

# KIC 010093664

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010093664-01	OBS	7285.01	1.207023	132.519403	3.5	11.246	10.1	4.2	2.04	7331	0.39	15553.28

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010093664-01	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.

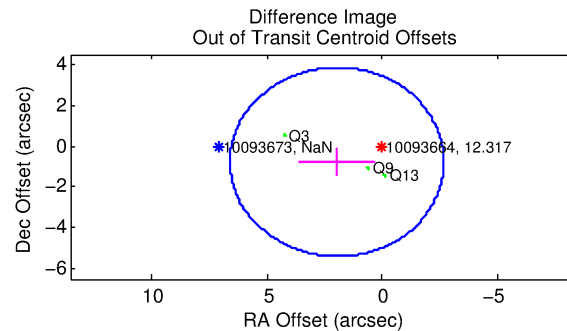
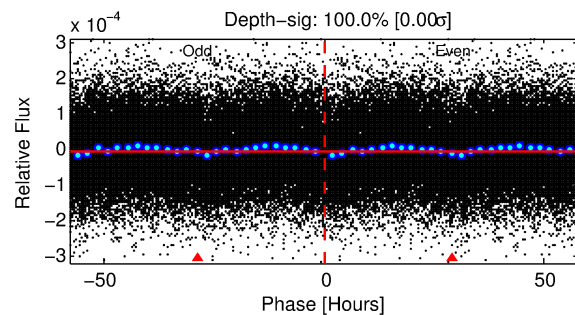
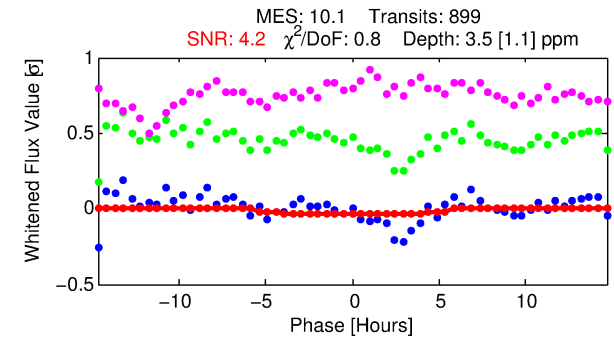
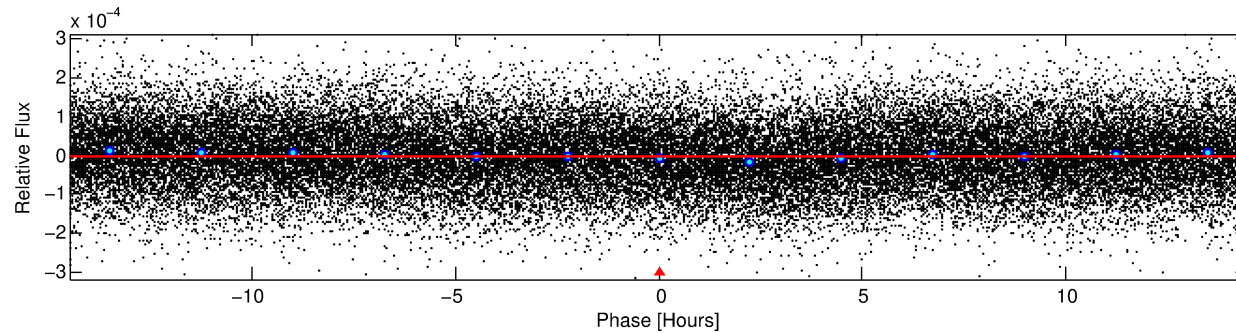
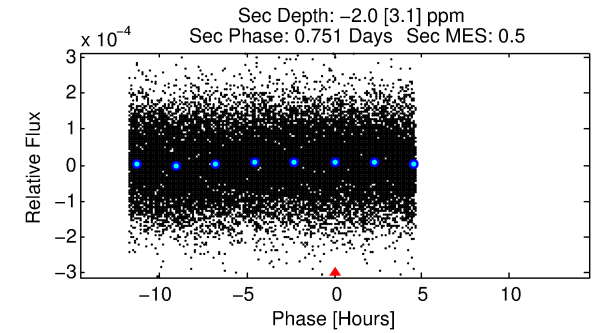
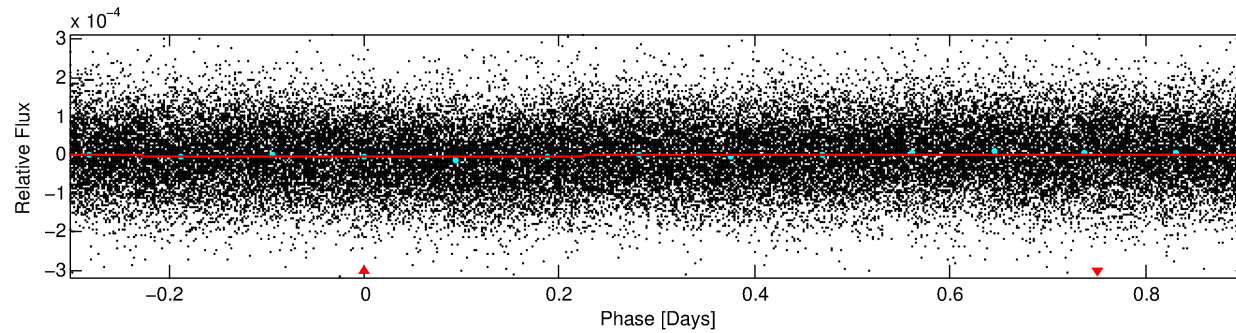
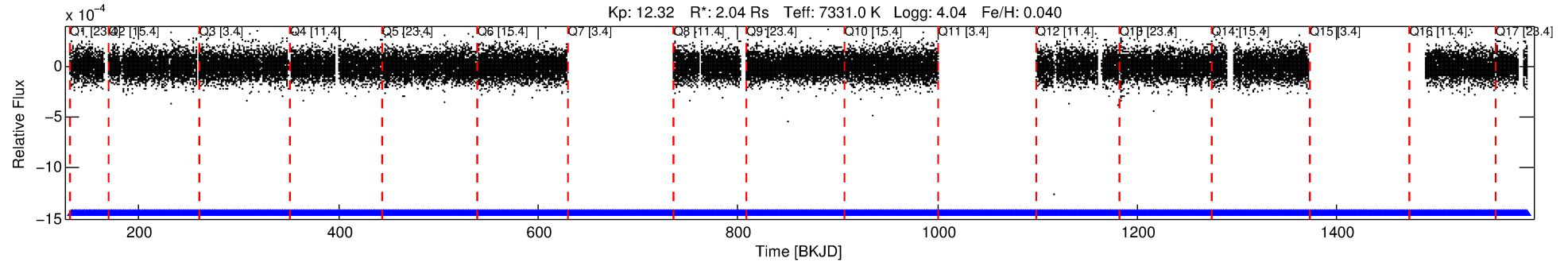
## Ephemeris Match Information For 010093664-01

No Significant Match Found

# DV One-Page Summary

KIC: 10093664 Candidate: 1 of 1 Period: 1.207 d

KOI: K07285 Corr: No Ephemeris Match



## DV Fit Results:

Period = 1.20702 [0.00006] d  
Epoch = 132.5194 [0.0205] BKJD  
Rp/R\* = 0.0017 [0.0036]  
a/R\* = 1.07 [1.59]  
b = 0.10 [124.51]  
Seff = 15553.28 [5623.26]  
Teff = 2848 [257] K  
Rp = 0.39 [0.81] Re  
a = 0.0263 [0.0057] AU  
Ag = N/A  
Teffp = N/A

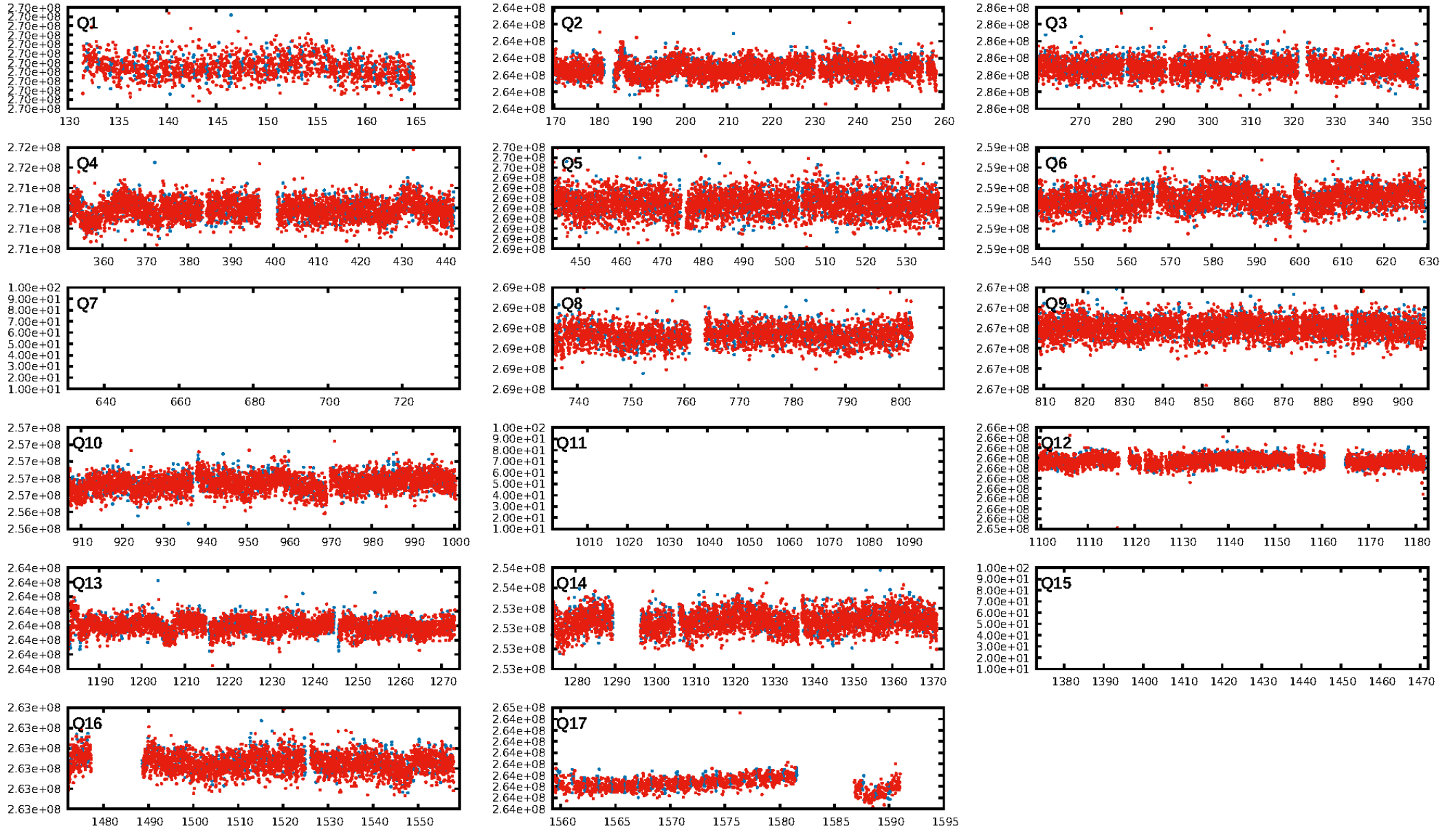
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [847/847]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 2.112 arcsec [1.37σ]  
KicOffset-rm: 2.034 arcsec [1.28σ]  
OotOffset-st: 0/1/0/2 [3]  
KicOffset-st: 0/1/0/2 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 1.00 [14/14]

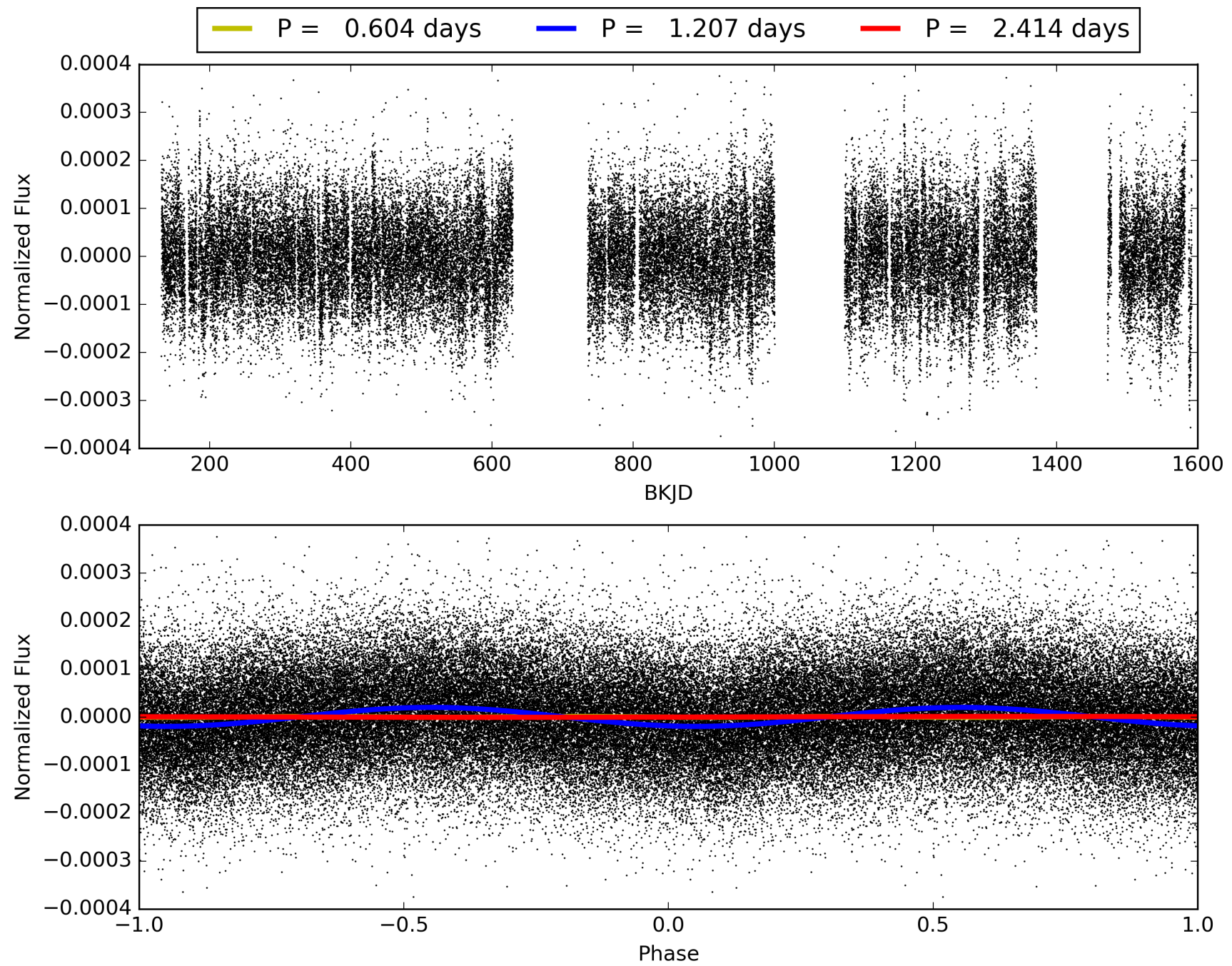
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:27:50 Z

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

# TCE 010093664-01, PDC Light Curves

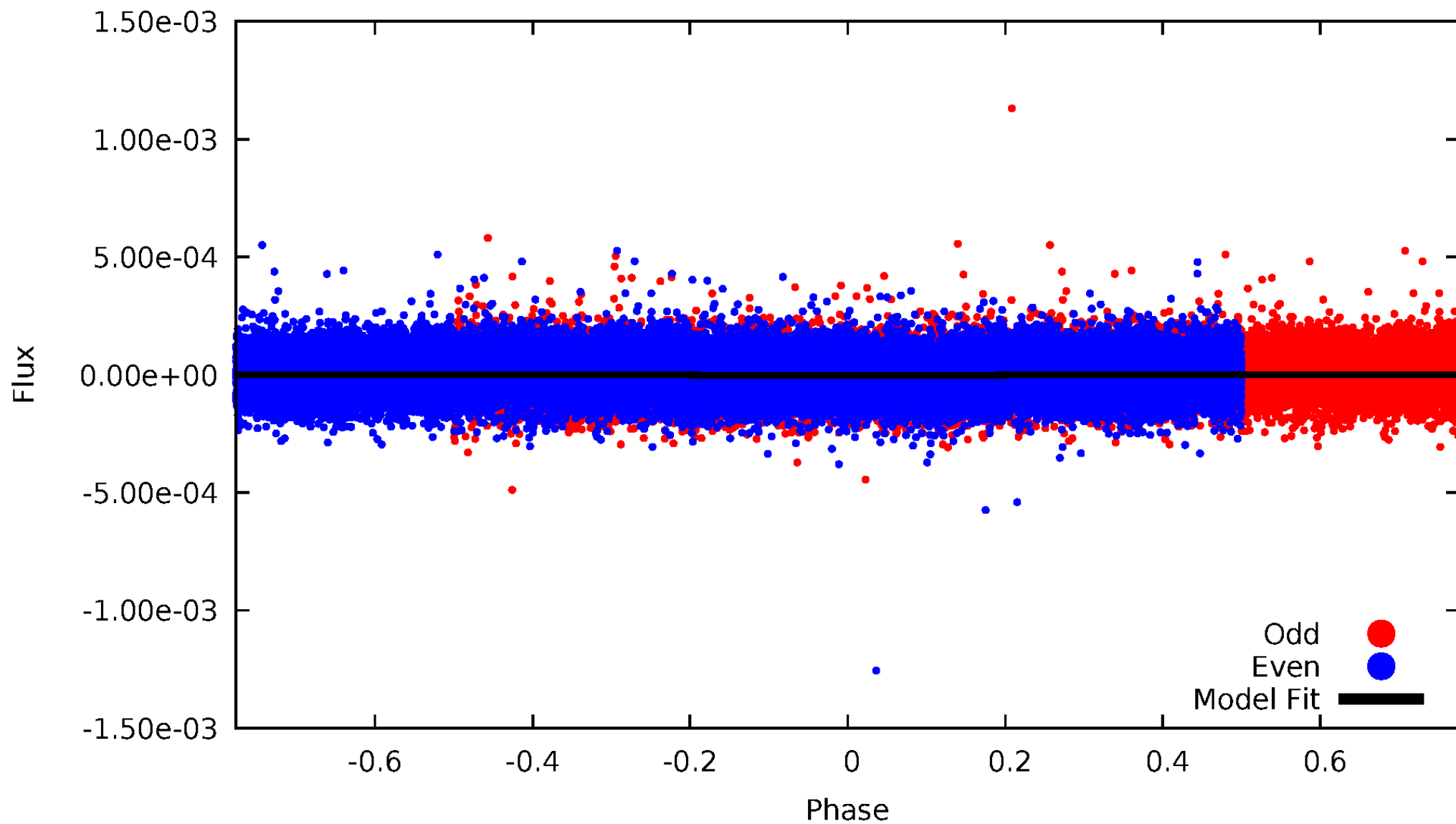


TCE 010093664-01



# DV Odd/Even

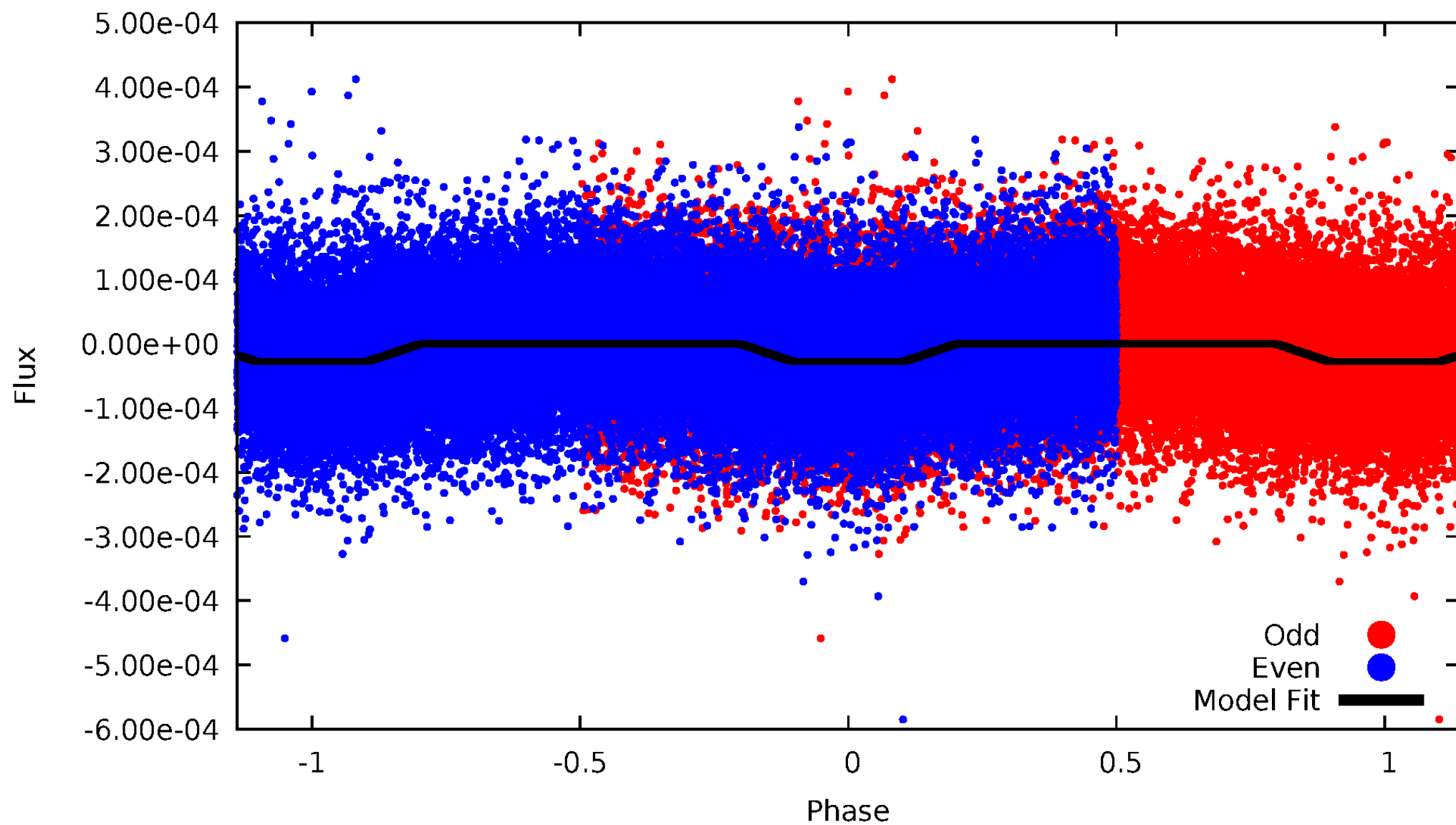
TCE 010093664-01





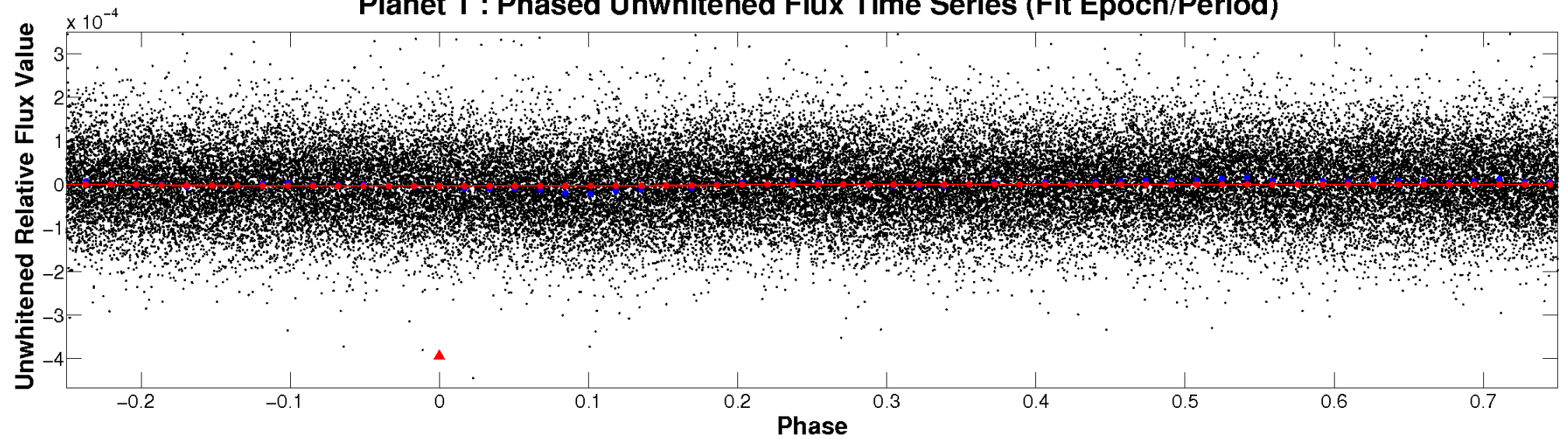
# ALT Odd/Even

TCE 010093664-01

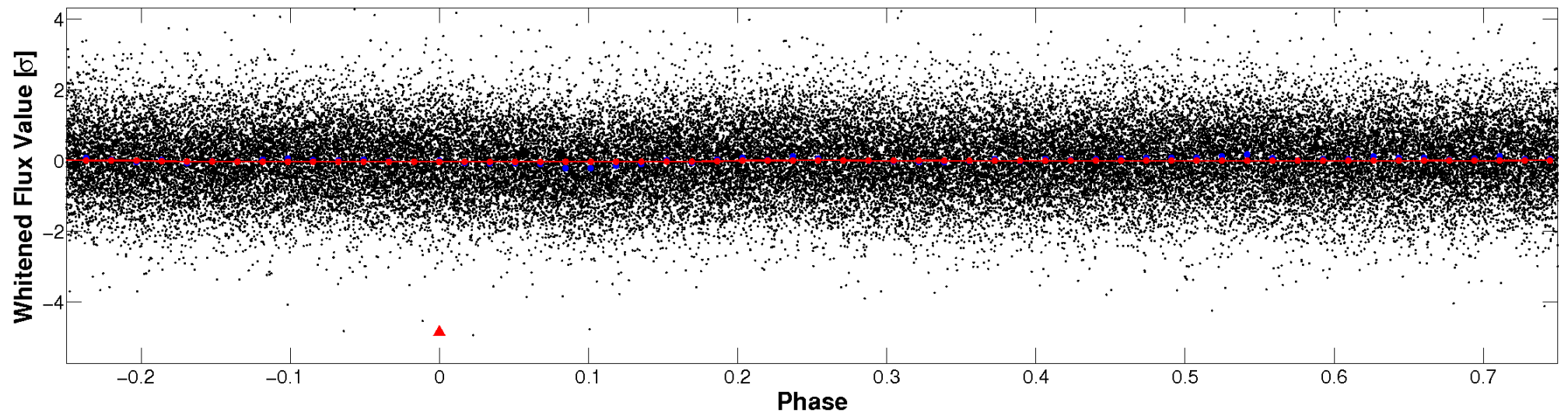


# Non-Whitened Vs. Whitened Light Curve

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

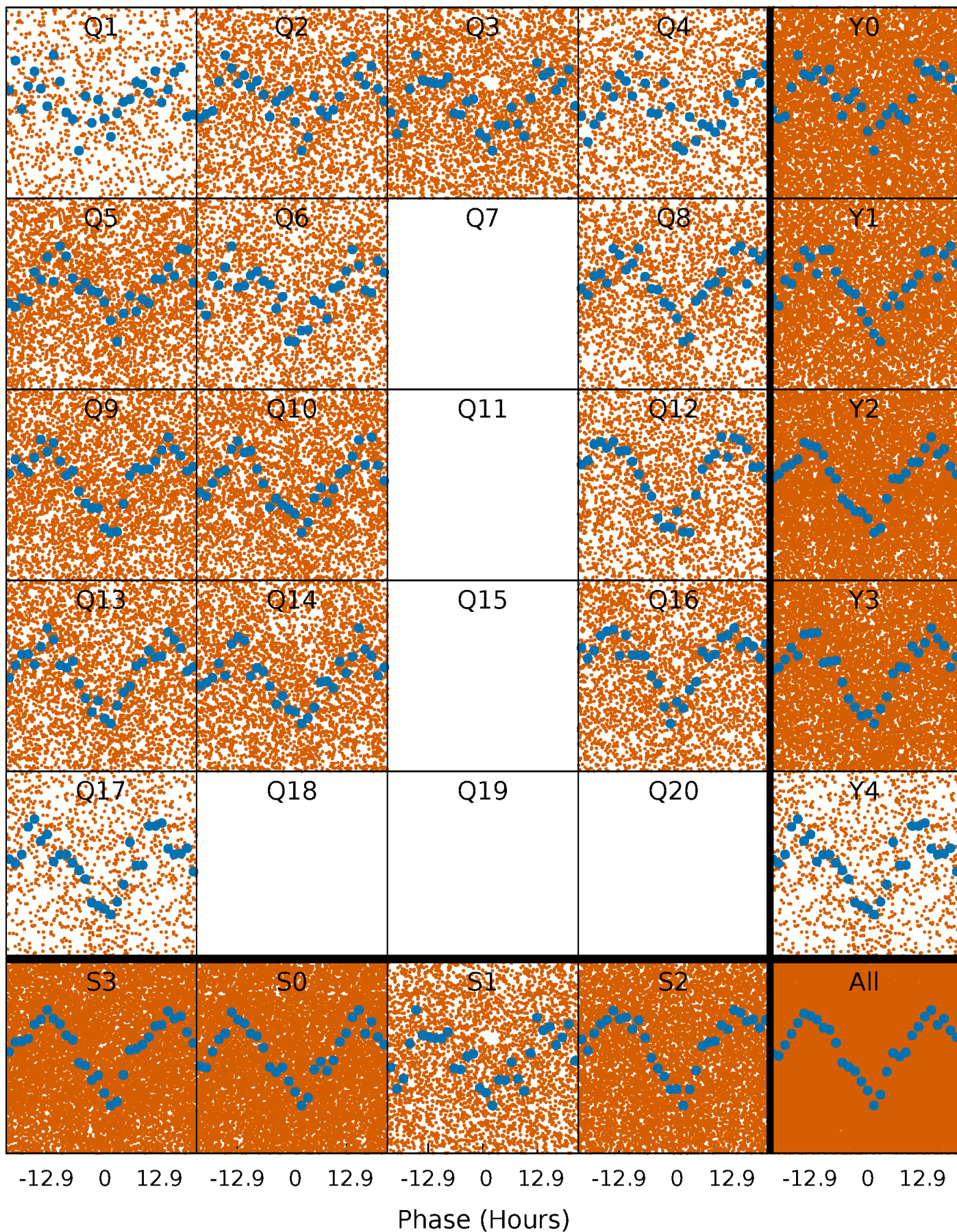


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

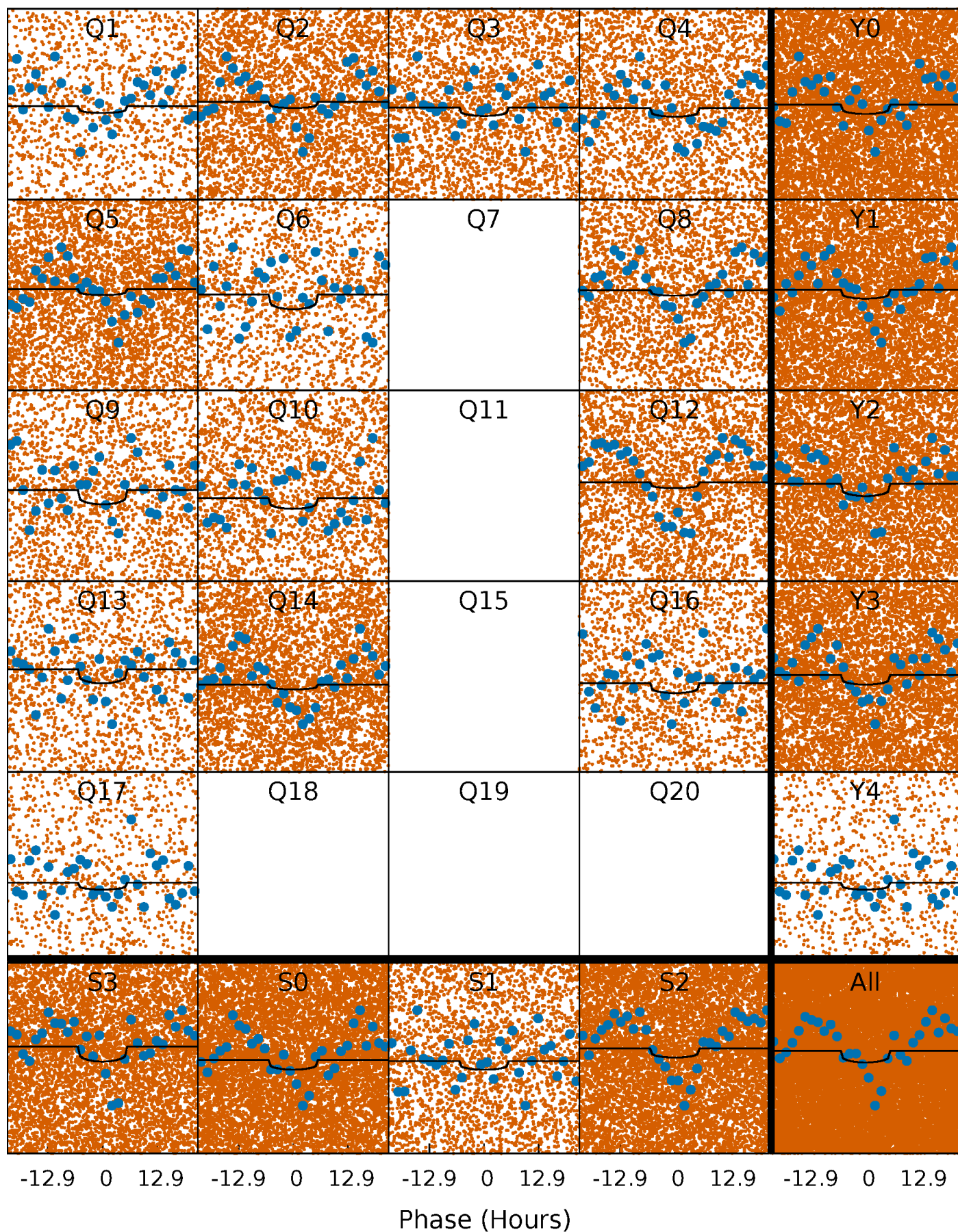
TCE 010093664-01 P= 1.207023 Days  $T_0=132.519403$  (BKJD)





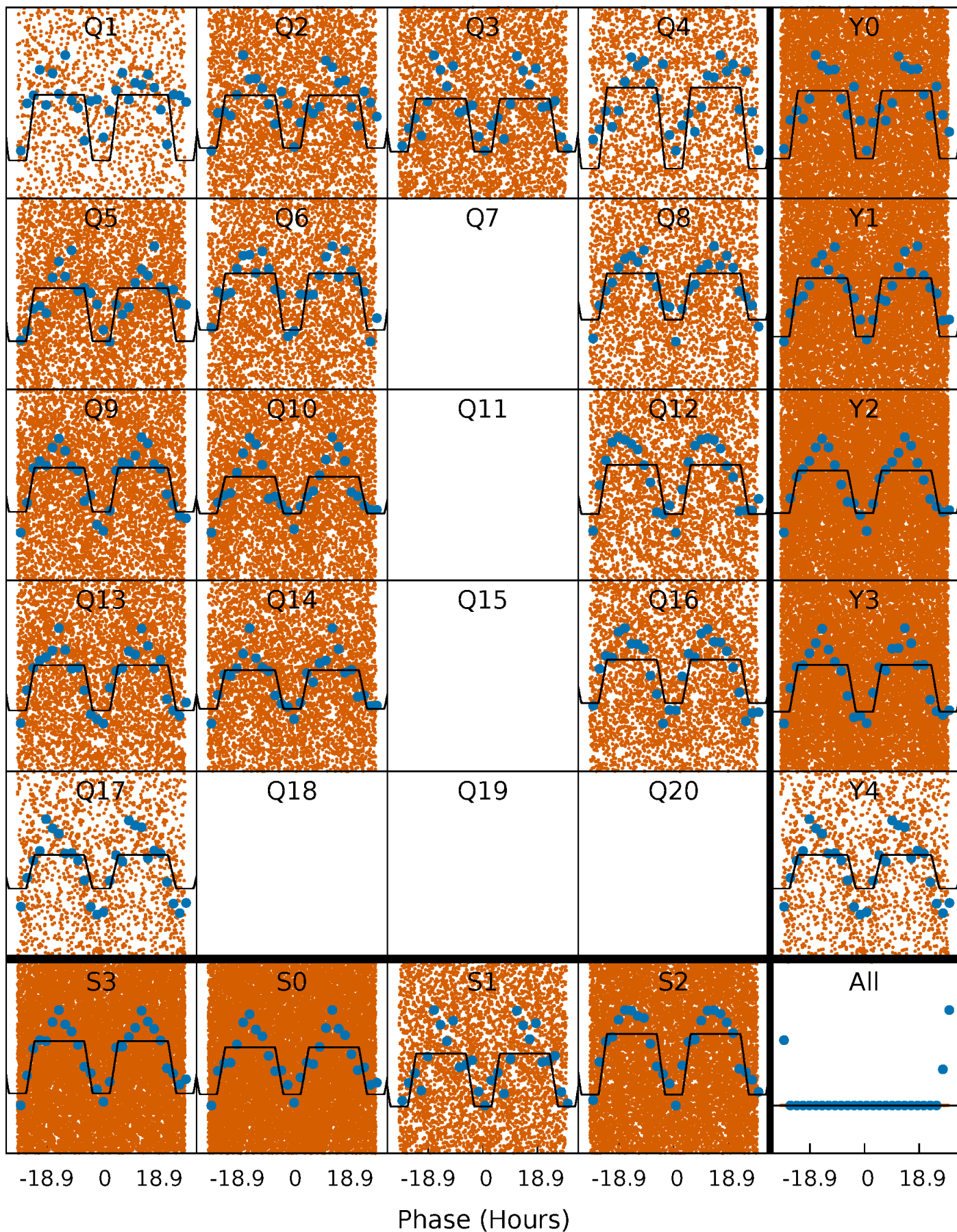
# DV Quarter-Phased Transit Curves

TCE 010093664-01 P= 1.207023 Days  $T_0=132.519403$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 010093664-01   P= 1.207065 Days    $T_0=132.570564$  (BKJD)

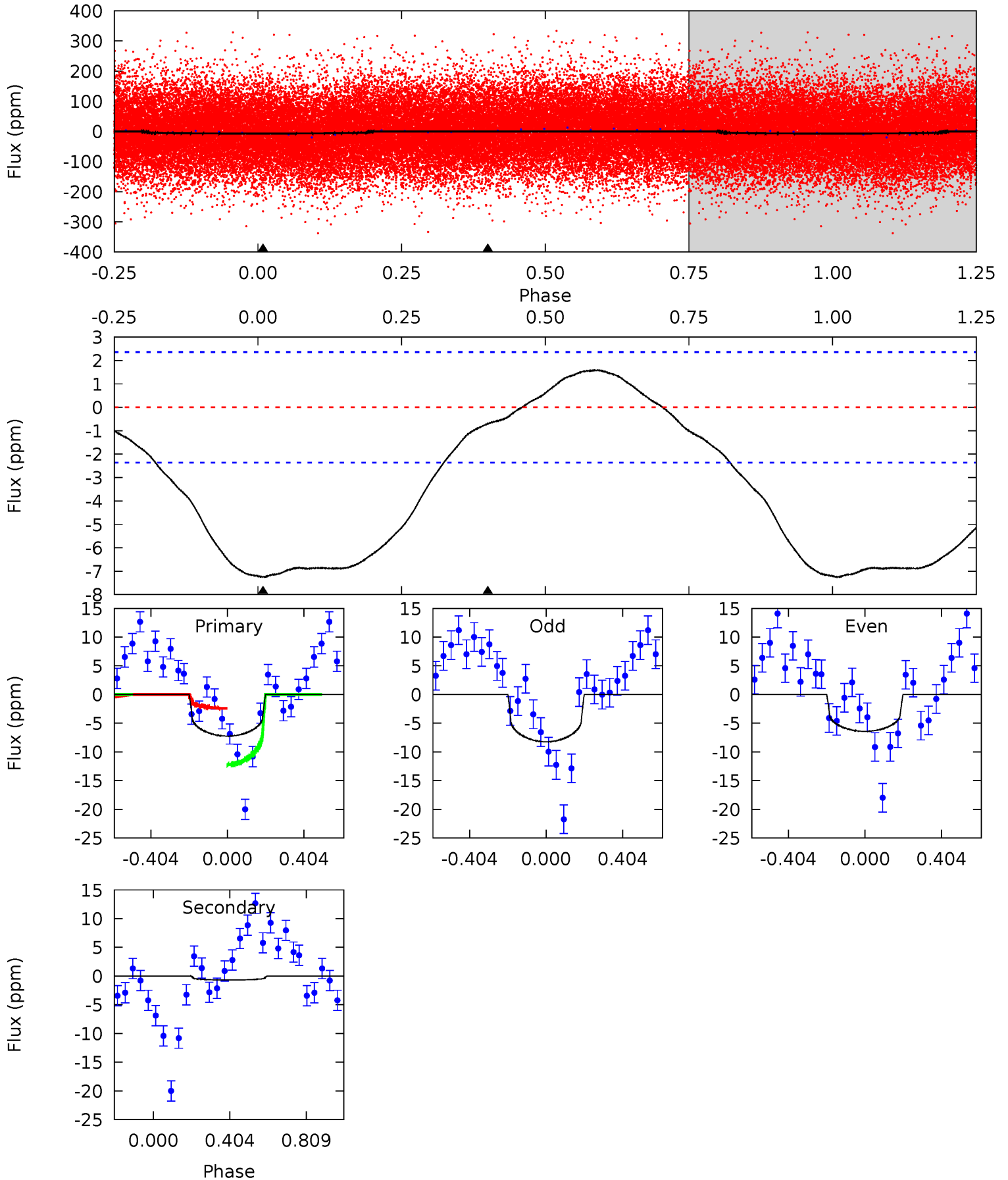




# DV Model-Shift Uniqueness Test

010093664-01, P = 1.207023 Days, E = 131.312380 Days

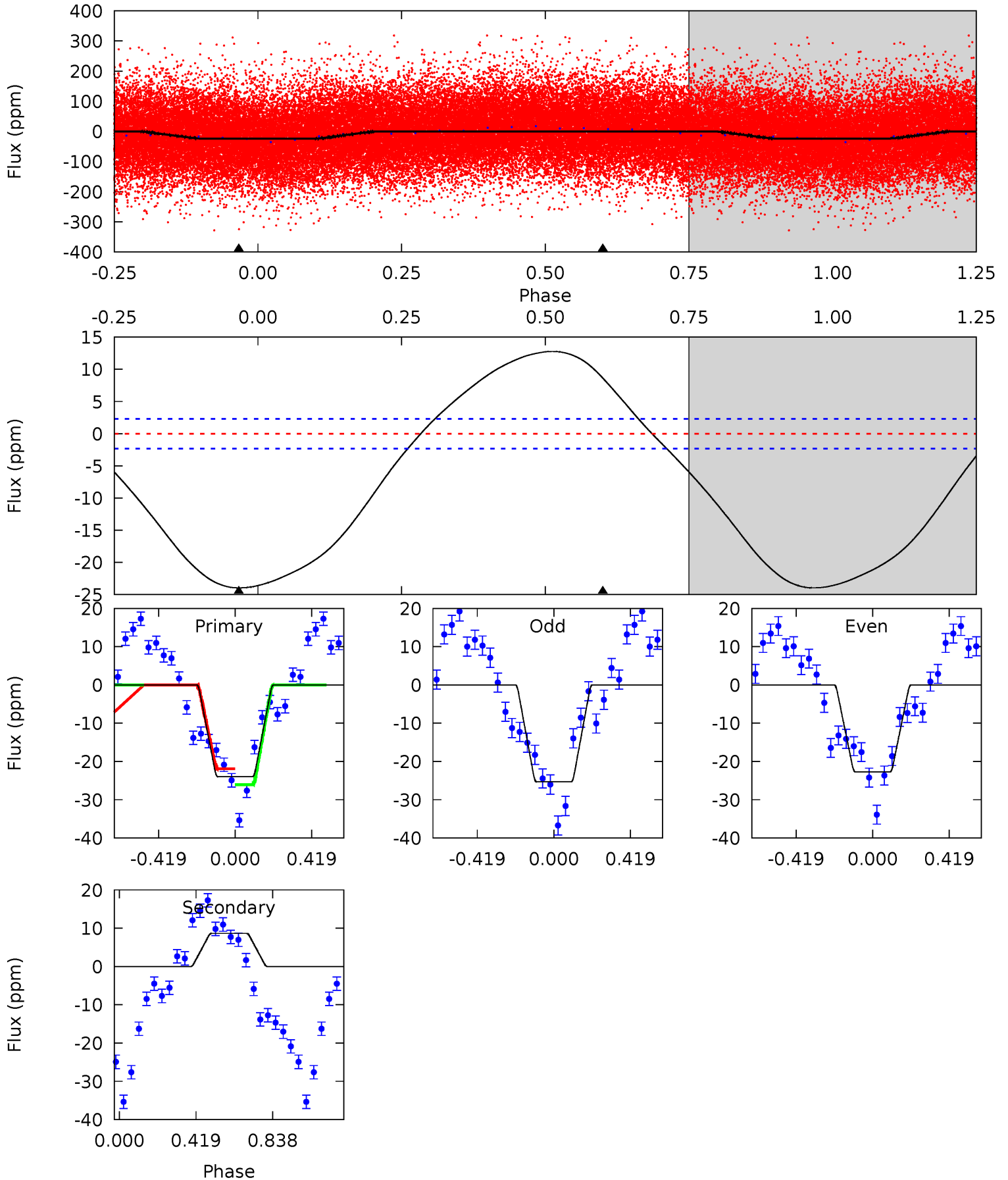
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	1.26	0	0	4.26	0.83	1.04	13.1	13.1	1.26	1.26	1.64	1.13	0.18	8.81



# Alt Model-Shift Uniqueness Test

010093664-01, P = 1.207065 Days, E = 131.363499 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
44.0	-15.9	0	0	4.25	0.81	5.24	44.0	44.0	-15.9	-15.9	2.37	0.95	0.35	3.72





### Stellar Parameters For KIC 010093664

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7331^{+228}_{-330}$	$4.041^{+0.170}_{-0.170}$	$0.040^{+0.200}_{-0.350}$	$2.041^{+0.532}_{-0.478}$	$1.668^{+0.193}_{-0.289}$	$0.276^{+0.260}_{-0.135}$
	+3%/-5%	+4%/-4%	+500%/-875%	+26%/-23%	+12%/-17%	+94%/-49%
Source	KIC0	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 010093664-01 / KOI 7285.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-1 \pm 1$	$0.72^{+0.68}_{-0.47}$	$3983^{+287}_{-304}$	$3171^{+2838}_{-6721}$	$0.429^{+3.490}_{-0.369}$
Alt.	$9 \pm 1$	$1.24^{+0.75}_{-0.72}$	$3981^{+308}_{-287}$	$-5483^{+868}_{-2950}$	$-2.145^{+1.326}_{-9.554}$

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

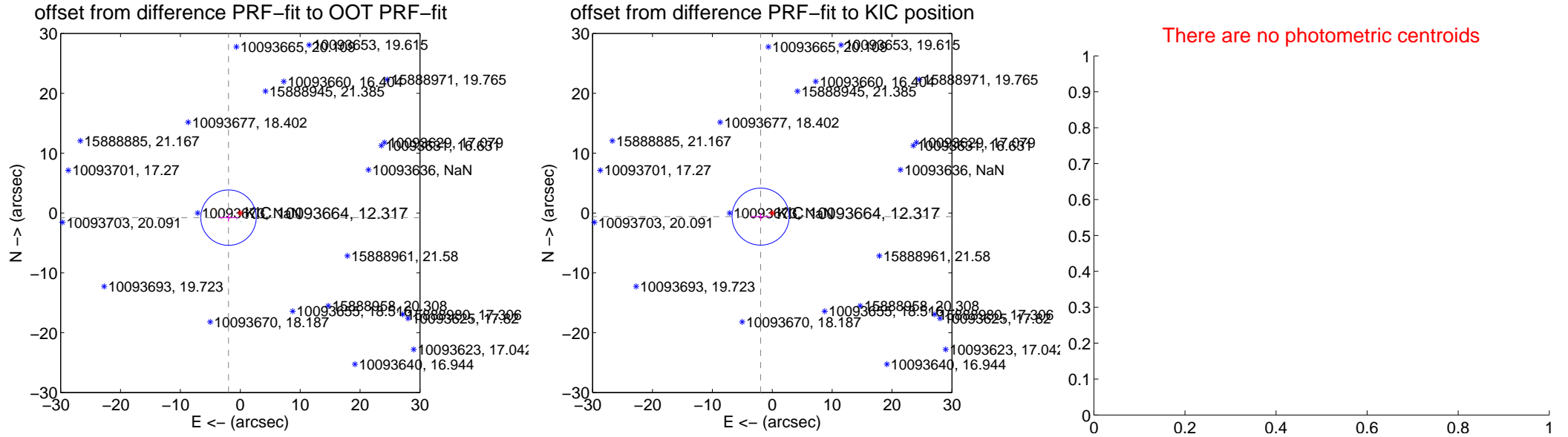
## DV Centroid Data

Supplemental centroid analysis for 010093664-01. Kepler magnitude: 12.32. Transit SNR 4.22

There are 2 quarters with good PRF difference image offsets

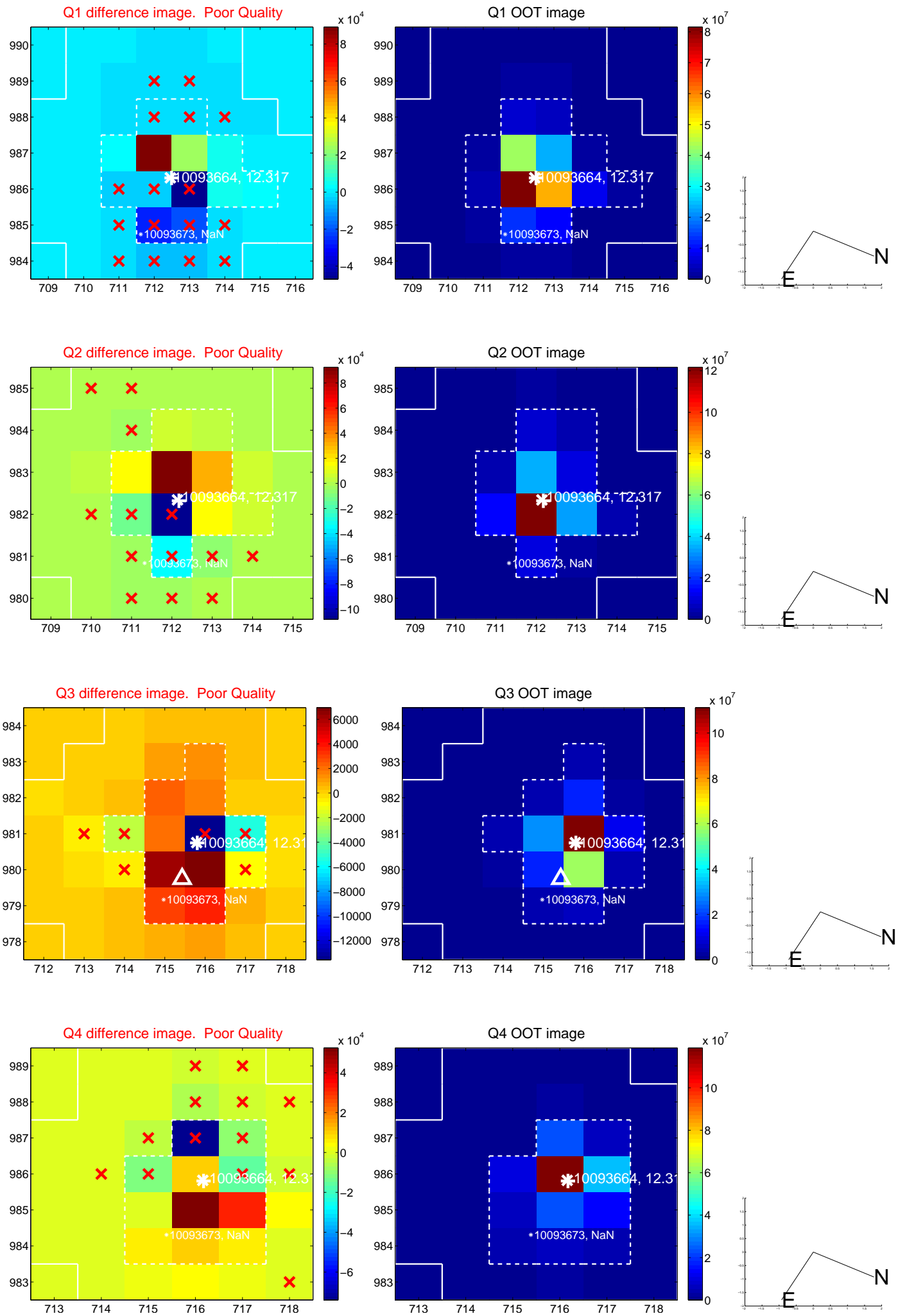
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.112 \pm 1.542$	1.37	$1.966 \pm 1.635$	$-0.770 \pm 0.674$
PRF-fit source offset from KIC position	$2.034 \pm 1.588$	1.28	$1.942 \pm 1.652$	$-0.603 \pm 0.620$
photometric centroid source offset	—	—	—	—

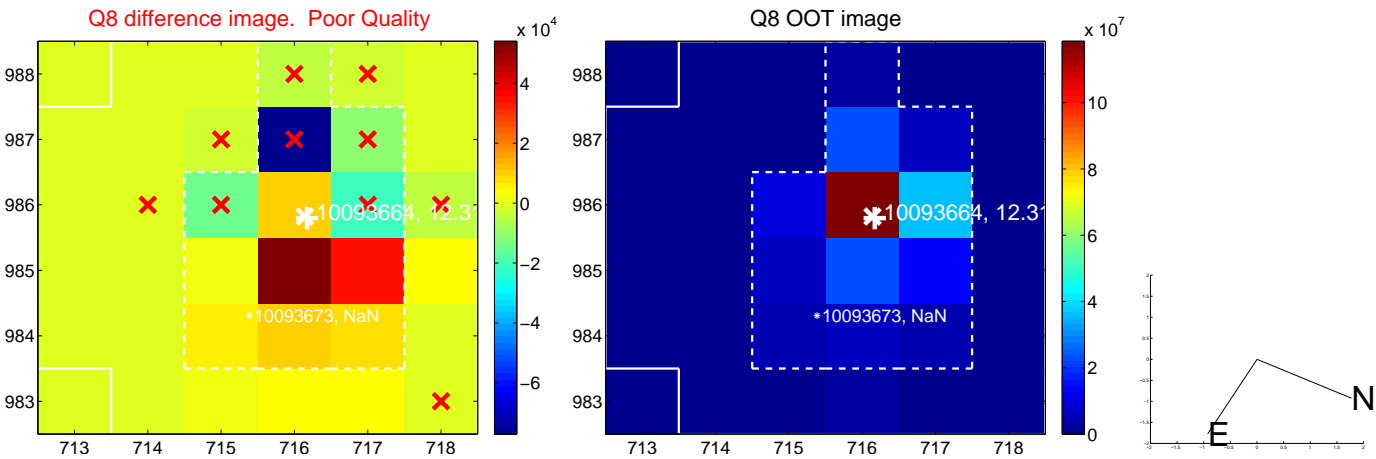
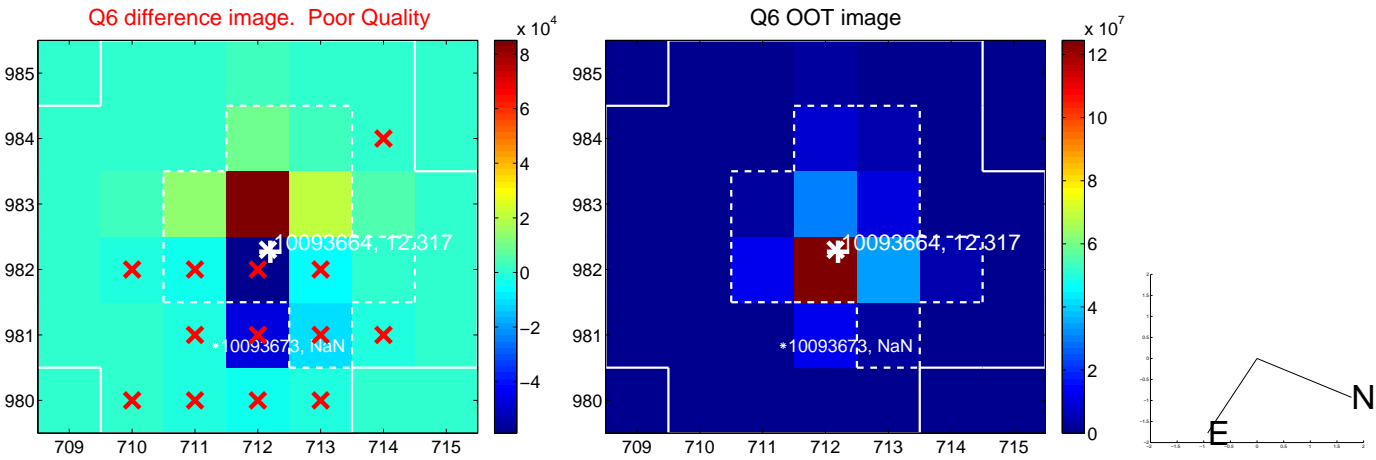
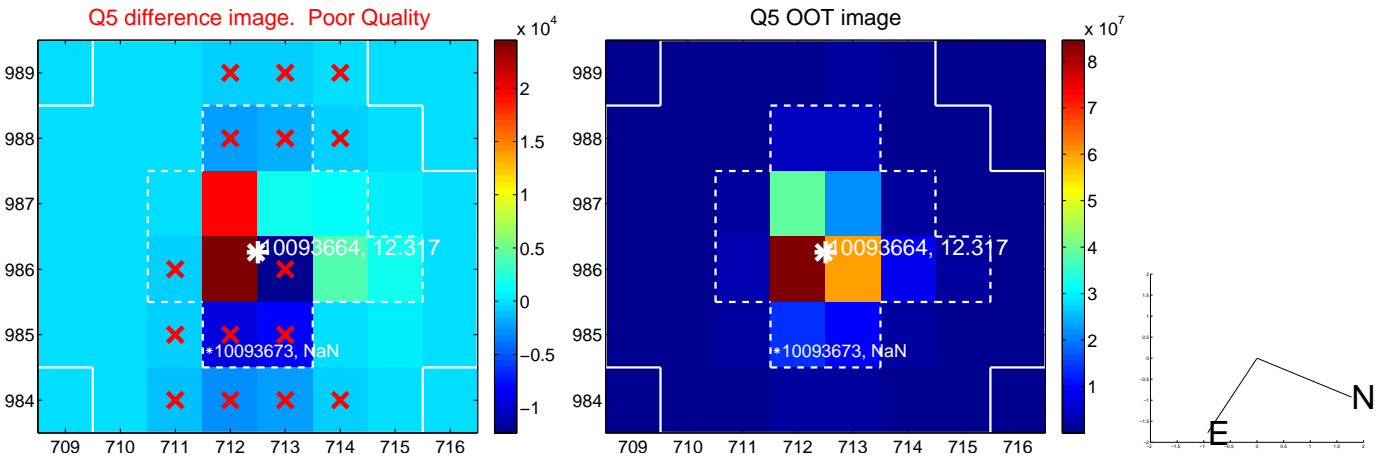


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

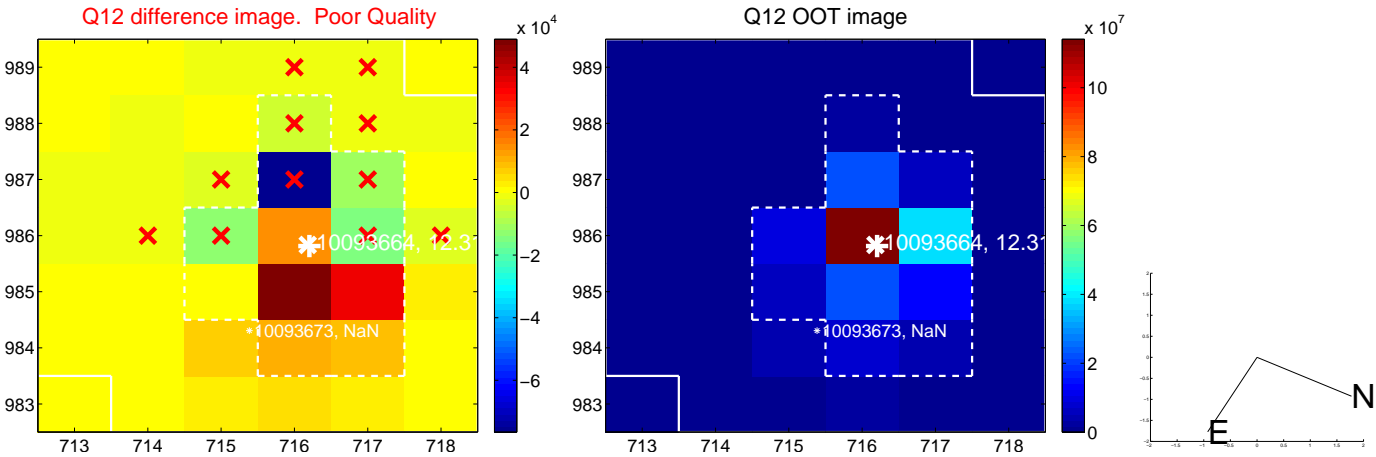
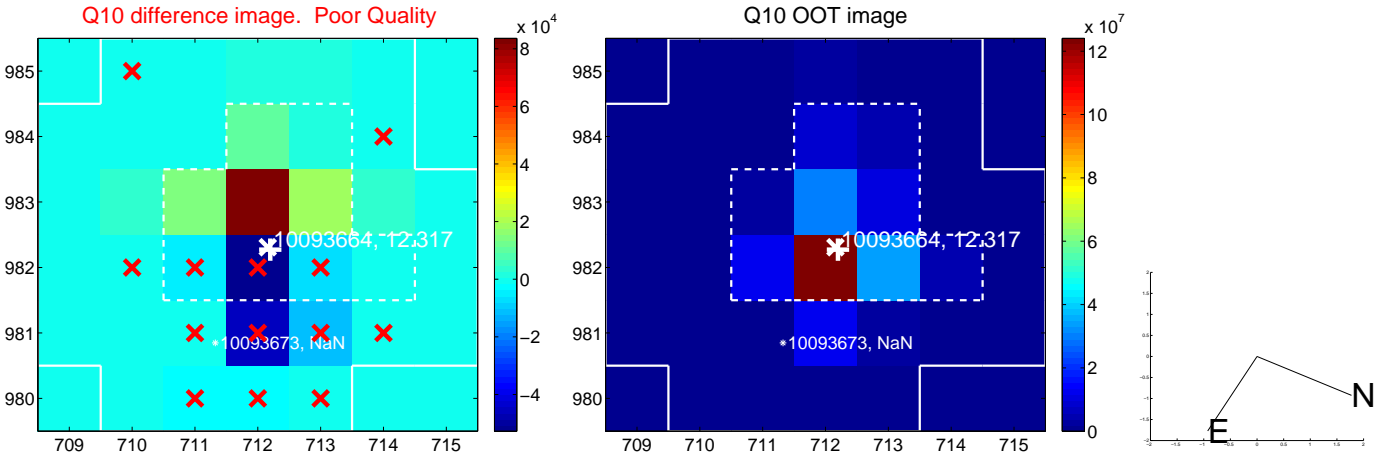
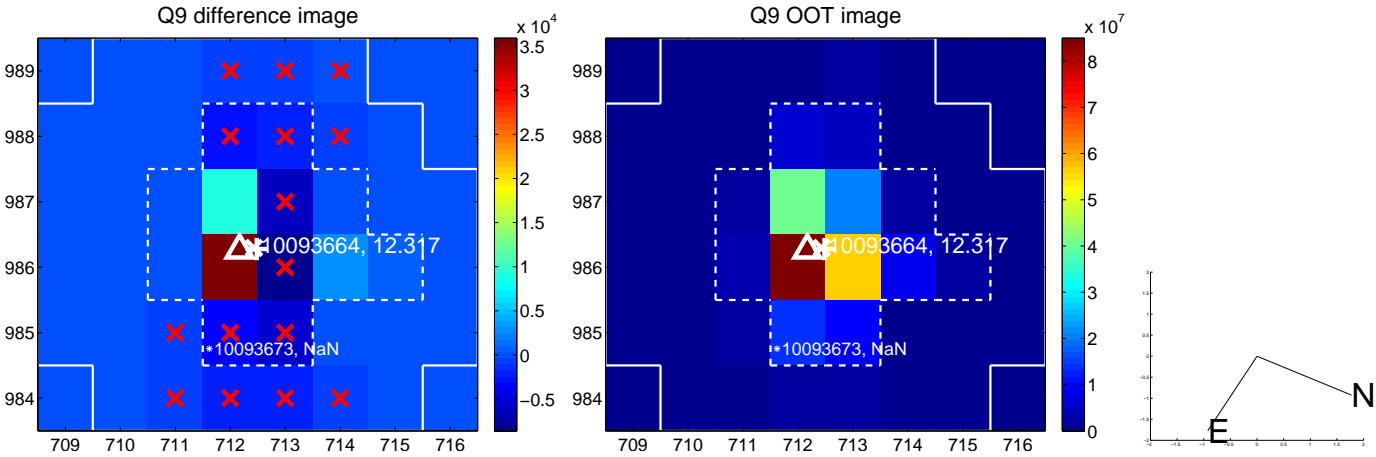


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

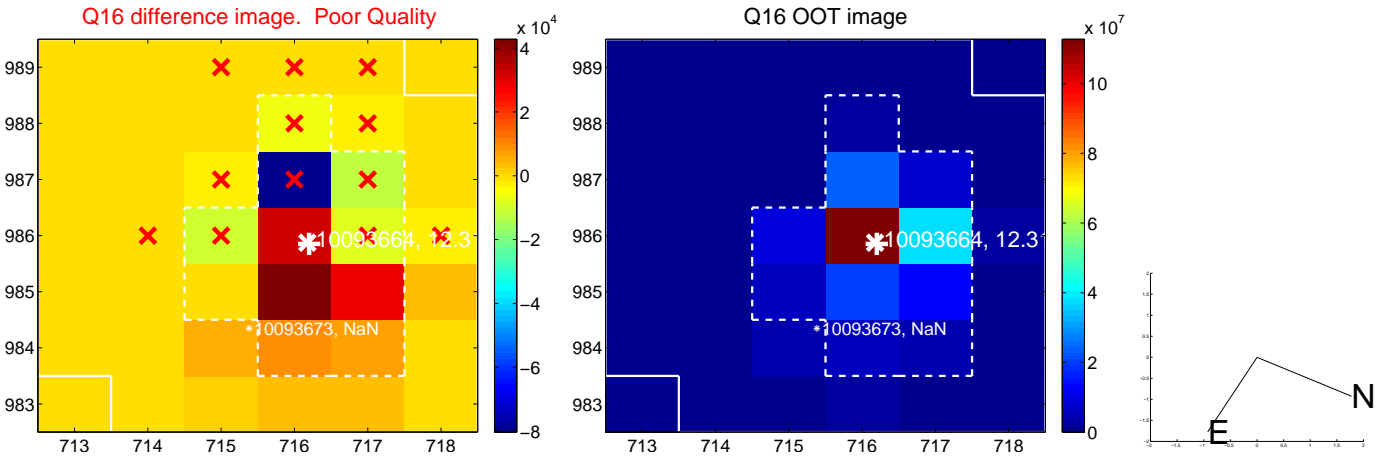
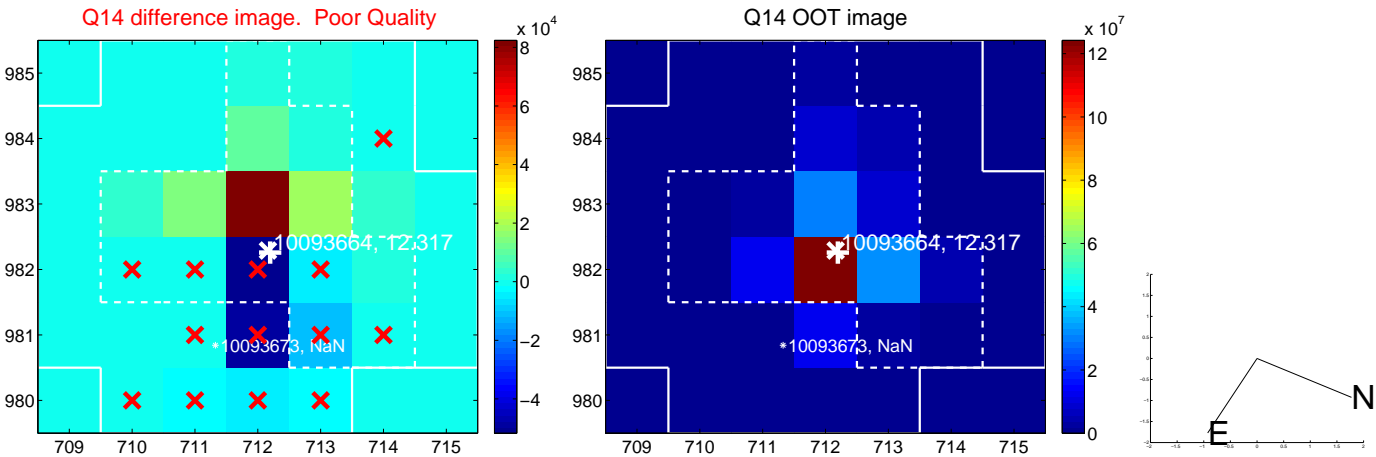
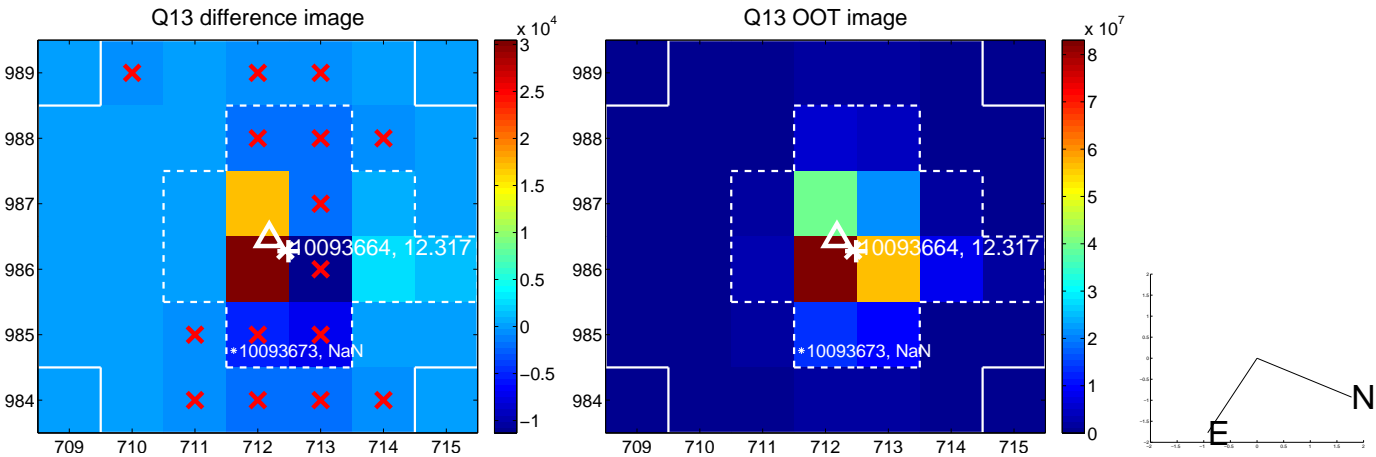




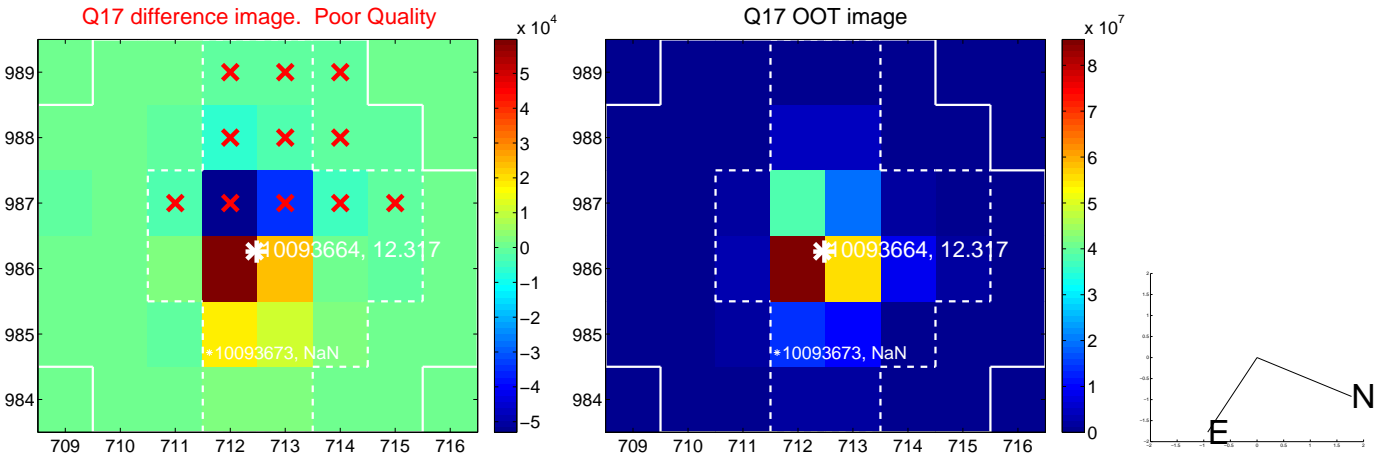
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folded centroid time series figure for this object.

UKIRT Image

