

# KIC 009472363

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
009472363-01	OBS	No	0.851849	131.675829	4.5	8.172	8.4	9.2	2.99	8413	0.67	73952.34

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009472363-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

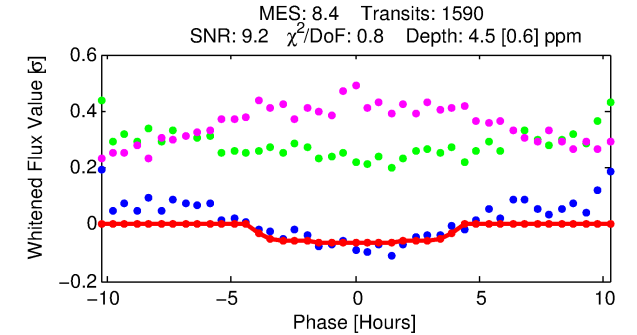
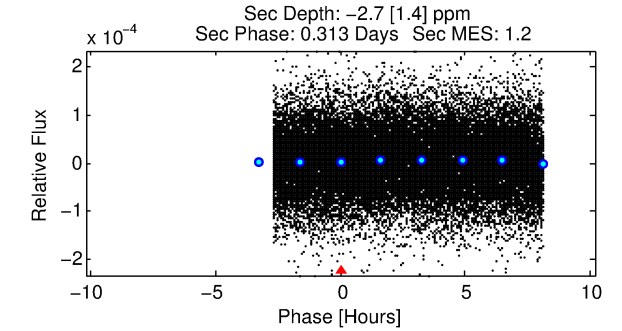
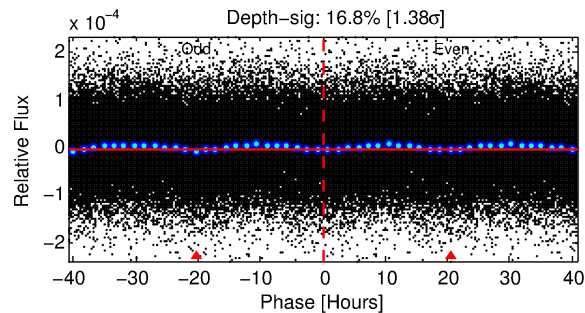
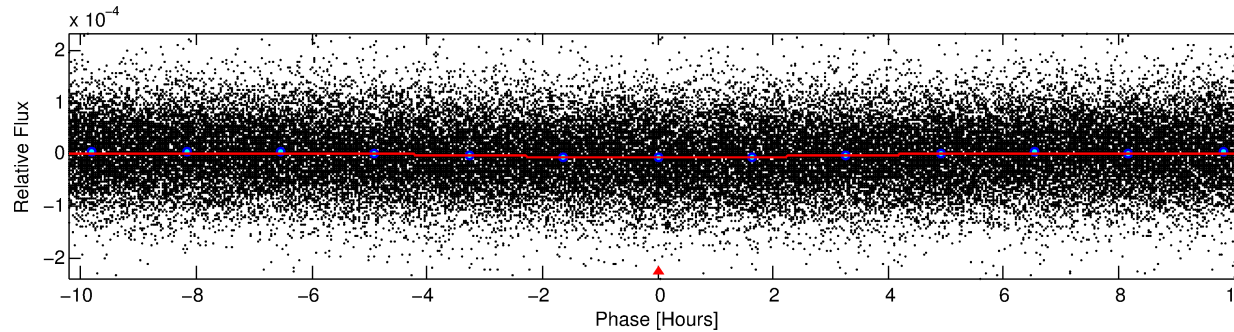
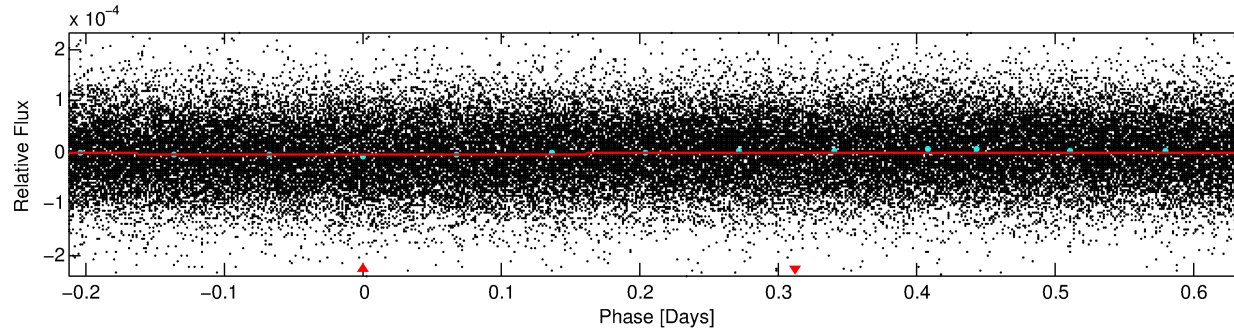
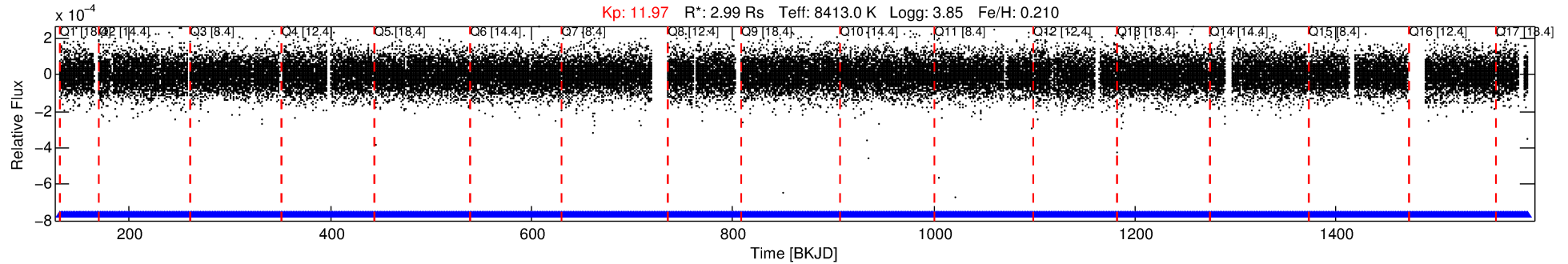
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 009472363-01

No Significant Match Found

# DV One-Page Summary

KIC: 9472363 Candidate: 1 of 1 Period: 0.852 d



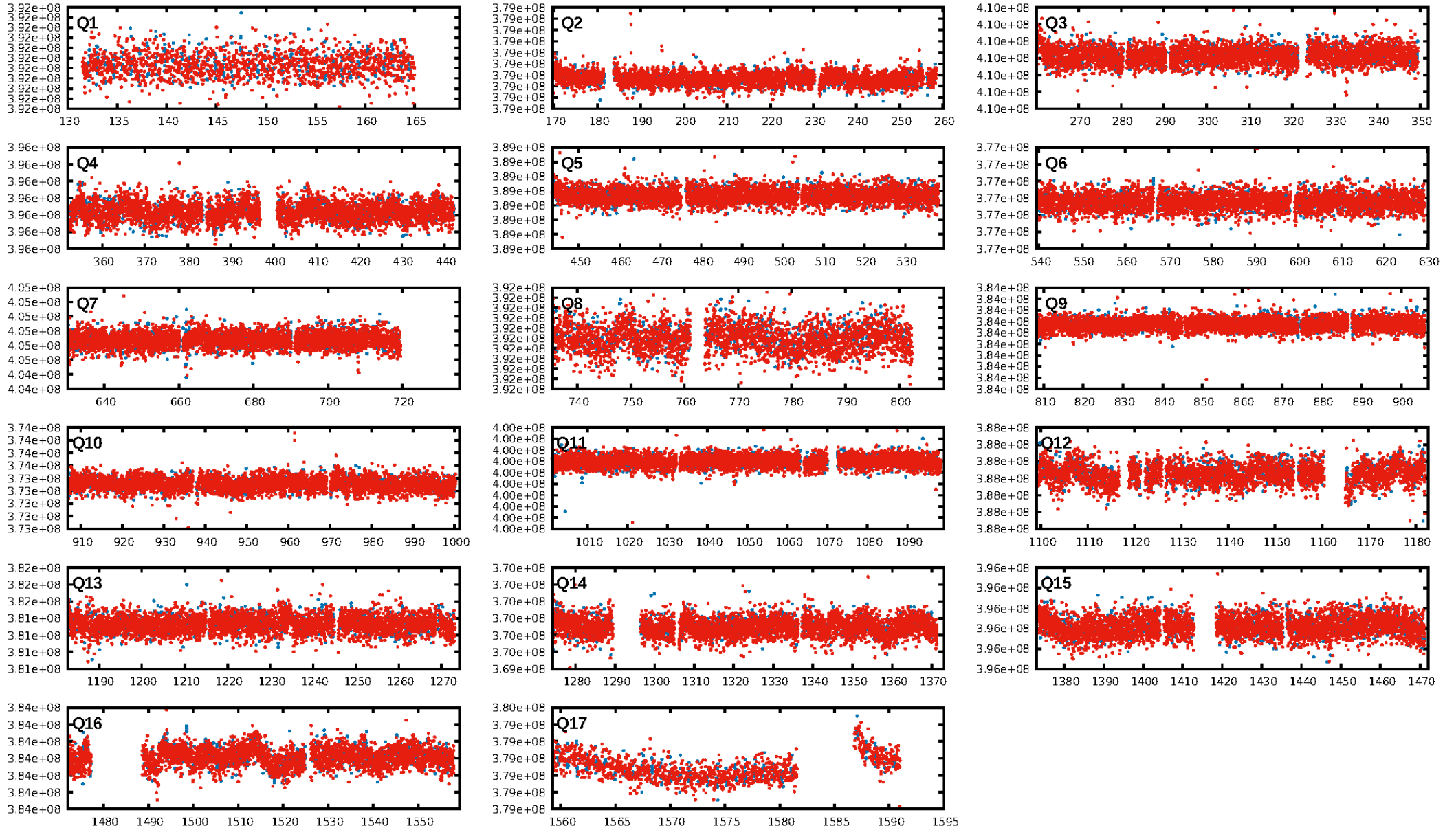
## DV Fit Results:

Period = 0.85185 [0.00002] d  
Epoch = 131.6758 [0.0082] BKJD  
 $R_p/R^*$  = 0.0021 [0.0016]  
 $a/R^*$  = 1.03 [0.29]  
 $b$  = 0.65 [4.18]  
 $\text{Seff}$  = 73952.34 [41843.58]  
 $\text{Teq}$  = 4205 [595] K  
 $R_p$  = 0.67 [0.58]  $R_e$   
 $a$  = 0.0233 [0.0080] AU  
 $\text{Ag}$  = N/A  
 $\text{Teffp}$  = N/A

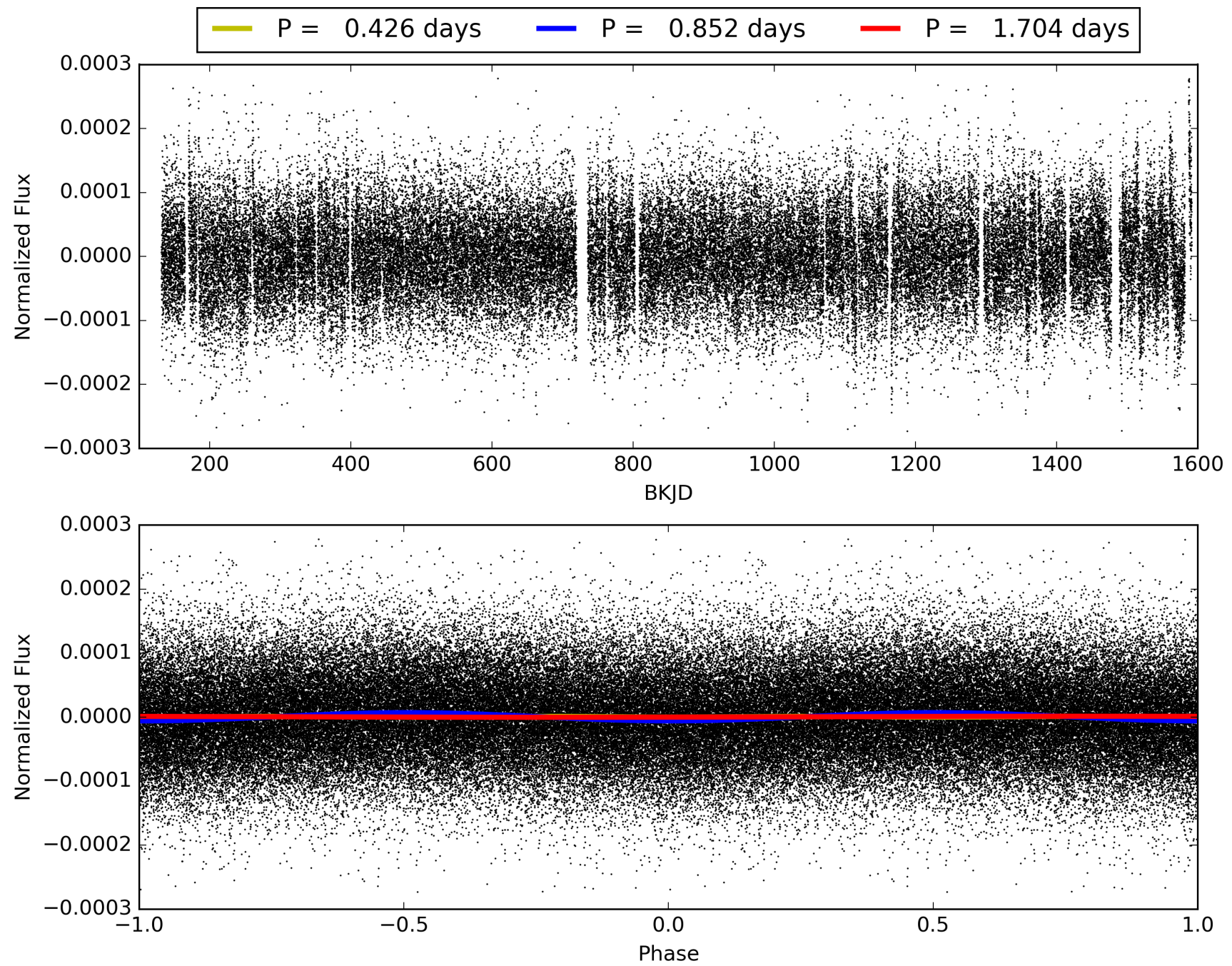
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1518/1518]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 009472363-01, PDC Light Curves

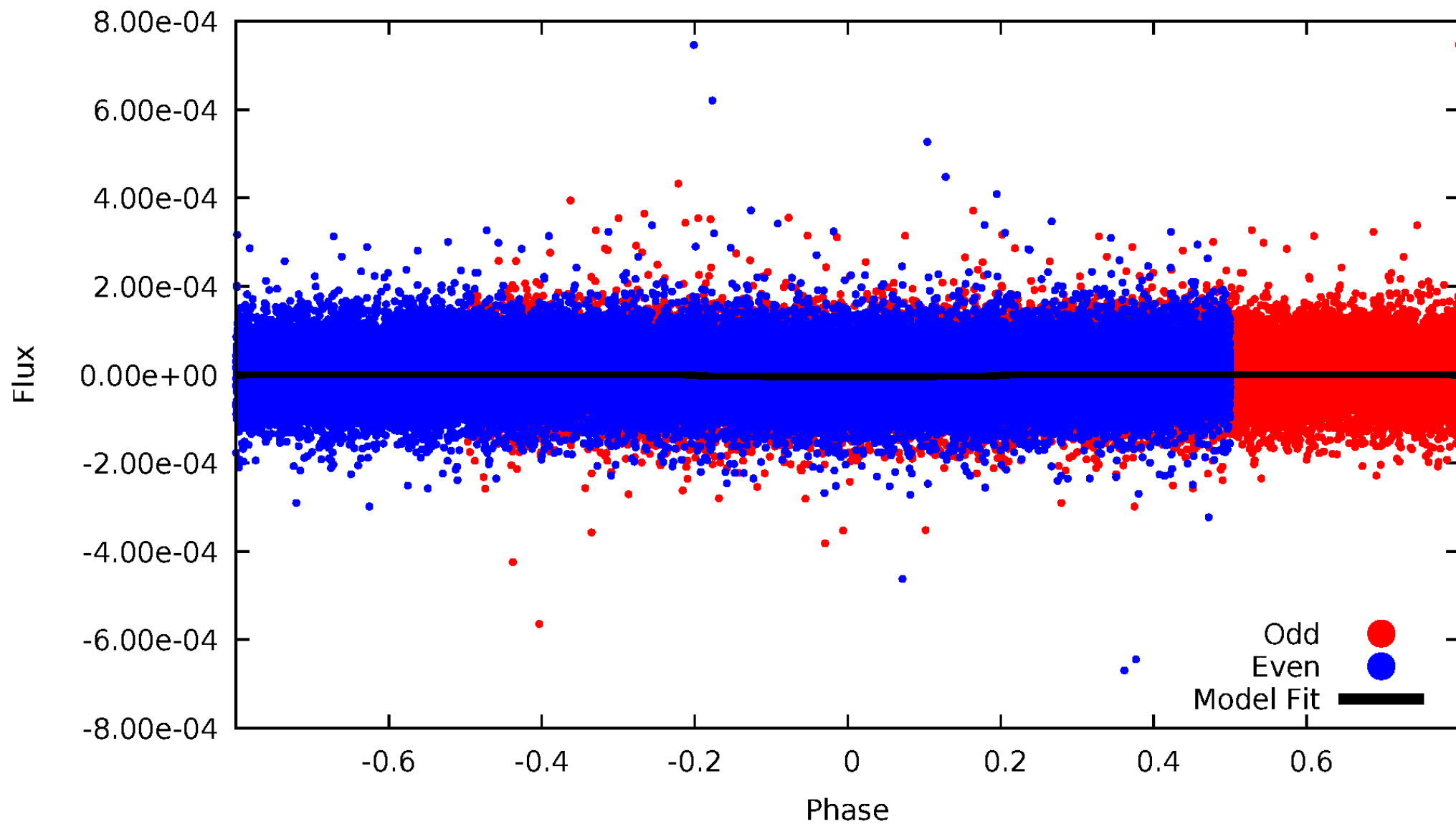


TCE 009472363-01



# DV Odd/Even

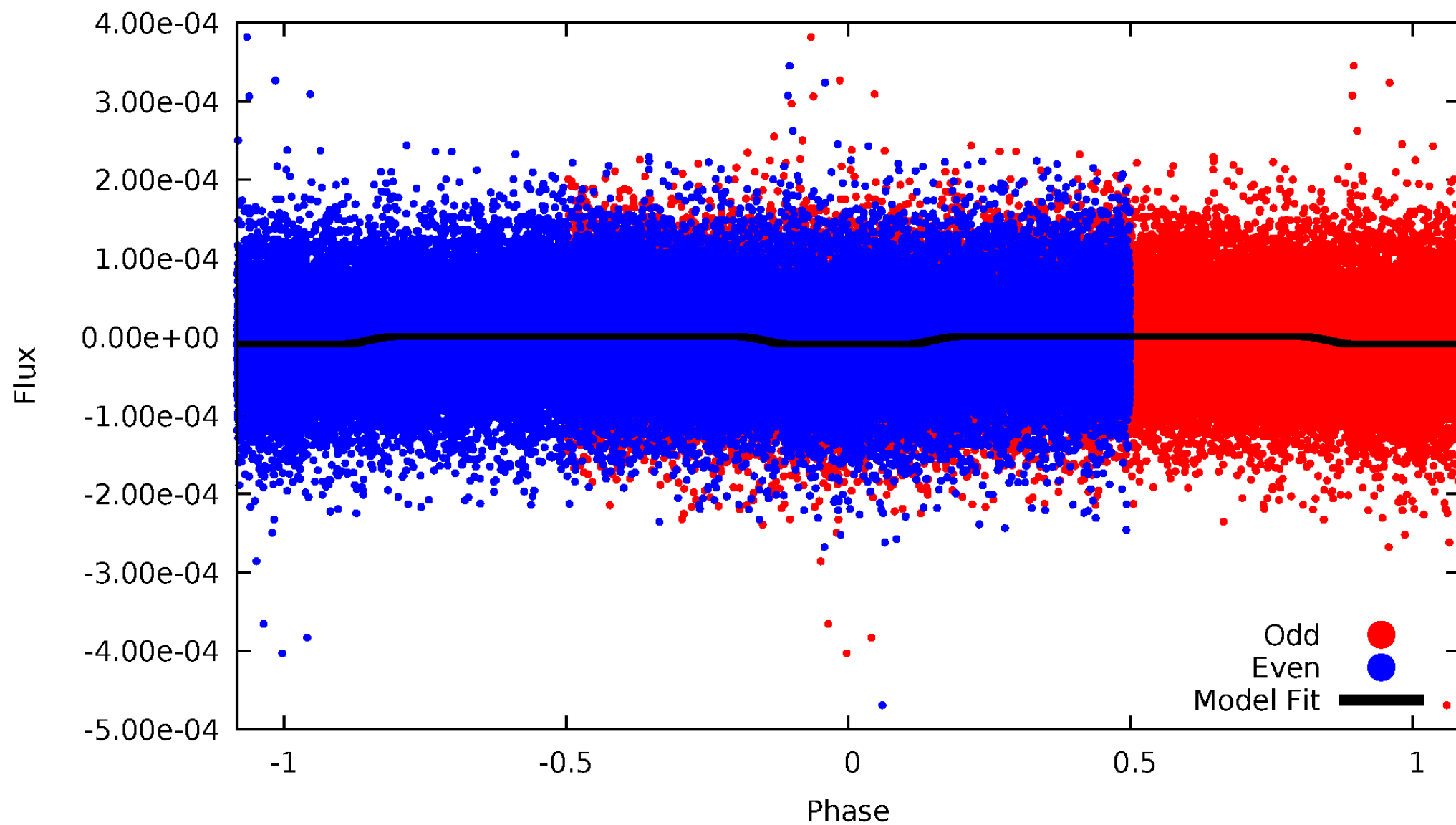
TCE 009472363-01





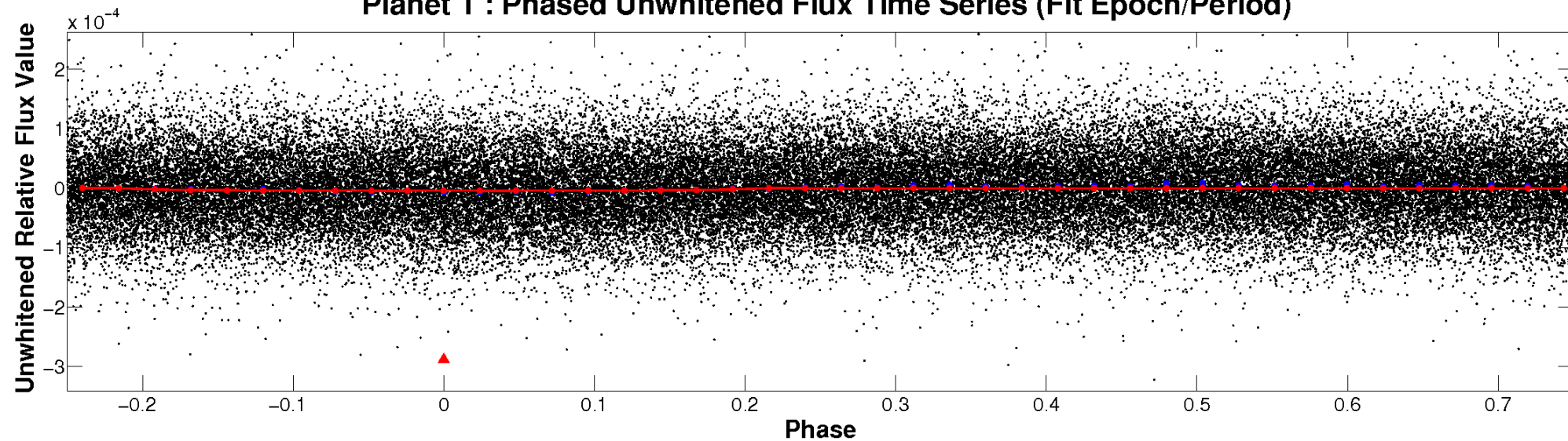
# ALT Odd/Even

TCE 009472363-01

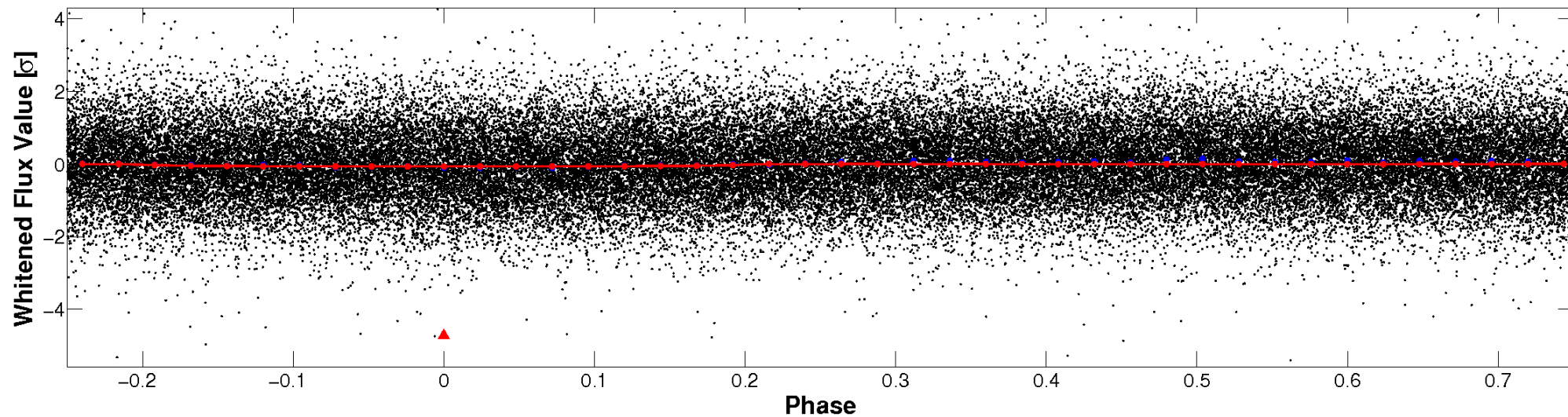


# Non-Whitened Vs. Whitened Light Curve

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

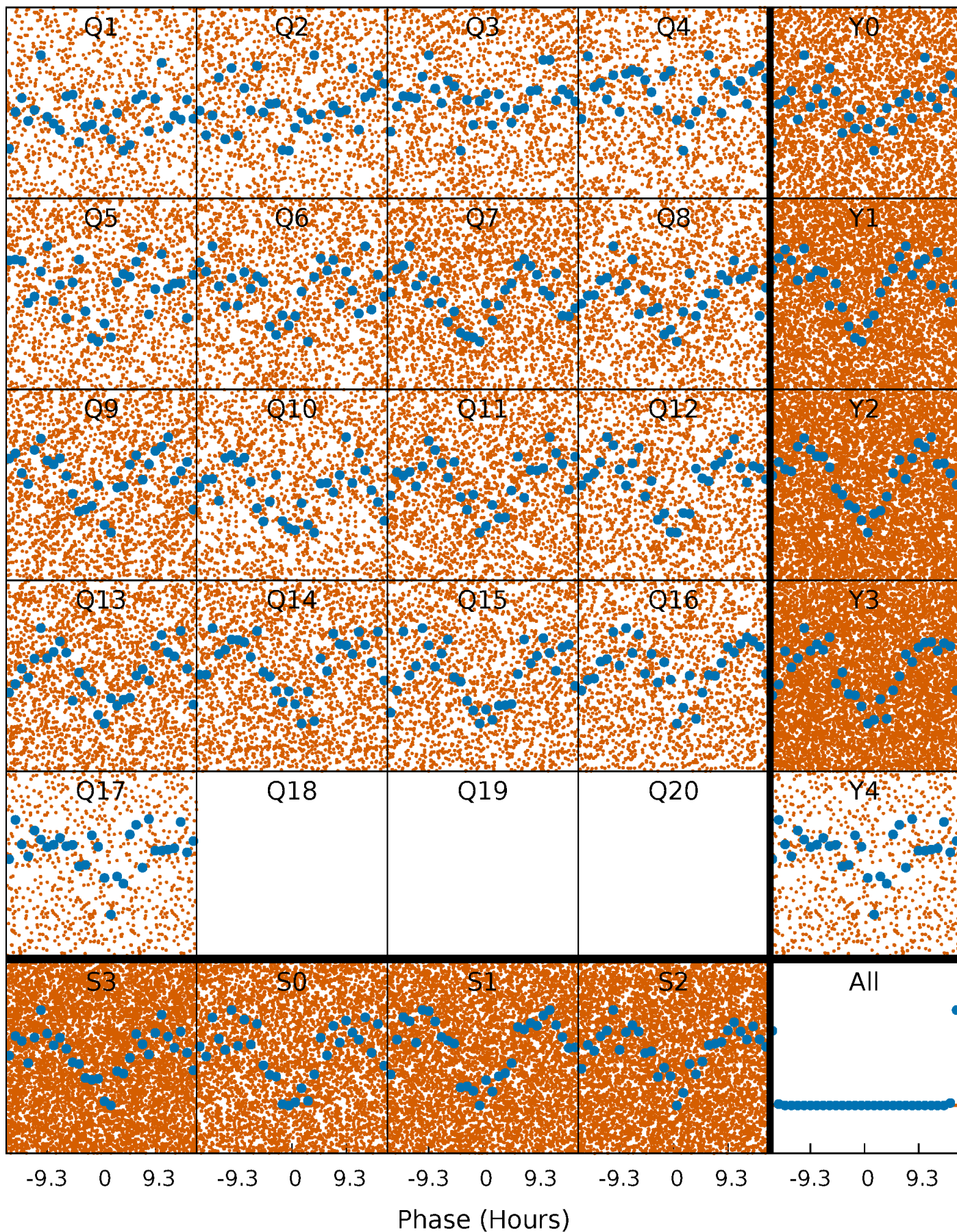


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

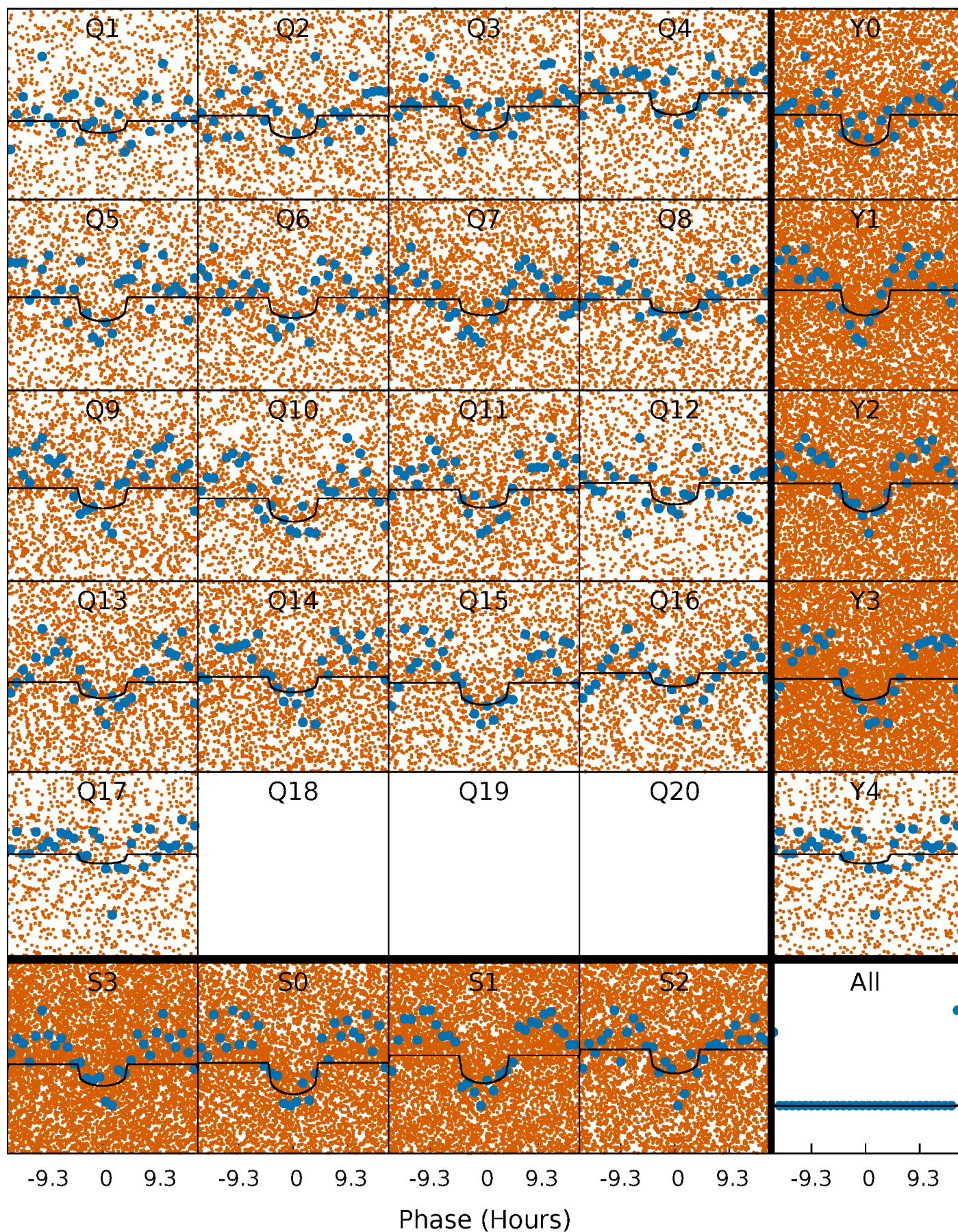
TCE 009472363-01 P= 0.851849 Days  $T_0=131.675829$  (BKJD)





# DV Quarter-Phased Transit Curves

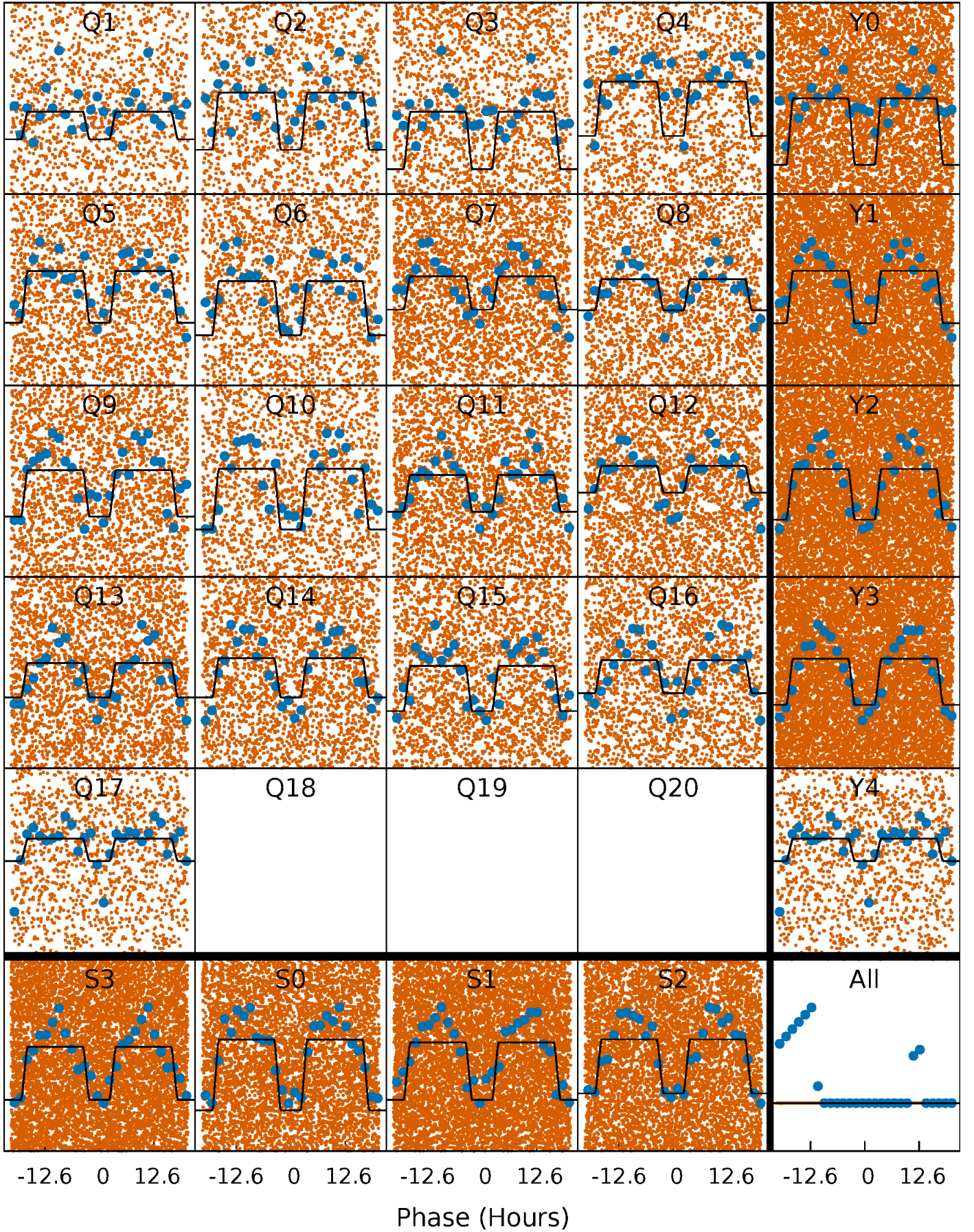
TCE 009472363-01 P= 0.851849 Days  $T_0=131.675829$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

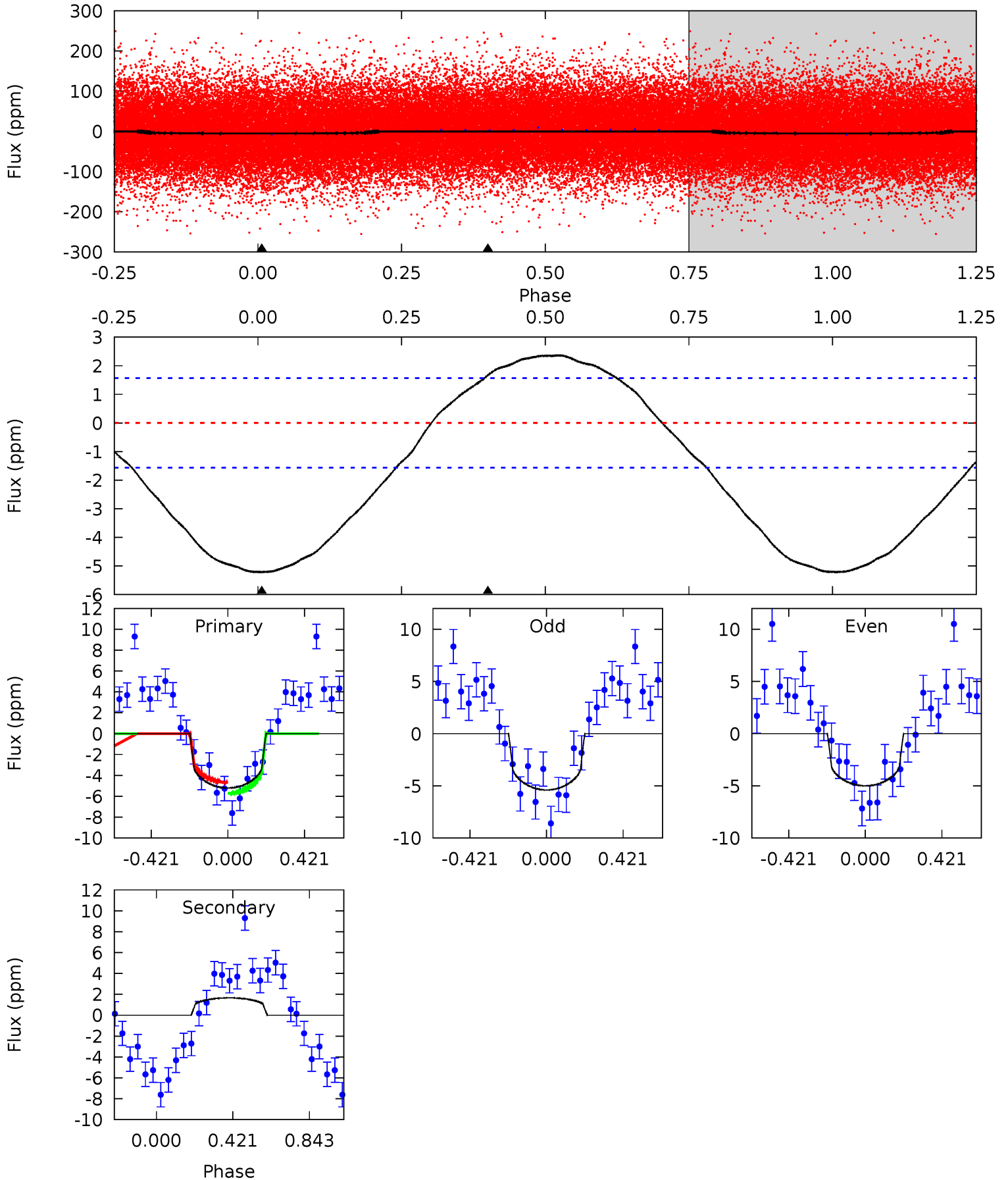
TCE 009472363-01   P= 0.851905 Days    $T_0=131.632864$  (BKJD)



# DV Model-Shift Uniqueness Test

009472363-01, P = 0.851849 Days, E = 130.823980 Days

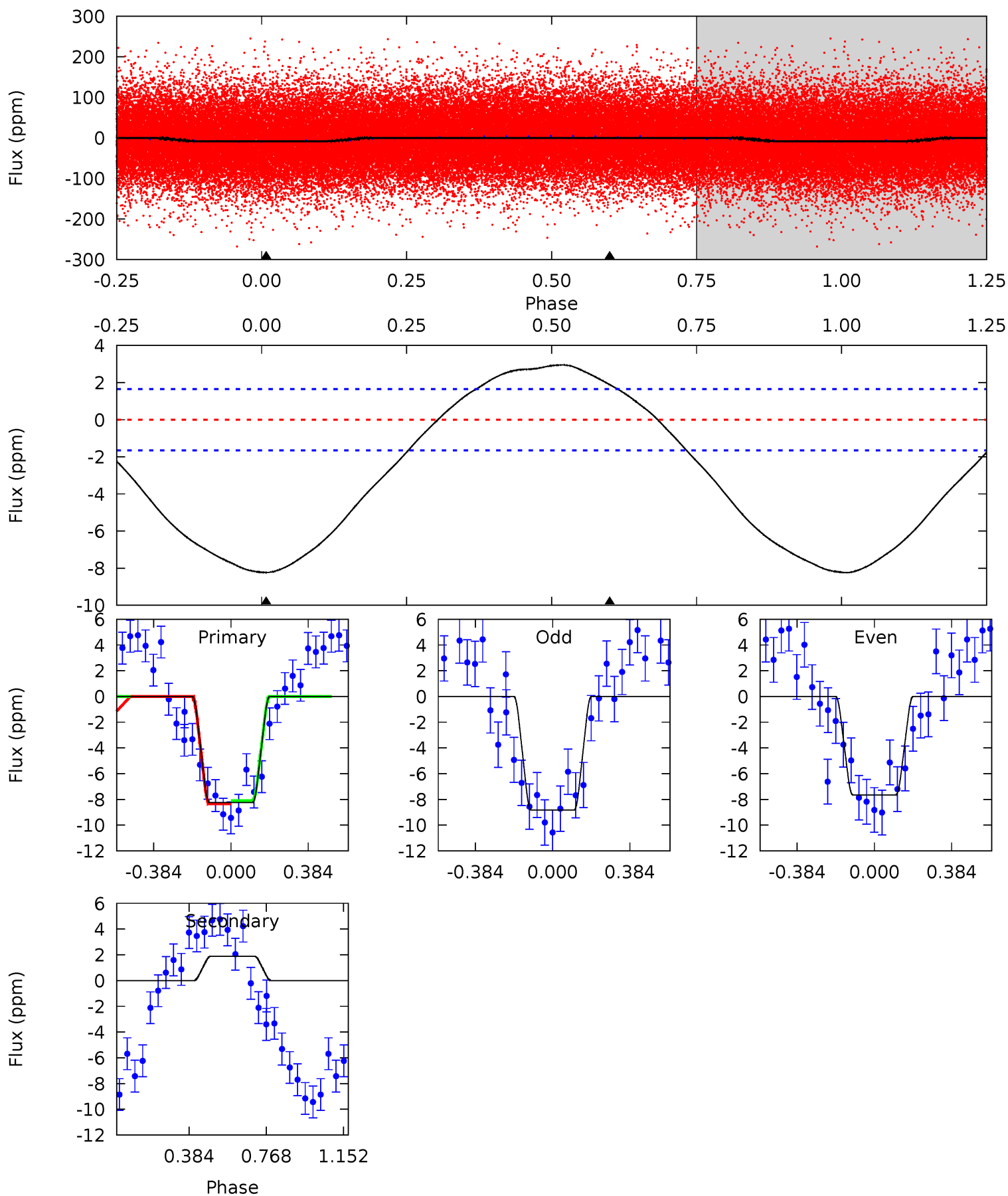
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	-4.52	0	0	4.25	0.80	1.75	14.2	14.2	-4.52	-4.52	0.54	1.05	0.31	1.44



# Alt Model-Shift Uniqueness Test

009472363-01, P = 0.851905 Days, E = 130.780959 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
21.3	-4.90	0	0	4.27	0.87	2.24	21.3	21.3	-4.90	-4.90	1.52	1.16	0.26	0.34





### Stellar Parameters For KIC 009472363

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8413^{+235}_{-403}$	$3.853^{+0.306}_{-0.165}$	$0.210^{+0.150}_{-0.550}$	$2.993^{+0.921}_{-1.125}$	$2.328^{+0.285}_{-0.665}$	$0.122^{+0.277}_{-0.058}$
	+3%/-5%	+8%/-4%	+71%/-262%	+31%/-38%	+12%/-29%	+227%/-47%
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 009472363-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$2\pm0$	$0.68^{+0.51}_{-0.40}$	$5783^{+451}_{-542}$	$-6559^{+1072}_{-4550}$	$-1.012^{+0.684}_{-5.385}$
Alt.	$2\pm0$	$0.96^{+0.54}_{-0.50}$	$5778^{+473}_{-595}$	$-5950^{+606}_{-2200}$	$-0.593^{+0.348}_{-2.052}$

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

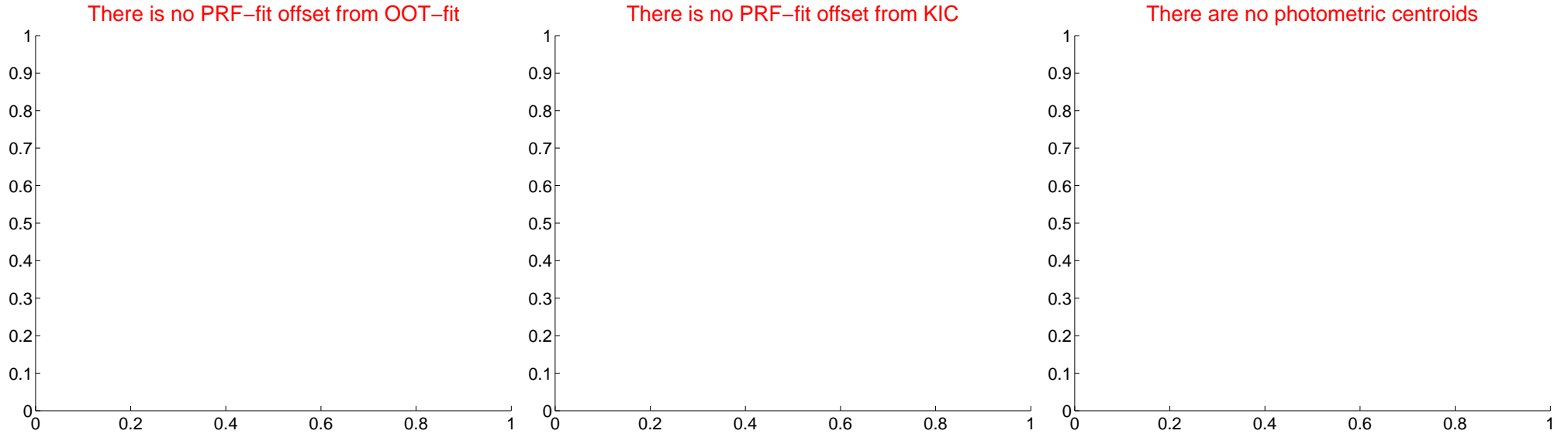
## DV Centroid Data

Supplemental centroid analysis for 009472363-01. **Kepler magnitude: 11.96.** Transit SNR 9.24

**There are 0 quarters with good PRF difference image offsets**

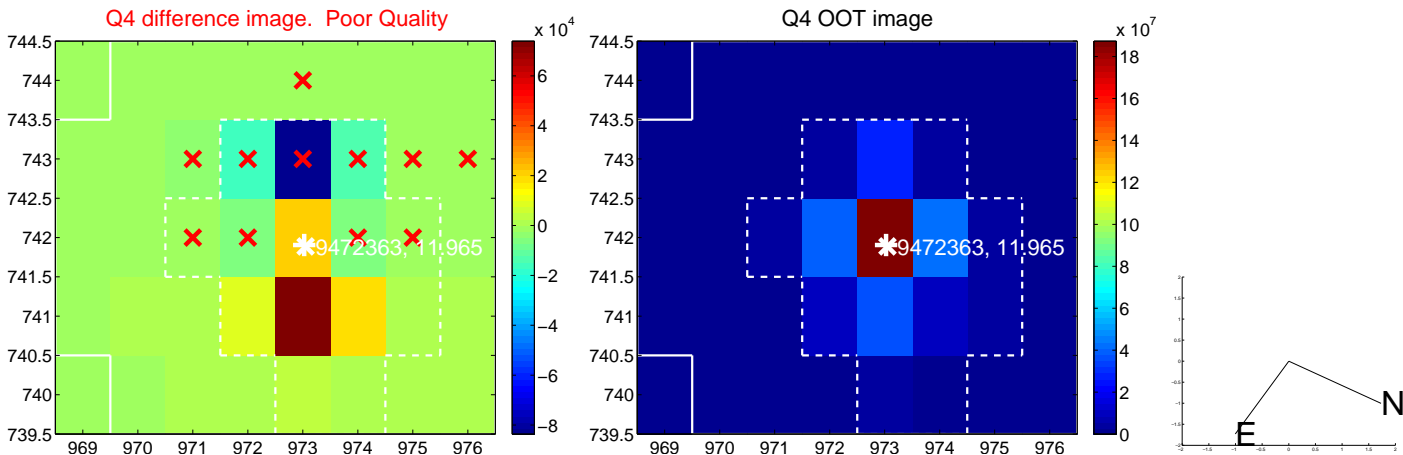
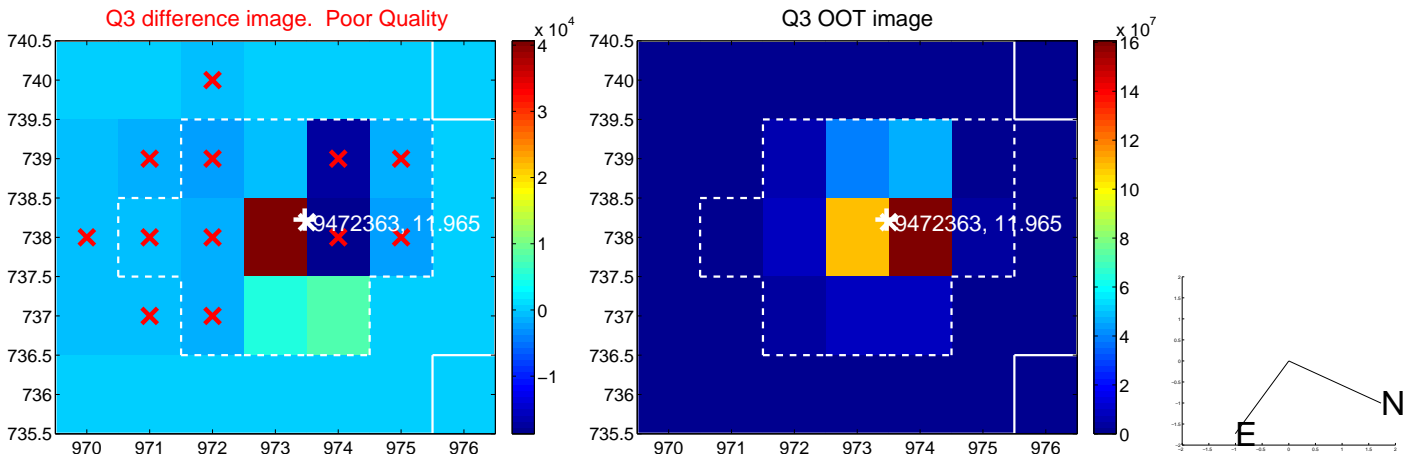
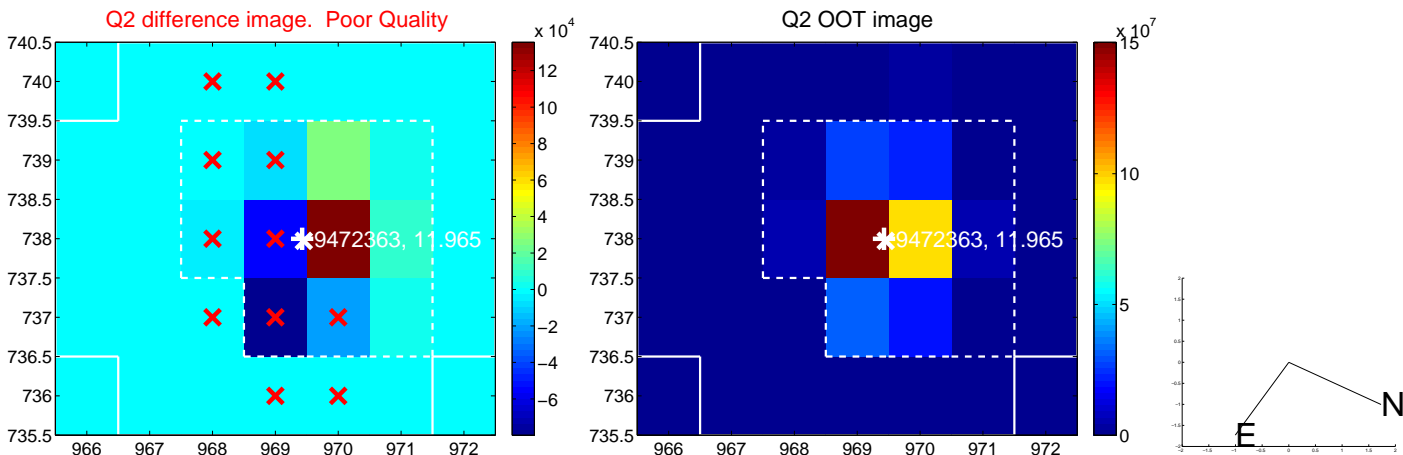
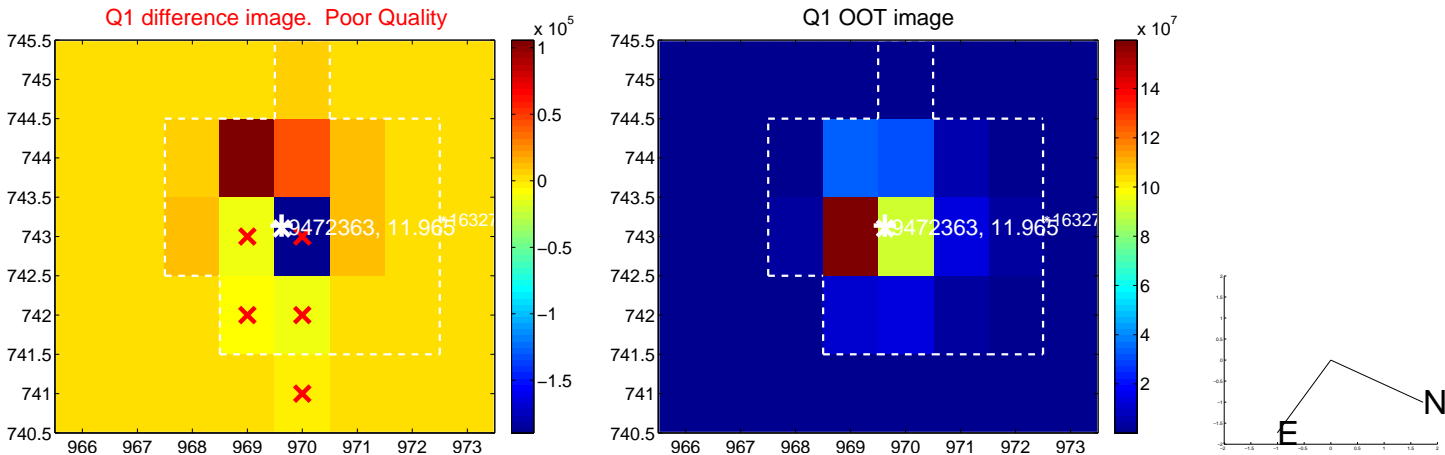
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—



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.

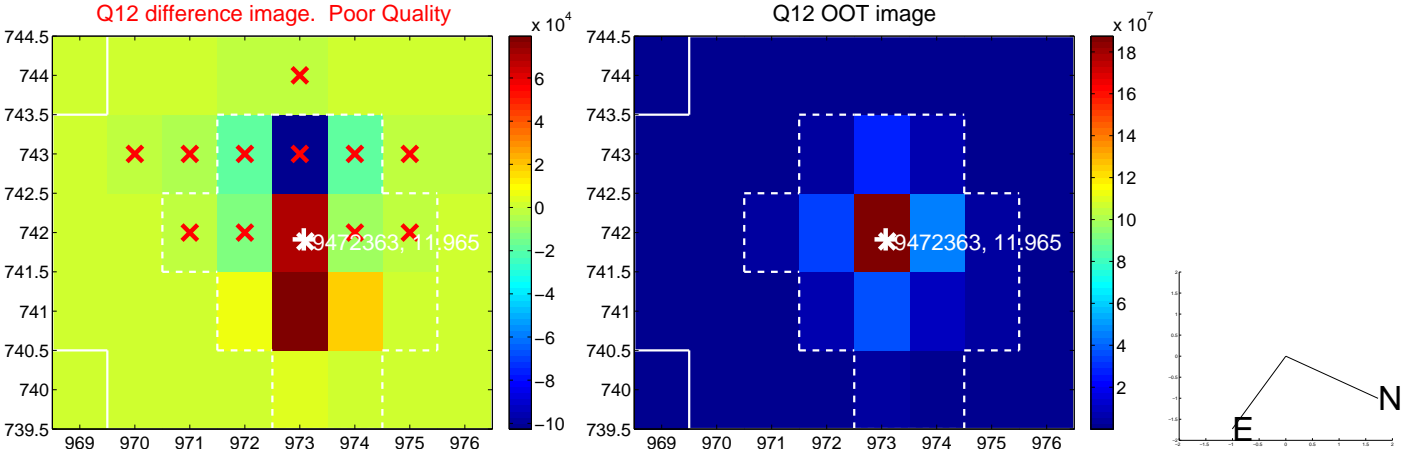
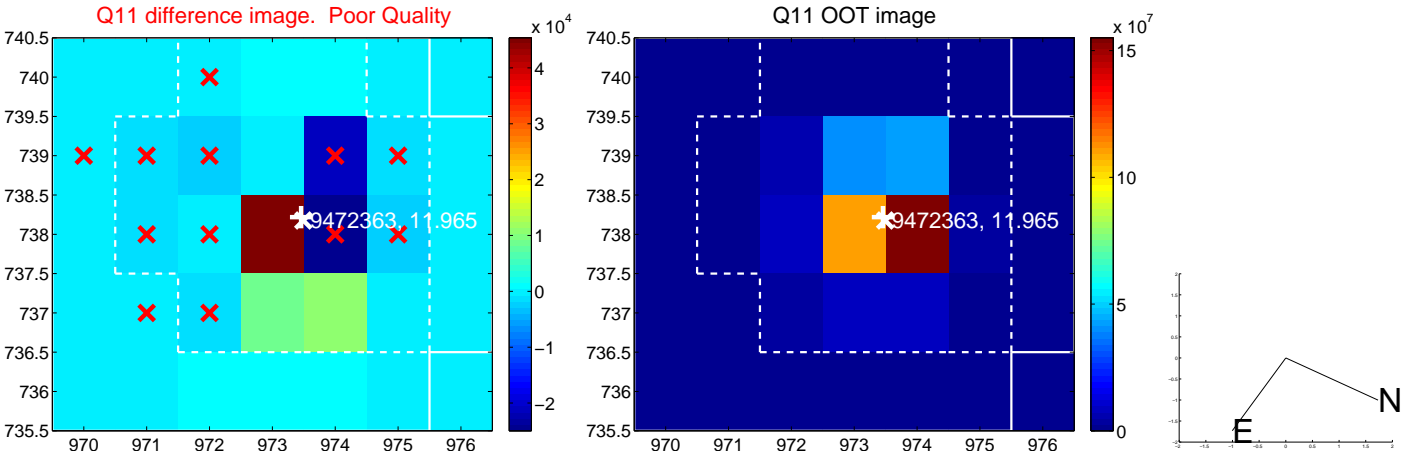
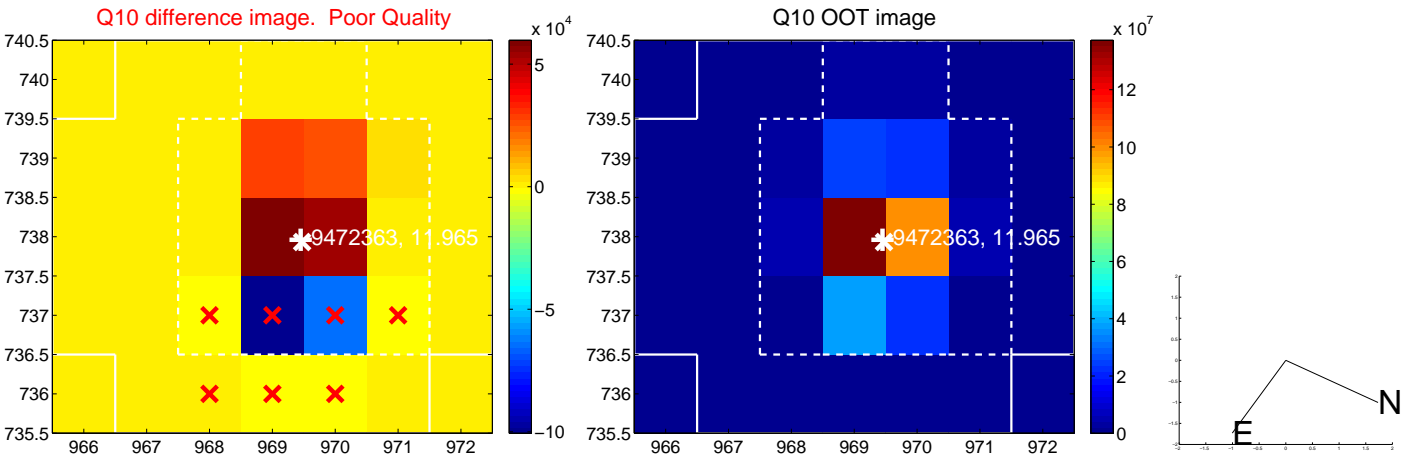
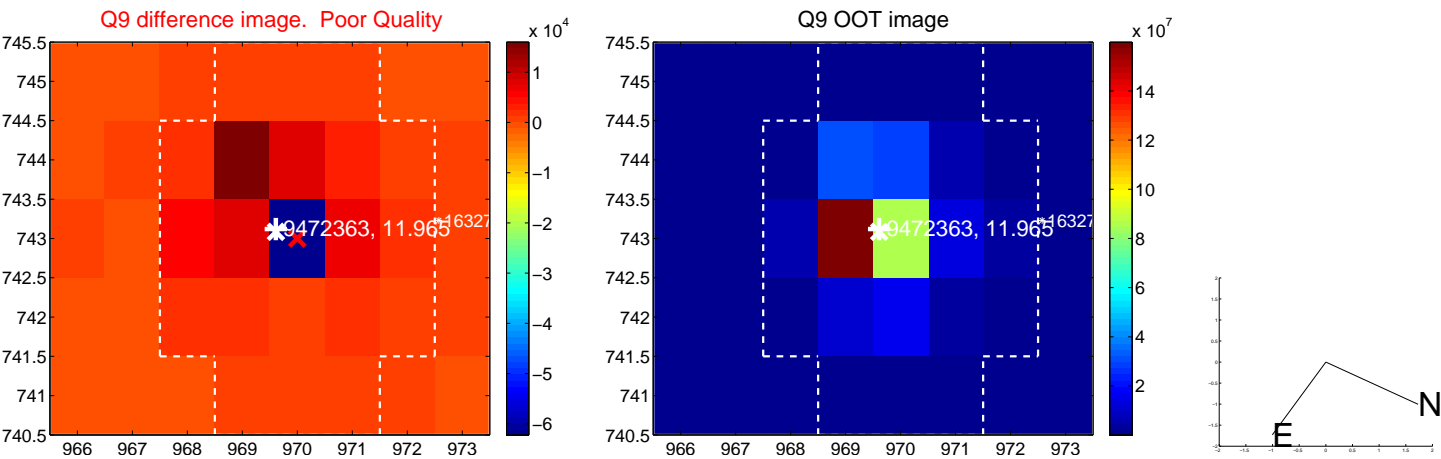
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



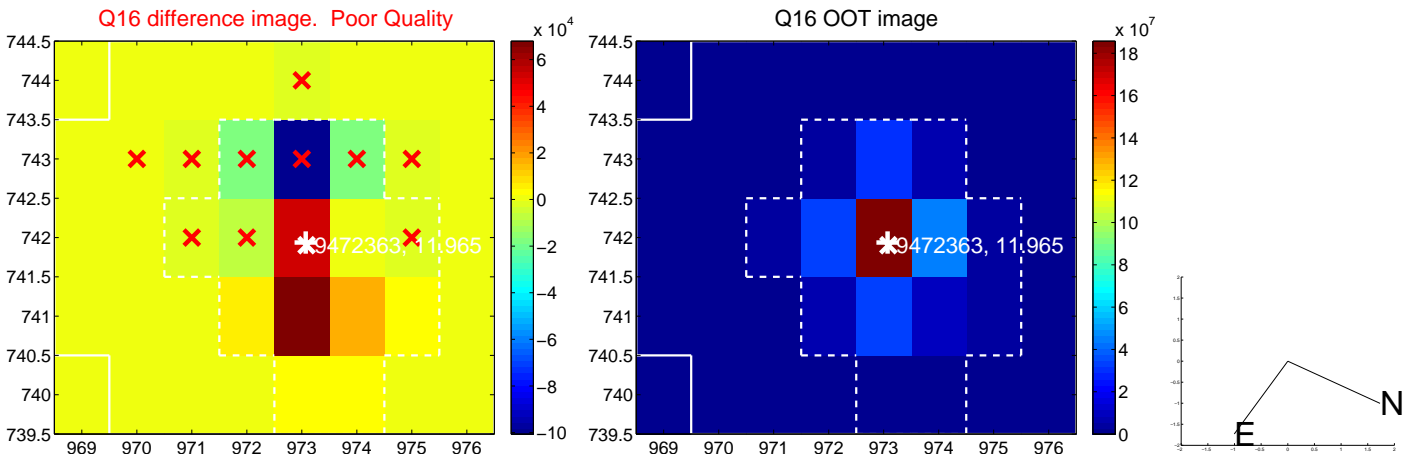
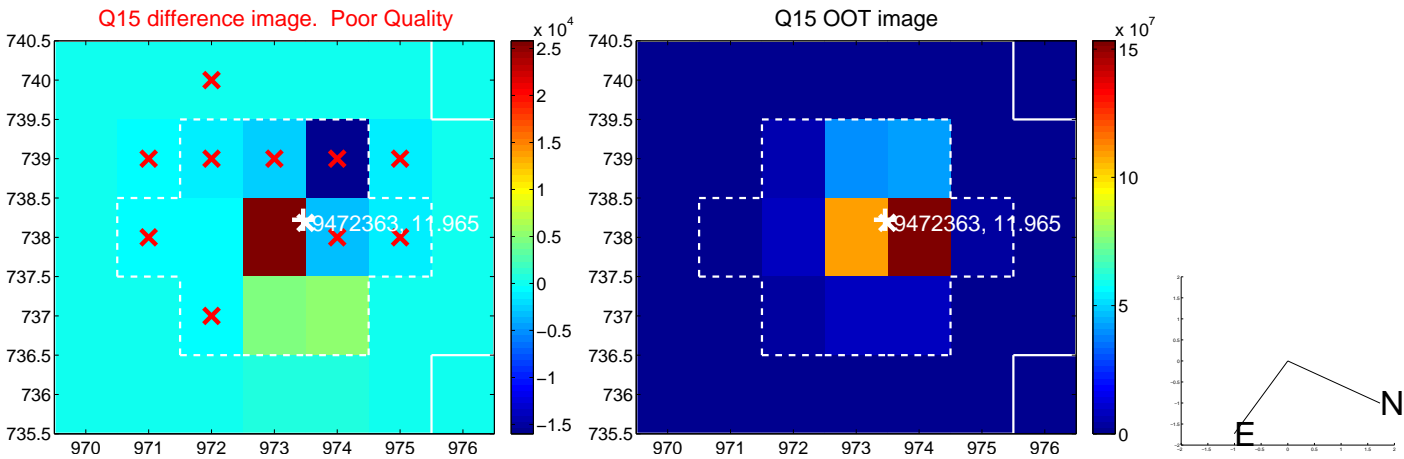
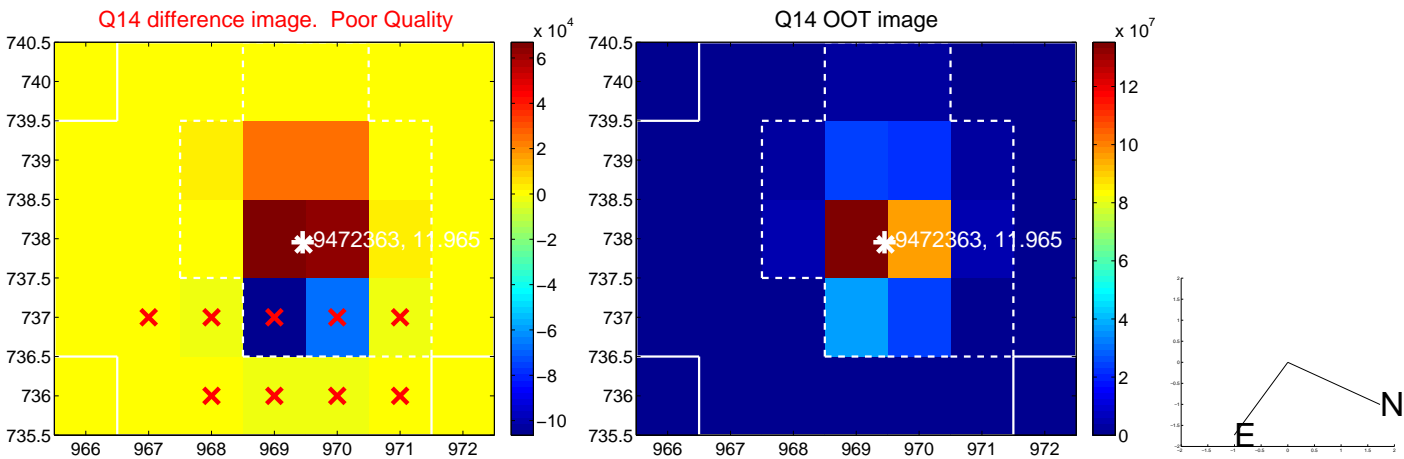
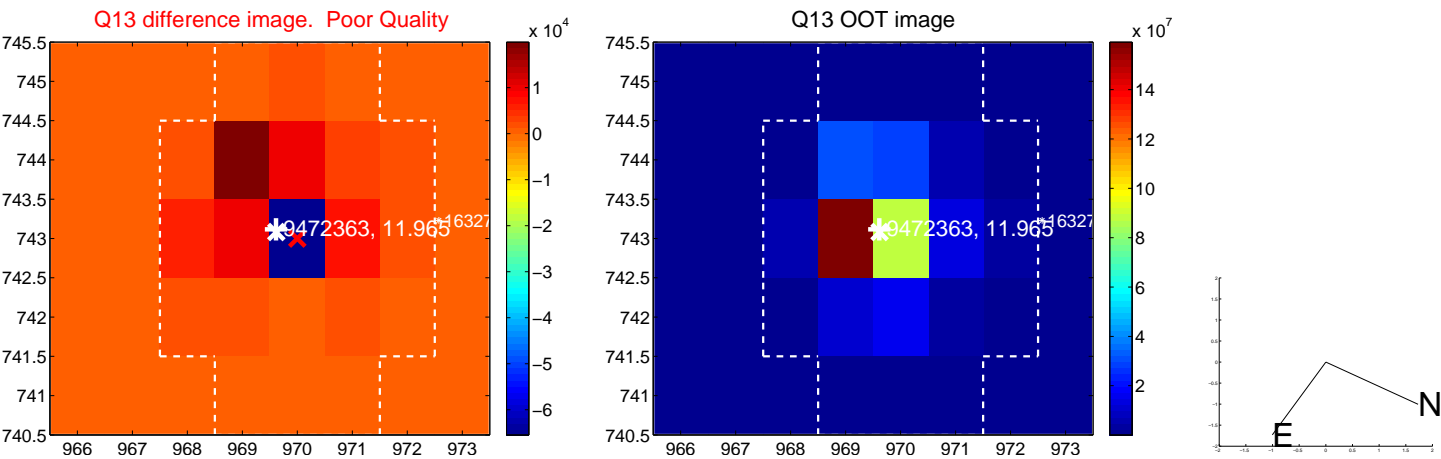




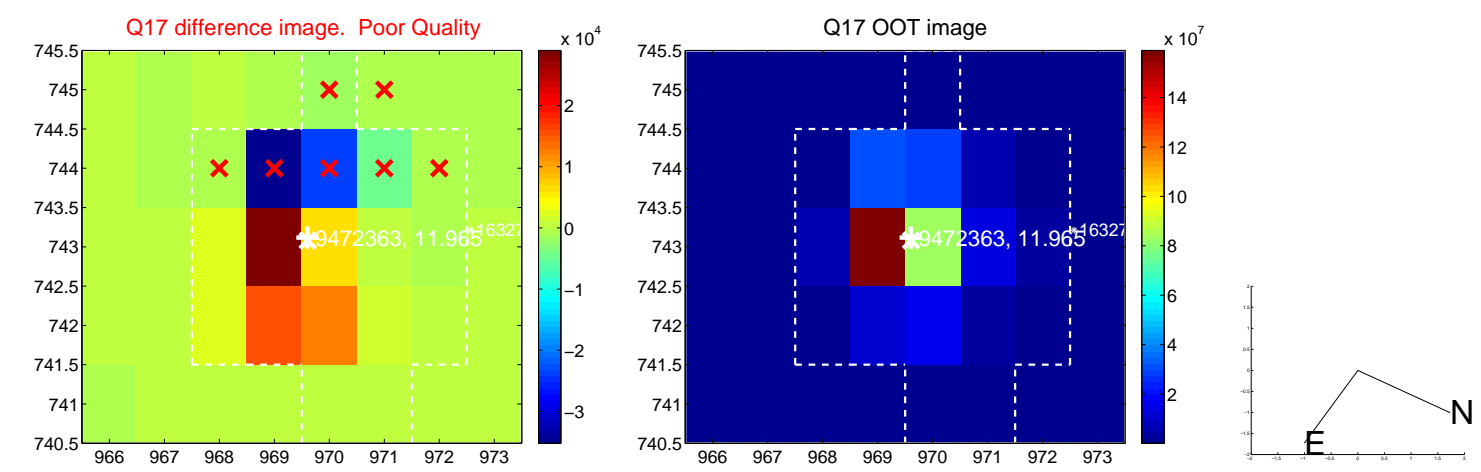
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

