

KIC 003943032

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})
003943032-01	OBS	No	527.422727	373.736265	226.2	5.853	8.9	6.6	0.81	5808	1.44	0.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003943032-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—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.

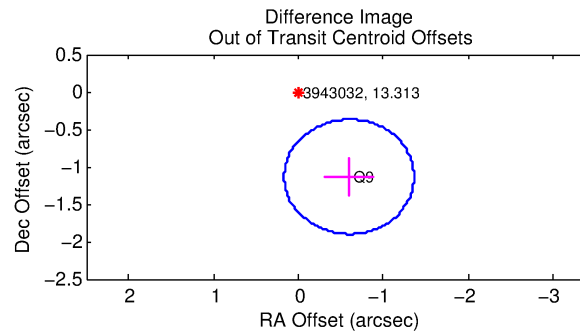
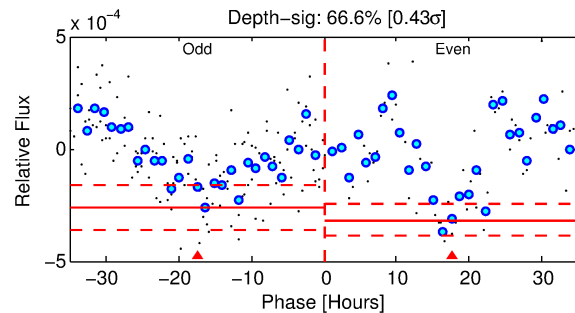
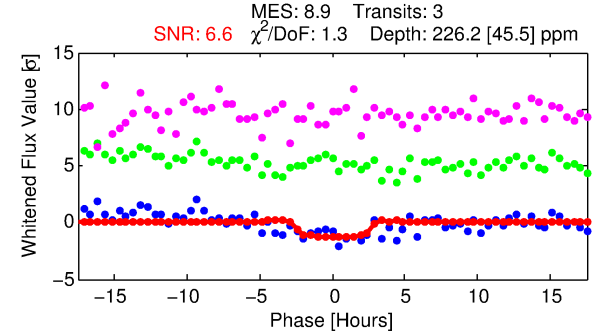
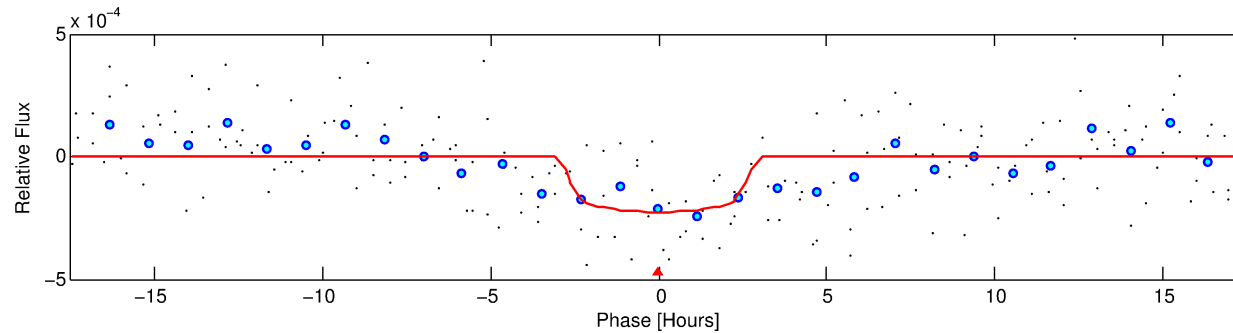
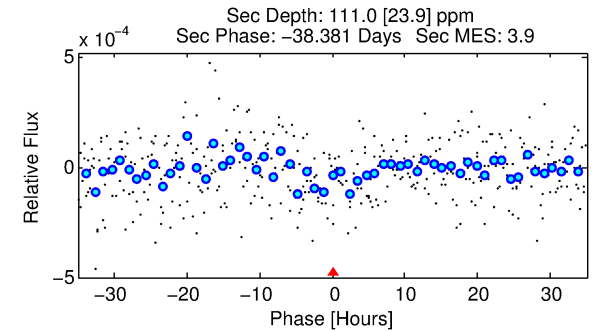
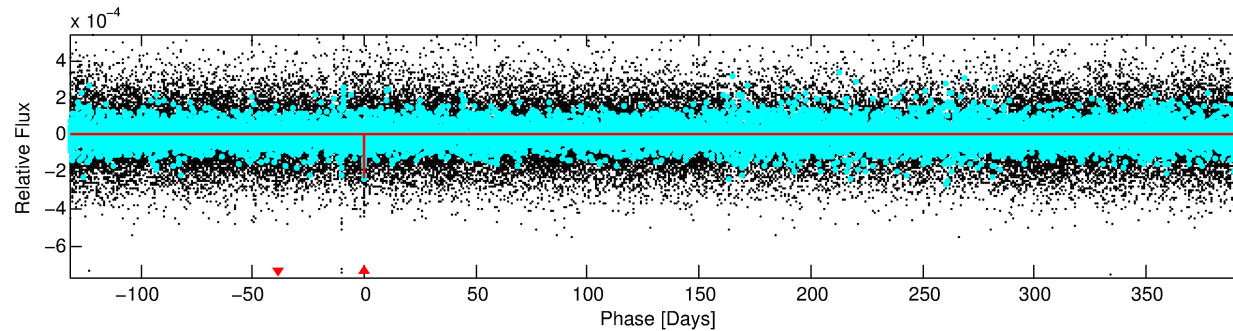
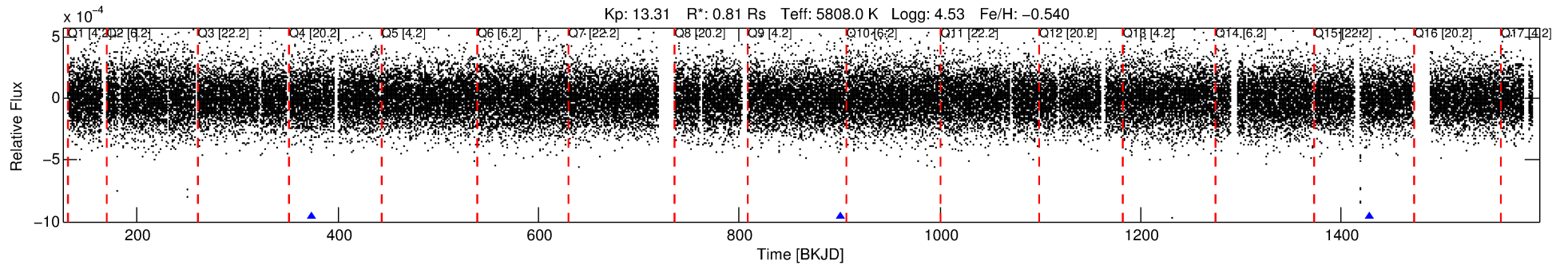
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003943032-01

No Significant Match Found

DV One-Page Summary

KIC: 3943032 Candidate: 1 of 1 Period: 527.423 d



DV Fit Results:

Period = 527.42273 [0.01156] d
Epoch = 373.7363 [0.0164] BKJD
Rp/R* = 0.0162 [0.0137]
a/R* = 327.57 [1408.52]
b = 0.90 [0.94]
Seff = 0.47 [0.15]
Teq = 211 [17] K
Rp = 1.44 [1.26] Re
a = 1.1954 [0.2469] AU
Ag = 42137.16 [72772.03] [0.58 σ]
Teffp = 4681 [1994] K [2.24 σ]

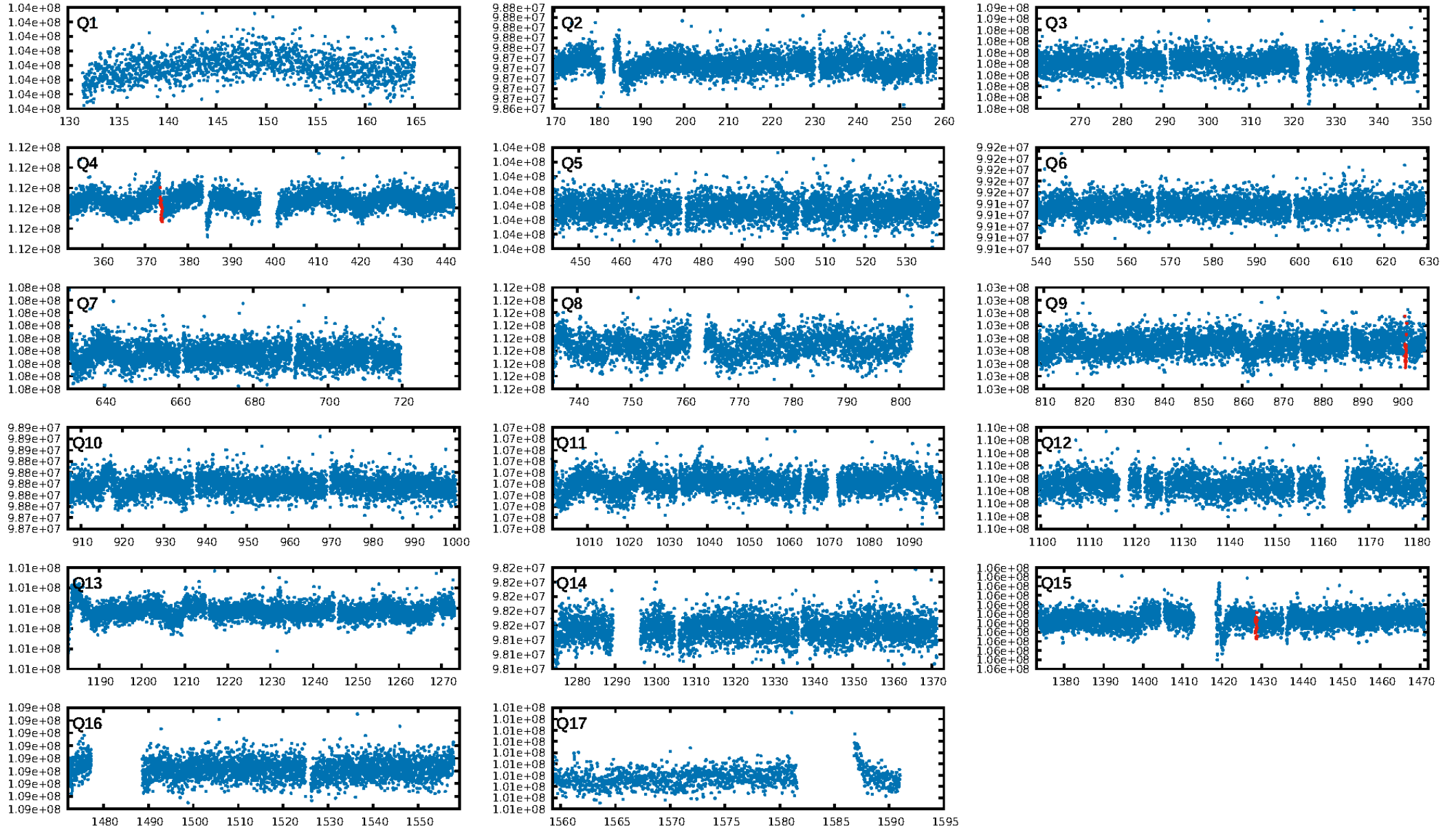
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.8%
ModelChiSquareGof-sig: 93.0%
Bootstrap-pfa: 8.53e-19
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.065
Centroid-sig: 3.6%
Centroid-so: 2.281 arcsec [1.34 σ]
OotOffset-rm: 1.284 arcsec [5.03 σ]
KicOffset-rm: 1.364 arcsec [5.35 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

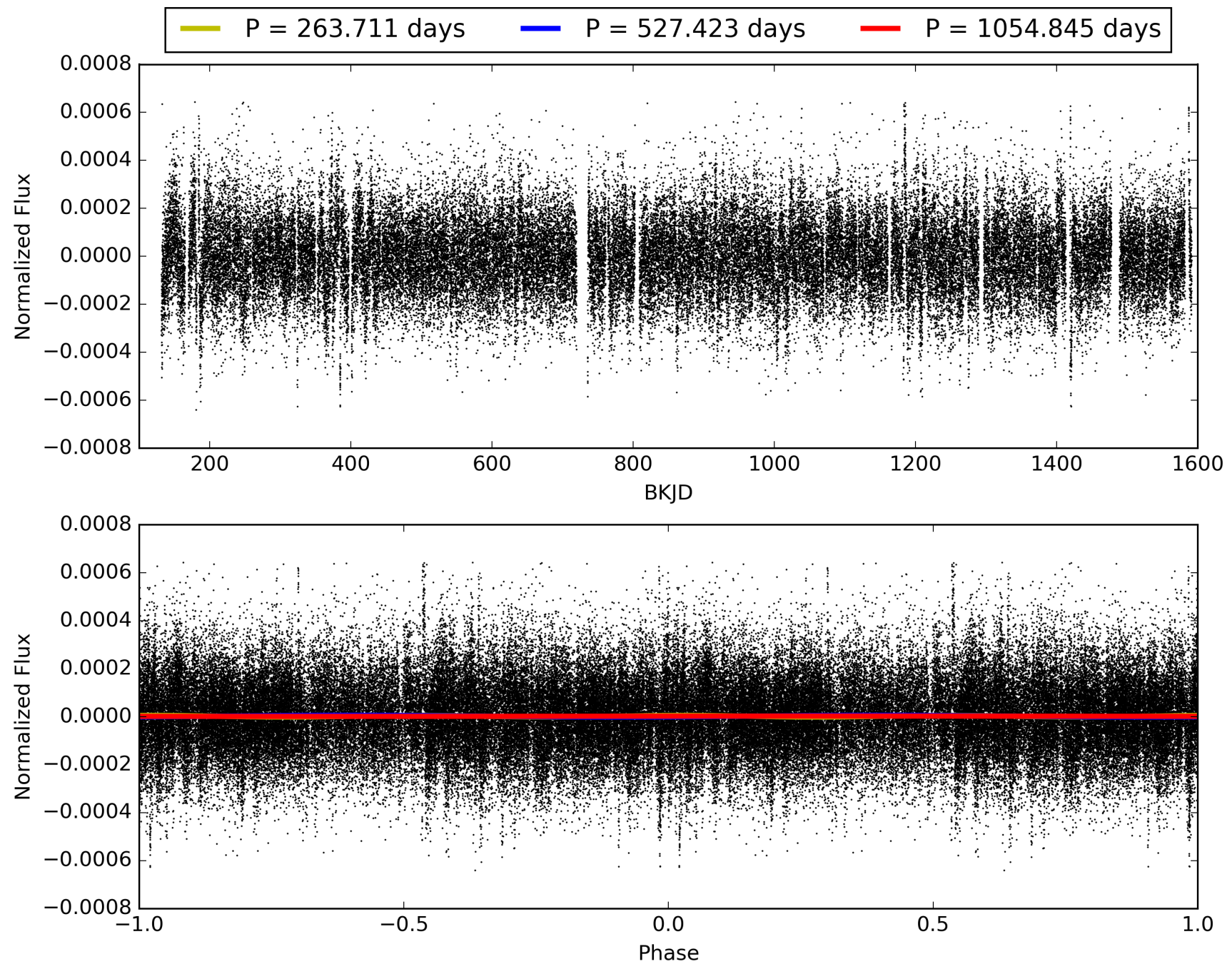
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:51:17 Z

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

TCE 003943032-01, PDC Light Curves

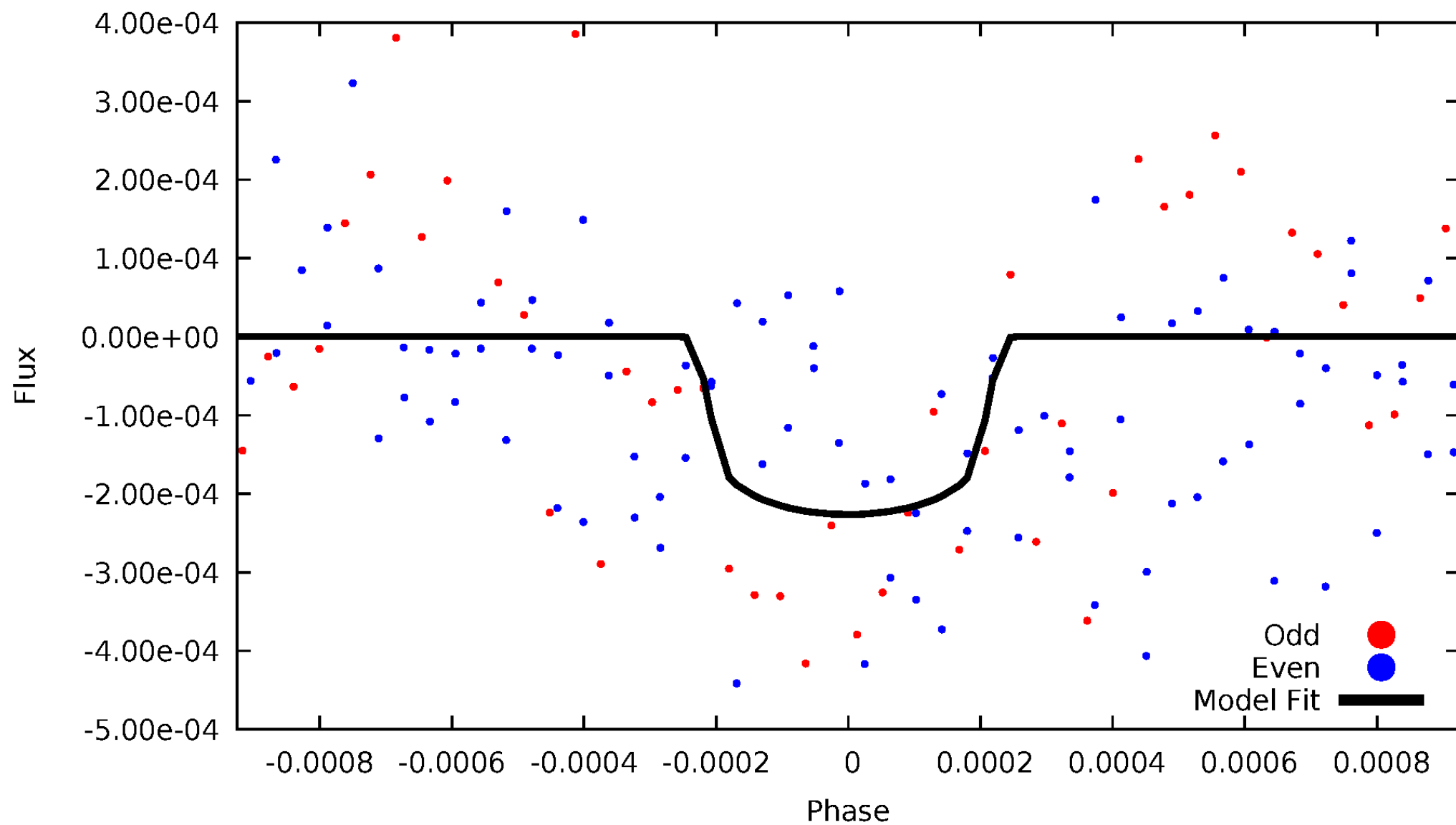


TCE 003943032-01



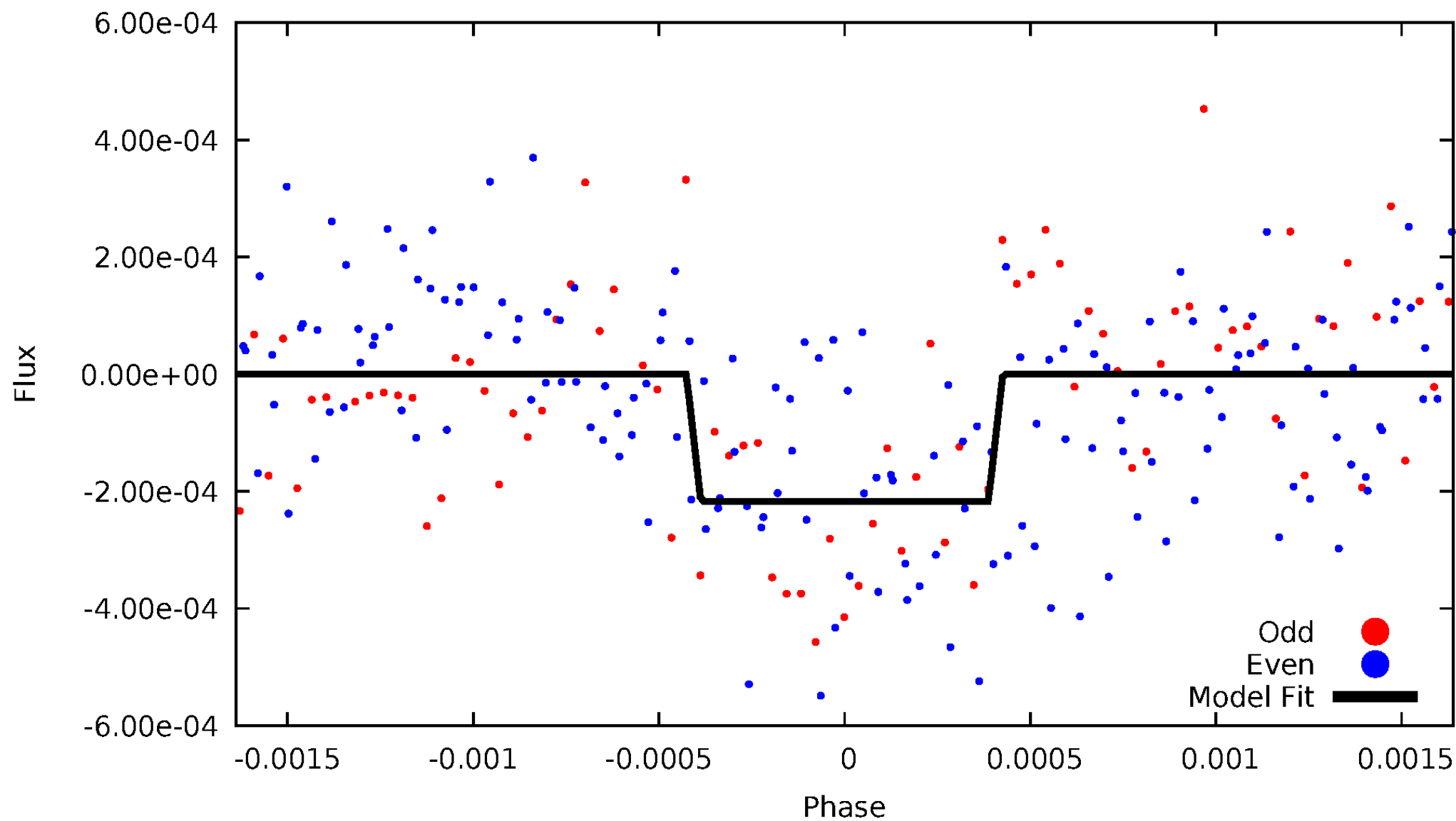
DV Odd/Even

TCE 003943032-01

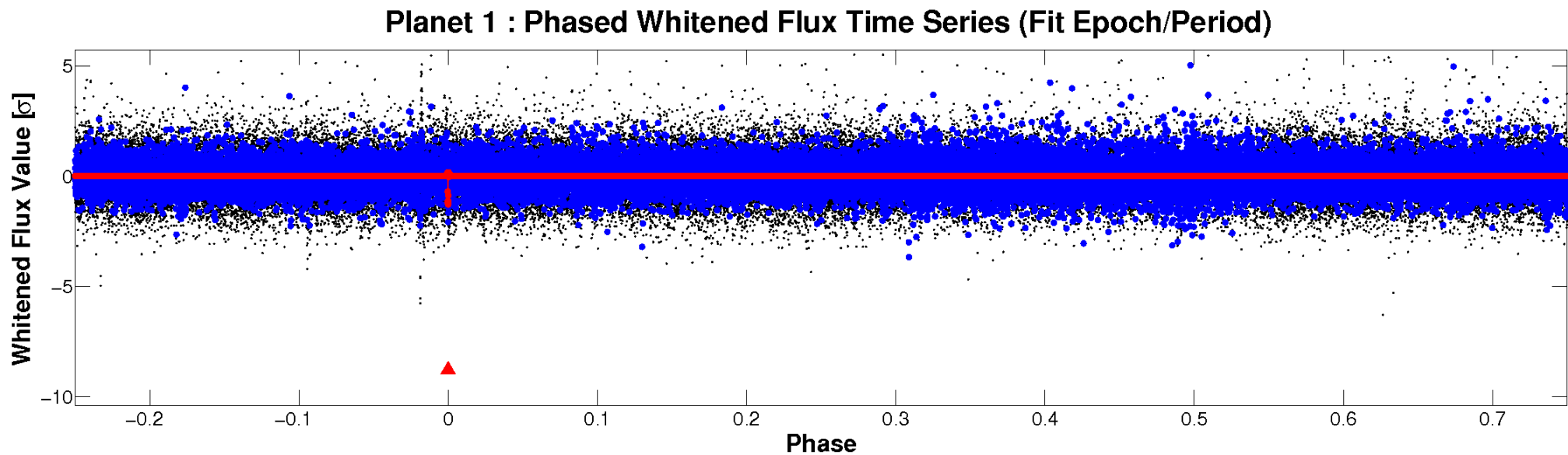
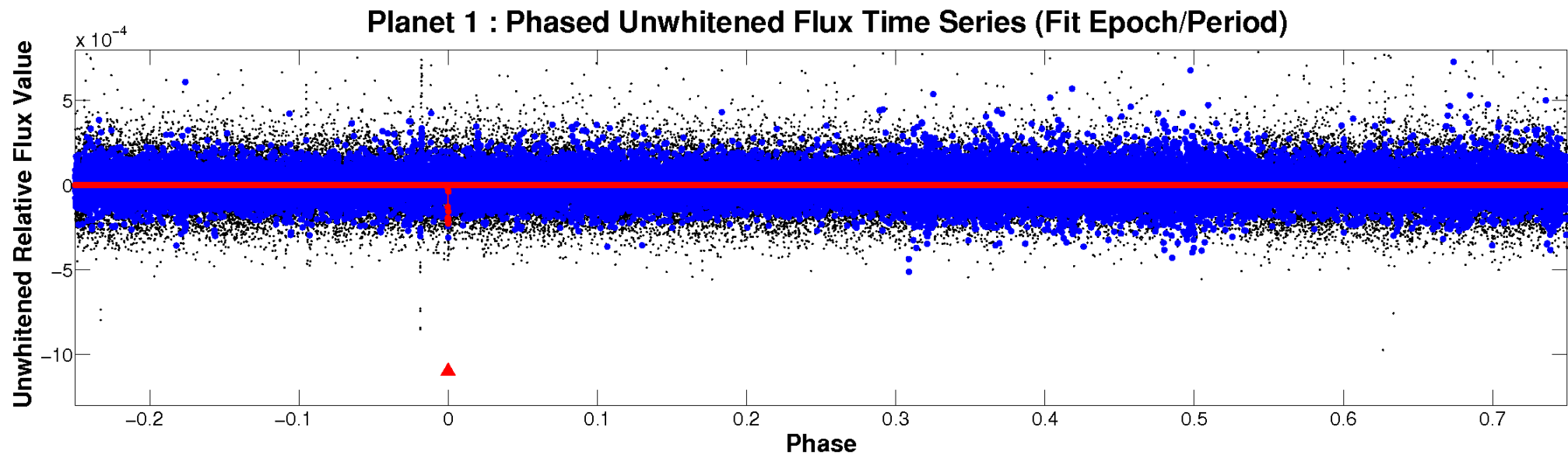


ALT Odd/Even

TCE 003943032-01

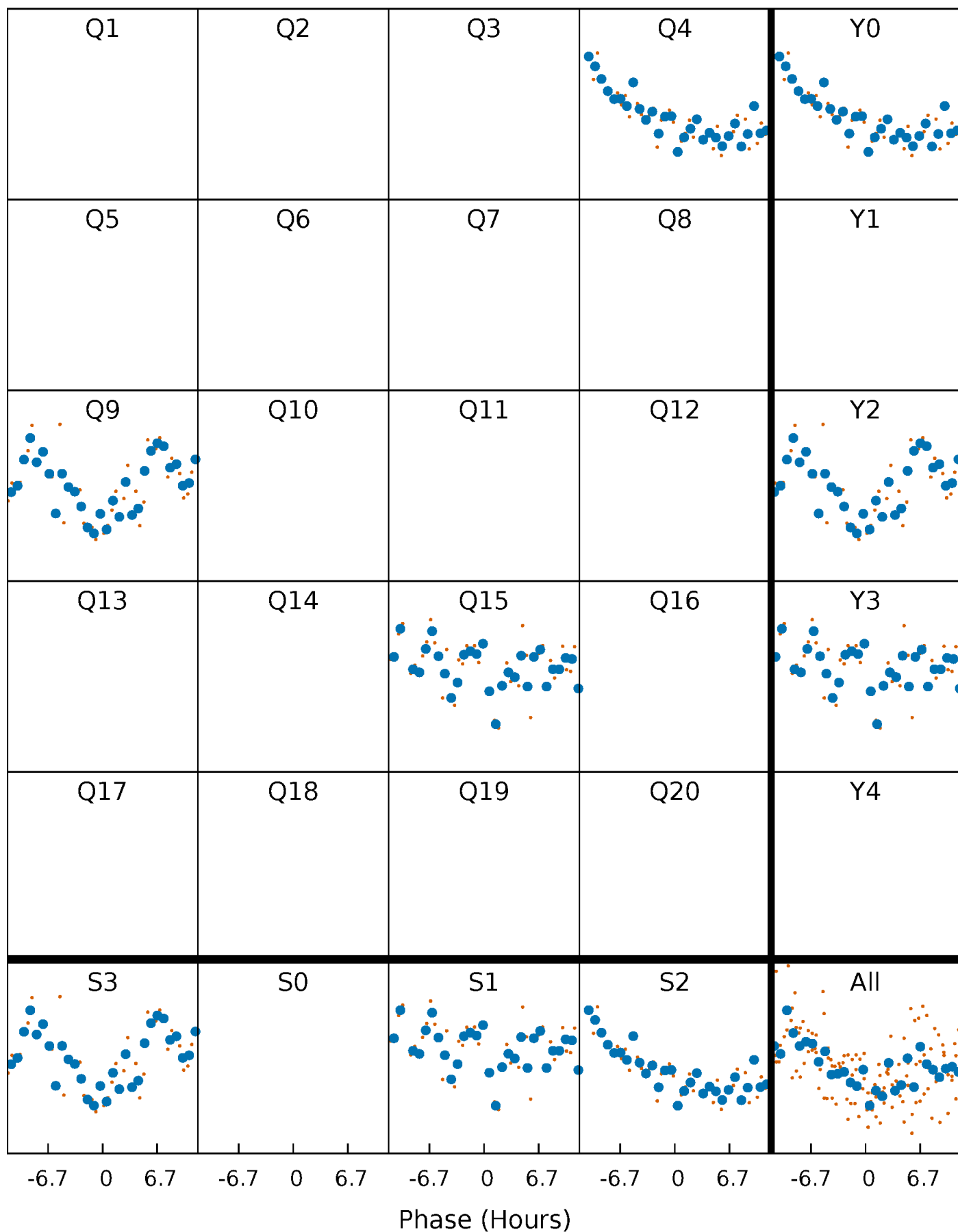


Non-Whitened Vs. Whitened Light Curve



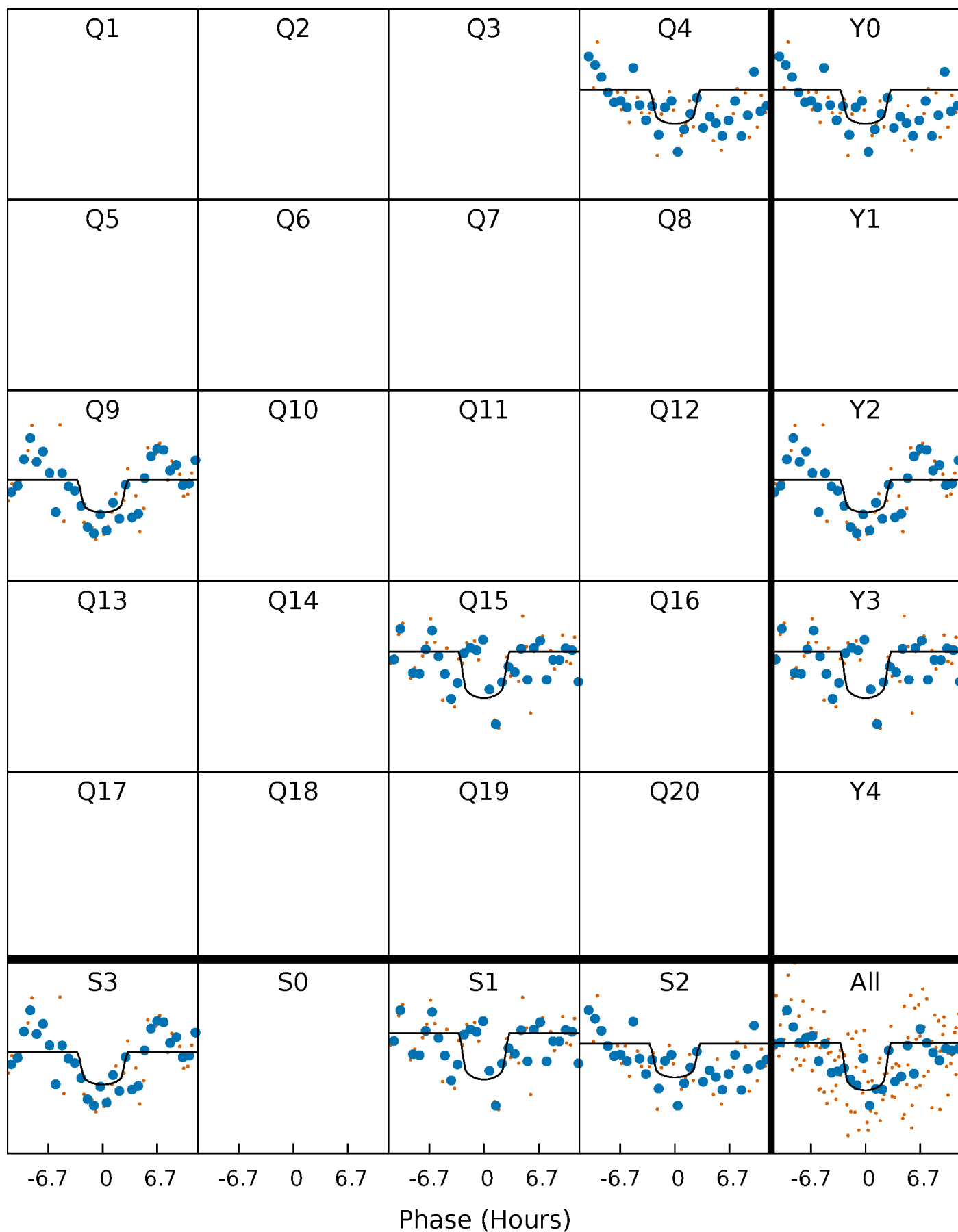
PDC Quarter-Phased Transit Curves

TCE 003943032-01 P=527.422727 Days $T_0=373.736265$ (BKJD)



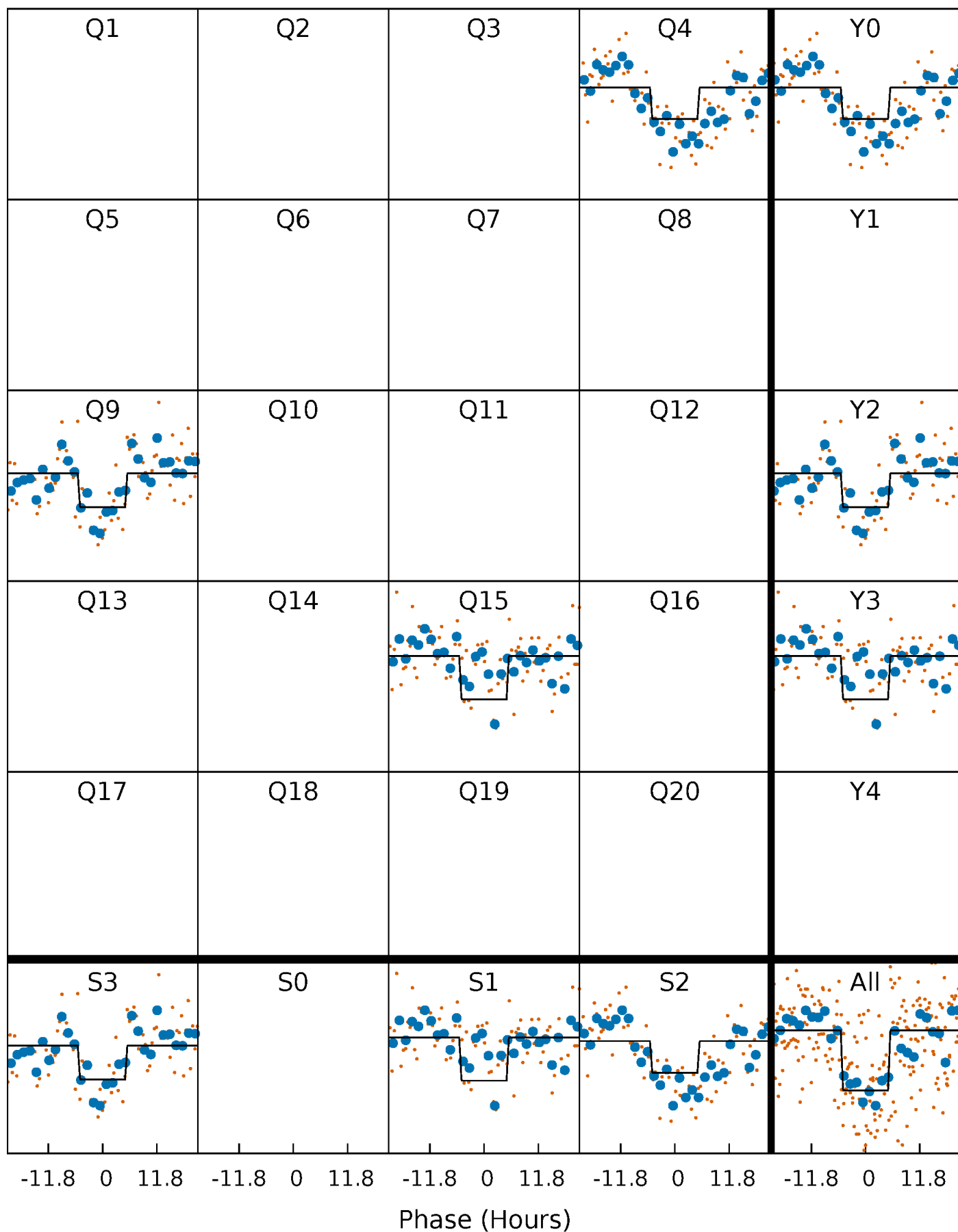
DV Quarter-Phased Transit Curves

TCE 003943032-01 P=527.422727 Days $T_0=373.736265$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

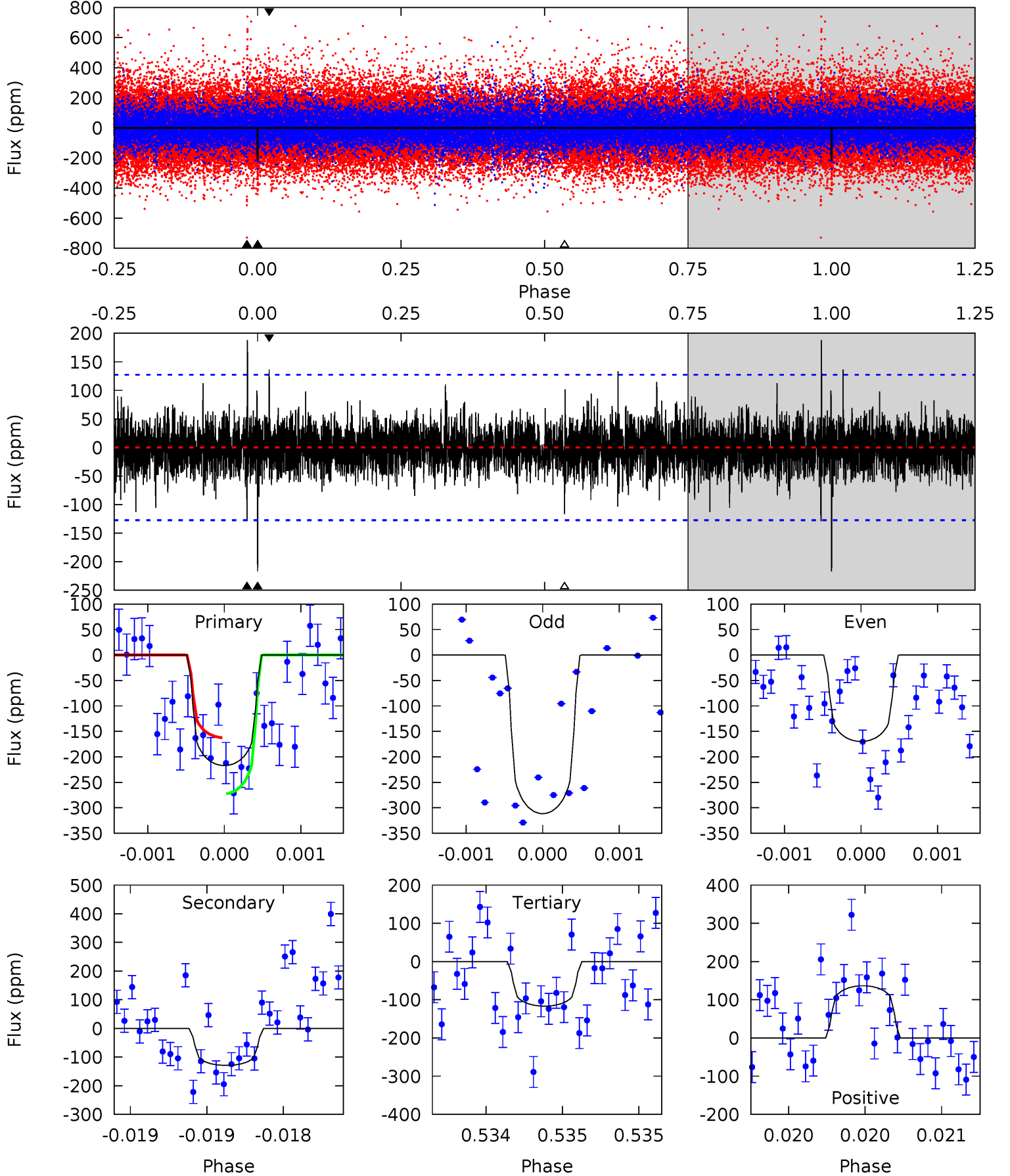
TCE 003943032-01 P=527.383372 Days $T_0=373.783062$ (BKJD)



DV Model-Shift Uniqueness Test

003943032-01, $P = 527.422727$ Days, $E = 373.736265$ Days

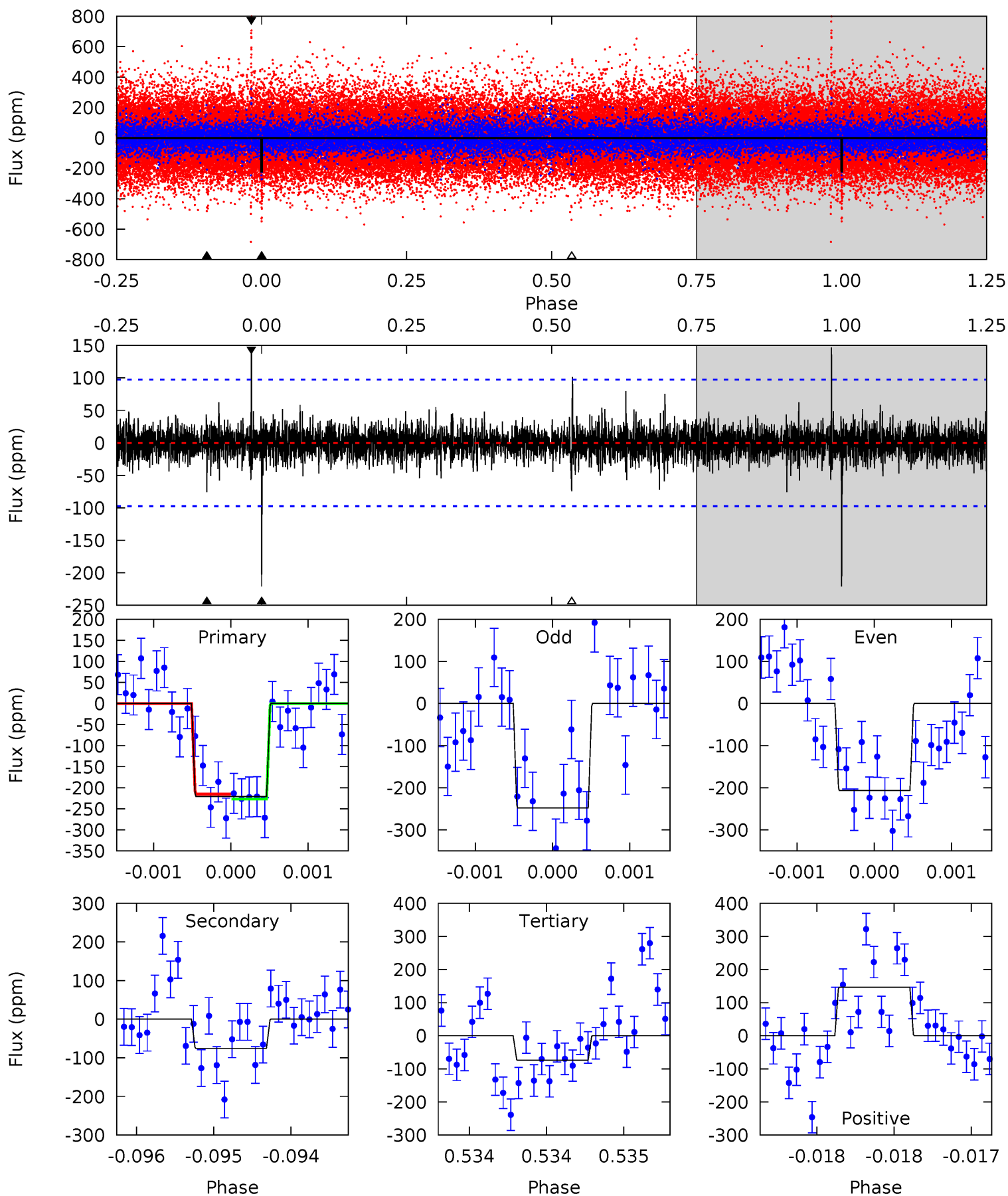
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.49	5.65	5.10	5.98	5.57	3.48	1.21	4.39	3.51	0.54	-0.33	2.99	0.97	0.46	2.41



Alt Model-Shift Uniqueness Test

003943032-01, P = 527.383372 Days, E = 373.783062 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	4.25	4.18	8.26	5.48	3.34	0.93	8.26	4.17	0.07	-4.01	1.10	0.90	0.40	0.33



Stellar Parameters For KIC 003943032

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5808^{+157}_{-157}	$4.531^{+0.066}_{-0.165}$	$-0.540^{+0.300}_{-0.300}$	$0.813^{+0.199}_{-0.085}$	$0.819^{+0.095}_{-0.069}$	$2.145^{+0.594}_{-0.926}$
	+3%/-3%	+1%/-4%	+56%/-56%	+24%/-10%	+12%/-8%	+28%/-43%
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 003943032-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-129±23	$1.61^{+1.21}_{-0.92}$	299^{+19}_{-12}	4807^{+2437}_{-923}	$40461^{+170017}_{-28109}$
Alt.	-76±18	$1.53^{+1.07}_{-0.86}$	299^{+17}_{-14}	4384^{+1878}_{-769}	$24921^{+103621}_{-16386}$

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

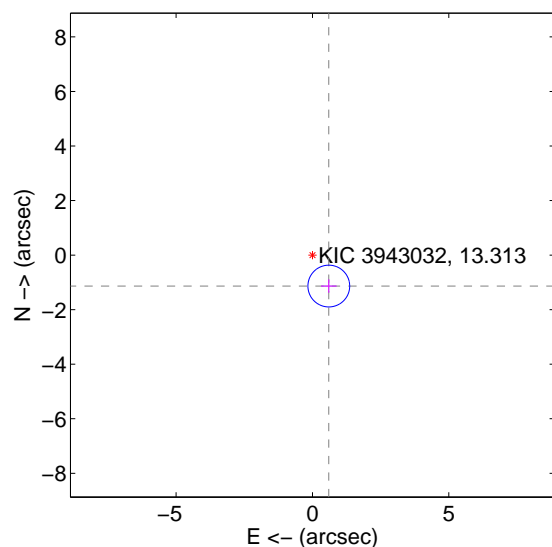
Supplemental centroid analysis for 003943032-01. Kepler magnitude: 13.31. Transit SNR 6.56

There are 1 quarters with good PRF difference image offsets

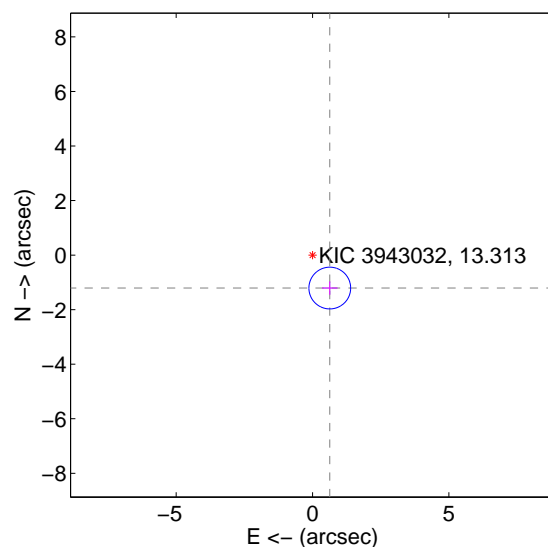
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.284 ± 0.255	5.03	-0.600 ± 0.286	-1.135 ± 0.246
PRF-fit source offset from KIC position	1.364 ± 0.255	5.35	-0.633 ± 0.286	-1.208 ± 0.246
photometric centroid source offset	2.28 ± 1.70	1.34	0.76 ± 1.71	-2.15 ± 1.70

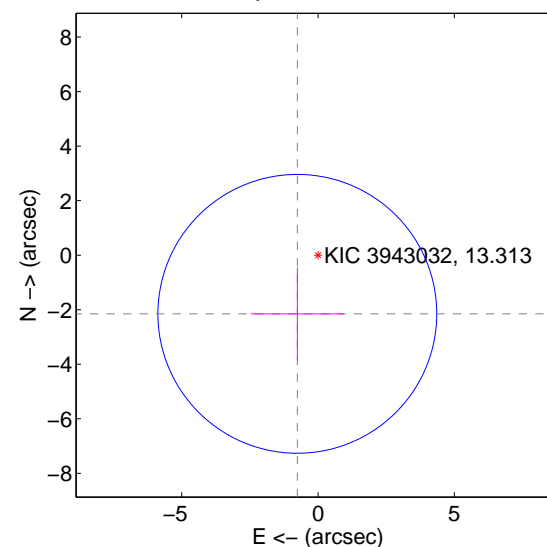
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

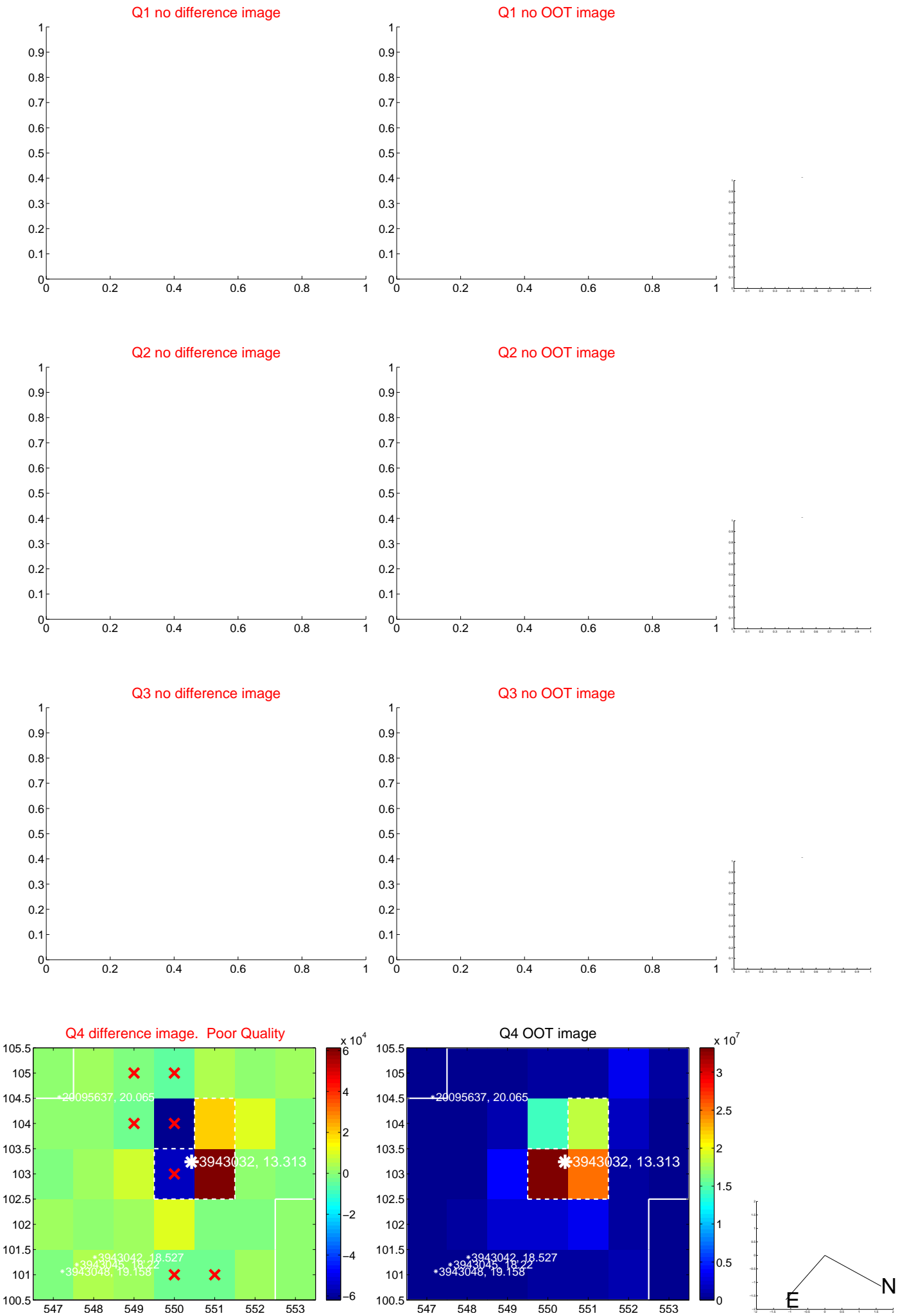


offset from photometric centroids



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.

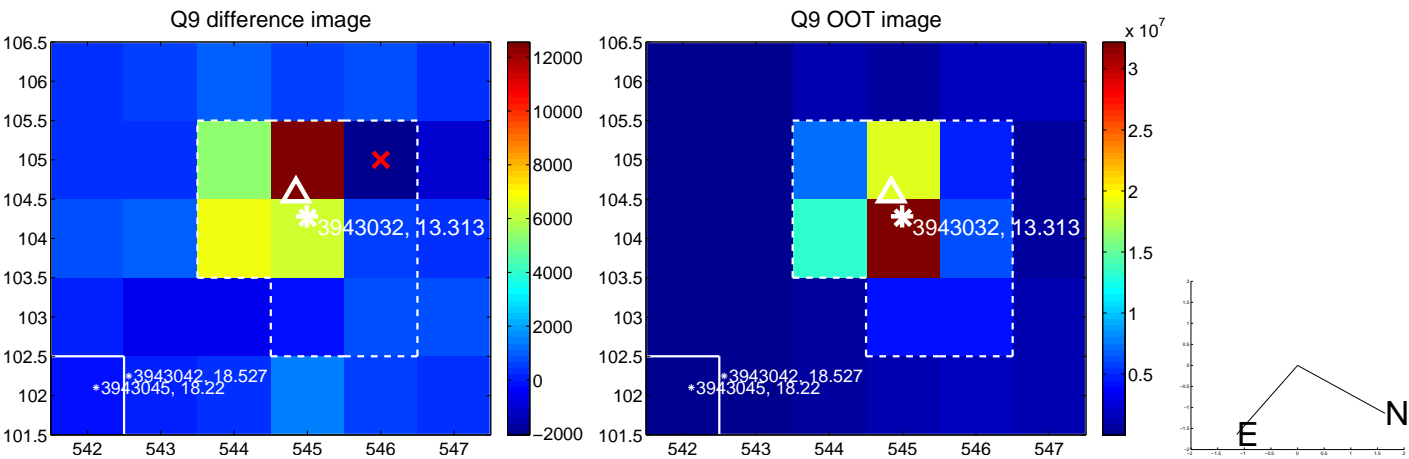
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



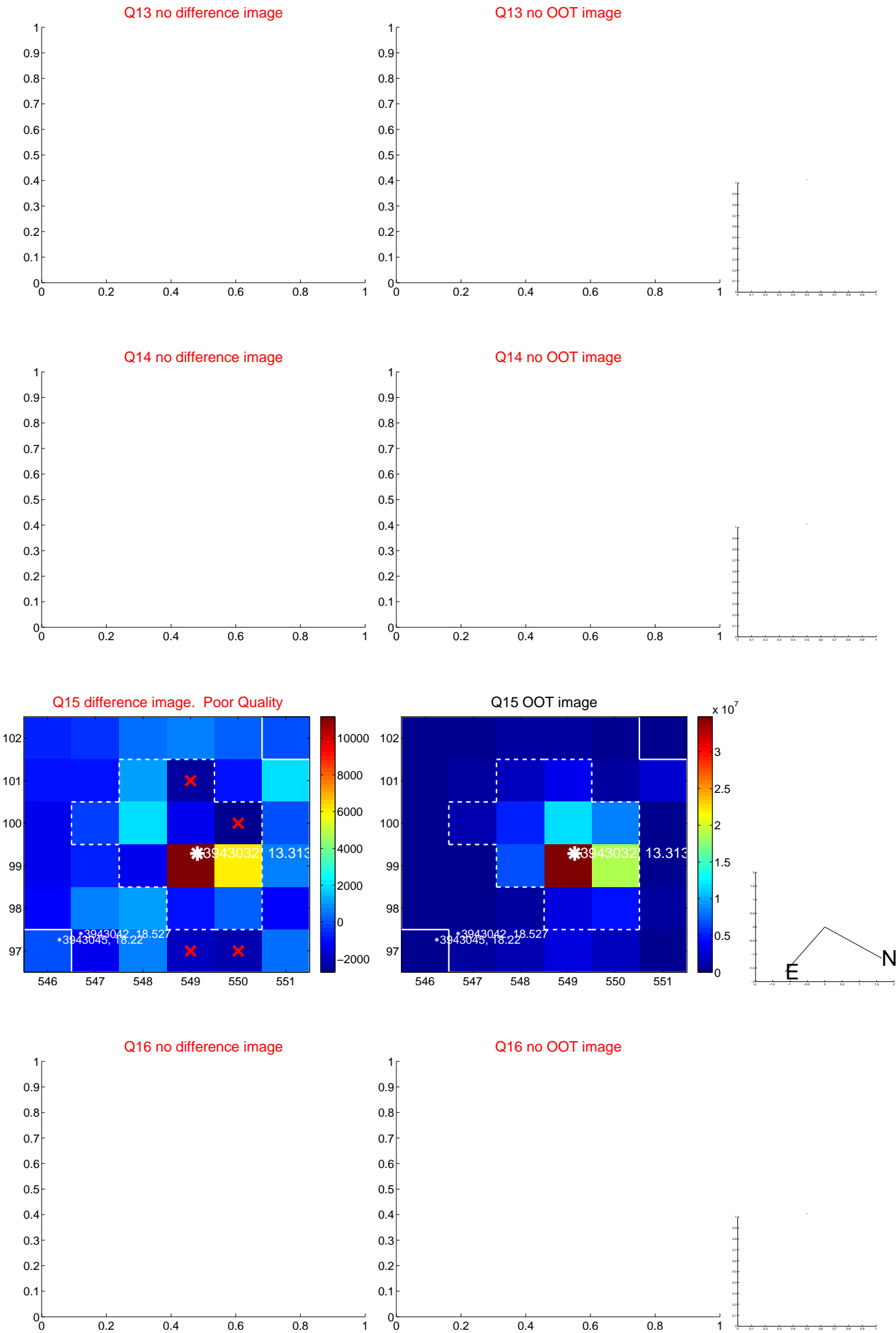
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



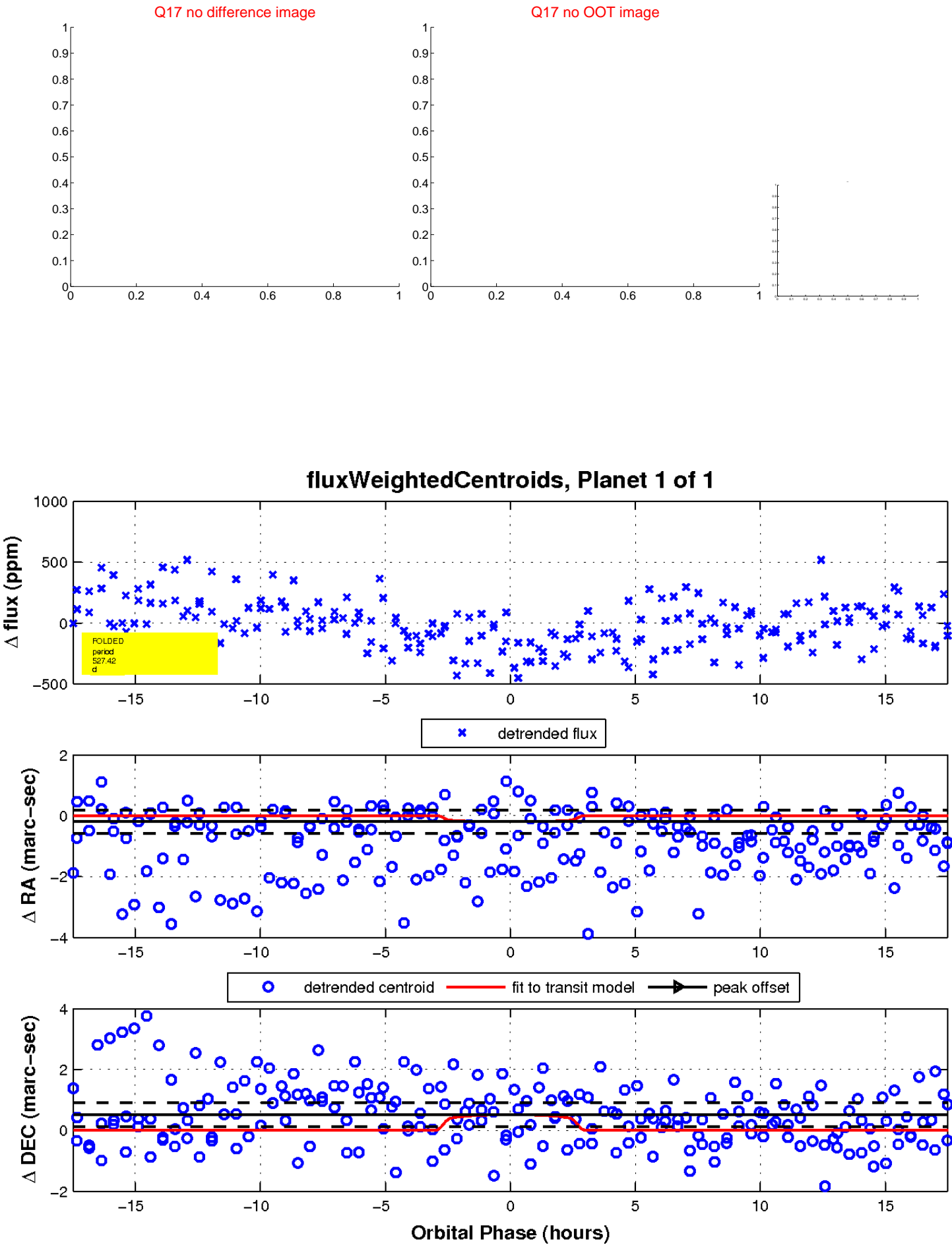
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

