

KIC 009964670

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})
009964670-01	OBS	2192.01	1.541299	132.347810	215.5	3.188	26.7	27.8	0.78	5150	1.39	622.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009964670-01	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 009964670-01

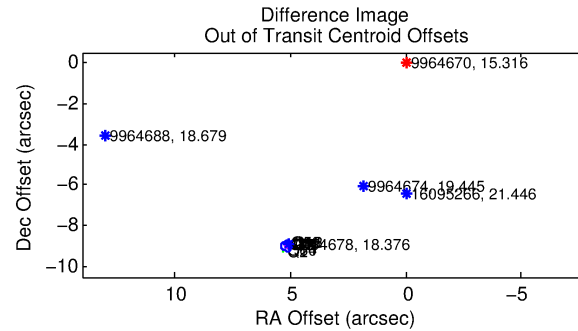
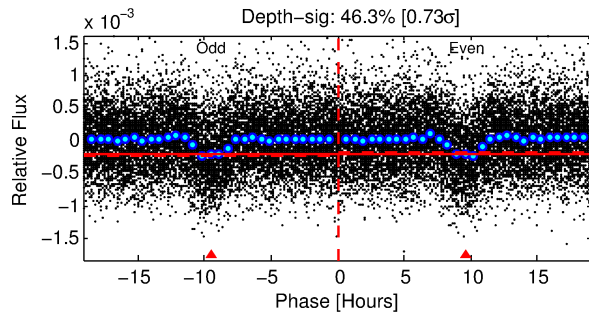
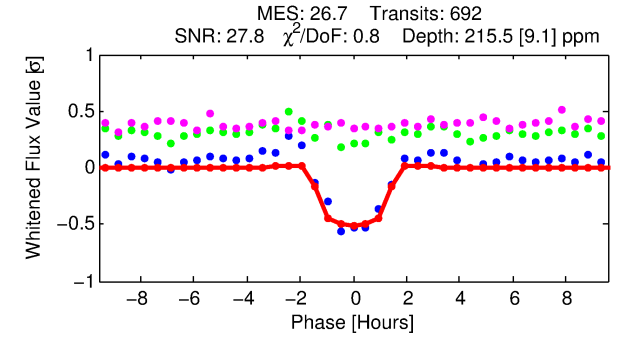
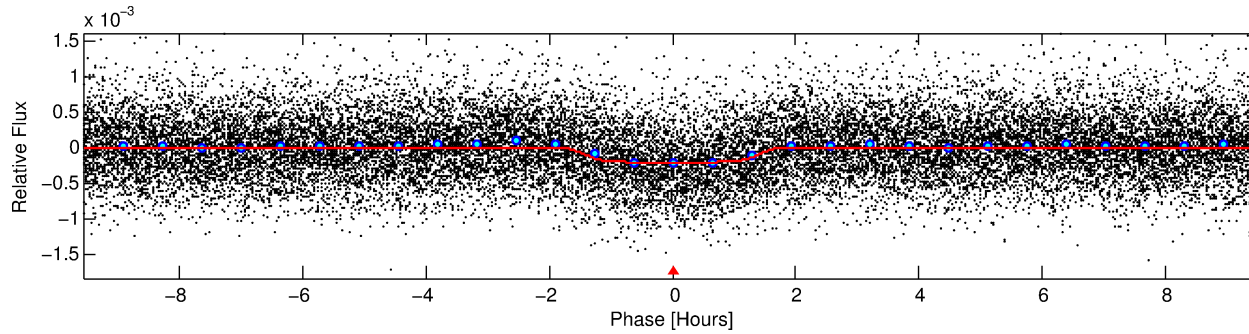
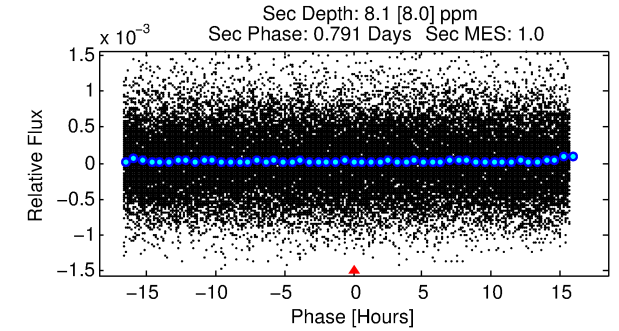
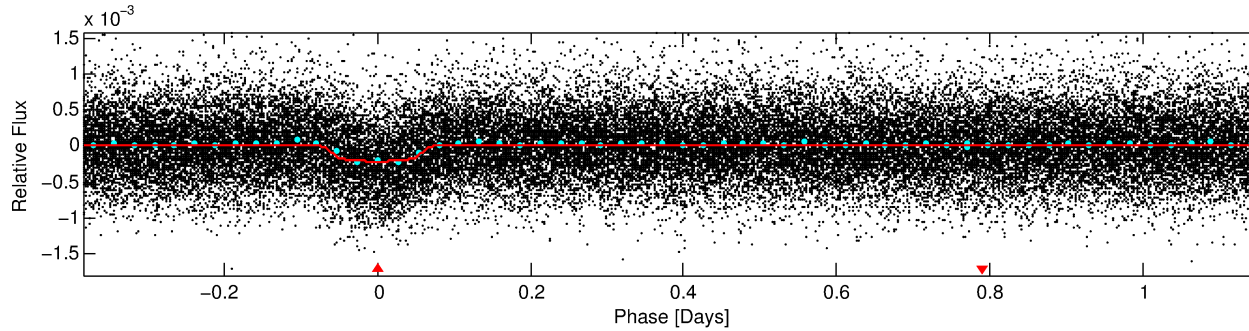
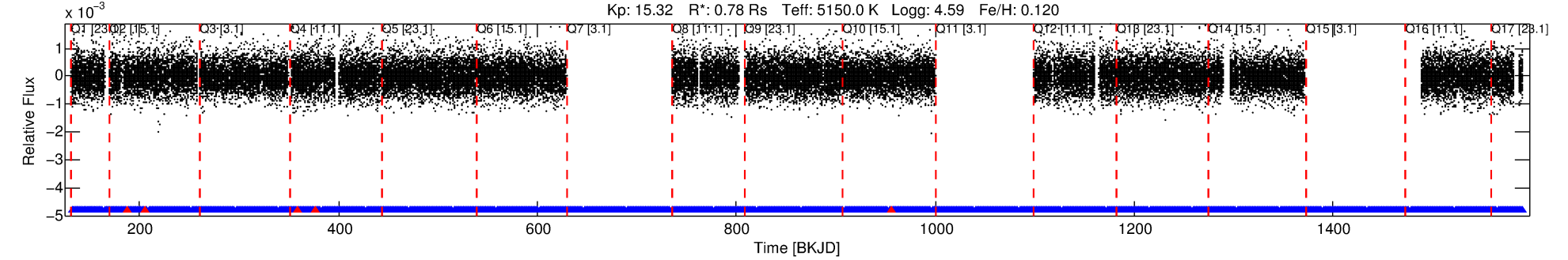
No Significant Match Found

DV One-Page Summary

KIC: 9964670 Candidate: 1 of 1 Period: 1.541 d

KOI: K02192.01 Corr: 0.914

Kp: 15.32 R*: 0.78 Rs Teff: 5150.0 K Logg: 4.59 Fe/H: 0.120



DV Fit Results:

Period = 1.54130 [0.00001] d
Epoch = 132.3478 [0.0016] BKJD
Rp/R* = 0.0163 [0.0039]
a/R* = 2.00 [1.47]
b = 0.90 [0.22]
Seff = 622.04 [135.47]
Teq = 1273 [69] K
Rp = 1.39 [0.38] Re
a = 0.0250 [0.0029] AU
Ag = 1.43 [1.59] [0.27σ]
Teff = 2153 [596] K [1.47σ]

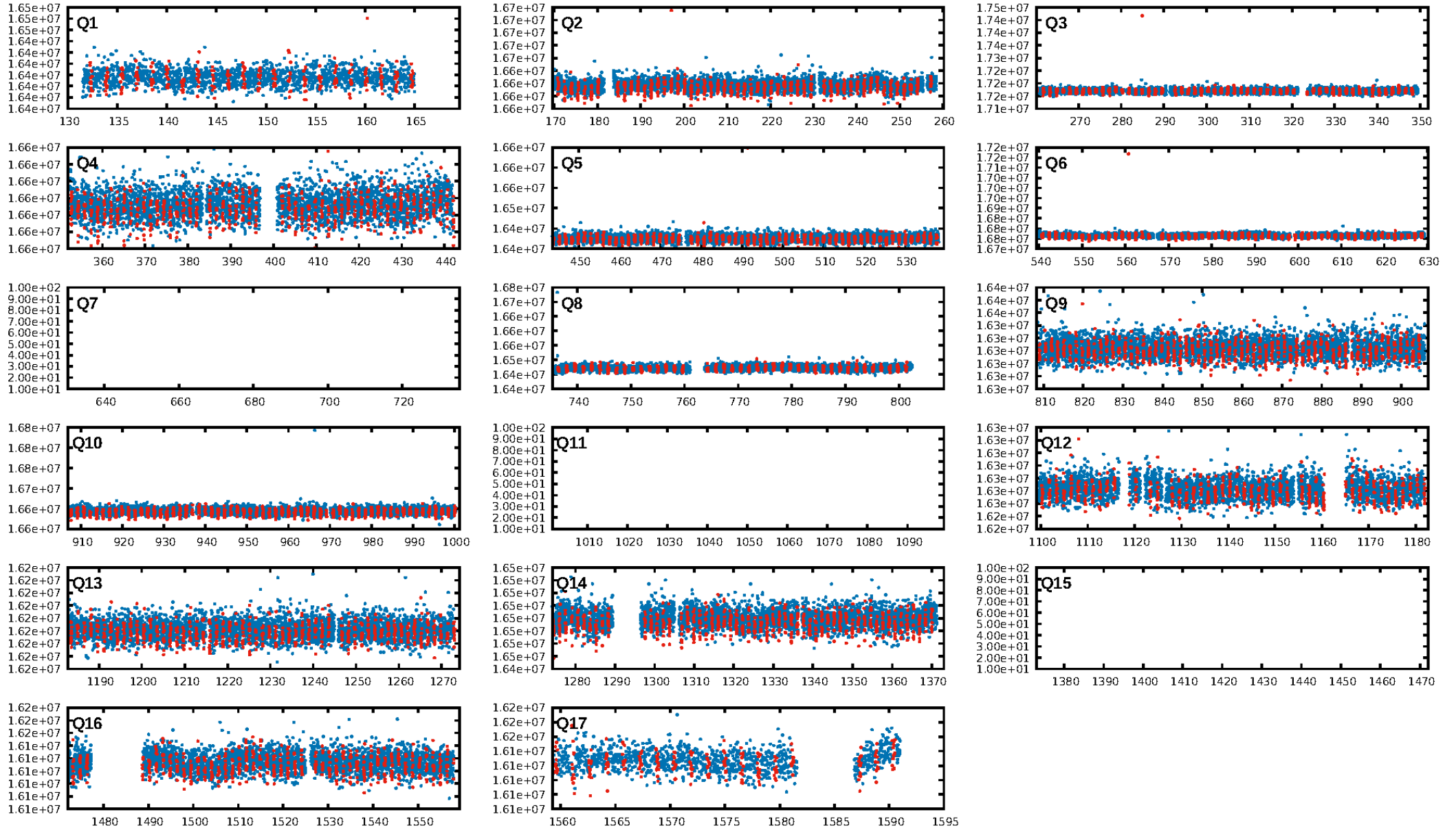
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 7.96e-152
RollingBand-fgt: 0.99 [647/652]
GhostDiagnostic-chr: -0.1707
Centroid-sig: 0.0%
Centroid-so: 134.637 arcsec [196.88σ]
OotOffset-rm: 10.368 arcsec [128.20σ]
KicOffset-rm: 10.567 arcsec [146.30σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

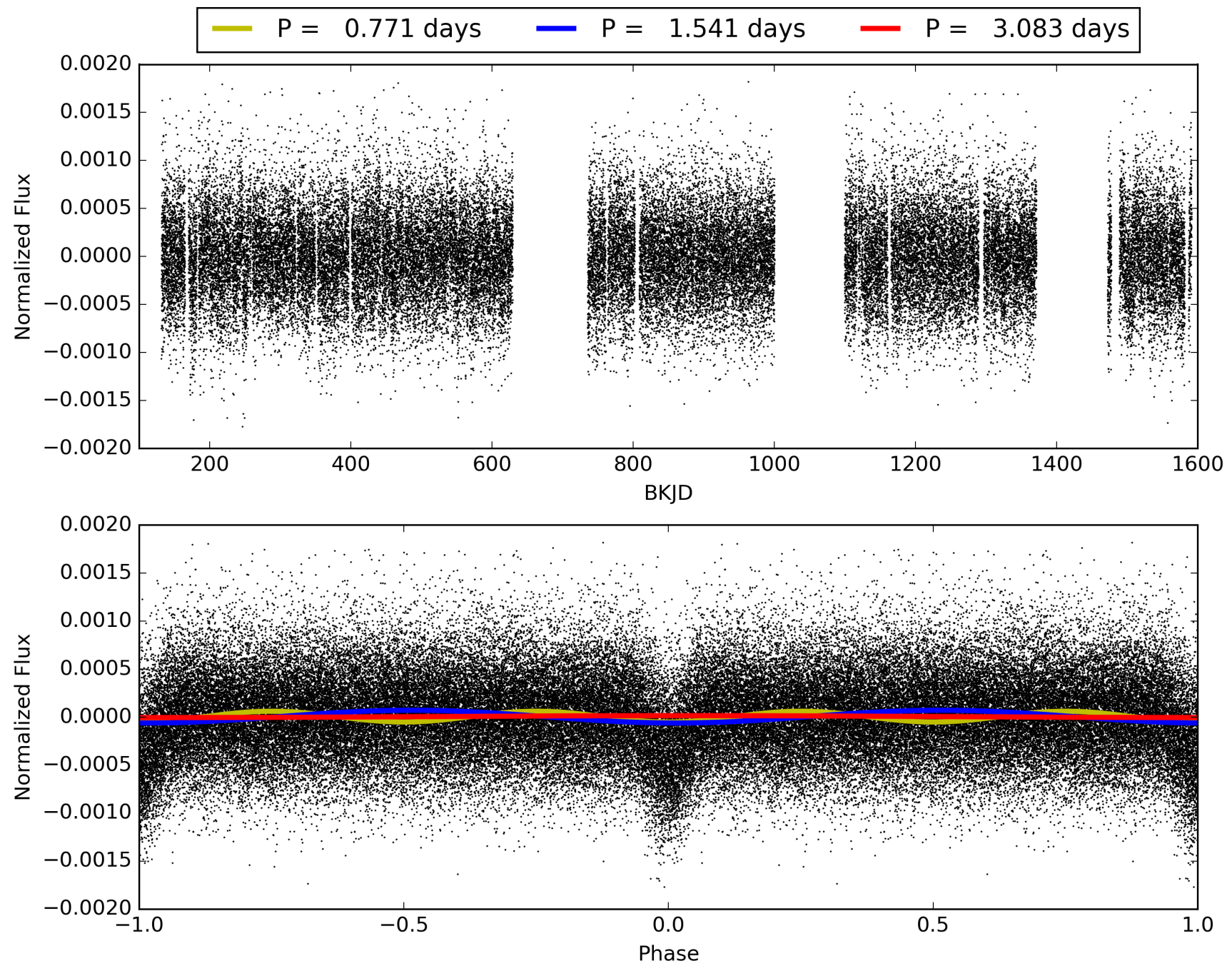
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:35:36 Z

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

TCE 009964670-01, PDC Light Curves

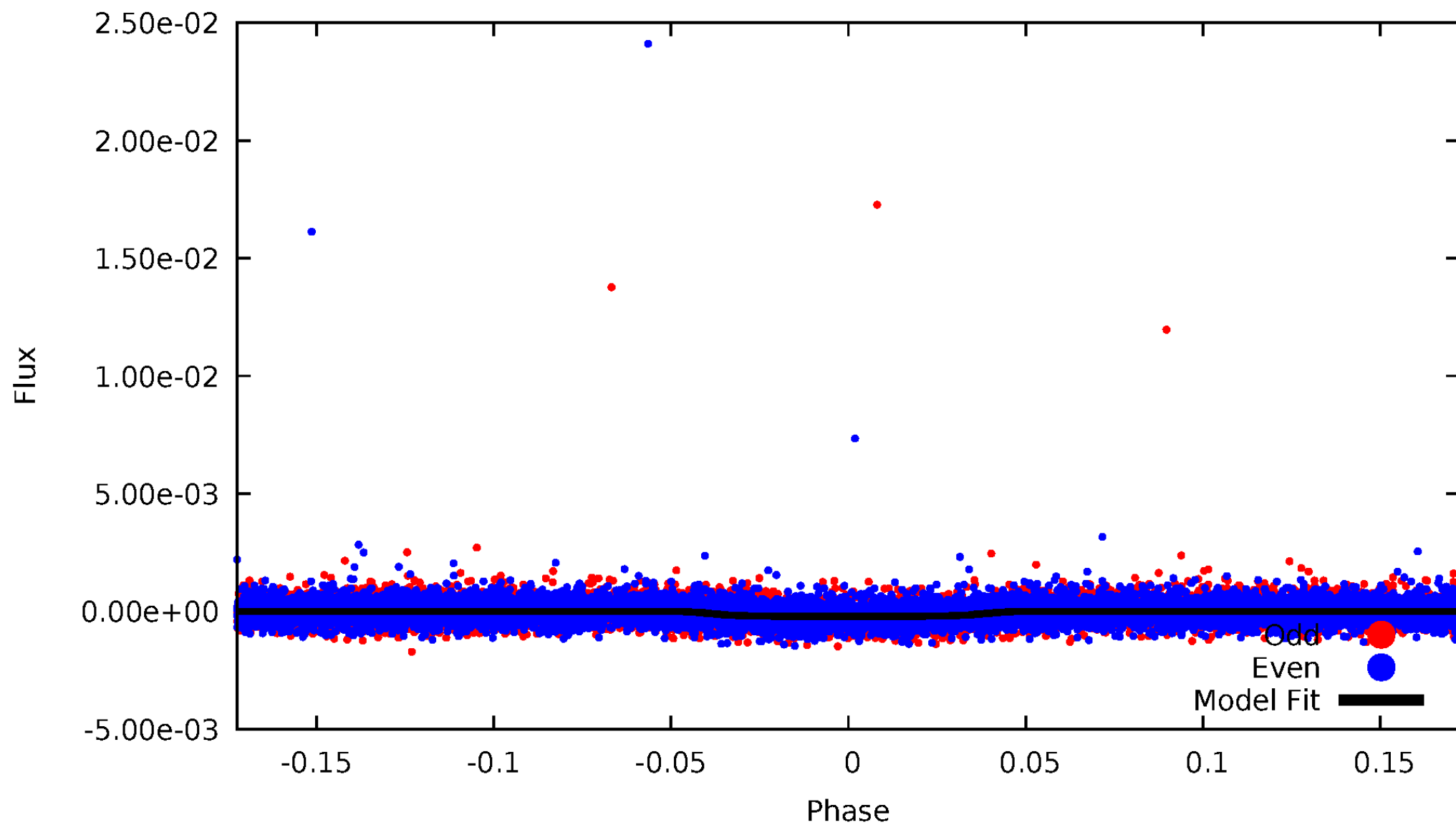


TCE 009964670-01



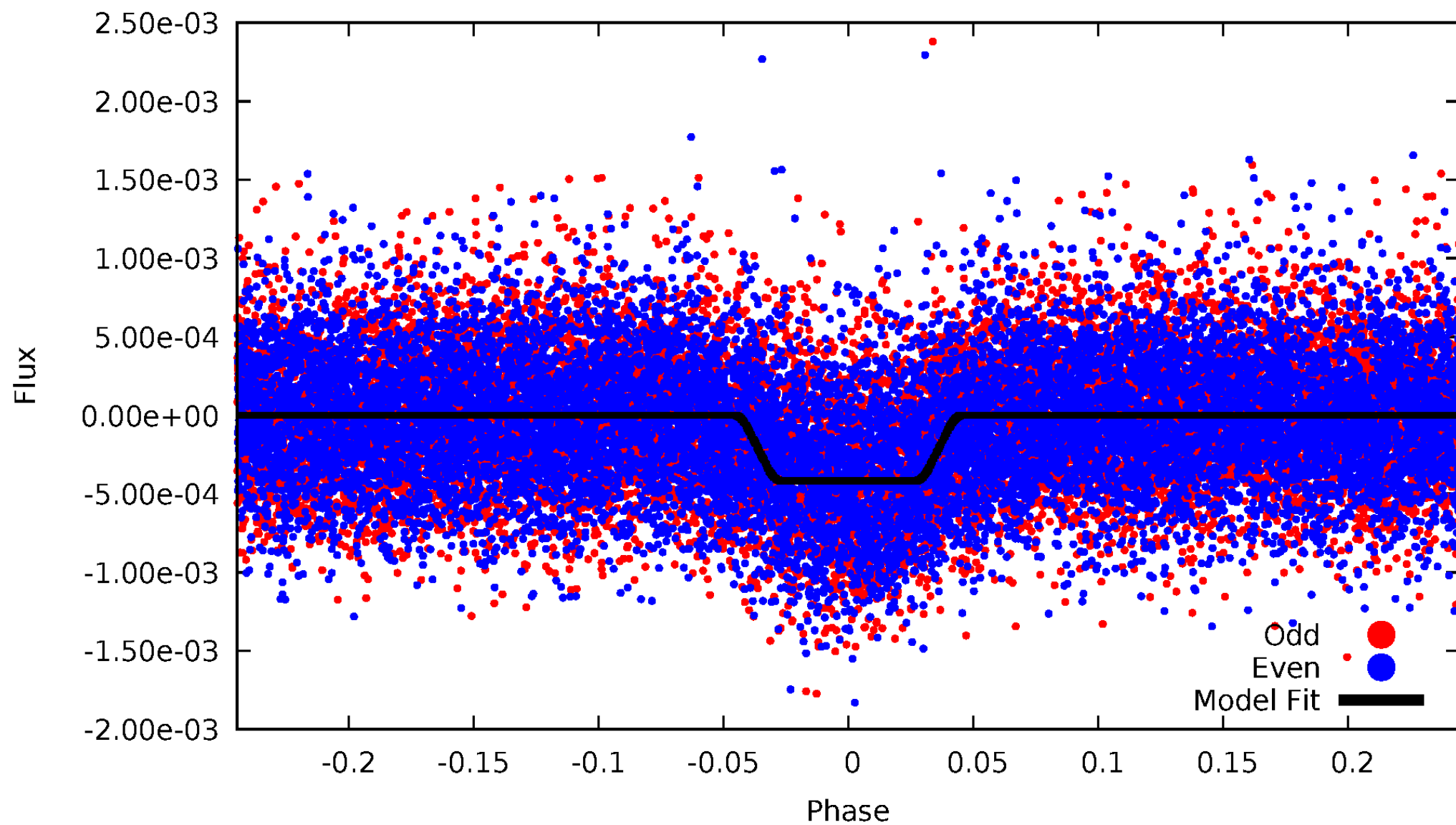
DV Odd/Even

TCE 009964670-01

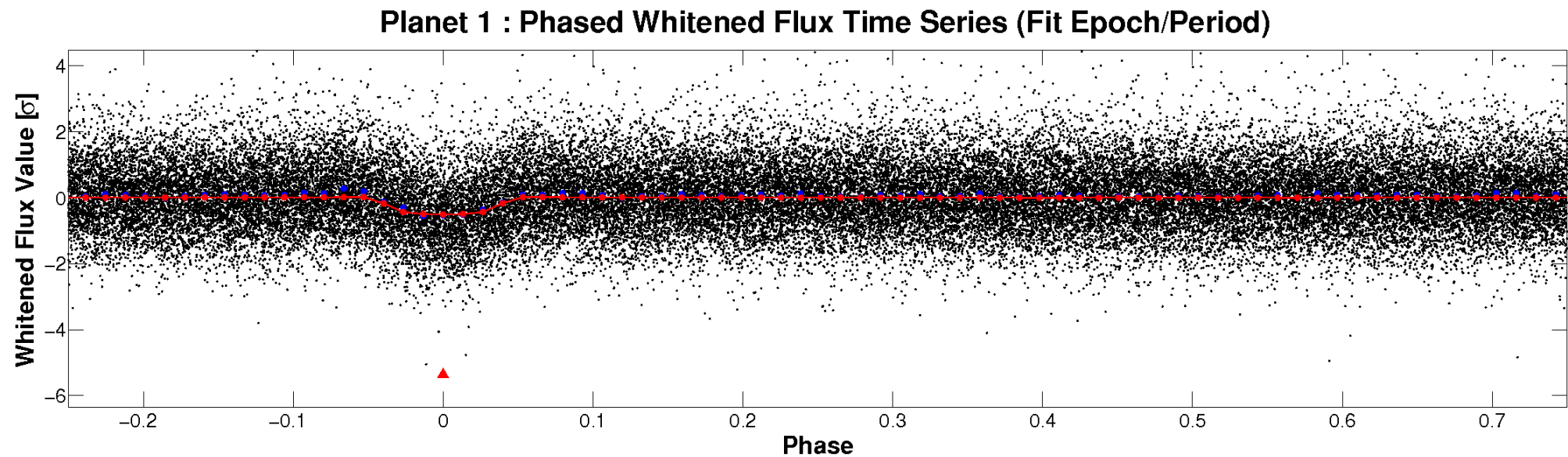
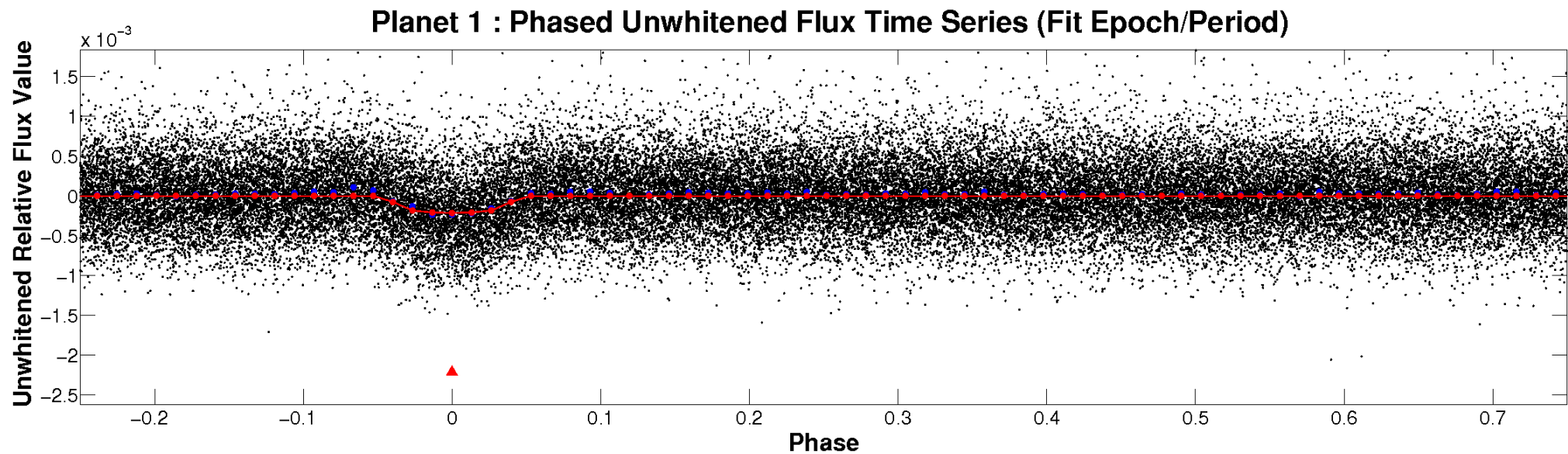


ALT Odd/Even

TCE 009964670-01

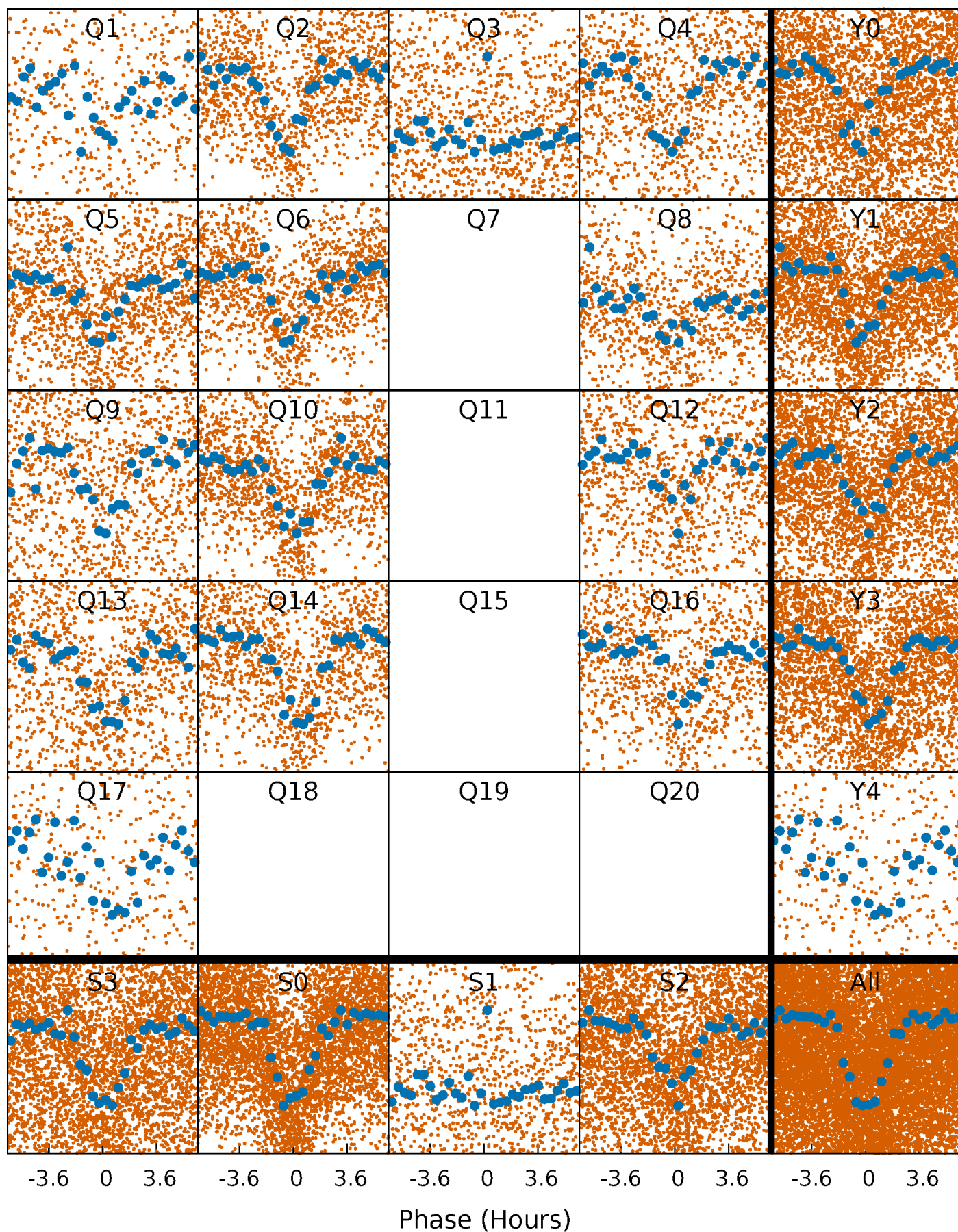


Non-Whitened Vs. Whitened Light Curve



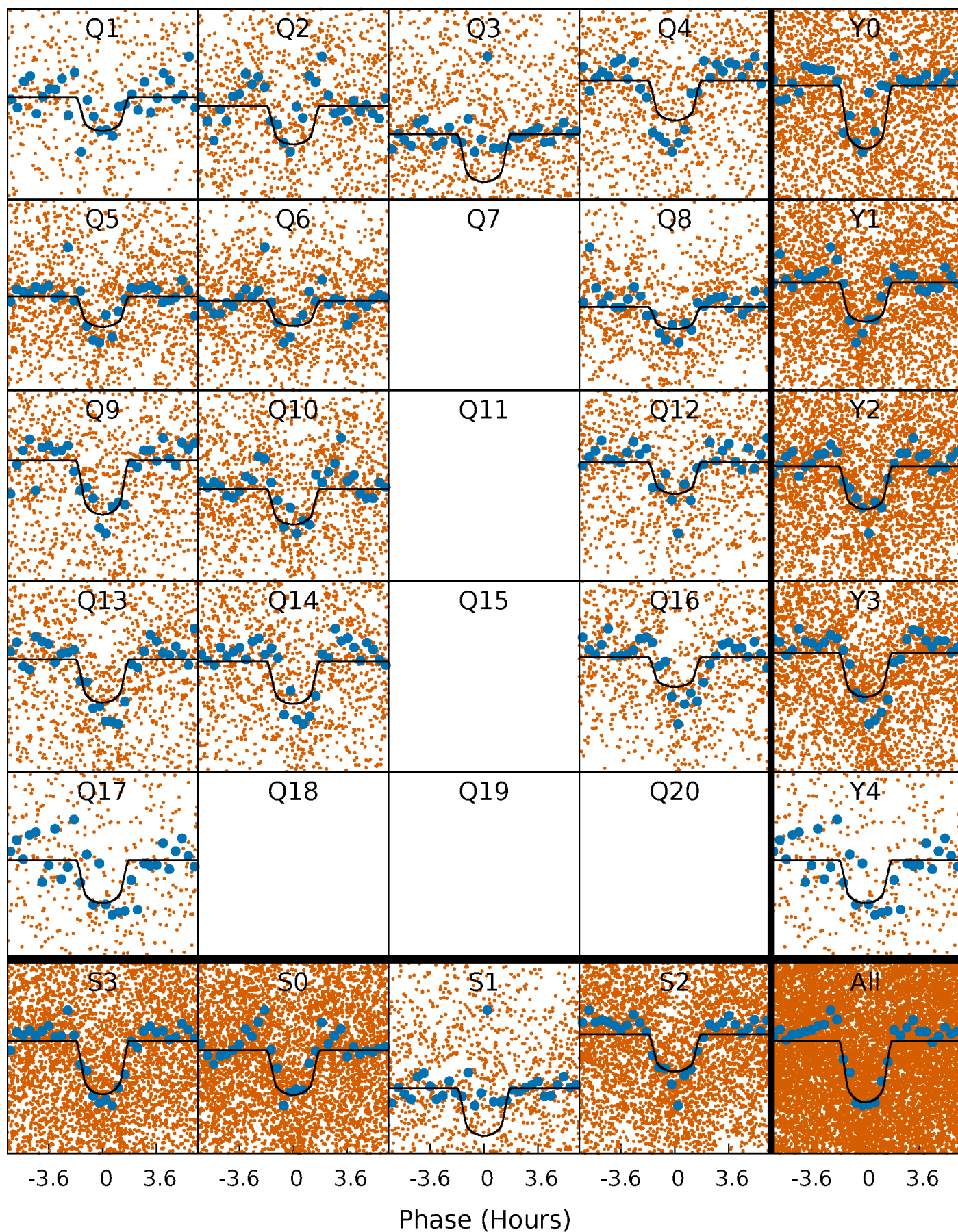
PDC Quarter-Phased Transit Curves

TCE 009964670-01 P= 1.541299 Days $T_0=132.347810$ (BKJD)



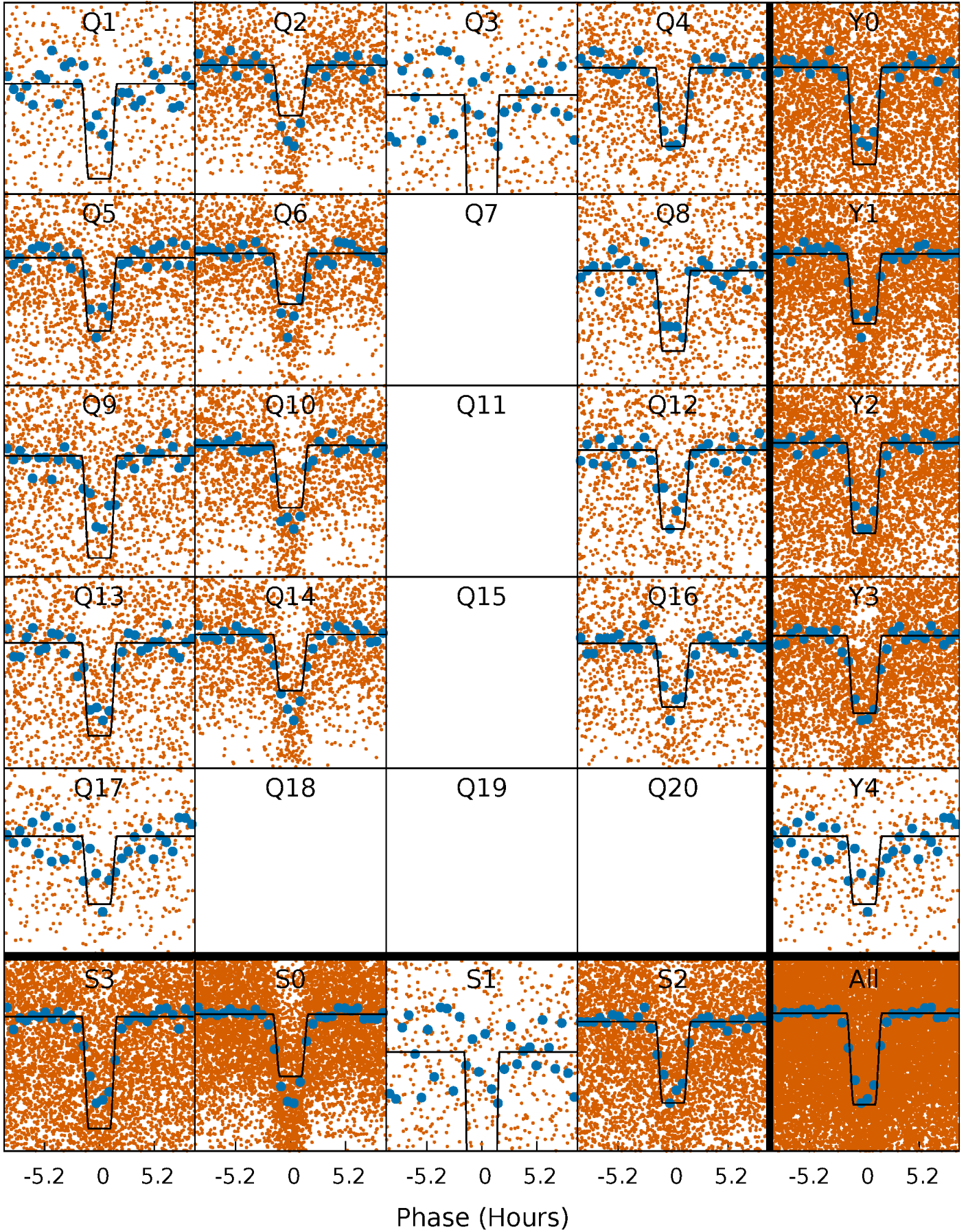
DV Quarter-Phased Transit Curves

TCE 009964670-01 P= 1.541299 Days $T_0=132.347810$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

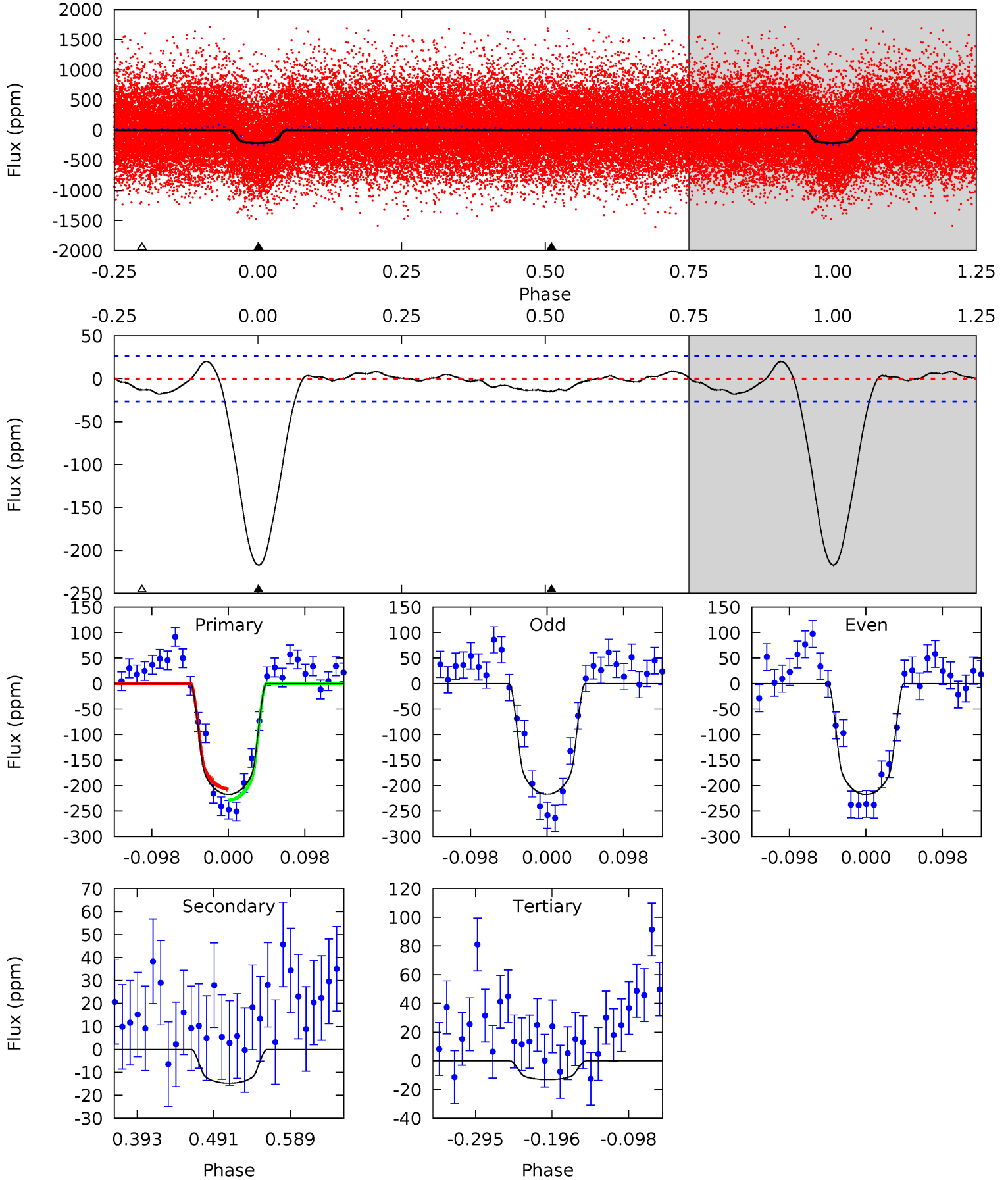
TCE 009964670-01 P= 1.541346 Days $T_0=132.328086$ (BKJD)



DV Model-Shift Uniqueness Test

009964670-01, P = 1.541299 Days, E = 130.806511 Days

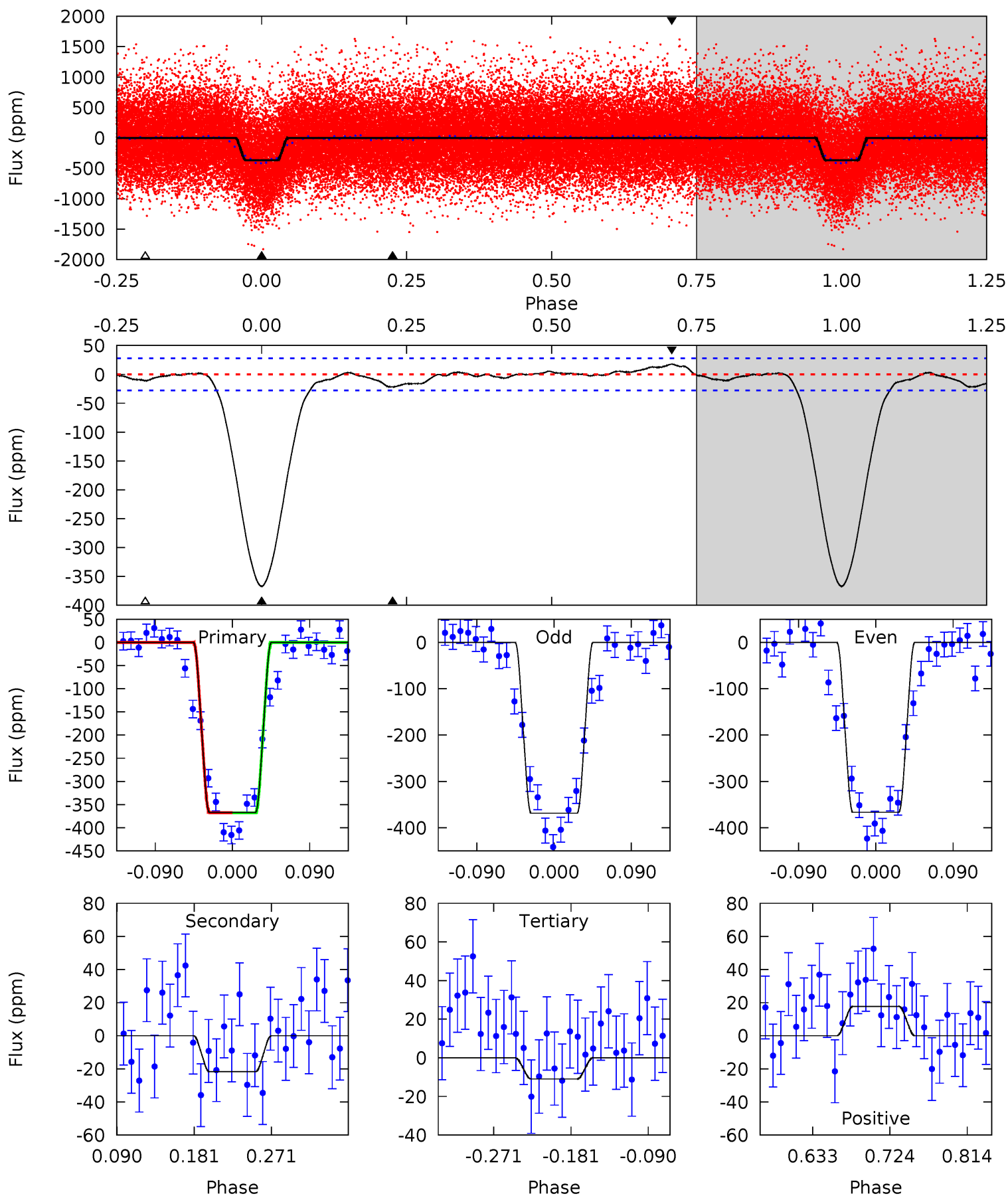
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.2	2.53	2.25	0	4.57	1.65	1.14	35.0	37.2	0.28	2.53	0.04	0.91	0.09	1.90



Alt Model-Shift Uniqueness Test

009964670-01, P = 1.541346 Days, E = 130.786740 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.8	3.60	1.82	2.93	4.59	1.69	1.08	59.0	57.9	1.79	0.67	0.16	0.99	0.05	0.03



Stellar Parameters For KIC 009964670

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5150^{+170}_{-139}	$4.590^{+0.026}_{-0.097}$	$0.120^{+0.250}_{-0.300}$	$0.784^{+0.104}_{-0.052}$	$0.878^{+0.050}_{-0.092}$	$2.566^{+0.332}_{-0.785}$
	+3%/-3%	+1%/-2%	+208%/-250%	+13%/-7%	+6%/-10%	+13%/-31%
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 009964670-01 / KOI 2192.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 6	$1.43^{+0.35}_{-0.36}$	1807^{+82}_{-65}	3039^{+335}_{-335}	$2.372^{+2.288}_{-1.214}$
Alt.	-22 ± 6	$1.77^{+0.37}_{-0.37}$	1804^{+70}_{-68}	3013^{+265}_{-229}	$2.296^{+1.586}_{-0.875}$

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

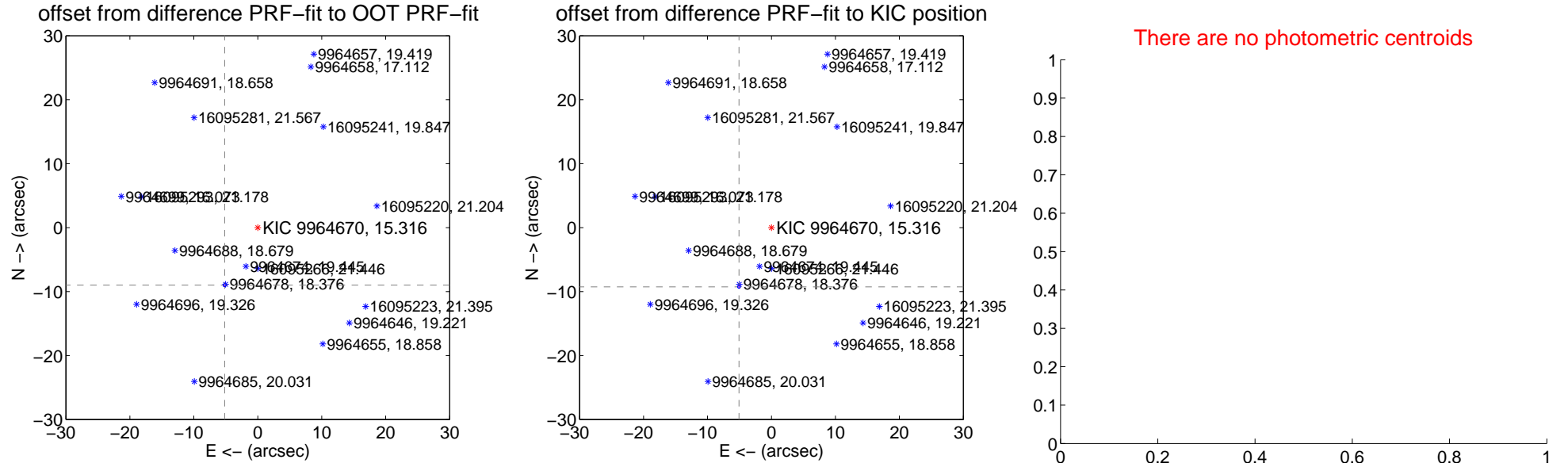
DV Centroid Data

Supplemental centroid analysis for 009964670-01. Kepler magnitude: 15.32. Transit SNR 27.81

There are 14 quarters with good PRF difference image offsets

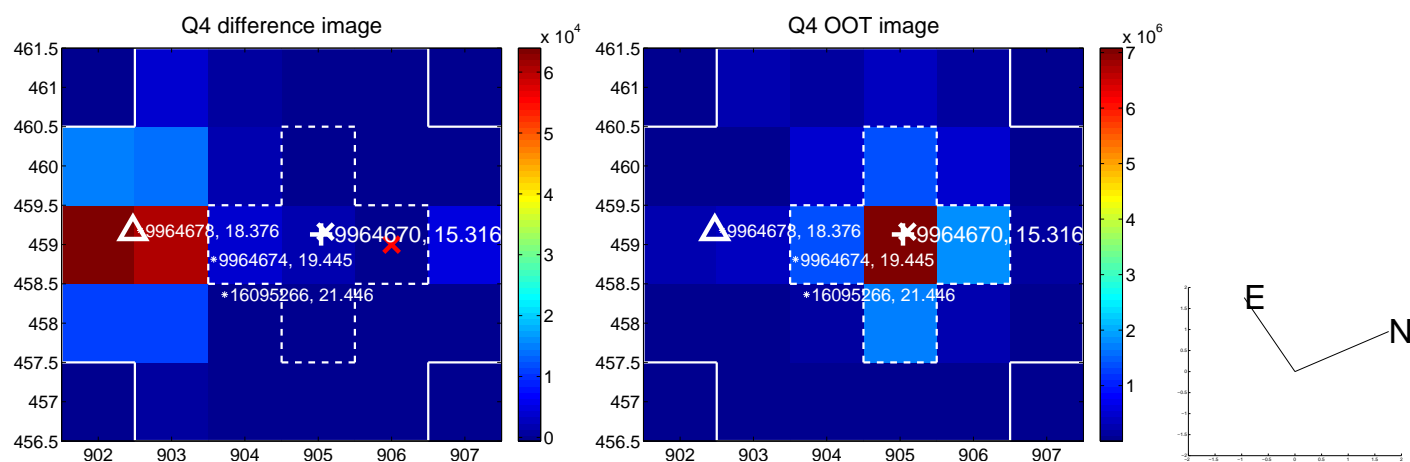
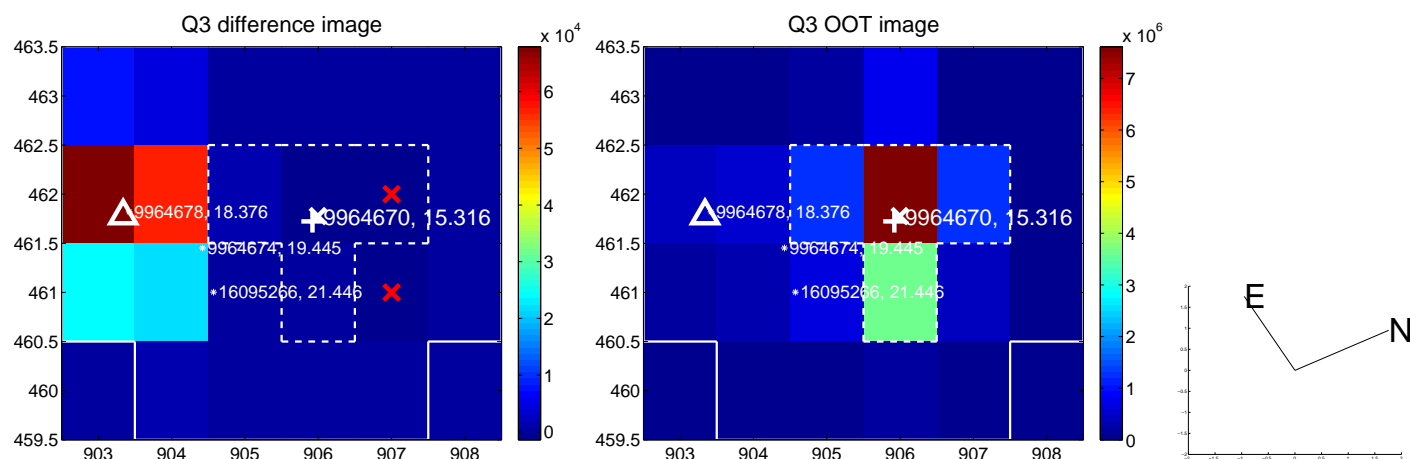
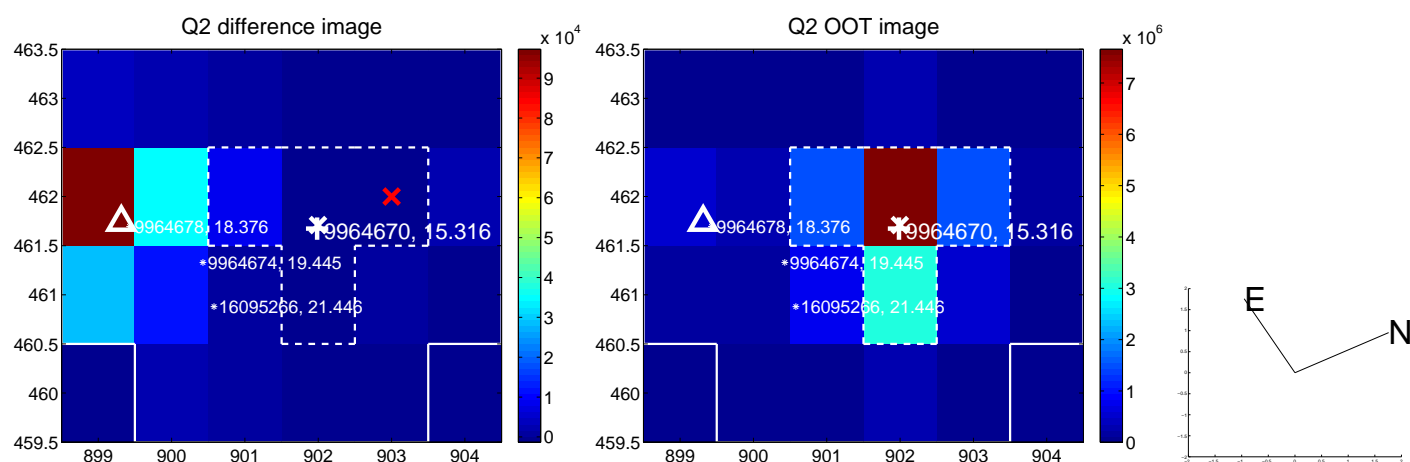
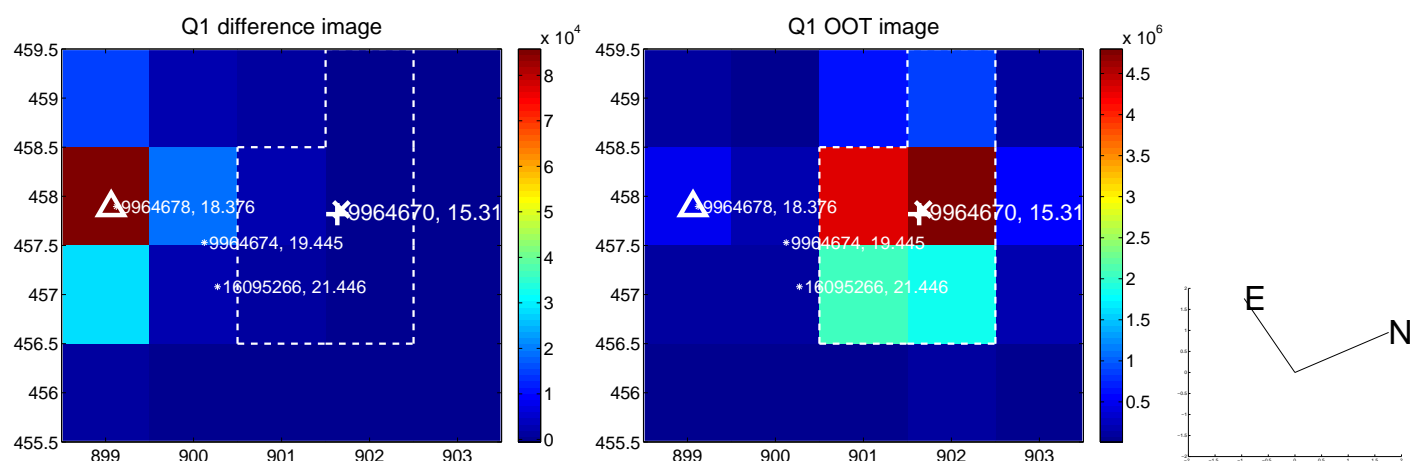
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.368 \pm 0.081	128.20	5.174 \pm 0.072	-8.985 \pm 0.078
PRF-fit source offset from KIC position	10.567 \pm 0.072	146.30	5.080 \pm 0.070	-9.265 \pm 0.070
photometric centroid source offset	—	—	—	—

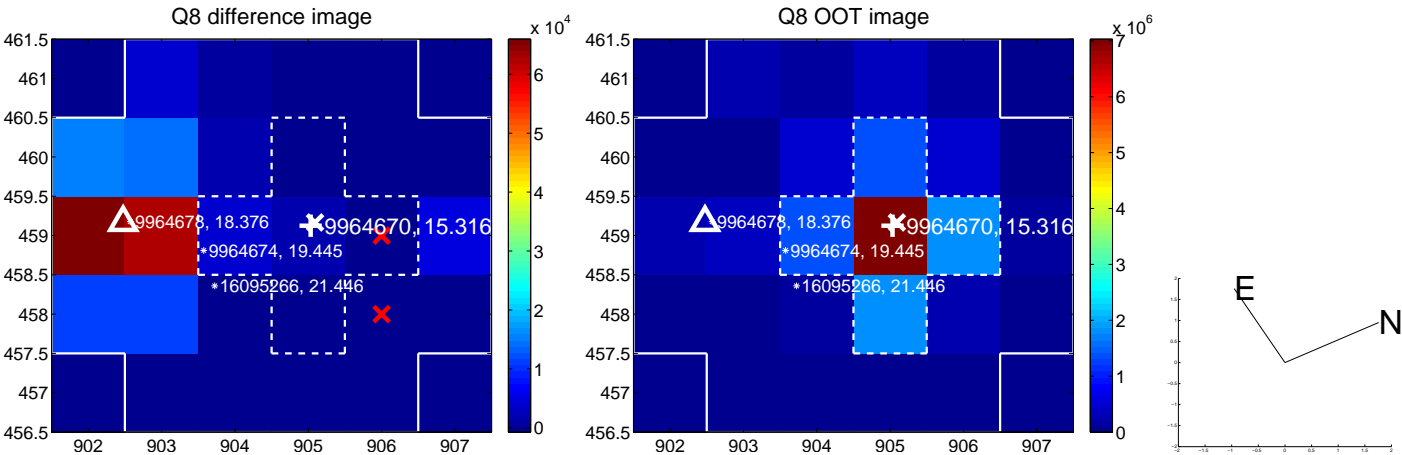
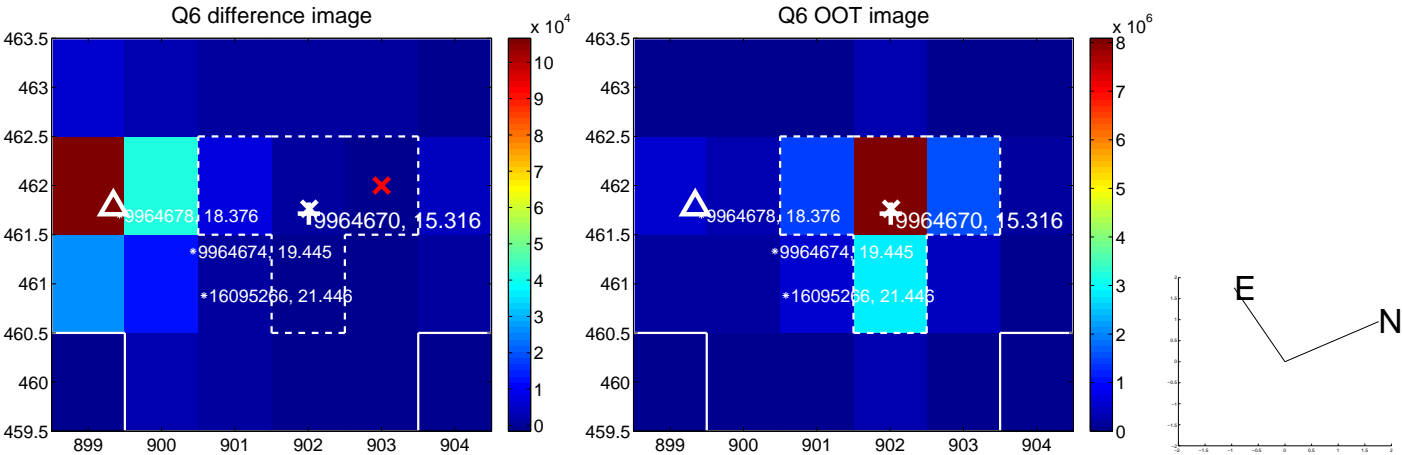
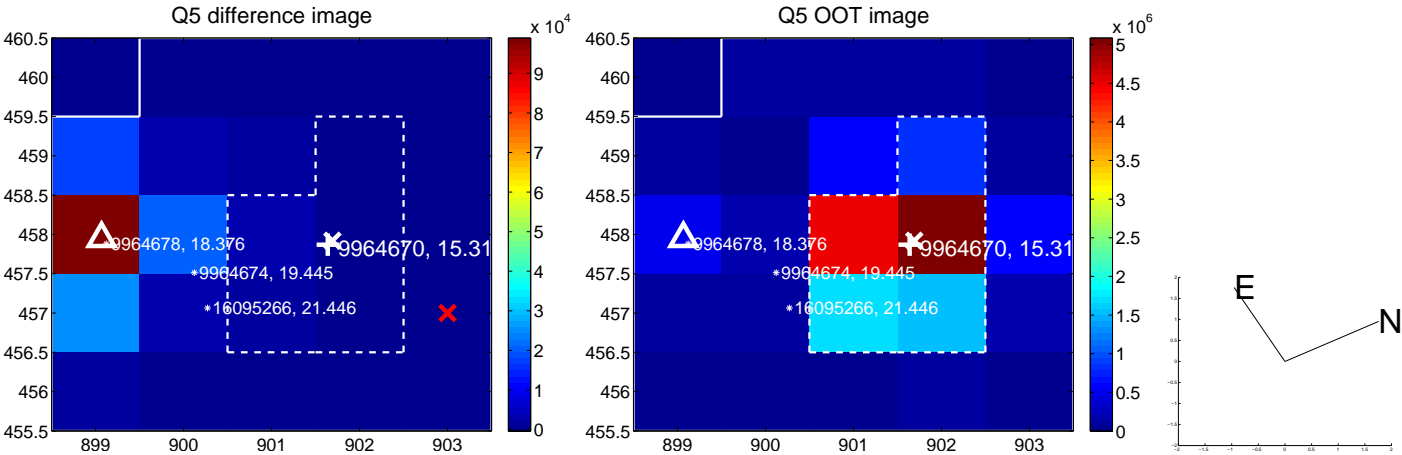


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

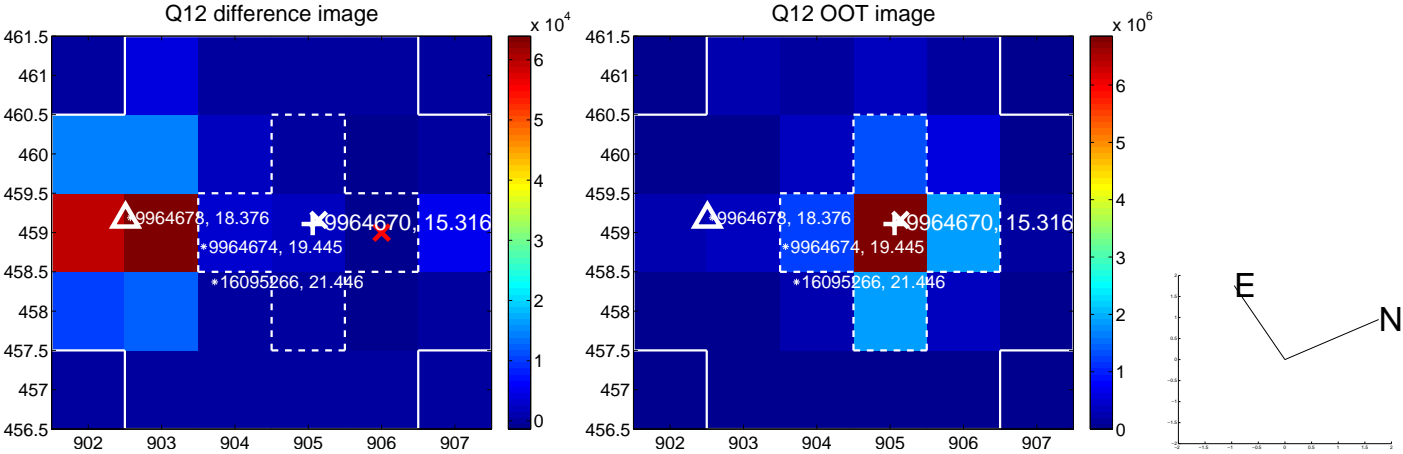
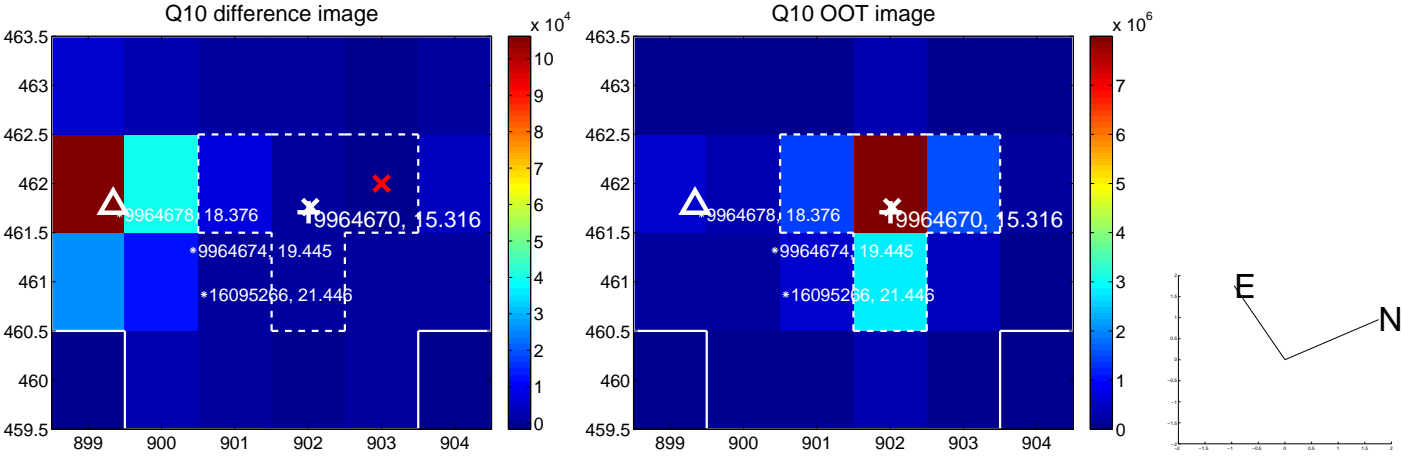
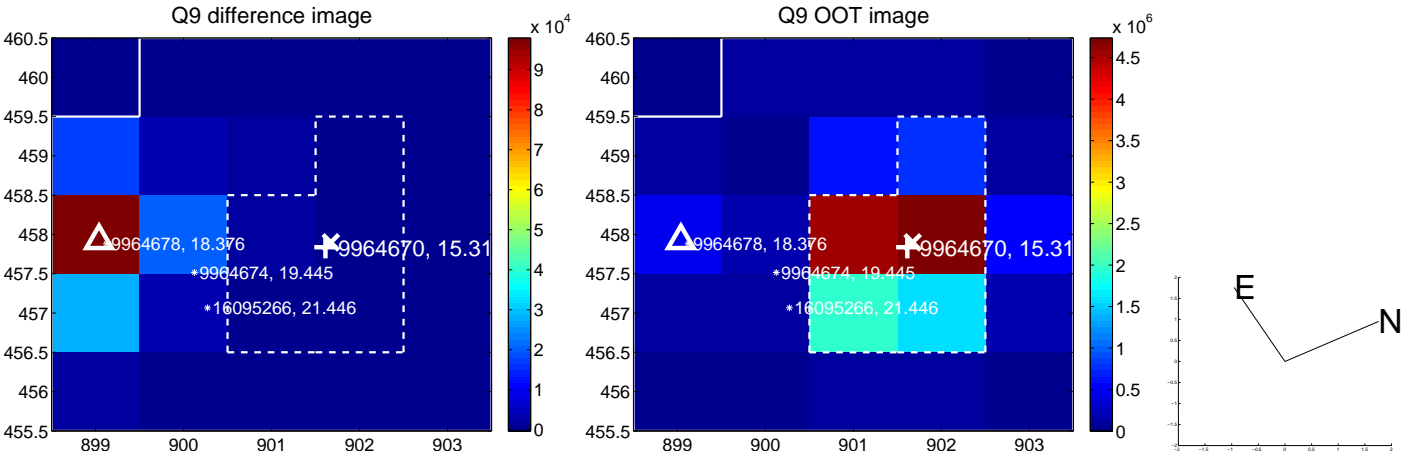
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



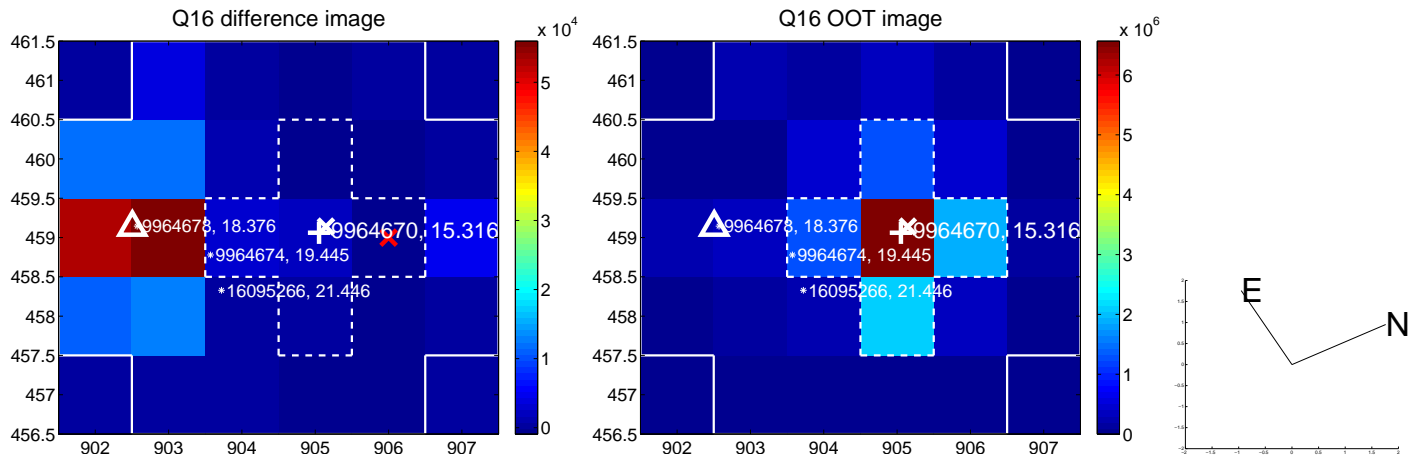
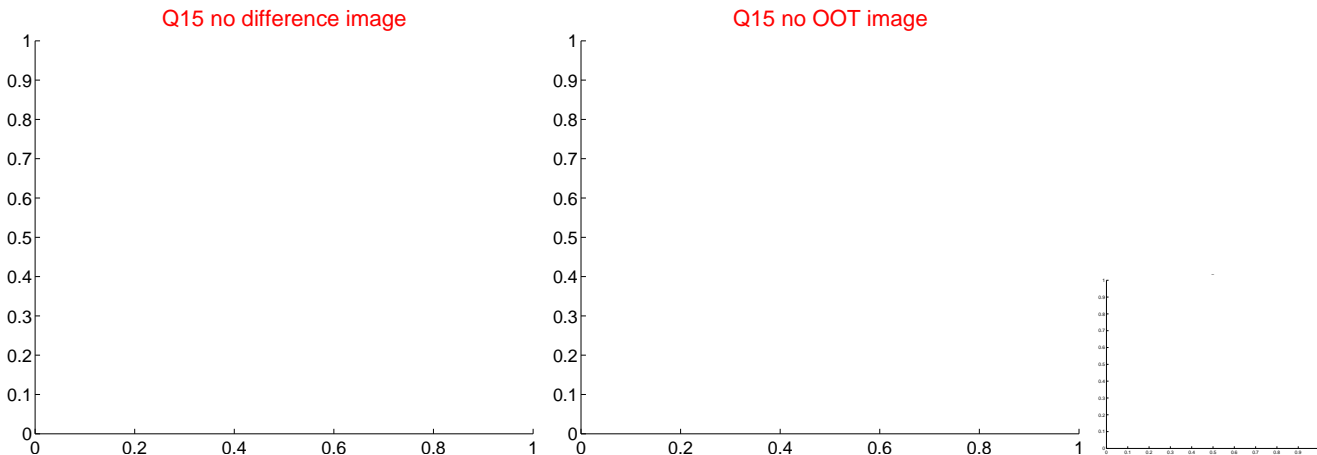
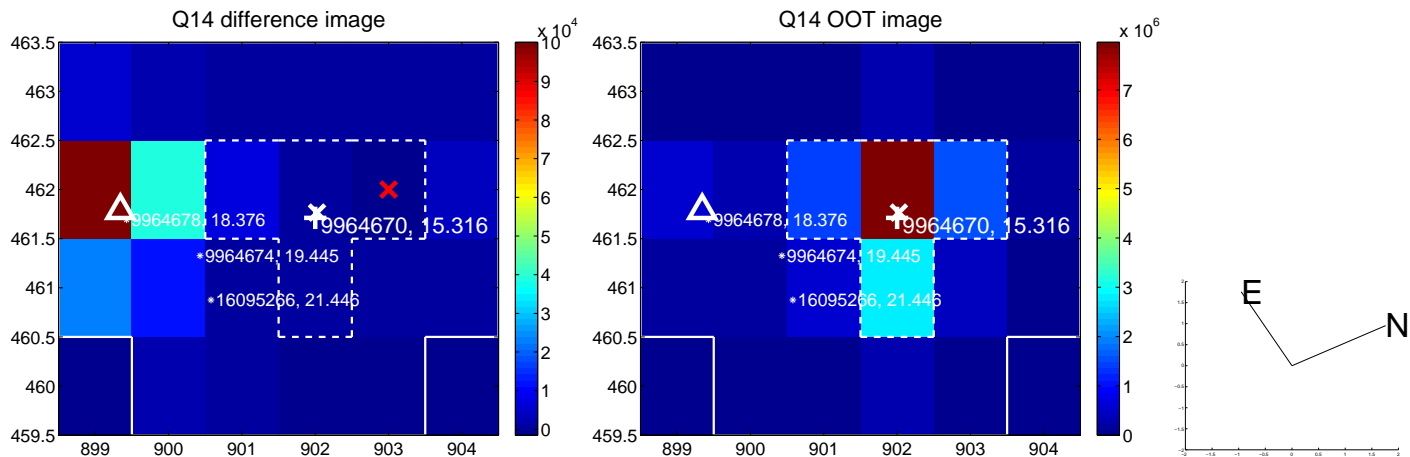
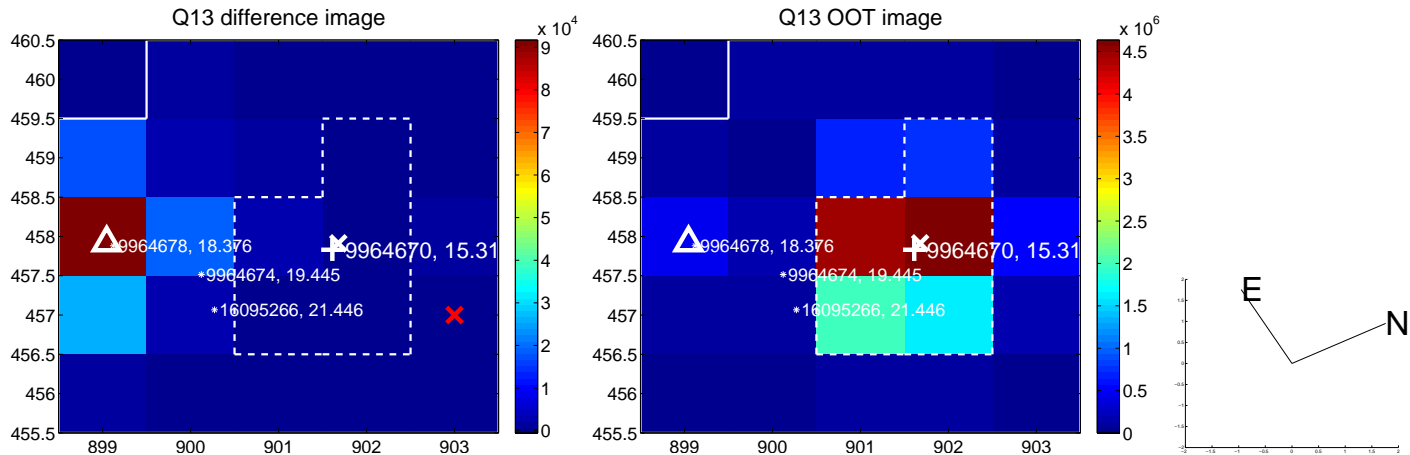
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



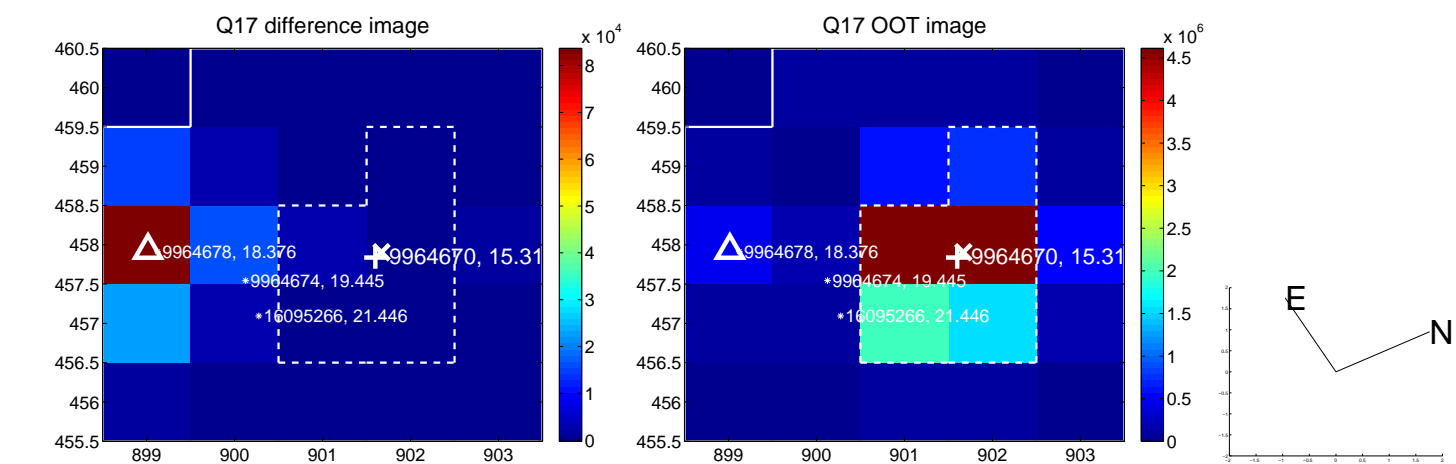
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



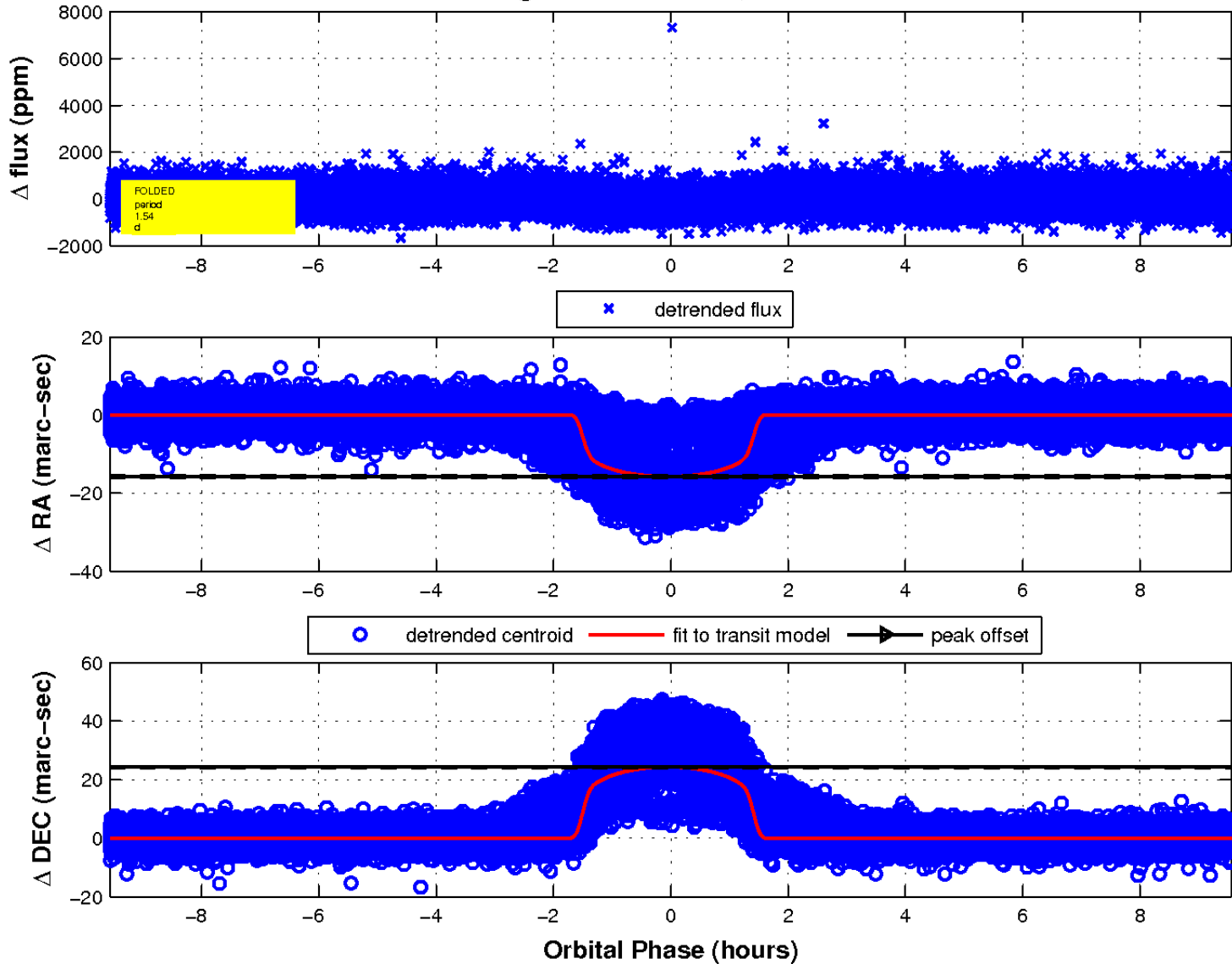
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

