

# KIC 003640832

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003640832-01	OBS	No	0.608787	132.067444	222.2	2.000	9.0	-1.0	2.96	6762	4.46	57205.28

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003640832-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

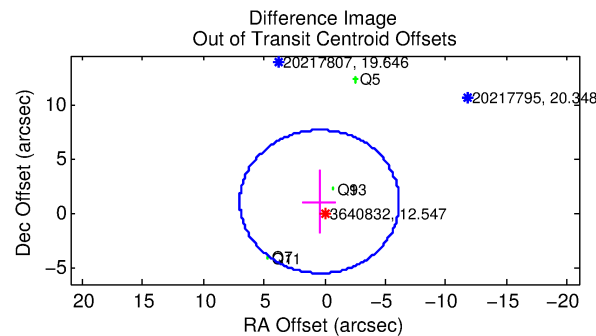
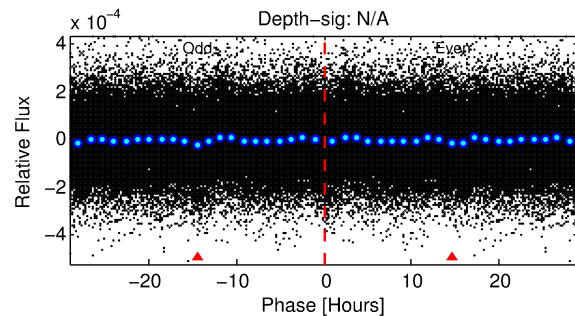
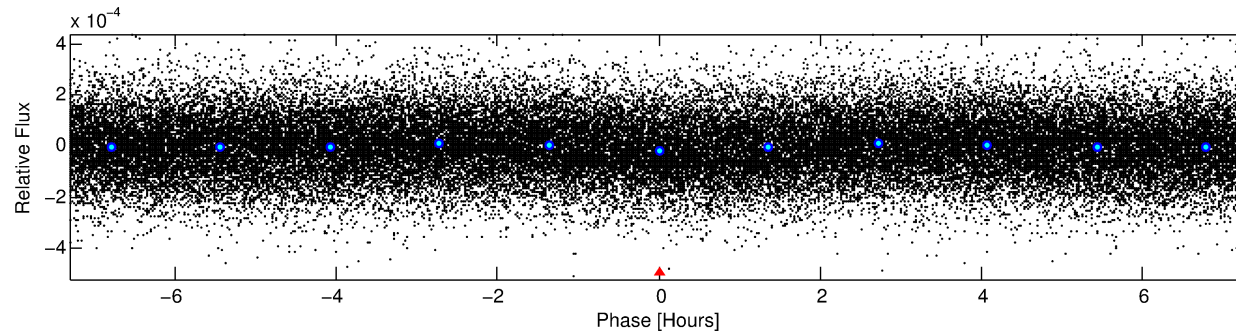
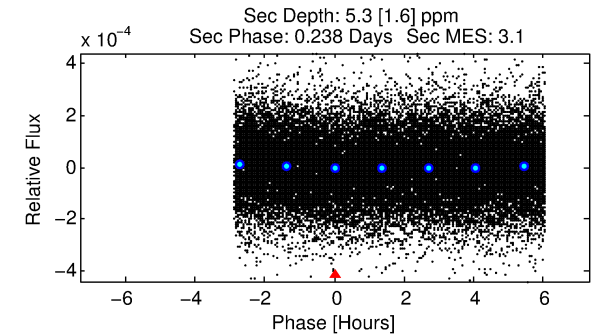
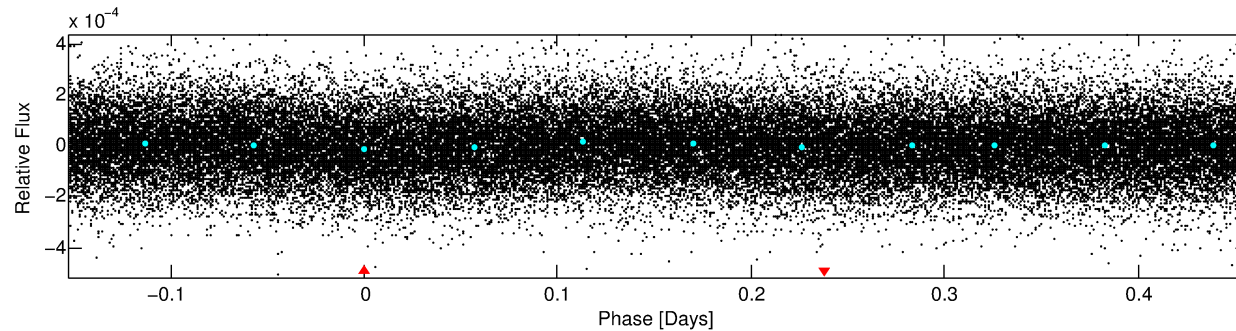
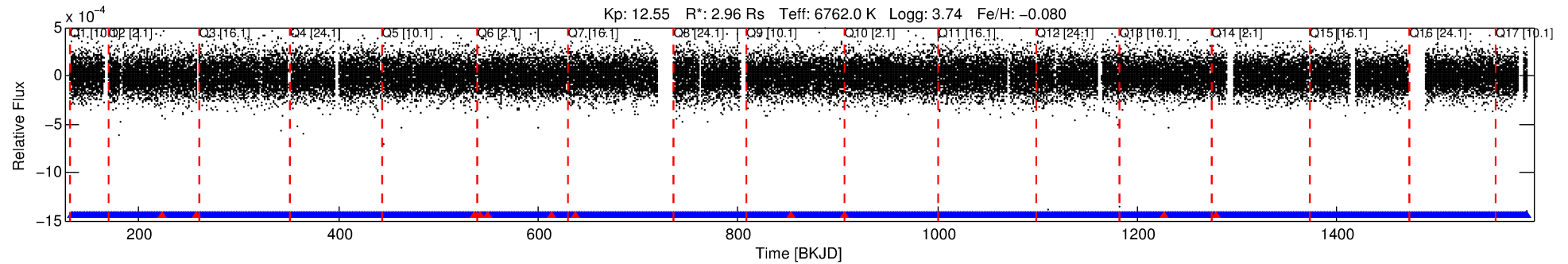
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003640832-01

No Significant Match Found

# DV One-Page Summary

KIC: 3640832 Candidate: 1 of 1 Period: 0.609 d



## TPS TCE Results:

Period = 0.60879 d  
Epoch = 132.0674 BKJD

DV fit results are unavailable

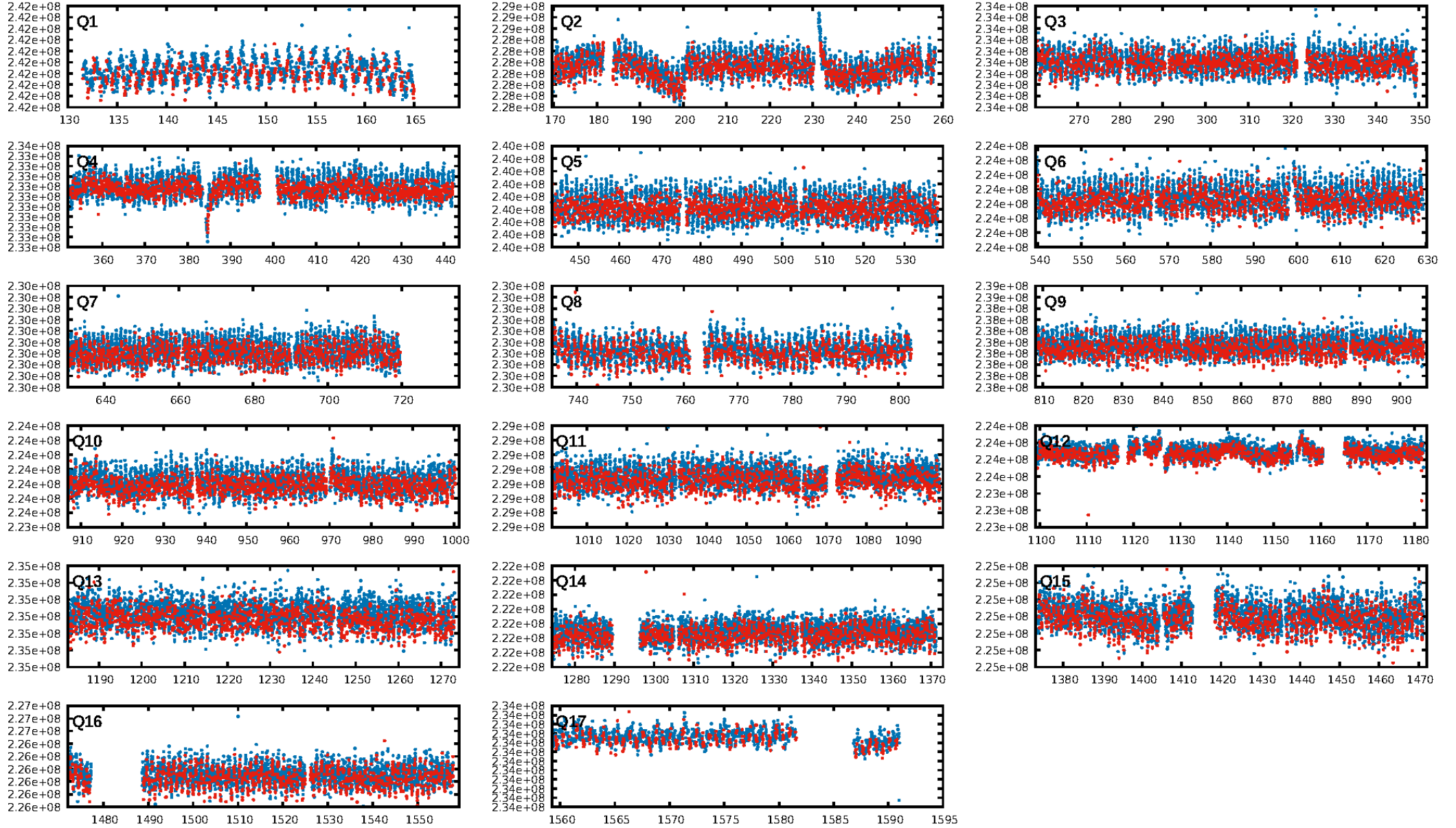
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.20e-14  
RollingBand-fgt: 0.99 [2114/2125]  
GhostDiagnostic-chr: 0.4032  
Centroid-sig: 0.0%  
Centroid-so: 0.375 arcsec [2.93σ]  
OotOffset-rm: 1.150 arcsec [0.52σ]  
KicOffset-rm: 1.290 arcsec [0.78σ]  
OotOffset-st: 0/2/0/3 [5]  
KicOffset-st: 0/2/0/3 [5]  
DiffImageQuality-fgm: 0.40 [2/5]  
DiffImageOverlap-fno: 1.00 [17/17]

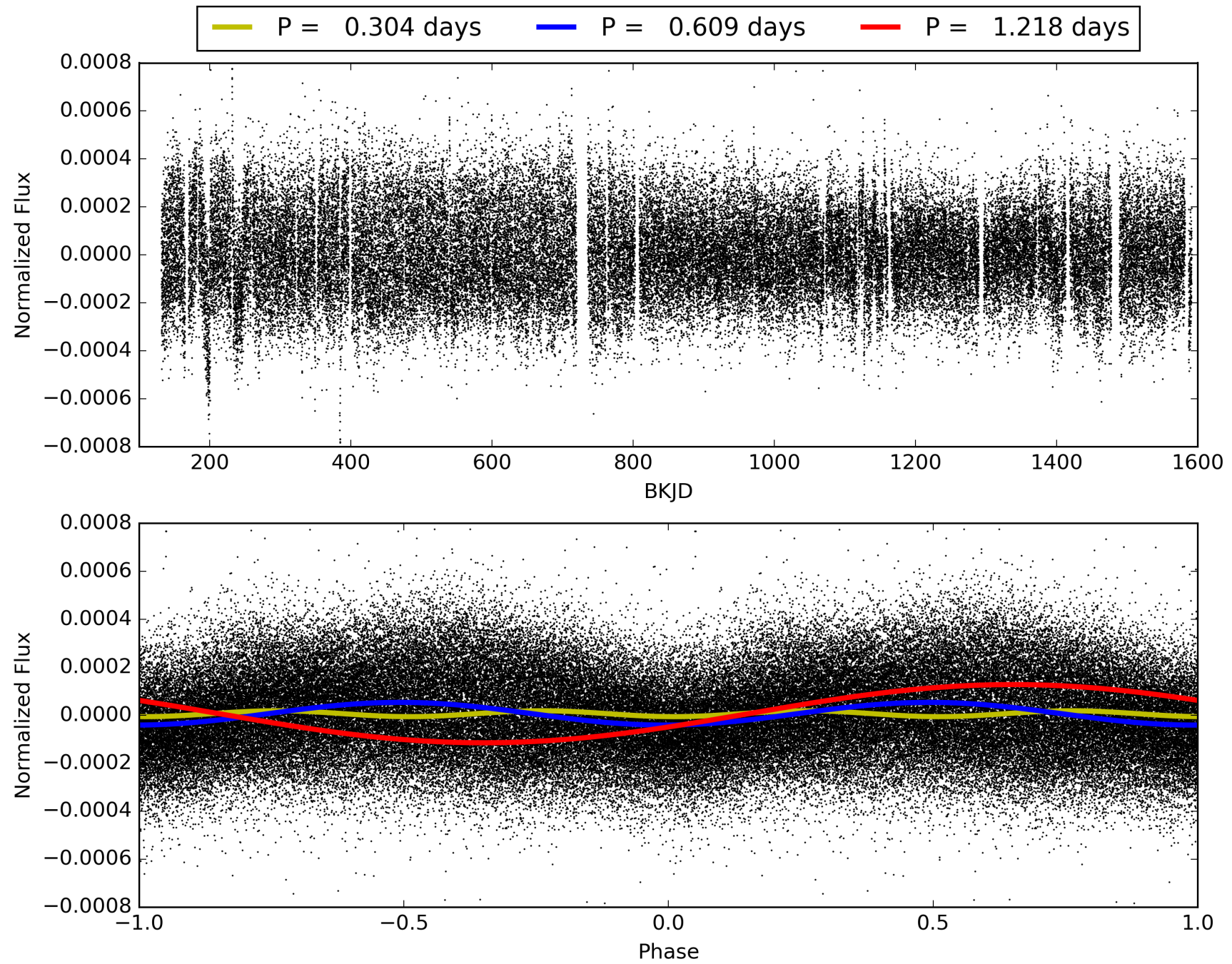
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:52:30 Z

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

# TCE 003640832-01, PDC Light Curves



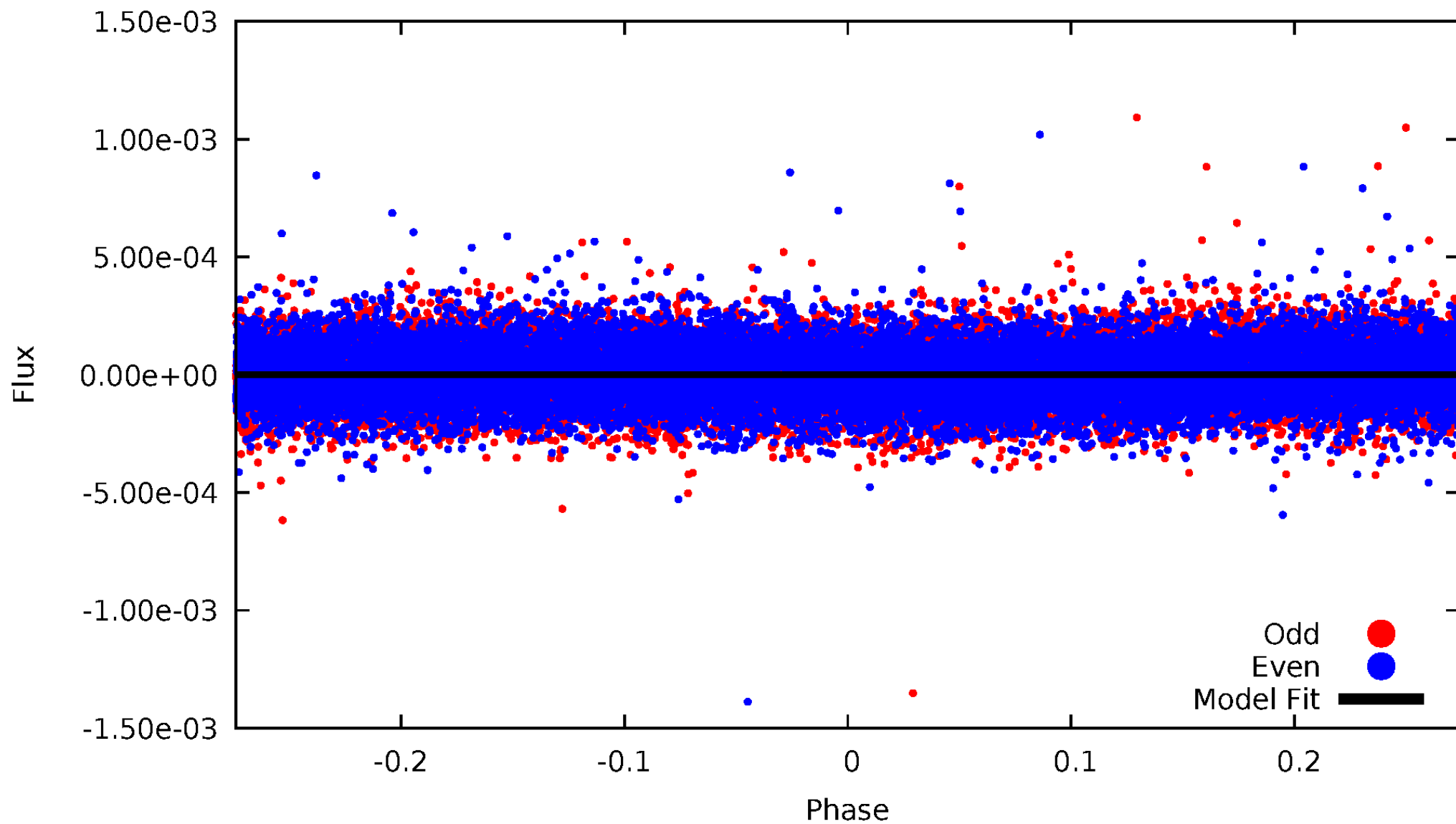
TCE 003640832-01





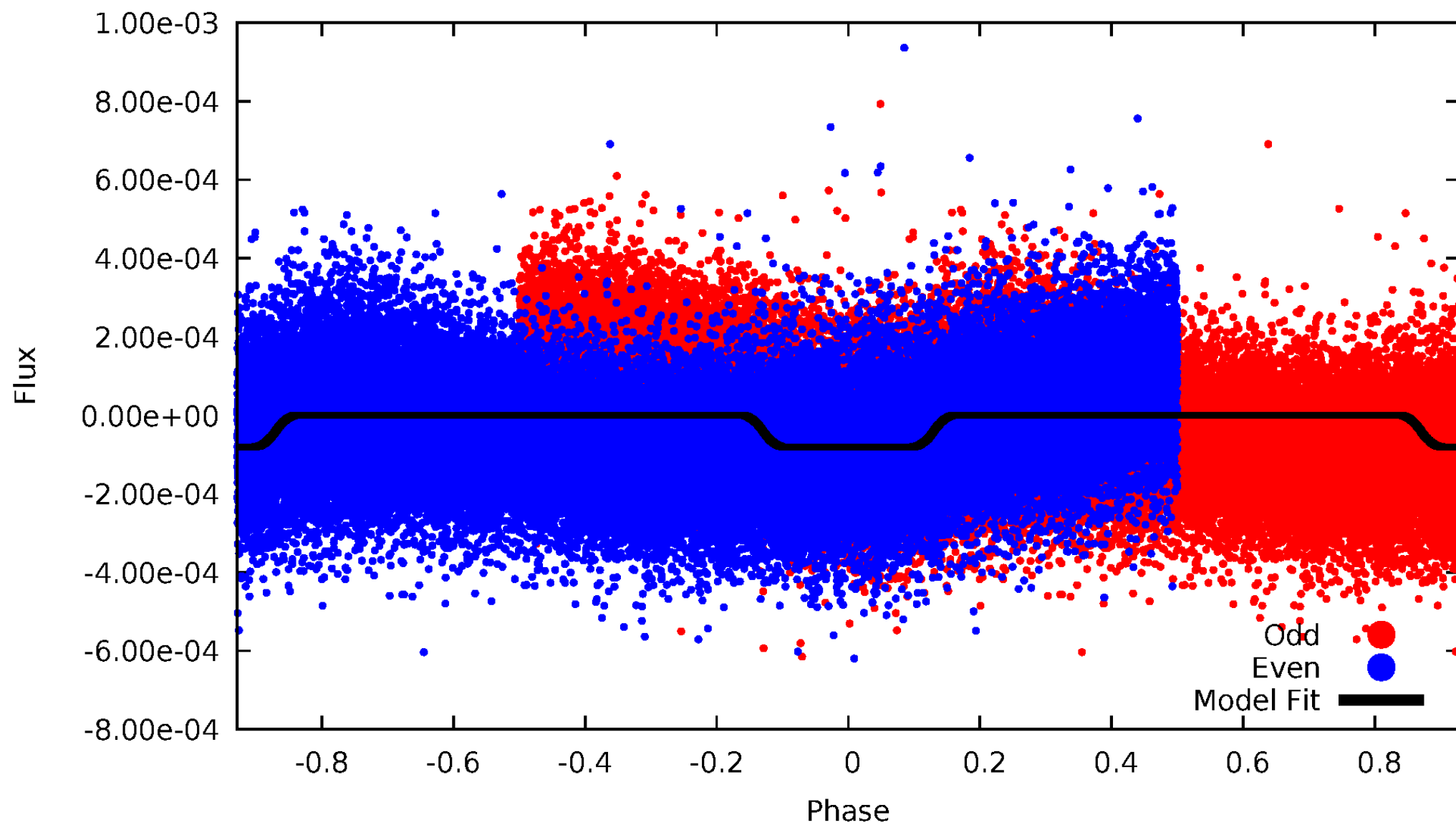
# DV Odd/Even

TCE 003640832-01

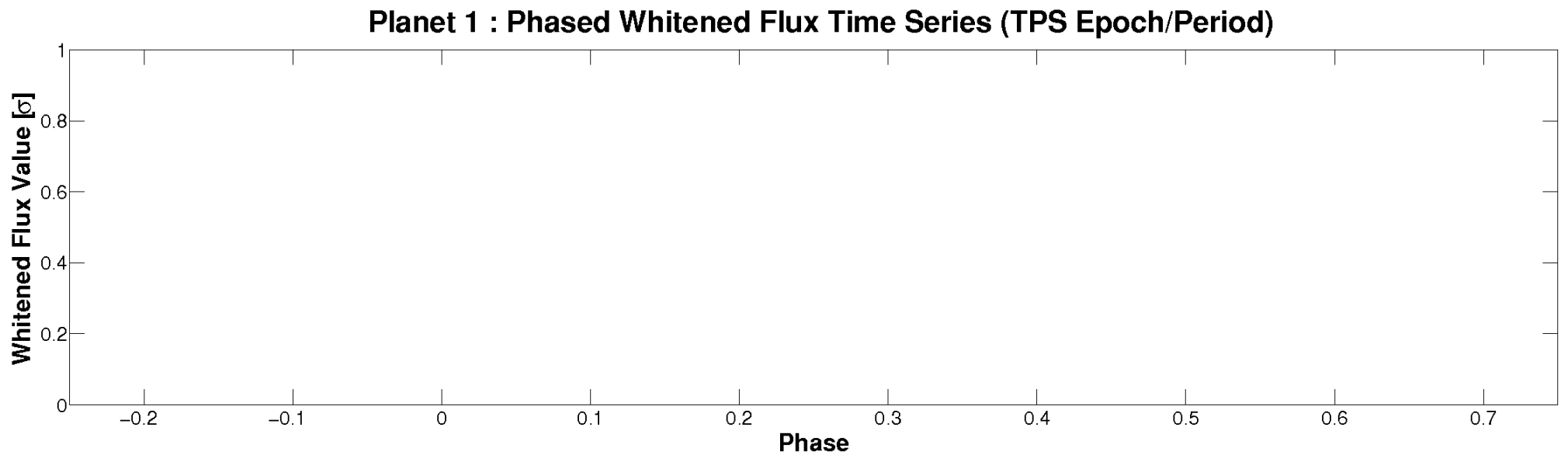
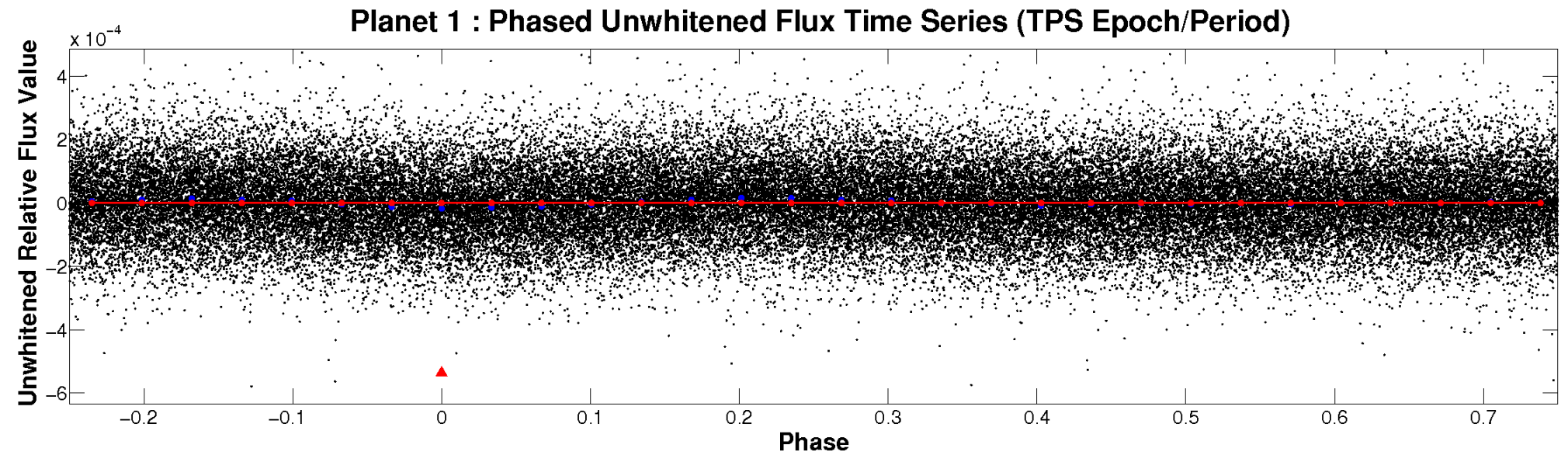


# ALT Odd/Even

TCE 003640832-01

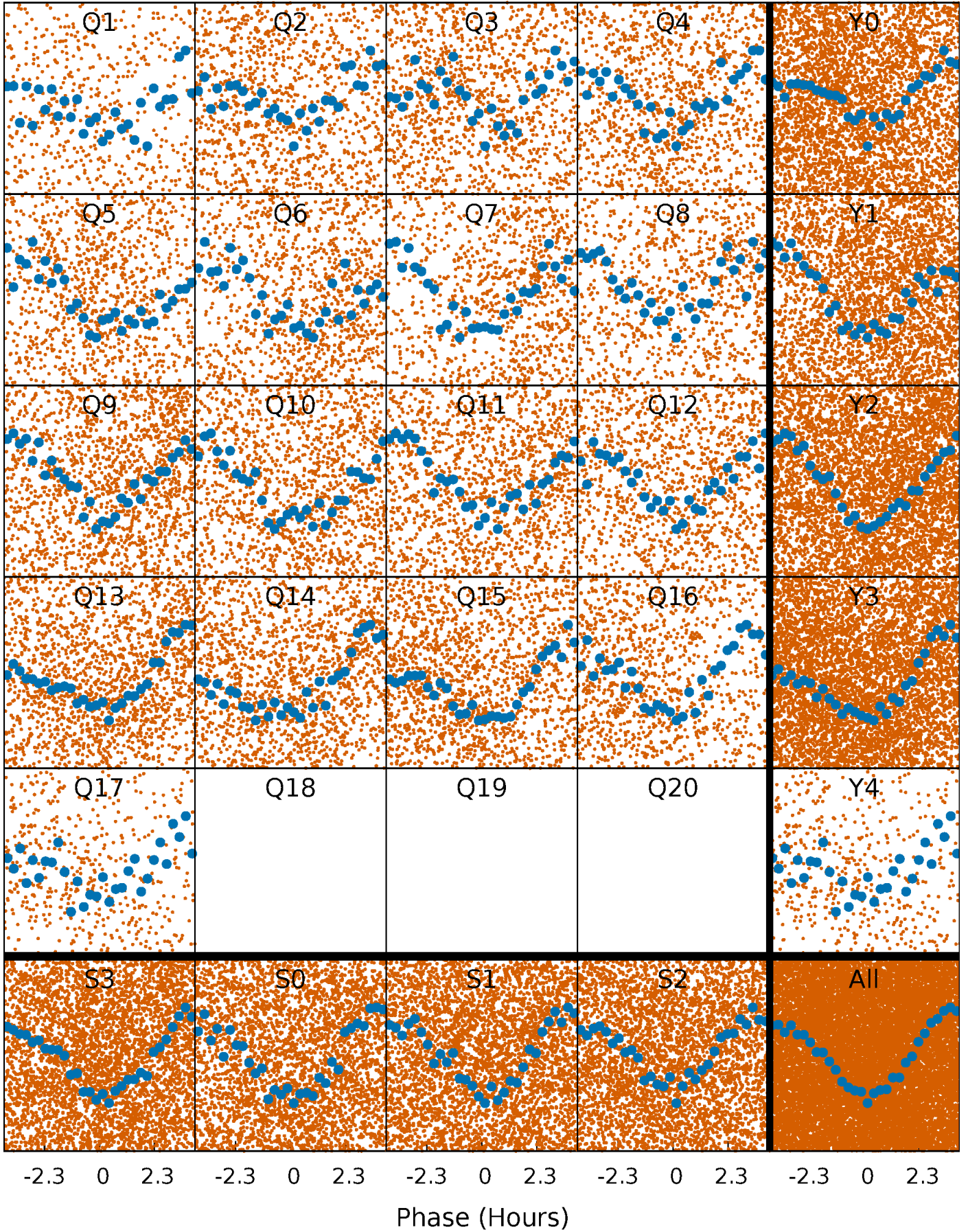


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

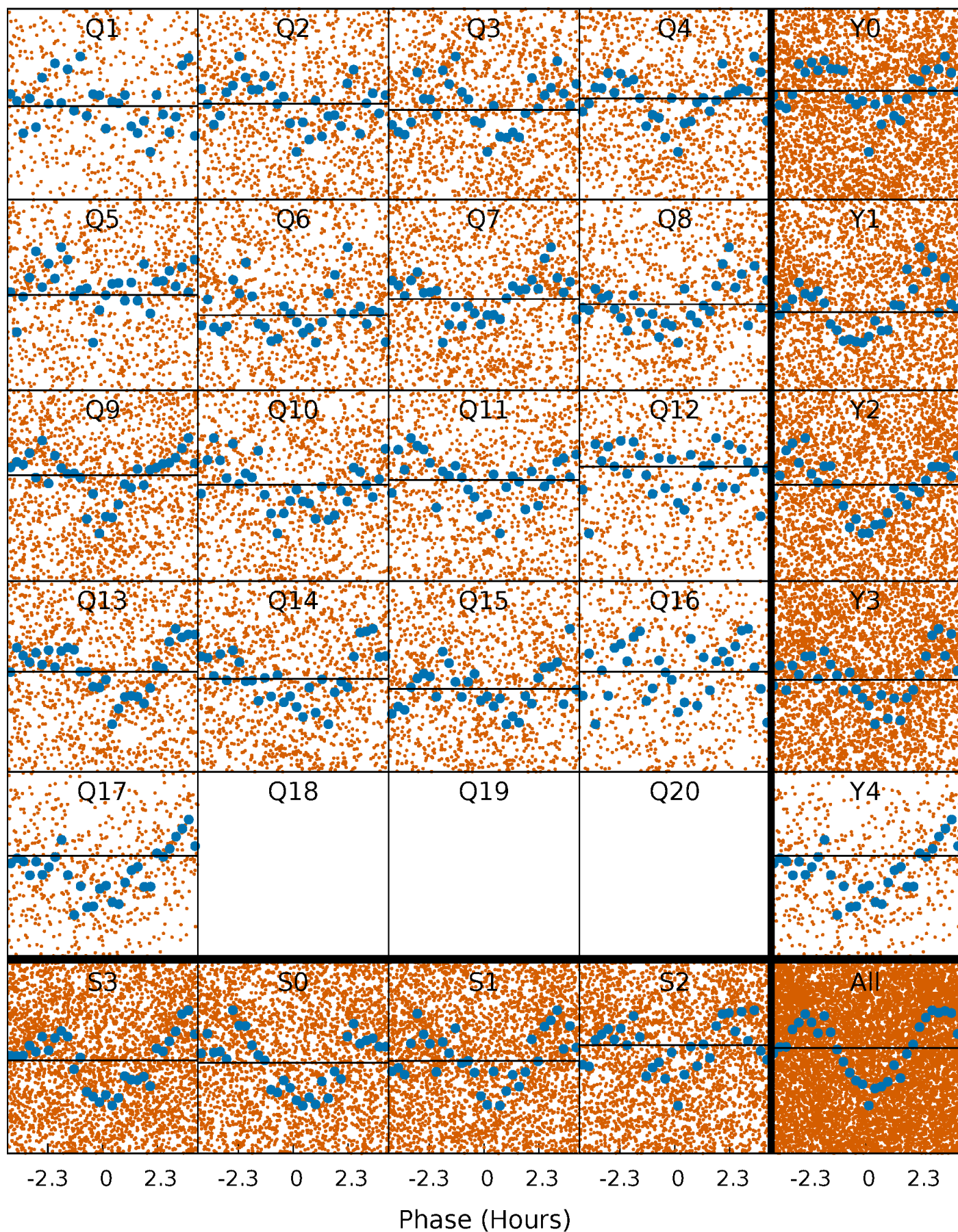
TCE 003640832-01 P= 0.608787 Days  $T_0=132.067444$  (BKJD)





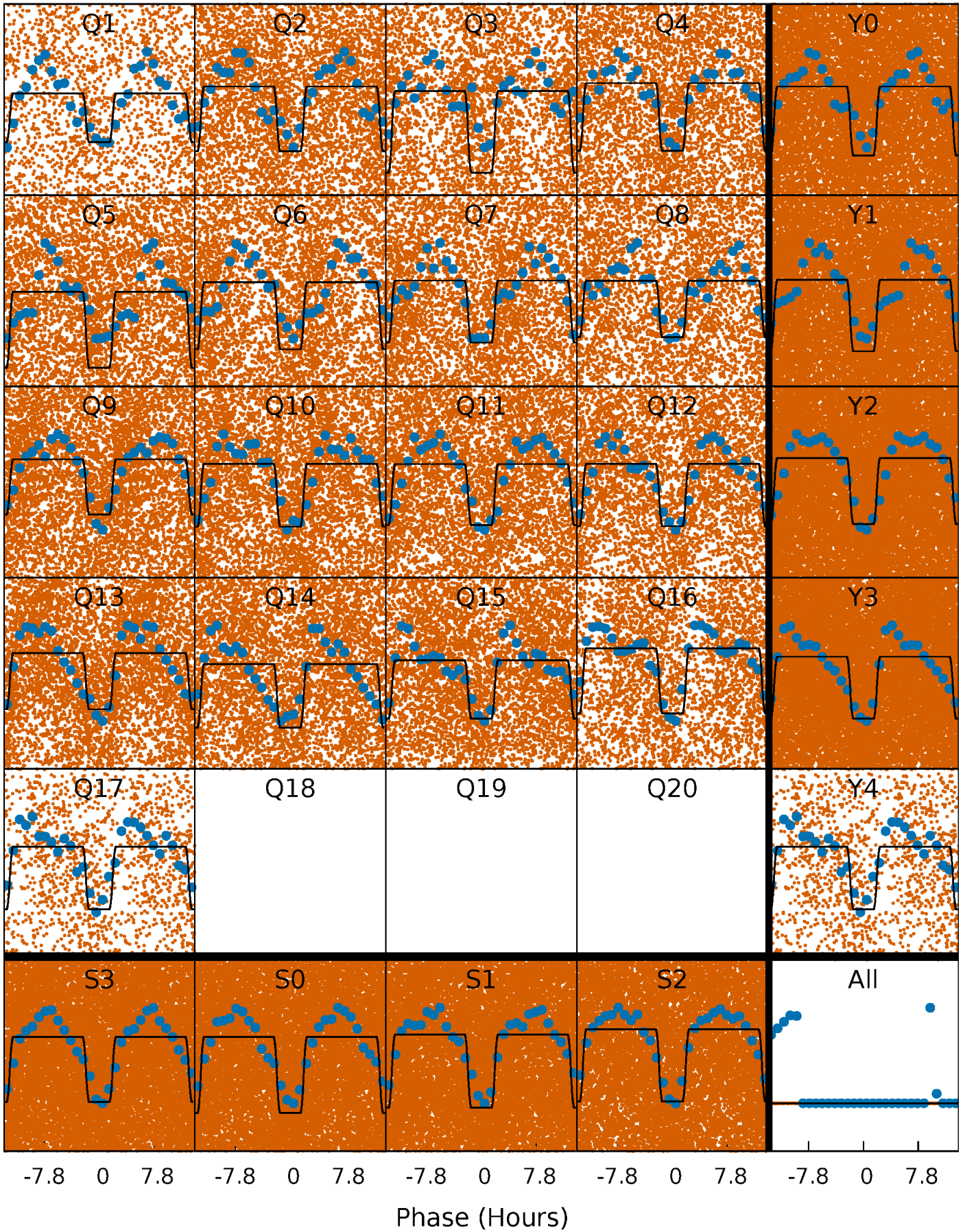
# DV Quarter-Phased Transit Curves

TCE 003640832-01 P= 0.608787 Days  $T_0=132.067444$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003640832-01   P= 0.608787 Days    $T_0=132.068056$  (BKJD)

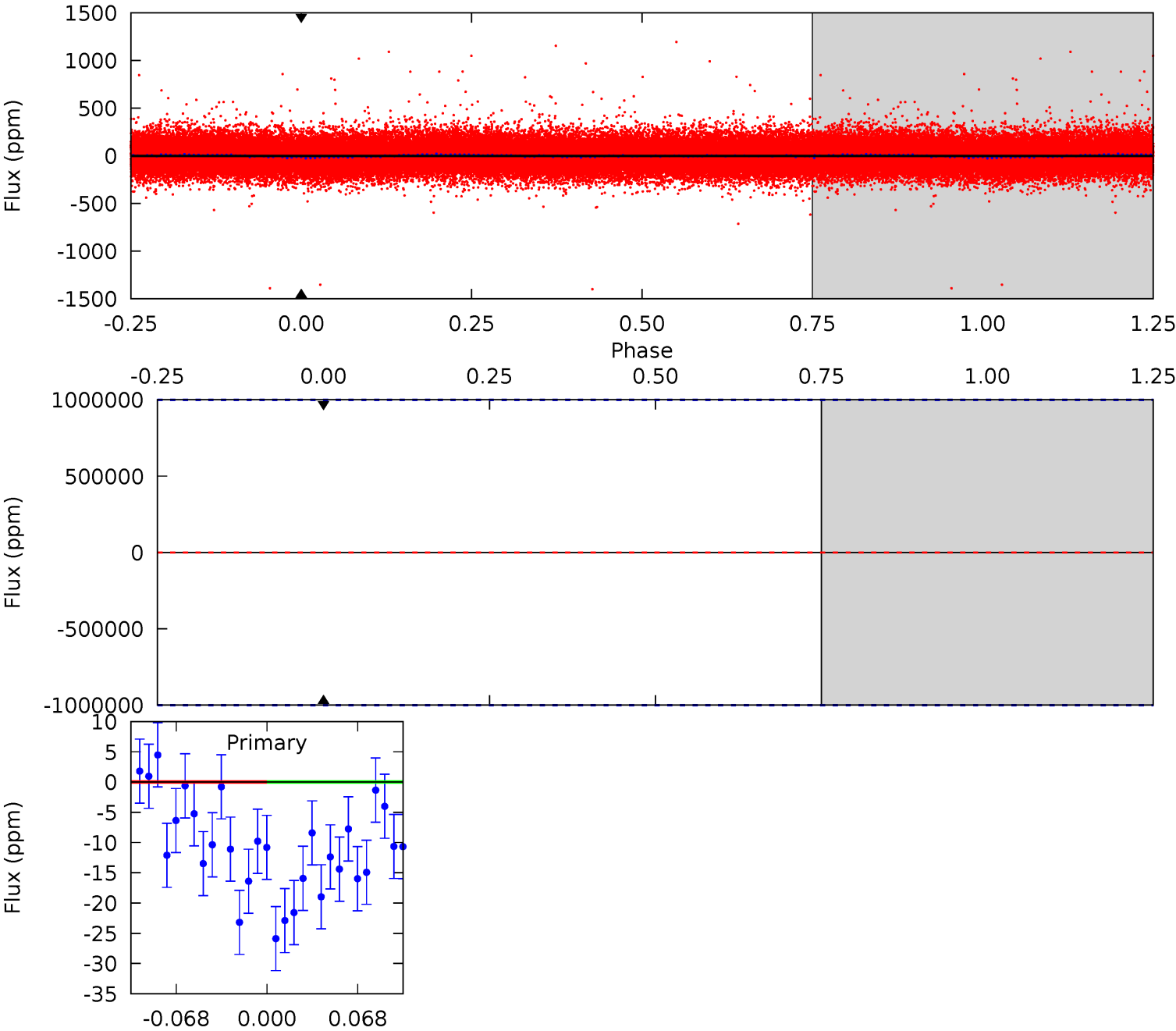




# DV Model-Shift Uniqueness Test

003640832-01, P = 0.608787 Days, E = 131.458657 Days

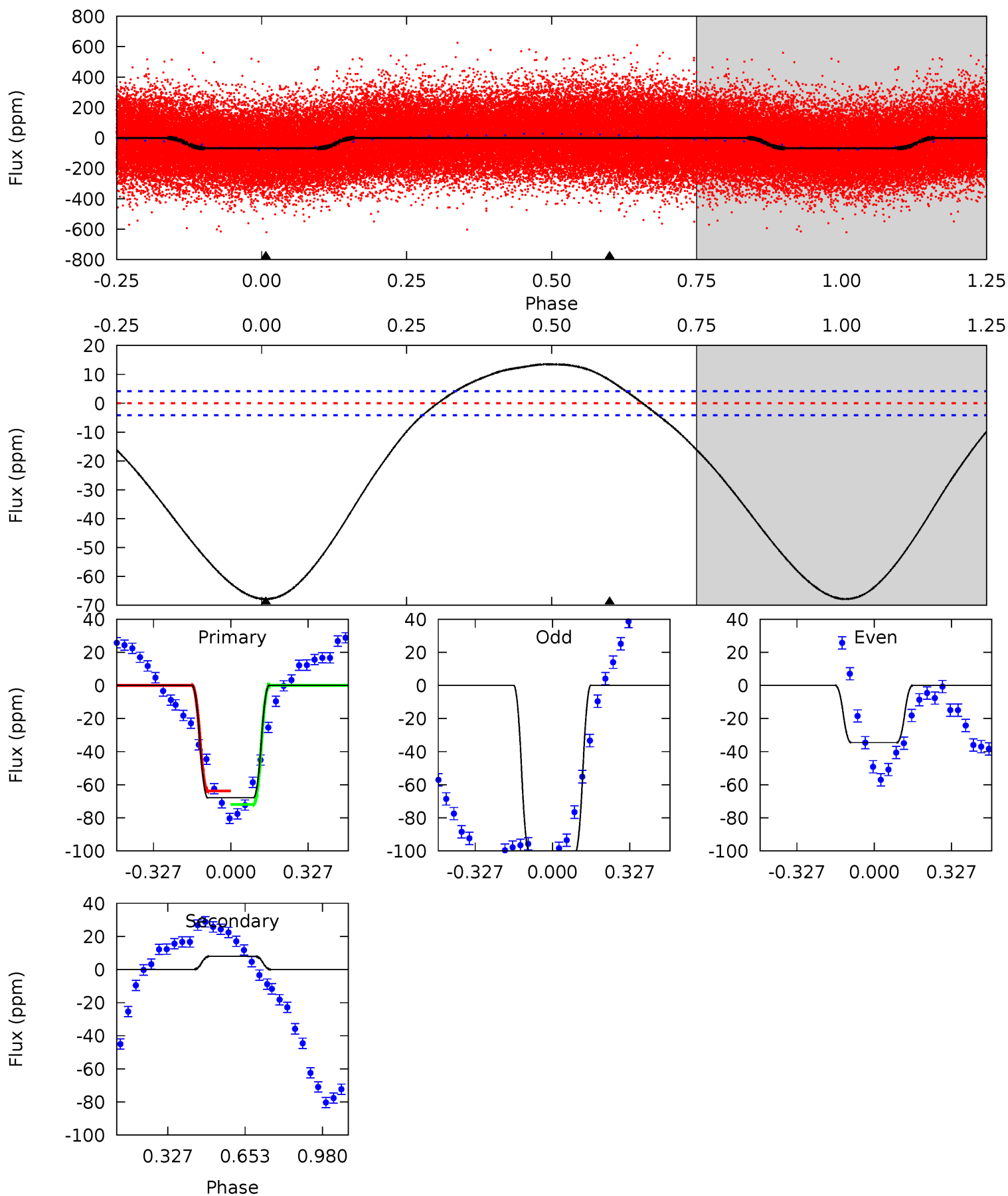
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

003640832-01, P = 0.608787 Days, E = 131.459269 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
70.3	-8.26	0	0	4.31	0.98	4.66	70.3	70.3	-8.26	-8.26	34.1	0.95	0.17	4.26





### Stellar Parameters For KIC 003640832

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6762^{+169}_{-219}$	$3.738^{+0.304}_{-0.095}$	$-0.080^{+0.300}_{-0.250}$	$2.960^{+0.460}_{-1.074}$	$1.746^{+0.165}_{-0.384}$	$0.095^{+0.196}_{-0.030}$
	+2%/-3%	+8%/-3%	+375%/-312%	+16%/-36%	+9%/-22%	+207%/-32%
Source	PHO1	FLK73	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 003640832-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$22.40^{+25.85}_{-15.13}$	$5400^{+329}_{-476}$	$5635^{+27215}_{-28673}$	$1.243^{+65.812}_{-37.463}$
Alt.	$8 \pm 1$	$22.27^{+20.35}_{-15.32}$	$5399^{+350}_{-490}$	$-4636^{+331}_{-251}$	$-0.003^{+0.002}_{-0.022}$

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

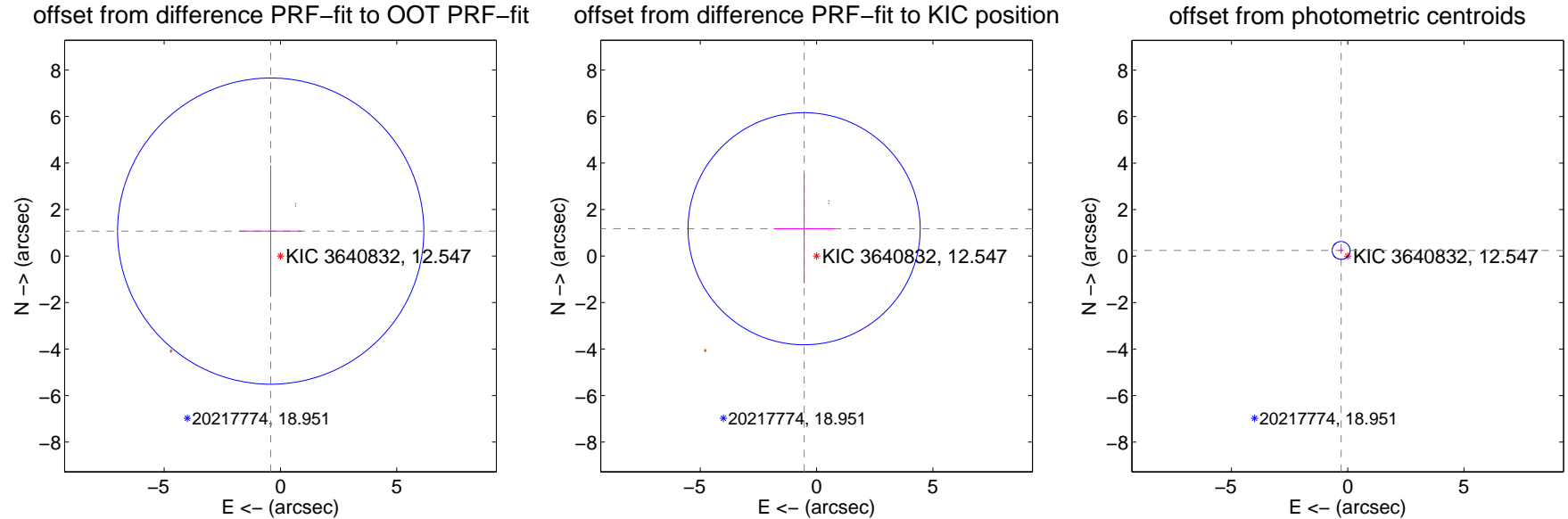
## DV Centroid Data

Supplemental centroid analysis for 003640832-01. Kepler magnitude: 12.55. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

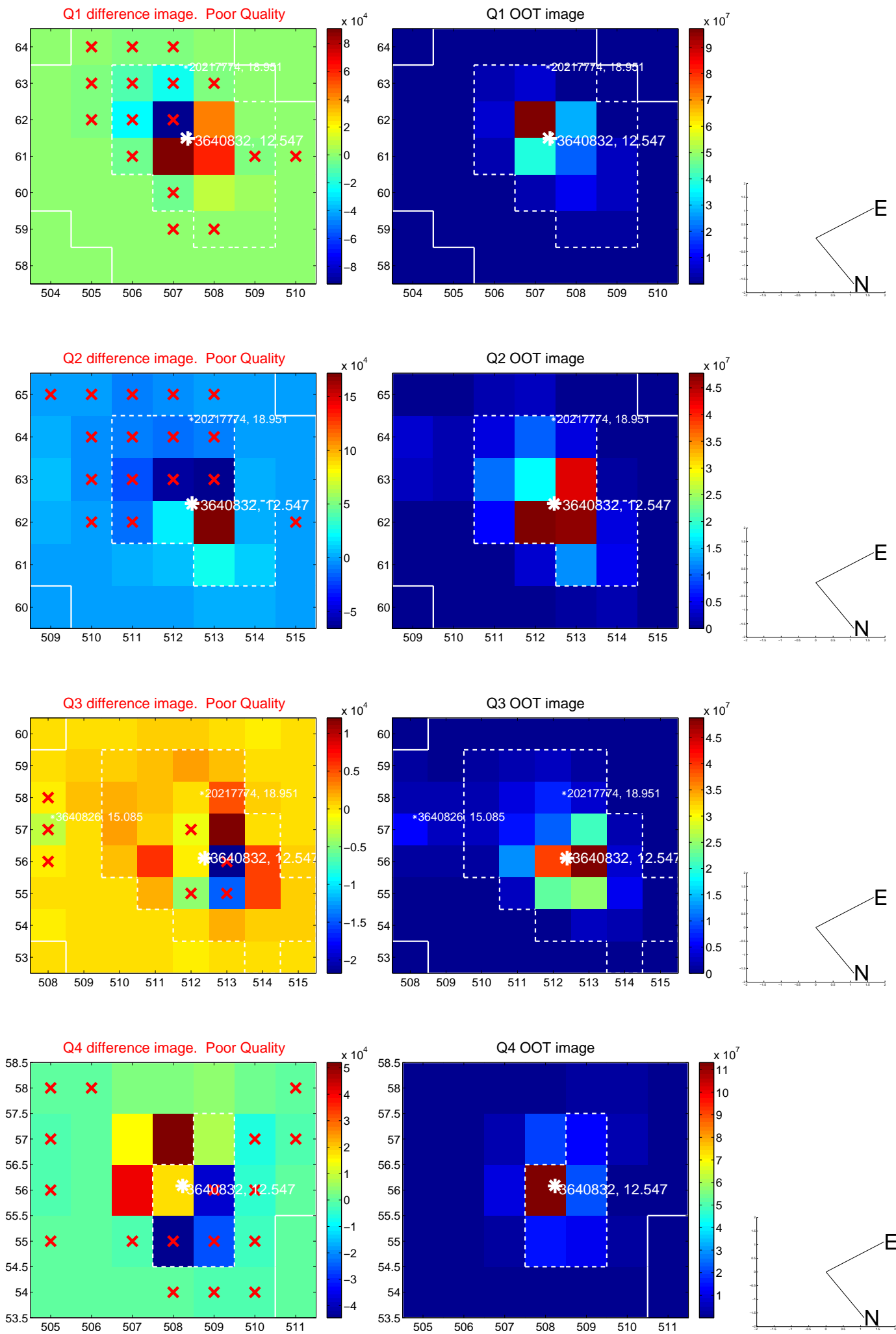
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.150 \pm 2.194$	0.52	$0.420 \pm 1.343$	$1.071 \pm 2.827$
PRF-fit source offset from KIC position	$1.290 \pm 1.663$	0.78	$0.536 \pm 1.312$	$1.173 \pm 2.351$
photometric centroid source offset	$0.38 \pm 0.13$	2.93	$0.29 \pm 0.12$	$0.24 \pm 0.14$

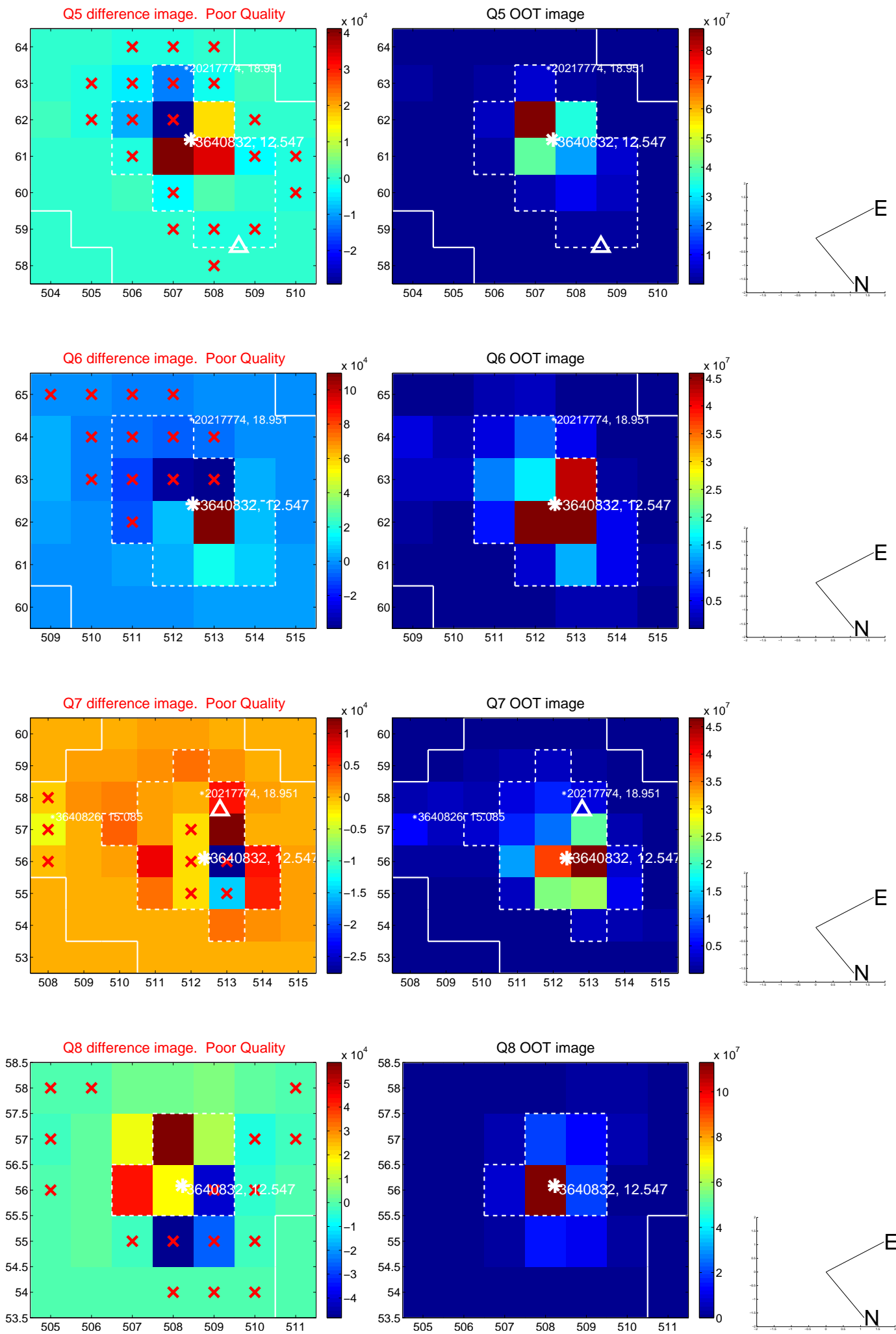


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

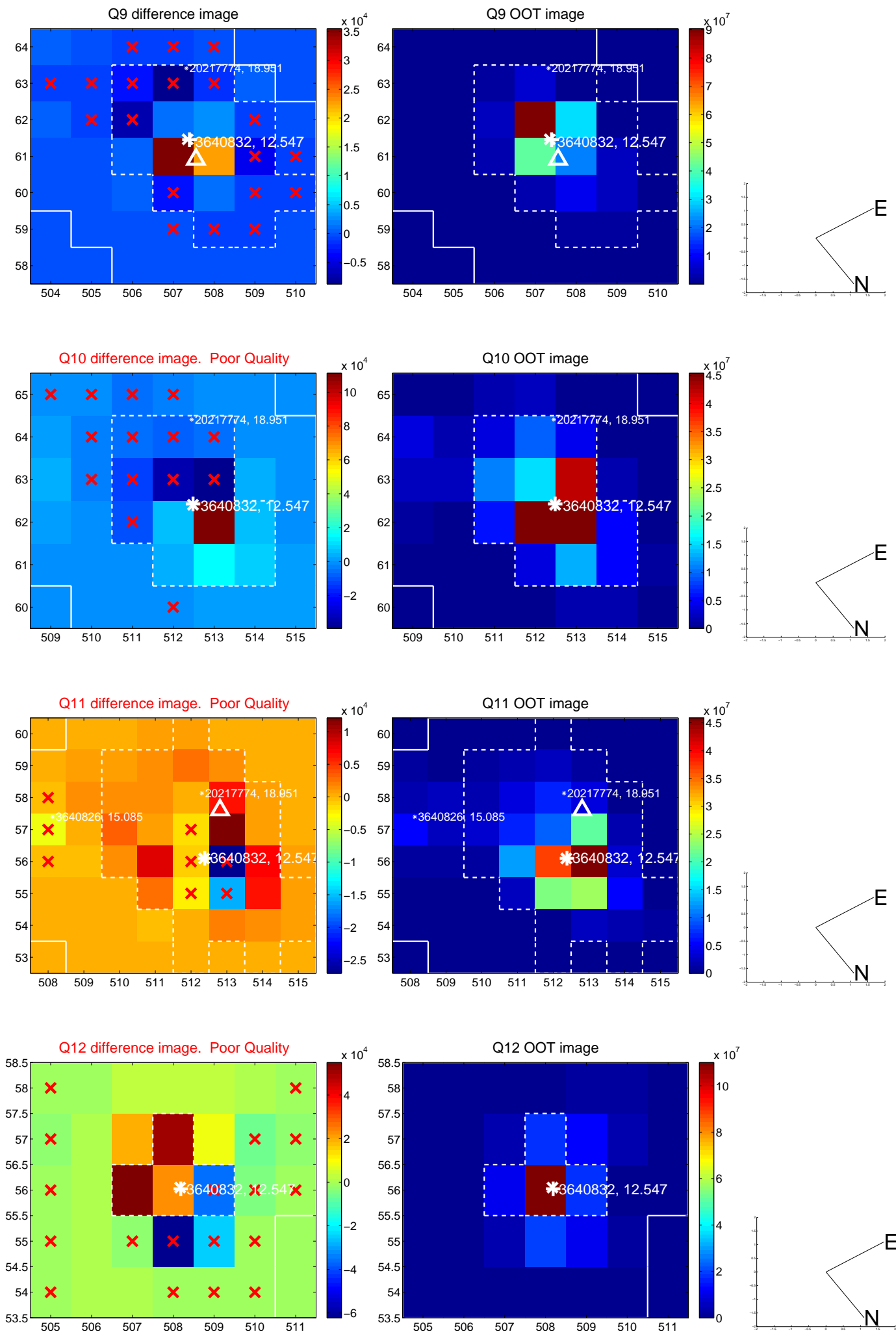


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

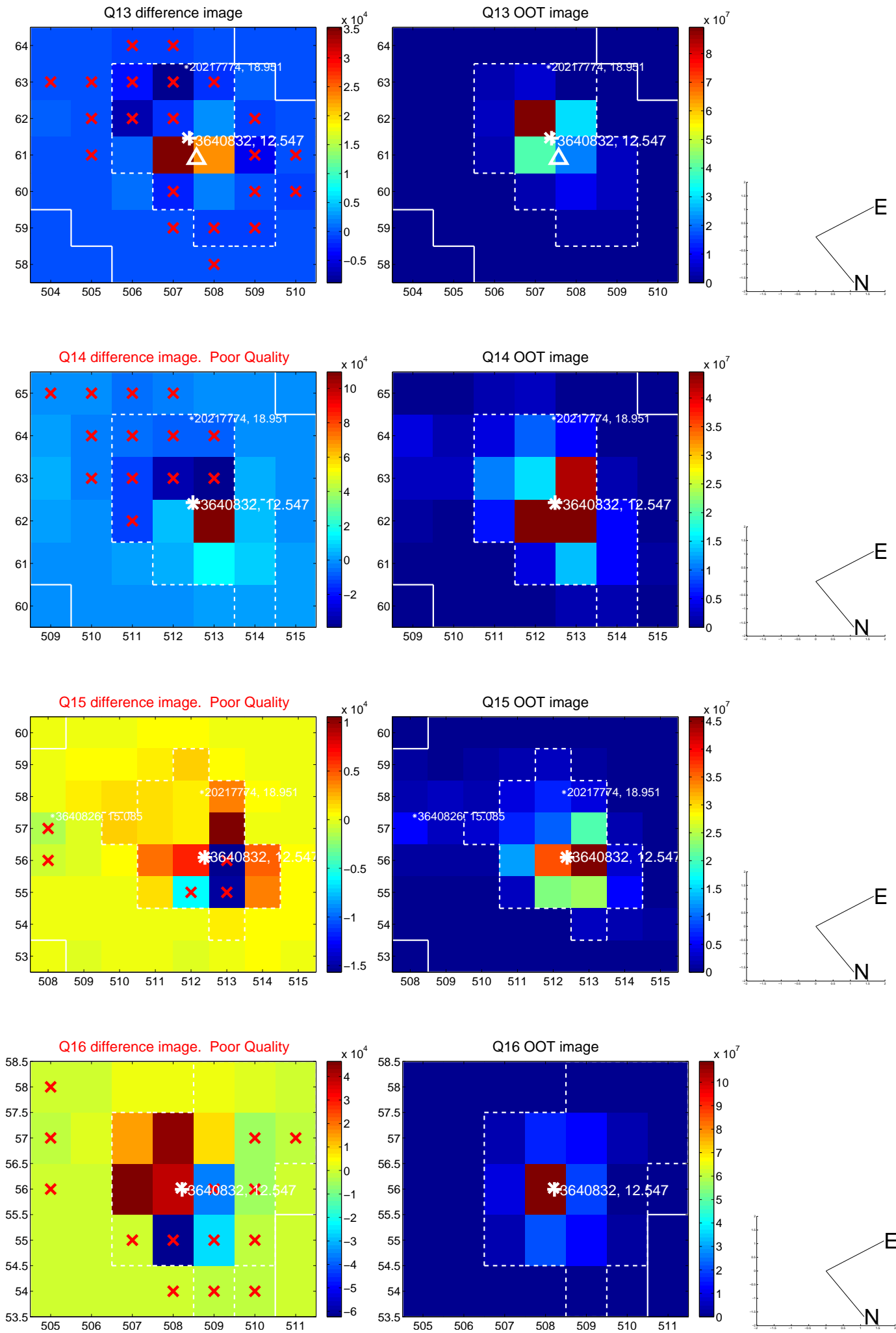




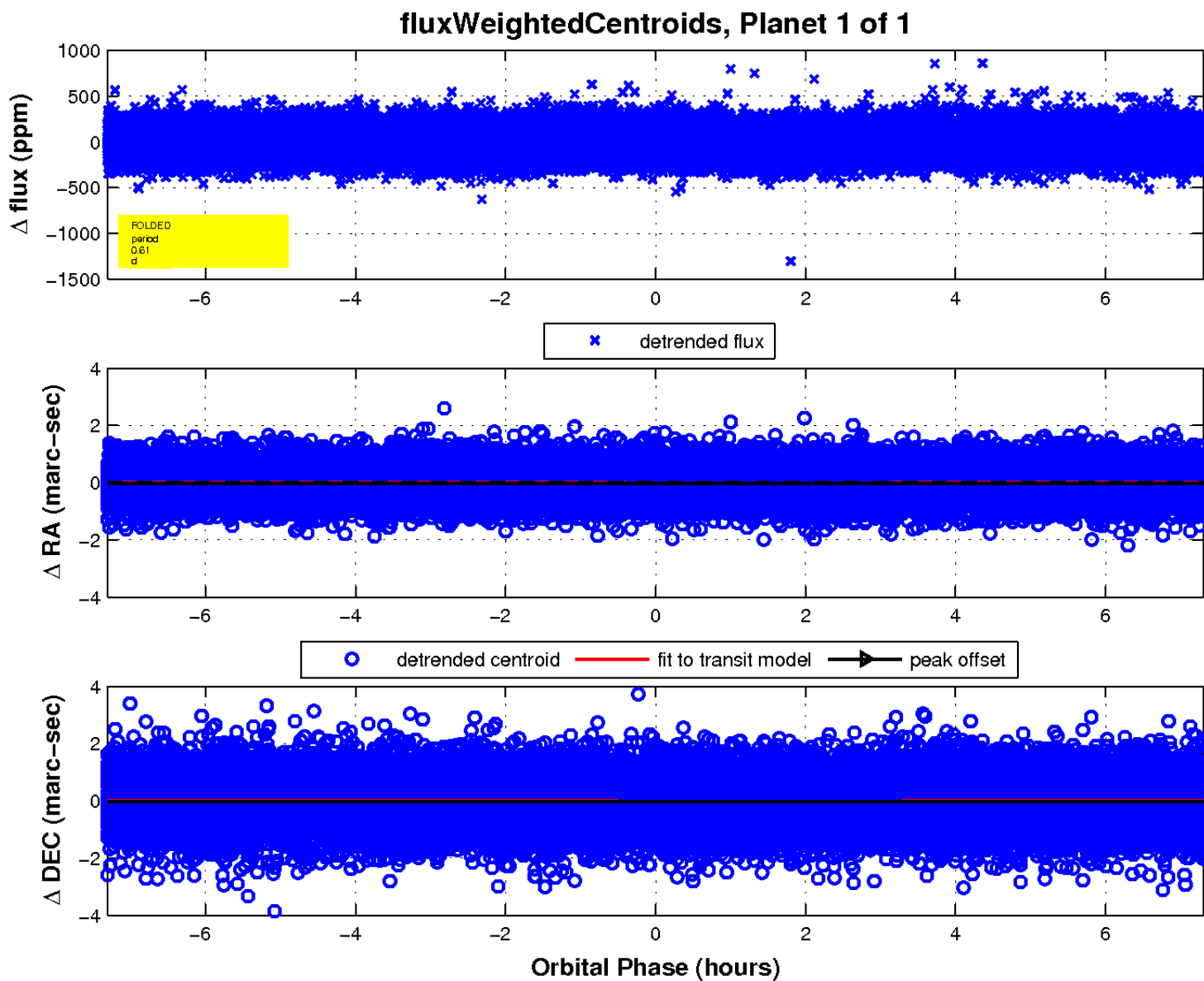
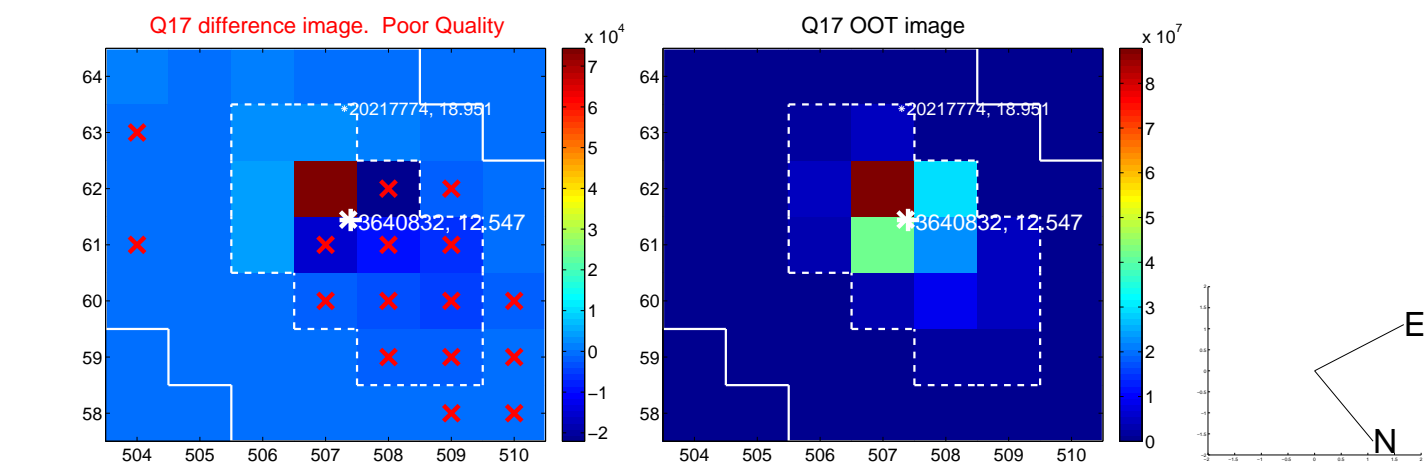
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

