

KIC 008489396

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})
008489396-01	OBS	No	376.891964	221.865521	937.9	49.426	8.6	10.1	0.59	4615	3.70	0.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008489396-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

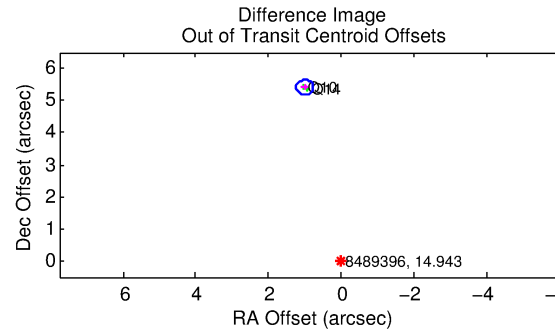
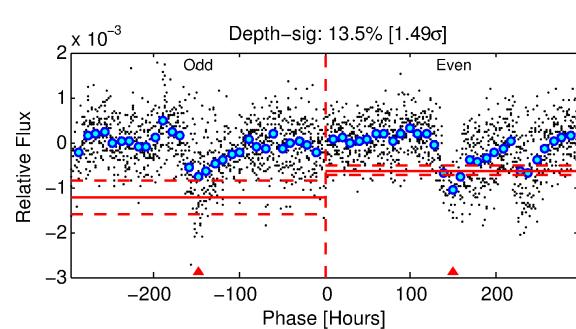
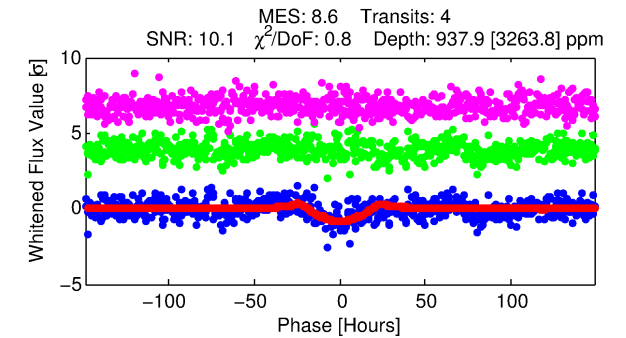
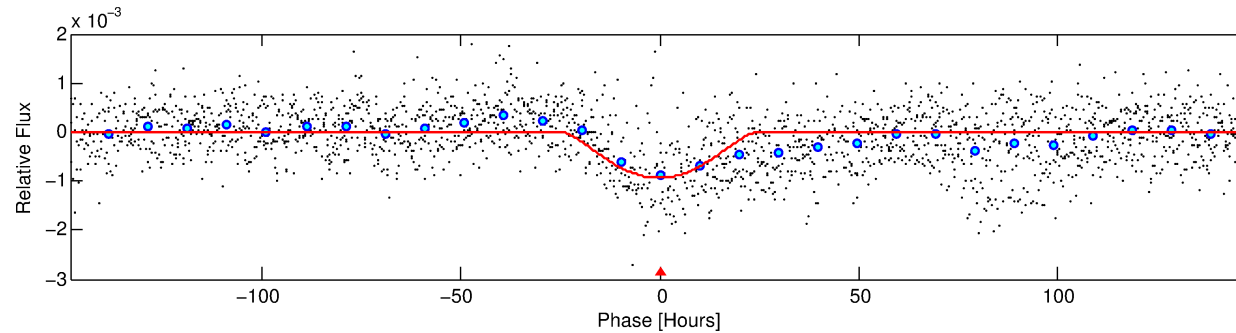
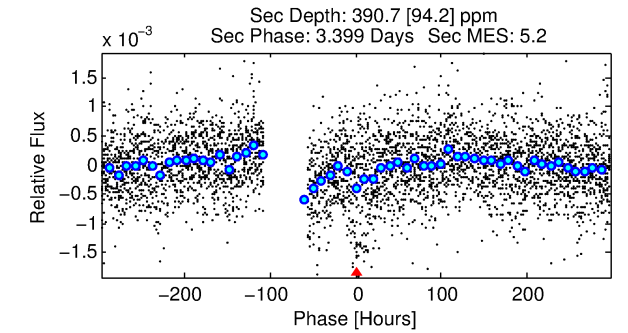
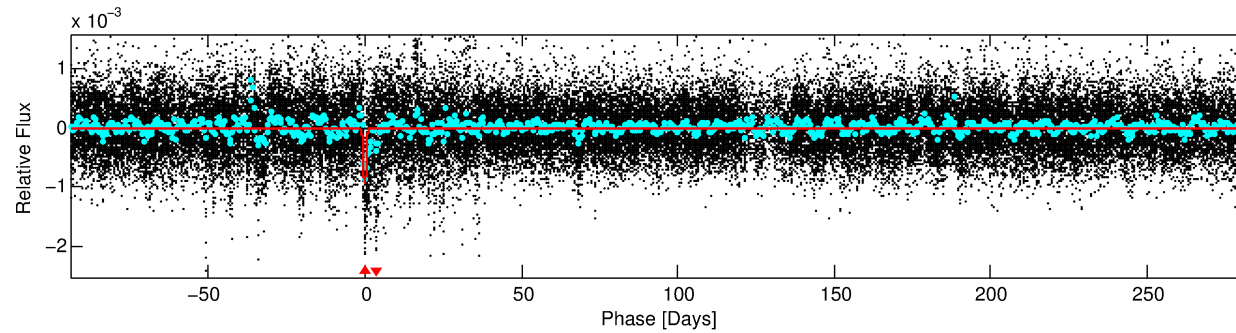
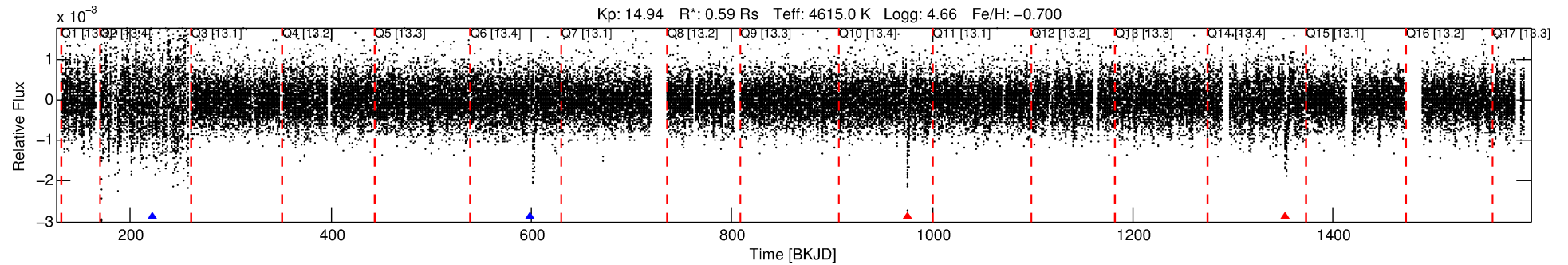
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008489396-01

No Significant Match Found

DV One-Page Summary

KIC: 8489396 Candidate: 1 of 1 Period: 376.892 d



DV Fit Results:

Period = 376.89196 [0.04072] d
Epoch = 221.8655 [0.0867] BKJD
Rp/R* = 0.0576 [0.1121]
a/R* = 20.08 [8.74]
b = 1.00 [0.03]
Seff = 0.19 [0.03]
Teq = 169 [7] K
Rp = 3.70 [7.21] Re
a = 0.8510 [0.0628] AU
Ag = 11368.39 [44388.84] [0.26σ]
Teff = 2704 [2640] K [0.96σ]

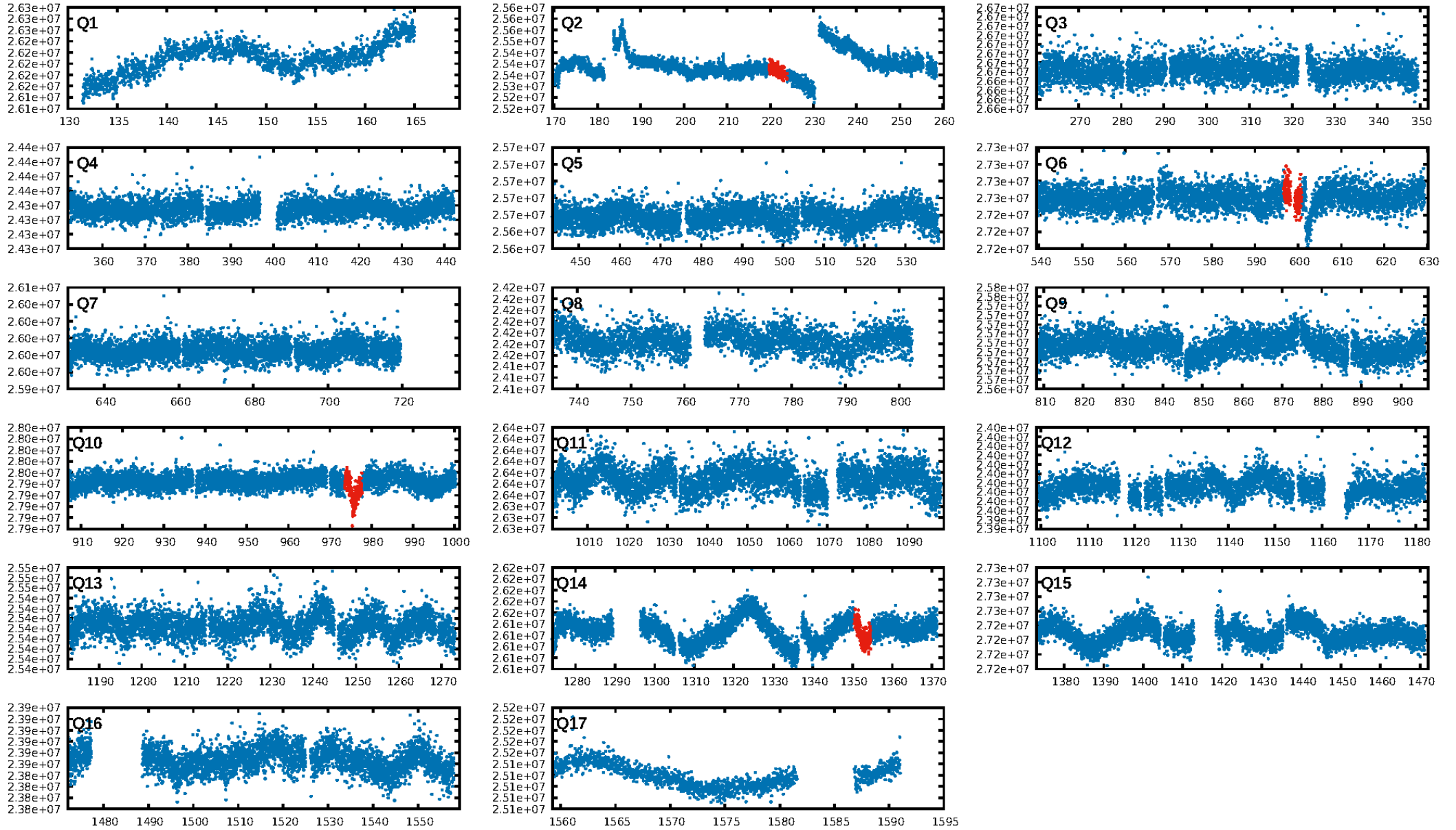
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.4%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 2.22e-12
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: 0.9409
Centroid-sig: 0.0%
Centroid-so: 1.506 arcsec [3.07σ]
OotOffset-rm: 5.504 arcsec [71.13σ]
KicOffset-rm: 4.713 arcsec [62.29σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

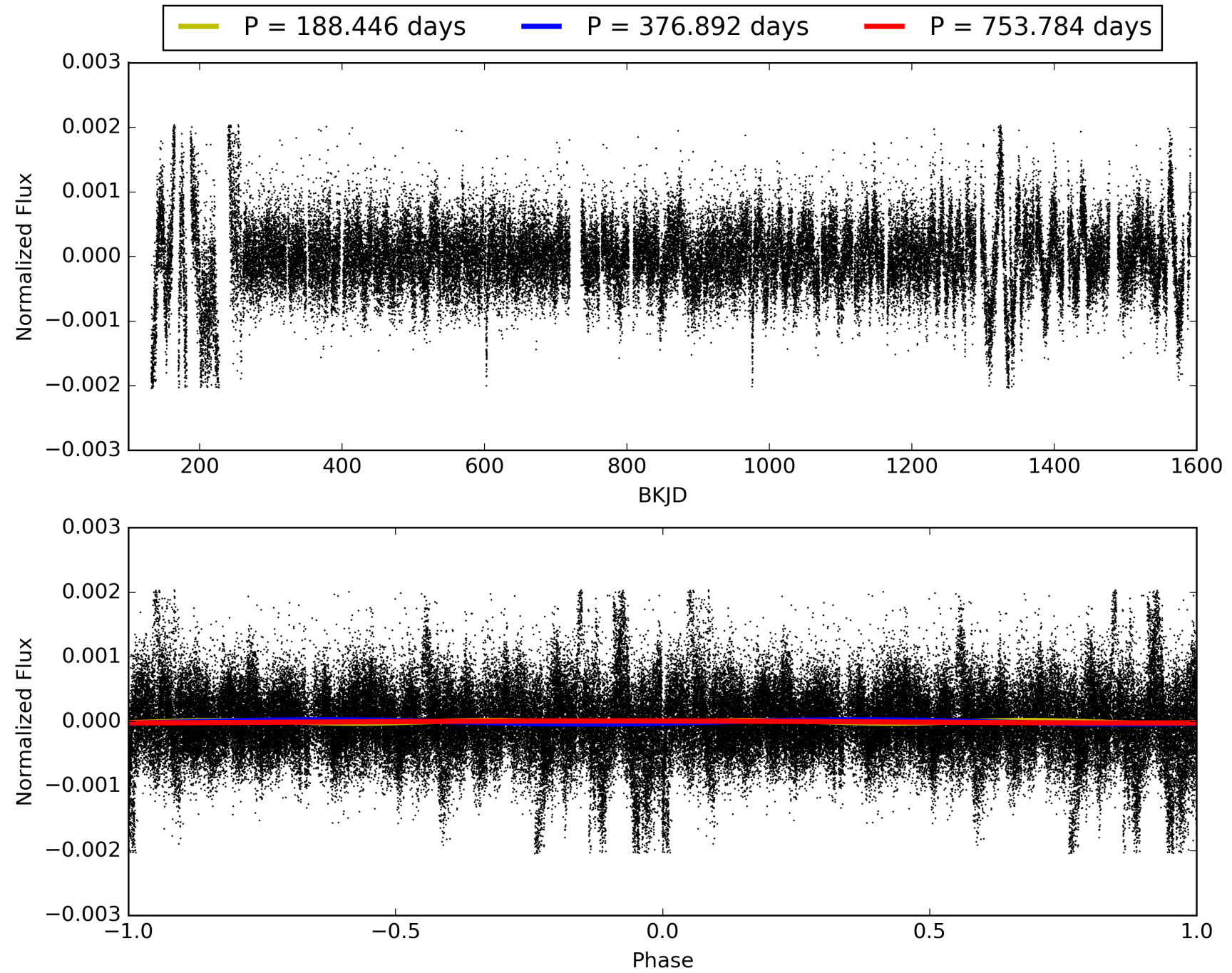
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:59:14 Z

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

TCE 008489396-01, PDC Light Curves

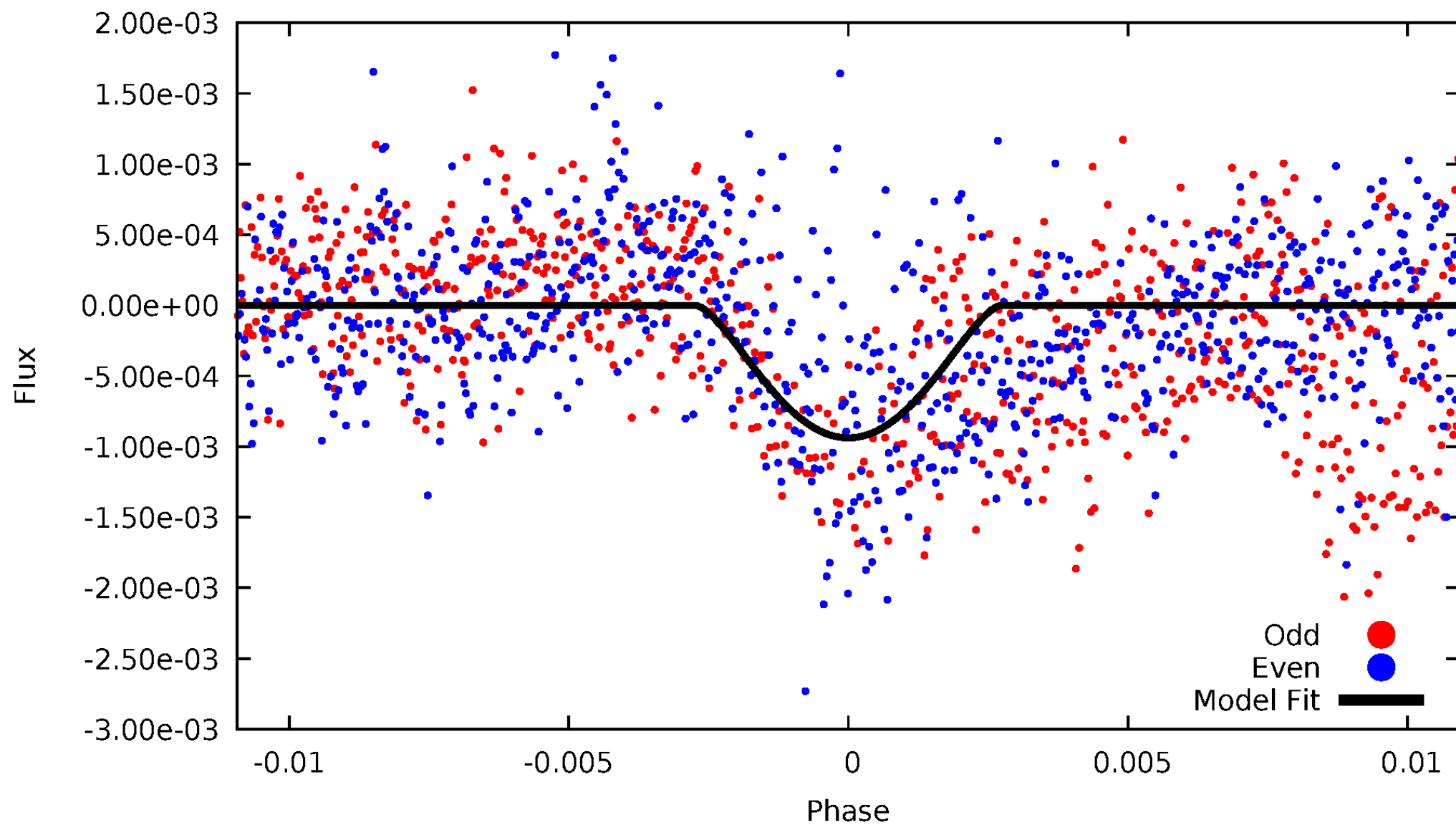


TCE 008489396-01



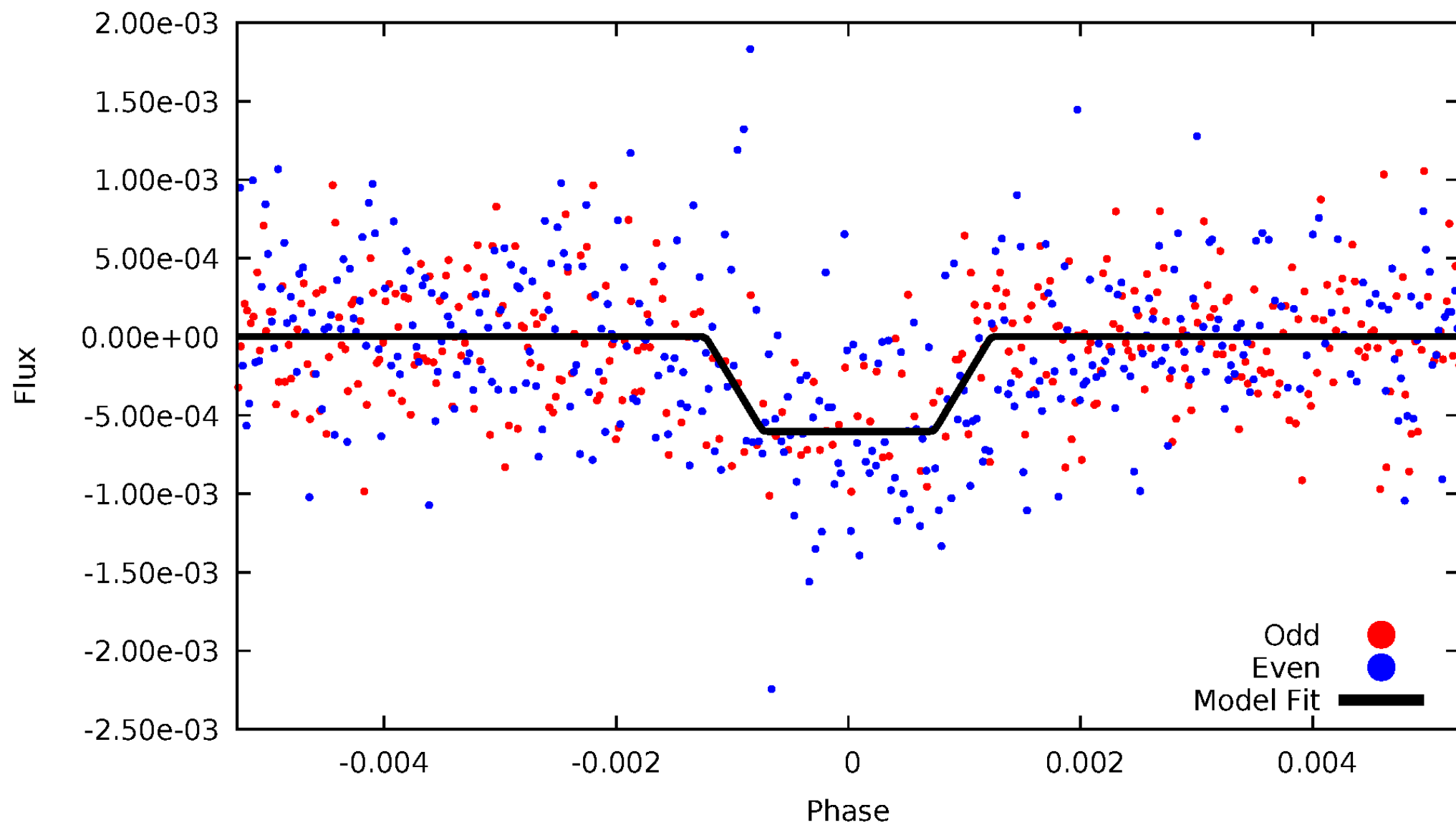
DV Odd/Even

TCE 008489396-01



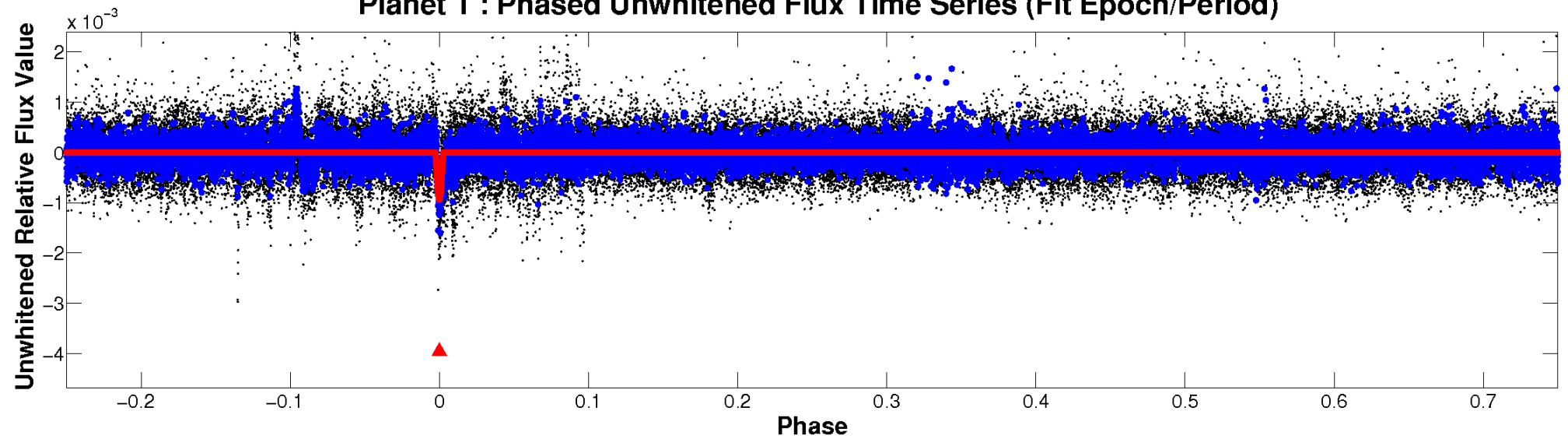
ALT Odd/Even

TCE 008489396-01

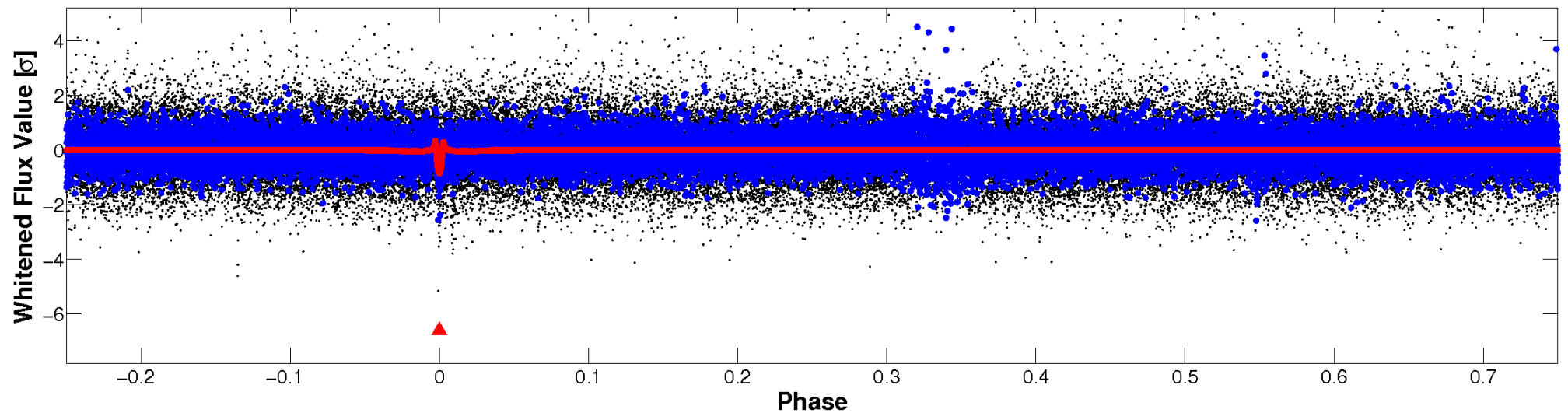


Non-Whitened Vs. Whitened Light Curve

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

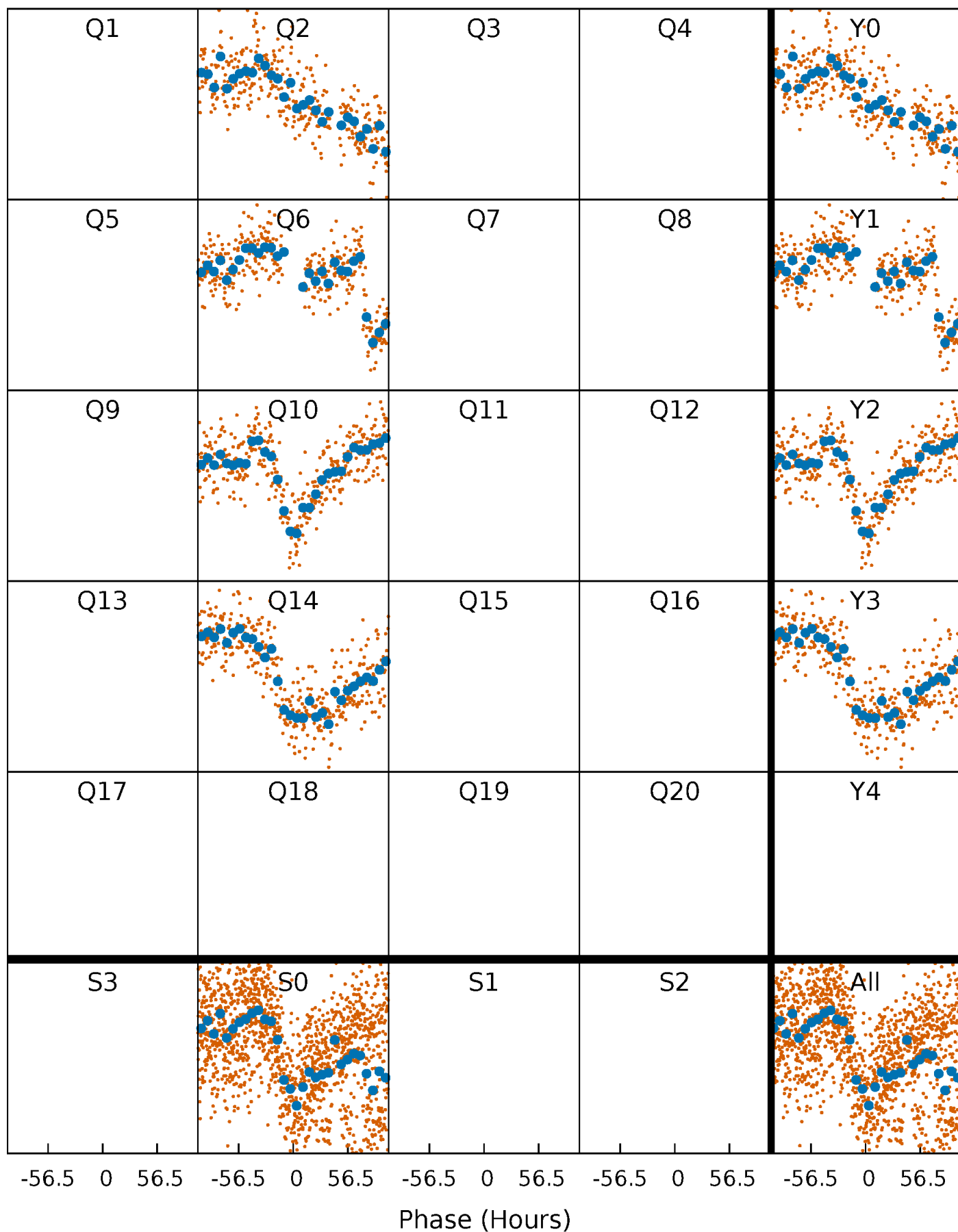


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



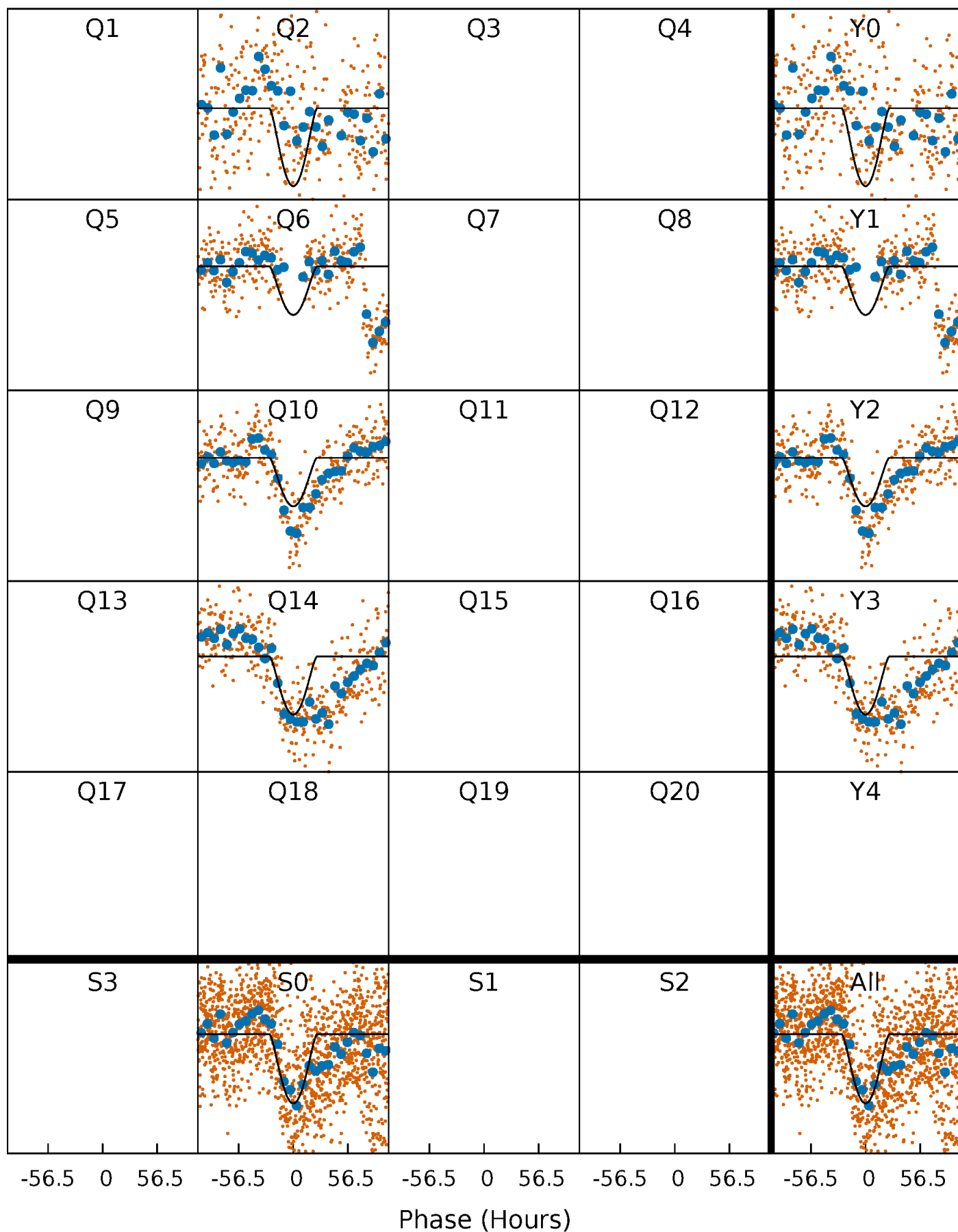
PDC Quarter-Phased Transit Curves

TCE 008489396-01 P=376.891964 Days $T_0=221.865521$ (BKJD)



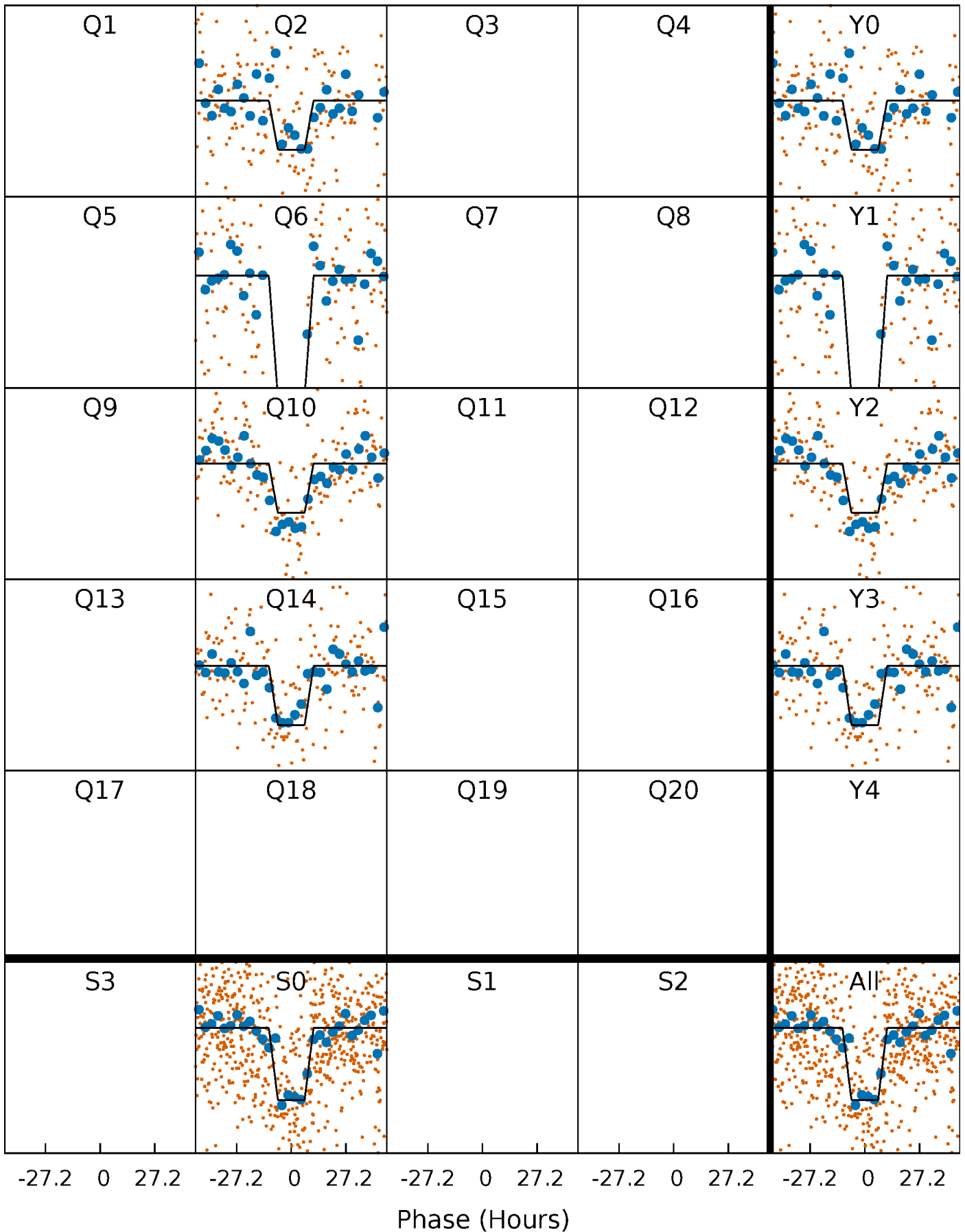
DV Quarter-Phased Transit Curves

TCE 008489396-01 P=376.891964 Days $T_0=221.865521$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

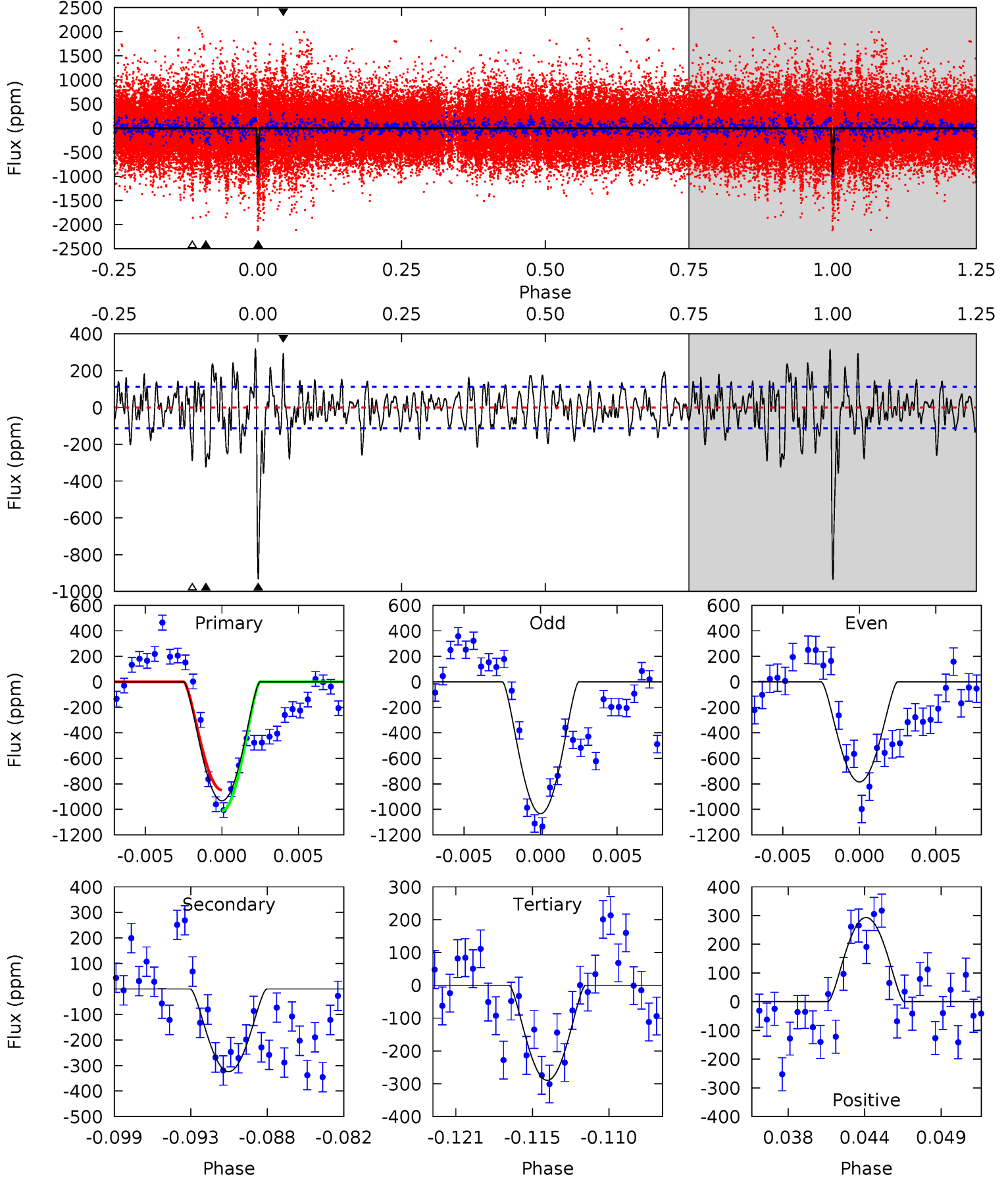
TCE 008489396-01 P=376.740357 Days $T_0=222.129295$ (BKJD)



DV Model-Shift Uniqueness Test

008489396-01, P = 376.891964 Days, E = 221.865521 Days

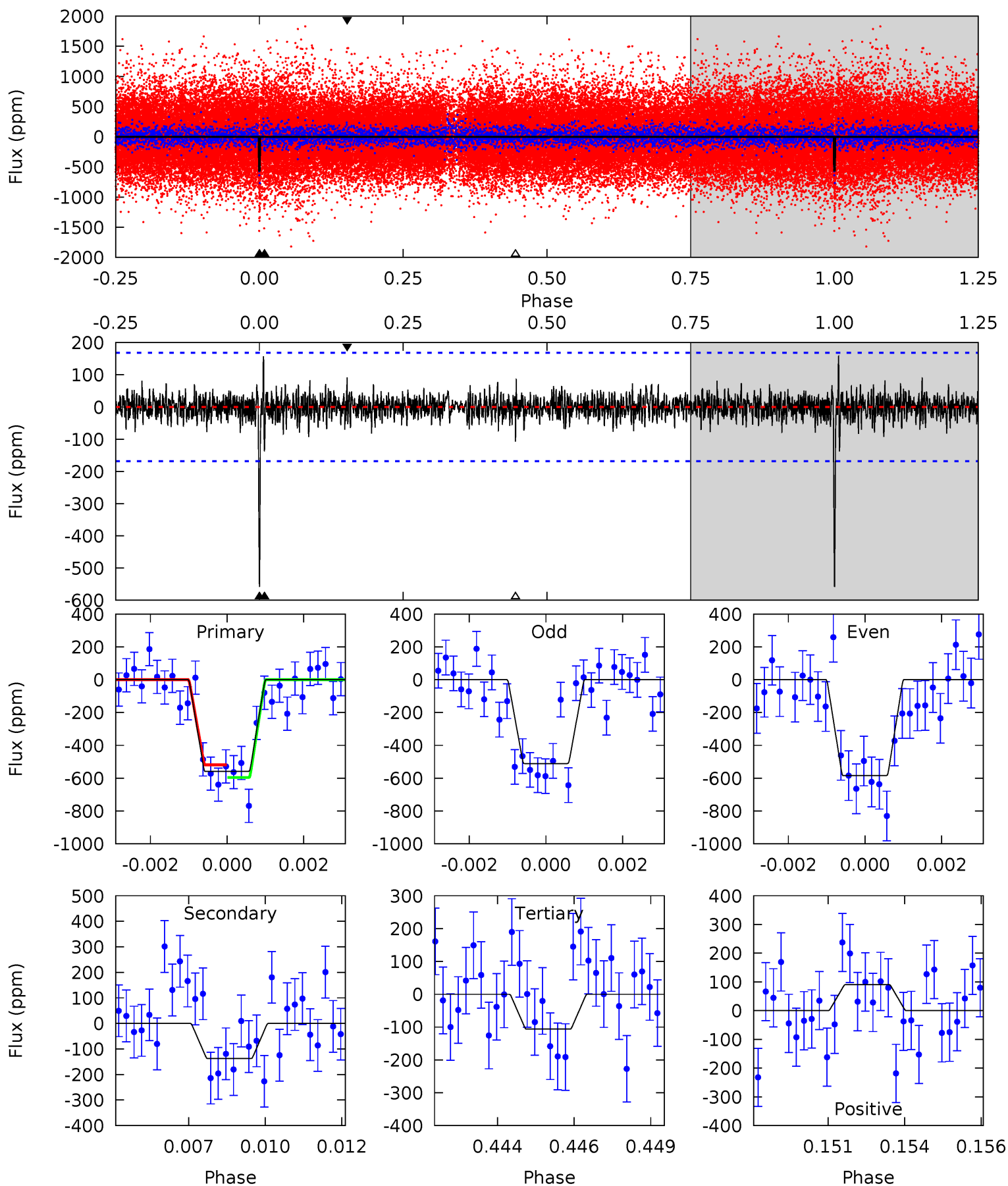
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.3	14.7	13.1	13.3	5.14	2.78	4.06	29.2	29.0	1.56	1.40	5.54	1.08	0.25	3.69



Alt Model-Shift Uniqueness Test

008489396-01, P = 376.740357 Days, E = 222.129295 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	4.31	3.34	2.84	5.29	3.03	0.81	14.2	14.7	0.97	1.46	1.11	1.14	0.22	1.21



Stellar Parameters For KIC 008489396

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4615^{+124}_{-138}	$4.660^{+0.058}_{-0.027}$	$-0.700^{+0.300}_{-0.300}$	$0.589^{+0.046}_{-0.052}$	$0.579^{+0.055}_{-0.032}$	$3.985^{+0.925}_{-0.518}$
	+3%/-3%	+1%/-1%	+43%/-43%	+8%/-9%	+9%/-6%	+23%/-13%
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 008489396-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-324 ± 22	$6.59^{+6.54}_{-4.10}$	235^{+8}_{-8}	2640^{+872}_{-376}	2915^{+18673}_{-2120}
Alt.	-137 ± 32	$5.44^{+5.44}_{-3.72}$	235^{+7}_{-8}	2490^{+955}_{-363}	1858^{+16579}_{-1406}

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

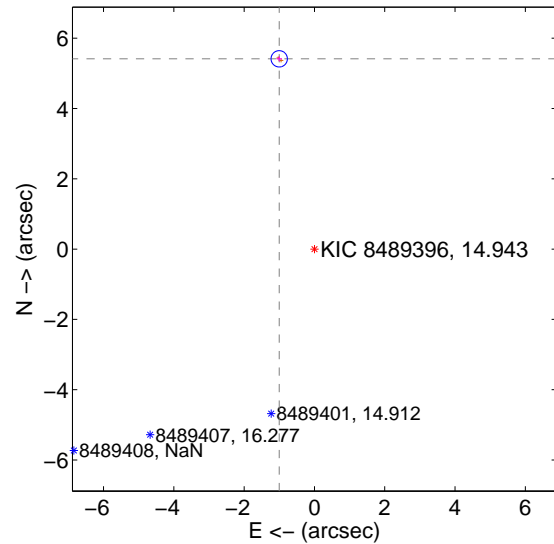
Supplemental centroid analysis for 008489396-01. Kepler magnitude: 14.94. Transit SNR 10.13

There are 0 quarters with good PRF difference image offsets

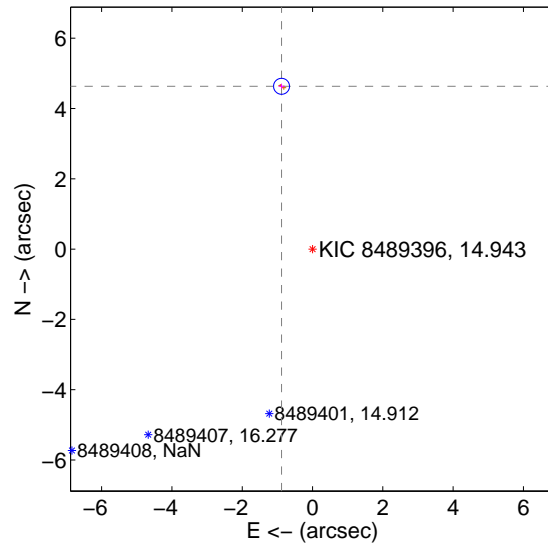
The direct PRF centroid is offset from the target star catalog position by about 0.79 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.504 ± 0.077	71.13	1.002 ± 0.077	5.412 ± 0.074
PRF-fit source offset from KIC position	4.713 ± 0.076	62.29	0.881 ± 0.088	4.630 ± 0.075
photometric centroid source offset	1.51 ± 0.49	3.07	1.50 ± 0.49	-0.14 ± 0.58

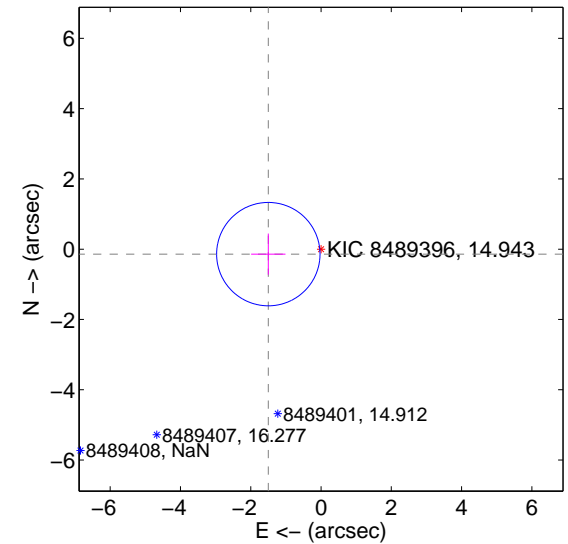
offset from difference PRF-fit to OOT PRF-fit



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.

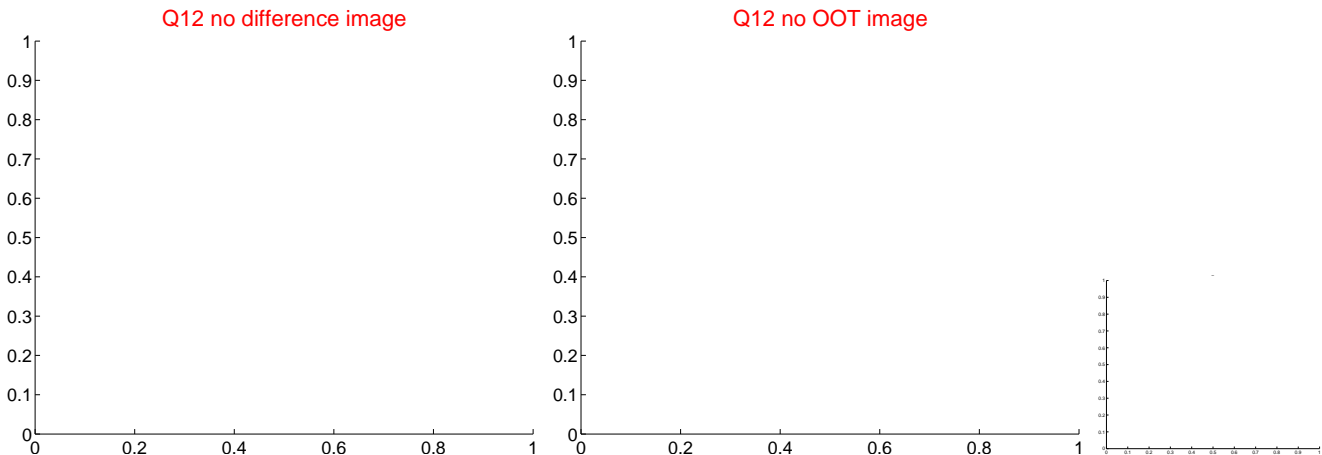
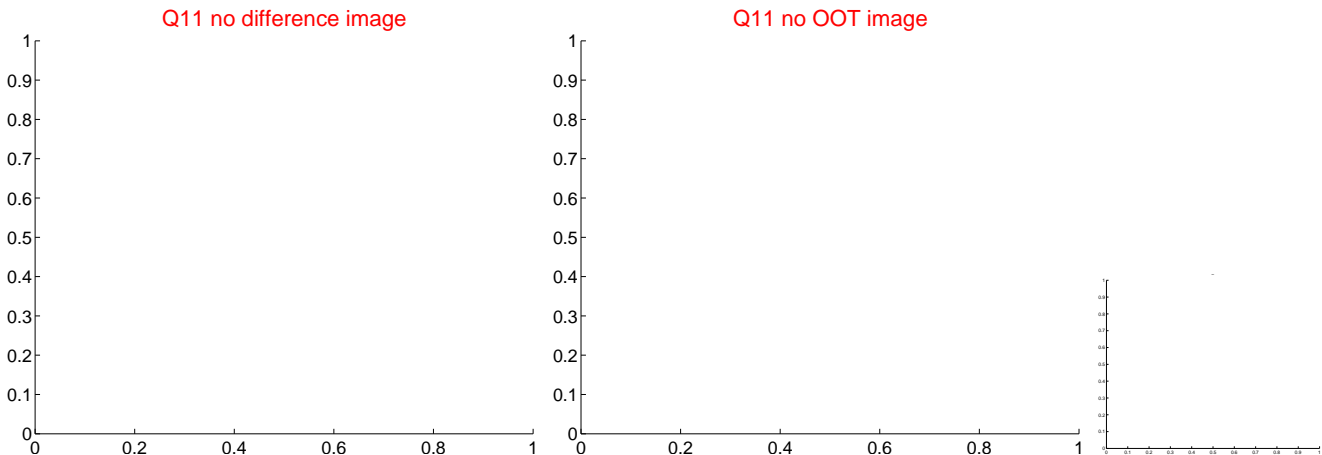
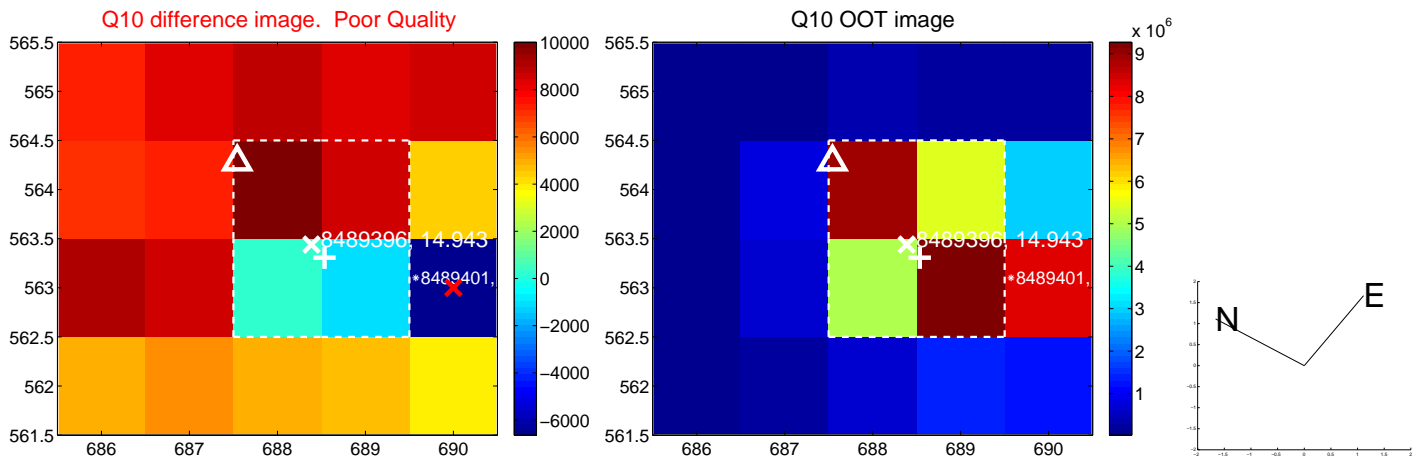
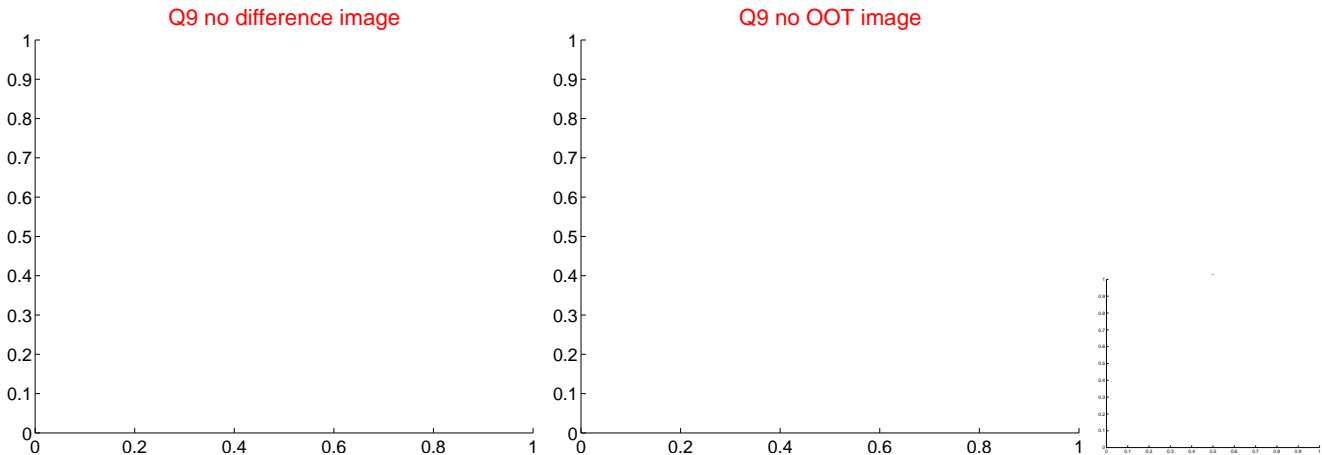
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



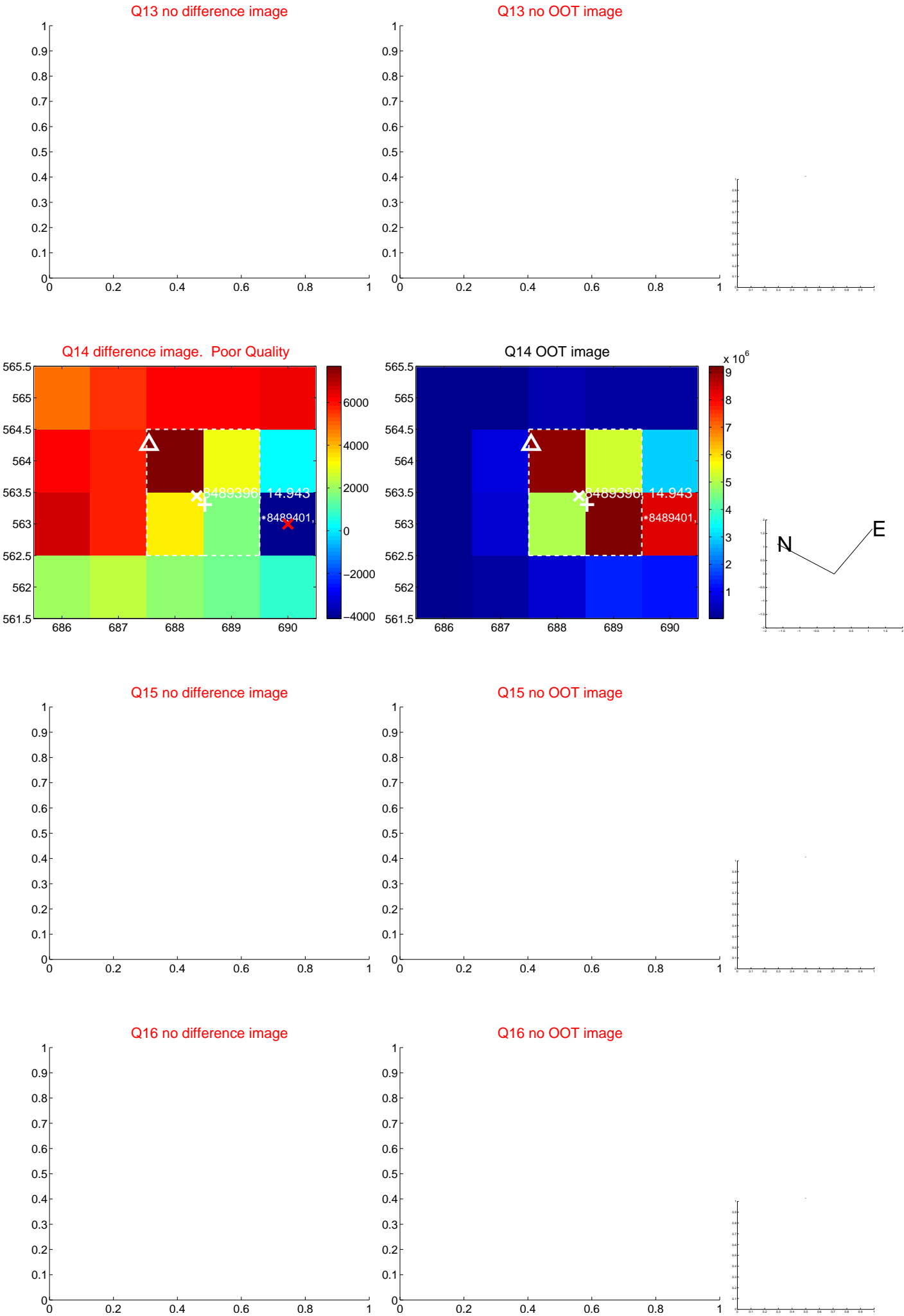
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



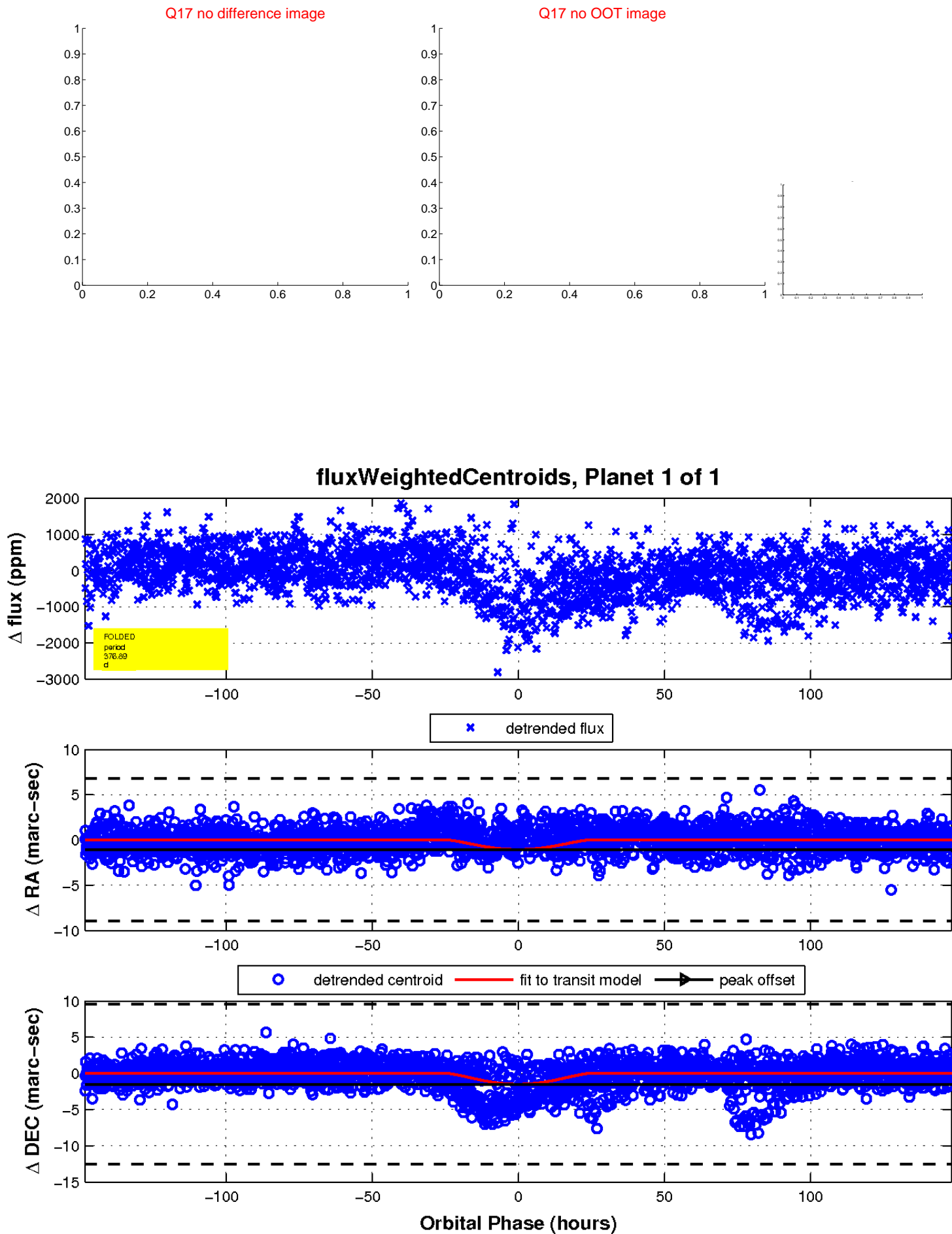
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

