

KIC 008893823

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})
008893823-01	OBS	No	593.904774	200.599091	158.0	9.340	8.3	7.3	1.61	6210	2.35	1.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008893823-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

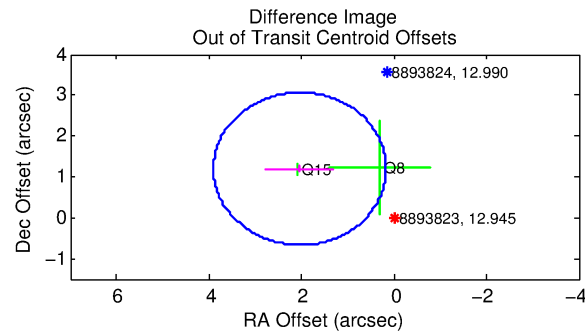
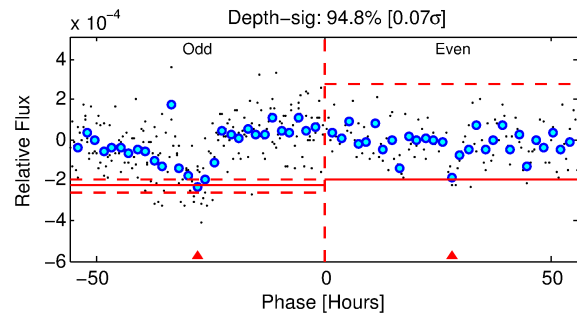
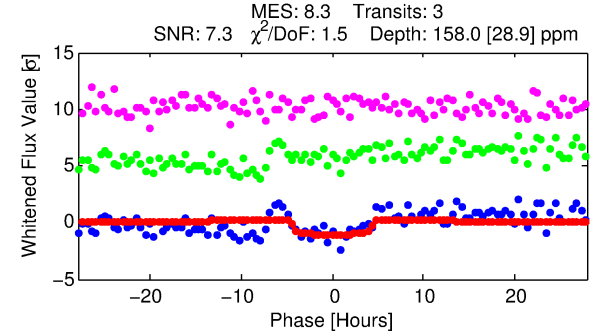
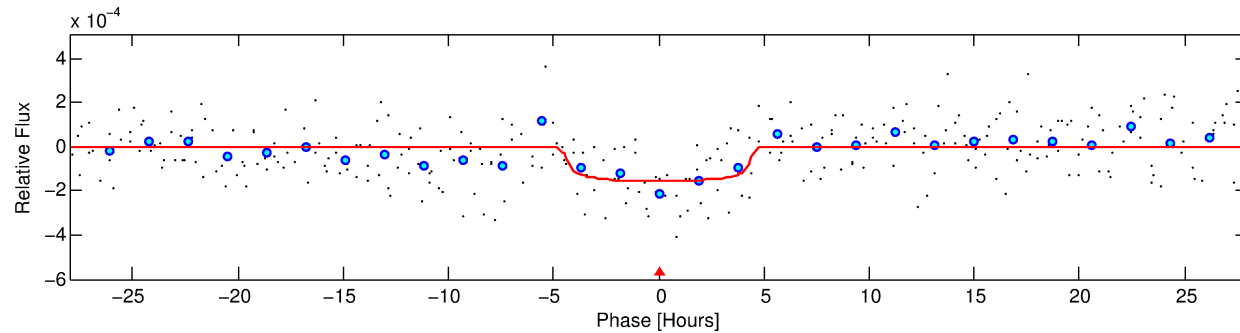
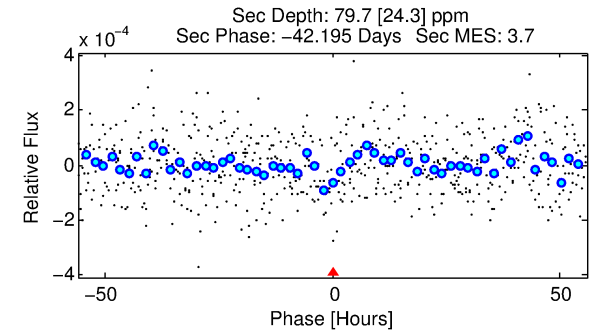
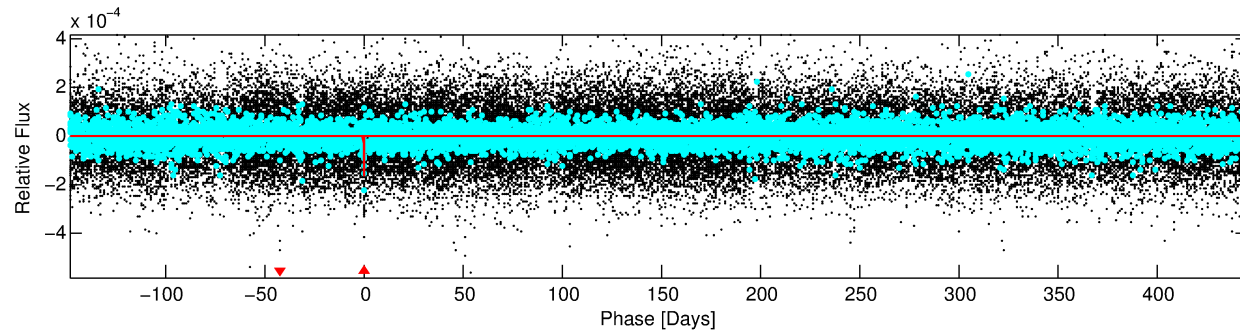
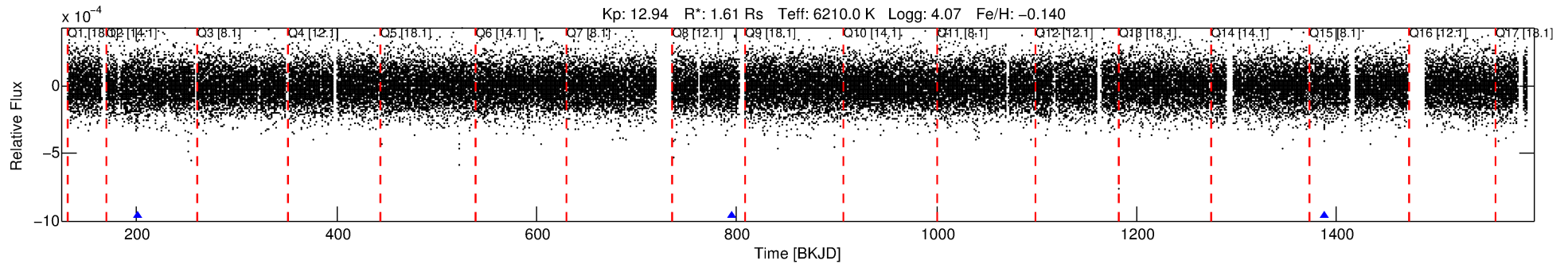
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008893823-01

No Significant Match Found

DV One-Page Summary

KIC: 8893823 Candidate: 1 of 1 Period: 593.905 d



DV Fit Results:

Period = 593.90477 [0.01498] d
Epoch = 200.5991 [0.0186] BKJD
Rp/R* = 0.0133 [0.0057]
a/R* = 243.33 [545.89]
b = 0.88 [0.58]
Seff = 1.68 [0.70]
Teq = 290 [30] K
Rp = 2.35 [1.19] Re
a = 1.4376 [0.3643] AU
Ag = 16467.69 [16436.91] [1.00σ]
Teffp = 5086 [1172] K [4.09σ]

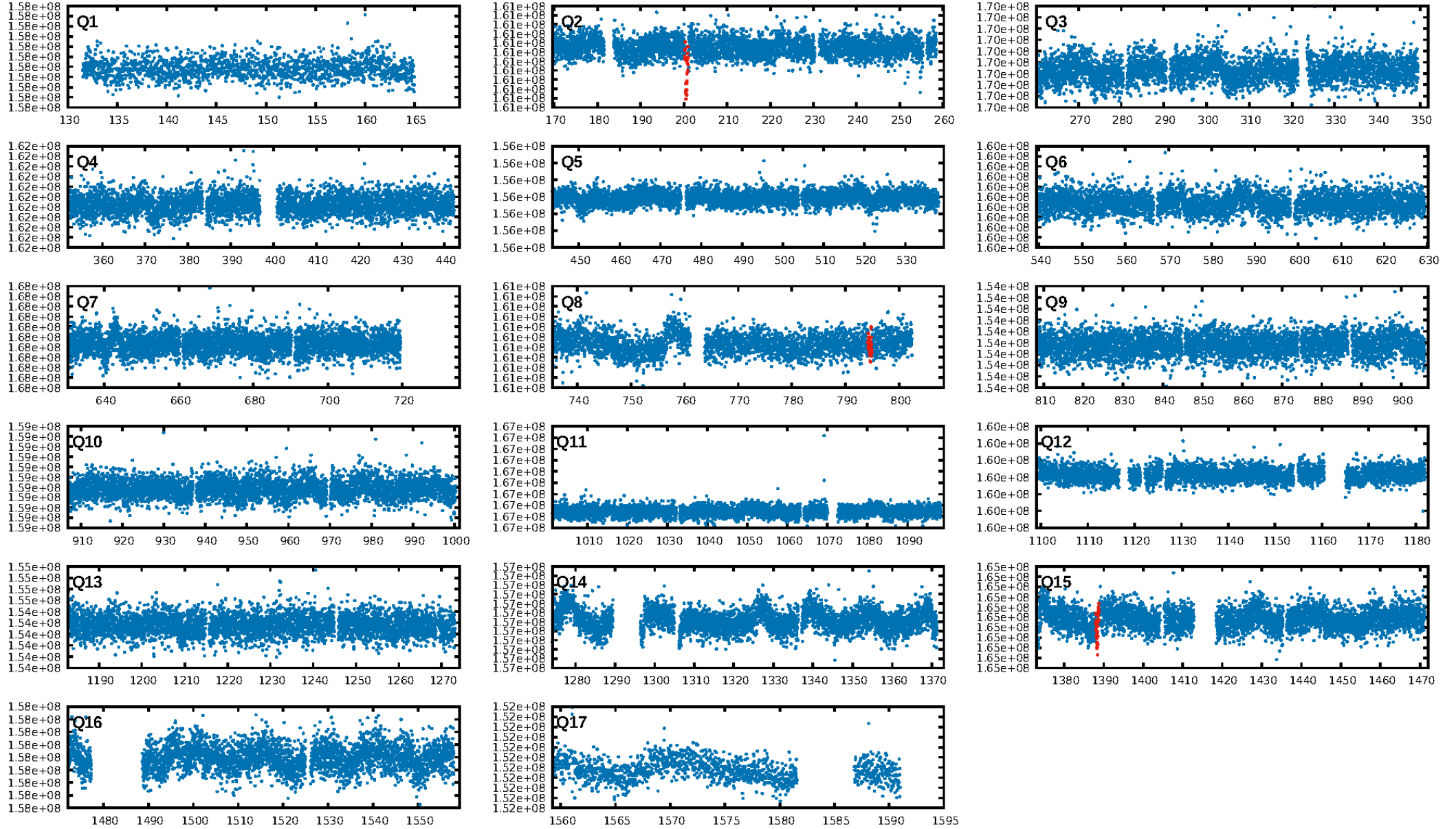
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 81.4%
Bootstrap-pfa: 2.25e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5868
Centroid-sig: 1.9%
Centroid-so: 2.294 arcsec [1.72σ]
OotOffset-rm: 2.363 arcsec [3.80σ]
KicOffset-rm: 2.256 arcsec [3.16σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

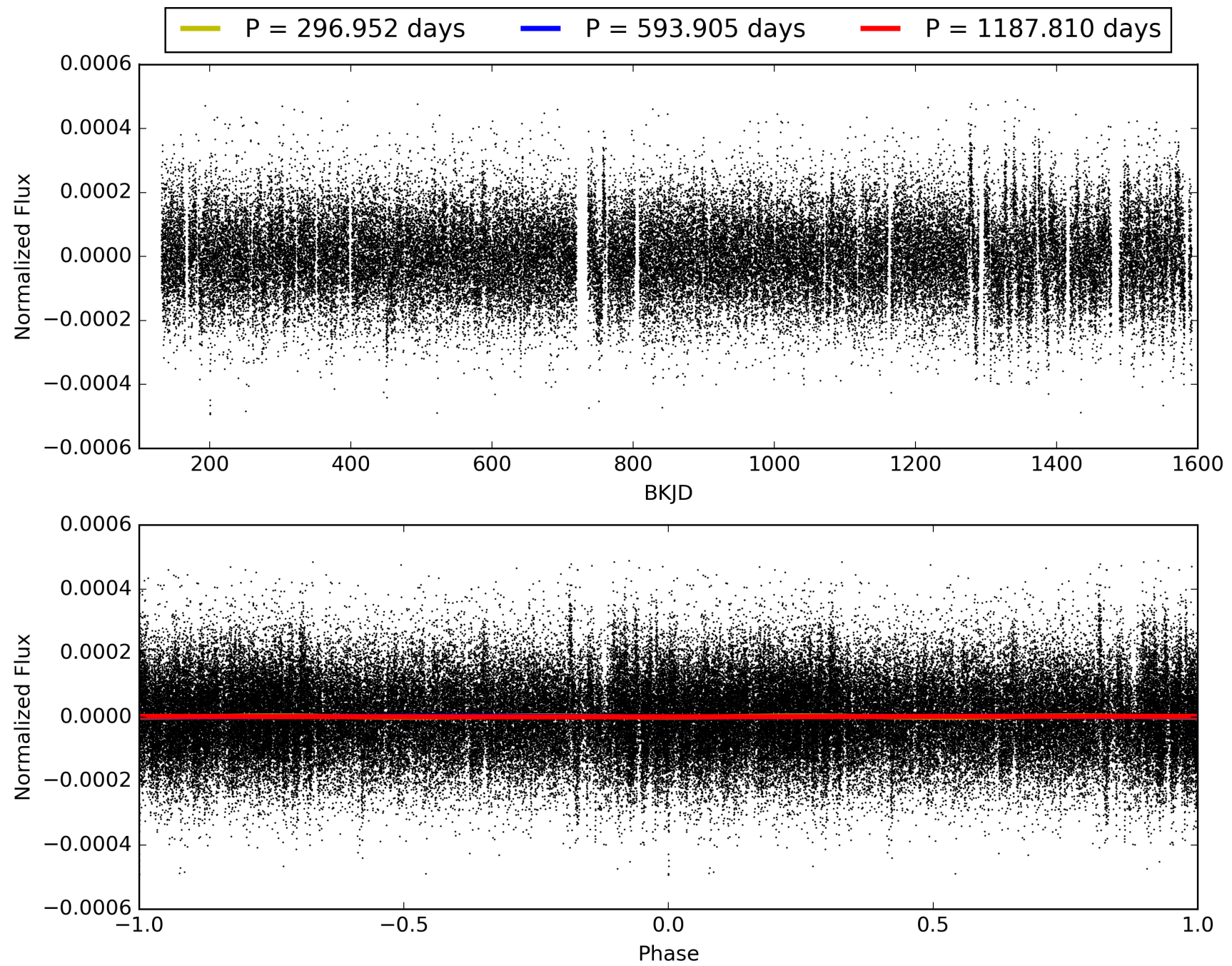
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:19:57 Z

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

TCE 008893823-01, PDC Light Curves

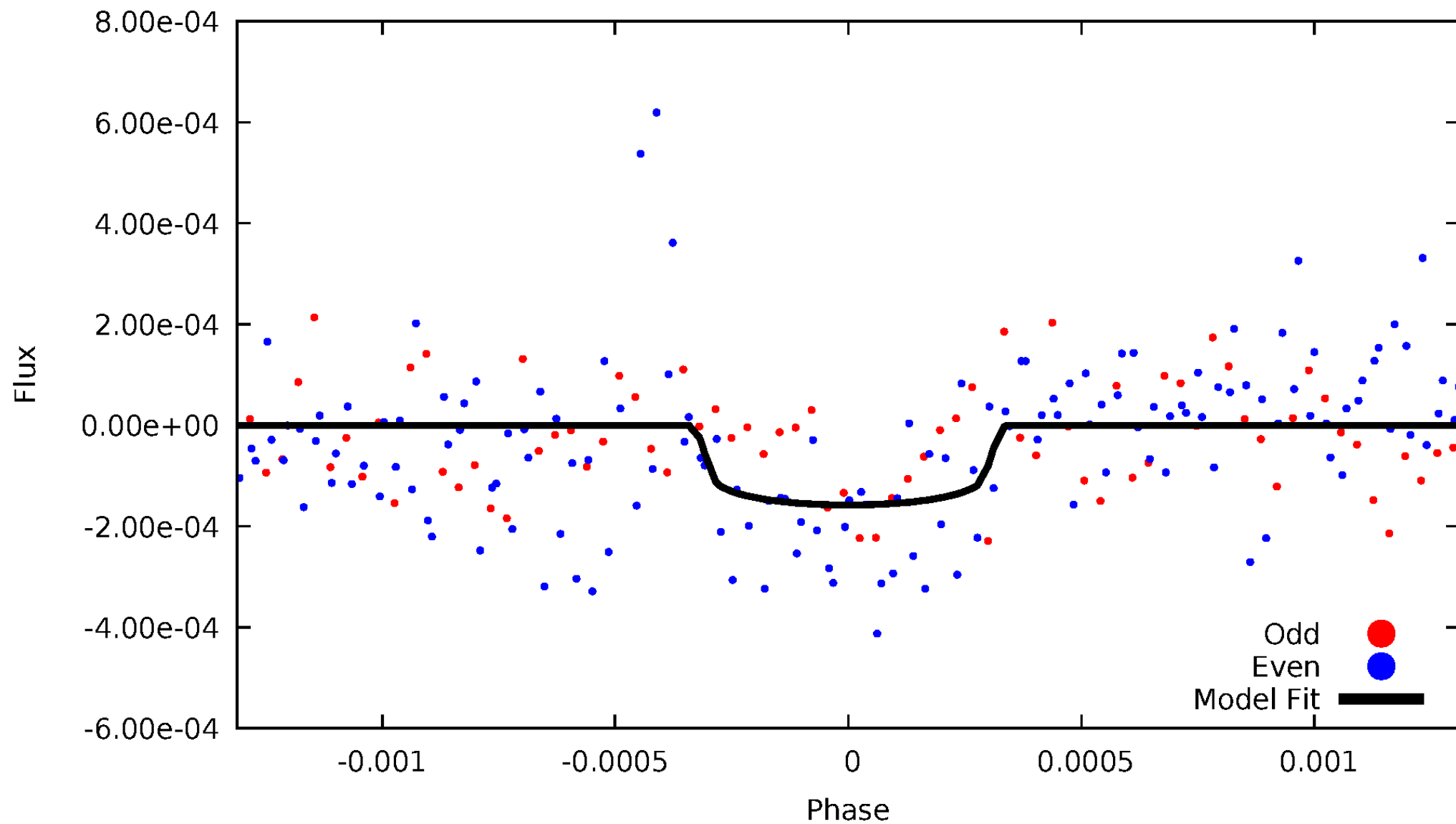


TCE 008893823-01



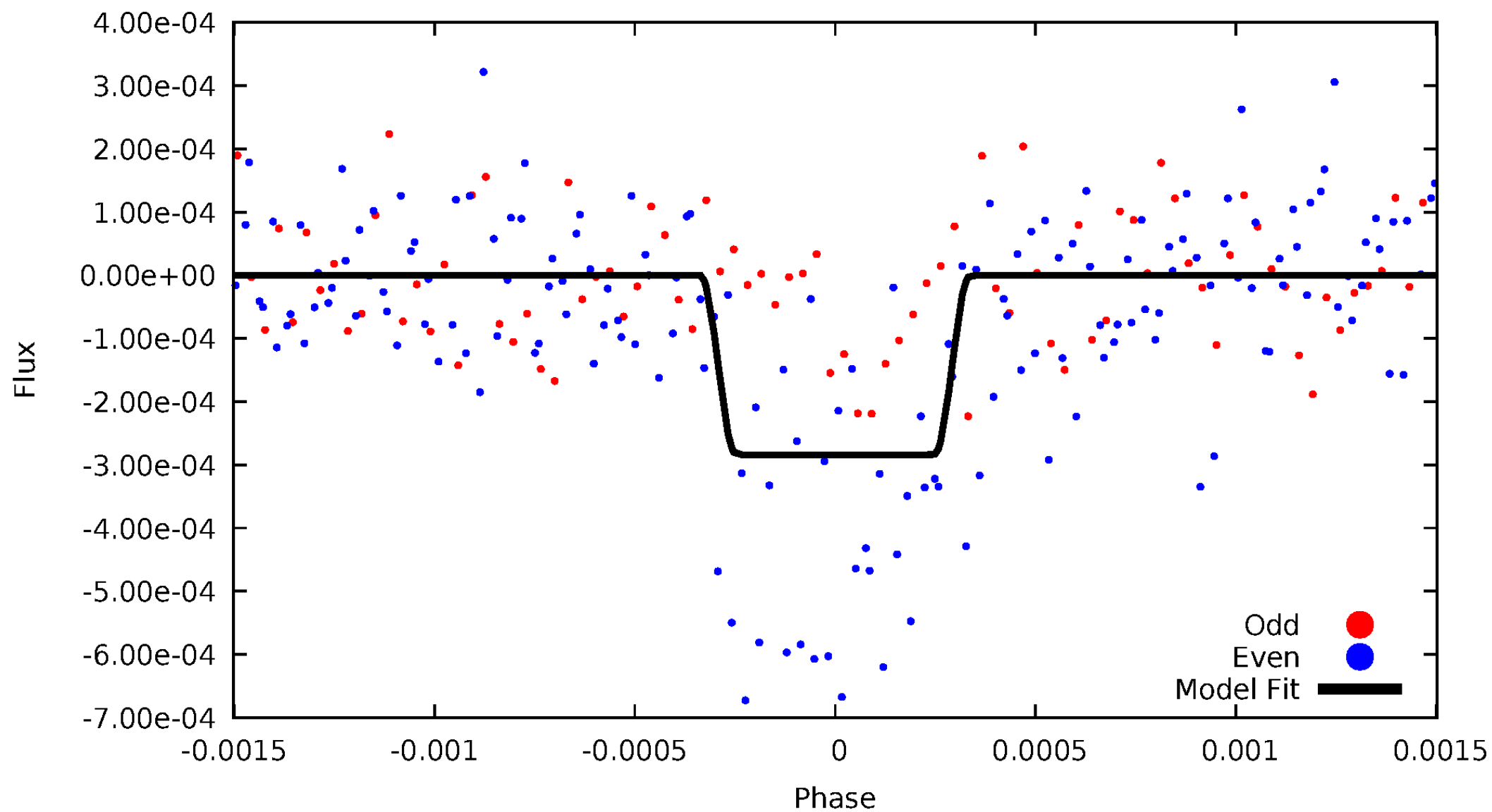
DV Odd/Even

TCE 008893823-01

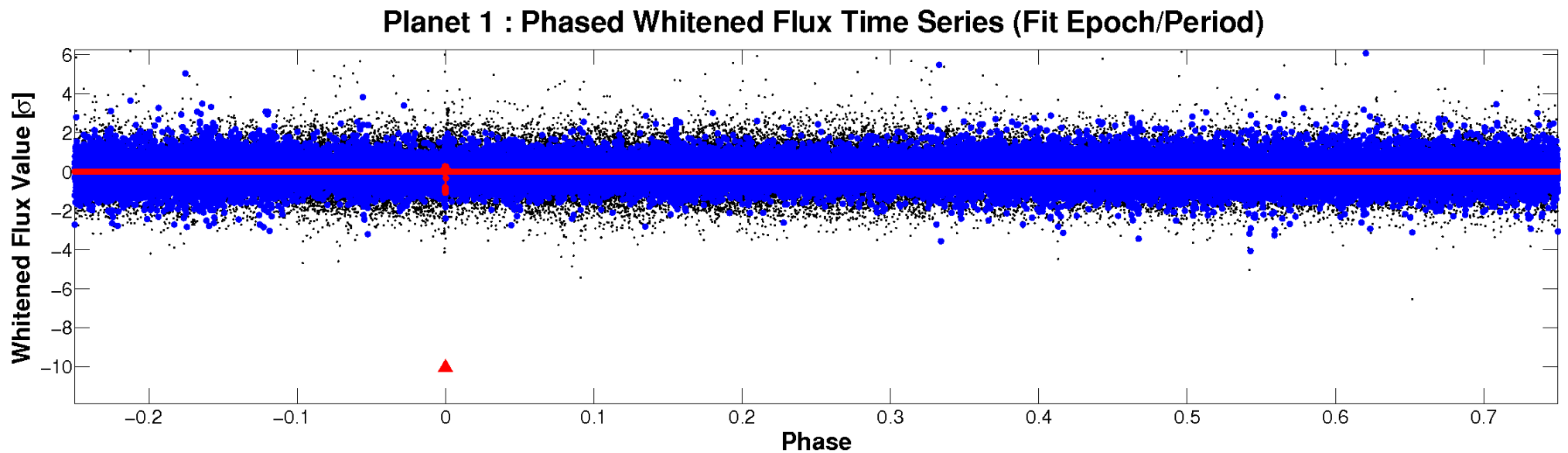
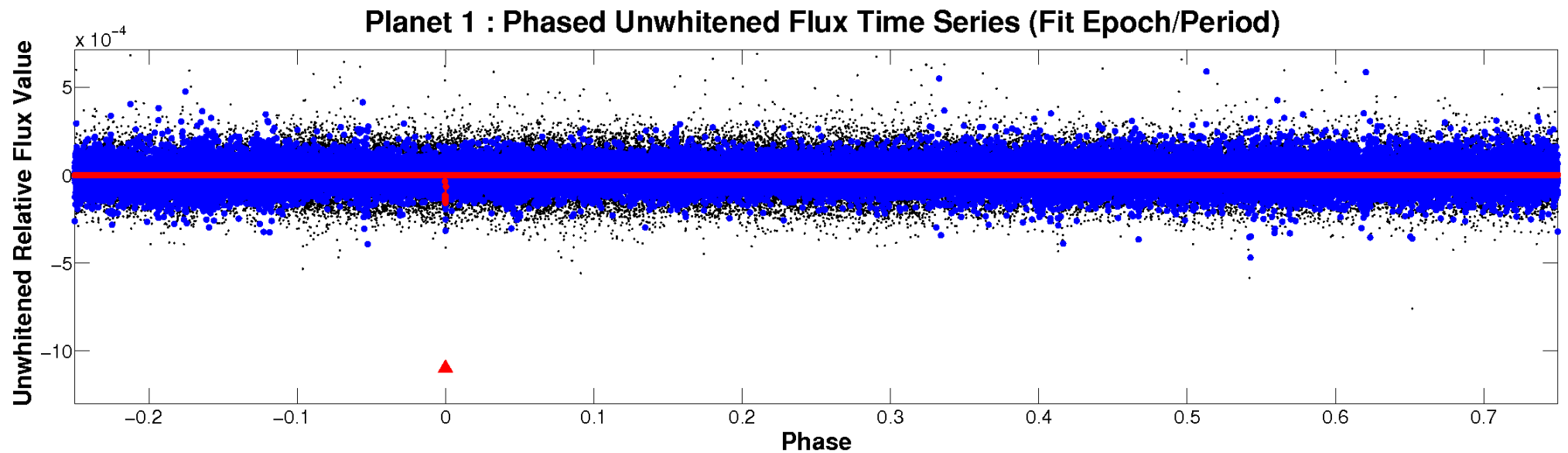


ALT Odd/Even

TCE 008893823-01

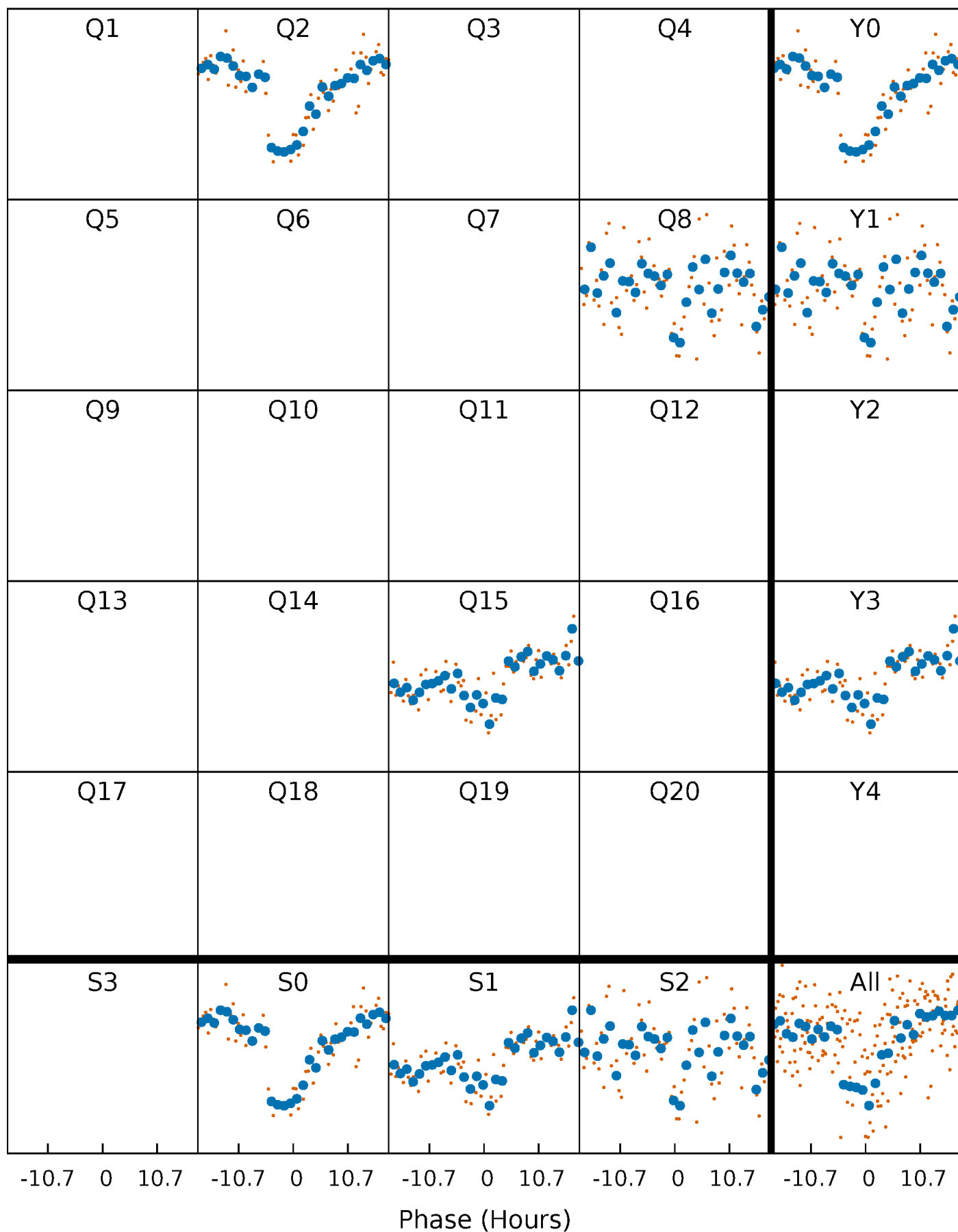


Non-Whitened Vs. Whitened Light Curve



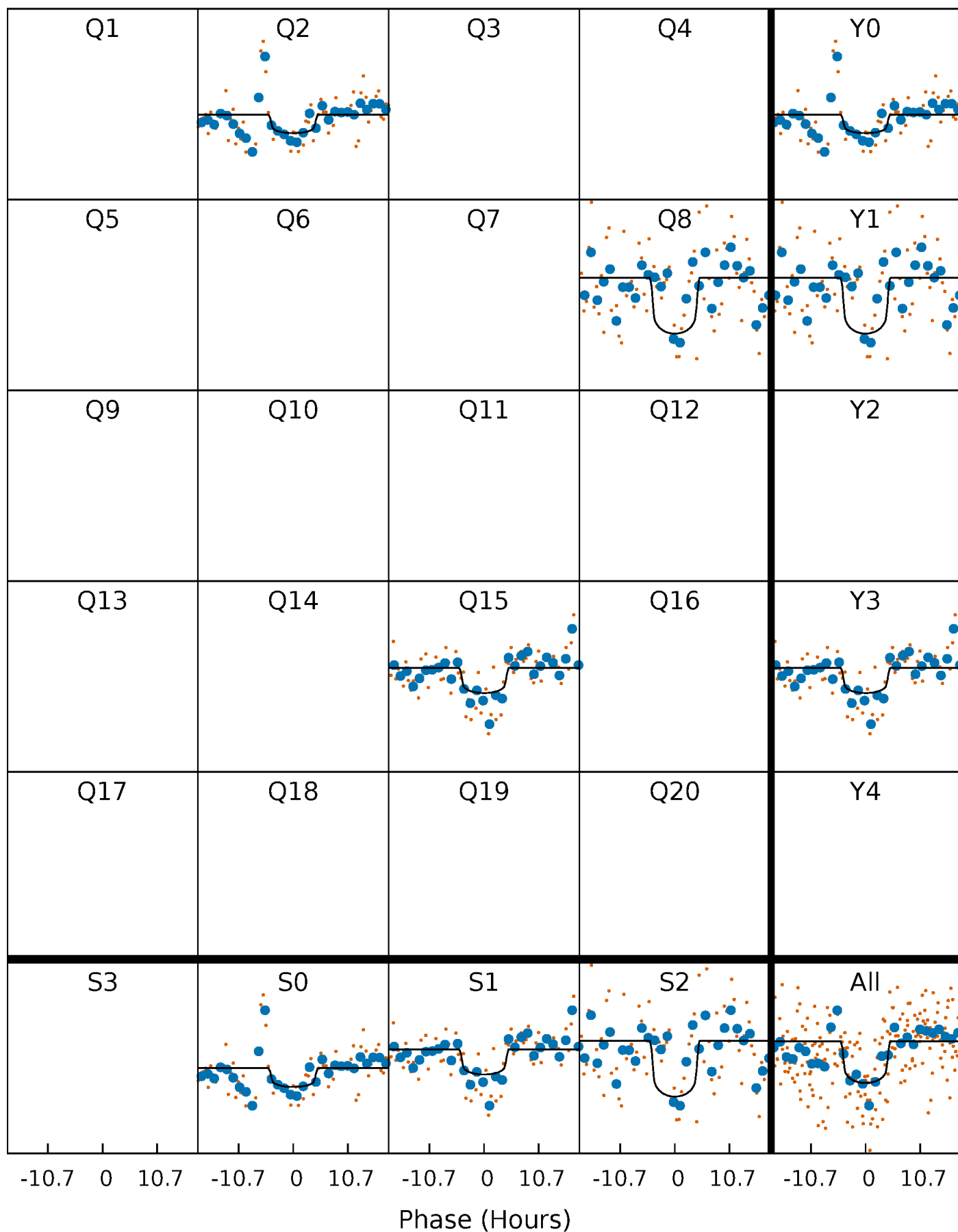
PDC Quarter-Phased Transit Curves

TCE 008893823-01 P=593.904774 Days $T_0=200.599091$ (BKJD)



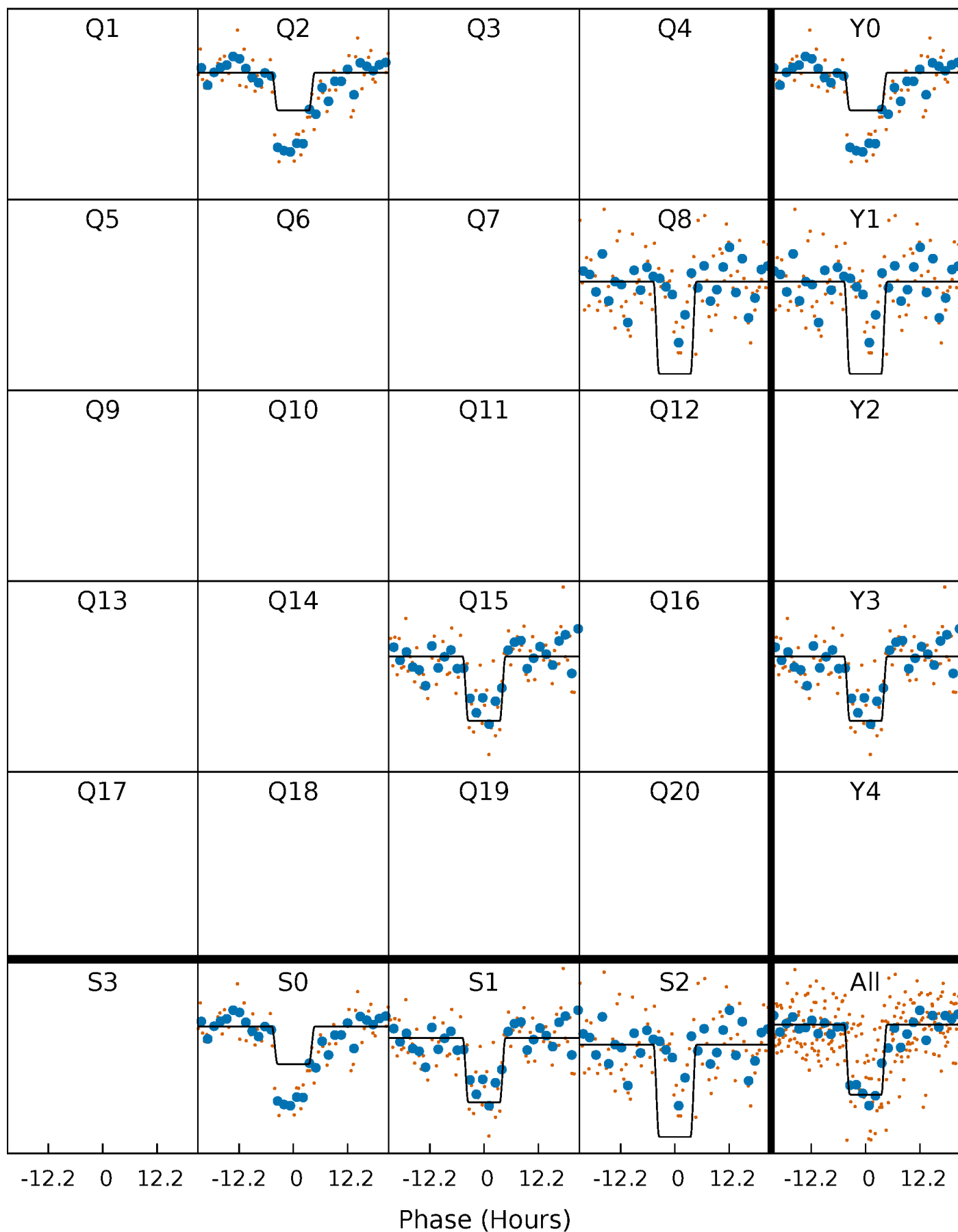
DV Quarter-Phased Transit Curves

TCE 008893823-01 P=593.904774 Days $T_0=200.599091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

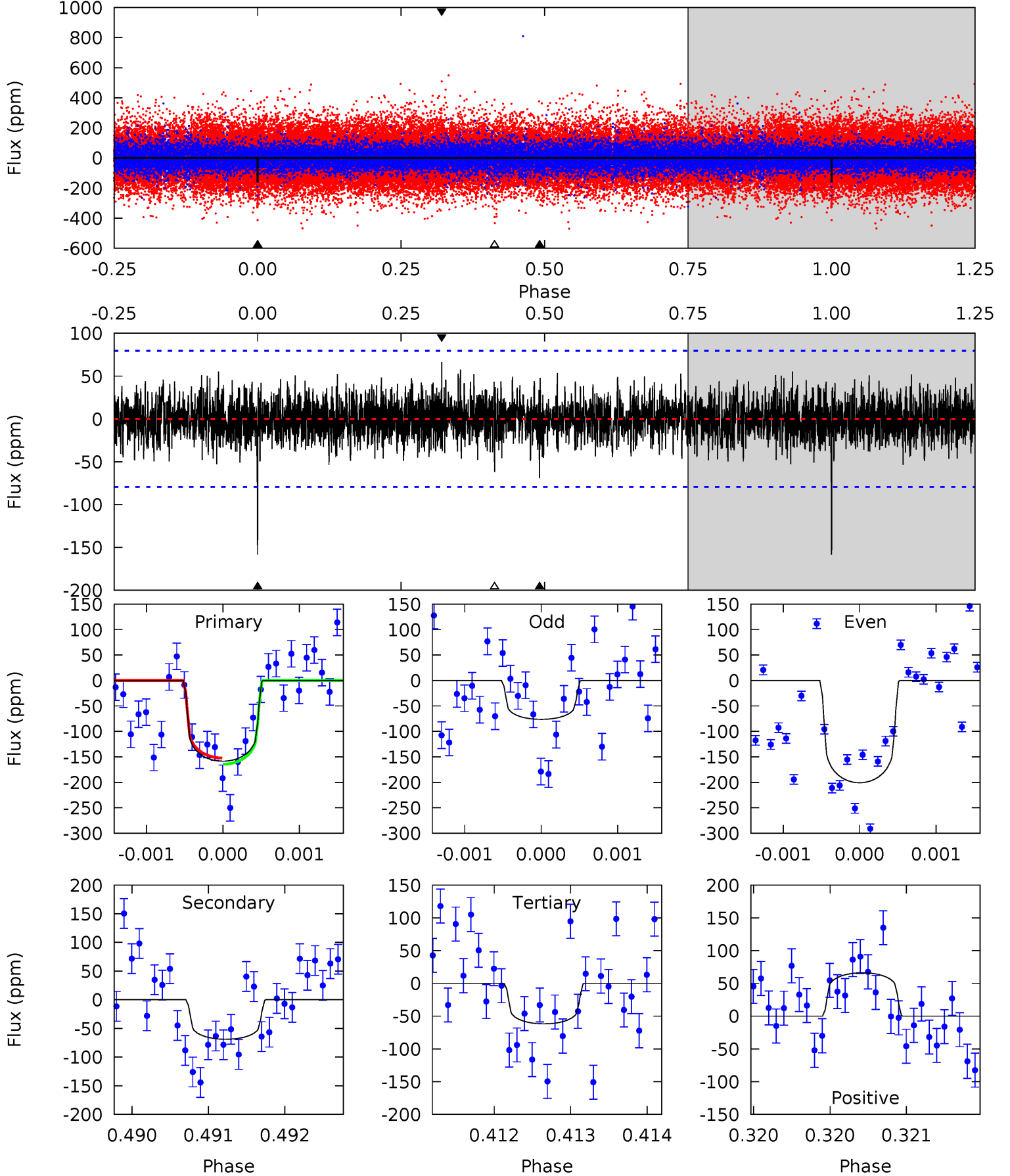
TCE 008893823-01 P=593.915044 Days $T_0=200.569747$ (BKJD)



DV Model-Shift Uniqueness Test

008893823-01, $P = 593.904774$ Days, $E = 200.599091$ Days

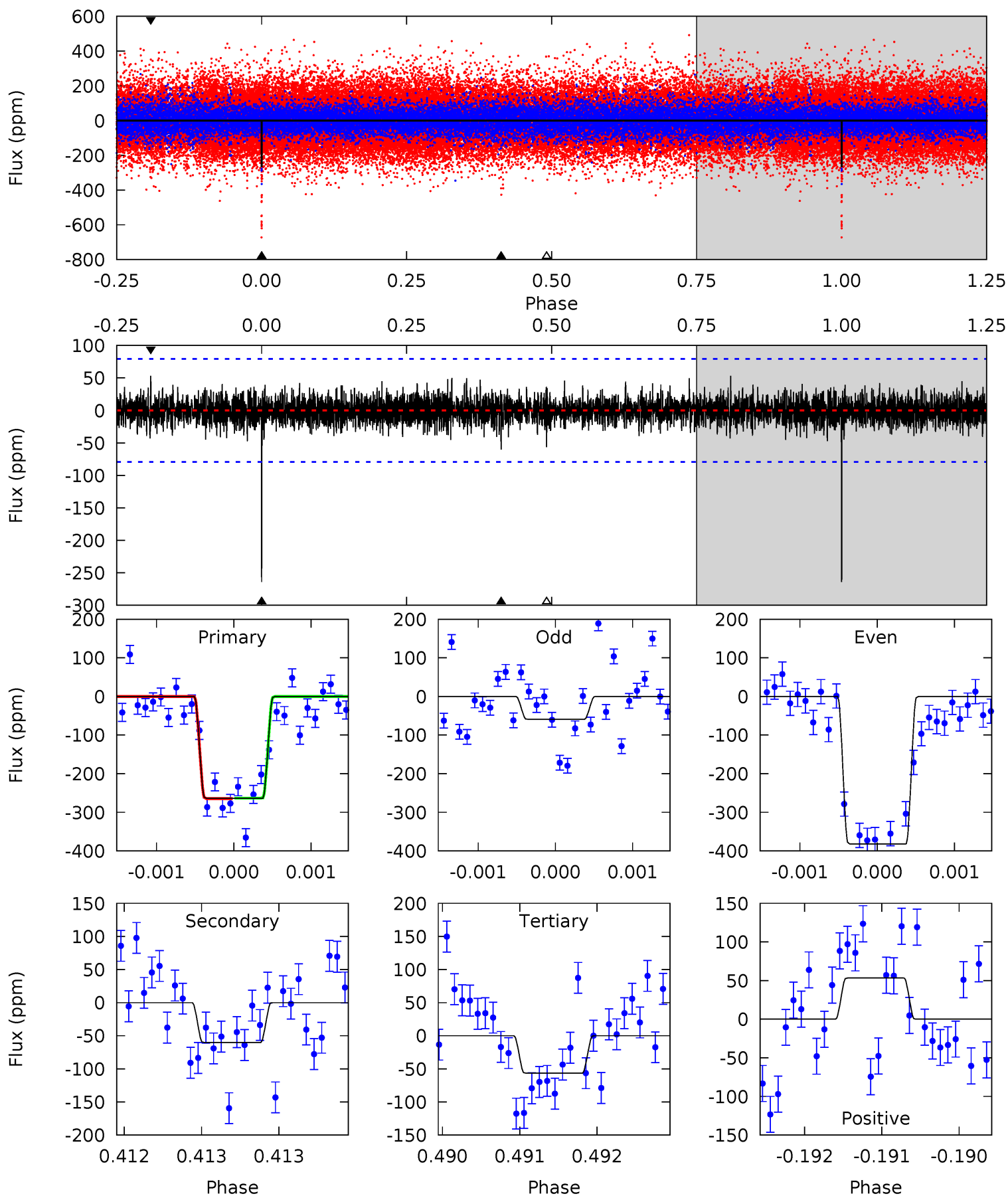
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	4.78	4.29	4.59	5.53	3.41	1.19	6.71	6.40	0.50	0.19	4.10	0.88	0.29	0.42



Alt Model-Shift Uniqueness Test

008893823-01, P = 593.915044 Days, E = 200.569747 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	4.19	3.94	3.72	5.52	3.41	0.96	14.5	14.7	0.25	0.47	10.8	1.21	0.17	0.05



Stellar Parameters For KIC 008893823

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6210^{+167}_{-186}	$4.072^{+0.234}_{-0.126}$	$-0.140^{+0.300}_{-0.300}$	$1.615^{+0.354}_{-0.433}$	$1.123^{+0.189}_{-0.155}$	$0.375^{+0.517}_{-0.141}$
	+3%/-3%	+6%/-3%	+214%/-214%	+22%/-27%	+17%/-14%	+138%/-38%
Source	PHO1	FLK73	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 008893823-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-69 ± 14	$2.31^{+1.04}_{-1.01}$	403^{+26}_{-30}	4951^{+1421}_{-643}	14254^{+31264}_{-7362}
Alt.	-60 ± 14	$2.86^{+1.16}_{-1.04}$	402^{+24}_{-31}	4429^{+856}_{-517}	8253^{+13366}_{-4222}

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

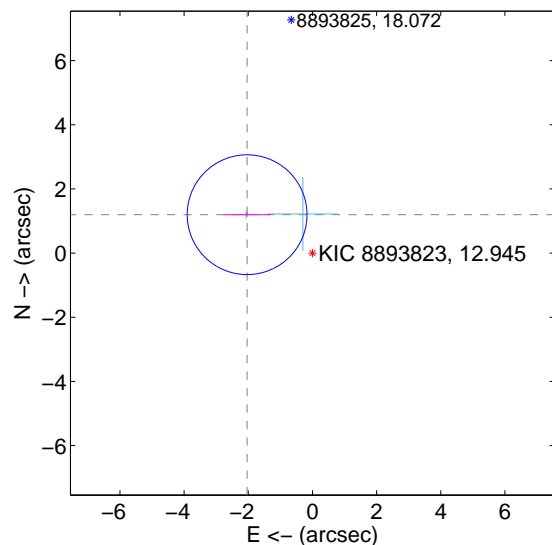
Supplemental centroid analysis for 008893823-01. Kepler magnitude: 12.95. Transit SNR 7.25

There are 2 quarters with good PRF difference image offsets

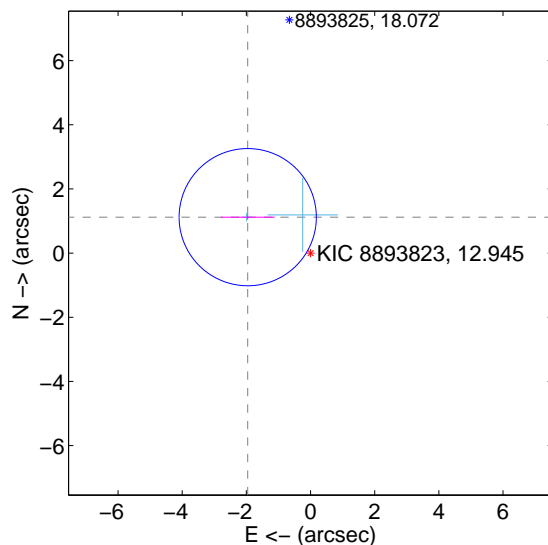
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.363 ± 0.622	3.80	2.037 ± 0.727	1.197 ± 0.067
PRF-fit source offset from KIC position	2.256 ± 0.713	3.16	1.958 ± 0.840	1.120 ± 0.075
photometric centroid source offset	2.29 ± 1.33	1.72	-1.45 ± 1.34	1.78 ± 1.32

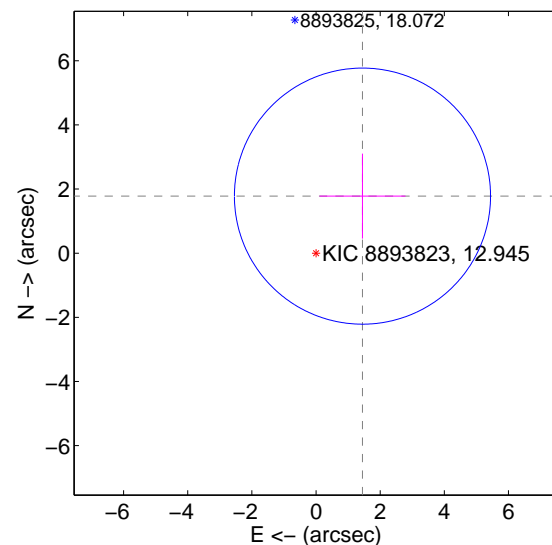
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

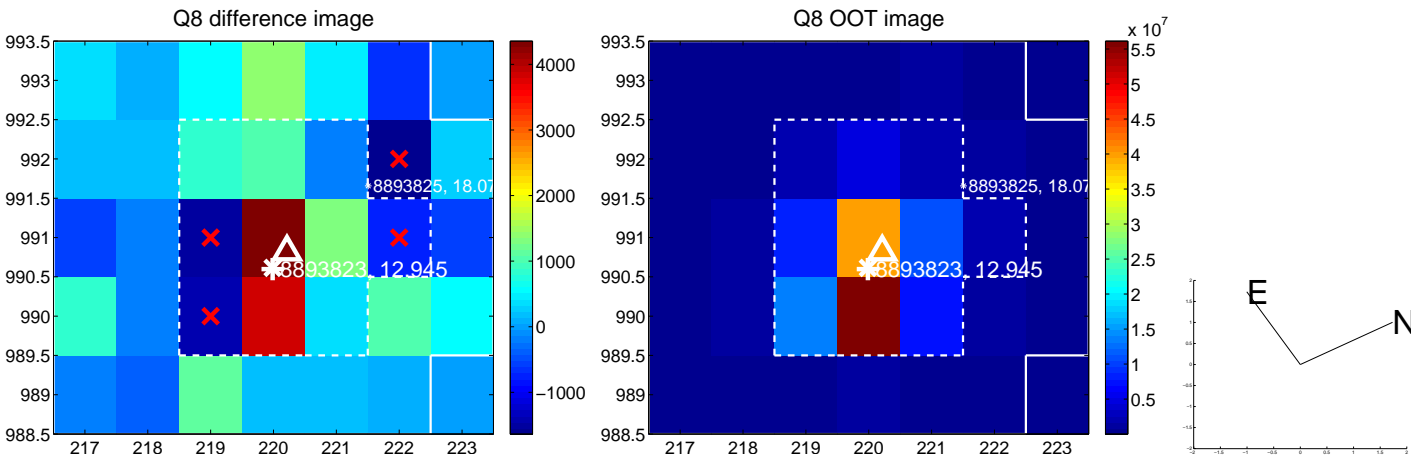


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



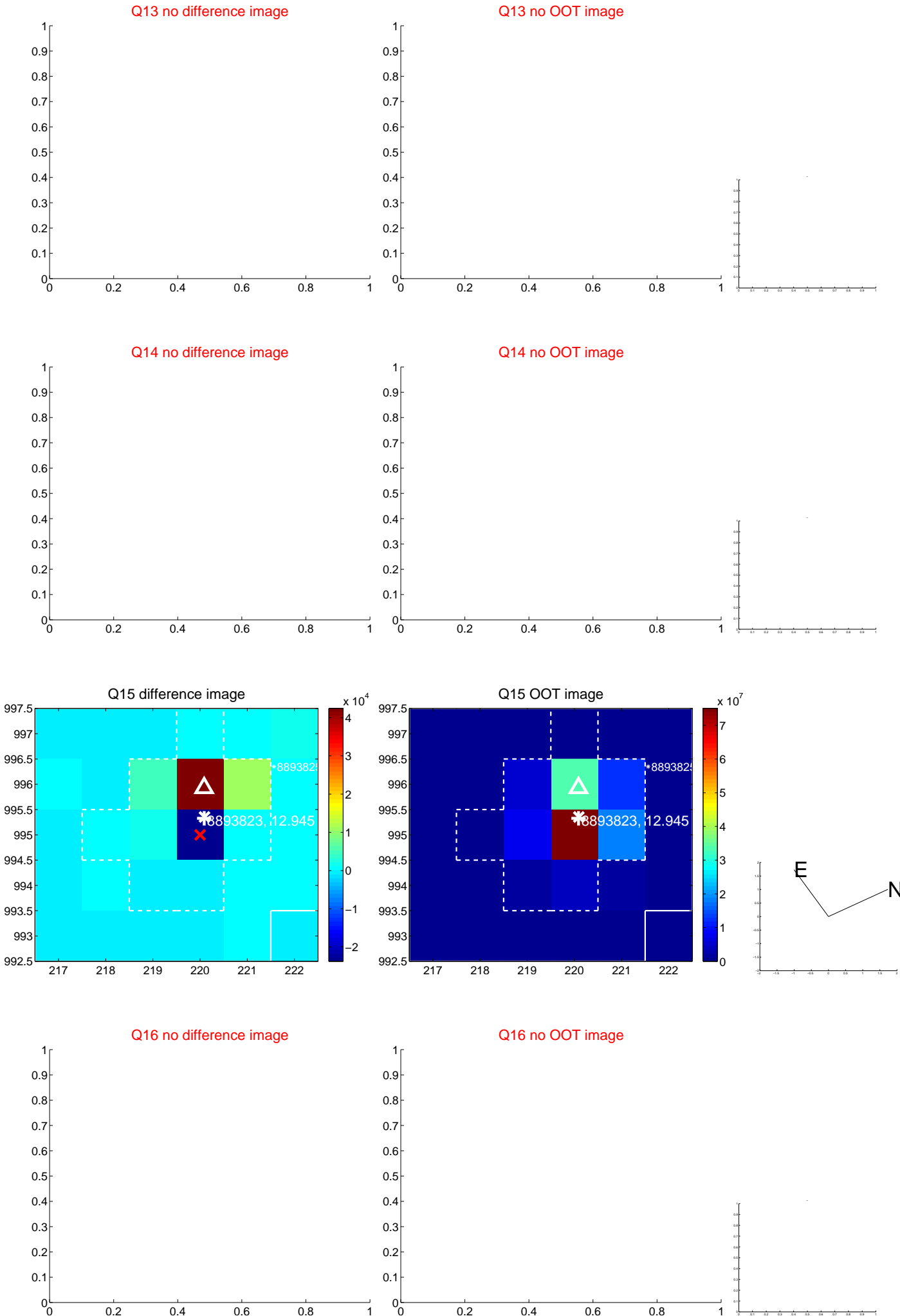
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



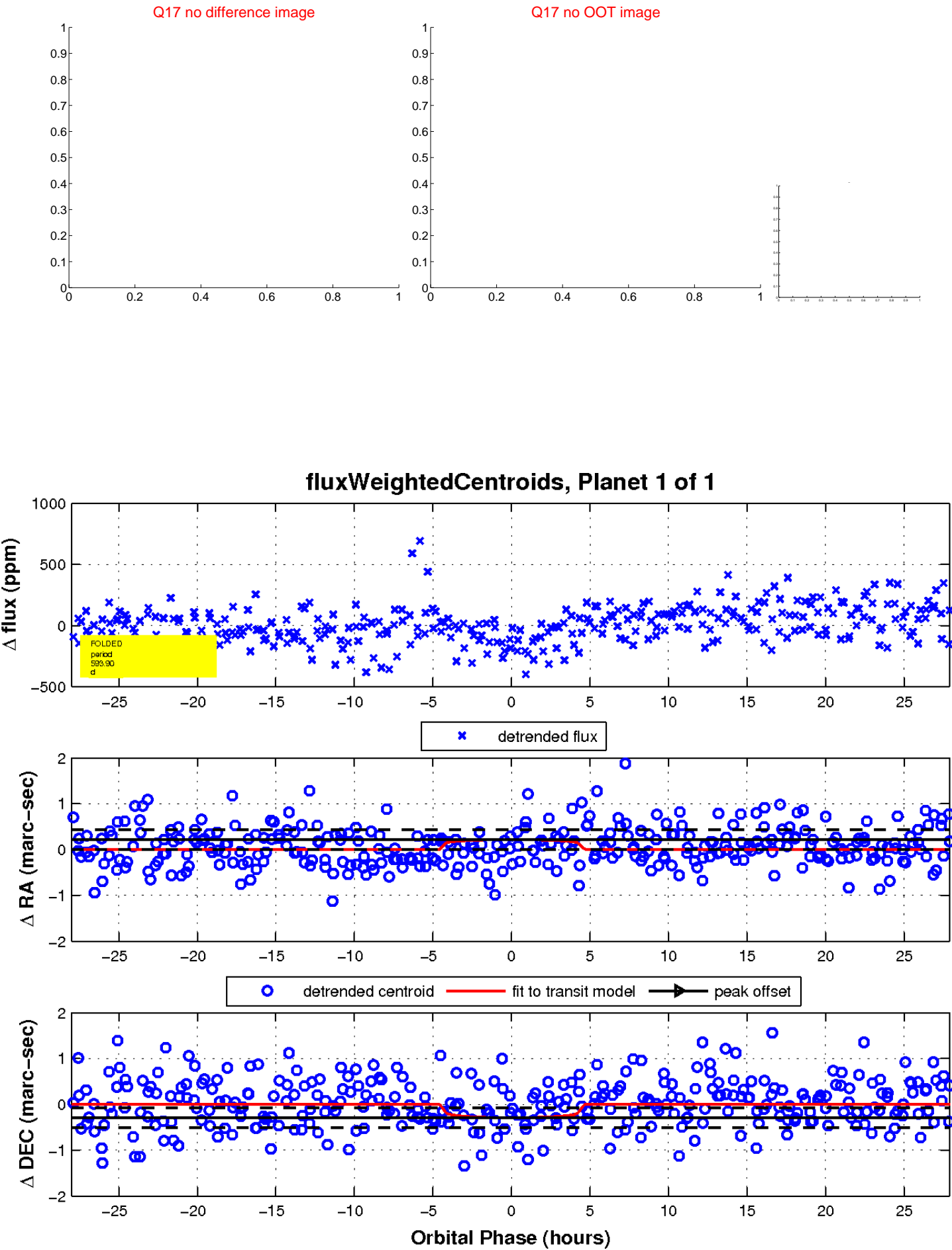
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

