

KIC 005094412

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})
005094412-01	OBS	5124.01	276.879408	176.522595	1678.9	3.578	10.9	12.0	0.97	5324	5.14	1.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005094412-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE

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.

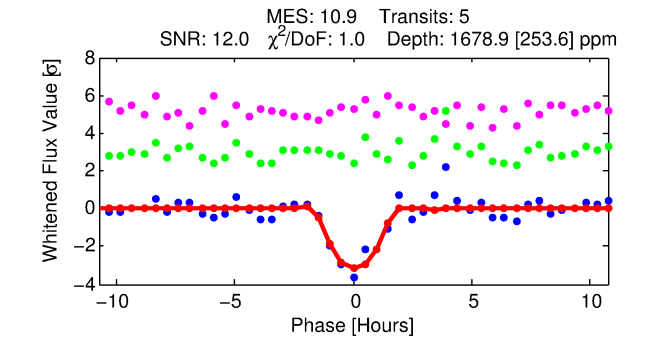
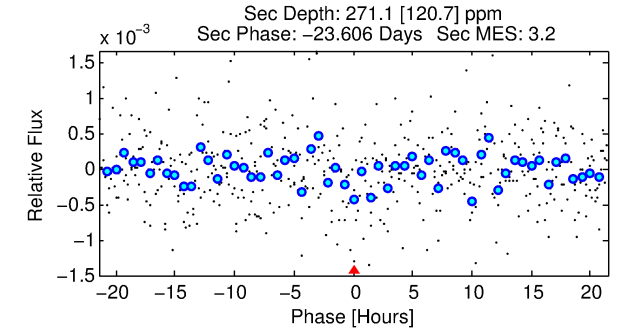
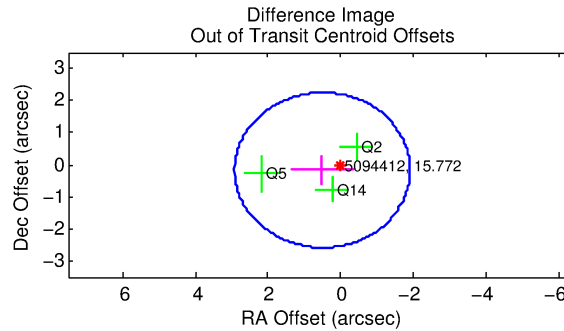
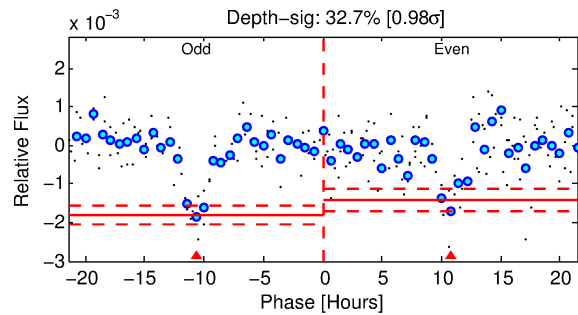
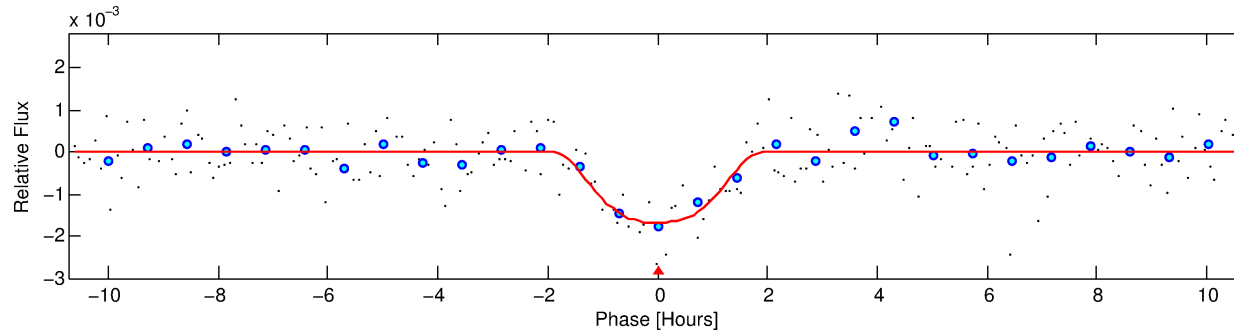
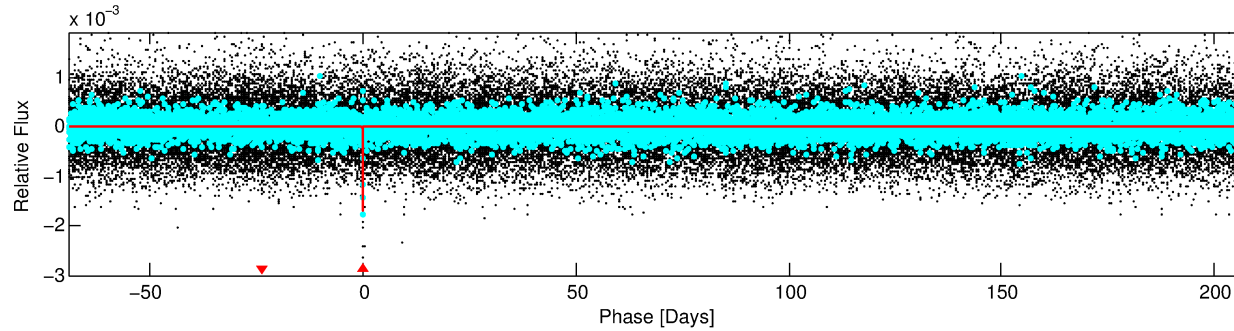
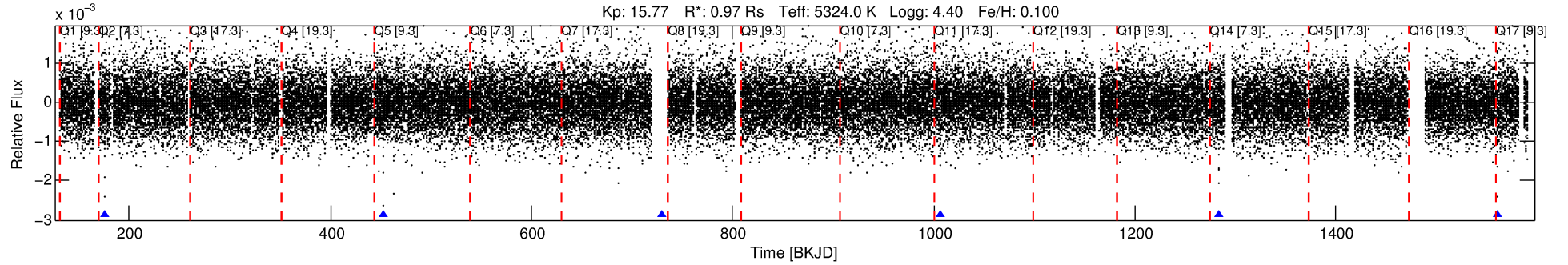
Ephemeris Match Information For 005094412-01

No Significant Match Found

DV One-Page Summary

KIC: 5094412 Candidate: 1 of 1 Period: 276.879 d

KOI: K05124.01 Corr: 0.973



DV Fit Results:

Period = 276.87941 [0.00222] d
Epoch = 176.5226 [0.0067] BKJD
Rp/R* = 0.0488 [0.0069]
a/R* = 268.08 [69.49]
b = 0.95 [0.04]
Seff = 1.09 [0.24]
Teq = 260 [14] K
Rp = 5.14 [0.96] Re
a = 0.7868 [0.0995] AU
Ag = 3495.06 [1984.15] [1.76 σ]
Teffp = 3094 [411] K [6.89 σ]

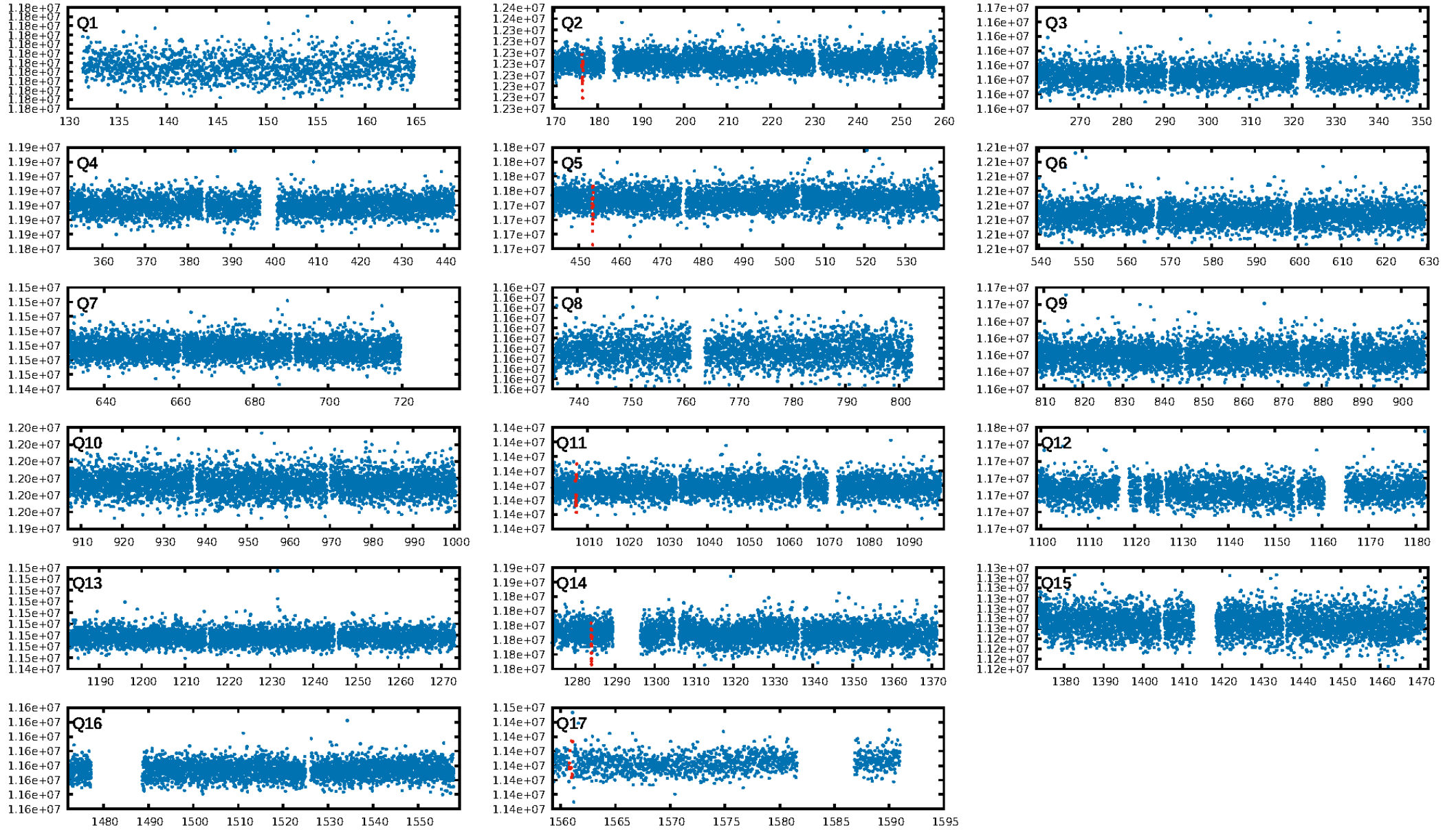
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 56.4%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 3.50e-27
RollingBand-fgm: 1.00 [4/4]
GhostDiagnostic-chr: 14.29
Centroid-sig: 48.2%
Centroid-so: 1.265 arcsec [0.98 σ]
OotOffset-rm: 0.533 arcsec [0.66 σ]
KicOffset-rm: 0.589 arcsec [0.70 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [4/4]

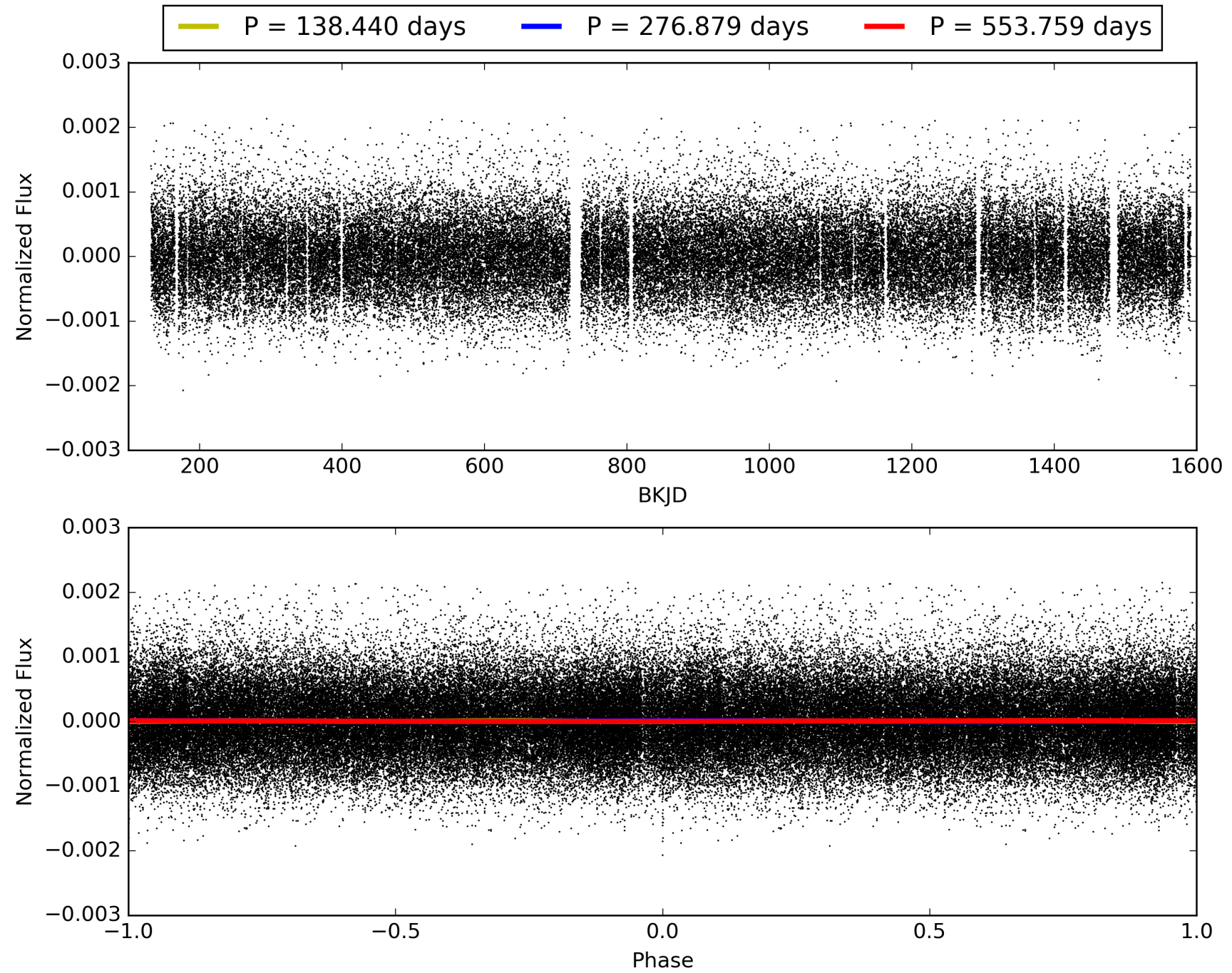
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:12:19 Z

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

TCE 005094412-01, PDC Light Curves

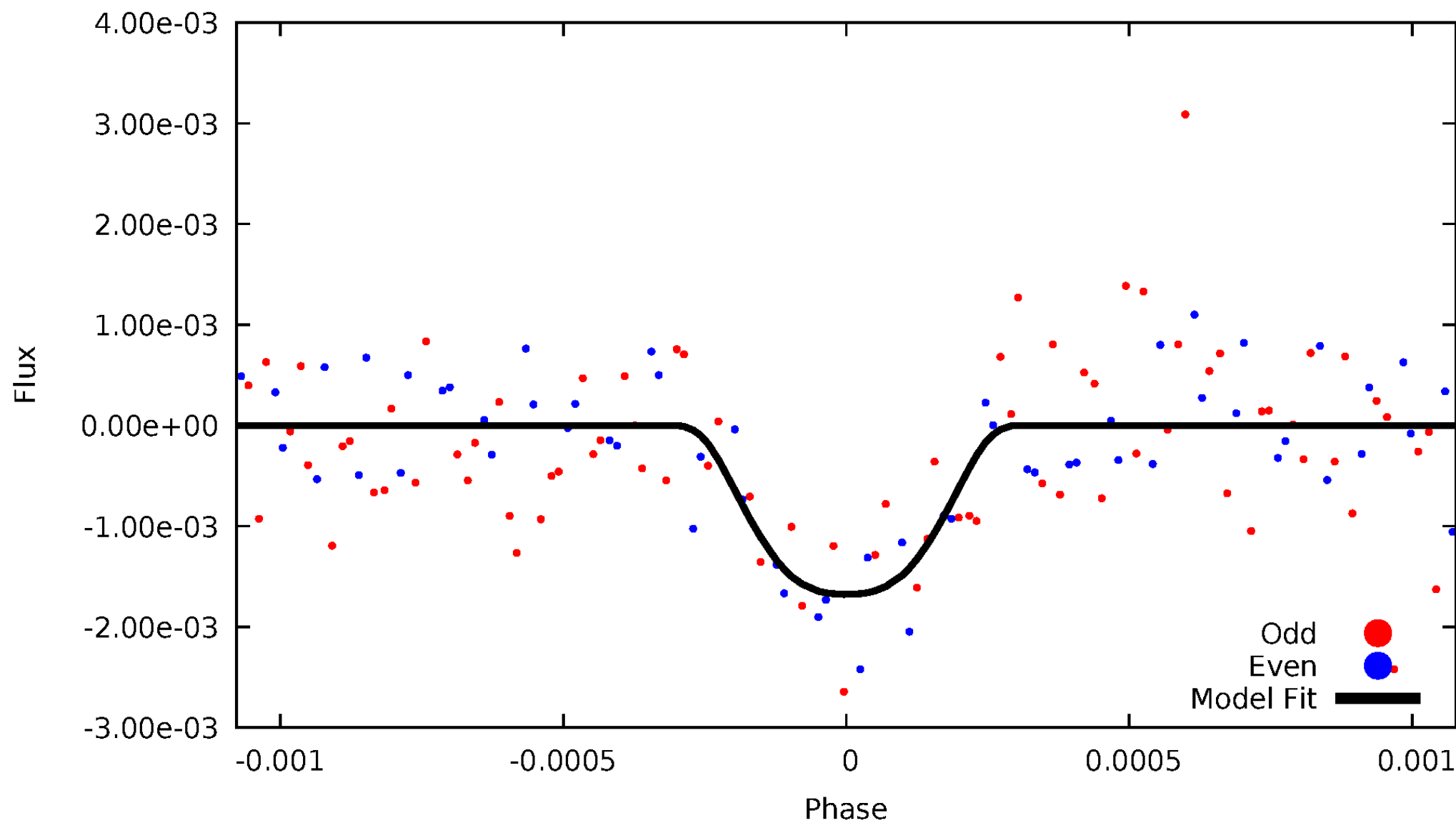


TCE 005094412-01



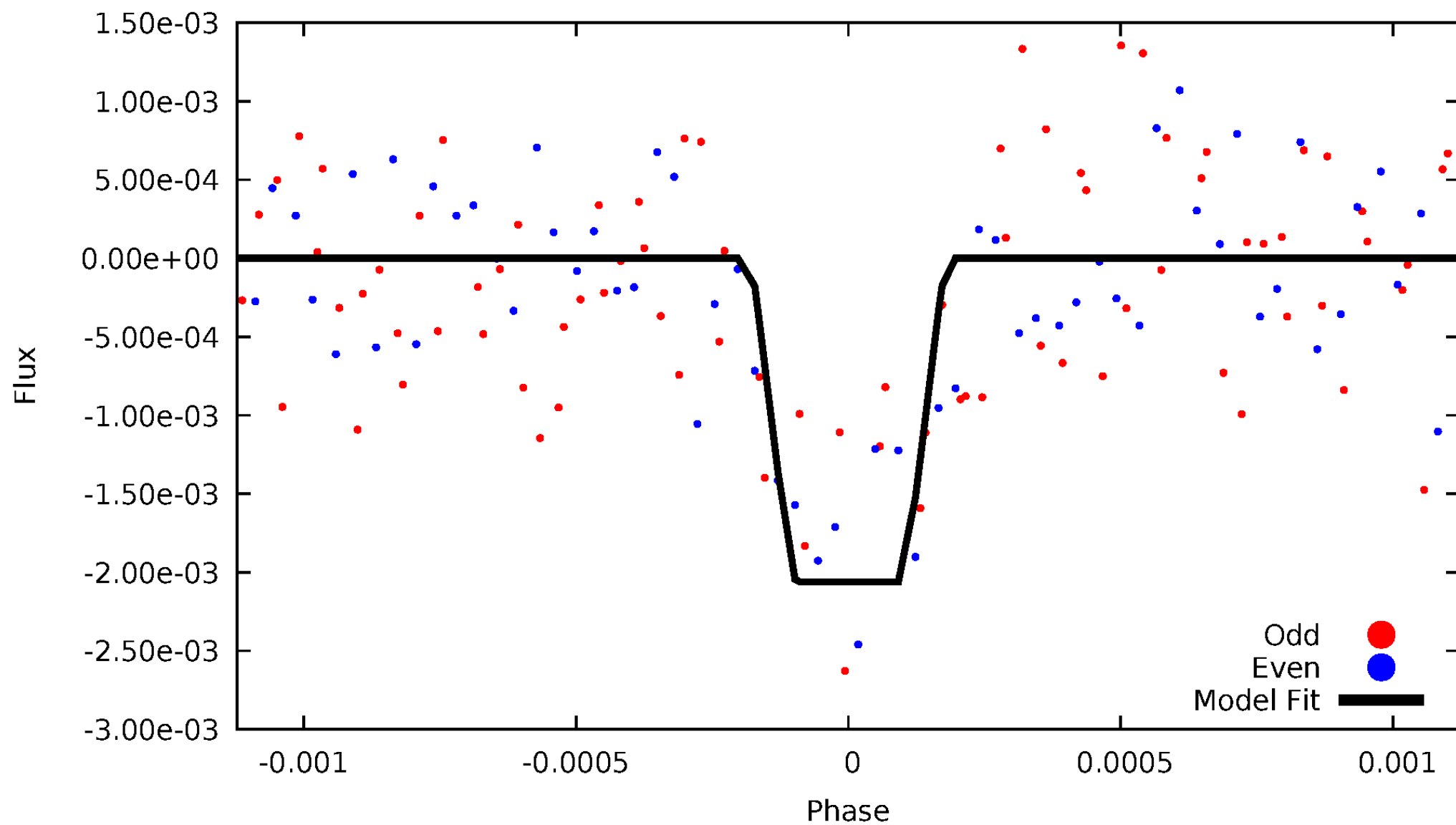
DV Odd/Even

TCE 005094412-01



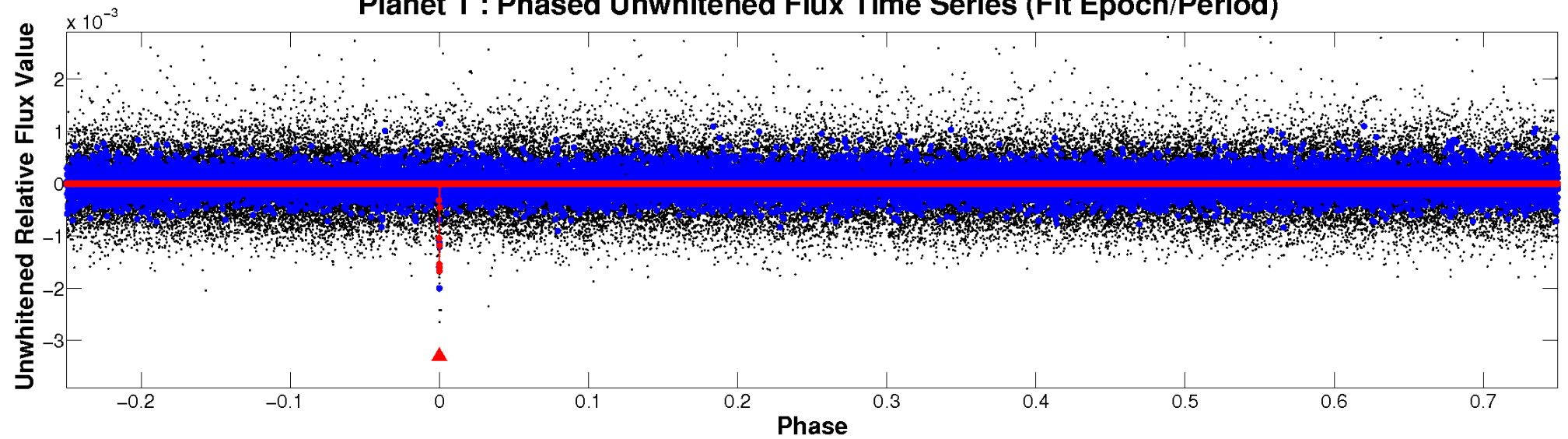
ALT Odd/Even

TCE 005094412-01

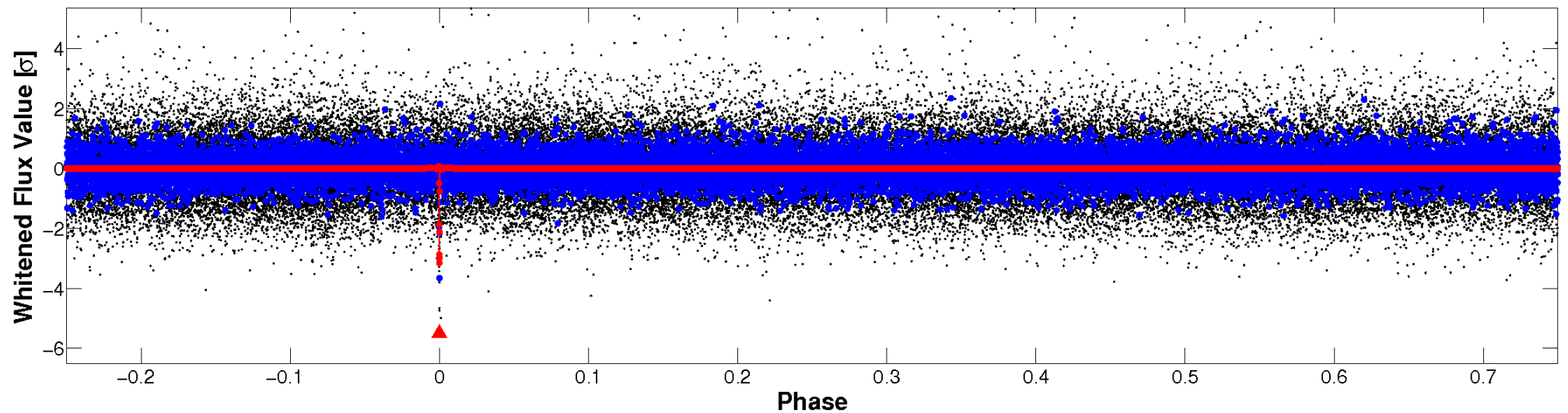


Non-Whitened Vs. Whitened Light Curve

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

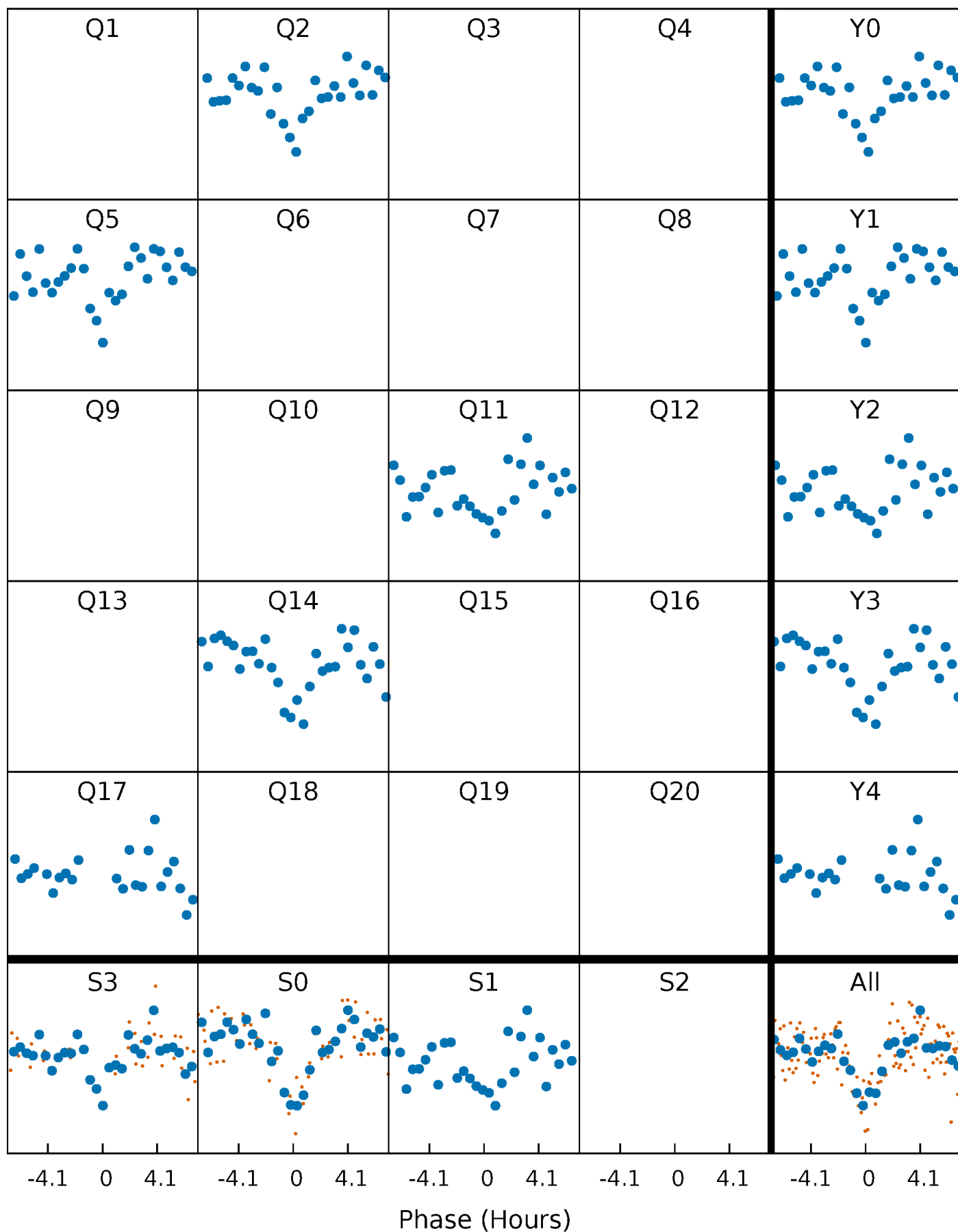


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



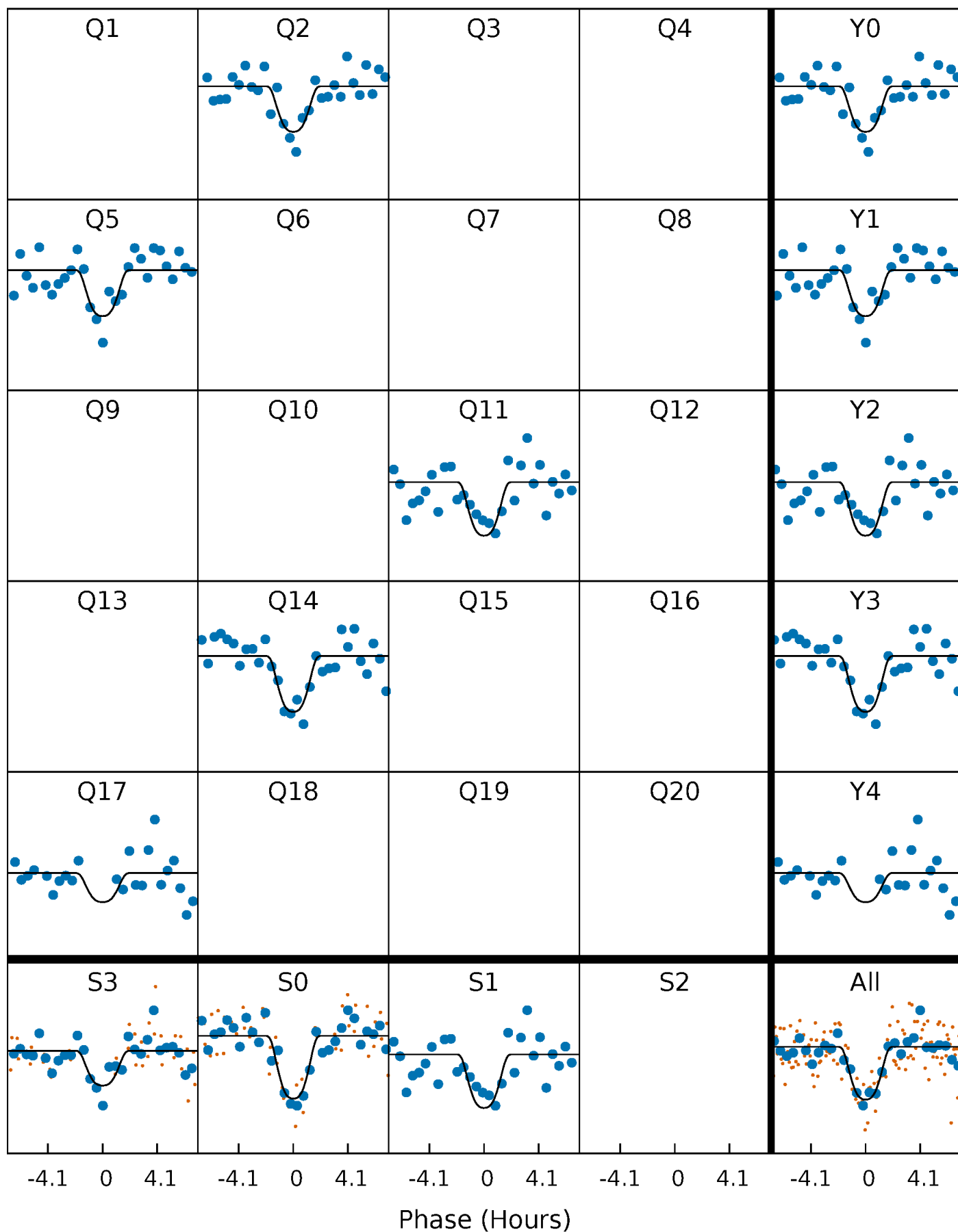
PDC Quarter-Phased Transit Curves

TCE 005094412-01 P=276.879408 Days $T_0=176.522595$ (BKJD)



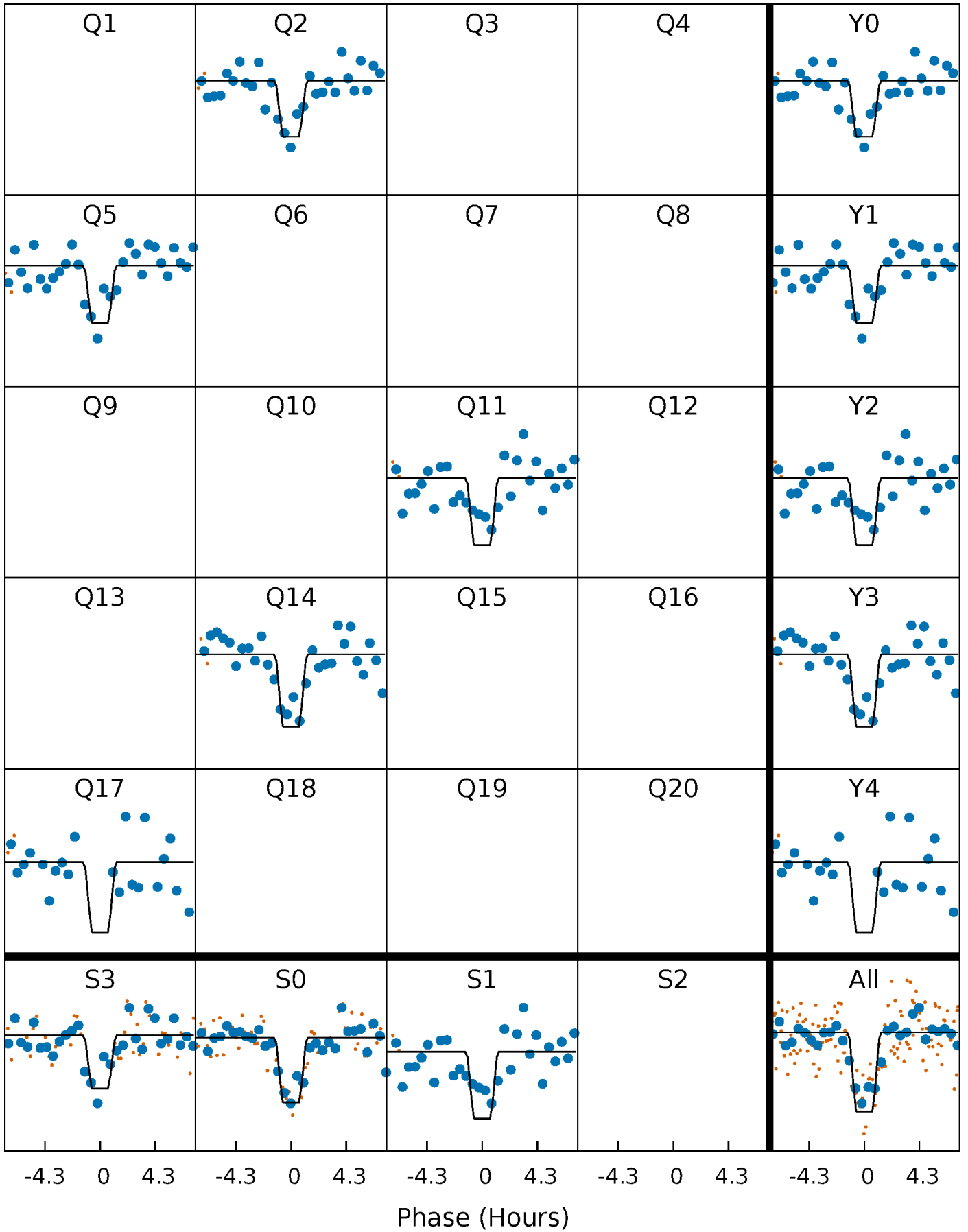
DV Quarter-Phased Transit Curves

TCE 005094412-01 P=276.879408 Days $T_0=176.522595$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

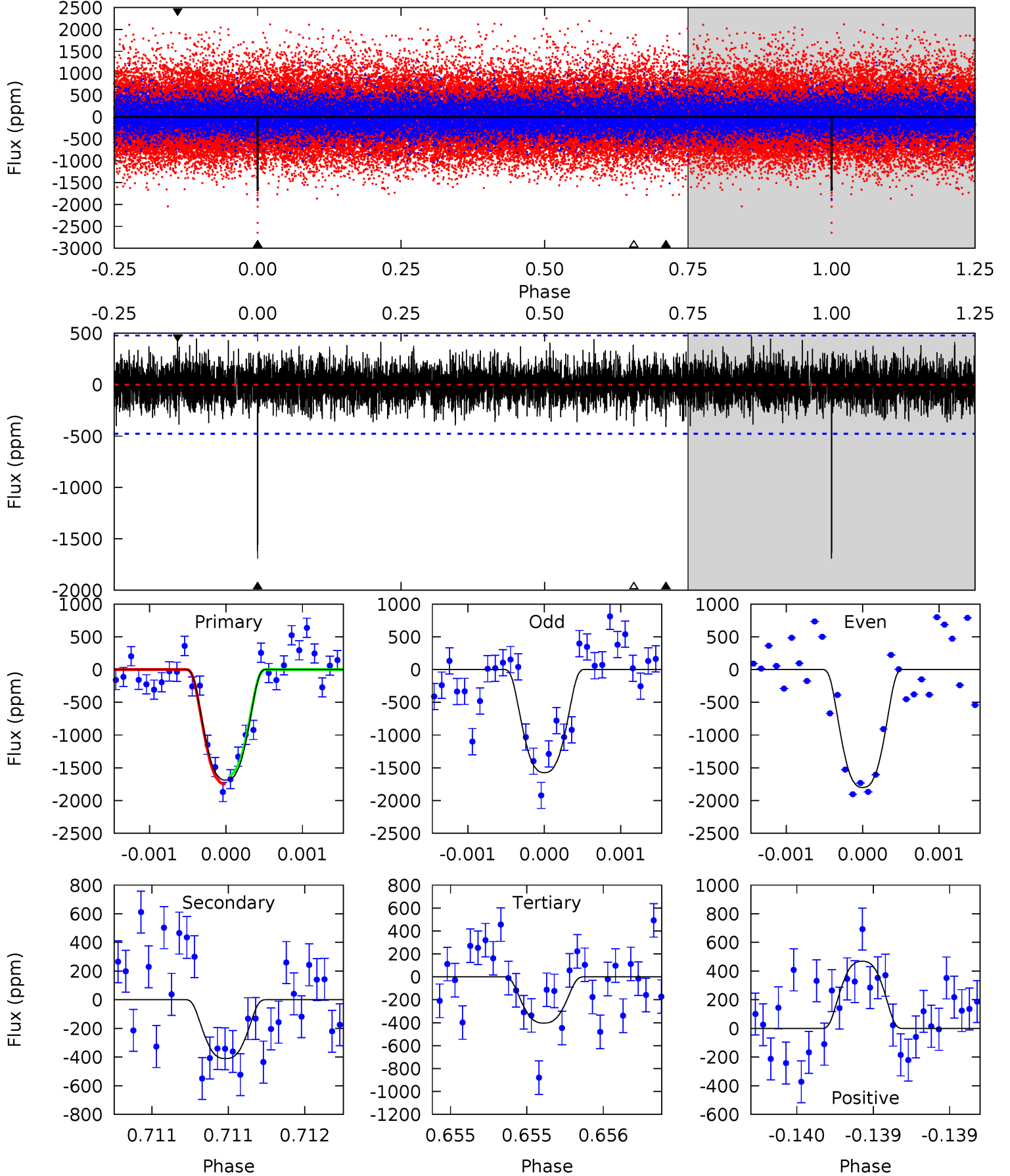
TCE 005094412-01 P=276.878166 Days $T_0=176.524376$ (BKJD)



DV Model-Shift Uniqueness Test

005094412-01, P = 276.879408 Days, E = 176.522595 Days

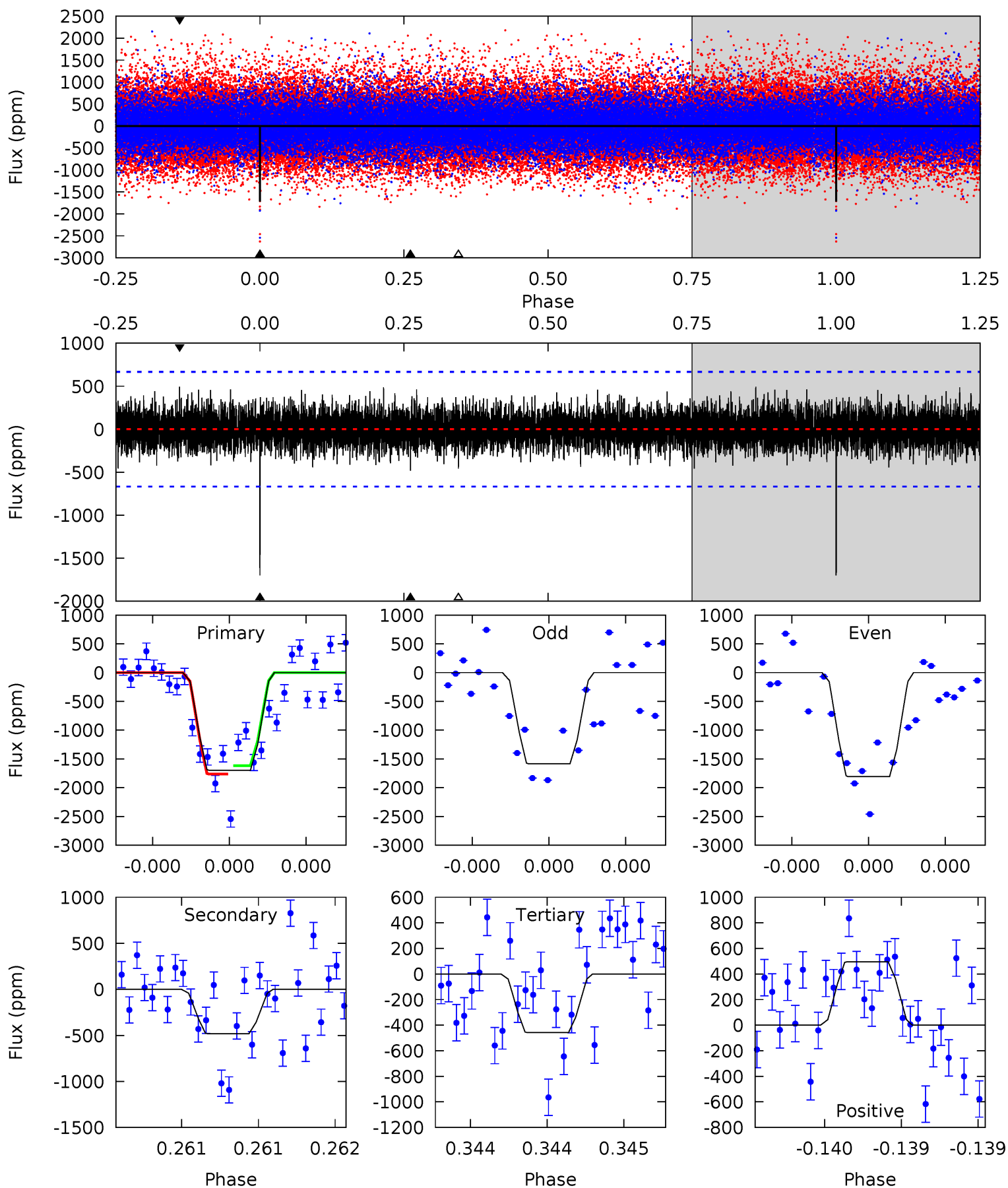
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	4.77	4.68	5.44	5.54	3.44	1.41	14.9	14.2	0.09	-0.67	1.32	0.86	0.22	0.76



Alt Model-Shift Uniqueness Test

005094412-01, P = 276.878166 Days, E = 176.524376 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	4.08	3.87	4.19	5.64	3.59	1.11	10.5	10.2	0.21	-0.11	0.94	0.95	0.23	0.62



Stellar Parameters For KIC 005094412

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5324^{+85}_{-74}	$4.396^{+0.126}_{-0.063}$	$0.100^{+0.150}_{-0.150}$	$0.966^{+0.089}_{-0.118}$	$0.846^{+0.066}_{-0.033}$	$1.325^{+0.681}_{-0.264}$
	+2%/-1%	+3%/-1%	+150%/-150%	+9%/-12%	+8%/-4%	+51%/-20%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005094412-01 / KOI 5124.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-411 ± 86	$5.07^{+0.83}_{-0.78}$	362^{+12}_{-13}	3803^{+233}_{-225}	5506^{+2578}_{-1704}
Alt.	-482 ± 118	$4.70^{+0.84}_{-0.80}$	362^{+11}_{-15}	4006^{+302}_{-308}	7531^{+3890}_{-2830}

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

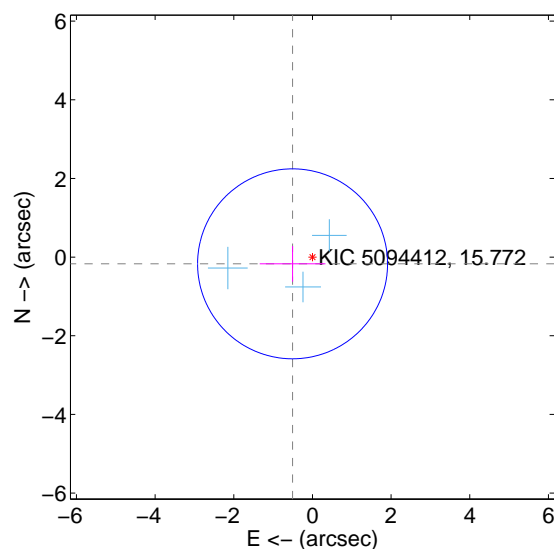
Supplemental centroid analysis for 005094412-01. Kepler magnitude: 15.77. Transit SNR 12.02

There are 3 quarters with good PRF difference image offsets

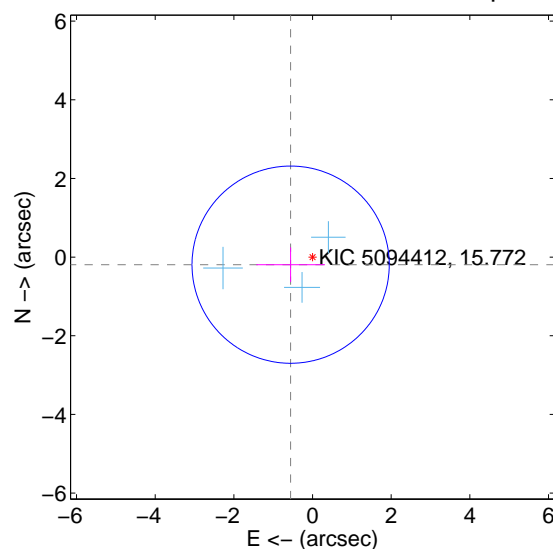
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.533 ± 0.805	0.66	0.505 ± 0.836	-0.171 ± 0.453
PRF-fit source offset from KIC position	0.589 ± 0.836	0.70	0.557 ± 0.871	-0.193 ± 0.439
photometric centroid source offset	1.27 ± 1.29	0.98	1.24 ± 1.29	-0.23 ± 1.22

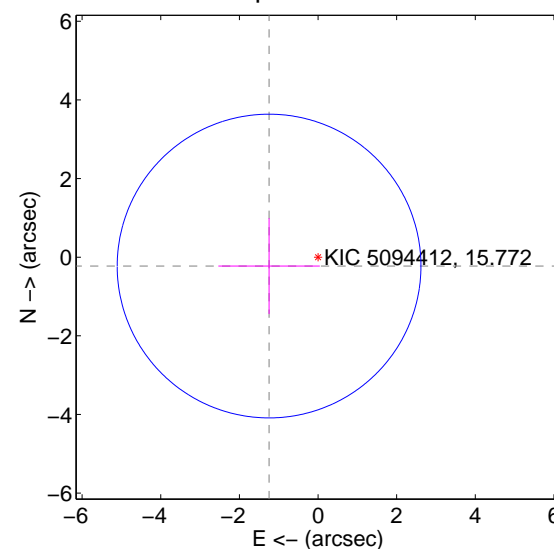
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

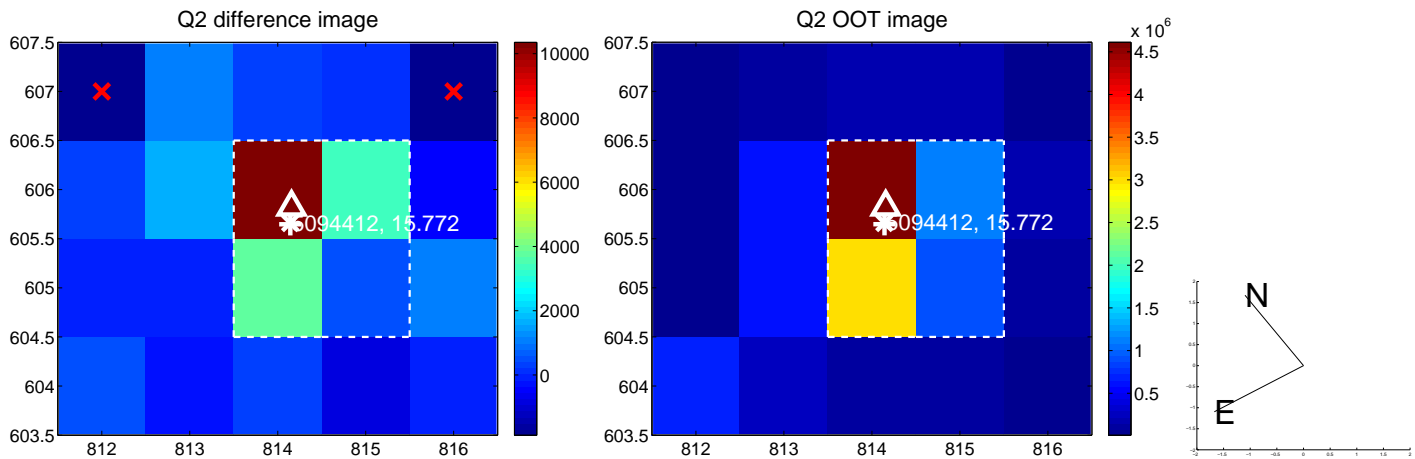


offset from photometric centroids

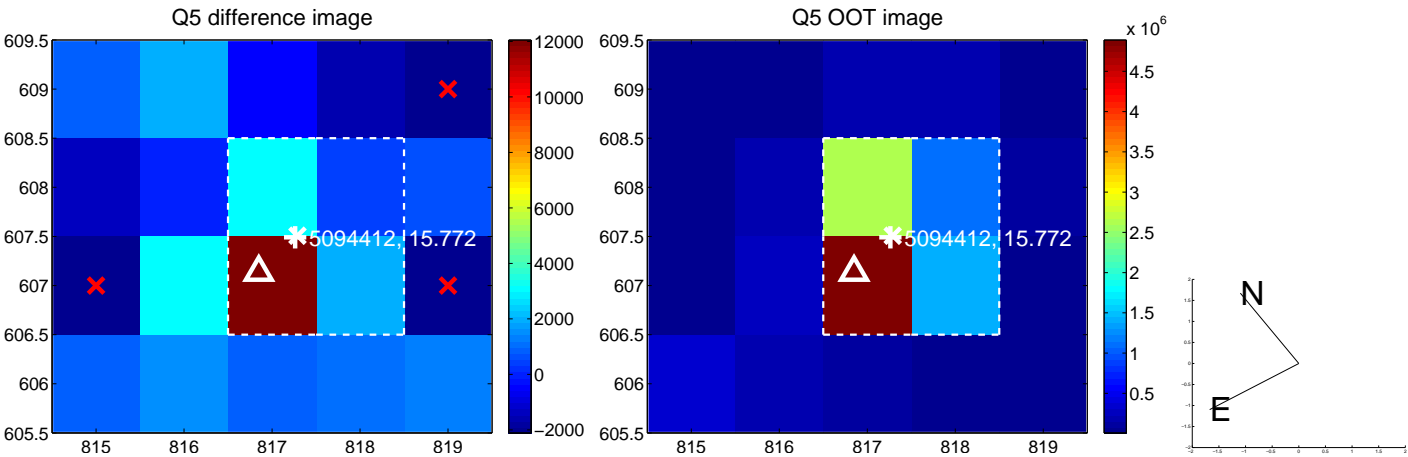


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

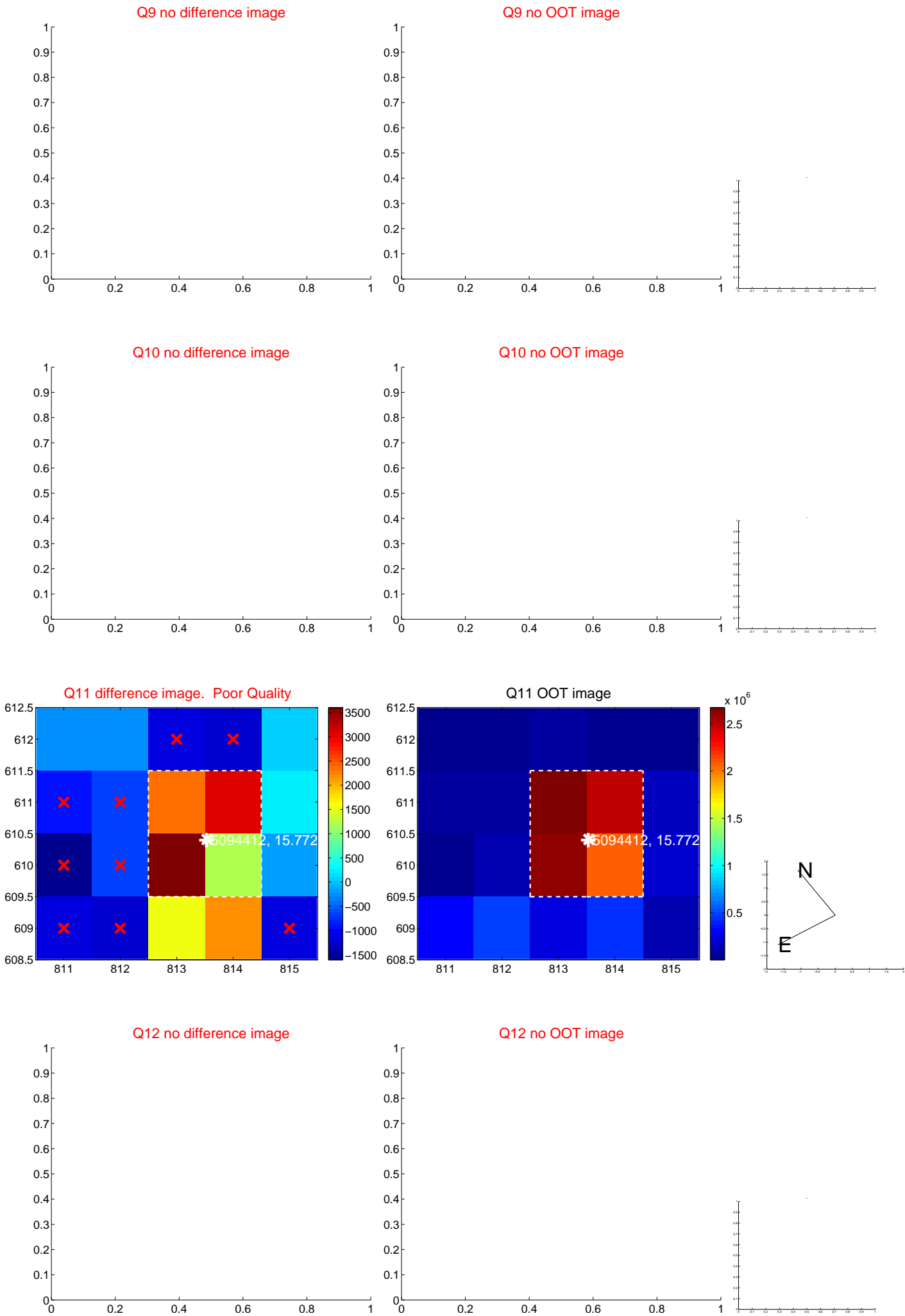
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



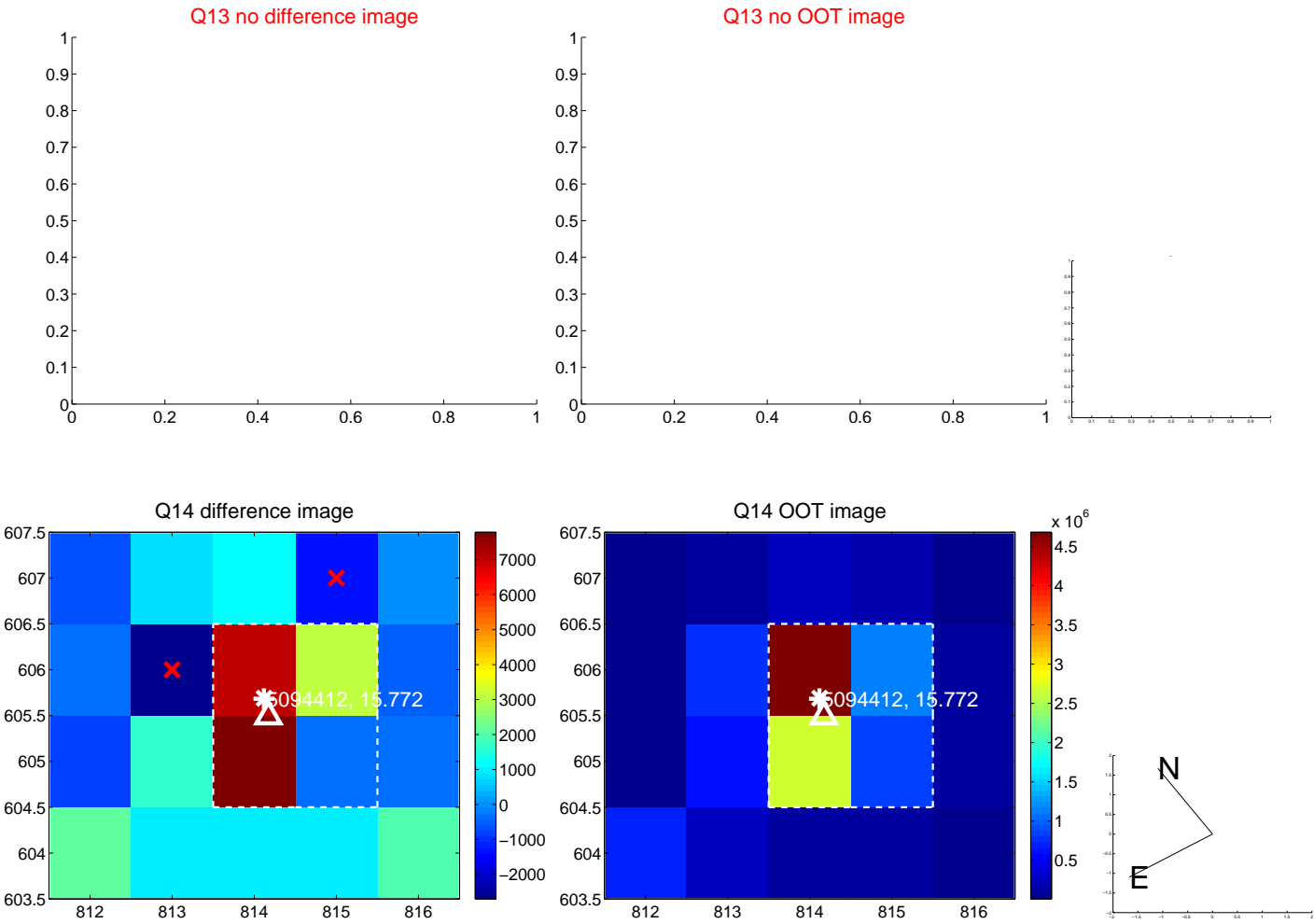
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



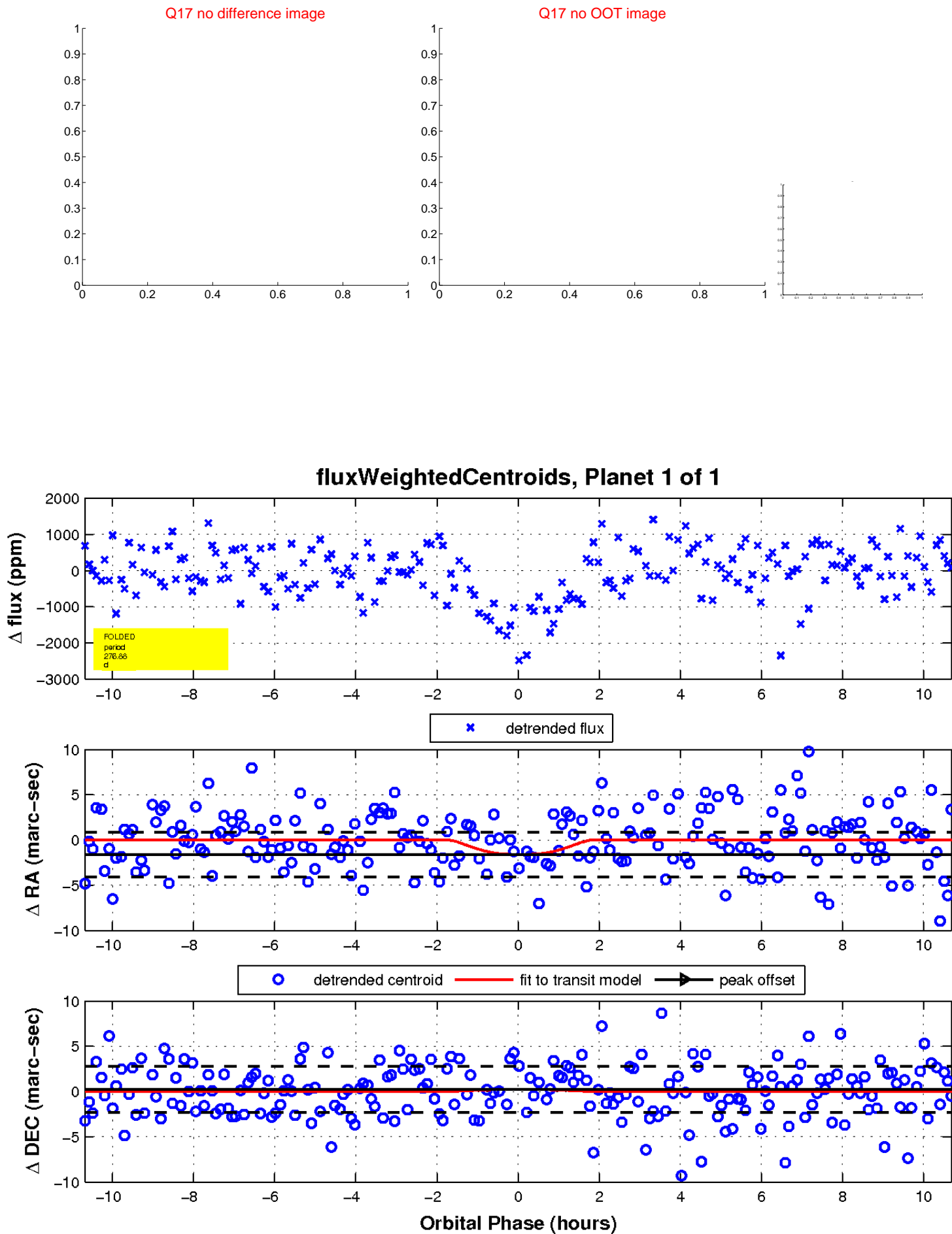
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

