

KIC 004927432

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})
004927432-01	OBS	No	409.762205	365.700777	1357.0	7.519	7.8	10.5	15.16	5401	68.51	65.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004927432-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

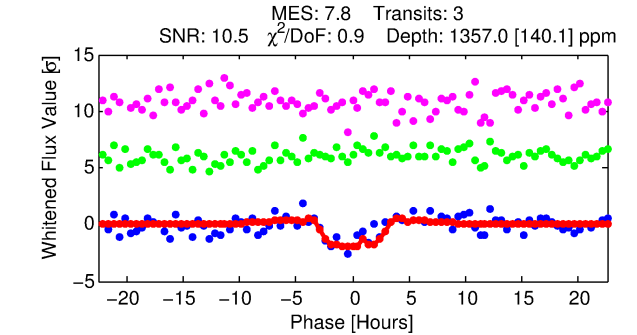
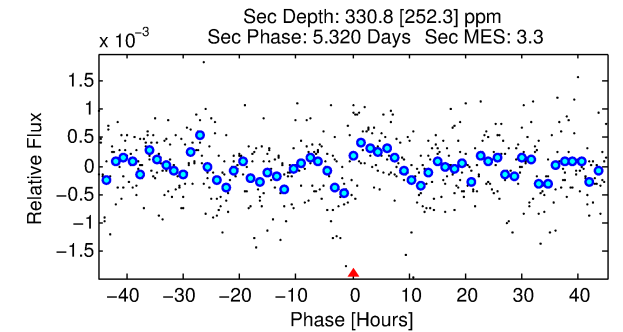
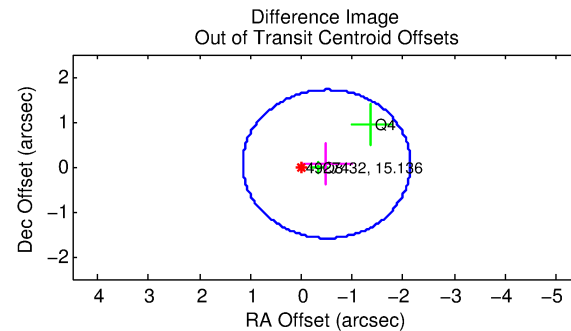
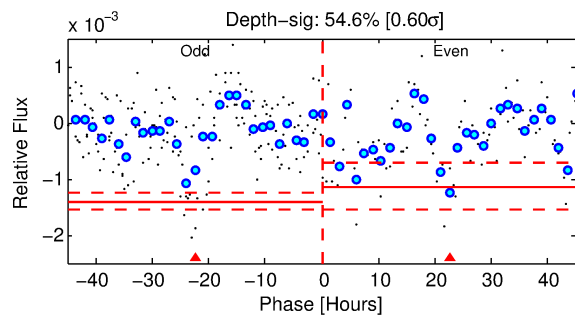
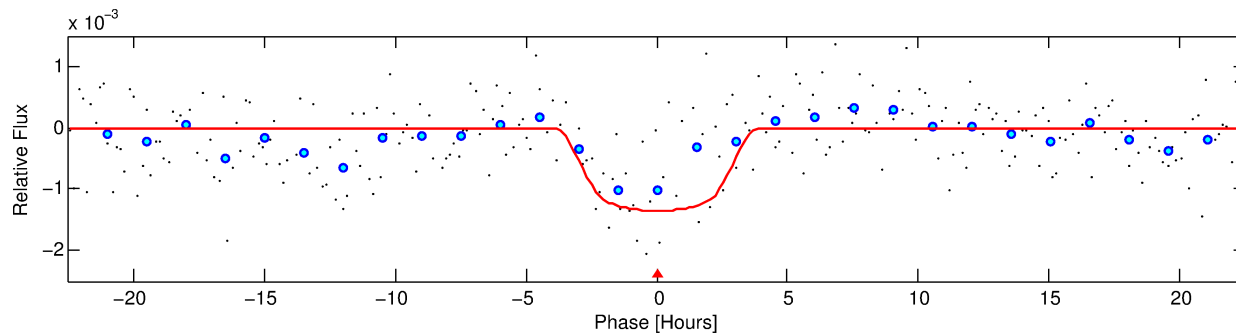
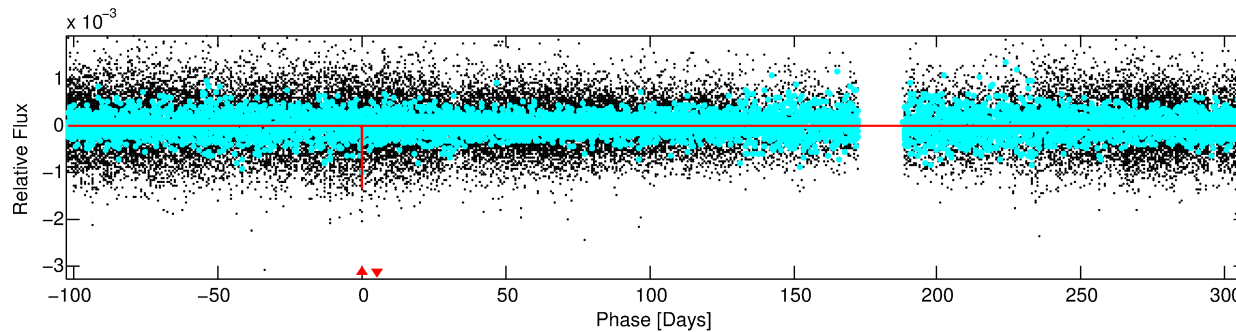
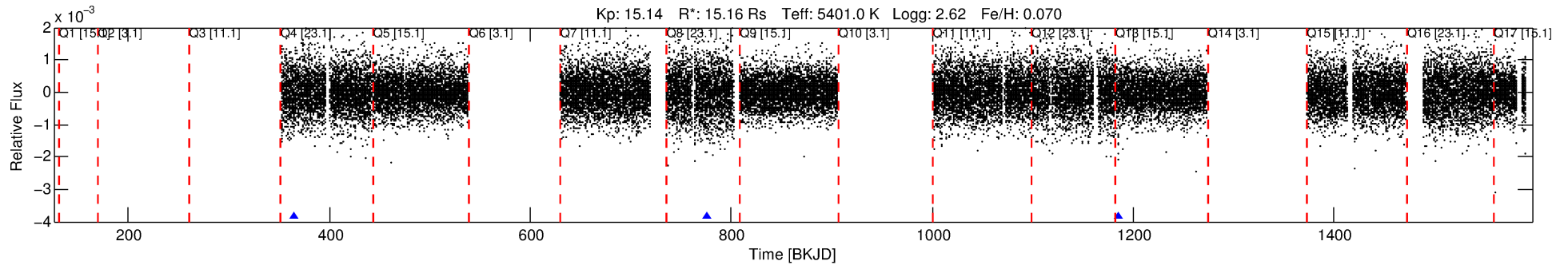
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004927432-01

No Significant Match Found

DV One-Page Summary

KIC: 4927432 Candidate: 1 of 1 Period: 409.762 d



DV Fit Results:

Period = 409.76221 [0.00767] d
Epoch = 365.7008 [0.0125] BKJD
Rp/R^{*} = 0.0414 [0.0036]
a/R^{*} = 204.22 [49.36]
b = 0.92 [0.04]
Seff = 65.35 [24.03]
Teq = 725 [67] K
Rp = 68.51 [24.51] Re
a = 1.6375 [0.3855] AU
Ag = 103.97 [85.26] [1.21σ]
Teff = 3579 [741] K [3.84σ]

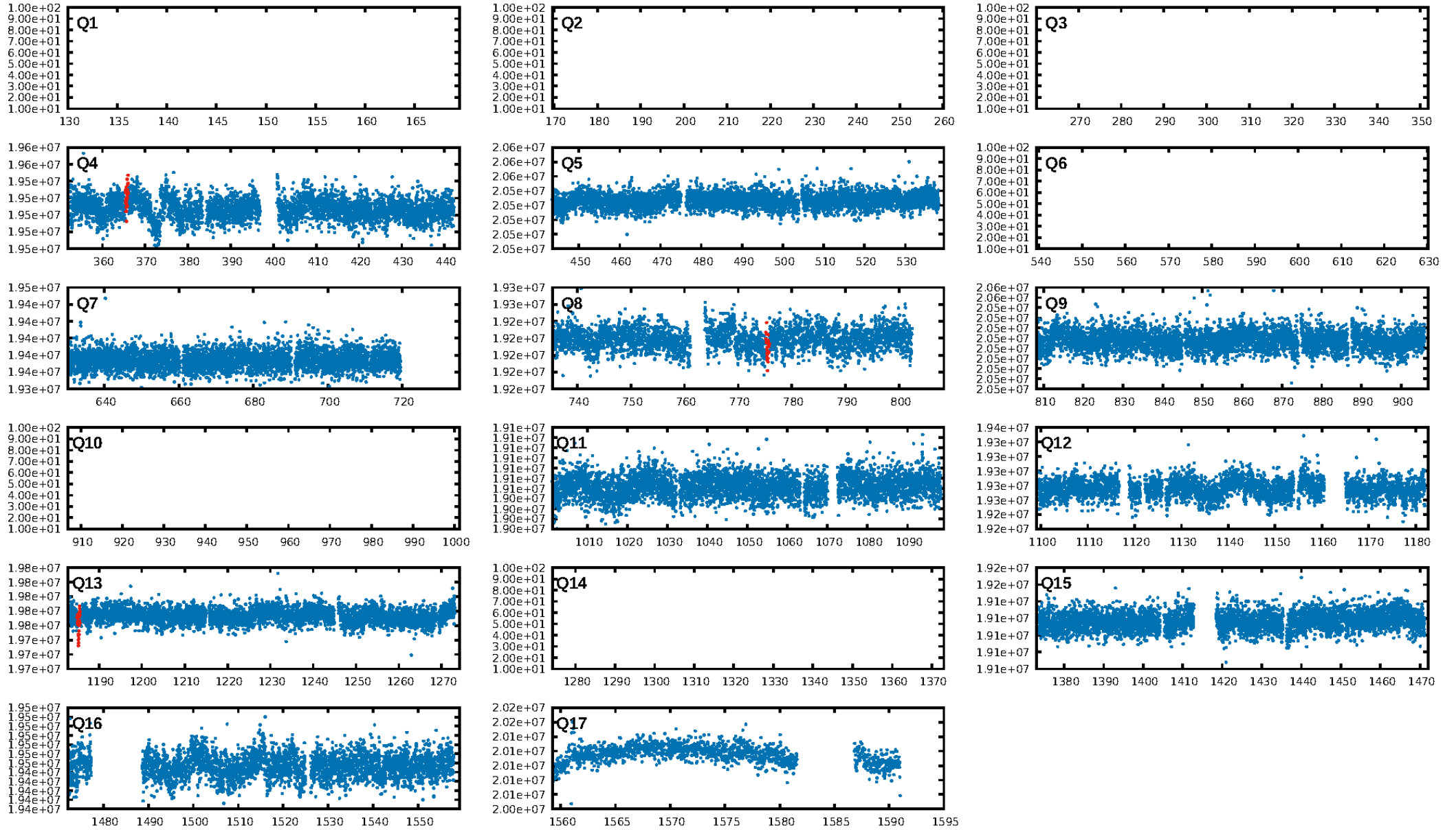
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: 7.02e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 25.38
Centroid-sig: 40.1%
Centroid-so: 2.702 arcsec [6.30σ]
OotOffset-rm: 0.502 arcsec [0.91σ]
KicOffset-rm: 6.131 arcsec [14.80σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

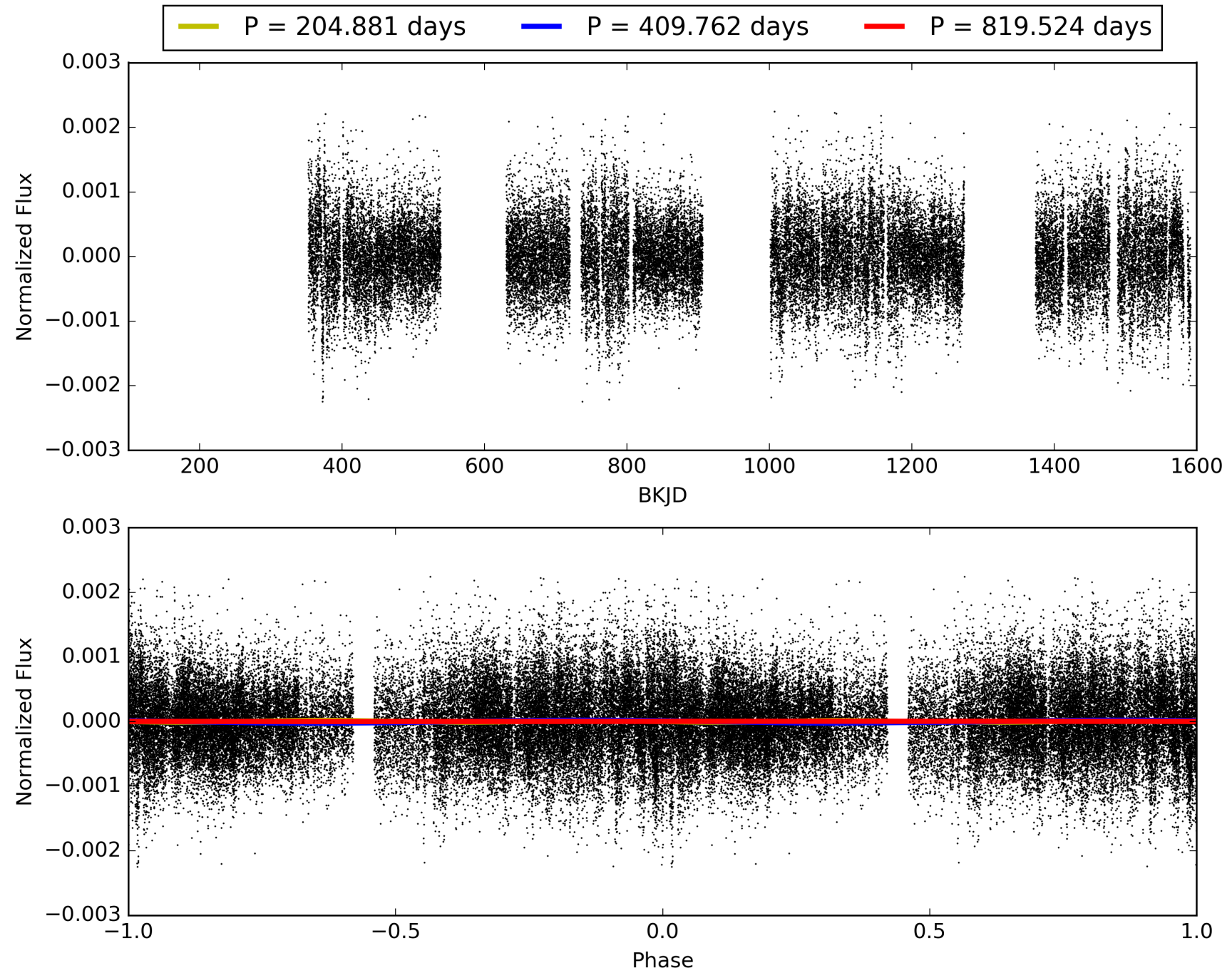
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:08:03 Z

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

TCE 004927432-01, PDC Light Curves

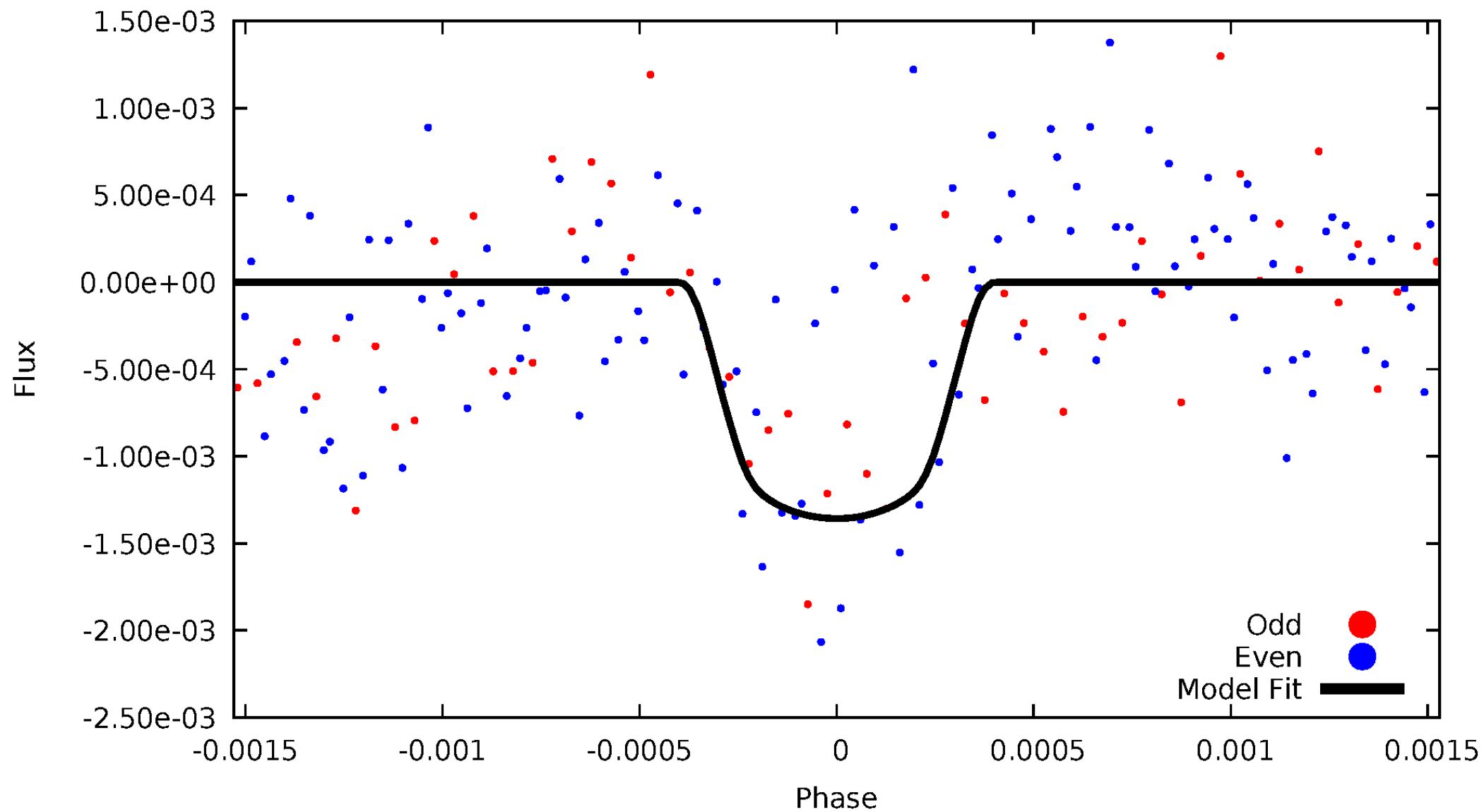


TCE 004927432-01



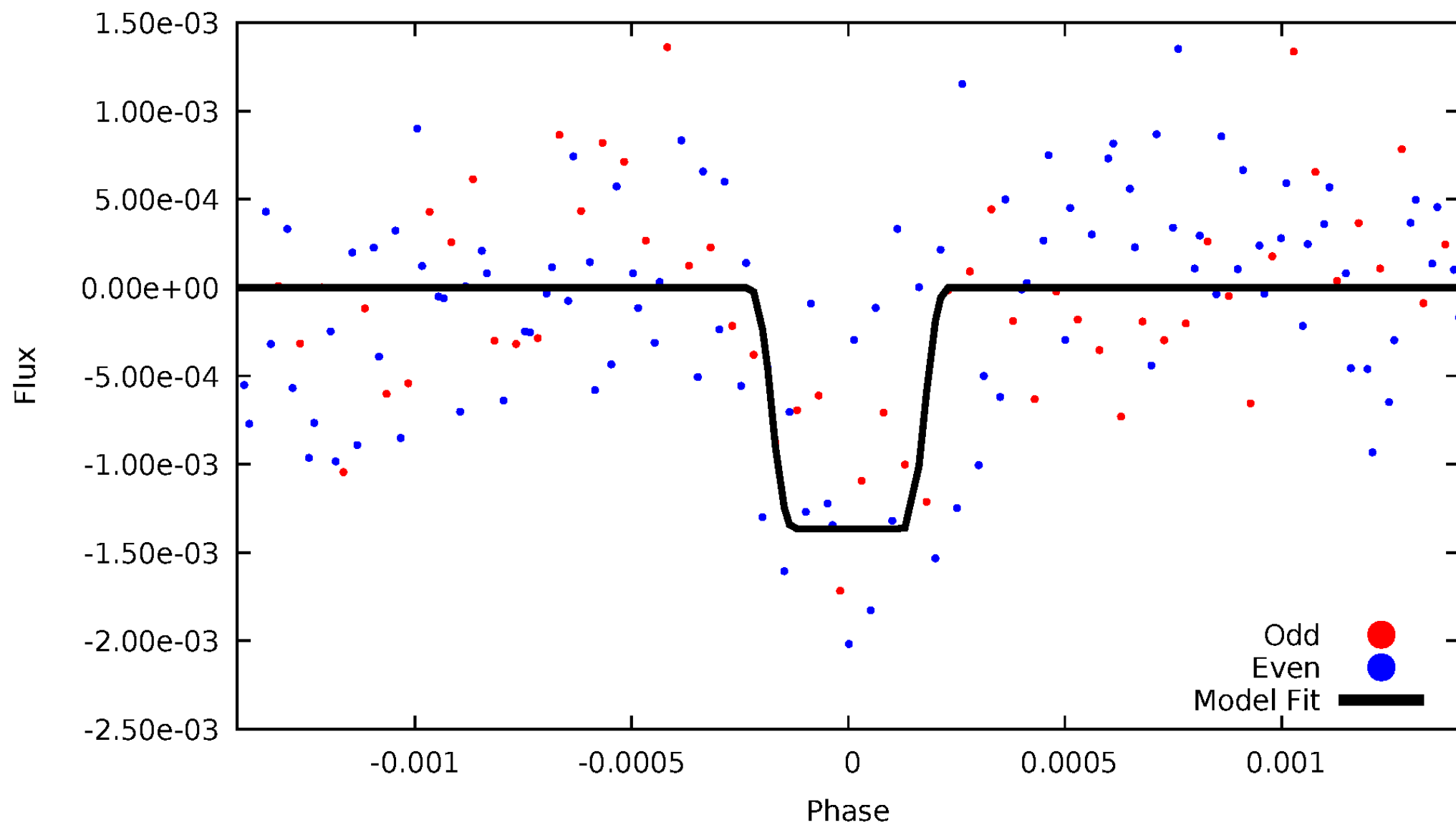
DV Odd/Even

TCE 004927432-01



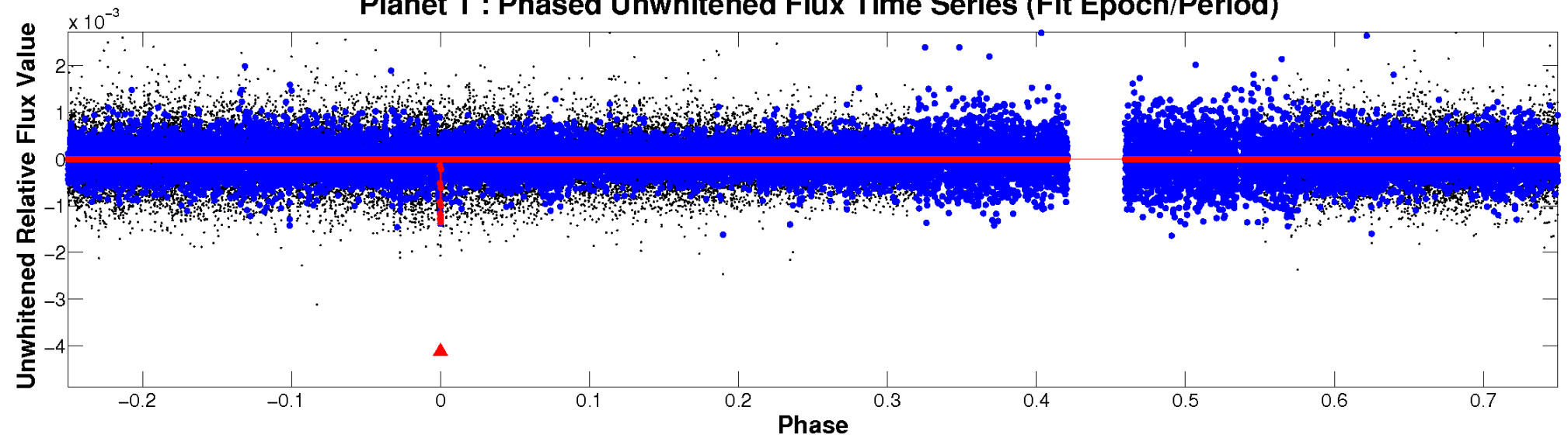
ALT Odd/Even

TCE 004927432-01

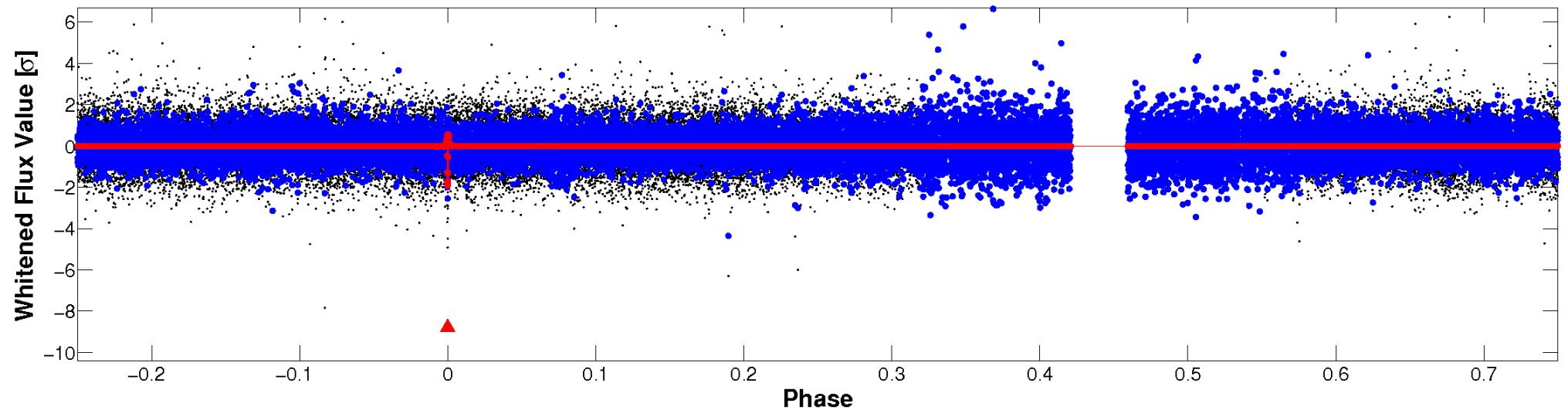


Non-Whitened Vs. Whitened Light Curve

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

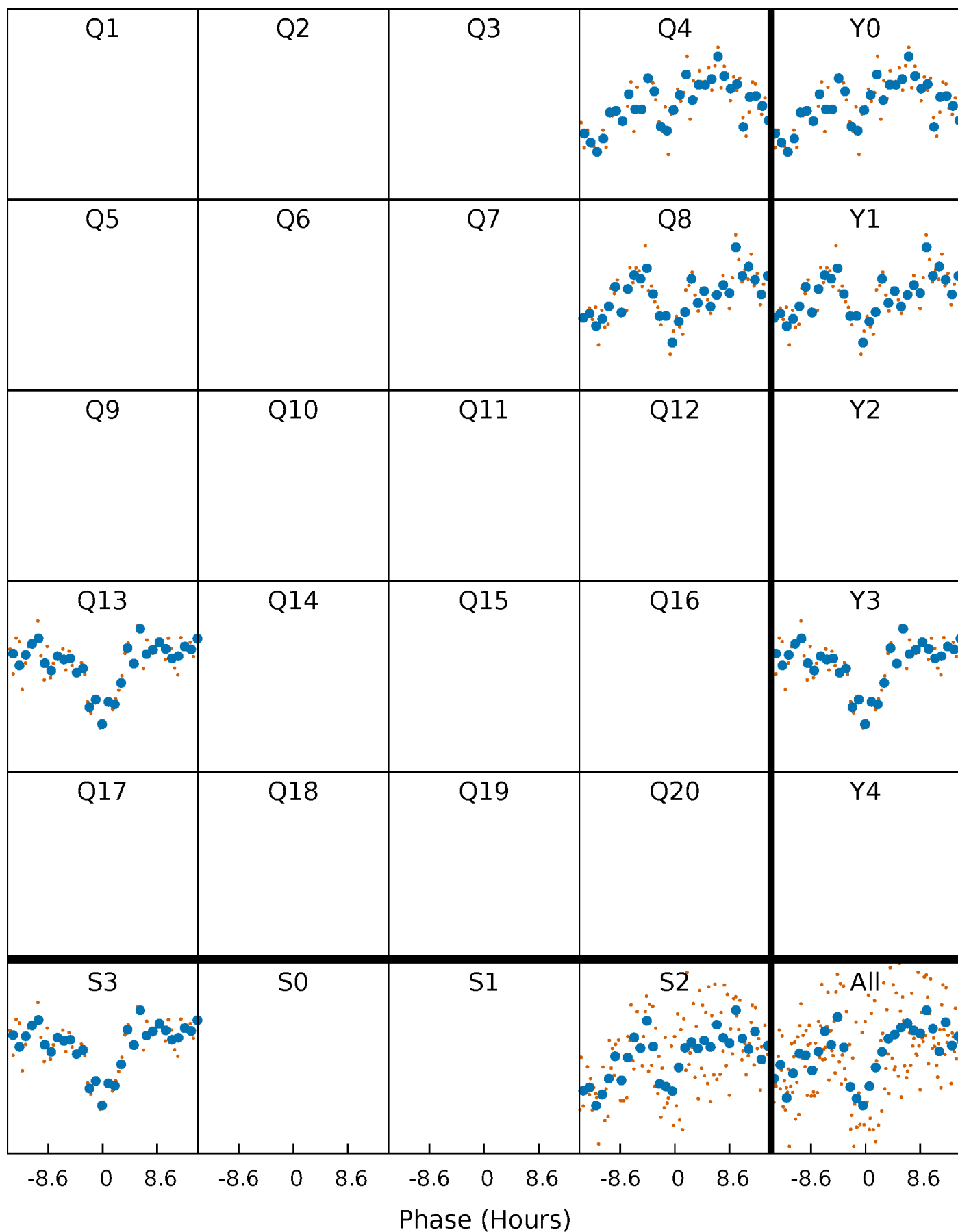


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



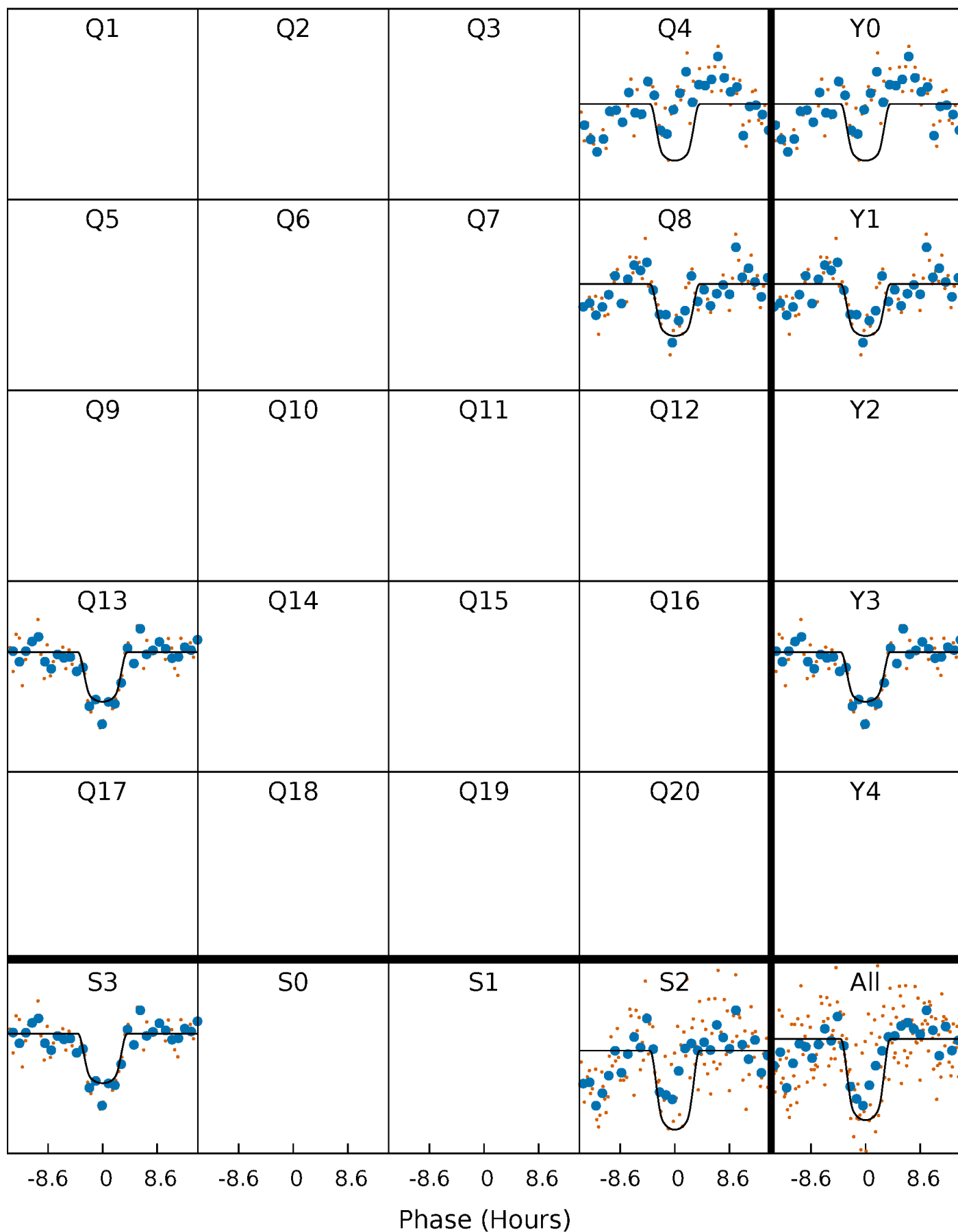
PDC Quarter-Phased Transit Curves

TCE 004927432-01 $P=409.762205$ Days $T_0=365.700777$ (BKJD)



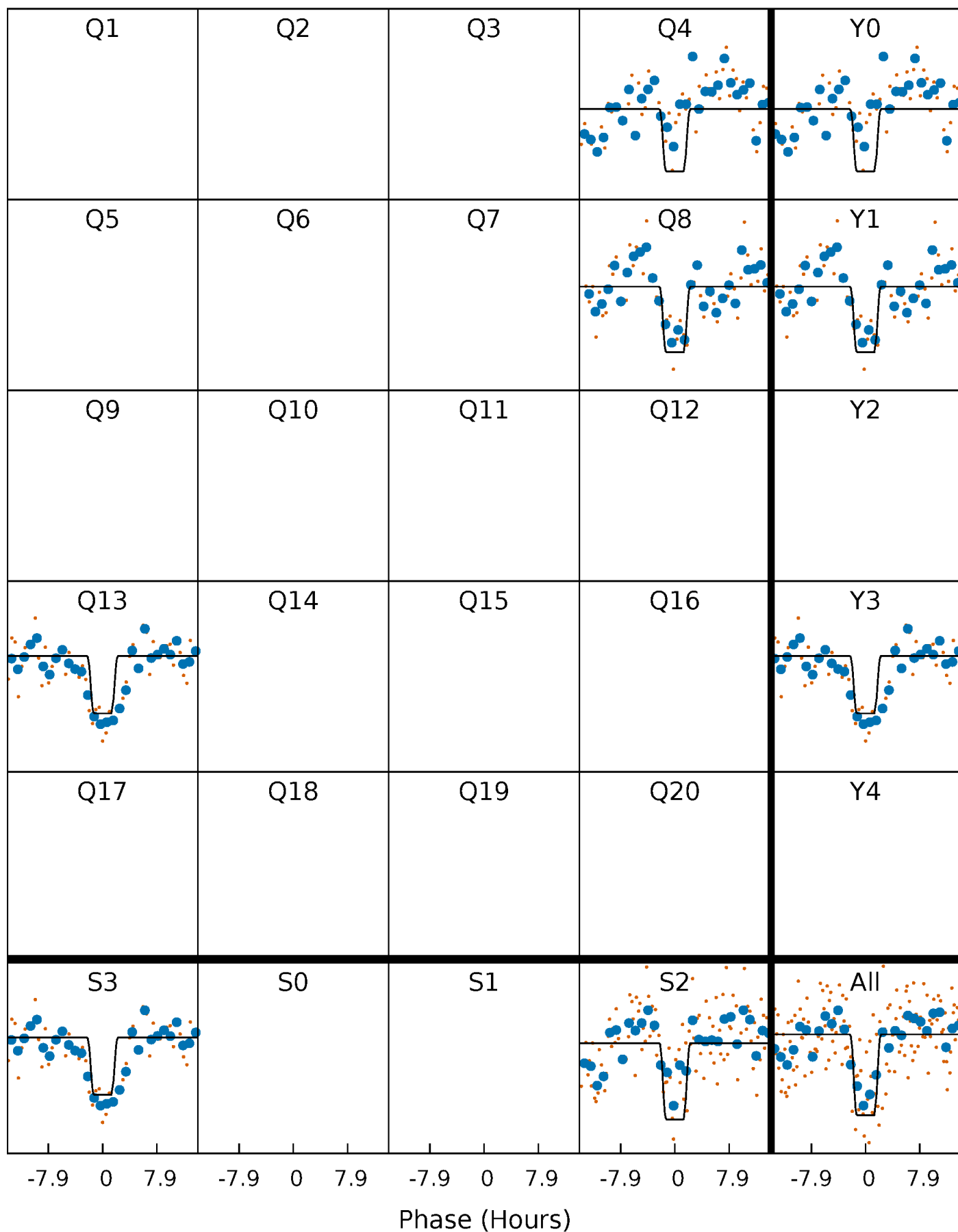
DV Quarter-Phased Transit Curves

TCE 004927432-01 P=409.762205 Days $T_0=365.700777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

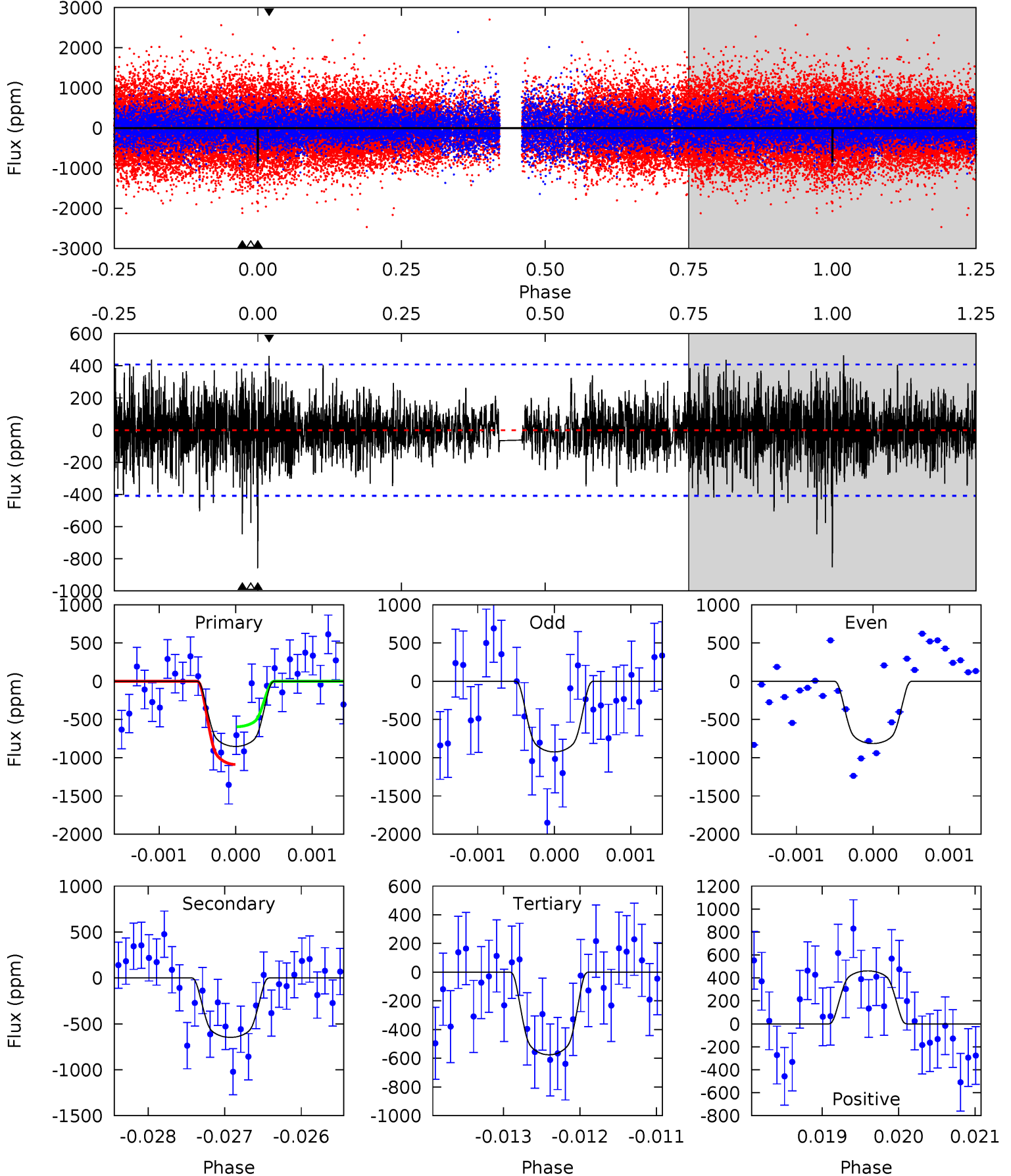
TCE 004927432-01 P=409.767801 Days $T_0=365.672843$ (BKJD)



DV Model-Shift Uniqueness Test

004927432-01, P = 409.762205 Days, E = 365.700777 Days

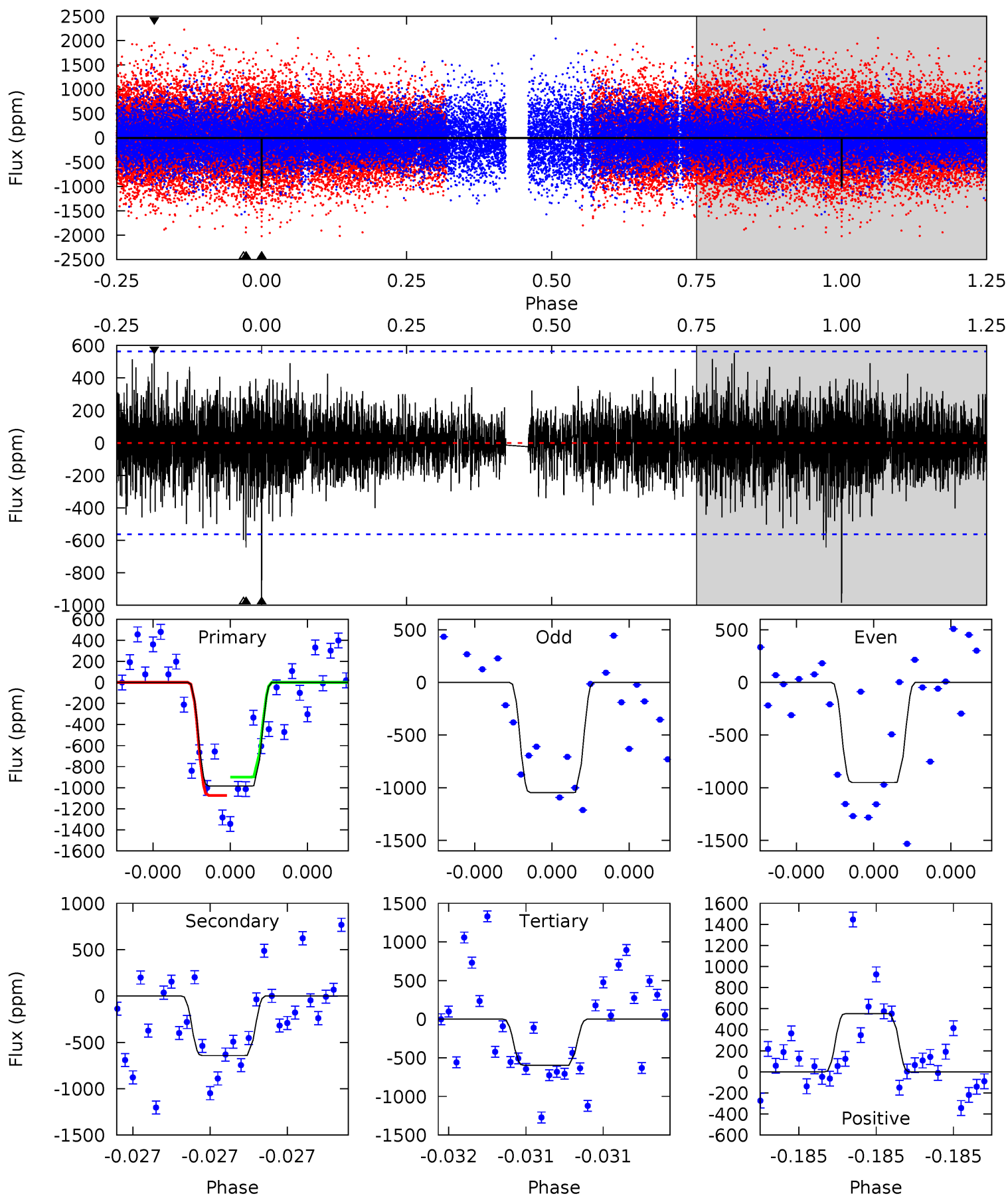
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	8.71	7.74	6.20	5.49	3.35	1.71	3.72	5.26	0.96	2.50	0.70	0.95	0.35	3.34



Alt Model-Shift Uniqueness Test

004927432-01, P = 409.767801 Days, E = 365.672843 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.78	6.39	5.94	5.49	5.60	3.52	1.31	3.85	4.29	0.45	0.89	0.45	0.96	0.36	0.86



Stellar Parameters For KIC 004927432

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5401^{+43}_{-368}	$2.619^{+0.056}_{-0.017}$	$0.070^{+0.150}_{-0.600}$	$15.160^{+0.263}_{-5.263}$	$3.481^{+0.070}_{-1.882}$	$0.001^{+0.001}_{-0.000}$
	+1%/-7%	+2%/-1%	+214%/-857%	+2%/-35%	+2%/-54%	+61%/-5%
Source	KIC0	AST71	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 004927432-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-648 ± 74	$67.52^{+7.36}_{-6.40}$	1000^{+22}_{-63}	4335^{+222}_{-236}	207^{+53}_{-42}
Alt.	-643 ± 101	$60.72^{+6.36}_{-7.22}$	1000^{+23}_{-65}	4507^{+294}_{-266}	257^{+81}_{-61}

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 $A_{obs} \gg 1.0$

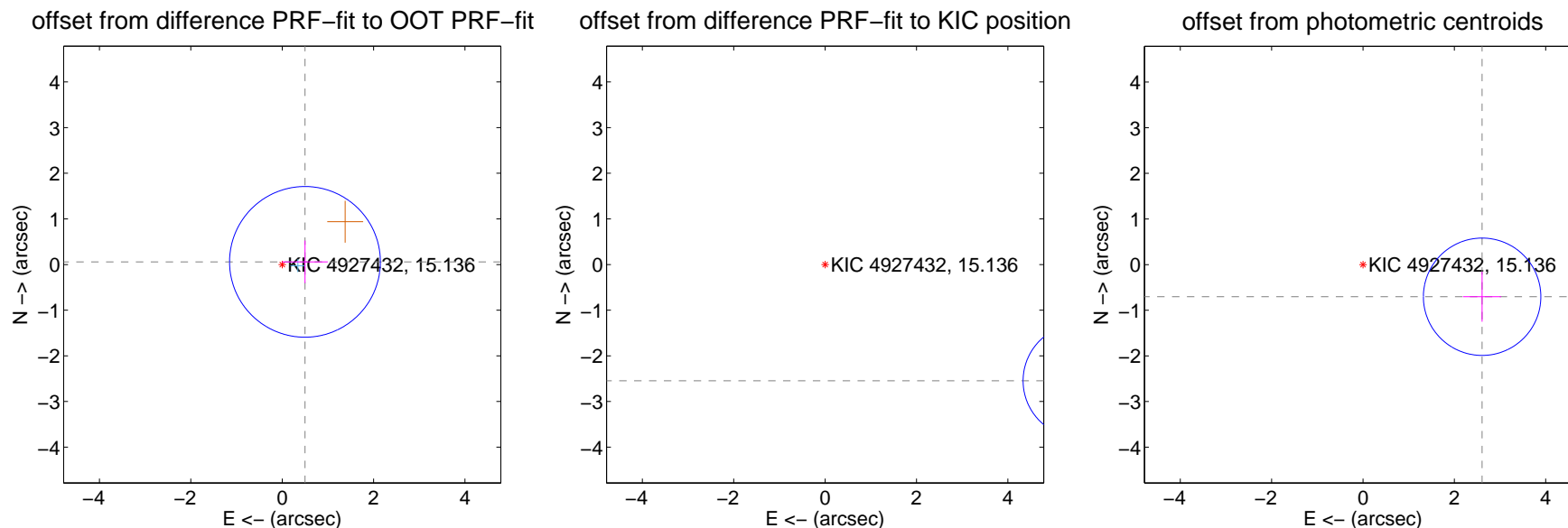
DV Centroid Data

Supplemental centroid analysis for 004927432-01. Kepler magnitude: 15.14. Transit SNR 10.55

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.71 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	0.502 ± 0.550	0.91	-0.498 ± 0.500	0.059 ± 0.466
PRF-fit source offset from KIC position	6.131 ± 0.414	14.80	-5.577 ± 0.428	-2.547 ± 0.343
photometric centroid source offset	2.70 ± 0.43	6.30	-2.61 ± 0.42	-0.70 ± 0.55



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



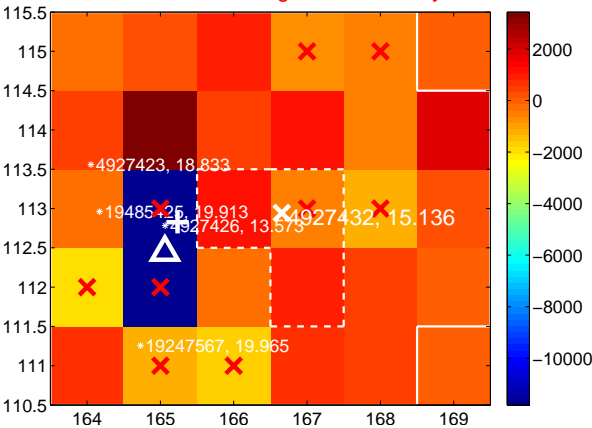
Q3 no difference image



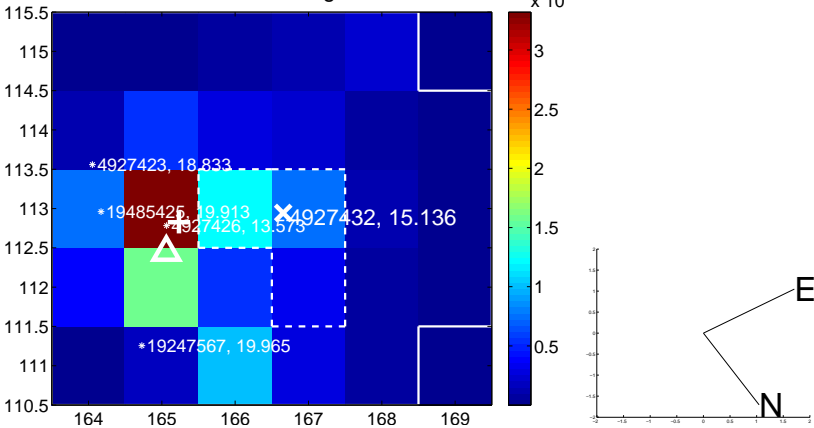
Q3 no OOT image



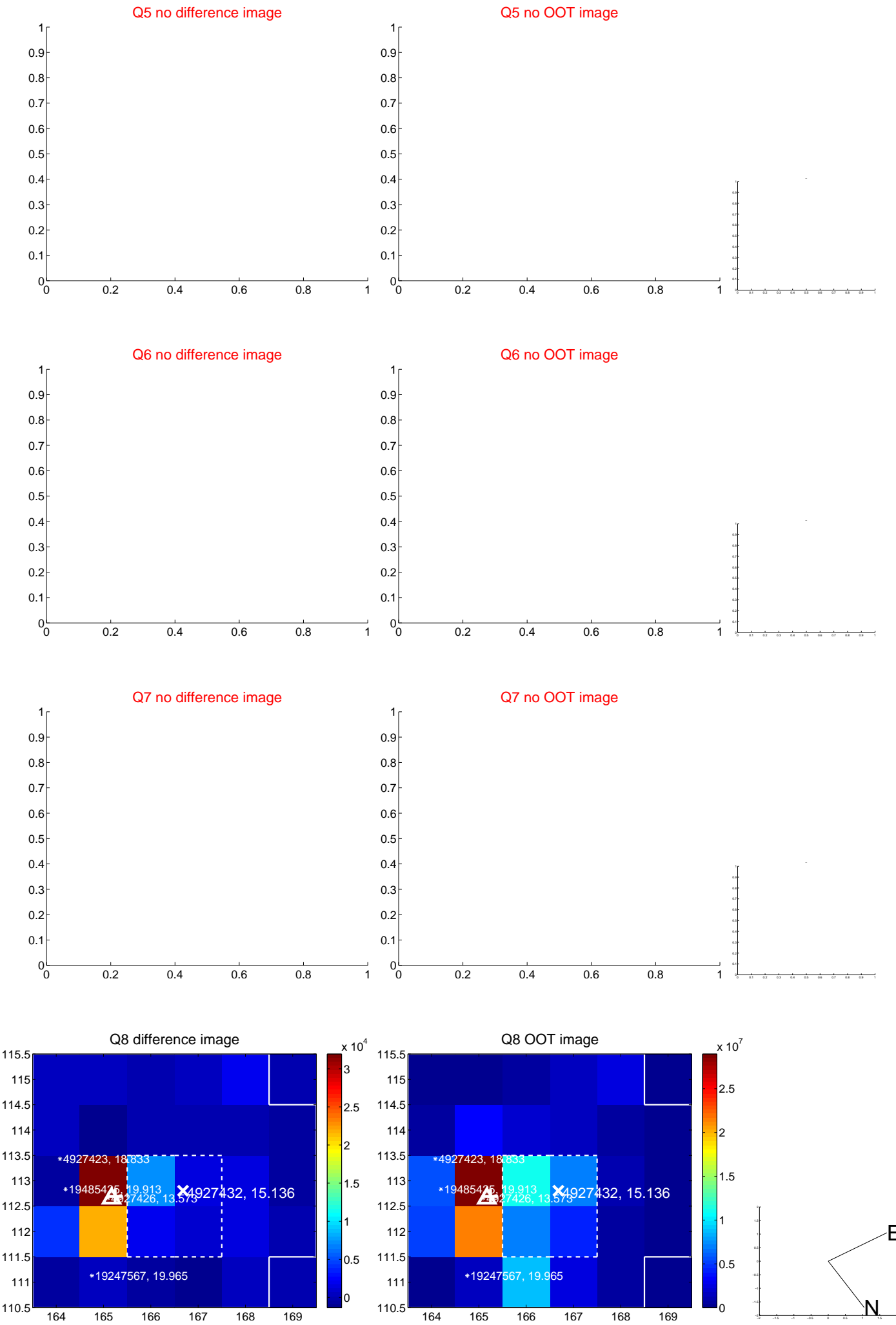
Q4 difference image. Poor Quality



Q4 OOT image



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



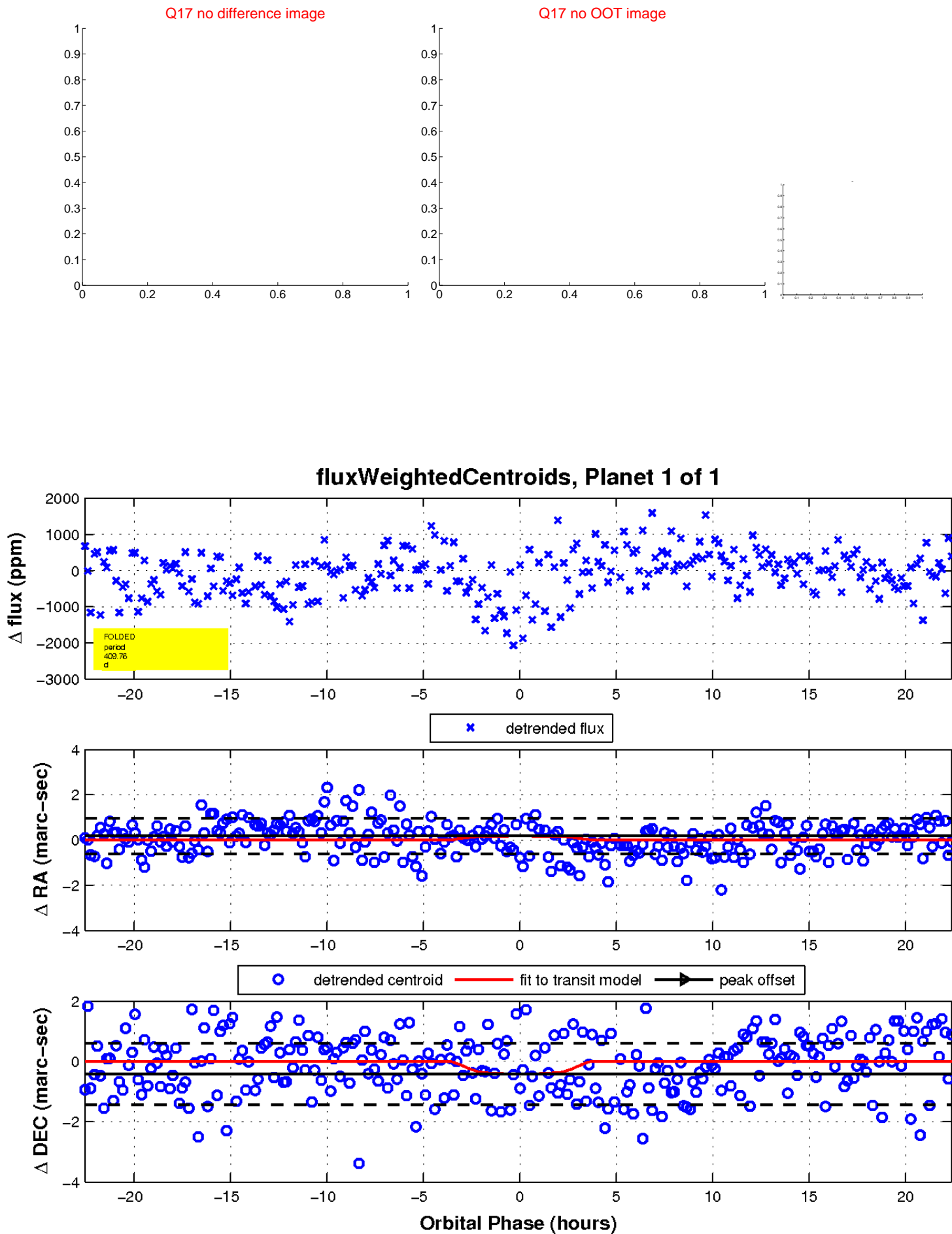
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

