

KIC 009719634

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})
009719634-01	OBS	1500.01	3.351552	134.285124	339.6	2.528	33.4	36.4	0.91	5185	1.97	314.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009719634-01	OBS	FP	0.00	0	0	1	1	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 009719634-01

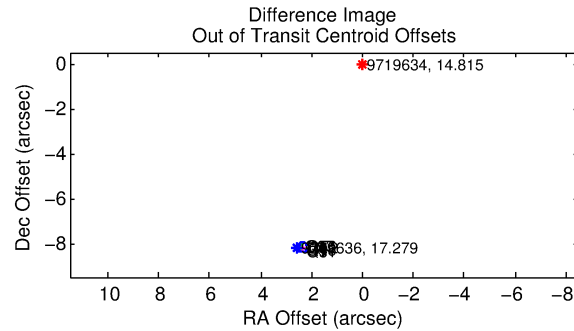
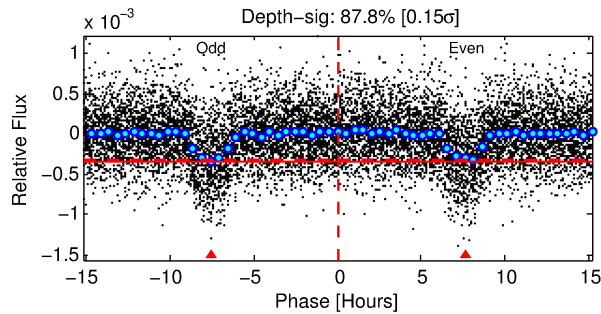
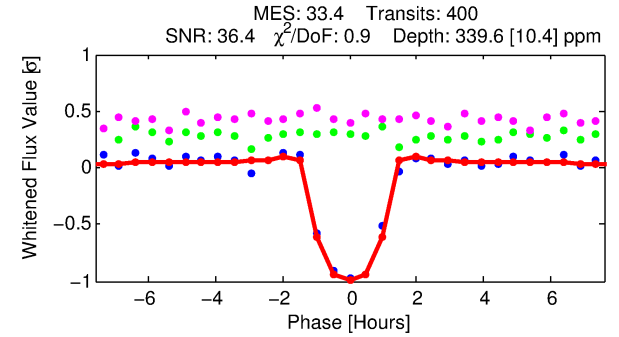
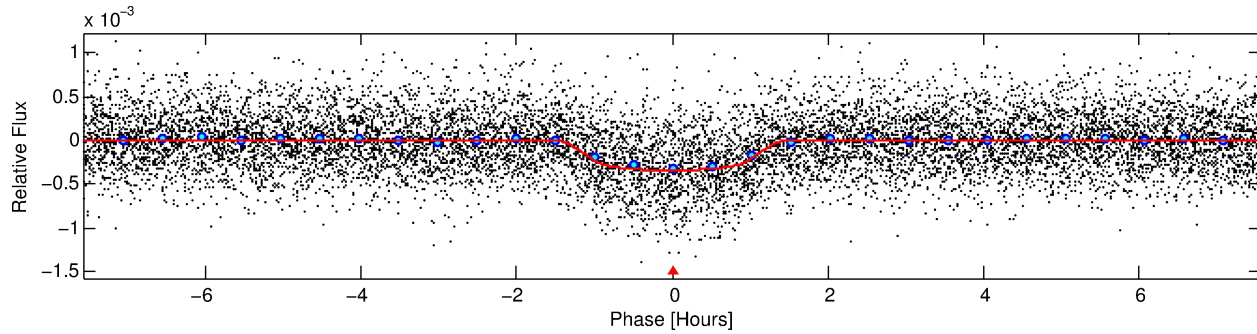
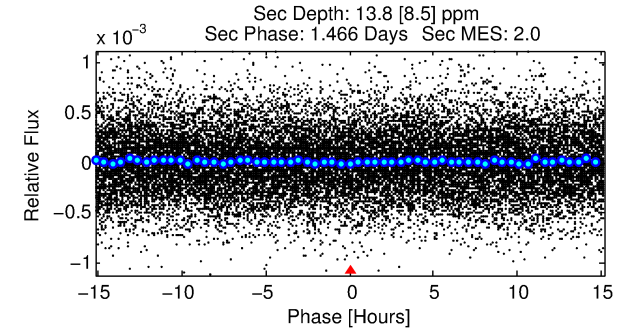
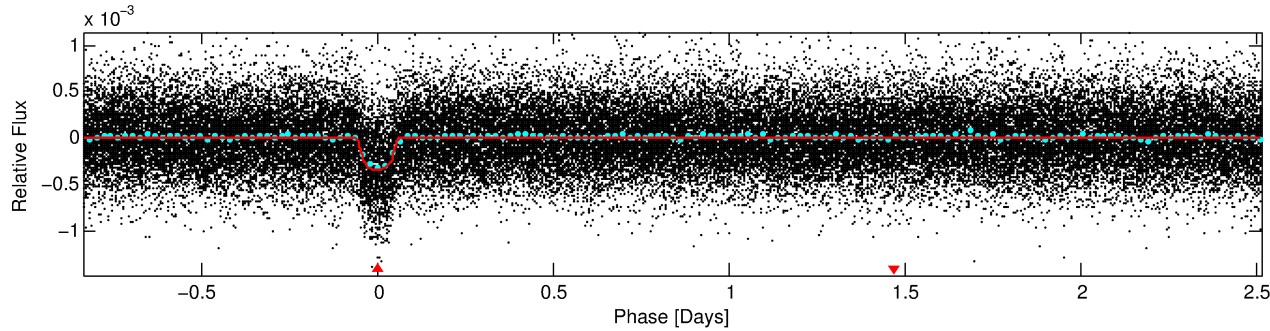
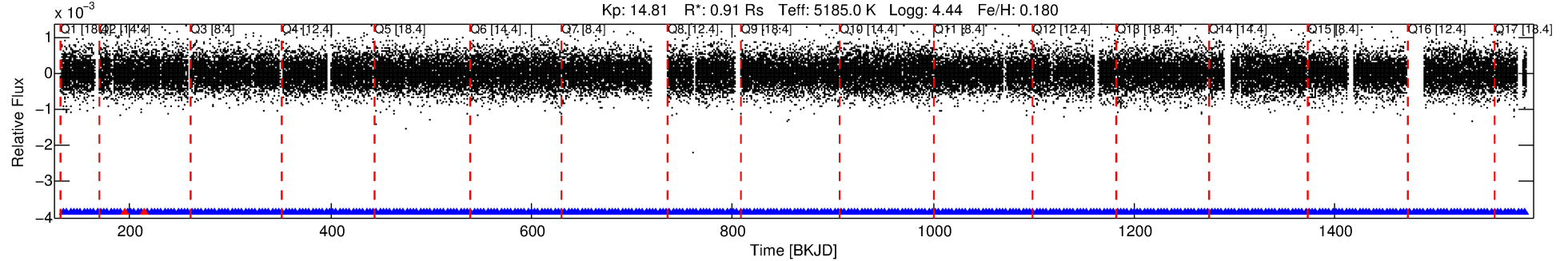
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009719634-01	9719634	3686.01	9719636	1:1	8.6	0	2	17.28	14.82	193.01	Direct-PRF	0	0.37	0.20

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: 9719634 Candidate: 1 of 1 Period: 3.352 d
KOI: K01500.01 Corr: 0.979

Kp: 14.81 R*: 0.91 Rs Teff: 5185.0 K Logg: 4.44 Fe/H: 0.180



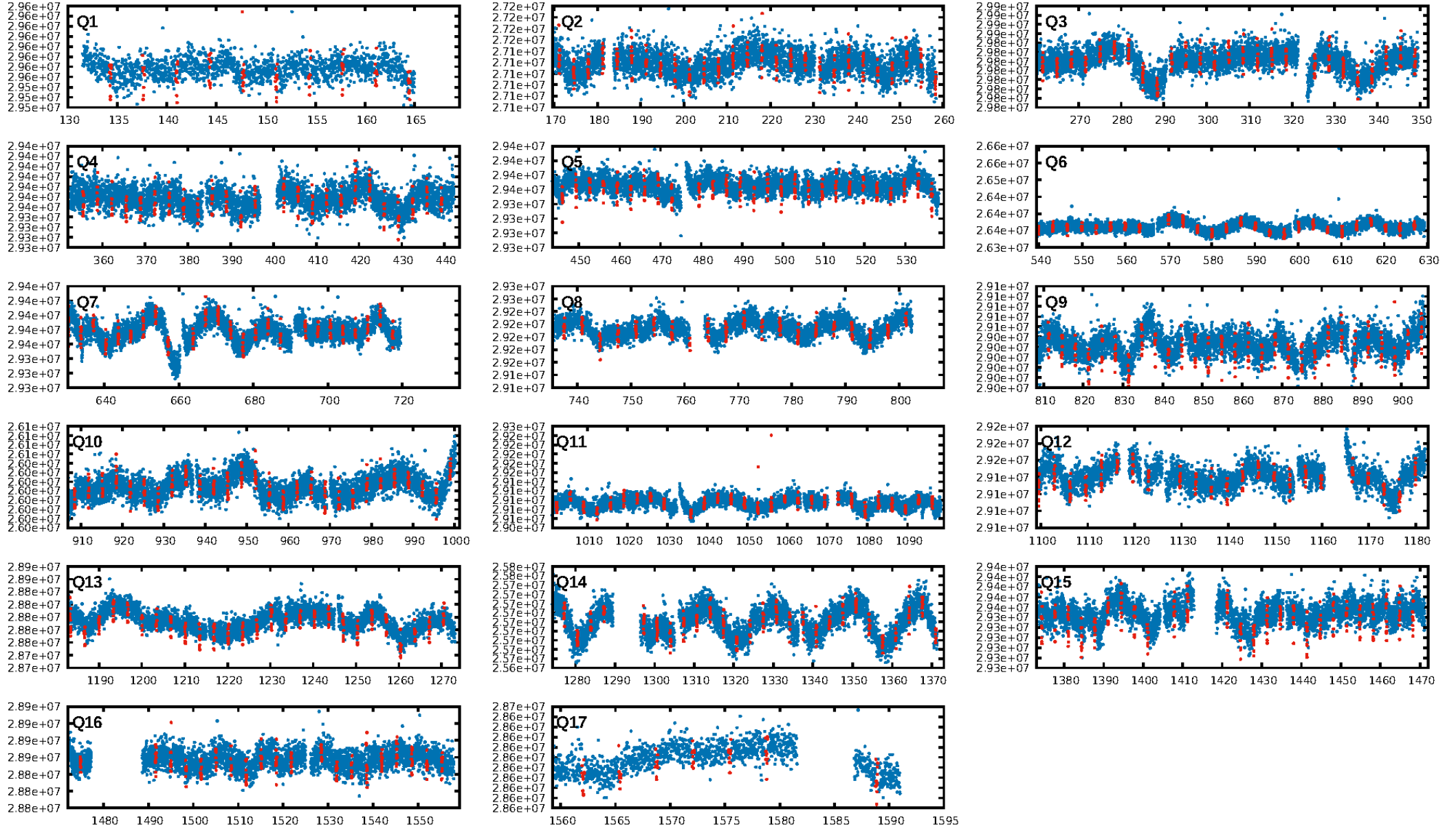
DV Fit Results:

Period = 3.35155 [0.00001] d
Epoch = 134.2851 [0.0011] BKJD
Rp/R* = 0.0198 [0.0046]
a/R* = 5.55 [4.90]
b = 0.86 [0.27]
Seff = 314.71 [85.92]
Teq = 1074 [73] K
Rp = 1.97 [0.56] Re
a = 0.0413 [0.0064] AU
Ag = 3.34 [2.71] [0.86σ]
Teffp = 2245 [439] K [2.63σ]

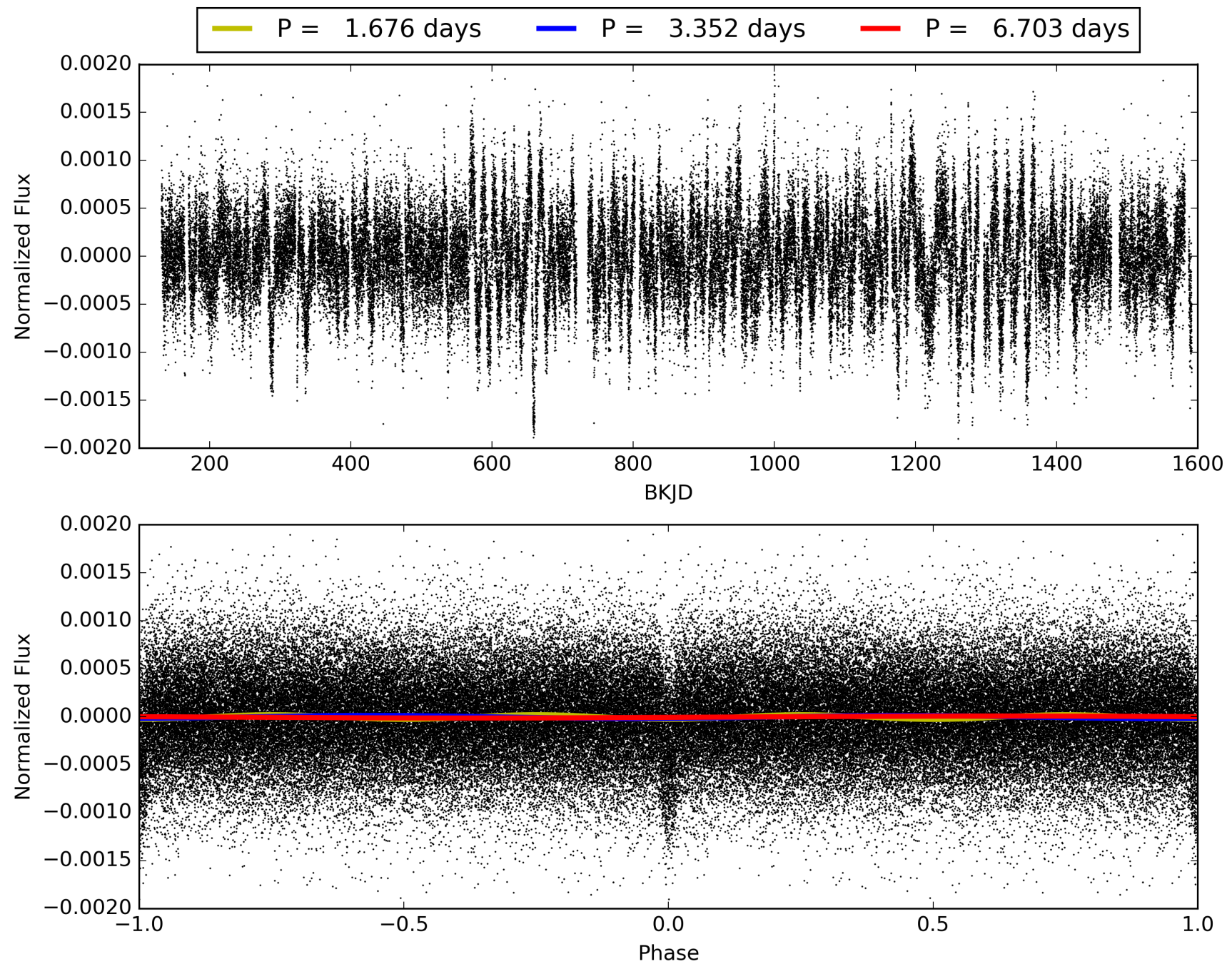
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.71e-232
RollingBand-fgt: 0.99 [381/383]
GhostDiagnostic-chr: -0.3539
Centroid-sig: 0.0%
Centroid-so: 76.958 arcsec [185.28σ]
OotOffset-rm: 8.521 arcsec [115.93σ]
KicOffset-rm: 8.679 arcsec [124.32σ]
OotOffset-st: 0/4/4/5 [13]
KicOffset-st: 0/4/4/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009719634-01, PDC Light Curves

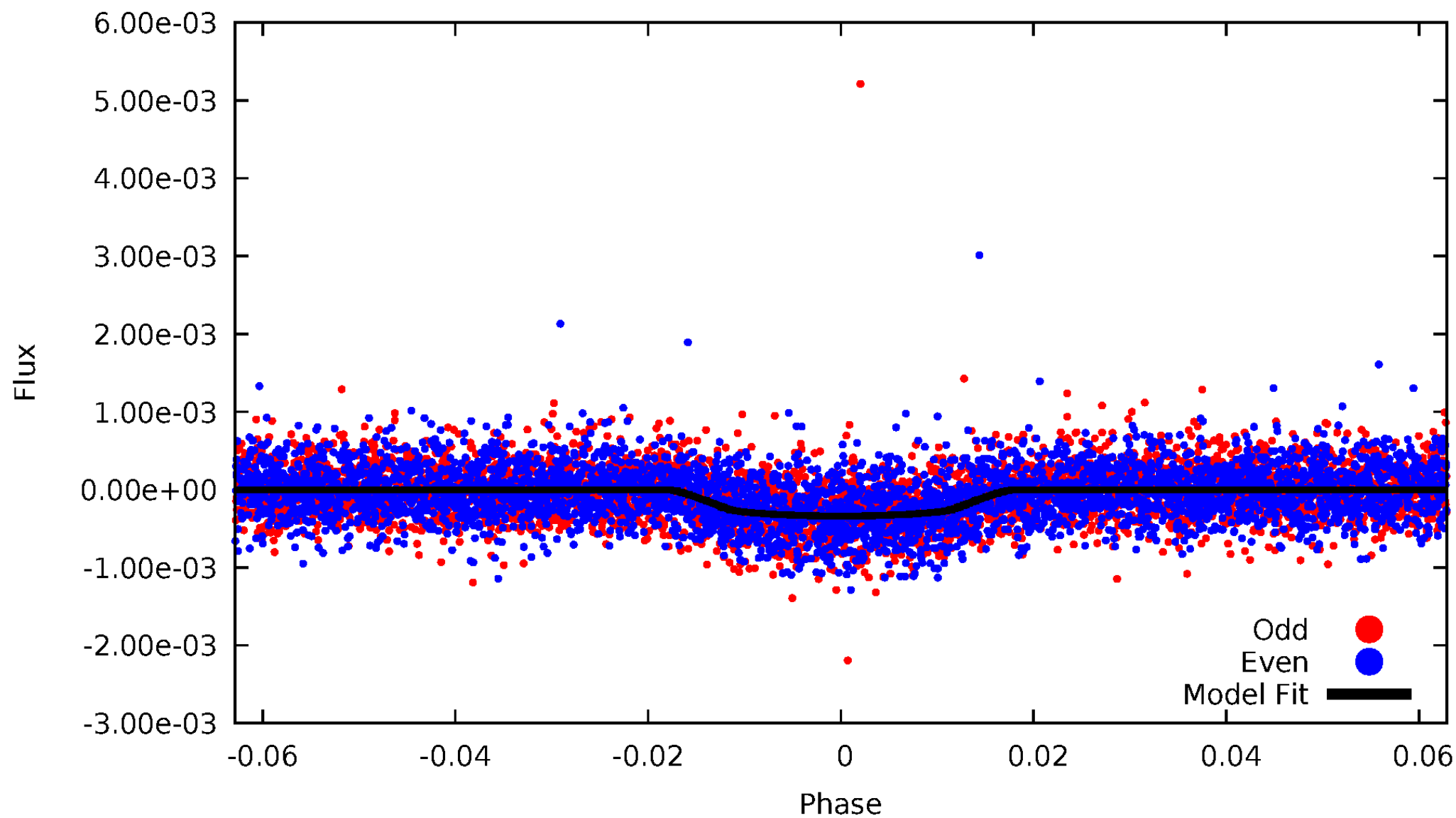


TCE 009719634-01



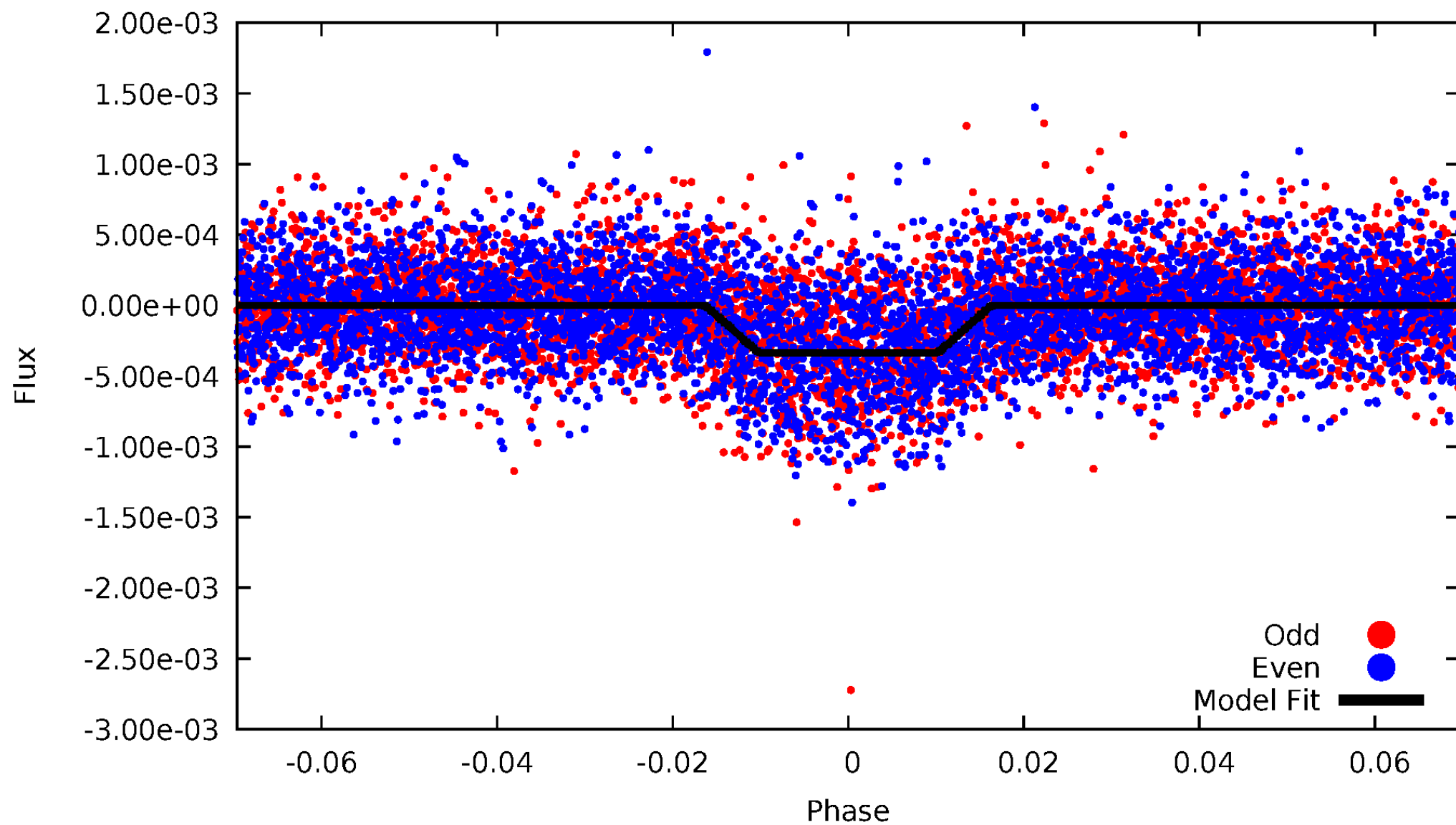
DV Odd/Even

TCE 009719634-01

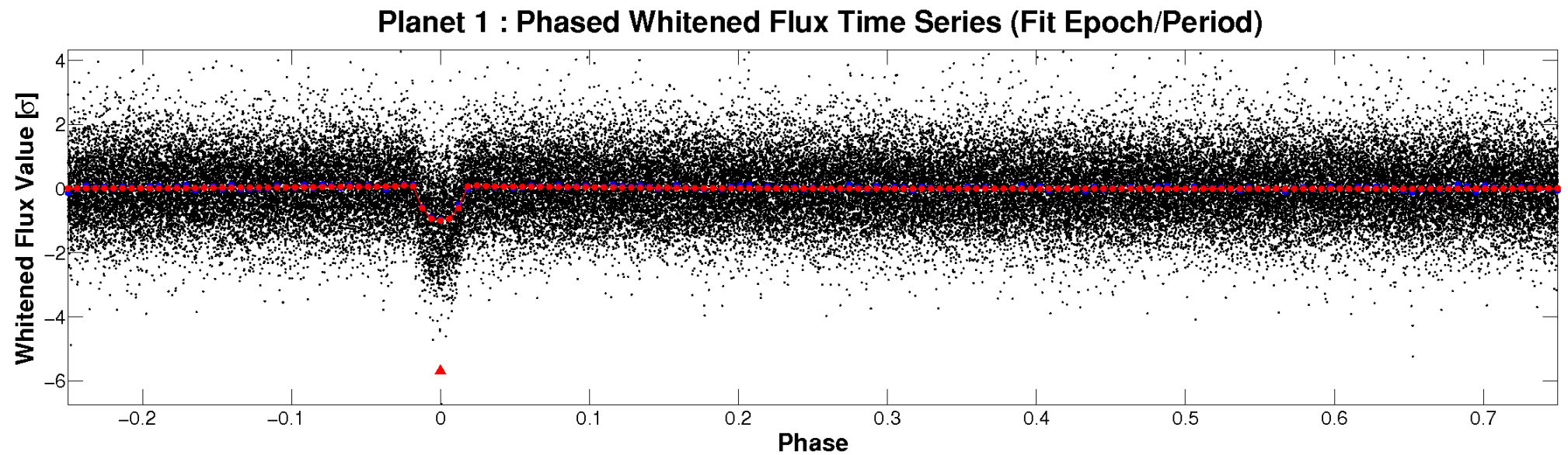
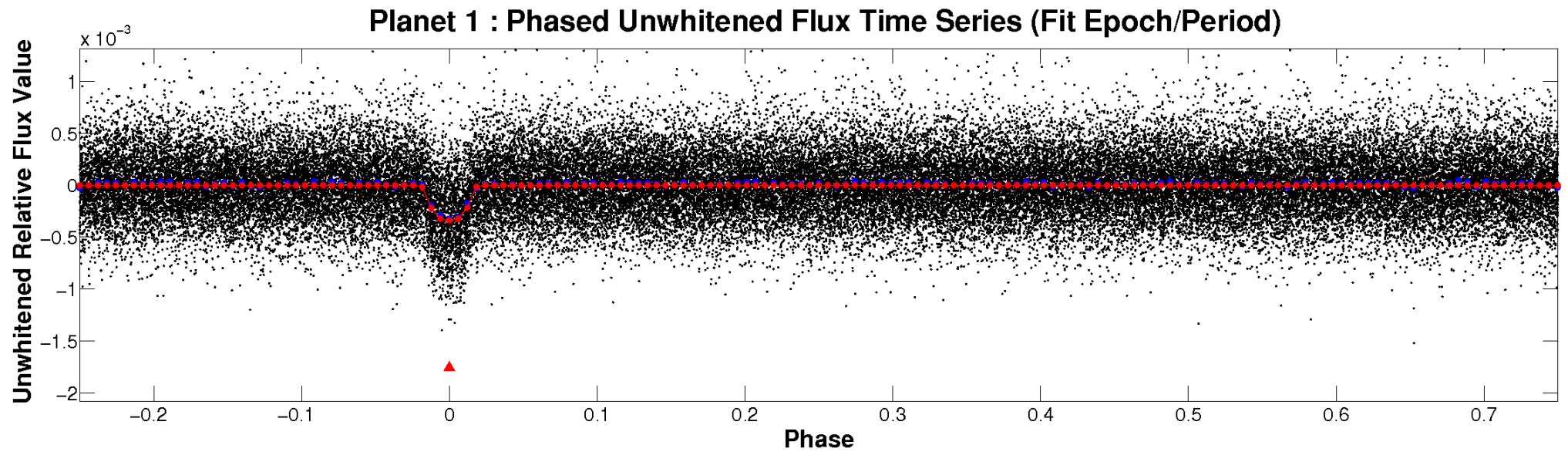


ALT Odd/Even

TCE 009719634-01

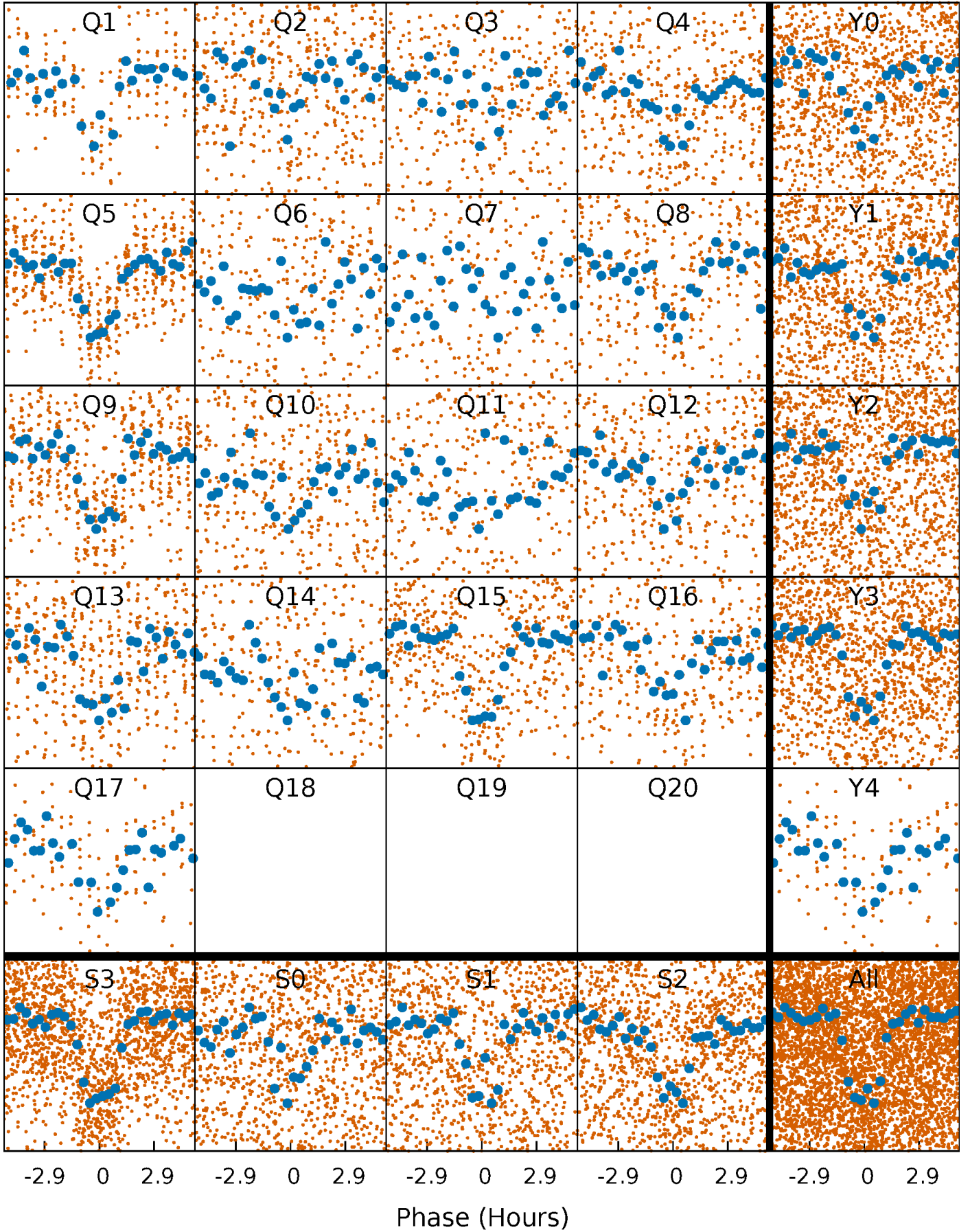


Non-Whitened Vs. Whitened Light Curve



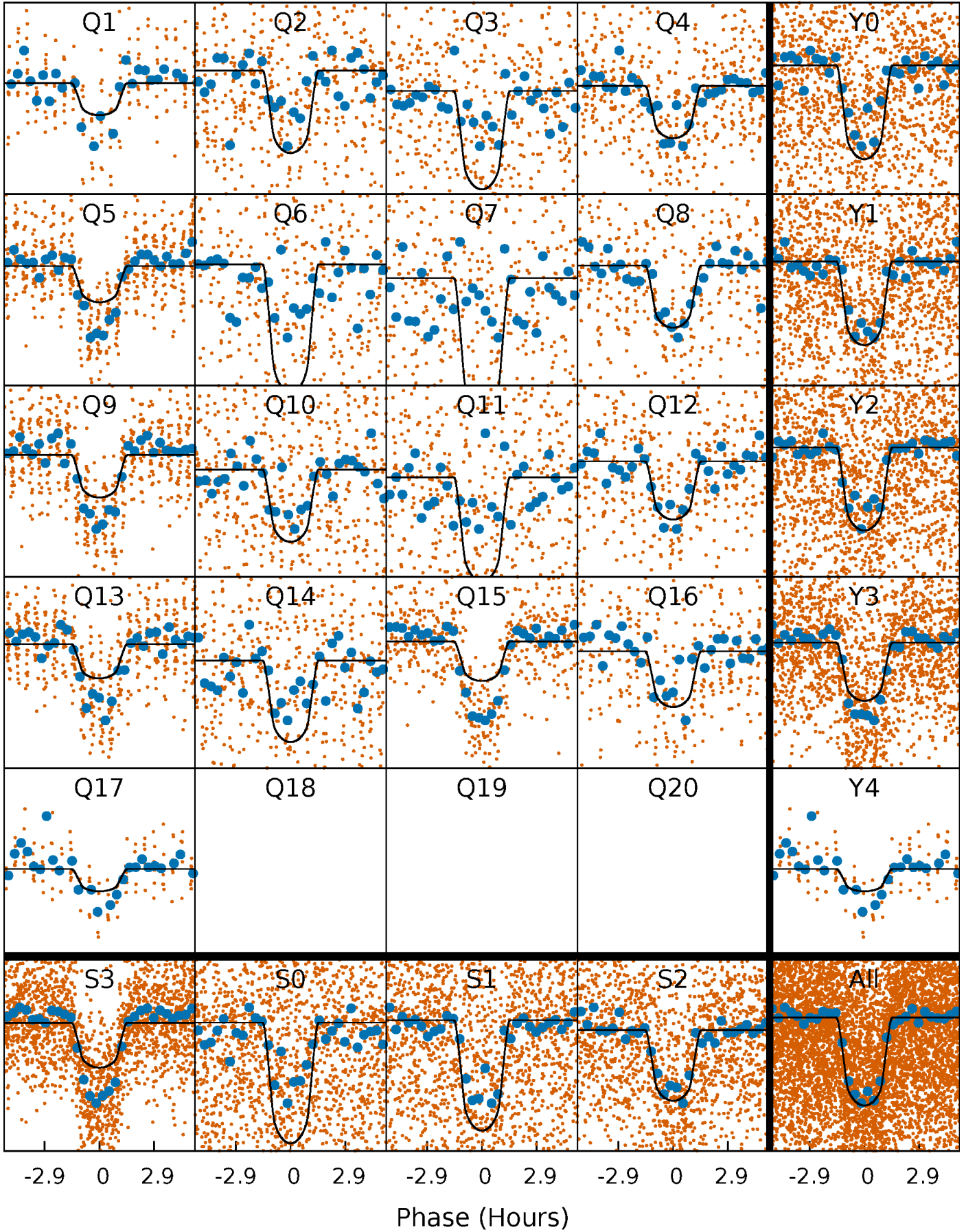
PDC Quarter-Phased Transit Curves

TCE 009719634-01 P= 3.351552 Days $T_0=134.285124$ (BKJD)



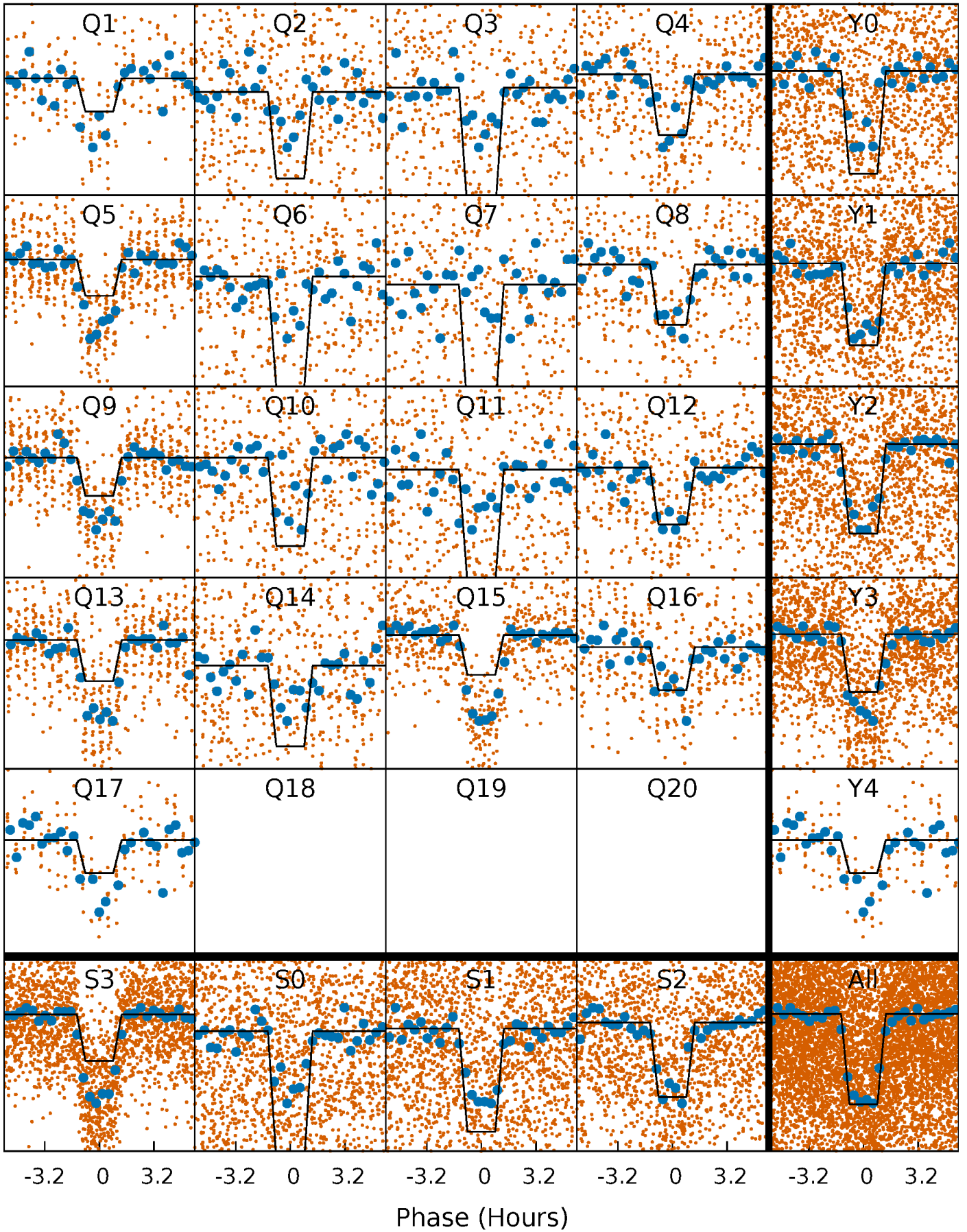
DV Quarter-Phased Transit Curves

TCE 009719634-01 P= 3.351552 Days $T_0=134.285124$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

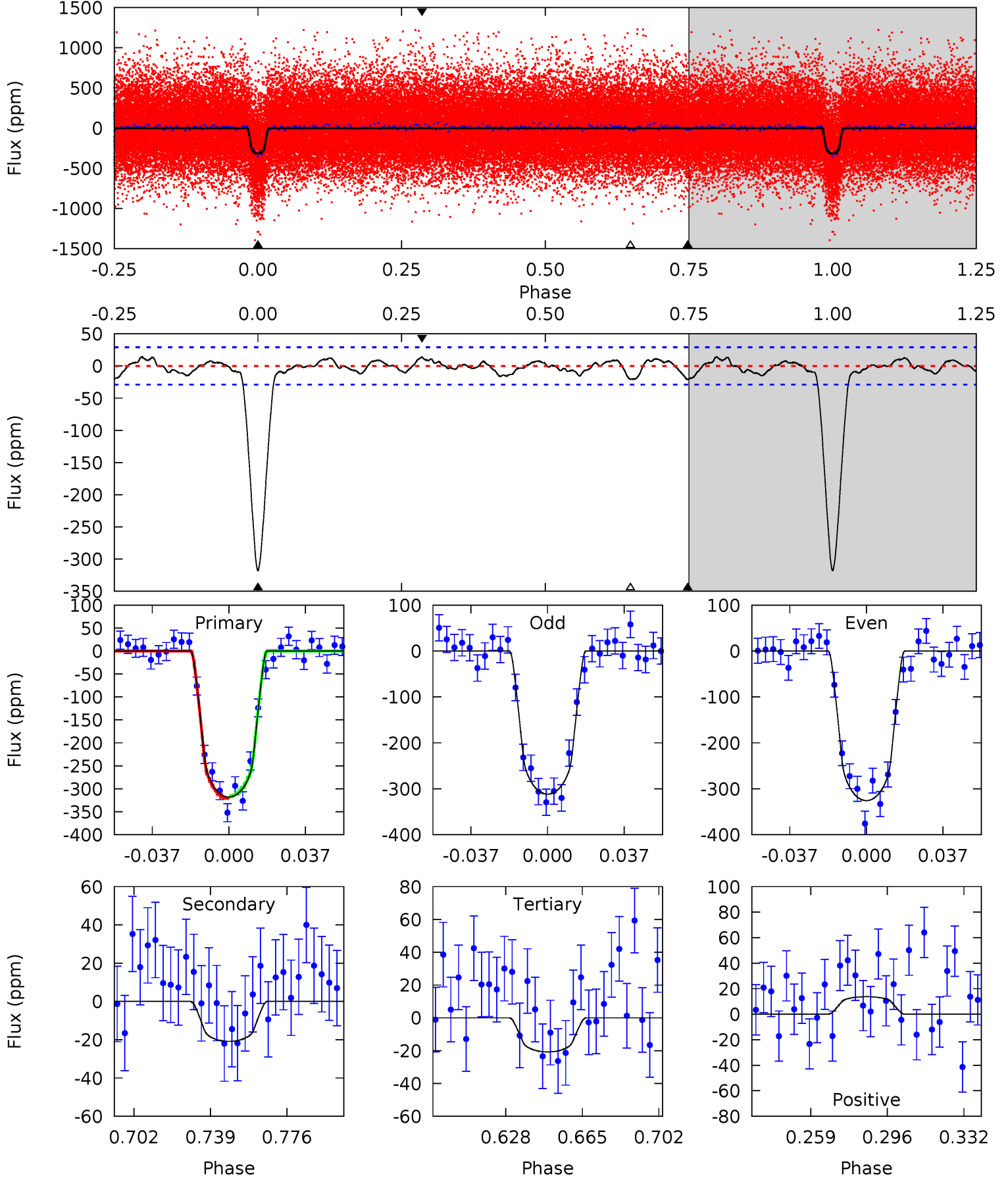
TCE 009719634-01 P= 3.351537 Days $T_0=134.289449$ (BKJD)



DV Model-Shift Uniqueness Test

009719634-01, P = 3.351552 Days, E = 130.933572 Days

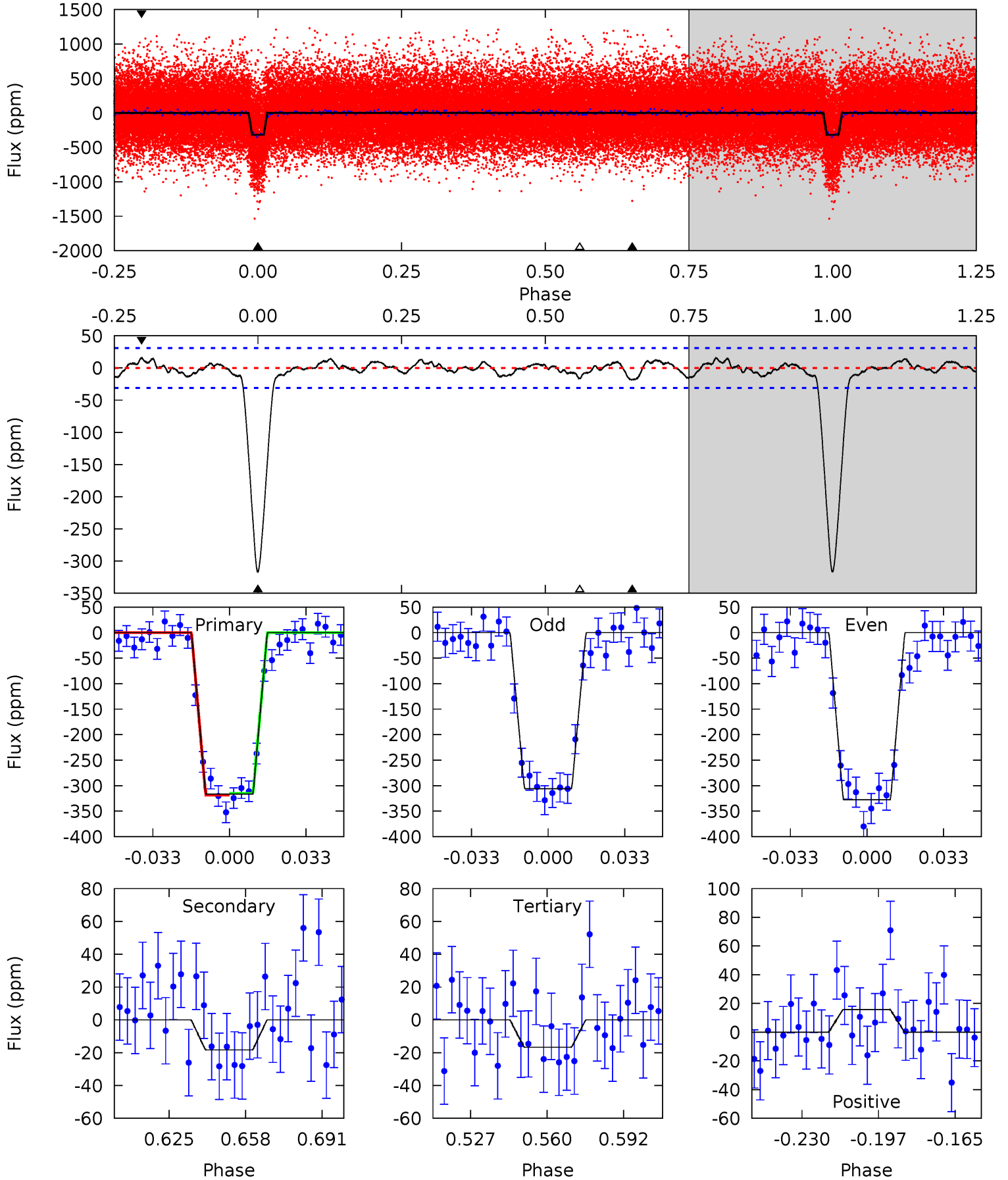
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.3	3.43	3.41	2.26	4.77	2.09	1.26	48.8	50.0	0.02	1.17	1.16	1.05	0.04	0.41



Alt Model-Shift Uniqueness Test

009719634-01, P = 3.351537 Days, E = 130.937912 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.2	2.84	2.60	2.45	4.79	2.13	1.08	46.6	46.7	0.25	0.39	1.65	1.10	0.05	0.24



Stellar Parameters For KIC 009719634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5185^{+155}_{-155}	$4.442^{+0.117}_{-0.143}$	$0.180^{+0.200}_{-0.300}$	$0.911^{+0.150}_{-0.123}$	$0.837^{+0.087}_{-0.060}$	$1.560^{+0.779}_{-0.566}$
	+3%/-3%	+3%/-3%	+111%/-167%	+16%/-14%	+10%/-7%	+50%/-36%
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 009719634-01 / KOI 1500.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-21 ± 6	$1.98^{+0.49}_{-0.48}$	1509^{+83}_{-76}	3063^{+289}_{-246}	$4.856^{+4.154}_{-2.021}$
Alt.	-18 ± 6	$1.88^{+0.46}_{-0.53}$	1507^{+80}_{-78}	3050^{+355}_{-286}	$4.917^{+4.871}_{-2.452}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

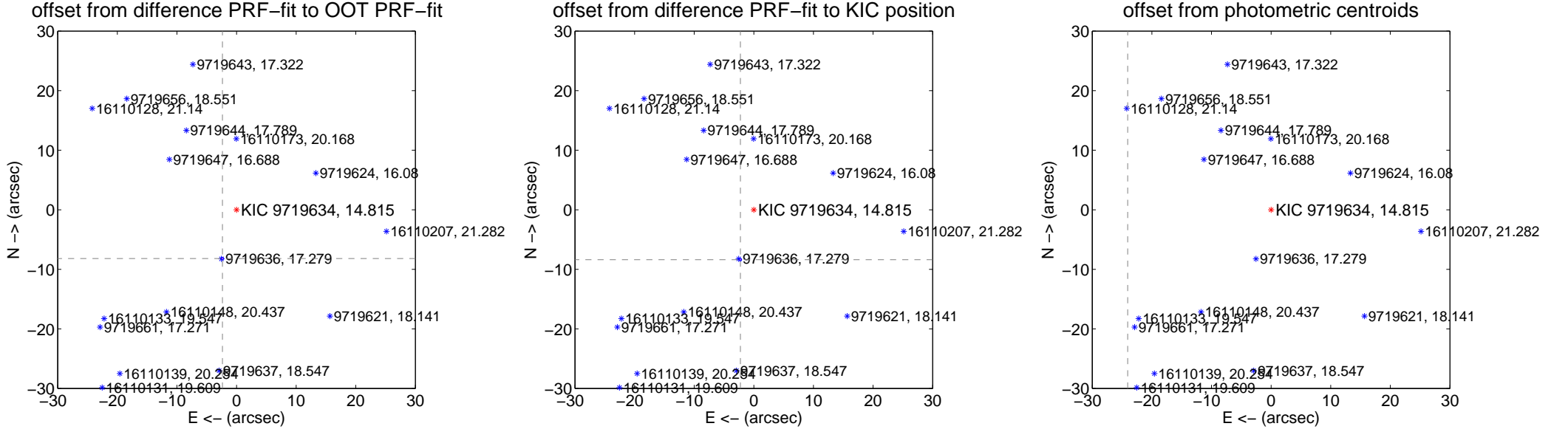
A_{obs} = Observed Albedo (Assuming $T=0$)

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

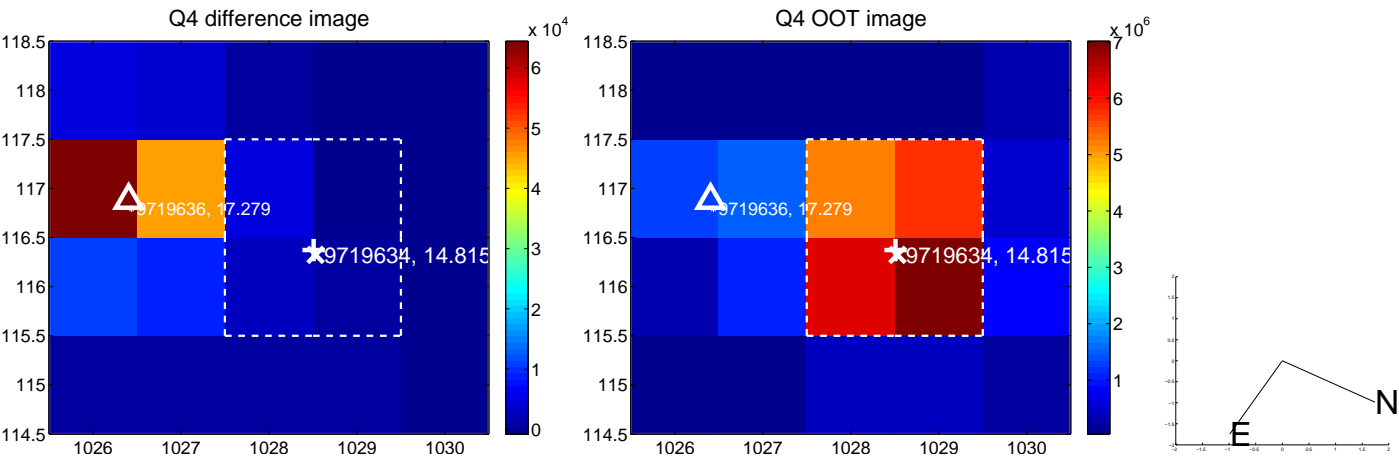
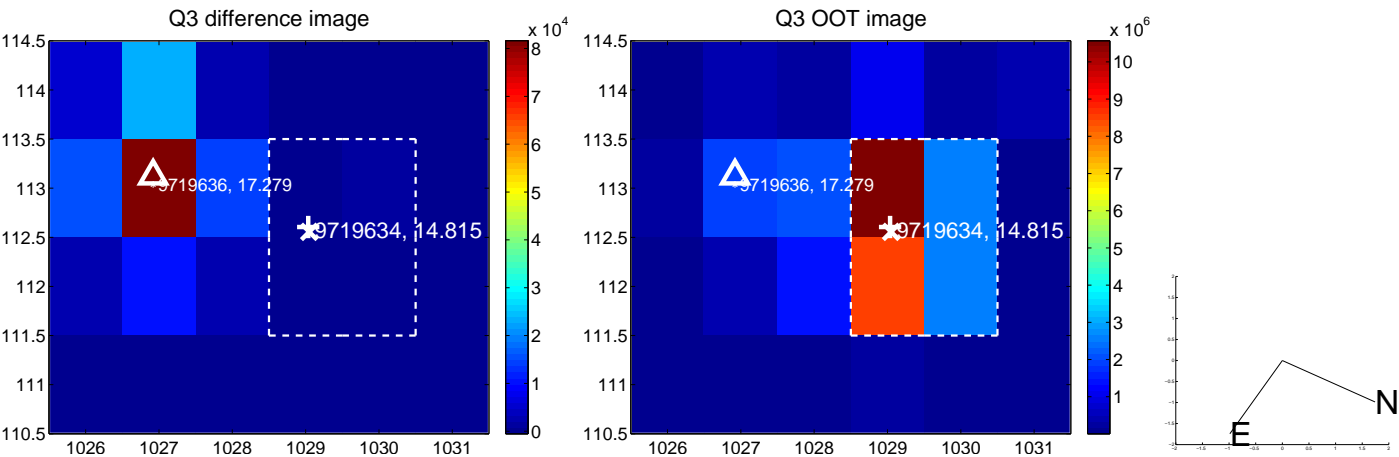
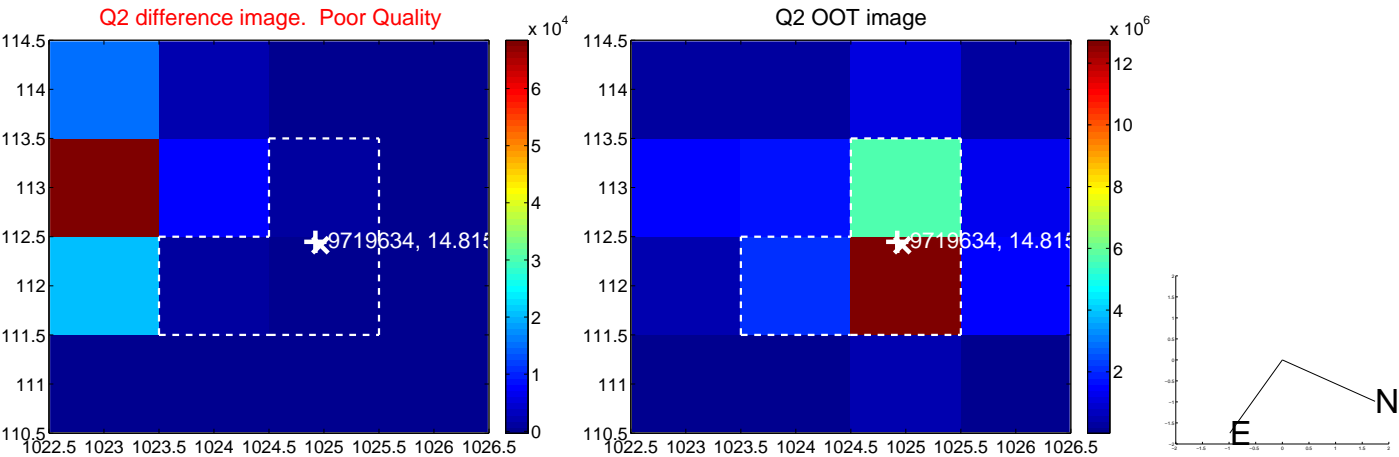
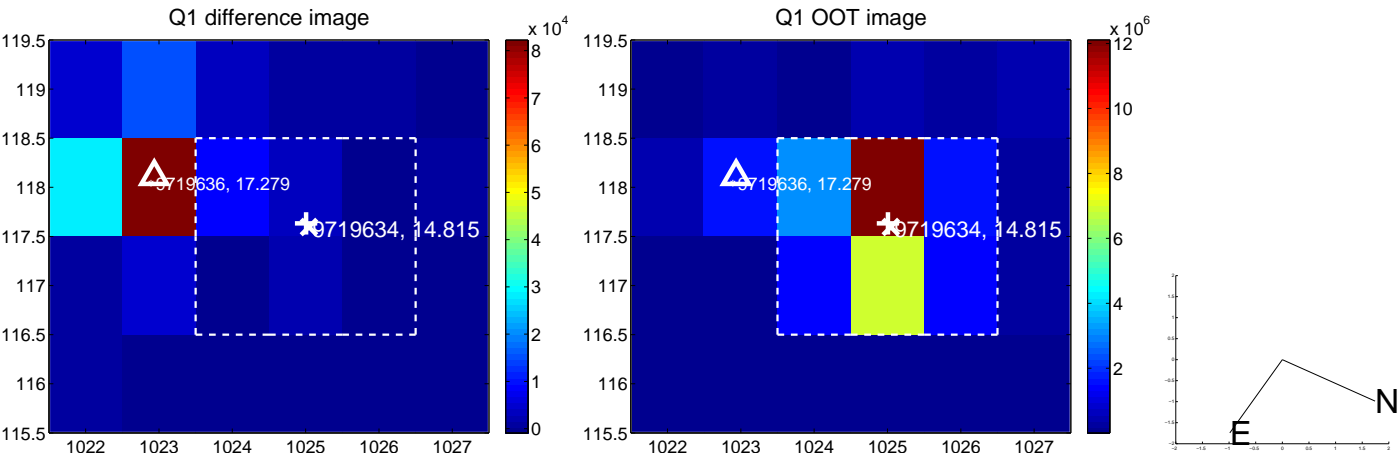
Supplemental centroid analysis for 009719634-01. Kepler magnitude: 14.81. Transit SNR 36.37
 There are 13 quarters with good PRF difference image offsets
 The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.521 \pm 0.074	115.93	2.367 \pm 0.067	-8.186 \pm 0.074
PRF-fit source offset from KIC position	8.679 \pm 0.070	124.32	2.250 \pm 0.070	-8.382 \pm 0.070
photometric centroid source offset	76.96 \pm 0.42	185.29	24.06 \pm 0.33	-73.10 \pm 0.42

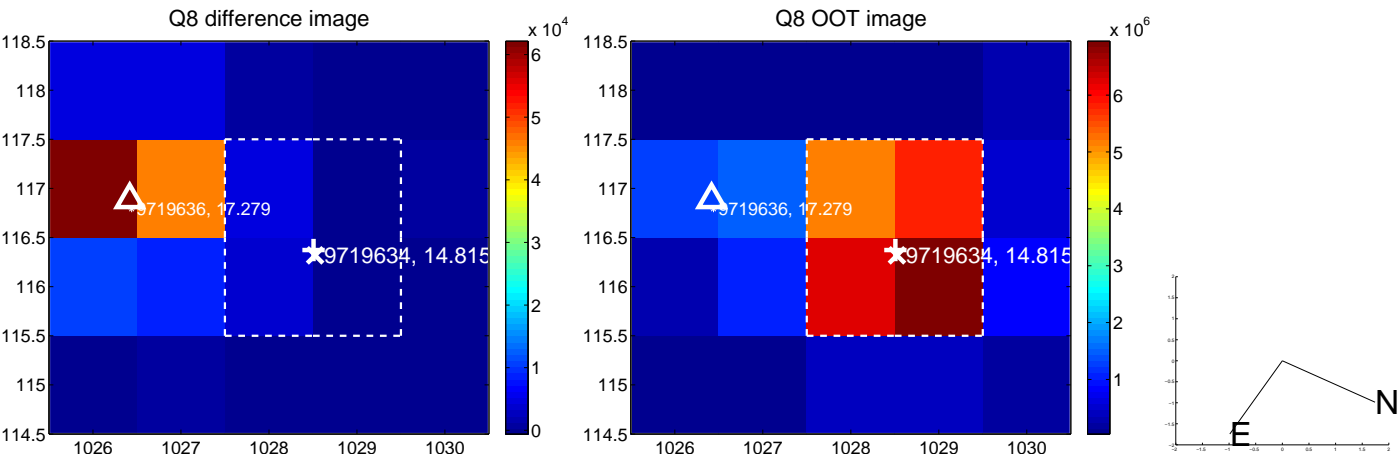
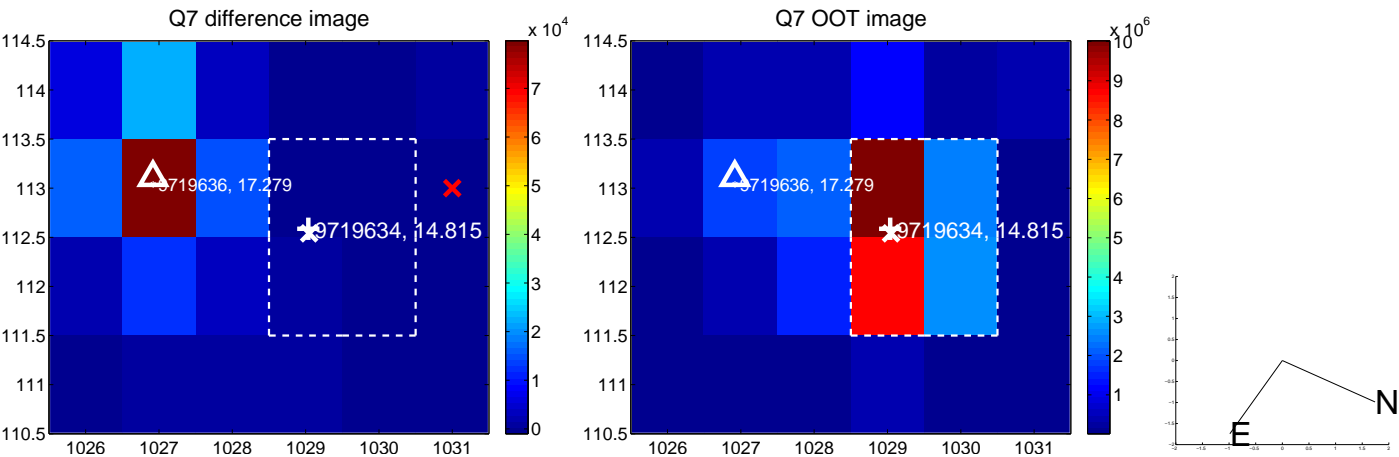
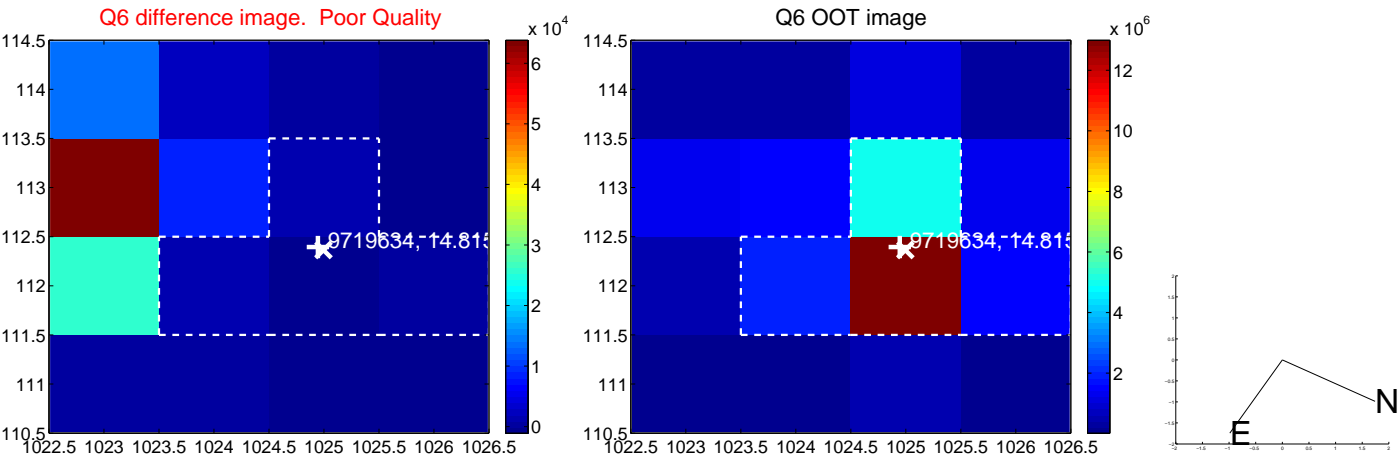
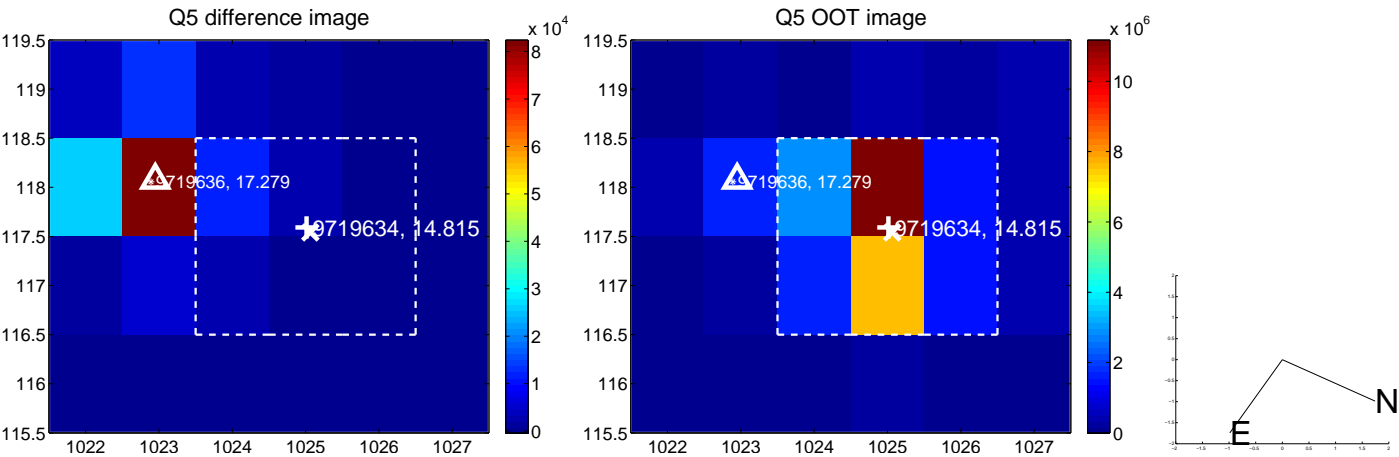


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

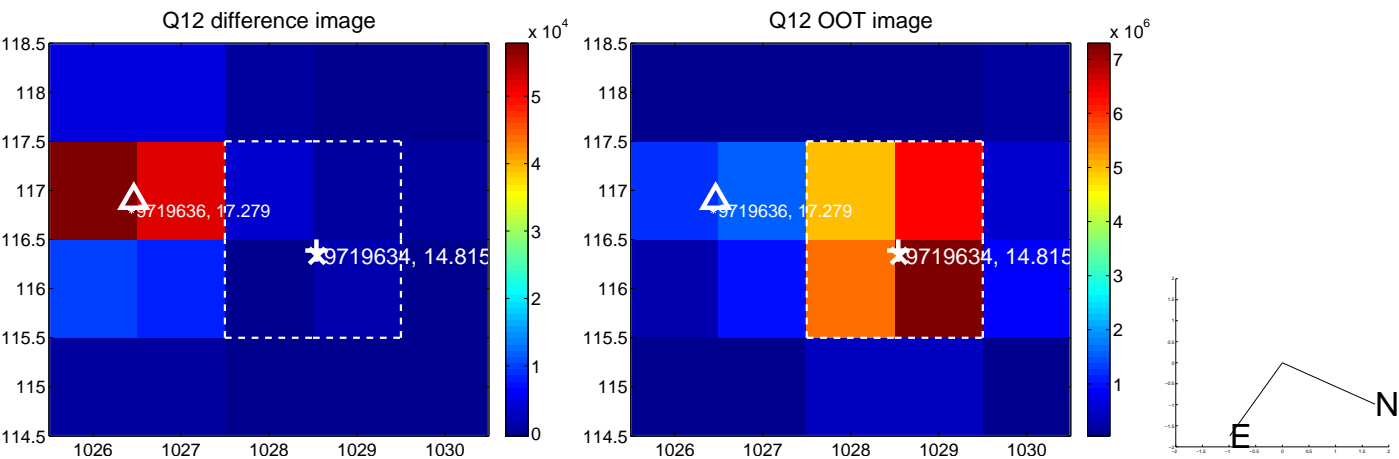
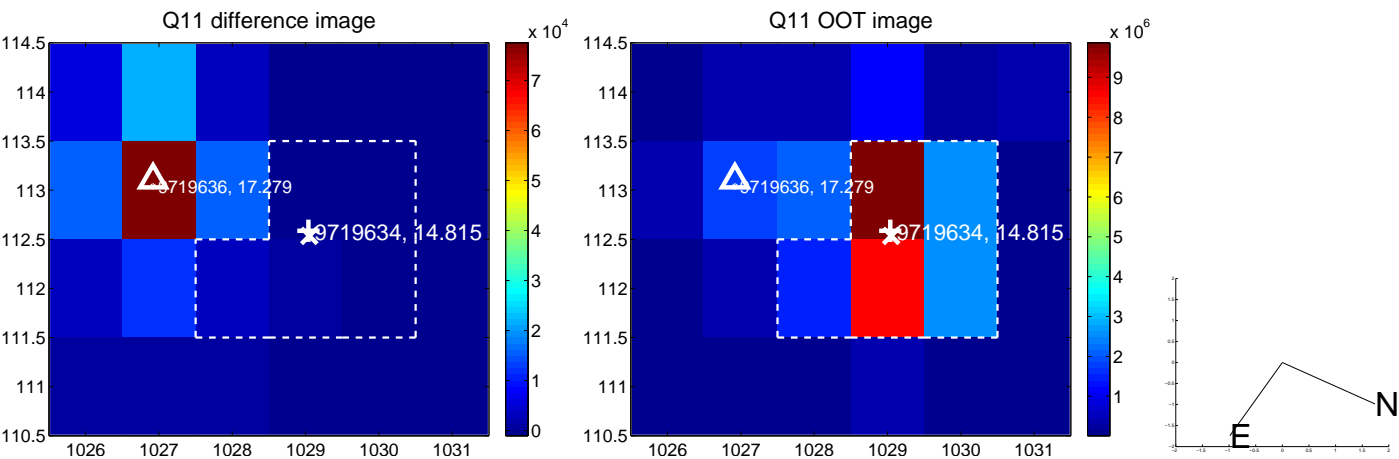
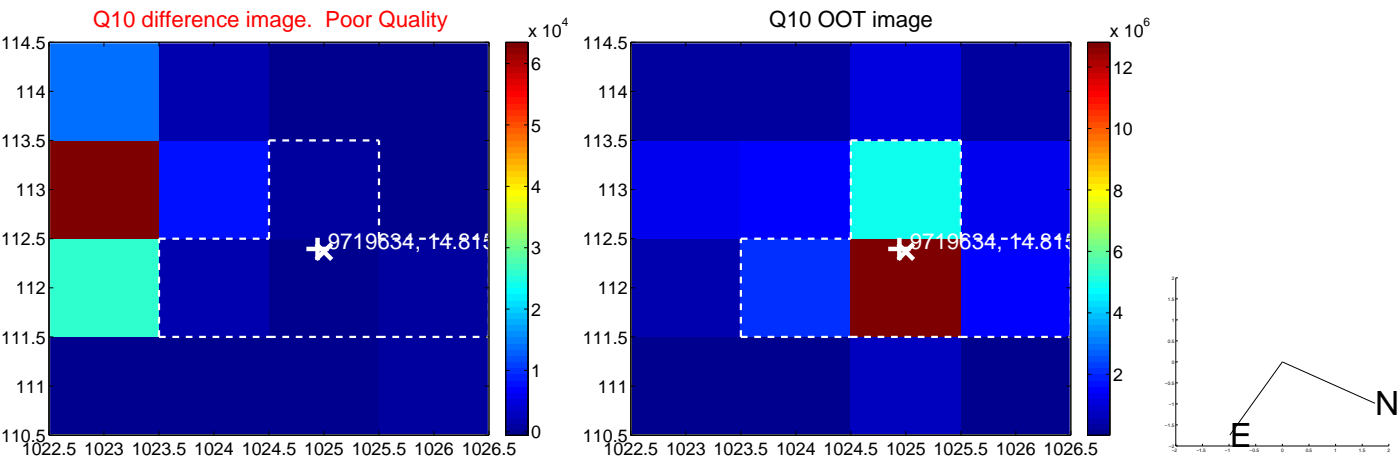
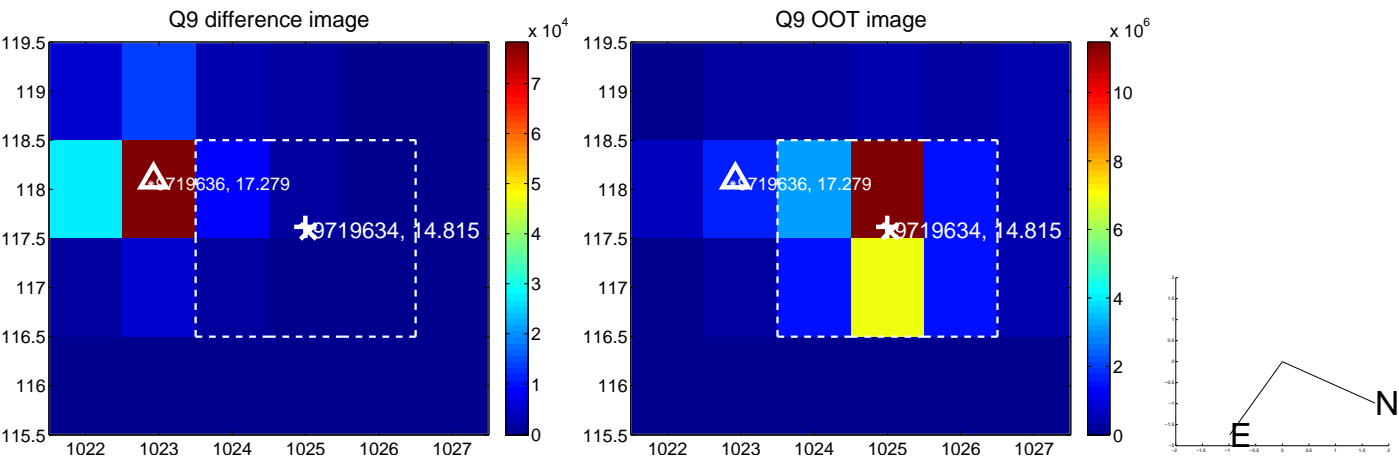
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



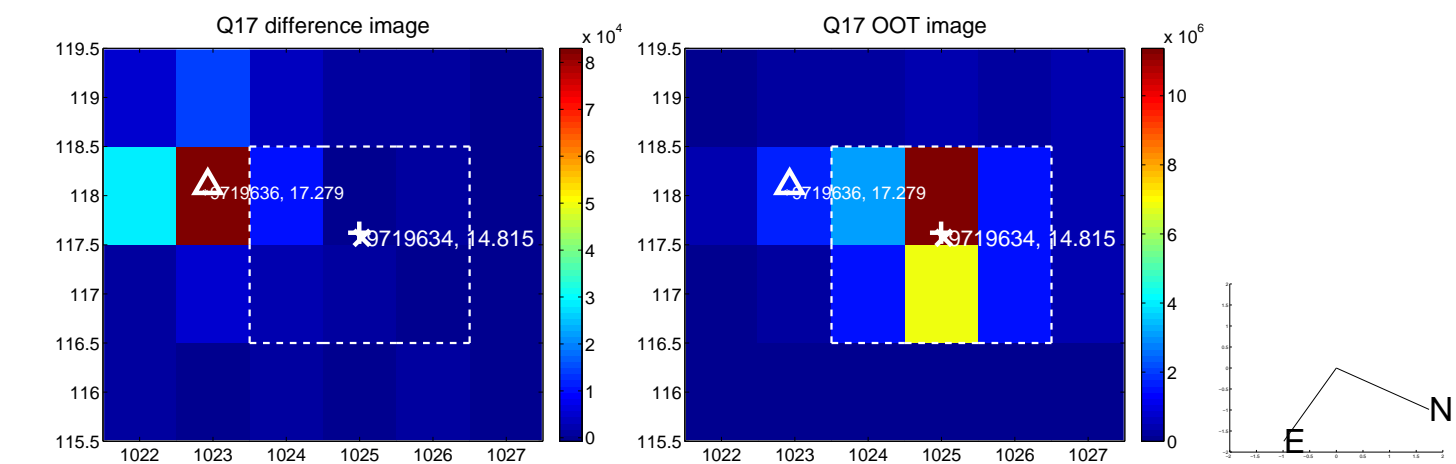
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



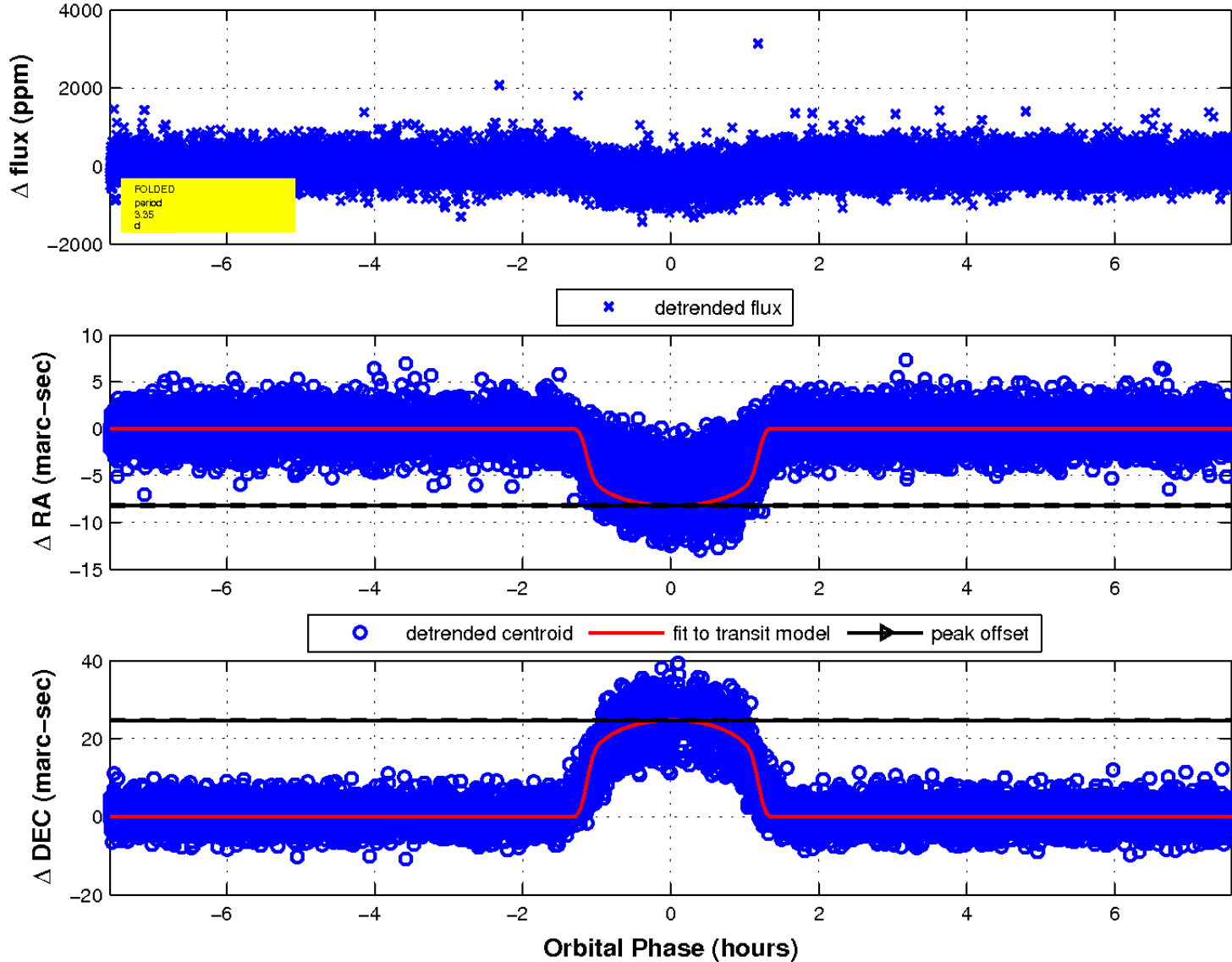
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

