

KIC 006233903

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})
006233903-01	OBS	3609.01	2.995377	132.792763	172663.1	6.616	4274.6	2407.5	1.94	5949	119.18	2439.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006233903-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_KIC_POS

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.

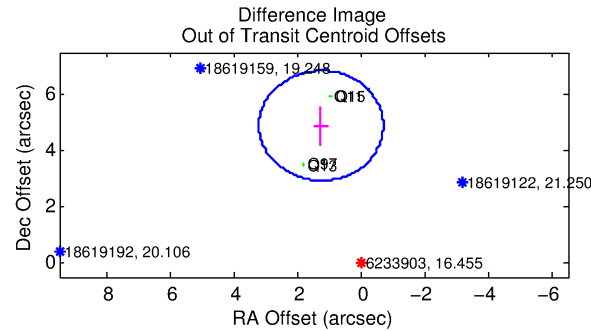
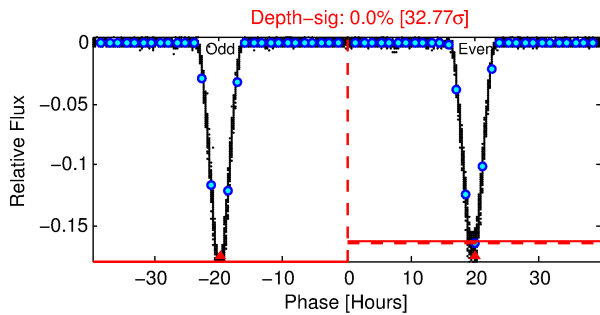
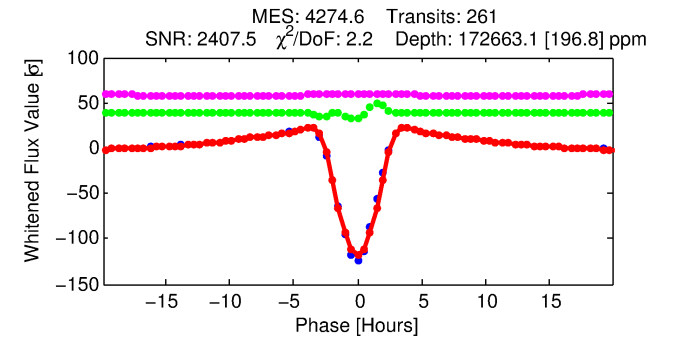
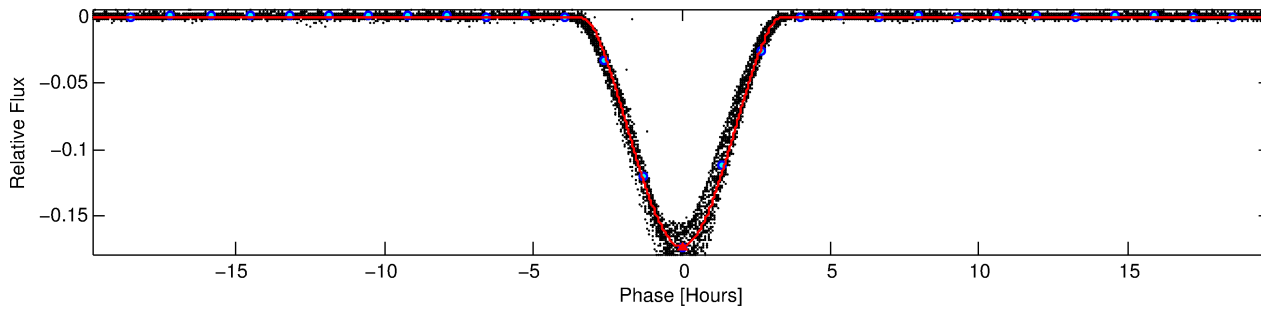
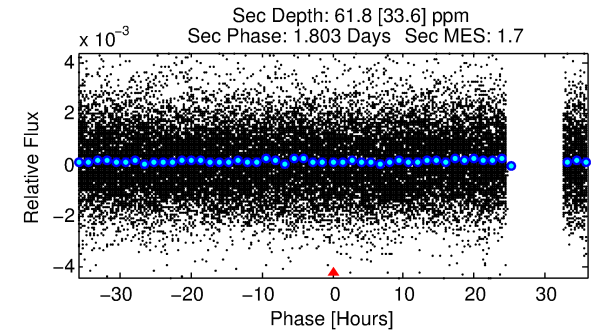
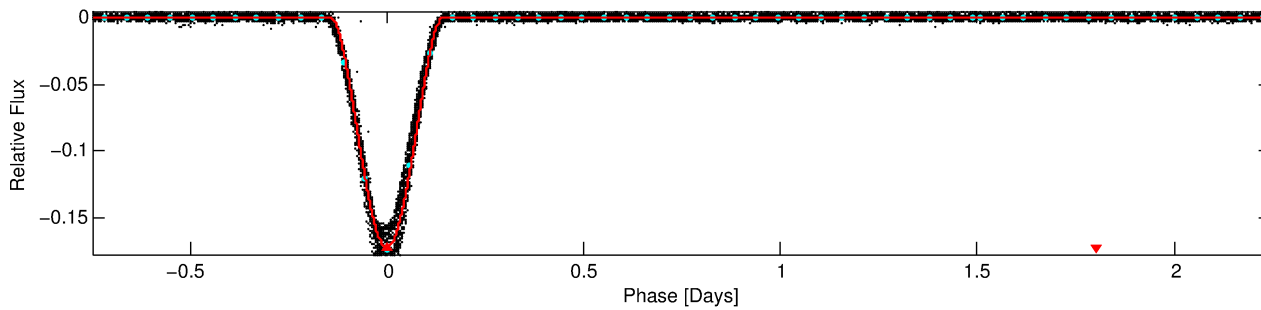
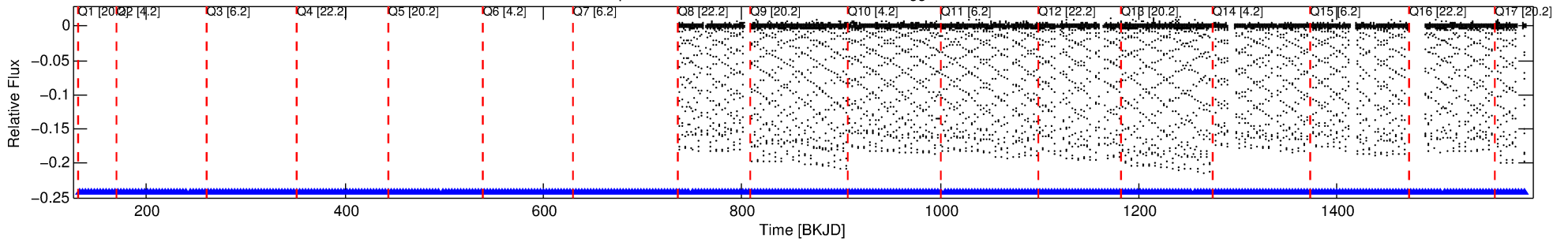
Ephemeris Match Information For 006233903-01

No Significant Match Found

DV One-Page Summary

KIC: 6233903 Candidate: 1 of 1 Period: 2.995 d
KOI: K03609.01 Corr: 0.940

Kp: 16.45 R*: 1.94 Rs Teff: 5949.0 K Logg: 3.89 Fe/H: -0.320



DV Fit Results:

Period = 2.99538 [0.00000] d
Epoch = 132.7928 [0.0001] BKJD
Rp/R* = 0.5630 [0.0415]
a/R* = 4.59 [0.05]
b = 0.89 [0.06]
Seff = 2439.32 [2121.93]
Teq = 1792 [390] K
Rp = 119.18 [56.77] Re
a = 0.0416 [0.0211] AU
Ag = 0.00 [0.00] [-234.28σ]
Teffp = 703 [102] K [-2.70σ]

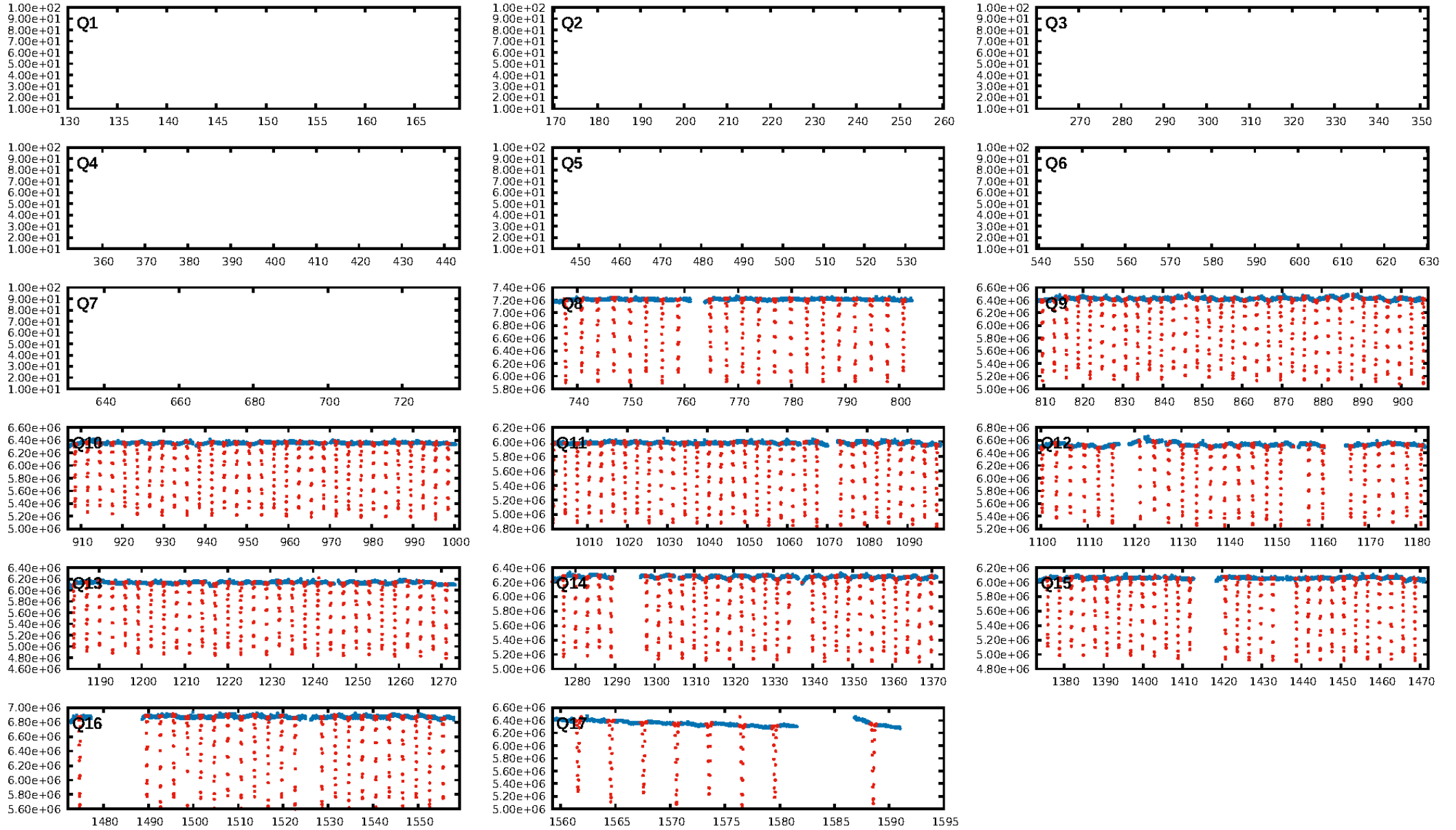
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-figt: 1.00 [253/253]
GhostDiagnostic-chr: 2.953
Centroid-sig: 0.0%
Centroid-so: 2.758 arcsec [1812.06σ]
OotOffset-rm: 5.051 arcsec [7.75σ]
KicOffset-rm: 0.270 arcsec [3.71σ]
OotOffset-st: 0.2/0/3 [5]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

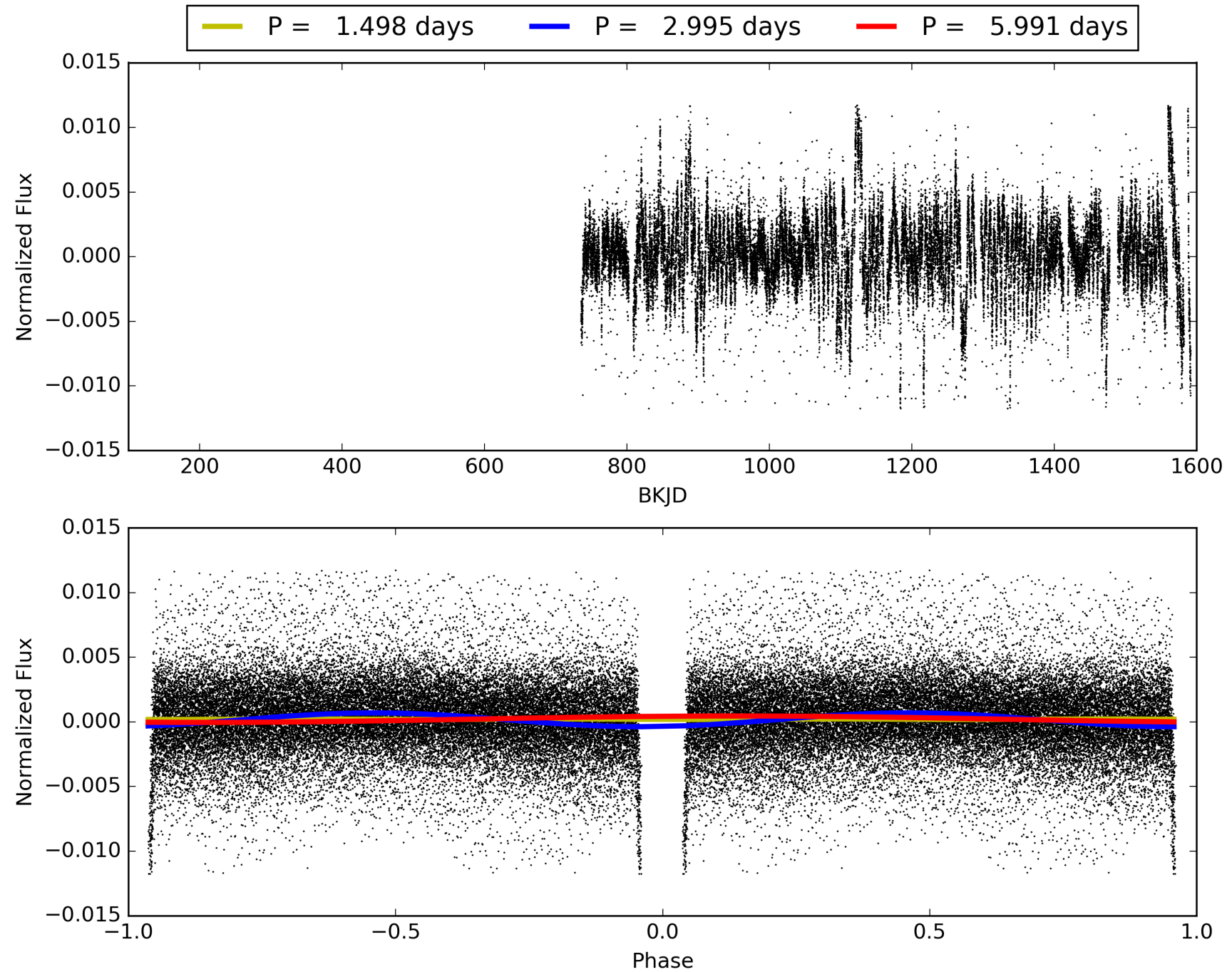
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:16:43 Z

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

TCE 006233903-01, PDC Light Curves

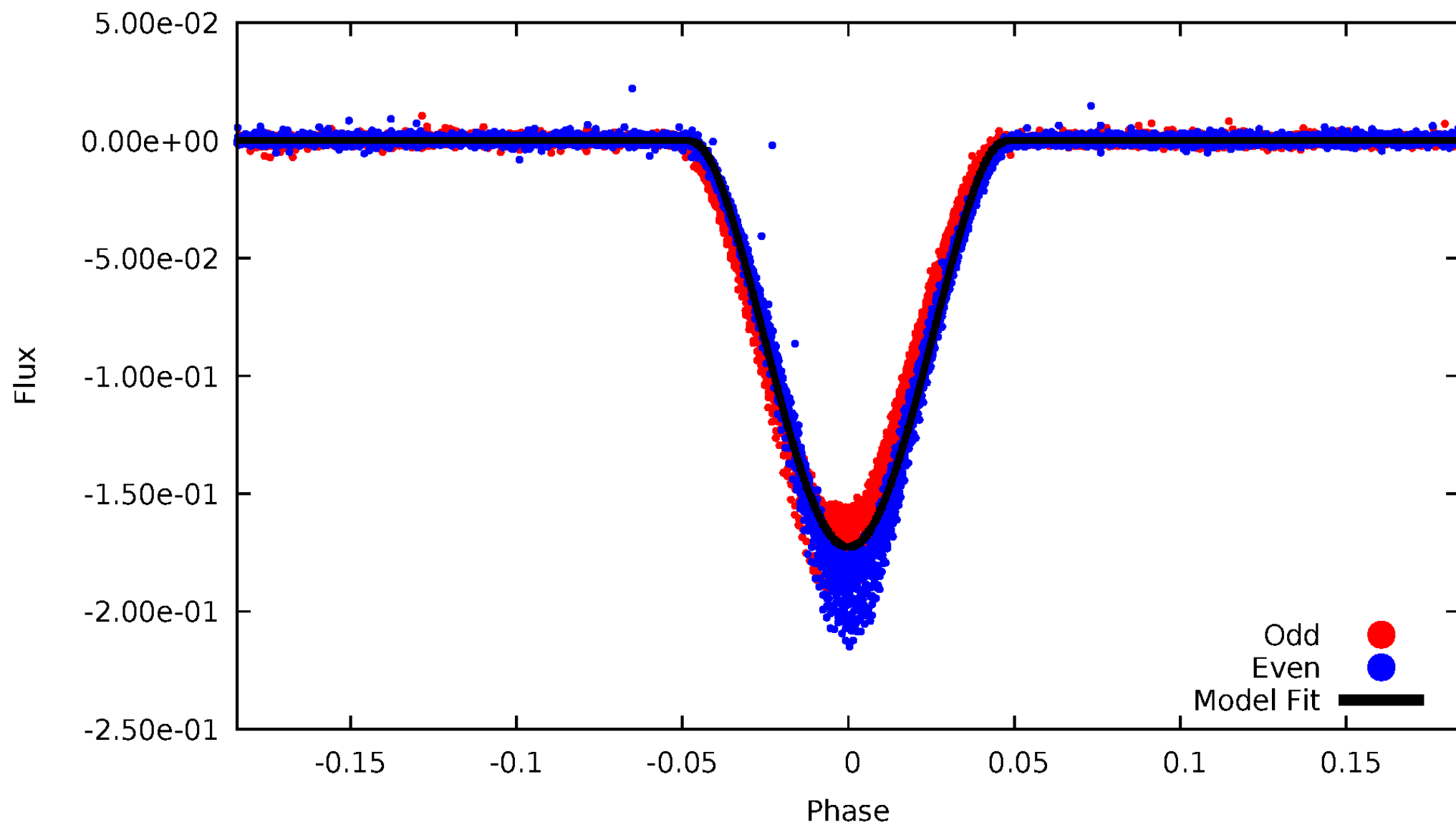


TCE 006233903-01



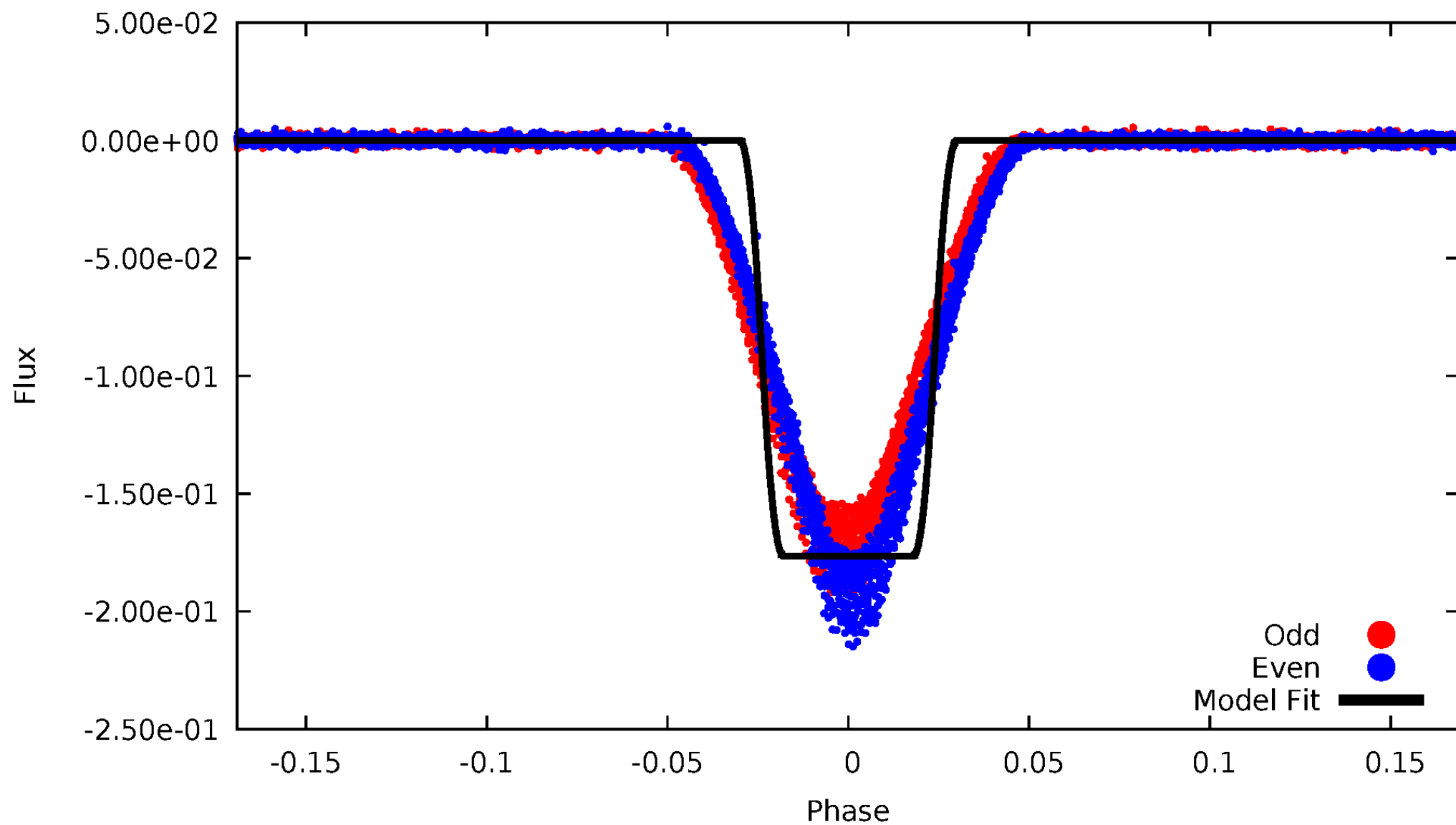
DV Odd/Even

TCE 006233903-01



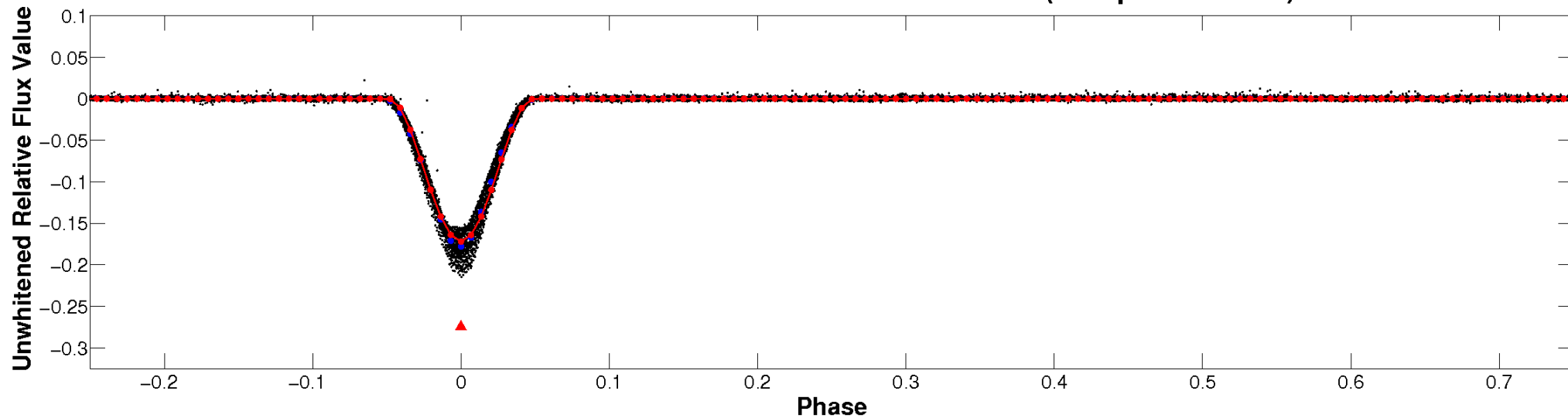
ALT Odd/Even

TCE 006233903-01

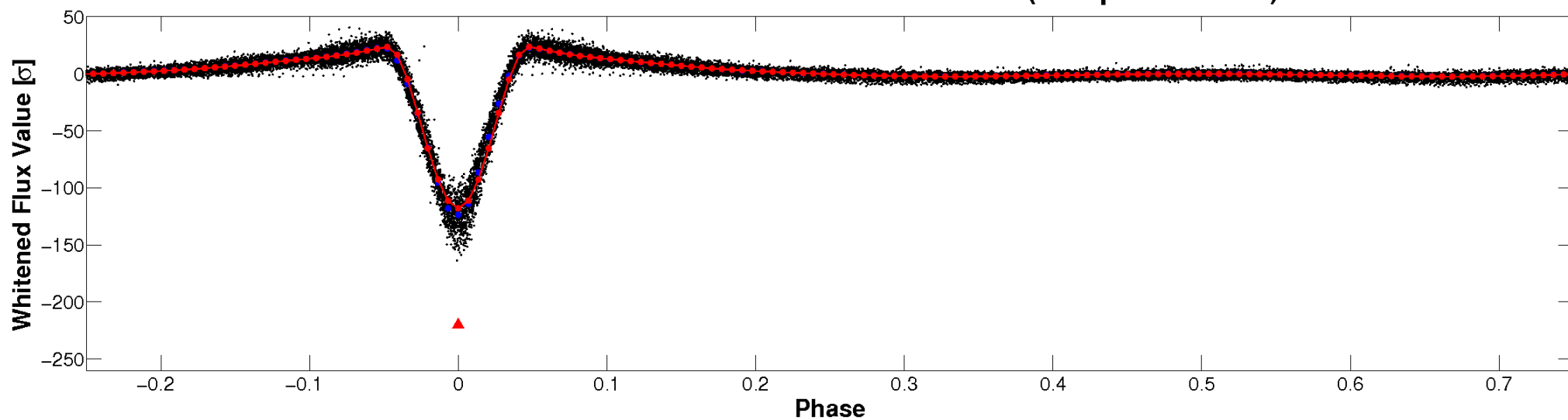


Non-Whitened Vs. Whitened Light Curve

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

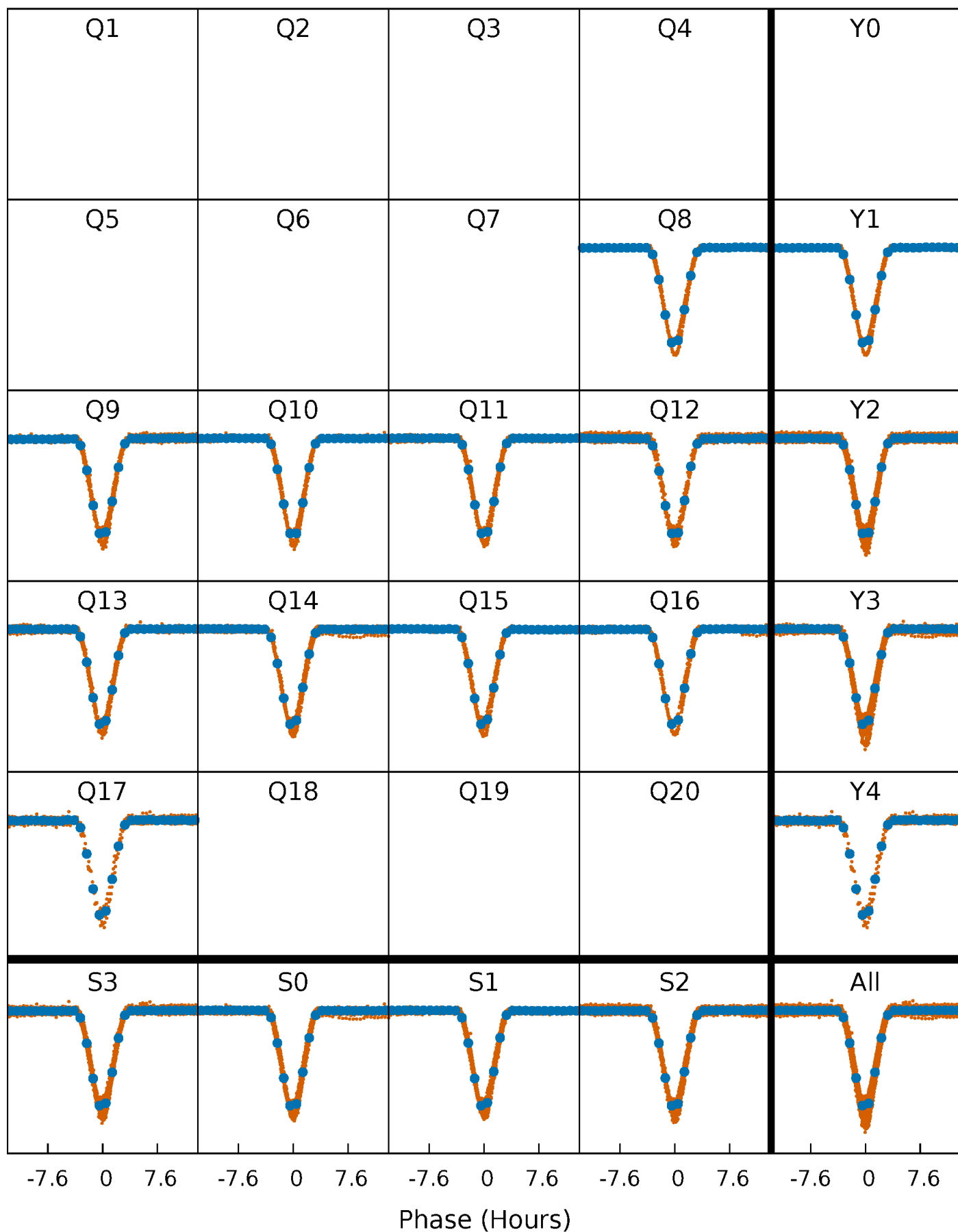


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



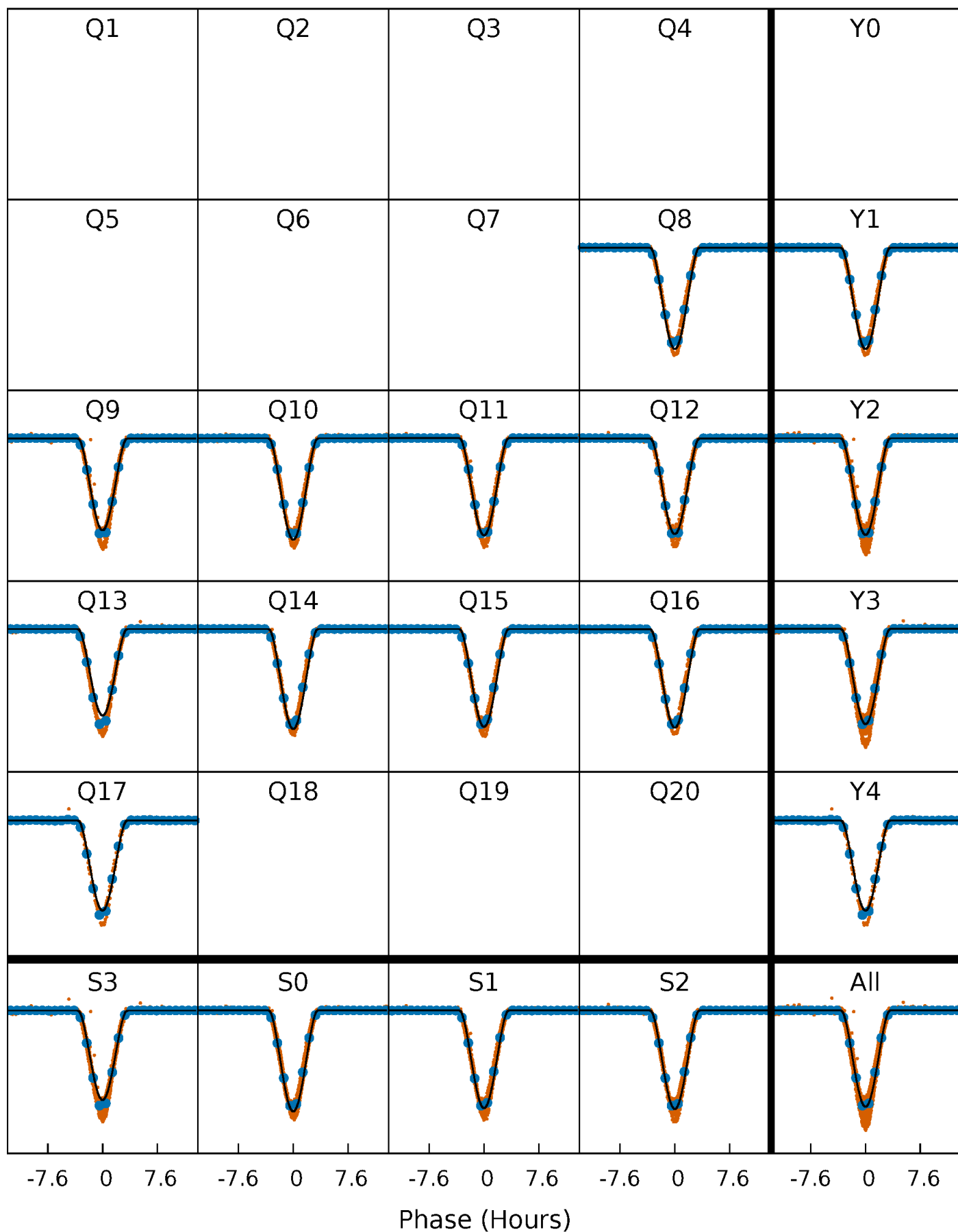
PDC Quarter-Phased Transit Curves

TCE 006233903-01 P= 2.995377 Days $T_0=132.792763$ (BKJD)



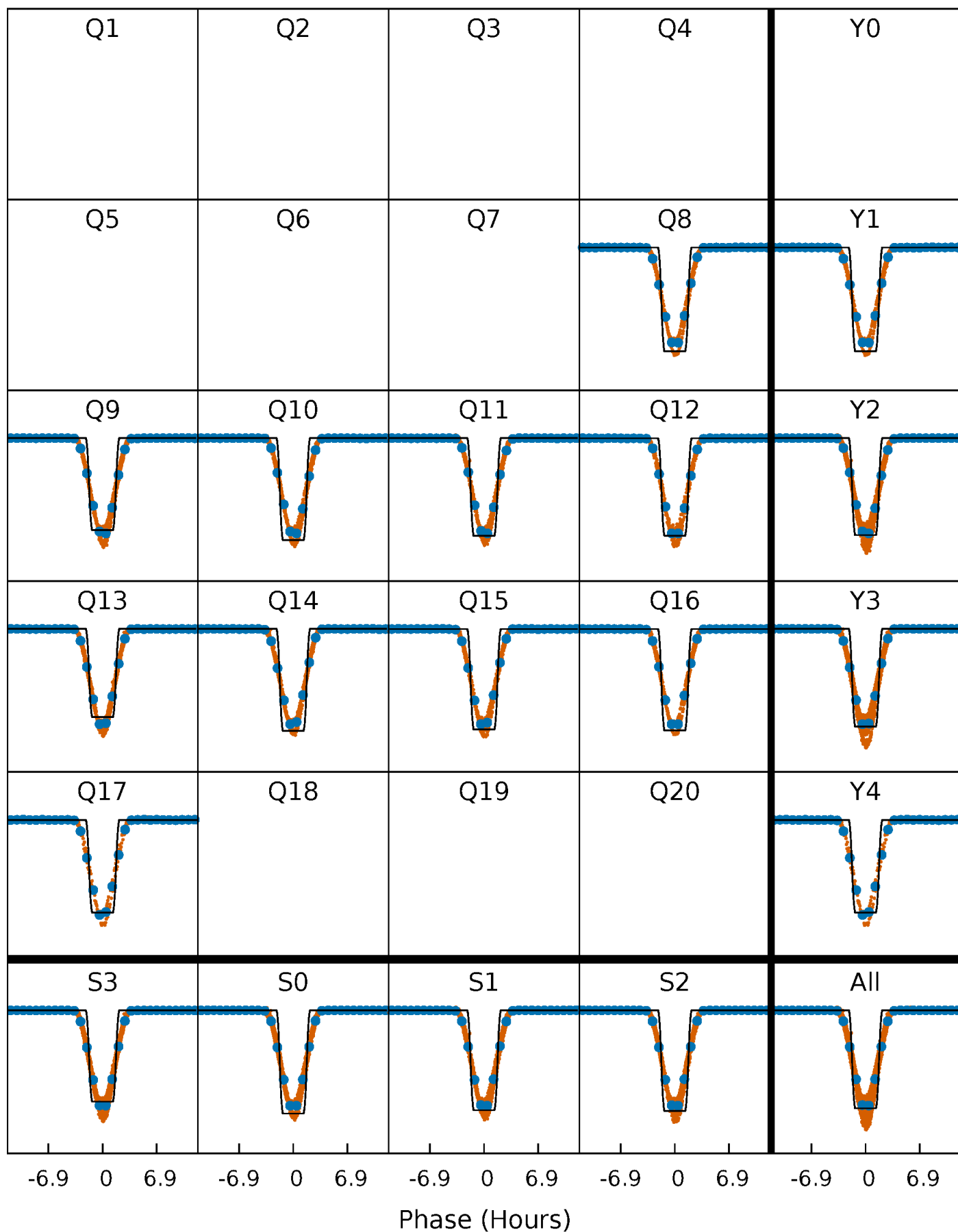
DV Quarter-Phased Transit Curves

TCE 006233903-01 P= 2.995377 Days $T_0=132.792763$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

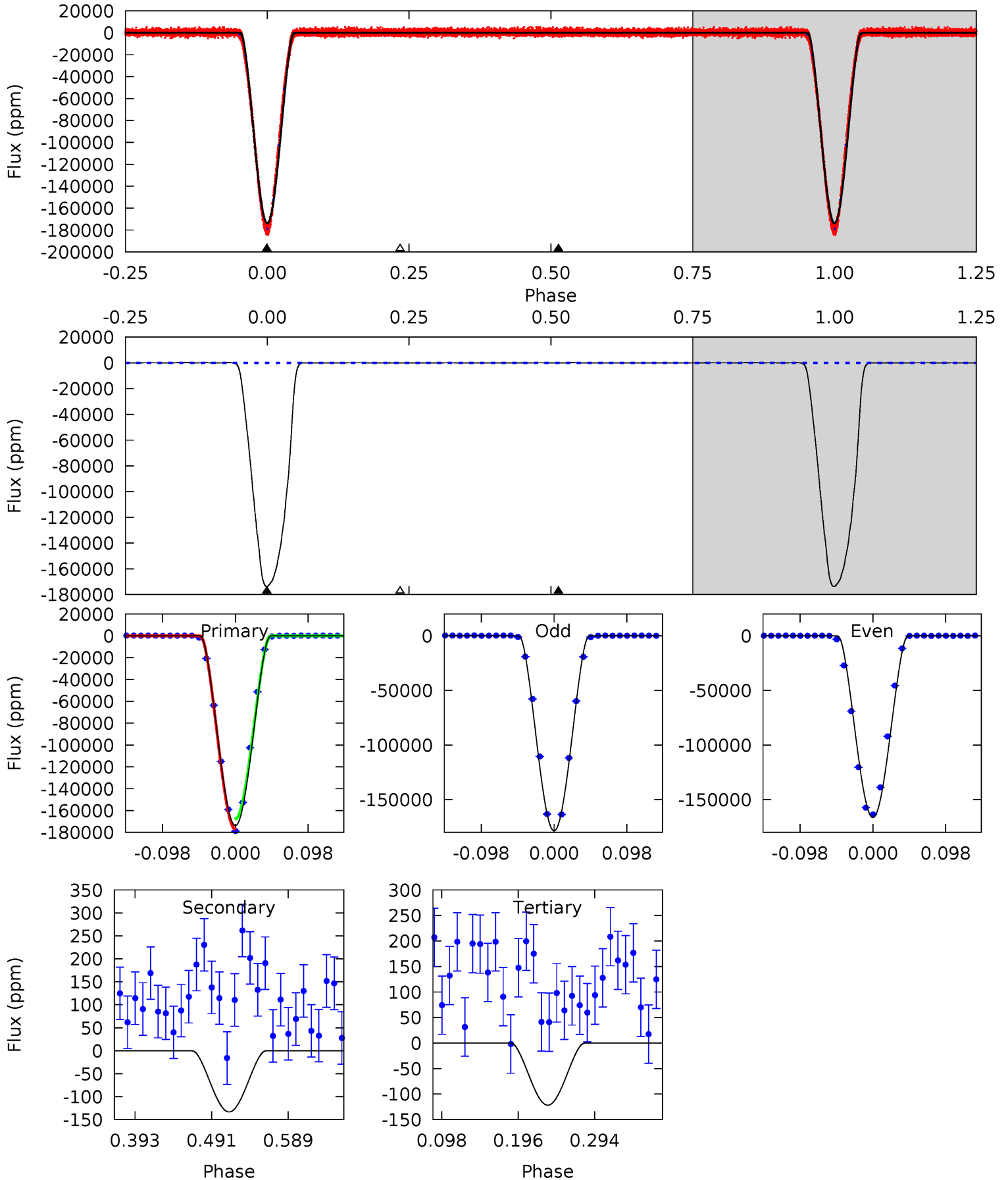
TCE 006233903-01 $P = 2.995376$ Days $T_0 = 132.790439$ (BKJD)



DV Model-Shift Uniqueness Test

006233903-01, P = 2.995377 Days, E = 132.792763 Days

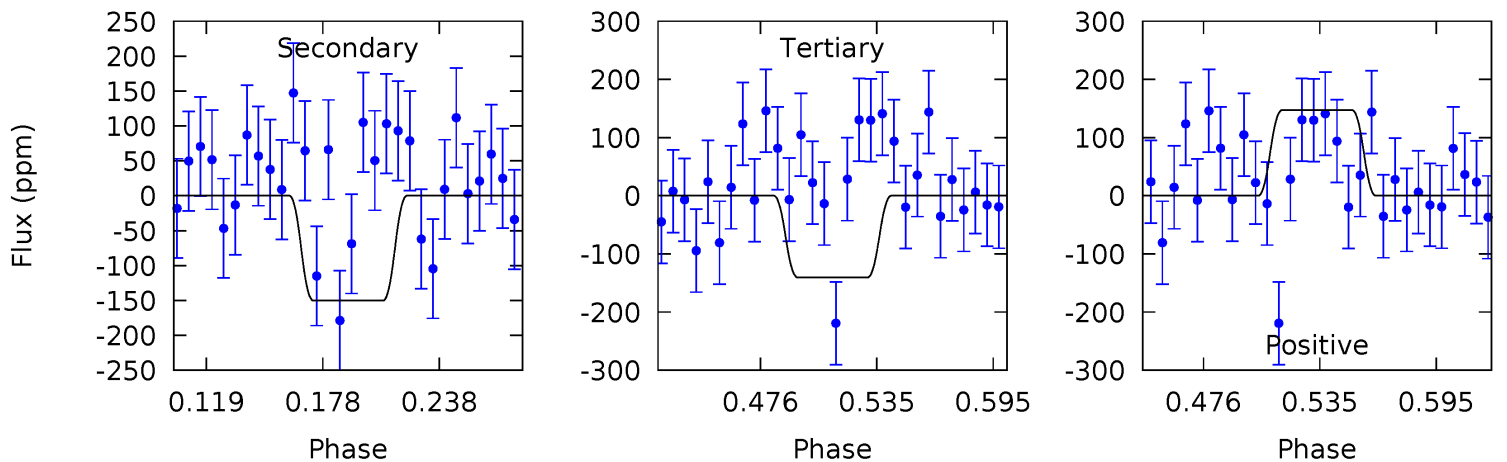
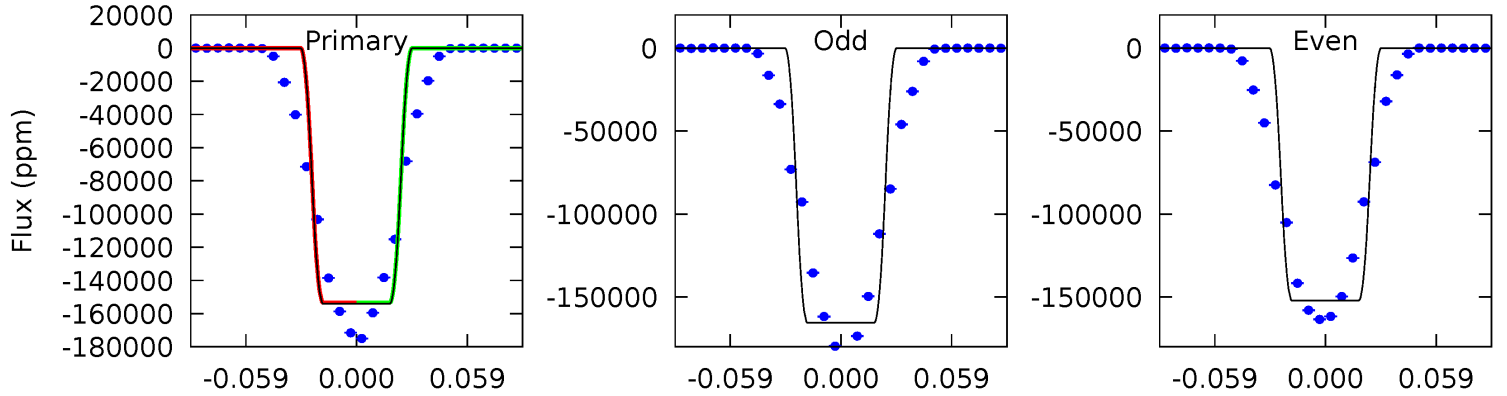
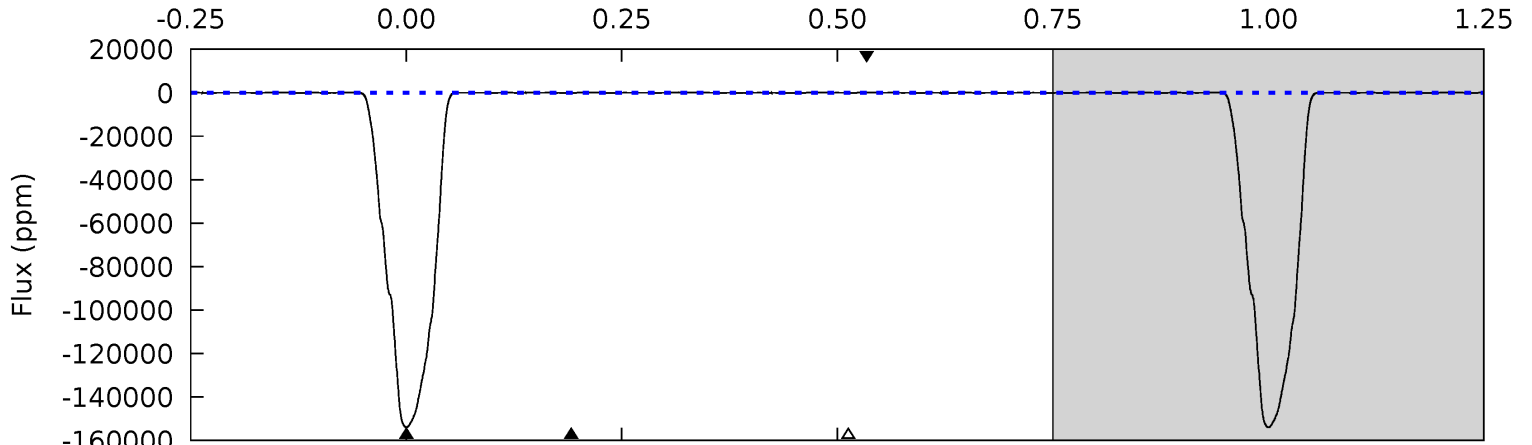
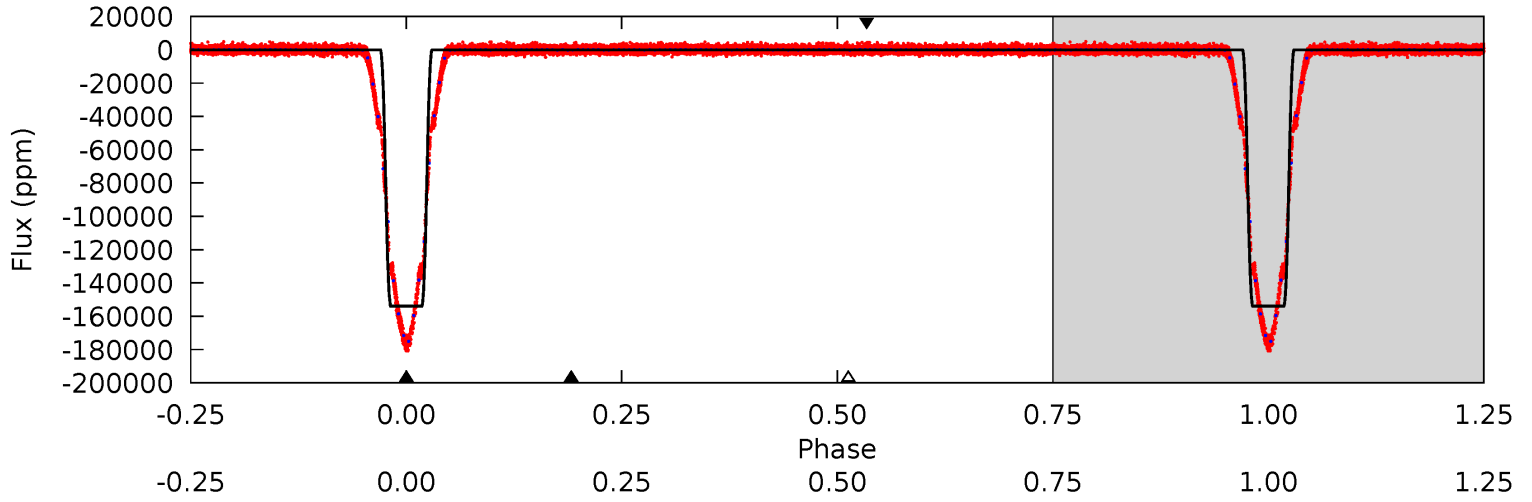
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6000	4.60	4.20	0	4.57	1.65	2.32	5995	6000	0.40	4.60	254.0	1.00	0.00	0



Alt Model-Shift Uniqueness Test

006233903-01, P = 2.995376 Days, E = 132.790439 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3337	3.26	3.05	3.19	4.67	1.88	1.17	3334	3334	0.21	0.06	168.0	1.00	0.00	0



Stellar Parameters For KIC 006233903

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5949^{+216}_{-180}	$3.892^{+0.520}_{-0.130}$	$-0.320^{+0.300}_{-0.300}$	$1.940^{+0.492}_{-0.913}$	$1.070^{+0.162}_{-0.199}$	$0.207^{+1.162}_{-0.077}$
	+4%/-3%	+13%/-3%	+94%/-94%	+25%/-47%	+15%/-19%	+562%/-37%
Source	KIC0	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 006233903-01 / KOI 3609.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-133 ± 29	$113.27^{+21.88}_{-29.06}$	2445^{+188}_{-308}	-2750^{+189}_{-117}	$0.010^{+0.007}_{-0.003}$
Alt.	-150 ± 46	$84.50^{+17.76}_{-23.23}$	2453^{+209}_{-329}	-2744^{+216}_{-129}	$0.020^{+0.018}_{-0.009}$

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

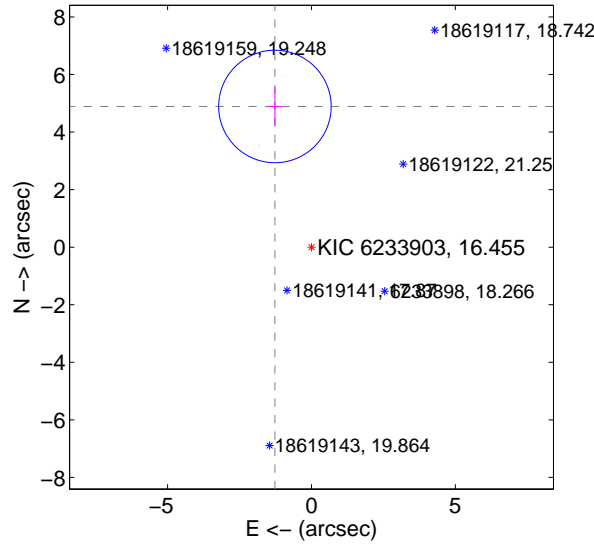
Supplemental centroid analysis for 006233903-01. Kepler magnitude: 16.45. Transit SNR 2407.50

There are 10 quarters with good PRF difference image offsets

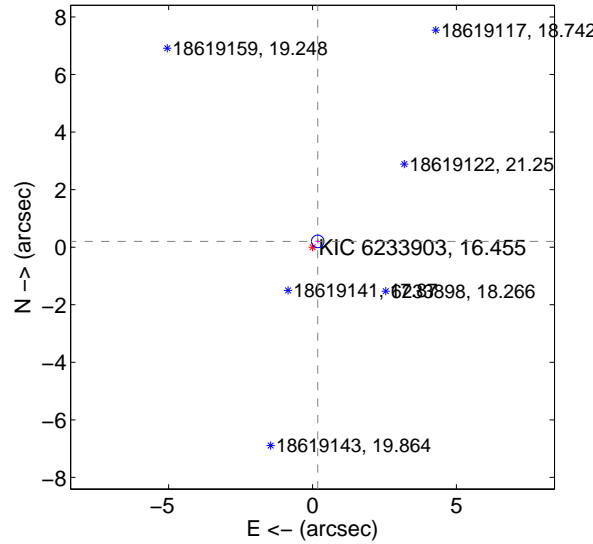
The OOT PRF centroid is offset from the target star catalog position by about 3.91 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.051 ± 0.651	7.75	1.270 ± 0.228	4.889 ± 0.670
PRF-fit source offset from KIC position	0.270 ± 0.073	3.71	-0.180 ± 0.075	0.201 ± 0.071
photometric centroid source offset	2.76 ± 0.00	1812.06	-1.13 ± 0.00	-2.52 ± 0.00

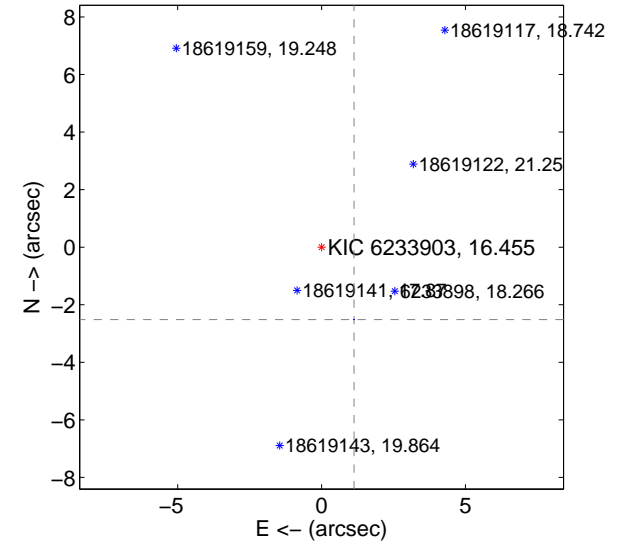
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

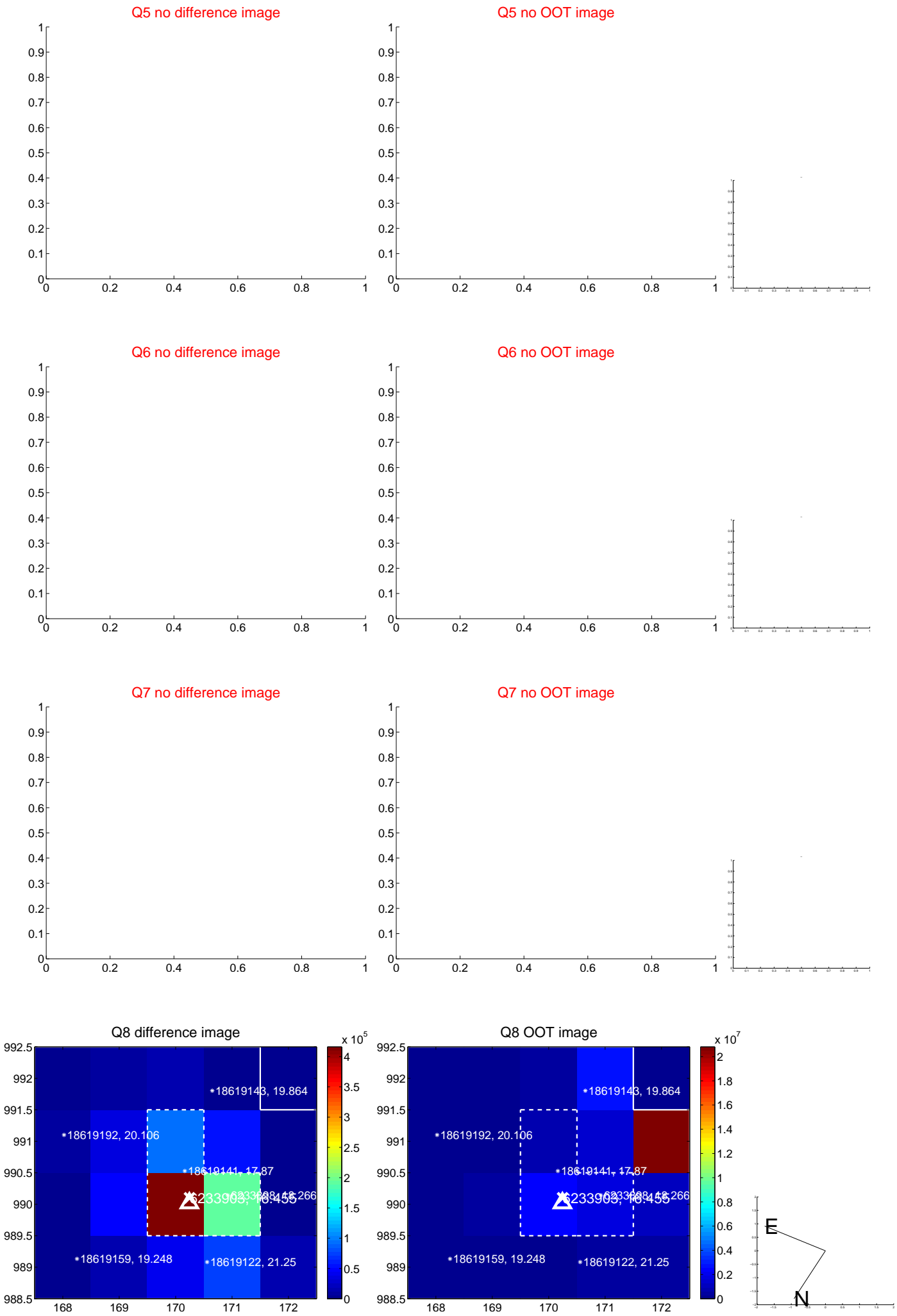


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

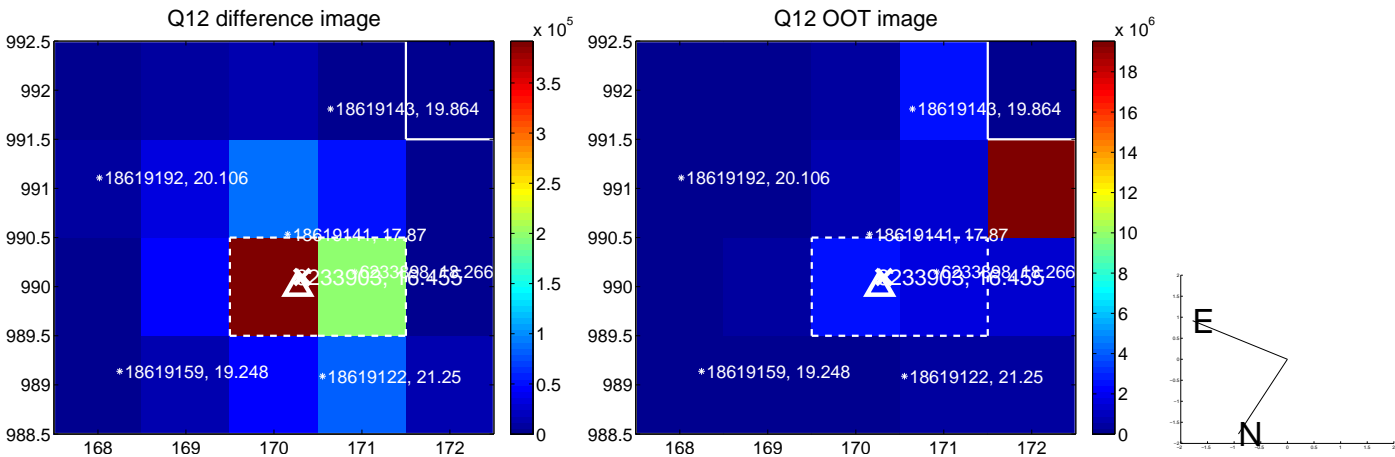
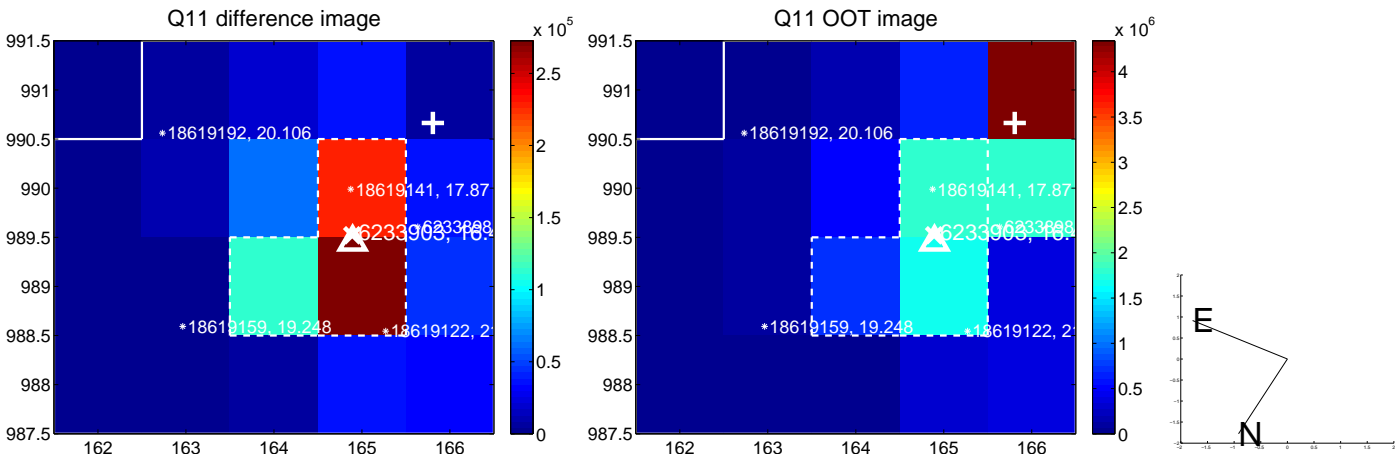
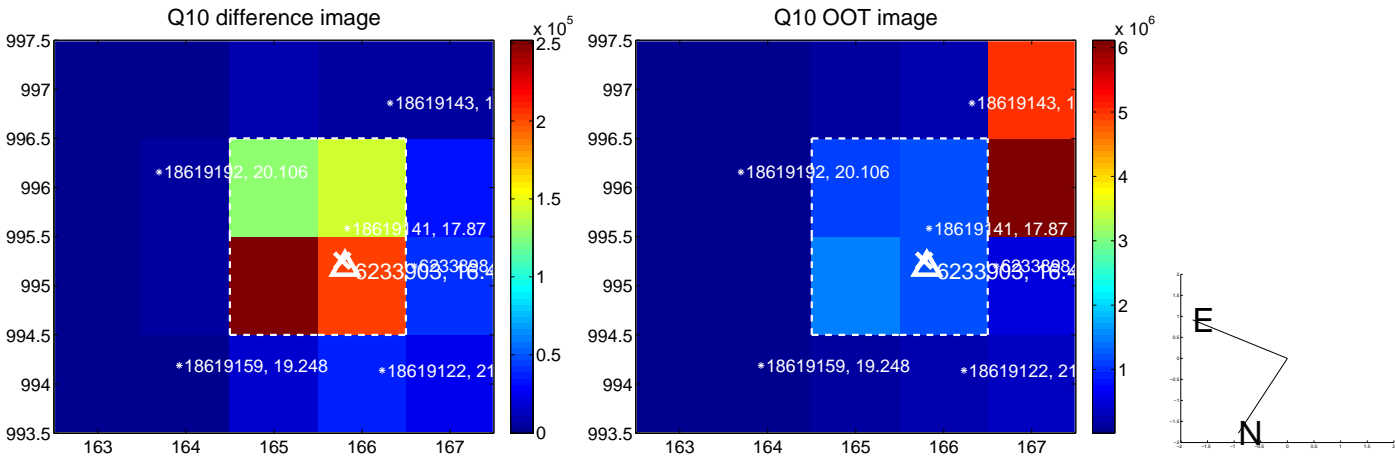
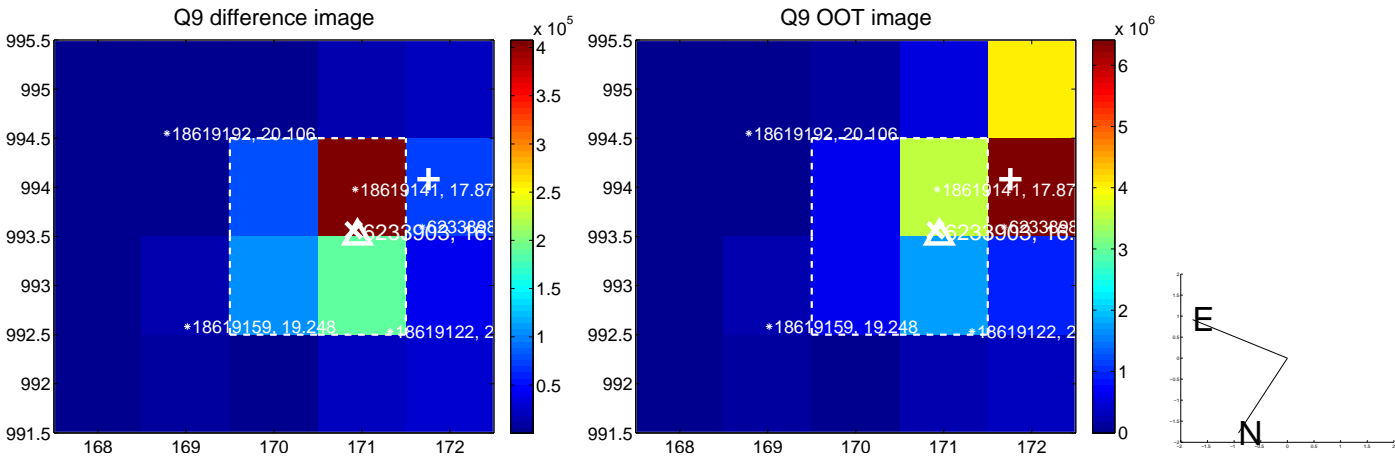
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



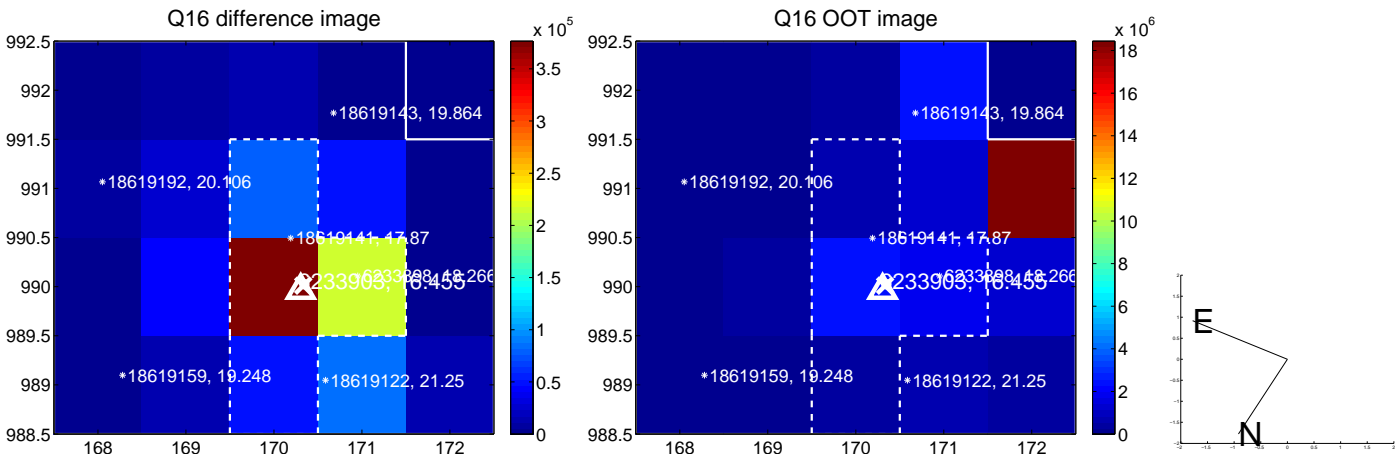
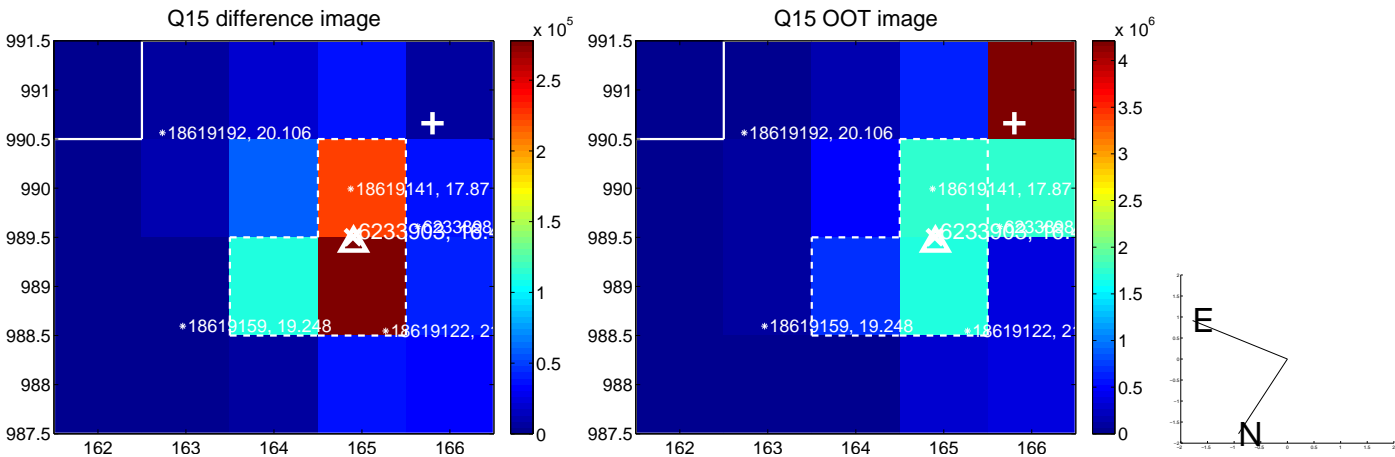
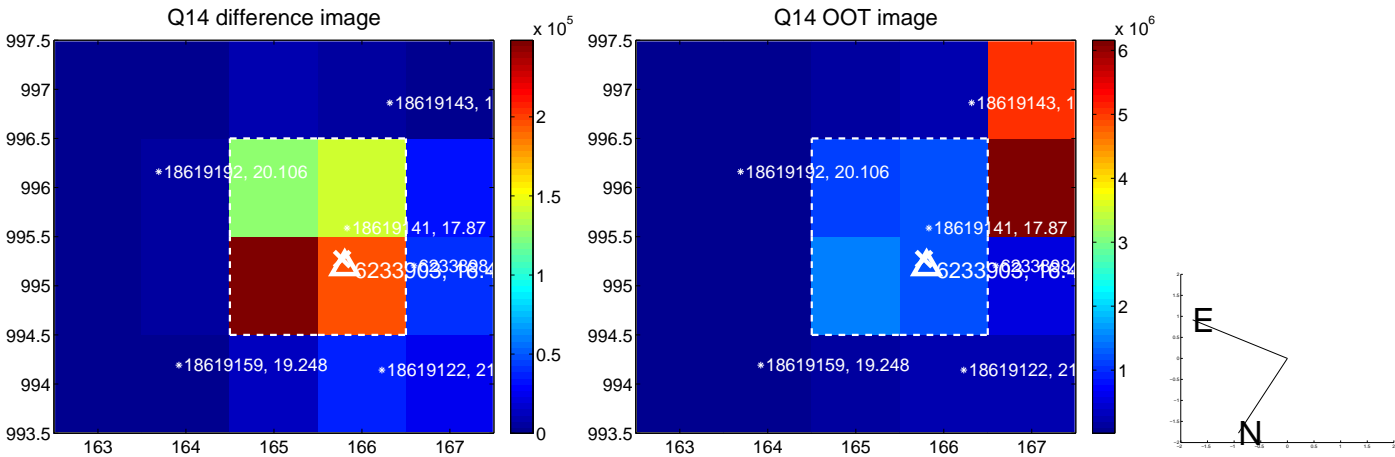
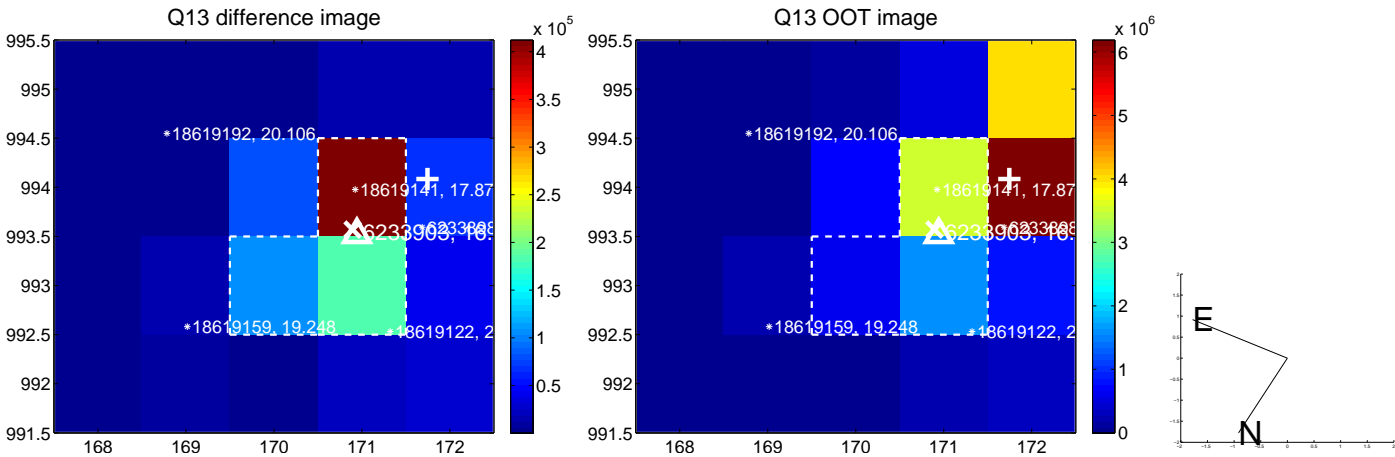
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



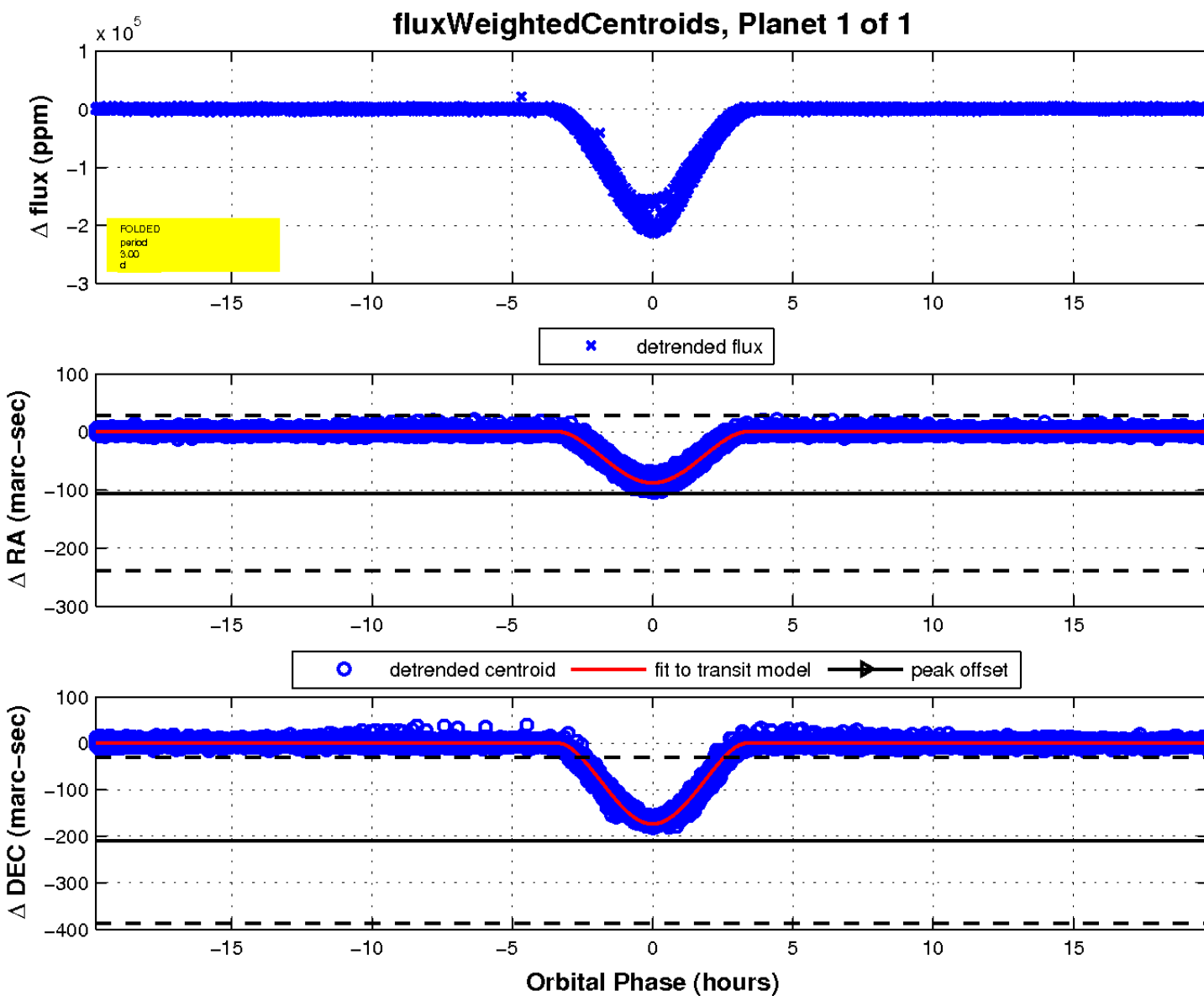
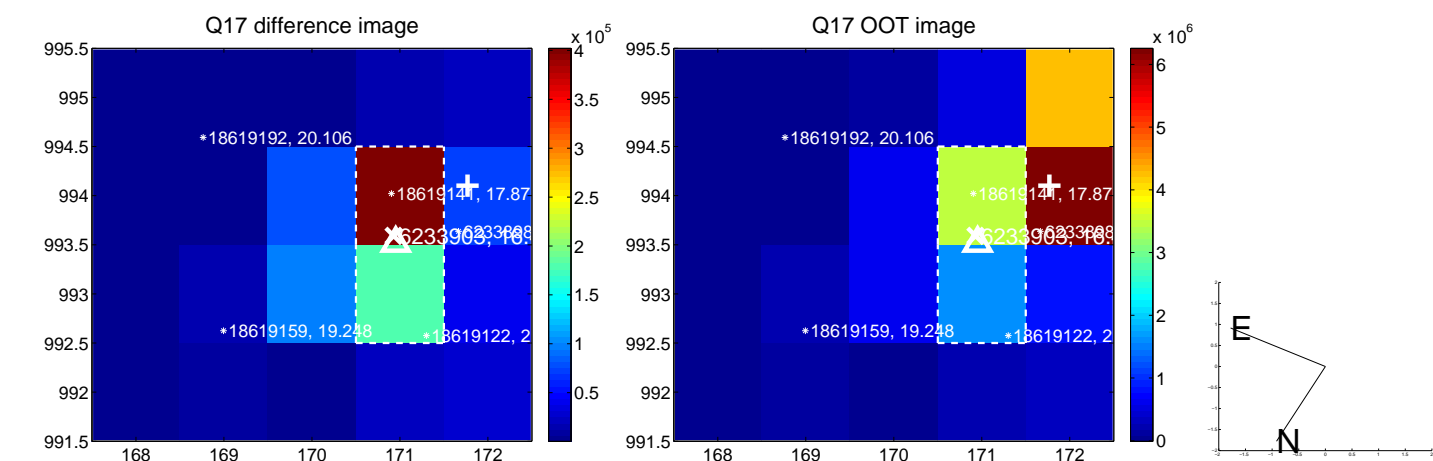
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

