

KIC 009994396

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})
009994396-01	OBS	No	317.252425	281.065278	445.4	10.595	8.6	7.1	0.90	5758	2.08	1.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009994396-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

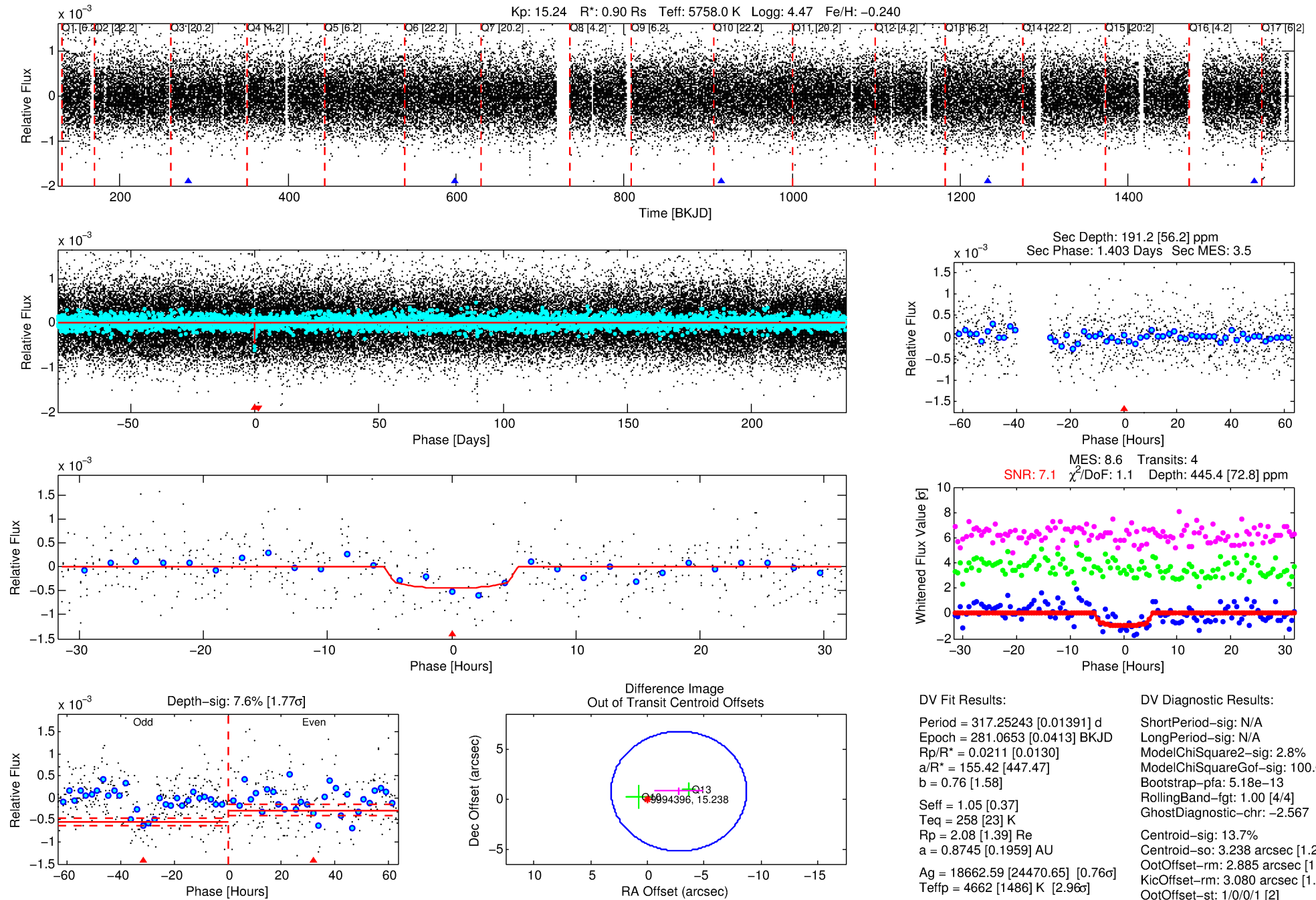
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009994396-01

No Significant Match Found

DV One-Page Summary

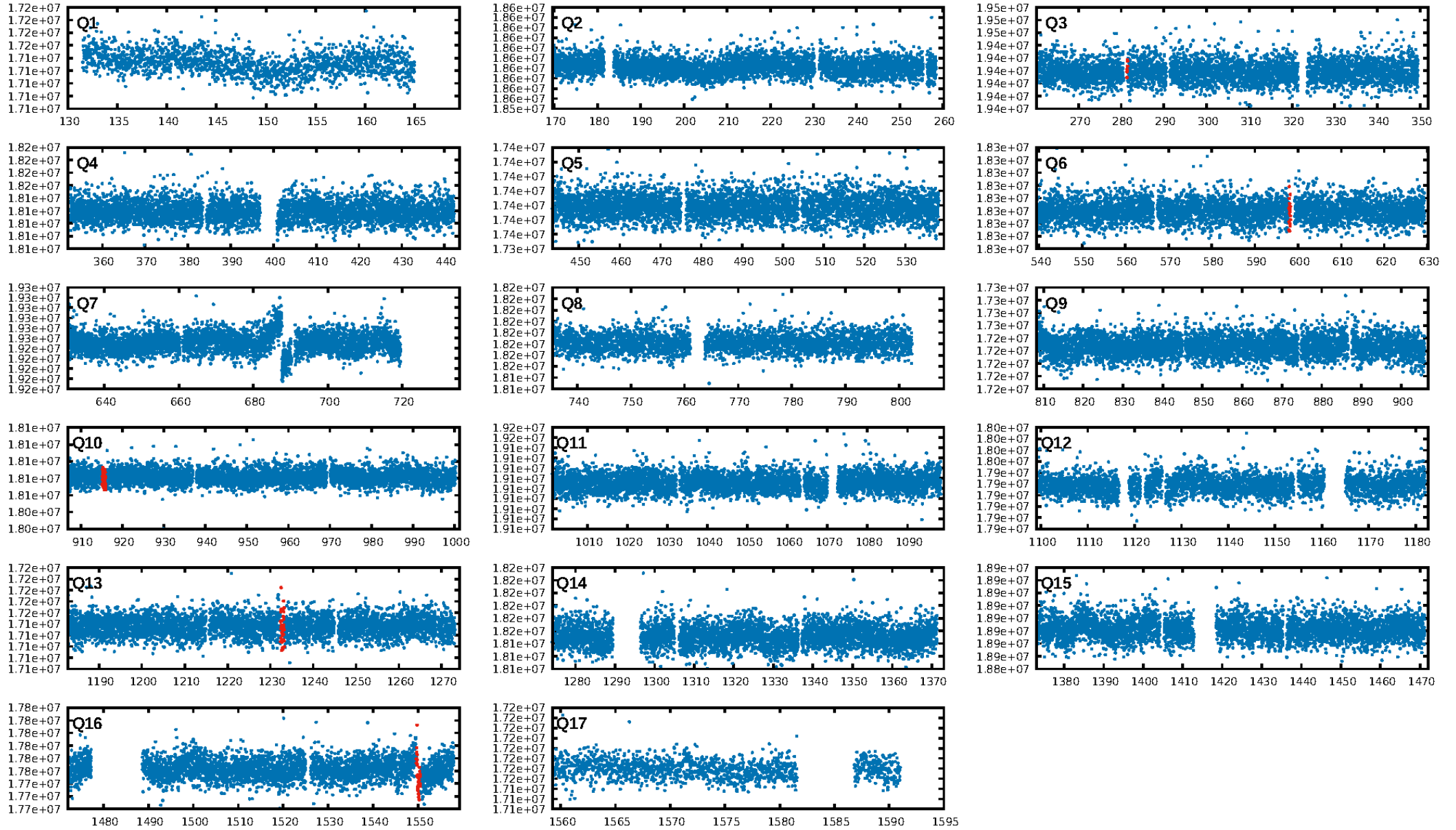
KIC: 9994396 Candidate: 1 of 1 Period: 317.252 d



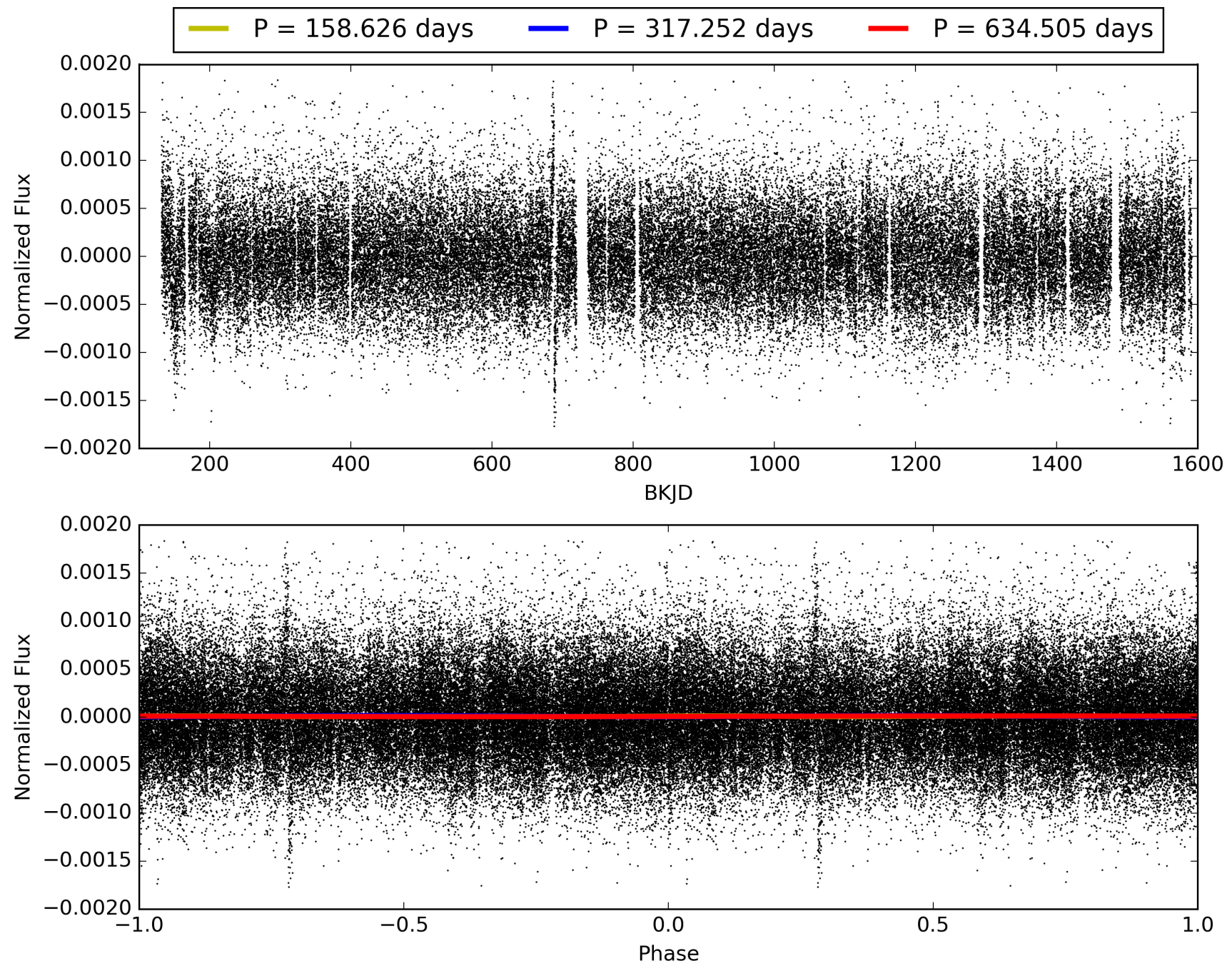
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:29:34 Z

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

TCE 009994396-01, PDC Light Curves

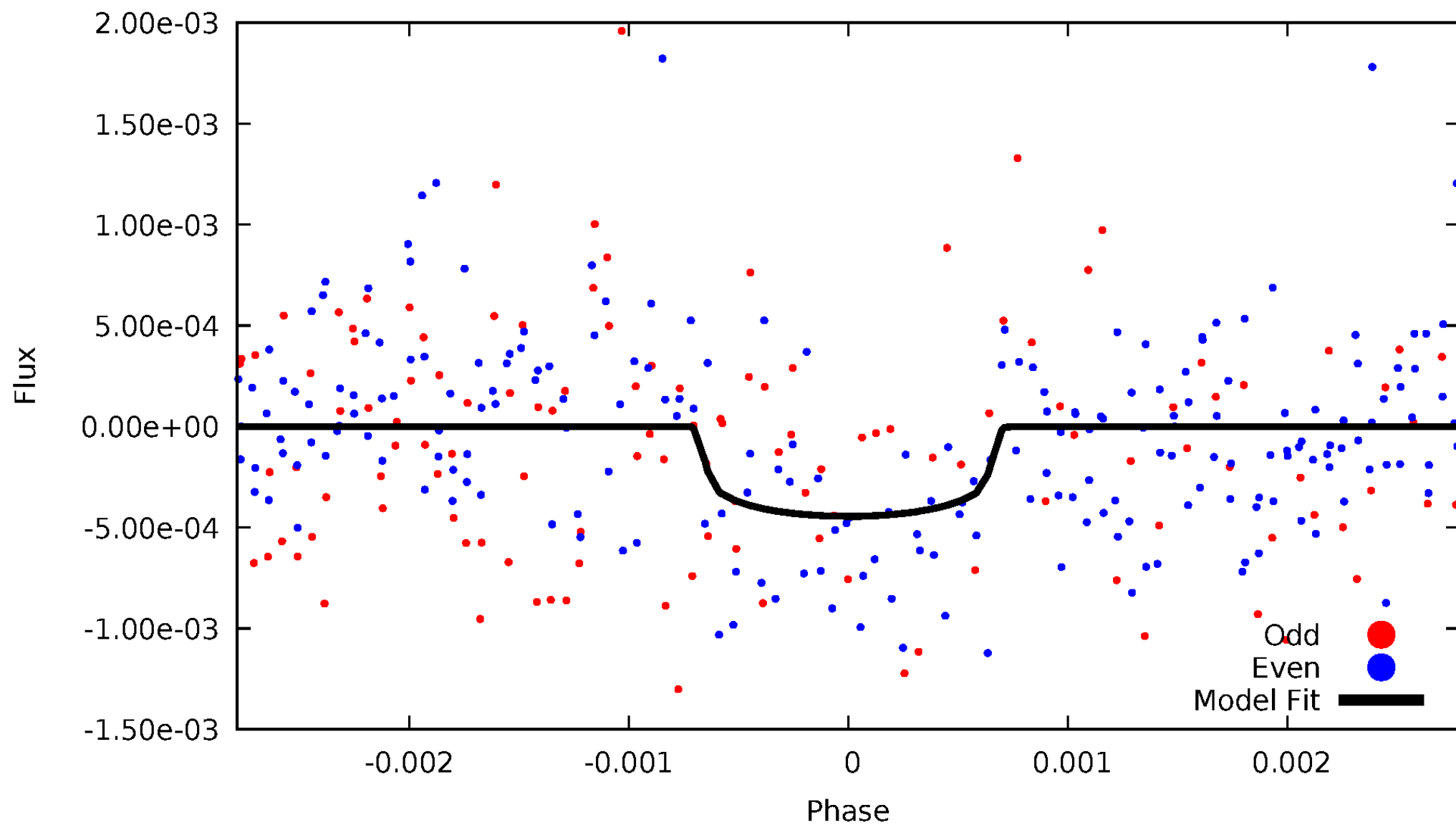


TCE 009994396-01



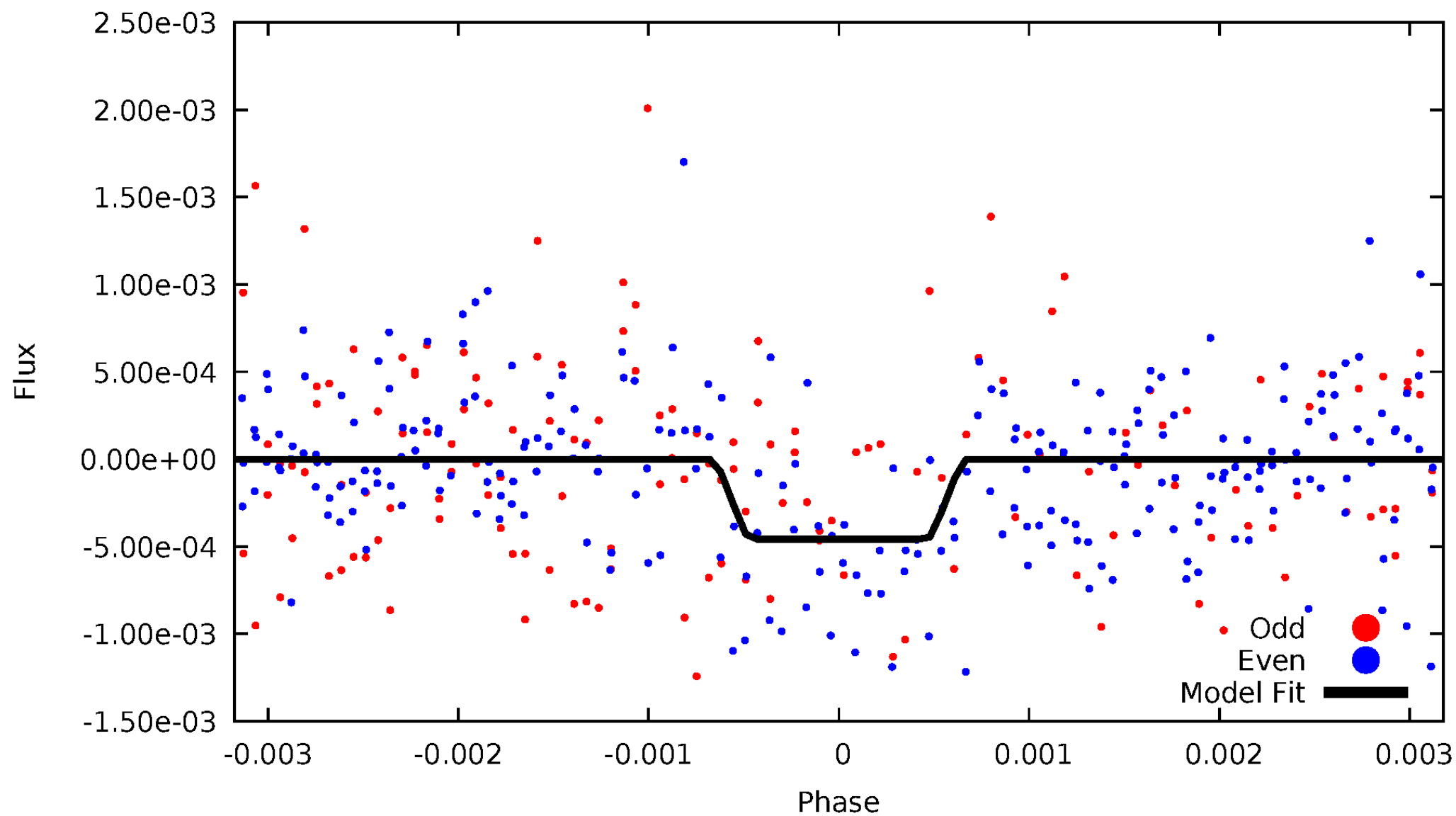
DV Odd/Even

TCE 009994396-01



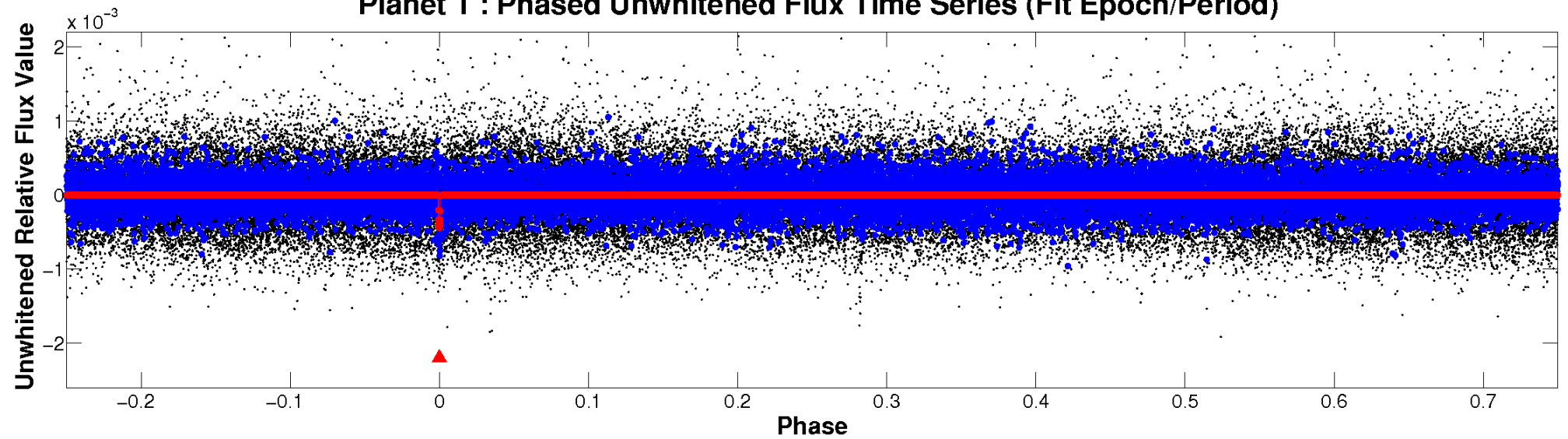
ALT Odd/Even

TCE 009994396-01

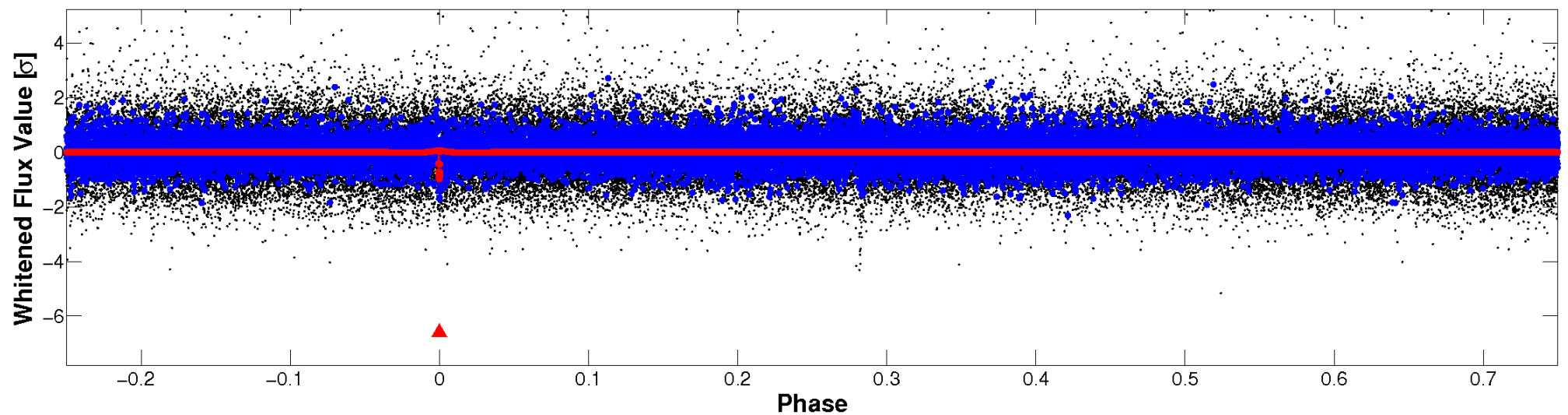


Non-Whitened Vs. Whitened Light Curve

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

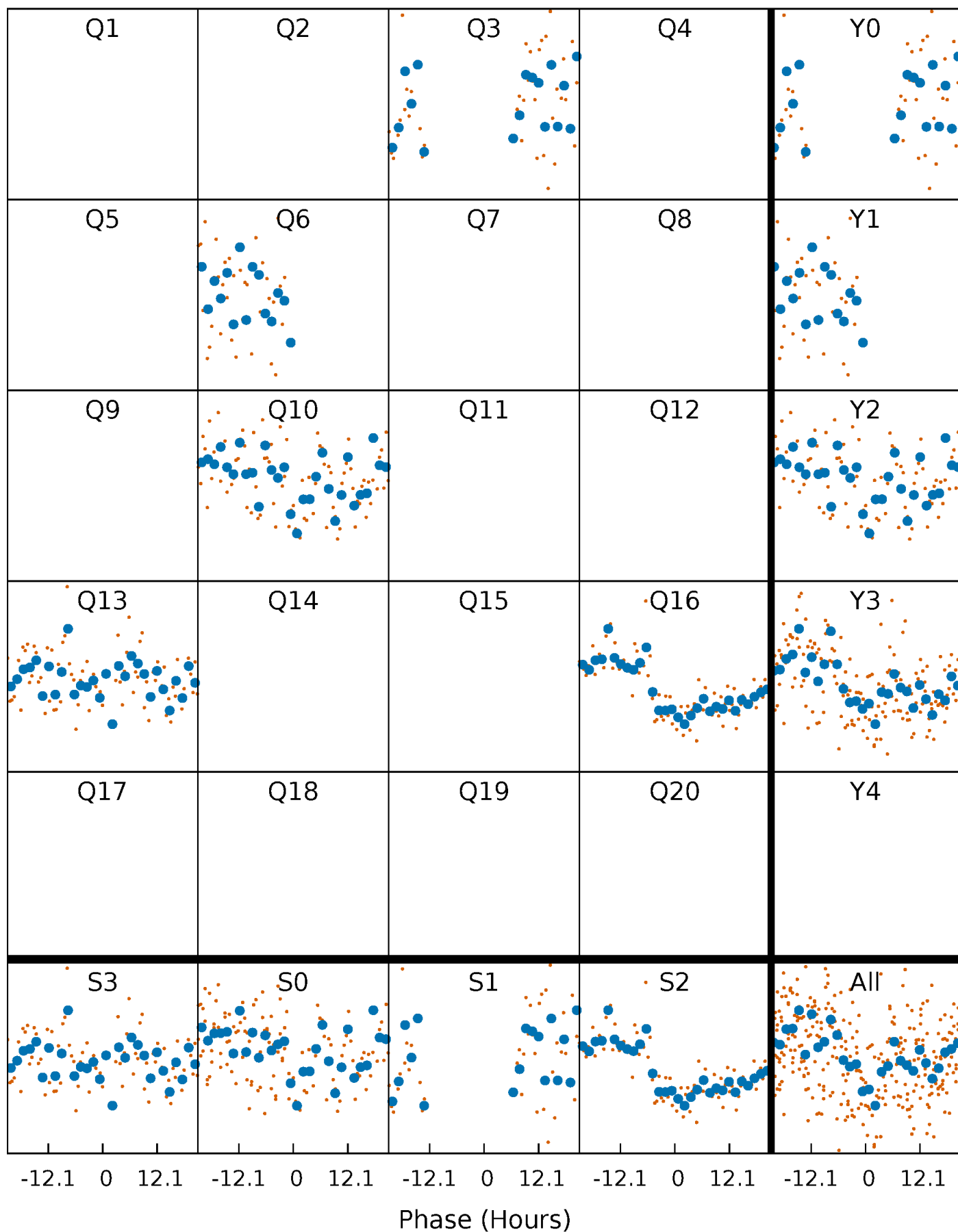


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



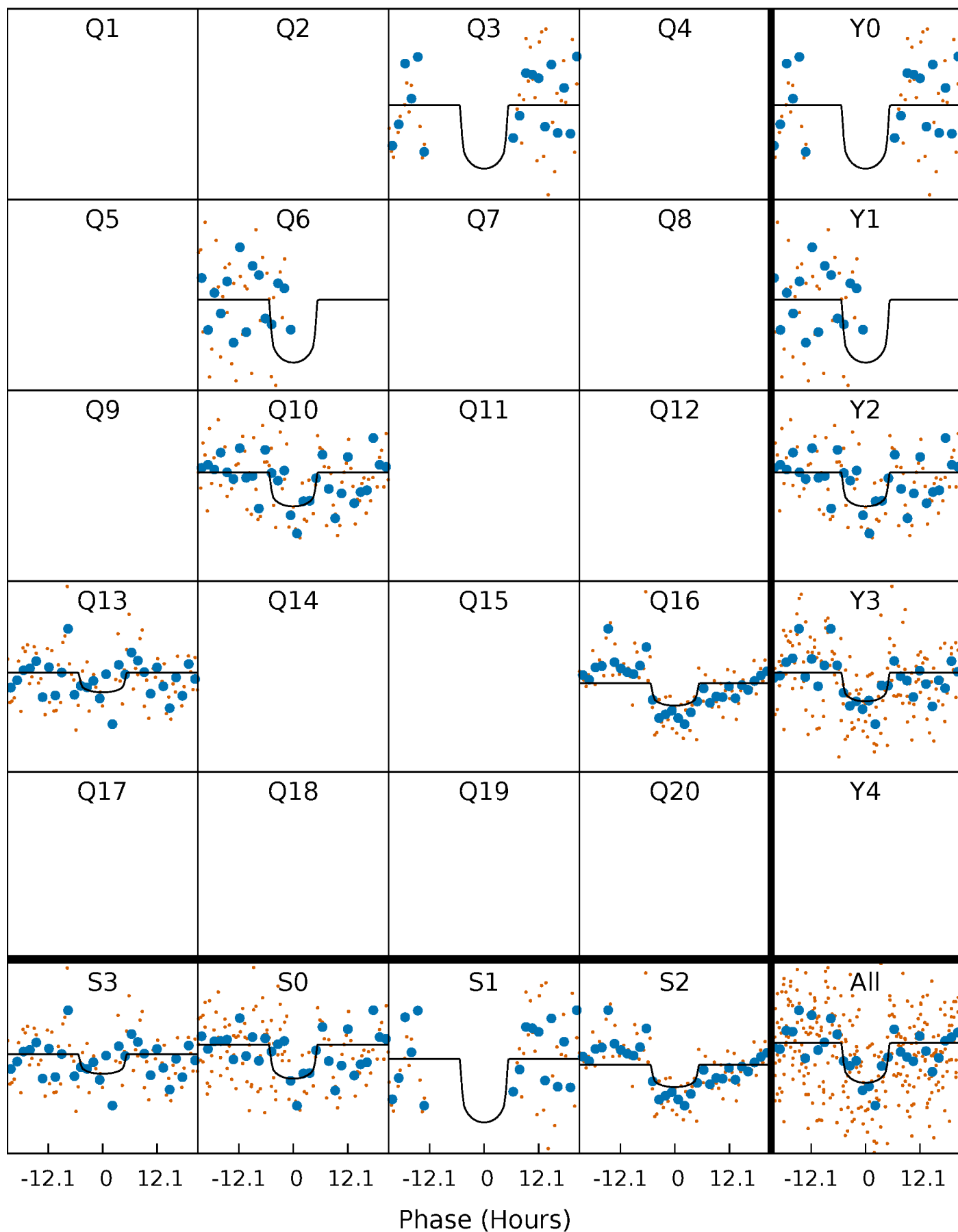
PDC Quarter-Phased Transit Curves

TCE 009994396-01 P=317.252425 Days $T_0=281.065278$ (BKJD)



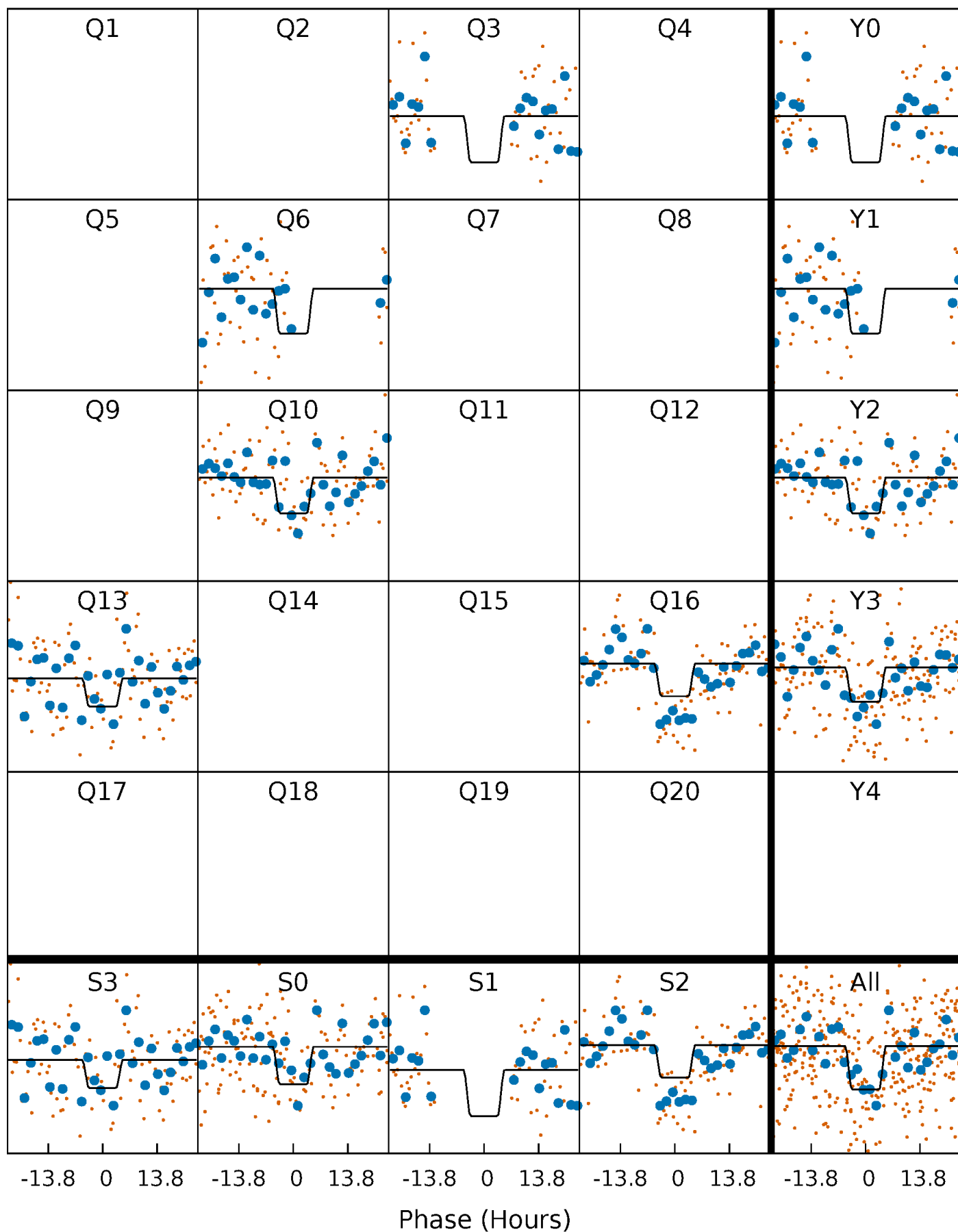
DV Quarter-Phased Transit Curves

TCE 009994396-01 P=317.252425 Days $T_0=281.065278$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

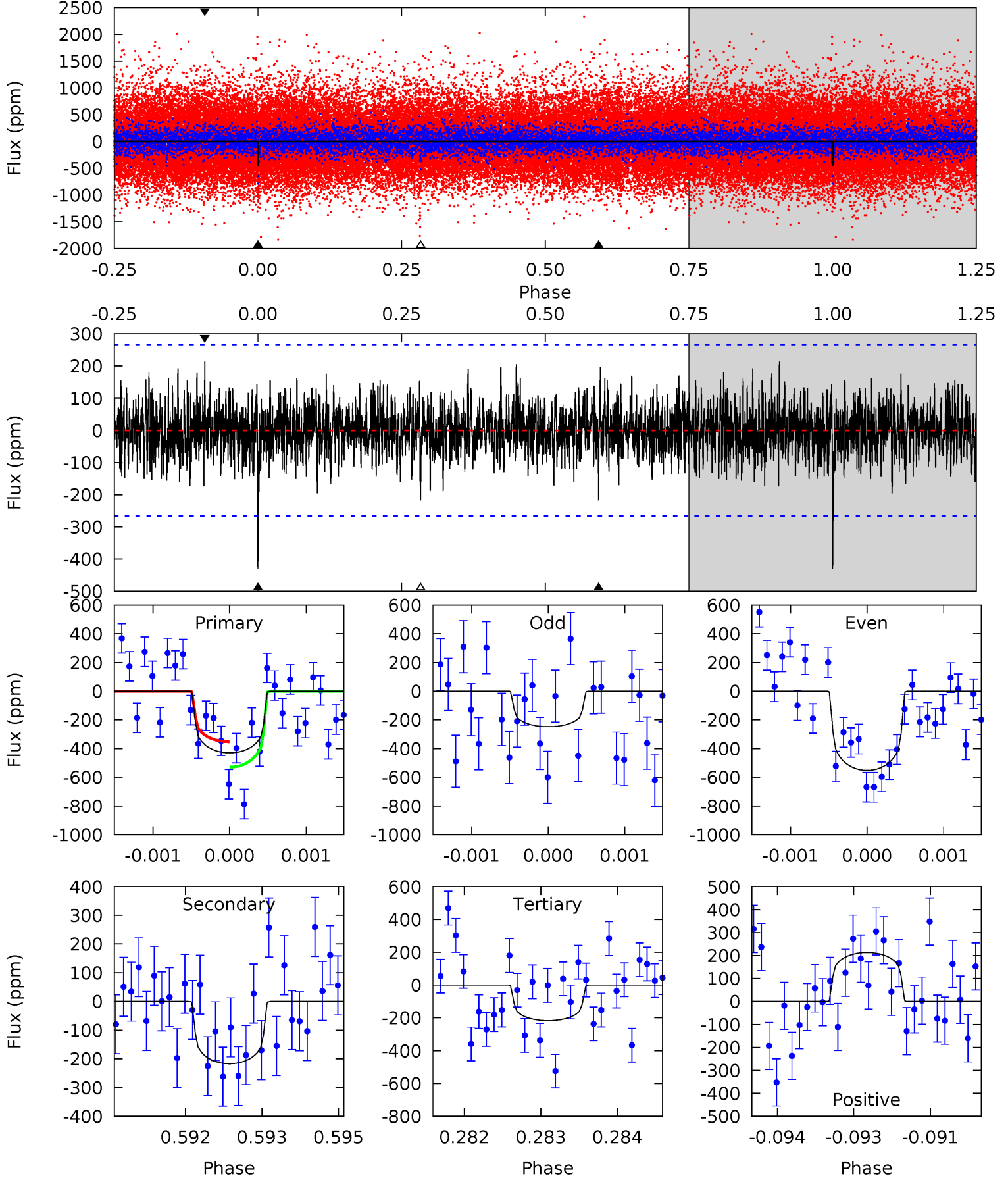
TCE 009994396-01 P=317.251453 Days $T_0=281.059304$ (BKJD)



DV Model-Shift Uniqueness Test

009994396-01, P = 317.252425 Days, E = 281.065278 Days

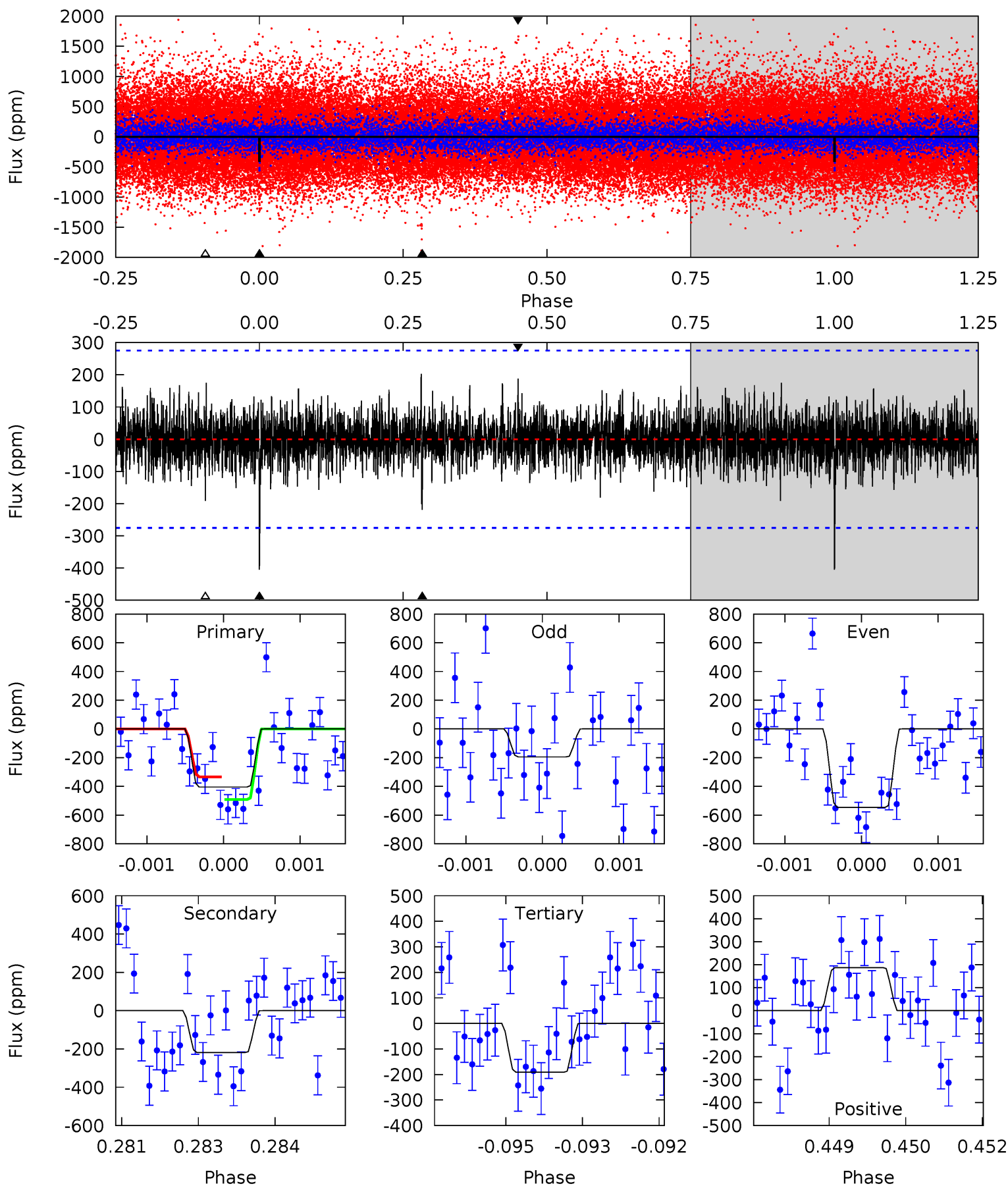
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.68	4.38	4.38	4.31	5.39	3.19	1.18	4.30	4.37	0.00	0.07	3.05	1.01	0.33	1.77



Alt Model-Shift Uniqueness Test

009994396-01, P = 317.251453 Days, E = 281.059304 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.94	4.30	3.75	3.68	5.40	3.20	0.99	4.18	4.26	0.54	0.62	3.39	1.36	0.33	1.55



Stellar Parameters For KIC 009994396

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5758^{+155}_{-172}	$4.475^{+0.078}_{-0.182}$	$-0.240^{+0.300}_{-0.300}$	$0.902^{+0.237}_{-0.110}$	$0.887^{+0.110}_{-0.090}$	$1.704^{+0.677}_{-0.784}$
	+3%/-3%	+2%/-4%	+125%/-125%	+26%/-12%	+12%/-10%	+40%/-46%
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 009994396-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-217 ± 50	$2.26^{+1.27}_{-1.22}$	365^{+22}_{-17}	4852^{+1977}_{-801}	18133^{+62201}_{-11053}
Alt.	-219 ± 51	$2.19^{+1.33}_{-1.10}$	366^{+23}_{-17}	4902^{+1934}_{-873}	19033^{+56845}_{-11948}

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

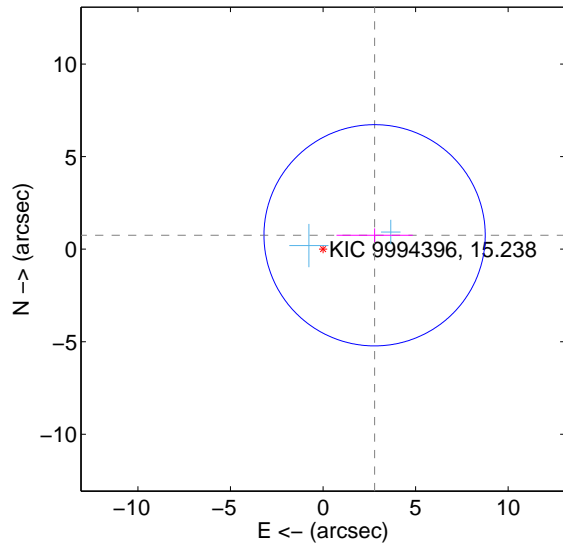
Supplemental centroid analysis for 009994396-01. Kepler magnitude: 15.24. Transit SNR 7.07

There are 2 quarters with good PRF difference image offsets

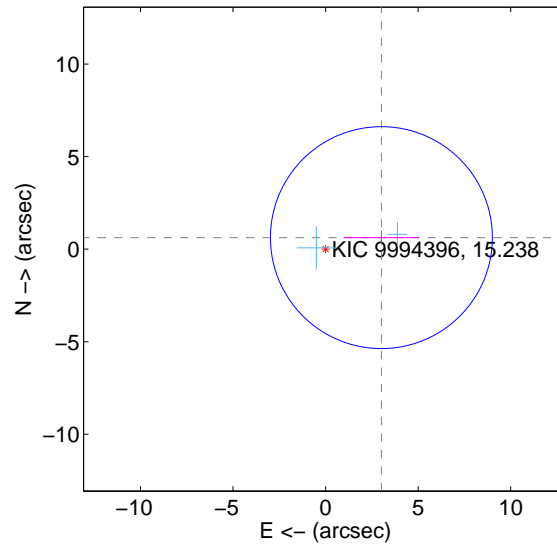
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.885 ± 1.992	1.45	-2.786 ± 2.061	0.750 ± 0.372
PRF-fit source offset from KIC position	3.080 ± 1.998	1.54	-3.016 ± 2.039	0.624 ± 0.370
photometric centroid source offset	3.24 ± 2.55	1.27	-1.24 ± 2.46	-2.99 ± 2.57

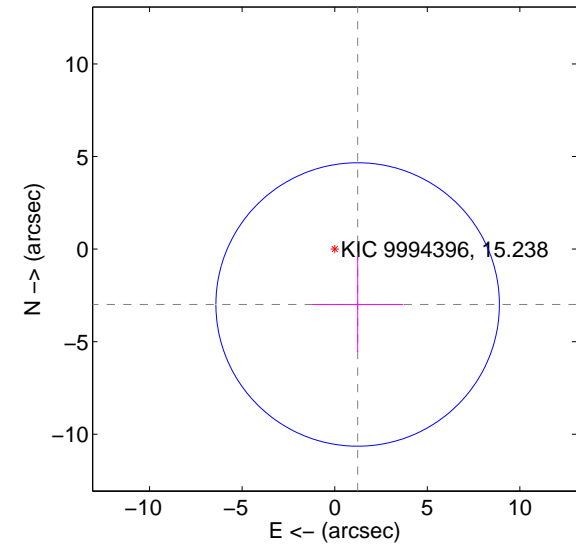
offset from difference PRF-fit to OOT PRF-fit



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.

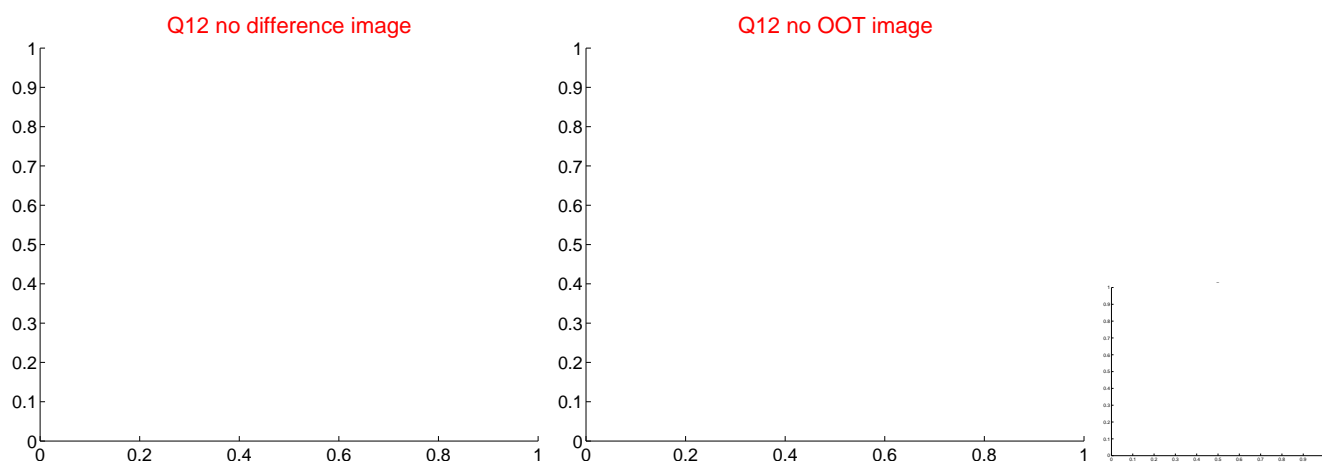
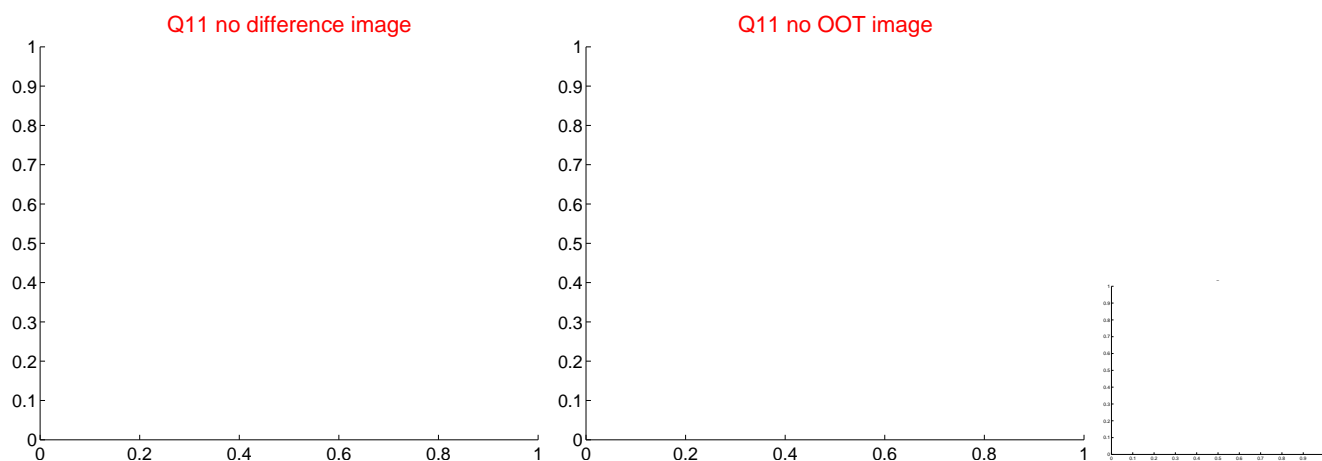
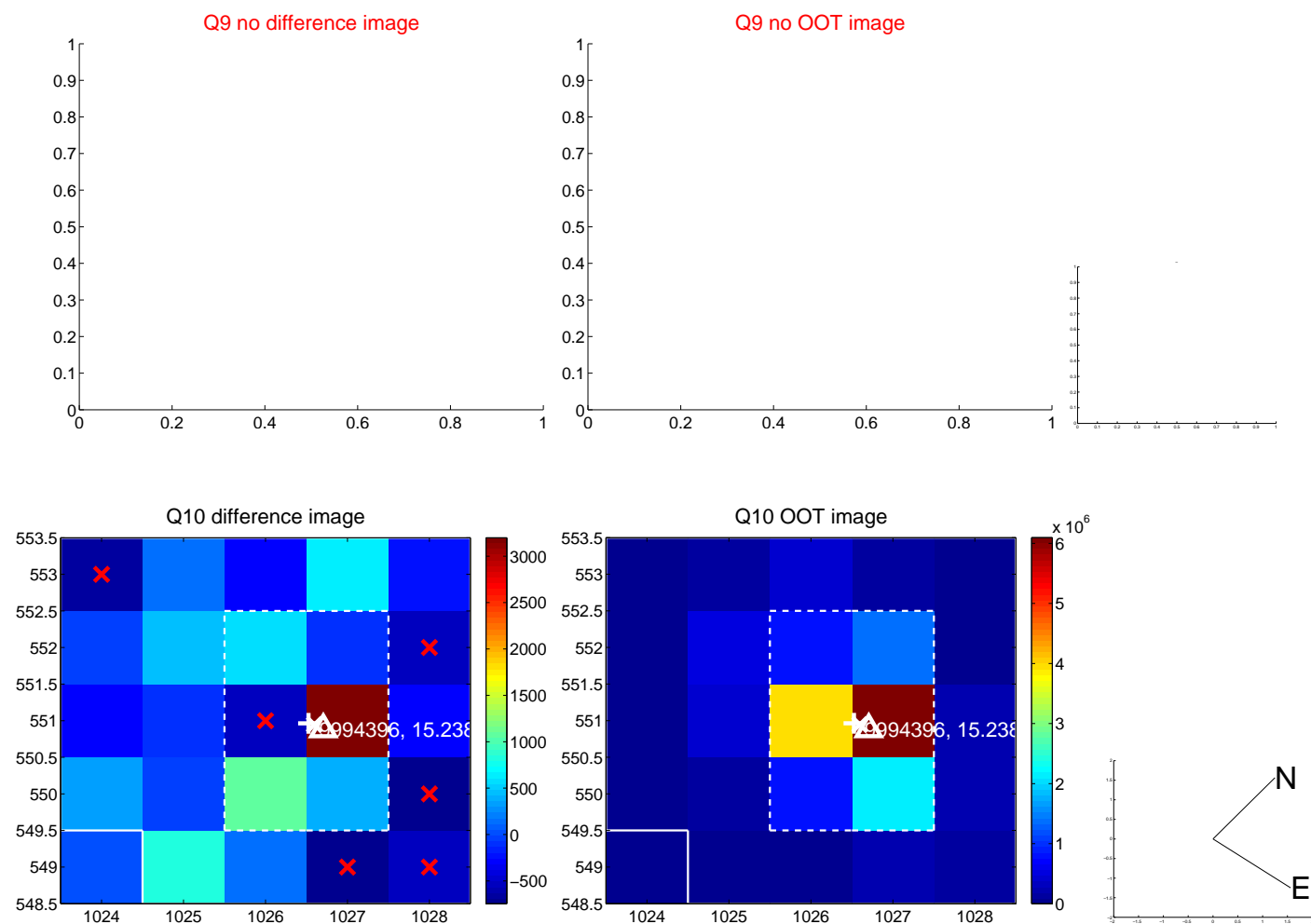
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



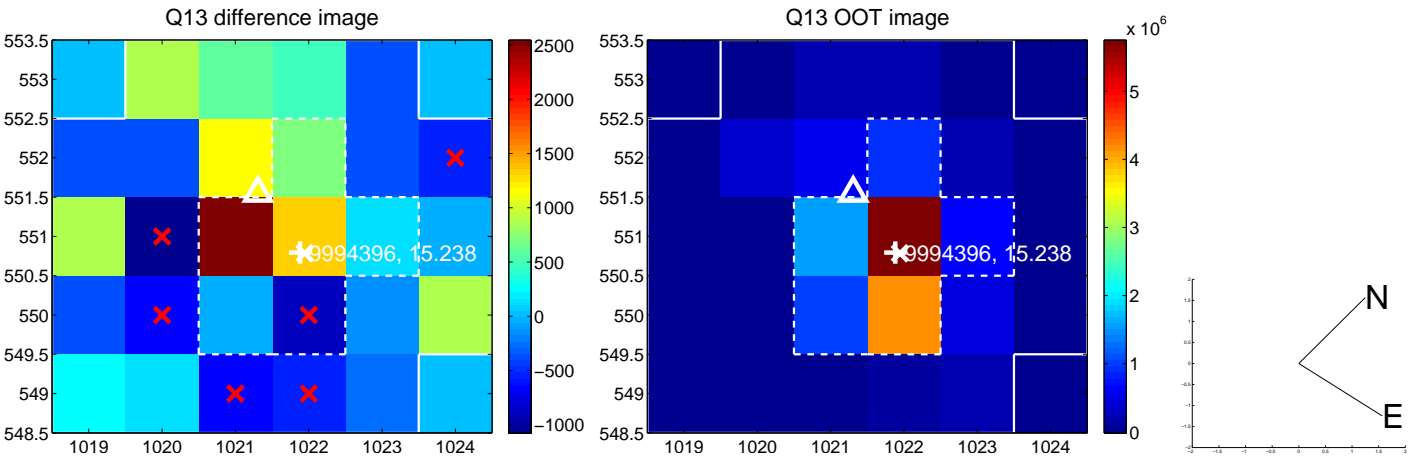
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



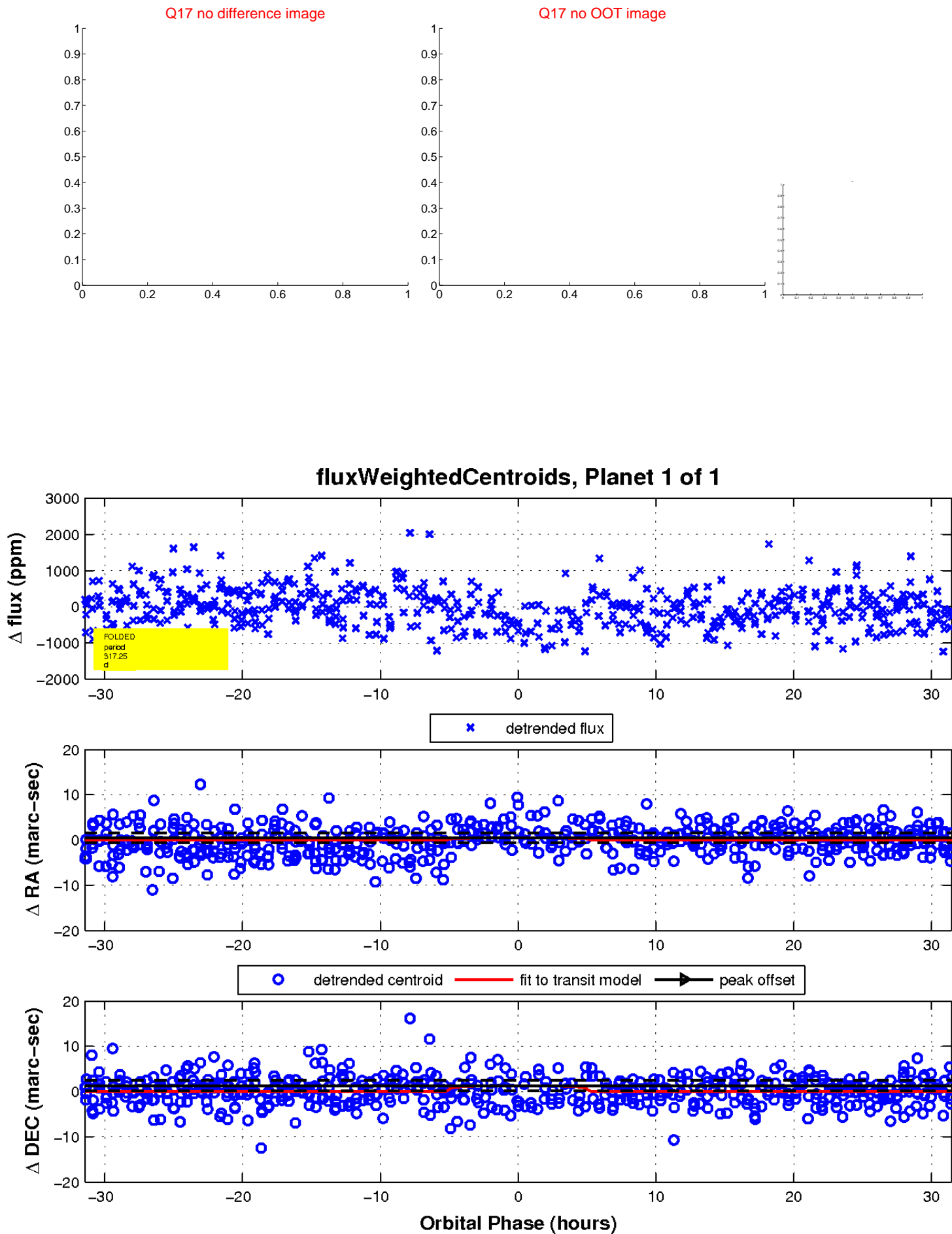
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

