

KIC 009636432

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})
009636432-01	OBS	No	386.943224	336.917424	235.1	13.884	7.2	9.4	1.21	6582	1.93	2.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009636432-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

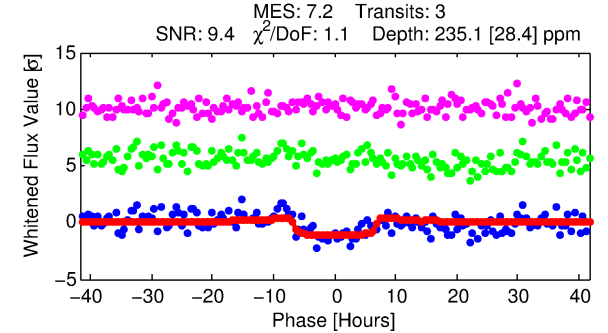
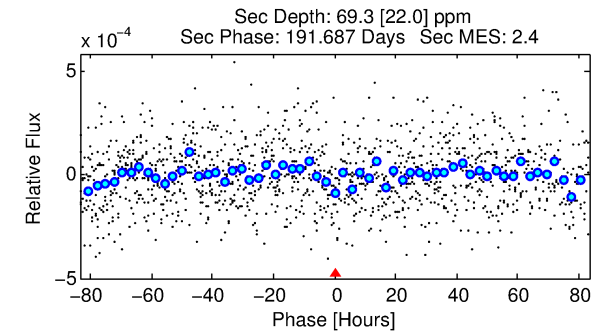
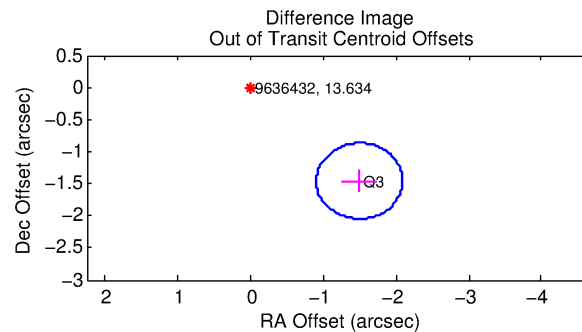
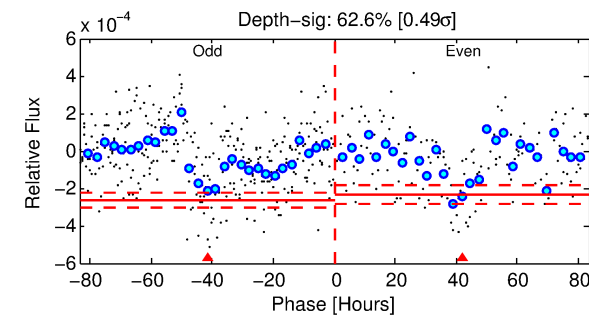
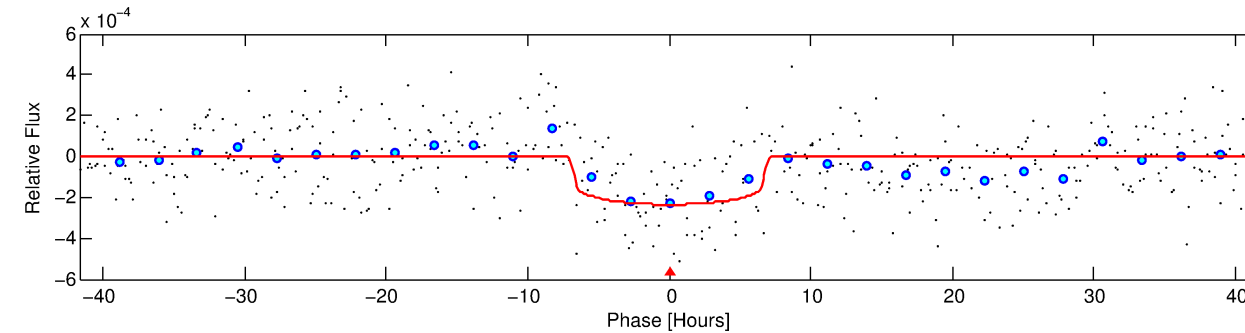
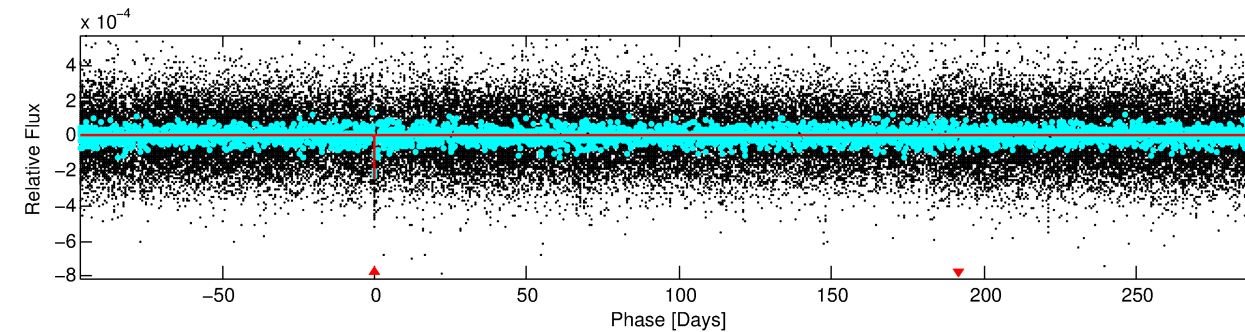
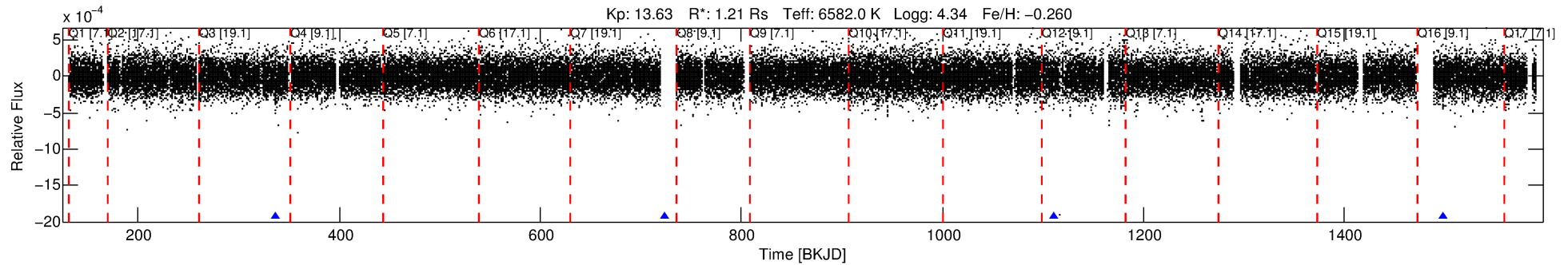
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009636432-01

No Significant Match Found

DV One-Page Summary

KIC: 9636432 Candidate: 1 of 1 Period: 386.943 d



DV Fit Results:

Period = 386.94322 [0.00809] d
Epoch = 336.9174 [0.0178] BKJD
Rp/R* = 0.0146 [0.0074]
a/R* = 180.60 [501.08]
b = 0.56 [3.45]
Seff = 2.06 [0.80]
Teq = 305 [30] K
Rp = 1.93 [1.15] Re
a = 1.0898 [0.2831] AU
Ag = 12207.30 [13751.99] [0.89σ]
Teffp = 4964 [1330] K [3.50σ]

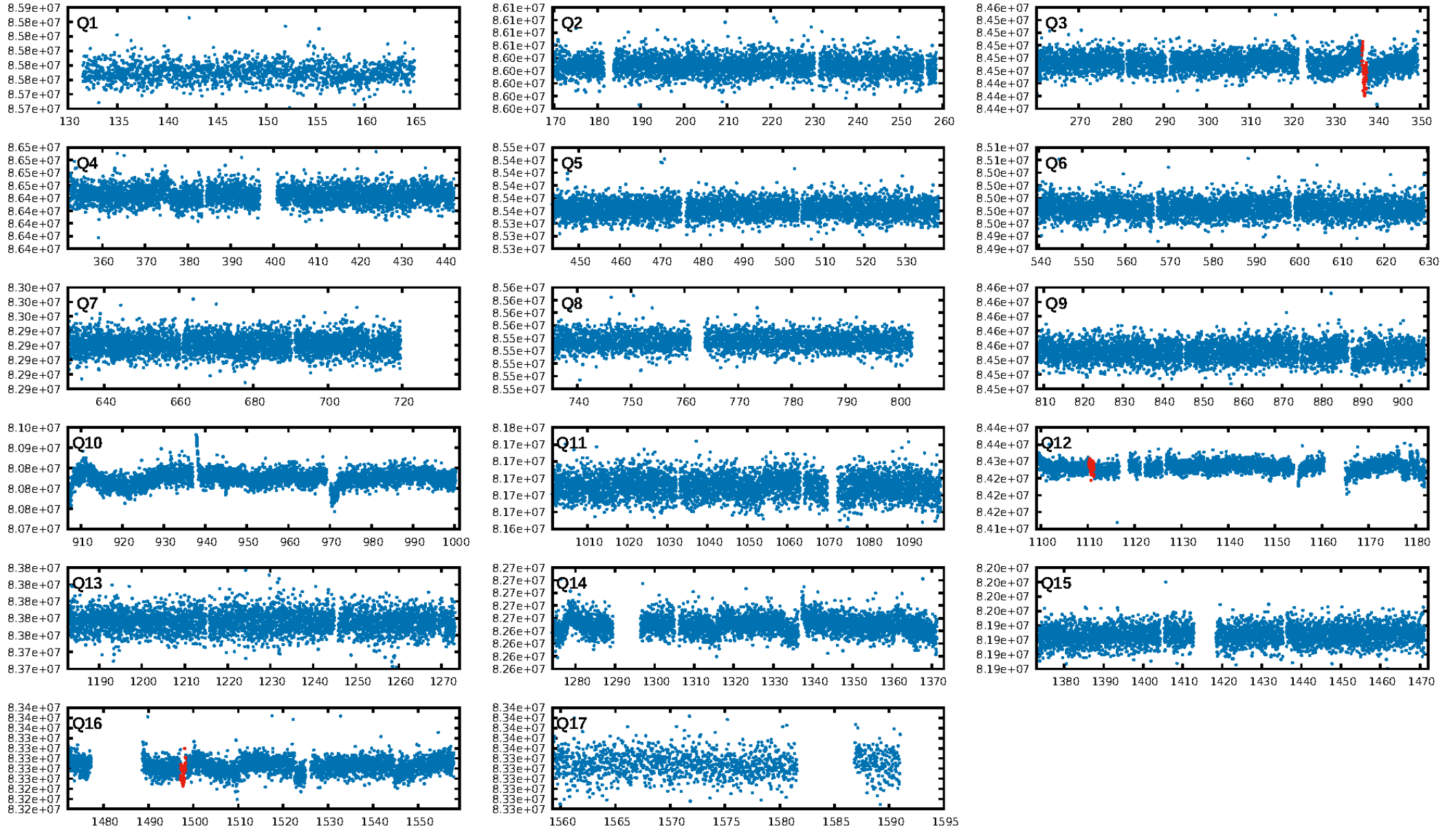
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 92.9%
Bootstrap-pfa: 1.01e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.246
Centroid-sig: 3.9%
Centroid-so: 1.653 arcsec [1.54σ]
OotOffset-rm: 2.088 arcsec [10.60σ]
KicOffset-rm: 2.032 arcsec [10.32σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

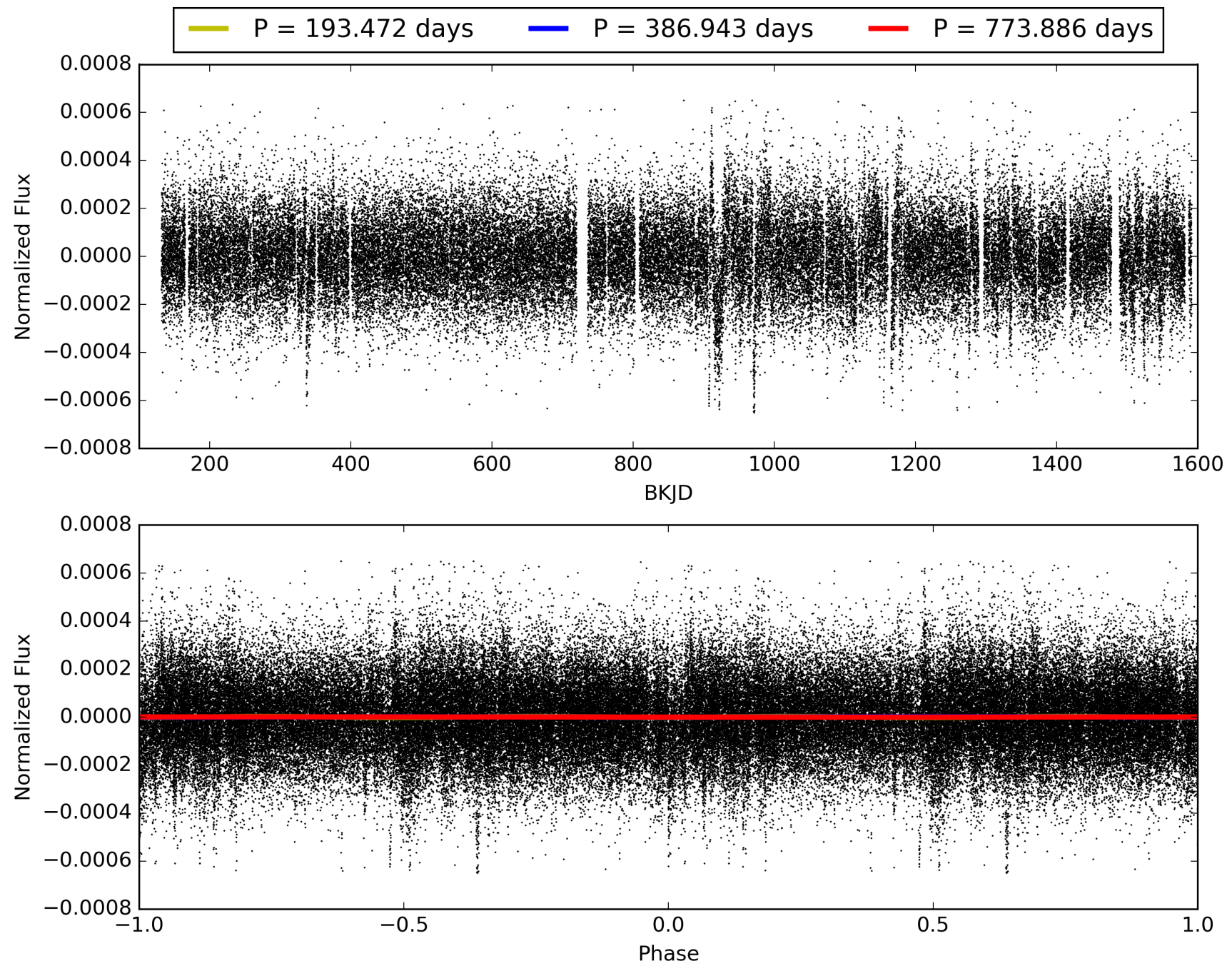
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:18:52 Z

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

TCE 009636432-01, PDC Light Curves

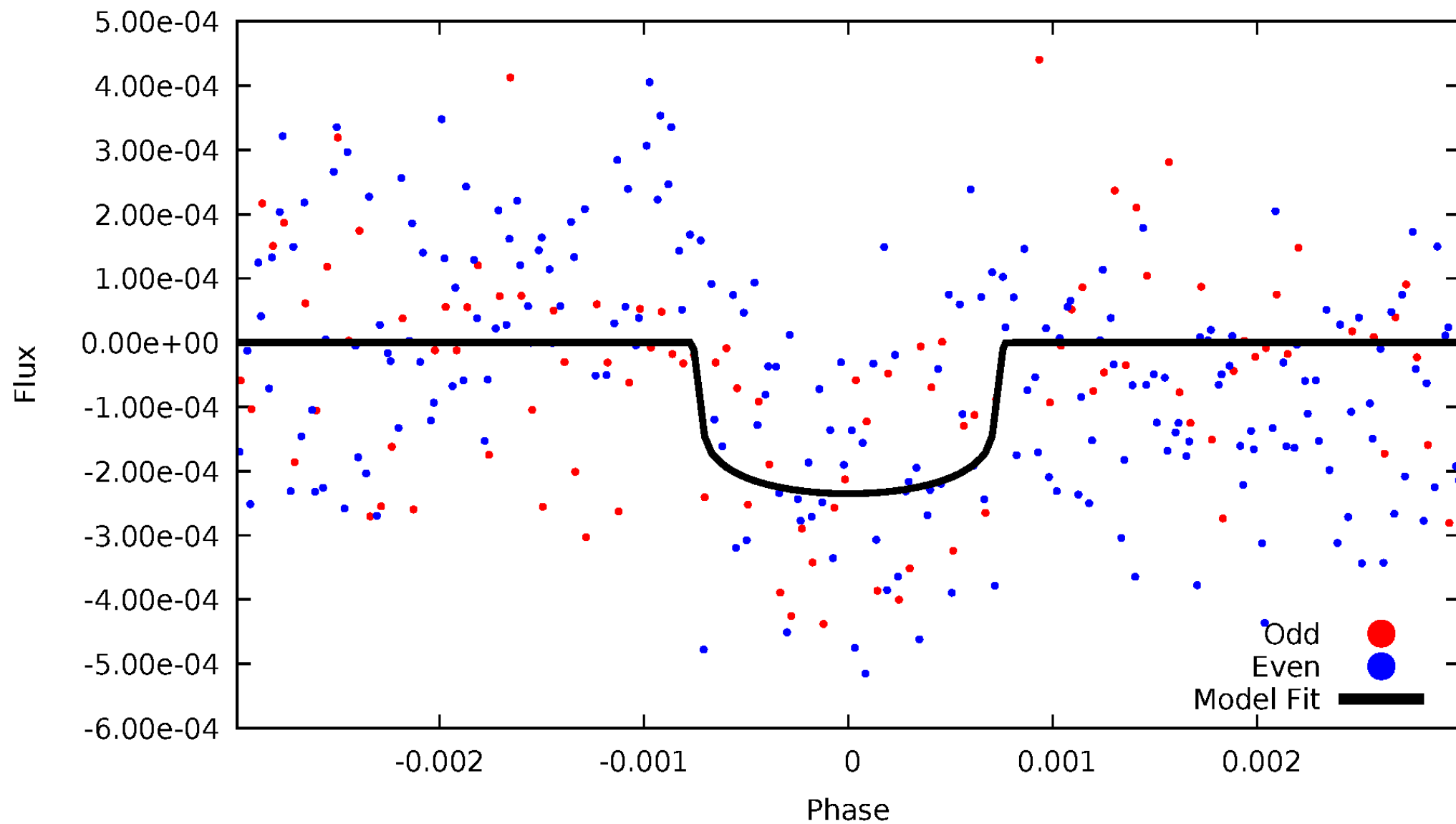


TCE 009636432-01



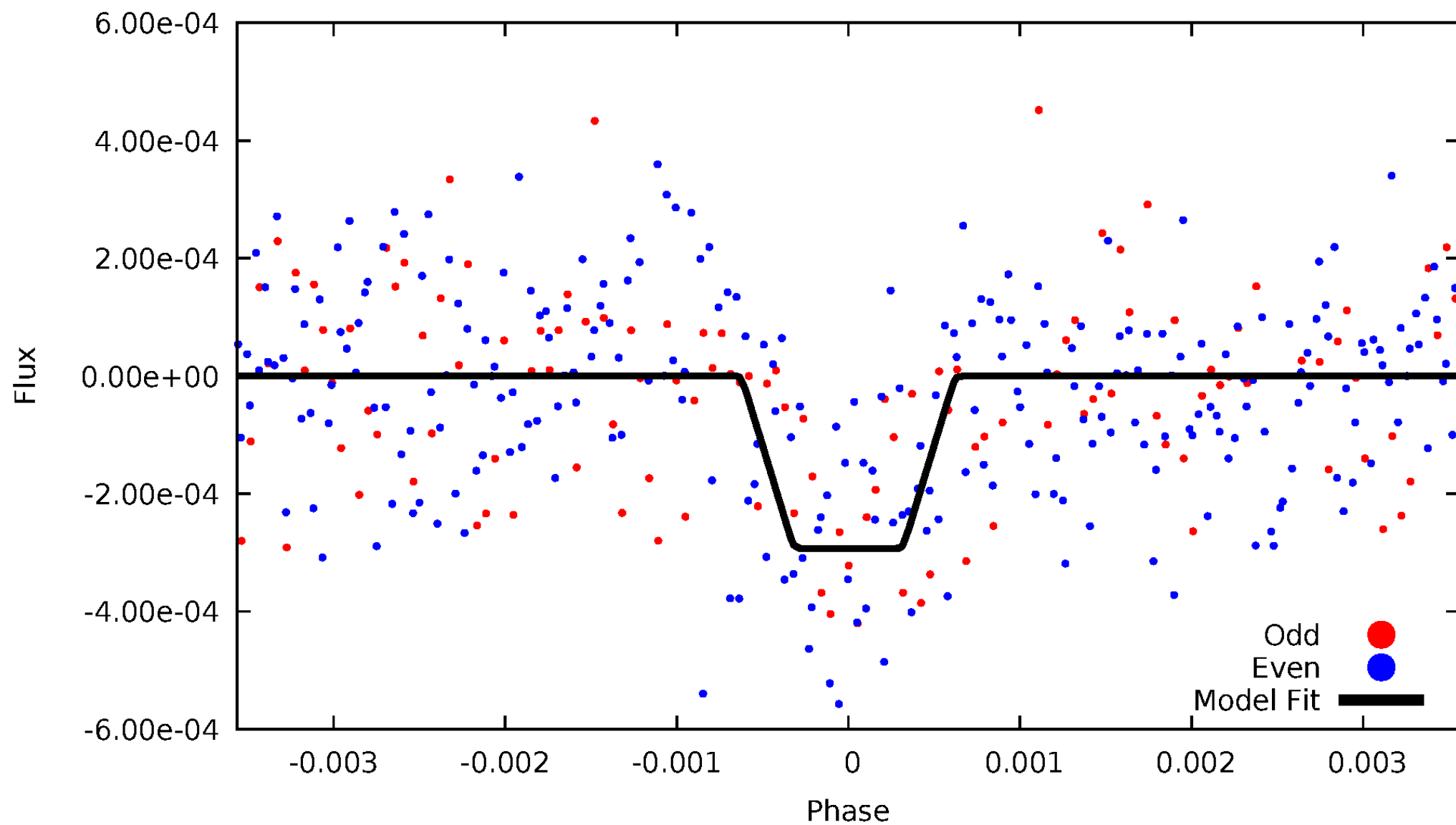
DV Odd/Even

TCE 009636432-01

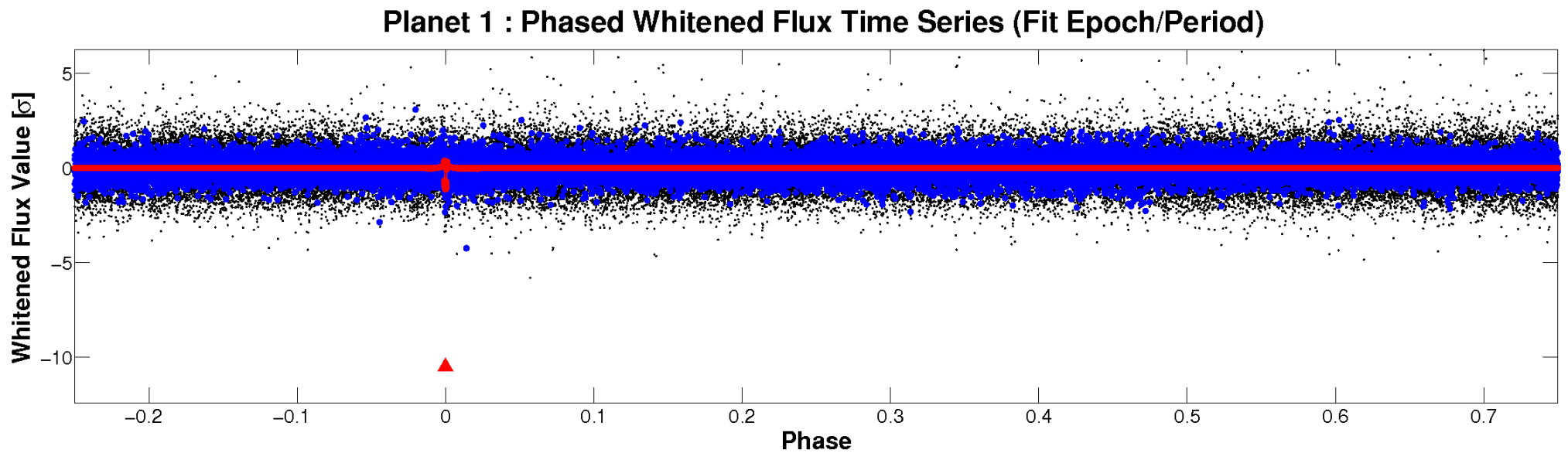
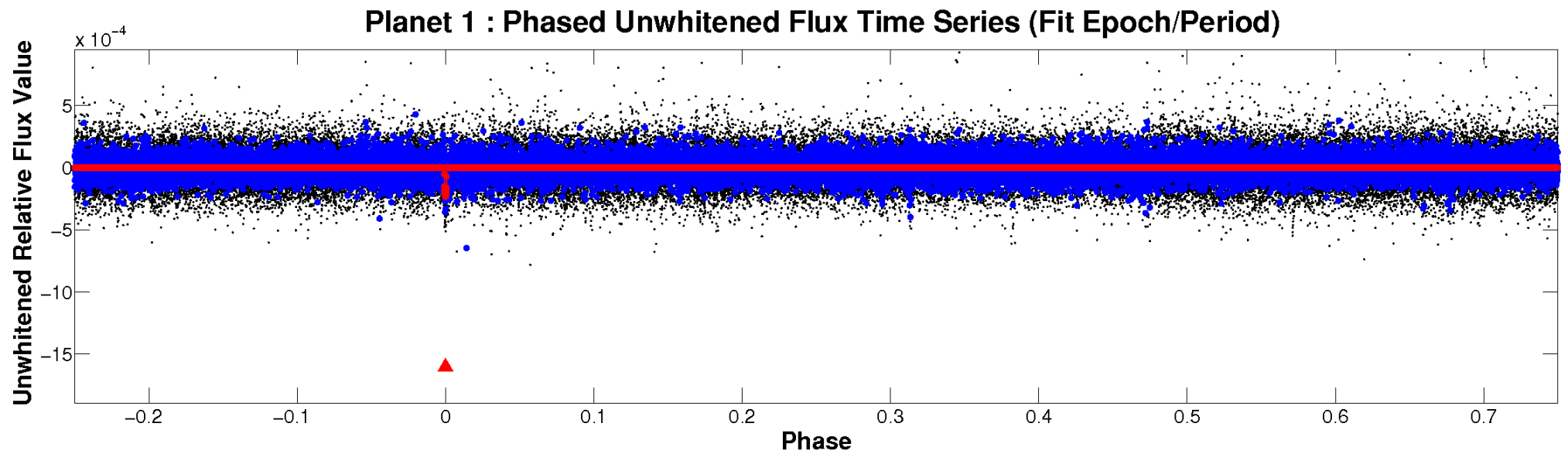


ALT Odd/Even

TCE 009636432-01

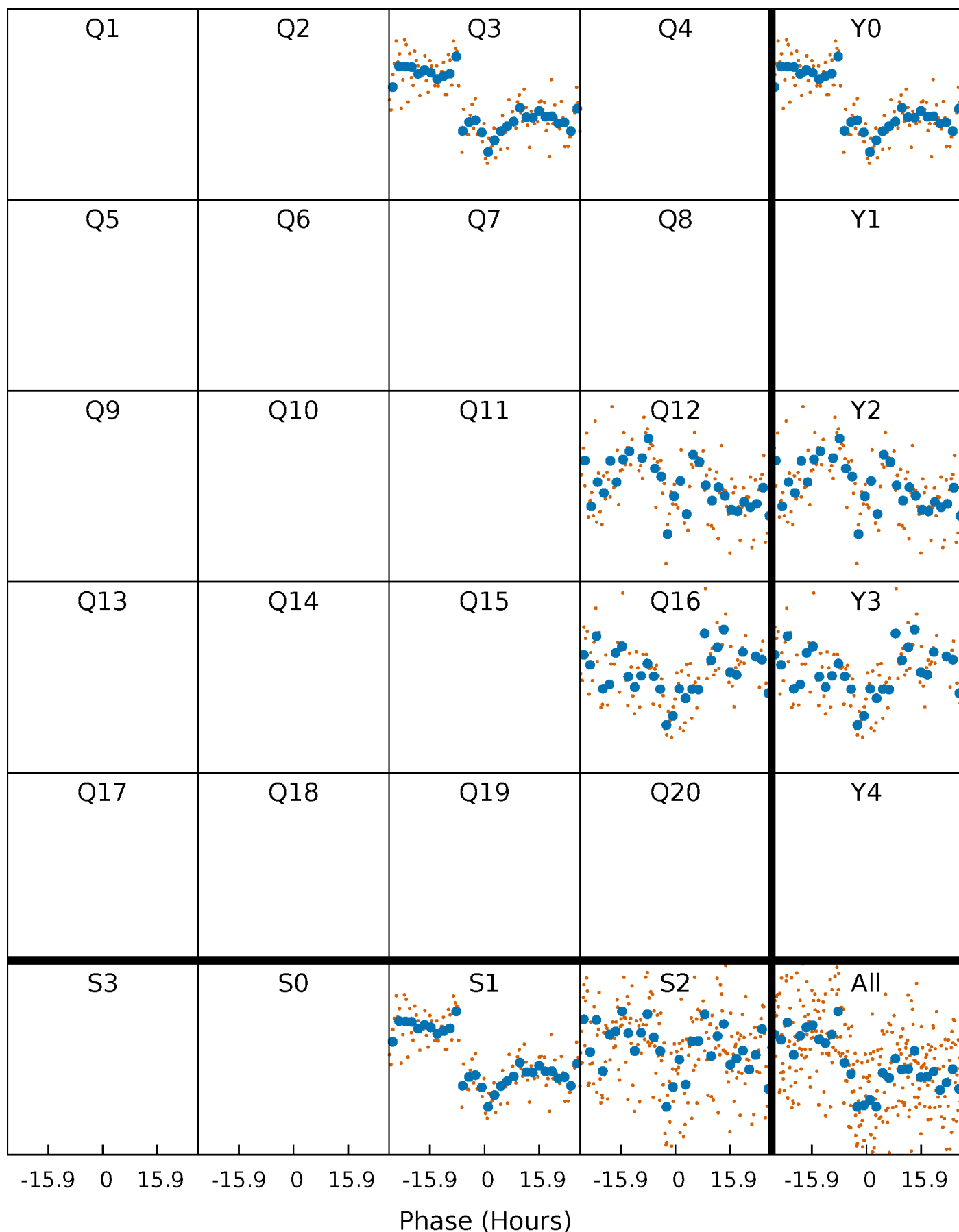


Non-Whitened Vs. Whitened Light Curve



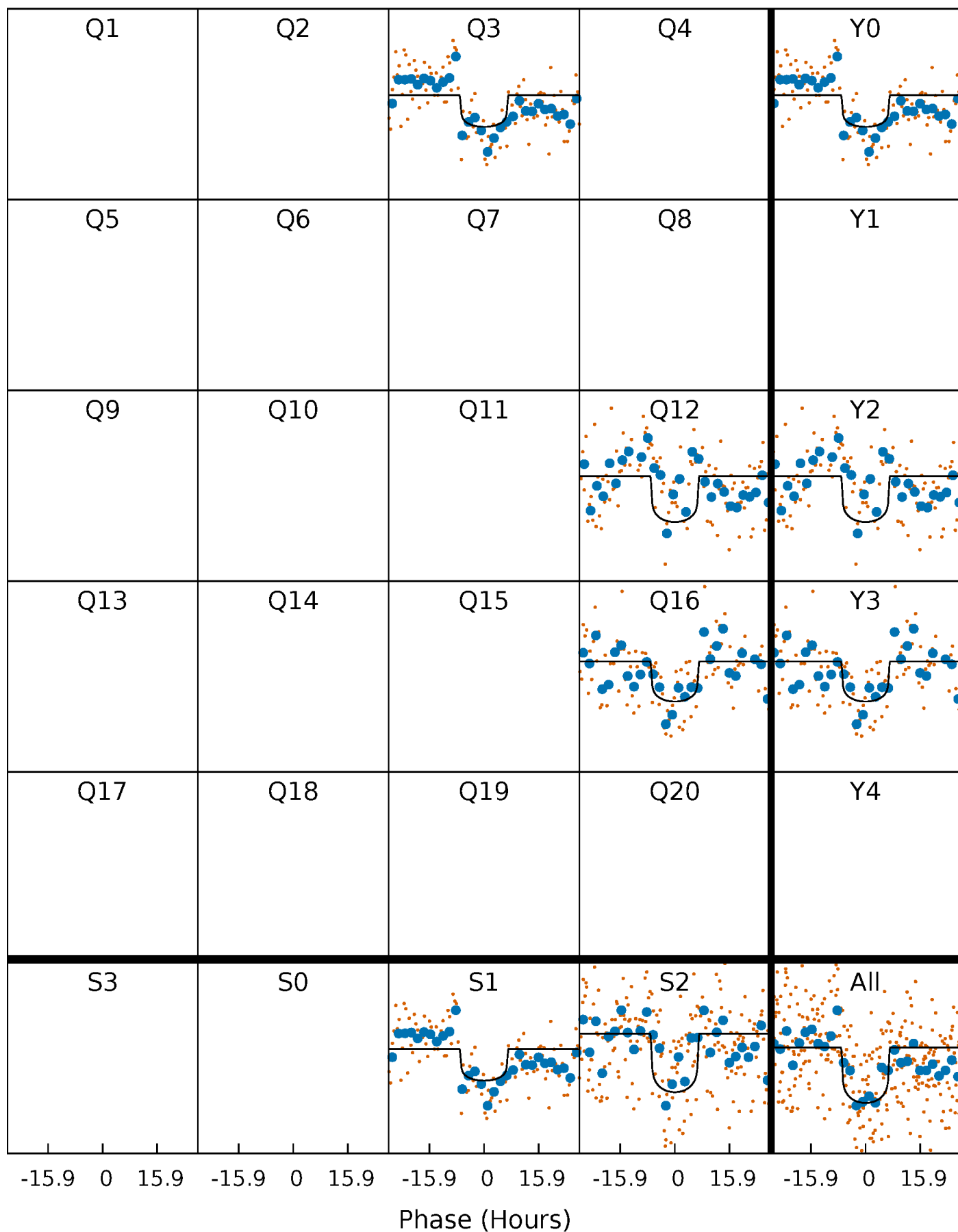
PDC Quarter-Phased Transit Curves

TCE 009636432-01 $P=386.943224$ Days $T_0=336.917424$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009636432-01 P=386.943224 Days $T_0=336.917424$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

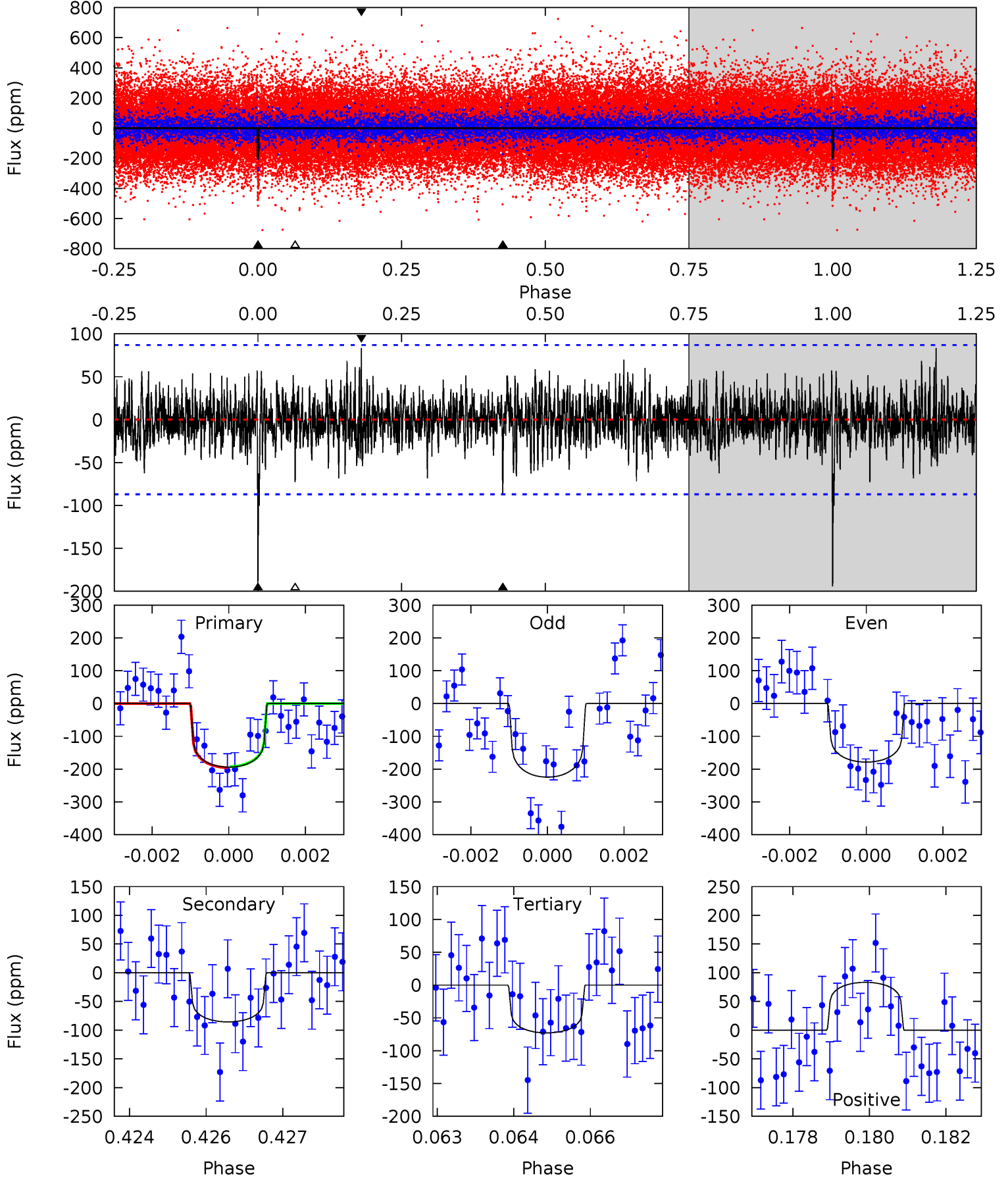
TCE 009636432-01 P=386.902647 Days $T_0=336.971162$ (BKJD)



DV Model-Shift Uniqueness Test

009636432-01, P = 386.943224 Days, E = 336.917424 Days

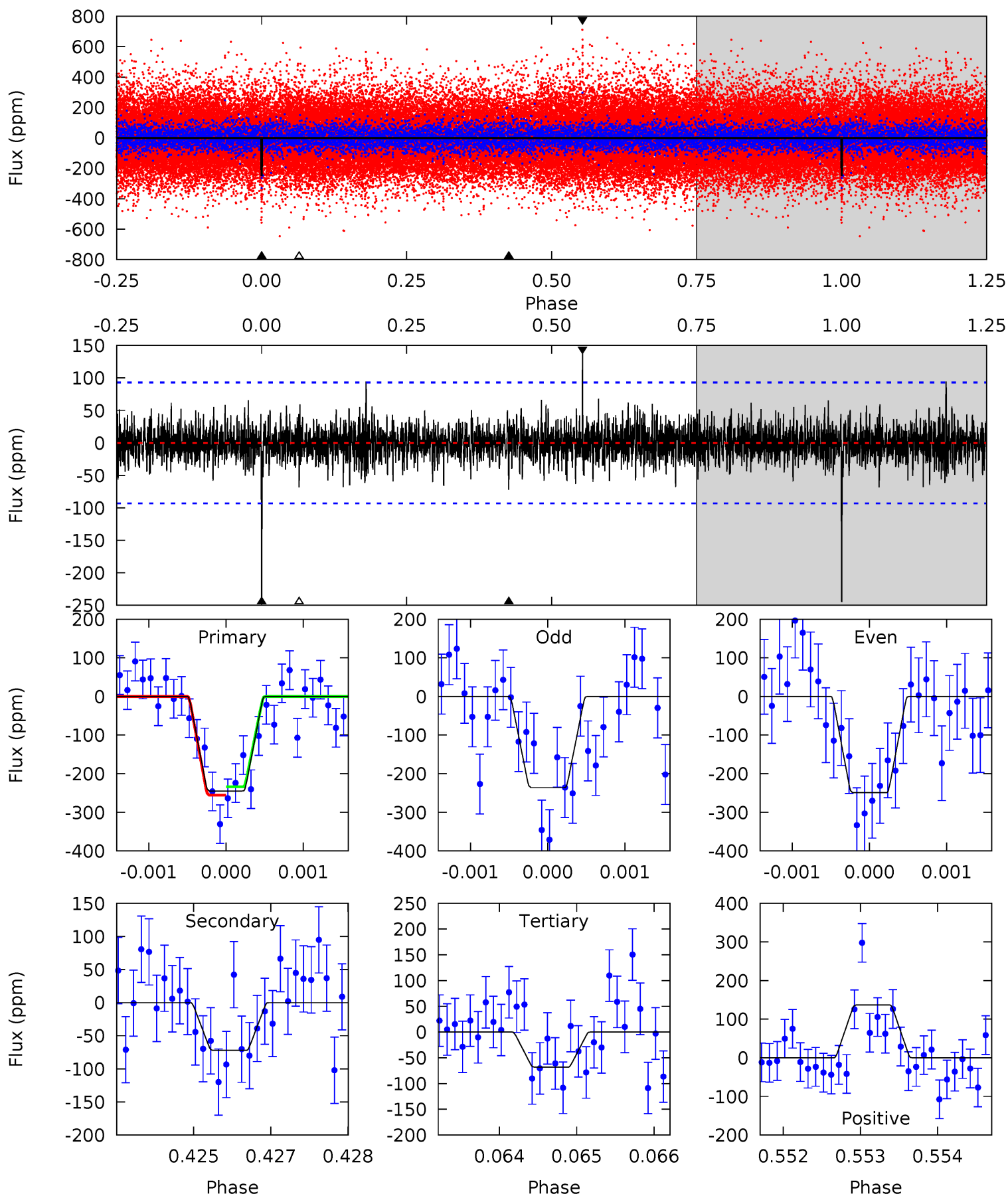
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	5.29	4.51	5.15	5.38	3.17	1.26	7.49	6.85	0.79	0.14	1.35	0.87	0.30	0.09



Alt Model-Shift Uniqueness Test

009636432-01, P = 386.902647 Days, E = 336.971162 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	4.18	3.95	7.94	5.40	3.22	1.18	10.3	6.28	0.23	-3.76	0.36	1.04	0.36	0.64



Stellar Parameters For KIC 009636432

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6582^{+148}_{-198}	$4.337^{+0.084}_{-0.196}$	$-0.260^{+0.250}_{-0.300}$	$1.206^{+0.383}_{-0.164}$	$1.156^{+0.178}_{-0.146}$	$0.928^{+0.408}_{-0.476}$
	+2%/-3%	+2%/-5%	+96%/-115%	+32%/-14%	+15%/-13%	+44%/-51%
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 009636432-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-86 ± 16	$2.07^{+1.06}_{-1.00}$	431^{+31}_{-21}	5178^{+1884}_{-798}	12678^{+34059}_{-7354}
Alt.	-72 ± 17	$2.42^{+1.01}_{-1.10}$	433^{+30}_{-21}	4705^{+1465}_{-646}	8051^{+18020}_{-4314}

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 $A_{obs} \gg 1.0$

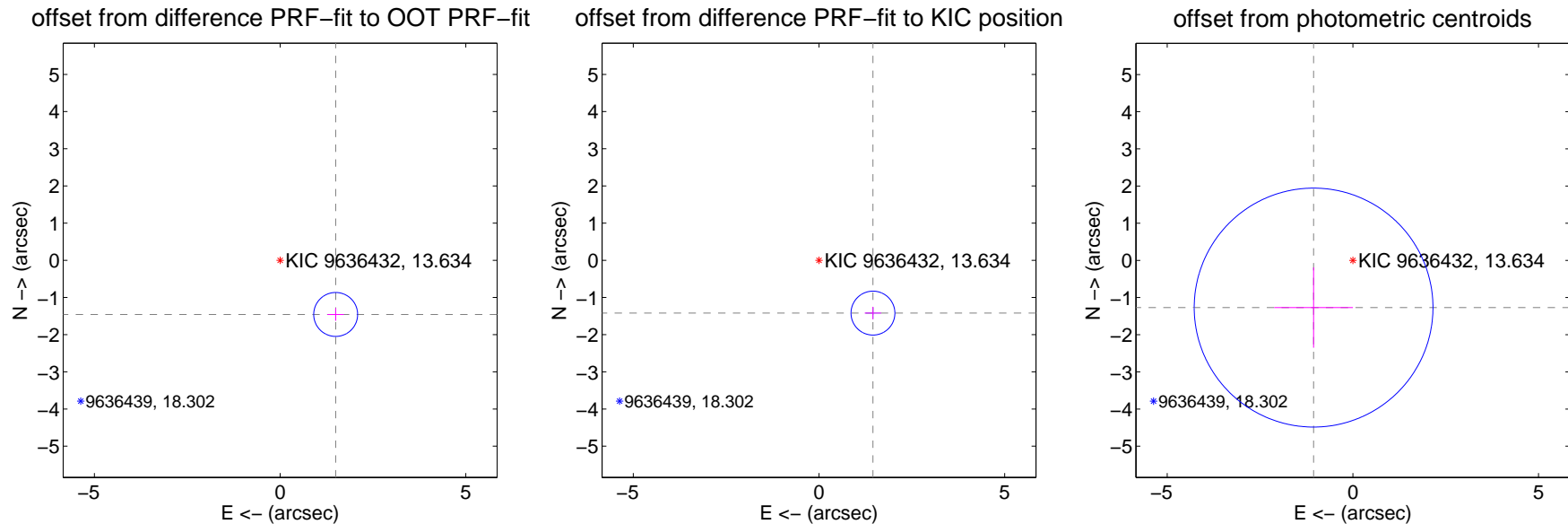
DV Centroid Data

Supplemental centroid analysis for 009636432-01. Kepler magnitude: 13.63. Transit SNR 9.42

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.088 ± 0.197	10.60	-1.496 ± 0.220	-1.457 ± 0.169
PRF-fit source offset from KIC position	2.032 ± 0.197	10.32	-1.453 ± 0.220	-1.420 ± 0.169
photometric centroid source offset	1.65 ± 1.07	1.54	1.06 ± 1.06	-1.27 ± 1.08



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



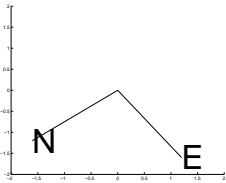
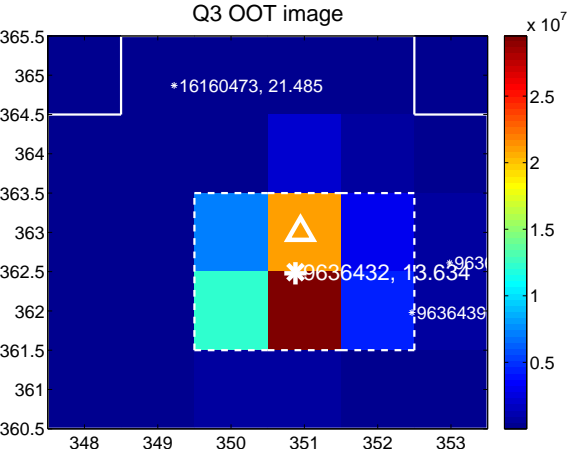
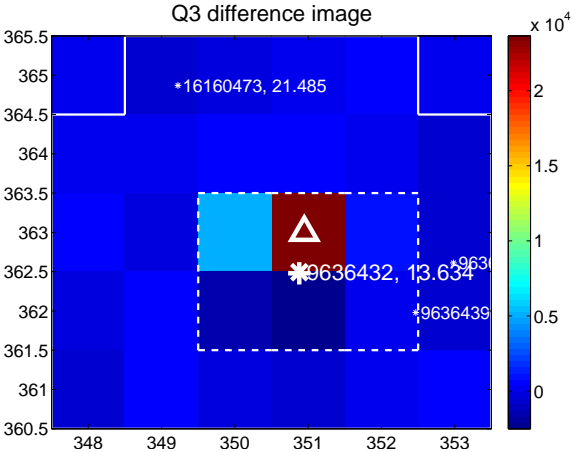
Q1 no OOT image



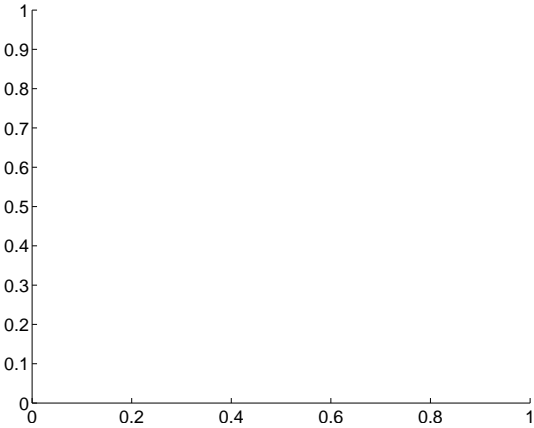
Q2 no difference image



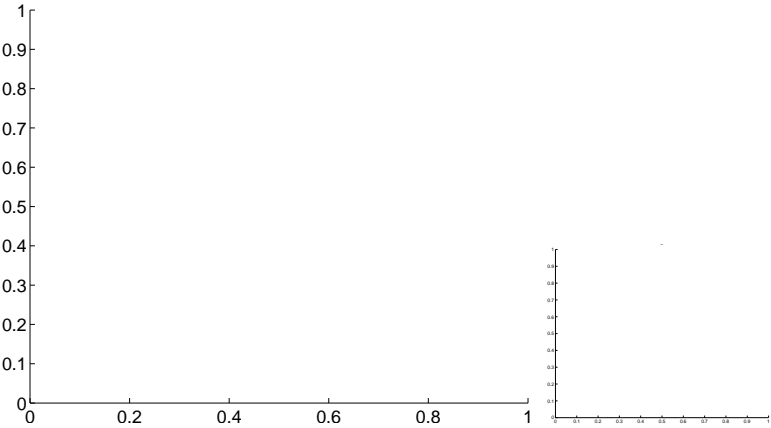
Q2 no OOT image



Q4 no difference image



Q4 no OOT image



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



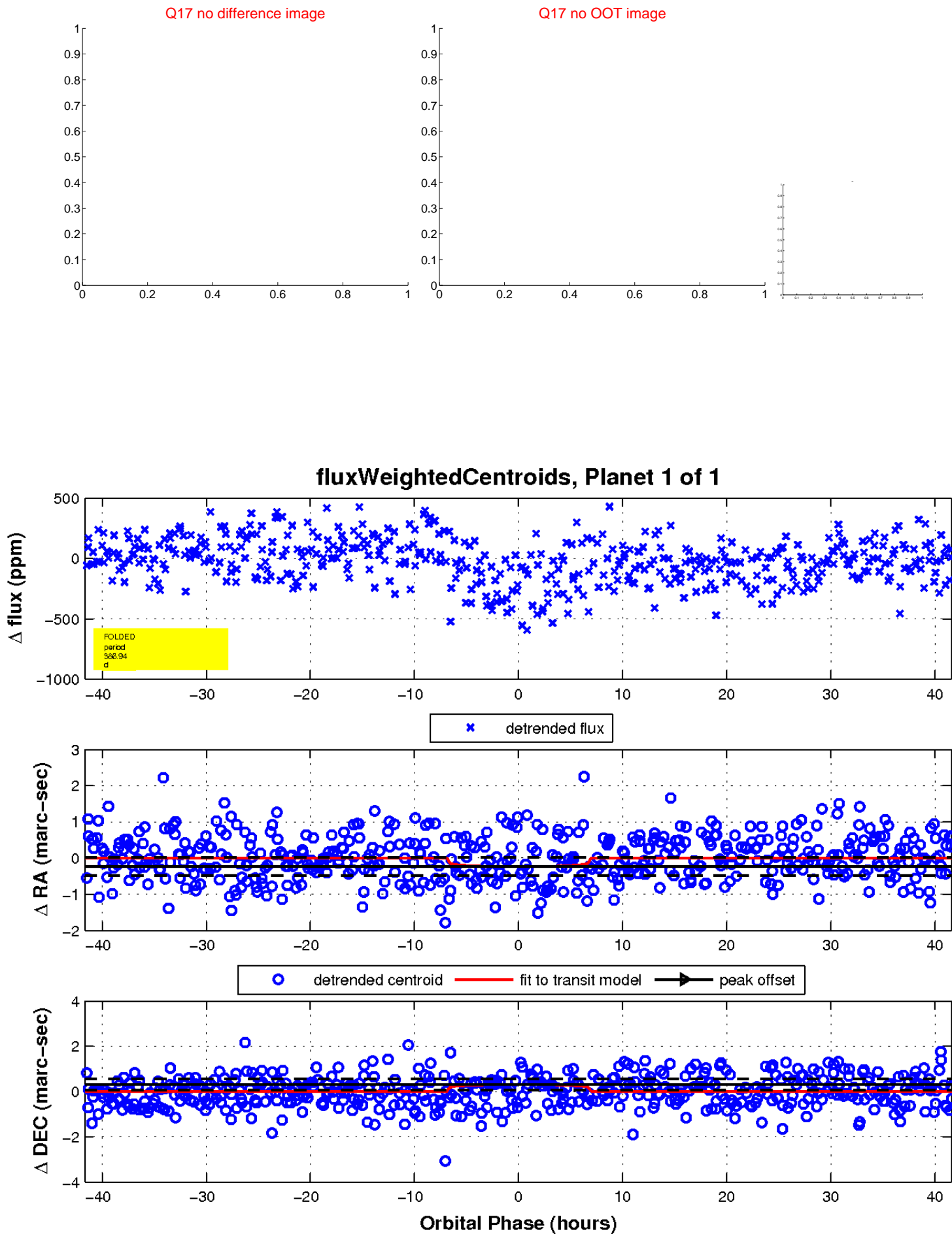
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

