

KIC 005023711

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})
005023711-01	OBS	No	233.453090	364.799468	1041.8	6.168	7.3	7.4	1.02	6419	3.57	2.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005023711-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

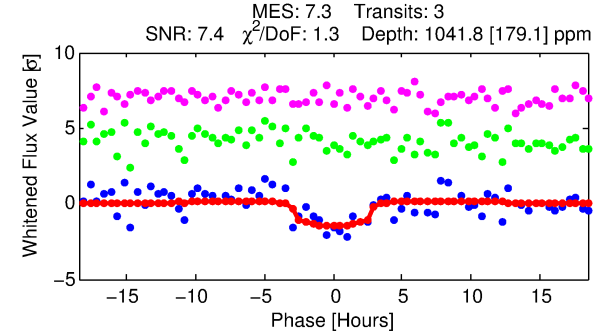
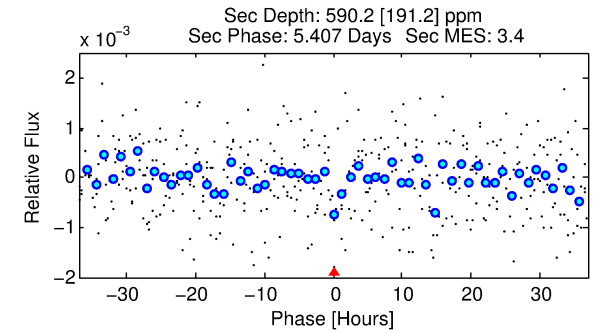
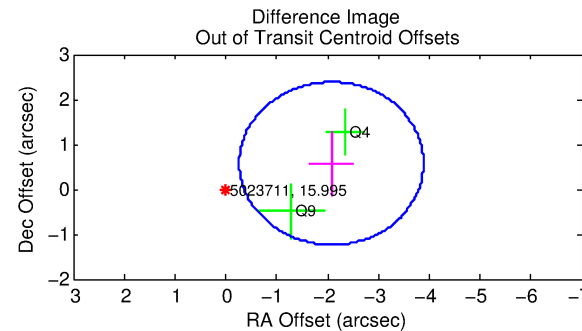
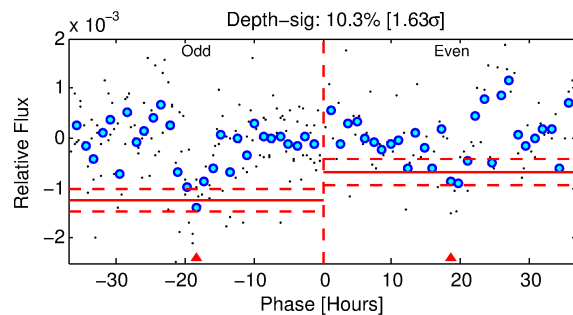
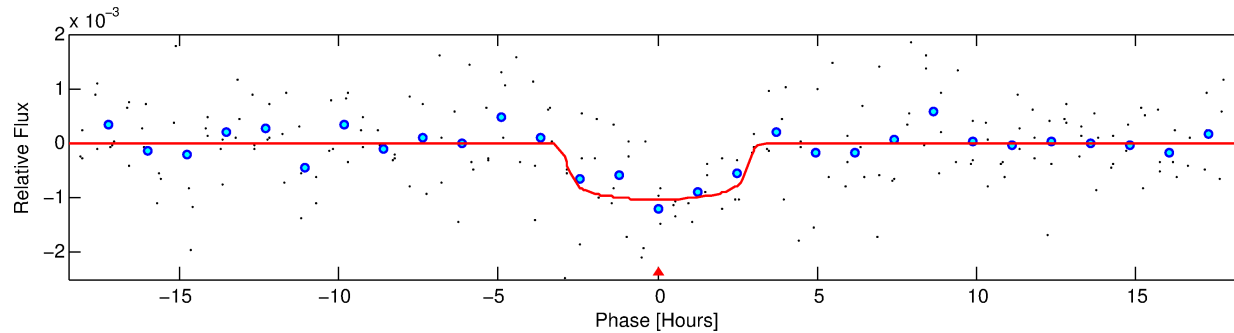
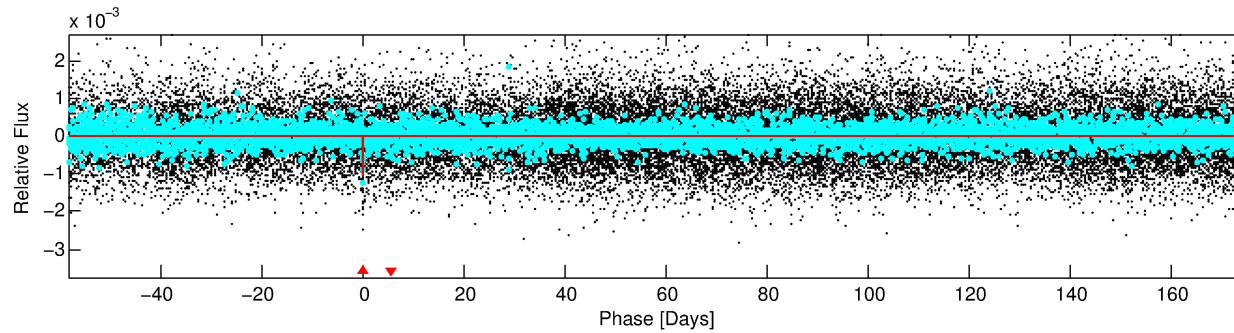
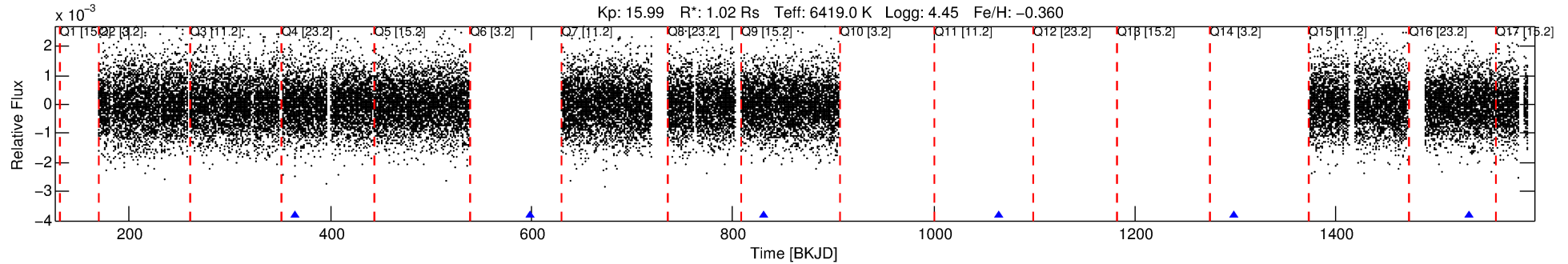
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005023711-01

No Significant Match Found

DV One-Page Summary

KIC: 5023711 Candidate: 1 of 1 Period: 233.453 d



DV Fit Results:

Period = 233.45309 [0.00465] d
Epoch = 364.7995 [0.0139] BKJD
Rp/R* = 0.0321 [0.0240]
a/R* = 204.28 [801.80]
b = 0.75 [2.31]
Seff = 2.75 [1.08]
Teq = 328 [32] K
Rp = 3.57 [2.86] Re
a = 0.7585 [0.1874] AU
Ag = 14635.54 [22974.65] [0.64 σ]
Teffp = 5582 [2142] K [2.45 σ]

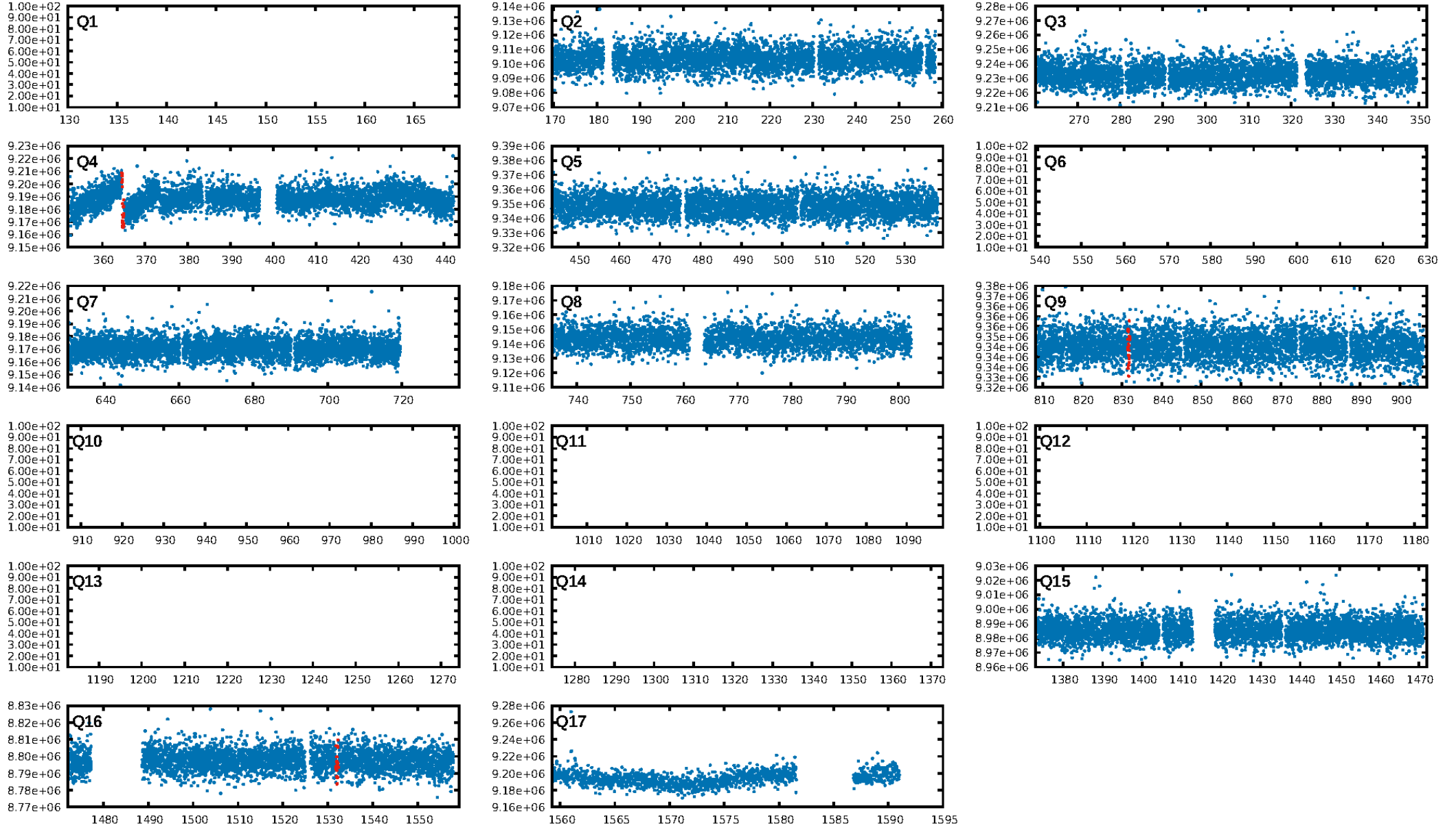
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 79.0%
Bootstrap-pfa: 3.18e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.375
Centroid-sig: 96.8%
Centroid-so: 0.800 arcsec [0.47 σ]
OotOffset-rm: 2.155 arcsec [3.57 σ]
KicOffset-rm: 2.131 arcsec [3.16 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

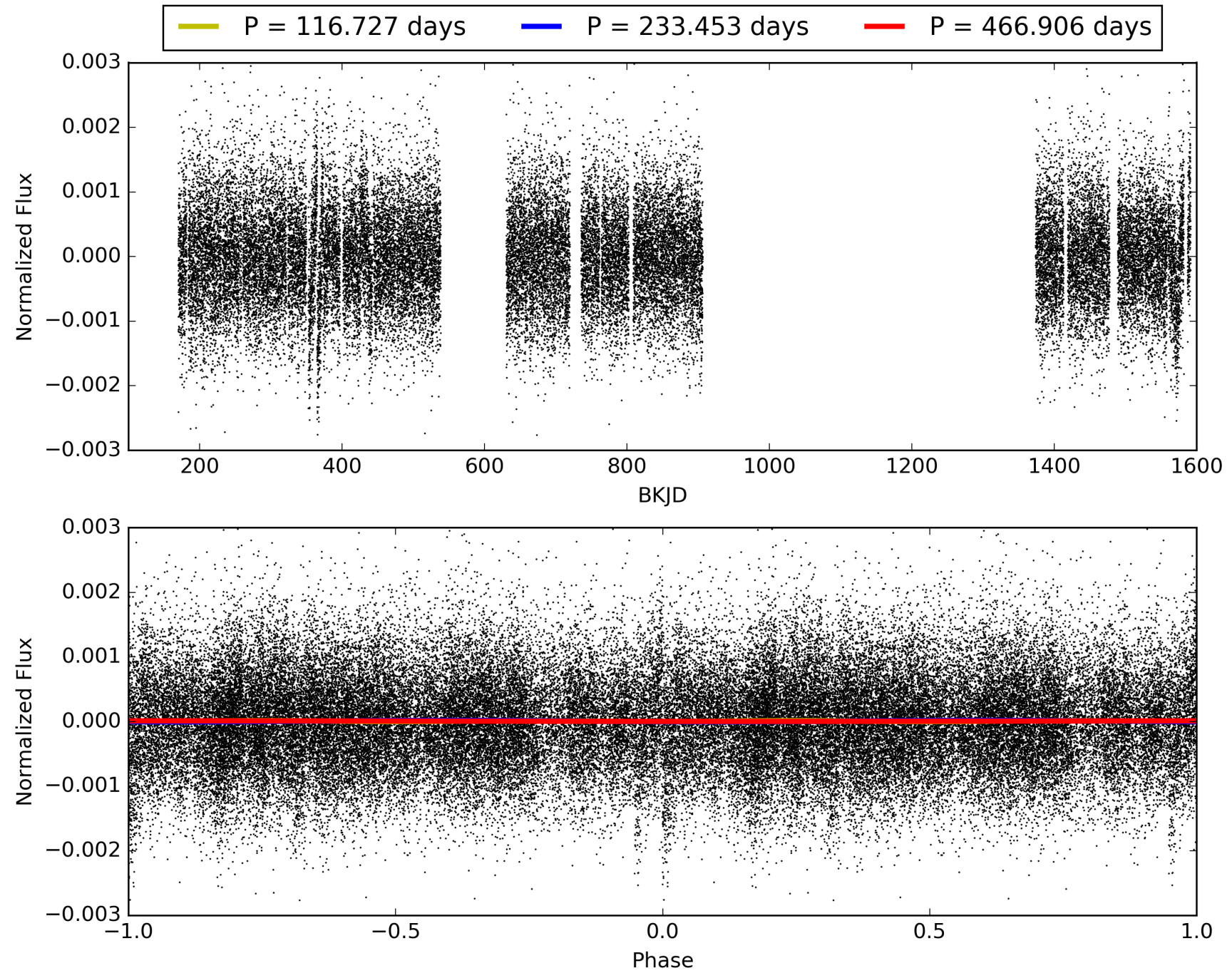
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:17:08 Z

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

TCE 005023711-01, PDC Light Curves

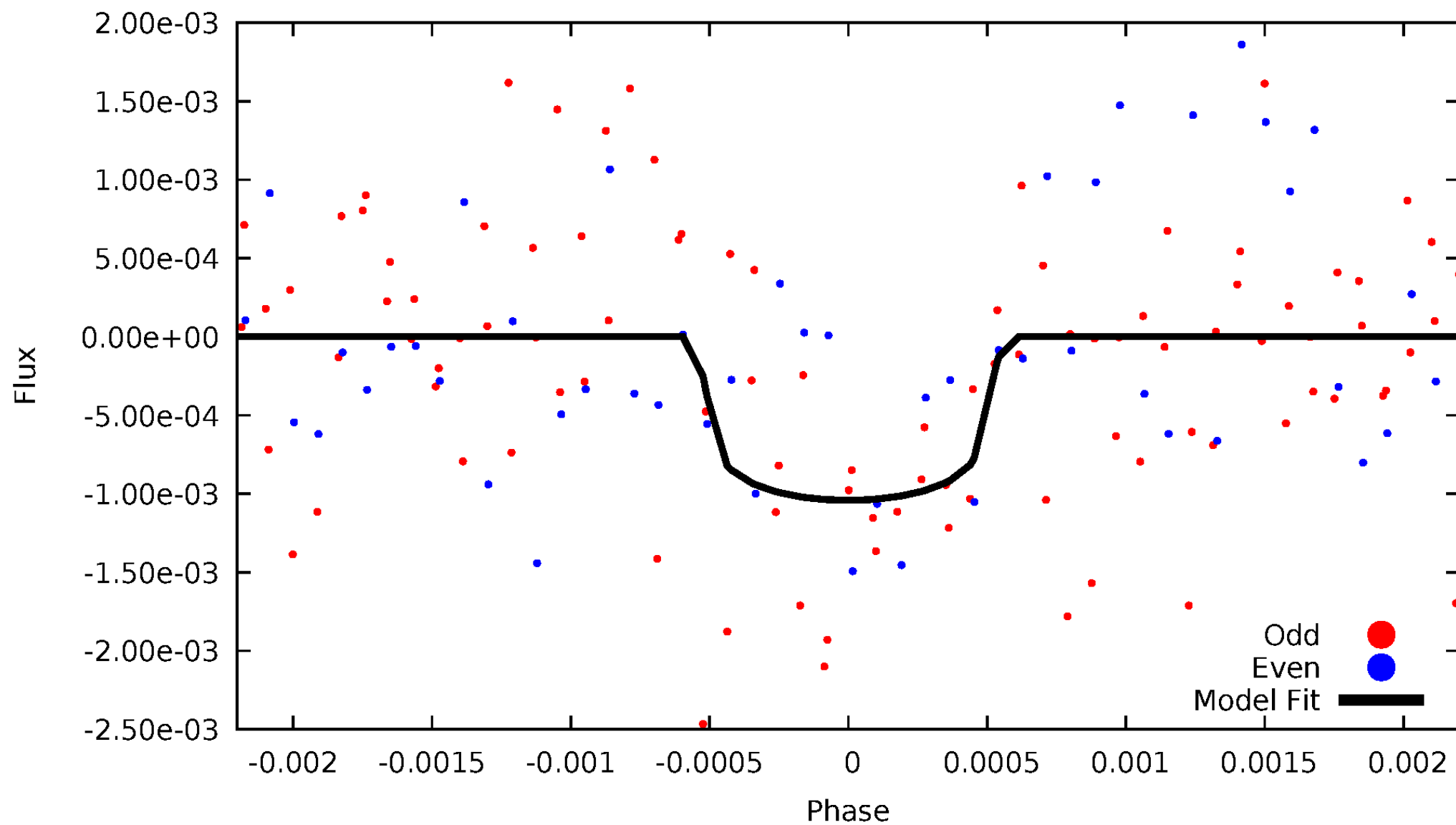


TCE 005023711-01



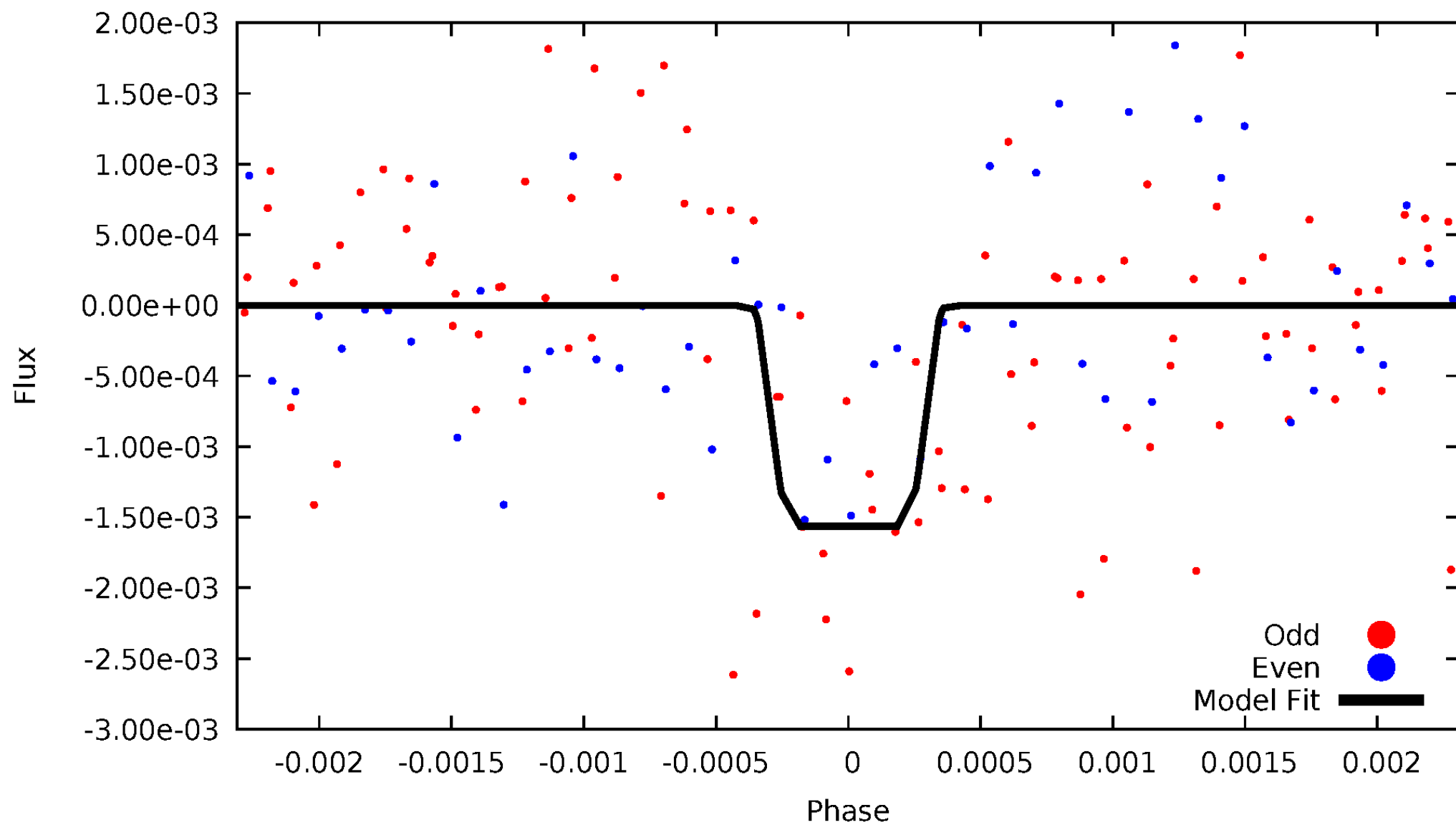
DV Odd/Even

TCE 005023711-01



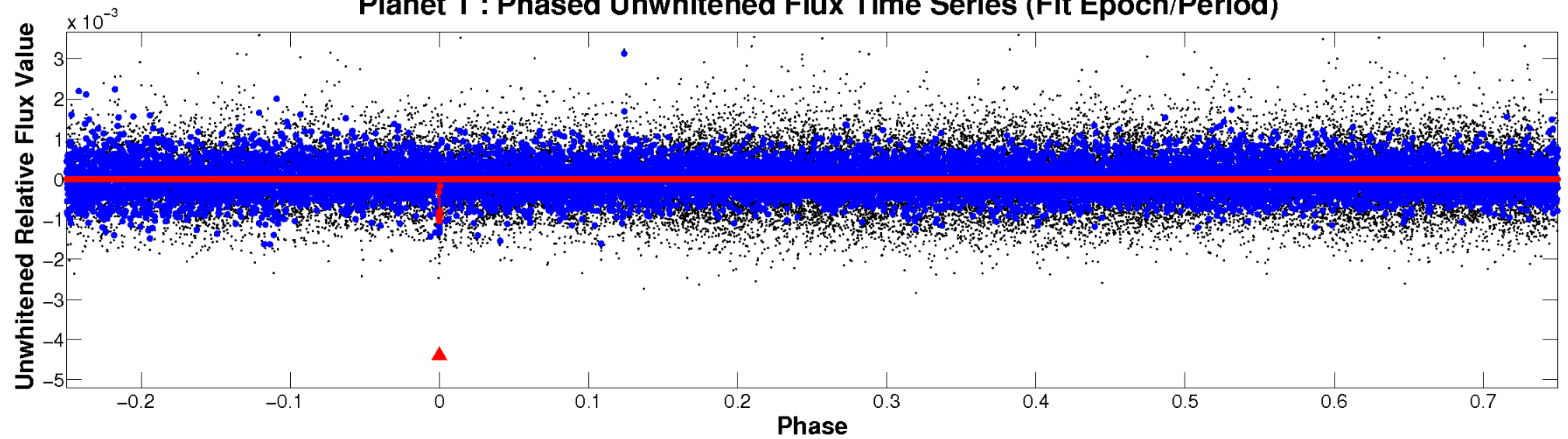
ALT Odd/Even

TCE 005023711-01

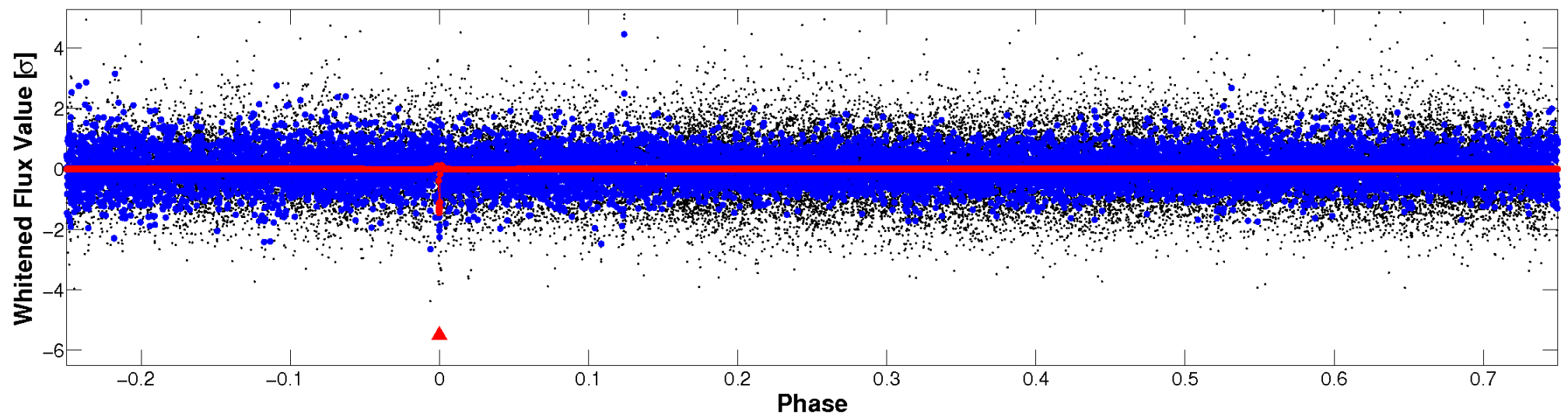


Non-Whitened Vs. Whitened Light Curve

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

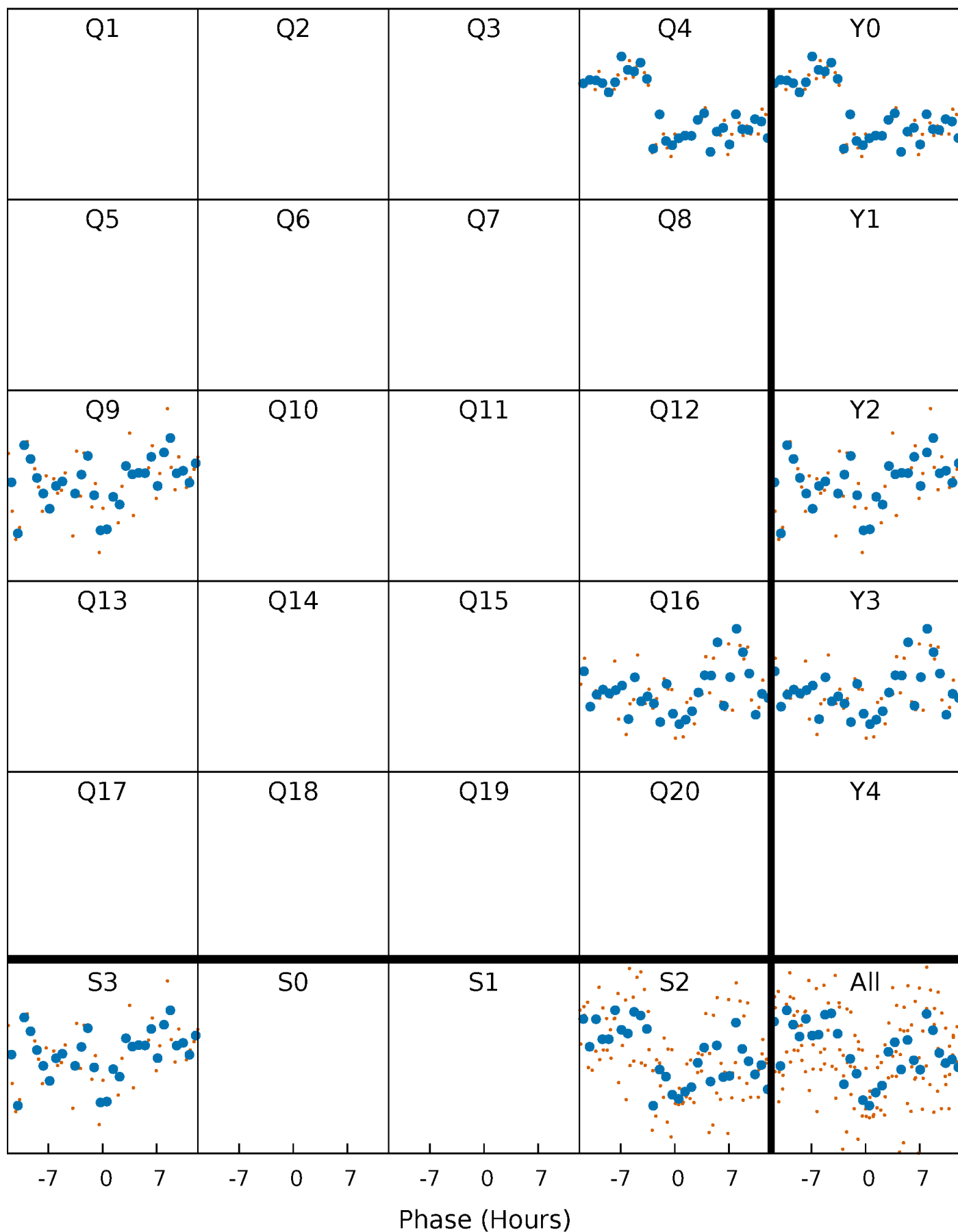


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



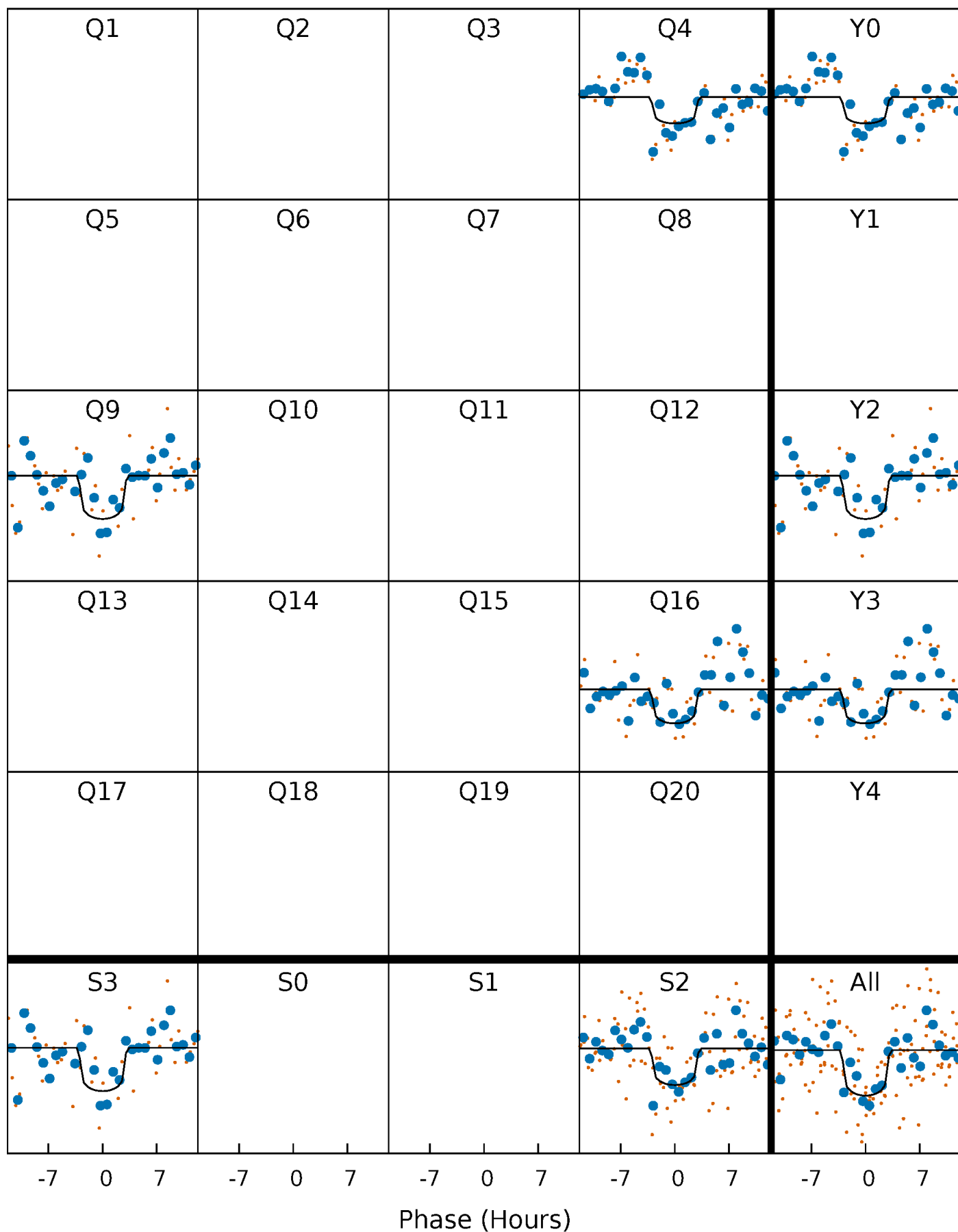
PDC Quarter-Phased Transit Curves

TCE 005023711-01 P=233.453090 Days $T_0=364.799468$ (BKJD)



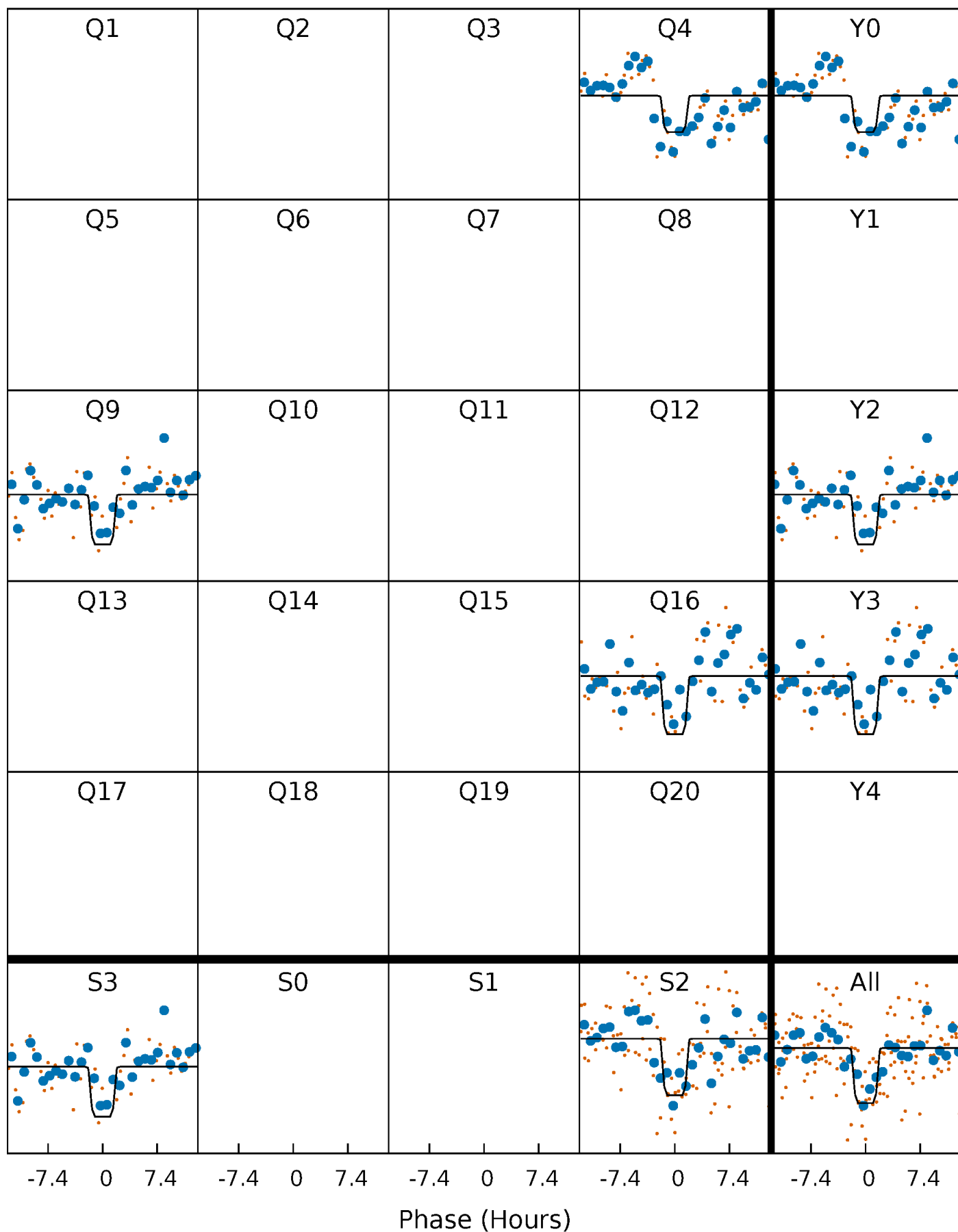
DV Quarter-Phased Transit Curves

TCE 005023711-01 P=233.453090 Days $T_0=364.799468$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

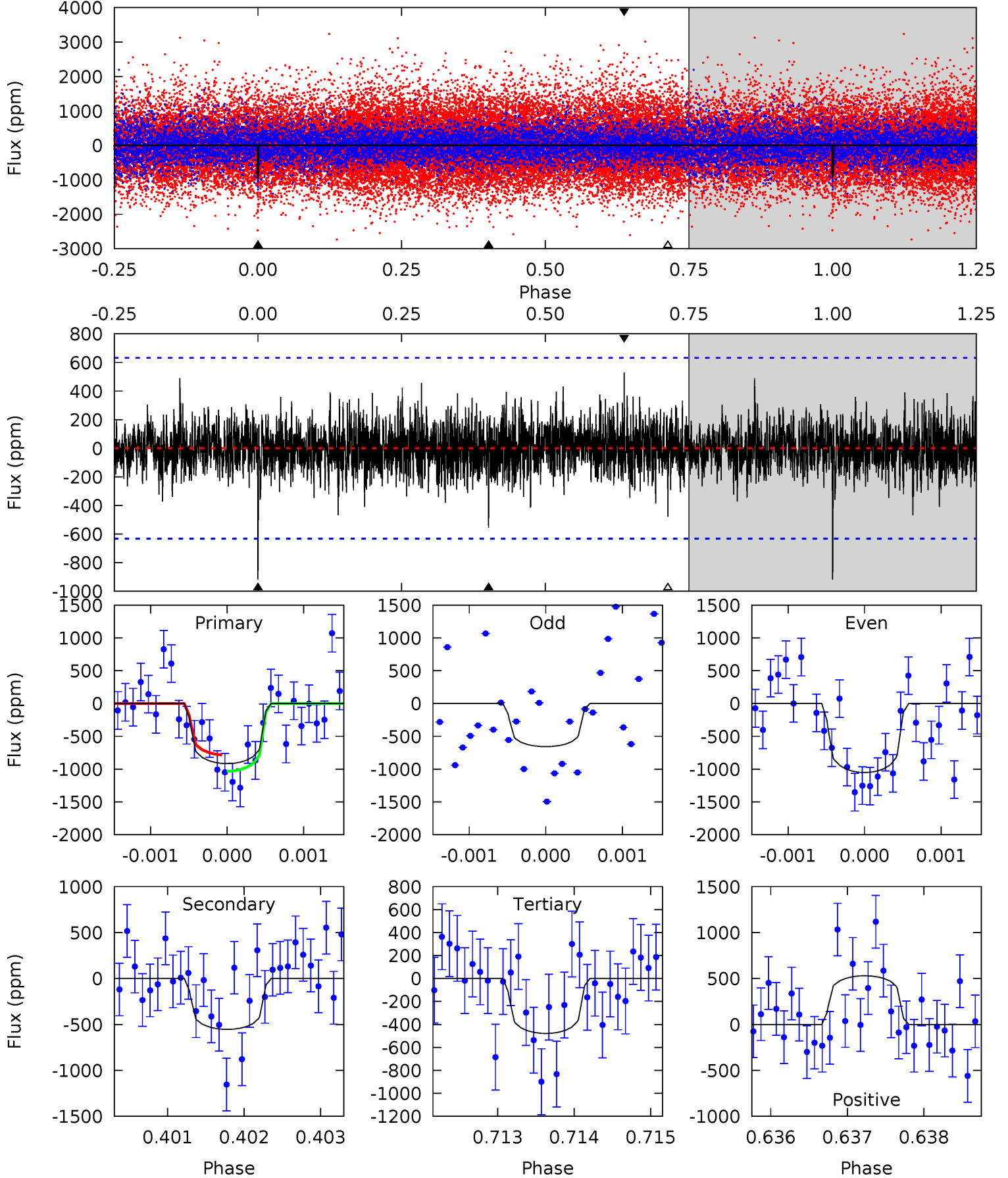
TCE 005023711-01 P=233.465715 Days $T_0=364.778680$ (BKJD)



DV Model-Shift Uniqueness Test

005023711-01, P = 233.453090 Days, E = 131.346378 Days

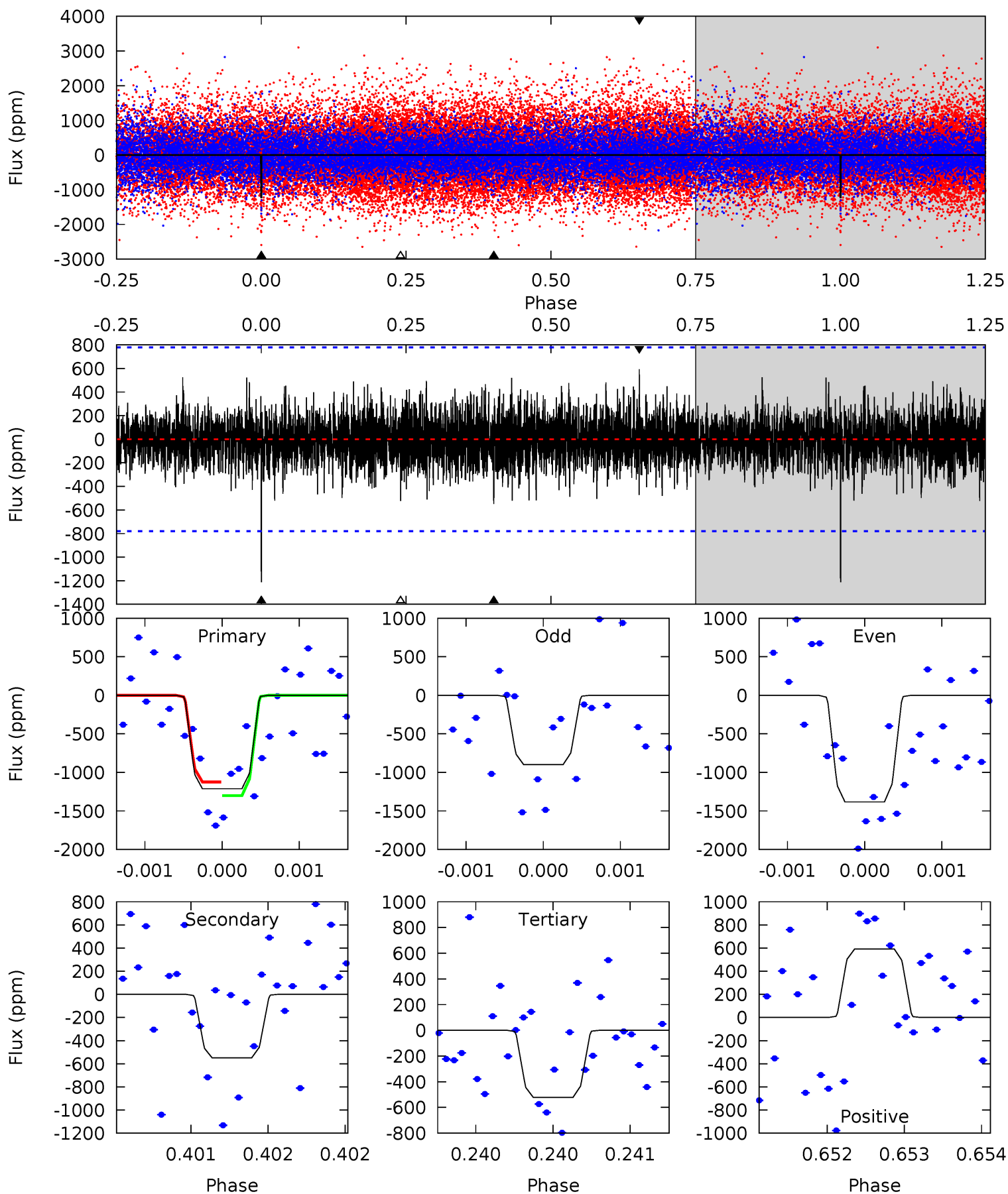
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.88	4.77	4.12	4.56	5.44	3.27	1.07	3.77	3.33	0.65	0.21	1.60	1.25	0.37	1.07



Alt Model-Shift Uniqueness Test

005023711-01, P = 233.465715 Days, E = 131.312965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.57	3.88	3.69	4.19	5.51	3.38	1.05	4.88	4.38	0.19	-0.30	1.61	1.33	0.33	0.63



Stellar Parameters For KIC 005023711

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6419^{+177}_{-244}	$4.450^{+0.062}_{-0.200}$	$-0.360^{+0.300}_{-0.300}$	$1.019^{+0.296}_{-0.106}$	$1.066^{+0.142}_{-0.142}$	$1.418^{+0.457}_{-0.708}$
	+3%/-4%	+1%/-4%	+83%/-83%	+29%/-10%	+13%/-13%	+32%/-50%
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 005023711-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-554 ± 116	$4.06^{+2.66}_{-2.36}$	466^{+34}_{-22}	5242^{+3201}_{-948}	10227^{+48308}_{-6533}
Alt.	-549 ± 141	$4.82^{+2.69}_{-2.45}$	466^{+34}_{-23}	4901^{+2086}_{-867}	7454^{+22422}_{-4770}

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

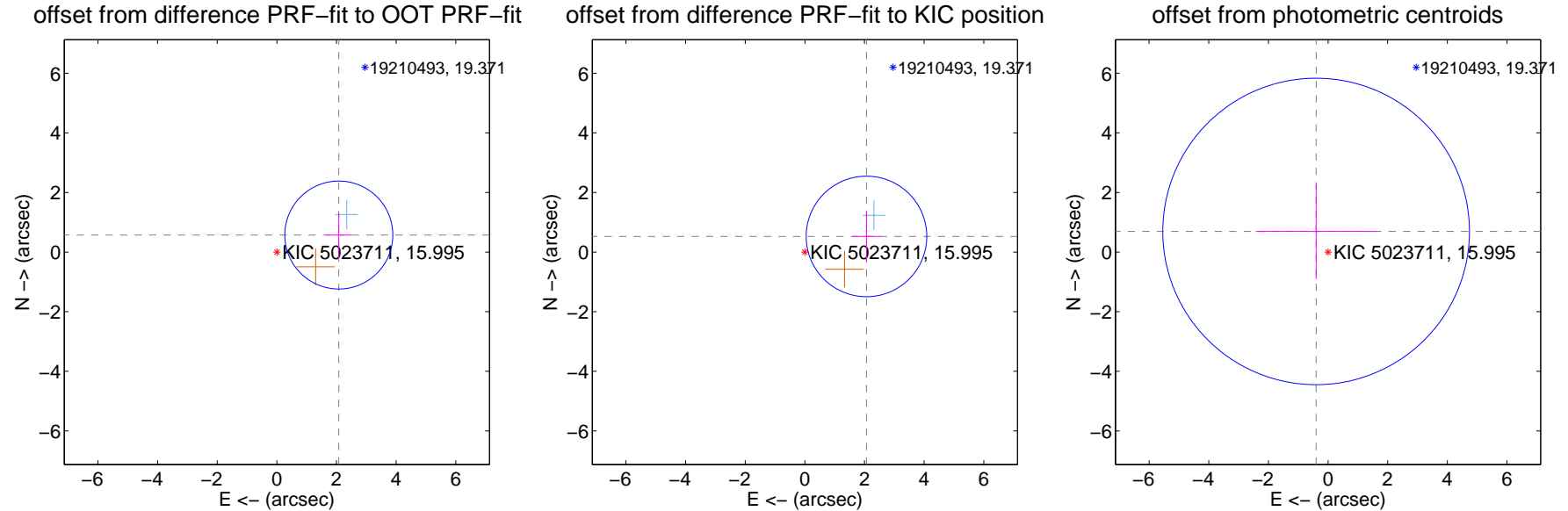
DV Centroid Data

Supplemental centroid analysis for 005023711-01. Kepler magnitude: 15.99. Transit SNR 7.41

There are 1 quarters with good PRF difference image offsets

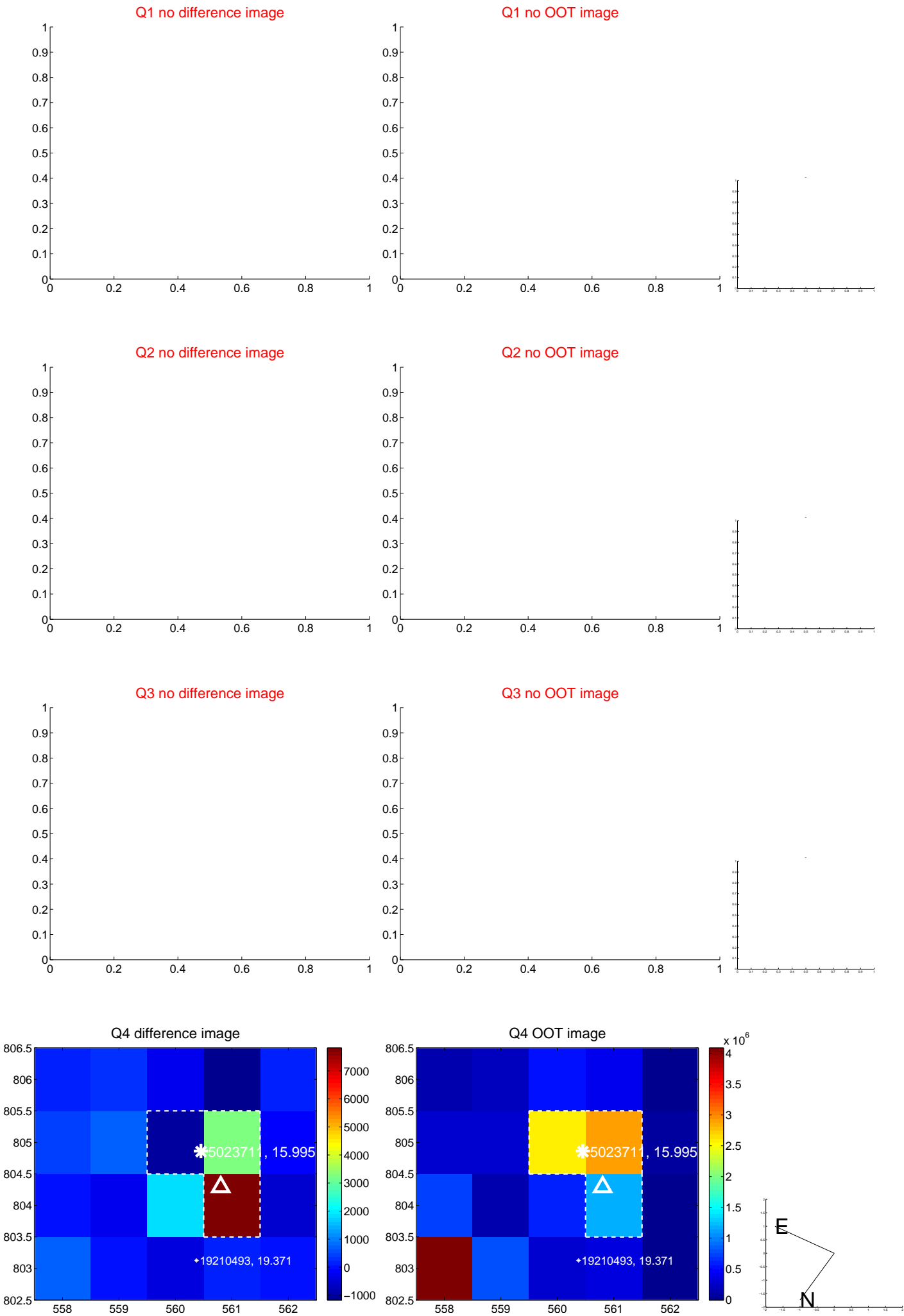
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.155 ± 0.604	3.57	-2.078 ± 0.431	0.572 ± 0.718
PRF-fit source offset from KIC position	2.131 ± 0.674	3.16	-2.066 ± 0.477	0.525 ± 0.869
photometric centroid source offset	0.80 ± 1.71	0.47	0.40 ± 2.02	0.69 ± 1.60



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.

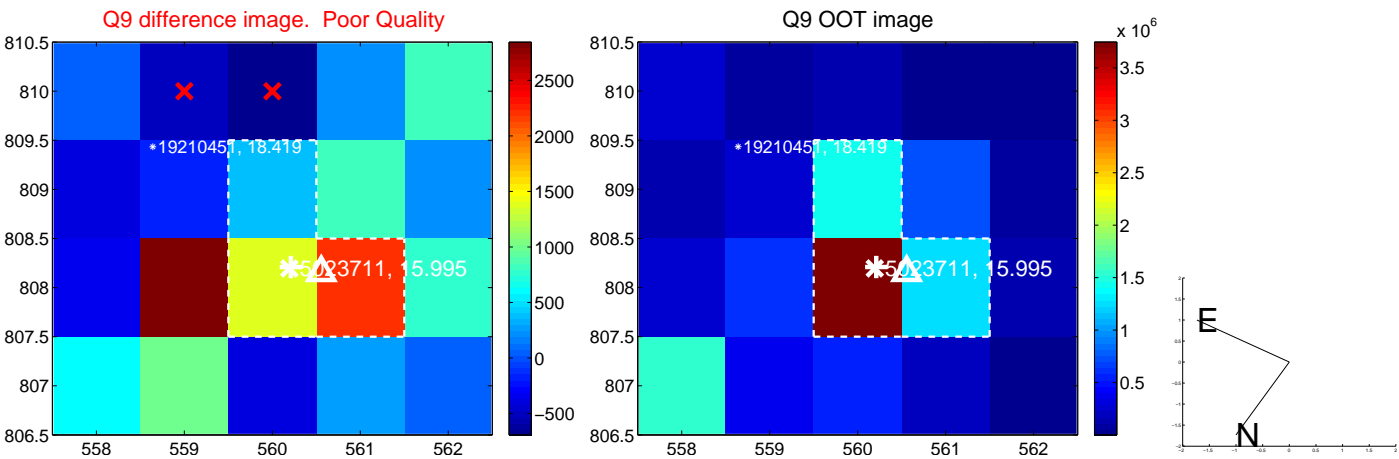
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



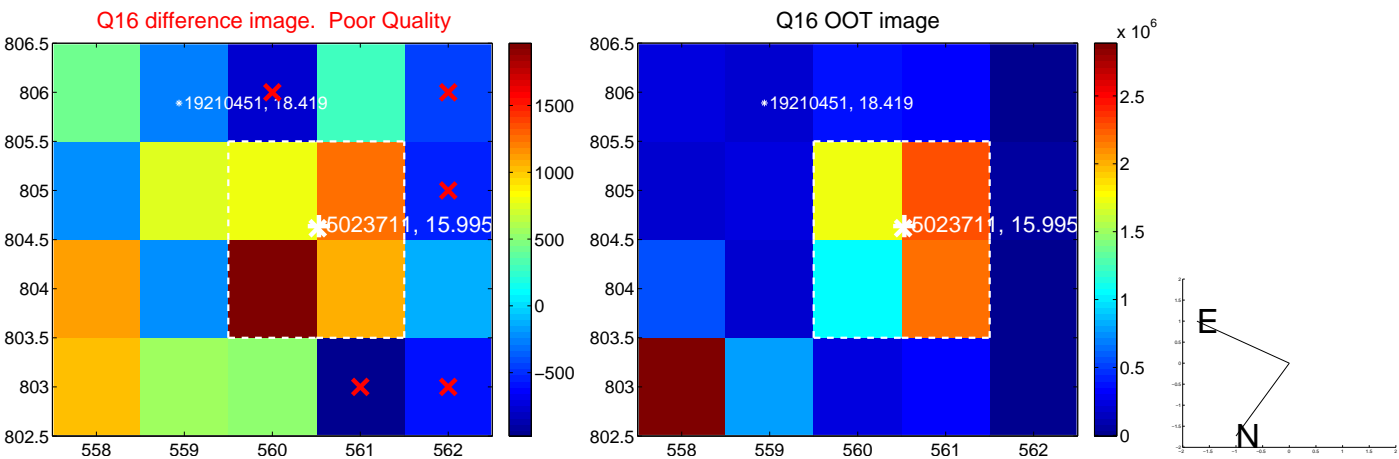
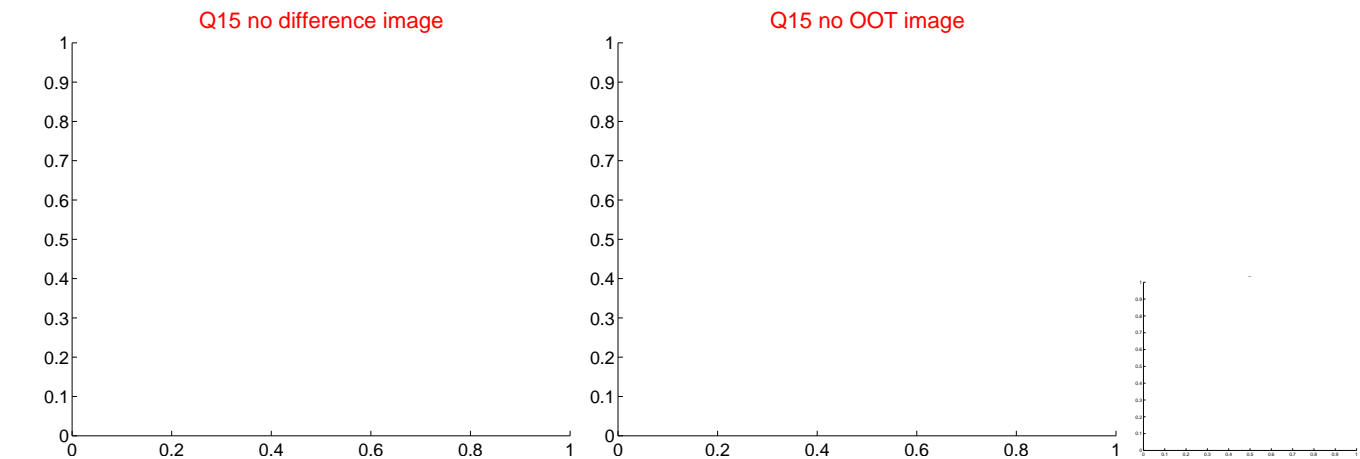
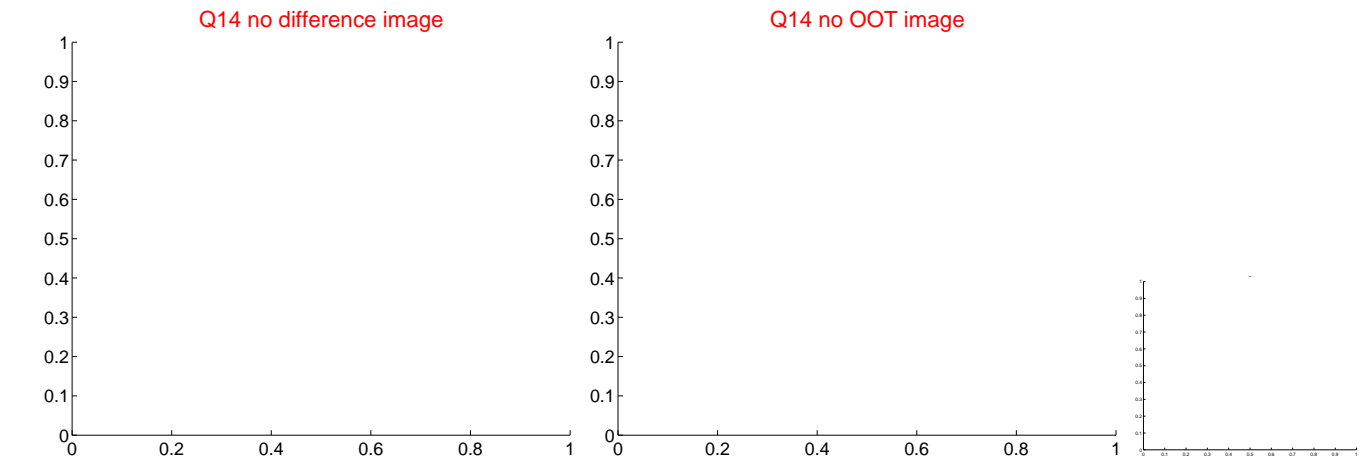
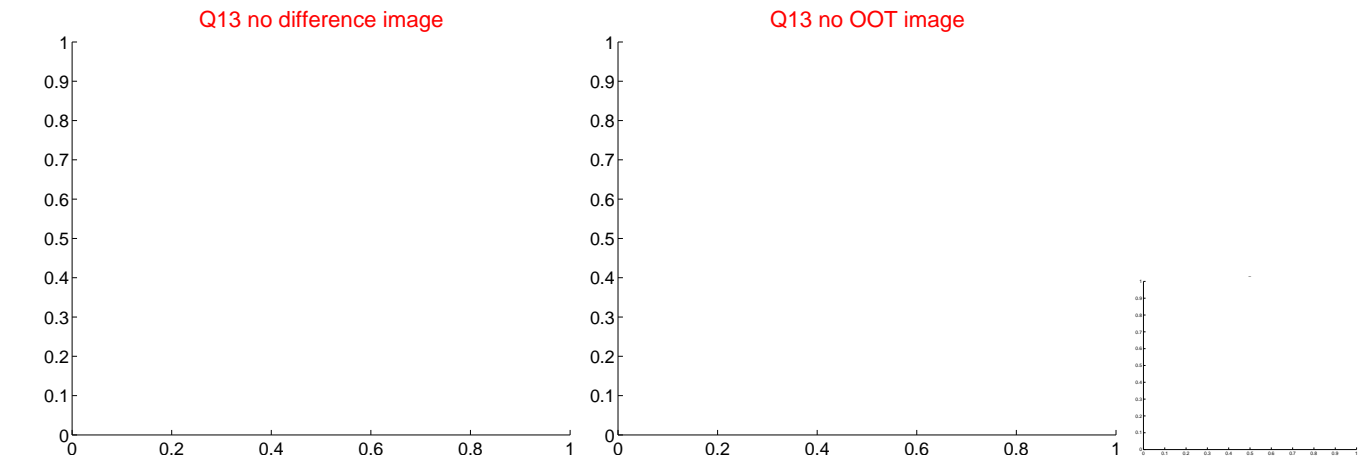
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



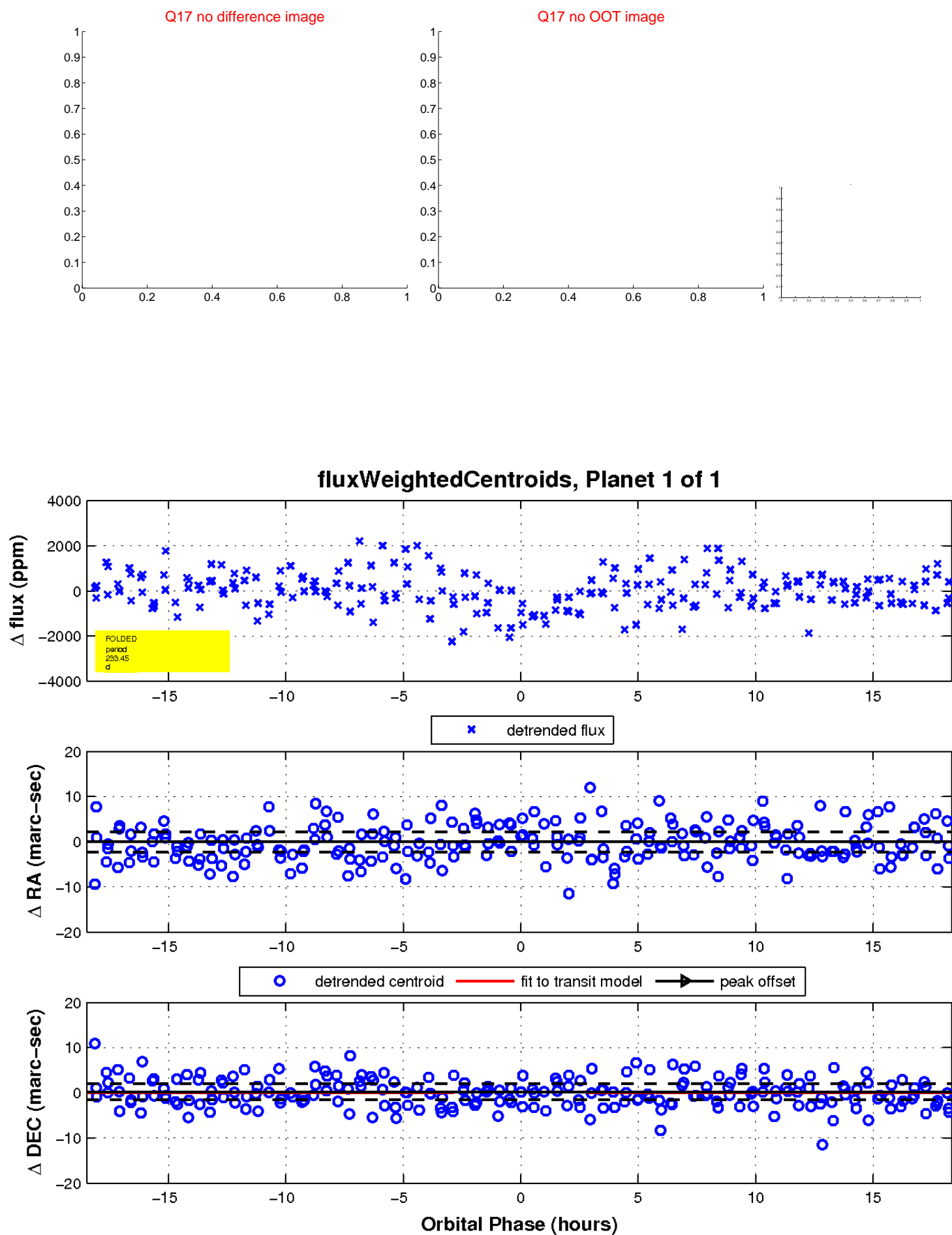
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

