

KIC 011872333

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})
011872333-01	OBS	No	508.359771	246.890433	266.0	11.065	7.6	7.0	1.46	6793	2.55	2.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011872333-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

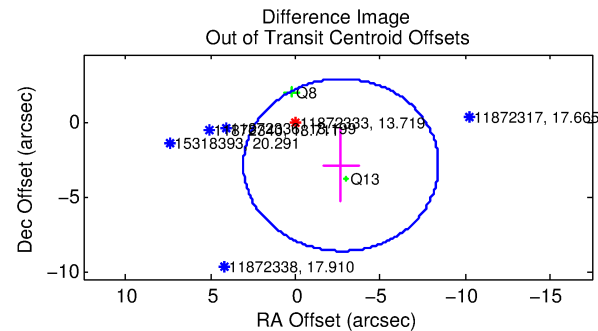
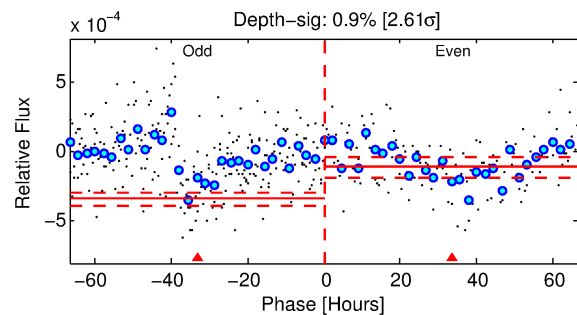
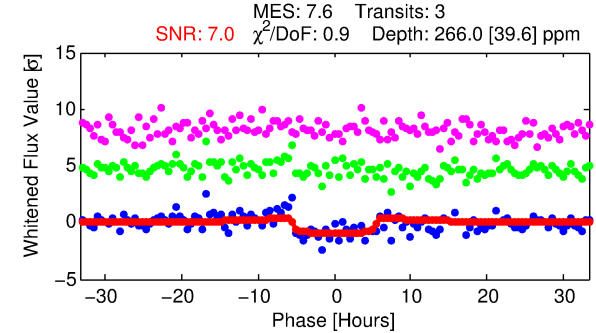
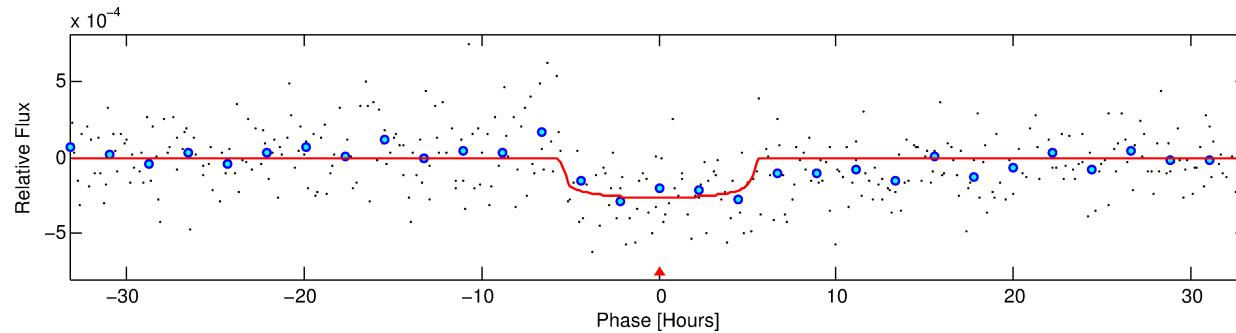
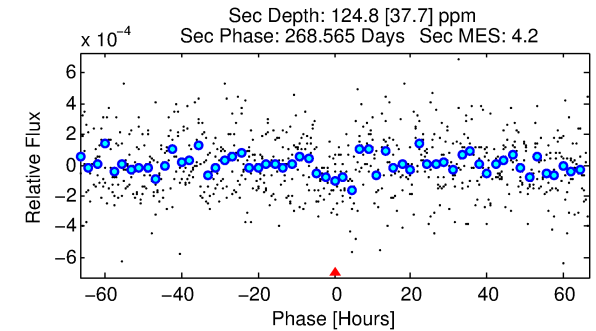
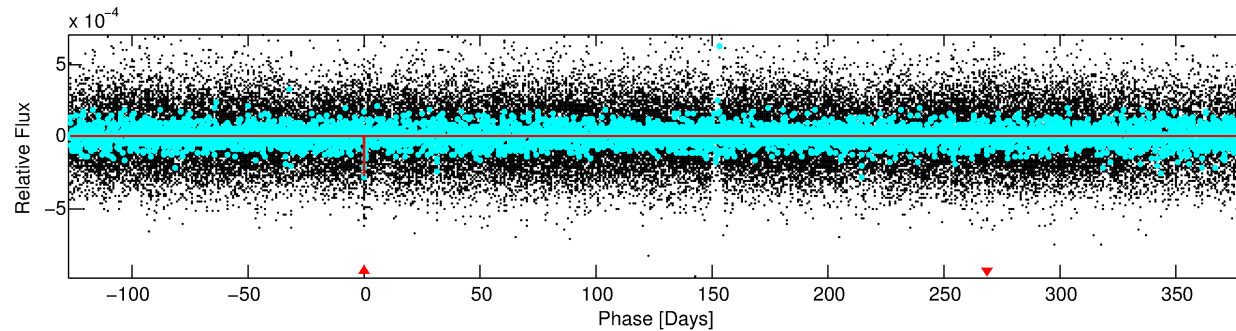
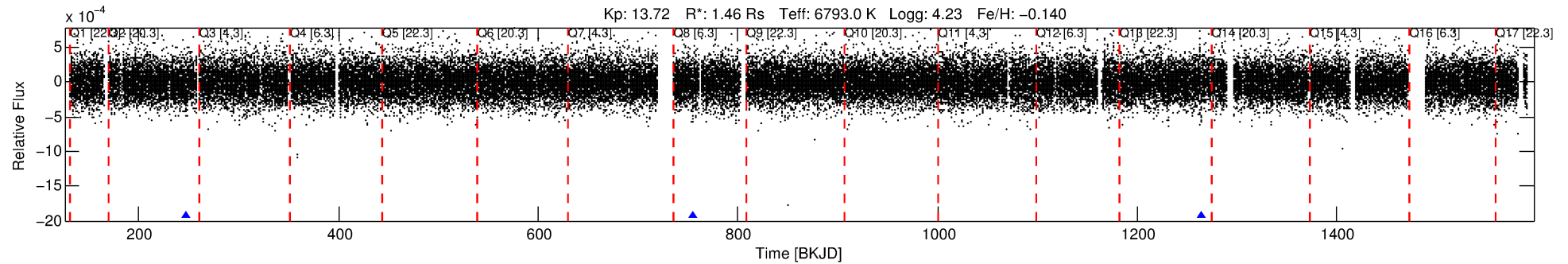
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011872333-01

No Significant Match Found

DV One-Page Summary

KIC: 11872333 Candidate: 1 of 1 Period: 508.360 d



DV Fit Results:

Period = 508.35977 [0.01296] d
Epoch = 246.8904 [0.0182] BKJD
Rp/R* = 0.0160 [0.0069]
a/R* = 258.88 [621.06]
b = 0.70 [1.77]
Seff = 2.19 [0.88]
Teq = 310 [31] K
Rp = 2.55 [1.38] Re
a = 1.3637 [0.3630] AU
Ag = 19646.77 [19438.89] [1.01σ]
Teffp = 5676 [1313] K [4.09σ]

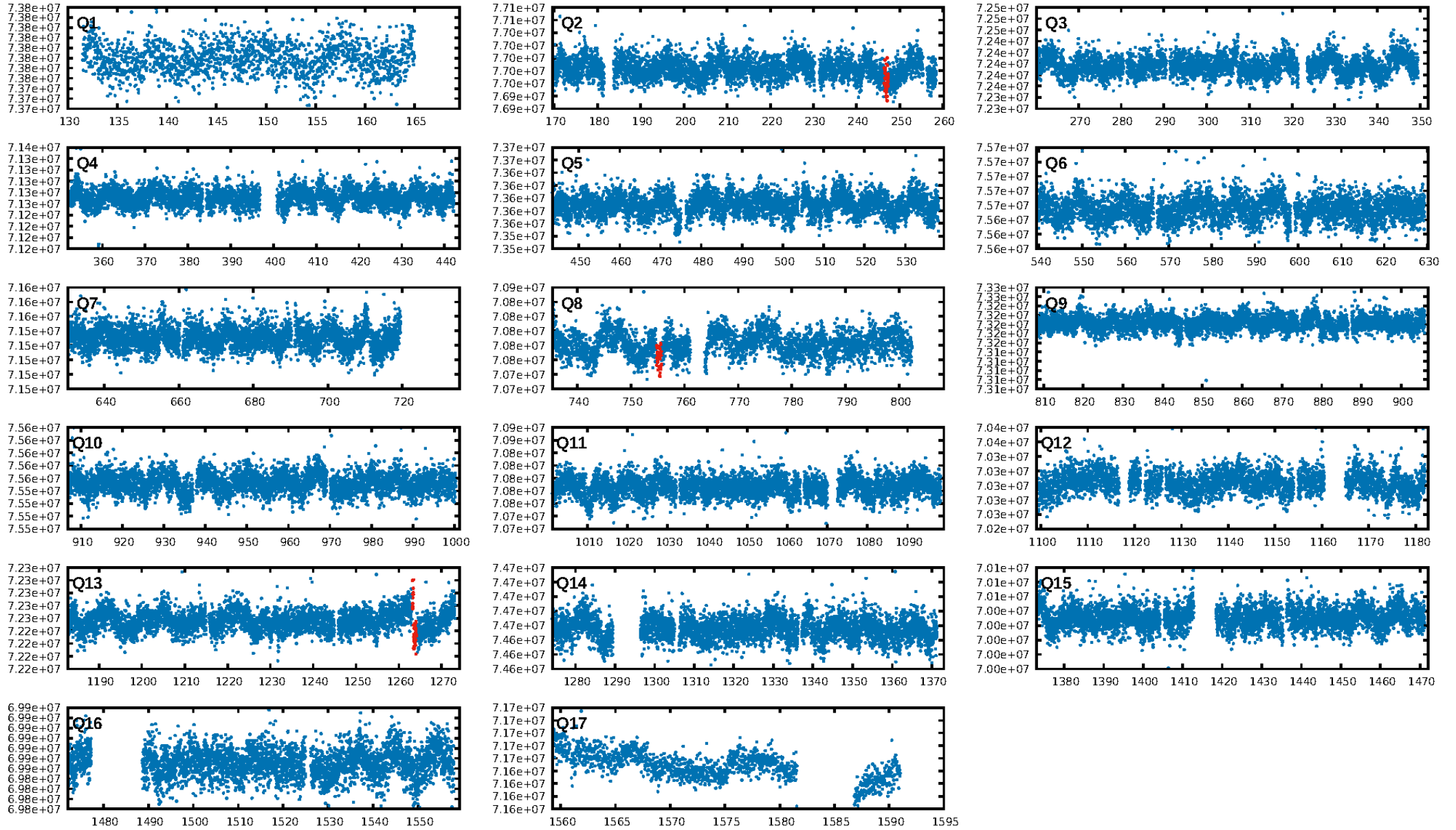
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.6%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 2.67e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.93
Centroid-sig: 16.2%
Centroid-so: 2.088 arcsec [1.47σ]
OotOffset-rm: 3.955 arcsec [2.06σ]
KicOffset-rm: 3.936 arcsec [2.06σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

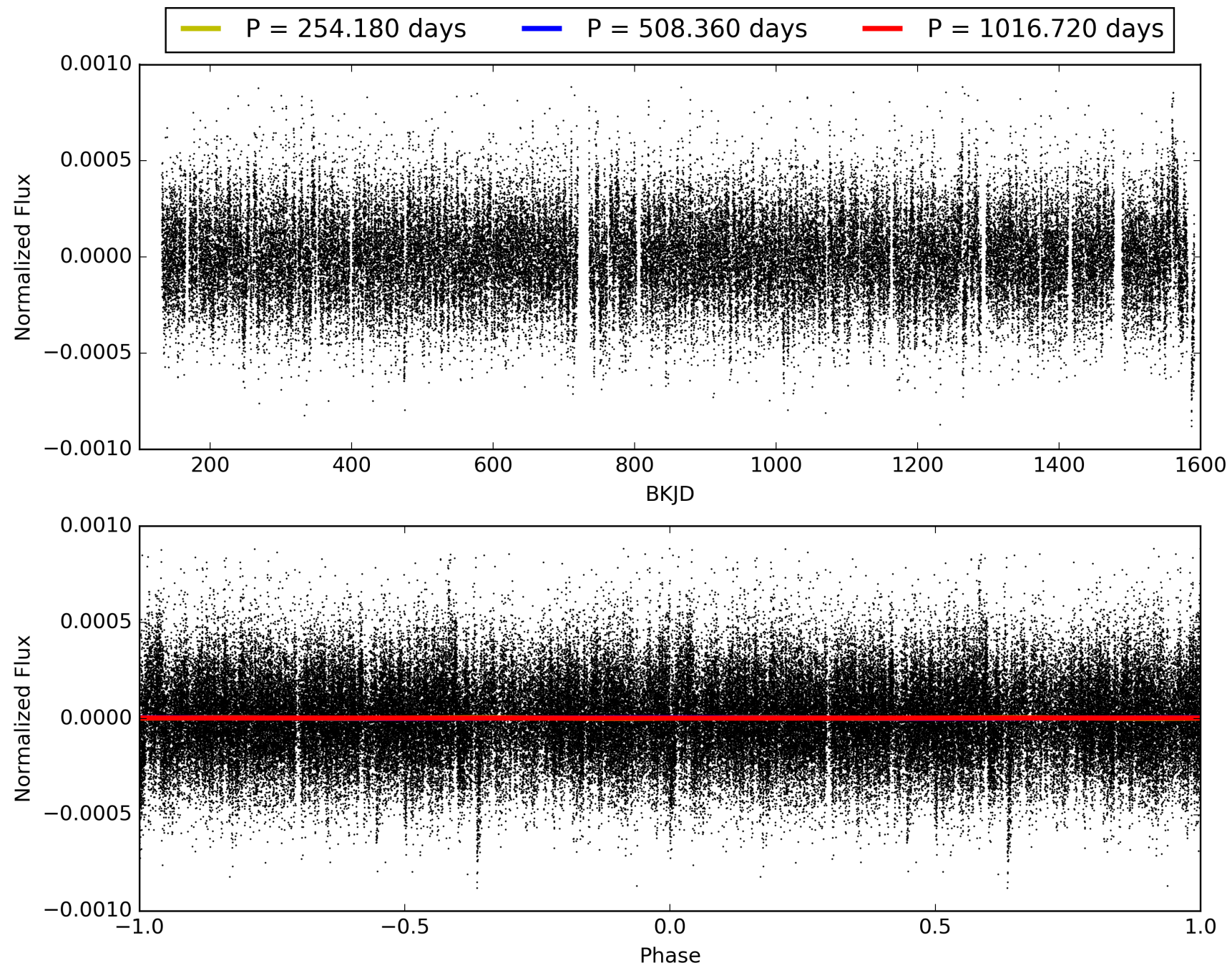
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:33:36 Z

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

TCE 011872333-01, PDC Light Curves

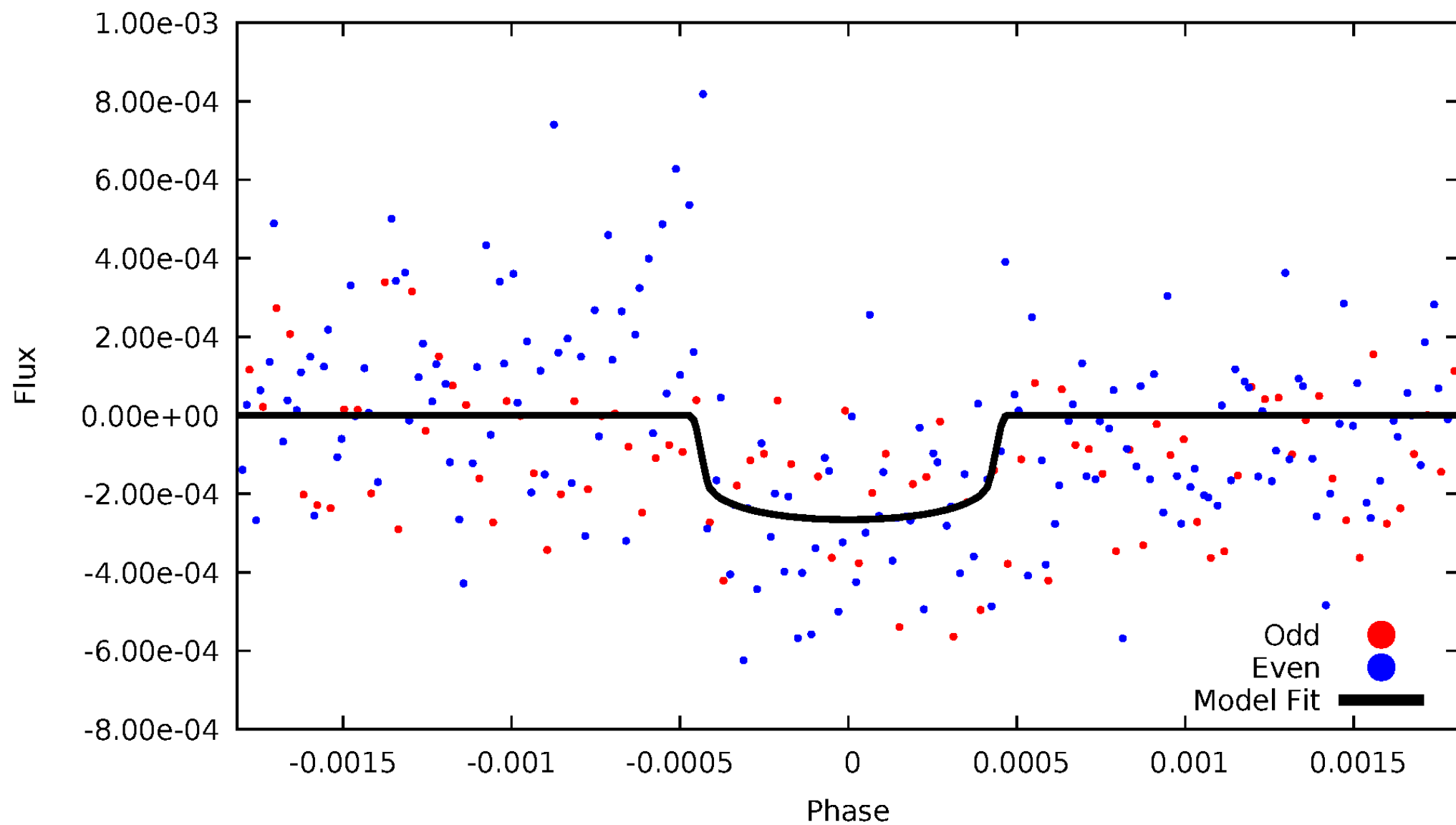


TCE 011872333-01



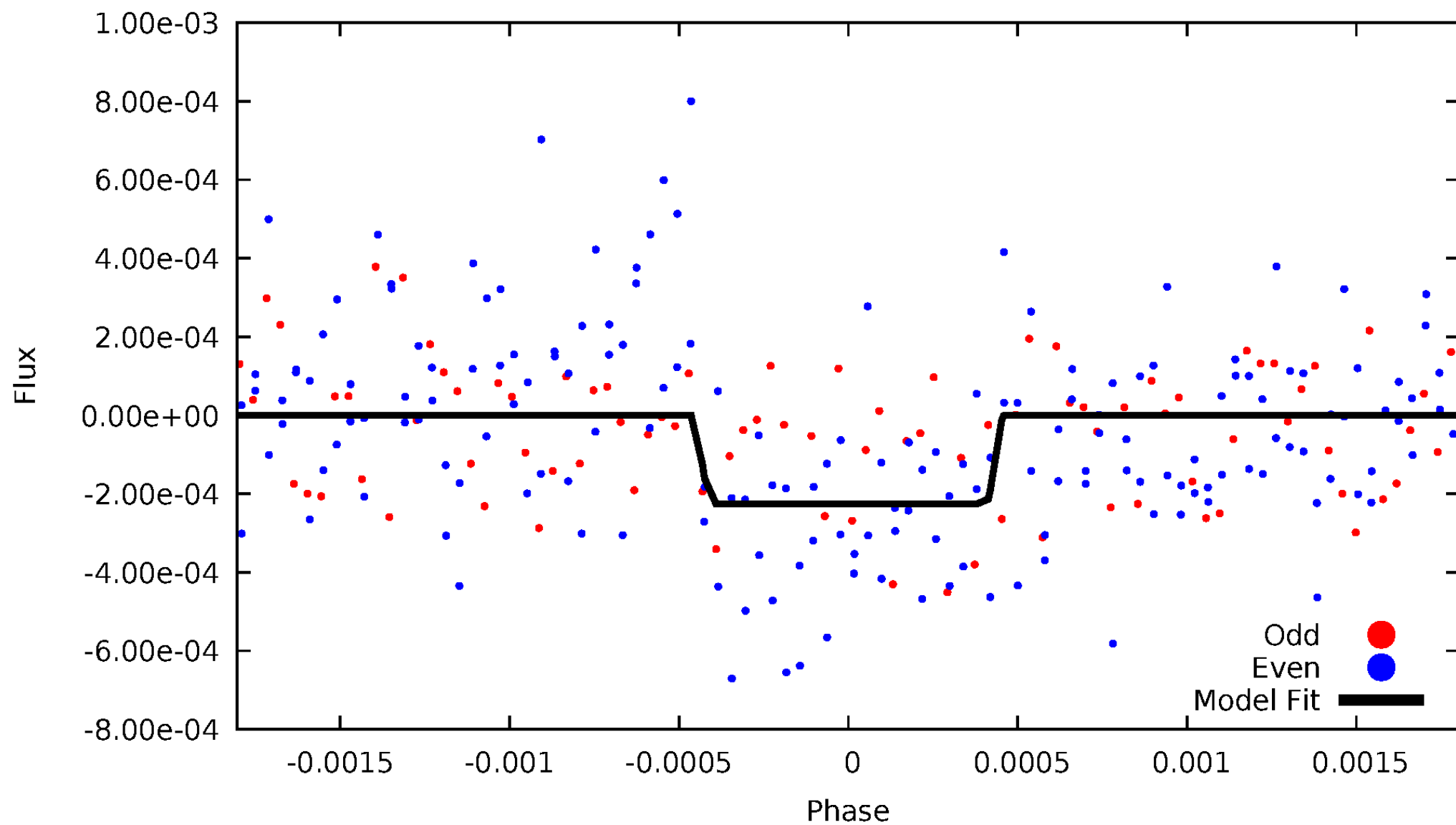
DV Odd/Even

TCE 011872333-01

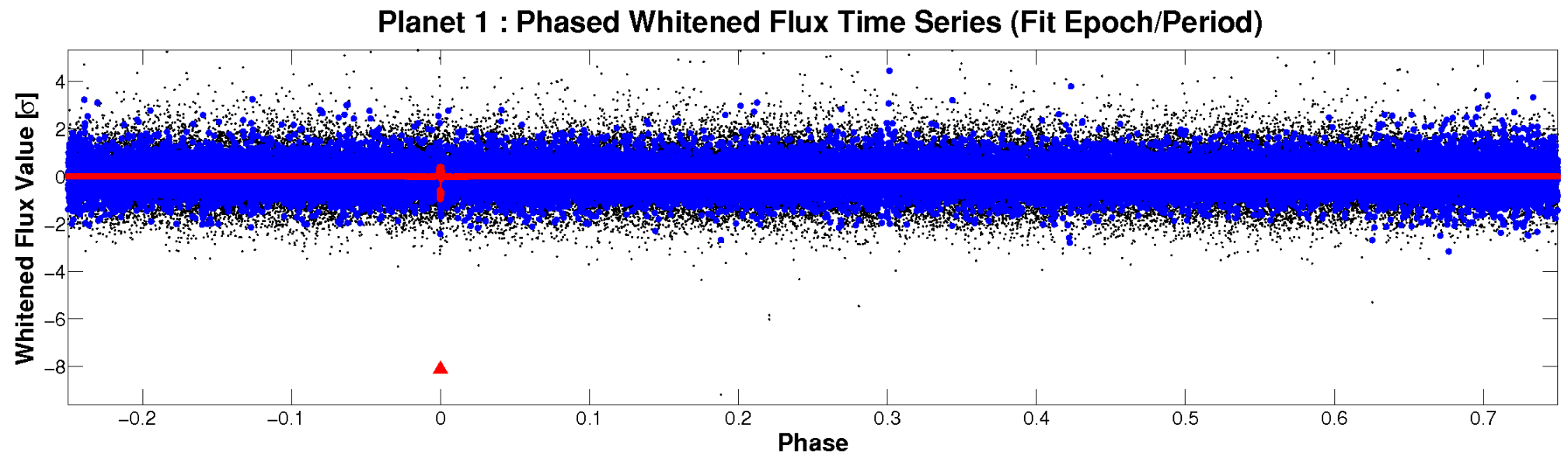
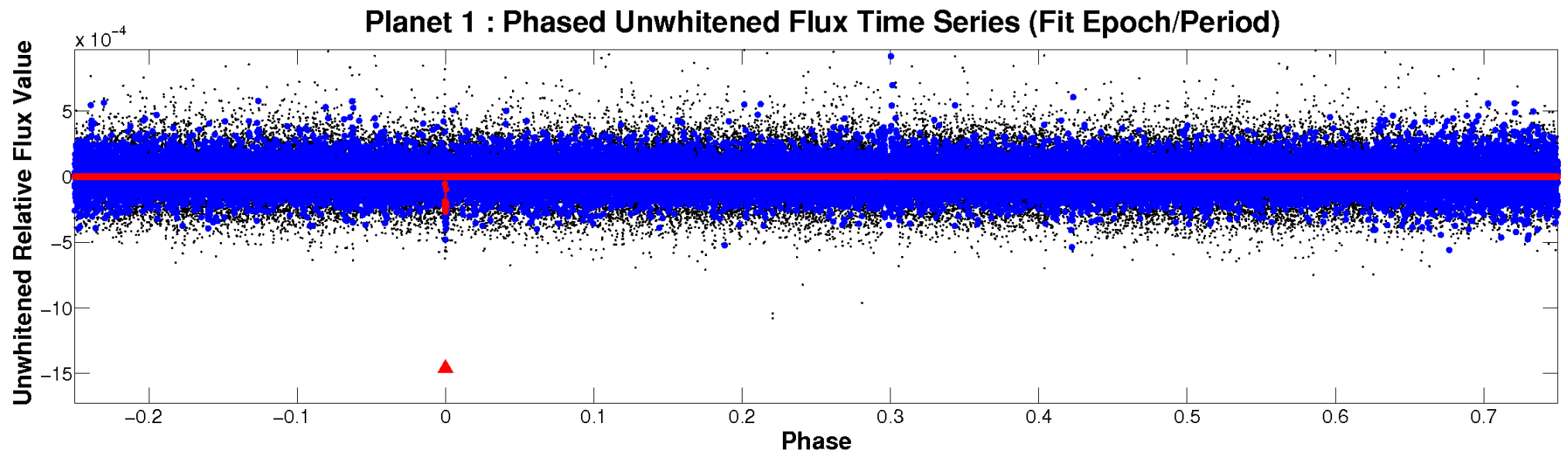


ALT Odd/Even

TCE 011872333-01

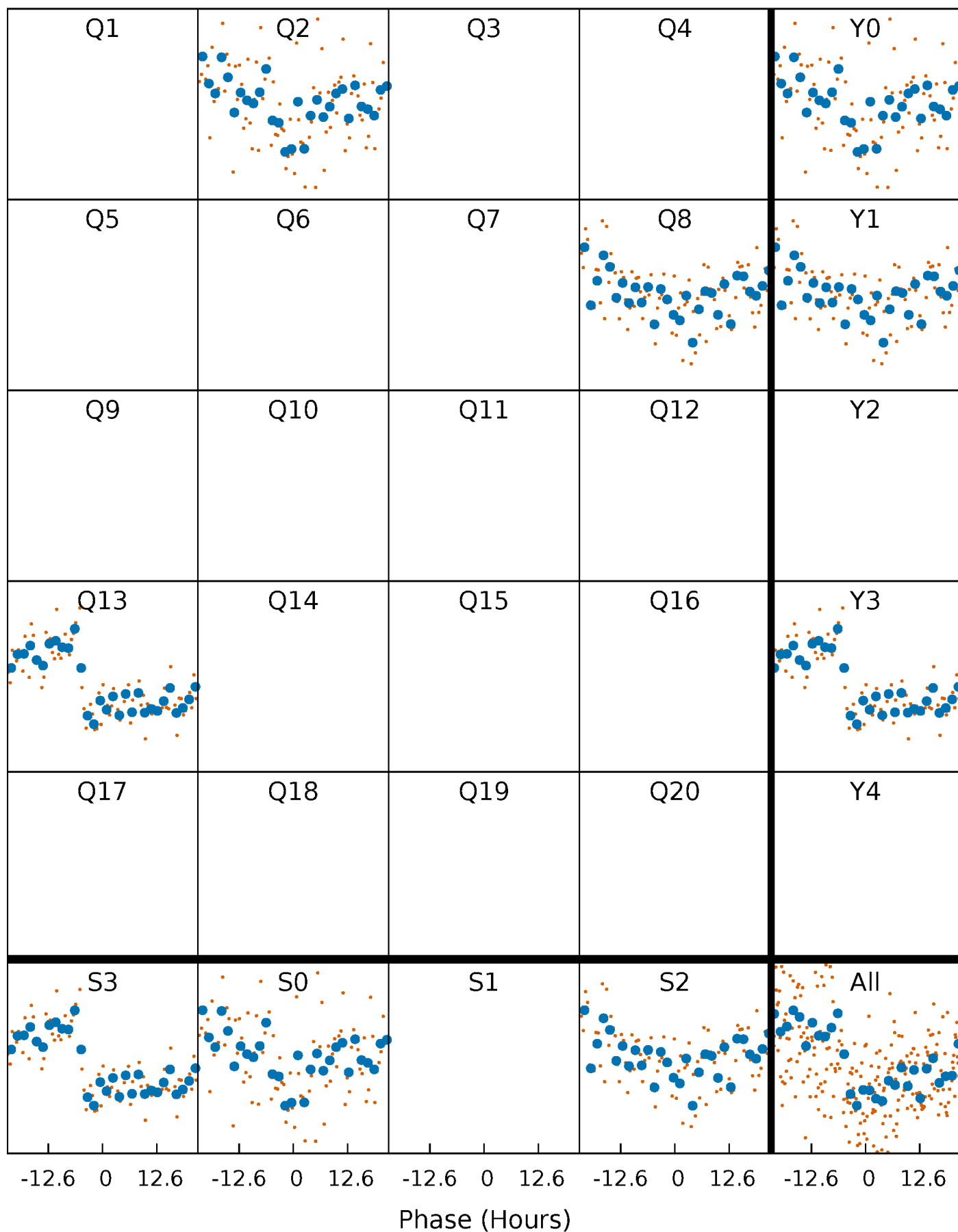


Non-Whitened Vs. Whitened Light Curve



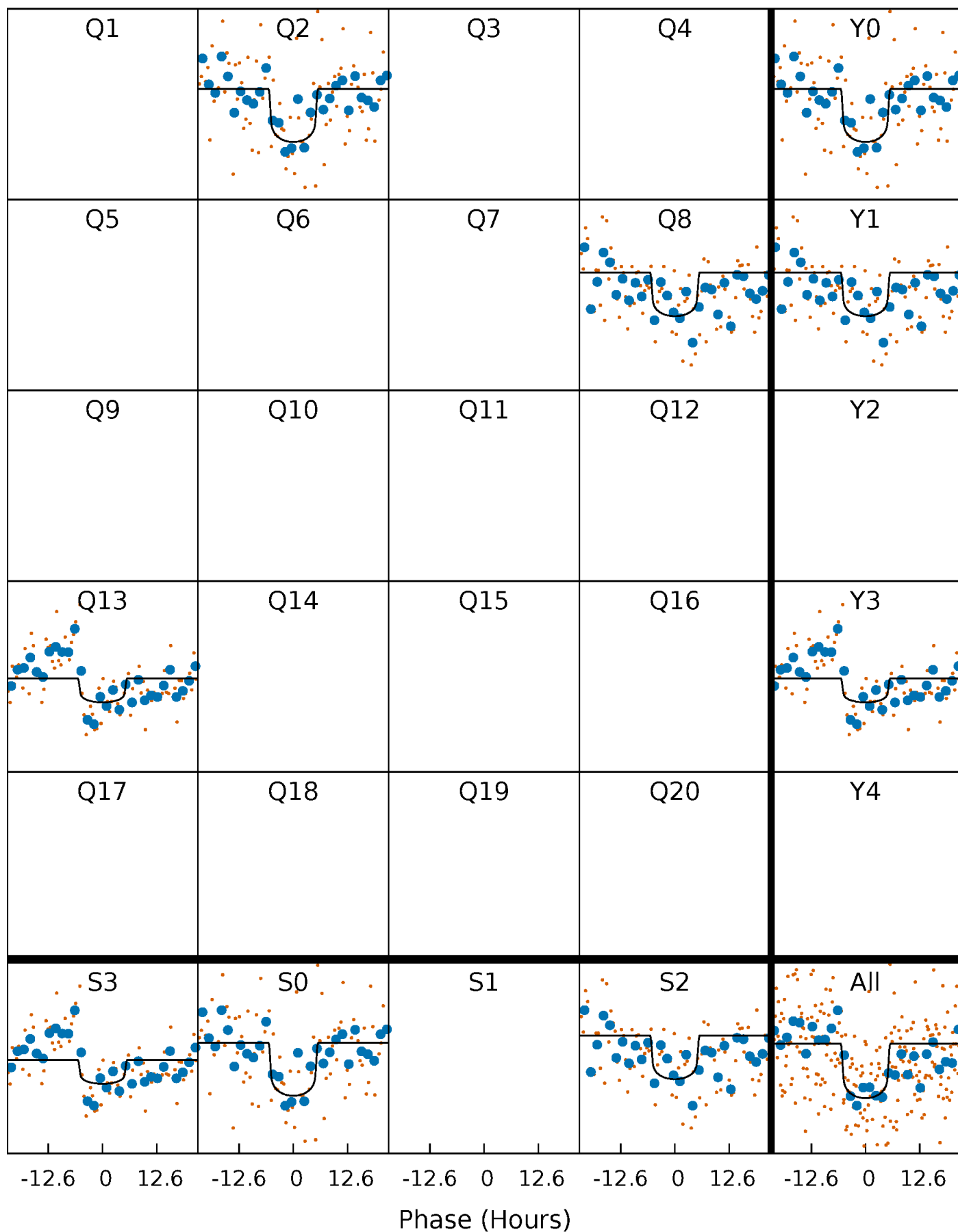
PDC Quarter-Phased Transit Curves

TCE 011872333-01 P=508.359771 Days $T_0=246.890433$ (BKJD)



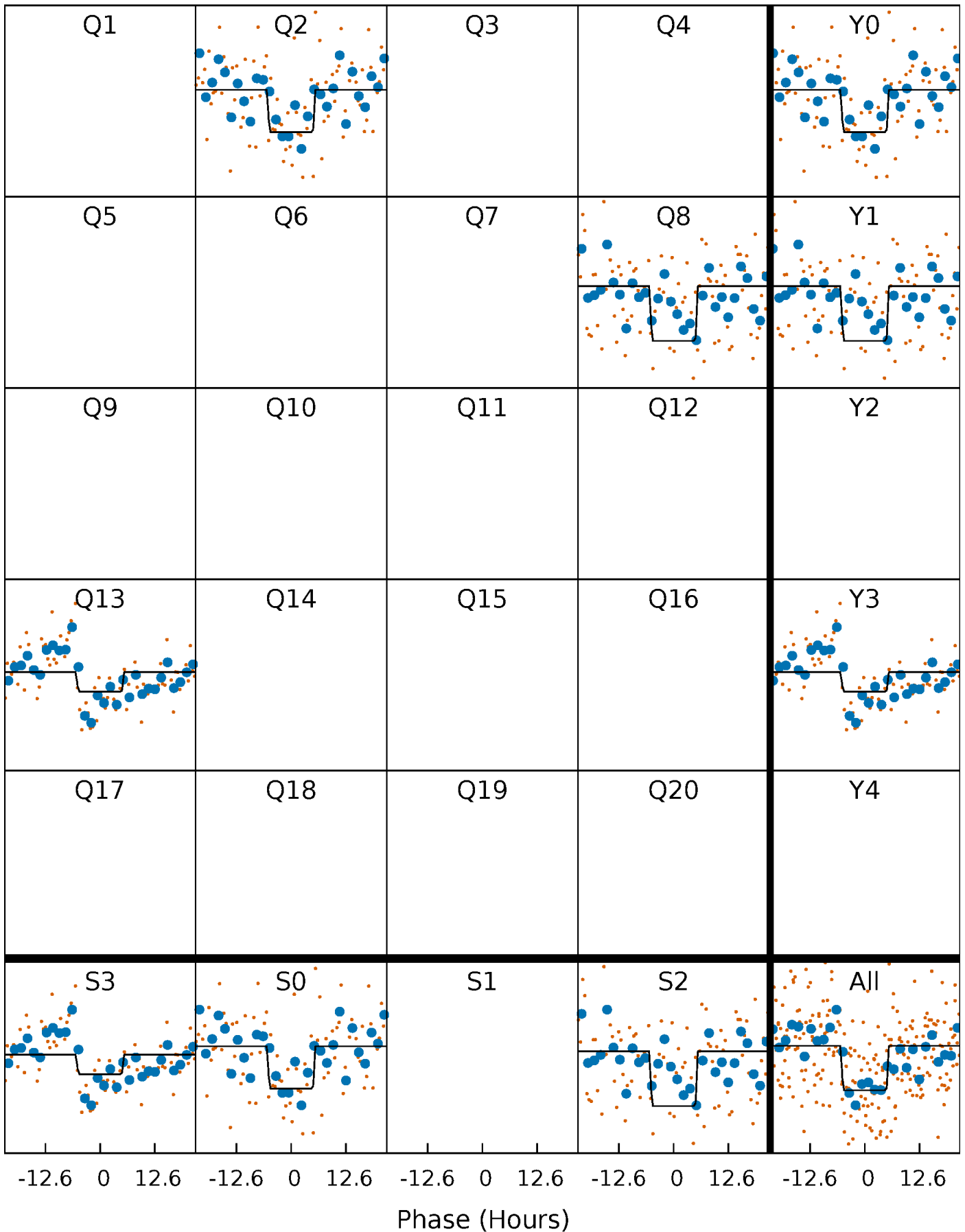
DV Quarter-Phased Transit Curves

TCE 011872333-01 P=508.359771 Days $T_0=246.890433$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

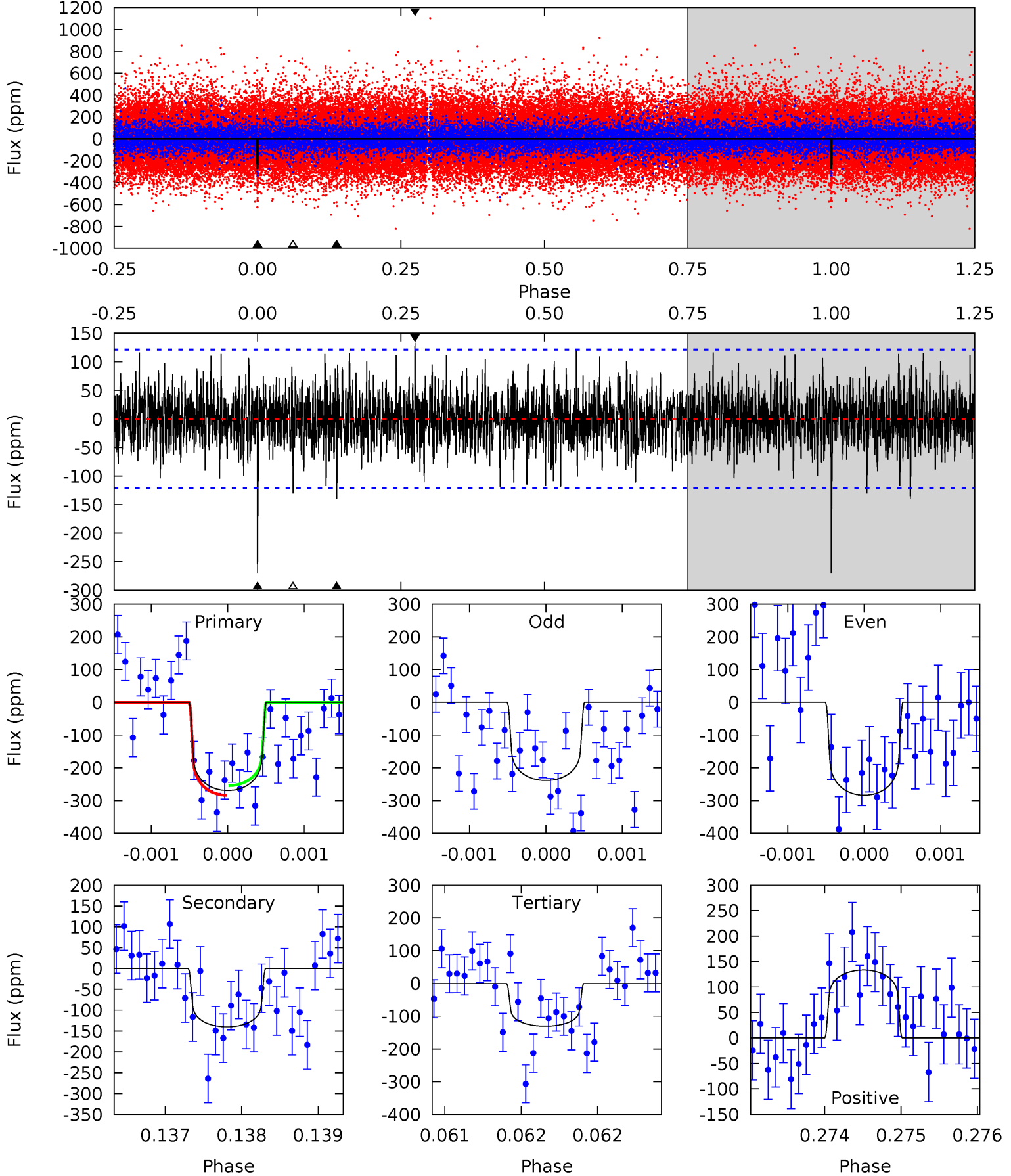
TCE 011872333-01 P=508.366539 Days $T_0=246.893704$ (BKJD)



DV Model-Shift Uniqueness Test

011872333-01, P = 508.359771 Days, E = 246.890433 Days

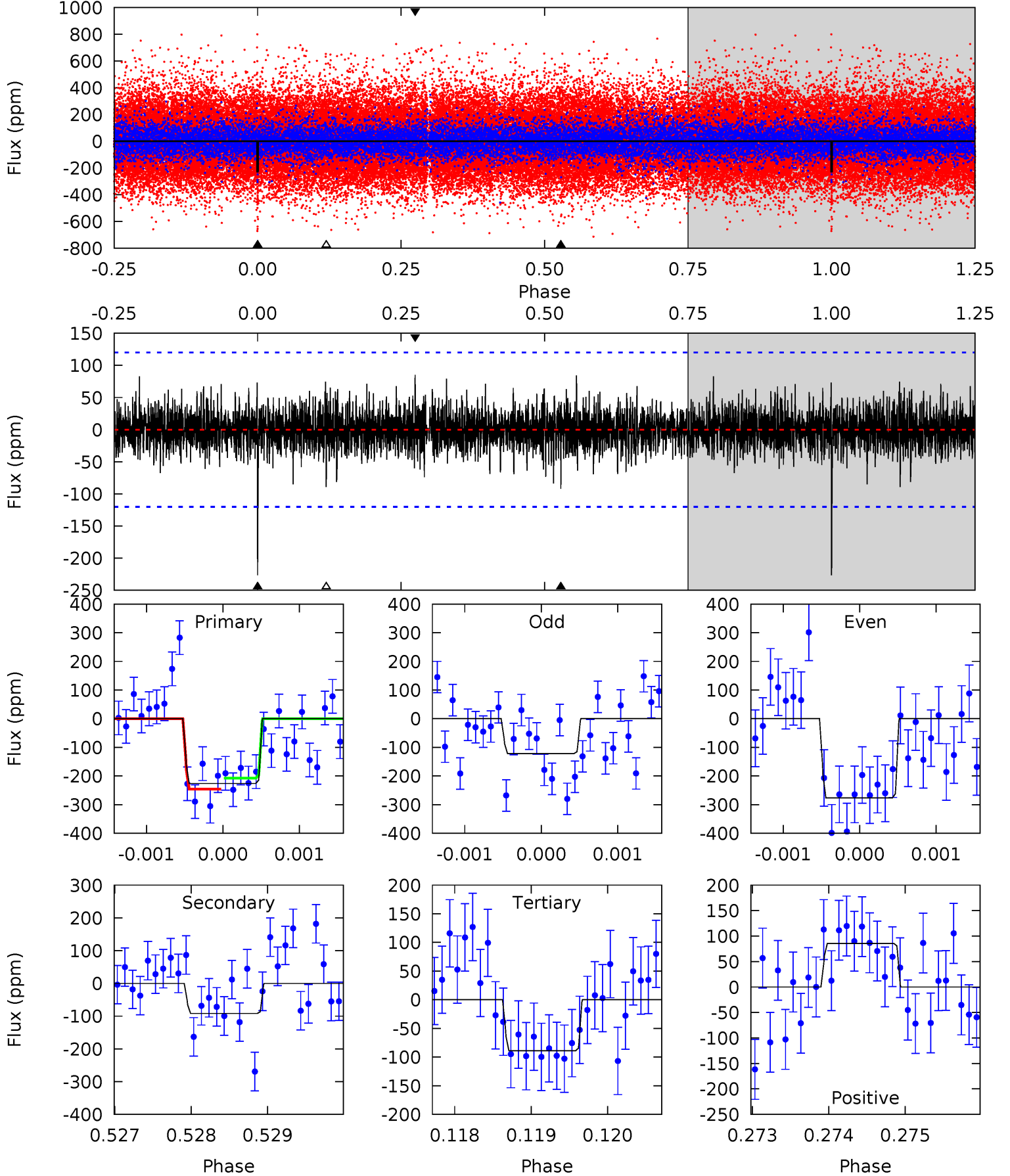
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	6.30	5.88	6.00	5.46	3.31	1.61	6.24	6.12	0.42	0.30	0.96	1.09	0.33	0.67



Alt Model-Shift Uniqueness Test

011872333-01, P = 508.366539 Days, E = 246.893704 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	4.18	4.06	3.89	5.47	3.32	0.99	6.26	6.43	0.13	0.29	3.33	1.18	0.27	0.87



Stellar Parameters For KIC 011872333

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6793^{+189}_{-236}	$4.226^{+0.124}_{-0.201}$	$-0.140^{+0.250}_{-0.350}$	$1.460^{+0.475}_{-0.292}$	$1.316^{+0.204}_{-0.204}$	$0.595^{+0.360}_{-0.304}$
	+3%/-3%	+3%/-5%	+179%/-250%	+33%/-20%	+16%/-16%	+61%/-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 011872333-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-140 ± 22	$2.64^{+1.23}_{-1.13}$	438^{+35}_{-27}	5734^{+2130}_{-831}	20459^{+41483}_{-11037}
Alt.	-92 ± 22	$2.51^{+1.19}_{-1.12}$	435^{+34}_{-25}	5332^{+1861}_{-857}	14345^{+34721}_{-8149}

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 $A_{obs} \gg 1.0$

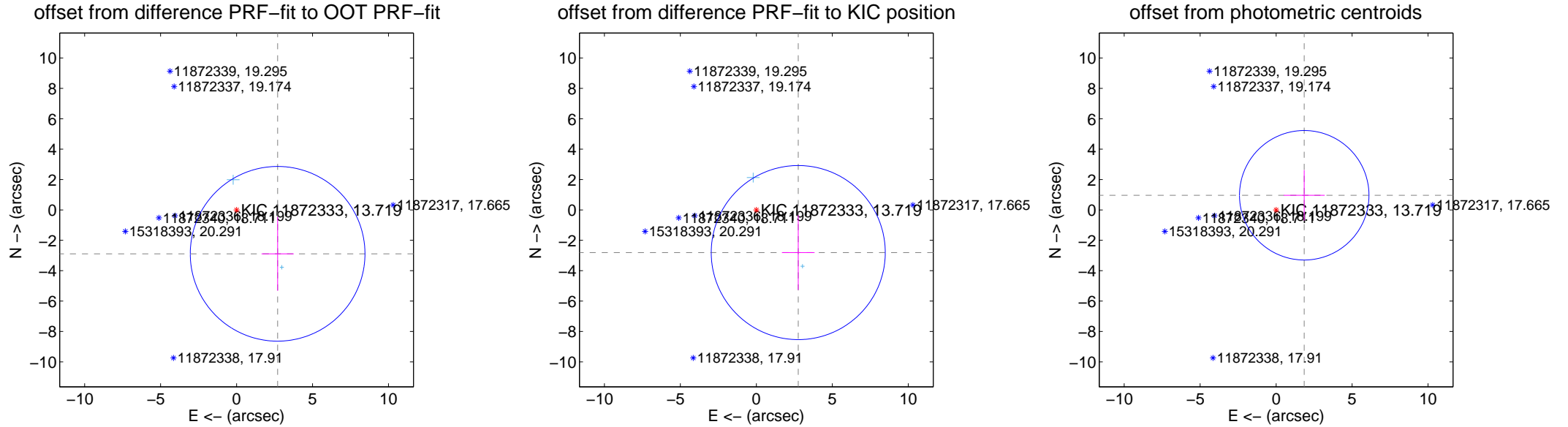
DV Centroid Data

Supplemental centroid analysis for 011872333-01. Kepler magnitude: 13.72. Transit SNR 7.04

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.955 ± 1.917	2.06	-2.702 ± 1.058	-2.888 ± 2.431
PRF-fit source offset from KIC position	3.936 ± 1.909	2.06	-2.759 ± 1.072	-2.807 ± 2.461
photometric centroid source offset	2.09 ± 1.42	1.47	-1.85 ± 1.35	0.96 ± 1.66

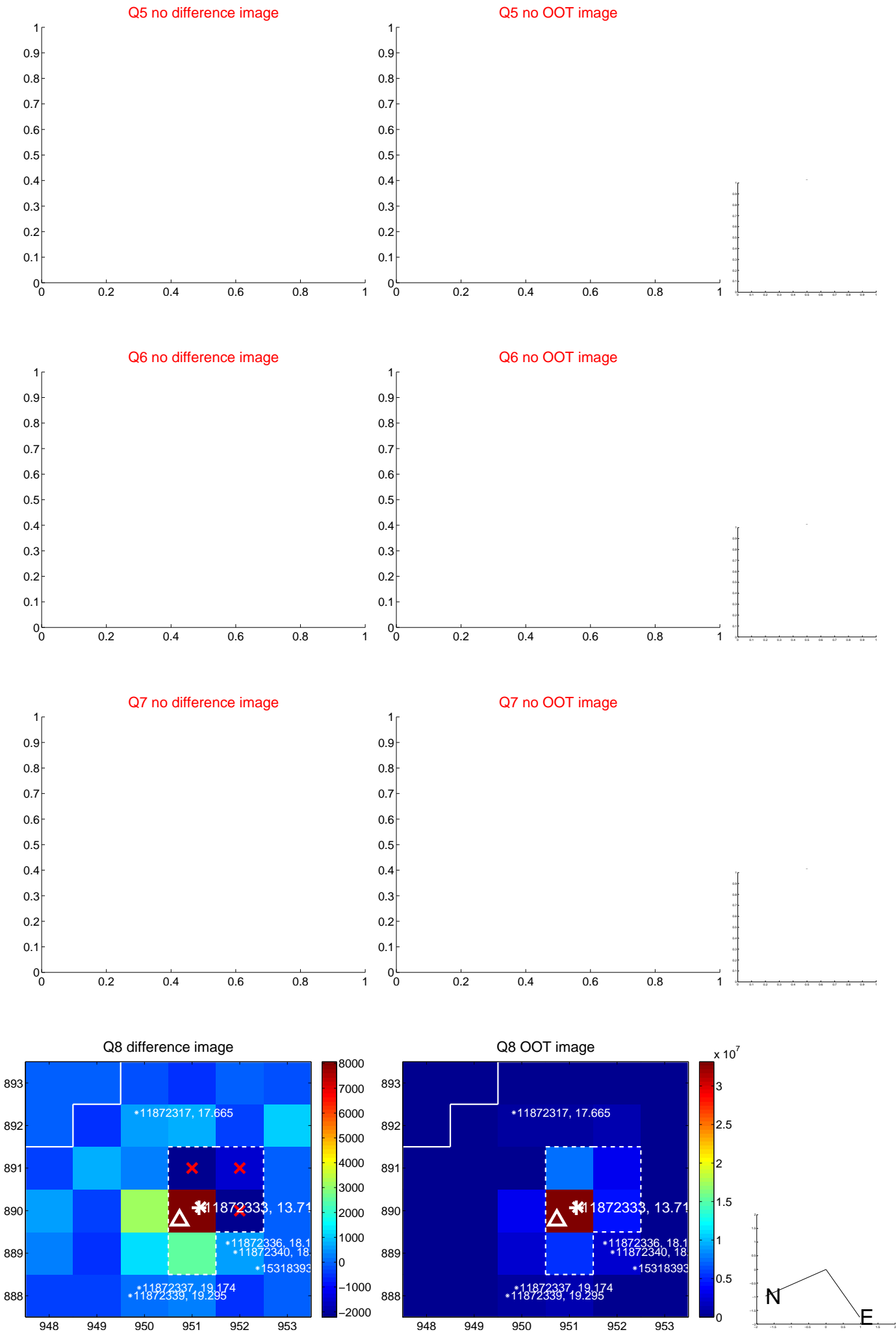


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



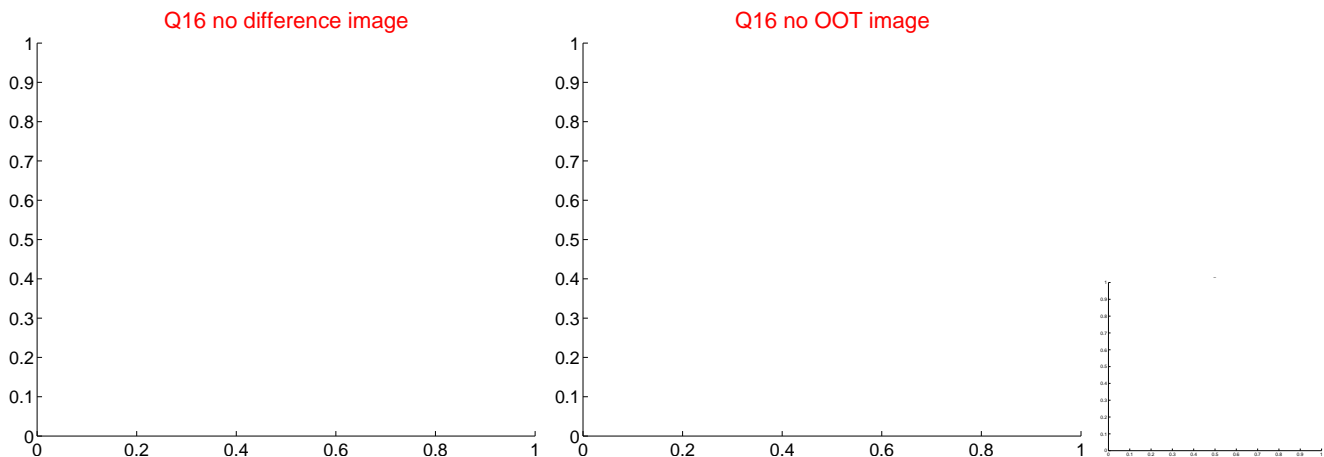
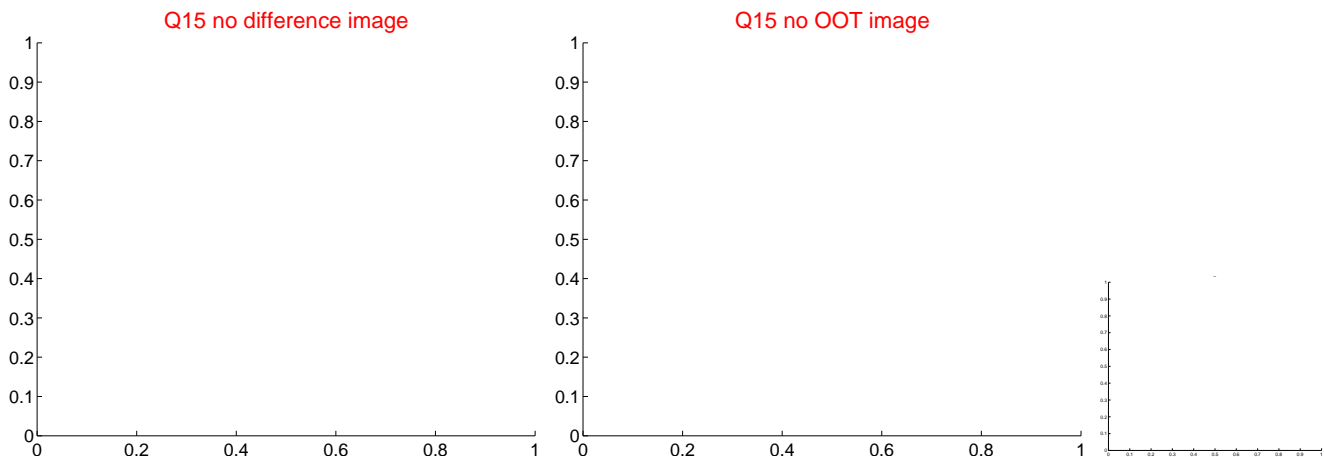
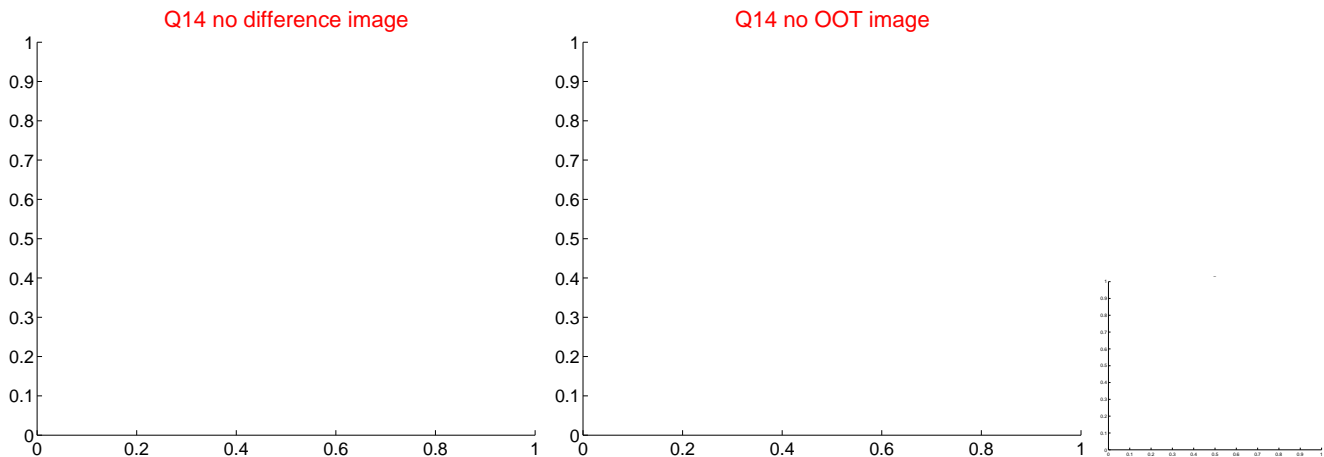
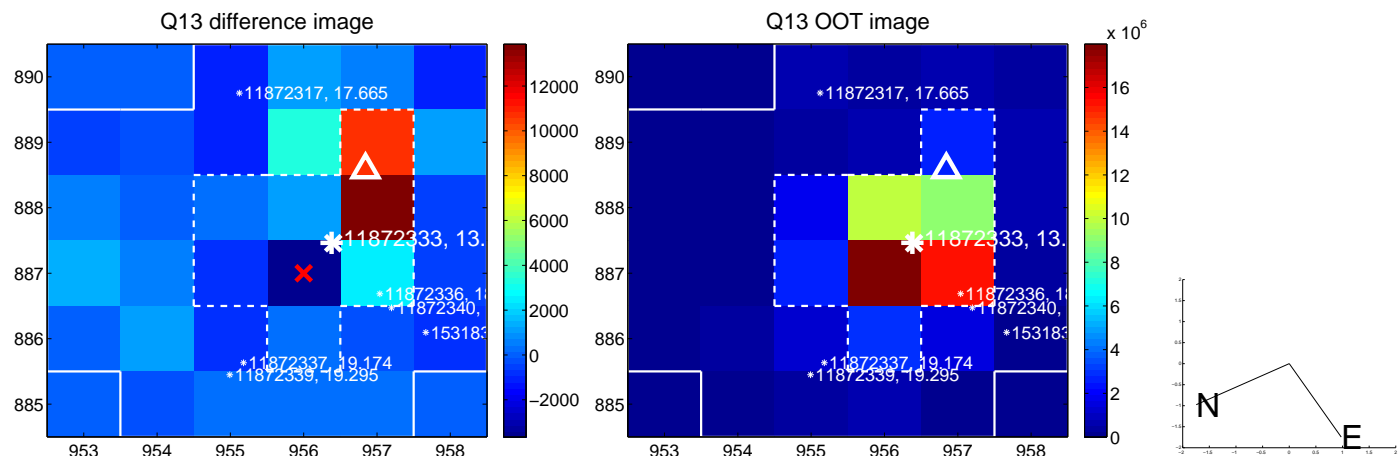
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



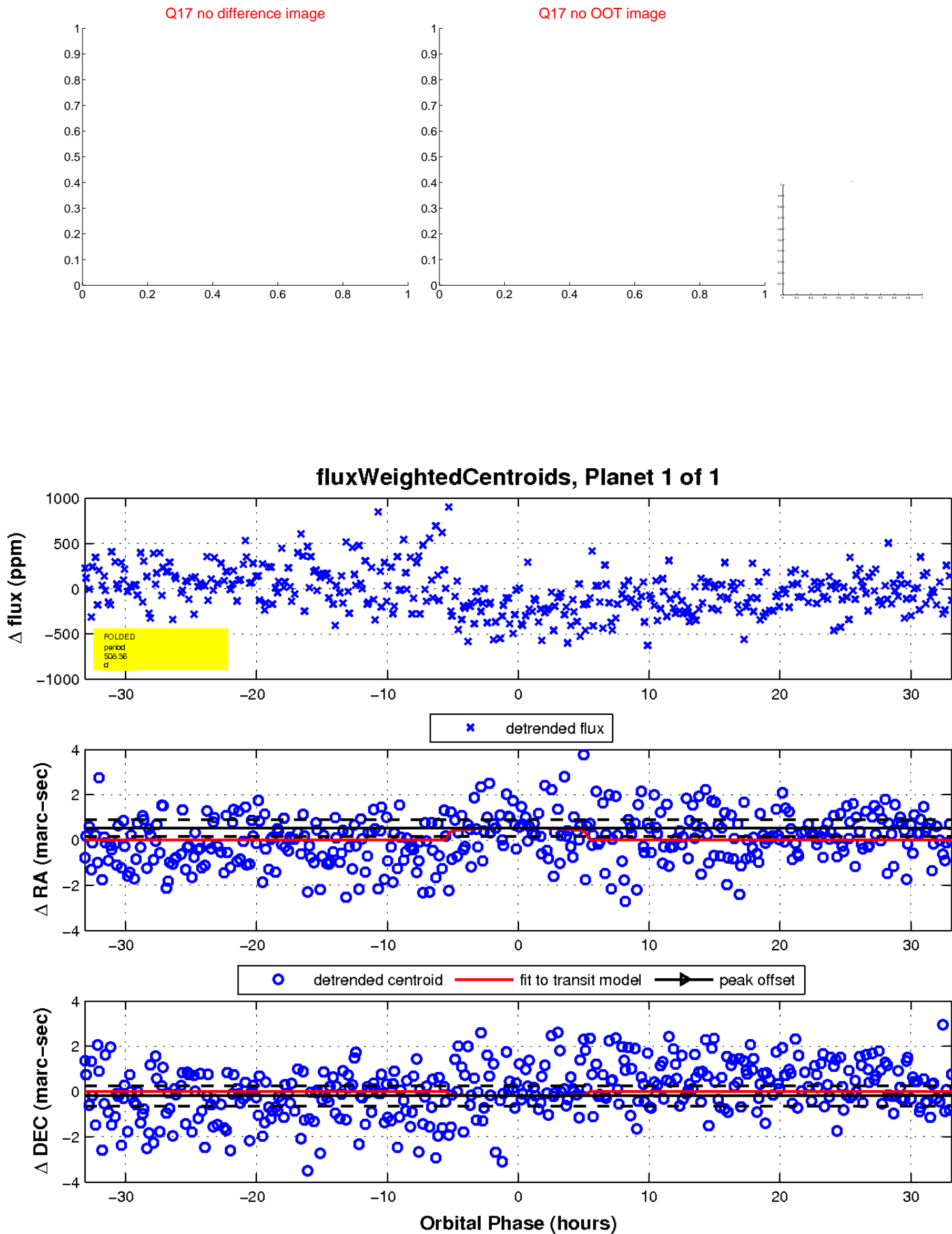
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

