

KIC 007450443

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})
007450443-01	OBS	No	368.240102	172.154972	317.9	17.556	10.5	12.1	1.42	6110	2.69	2.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007450443-01	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.

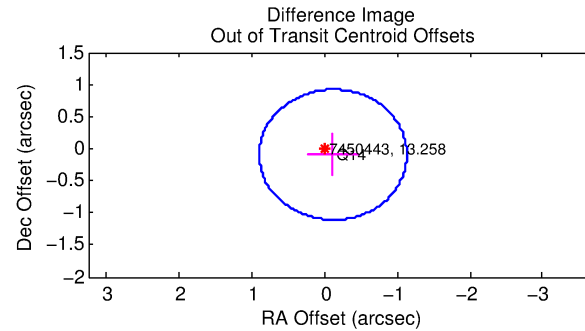
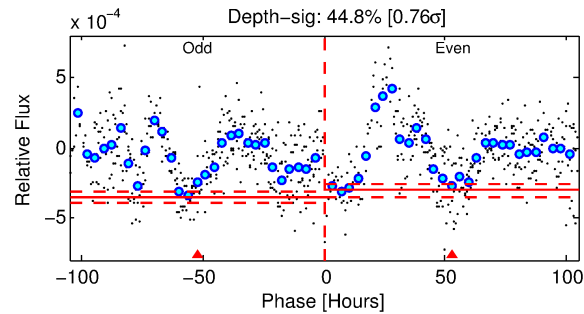
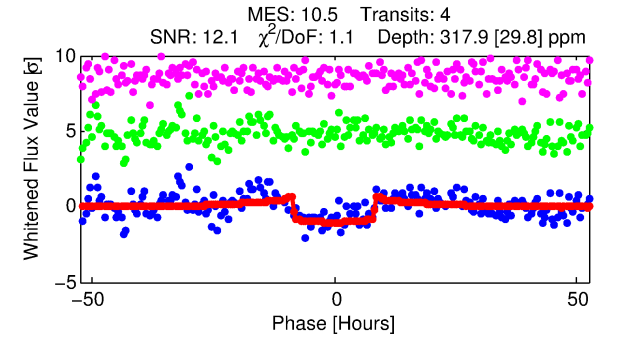
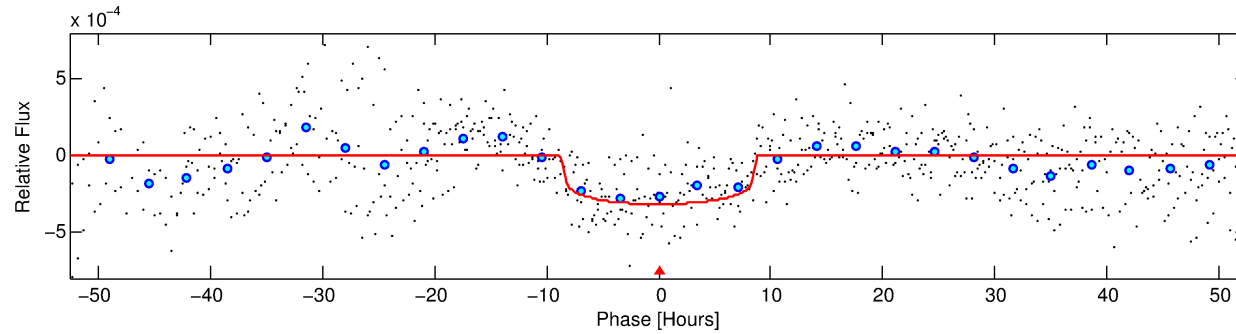
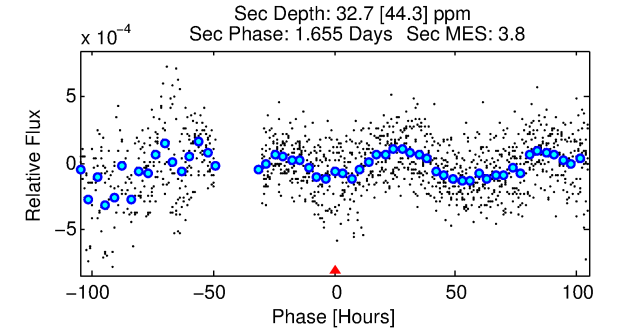
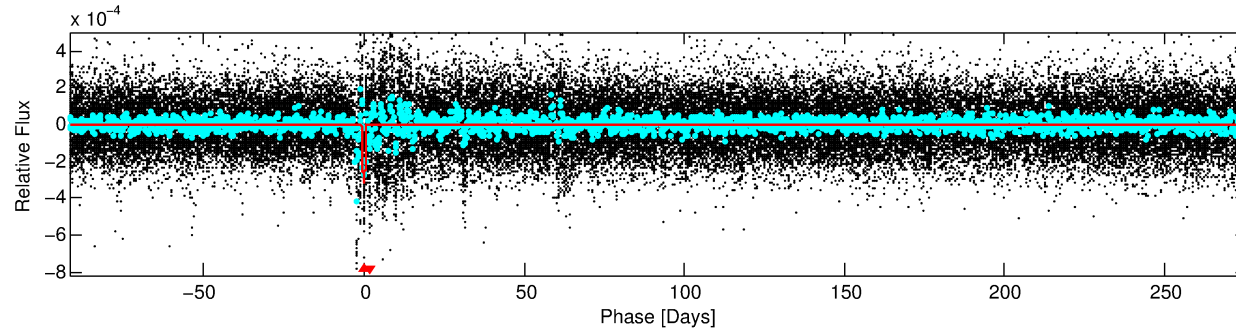
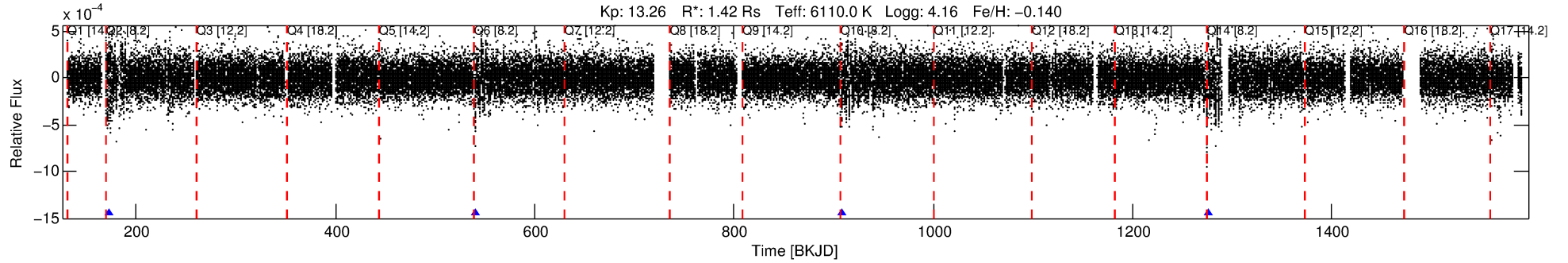
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007450443-01

No Significant Match Found

DV One-Page Summary

KIC: 7450443 Candidate: 1 of 1 Period: 368.240 d



DV Fit Results:

Period = 368.24010 [0.00636] d
Epoch = 172.1550 [0.0107] BKJD
Rp/R* = 0.0174 [0.0027]
a/R* = 120.80 [87.86]
b = 0.68 [0.57]
Seff = 2.38 [0.88]
Teq = 317 [29] K
Rp = 2.69 [0.75] Re
a = 1.0257 [0.2245] AU
Ag = 2620.16 [3752.76] [0.70σ]
Teffp = 3505 [1222] K [2.61σ]

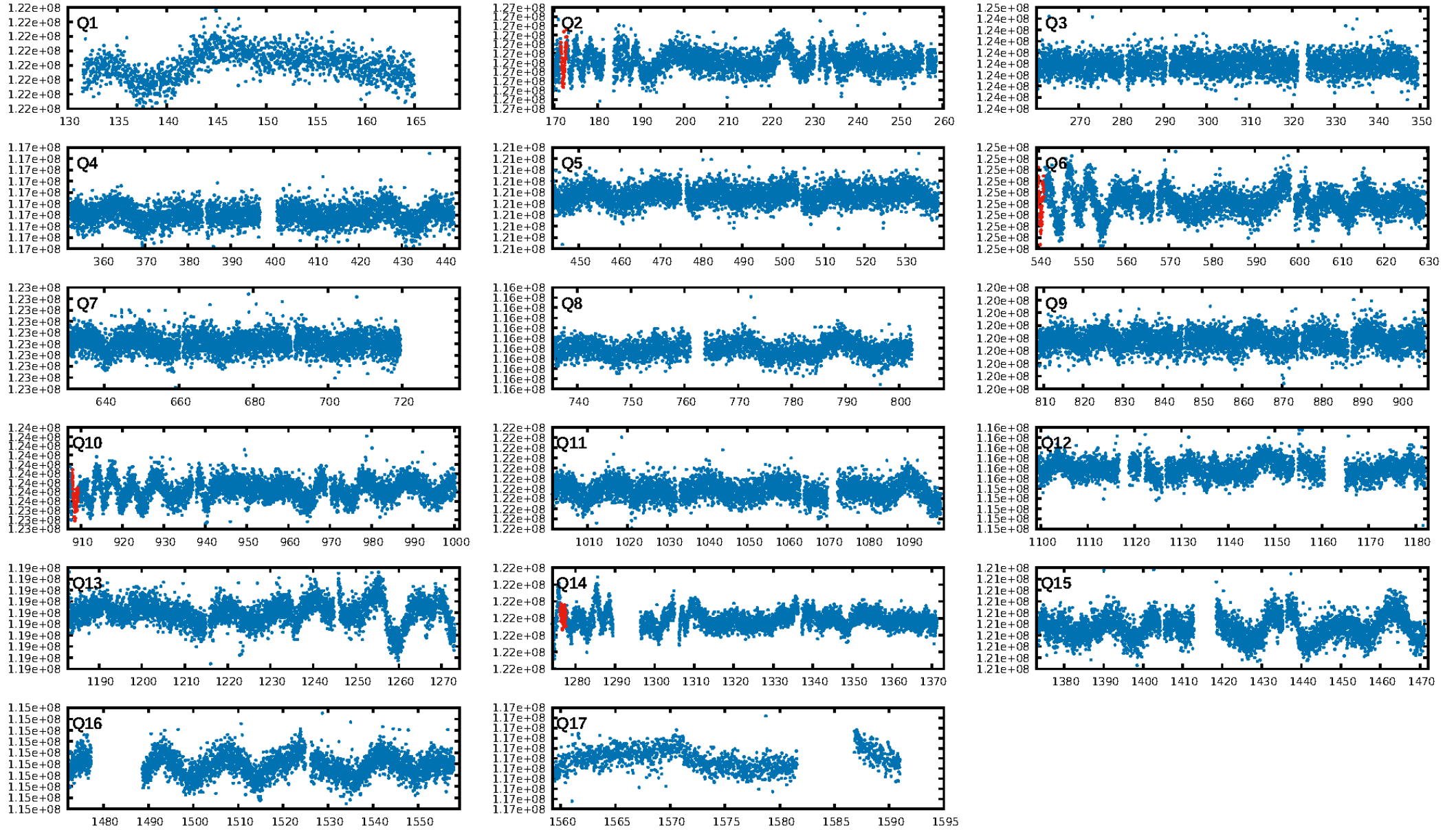
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 1.03e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.9582
Centroid-sig: 12.5%
Centroid-so: 0.835 arcsec [1.16σ]
OotOffset-rm: 0.150 arcsec [0.44σ]
KicOffset-rm: 0.244 arcsec [0.70σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

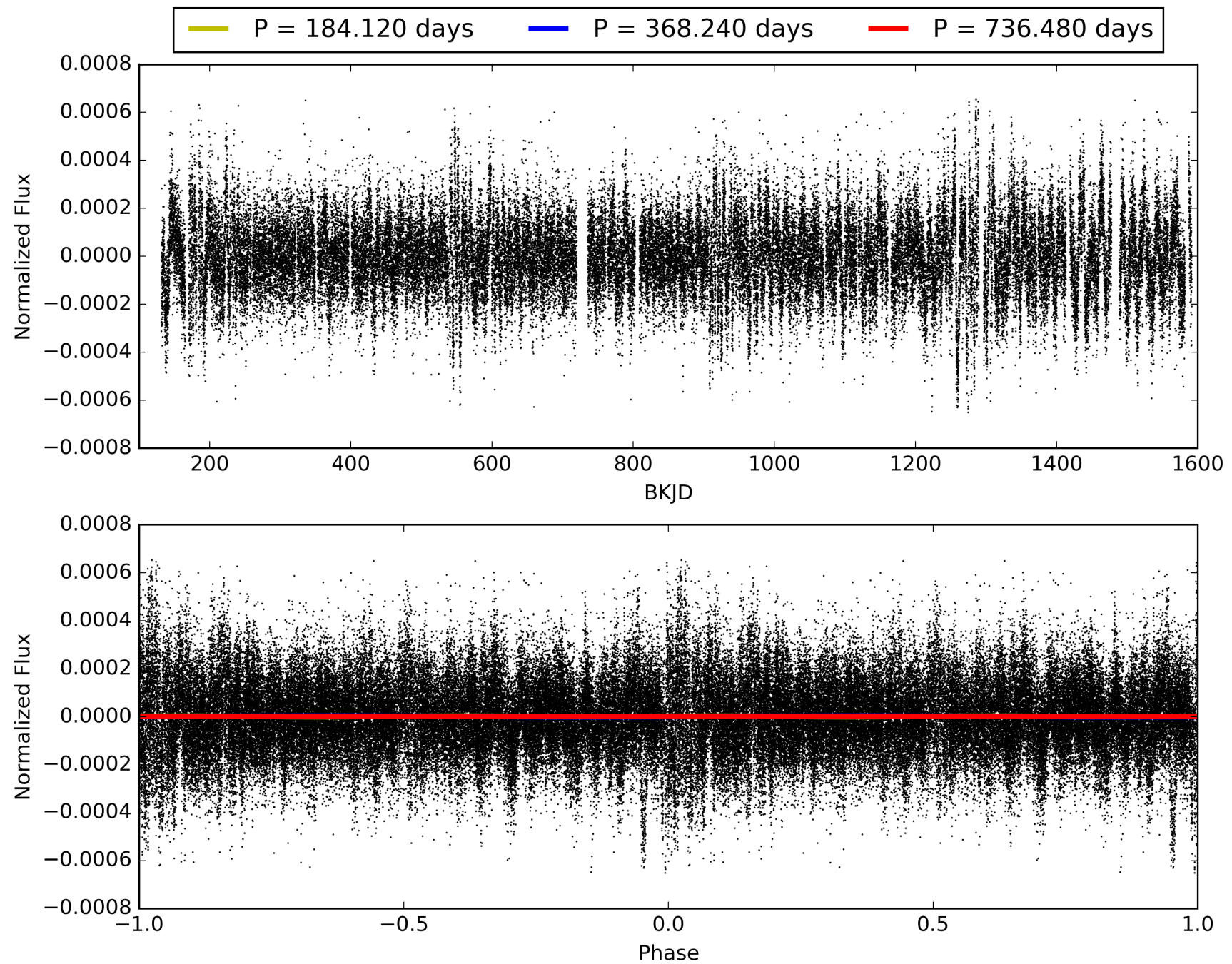
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:52:48 Z

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

TCE 007450443-01, PDC Light Curves

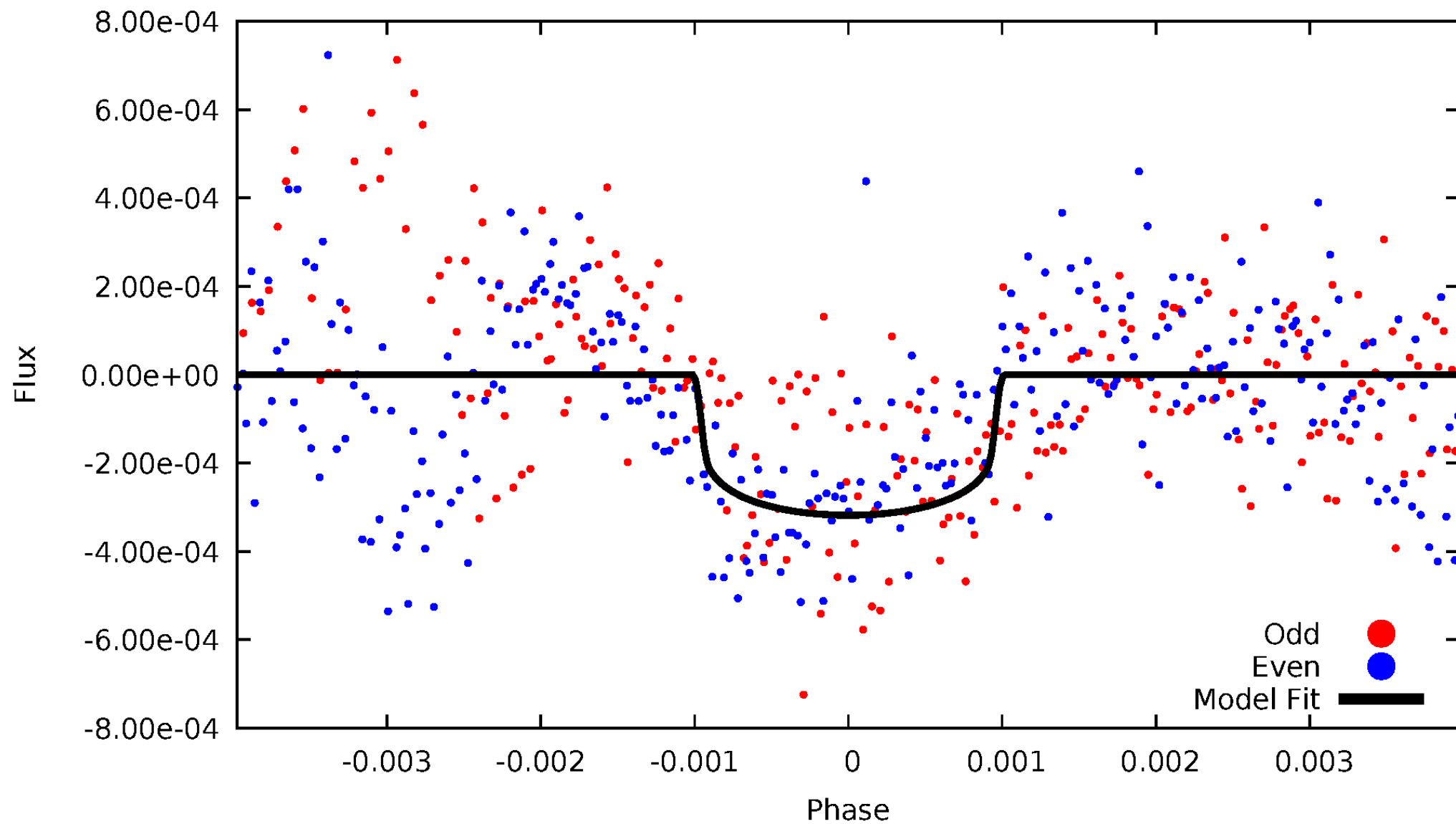


TCE 007450443-01



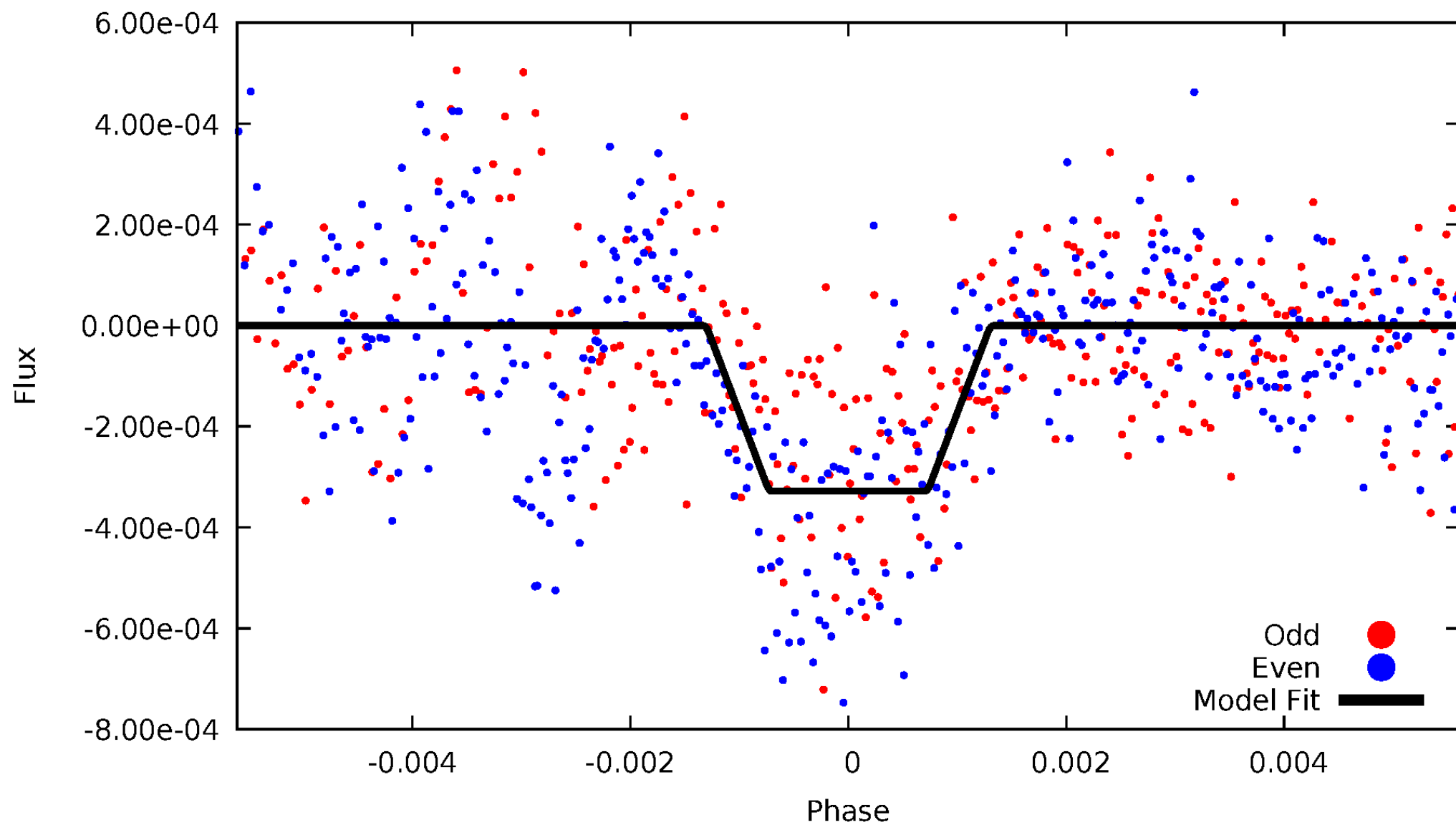
DV Odd/Even

TCE 007450443-01



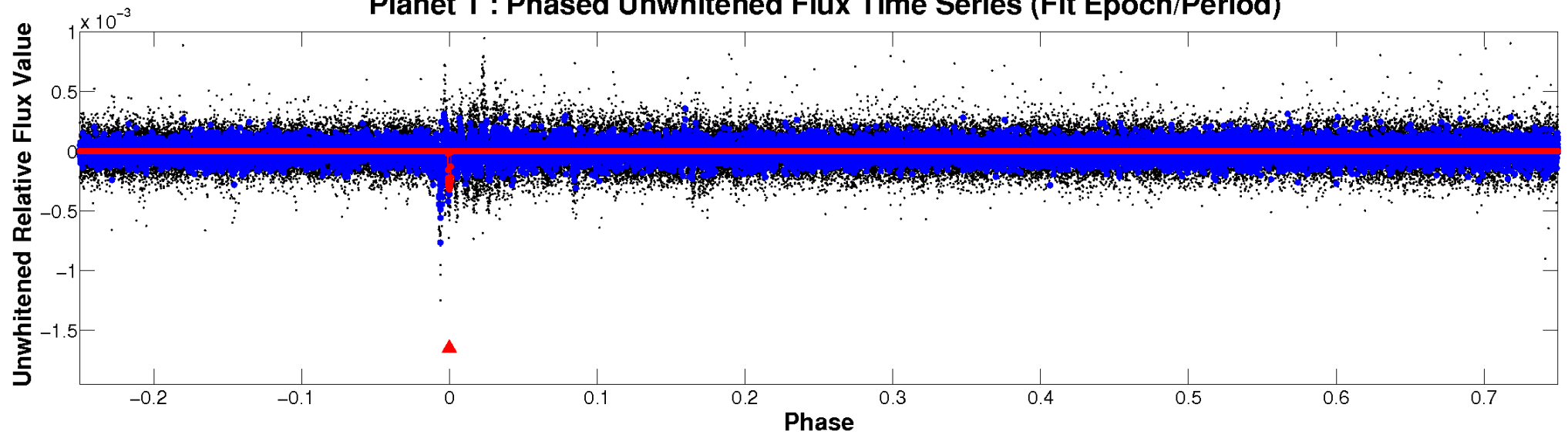
ALT Odd/Even

TCE 007450443-01

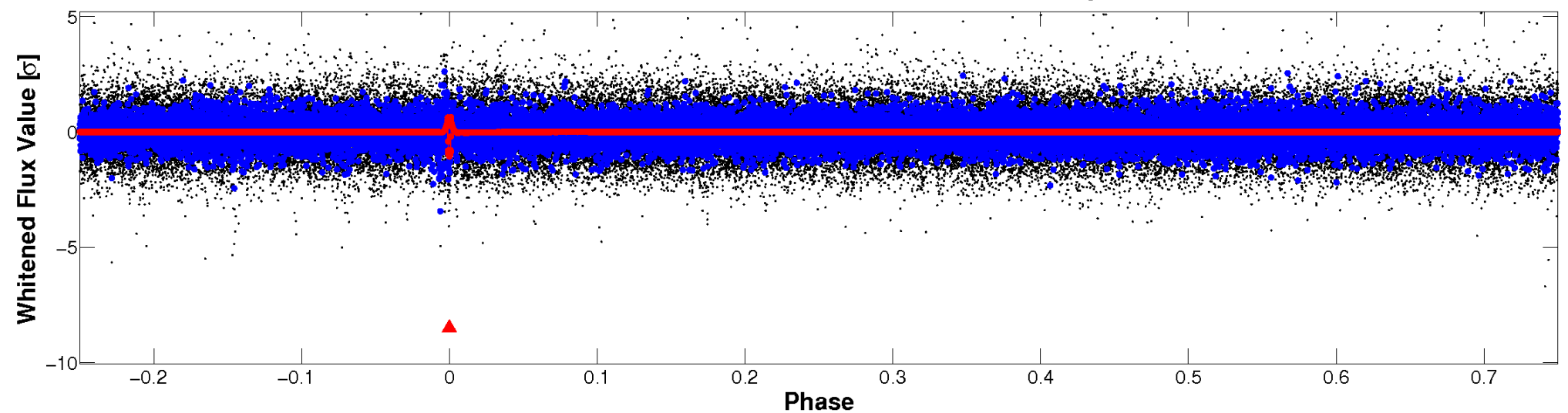


Non-Whitened Vs. Whitened Light Curve

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

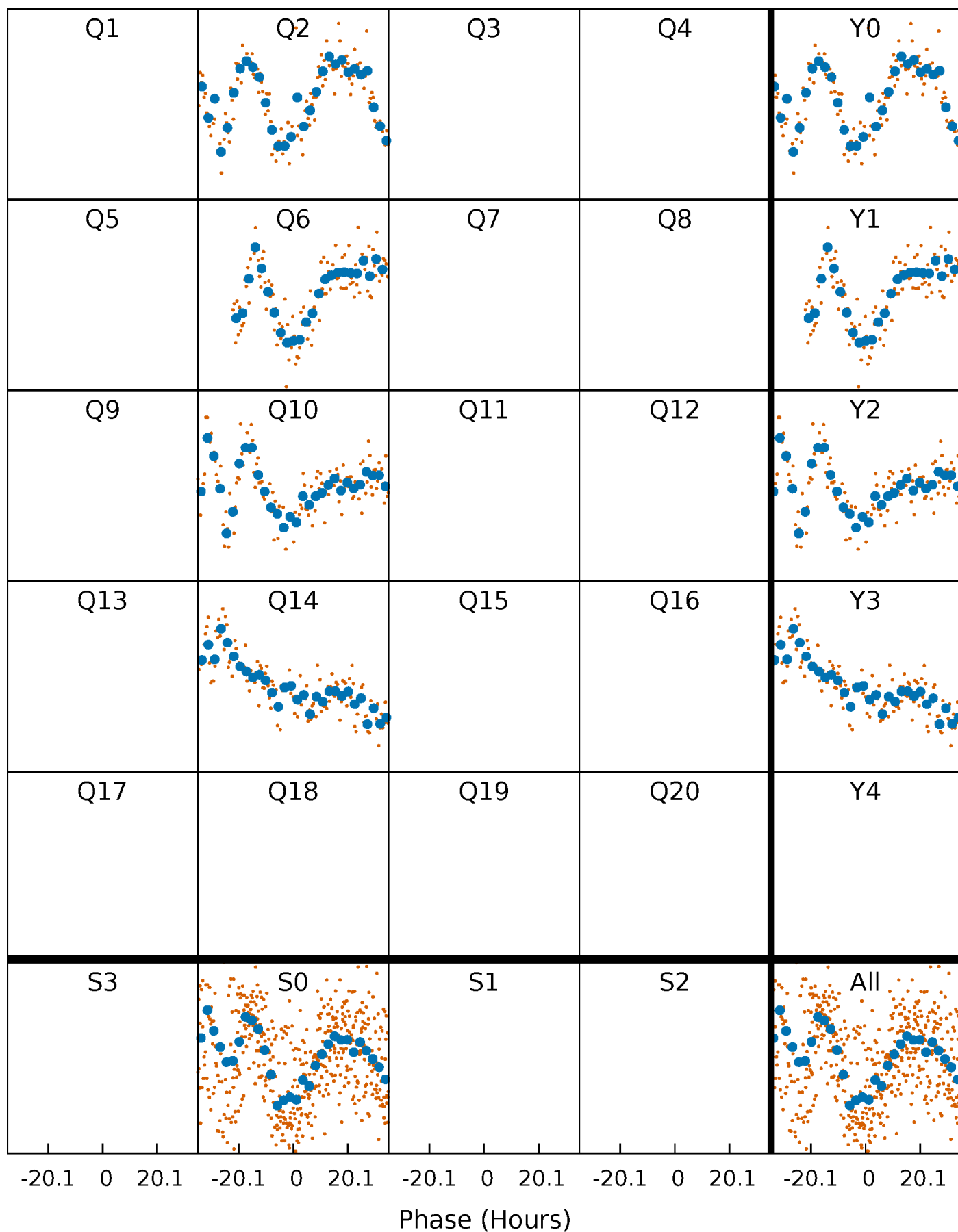


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



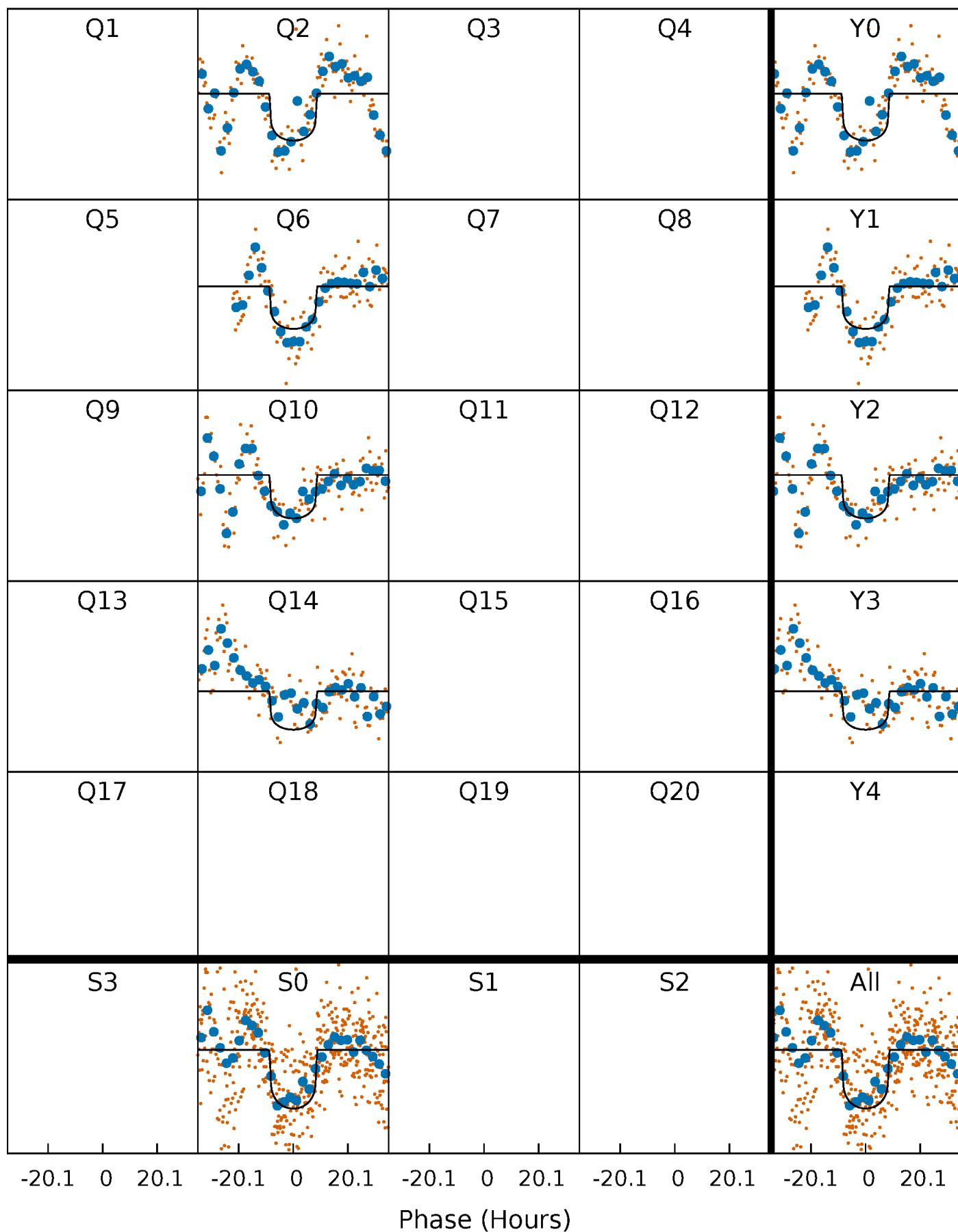
PDC Quarter-Phased Transit Curves

TCE 007450443-01 P=368.240102 Days $T_0=172.154972$ (BKJD)



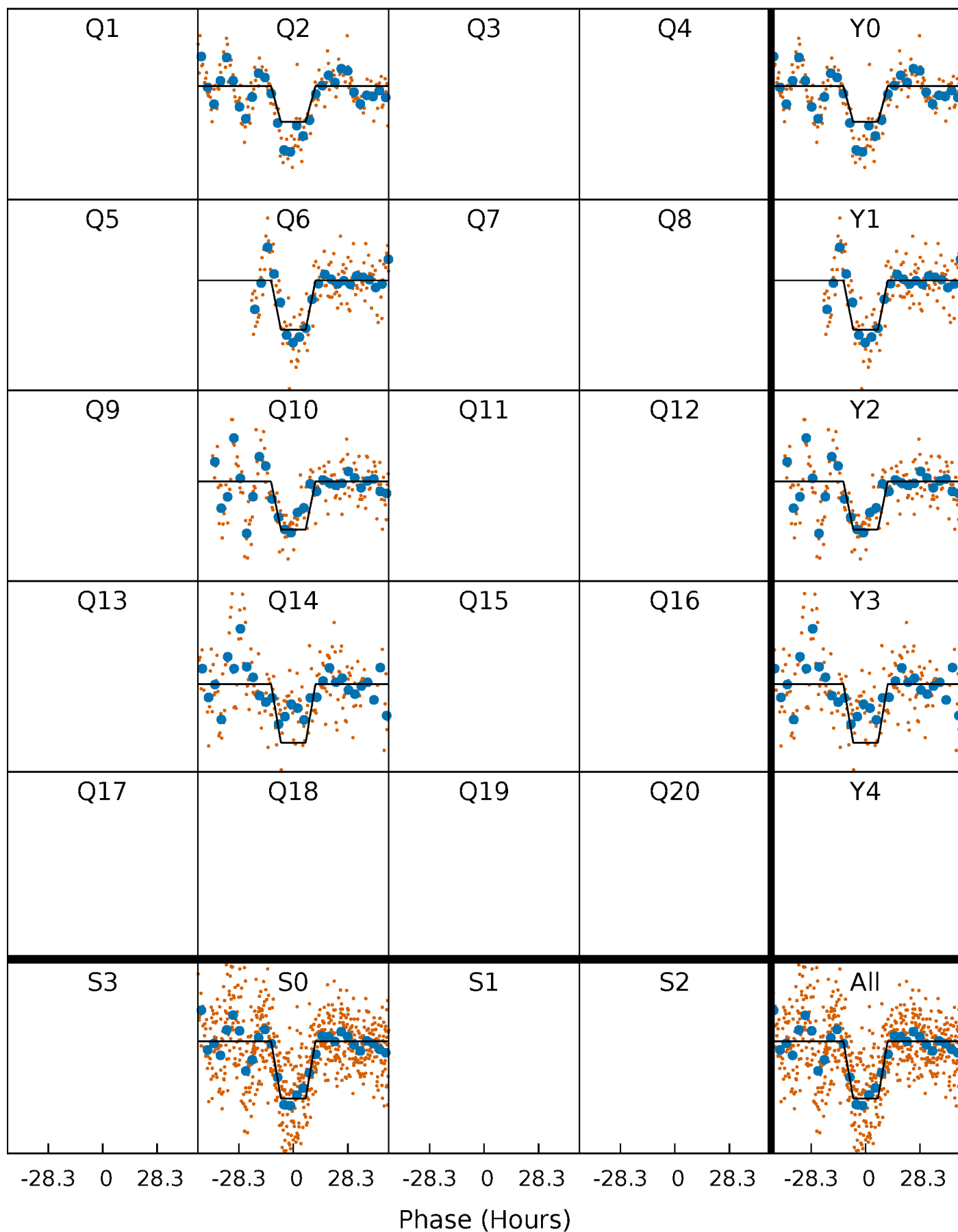
DV Quarter-Phased Transit Curves

TCE 007450443-01 P=368.240102 Days $T_0=172.154972$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

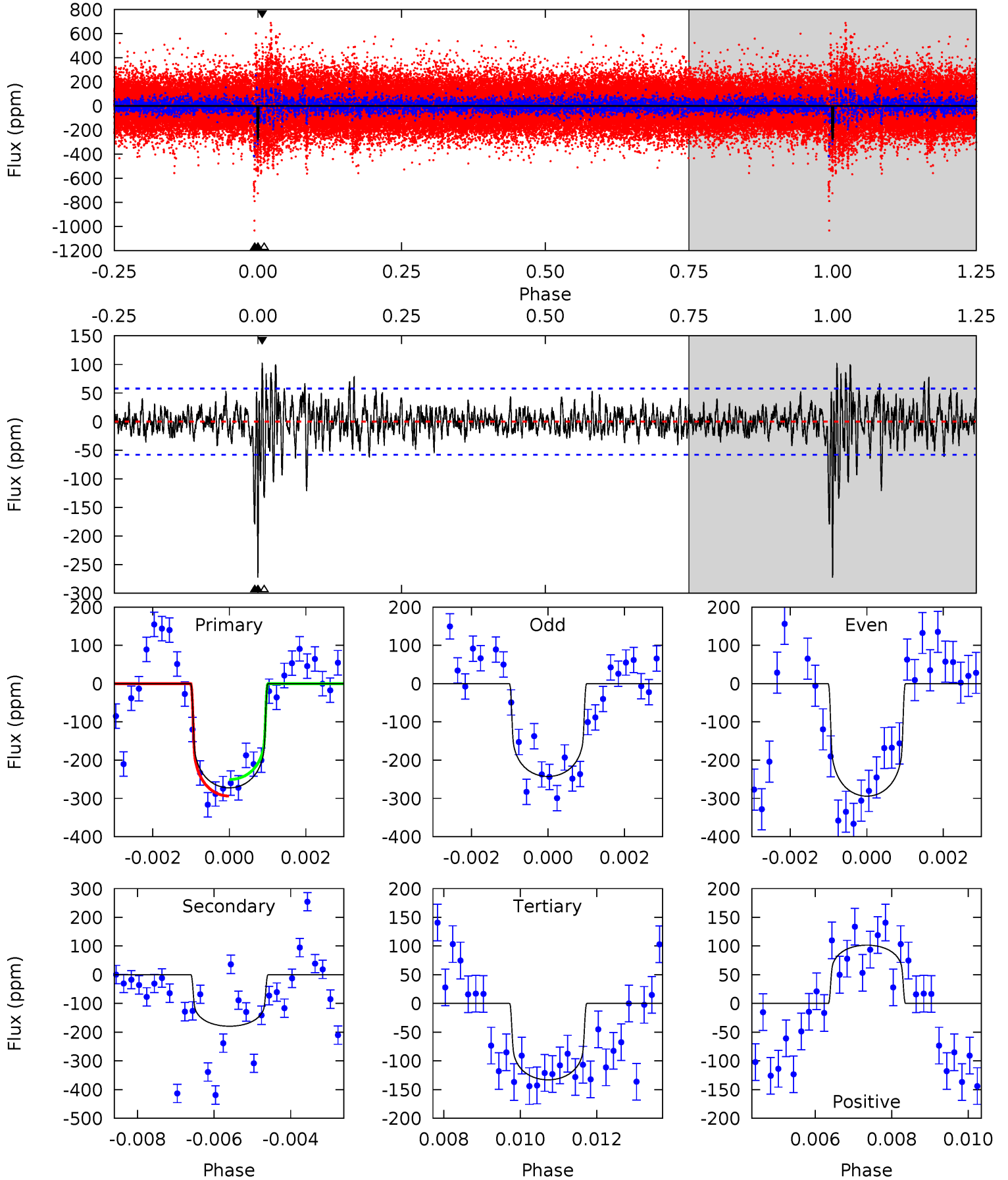
TCE 007450443-01 P=368.260429 Days $T_0=172.111434$ (BKJD)



DV Model-Shift Uniqueness Test

007450443-01, P = 368.240102 Days, E = 172.154972 Days

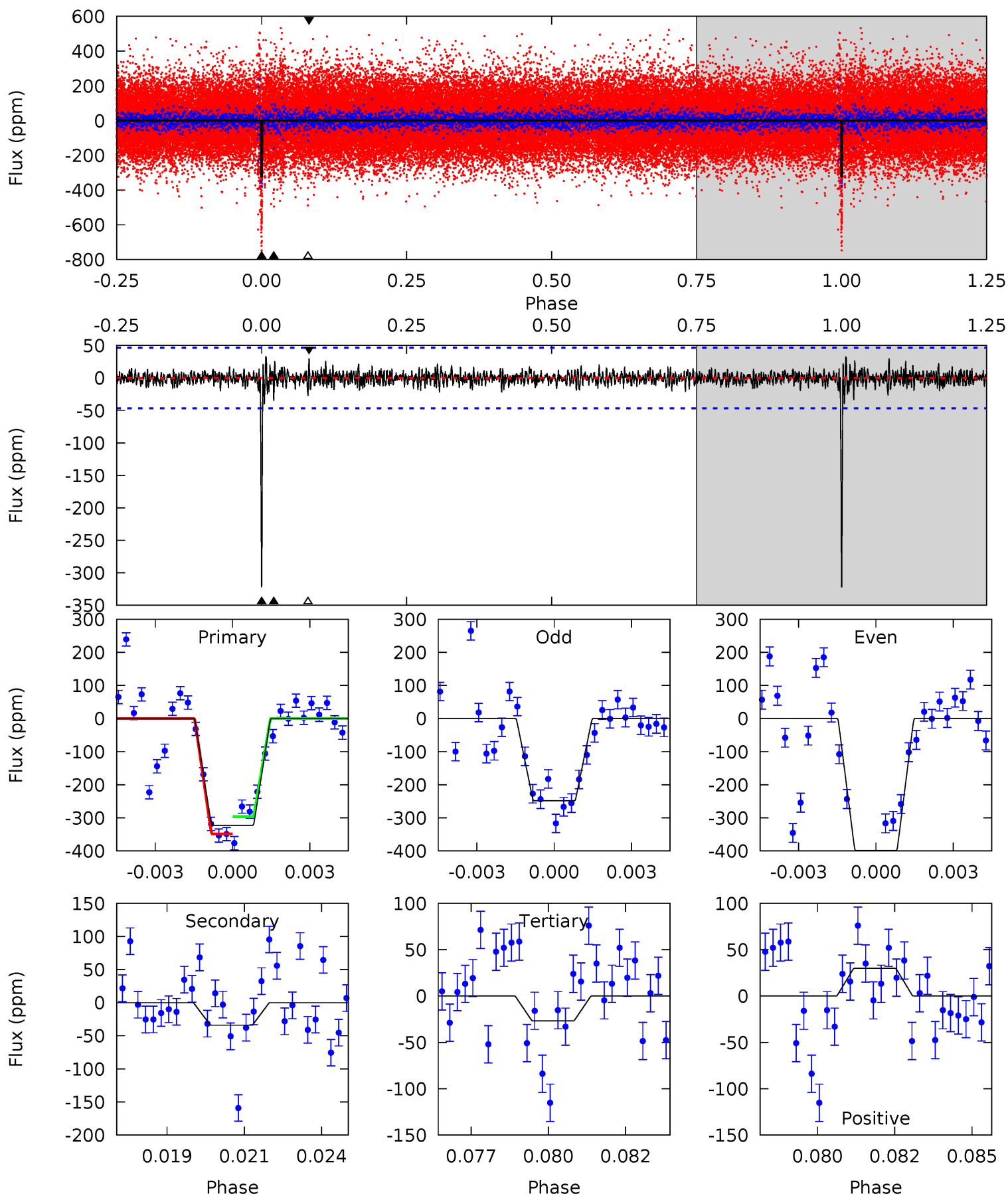
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	16.5	12.3	9.36	5.33	3.09	2.09	12.8	15.7	4.27	7.17	2.36	0.95	0.27	1.98



Alt Model-Shift Uniqueness Test

007450443-01, P = 368.260429 Days, E = 172.111434 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.4	3.84	3.02	3.36	5.27	3.00	0.81	33.4	33.0	0.82	0.47	8.48	1.07	0.09	2.93



Stellar Parameters For KIC 007450443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6110^{+167}_{-186}	$4.161^{+0.204}_{-0.136}$	$-0.140^{+0.300}_{-0.300}$	$1.417^{+0.325}_{-0.325}$	$1.059^{+0.159}_{-0.143}$	$0.525^{+0.594}_{-0.210}$
	+3%/-3%	+5%/-3%	+214%/-214%	+23%/-23%	+15%/-14%	+113%/-40%
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 007450443-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-179 ± 11	$2.64^{+0.53}_{-0.52}$	439^{+27}_{-30}	5386^{+464}_{-338}	14962^{+7812}_{-4589}
Alt.	-34 ± 9	$2.76^{+0.61}_{-0.58}$	440^{+26}_{-31}	3831^{+313}_{-283}	2532^{+1721}_{-981}

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 $A_{obs} \gg 1.0$

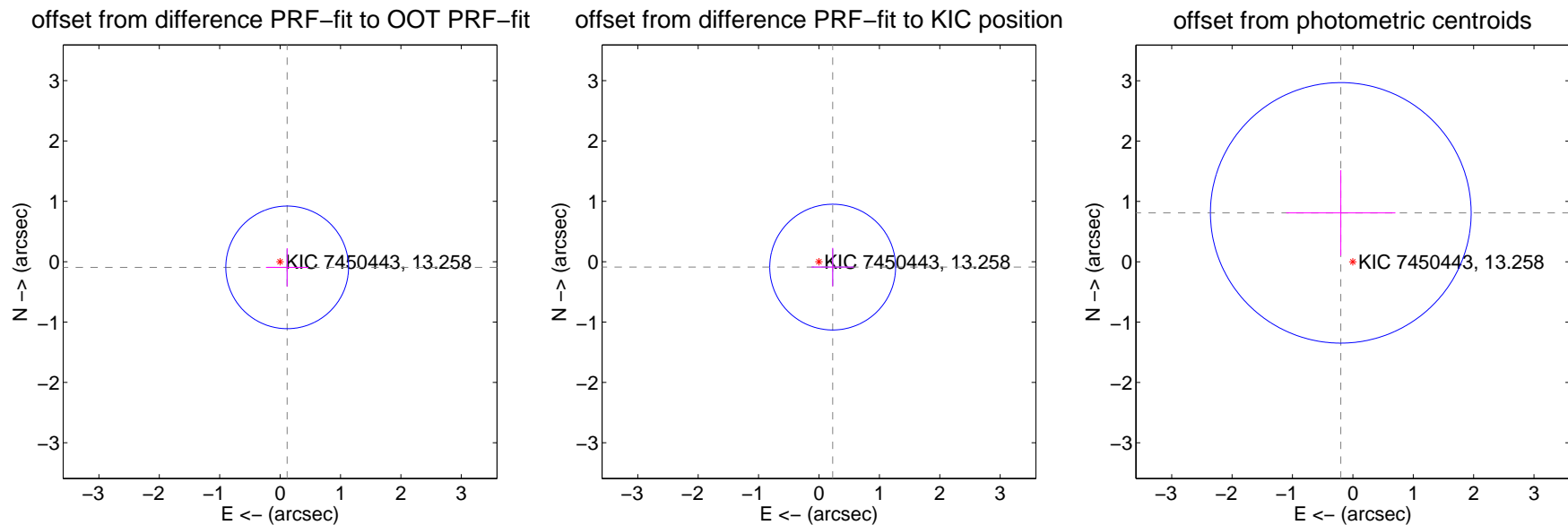
DV Centroid Data

Supplemental centroid analysis for 007450443-01. Kepler magnitude: 13.26. Transit SNR 12.07

There are 1 quarters with good PRF difference image offsets

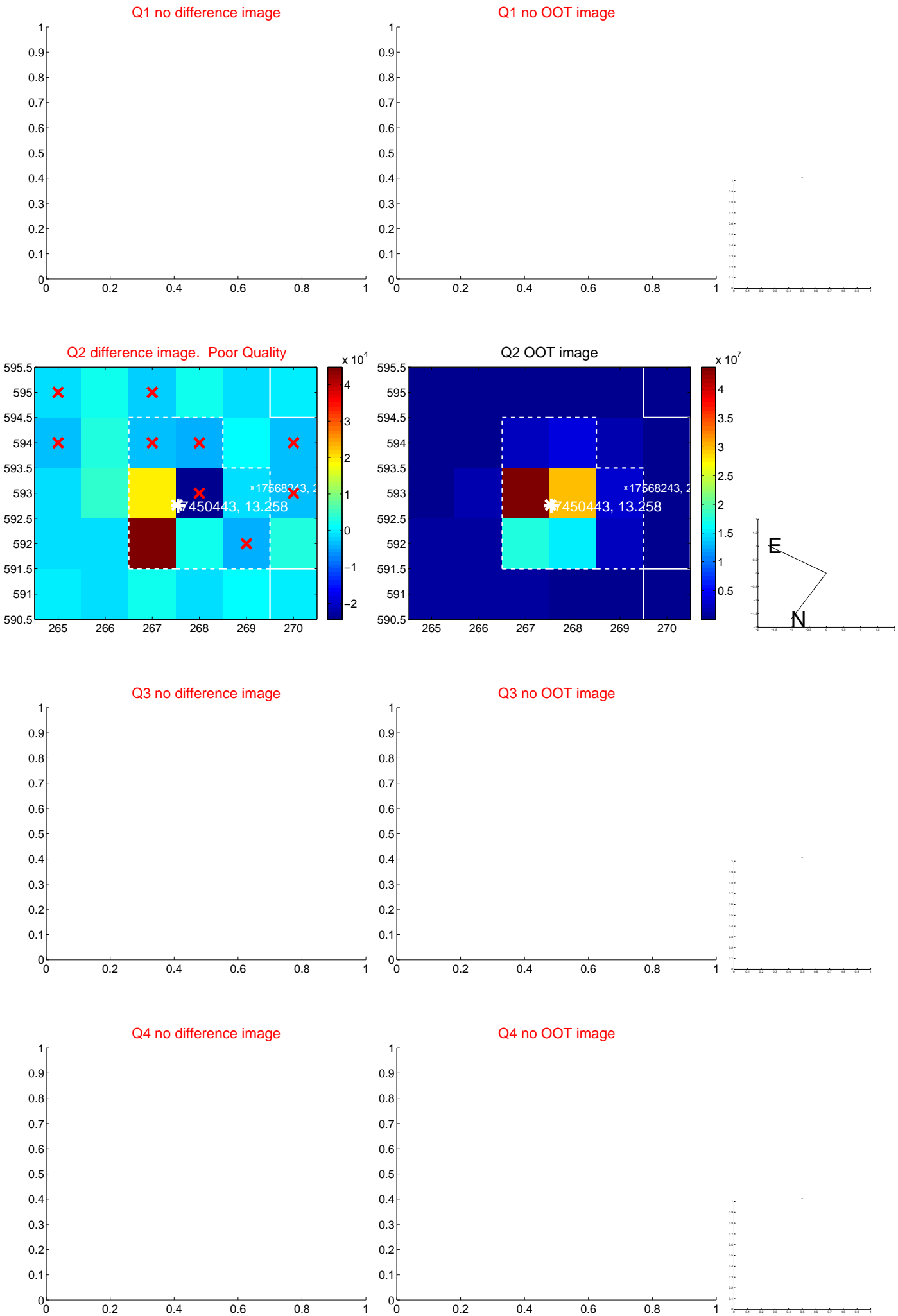
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.150 ± 0.339	0.44	-0.117 ± 0.352	-0.094 ± 0.317
PRF-fit source offset from KIC position	0.244 ± 0.347	0.70	-0.227 ± 0.352	-0.090 ± 0.317
photometric centroid source offset	0.83 ± 0.72	1.16	0.20 ± 0.90	0.81 ± 0.71



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.



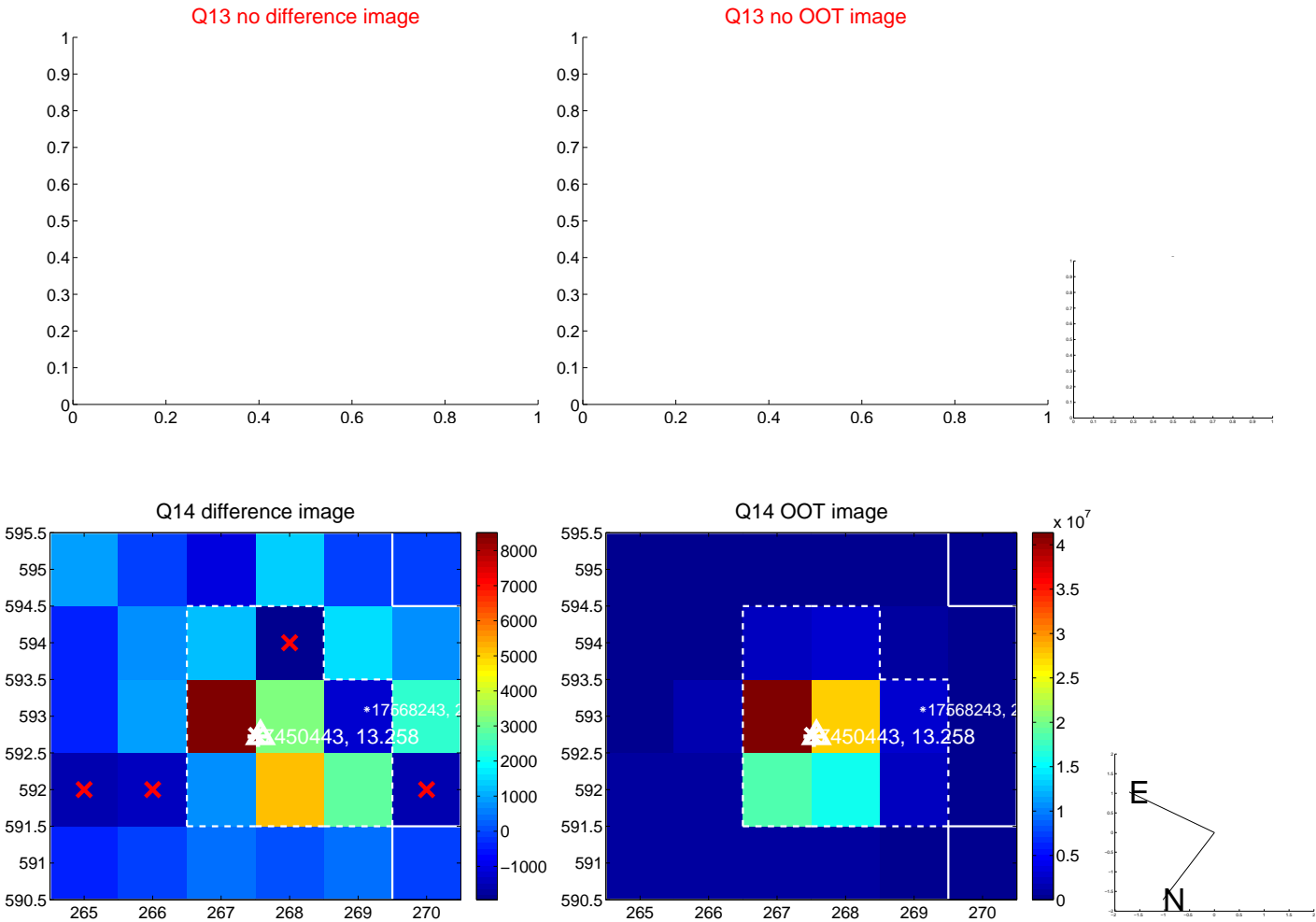
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



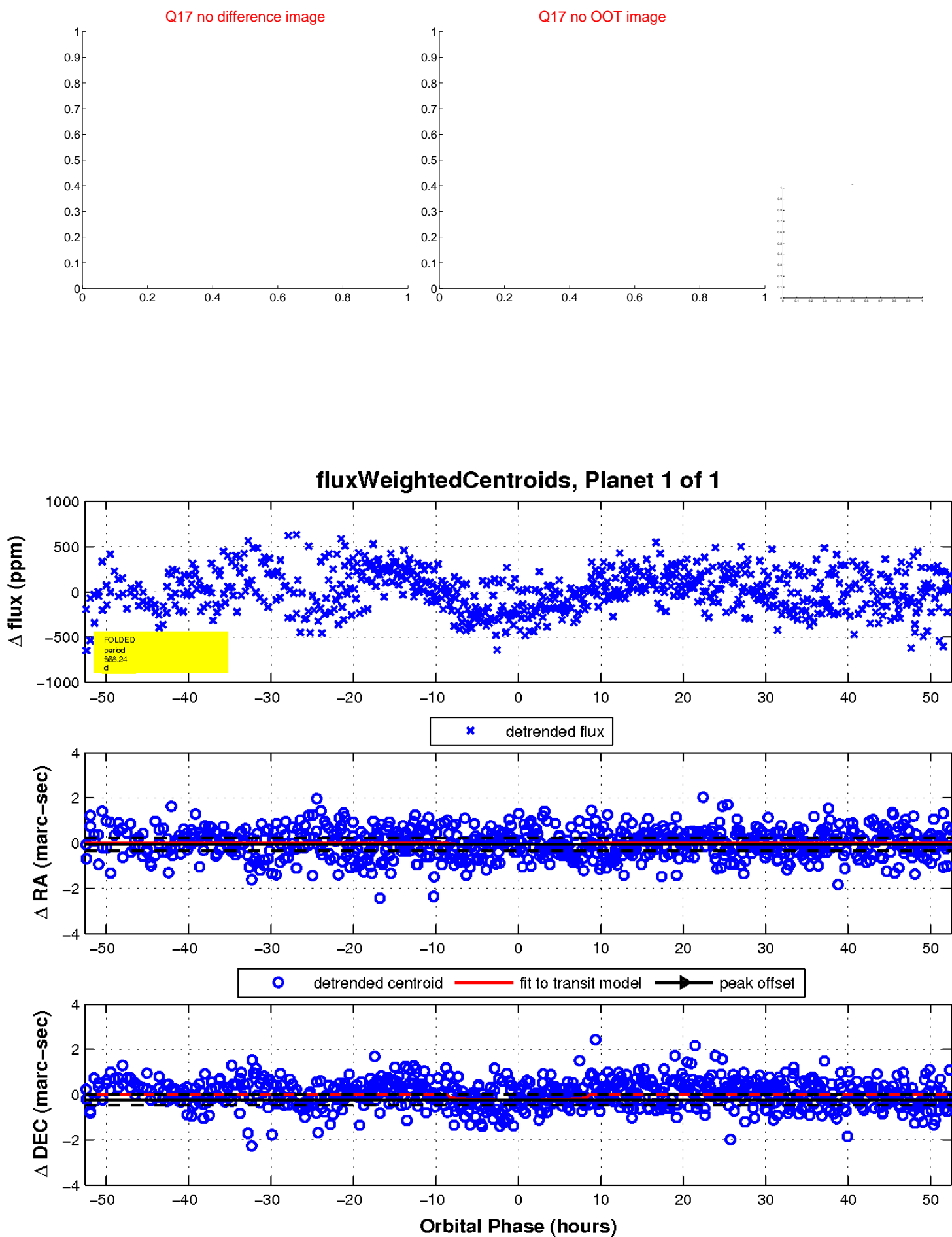
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

