

# KIC 003443050

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003443050-01	OBS	No	0.668325	132.047750	16.1	7.117	7.5	5.7	0.98	5962	0.42	5217.29

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003443050-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_KIC_POS

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

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

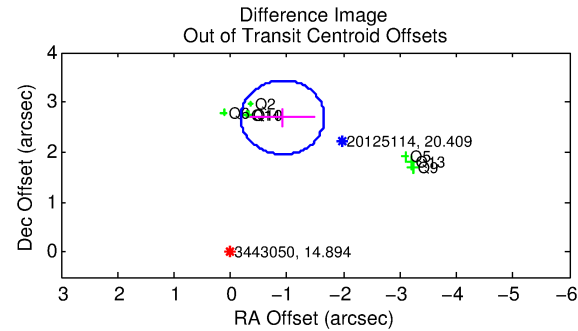
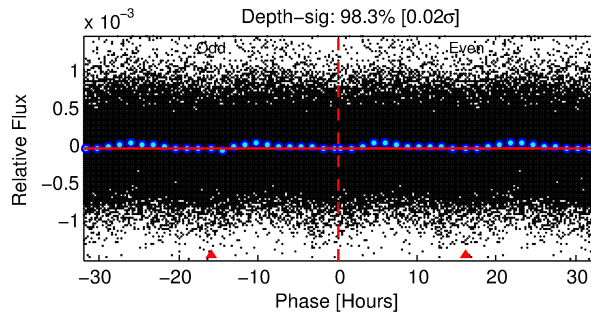
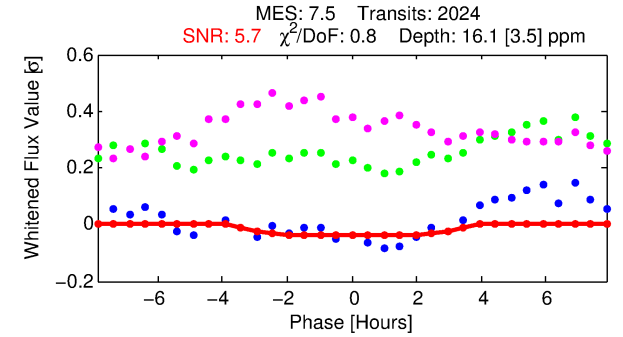
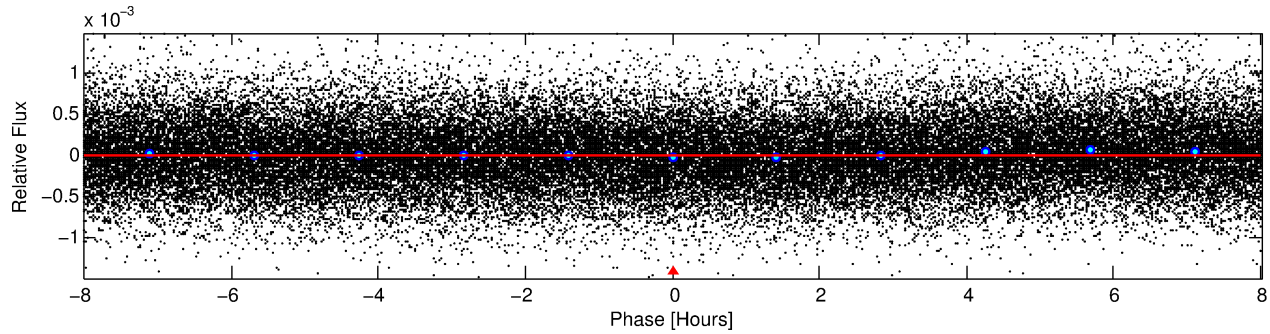
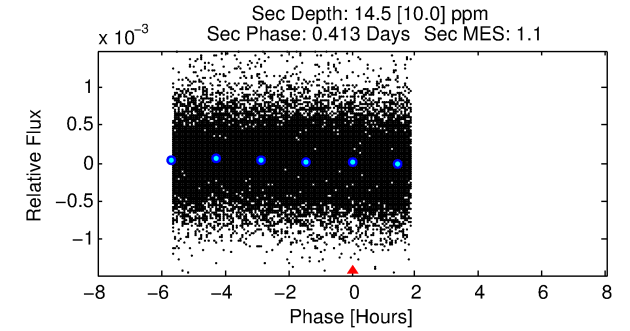
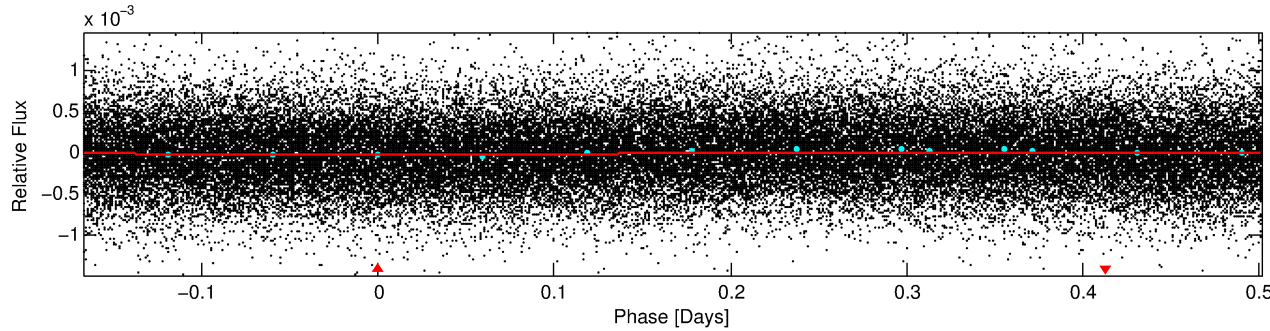
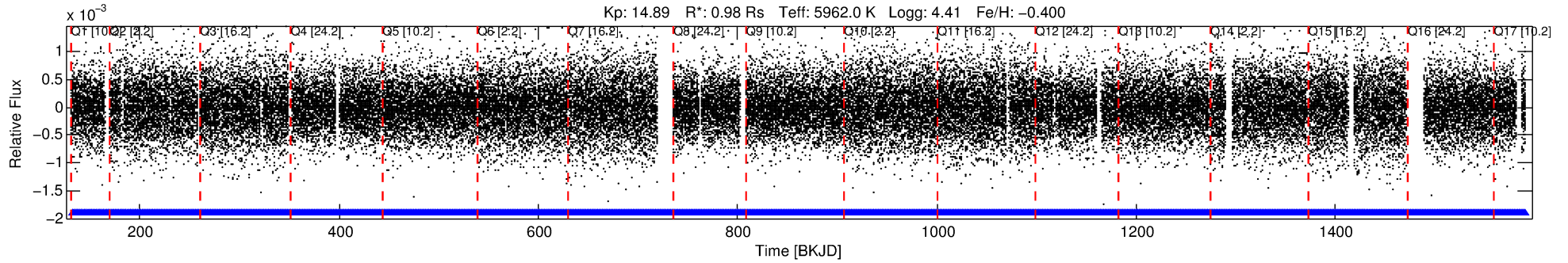
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003443050-01

No Significant Match Found

# DV One-Page Summary

KIC: 3443050 Candidate: 1 of 1 Period: 0.668 d



## DV Fit Results:

Period = 0.66833 [0.00002] d  
Epoch = 132.0478 [0.0138] BKJD  
Rp/R\* = 0.0039 [0.0062]  
a/R\* = 1.01 [0.18]  
b = 0.70 [5.90]  
Seff = 5217.29 [1876.01]  
Teq = 2167 [195] K  
Rp = 0.42 [0.67] Re  
a = 0.0144 [0.0033] AU  
Ag = 9.44 [30.41] [0.28σ]  
Teffp = 5873 [4708] K [0.79σ]

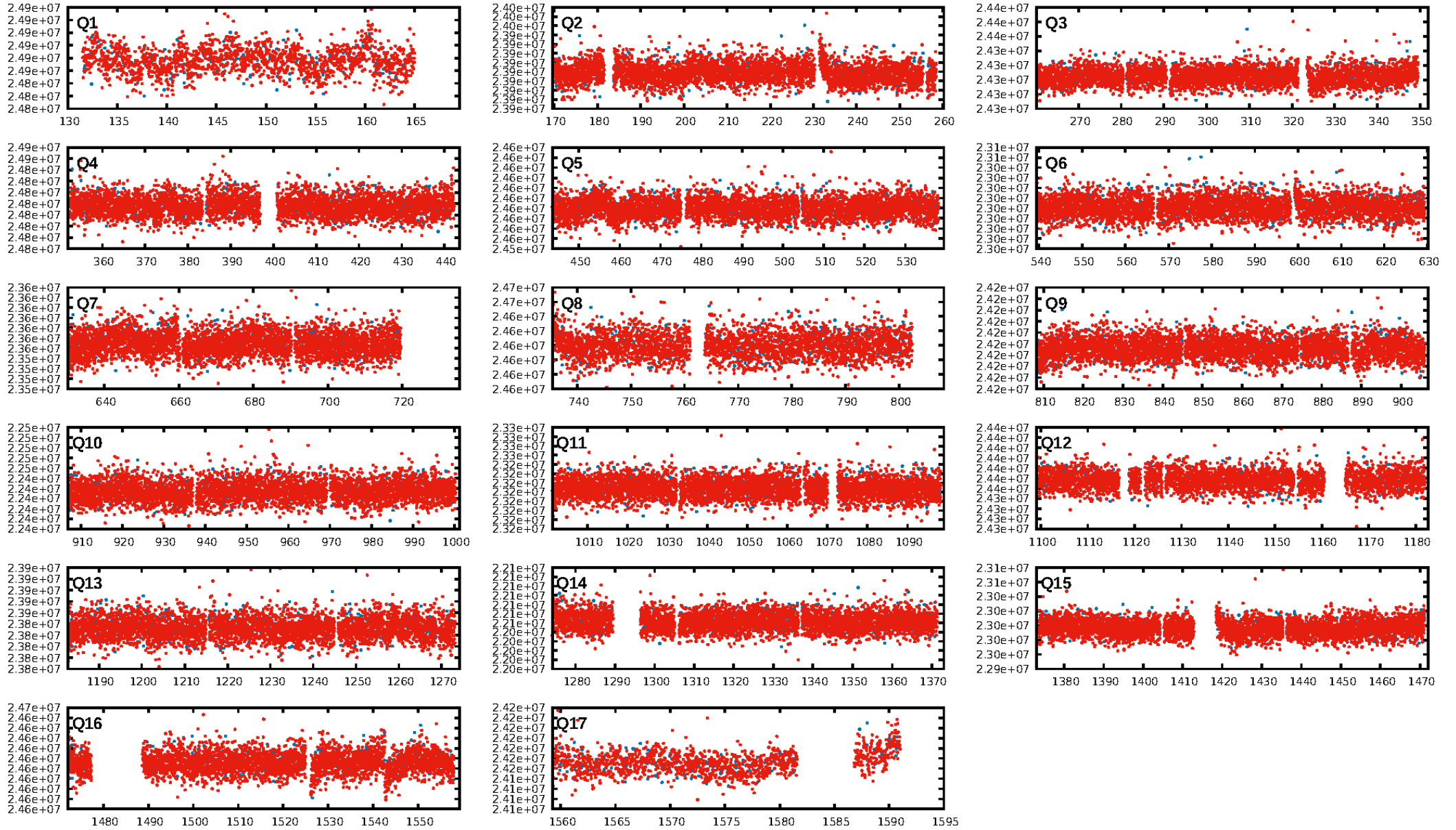
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1932/1932]  
GhostDiagnostic-chr: -0.459  
Centroid-sig: 0.0%  
Centroid-so: 11.191 arcsec [4.20σ]  
OotOffset-rm: 2.849 arcsec [11.54σ]  
KicOffset-rm: 2.782 arcsec [9.39σ]  
OotOffset-st: 4/0/0/3 [7]  
KicOffset-st: 4/0/0/3 [7]  
DiffImageQuality-fgm: 0.43 [3/7]  
DiffImageOverlap-fno: 1.00 [17/17]

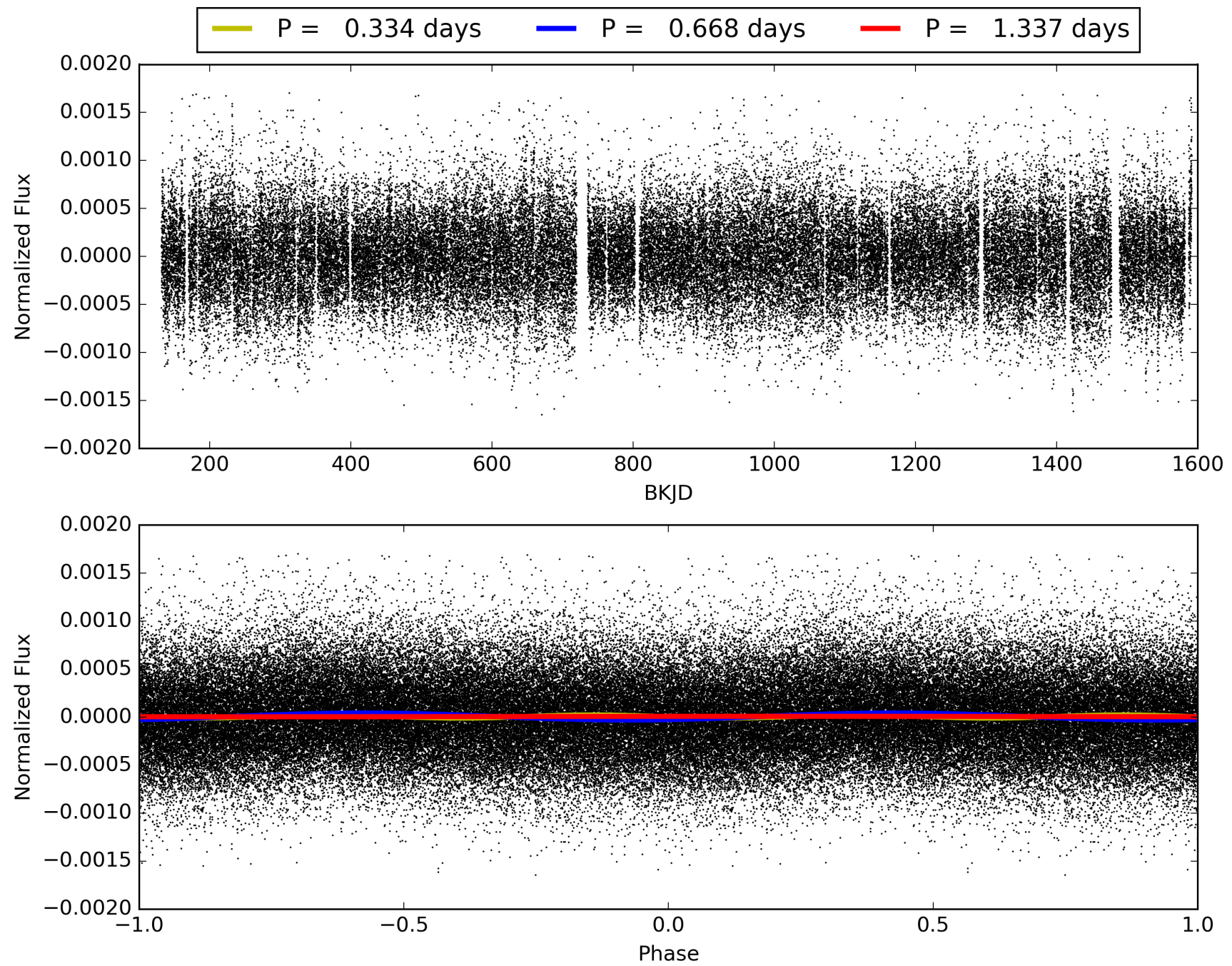
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:09:43 Z

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

# TCE 003443050-01, PDC Light Curves



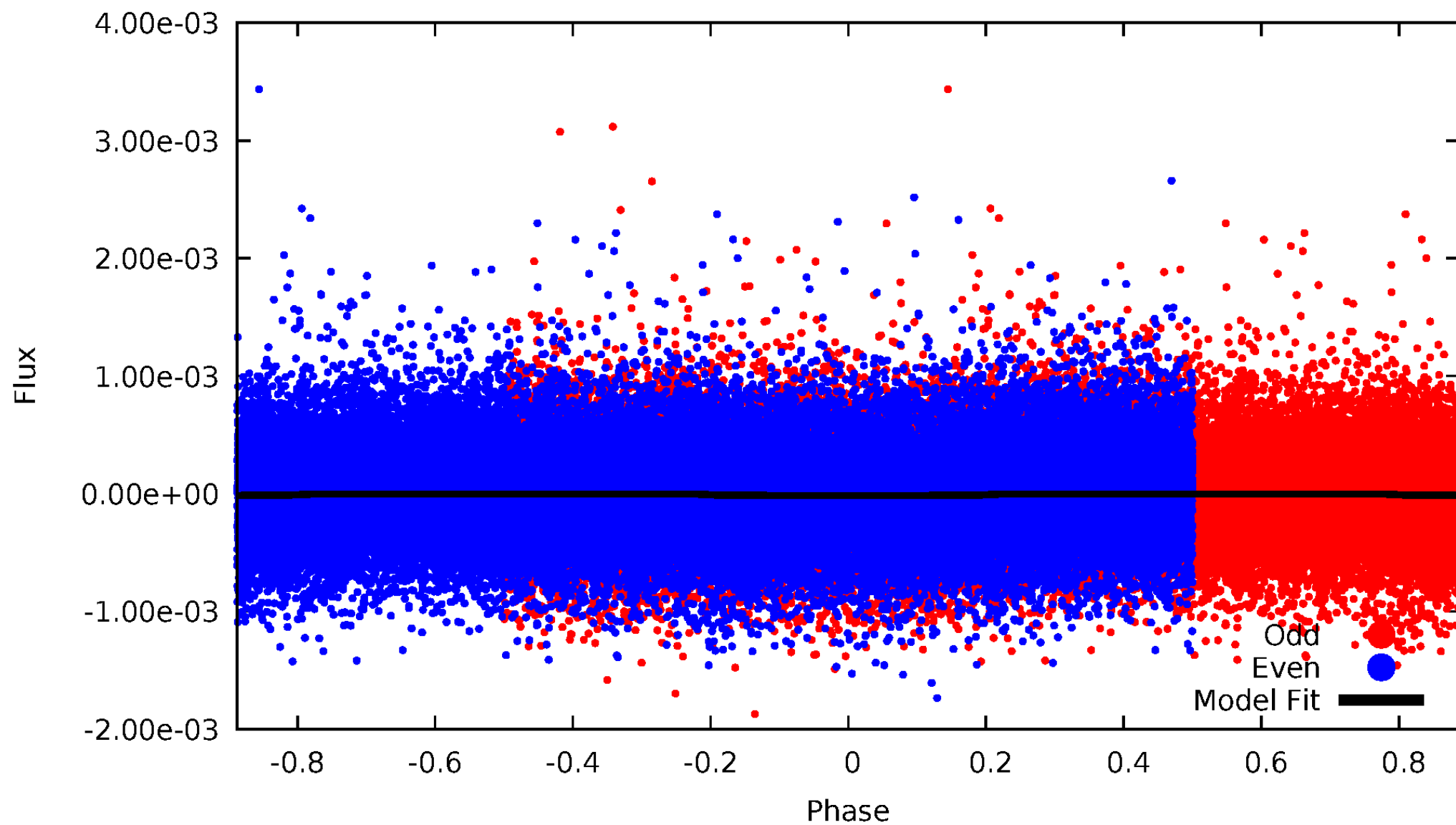
TCE 003443050-01





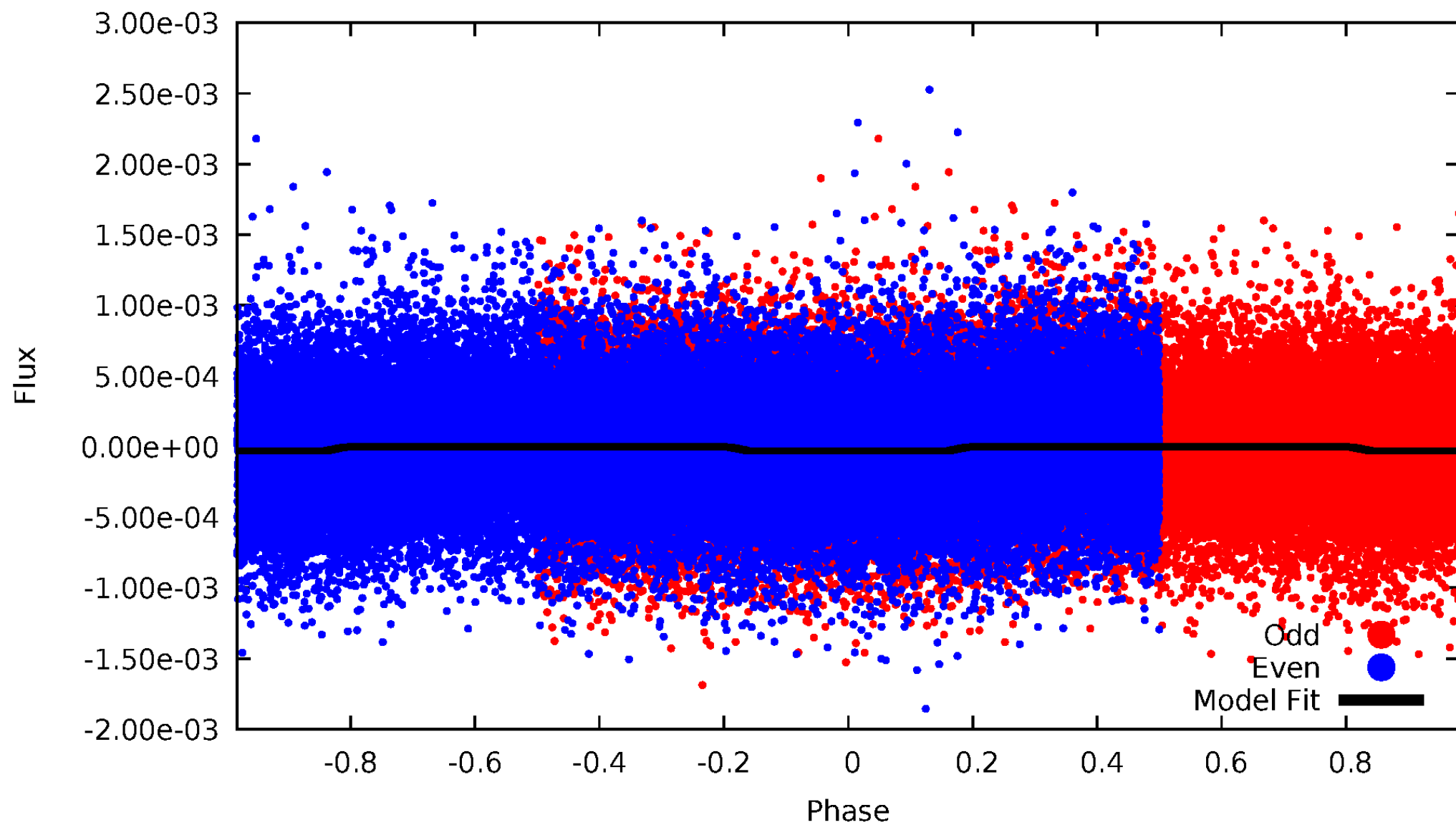
# DV Odd/Even

TCE 003443050-01



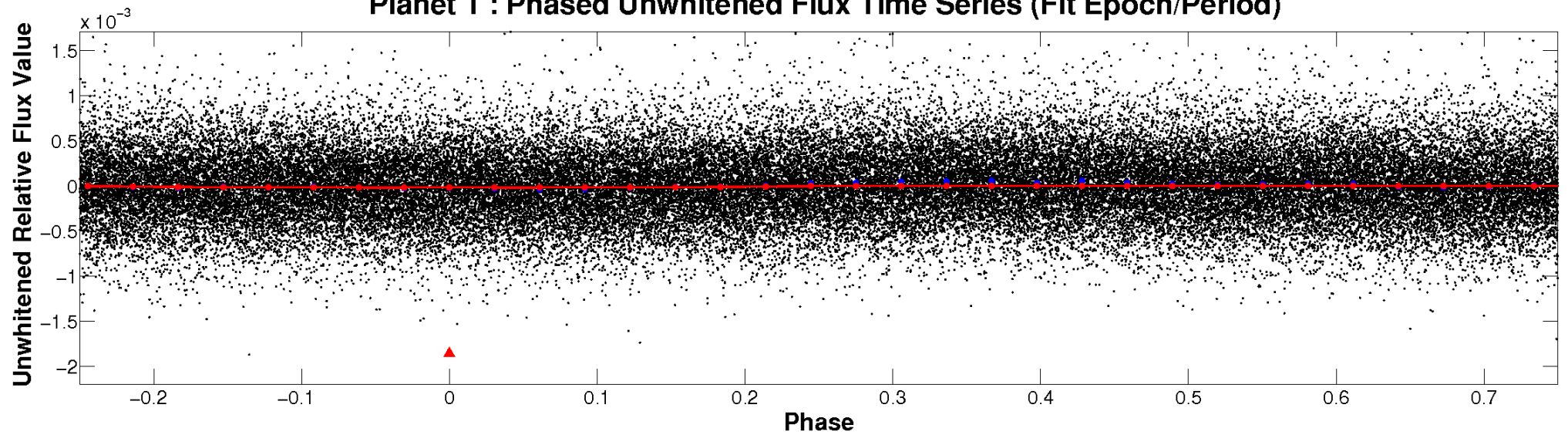
# ALT Odd/Even

TCE 003443050-01

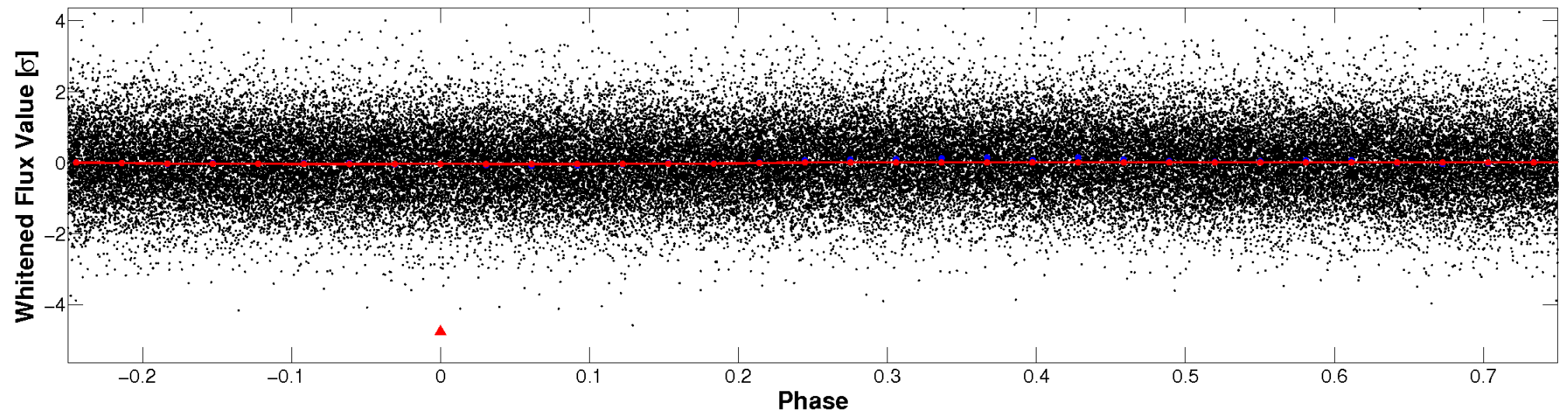


# Non-Whitened Vs. Whitened Light Curve

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

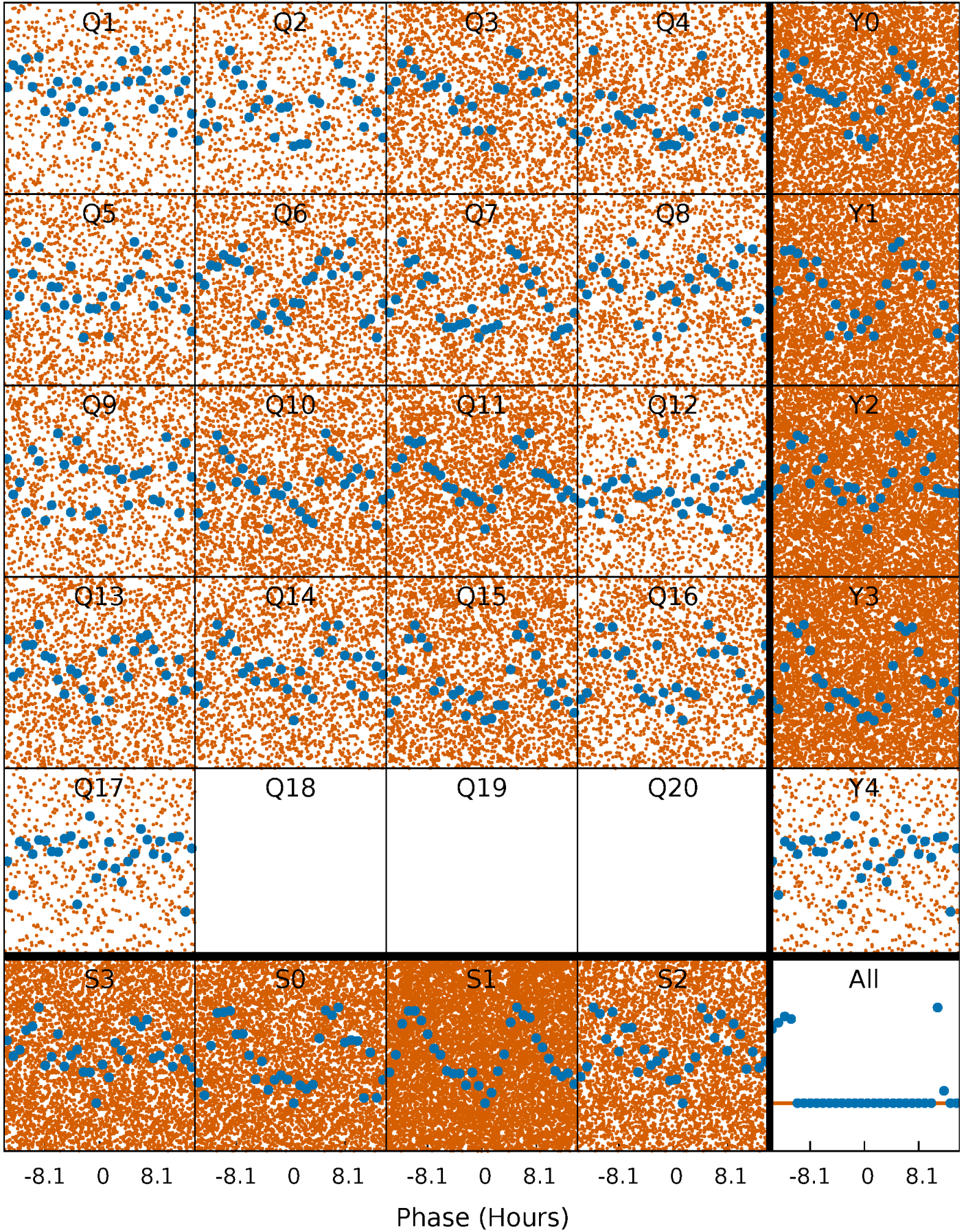


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

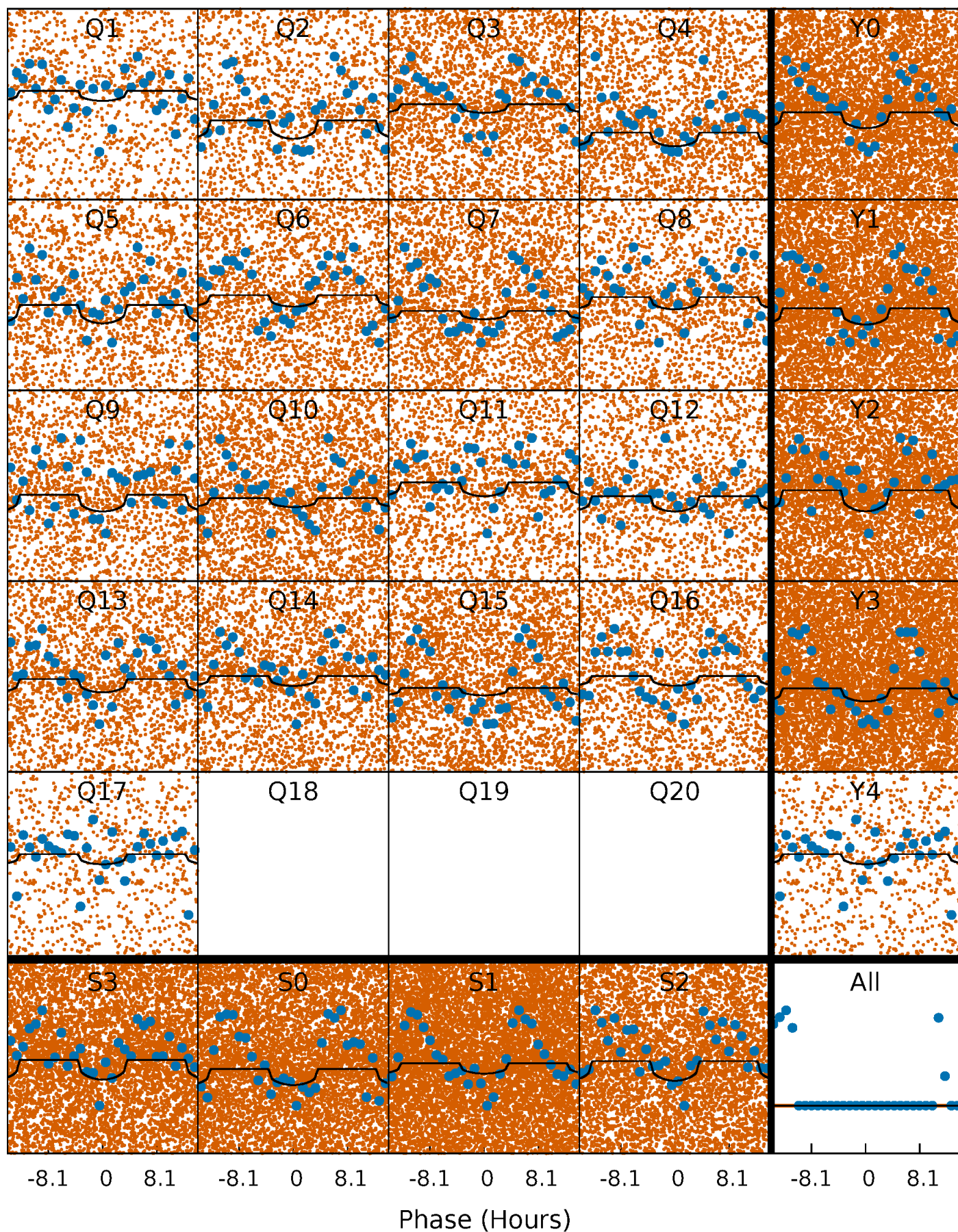
TCE 003443050-01 P= 0.668325 Days  $T_0=132.047750$  (BKJD)





# DV Quarter-Phased Transit Curves

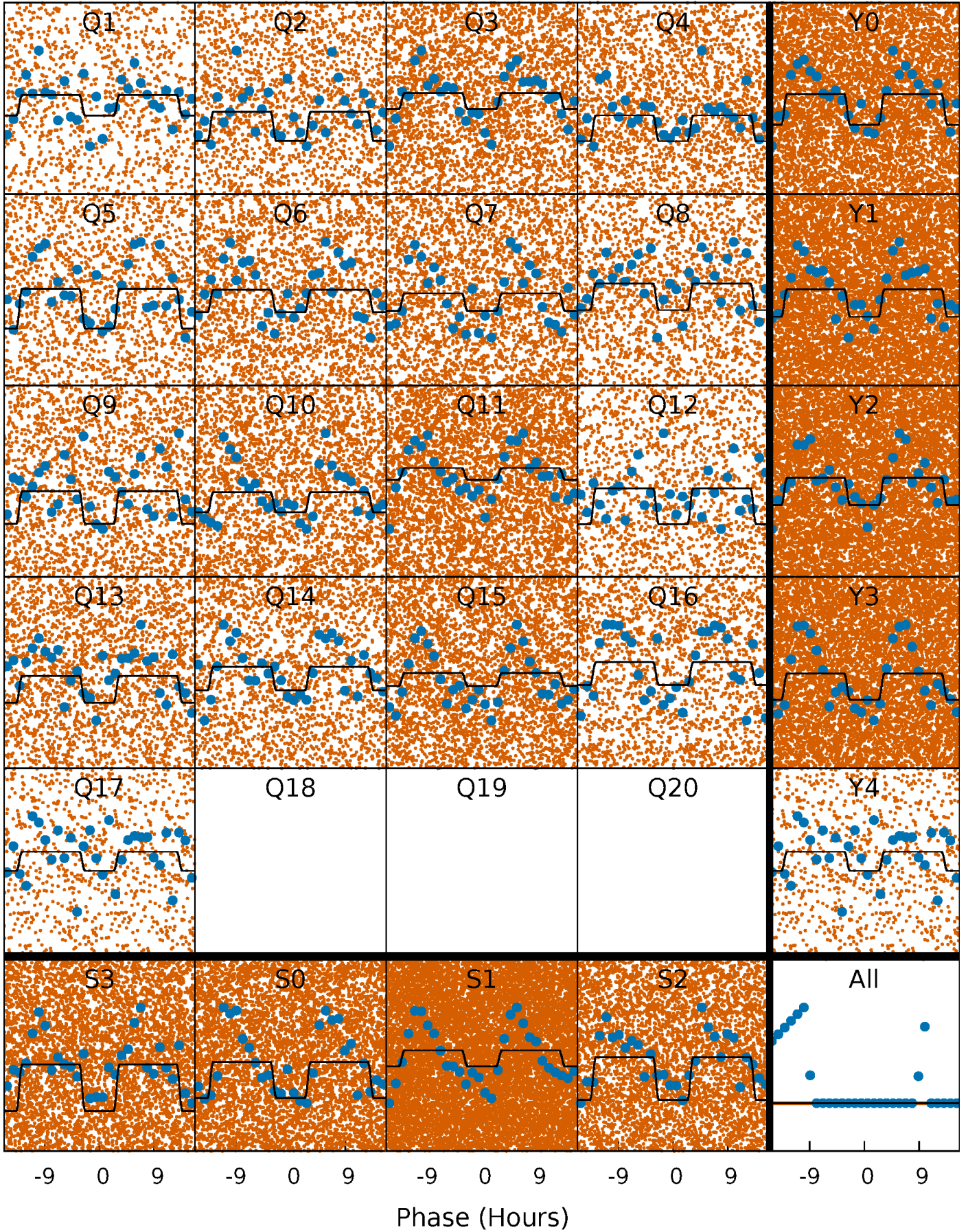
TCE 003443050-01 P= 0.668325 Days  $T_0=132.047750$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

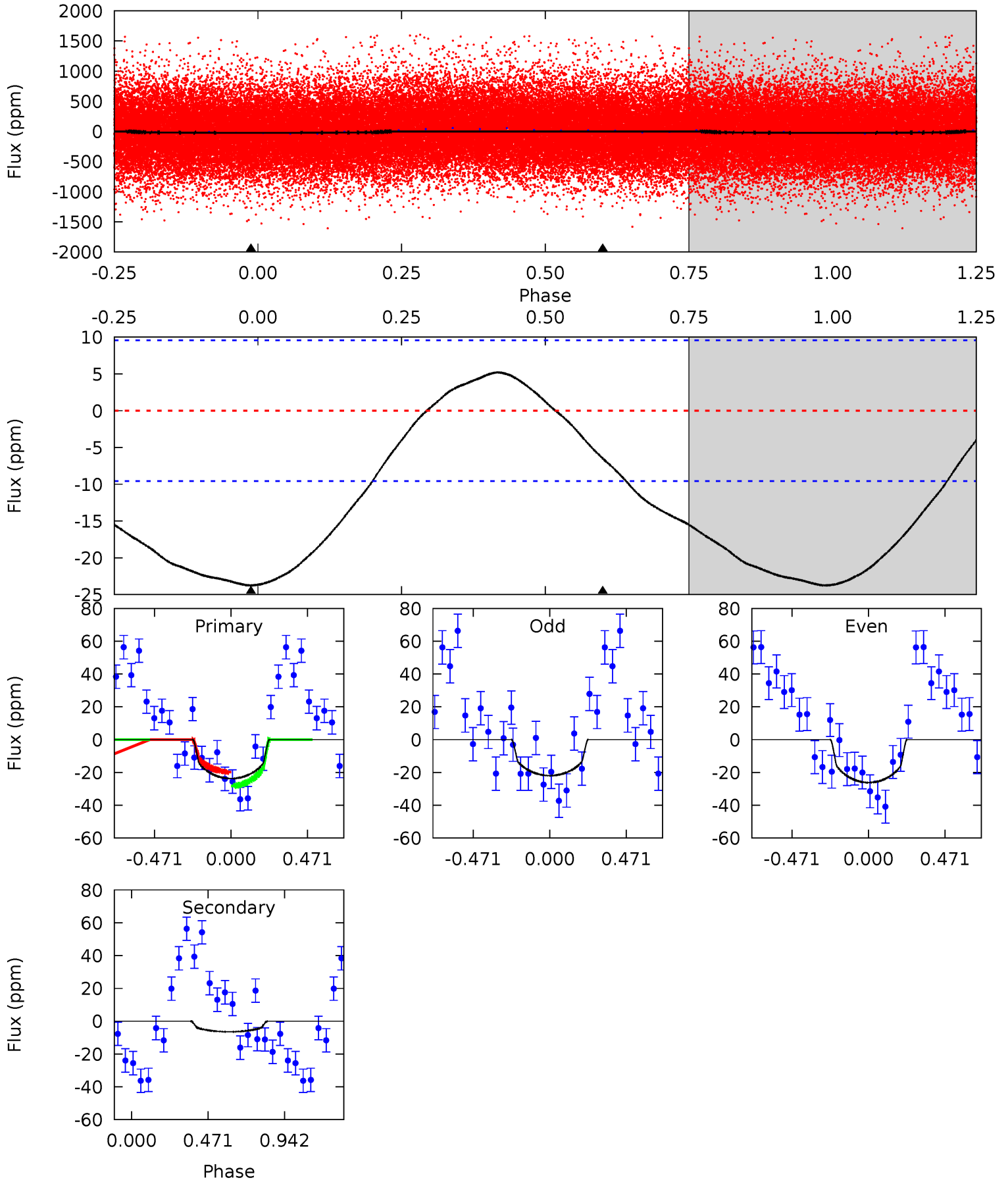
TCE 003443050-01 P= 0.668344 Days  $T_0=132.021460$  (BKJD)



# DV Model-Shift Uniqueness Test

003443050-01, P = 0.668325 Days, E = 131.379425 Days

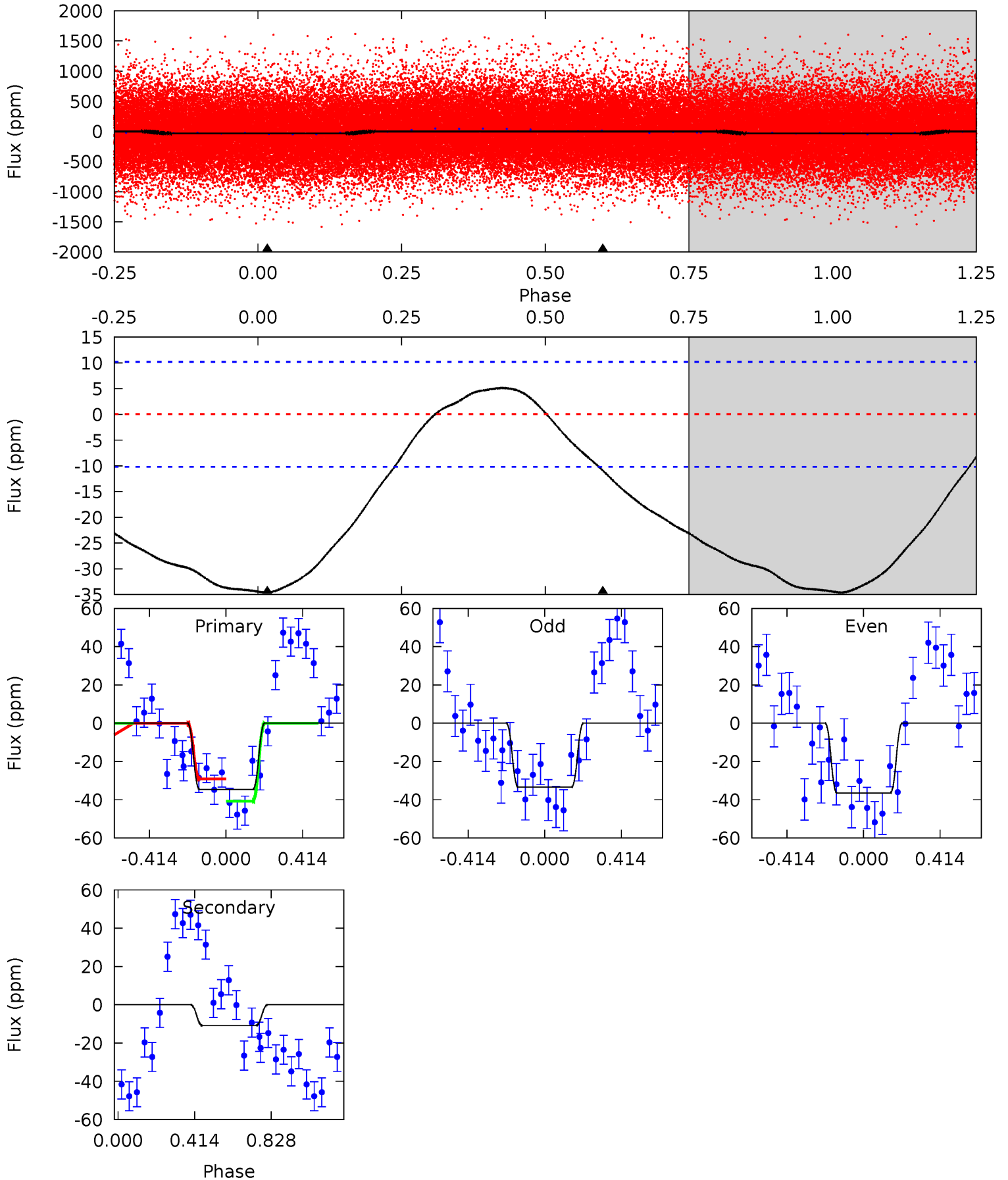
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	2.87	0	0	4.23	0.72	1.02	10.5	10.5	2.87	2.87	0.94	1.24	0.18	1.88



# Alt Model-Shift Uniqueness Test

003443050-01, P = 0.668344 Days, E = 131.353116 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
14.4	4.55	0	0	4.26	0.82	1.23	14.4	14.4	4.55	4.55	0.64	1.16	0.13	2.44





### Stellar Parameters For KIC 003443050

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5962^{+178}_{-178}$	$4.407^{+0.124}_{-0.186}$	$-0.400^{+0.300}_{-0.300}$	$0.976^{+0.268}_{-0.165}$	$0.887^{+0.119}_{-0.079}$	$1.342^{+0.768}_{-0.662}$
	+3%/-3%	+3%/-4%	+75%/-75%	+27%/-17%	+13%/-9%	+57%/-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 003443050-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-6 \pm 2$	$0.64^{+0.63}_{-0.43}$	$3052^{+215}_{-172}$	$3992^{+2821}_{-1211}$	$1.669^{+14.565}_{-1.244}$
Alt.	$-11 \pm 2$	$0.78^{+0.62}_{-0.48}$	$3050^{+229}_{-169}$	$4169^{+2451}_{-1002}$	$2.010^{+12.666}_{-1.395}$

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

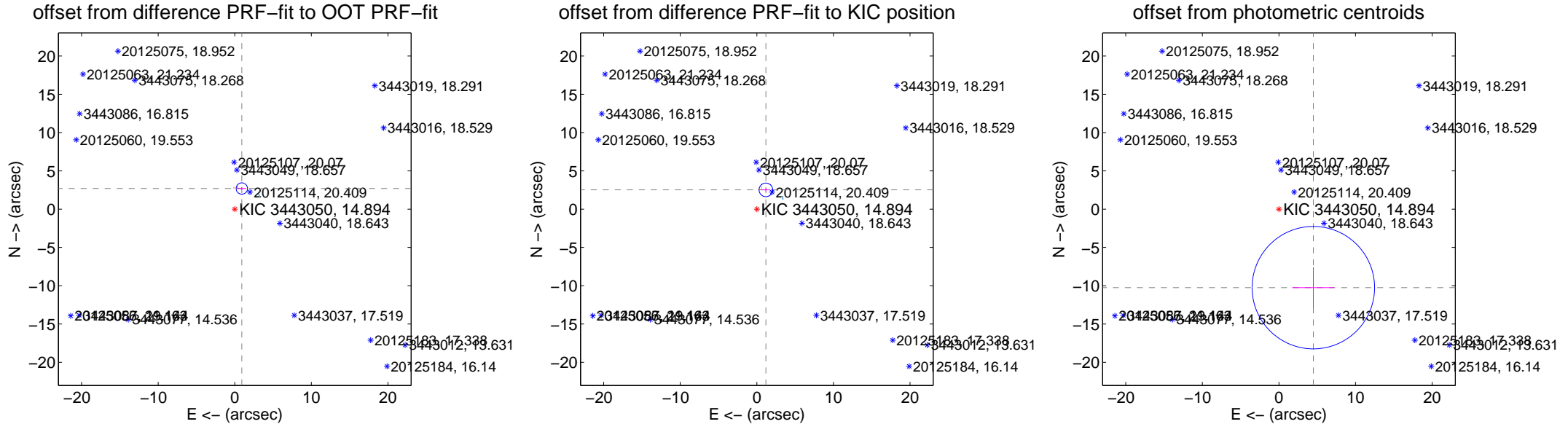
## DV Centroid Data

Supplemental centroid analysis for 003443050-01. Kepler magnitude: 14.89. Transit SNR 5.68

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

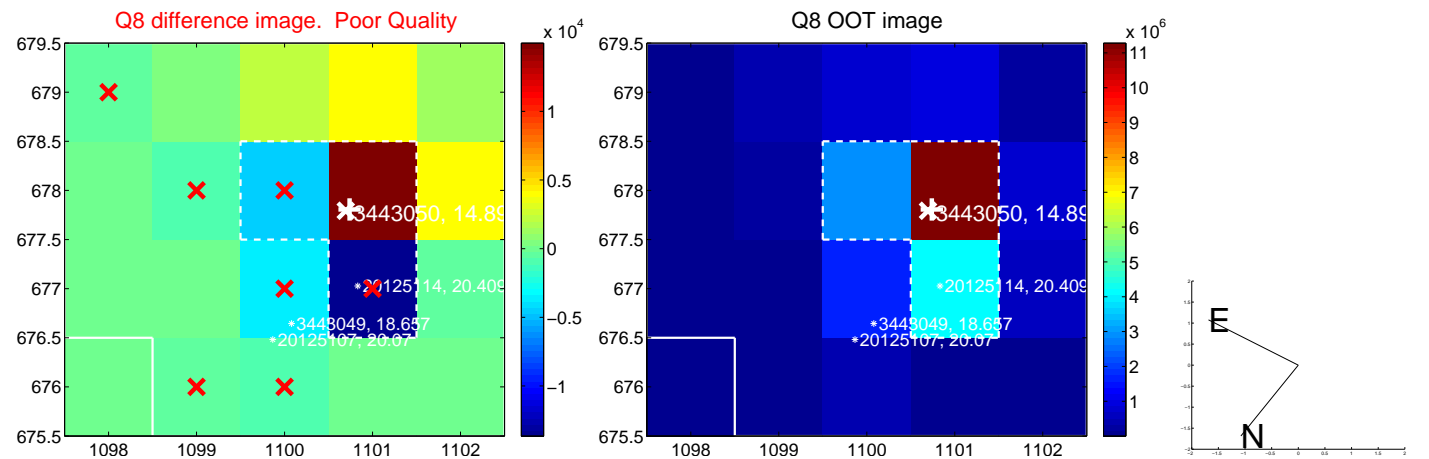
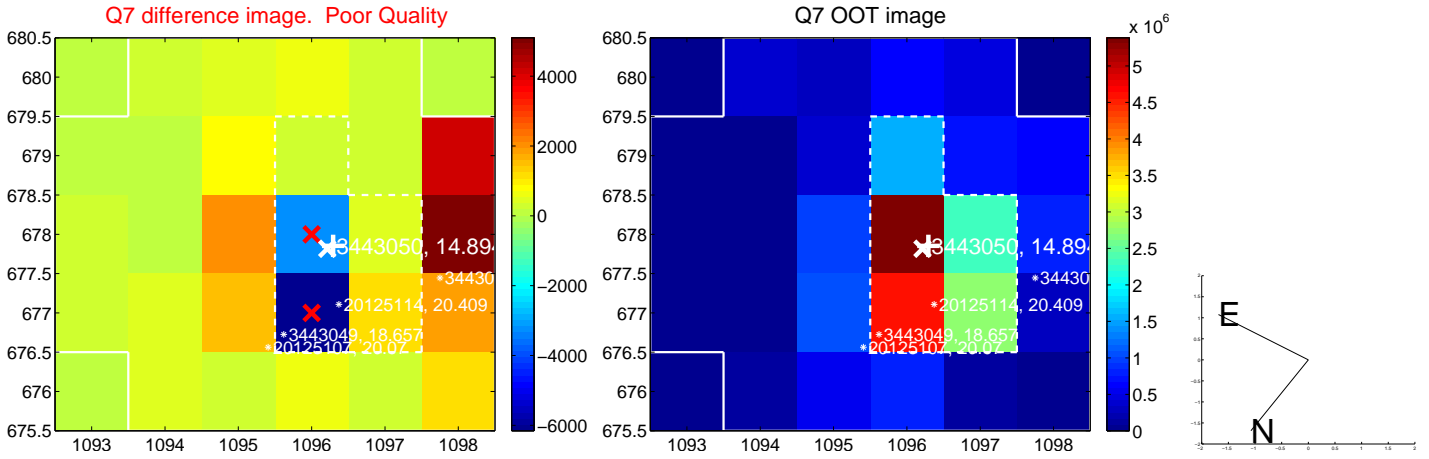
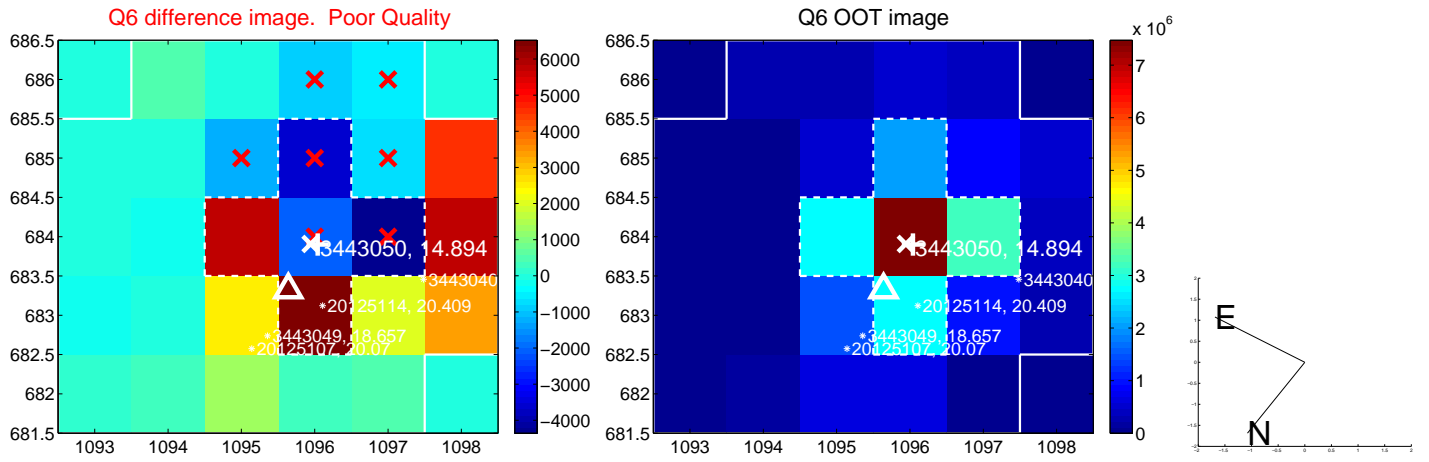
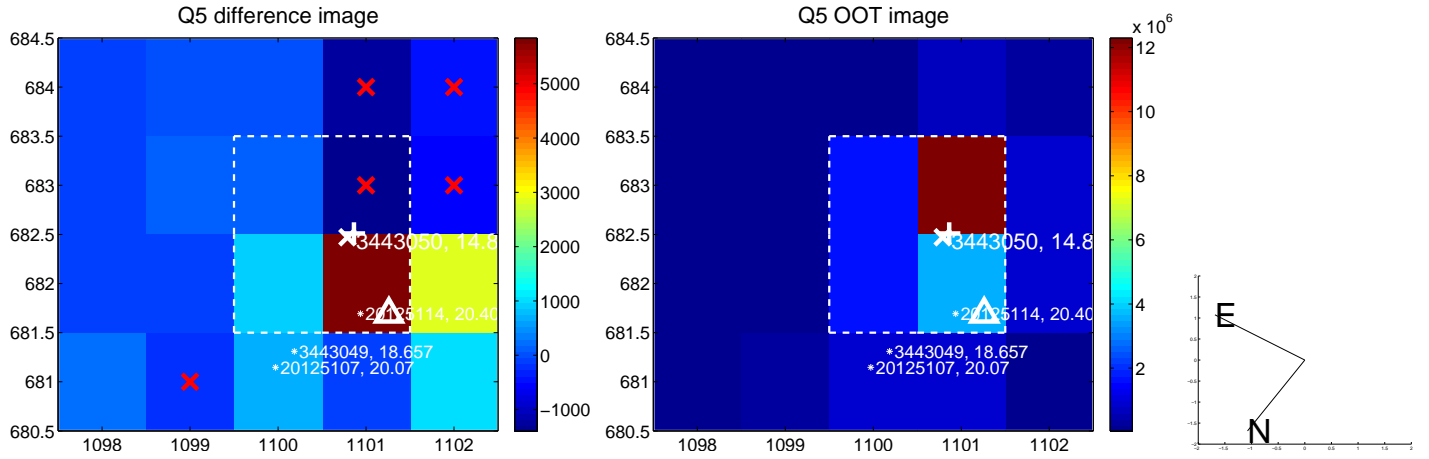
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.849 \pm 0.247$	11.54	$-0.923 \pm 0.575$	$2.695 \pm 0.171$
PRF-fit source offset from KIC position	$2.782 \pm 0.296$	9.39	$-1.183 \pm 0.553$	$2.518 \pm 0.200$
photometric centroid source offset	$11.19 \pm 2.67$	4.20	$-4.49 \pm 2.76$	$-10.25 \pm 2.65$



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.

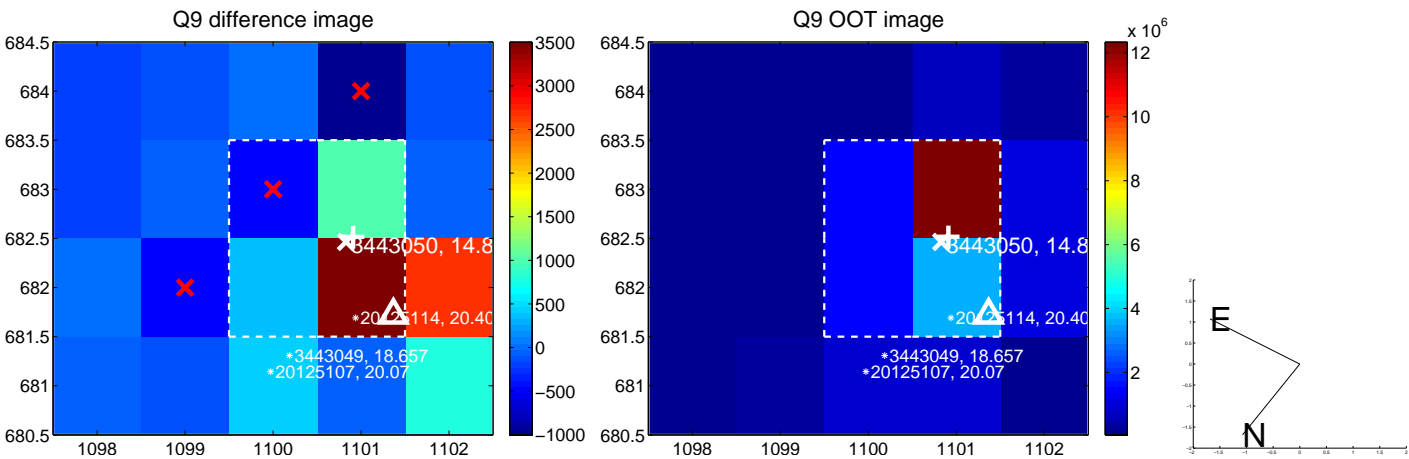


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

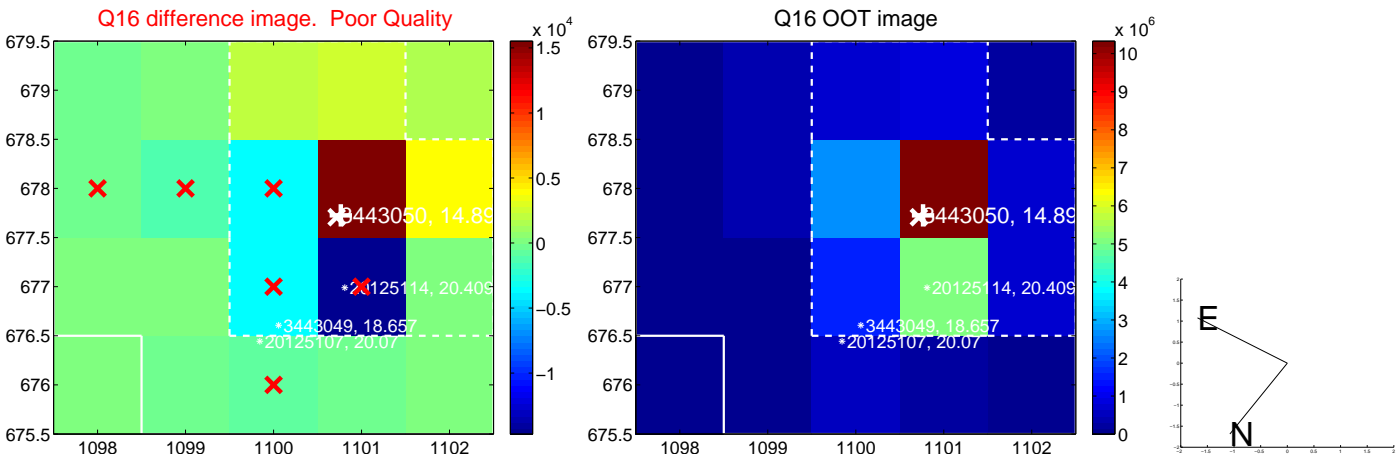
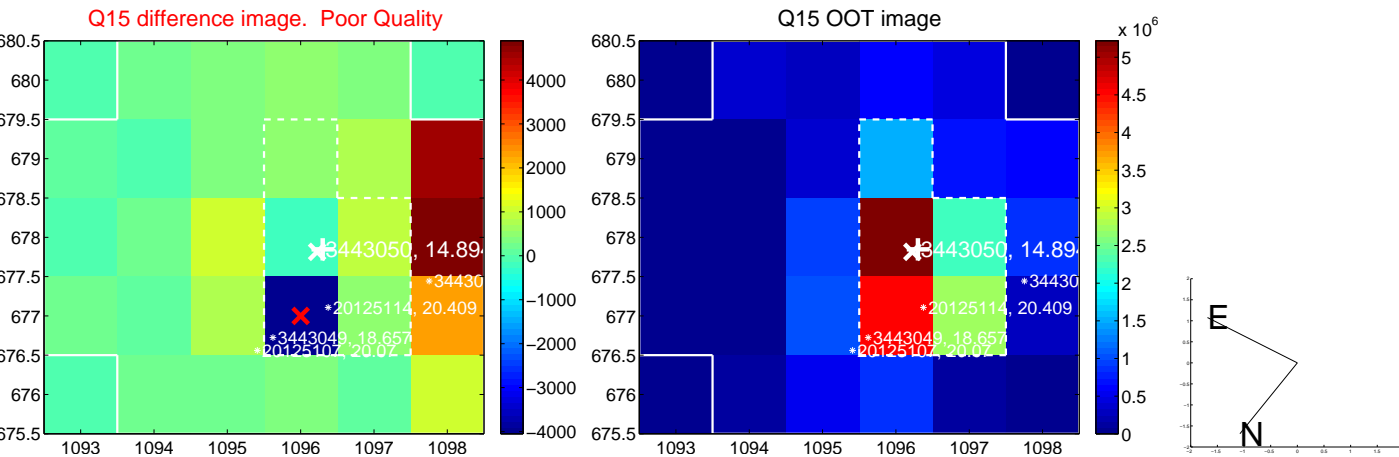
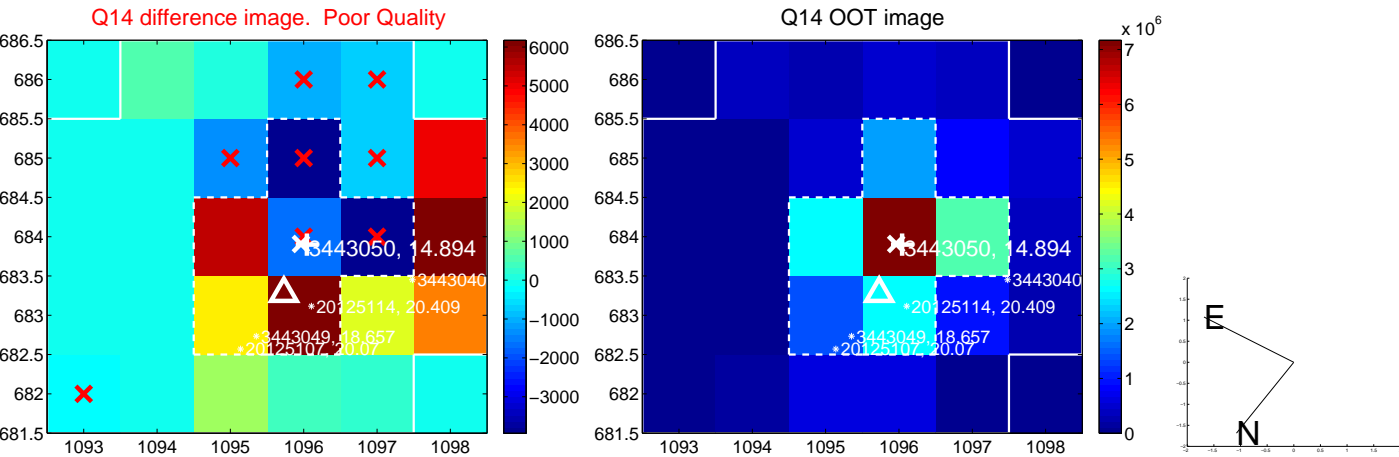
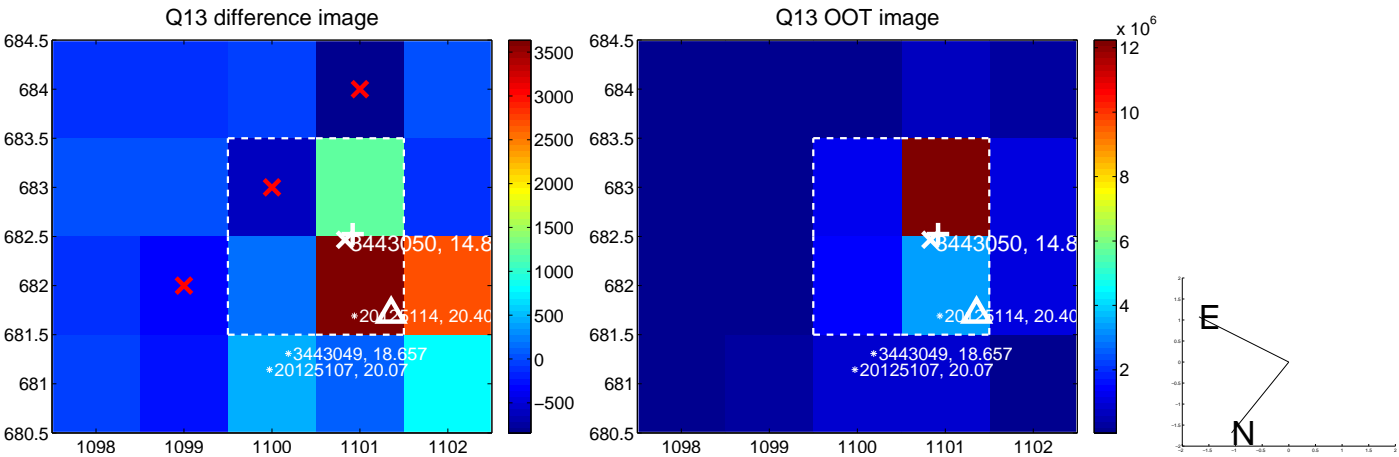




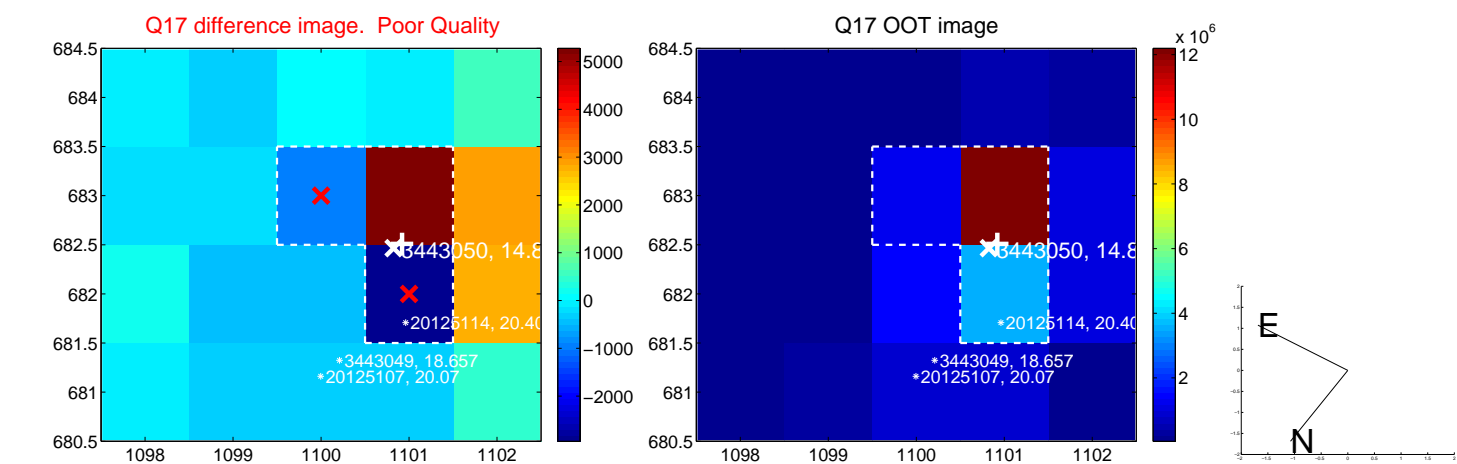
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



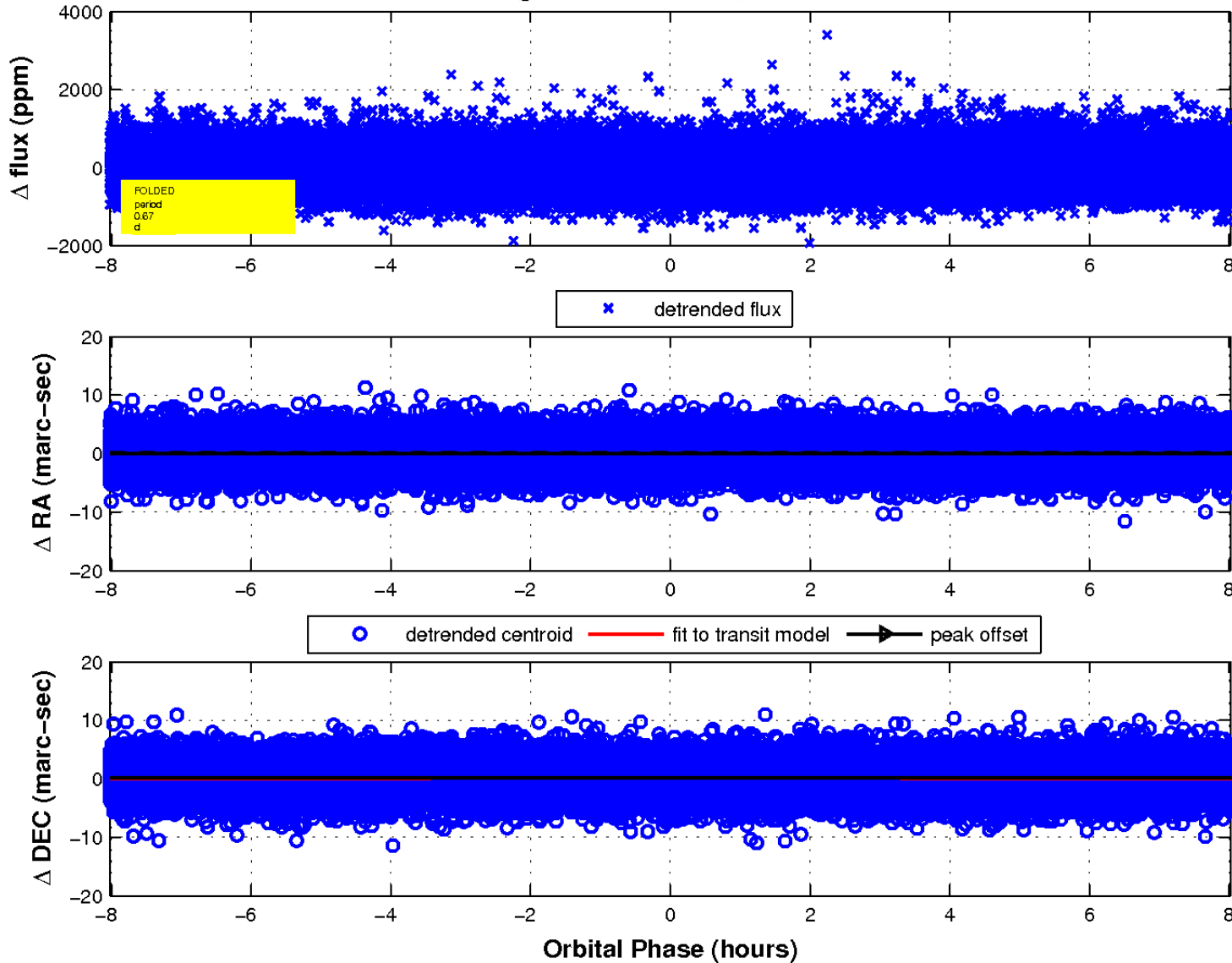
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

