

KIC 010405244

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})
010405244-01	OBS	No	372.885203	495.630390	1164.0	34.551	7.5	7.5	0.80	5345	5.40	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010405244-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

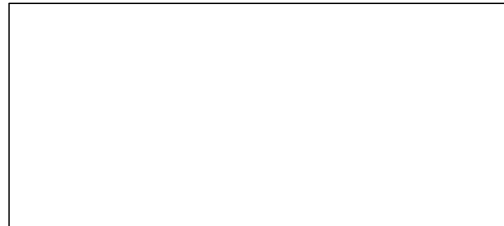
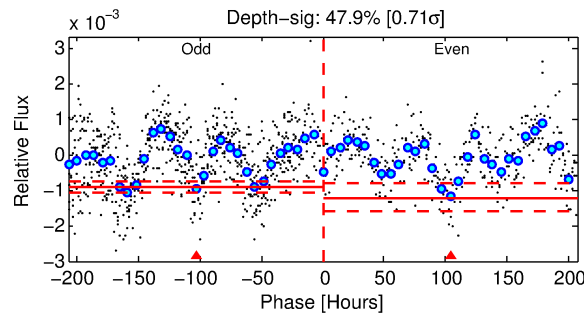
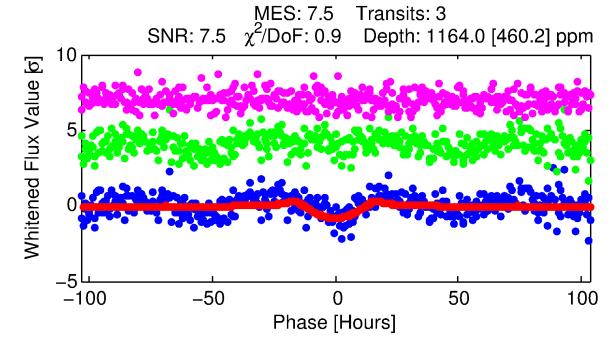
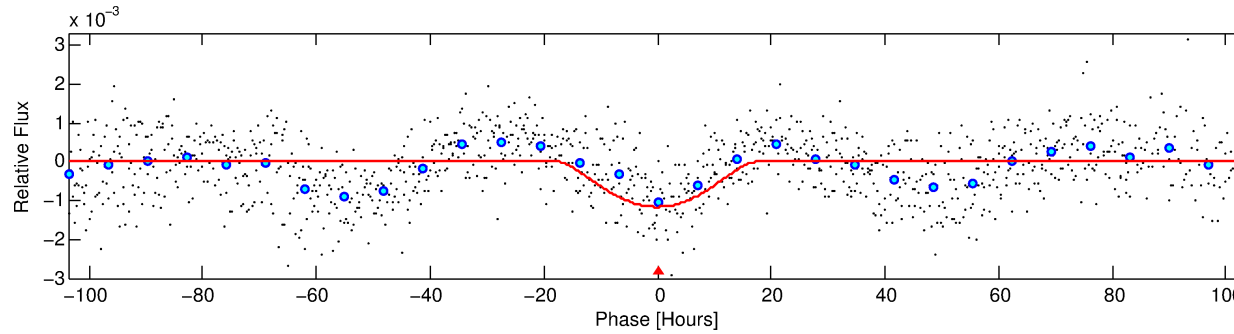
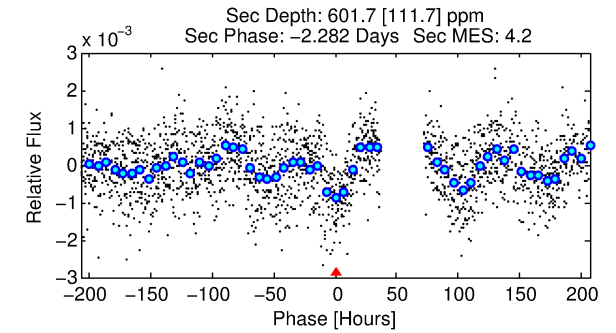
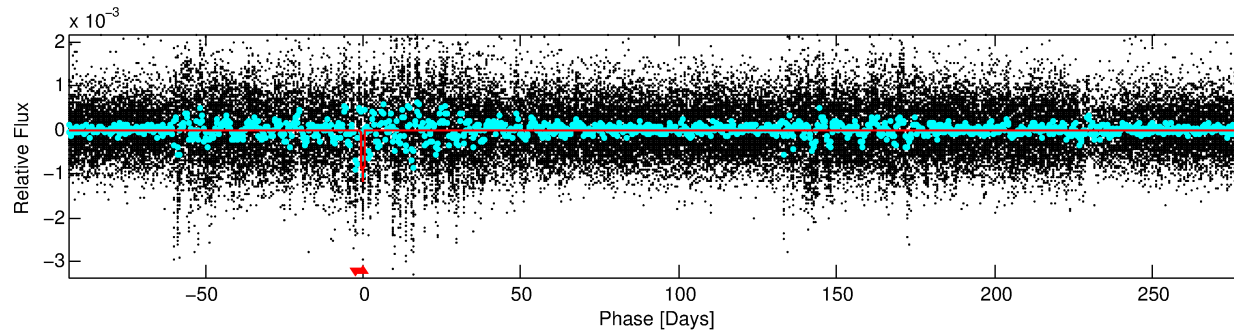
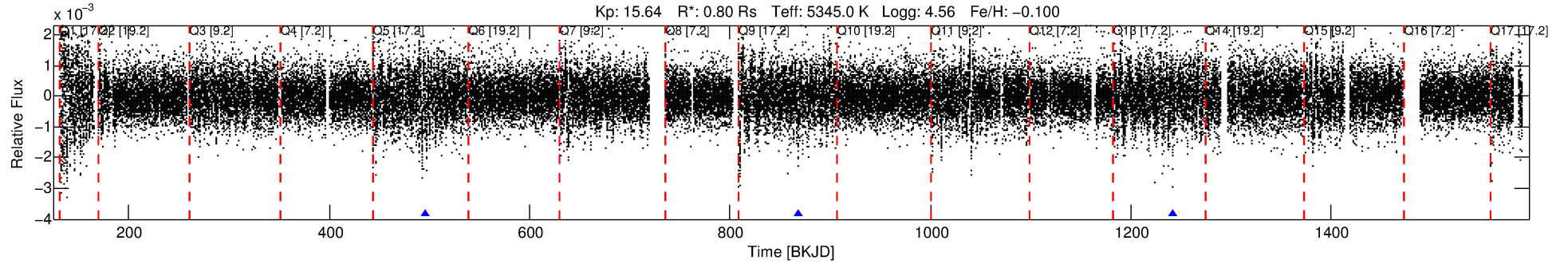
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010405244-01

No Significant Match Found

DV One-Page Summary

KIC: 10405244 Candidate: 1 of 1 Period: 372.885 d



DV Fit Results:

Period = 372.88520 [0.04898] d
Epoch = 495.6304 [0.0673] BKJD
Rp/R* = 0.0619 [0.1622]
a/R* = 29.48 [17.47]
b = 1.00 [0.22]
Seff = 0.51 [0.12]
Teq = 215 [12] K
Rp = 5.40 [14.18] Re
a = 0.9589 [0.1377] AU
Ag = 10452.26 [54855.91] [0.19σ]
Teffp = 3365 [4413] K [0.71σ]

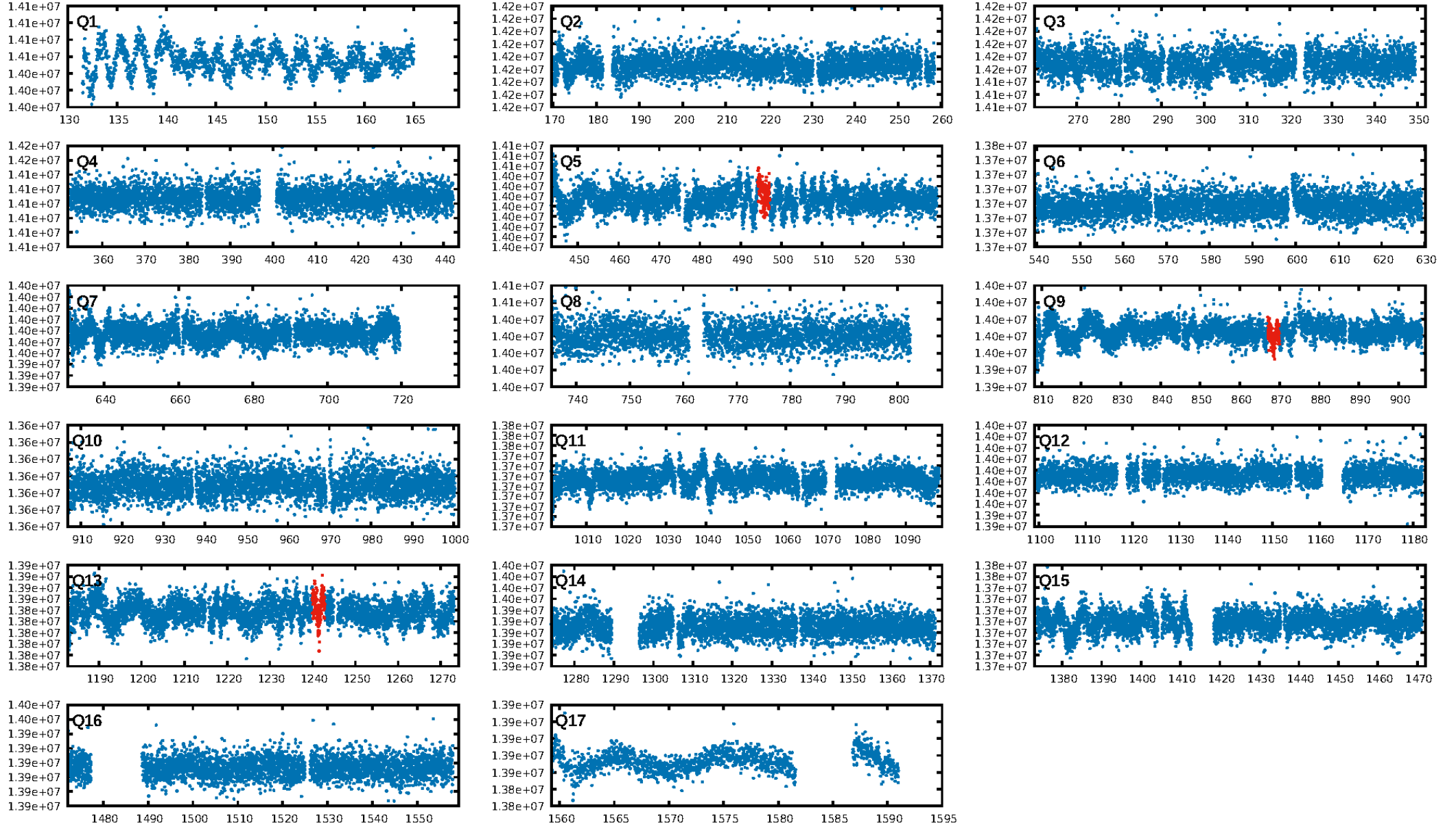
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.6%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 3.46e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.9026
Centroid-sig: 5.1%
Centroid-so: 4.330 arcsec [1.82σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

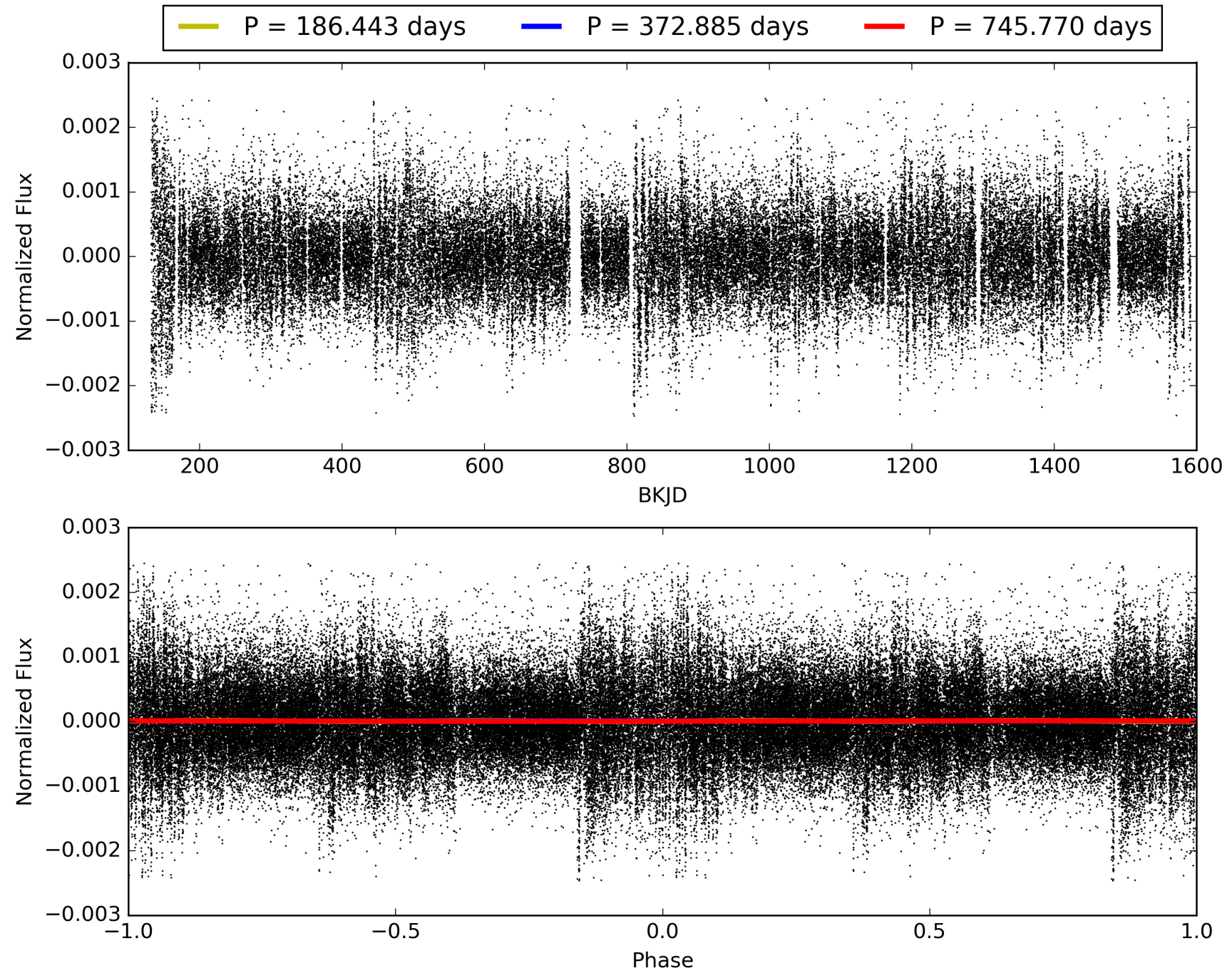
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:29:42 Z

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

TCE 010405244-01, PDC Light Curves

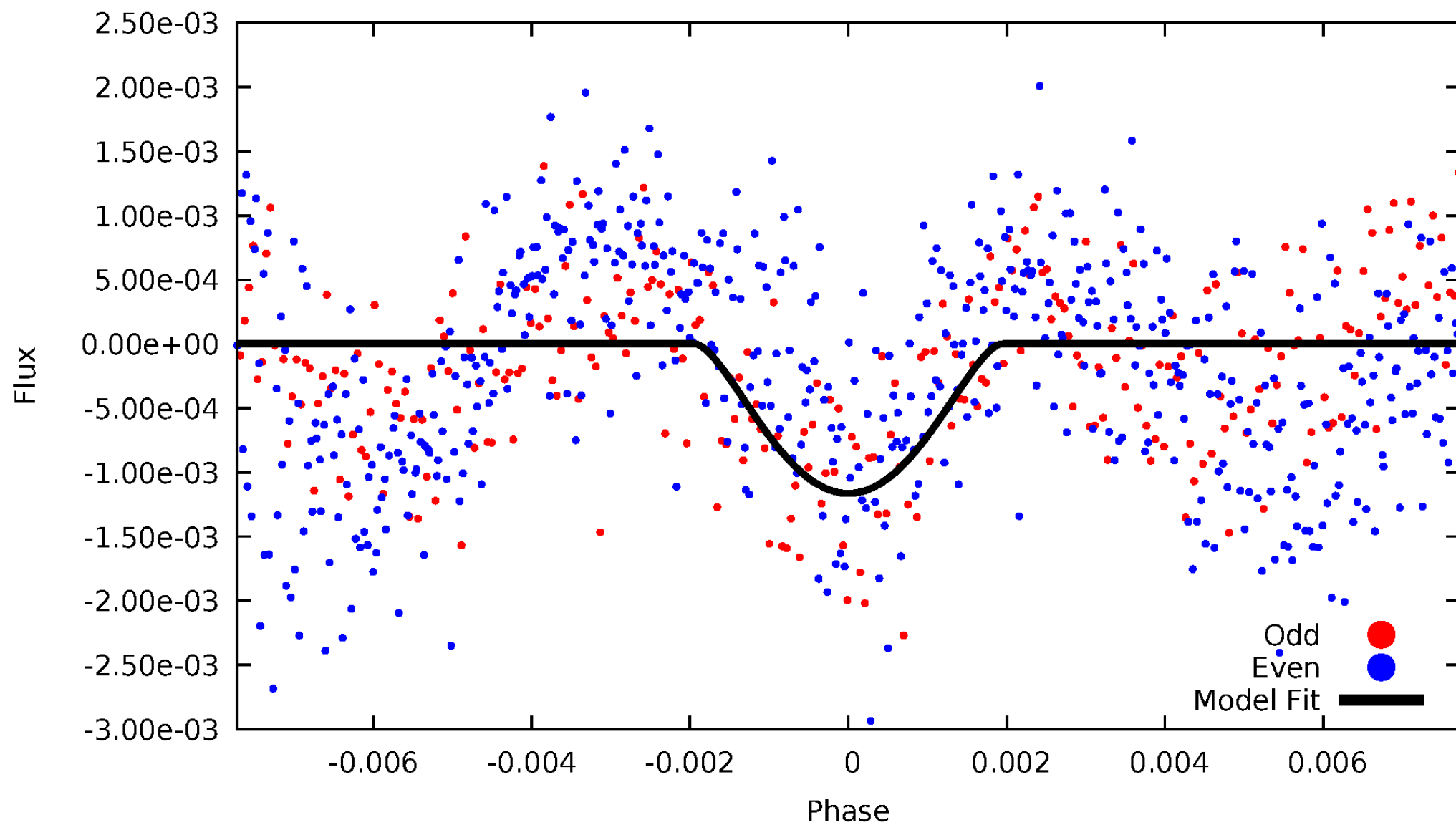


TCE 010405244-01



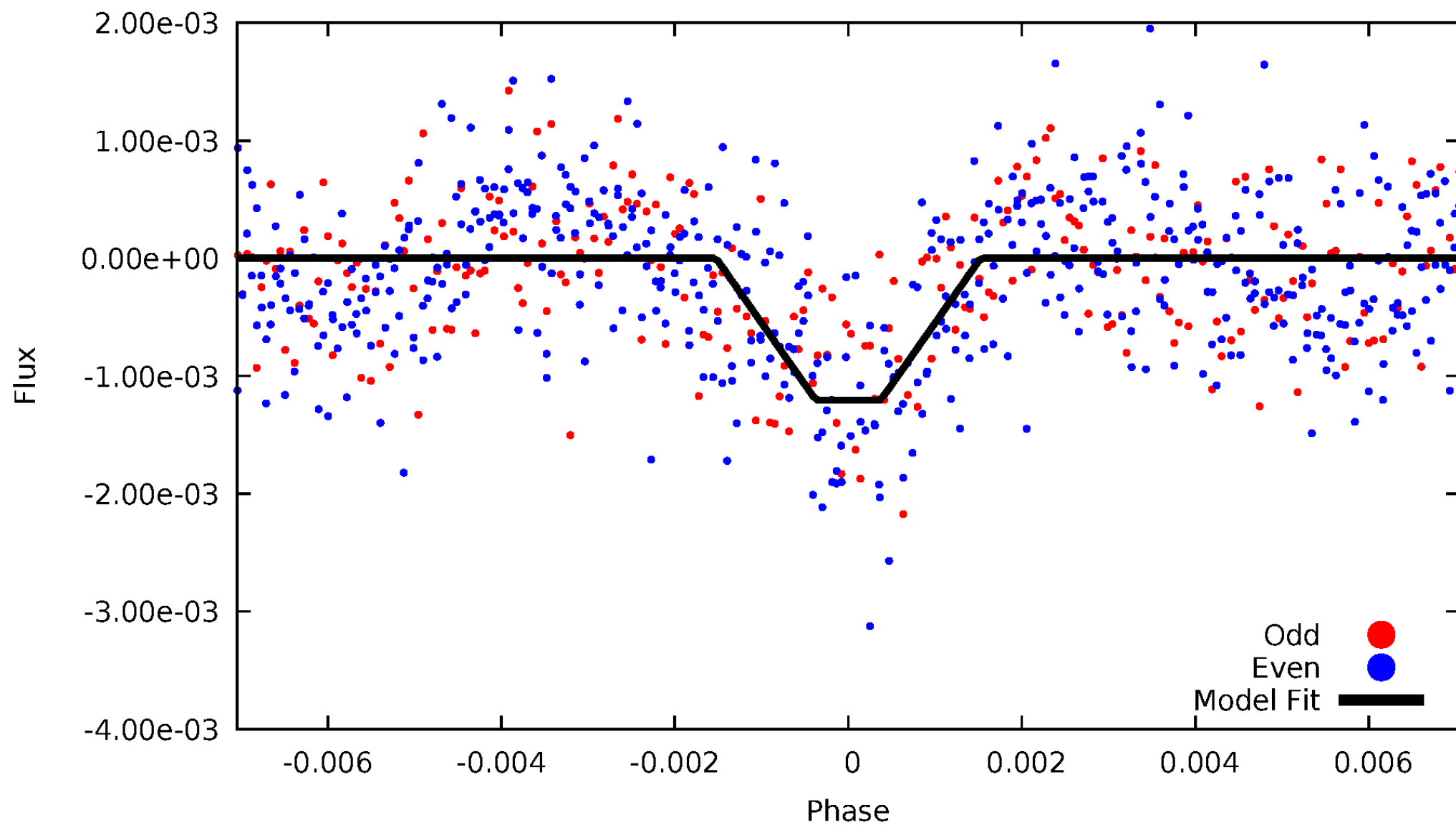
DV Odd/Even

TCE 010405244-01



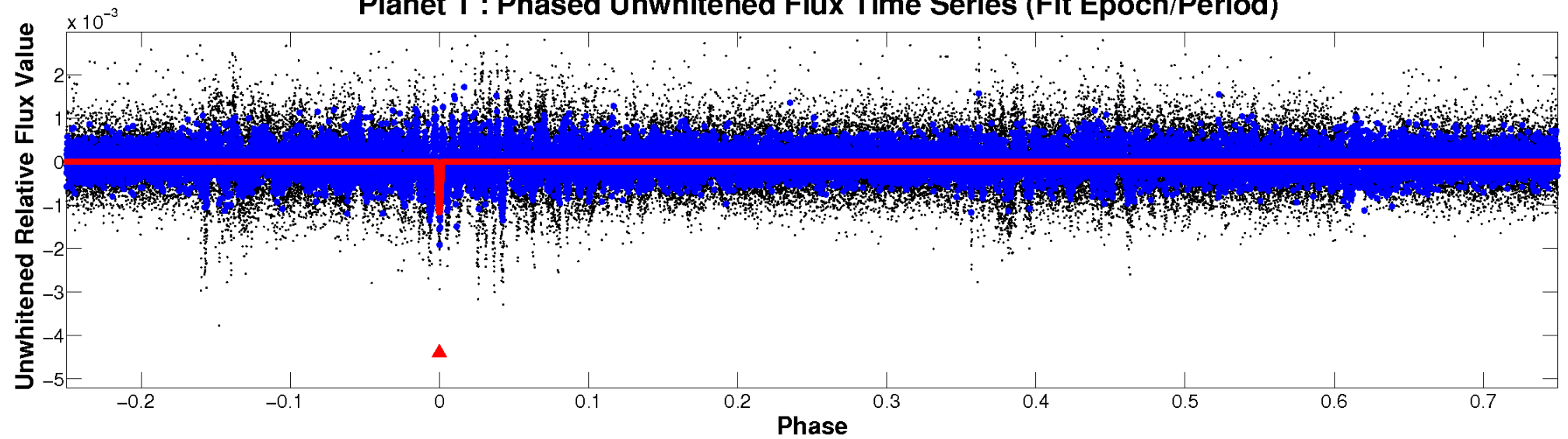
ALT Odd/Even

TCE 010405244-01

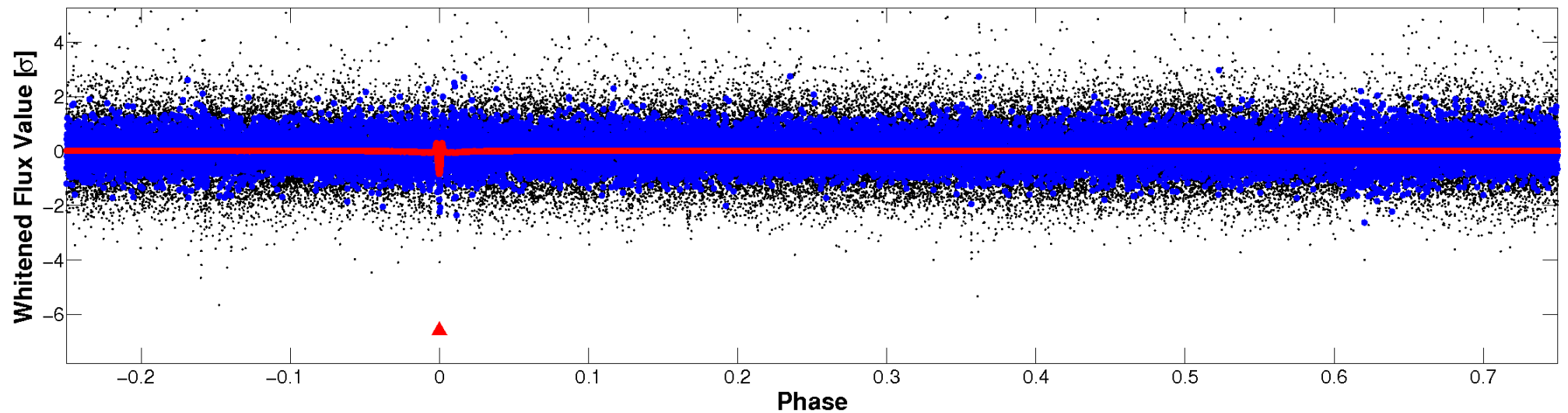


Non-Whitened Vs. Whitened Light Curve

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

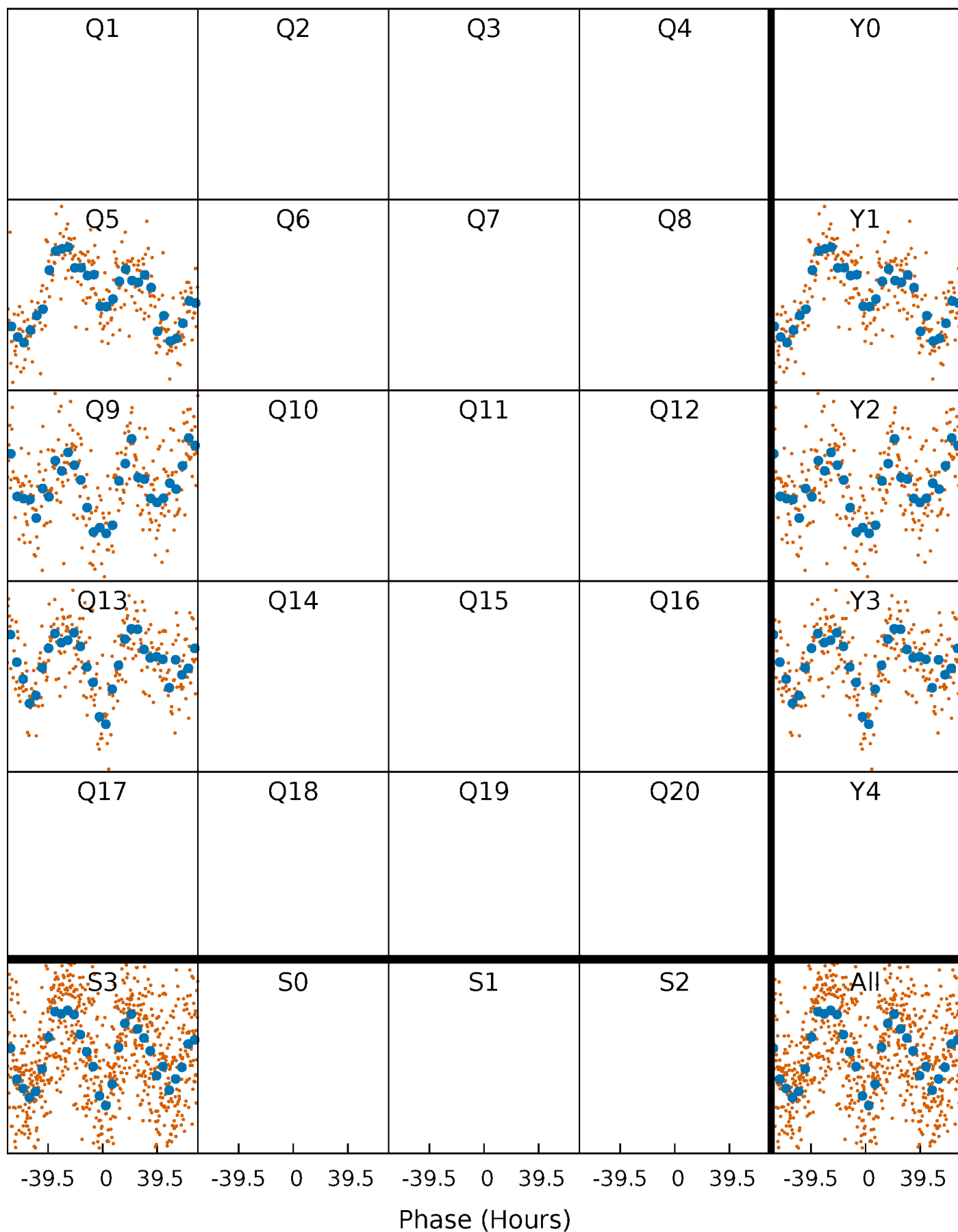


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



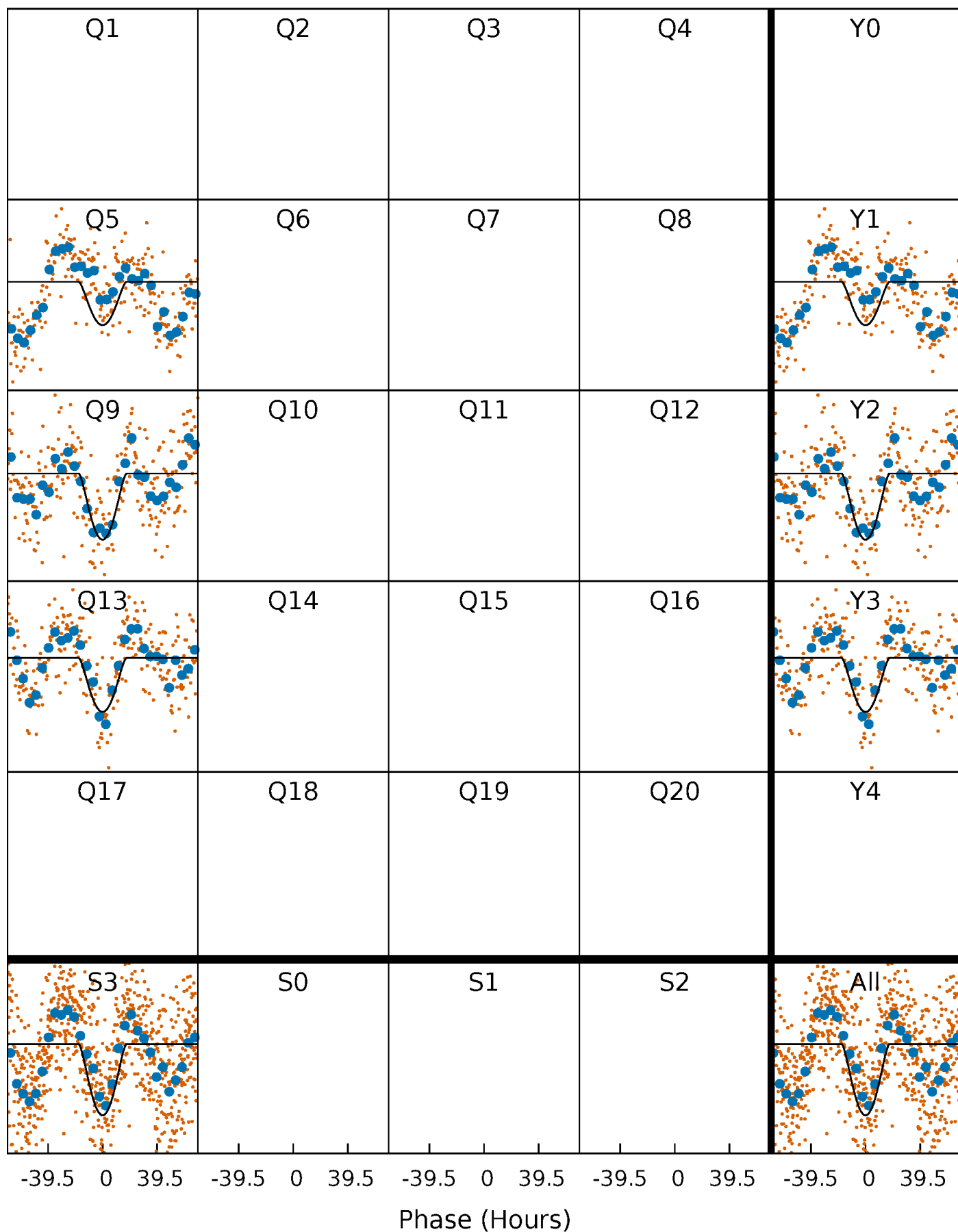
PDC Quarter-Phased Transit Curves

TCE 010405244-01 P=372.885202 Days $T_0=495.630390$ (BKJD)



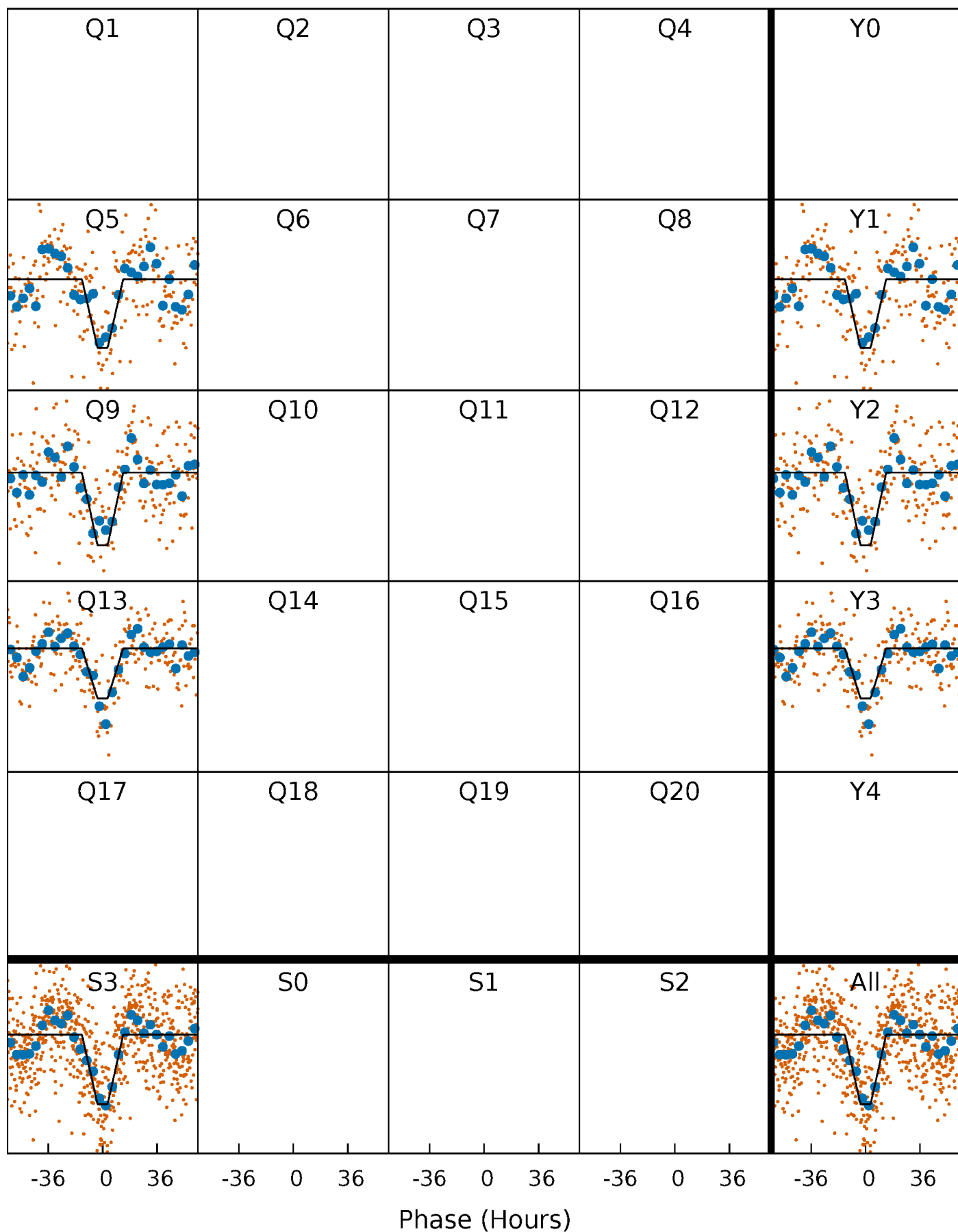
DV Quarter-Phased Transit Curves

TCE 010405244-01 P=372.885202 Days $T_0=495.630390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

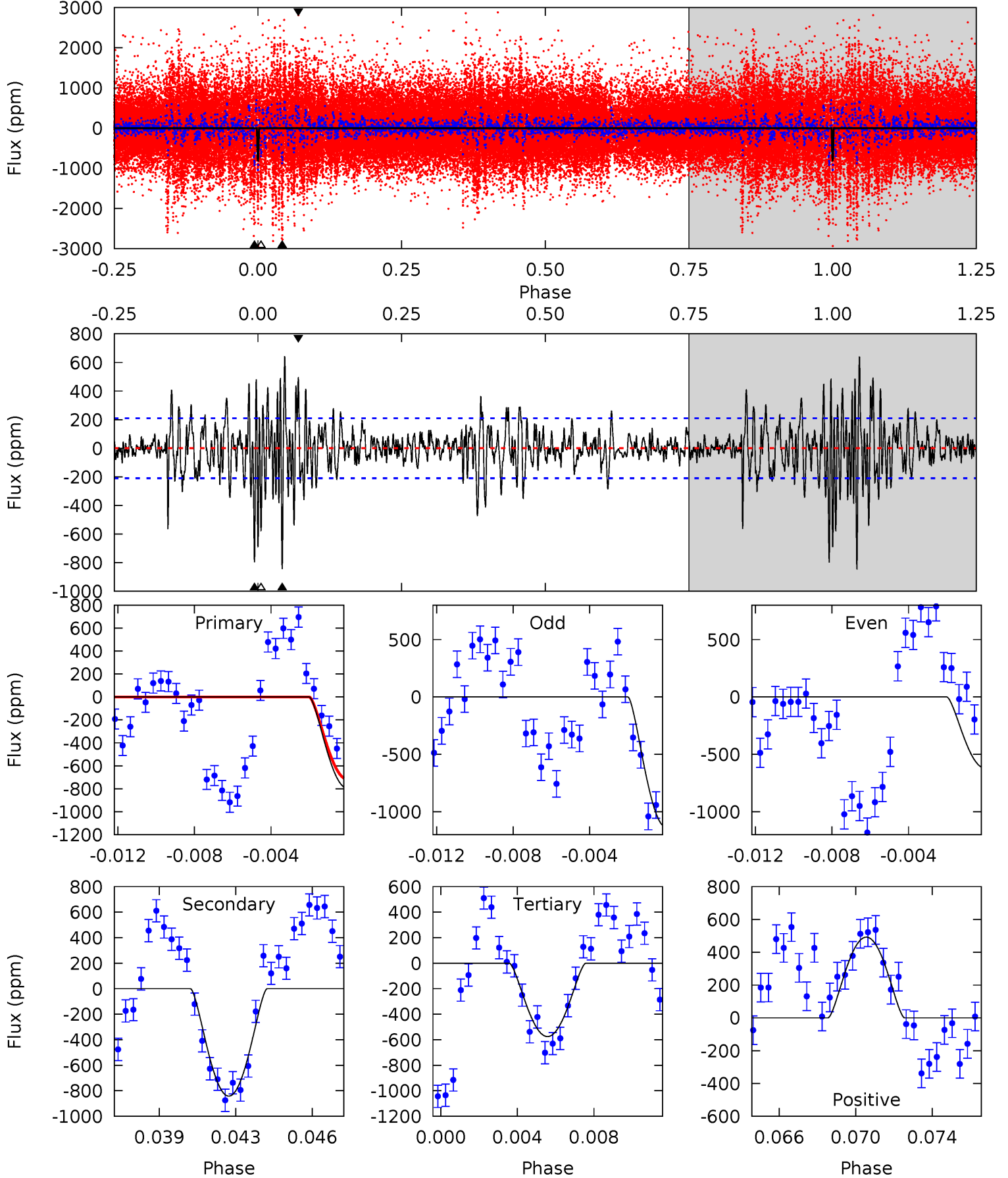
TCE 010405244-01 P=372.871603 Days $T_0=495.669224$ (BKJD)



DV Model-Shift Uniqueness Test

010405244-01, P = 372.885202 Days, E = 122.745188 Days

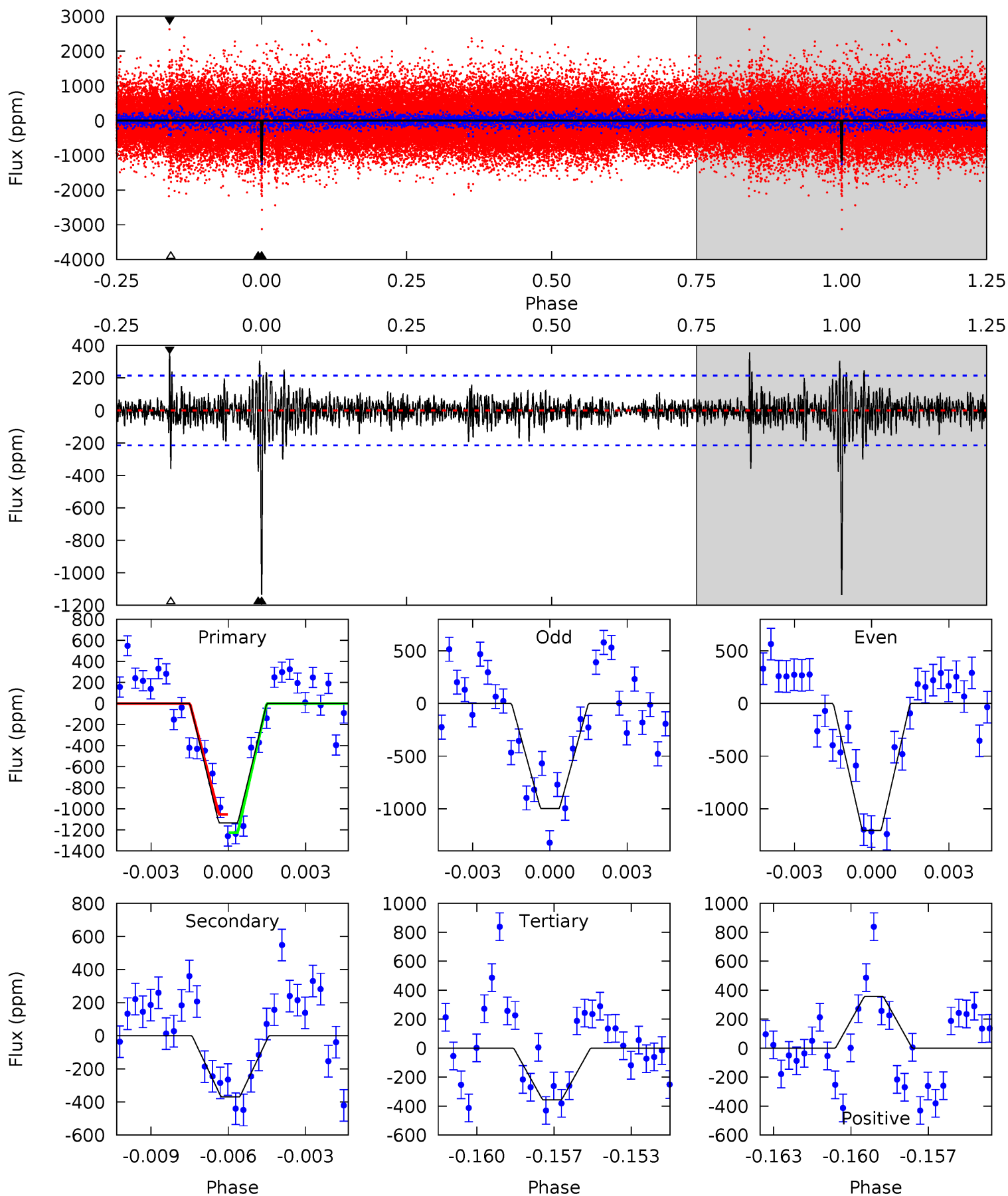
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	20.9	14.3	12.2	5.21	2.89	3.29	5.48	7.55	6.62	8.69	6.02	0.75	0.43	2.06



Alt Model-Shift Uniqueness Test

010405244-01, P = 372.871603 Days, E = 122.797621 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	9.01	8.72	8.72	5.25	2.96	1.44	19.0	19.0	0.29	0.29	2.42	1.14	0.24	2.12



Stellar Parameters For KIC 010405244

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5345^{+159}_{-143}	$4.560^{+0.048}_{-0.104}$	$-0.100^{+0.300}_{-0.300}$	$0.799^{+0.143}_{-0.077}$	$0.845^{+0.087}_{-0.087}$	$2.334^{+0.537}_{-0.743}$
	+3%/-3%	+1%/-2%	+300%/-300%	+18%/-10%	+10%/-10%	+23%/-32%
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 010405244-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-842 ± 40	$12.34^{+12.30}_{-8.64}$	304^{+14}_{-12}	3083^{+1566}_{-521}	2818^{+28266}_{-2109}
Alt.	-369 ± 41	$10.93^{+11.47}_{-7.55}$	304^{+14}_{-12}	2836^{+1230}_{-472}	1537^{+15034}_{-1164}

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

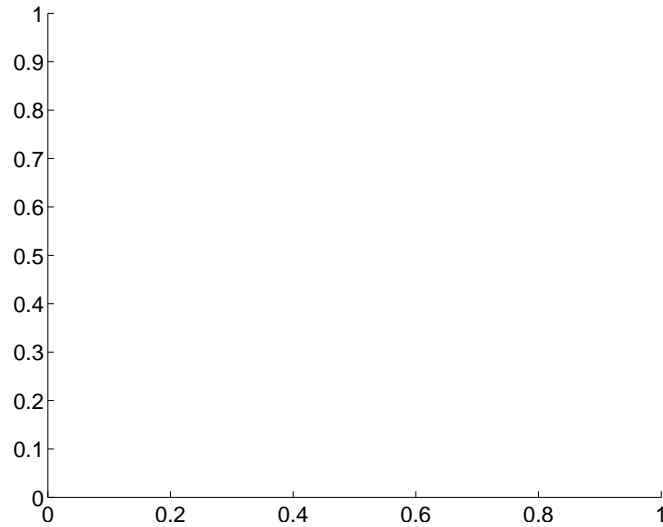
Supplemental centroid analysis for 010405244-01. Kepler magnitude: 15.64. Transit SNR 7.46

There are 0 quarters with good PRF difference image offsets

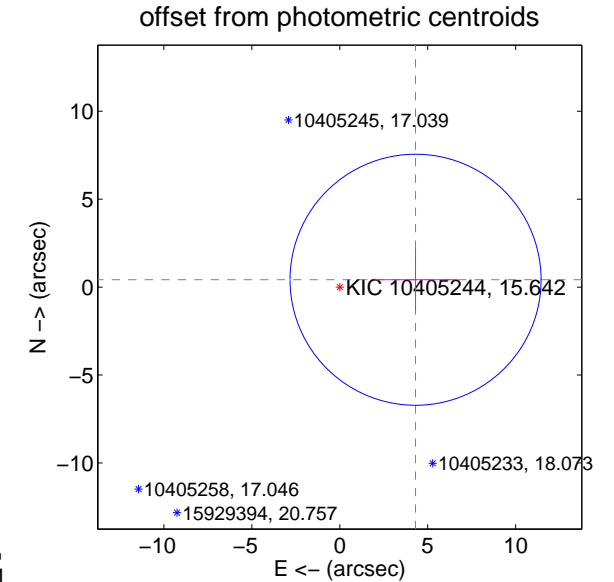
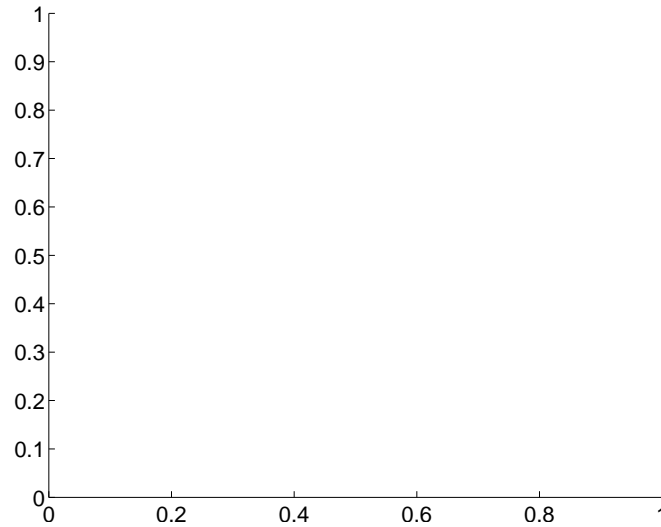
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	4.33 ± 2.38	1.82	-4.31 ± 2.38	0.42 ± 1.77

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

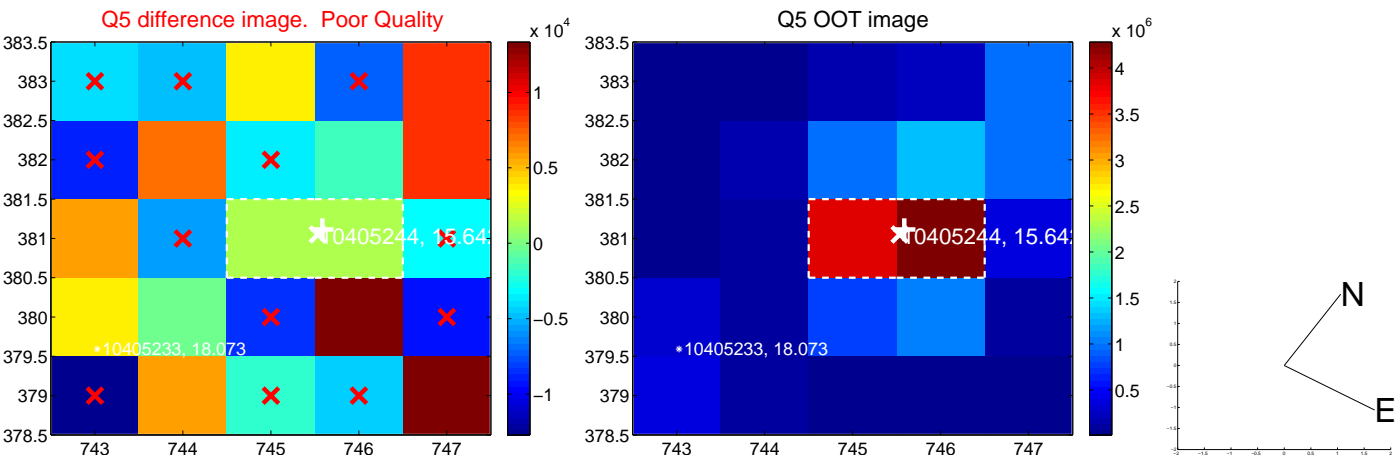


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

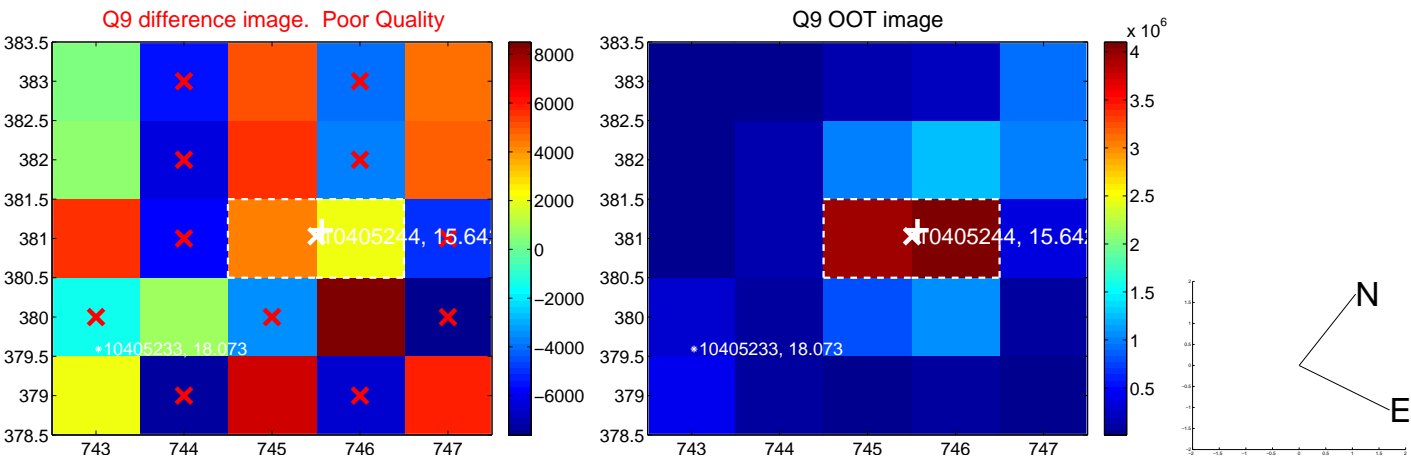
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



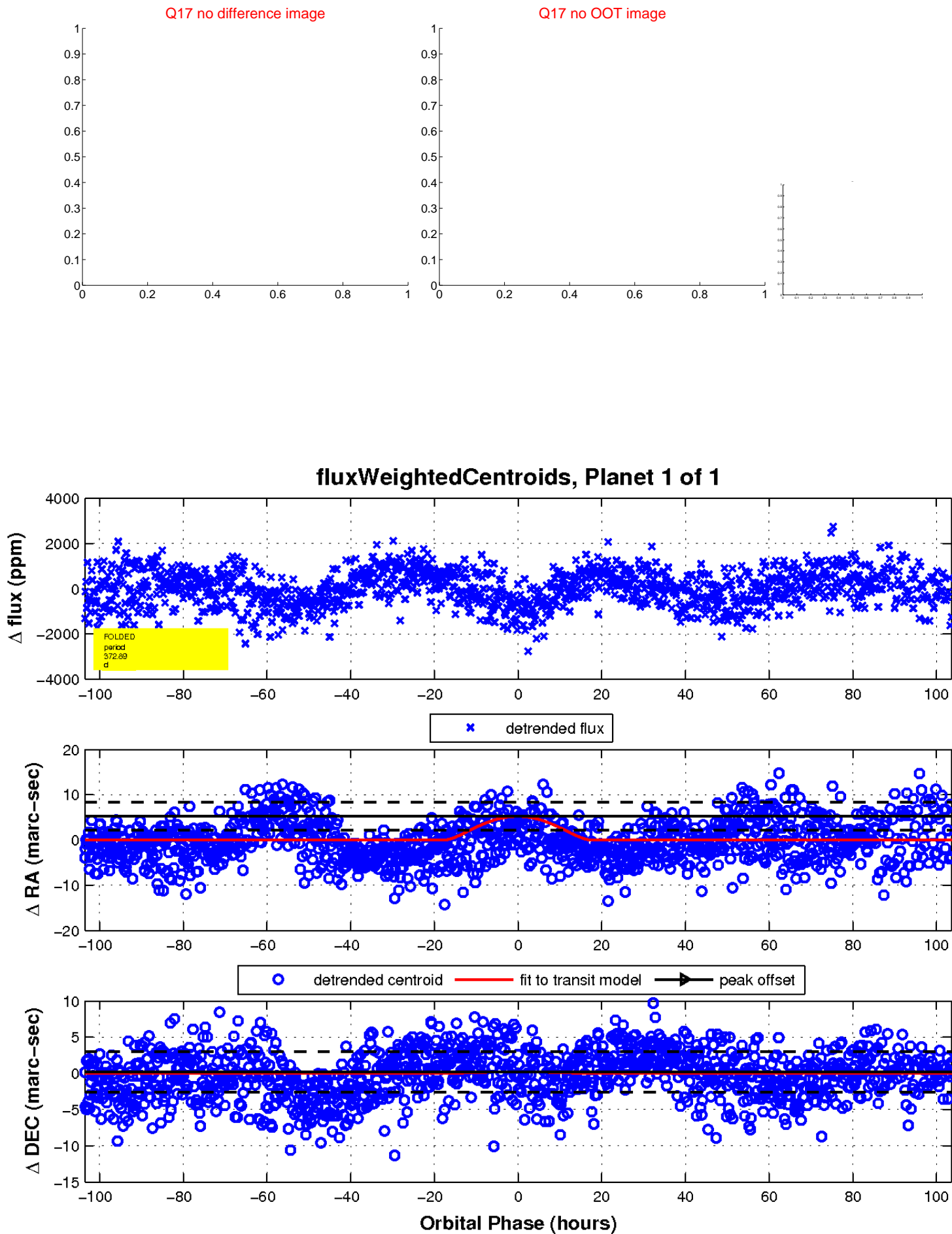
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

