

# KIC 003764025

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003764025-01	OBS	No	0.902110	131.905046	29.9	9.685	8.3	7.6	1.04	5947	0.57	3734.73

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003764025-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

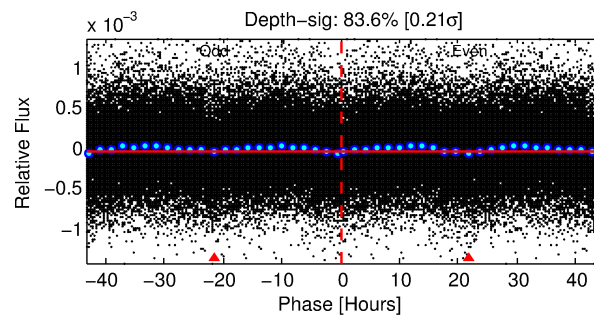
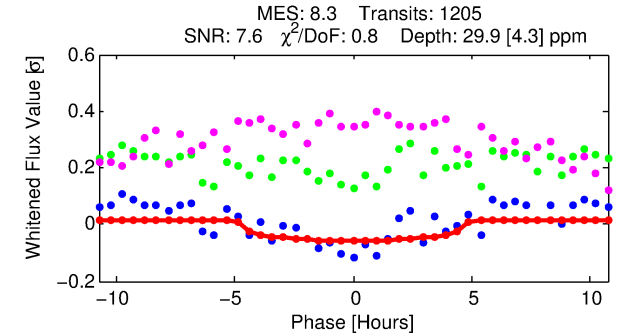
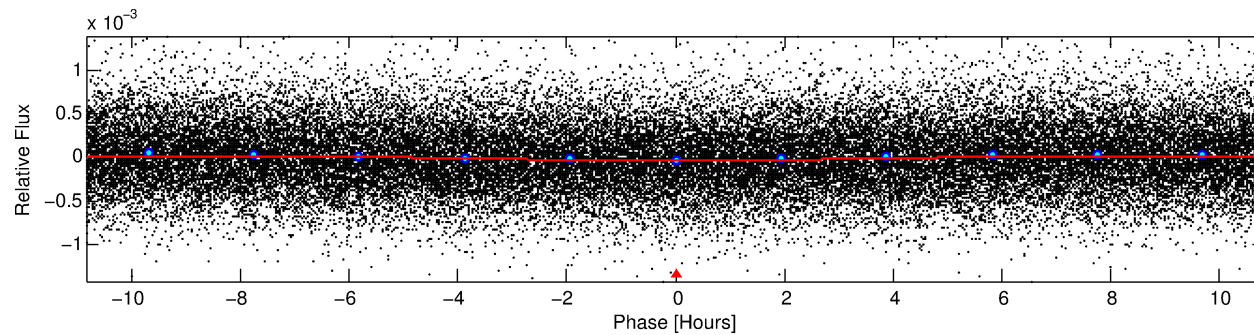
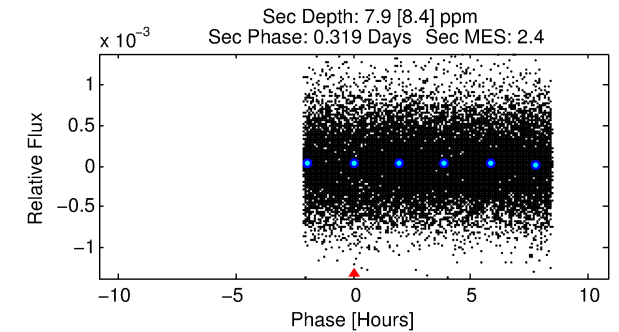
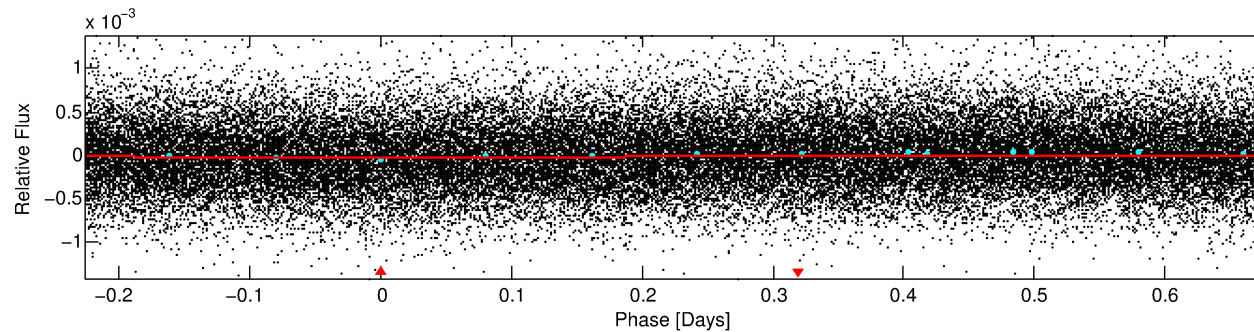
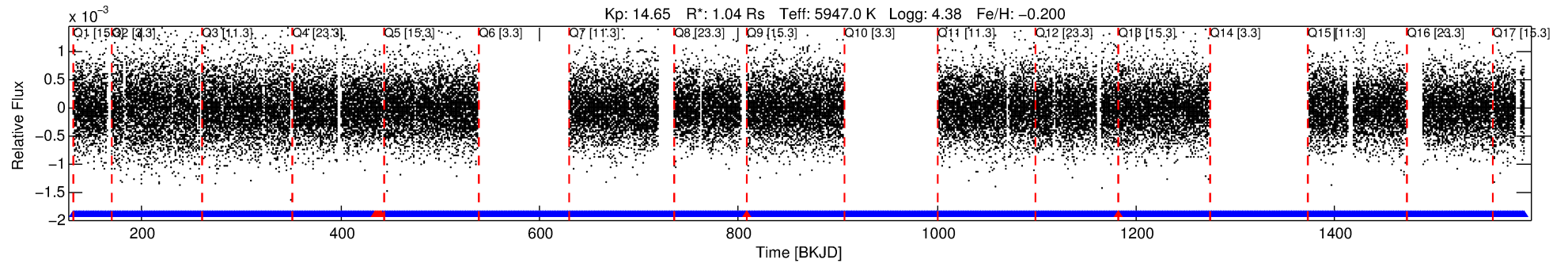
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003764025-01

No Significant Match Found

# DV One-Page Summary

KIC: 3764025 Candidate: 1 of 1 Period: 0.902 d



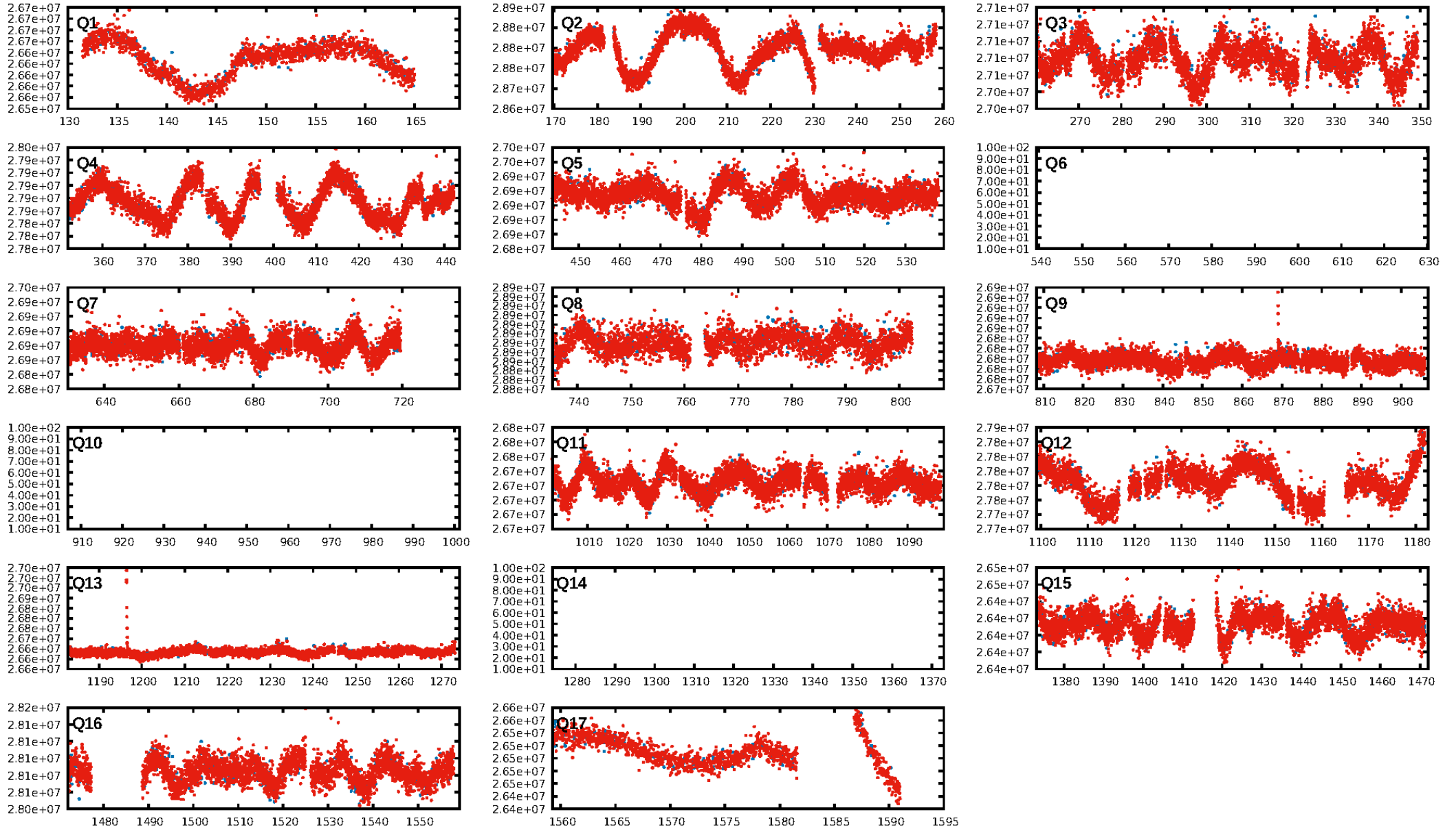
## DV Fit Results:

Period = 0.90211 [0.00002] d  
Epoch = 131.9050 [0.0107] BKJD  
Rp/R\* = 0.0050 [0.0057]  
a/R\* = 1.02 [0.18]  
b = 0.18 [28.87]  
Seff = 3734.73 [1381.21]  
Teff = 1993 [184] K  
Rp = 0.57 [0.67] Re  
a = 0.0180 [0.0043] AU  
Ag = 4.38 [11.11] [0.30σ]  
Teffp = 4459 [2804] K [0.88σ]

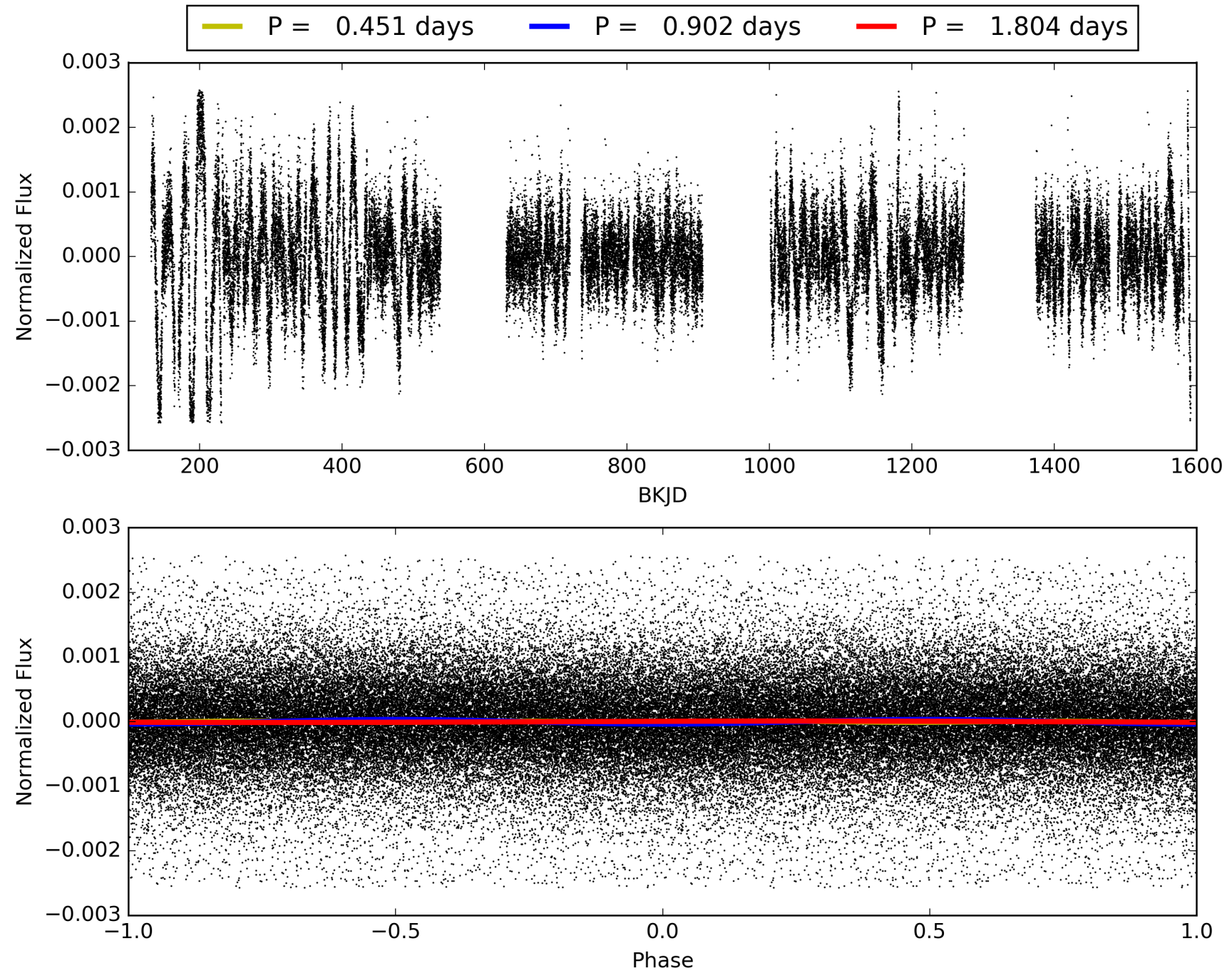
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [1129/1137]  
GhostDiagnostic-chr: 2.447  
Centroid-sig: 0.0%  
Centroid-so: 2.702 arcsec [2.17σ]  
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 [14/14]

# TCE 003764025-01, PDC Light Curves

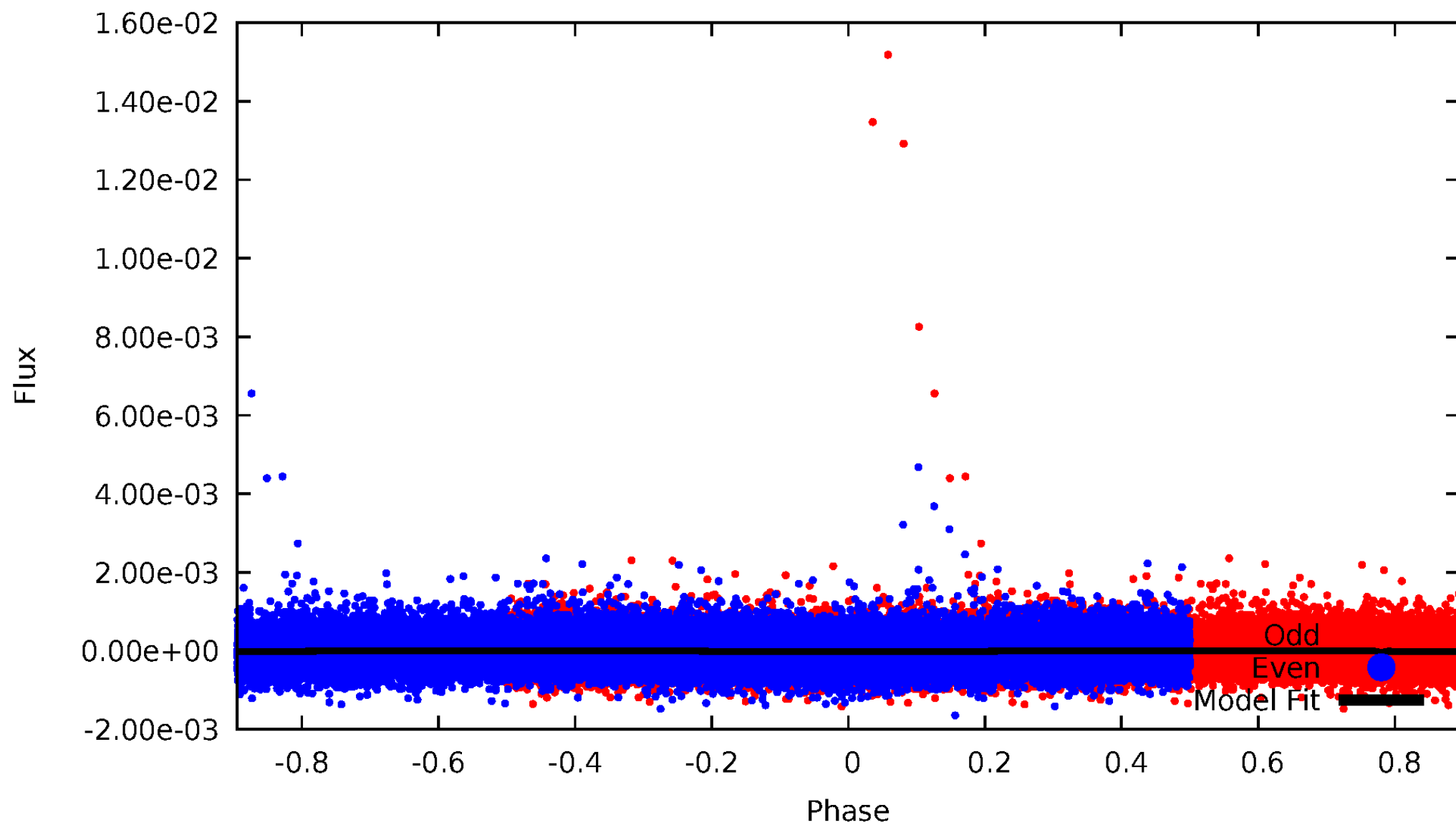


# TCE 003764025-01



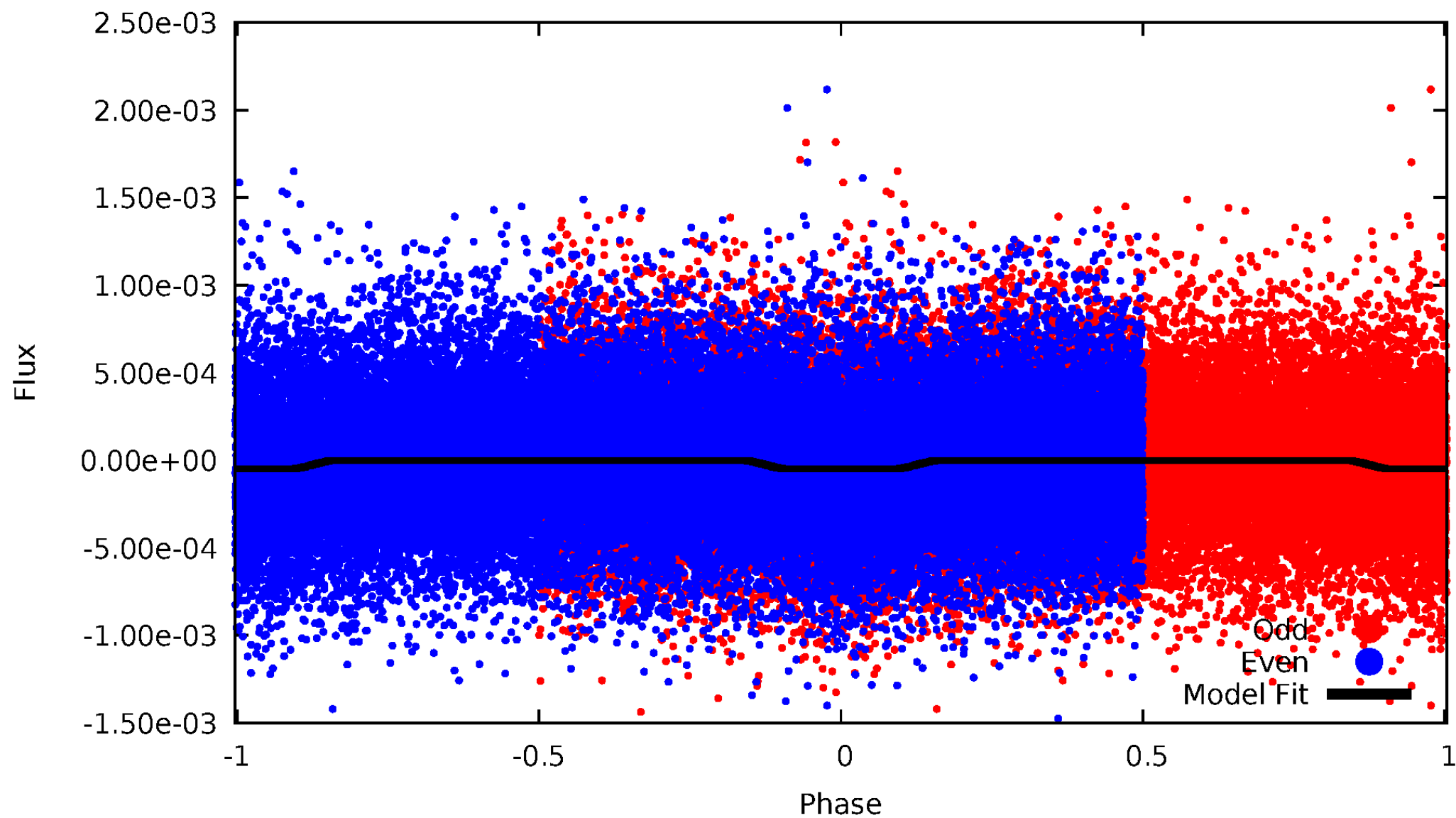
# DV Odd/Even

TCE 003764025-01



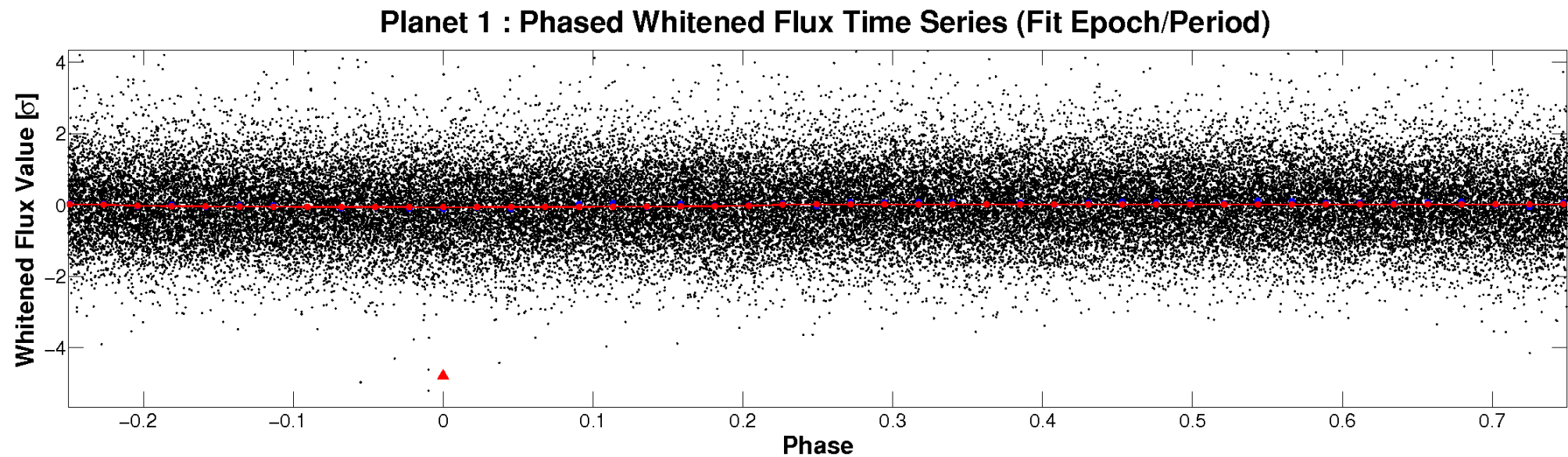
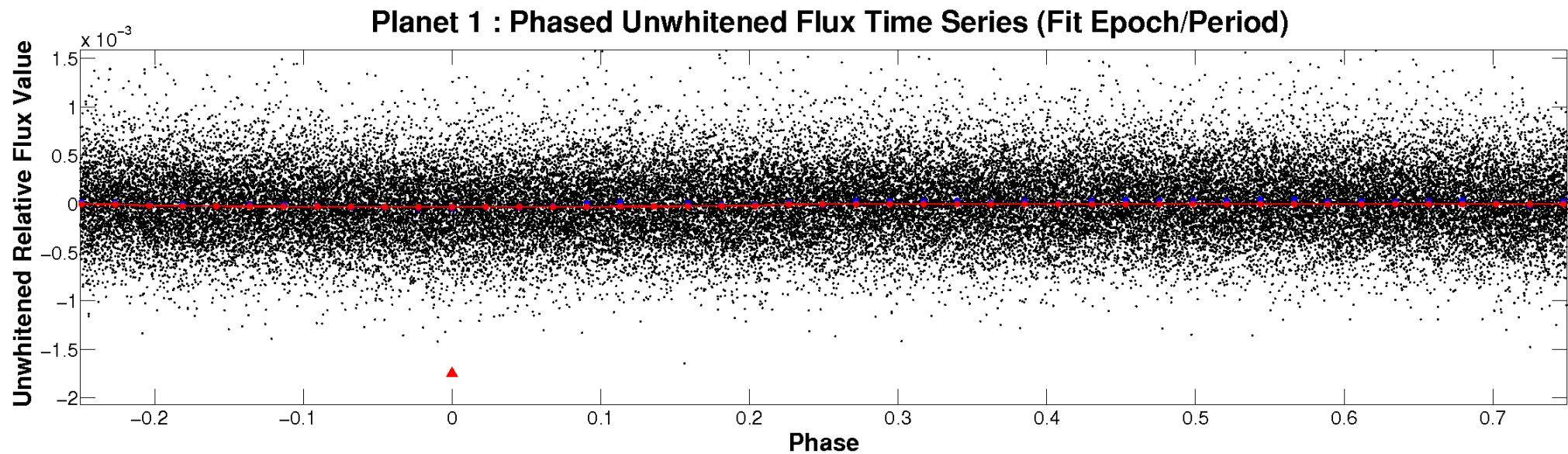
# ALT Odd/Even

TCE 003764025-01



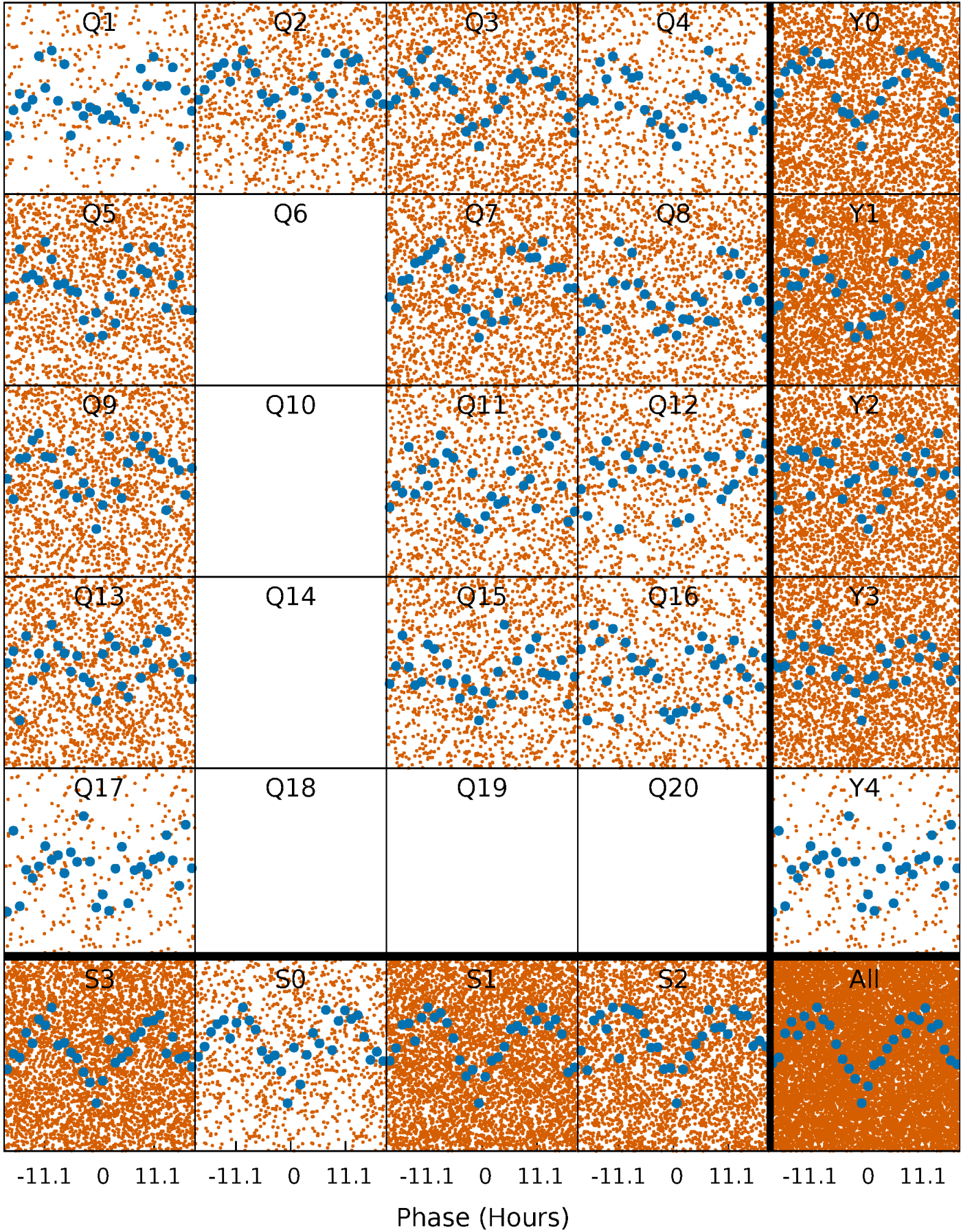


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

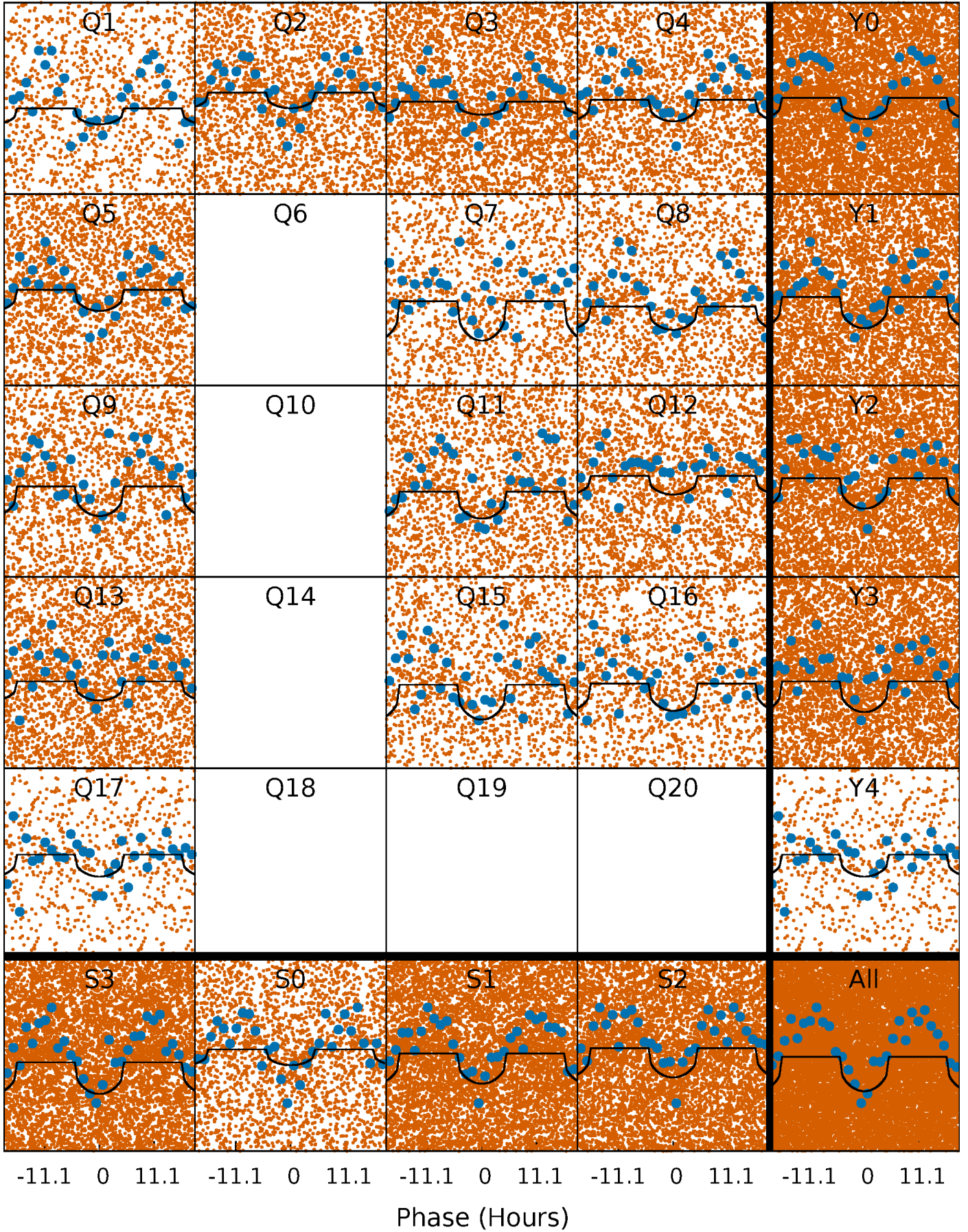
TCE 003764025-01   P= 0.902110 Days    $T_0=131.905046$  (BKJD)





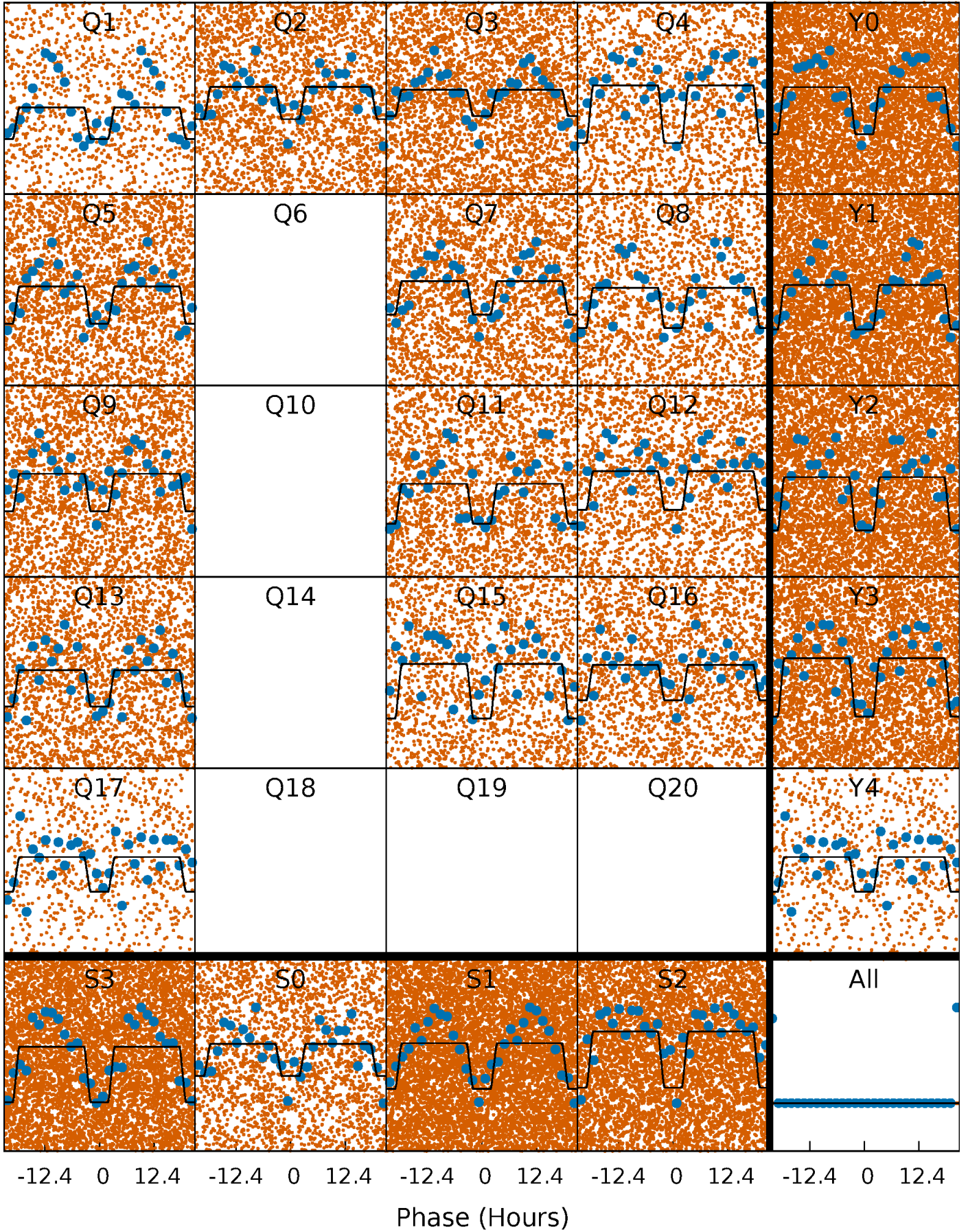
# DV Quarter-Phased Transit Curves

TCE 003764025-01 P= 0.902110 Days  $T_0=131.905046$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003764025-01   P= 0.902126 Days    $T_0=131.899206$  (BKJD)

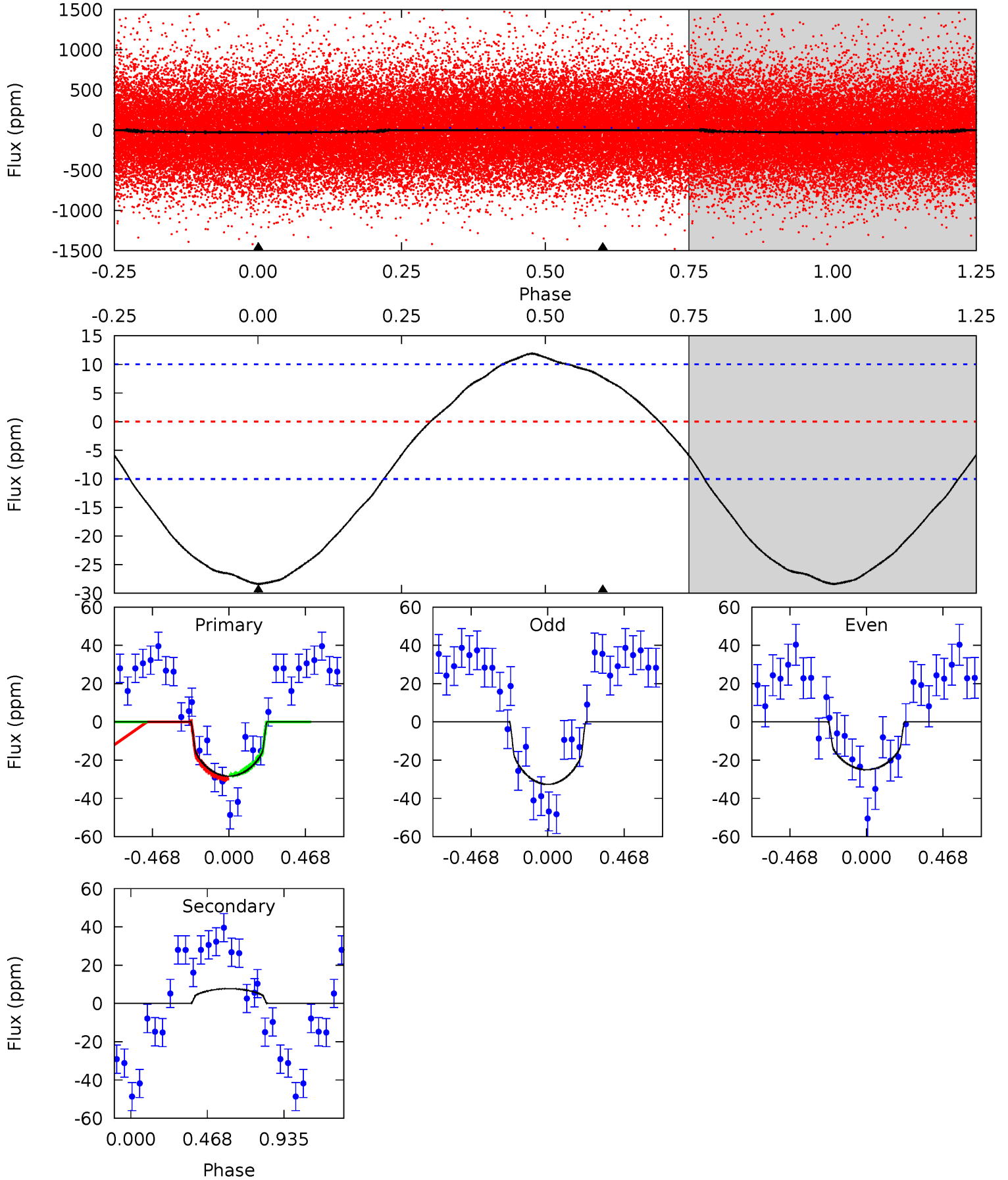




# DV Model-Shift Uniqueness Test

003764025-01, P = 0.902110 Days, E = 131.002936 Days

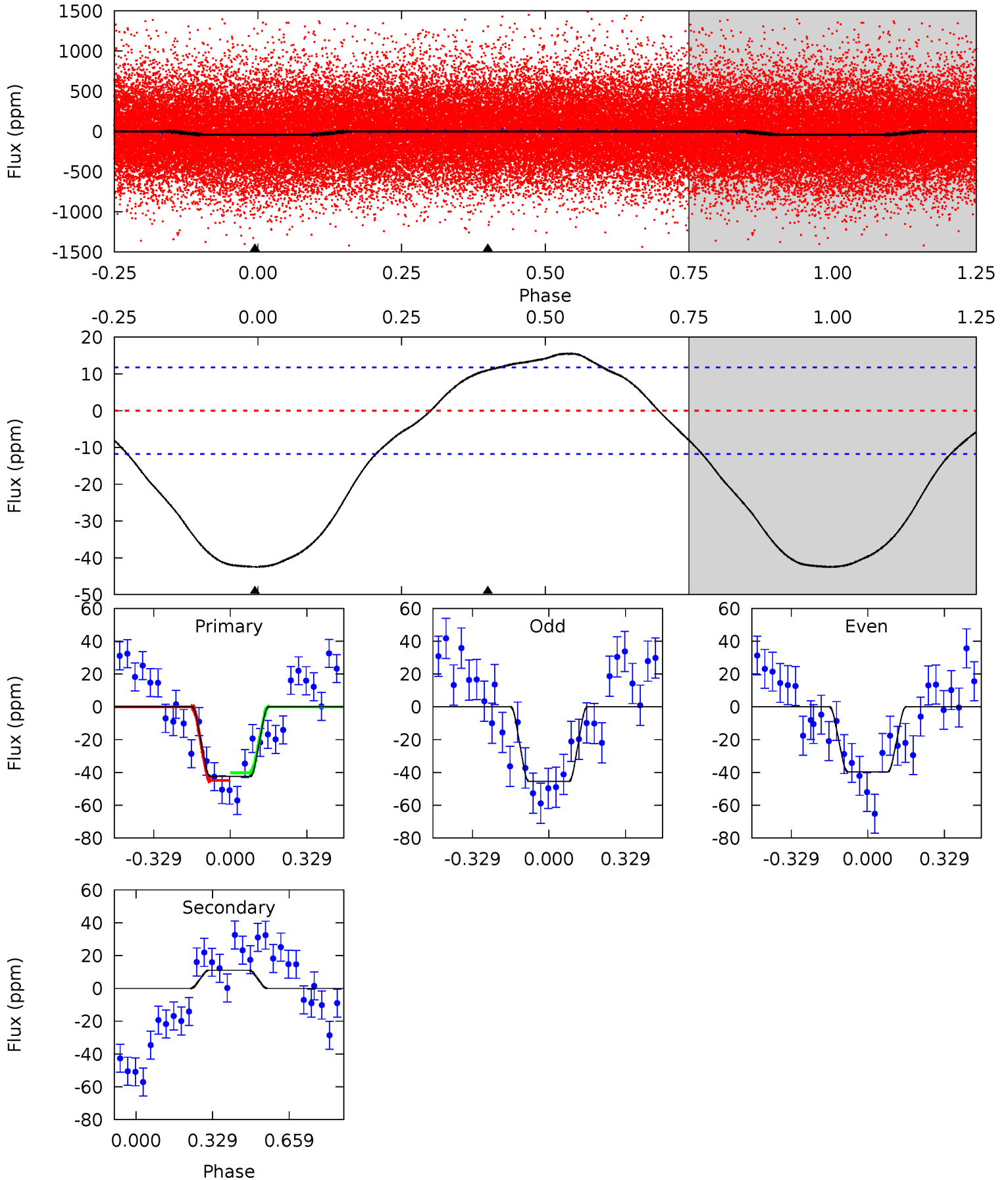
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	-3.25	0	0	4.23	0.73	1.26	12.0	12.0	-3.25	-3.25	1.63	0.88	0.30	0.45



# Alt Model-Shift Uniqueness Test

003764025-01, P = 0.902126 Days, E = 130.997080 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
15.5	-4.03	0	0	4.31	0.98	1.69	15.5	15.5	-4.03	-4.03	1.06	1.04	0.27	0.84





### Stellar Parameters For KIC 003764025

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5947^{+179}_{-197}$	$4.384^{+0.124}_{-0.186}$	$-0.200^{+0.300}_{-0.300}$	$1.037^{+0.302}_{-0.163}$	$0.952^{+0.134}_{-0.109}$	$1.202^{+0.677}_{-0.584}$
	+3%/-3%	+3%/-4%	+150%/-150%	+29%/-16%	+14%/-11%	+56%/-49%
Source	PHO1	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 003764025-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$8 \pm 2$	$0.71^{+0.62}_{-0.44}$	$2805^{+227}_{-166}$	$-4270^{+693}_{-2145}$	$-2.594^{+1.926}_{-14.904}$
Alt.	$11 \pm 3$	$0.92^{+0.59}_{-0.56}$	$2801^{+208}_{-174}$	$-4198^{+559}_{-1920}$	$-2.218^{+1.418}_{-12.253}$

$T_{\text{max}}$  = 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

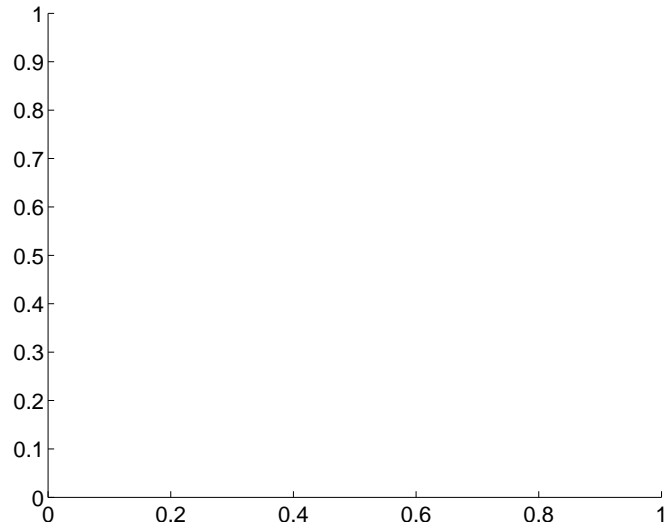
Supplemental centroid analysis for 003764025-01. Kepler magnitude: 14.64. Transit SNR 7.58

There are 0 quarters with good PRF difference image offsets

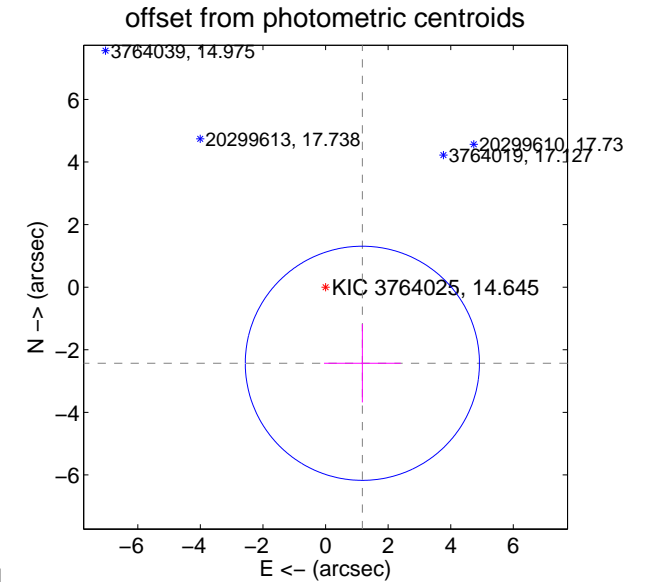
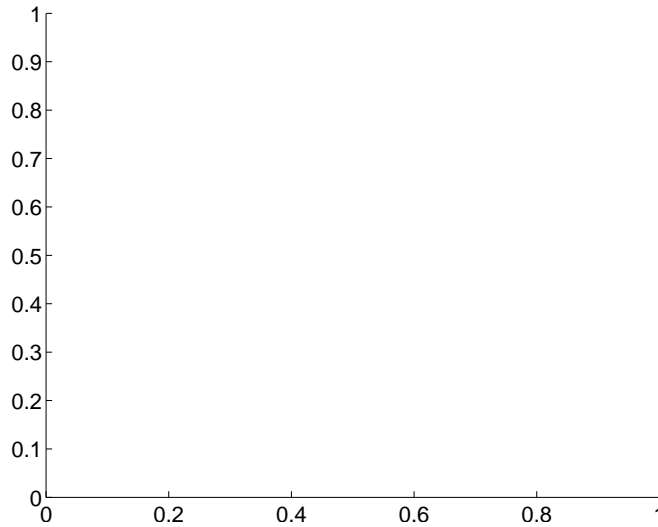
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$2.70 \pm 1.25$	2.17	$-1.18 \pm 1.23$	$-2.43 \pm 1.25$

There is no PRF-fit offset from OOT-fit

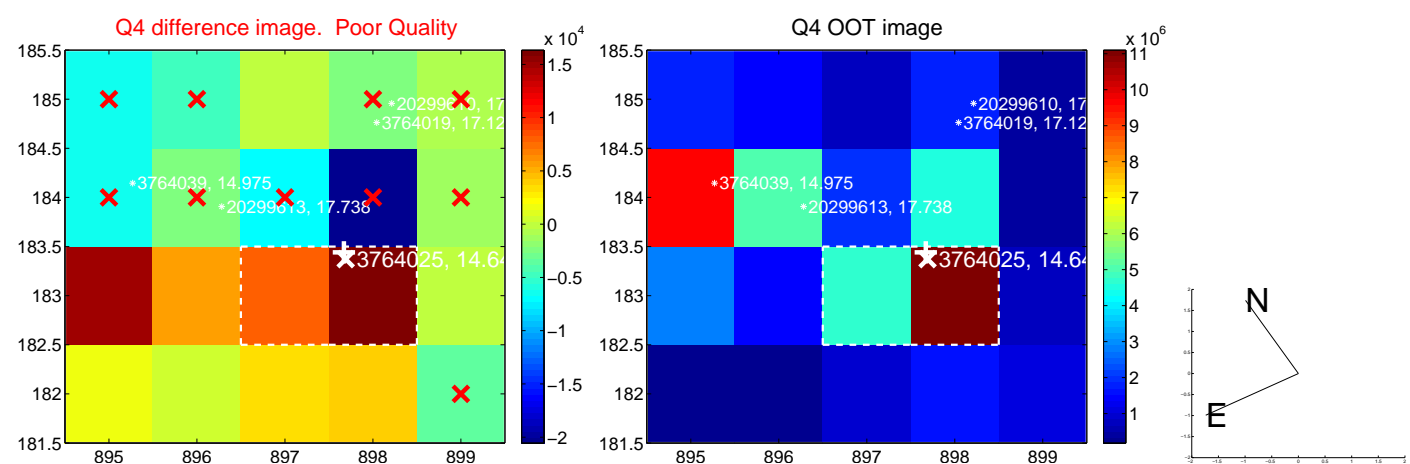
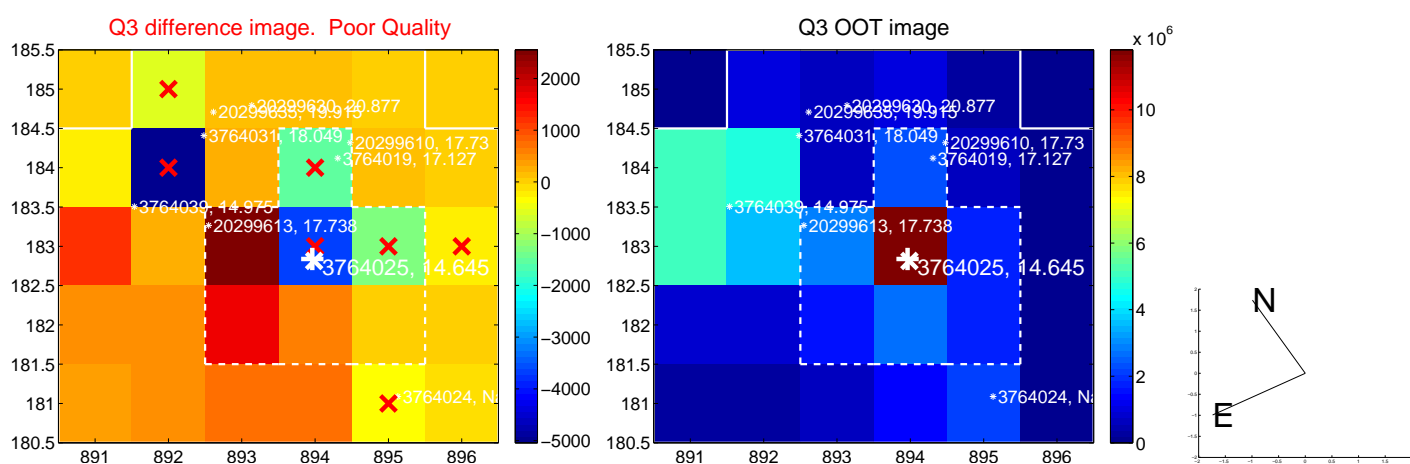
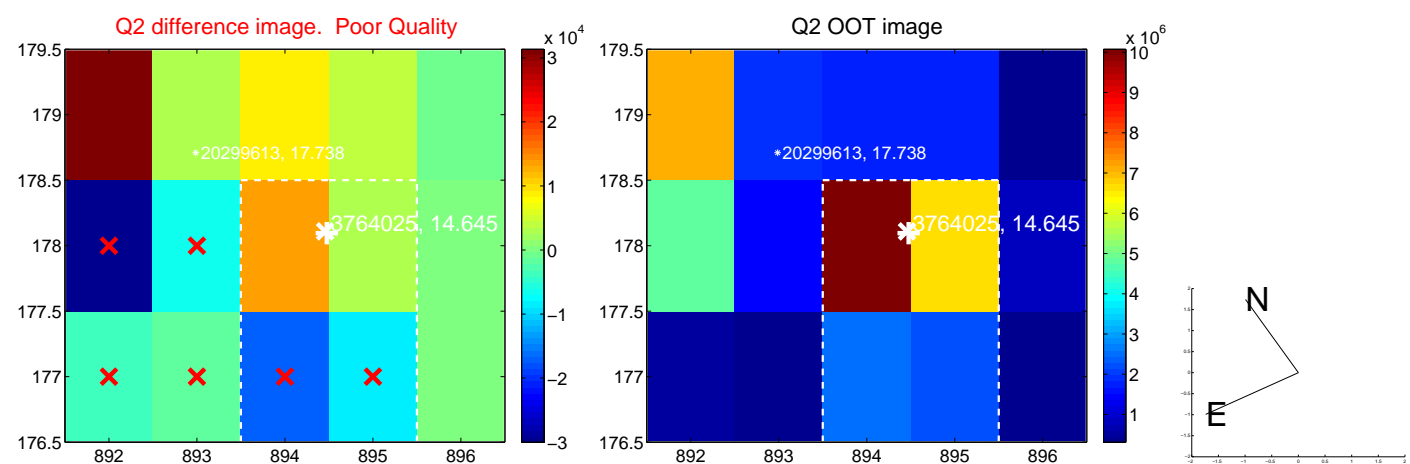
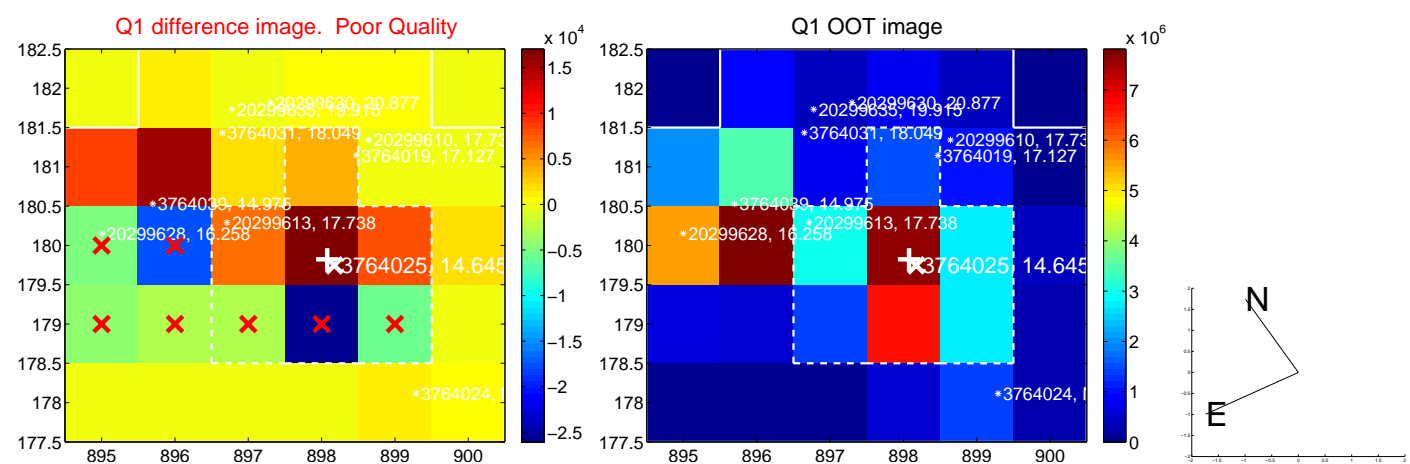


There is no PRF-fit offset from KIC

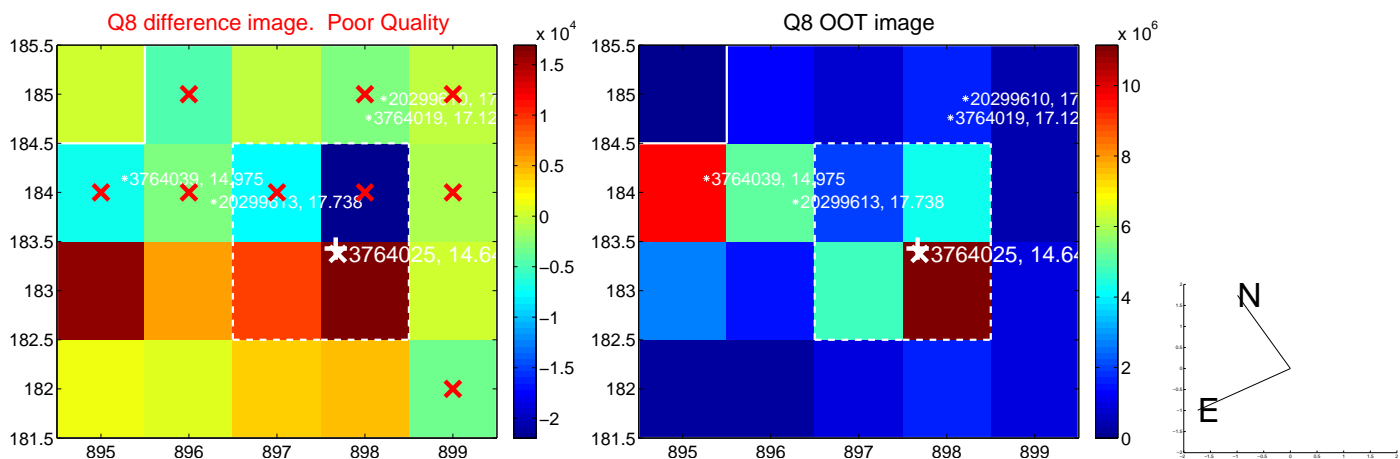
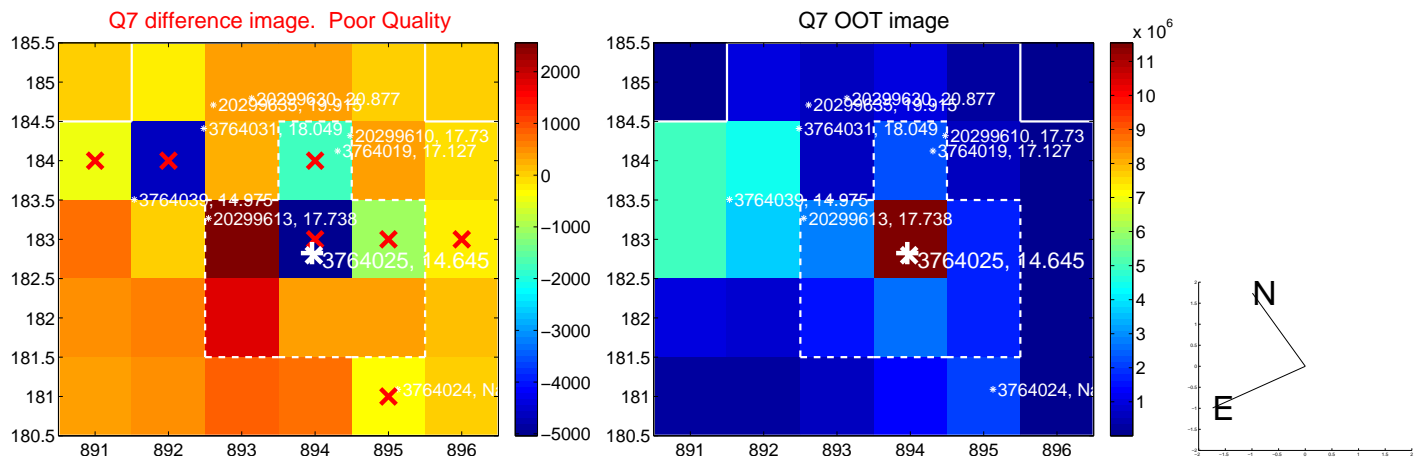
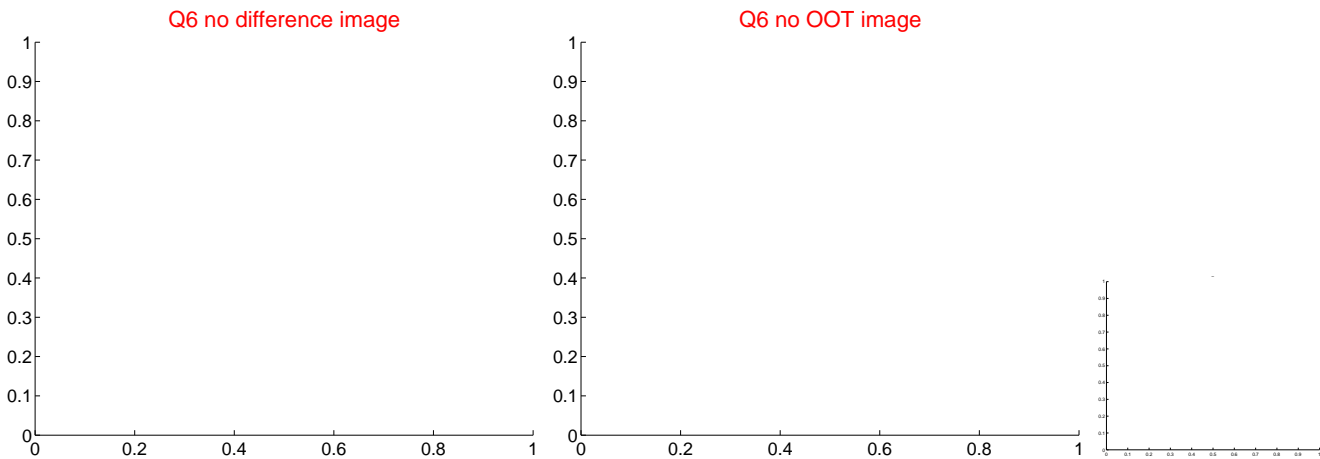
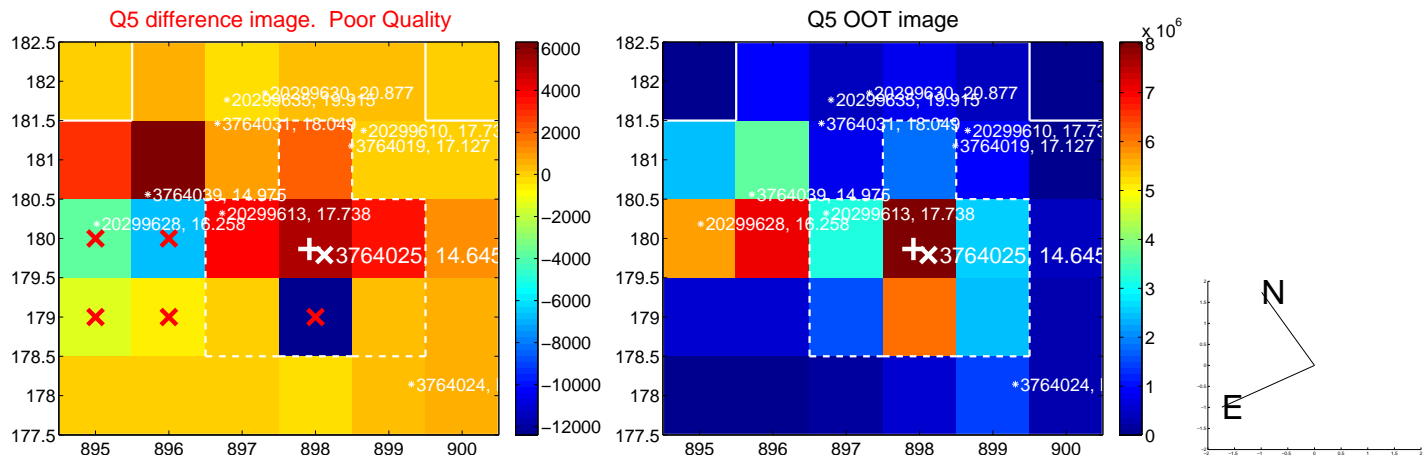


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

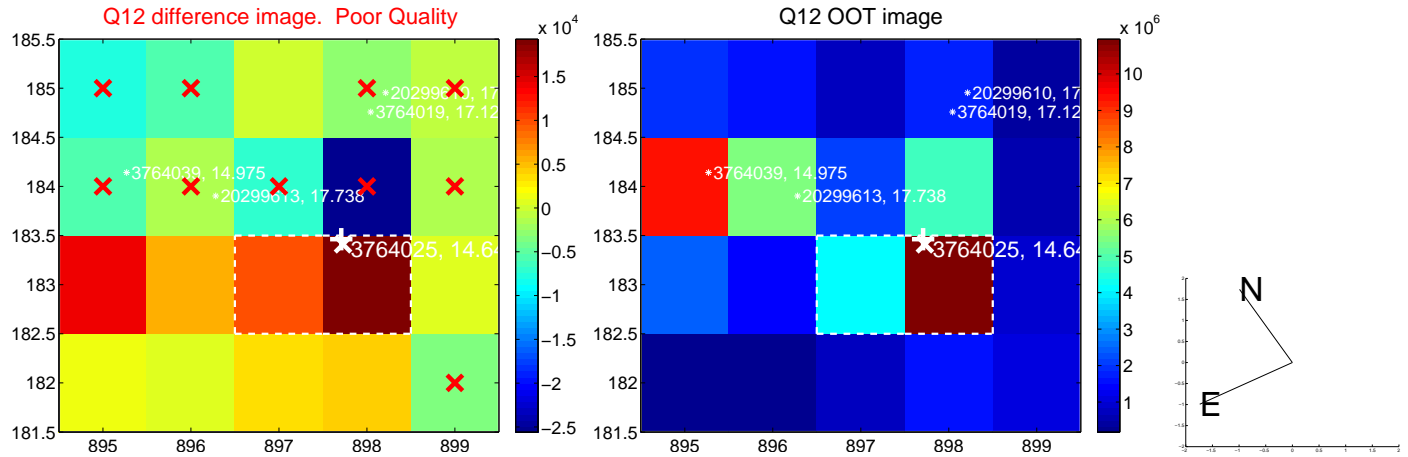
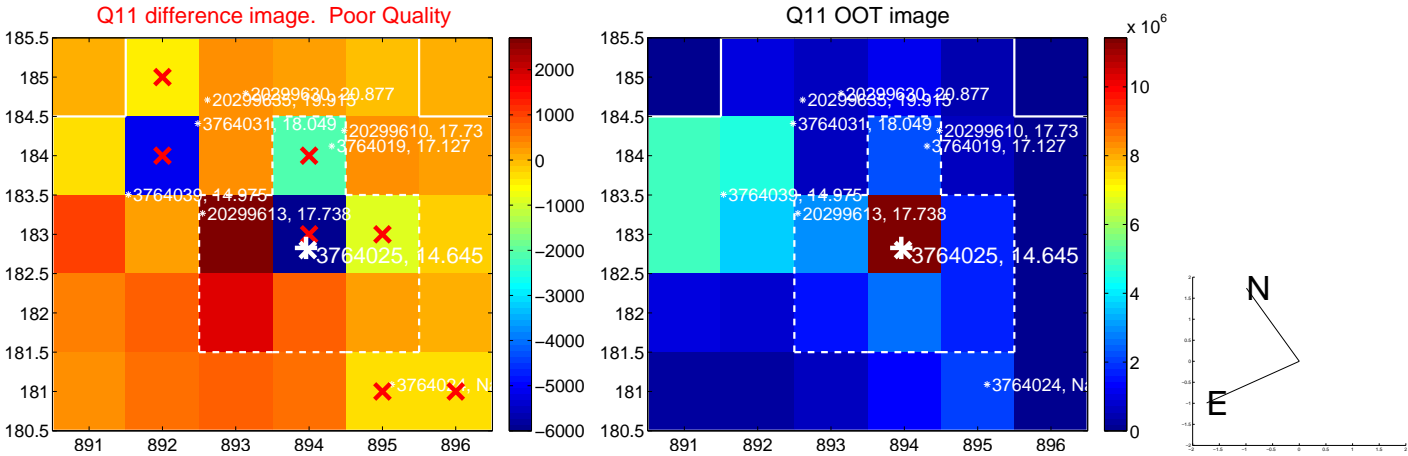
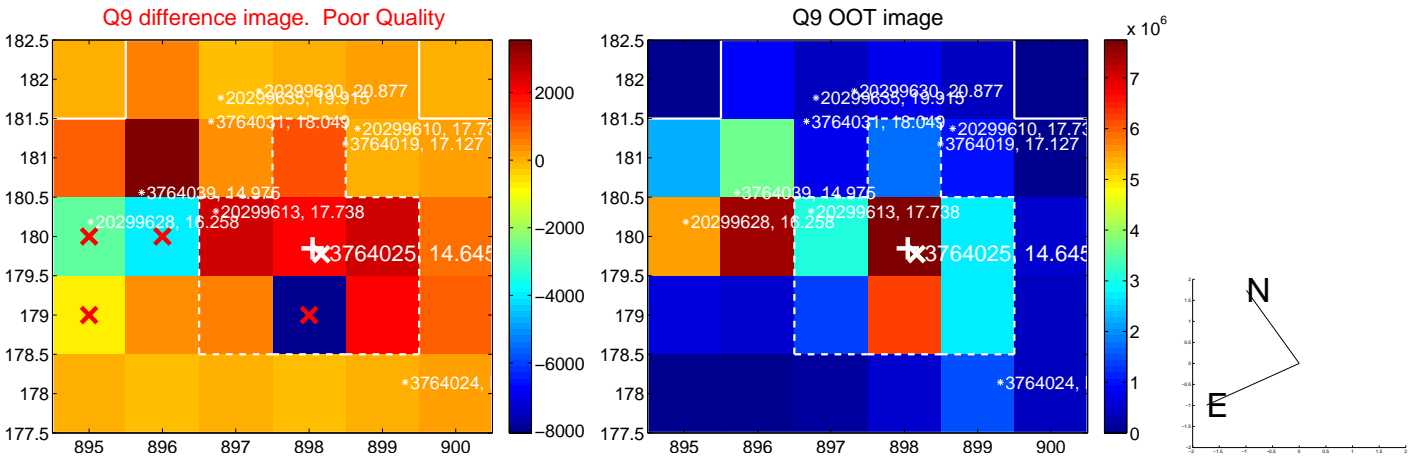


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



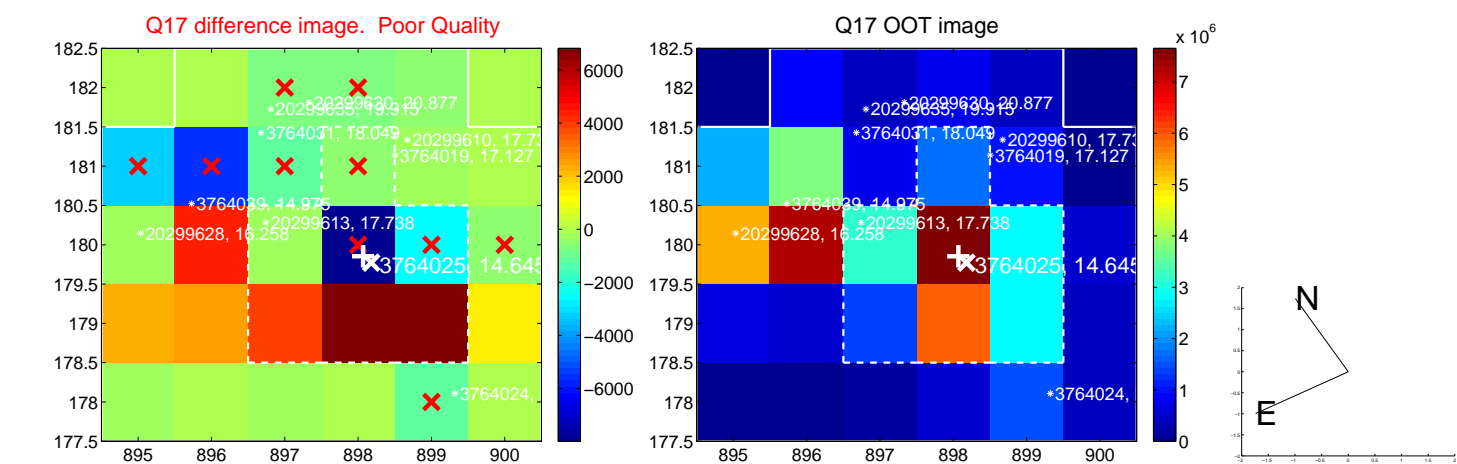


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

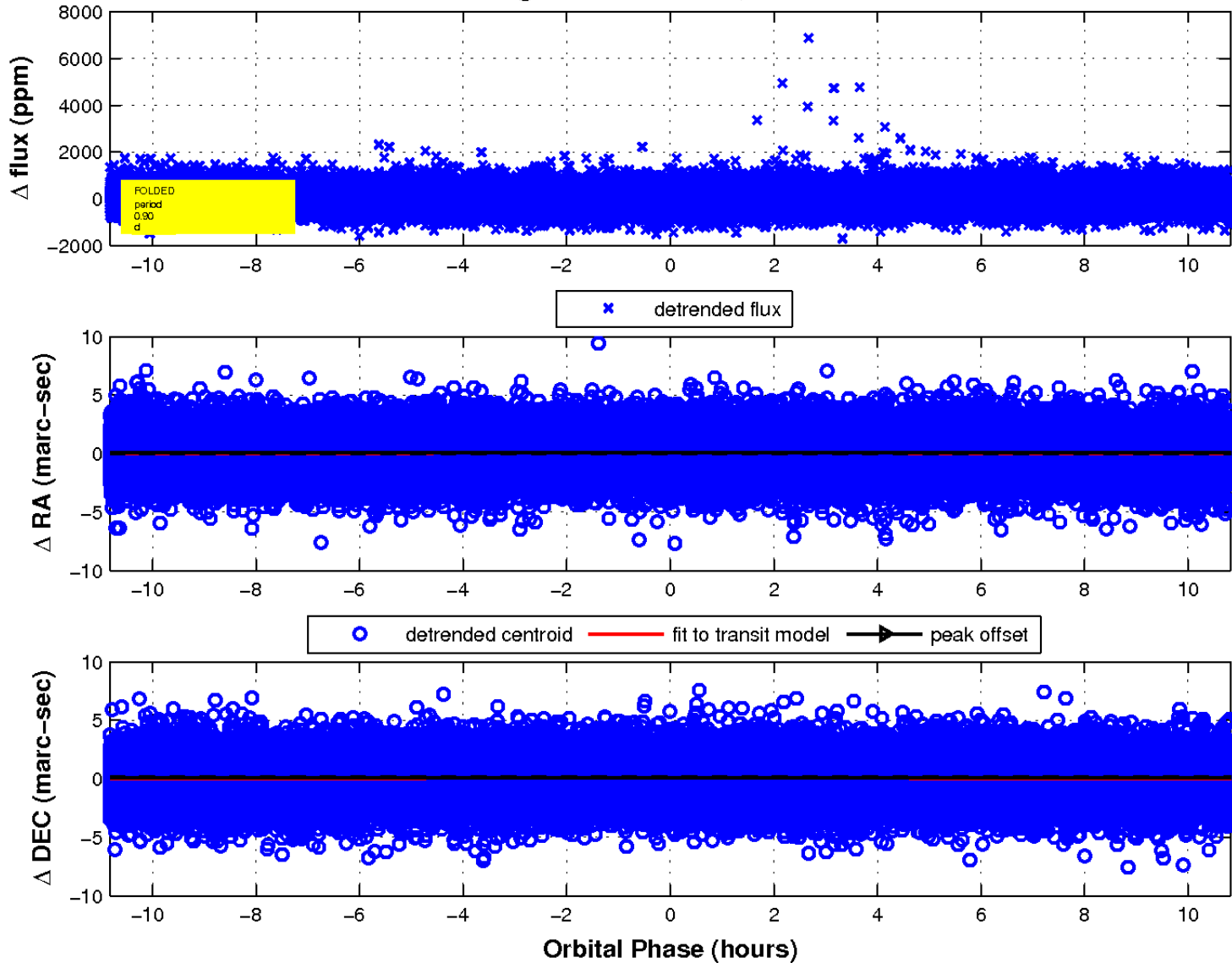




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



### fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

