

KIC 010733196

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})
010733196-01	OBS	No	493.372314	280.095232	96.5	20.775	7.1	4.1	1.09	6511	1.19	1.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010733196-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—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.

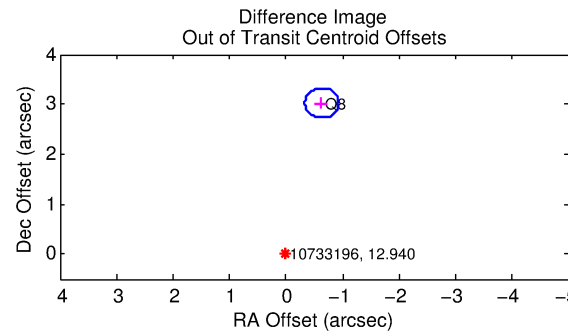
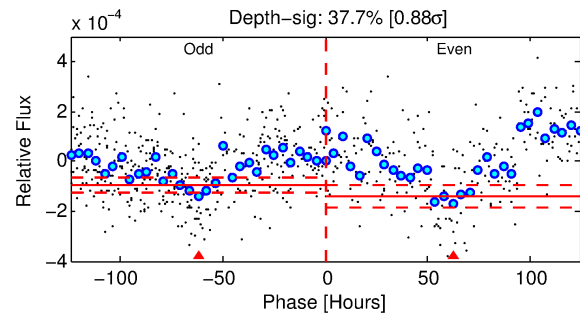
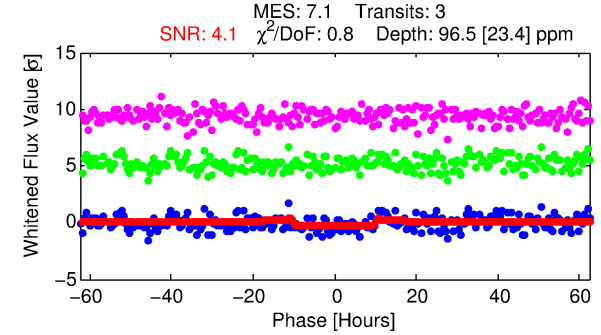
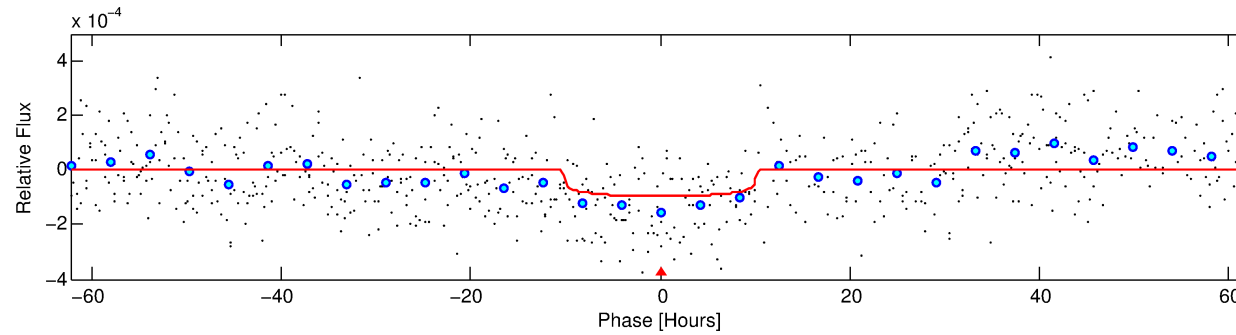
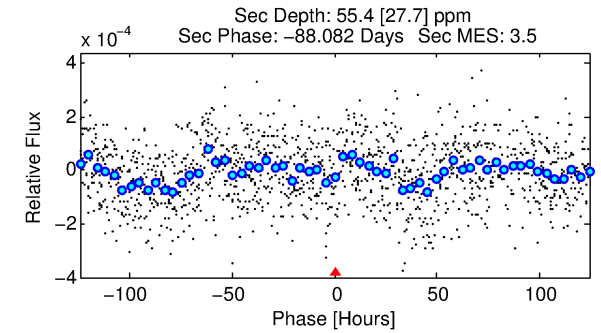
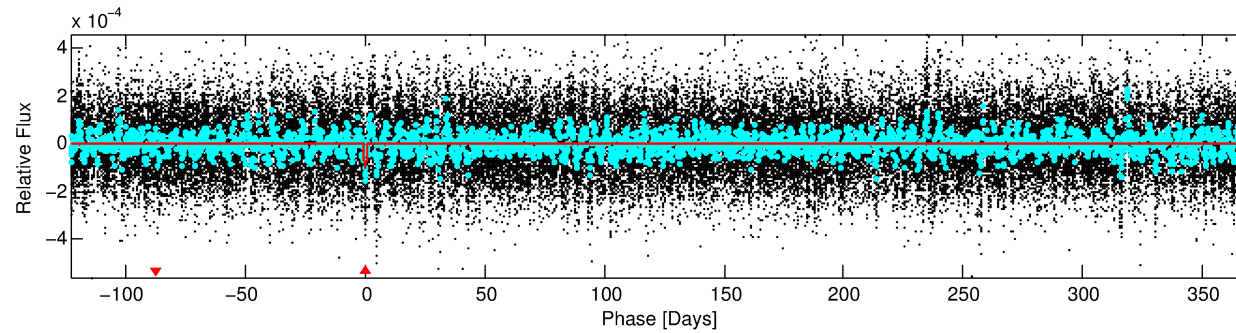
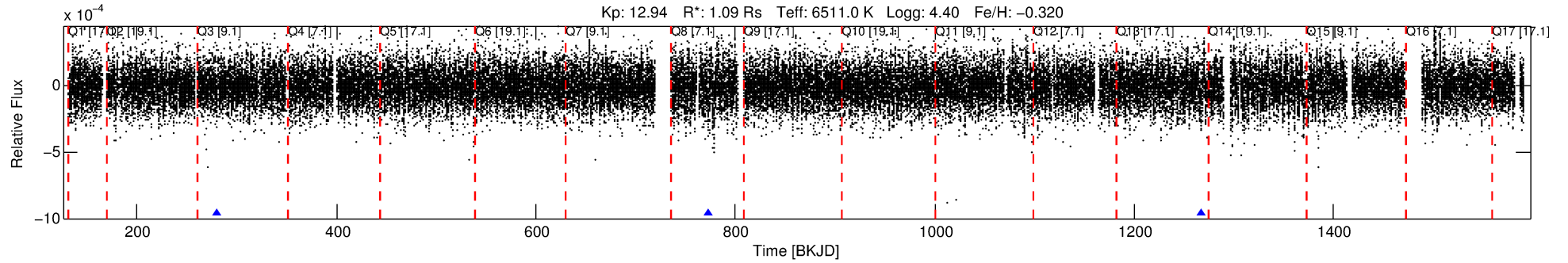
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010733196-01

No Significant Match Found

DV One-Page Summary

KIC: 10733196 Candidate: 1 of 1 Period: 493.372 d



DV Fit Results:

Period = 493.37231 [0.02344] d
Epoch = 280.0952 [0.0254] BKJD
Rp/R* = 0.0099 [0.0038]
a/R* = 112.37 [225.63]
b = 0.80 [0.92]
Seff = 1.21 [0.35]
Teq = 267 [20] K
Rp = 1.19 [0.52] Re
a = 1.2633 [0.2321] AU
Ag = 34622.87 [32960.33] [1.05σ]
Teffp = 5638 [1298] K [4.14σ]

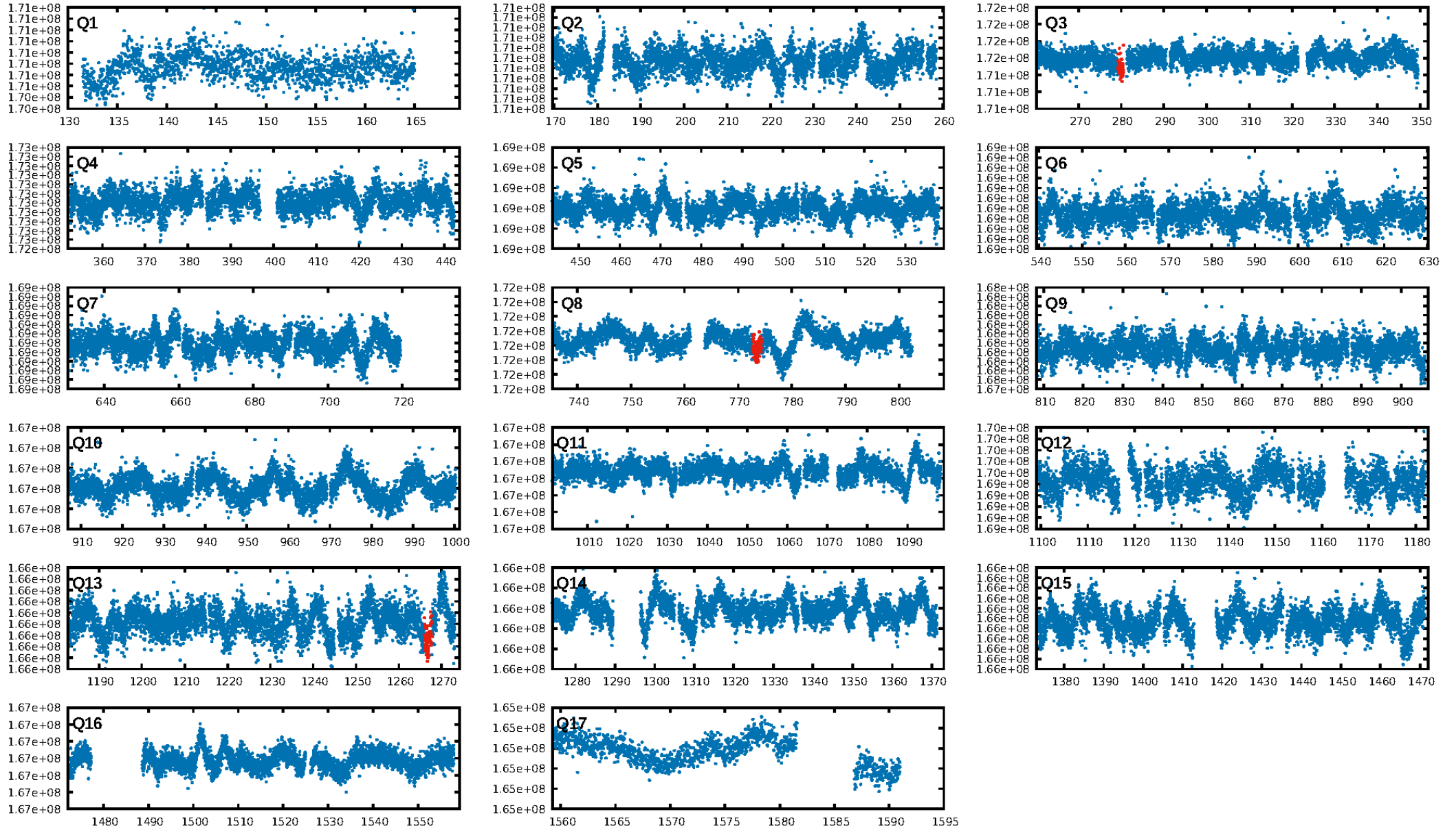
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 75.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.89e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9295
Centroid-sig: N/A
Centroid-so: 1.052 arcsec [0.77σ]
OotOffset-rm: 3.090 arcsec [31.01σ]
KicOffset-rm: 3.037 arcsec [30.50σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

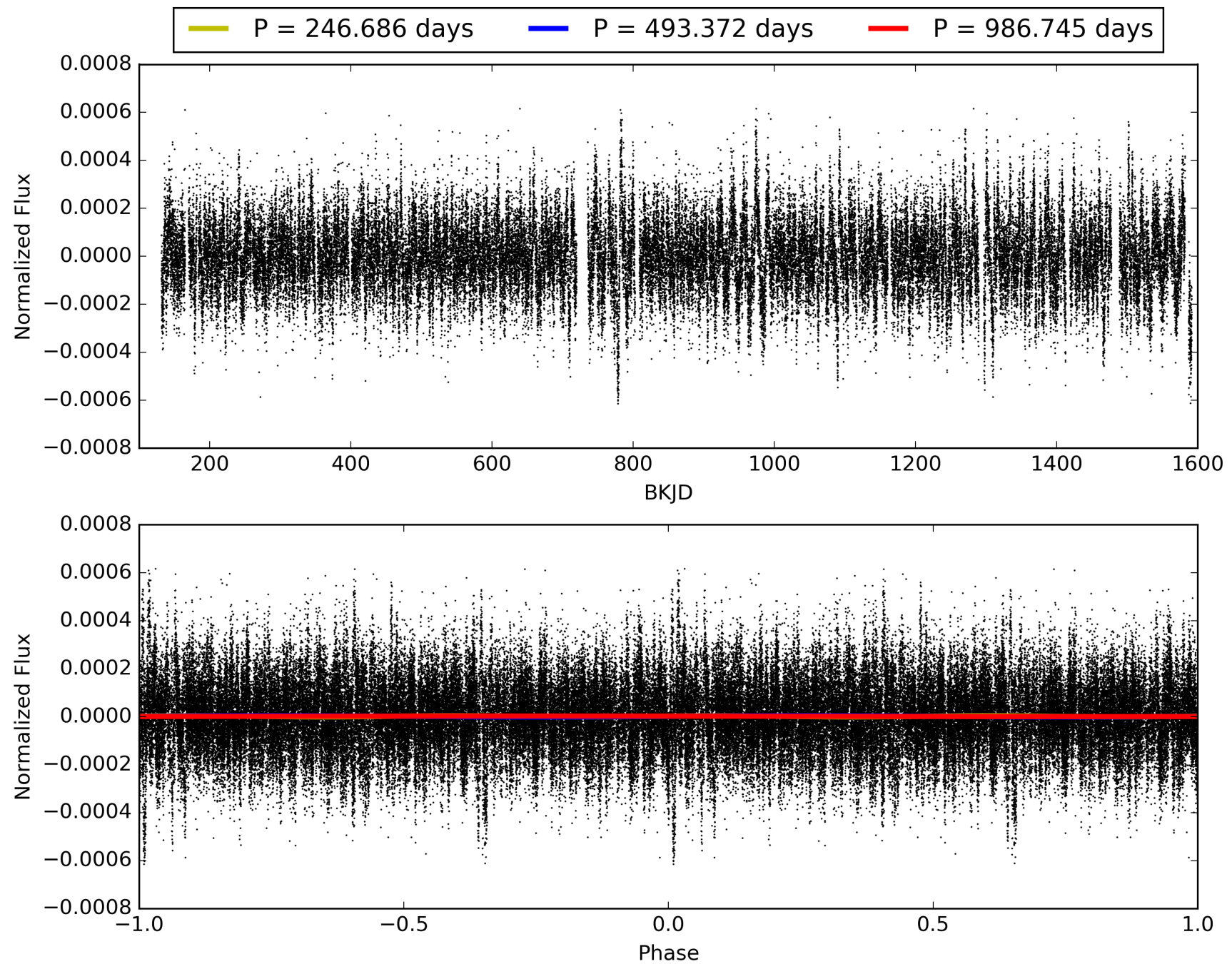
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:10:57 Z

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

TCE 010733196-01, PDC Light Curves

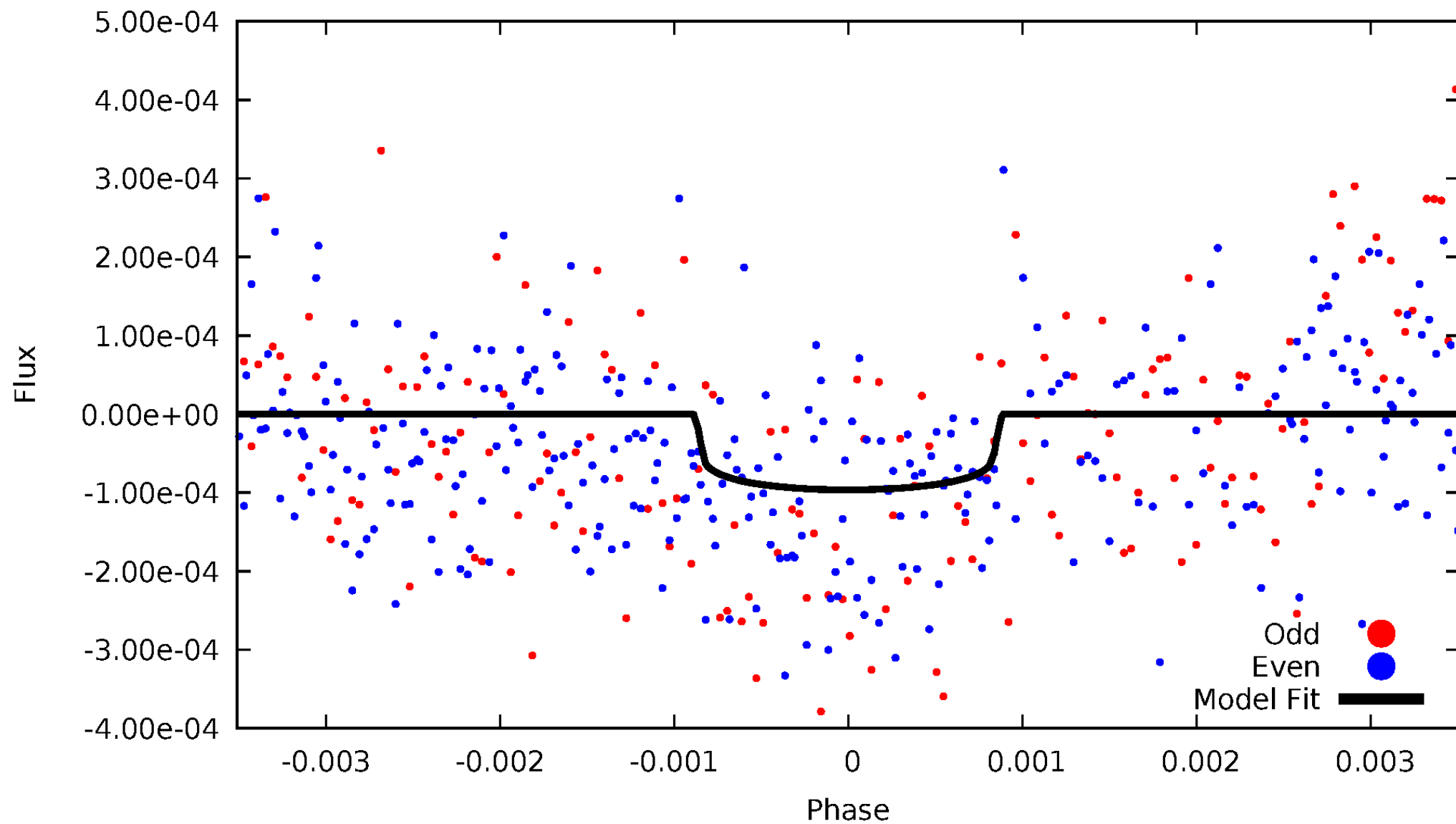


TCE 010733196-01



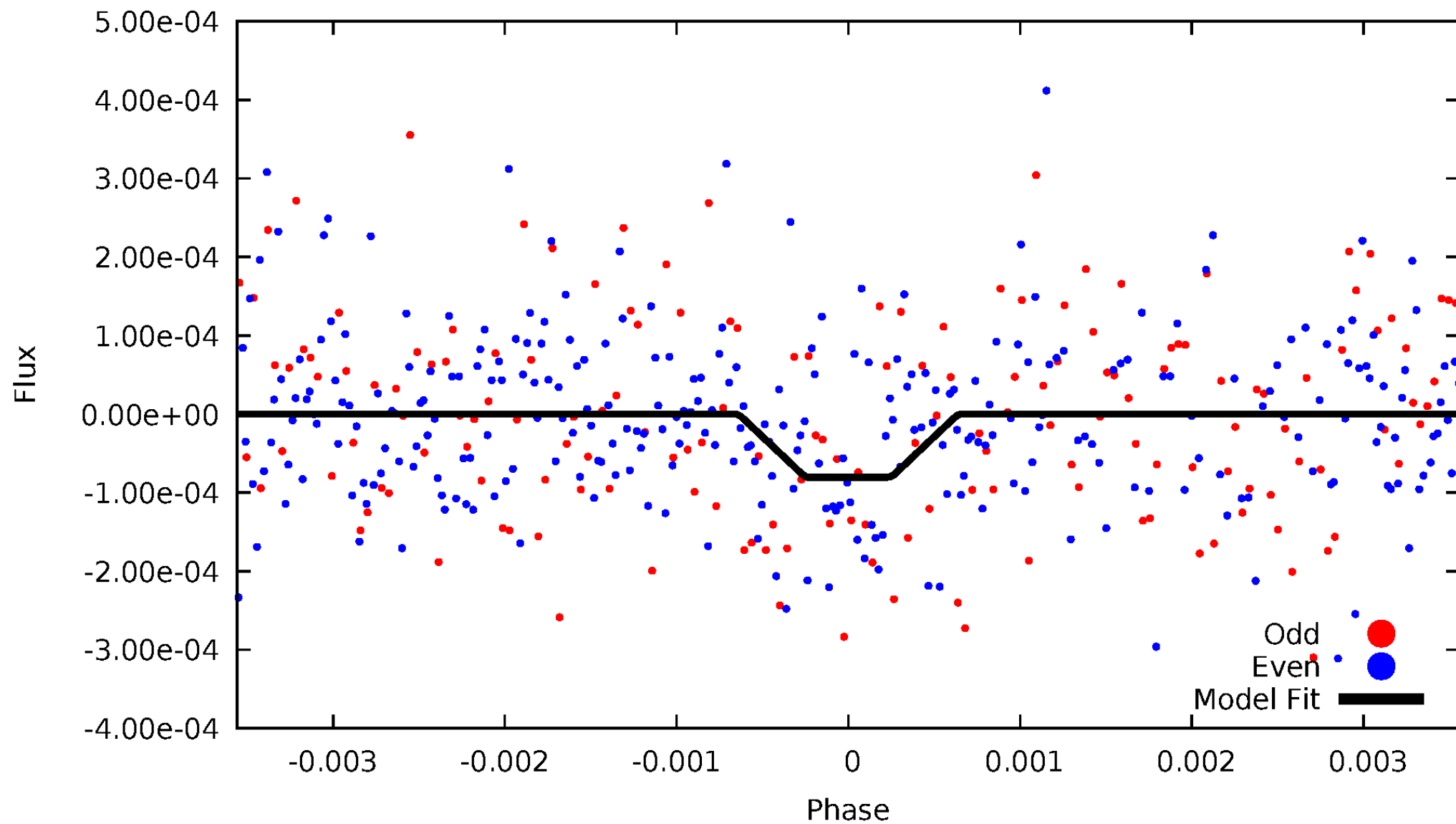
DV Odd/Even

TCE 010733196-01

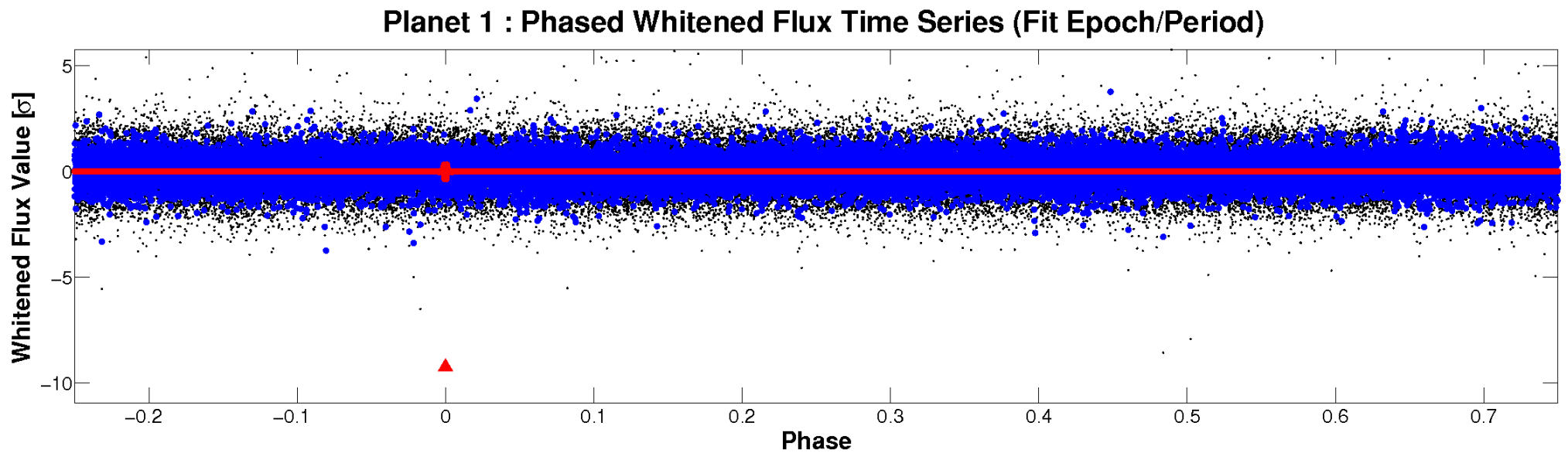
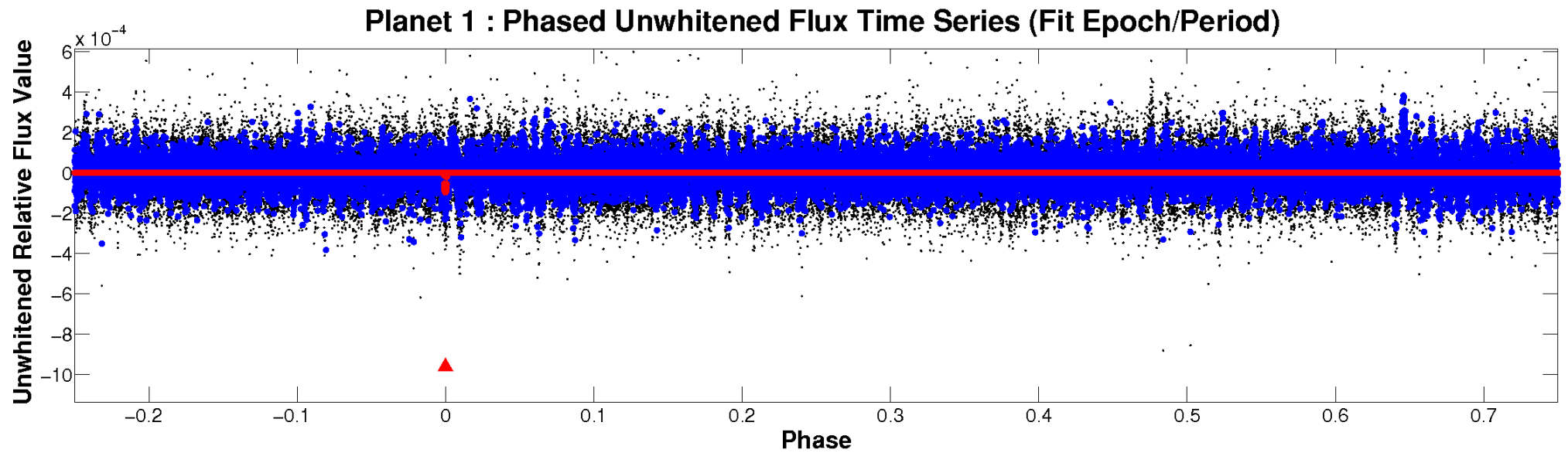


ALT Odd/Even

TCE 010733196-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 010733196-01 P=493.372314 Days $T_0=280.095232$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010733196-01 $P=493.372314$ Days $T_0=280.095232$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

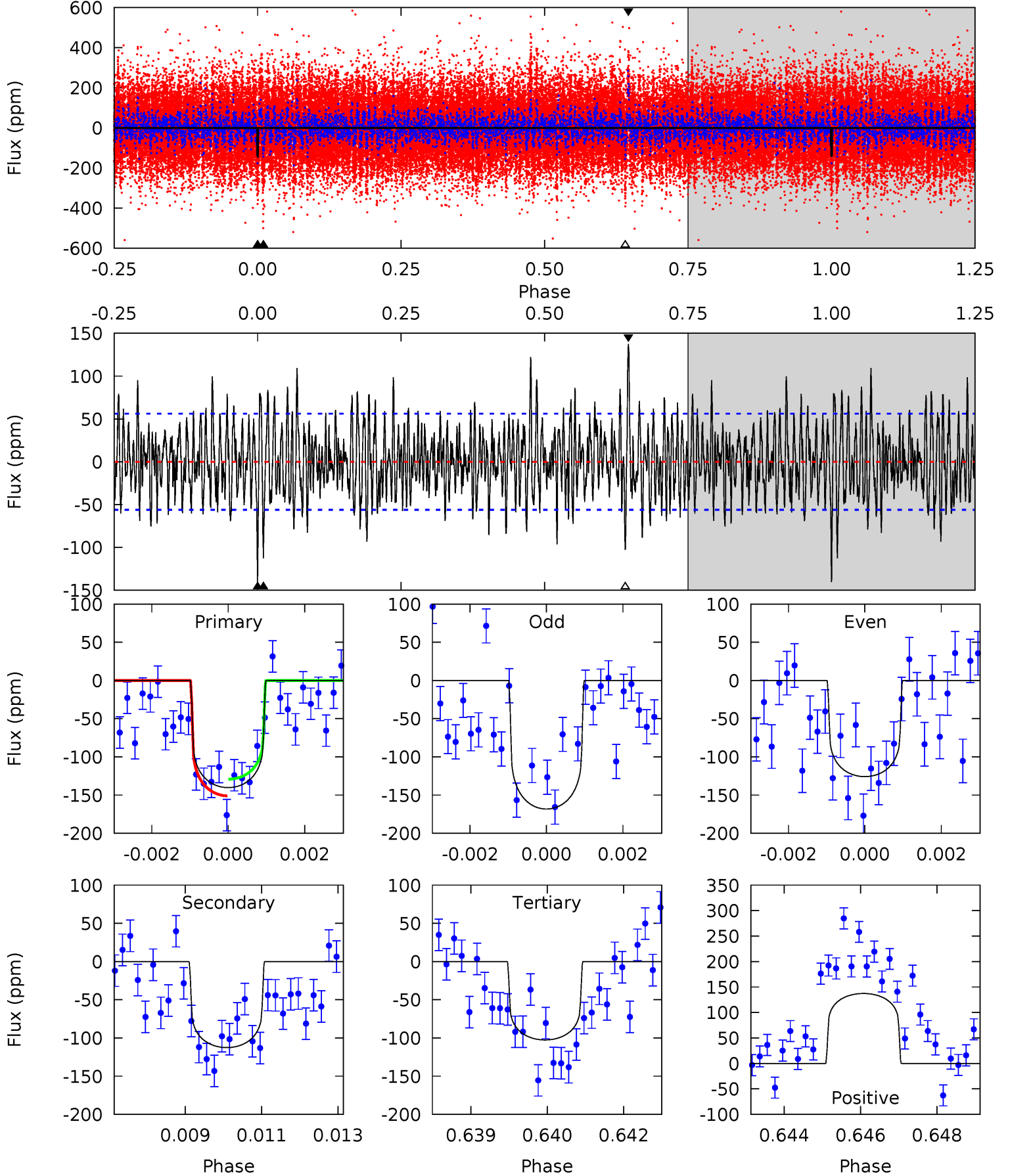
TCE 010733196-01 P=493.436418 Days $T_0=279.965980$ (BKJD)



DV Model-Shift Uniqueness Test

010733196-01, P = 493.372314 Days, E = 280.095232 Days

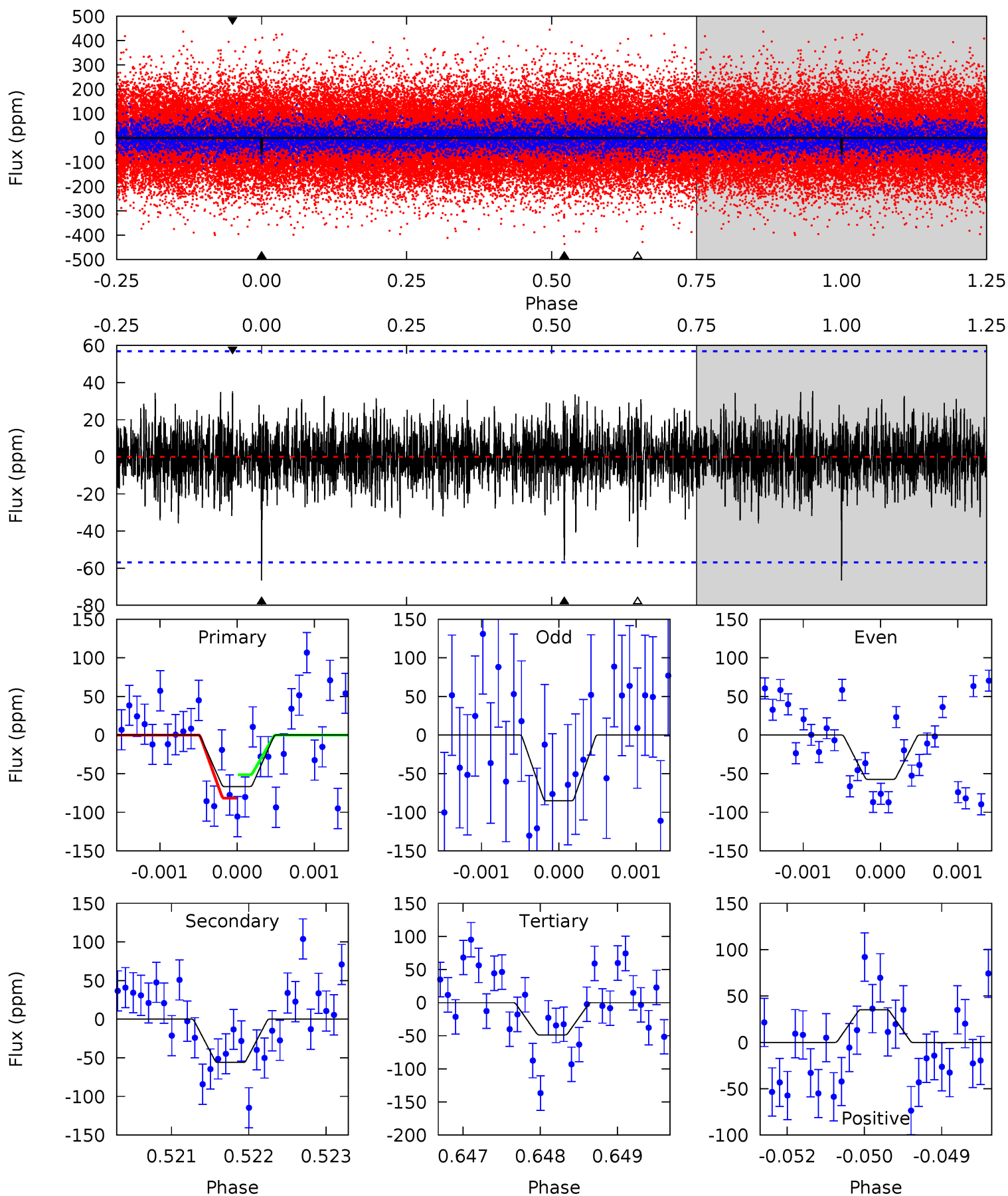
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	10.7	9.78	13.1	5.34	3.12	3.26	3.59	0.28	0.95	-2.36	1.93	0.97	0.49	1.04



Alt Model-Shift Uniqueness Test

010733196-01, P = 493.436418 Days, E = 279.965980 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.33	5.31	4.62	3.35	5.40	3.21	1.05	1.71	2.97	0.69	1.96	1.24	0.78	0.35	1.44



Stellar Parameters For KIC 010733196

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6511^{+146}_{-194}	$4.403^{+0.063}_{-0.147}$	$-0.320^{+0.250}_{-0.350}$	$1.094^{+0.238}_{-0.128}$	$1.104^{+0.125}_{-0.137}$	$1.186^{+0.381}_{-0.477}$
	+2%/-3%	+1%/-3%	+78%/-109%	+22%/-12%	+11%/-12%	+32%/-40%
Source	PHO1	FLK73	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 010733196-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-113 ± 10	$1.22^{+0.49}_{-0.42}$	378^{+22}_{-17}	6689^{+1959}_{-1016}	63829^{+93776}_{-30016}
Alt.	-56 ± 11	$1.09^{+0.48}_{-0.45}$	376^{+20}_{-15}	5955^{+2218}_{-893}	41579^{+87837}_{-21870}

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

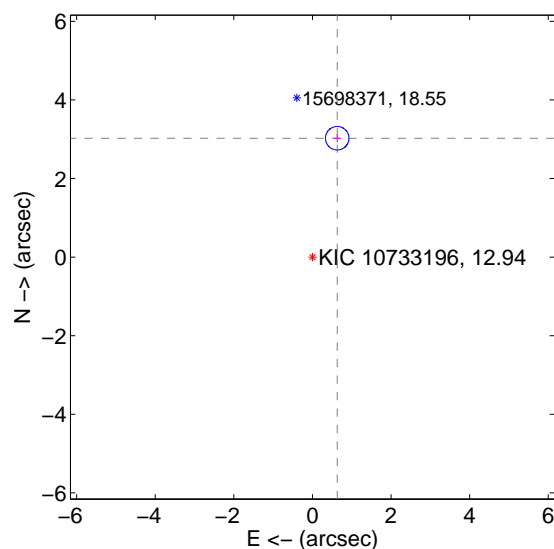
Supplemental centroid analysis for 010733196-01. Kepler magnitude: 12.94. Transit SNR 4.10

There are 1 quarters with good PRF difference image offsets

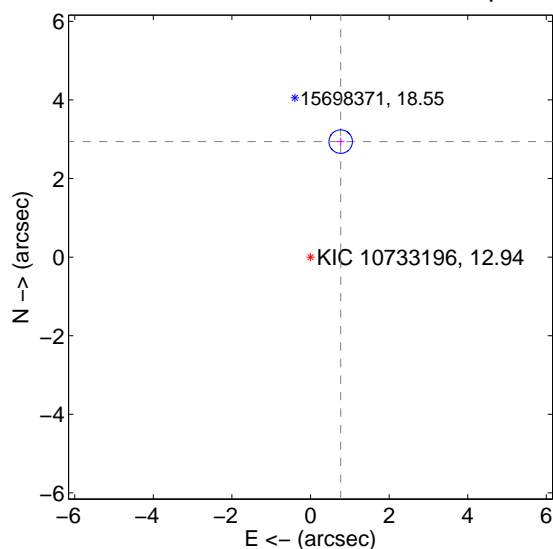
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.090 ± 0.100	31.01	-0.630 ± 0.097	3.025 ± 0.100
PRF-fit source offset from KIC position	3.037 ± 0.100	30.50	-0.768 ± 0.097	2.939 ± 0.100
photometric centroid source offset	1.05 ± 1.36	0.77	-0.86 ± 1.32	-0.61 ± 1.44

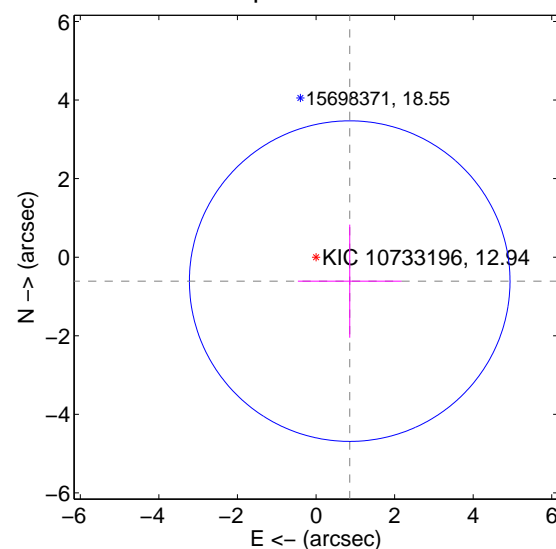
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

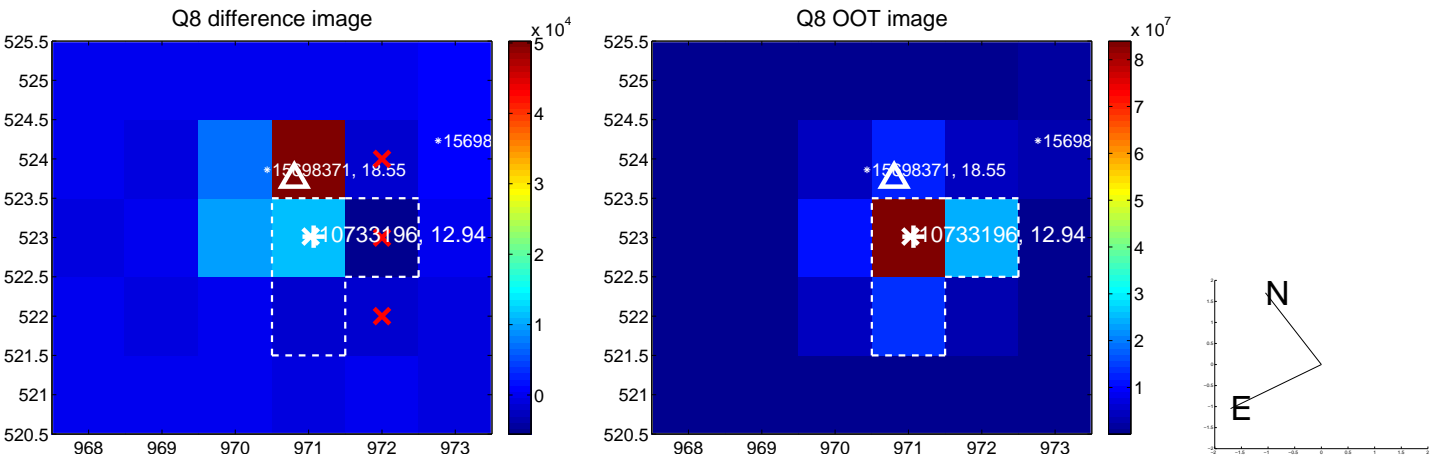
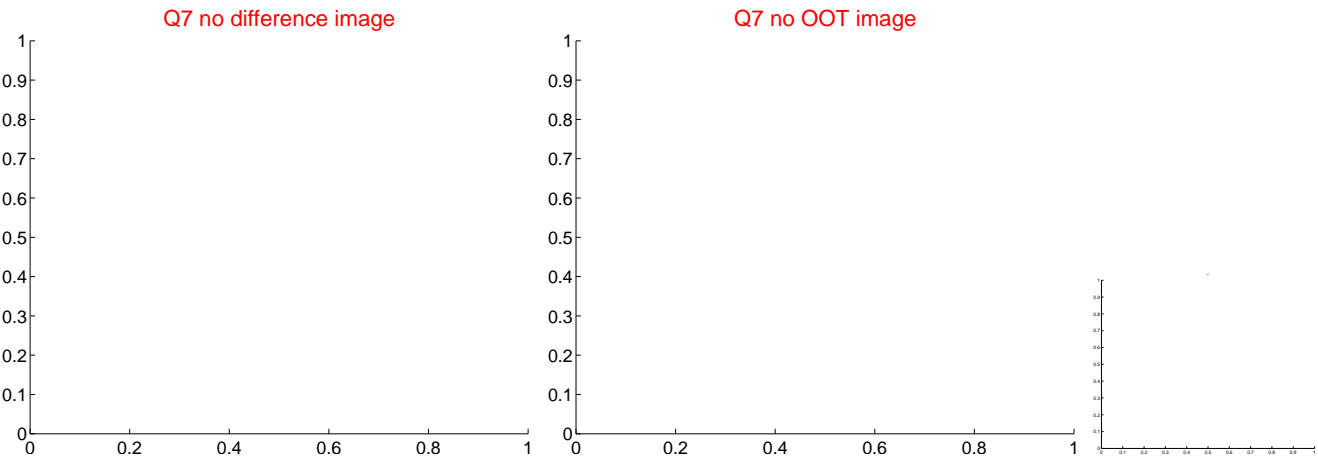
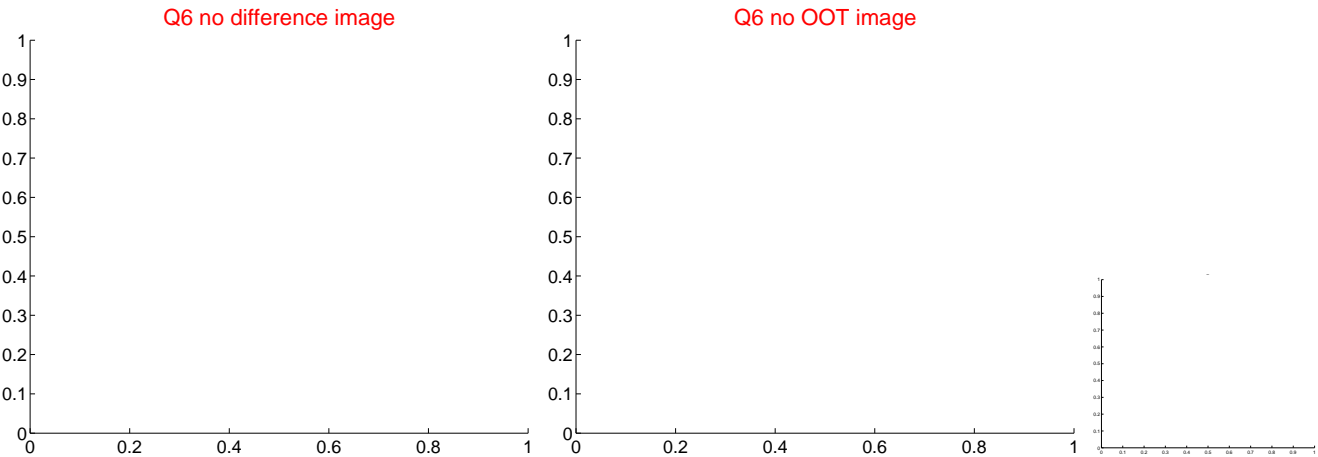
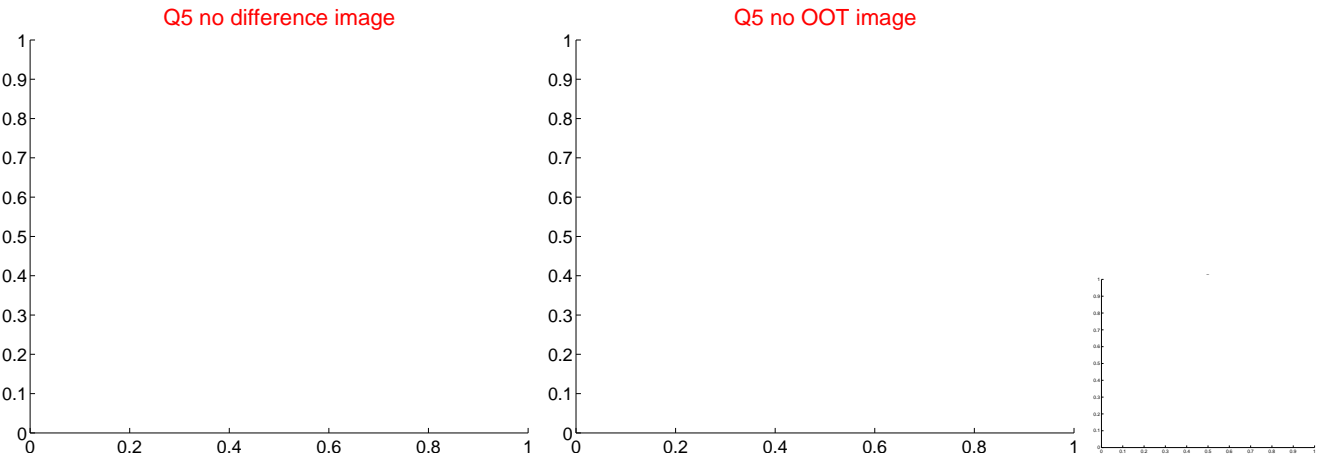


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

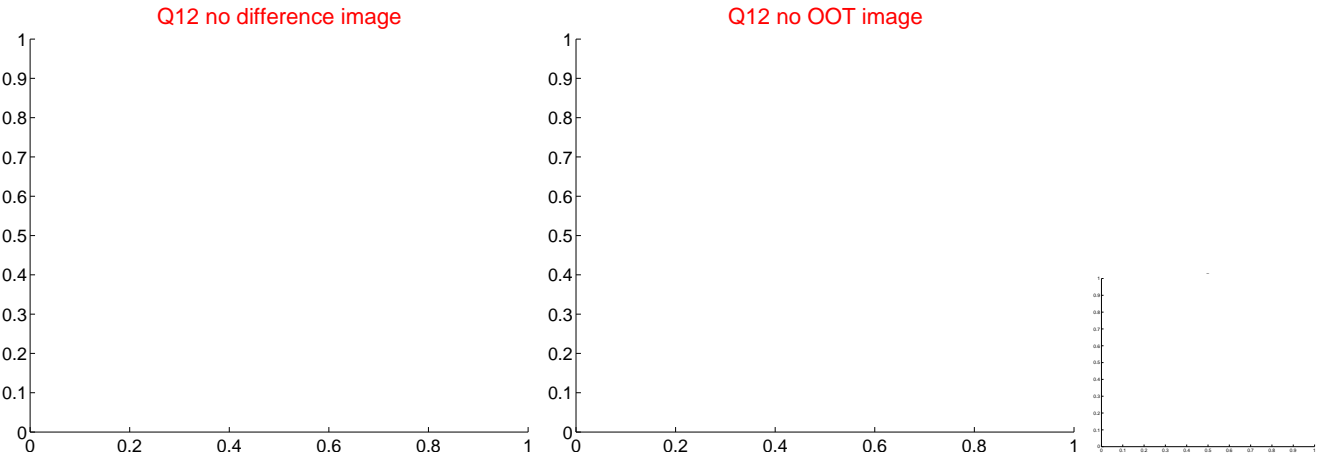
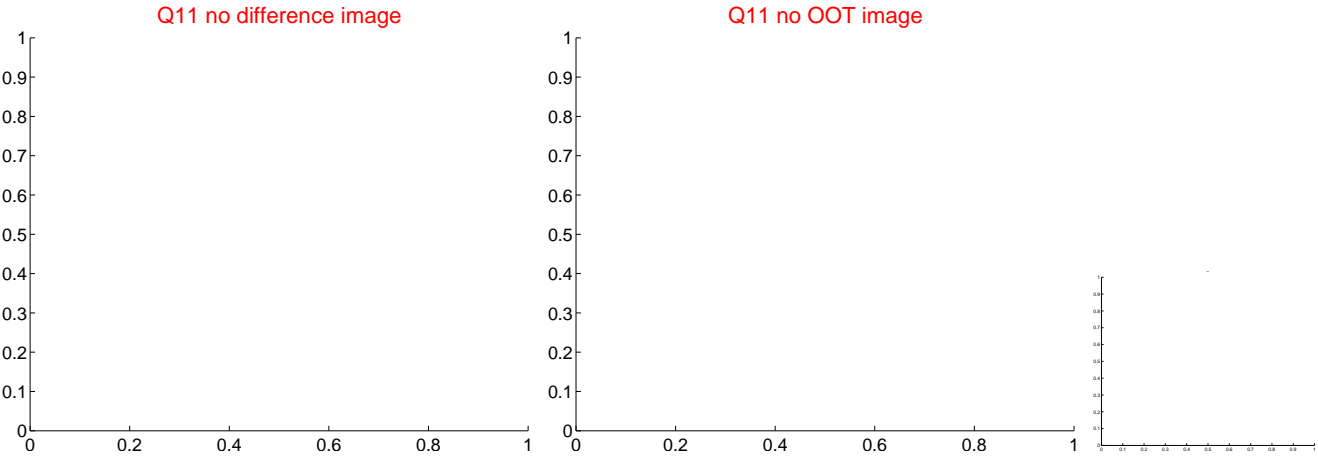
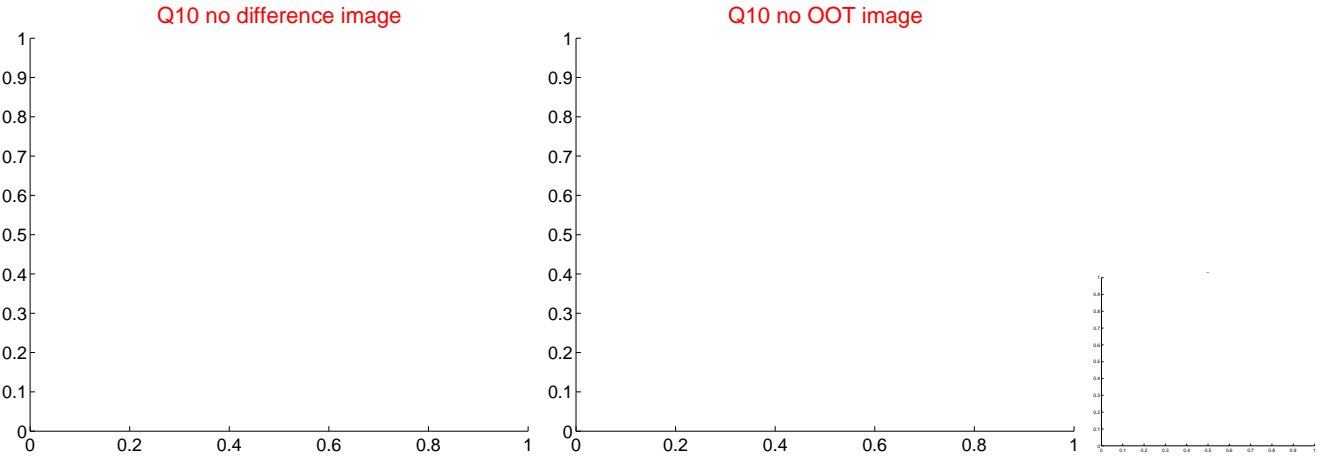
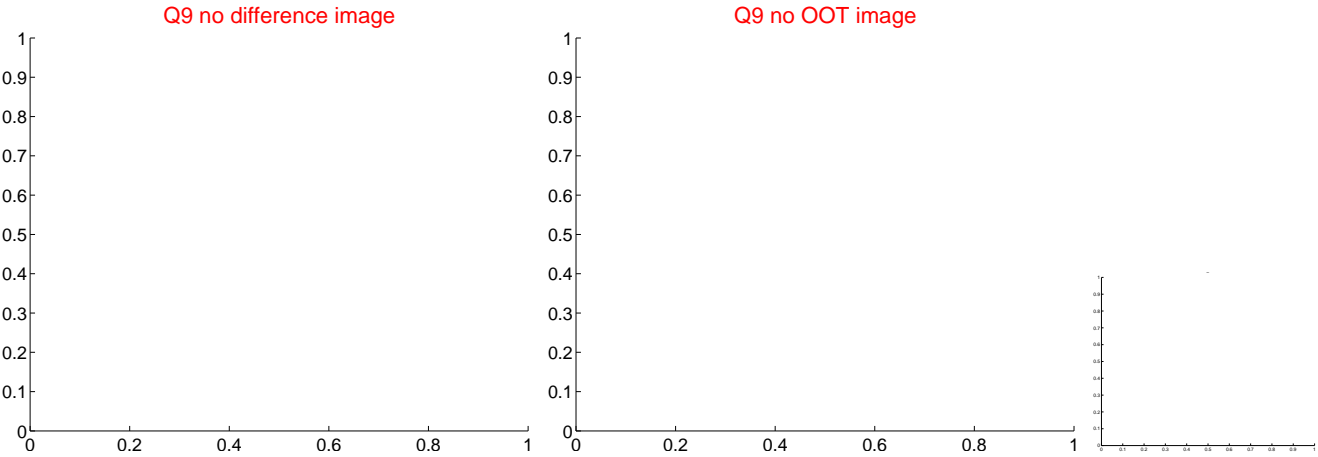
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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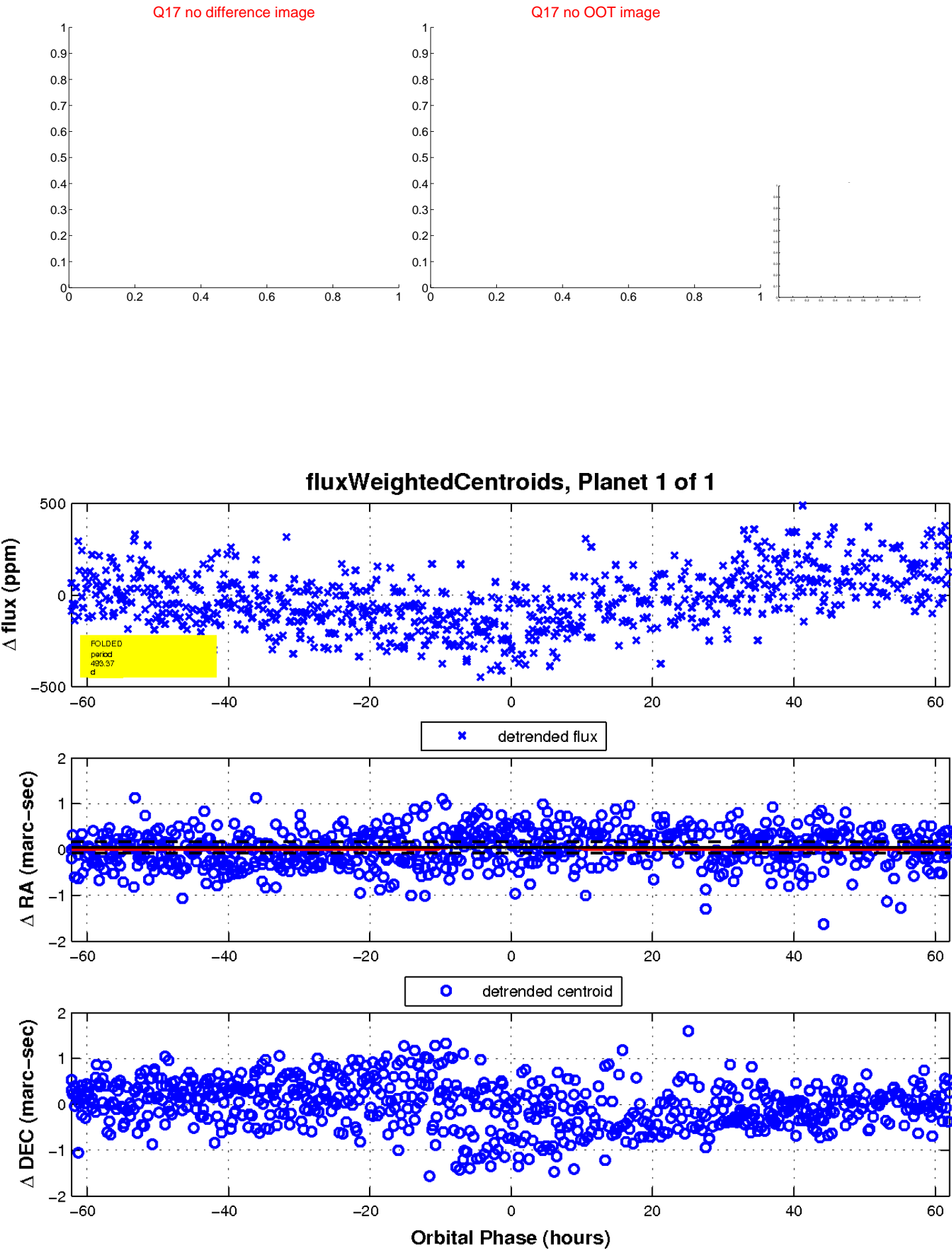
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

