

KIC 009592918

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})
009592918-01	OBS	No	0.609625	131.960950	19.4	3.437	9.4	6.1	0.91	5827	0.43	4368.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009592918-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—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.

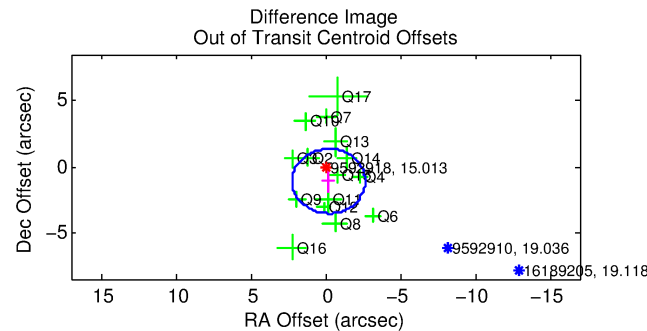
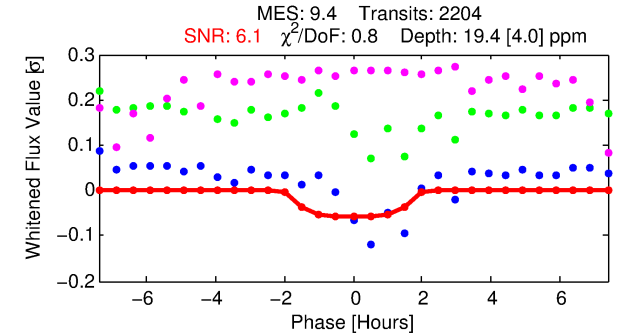
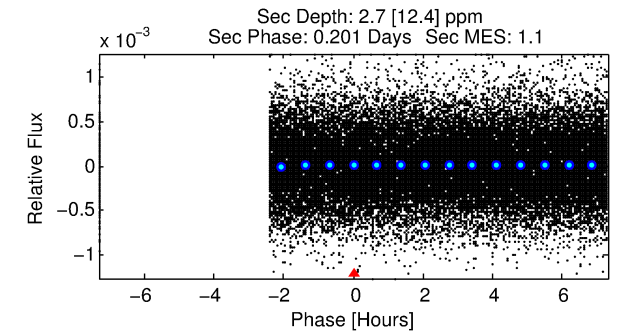
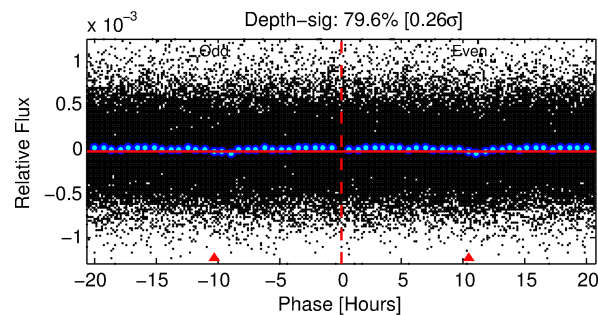
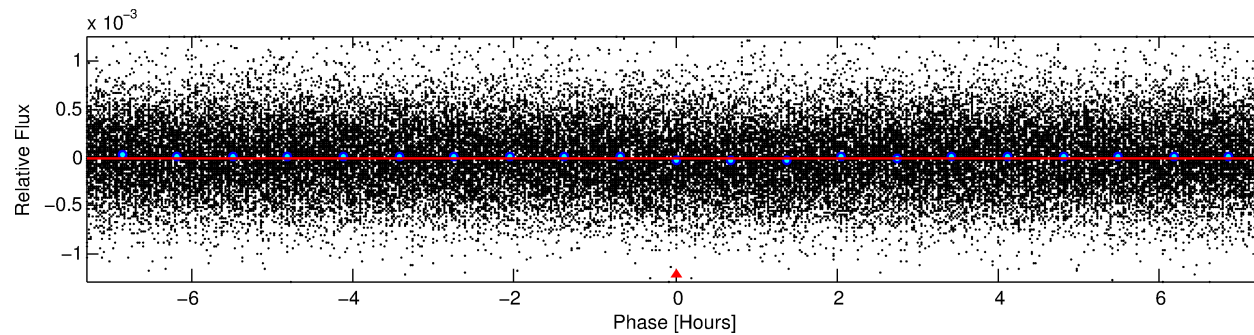
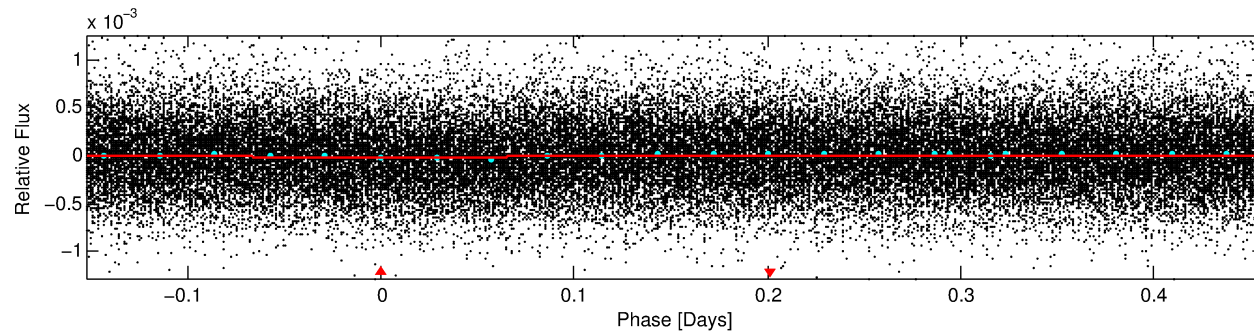
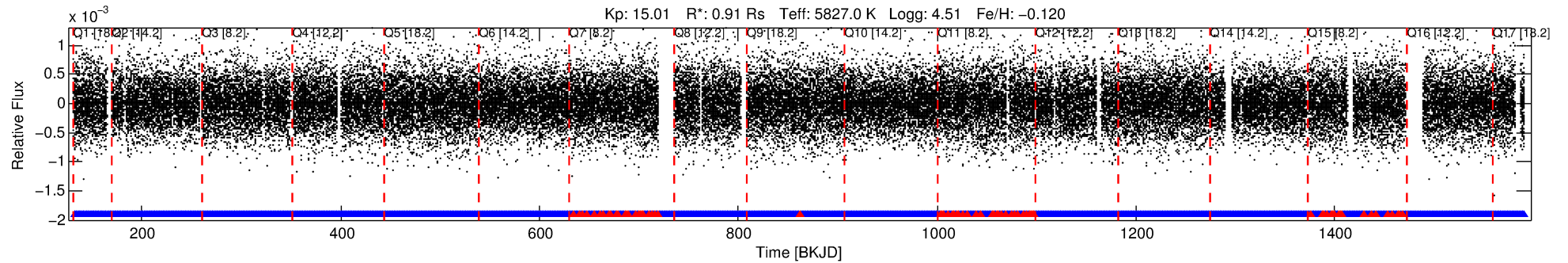
Ephemeris Match Information For 009592918-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009592918-01	9592918	009592831-01	9592831	1:1	114.0	28	-2	16.68	15.01	5.37	Col-Anomaly	1	3.25	1.24

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: 9592918 Candidate: 1 of 1 Period: 0.610 d



DV Fit Results:

Period = 0.60963 [0.00002] d
Epoch = 131.9610 [0.0070] BKJD
Rp/R* = 0.0044 [0.0035]
a/R* = 1.25 [1.64]
b = 0.74 [2.25]
Seff = 4368.74 [1690.46]
Teff = 2073 [201] K
Rp = 0.43 [0.37] Re
a = 0.0139 [0.0035] AU
Ag = 1.52 [7.52] [0.07 σ]
Teffp = 3557 [4396] K [0.34 σ]

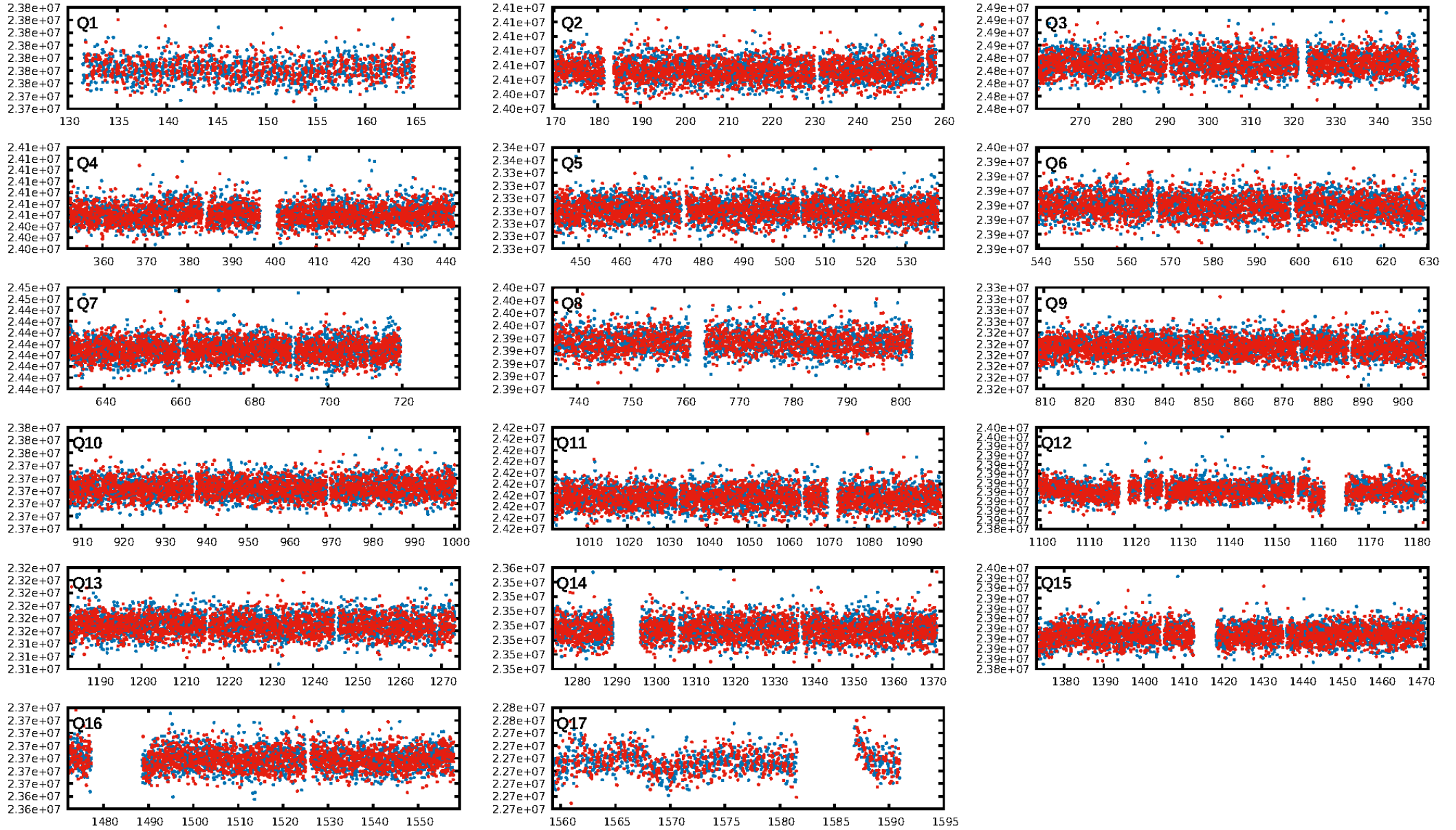
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.89e-18
RollingBand-fgt: 0.96 [2028/2105]
GhostDiagnostic-chr: -0.1511
Centroid-sig: 0.5%
Centroid-so: 5.554 arcsec [2.38 σ]
OotOffset-rm: 1.124 arcsec [1.38 σ]
KicOffset-rm: 1.327 arcsec [1.66 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 1.00 [17/17]

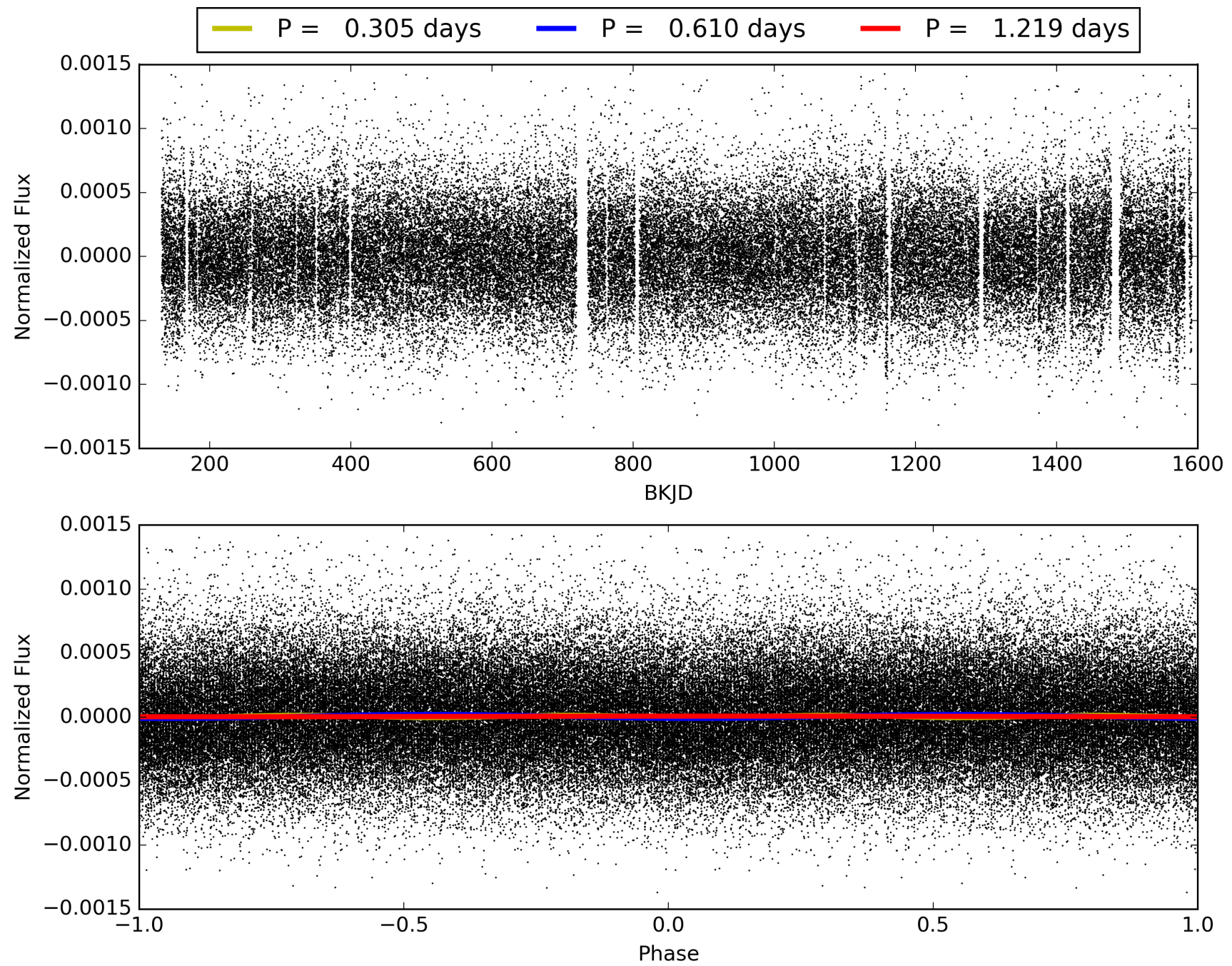
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:37:09 Z

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

TCE 009592918-01, PDC Light Curves

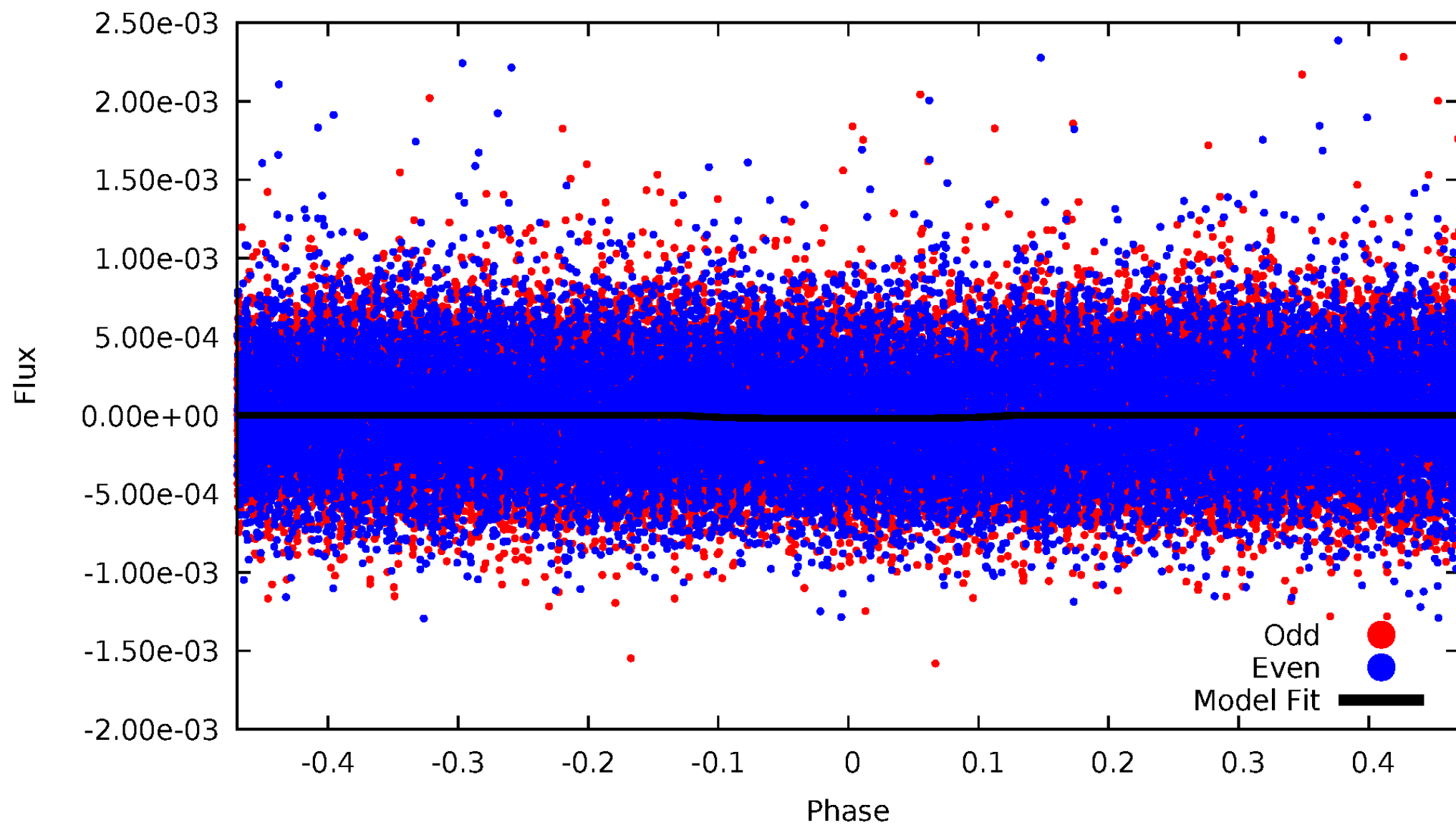


TCE 009592918-01



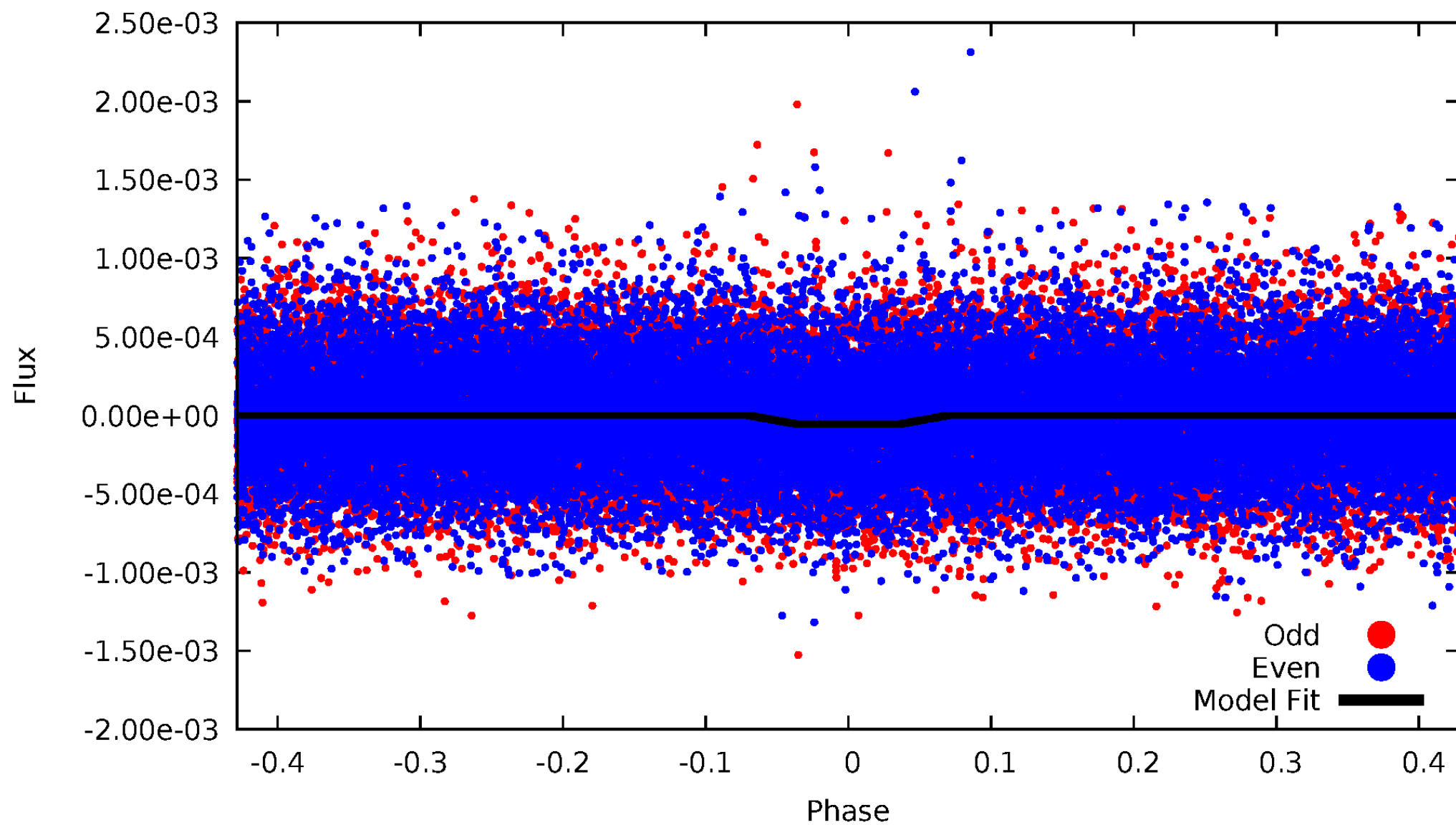
DV Odd/Even

TCE 009592918-01

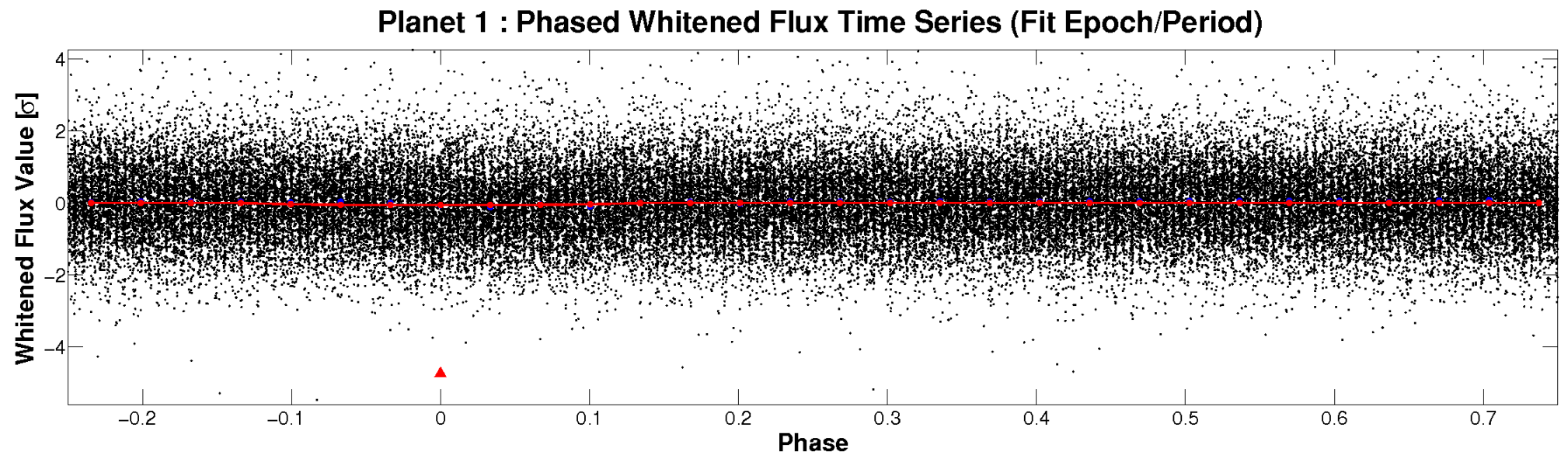
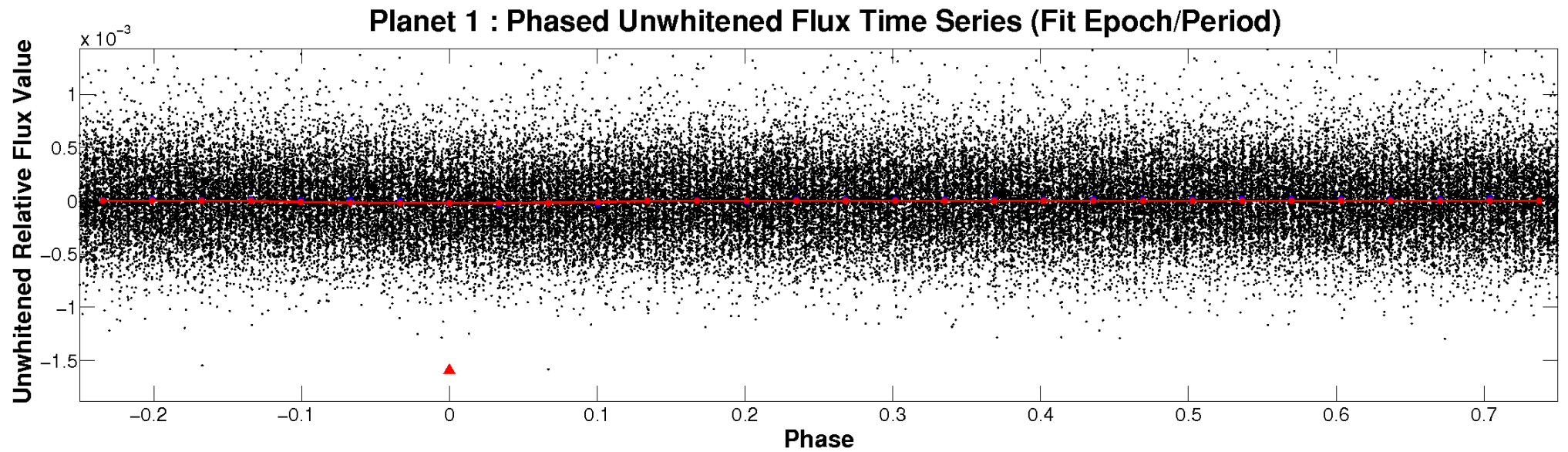


ALT Odd/Even

TCE 009592918-01

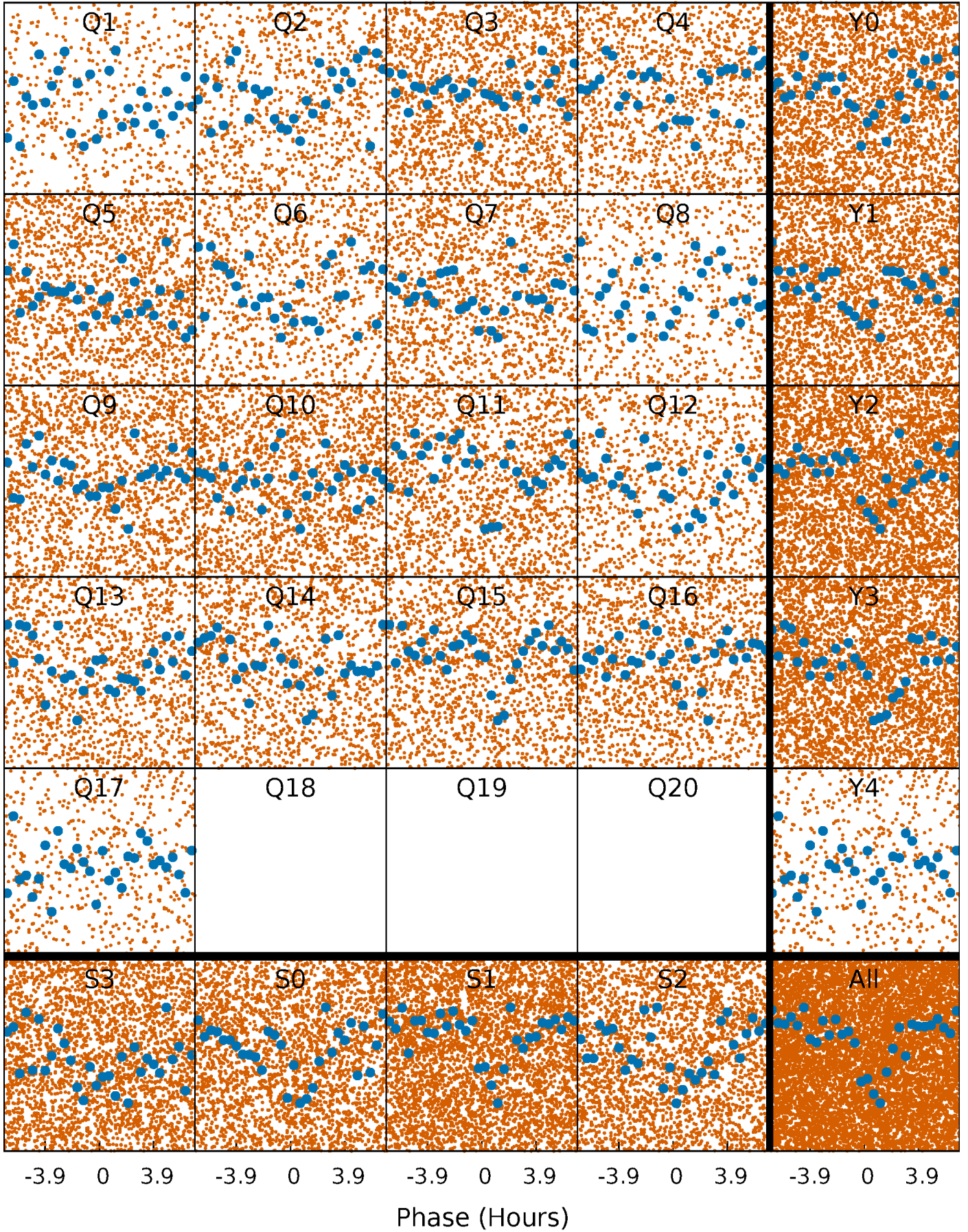


Non-Whitened Vs. Whitened Light Curve



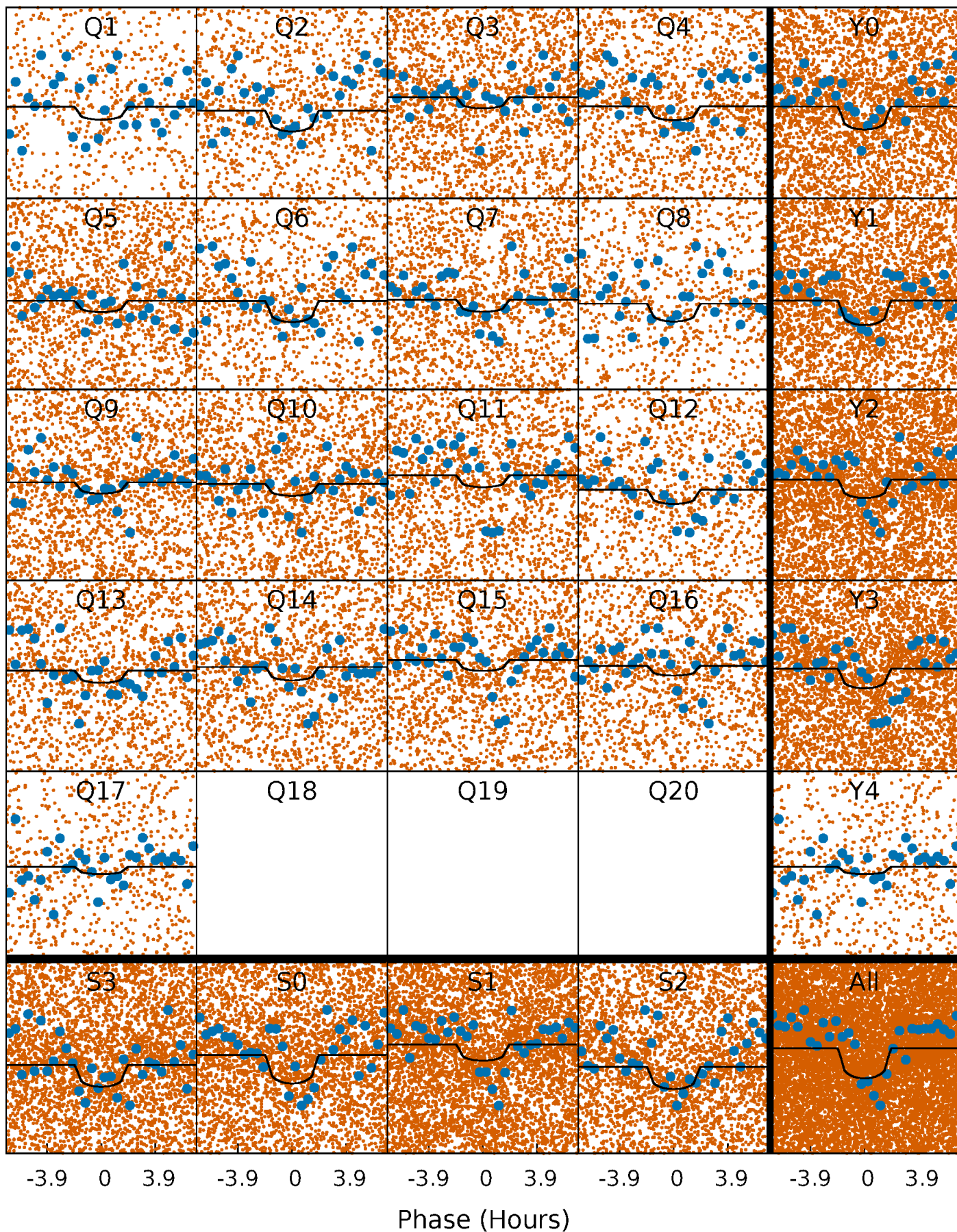
PDC Quarter-Phased Transit Curves

TCE 009592918-01 P= 0.609625 Days $T_0=131.960950$ (BKJD)



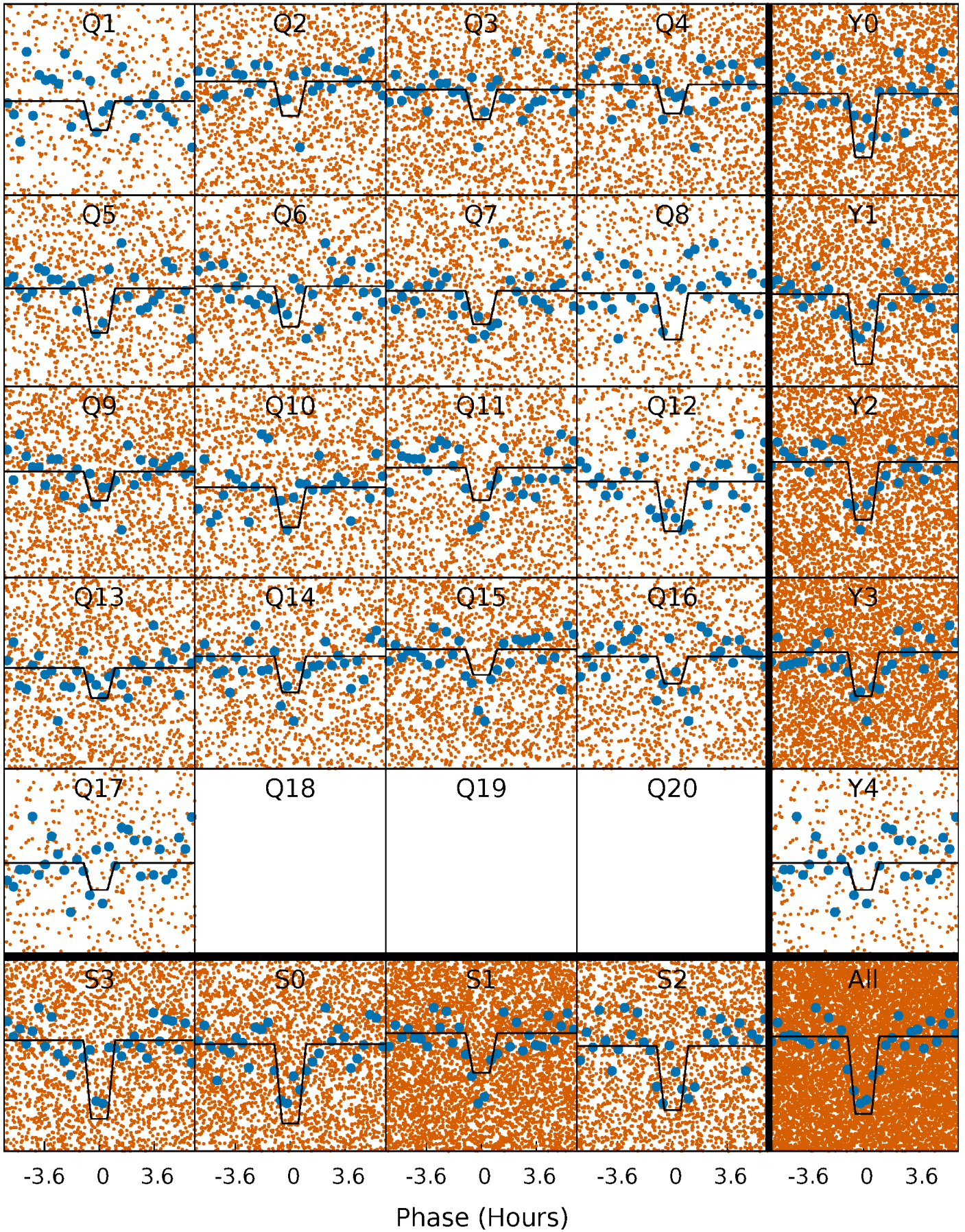
DV Quarter-Phased Transit Curves

TCE 009592918-01 P= 0.609625 Days $T_0=131.960950$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

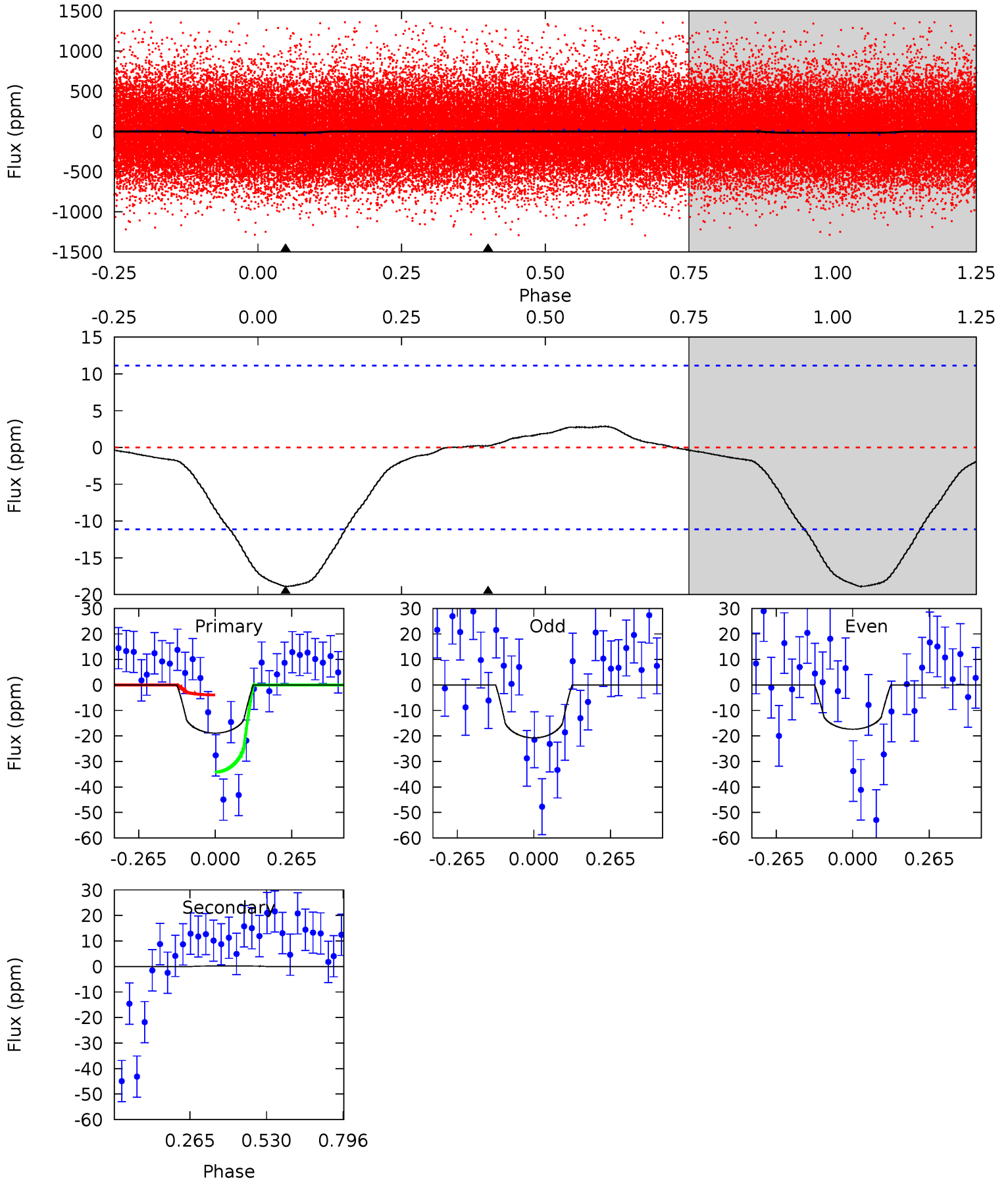
TCE 009592918-01 P= 0.609656 Days $T_0=131.950621$ (BKJD)



DV Model-Shift Uniqueness Test

009592918-01, P = 0.609625 Days, E = 131.351325 Days

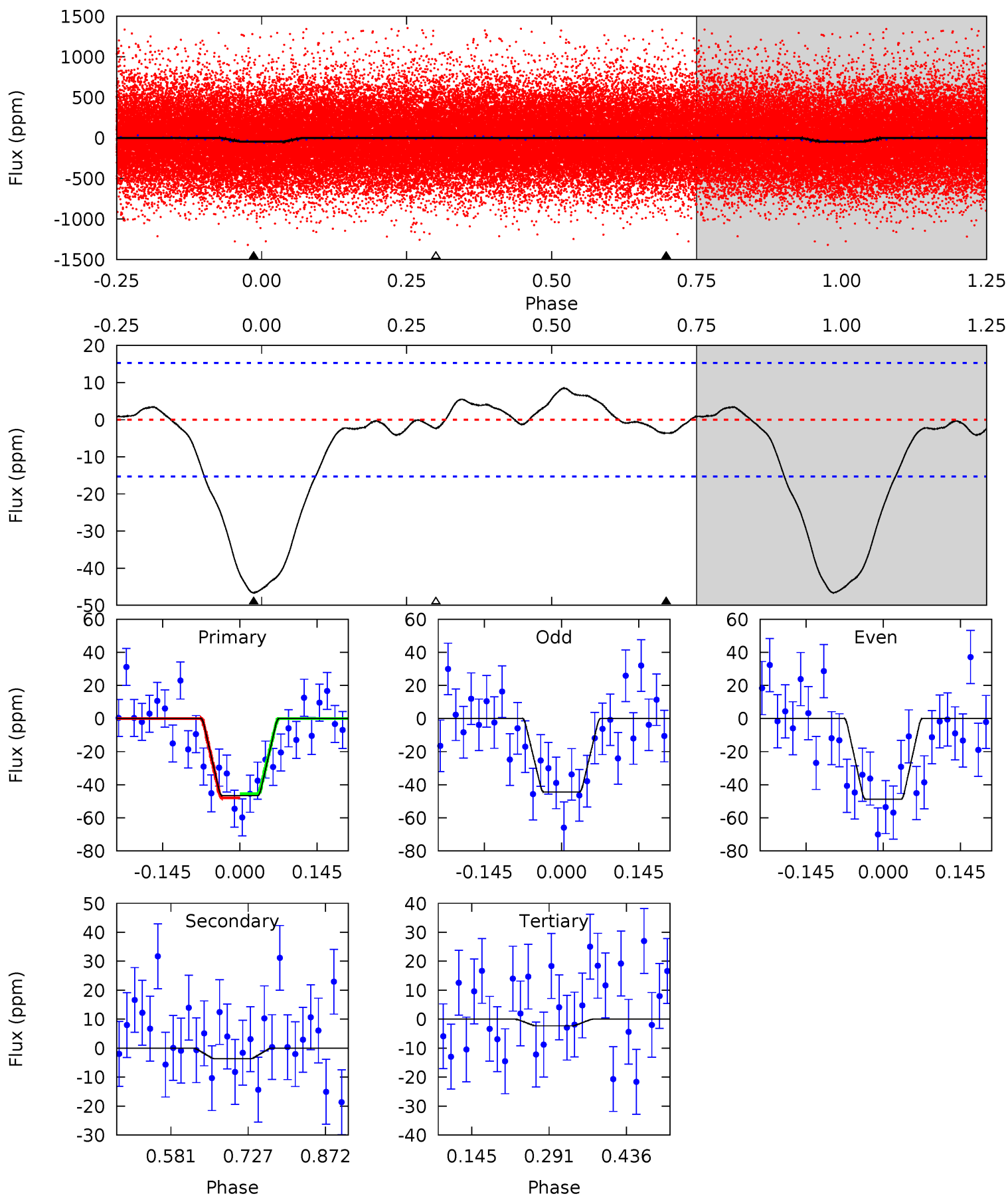
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.39	-0.08	0	0	4.36	1.11	0.19	7.39	7.39	-0.08	-0.08	0.67	1.07	0.13	5.95



Alt Model-Shift Uniqueness Test

009592918-01, P = 0.609656 Days, E = 131.340965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	1.07	0.68	0	4.49	1.46	1.01	13.0	13.7	0.39	1.07	0.64	1.01	0.15	0.37



Stellar Parameters For KIC 009592918

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5827^{+140}_{-175}	$4.510^{+0.050}_{-0.200}$	$-0.120^{+0.300}_{-0.300}$	$0.905^{+0.275}_{-0.092}$	$0.966^{+0.116}_{-0.116}$	$1.836^{+0.498}_{-0.992}$
	+2%/-3%	+1%/-4%	+250%/-250%	+30%/-10%	+12%/-12%	+27%/-54%
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 009592918-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 3	$0.50^{+0.35}_{-0.31}$	2953^{+215}_{-129}	-3130^{+6762}_{-1163}	$-0.045^{+1.310}_{-1.969}$
Alt.	-4 ± 3	$0.79^{+0.38}_{-0.35}$	2943^{+223}_{-120}	2955^{+987}_{-6016}	$0.533^{+1.253}_{-0.497}$

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 $A_{obs} \gg 1.0$

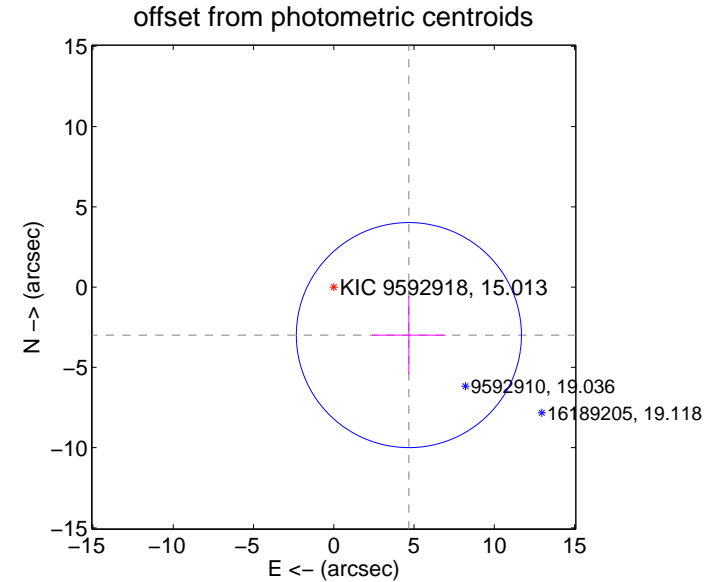
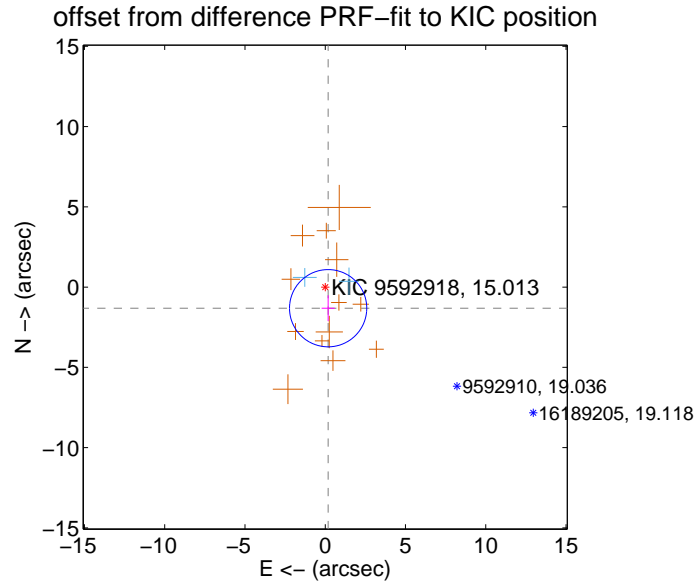
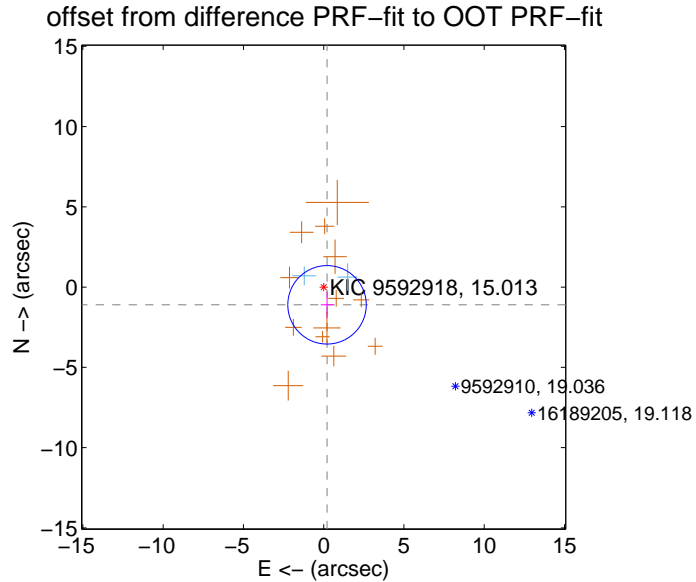
DV Centroid Data

Supplemental centroid analysis for 009592918-01. Kepler magnitude: 15.01. Transit SNR 6.09

There are 2 quarters with good PRF difference image offsets

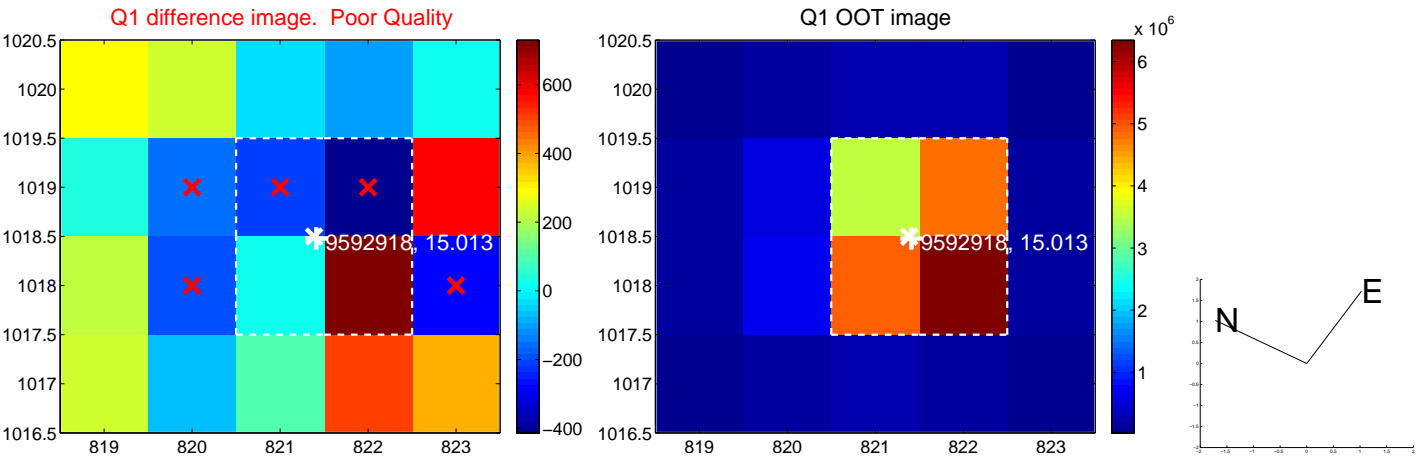
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.124 ± 0.814	1.38	-0.209 ± 0.389	-1.104 ± 0.828
PRF-fit source offset from KIC position	1.327 ± 0.802	1.66	-0.181 ± 0.409	-1.315 ± 0.806
photometric centroid source offset	5.55 ± 2.34	2.38	-4.68 ± 2.29	-2.99 ± 2.44

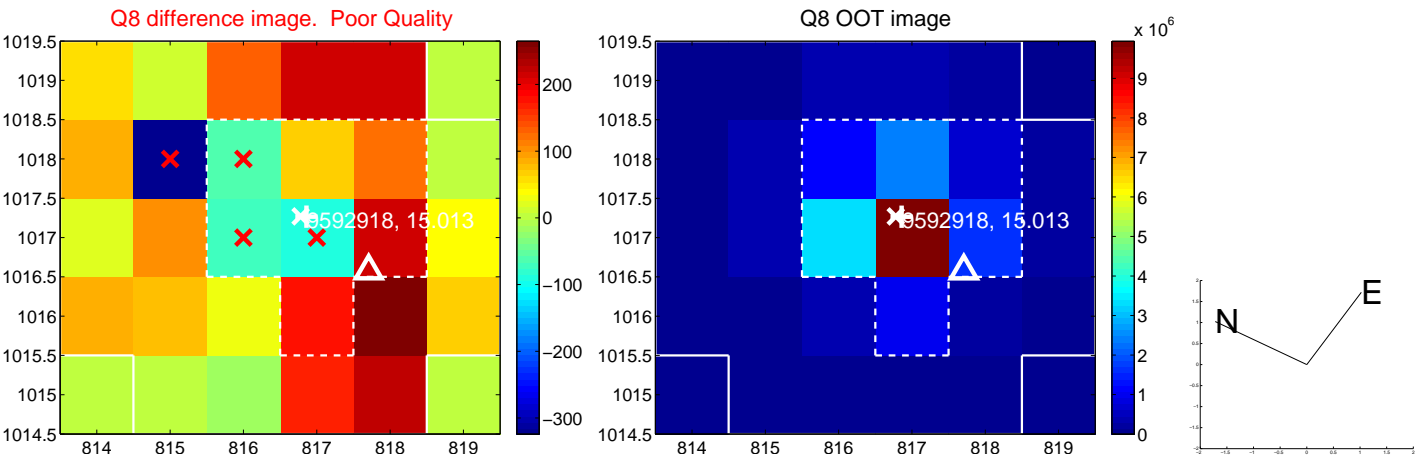
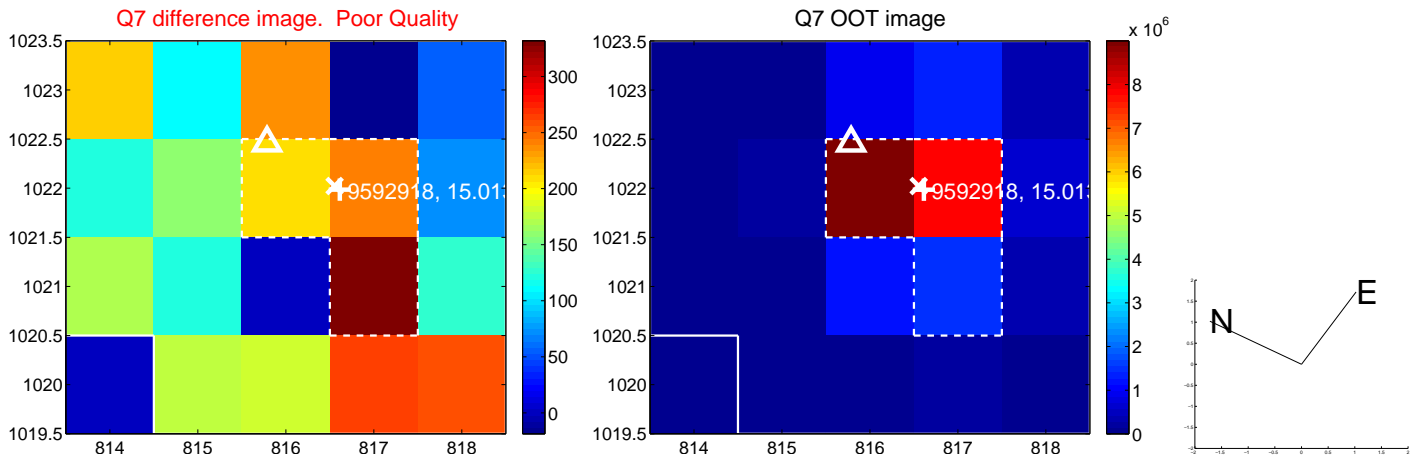
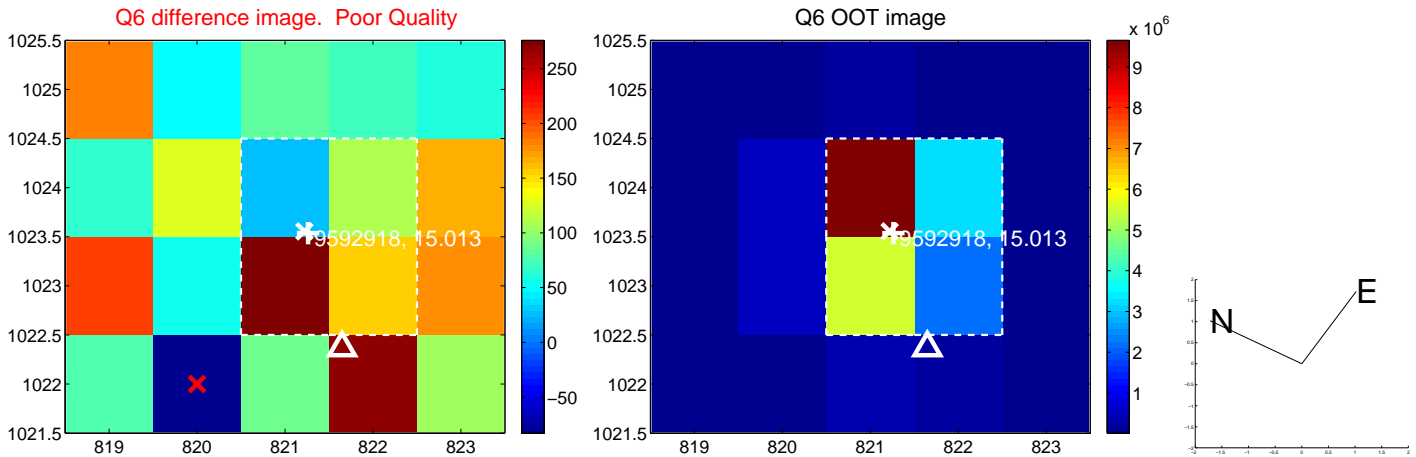
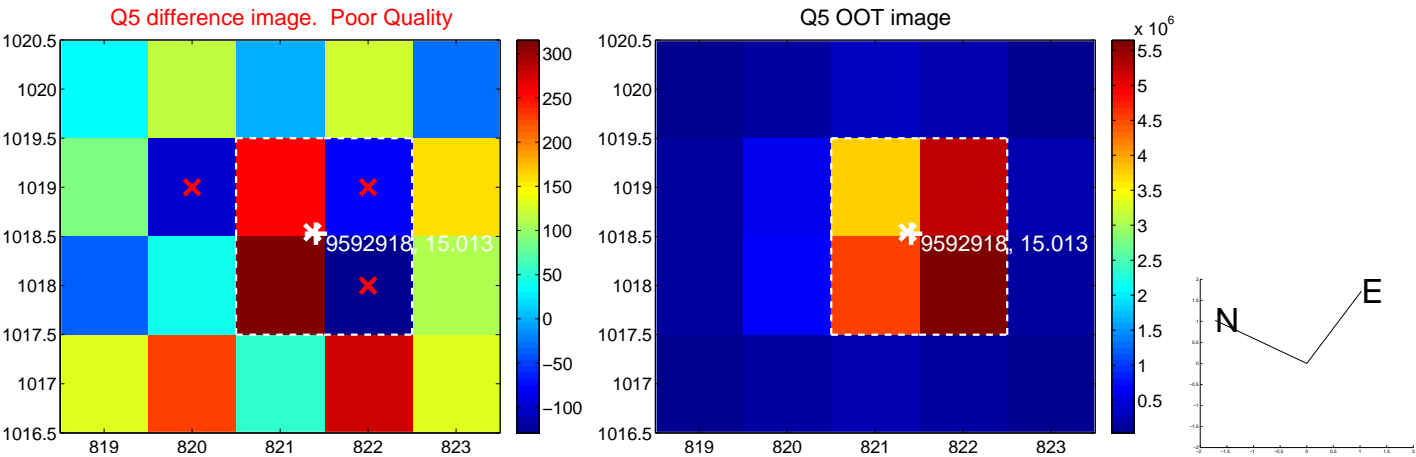


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

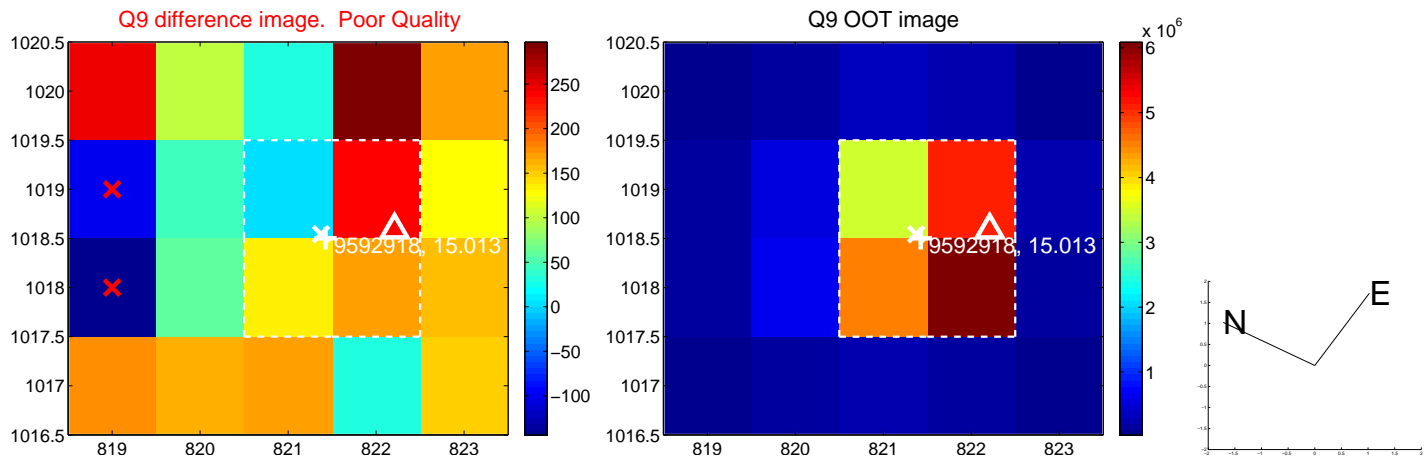
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



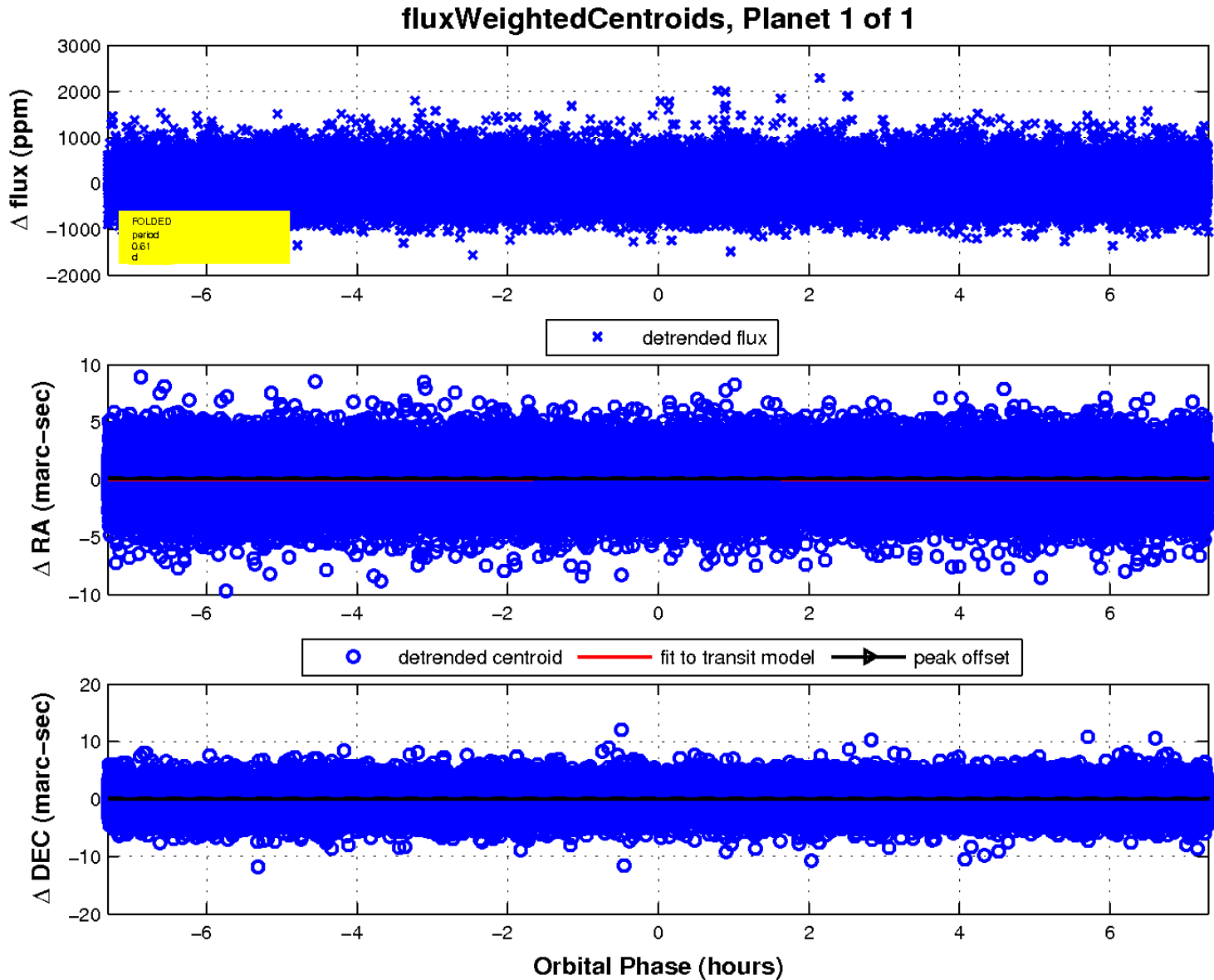
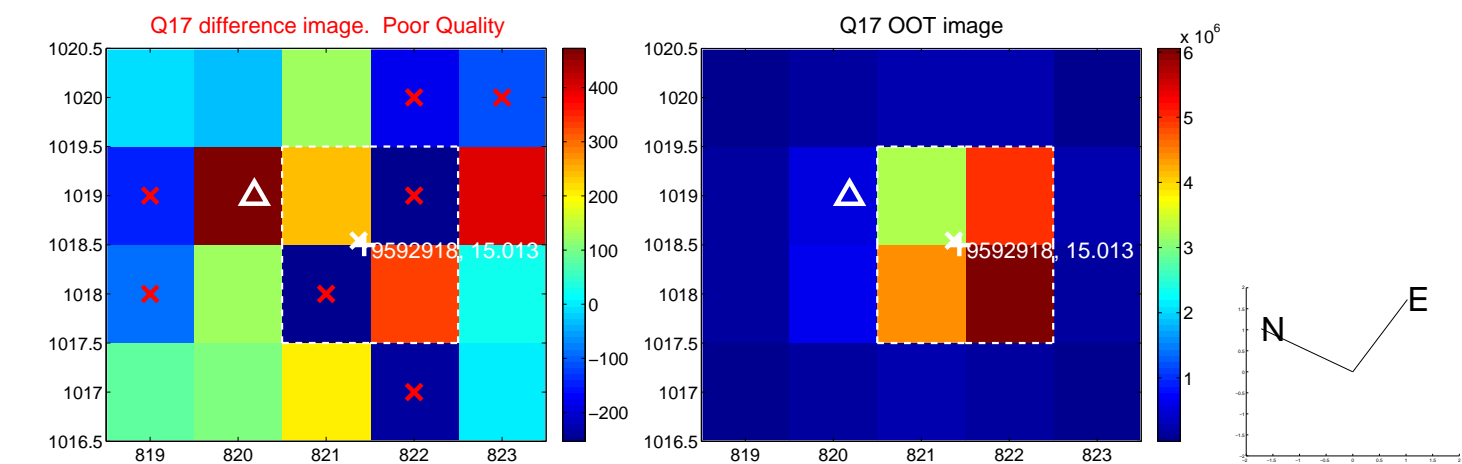
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

