

KIC 007677823

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})
007677823-01	OBS	No	463.154701	577.922110	244.0	22.844	9.1	10.7	0.93	5988	1.57	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677823-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

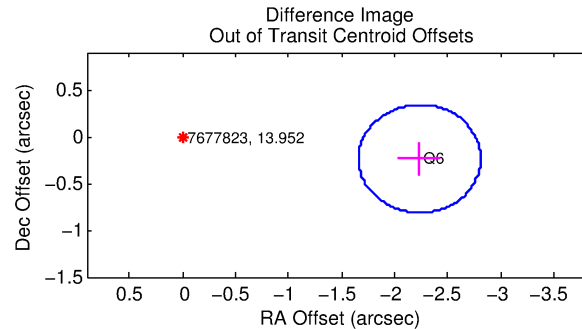
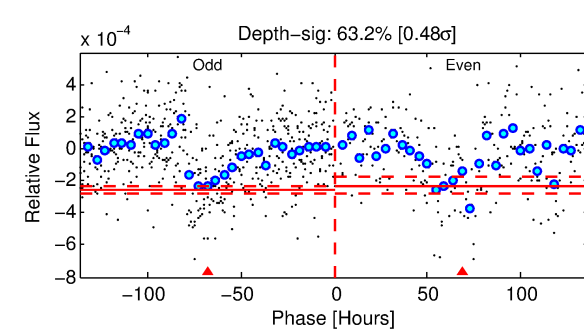
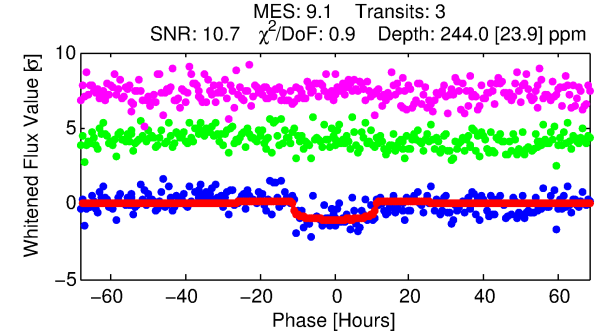
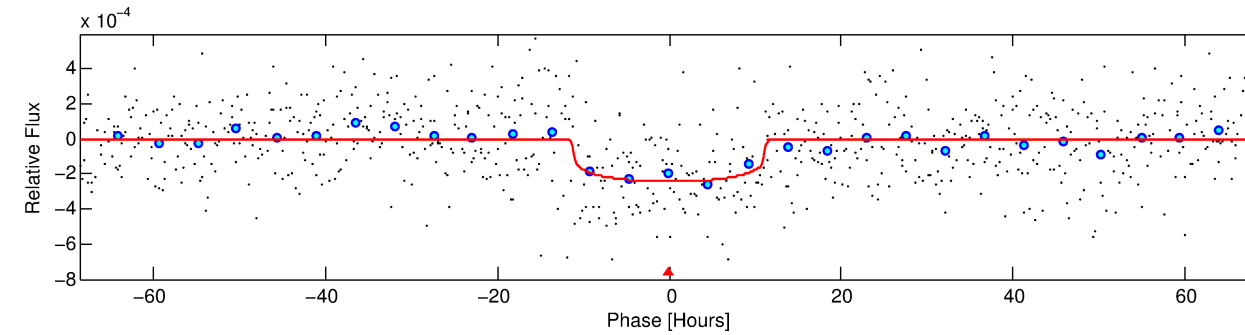
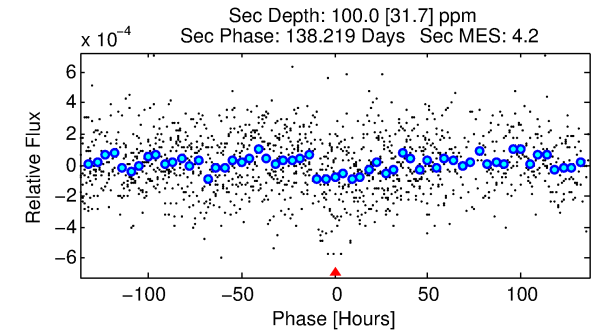
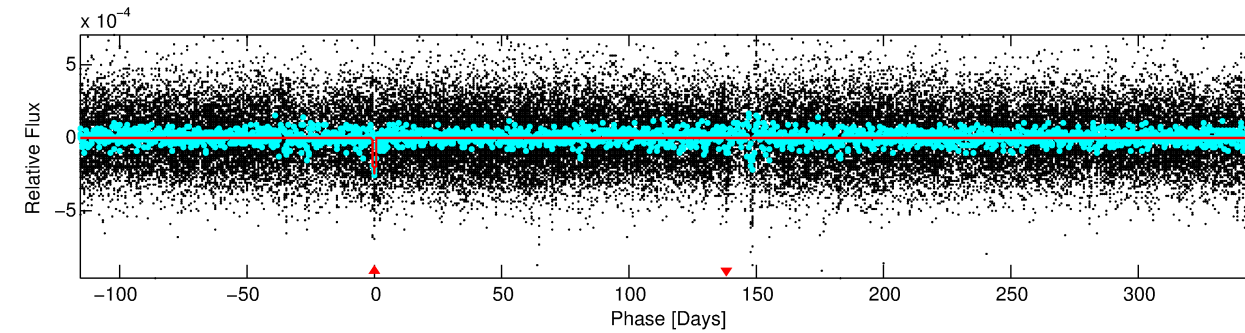
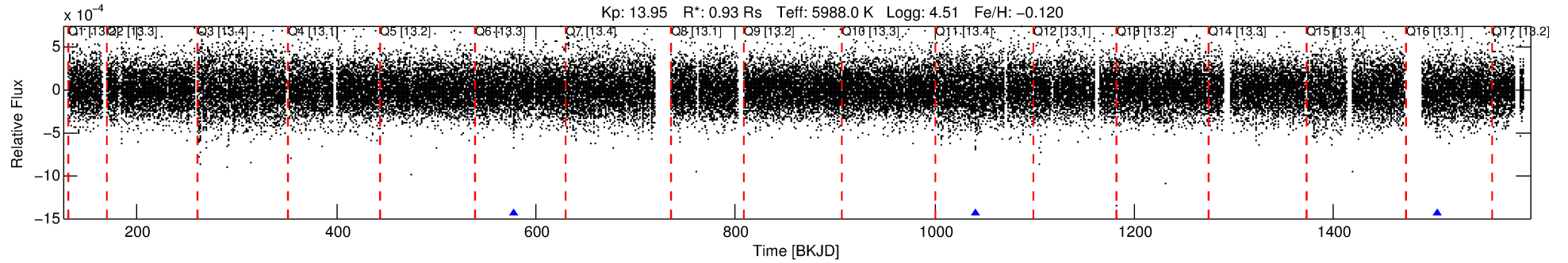
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007677823-01

No Significant Match Found

DV One-Page Summary

KIC: 7677823 Candidate: 1 of 1 Period: 463.155 d



DV Fit Results:

Period = 463.15470 [0.02018] d
Epoch = 577.9221 [0.0226] BKJD
Rp/R* = 0.0154 [0.0038]
a/R* = 110.53 [129.03]
b = 0.72 [0.78]
Seff = 0.72 [0.30]
Teq = 235 [25] K
Rp = 1.57 [0.63] Re
a = 1.1805 [0.3185] AU
Ag = 31148.29 [22158.62] [1.41σ]
Teffp = 4826 [728] K [6.30σ]

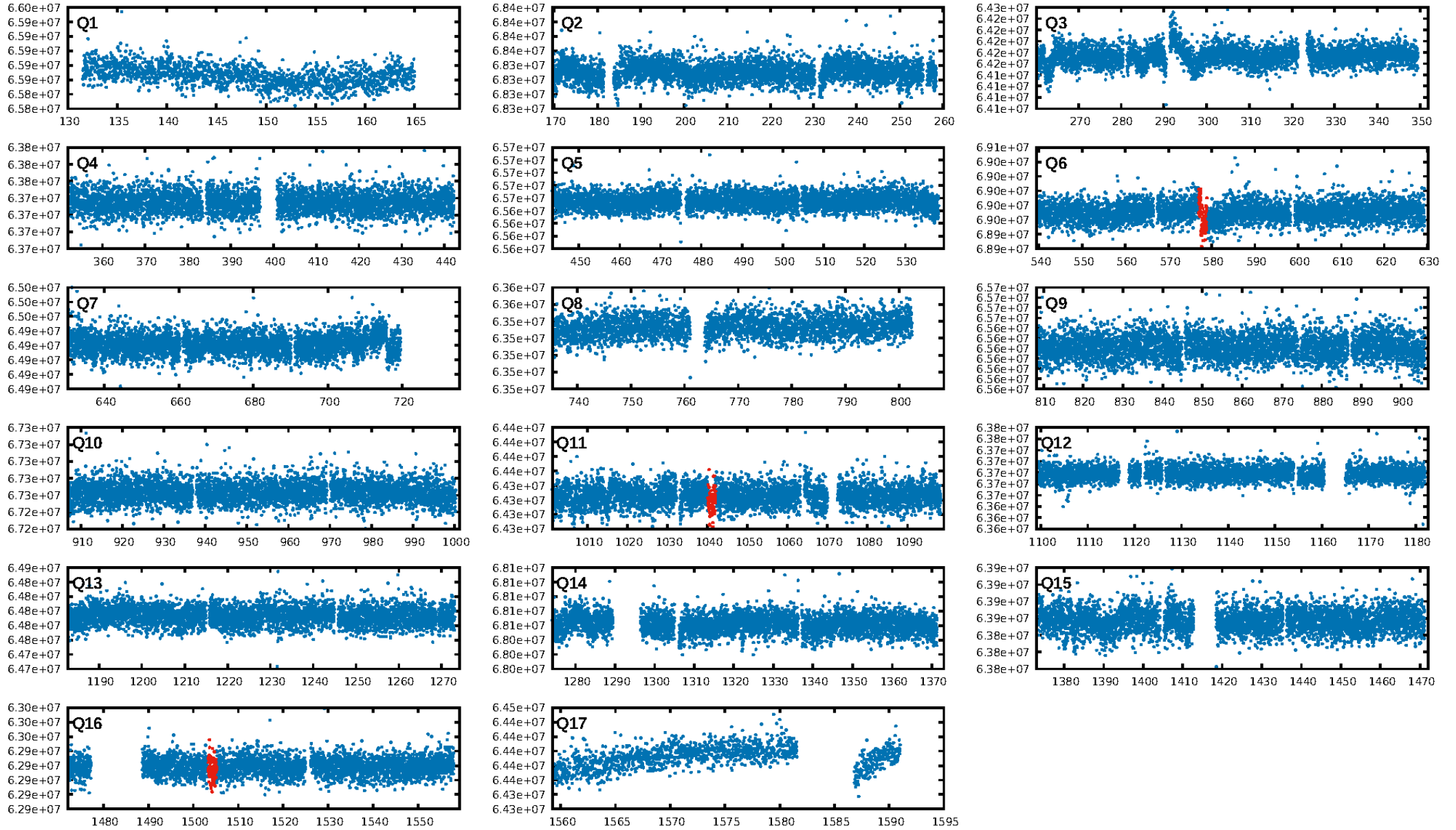
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.37e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.3
Centroid-sig: 2.3%
Centroid-so: 2.082 arcsec [1.92σ]
OotOffset-rm: 2.249 arcsec [11.70σ]
KicOffset-rm: 2.375 arcsec [12.40σ]
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]

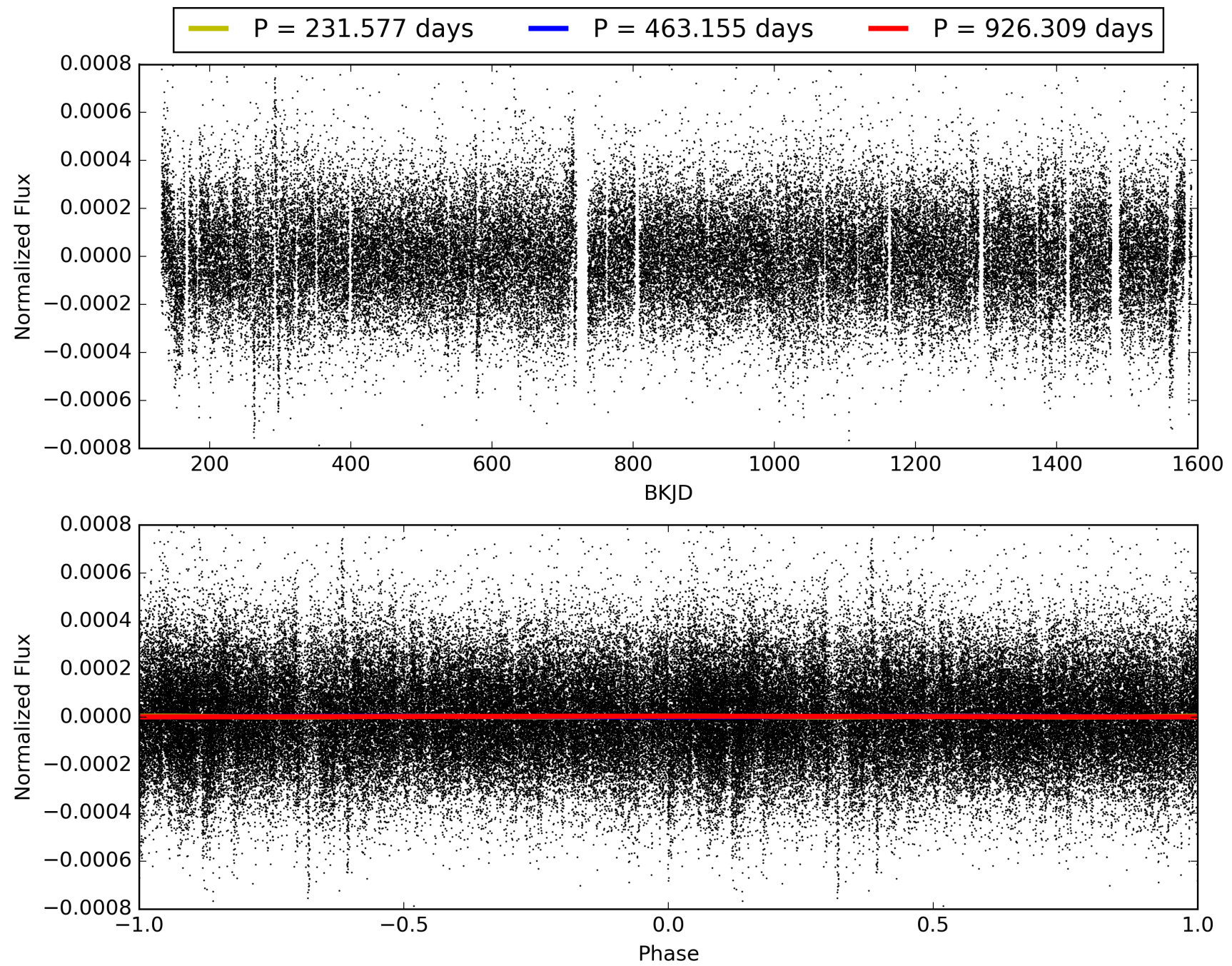
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:14:56 Z

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

TCE 007677823-01, PDC Light Curves

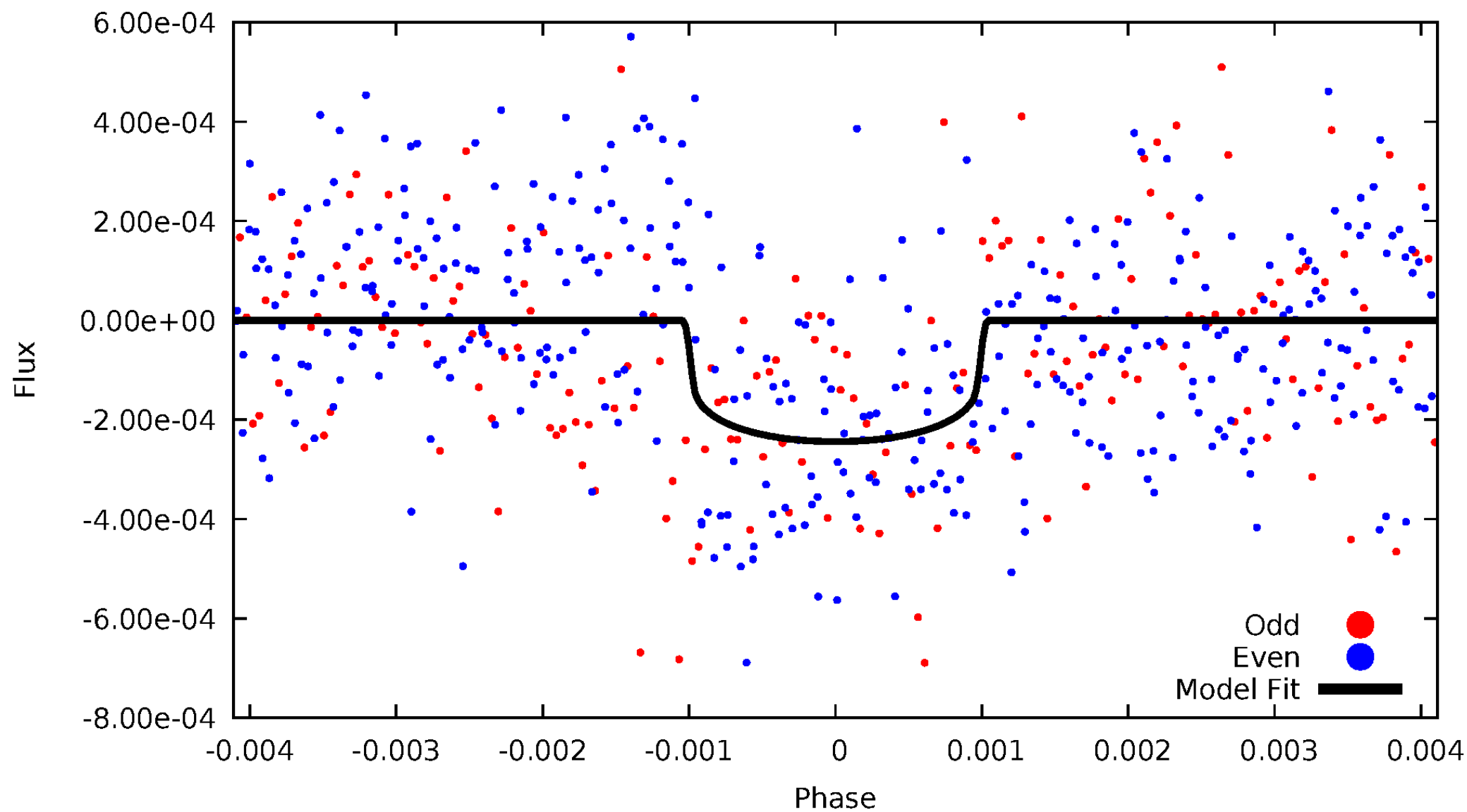


TCE 007677823-01



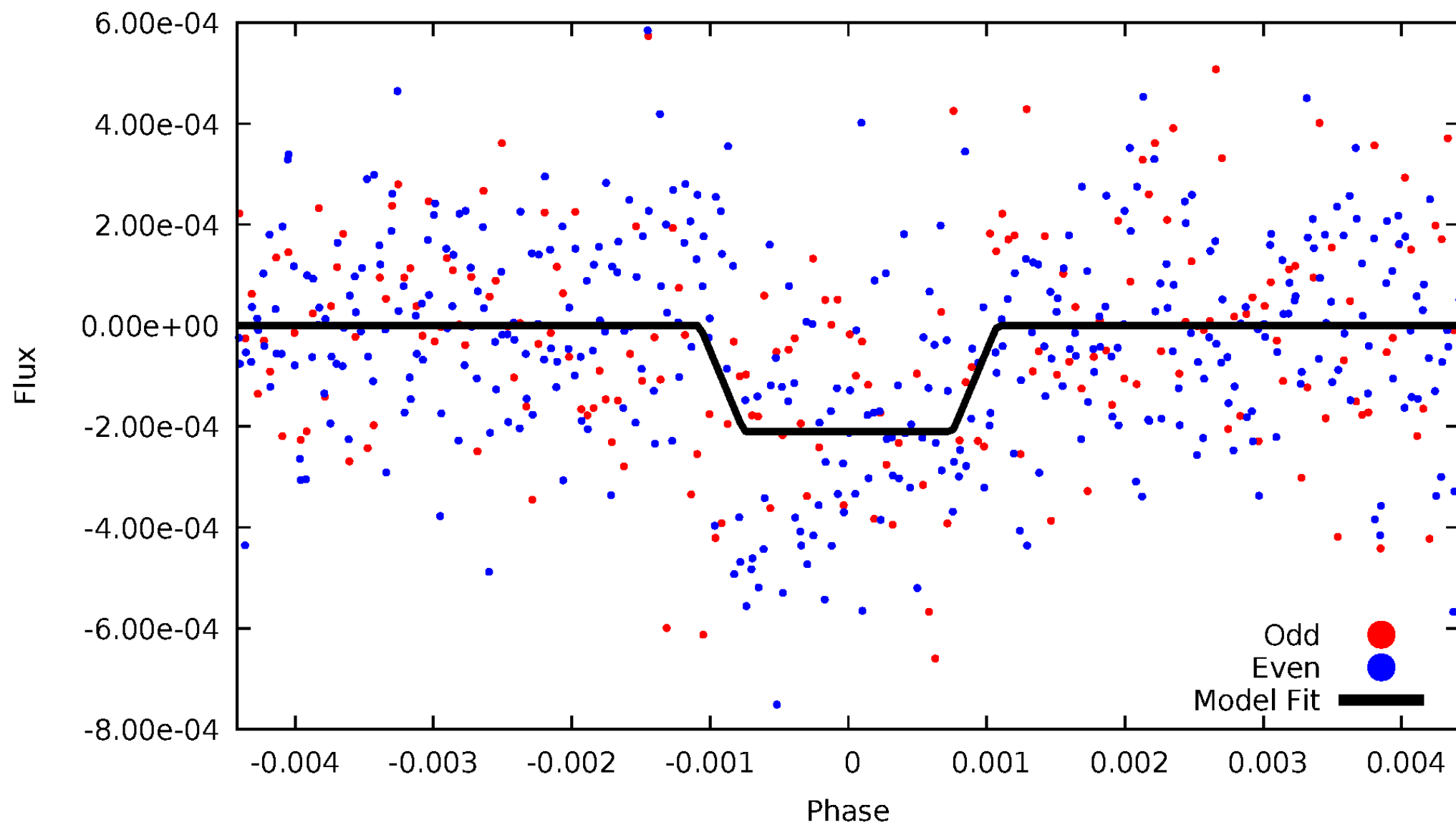
DV Odd/Even

TCE 007677823-01



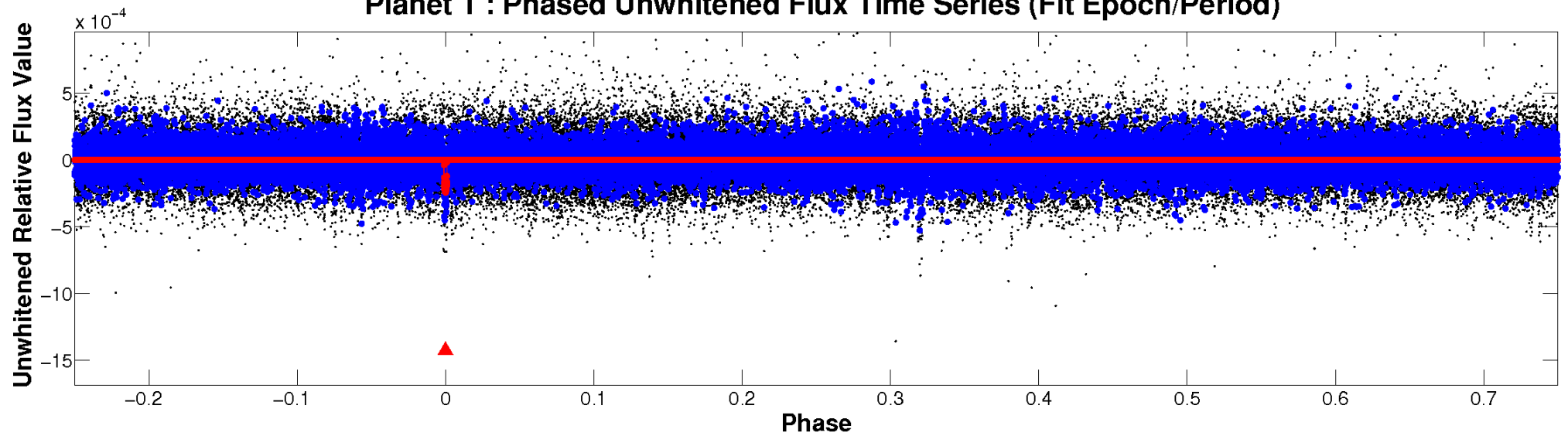
ALT Odd/Even

TCE 007677823-01

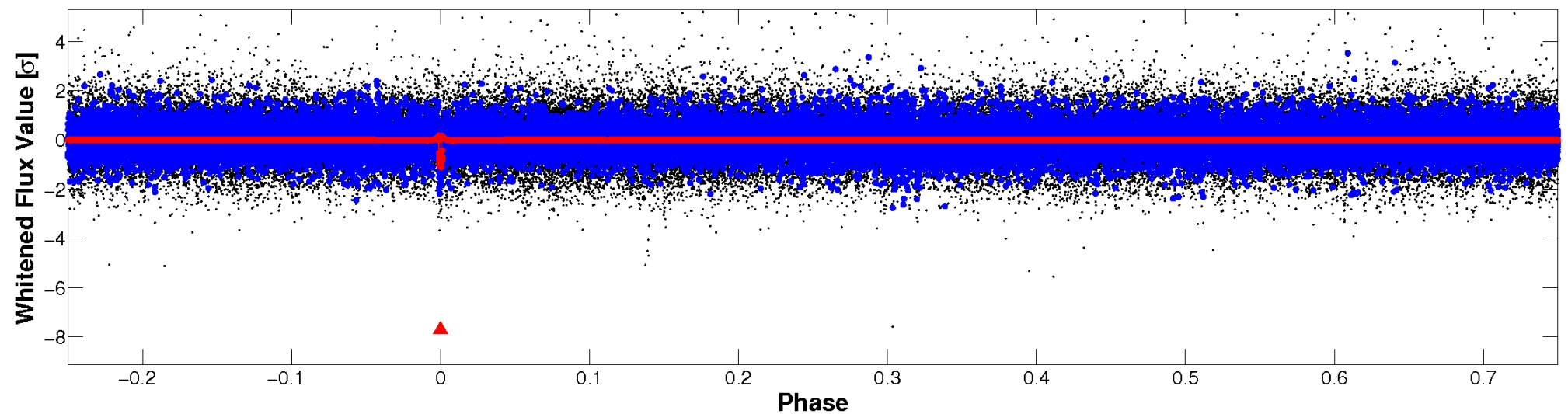


Non-Whitened Vs. Whitened Light Curve

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

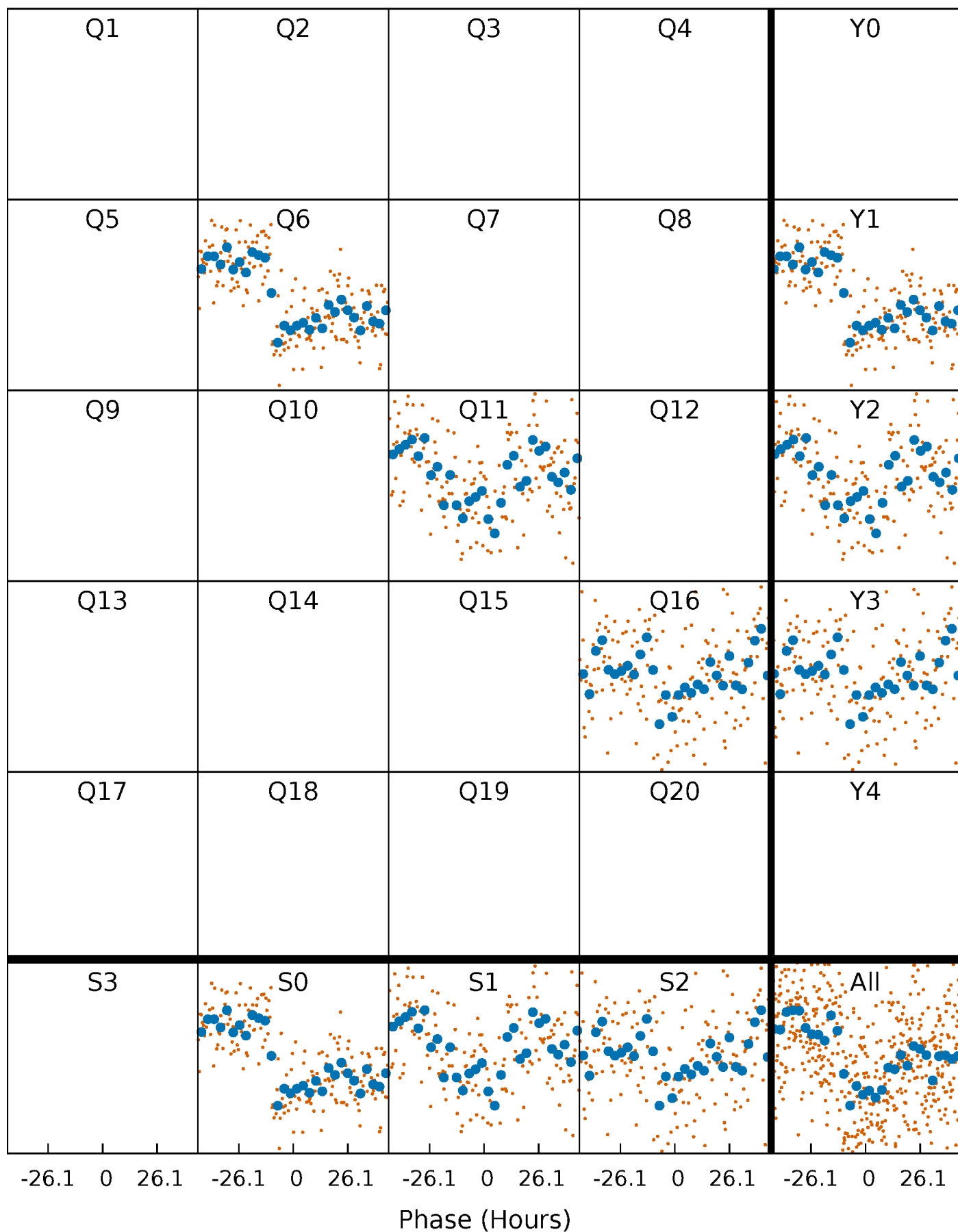


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



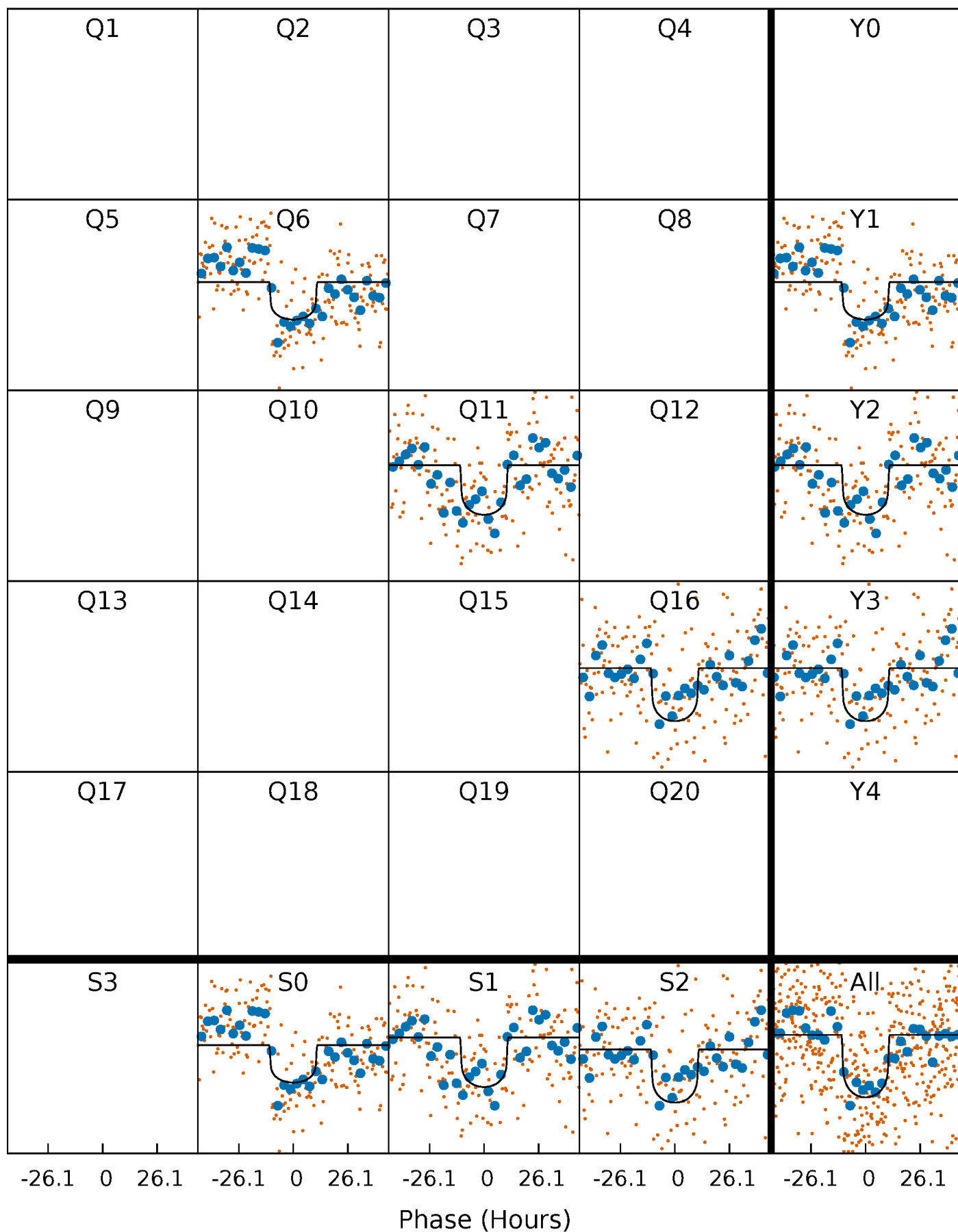
PDC Quarter-Phased Transit Curves

TCE 007677823-01 P=463.154701 Days $T_0=577.922110$ (BKJD)



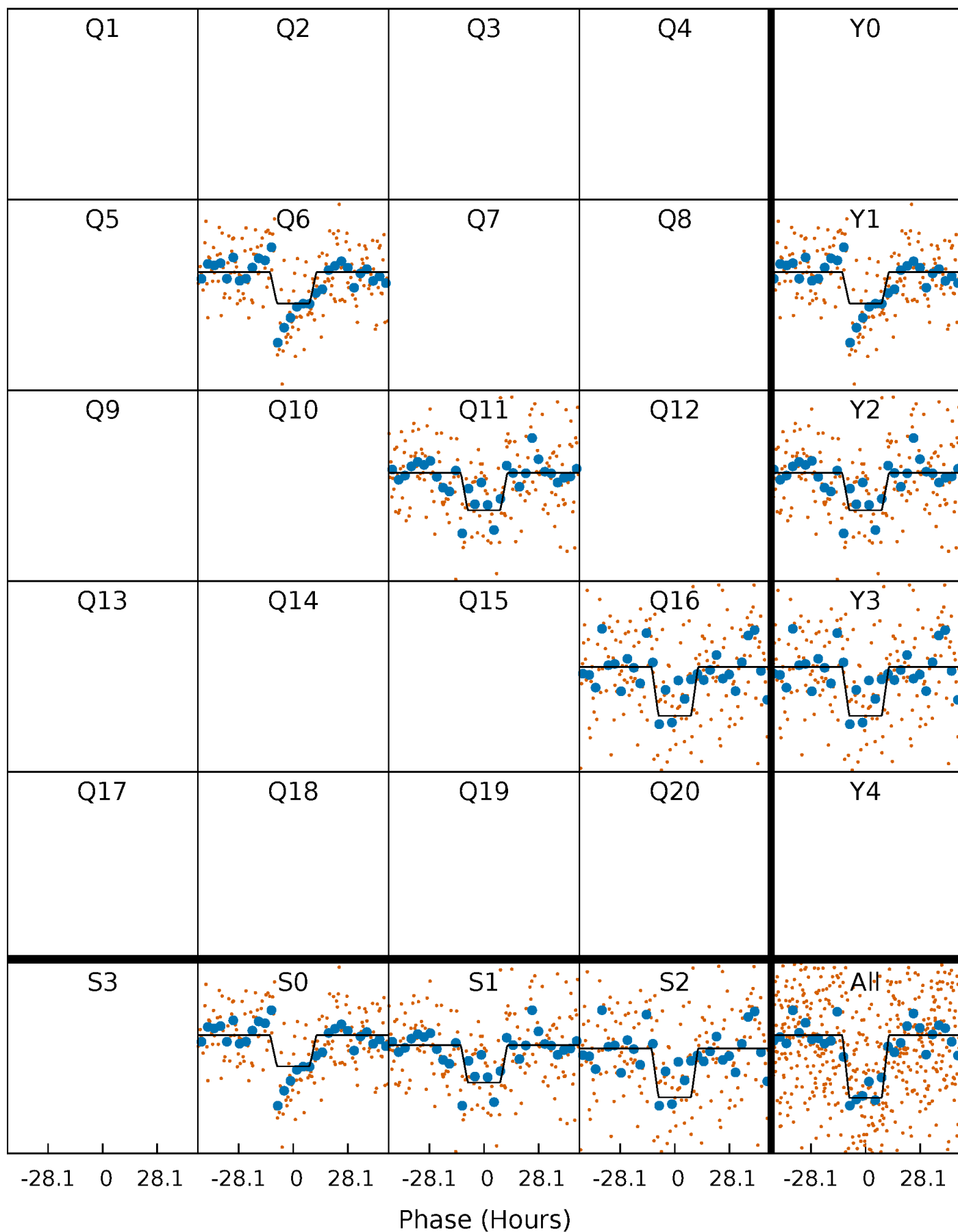
DV Quarter-Phased Transit Curves

TCE 007677823-01 P=463.154701 Days $T_0=577.922110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

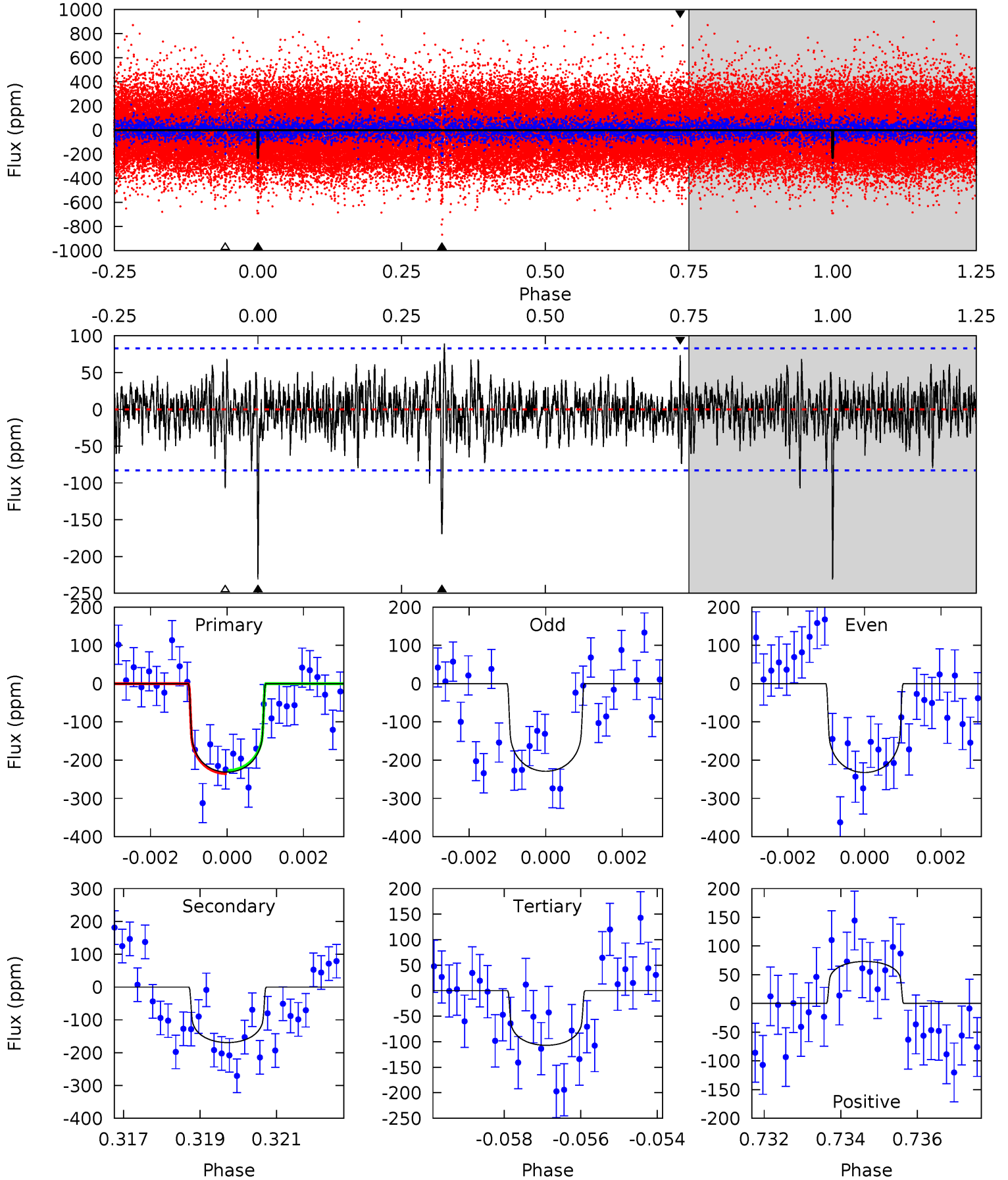
TCE 007677823-01 P=463.187938 Days $T_0=577.880324$ (BKJD)



DV Model-Shift Uniqueness Test

007677823-01, P = 463.154701 Days, E = 114.767409 Days

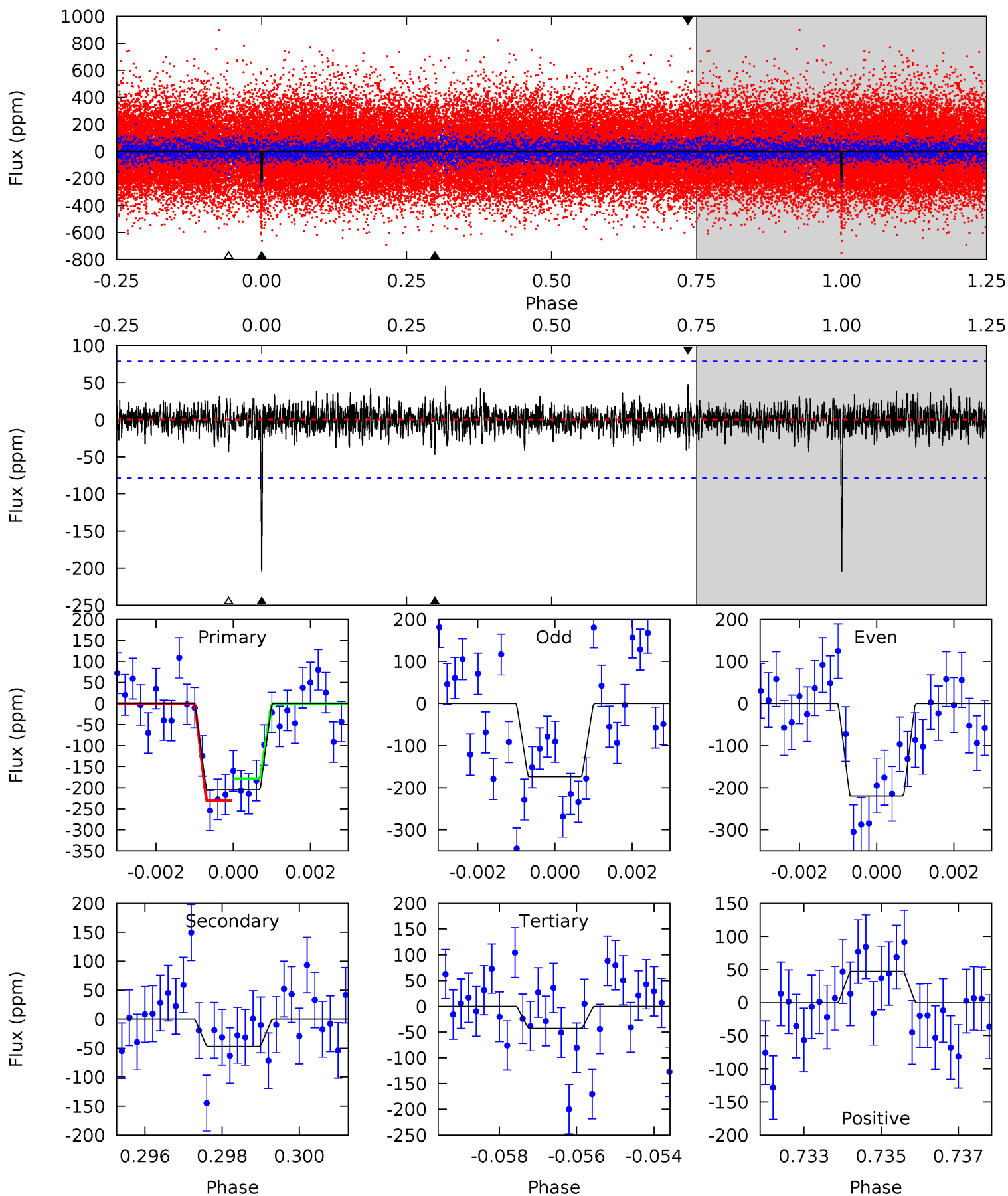
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	10.9	6.87	4.70	5.32	3.08	1.48	7.98	10.1	4.00	6.17	0.10	1.01	0.28	0.26



Alt Model-Shift Uniqueness Test

007677823-01, P = 463.187938 Days, E = 114.692386 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	3.14	2.86	3.17	5.31	3.07	0.81	10.9	10.6	0.28	-0.03	1.44	1.17	0.19	1.73



Stellar Parameters For KIC 007677823

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5988^{+161}_{-197}	$4.507^{+0.039}_{-0.221}$	$-0.120^{+0.300}_{-0.300}$	$0.934^{+0.294}_{-0.078}$	$1.021^{+0.134}_{-0.134}$	$1.767^{+0.385}_{-0.972}$
	+3%/-3%	+1%/-5%	+250%/-250%	+31%/-8%	+13%/-13%	+22%/-55%
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 007677823-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-169 ± 16	$1.65^{+0.49}_{-0.44}$	338^{+25}_{-17}	5527^{+837}_{-571}	45724^{+40473}_{-18382}
Alt.	-47 ± 15	$1.59^{+0.49}_{-0.44}$	336^{+24}_{-16}	4321^{+545}_{-461}	14220^{+11911}_{-6815}

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

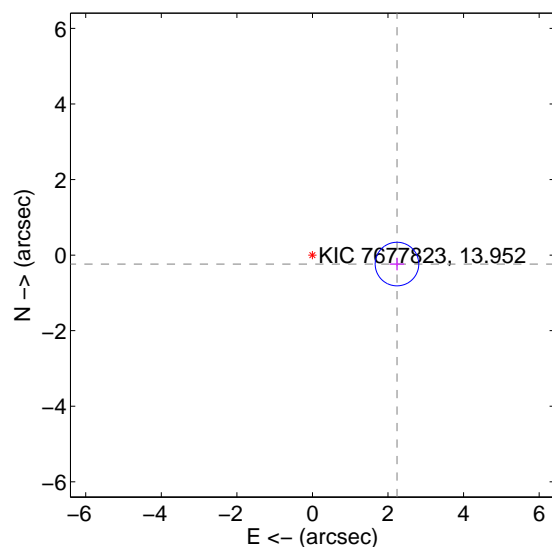
Supplemental centroid analysis for 007677823-01. Kepler magnitude: 13.95. Transit SNR 10.68

There are 1 quarters with good PRF difference image offsets

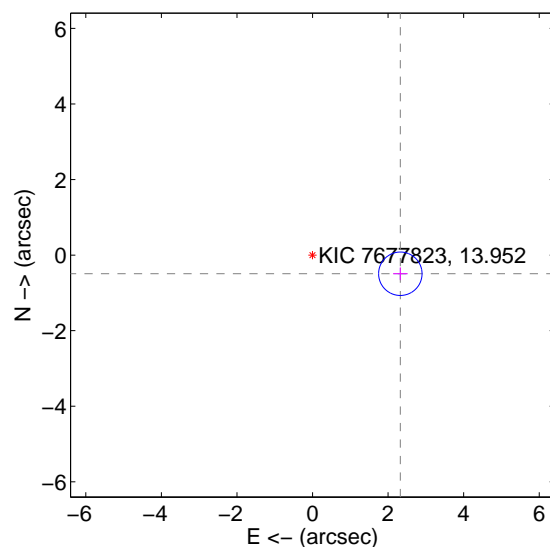
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.249 ± 0.192	11.70	-2.237 ± 0.192	-0.237 ± 0.169
PRF-fit source offset from KIC position	2.375 ± 0.192	12.40	-2.323 ± 0.192	-0.493 ± 0.169
photometric centroid source offset	2.08 ± 1.08	1.92	-2.01 ± 1.09	0.53 ± 1.02

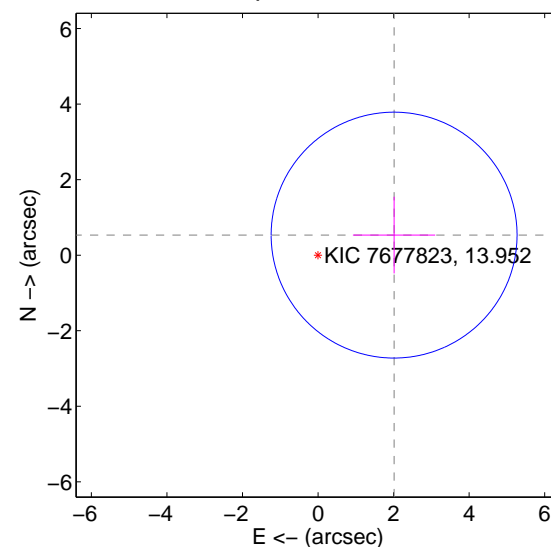
offset from difference PRF-fit to OOT PRF-fit



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.



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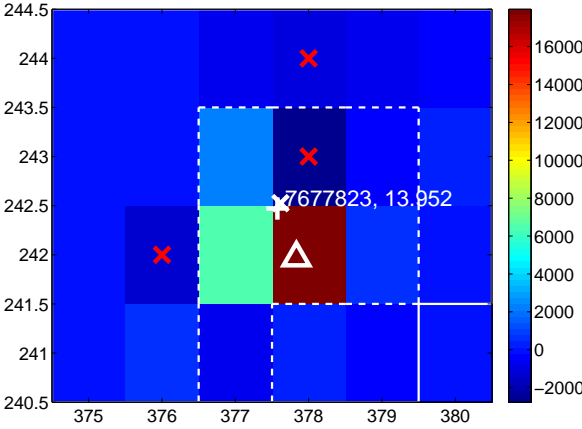
Q5 no difference image



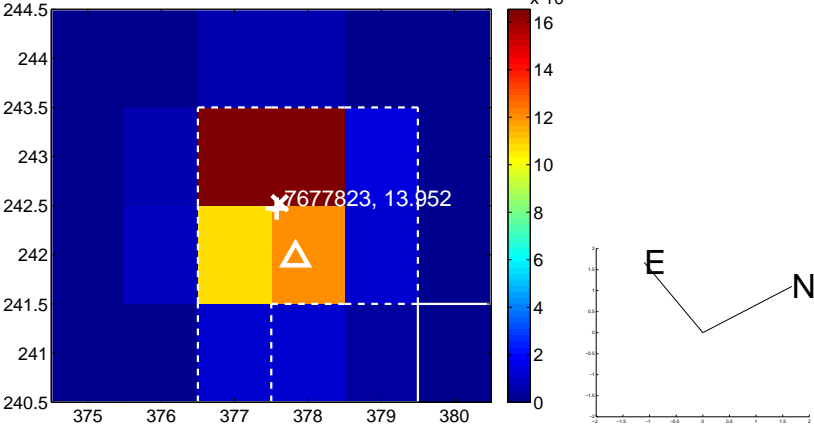
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



Q8 no OOT image



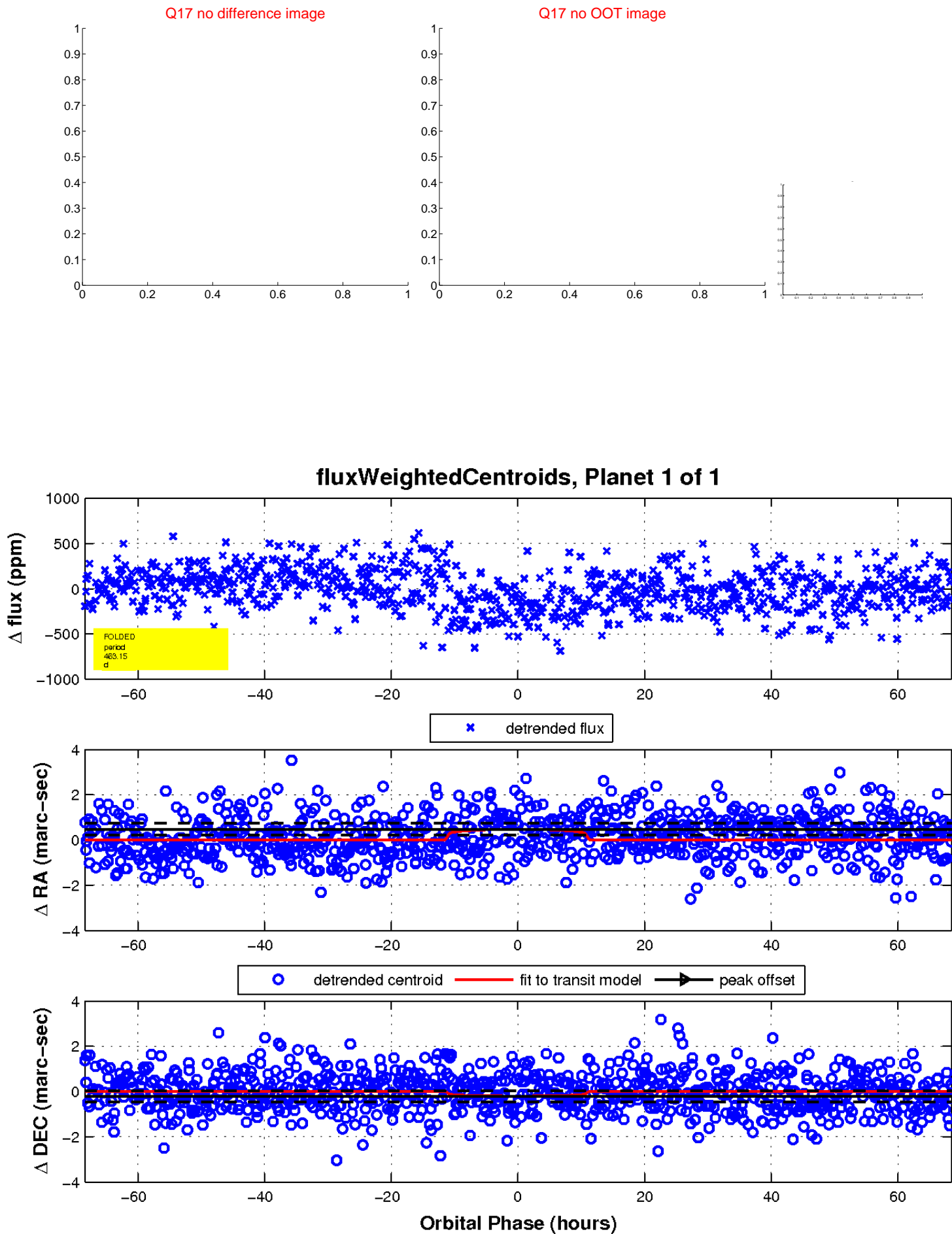
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

