

# KIC 008264254

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008264254-01	OBS	No	633.708916	255.198540	633.4	10.822	7.4	7.2	1.71	7174	4.76	2.61

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264254-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_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.

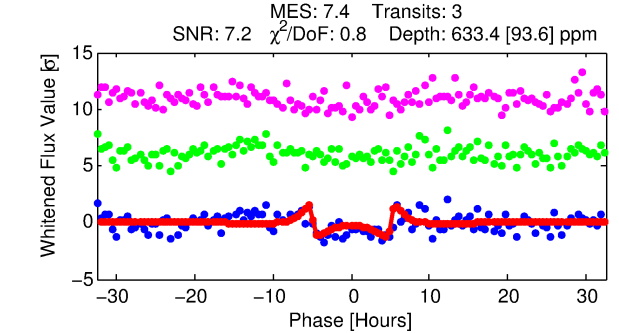
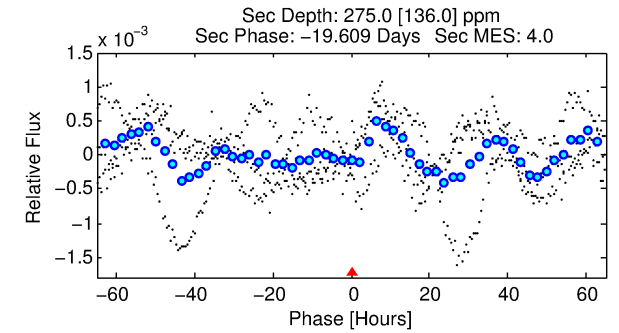
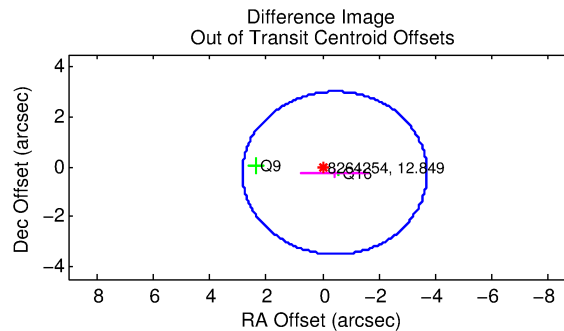
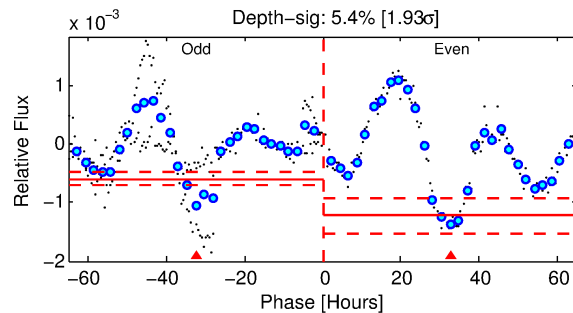
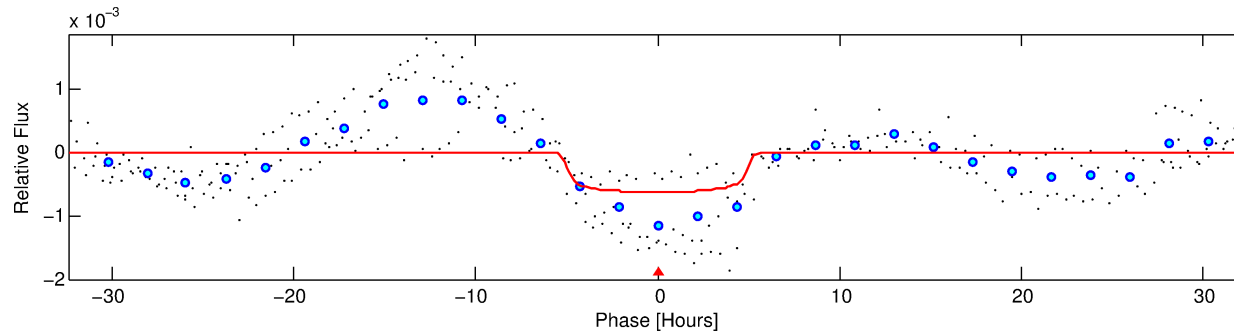
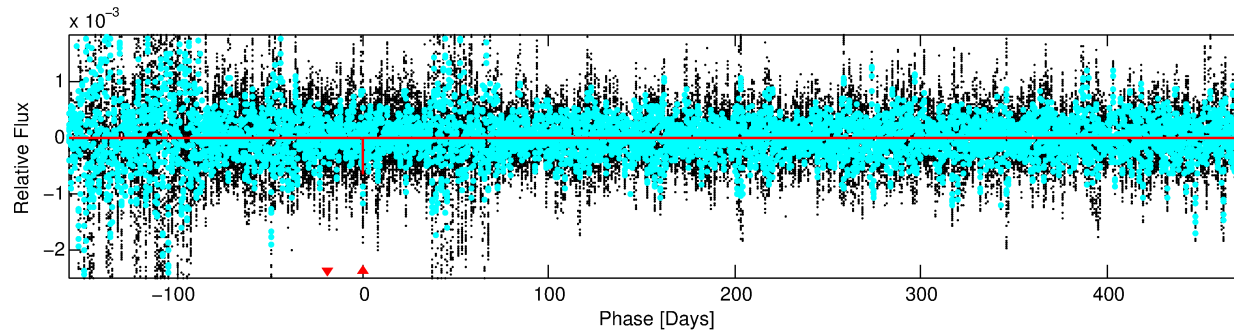
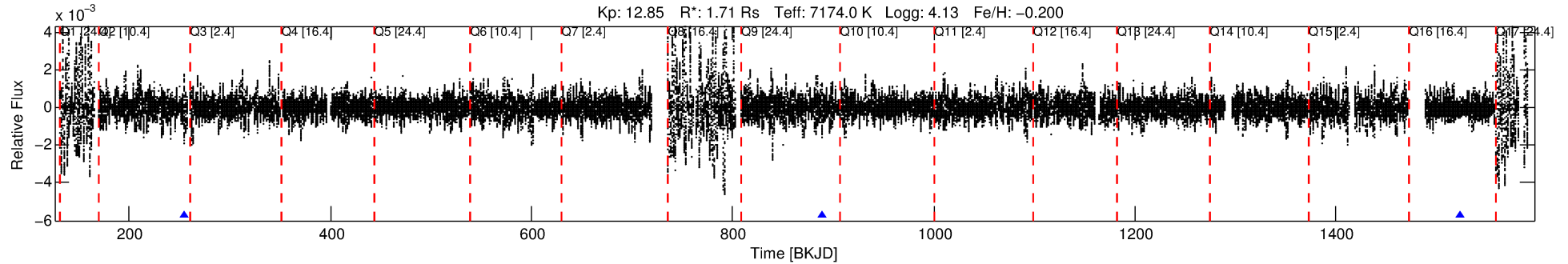
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008264254-01

No Significant Match Found

# DV One-Page Summary

KIC: 8264254 Candidate: 1 of 1 Period: 633.709 d



## DV Fit Results:

Period = 633.70892 [0.00597] d  
Epoch = 255.1985 [0.0087] BKJD  
Rp/R\* = 0.0256 [0.0027]  
a/R\* = 277.99 [97.32]  
b = 0.82 [0.14]  
Seff = 2.61 [1.02]  
Teq = 324 [32] K  
Rp = 4.76 [1.49] Re  
a = 1.6272 [0.4001] AU  
Ag = 17695.52 [11405.10] [1.55 $\sigma$ ]  
Teffp = 5777 [813] K [6.70 $\sigma$ ]

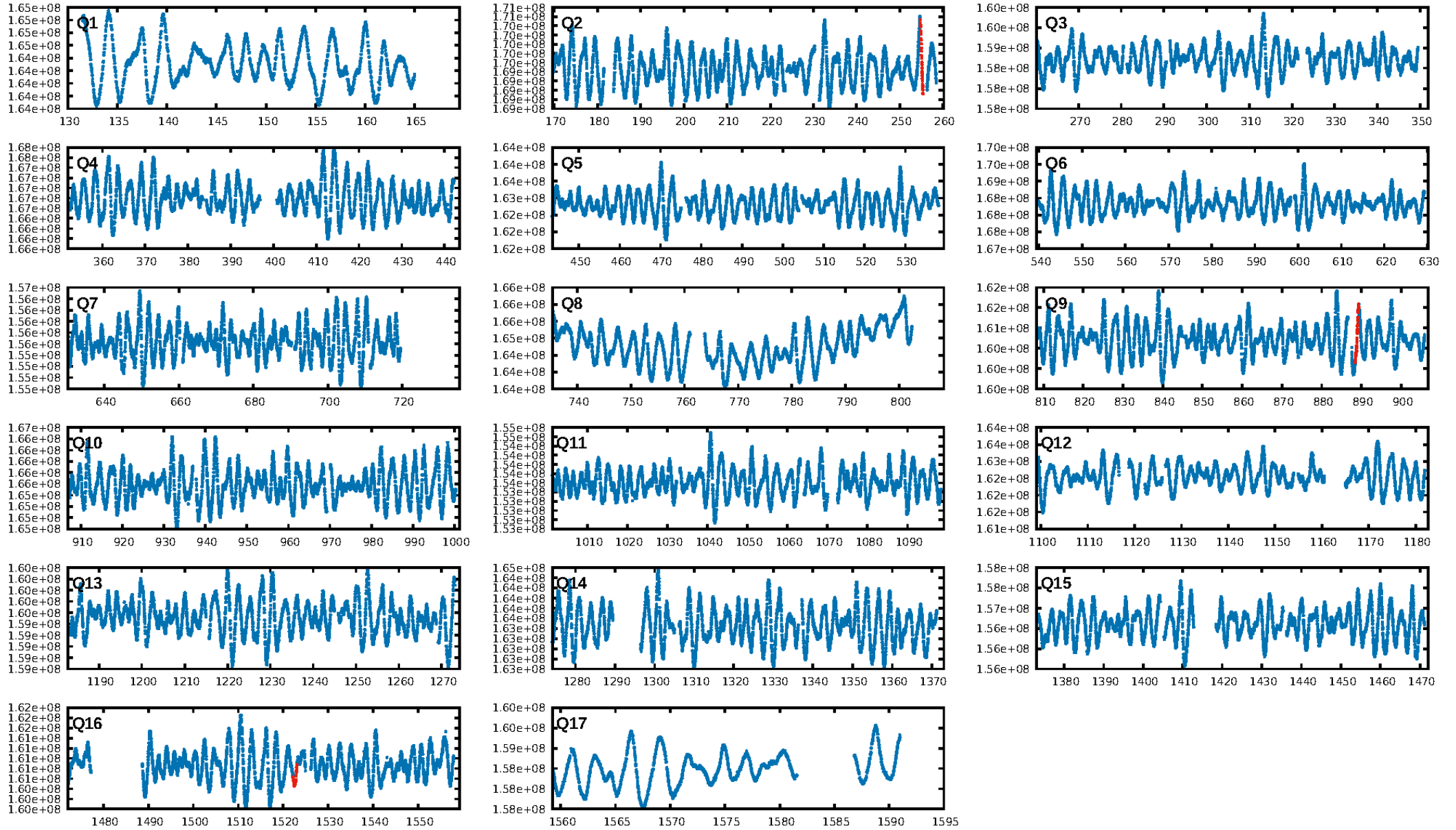
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 32.1%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 1.60e-08**  
RollingBand-fgt: 1.00 [3/3]  
**GhostDiagnostic-chr: 0.5795**  
Centroid-sig: 22.5%  
Centroid-so: 0.357 arcsec [0.36 $\sigma$ ]  
OotOffset-rm: 0.503 arcsec [0.46 $\sigma$ ]  
OotOffset-st: 0/0/1/1 [2]  
KicOffset-rm: 0.232 arcsec [1.42 $\sigma$ ]  
KicOffset-st: 0/0/1/1 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [2/2]

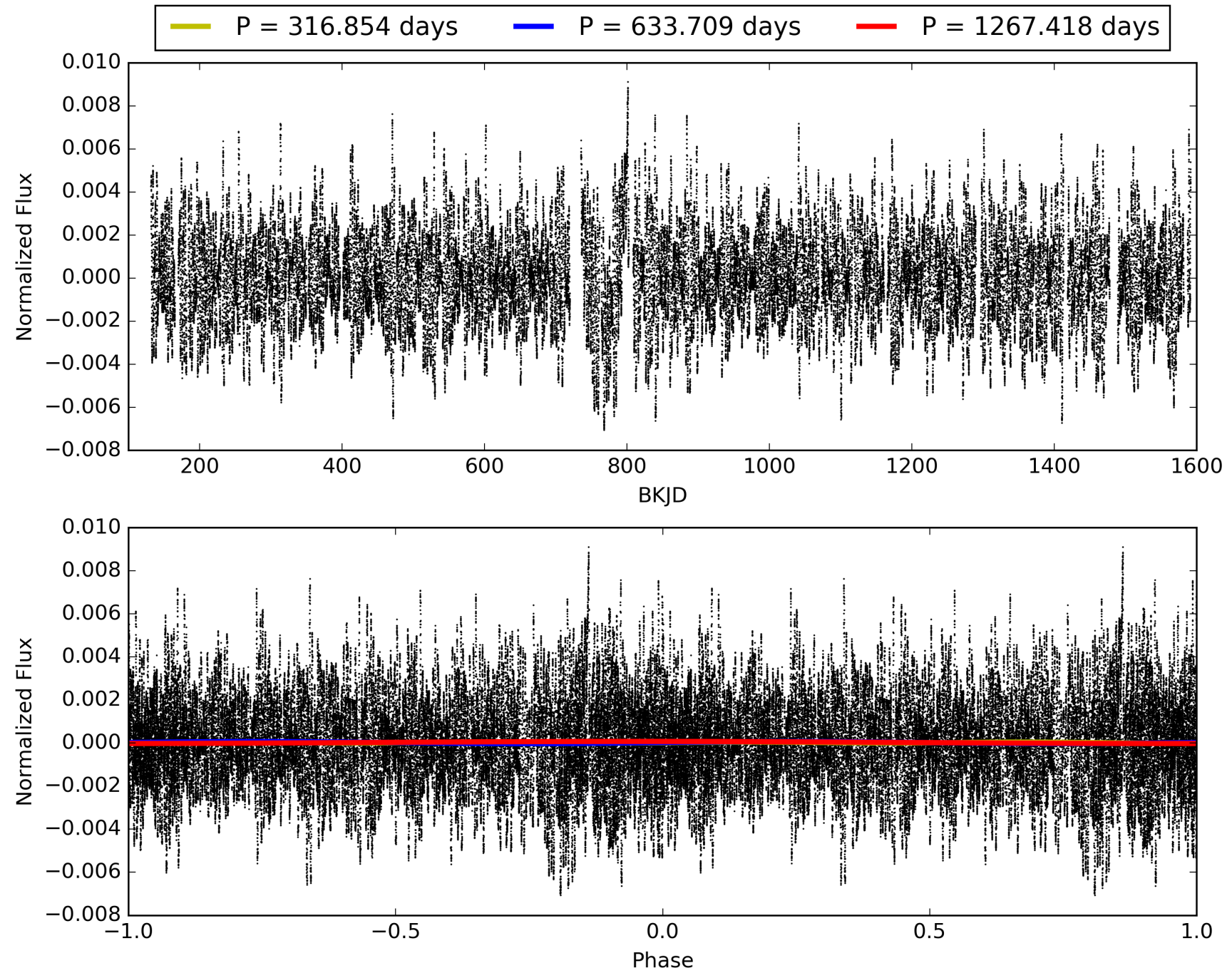
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:05:26 Z

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

# TCE 008264254-01, PDC Light Curves

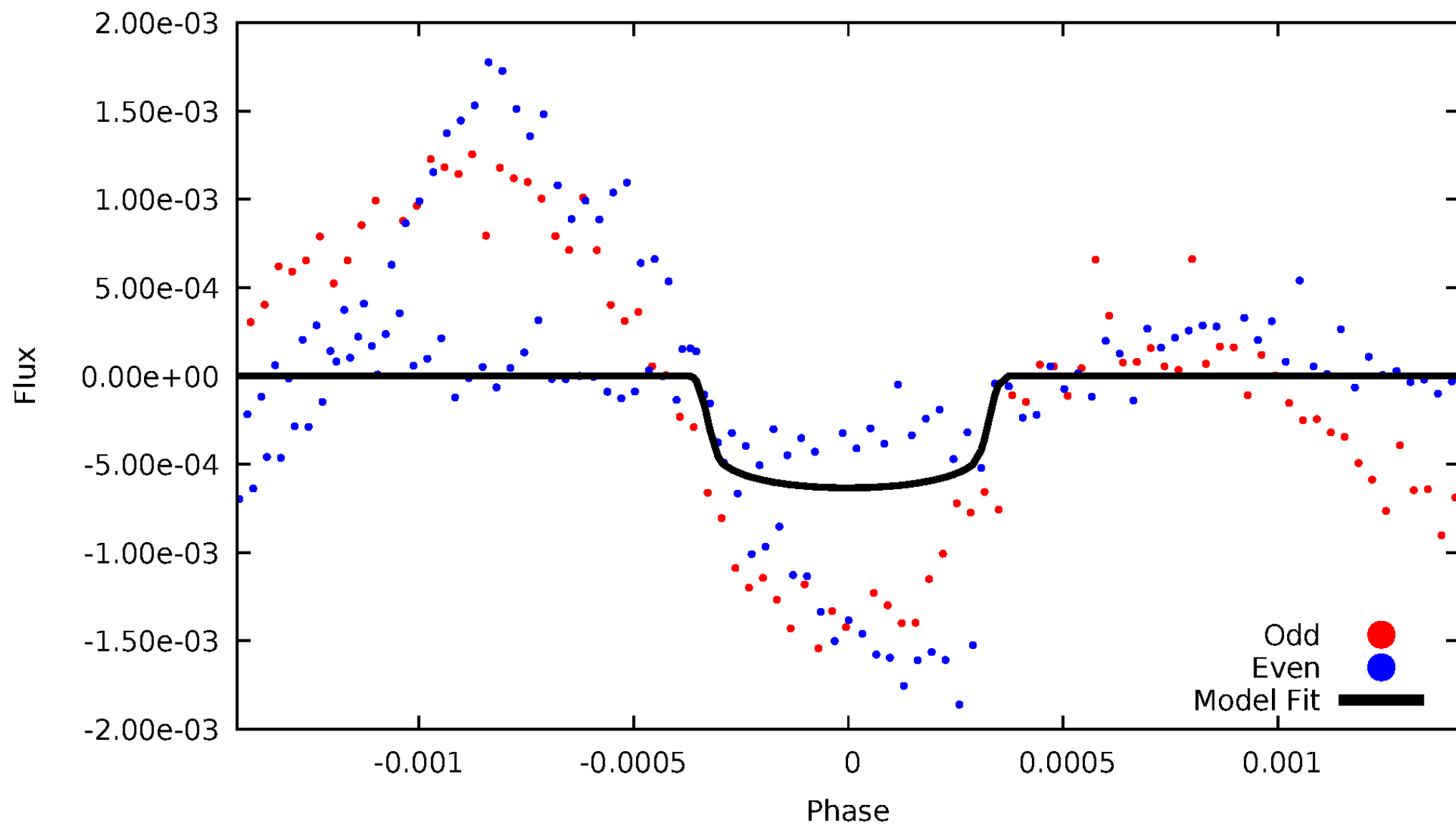


TCE 008264254-01



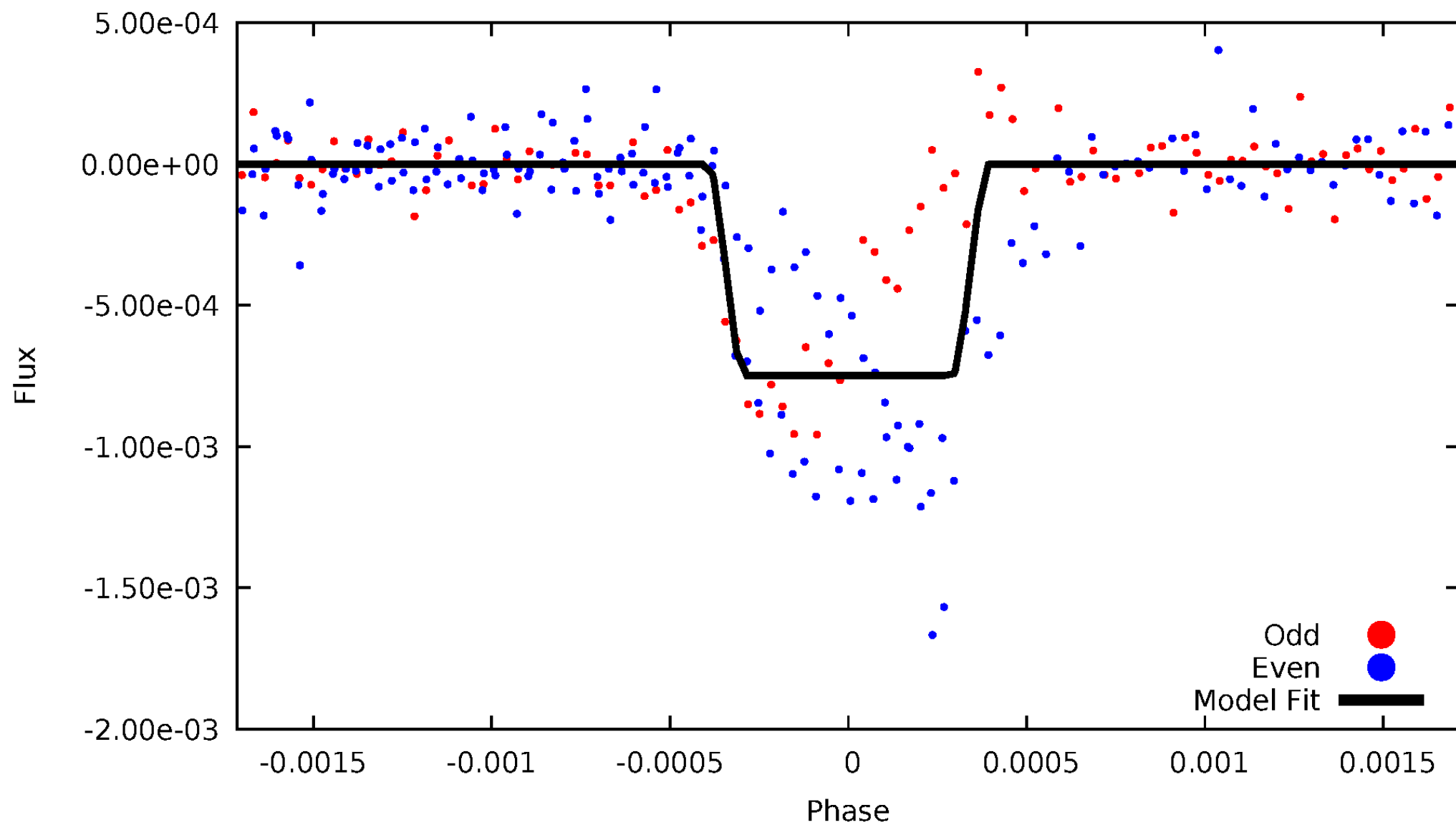
# DV Odd/Even

TCE 008264254-01



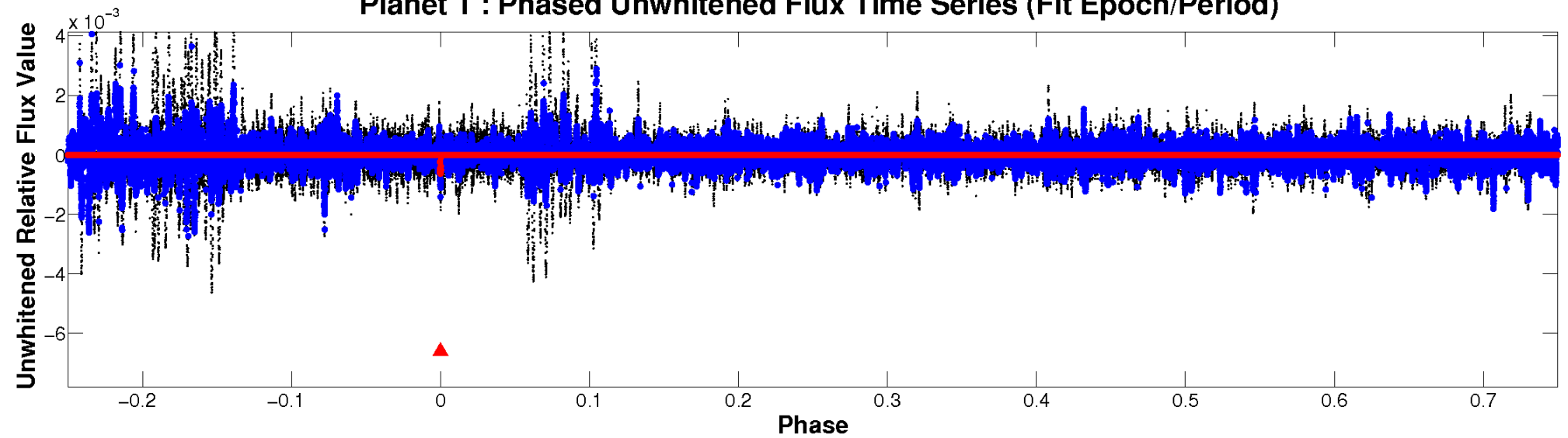
# ALT Odd/Even

TCE 008264254-01

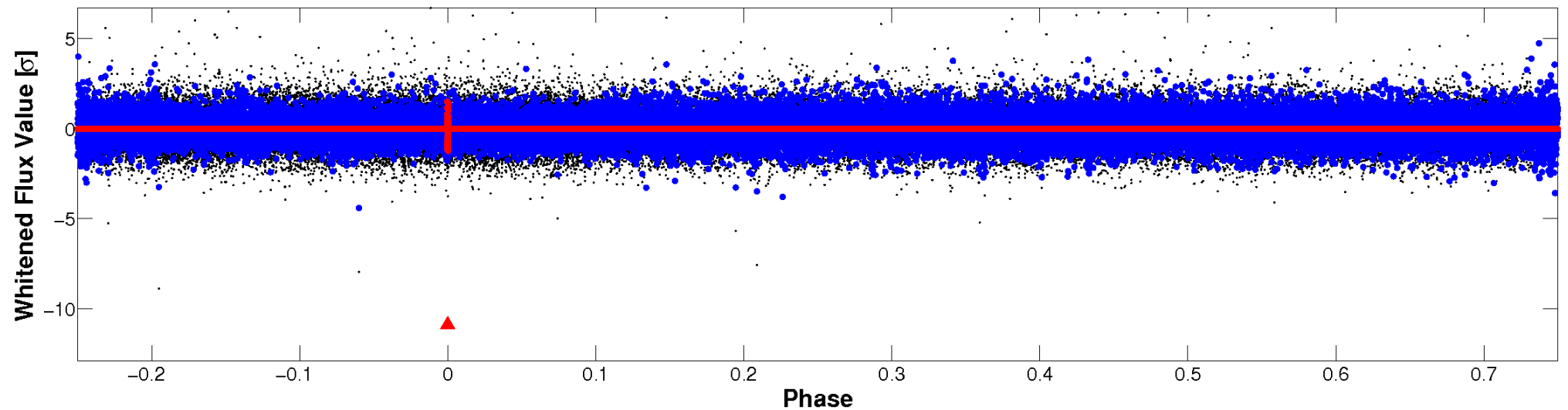


# Non-Whitened Vs. Whitened Light Curve

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



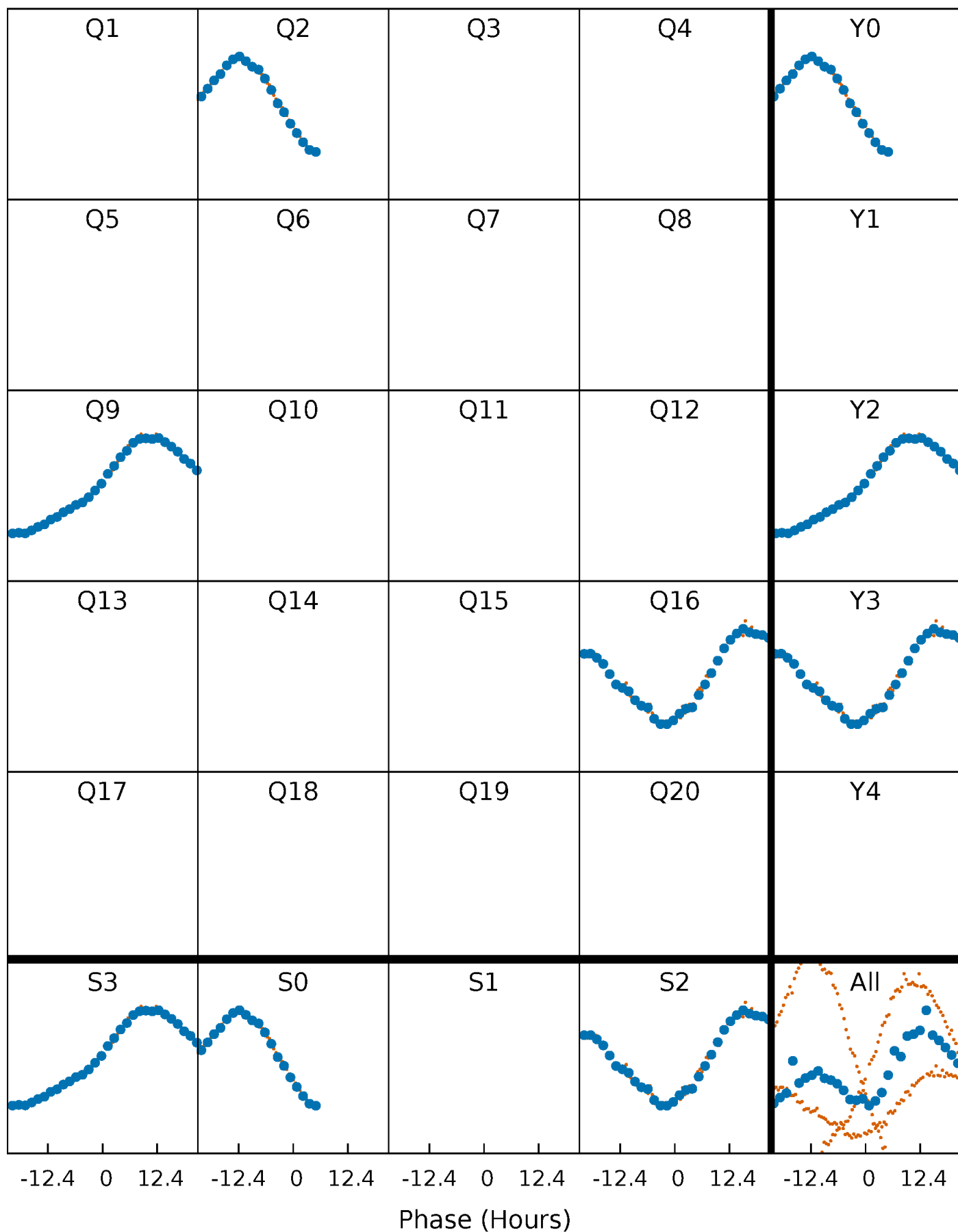
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

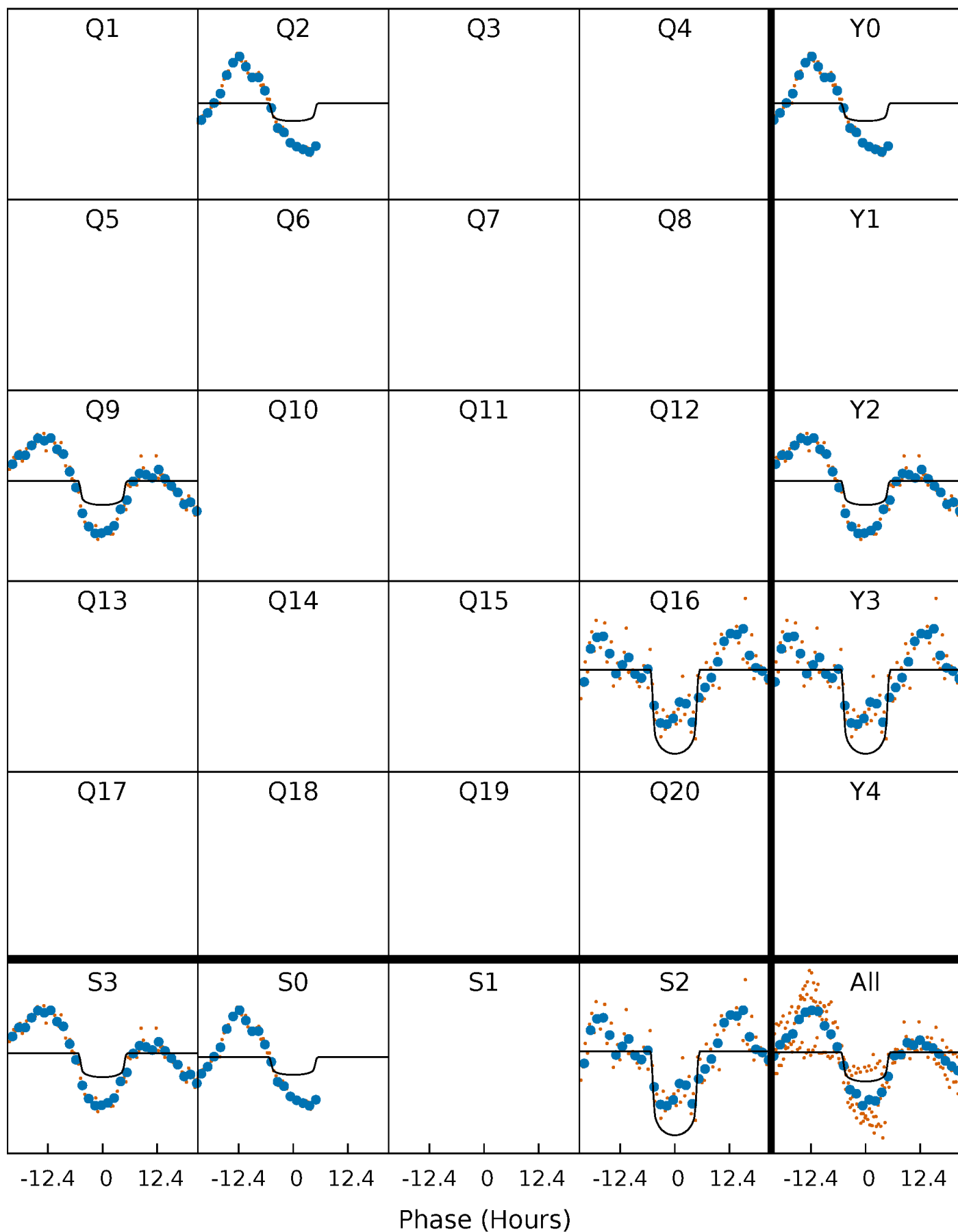
TCE 008264254-01 P=633.708916 Days  $T_0=255.198540$  (BKJD)





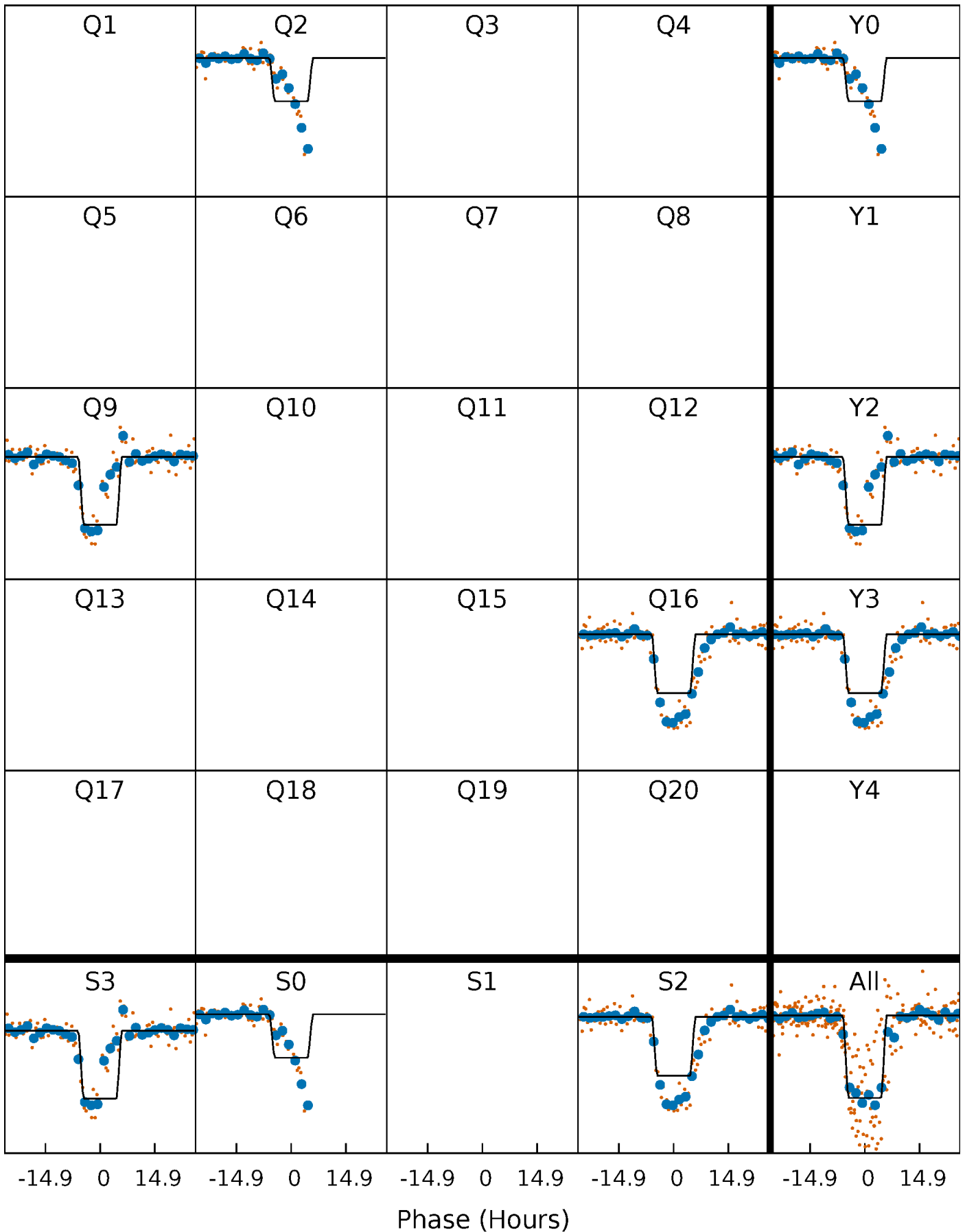
# DV Quarter-Phased Transit Curves

TCE 008264254-01 P=633.708916 Days  $T_0=255.198540$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

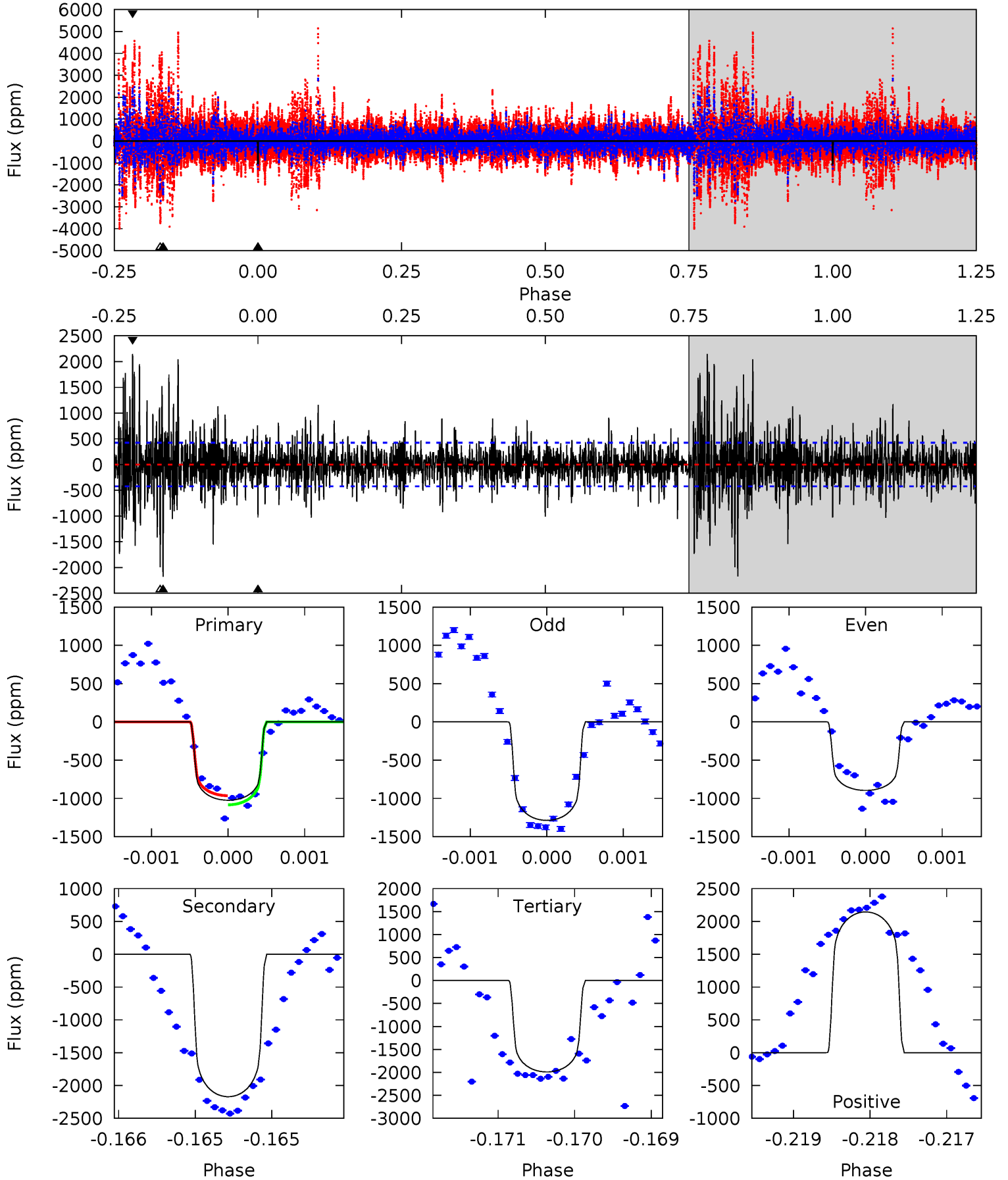
TCE 008264254-01 P=633.705996 Days  $T_0=255.212801$  (BKJD)



# DV Model-Shift Uniqueness Test

008264254-01, P = 633.708916 Days, E = 255.198540 Days

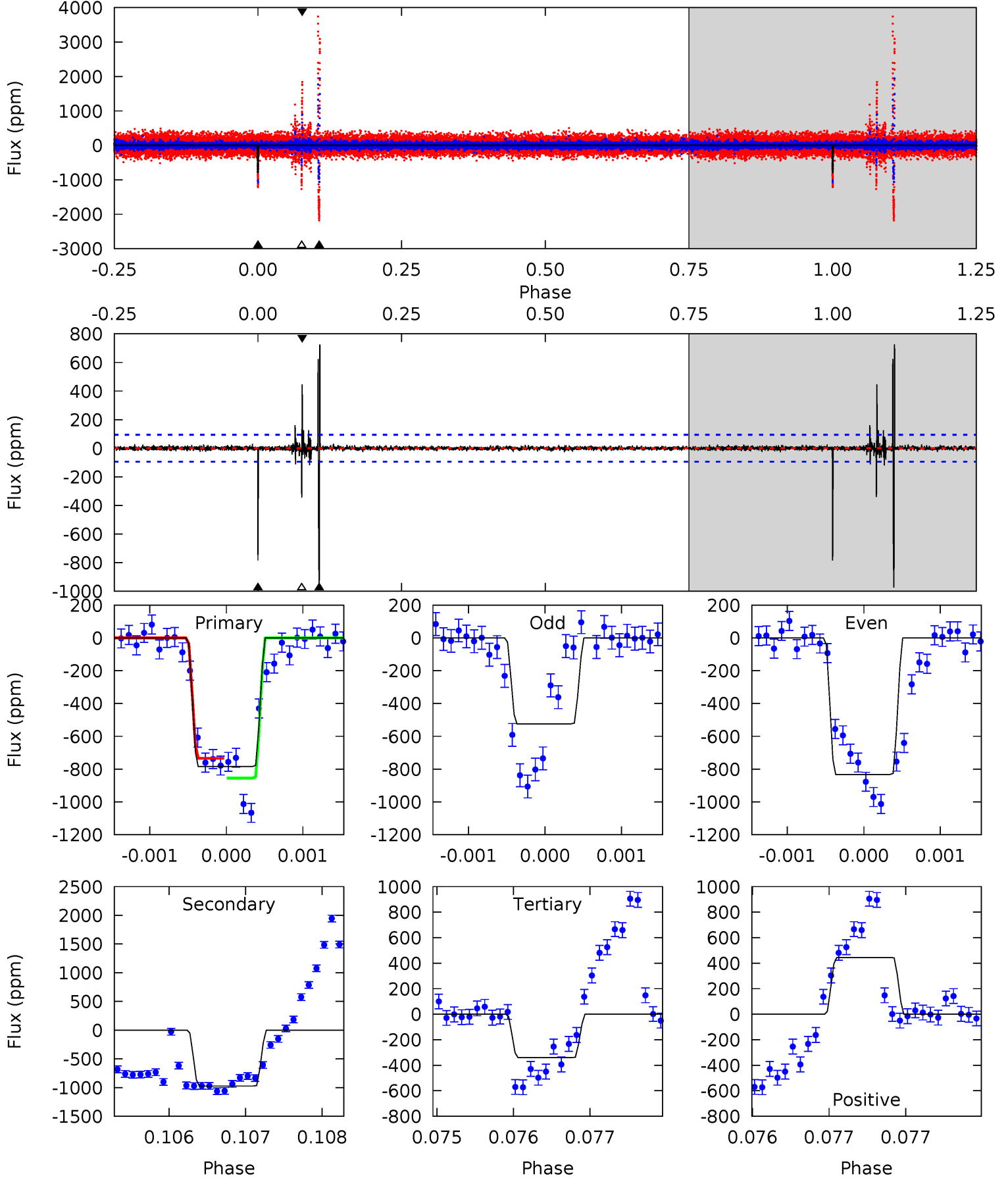
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	28.3	26.0	28.0	5.50	3.37	4.52	-12.6	-14.6	2.35	0.34	2.12	0.79	0.50	0.78



# Alt Model-Shift Uniqueness Test

008264254-01, P = 633.705996 Days, E = 255.212801 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.7	56.7	19.8	26.0	5.50	3.36	1.79	25.9	19.8	36.9	30.8	5.47	1.08	0.43	3.42



### Stellar Parameters For KIC 008264254

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7174^{+199}_{-299}$	$4.130^{+0.158}_{-0.193}$	$-0.200^{+0.250}_{-0.350}$	$1.705^{+0.502}_{-0.411}$	$1.430^{+0.205}_{-0.251}$	$0.406^{+0.334}_{-0.213}$
	+3%/-4%	+4%/-5%	+125%/-175%	+29%/-24%	+14%/-18%	+82%/-53%
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 008264254-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-2171 \pm 77$	$4.79^{+0.97}_{-0.80}$	$455^{+33}_{-33}$	$10621^{+1042}_{-957}$	$135734^{+54283}_{-39290}$
Alt.	$-973 \pm 17$	$5.16^{+1.00}_{-0.93}$	$454^{+36}_{-33}$	$7707^{+610}_{-518}$	$52894^{+23117}_{-15557}$

$T_{max}$  = 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  $A_{obs} \gg 1.0$

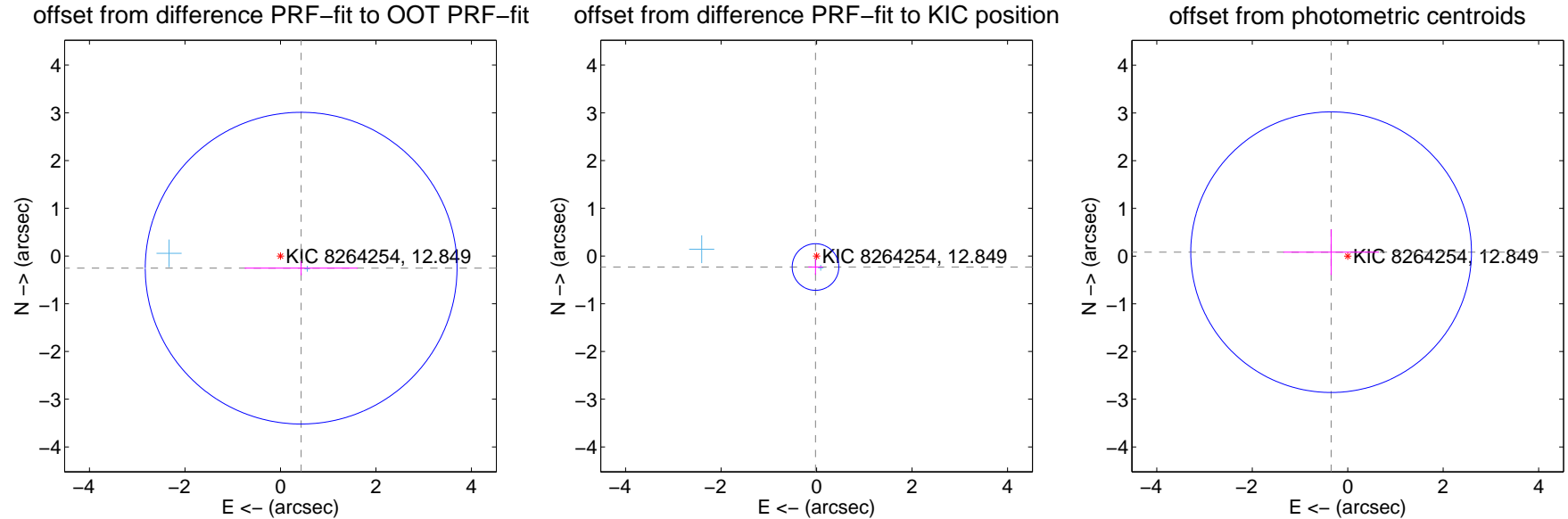
## DV Centroid Data

Supplemental centroid analysis for 008264254-01. Kepler magnitude: 12.85. Transit SNR 7.18

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.503 \pm 1.088$	0.46	$-0.434 \pm 1.184$	$-0.254 \pm 0.148$
PRF-fit source offset from KIC position	$0.232 \pm 0.163$	1.42	$0.023 \pm 0.150$	$-0.230 \pm 0.163$
photometric centroid source offset	$0.36 \pm 0.98$	0.36	$0.35 \pm 1.00$	$0.08 \pm 0.48$



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- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . 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.

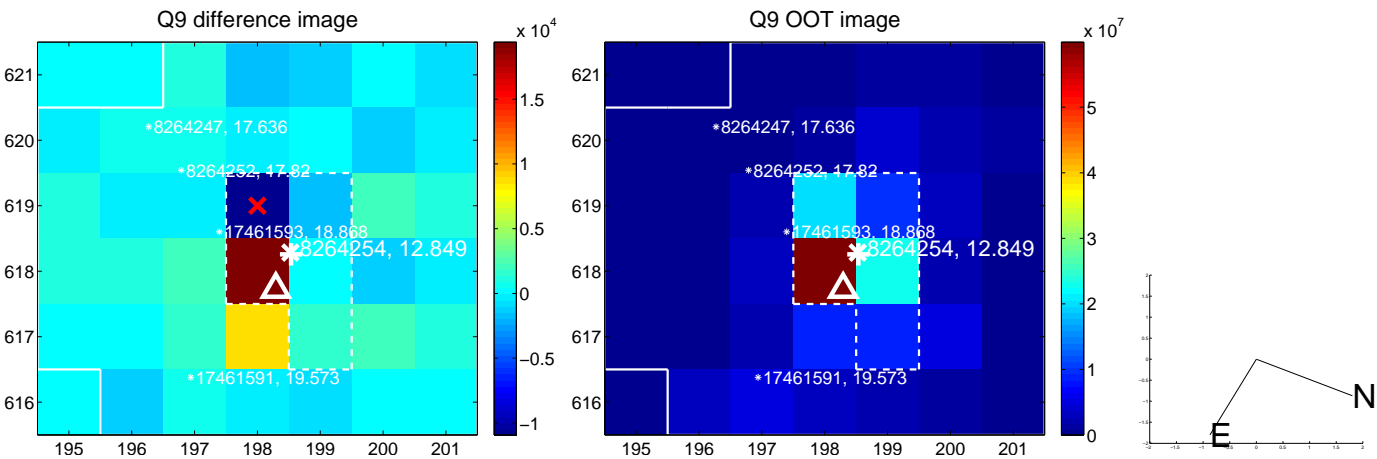




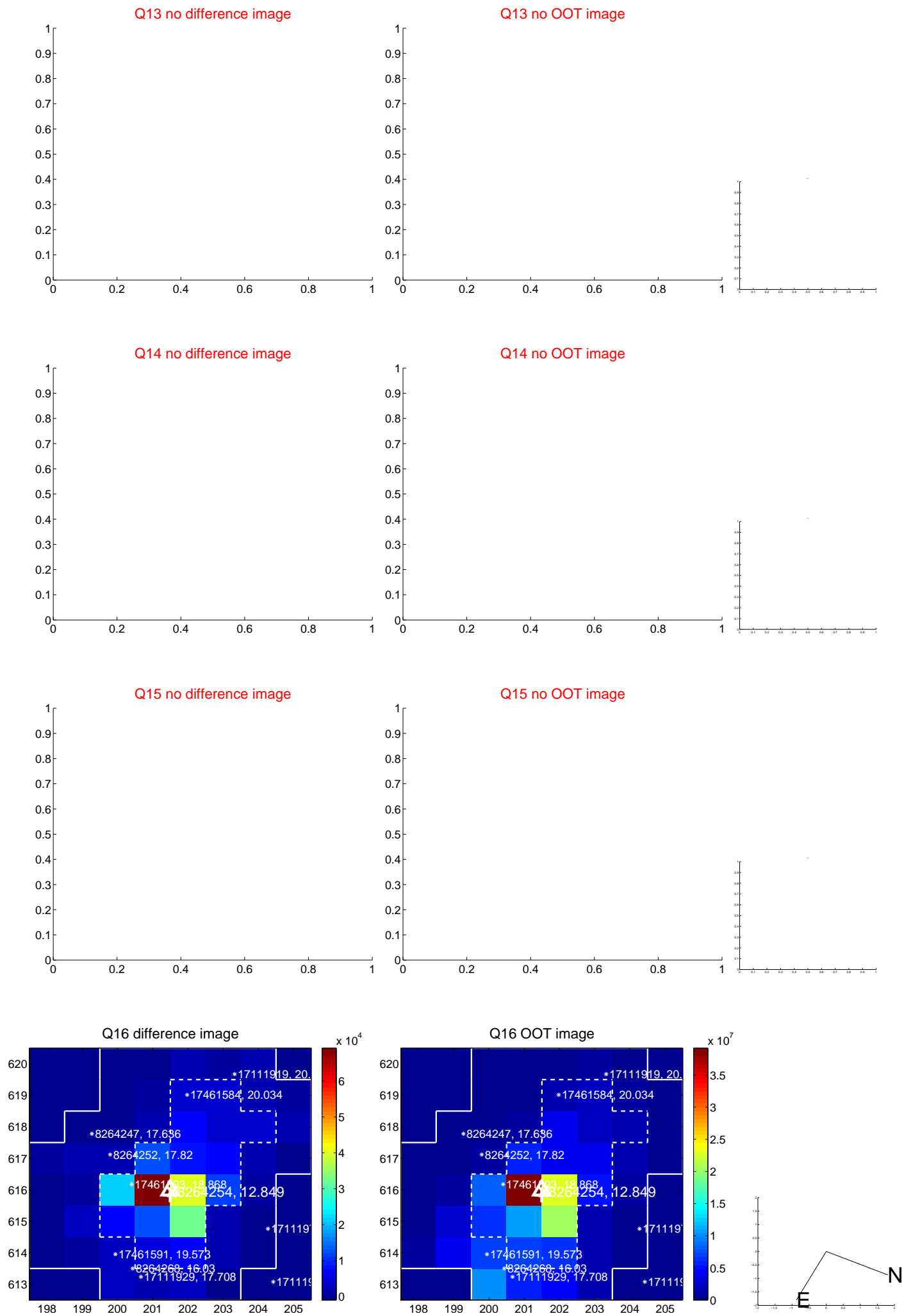
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



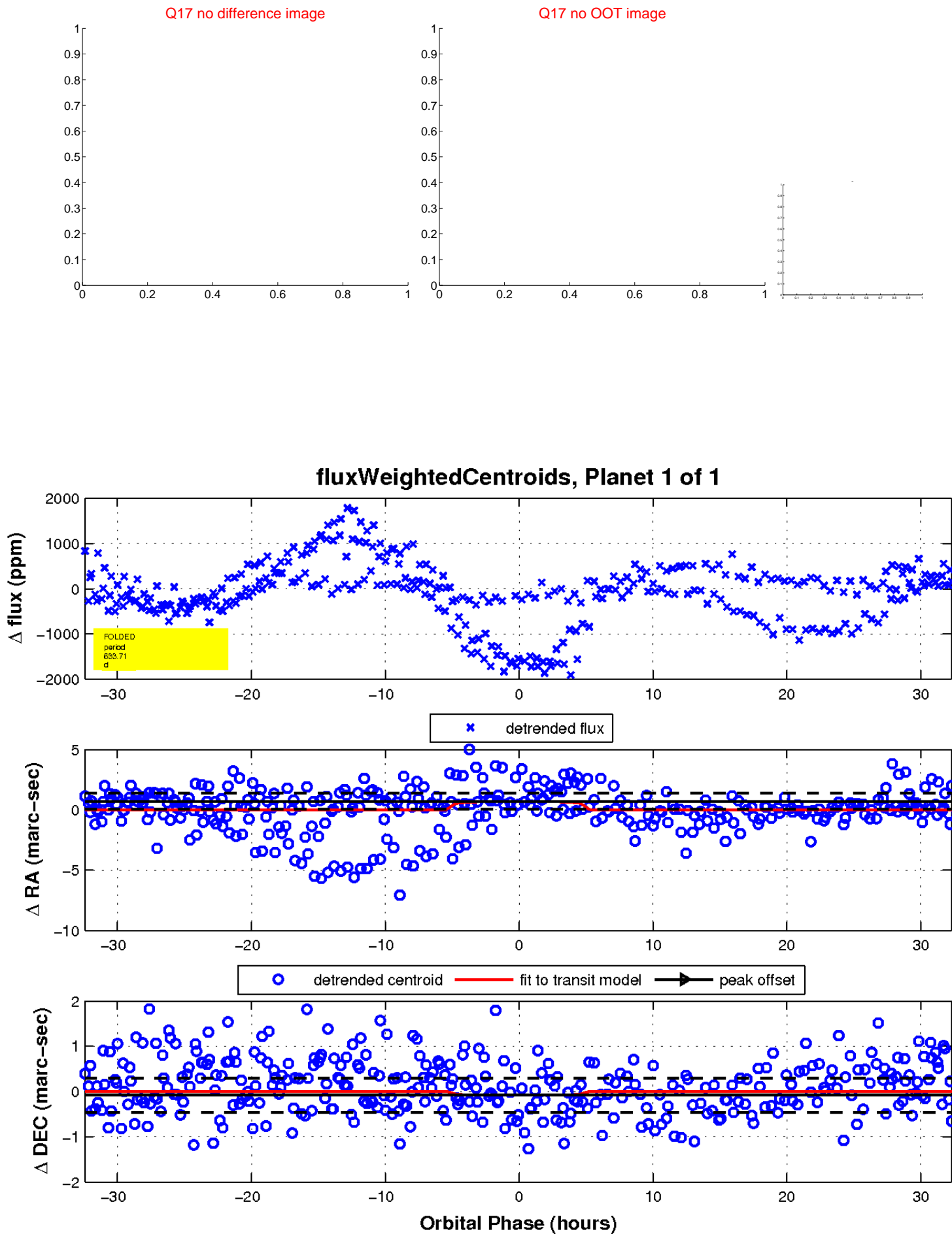
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

