

KIC 009994204

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})
009994204-01	OBS	No	220.476770	188.547966	645.2	10.817	7.1	8.0	0.95	5571	4.24	1.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009994204-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_ALT—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.

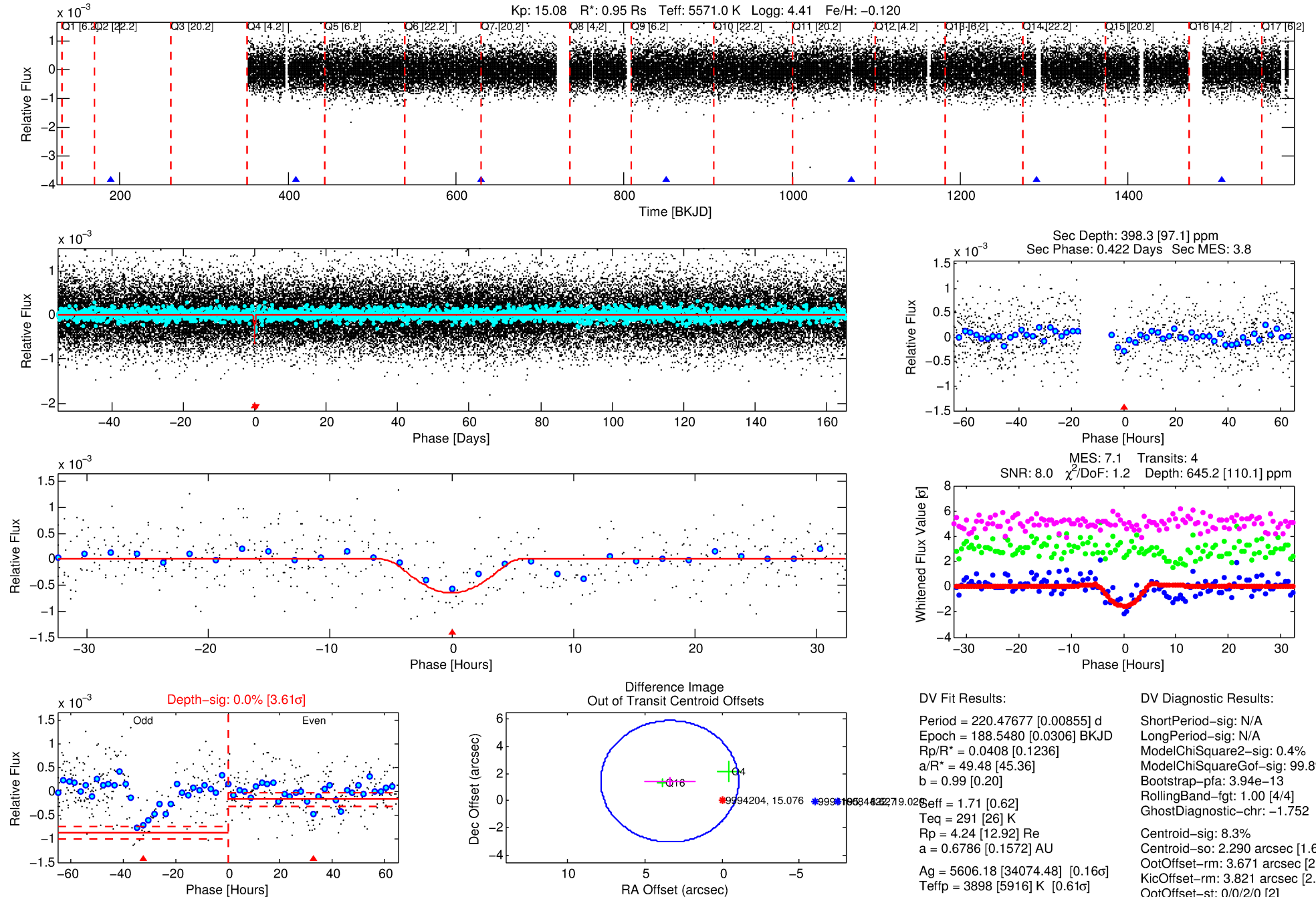
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009994204-01

No Significant Match Found

DV One-Page Summary

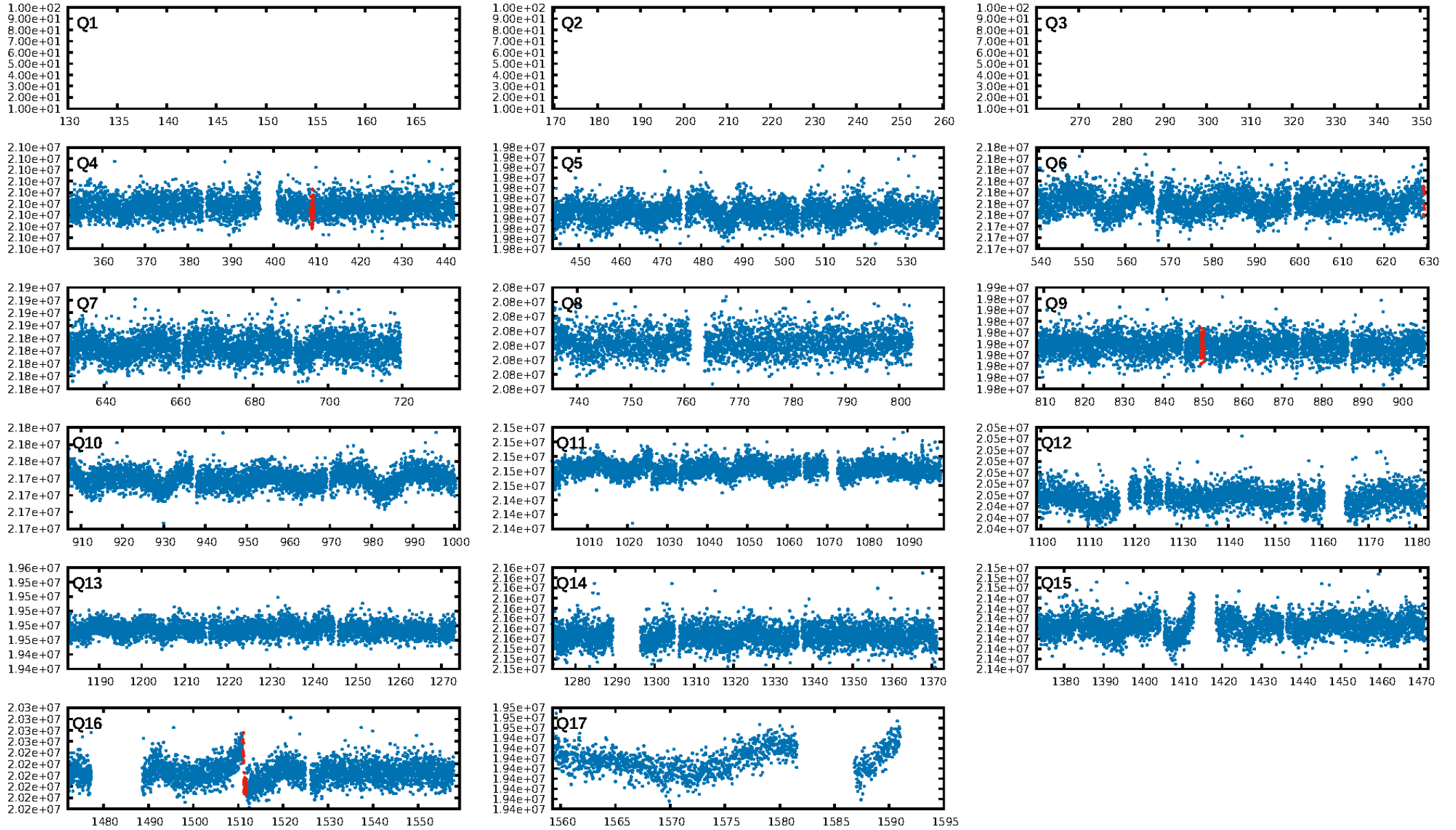
KIC: 9994204 Candidate: 1 of 1 Period: 220.477 d



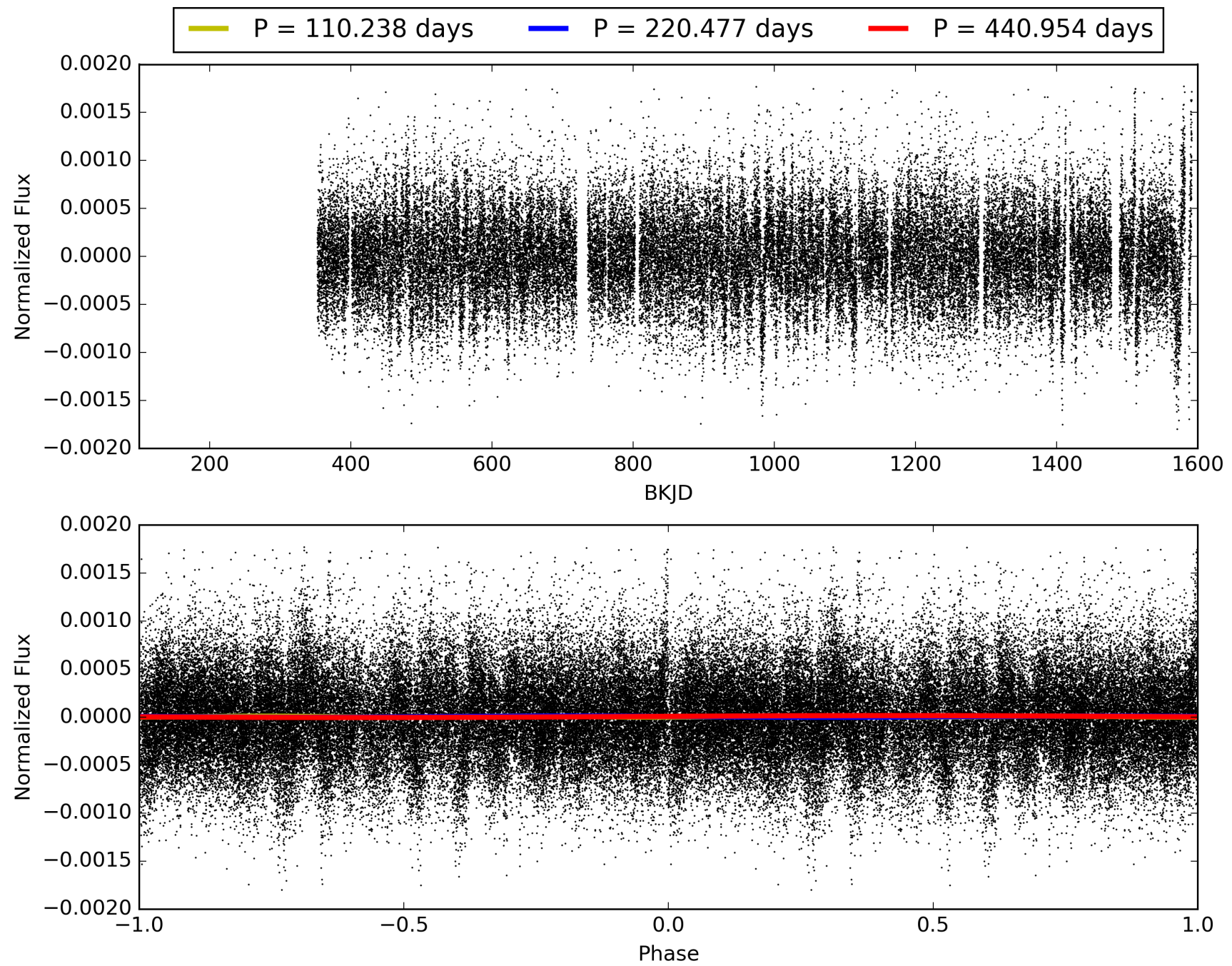
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 18:53:19 Z

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

TCE 009994204-01, PDC Light Curves

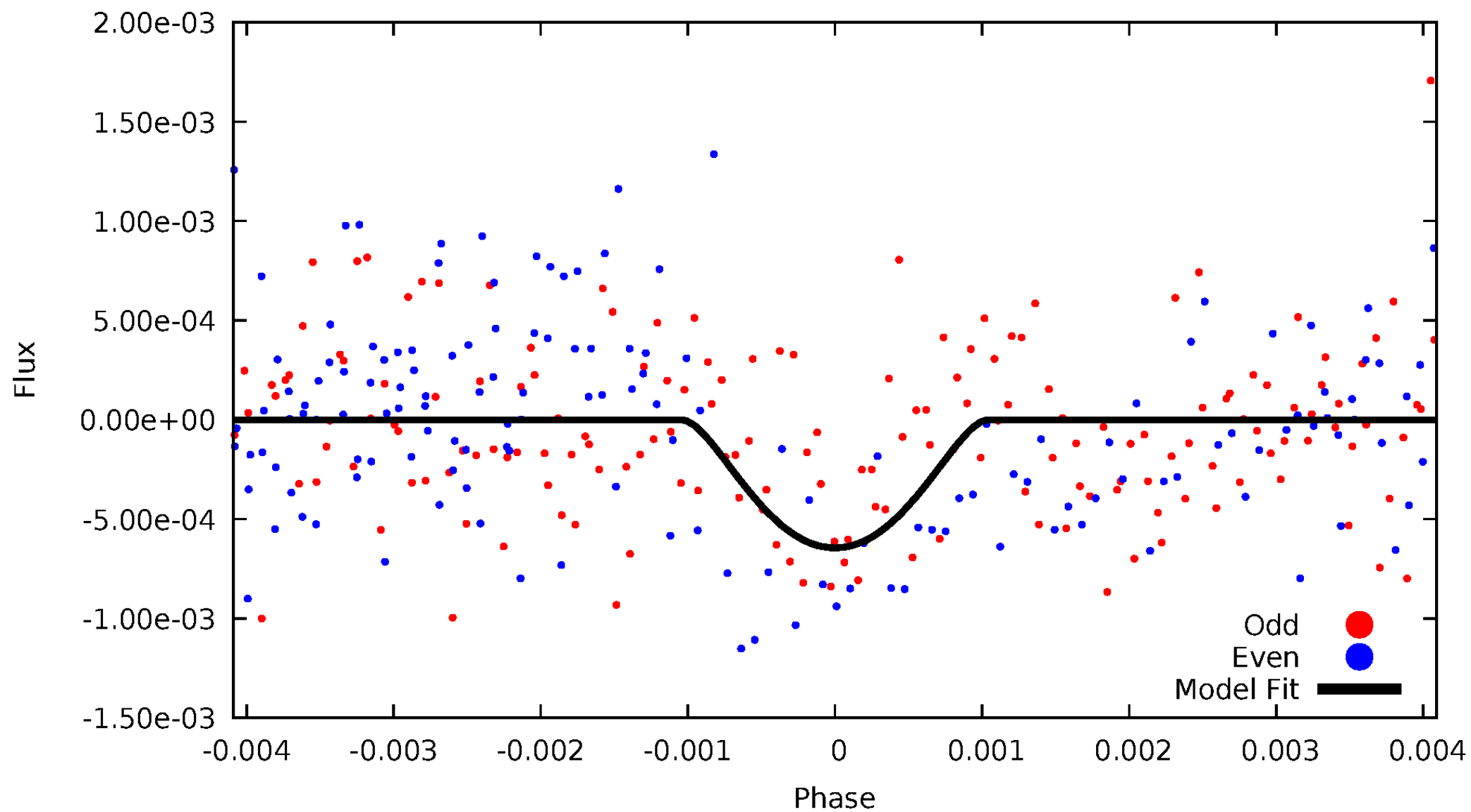


TCE 009994204-01



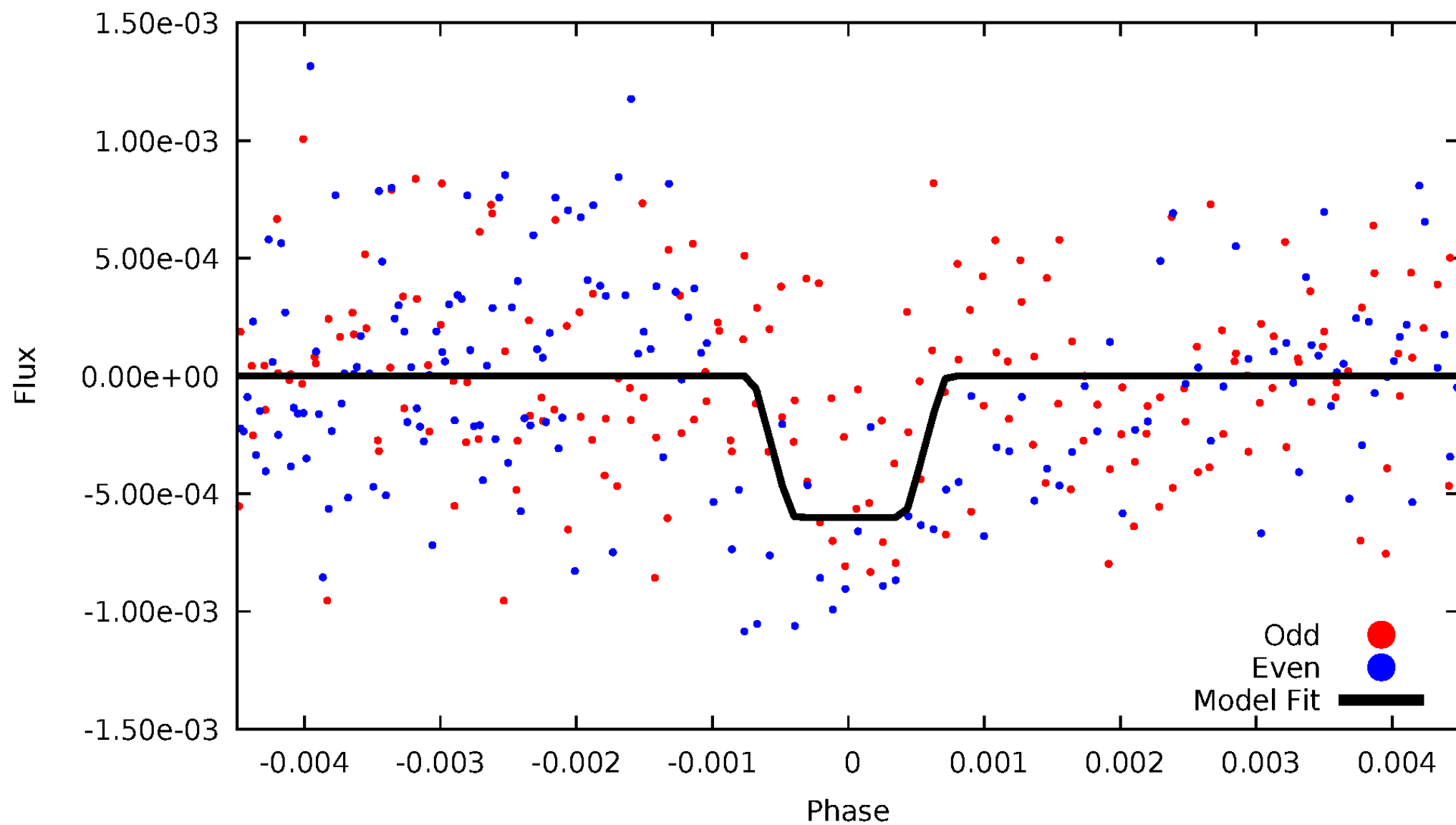
DV Odd/Even

TCE 009994204-01



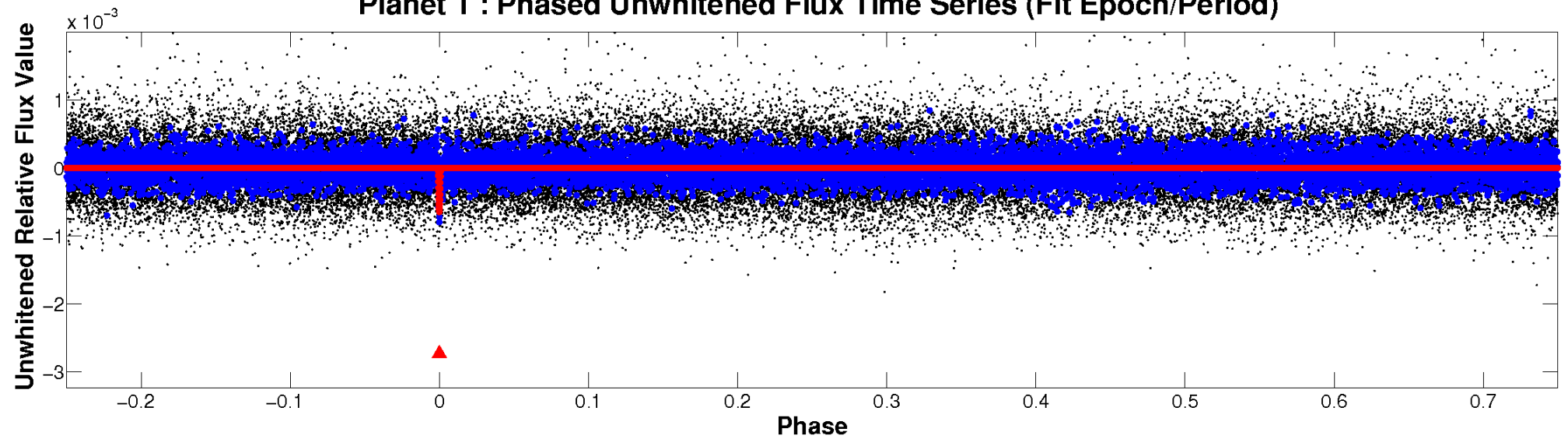
ALT Odd/Even

TCE 009994204-01

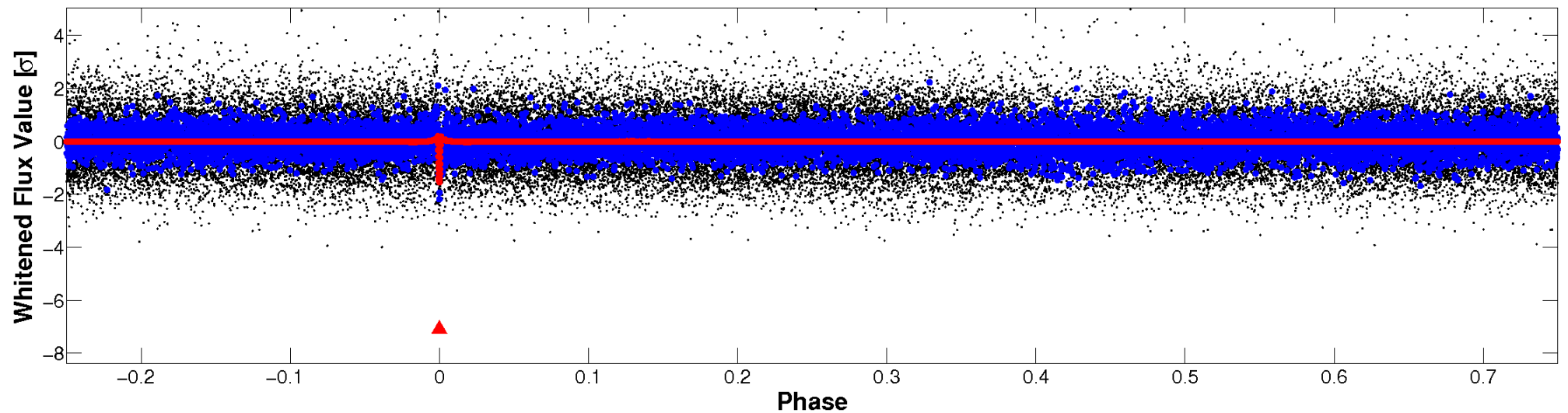


Non-Whitened Vs. Whitened Light Curve

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

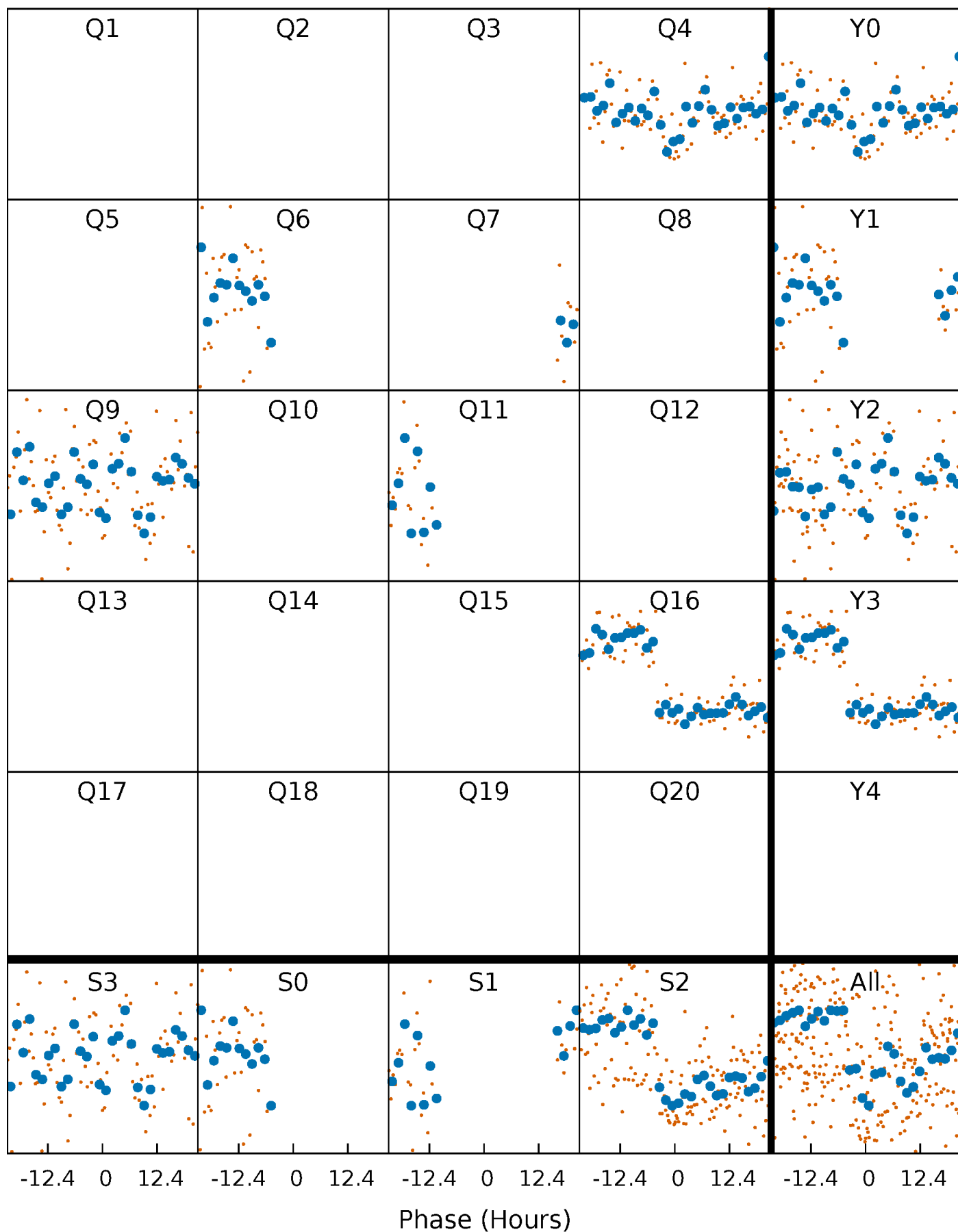


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



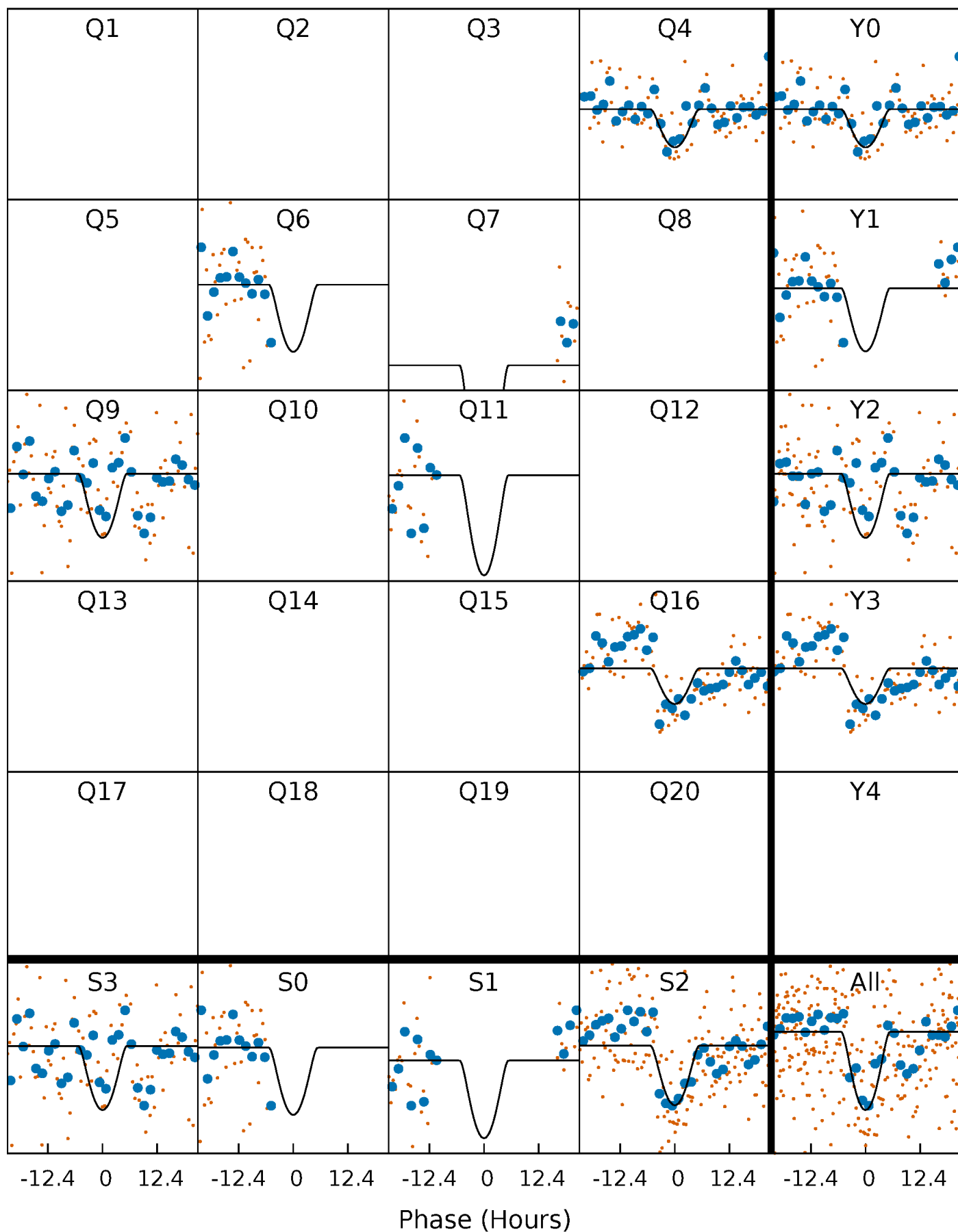
PDC Quarter-Phased Transit Curves

TCE 009994204-01 P=220.476770 Days $T_0=188.547966$ (BKJD)



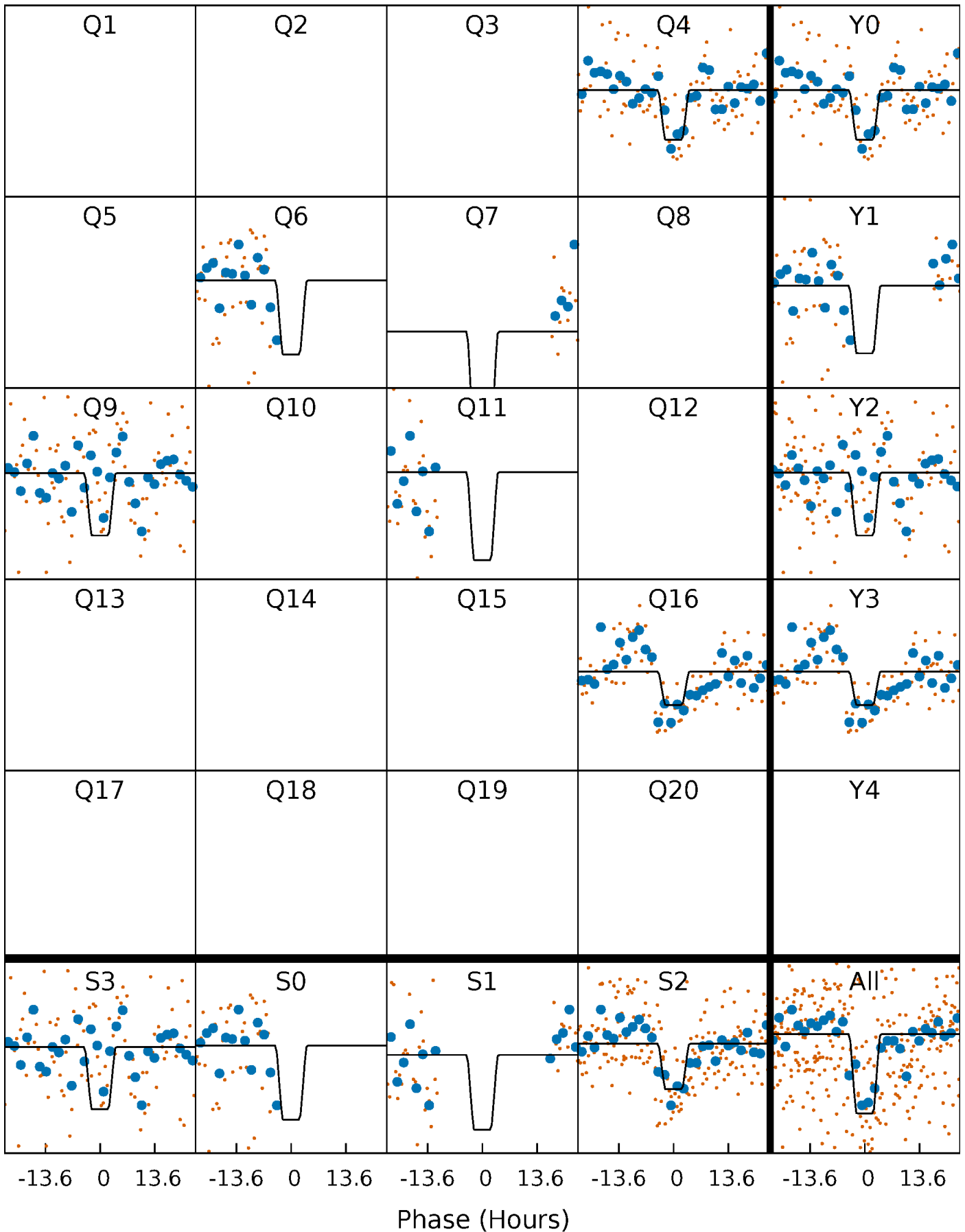
DV Quarter-Phased Transit Curves

TCE 009994204-01 P=220.476770 Days $T_0=188.547966$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

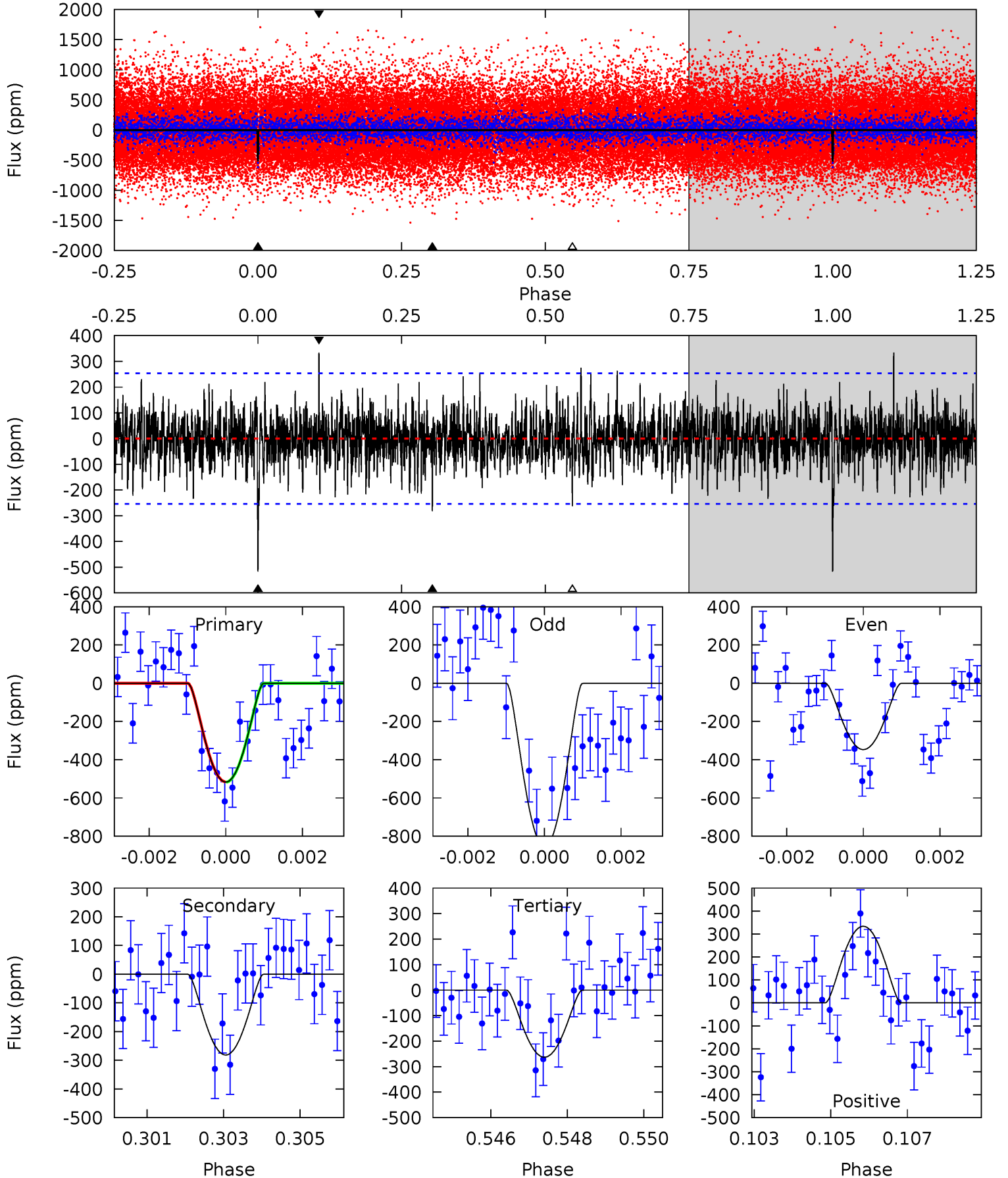
TCE 009994204-01 P=220.490712 Days $T_0=188.492096$ (BKJD)



DV Model-Shift Uniqueness Test

009994204-01, P = 220.476770 Days, E = 188.547966 Days

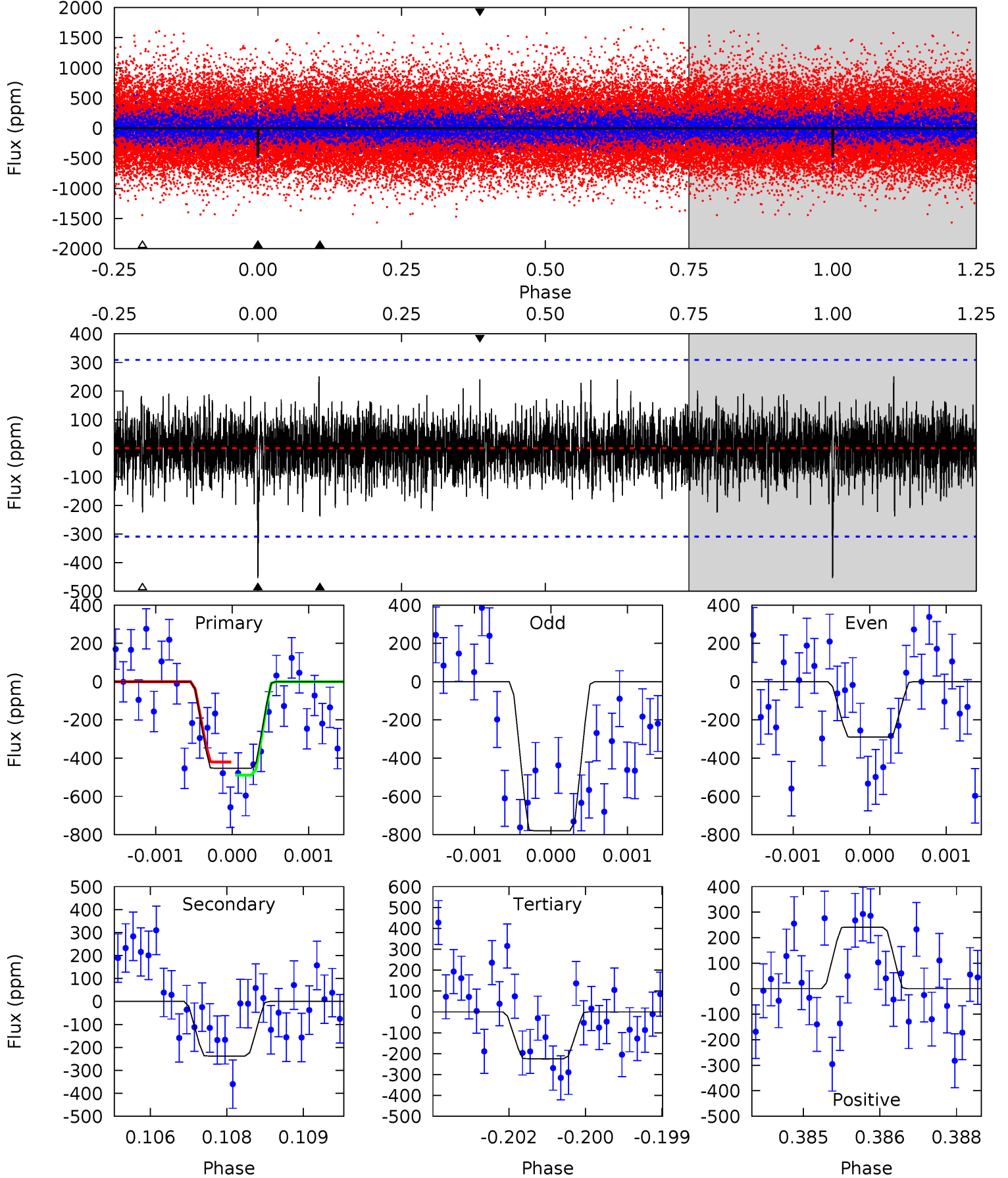
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	5.91	5.51	7.00	5.32	3.07	1.54	5.32	3.84	0.39	-1.09	5.15	0.99	0.39	0.02



Alt Model-Shift Uniqueness Test

009994204-01, P = 220.490712 Days, E = 188.492096 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.91	4.15	3.91	4.21	5.39	3.19	1.11	4.00	3.70	0.24	-0.06	4.04	0.94	0.36	0.60



Stellar Parameters For KIC 009994204

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5571^{+182}_{-182}	$4.412^{+0.124}_{-0.186}$	$-0.120^{+0.300}_{-0.300}$	$0.954^{+0.261}_{-0.161}$	$0.856^{+0.120}_{-0.074}$	$1.390^{+0.779}_{-0.679}$
	+3%/-3%	+3%/-4%	+250%/-250%	+27%/-17%	+14%/-9%	+56%/-49%
Source	KIC0	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 009994204-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-282 ± 48	$11.13^{+10.69}_{-7.54}$	411^{+31}_{-25}	2933^{+1237}_{-471}	580^{+4865}_{-432}
Alt.	-238 ± 57	$10.31^{+10.32}_{-6.94}$	410^{+29}_{-25}	2918^{+1246}_{-475}	578^{+5094}_{-438}

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 $A_{obs} \gg 1.0$

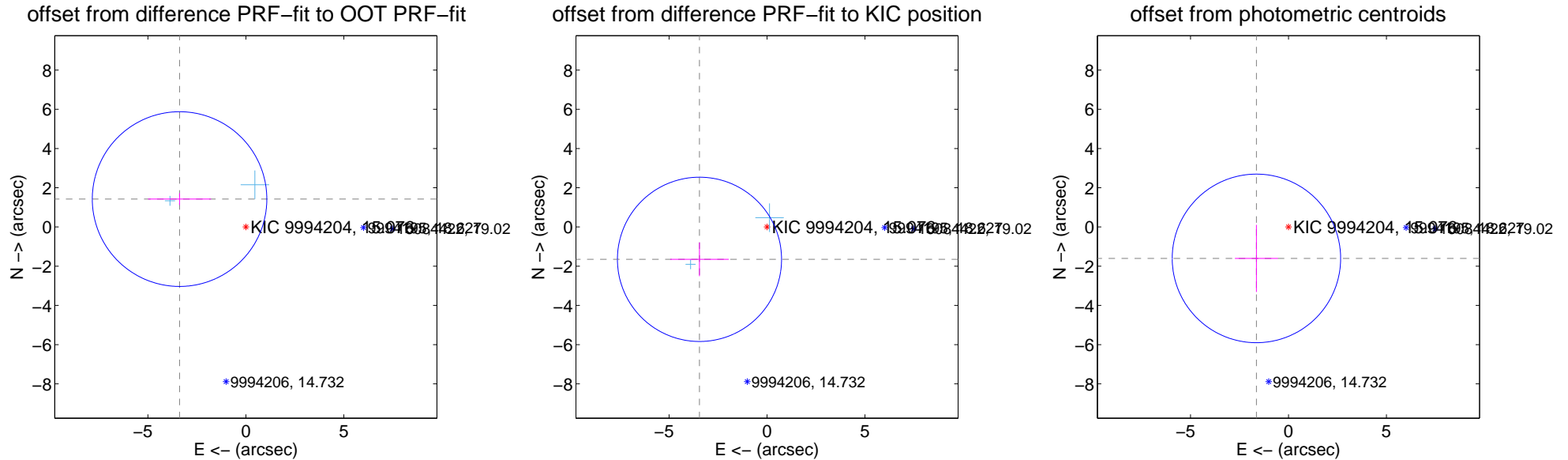
DV Centroid Data

Supplemental centroid analysis for 009994204-01. Kepler magnitude: 15.08. Transit SNR 7.99

There are 2 quarters with good PRF difference image offsets

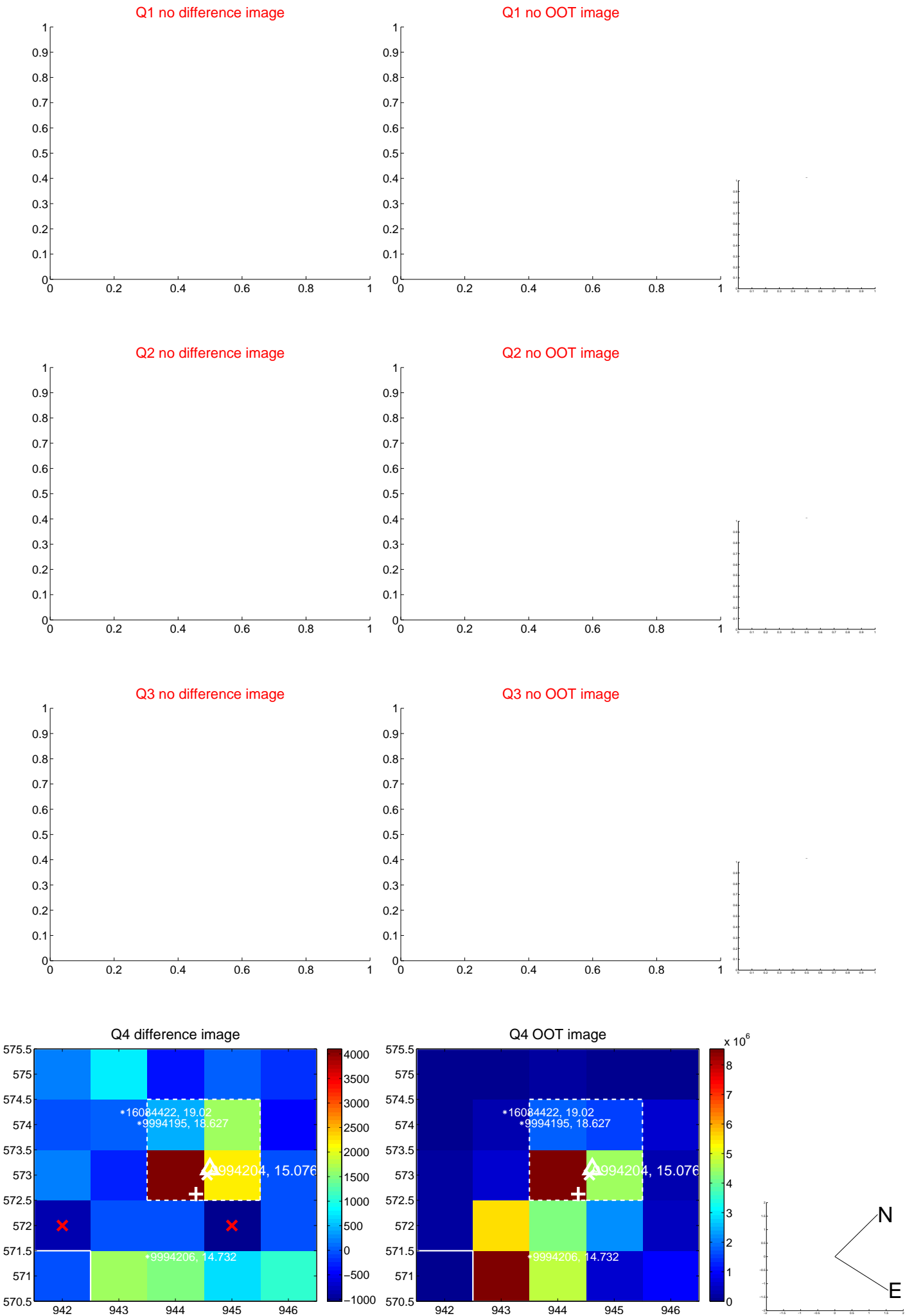
The OOT PRF centroid is offset from the target star catalog position by about 3.24 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.671 ± 1.484	2.47	3.384 ± 1.605	1.422 ± 0.302
PRF-fit source offset from KIC position	3.821 ± 1.396	2.74	3.447 ± 1.492	-1.650 ± 0.859
photometric centroid source offset	2.29 ± 1.43	1.60	1.64 ± 1.10	-1.60 ± 1.71



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.

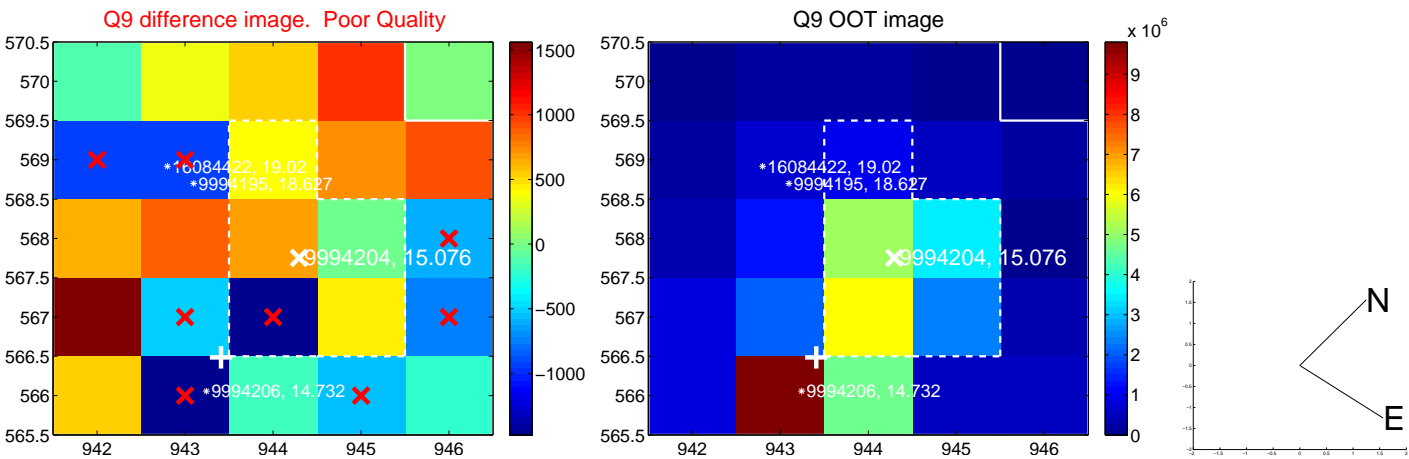
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



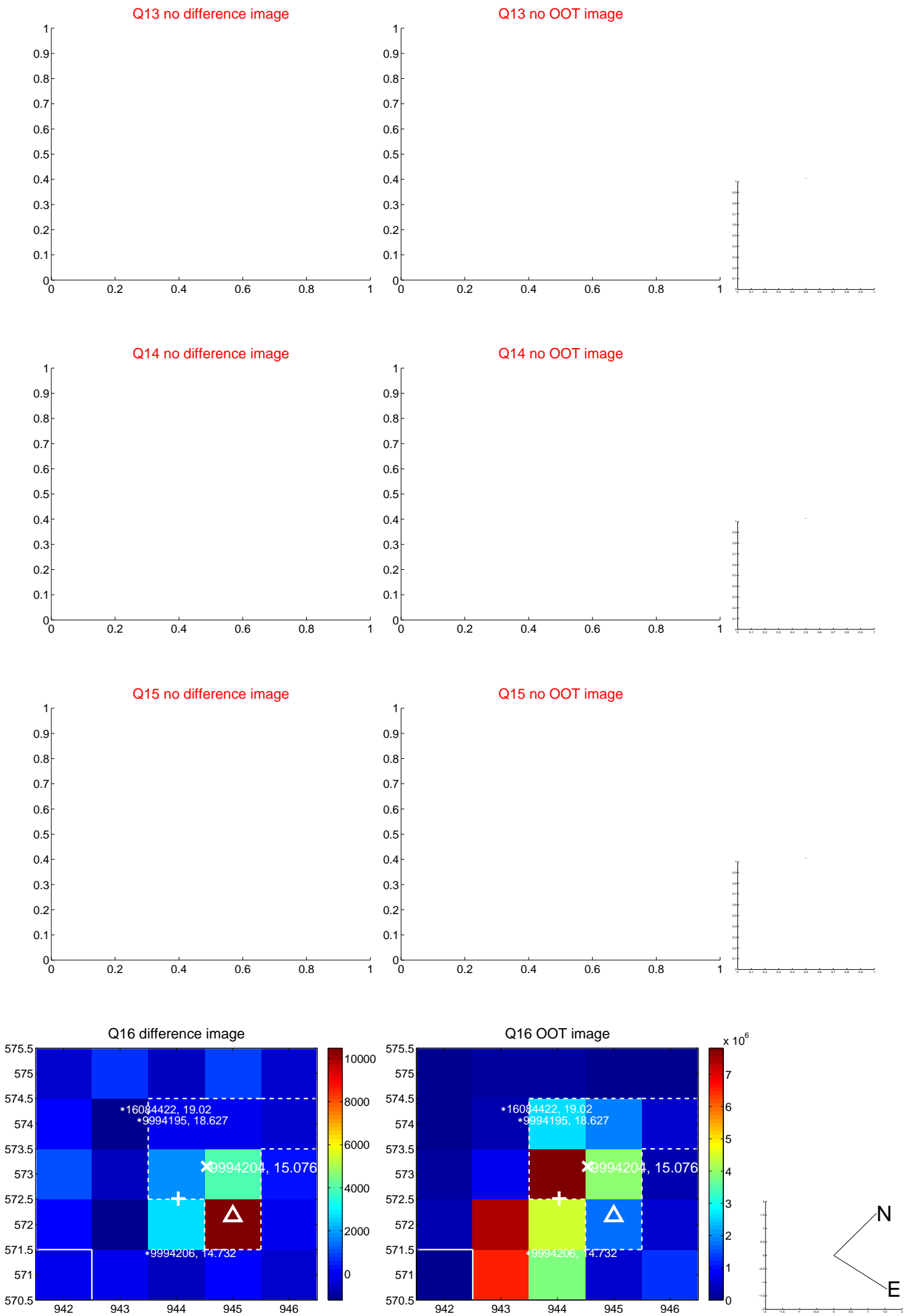
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



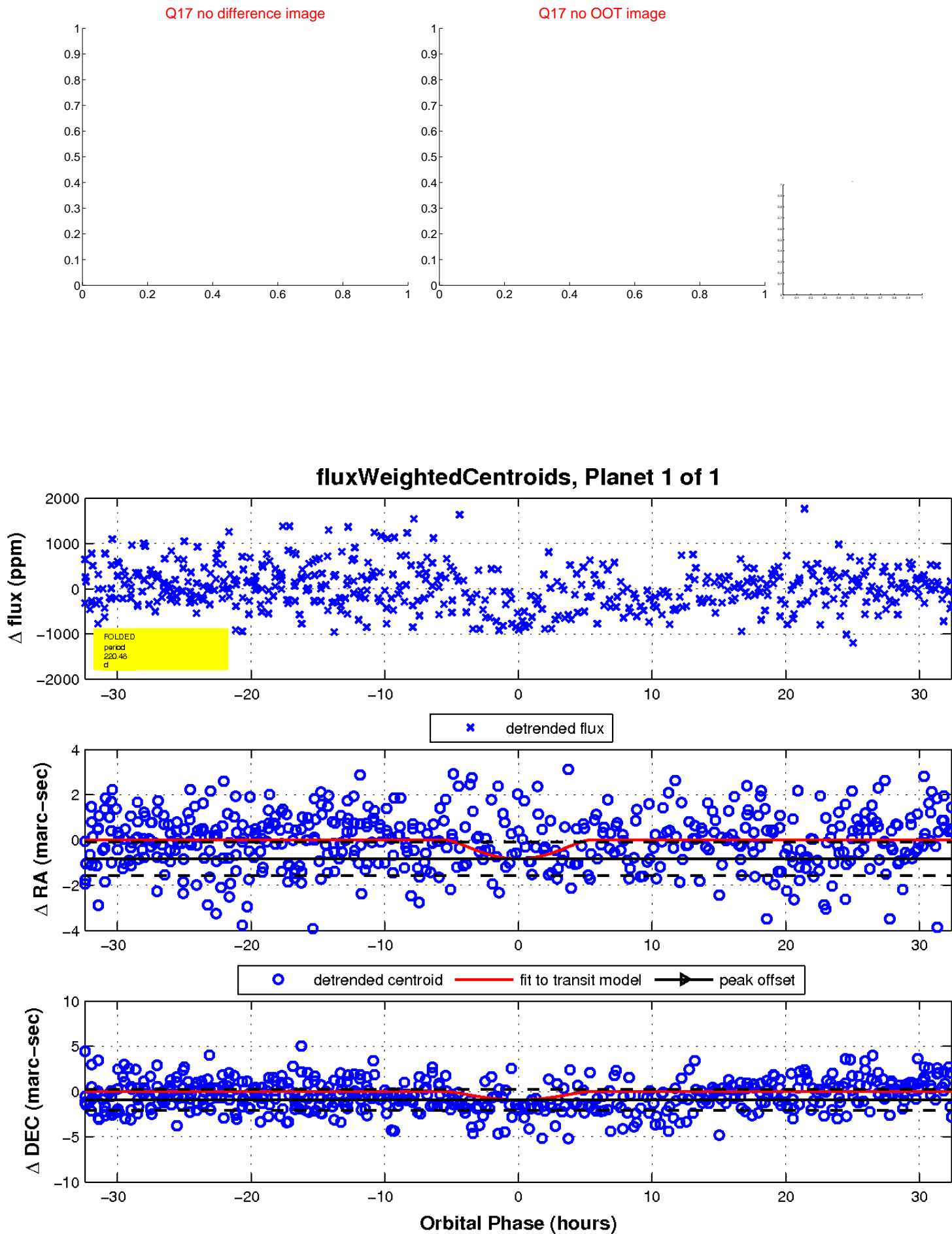
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

