

KIC 009715733

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})
009715733-01	OBS	No	211.792192	301.391174	938.3	21.857	10.2	10.7	0.89	5650	2.76	1.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009715733-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

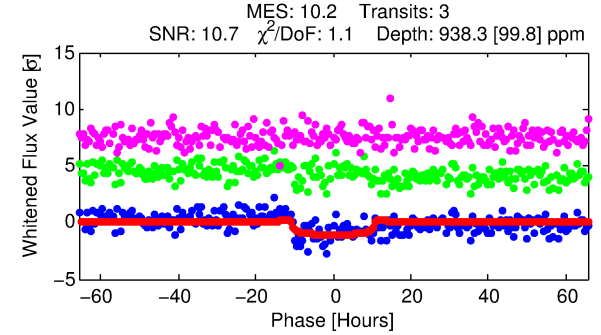
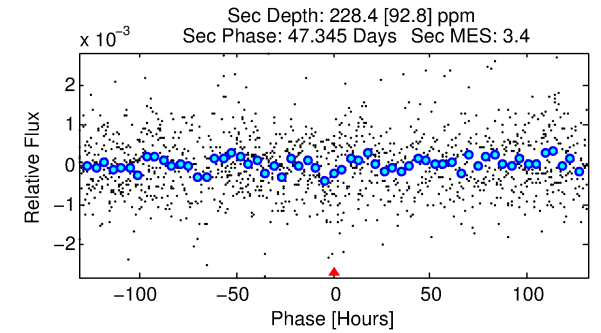
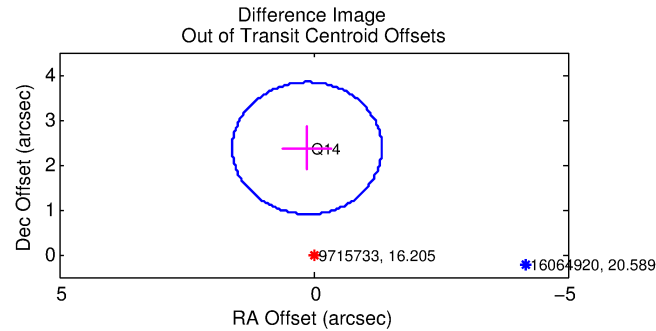
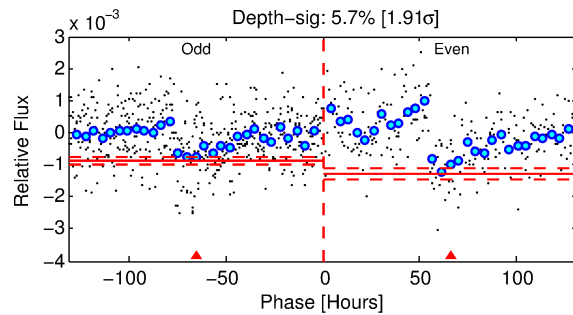
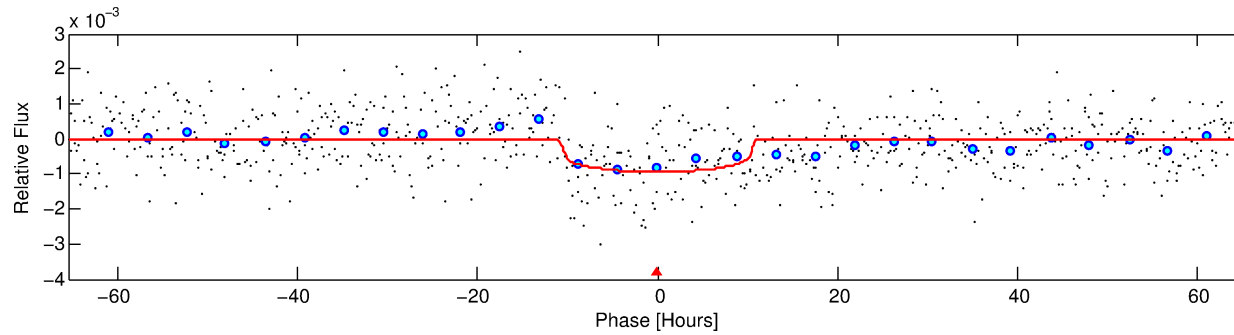
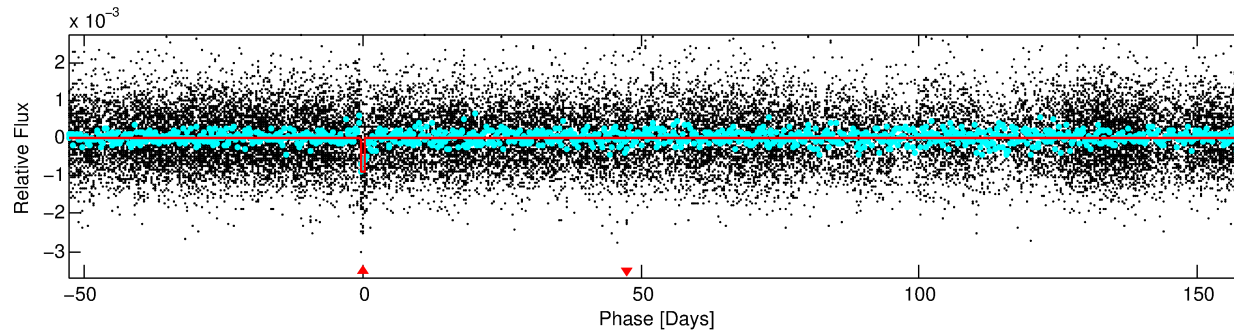
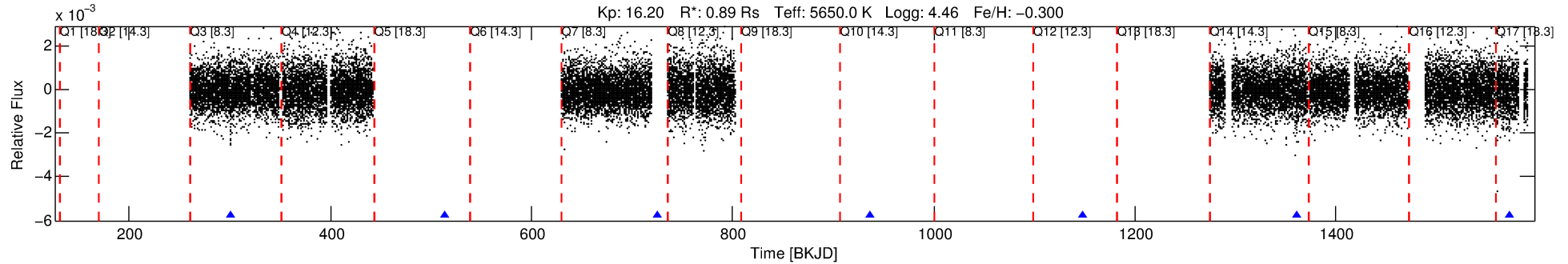
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009715733-01

No Significant Match Found

DV One-Page Summary

KIC: 9715733 Candidate: 1 of 1 Period: 211.792 d



DV Fit Results:

Period = 211.79219 [0.00617] d
Epoch = 301.3912 [0.0261] BKJD
Rp/R* = 0.0284 [0.0112]
a/R* = 69.18 [118.80]
b = 0.43 [3.28]
Seff = 1.70 [0.57]
Teff = 291 [25] K
Rp = 2.76 [1.30] Re
a = 0.6530 [0.1409] AU
Ag = 7029.66 [6593.94] [1.07 σ]
Teffp = 4120 [922] K [4.15 σ]

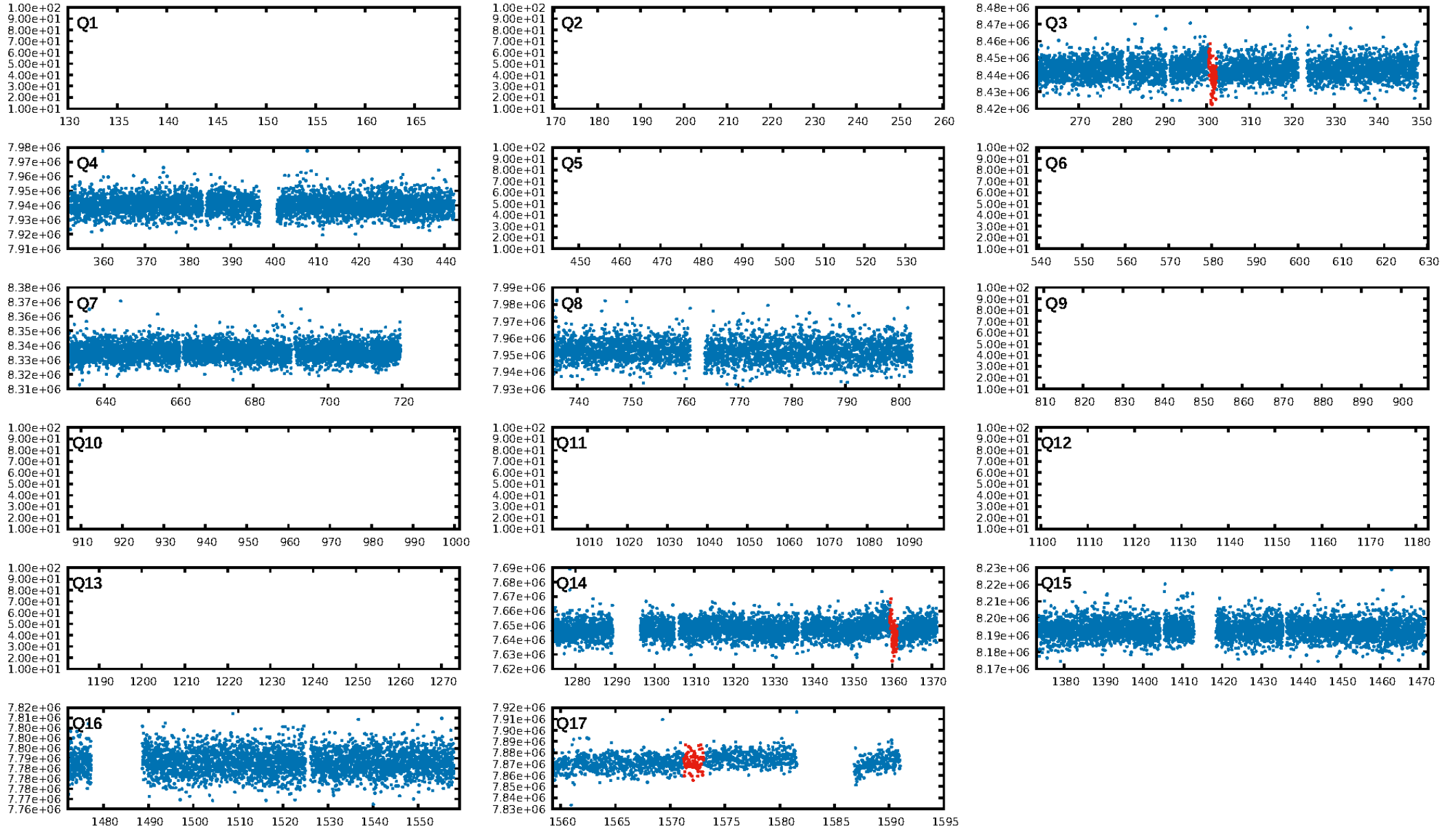
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.4%
ModelChiSquareGof-sig: 92.7%
Bootstrap-pfa: 1.84e-28
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -3.275
Centroid-sig: 0.0%
Centroid-so: 2.028 arcsec [3.19 σ]
OotOffset-rm: 2.369 arcsec [4.84 σ]
KicOffset-rm: 1.778 arcsec [3.63 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

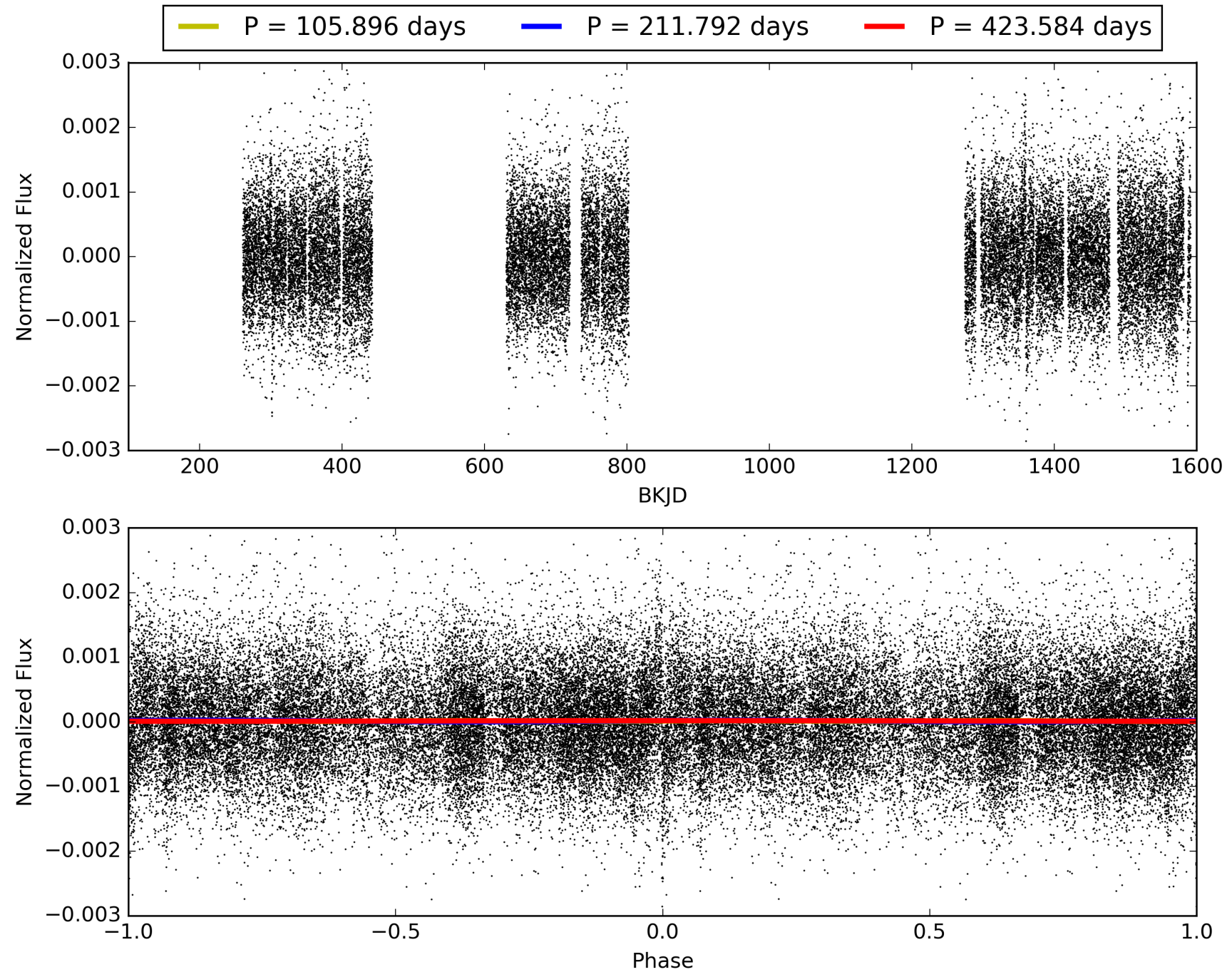
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:23:04 Z

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

TCE 009715733-01, PDC Light Curves

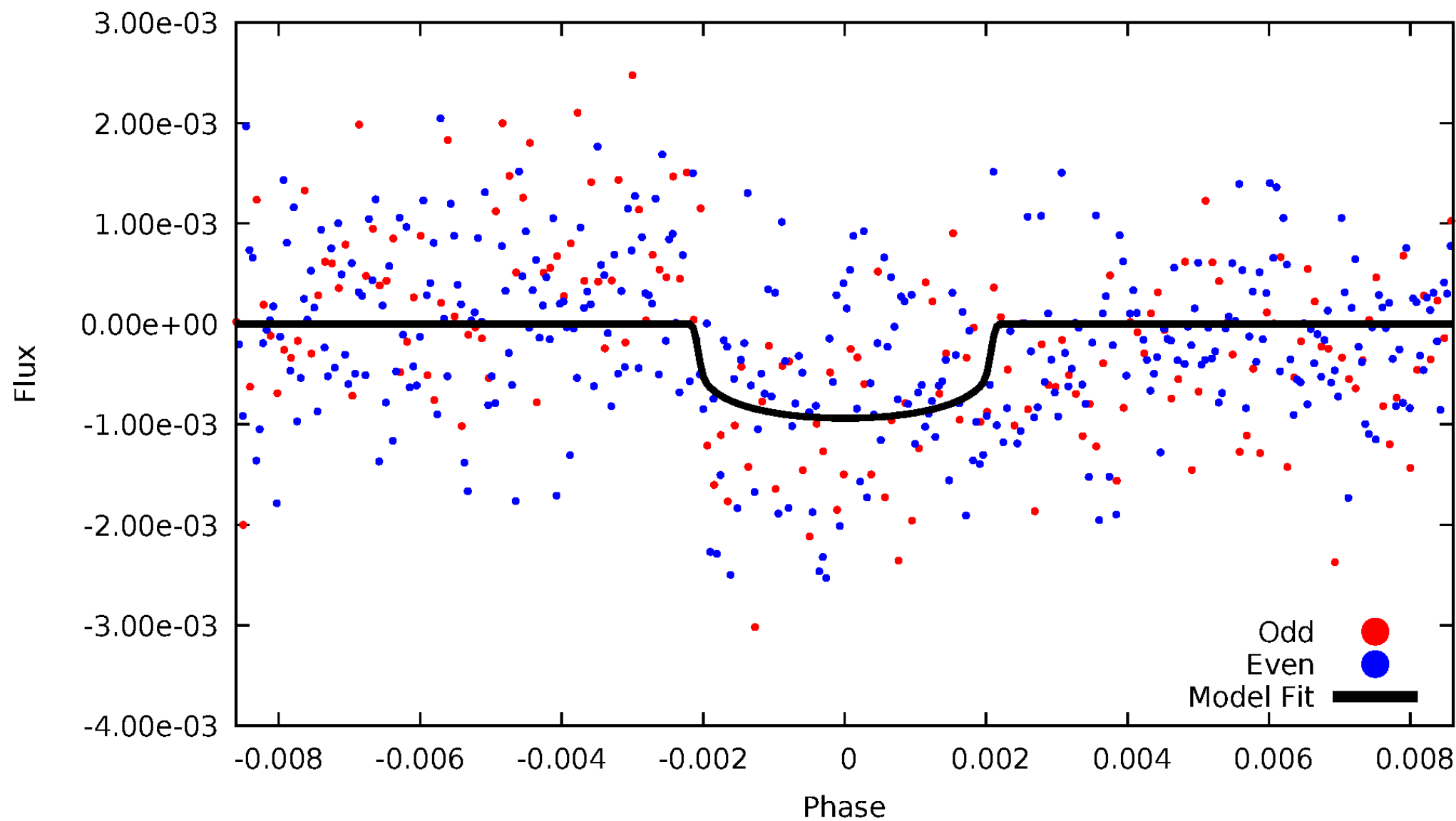


TCE 009715733-01



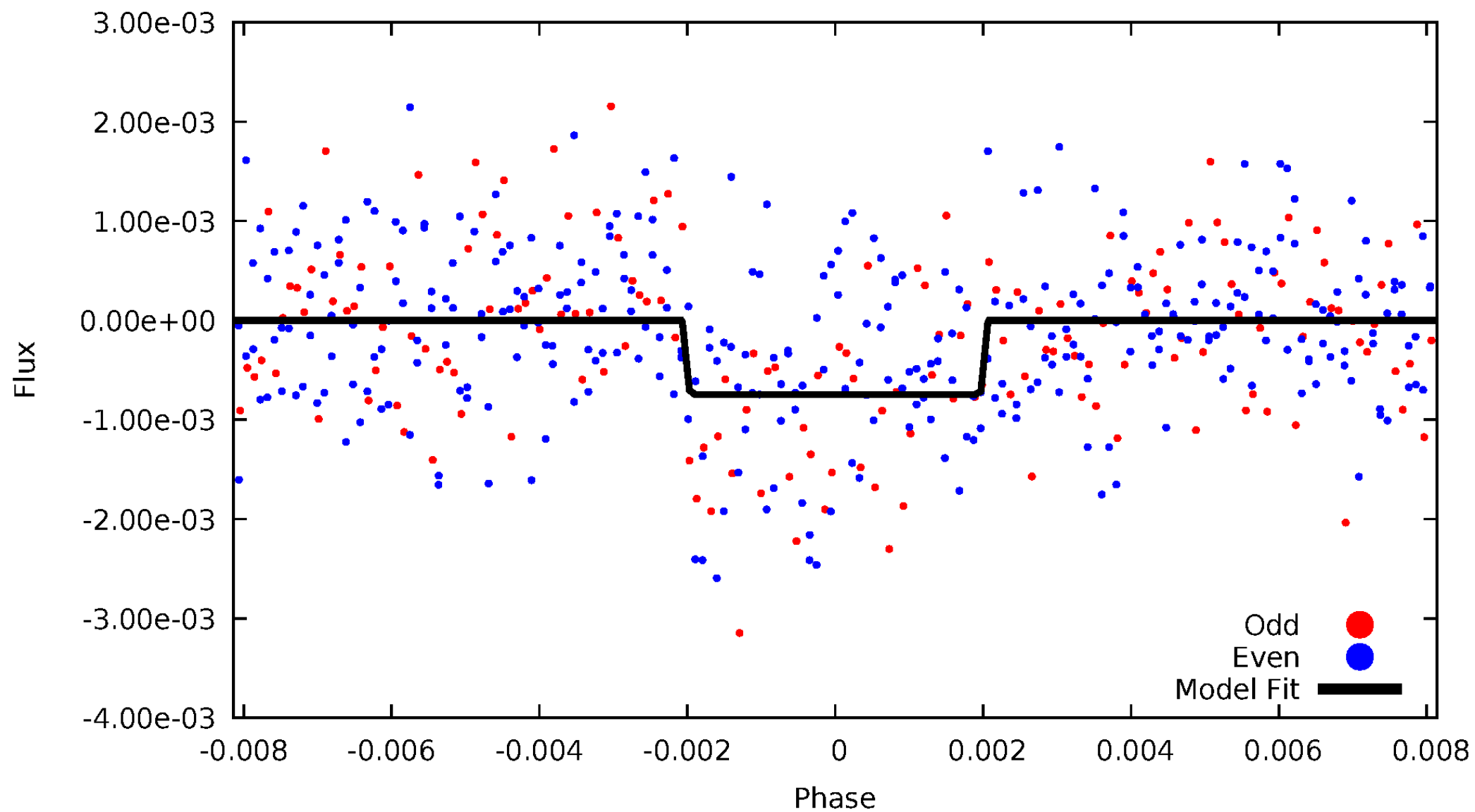
DV Odd/Even

TCE 009715733-01



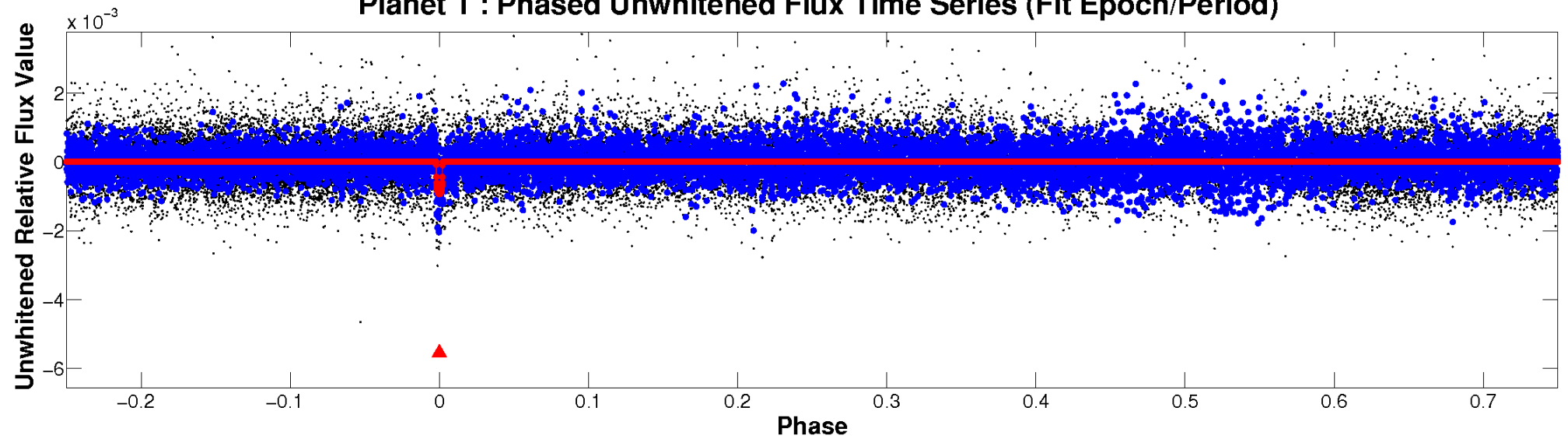
ALT Odd/Even

TCE 009715733-01

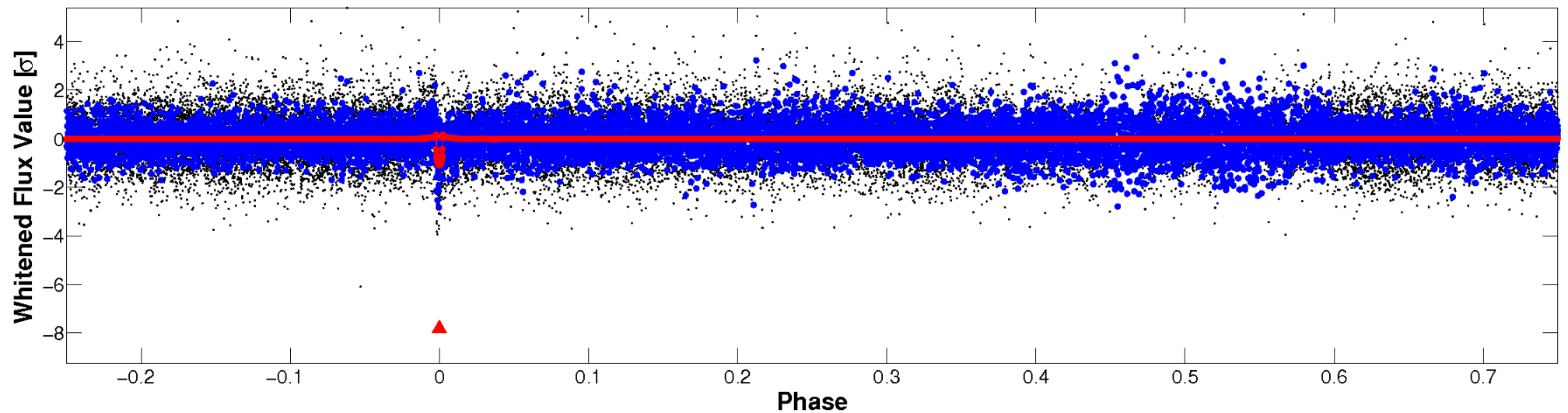


Non-Whitened Vs. Whitened Light Curve

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 009715733-01 P=211.792192 Days $T_0=301.391174$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009715733-01 P=211.792192 Days $T_0=301.391174$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

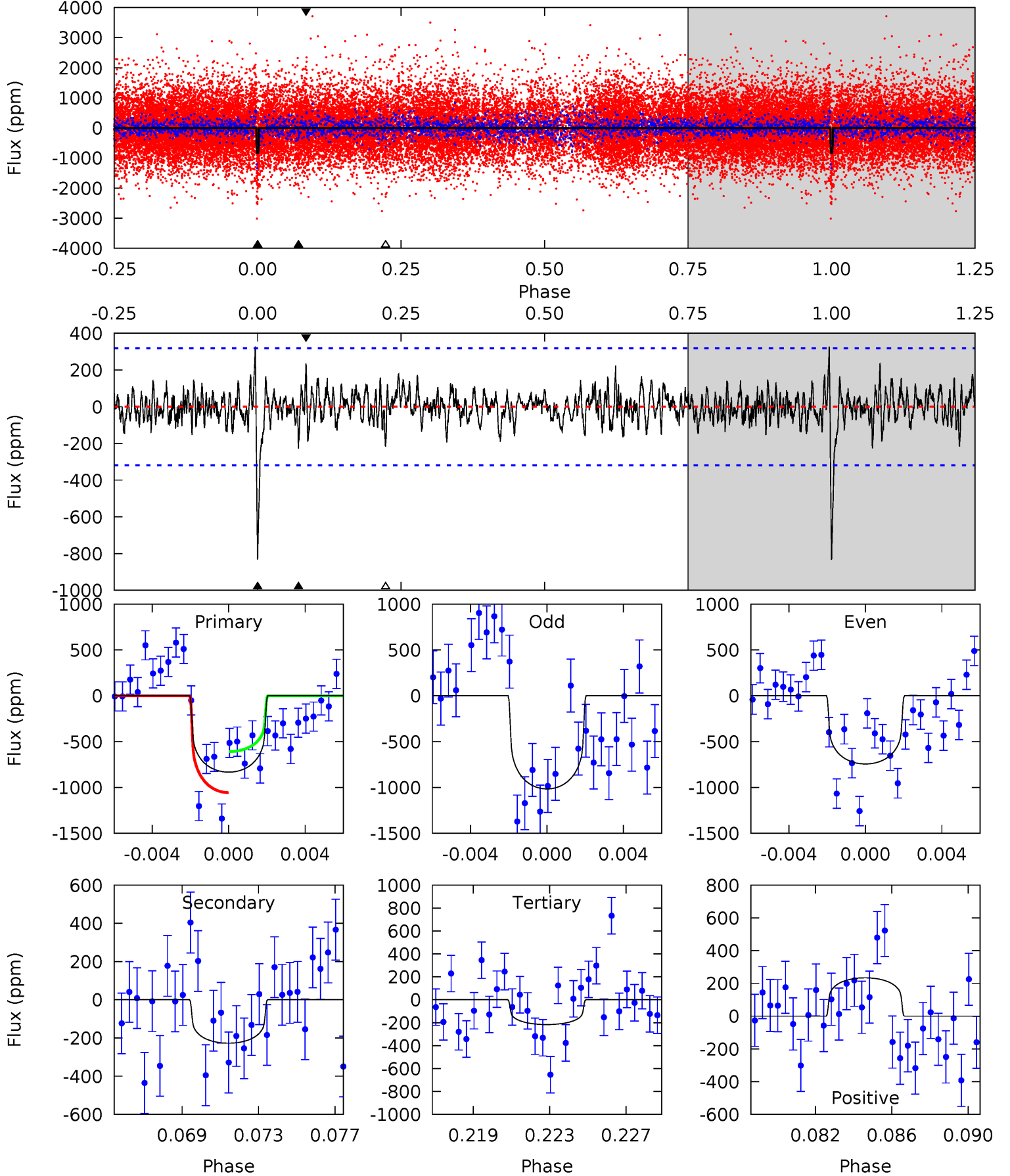
TCE 009715733-01 P=211.793849 Days $T_0=301.389118$ (BKJD)



DV Model-Shift Uniqueness Test

009715733-01, $P = 211.792192$ Days, $E = 89.598982$ Days

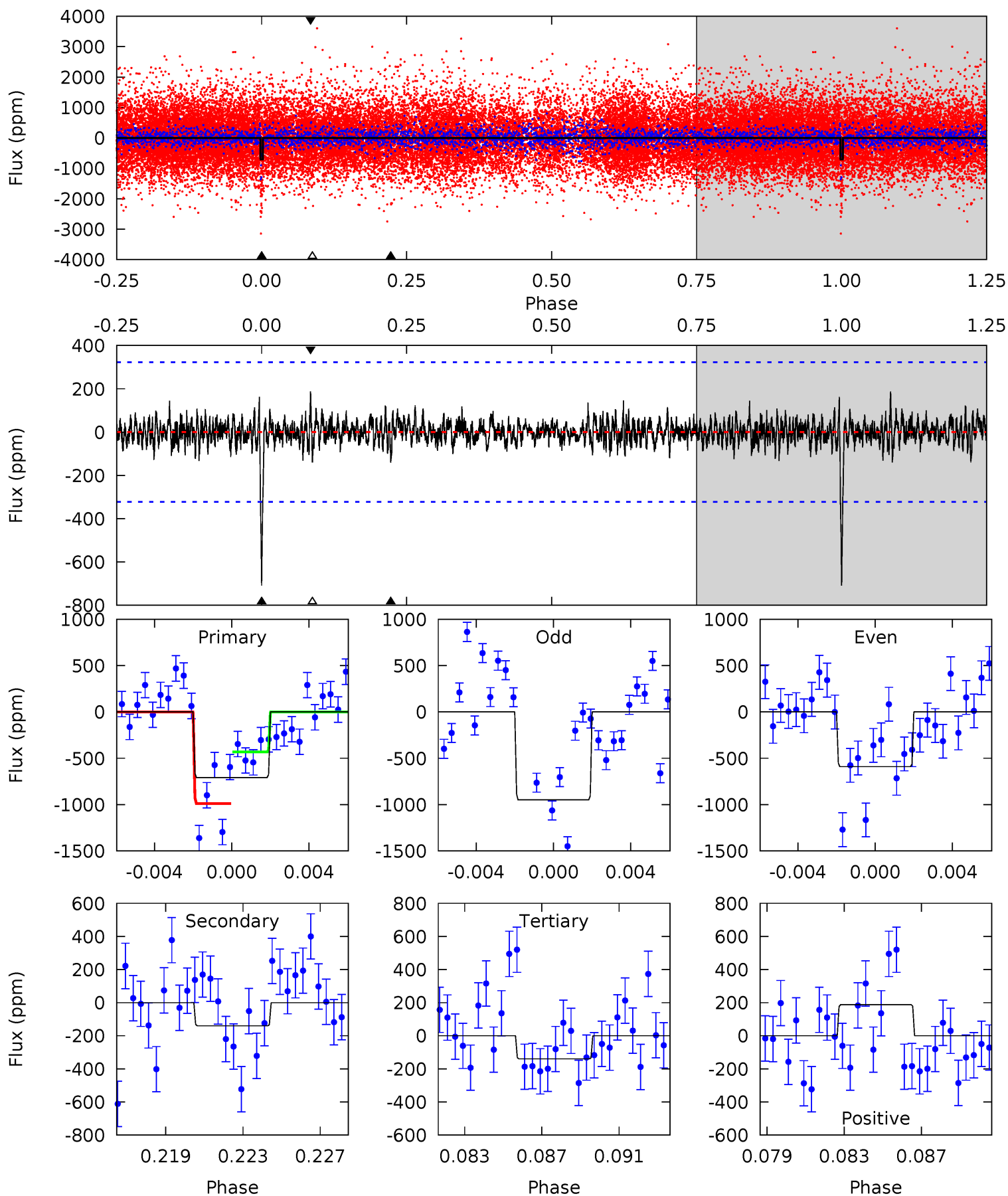
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	3.69	3.52	3.80	5.19	2.86	1.11	10.0	9.74	0.18	-0.11	2.11	0.82	0.28	3.65



Alt Model-Shift Uniqueness Test

009715733-01, P = 211.793849 Days, E = 89.595269 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	2.26	2.25	3.02	5.19	2.87	0.67	9.15	8.38	0.00	-0.77	2.74	0.78	0.21	4.50



Stellar Parameters For KIC 009715733

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5650^{+186}_{-186}	$4.457^{+0.112}_{-0.168}$	$-0.300^{+0.300}_{-0.300}$	$0.890^{+0.231}_{-0.124}$	$0.829^{+0.115}_{-0.071}$	$1.655^{+0.822}_{-0.758}$
	+3%/-3%	+3%/-4%	+100%/-100%	+26%/-14%	+14%/-9%	+50%/-46%
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 009715733-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-227 ± 62	$2.92^{+1.18}_{-1.16}$	410^{+28}_{-23}	4273^{+991}_{-508}	6380^{+10673}_{-3412}
Alt.	-140 ± 62	$2.76^{+1.24}_{-1.13}$	409^{+28}_{-24}	3941^{+986}_{-538}	4136^{+8447}_{-2606}

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 $A_{obs} \gg 1.0$

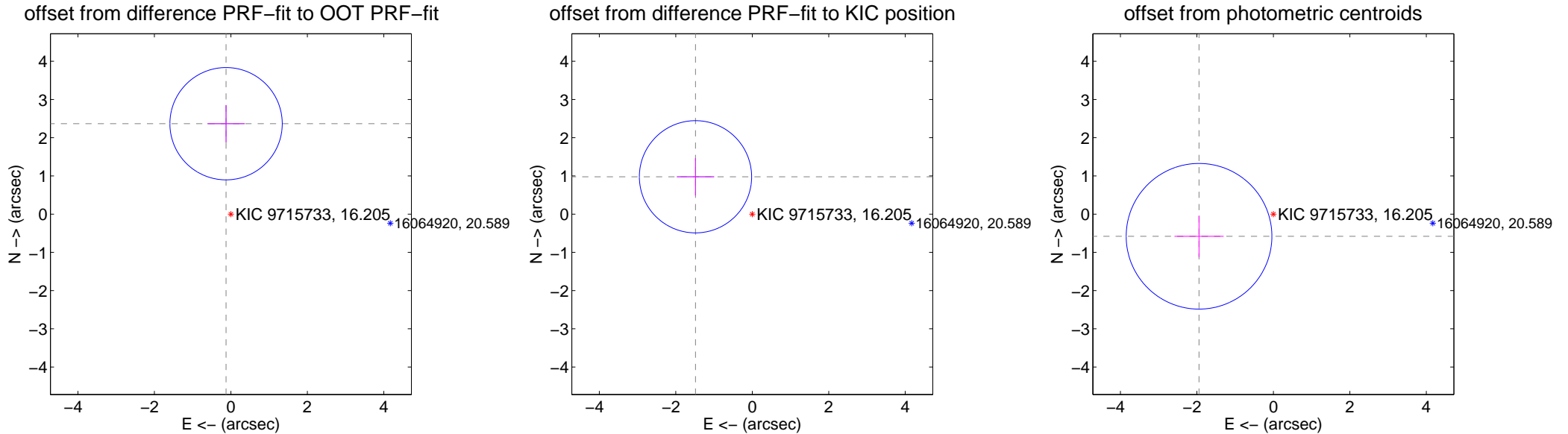
DV Centroid Data

Supplemental centroid analysis for 009715733-01. Kepler magnitude: 16.20. Transit SNR 10.65

There are 1 quarters with good PRF difference image offsets

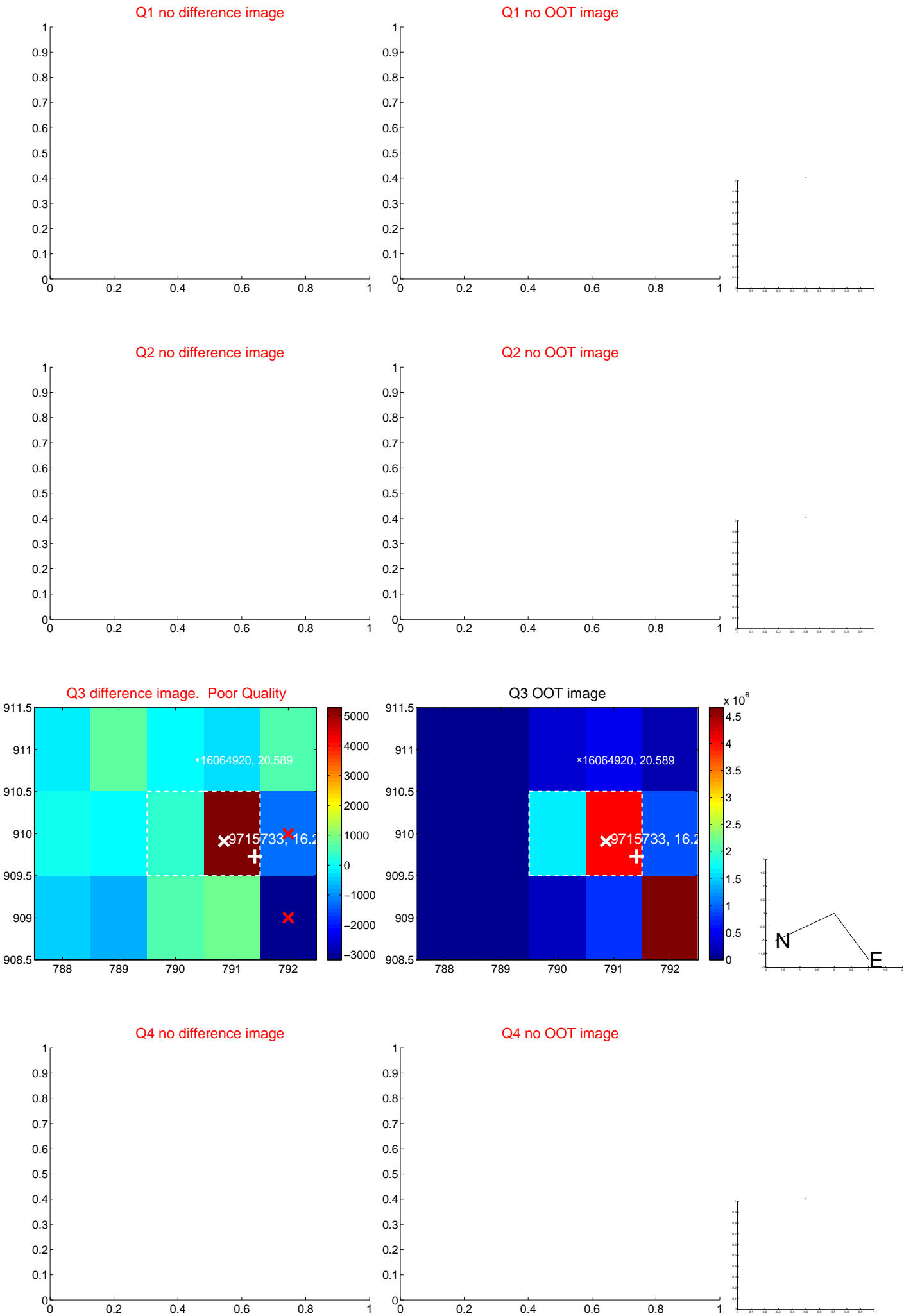
The direct PRF centroid is offset from the target star catalog position by about 1.94 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.369 ± 0.490	4.84	0.126 ± 0.489	2.366 ± 0.490
PRF-fit source offset from KIC position	1.778 ± 0.489	3.63	1.485 ± 0.489	0.978 ± 0.490
photometric centroid source offset	2.03 ± 0.64	3.19	1.94 ± 0.64	-0.58 ± 0.54



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



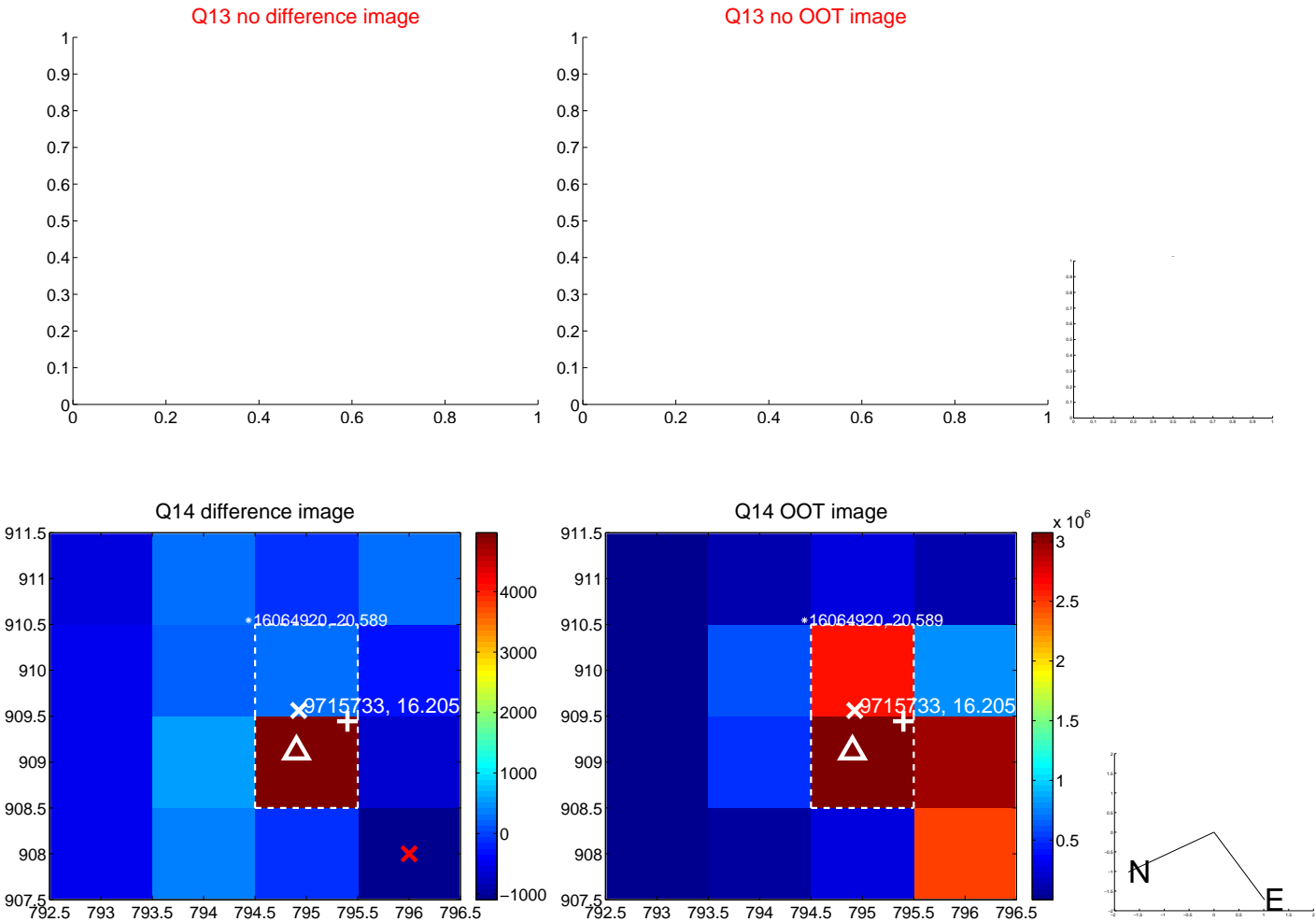
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



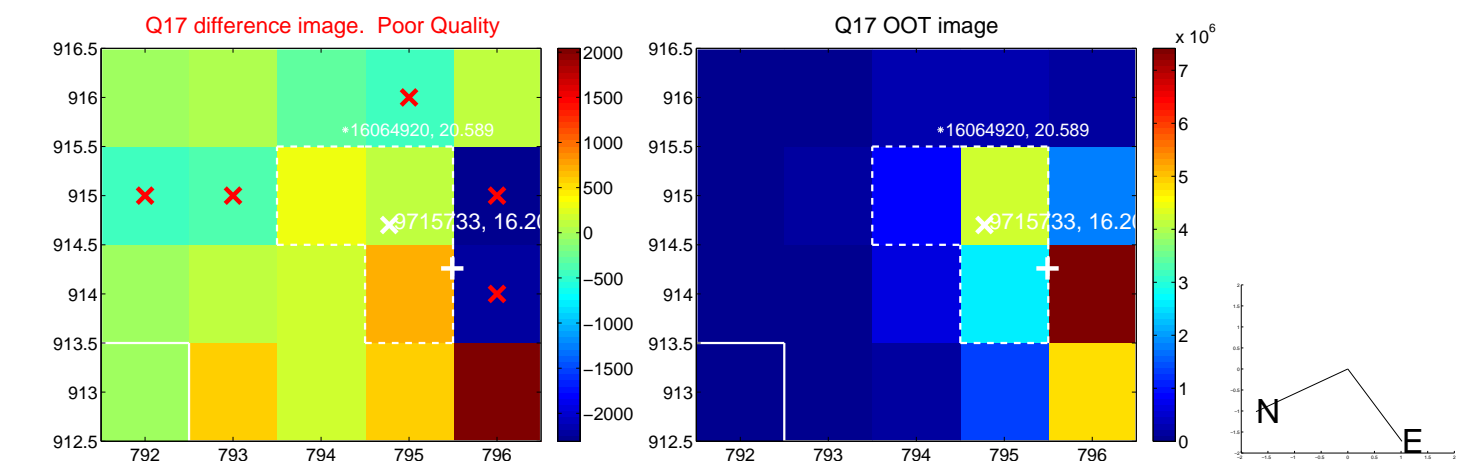
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



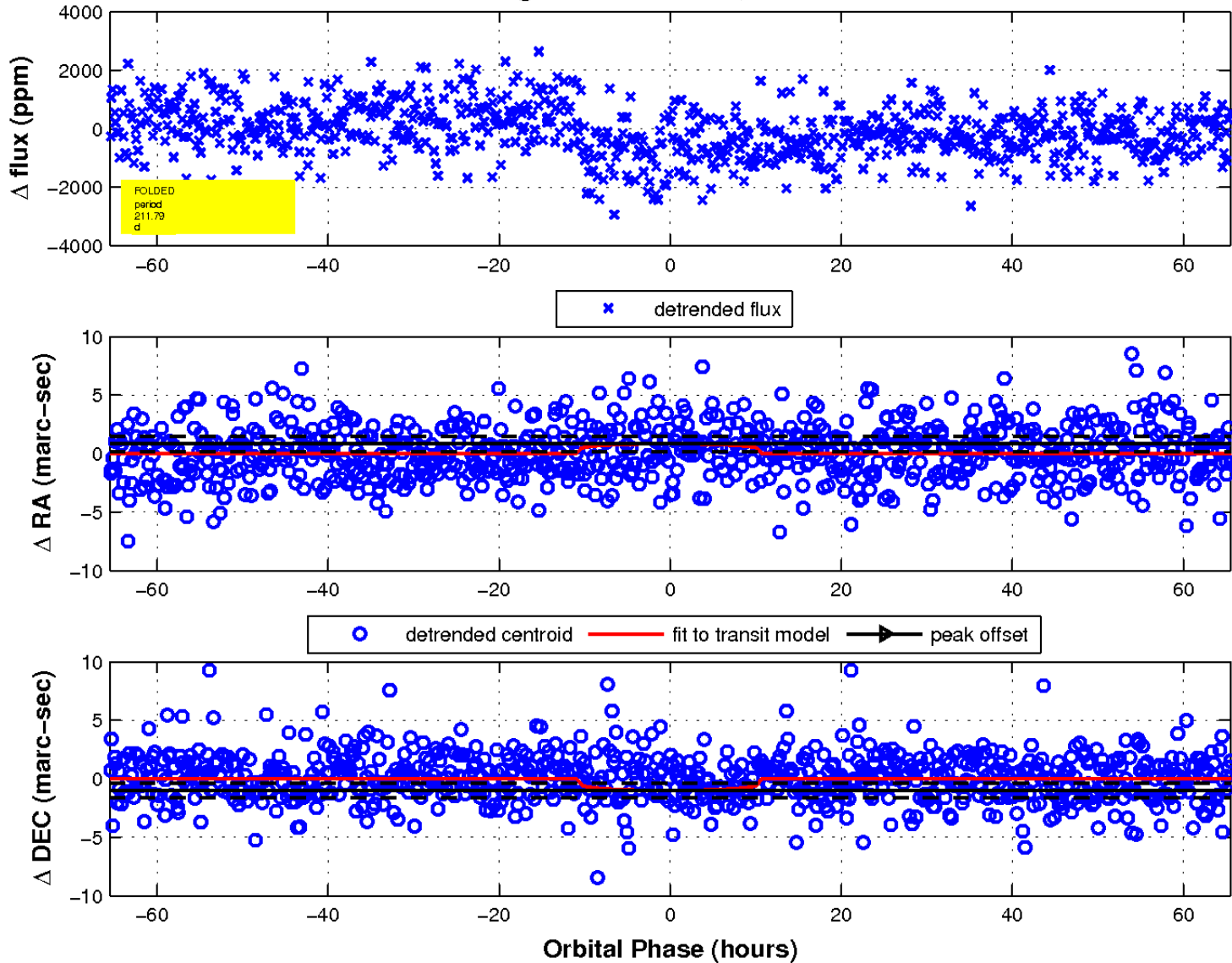
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

