

KIC 006864078

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})
006864078-01	OBS	No	417.234766	545.284942	184.1	16.838	8.4	8.3	1.77	6274	2.90	3.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006864078-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

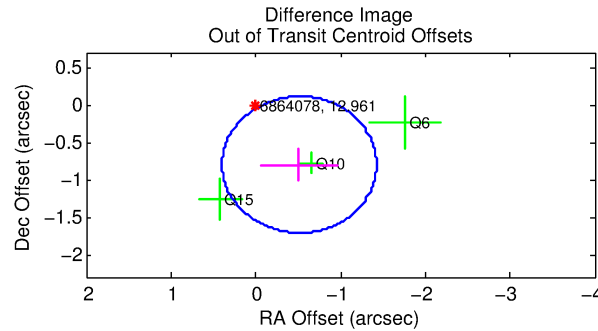
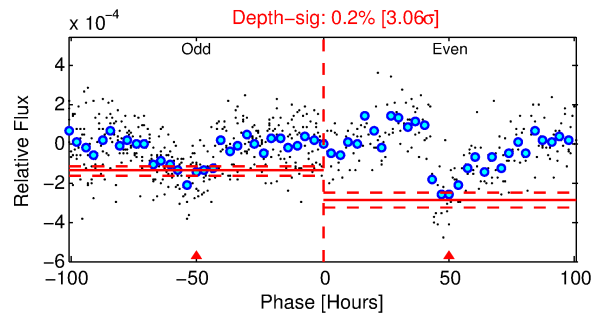
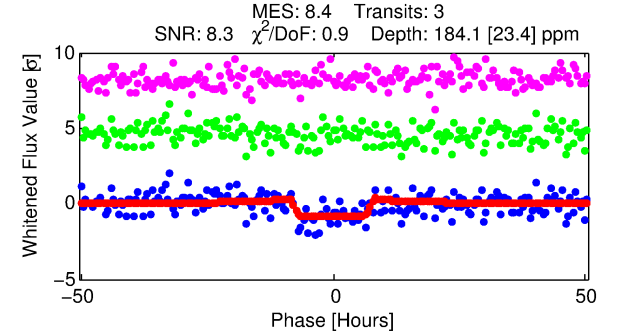
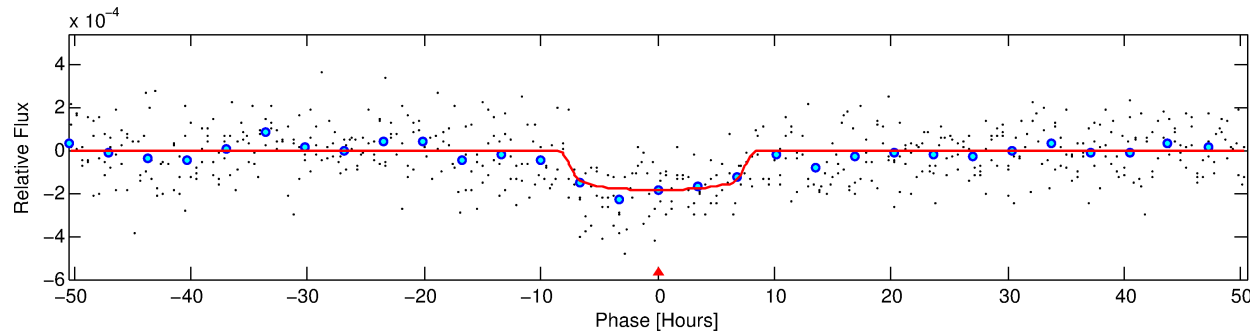
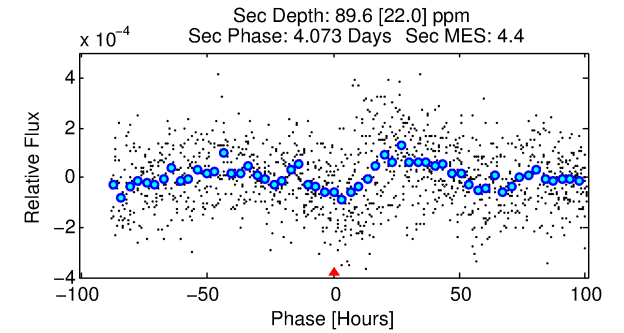
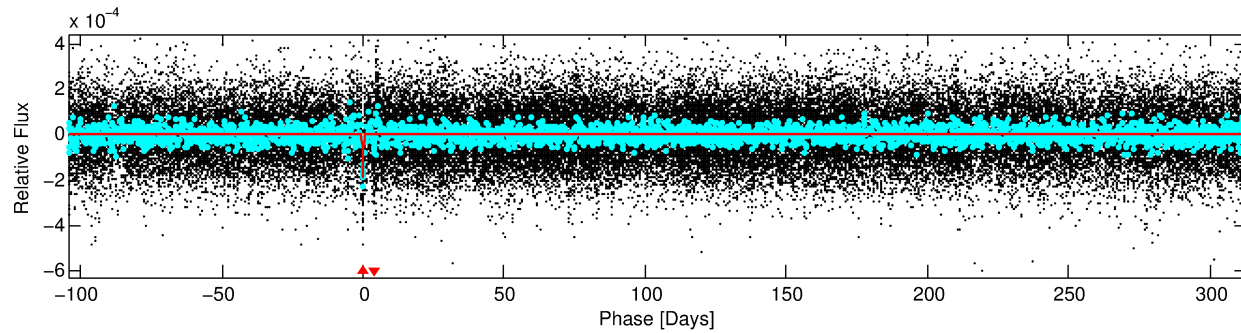
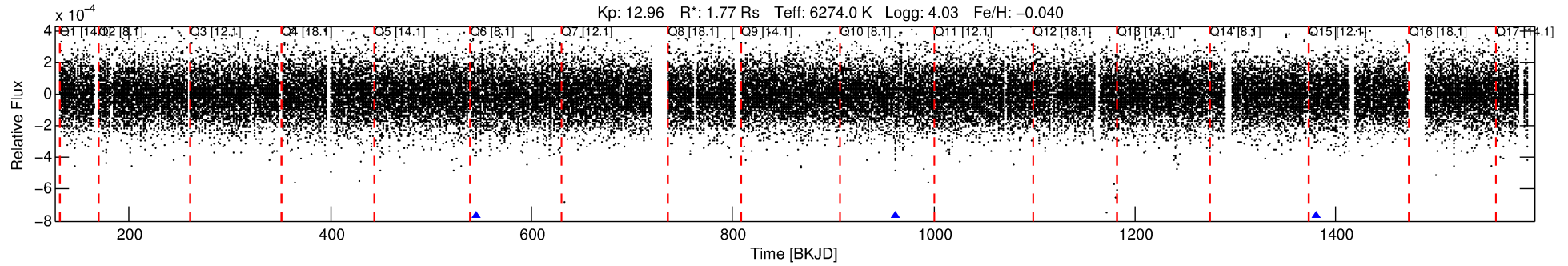
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006864078-01

No Significant Match Found

DV One-Page Summary

KIC: 6864078 Candidate: 1 of 1 Period: 417.235 d



DV Fit Results:

Period = 417.23477 [0.01775] d
Epoch = 545.2849 [0.0244] BKJD
Rp/R* = 0.0150 [0.0016]
a/R* = 77.37 [33.06]
b = 0.93 [0.06]
Seff = 3.20 [1.42]
Teq = 341 [38] K
Rp = 2.90 [0.87] Re
a = 1.1666 [0.3134] AU
Ag = 7974.46 [4278.86] [1.86σ]
Teffp = 4981 [428] K [10.81σ]

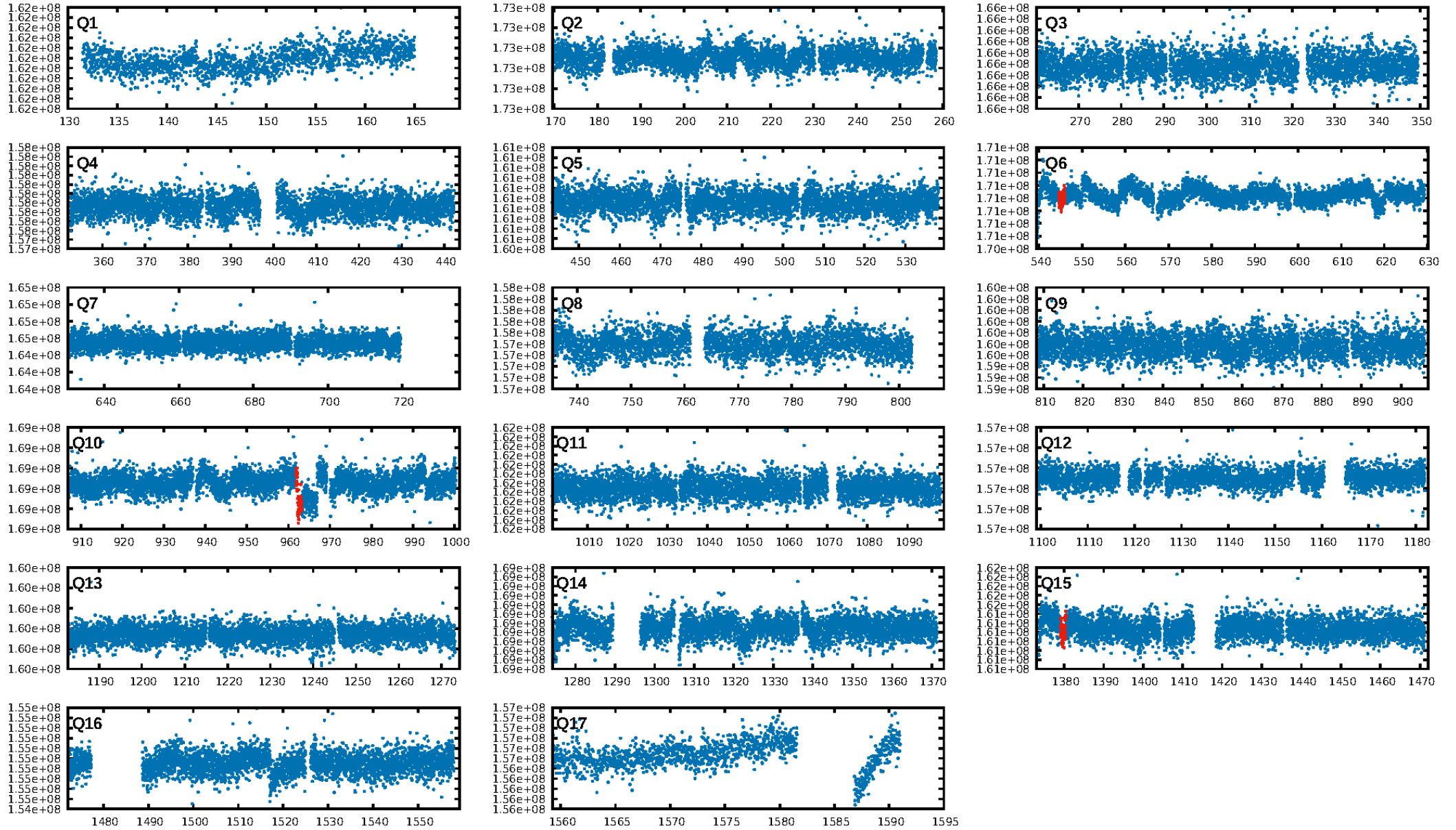
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.8%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 5.69e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.305
Centroid-sig: 0.1%
Centroid-so: 2.838 arcsec [2.57σ]
OotOffset-rm: 0.951 arcsec [3.13σ]
KicOffset-rm: 1.180 arcsec [3.73σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

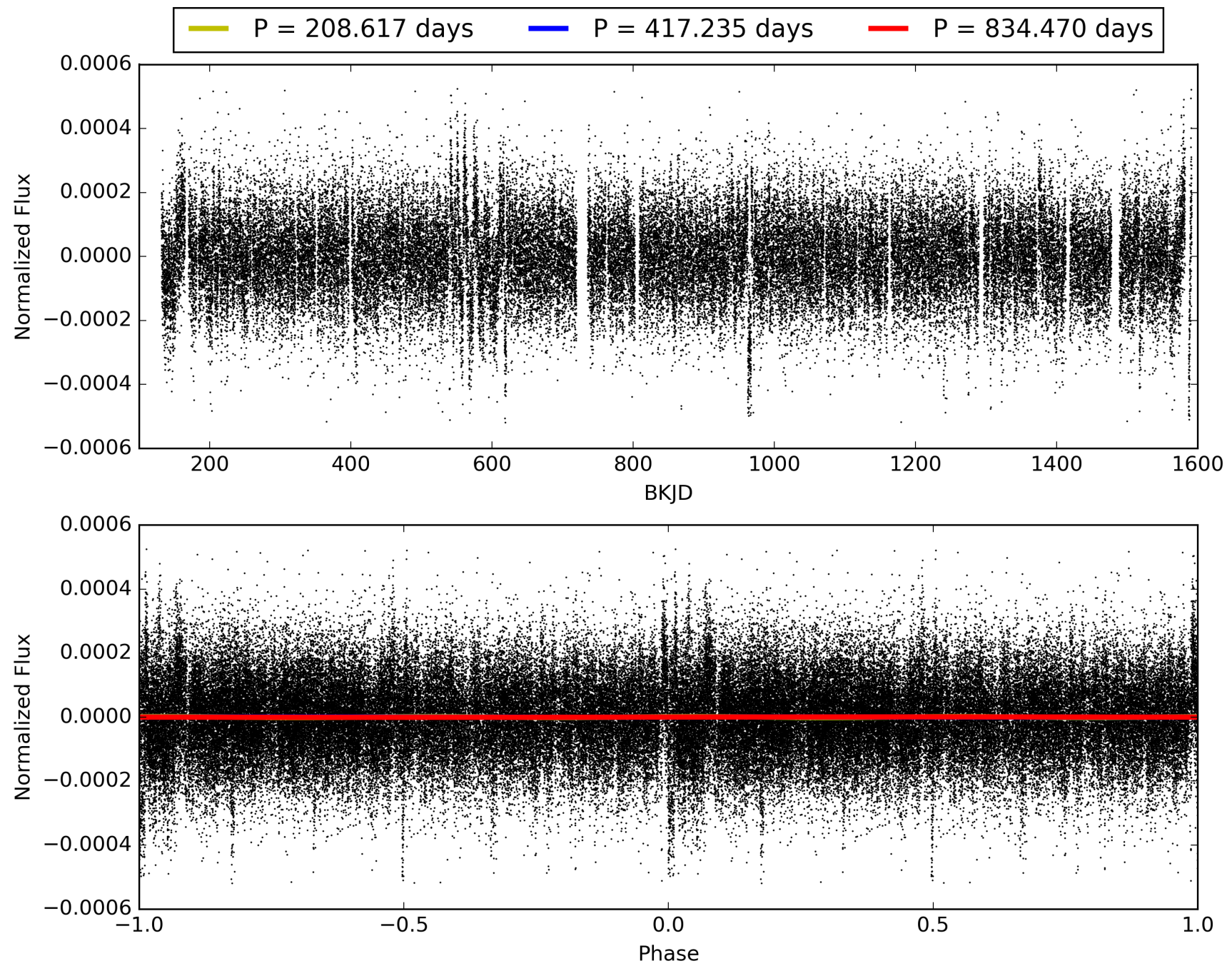
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:06:17 Z

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

TCE 006864078-01, PDC Light Curves

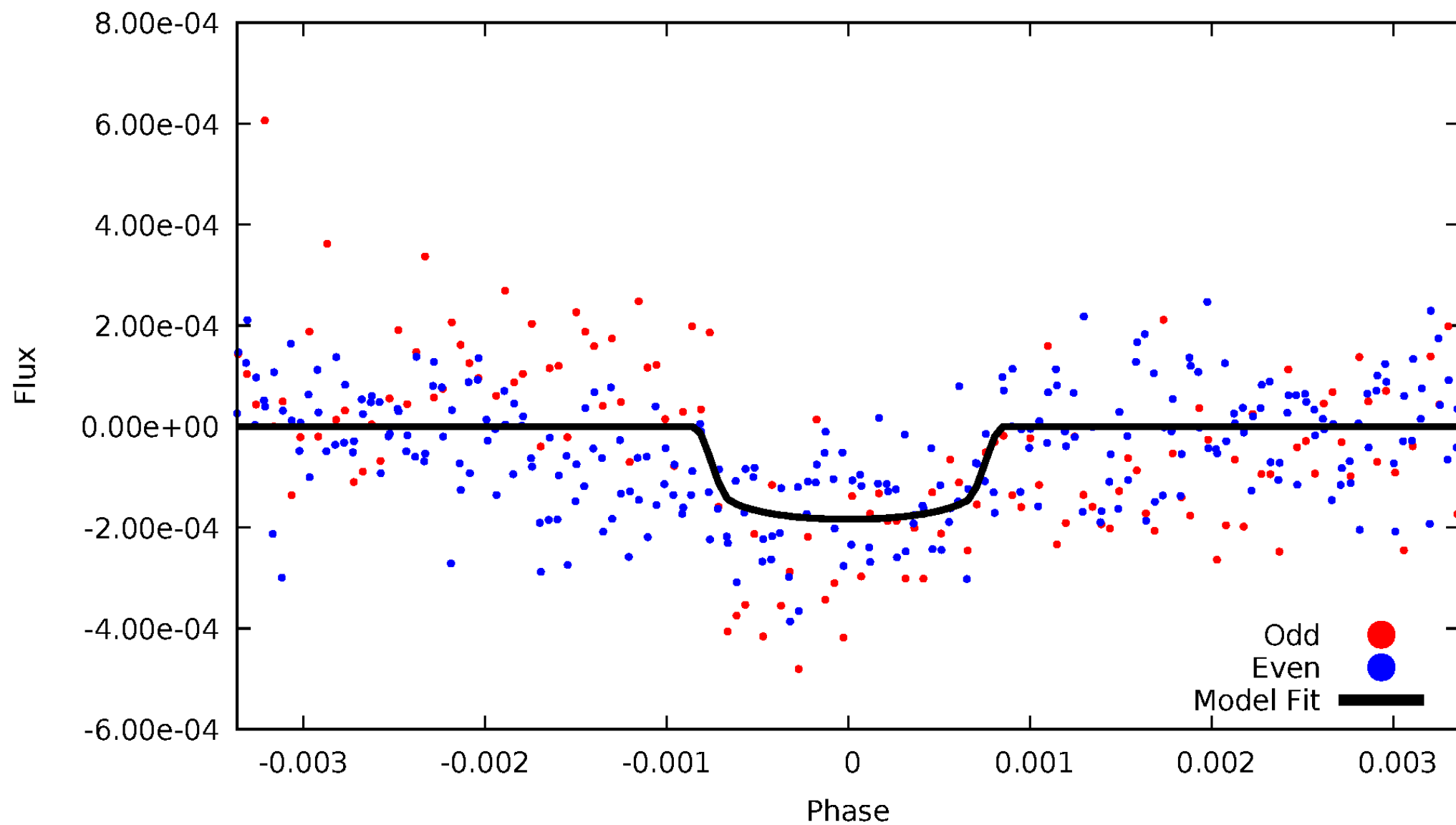


TCE 006864078-01



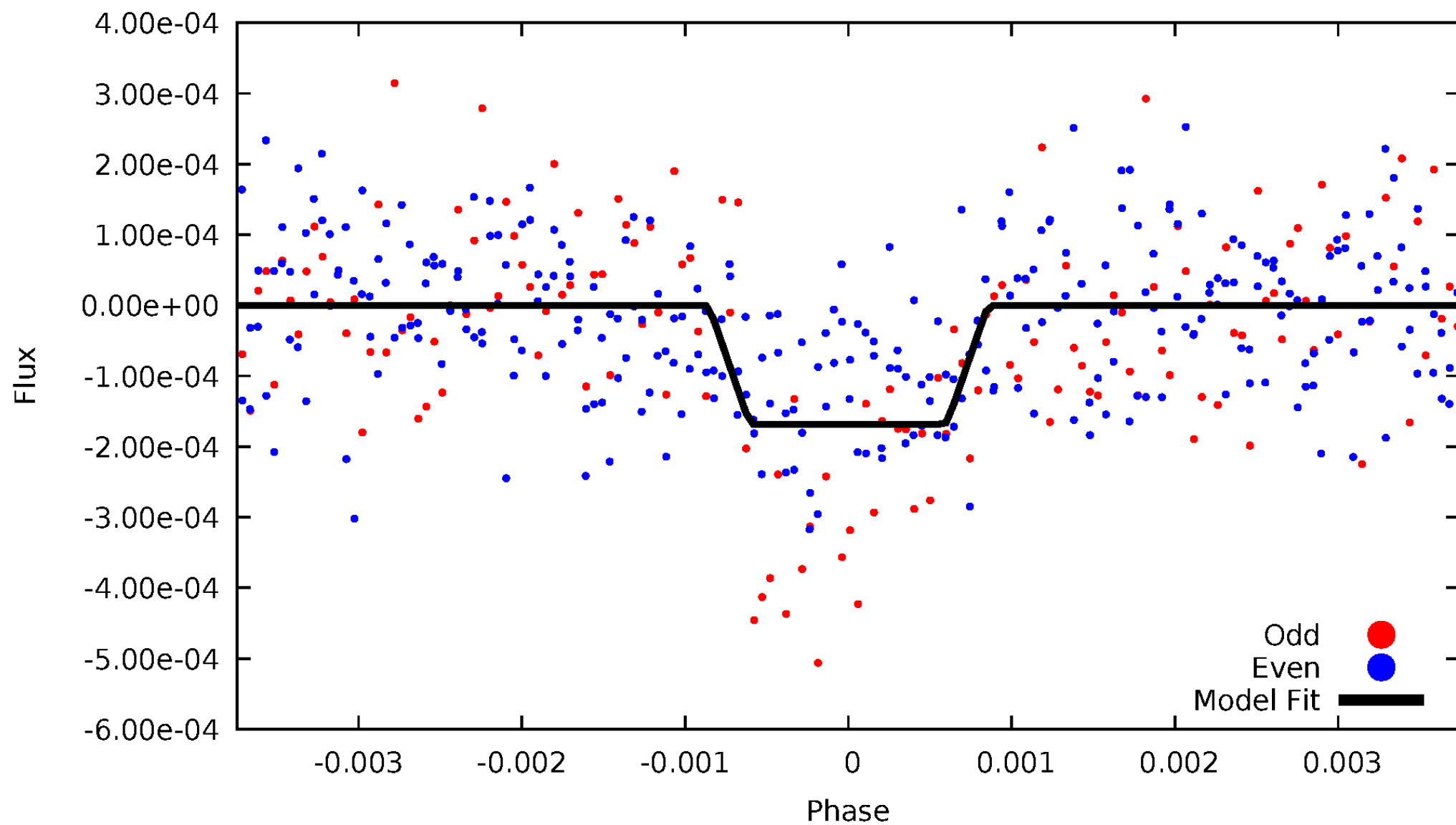
DV Odd/Even

TCE 006864078-01

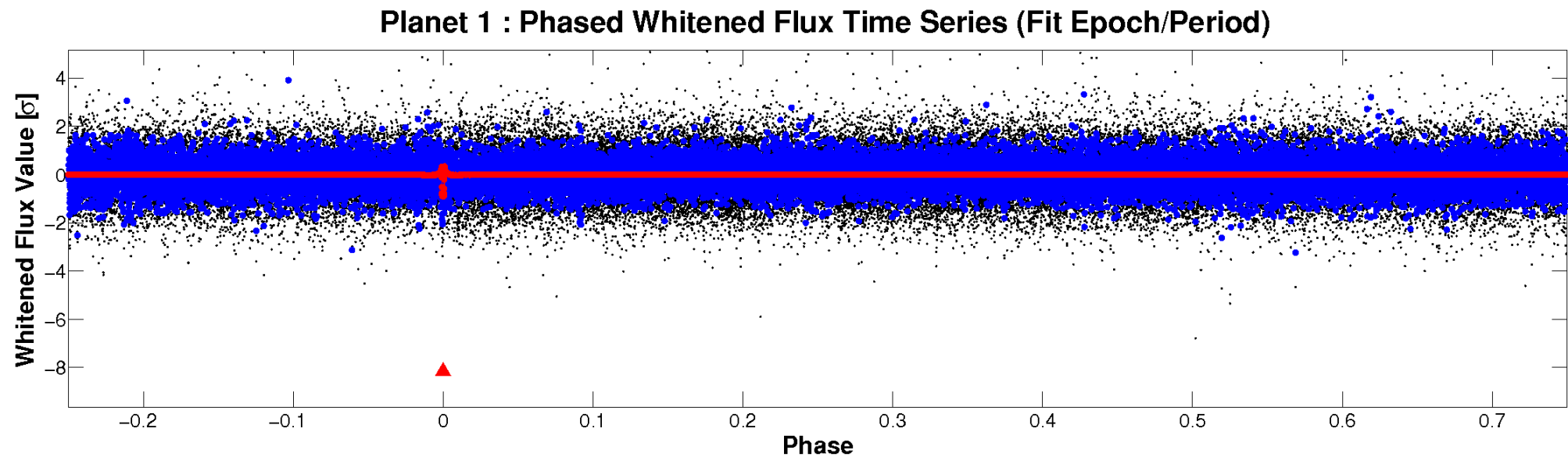
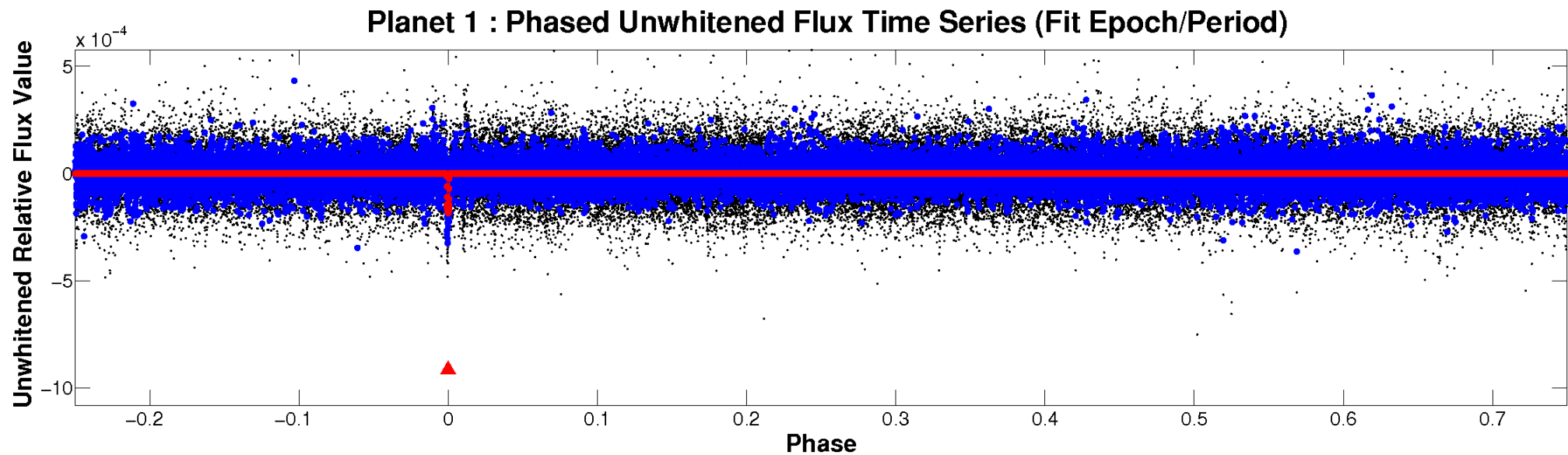


ALT Odd/Even

TCE 006864078-01

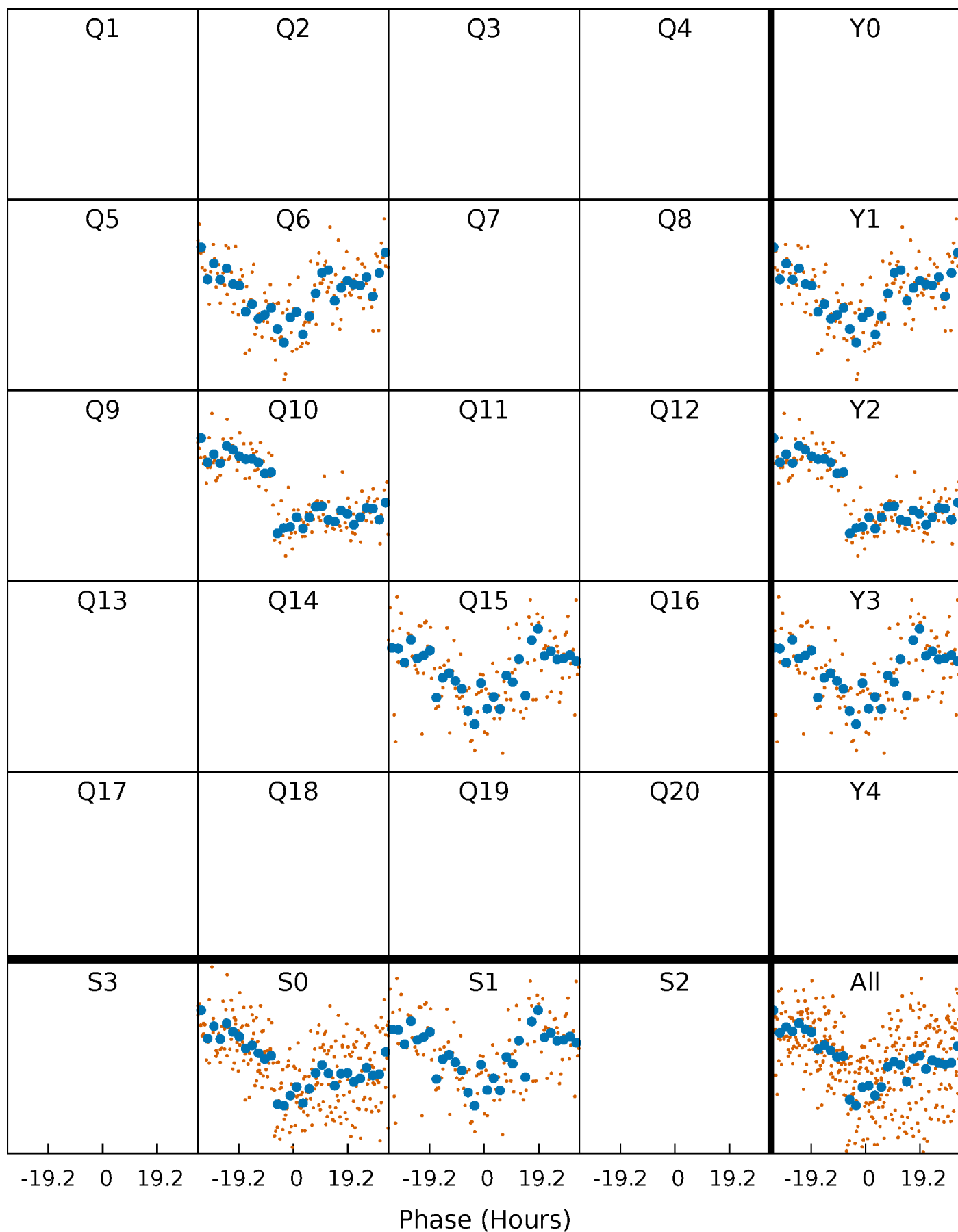


Non-Whitened Vs. Whitened Light Curve



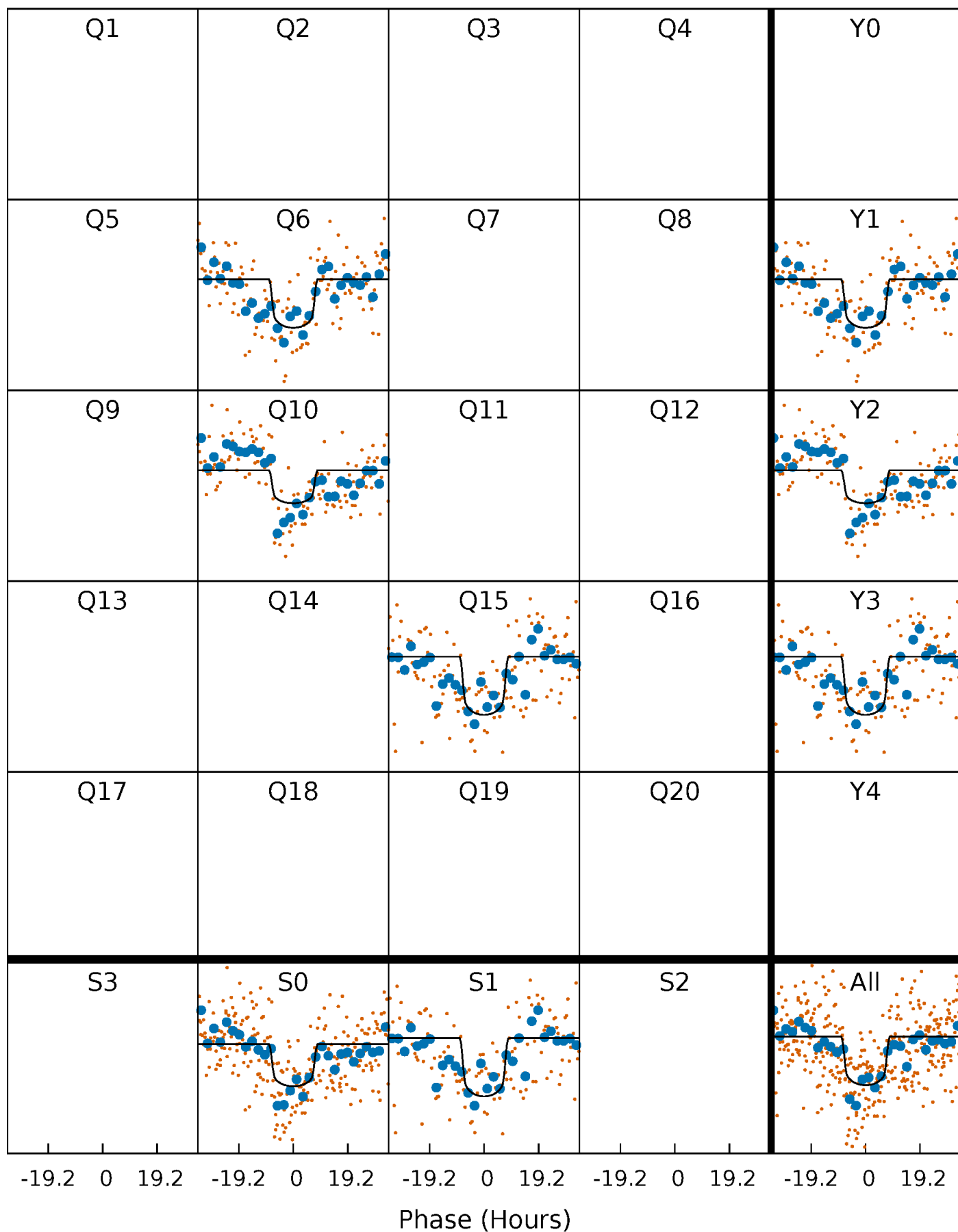
PDC Quarter-Phased Transit Curves

TCE 006864078-01 P=417.234766 Days $T_0=545.284941$ (BKJD)



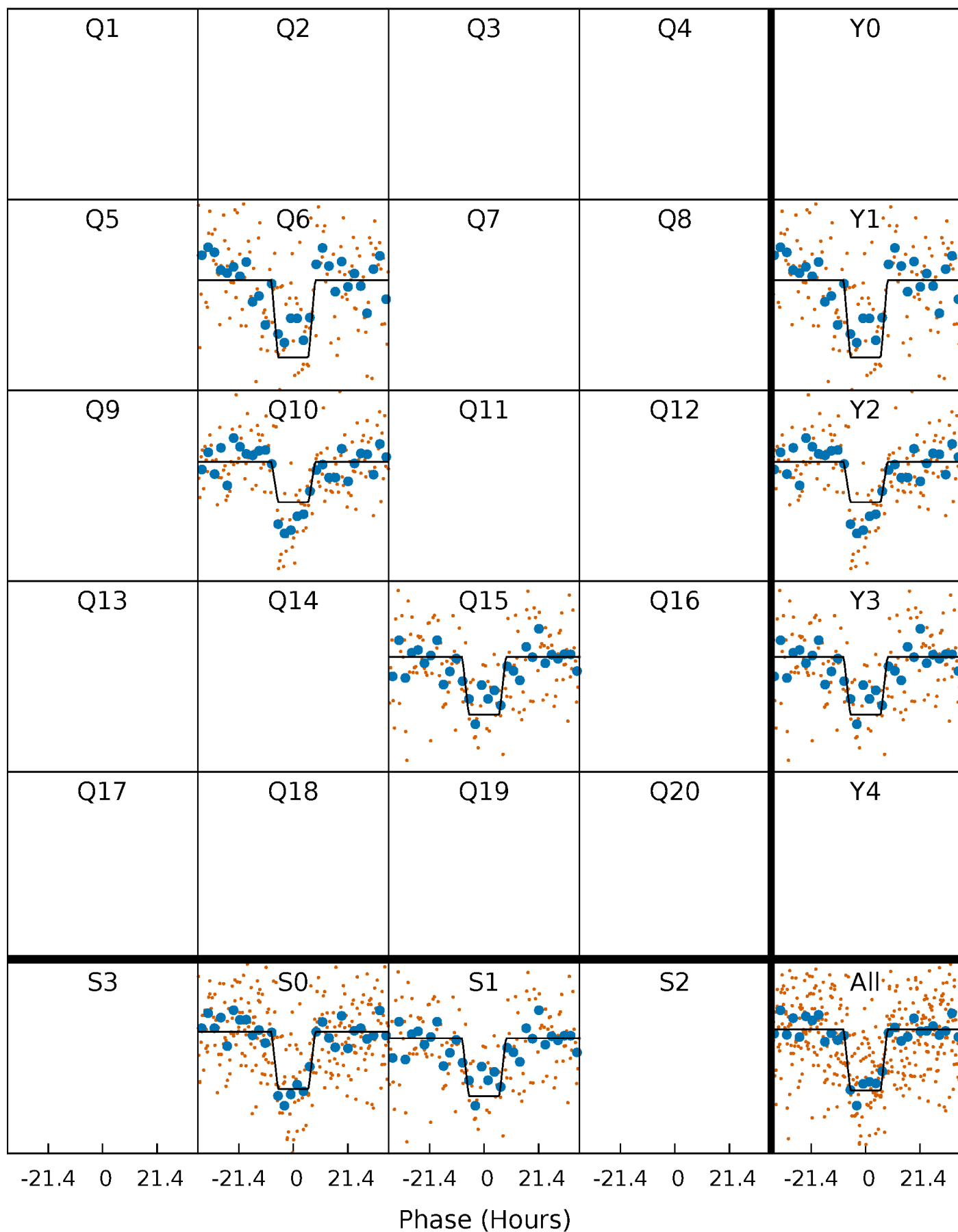
DV Quarter-Phased Transit Curves

TCE 006864078-01 P=417.234766 Days $T_0=545.284941$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

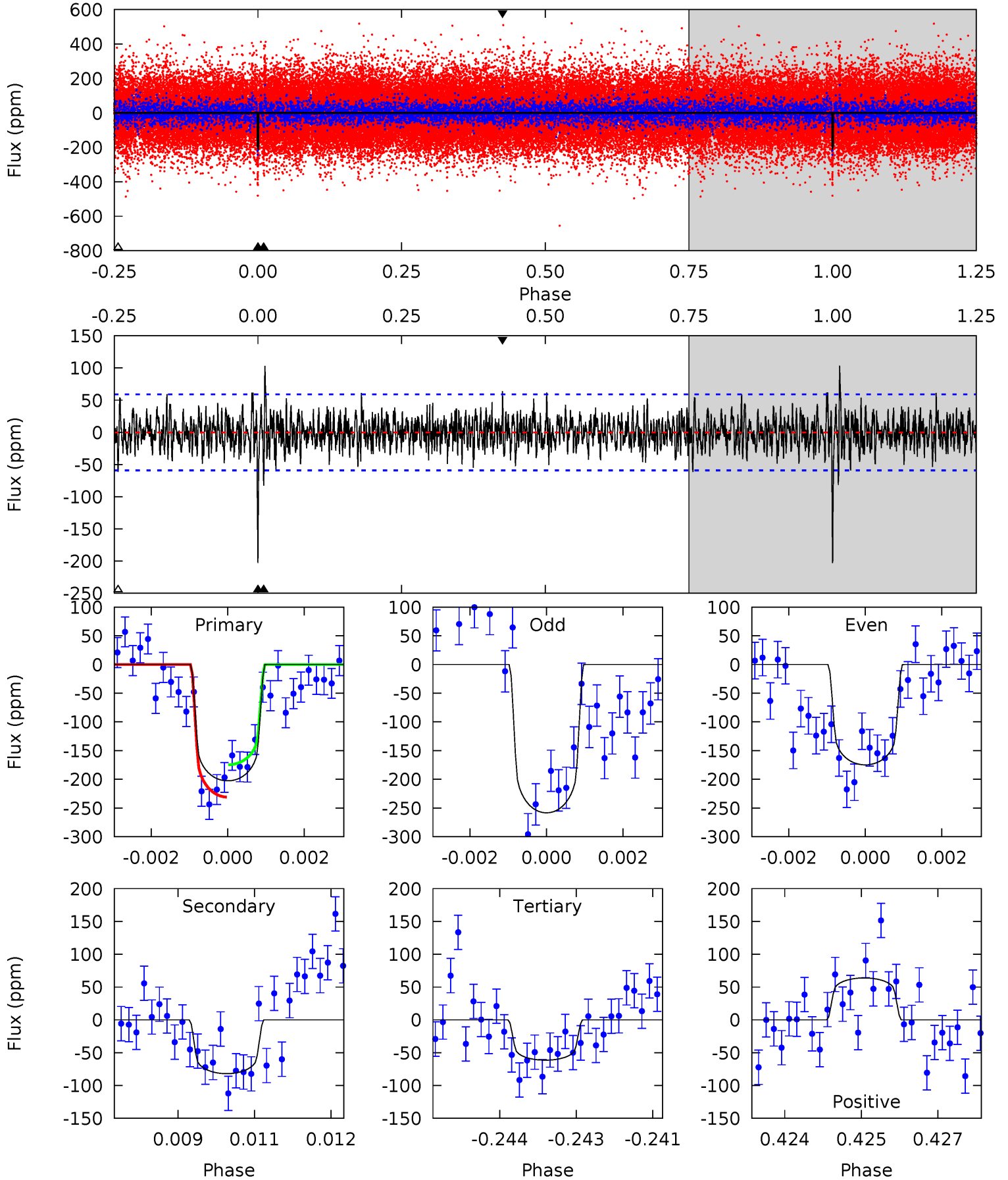
TCE 006864078-01 P=417.232862 Days $T_0=545.250294$ (BKJD)



DV Model-Shift Uniqueness Test

006864078-01, P = 417.234766 Days, E = 128.050175 Days

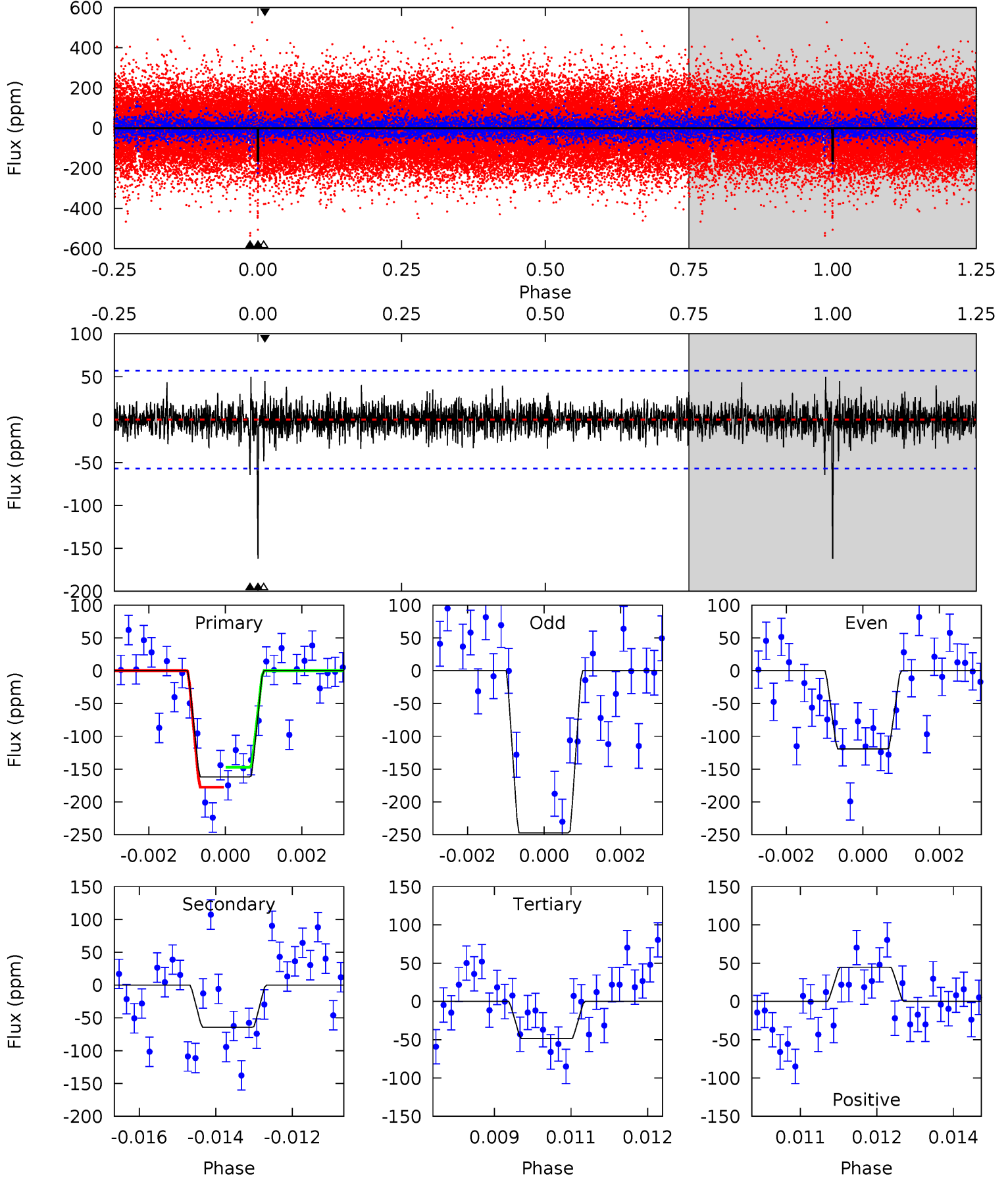
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	7.43	5.57	5.79	5.35	3.13	1.76	12.8	12.6	1.86	1.64	3.57	1.10	0.34	2.56



Alt Model-Shift Uniqueness Test

006864078-01, P = 417.232862 Days, E = 128.017432 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	6.03	4.56	4.19	5.35	3.13	1.03	10.6	11.0	1.47	1.84	5.71	1.27	0.23	1.44



Stellar Parameters For KIC 006864078

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6274^{+169}_{-188}	$4.027^{+0.252}_{-0.126}$	$-0.040^{+0.250}_{-0.250}$	$1.770^{+0.405}_{-0.495}$	$1.217^{+0.186}_{-0.186}$	$0.309^{+0.448}_{-0.120}$
	+3%/-3%	+6%/-3%	+625%/-625%	+23%/-28%	+15%/-15%	+145%/-39%
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 006864078-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-82 ± 11	$2.87^{+0.53}_{-0.50}$	472^{+30}_{-39}	4950^{+289}_{-273}	7414^{+3791}_{-2109}
Alt.	-64 ± 11	$2.43^{+0.49}_{-0.44}$	469^{+32}_{-37}	5001^{+371}_{-301}	8177^{+4468}_{-2684}

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 $A_{\text{obs}} \gg 1.0$

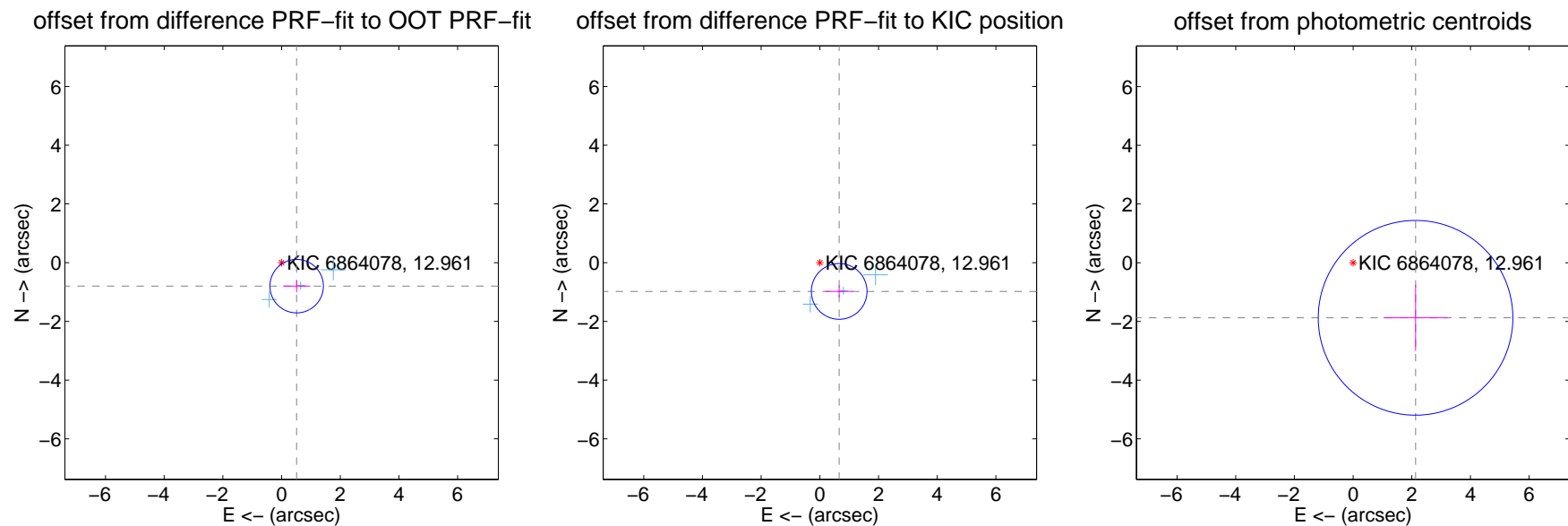
DV Centroid Data

Supplemental centroid analysis for 006864078-01. Kepler magnitude: 12.96. Transit SNR 8.25

There are 3 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	0.951 ± 0.304	3.13	-0.514 ± 0.458	-0.800 ± 0.209
PRF-fit source offset from KIC position	1.180 ± 0.316	3.73	-0.659 ± 0.479	-0.979 ± 0.204
photometric centroid source offset	2.84 ± 1.11	2.57	-2.13 ± 1.09	-1.88 ± 1.12



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.

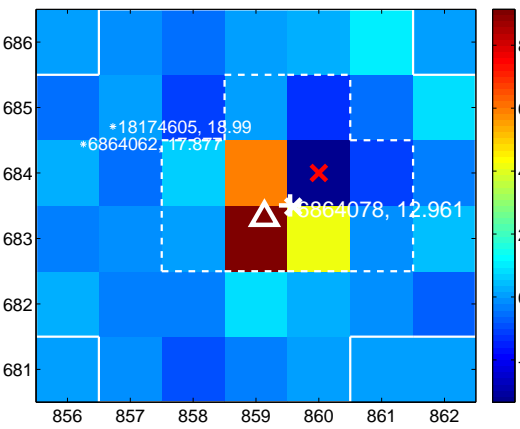
Q5 no difference image



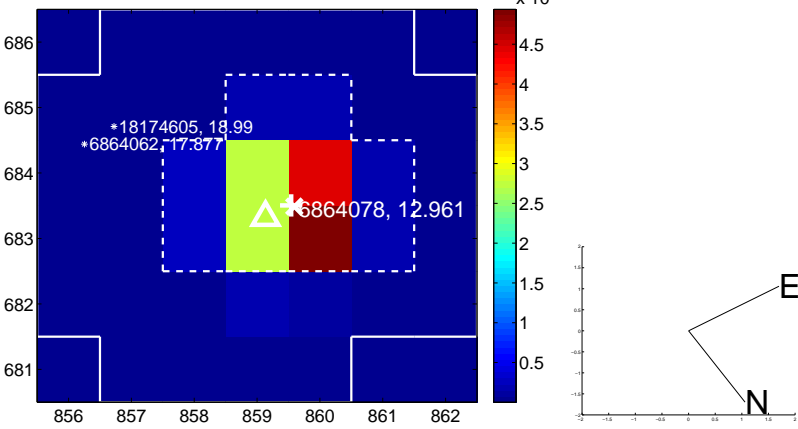
Q5 no OOT image



Q6 difference image



Q6 OOT image



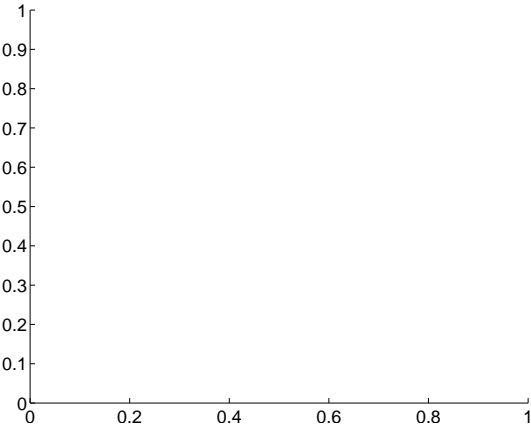
Q7 no difference image



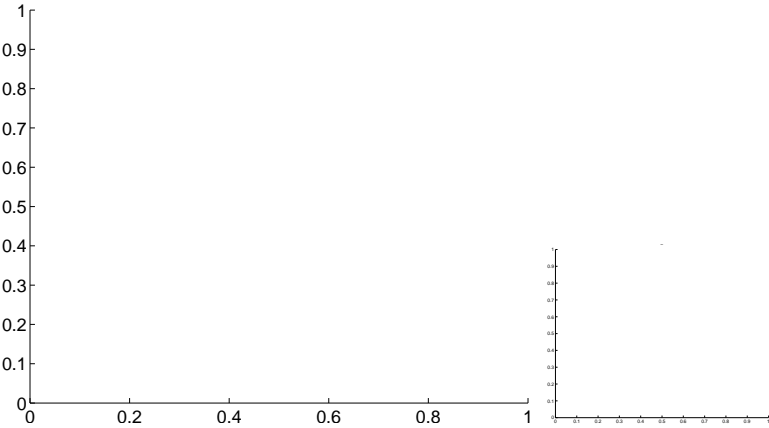
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

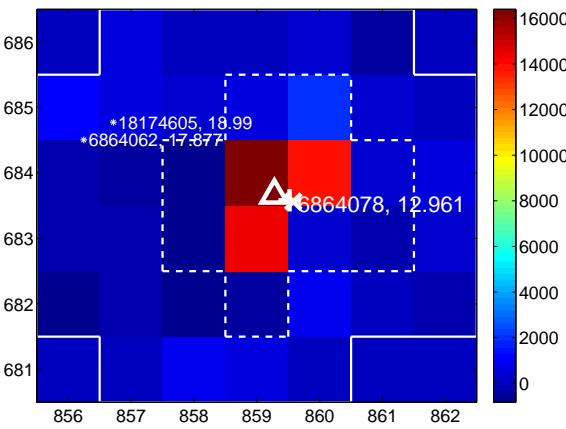
Q9 no difference image



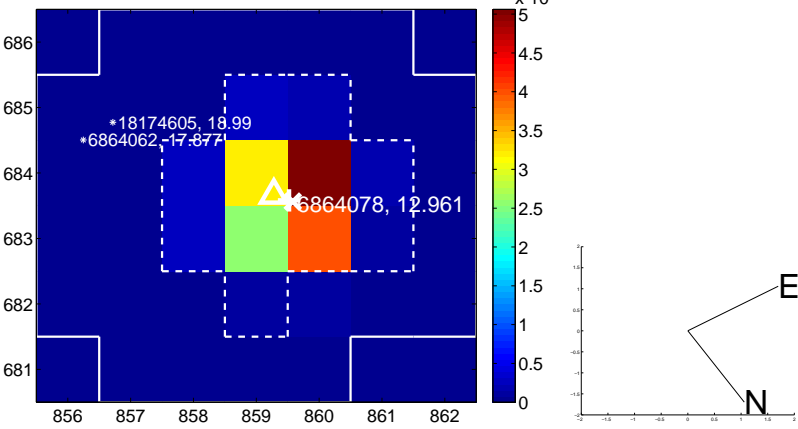
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



Q13 no OOT image



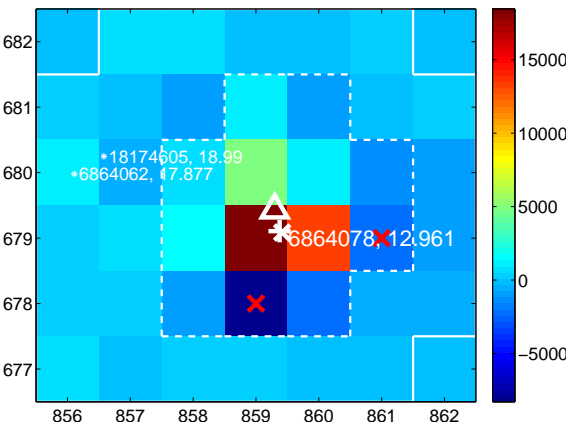
Q14 no difference image



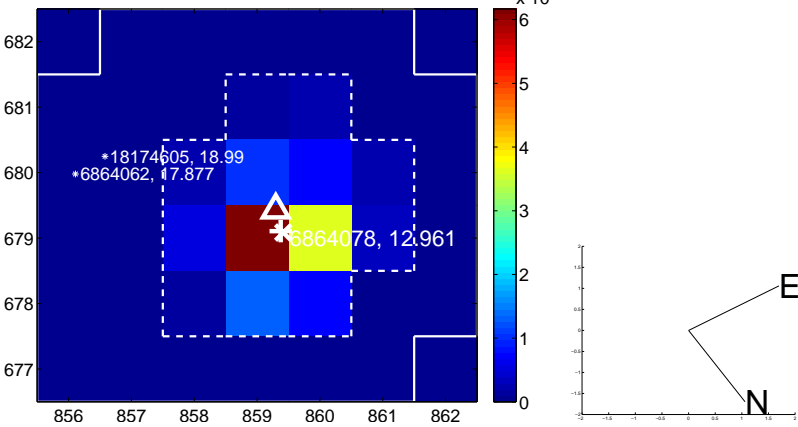
Q14 no OOT image



Q15 difference image



Q15 OOT image



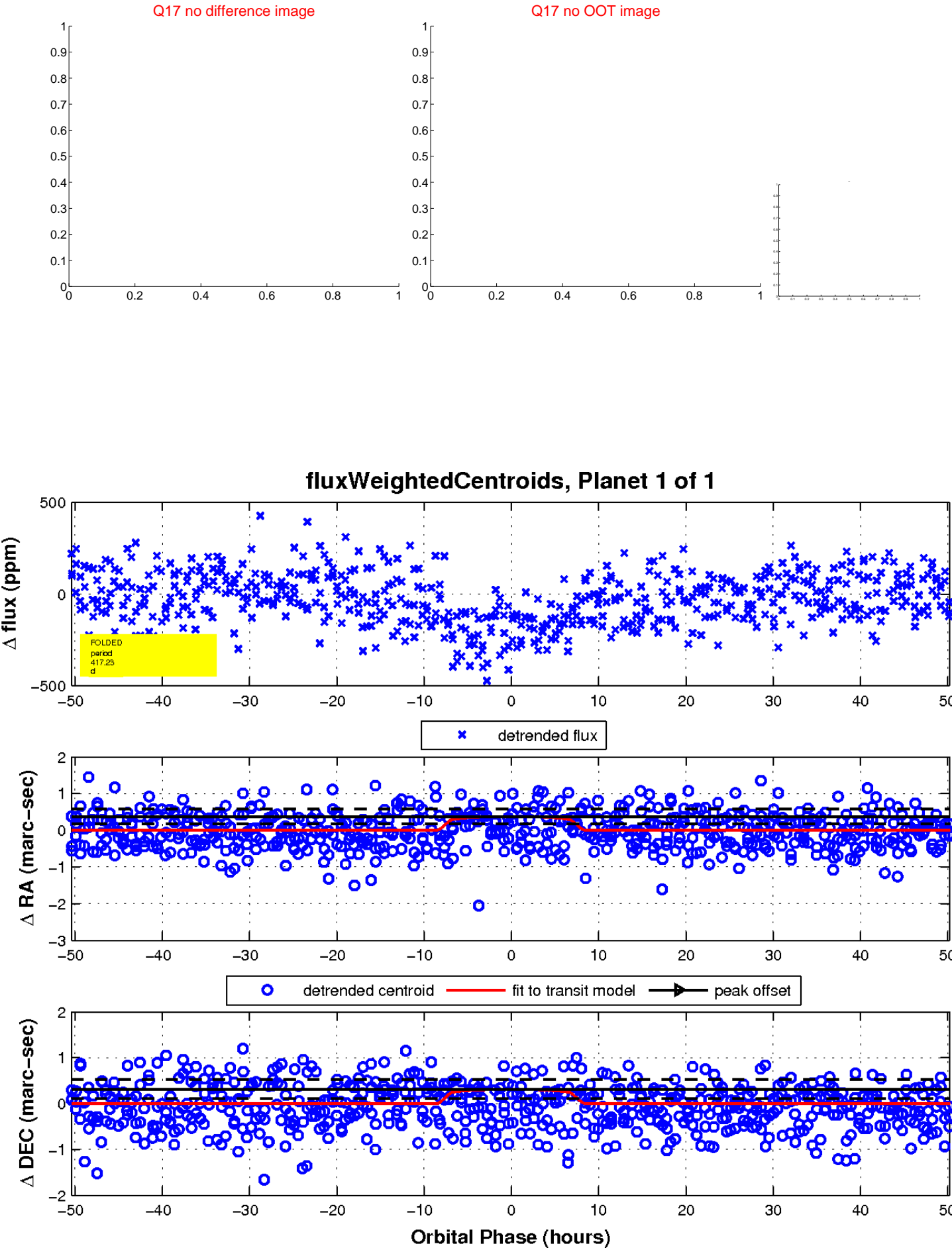
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

