

KIC 005983410

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})
005983410-01	OBS	No	252.225363	302.603504	2034.2	3.297	10.9	6.9	0.56	4875	2.65	0.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005983410-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

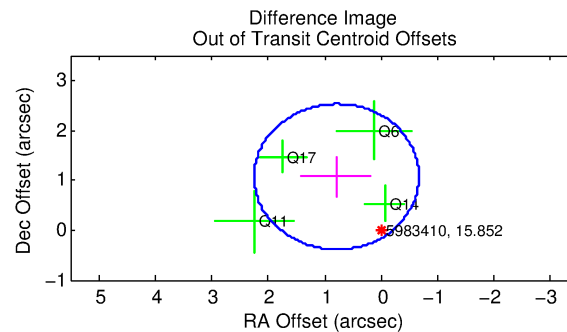
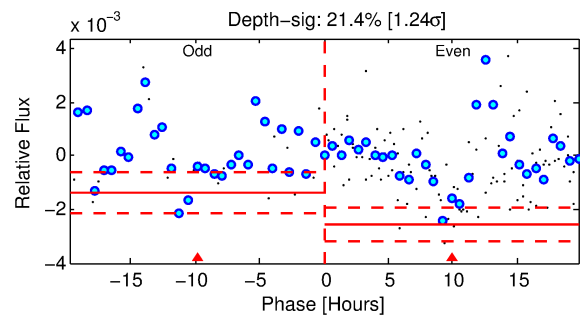
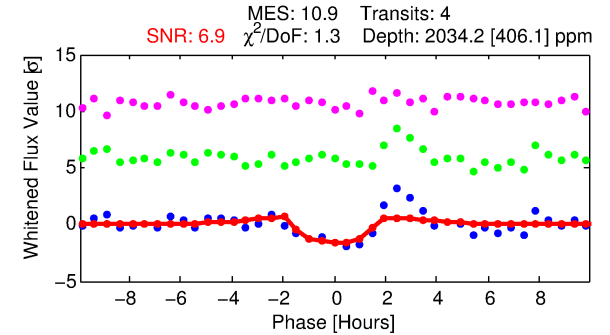
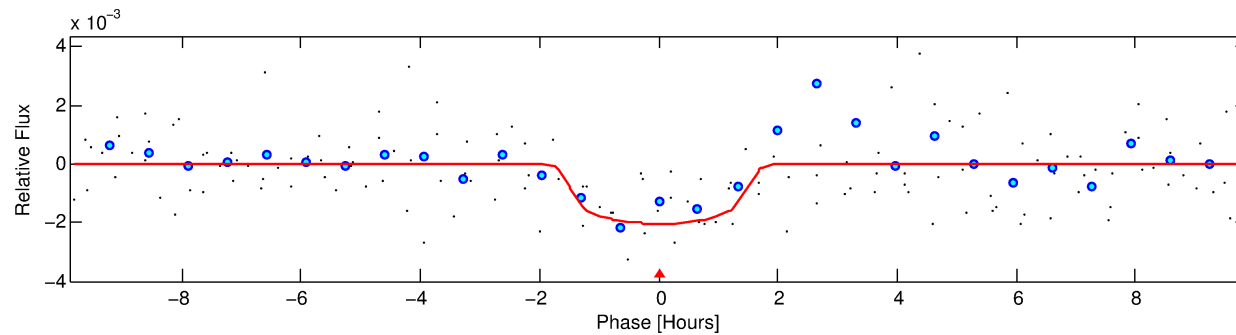
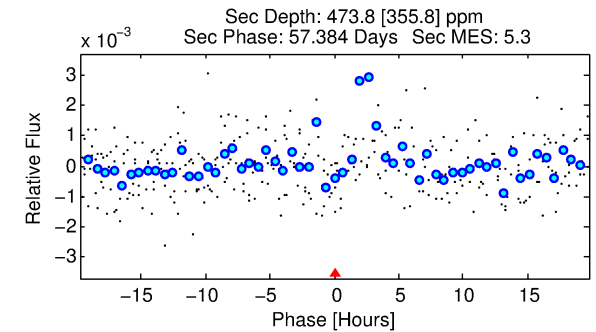
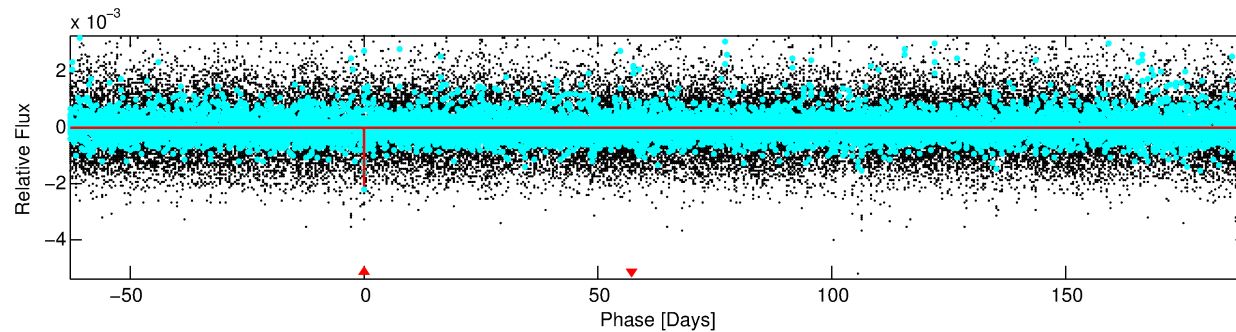
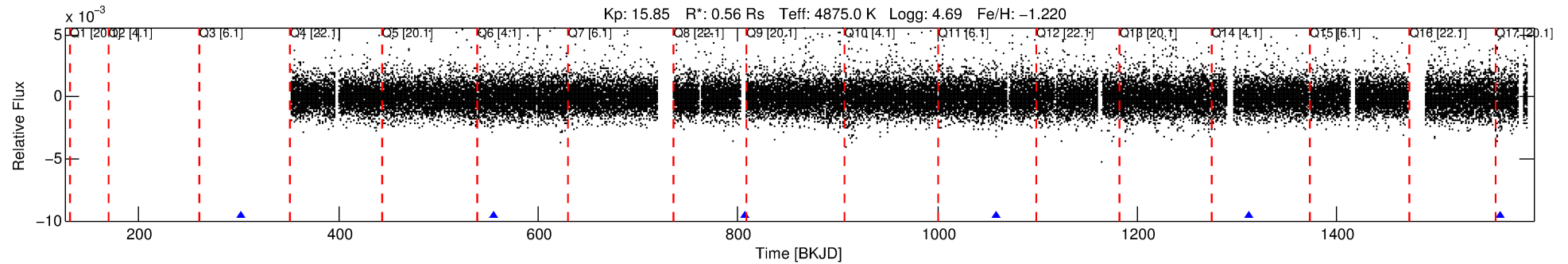
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005983410-01

No Significant Match Found

DV One-Page Summary

KIC: 5983410 Candidate: 1 of 1 Period: 252.225 d



DV Fit Results:

Period = 252.22536 [0.00446] d
Epoch = 302.6035 [0.0171] BKJD
Rp/R* = 0.0434 [0.0555]
a/R* = 478.00 [2422.89]
b = 0.65 [4.60]
Seff = 0.38 [0.06]
Teq = 200 [9] K
Rp = 2.65 [3.39] Re
a = 0.6449 [0.0372] AU
Ag = 15456.33 [41234.24] [0.37σ]
Teffp = 3452 [2304] K [1.41σ]

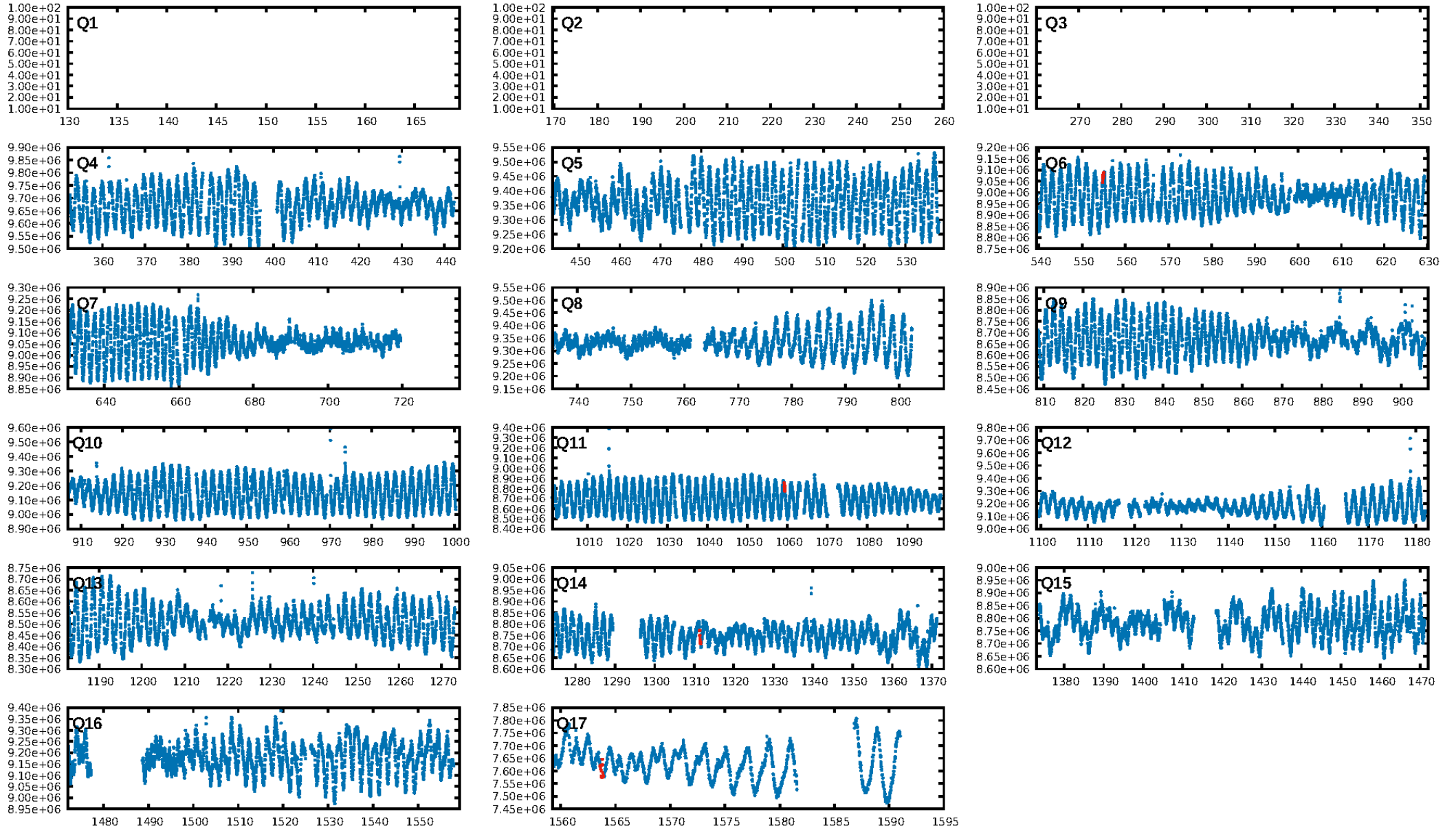
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 83.4%
Bootstrap-pfa: 1.14e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 10.36
Centroid-sig: 15.4%
Centroid-so: 2.685 arcsec [2.15σ]
OotOffset-rm: 1.328 arcsec [2.73σ]
OotOffset-st: 2/1/0/1 [4]
KicOffset-rm: 0.466 arcsec [1.15σ]
KicOffset-st: 2/1/0/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

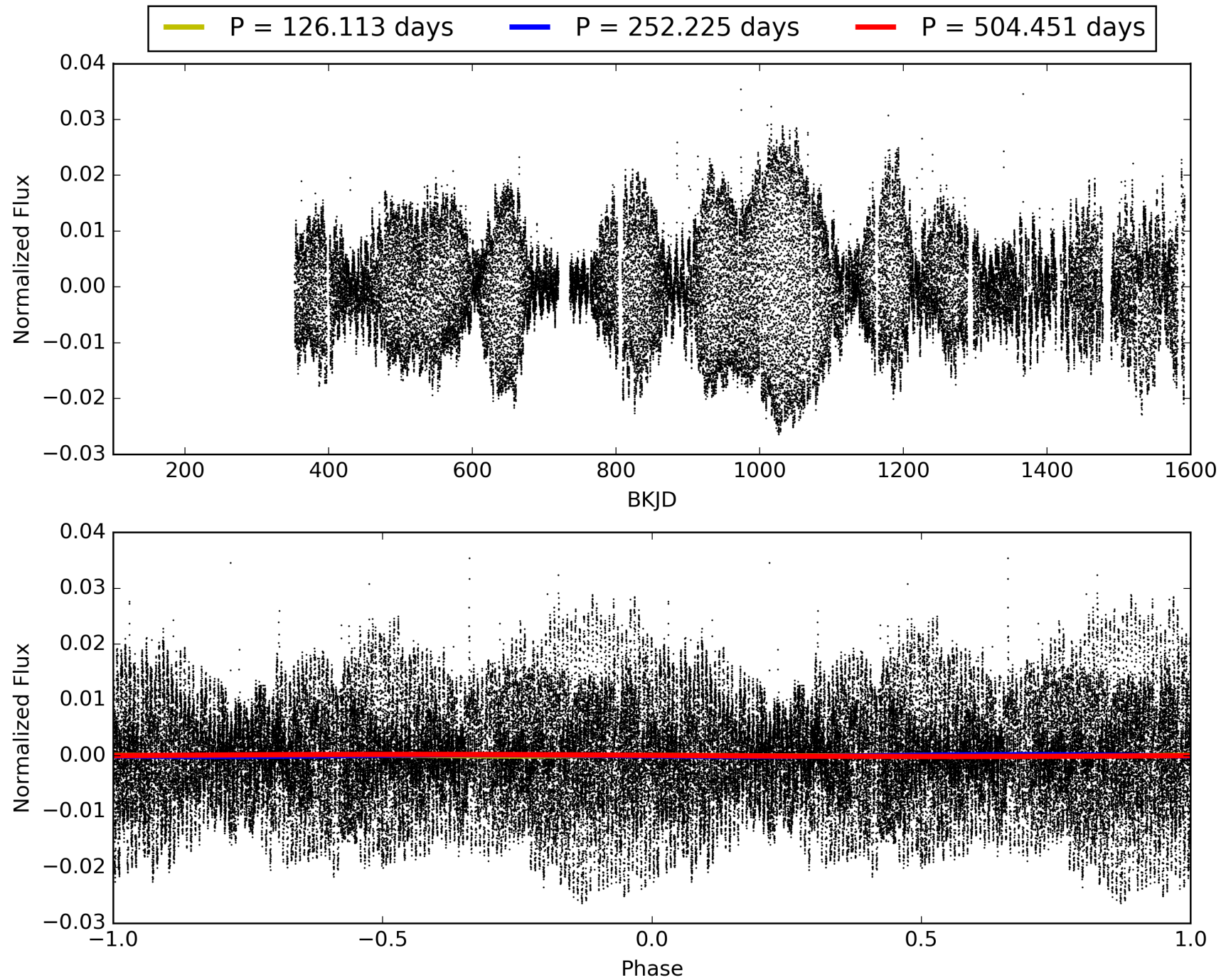
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:45:13 Z

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

TCE 005983410-01, PDC Light Curves

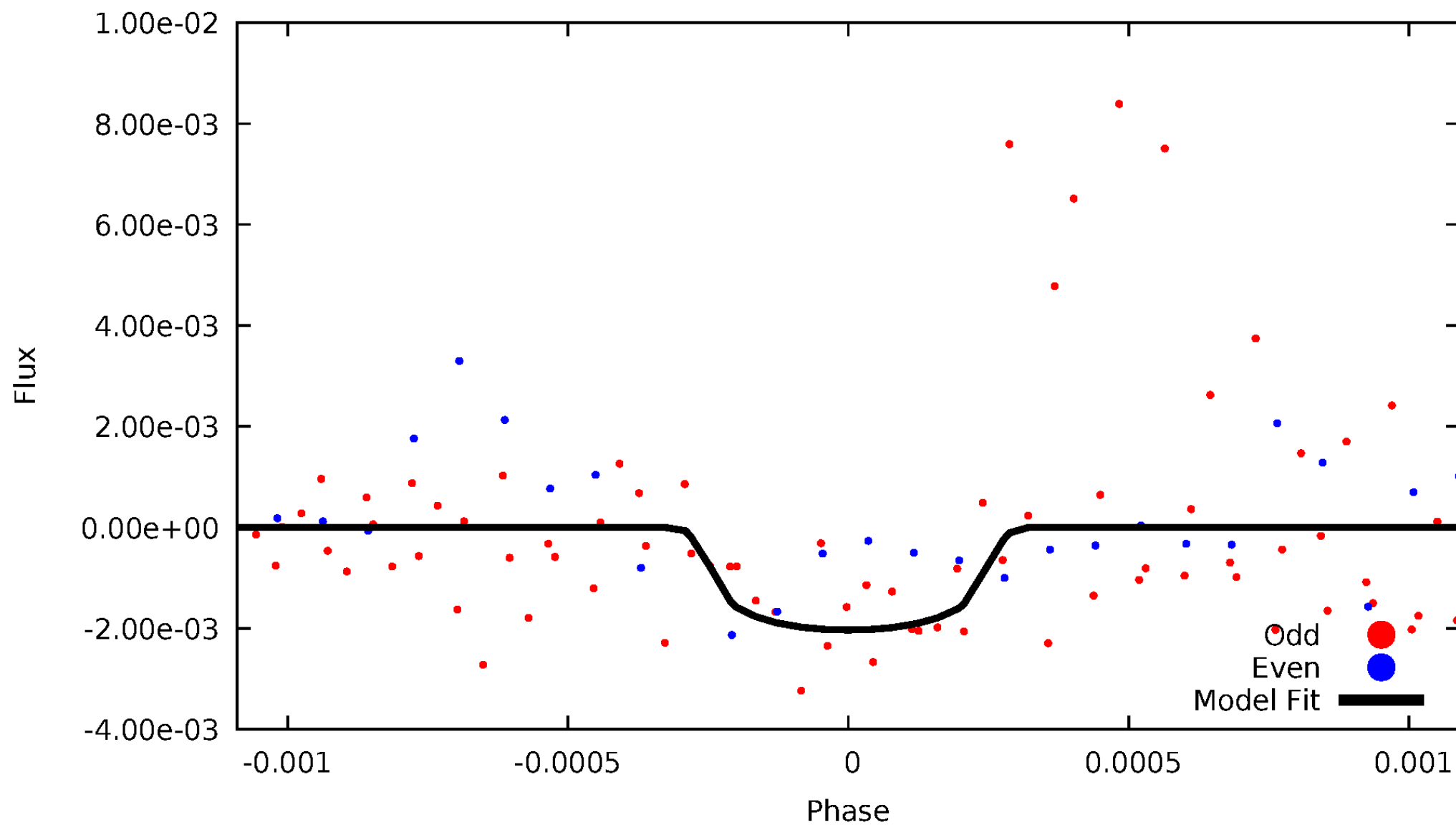


TCE 005983410-01



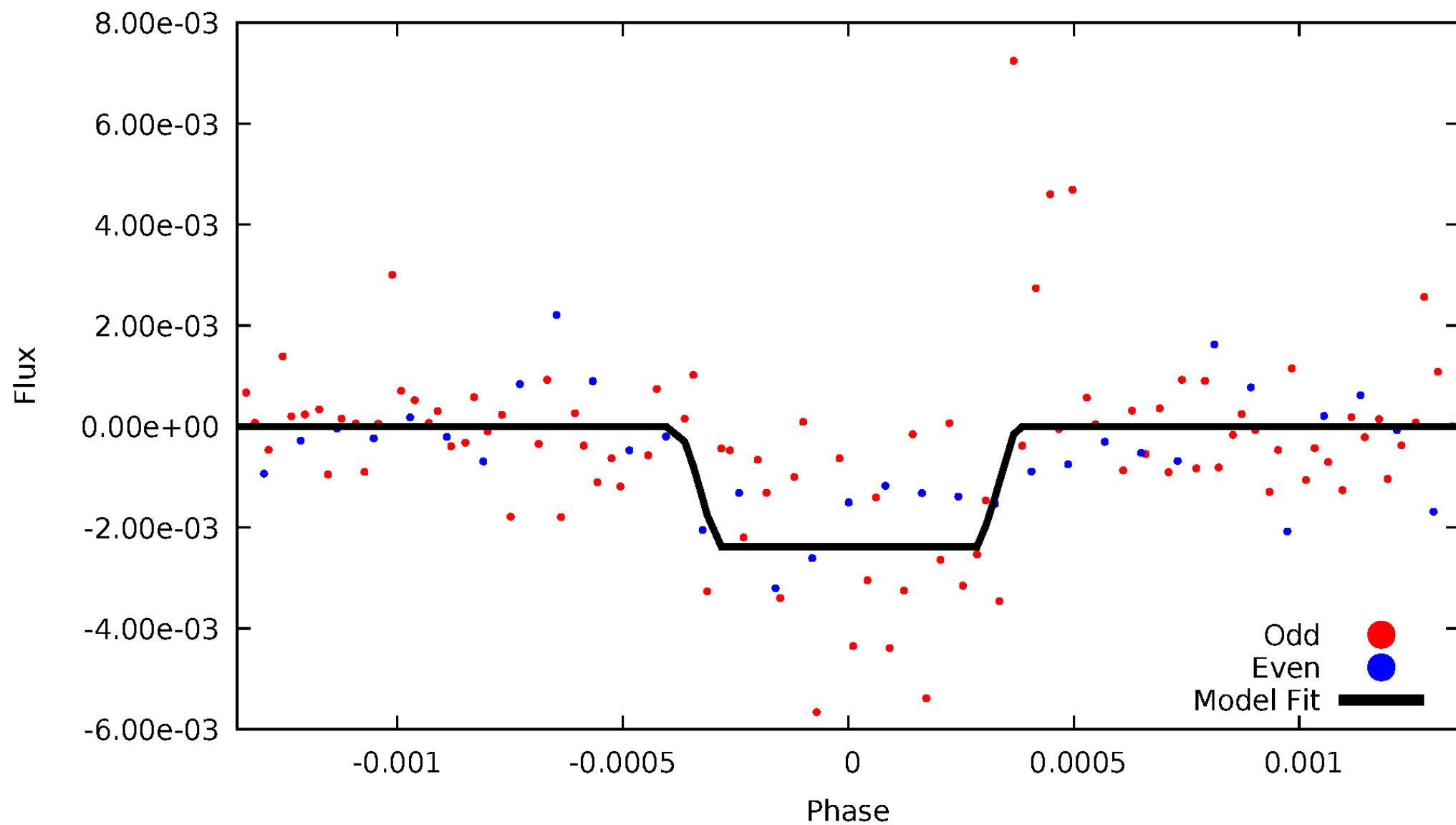
DV Odd/Even

TCE 005983410-01



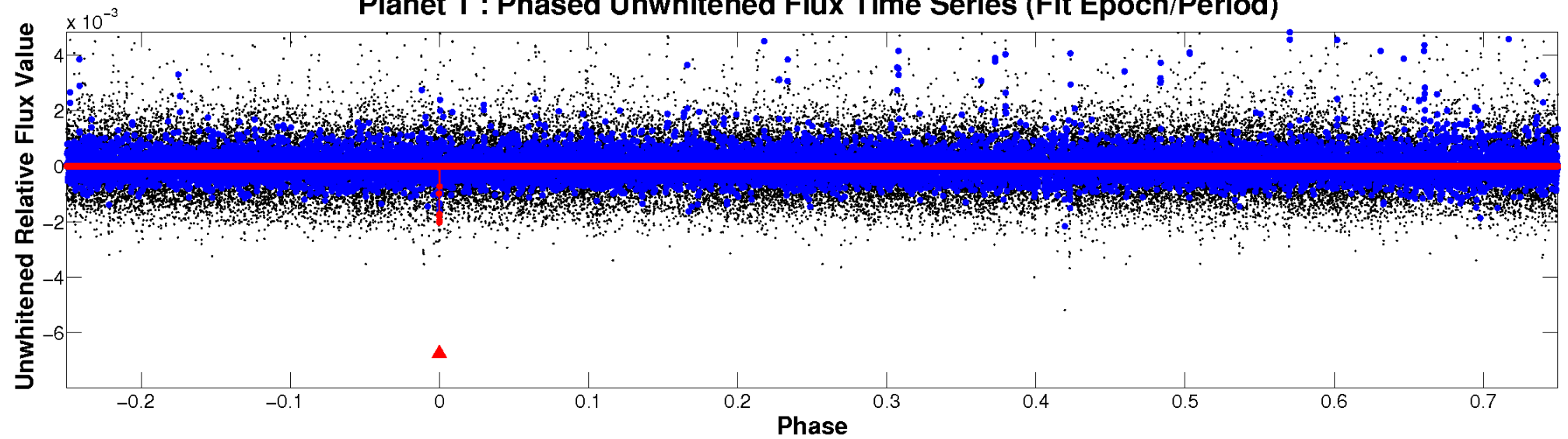
ALT Odd/Even

TCE 005983410-01

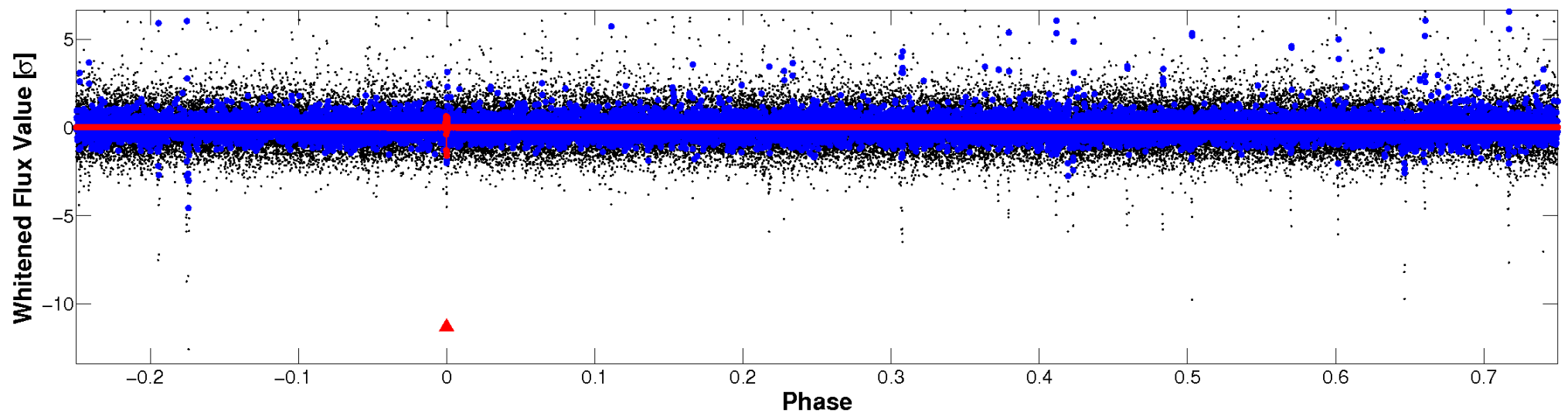


Non-Whitened Vs. Whitened Light Curve

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

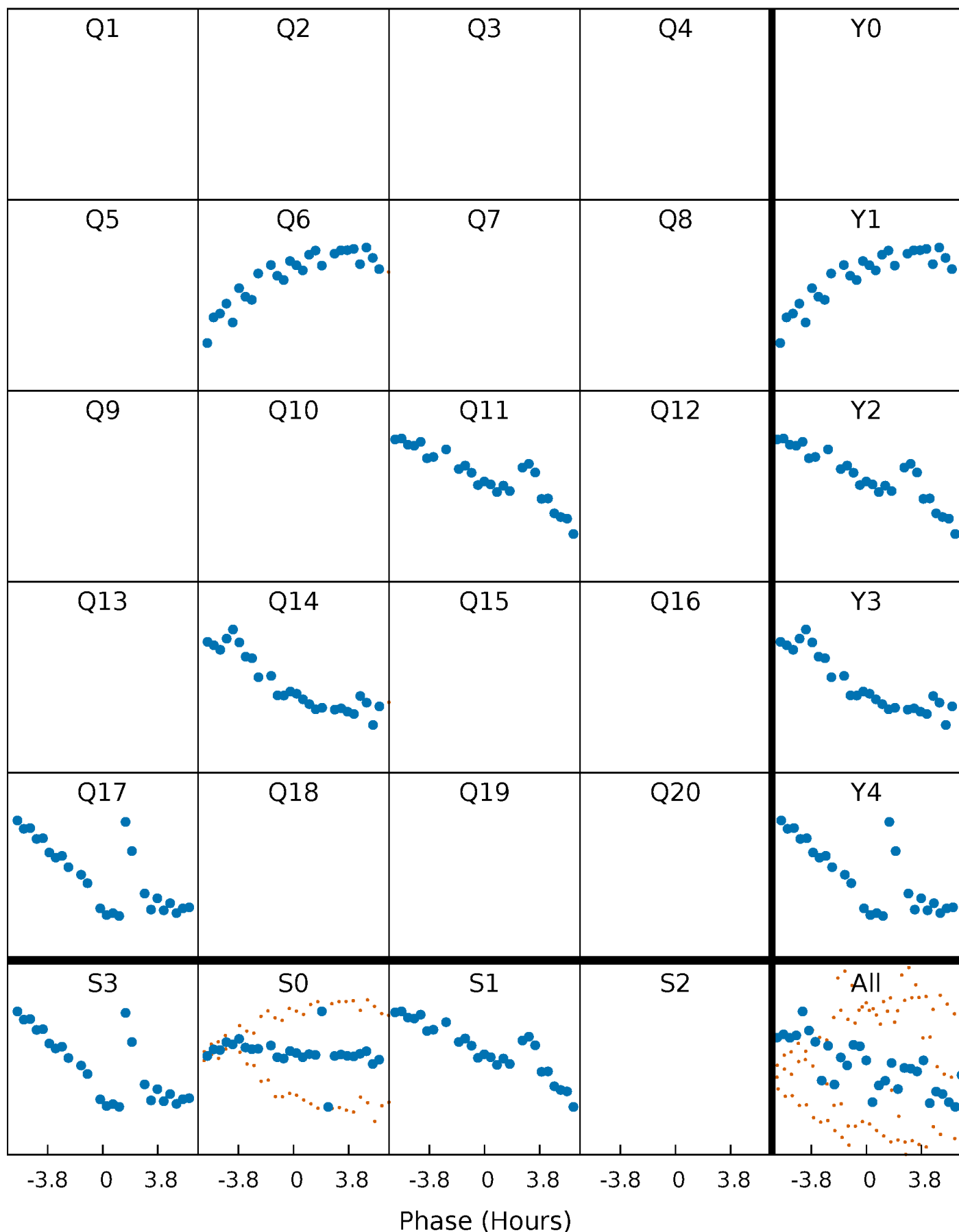


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



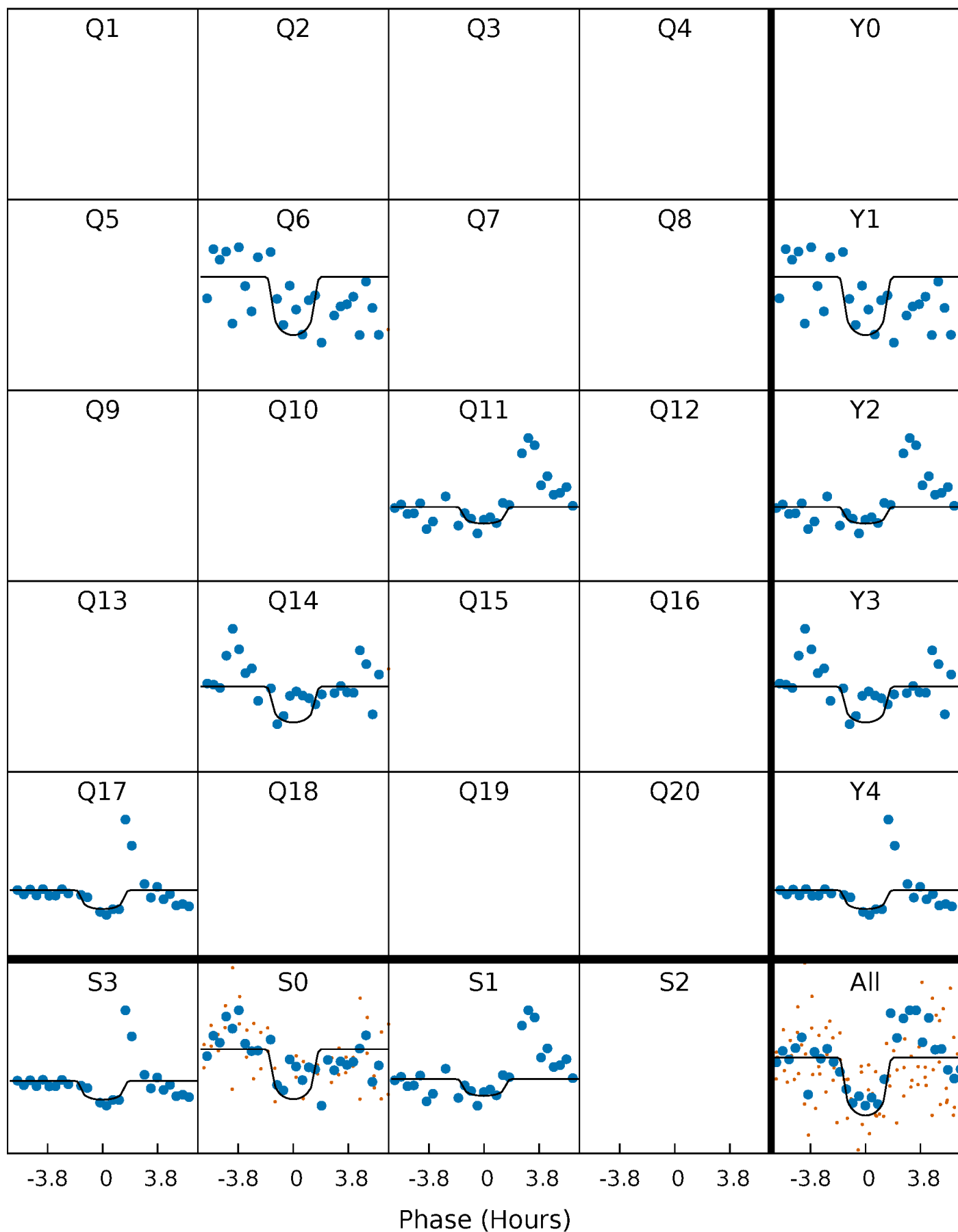
PDC Quarter-Phased Transit Curves

TCE 005983410-01 P=252.225363 Days $T_0=302.603504$ (BKJD)



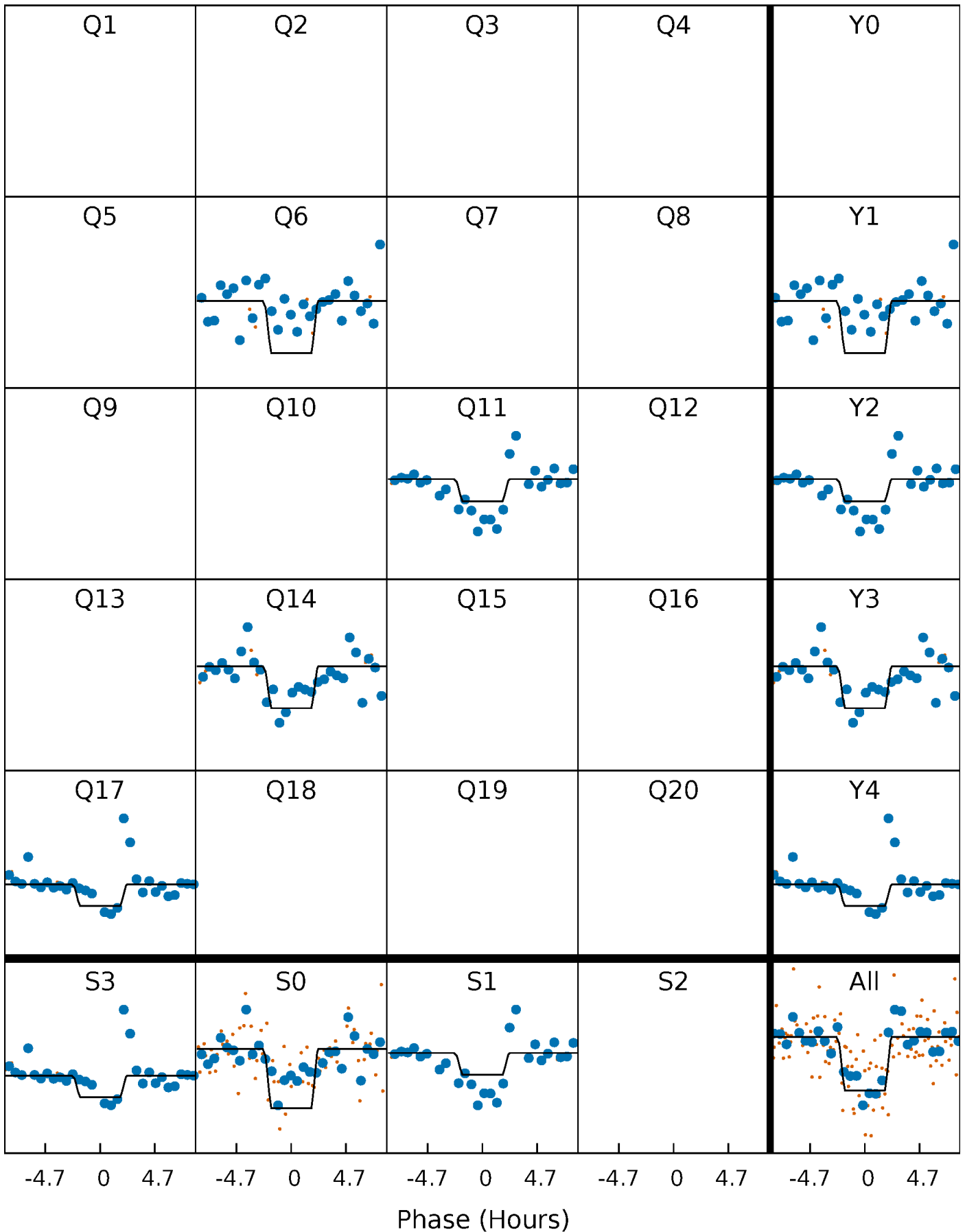
DV Quarter-Phased Transit Curves

TCE 005983410-01 P=252.225363 Days $T_0=302.603504$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

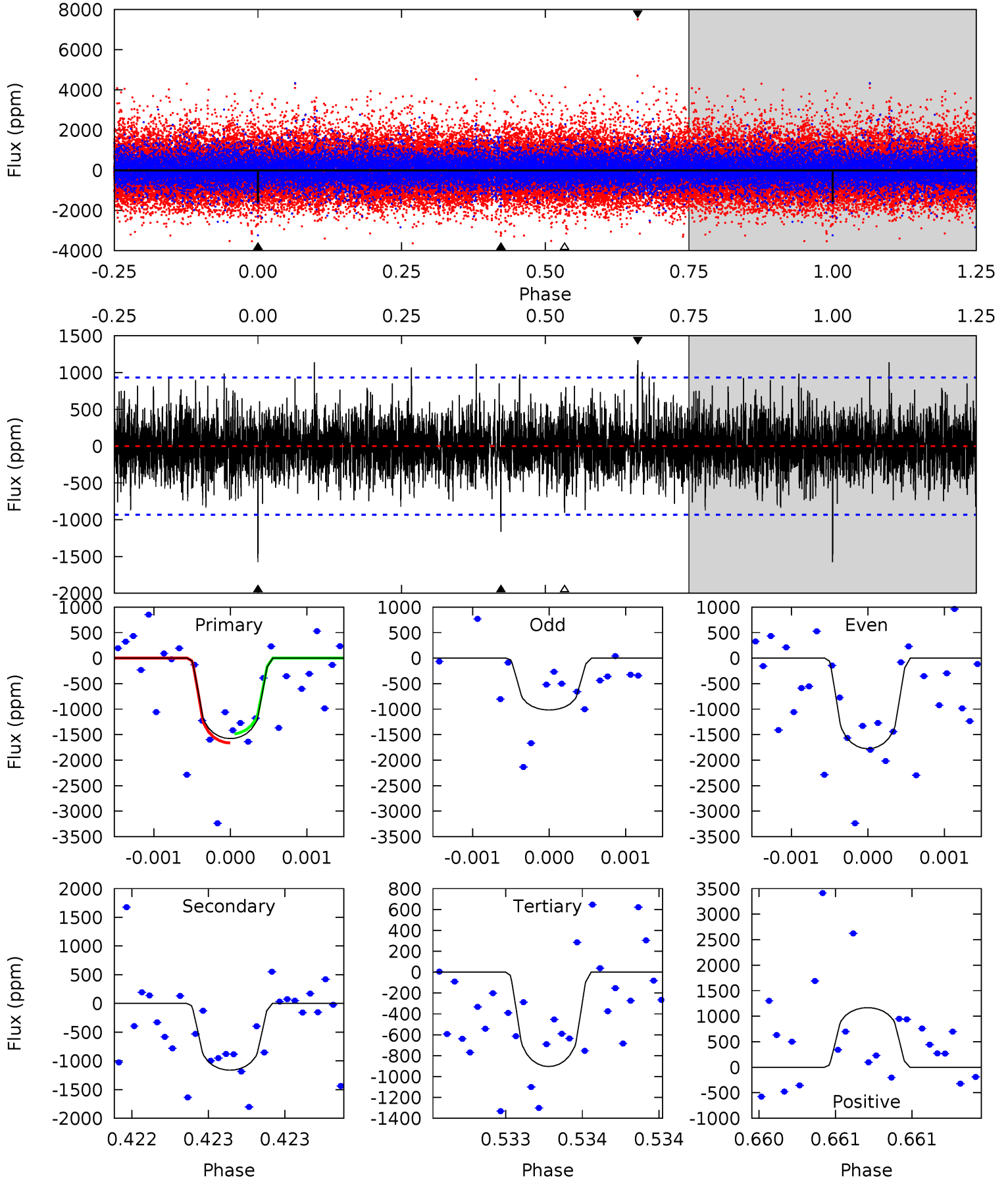
TCE 005983410-01 P=252.217109 Days $T_0=302.624779$ (BKJD)



DV Model-Shift Uniqueness Test

005983410-01, P = 252.225363 Days, E = 302.603504 Days

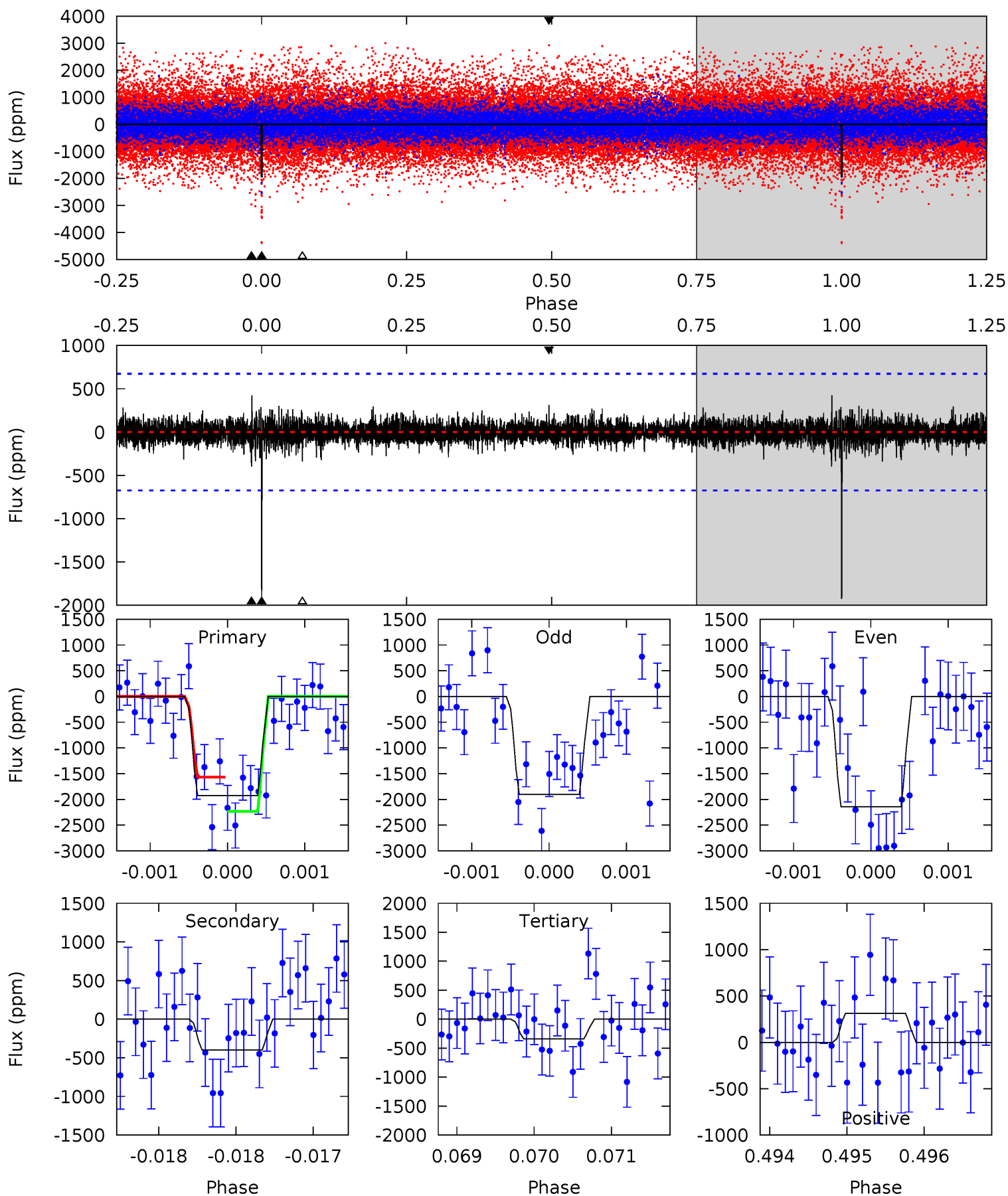
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.38	6.91	5.38	6.94	5.55	3.44	1.55	4.00	2.44	1.53	-0.03	2.00	1.00	0.43	0.52



Alt Model-Shift Uniqueness Test

005983410-01, P = 252.217109 Days, E = 302.624779 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	3.26	2.78	2.55	5.51	3.38	0.62	13.0	13.2	0.47	0.70	0.86	1.14	0.18	2.71



Stellar Parameters For KIC 005983410

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4875^{+176}_{-176}	$4.693^{+0.052}_{-0.028}$	$-1.220^{+0.300}_{-0.300}$	$0.559^{+0.035}_{-0.035}$	$0.563^{+0.041}_{-0.024}$	$4.532^{+0.889}_{-0.510}$
	+4%/-4%	+1%/-1%	+25%/-25%	+6%/-6%	+7%/-4%	+20%/-11%
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 005983410-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1162 ± 168	$3.44^{+3.13}_{-2.25}$	278^{+11}_{-11}	3998^{+2223}_{-763}	$22367^{+176708}_{-16126}$
Alt.	-398 ± 122	$3.71^{+3.00}_{-2.30}$	278^{+10}_{-11}	3278^{+1334}_{-534}	6703^{+38959}_{-4833}

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 $A_{obs} \gg 1.0$

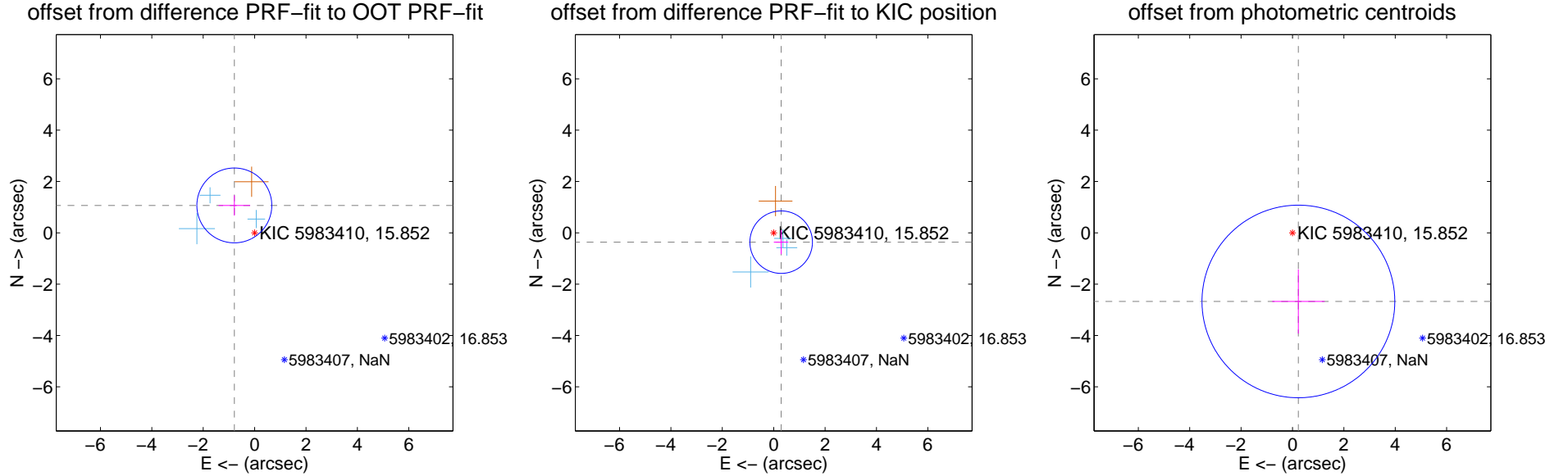
DV Centroid Data

Supplemental centroid analysis for 005983410-01. Kepler magnitude: 15.85. Transit SNR 6.94

There are 3 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 3.04 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	1.328 ± 0.486	2.73	0.789 ± 0.616	1.068 ± 0.398
PRF-fit source offset from KIC position	0.466 ± 0.406	1.15	-0.291 ± 0.285	-0.364 ± 0.467
photometric centroid source offset	2.69 ± 1.25	2.15	-0.23 ± 1.02	-2.68 ± 1.25

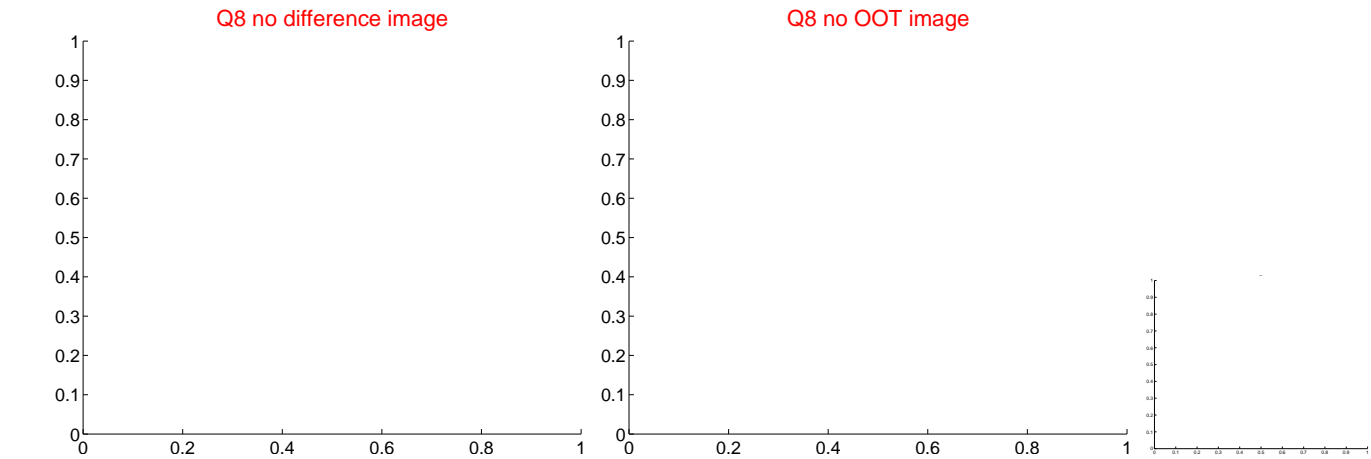
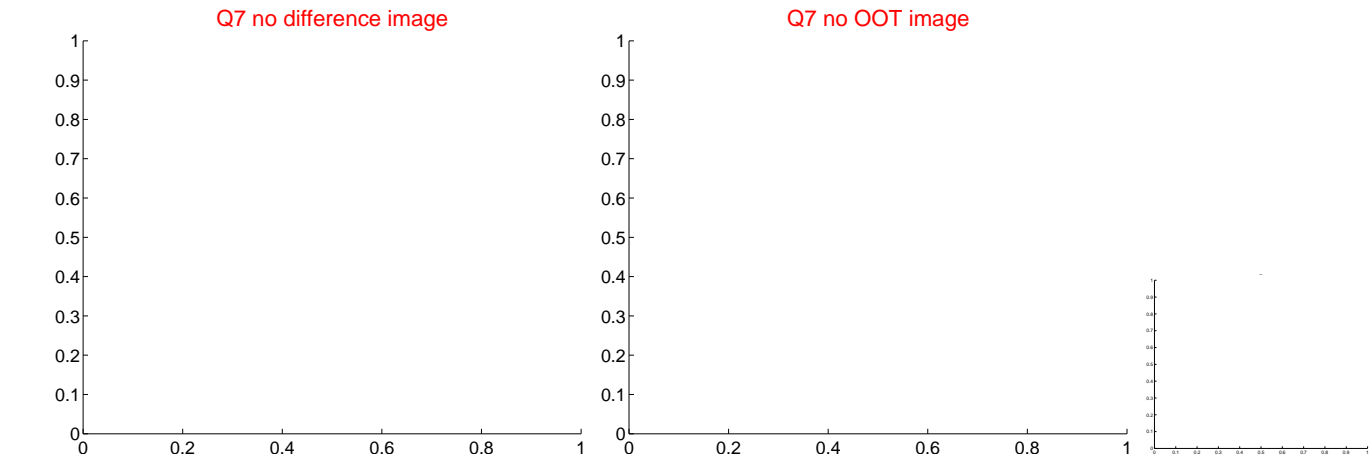
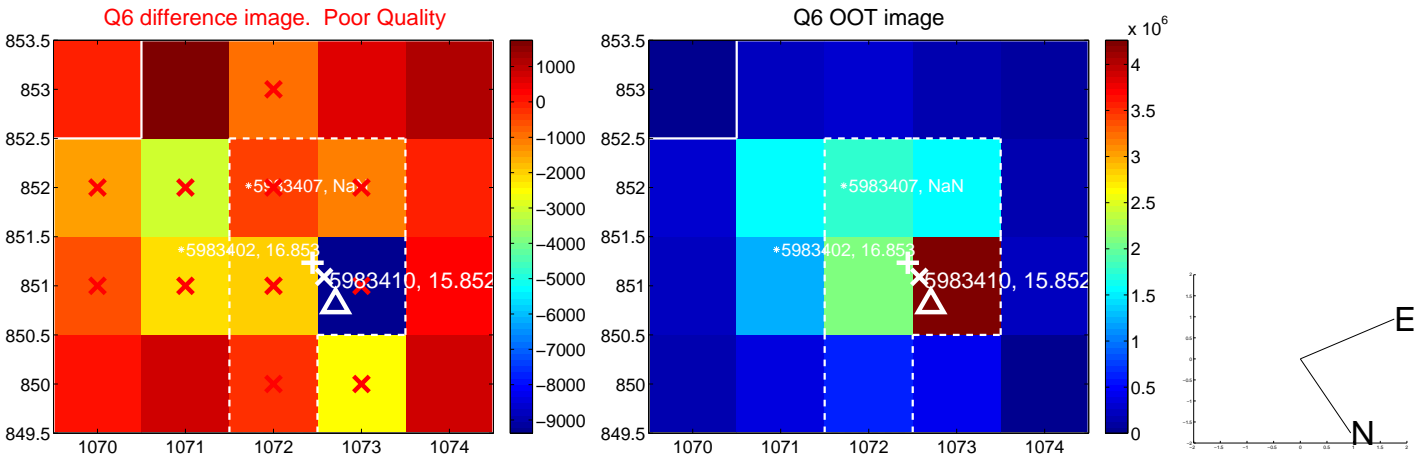
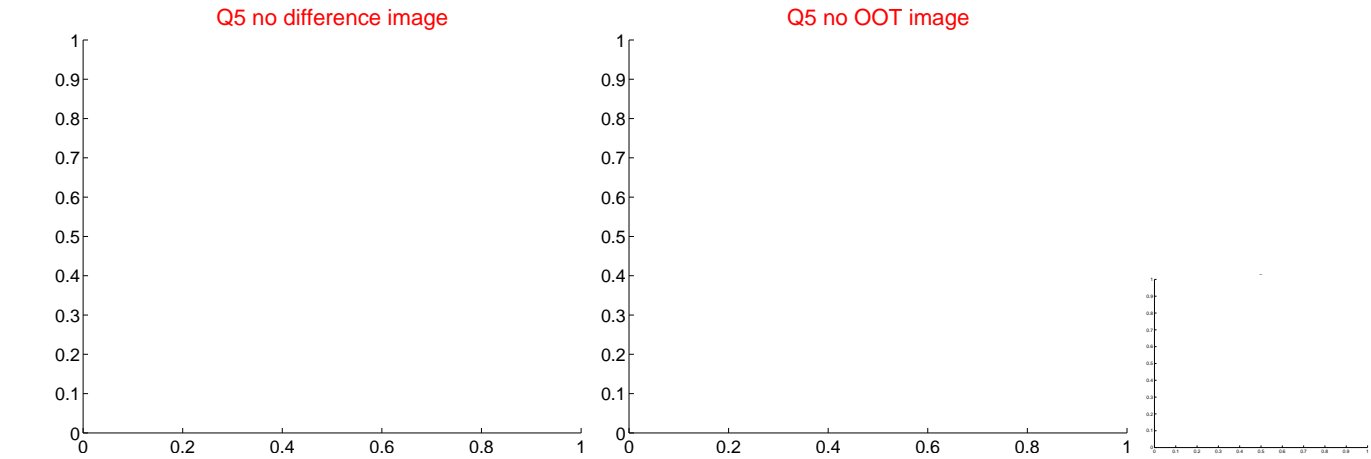


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



Q9 no OOT image



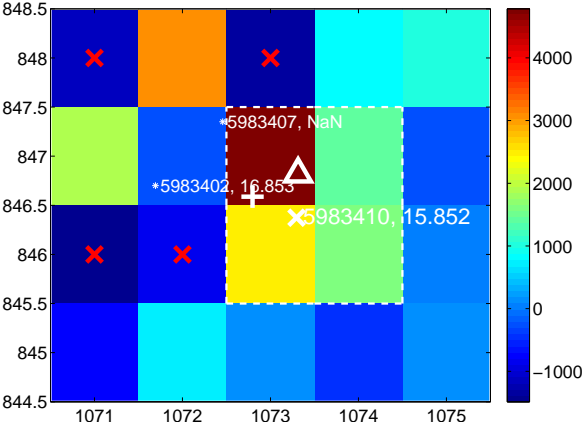
Q10 no difference image



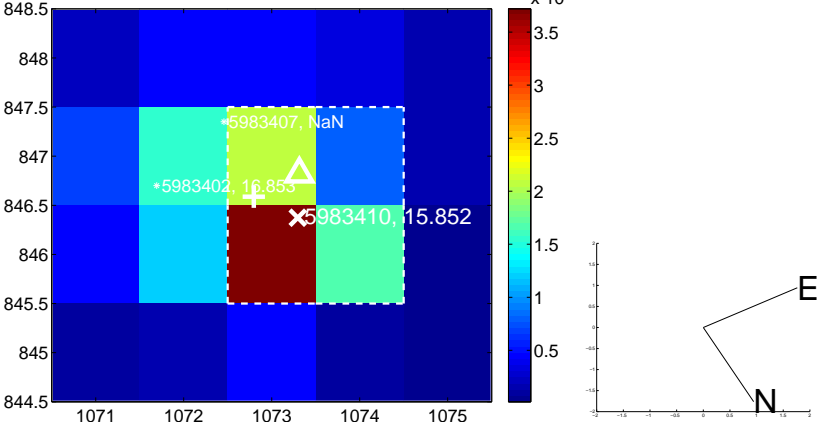
Q10 no OOT image



Q11 difference image



Q11 OOT image



Q12 no difference image



Q12 no OOT image



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

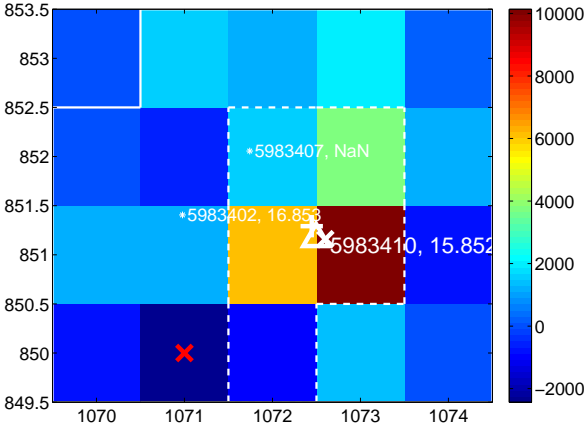
Q13 no difference image



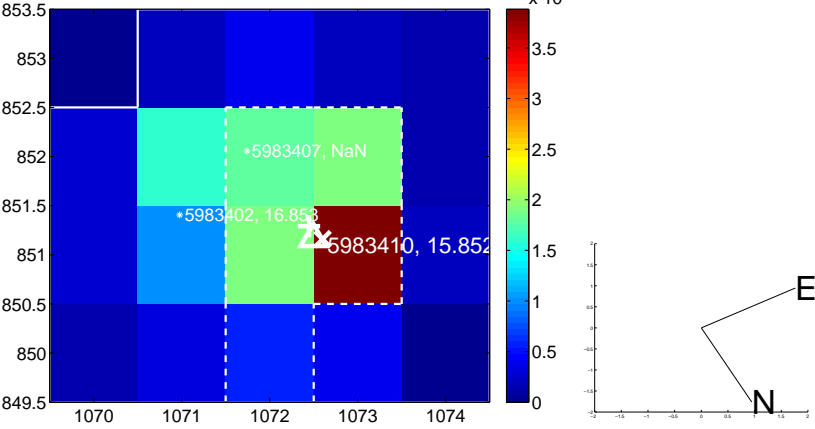
Q13 no OOT image



Q14 difference image



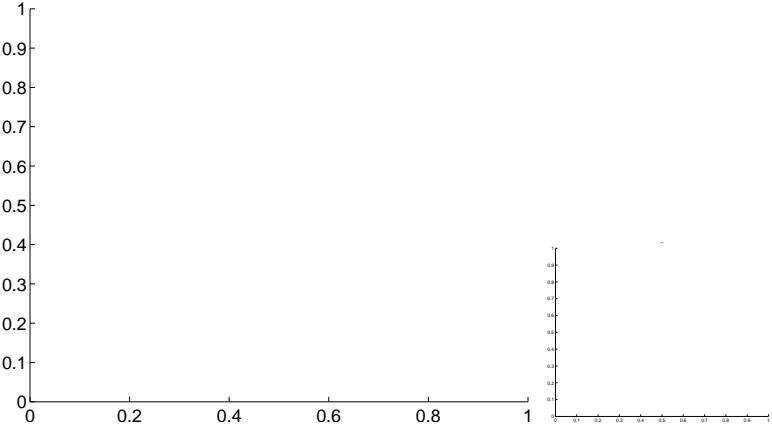
Q14 OOT image



Q15 no difference image



Q15 no OOT image



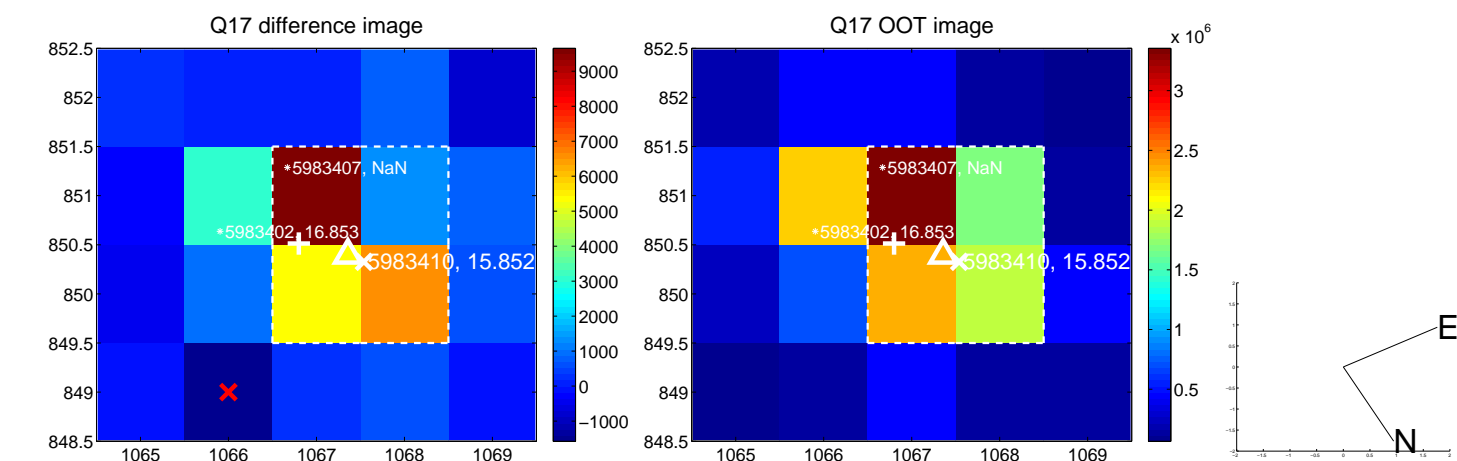
Q16 no difference image



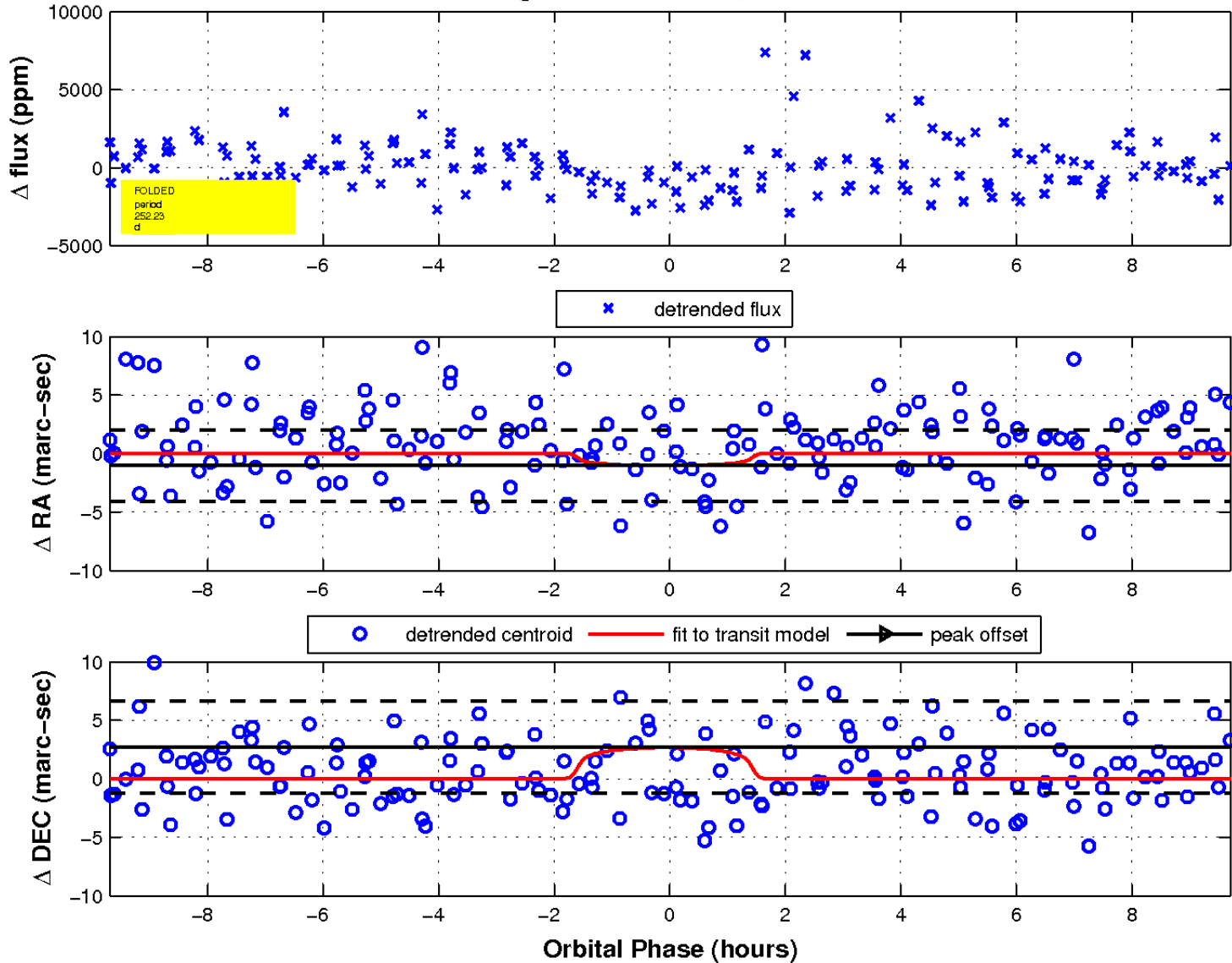
Q16 no OOT image



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

