

KIC 008397446

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})
008397446-01	OBS	1135.01	0.986576	131.927224	153.1	2.180	15.5	13.6	1.39	6243	2.00	6718.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008397446-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

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.

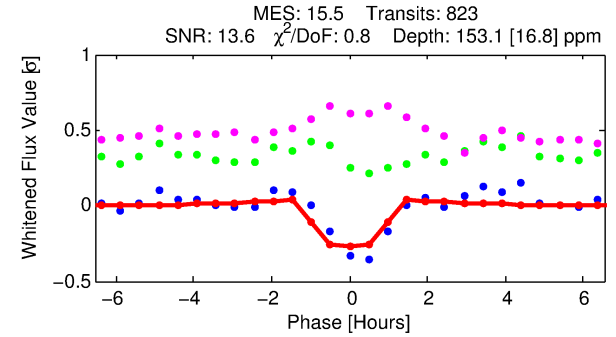
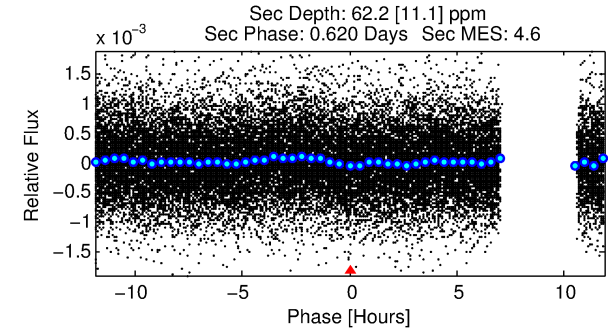
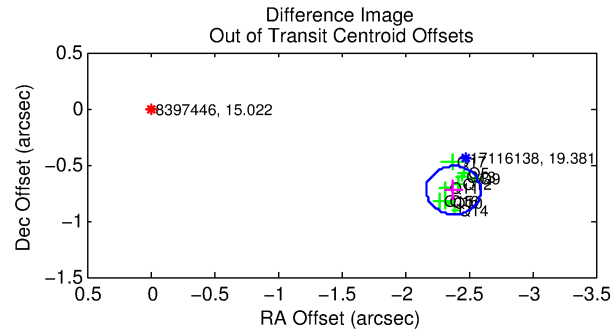
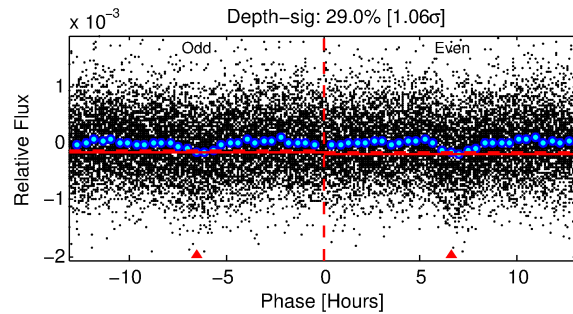
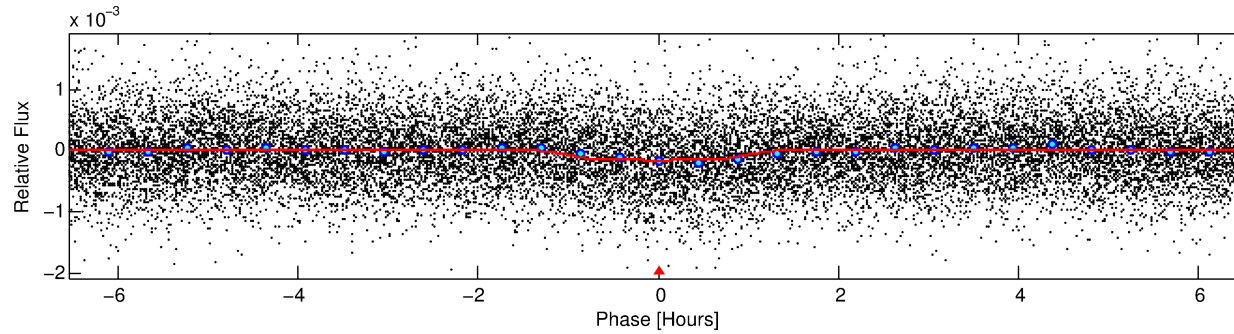
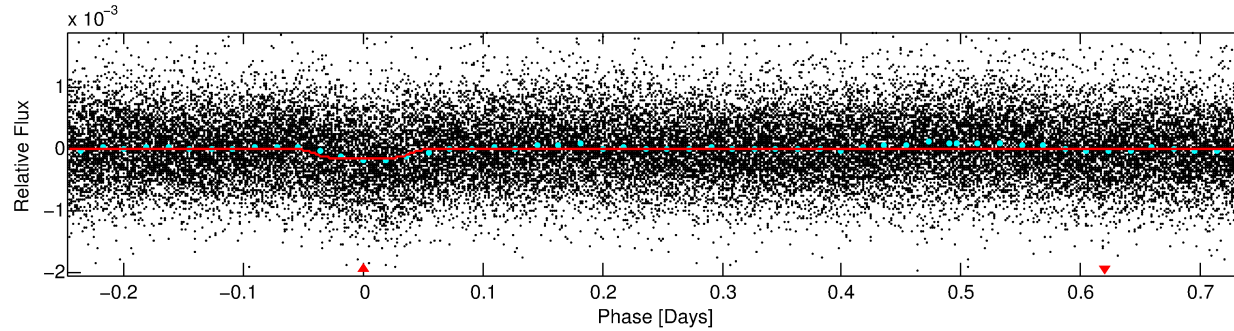
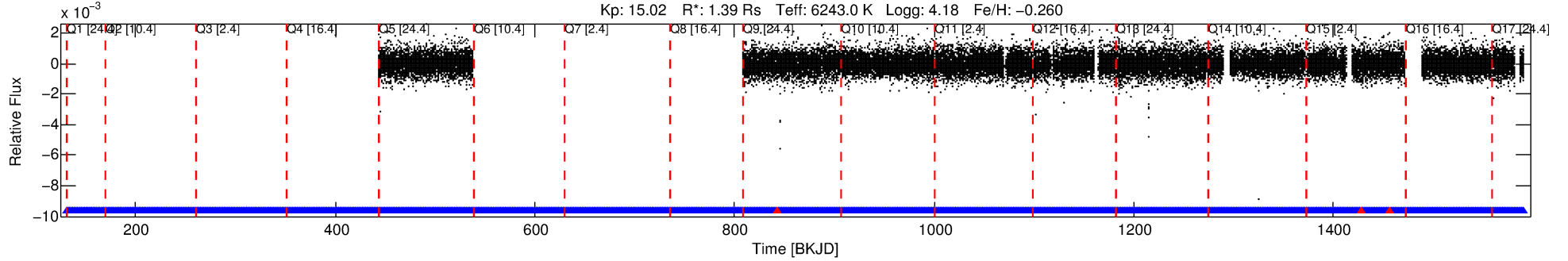
Ephemeris Match Information For 008397446-01

No Significant Match Found

DV One-Page Summary

KIC: 8397446 Candidate: 1 of 1 Period: 0.987 d
KOI: K01135.01 Corr: 0.776

Kp: 15.02 R*: 1.39 Rs Teff: 6243.0 K Logg: 4.18 Fe/H: -0.260



DV Fit Results:

Period = 0.98658 [0.00001] d
Epoch = 131.9272 [0.0020] BKJD
Rp/R* = 0.0133 [0.0060]
a/R* = 1.88 [3.37]
b = 0.90 [0.55]
Seff = 6718.31 [3001.13]
Teq = 2309 [258] K
Rp = 2.01 [1.07] Re
a = 0.0197 [0.0052] AU
Ag = 3.31 [3.37] [0.68σ]
Teffp = 4813 [1133] K [2.15σ]

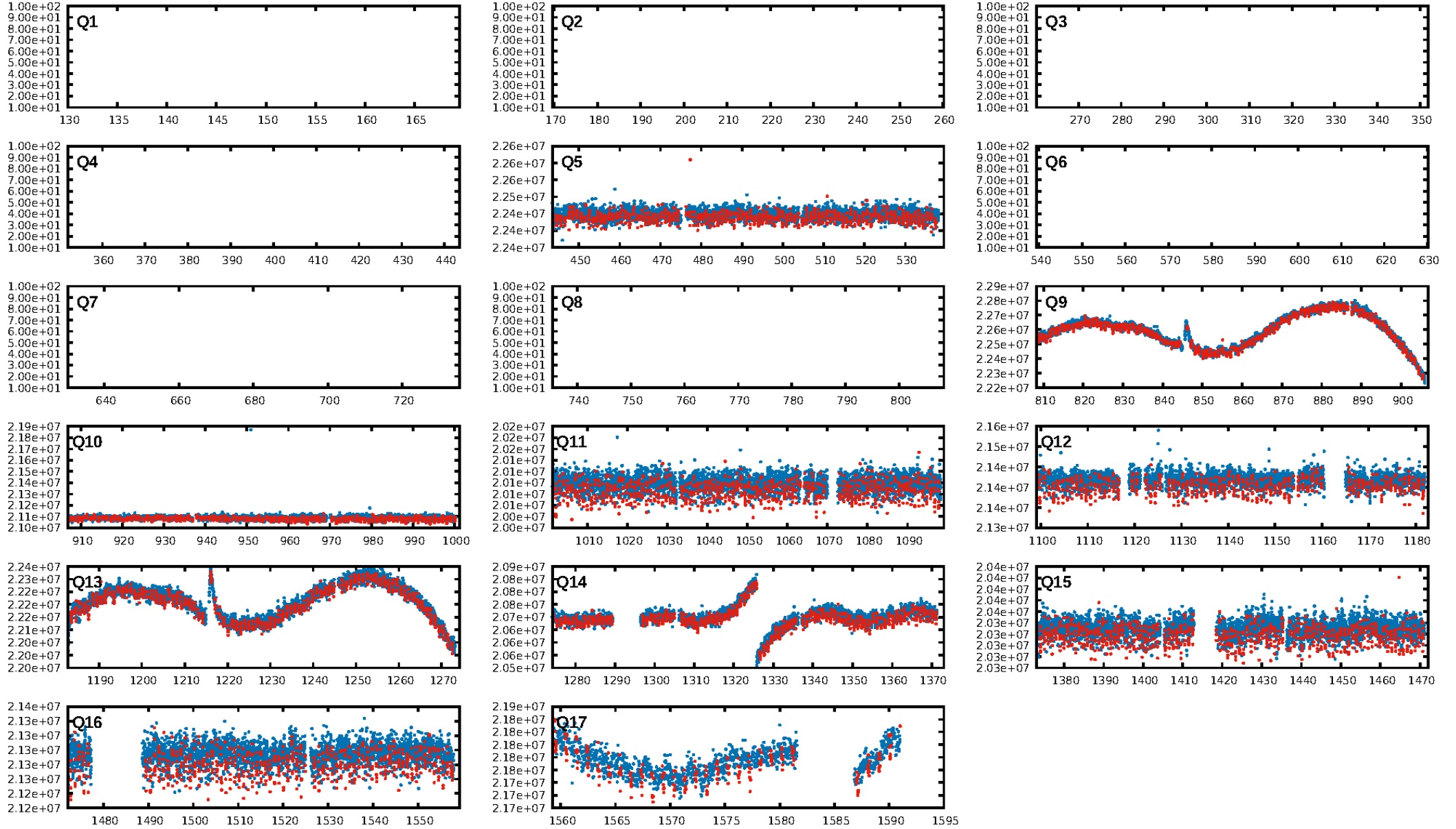
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.56e-53
RollingBand-fgt: 1.00 [793/796]
GhostDiagnostic-chr: 0.8107
Centroid-sig: 0.0%
Centroid-so: 3.776 arcsec [4.31σ]
OotOffset-rm: 2.489 arcsec [34.75σ]
KicOffset-rm: 2.367 arcsec [30.76σ]
OotOffset-st: 2/2/2/4 [10]
KicOffset-st: 2/2/2/4 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

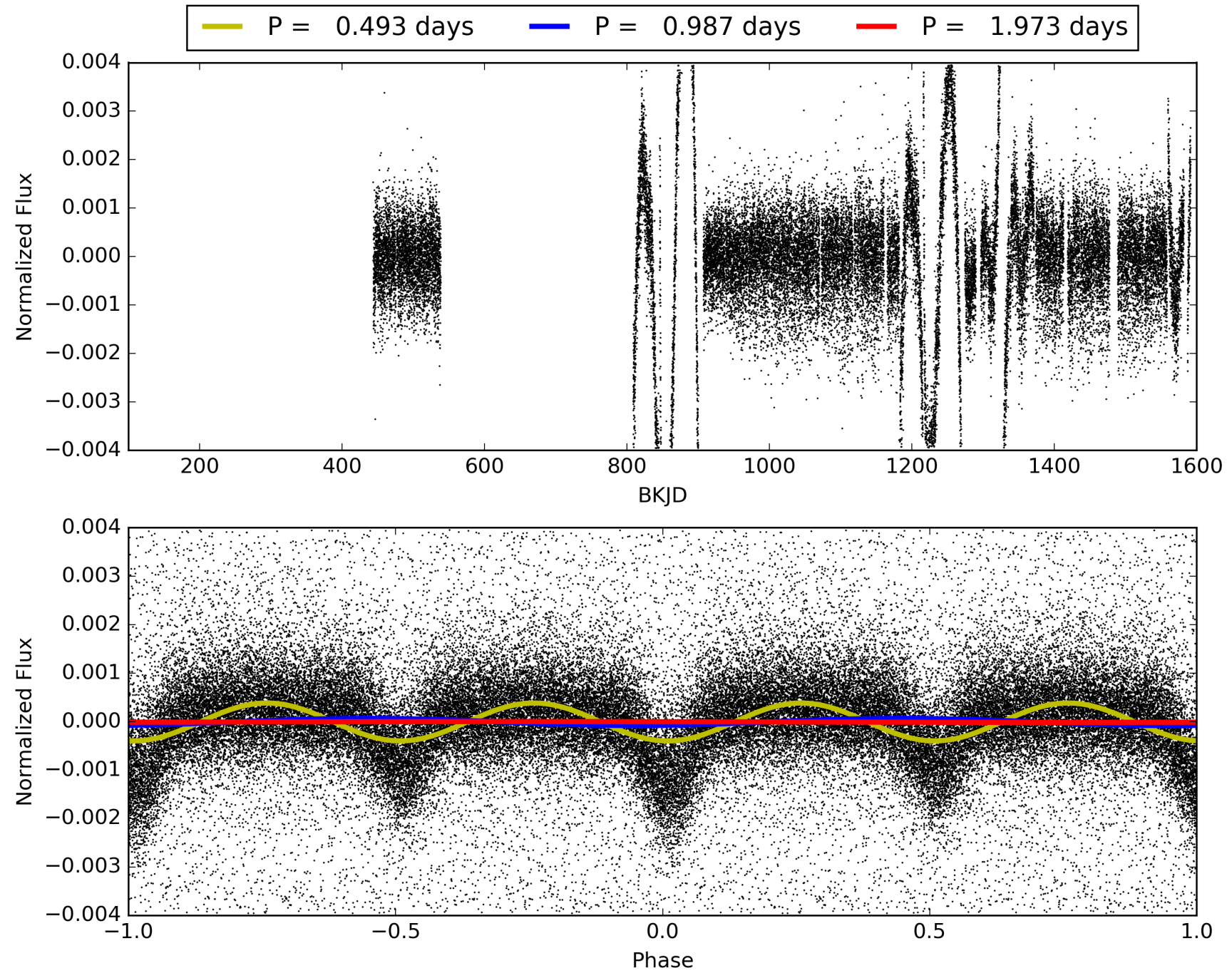
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:52:44 Z

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

TCE 008397446-01, PDC Light Curves

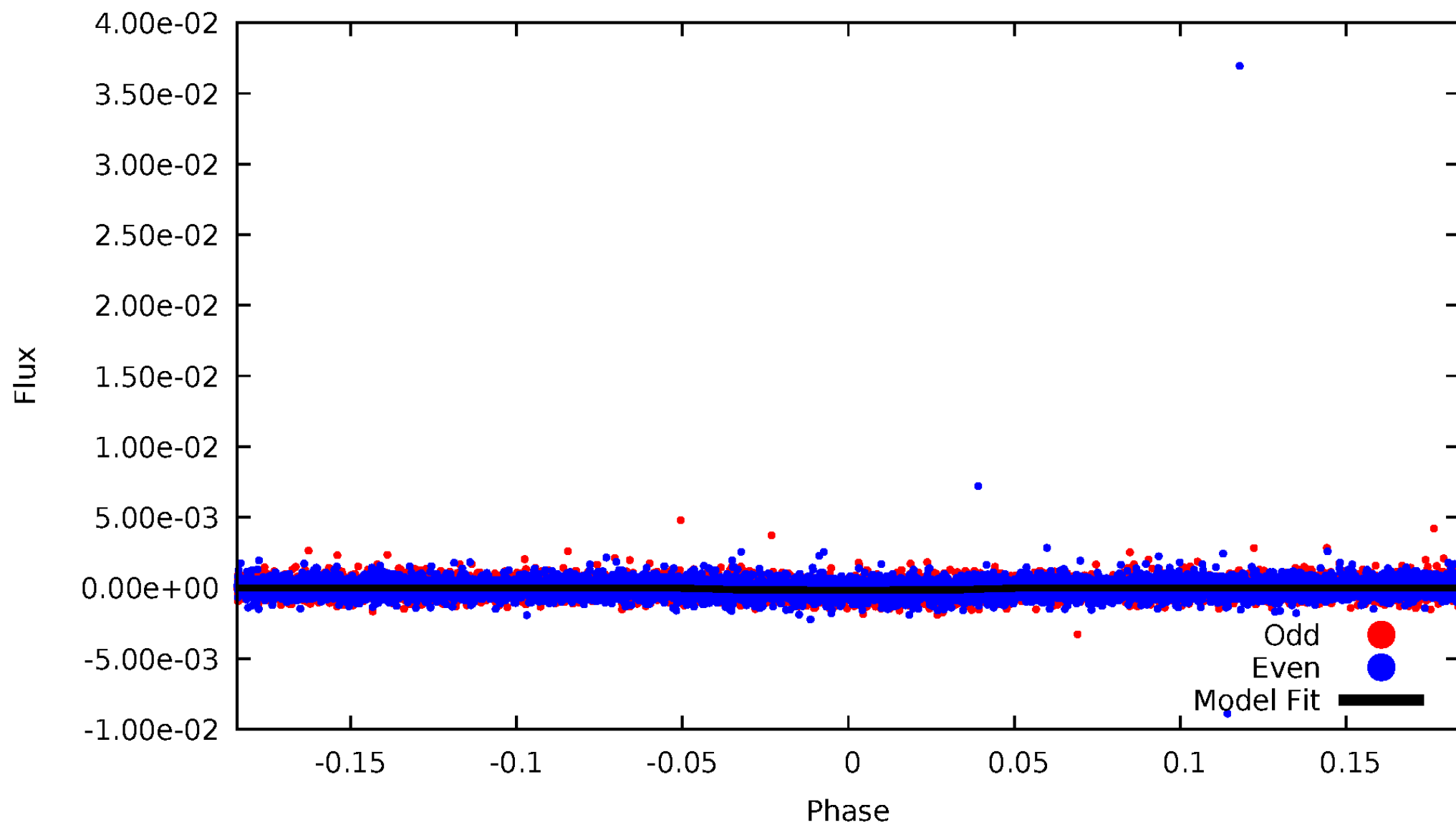


TCE 008397446-01



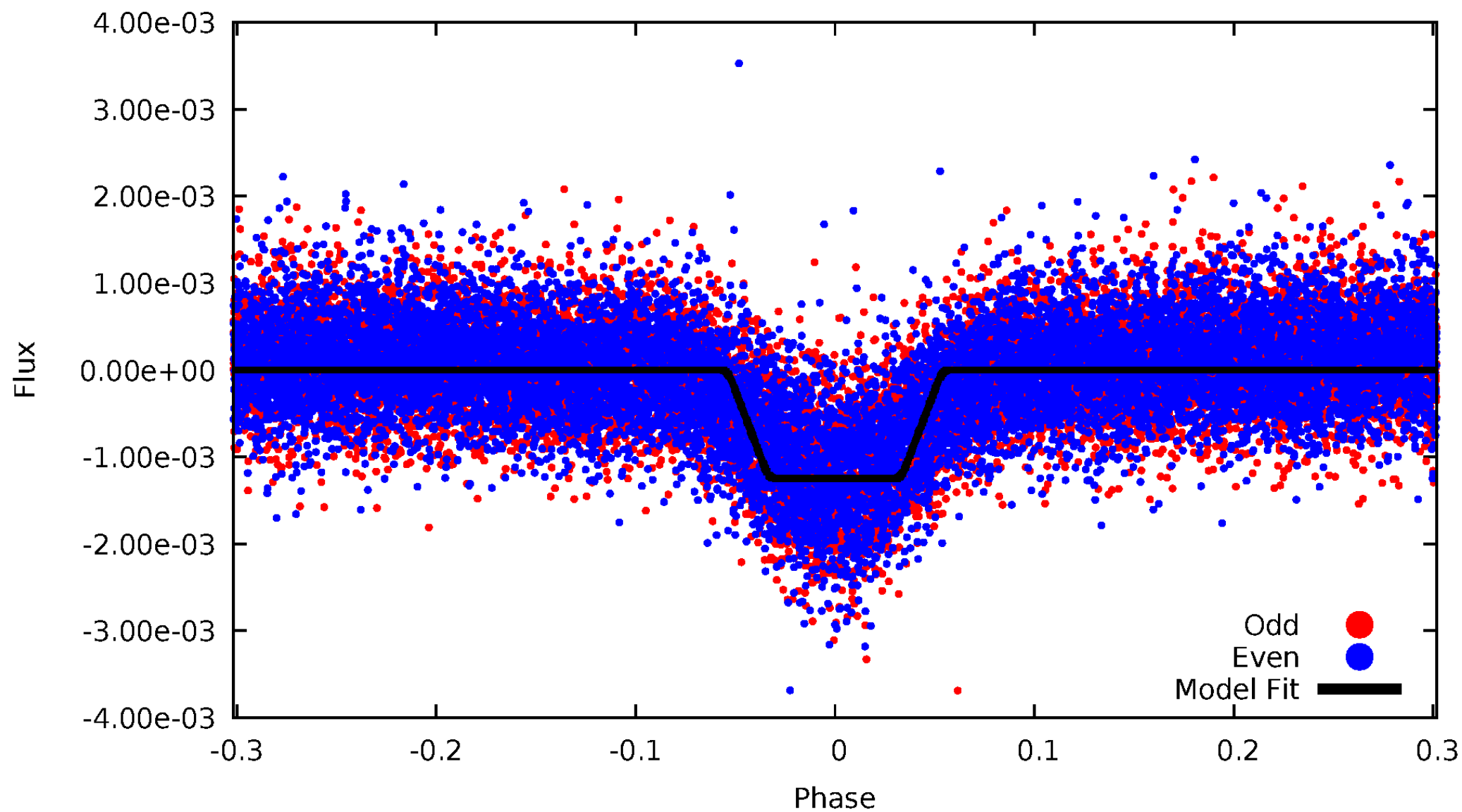
DV Odd/Even

TCE 008397446-01



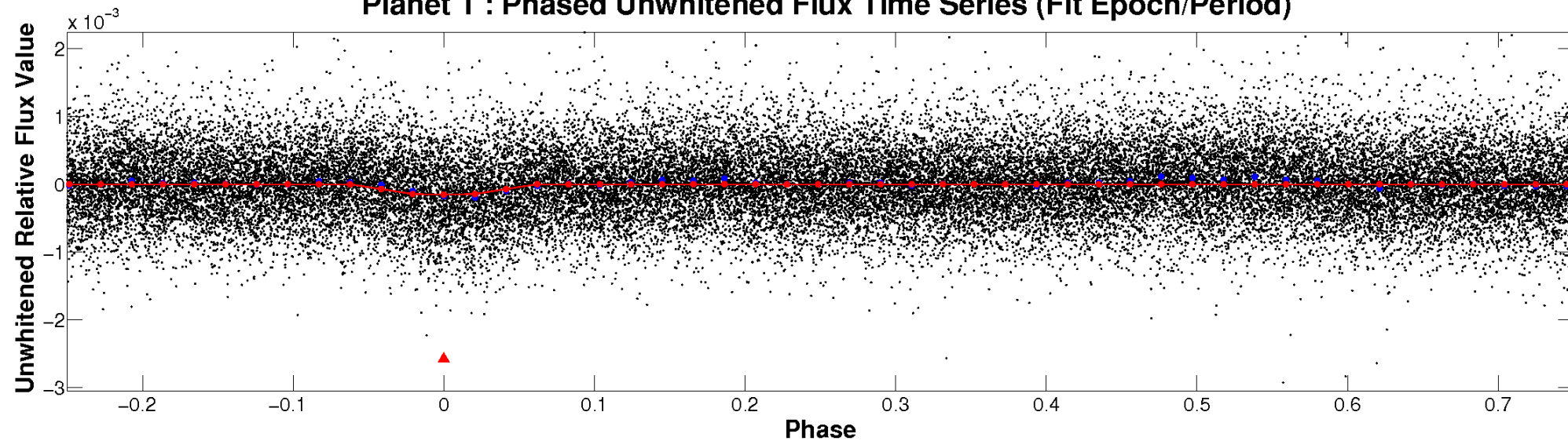
ALT Odd/Even

TCE 008397446-01

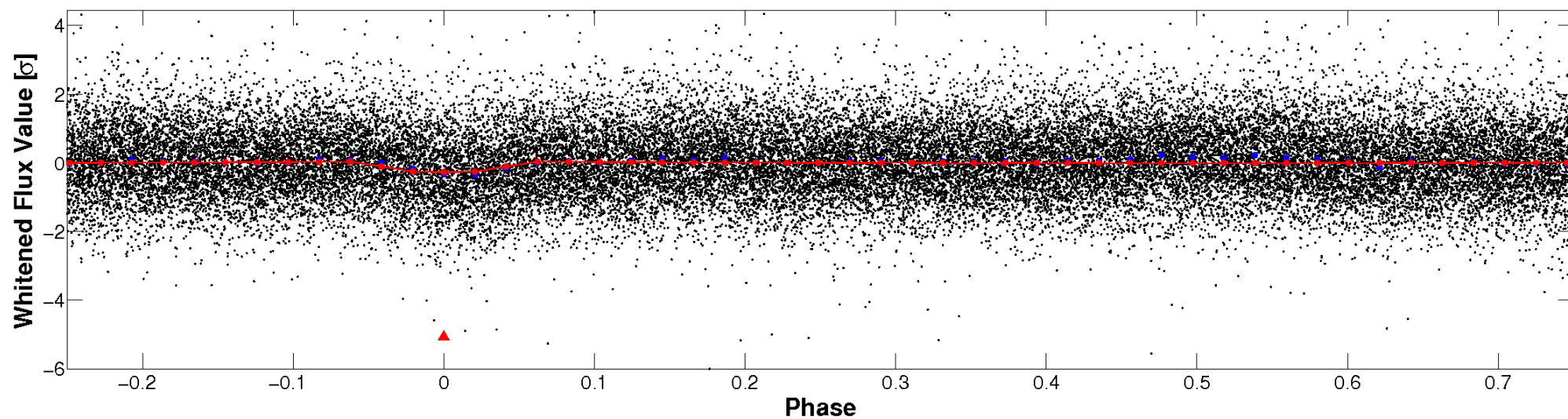


Non-Whitened Vs. Whitened Light Curve

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

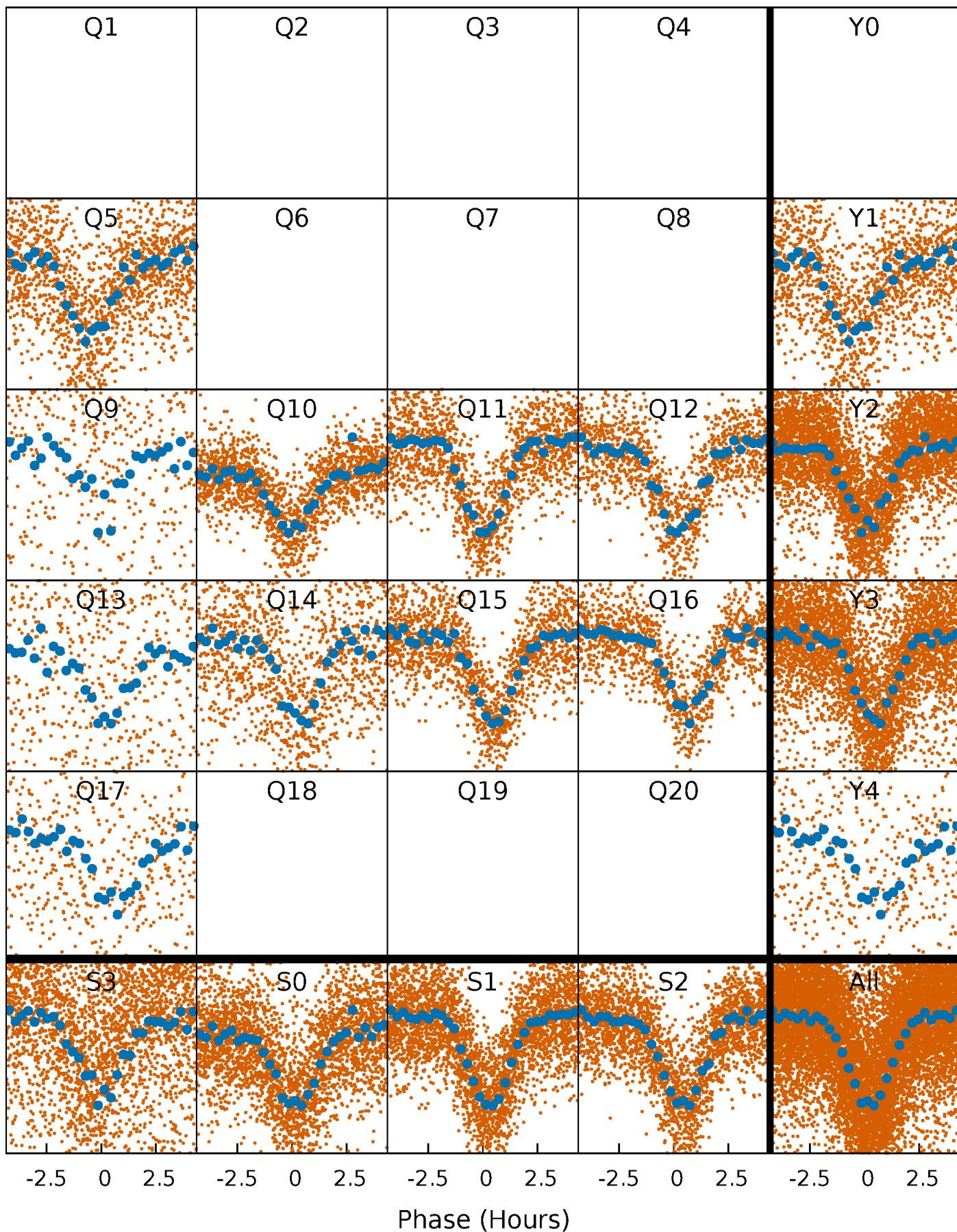


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



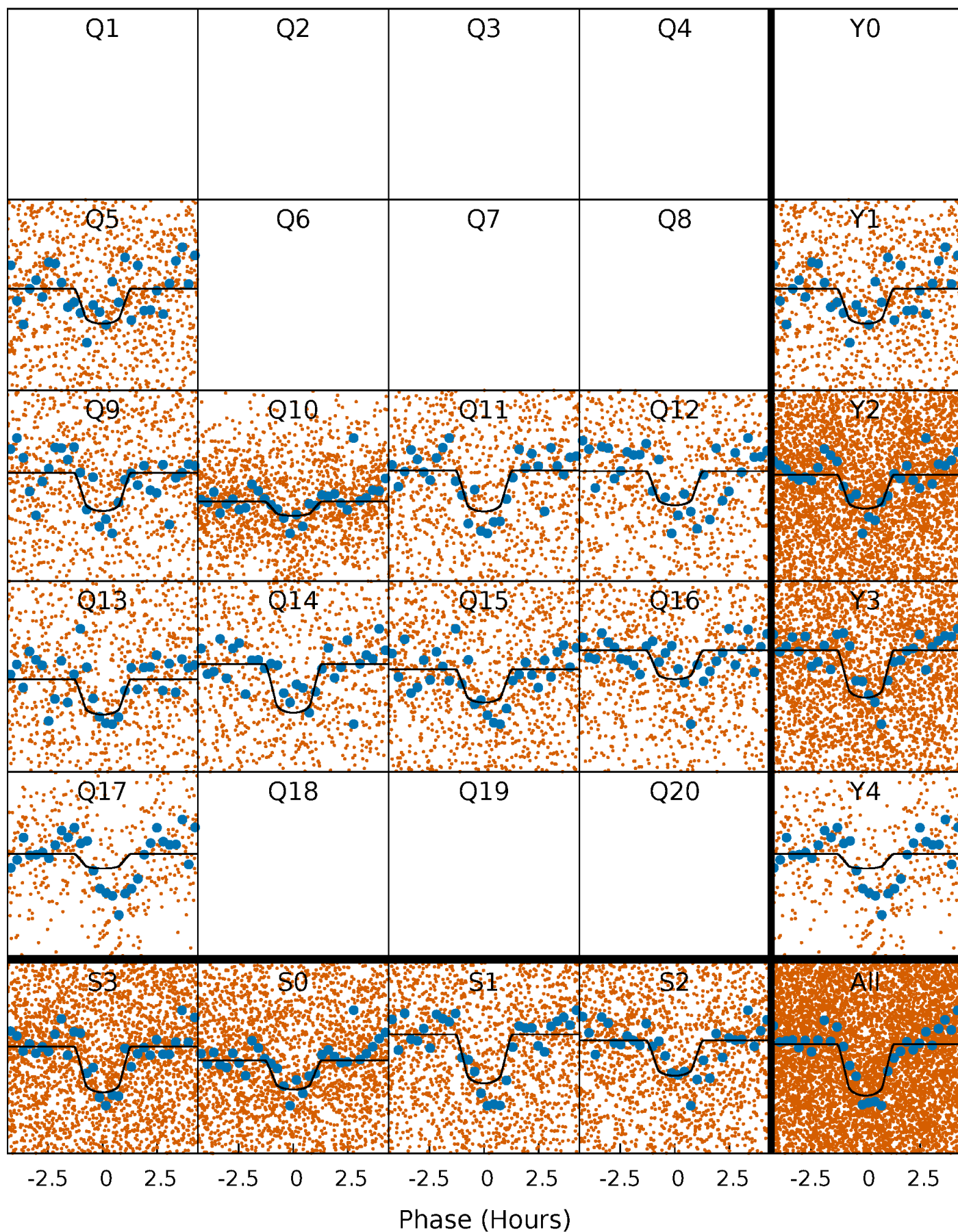
PDC Quarter-Phased Transit Curves

TCE 008397446-01 P= 0.986576 Days $T_0=131.927224$ (BKJD)



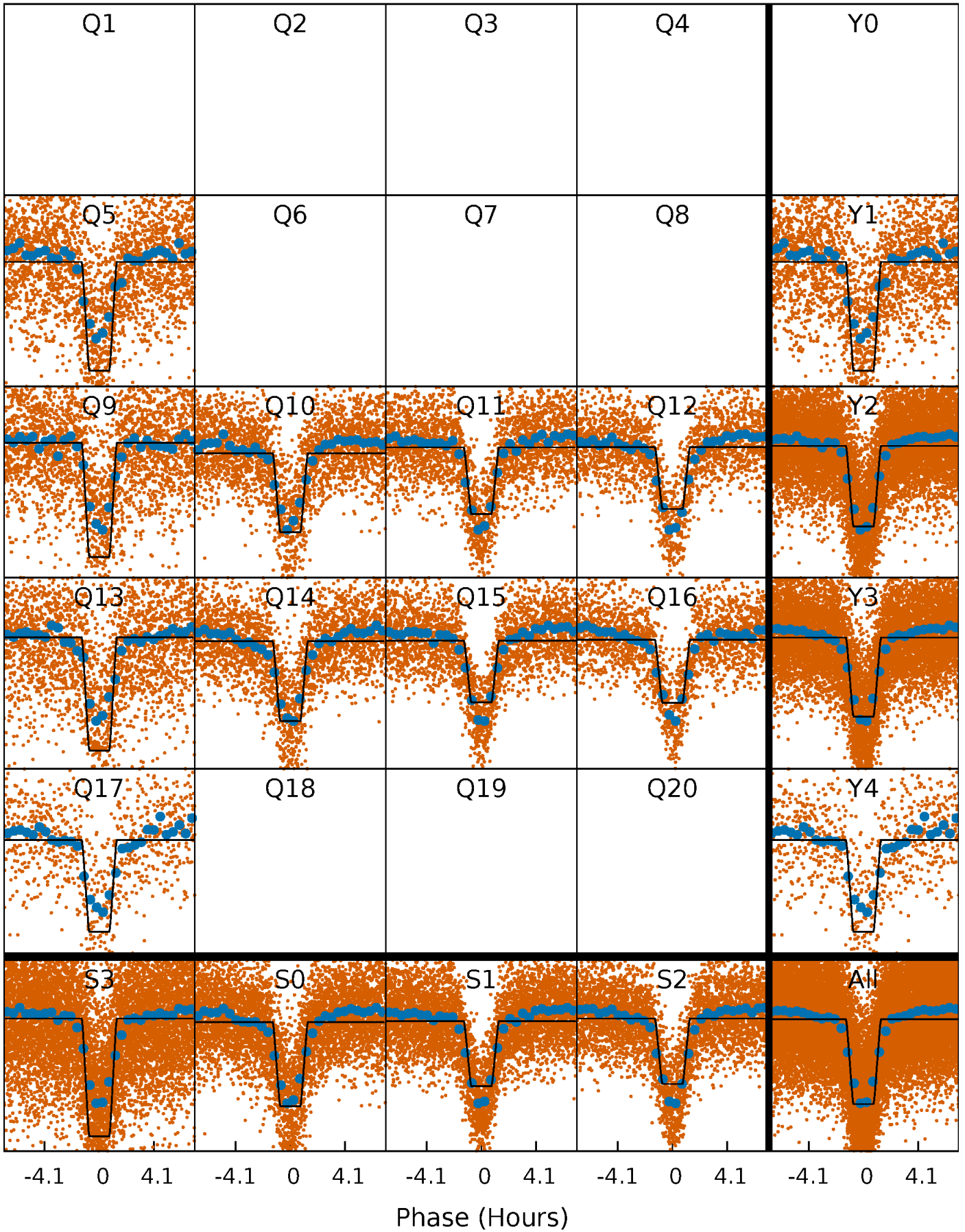
DV Quarter-Phased Transit Curves

TCE 008397446-01 P= 0.986576 Days $T_0=131.927224$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

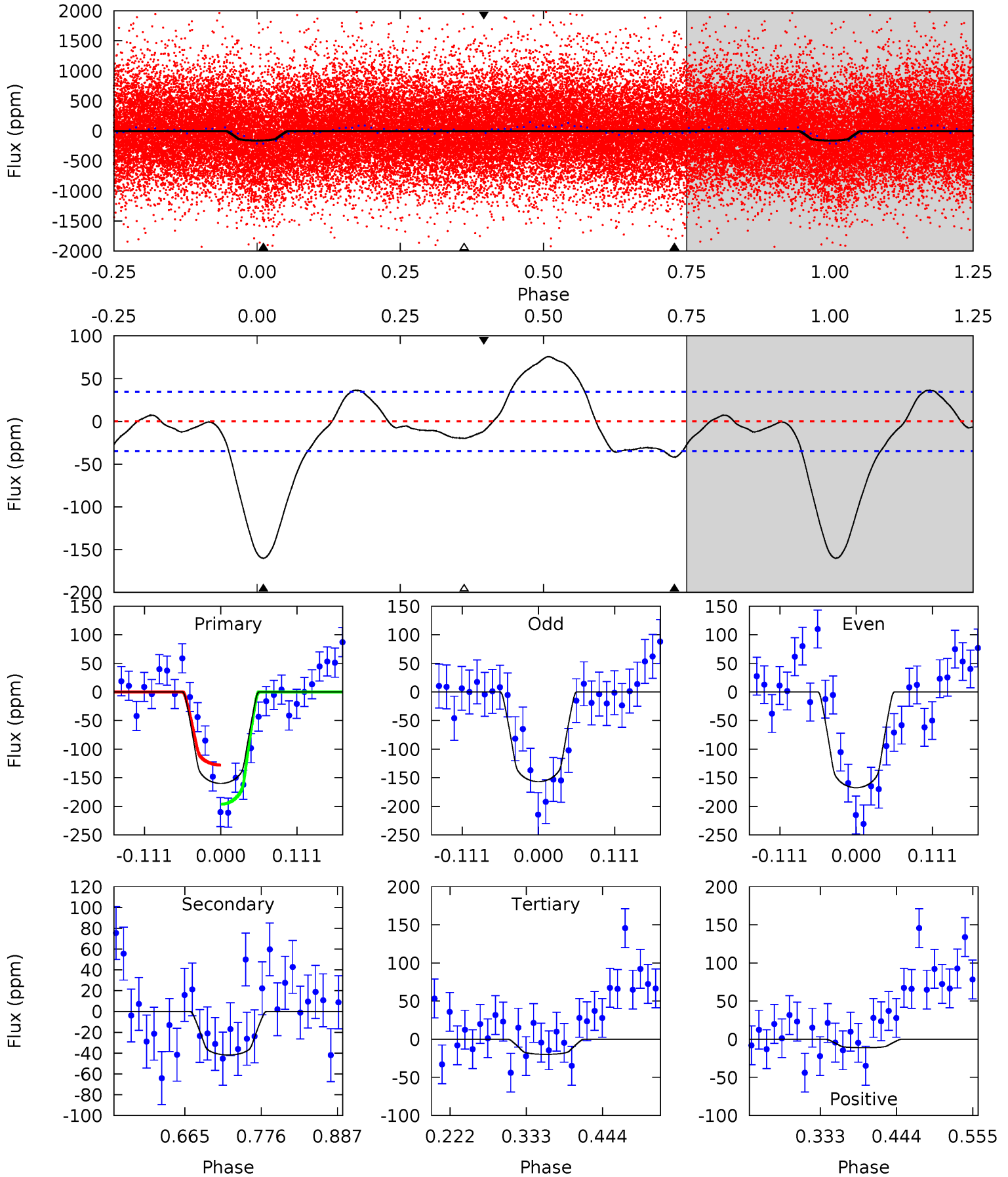
TCE 008397446-01 P= 0.986619 Days $T_0=131.892498$ (BKJD)



DV Model-Shift Uniqueness Test

008397446-01, P = 0.986576 Days, E = 131.927224 Days

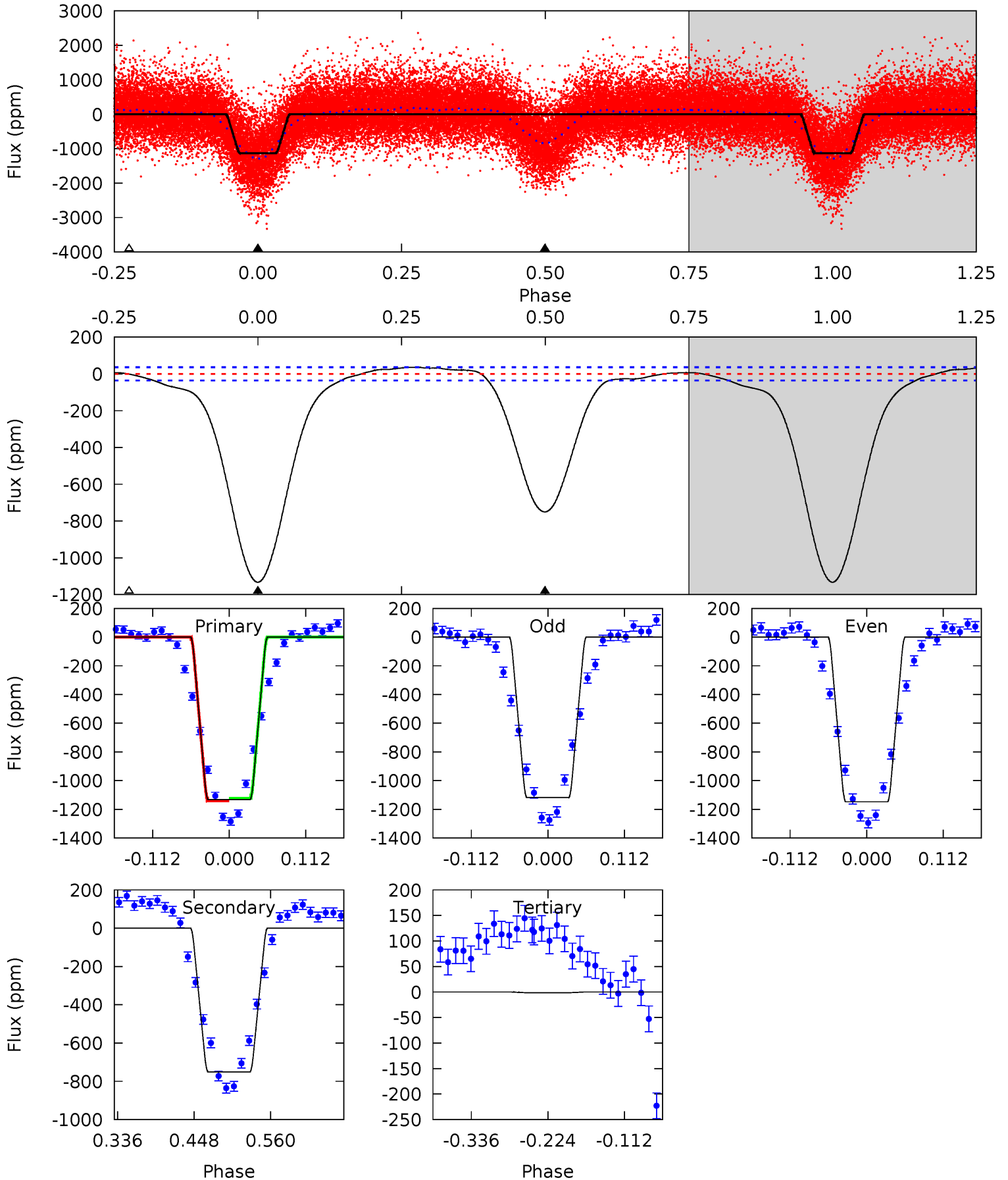
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	5.48	2.60	-1.47	4.54	1.59	4.00	18.4	22.4	2.88	6.95	0.69	1.02	0.32	4.51



Alt Model-Shift Uniqueness Test

008397446-01, P = 0.986619 Days, E = 131.892498 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
144.1	95.5	0.17	0	4.54	1.59	4.52	143.9	144.1	95.3	95.5	1.90	1.00	0.03	1.18



Stellar Parameters For KIC 008397446

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6243^{+197}_{-241}	$4.176^{+0.246}_{-0.164}$	$-0.260^{+0.300}_{-0.300}$	$1.385^{+0.378}_{-0.378}$	$1.049^{+0.169}_{-0.139}$	$0.555^{+0.801}_{-0.245}$
	+3%/-4%	+6%/-4%	+115%/-115%	+27%/-27%	+16%/-13%	+144%/-44%
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 008397446-01 / KOI 1135.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-42 ± 8	$1.98^{+0.94}_{-0.89}$	3201^{+266}_{-281}	4371^{+1359}_{-700}	$2.288^{+5.180}_{-1.278}$
Alt.	-751 ± 8	$5.25^{+1.31}_{-1.13}$	3209^{+256}_{-274}	5452^{+556}_{-417}	$5.893^{+3.683}_{-2.030}$

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

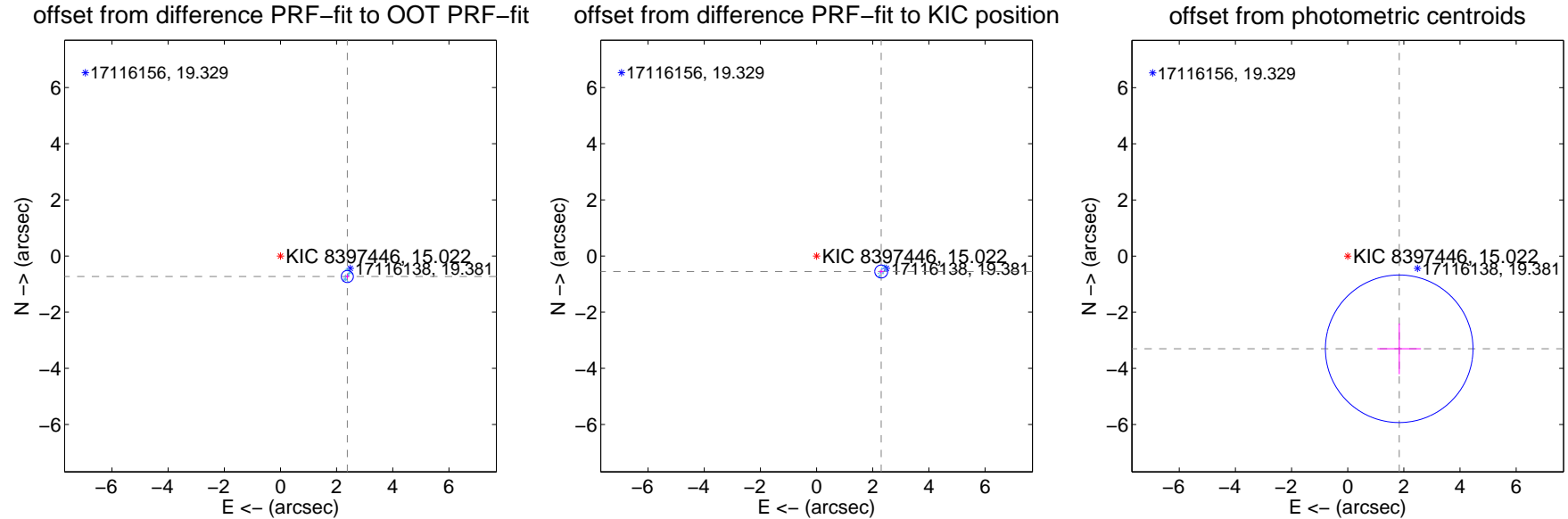
DV Centroid Data

Supplemental centroid analysis for 008397446-01. Kepler magnitude: 15.02. Transit SNR 13.63

There are 10 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	2.489 ± 0.072	34.75	-2.380 ± 0.071	-0.728 ± 0.082
PRF-fit source offset from KIC position	2.367 ± 0.077	30.76	-2.302 ± 0.077	-0.551 ± 0.076
photometric centroid source offset	3.78 ± 0.88	4.31	-1.83 ± 0.78	-3.30 ± 0.90

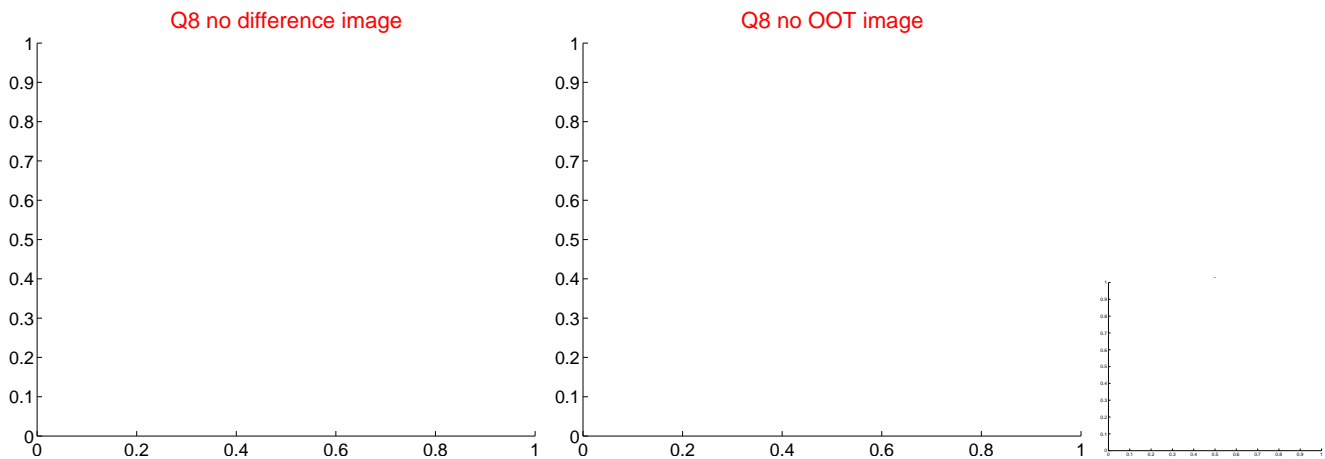
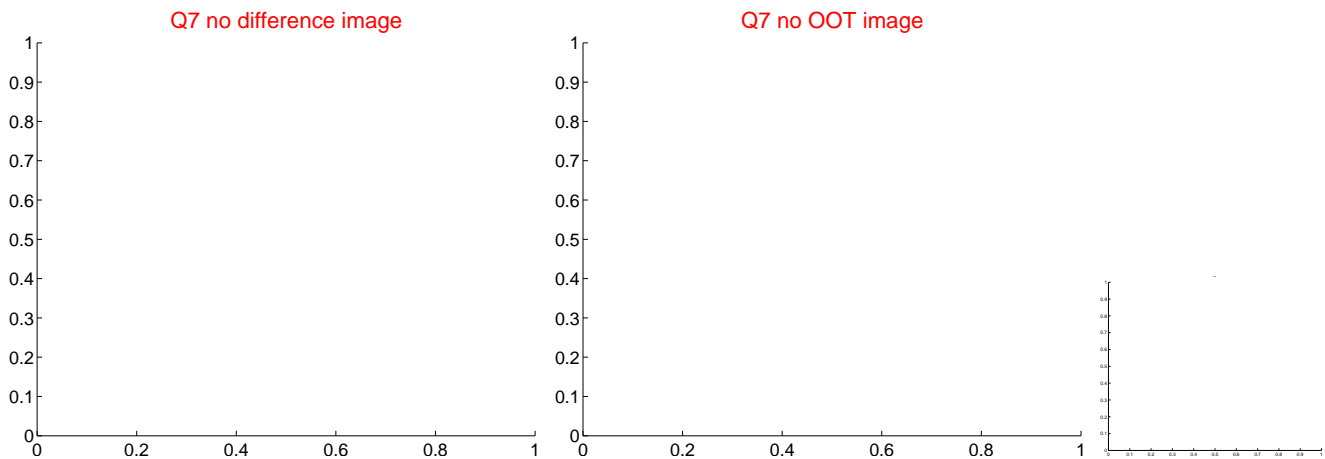
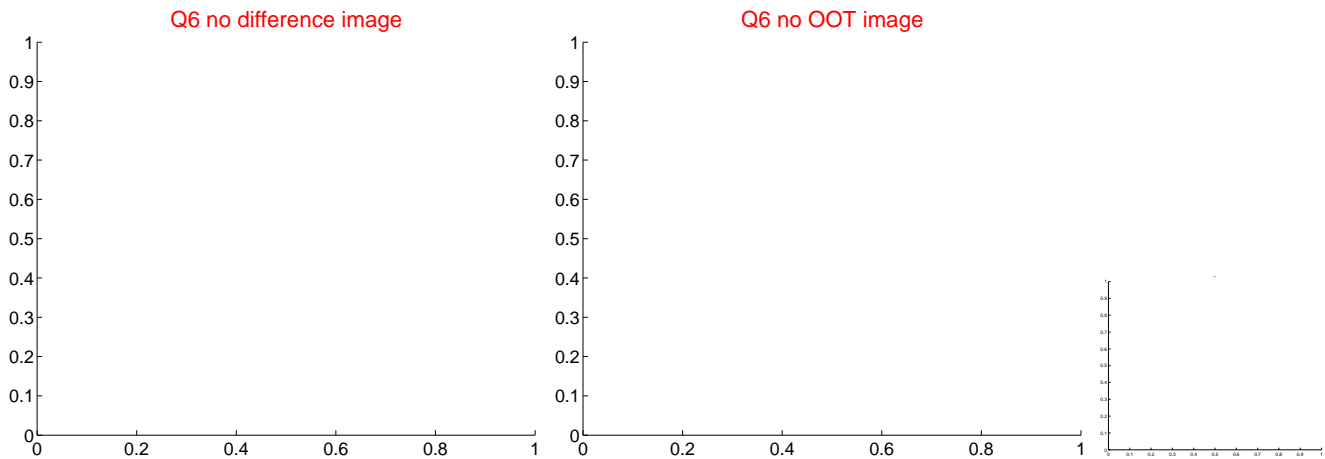
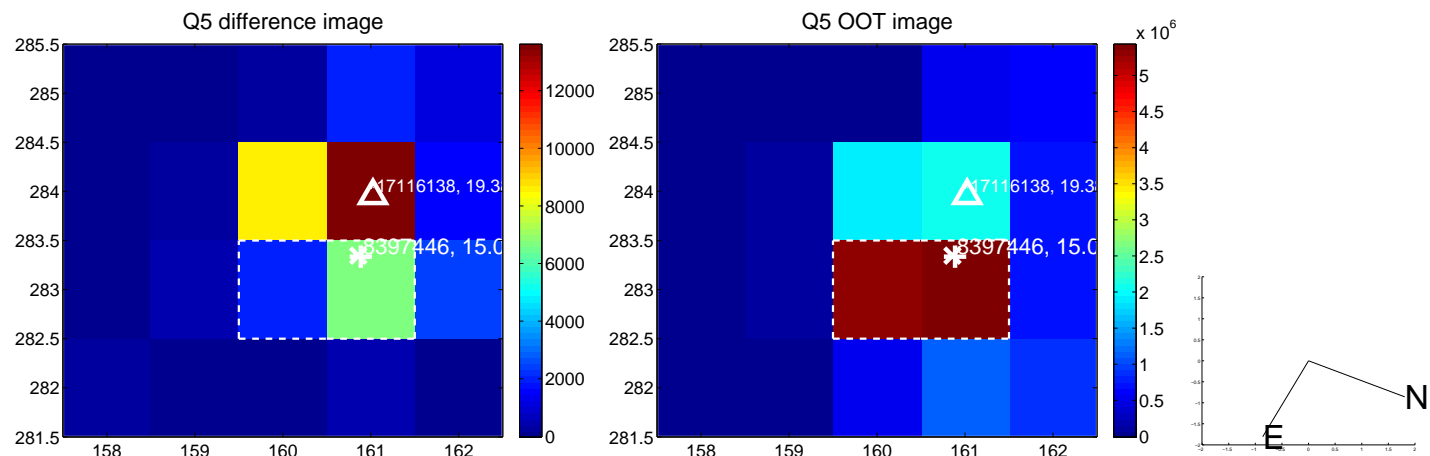


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

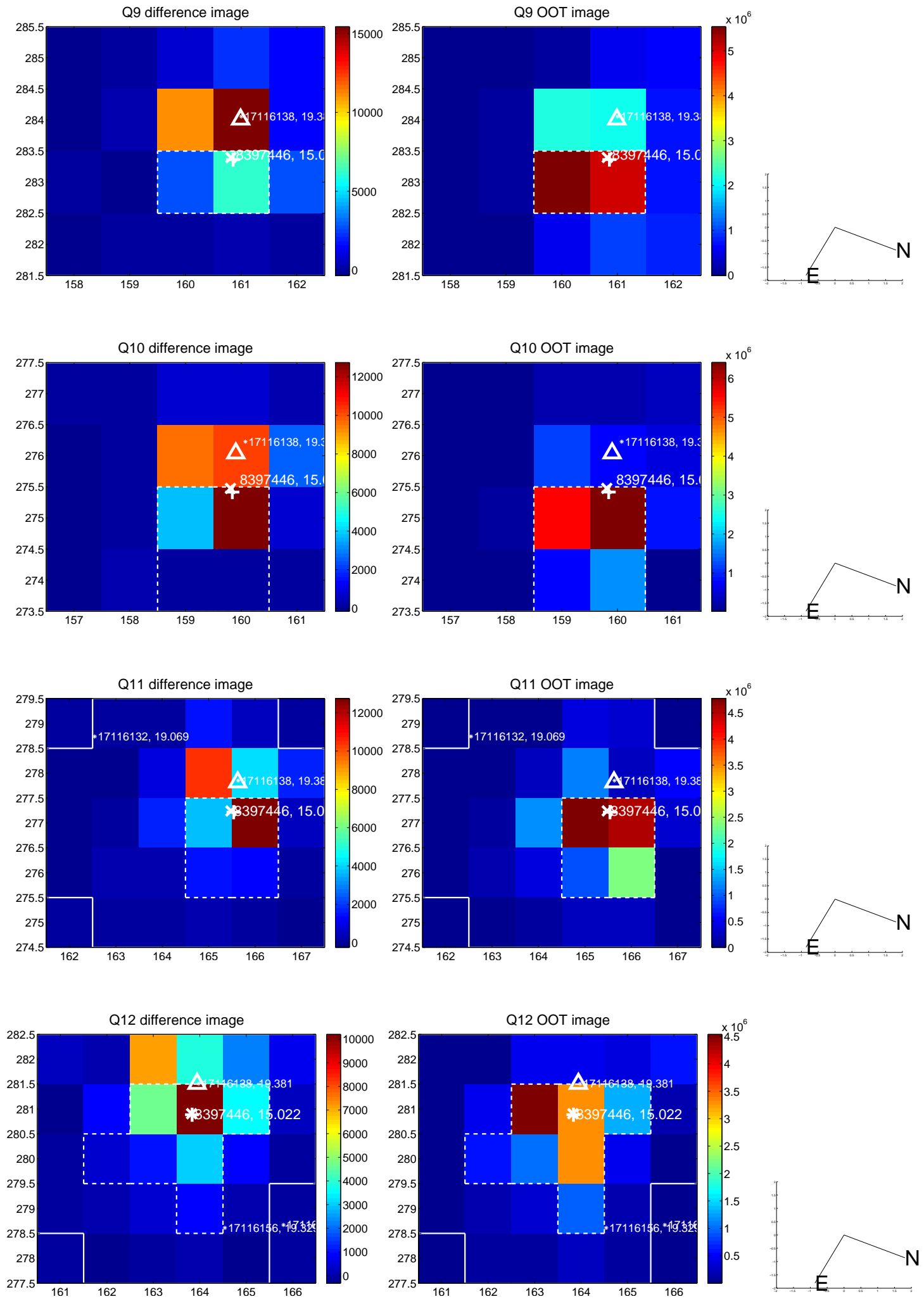
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



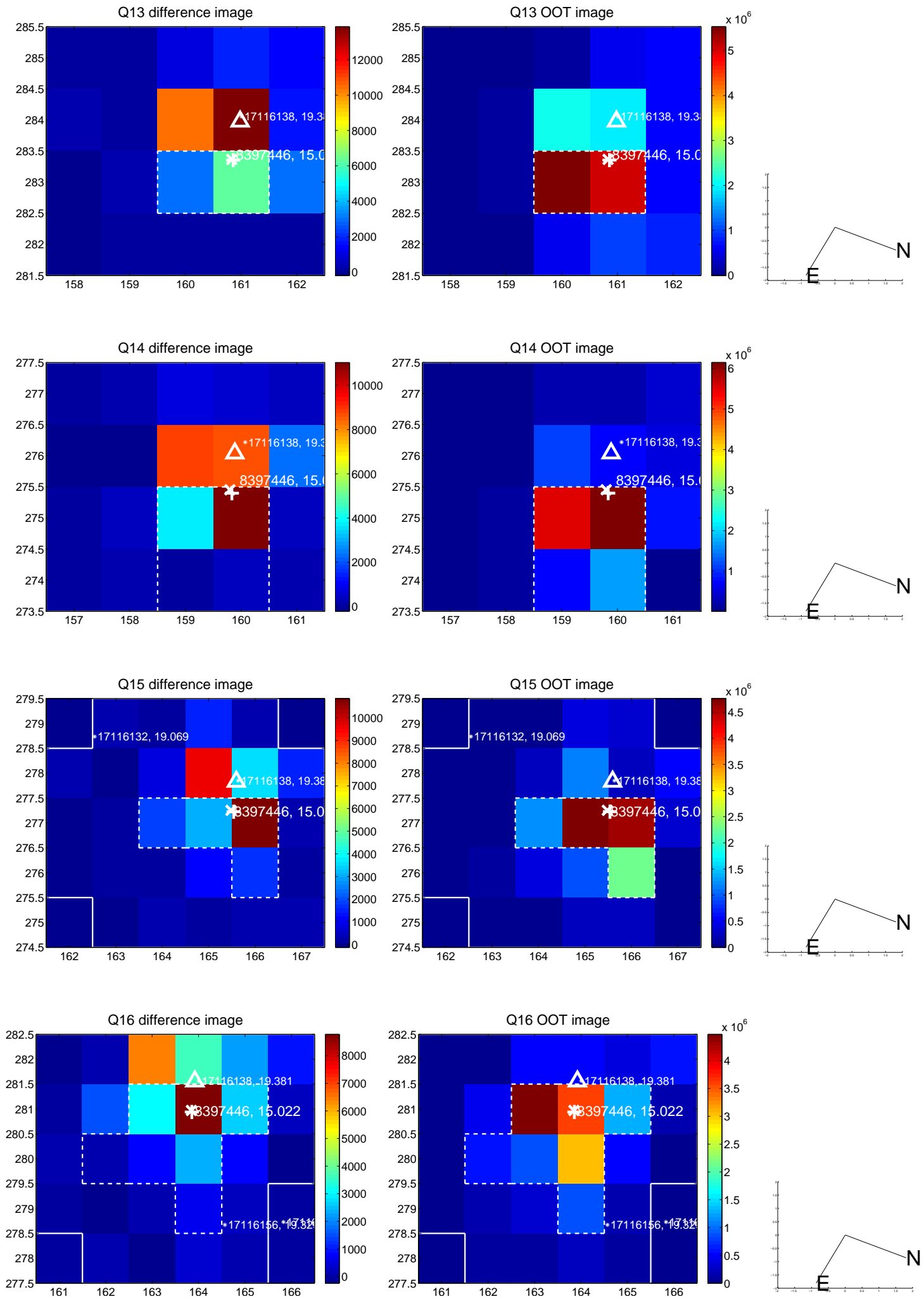
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



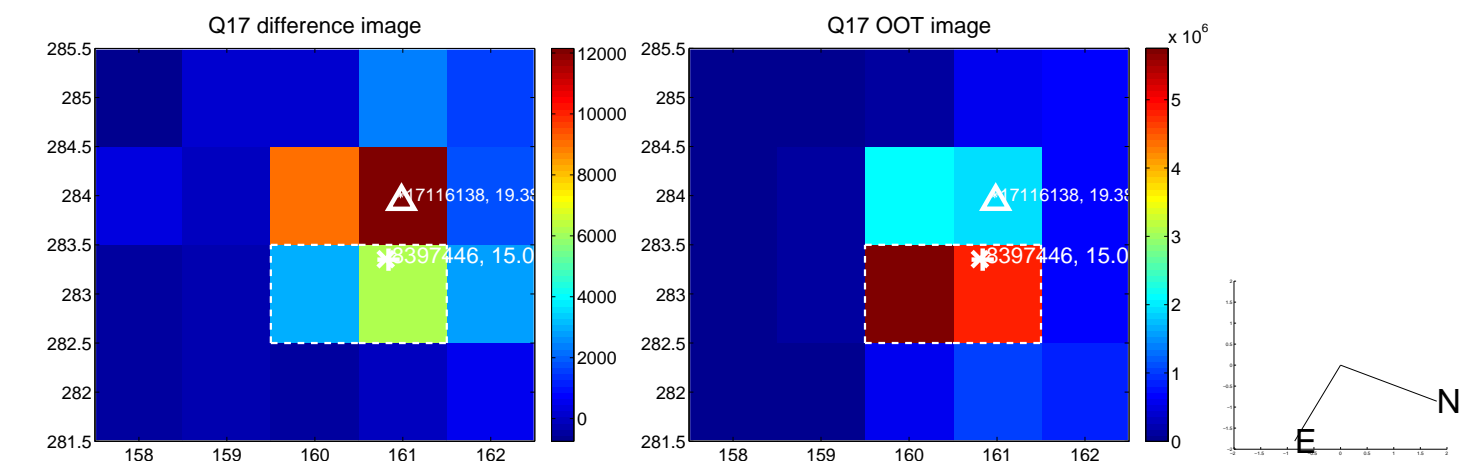
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



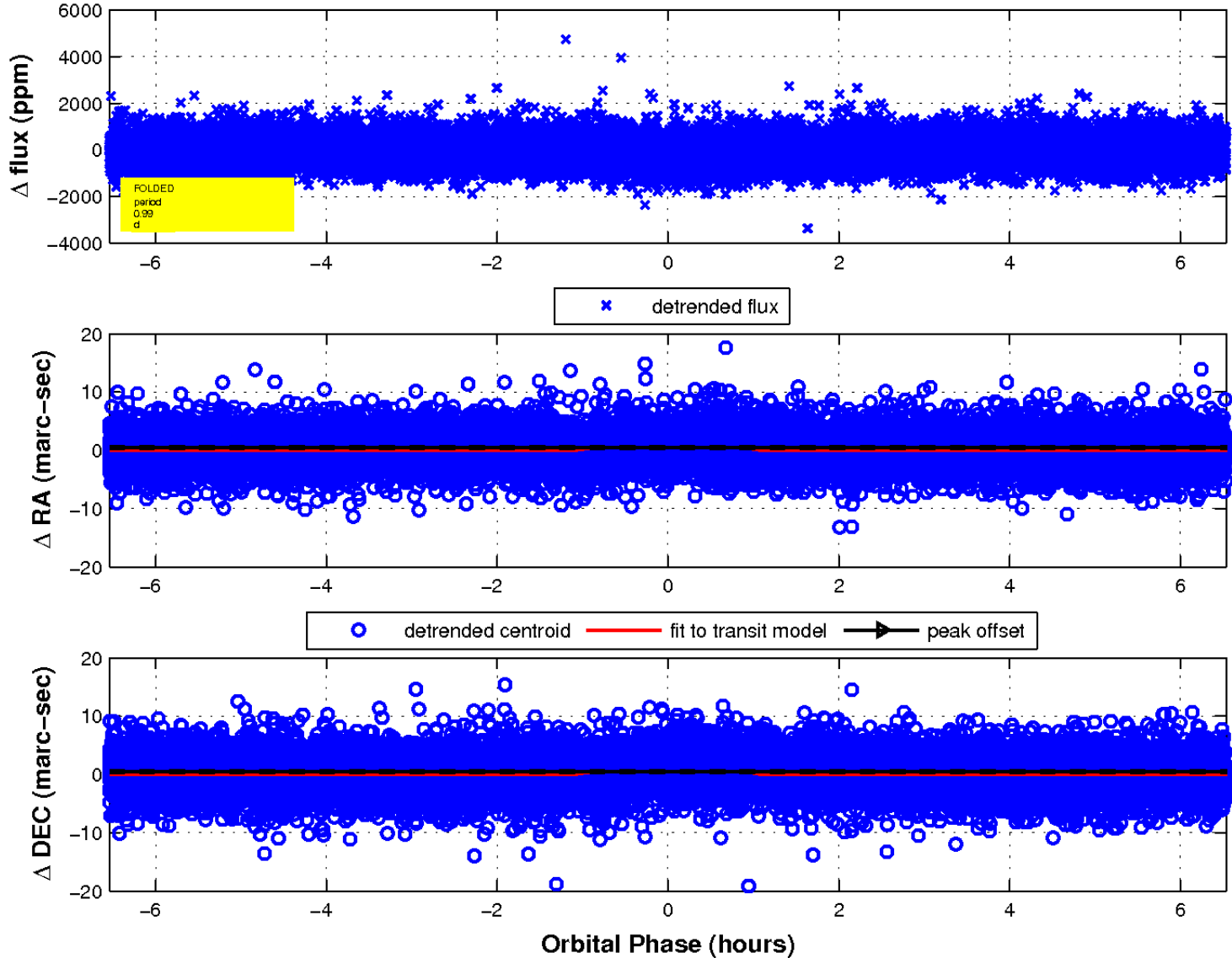
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

