

# KIC 008323764

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008323764-01	OBS	3767.01	6.714211	134.322993	34608.0	3.879	218.0	187.3	0.80	5159	20.46	101.21

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008323764-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_FEW_MEAS

**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.

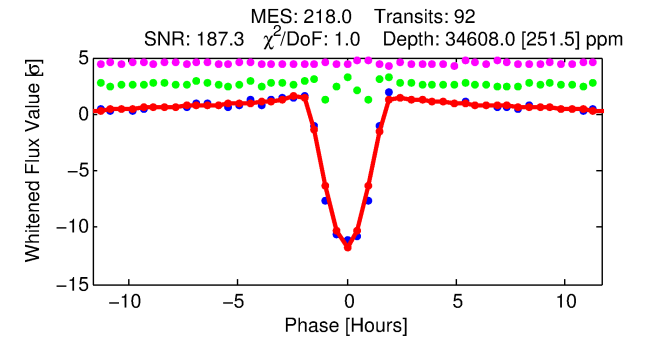
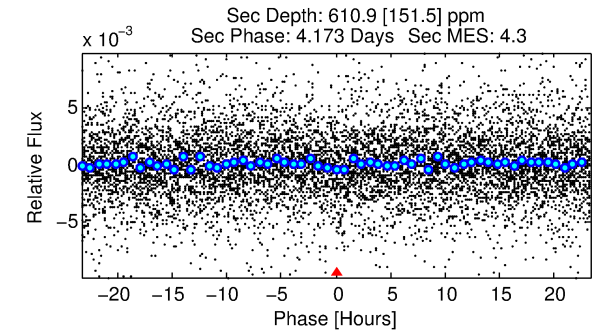
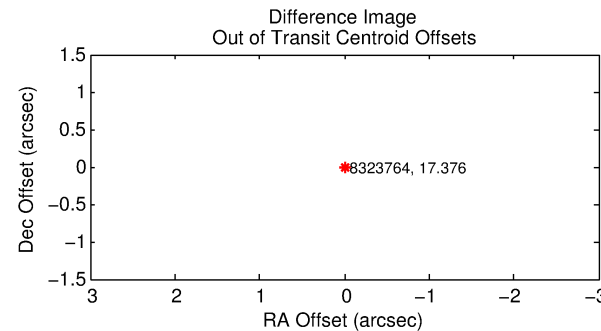
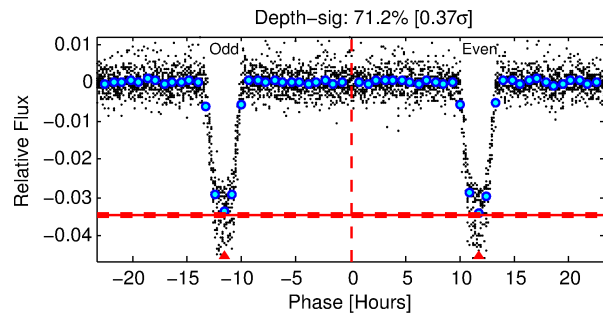
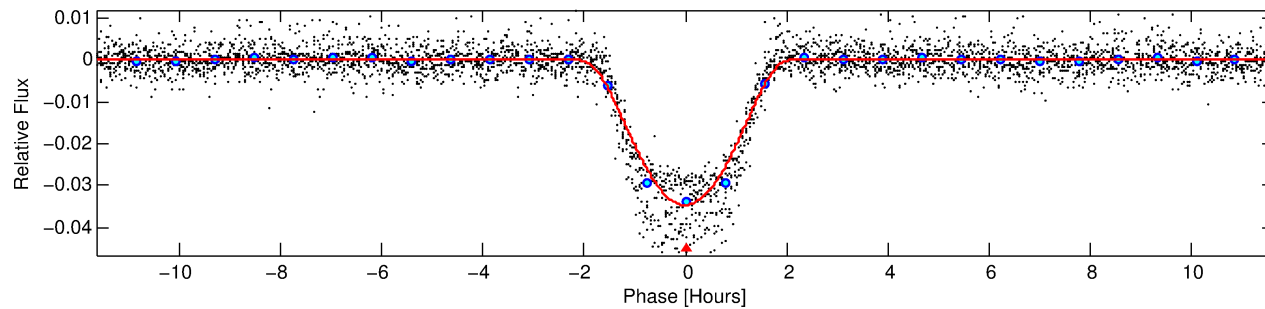
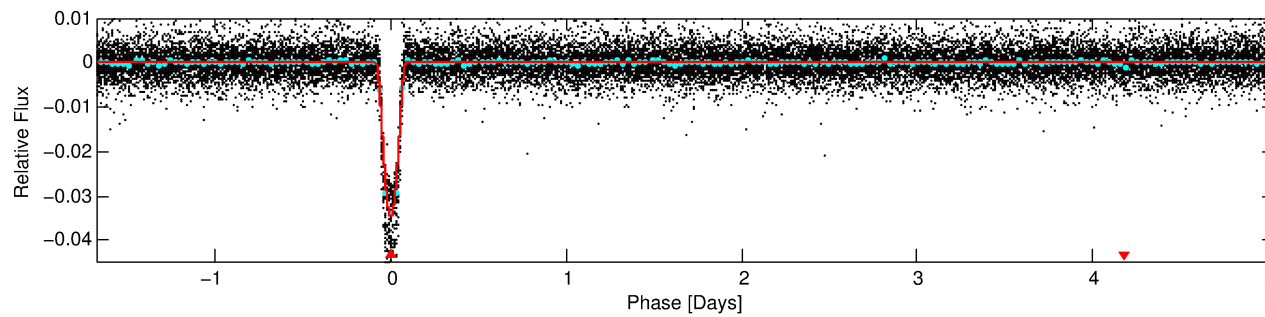
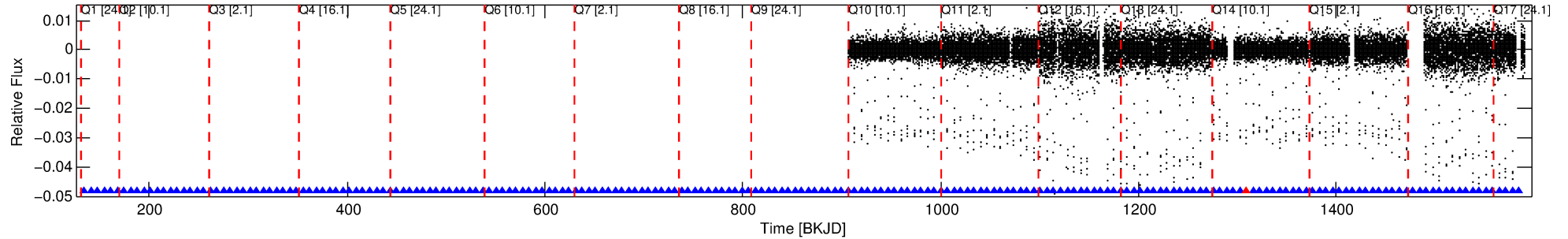
## Ephemeris Match Information For 008323764-01

No Significant Match Found

# DV One-Page Summary

KIC: 8323764 Candidate: 1 of 1 Period: 6.714 d  
KOI: K03767.01 Corr: 0.932

Kp: 17.38 R\*: 0.80 Rs Teff: 5159.0 K Logg: 4.51 Fe/H: -0.160



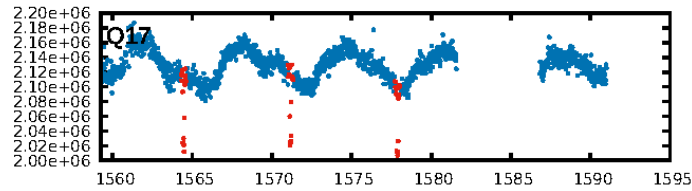
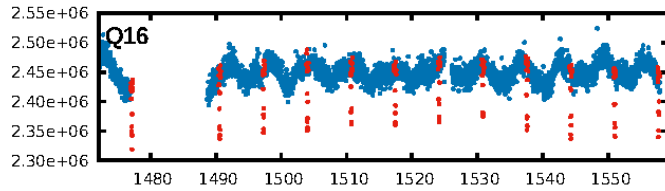
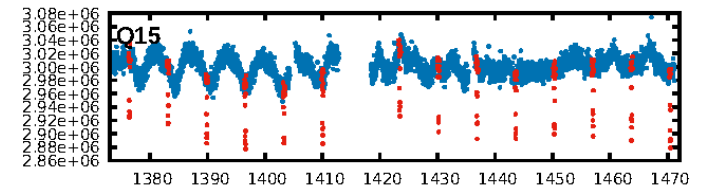
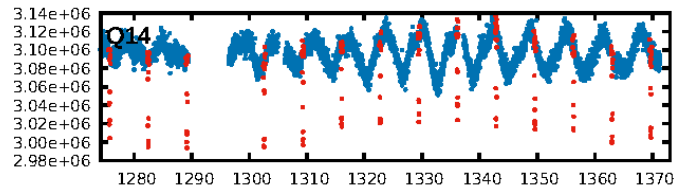
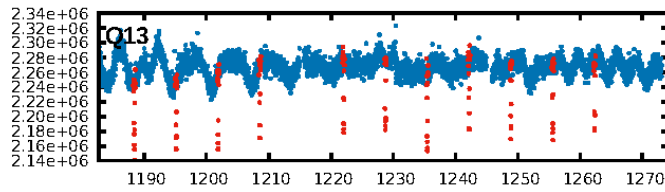
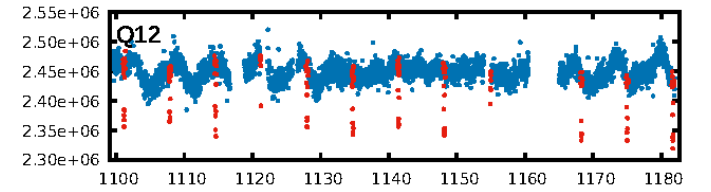
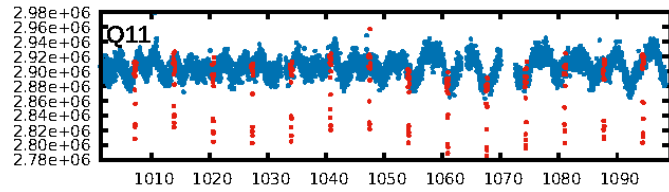
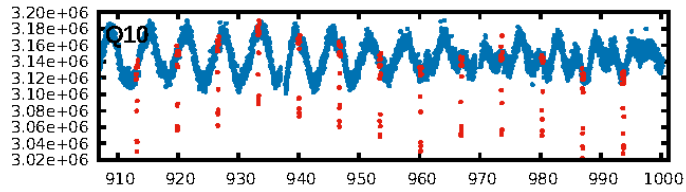
## DV Fit Results:

Period = 6.71421 [0.00001] d  
Epoch = 134.3230 [0.0010] BKJD  
Rp/R\* = 0.2344 [0.0314]  
a/R\* = 11.24 [0.27]  
b = 0.90 [0.05]  
Seff = 101.21 [22.67]  
Teff = 809 [45] K  
Rp = 20.46 [3.68] Re  
a = 0.0634 [0.0071] AU  
Ag = 3.22 [1.30] [1.70σ]  
Teffp = 1675 [163] K [5.11σ]

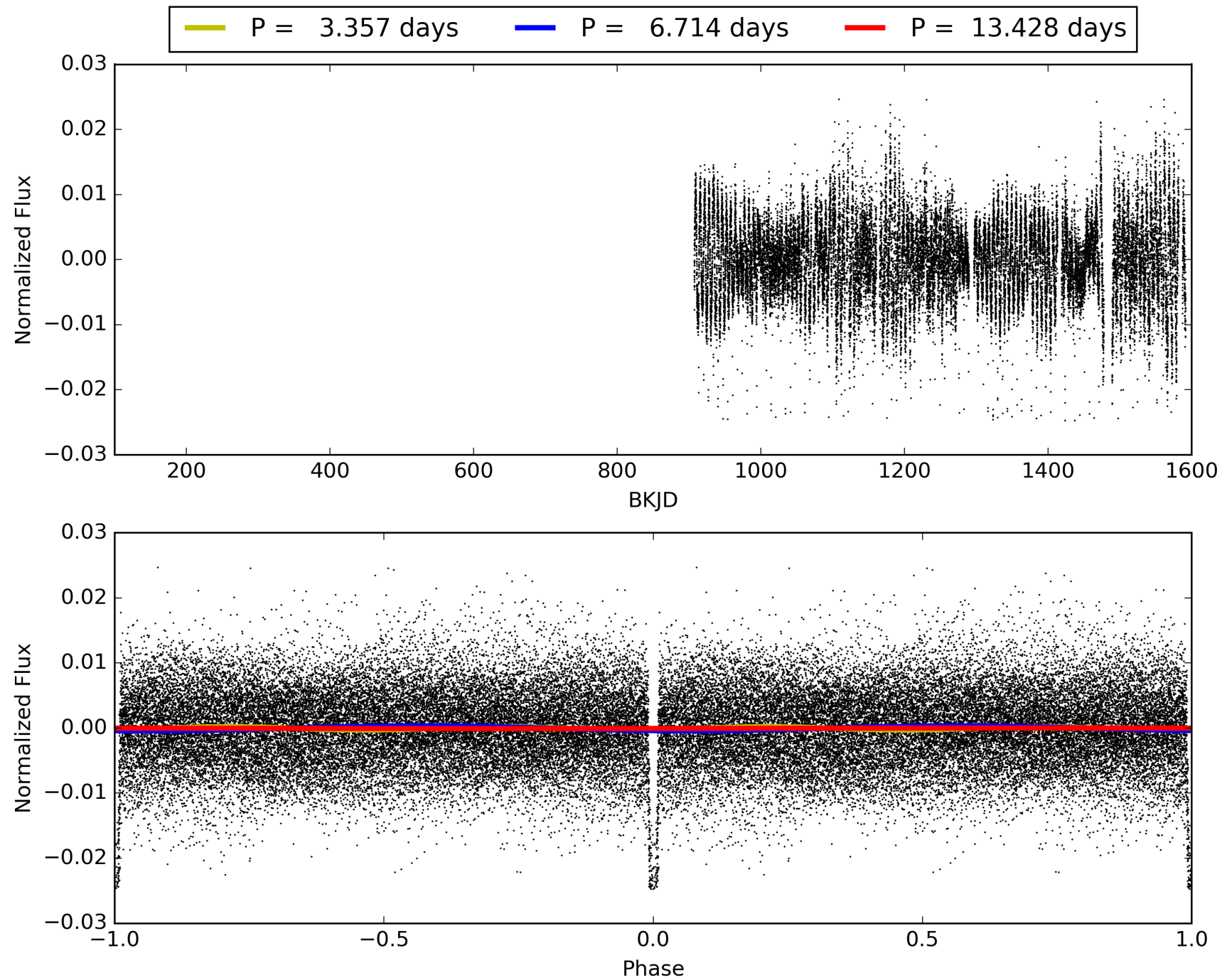
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.99 [88/89]  
GhostDiagnostic-chr: 2.83  
Centroid-sig: 0.0%  
Centroid-so: 4.213 arcsec [657.00σ]  
OotOffset-rm: N/A  
KicOffset-rm: 0.120 arcsec [1.75σ]  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 2/2/2 [8]  
DiffImageQuality-fgm: 1.00 [8/8]  
DiffImageOverlap-fno: 1.00 [8/8]

# TCE 008323764-01, PDC Light Curves

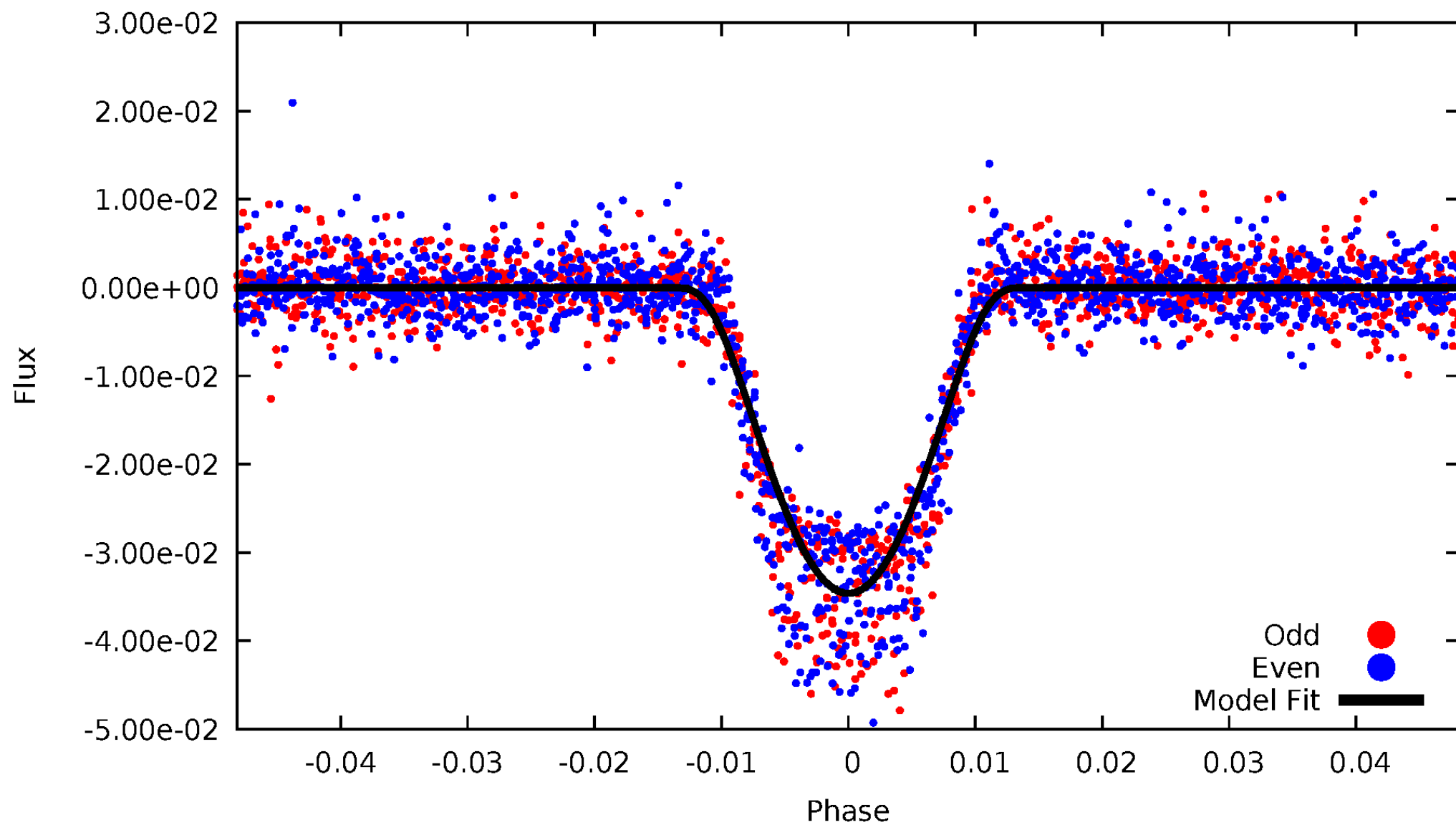


TCE 008323764-01



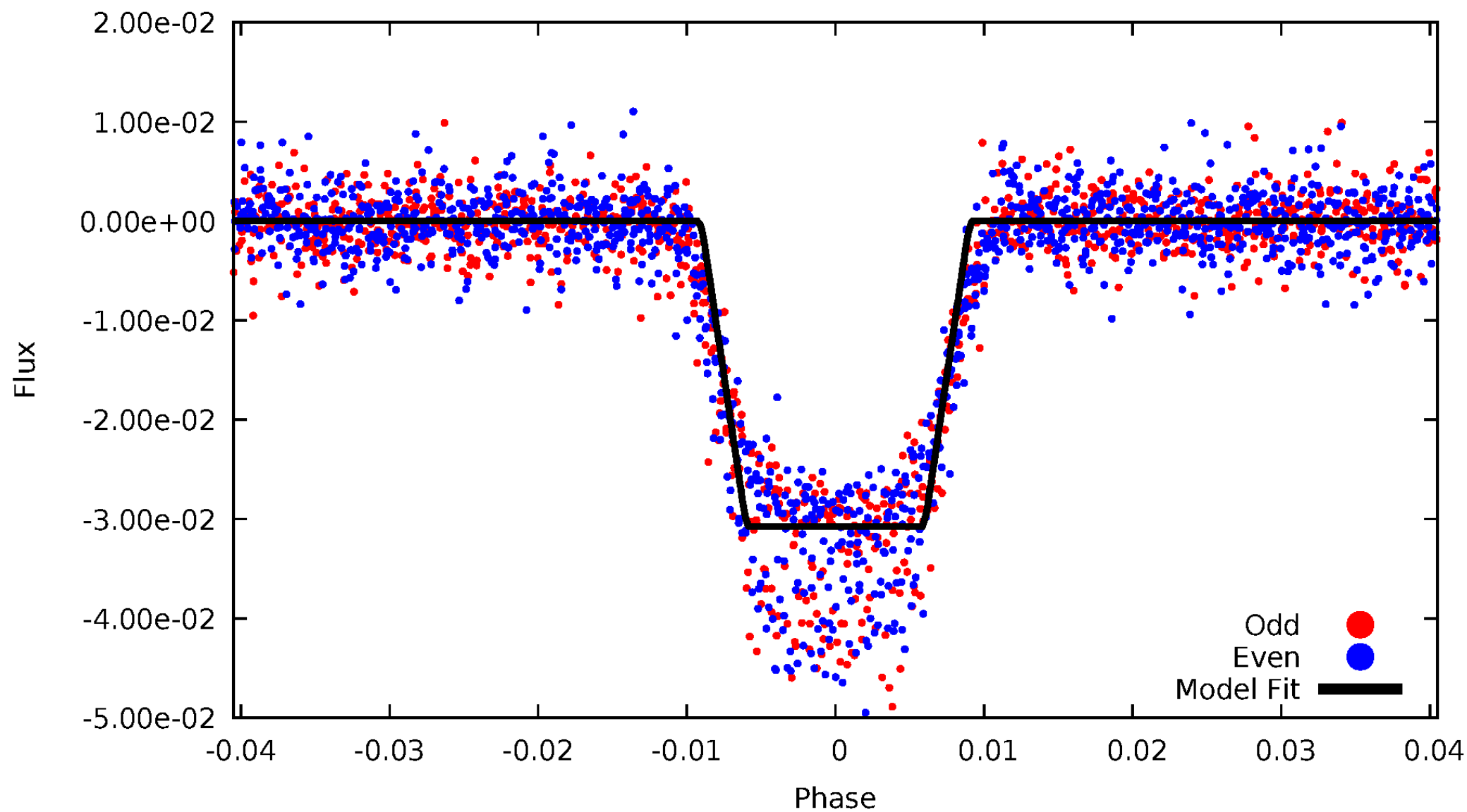
# DV Odd/Even

TCE 008323764-01



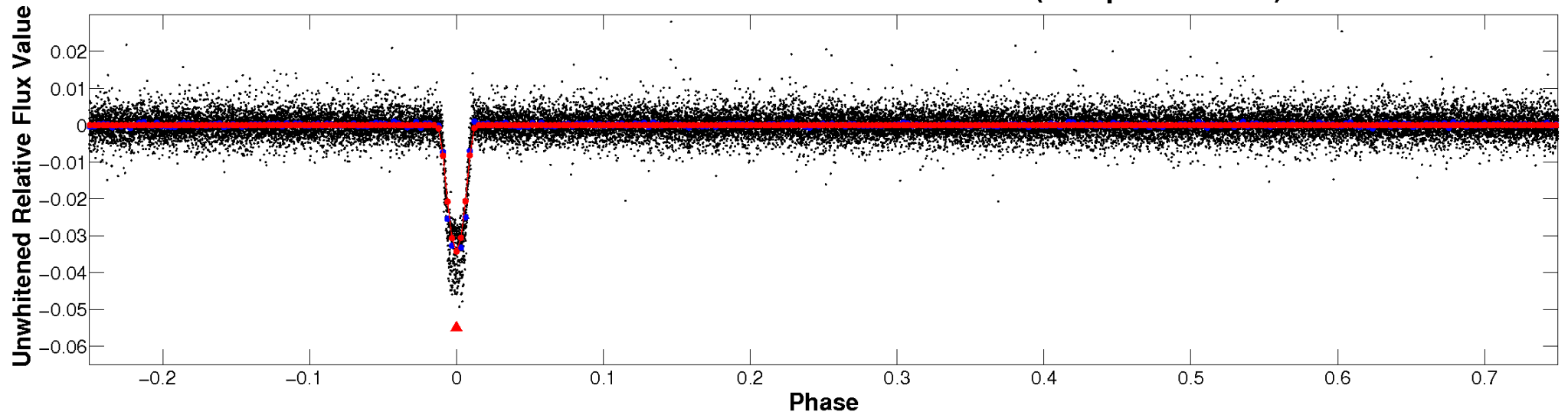
# ALT Odd/Even

TCE 008323764-01

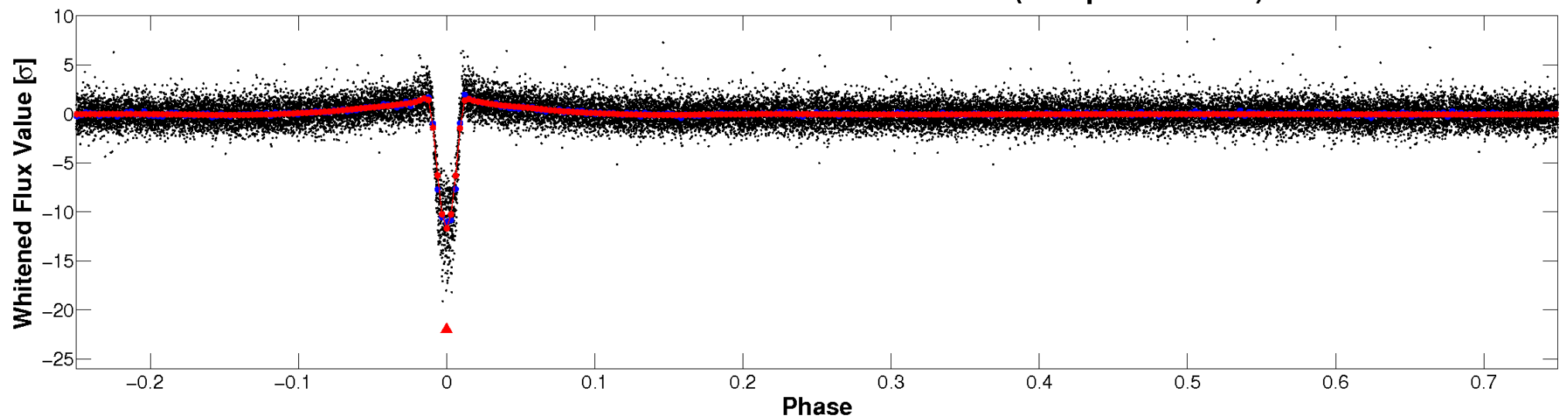


# Non-Whitened Vs. Whitened Light Curve

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



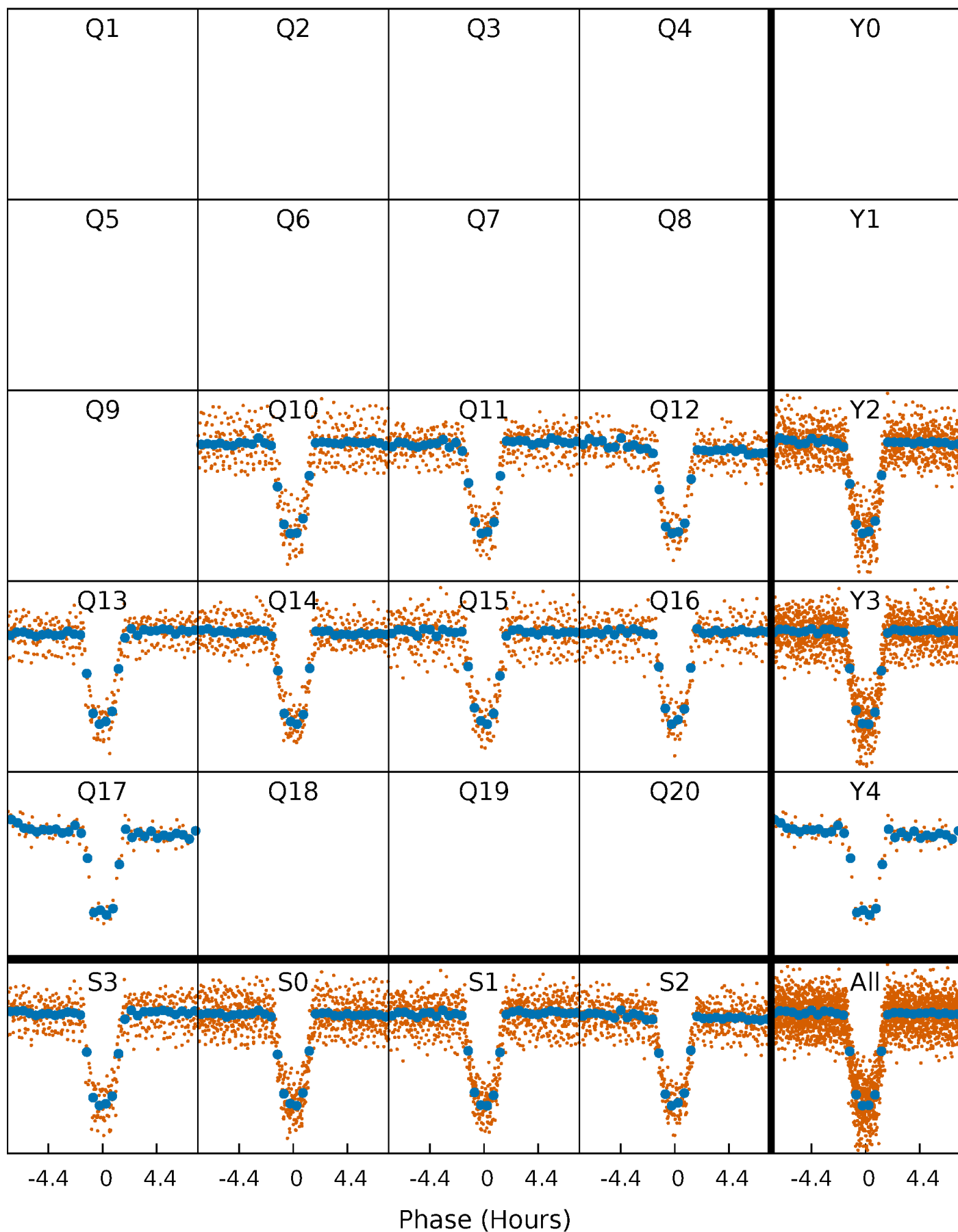
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

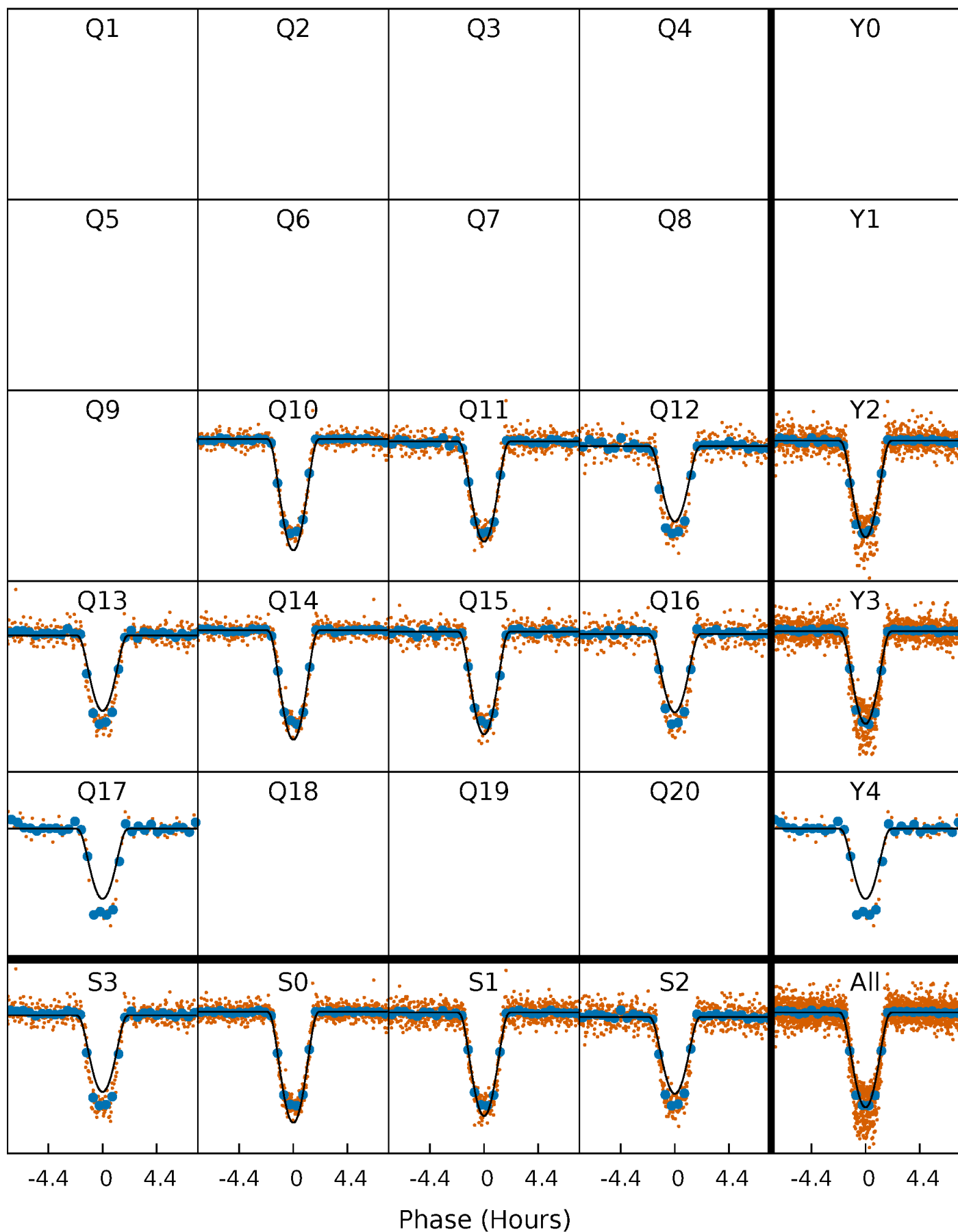
TCE 008323764-01 P= 6.714211 Days  $T_0=134.322993$  (BKJD)





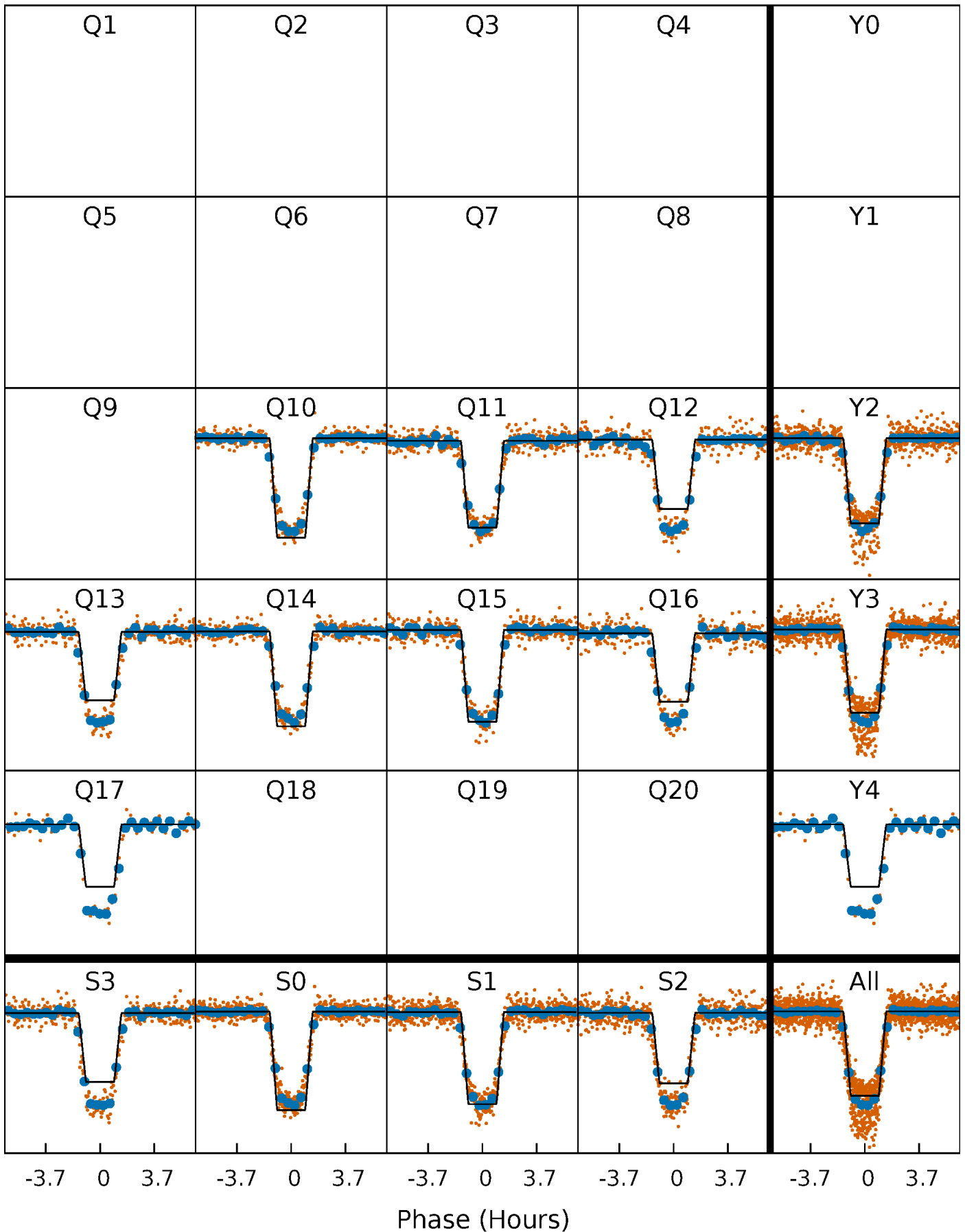
# DV Quarter-Phased Transit Curves

TCE 008323764-01 P= 6.714211 Days  $T_0=134.322993$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

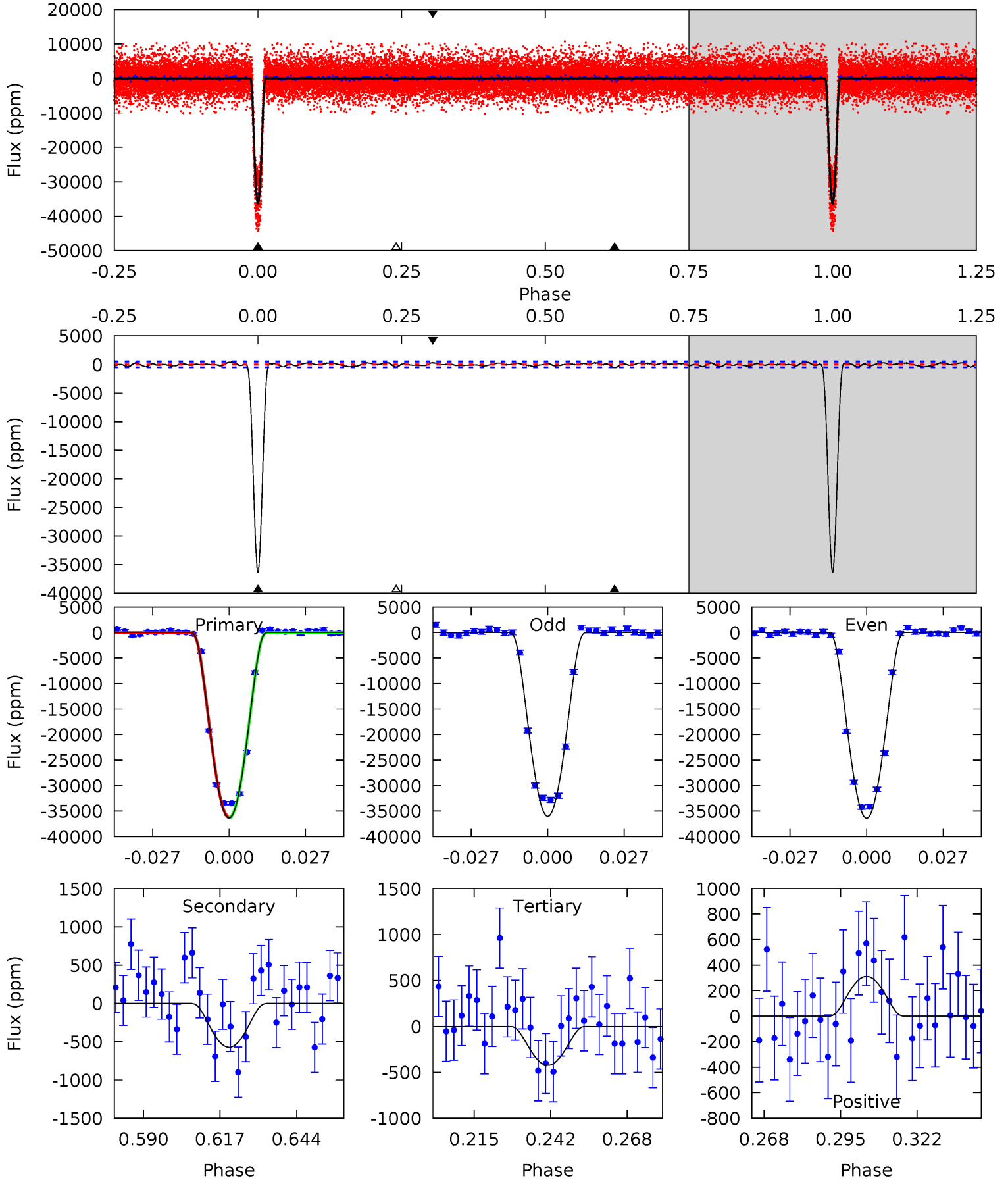
TCE 008323764-01 P= 6.714239 Days  $T_0=134.318499$  (BKJD)



# DV Model-Shift Uniqueness Test

008323764-01, P = 6.714211 Days, E = 134.322993 Days

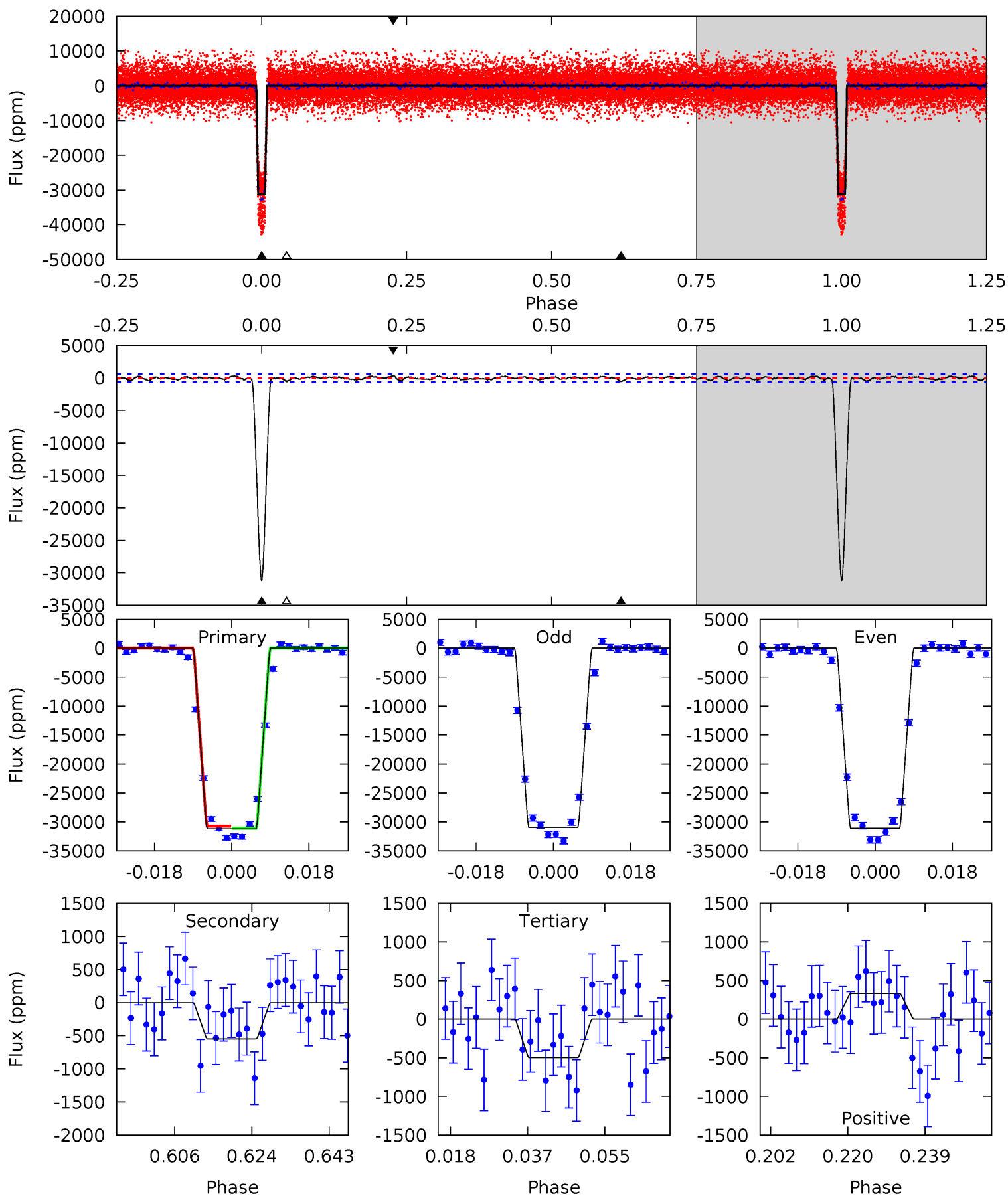
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
348.2	5.49	4.06	2.99	4.83	2.21	1.66	344.1	345.2	1.43	2.50	1.81	1.09	0.01	0.46



# Alt Model-Shift Uniqueness Test

008323764-01, P = 6.714239 Days, E = 134.318499 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
244.8	4.29	3.88	2.61	4.91	2.36	1.17	241.0	242.2	0.41	1.68	0.61	1.09	0.01	1.50



### Stellar Parameters For KIC 008323764

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5159^{+179}_{-179}$	$4.508^{+0.102}_{-0.085}$	$-0.160^{+0.300}_{-0.300}$	$0.800^{+0.096}_{-0.096}$	$0.752^{+0.106}_{-0.057}$	$2.067^{+0.847}_{-0.507}$
	+3%/-3%	+2%/-2%	+188%/-188%	+12%/-12%	+14%/-8%	+41%/-25%
Source	KIC0	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 008323764-01 / KOI 3767.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-573 \pm 104$	$20.50^{+3.21}_{-3.08}$	$1127^{+55}_{-54}$	$2455^{+121}_{-114}$	$3.037^{+1.279}_{-0.920}$
Alt.	$-547 \pm 127$	$15.44^{+3.12}_{-3.02}$	$1129^{+54}_{-53}$	$2629^{+177}_{-147}$	$5.062^{+2.821}_{-1.837}$

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

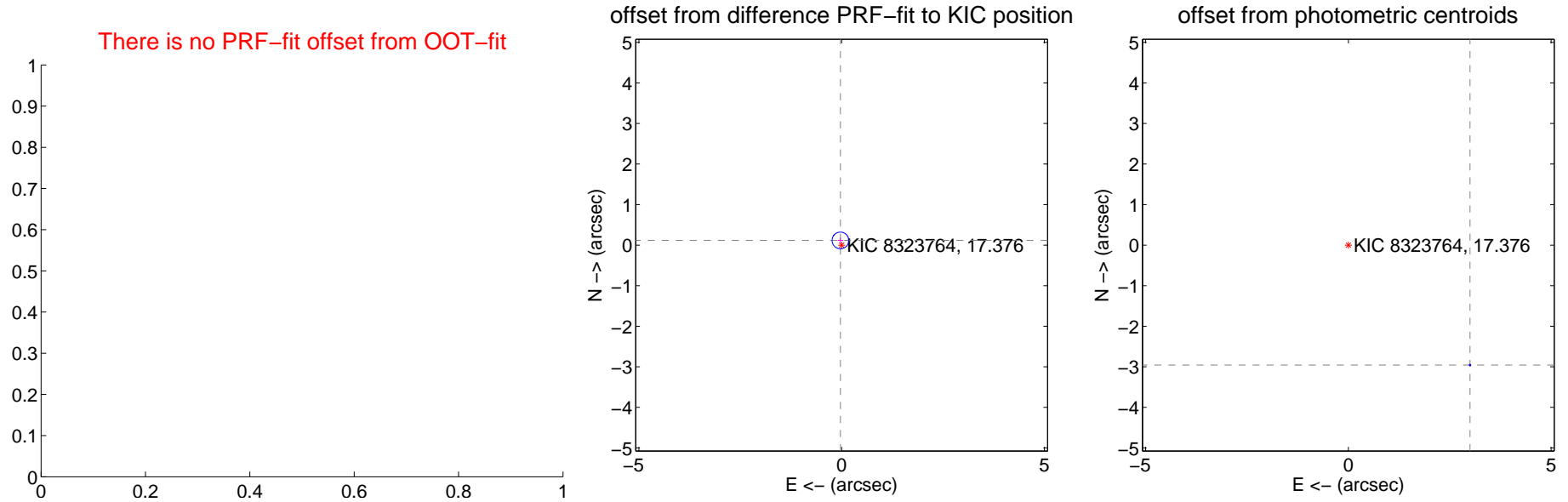
## DV Centroid Data

Supplemental centroid analysis for 008323764-01. Kepler magnitude: 17.38. Transit SNR 187.29

There are 8 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	$0.120 \pm 0.069$	1.75	$0.030 \pm 0.068$	$0.116 \pm 0.068$
photometric centroid source offset	$4.21 \pm 0.01$	657.00	$-3.00 \pm 0.01$	$-2.96 \pm 0.01$



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.

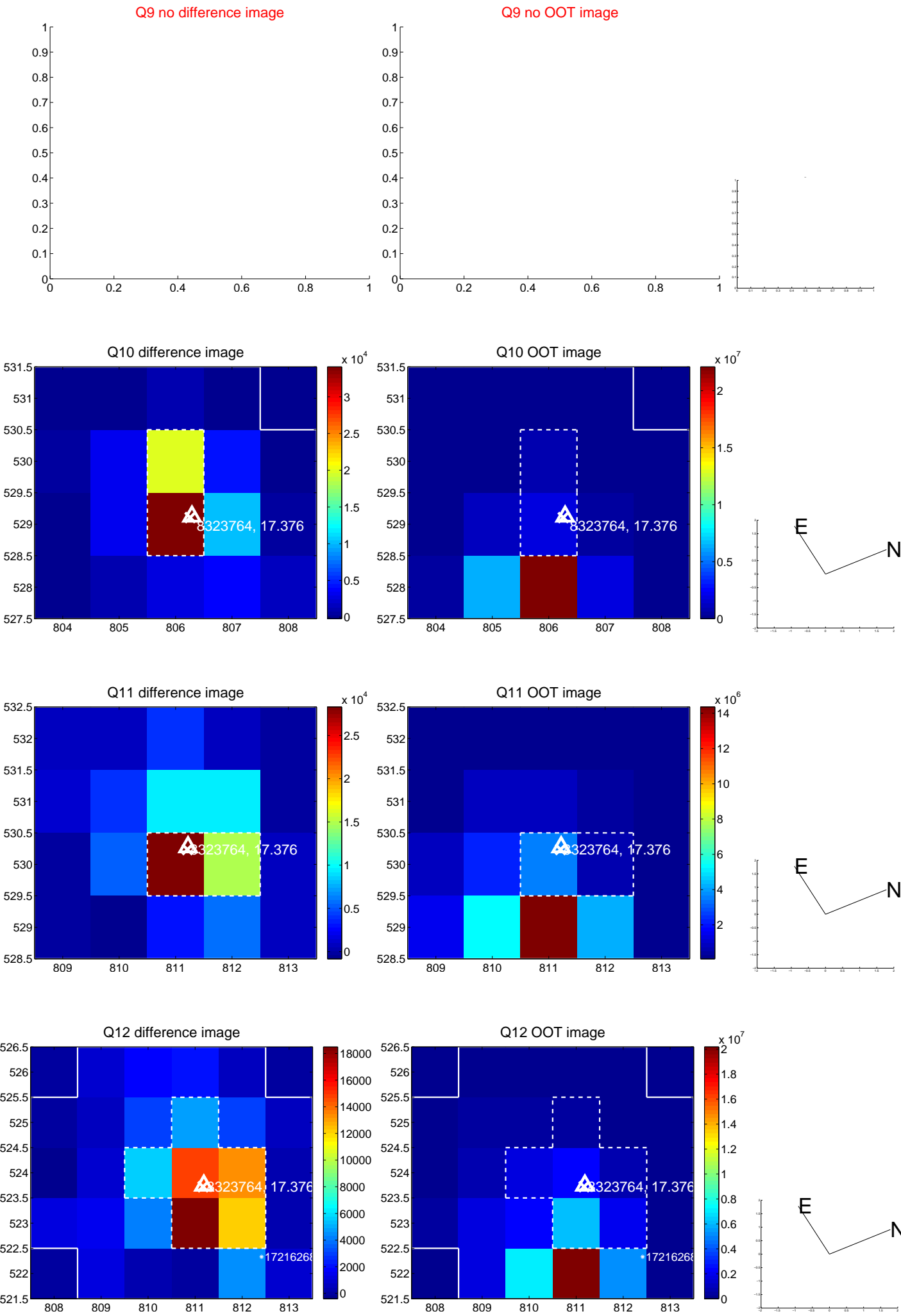




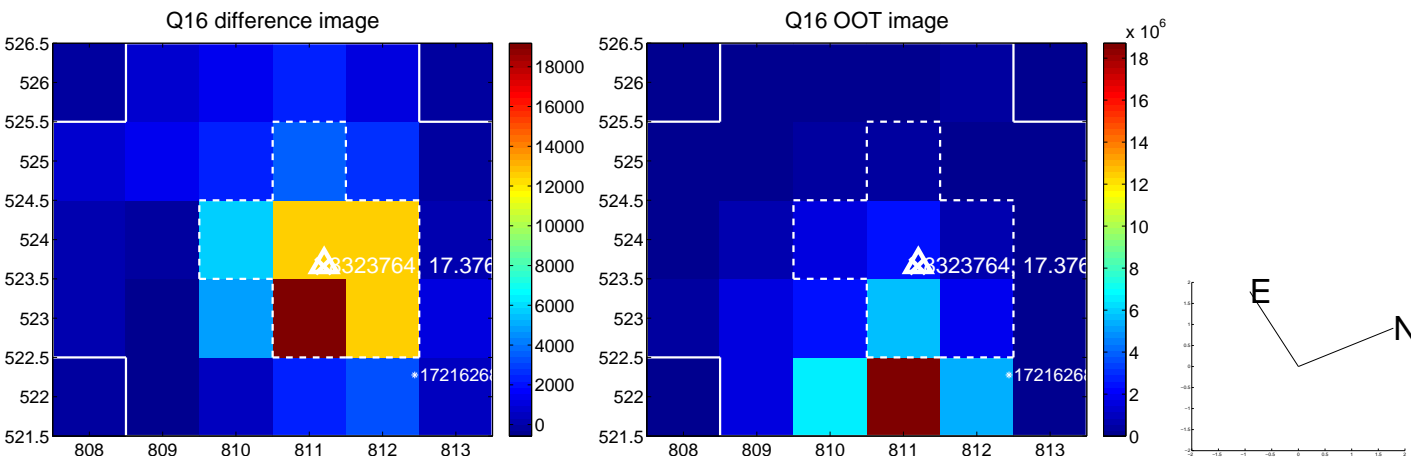
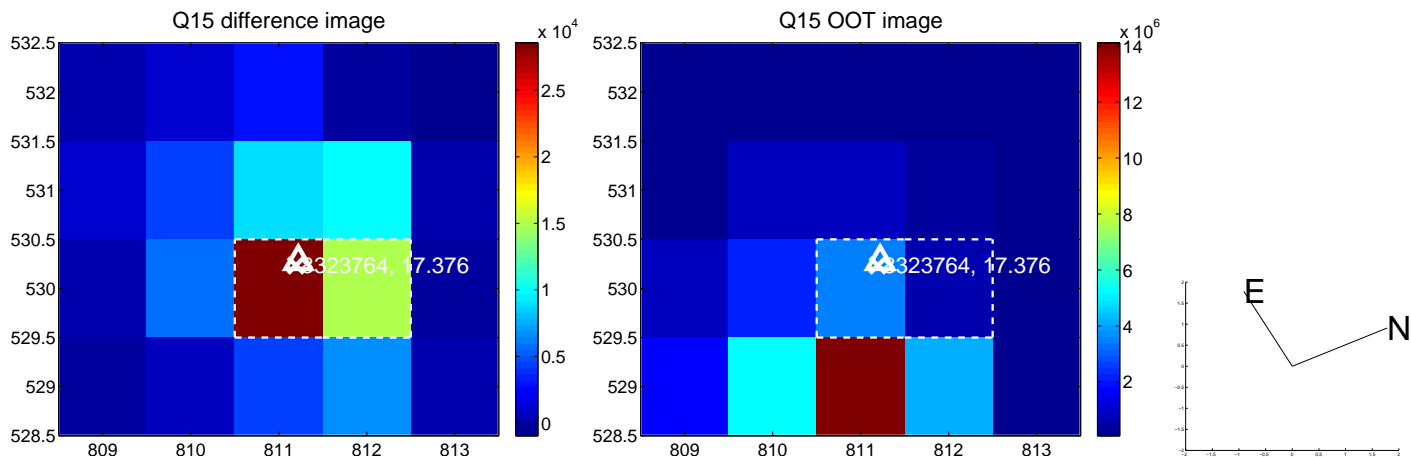
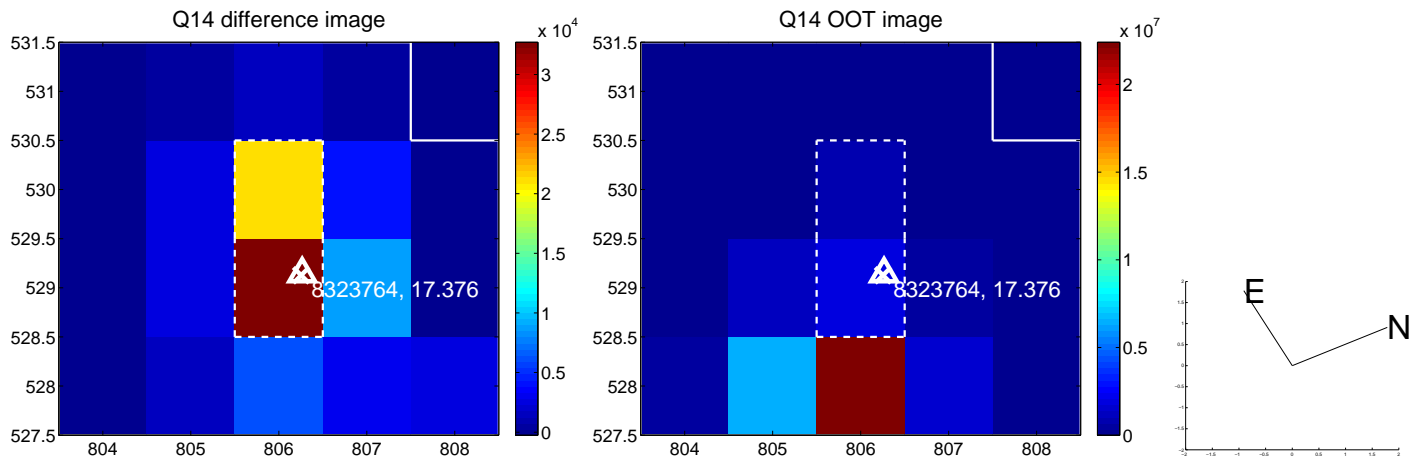
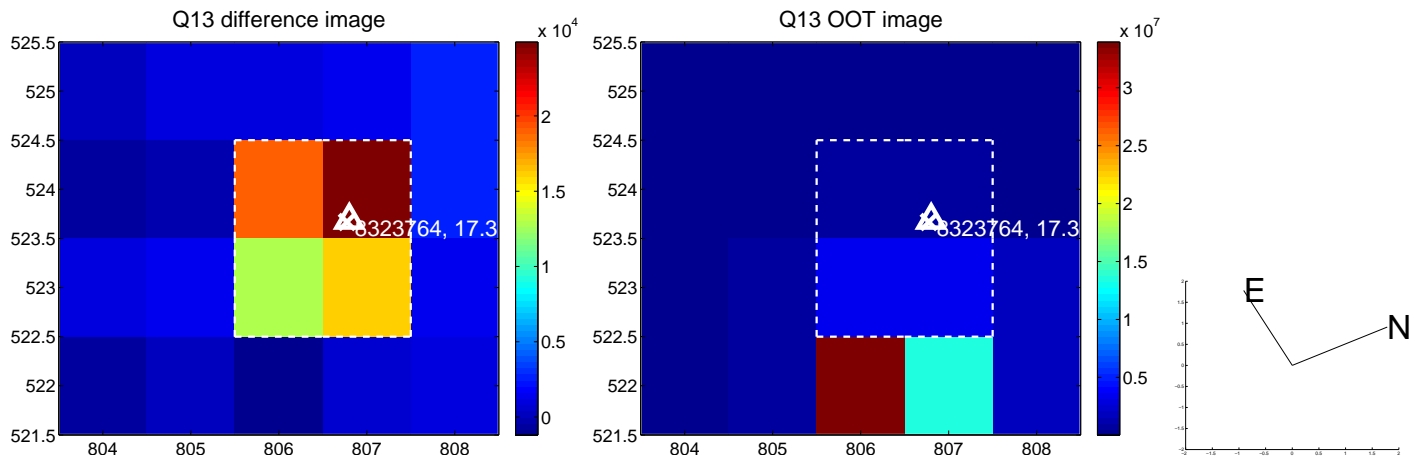
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



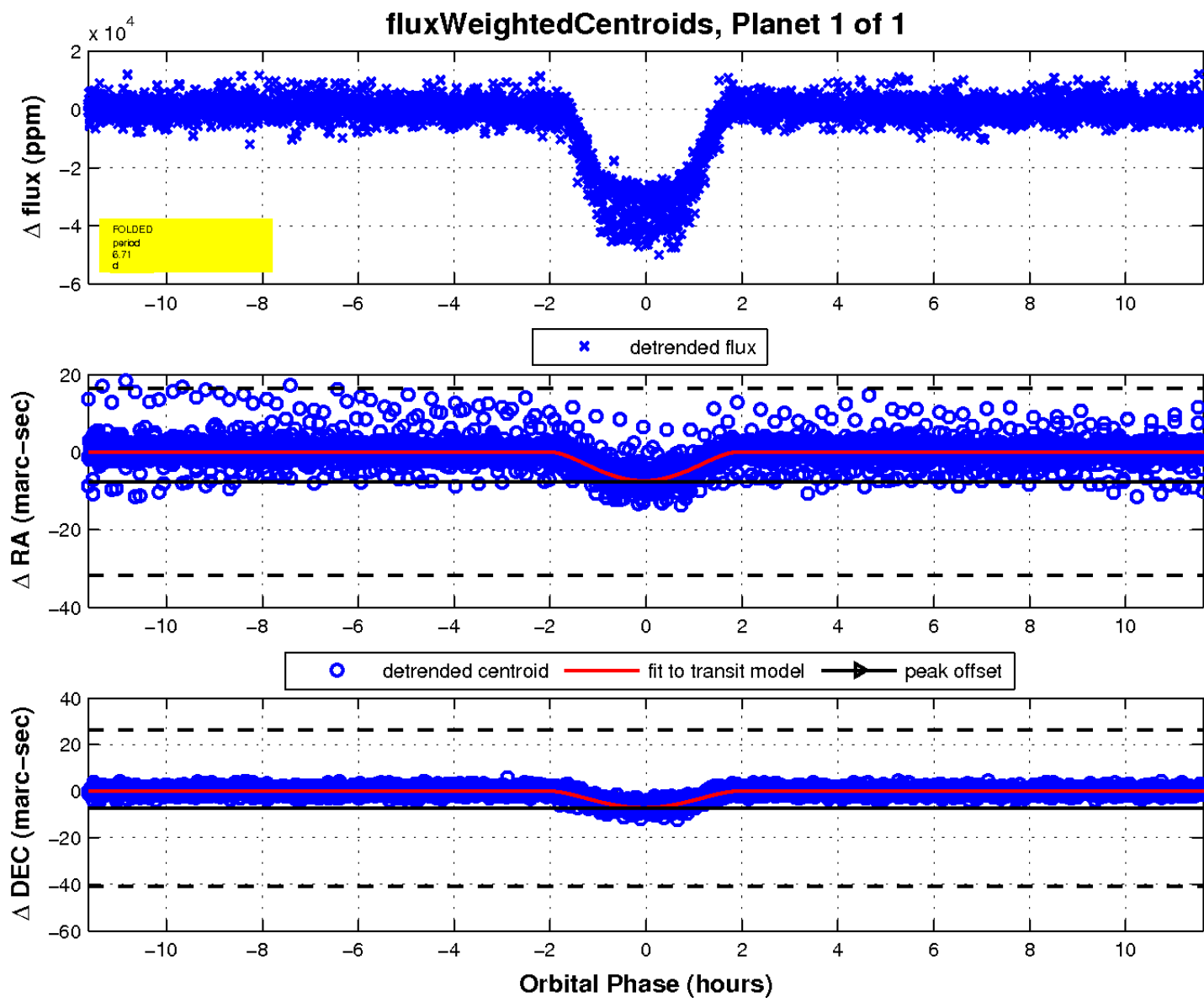
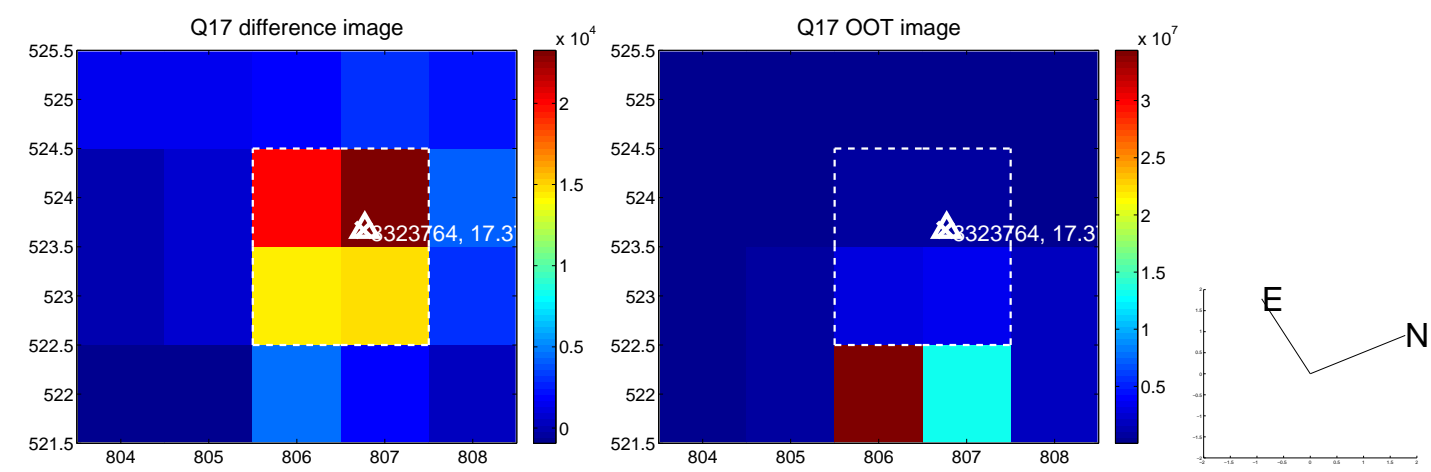
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

