

# KIC 003115272

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003115272-01	OBS	No	4.769871	134.984699	186.8	10.500	11.3	-1.0	1.67	6559	2.30	1321.92

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003115272-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

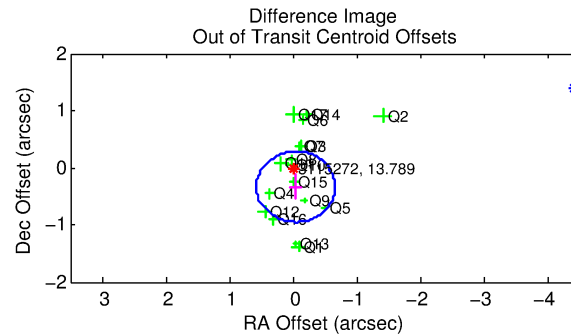
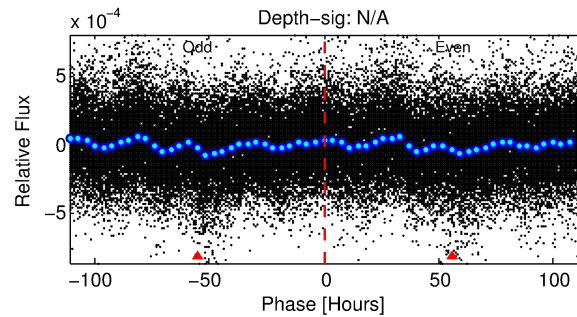
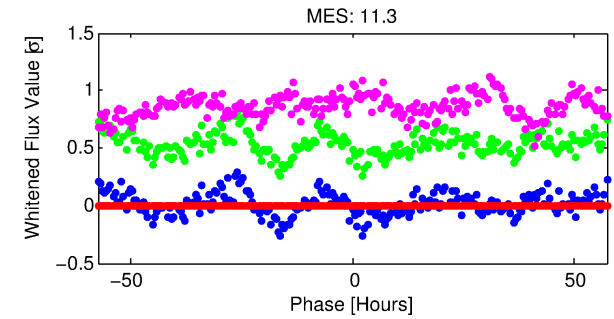
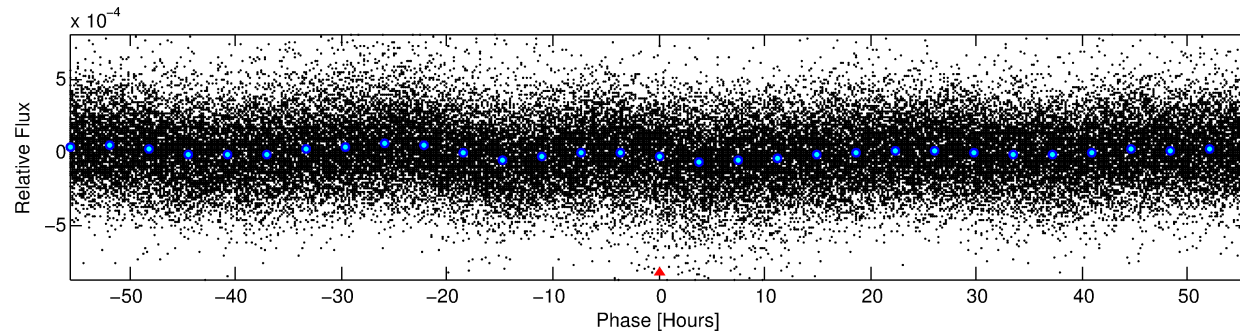
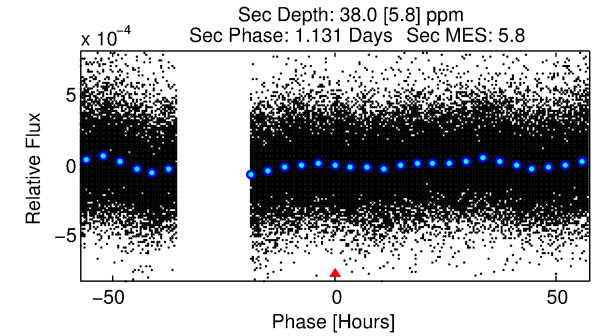
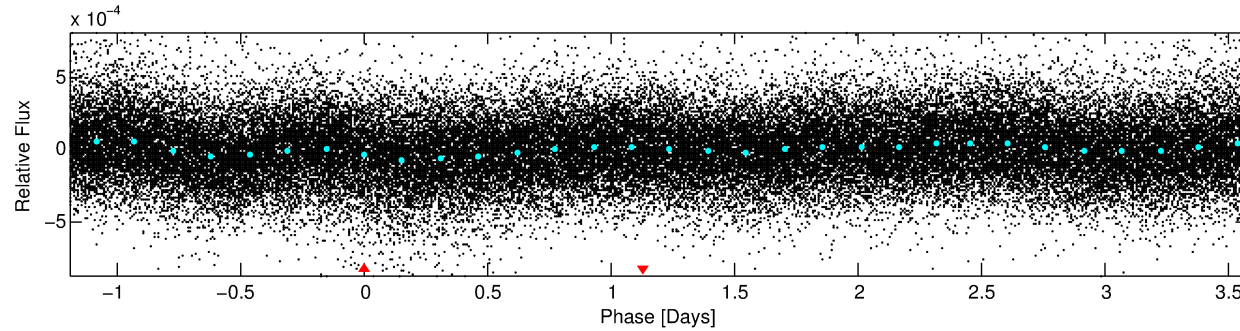
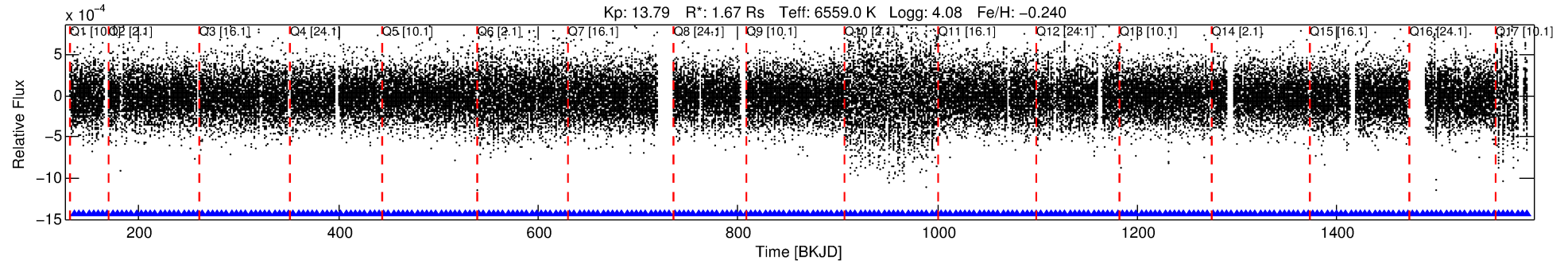
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003115272-01

No Significant Match Found

# DV One-Page Summary

KIC: 3115272 Candidate: 1 of 1 Period: 4.770 d



## TPS TCE Results:

Period = 4.76987 d  
Epoch = 134.9847 BKJD

DV fit results are unavailable

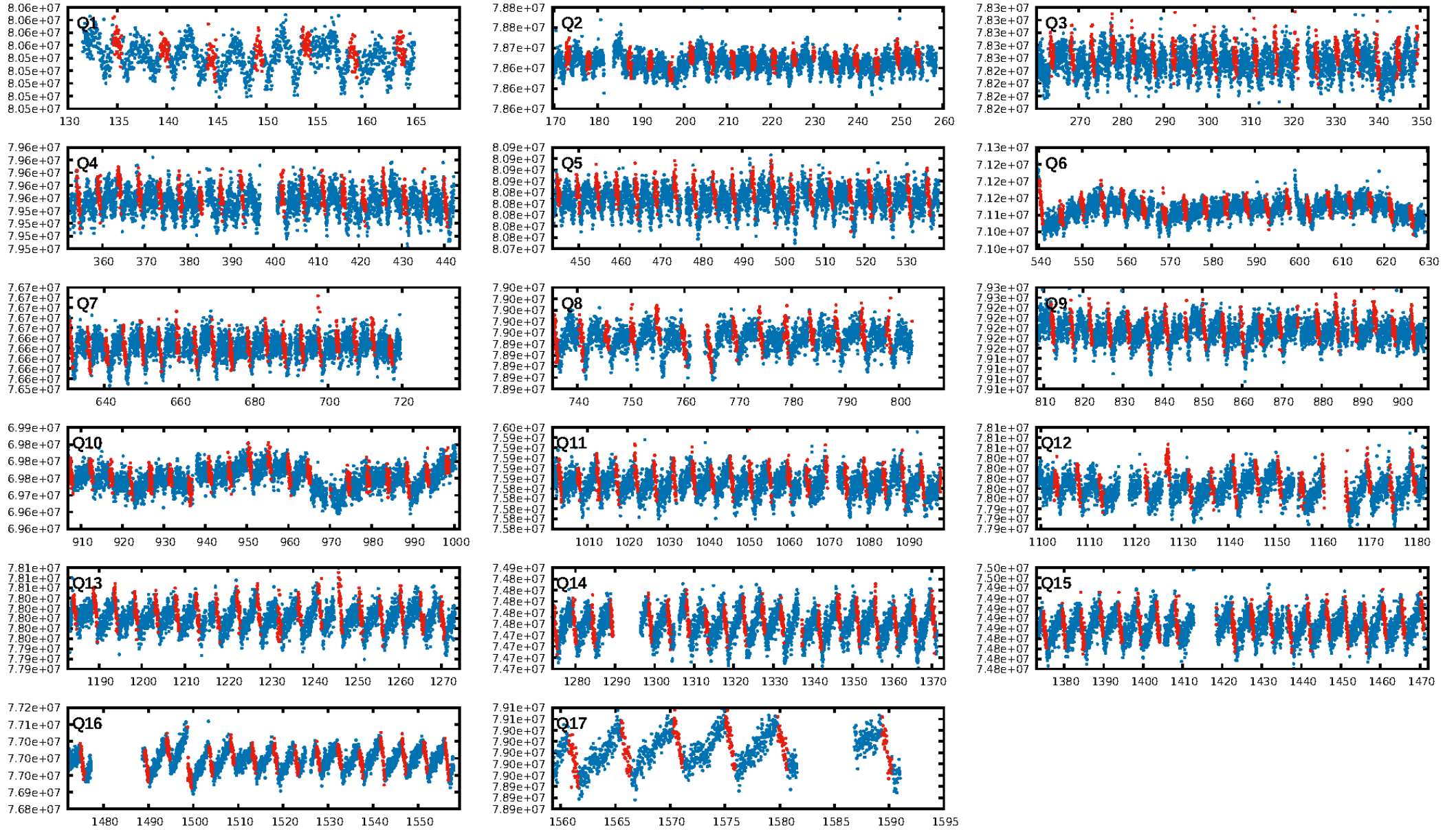
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.94e-26  
RollingBand-fgt: 1.00 [275/275]  
GhostDiagnostic-chr: 0.9908  
Centroid-sig: 4.6%  
Centroid-so: 0.899 arcsec [1.30σ]  
OotOffset-rm: 0.337 arcsec [1.63σ]  
KicOffset-rm: 0.366 arcsec [1.77σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

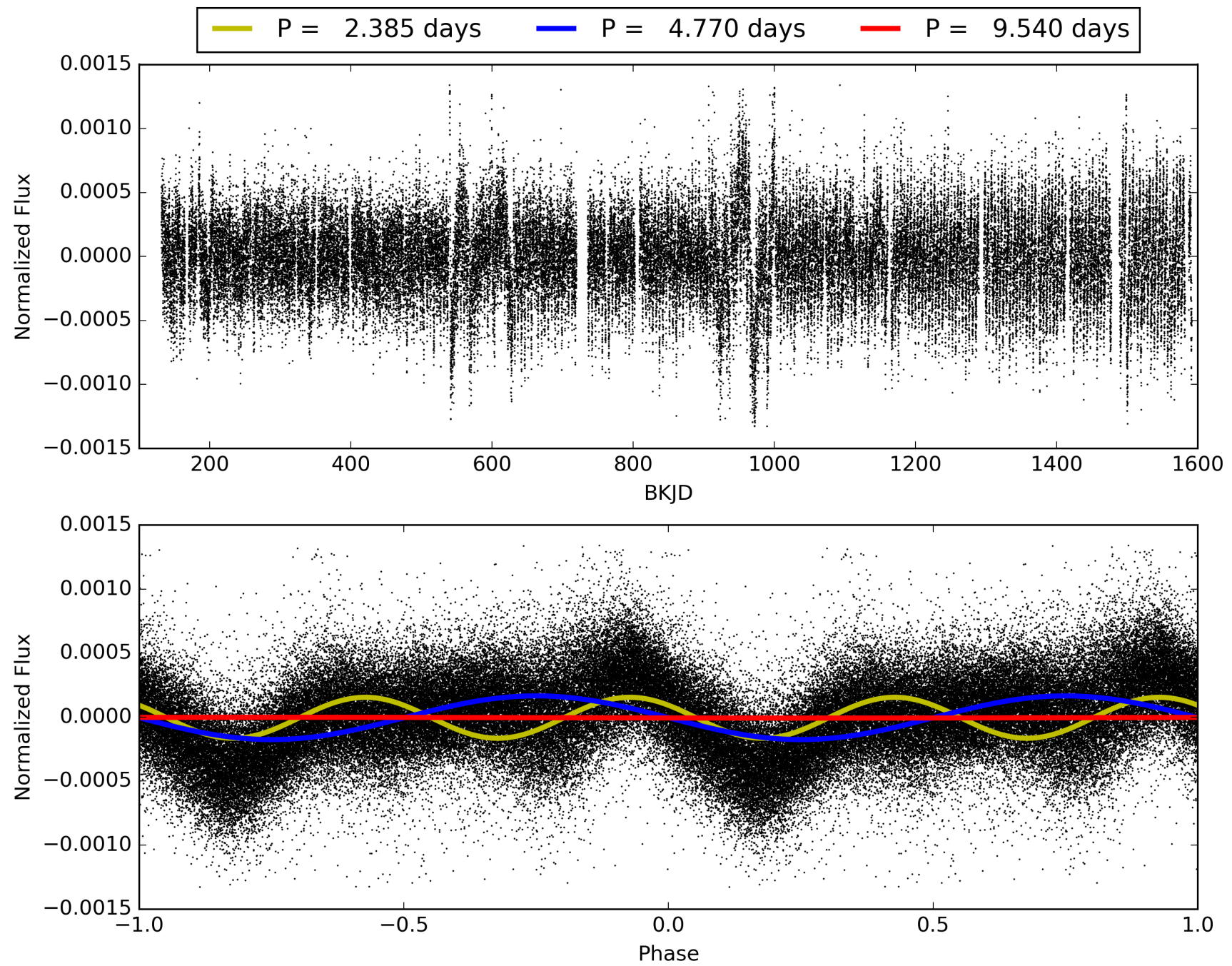
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:09:35 Z

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

# TCE 003115272-01, PDC Light Curves



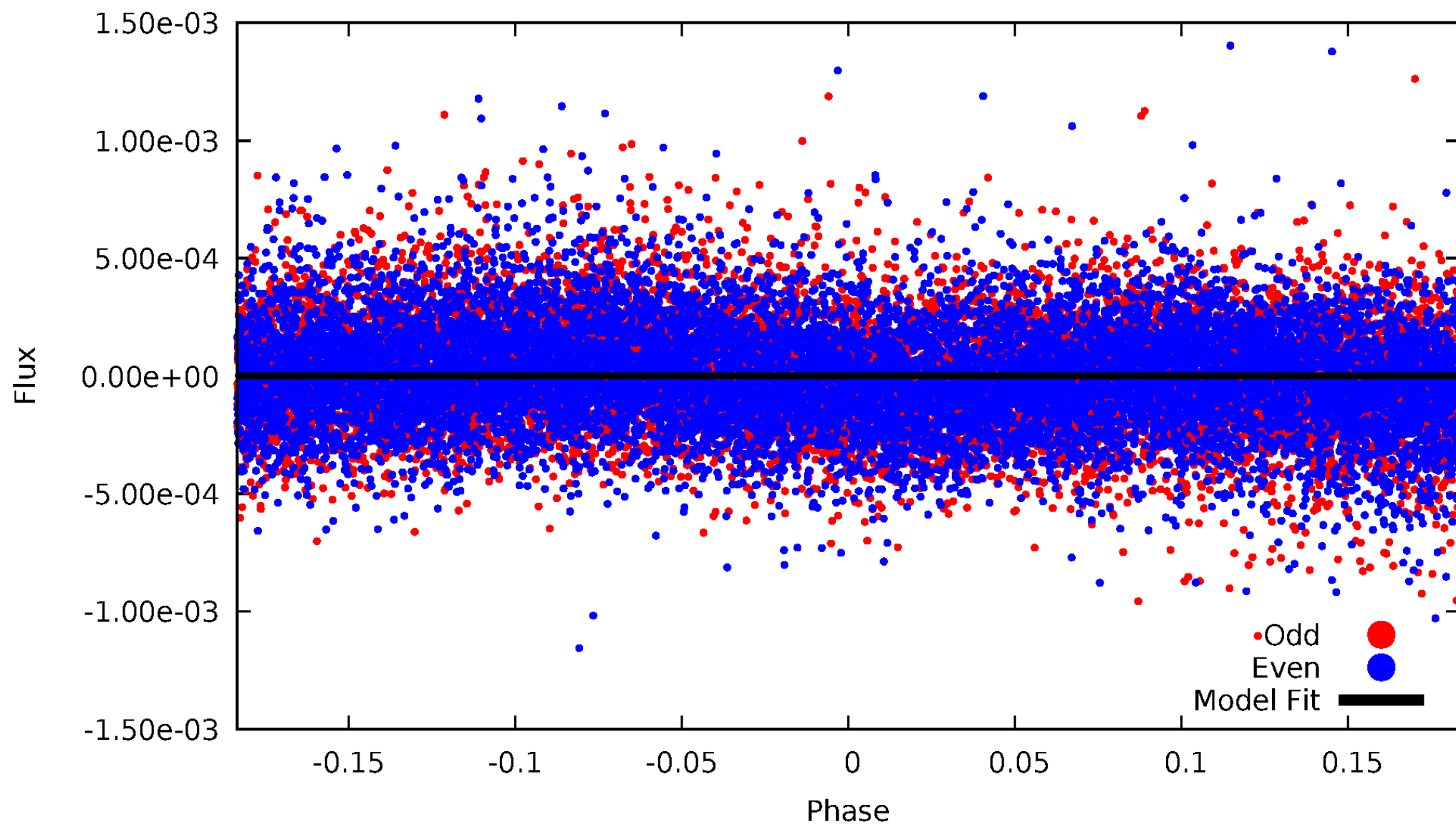
TCE 003115272-01





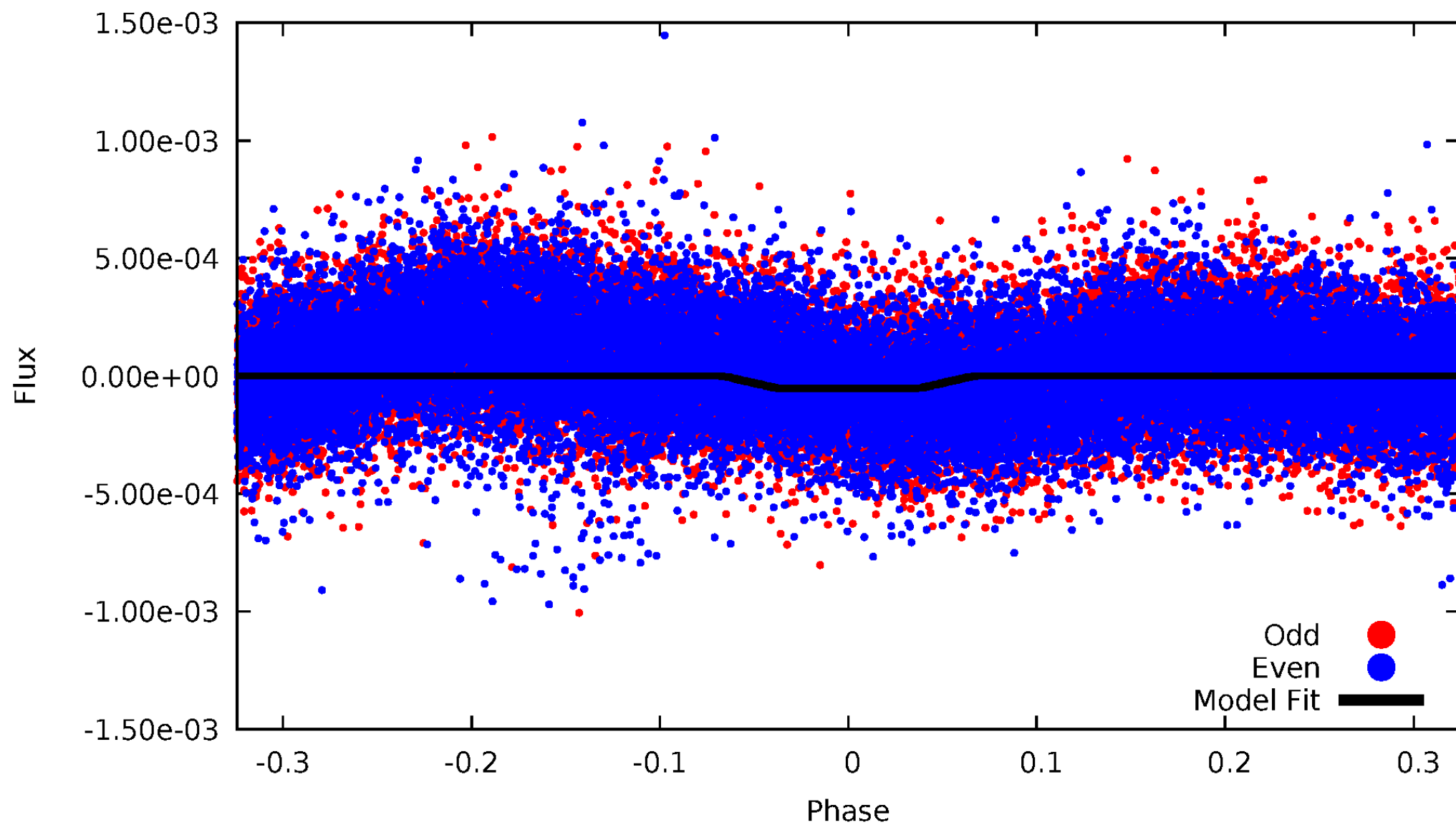
DV Odd/Even

TCE 003115272-01

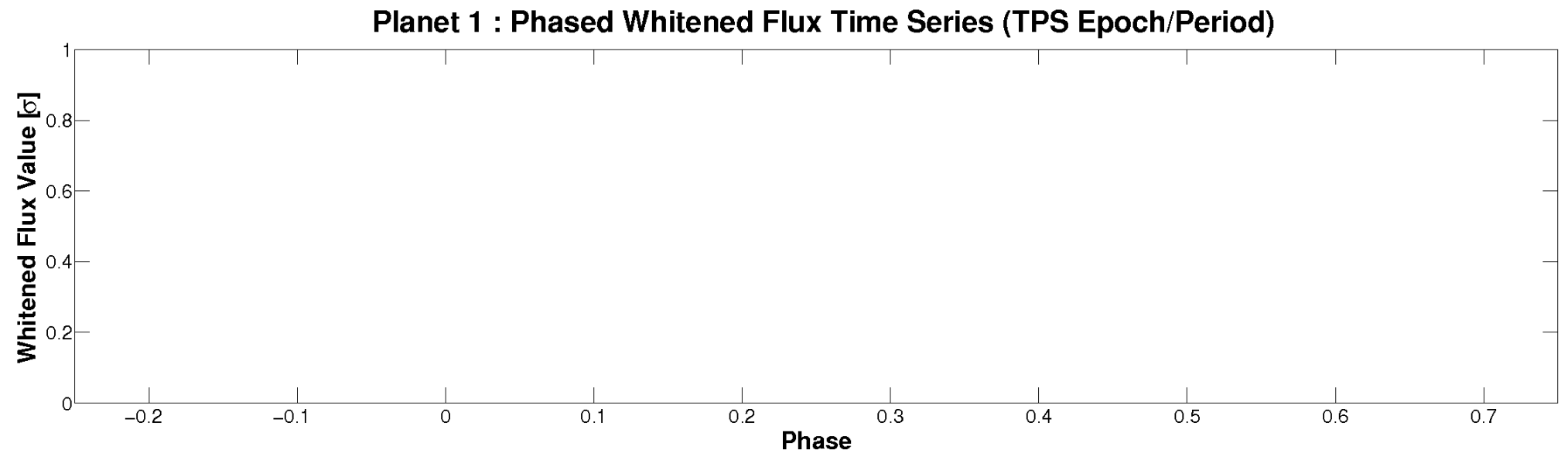
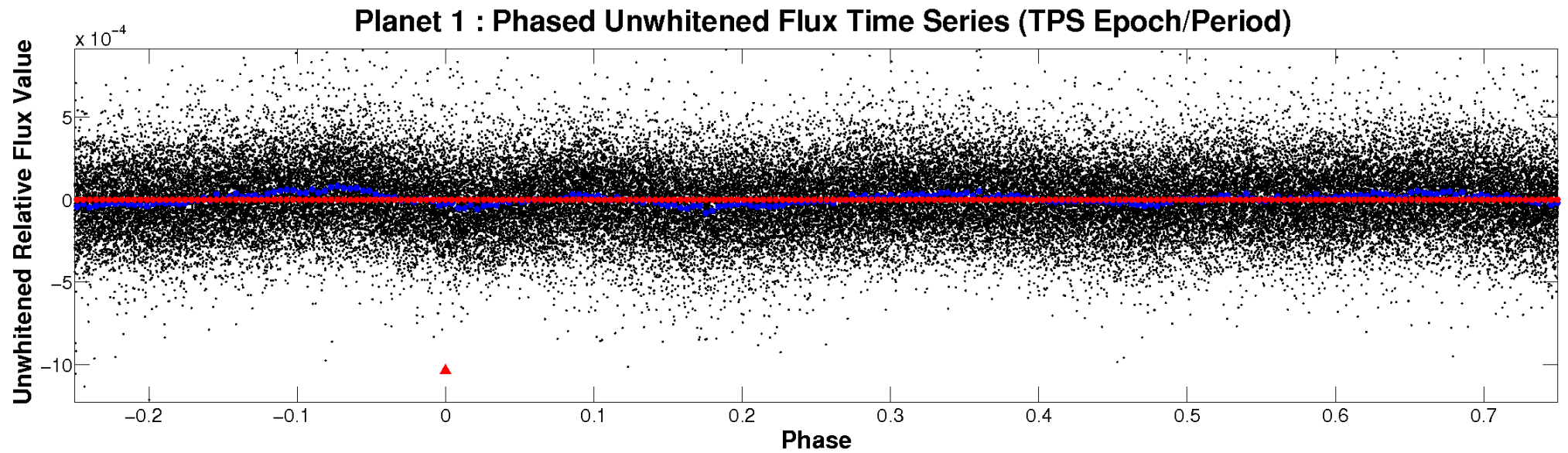


# ALT Odd/Even

TCE 003115272-01

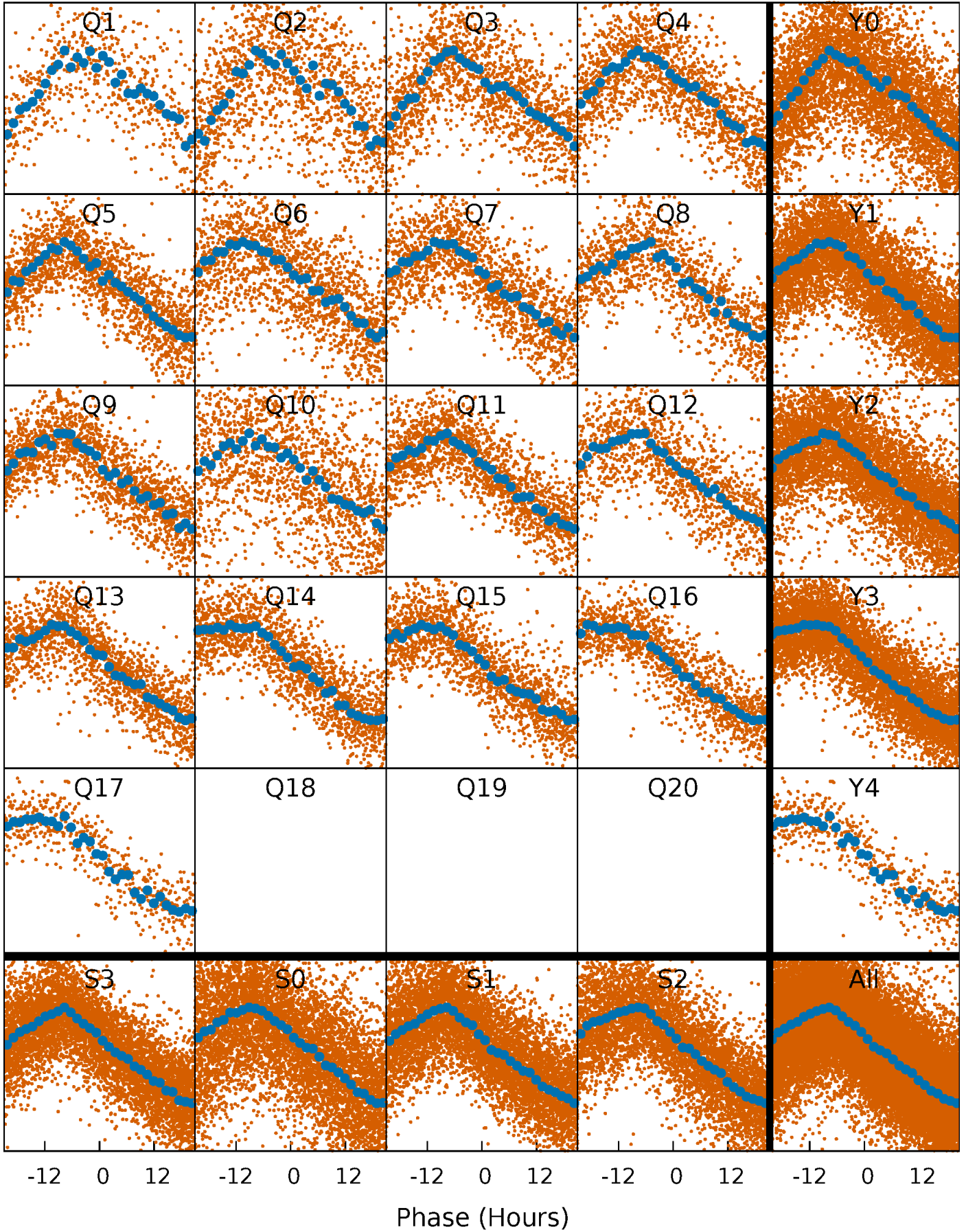


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

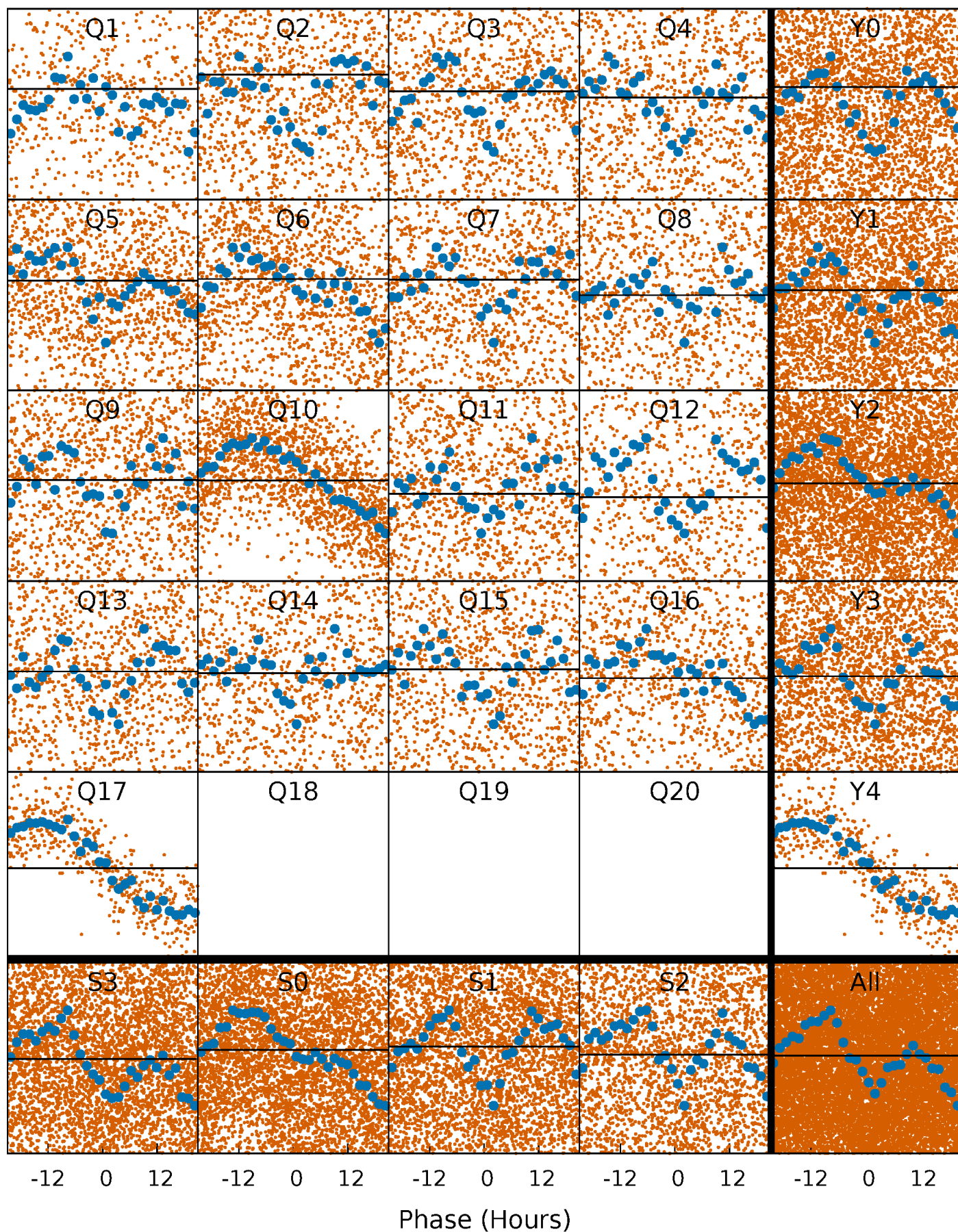
TCE 003115272-01   P= 4.769871 Days    $T_0=134.984699$  (BKJD)





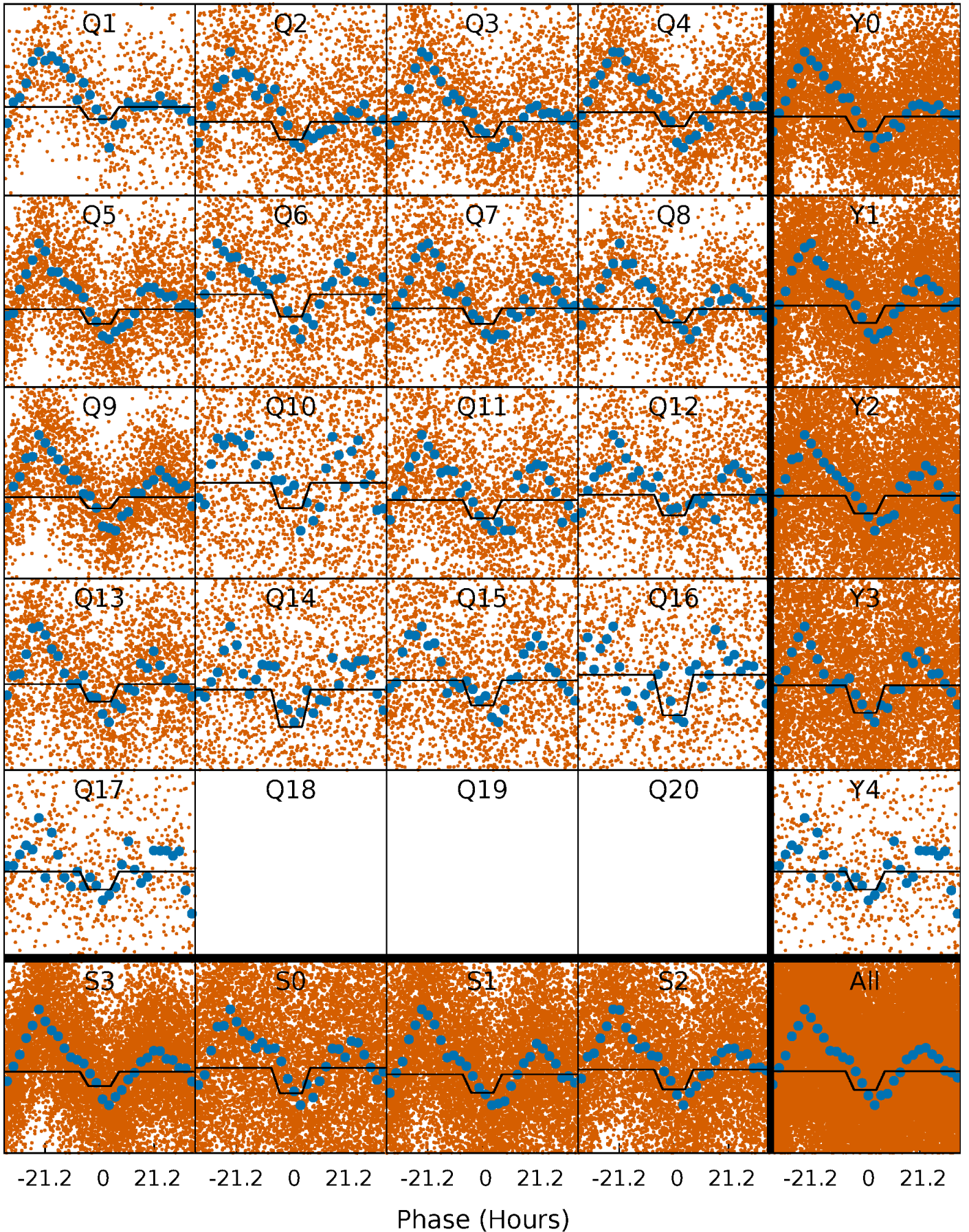
# DV Quarter-Phased Transit Curves

TCE 003115272-01 P= 4.769871 Days  $T_0=134.984699$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003115272-01 P= 4.769871 Days  $T_0=135.642755$  (BKJD)

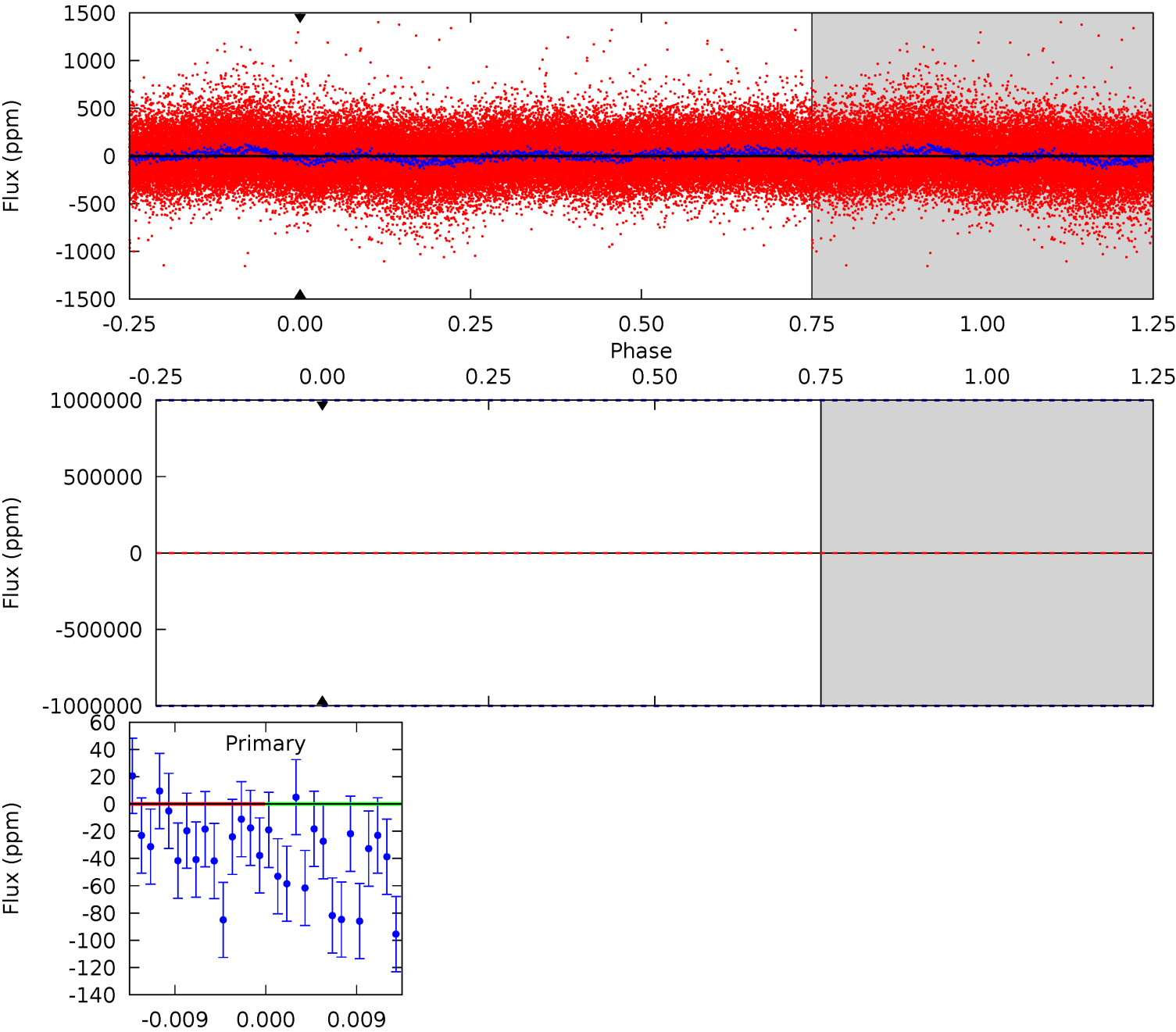




DV Model-Shift Uniqueness Test

003115272-01, P = 4.769871 Days, E = 130.214828 Days

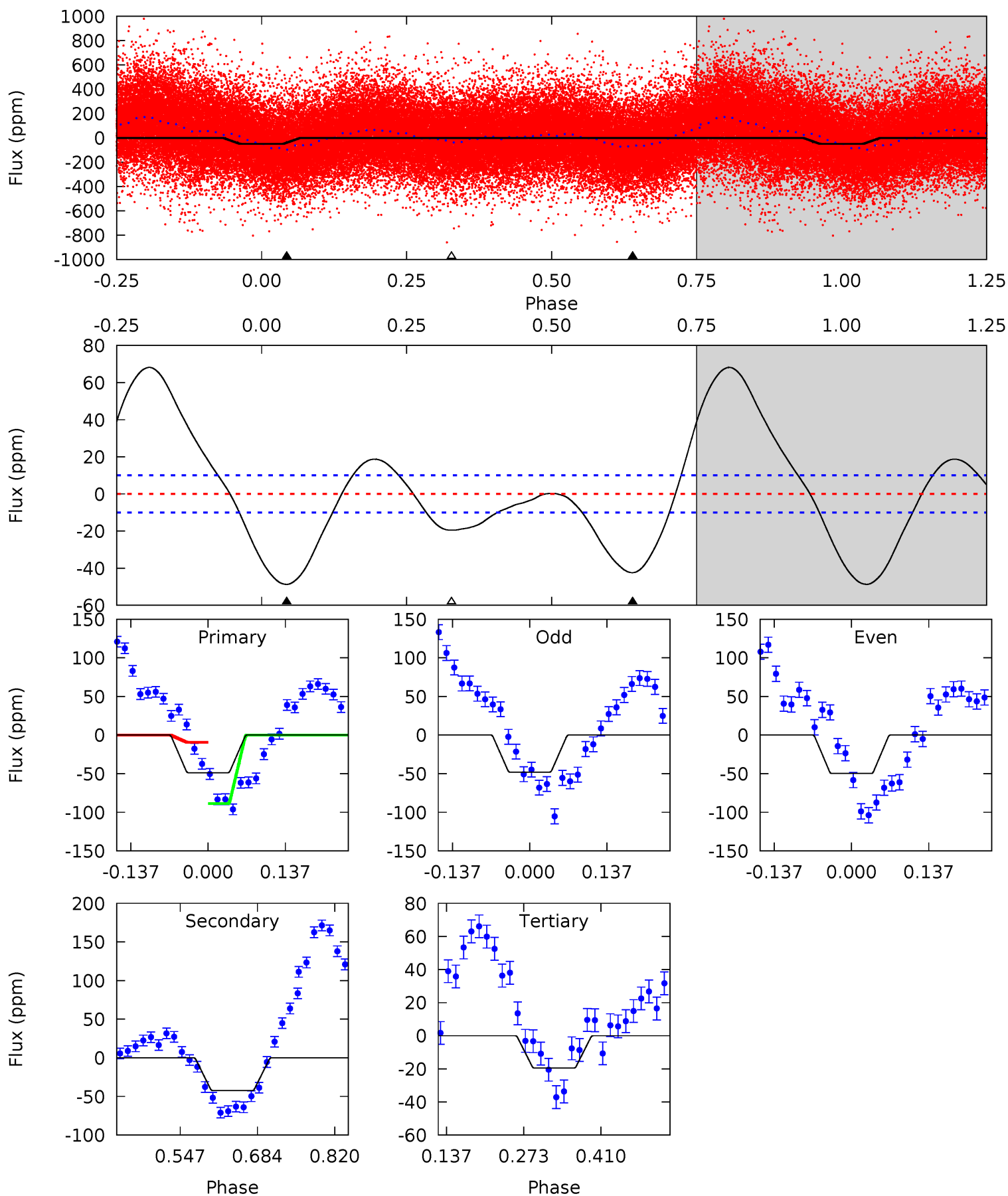
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



## Alt Model-Shift Uniqueness Test

003115272-01, P = 4.769871 Days, E = 130.872884 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
21.8	19.0	8.75	0	4.50	1.49	12.7	13.1	21.8	10.2	19.0	0.41	1.14	0.58	17.2





### Stellar Parameters For KIC 003115272

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6559^{+181}_{-250}$	$4.076^{+0.264}_{-0.176}$	$-0.240^{+0.250}_{-0.300}$	$1.669^{+0.494}_{-0.494}$	$1.212^{+0.188}_{-0.188}$	$0.367^{+0.597}_{-0.176}$
	+3%/-4%	+6%/-4%	+104%/-125%	+30%/-30%	+16%/-16%	+163%/-48%
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 003115272-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$13.27^{+14.01}_{-9.67}$	$2124^{+179}_{-187}$	$-5137^{+34694}_{-22909}$	$-21.900^{+2210.951}_{-2128.785}$
Alt.	$-42 \pm 2$	$12.29^{+14.43}_{-8.81}$	$2134^{+174}_{-180}$	$2461^{+1640}_{-4890}$	$0.537^{+6.257}_{-0.425}$

$T_{\text{max}}$  = 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

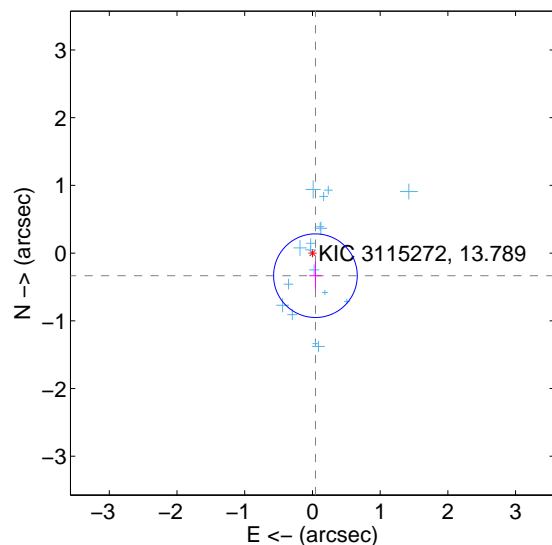
Supplemental centroid analysis for 003115272-01. Kepler magnitude: 13.79. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

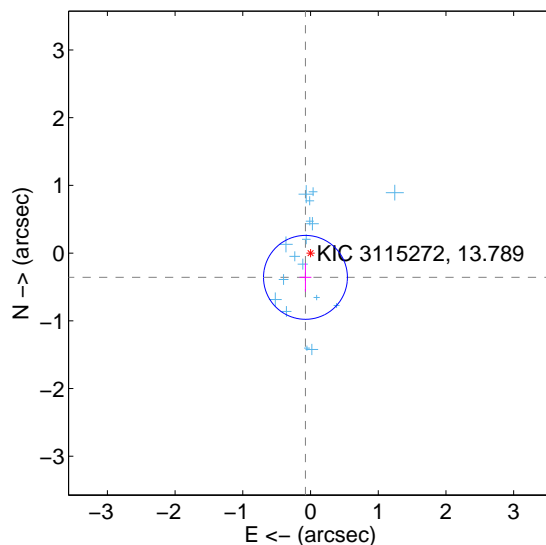
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.337 \pm 0.206$	1.63	$-0.044 \pm 0.090$	$-0.334 \pm 0.207$
PRF-fit source offset from KIC position	$0.366 \pm 0.207$	1.77	$0.075 \pm 0.087$	$-0.358 \pm 0.210$
photometric centroid source offset	$0.90 \pm 0.69$	1.30	$-0.48 \pm 0.59$	$-0.76 \pm 0.73$

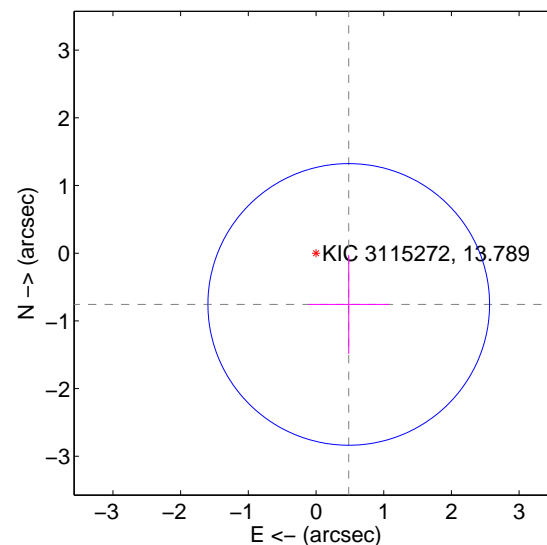
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

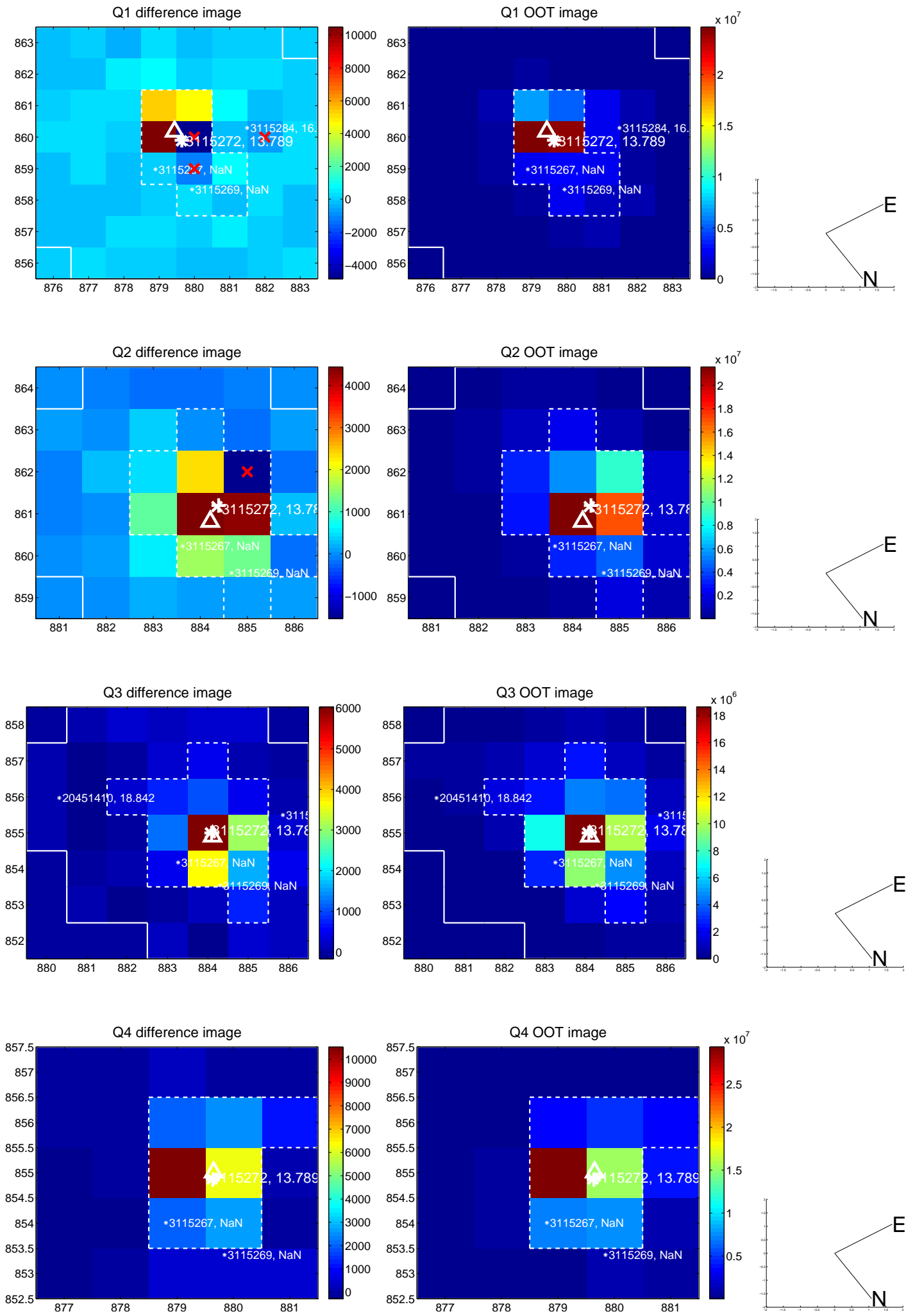


offset from photometric centroids

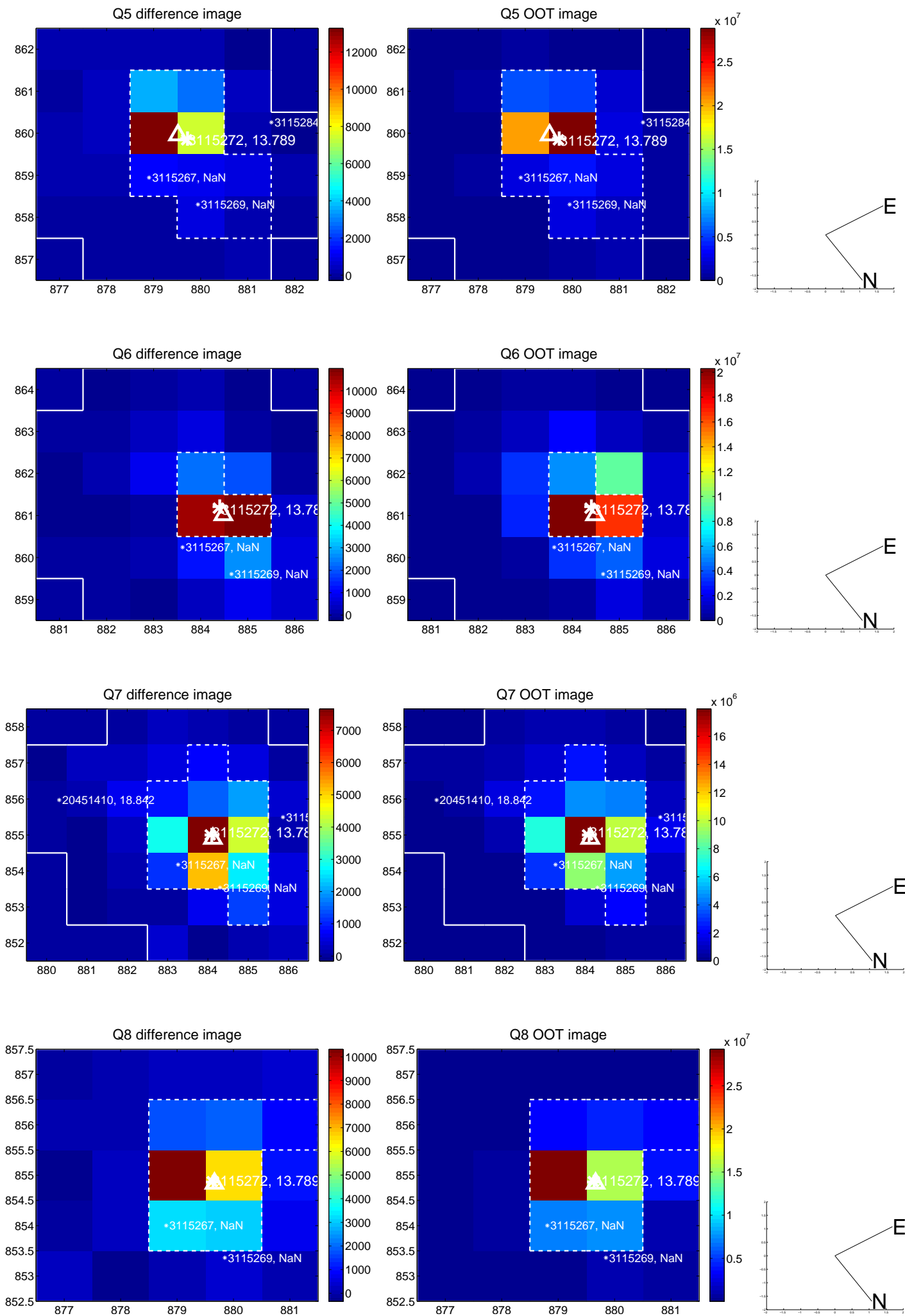


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

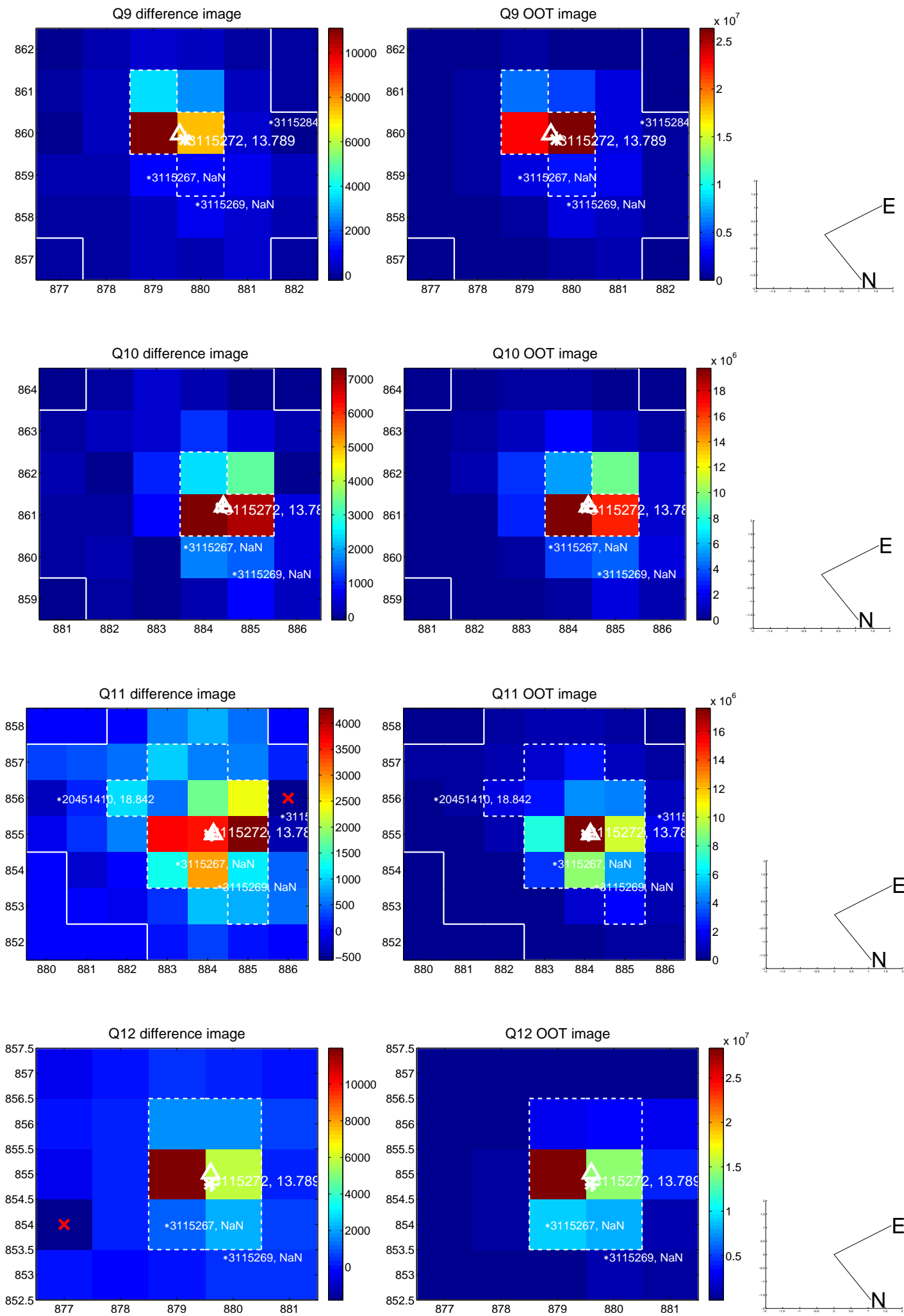


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

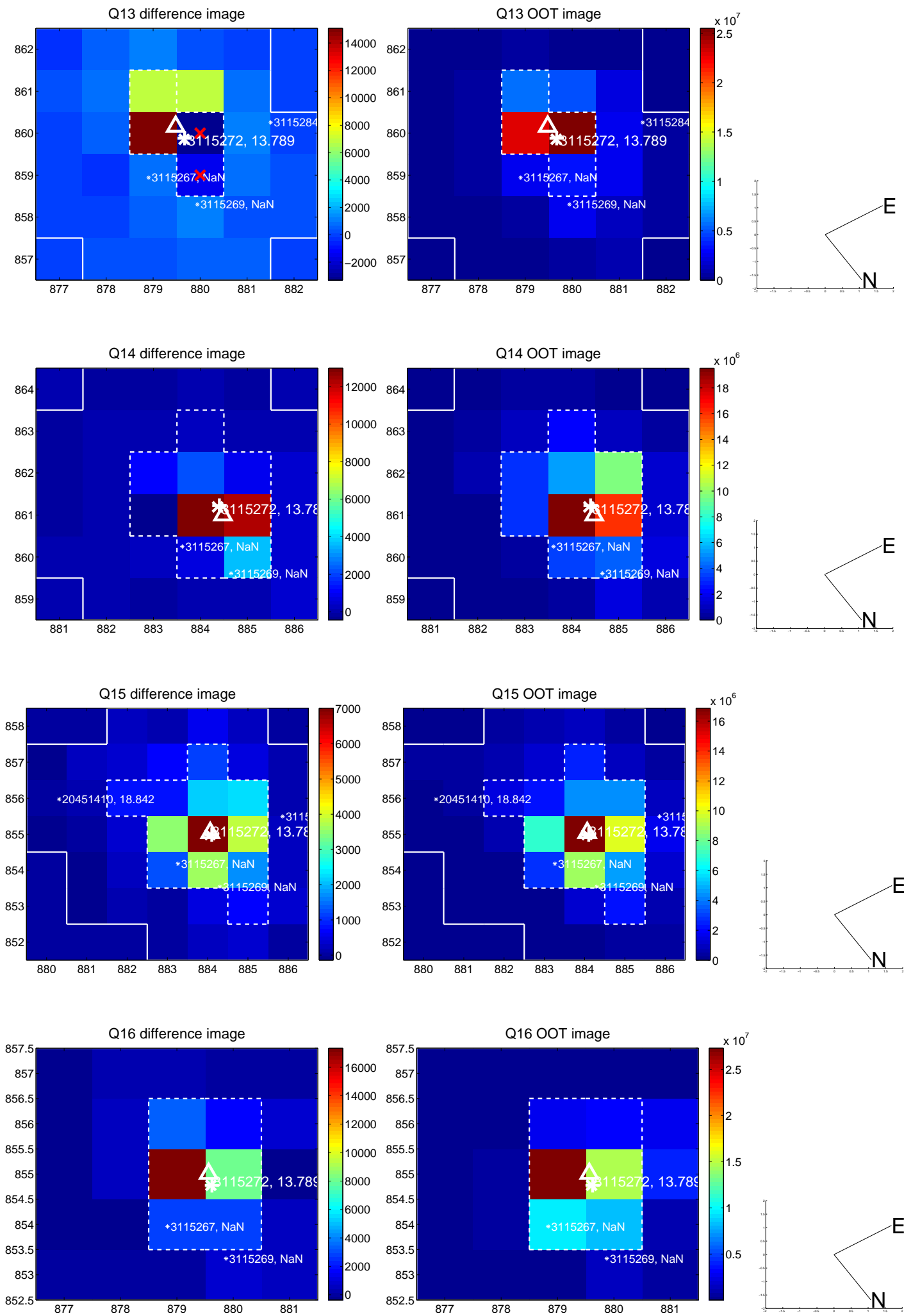




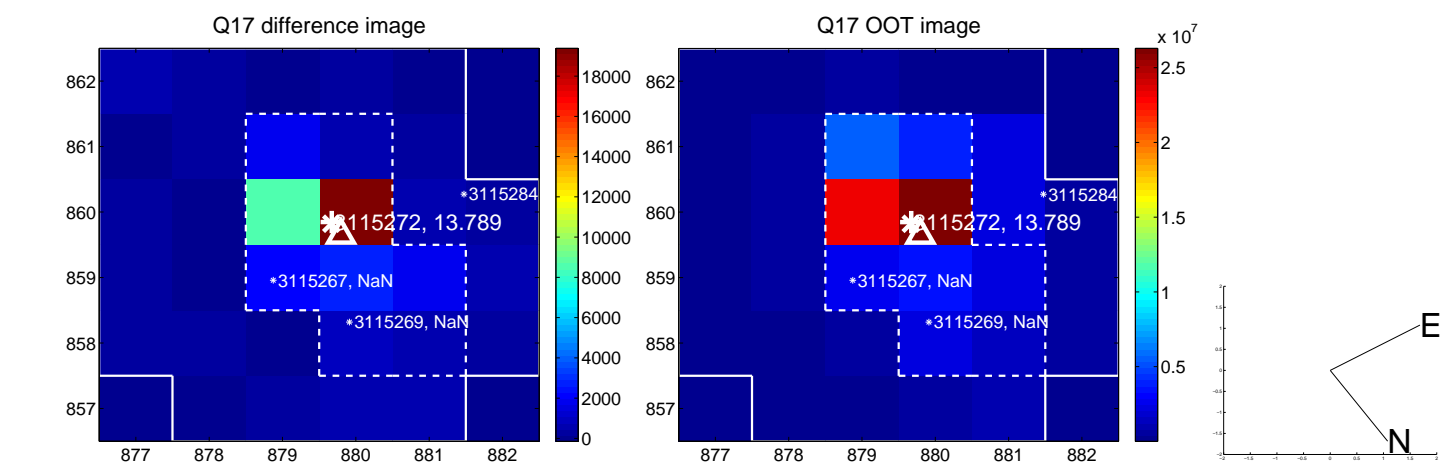
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



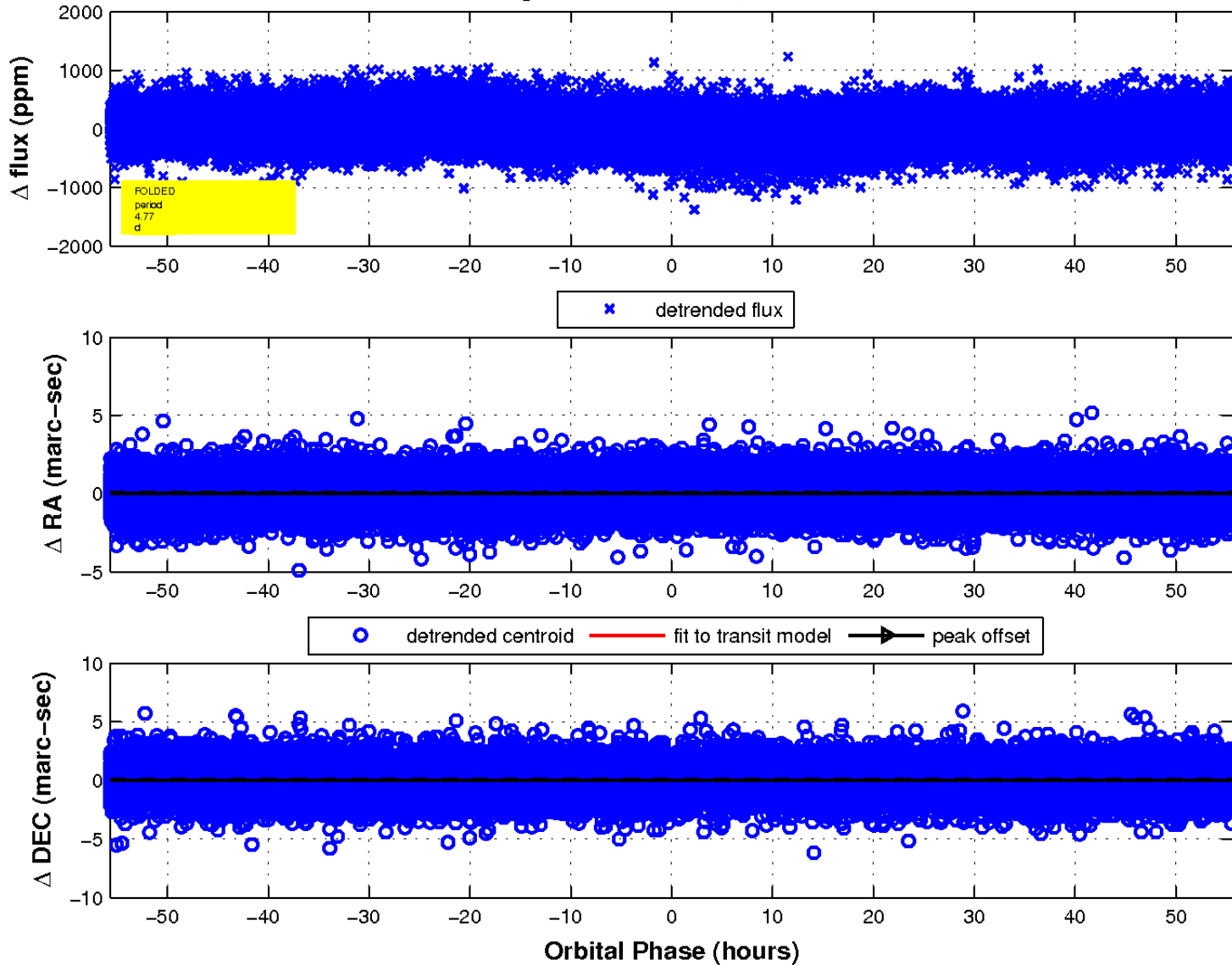
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

