

KIC 009118716

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})
009118716-01	OBS	No	1.141406	132.585497	24.3	2.963	7.7	6.4	3.05	6720	1.75	27650.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009118716-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

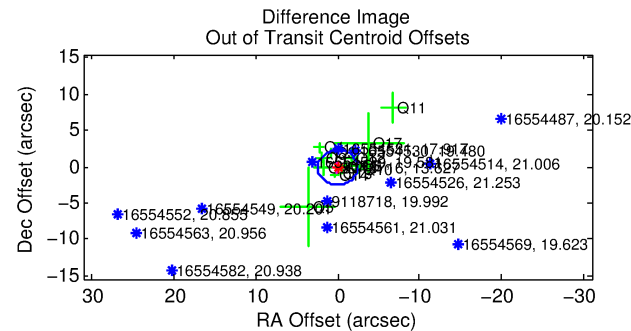
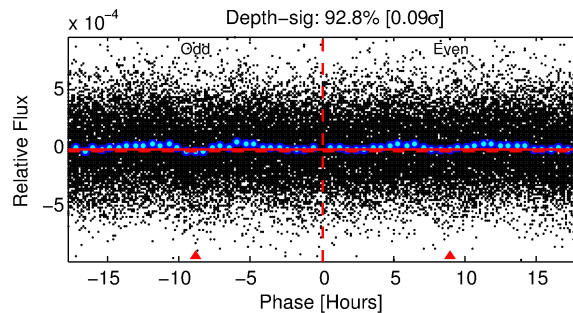
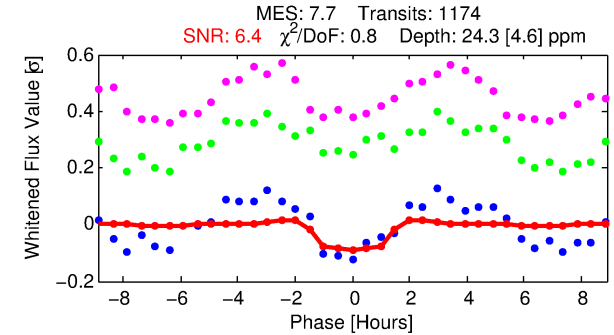
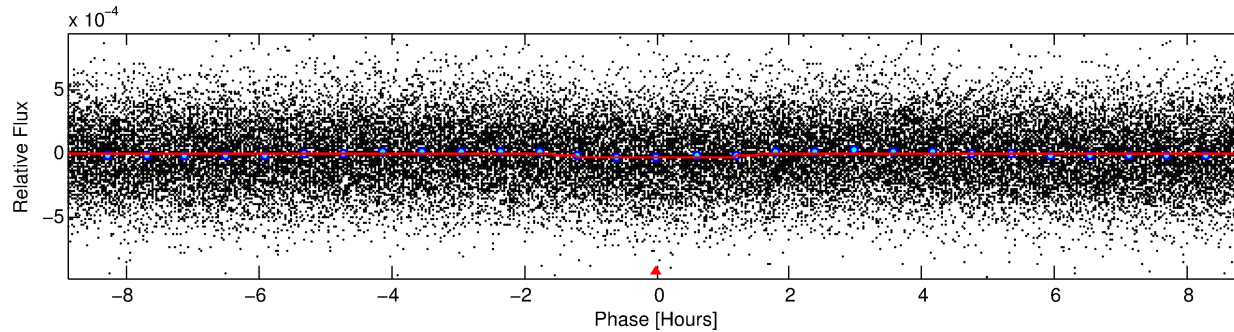
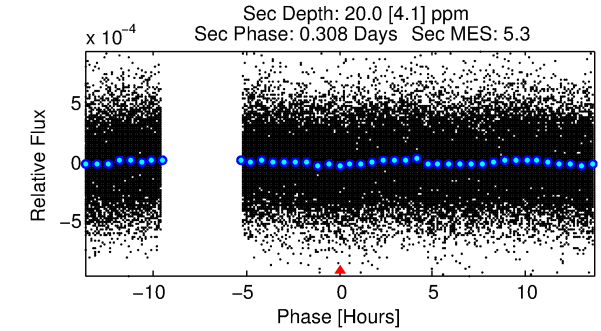
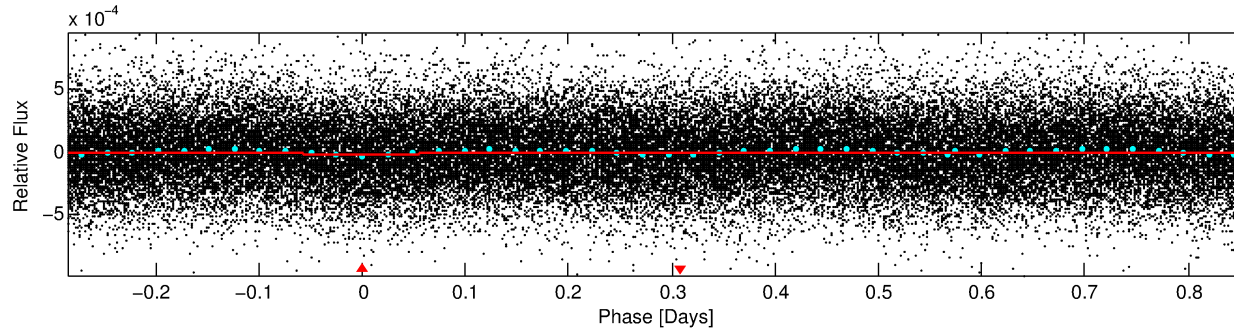
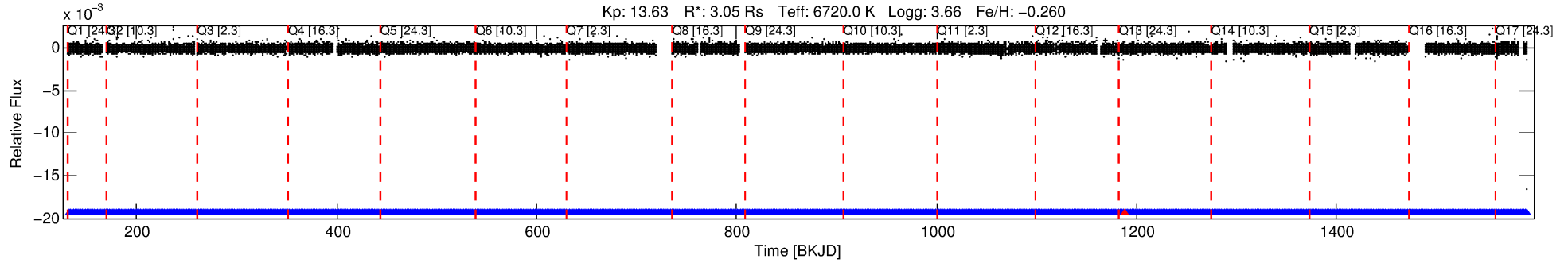
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009118716-01

No Significant Match Found

DV One-Page Summary

KIC: 9118716 Candidate: 1 of 1 Period: 1.141 d



DV Fit Results:

Period = 1.14141 [0.00002] d
Epoch = 132.5855 [0.0053] BKJD
Rp/R* = 0.0053 [0.0024]
a/R* = 1.63 [2.79]
b = 0.90 [0.60]
Seff = 27650.13 [26973.76]
Teq = 3288 [802] K
Rp = 1.75 [1.28] Re
a = 0.0248 [0.0144] AU
Ag = 2.21 [2.99] [0.41σ]
Teffp = 6199 [1496] K [1.71σ]

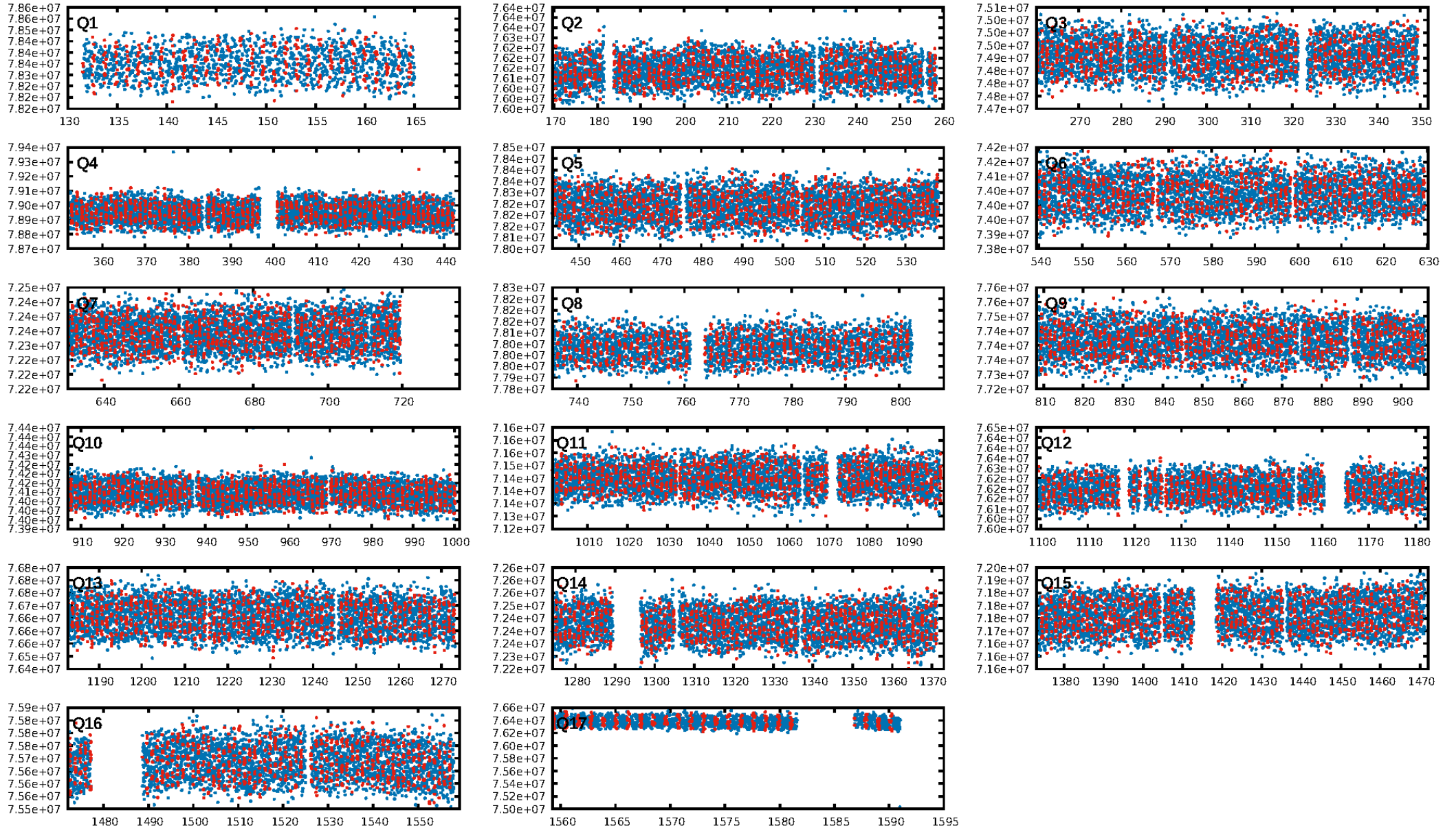
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 4.90e-13
RollingBand-fgt: 1.00 [1120/1121]
GhostDiagnostic-chr: -12.63
Centroid-sig: N/A
Centroid-so: 1.941 arcsec [1.02σ]
OotOffset-rm: 0.120 arcsec [0.15σ]
KicOffset-rm: 0.128 arcsec [0.24σ]
OotOffset-st: 3/3/3/5 [14]
KicOffset-st: 3/3/3/5 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [17/17]

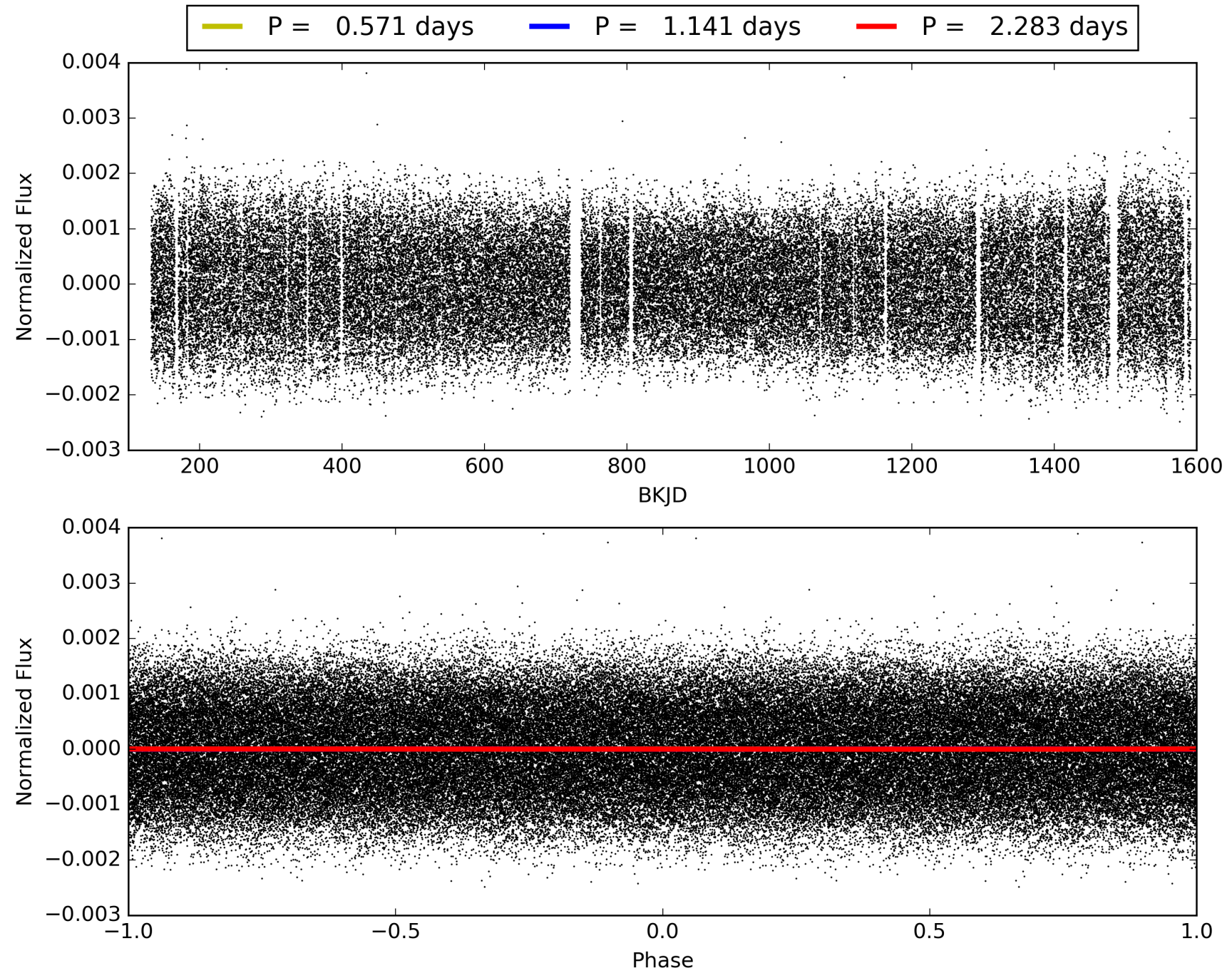
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:38:01 Z

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

TCE 009118716-01, PDC Light Curves

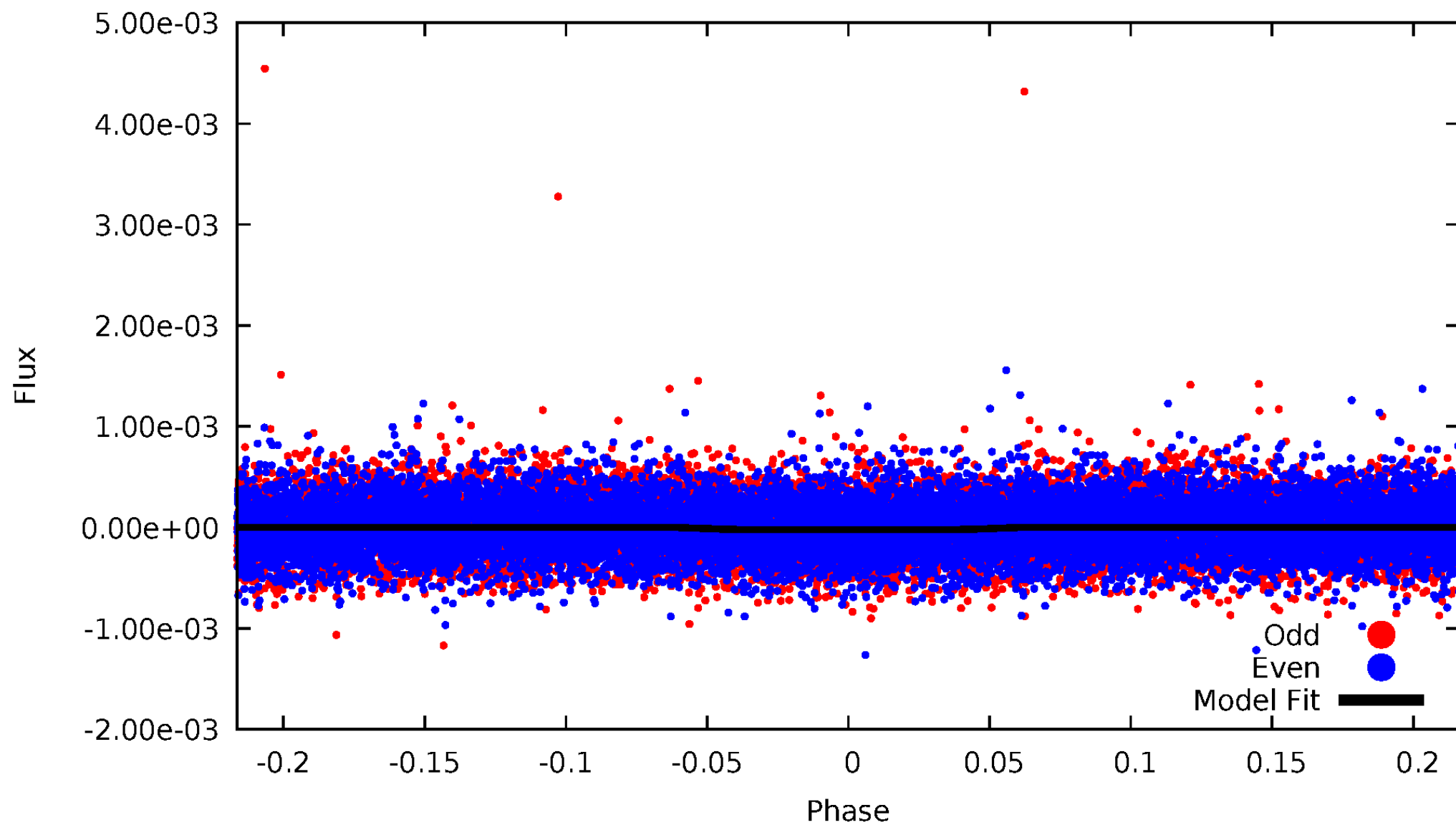


TCE 009118716-01



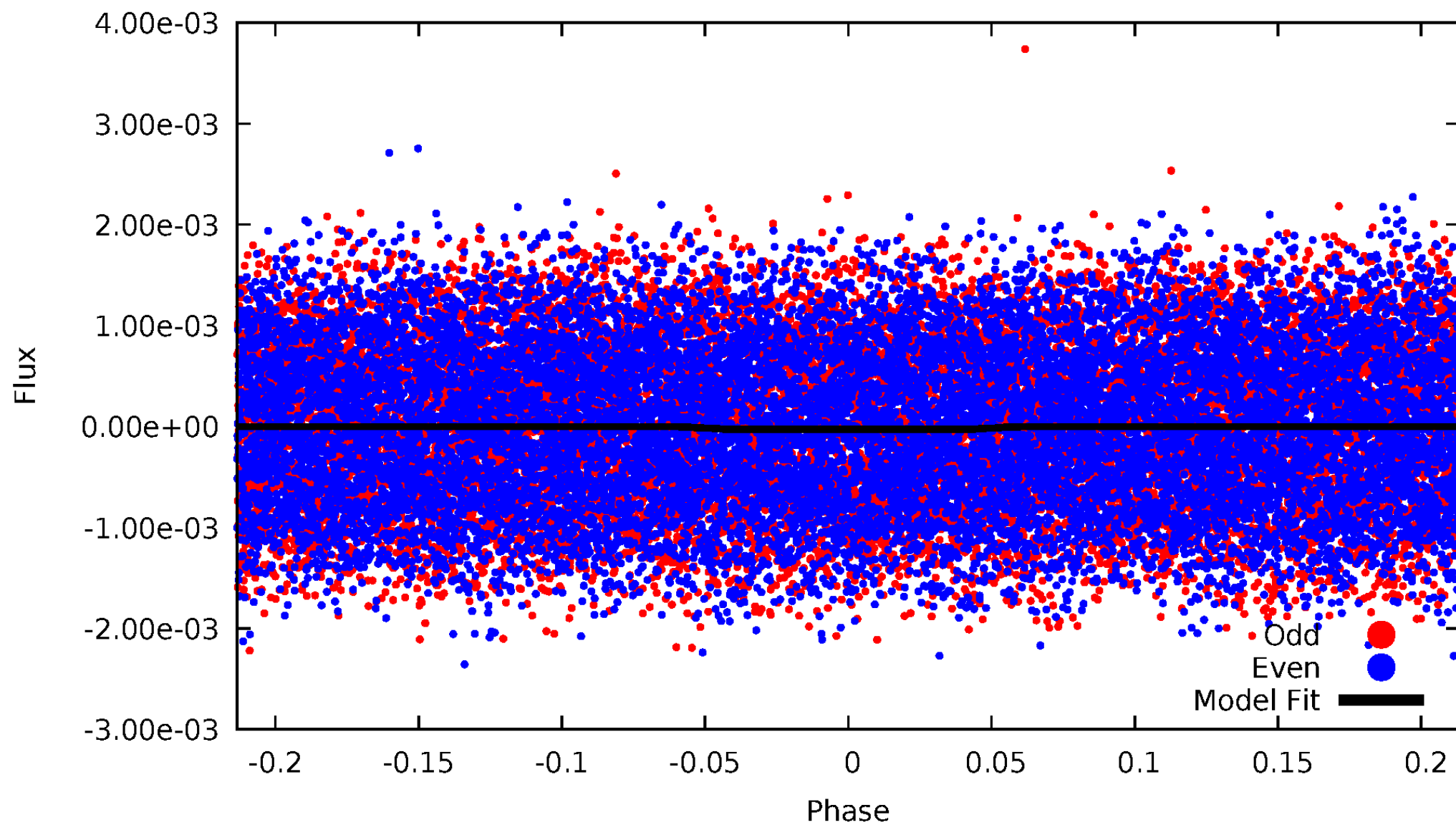
DV Odd/Even

TCE 009118716-01



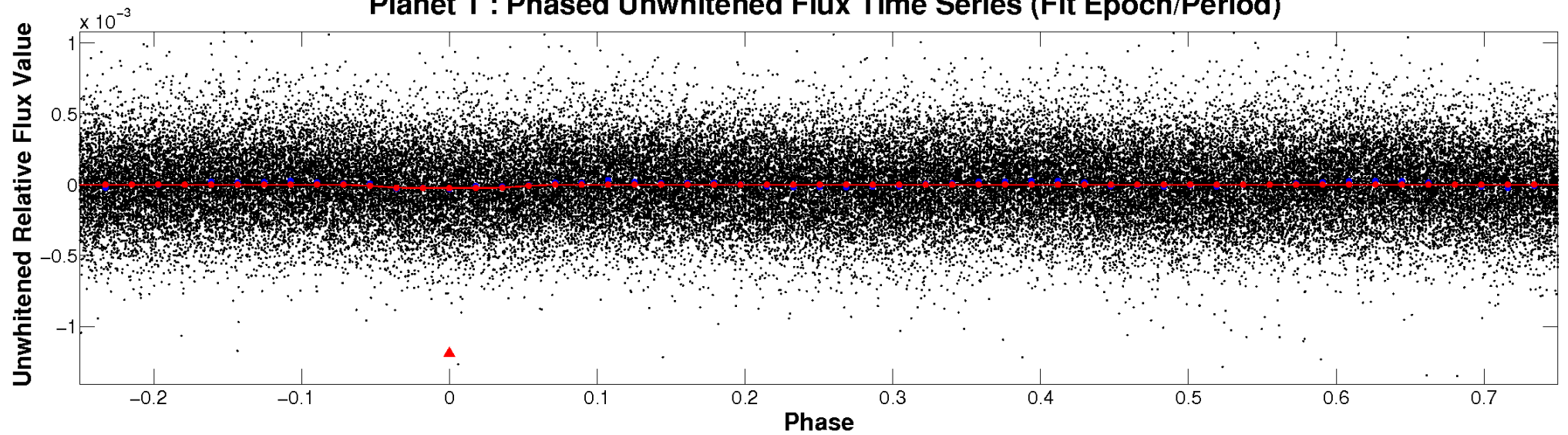
ALT Odd/Even

TCE 009118716-01

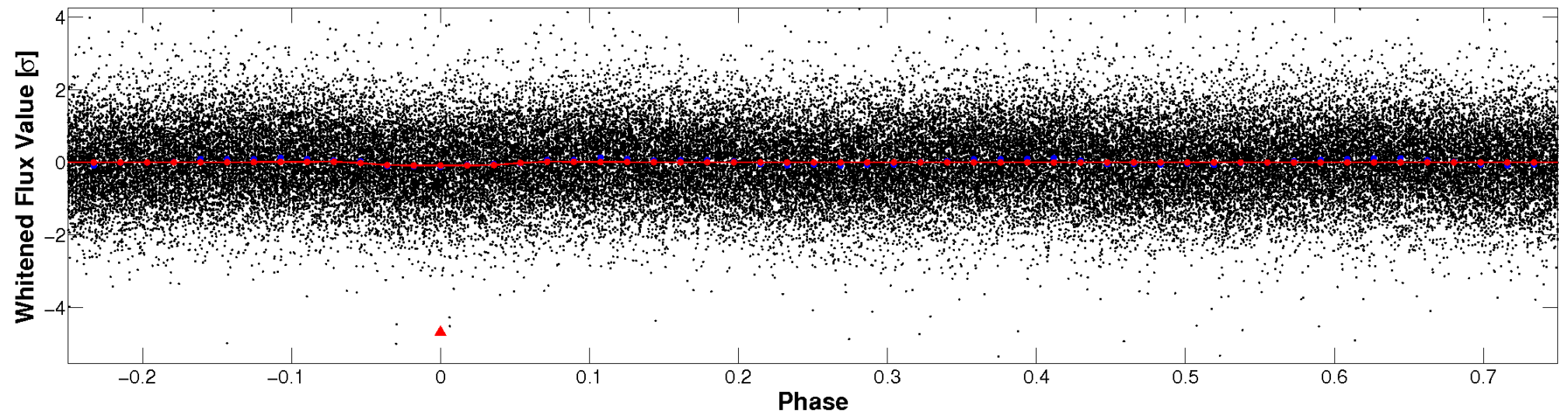


Non-Whitened Vs. Whitened Light Curve

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

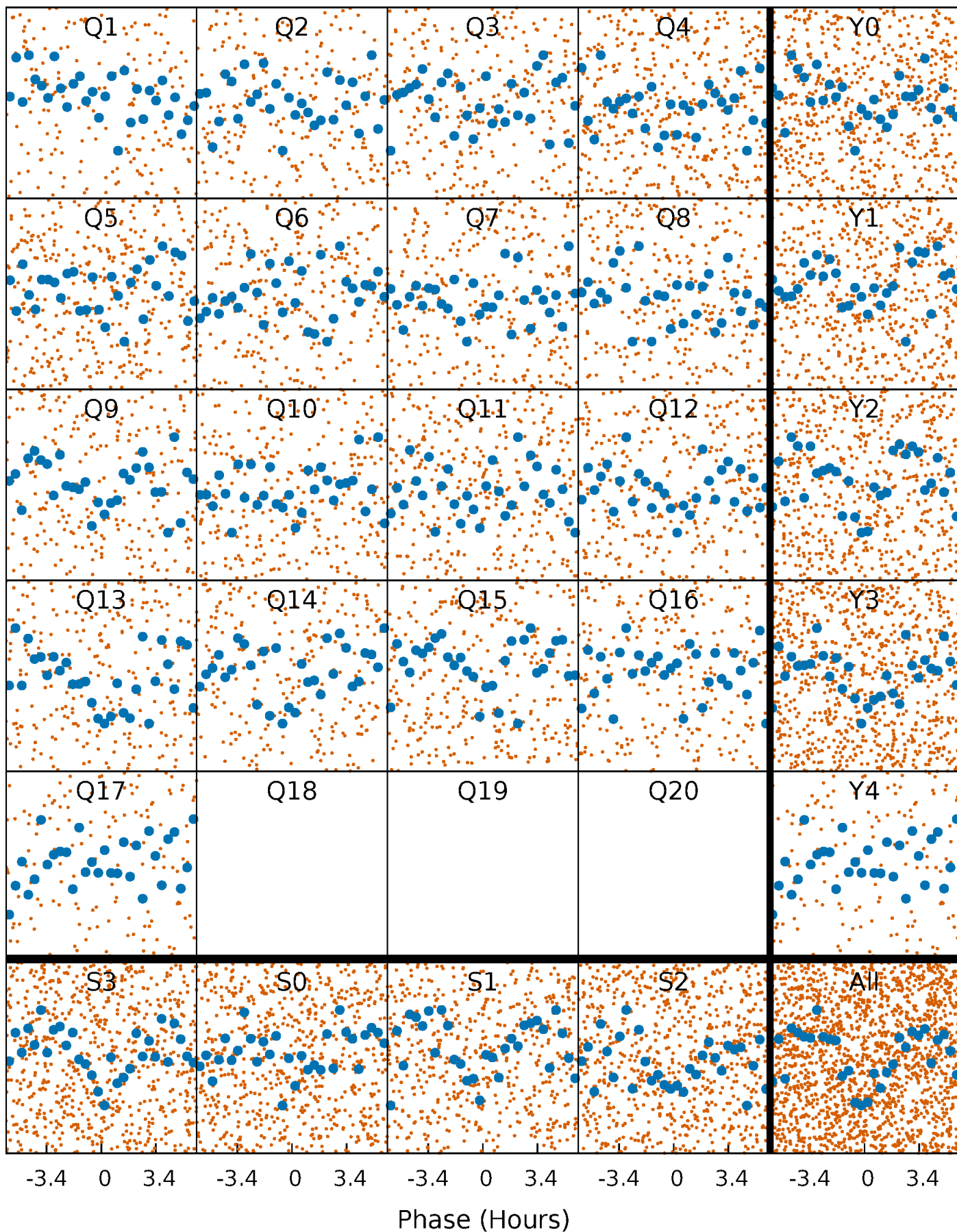


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



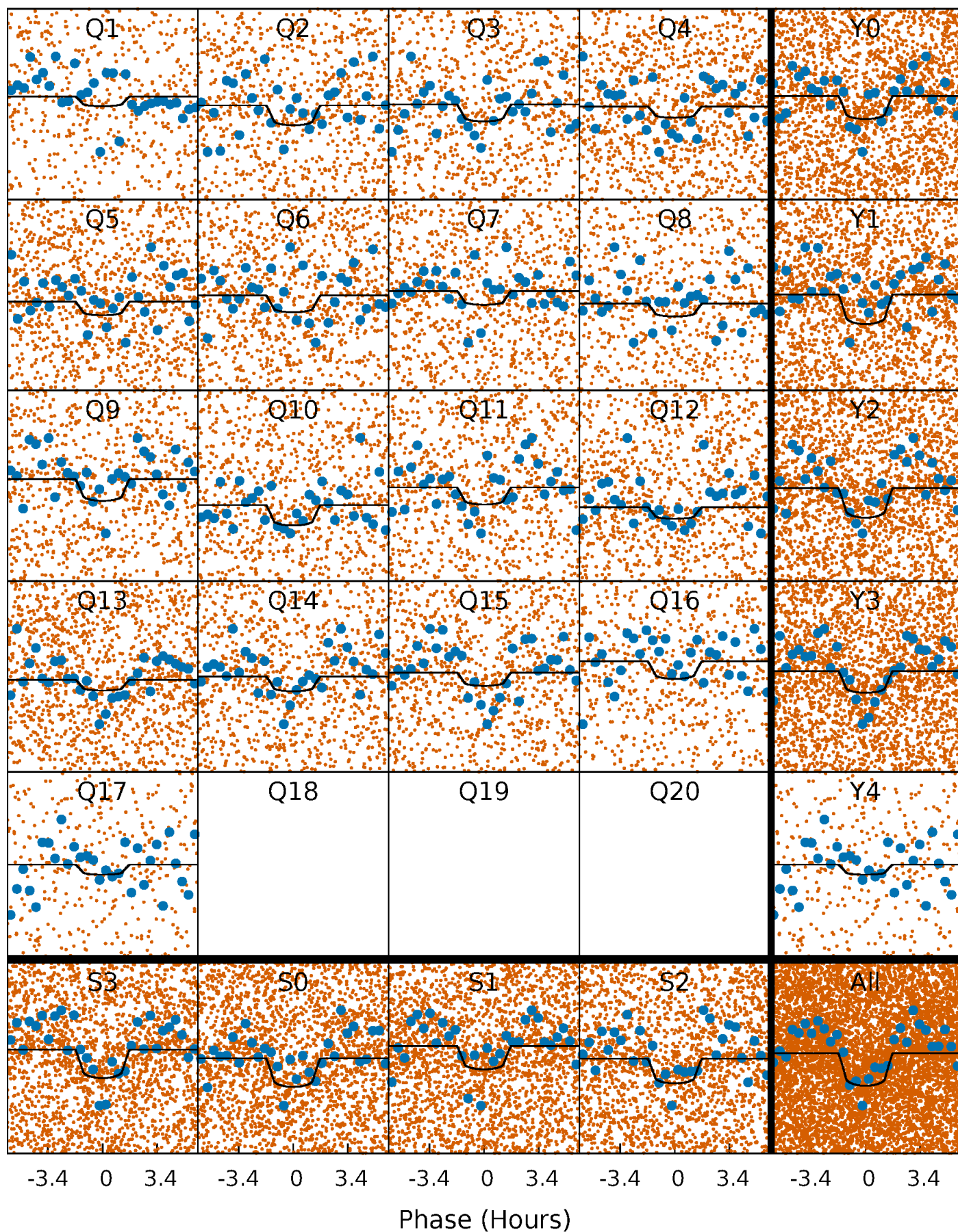
PDC Quarter-Phased Transit Curves

TCE 009118716-01 P= 1.141406 Days $T_0=132.585497$ (BKJD)



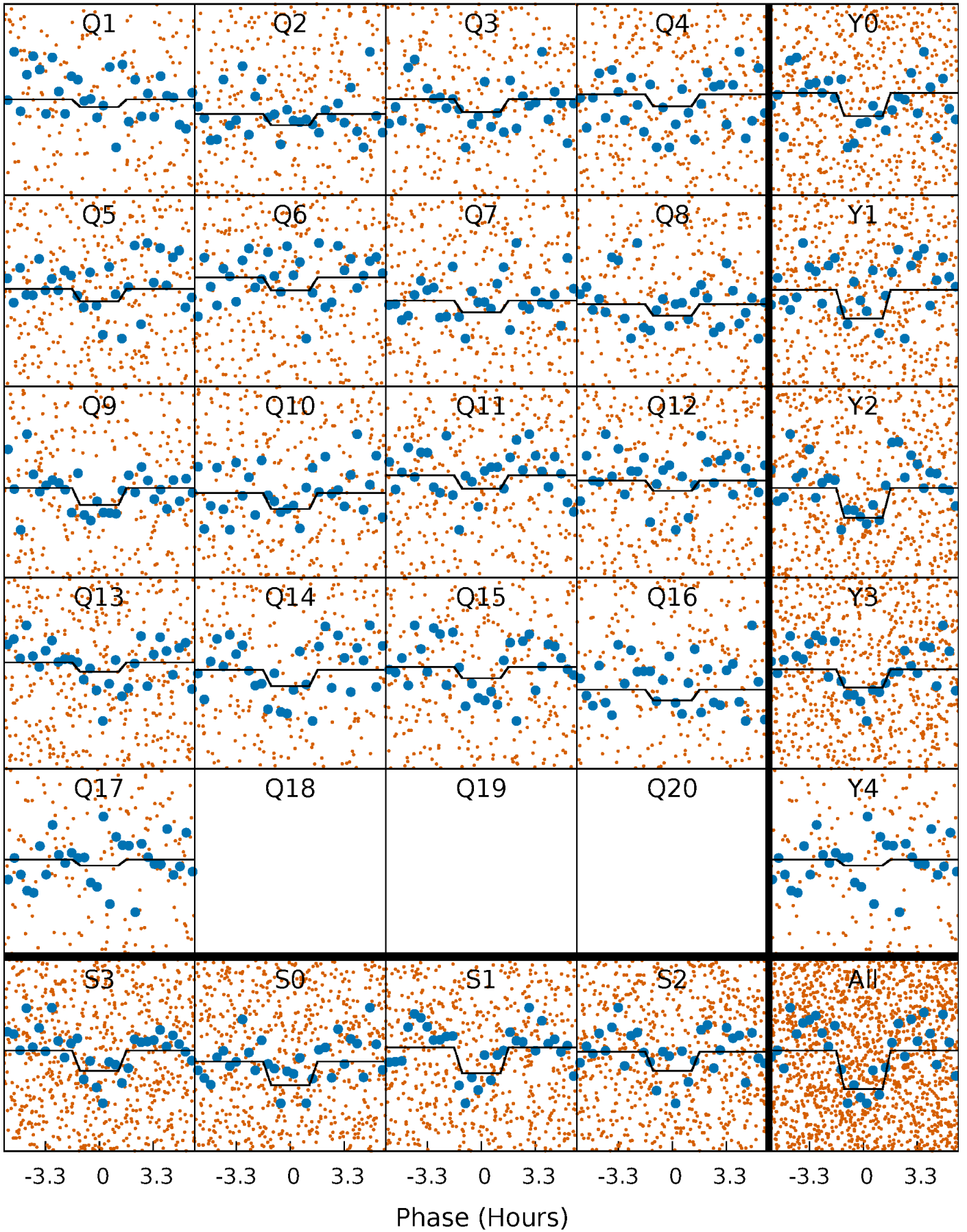
DV Quarter-Phased Transit Curves

TCE 009118716-01 P= 1.141406 Days $T_0=132.585497$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

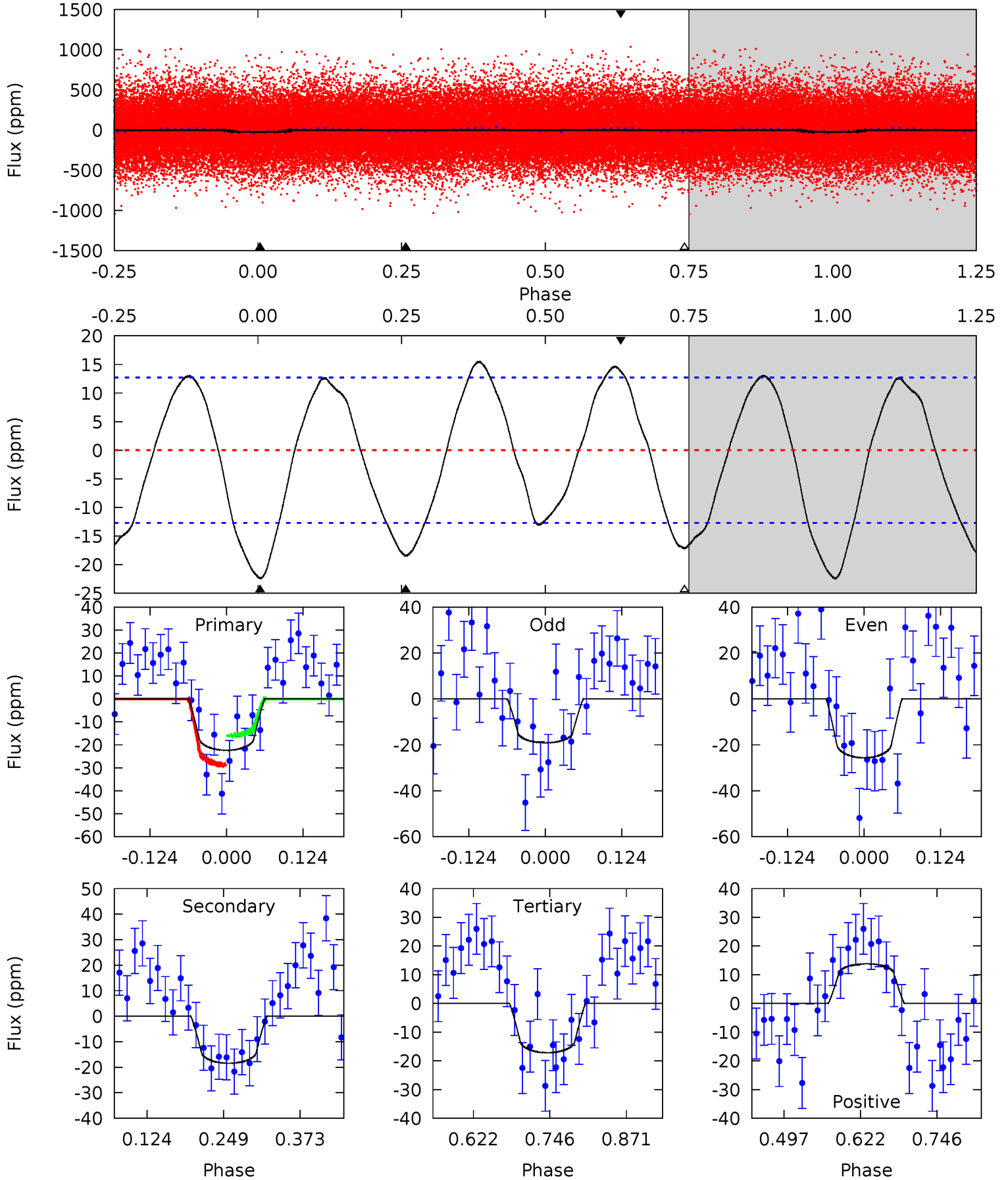
TCE 009118716-01 P= 1.141412 Days $T_0=132.584861$ (BKJD)



DV Model-Shift Uniqueness Test

009118716-01, P = 1.141406 Days, E = 131.444091 Days

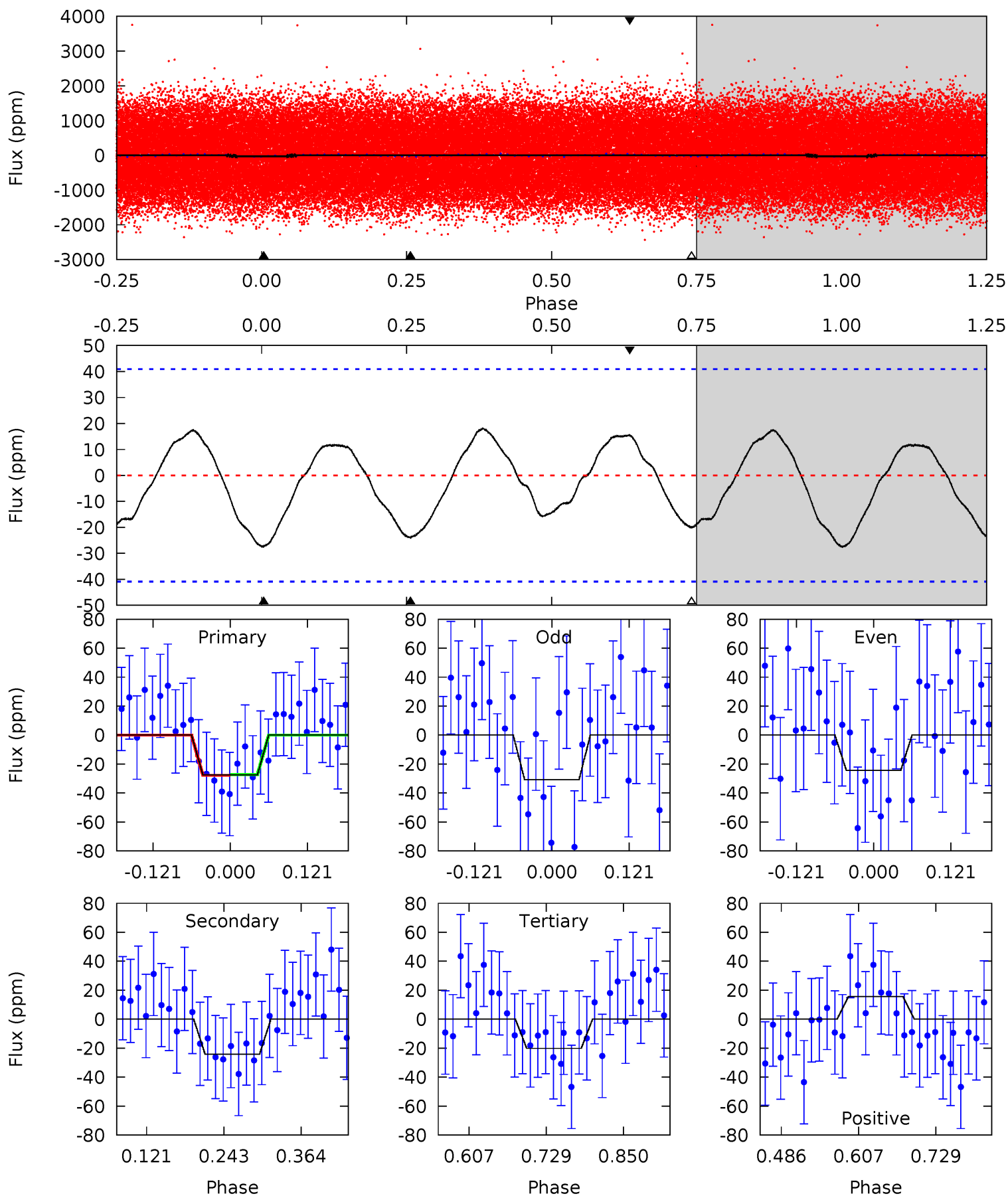
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.96	6.56	6.10	4.91	4.52	1.54	3.68	1.86	3.06	0.46	1.65	1.16	0.83	0.41	2.29



Alt Model-Shift Uniqueness Test

009118716-01, P = 1.141412 Days, E = 131.443449 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.05	2.67	2.23	1.73	4.52	1.55	1.31	0.82	1.32	0.44	0.94	0.36	0.85	0.40	0.03



Stellar Parameters For KIC 009118716

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6720^{+213}_{-284}	$3.663^{+0.576}_{-0.096}$	$-0.260^{+0.300}_{-0.300}$	$3.054^{+0.431}_{-1.722}$	$1.566^{+0.196}_{-0.424}$	$0.077^{+0.583}_{-0.022}$
	+3%/-4%	+16%/-3%	+115%/-115%	+14%/-56%	+13%/-27%	+753%/-29%
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 009118716-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-18 ± 3	$1.49^{+0.95}_{-0.74}$	4429^{+338}_{-585}	5867^{+2549}_{-1195}	$2.741^{+6.955}_{-1.700}$
Alt.	-24 ± 9	$1.51^{+0.93}_{-0.73}$	4439^{+348}_{-640}	6175^{+2951}_{-1387}	$3.222^{+9.919}_{-2.108}$

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

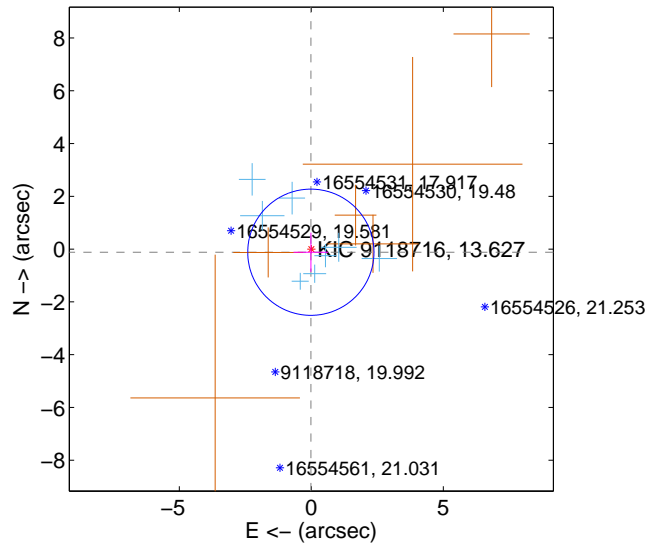
Supplemental centroid analysis for 009118716-01. Kepler magnitude: 13.63. Transit SNR 6.39

There are 8 quarters with good PRF difference image offsets

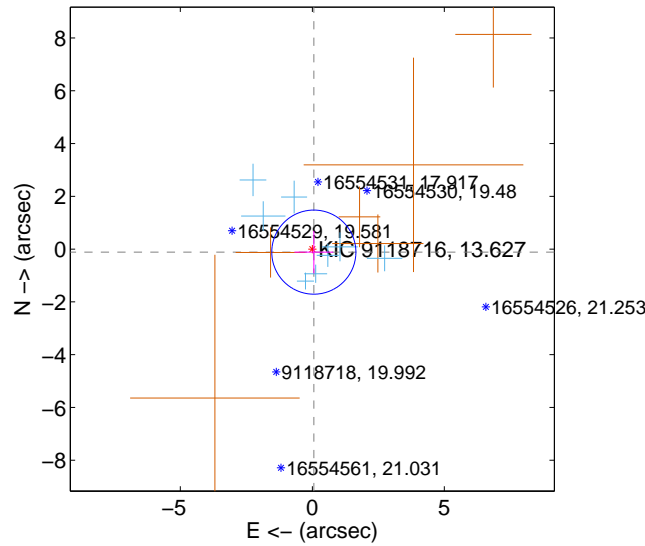
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.120 ± 0.797	0.15	0.017 ± 0.658	-0.119 ± 0.742
PRF-fit source offset from KIC position	0.128 ± 0.531	0.24	-0.057 ± 0.738	-0.115 ± 0.806
photometric centroid source offset	1.94 ± 1.90	1.02	1.82 ± 1.90	-0.68 ± 1.88

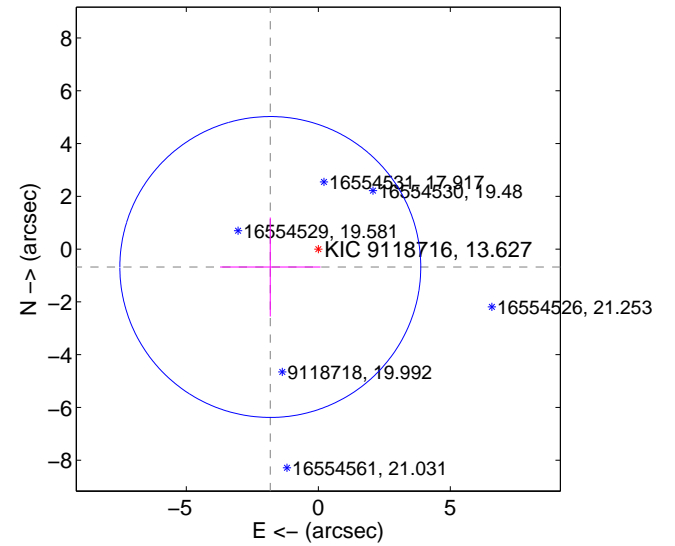
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

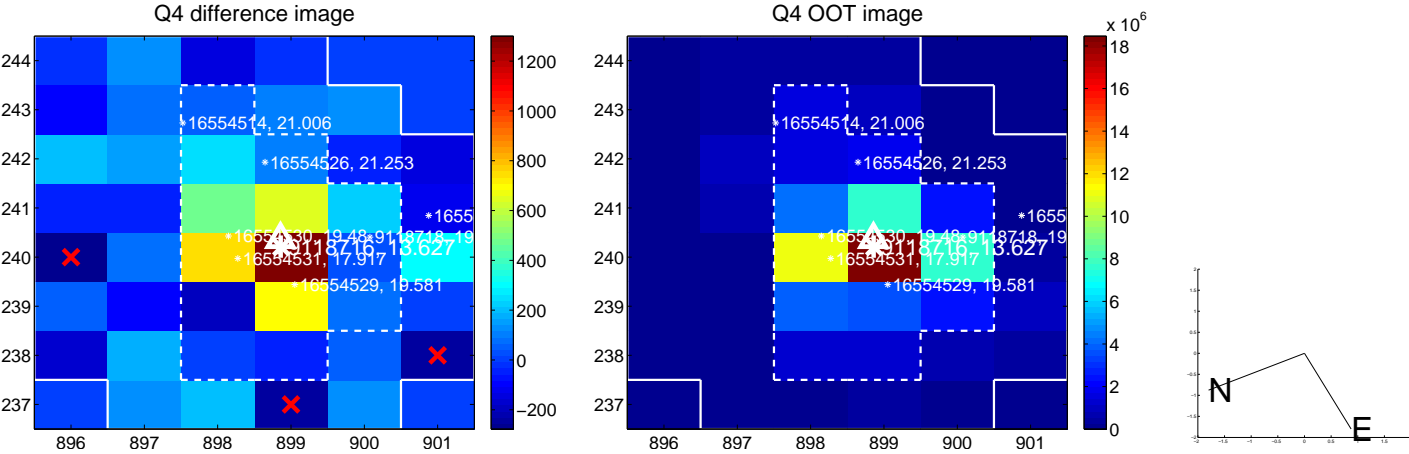
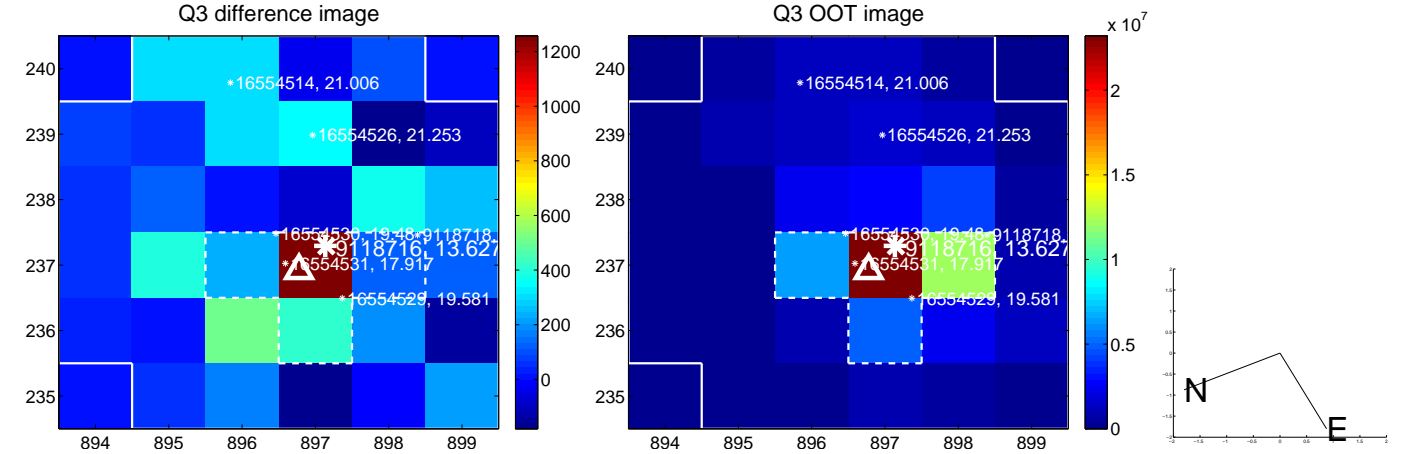
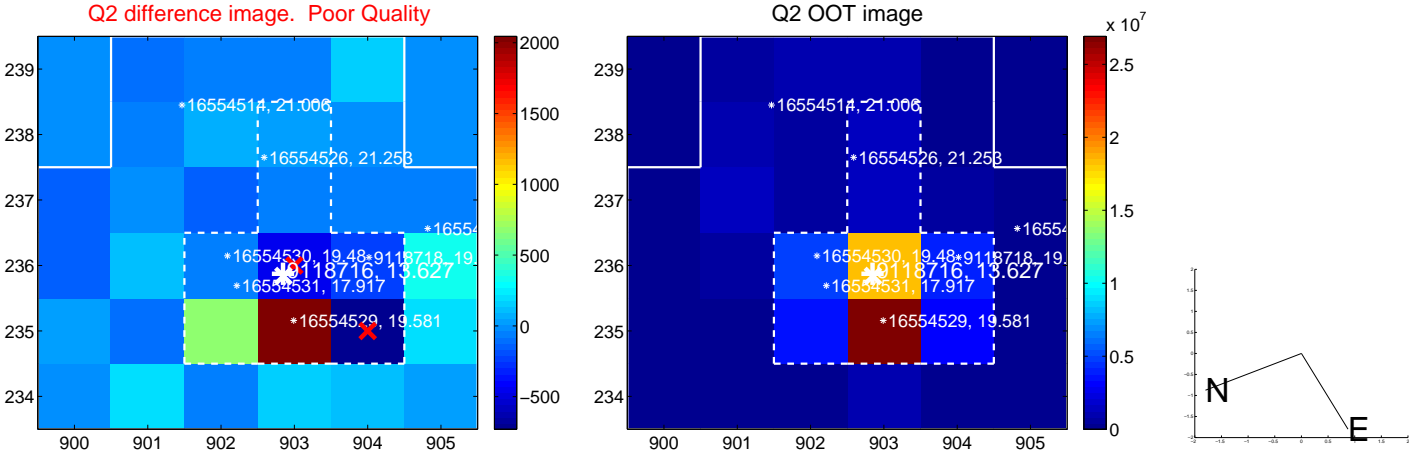
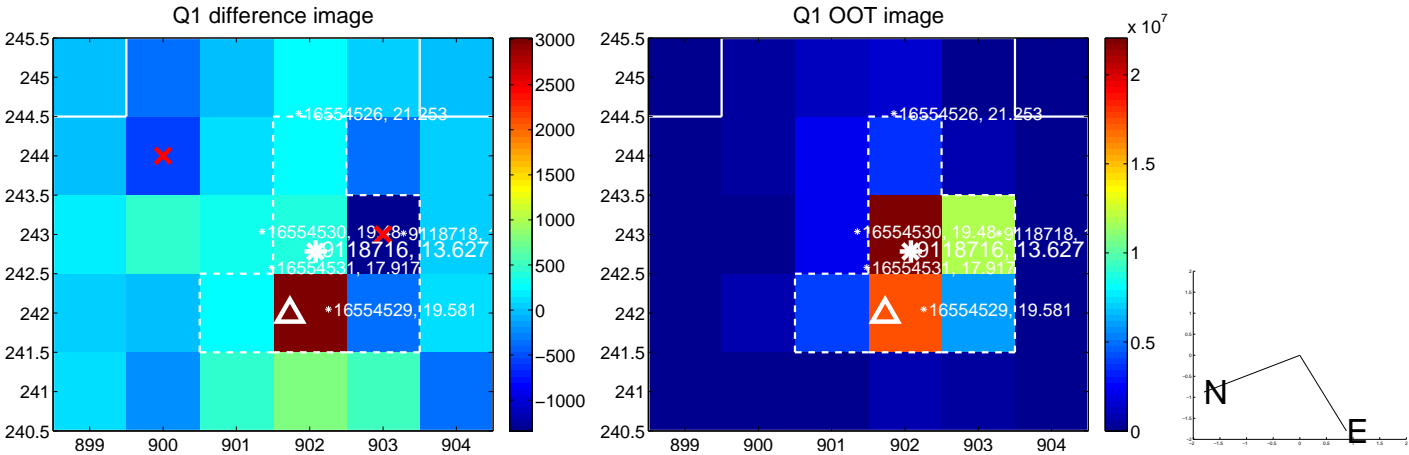


offset from photometric centroids

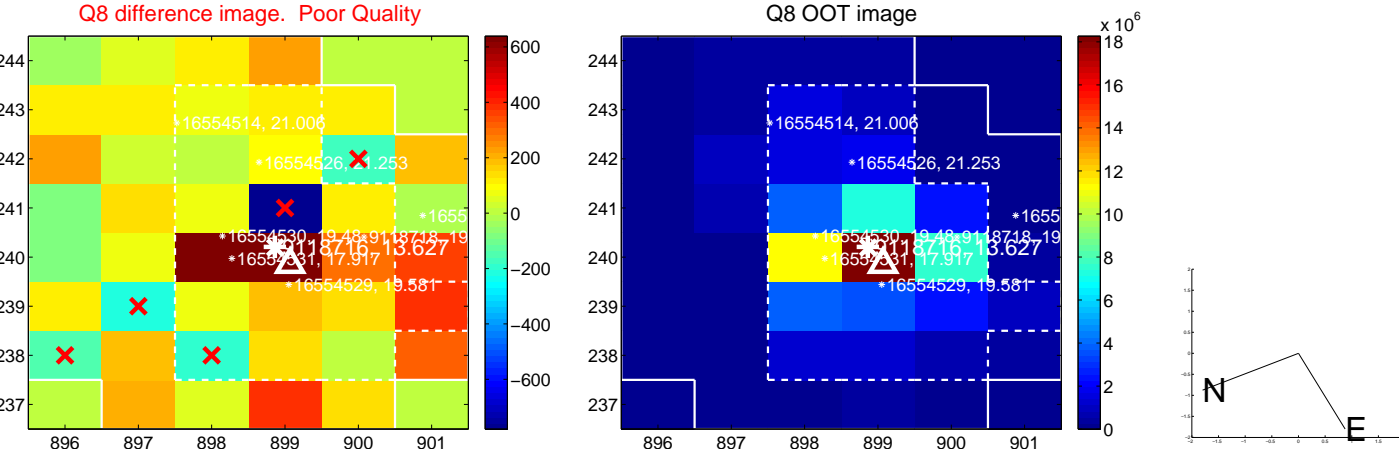
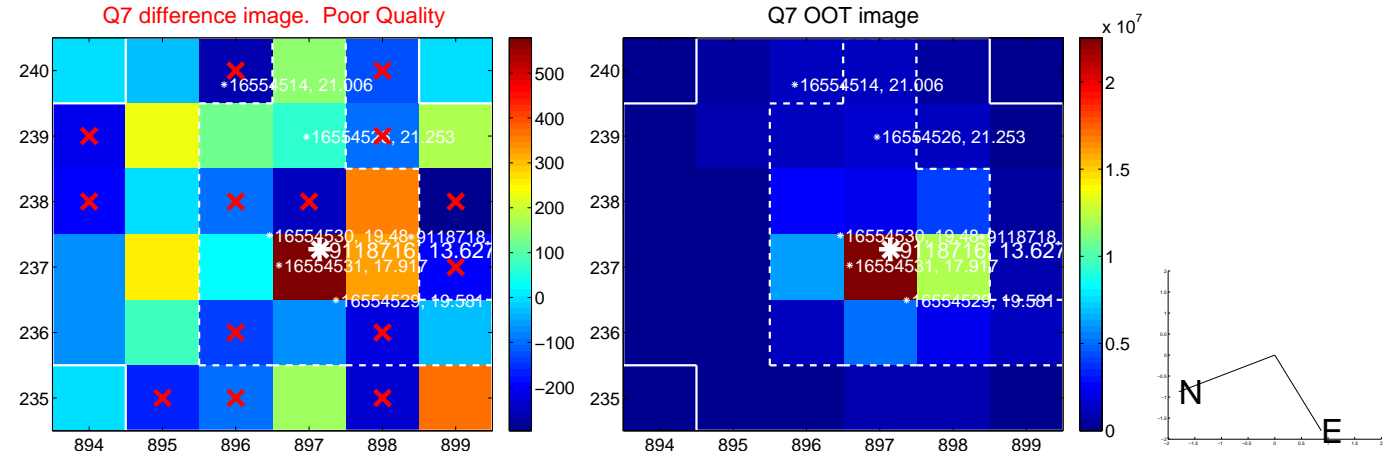
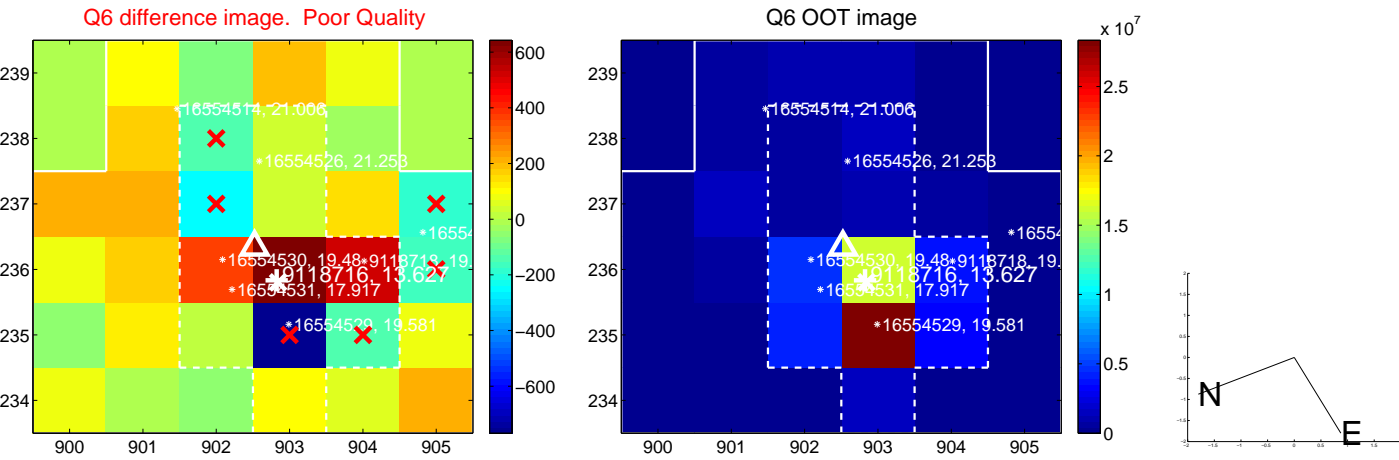
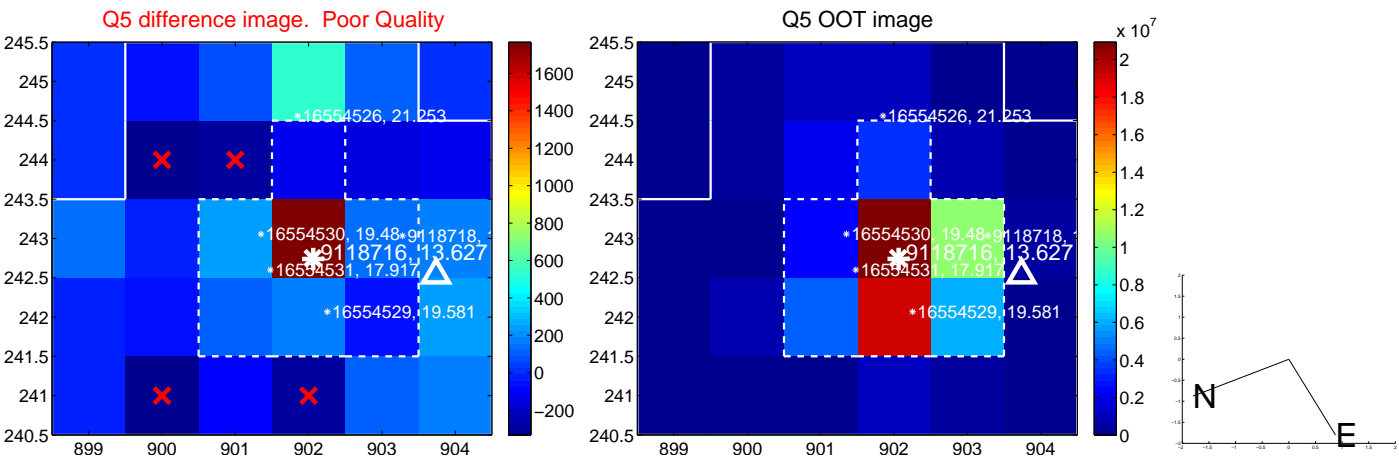


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

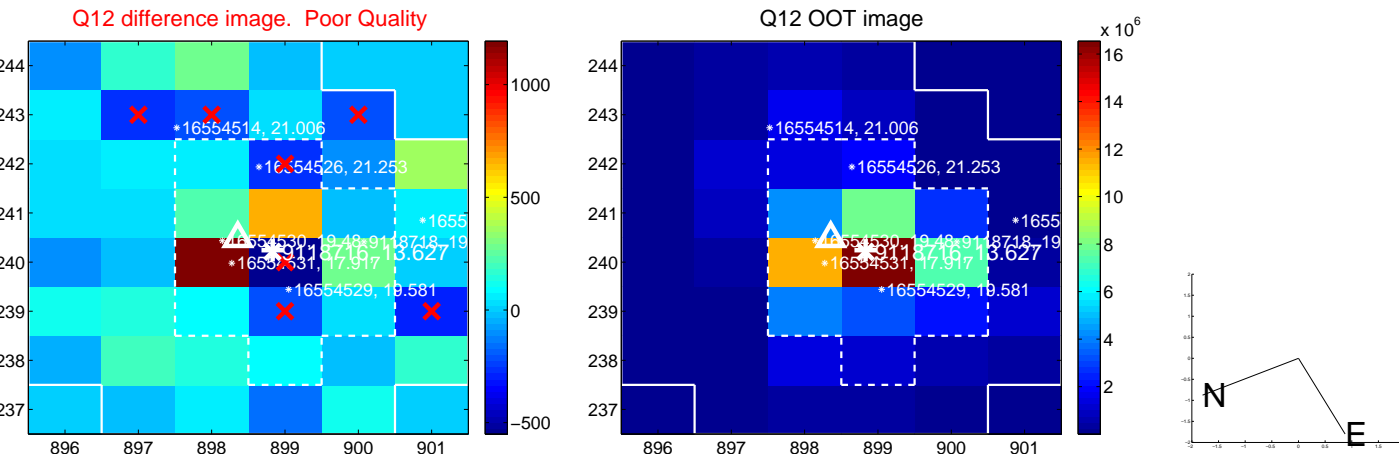
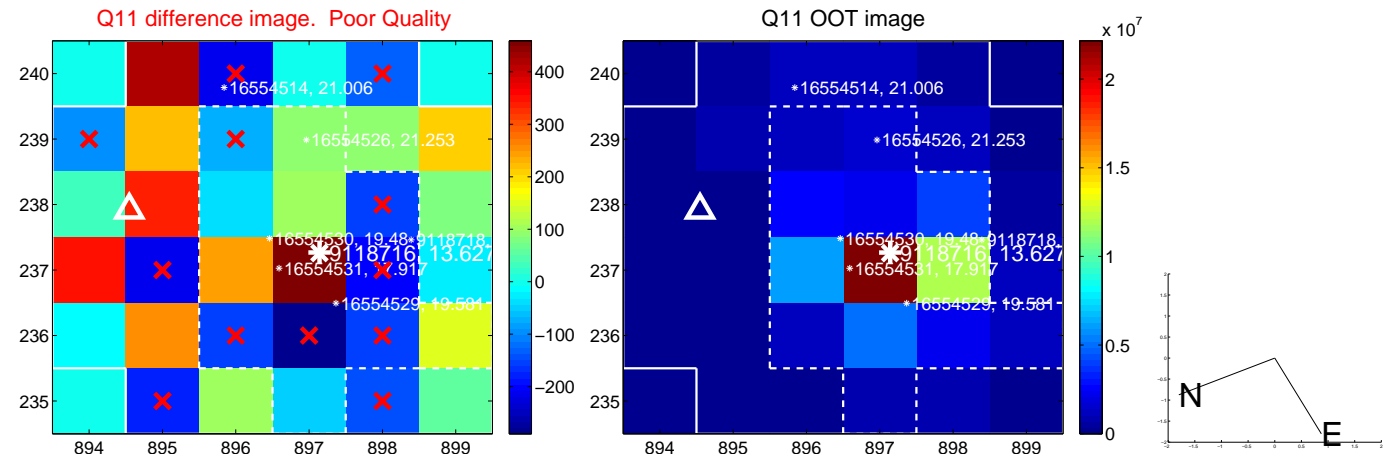
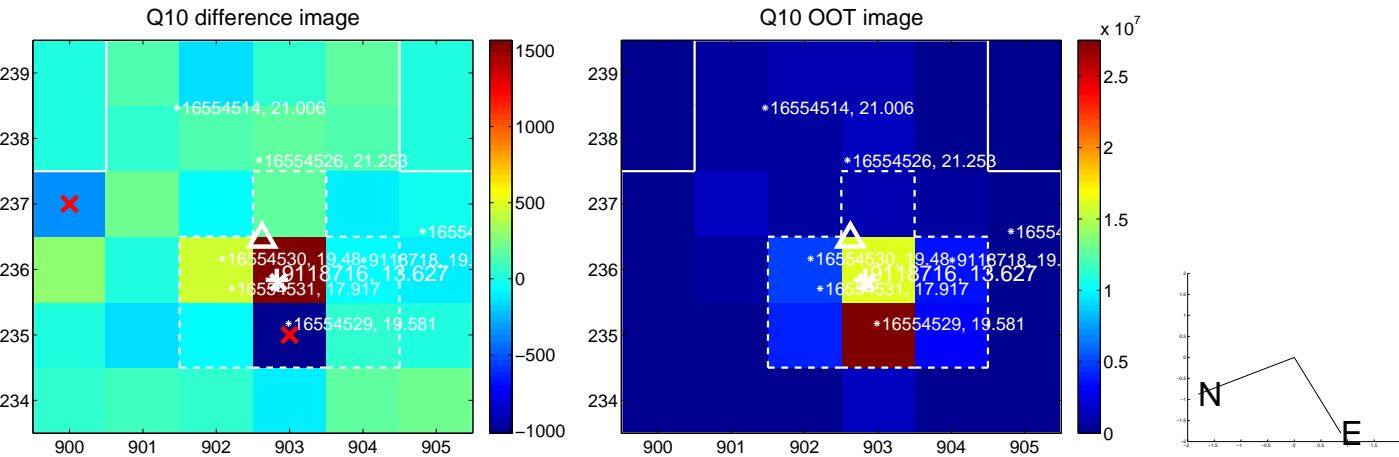
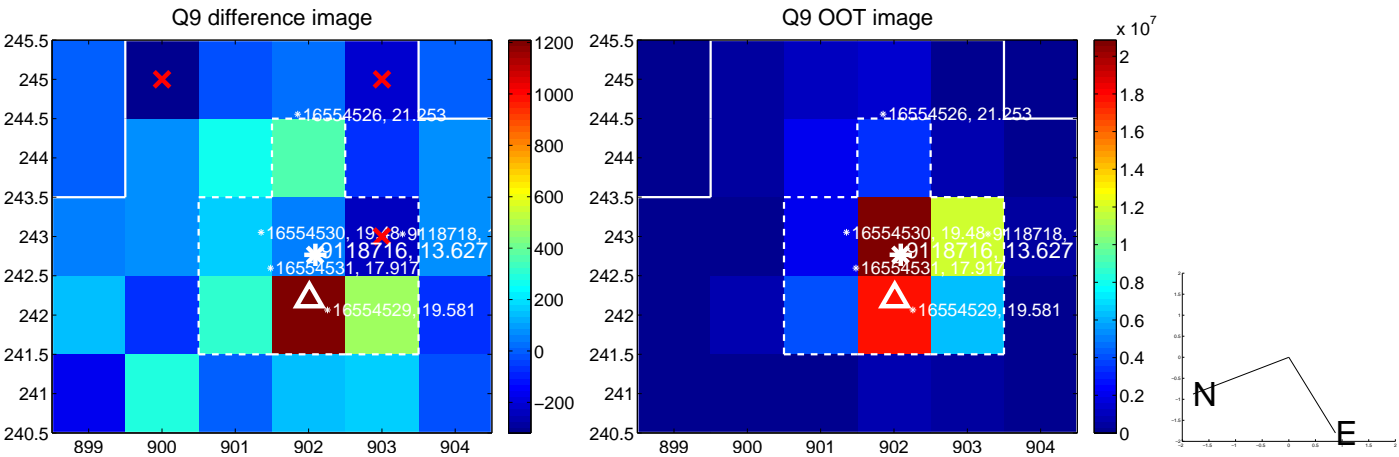
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



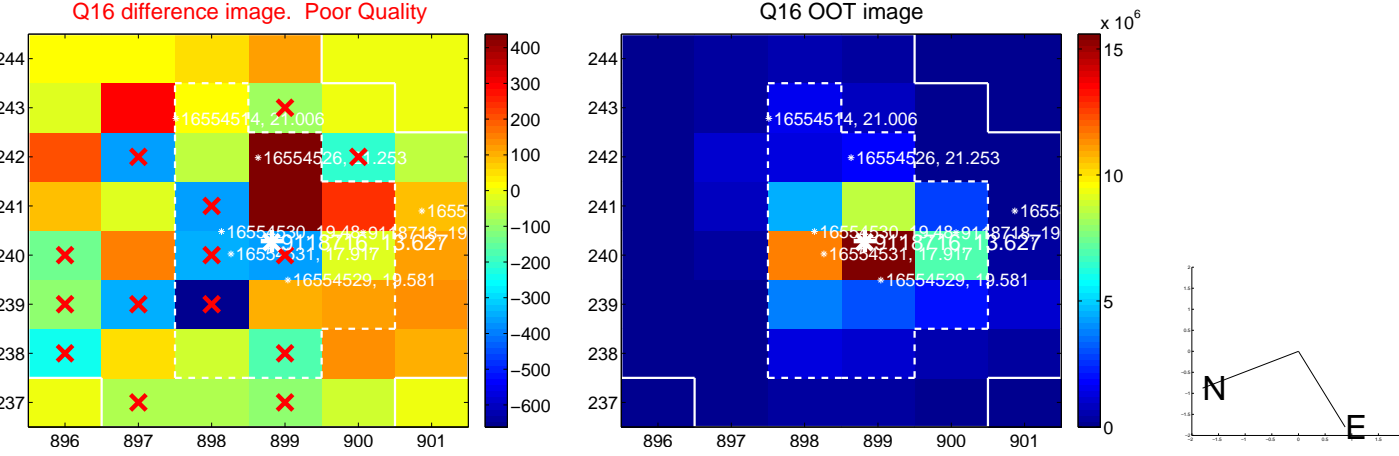
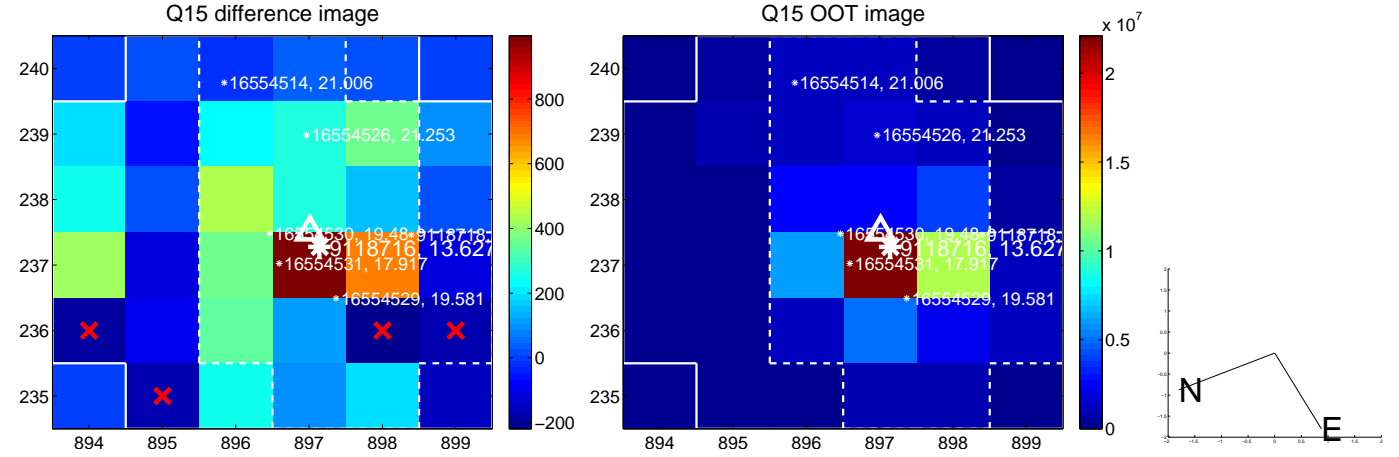
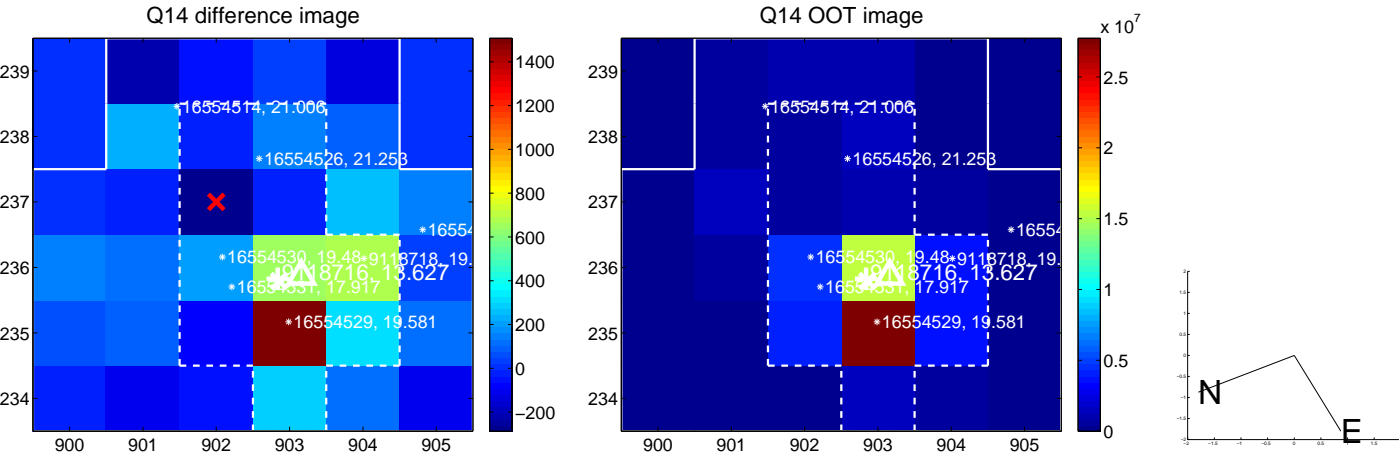
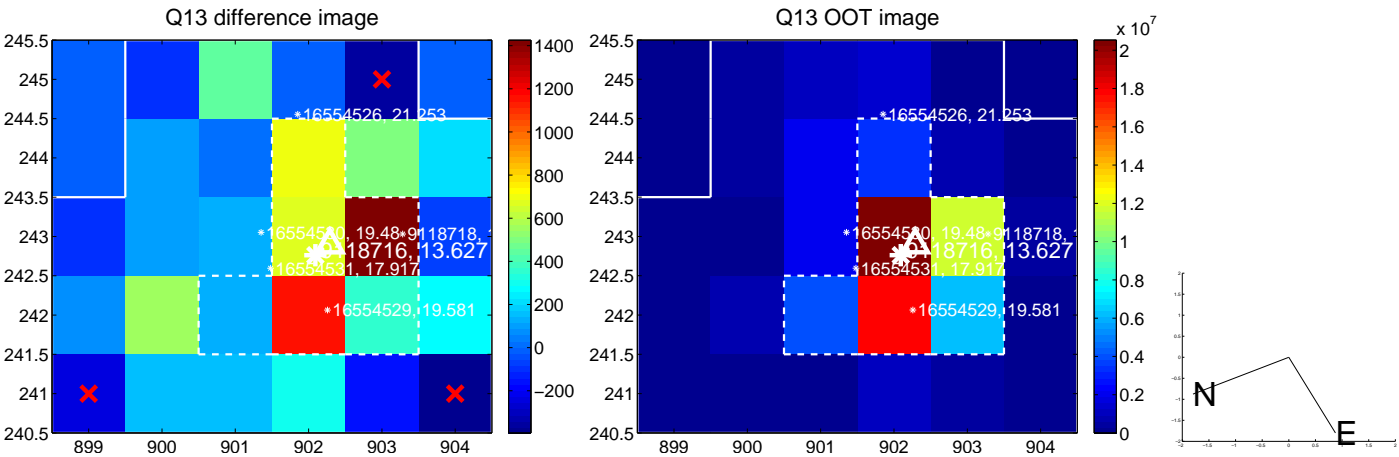
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



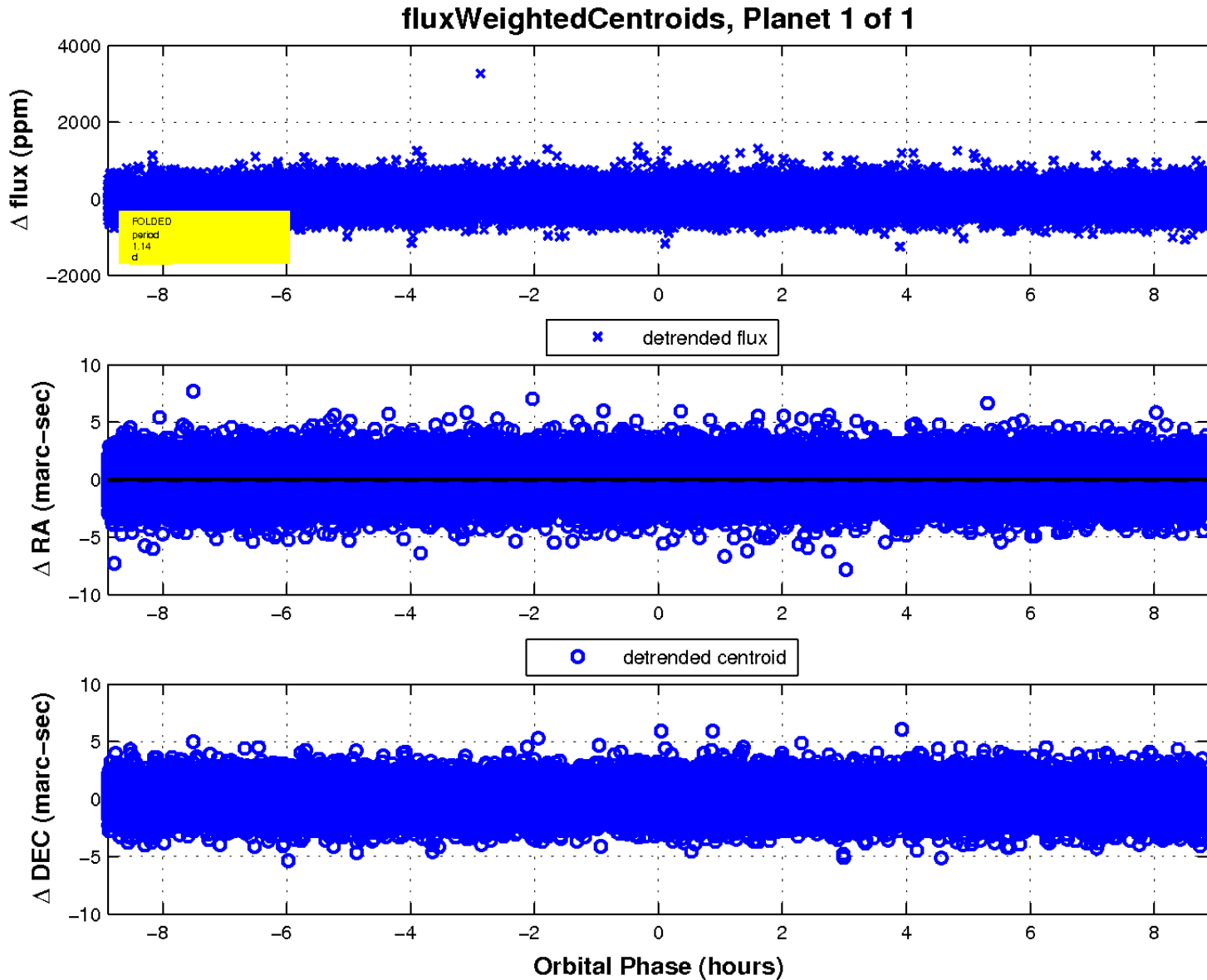
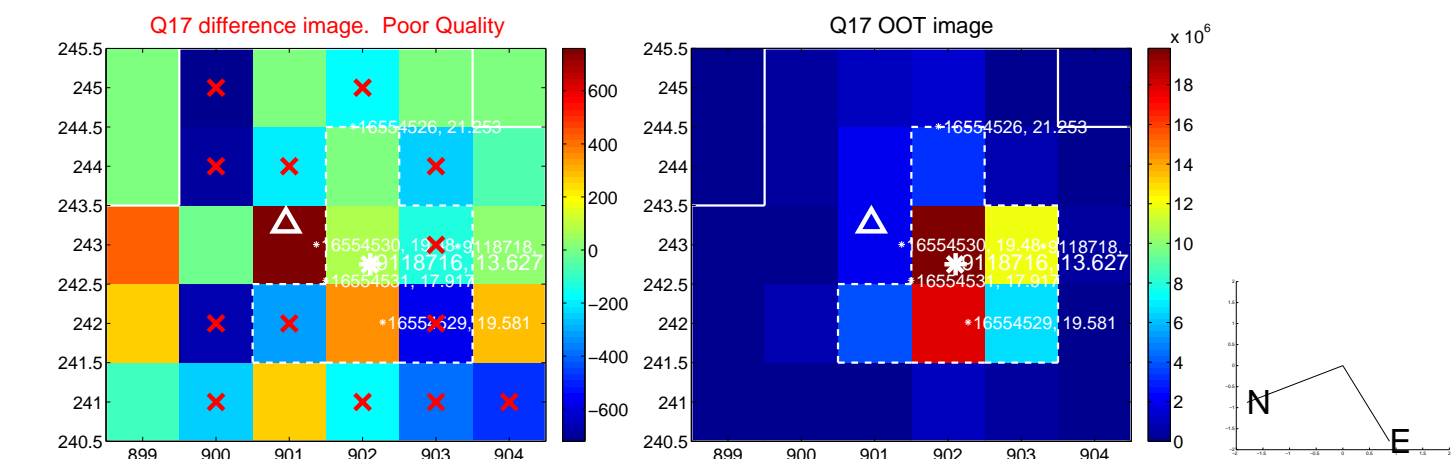
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

