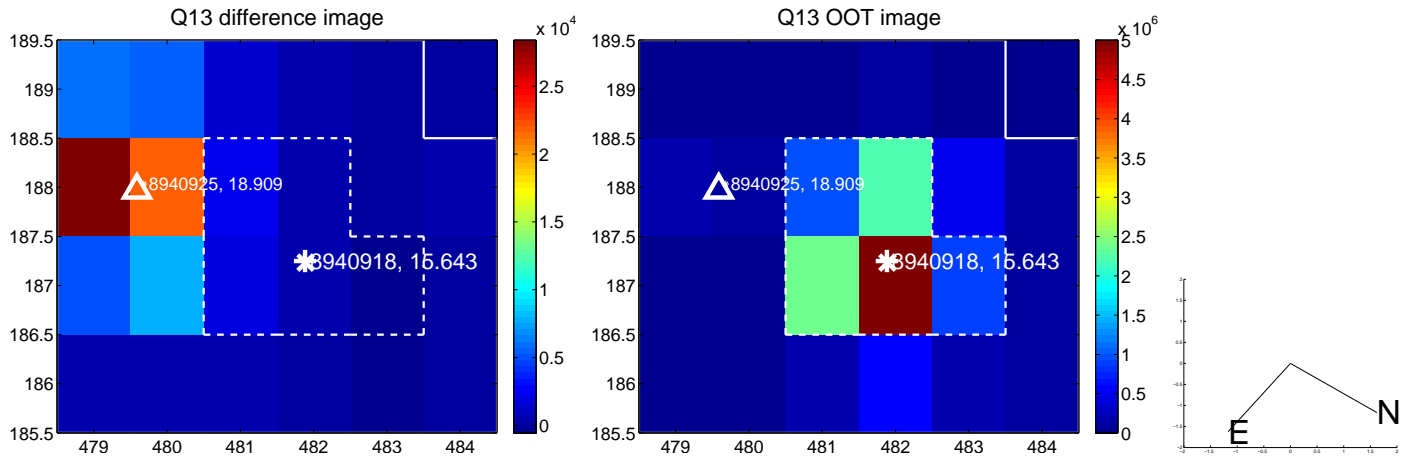
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



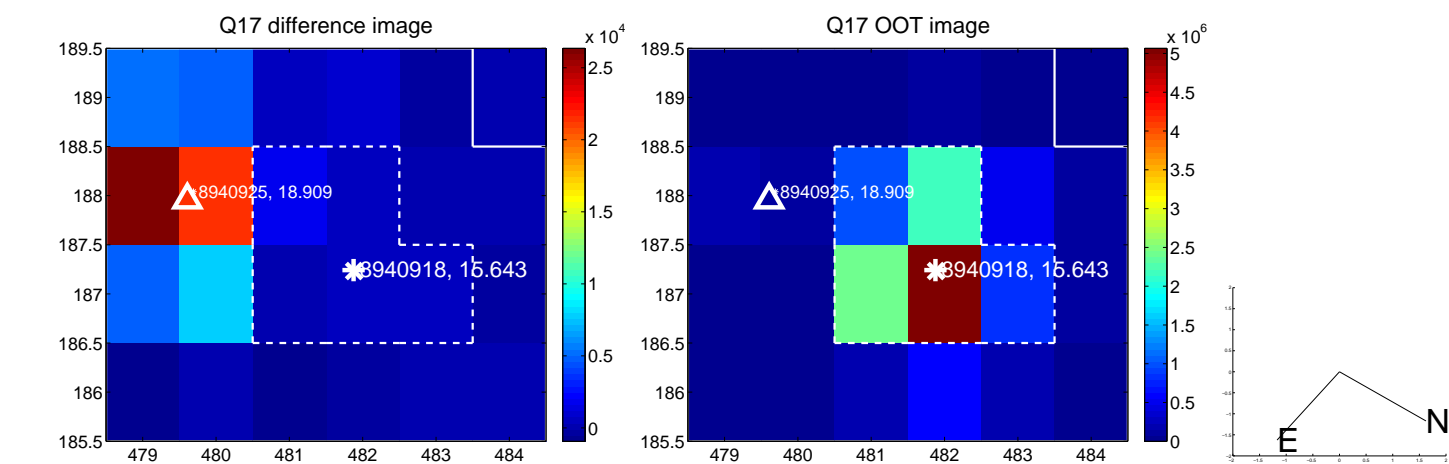
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



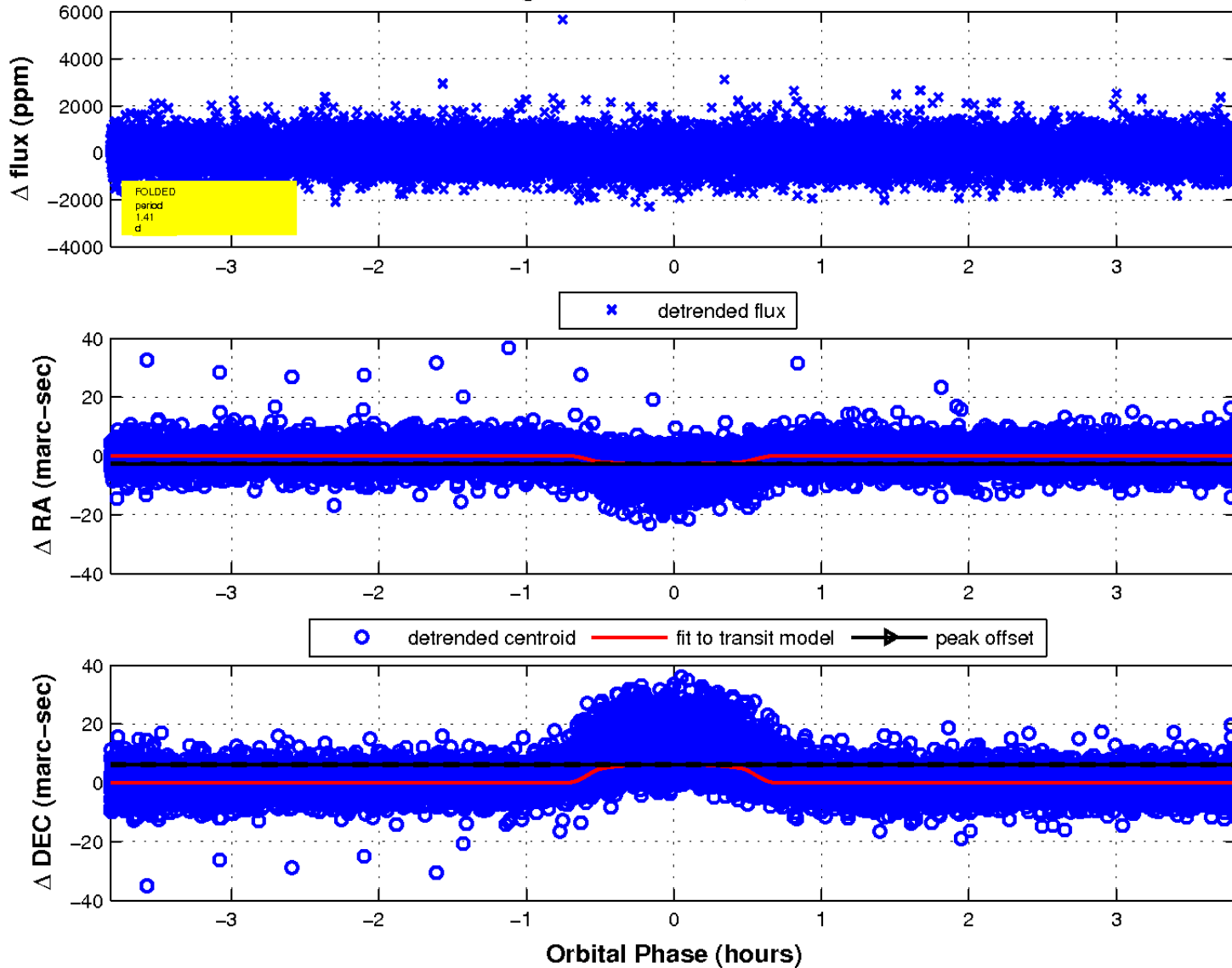
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

