

KIC 005471623

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})
005471623-01	OBS	No	0.963008	131.982703	131.1	2.307	10.2	10.8	1.81	6794	2.39	13741.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005471623-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

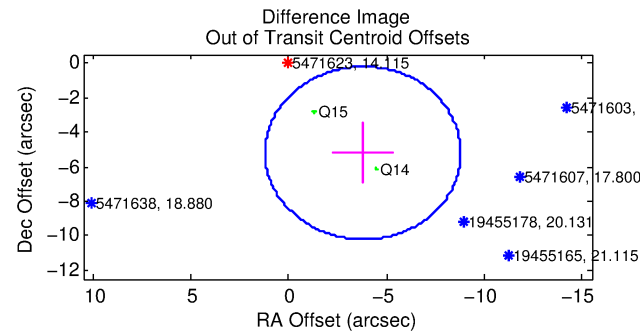
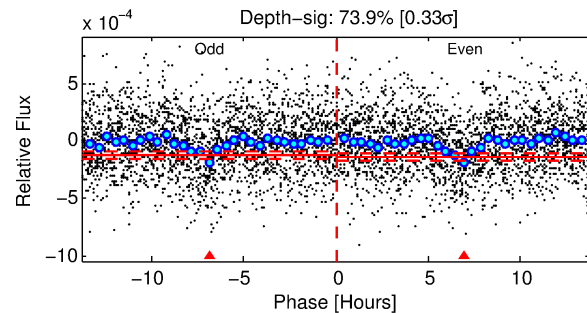
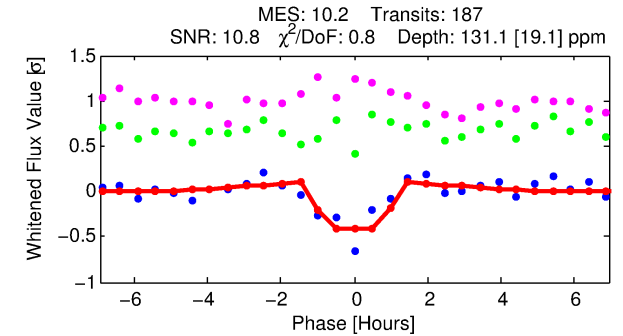
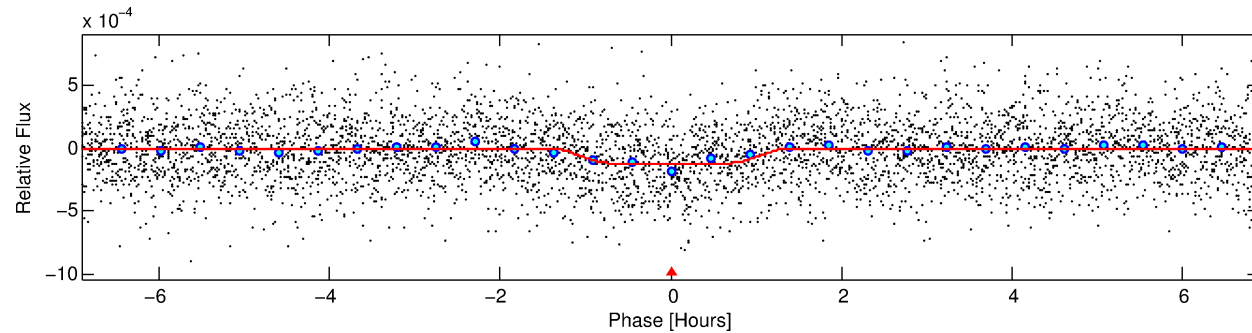
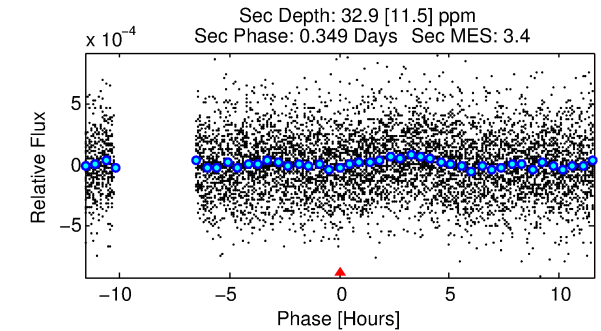
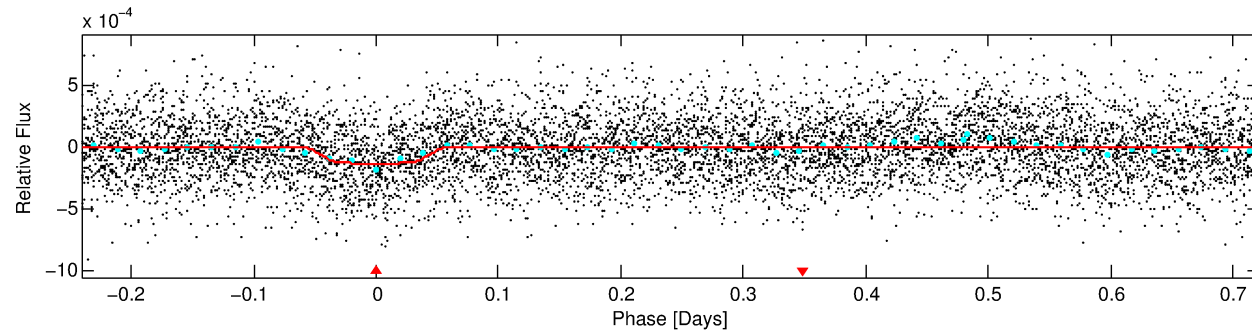
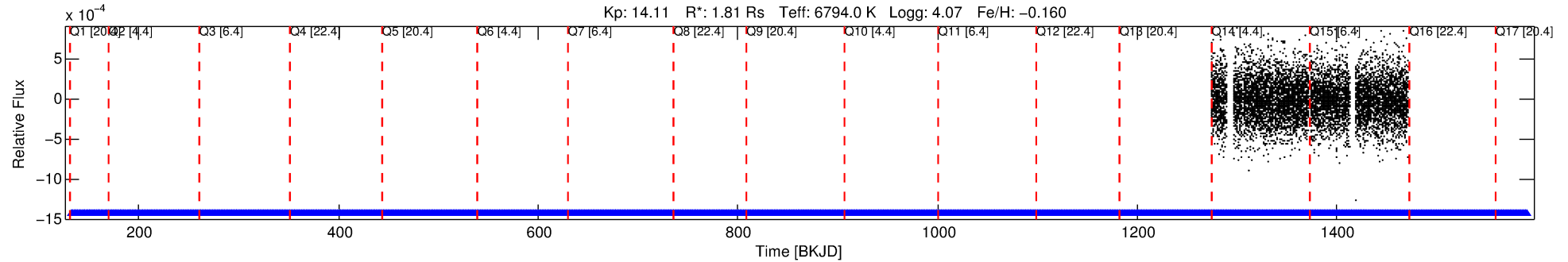
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005471623-01

No Significant Match Found

DV One-Page Summary

KIC: 5471623 Candidate: 1 of 1 Period: 0.963 d



DV Fit Results:

Period = 0.96301 [0.00001] d
Epoch = 131.9827 [0.0022] BKJD
Rp/R* = 0.0121 [0.0051]
a/R* = 1.80 [3.05]
b = 0.89 [0.58]
Seff = 13741.13 [5867.70]
Teq = 2761 [295] K
Rp = 2.39 [1.23] Re
a = 0.0213 [0.0056] AU
Ag = 1.43 [1.42] [0.30σ]
Teffp = 4670 [1080] K [1.71σ]

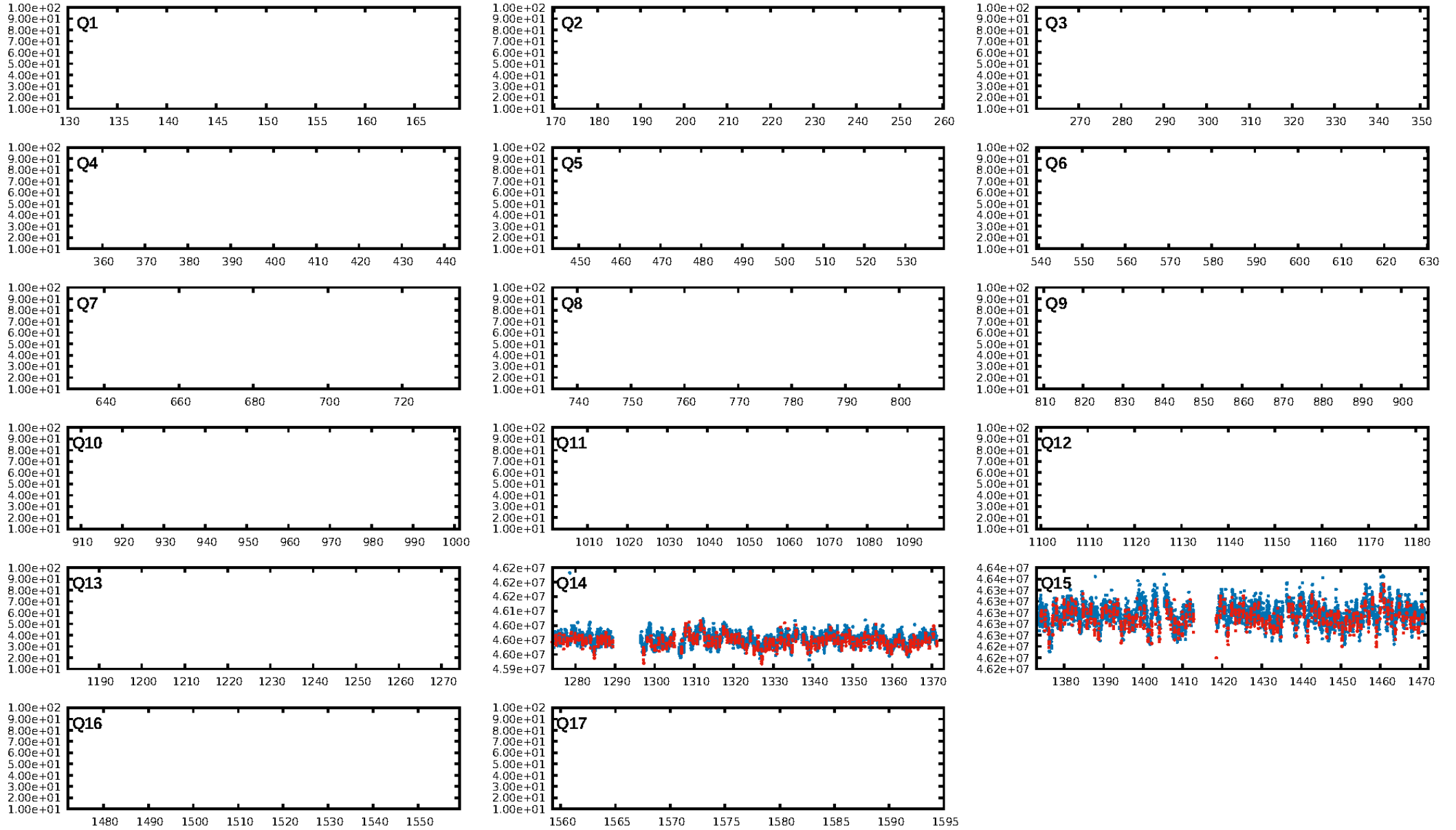
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.16e-22
RollingBand-fgt: 1.00 [187/187]
GhostDiagnostic-chr: 0.2753
Centroid-sig: 0.0%
Centroid-so: 2.580 arcsec [2.93σ]
OotOffset-rm: 6.446 arcsec [3.87σ]
KicOffset-rm: 6.282 arcsec [3.67σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

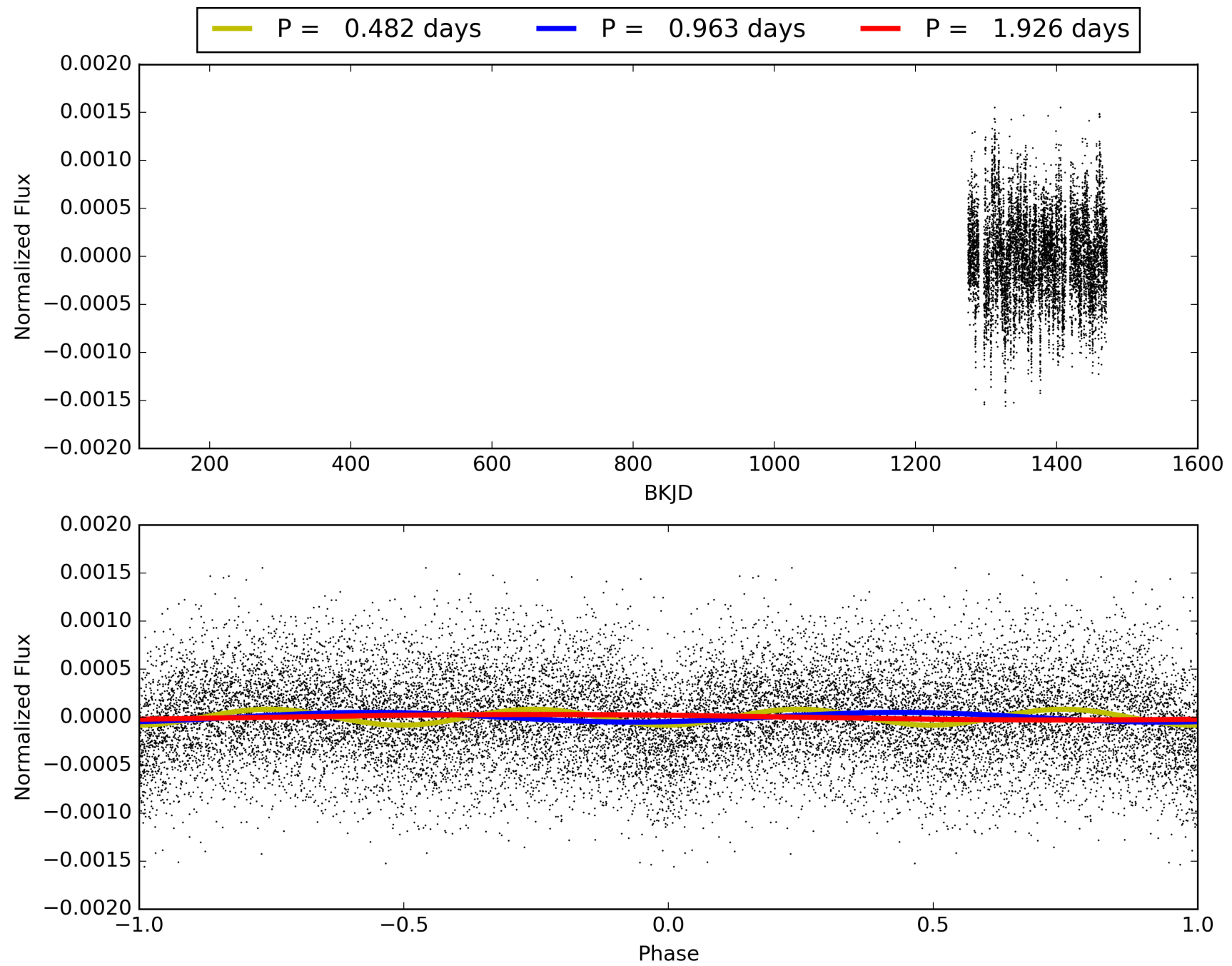
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:10:55 Z

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

TCE 005471623-01, PDC Light Curves

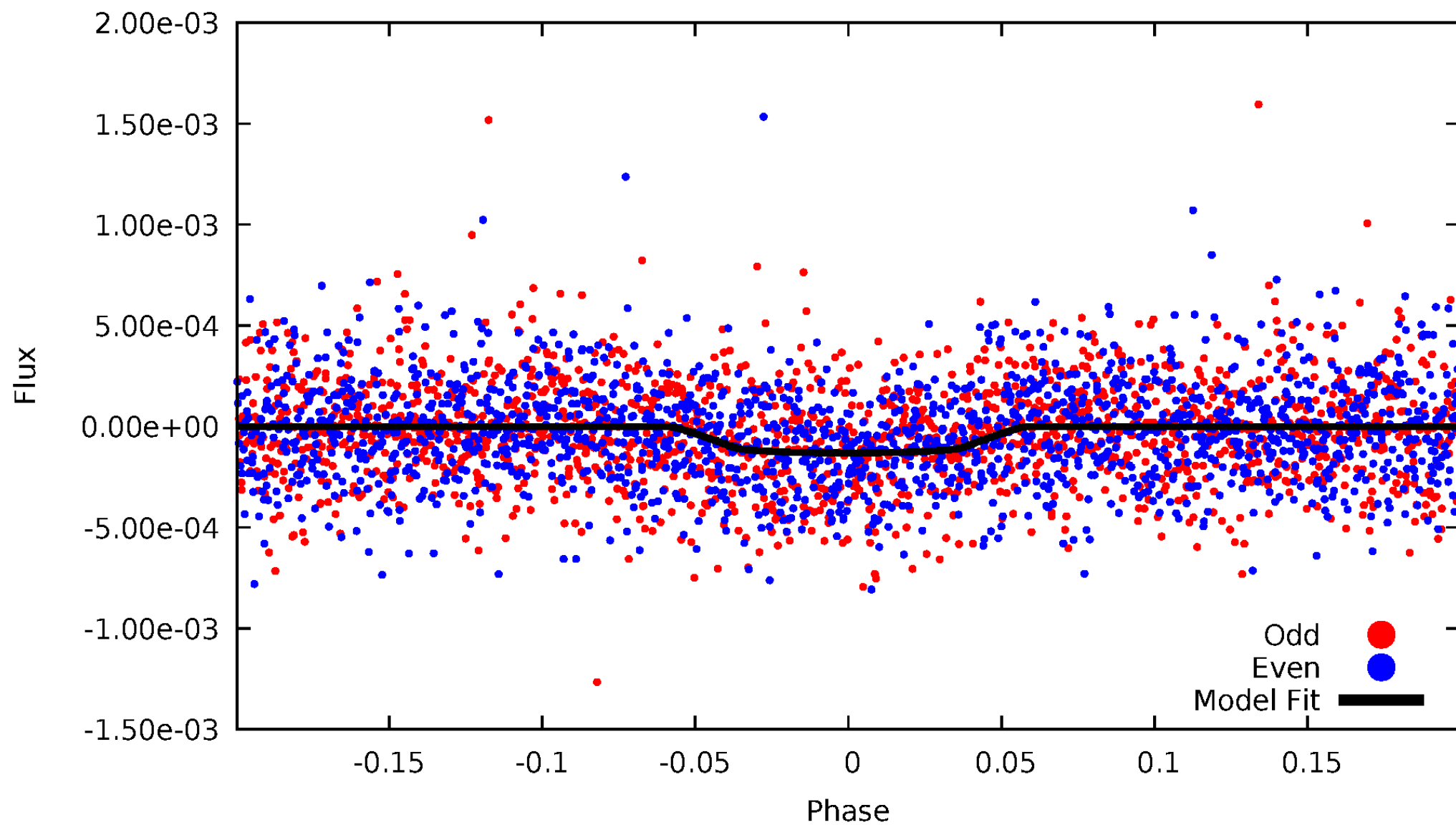


TCE 005471623-01



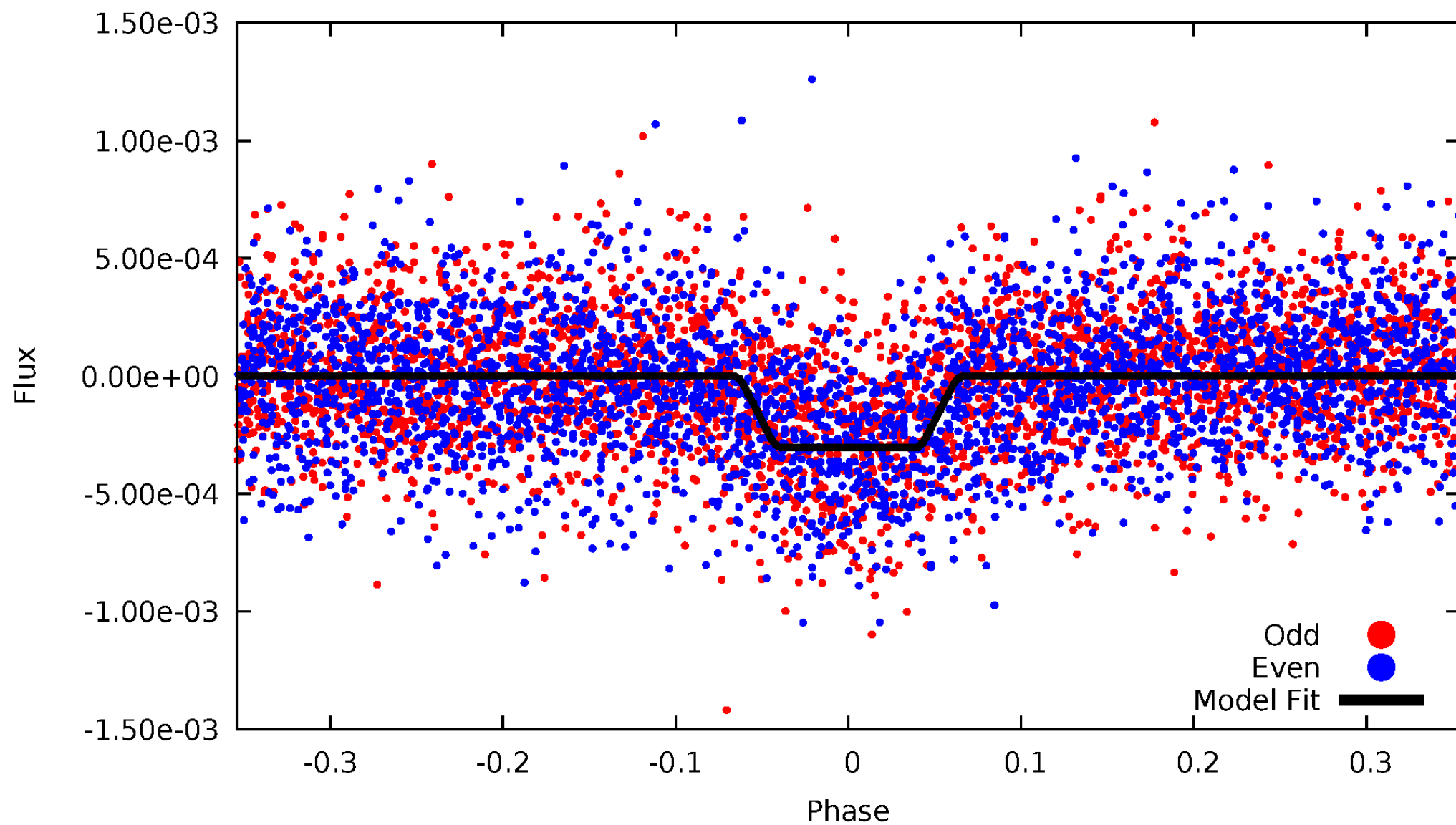
DV Odd/Even

TCE 005471623-01

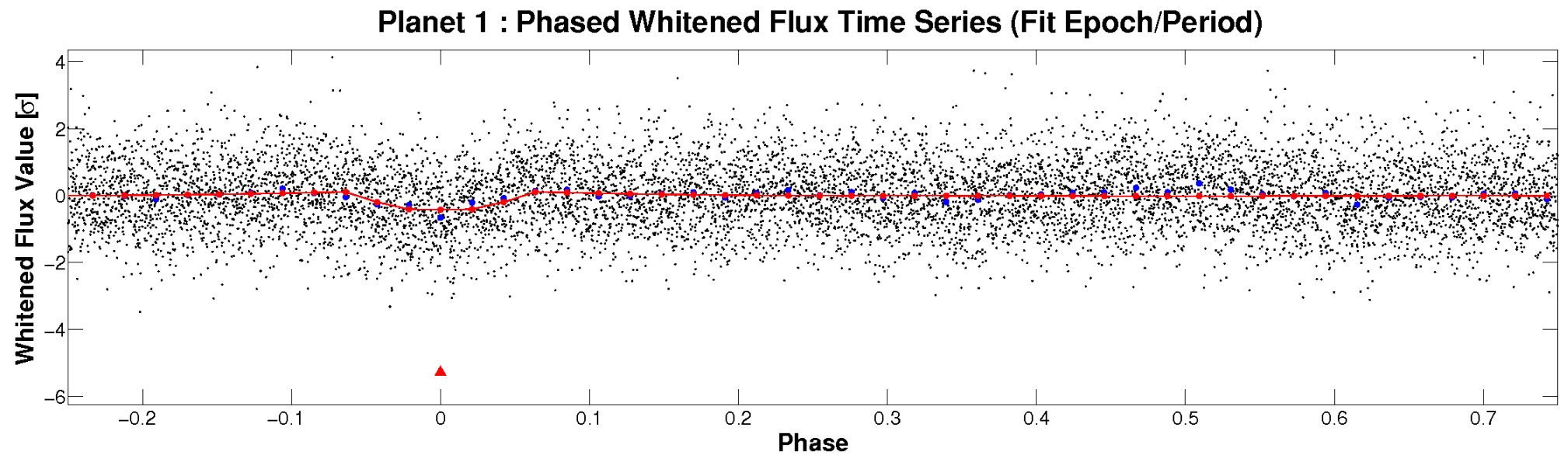
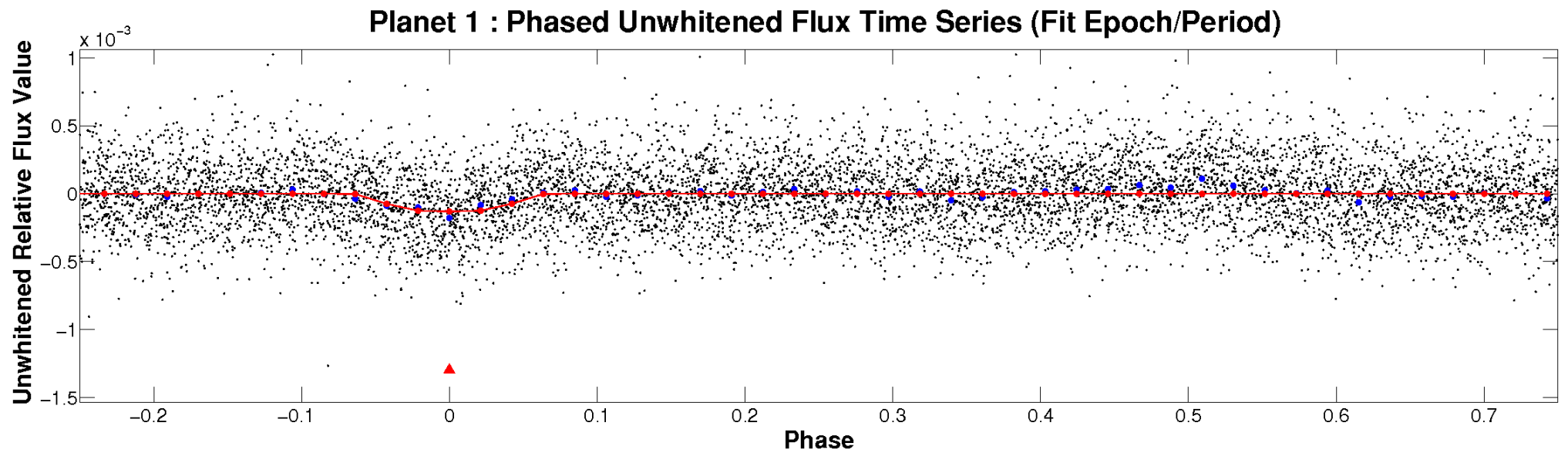


ALT Odd/Even

TCE 005471623-01

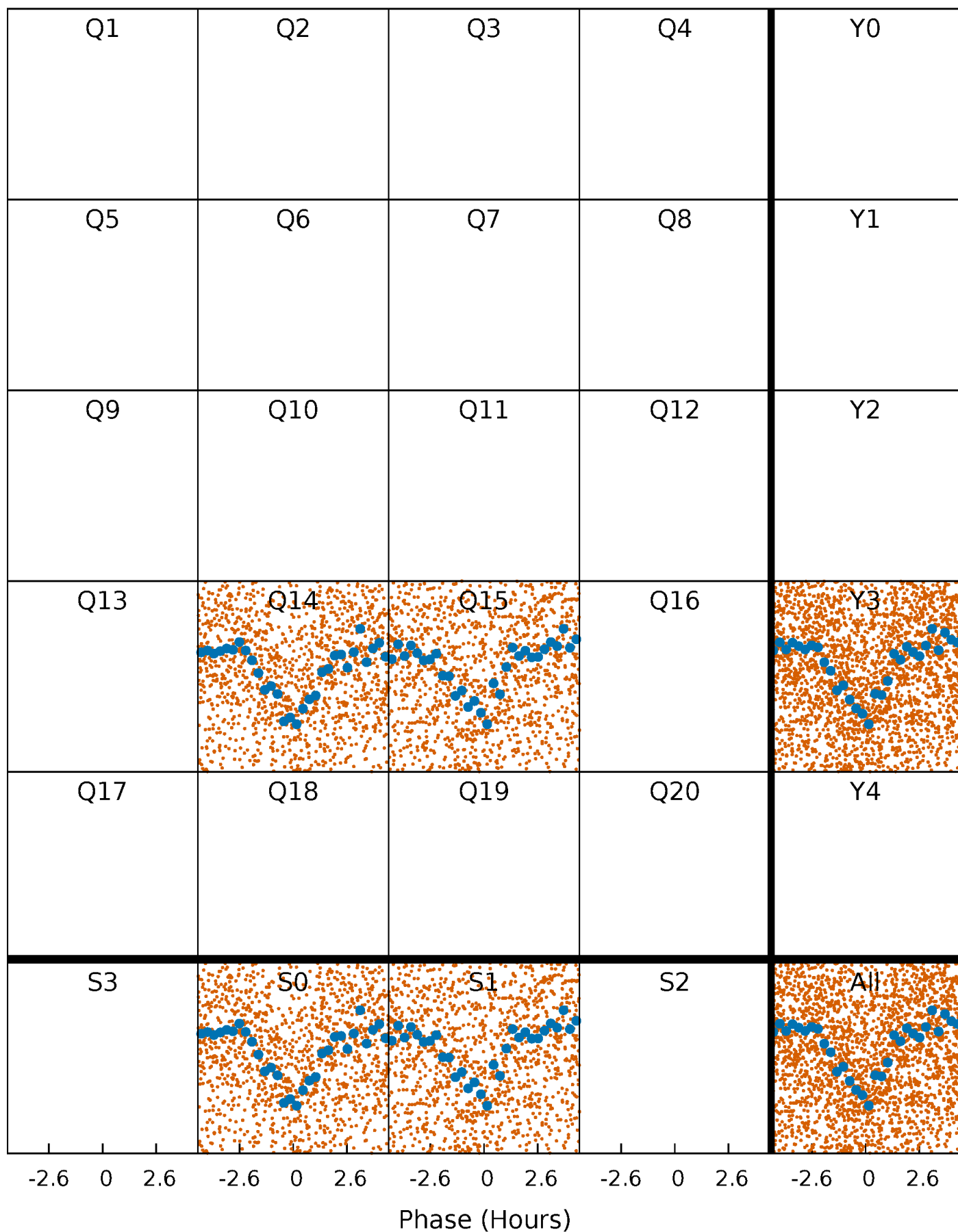


Non-Whitened Vs. Whitened Light Curve



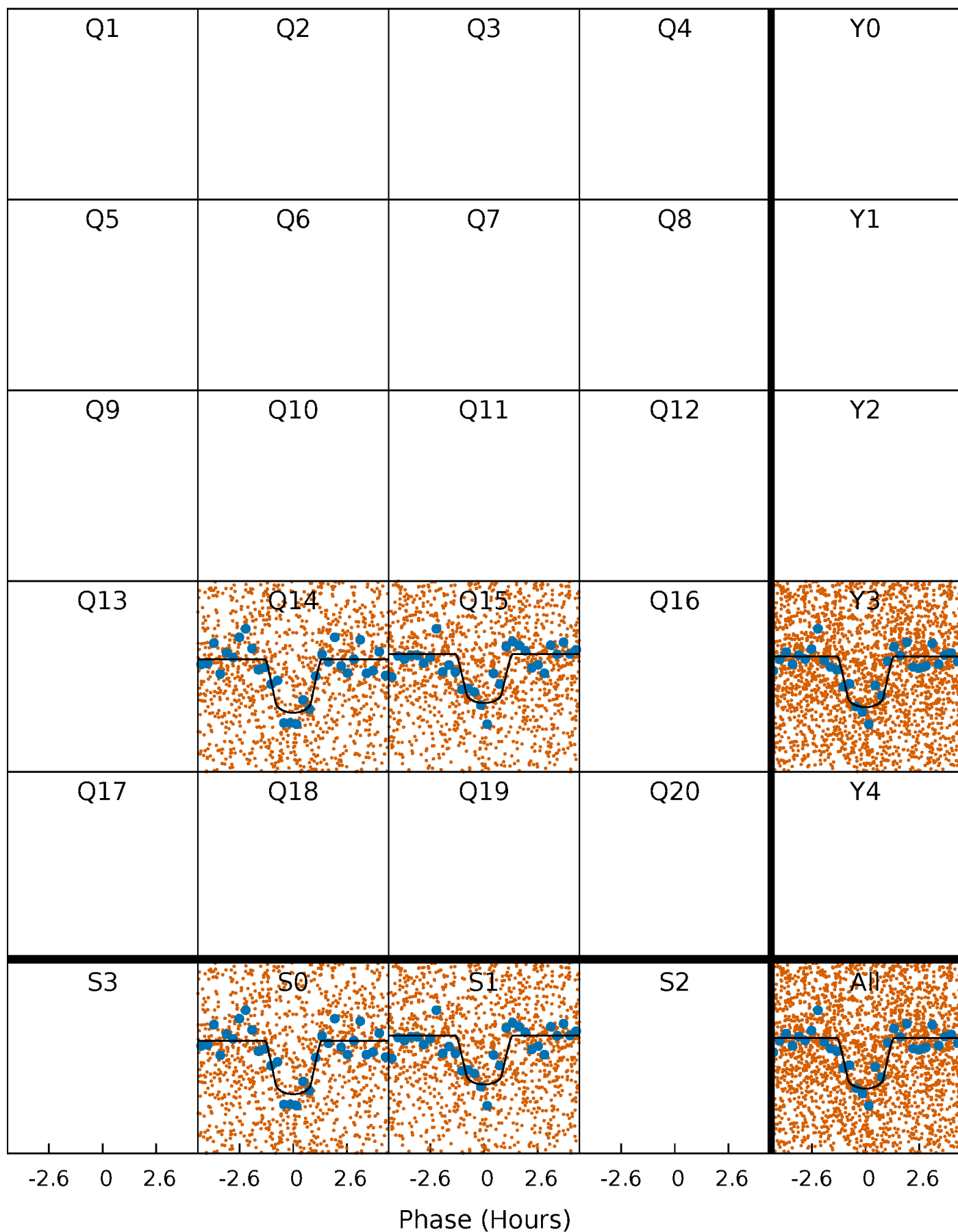
PDC Quarter-Phased Transit Curves

TCE 005471623-01 P= 0.963008 Days $T_0=131.982703$ (BKJD)



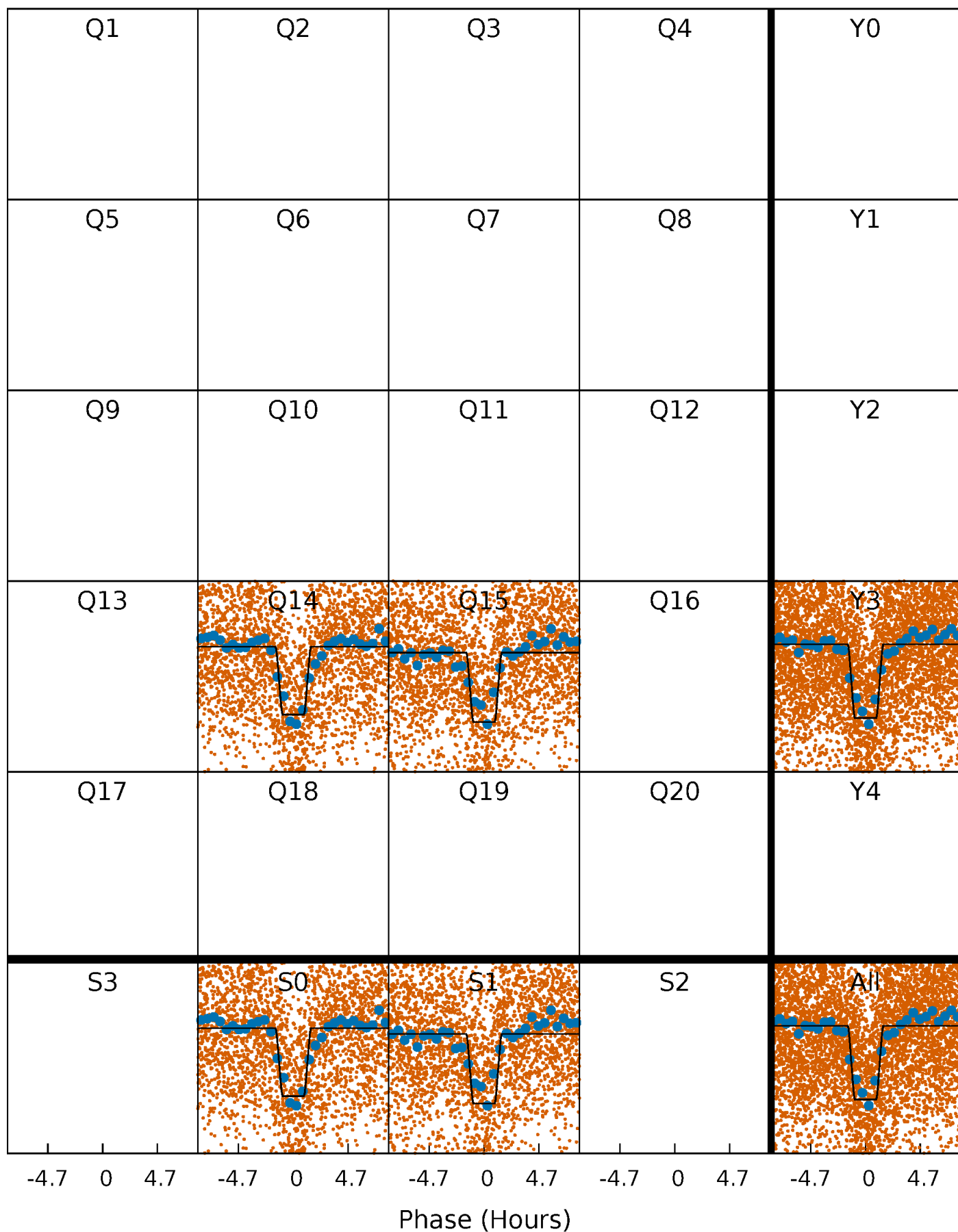
DV Quarter-Phased Transit Curves

TCE 005471623-01 P= 0.963008 Days $T_0=131.982703$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

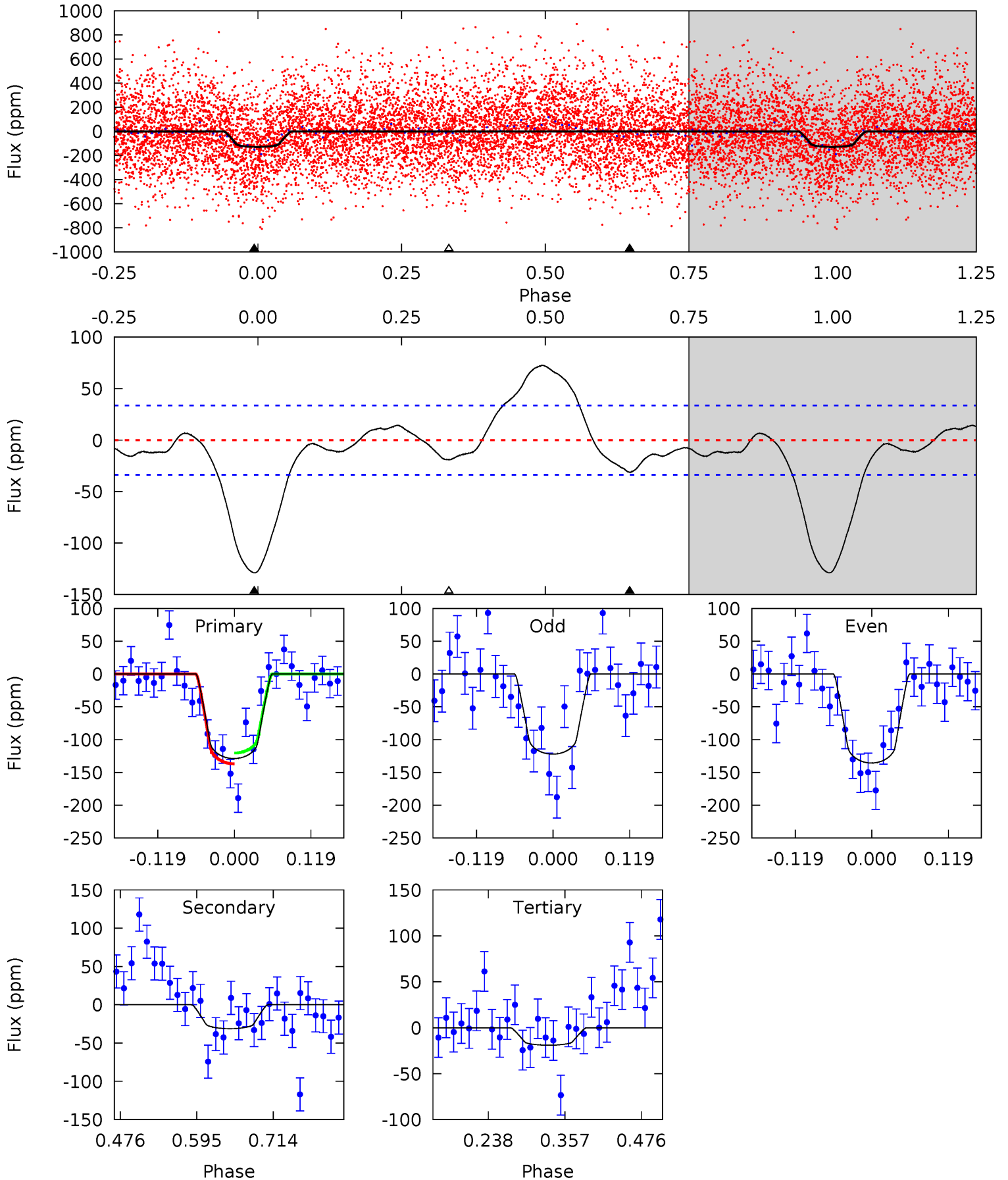
TCE 005471623-01 P= 0.962954 Days $T_0=132.042694$ (BKJD)



DV Model-Shift Uniqueness Test

005471623-01, P = 0.963008 Days, E = 131.982703 Days

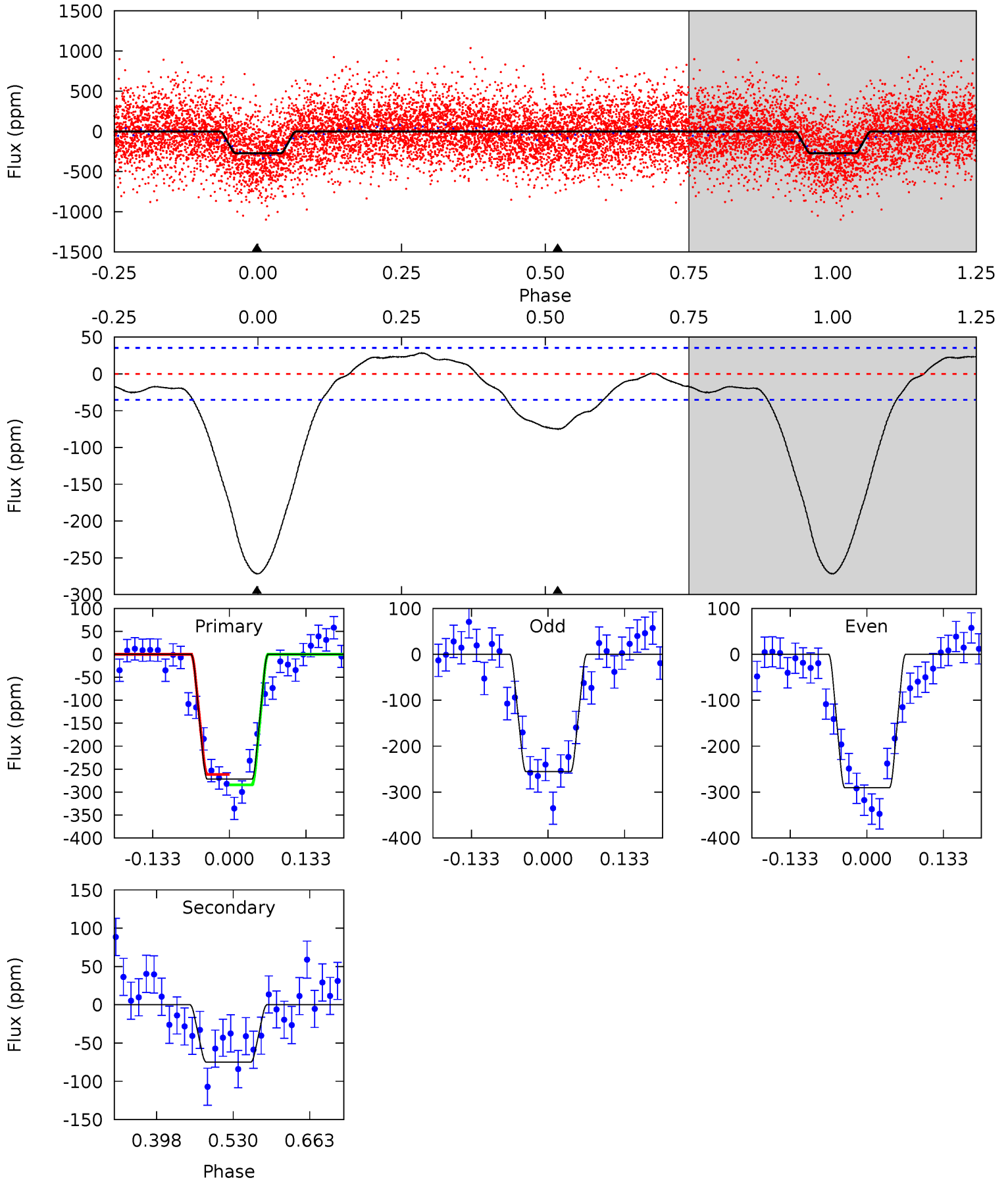
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	4.19	2.56	0	4.53	1.56	3.64	14.8	17.3	1.64	4.19	0.91	1.09	0.36	1.10



Alt Model-Shift Uniqueness Test

005471623-01, P = 0.962954 Days, E = 132.042694 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.7	9.56	0	0	4.51	1.50	2.27	34.7	34.7	9.56	9.56	2.23	1.05	0.09	1.47



Stellar Parameters For KIC 005471623

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6794^{+190}_{-286}	$4.067^{+0.220}_{-0.180}$	$-0.160^{+0.250}_{-0.300}$	$1.808^{+0.542}_{-0.542}$	$1.394^{+0.202}_{-0.269}$	$0.332^{+0.443}_{-0.168}$
	+3%/-4%	+5%/-4%	+156%/-188%	+30%/-30%	+14%/-19%	+133%/-51%
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 005471623-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 7	$2.37^{+1.15}_{-1.03}$	3838^{+309}_{-321}	4475^{+1326}_{-884}	$1.349^{+2.833}_{-0.764}$
Alt.	-75 ± 8	$3.42^{+1.24}_{-1.09}$	3819^{+305}_{-292}	4608^{+869}_{-623}	$1.583^{+1.877}_{-0.731}$

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

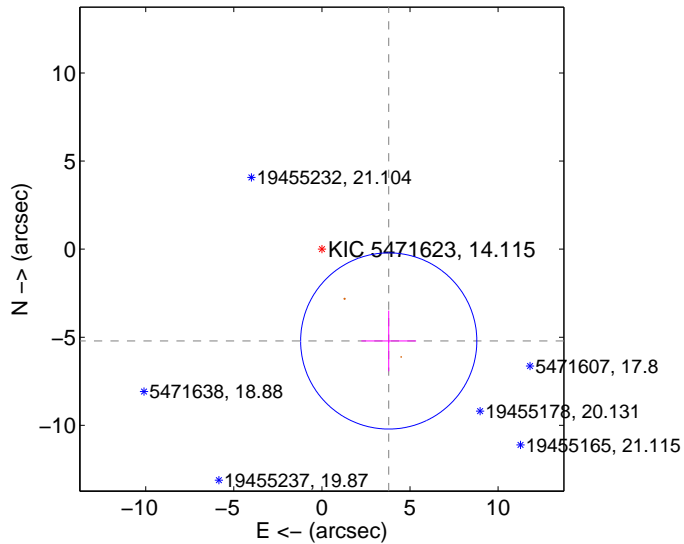
Supplemental centroid analysis for 005471623-01. Kepler magnitude: 14.12. Transit SNR 10.77

There are 0 quarters with good PRF difference image offsets

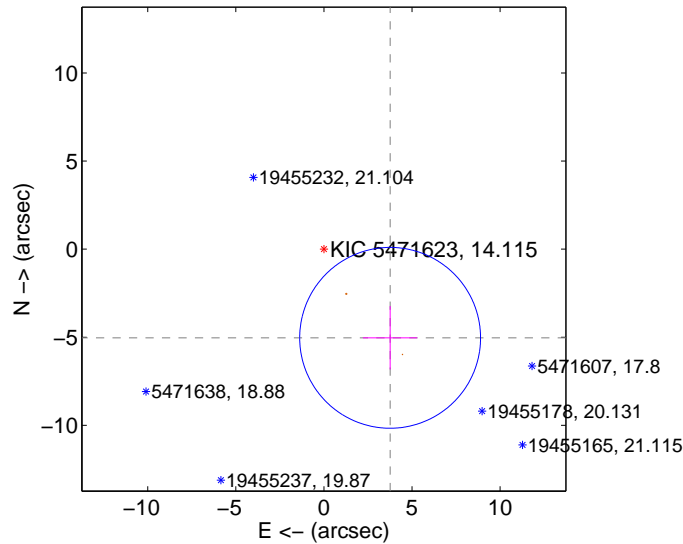
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.446 ± 1.667	3.87	-3.794 ± 1.555	-5.212 ± 1.724
PRF-fit source offset from KIC position	6.282 ± 1.711	3.67	-3.759 ± 1.546	-5.034 ± 1.797
photometric centroid source offset	2.58 ± 0.88	2.93	-2.23 ± 0.87	-1.29 ± 0.92

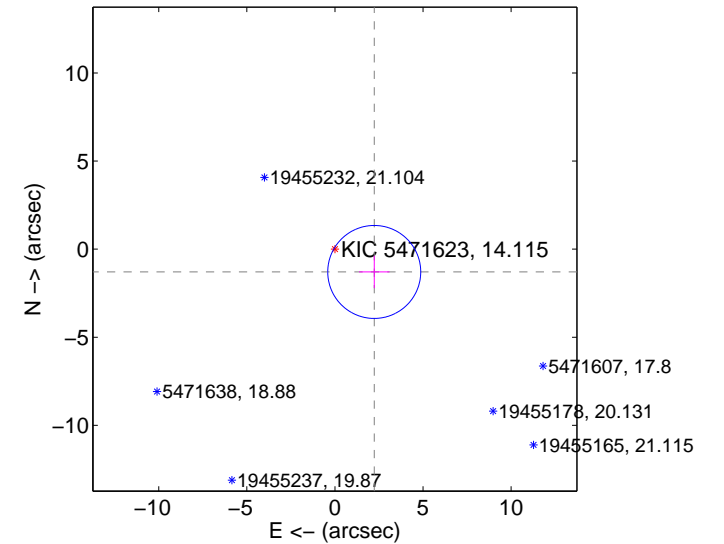
offset from difference PRF-fit to OOT PRF-fit



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.



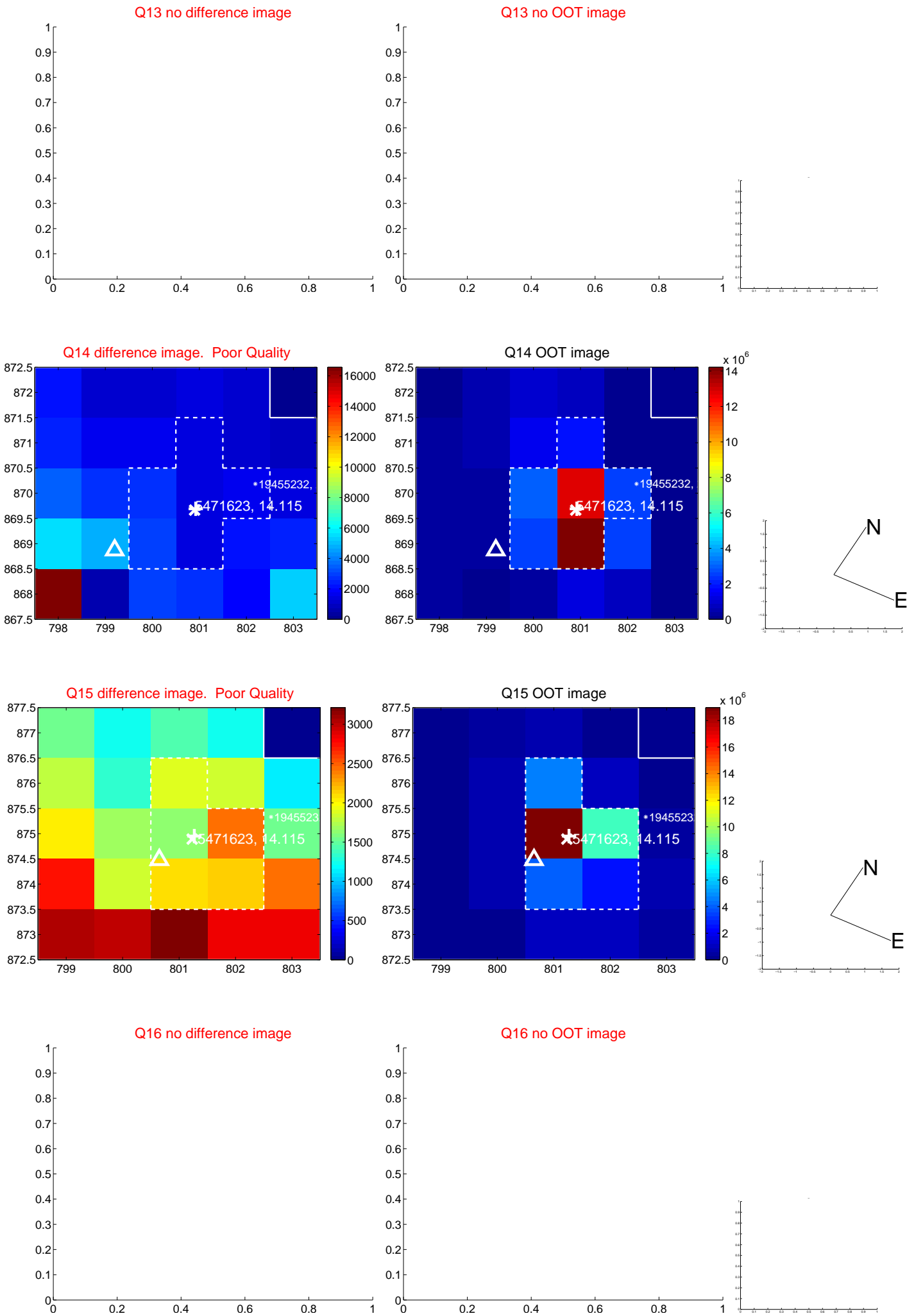
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



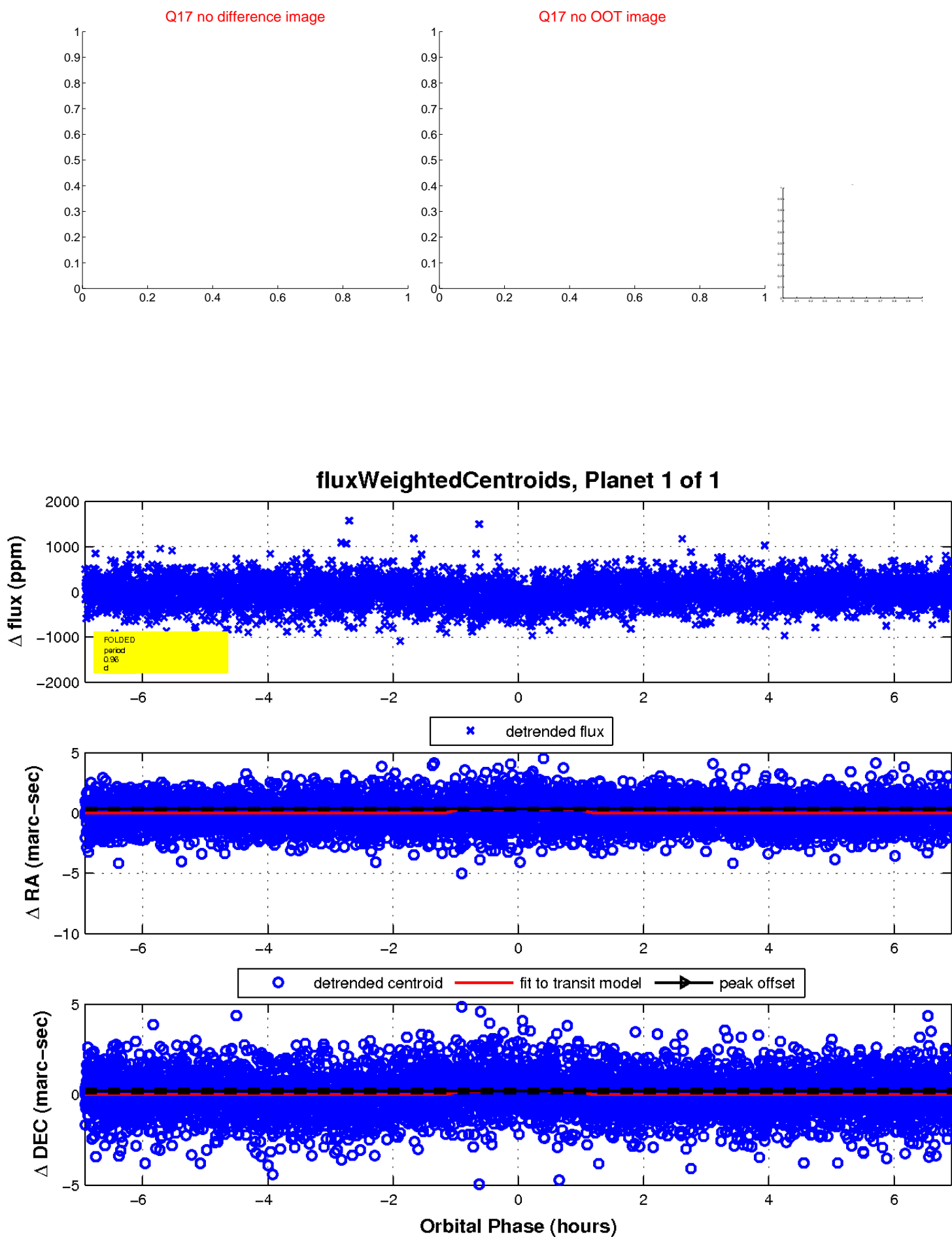
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

