

KIC 004263878

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})
004263878-01	OBS	No	410.241880	272.088981	973.1	3.804	8.2	6.5	3.27	5098	10.87	6.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004263878-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS

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

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

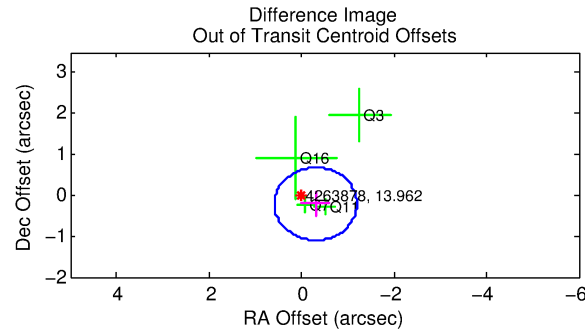
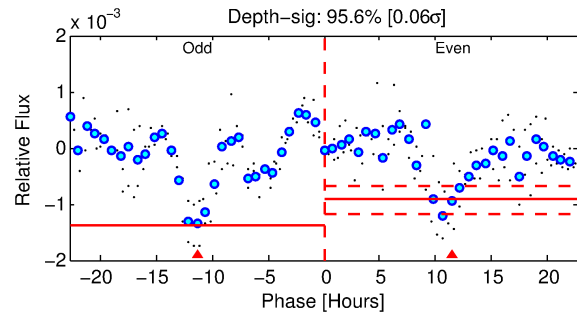
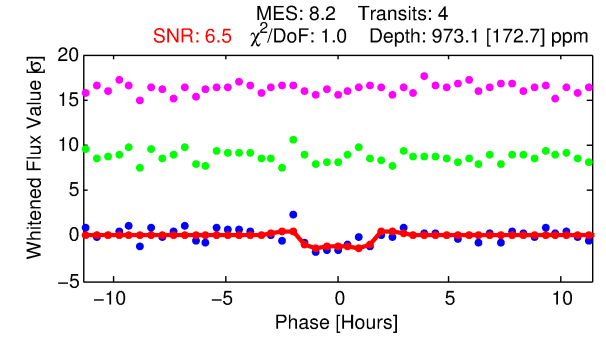
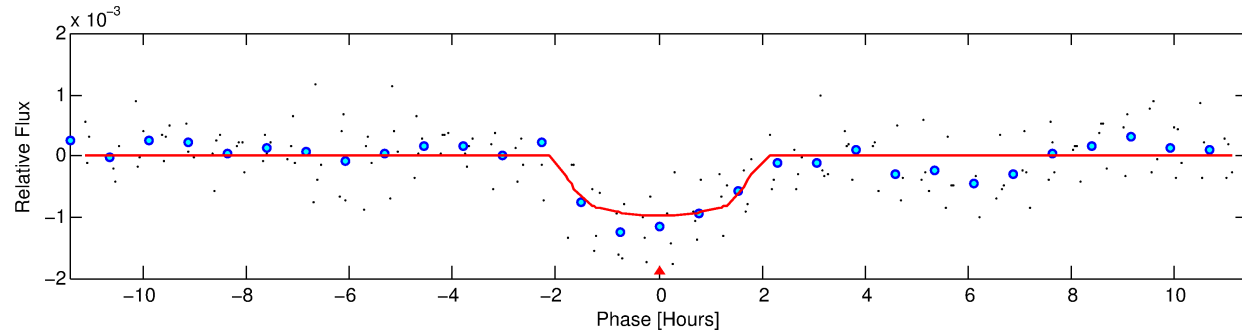
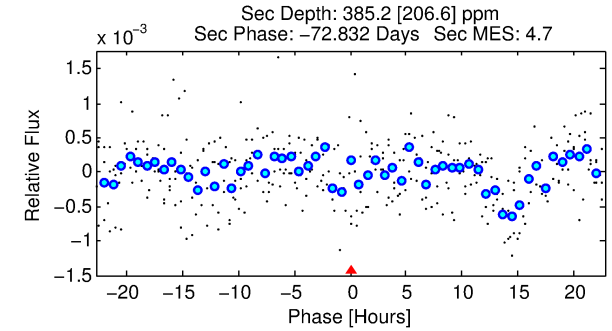
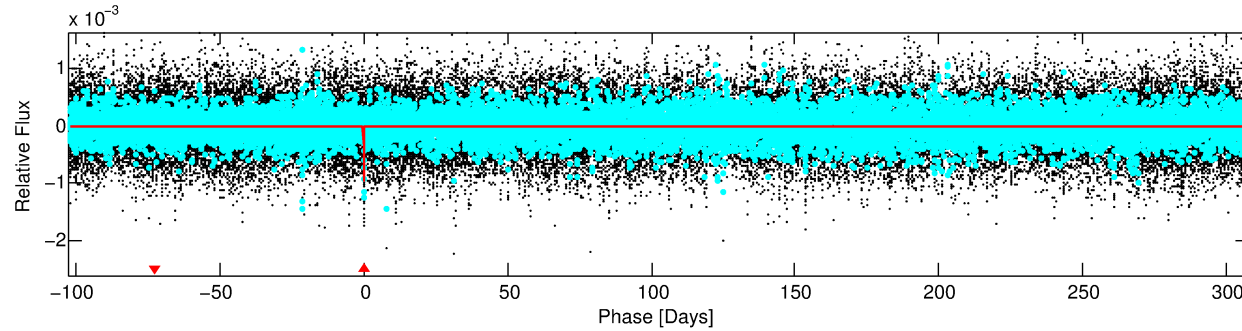
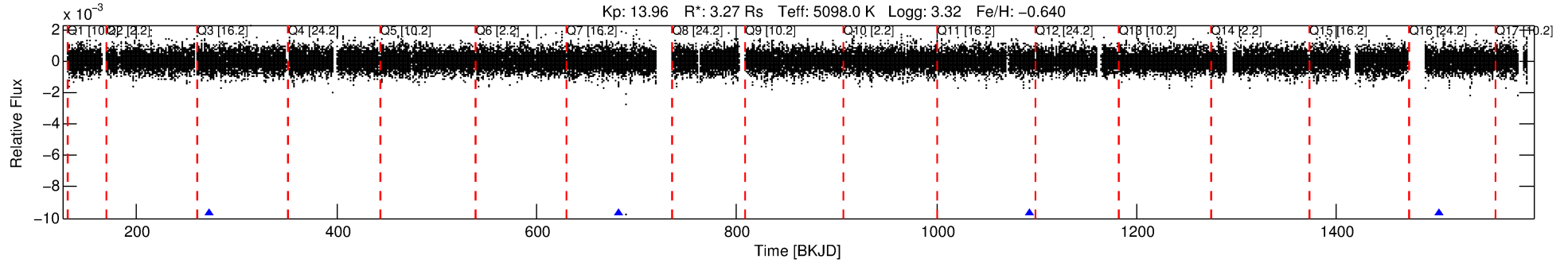
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004263878-01

No Significant Match Found

DV One-Page Summary

KIC: 4263878 Candidate: 1 of 1 Period: 410.242 d



DV Fit Results:

Period = 410.24188 [0.00283] d
Epoch = 272.0890 [0.0061] BKJD
Rp/R* = 0.0304 [0.0663]
a/R* = 631.35 [5478.05]
b = 0.69 [6.74]
Seff = 6.33 [12.26]
Teq = 404 [196] K
Rp = 10.87 [25.13] Re
a = 1.0124 [1.0797] AU
Ag = 1839.81 [8826.63] [0.21σ]
Teffp = 4095 [4495] K [0.82σ]

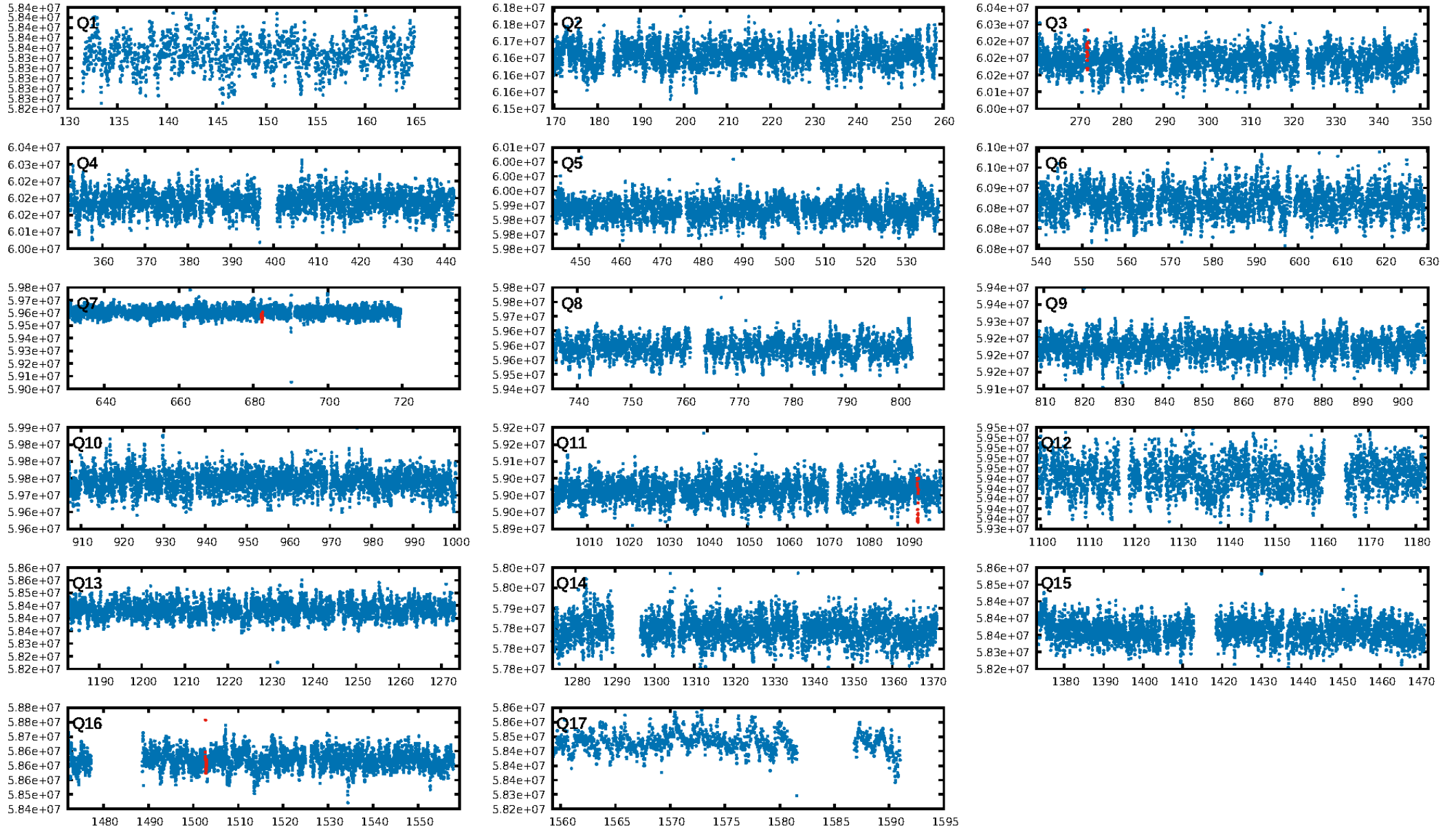
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.7%
ModelChiSquareGof-sig: 94.0%
Bootstrap-pfa: 7.99e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.07
Centroid-sig: 93.0%
Centroid-so: 0.330 arcsec [0.37σ]
OotOffset-rm: 0.369 arcsec [1.24σ]
OotOffset-st: 0/3/1/0 [4]
KicOffset-rm: 0.323 arcsec [1.09σ]
KicOffset-st: 0/3/1/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

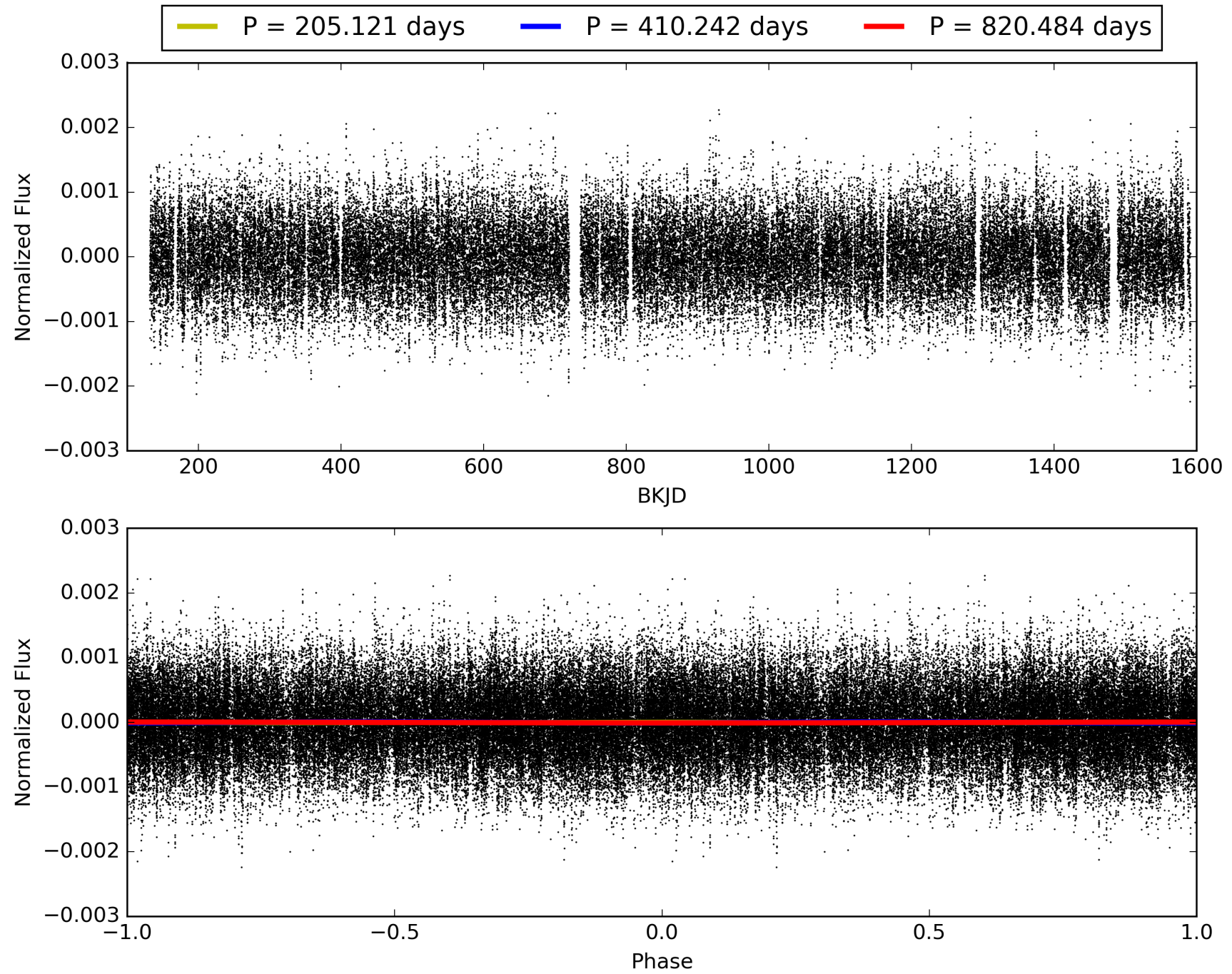
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:05:31 Z

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

TCE 004263878-01, PDC Light Curves

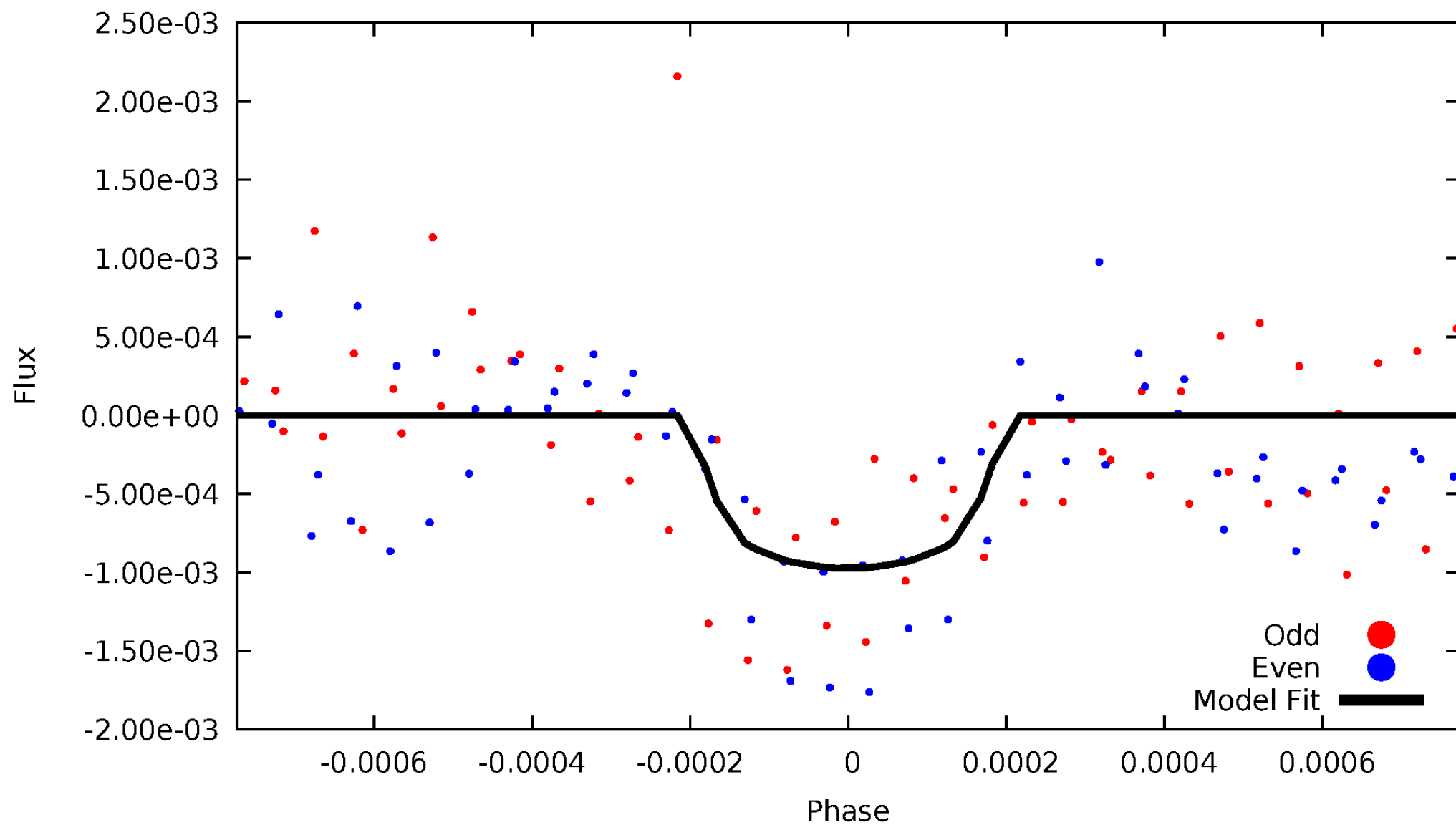


TCE 004263878-01



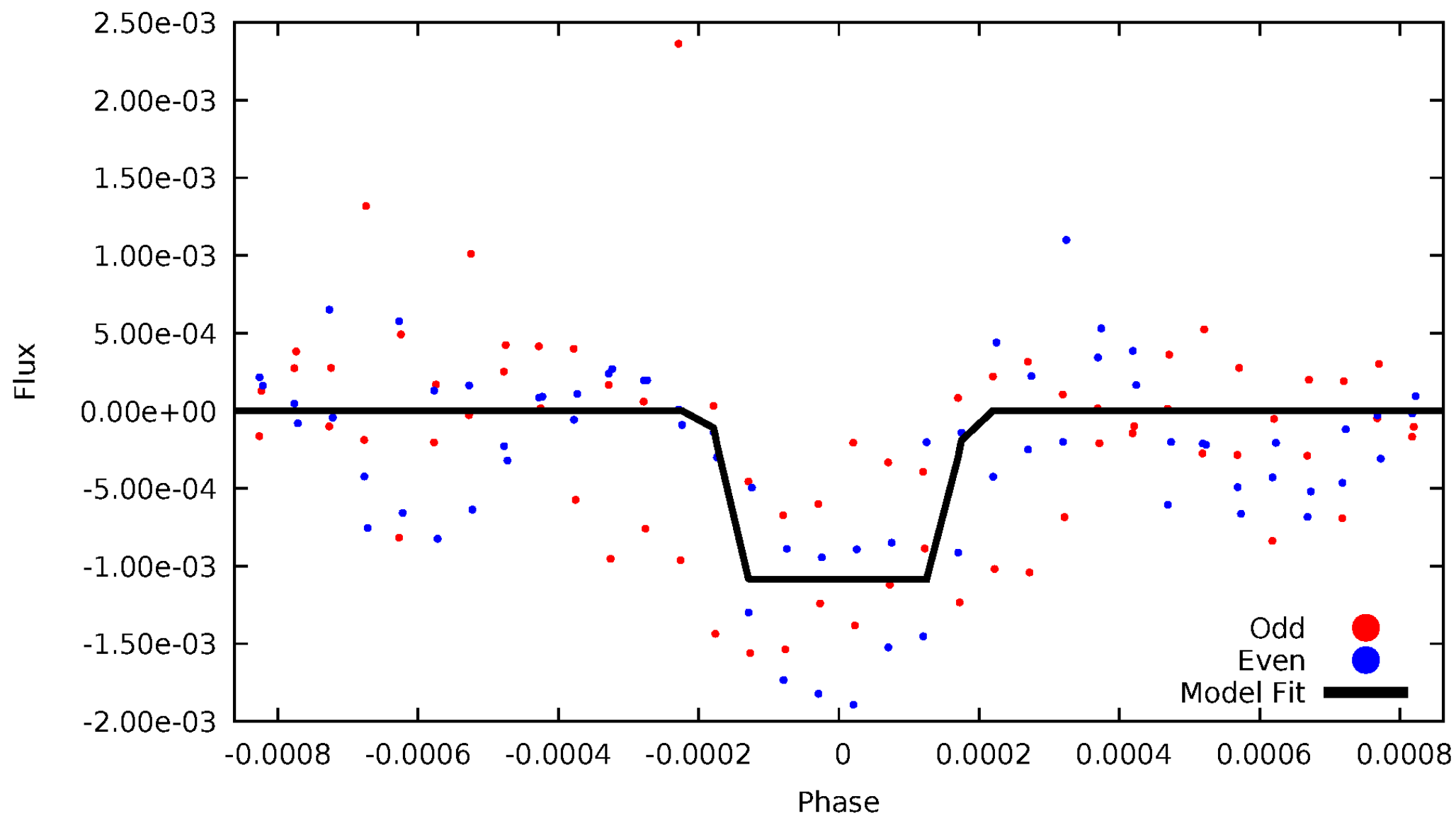
DV Odd/Even

TCE 004263878-01



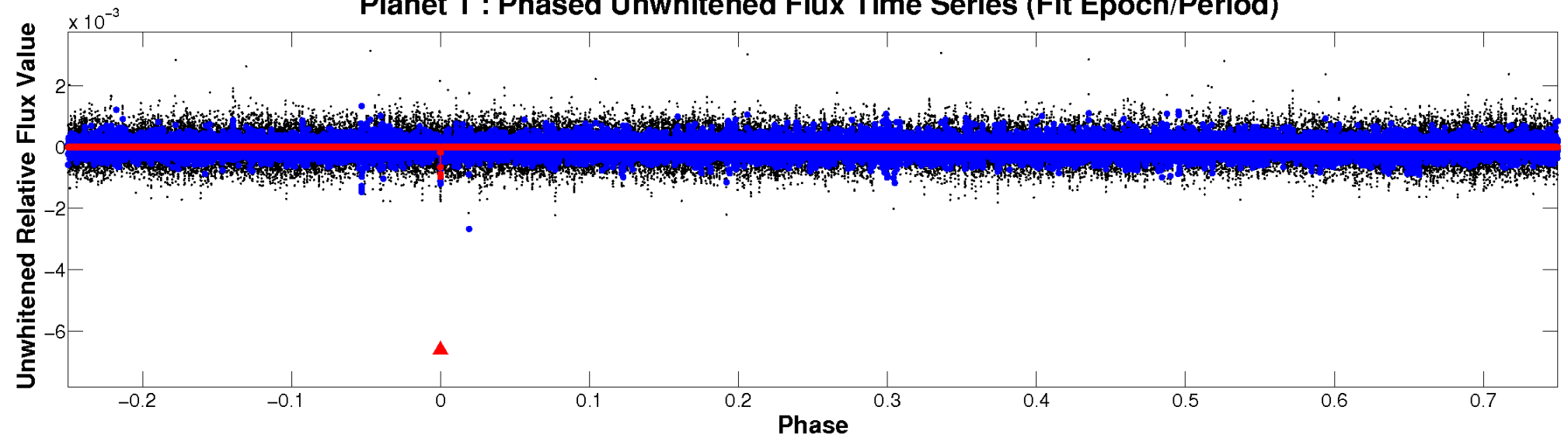
ALT Odd/Even

TCE 004263878-01

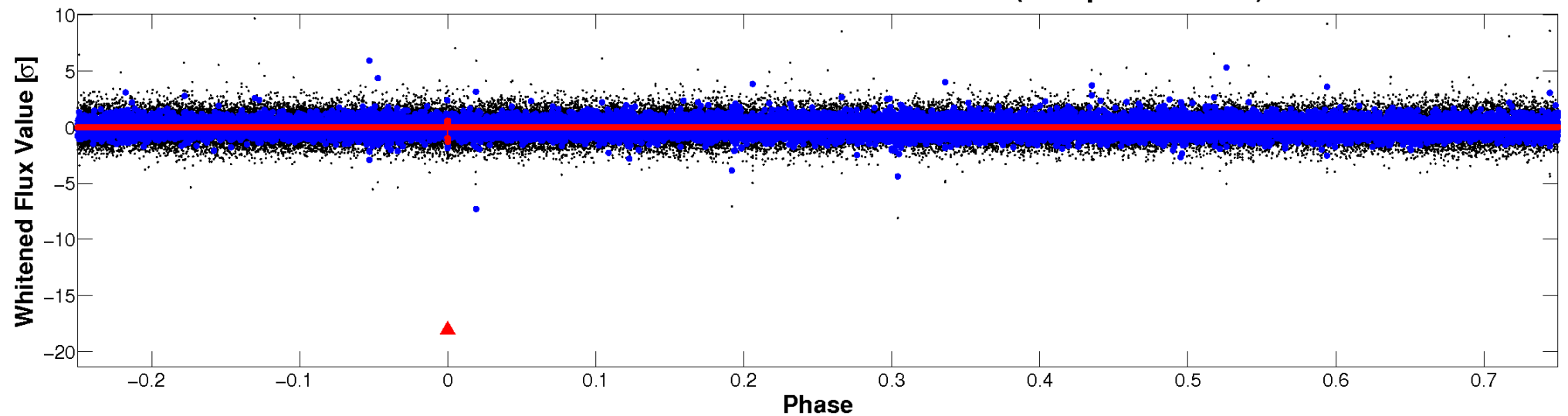


Non-Whitened Vs. Whitened Light Curve

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

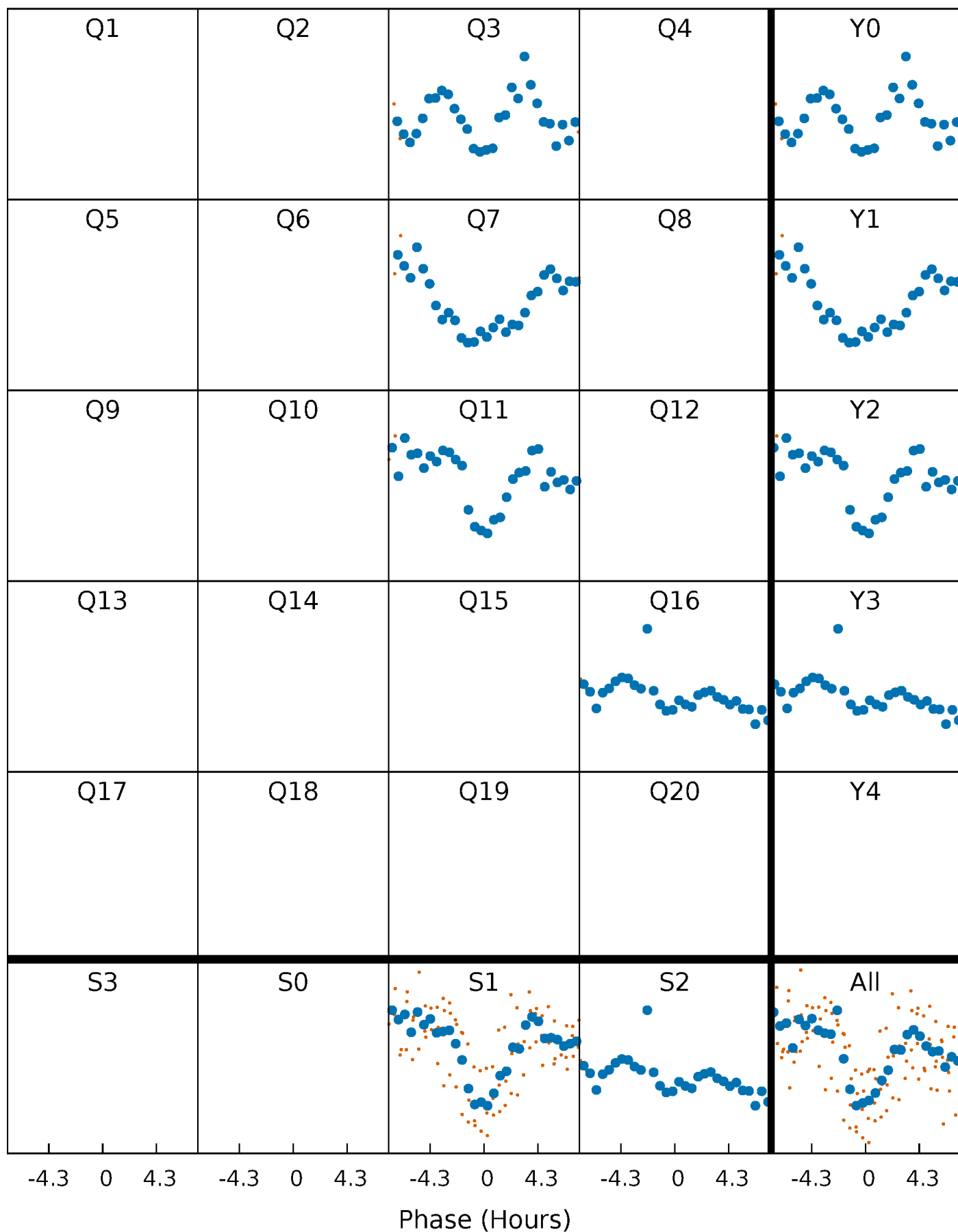


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



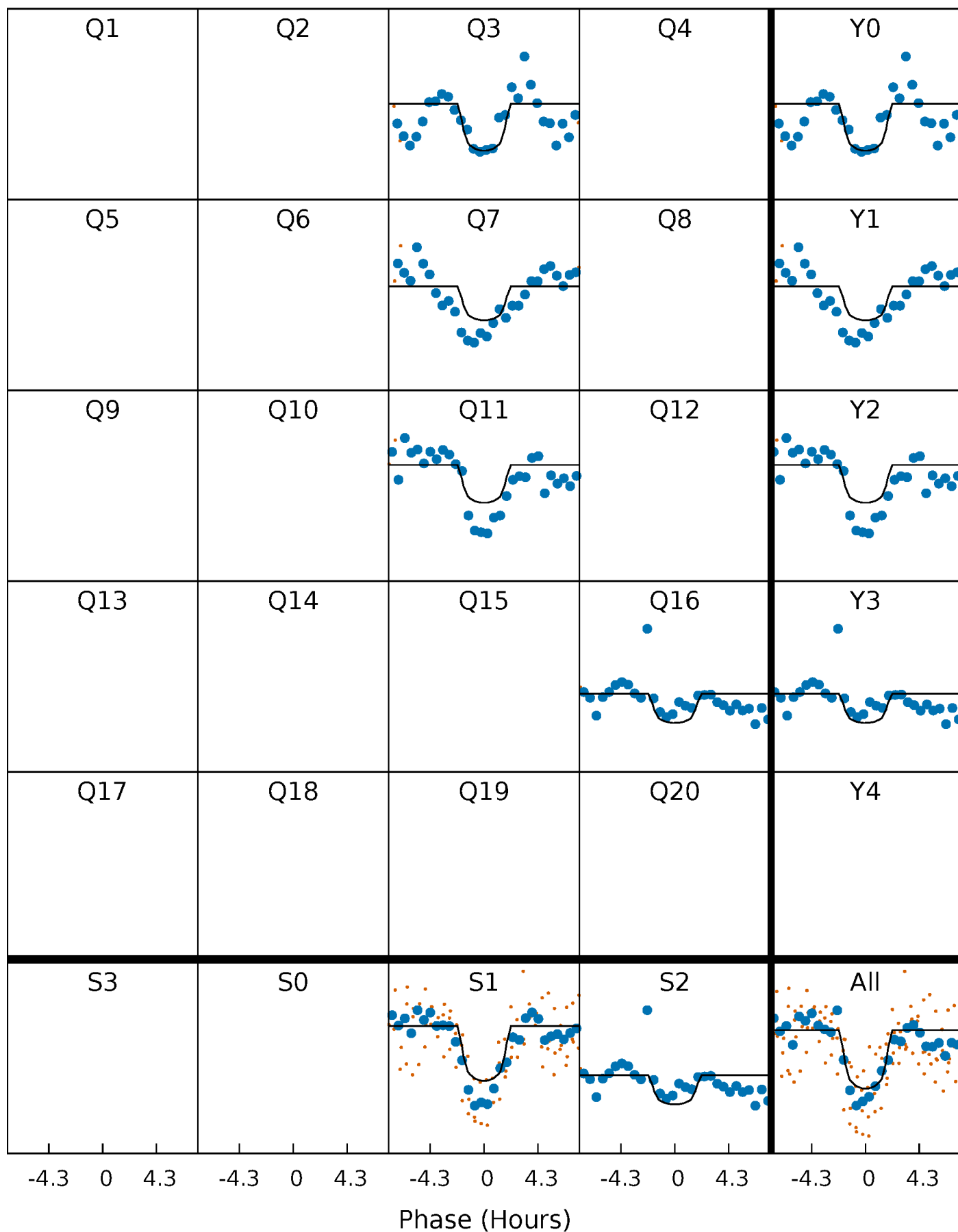
PDC Quarter-Phased Transit Curves

TCE 004263878-01 P=410.241879 Days $T_0=272.088981$ (BKJD)



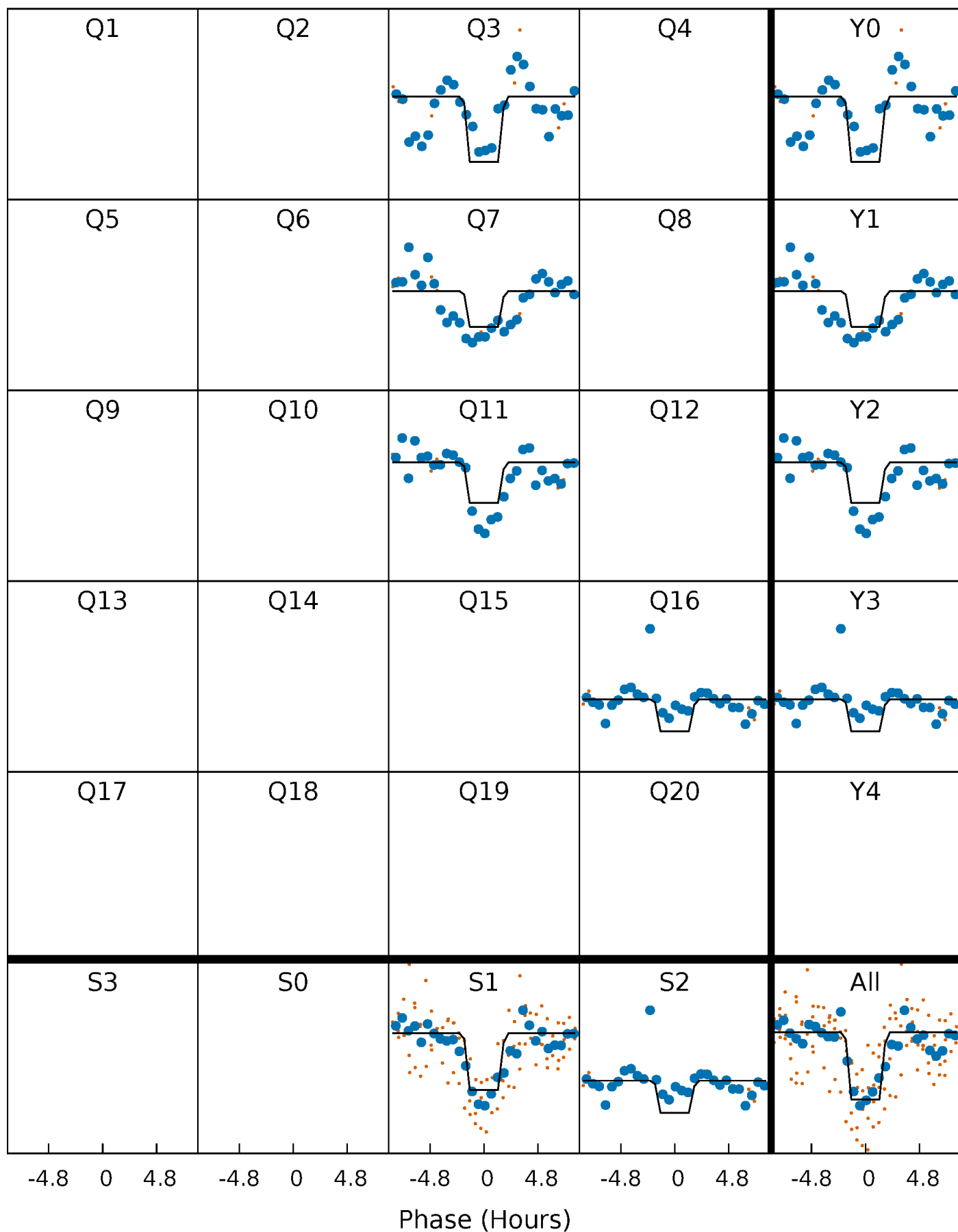
DV Quarter-Phased Transit Curves

TCE 004263878-01 P=410.241879 Days $T_0=272.088981$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

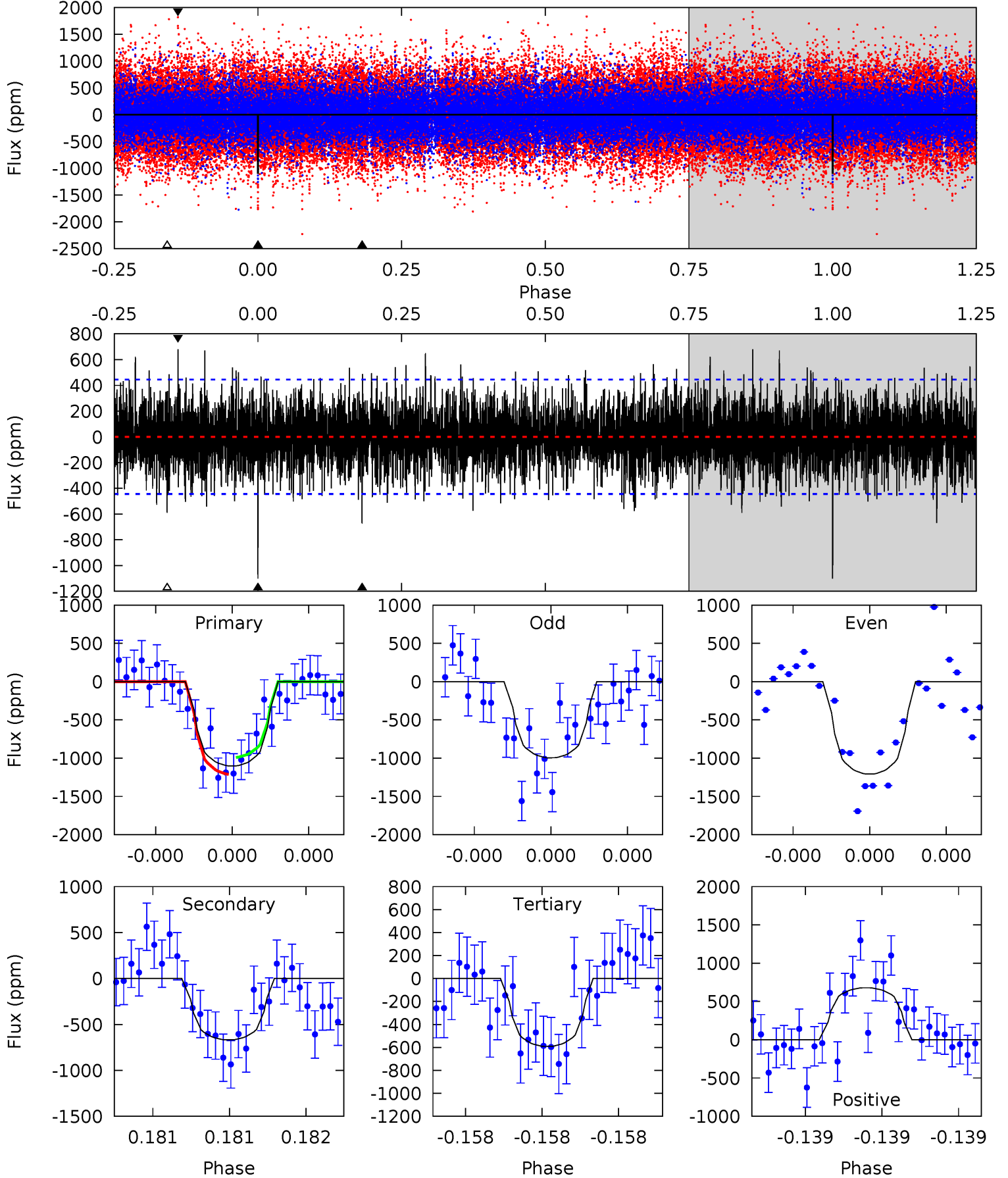
TCE 004263878-01 P=410.244584 Days $T_0=272.086007$ (BKJD)



DV Model-Shift Uniqueness Test

004263878-01, P = 410.241879 Days, E = 272.088981 Days

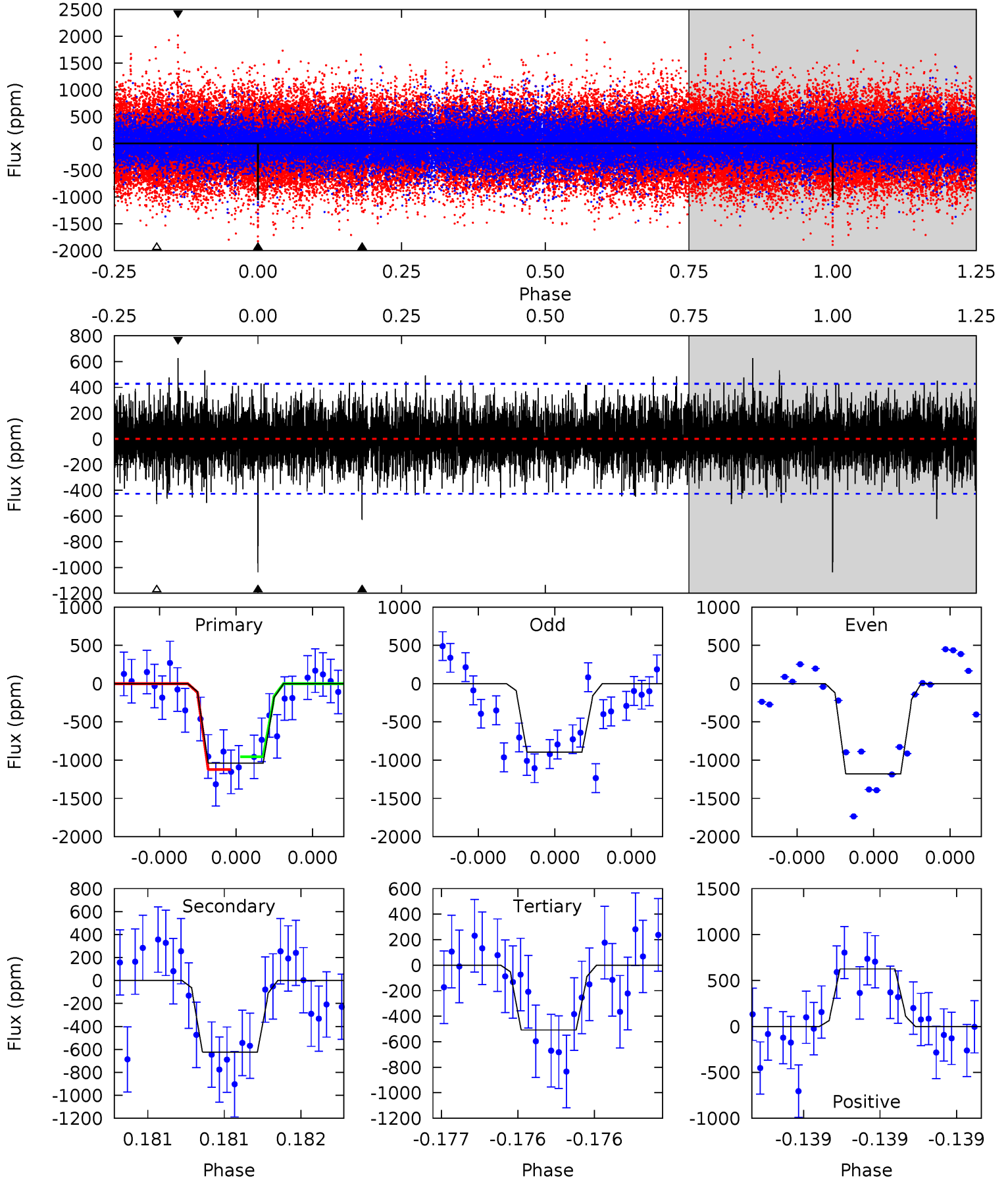
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	8.46	7.49	8.59	5.63	3.57	2.17	6.46	5.36	0.97	-0.13	1.36	0.97	0.38	1.40



Alt Model-Shift Uniqueness Test

004263878-01, P = 410.244584 Days, E = 272.086007 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	8.22	6.70	8.24	5.63	3.57	1.91	6.98	5.44	1.53	-0.02	1.89	1.00	0.38	1.10



Stellar Parameters For KIC 004263878

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5098^{+127}_{-127}	$3.323^{+1.215}_{-0.324}$	$-0.640^{+0.300}_{-0.300}$	$3.273^{+2.078}_{-2.540}$	$0.821^{+0.258}_{-0.188}$	$0.033^{+2.739}_{-0.025}$
	+2%/-2%	+37%/-10%	+47%/-47%	+63%/-78%	+31%/-23%	+8313%/-75%
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 004263878-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-668 ± 79	$16.35^{+23.07}_{-11.85}$	538^{+99}_{-120}	3734^{+2519}_{-673}	1333^{+18023}_{-1085}
Alt.	-624 ± 76	$17.09^{+21.71}_{-12.21}$	553^{+89}_{-128}	3709^{+2249}_{-684}	1204^{+14099}_{-963}

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 $A_{obs} \gg 1.0$

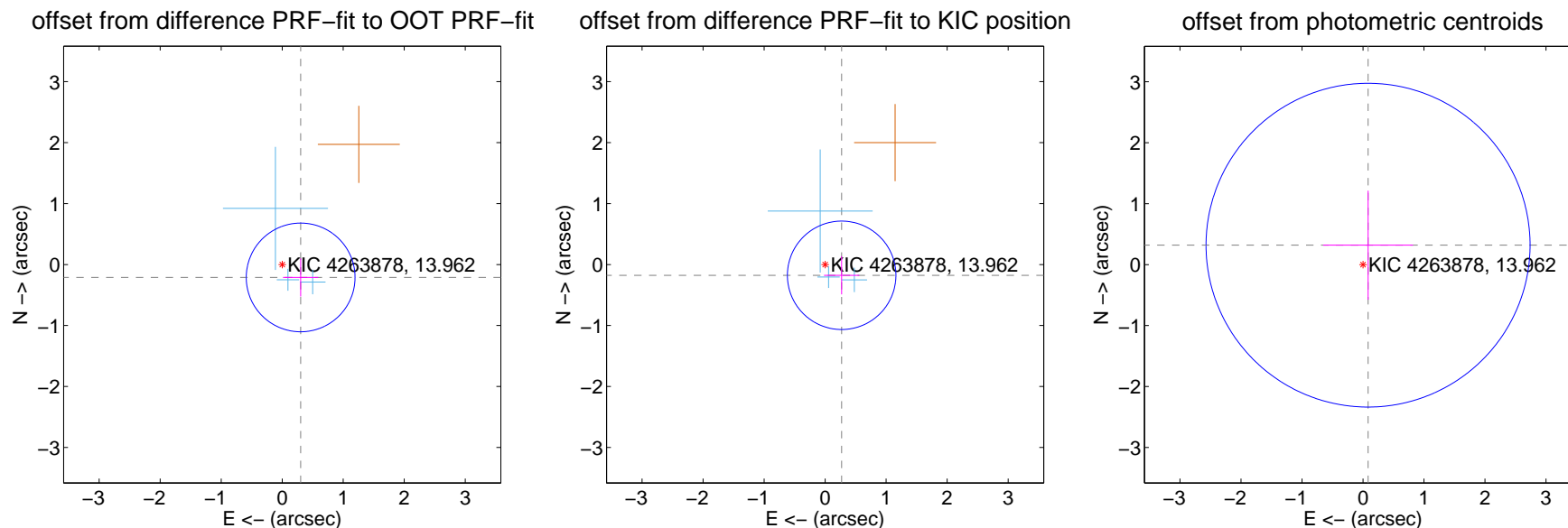
DV Centroid Data

Supplemental centroid analysis for 004263878-01. Kepler magnitude: 13.96. Transit SNR 6.49

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.369 ± 0.297	1.24	-0.302 ± 0.289	-0.211 ± 0.313
PRF-fit source offset from KIC position	0.323 ± 0.296	1.09	-0.271 ± 0.289	-0.177 ± 0.313
photometric centroid source offset	0.33 ± 0.89	0.37	-0.08 ± 0.74	0.32 ± 0.89



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.

Q1 no difference image



Q1 no OOT image



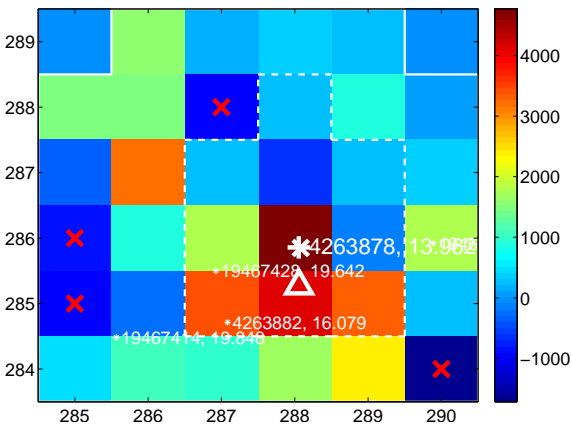
Q2 no difference image



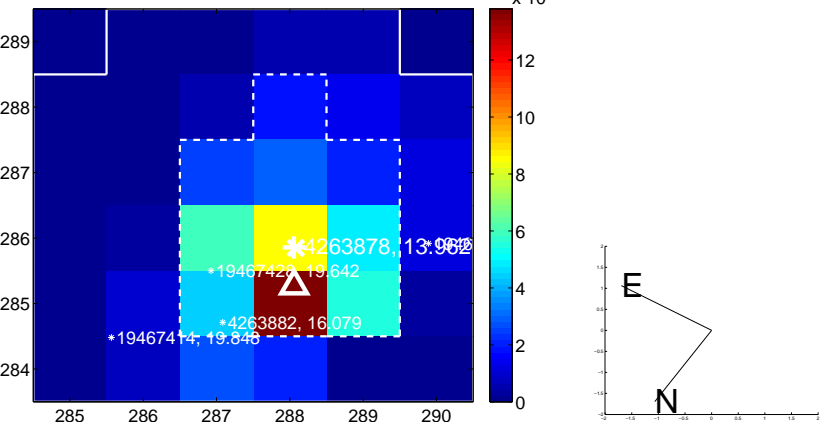
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

Q5 no difference image



Q5 no OOT image



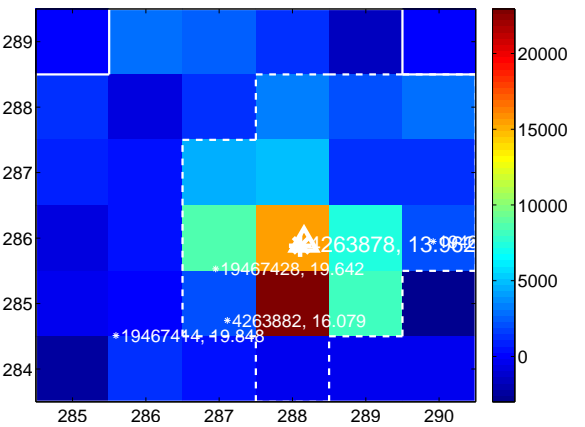
Q6 no difference image



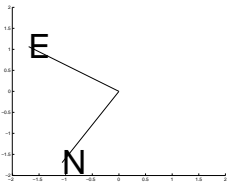
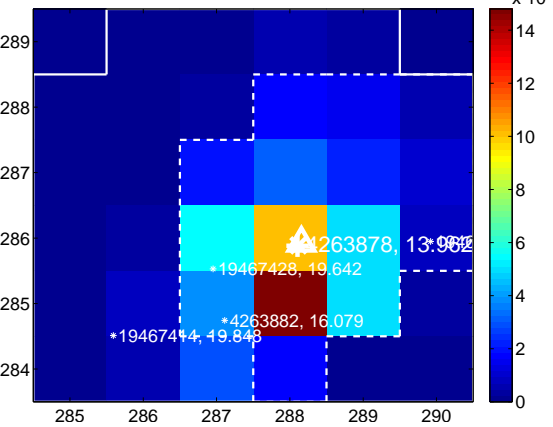
Q6 no OOT image



Q7 difference image



Q7 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



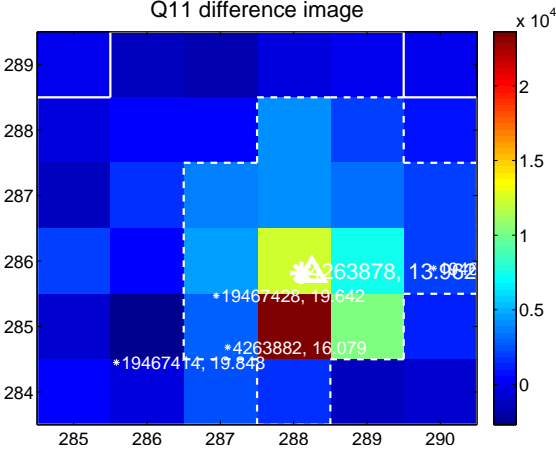
Q10 no difference image



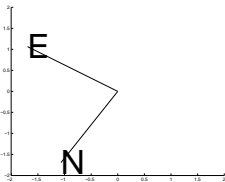
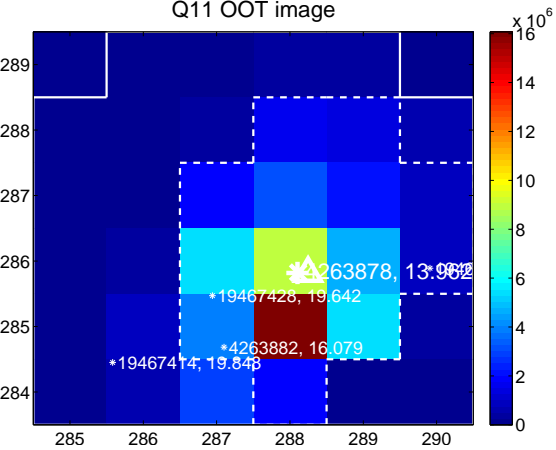
Q10 no OOT image



Q11 difference image



Q11 OOT image



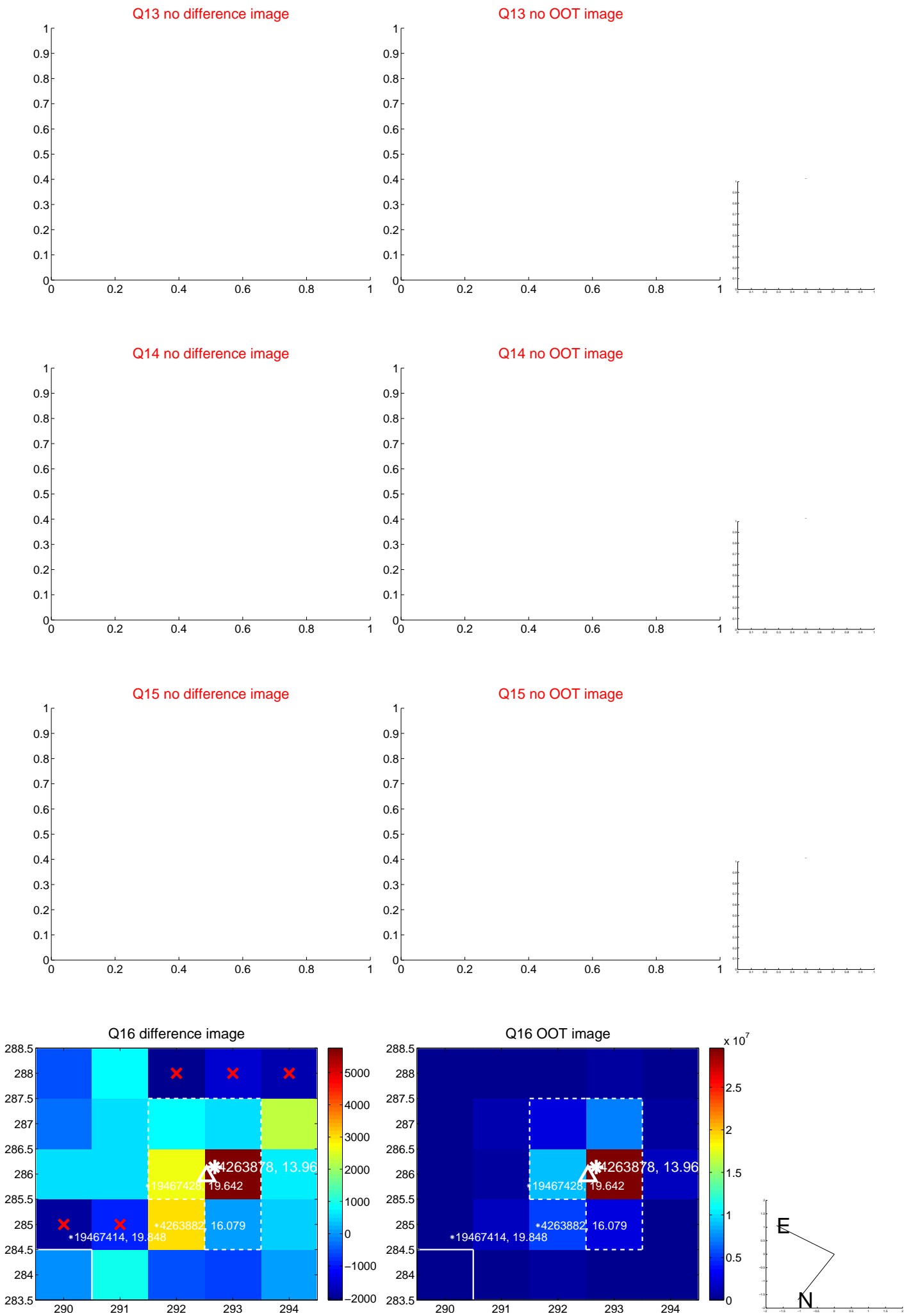
Q12 no difference image



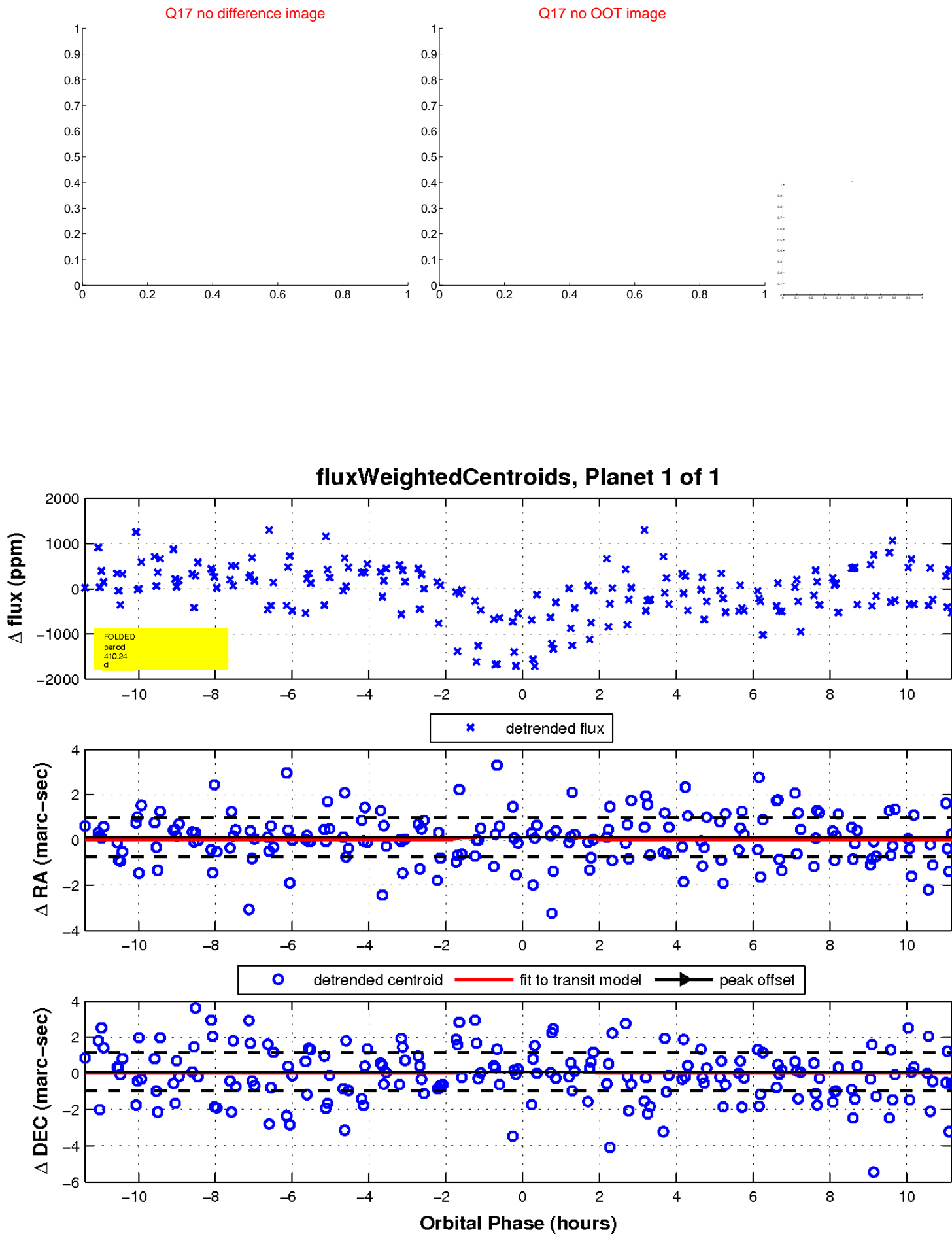
Q12 no OOT image



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.



UKIRT Image

