

KIC 005386904

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
005386904-01	OBS	3813.01	4.859282	132.643054	2171.4	3.874	72.5	72.5	1.21	6586	6.83	681.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005386904-01	OBS	PC	1.00	0	0	0	0	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.

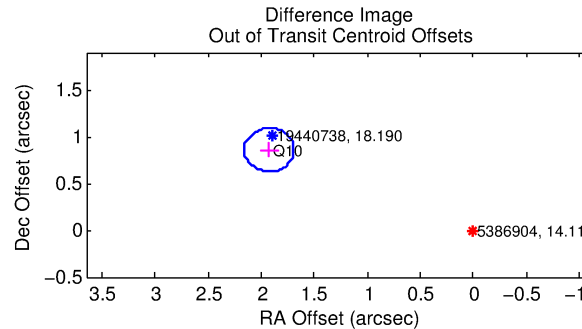
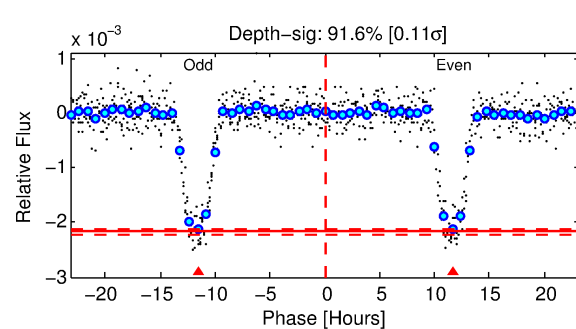
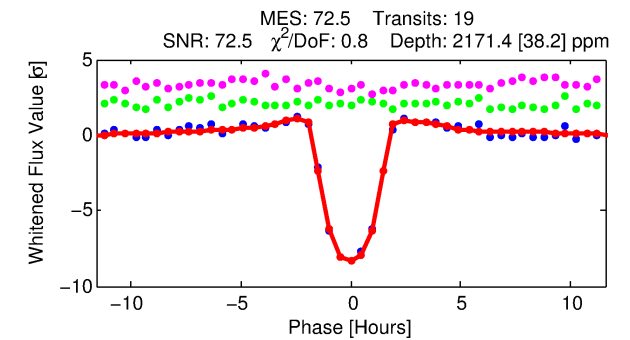
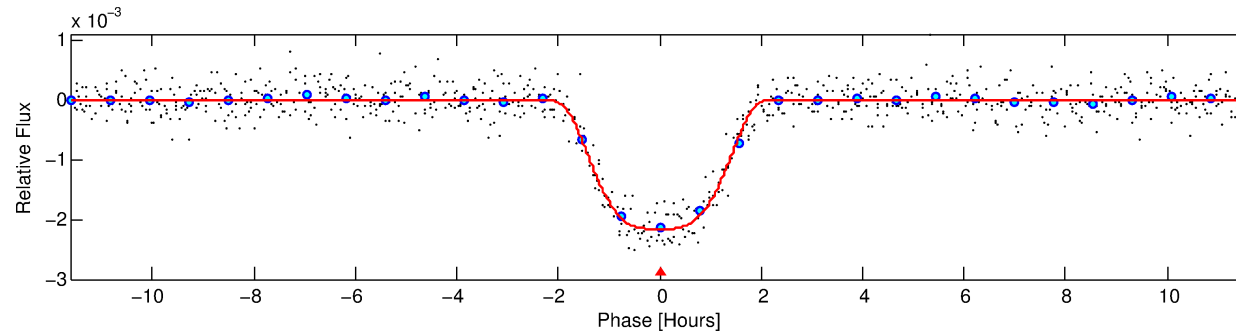
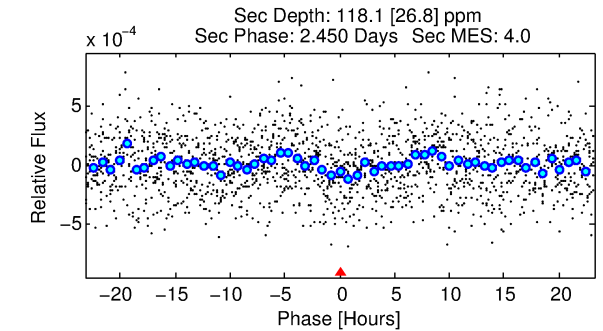
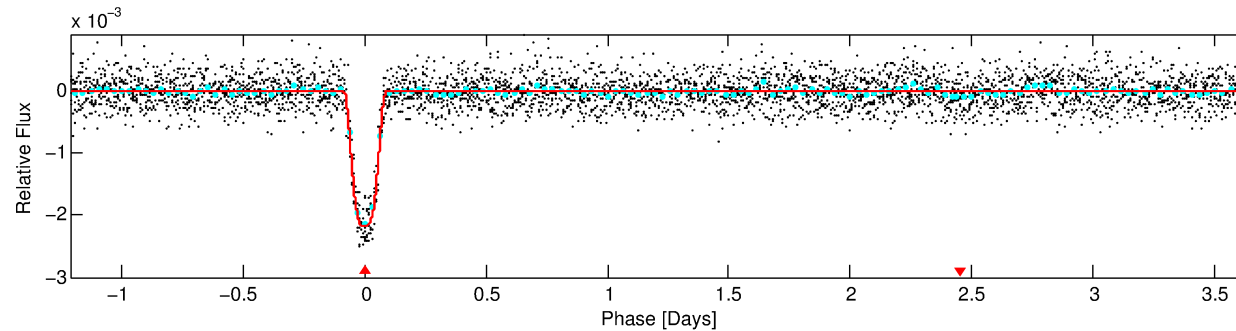
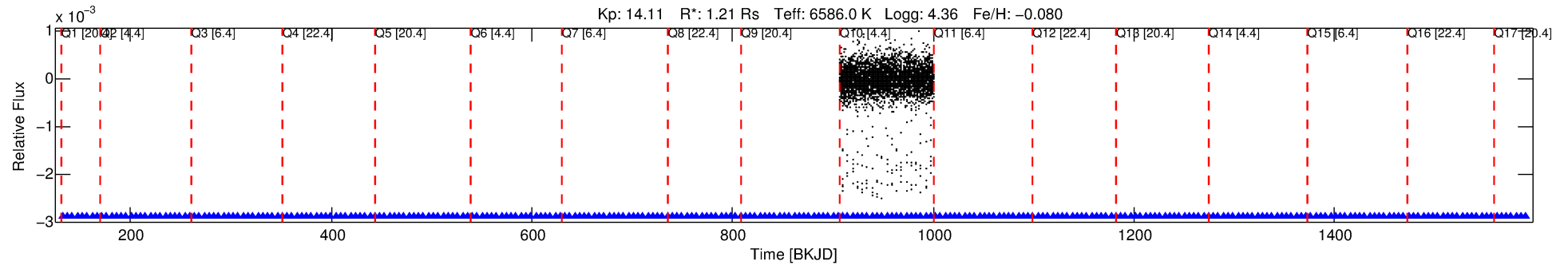
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005386904-01

No Significant Match Found

DV One-Page Summary

KIC: 5386904 Candidate: 1 of 1 Period: 4.859 d
KOI: K03813.01 Corr: 0.960



DV Fit Results:

Period = 4.85928 [0.00002] d
Epoch = 132.6431 [0.0036] BKJD
Rp/R* = 0.0518 [0.0008]
a/R* = 4.74 [0.25]
b = 0.93 [0.01]
Seff = 681.96 [285.37]
Teq = 1303 [136] K
Rp = 6.83 [2.21] Re
a = 0.0600 [0.0162] AU
Ag = 5.02 [2.26] [1.78σ]
Teff = 3015 [209] K [6.86σ]

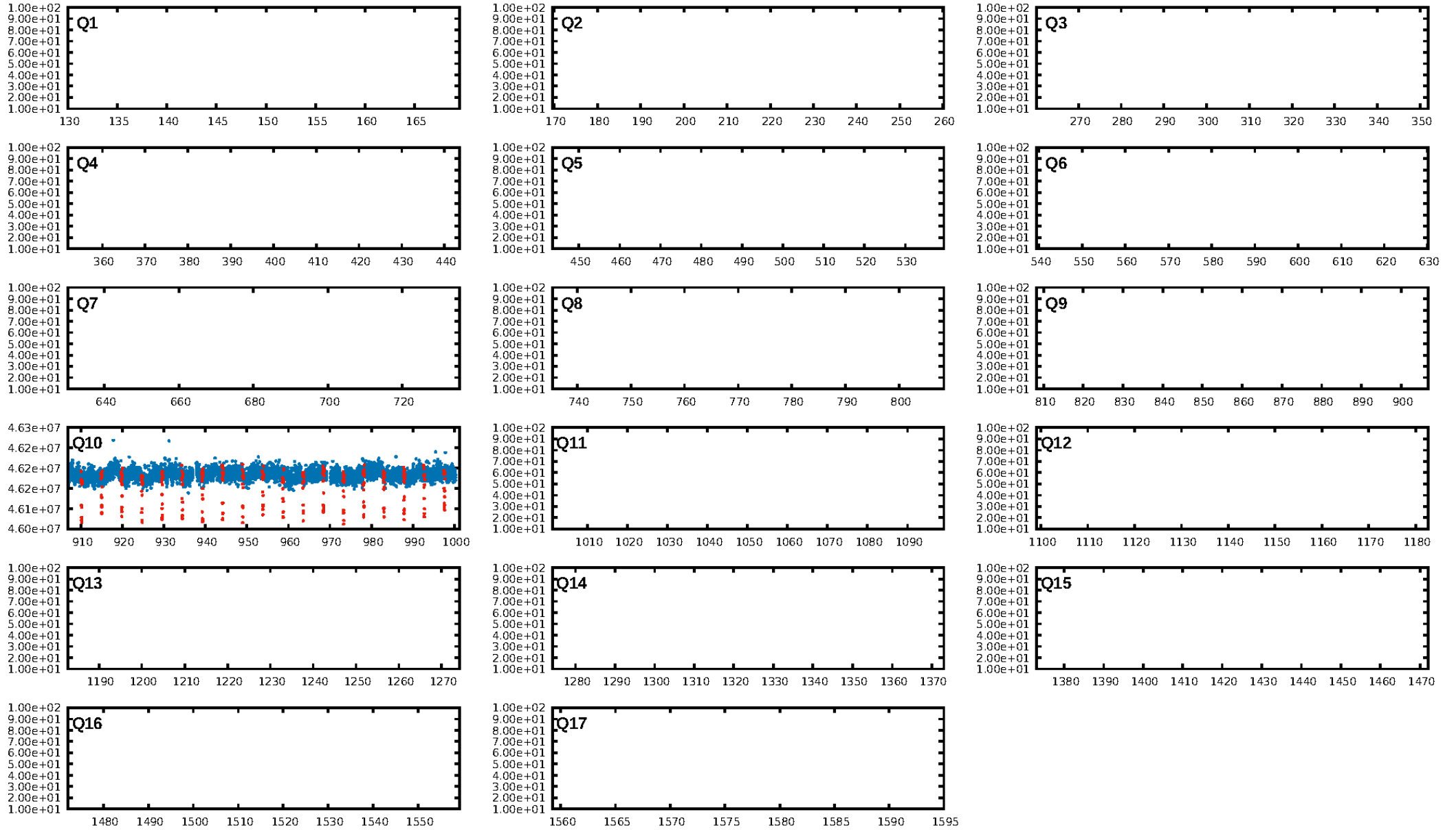
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 34.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [19/19]
GhostDiagnostic-chr: 2.281
Centroid-sig: 0.0%
Centroid-so: 2.060 arcsec [11.50σ]
OotOffset-rm: 2.109 arcsec [27.18σ]
KicOffset-rm: 2.174 arcsec [28.02σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

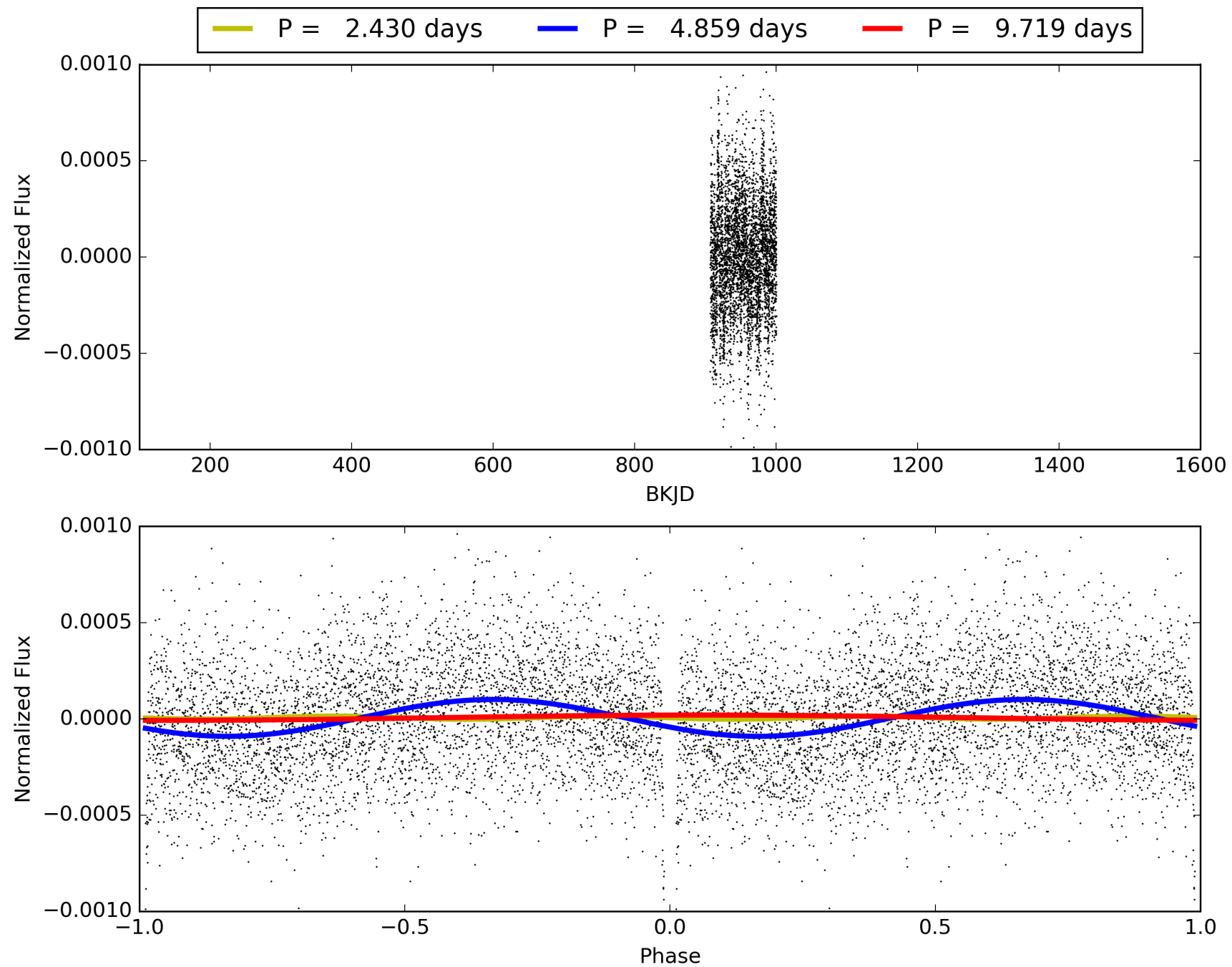
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:44:40 Z

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

TCE 005386904-01, PDC Light Curves

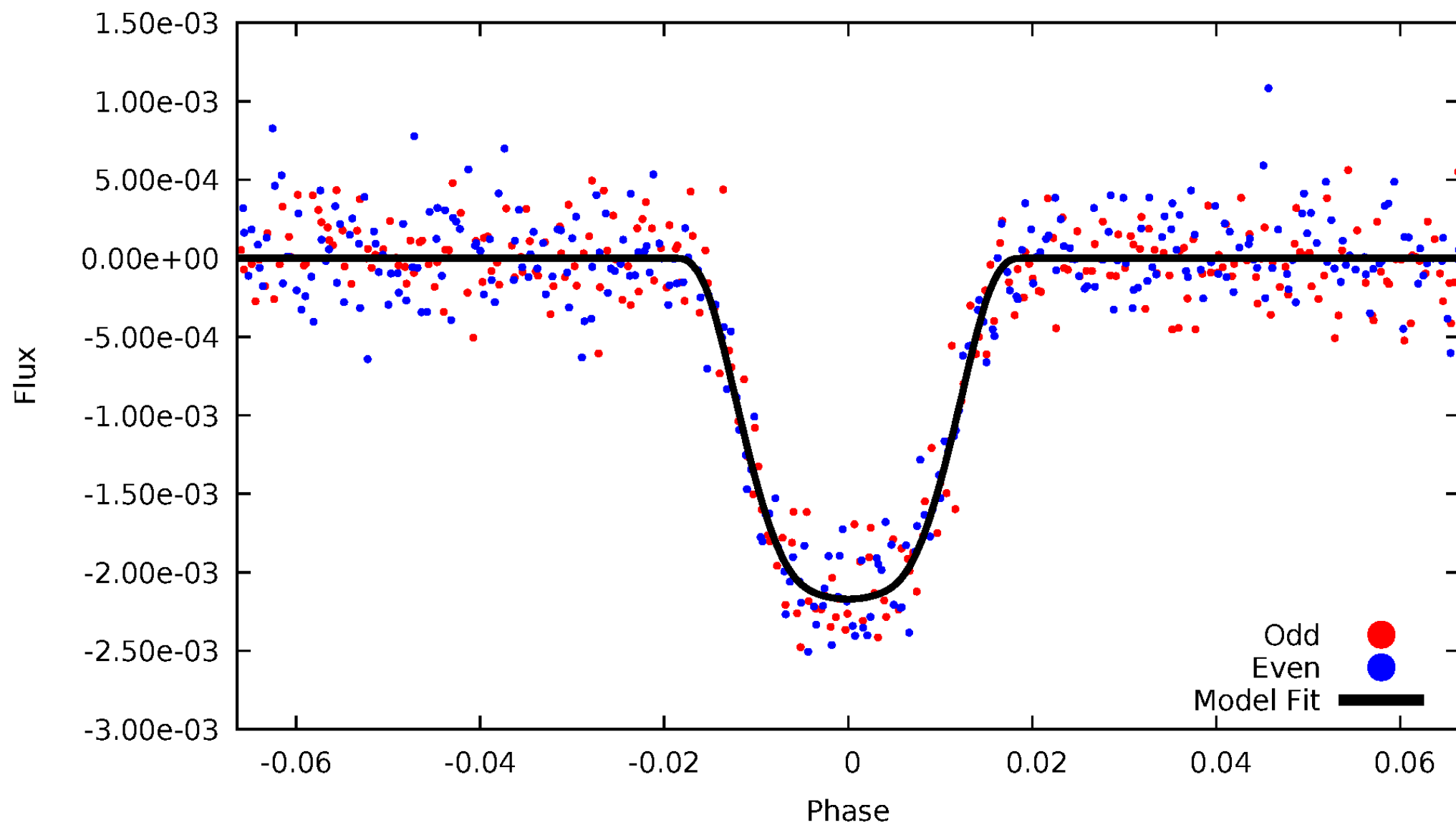


TCE 005386904-01



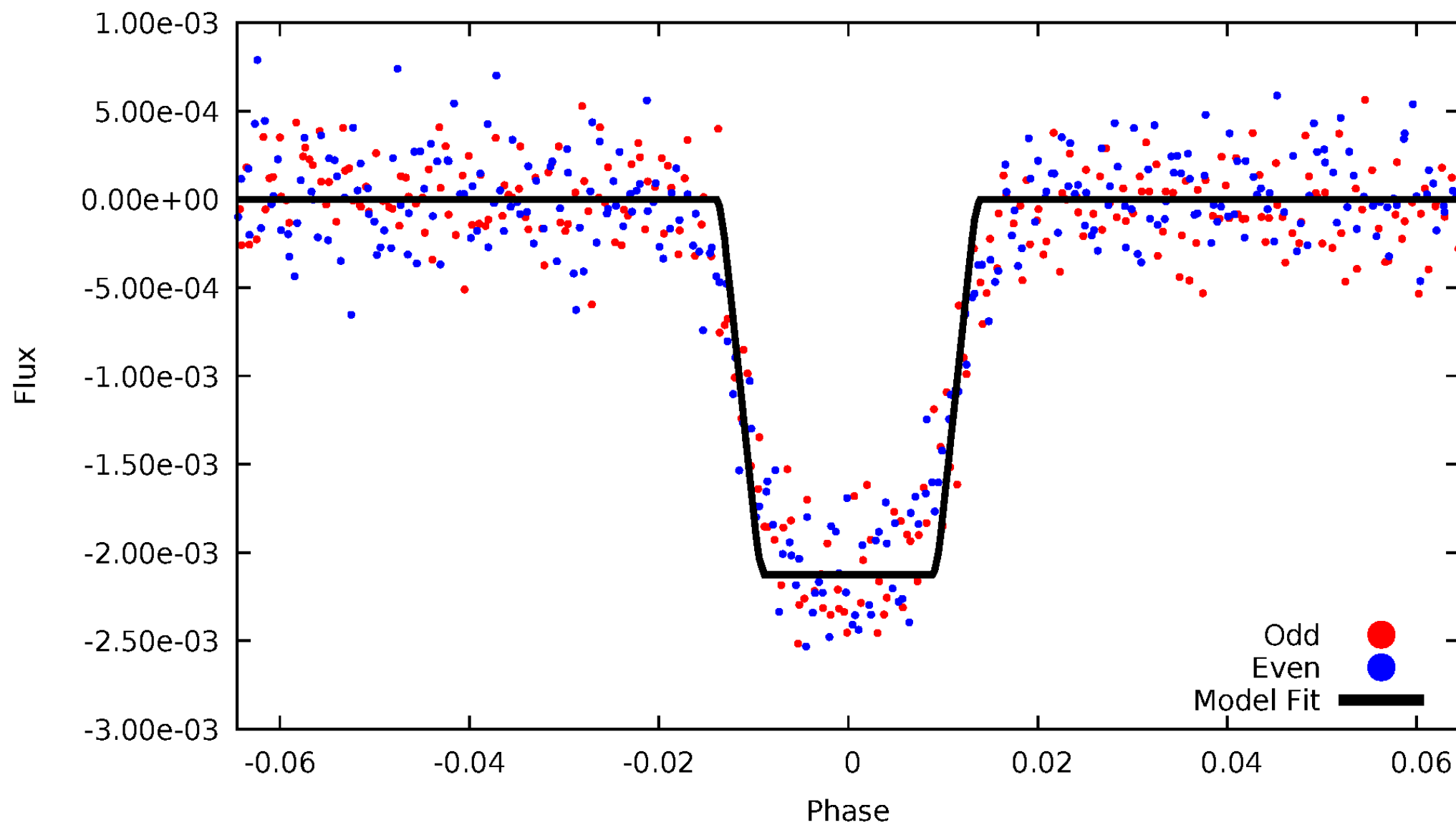
DV Odd/Even

TCE 005386904-01



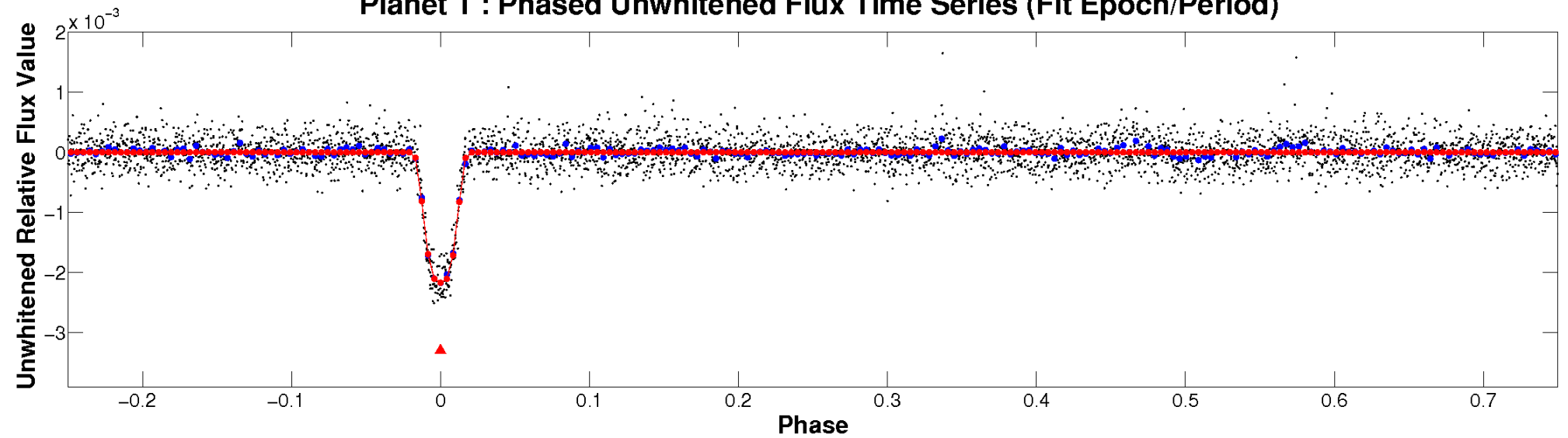
ALT Odd/Even

TCE 005386904-01

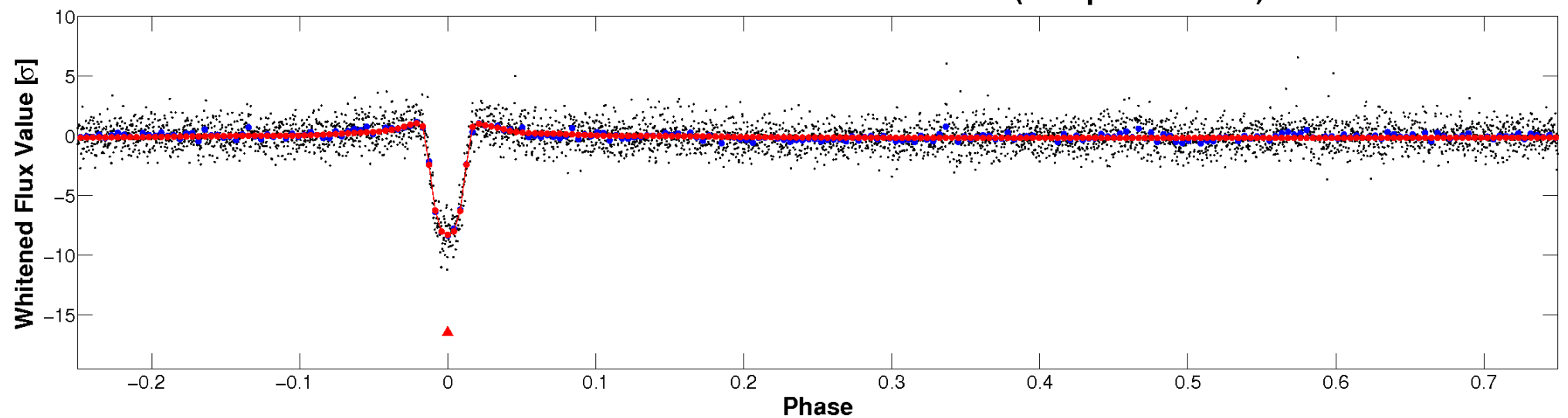


Non-Whitened Vs. Whitened Light Curve

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

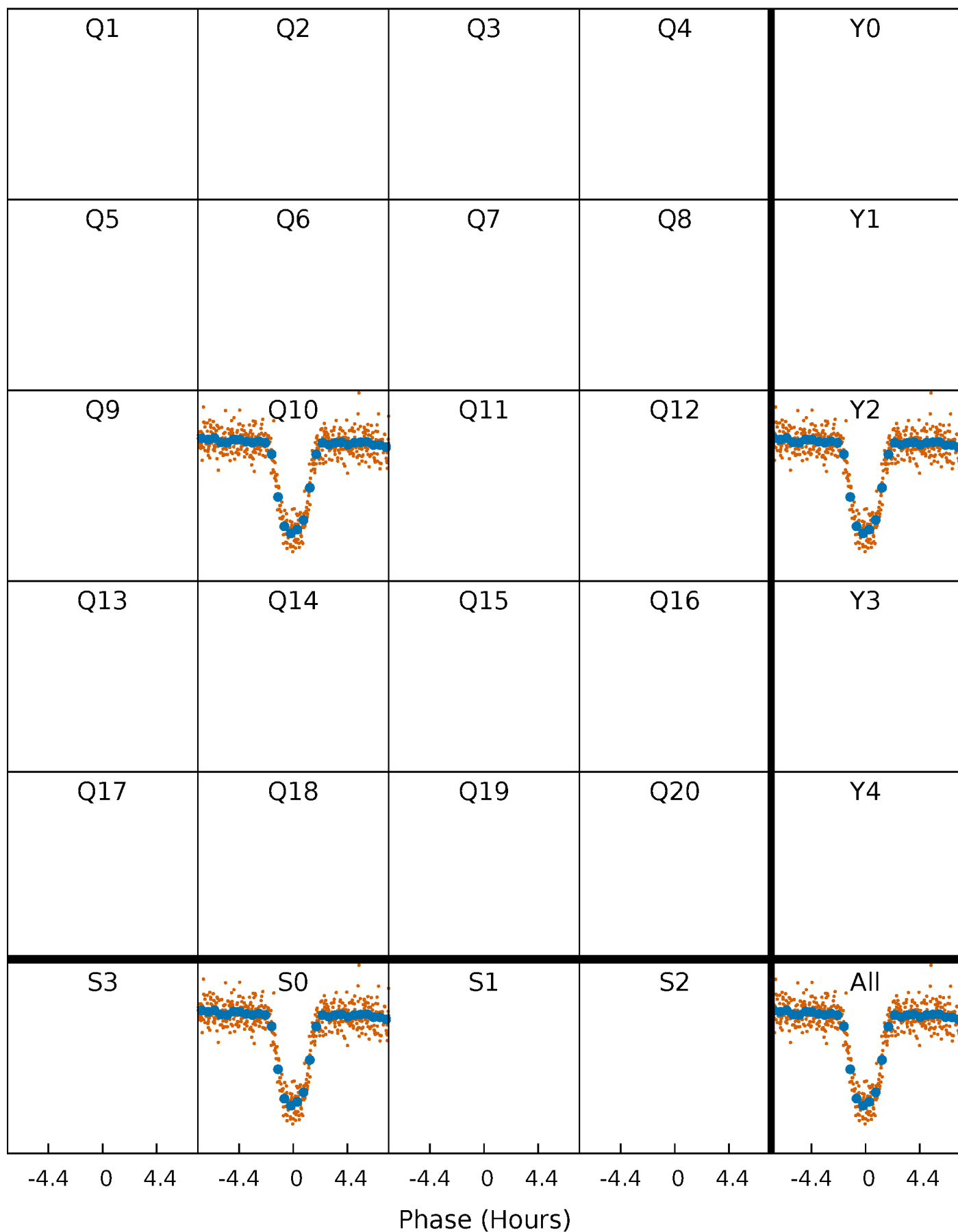


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



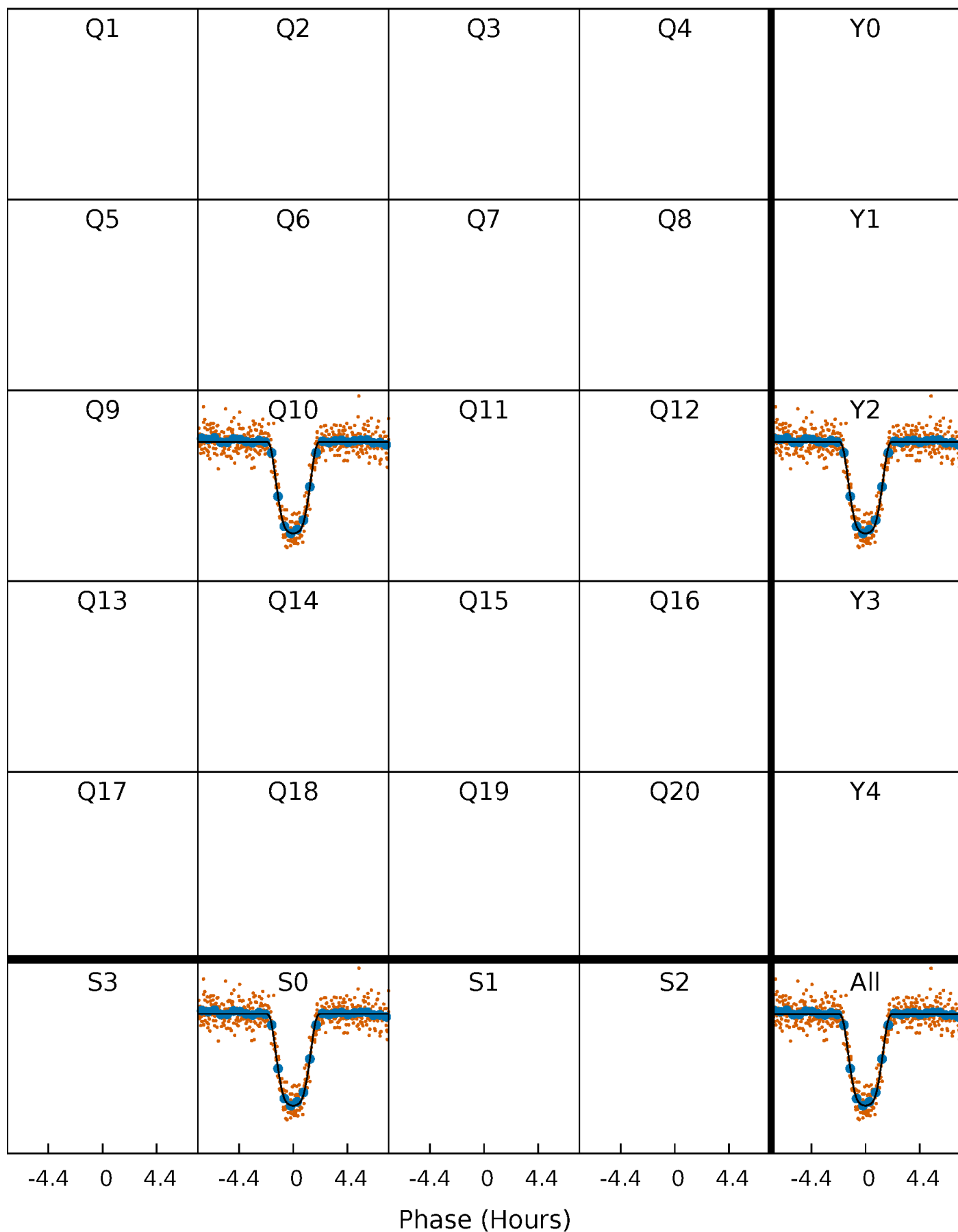
PDC Quarter-Phased Transit Curves

TCE 005386904-01 P= 4.859282 Days $T_0=132.643054$ (BKJD)



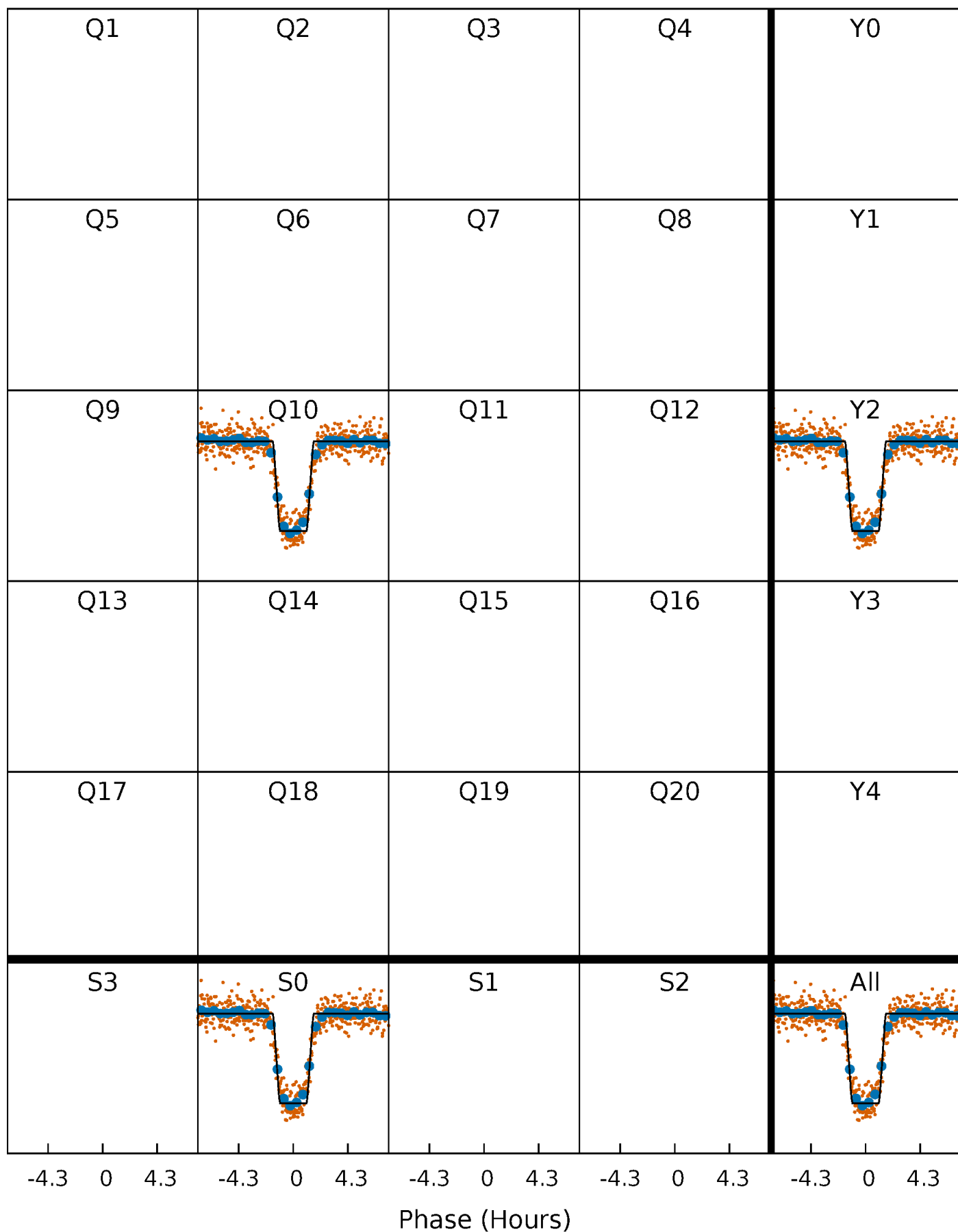
DV Quarter-Phased Transit Curves

TCE 005386904-01 P= 4.859282 Days $T_0=132.643054$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

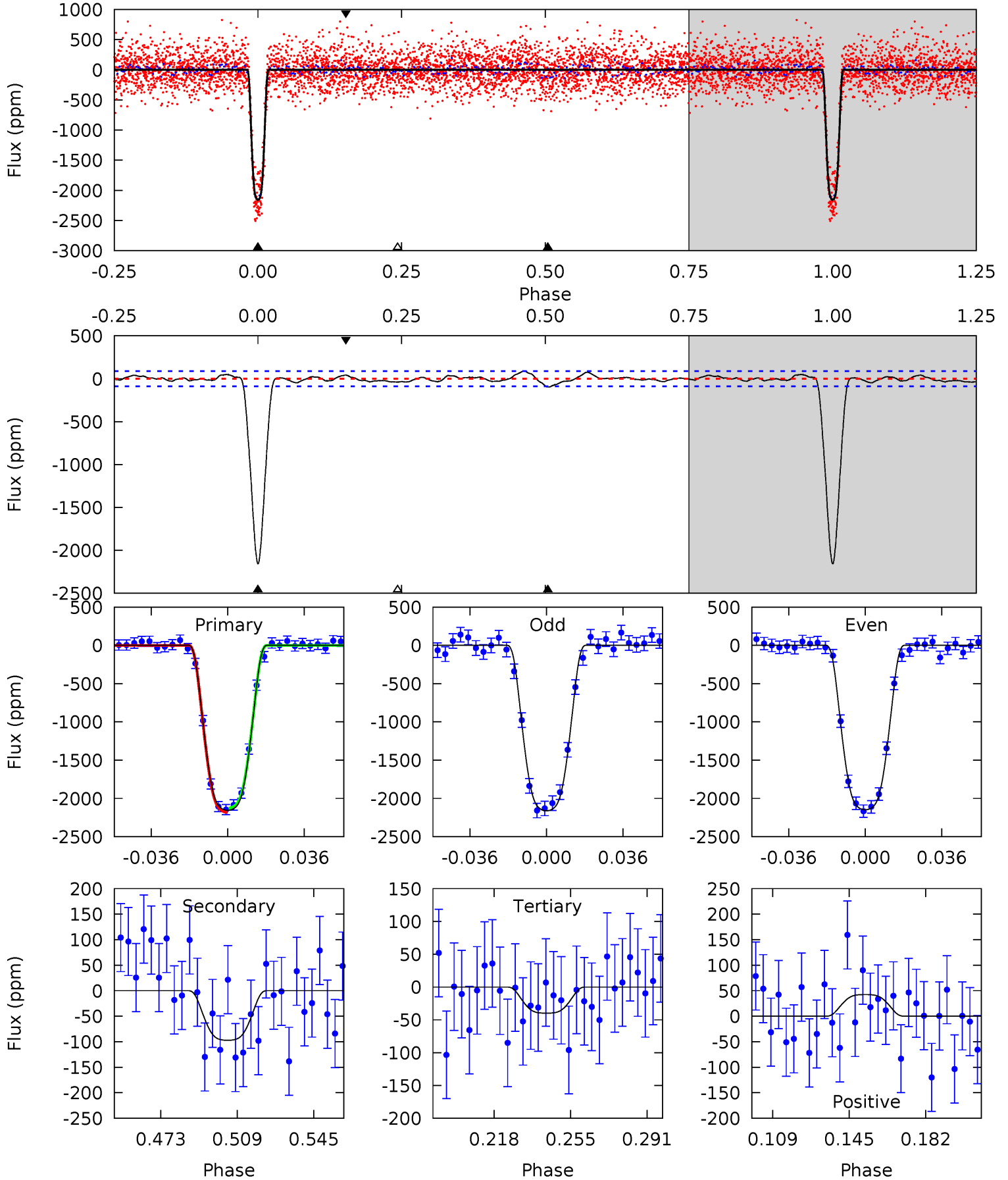
TCE 005386904-01 P= 4.859026 Days $T_0=132.686532$ (BKJD)



DV Model-Shift Uniqueness Test

005386904-01, P = 4.859282 Days, E = 132.643054 Days

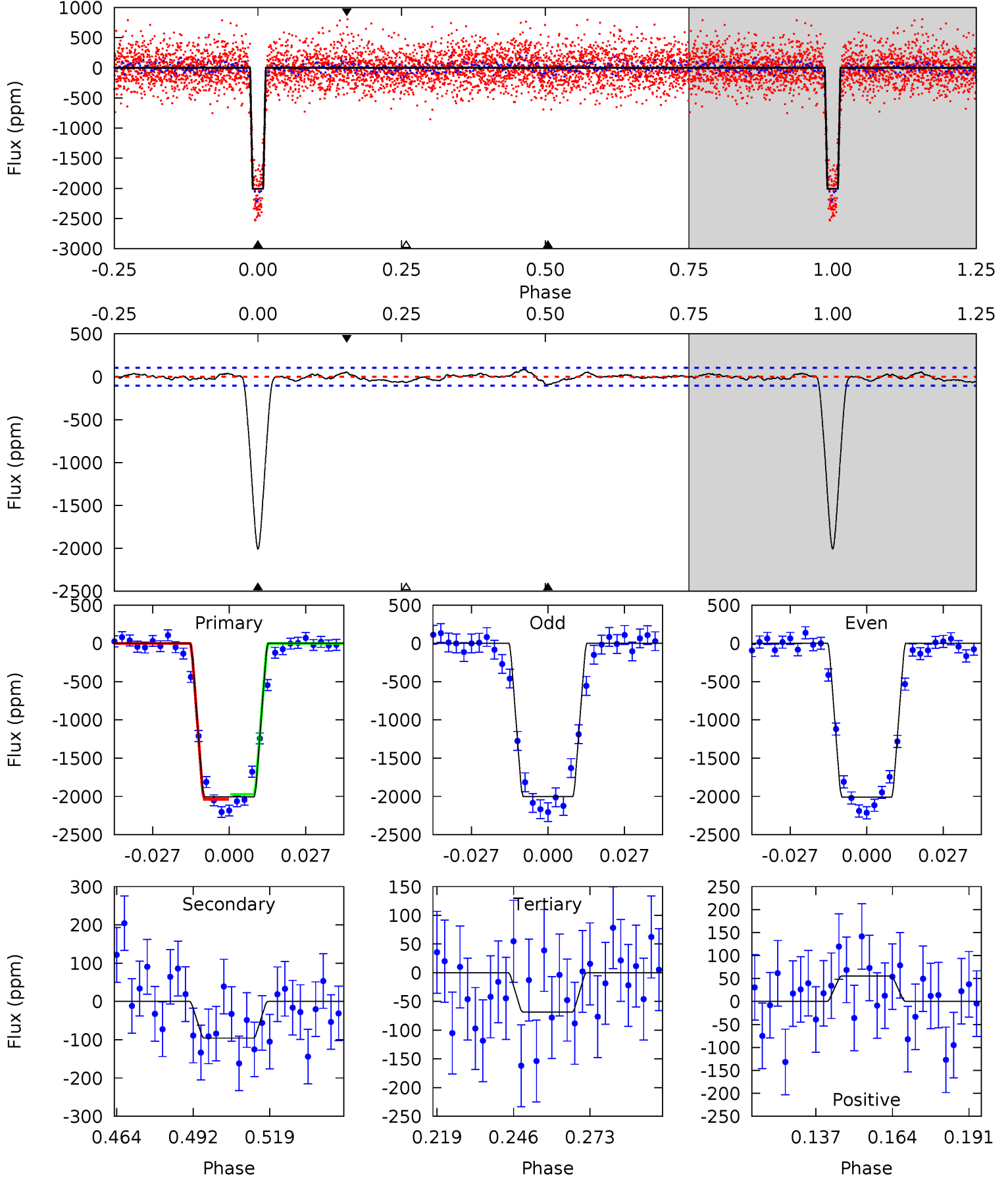
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
116.6	5.26	2.16	2.30	4.77	2.09	1.41	114.4	114.3	3.10	2.96	0.37	1.00	0.04	1.53



Alt Model-Shift Uniqueness Test

005386904-01, P = 4.859026 Days, E = 132.686532 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
93.4	4.46	3.18	2.57	4.83	2.21	1.29	90.2	90.8	1.28	1.88	0.18	0.99	0.04	1.48



Stellar Parameters For KIC 005386904

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6586^{+164}_{-258}	$4.361^{+0.070}_{-0.210}$	$-0.080^{+0.250}_{-0.300}$	$1.207^{+0.391}_{-0.168}$	$1.226^{+0.174}_{-0.174}$	$0.982^{+0.353}_{-0.522}$
	+2%/-4%	+2%/-5%	+312%/-375%	+32%/-14%	+14%/-14%	+36%/-53%
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 005386904-01 / KOI 3813.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-97 ± 18	$6.96^{+1.20}_{-0.62}$	1846^{+137}_{-106}	3333^{+131}_{-136}	$3.798^{+1.139}_{-1.073}$
Alt.	-96 ± 21	$6.24^{+1.05}_{-0.55}$	1842^{+142}_{-91}	3458^{+140}_{-168}	$4.671^{+1.548}_{-1.425}$

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

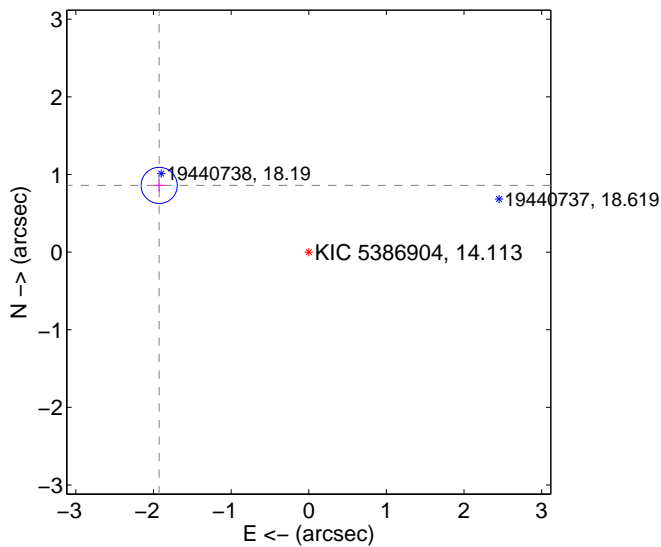
Supplemental centroid analysis for 005386904-01. Kepler magnitude: 14.11. Transit SNR 72.52

There are 1 quarters with good PRF difference image offsets

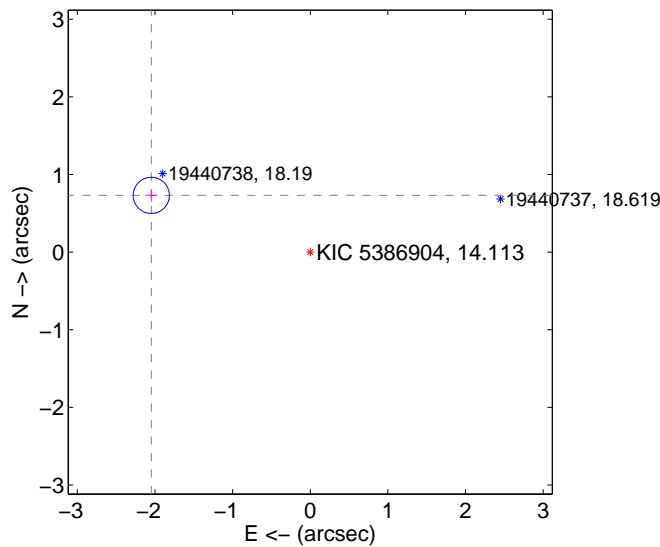
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.109 ± 0.078	27.18	1.927 ± 0.078	0.859 ± 0.078
PRF-fit source offset from KIC position	2.174 ± 0.078	28.02	2.047 ± 0.078	0.731 ± 0.078
photometric centroid source offset	2.06 ± 0.18	11.50	1.94 ± 0.18	0.68 ± 0.13

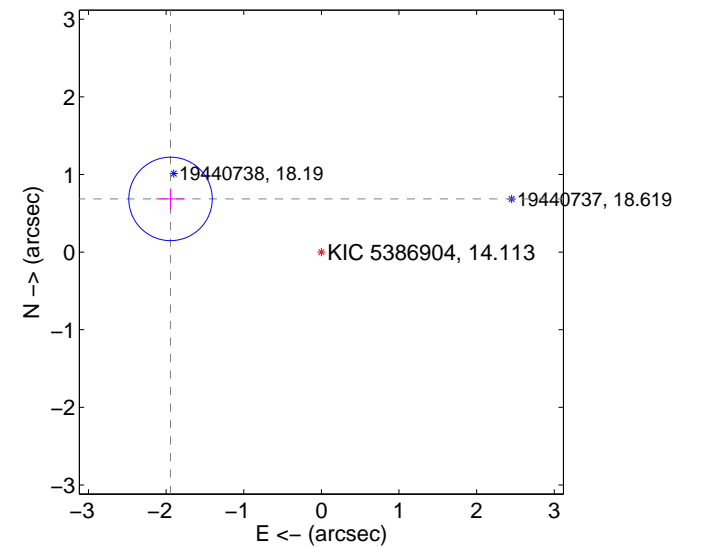
offset from difference PRF-fit to OOT PRF-fit



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.

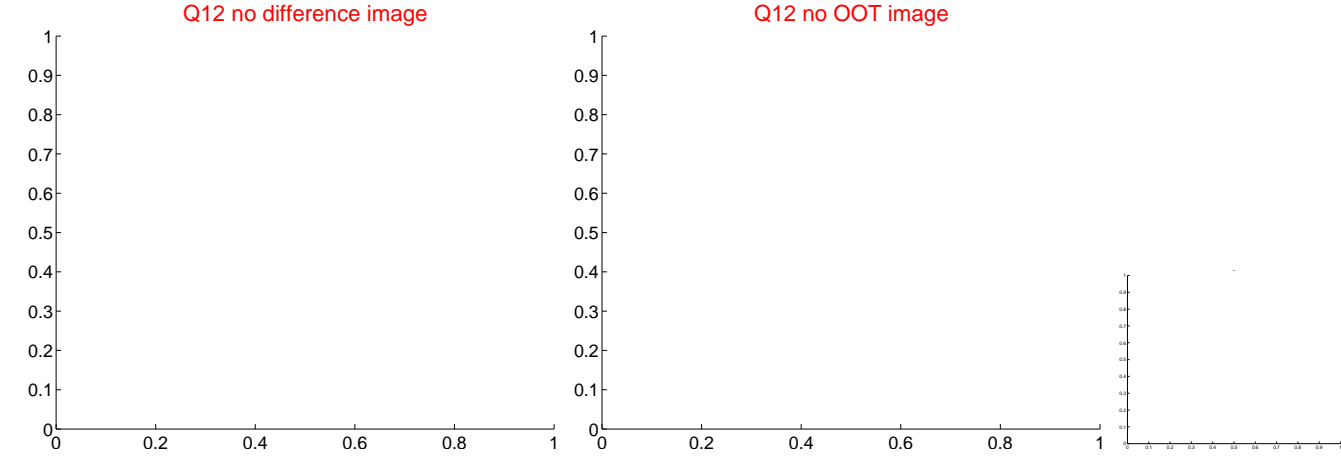
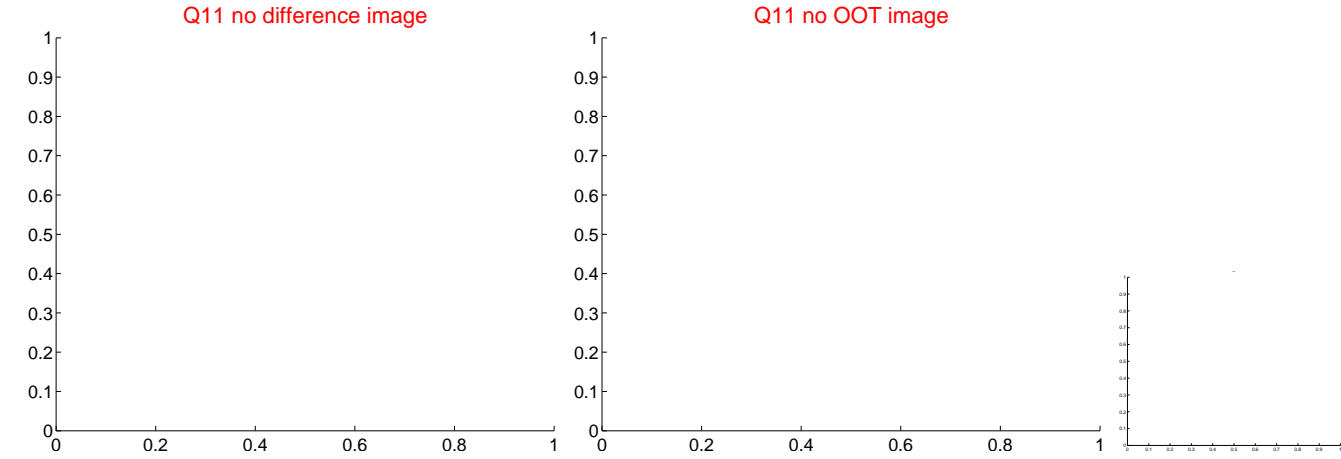
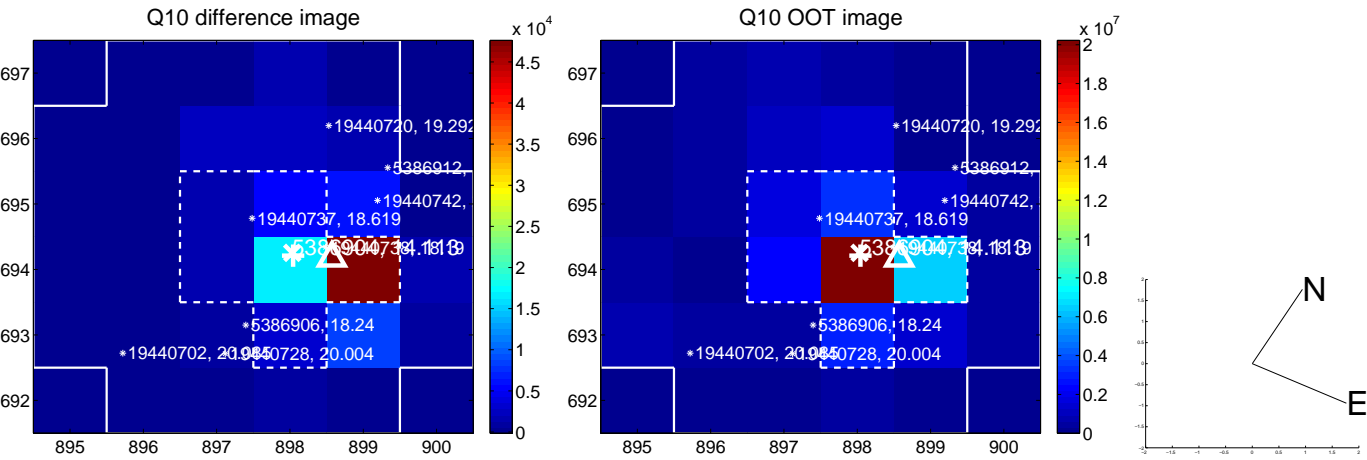
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



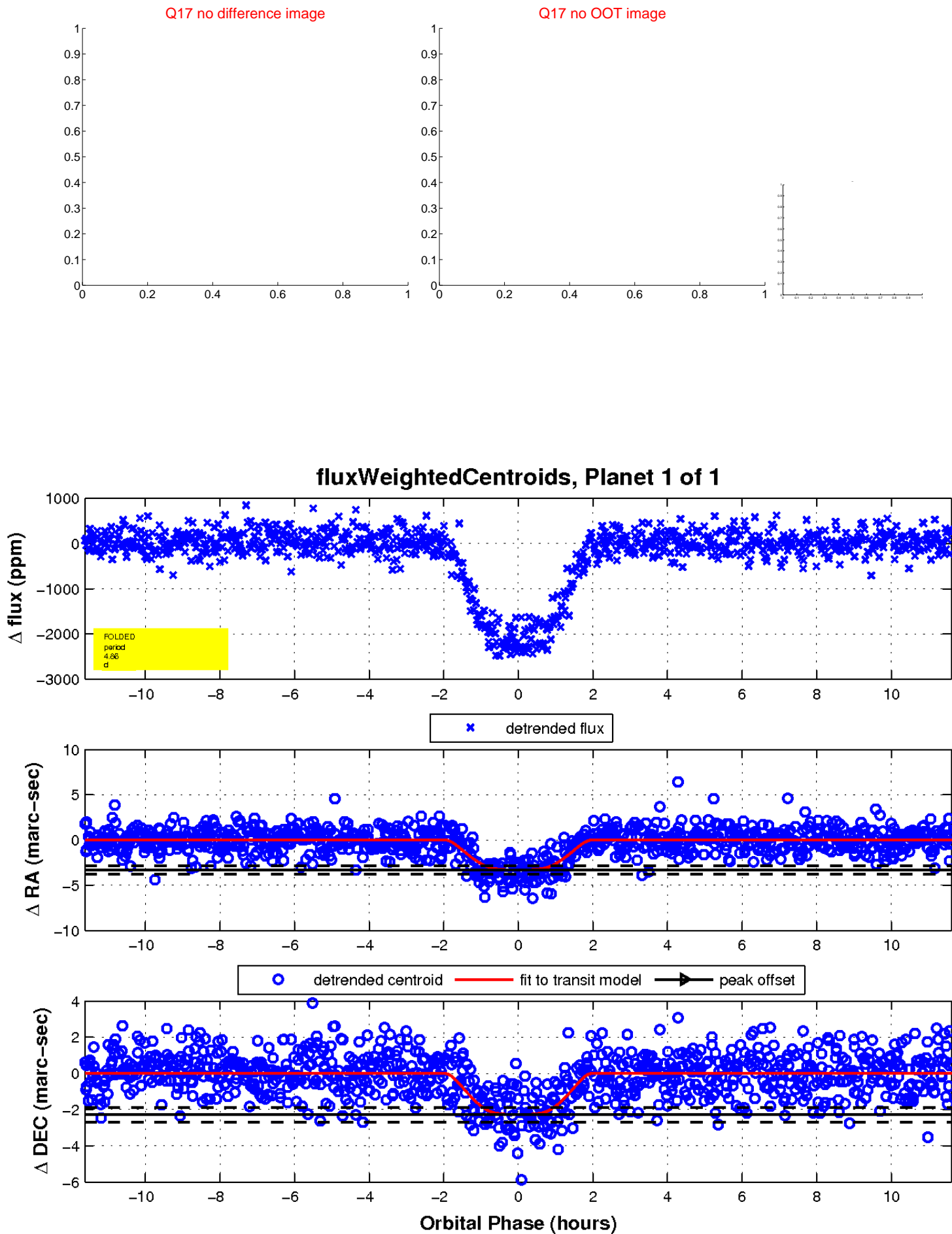
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

