

KIC 005963604

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})
005963604-01	OBS	No	463.233695	311.563839	572.1	17.402	8.0	7.7	0.96	5817	2.40	0.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005963604-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

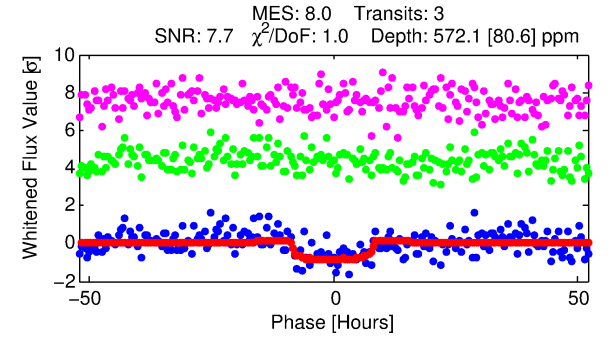
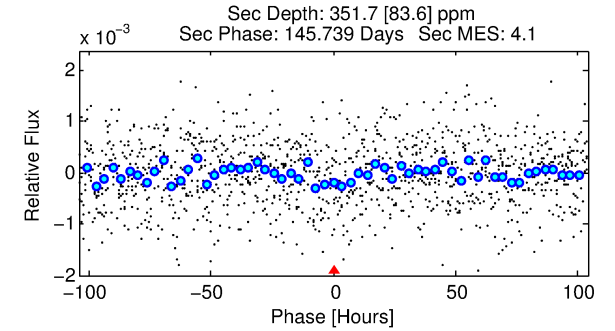
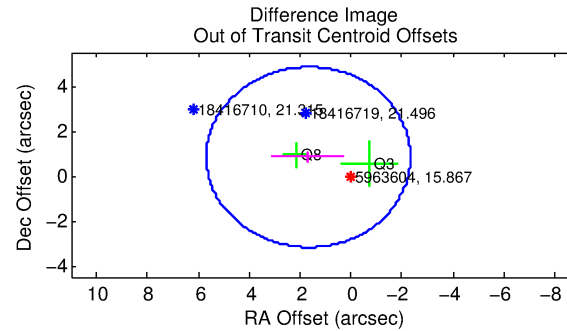
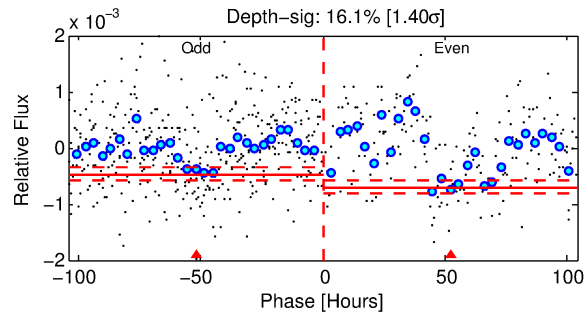
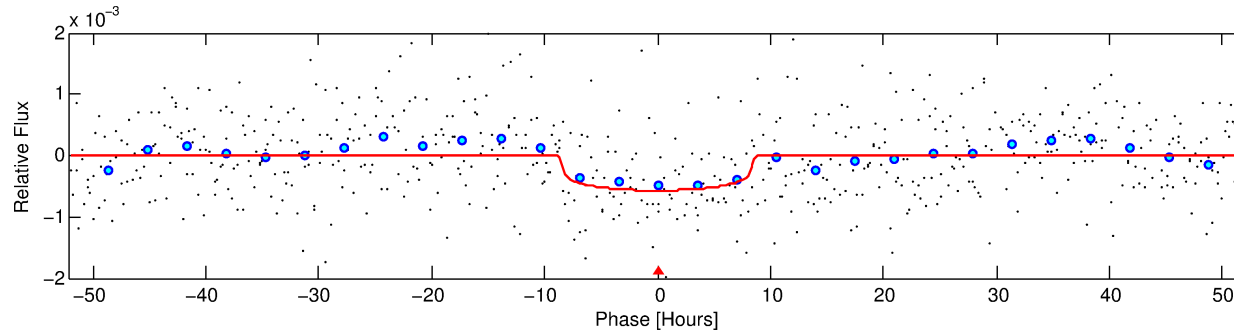
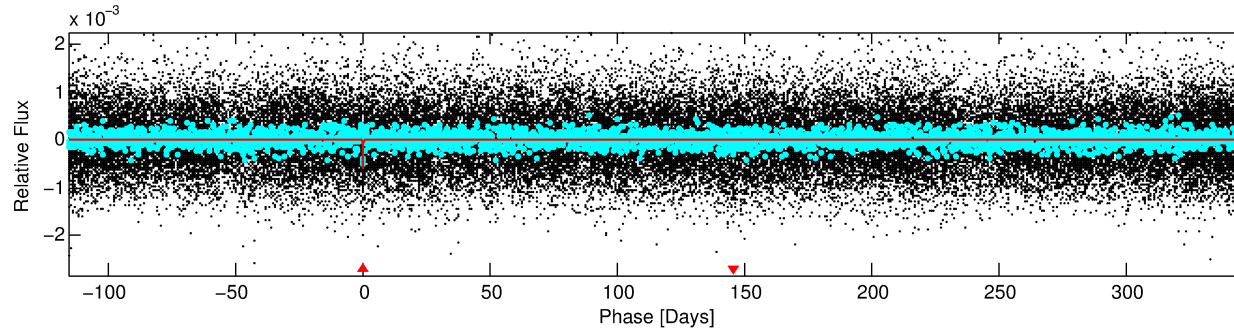
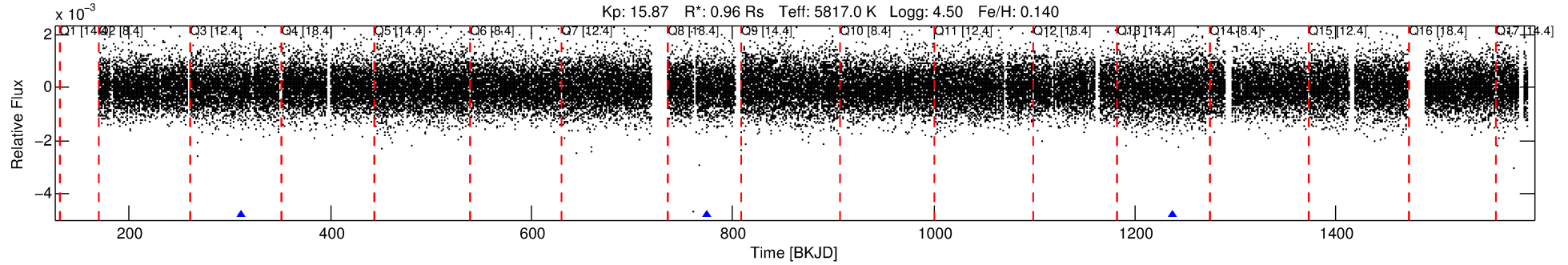
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005963604-01

No Significant Match Found

DV One-Page Summary

KIC: 5963604 Candidate: 1 of 1 Period: 463.234 d



DV Fit Results:

Period = 463.23370 [0.02362] d
Epoch = 311.5638 [0.0308] BKJD
Rp/R* = 0.0228 [0.0152]
a/R* = 167.13 [483.44]
b = 0.61 [3.01]
Seff = 0.67 [0.27]
Teq = 230 [23] K
Rp = 2.40 [1.75] Re
a = 1.1940 [0.3058] AU
Ag = 47988.39 [67347.22] [0.71 σ]
Teffp = 5271 [1790] K [2.82 σ]

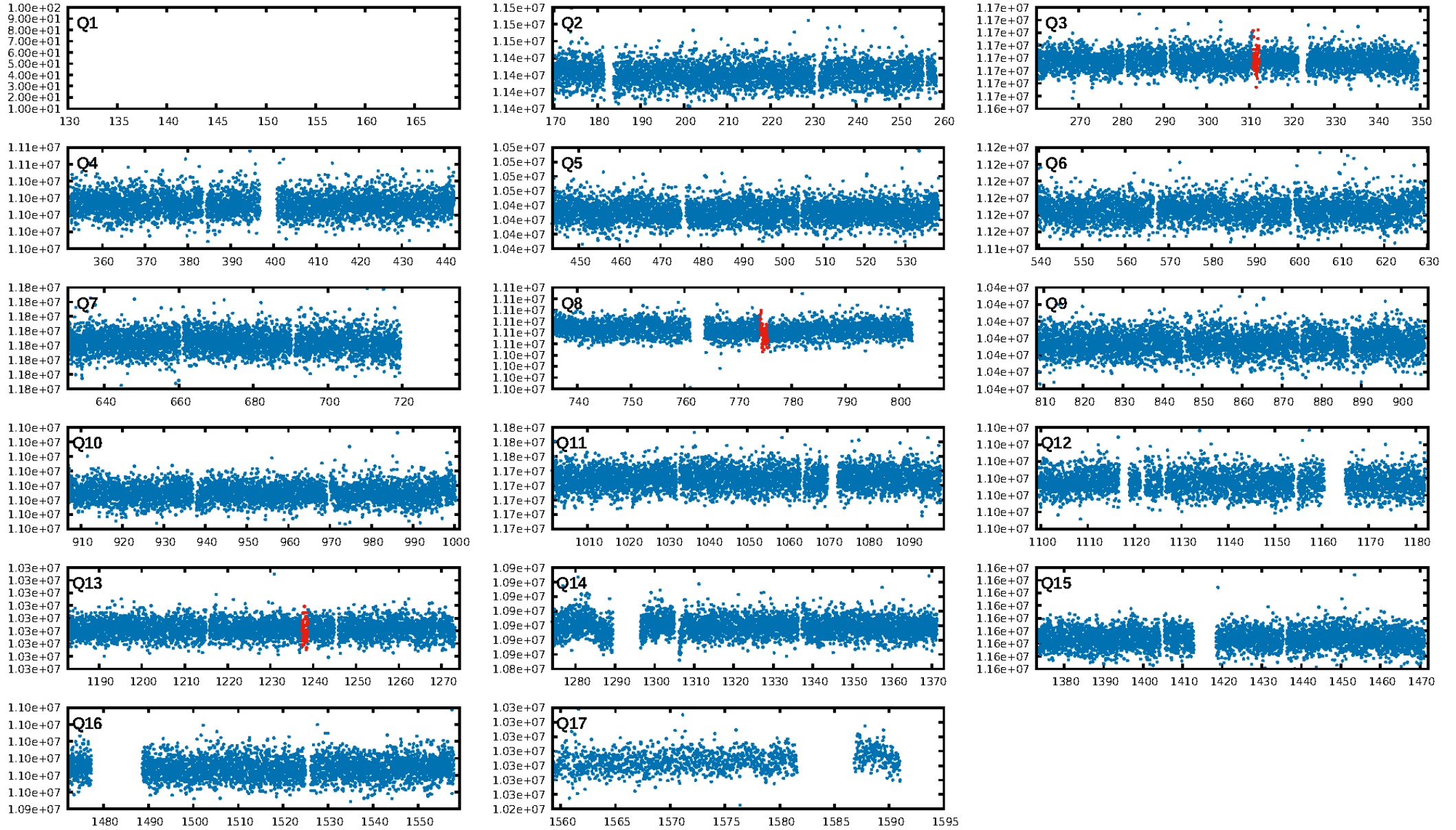
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 27.2%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.47e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.507
Centroid-sig: 41.4%
Centroid-so: 1.150 arcsec [0.71 σ]
OotOffset-rm: 1.868 arcsec [1.40 σ]
KicOffset-rm: 1.902 arcsec [1.45 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

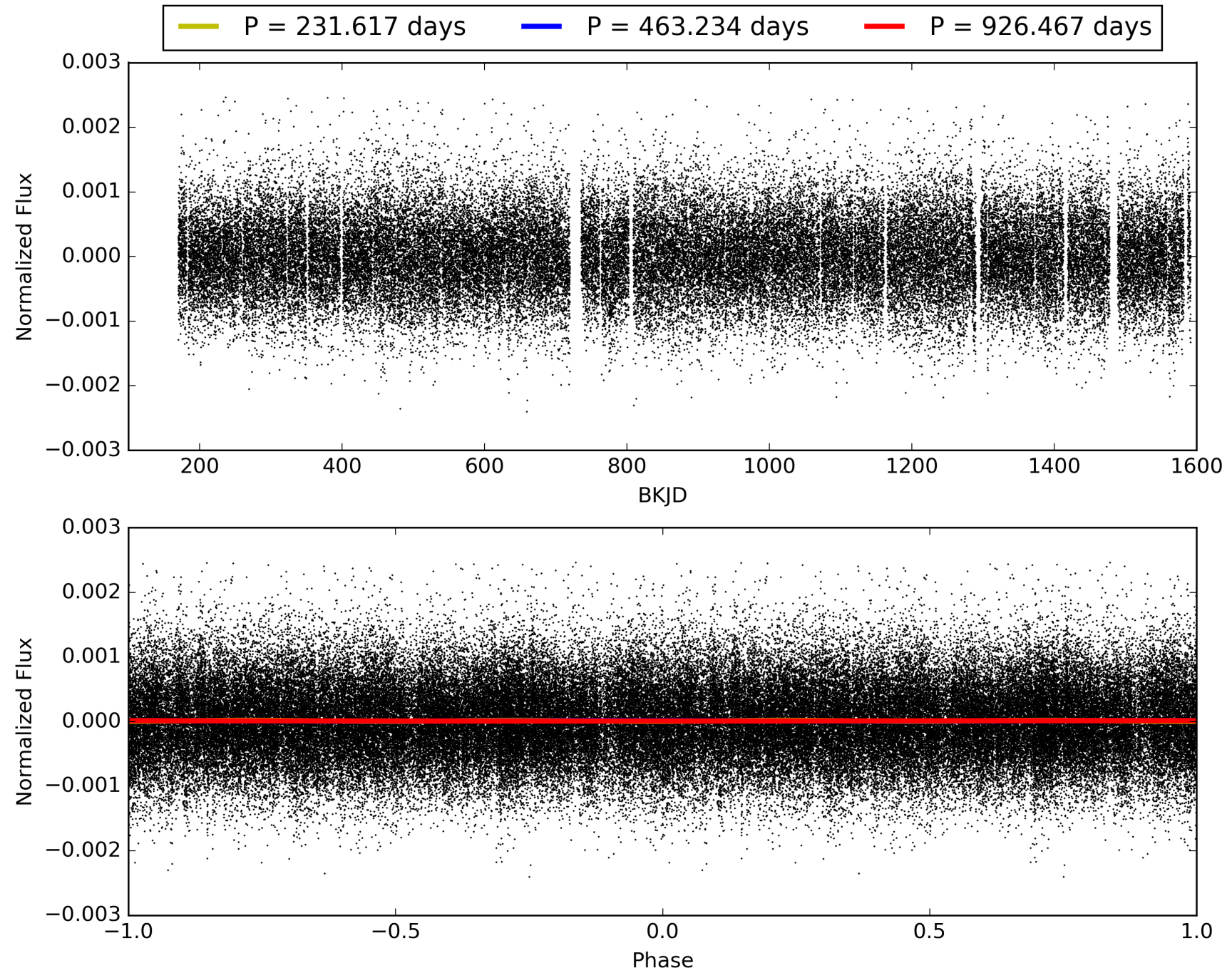
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:10:51 Z

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

TCE 005963604-01, PDC Light Curves

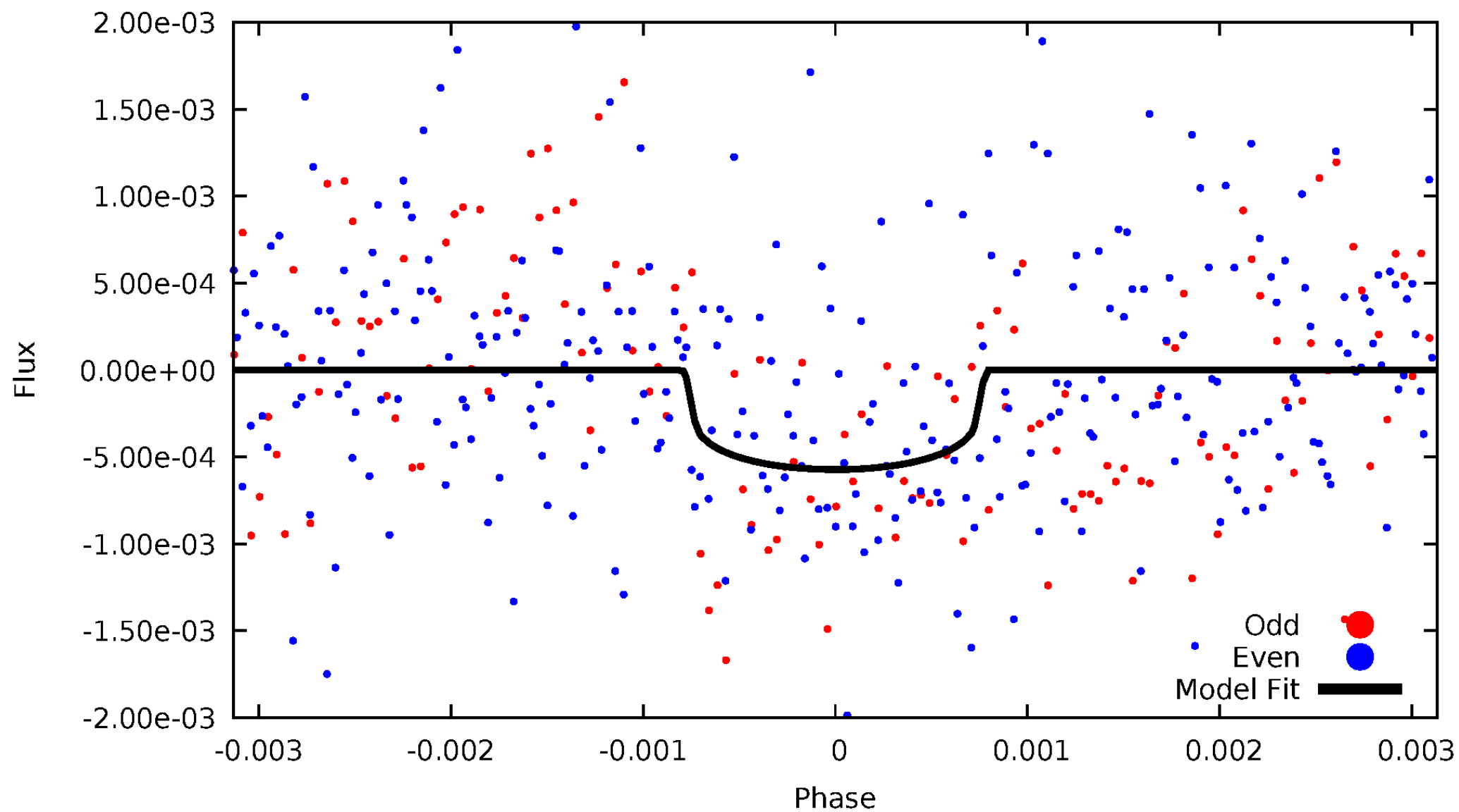


TCE 005963604-01



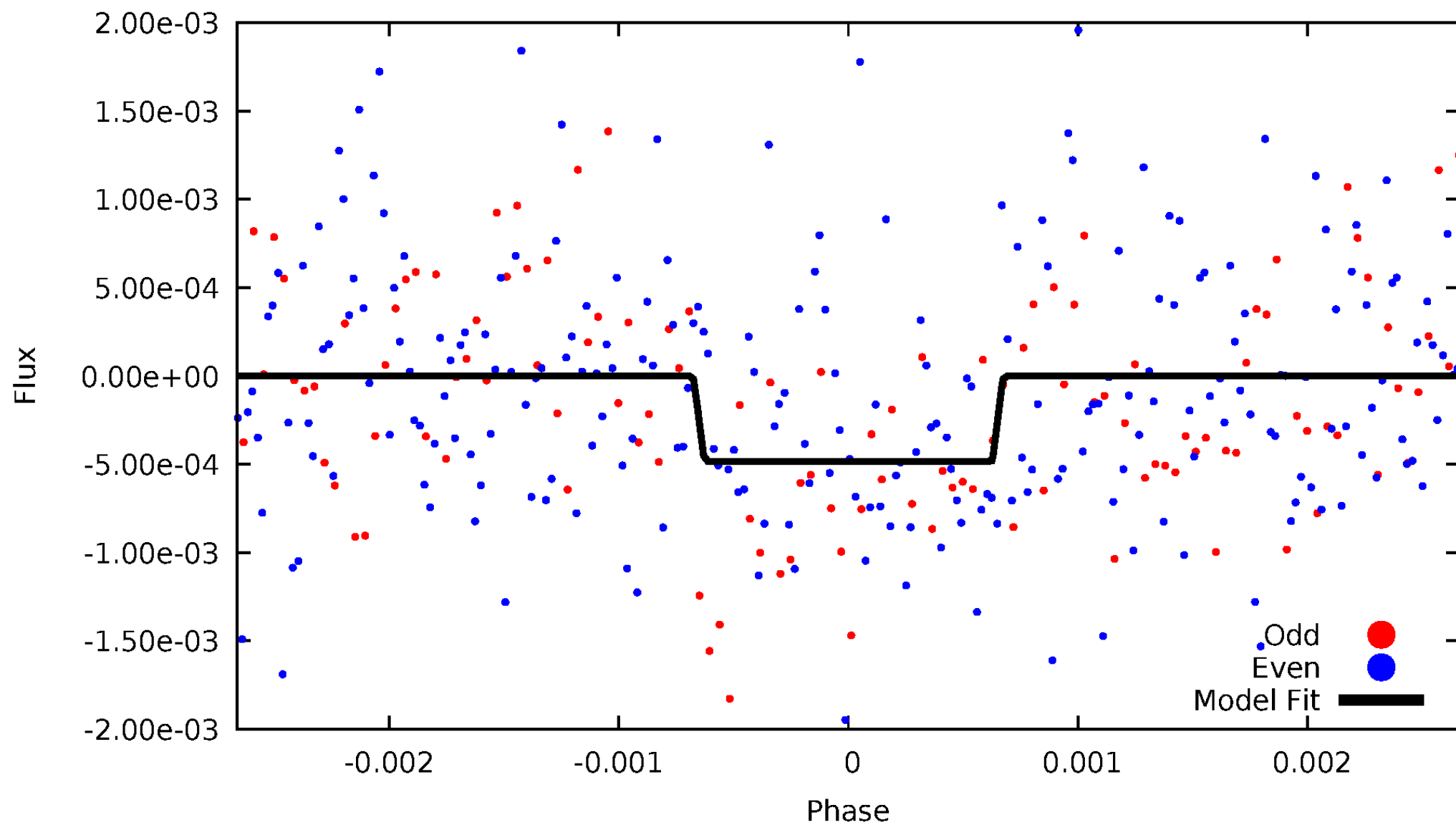
DV Odd/Even

TCE 005963604-01



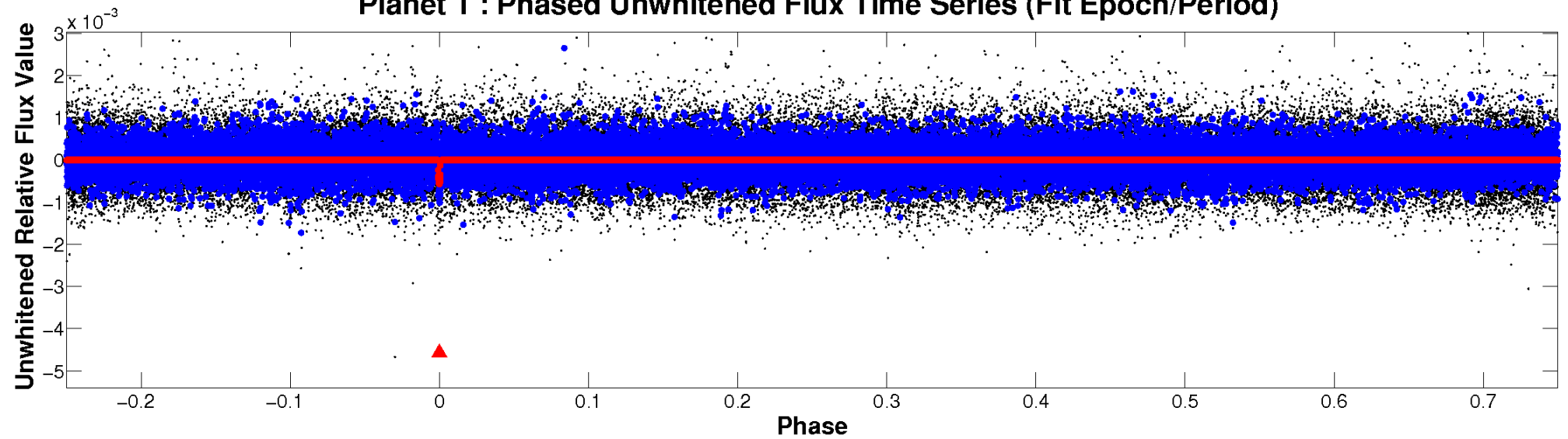
ALT Odd/Even

TCE 005963604-01

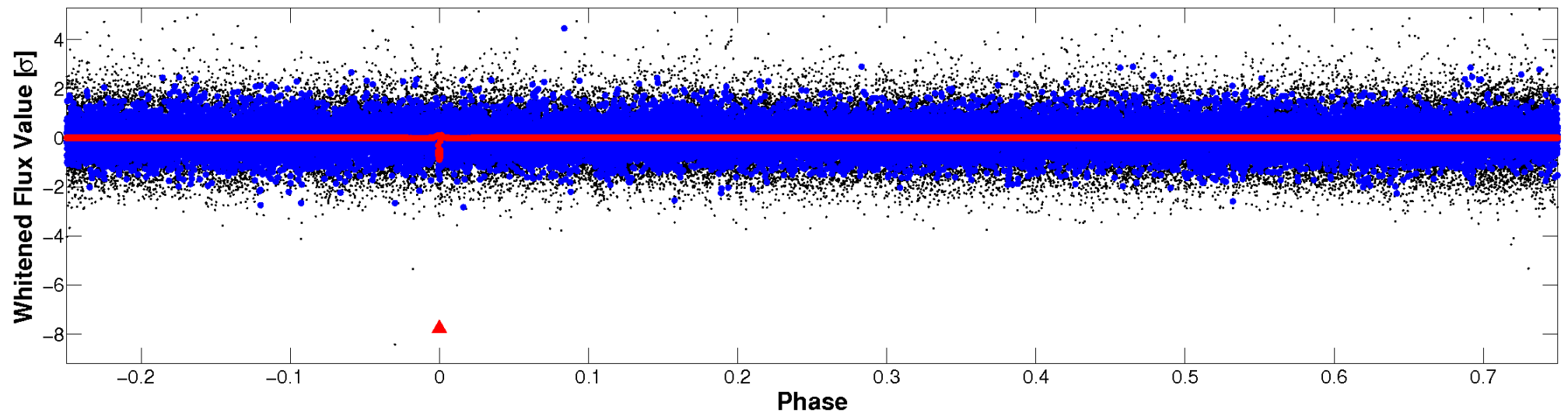


Non-Whitened Vs. Whitened Light Curve

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

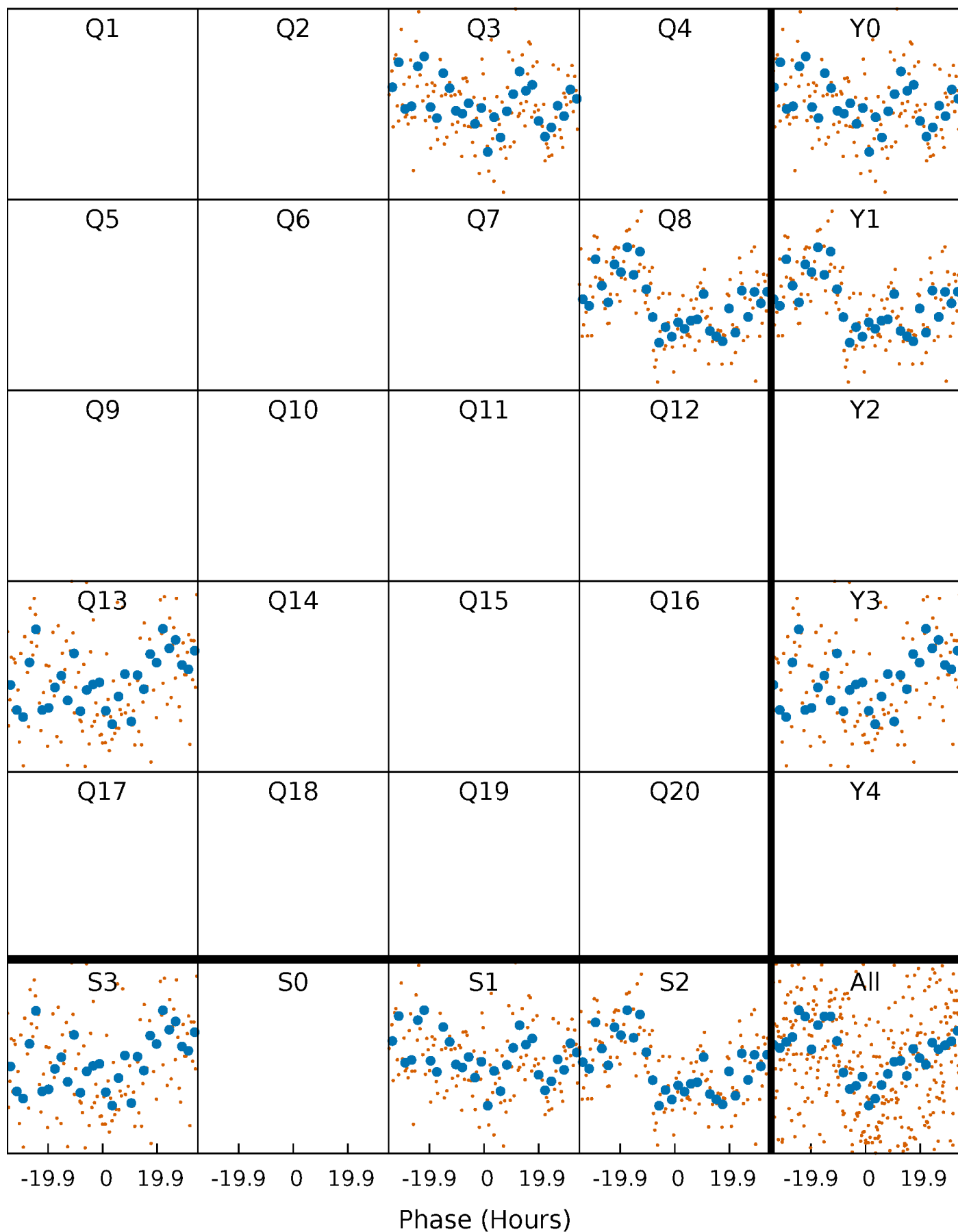


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



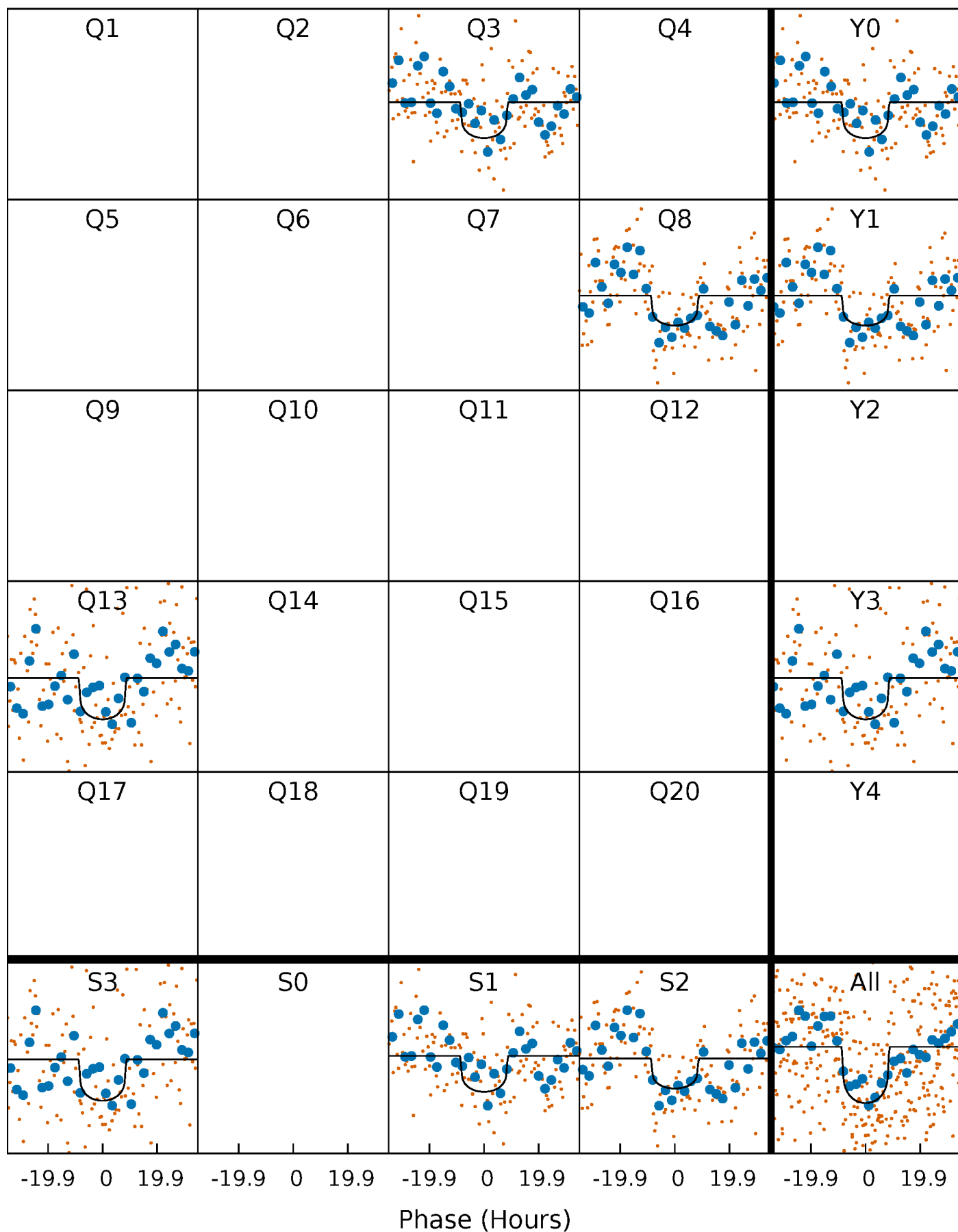
PDC Quarter-Phased Transit Curves

TCE 005963604-01 P=463.233695 Days $T_0=311.563839$ (BKJD)



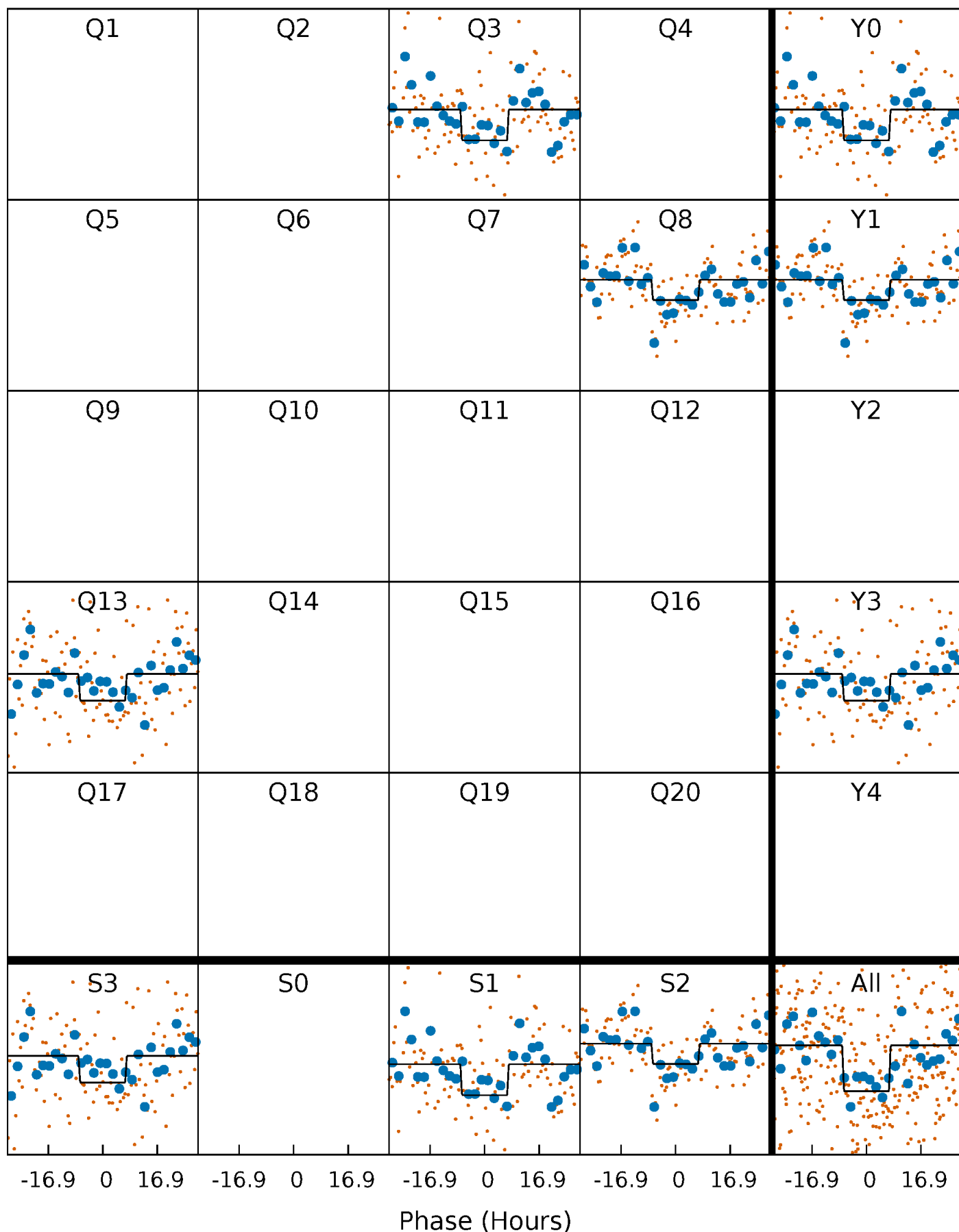
DV Quarter-Phased Transit Curves

TCE 005963604-01 $P=463.233695$ Days $T_0=311.563839$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

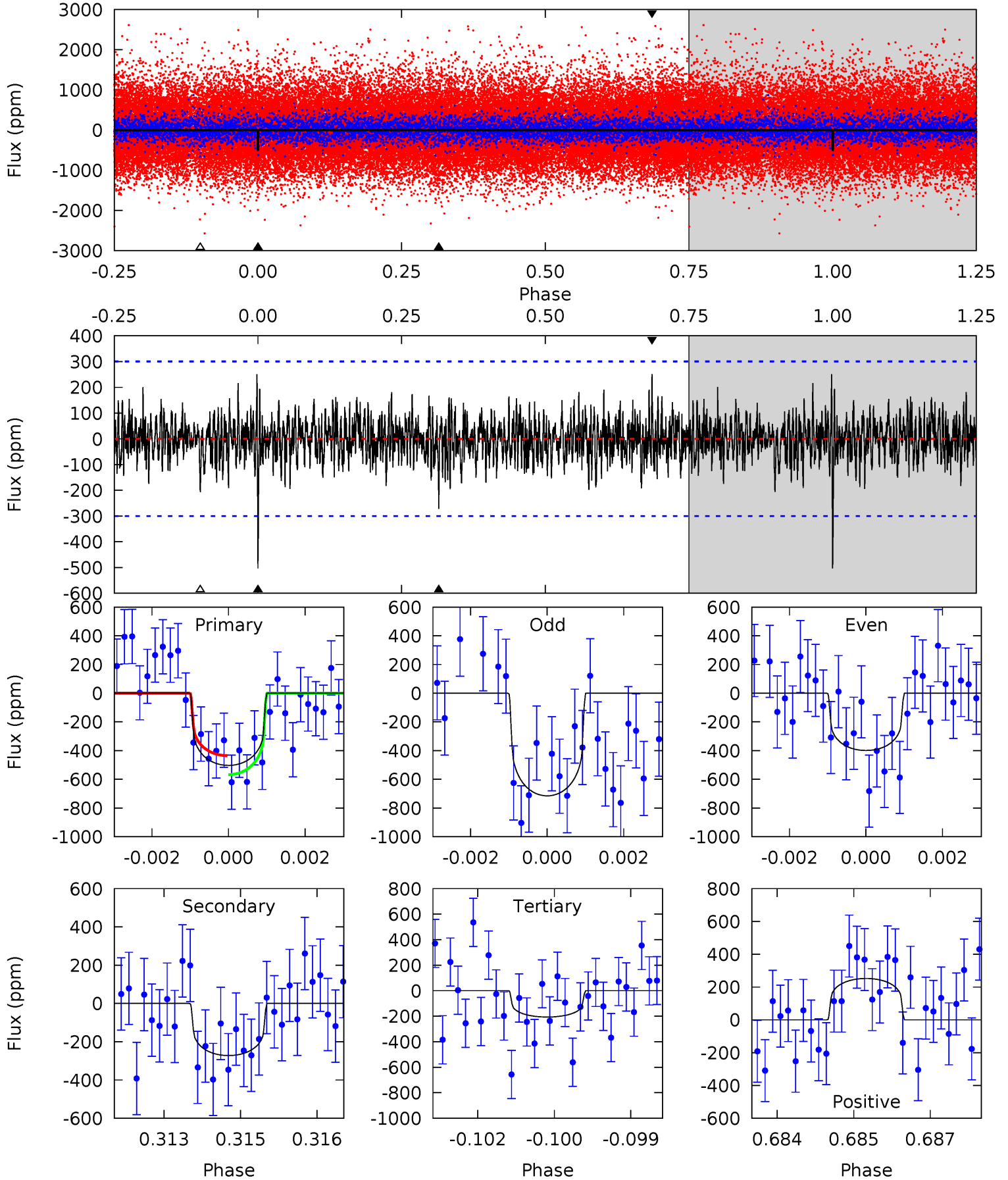
TCE 005963604-01 P=463.174316 Days $T_0=311.598835$ (BKJD)



DV Model-Shift Uniqueness Test

005963604-01, P = 463.233695 Days, E = 311.563839 Days

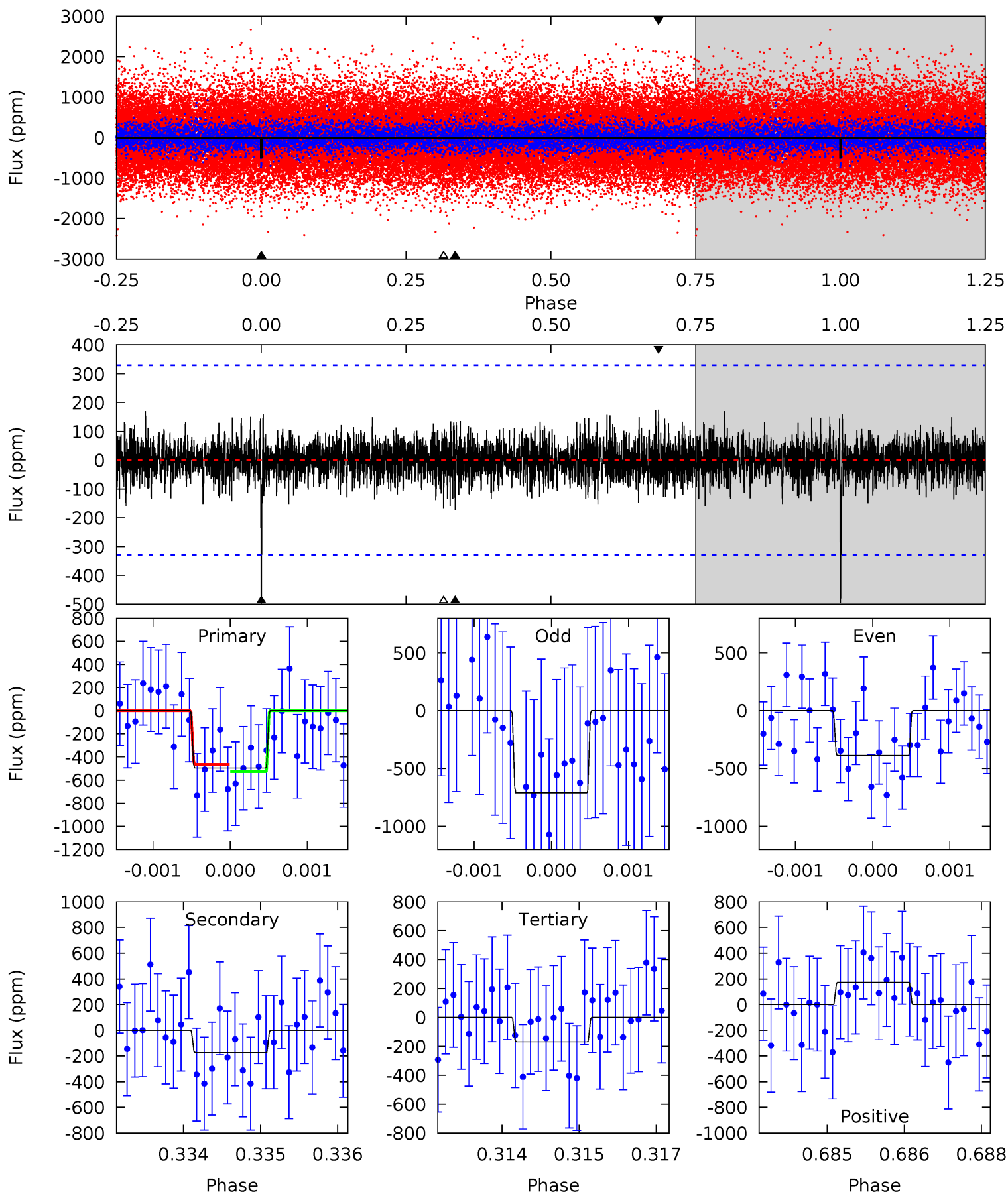
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.99	4.86	3.69	4.51	5.37	3.16	1.17	5.30	4.48	1.18	0.36	2.66	1.18	0.33	1.18



Alt Model-Shift Uniqueness Test

005963604-01, P = 463.174316 Days, E = 311.598835 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.13	2.85	2.76	2.87	5.40	3.21	0.77	5.37	5.27	0.08	-0.02	2.49	1.13	0.26	0.51



Stellar Parameters For KIC 005963604

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5817^{+156}_{-191}	$4.496^{+0.039}_{-0.208}$	$0.140^{+0.200}_{-0.300}$	$0.962^{+0.289}_{-0.096}$	$1.057^{+0.112}_{-0.137}$	$1.672^{+0.342}_{-0.872}$
	+3%/-3%	+1%/-5%	+143%/-214%	+30%/-10%	+11%/-13%	+20%/-52%
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 005963604-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-272 ± 56	$2.67^{+1.70}_{-1.47}$	330^{+24}_{-16}	4889^{+2302}_{-830}	$29338^{+113094}_{-18937}$
Alt.	-174 ± 61	$2.73^{+1.57}_{-1.56}$	329^{+23}_{-16}	4424^{+2075}_{-736}	17273^{+82540}_{-10843}

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 $A_{obs} \gg 1.0$

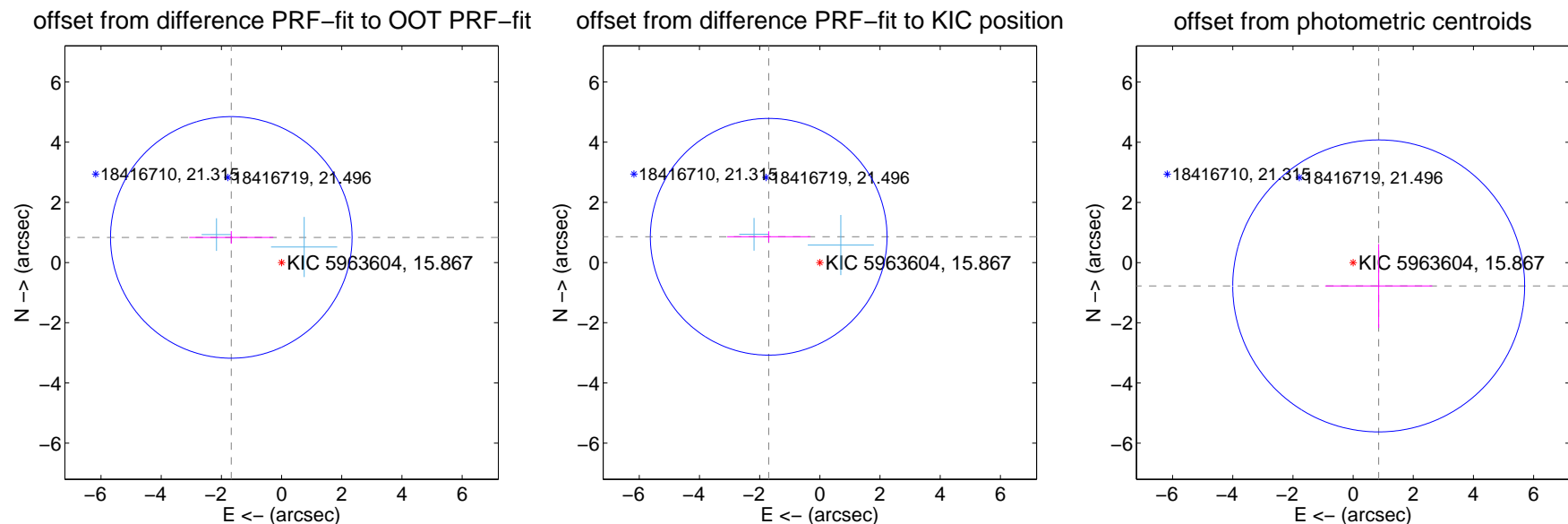
DV Centroid Data

Supplemental centroid analysis for 005963604-01. Kepler magnitude: 15.87. Transit SNR 7.75

There are 2 quarters with good PRF difference image offsets

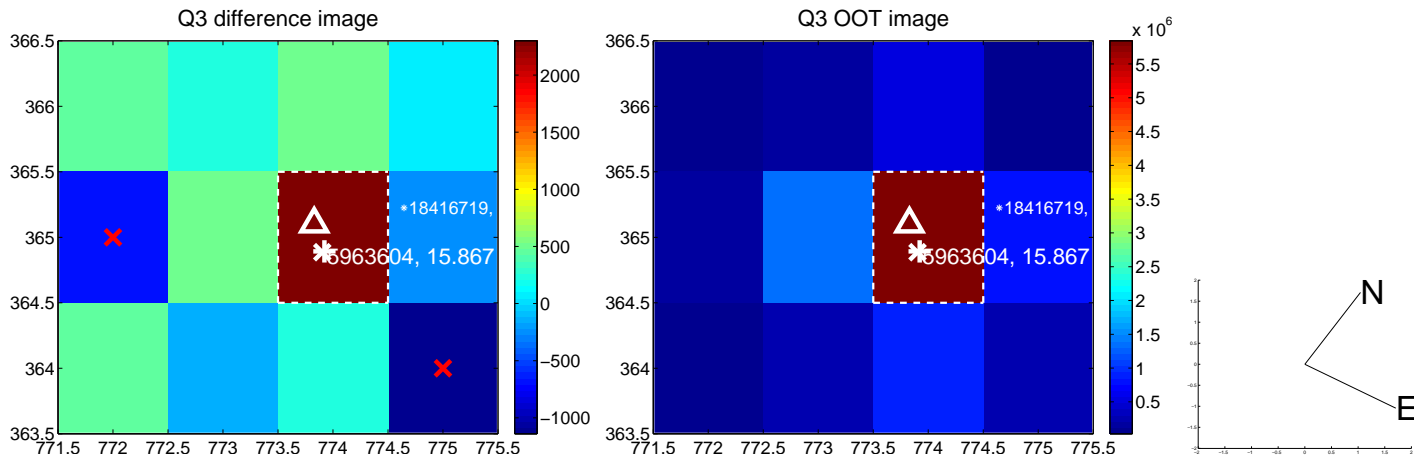
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.868 ± 1.337	1.40	1.671 ± 1.396	0.834 ± 0.209
PRF-fit source offset from KIC position	1.902 ± 1.310	1.45	1.699 ± 1.381	0.856 ± 0.184
photometric centroid source offset	1.15 ± 1.62	0.71	-0.85 ± 1.78	-0.77 ± 1.39

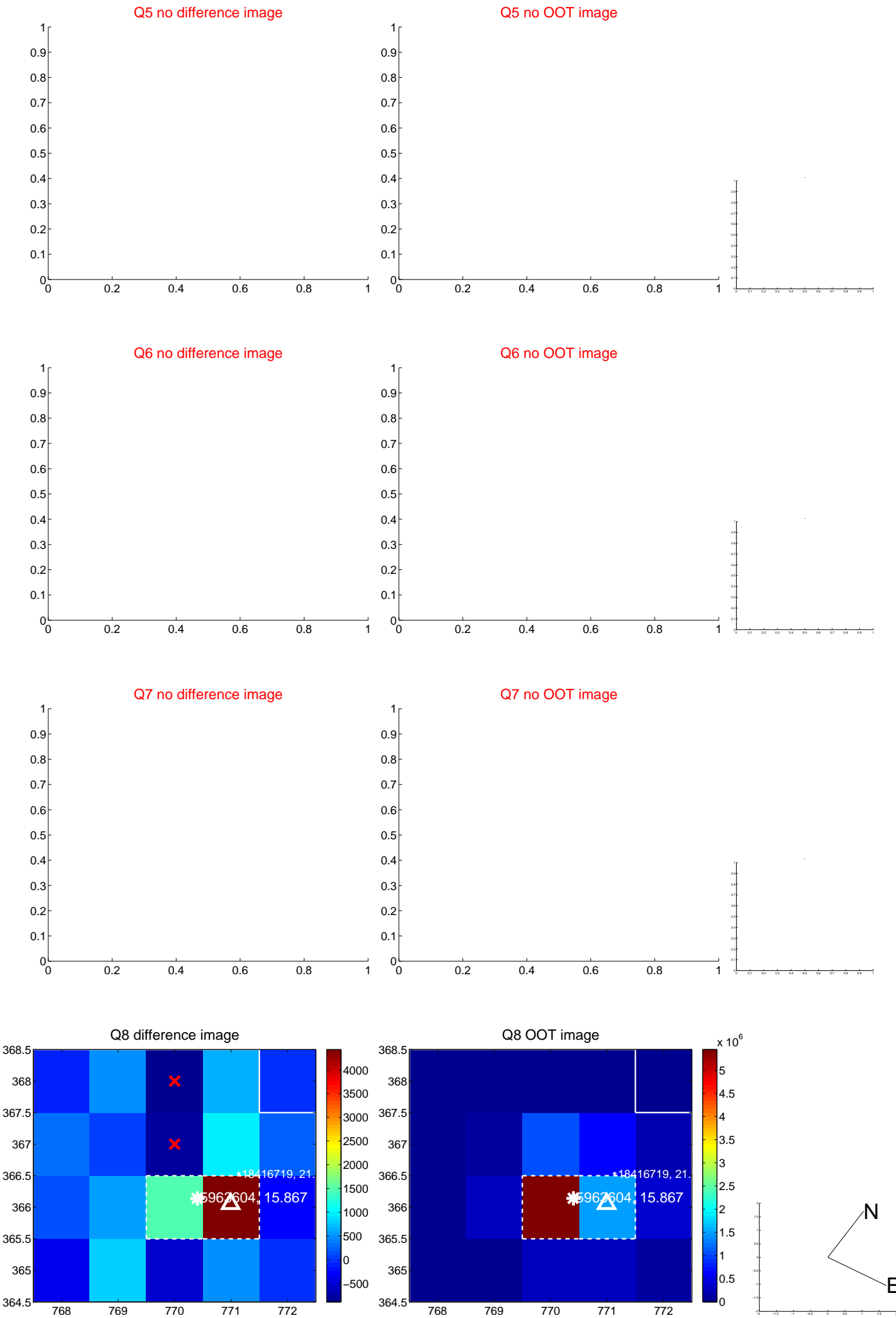


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



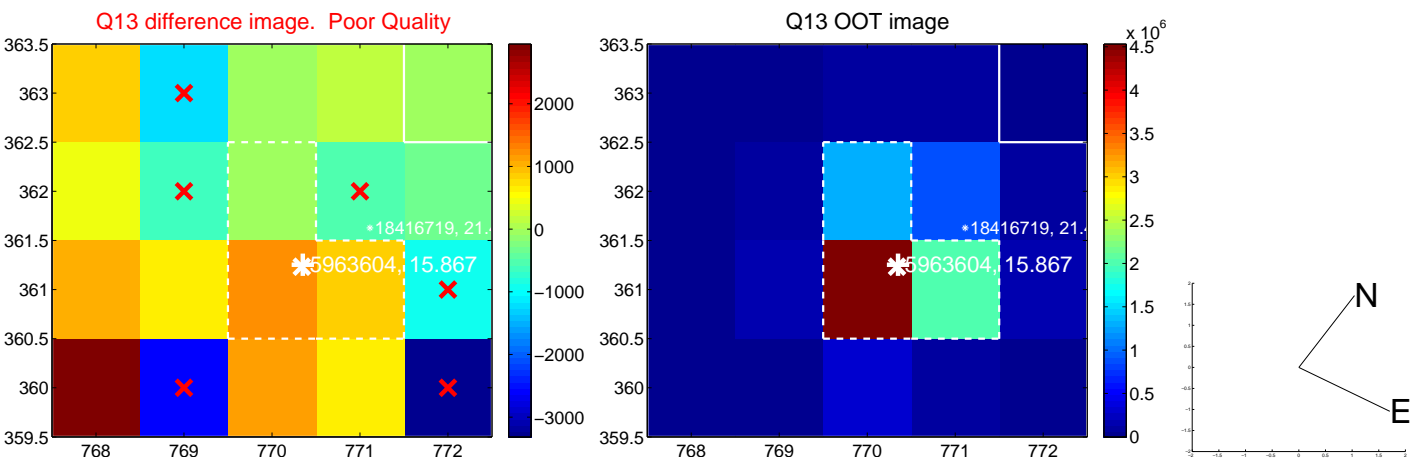
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



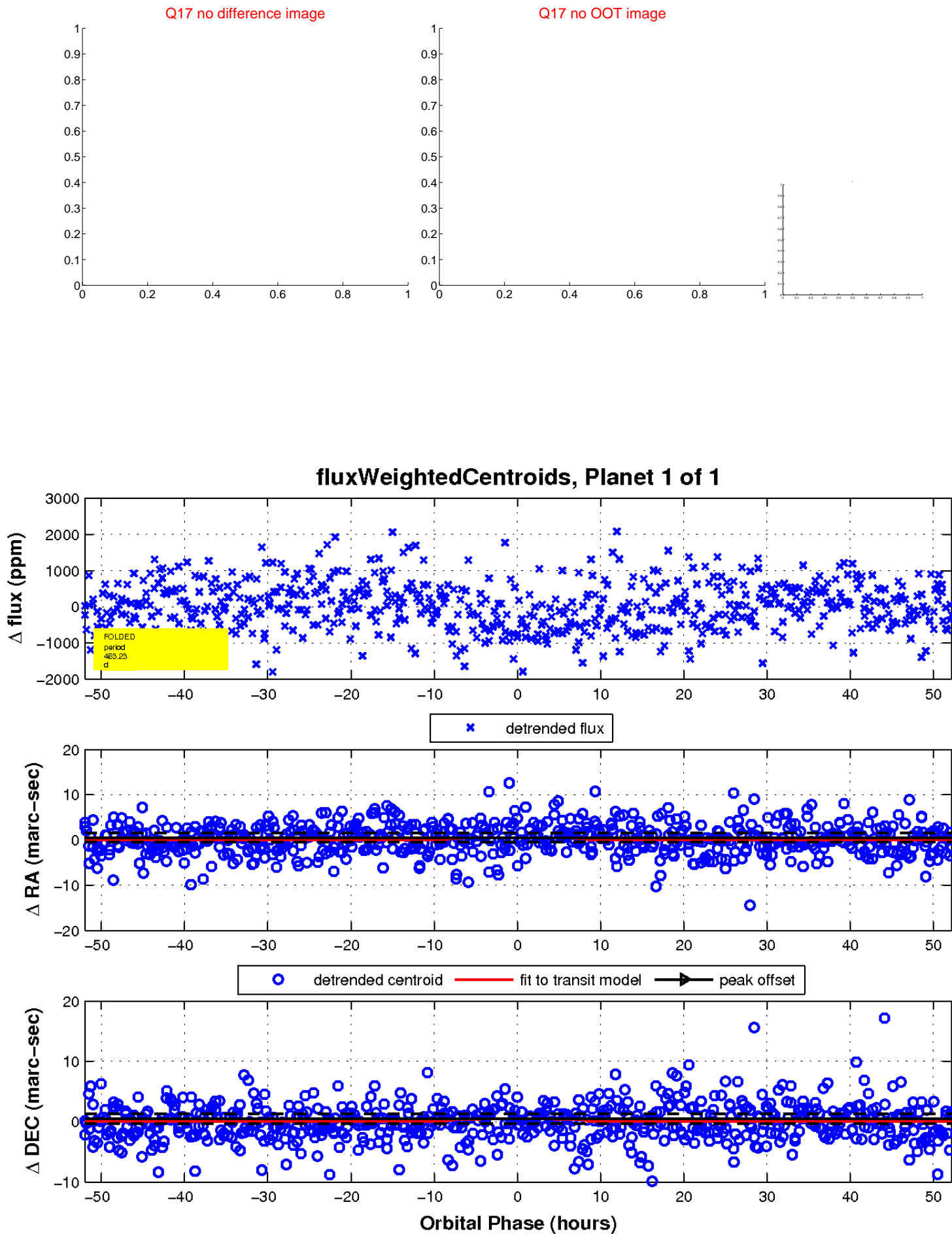
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

