

KIC 008396288

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})
008396288-01	OBS	5512.01	8.585271	137.397469	1590.4	2.868	9.0	10.5	0.82	5488	3.39	86.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008396288-01	OBS	PC	1.00	0	0	0	0	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.

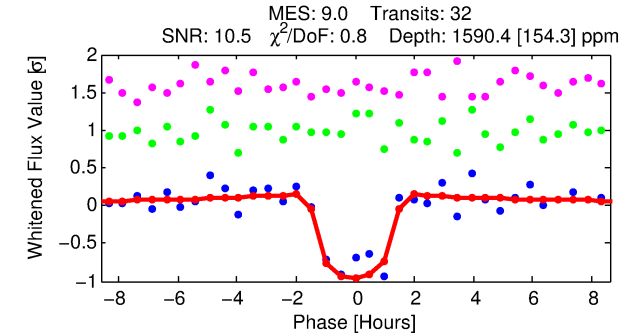
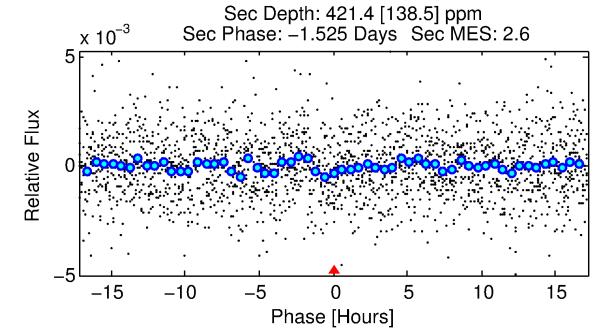
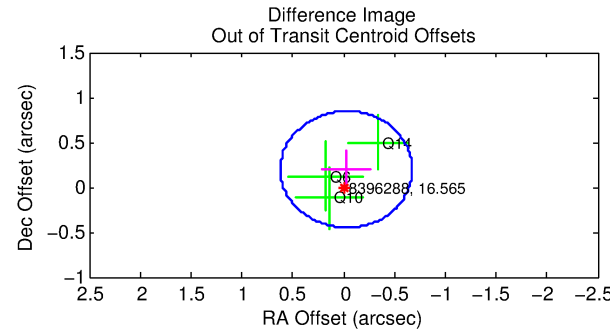
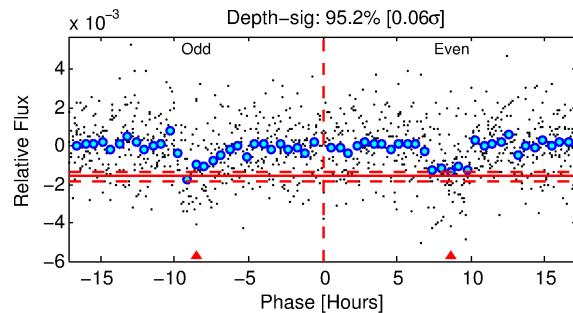
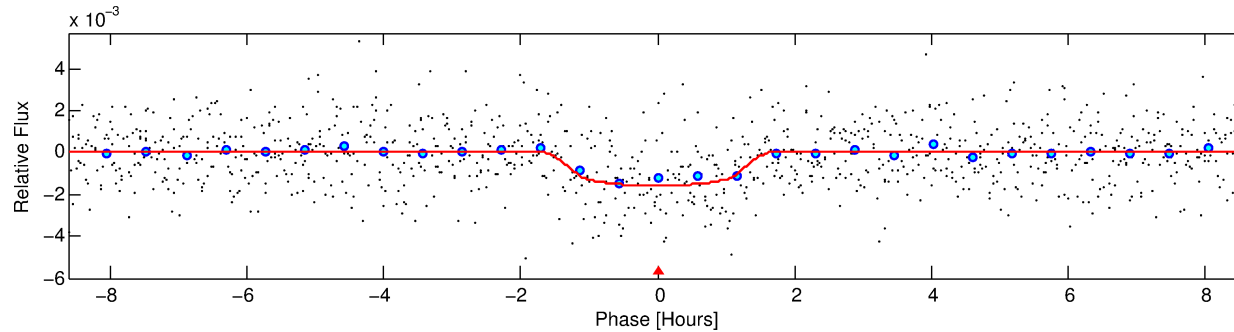
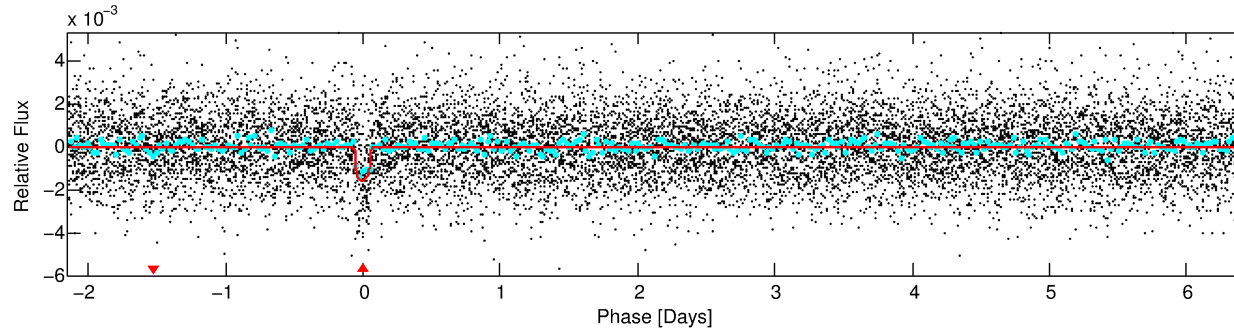
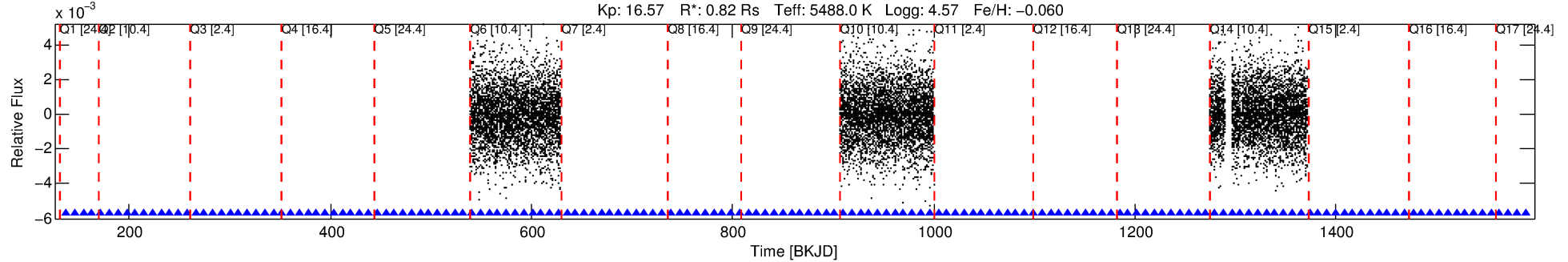
Ephemeris Match Information For 008396288-01

No Significant Match Found

DV One-Page Summary

KIC: 8396288 Candidate: 1 of 1 Period: 8.585 d
KOI: K05512 Corr: No Ephemeris Match

Kp: 16.57 R*: 0.82 Rs Teff: 5488.0 K Logg: 4.57 Fe/H: -0.060



DV Fit Results:

Period = 8.58527 [0.00007] d
Epoch = 137.3975 [0.0065] BKJD
Rp/R* = 0.0380 [0.0462]
a/R* = 19.35 [93.30]
b = 0.60 [5.20]
Seff = 86.17 [27.80]
Teq = 777 [63] K
Rp = 3.39 [4.21] Re
a = 0.0794 [0.0162] AU
Ag = 127.28 [314.99] [0.40σ]
Teffp = 4035 [2482] K [1.31σ]

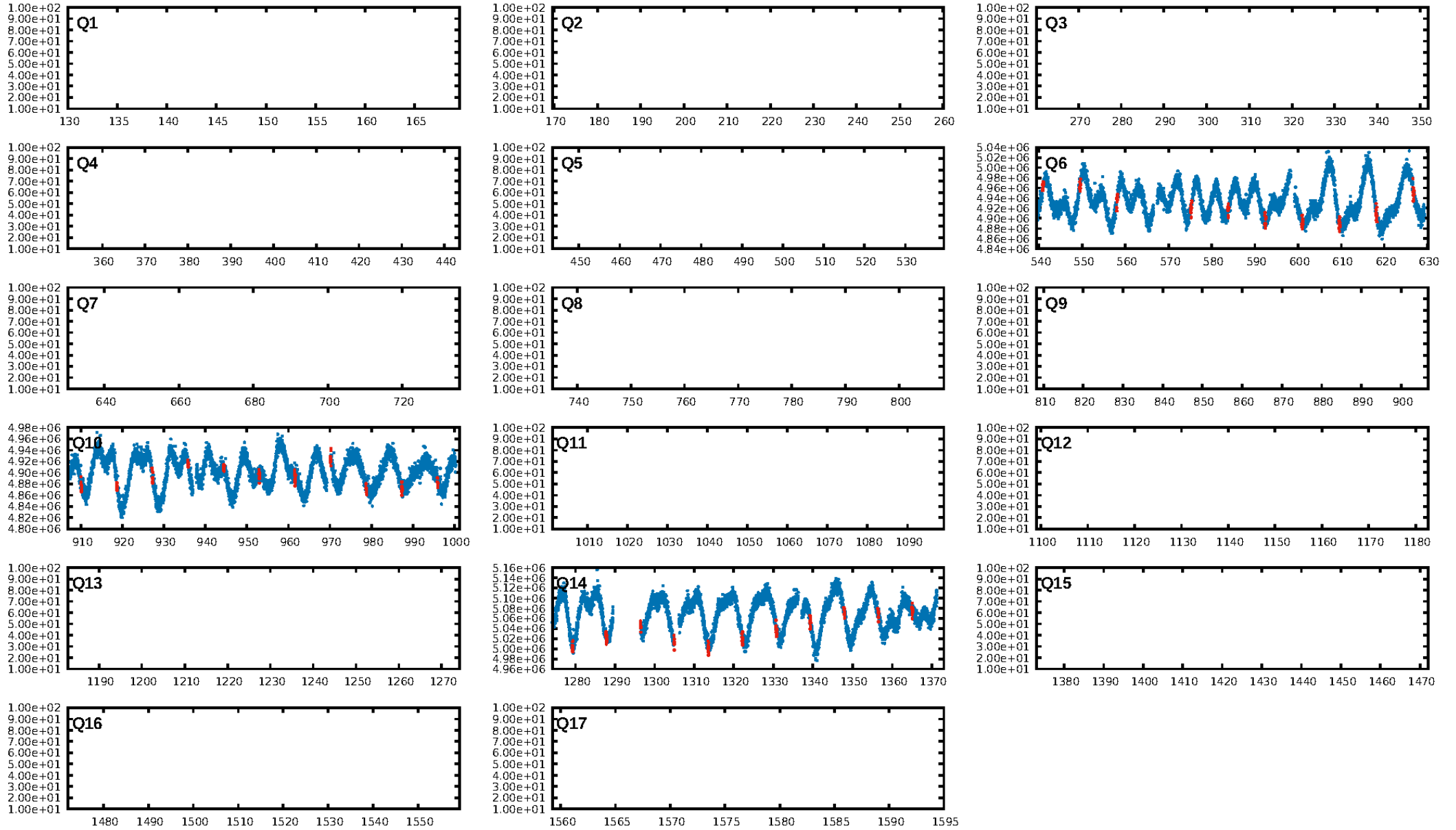
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 27.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.27e-19
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: 2.691
Centroid-sig: 71.0%
Centroid-so: 1.907 arcsec [1.97σ]
OotOffset-rm: 0.199 arcsec [0.92σ]
KicOffset-rm: 0.300 arcsec [1.35σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

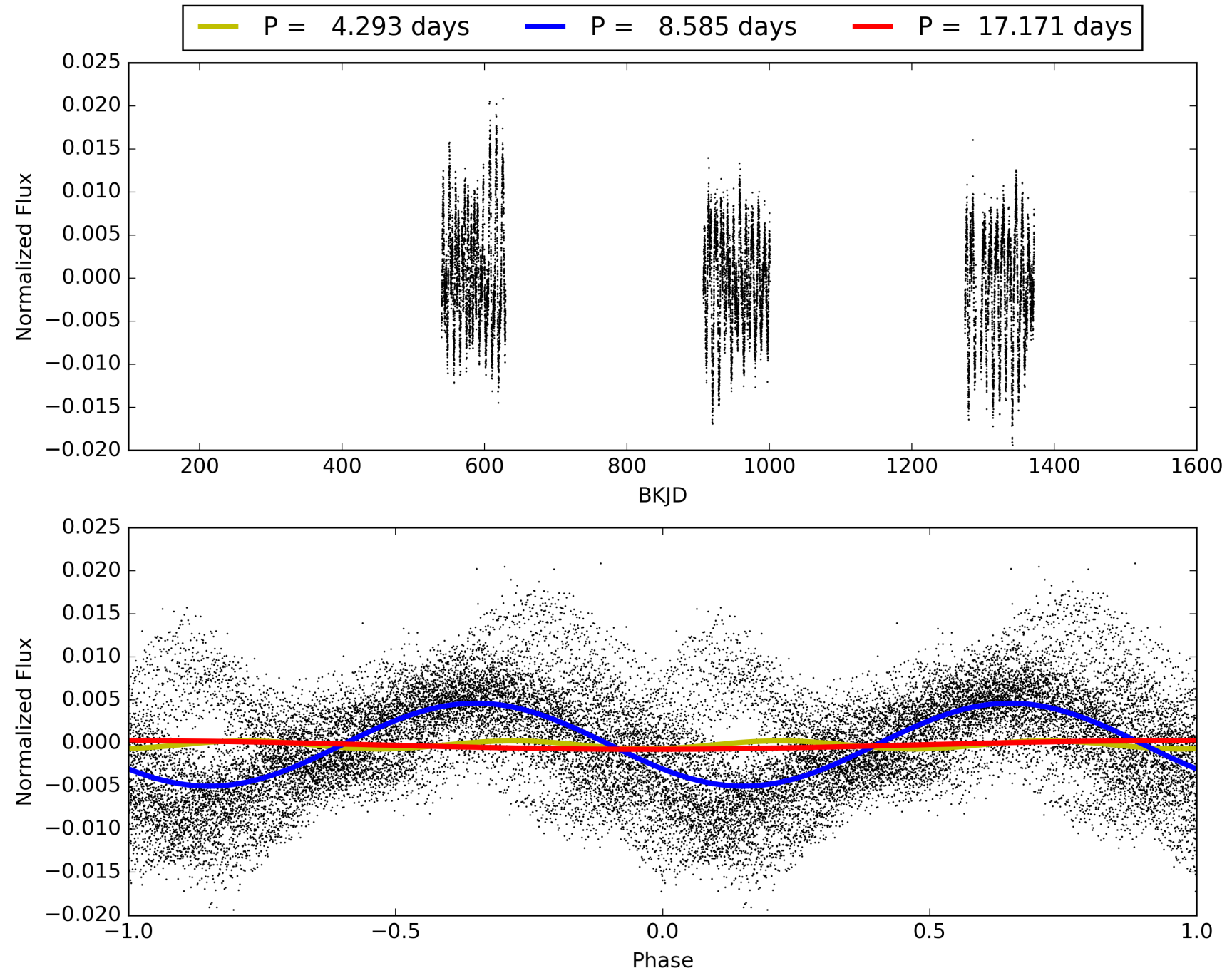
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:49:15 Z

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

TCE 008396288-01, PDC Light Curves

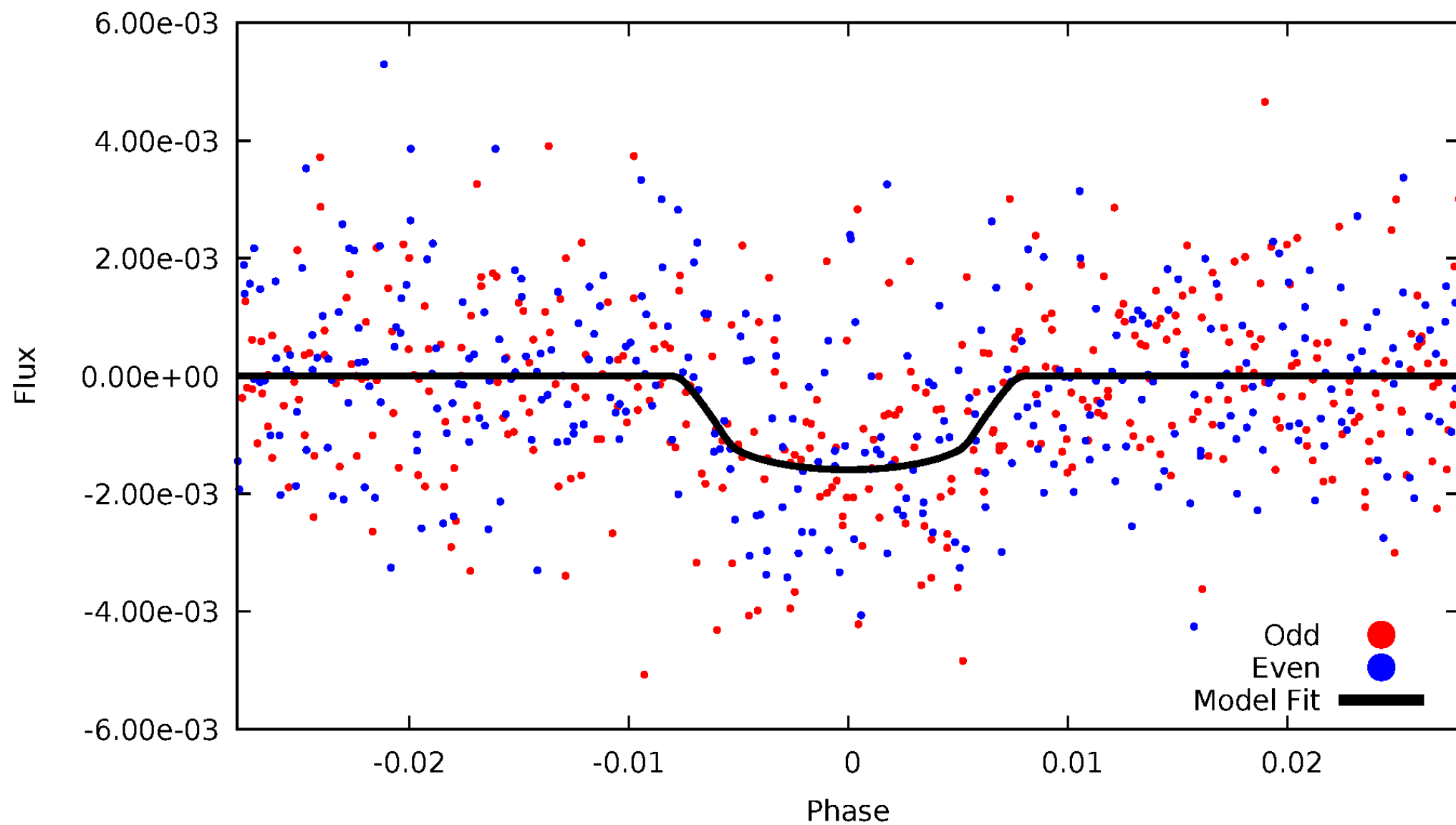


TCE 008396288-01



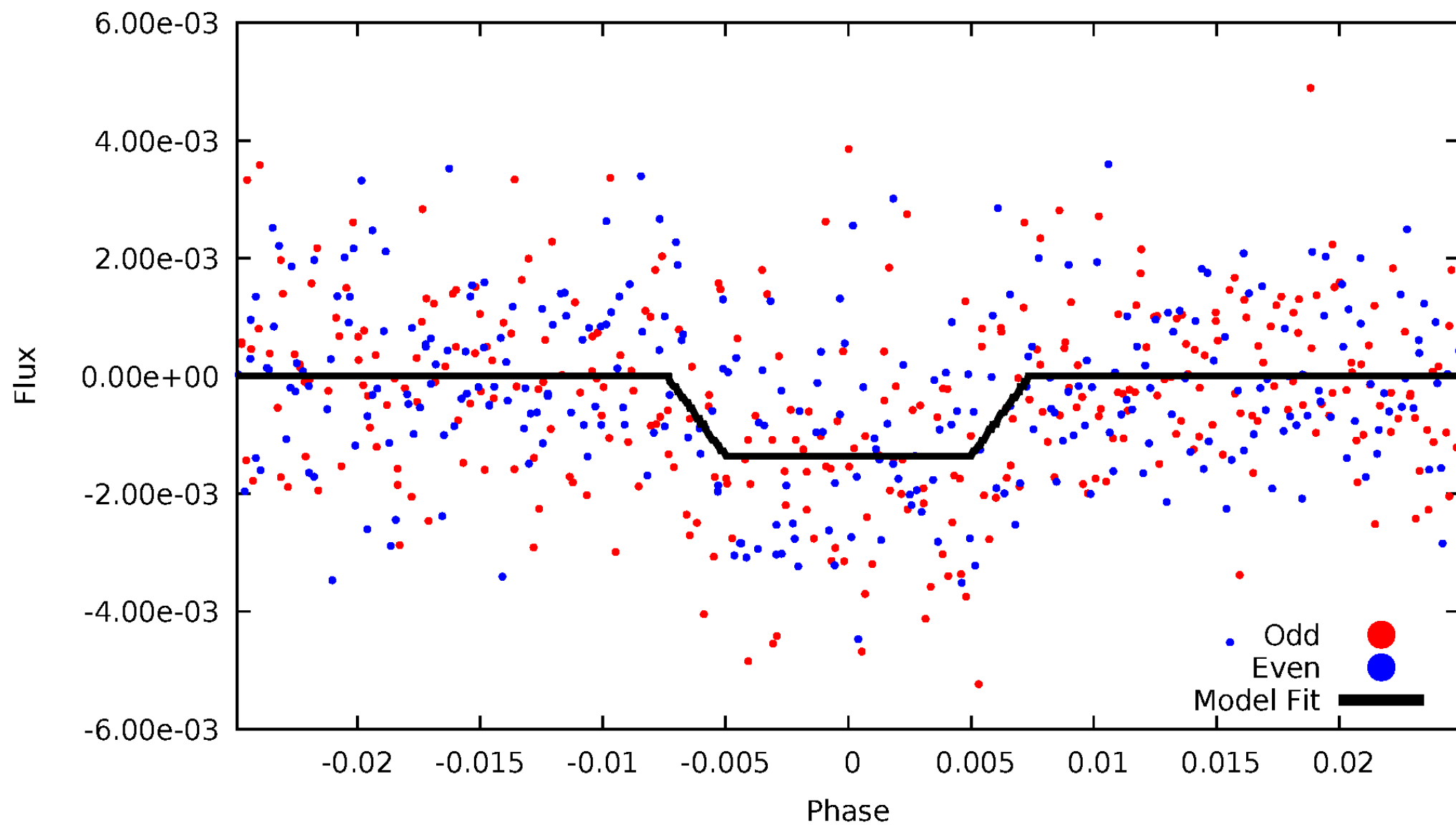
DV Odd/Even

TCE 008396288-01



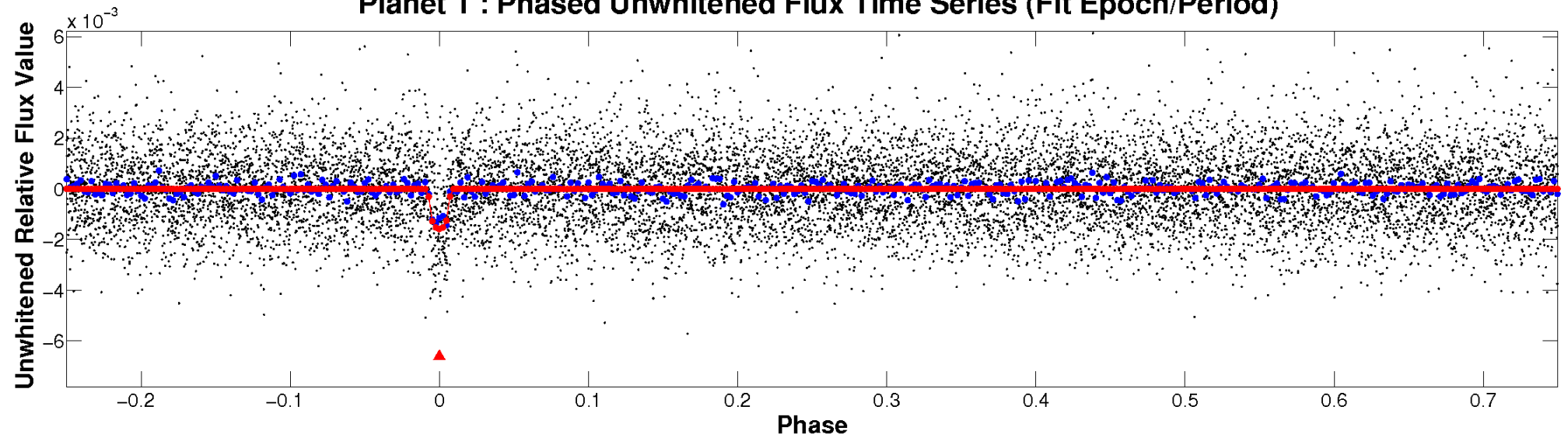
ALT Odd/Even

TCE 008396288-01

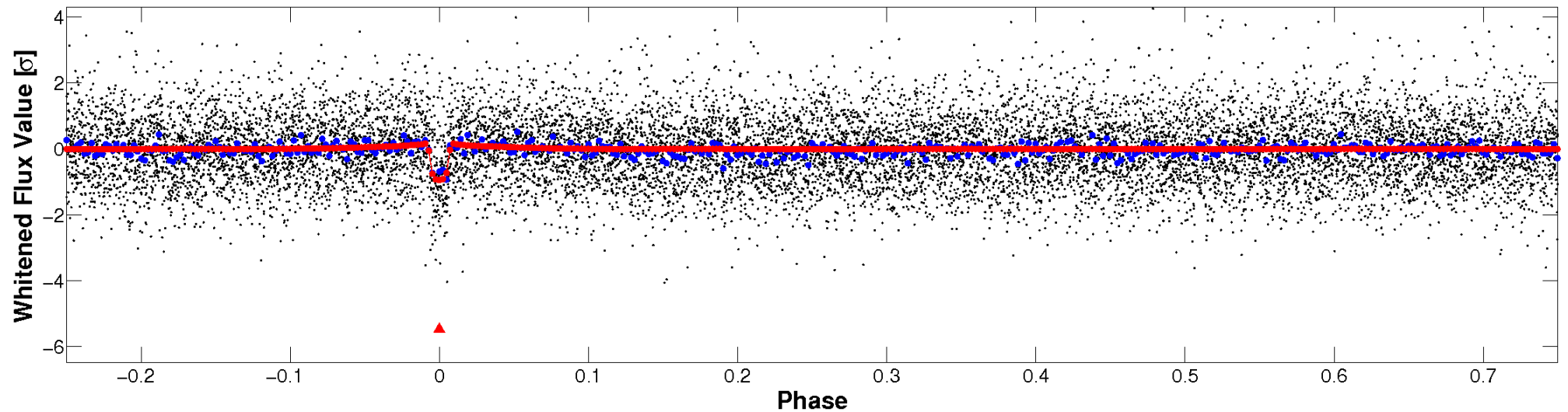


Non-Whitened Vs. Whitened Light Curve

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

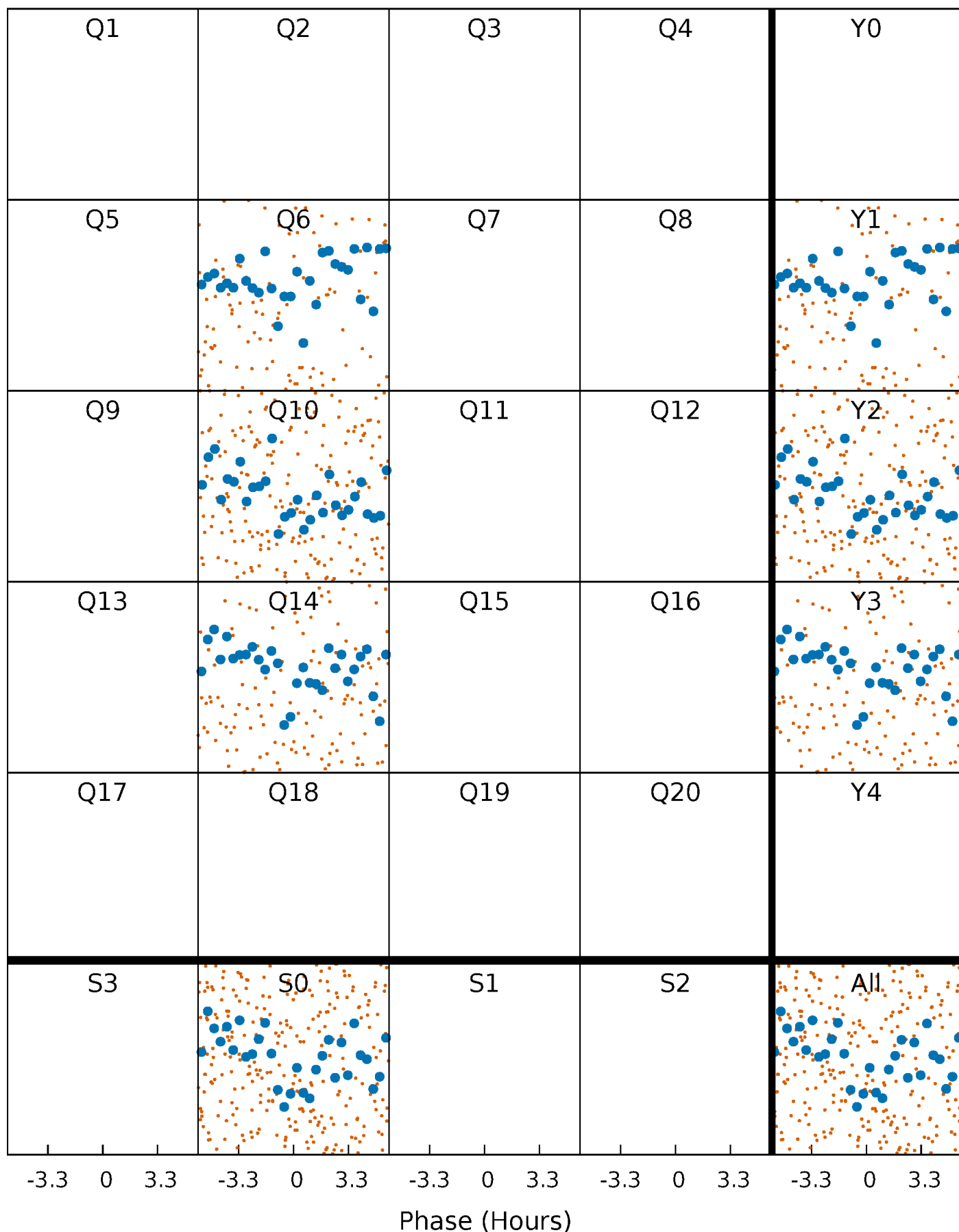


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



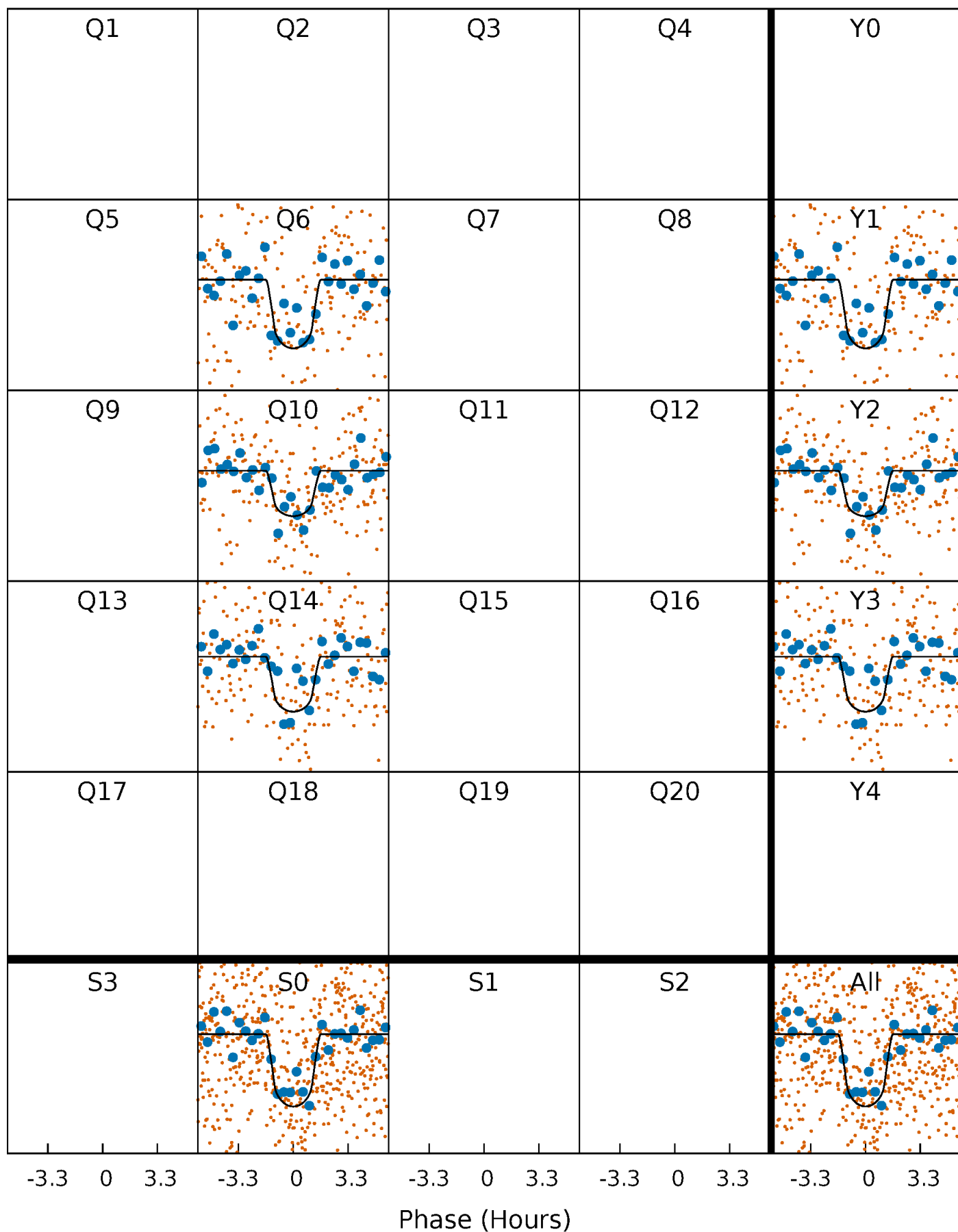
PDC Quarter-Phased Transit Curves

TCE 008396288-01 P= 8.585271 Days $T_0=137.397469$ (BKJD)



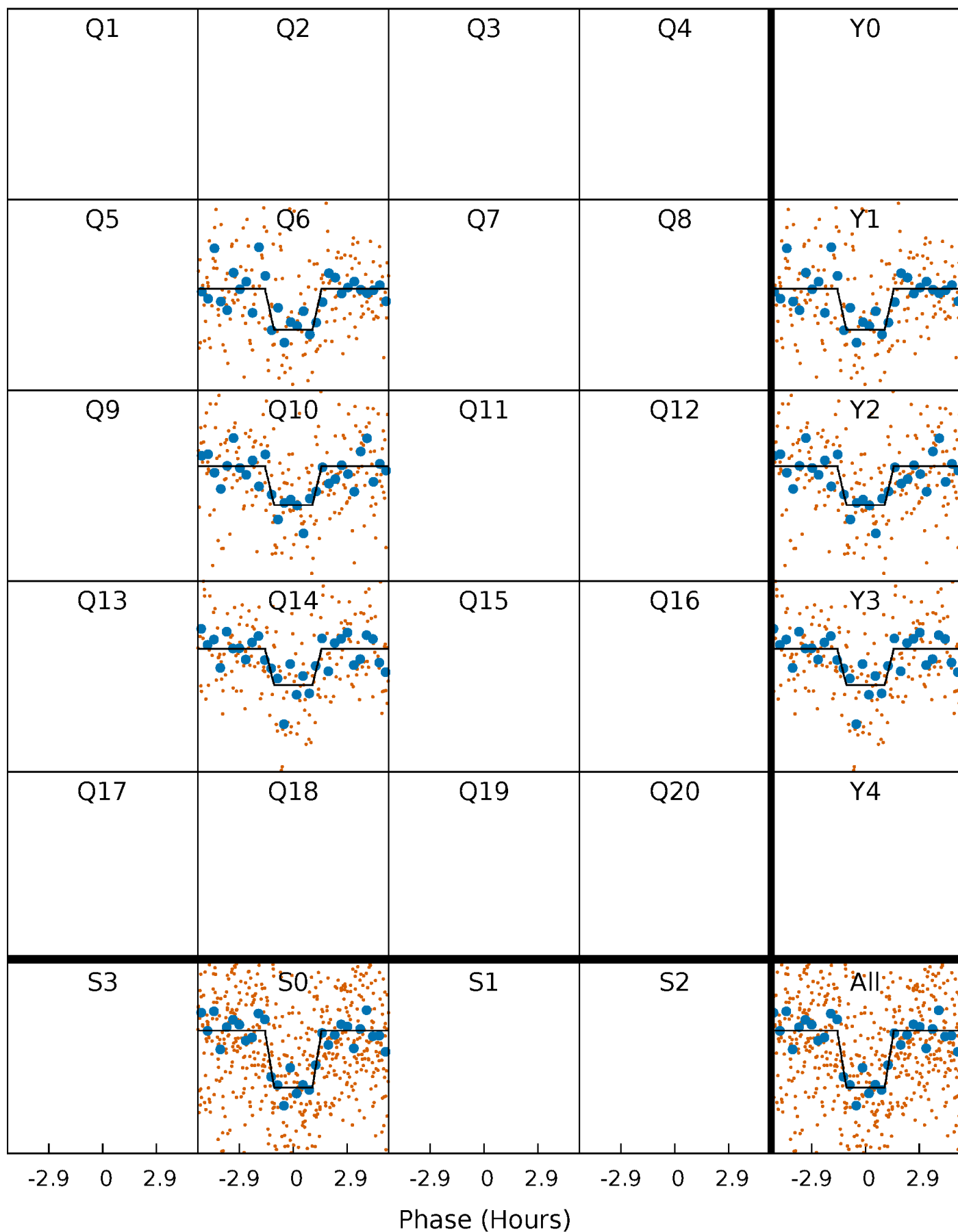
DV Quarter-Phased Transit Curves

TCE 008396288-01 P= 8.585271 Days $T_0=137.397469$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

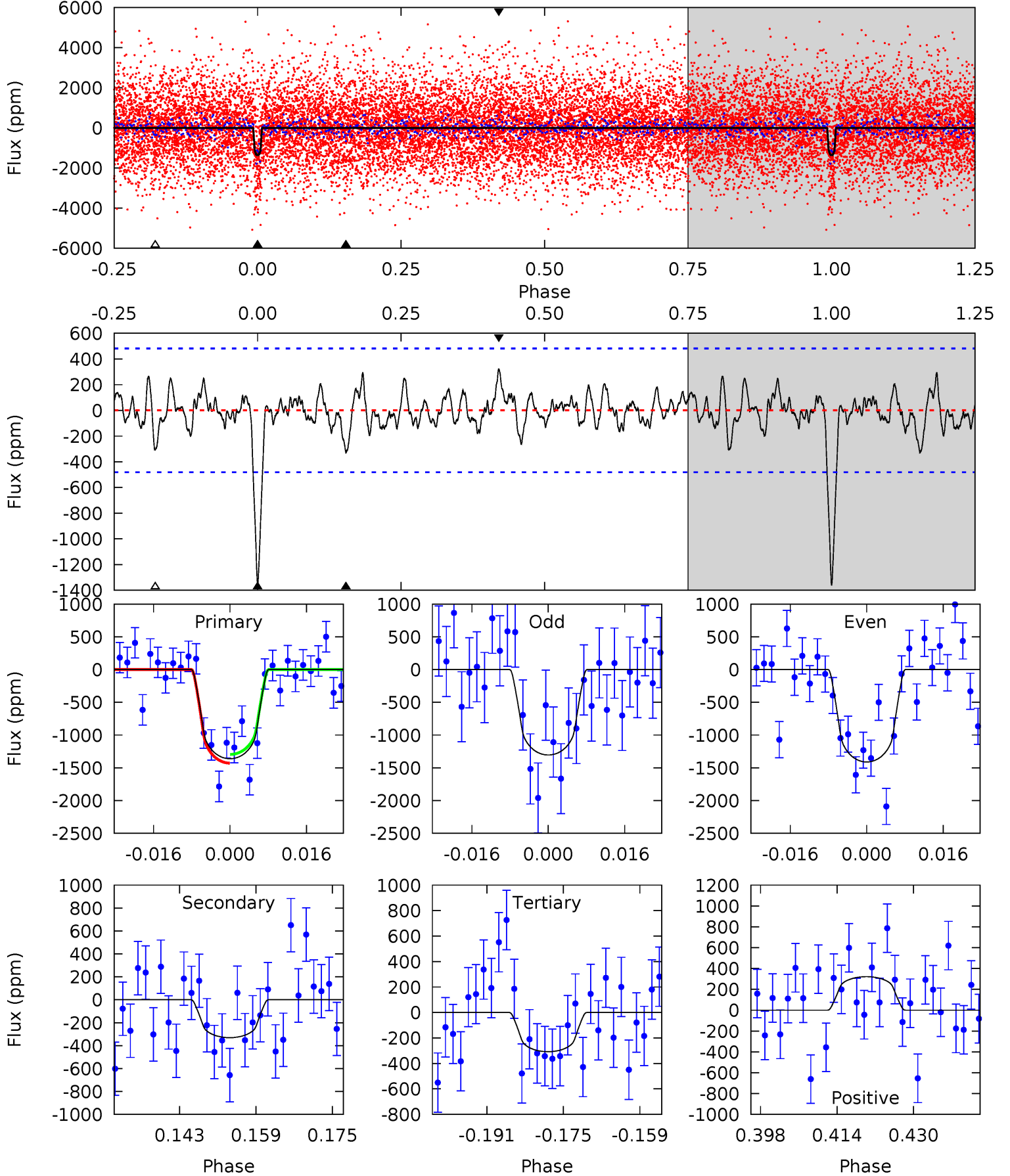
TCE 008396288-01 P= 8.585323 Days $T_0=137.394093$ (BKJD)



DV Model-Shift Uniqueness Test

008396288-01, P = 8.585271 Days, E = 137.397469 Days

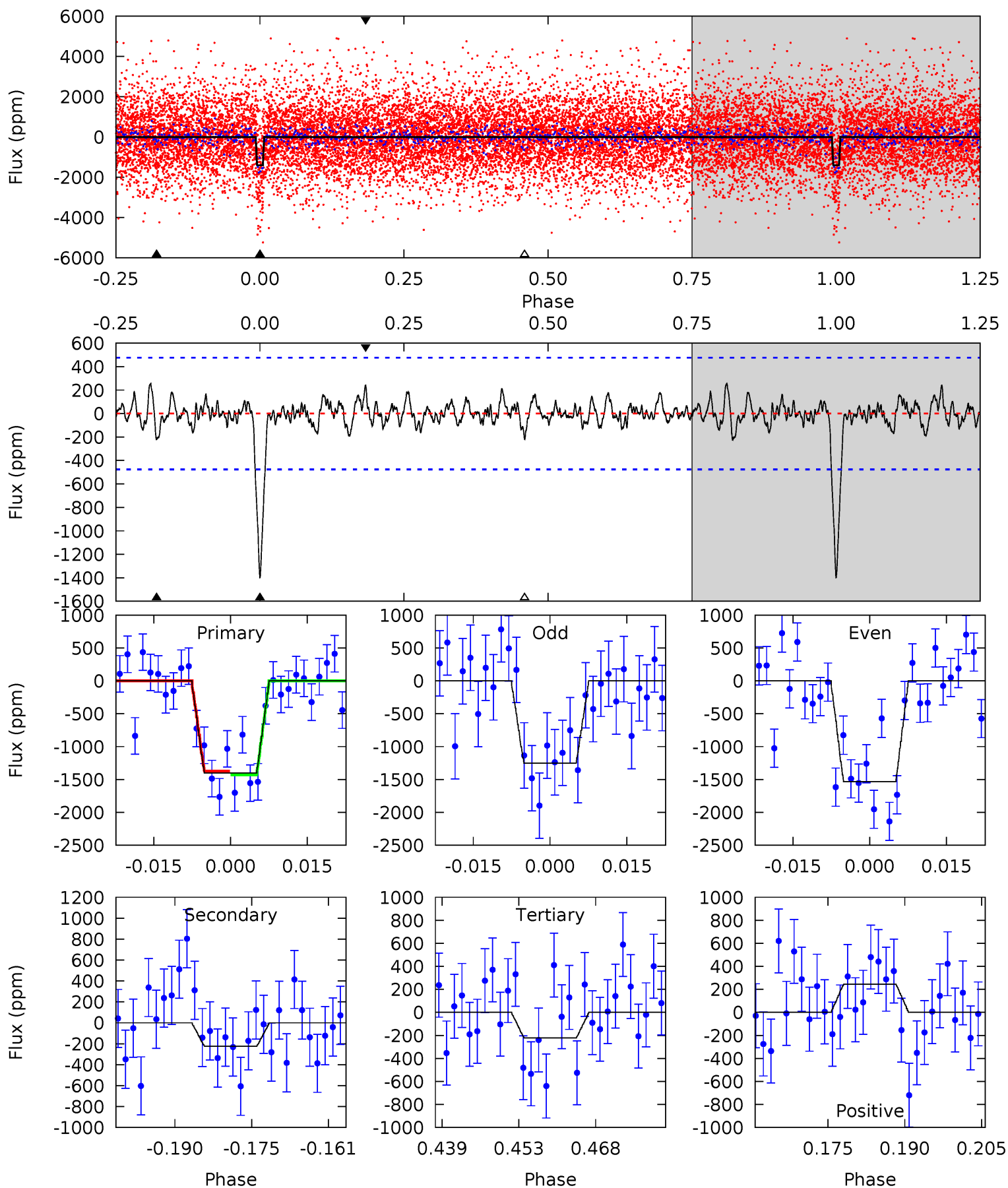
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	3.39	3.15	3.30	4.94	2.41	1.05	10.8	10.7	0.23	0.09	0.55	0.97	0.19	0.68



Alt Model-Shift Uniqueness Test

008396288-01, P = 8.585323 Days, E = 137.394093 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	2.34	2.31	2.55	4.95	2.44	0.77	12.3	12.0	0.03	-0.21	1.46	1.15	0.16	0.31



Stellar Parameters For KIC 008396288

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5488^{+180}_{-180}	$4.570^{+0.040}_{-0.160}$	$-0.060^{+0.300}_{-0.300}$	$0.818^{+0.200}_{-0.067}$	$0.913^{+0.081}_{-0.111}$	$2.346^{+0.474}_{-1.044}$
	+3%/-3%	+1%/-4%	+500%/-500%	+24%/-8%	+9%/-12%	+20%/-45%
Source	KIC0	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 008396288-01 / KOI 5512.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-331 ± 98	$4.82^{+3.87}_{-3.12}$	1110^{+64}_{-49}	3676^{+1739}_{-661}	49^{+315}_{-35}
Alt.	-225 ± 96	$4.84^{+3.43}_{-2.84}$	1109^{+61}_{-49}	3416^{+1342}_{-573}	30^{+174}_{-21}

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

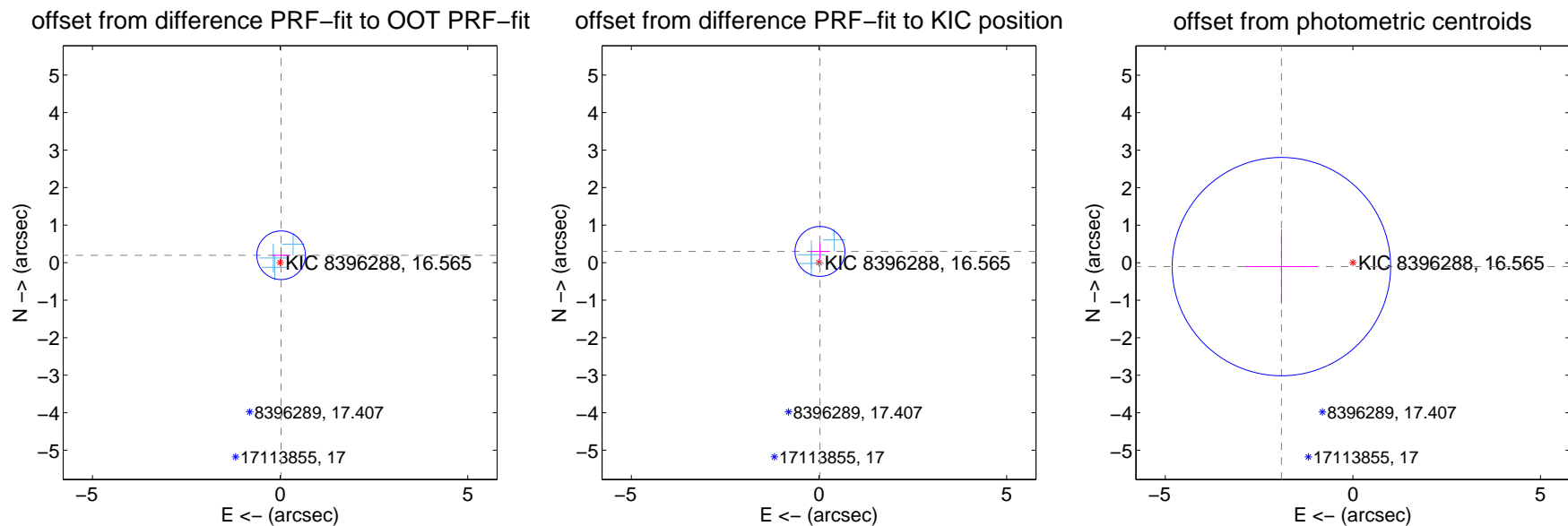
DV Centroid Data

Supplemental centroid analysis for 008396288-01. Kepler magnitude: 16.57. Transit SNR 10.48

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.199 ± 0.216	0.92	-0.027 ± 0.236	0.197 ± 0.216
PRF-fit source offset from KIC position	0.300 ± 0.222	1.35	-0.026 ± 0.271	0.299 ± 0.221
photometric centroid source offset	1.91 ± 0.97	1.97	1.90 ± 0.97	-0.10 ± 0.99



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.

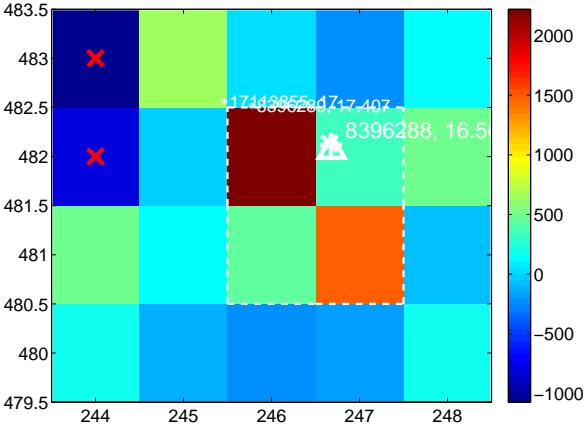
Q5 no difference image



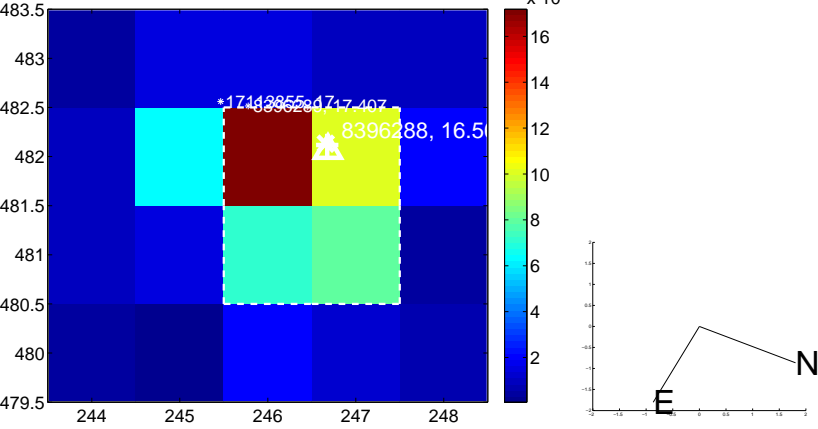
Q5 no OOT image



Q6 difference image



Q6 OOT image



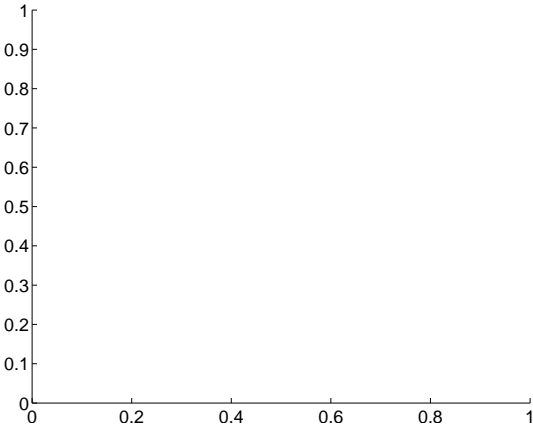
Q7 no difference image



Q7 no OOT image



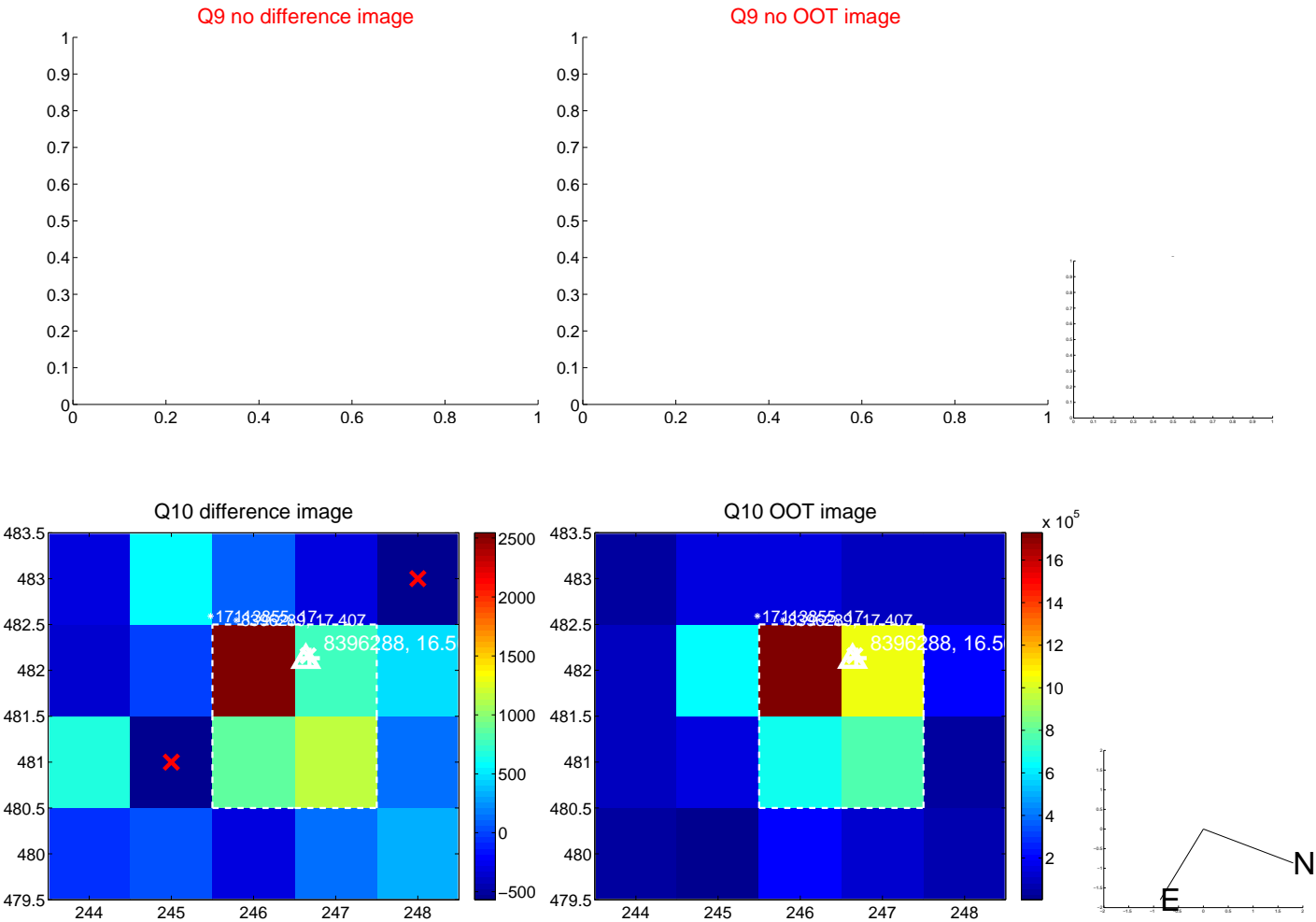
Q8 no difference image



Q8 no OOT image



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



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

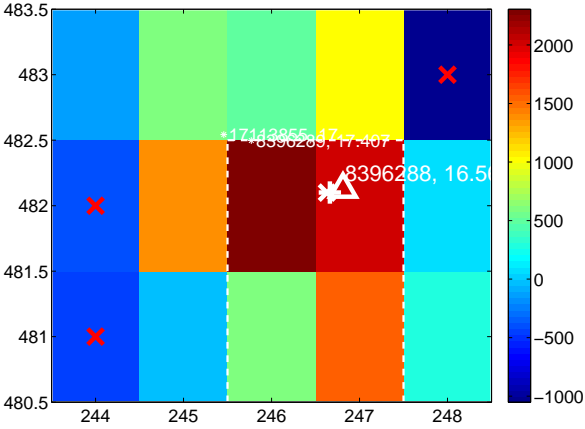
Q13 no difference image



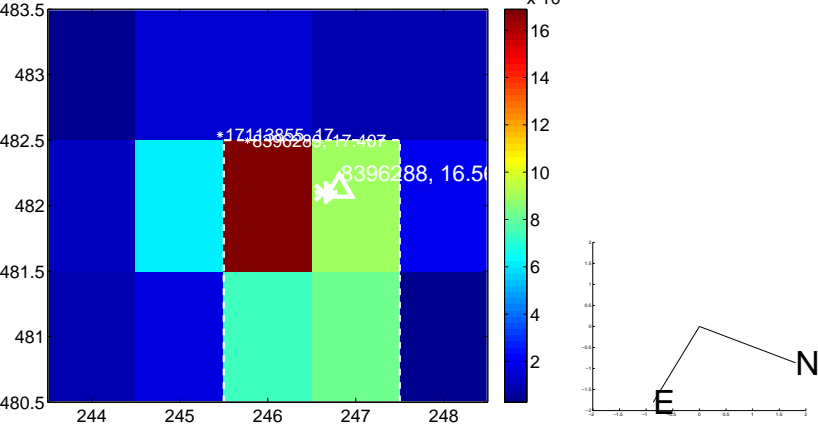
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



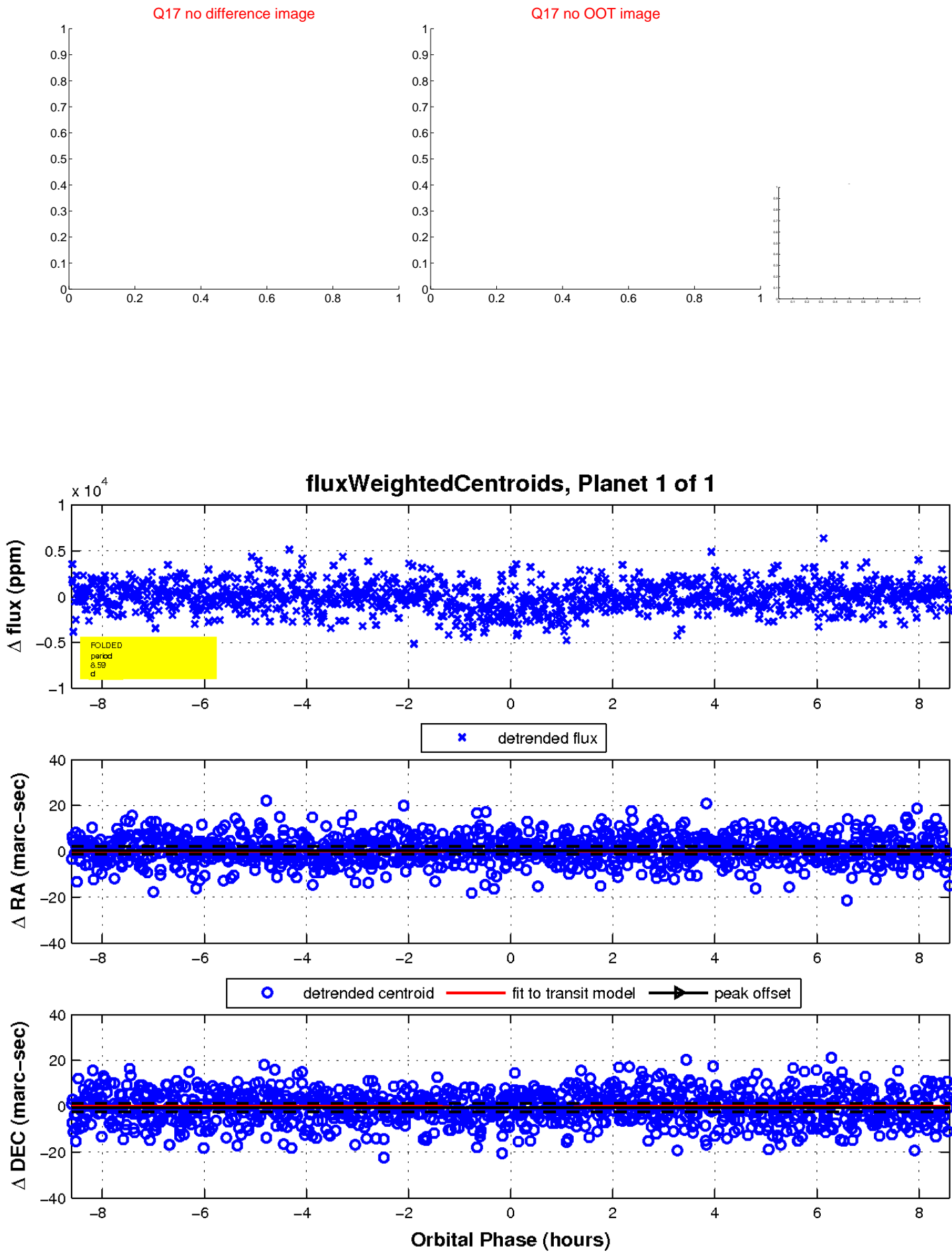
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

