

KIC 010473003

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})
010473003-02	OBS	No	637.029377	174.944424	1431.9	54.318	47.1	33.2	1.58	6370	11.20	1.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010473003-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_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.

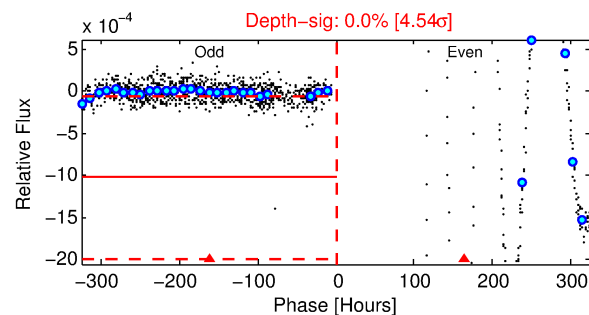
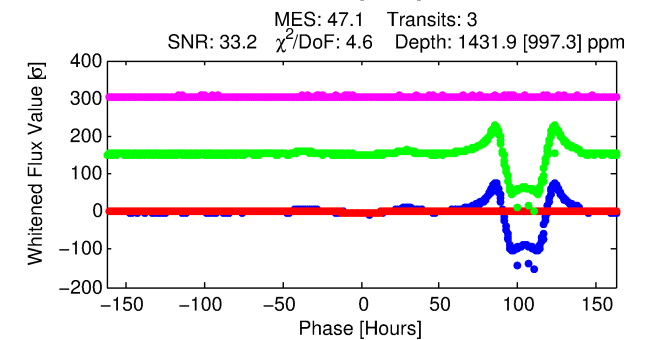
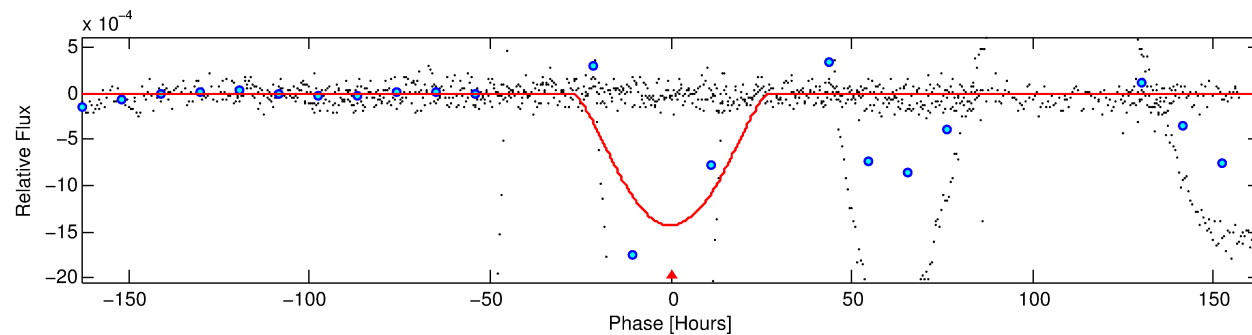
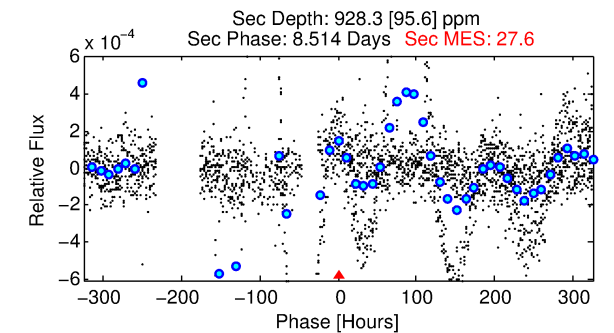
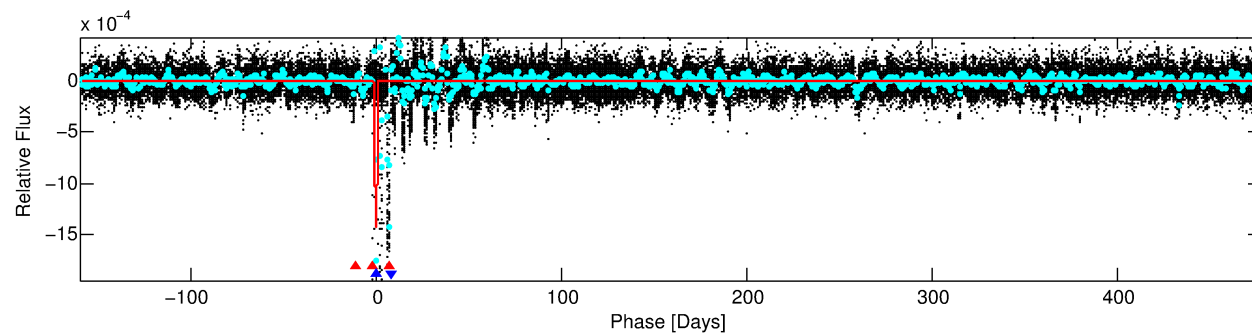
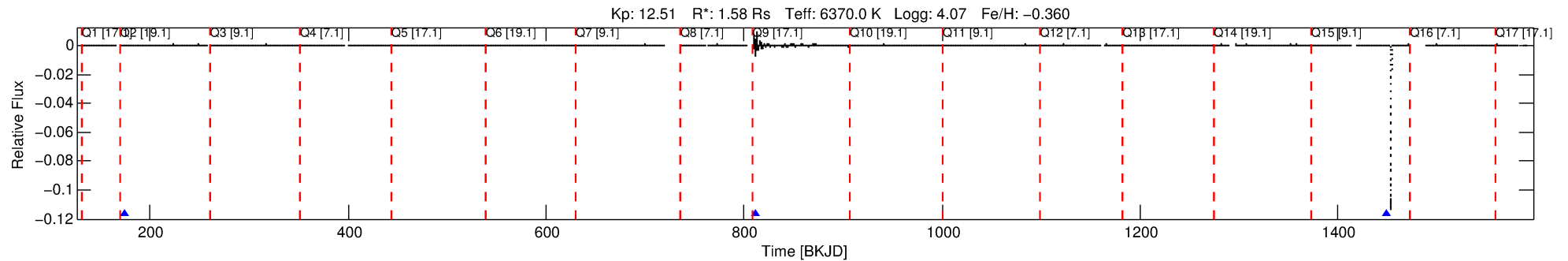
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010473003-02

No Significant Match Found

DV One-Page Summary

KIC: 10473003 Candidate: 2 of 2 Period: 637.029 d



DV Fit Results:

Period = 637.02938 [0.09080] d
Epoch = 174.9444 [0.1188] BKJD
Rp/R* = 0.0648 [0.1706]
a/R* = 32.80 [19.30]
b = 1.00 [0.22]
Seff = 1.67 [0.70]
Teq = 290 [30] K
Rp = 11.20 [29.62] Re
a = 1.4864 [0.3756] AU
Ag = 8998.80 [47520.15] [0.19σ]
Teffp = 4367 [5750] K [0.71σ]

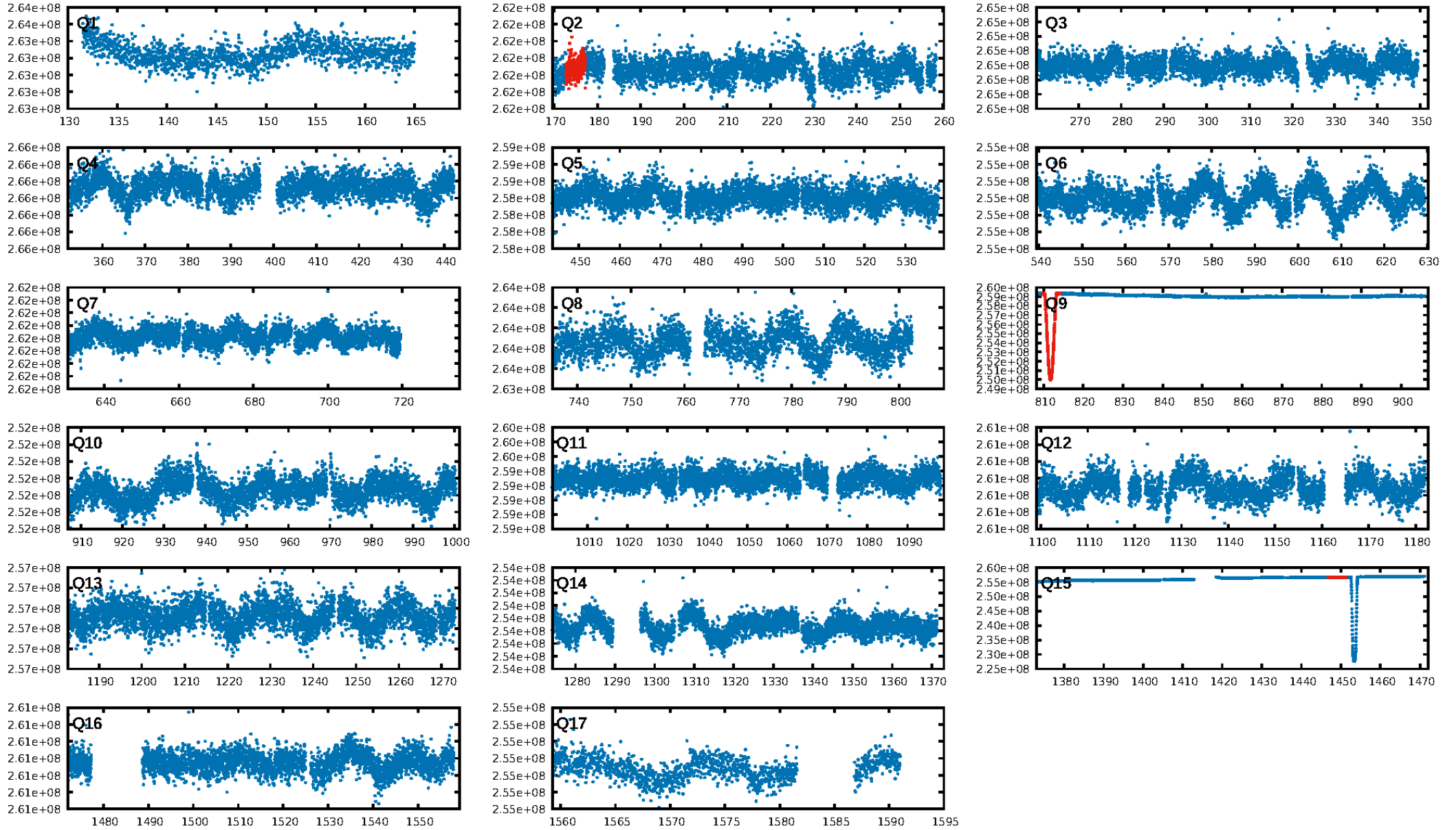
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.06σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 6.42e-273
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.961
Centroid-sig: 0.0%
Centroid-so: 0.714 arcsec [4.19σ]
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 [1/1]

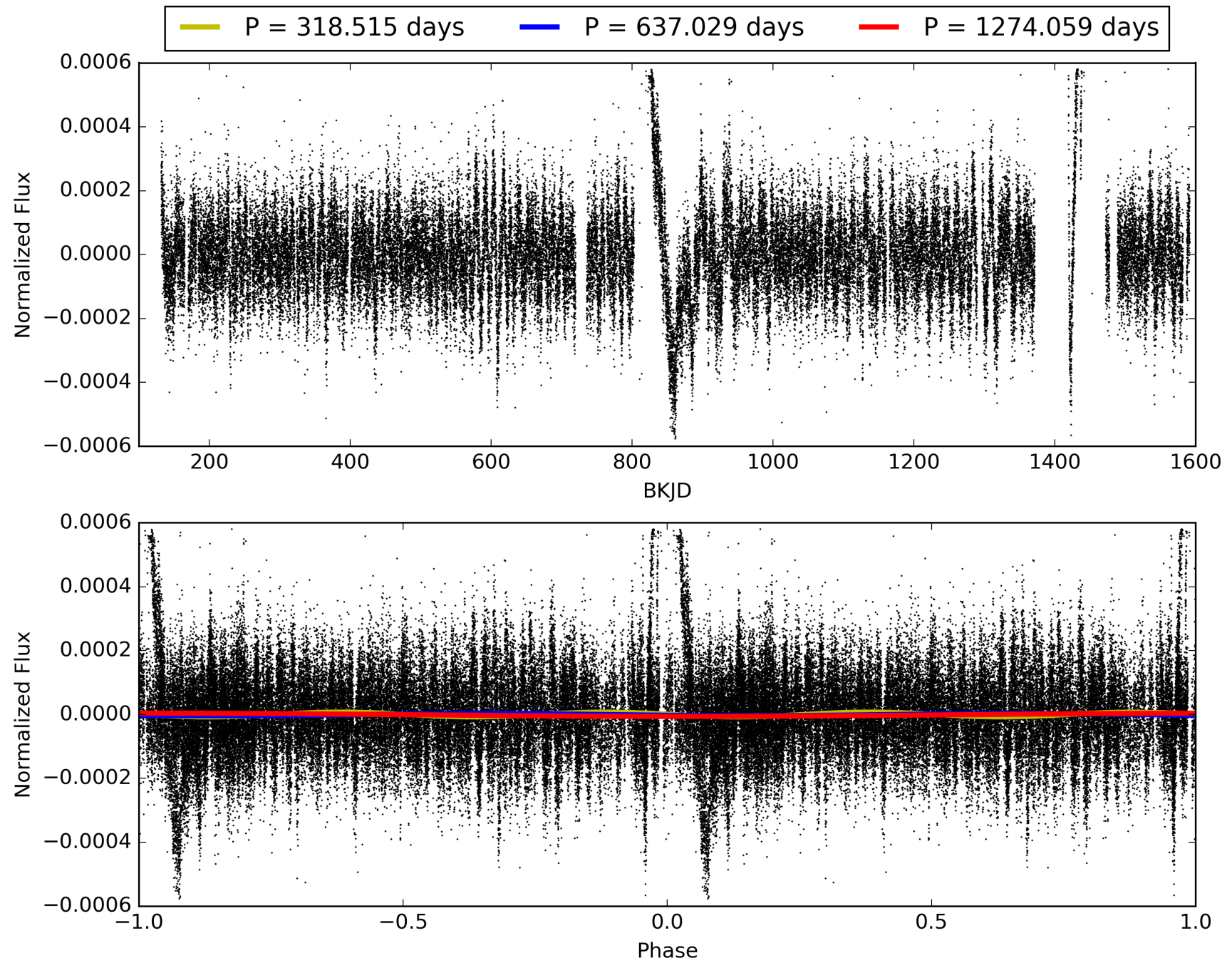
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:25:42 Z

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

TCE 010473003-02, PDC Light Curves

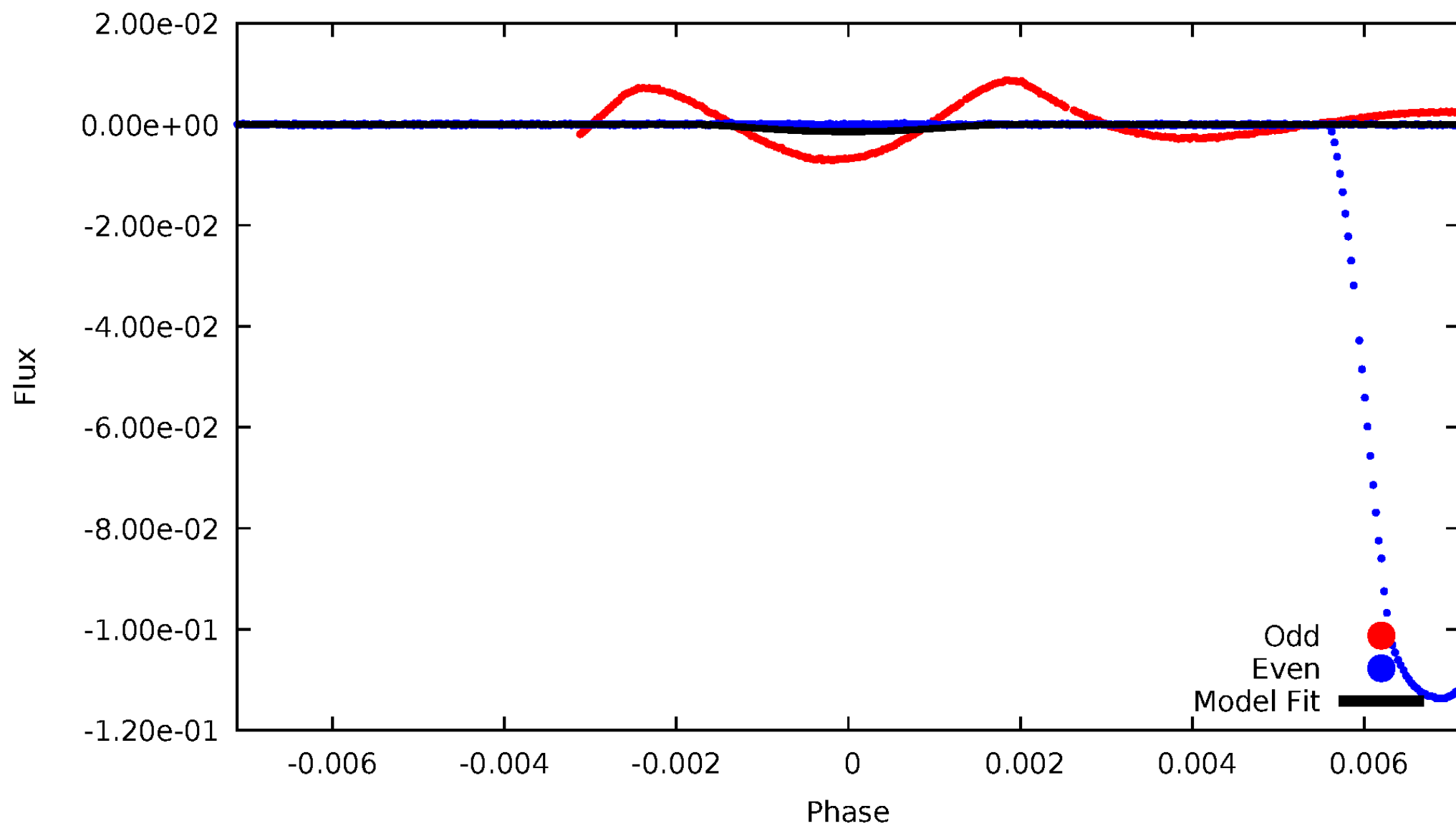


TCE 010473003-02



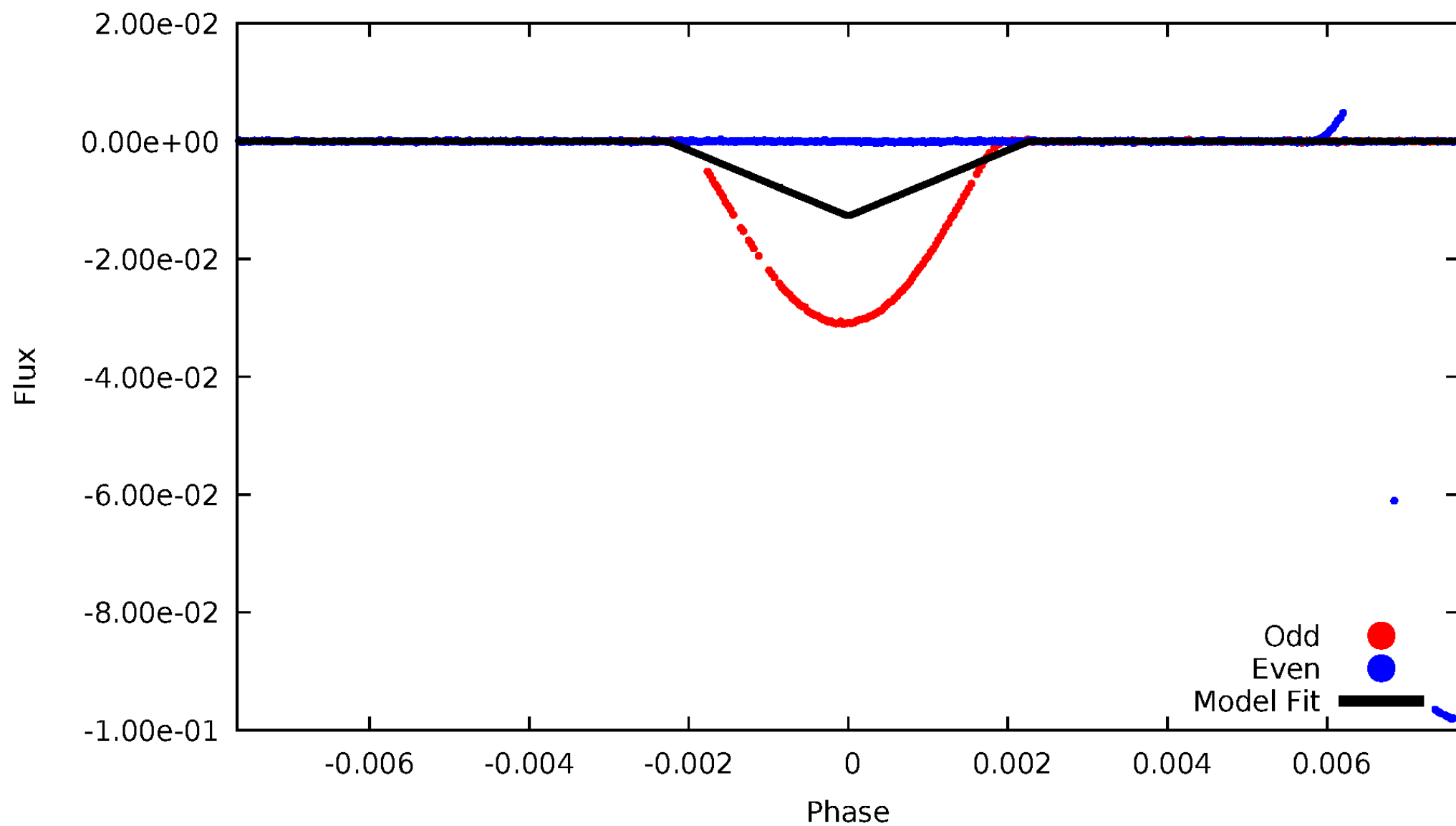
DV Odd/Even

TCE 010473003-02



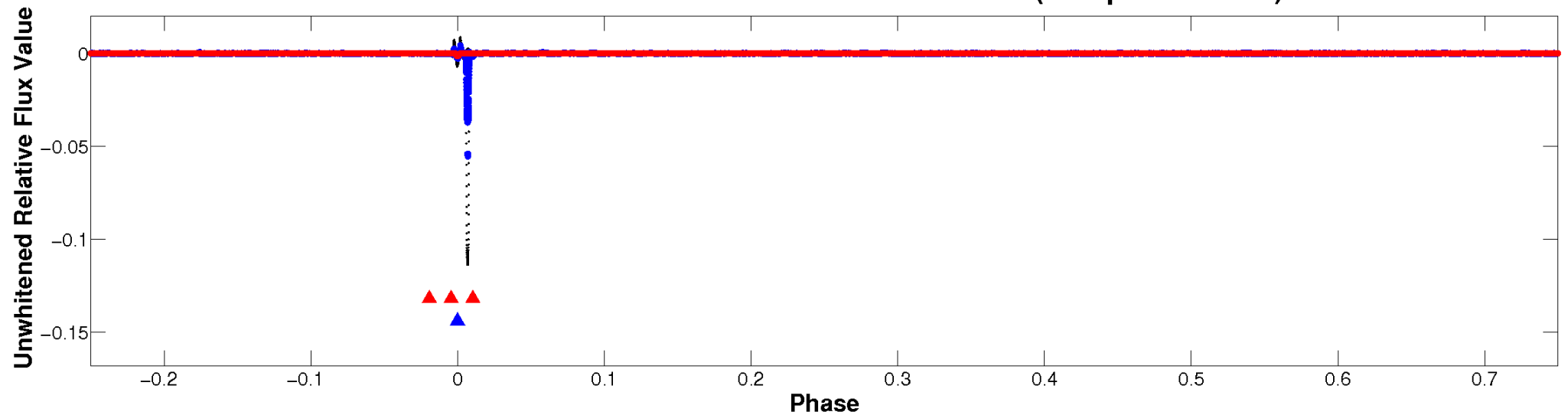
ALT Odd/Even

TCE 010473003-02

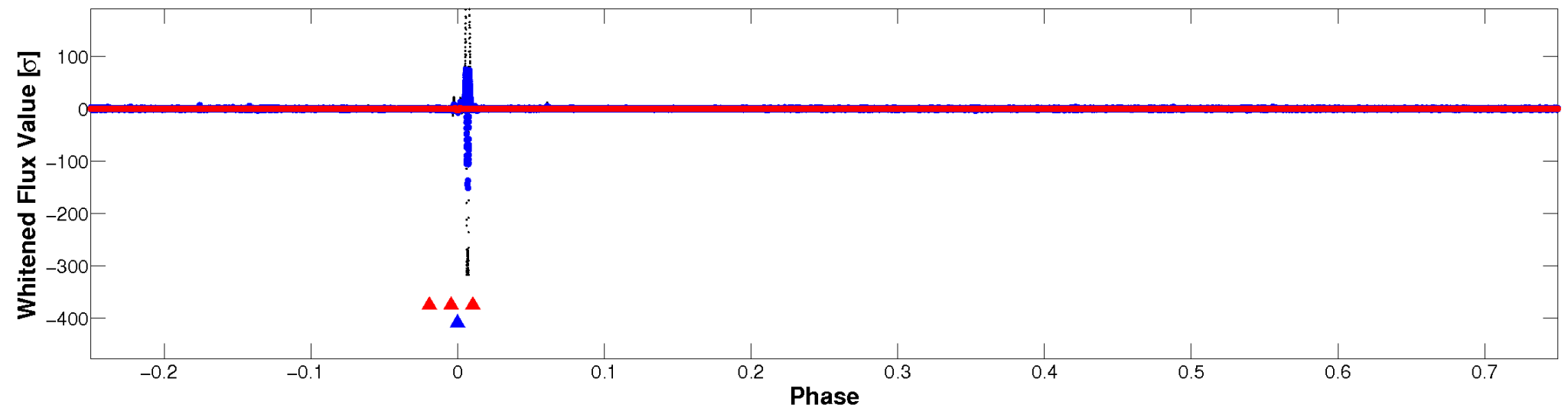


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

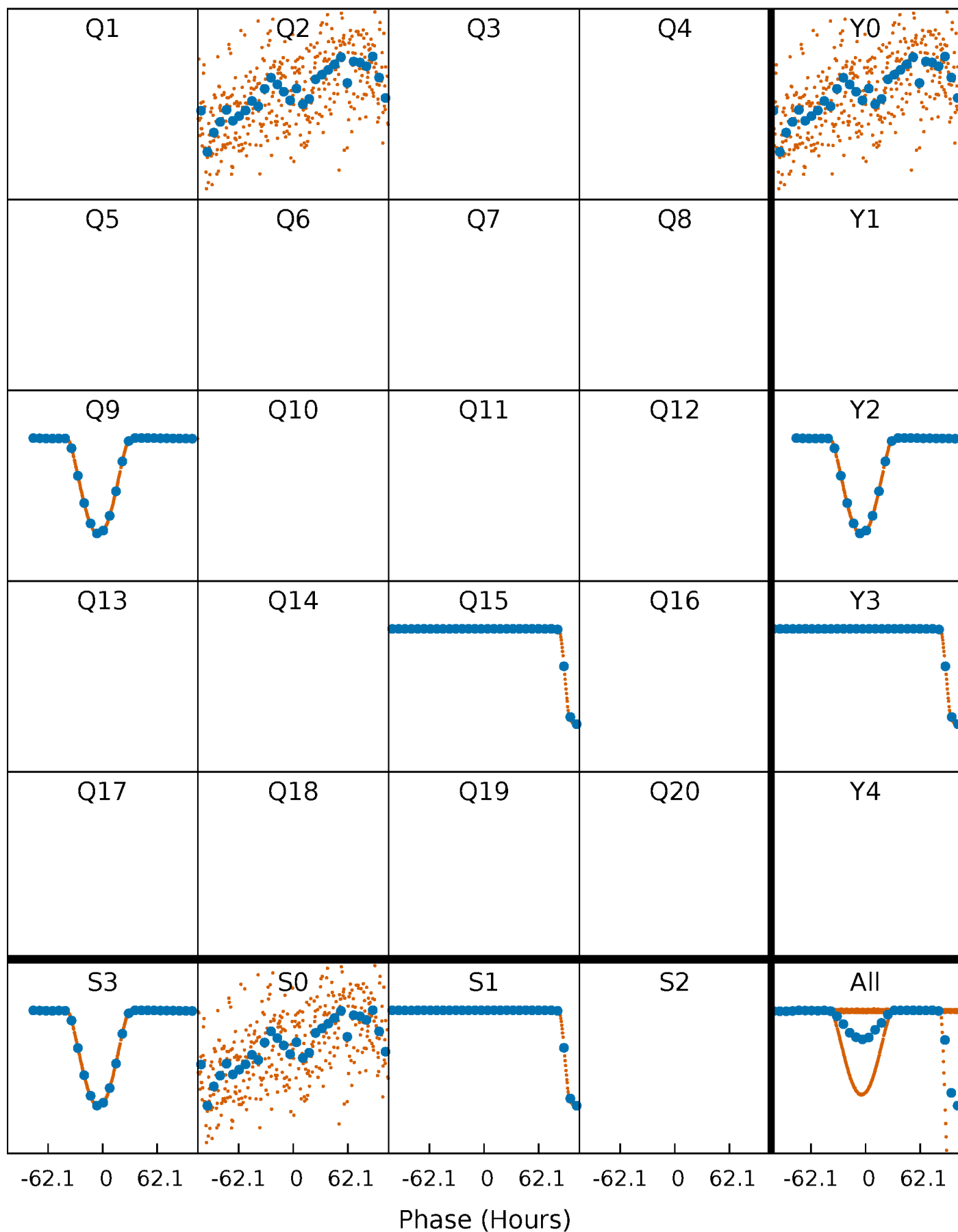


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



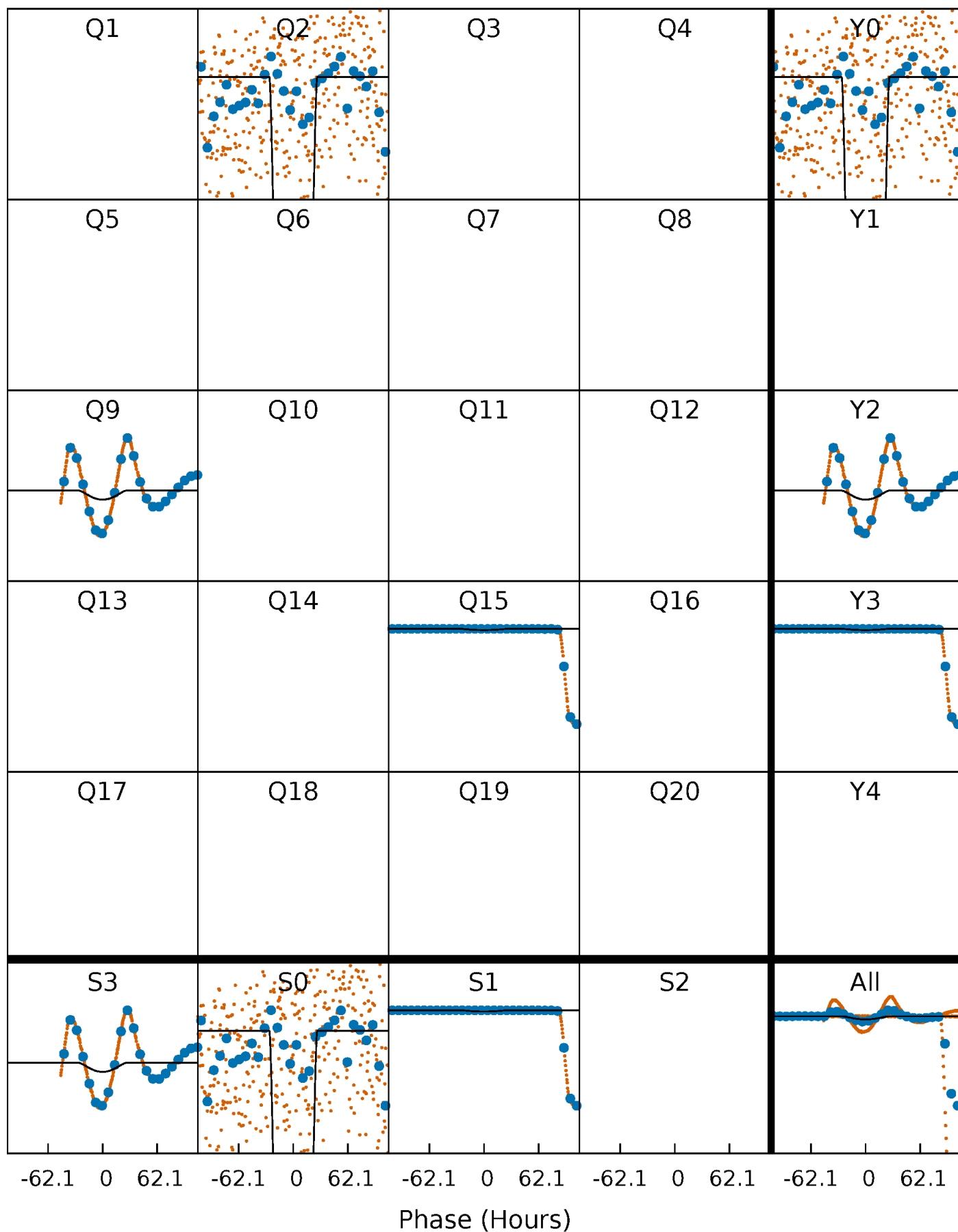
PDC Quarter-Phased Transit Curves

TCE 010473003-02 $P=637.029377$ Days $T_0=174.944424$ (BKJD)



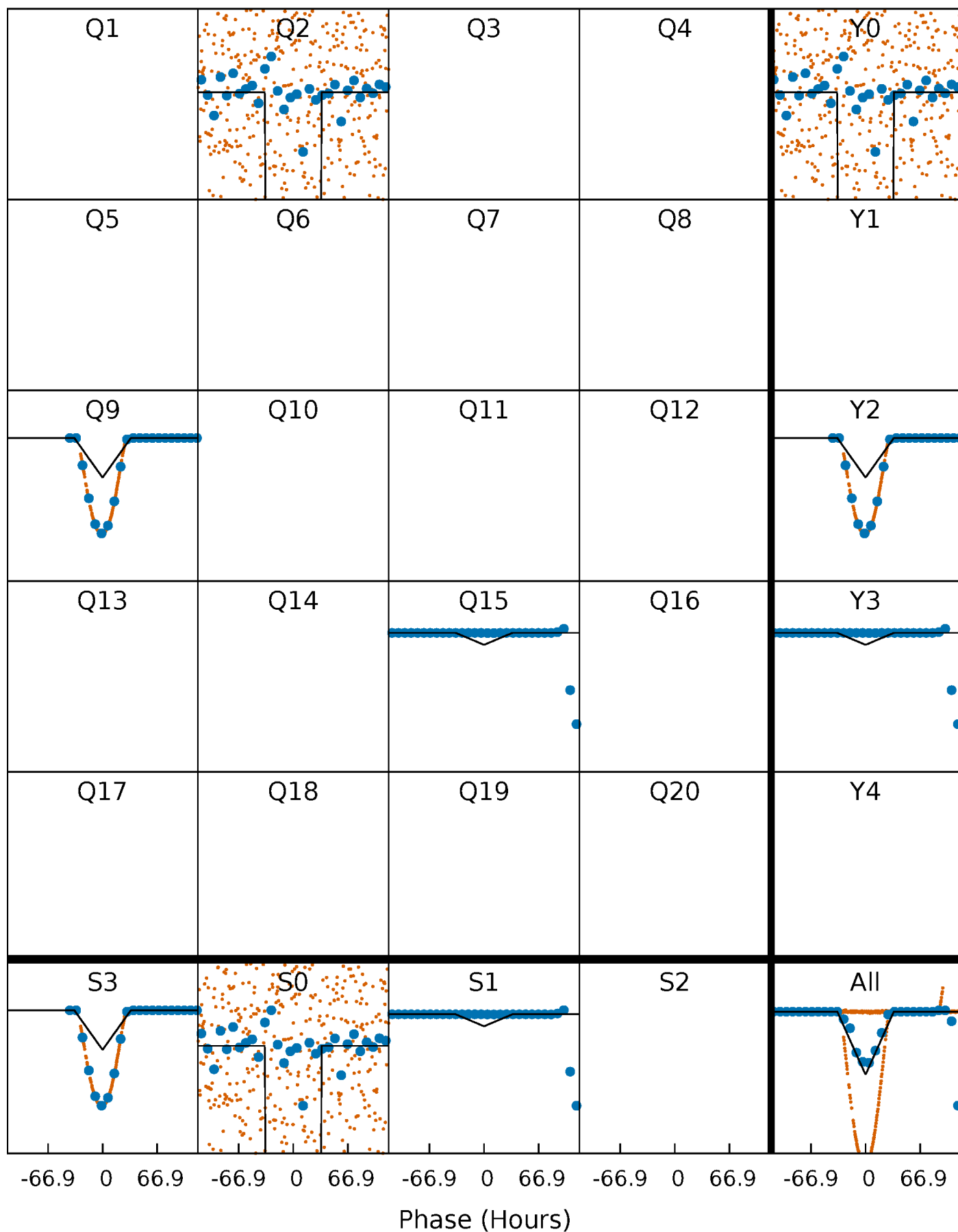
DV Quarter-Phased Transit Curves

TCE 010473003-02 P=637.029377 Days $T_0=174.944424$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

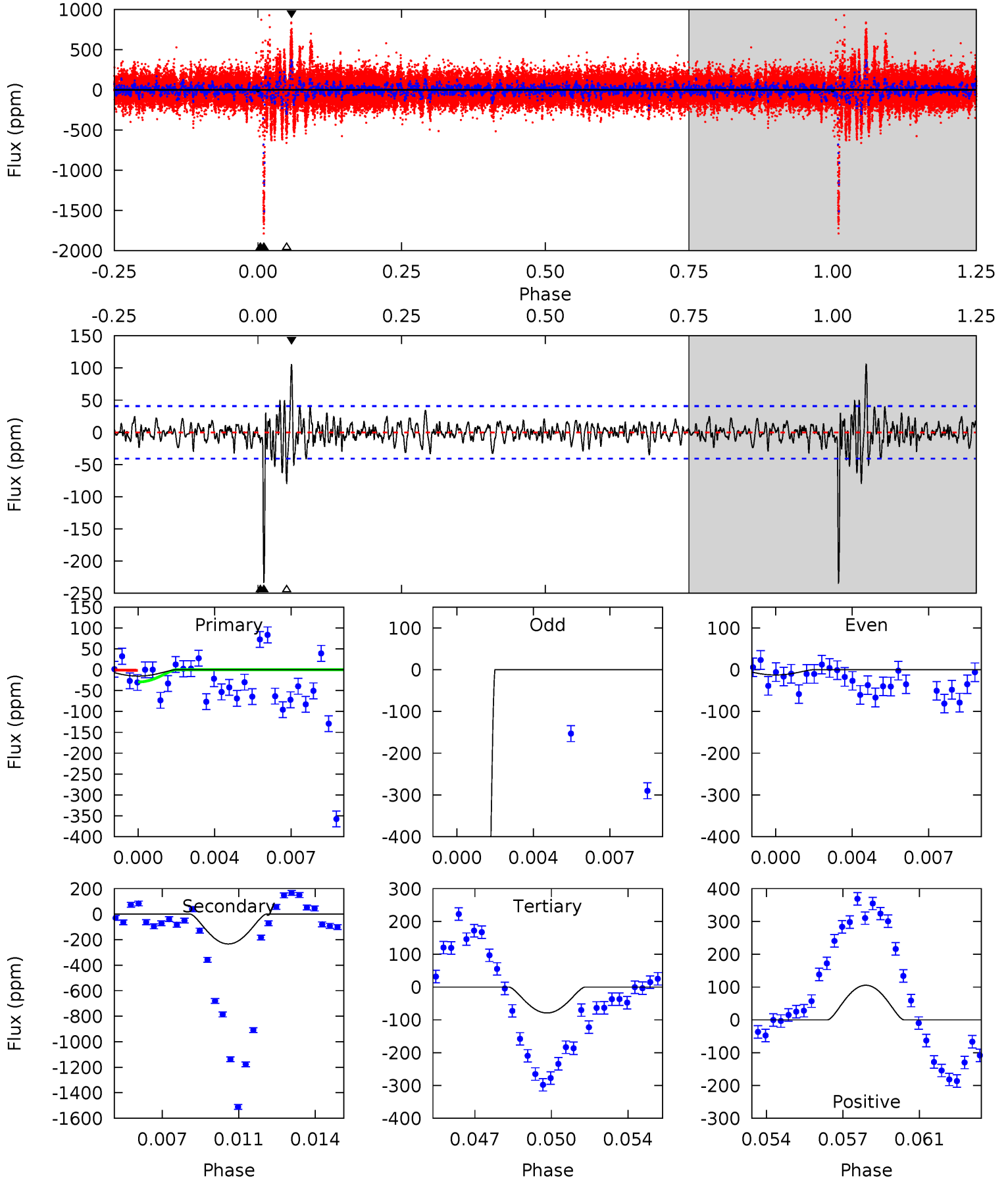
TCE 010473003-02 P=636.730163 Days $T_0=175.094756$ (BKJD)



DV Model-Shift Uniqueness Test

010473003-02, P = 637.029377 Days, E = 174.944424 Days

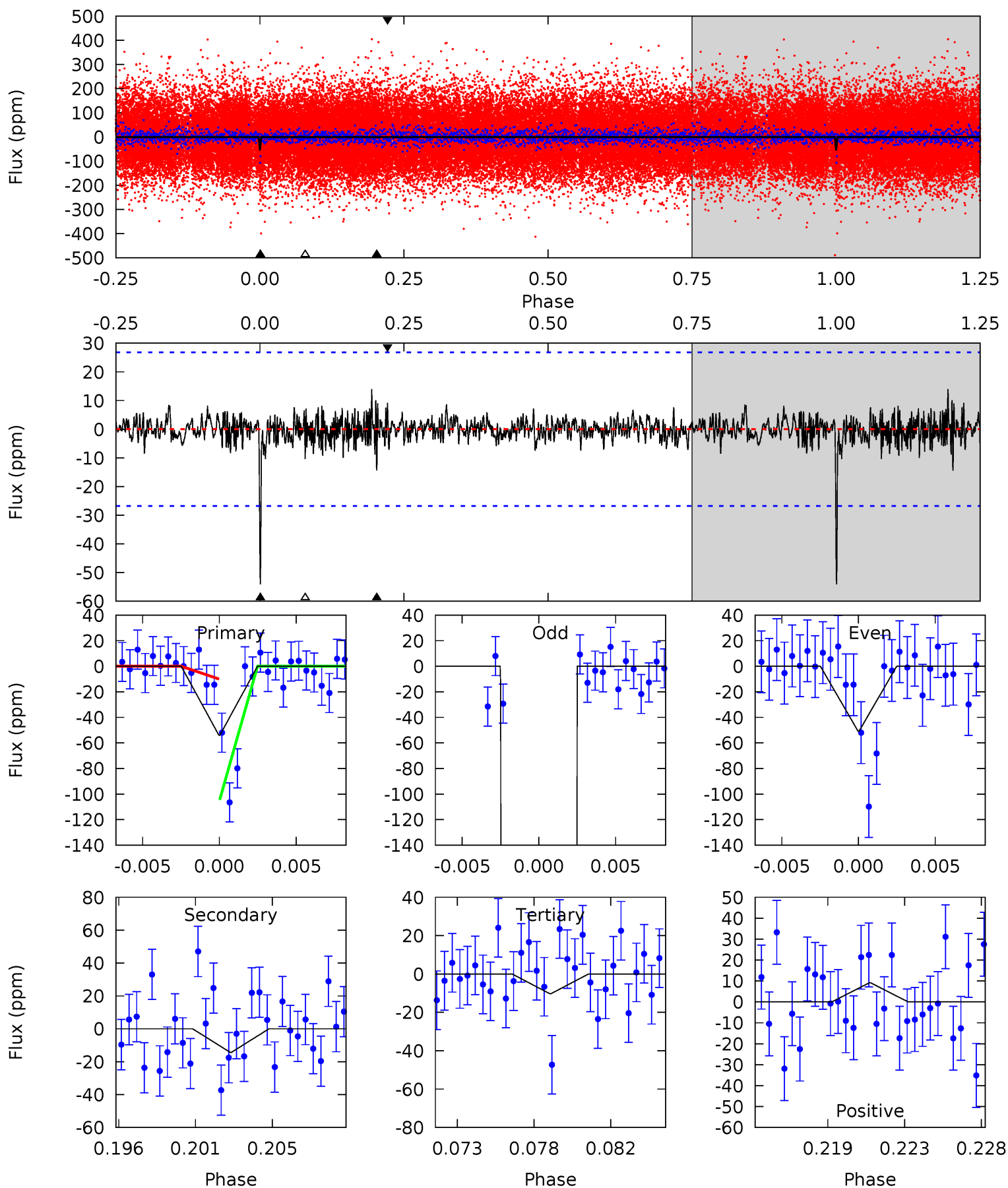
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.96	29.9	10.1	13.5	5.22	2.91	1.82	-8.16	-11.5	19.8	16.4	269.2	34.0	0.31	0



Alt Model-Shift Uniqueness Test

010473003-02, P = 636.730163 Days, E = 175.094756 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	2.78	1.99	1.77	5.17	2.84	0.58	8.45	8.67	0.78	1.00	3519	138.9	0.21	9.08



Stellar Parameters For KIC 010473003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6370^{+155}_{-175}	$4.072^{+0.234}_{-0.126}$	$-0.360^{+0.300}_{-0.300}$	$1.583^{+0.346}_{-0.422}$	$1.079^{+0.177}_{-0.145}$	$0.383^{+0.505}_{-0.138}$
	+2%/-3%	+6%/-3%	+83%/-83%	+22%/-27%	+16%/-13%	+132%/-36%
Source	PHO1	FLK73	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 010473003-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-234 ± 8	$26.01^{+22.40}_{-17.33}$	399^{+26}_{-29}	2745^{+1080}_{-371}	436^{+3328}_{-314}
Alt.	-14 ± 5	$29.34^{+24.46}_{-19.32}$	402^{+26}_{-31}	1941^{+498}_{-224}	20^{+152}_{-15}

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 $A_{obs} \gg 1.0$

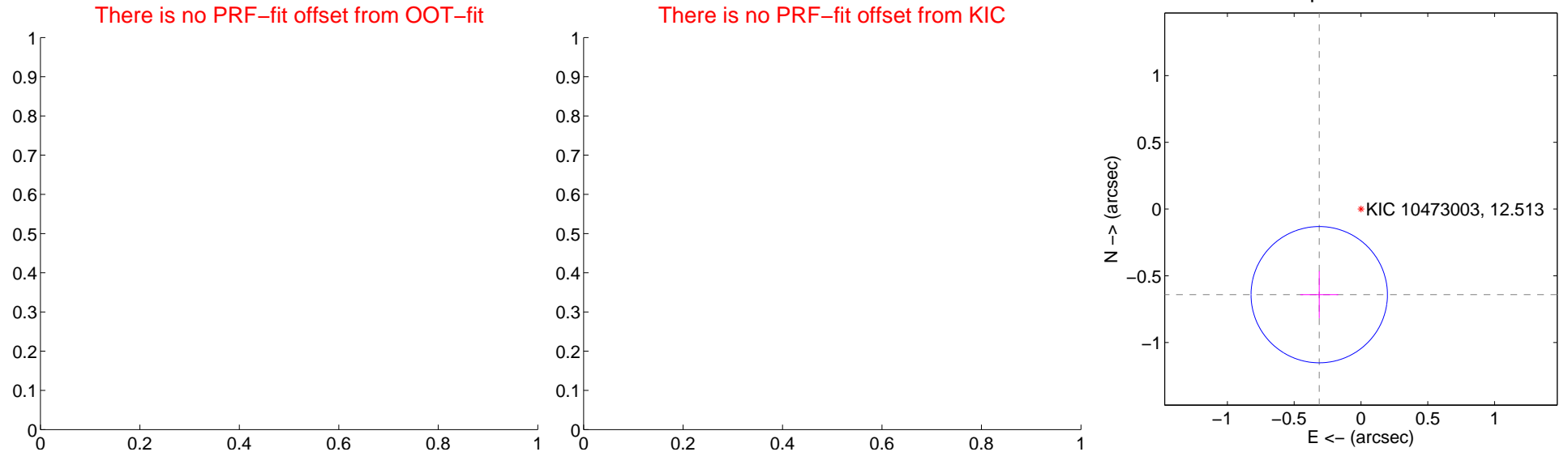
DV Centroid Data

Supplemental centroid analysis for 010473003-02. Kepler magnitude: 12.51. Transit SNR 33.19

There are 0 quarters with good PRF difference image offsets

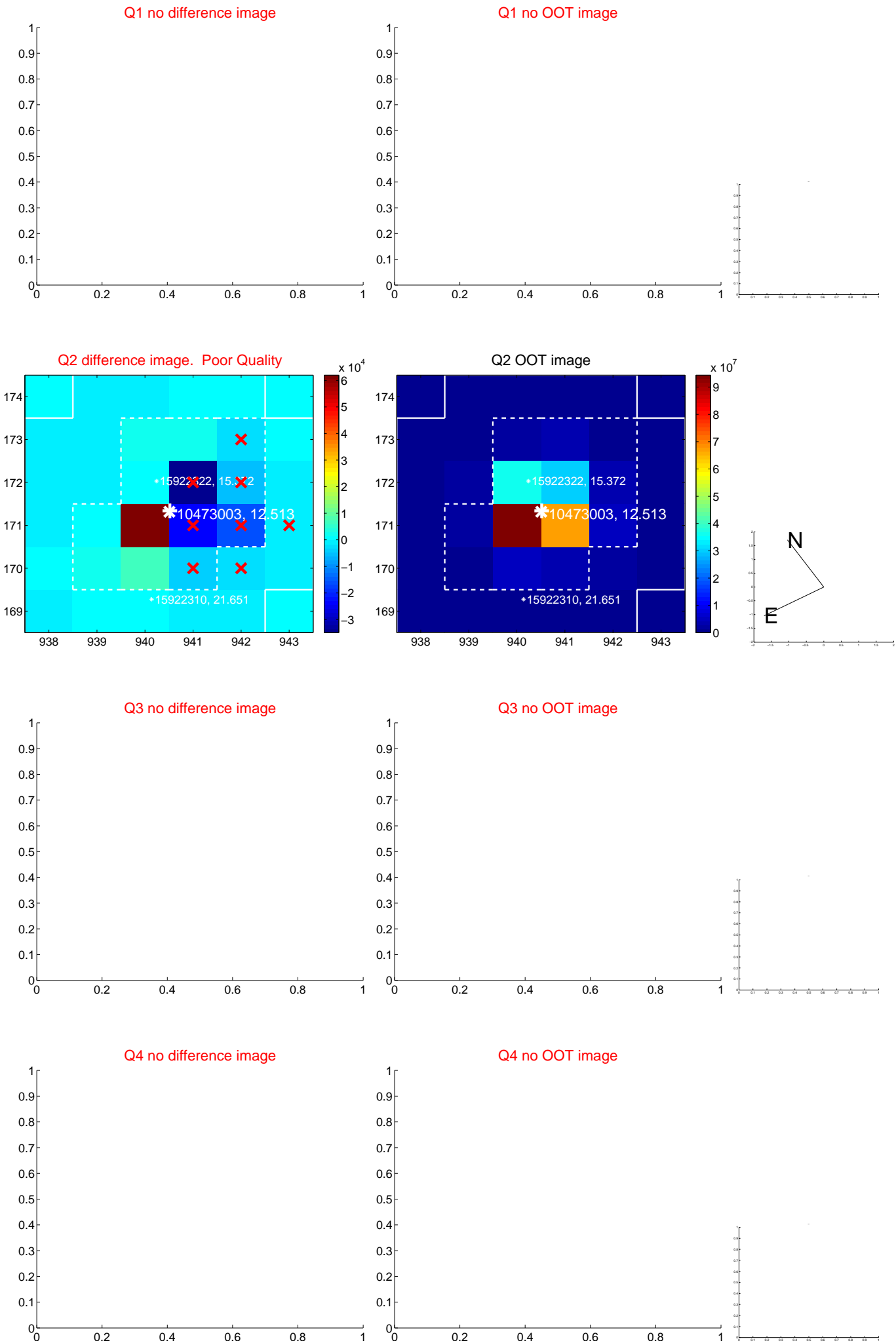
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	0.71 ± 0.17	4.19	0.31 ± 0.14	-0.64 ± 0.18



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 ×: 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.



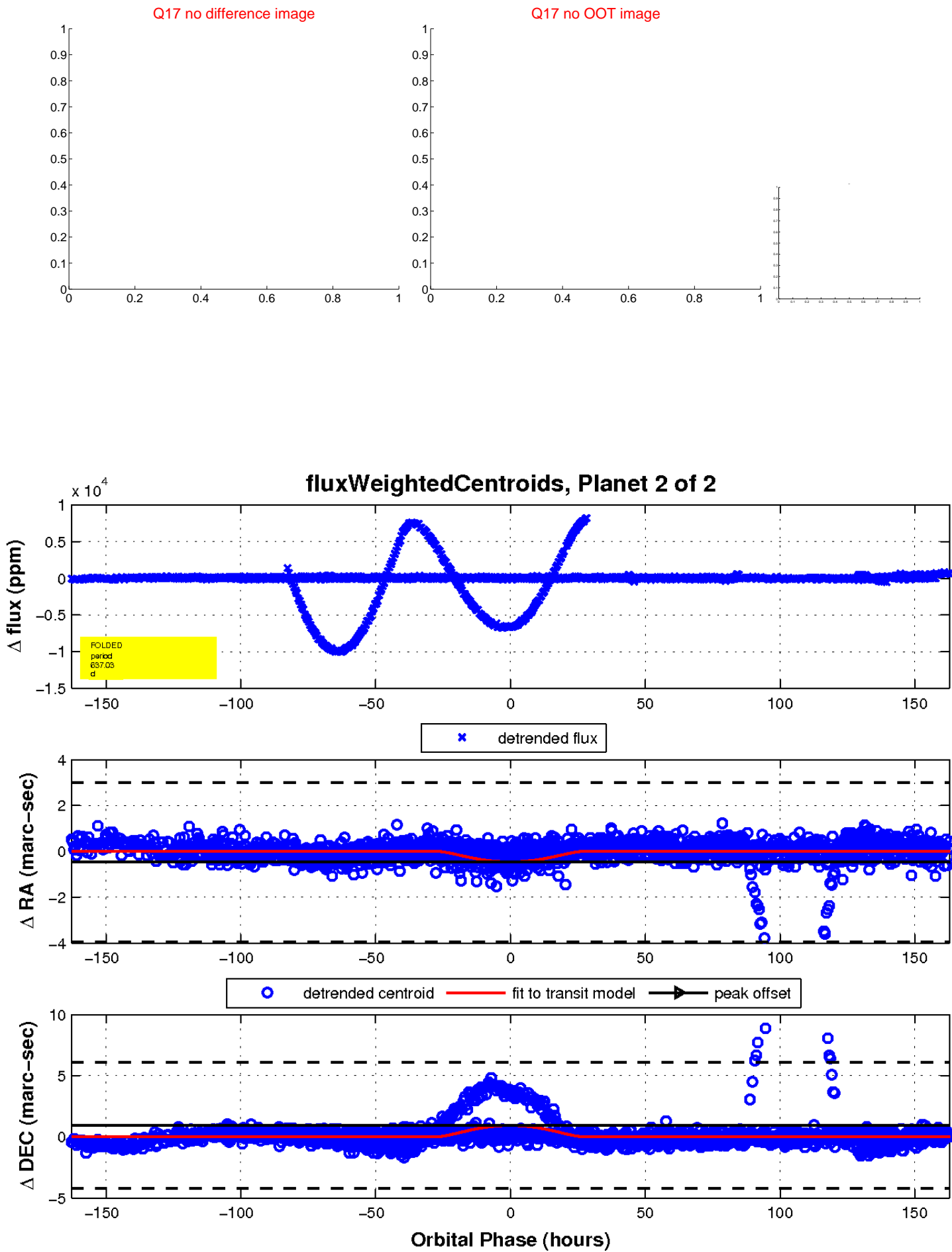
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

