

KIC 006443093

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})
006443093-01	OBS	5284.01	389.313262	351.365280	2583.8	5.337	37.2	37.1	0.96	5731	6.48	0.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006443093-01	OBS	PC	0.96	0	0	0	0	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 006443093-01

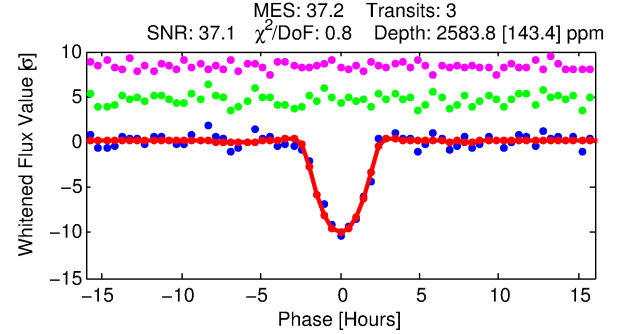
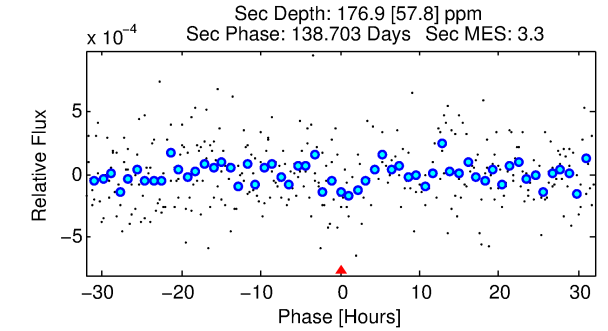
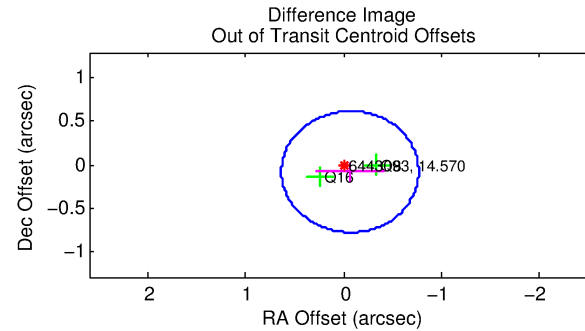
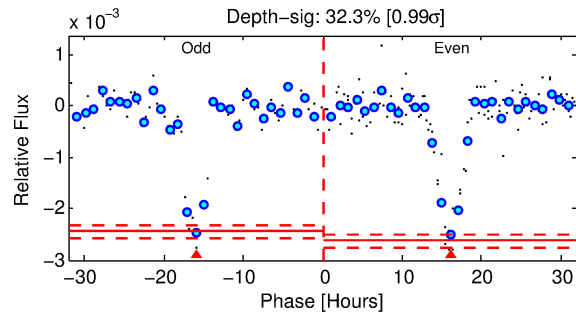
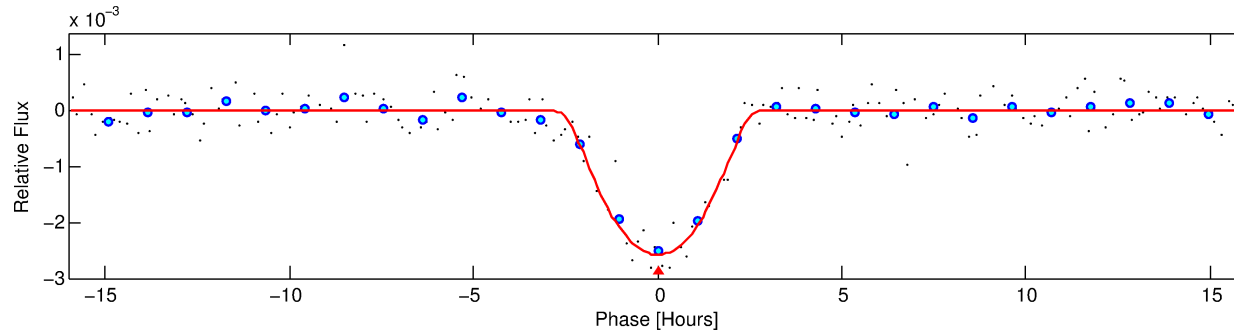
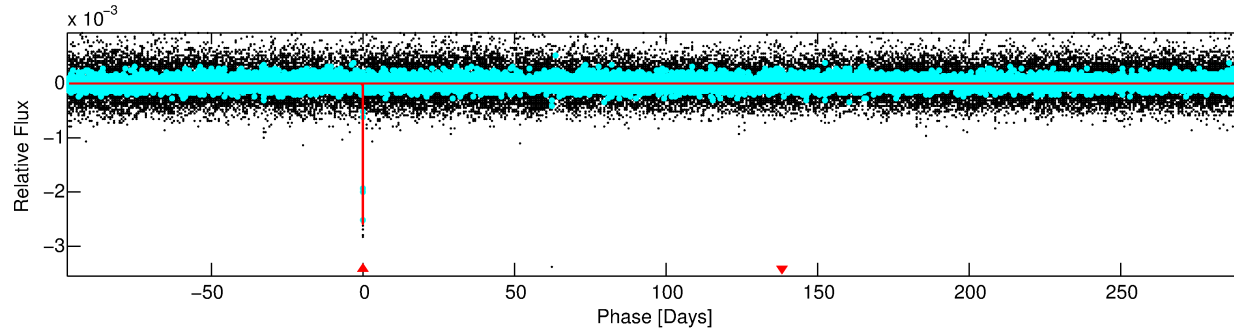
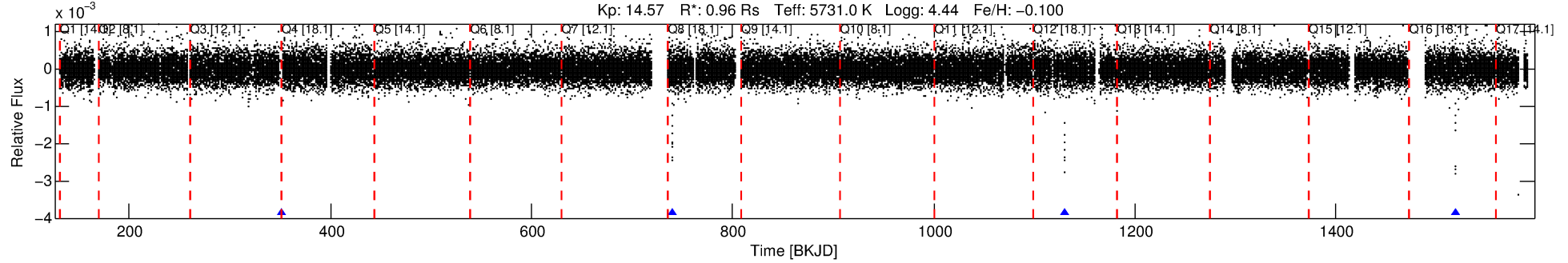
No Significant Match Found

DV One-Page Summary

KIC: 6443093 Candidate: 1 of 1 Period: 389.313 d

KOI: K05284.01 Corr: 0.962

Kp: 14.57 R*: 0.96 Rs Teff: 5731.0 K Logg: 4.44 Fe/H: -0.100



DV Fit Results:

Period = 389.31326 [0.00220] d
Epoch = 351.3653 [0.0048] BKJD
Rp/R* = 0.0620 [0.0101]
a/R* = 261.86 [26.76]
b = 0.95 [0.03]
Seff = 0.86 [0.31]
Teq = 246 [22] K
Rp = 6.48 [2.09] Re
a = 1.0158 [0.2361] AU
Ag = 2393.13 [1367.77] [1.75σ]
Teffp = 2655 [317] K [7.58σ]

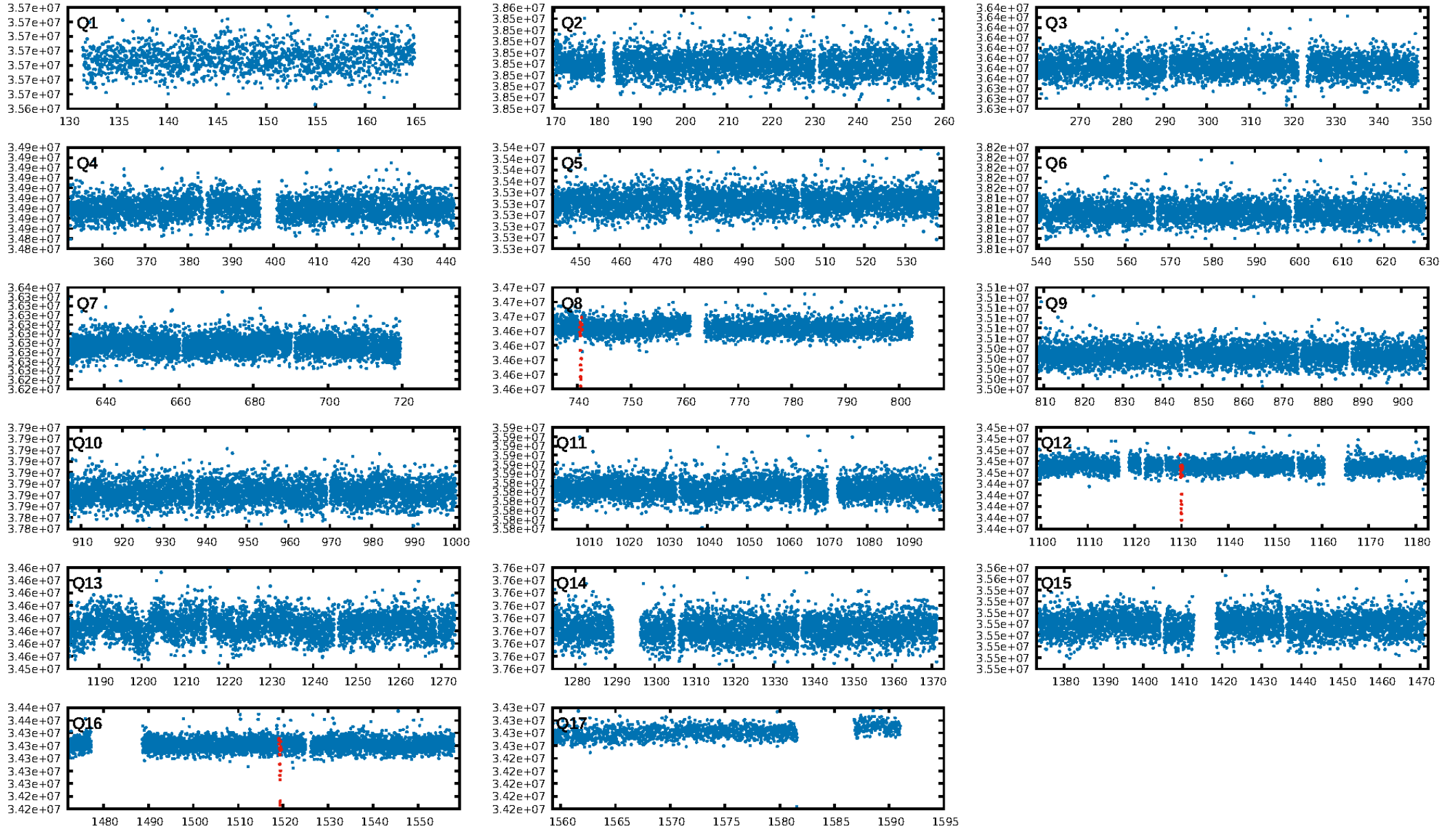
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 40.5%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: 3.95e-173
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 13.2
Centroid-sig: 14.5%
Centroid-so: 0.136 arcsec [0.32σ]
OotOffset-rm: 0.106 arcsec [0.45σ]
KicOffset-rm: 0.205 arcsec [1.03σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

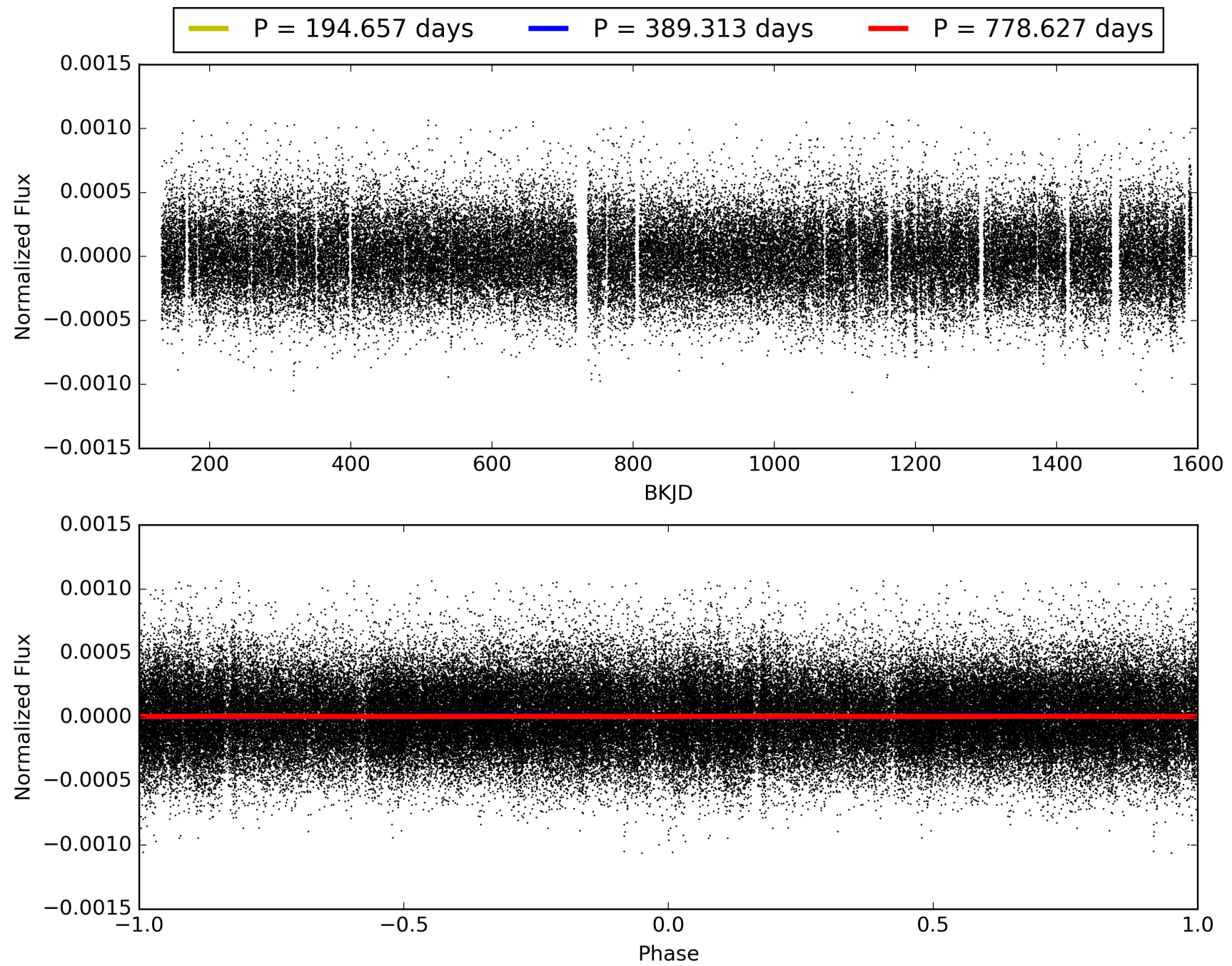
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:01:22 Z

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

TCE 006443093-01, PDC Light Curves

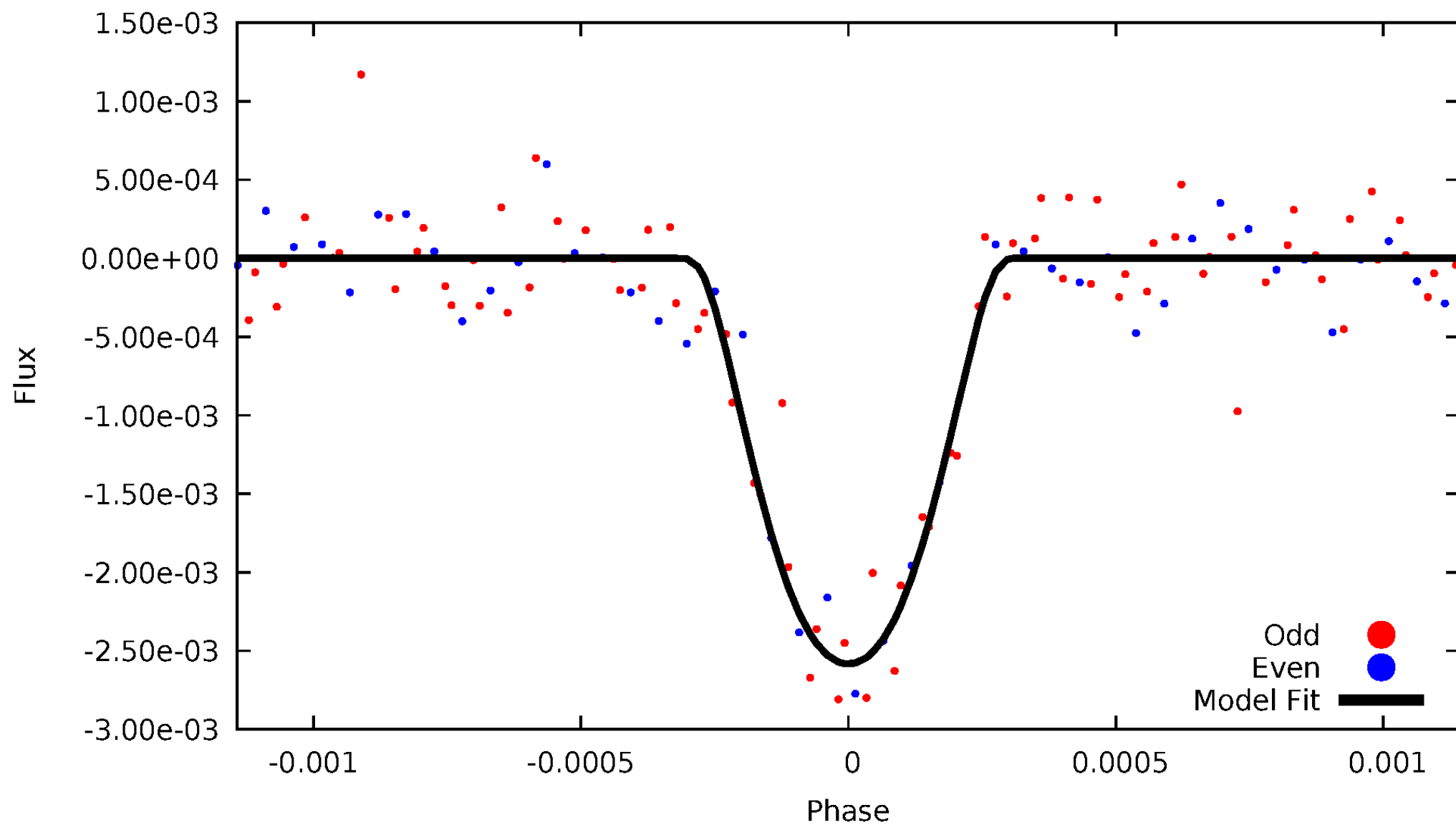


TCE 006443093-01



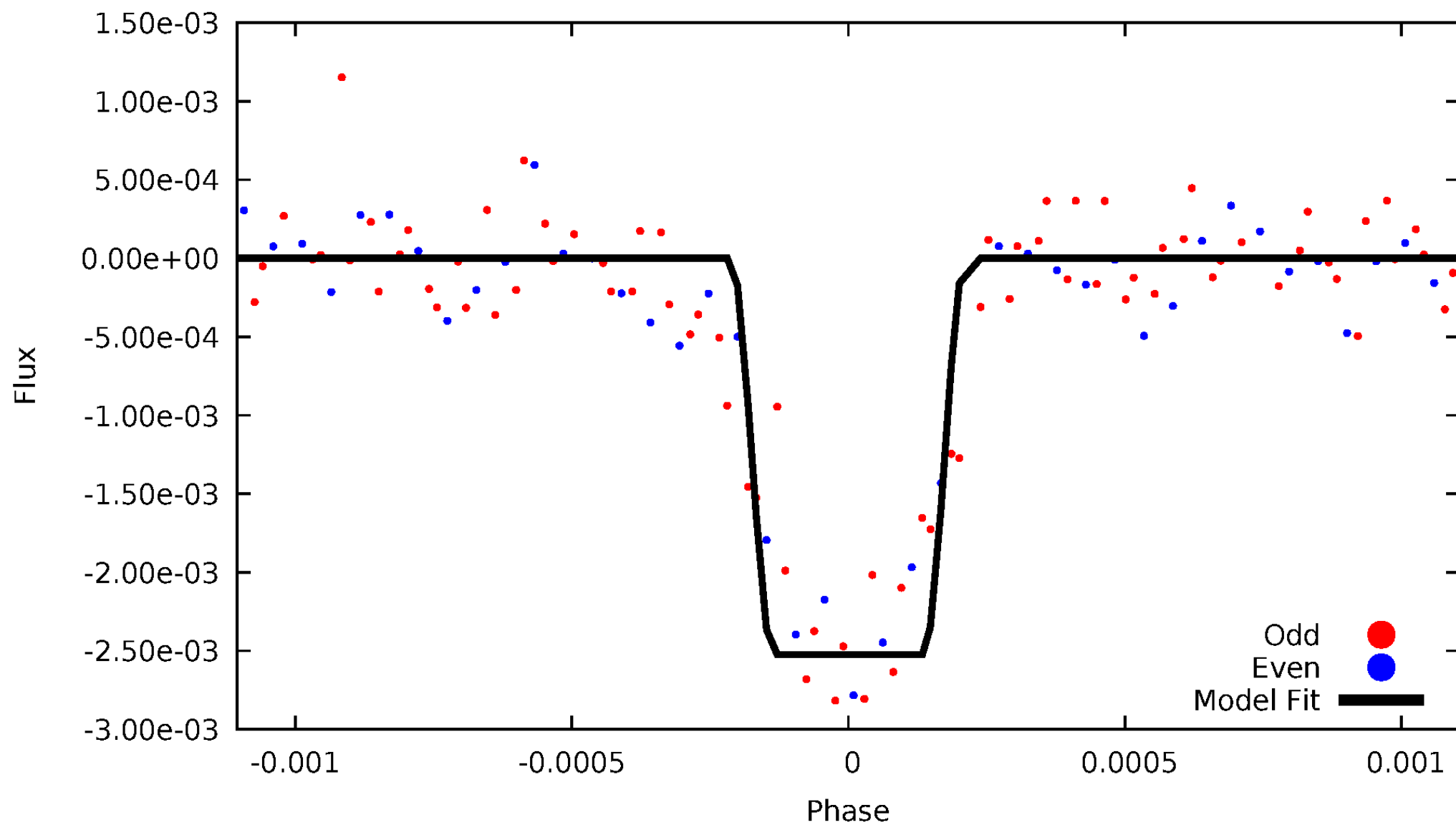
DV Odd/Even

TCE 006443093-01



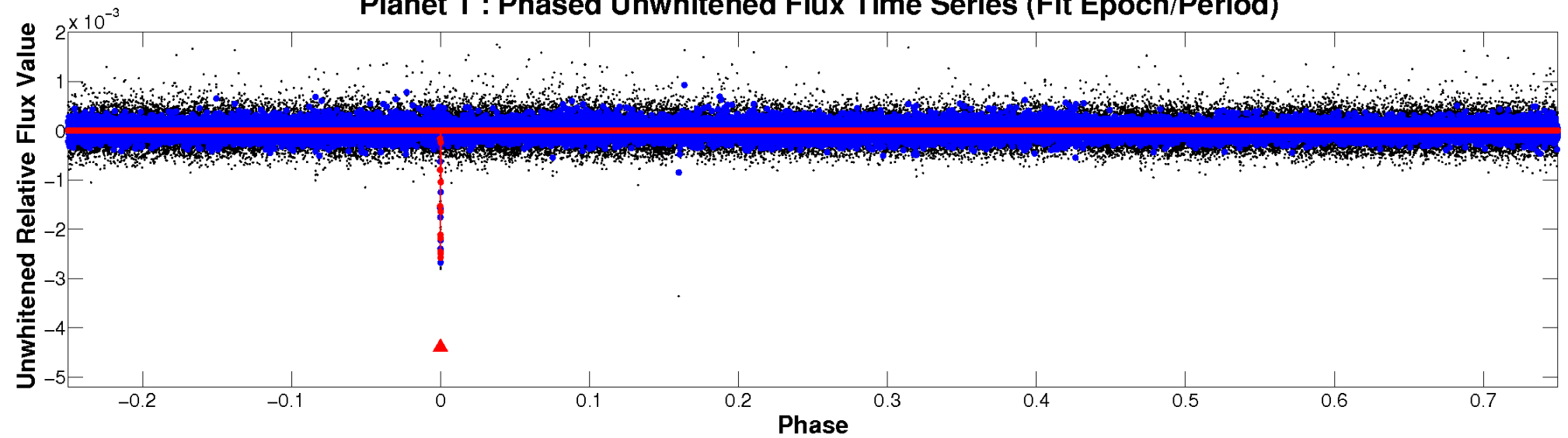
ALT Odd/Even

TCE 006443093-01

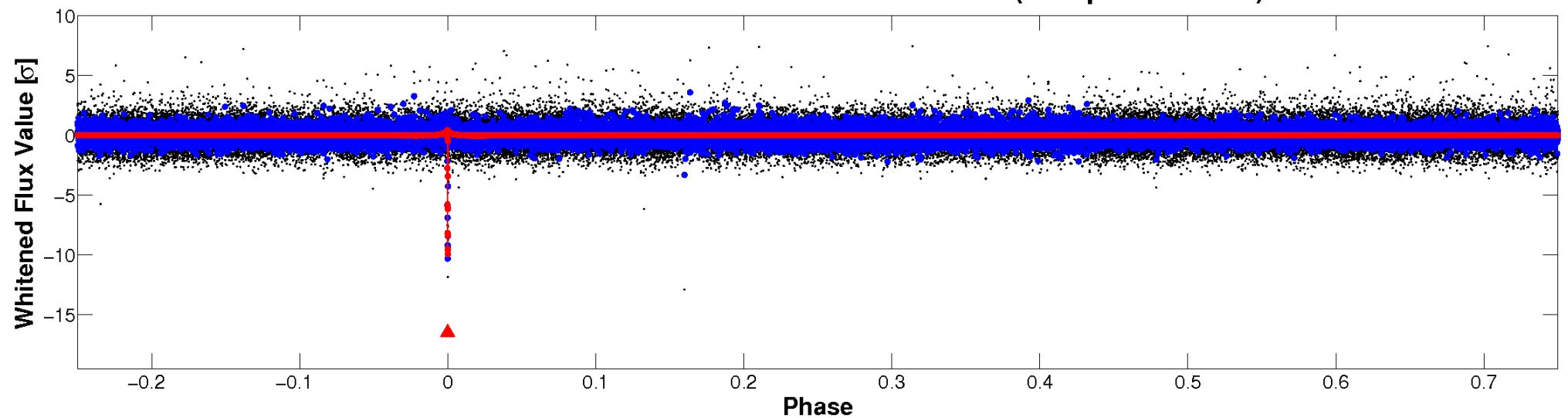


Non-Whitened Vs. Whitened Light Curve

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

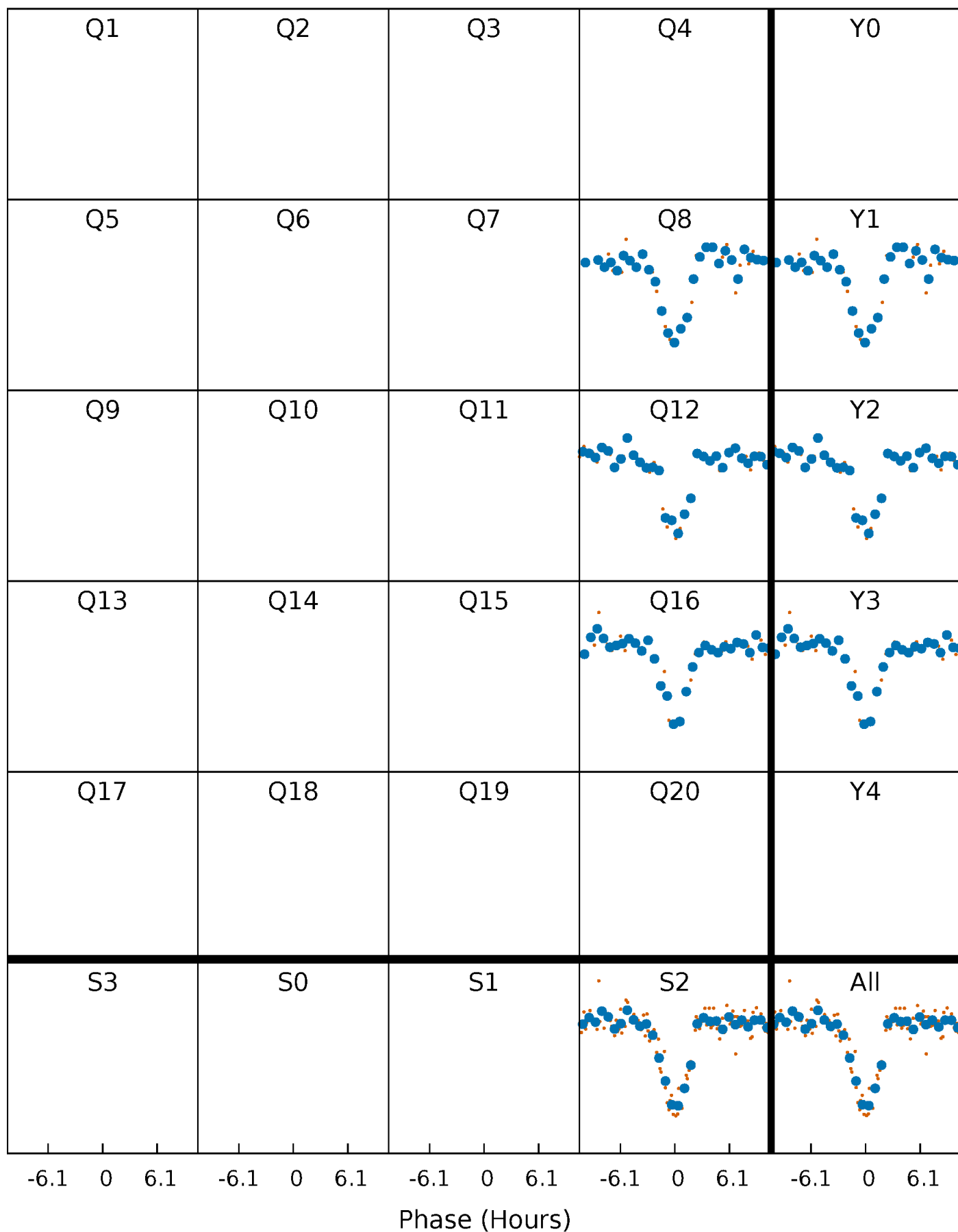


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



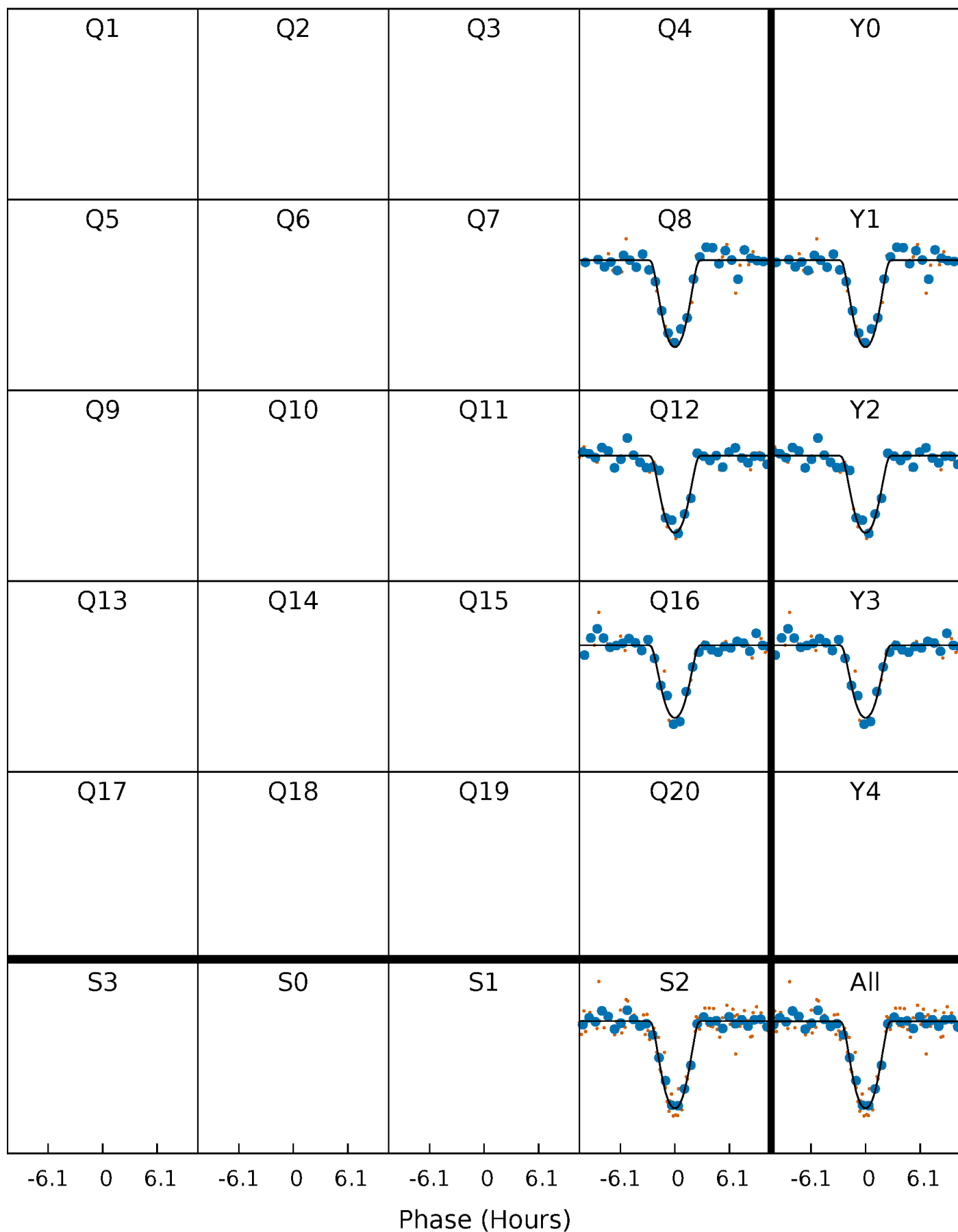
PDC Quarter-Phased Transit Curves

TCE 006443093-01 P=389.313262 Days $T_0=351.365280$ (BKJD)



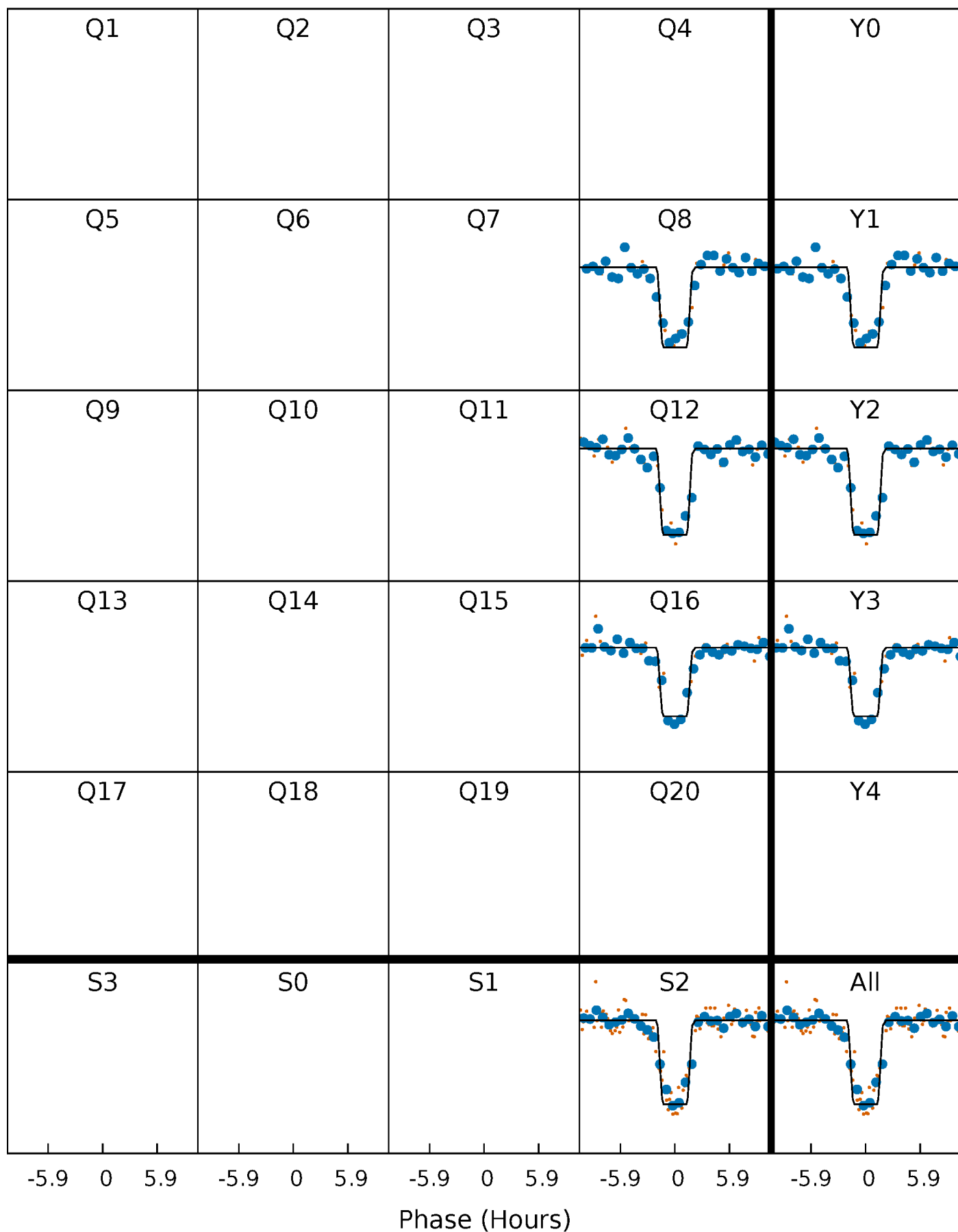
DV Quarter-Phased Transit Curves

TCE 006443093-01 P=389.313262 Days $T_0=351.365280$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

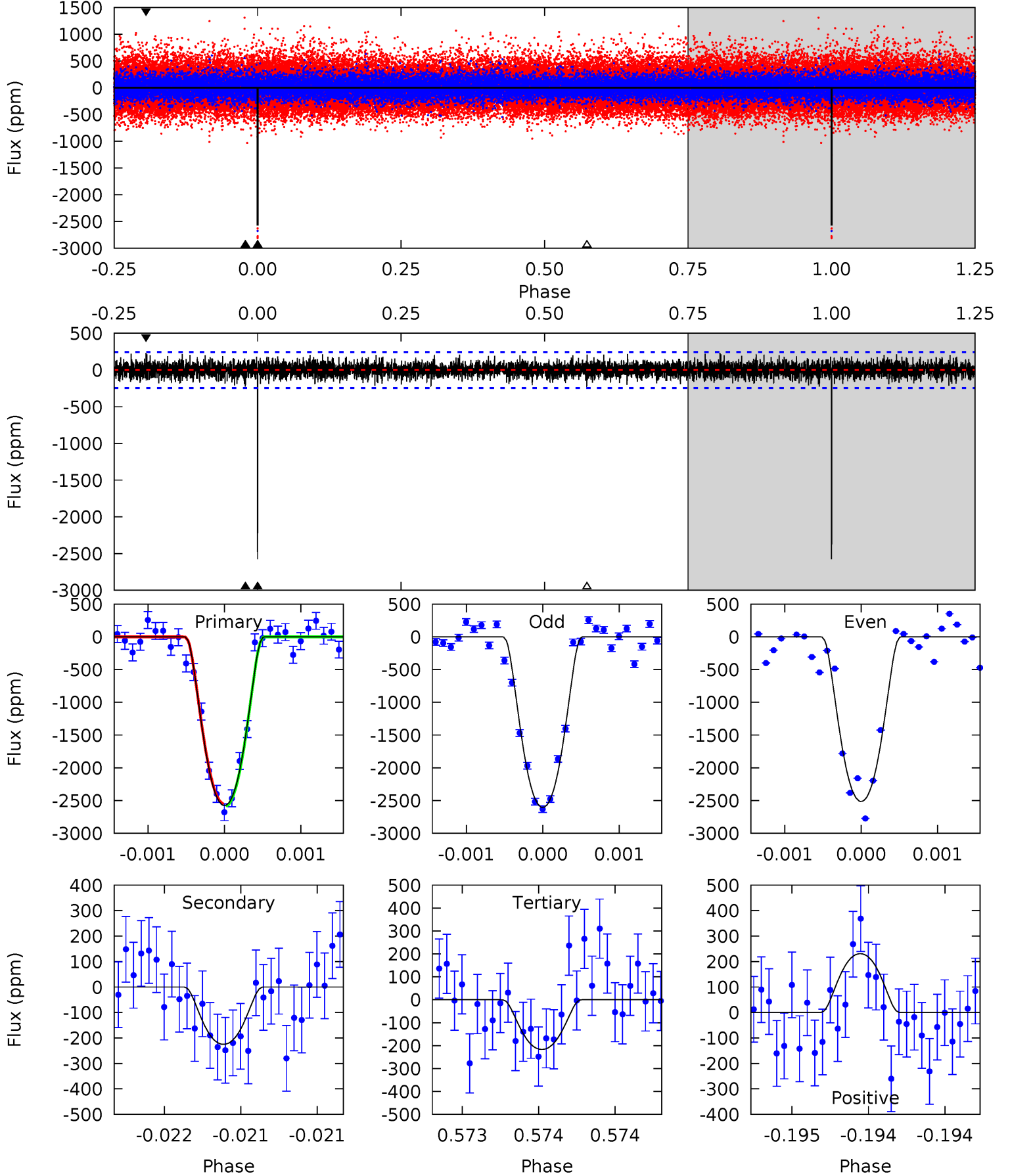
TCE 006443093-01 P=389.313807 Days $T_0=351.365528$ (BKJD)



DV Model-Shift Uniqueness Test

006443093-01, P = 389.313262 Days, E = 351.365280 Days

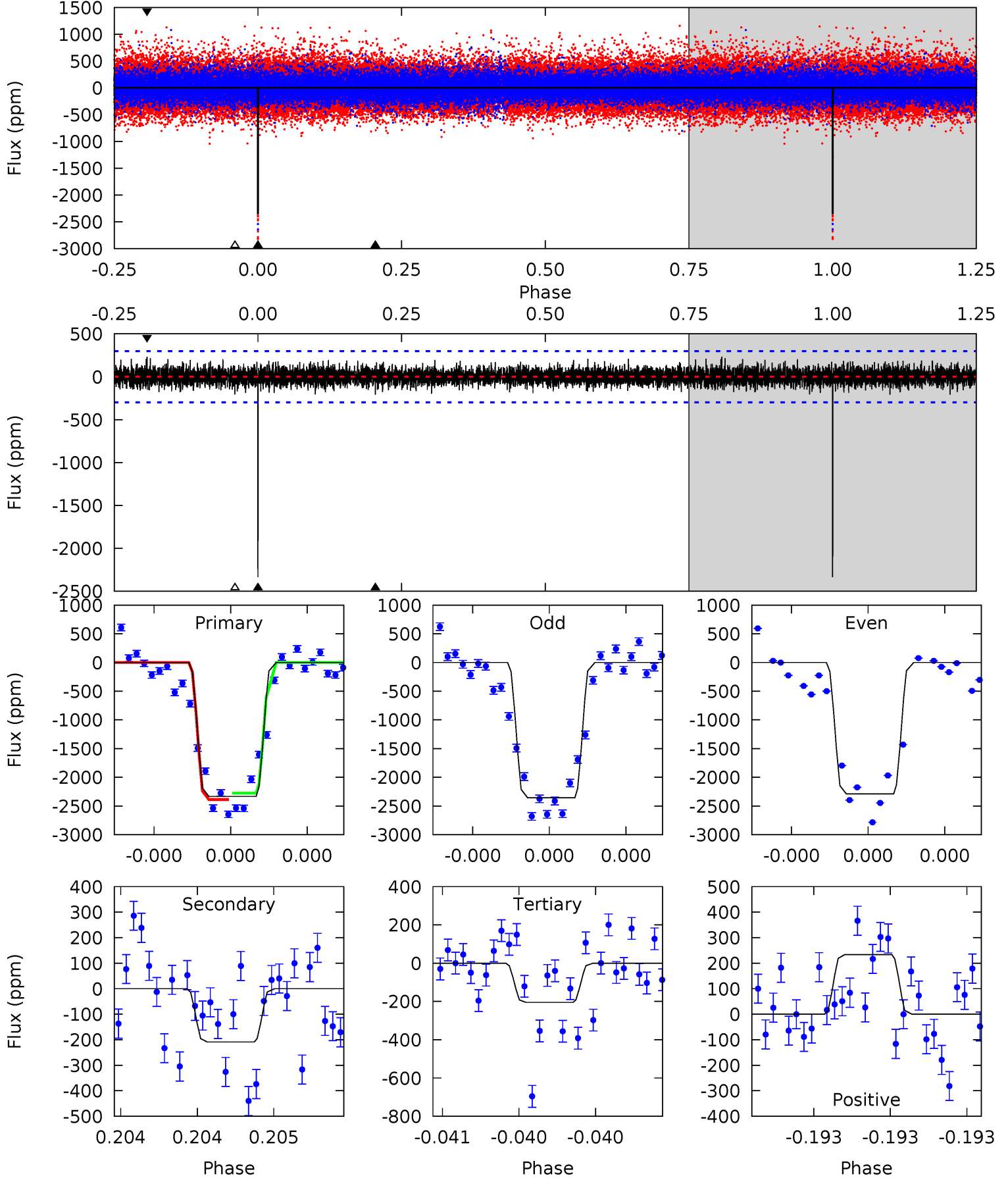
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.5	5.11	4.92	5.24	5.54	3.44	1.41	53.6	53.2	0.19	-0.13	0.96	1.00	0.08	0.42



Alt Model-Shift Uniqueness Test

006443093-01, P = 389.313807 Days, E = 351.365528 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.9	3.92	3.85	4.39	5.61	3.54	1.05	40.0	39.5	0.07	-0.47	0.59	0.99	0.09	1.05



Stellar Parameters For KIC 006443093

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5731^{+153}_{-170}	$4.440^{+0.098}_{-0.182}$	$-0.100^{+0.300}_{-0.300}$	$0.958^{+0.267}_{-0.114}$	$0.921^{+0.116}_{-0.095}$	$1.477^{+0.622}_{-0.705}$
	+3%/-3%	+2%/-4%	+300%/-300%	+28%/-12%	+13%/-10%	+42%/-48%
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 006443093-01 / KOI 5284.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-225 ± 44	$6.53^{+1.39}_{-1.12}$	345^{+26}_{-17}	3355^{+218}_{-201}	2867^{+1549}_{-1004}
Alt.	-209 ± 53	$5.38^{+1.27}_{-1.20}$	346^{+24}_{-17}	3532^{+327}_{-250}	4057^{+2823}_{-1642}

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 $A_{obs} \gg 1.0$

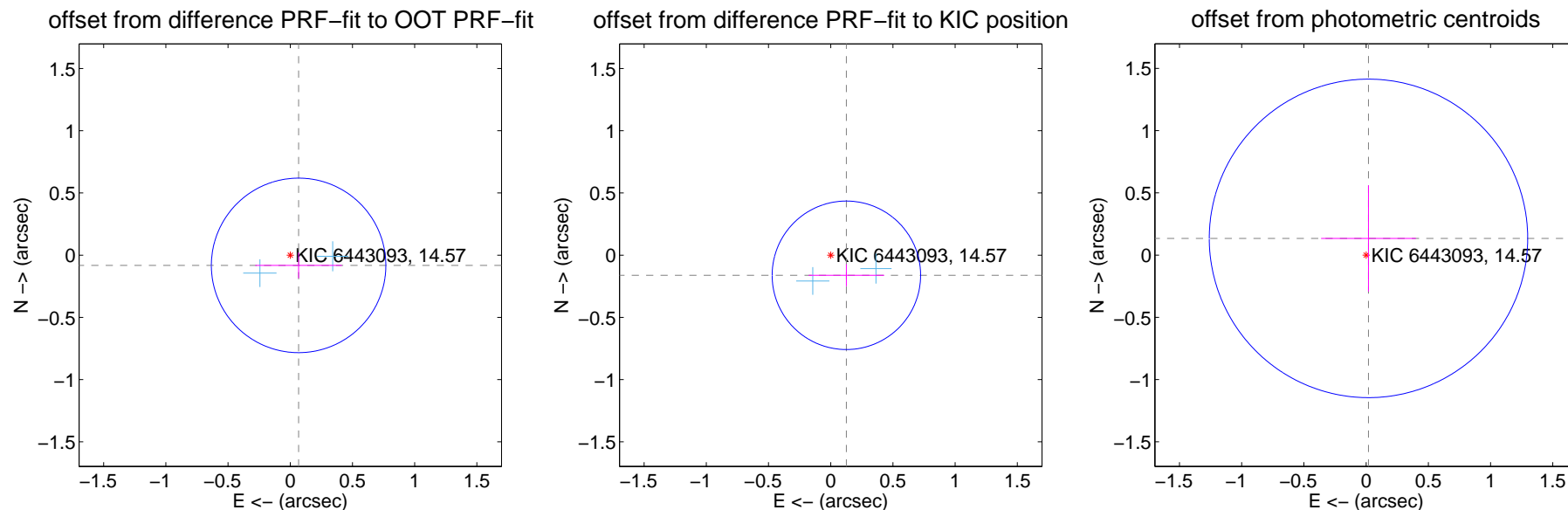
DV Centroid Data

Supplemental centroid analysis for 006443093-01. Kepler magnitude: 14.57. Transit SNR 37.05

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 0.234	0.45	-0.067 ± 0.348	-0.082 ± 0.103
PRF-fit source offset from KIC position	0.205 ± 0.199	1.03	-0.126 ± 0.304	-0.162 ± 0.088
photometric centroid source offset	0.14 ± 0.43	0.32	-0.02 ± 0.38	0.13 ± 0.43

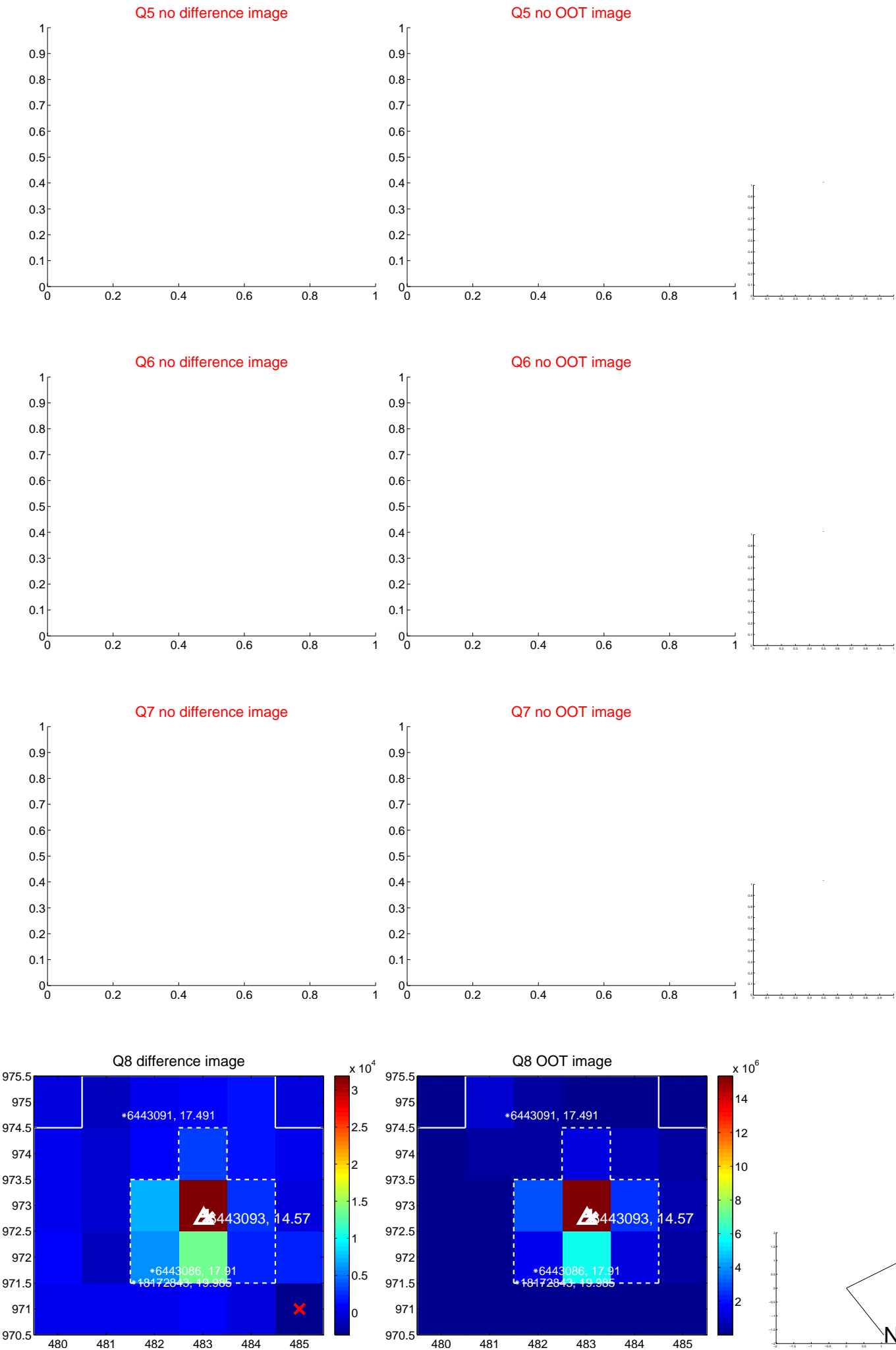


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



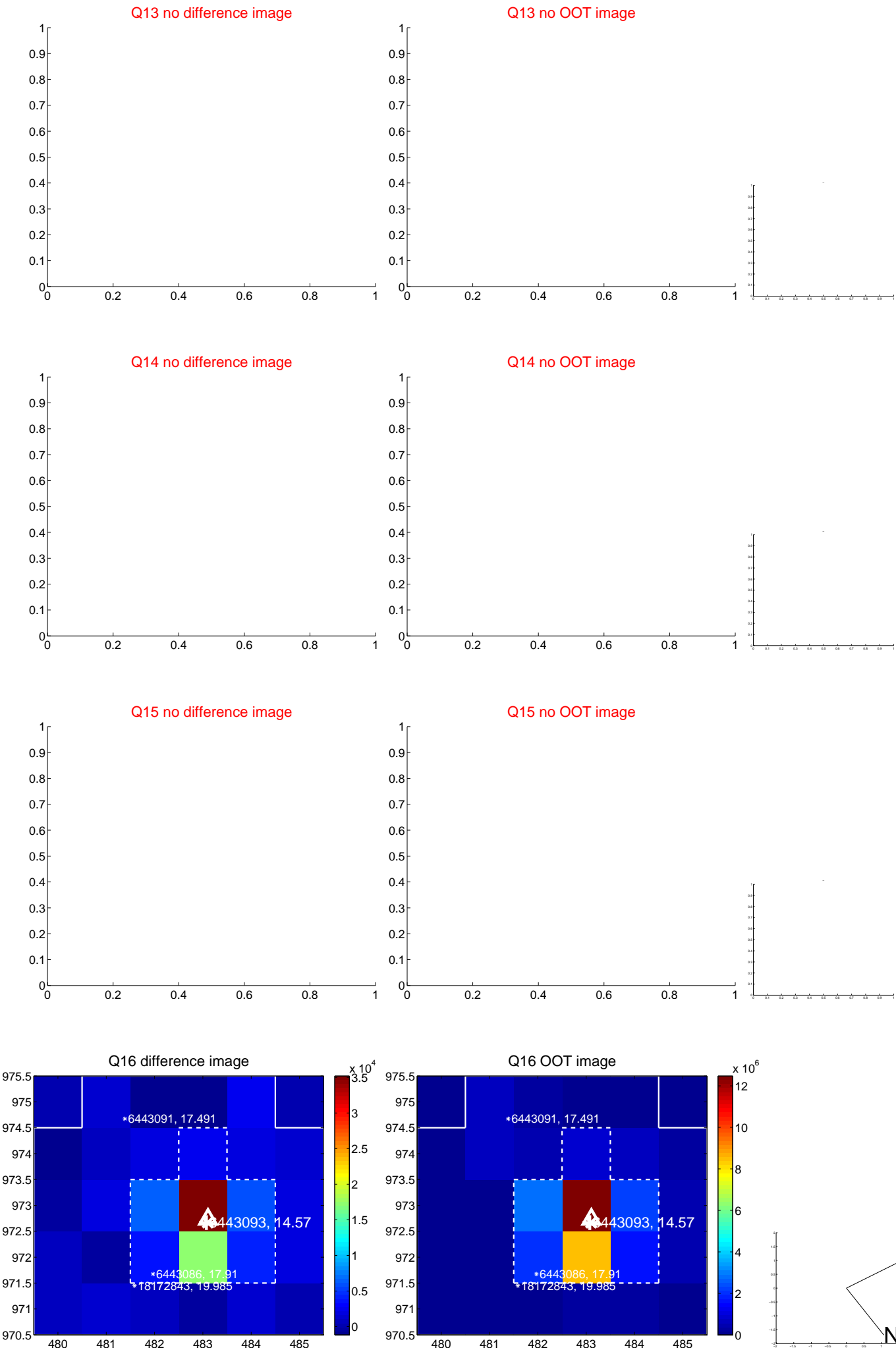
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



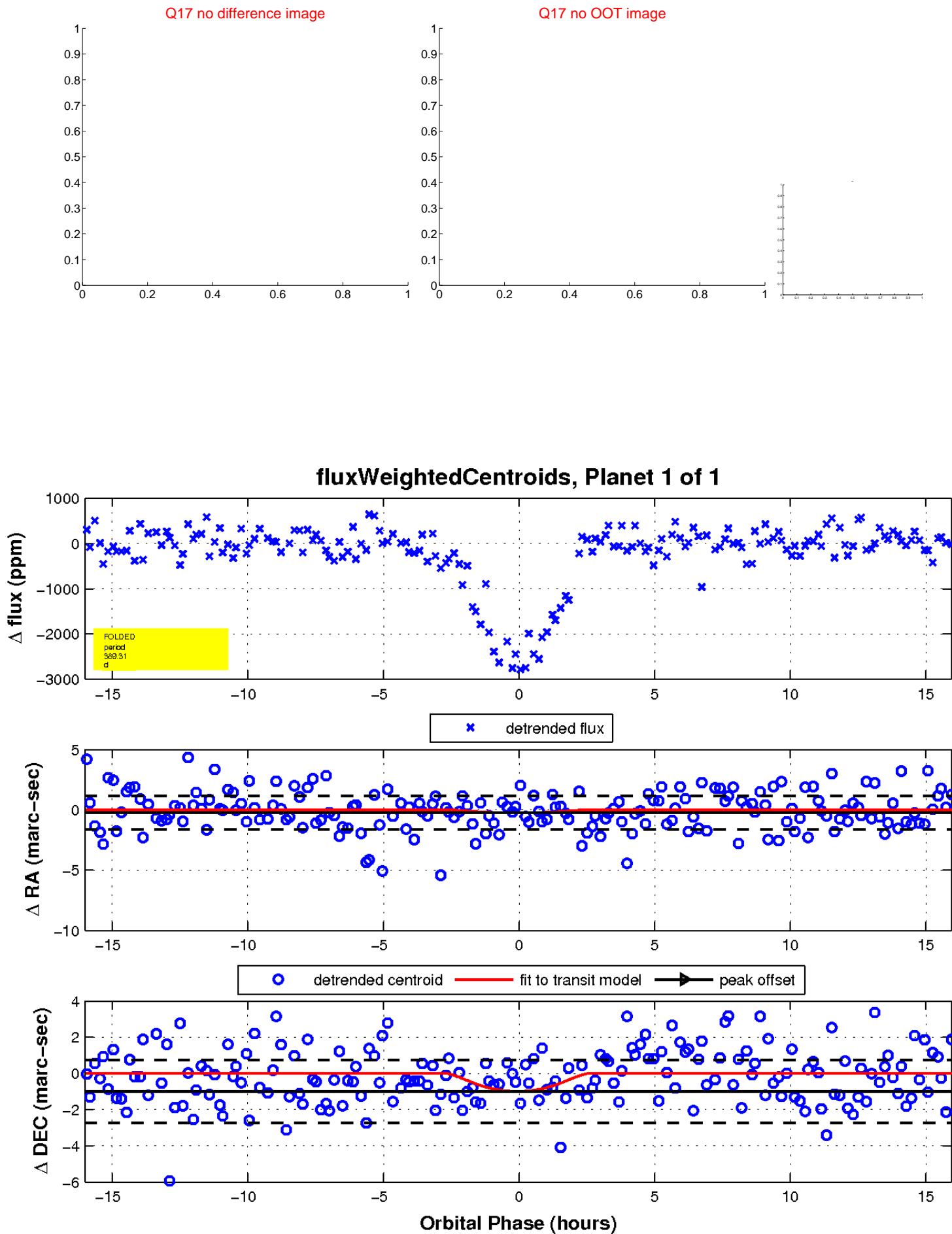
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

