

KIC 006118370

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})
006118370-01	OBS	3458.01	14.032808	138.065200	216.4	7.113	10.0	10.9	1.00	6063	1.73	88.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006118370-01	OBS	PC	0.93	0	0	0	0	NO_COMMENT

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 006118370-01

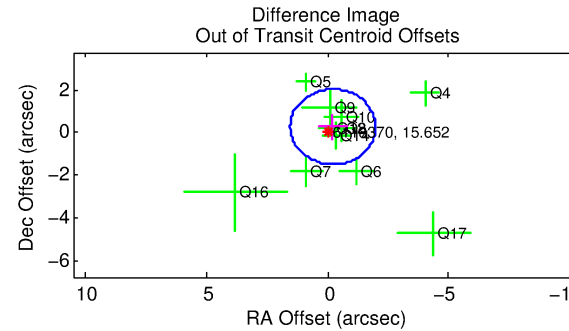
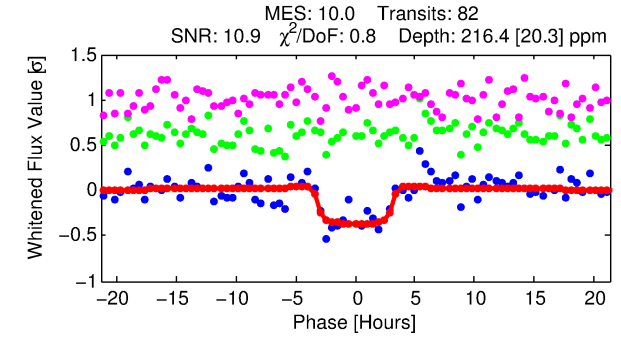
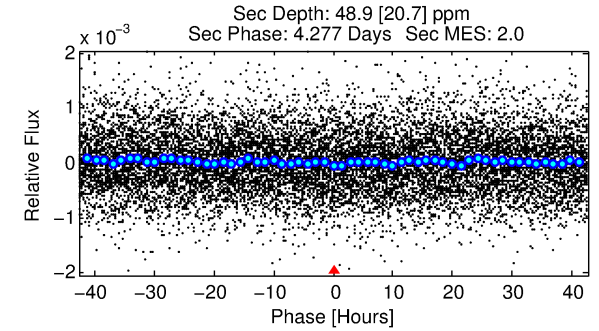
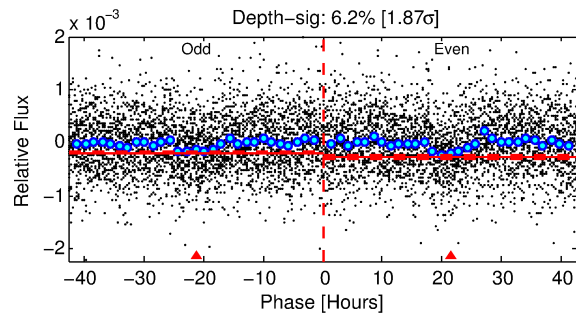
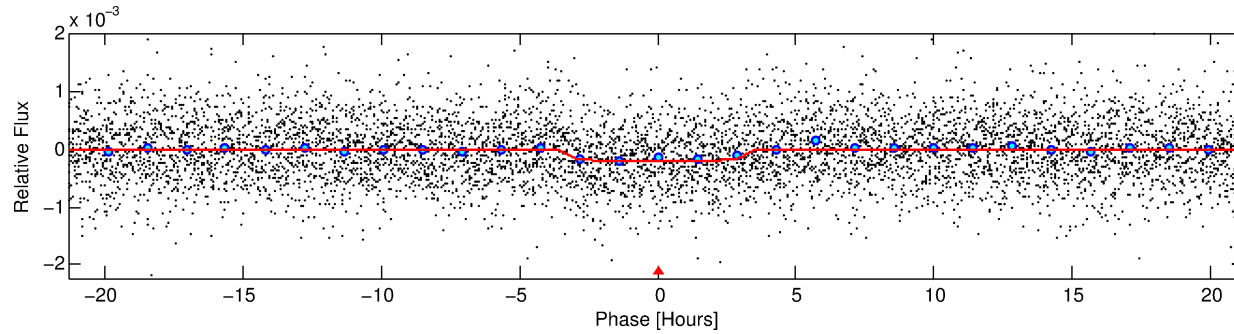
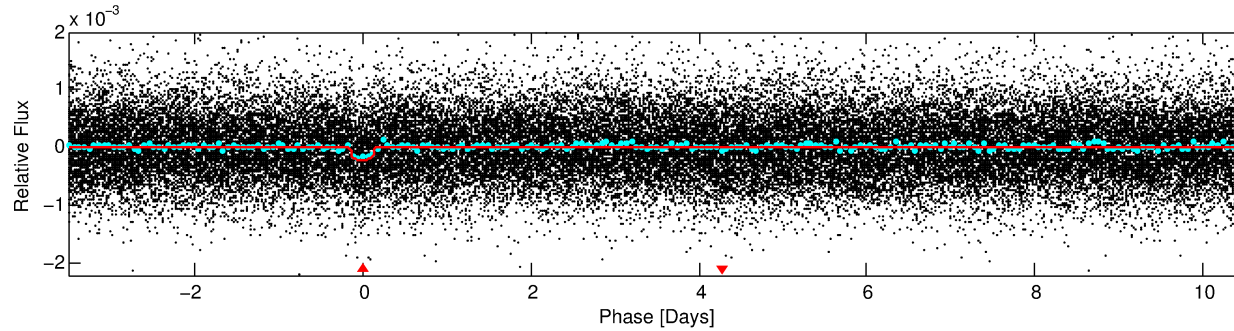
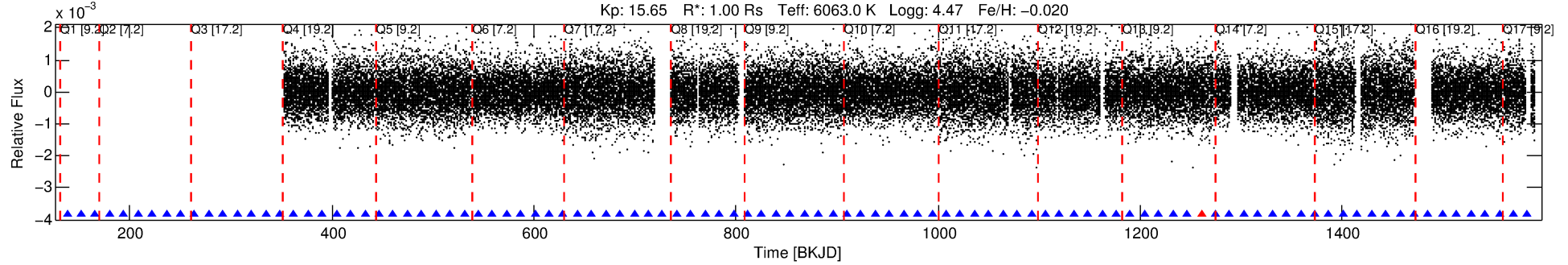
No Significant Match Found

DV One-Page Summary

KIC: 6118370 Candidate: 1 of 1 Period: 14.033 d

KOI: K03458.01 Corr: 0.979

Kp: 15.65 R*: 1.00 Rs Teff: 6063.0 K Logg: 4.47 Fe/H: -0.020



DV Fit Results:

Period = 14.03281 [0.00024] d
Epoch = 138.0652 [0.0149] BKJD
Rp/R* = 0.0159 [0.0031]
a/R* = 7.21 [6.91]
b = 0.90 [0.21]
Seff = 88.94 [36.69]
Teq = 783 [81] K
Rp = 1.73 [0.65] Re
a = 0.1168 [0.0310] AU
Ag = 122.05 [84.69] [1.43σ]
Teff = 4024 [602] K [5.34σ]

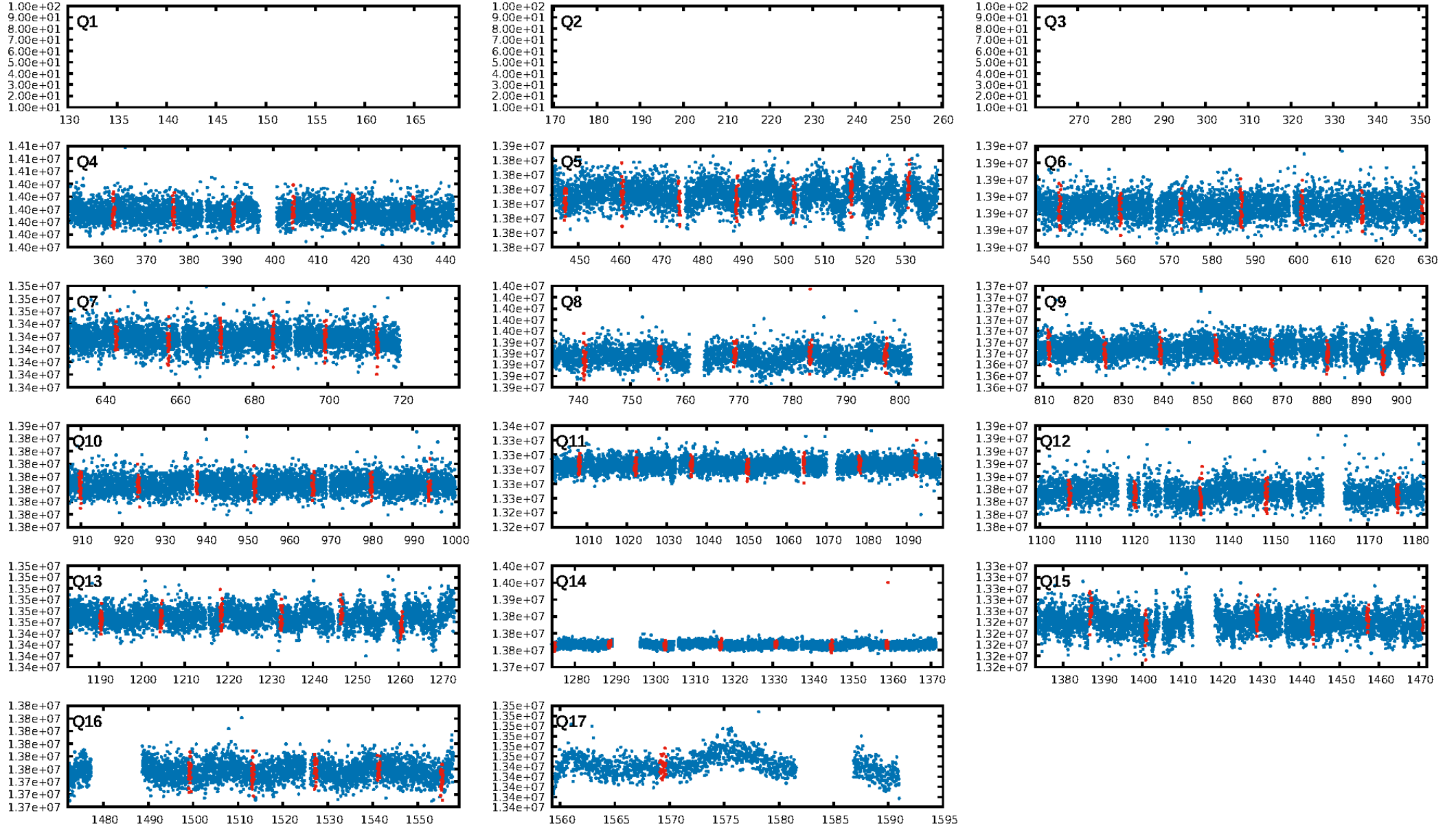
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.74e-23
RollingBand-fgt: 0.99 [80/81]
GhostDiagnostic-chr: -58.2
Centroid-sig: 68.1%
Centroid-so: 0.752 arcsec [0.49σ]
OotOffset-rm: 0.343 arcsec [0.58σ]
KicOffset-rm: 0.293 arcsec [0.47σ]
OotOffset-st: 3/1/4/3 [11]
KicOffset-st: 3/1/4/3 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 1.00 [14/14]

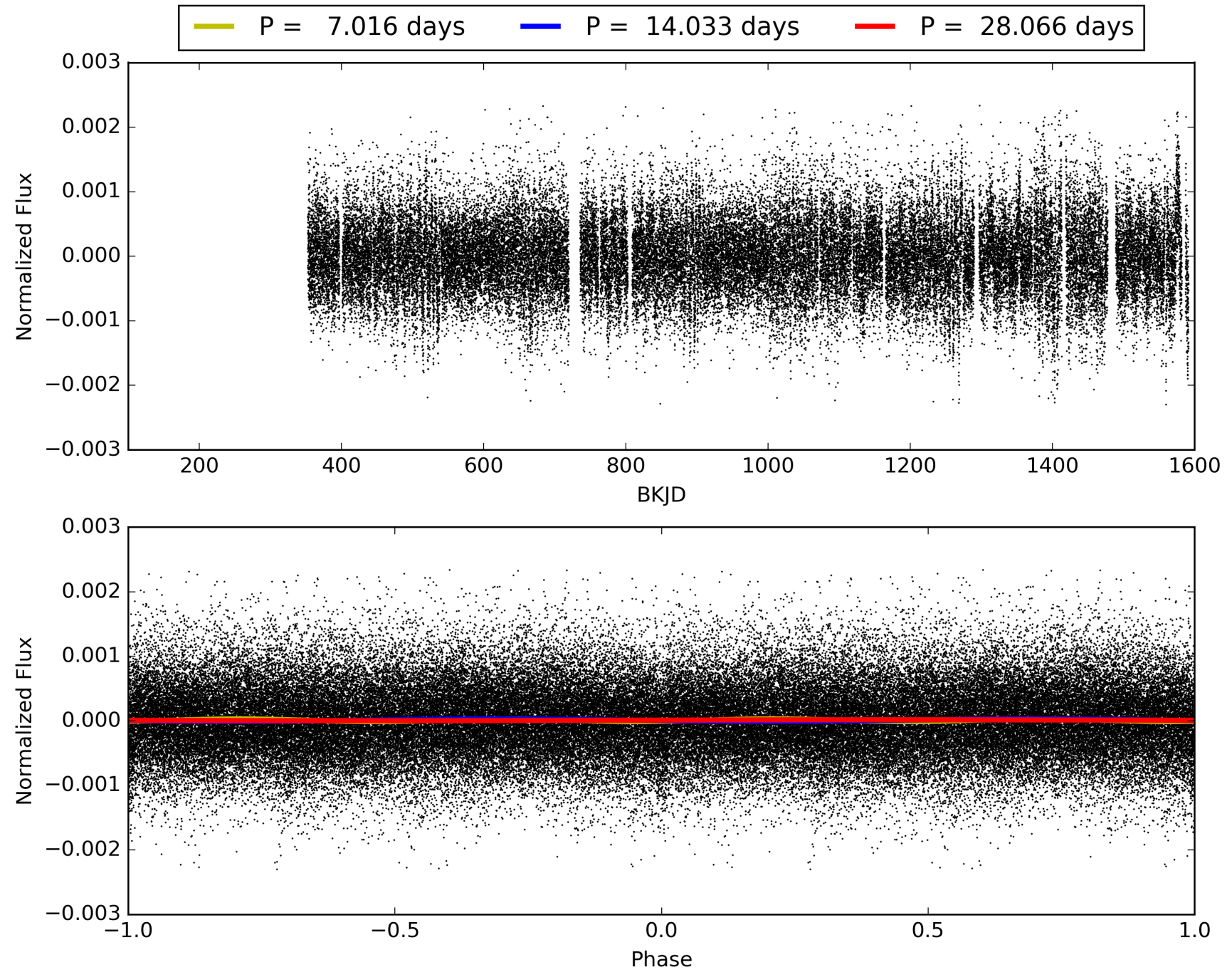
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:38:14 Z

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

TCE 006118370-01, PDC Light Curves

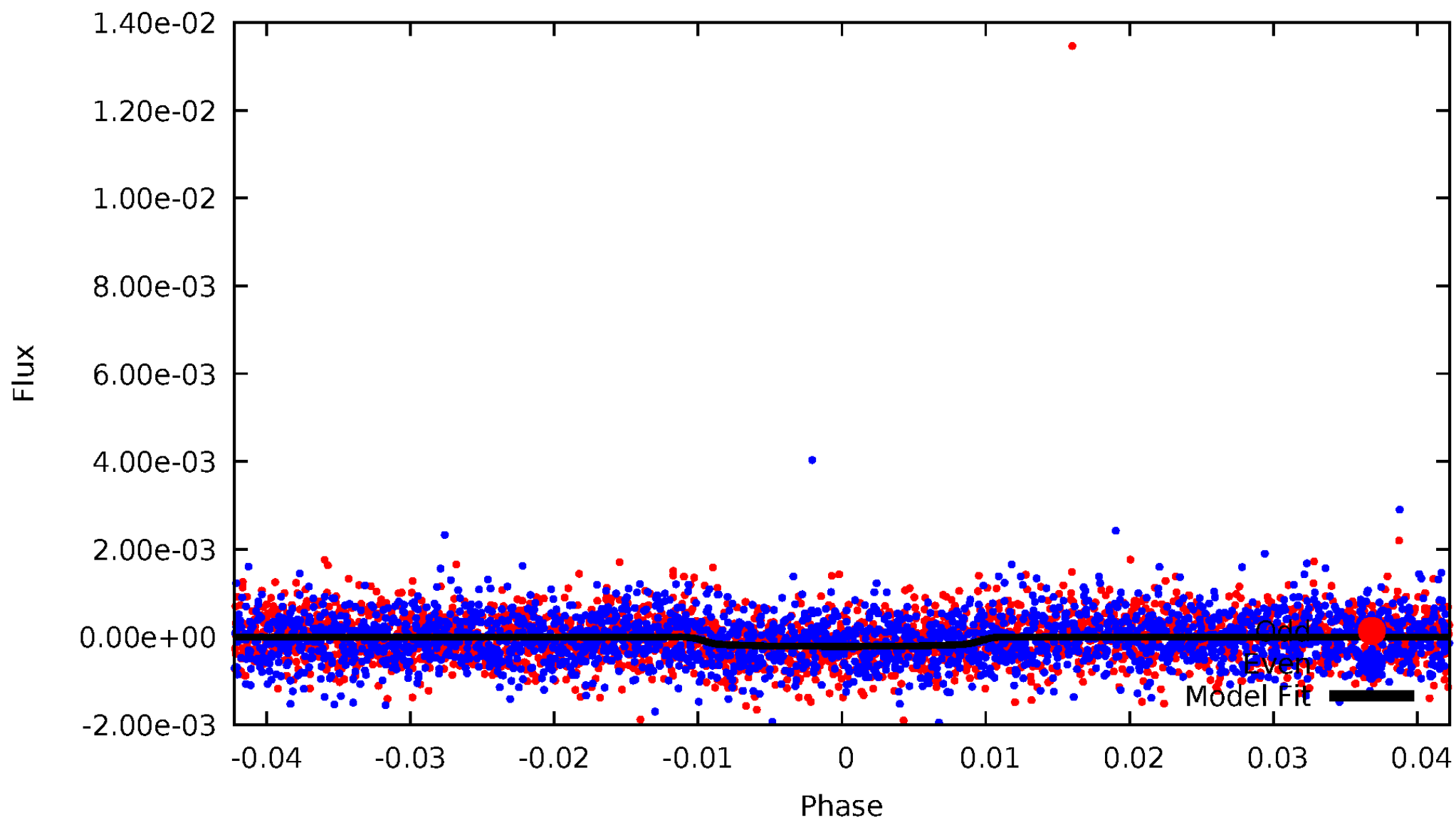


TCE 006118370-01



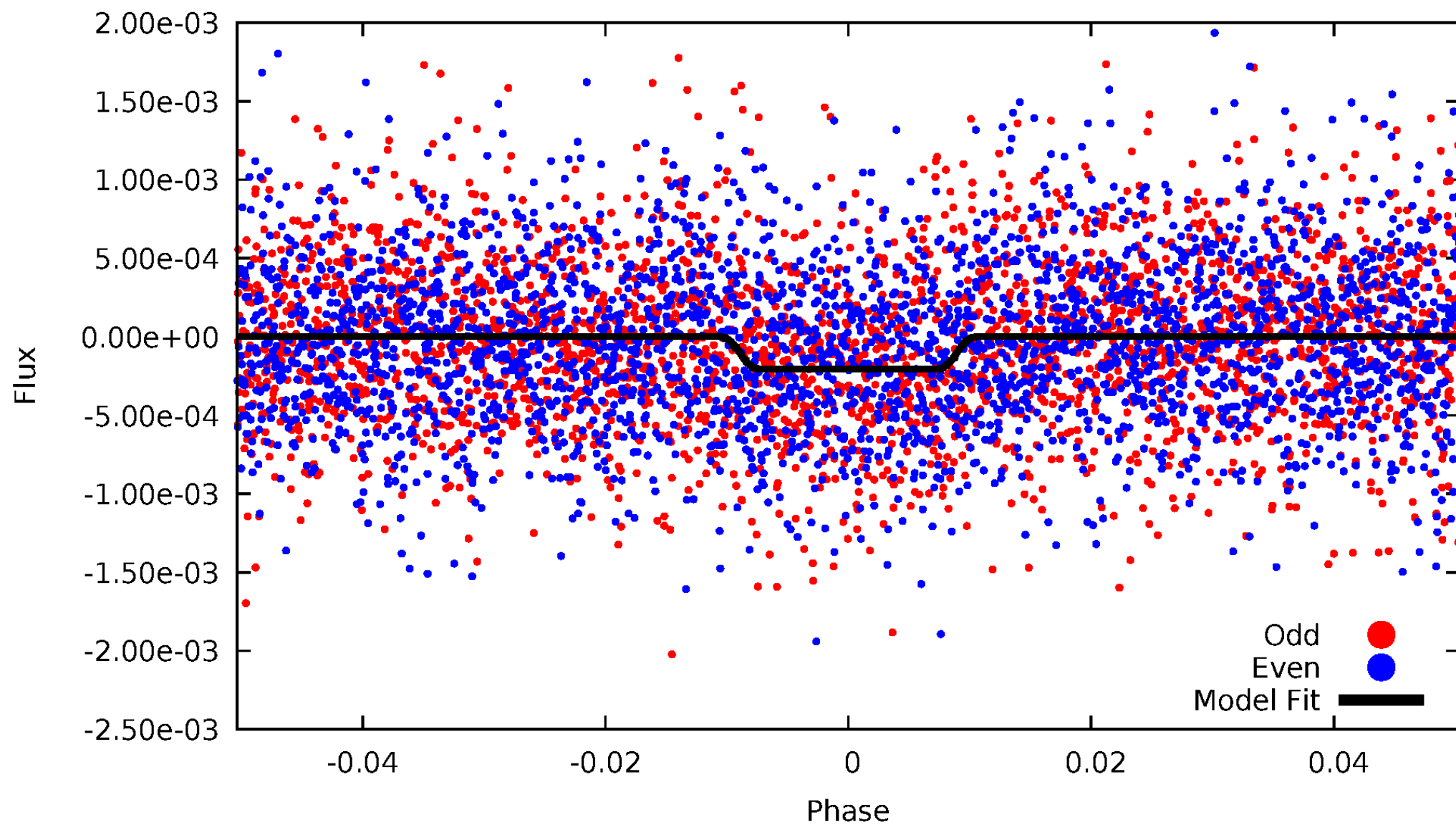
DV Odd/Even

TCE 006118370-01



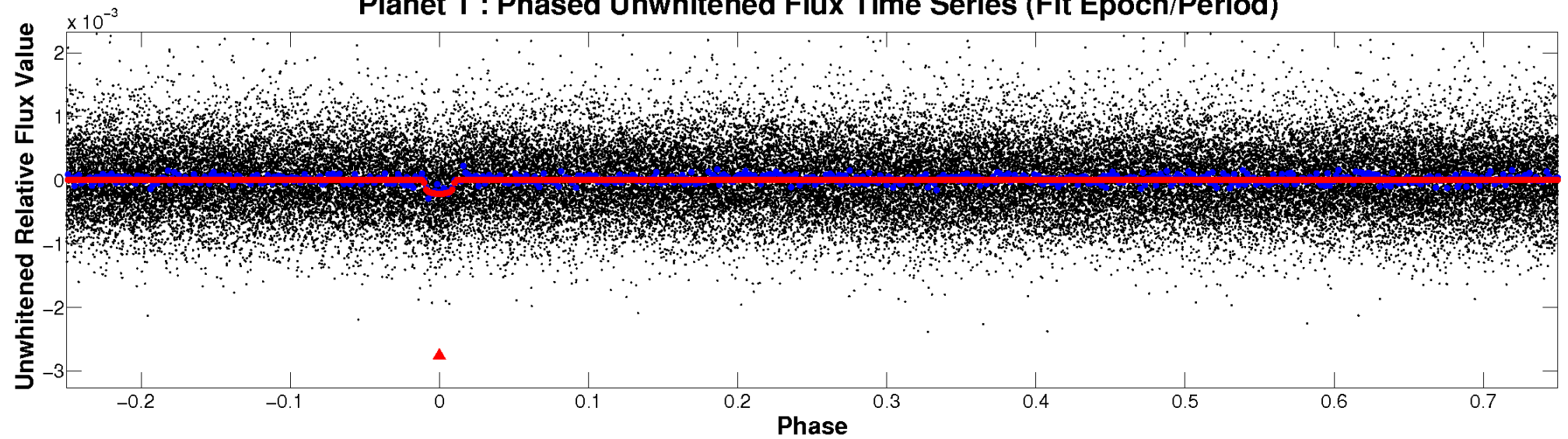
ALT Odd/Even

TCE 006118370-01

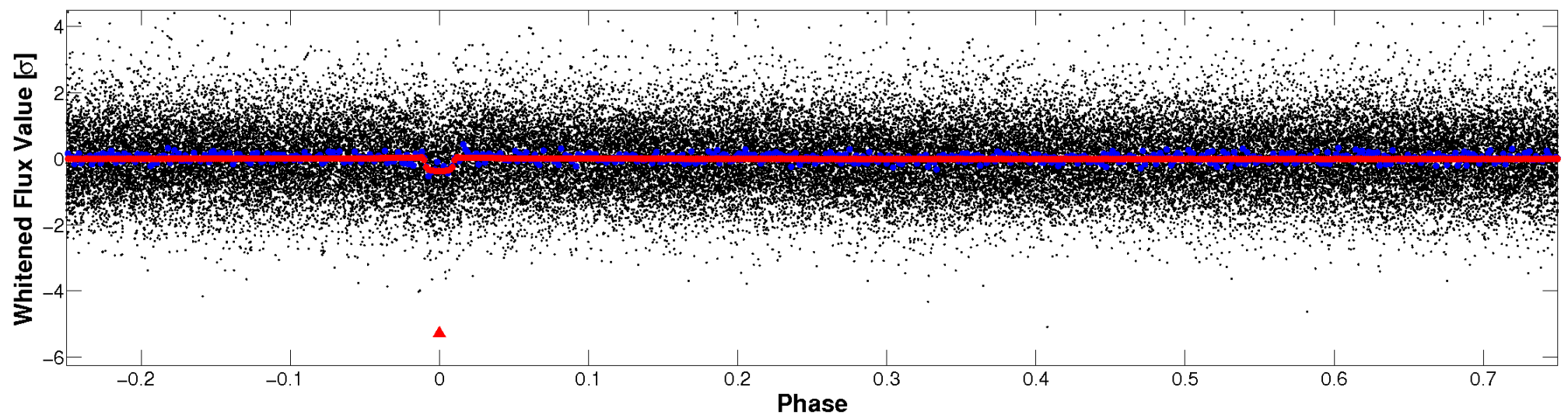


Non-Whitened Vs. Whitened Light Curve

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

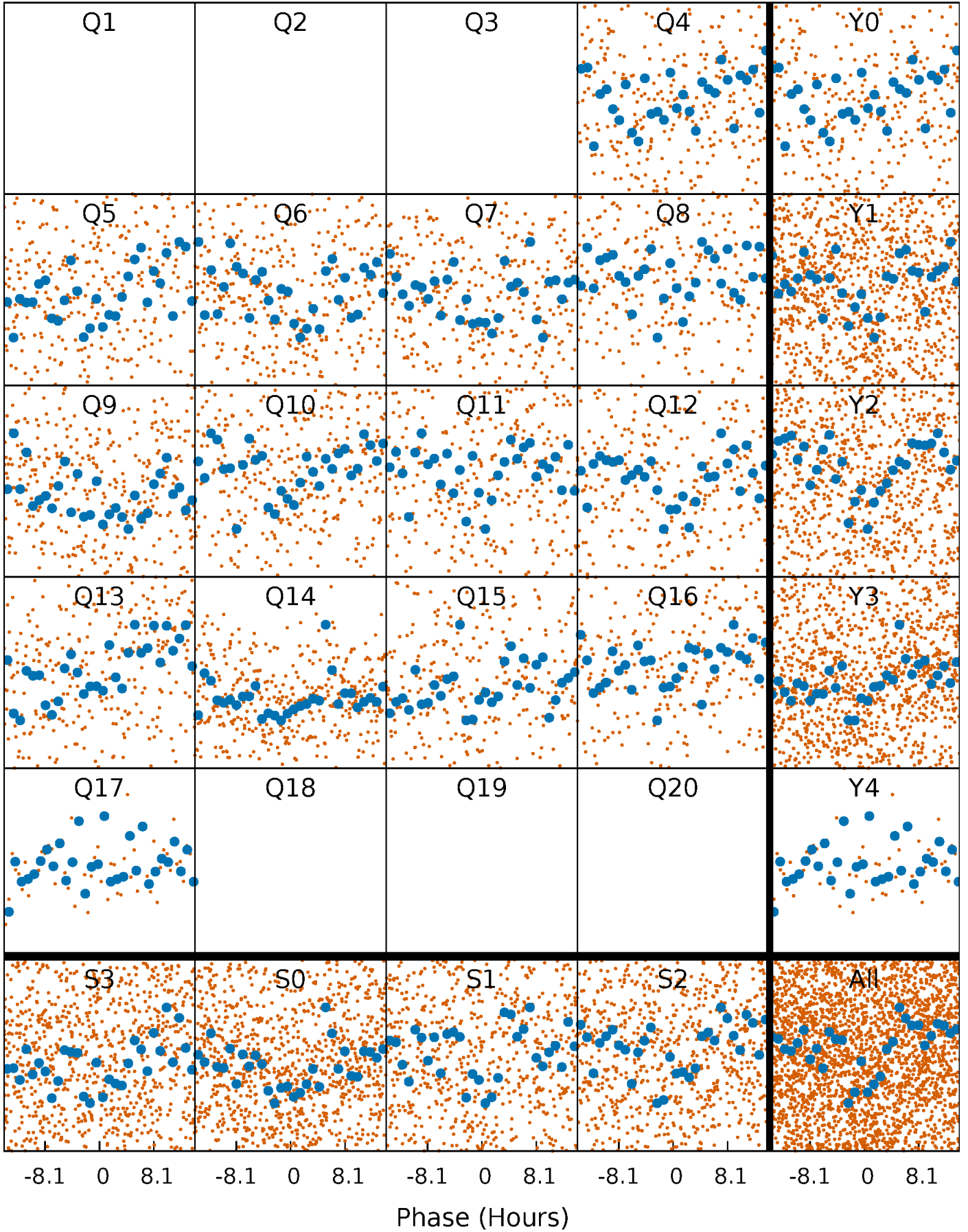


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



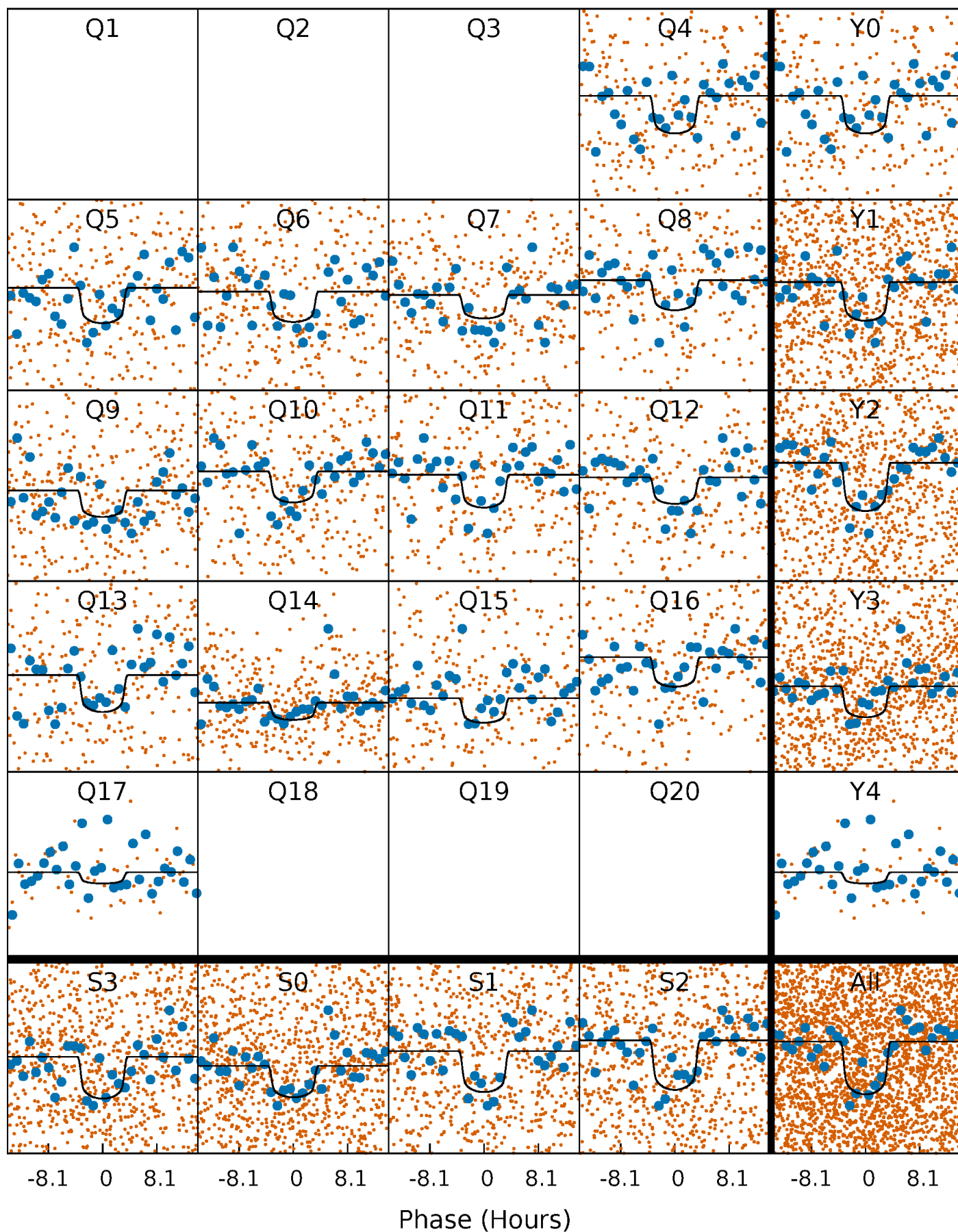
PDC Quarter-Phased Transit Curves

TCE 006118370-01 P= 14.032808 Days $T_0=138.065200$ (BKJD)



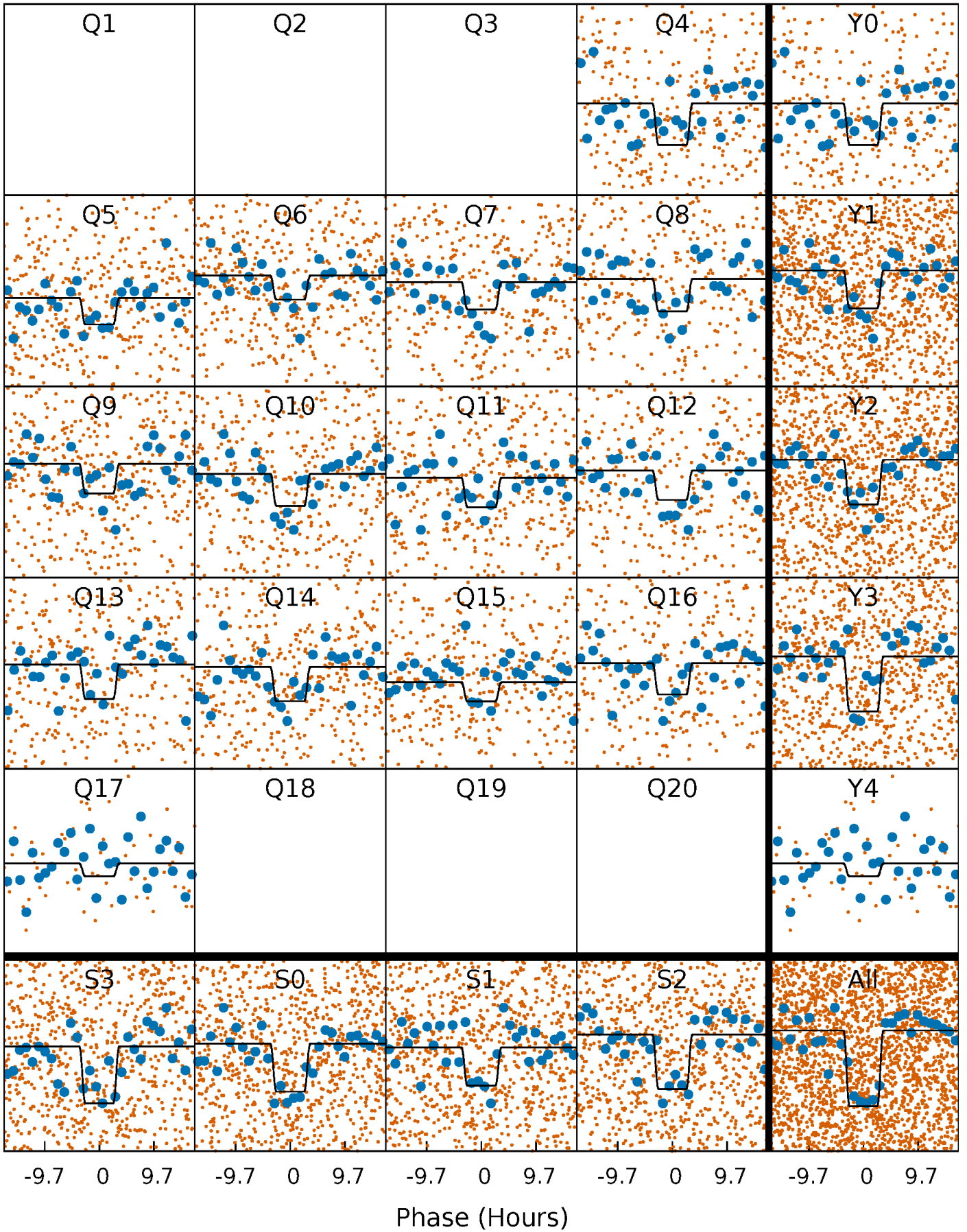
DV Quarter-Phased Transit Curves

TCE 006118370-01 P= 14.032808 Days $T_0=138.065200$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

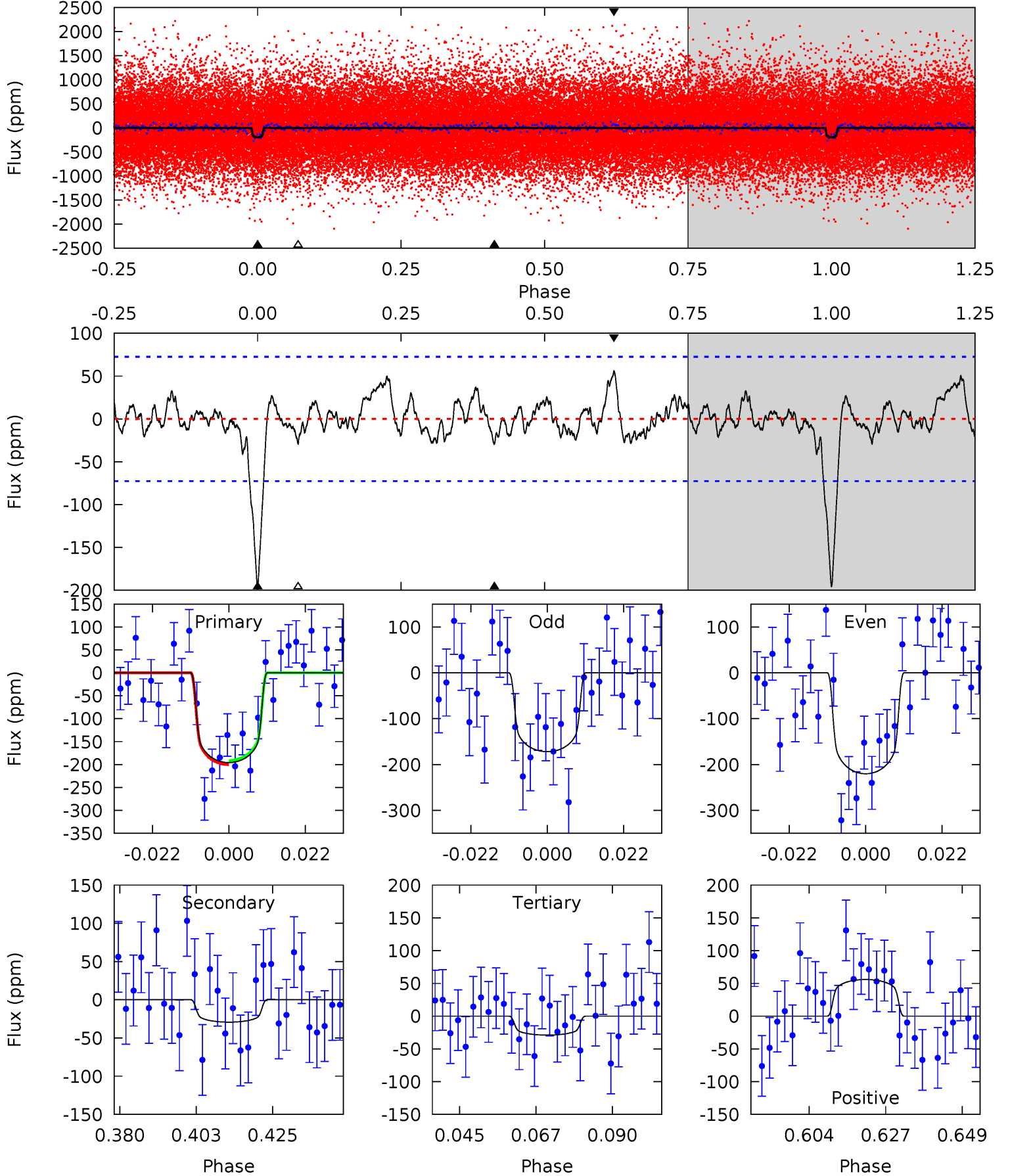
TCE 006118370-01 P= 14.032025 Days $T_0=138.104720$ (BKJD)



DV Model-Shift Uniqueness Test

006118370-01, $P = 14.032808$ Days, $E = 138.065200$ Days

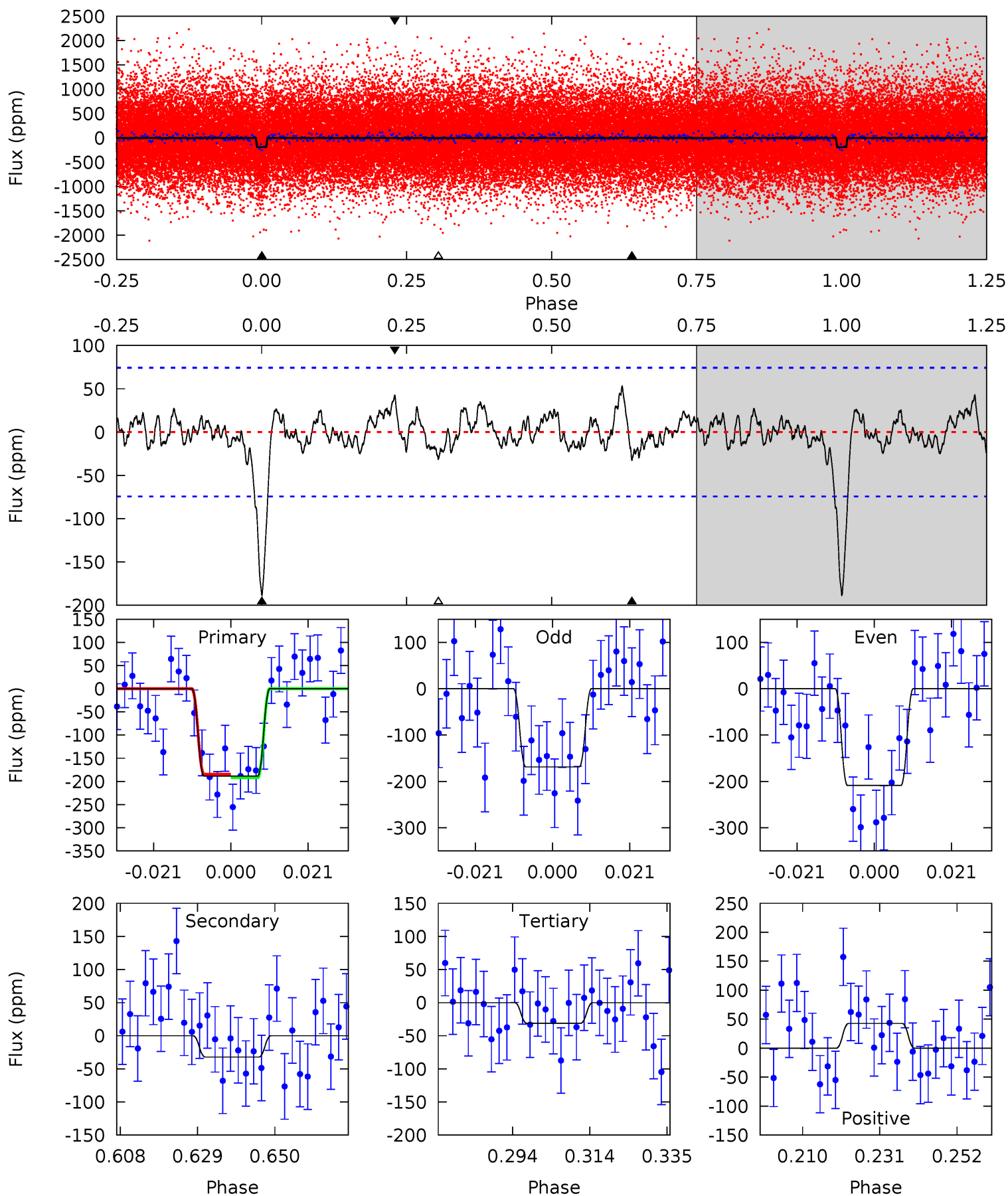
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	1.97	1.94	3.75	4.87	2.28	1.14	11.2	9.39	0.03	-1.79	1.62	0.92	0.22	0.29



Alt Model-Shift Uniqueness Test

006118370-01, P = 14.032025 Days, E = 138.104720 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	2.12	2.06	2.80	4.88	2.31	0.94	10.3	9.58	0.06	-0.69	1.31	0.87	0.22	0.26



Stellar Parameters For KIC 006118370

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6063^{+190}_{-232}	$4.470^{+0.052}_{-0.208}$	$-0.020^{+0.250}_{-0.300}$	$1.001^{+0.318}_{-0.106}$	$1.079^{+0.130}_{-0.159}$	$1.517^{+0.408}_{-0.770}$
	+3%/-4%	+1%/-5%	+1250%/-1500%	+32%/-11%	+12%/-15%	+27%/-51%
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 006118370-01 / KOI 3458.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-29 ± 15	$1.82^{+0.45}_{-0.37}$	1116^{+84}_{-60}	3866^{+446}_{-450}	63^{+57}_{-34}
Alt.	-32 ± 15	$1.64^{+0.47}_{-0.39}$	1119^{+83}_{-58}	4052^{+530}_{-529}	83^{+83}_{-47}

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 $A_{obs} \gg 1.0$

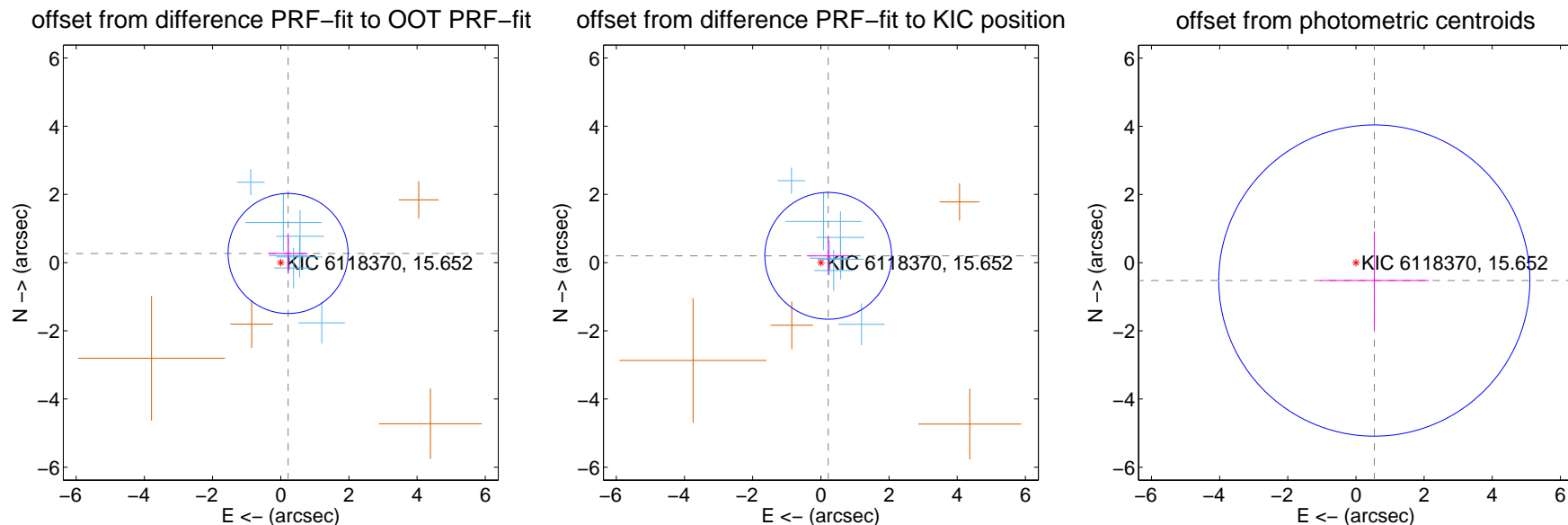
DV Centroid Data

Supplemental centroid analysis for 006118370-01. Kepler magnitude: 15.65. Transit SNR 10.90

There are 7 quarters with good PRF difference image offsets

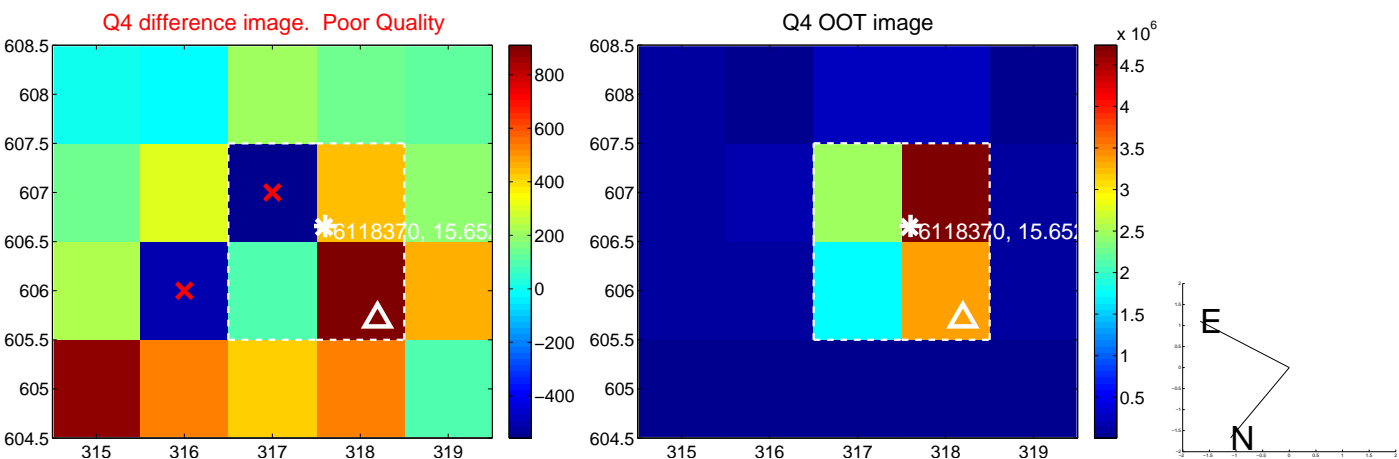
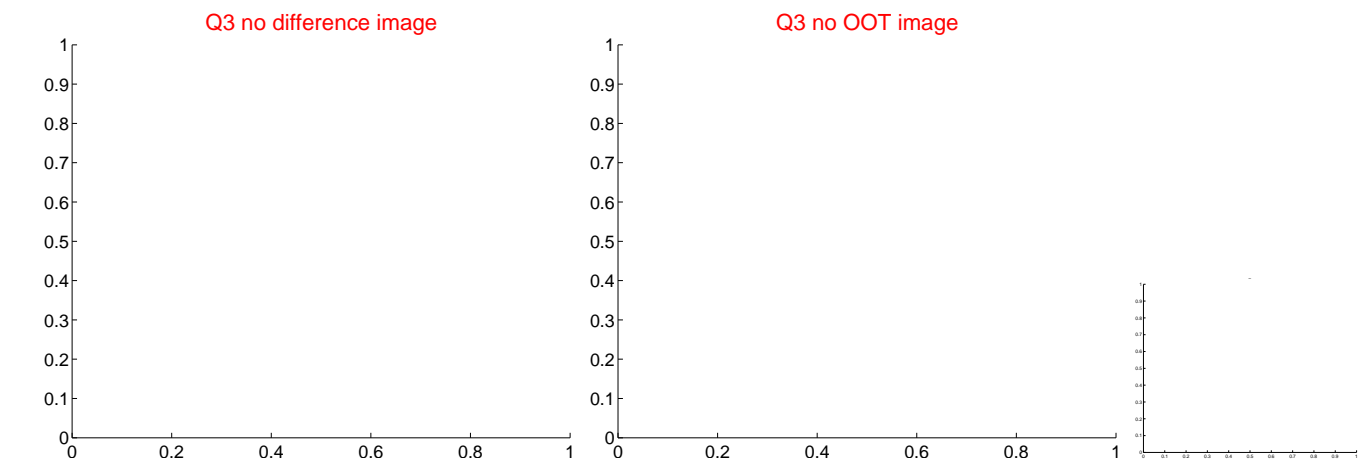
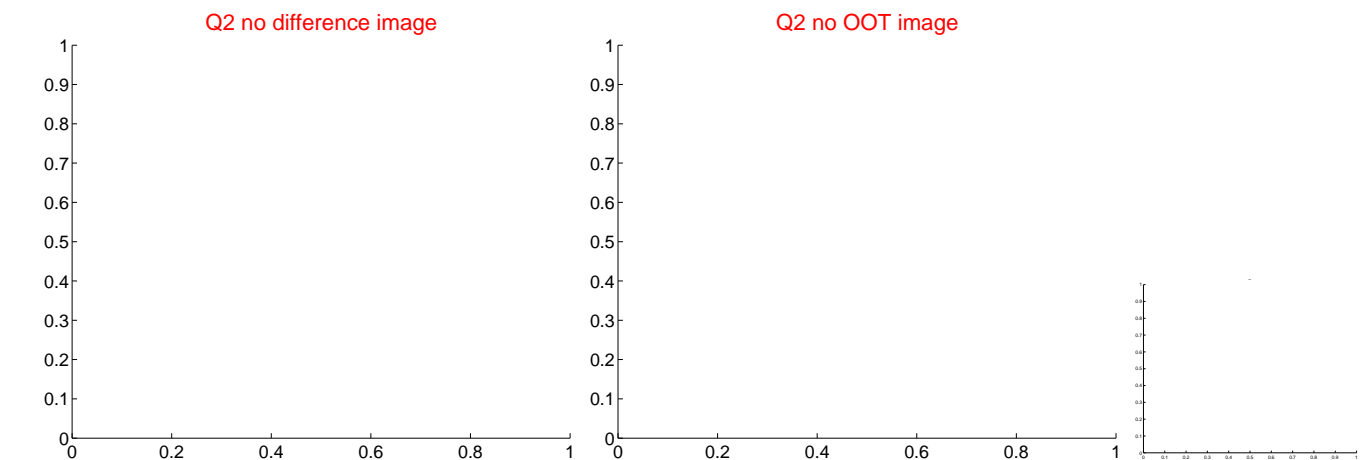
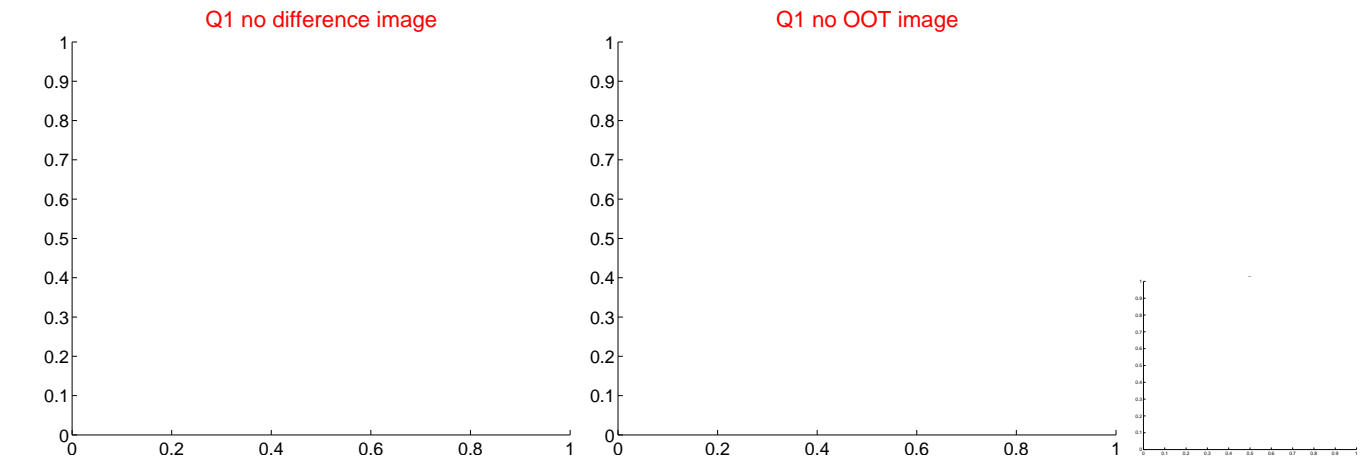
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.343 ± 0.587	0.58	-0.215 ± 0.577	0.267 ± 0.594
PRF-fit source offset from KIC position	0.293 ± 0.619	0.47	-0.216 ± 0.631	0.199 ± 0.565
photometric centroid source offset	0.75 ± 1.52	0.49	-0.54 ± 1.60	-0.52 ± 1.44

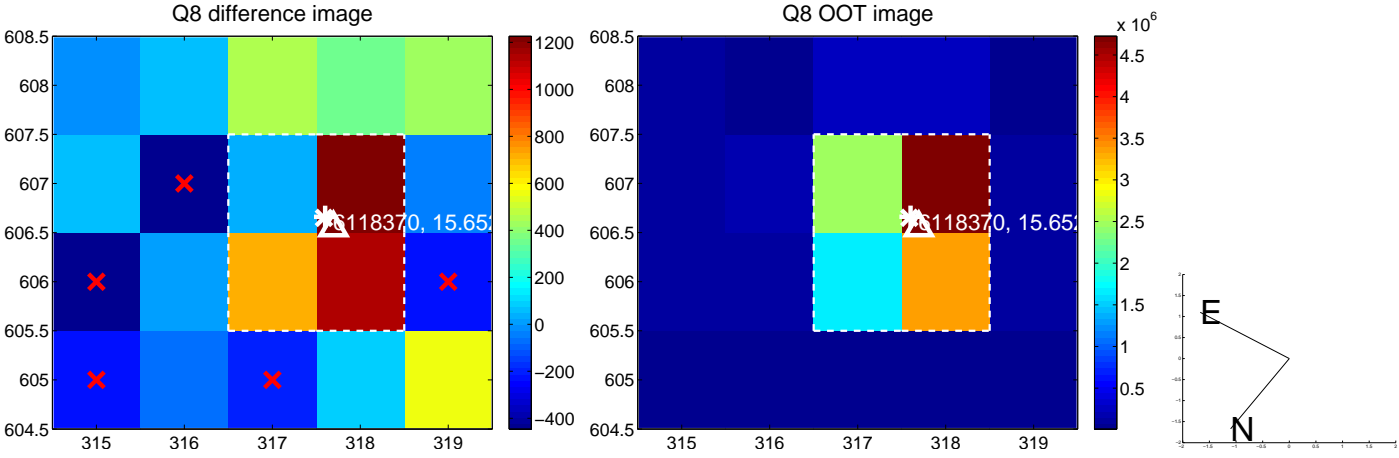
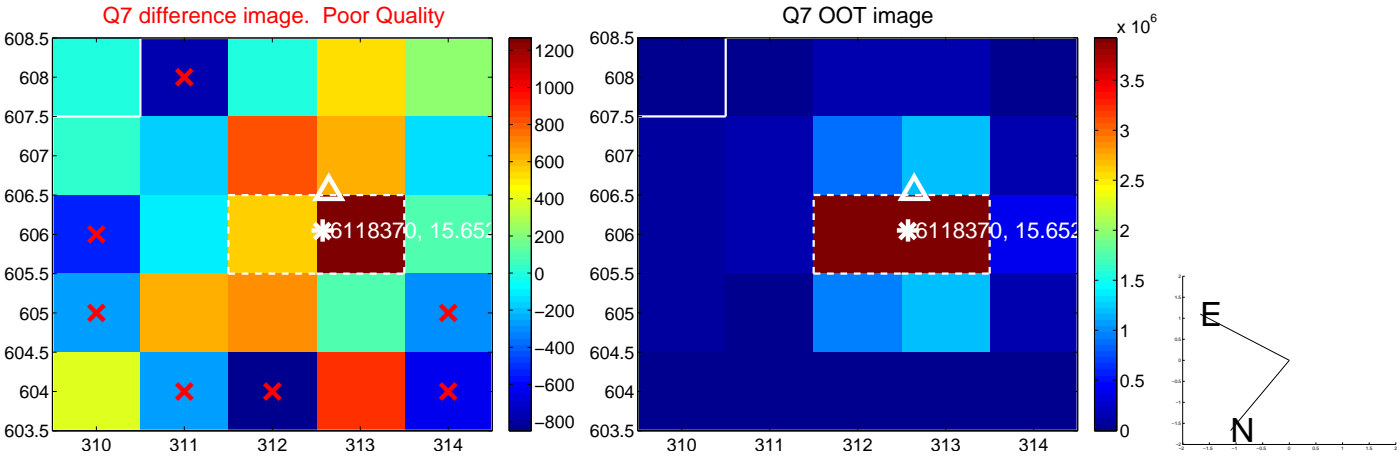
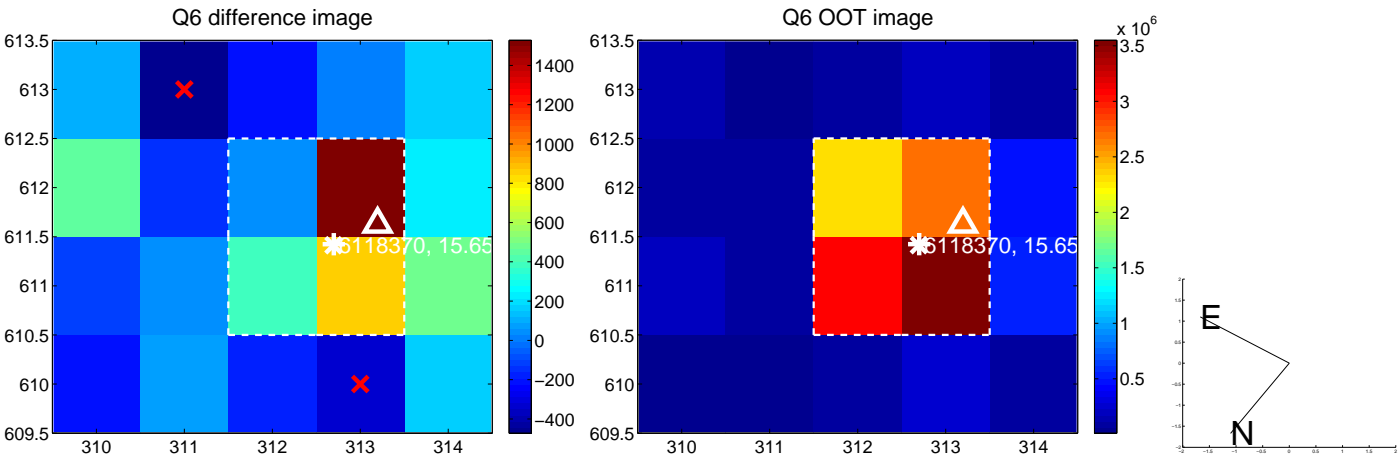
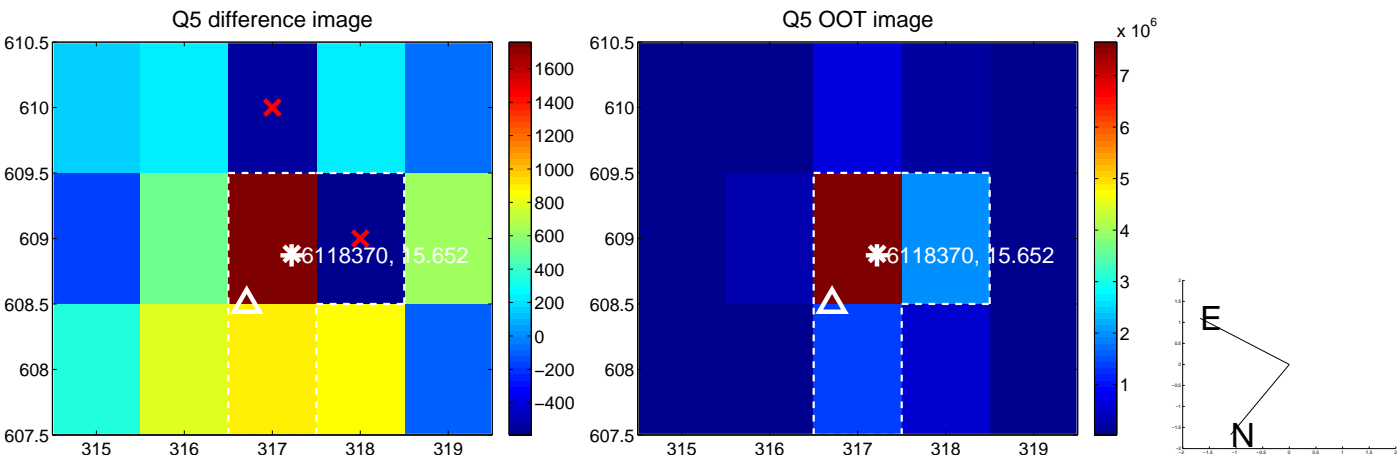


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

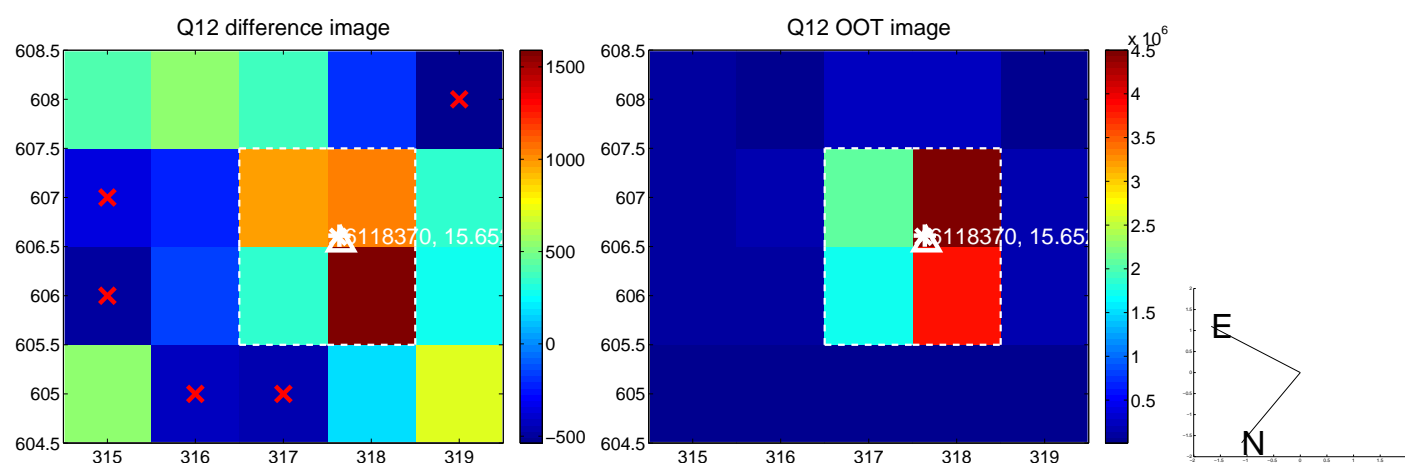
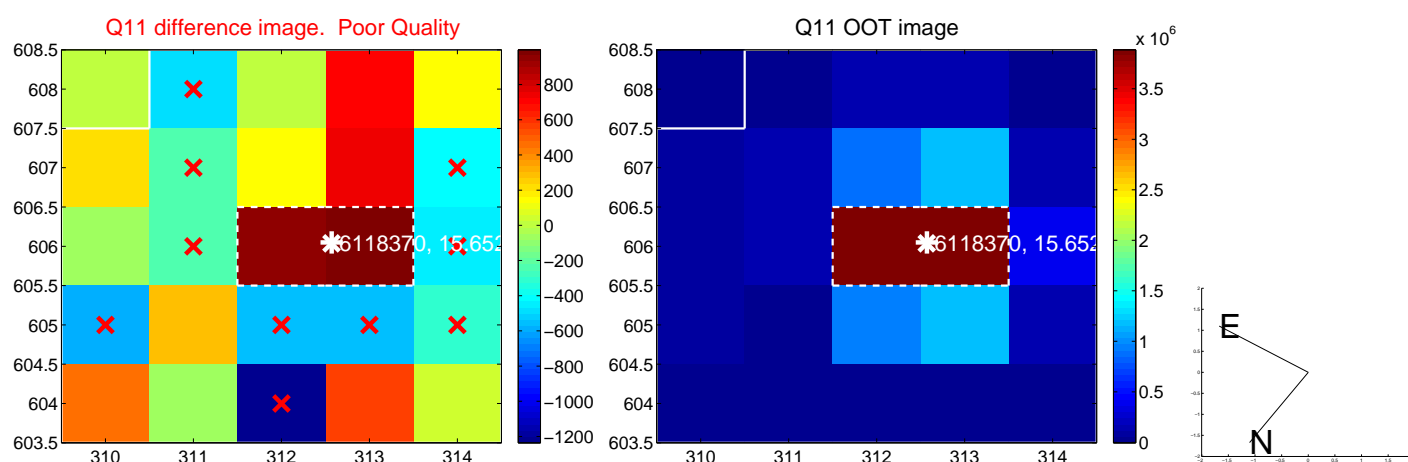
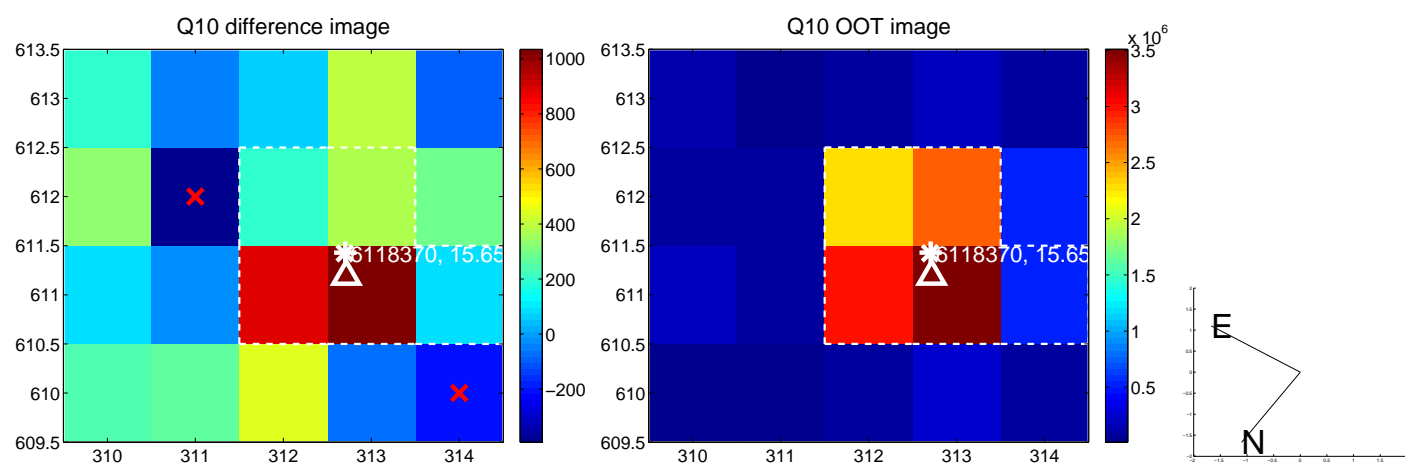
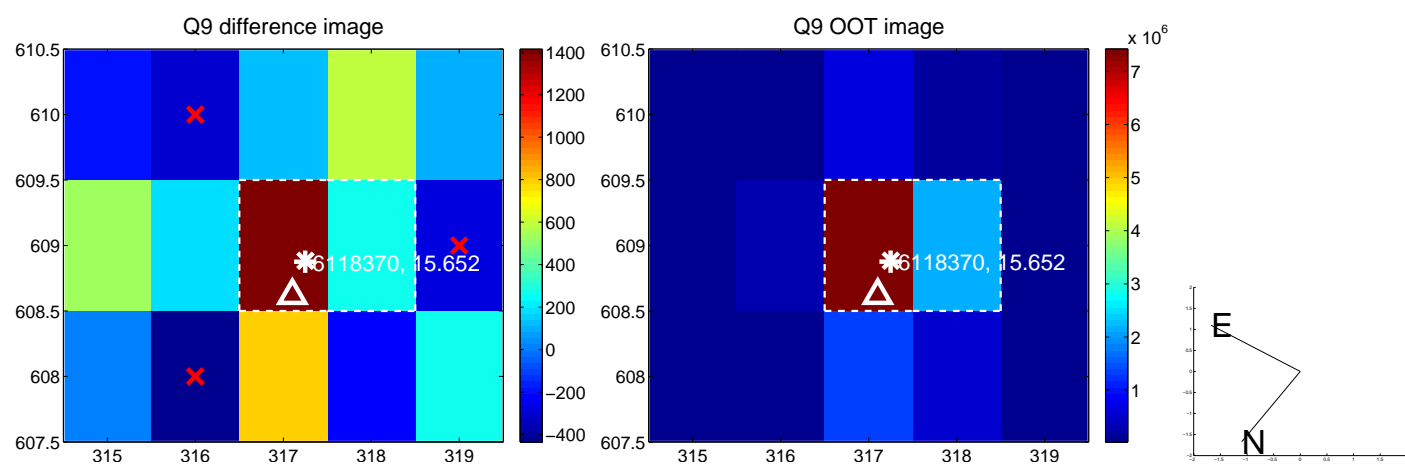
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



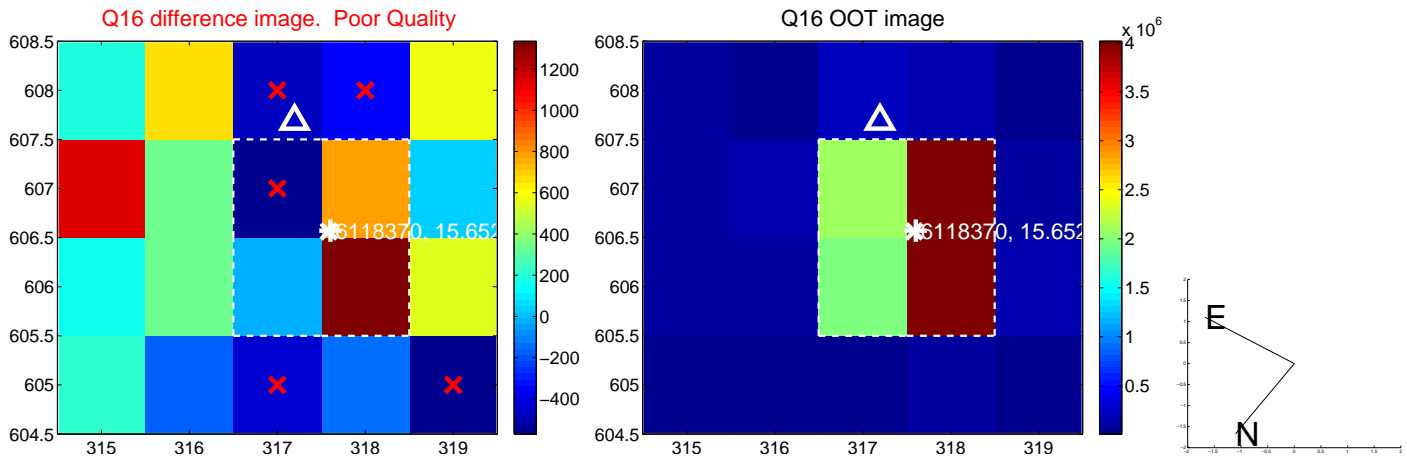
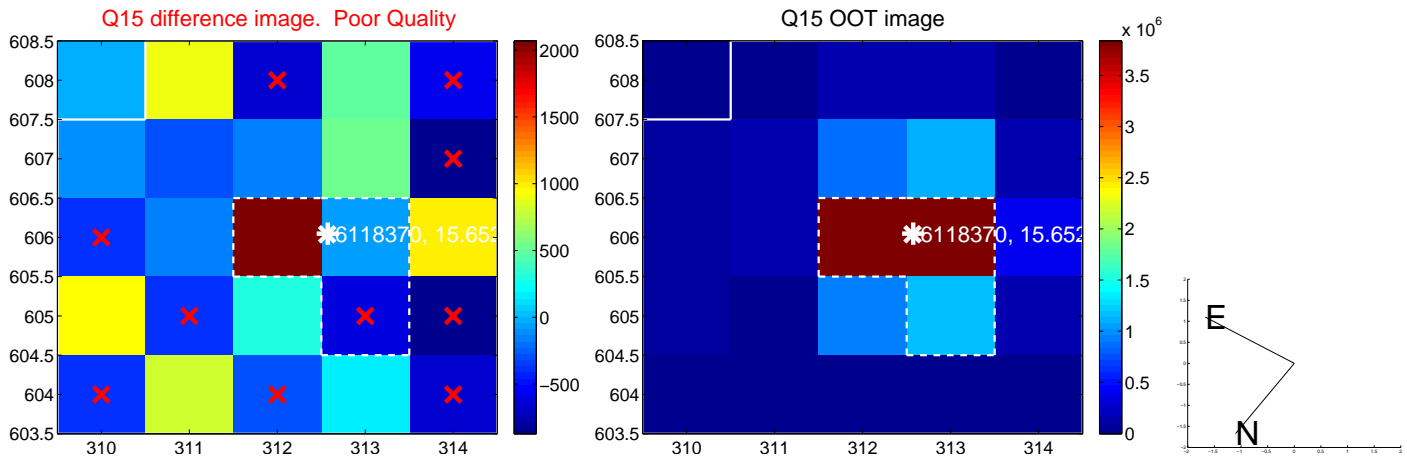
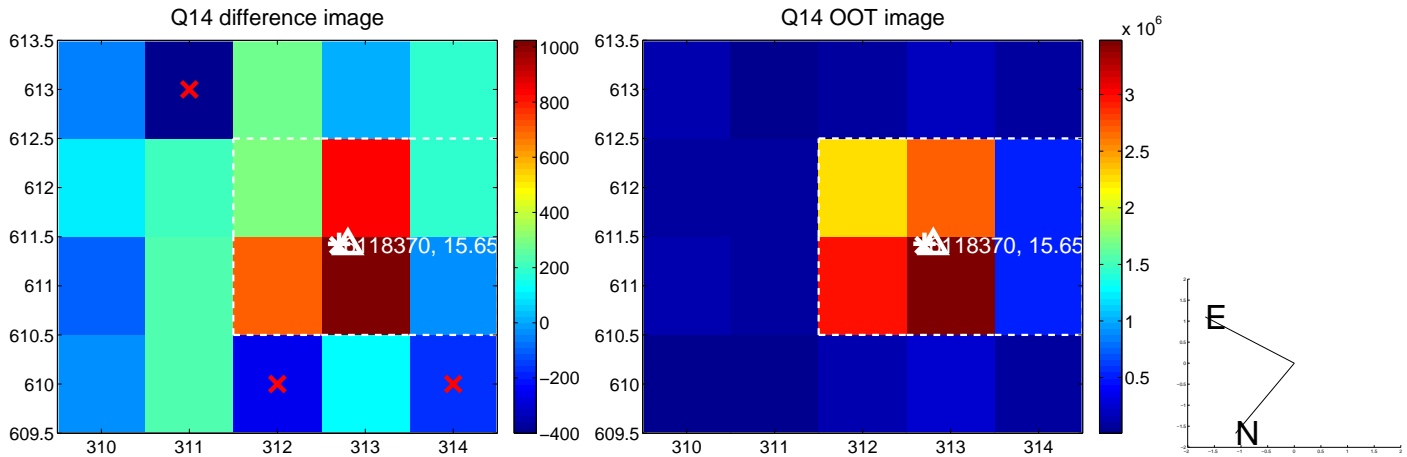
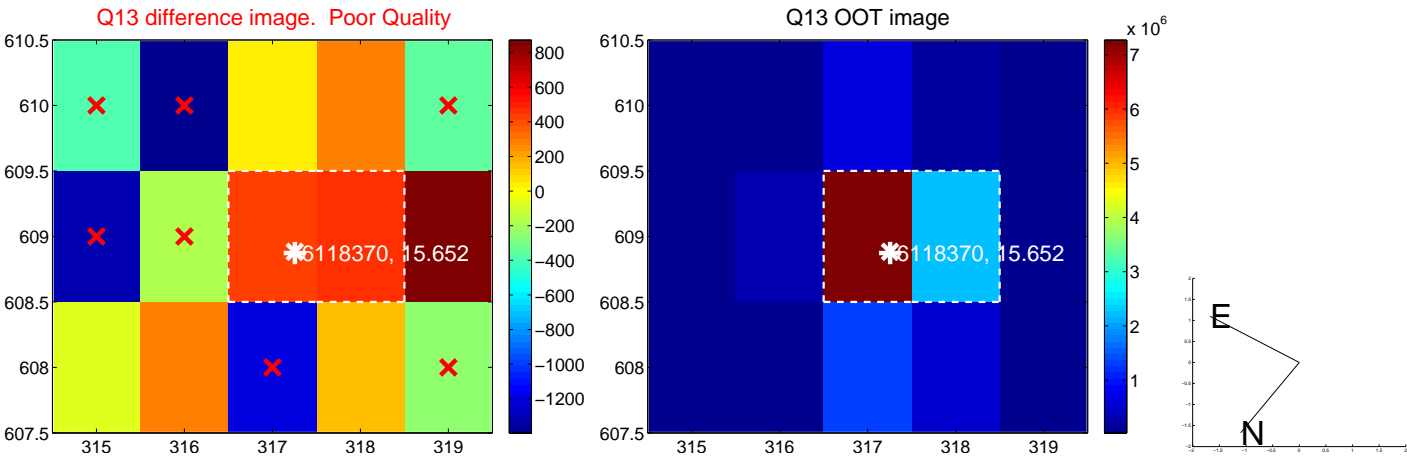
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



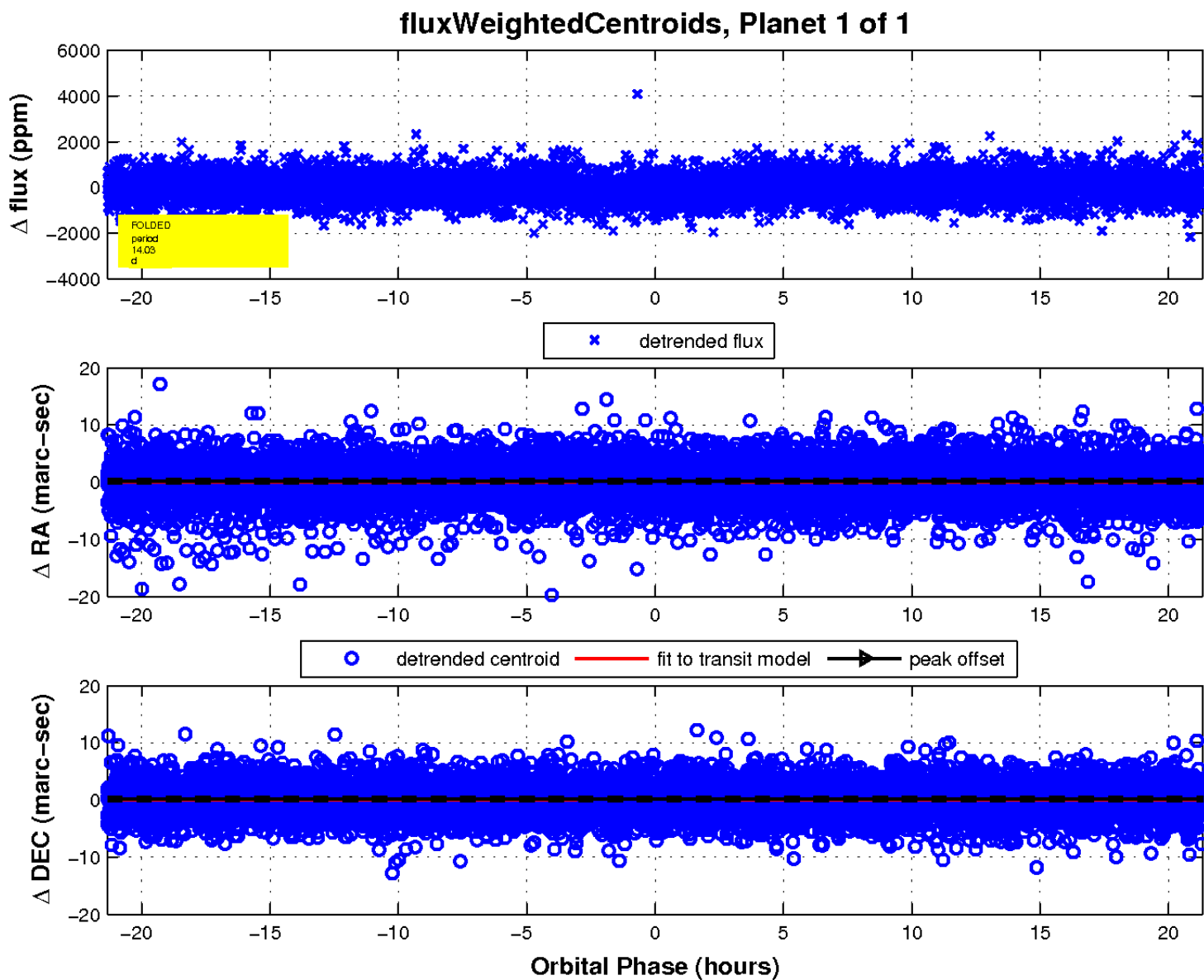
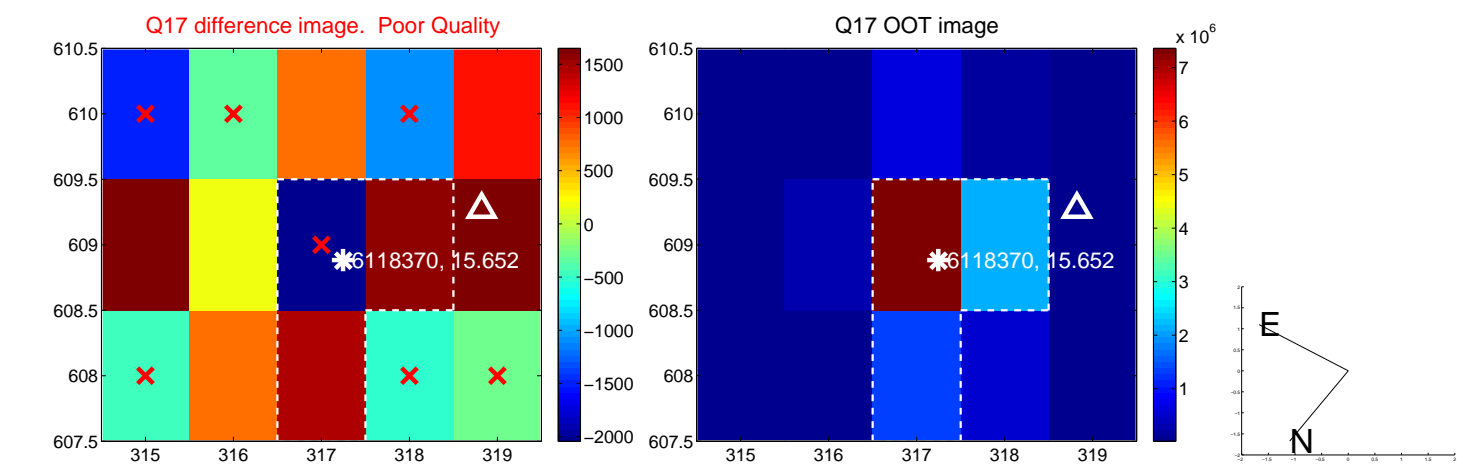
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

