

# KIC 006372633

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006372633-01	OBS	No	1.053046	131.635607	5.4	1.247	8.4	9.8	1.58	7154	0.40	12375.56

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006372633-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—CENT_SATURATED

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

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

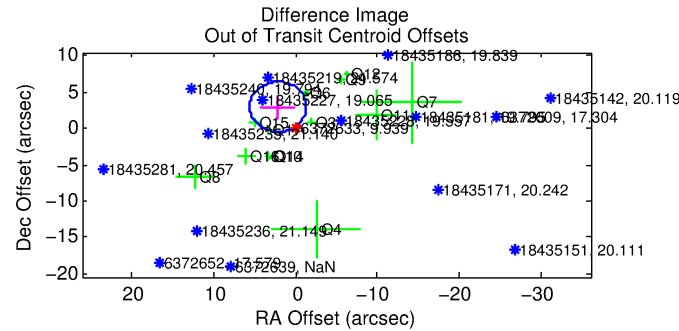
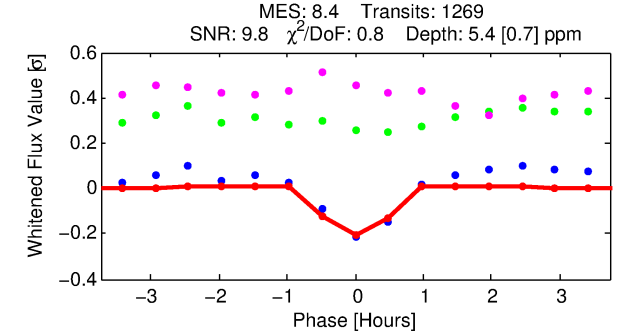
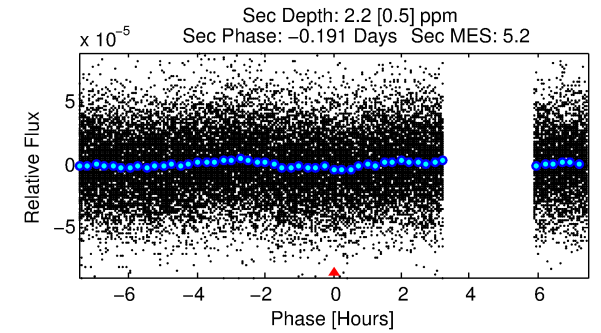
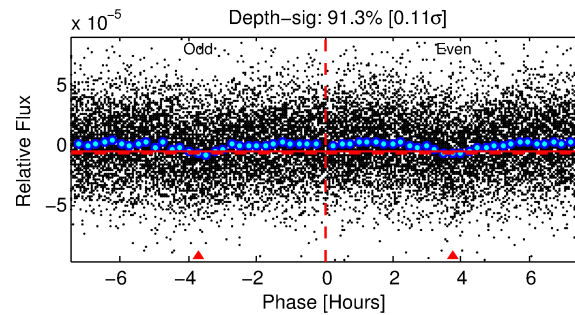
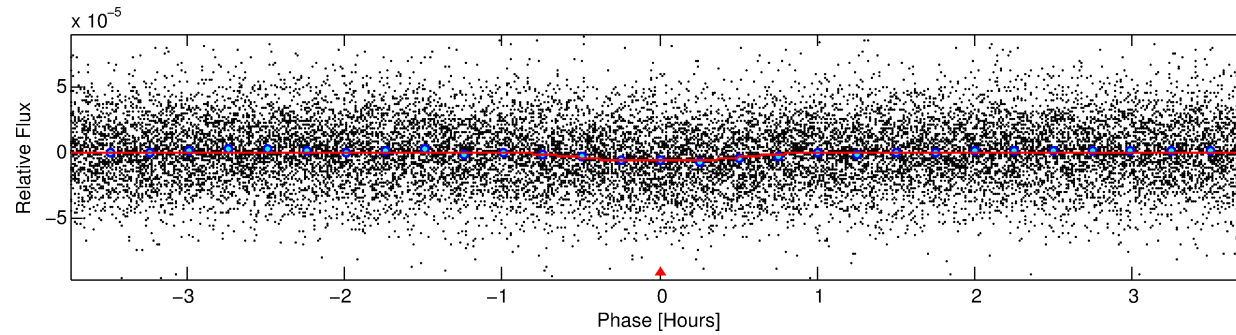
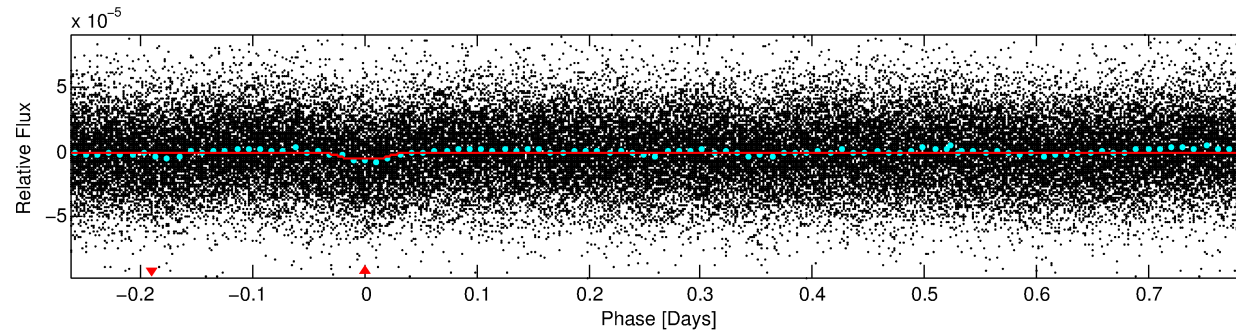
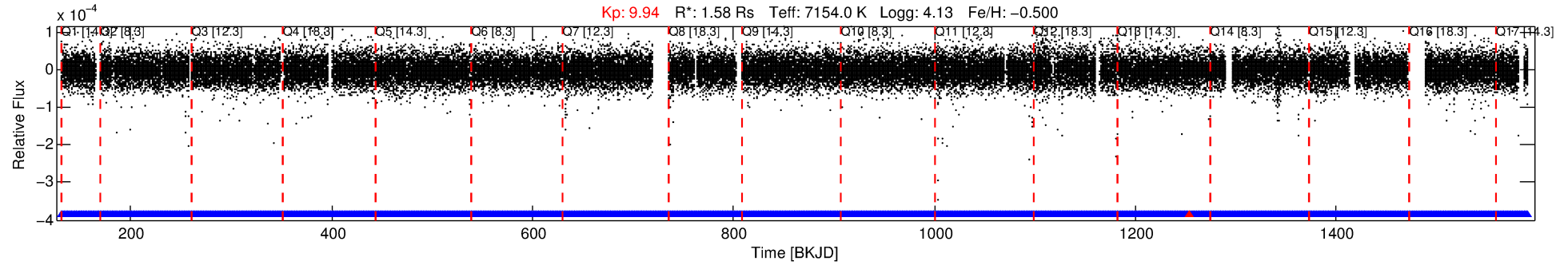
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006372633-01

No Significant Match Found

# DV One-Page Summary

KIC: 6372633 Candidate: 1 of 1 Period: 1.053 d



## DV Fit Results:

Period = 1.05305 [0.00001] d  
Epoch = 131.6356 [0.0020] BKJD  
 $R_p/R^*$  = 0.0023 [0.0002]  
 $a/R^*$  = 4.67 [1.77]  
 $b$  = 0.71 [0.28]  
 $\text{Seff}$  = 12375.56 [4883.29]  
 $T_{\text{eq}}$  = 2689 [265] K  
 $R_p$  = 0.40 [0.12]  $R_e$   
 $a$  = 0.0217 [0.0052] AU  
 $A_g$  = 3.66 [1.69] [1.58 $\sigma$ ]  
 $T_{\text{effp}}$  = 5750 [484] K [5.55 $\sigma$ ]

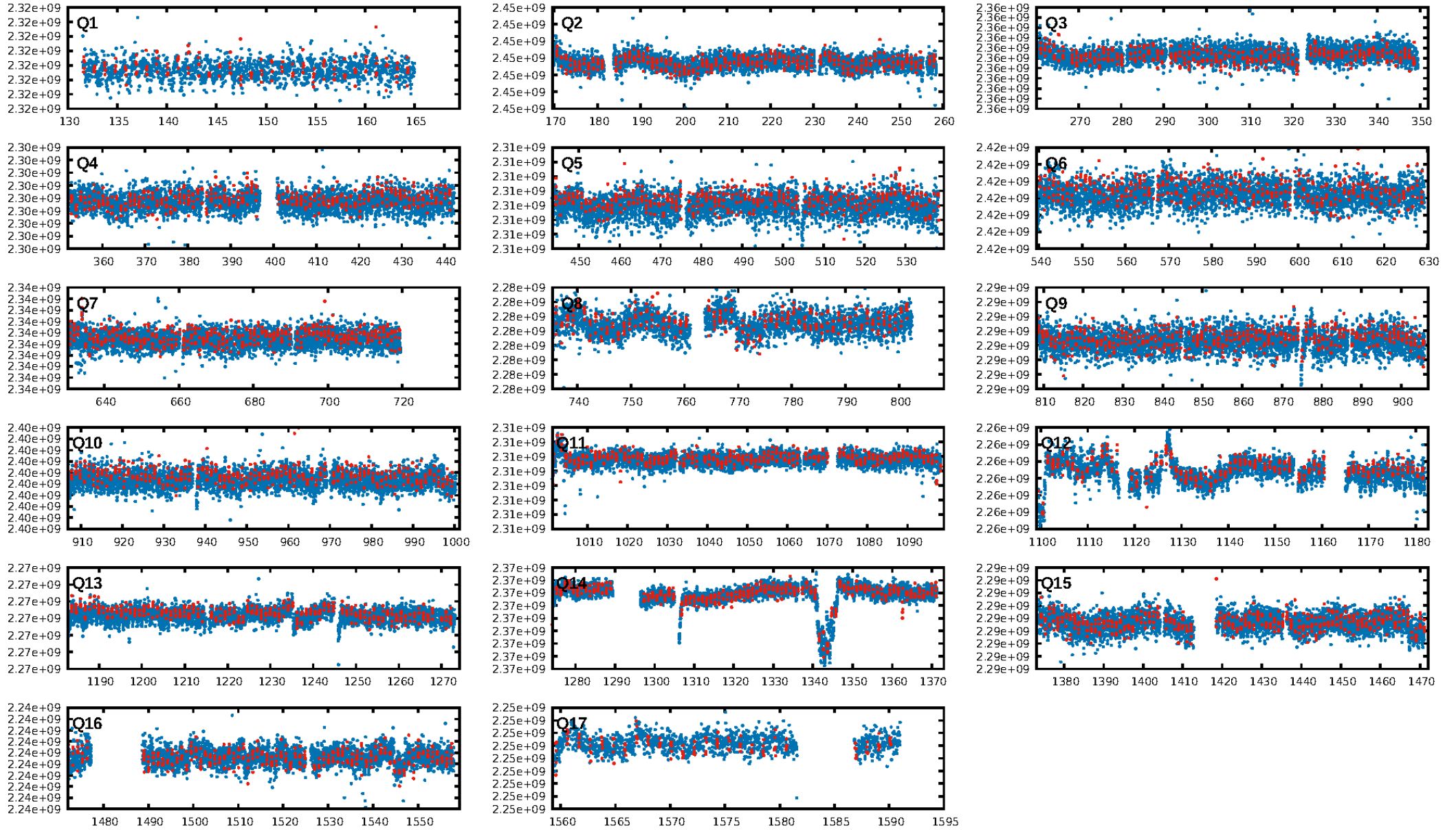
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 9.97e-16  
RollingBand-fgt: 1.00 [1211/1212]  
GhostDiagnostic-chr: N/A  
Centroid-sig: 34.9%  
Centroid-so: 1.380 arcsec [0.76 $\sigma$ ]  
**OotOffset-rm: 3.677 arcsec [3.19 $\sigma$ ]**  
KicOffset-rm: 2.762 arcsec [1.79 $\sigma$ ]  
OotOffset-st: 3/4/4/2 [13]  
KicOffset-st: 3/4/4/2 [13]  
DiffImageQuality-fgm: 0.15 [2/13]  
DiffImageOverlap-fno: 1.00 [17/17]

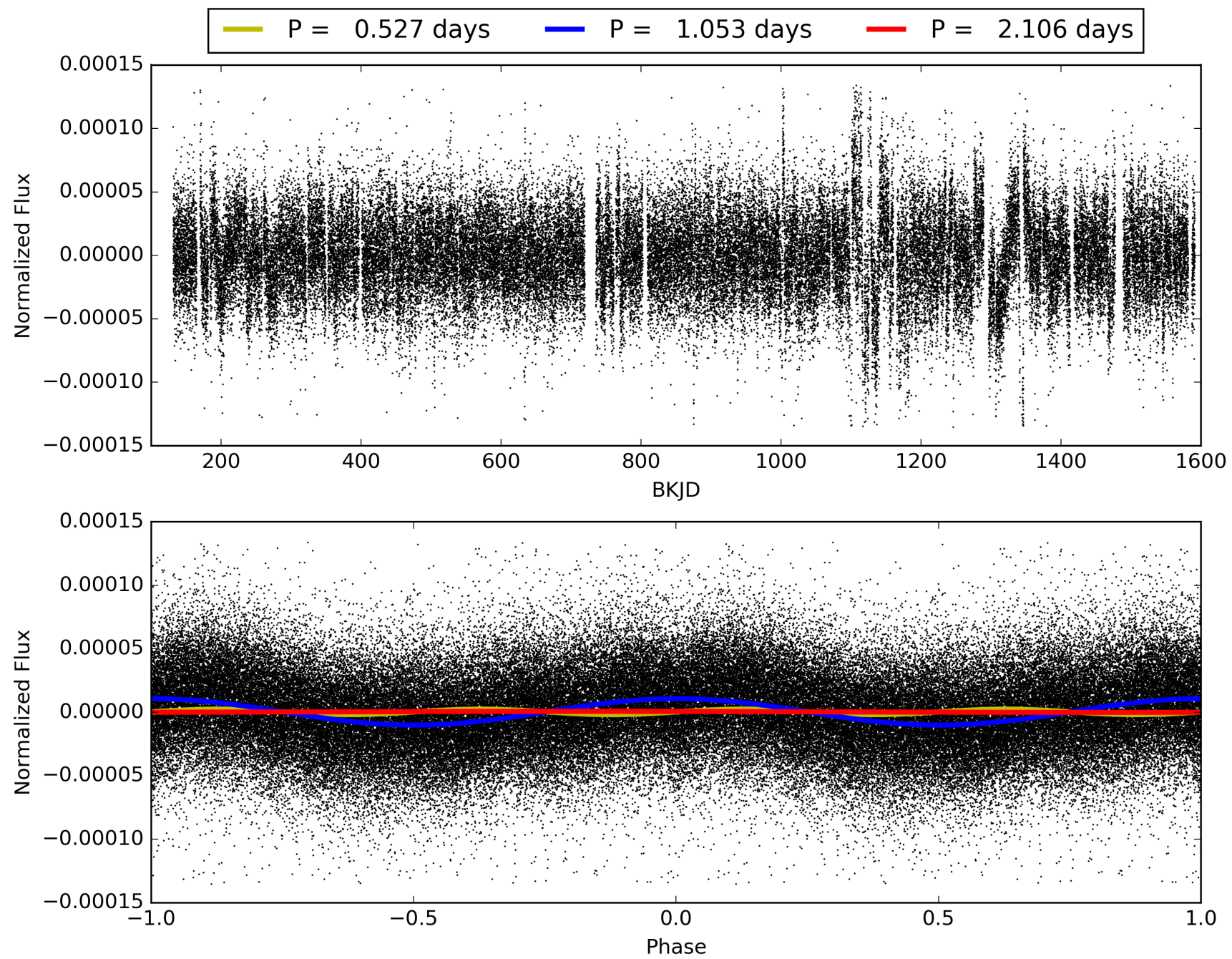
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:22:22 Z

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

# TCE 006372633-01, PDC Light Curves



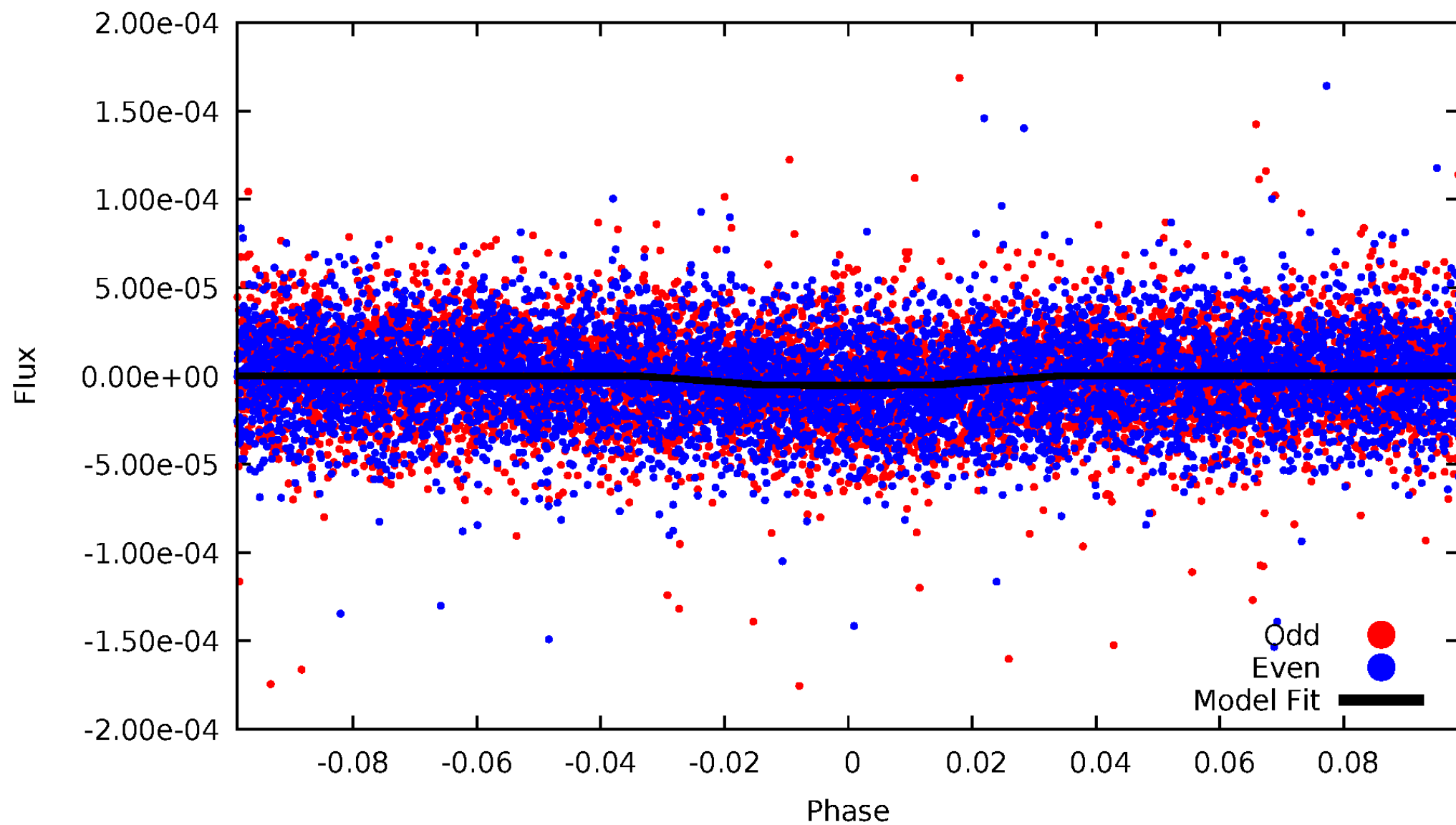
TCE 006372633-01





# DV Odd/Even

TCE 006372633-01



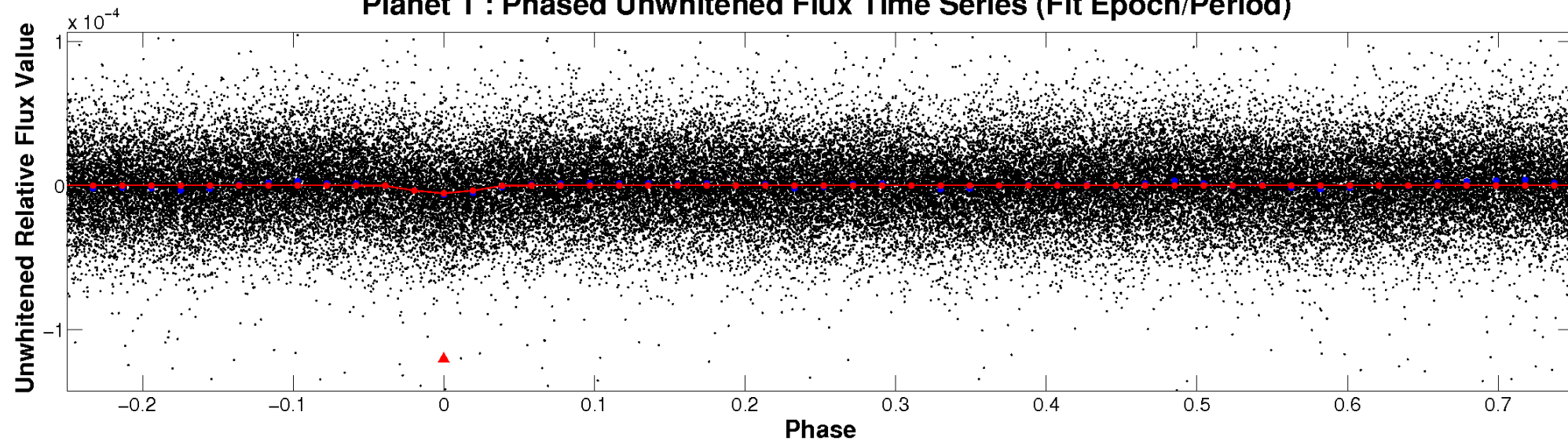


ALT Odd/Even

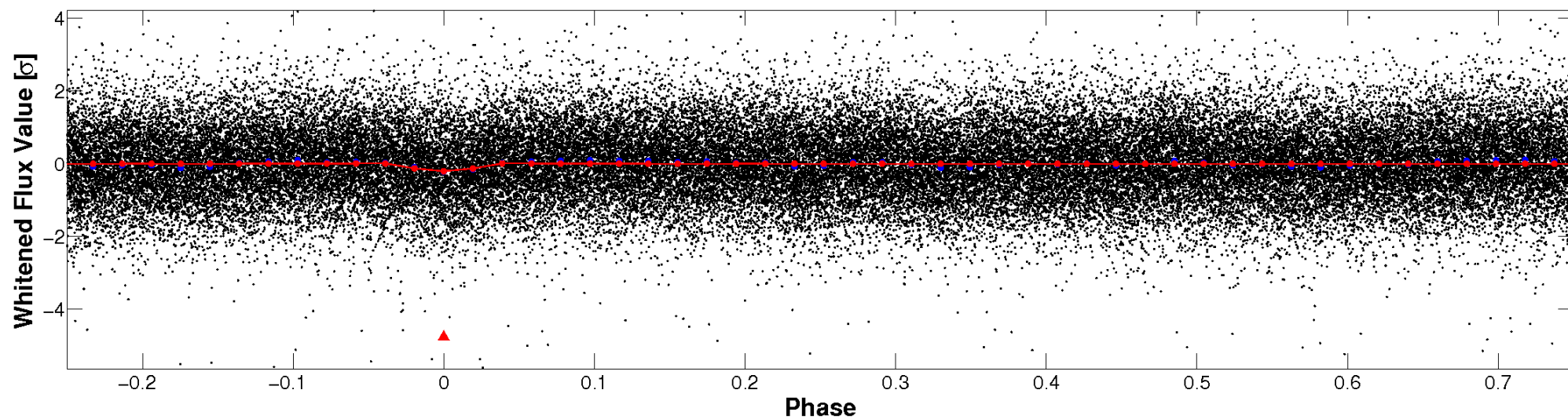
This plot does not exist for this TCE.

# Non-Whitened Vs. Whitened Light Curve

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



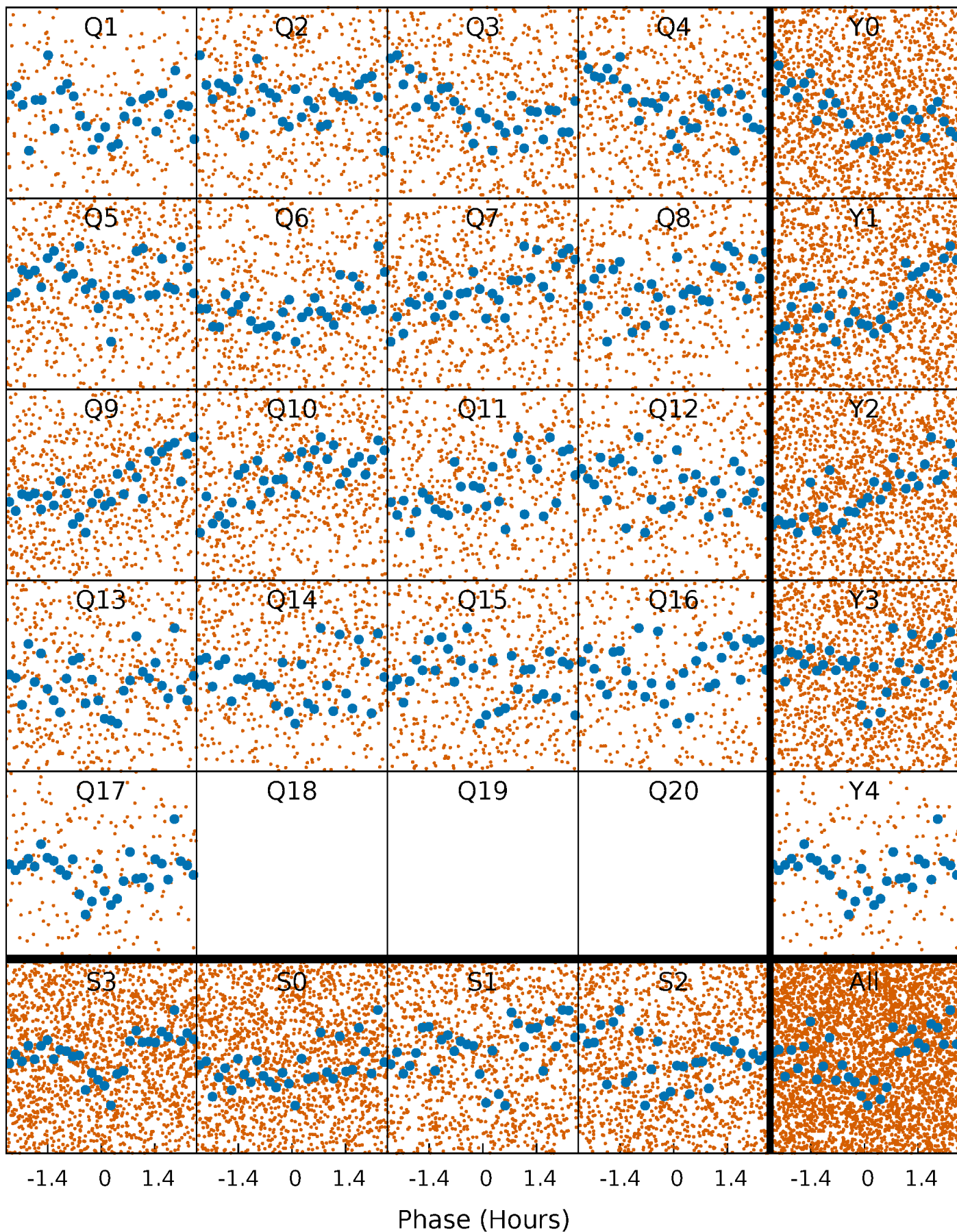
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





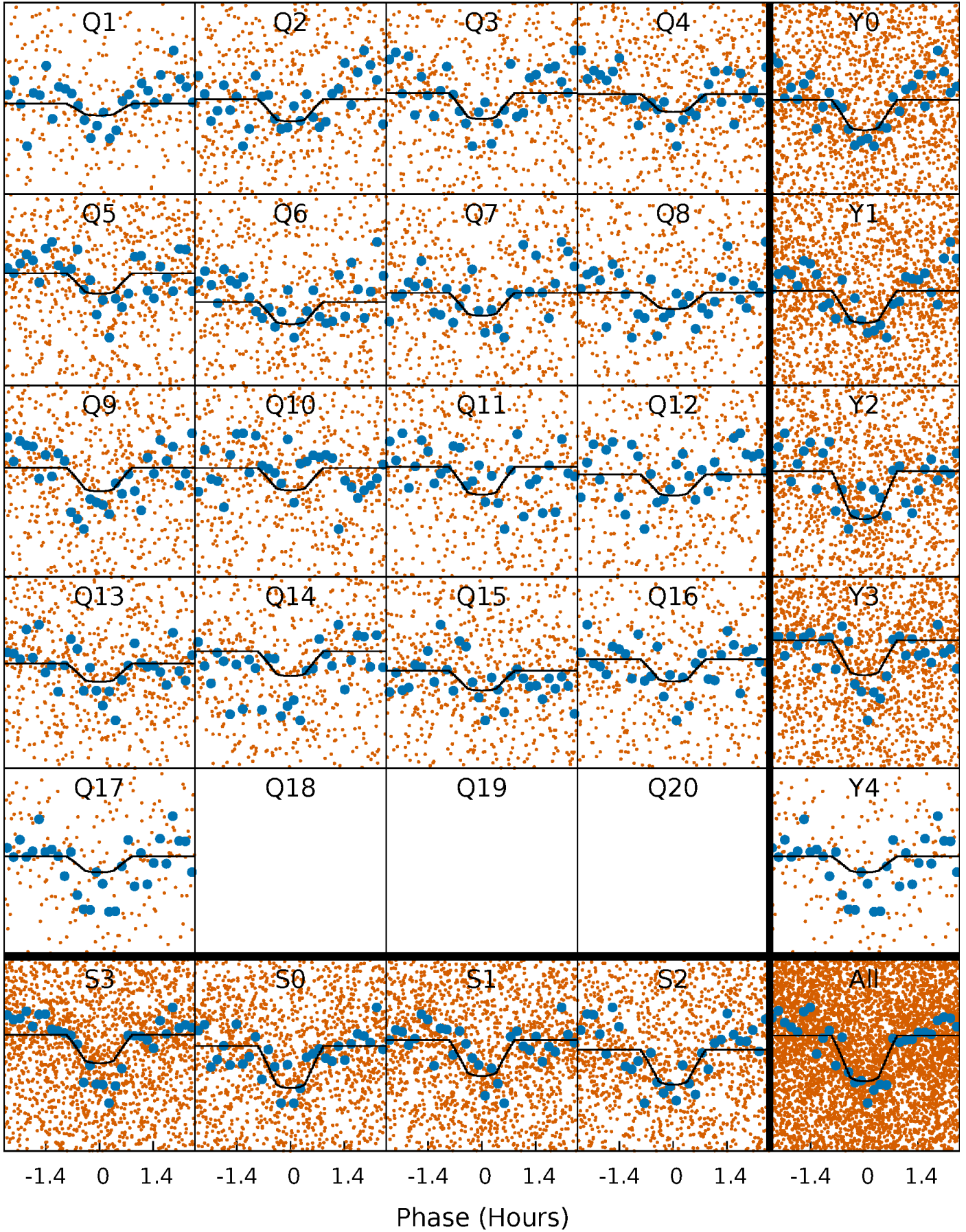
# PDC Quarter-Phased Transit Curves

TCE 006372633-01 P= 1.053046 Days  $T_0=131.635607$  (BKJD)



# DV Quarter-Phased Transit Curves

TCE 006372633-01 P= 1.053046 Days  $T_0=131.635607$  (BKJD)

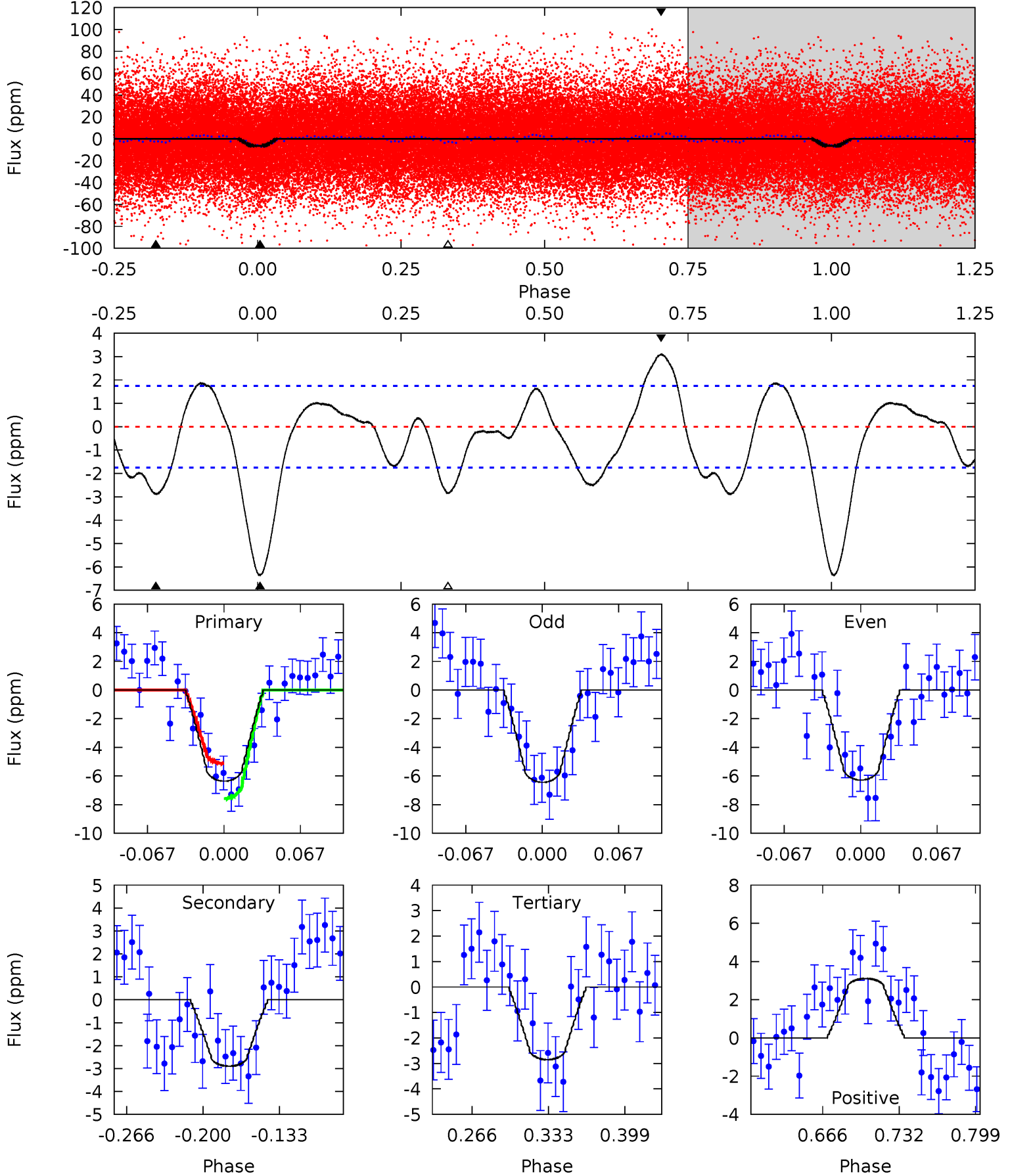


This plot does not exist for this TCE.

# DV Model-Shift Uniqueness Test

006372633-01, P = 1.053046 Days, E = 130.582561 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
16.9	7.69	7.57	8.25	4.65	1.83	3.72	9.32	8.64	0.12	-0.56	0.21	0.98	0.33	3.26



## Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

### Stellar Parameters For KIC 006372633

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7154^{+225}_{-300}$	$4.133^{+0.198}_{-0.162}$	$-0.500^{+0.250}_{-0.300}$	$1.578^{+0.444}_{-0.363}$	$1.236^{+0.192}_{-0.174}$	$0.443^{+0.490}_{-0.200}$
	+3%/-4%	+5%/-4%	+50%/-60%	+28%/-23%	+16%/-14%	+111%/-45%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006372633-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-3 \pm 0$	$0.40^{+0.07}_{-0.07}$	$3733^{+287}_{-264}$	$5980^{+457}_{-374}$	$4.837^{+2.052}_{-1.351}$
Alt.	N/A	N/A	N/A	N/A	N/A

$T_{max}$  = 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

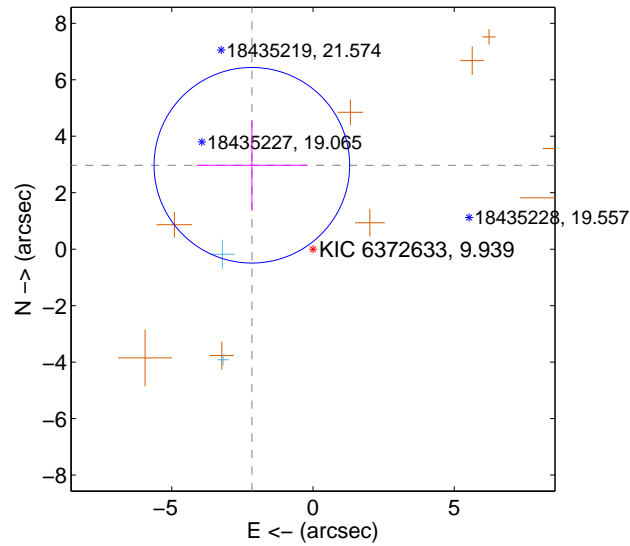
Supplemental centroid analysis for 006372633-01. **Kepler magnitude: 9.94.** Transit SNR 9.75

**There are 2 quarters with good PRF difference image offsets**

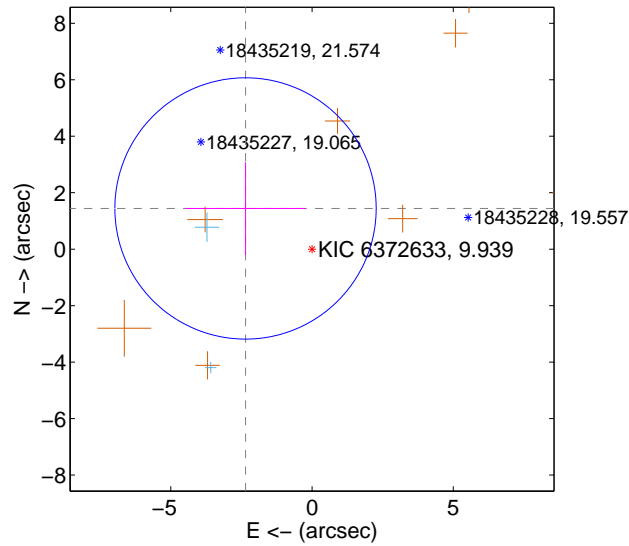
The direct PRF centroid is offset from the target star catalog position by about 1.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>3.677 \pm 1.154</math></b>	<b>3.19</b>	$2.165 \pm 1.957$	$2.972 \pm 1.578$
PRF-fit source offset from KIC position	$2.762 \pm 1.542$	1.79	$2.355 \pm 2.127$	$1.442 \pm 1.638$
photometric centroid source offset	$1.38 \pm 1.81$	0.76	$0.92 \pm 1.43$	$1.03 \pm 2.07$

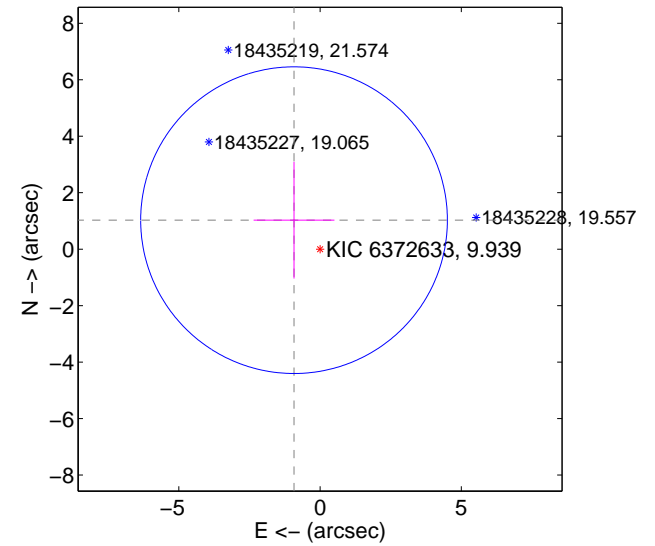
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

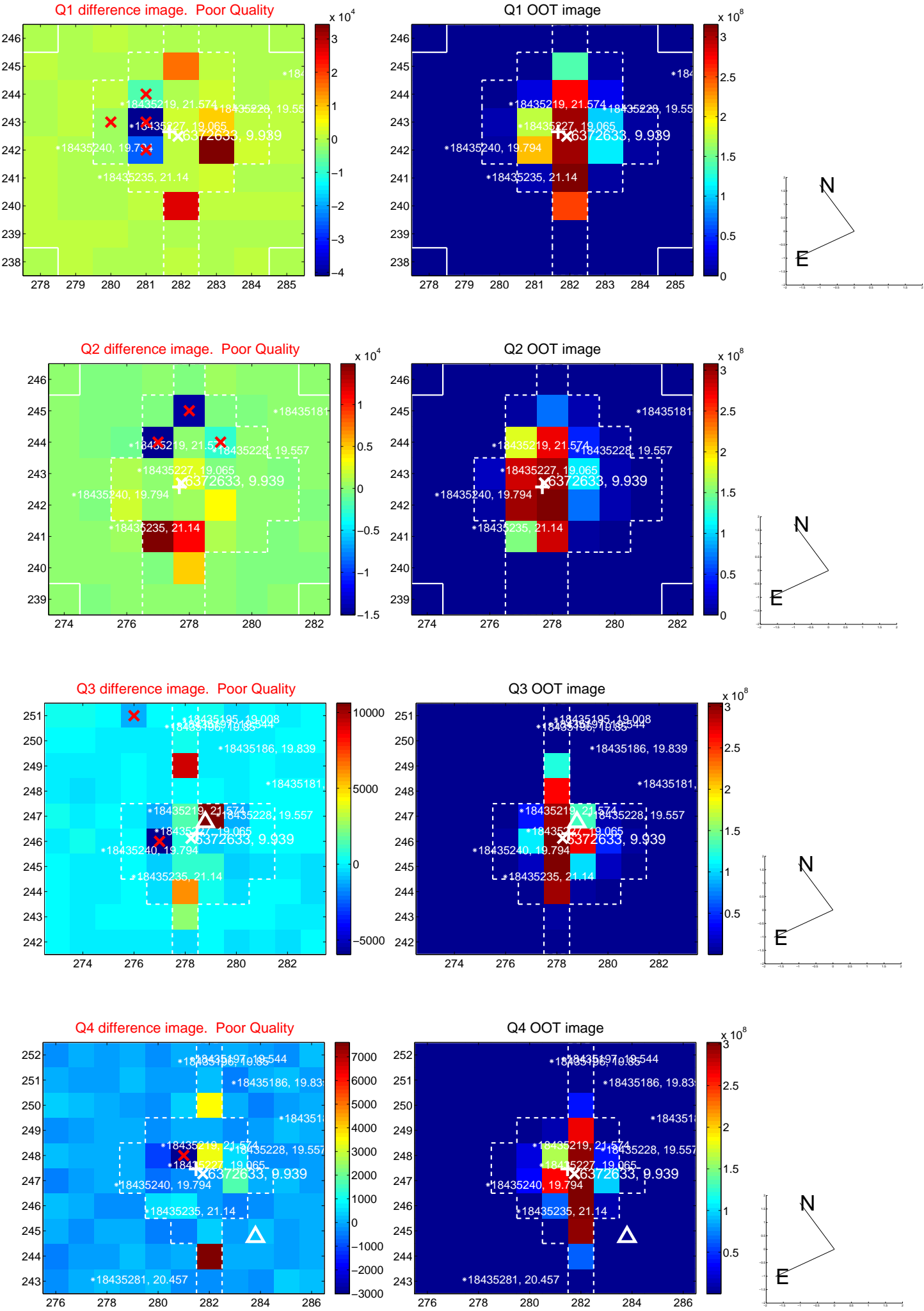


offset from photometric centroids

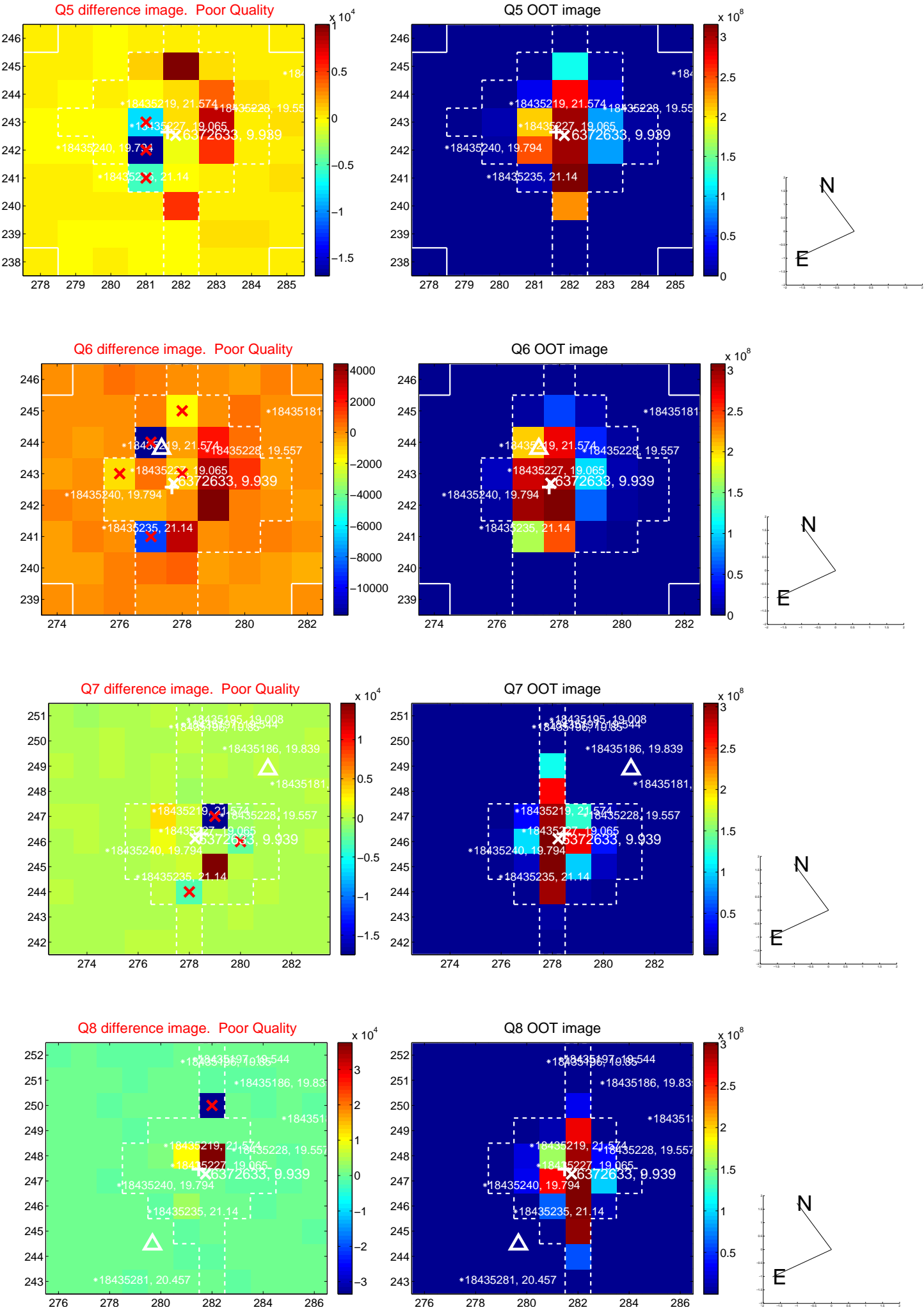


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

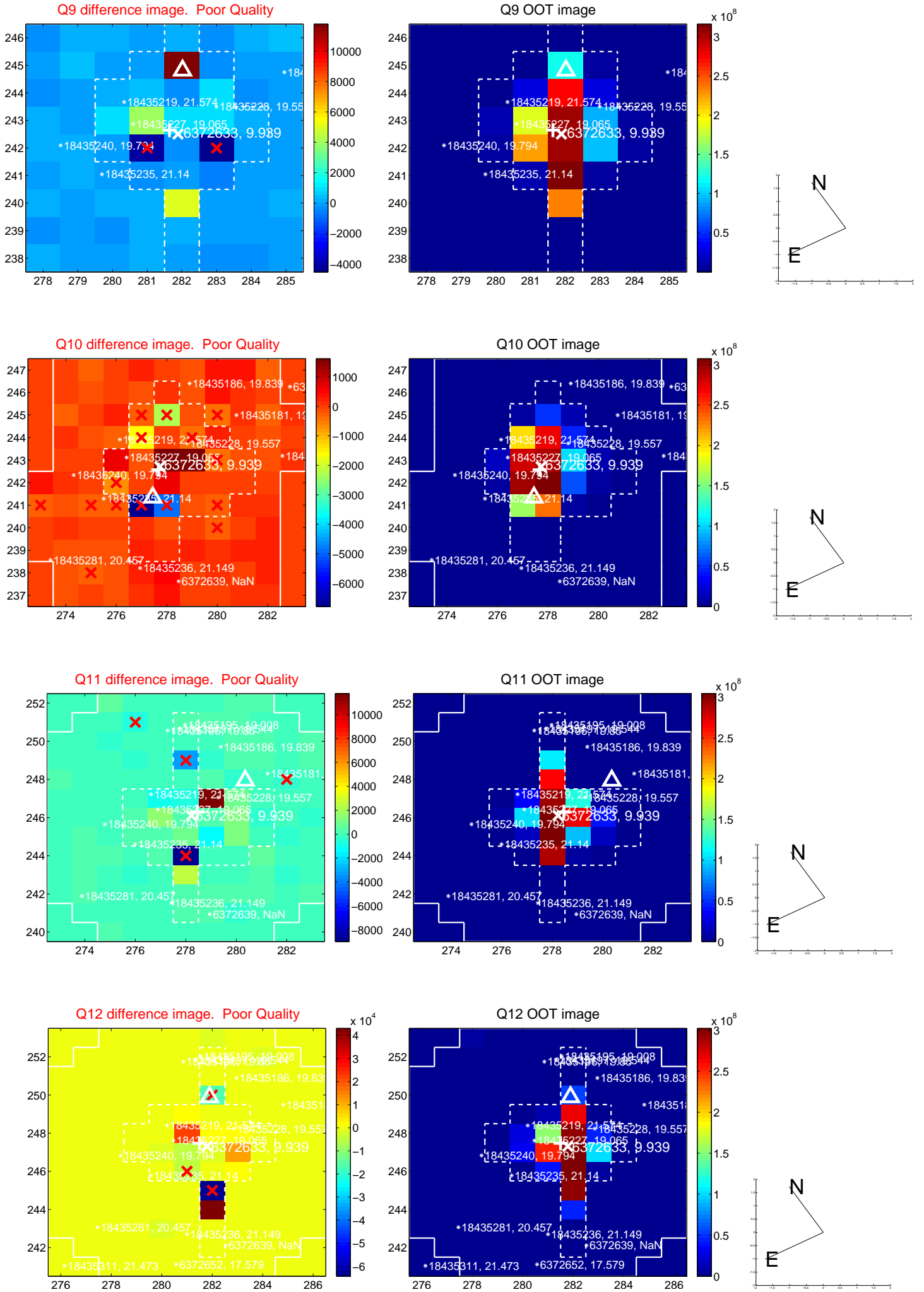
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



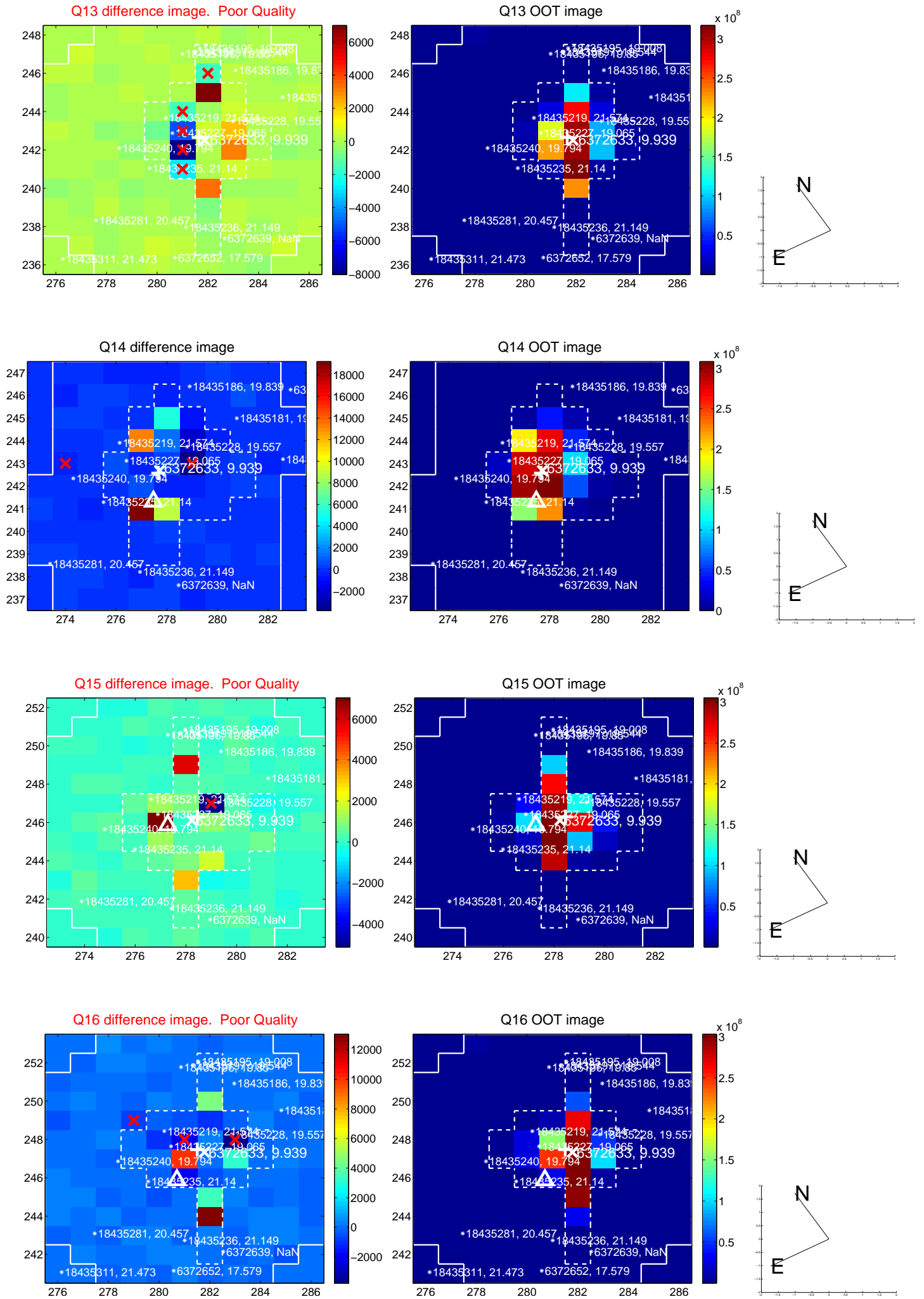
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



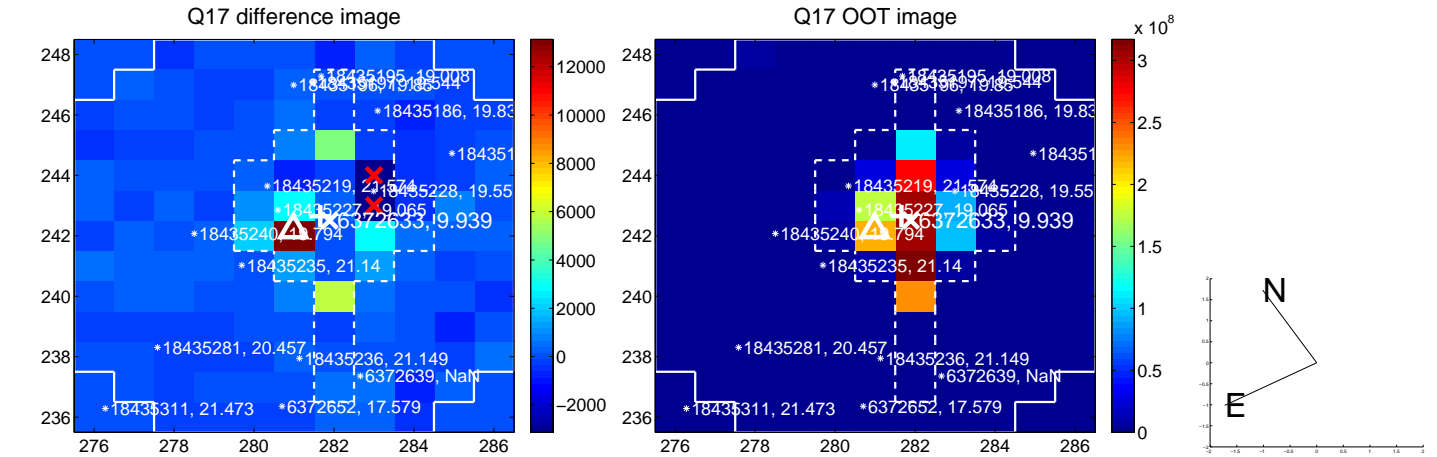
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



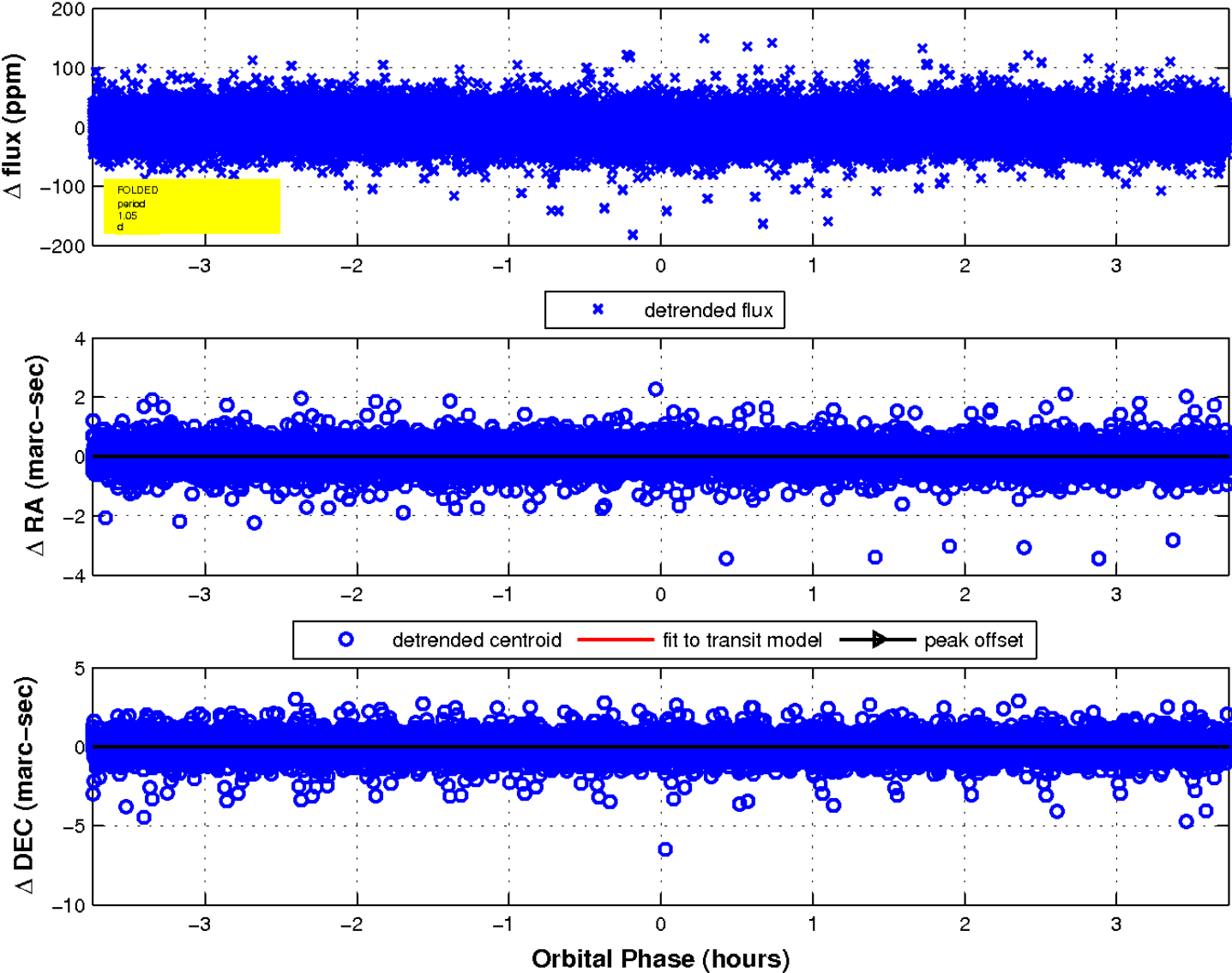
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1





UKIRT Image

Declination

