

KIC 010340680

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})
010340680-01	OBS	No	350.917004	185.296067	905.3	5.010	7.7	4.7	0.57	4265	1.84	0.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010340680-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—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.

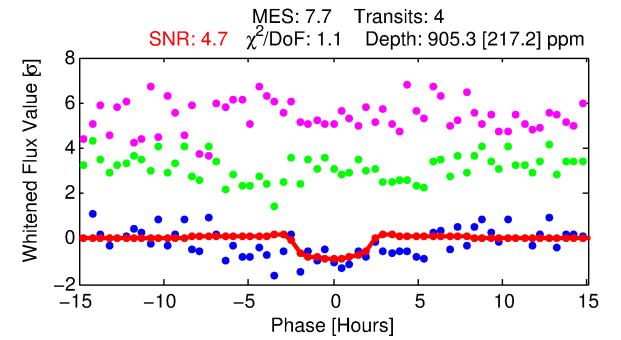
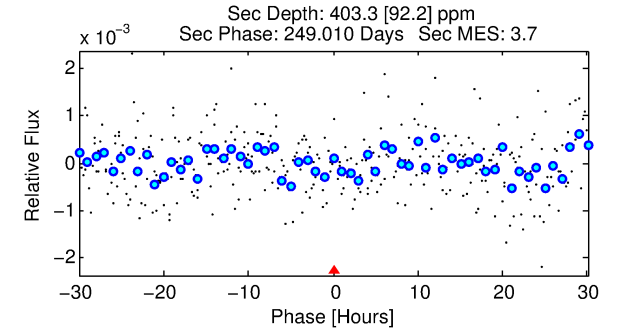
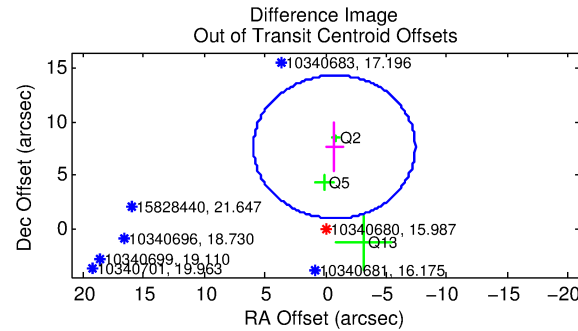
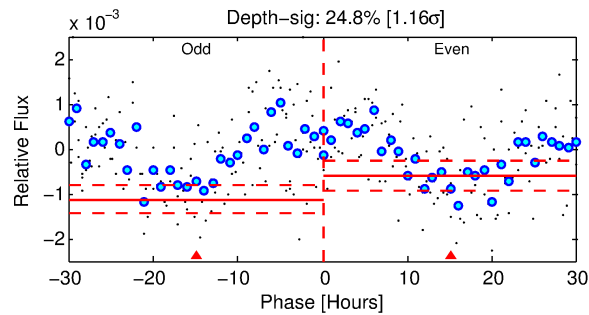
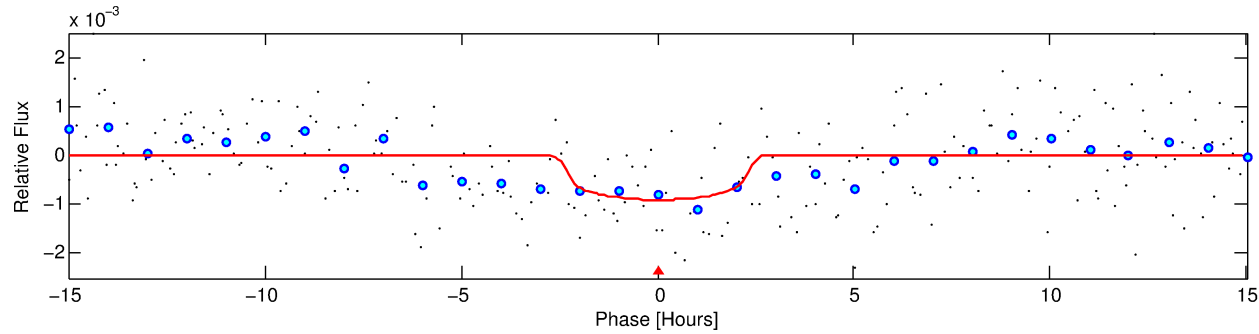
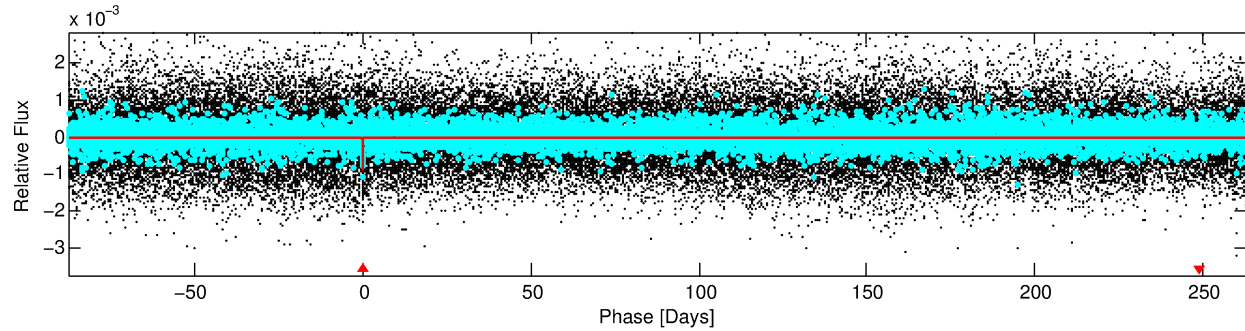
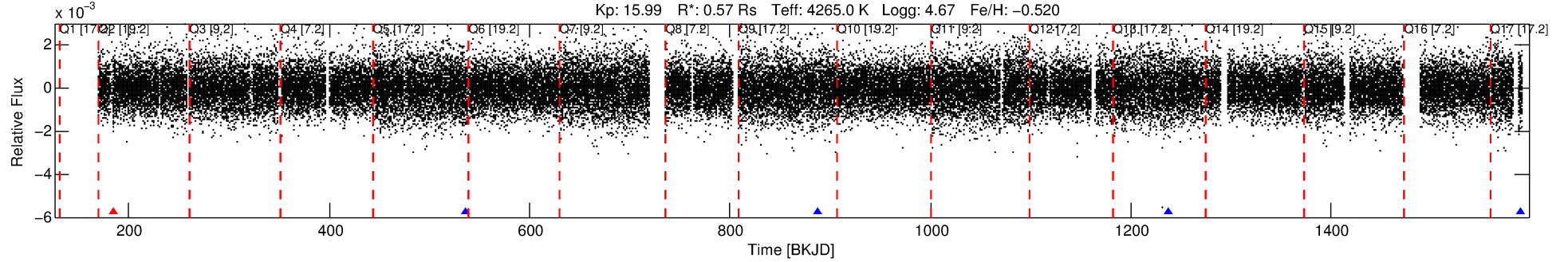
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010340680-01

No Significant Match Found

DV One-Page Summary

KIC: 10340680 Candidate: 1 of 1 Period: 350.917 d



DV Fit Results:

Period = 350.91700 [0.00686] d
Epoch = 185.2961 [0.0168] BKJD
Rp/R* = 0.0297 [0.0404]
a/R* = 393.97 [2026.49]
b = 0.72 [3.50]
Seff = 0.15 [0.03]
Teq = 158 [7] K
Rp = 1.84 [2.50] Re
a = 0.8002 [0.0663] AU
Ag = 42141.69 [115133.07] [0.37 σ]
Teffp = 3508 [2397] K [1.40 σ]

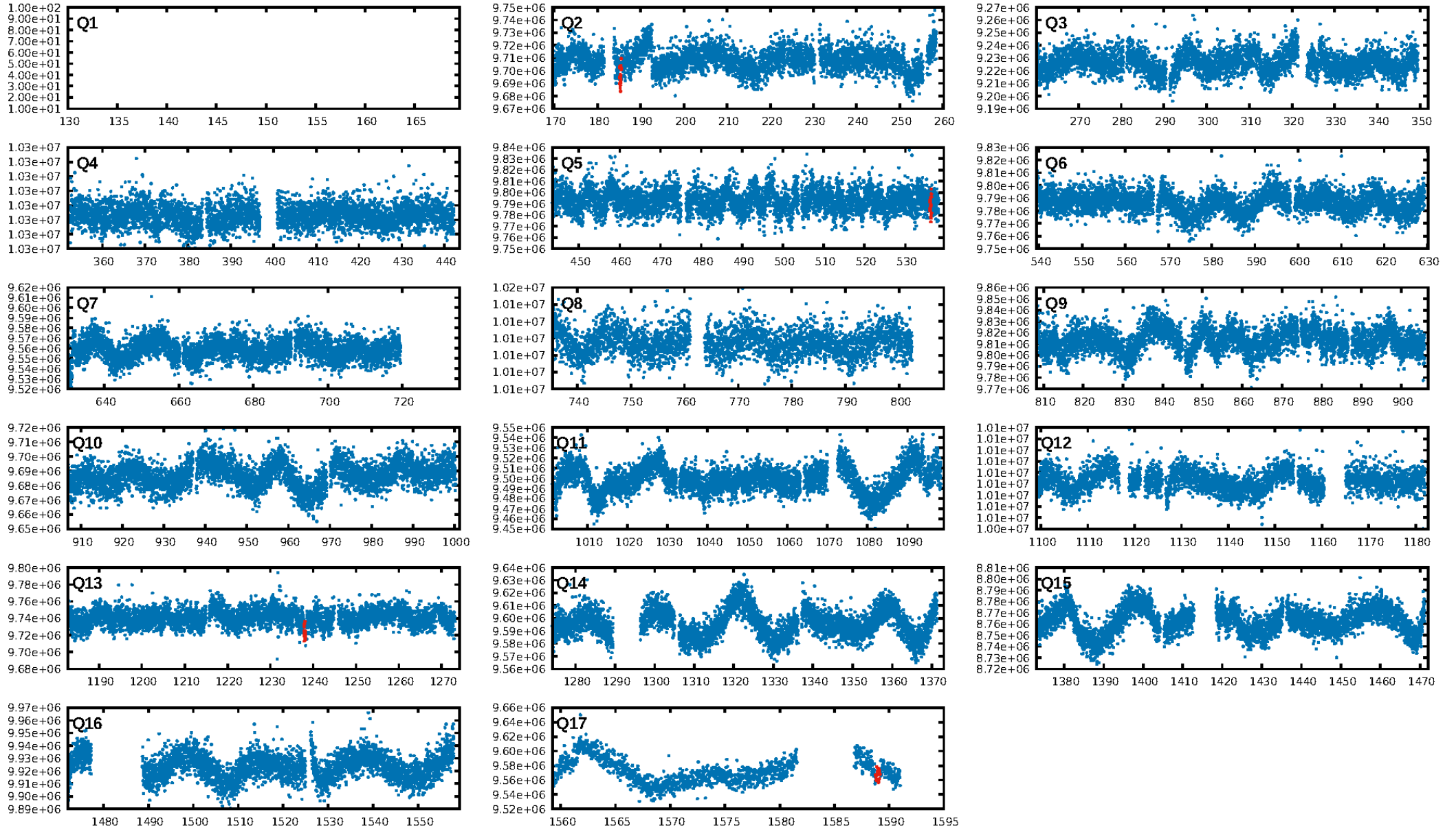
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 68.3%
ModelChiSquareGof-sig: 95.1%
Bootstrap-pfa: 6.08e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -370.1
Centroid-sig: 0.9%
Centroid-so: 2.591 arcsec [1.36 σ]
OotOffset-rm: 7.694 arcsec [3.45 σ]
KicOffset-rm: 5.424 arcsec [2.21 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

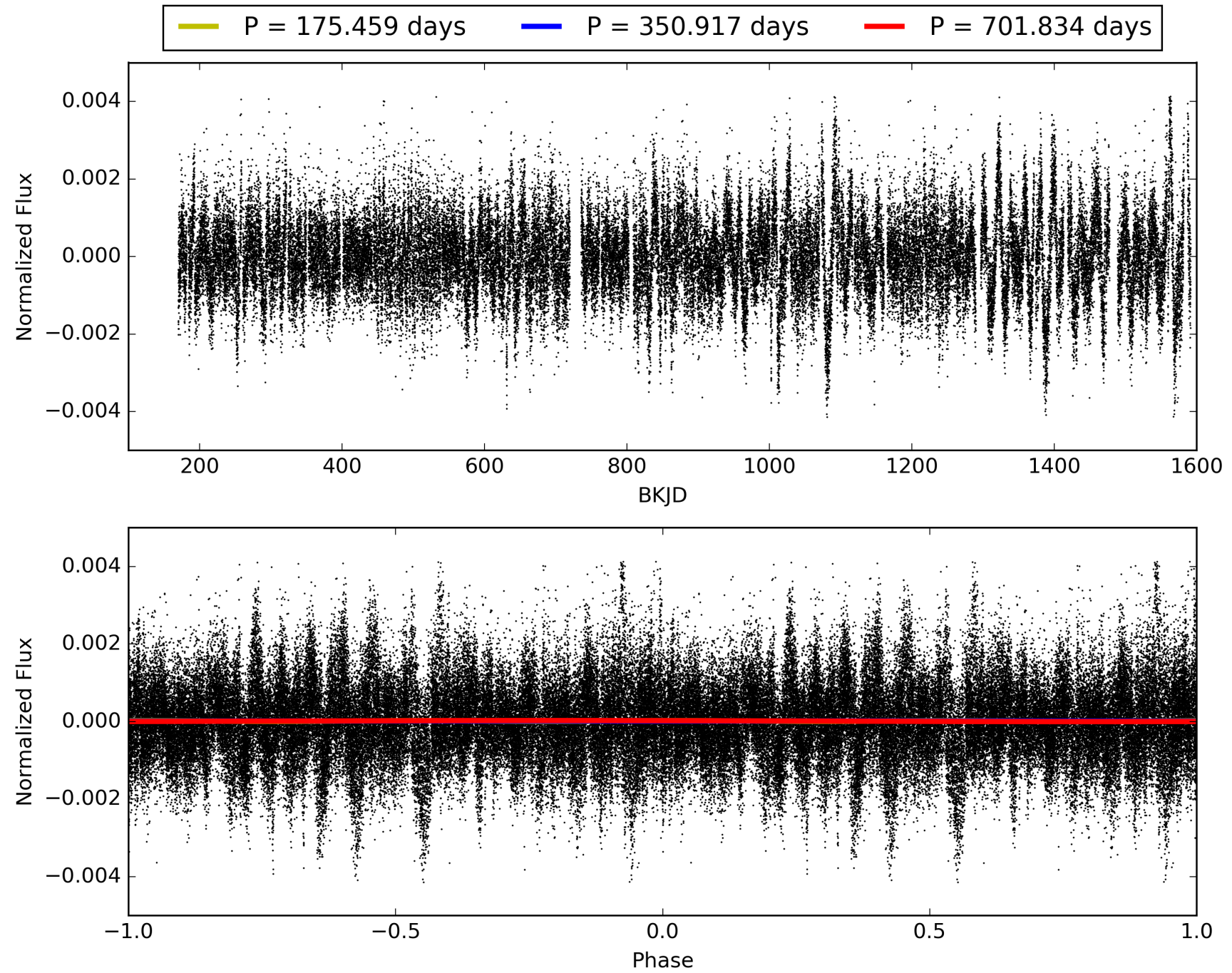
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:15:33 Z

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

TCE 010340680-01, PDC Light Curves

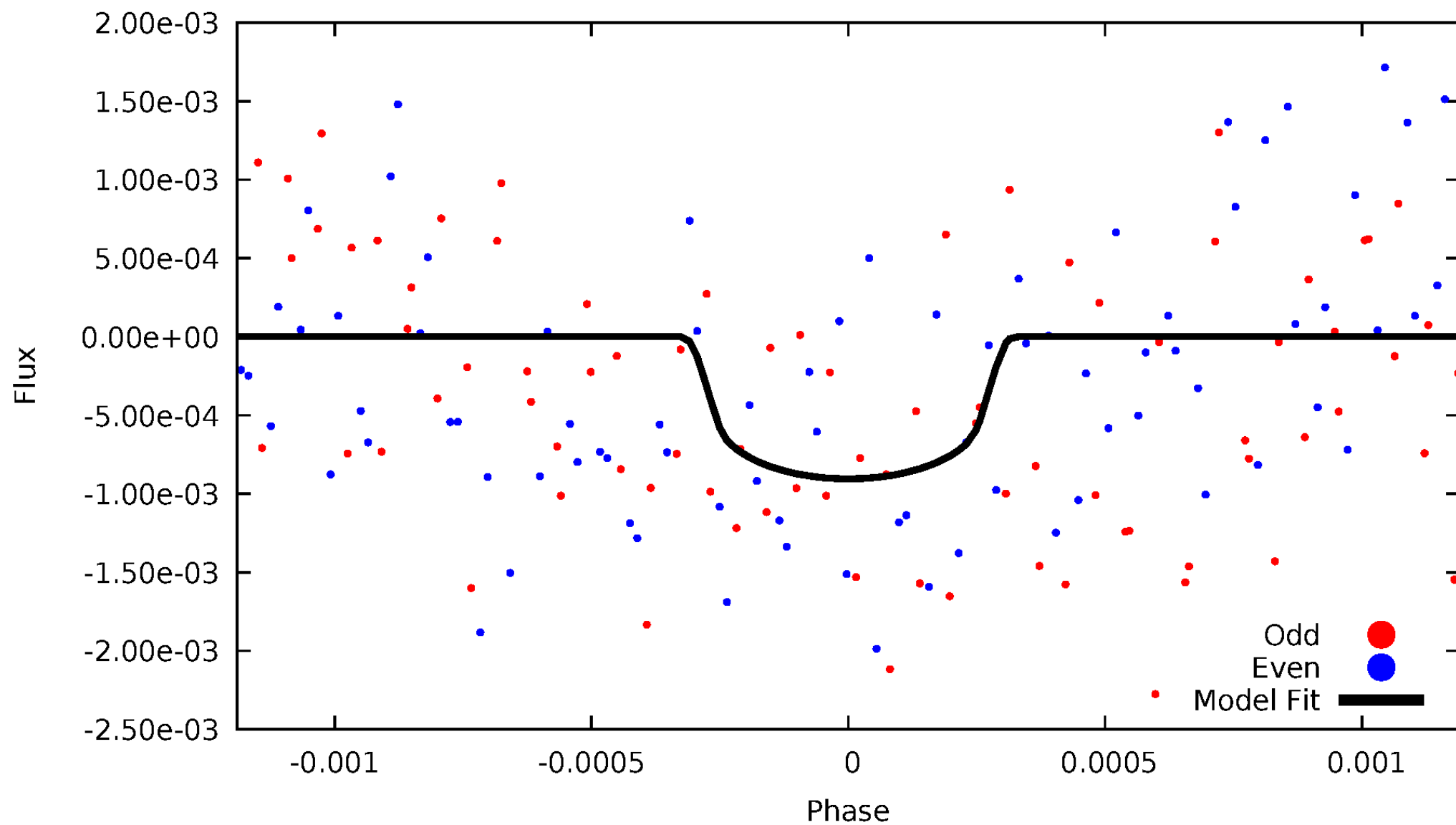


TCE 010340680-01



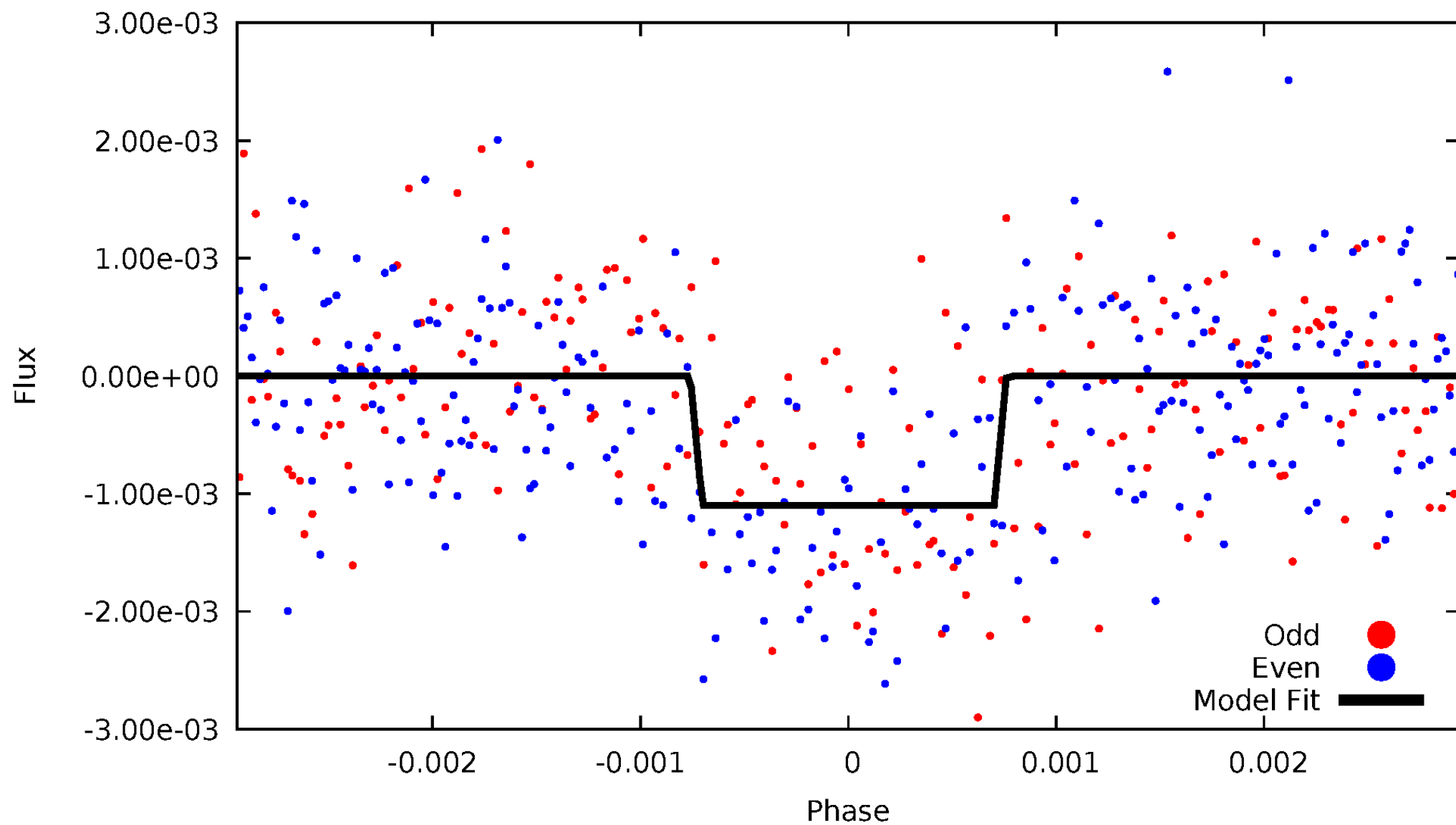
DV Odd/Even

TCE 010340680-01

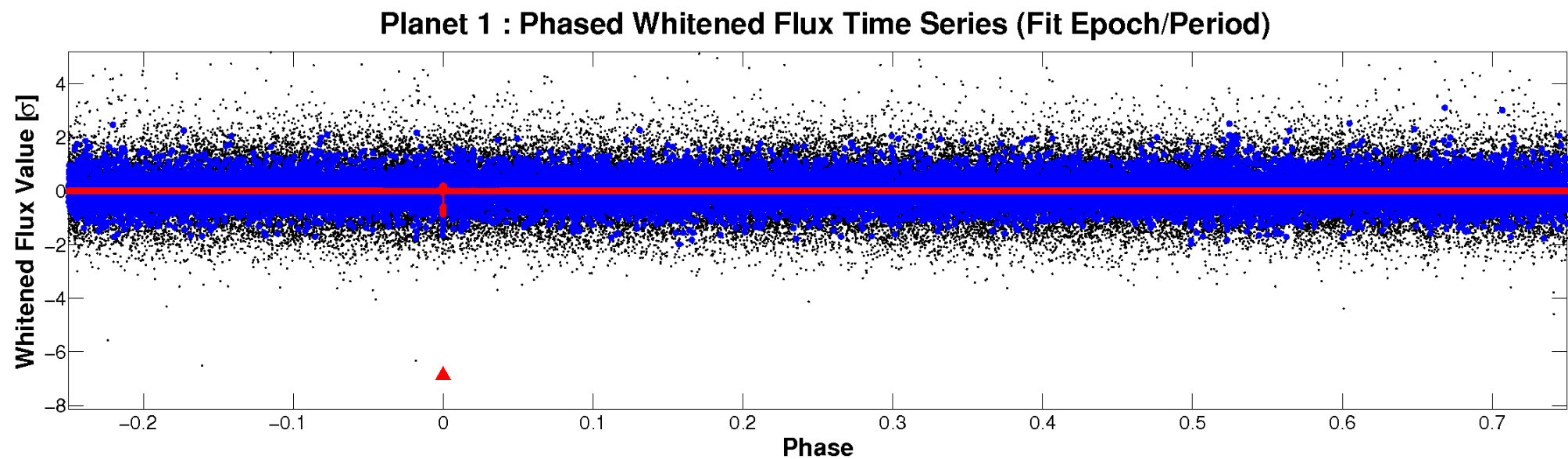
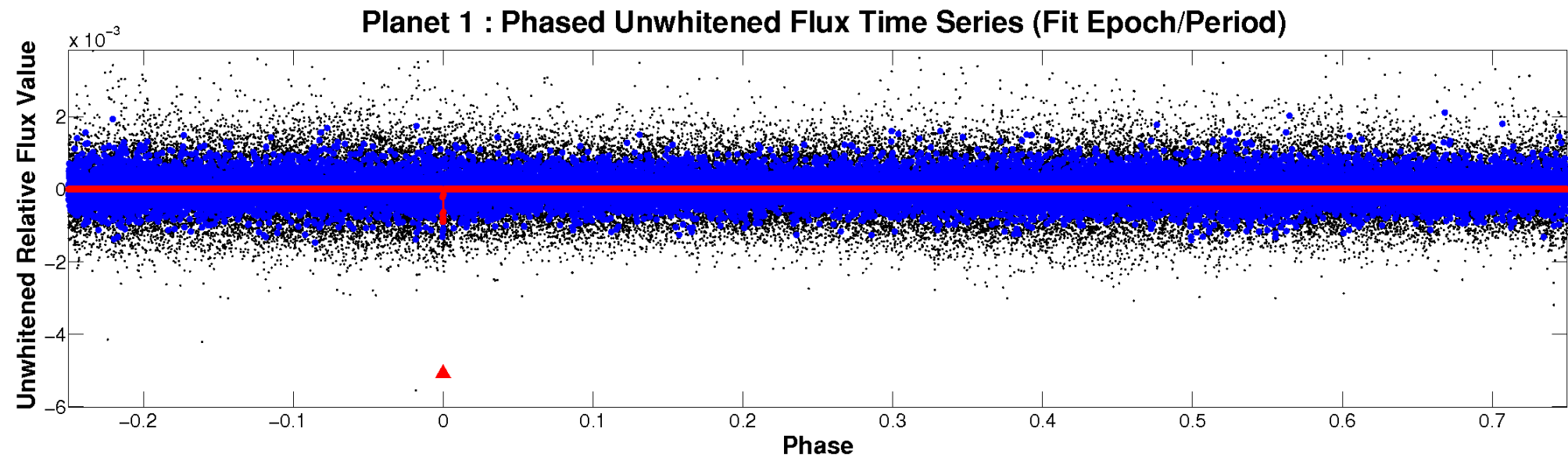


ALT Odd/Even

TCE 010340680-01

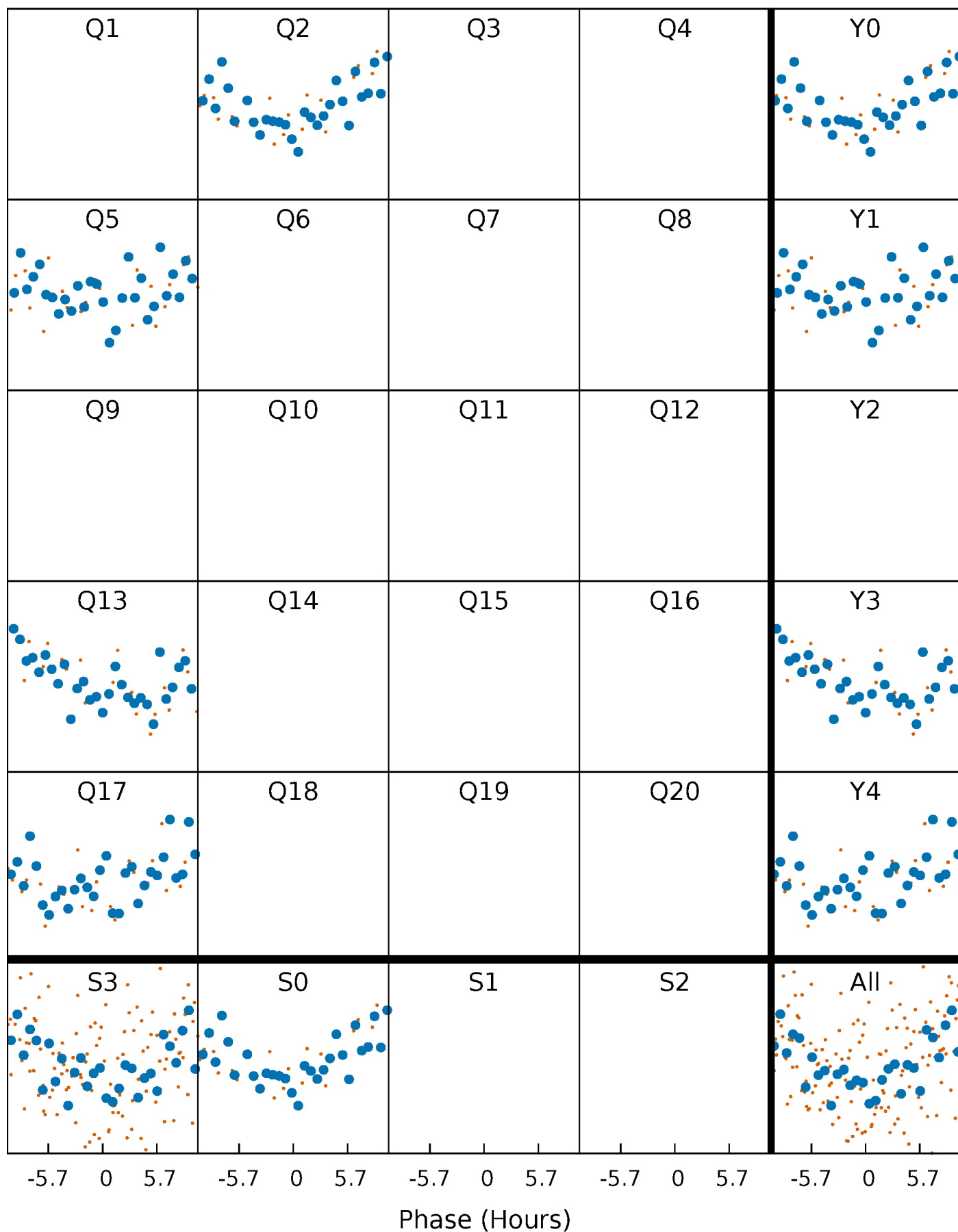


Non-Whitened Vs. Whitened Light Curve



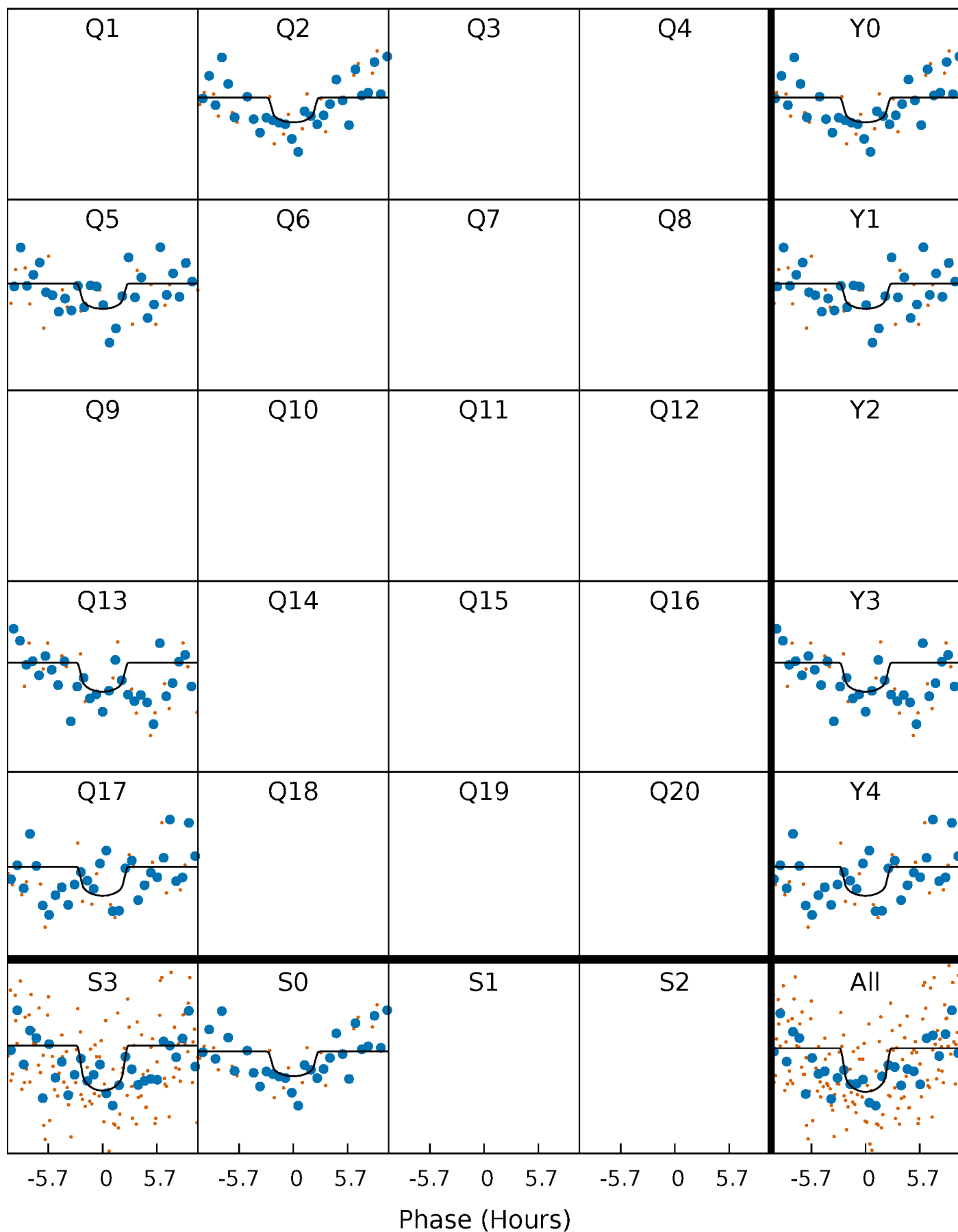
PDC Quarter-Phased Transit Curves

TCE 010340680-01 P=350.917004 Days $T_0=185.296067$ (BKJD)



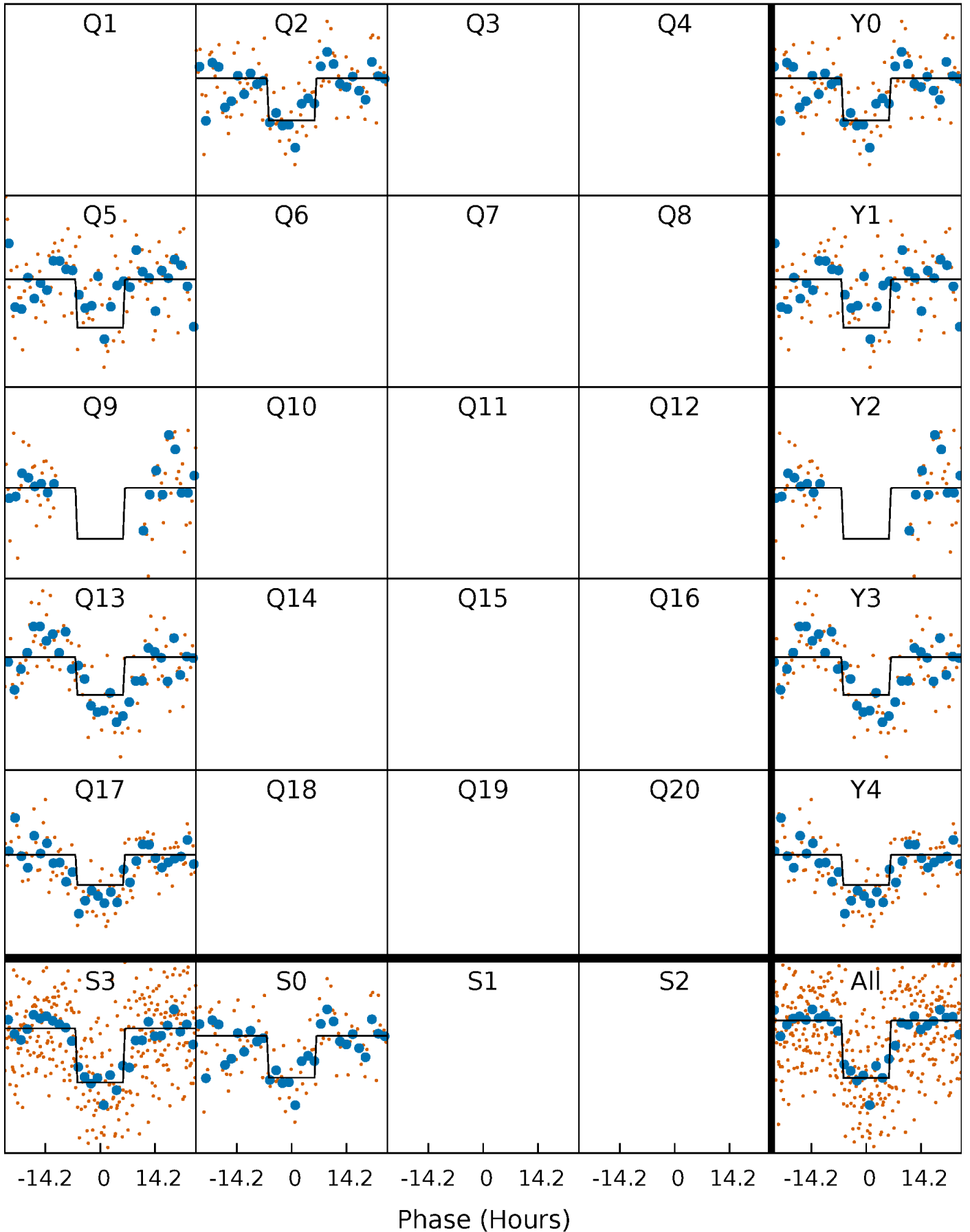
DV Quarter-Phased Transit Curves

TCE 010340680-01 P=350.917004 Days $T_0=185.296067$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

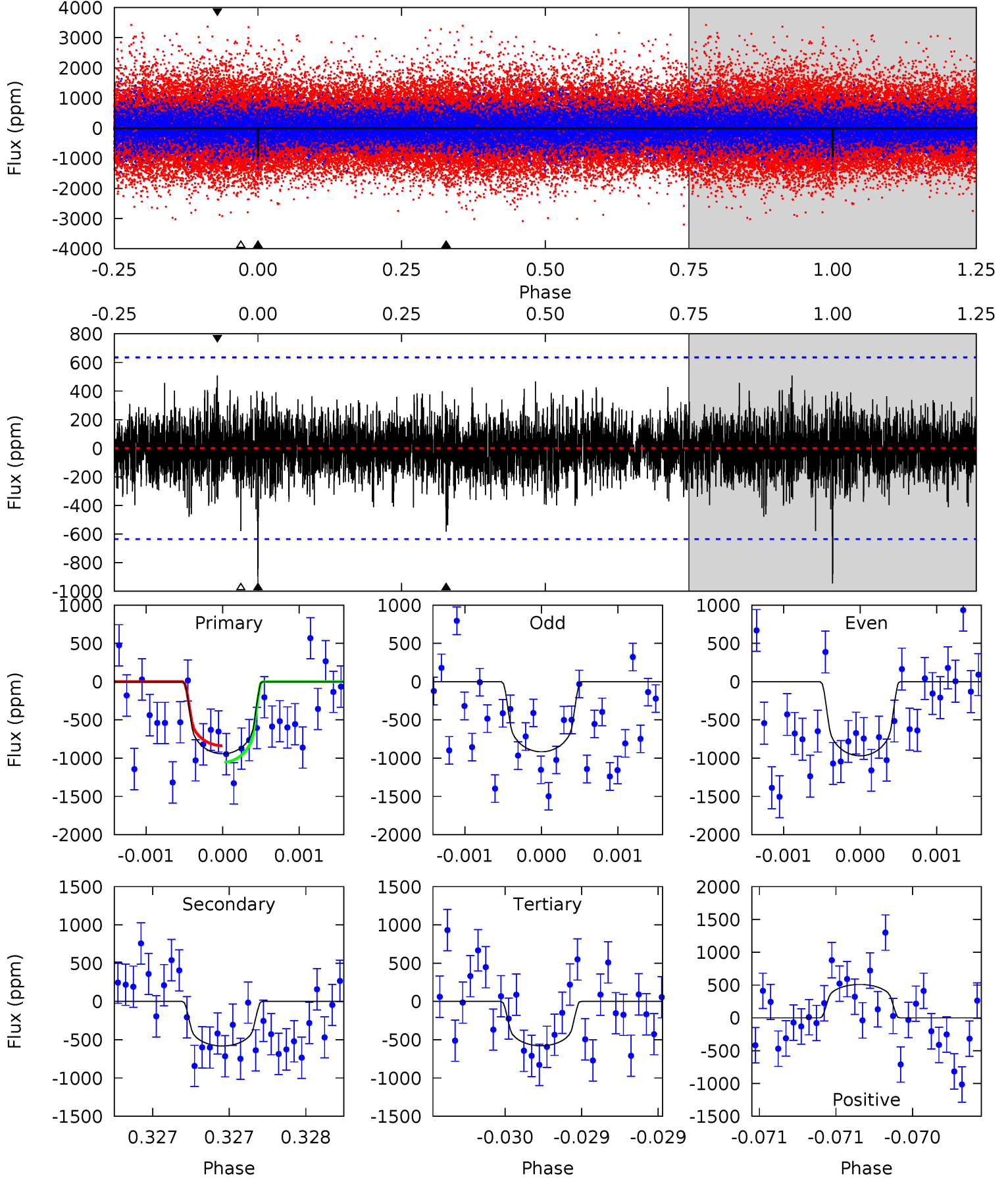
TCE 010340680-01 $P=350.919148$ Days $T_0=185.280575$ (BKJD)



DV Model-Shift Uniqueness Test

010340680-01, P = 350.917004 Days, E = 185.296067 Days

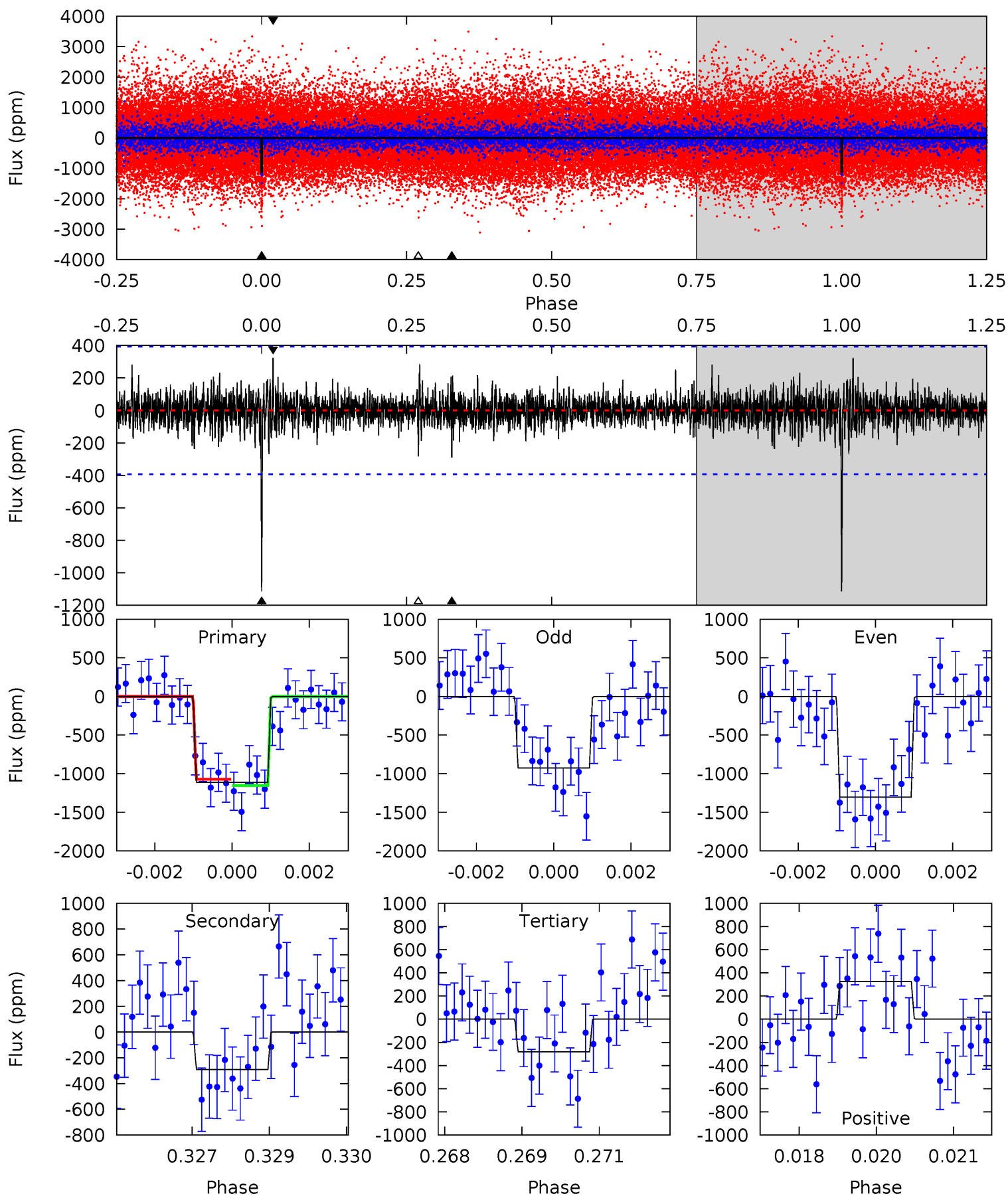
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.22	5.07	5.04	4.43	5.53	3.42	1.18	3.18	3.79	0.03	0.64	0.23	1.03	0.35	0.94



Alt Model-Shift Uniqueness Test

010340680-01, P = 350.919148 Days, E = 185.280575 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	3.97	3.86	4.43	5.38	3.17	0.88	11.4	10.8	0.12	-0.46	2.60	0.95	0.23	0.54



Stellar Parameters For KIC 010340680

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4265^{+115}_{-140}	$4.675^{+0.059}_{-0.027}$	$-0.520^{+0.300}_{-0.300}$	$0.567^{+0.049}_{-0.059}$	$0.555^{+0.062}_{-0.045}$	$4.287^{+1.154}_{-0.584}$
	+3%/-3%	+1%/-1%	+58%/-58%	+9%/-10%	+11%/-8%	+27%/-14%
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 010340680-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-582 ± 115	$2.54^{+2.00}_{-1.70}$	220^{+7}_{-8}	3504^{+1792}_{-565}	$30814^{+258157}_{-21339}$
Alt.	-290 ± 73	$2.84^{+2.19}_{-1.77}$	220^{+7}_{-8}	3094^{+1160}_{-488}	13346^{+76722}_{-9596}

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

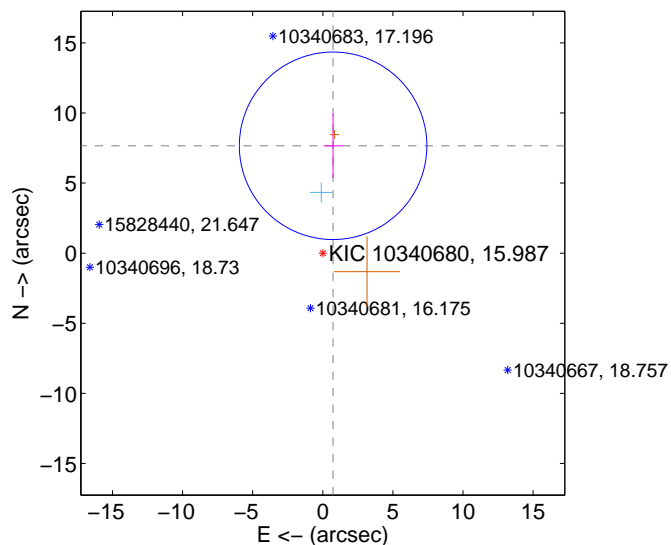
Supplemental centroid analysis for 010340680-01. Kepler magnitude: 15.99. Transit SNR 4.73

There are 1 quarters with good PRF difference image offsets

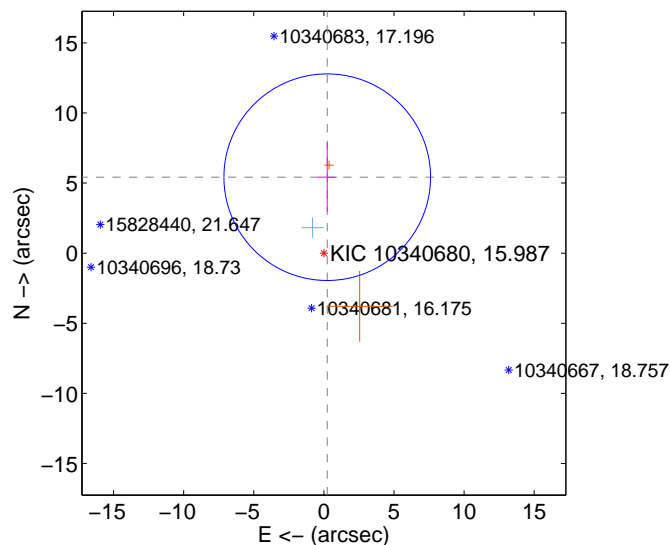
The OOT PRF centroid is offset from the target star catalog position by about 2.55 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.694 ± 2.229	3.45	-0.734 ± 0.701	7.658 ± 2.298
PRF-fit source offset from KIC position	5.424 ± 2.456	2.21	-0.239 ± 0.678	5.418 ± 2.472
photometric centroid source offset	2.59 ± 1.91	1.36	-2.35 ± 1.86	1.09 ± 2.10

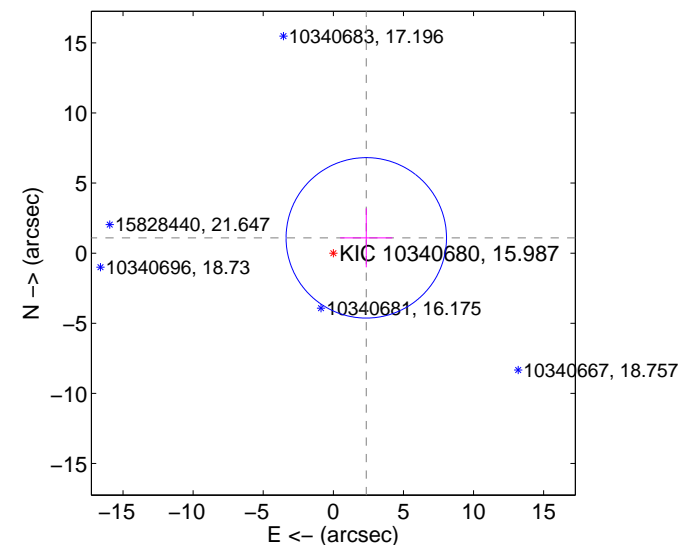
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

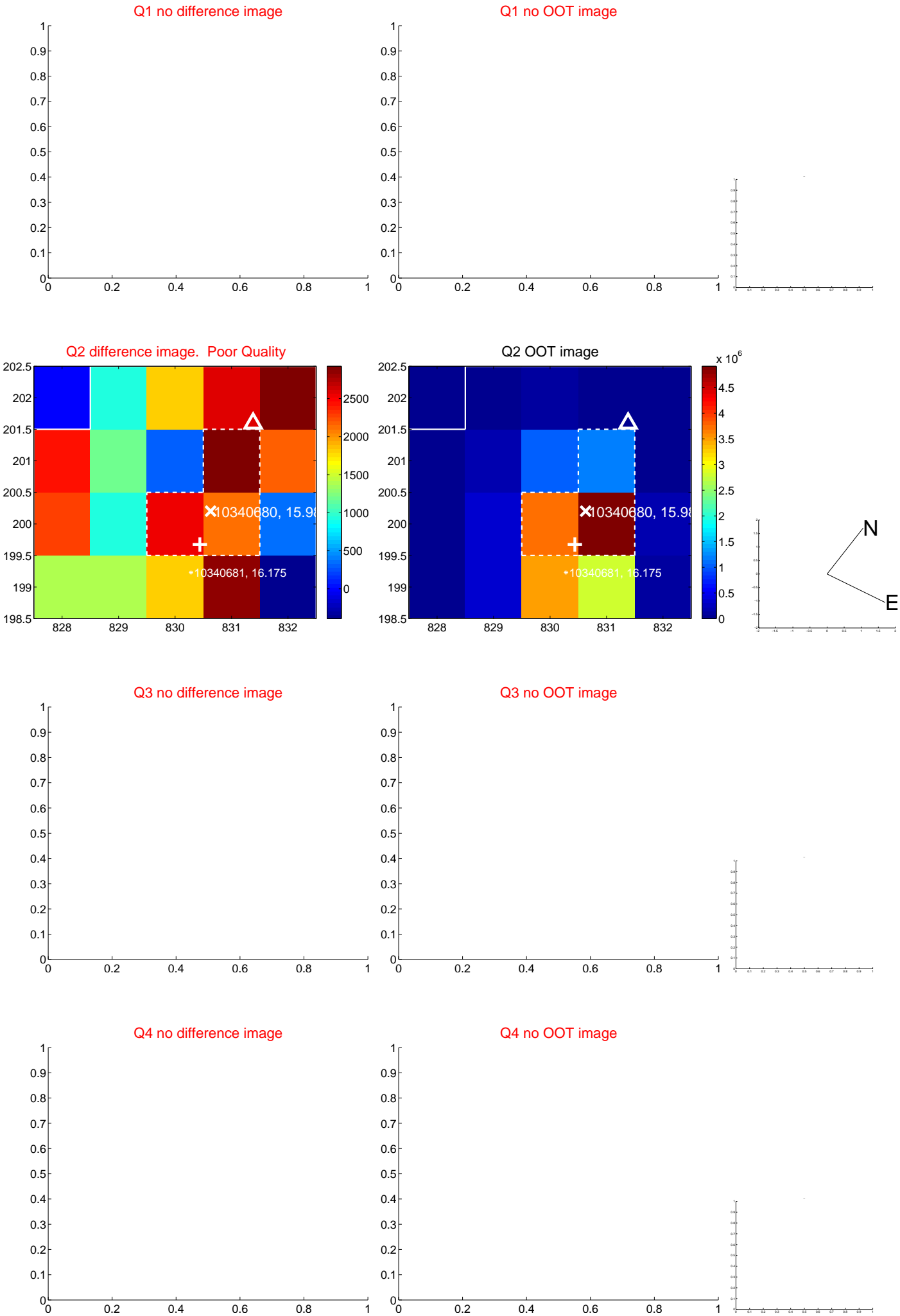


offset from photometric centroids

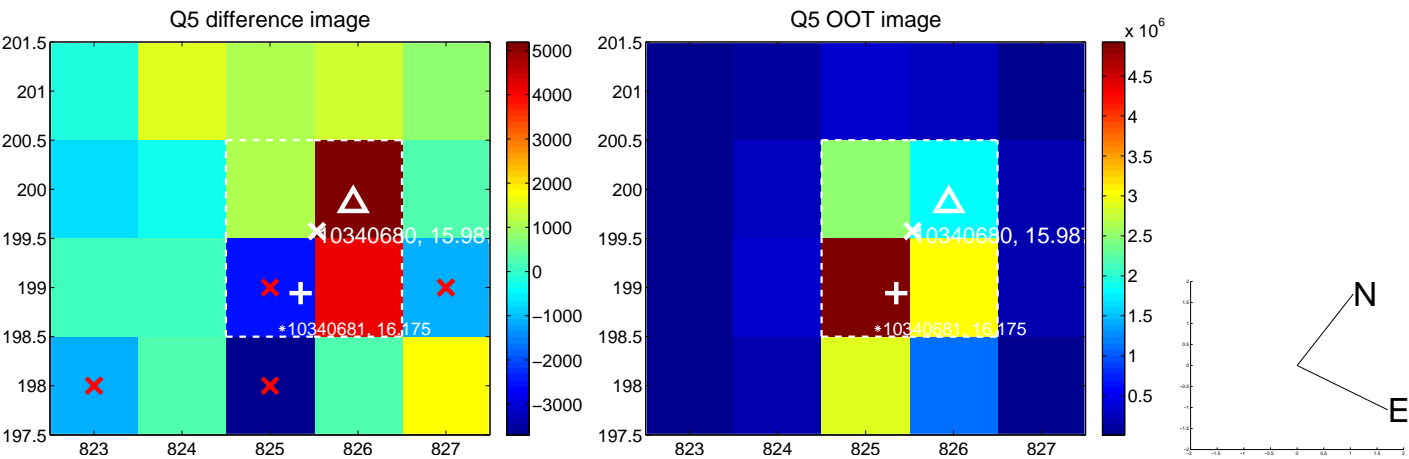


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



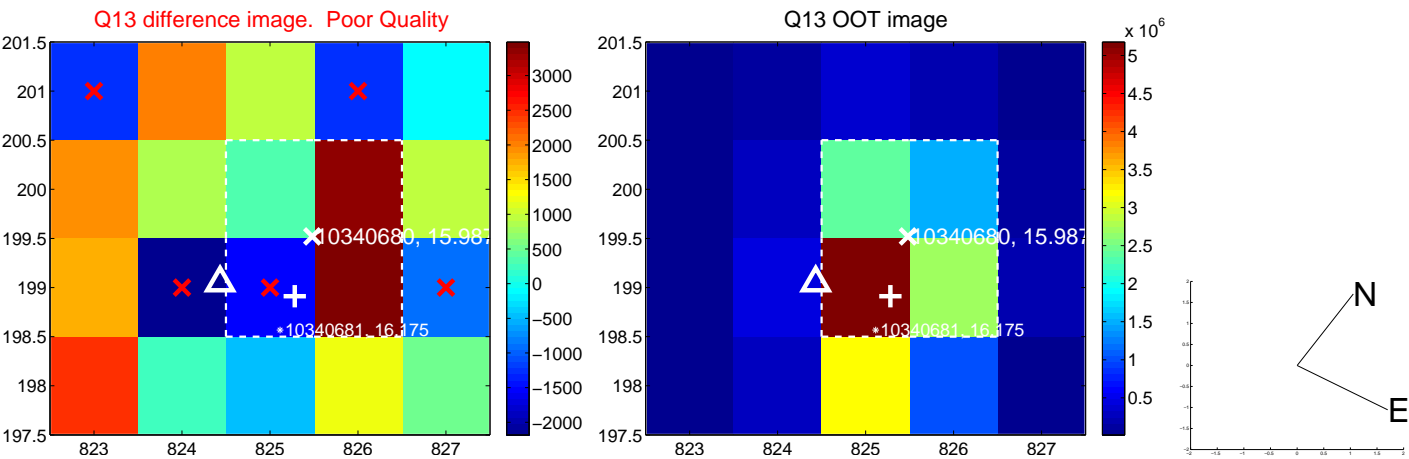
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



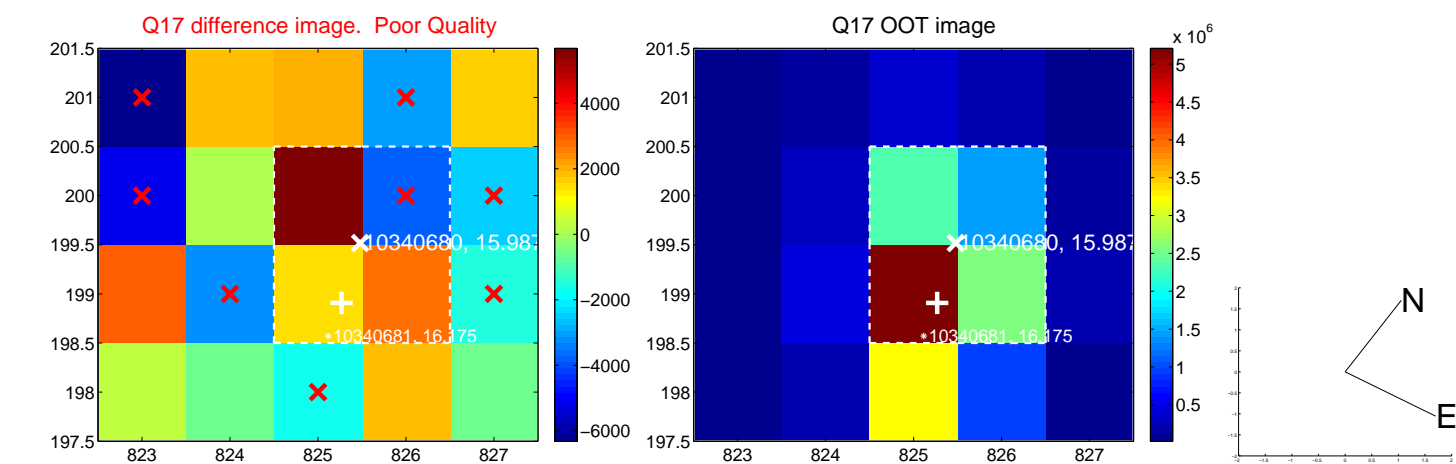
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



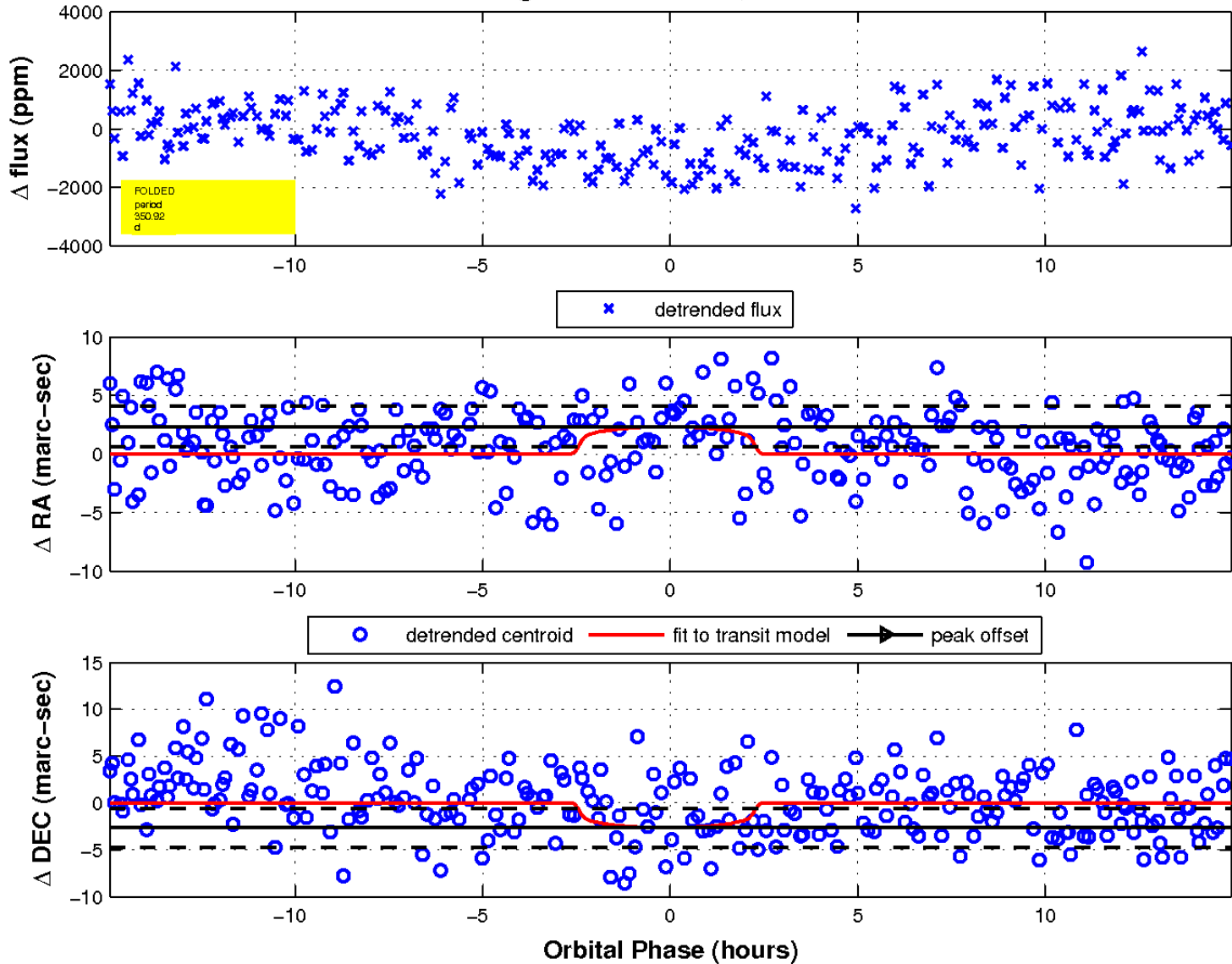
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

