

KIC 007664272

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})
007664272-01	OBS	7845.01	341.026576	448.712357	360.3	5.277	7.4	7.3	0.90	5327	1.69	0.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007664272-01	OBS	FP	0.15	1	0	0	0	MOD_NONUNIQ_ALT—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.

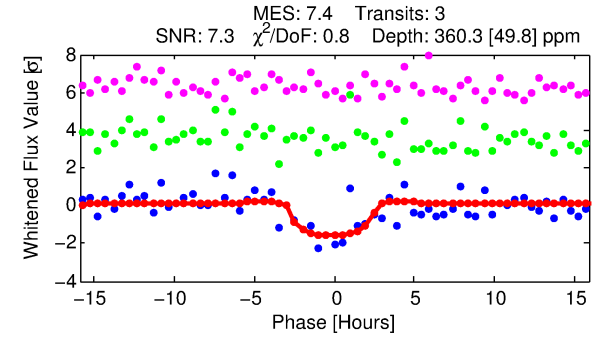
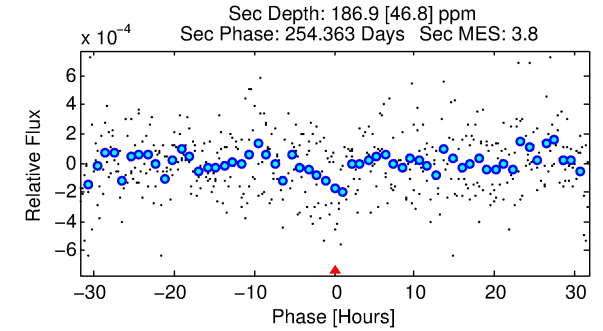
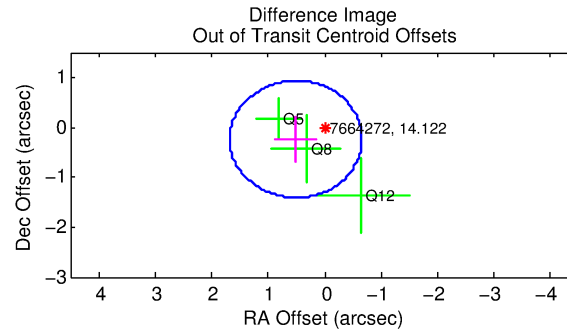
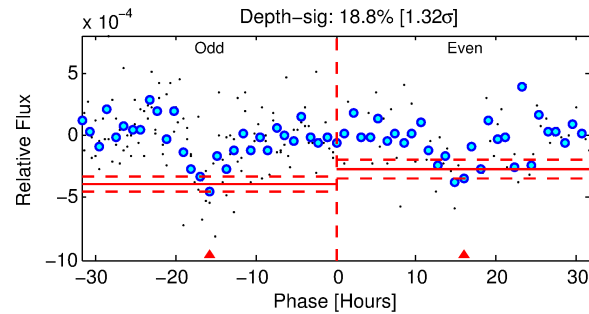
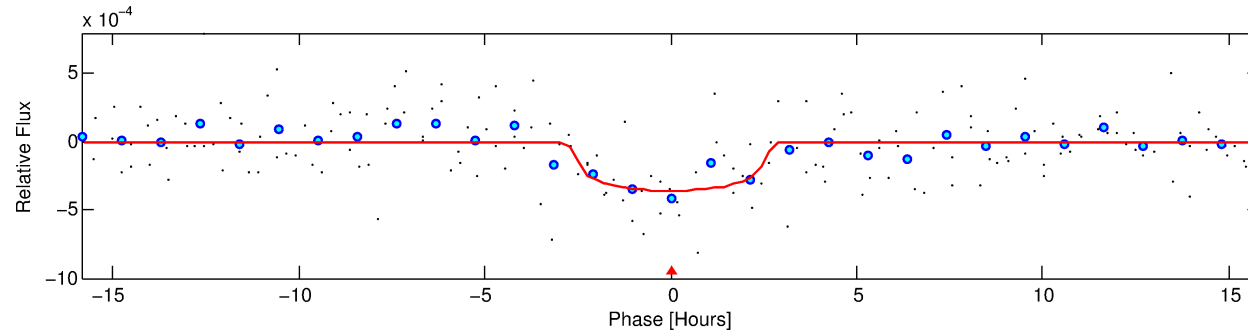
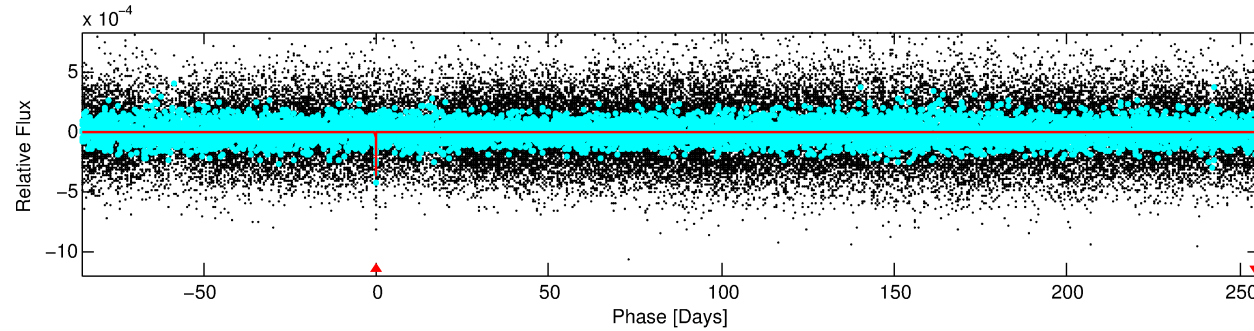
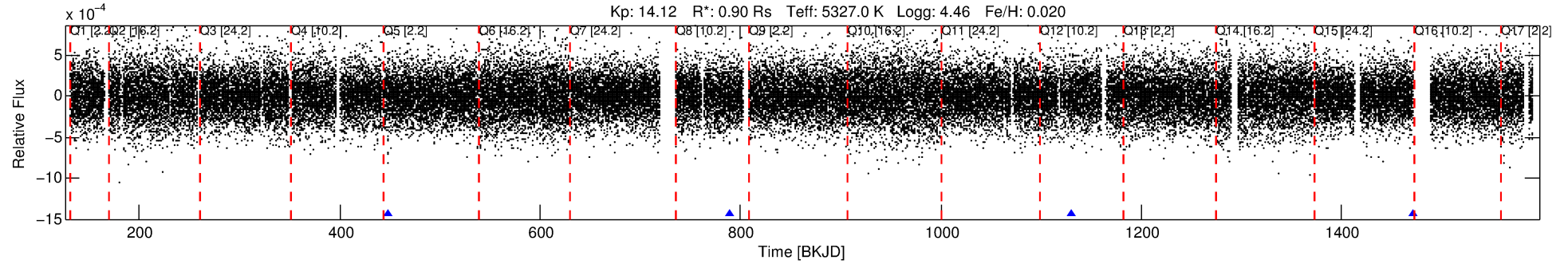
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007664272-01

No Significant Match Found

DV One-Page Summary

KIC: 7664272 Candidate: 1 of 1 Period: 341.027 d



DV Fit Results:

Period = 341.02658 [0.00995] d
Epoch = 448.7124 [0.0142] BKJD
Rp/R* = 0.0172 [0.0615]
a/R* = 475.24 [6375.58]
b = 0.33 [36.85]
Seff = 0.71 [0.19]
Teq = 234 [16] K
Rp = 1.69 [6.02] Re
a = 0.9004 [0.1410] AU
Ag = 29331.78 [209475.40] [0.14 σ]
Teffp = 4743 [8465] K [0.53 σ]

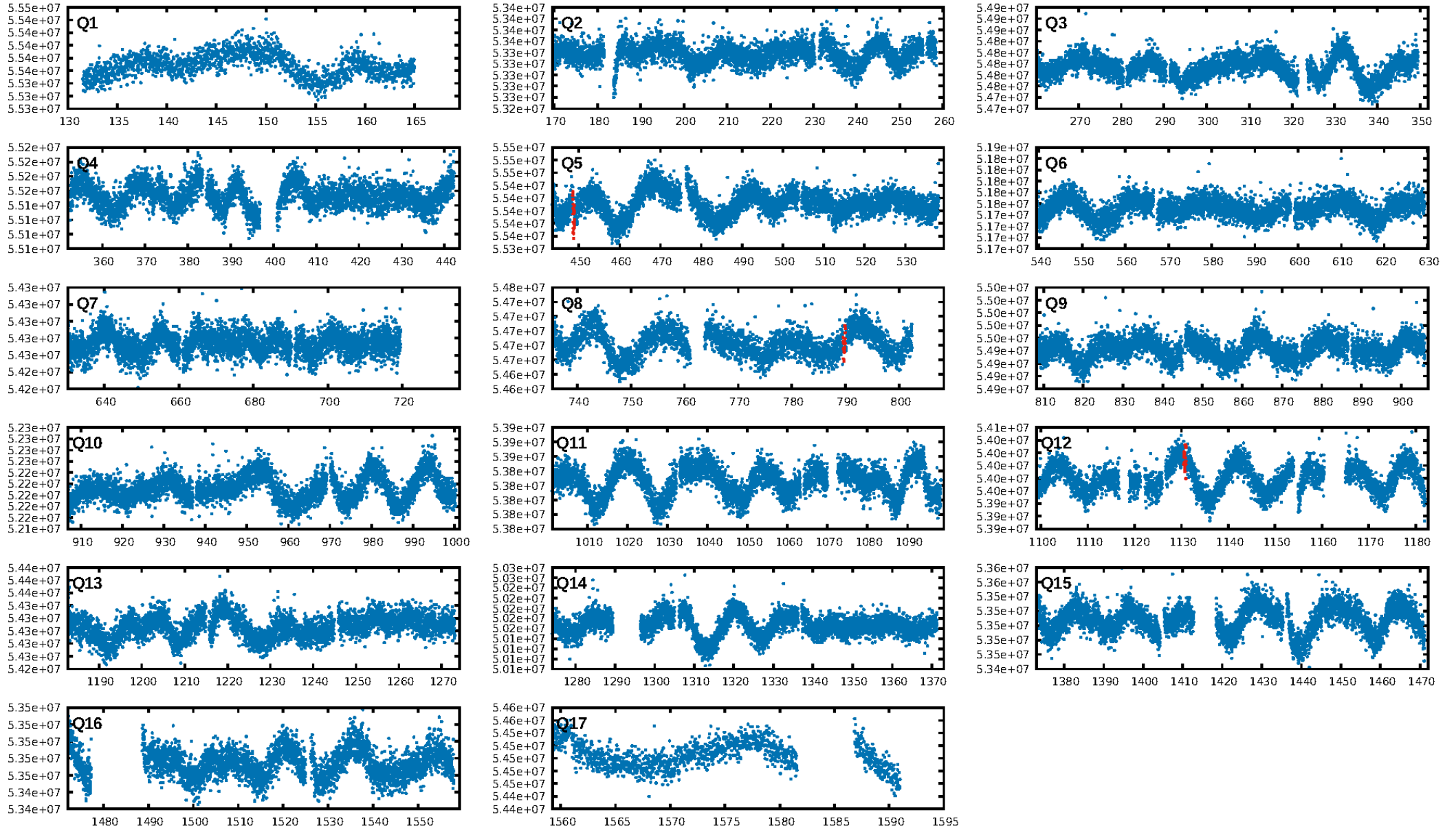
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 28.4%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.26e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.813
Centroid-sig: 50.8%
Centroid-so: 0.991 arcsec [0.59 σ]
OotOffset-rm: 0.565 arcsec [1.45 σ]
OotOffset-st: 0/0/2/1 [3]
KicOffset-rm: 0.720 arcsec [1.83 σ]
KicOffset-st: 0/0/2/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

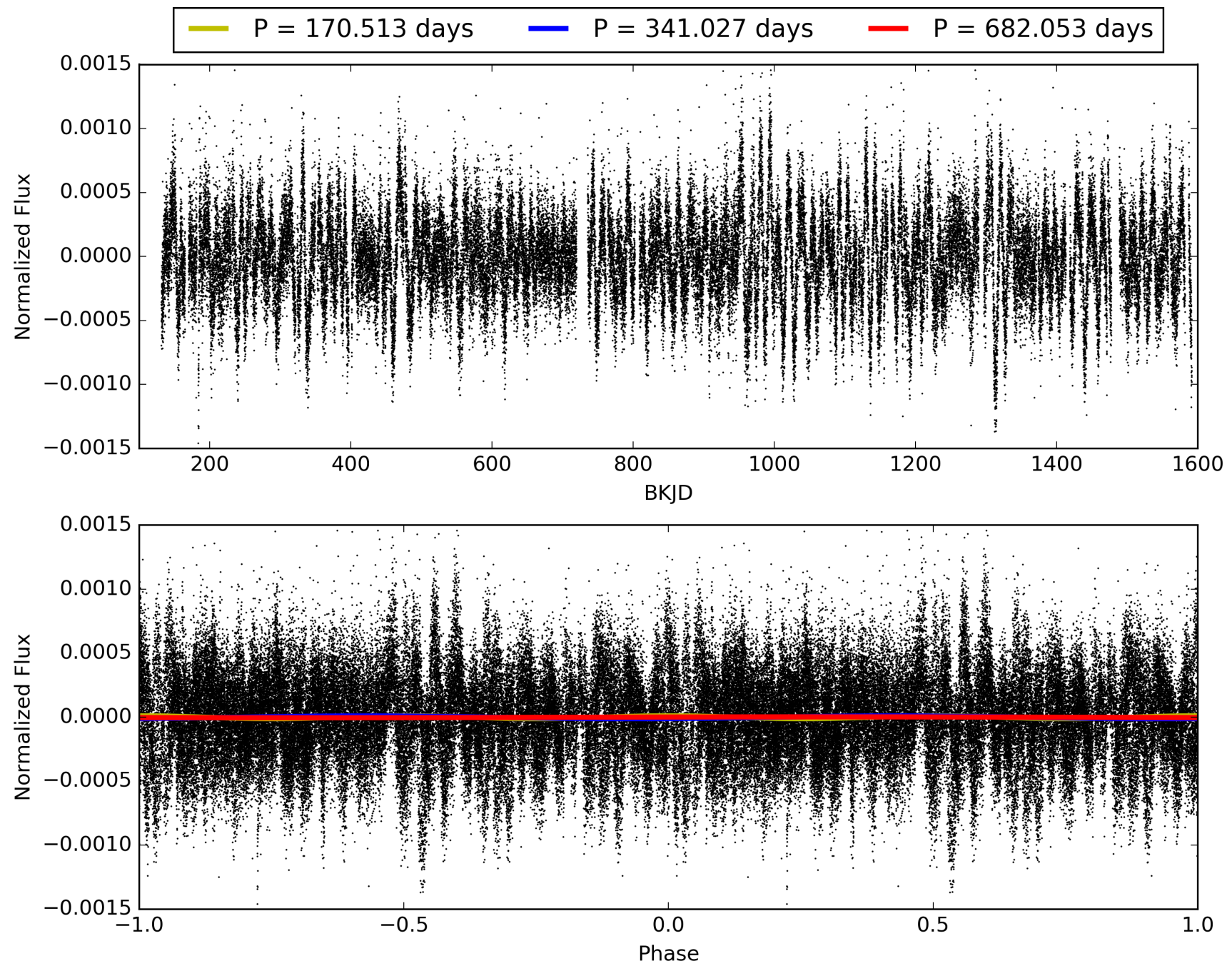
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:34:45 Z

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

TCE 007664272-01, PDC Light Curves

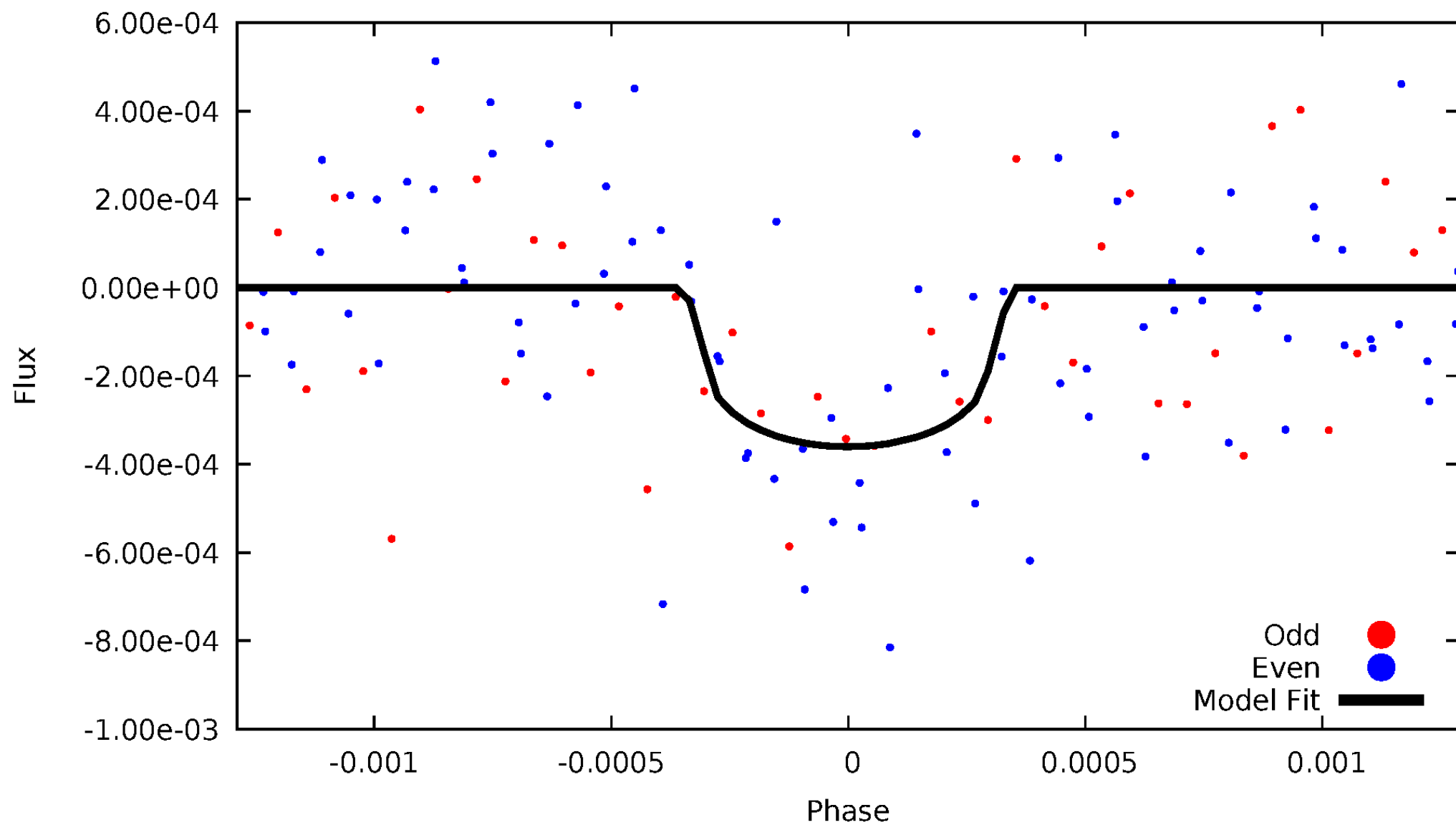


TCE 007664272-01



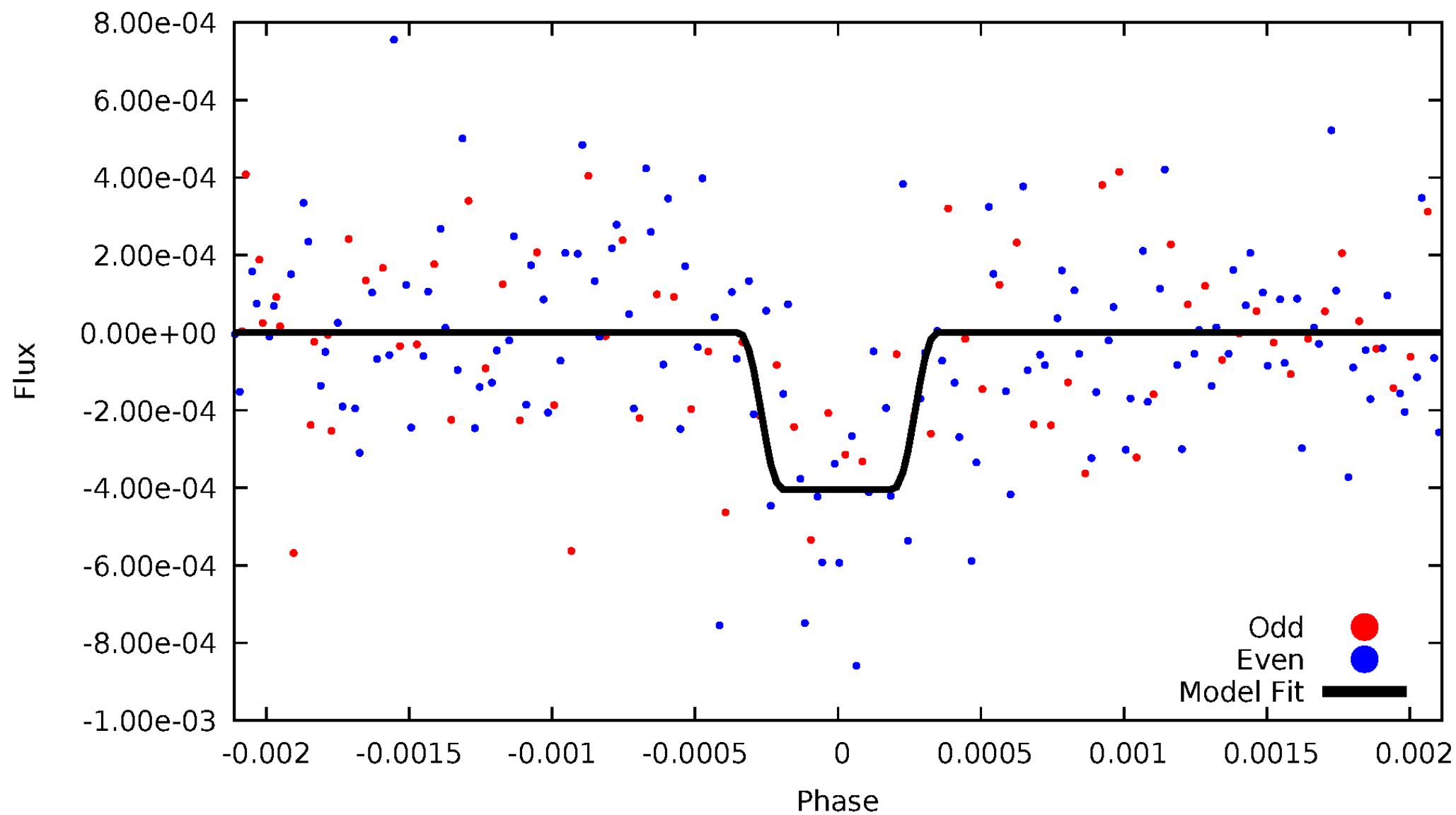
DV Odd/Even

TCE 007664272-01



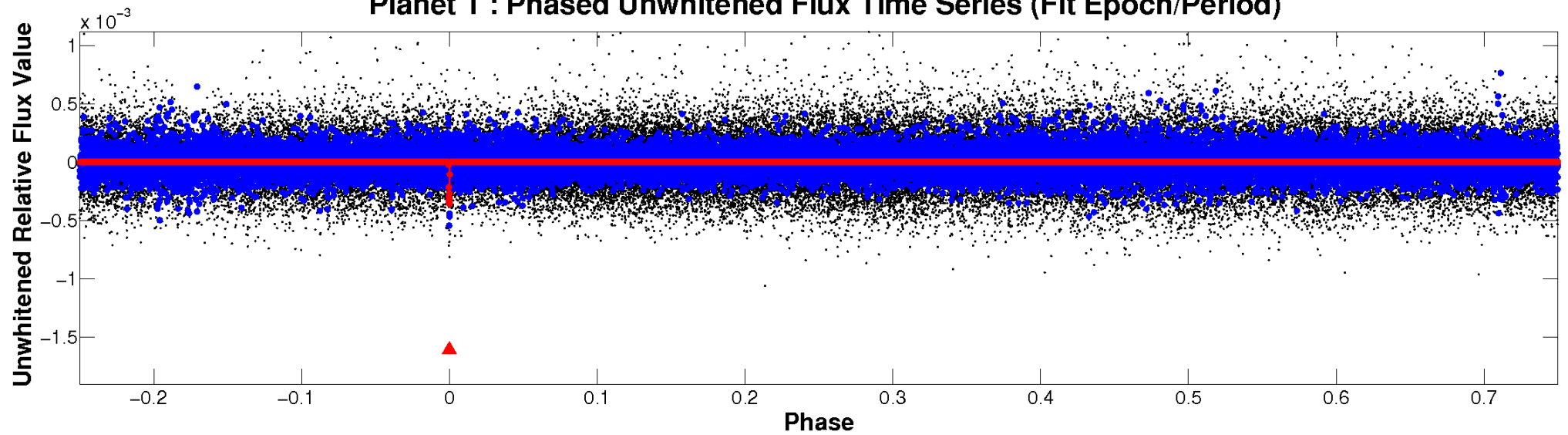
ALT Odd/Even

TCE 007664272-01

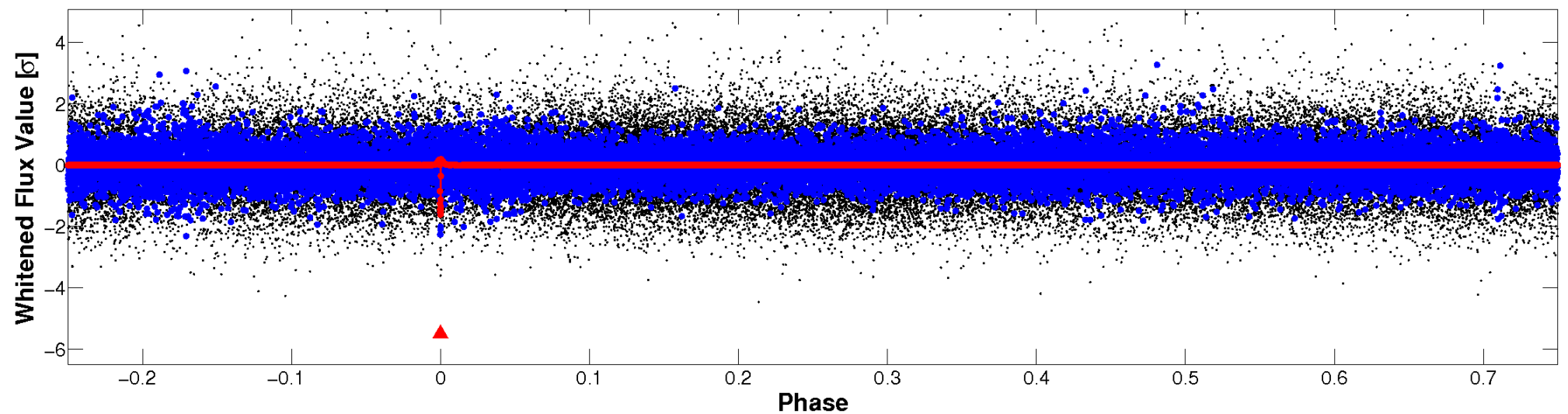


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



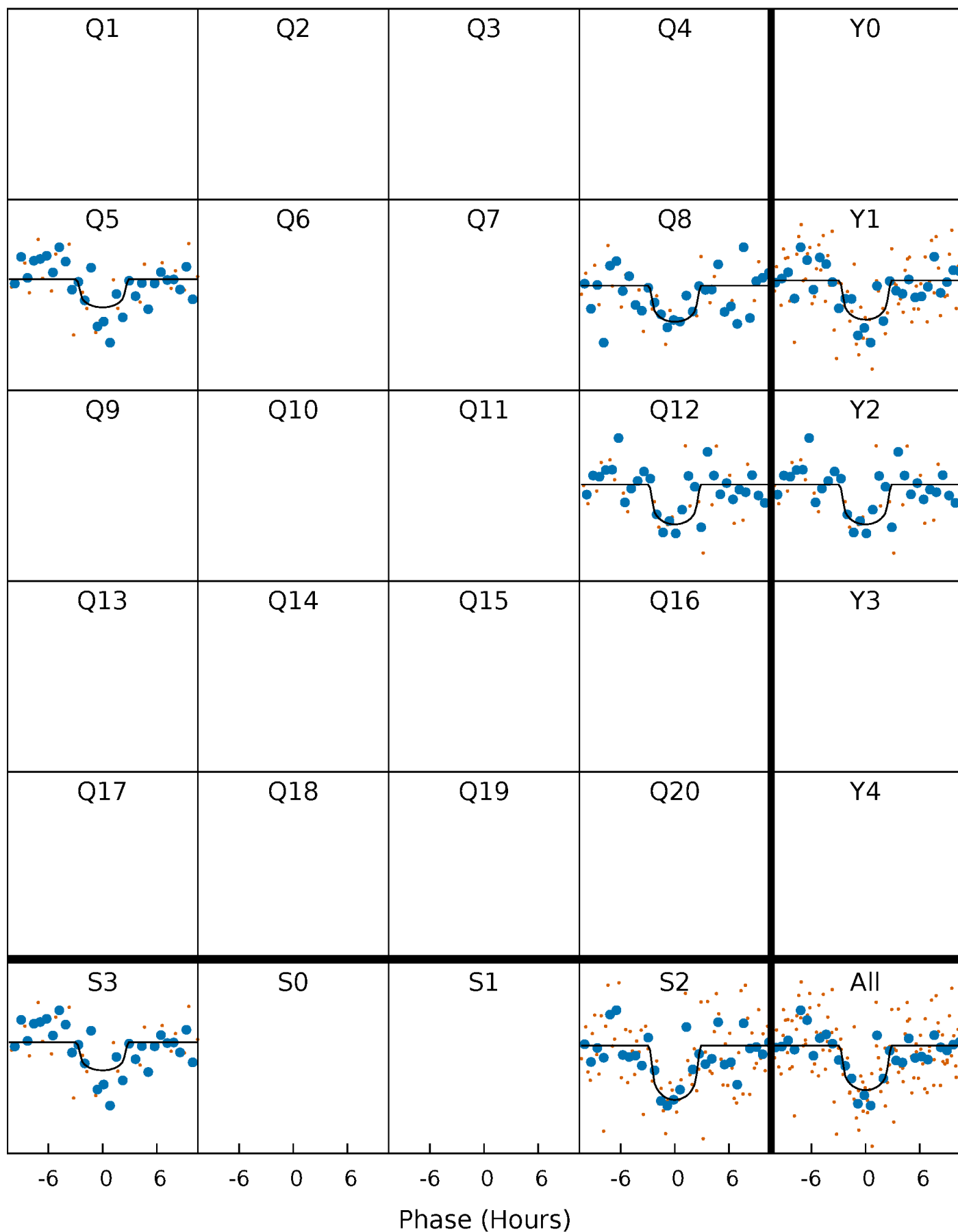
PDC Quarter-Phased Transit Curves

TCE 007664272-01 P=341.026576 Days $T_0=448.712357$ (BKJD)



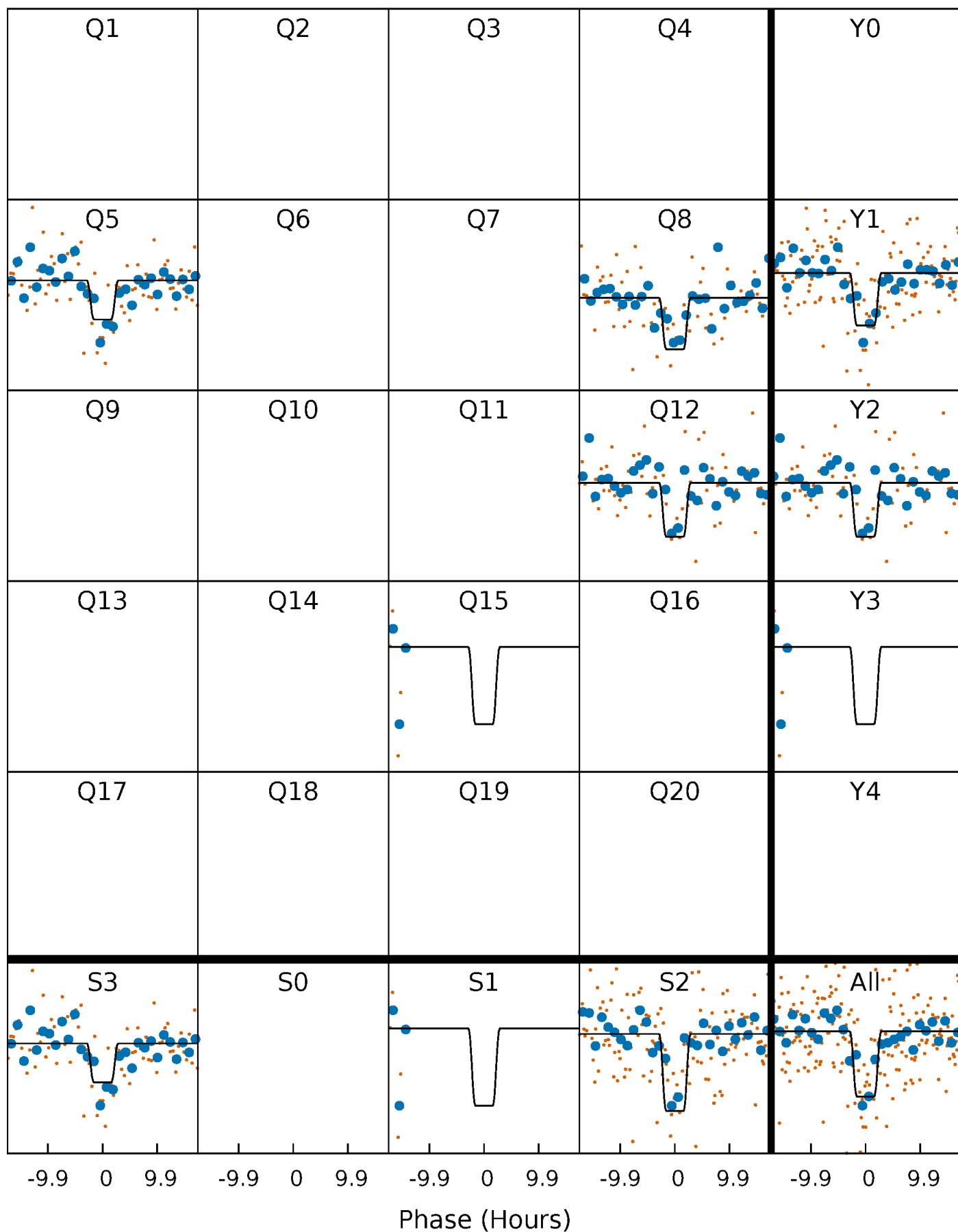
DV Quarter-Phased Transit Curves

TCE 007664272-01 P=341.026576 Days $T_0=448.712357$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

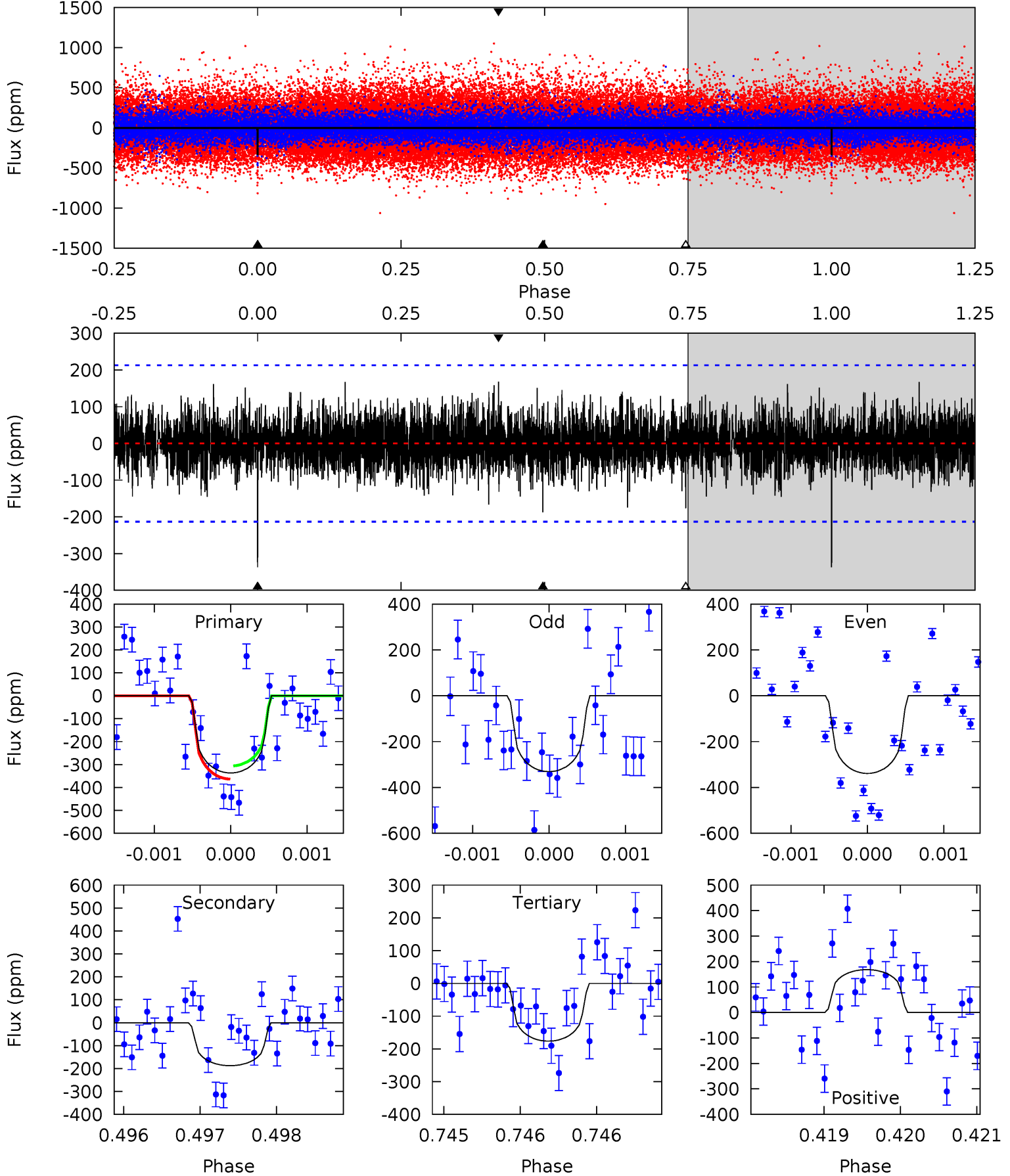
TCE 007664272-01 P=341.008241 Days $T_0=448.720353$ (BKJD)



DV Model-Shift Uniqueness Test

007664272-01, P = 341.026576 Days, E = 107.685781 Days

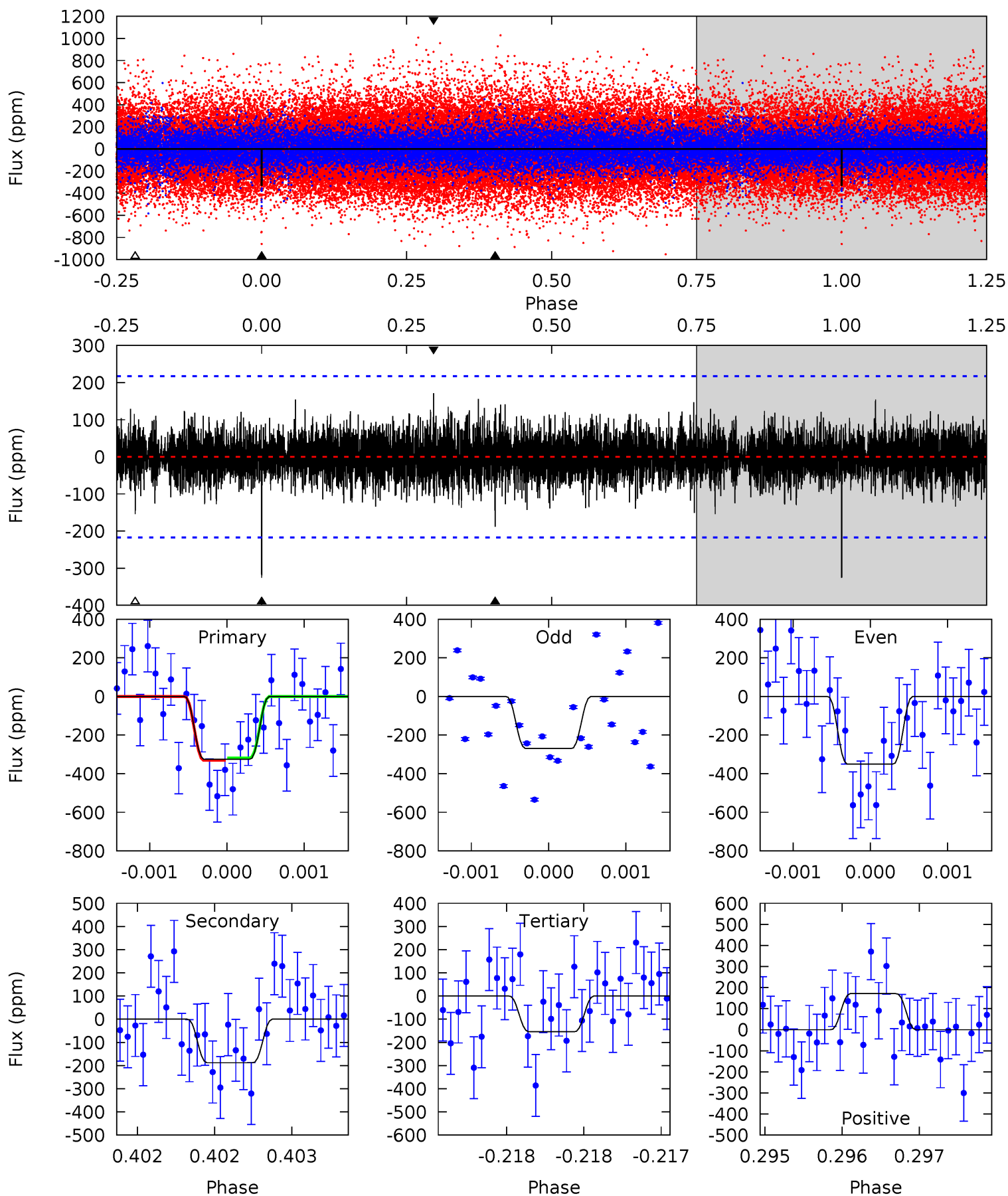
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.73	4.86	4.57	4.36	5.52	3.40	1.19	4.16	4.37	0.29	0.50	0.09	1.02	0.33	0.75



Alt Model-Shift Uniqueness Test

007664272-01, $P = 341.008241$ Days, $E = 107.712112$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.29	4.79	3.93	4.36	5.53	3.42	1.06	4.36	3.93	0.86	0.43	0.94	1.20	0.34	0.16



Stellar Parameters For KIC 007664272

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5327^{+159}_{-143}	$4.456^{+0.112}_{-0.138}$	$0.020^{+0.300}_{-0.300}$	$0.896^{+0.155}_{-0.113}$	$0.836^{+0.102}_{-0.071}$	$1.638^{+0.678}_{-0.625}$
	+3%/-3%	+3%/-3%	+1500%/-1500%	+17%/-13%	+12%/-8%	+41%/-38%
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 007664272-01 / KOI 7845.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-187 ± 39	$4.55^{+4.87}_{-2.90}$	328^{+18}_{-16}	3364^{+1533}_{-604}	3799^{+26609}_{-2842}
Alt.	-188 ± 39	$4.88^{+4.88}_{-3.18}$	330^{+18}_{-17}	3317^{+1564}_{-597}	3632^{+24111}_{-2773}

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

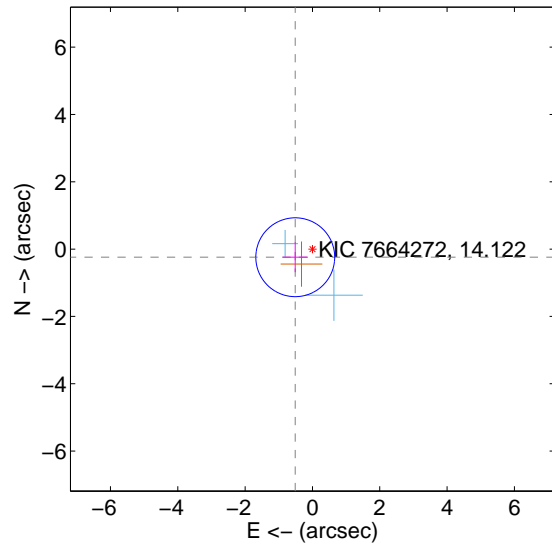
Supplemental centroid analysis for 007664272-01. Kepler magnitude: 14.12. Transit SNR 7.35

There are 2 quarters with good PRF difference image offsets

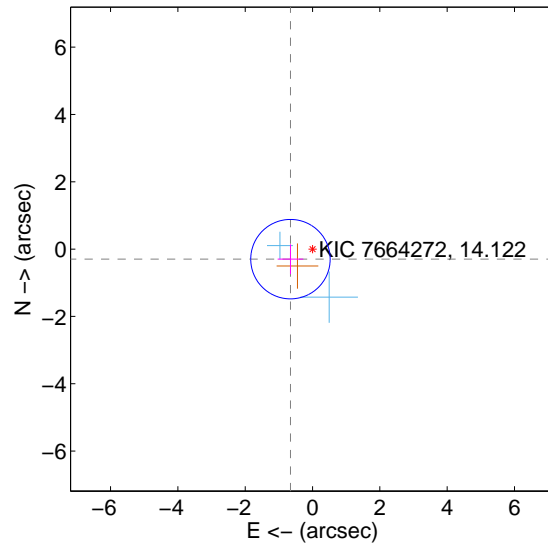
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.565 ± 0.390	1.45	0.510 ± 0.378	-0.242 ± 0.443
PRF-fit source offset from KIC position	0.720 ± 0.393	1.83	0.656 ± 0.382	-0.299 ± 0.444
photometric centroid source offset	0.99 ± 1.67	0.59	0.13 ± 1.86	0.98 ± 1.66

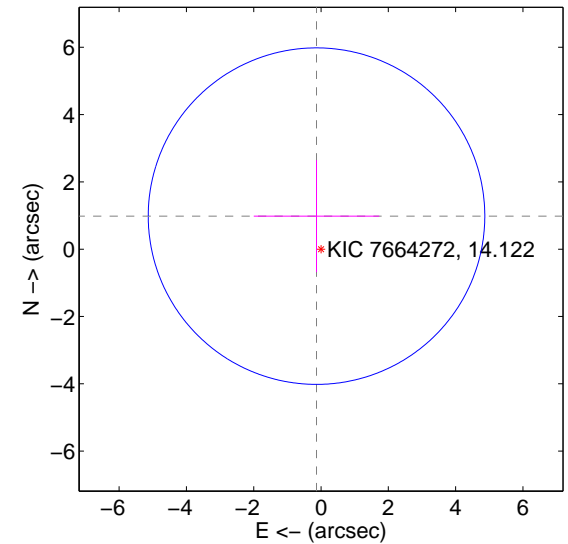
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

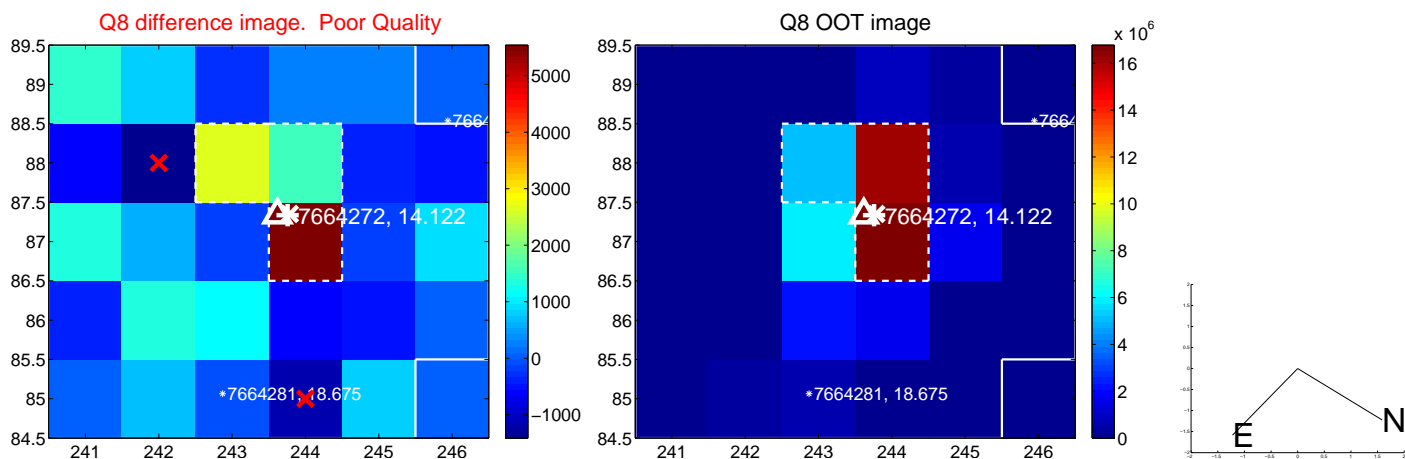
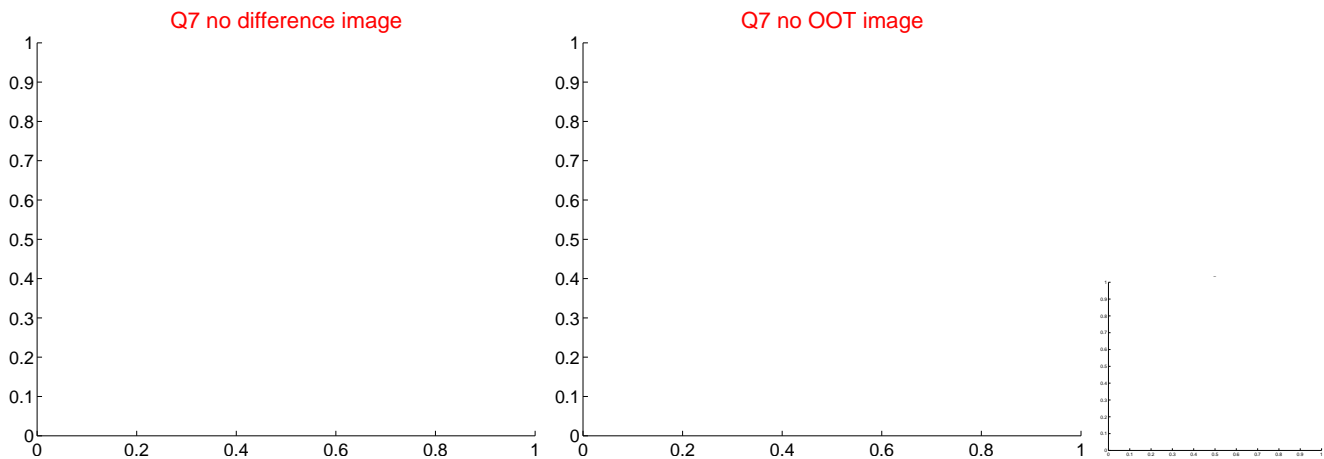
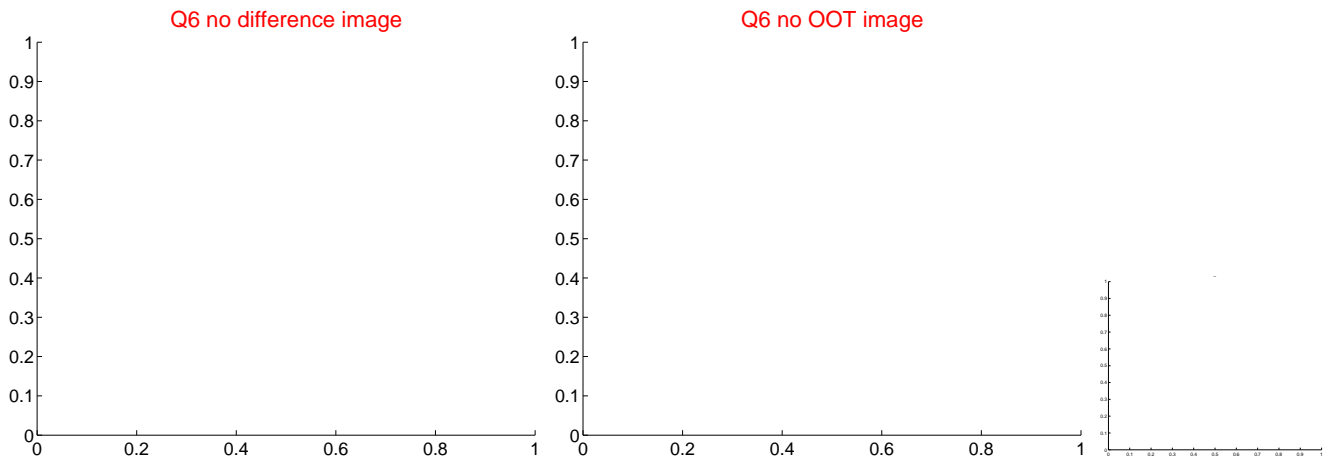
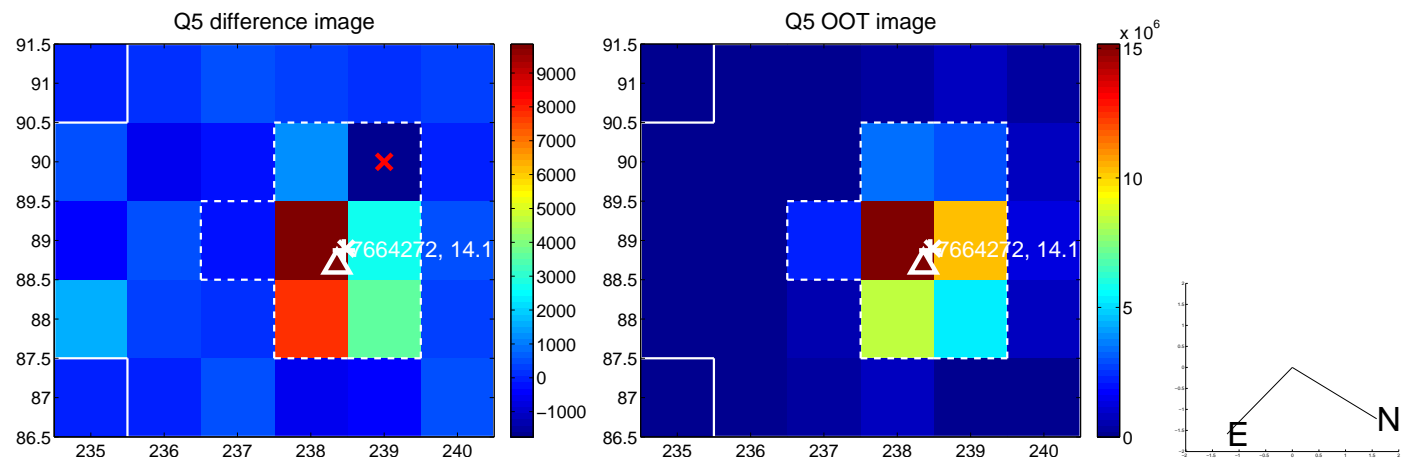


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

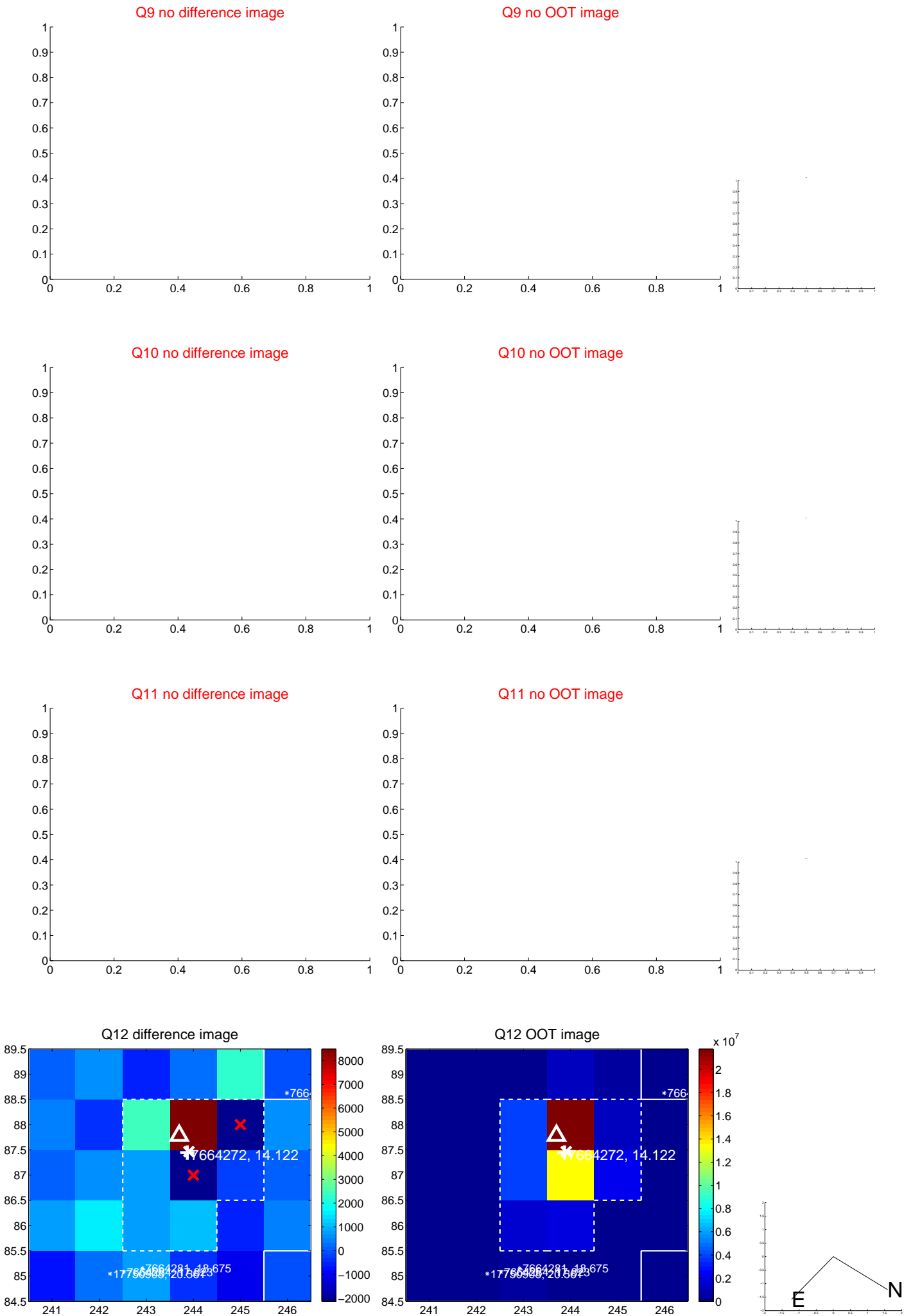
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



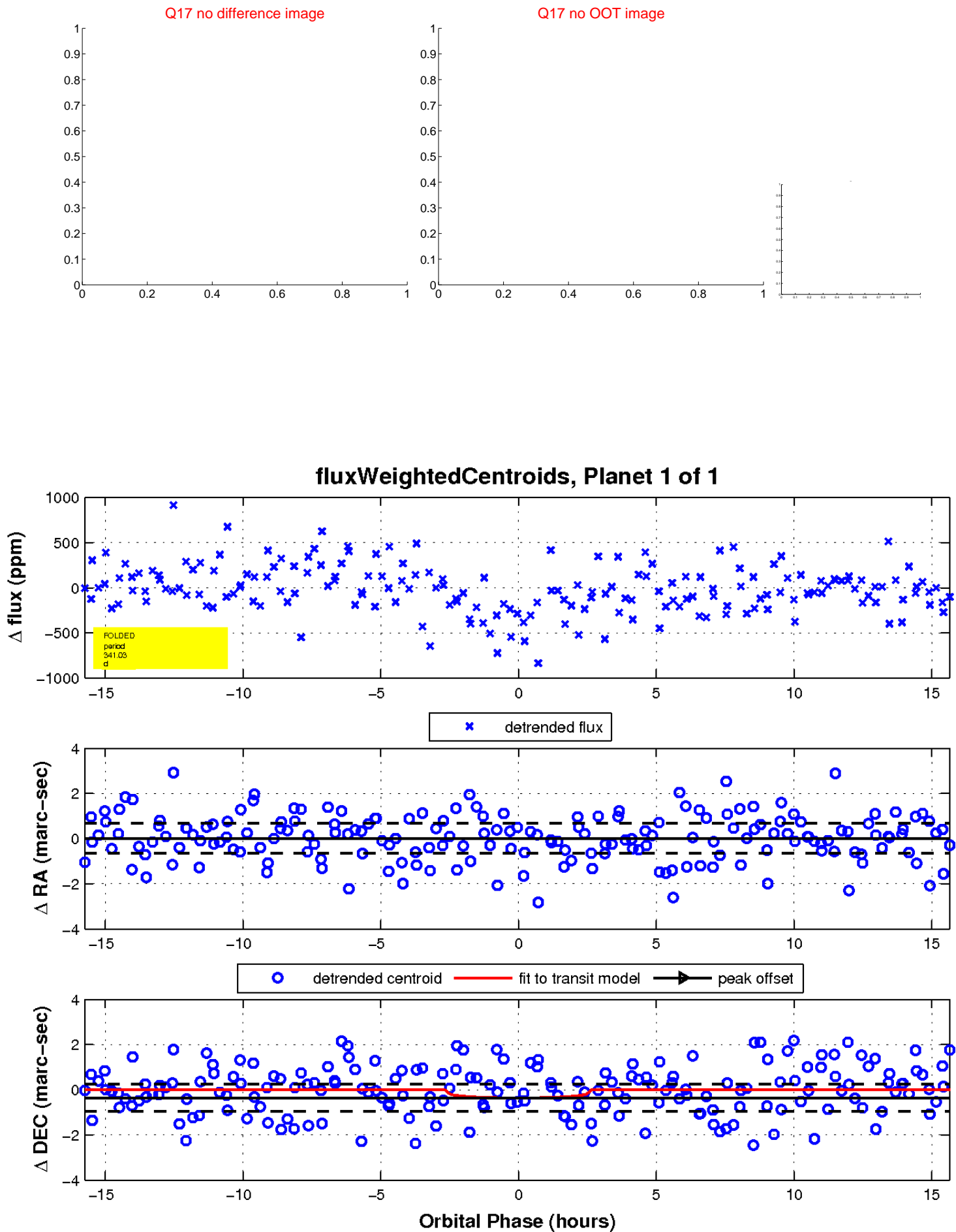
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

