

# KIC 010484817

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010484817-01	OBS	No	3.341599	133.170483	17.5	26.282	8.9	12.7	2.54	8584	1.18	9826.16

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010484817-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

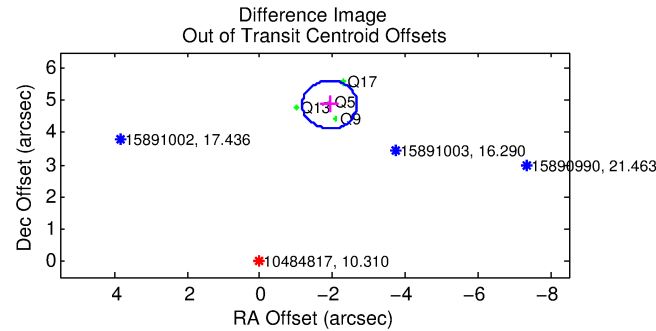
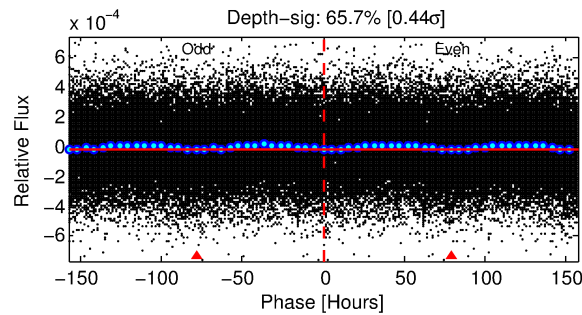
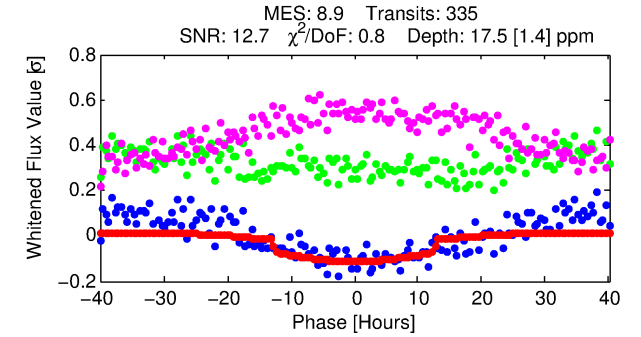
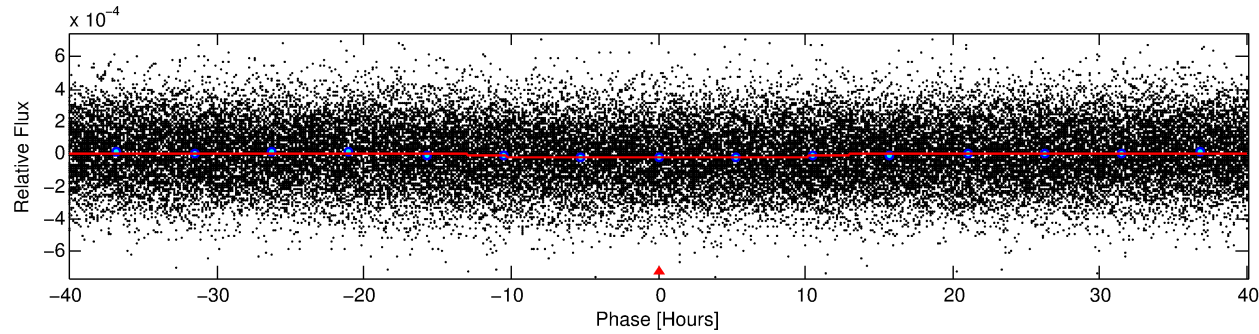
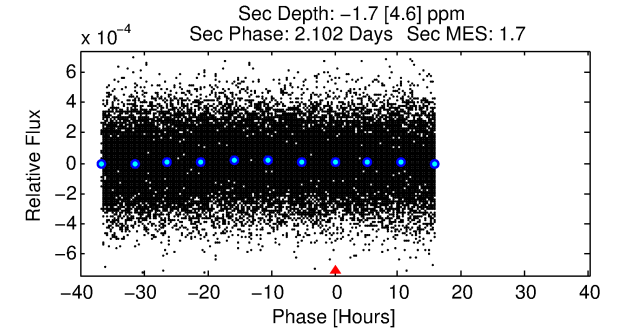
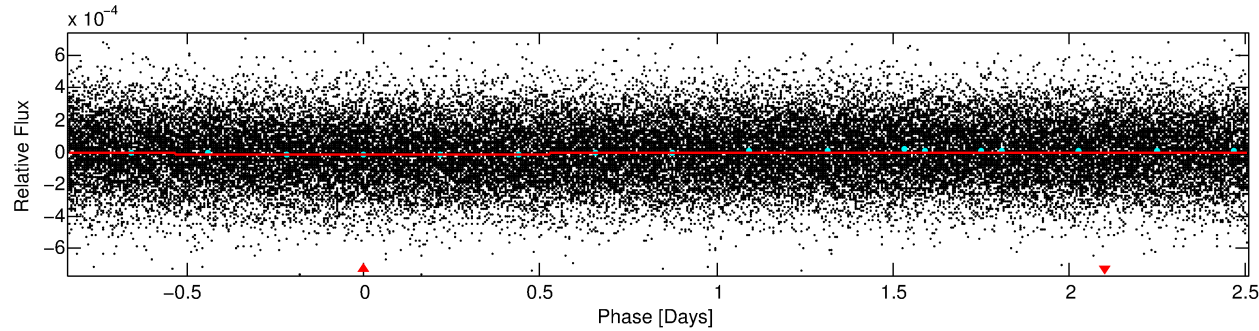
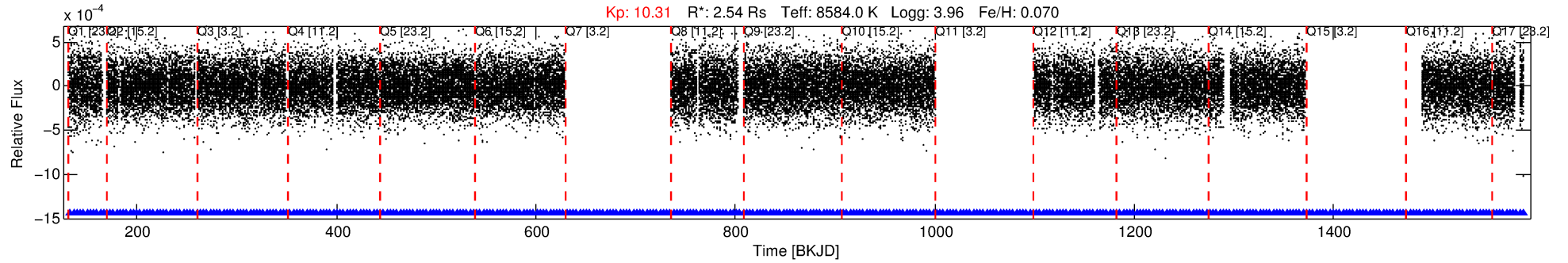
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010484817-01

No Significant Match Found

# DV One-Page Summary

KIC: 10484817 Candidate: 1 of 1 Period: 3.342 d



## DV Fit Results:

Period =  $3.34160 [0.00011] \text{ d}$   
Epoch =  $133.1705 [0.0208] \text{ BKJD}$   
 $R_p/R^* = 0.0043 [0.0012]$   
 $a/R^* = 1.06 [0.23]$   
 $b = 0.83 [0.74]$   
 $\text{Seff} = 9826.16 [4175.21]$   
 $T_{\text{eq}} = 2539 [270] \text{ K}$   
 $R_p = 1.18 [0.50] R_e$   
 $a = 0.0565 [0.0148] \text{ AU}$   
 $\text{Ag} = \text{N/A}$   
 $T_{\text{effp}} = \text{N/A}$

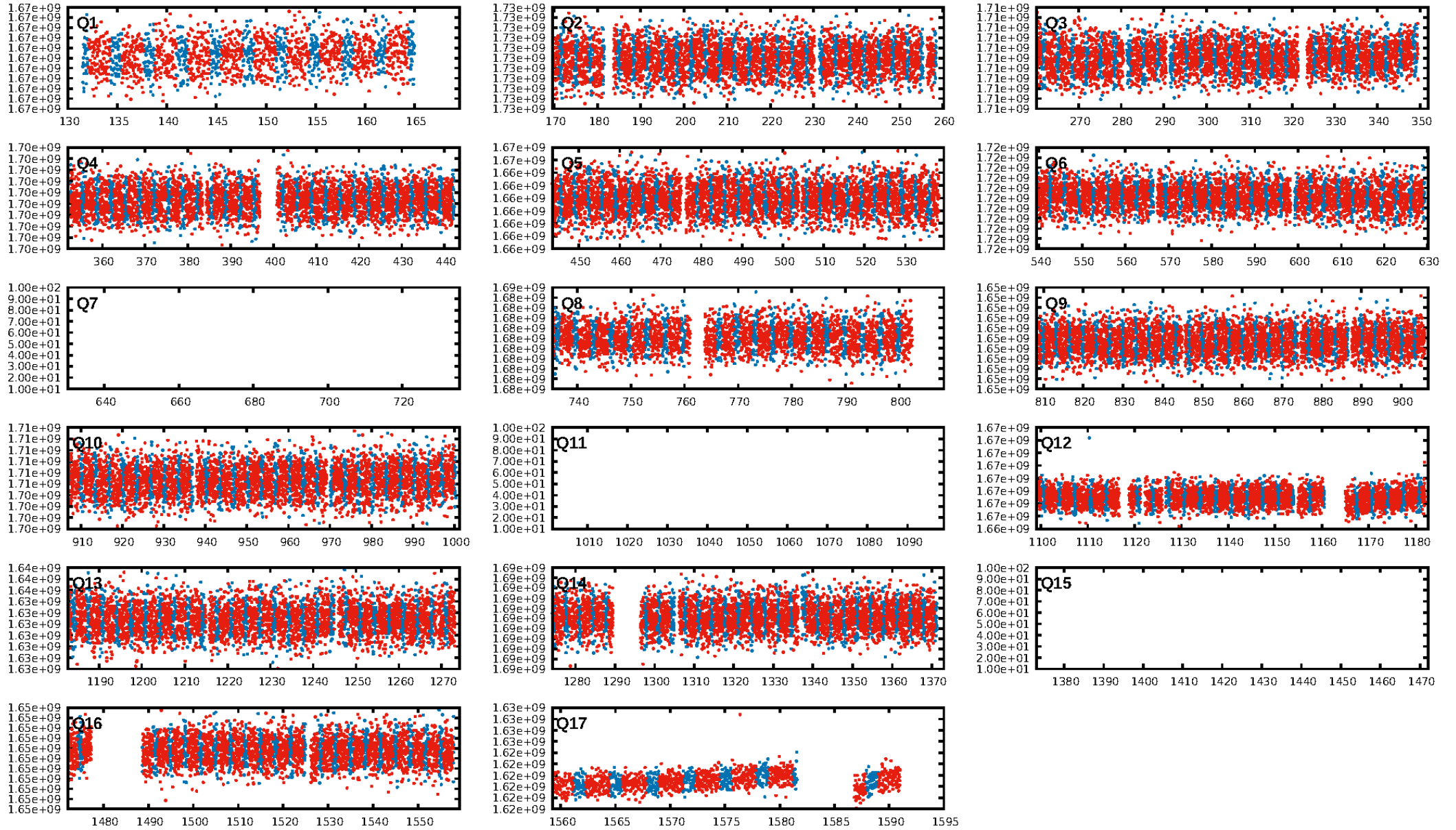
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [316/316]  
GhostDiagnostic-chr: 0.9475  
Centroid-sig: 0.0%  
Centroid-so:  $4.783 \text{ arcsec} [5.37\sigma]$   
OotOffset-rm:  $5.237 \text{ arcsec} [20.93\sigma]$   
KicOffset-rm:  $5.189 \text{ arcsec} [18.38\sigma]$   
OotOffset-st:  $0/0/0/4 [4]$   
KicOffset-st:  $0/0/0/4 [4]$   
DiffImageQuality-fgm: 0.25 [1/4]  
DiffImageOverlap-fno: 1.00 [14/14]

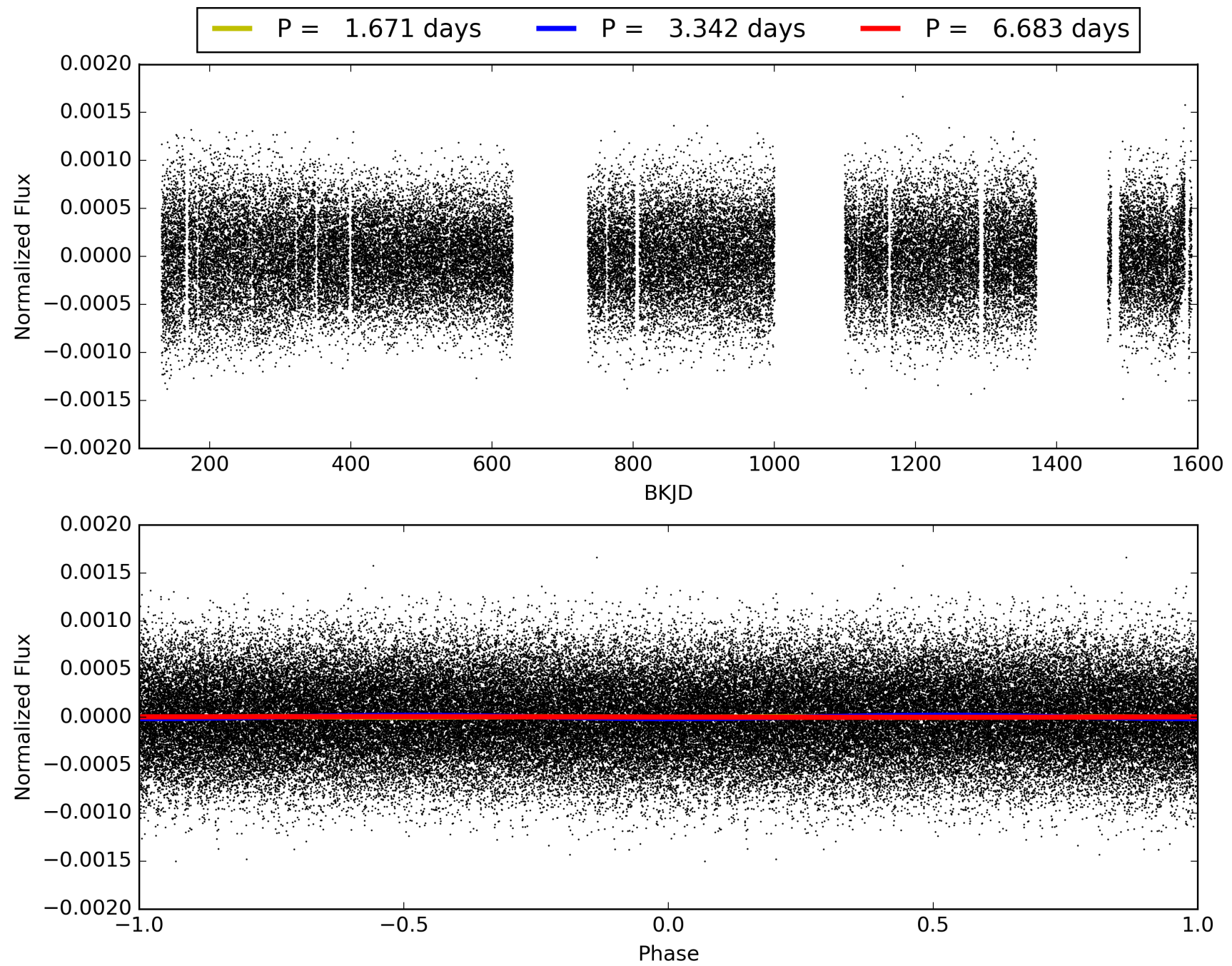
Software Revision: [svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958](https://svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958) -- Date Generated: 28-Jan-2016 20:58:43 Z

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

# TCE 010484817-01, PDC Light Curves



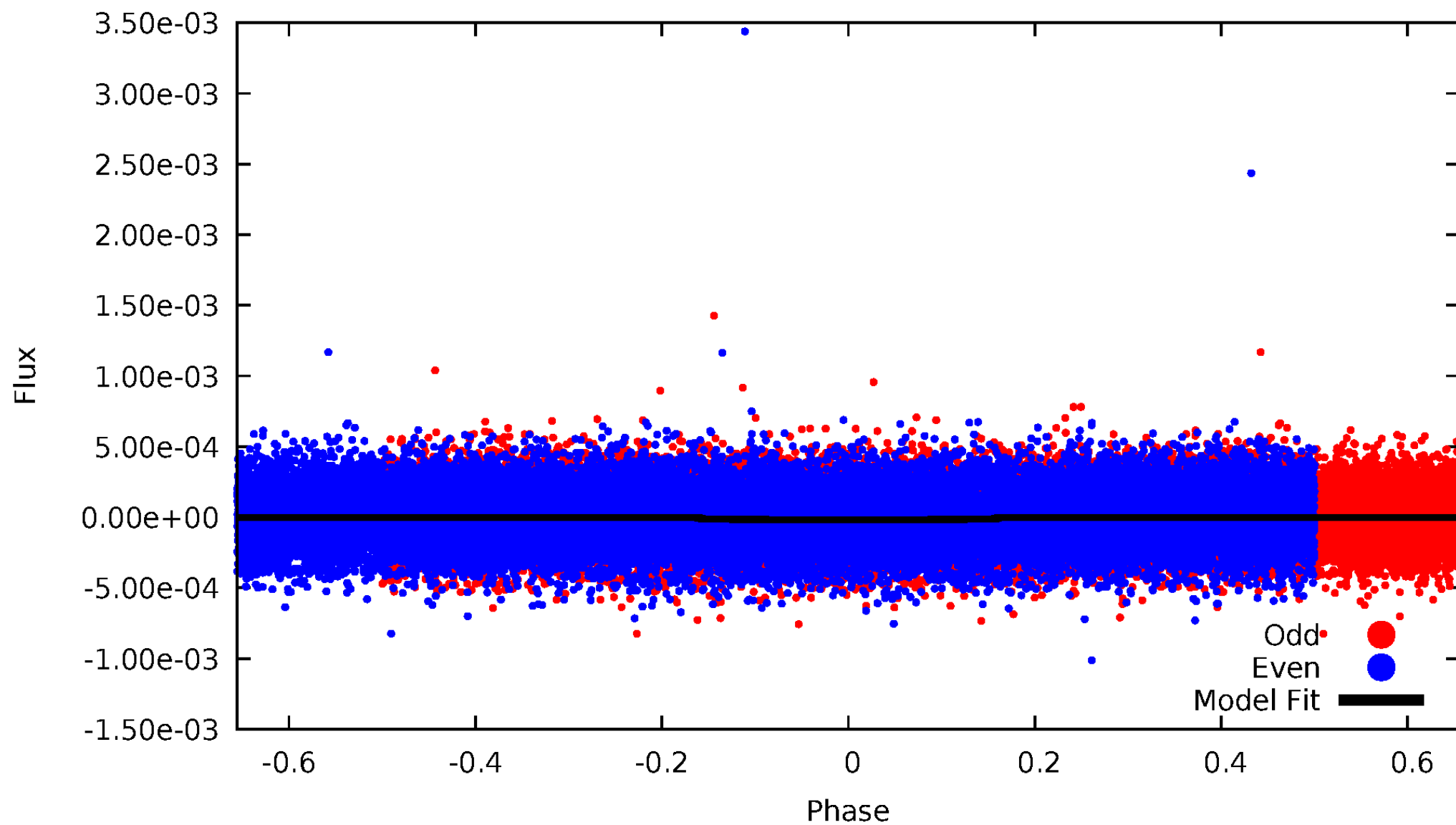
TCE 010484817-01





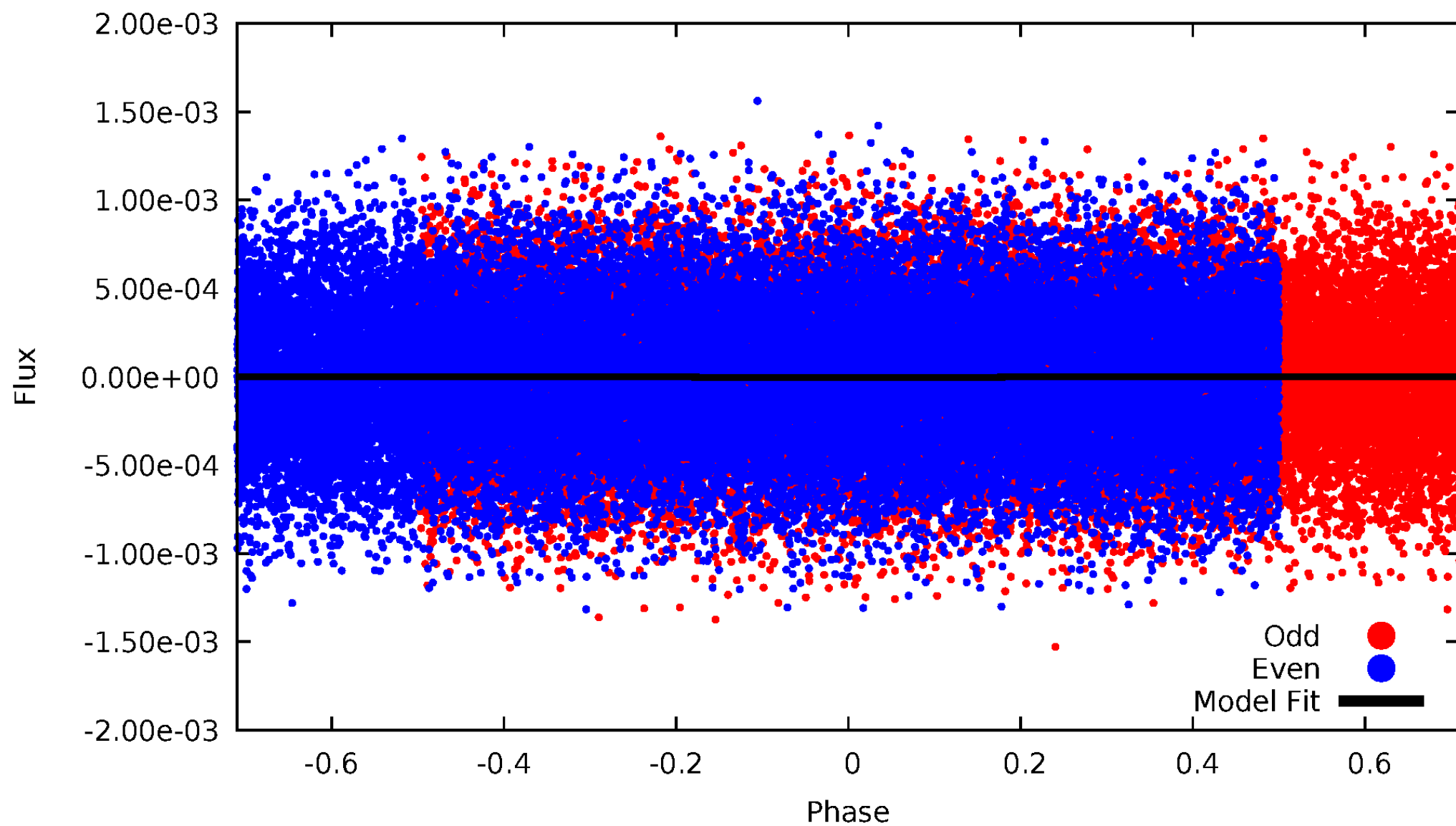
# DV Odd/Even

TCE 010484817-01



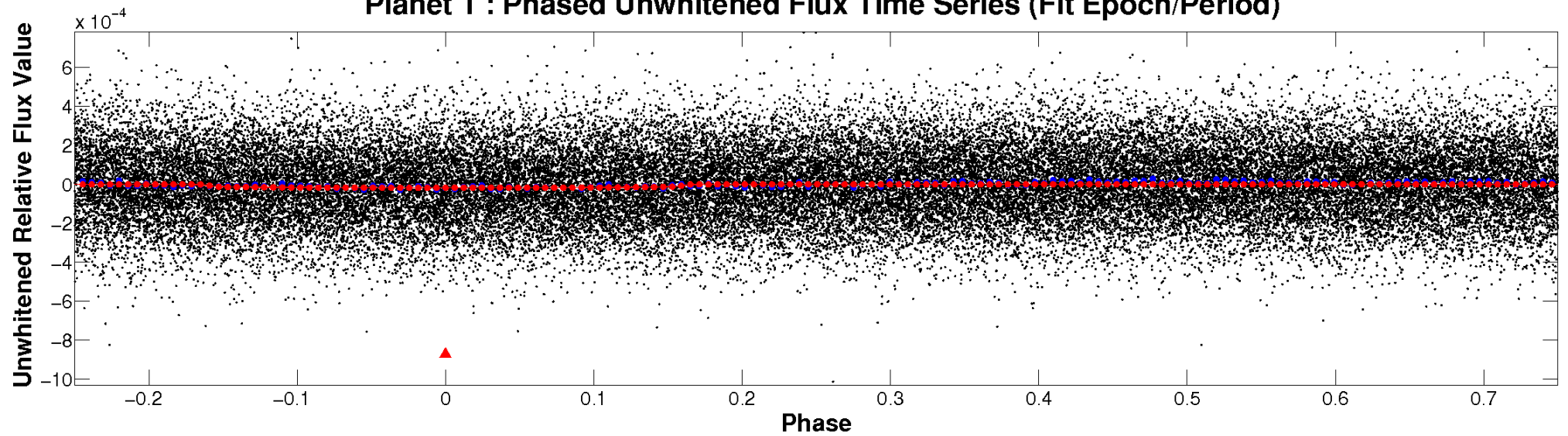
# ALT Odd/Even

TCE 010484817-01

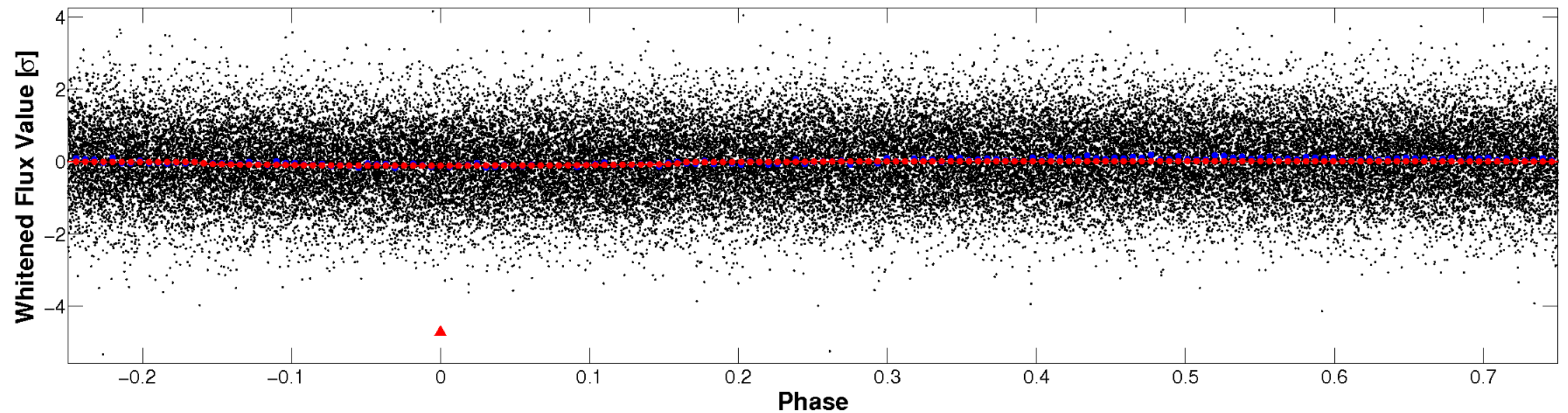


# Non-Whitened Vs. Whitened Light Curve

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

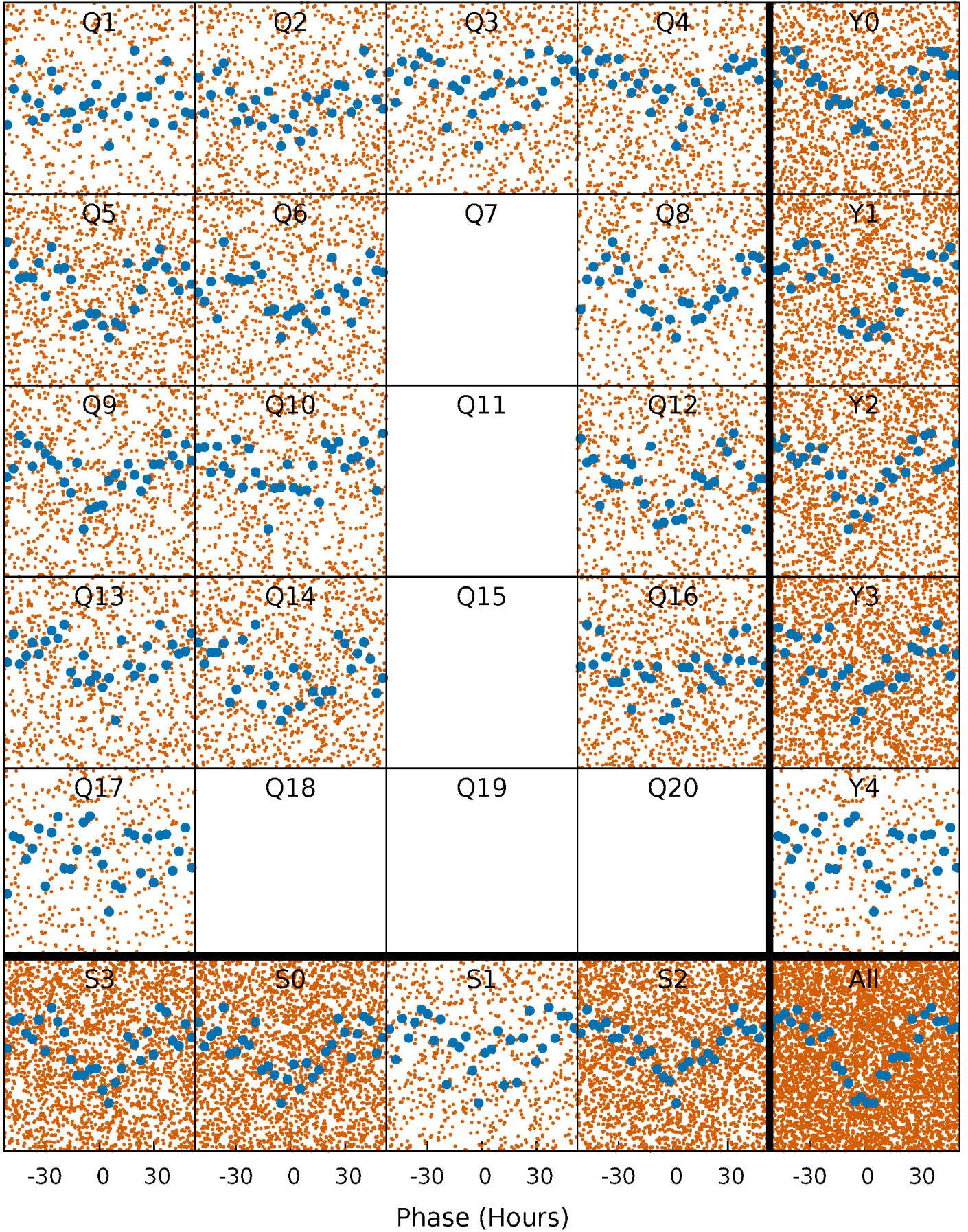


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

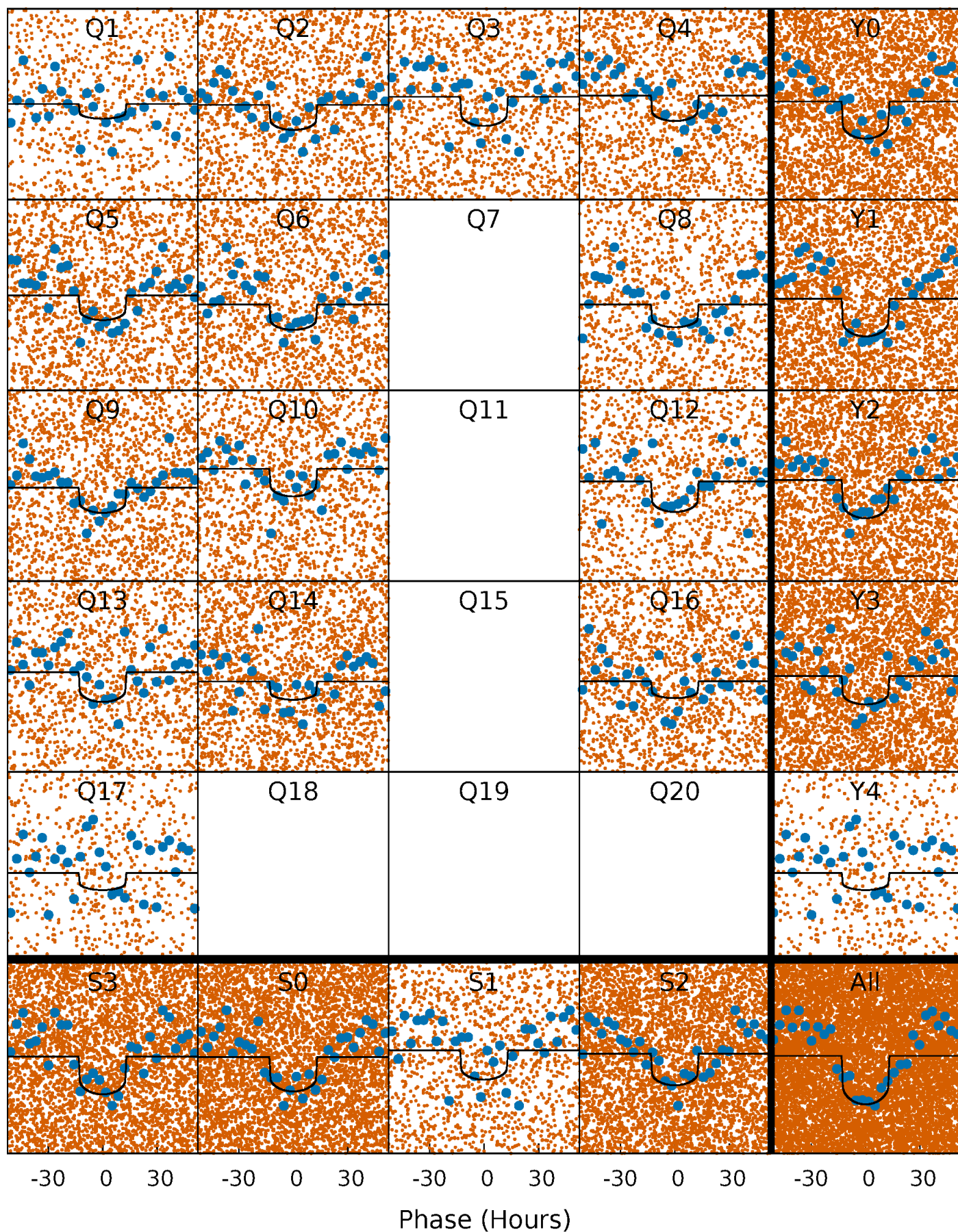
TCE 010484817-01   P= 3.341599 Days    $T_0=133.170483$  (BKJD)





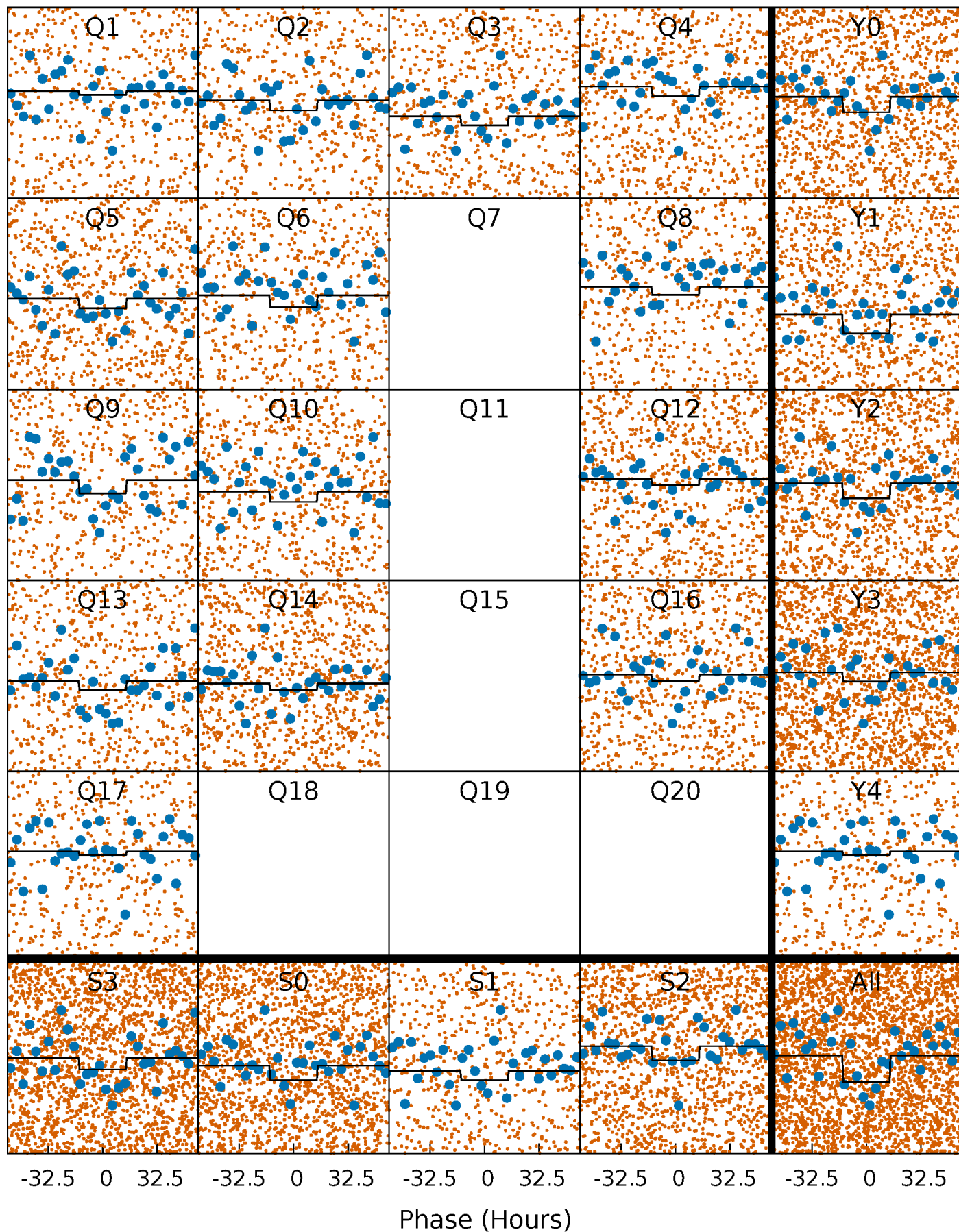
# DV Quarter-Phased Transit Curves

TCE 010484817-01 P= 3.341599 Days  $T_0=133.170483$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

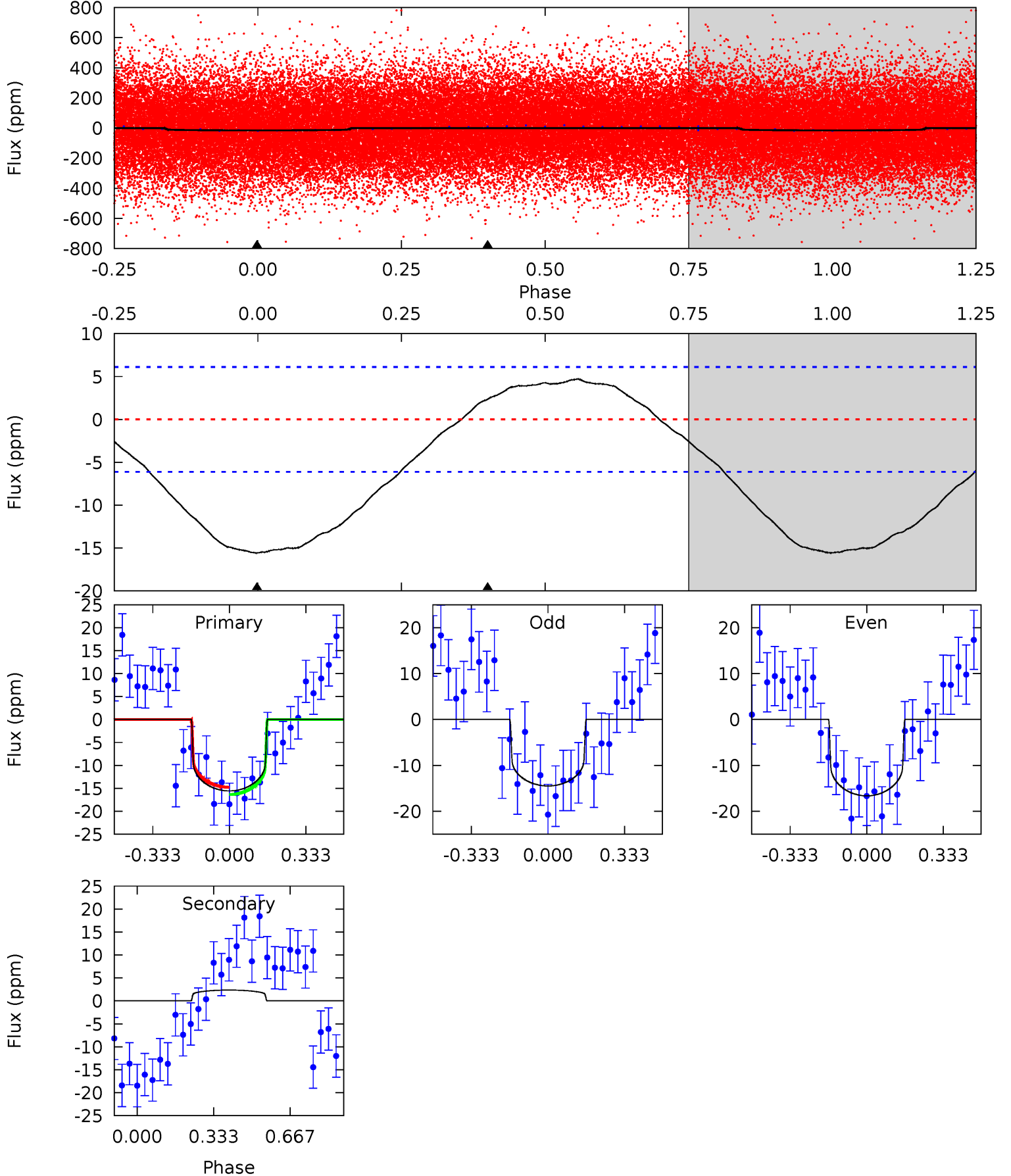
TCE 010484817-01 P= 3.341323 Days  $T_0=133.157715$  (BKJD)



# DV Model-Shift Uniqueness Test

010484817-01, P = 3.341599 Days, E = 129.828884 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
11.0	-1.66	0	0	4.31	0.97	1.09	11.0	11.0	-1.66	-1.66	0.76	1.11	0.23	0.55

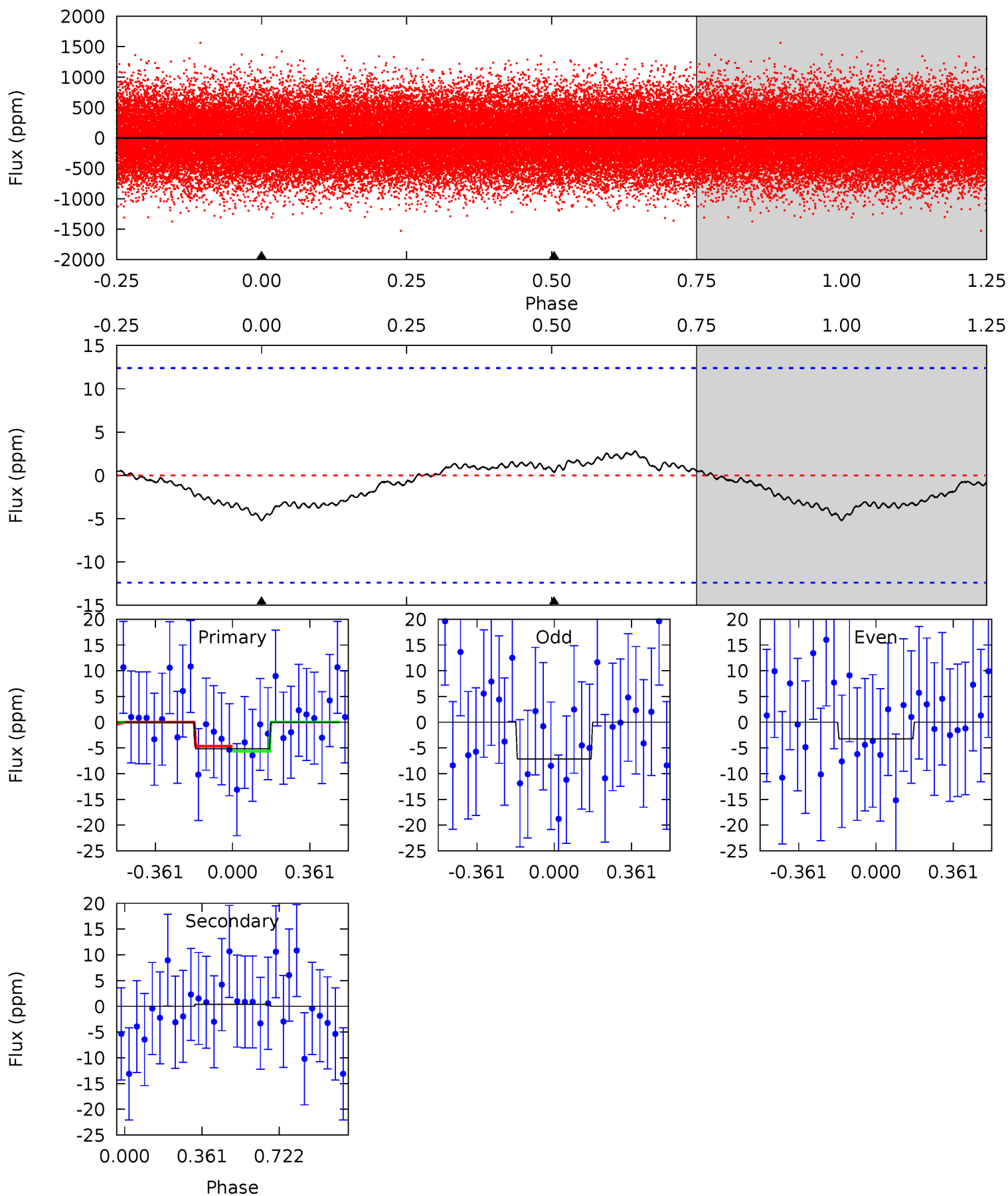




# Alt Model-Shift Uniqueness Test

010484817-01, P = 3.341323 Days, E = 129.816392 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
1.79	-0.14	0	0	4.29	0.91	0.22	1.79	1.79	-0.14	-0.14	0.67	2.17	0.35	0.17





### Stellar Parameters For KIC 010484817

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8584^{+234}_{-402}$	$3.962^{+0.209}_{-0.152}$	$0.070^{+0.250}_{-0.500}$	$2.541^{+0.786}_{-0.786}$	$2.159^{+0.332}_{-0.540}$	$0.185^{+0.273}_{-0.084}$
	+3%/-5%	+5%/-4%	+357%/-714%	+31%/-31%	+15%/-25%	+147%/-46%
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 010484817-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$2 \pm 1$	$1.14^{+0.40}_{-0.35}$	$3482^{+275}_{-297}$	$-4994^{+775}_{-1030}$	$-2.927^{+1.898}_{-4.125}$
Alt.	$0 \pm 3$	$0.60^{+0.37}_{-0.29}$	$3499^{+272}_{-302}$	$-4882^{+11737}_{-4139}$	$-2.546^{+16.077}_{-25.935}$

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

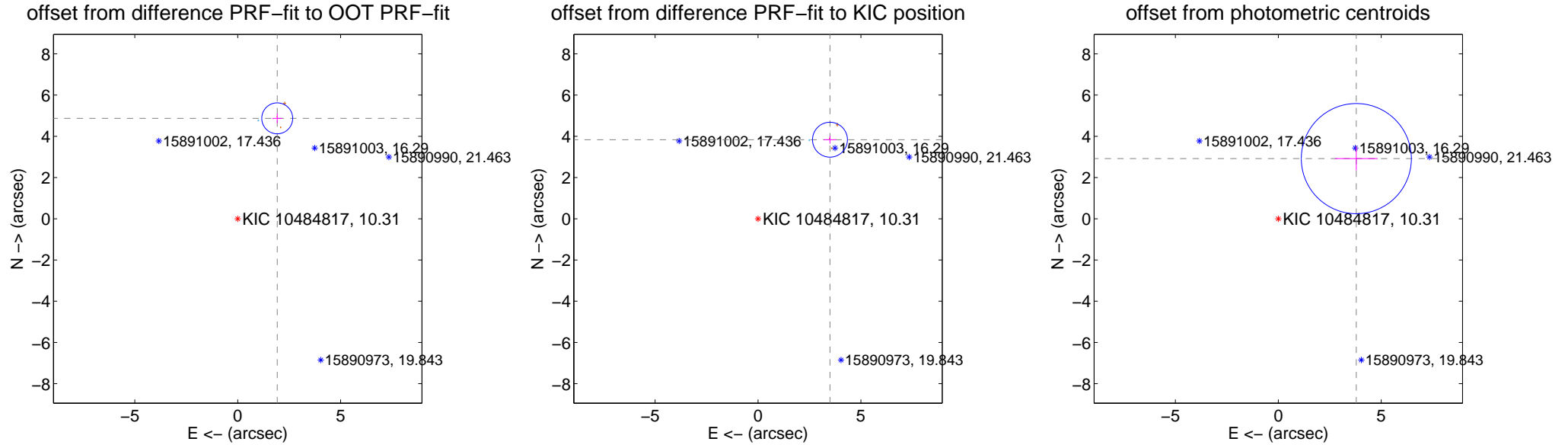
## DV Centroid Data

Supplemental centroid analysis for 010484817-01. **Kepler magnitude: 10.31.** Transit SNR 12.66

**There are 1 quarters with good PRF difference image offsets**

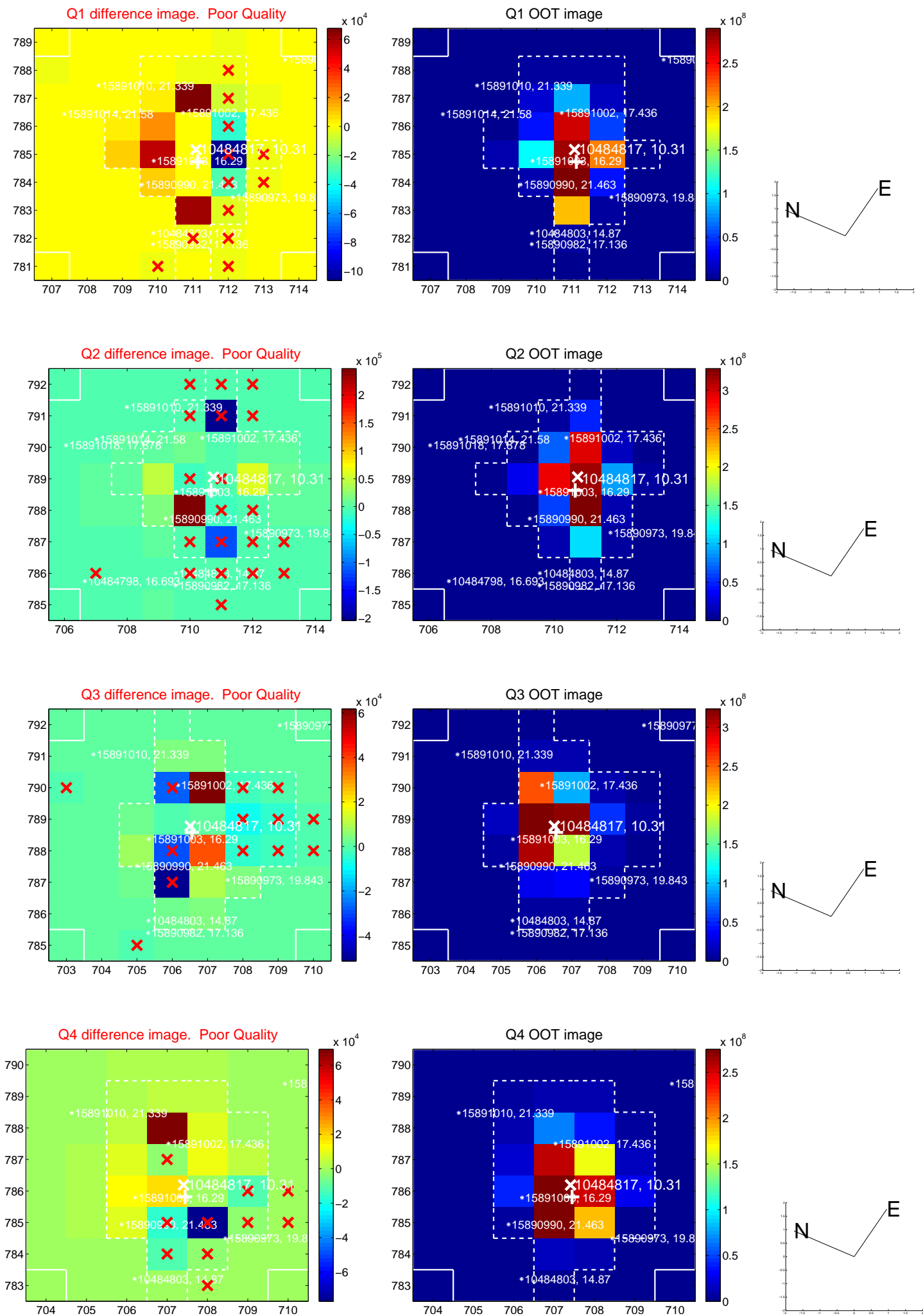
The direct PRF centroid is offset from the target star catalog position by about 1.88 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>5.237 \pm 0.250</math></b>	<b>20.93</b>	$-1.919 \pm 0.236$	$4.872 \pm 0.230$
PRF-fit source offset from KIC position	<b><math>5.189 \pm 0.282</math></b>	<b>18.38</b>	$-3.495 \pm 0.305$	$3.836 \pm 0.191$
photometric centroid source offset	<b><math>4.78 \pm 0.89</math></b>	<b>5.37</b>	$-3.79 \pm 1.03$	$2.92 \pm 0.57$

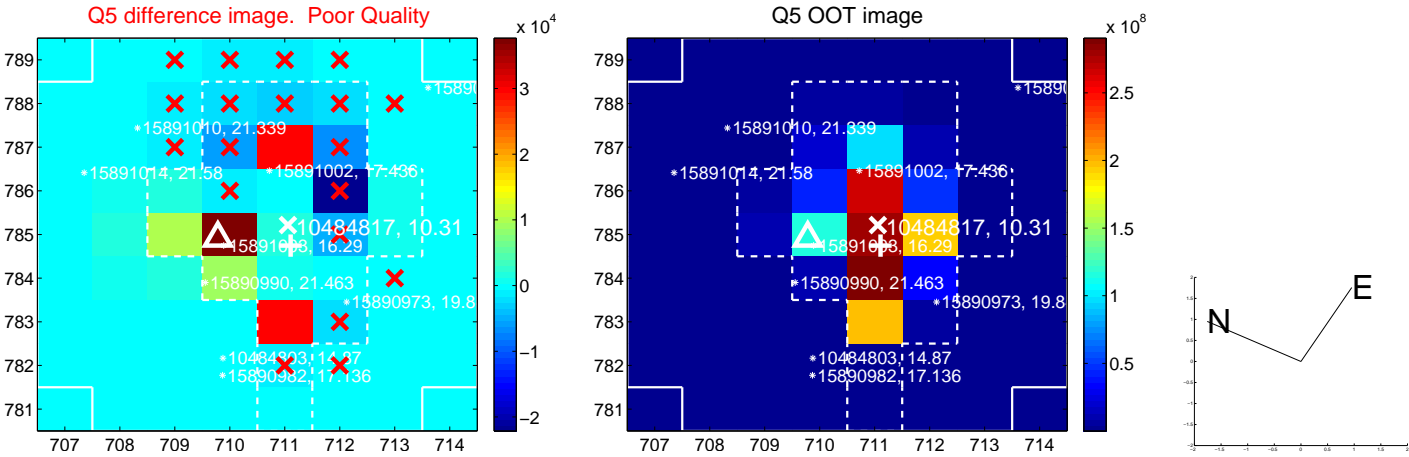


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

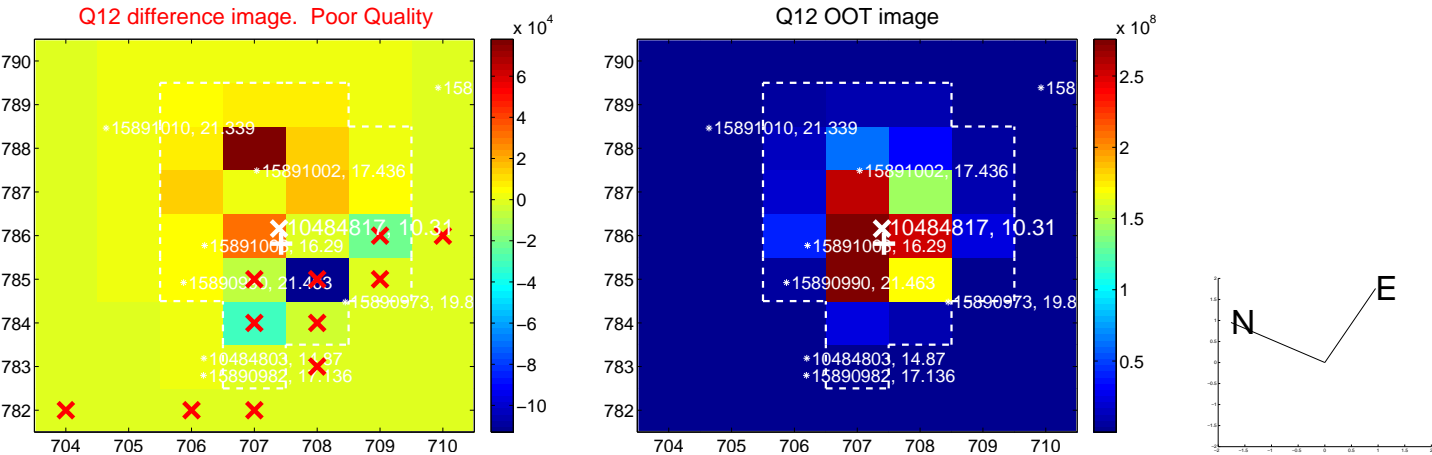
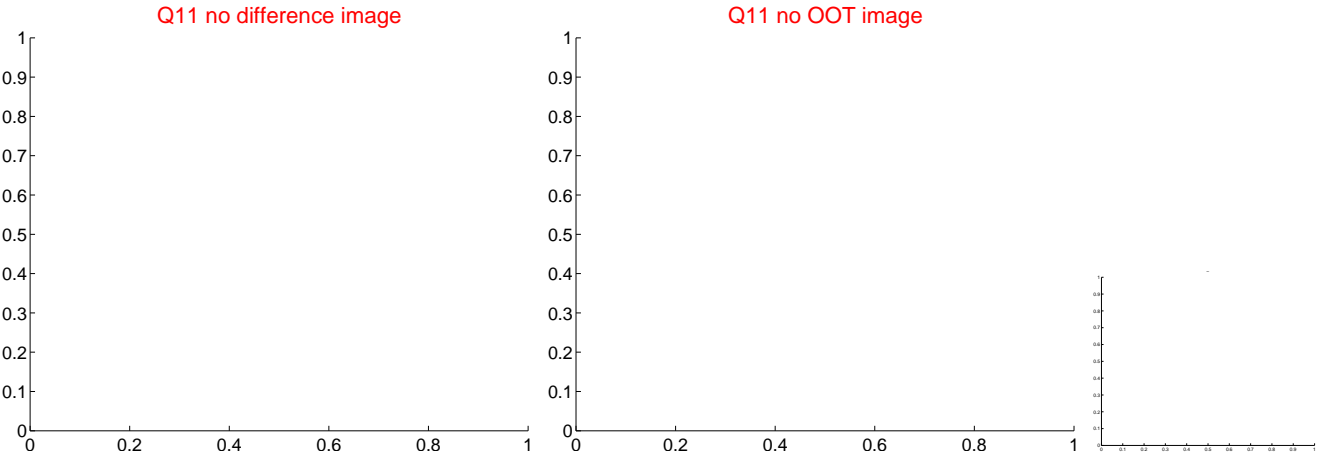
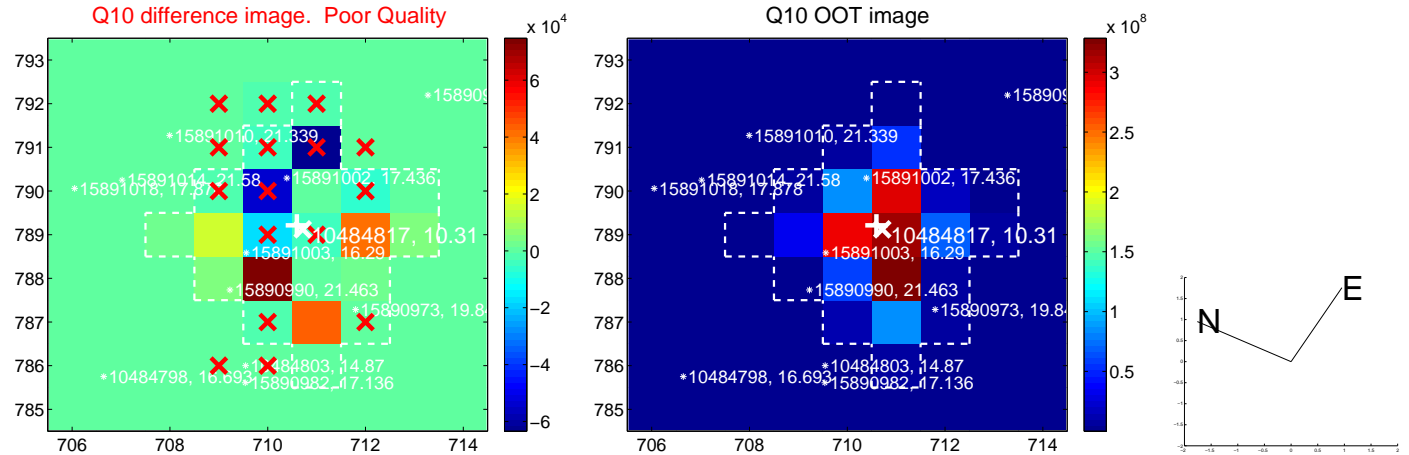
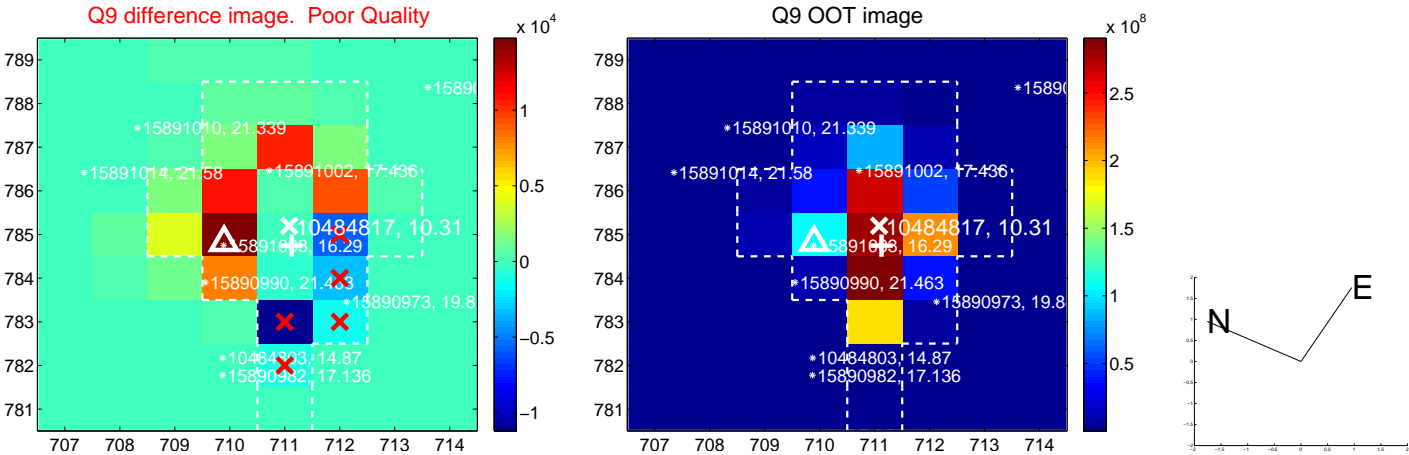


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

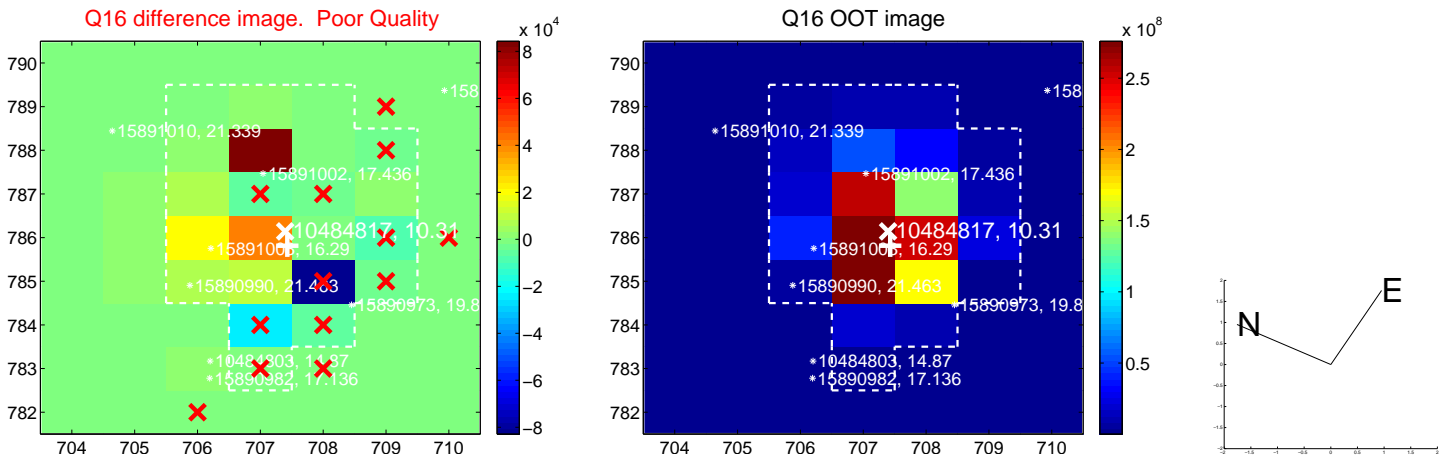
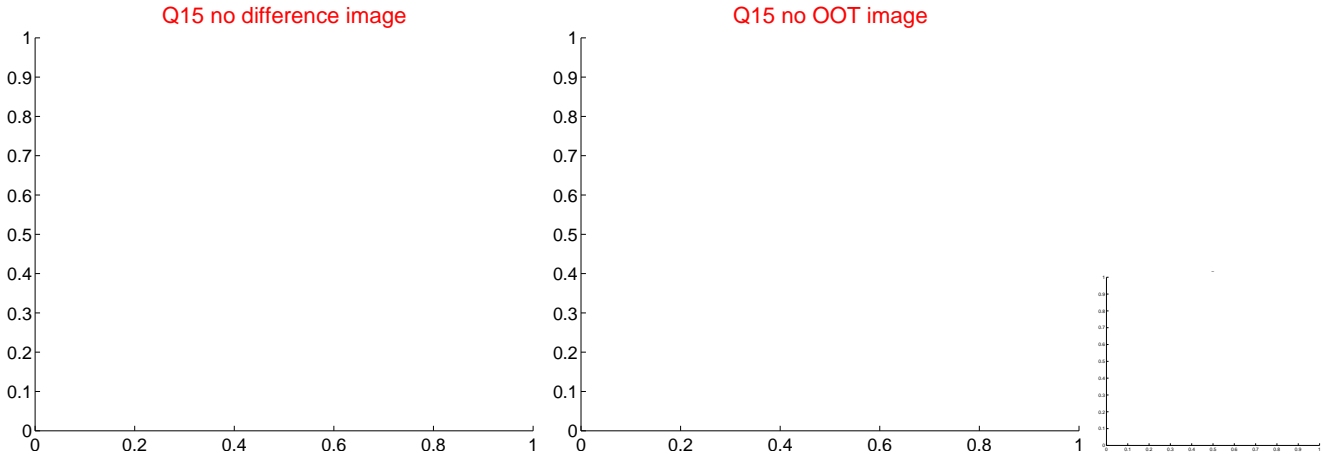
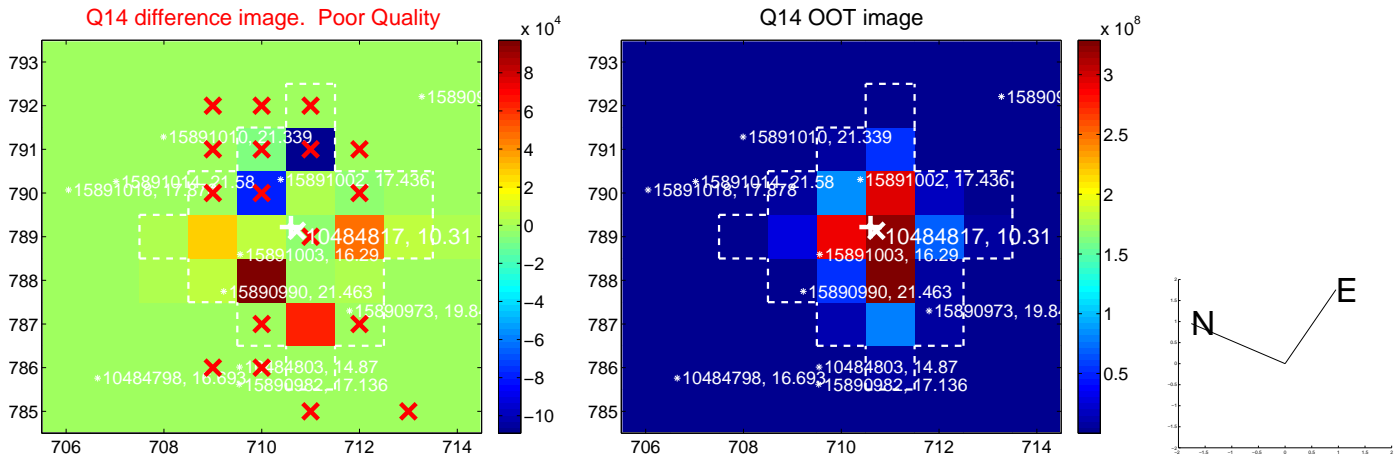
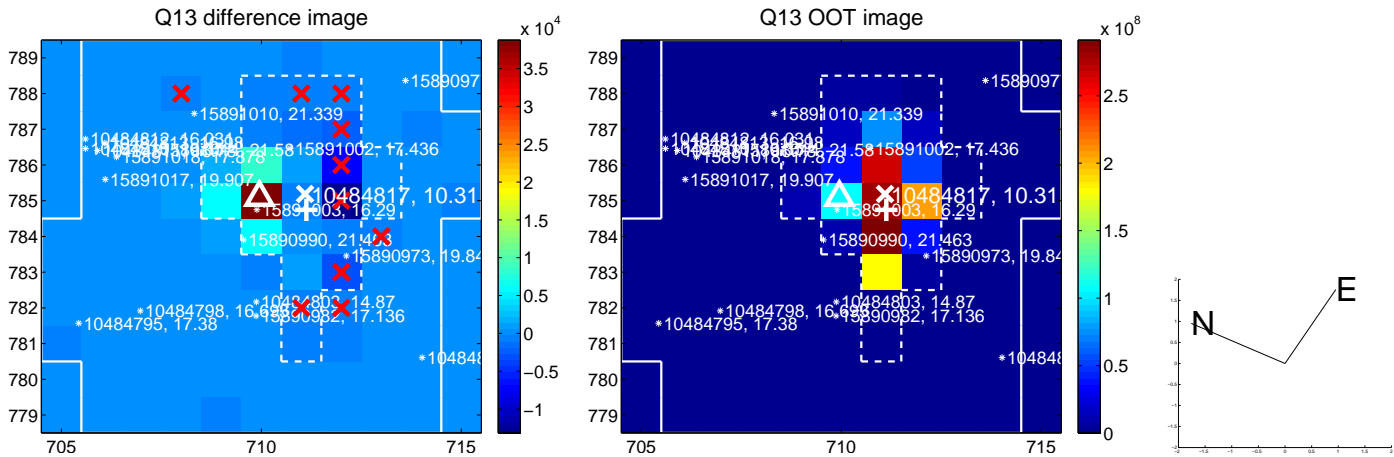




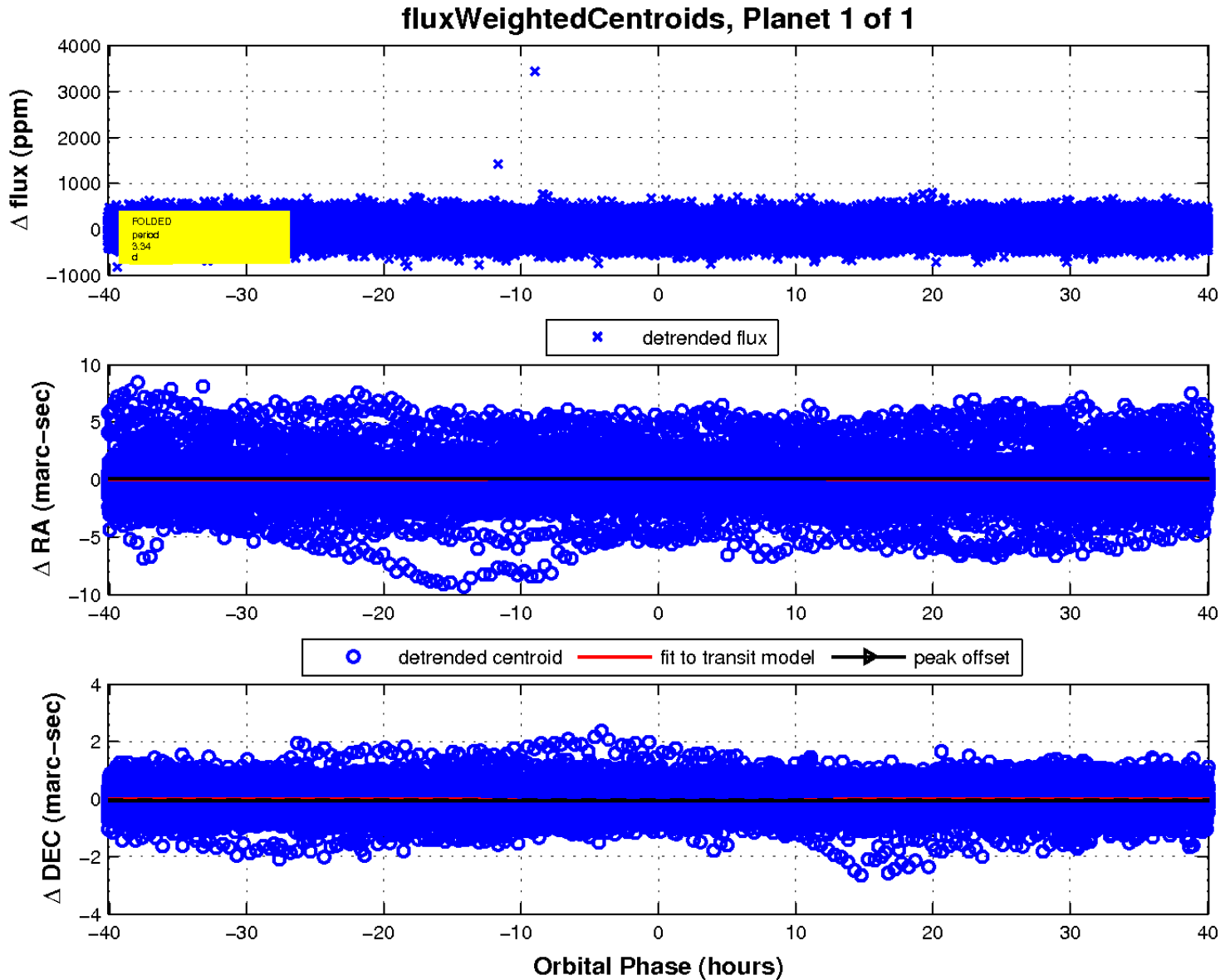
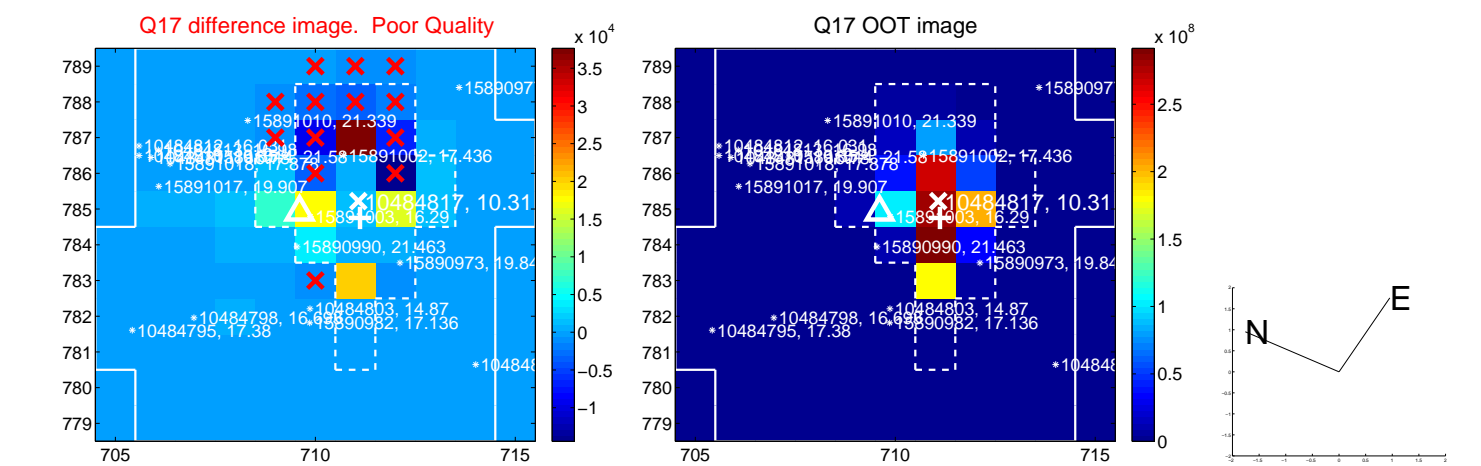
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

