

# KIC 006696713

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006696713-01	OBS	No	2.117300	132.019377	7.7	20.918	8.6	12.2	3.11	8482	0.88	26960.21

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006696713-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

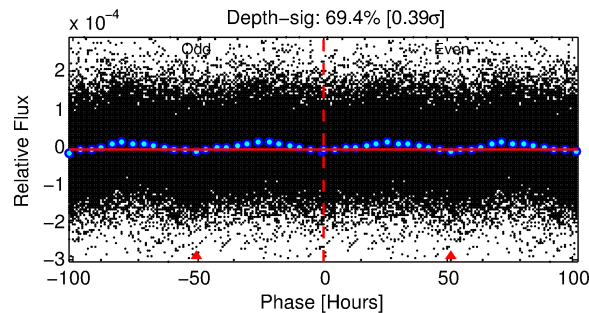
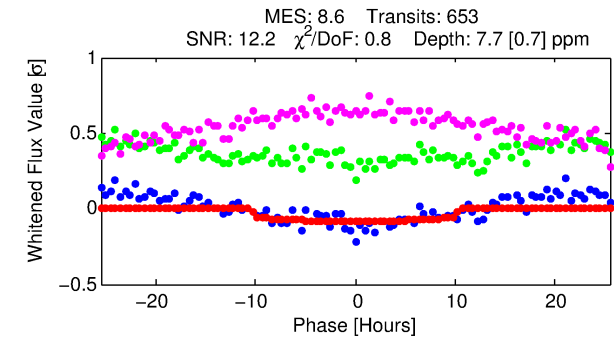
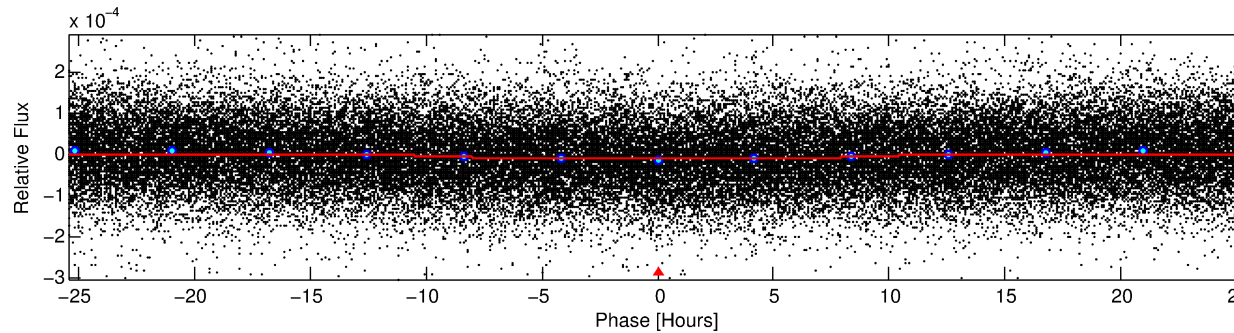
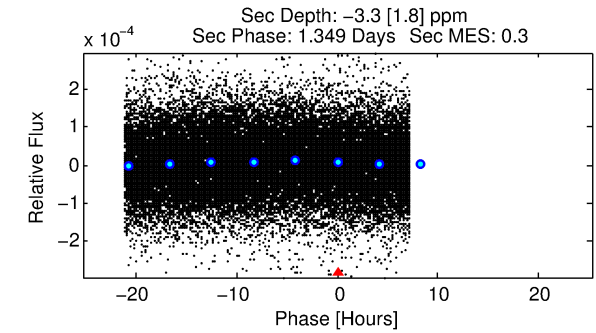
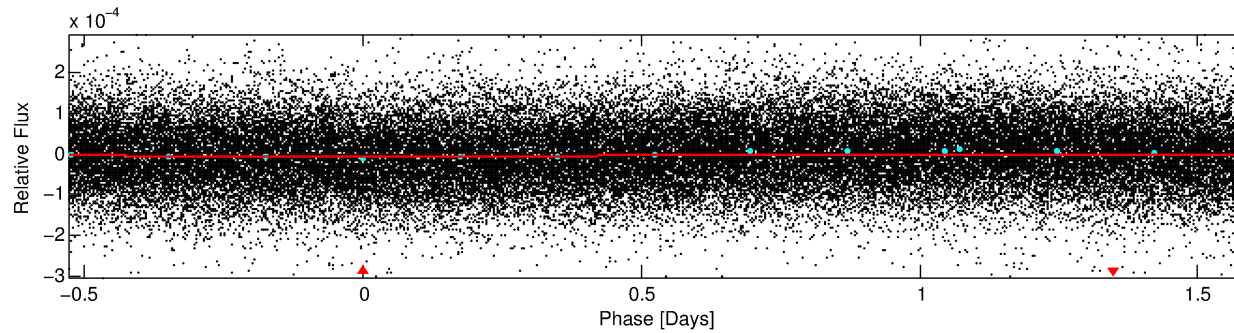
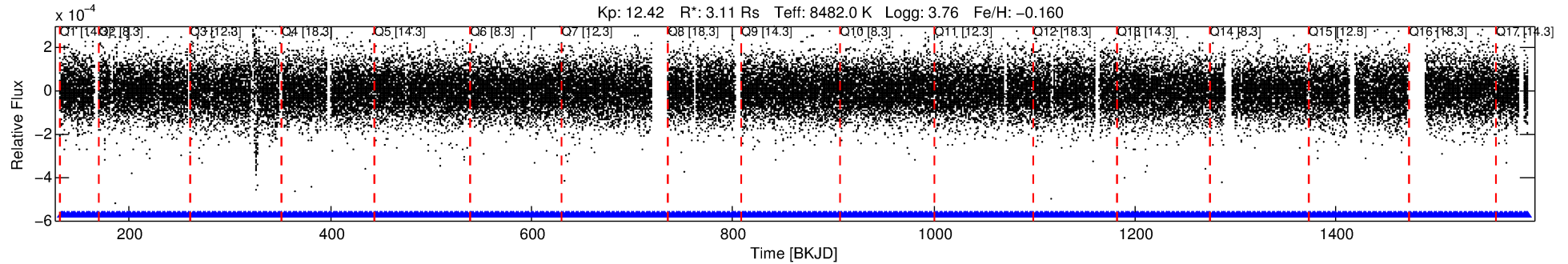
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006696713-01

No Significant Match Found

# DV One-Page Summary

KIC: 6696713 Candidate: 1 of 1 Period: 2.117 d



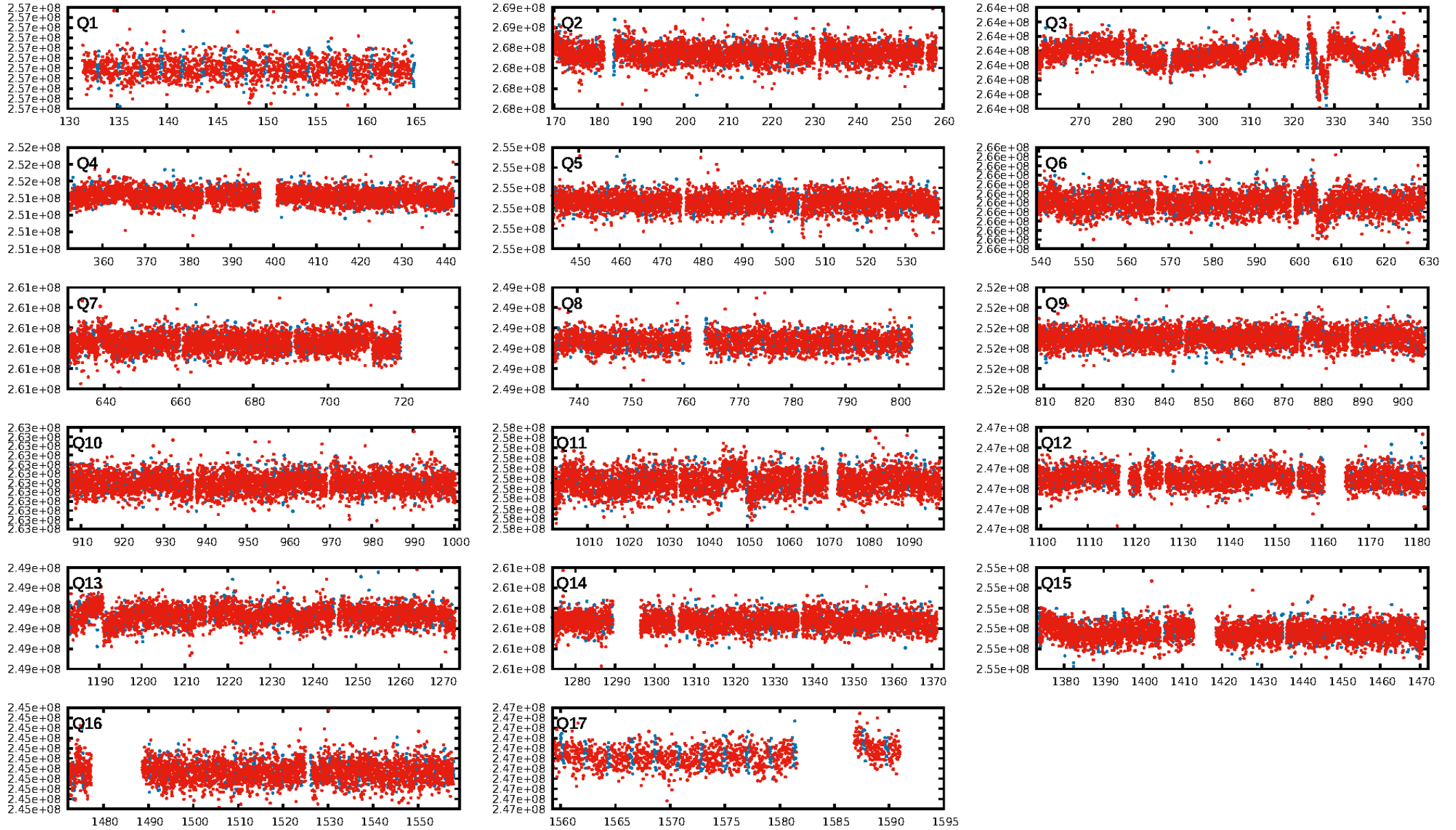
## DV Fit Results:

Period = 2.11730 [0.00005] d  
Epoch = 132.0194 [0.0122] BKJD  
Rp/R\* = 0.0026 [0.0015]  
a/R\* = 1.04 [0.29]  
b = 0.00 [1792.00]  
Seff = 26960.21 [13466.01]  
Teq = 3267 [408] K  
Rp = 0.88 [0.58] Re  
a = 0.0408 [0.0127] AU  
Ag = N/A  
Teffp = N/A

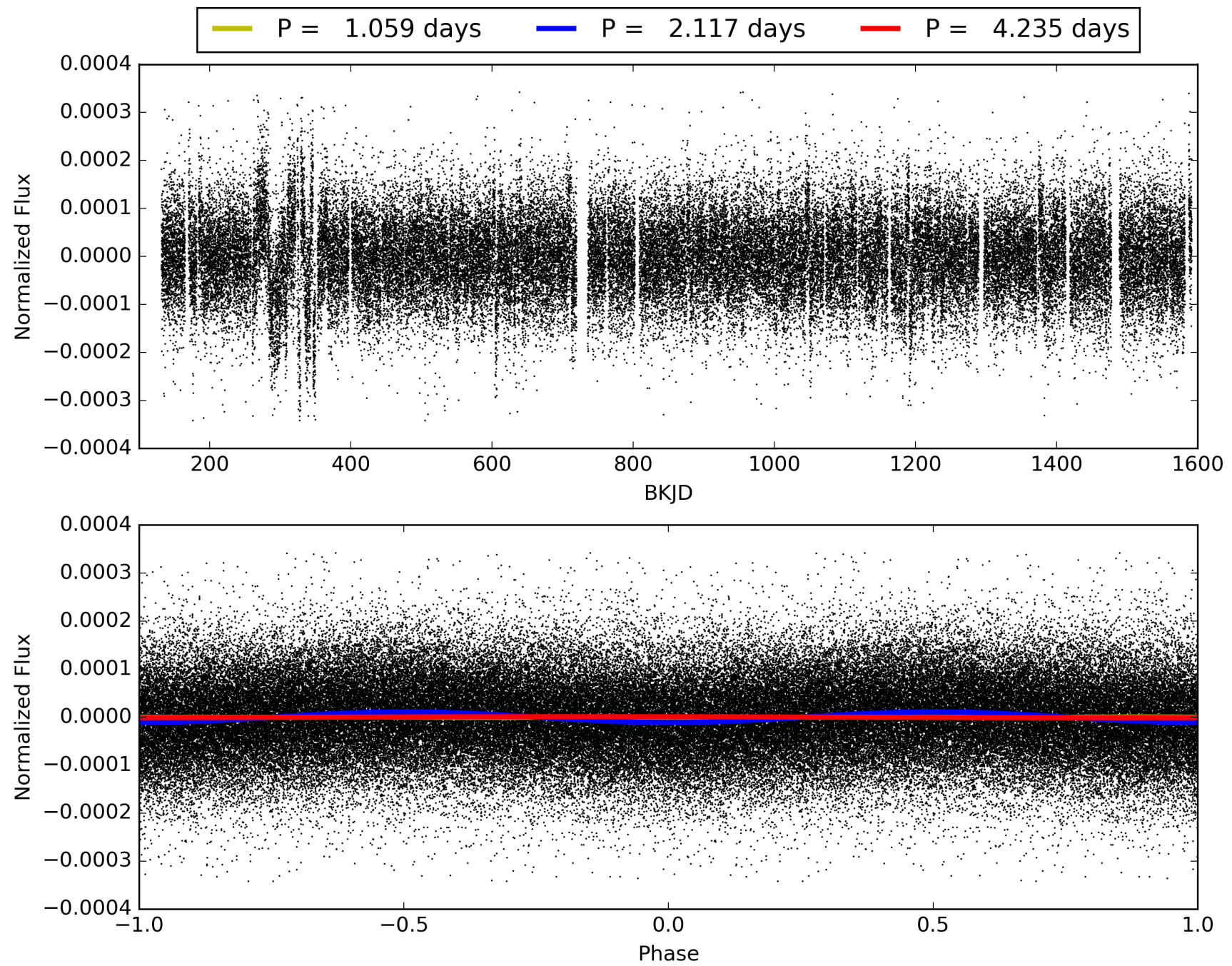
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [623/623]  
GhostDiagnostic-chr: 3.627  
Centroid-sig: 22.3%  
Centroid-so: 0.929 arcsec [0.93σ]  
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 006696713-01, PDC Light Curves



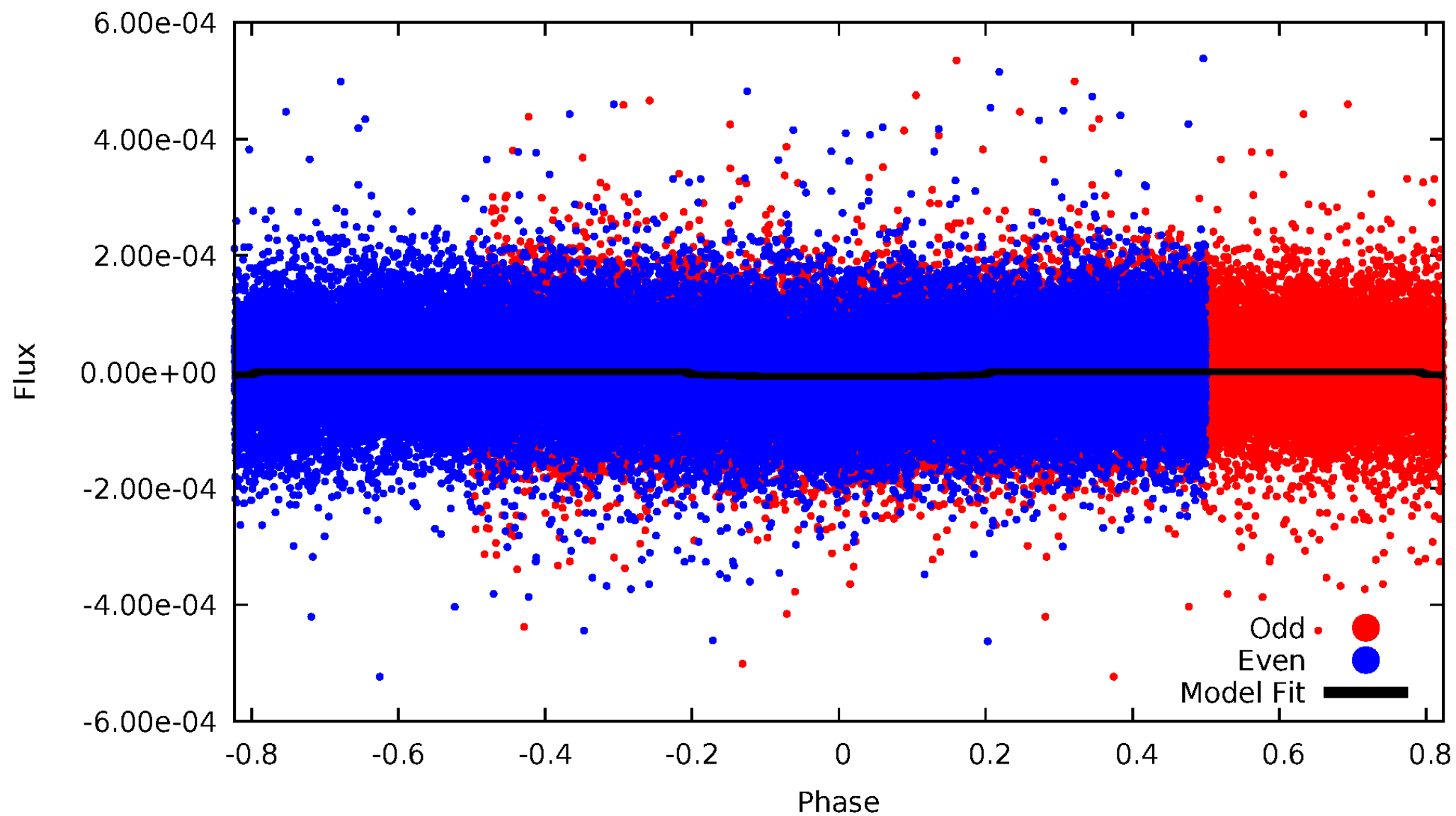
TCE 006696713-01





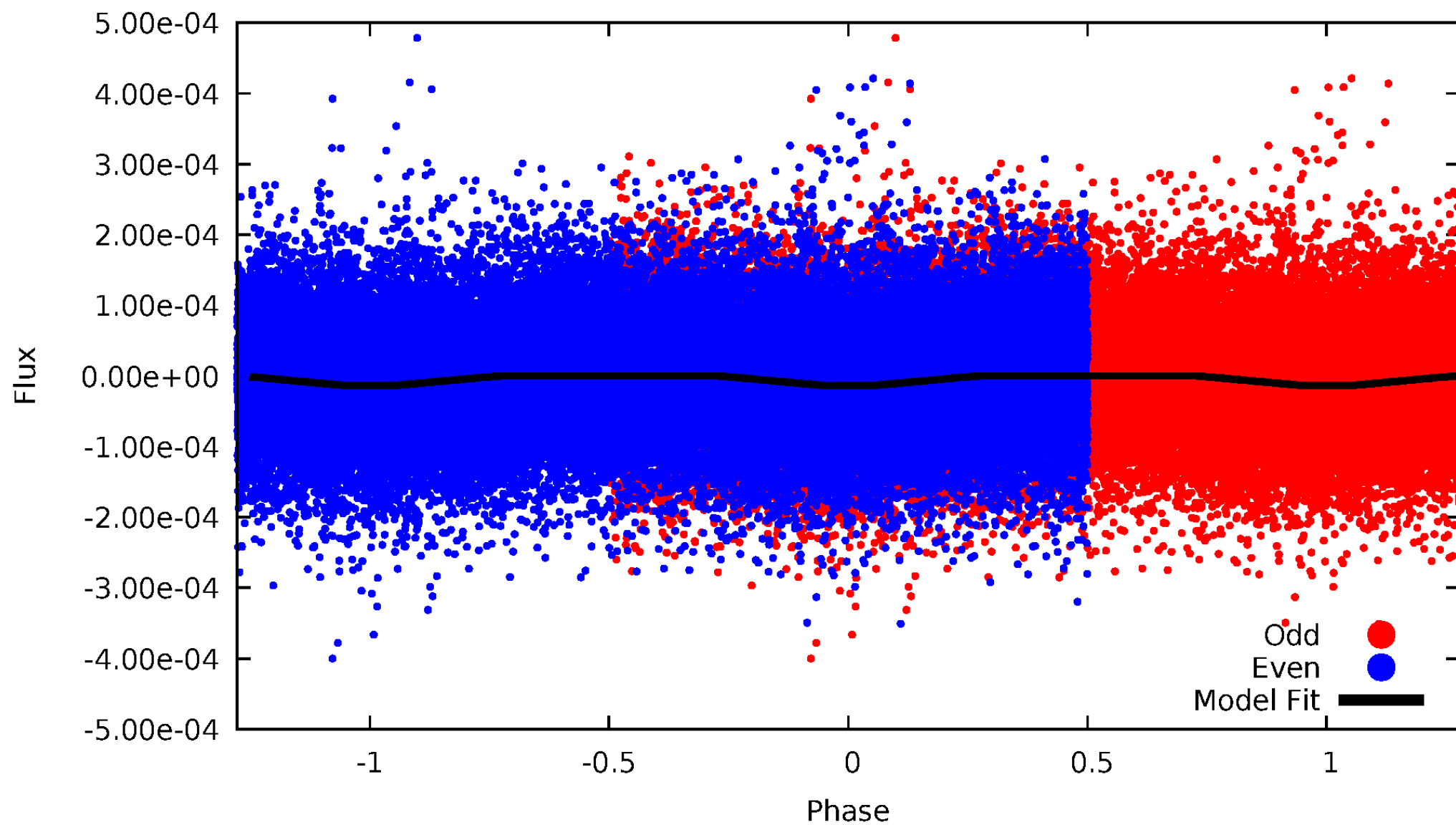
# DV Odd/Even

TCE 006696713-01



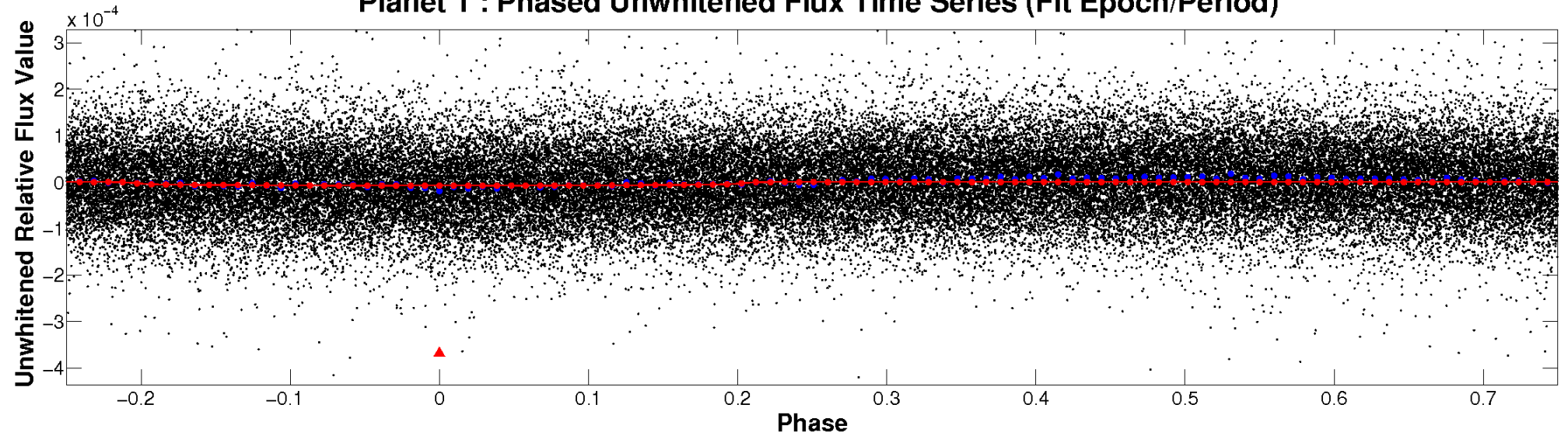
# ALT Odd/Even

TCE 006696713-01

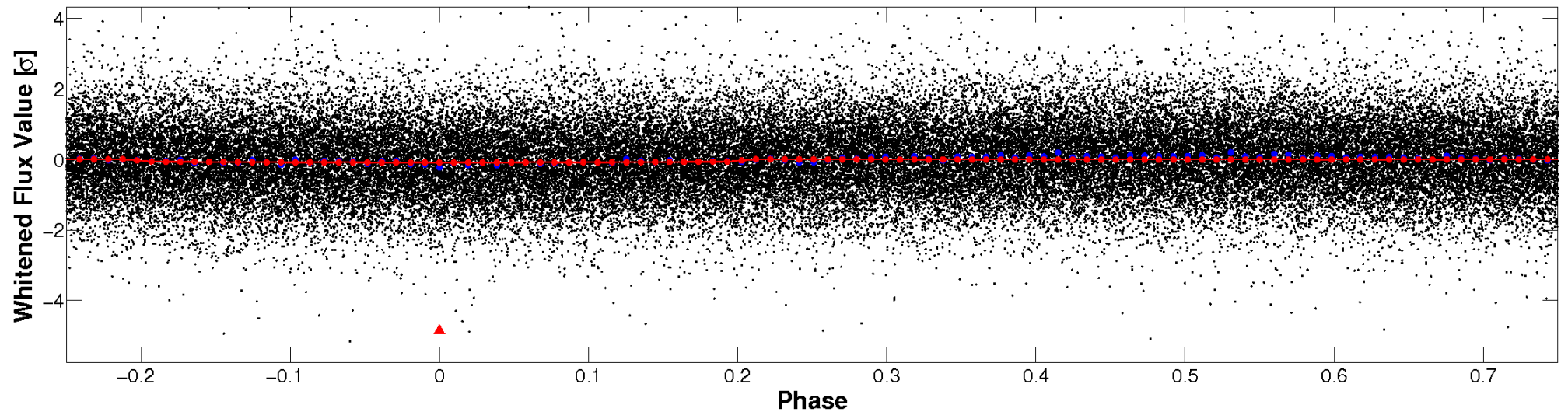


# Non-Whitened Vs. Whitened Light Curve

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

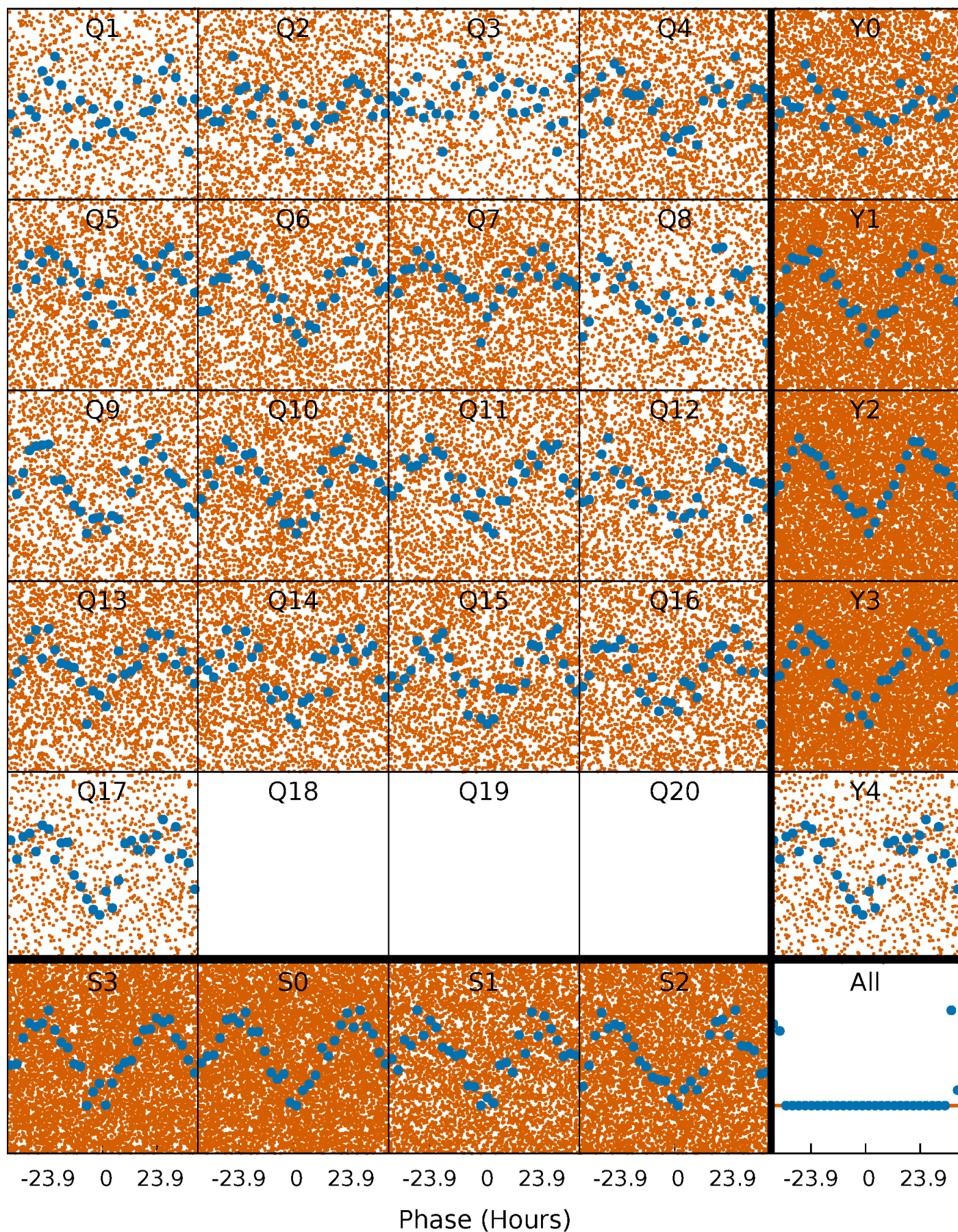


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

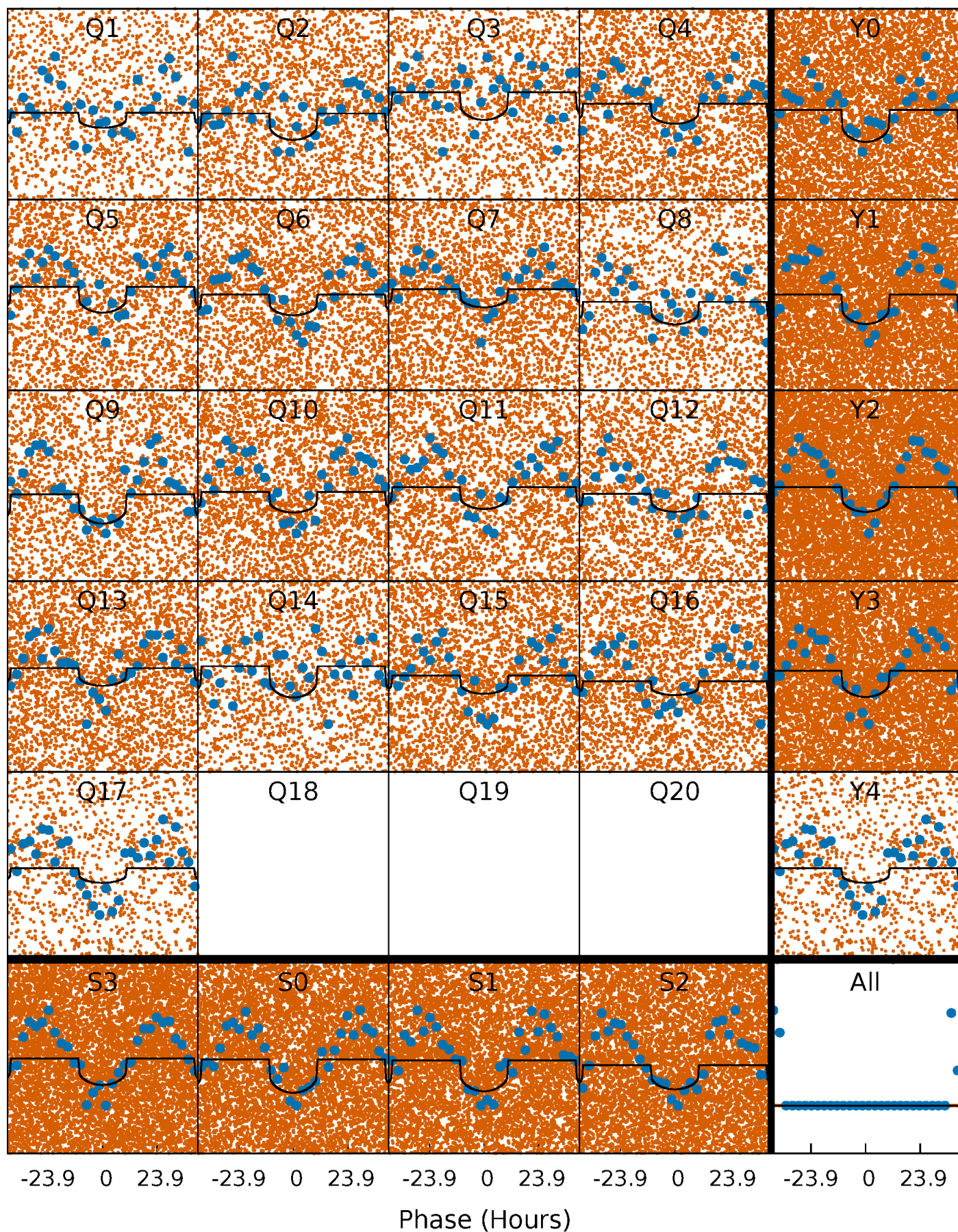
TCE 006696713-01 P= 2.117300 Days  $T_0=132.019377$  (BKJD)





# DV Quarter-Phased Transit Curves

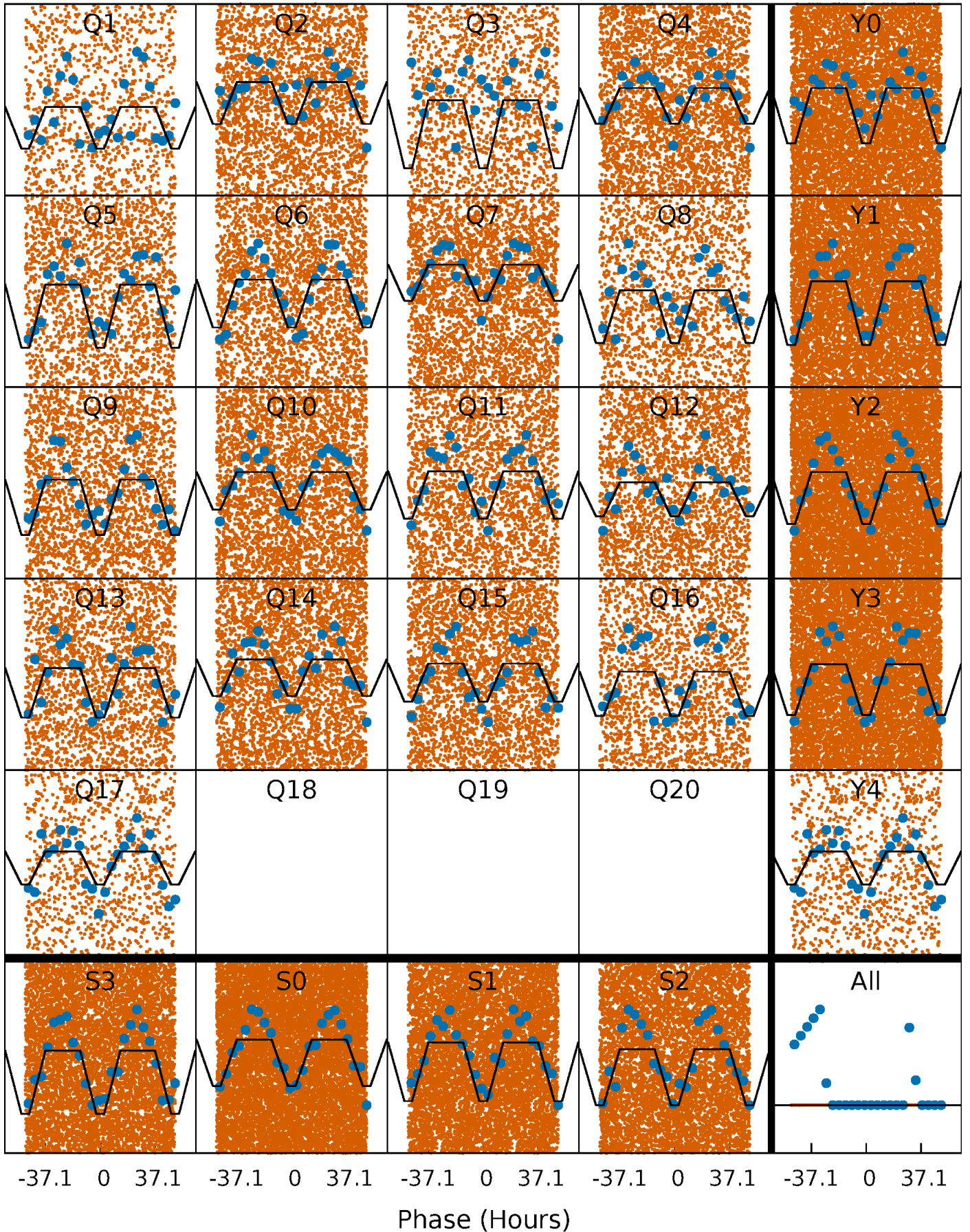
TCE 006696713-01 P= 2.117300 Days  $T_0=132.019377$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

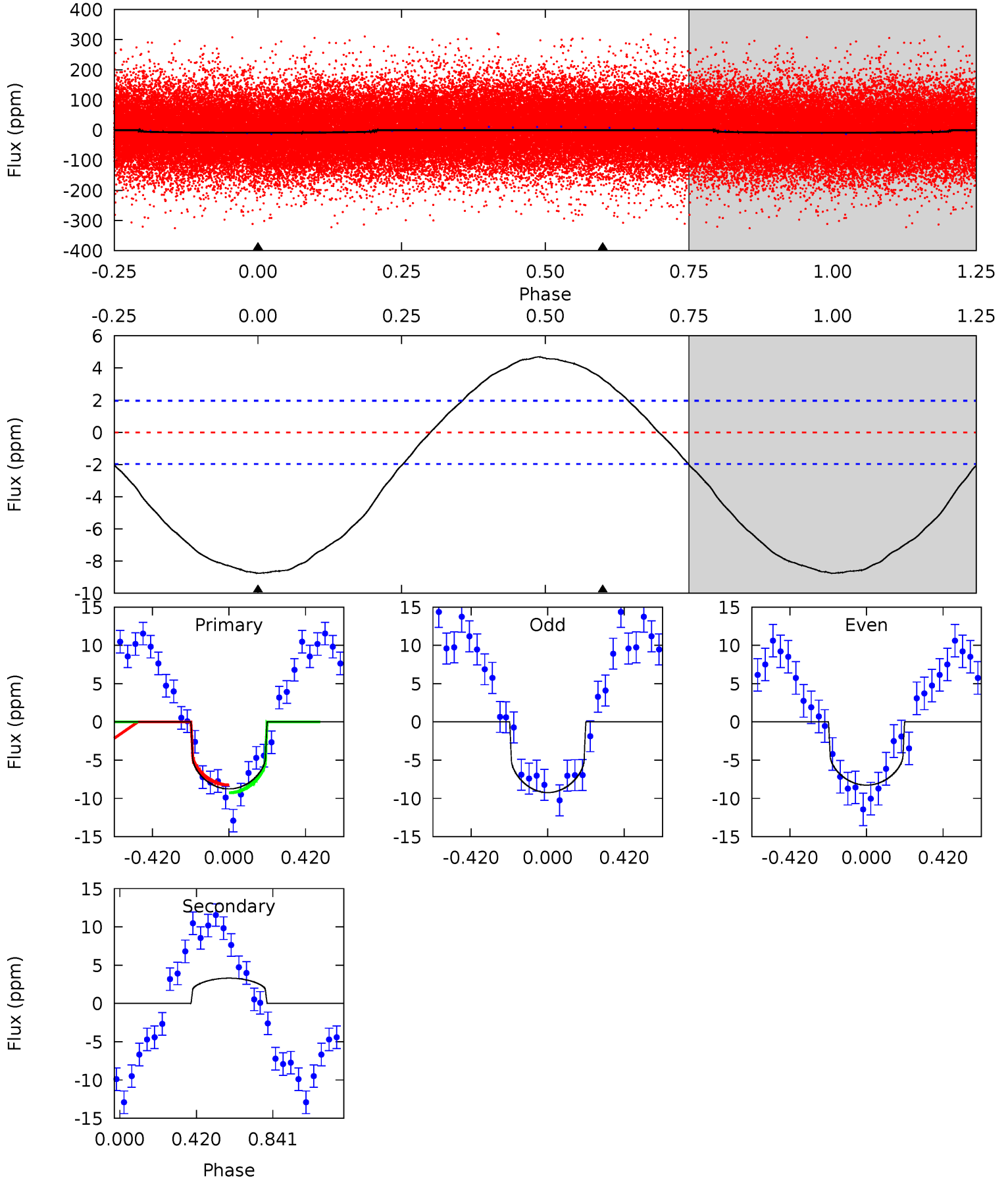
TCE 006696713-01 P= 2.117289 Days  $T_0=132.037299$  (BKJD)



# DV Model-Shift Uniqueness Test

006696713-01, P = 2.117300 Days, E = 129.902077 Days

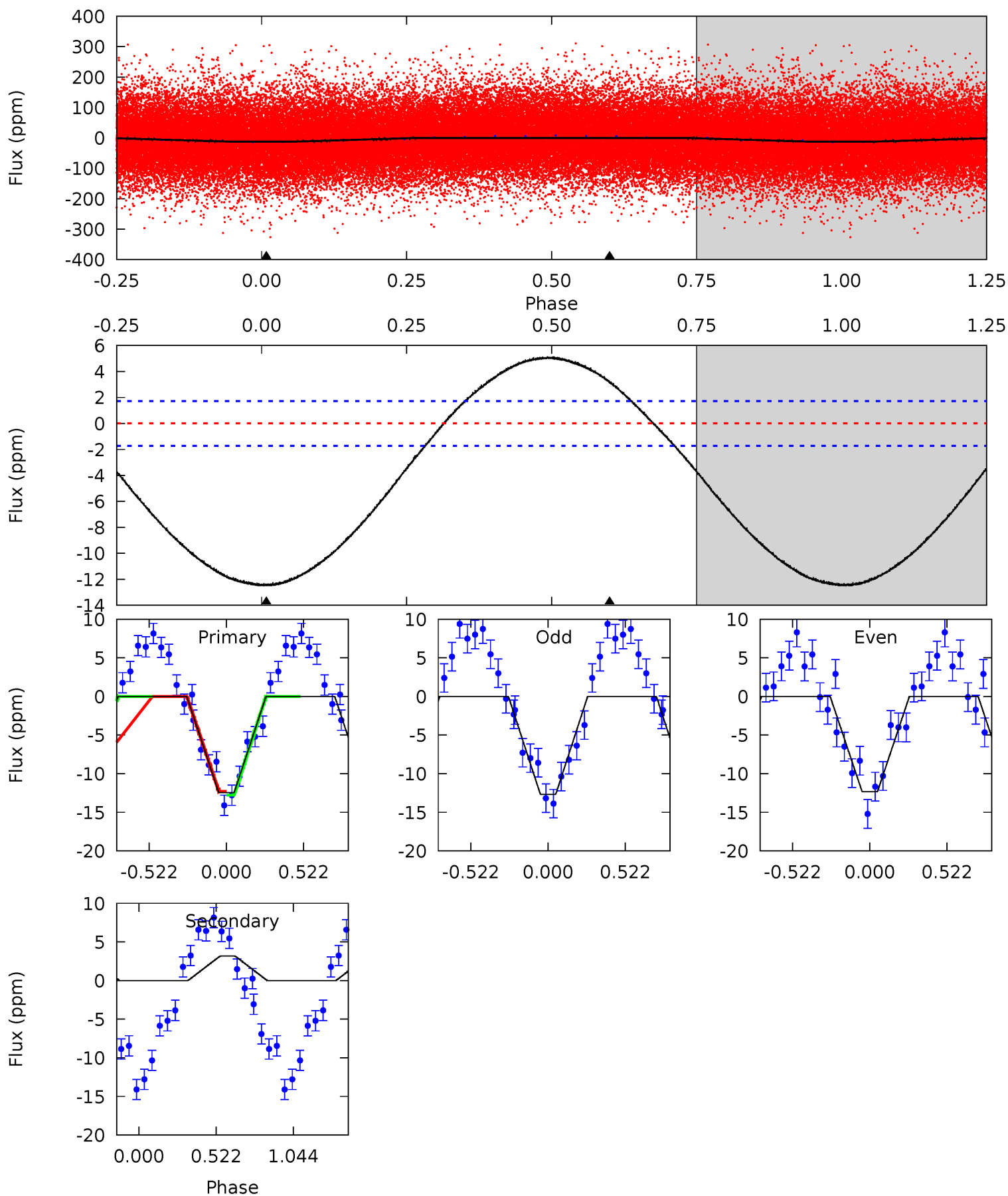
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	-7.15	0	0	4.25	0.81	2.42	18.9	18.9	-7.15	-7.15	1.05	0.94	0.35	1.11



# Alt Model-Shift Uniqueness Test

006696713-01, P = 2.117289 Days, E = 129.920010 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
30.5	-7.73	0	0	4.21	0.64	3.57	30.5	30.5	-7.73	-7.73	0.42	0.89	0.29	0.64





### Stellar Parameters For KIC 006696713

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8482^{+67}_{-101}$	$3.758^{+0.292}_{-0.117}$	$-0.160^{+0.250}_{-0.200}$	$3.114^{+0.670}_{-1.005}$	$2.024^{+0.368}_{-0.246}$	$0.094^{+0.173}_{-0.034}$
	+1%/-1%	+8%/-3%	+156%/-125%	+22%/-32%	+18%/-12%	+183%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 006696713-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$3 \pm 0$	$0.88^{+0.49}_{-0.48}$	$4491^{+252}_{-392}$	$-6780^{+1168}_{-4212}$	$-3.989^{+2.422}_{-15.220}$
Alt.	$3 \pm 0$	$1.23^{+0.52}_{-0.52}$	$4503^{+257}_{-391}$	$-5828^{+690}_{-1575}$	$-1.948^{+1.001}_{-3.957}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming A=0.3)

$A_{\text{obs}}$  = 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

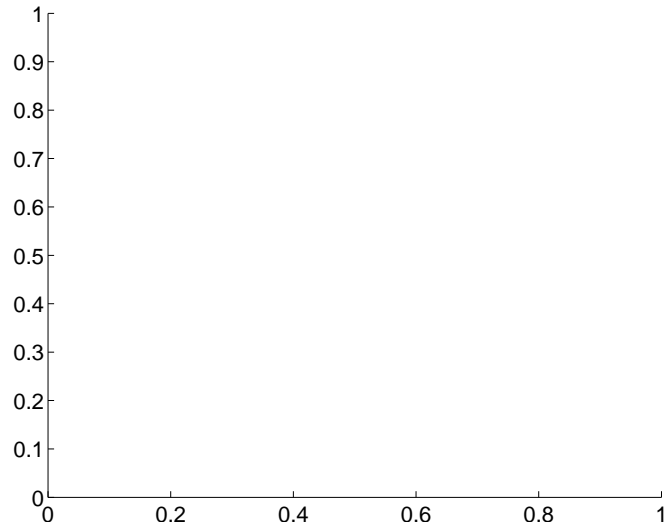
Supplemental centroid analysis for 006696713-01. Kepler magnitude: 12.42. Transit SNR 12.18

There are 0 quarters with good PRF difference image offsets

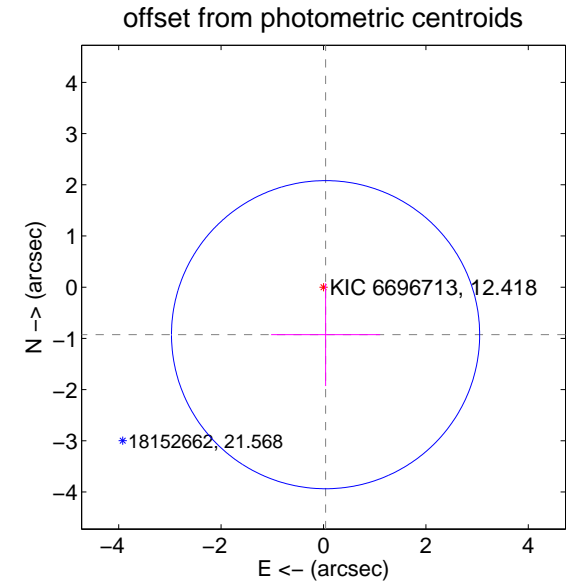
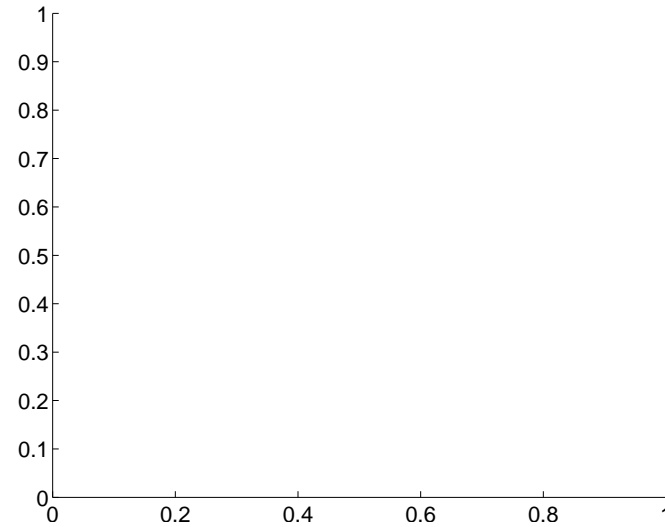
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$0.93 \pm 1.00$	0.93	$-0.04 \pm 1.06$	$-0.93 \pm 1.00$

There is no PRF-fit offset from OOT-fit

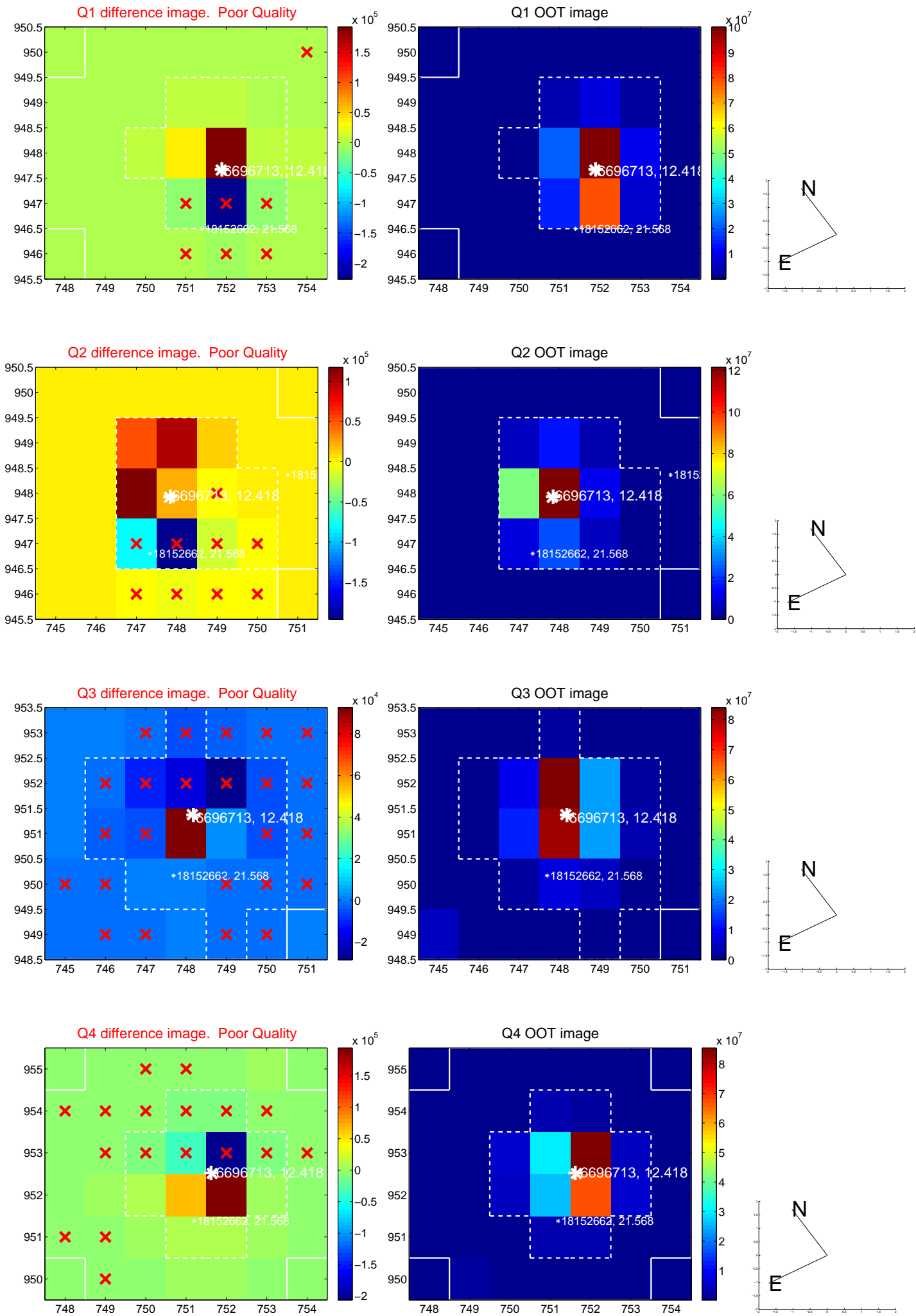


There is no PRF-fit offset from KIC

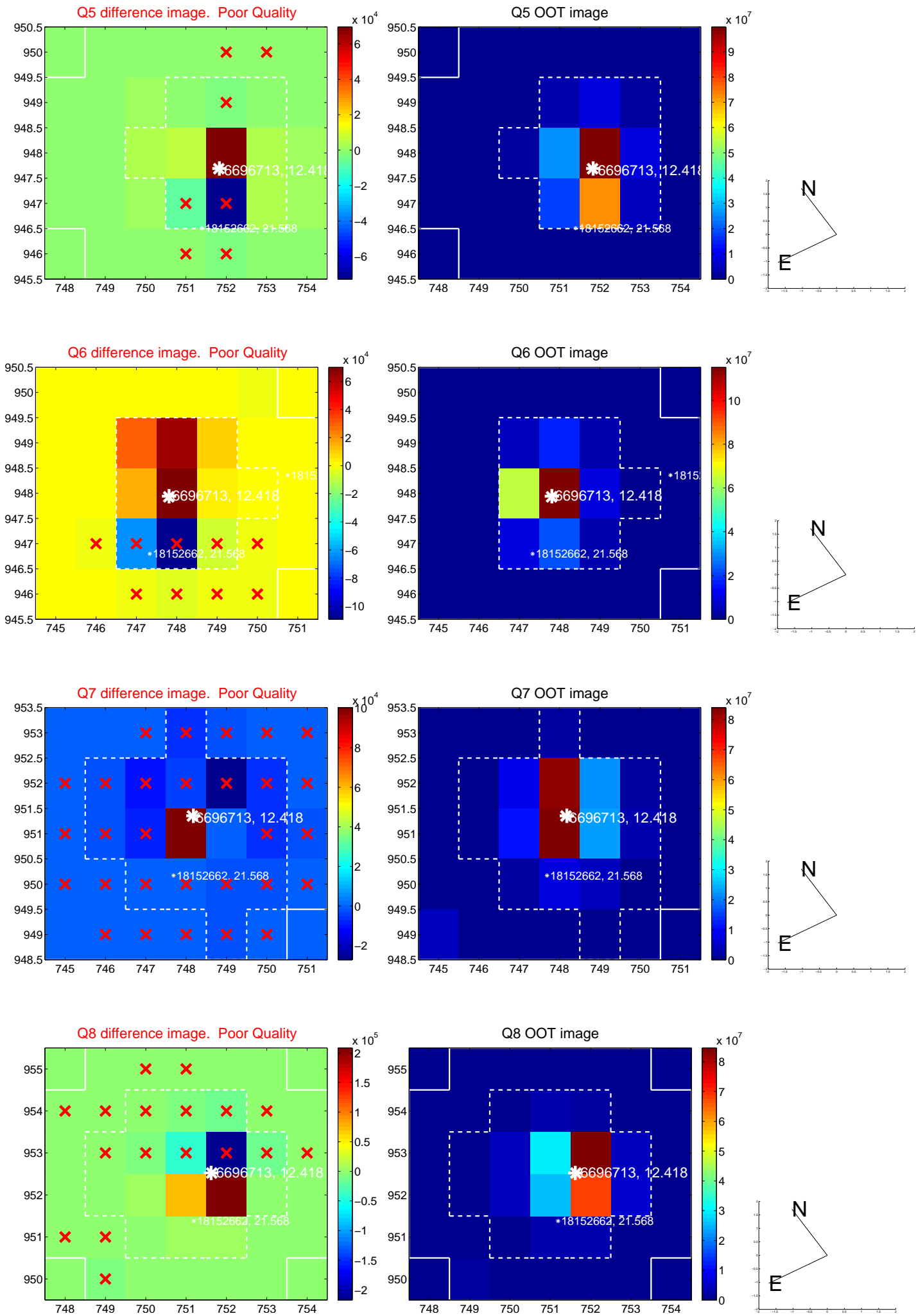


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

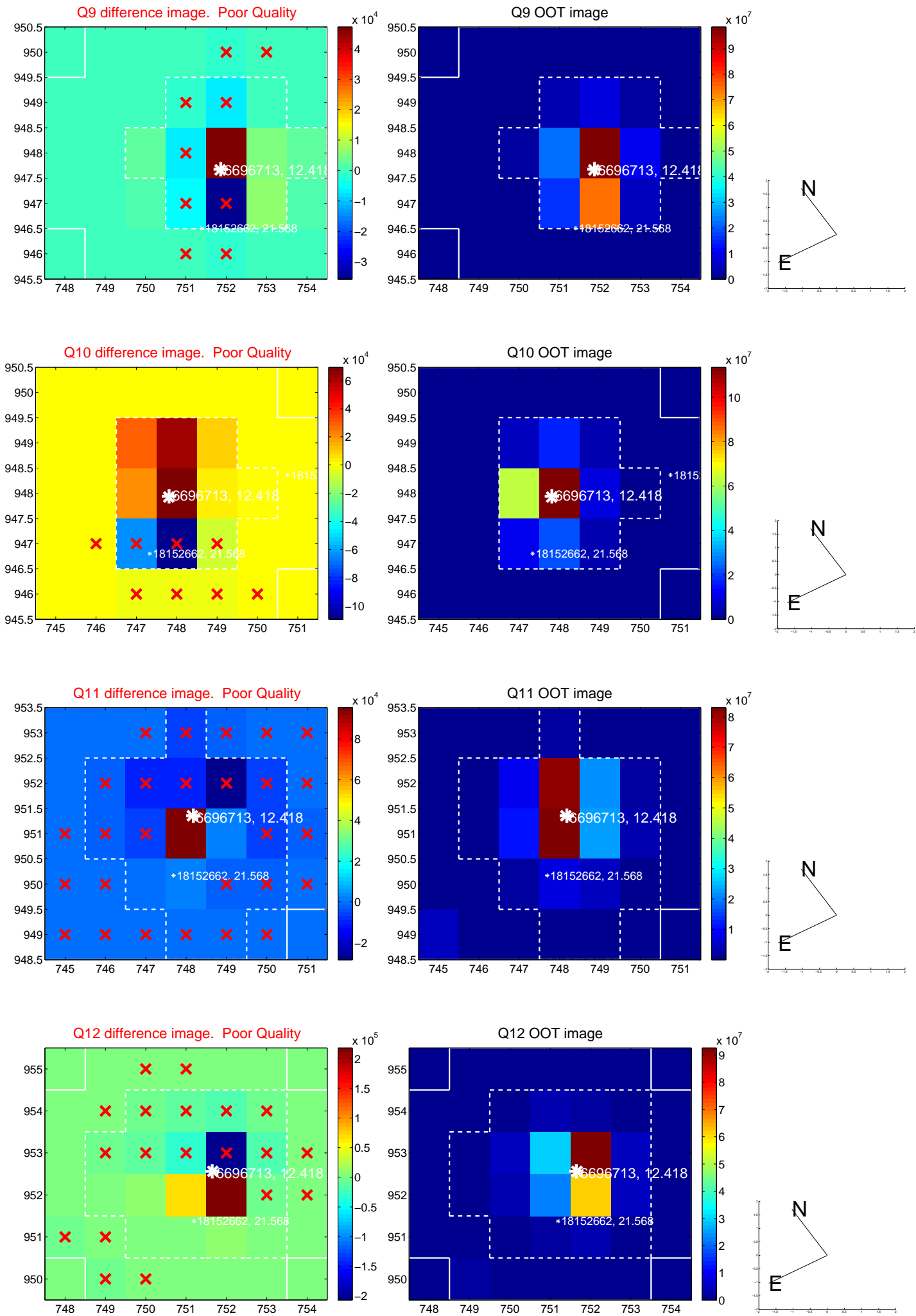


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

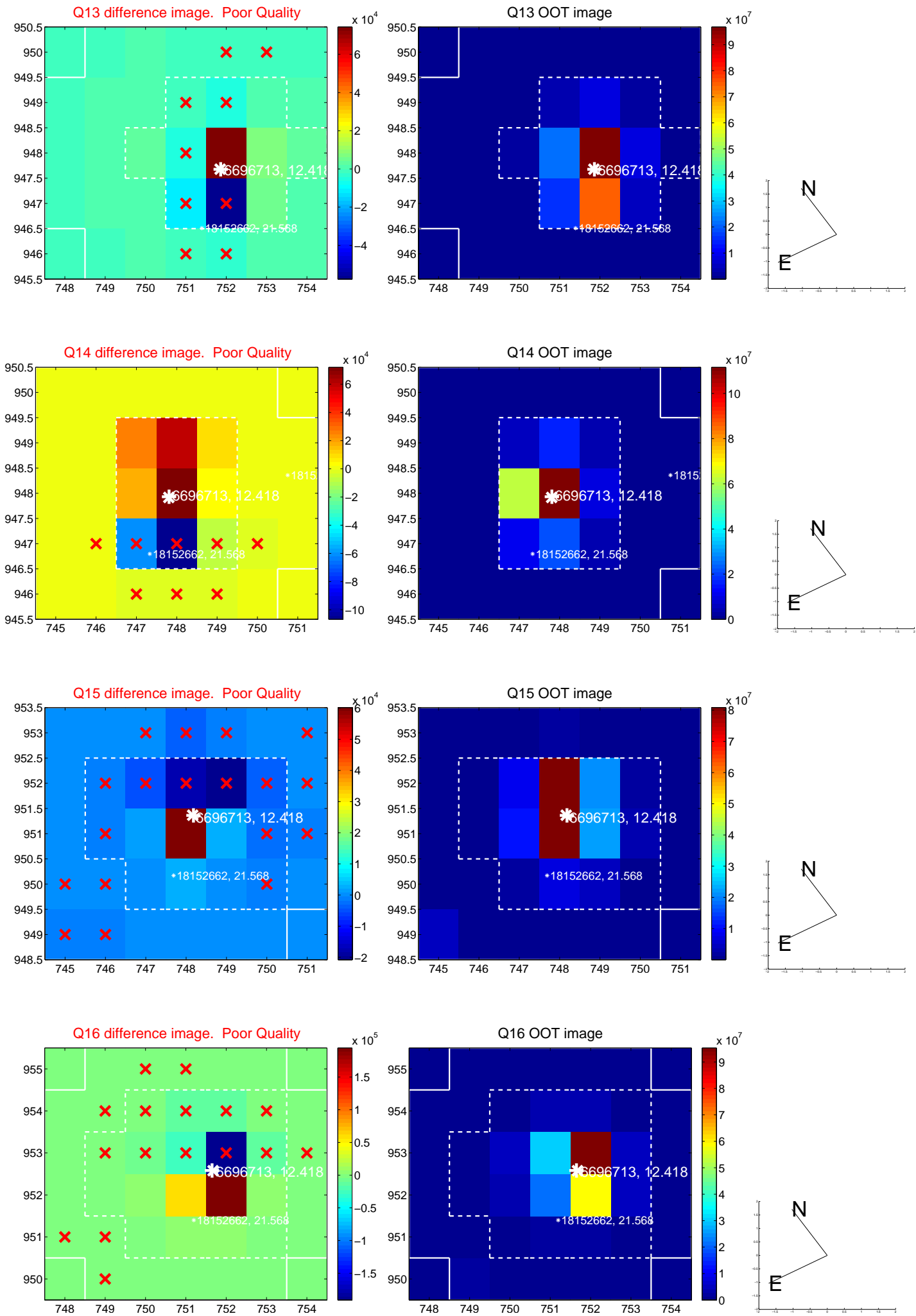




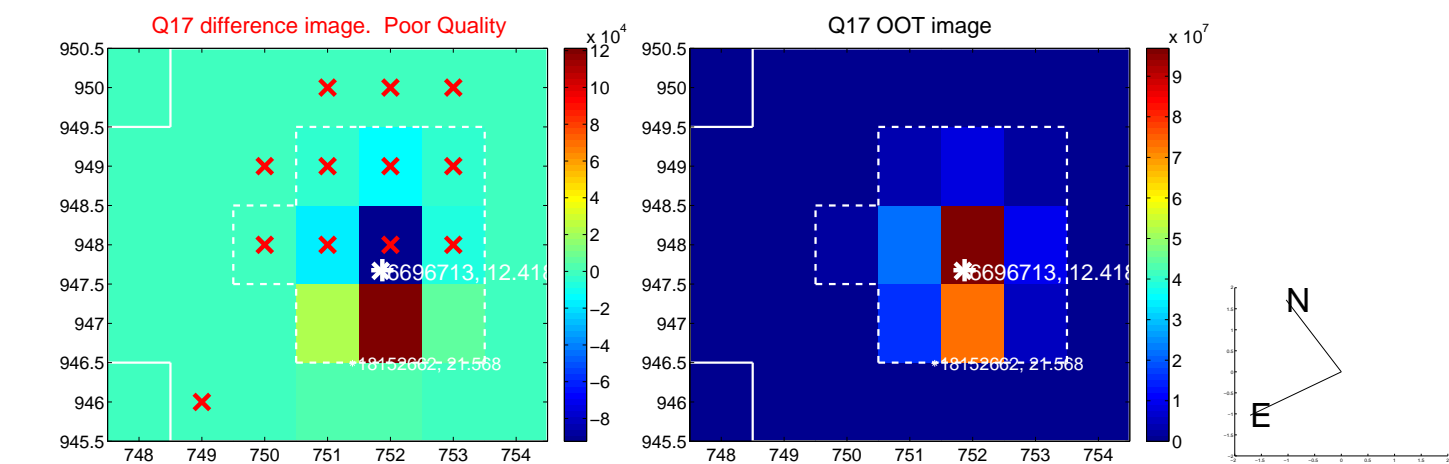
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



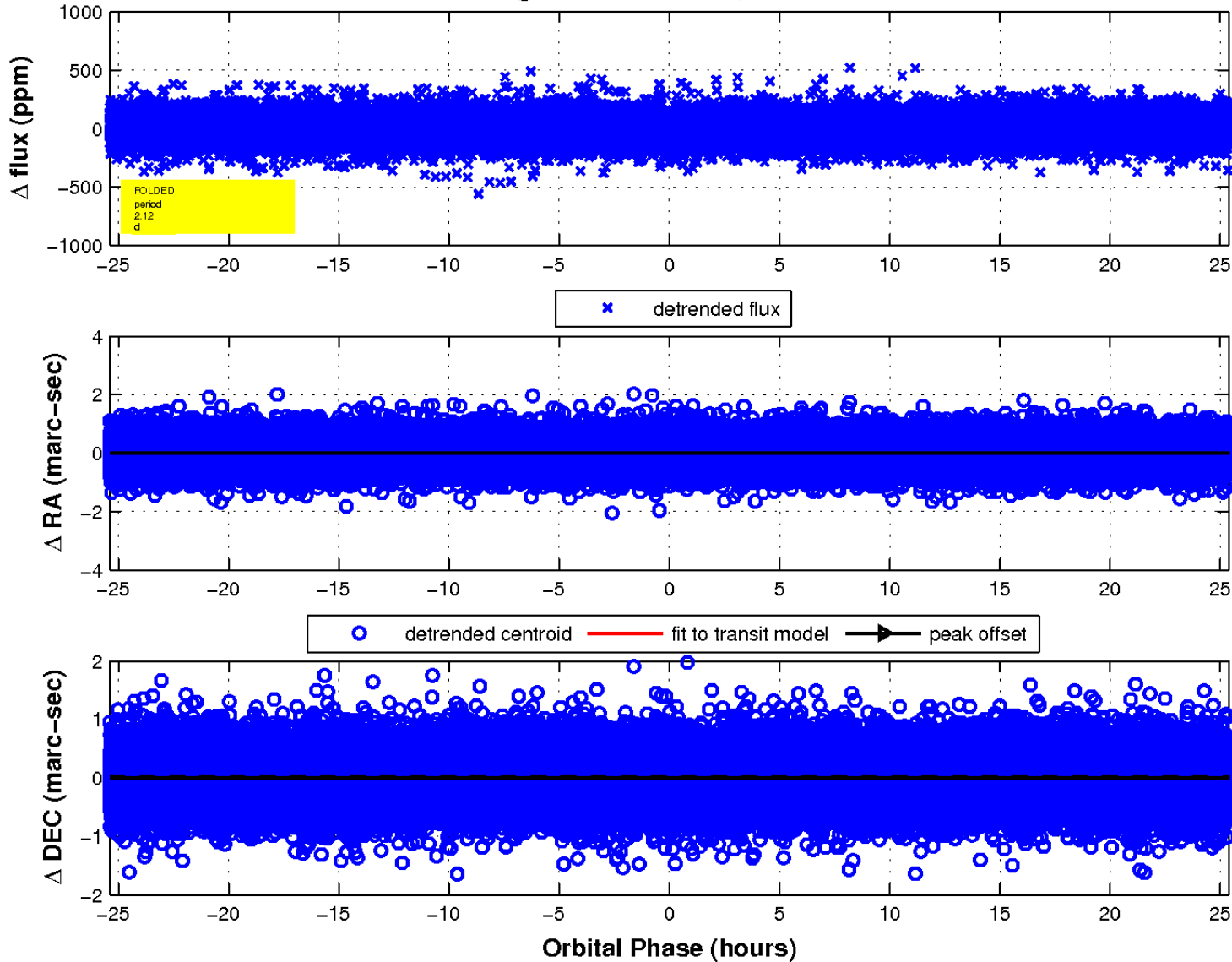
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

