

KIC 010294613

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})
010294613-01	OBS	1896.01	1.854567	132.473266	551.4	2.684	80.8	45.1	0.84	5431	2.41	657.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010294613-01	OBS	FP	0.00	0	1	1	1	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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 010294613-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
010294613-01	10294613	010294608-01	10294608	1:1	16.1	-3	3	13.34	14.89	793.53	Direct-PRF	0	2.81	0.98

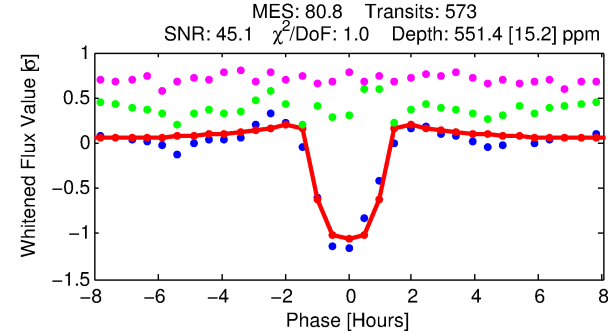
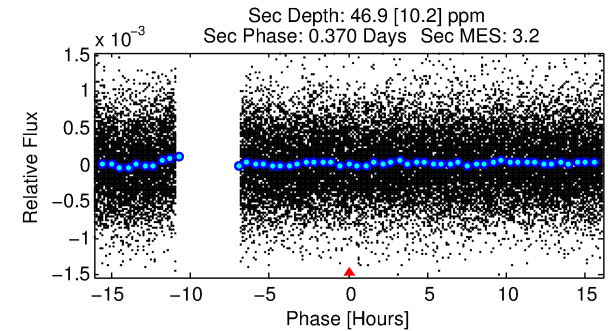
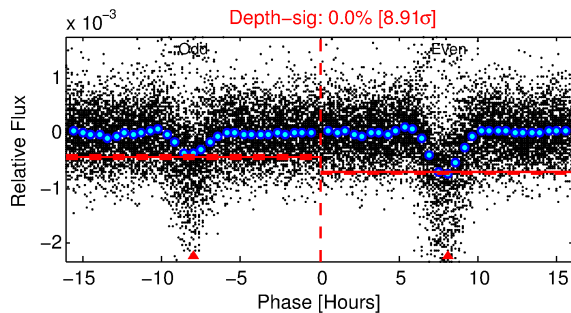
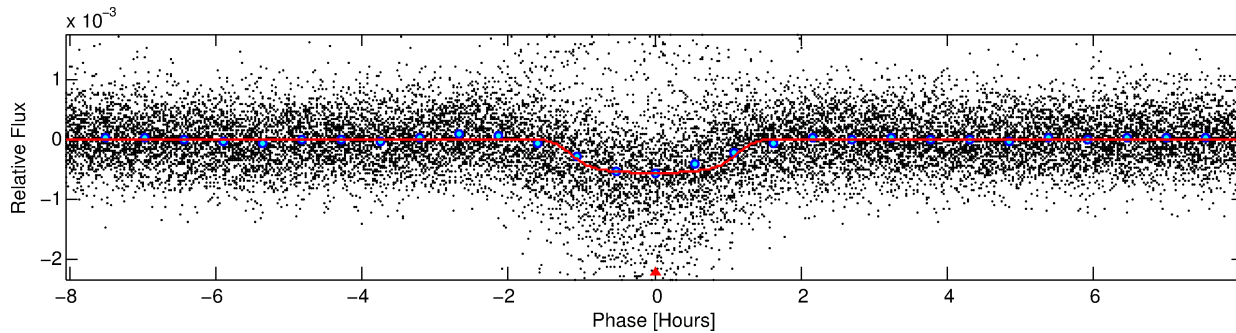
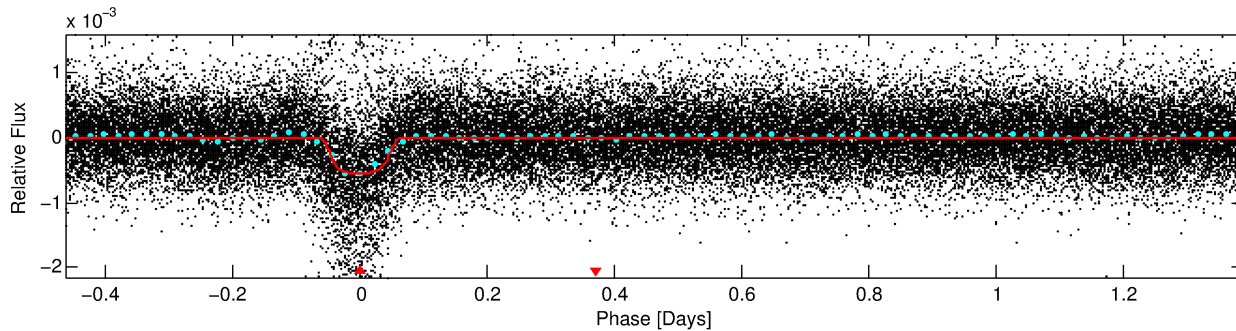
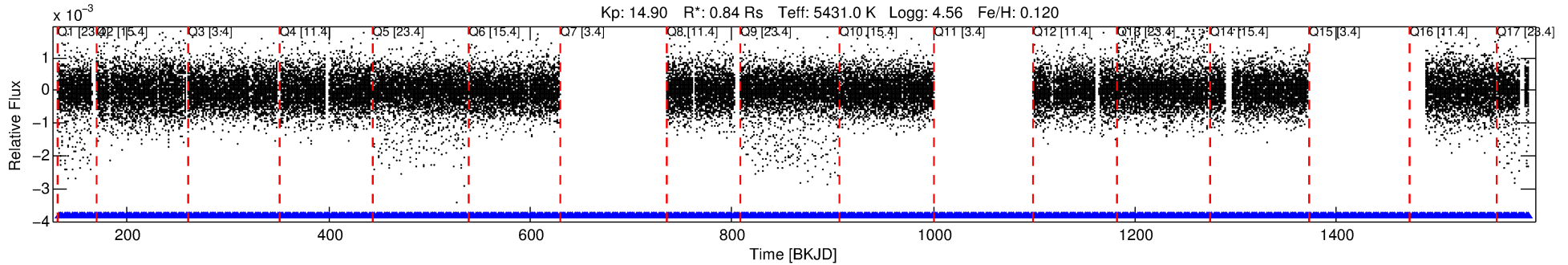
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10294613 Candidate: 1 of 1 Period: 1.855 d

KOI: K01896.01 Corr: 0.794

Kp: 14.90 R*: 0.84 Rs Teff: 5431.0 K Logg: 4.56 Fe/H: 0.120



DV Fit Results:

Period = 1.85457 [0.00000] d
Epoch = 132.4733 [0.0007] BKJD
Rp/R* = 0.0262 [0.0017]
a/R* = 2.70 [0.62]
b = 0.91 [0.05]
Seff = 657.62 [188.51]
Teq = 1291 [93] K
Rp = 2.41 [0.52] Re
a = 0.0290 [0.0051] AU
Ag = 3.76 [1.36] [2.02σ]
Teffp = 2779 [195] K [6.91σ]

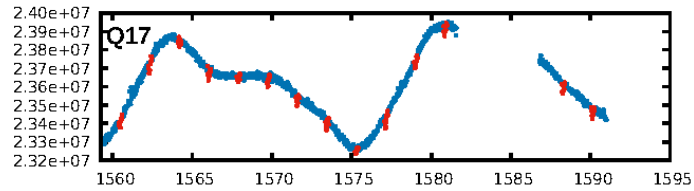
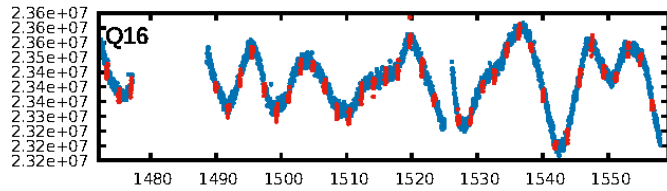
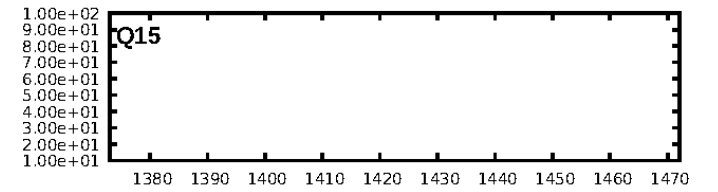
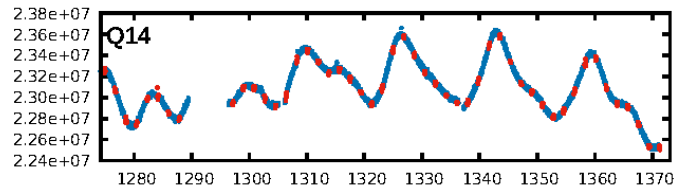
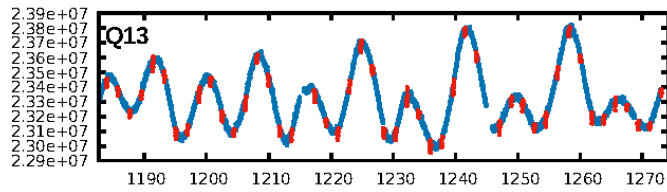
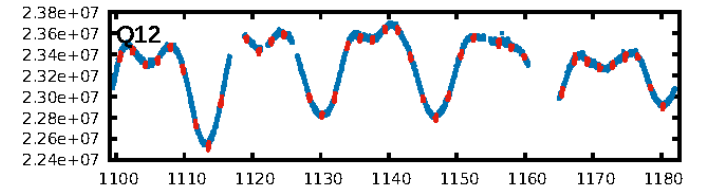
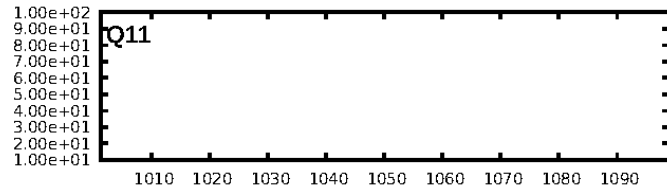
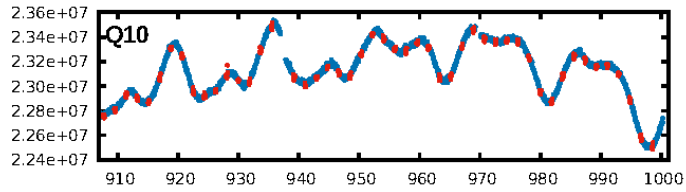
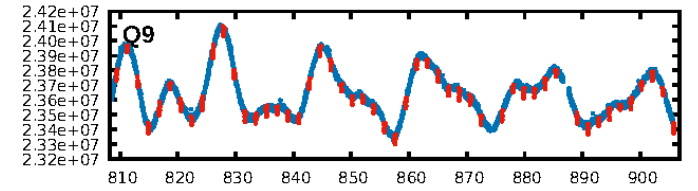
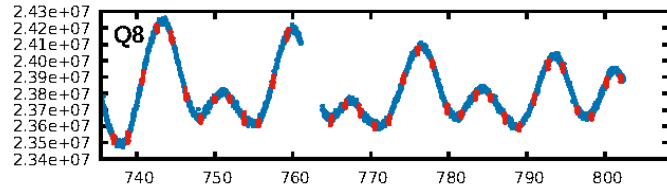
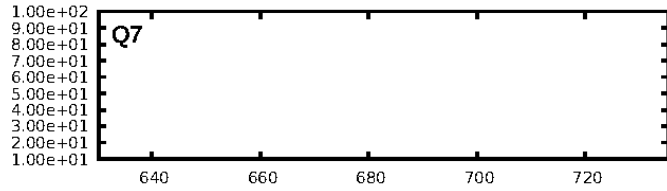
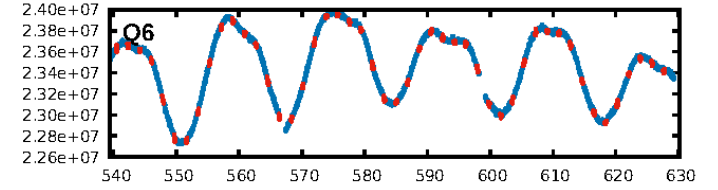
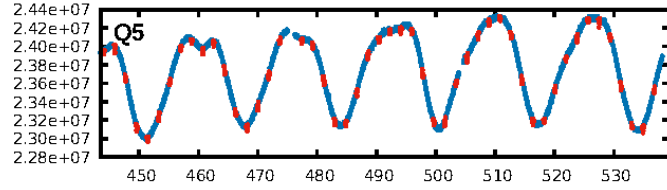
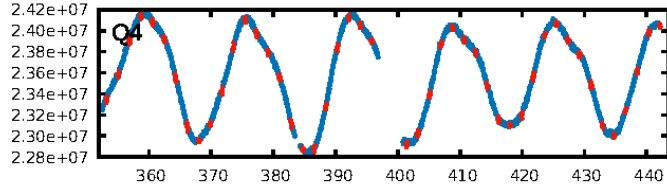
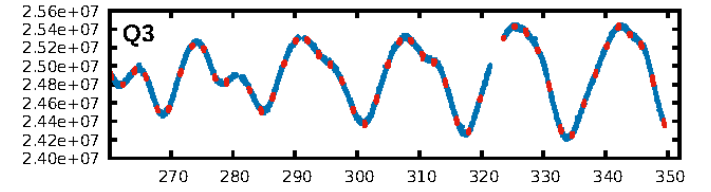
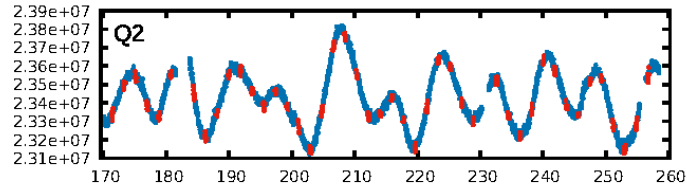
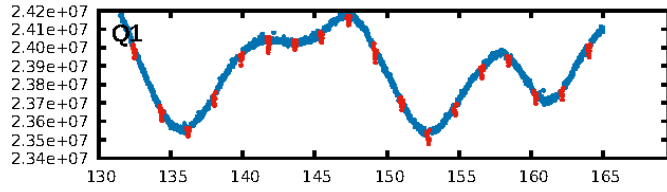
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [541/541]
GhostDiagnostic-chr: -0.2522
Centroid-sig: 0.0%
Centroid-so: 223.529 arcsec [774.40σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

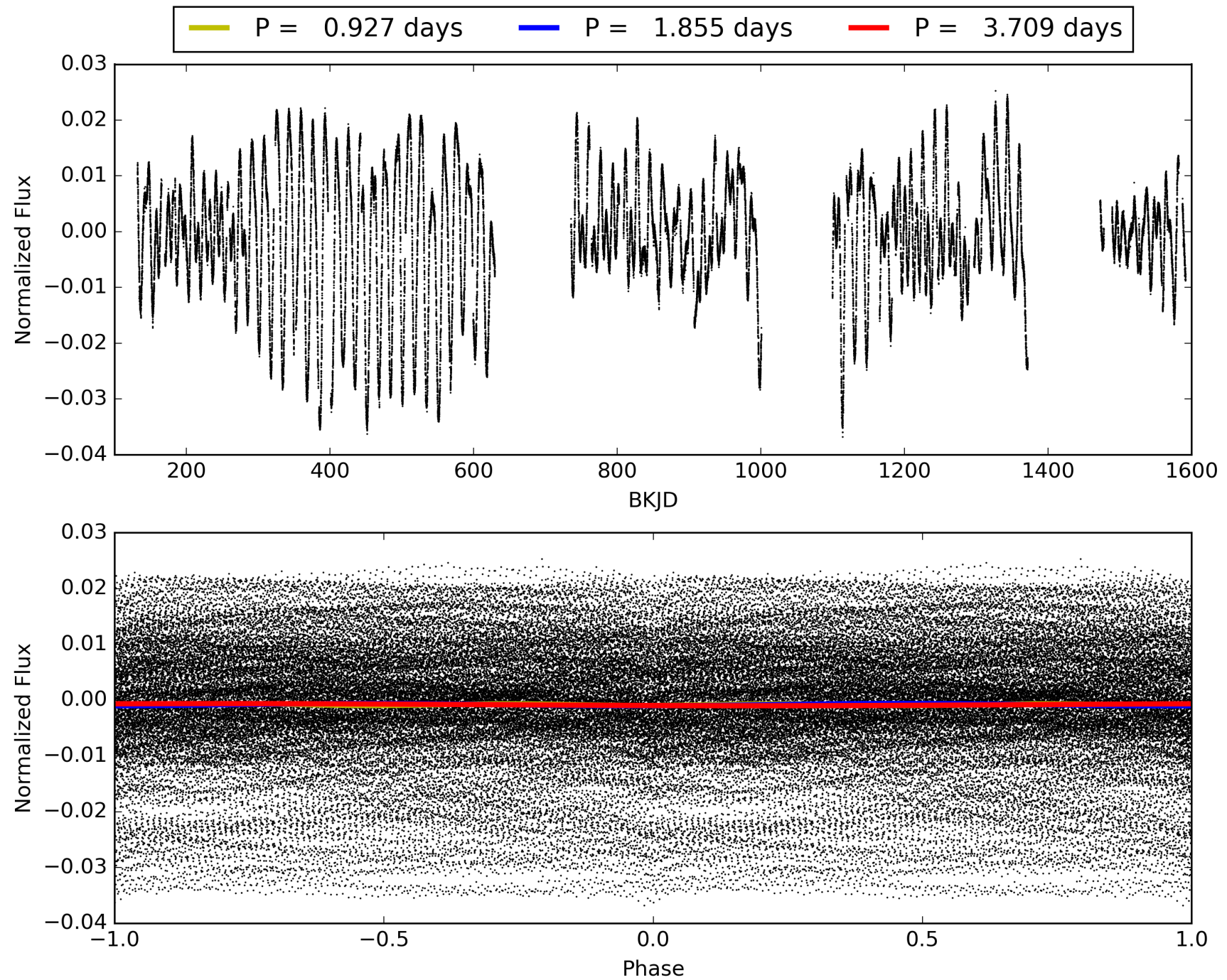
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:50:06 Z

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

TCE 010294613-01, PDC Light Curves

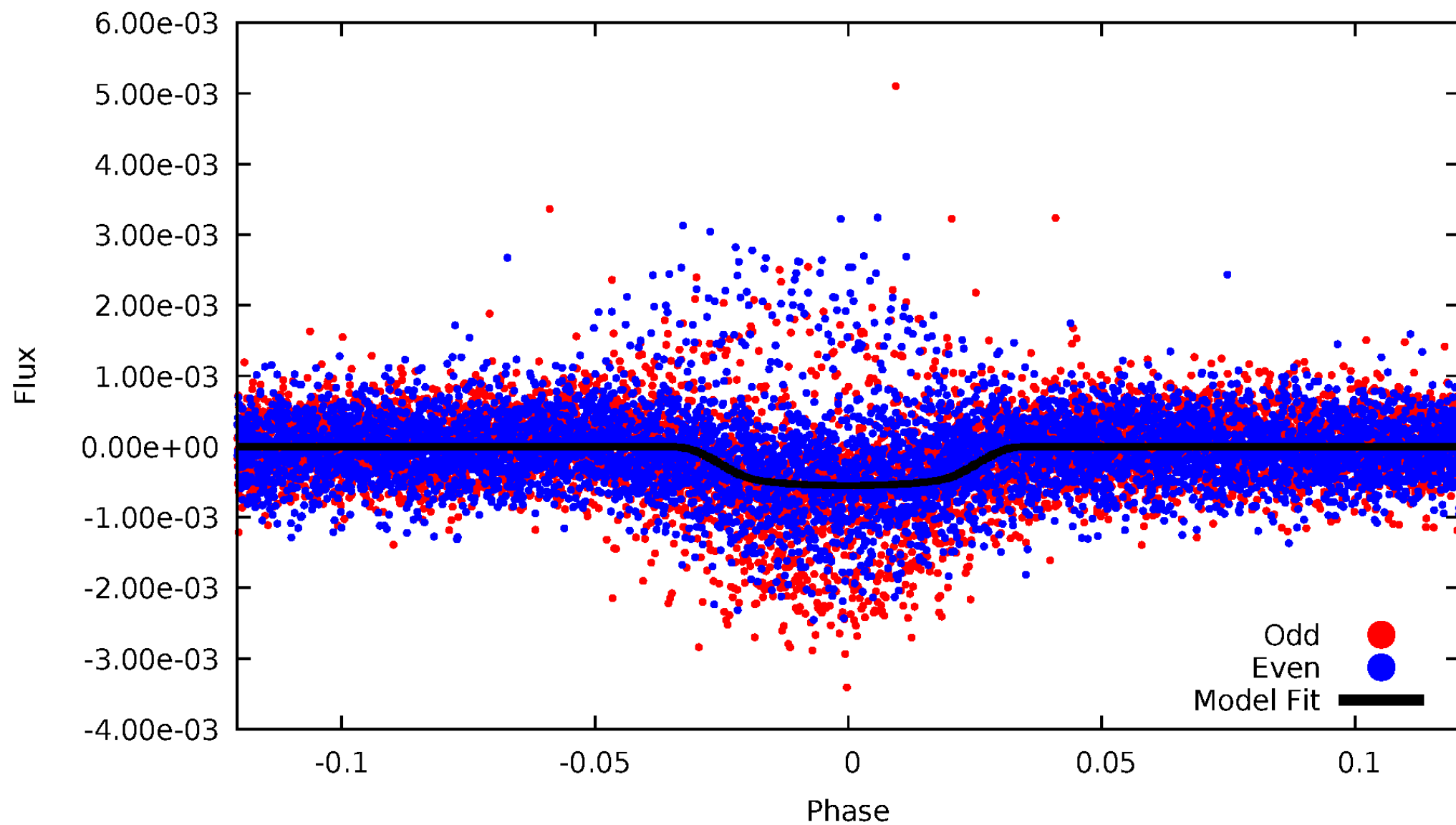


TCE 010294613-01



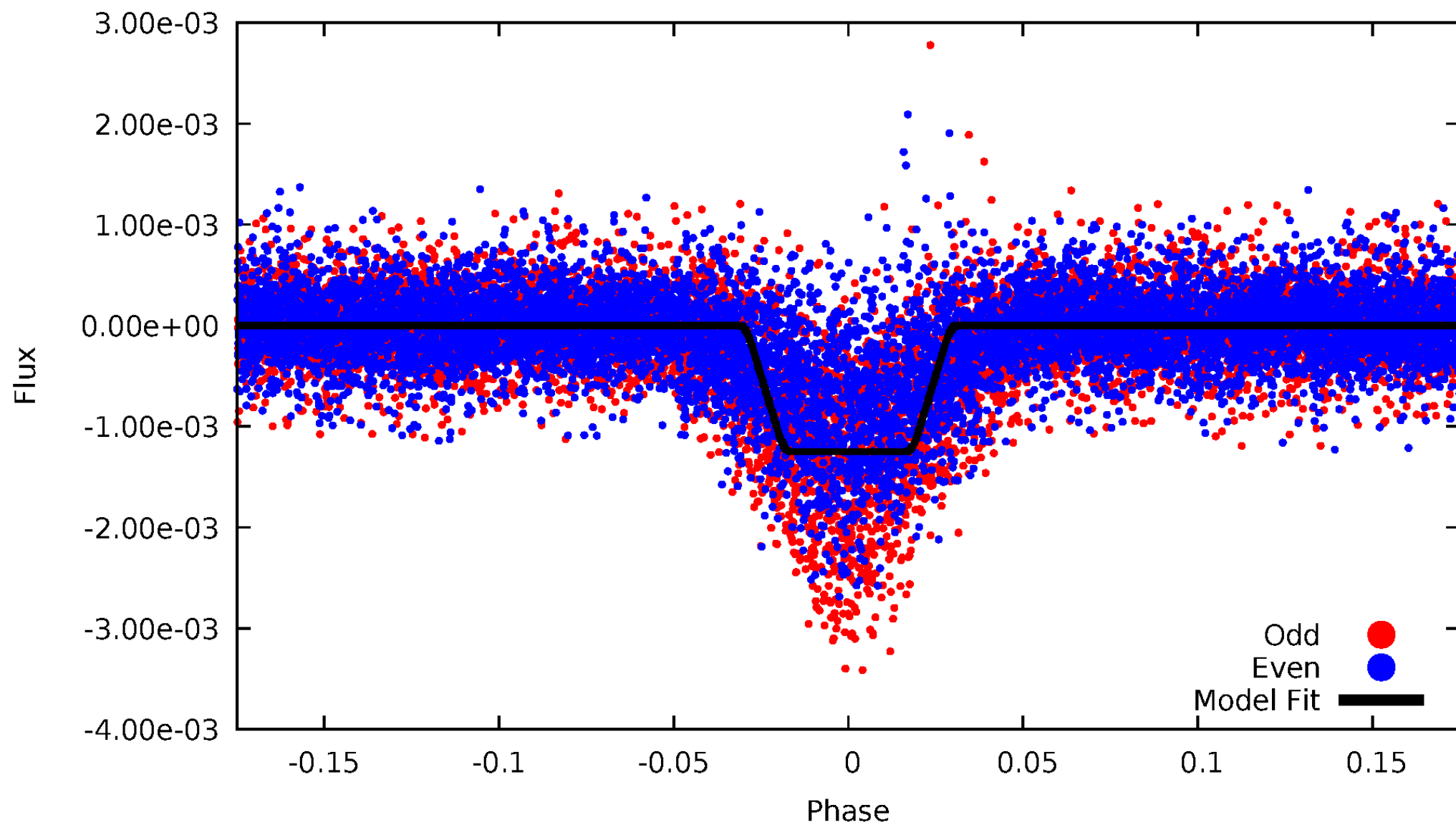
DV Odd/Even

TCE 010294613-01



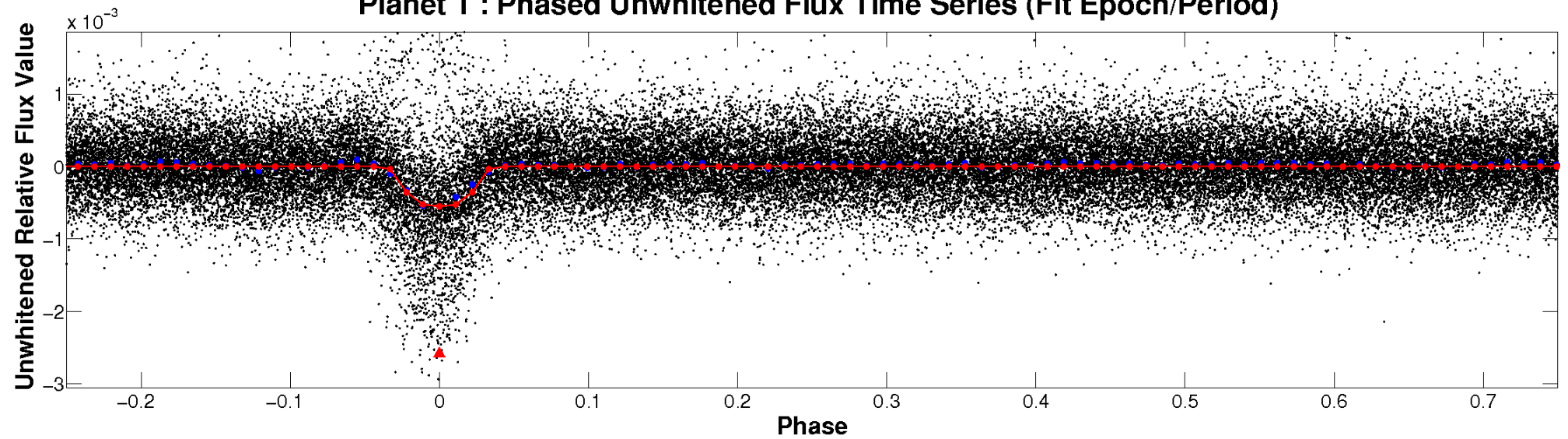
ALT Odd/Even

TCE 010294613-01

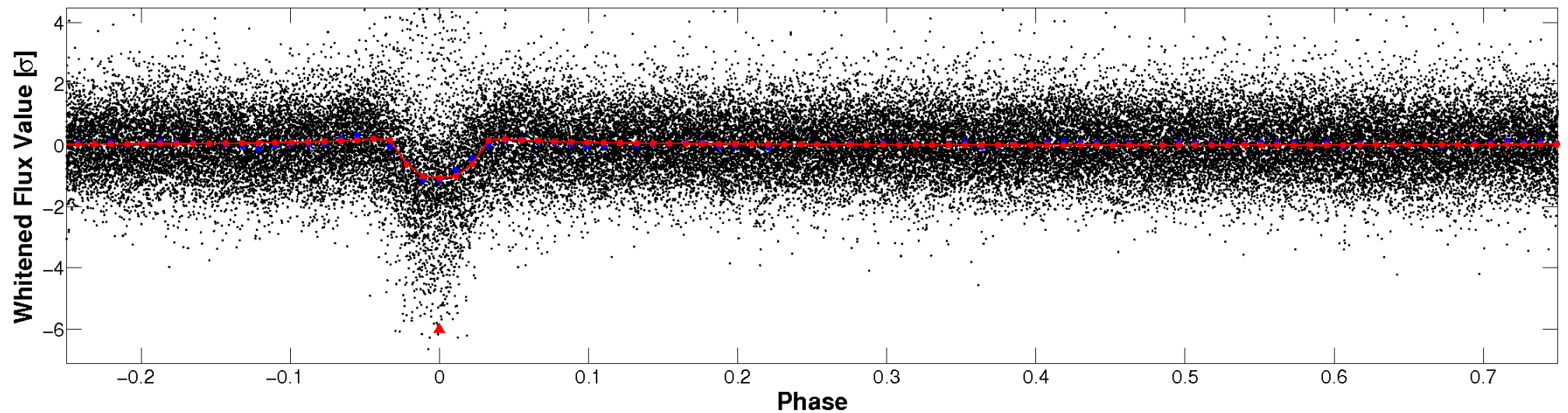


Non-Whitened Vs. Whitened Light Curve

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

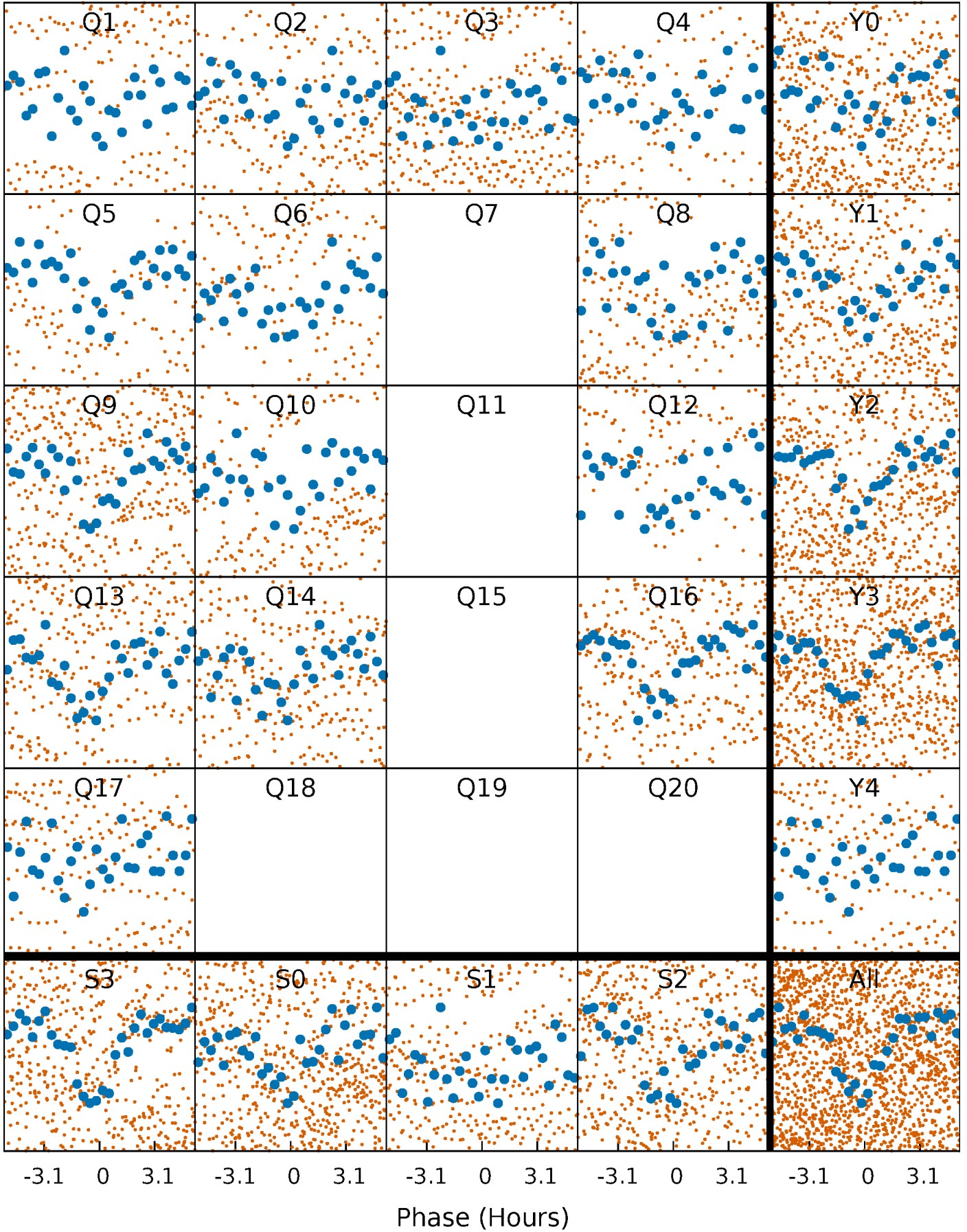


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



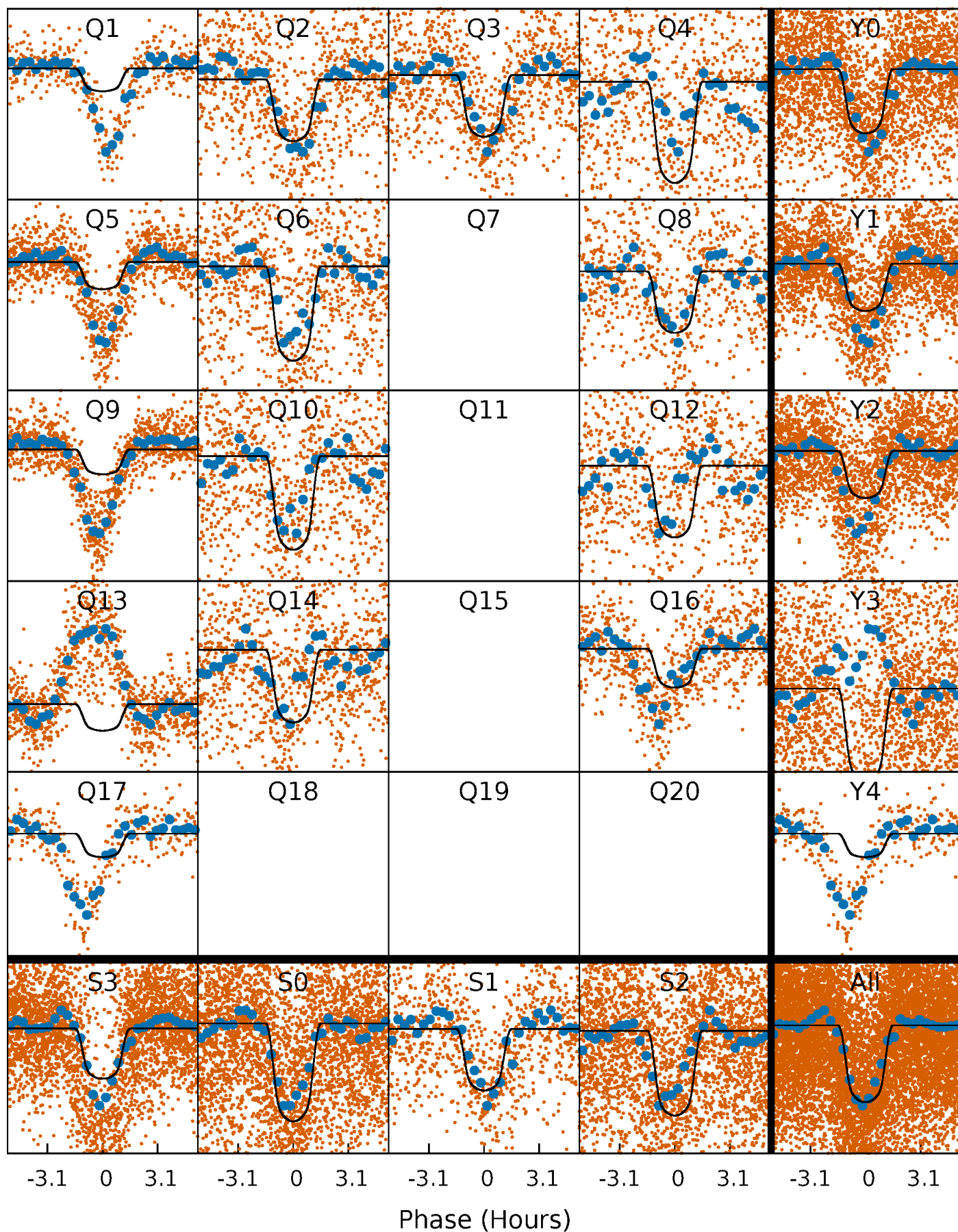
PDC Quarter-Phased Transit Curves

TCE 010294613-01 P= 1.854567 Days $T_0=132.473266$ (BKJD)



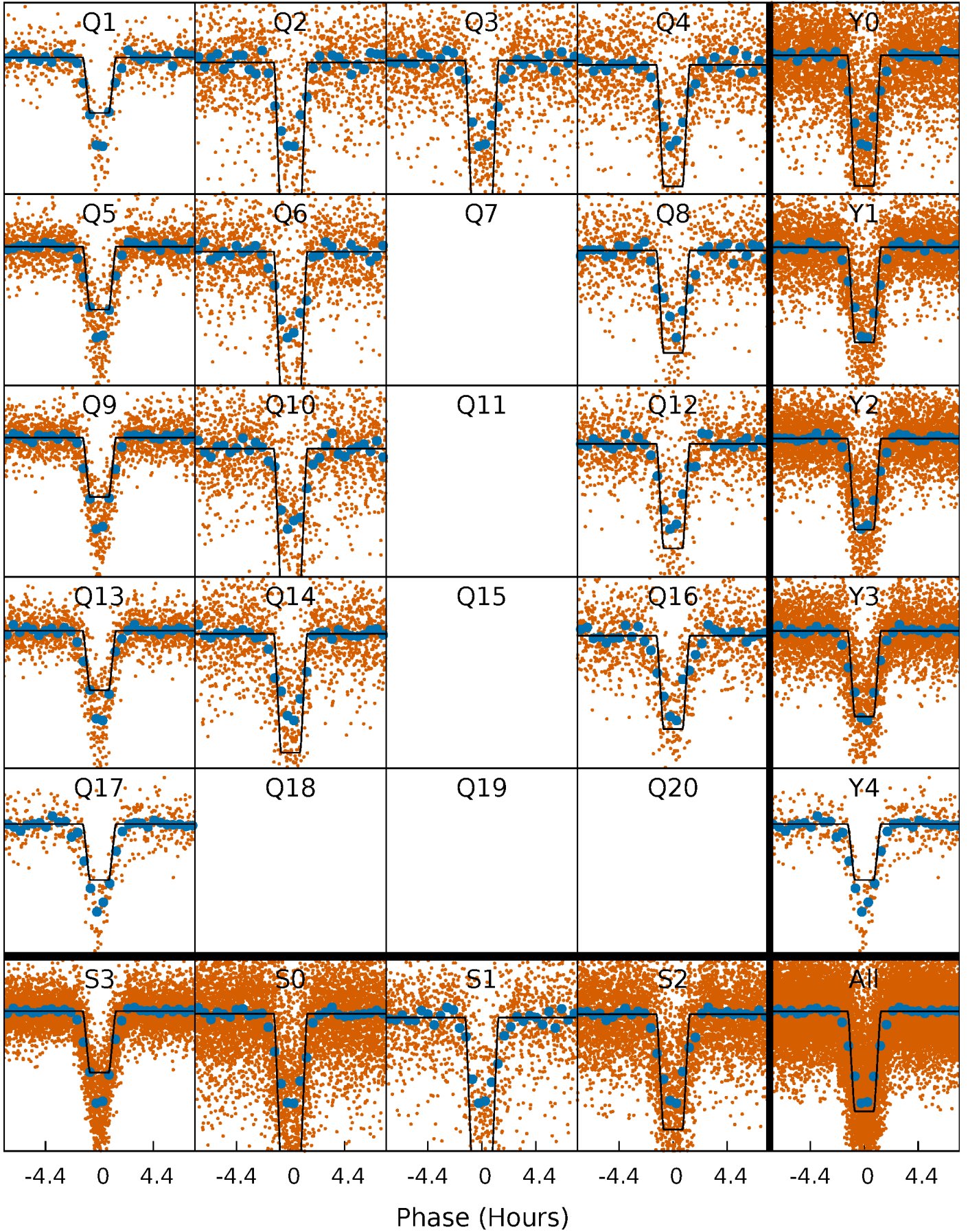
DV Quarter-Phased Transit Curves

TCE 010294613-01 P= 1.854567 Days $T_0=132.473266$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

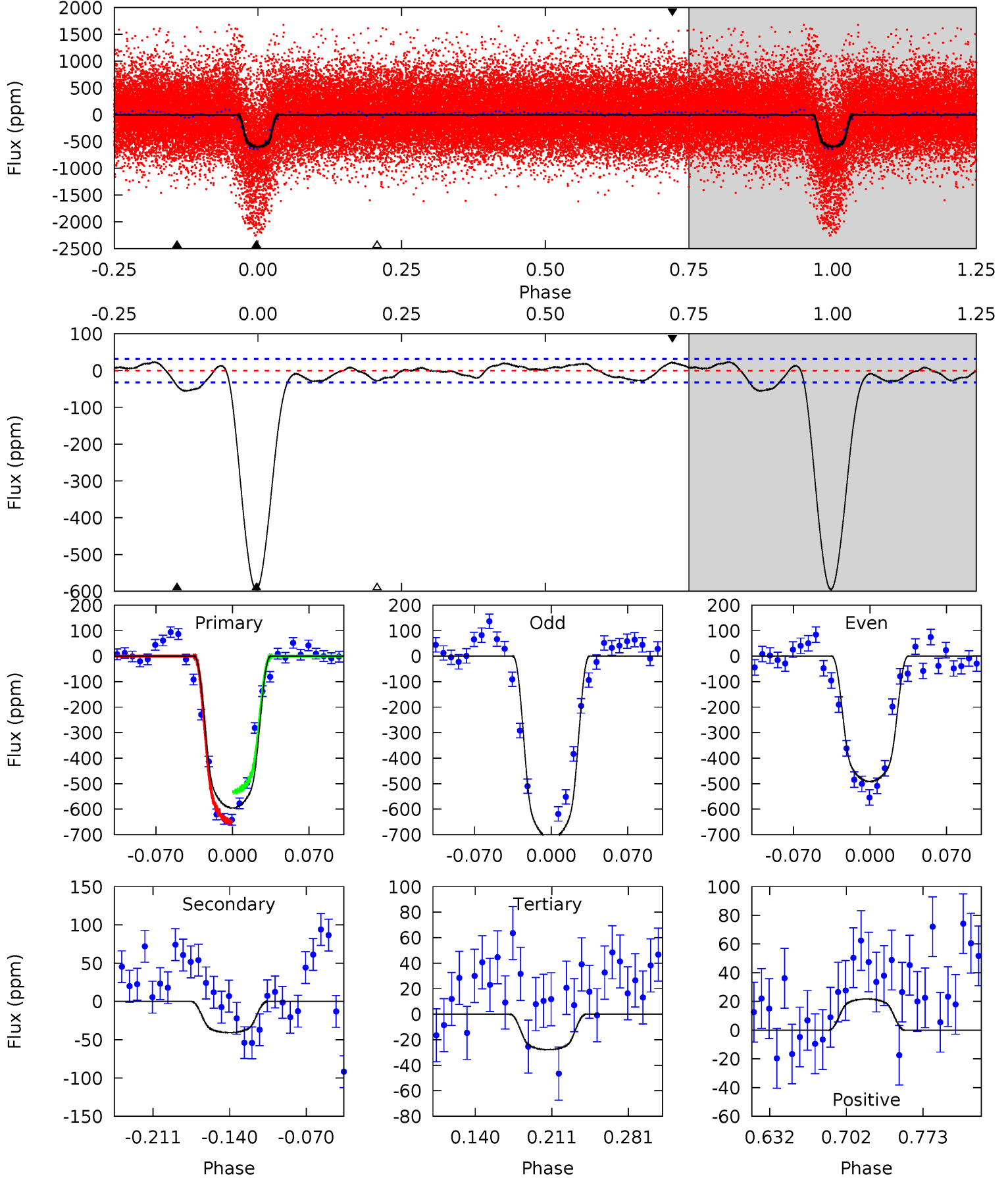
TCE 010294613-01 P= 1.854495 Days $T_0=132.489441$ (BKJD)



DV Model-Shift Uniqueness Test

010294613-01, P = 1.854567 Days, E = 130.618699 Days

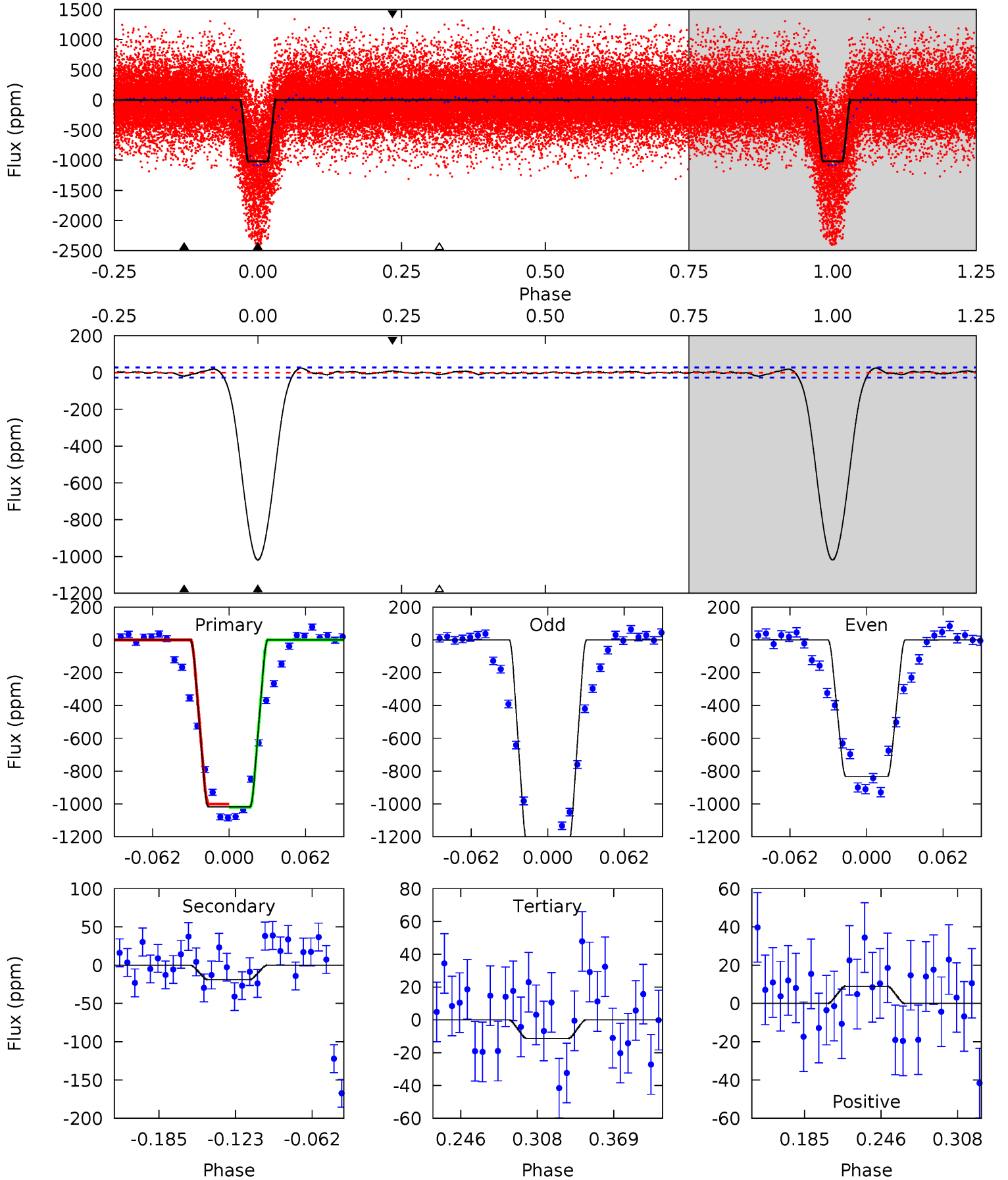
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
85.7	5.87	4.00	3.13	4.64	1.81	2.05	81.7	82.6	1.86	2.73	16.0	0.97	0.04	8.52



Alt Model-Shift Uniqueness Test

010294613-01, P = 1.854495 Days, E = 130.634946 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
168.9	3.14	1.87	1.49	4.67	1.87	0.86	167.0	167.4	1.27	1.65	33.3	1.05	0.02	1.56



Stellar Parameters For KIC 010294613

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5431^{+164}_{-147}	$4.563^{+0.027}_{-0.144}$	$0.120^{+0.250}_{-0.300}$	$0.843^{+0.173}_{-0.062}$	$0.945^{+0.065}_{-0.098}$	$2.223^{+0.402}_{-0.872}$
	+3%/-3%	+1%/-3%	+208%/-250%	+21%/-7%	+7%/-10%	+18%/-39%
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 010294613-01 / KOI 1896.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-41 ± 7	$2.49^{+0.28}_{-0.22}$	1842^{+99}_{-71}	3187^{+130}_{-128}	$2.930^{+0.760}_{-0.669}$
Alt.	-19 ± 6	$3.32^{+0.38}_{-0.24}$	1834^{+96}_{-69}	2513^{+156}_{-219}	$0.758^{+0.296}_{-0.262}$

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

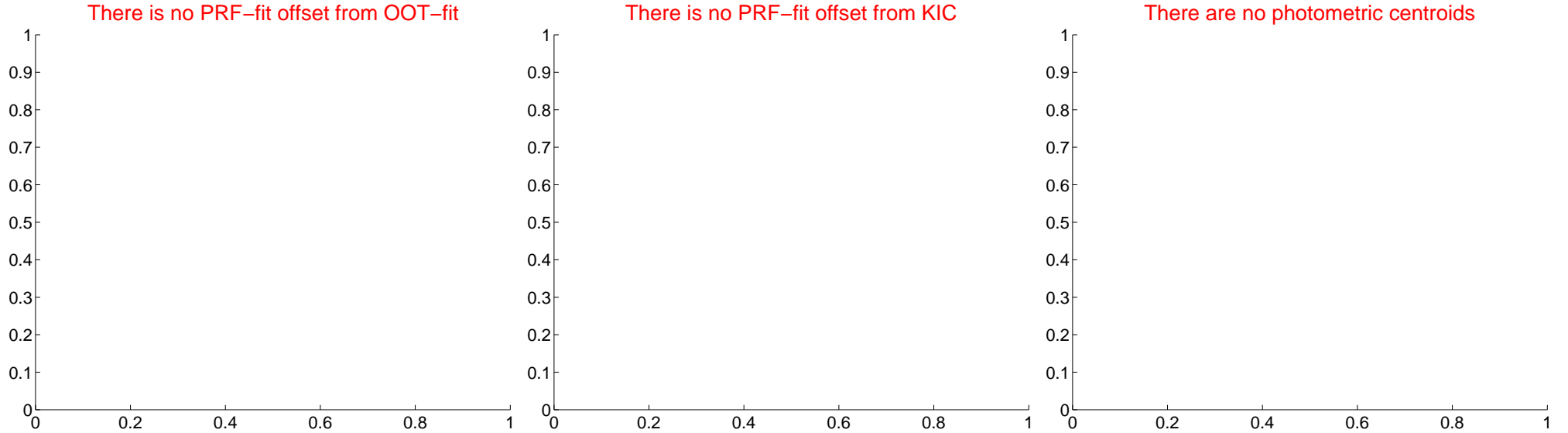
DV Centroid Data

Supplemental centroid analysis for 010294613-01. Kepler magnitude: 14.90. Transit SNR 45.08

There are 0 quarters with good PRF difference image offsets

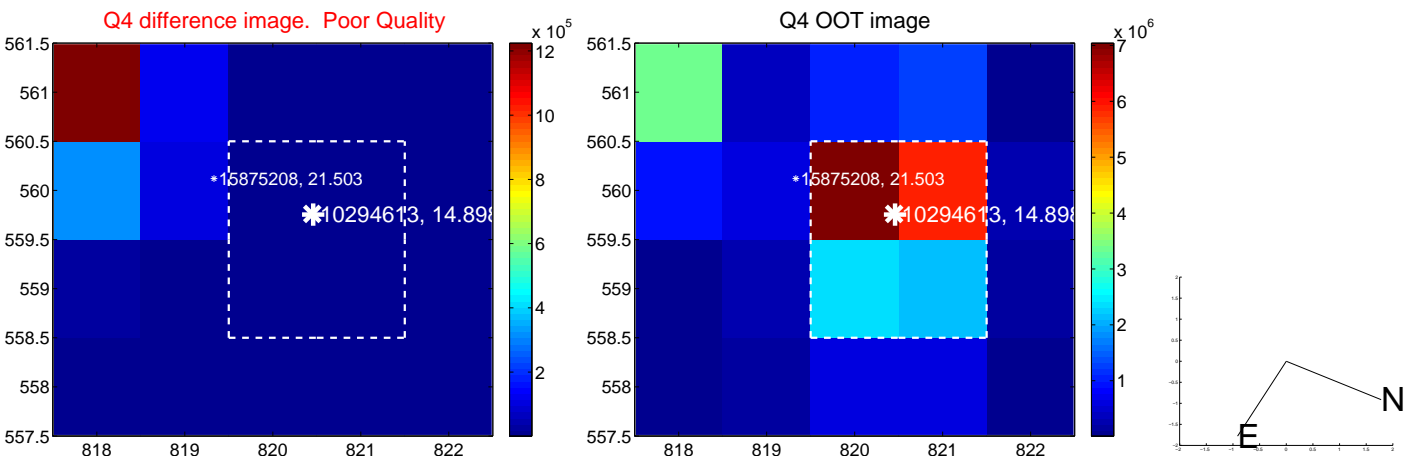
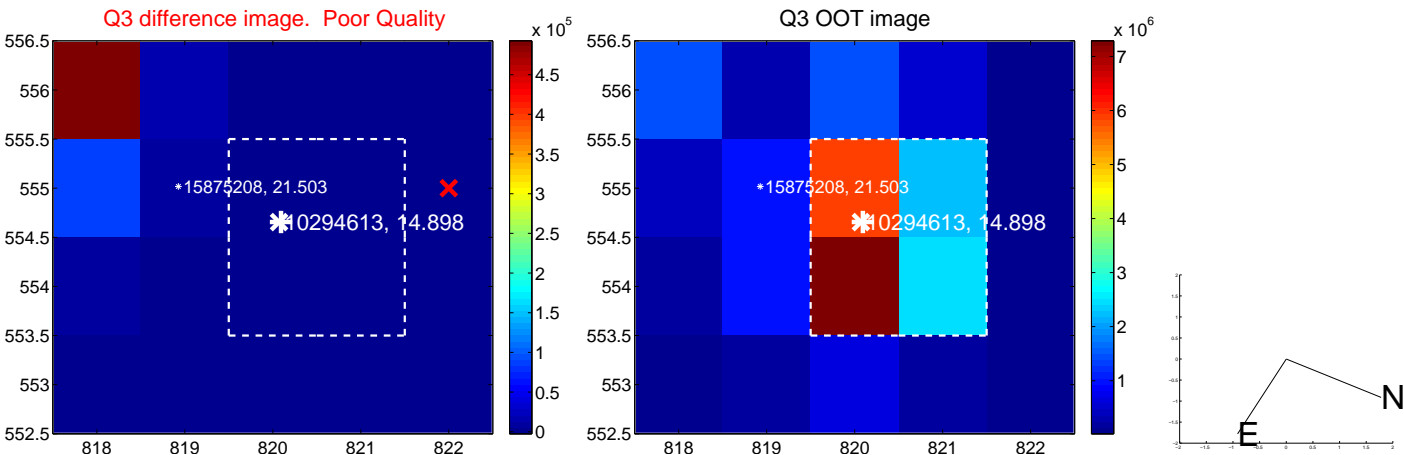
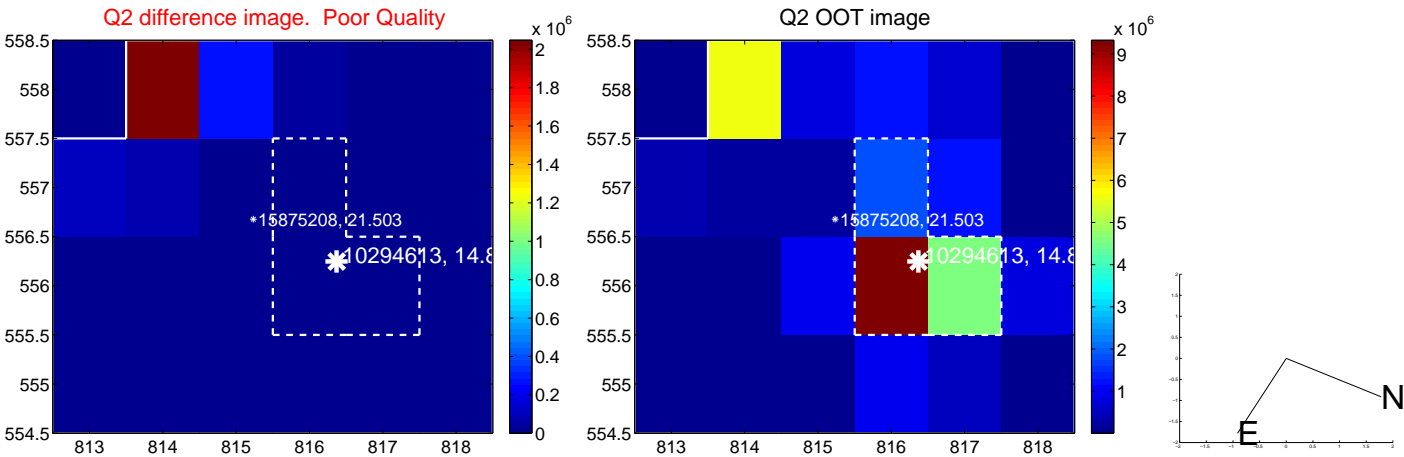
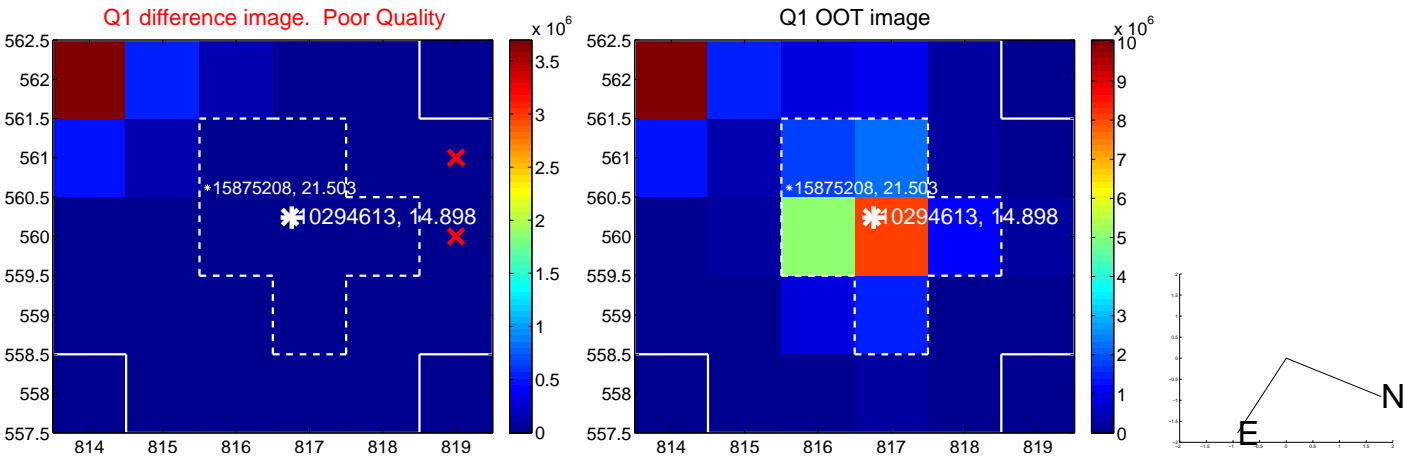
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

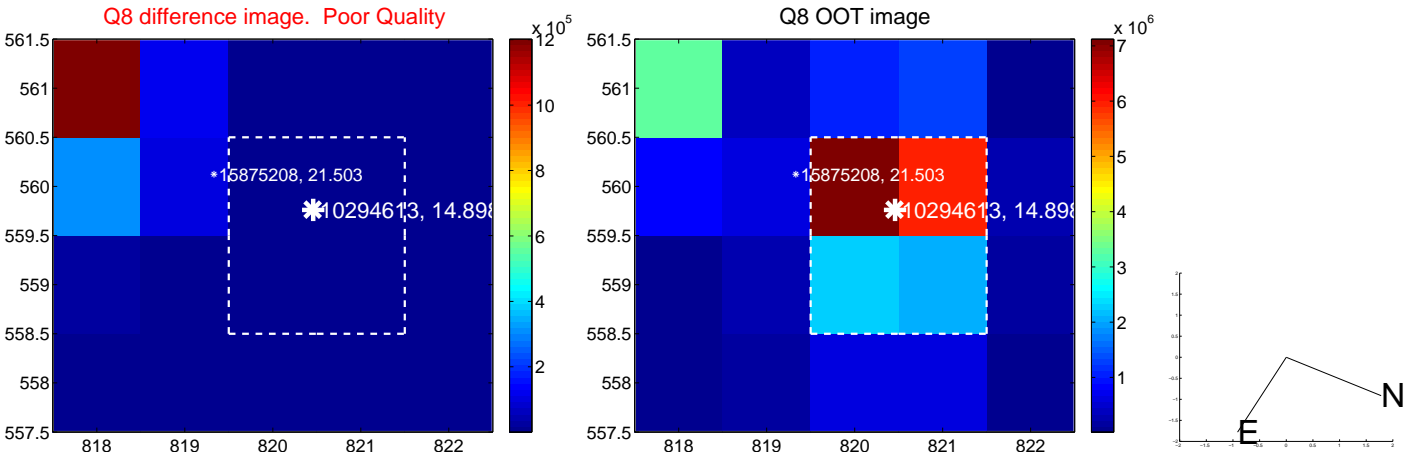
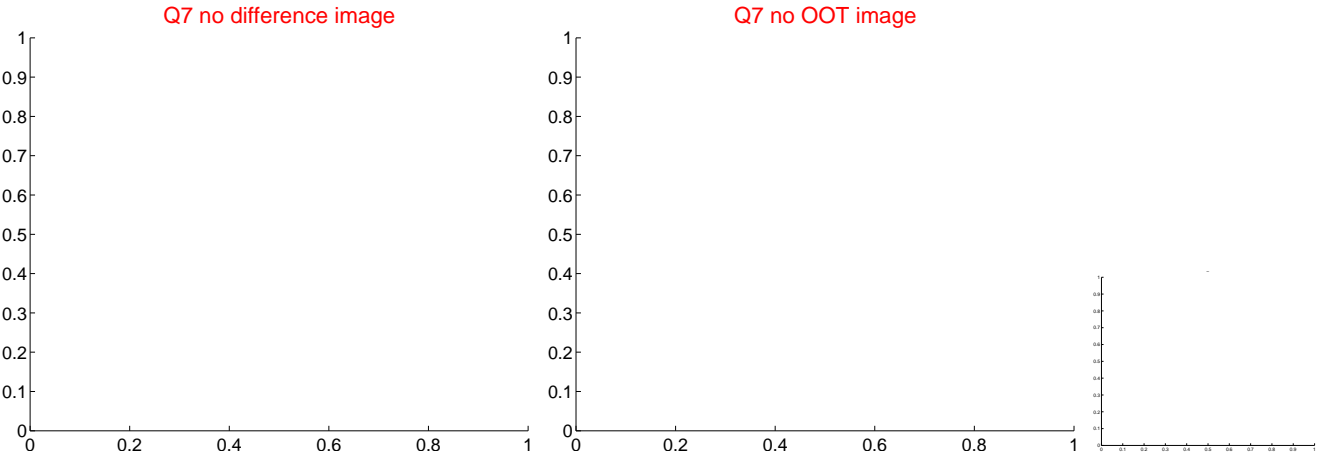
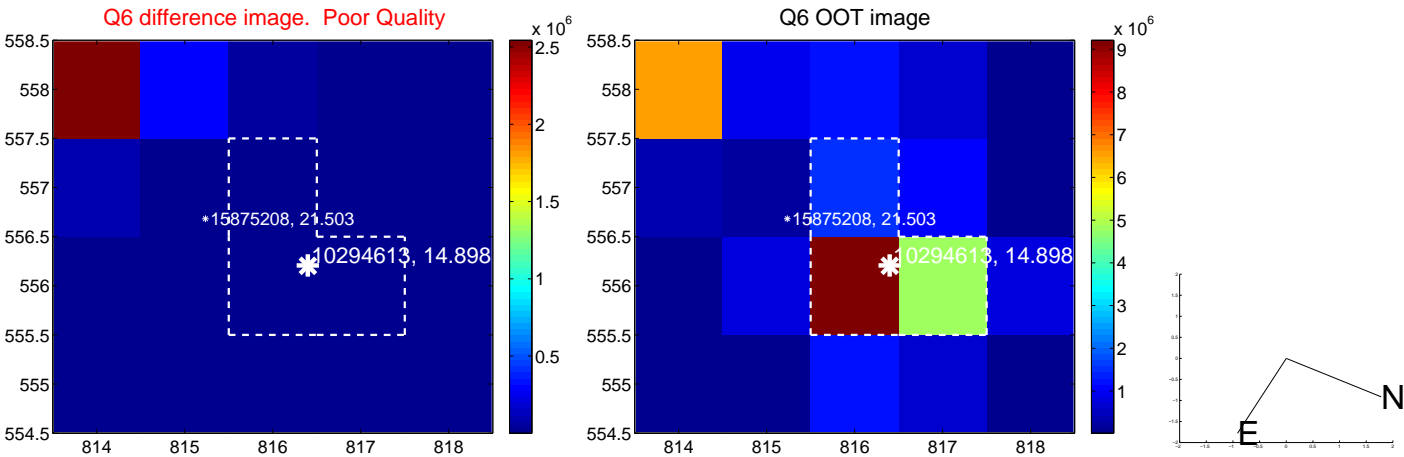
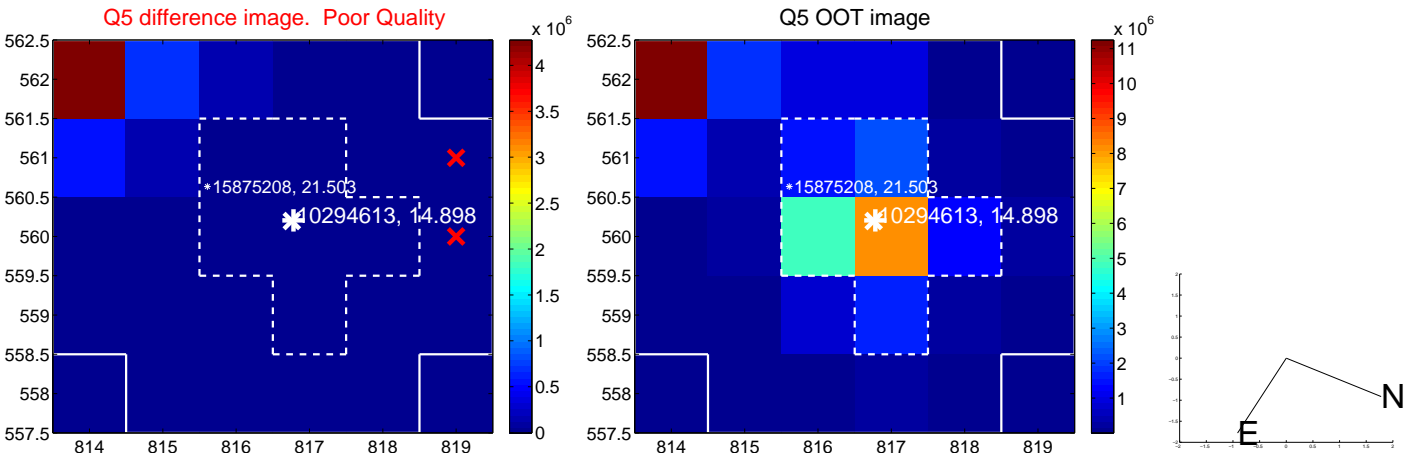


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

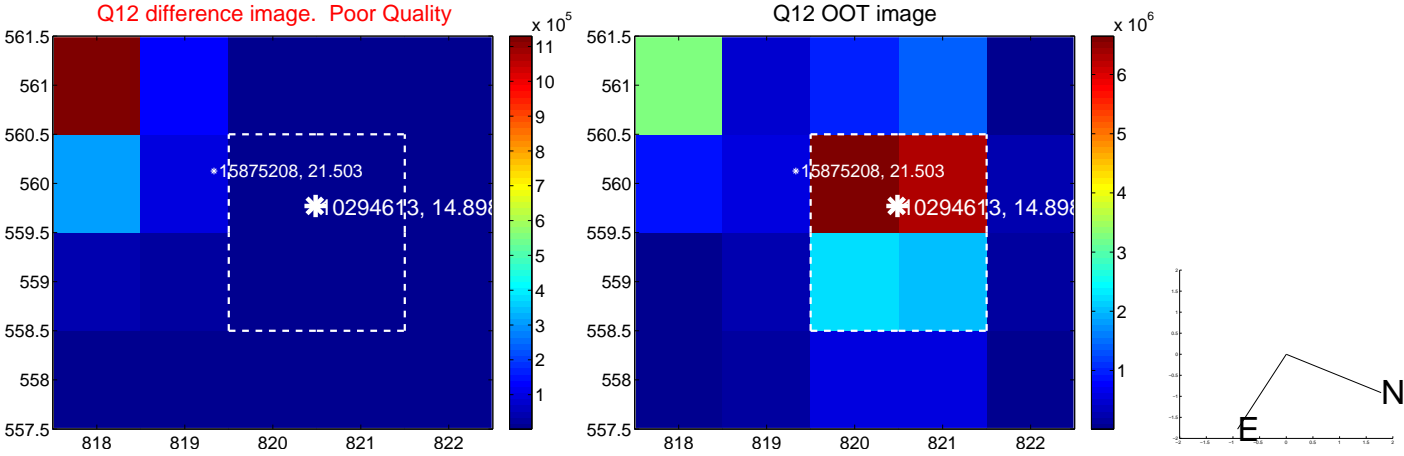
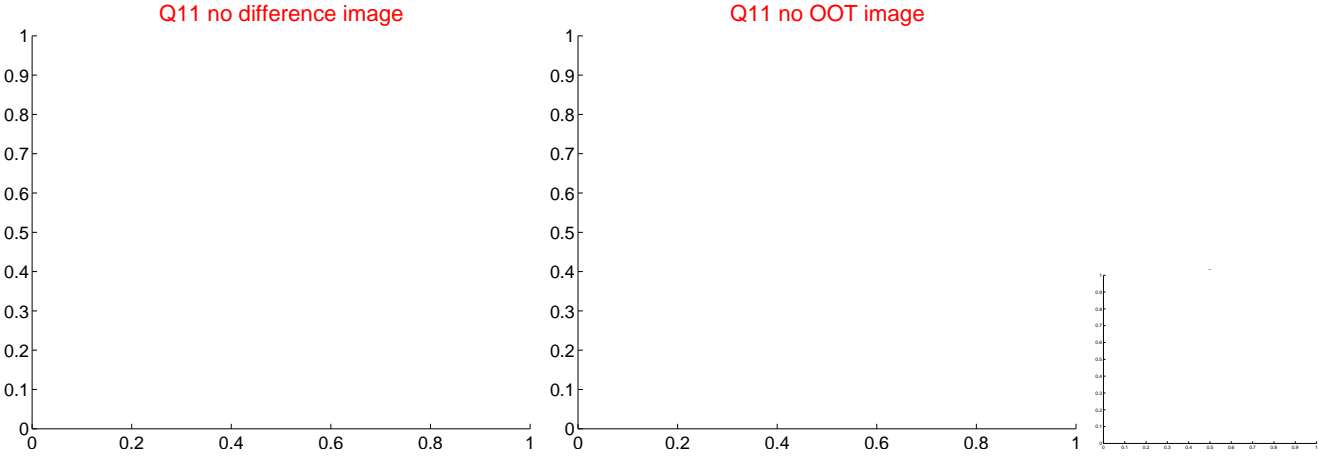
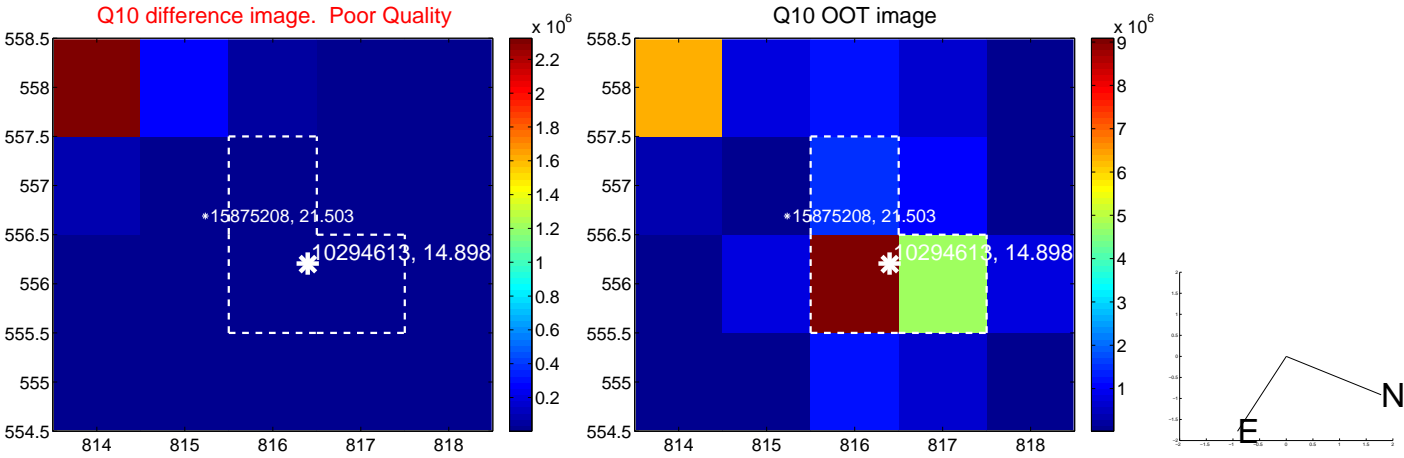
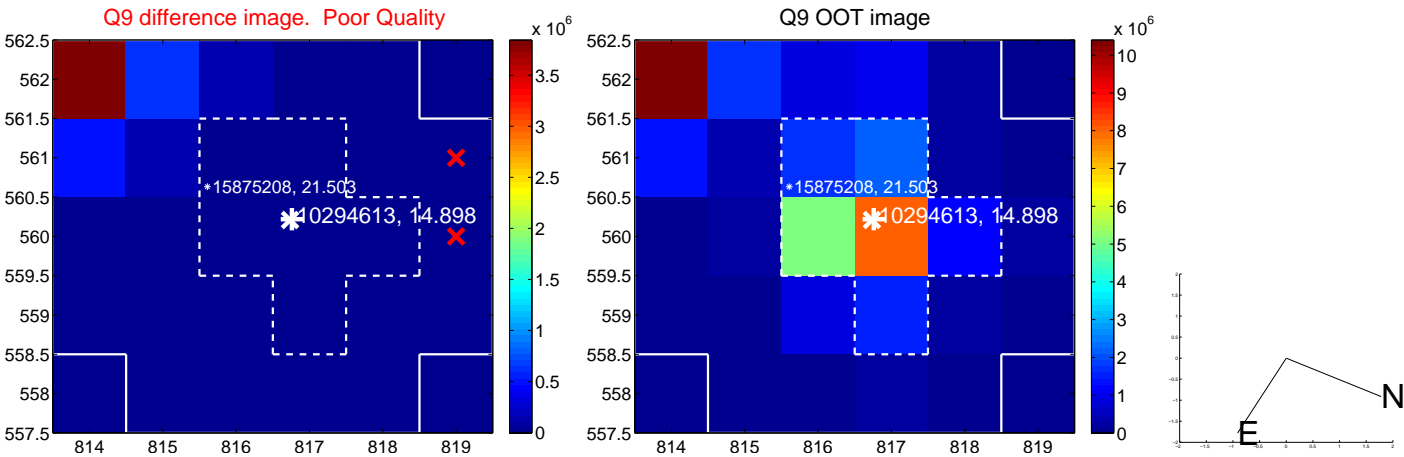
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



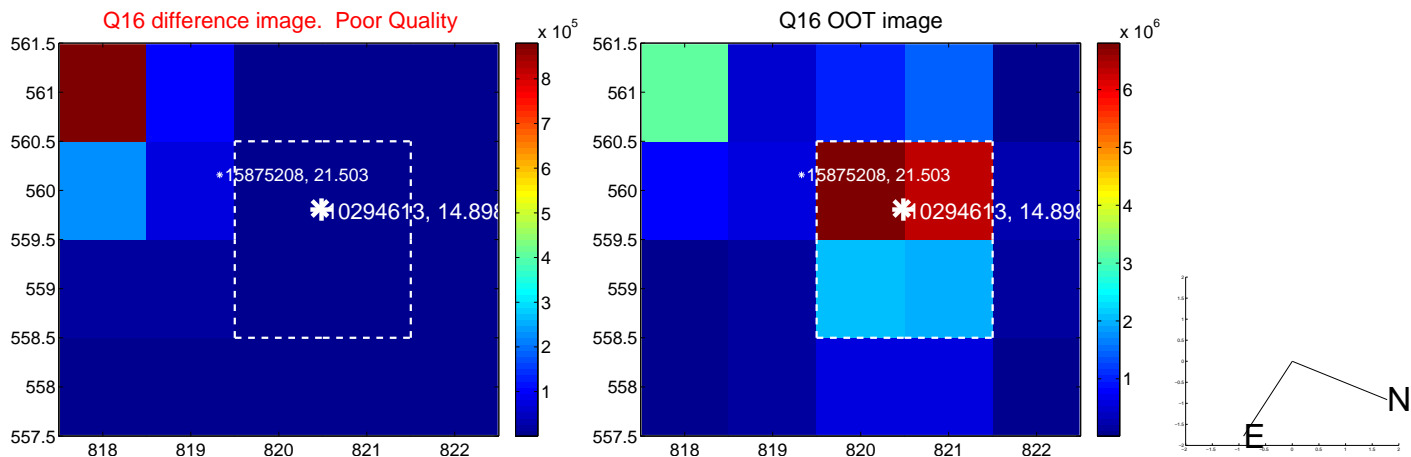
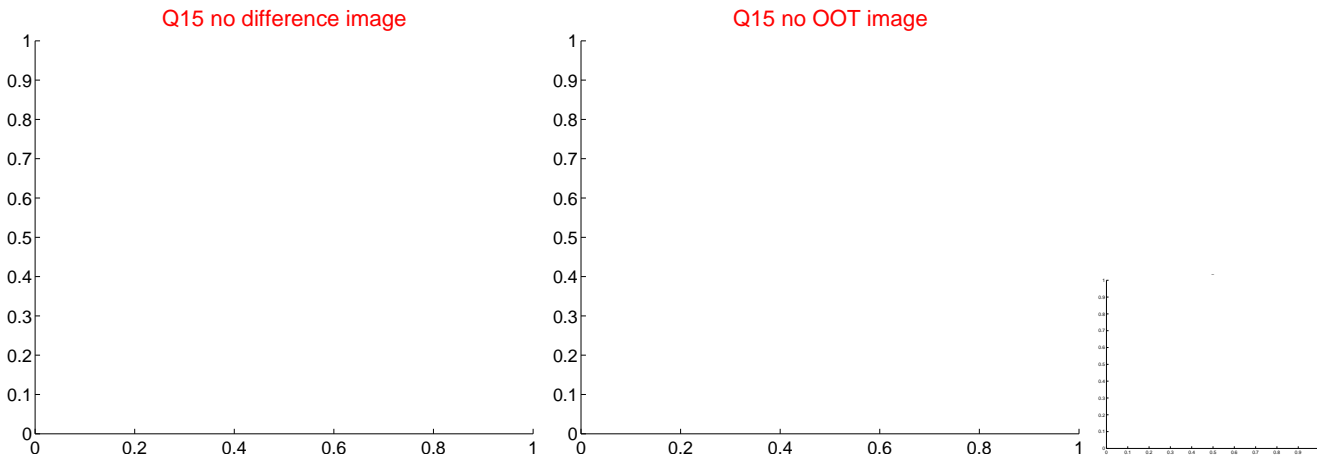
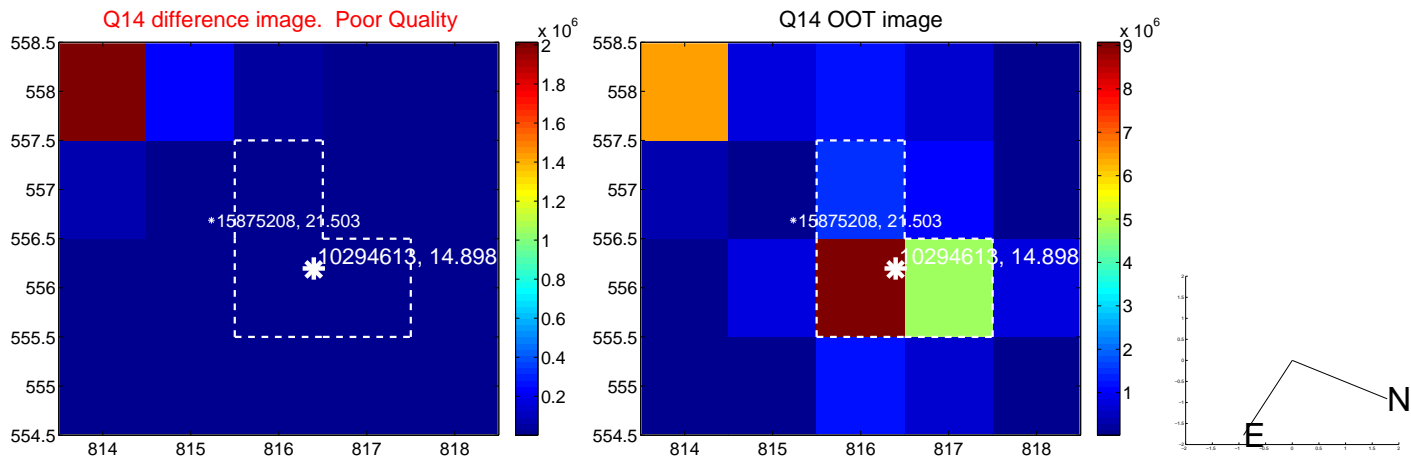
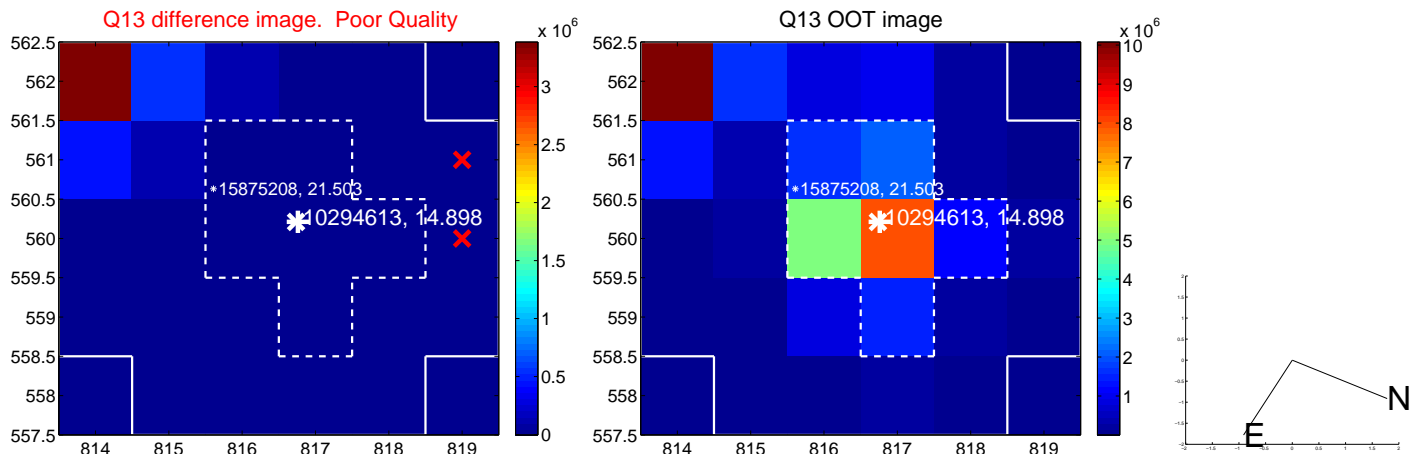
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



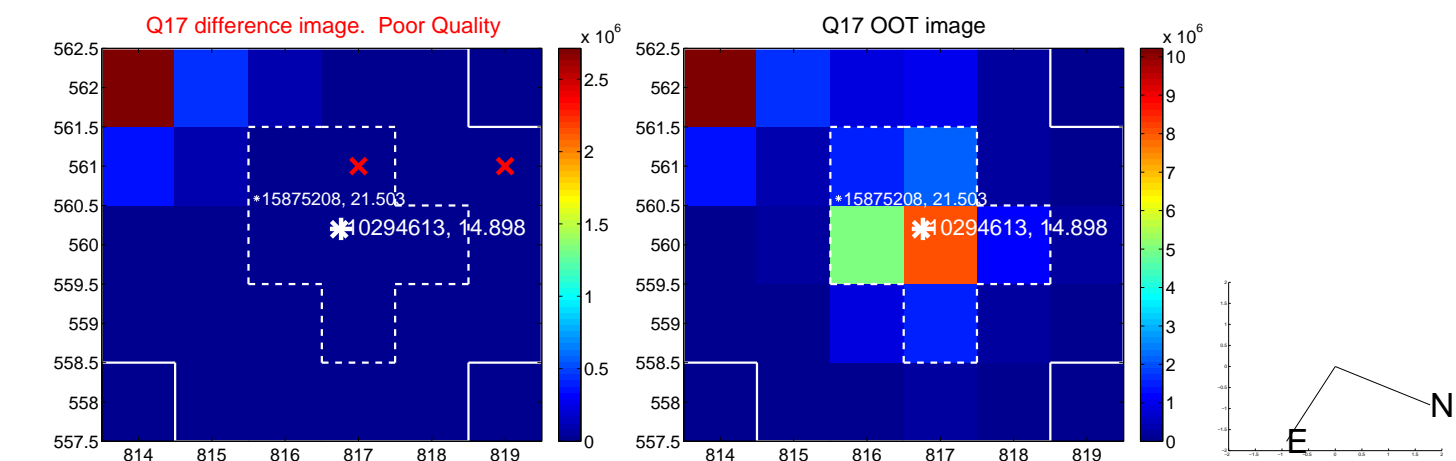
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



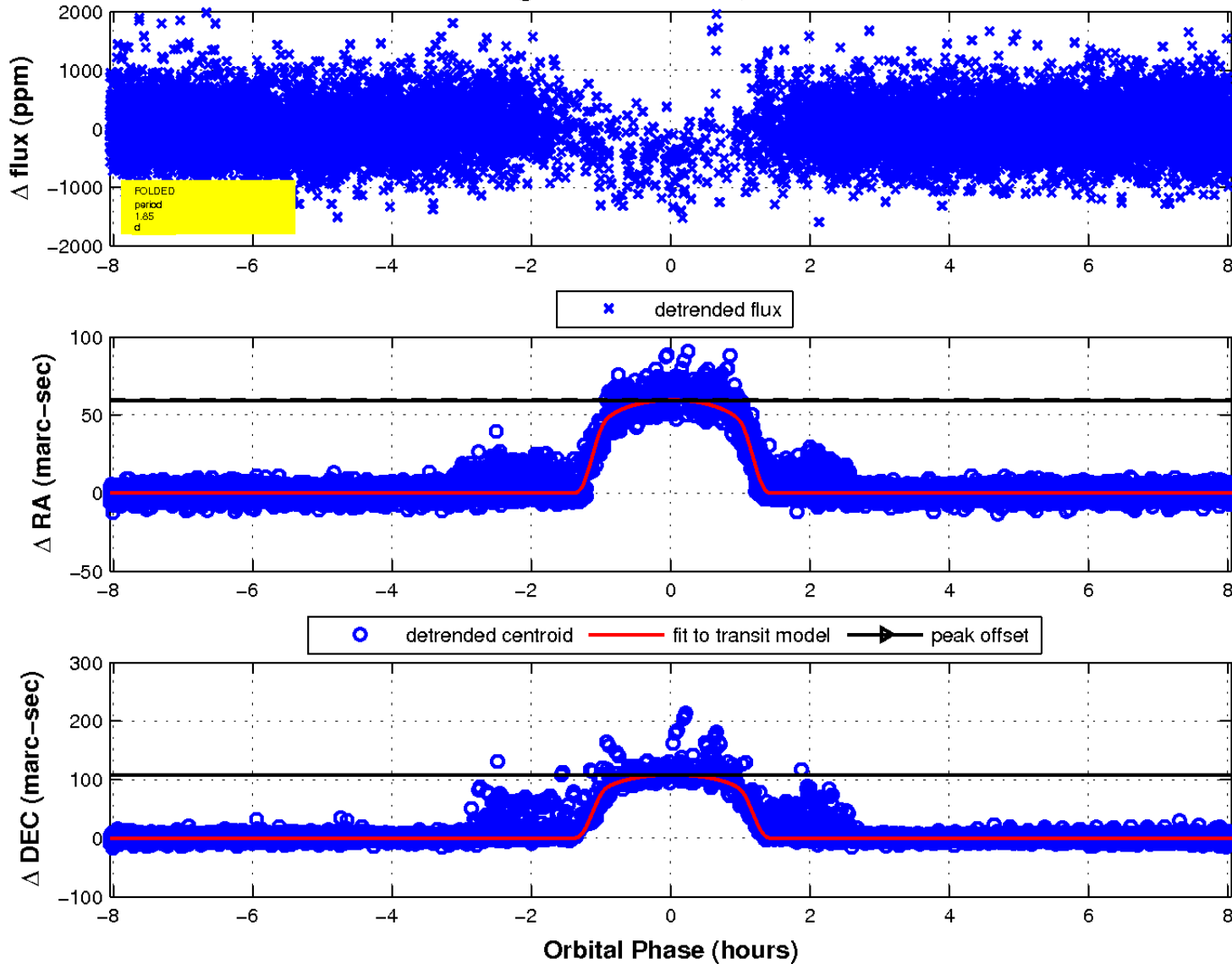
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

