

KIC 009344741

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})
009344741-01	OBS	No	272.695648	265.915870	880.1	3.762	7.6	6.7	9.72	4813	31.33	56.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009344741-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV

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

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

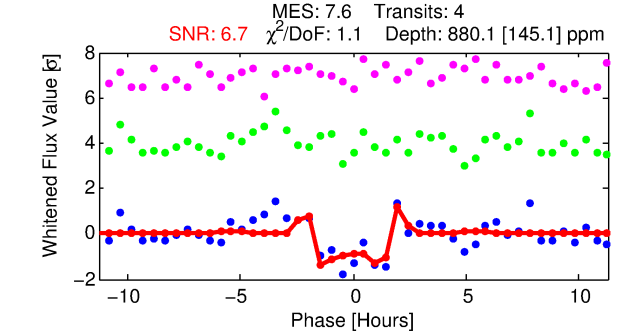
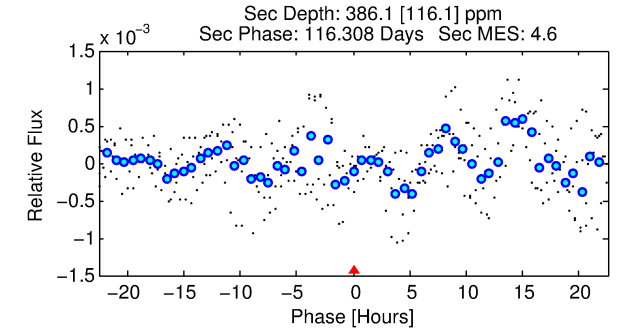
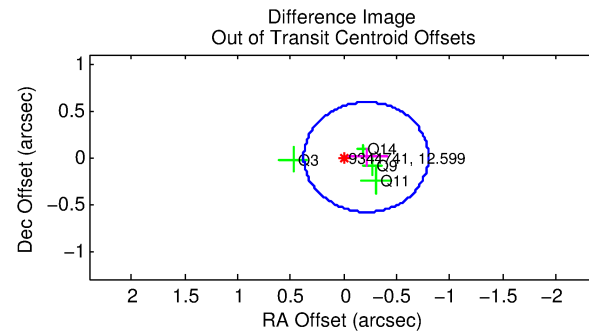
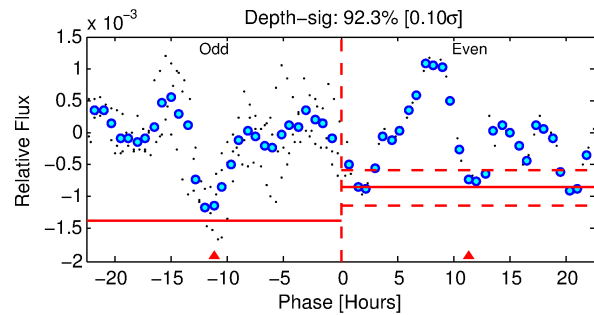
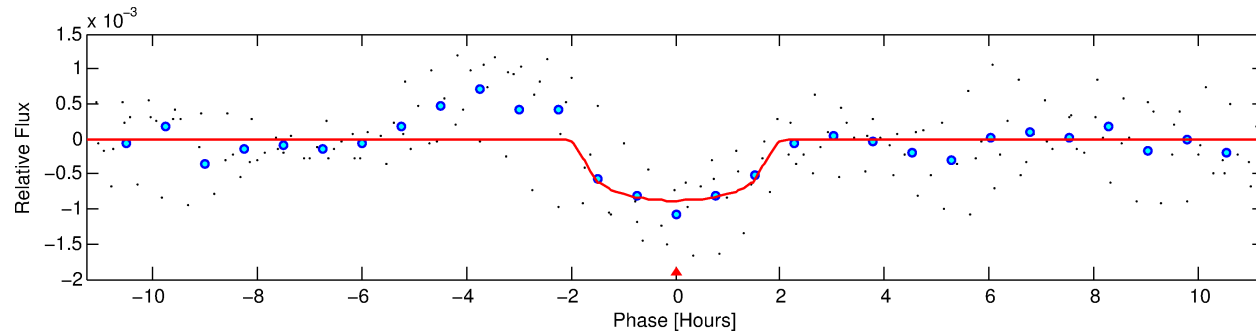
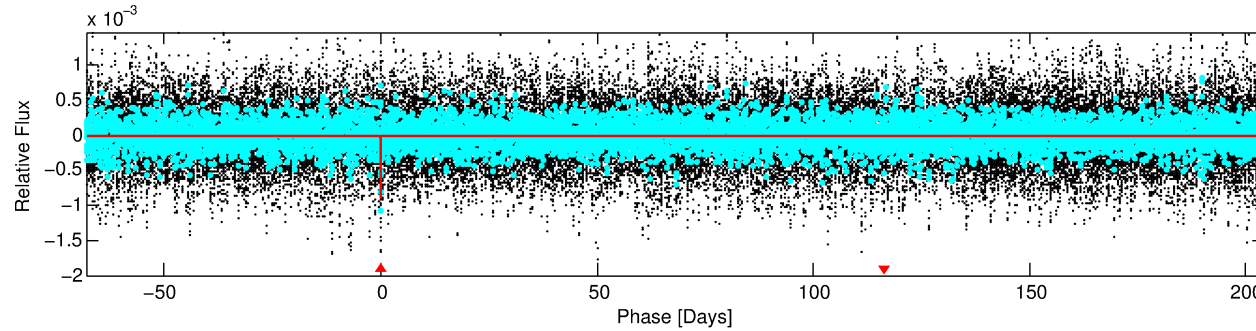
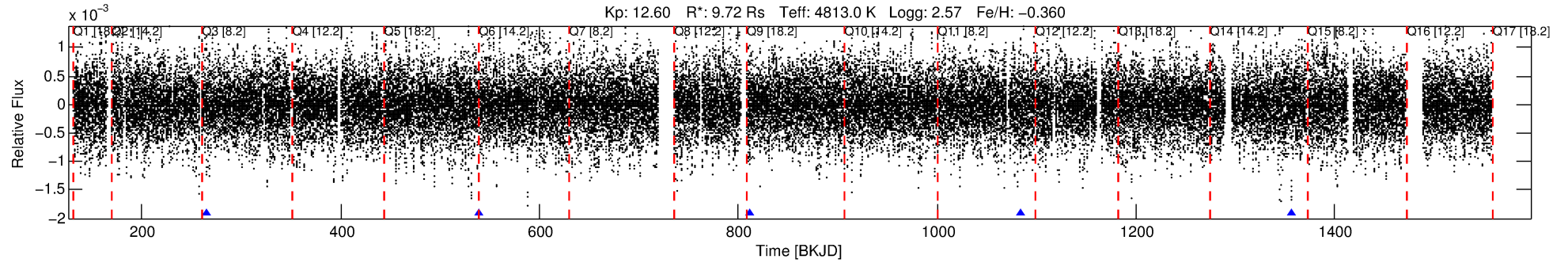
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009344741-01

No Significant Match Found

DV One-Page Summary

KIC: 9344741 Candidate: 1 of 1 Period: 272.696 d



DV Fit Results:

Period = 272.69565 [0.00143] d
Epoch = 265.9159 [0.0037] BKJD
Rp/R* = 0.0295 [0.0152]
a/R* = 394.80 [689.38]
b = 0.74 [1.08]
Seff = 56.85 [6.91]
Teq = 700 [21] K
Rp = 31.33 [16.68] Re
a = 0.8938 [0.0841] AU
Ag = 172.88 [186.13] [0.92 σ]
Teffp = 3926 [1054] K [3.06 σ]

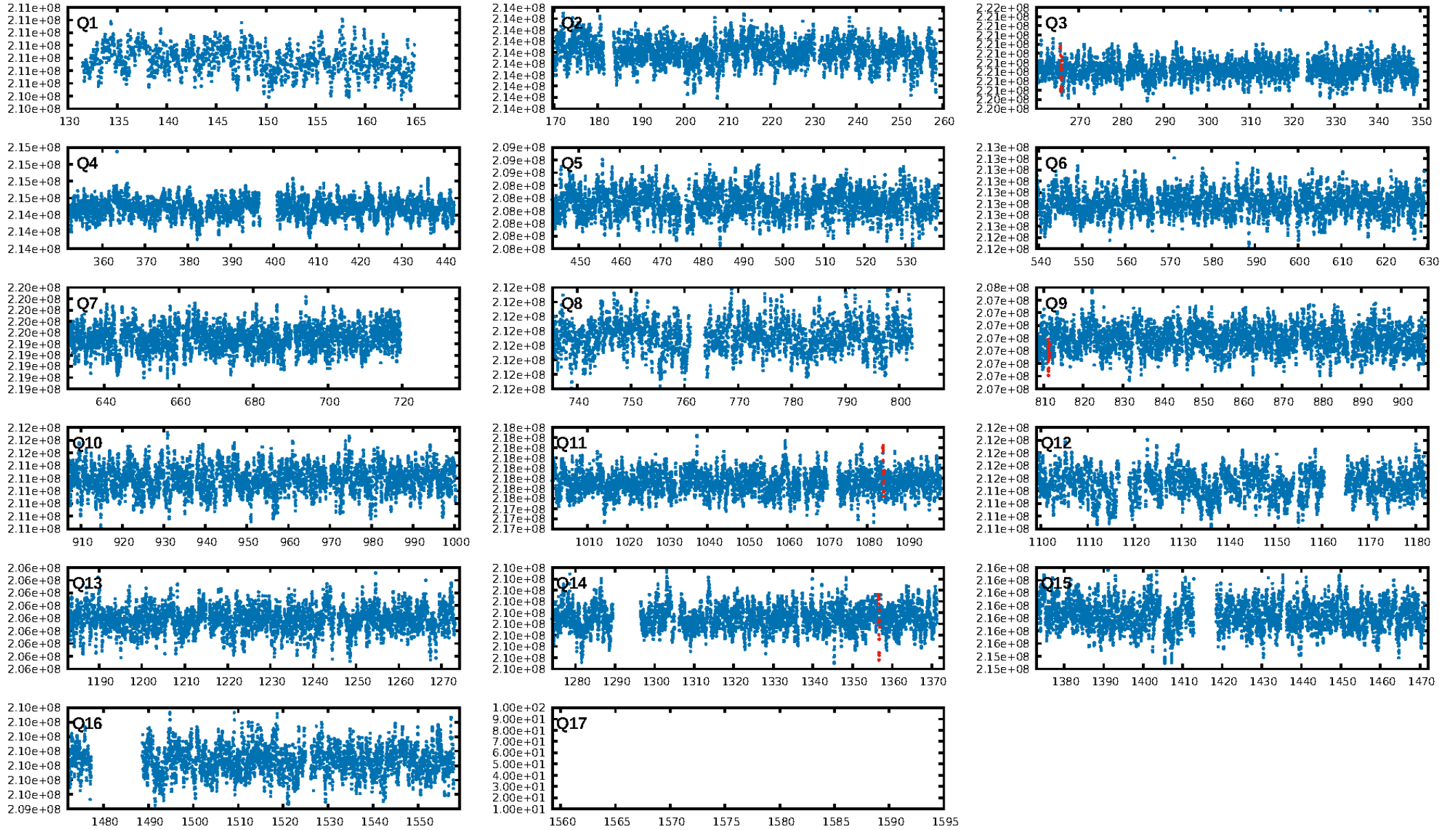
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 67.6%
ModelChiSquareGof-sig: 95.4%
Bootstrap-pfa: 5.76e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.563
Centroid-sig: 80.5%
Centroid-so: 0.219 arcsec [0.74 σ]
OotOffset-rm: 0.214 arcsec [1.10 σ]
KicOffset-rm: 0.233 arcsec [1.29 σ]
OotOffset-st: 1/2/0/1 [4]
KicOffset-st: 1/2/0/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

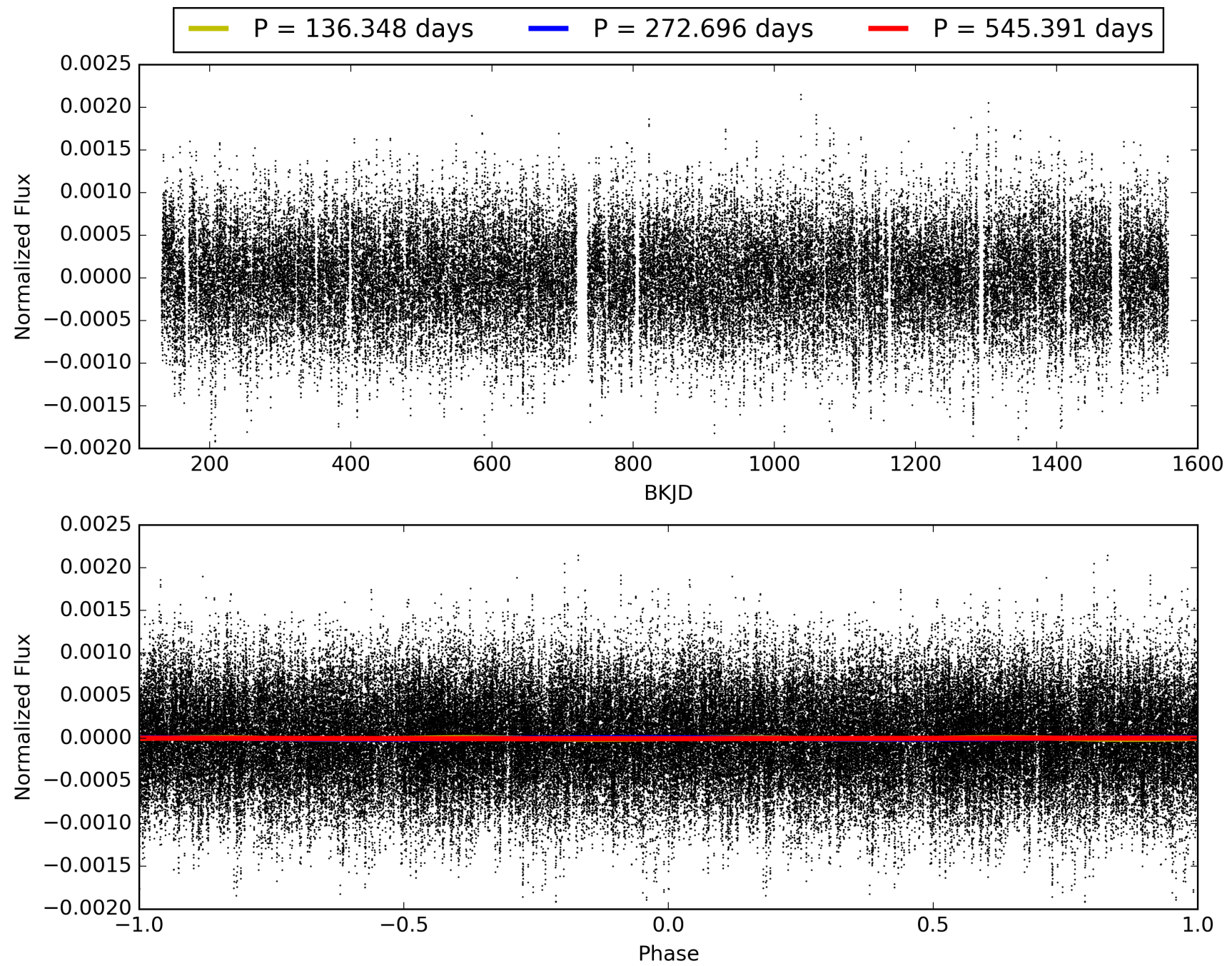
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:30:22 Z

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

TCE 009344741-01, PDC Light Curves

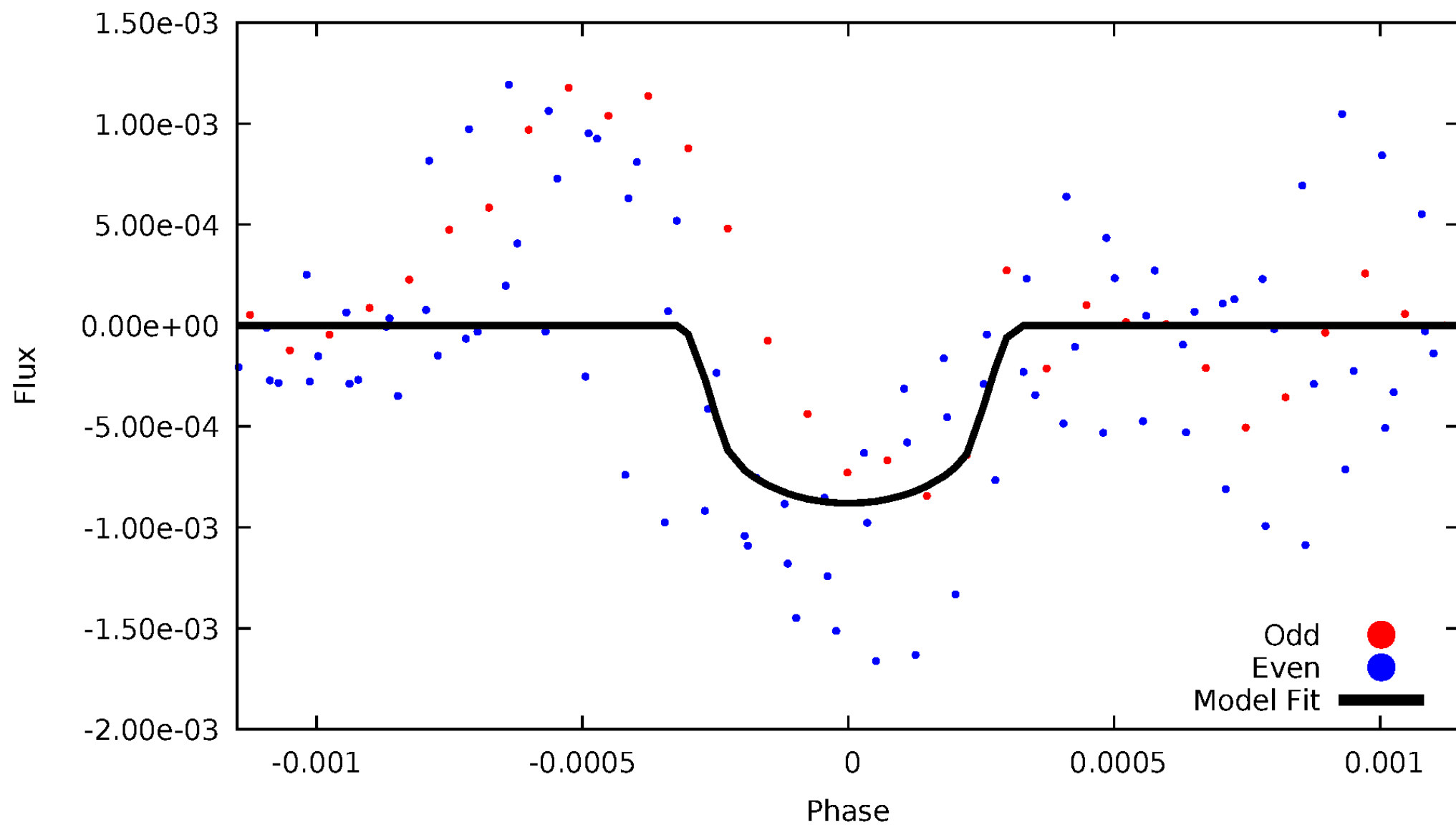


TCE 009344741-01



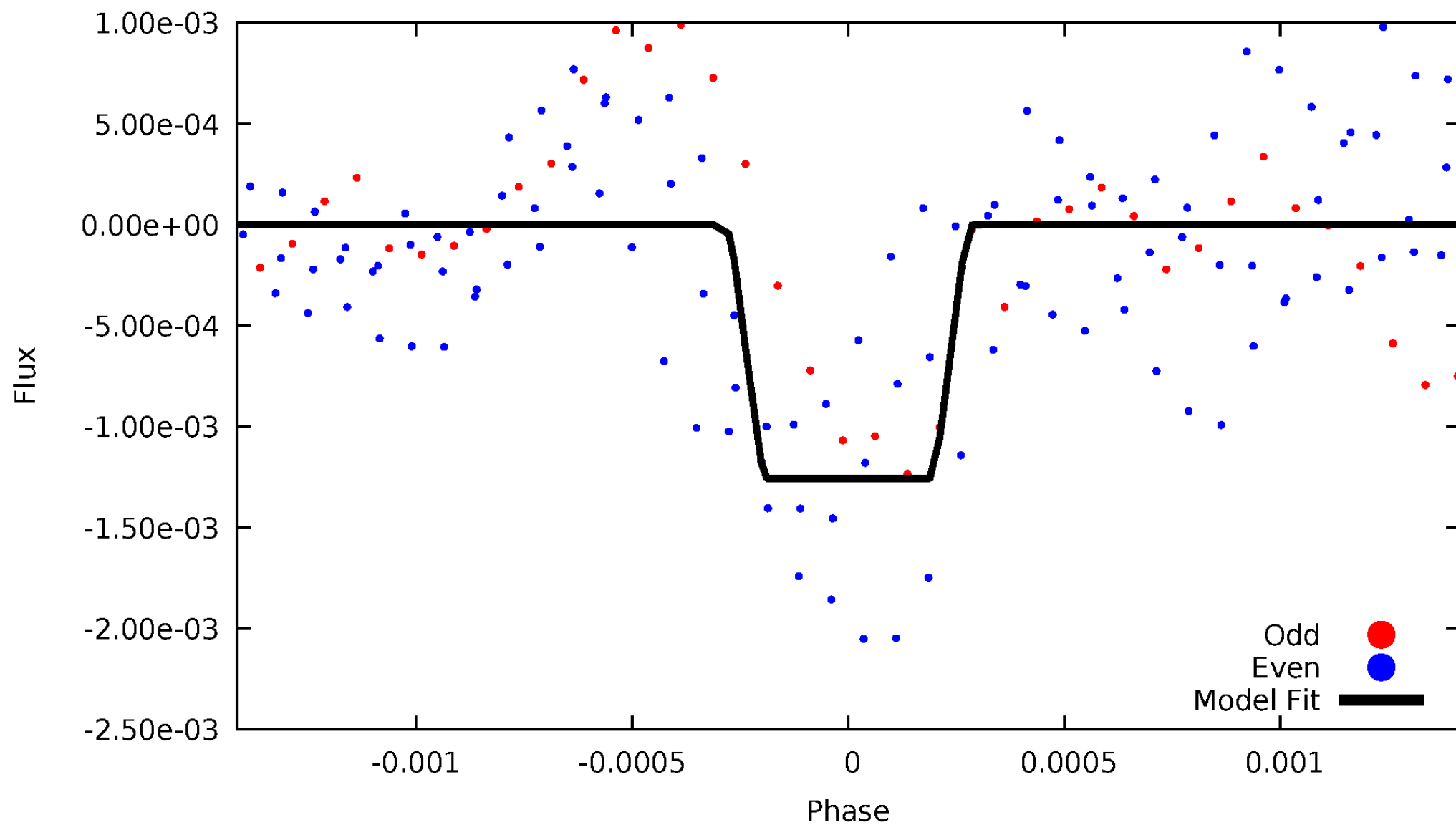
DV Odd/Even

TCE 009344741-01



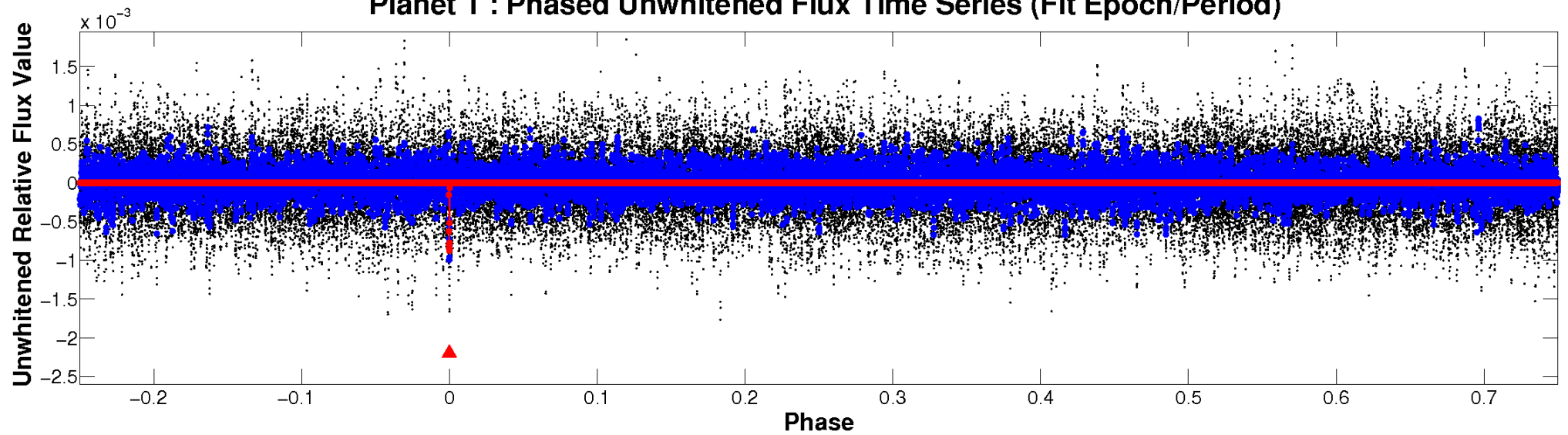
ALT Odd/Even

TCE 009344741-01

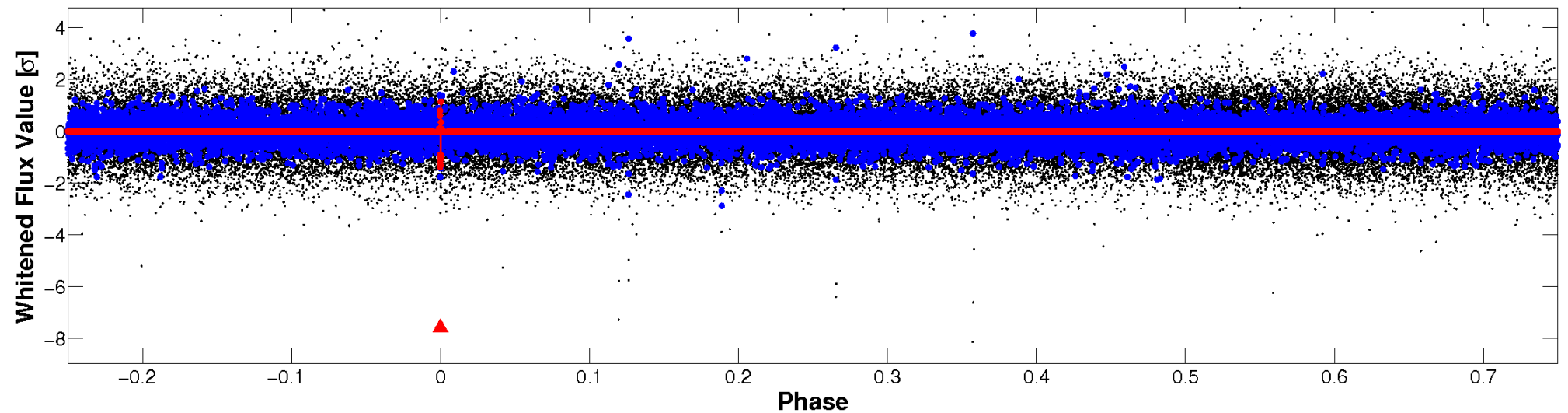


Non-Whitened Vs. Whitened Light Curve

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

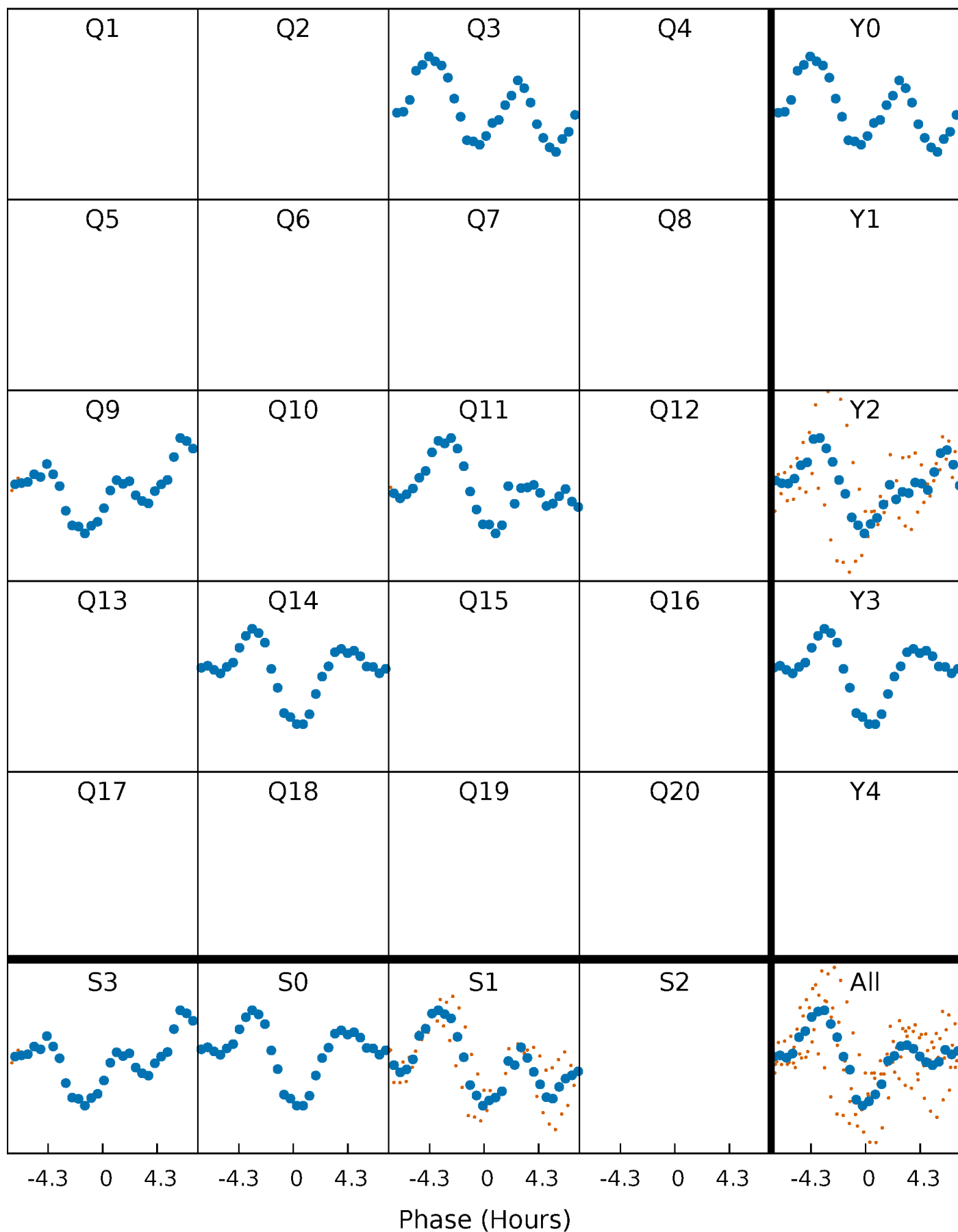


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



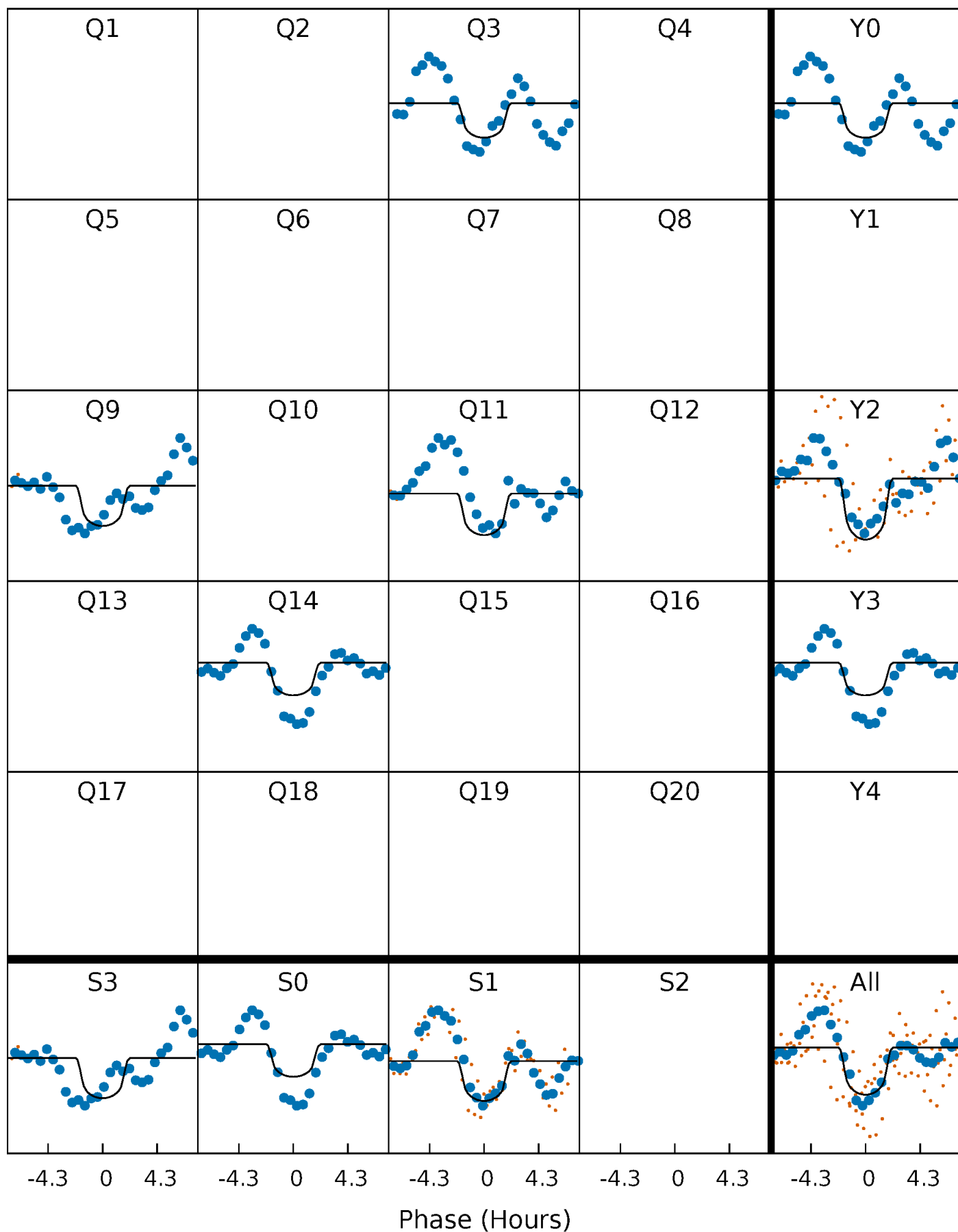
PDC Quarter-Phased Transit Curves

TCE 009344741-01 P=272.695648 Days $T_0=265.915870$ (BKJD)



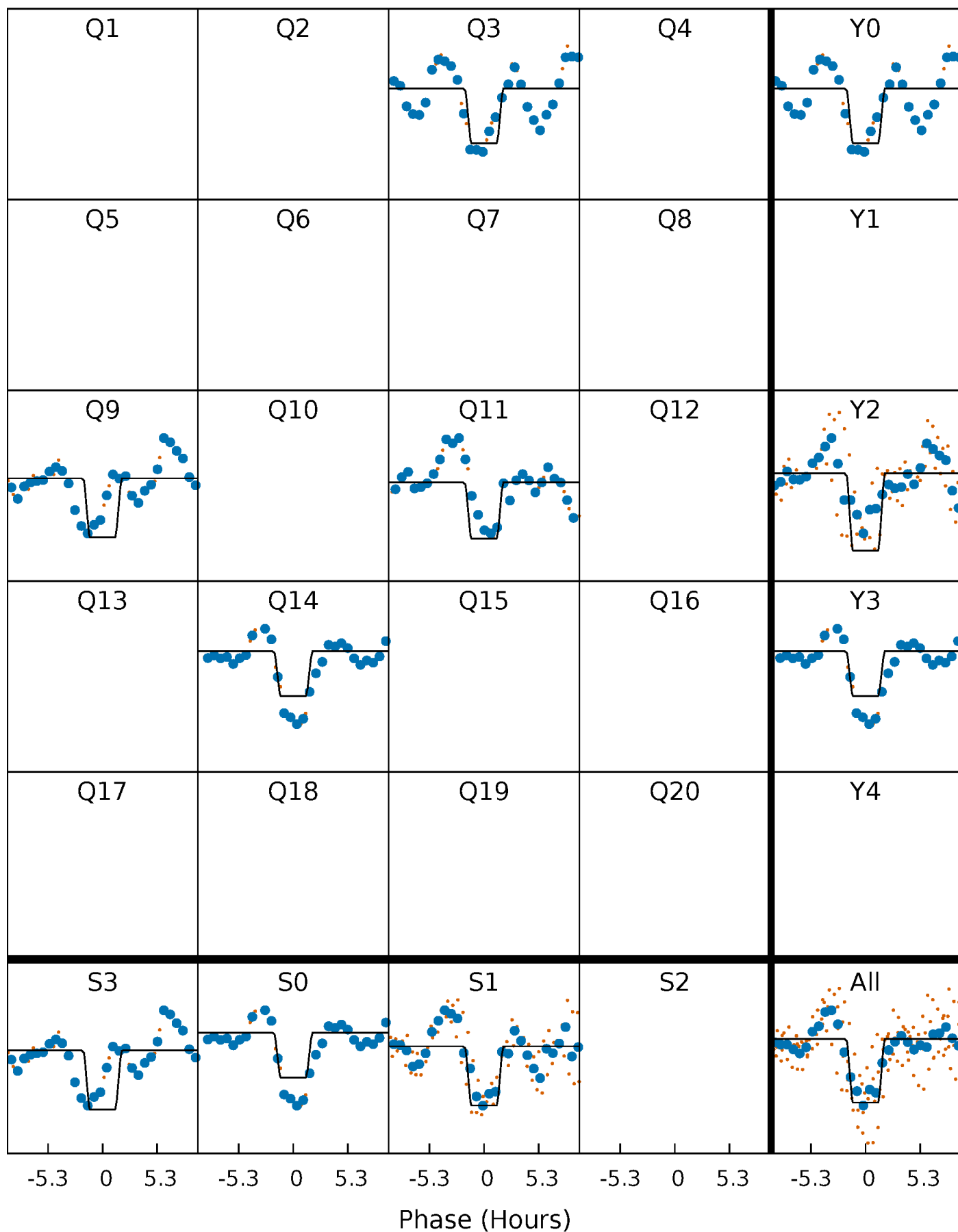
DV Quarter-Phased Transit Curves

TCE 009344741-01 P=272.695648 Days $T_0=265.915870$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

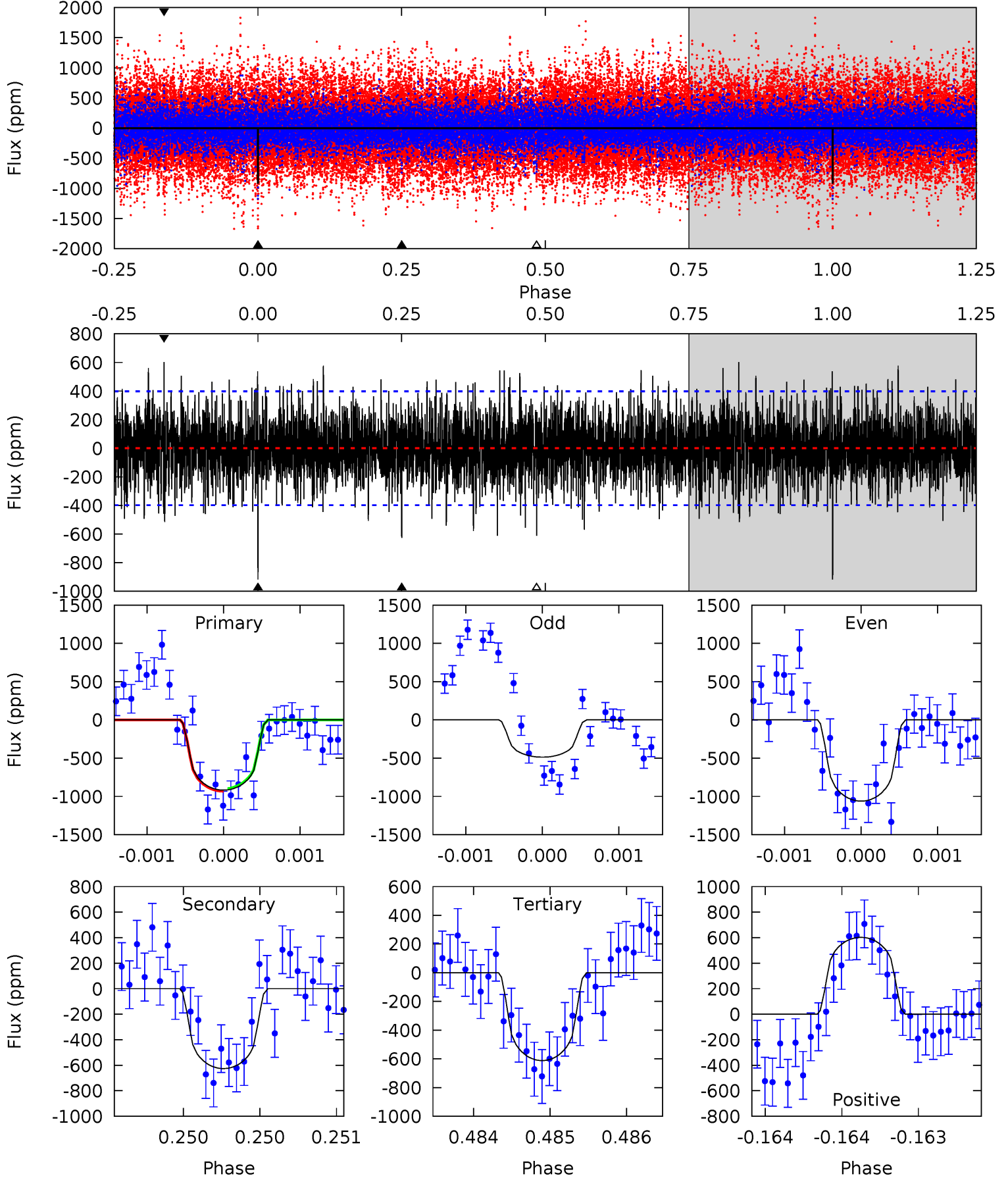
TCE 009344741-01 P=272.696975 Days $T_0=265.915028$ (BKJD)



DV Model-Shift Uniqueness Test

009344741-01, P = 272.695648 Days, E = 265.915870 Days

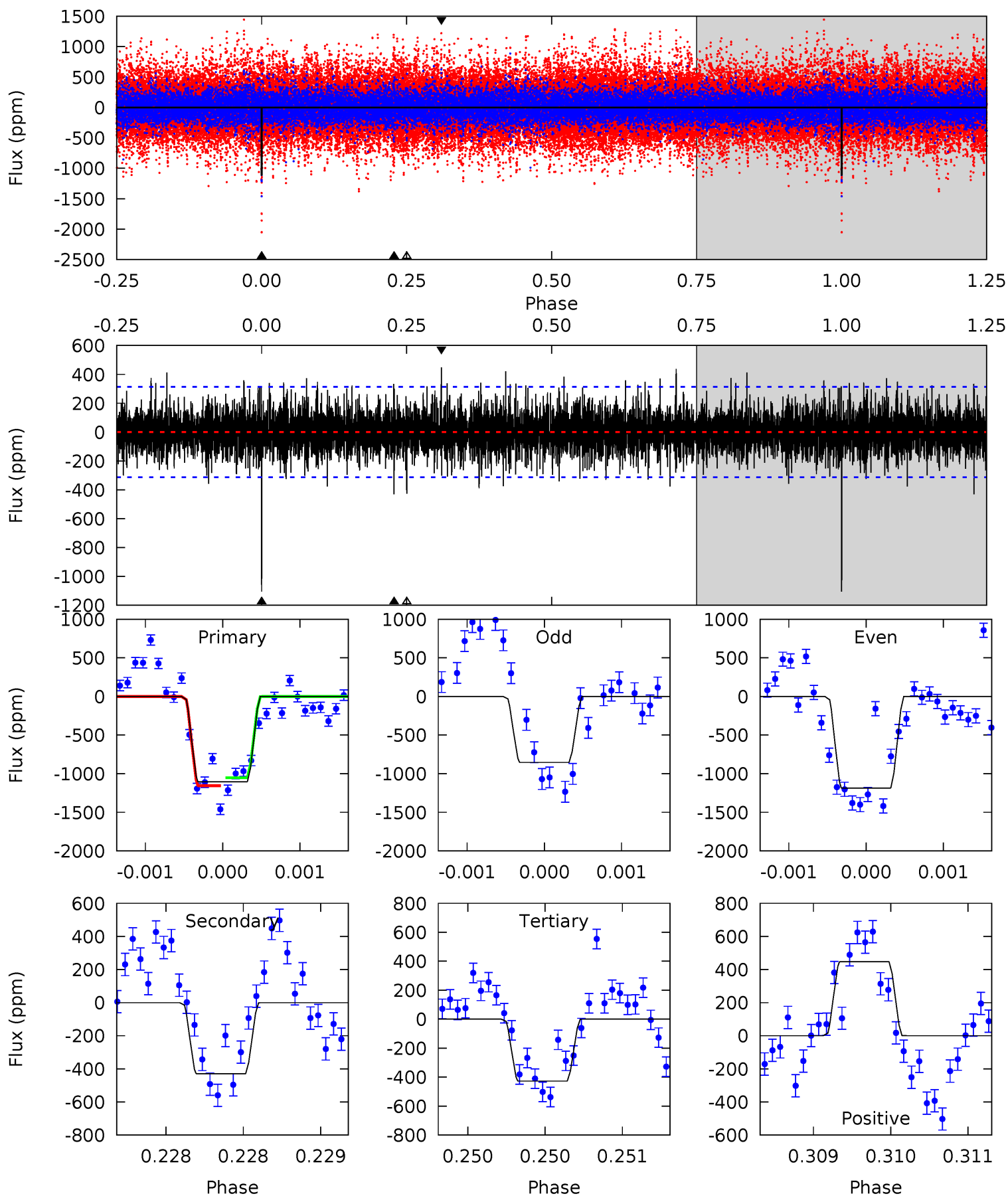
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	8.73	8.53	8.40	5.55	3.45	2.30	4.26	4.39	0.20	0.33	3.41	1.07	0.40	0.23



Alt Model-Shift Uniqueness Test

009344741-01, P = 272.696975 Days, E = 265.915028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	7.60	7.56	7.92	5.55	3.44	1.90	12.0	11.6	0.04	-0.32	2.64	1.09	0.29	0.91



Stellar Parameters For KIC 009344741

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4813^{+50}_{-79}	$2.570^{+0.030}_{-0.030}$	$-0.360^{+0.150}_{-0.100}$	$9.720^{+1.088}_{-1.330}$	$1.280^{+0.261}_{-0.319}$	$0.002^{+0.000}_{-0.000}$
	+1%/-2%	+1%/-1%	+42%/-28%	+11%/-14%	+20%/-25%	+18%/-14%
Source	SPE74	AST9	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009344741-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-626 ± 72	$31.63^{+16.36}_{-16.16}$	978^{+21}_{-23}	4478^{+1686}_{-633}	276^{+816}_{-156}
Alt.	-430 ± 57	$37.58^{+16.52}_{-16.30}$	978^{+21}_{-23}	3924^{+992}_{-446}	135^{+292}_{-72}

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

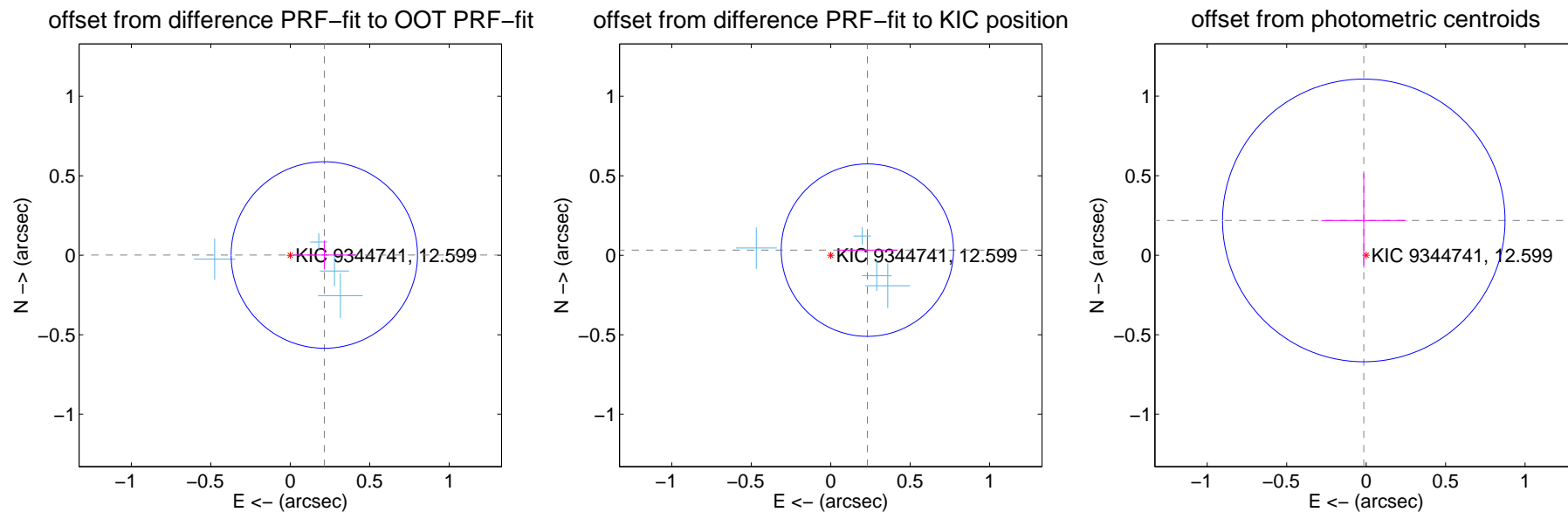
DV Centroid Data

Supplemental centroid analysis for 009344741-01. Kepler magnitude: 12.60. Transit SNR 6.75

There are 4 quarters with good PRF difference image offsets

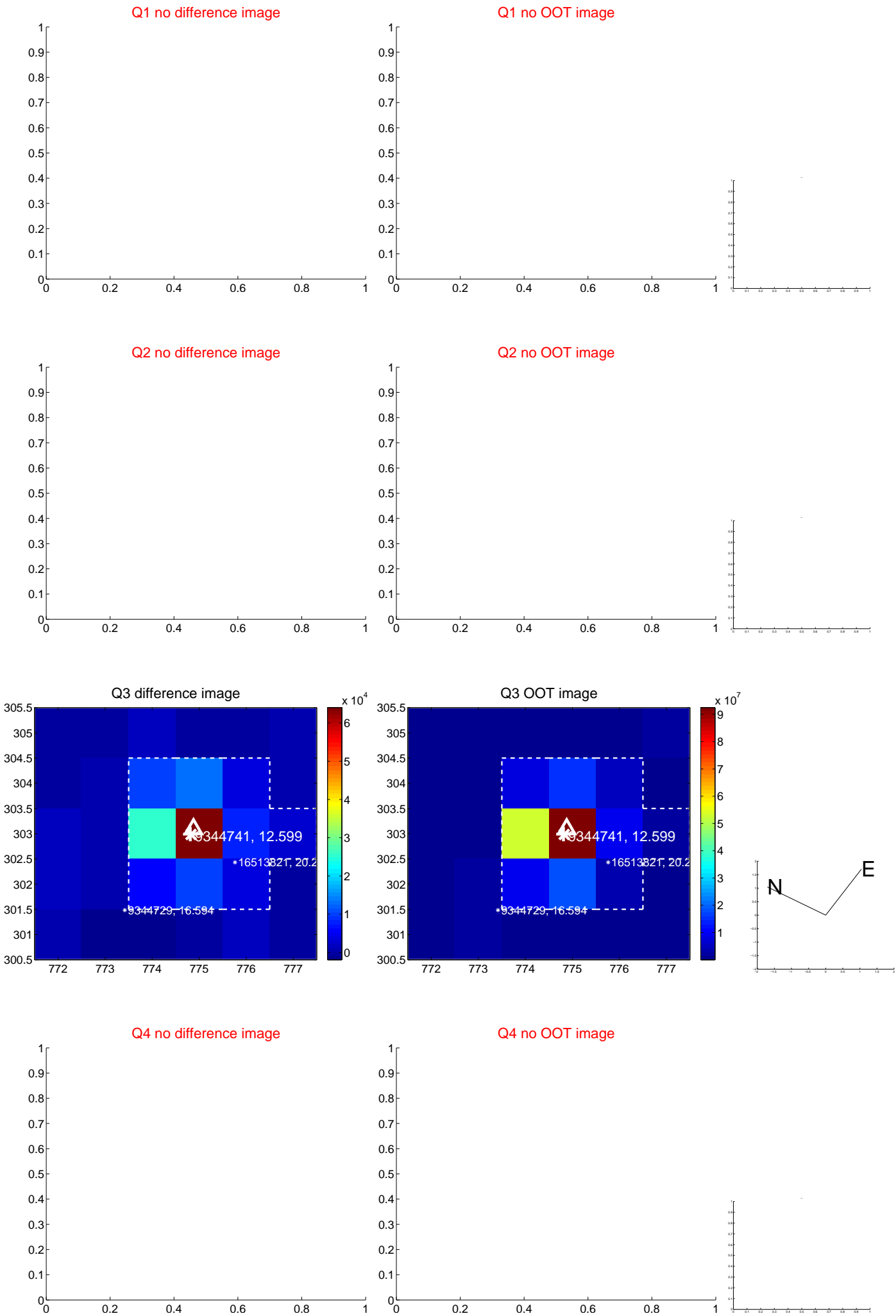
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.214 ± 0.196	1.10	-0.214 ± 0.196	0.002 ± 0.091
PRF-fit source offset from KIC position	0.233 ± 0.181	1.29	-0.231 ± 0.187	0.032 ± 0.084
photometric centroid source offset	0.22 ± 0.30	0.74	0.01 ± 0.27	0.22 ± 0.30



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.

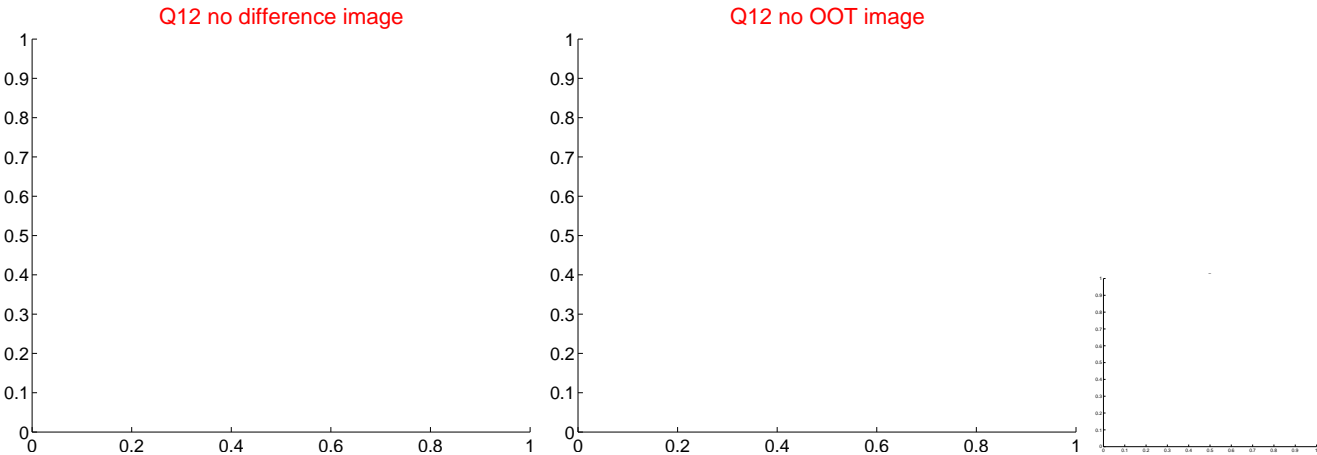
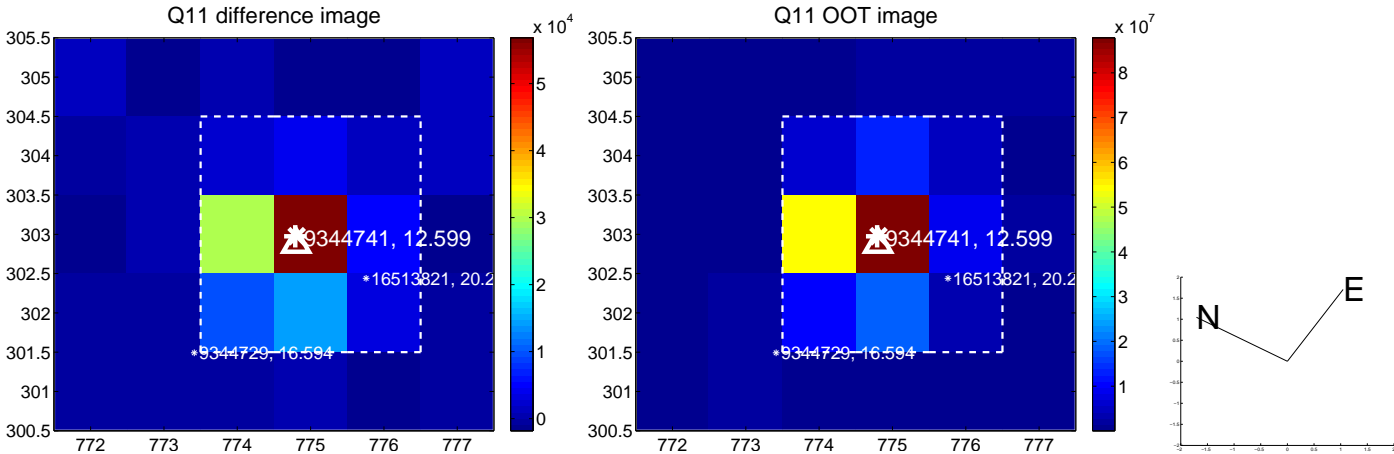
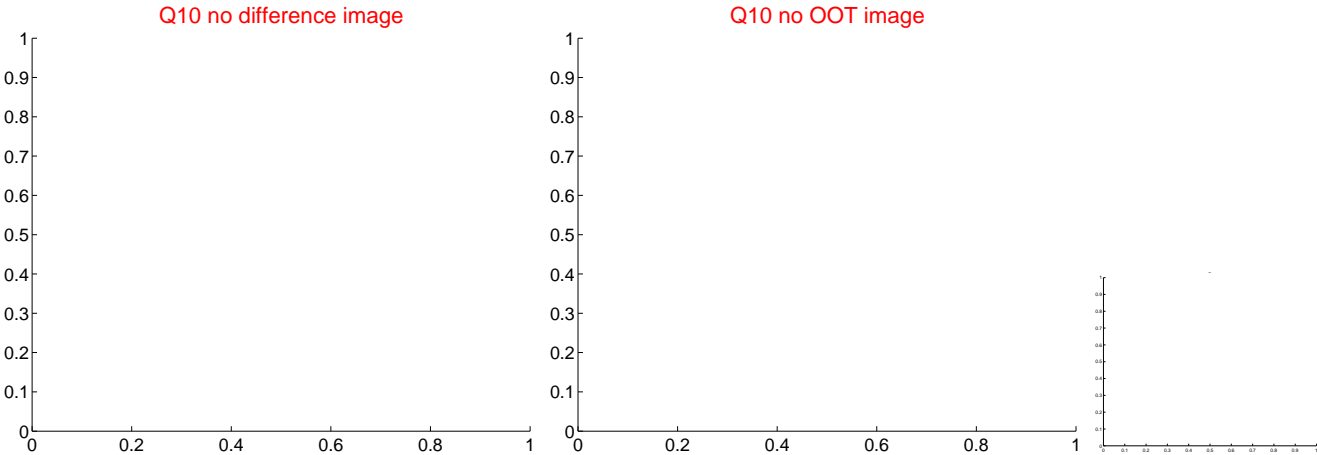
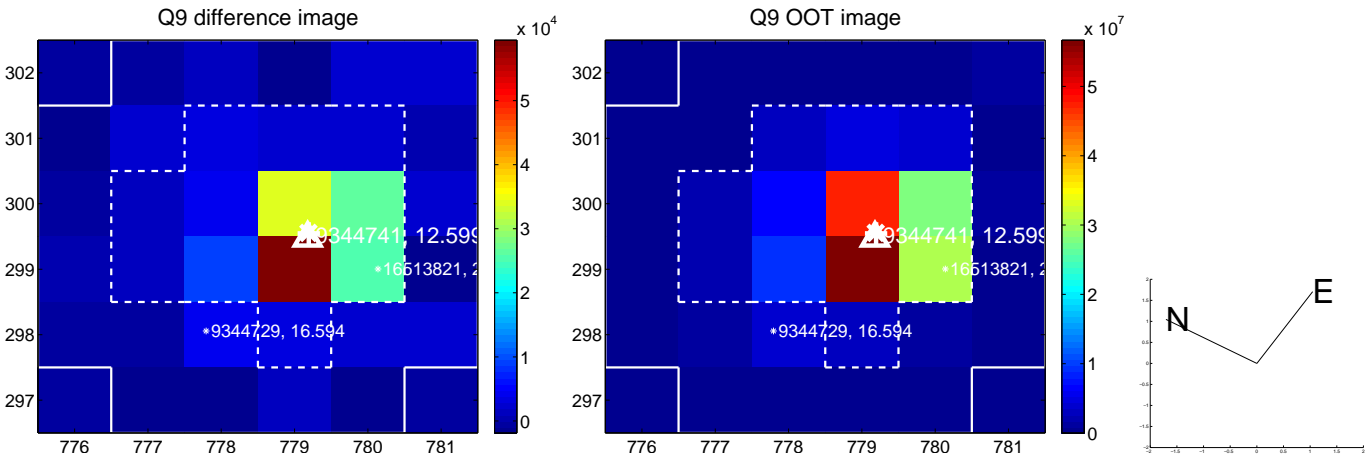
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



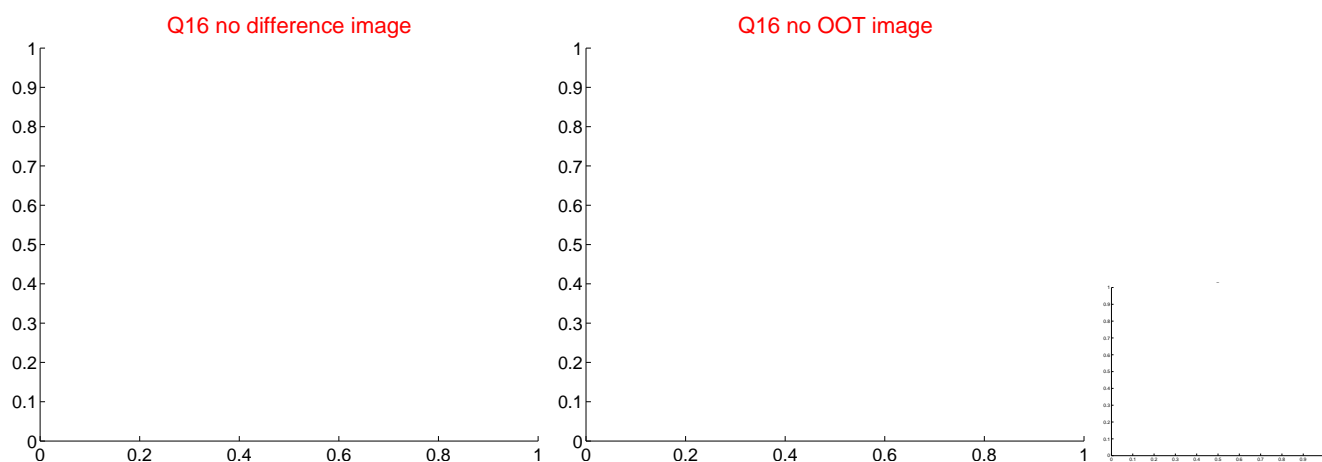
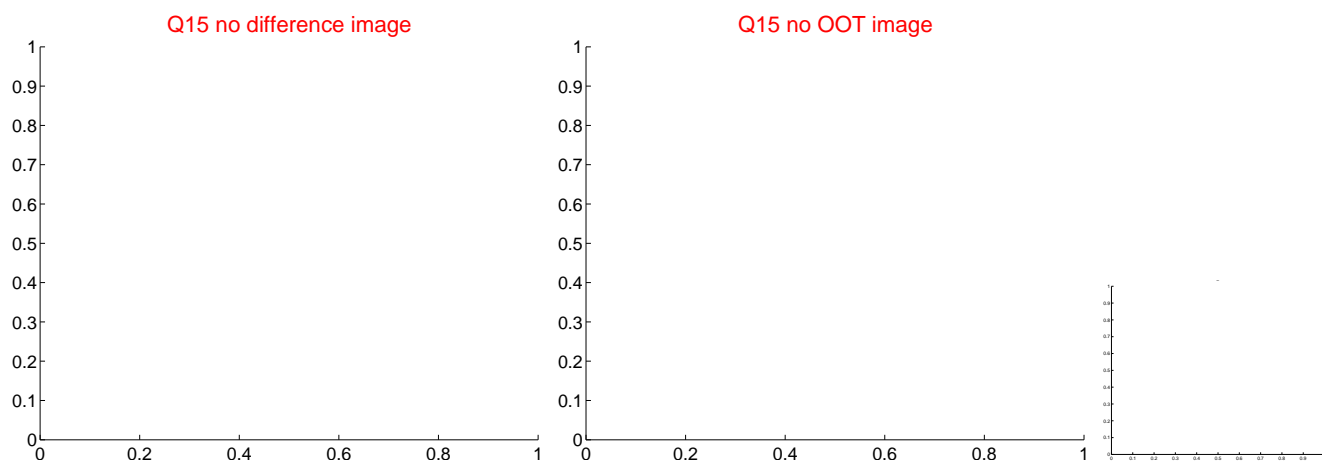
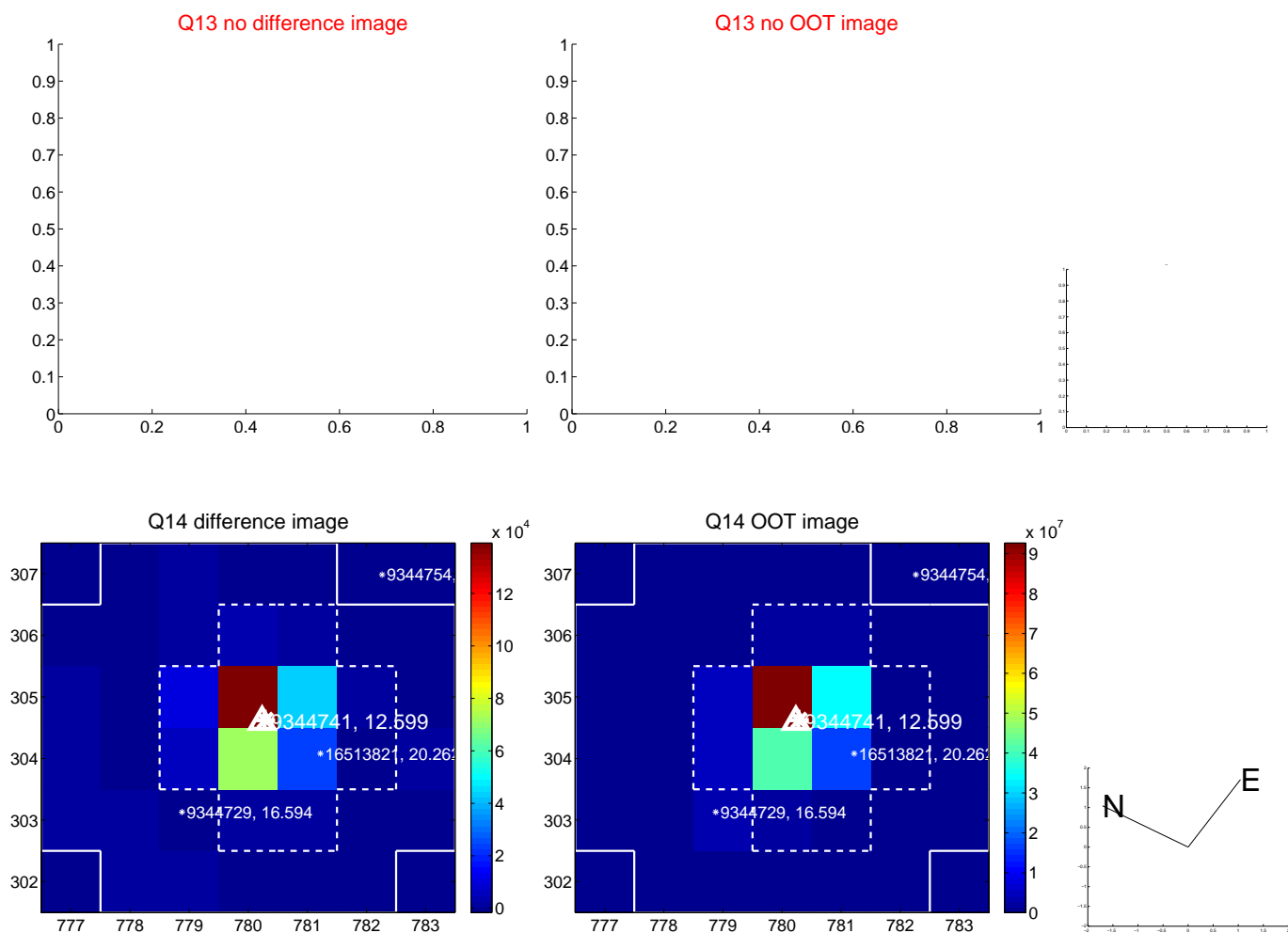
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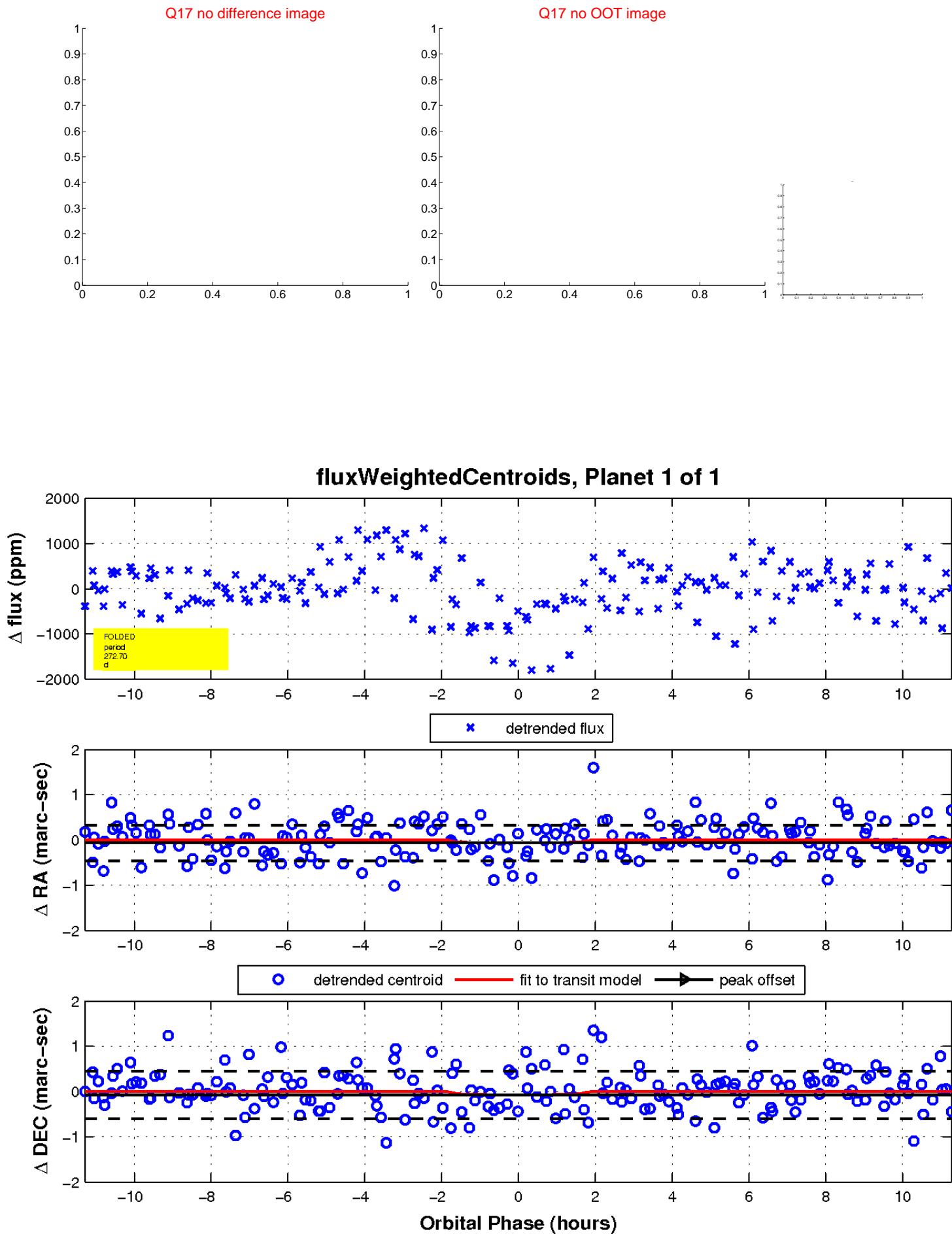
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

