

KIC 011913052

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})
011913052-01	OBS	7491.01	3.747928	134.159449	141.2	3.755	10.6	11.4	7.70	4929	11.18	8392.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011913052-01	OBS	FP	0.00	0	0	1	1	CENT_UNRESOLVED_OFFSET—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.

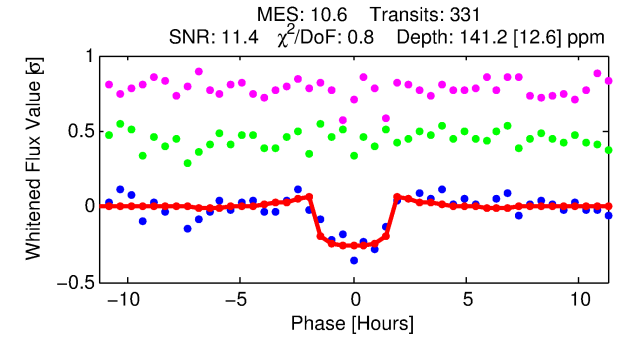
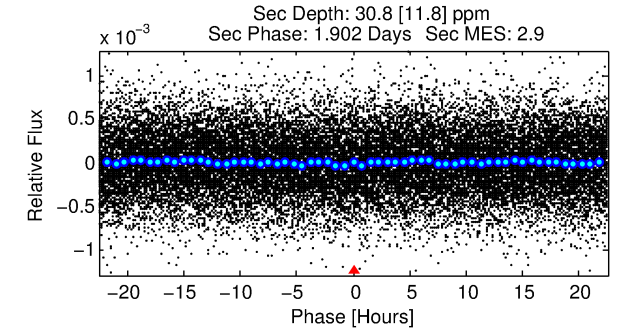
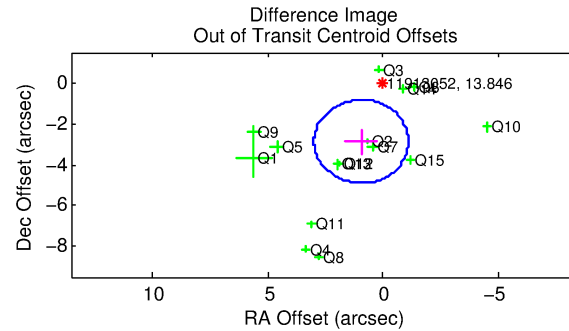
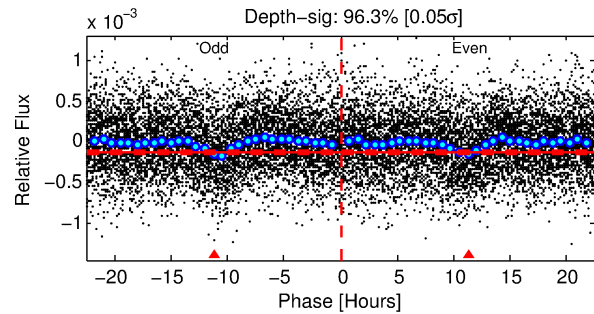
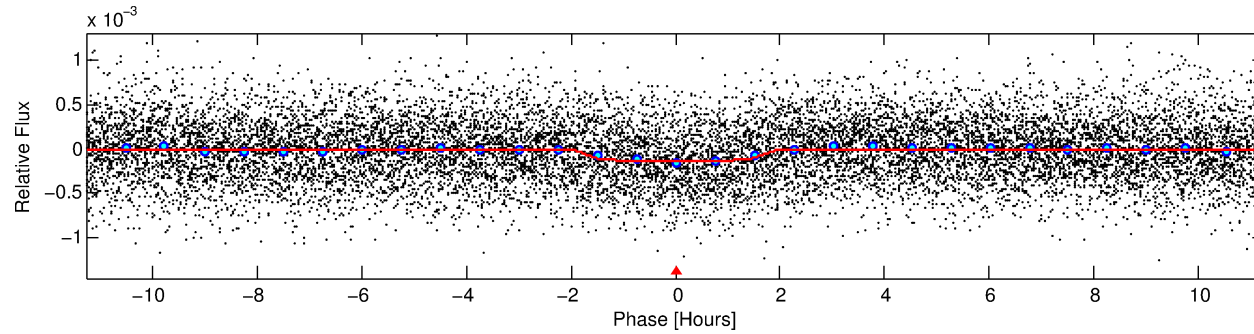
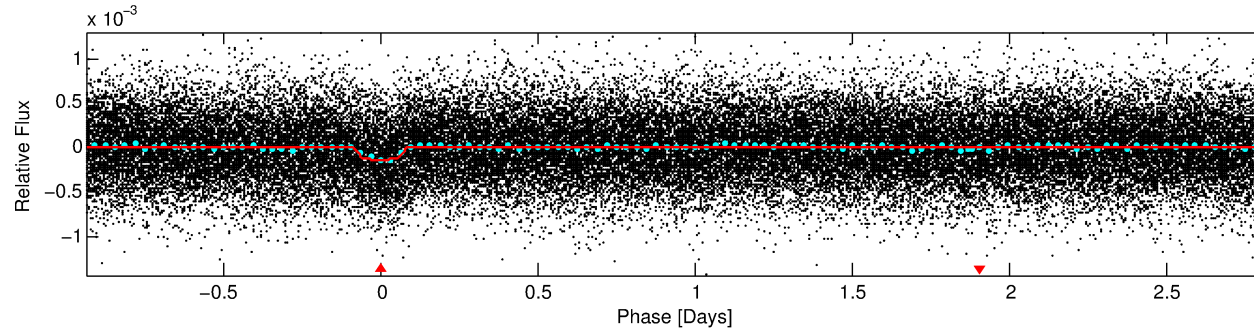
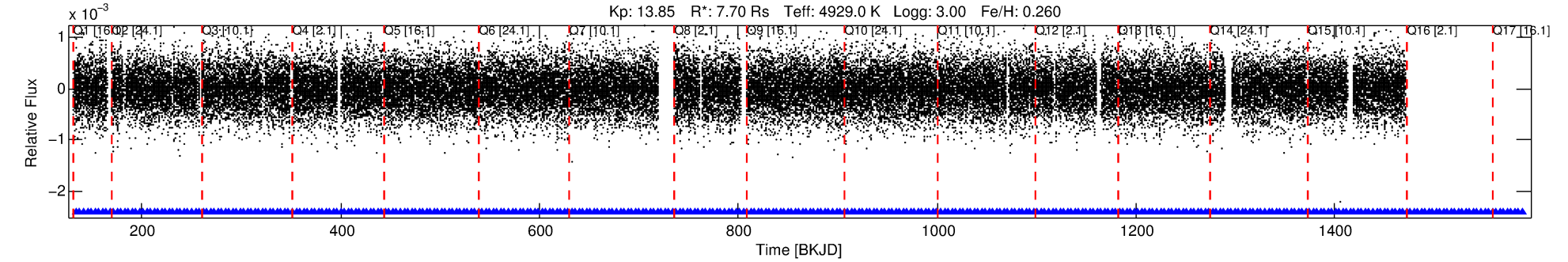
Ephemeris Match Information For 011913052-01

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
011913052-01	11913052	011913071-pri	11913071	1:1	103.7	25	-5	9.53	13.84	1340.40	Direct-PRF	0	1.39	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: 11913052 Candidate: 1 of 1 Period: 3.748 d
KOI: K07491.01 Corr: 0.950



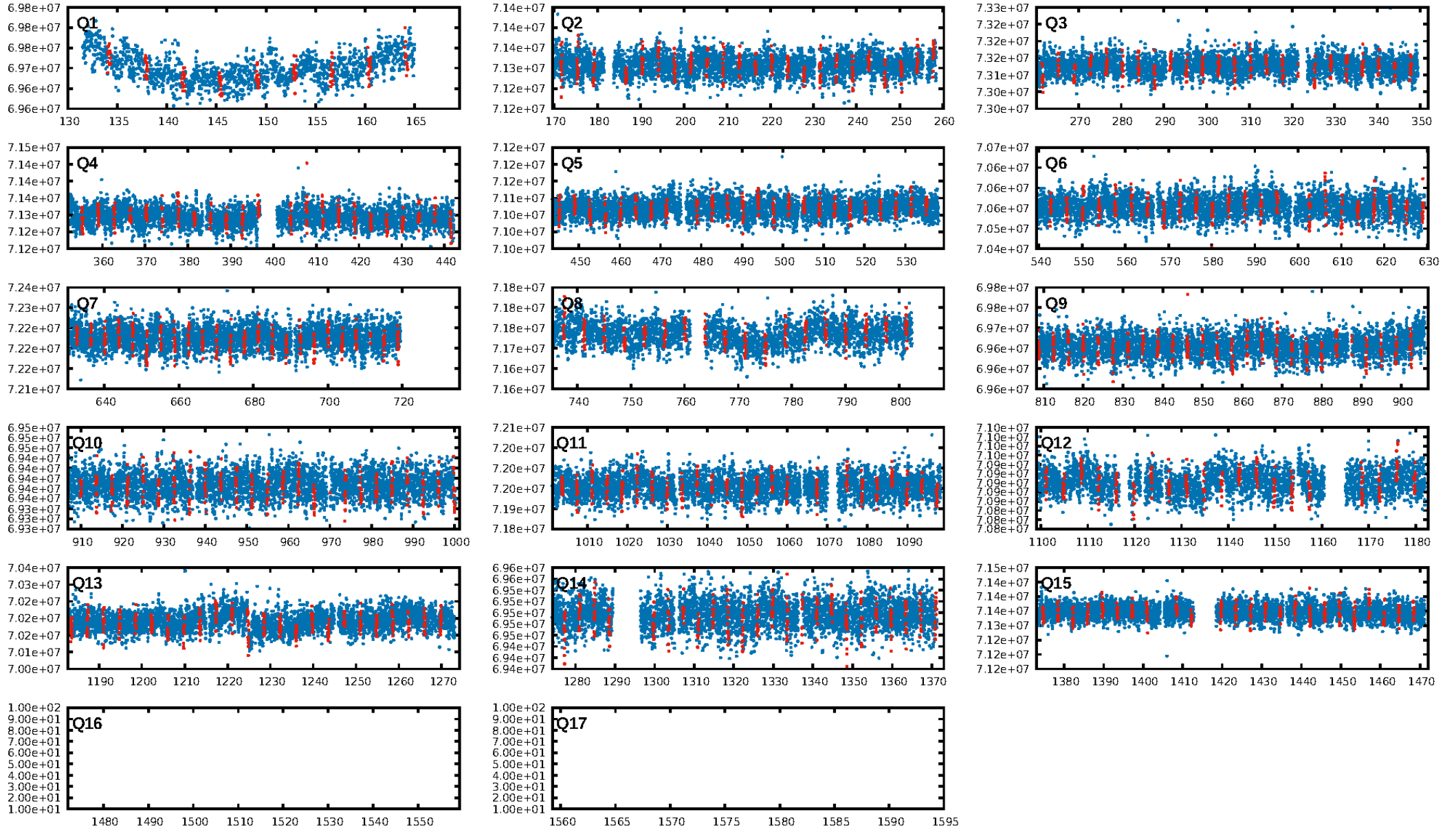
DV Fit Results:

Period = 3.74793 [0.00002] d
Epoch = 134.1594 [0.0029] BKJD
Rp/R* = 0.0133 [0.0041]
a/R* = 3.67 [4.07]
b = 0.90 [0.26]
Seff = 8392.06 [1957.67]
Teq = 2441 [142] K
Rp = 11.18 [4.56] Re
a = 0.0611 [0.0111] AU
Ag = 0.51 [0.38] [-1.31 σ]
Teffp = 3183 [585] K [1.23 σ]

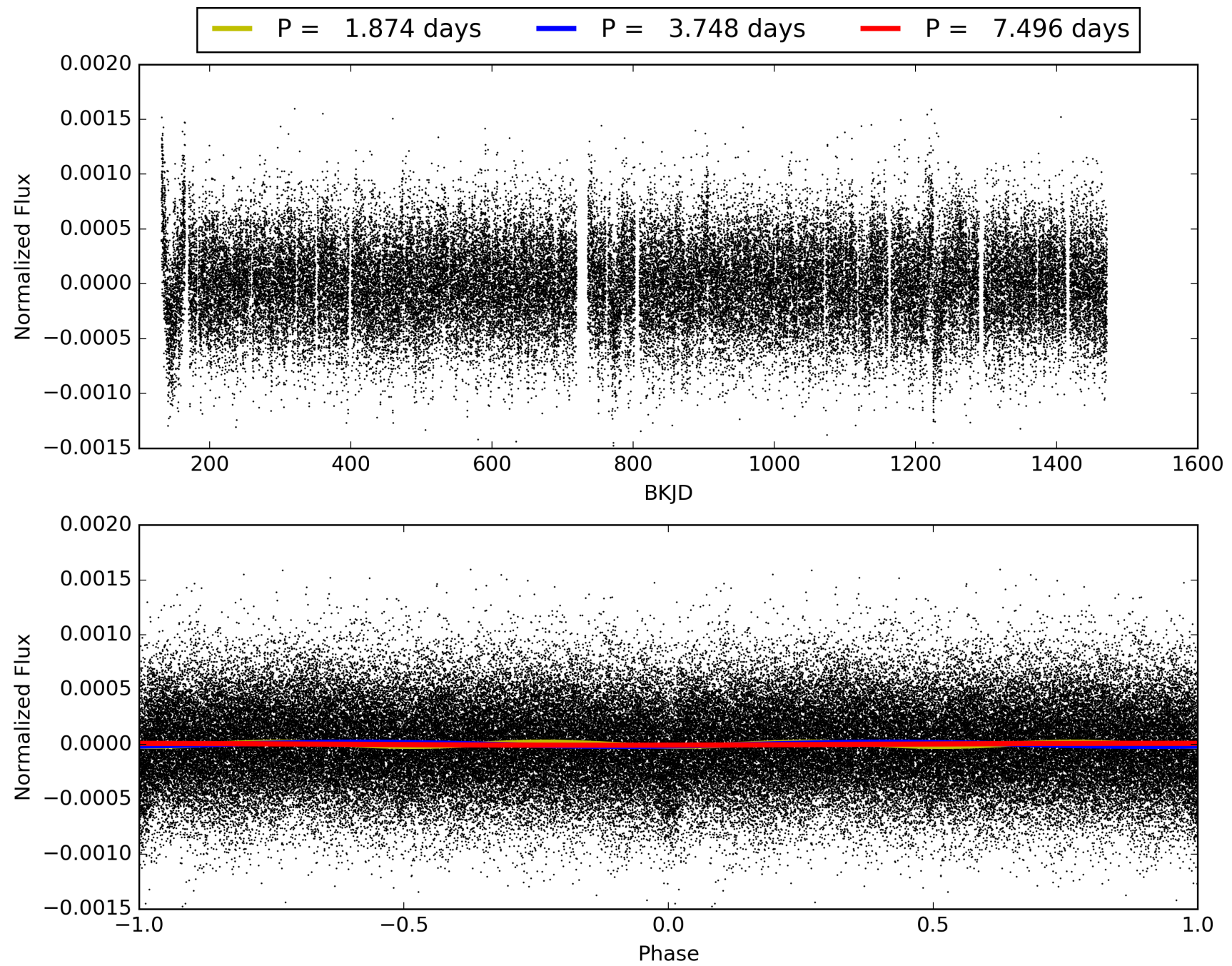
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.64e-23
RollingBand-fgt: 1.00 [322/322]
GhostDiagnostic-chr: 0.06598
Centroid-sig: 0.0%
Centroid-so: 4.951 arcsec [10.96 σ]
OotOffset-rm: 3.020 arcsec [4.44 σ]
KicOffset-rm: 3.026 arcsec [4.33 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.07 [1/15]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 011913052-01, PDC Light Curves

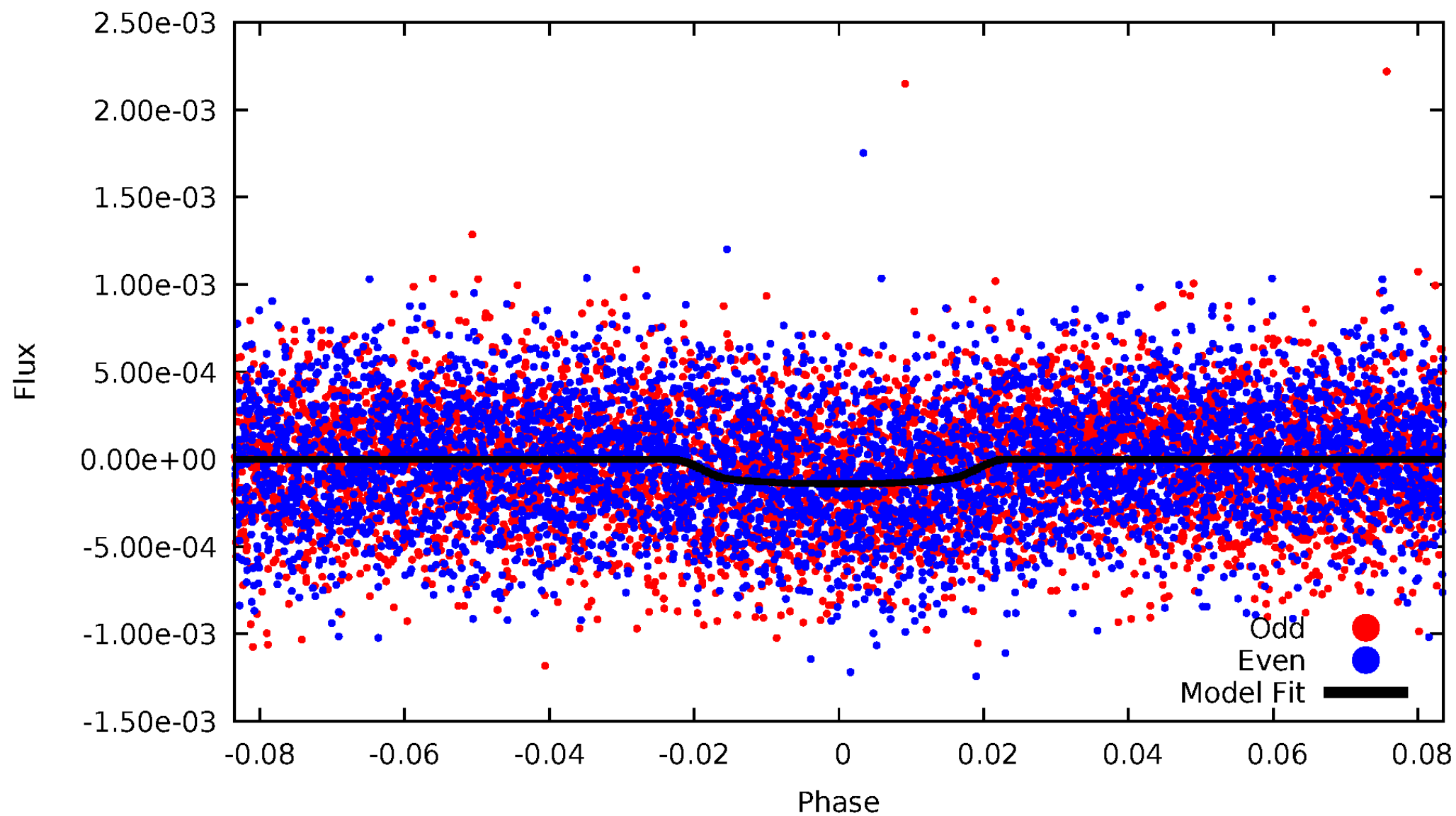


TCE 011913052-01



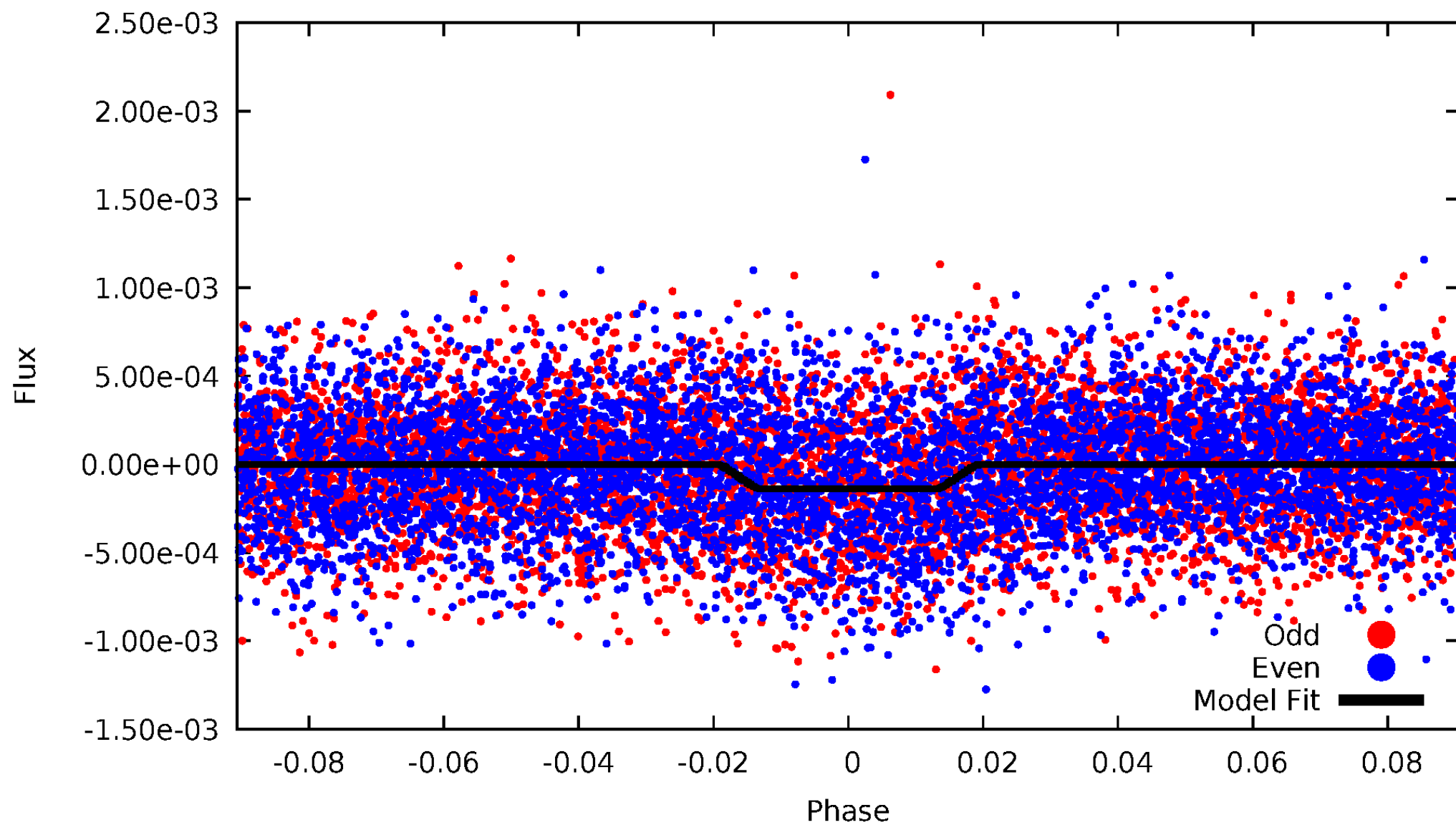
DV Odd/Even

TCE 011913052-01



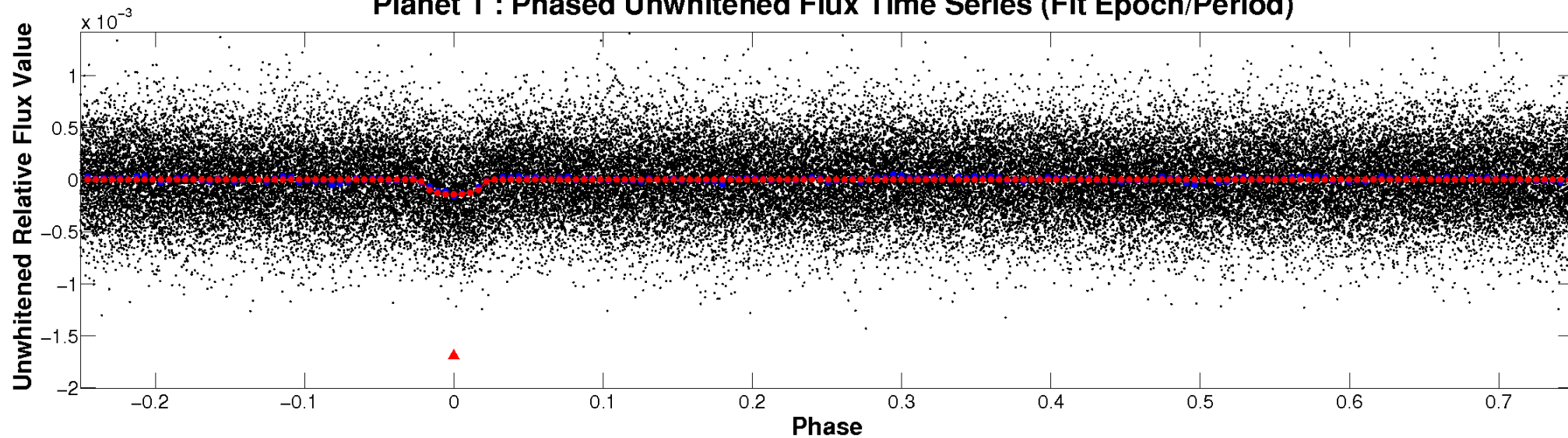
ALT Odd/Even

TCE 011913052-01

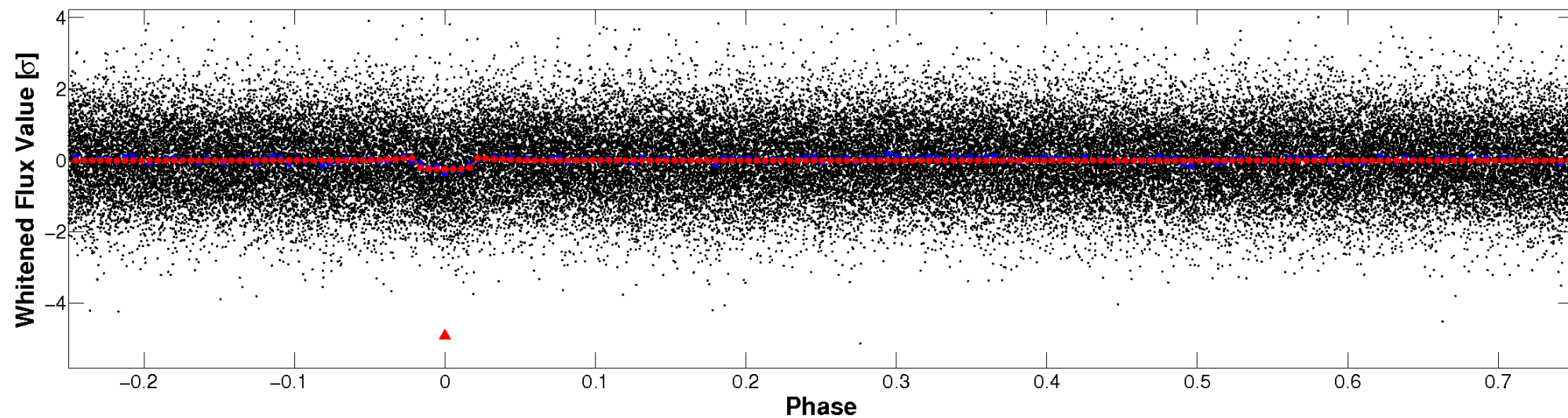


Non-Whitened Vs. Whitened Light Curve

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

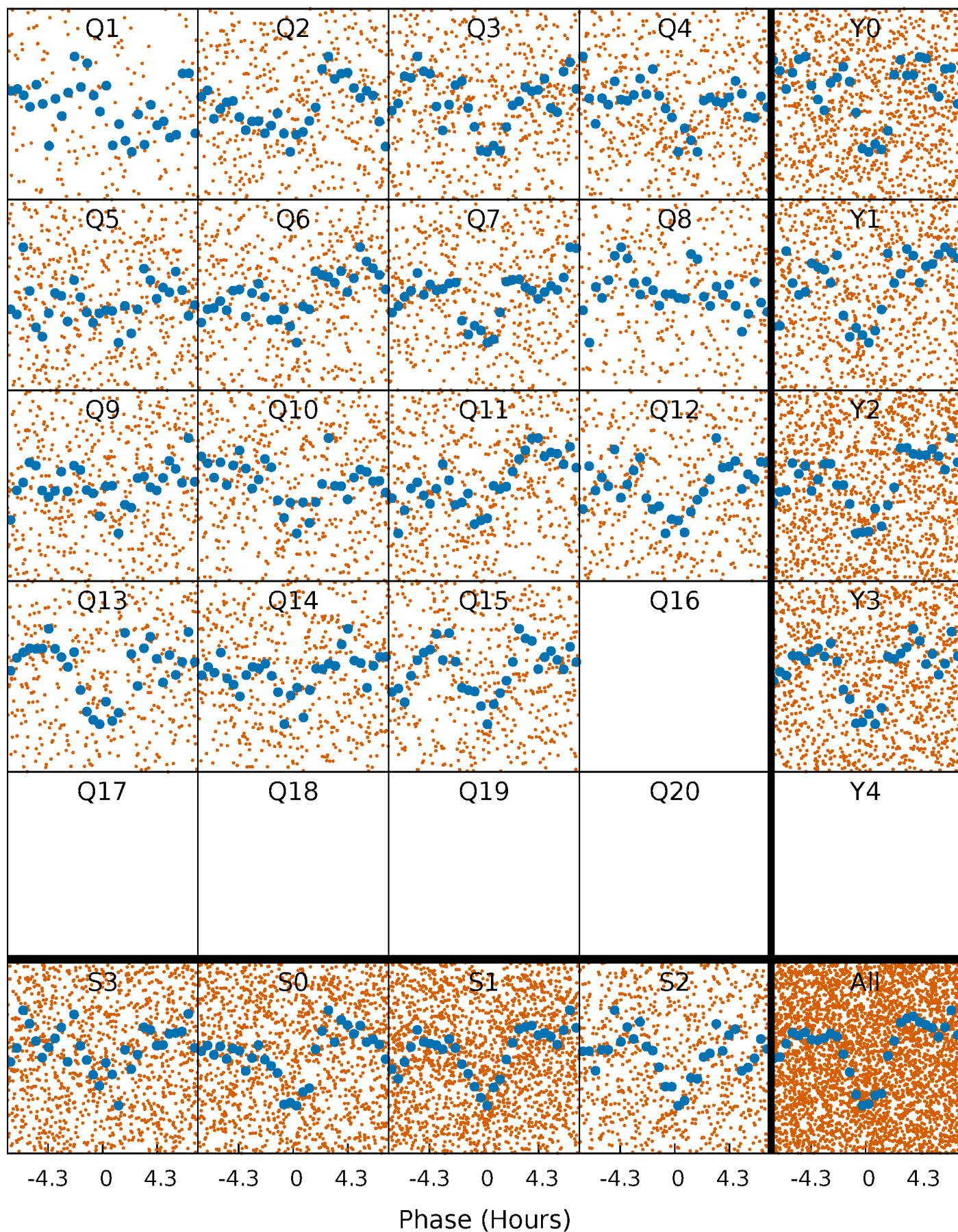


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



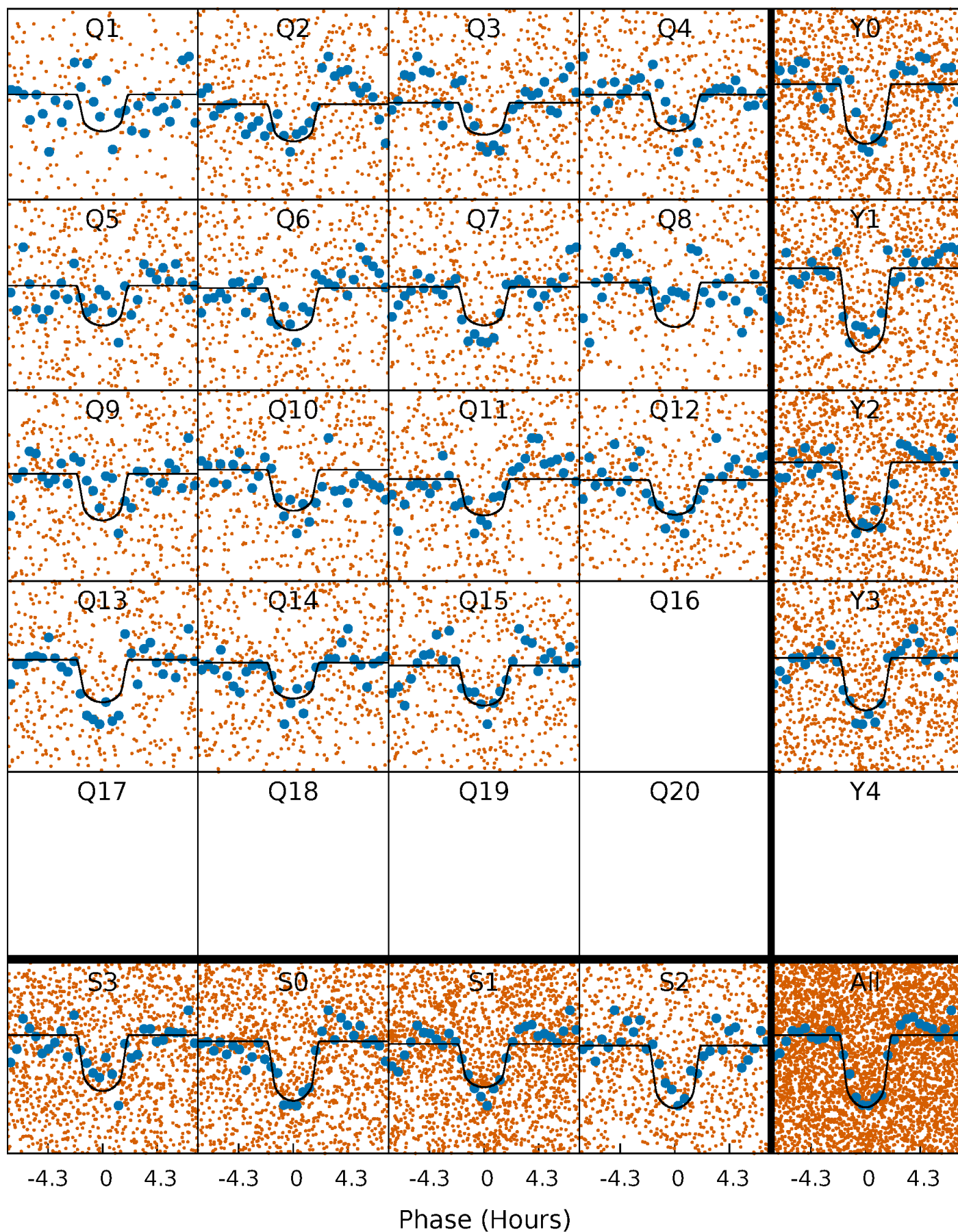
PDC Quarter-Phased Transit Curves

TCE 011913052-01 P= 3.747928 Days $T_0=134.159449$ (BKJD)



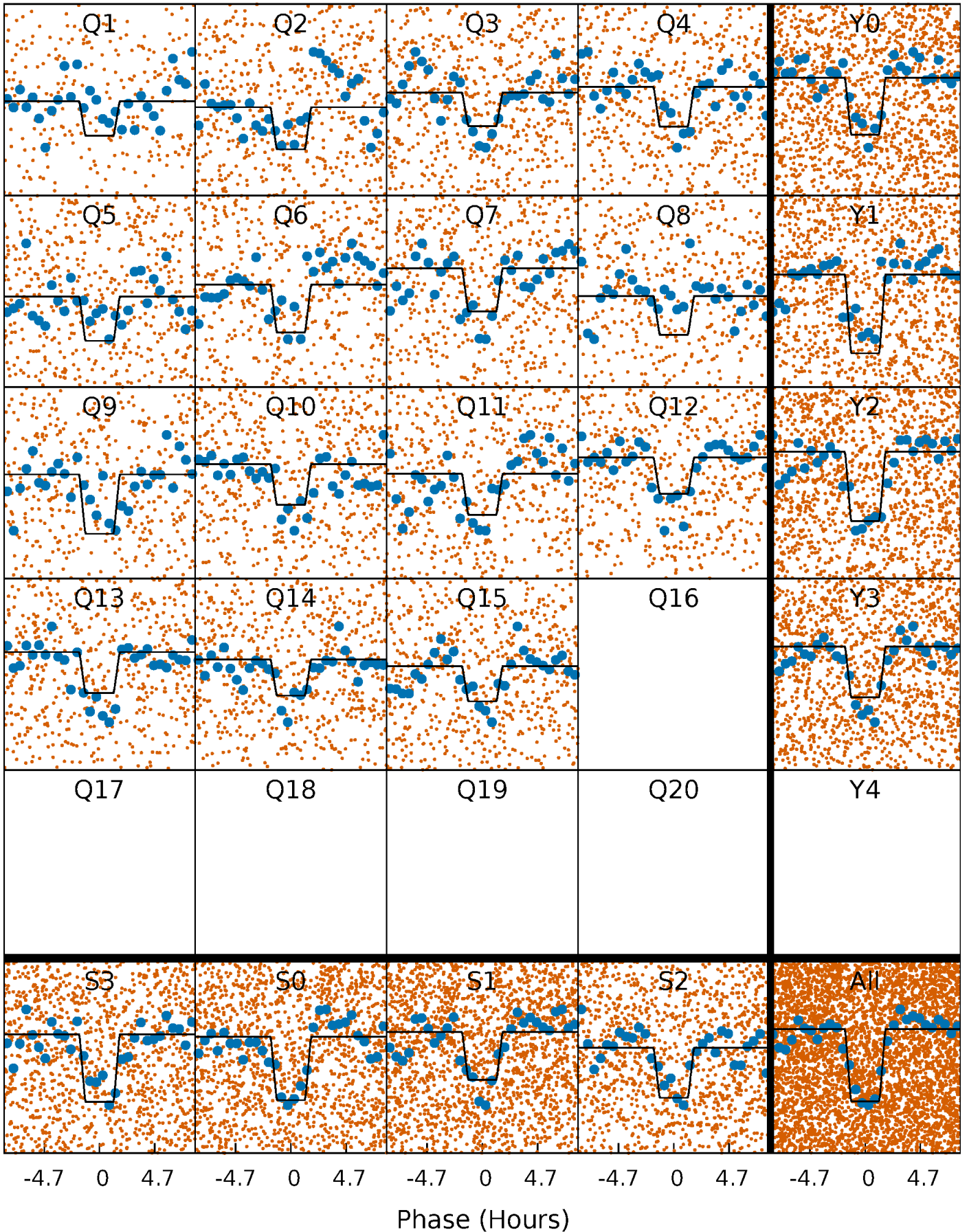
DV Quarter-Phased Transit Curves

TCE 011913052-01 P= 3.747928 Days $T_0=134.159449$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

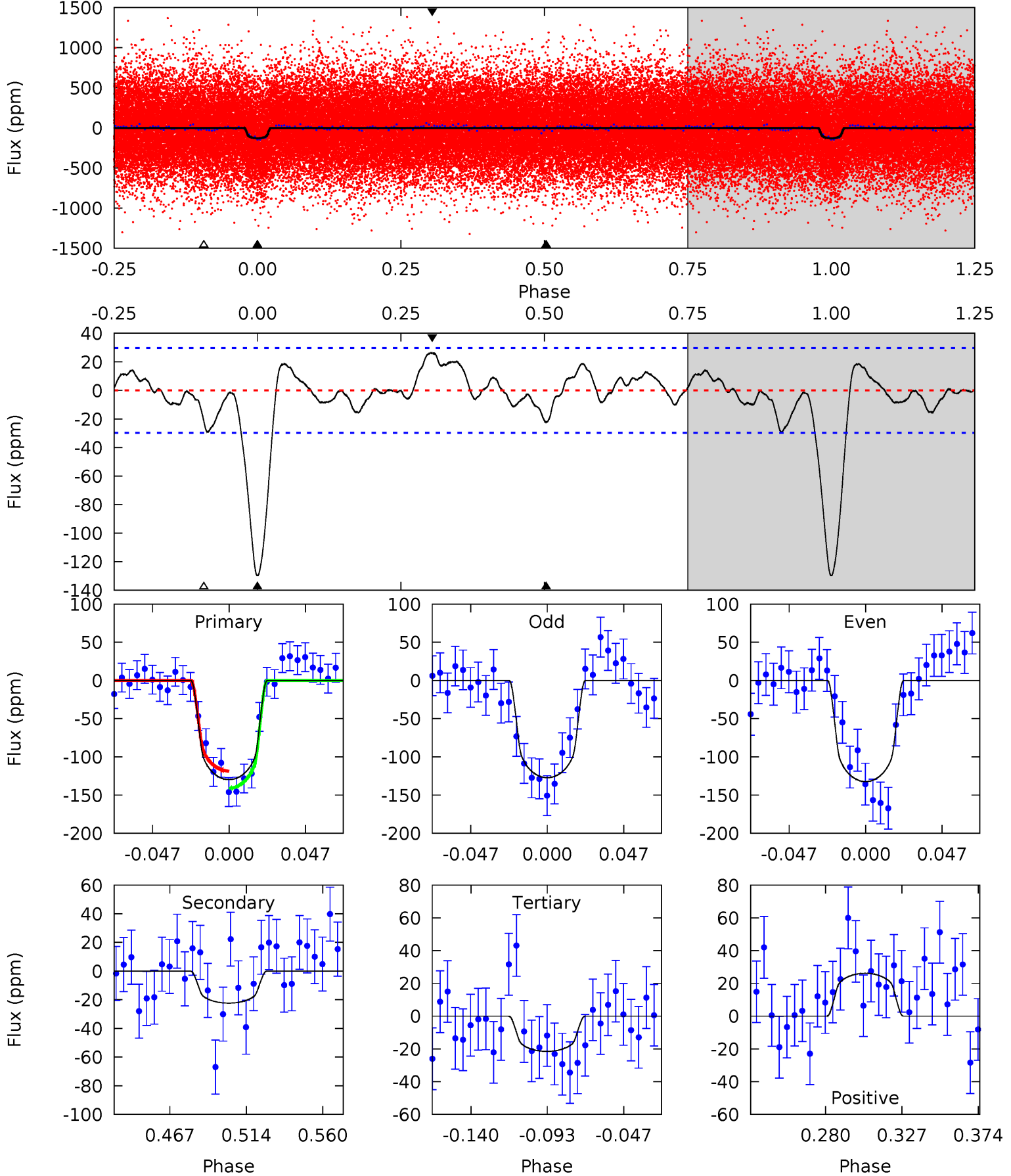
TCE 011913052-01 P= 3.747863 Days $T_0=134.175137$ (BKJD)



DV Model-Shift Uniqueness Test

011913052-01, P = 3.747928 Days, E = 130.411521 Days

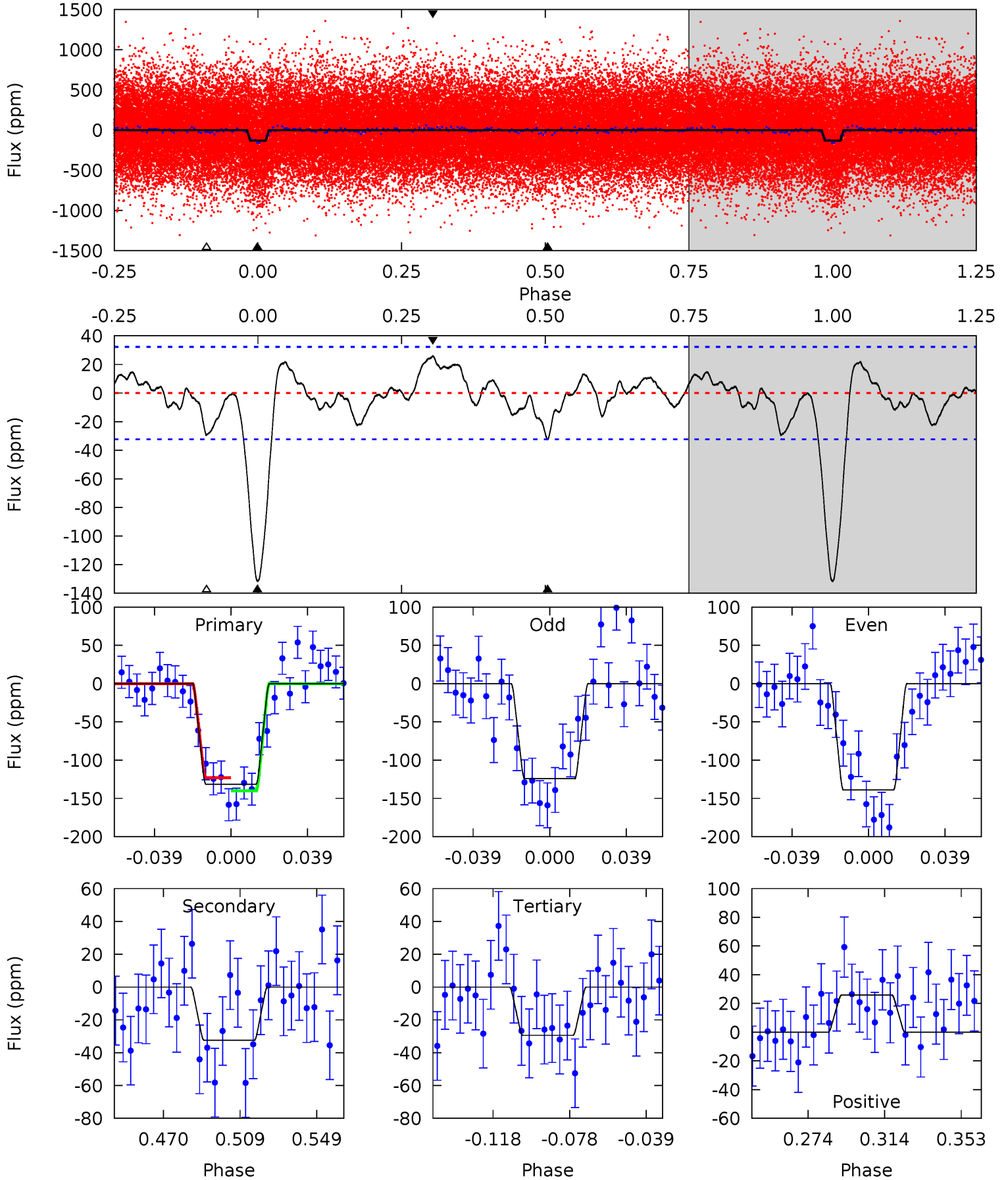
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	3.54	3.41	4.15	4.72	1.99	1.67	17.2	16.4	0.13	-0.60	0.40	1.03	0.17	1.78



Alt Model-Shift Uniqueness Test

011913052-01, P = 3.747863 Days, E = 130.427274 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.4	4.78	4.33	3.80	4.76	2.06	1.61	15.0	15.6	0.45	0.98	1.09	1.13	0.16	1.26



Stellar Parameters For KIC 011913052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4929^{+72}_{-172}	$3.001^{+0.033}_{-0.030}$	$0.260^{+0.100}_{-0.400}$	$7.700^{+0.367}_{-2.078}$	$2.167^{+0.230}_{-1.035}$	$0.007^{+0.003}_{-0.001}$
	+1%/-3%	+1%/-1%	+38%/-154%	+5%/-27%	+11%/-48%	+42%/-8%
Source	PHO1	AST9	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 011913052-01 / KOI 7491.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22 ± 6	$11.29^{+3.72}_{-3.43}$	3409^{+76}_{-137}	2624^{+904}_{-5450}	$0.361^{+0.401}_{-0.165}$
Alt.	-32 ± 7	$10.13^{+3.54}_{-3.70}$	3400^{+79}_{-127}	3371^{+806}_{-854}	$0.656^{+1.010}_{-0.311}$

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

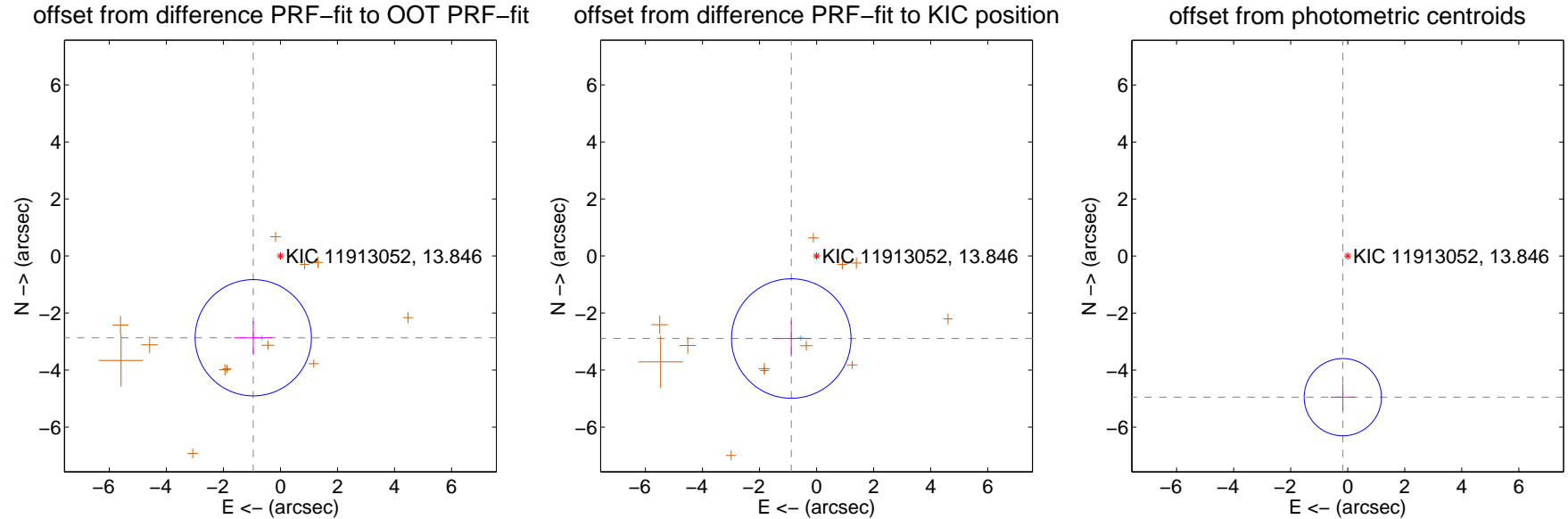
DV Centroid Data

Supplemental centroid analysis for 011913052-01. Kepler magnitude: 13.85. Transit SNR 11.41

There are 1 quarters with good PRF difference image offsets

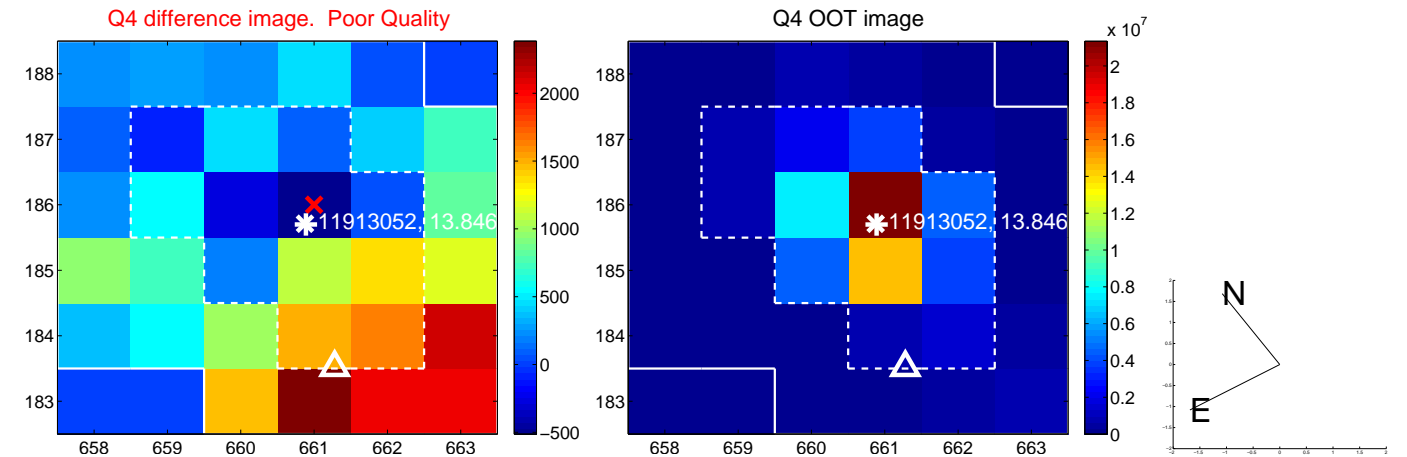
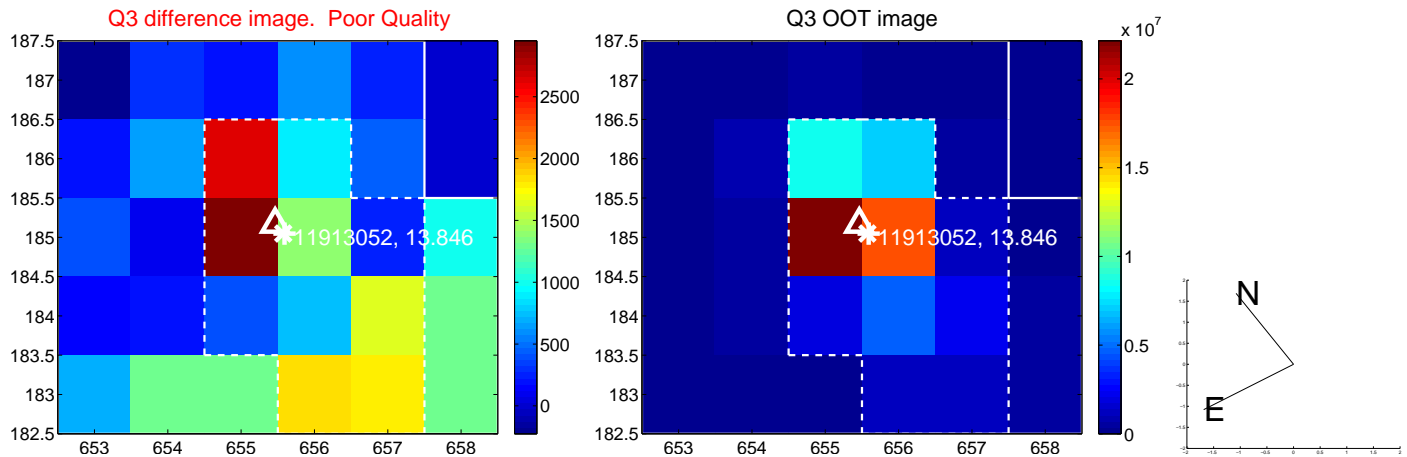
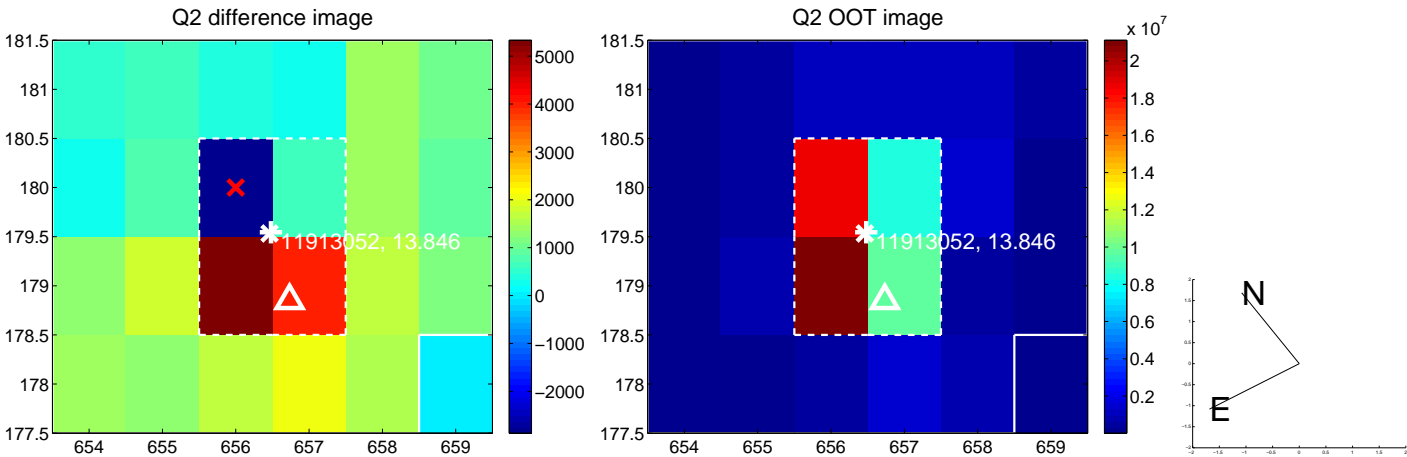
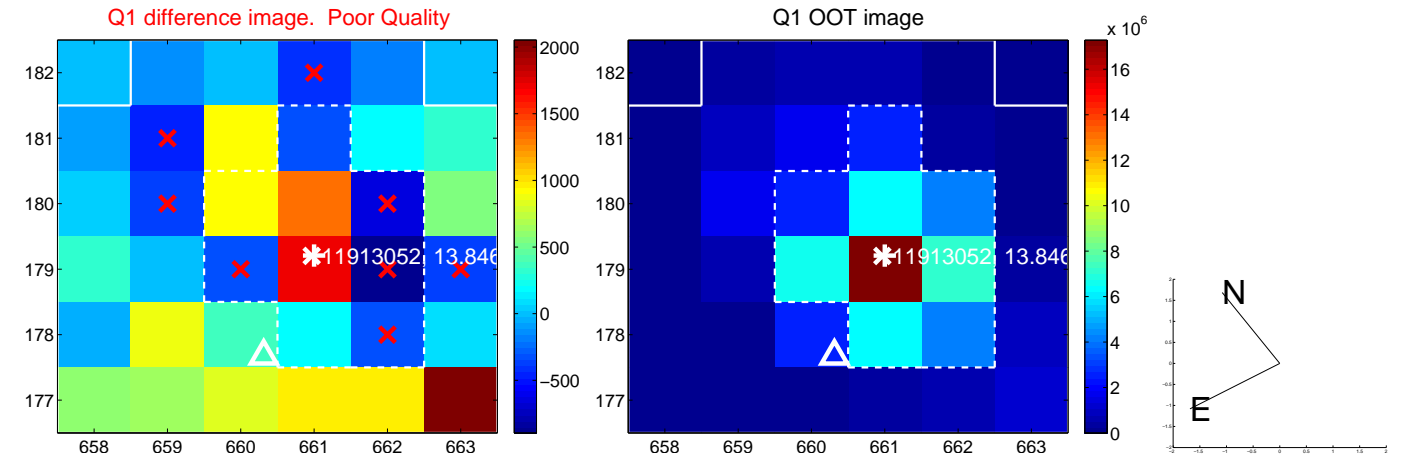
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.020 ± 0.680	4.44	0.953 ± 0.676	-2.866 ± 0.588
PRF-fit source offset from KIC position	3.026 ± 0.698	4.33	0.887 ± 0.664	-2.893 ± 0.628
photometric centroid source offset	4.95 ± 0.45	10.96	0.17 ± 0.43	-4.95 ± 0.45

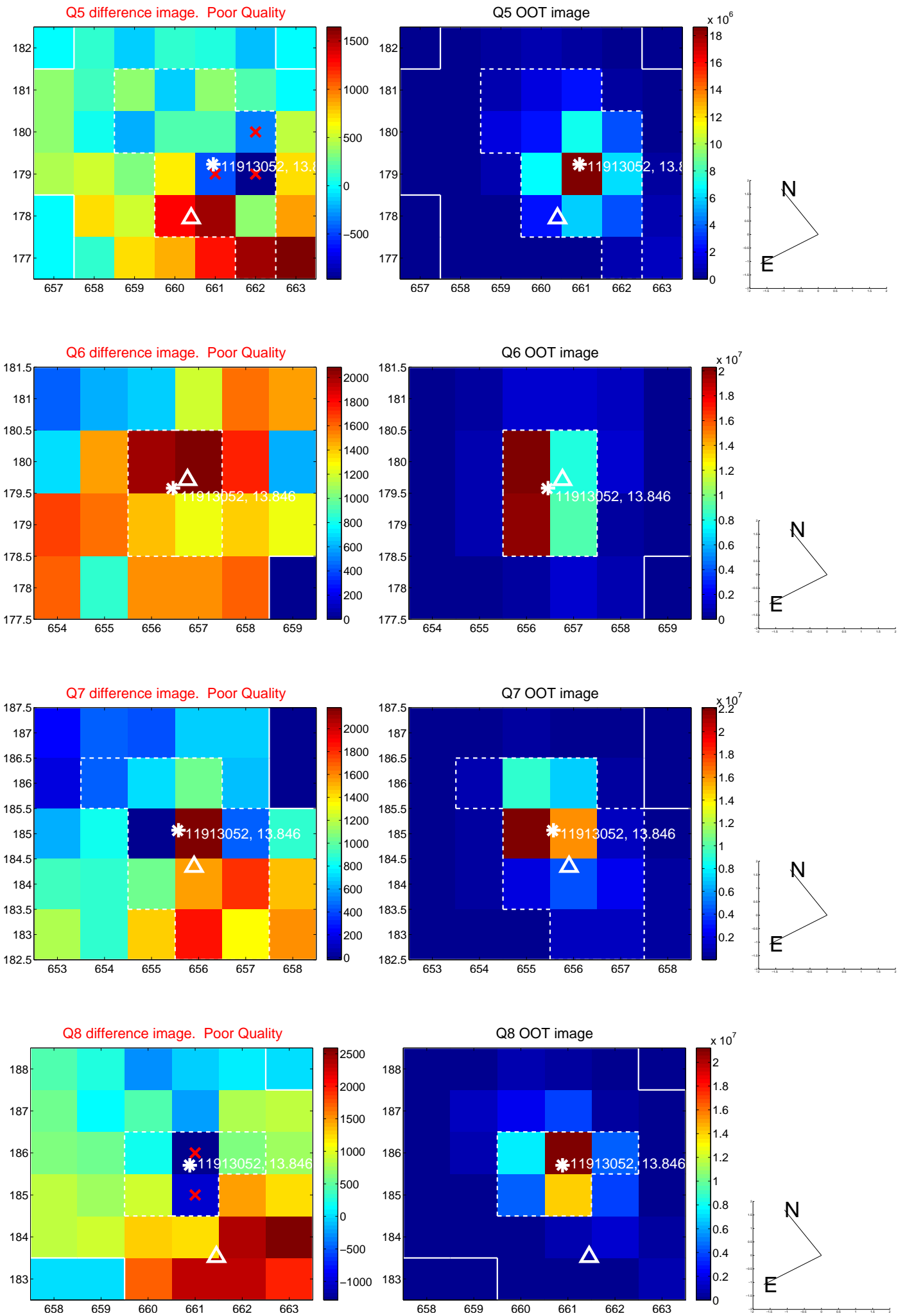


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

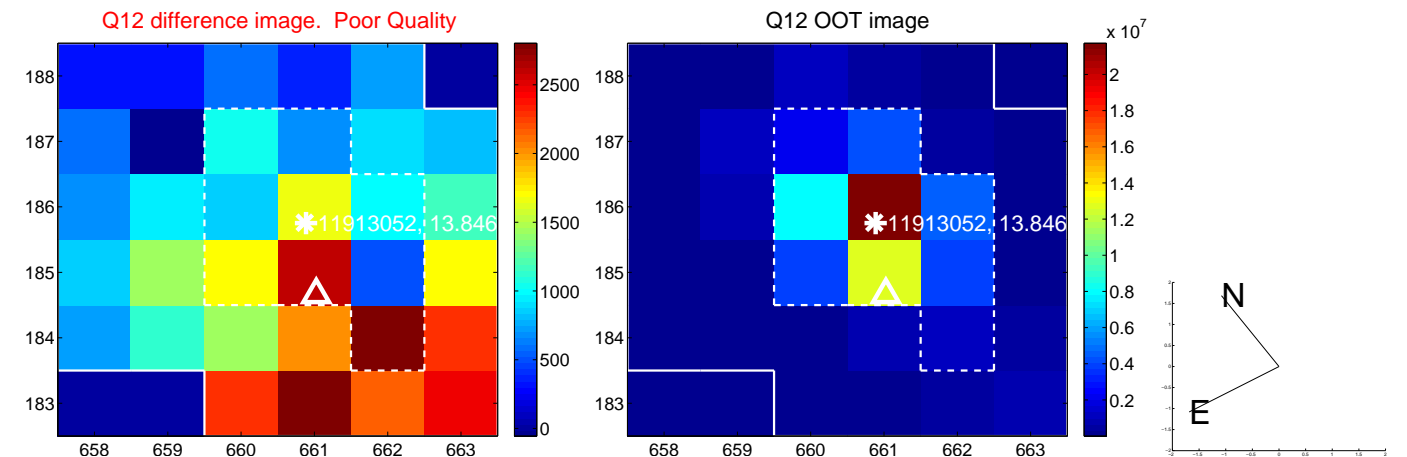
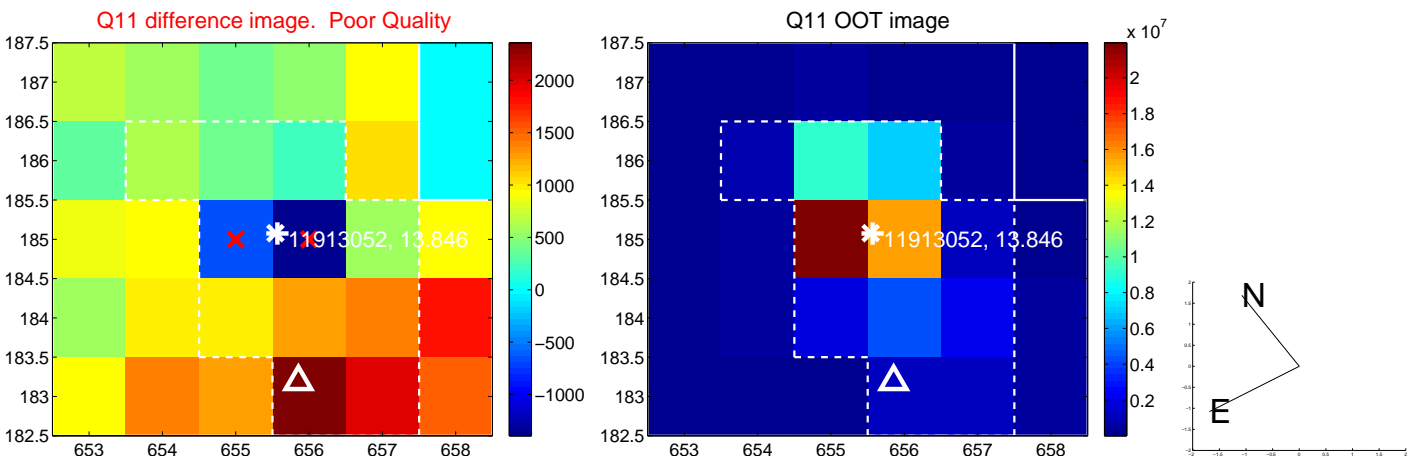
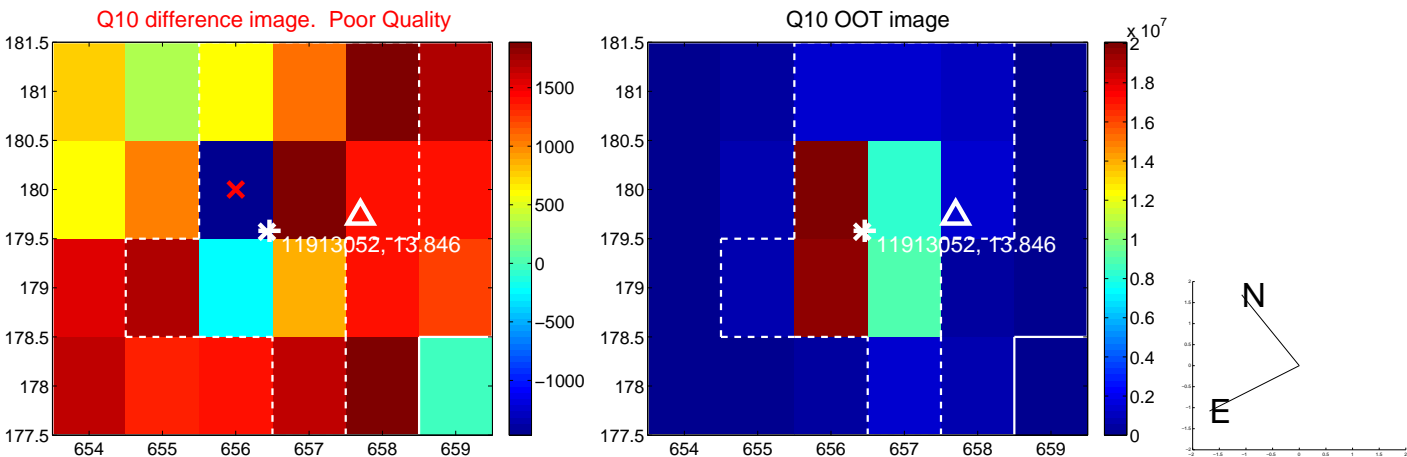
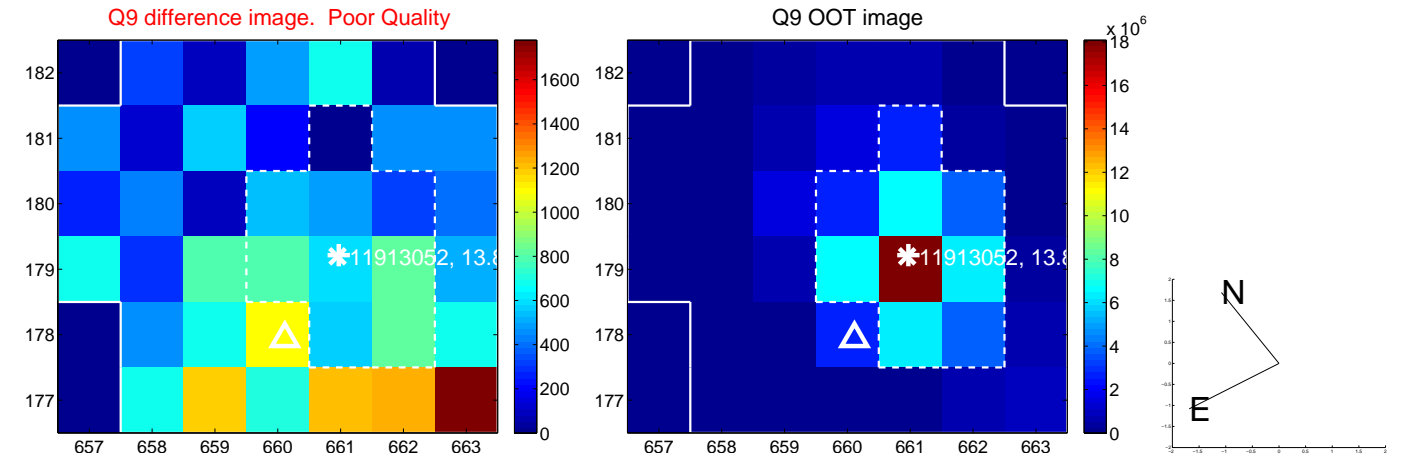
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



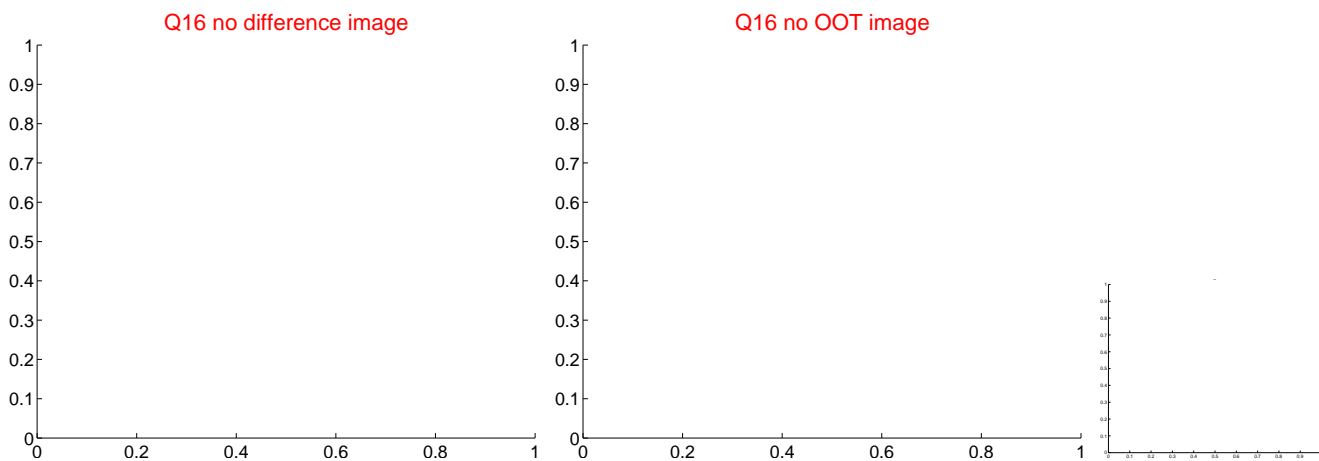
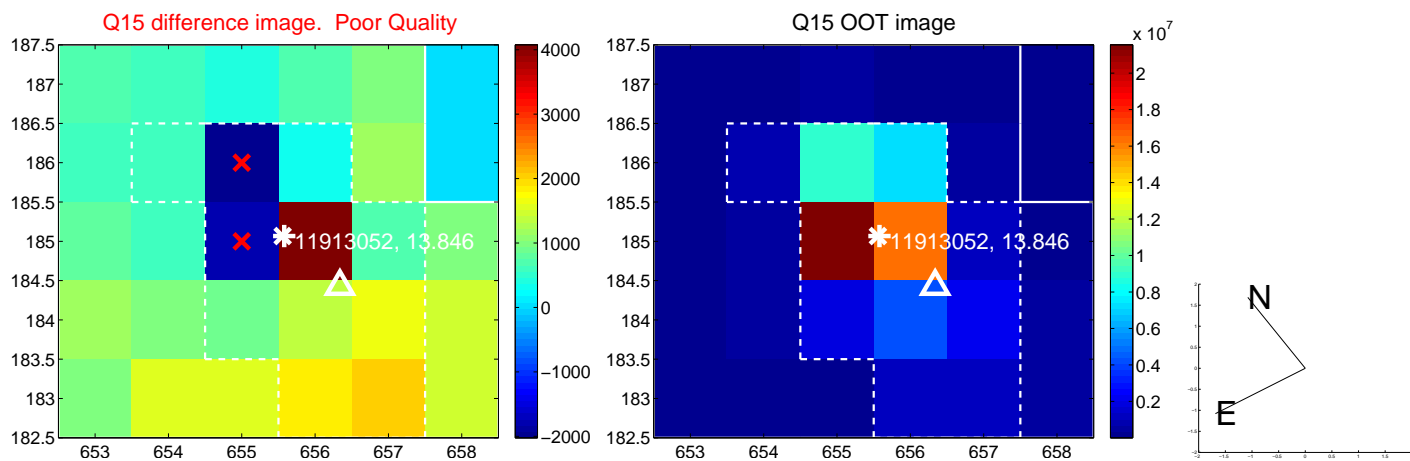
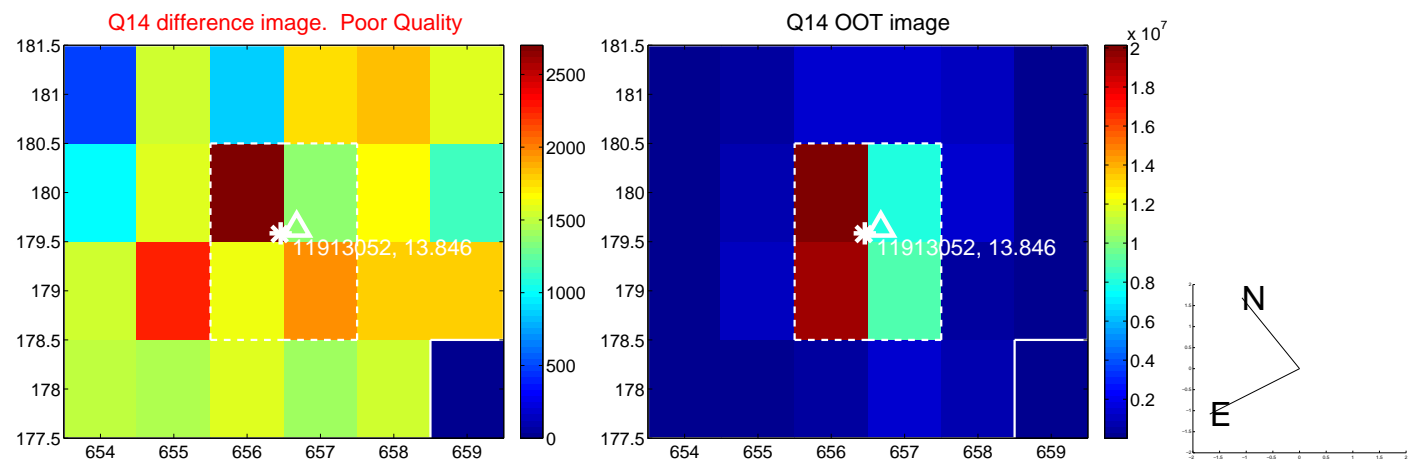
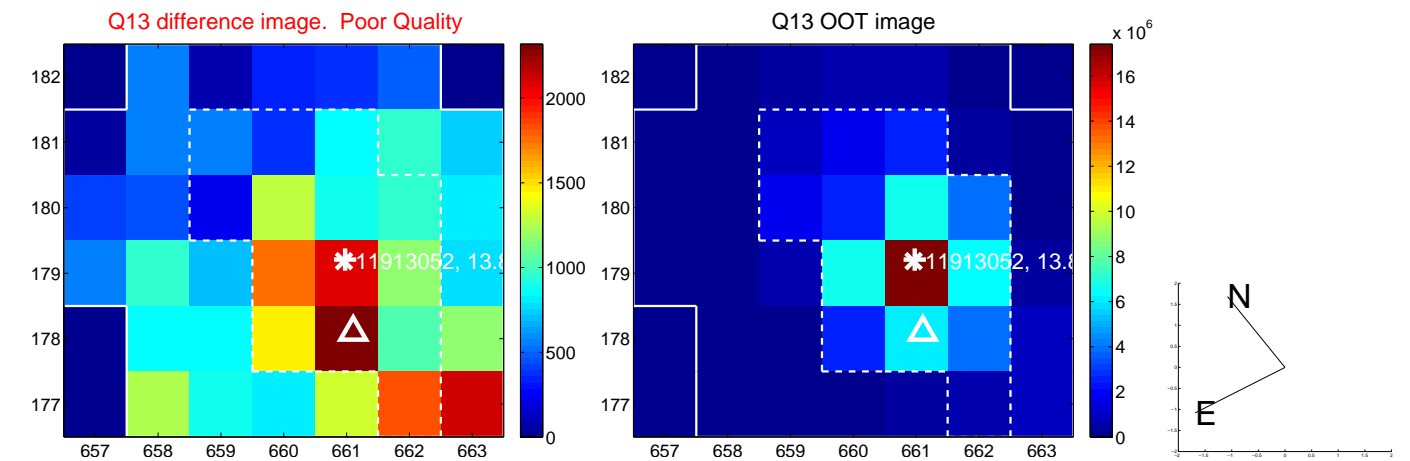
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



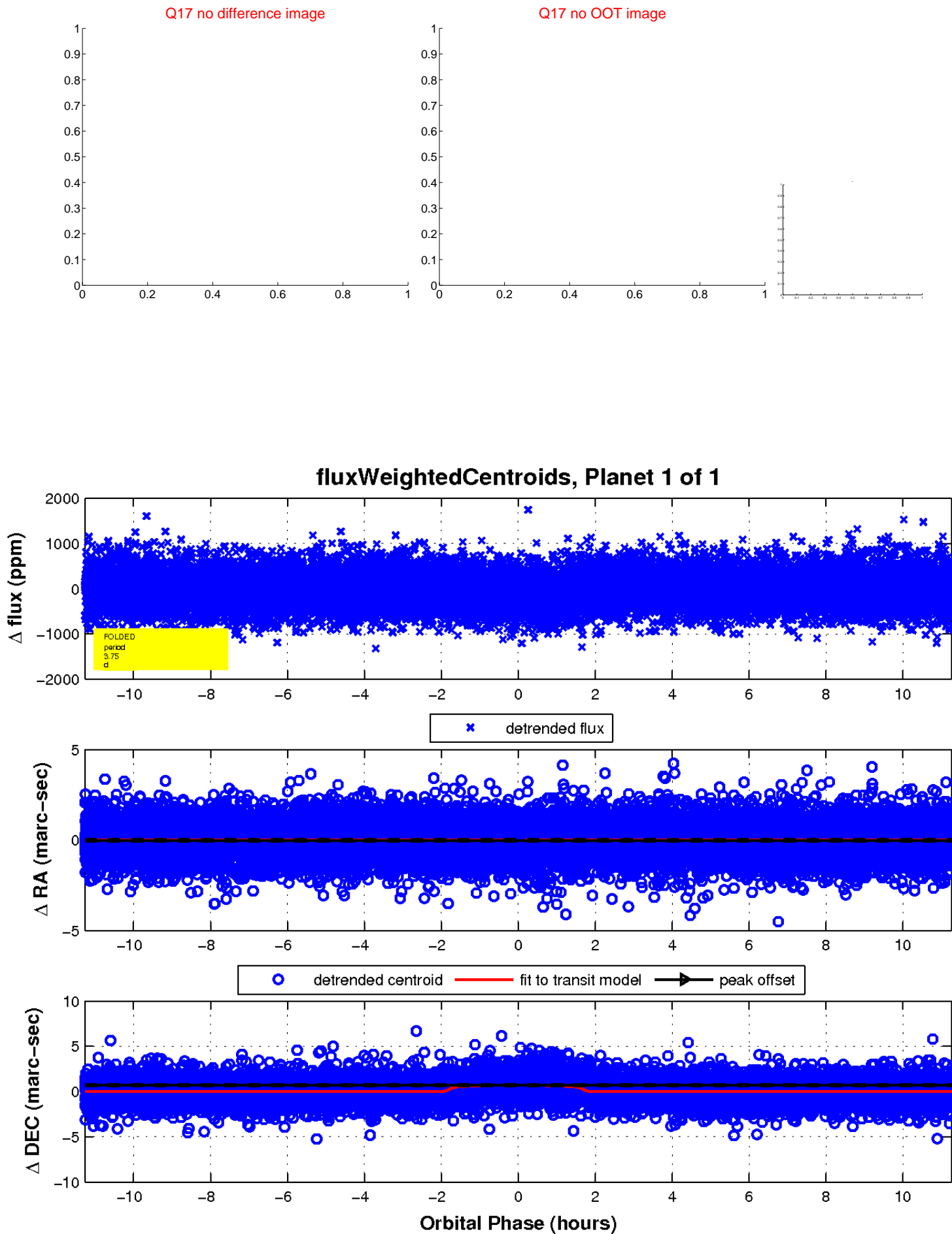
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

