

KIC 009602775

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})
009602775-01	OBS	4684.01	3.556322	133.591430	111.9	8.744	10.8	10.9	0.69	5404	0.90	211.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009602775-01	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 009602775-01

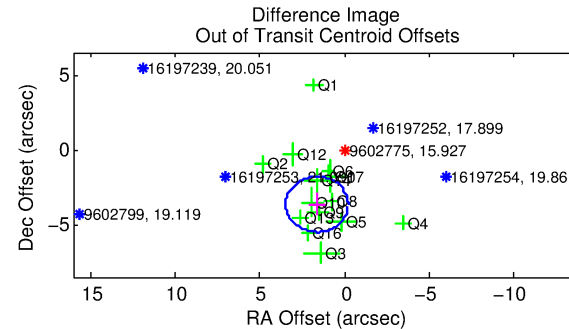
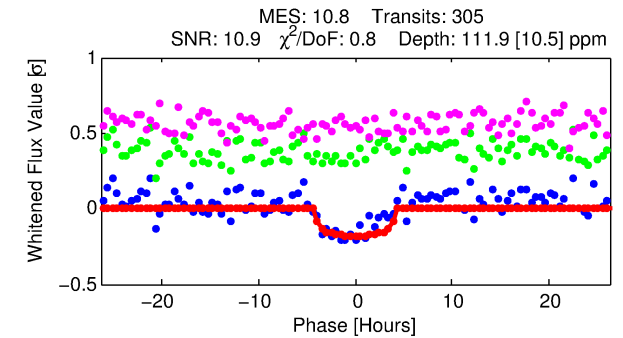
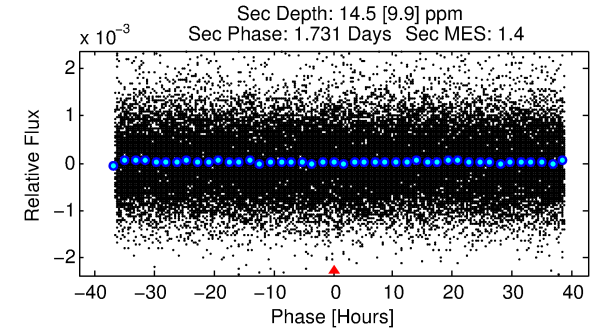
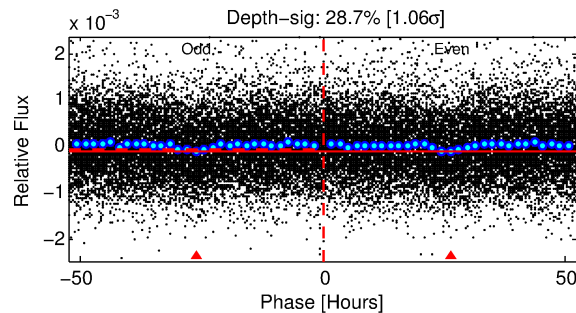
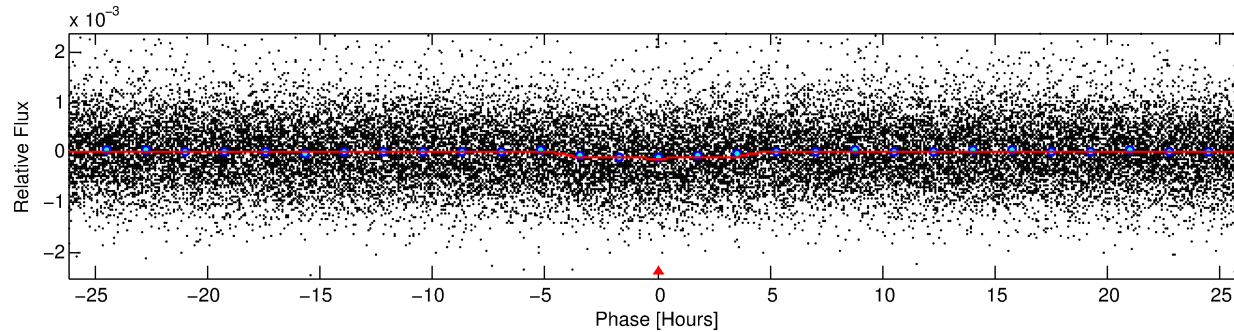
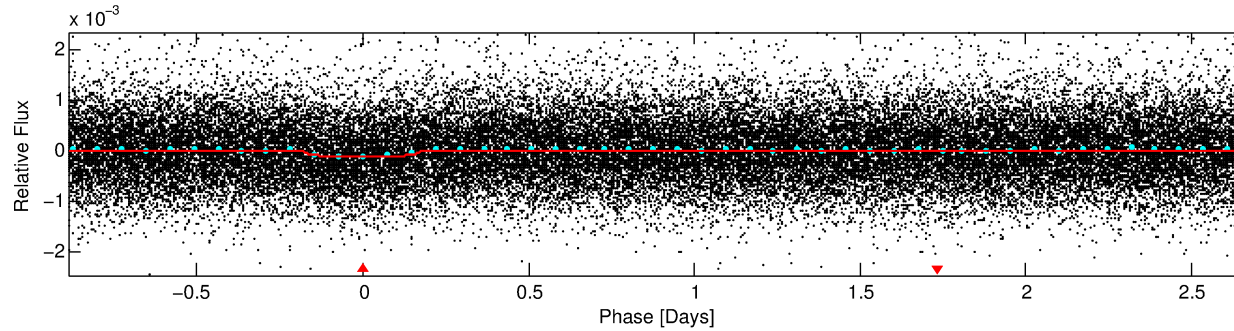
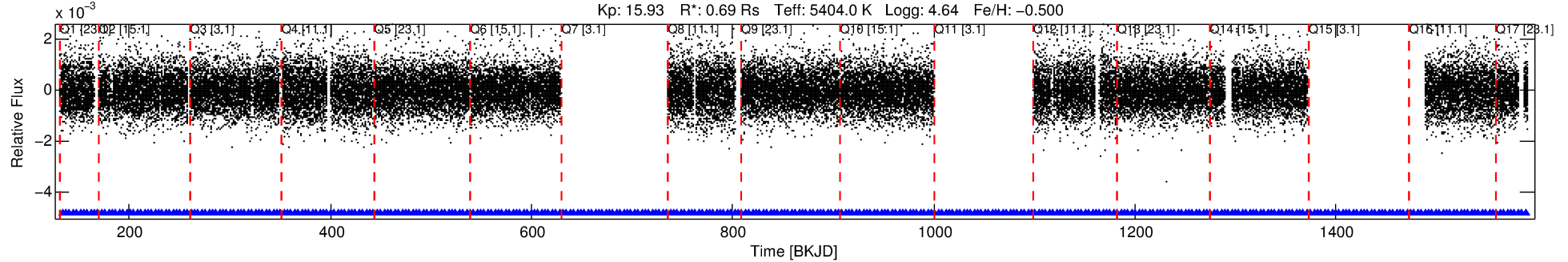
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009602775-01	9602775	V995-Cyg-pri	9602595	1:1	134.2	29	-16	11.88	15.92	6883.20	Direct-PRF	0	3.23	3.34

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: 9602775 Candidate: 1 of 1 Period: 3.556 d
KOI: K04684.01 Corr: 0.892

Kp: 15.93 R*: 0.69 Rs Teff: 5404.0 K Logg: 4.64 Fe/H: -0.500



DV Fit Results:

Period = 3.55632 [0.00006] d
Epoch = 133.5914 [0.0111] BKJD
Rp/R* = 0.0118 [0.0024]
a/R* = 1.62 [0.96]
b = 0.92 [0.16]
Seff = 211.83 [47.60]
Teq = 973 [55] K
Rp = 0.89 [0.23] Re
a = 0.0417 [0.0054] AU
Ag = 17.34 [14.13] [1.16σ]
Teffp = 3069 [618] K [3.38σ]

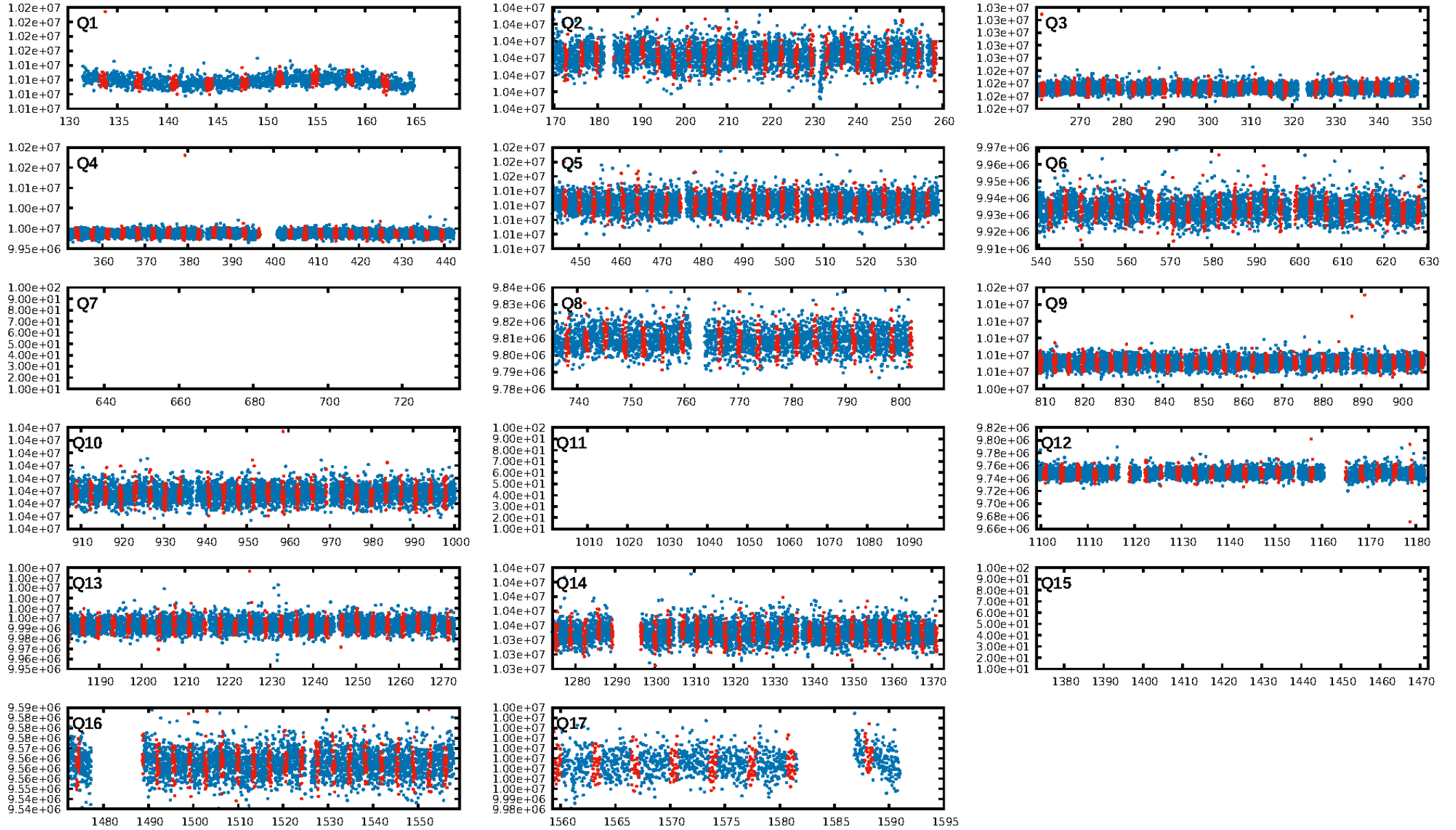
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.72e-28
RollingBand-fgt: 1.00 [288/288]
GhostDiagnostic-chr: 0.111
Centroid-sig: 0.3%
Centroid-so: 2.200 arcsec [1.65σ]
OotOffset-rm: 4.002 arcsec [6.49σ]
KicOffset-rm: 3.707 arcsec [6.21σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

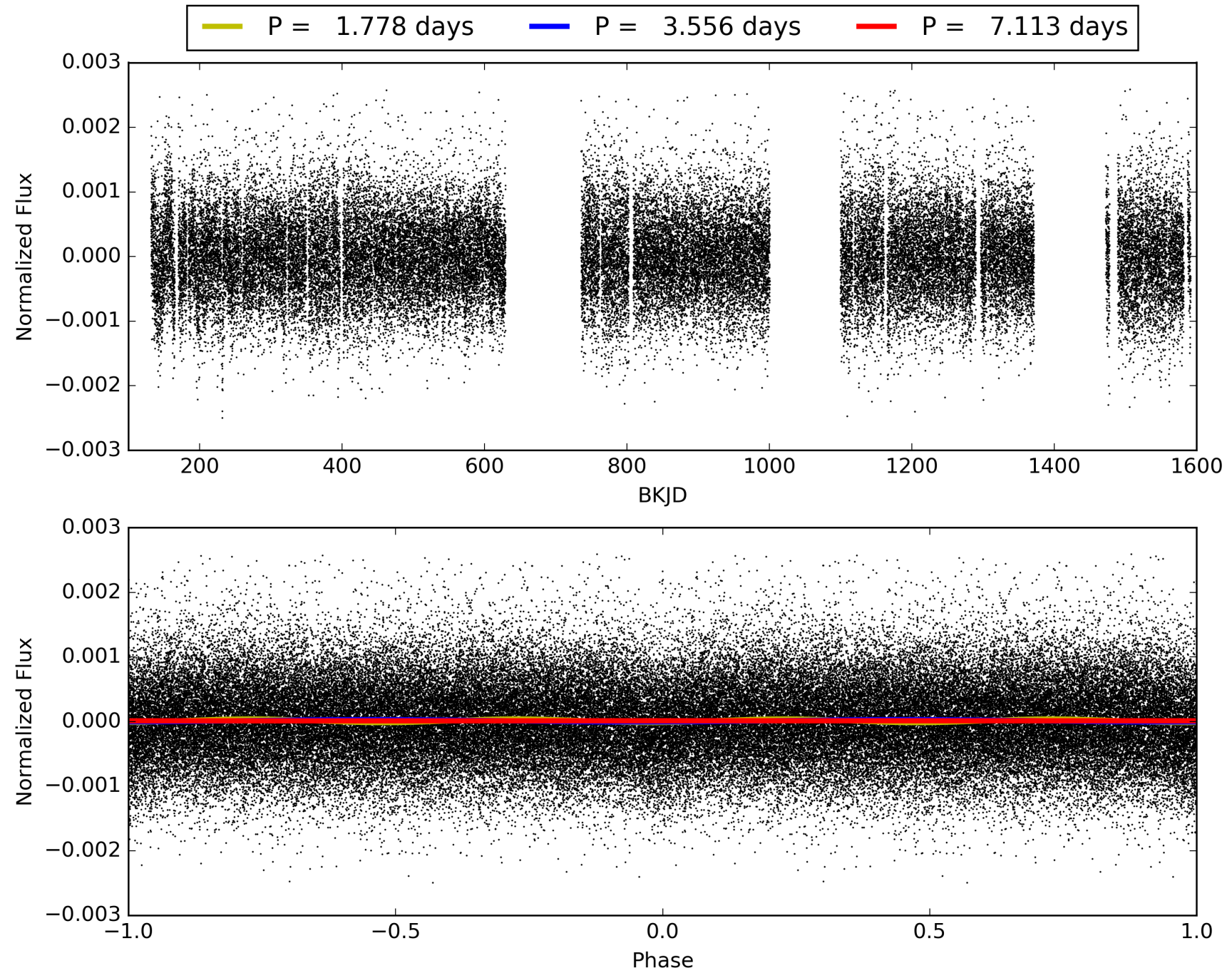
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:03:17 Z

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

TCE 009602775-01, PDC Light Curves

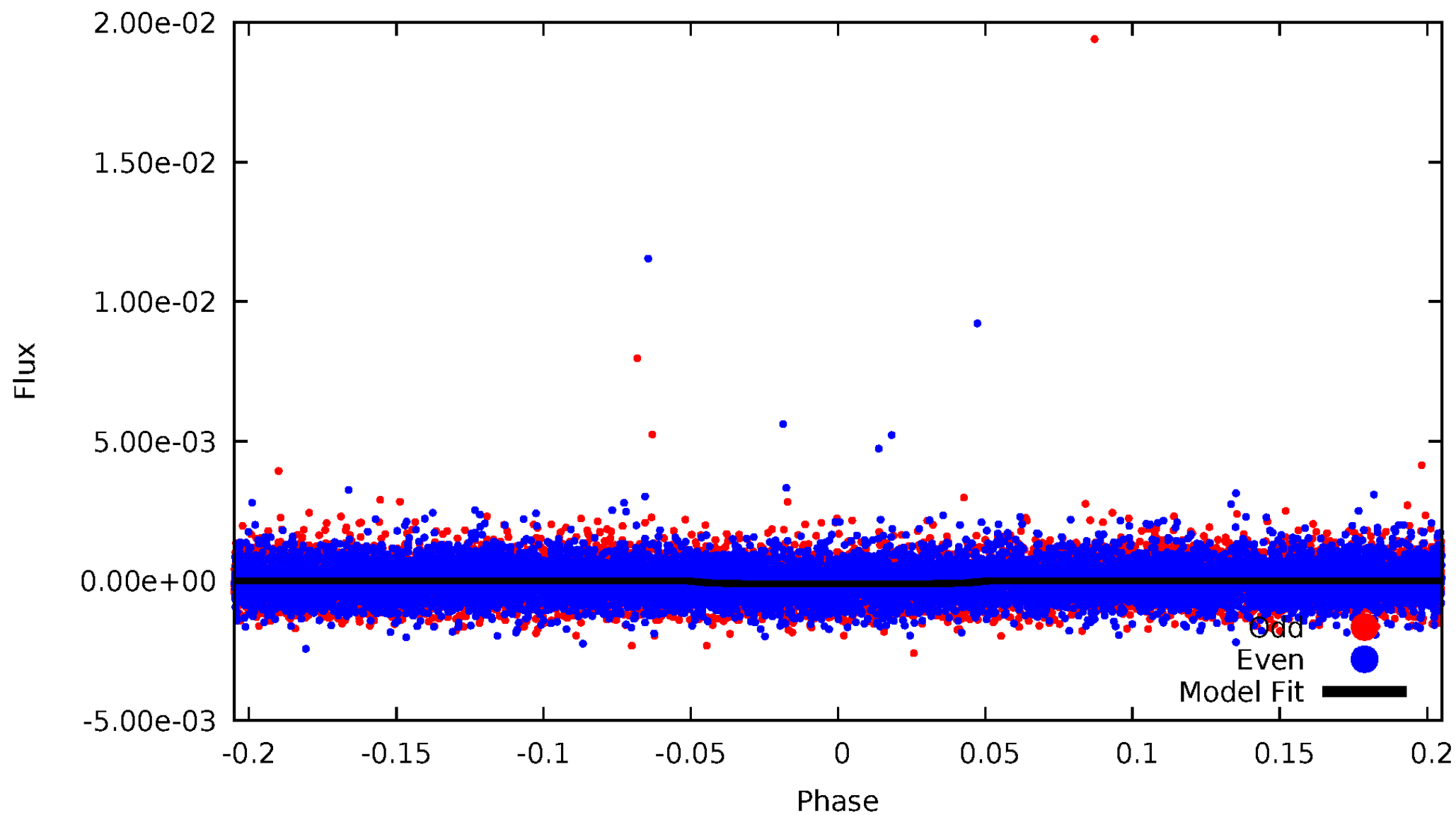


TCE 009602775-01



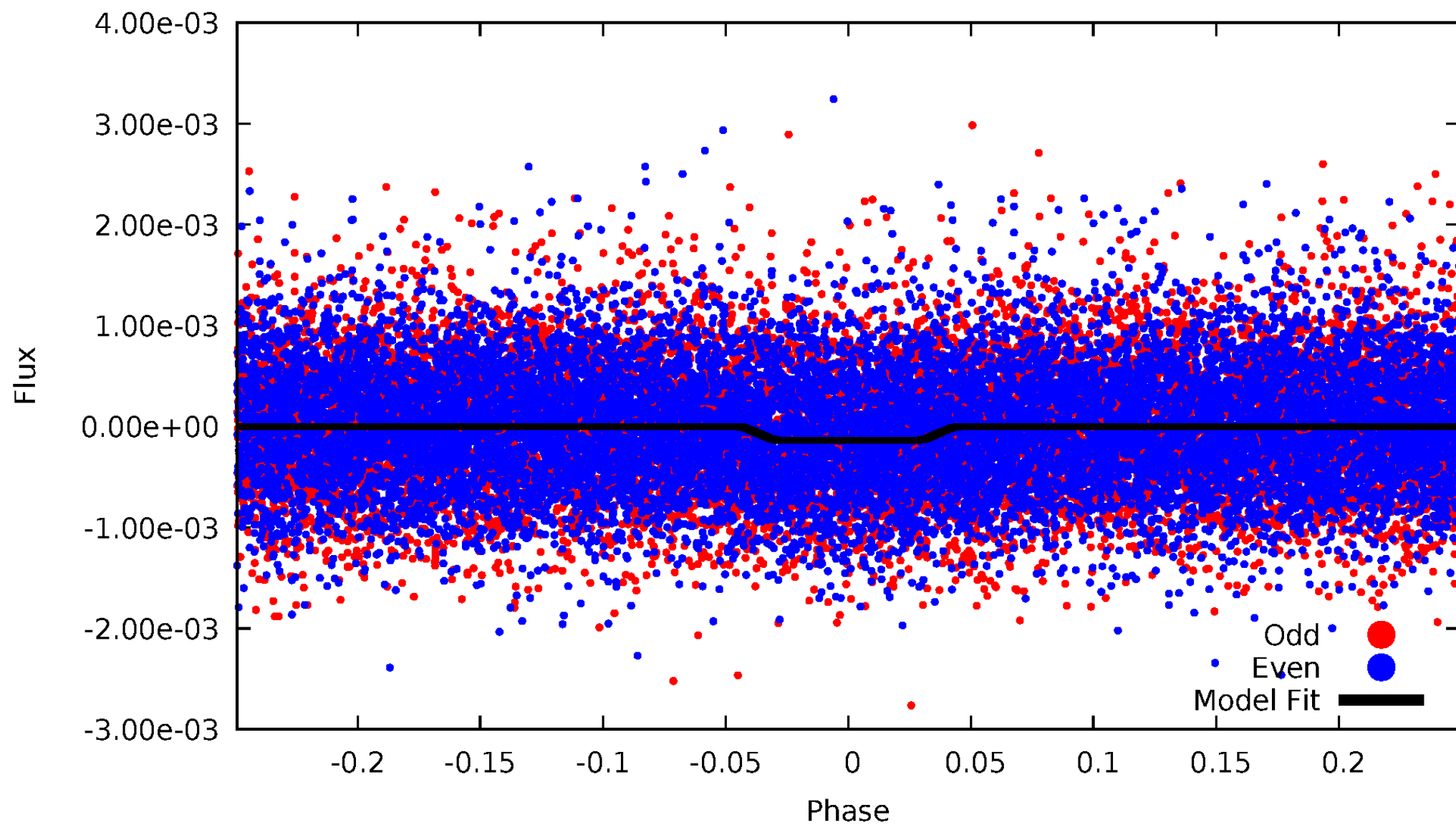
DV Odd/Even

TCE 009602775-01

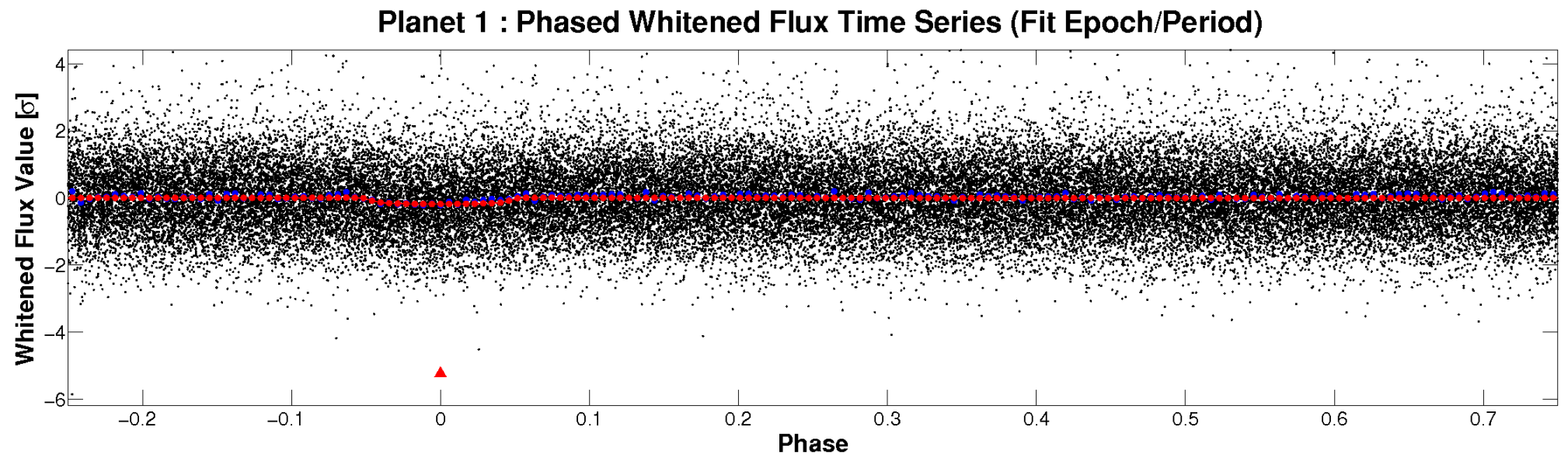
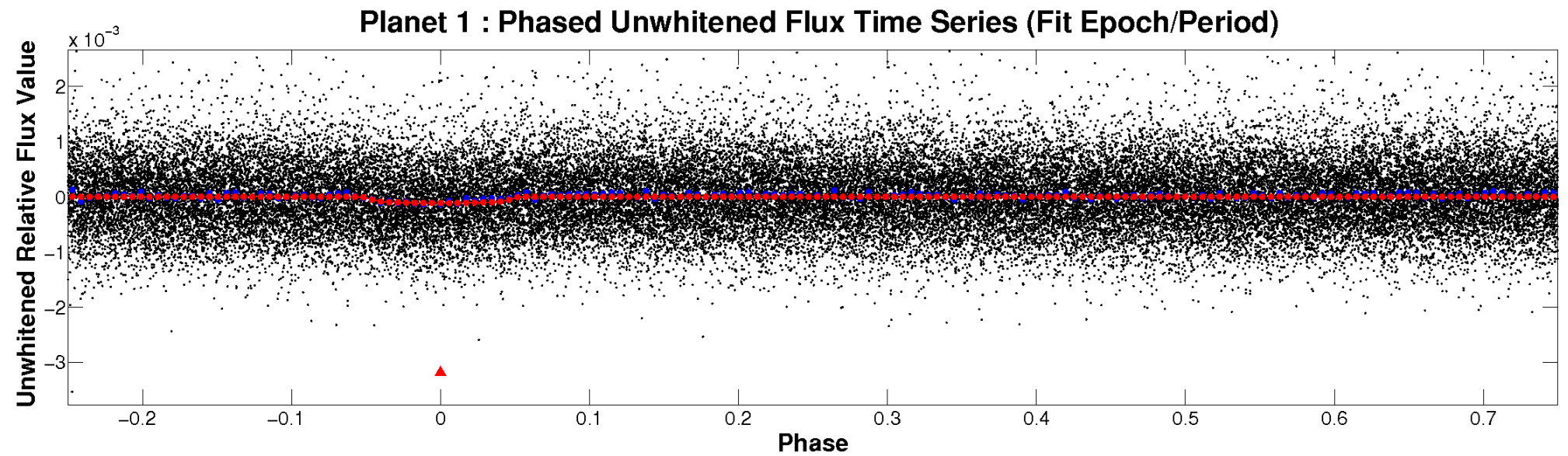


ALT Odd/Even

TCE 009602775-01

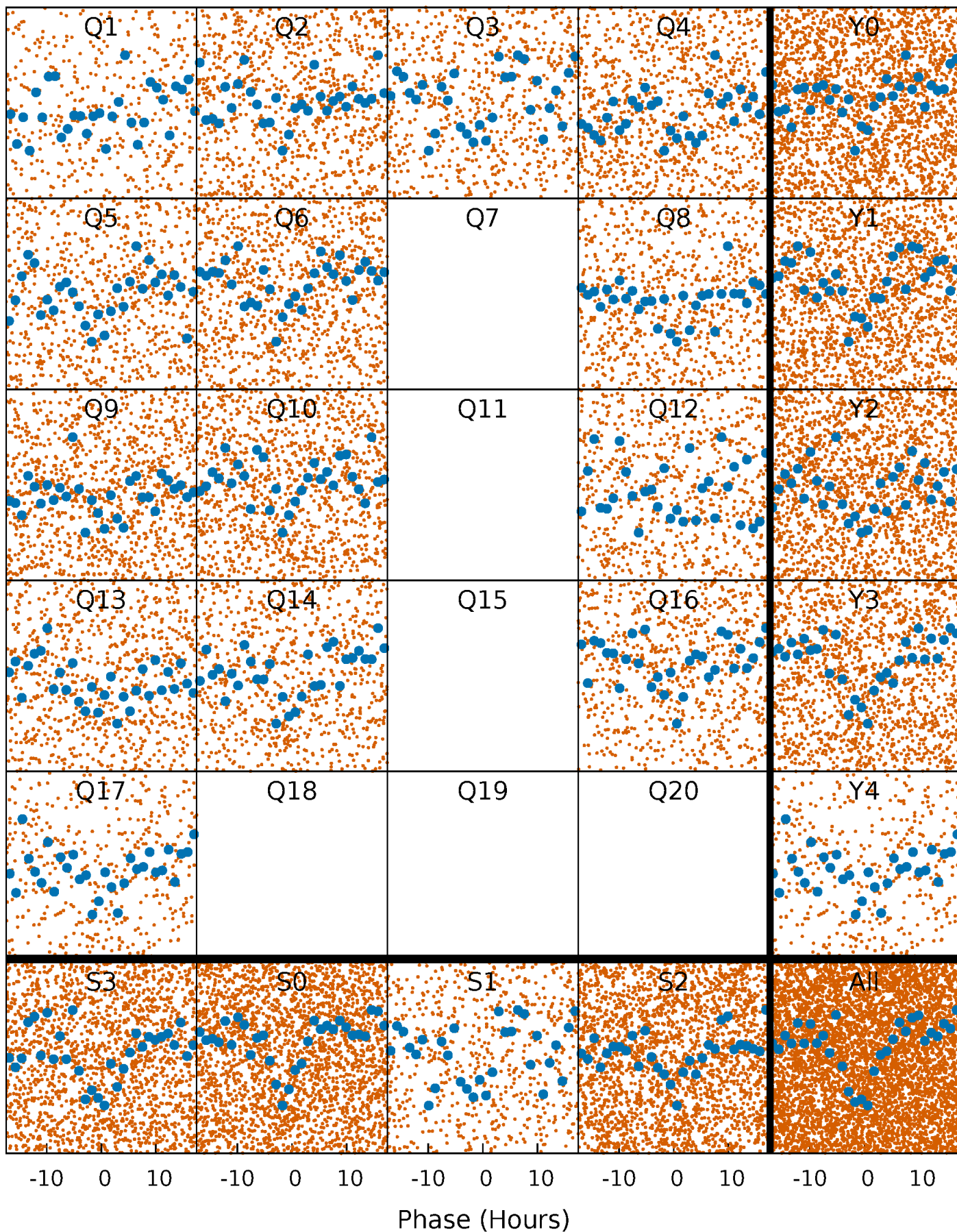


Non-Whitened Vs. Whitened Light Curve



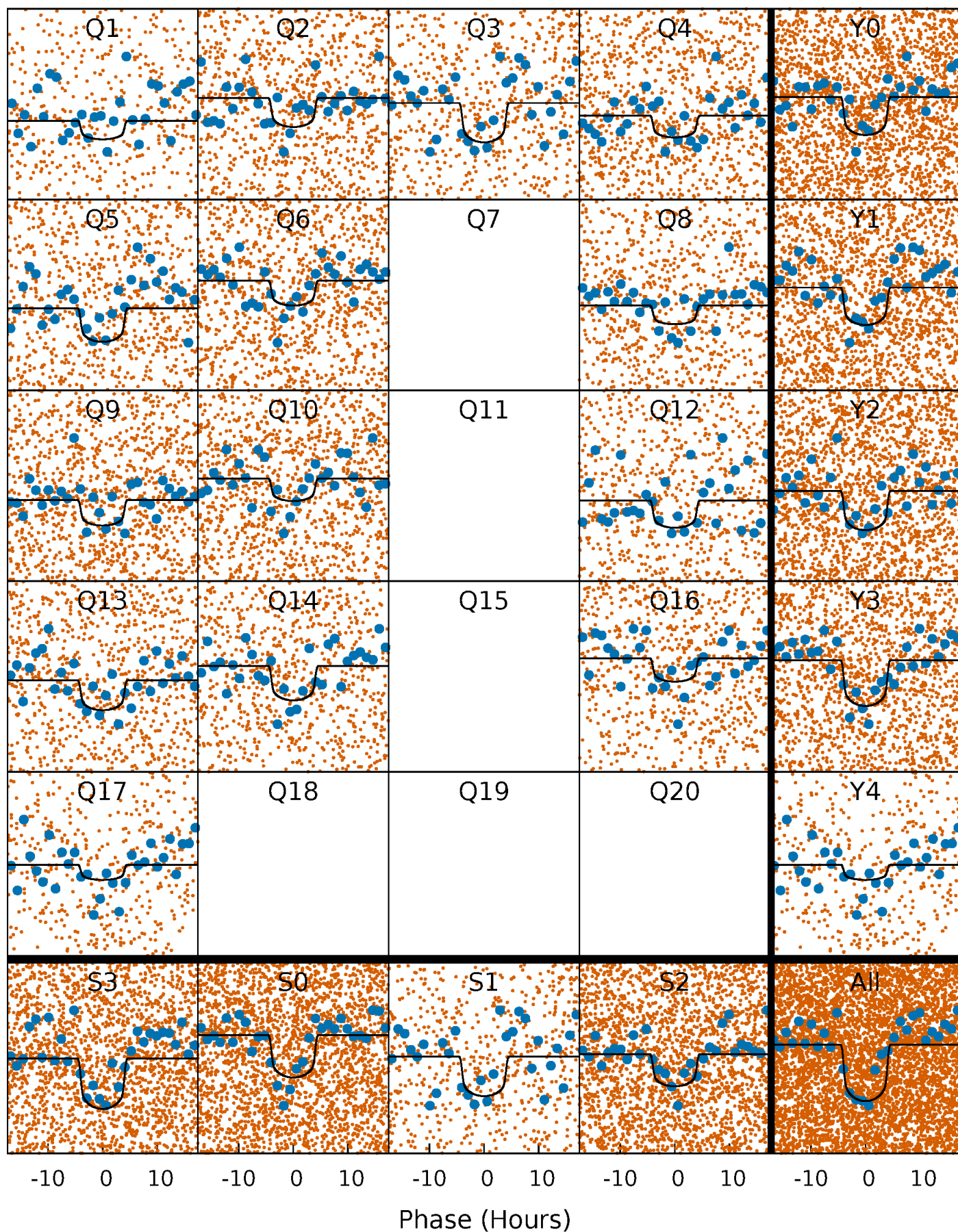
PDC Quarter-Phased Transit Curves

TCE 009602775-01 P= 3.556322 Days $T_0=133.591430$ (BKJD)



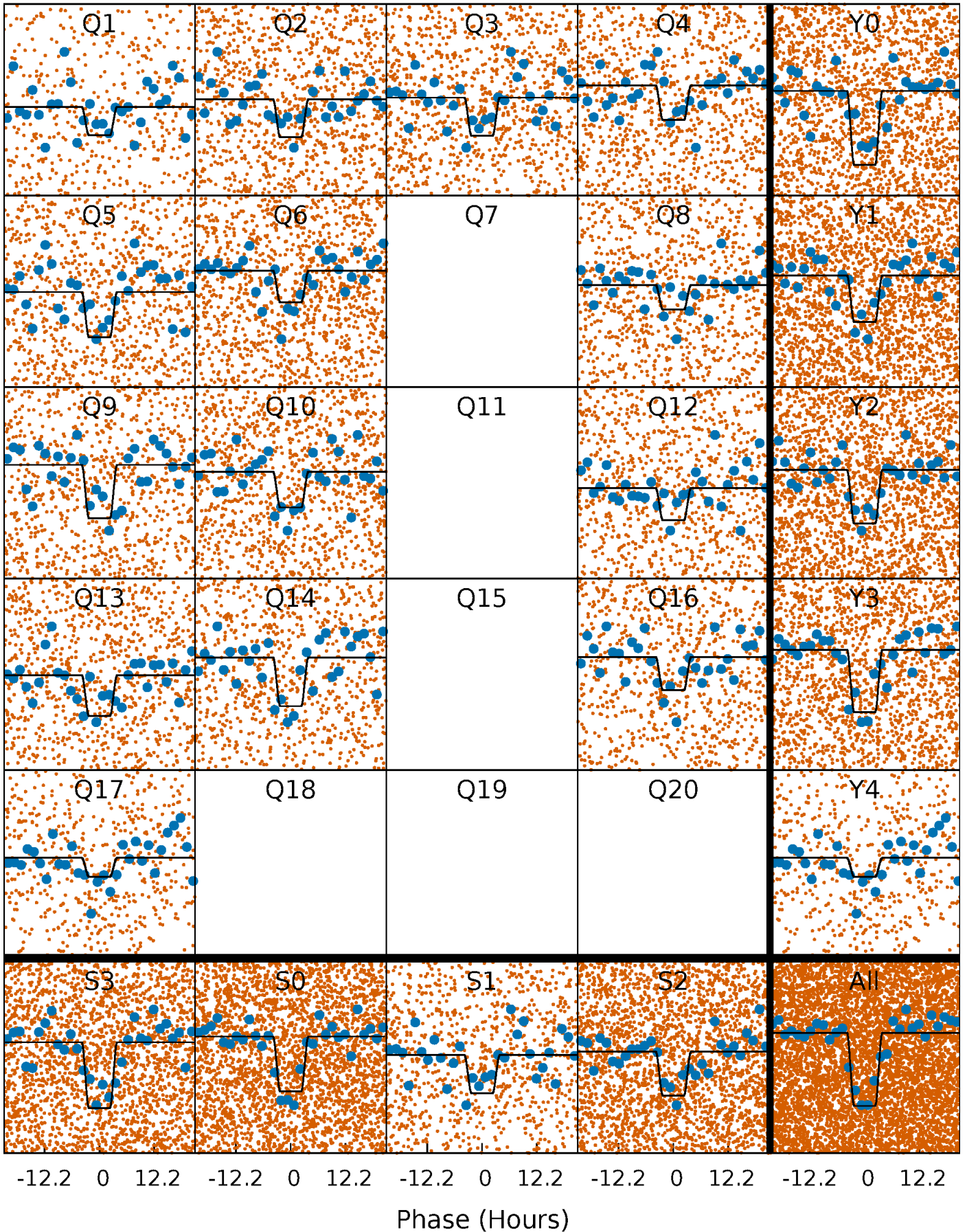
DV Quarter-Phased Transit Curves

TCE 009602775-01 P= 3.556322 Days $T_0=133.591430$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

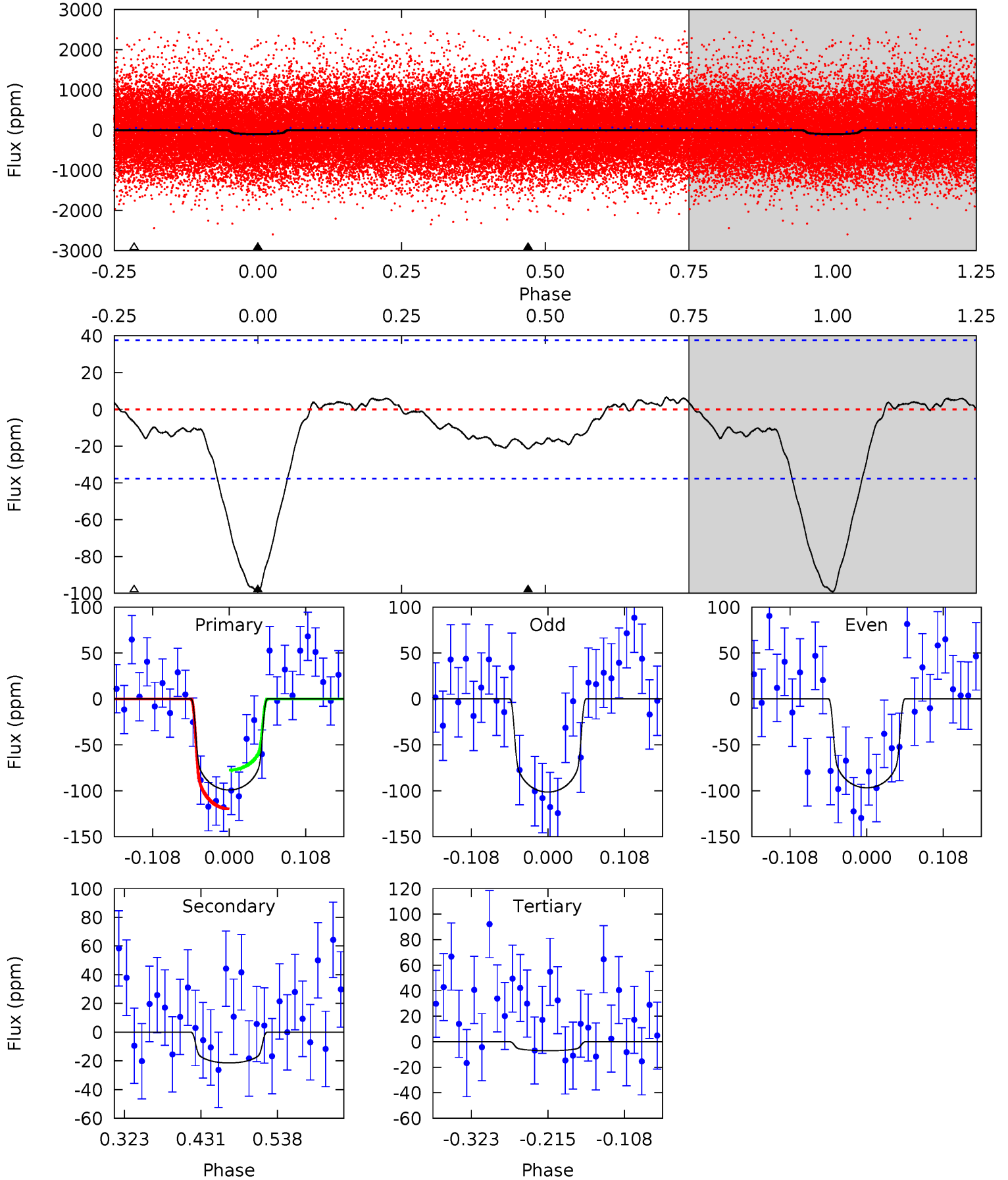
TCE 009602775-01 P= 3.556566 Days $T_0=133.519695$ (BKJD)



DV Model-Shift Uniqueness Test

009602775-01, P = 3.556322 Days, E = 130.035108 Days

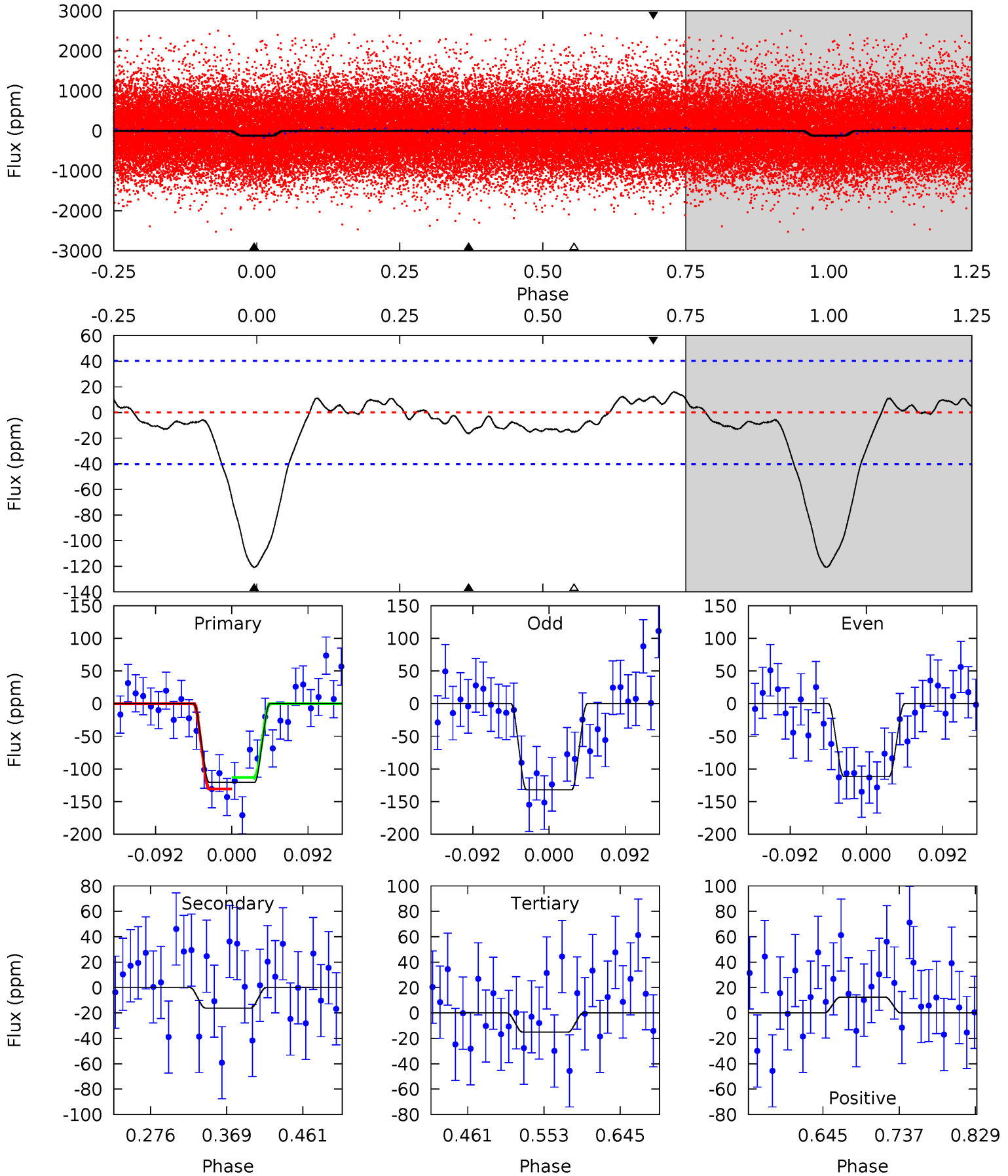
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	2.60	0.85	0	4.55	1.61	0.79	11.1	12.0	1.74	2.60	0.28	0.93	0.06	2.56



Alt Model-Shift Uniqueness Test

009602775-01, P = 3.556566 Days, E = 129.963129 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	1.84	1.72	1.41	4.58	1.68	1.06	12.0	12.3	0.12	0.43	1.16	1.02	0.12	1.00



Stellar Parameters For KIC 009602775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5404^{+178}_{-146}	$4.638^{+0.032}_{-0.097}$	$-0.500^{+0.300}_{-0.300}$	$0.694^{+0.109}_{-0.047}$	$0.789^{+0.075}_{-0.090}$	$3.319^{+0.465}_{-1.076}$
	+3%/-3%	+1%/-2%	+60%/-60%	+16%/-7%	+10%/-11%	+14%/-32%
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 009602775-01 / KOI 4684.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-21 ± 8	$0.93^{+0.21}_{-0.20}$	1381^{+63}_{-47}	3727^{+405}_{-353}	24^{+18}_{-11}
Alt.	-16 ± 9	$0.93^{+0.20}_{-0.20}$	1376^{+58}_{-46}	3563^{+444}_{-450}	17^{+18}_{-10}

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

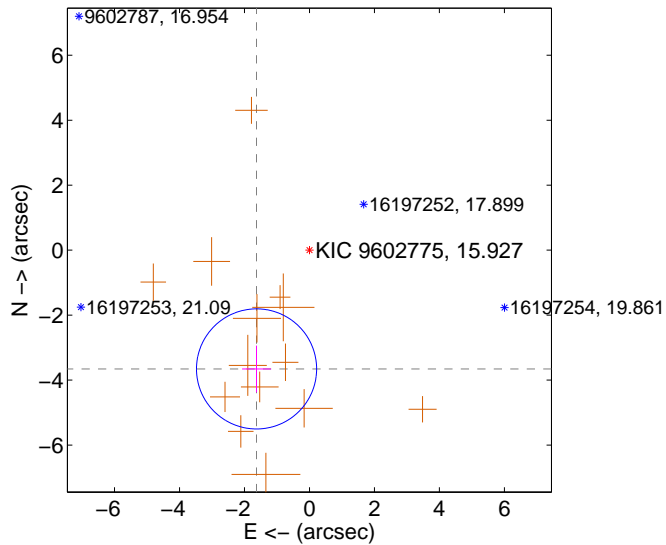
Supplemental centroid analysis for 009602775-01. Kepler magnitude: 15.93. Transit SNR 10.87

There are 0 quarters with good PRF difference image offsets

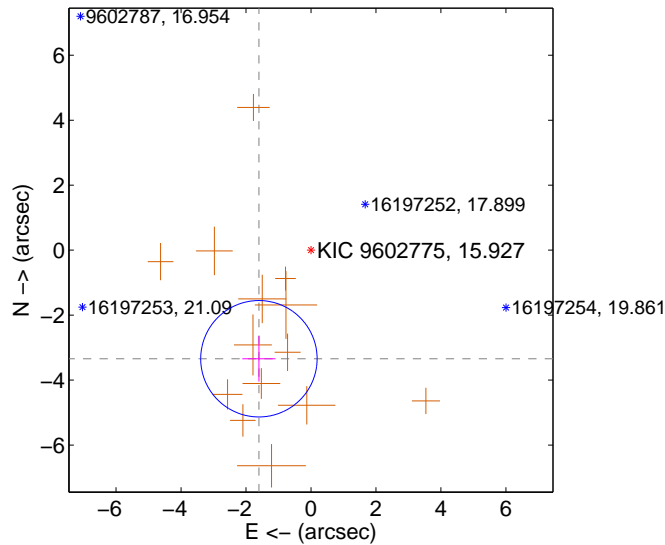
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.002 ± 0.616	6.49	1.629 ± 0.447	-3.656 ± 0.719
PRF-fit source offset from KIC position	3.707 ± 0.597	6.21	1.603 ± 0.511	-3.343 ± 0.701
photometric centroid source offset	2.20 ± 1.34	1.65	0.30 ± 1.26	-2.18 ± 1.34

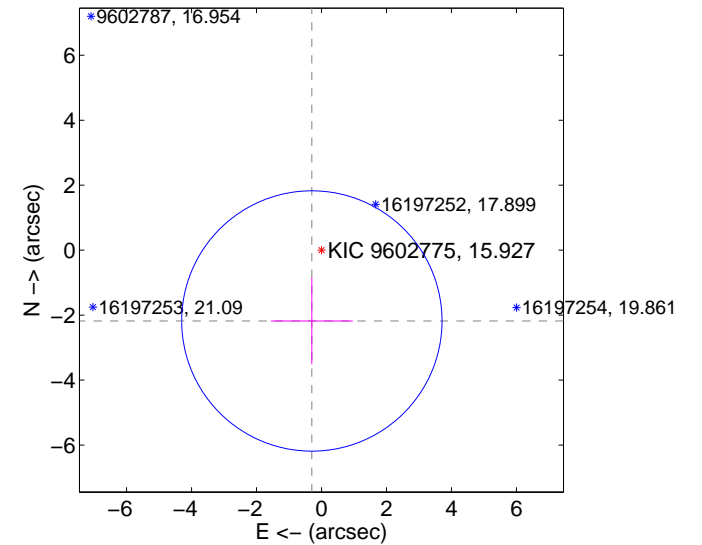
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

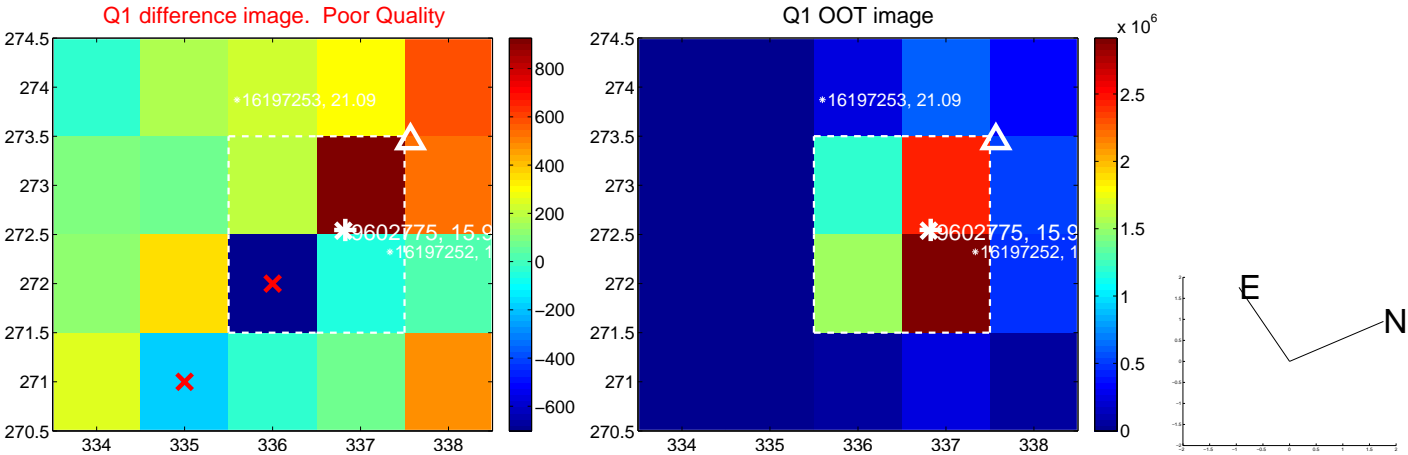


offset from photometric centroids

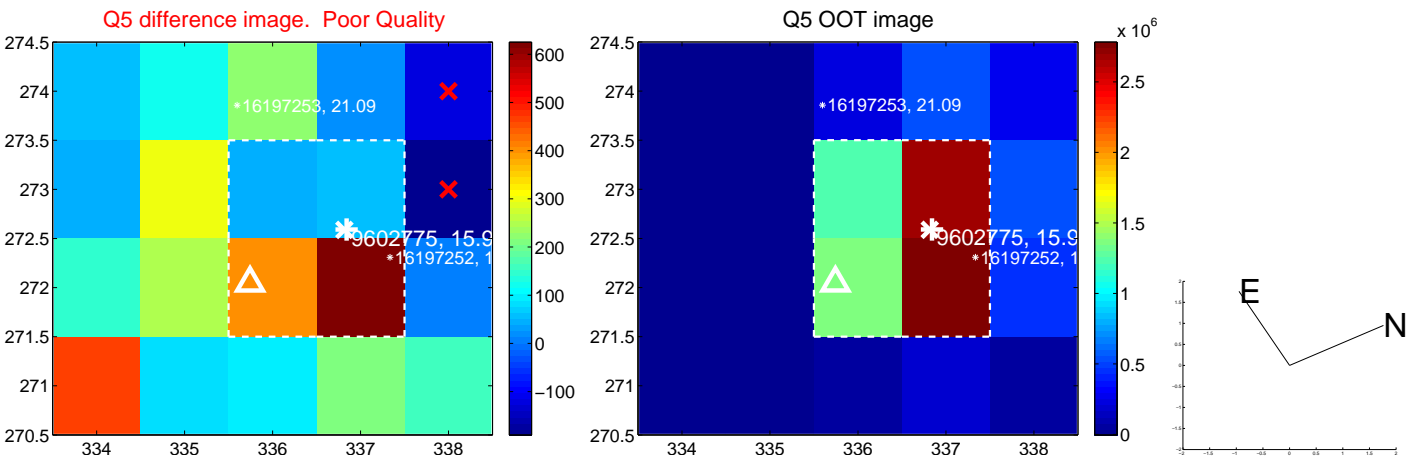


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

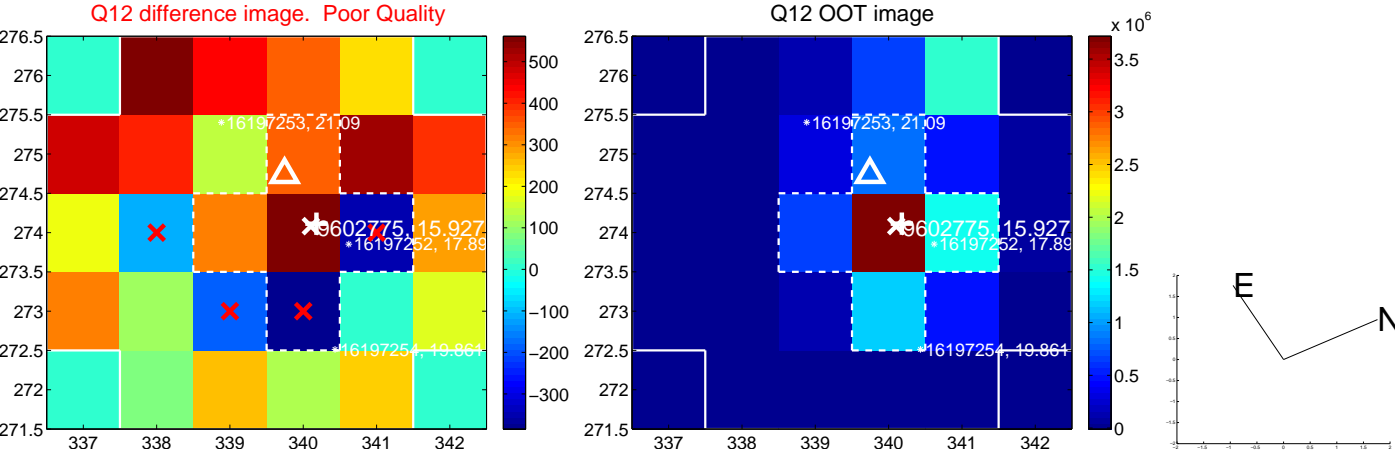
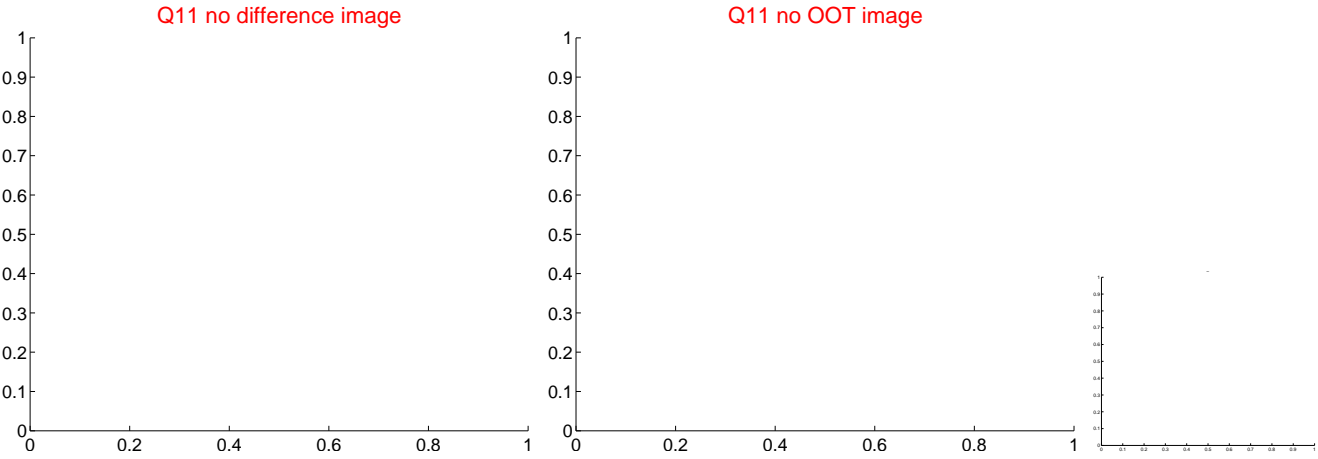
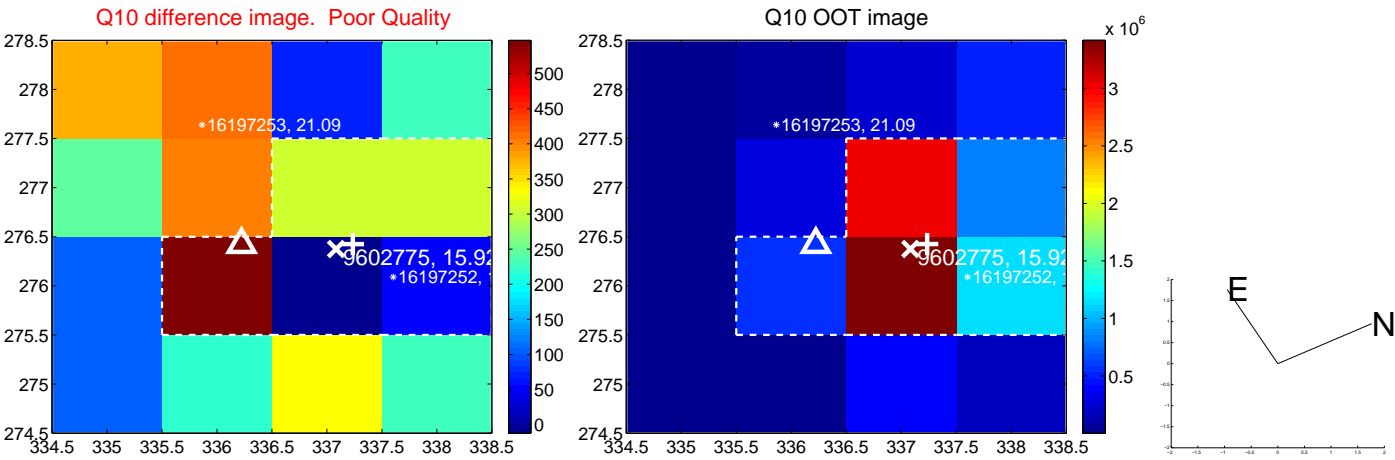
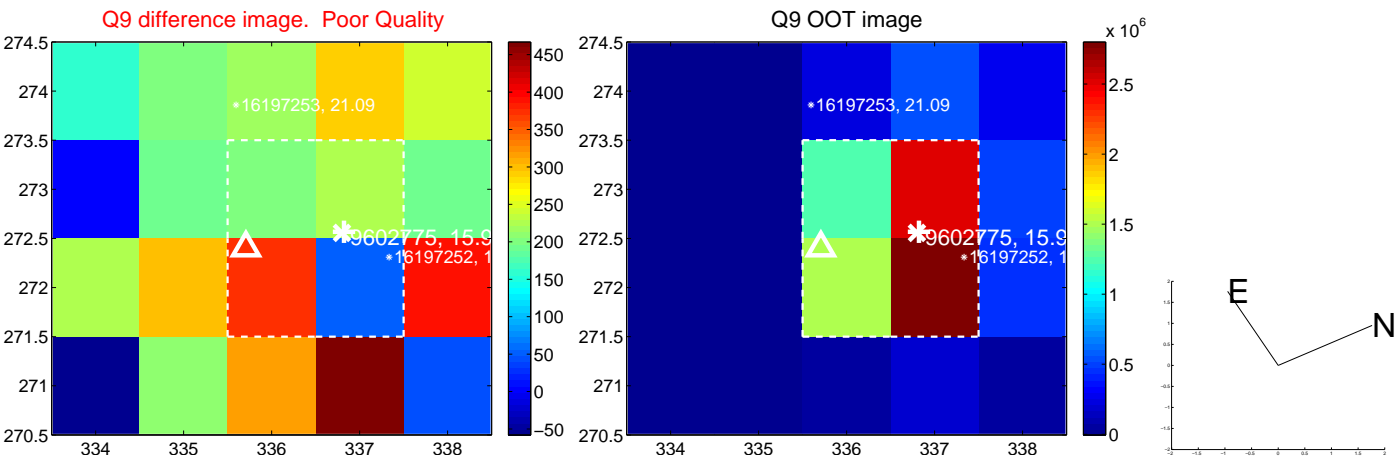
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



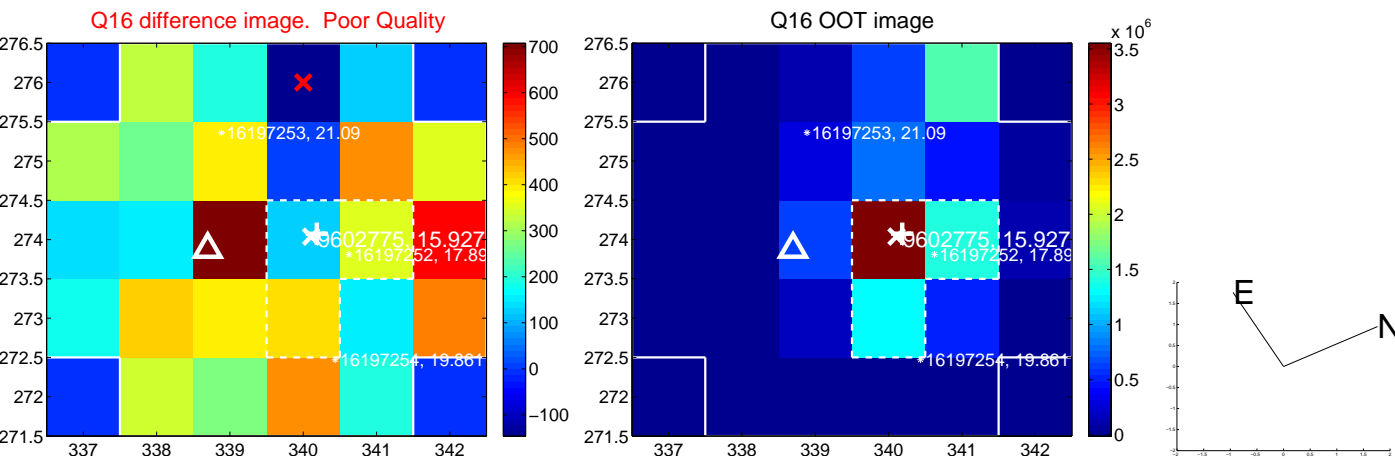
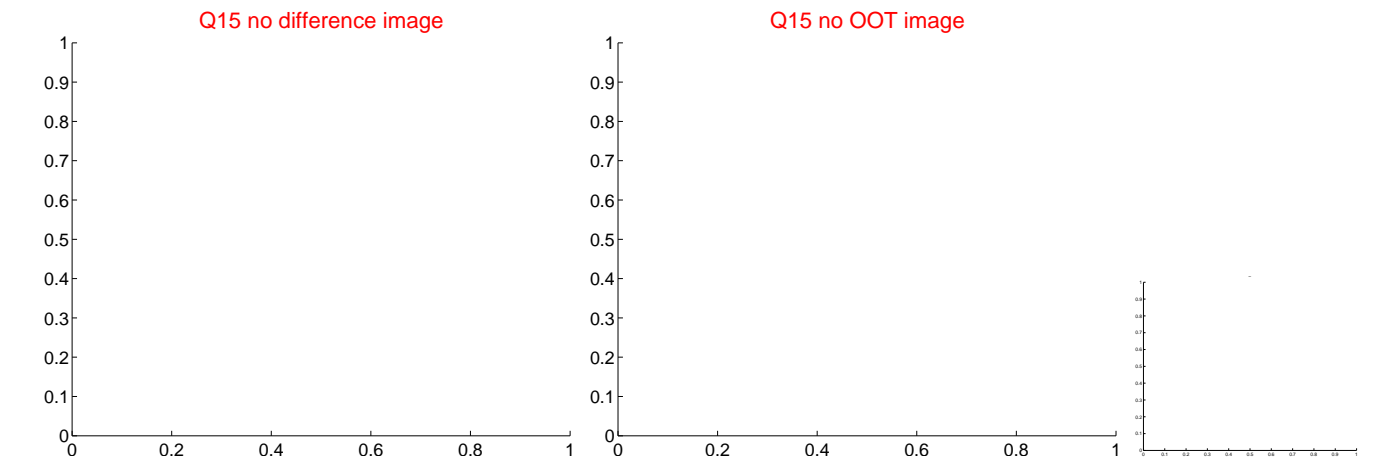
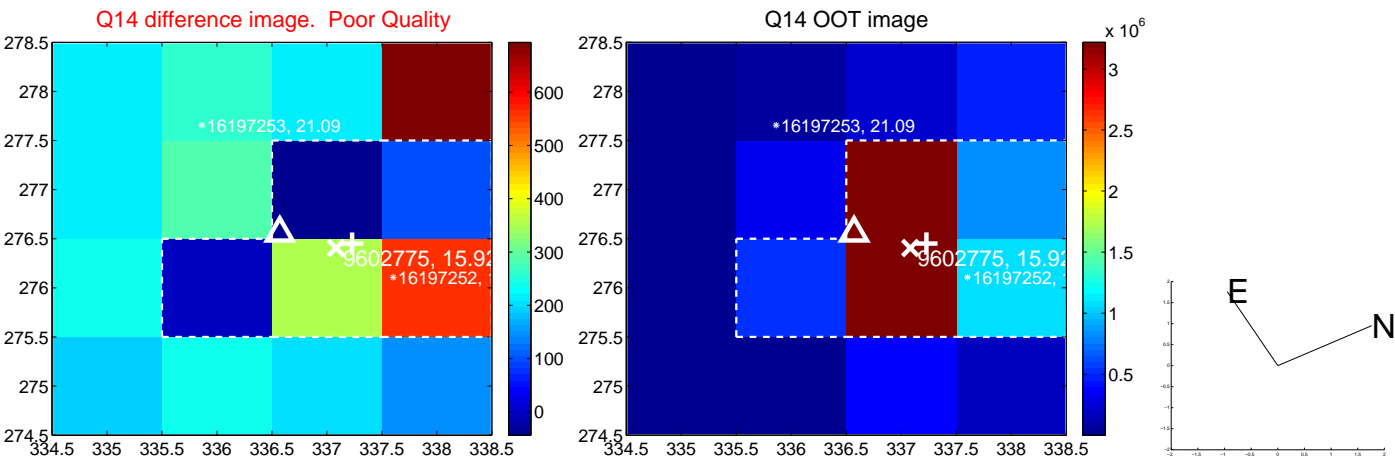
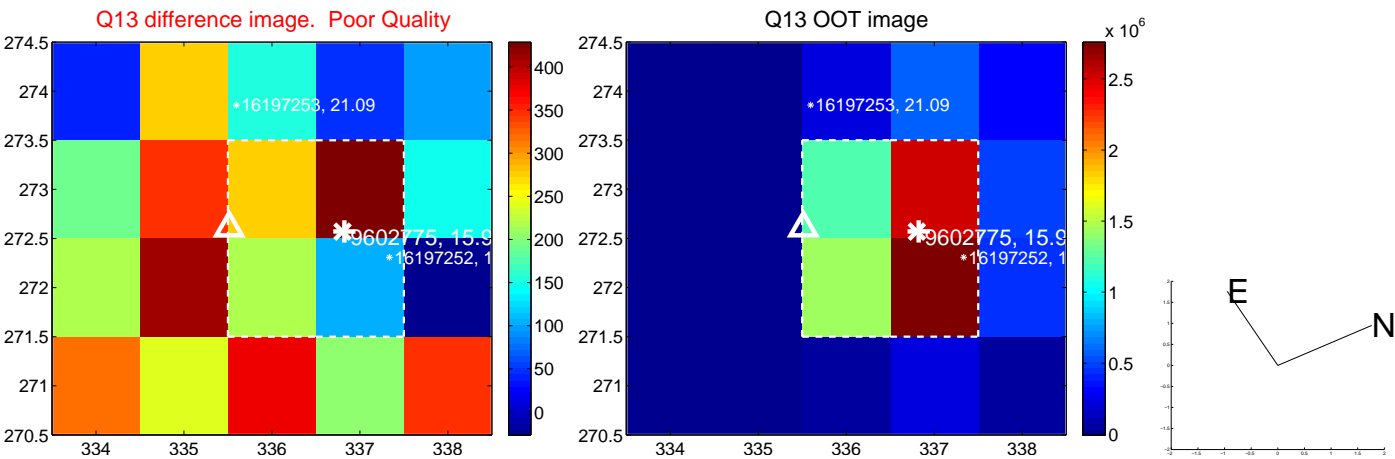
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



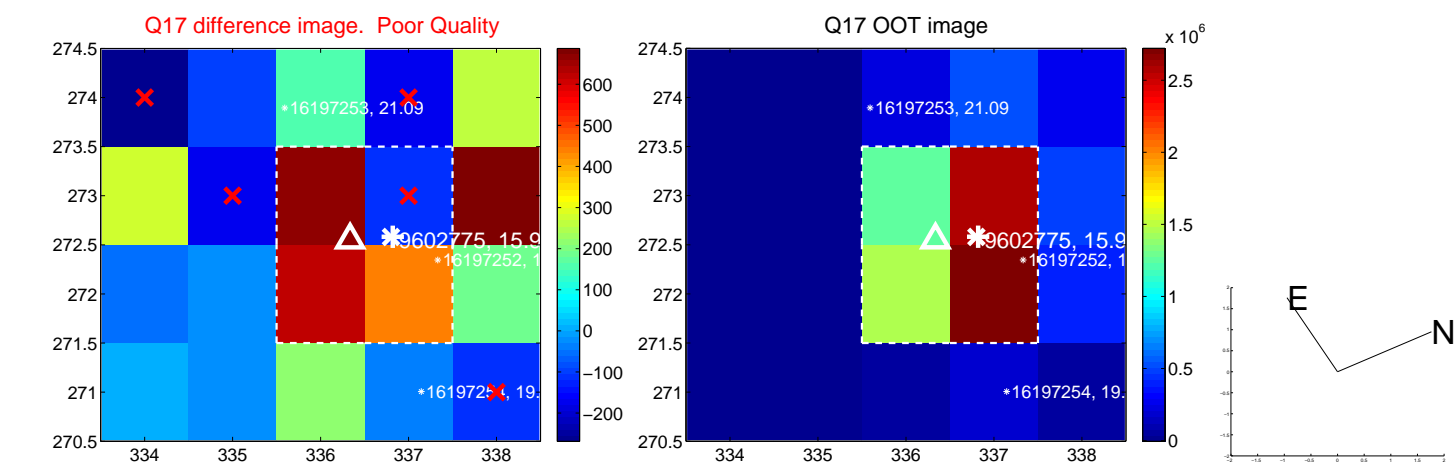
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



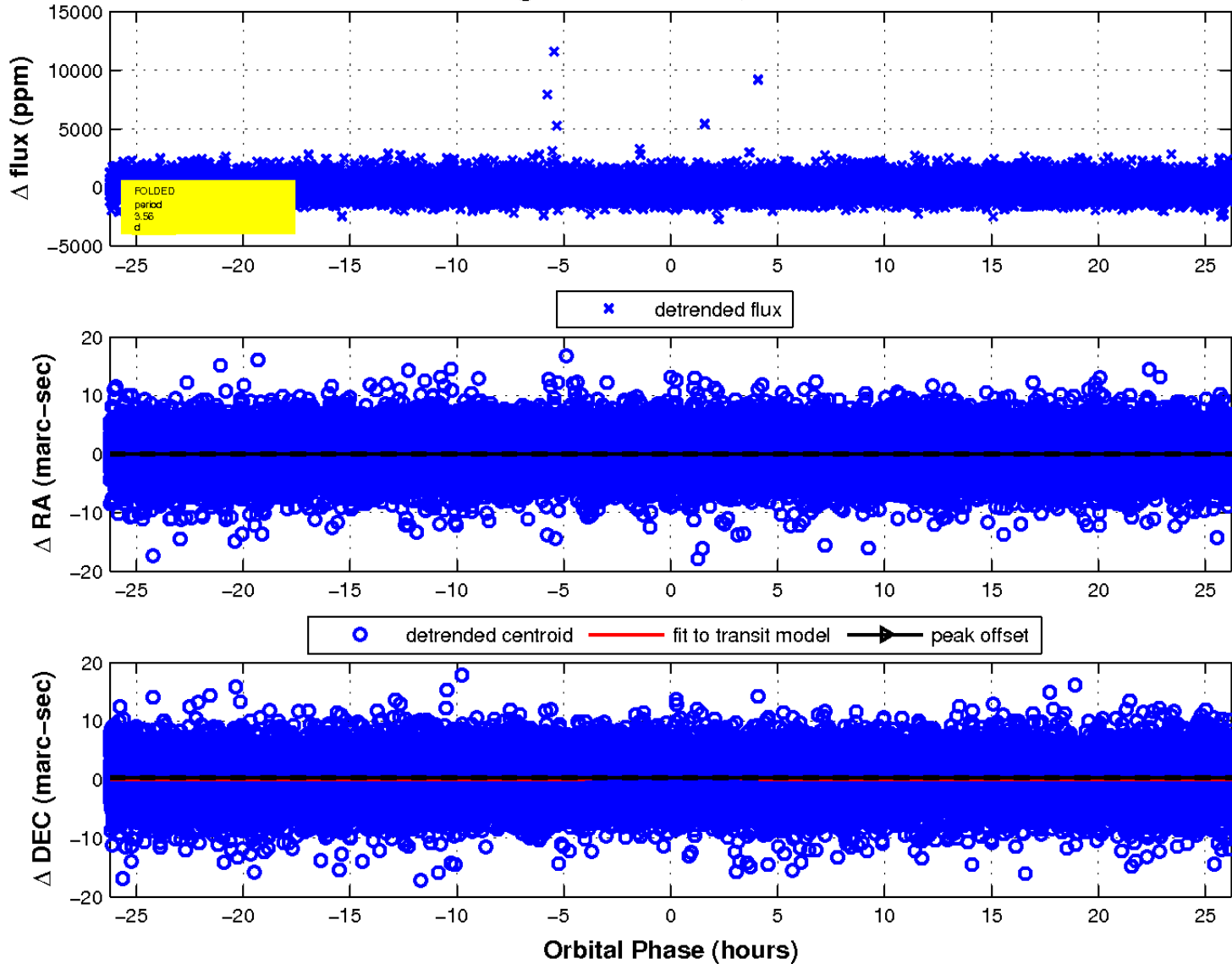
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

