

KIC 008039595

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})
008039595-01	OBS	No	359.696727	188.600652	2171.6	32.315	24.0	15.0	0.98	5892	8.59	1.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008039595-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

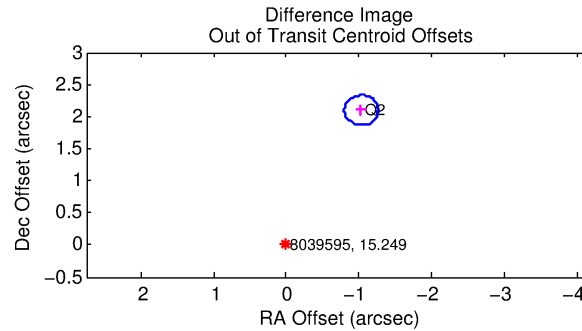
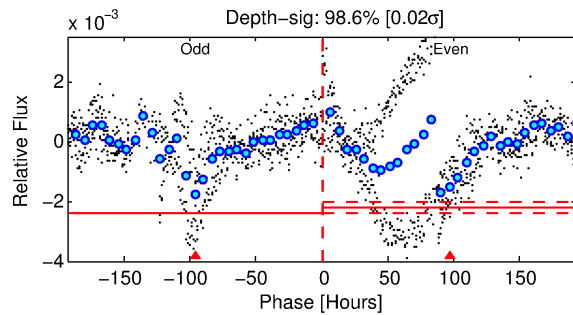
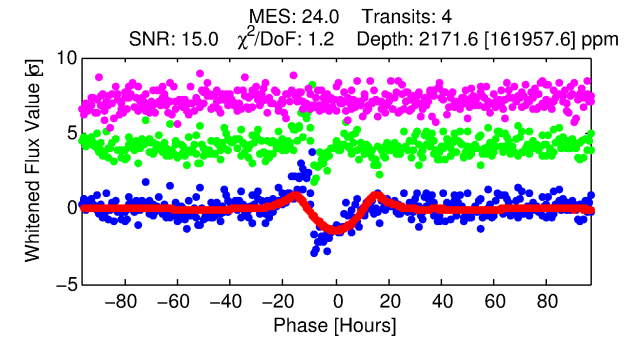
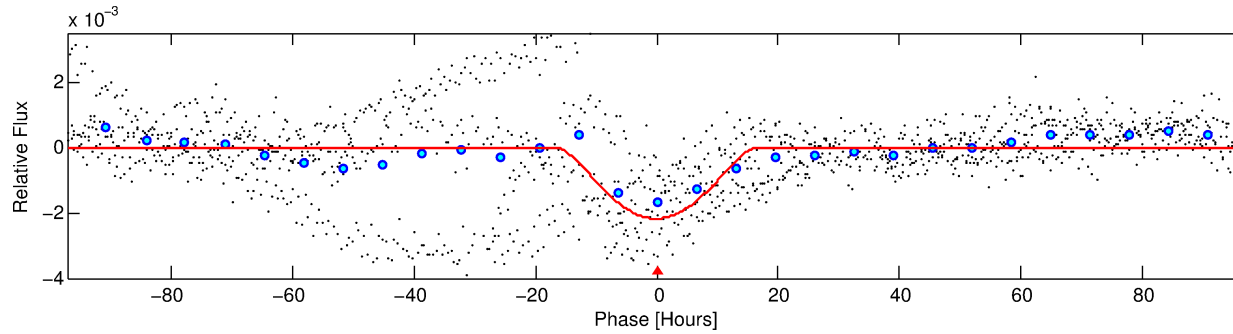
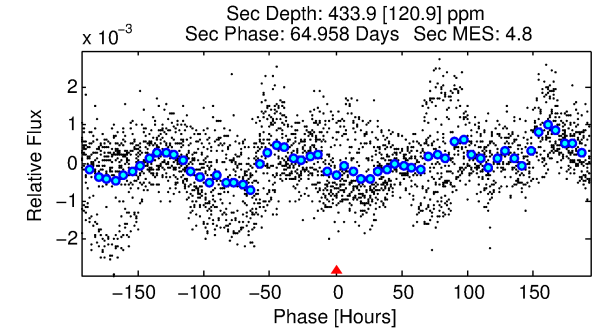
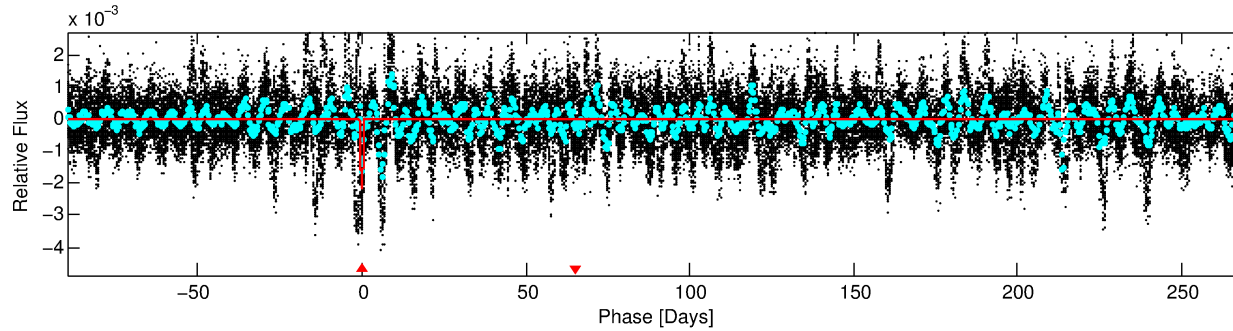
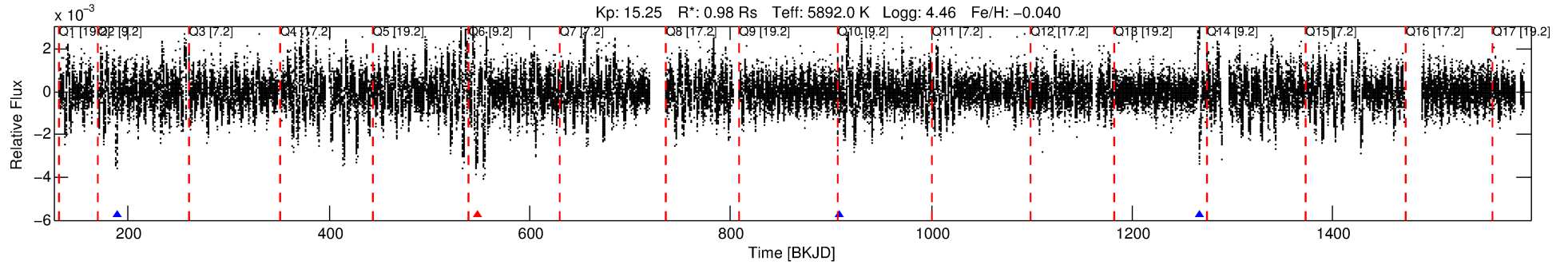
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008039595-01

No Significant Match Found

DV One-Page Summary

KIC: 8039595 Candidate: 1 of 1 Period: 359.697 d



DV Fit Results:

Period = 359.69673 [0.01441] d
Epoch = 188.6007 [0.0317] BKJD
Rp/R* = 0.0807 [0.0958]
a/R* = 34.86 [8.82]
b = 1.00 [4.16]
Seff = 1.05 [0.42]
Teq = 258 [26] K
Rp = 8.59 [10.52] Re
a = 0.9915 [0.2537] AU
Ag = 3178.22 [7696.63] [0.41σ]
Teff = 2994 [1793] K [1.53σ]

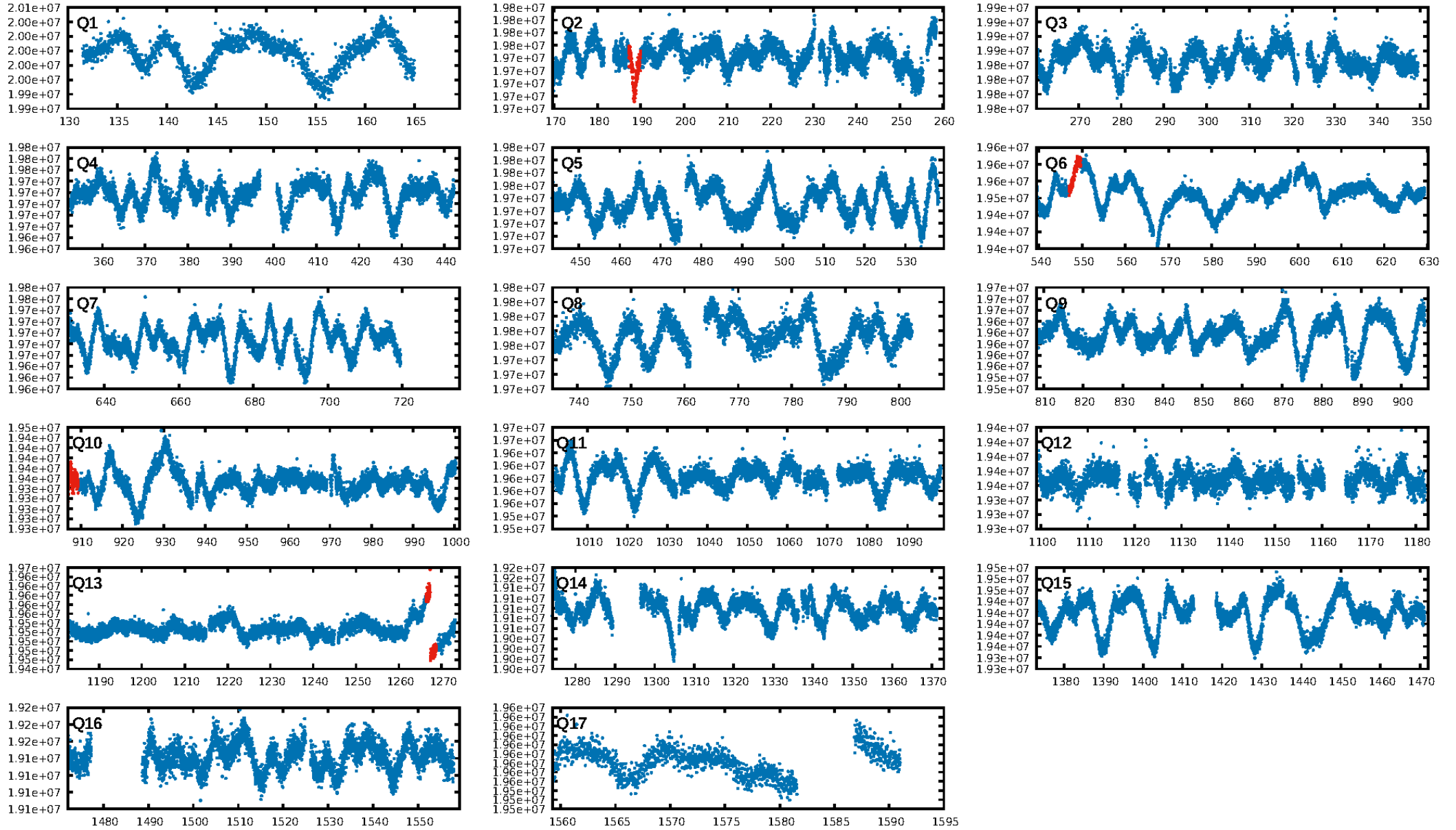
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 92.4%
Bootstrap-pfa: 5.57e-49
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 0.4
Centroid-sig: 0.0%
Centroid-so: 3.093 arcsec [4.25σ]
OotOffset-rm: 2.339 arcsec [30.11σ]
KicOffset-rm: 2.210 arcsec [28.47σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

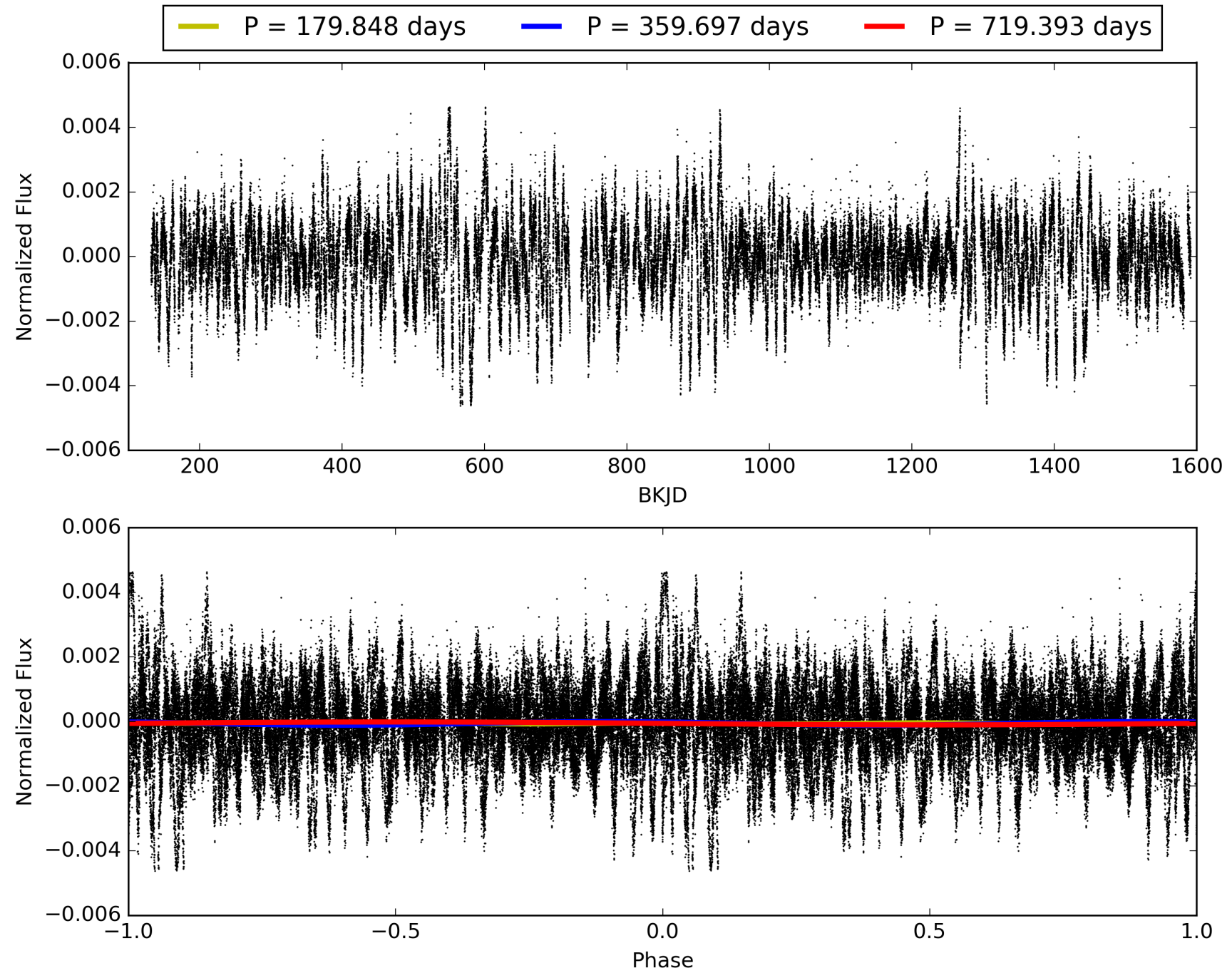
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:56:57 Z

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

TCE 008039595-01, PDC Light Curves

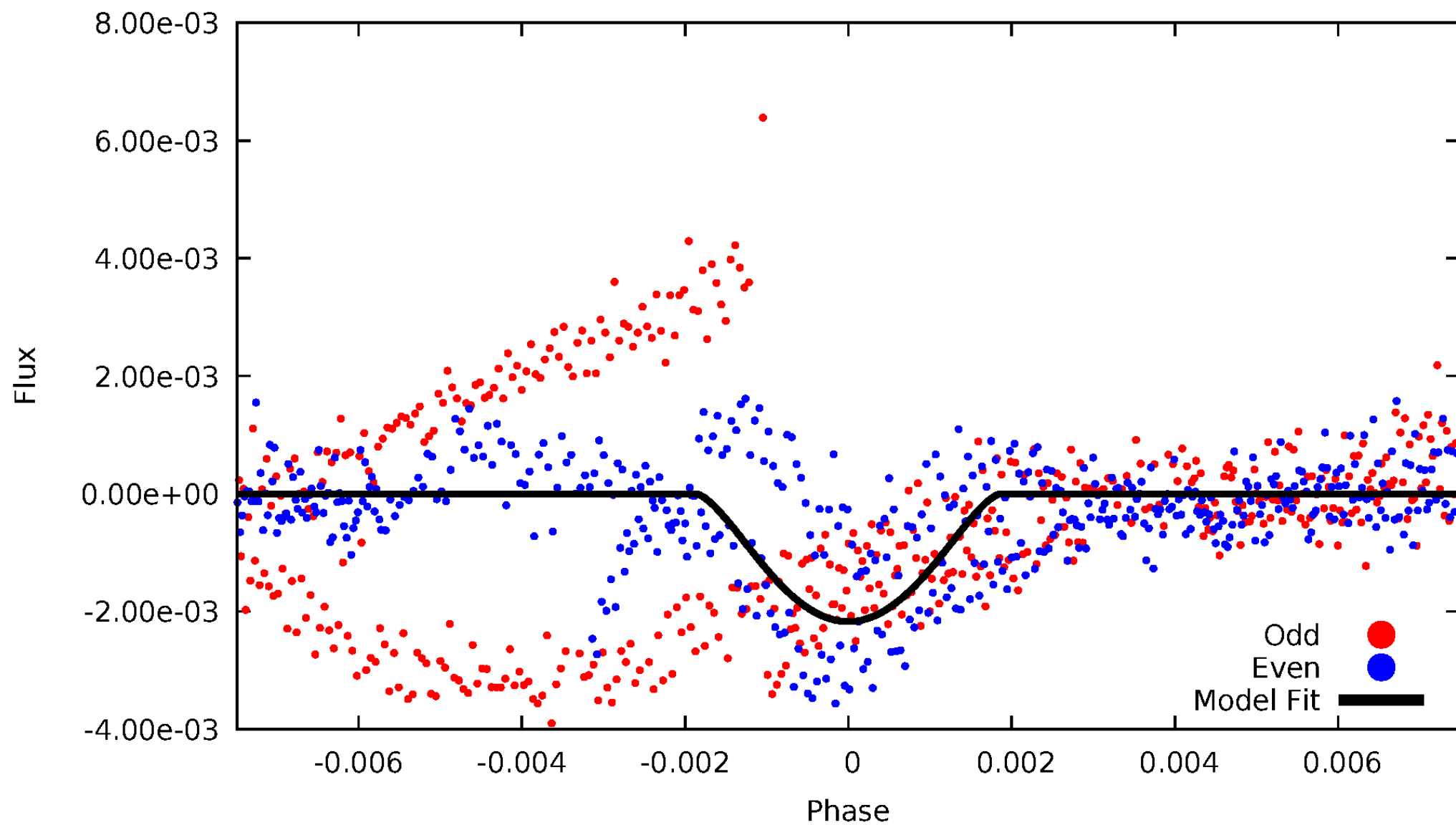


TCE 008039595-01



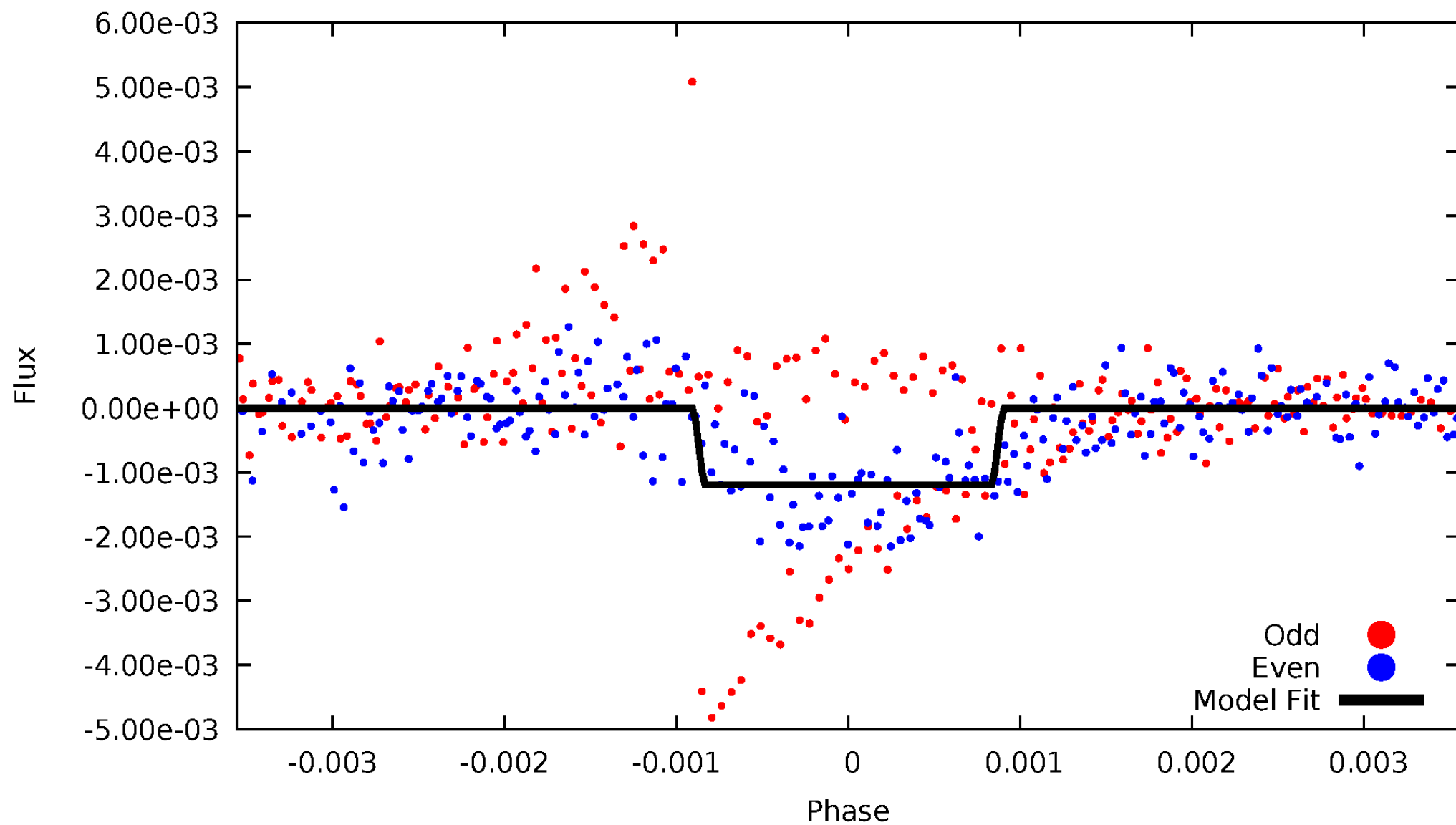
DV Odd/Even

TCE 008039595-01



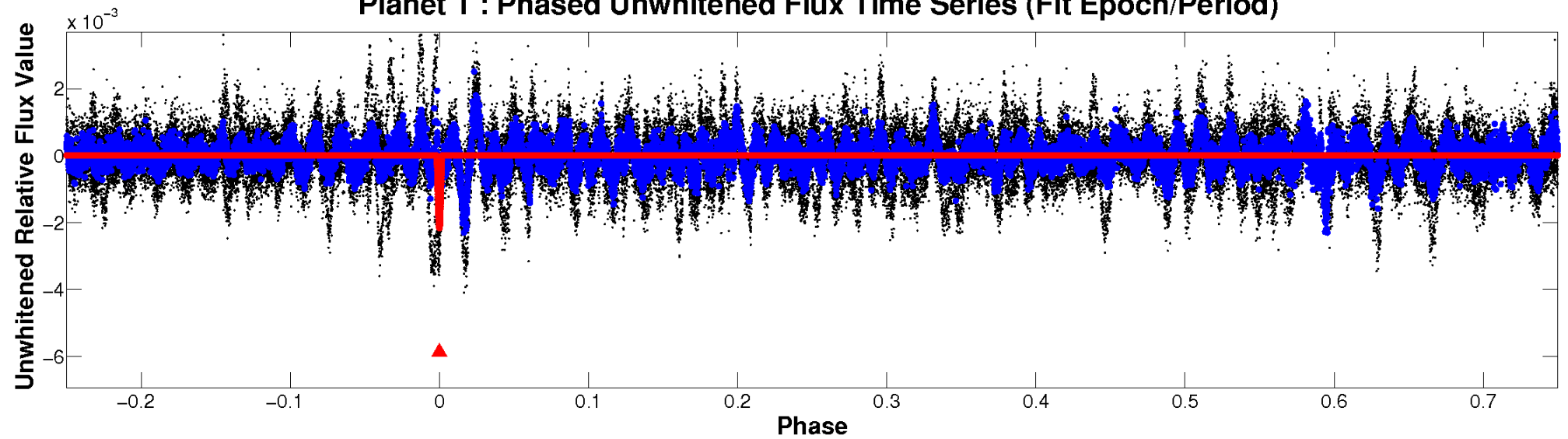
ALT Odd/Even

TCE 008039595-01

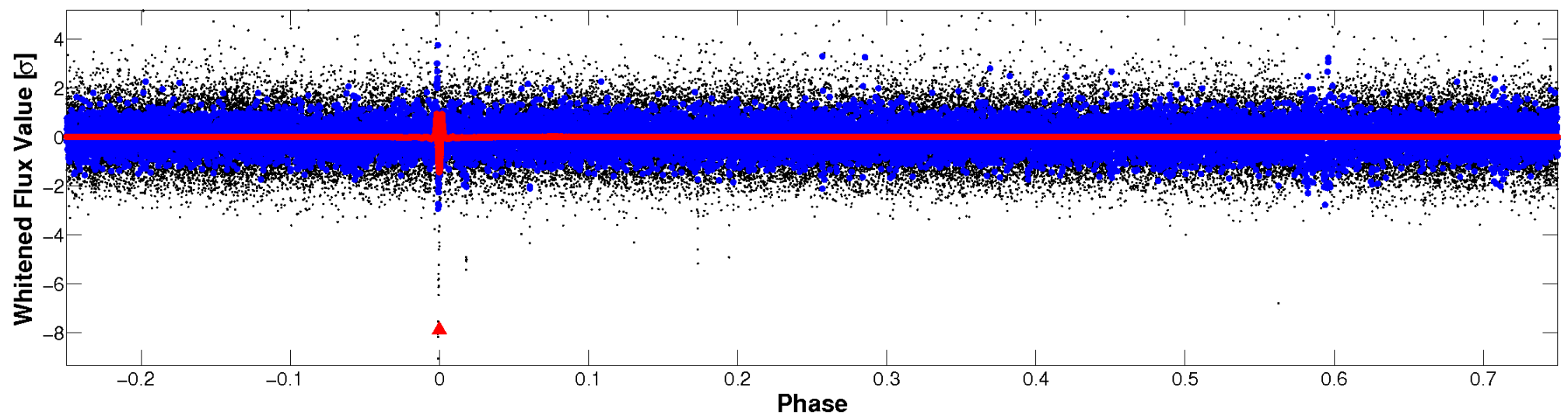


Non-Whitened Vs. Whitened Light Curve

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

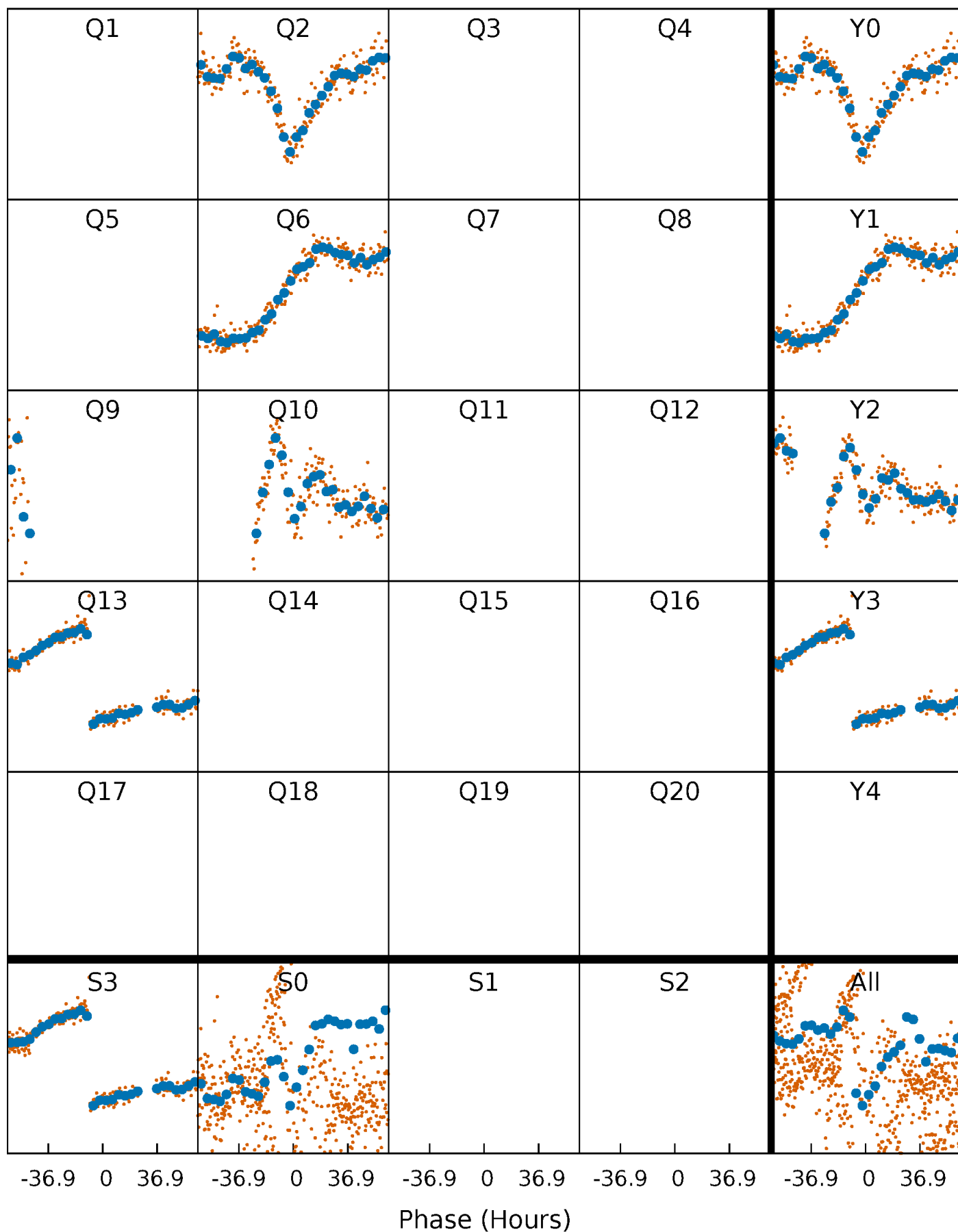


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



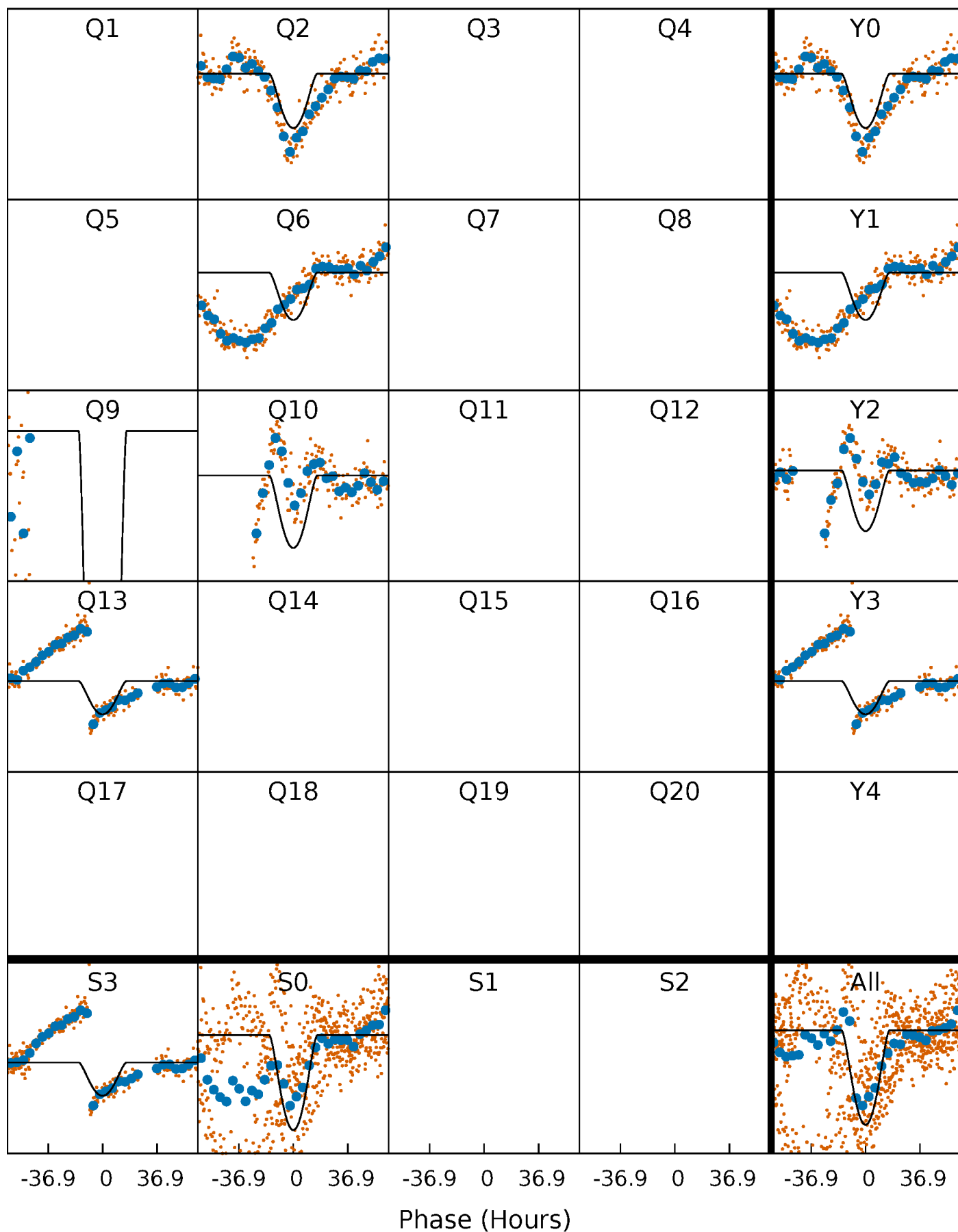
PDC Quarter-Phased Transit Curves

TCE 008039595-01 P=359.696728 Days $T_0=188.600652$ (BKJD)



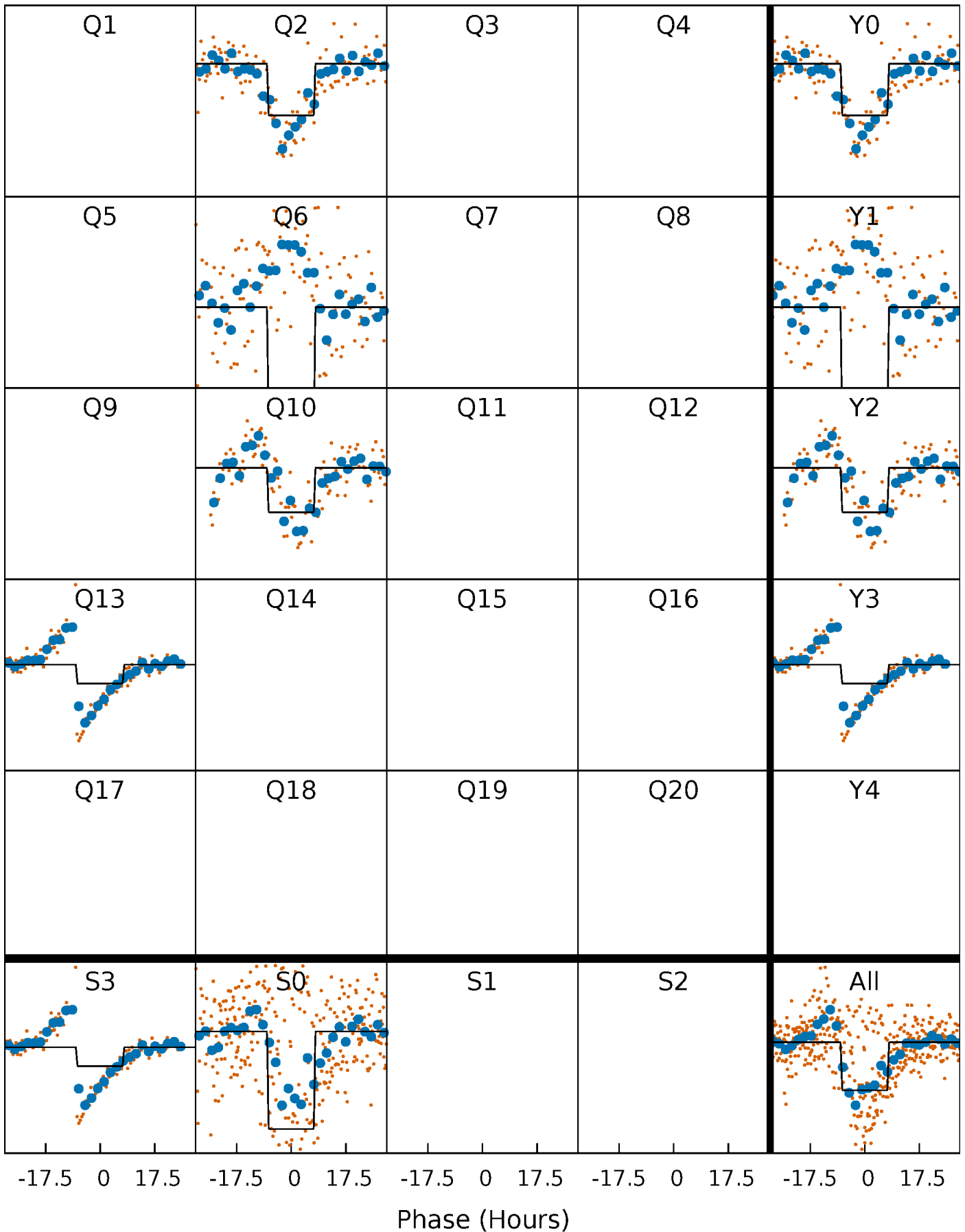
DV Quarter-Phased Transit Curves

TCE 008039595-01 P=359.696728 Days $T_0=188.600652$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

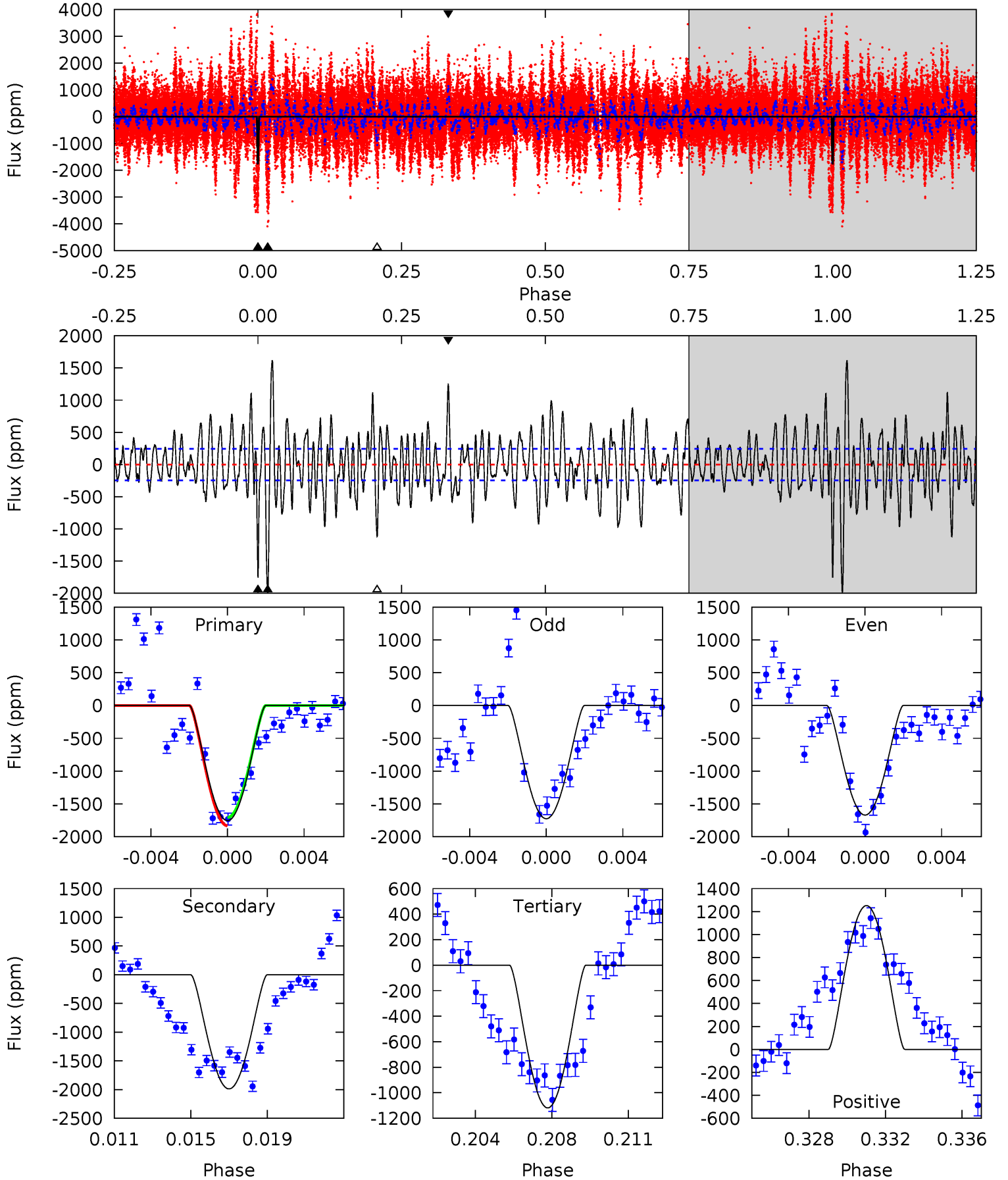
TCE 008039595-01 P=359.698768 Days $T_0=188.544745$ (BKJD)



DV Model-Shift Uniqueness Test

008039595-01, P = 359.696728 Days, E = 188.600652 Days

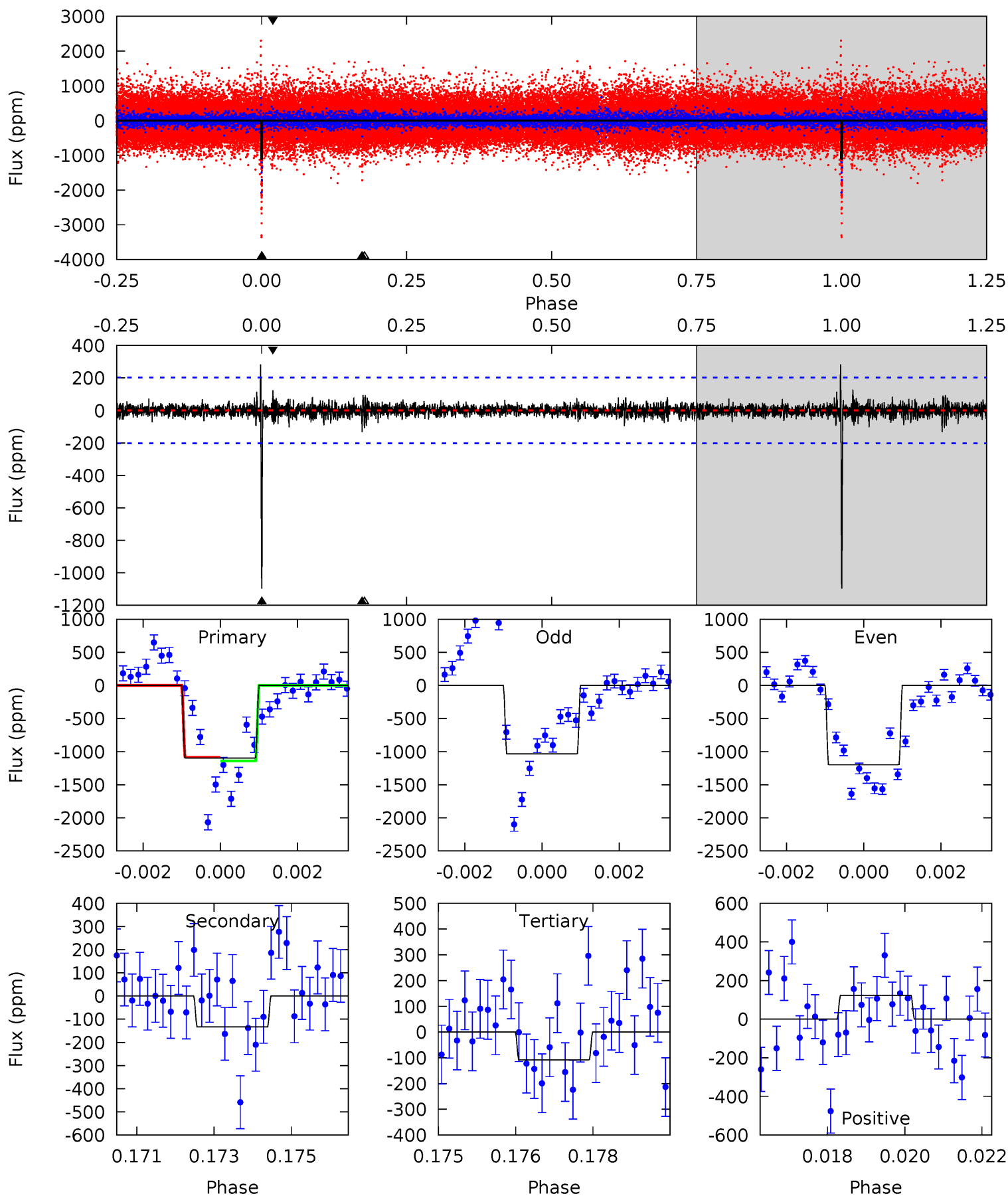
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.4	42.3	23.8	26.6	5.21	2.90	8.42	13.6	10.7	18.5	15.7	0.60	0.99	0.45	1.34



Alt Model-Shift Uniqueness Test

008039595-01, P = 359.698768 Days, E = 188.544745 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.9	3.51	2.84	3.26	5.34	3.12	0.62	26.1	25.6	0.67	0.26	2.35	0.95	0.20	0.71



Stellar Parameters For KIC 008039595

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5892^{+158}_{-193}	$4.461^{+0.070}_{-0.210}$	$-0.040^{+0.250}_{-0.300}$	$0.976^{+0.291}_{-0.125}$	$1.005^{+0.127}_{-0.127}$	$1.523^{+0.446}_{-0.823}$
	+3%/-3%	+2%/-5%	+625%/-750%	+30%/-13%	+13%/-13%	+29%/-54%
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 008039595-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1988 ± 47	$11.93^{+9.99}_{-7.54}$	366^{+28}_{-20}	4091^{+2128}_{-764}	7511^{+47029}_{-5296}
Alt.	-133 ± 38	$8.56^{+8.93}_{-5.84}$	368^{+27}_{-19}	2946^{+1392}_{-515}	905^{+8718}_{-696}

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 $A_{obs} \gg 1.0$

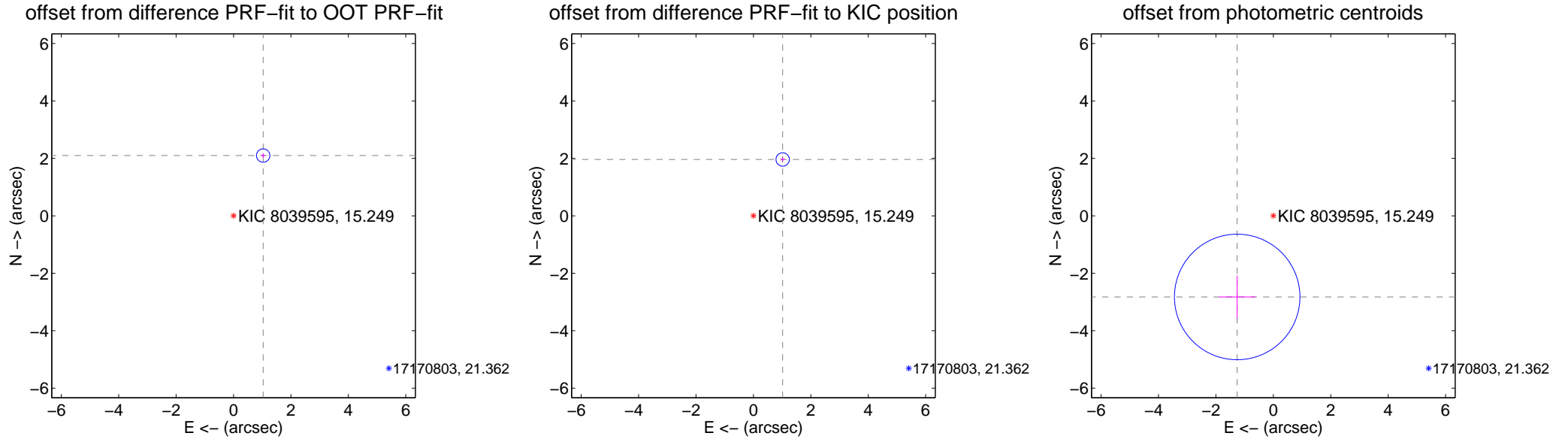
DV Centroid Data

Supplemental centroid analysis for 008039595-01. Kepler magnitude: 15.25. Transit SNR 15.05

There are 1 quarters with good PRF difference image offsets

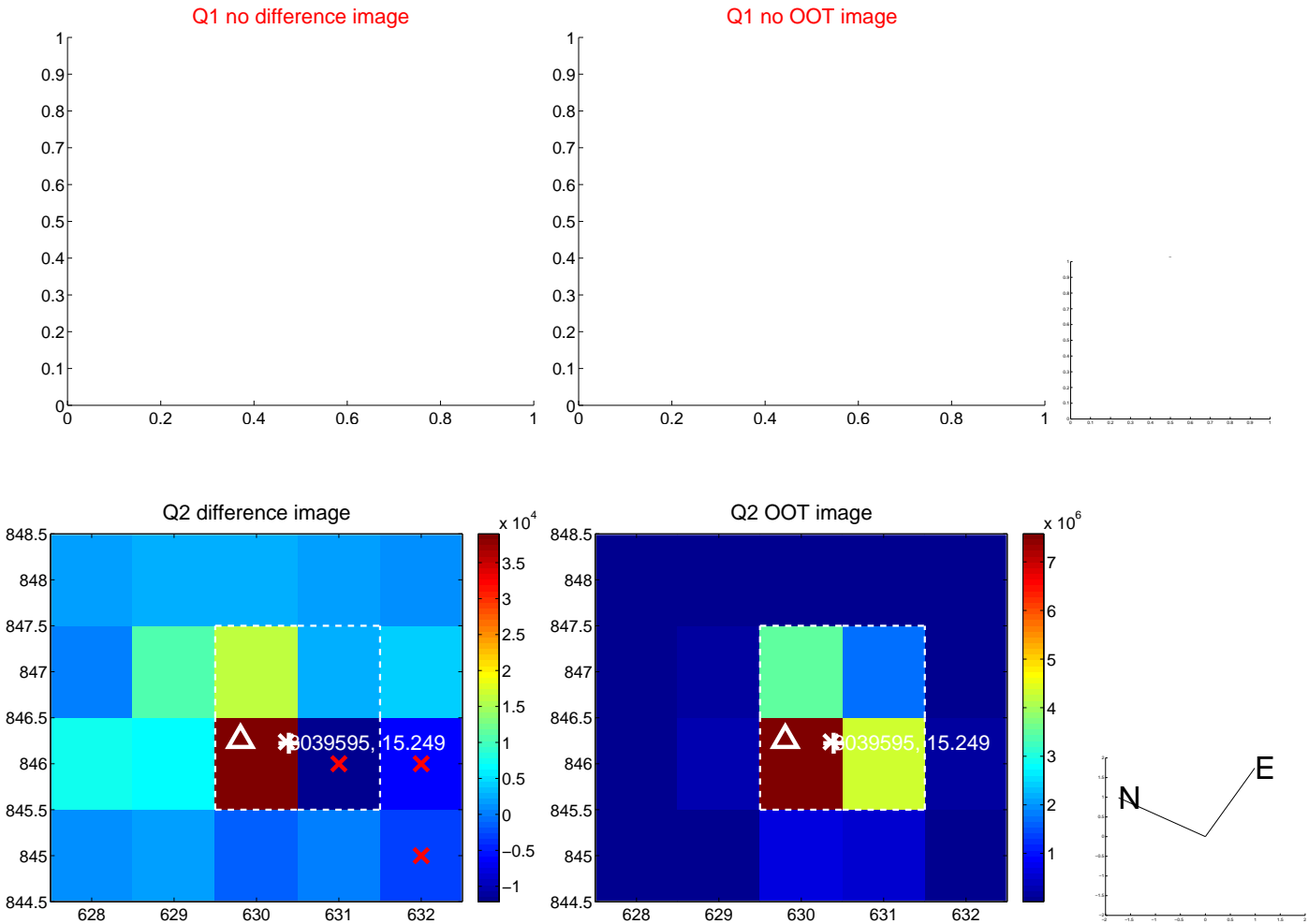
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.339 ± 0.078	30.11	-1.032 ± 0.075	2.099 ± 0.078
PRF-fit source offset from KIC position	2.210 ± 0.078	28.47	-1.019 ± 0.075	1.961 ± 0.078
photometric centroid source offset	3.09 ± 0.73	4.25	1.26 ± 0.64	-2.82 ± 0.75



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.

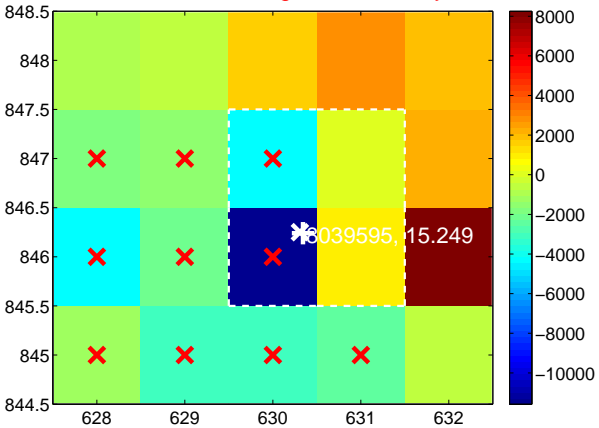
Q5 no difference image



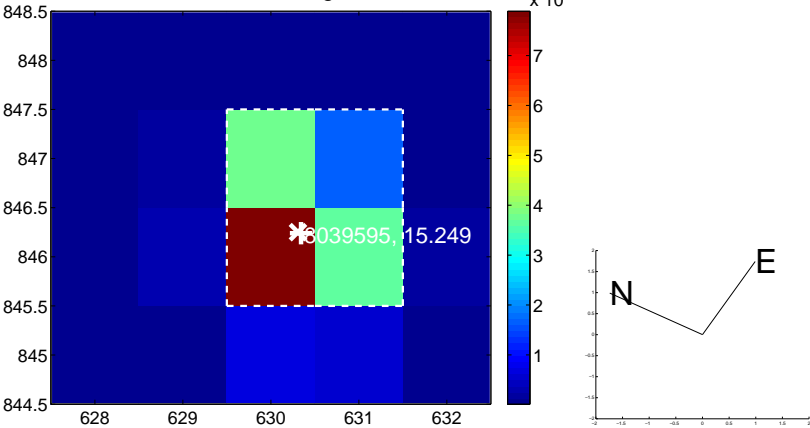
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



Q8 no OOT image



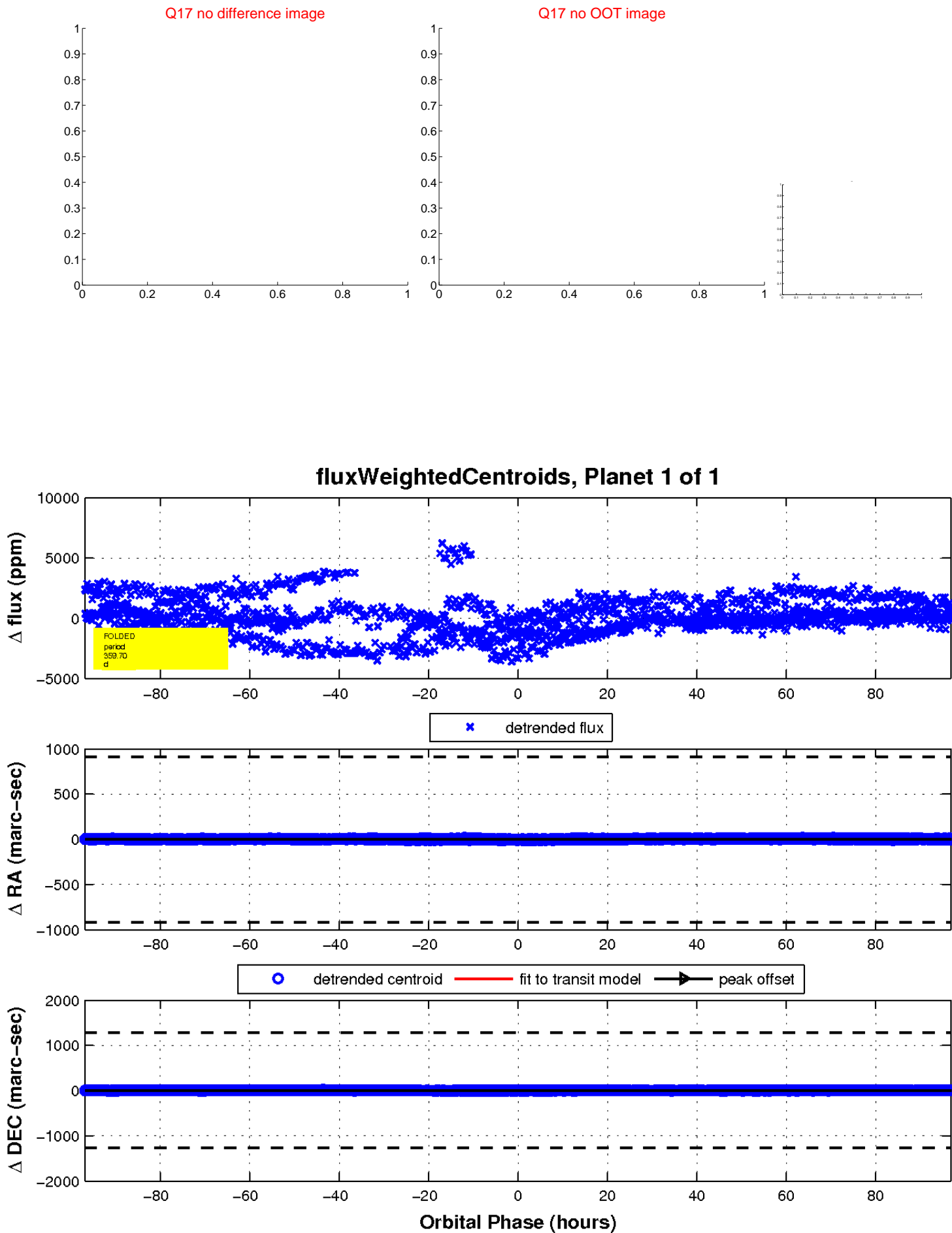
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

