

KIC 010972836

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})
010972836-01	OBS	No	591.810214	268.215024	320.0	9.843	7.4	7.3	0.89	6054	1.73	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010972836-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

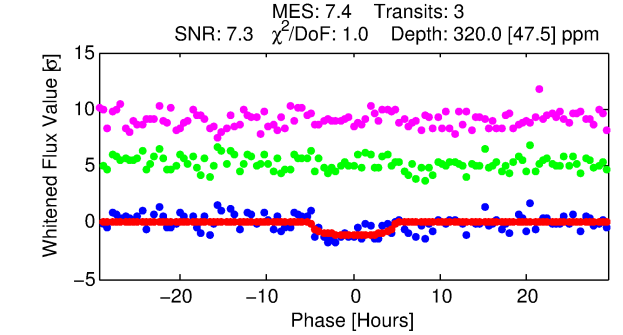
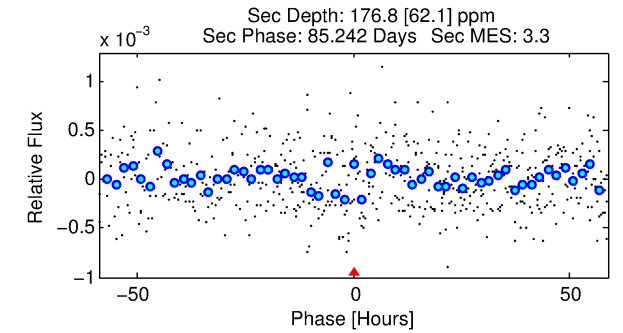
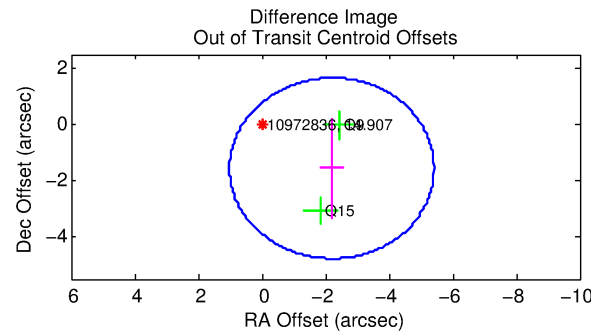
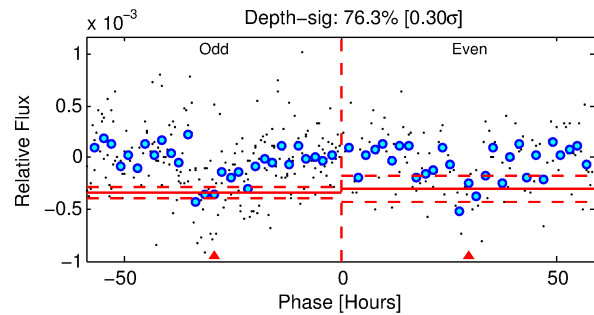
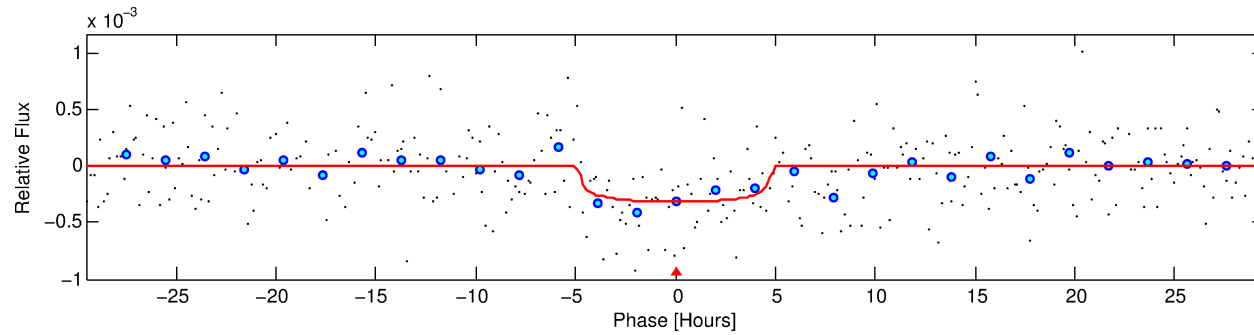
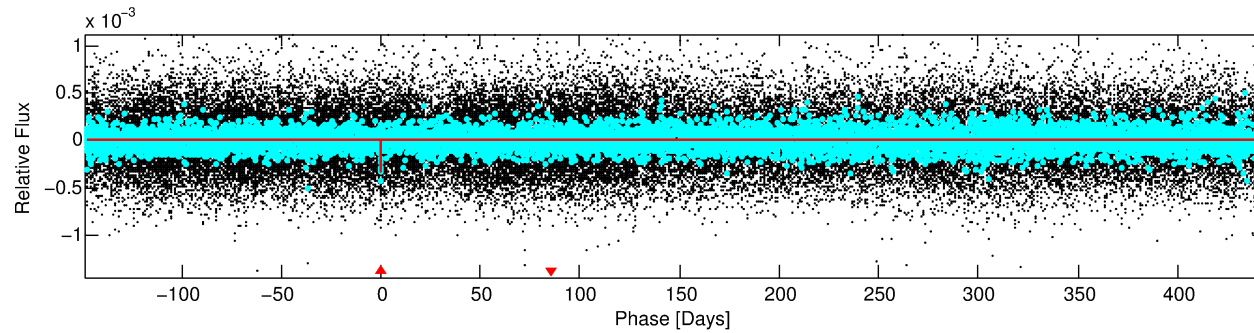
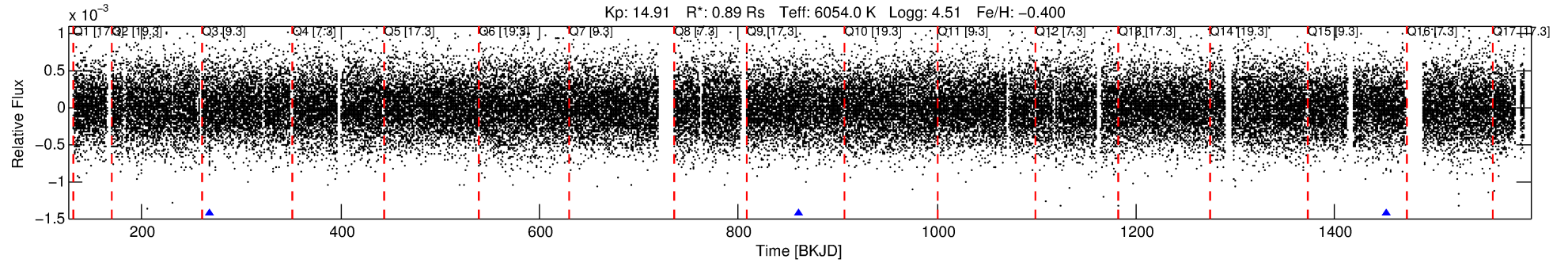
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010972836-01

No Significant Match Found

DV One-Page Summary

KIC: 10972836 Candidate: 1 of 1 Period: 591.810 d



DV Fit Results:

Period = 591.81021 [0.01569] d
Epoch = 268.2150 [0.0221] BKJD
Rp/R* = 0.0177 [0.0117]
a/R* = 319.61 [1075.07]
b = 0.74 [2.04]
Seff = 0.53 [0.21]
Teq = 217 [21] K
Rp = 1.73 [1.24] Re
a = 1.3502 [0.3393] AU
Ag = 59283.51 [83636.22] [0.71 σ]
Teffp = 5240 [1789] K [2.81 σ]

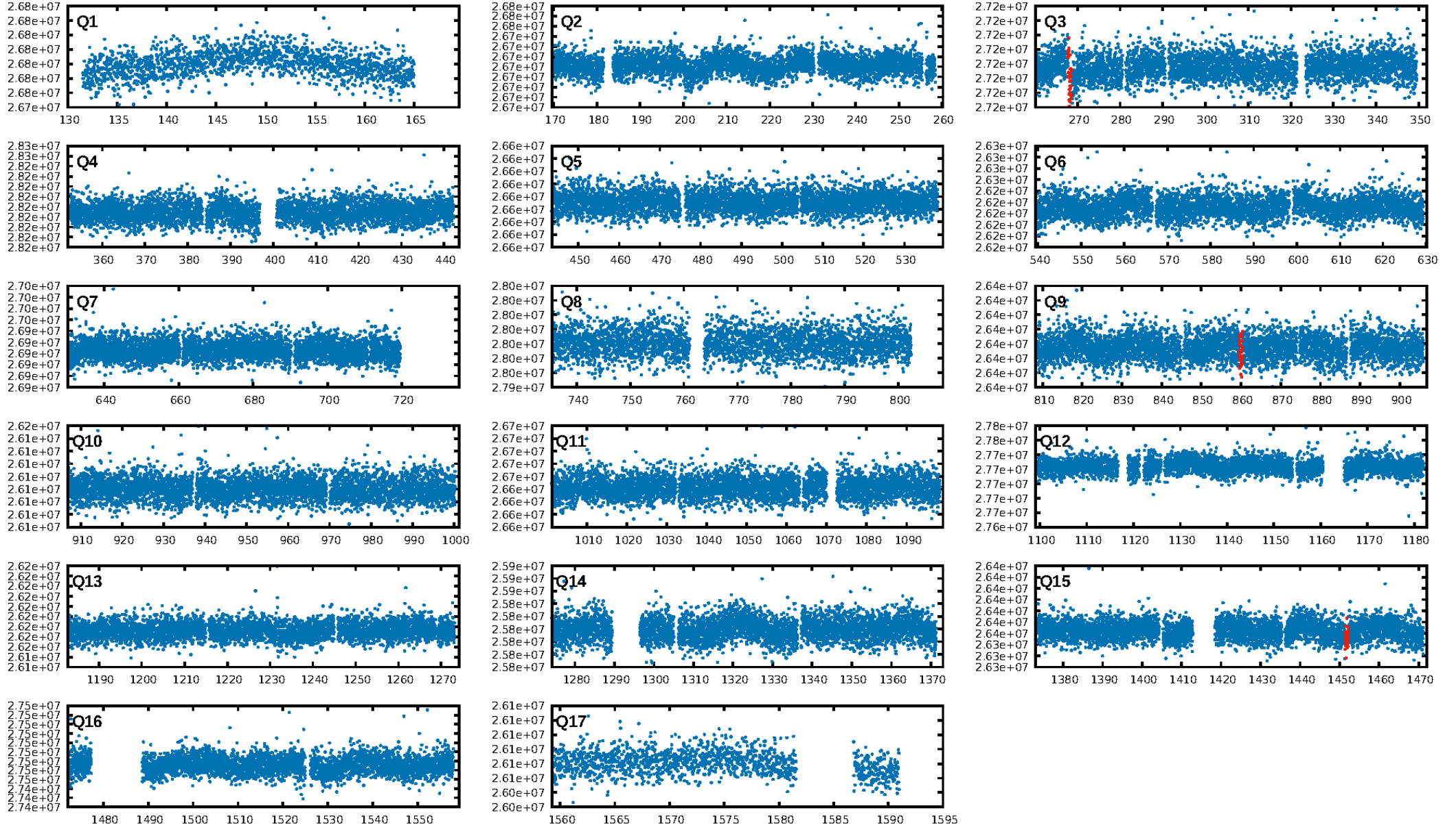
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.7%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: 1.33e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.07385
Centroid-sig: 6.0%
Centroid-so: 2.976 arcsec [1.60 σ]
OotOffset-rm: 2.698 arcsec [2.52 σ]
KicOffset-rm: 2.675 arcsec [2.46 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

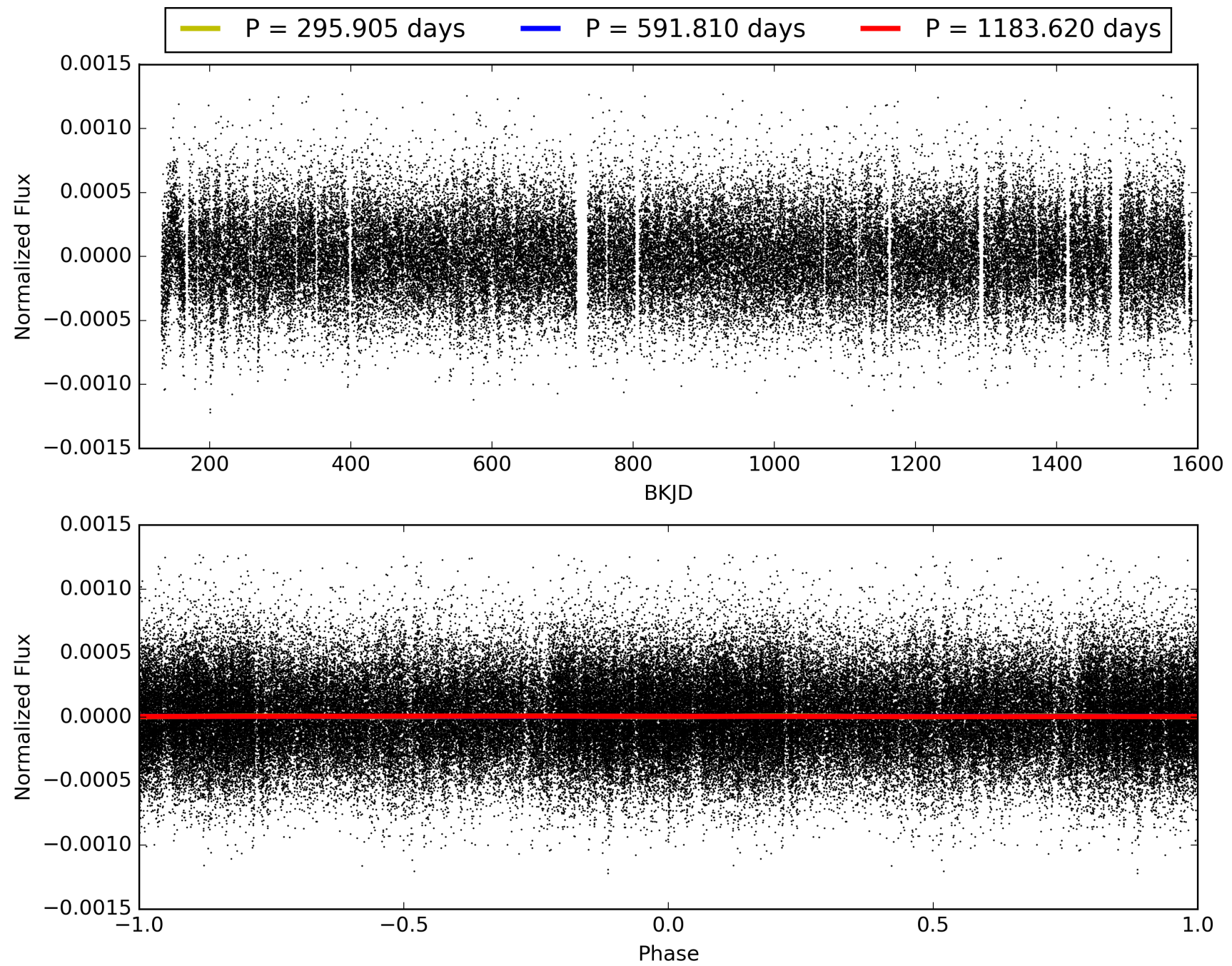
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:07:11 Z

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

TCE 010972836-01, PDC Light Curves

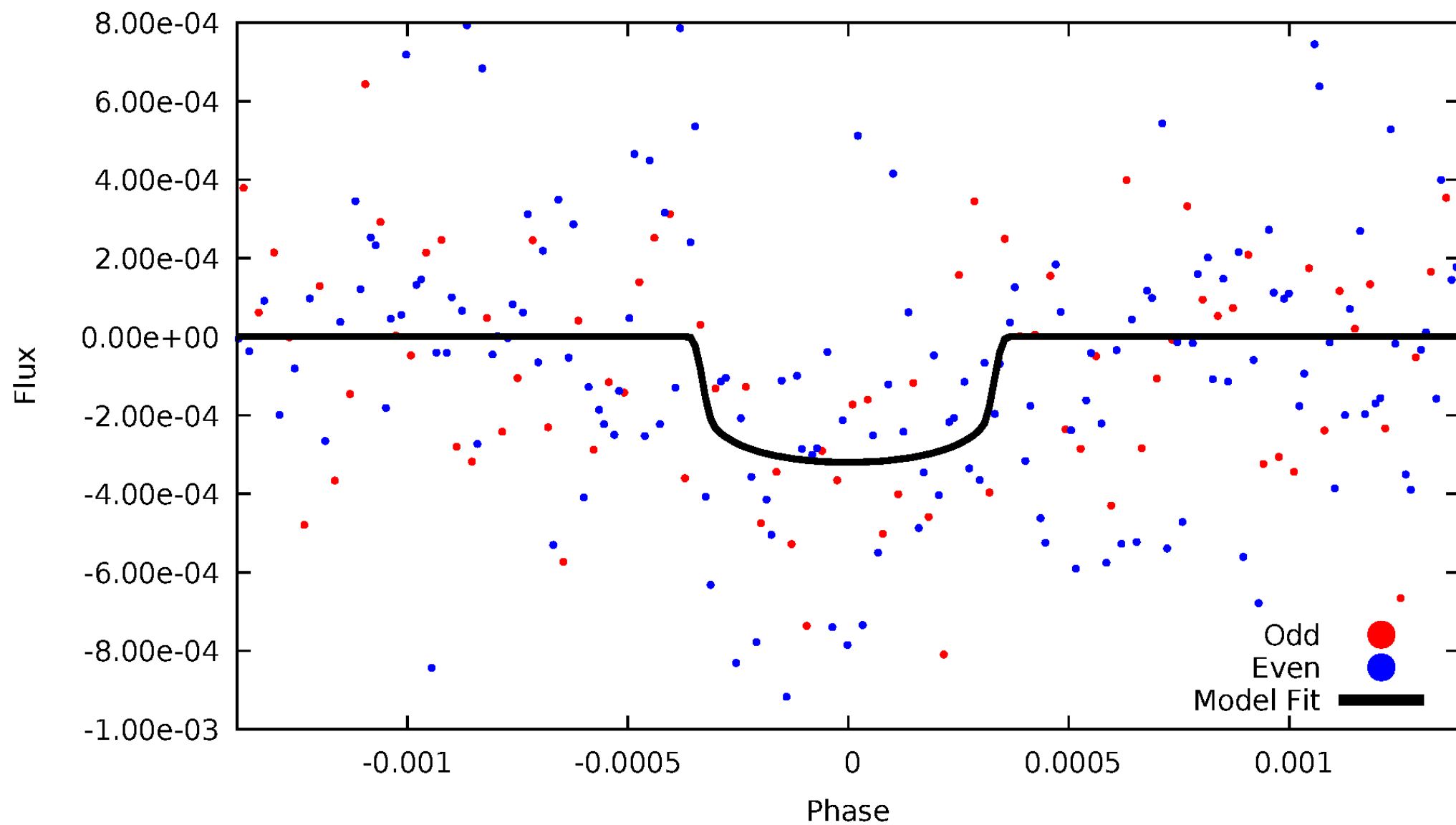


TCE 010972836-01



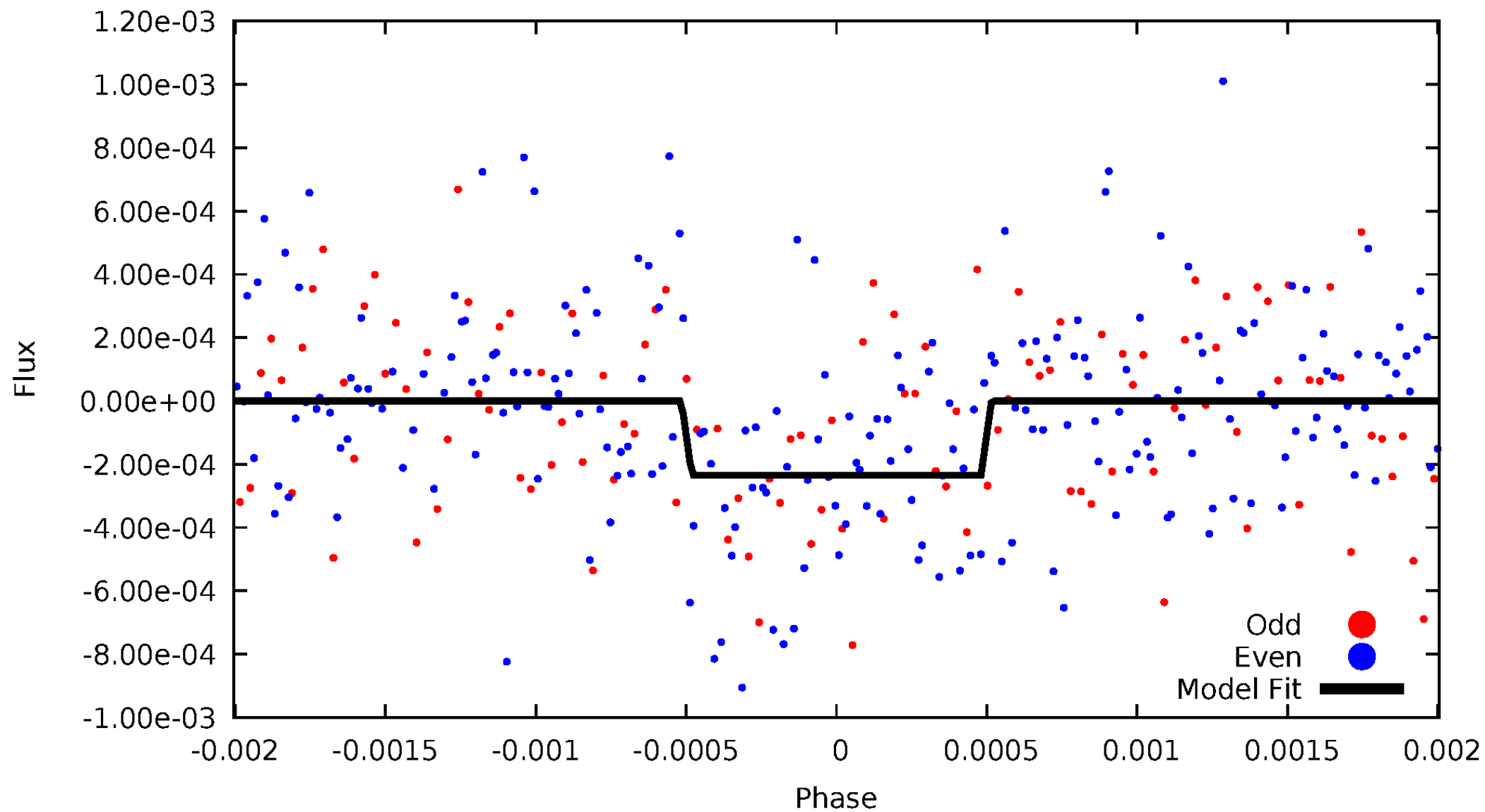
DV Odd/Even

TCE 010972836-01



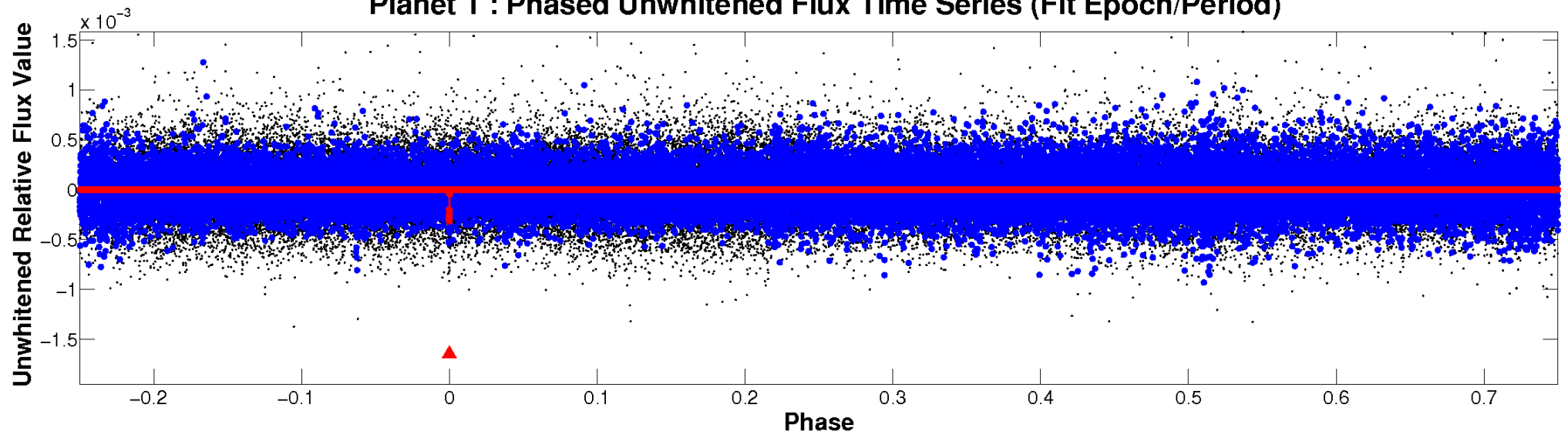
ALT Odd/Even

TCE 010972836-01

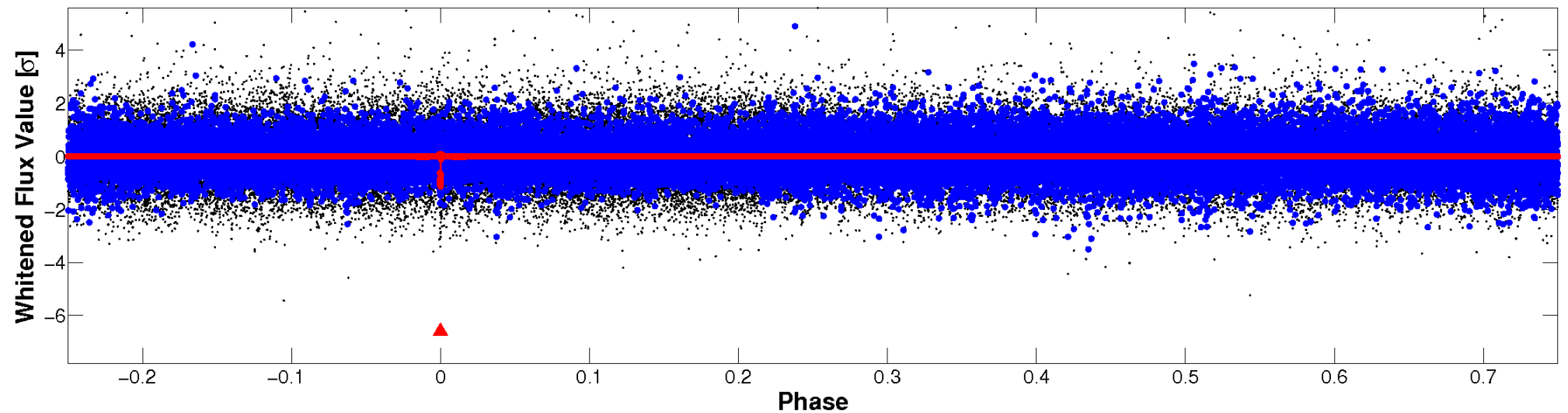


Non-Whitened Vs. Whitened Light Curve

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 010972836-01 P=591.810214 Days $T_0=268.215024$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010972836-01 P=591.810214 Days $T_0=268.215024$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

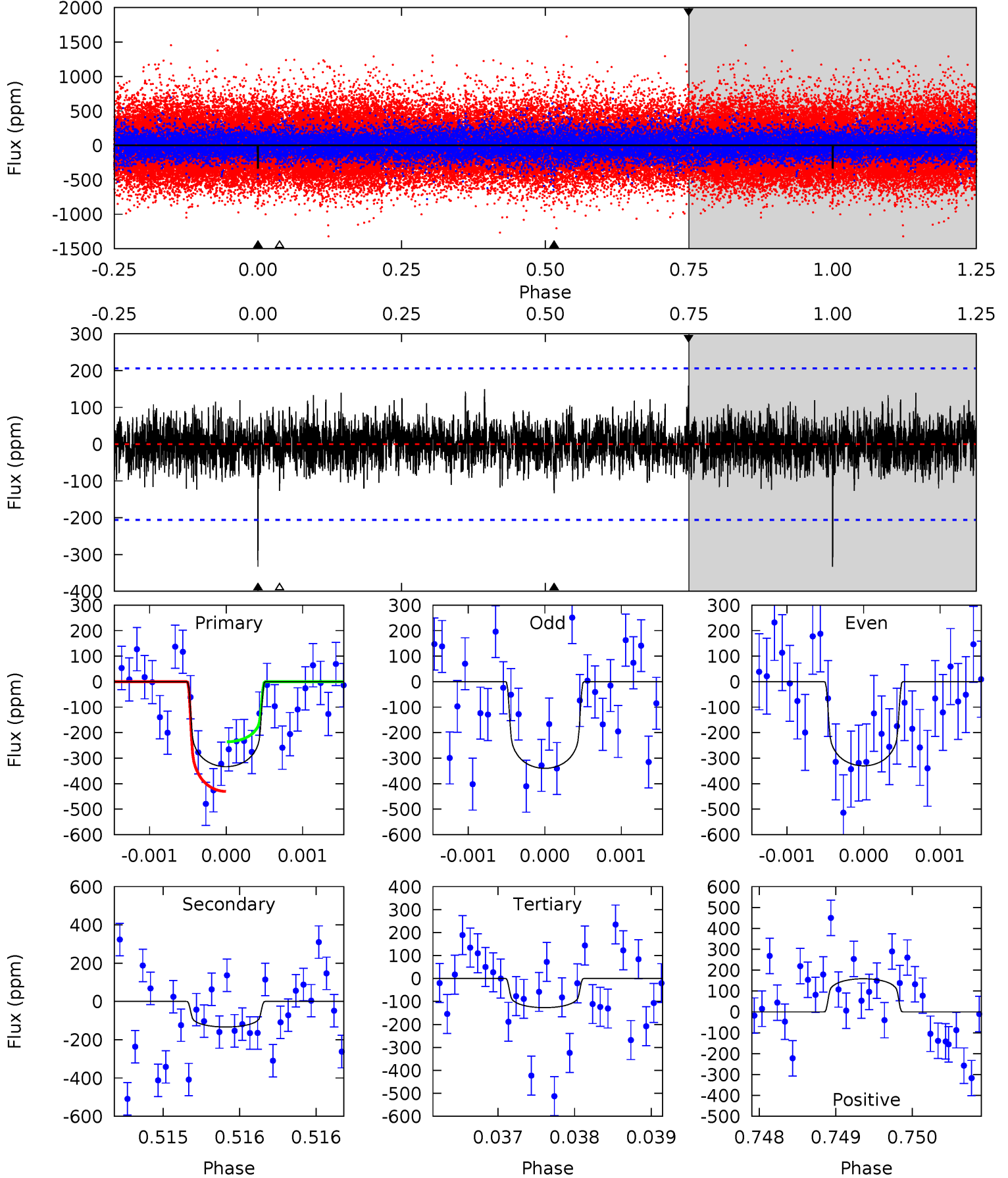
TCE 010972836-01 P=591.803576 Days $T_0=268.317911$ (BKJD)



DV Model-Shift Uniqueness Test

010972836-01, P = 591.810214 Days, E = 268.215024 Days

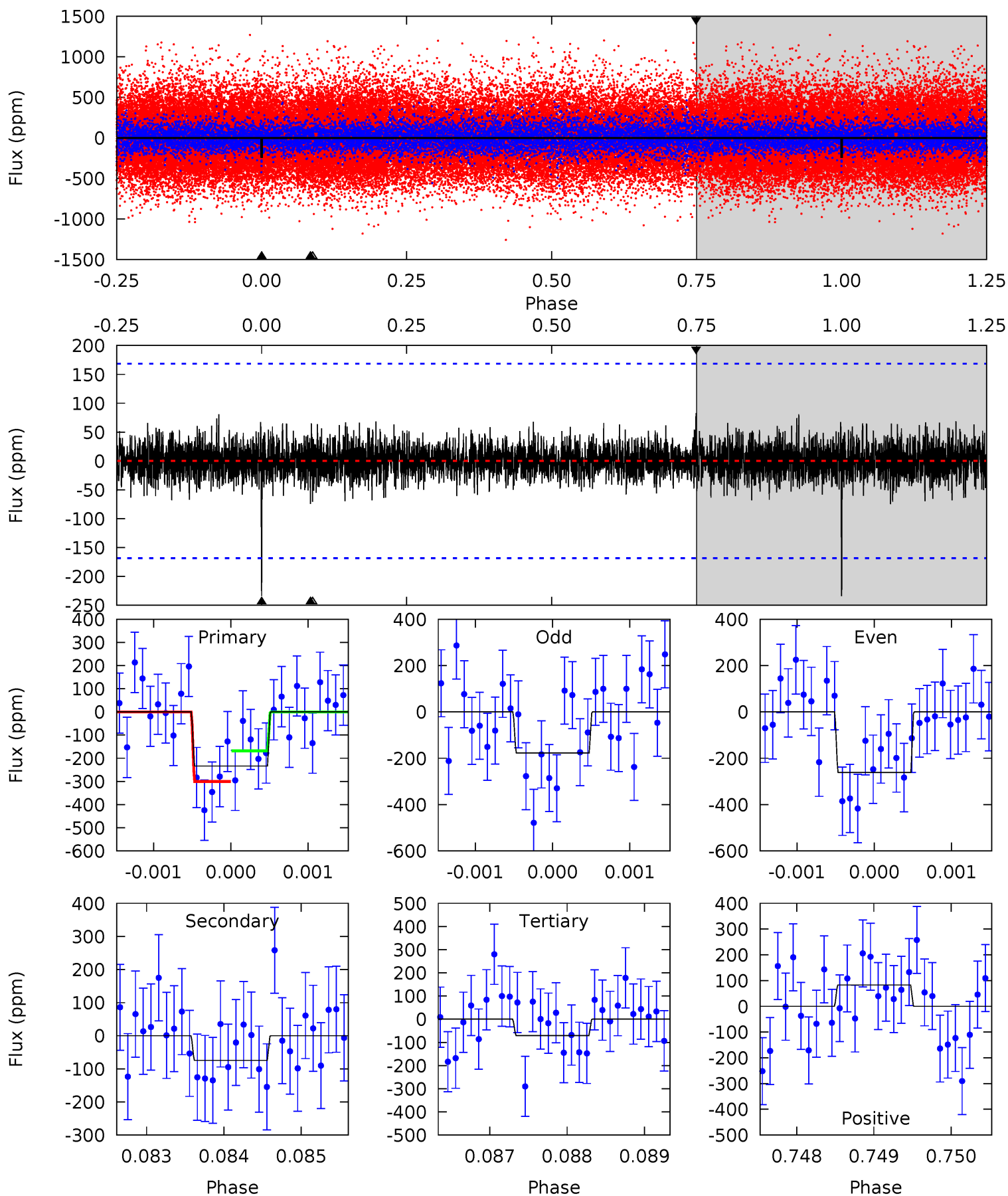
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.92	3.57	3.40	4.25	5.51	3.38	1.05	5.52	4.67	0.17	-0.68	0.13	0.98	0.32	2.60



Alt Model-Shift Uniqueness Test

010972836-01, P = 591.803576 Days, E = 268.317911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.57	2.41	2.29	2.68	5.45	3.29	0.67	5.28	4.89	0.12	-0.27	1.27	1.24	0.26	2.14



Stellar Parameters For KIC 010972836

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6054^{+164}_{-183}	$4.508^{+0.052}_{-0.208}$	$-0.400^{+0.300}_{-0.300}$	$0.893^{+0.260}_{-0.087}$	$0.938^{+0.106}_{-0.106}$	$1.853^{+0.504}_{-0.960}$
	+3%/-3%	+1%/-5%	+75%/-75%	+29%/-10%	+11%/-11%	+27%/-52%
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 010972836-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-133 ± 37	$1.94^{+1.12}_{-1.02}$	309^{+23}_{-14}	4821^{+2202}_{-804}	$34566^{+124436}_{-21306}$
Alt.	-74 ± 31	$1.71^{+1.24}_{-0.96}$	310^{+21}_{-15}	4468^{+2047}_{-845}	24175^{+98659}_{-17444}

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

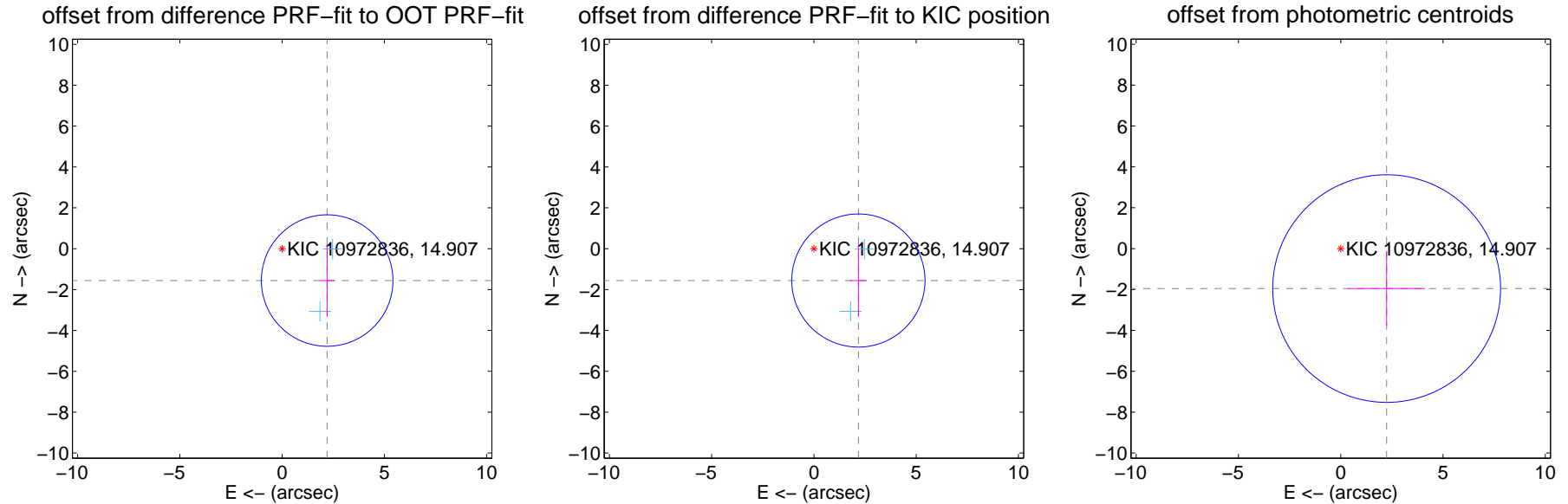
DV Centroid Data

Supplemental centroid analysis for 010972836-01. Kepler magnitude: 14.91. Transit SNR 7.25

There are 2 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	2.698 ± 1.072	2.52	-2.202 ± 0.363	-1.559 ± 1.783
PRF-fit source offset from KIC position	2.675 ± 1.086	2.46	-2.174 ± 0.396	-1.558 ± 1.780
photometric centroid source offset	2.98 ± 1.86	1.60	-2.25 ± 1.88	-1.95 ± 1.82



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.

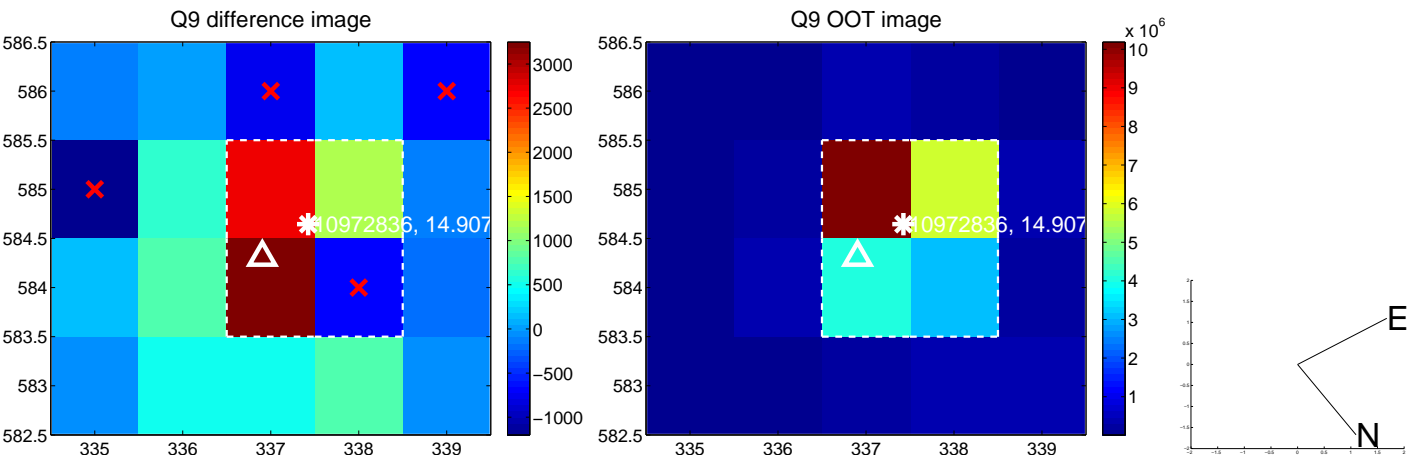
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



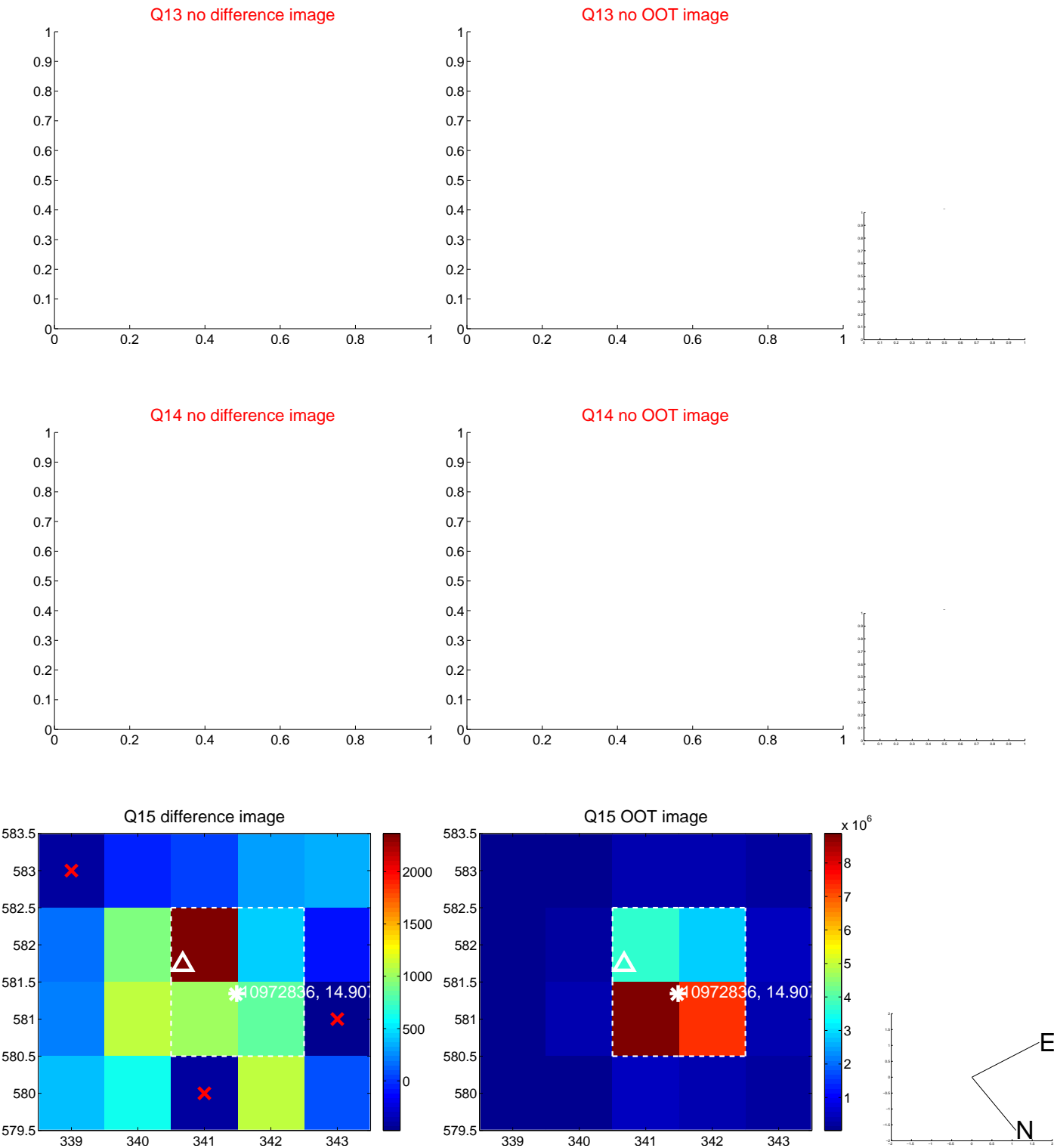
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



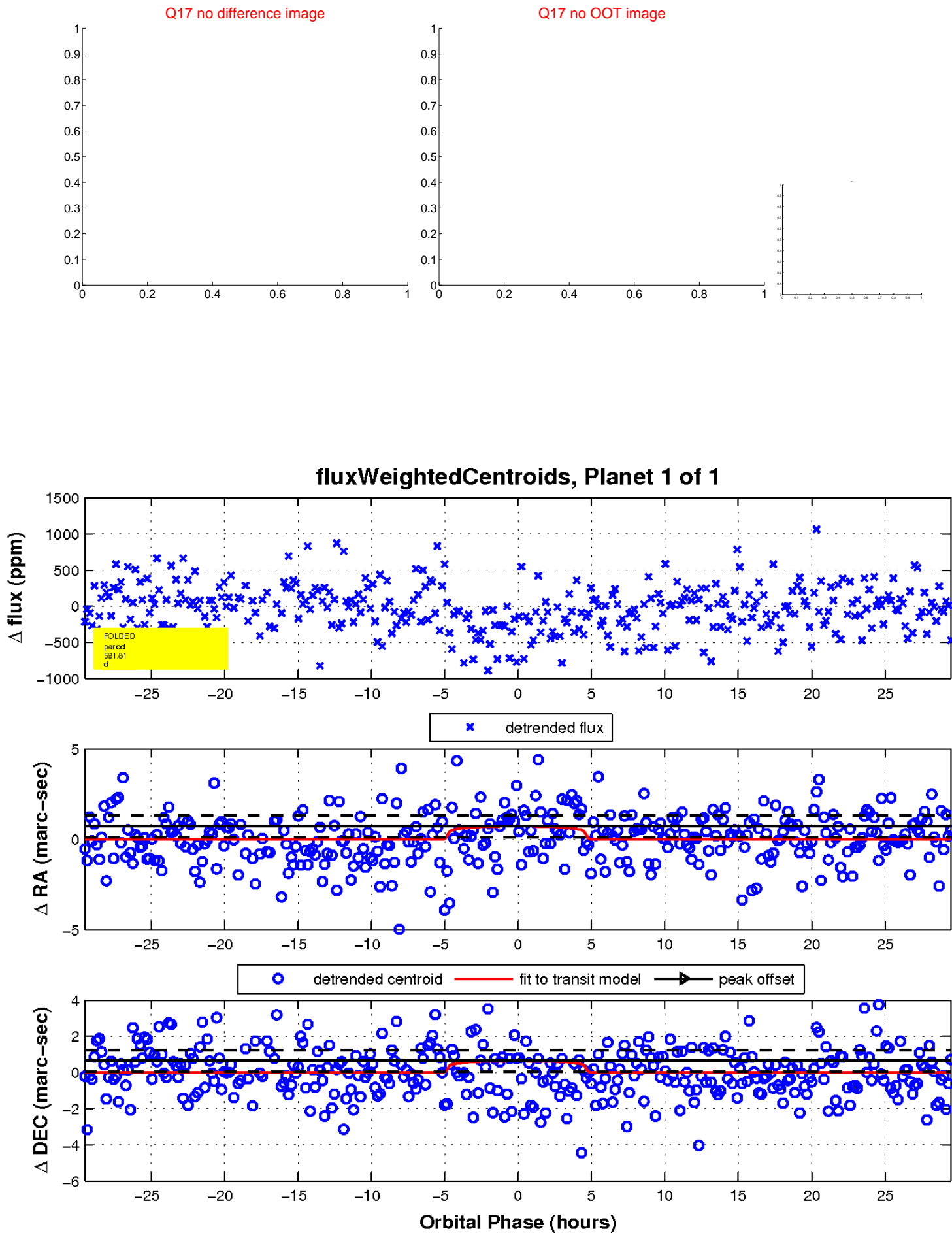
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

