

# KIC 008322263

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008322263-01	OBS	No	0.669067	132.197672	27.2	5.603	8.3	9.8	1.75	5931	0.91	15552.58

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008322263-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

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

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

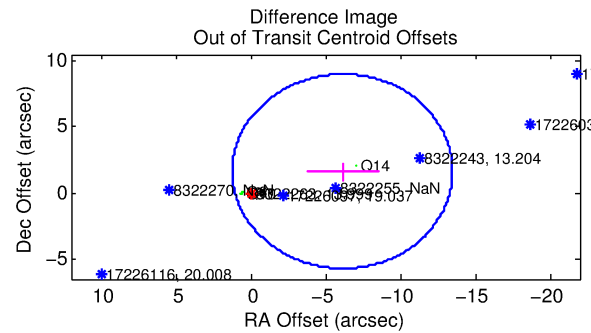
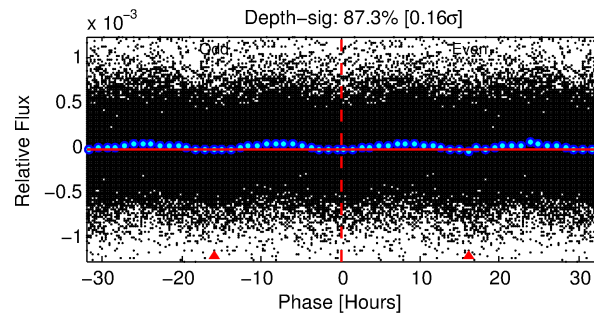
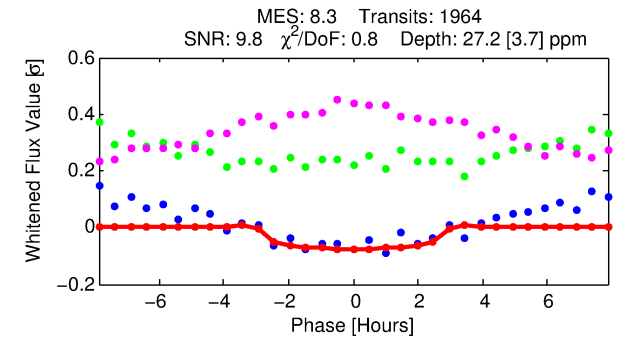
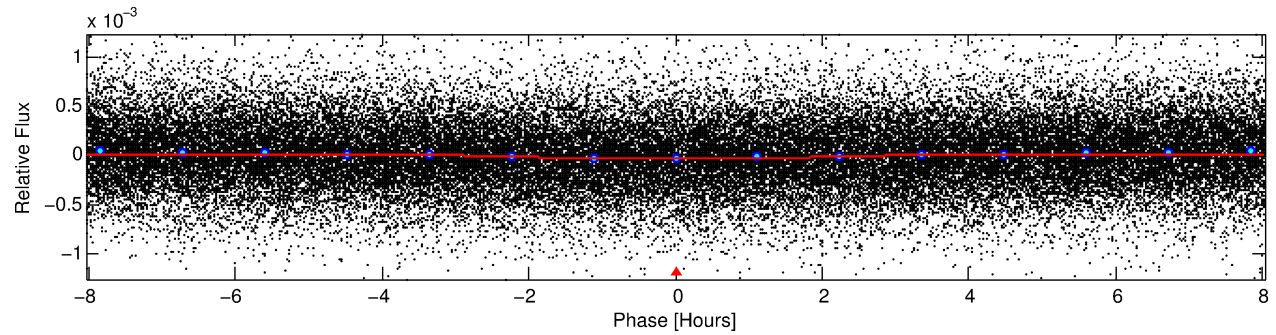
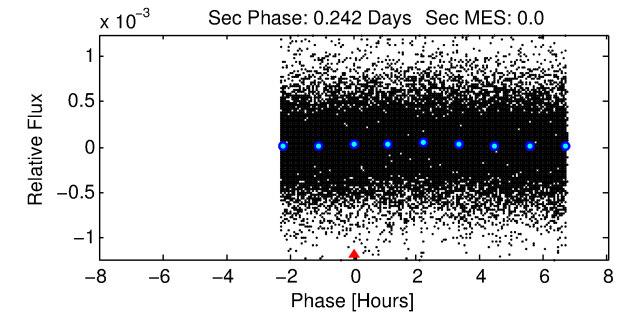
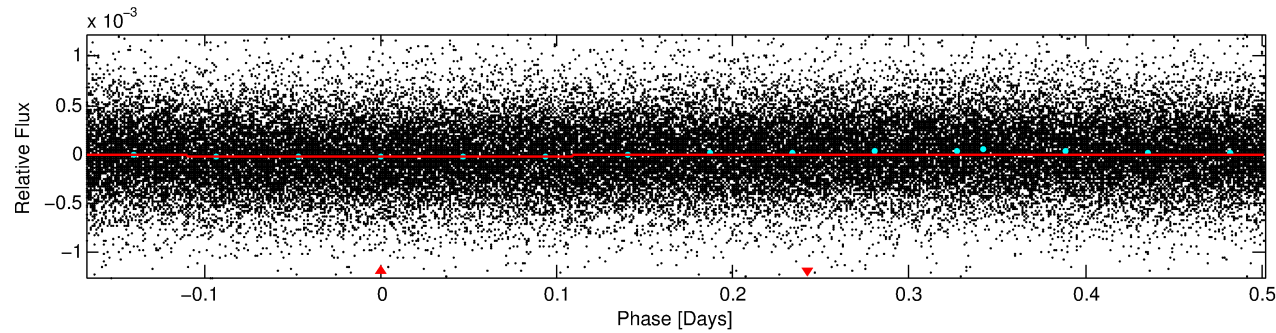
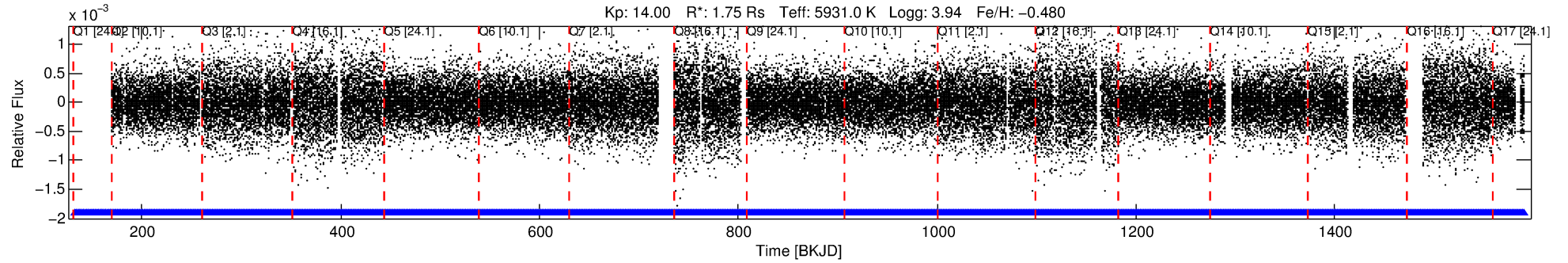
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008322263-01

No Significant Match Found

# DV One-Page Summary

KIC: 8322263 Candidate: 1 of 1 Period: 0.669 d



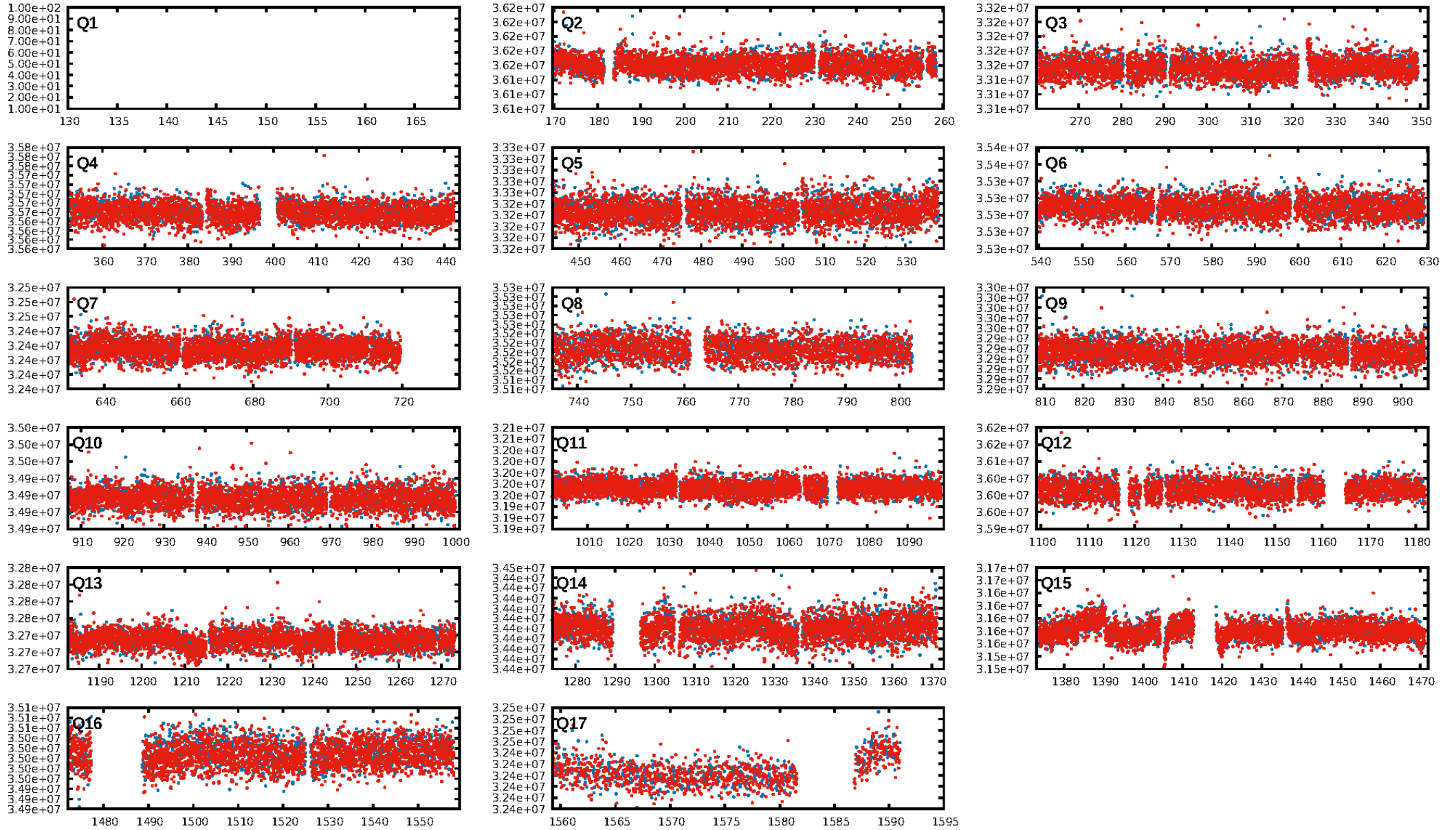
## DV Fit Results:

Period = 0.66907 [0.00001] d  
Epoch = 132.1977 [0.0061] BKJD  
Rp/R\* = 0.0048 [0.0058]  
a/R\* = 1.13 [1.42]  
b = 0.00 [2367.81]  
Seff = 15552.58 [13879.72]  
Teff = 2848 [635] K  
Rp = 0.91 [1.19] Re  
a = 0.0148 [0.0077] AU  
Ag = N/A  
Teffp = N/A

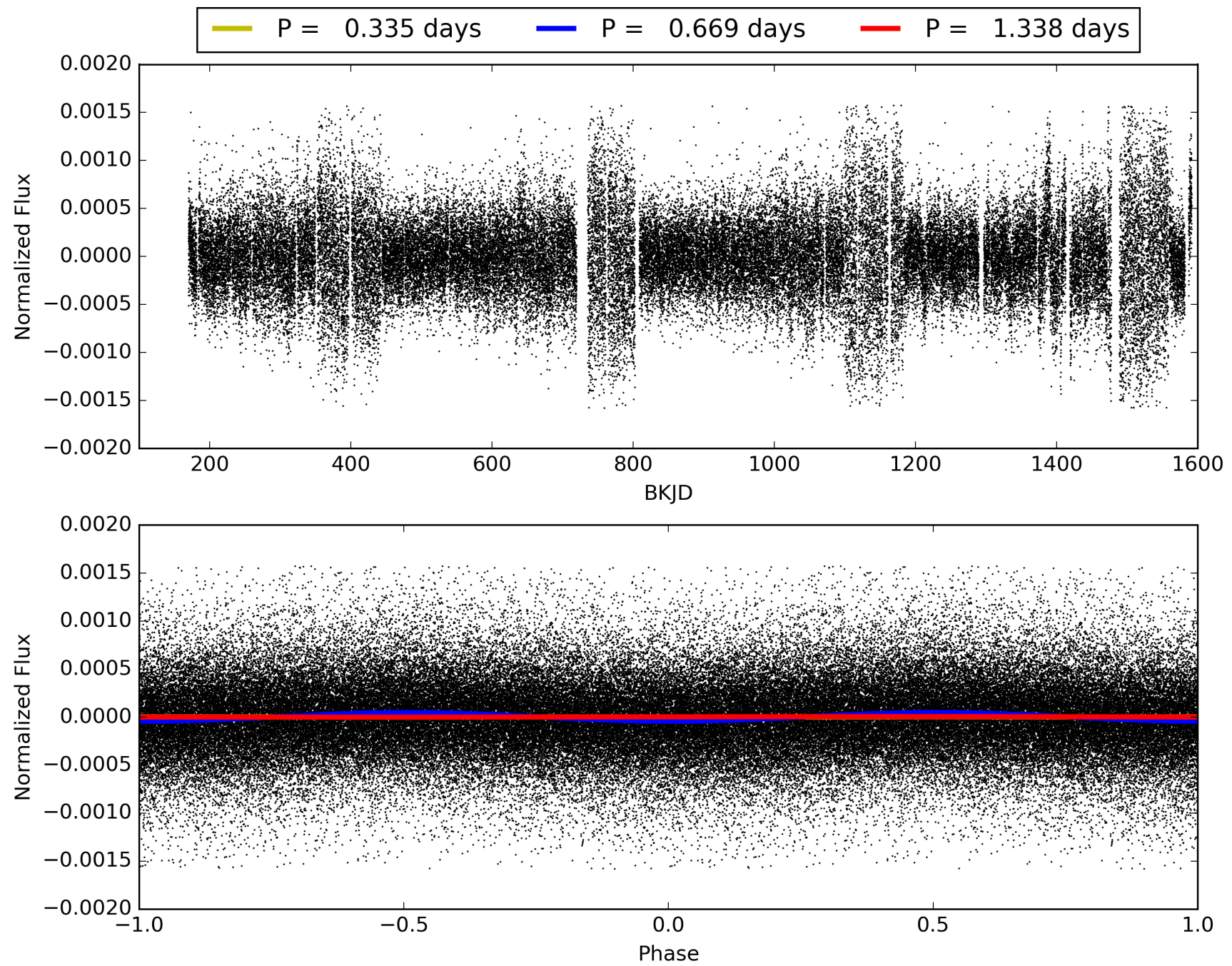
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1923/1923]  
GhostDiagnostic-chr: -1.399  
Centroid-sig: 0.0%  
Centroid-so: 5.716 arcsec [5.68σ]  
OotOffset-rm: 6.350 arcsec [2.59σ]  
KicOffset-rm: 8.898 arcsec [2.93σ]  
OotOffset-st: 3/0/0/0 [3]  
KicOffset-st: 3/0/0/0 [3]  
DiffImageQuality-fgm: 0.00 [0/3]  
DiffImageOverlap-fno: 1.00 [16/16]

# TCE 008322263-01, PDC Light Curves



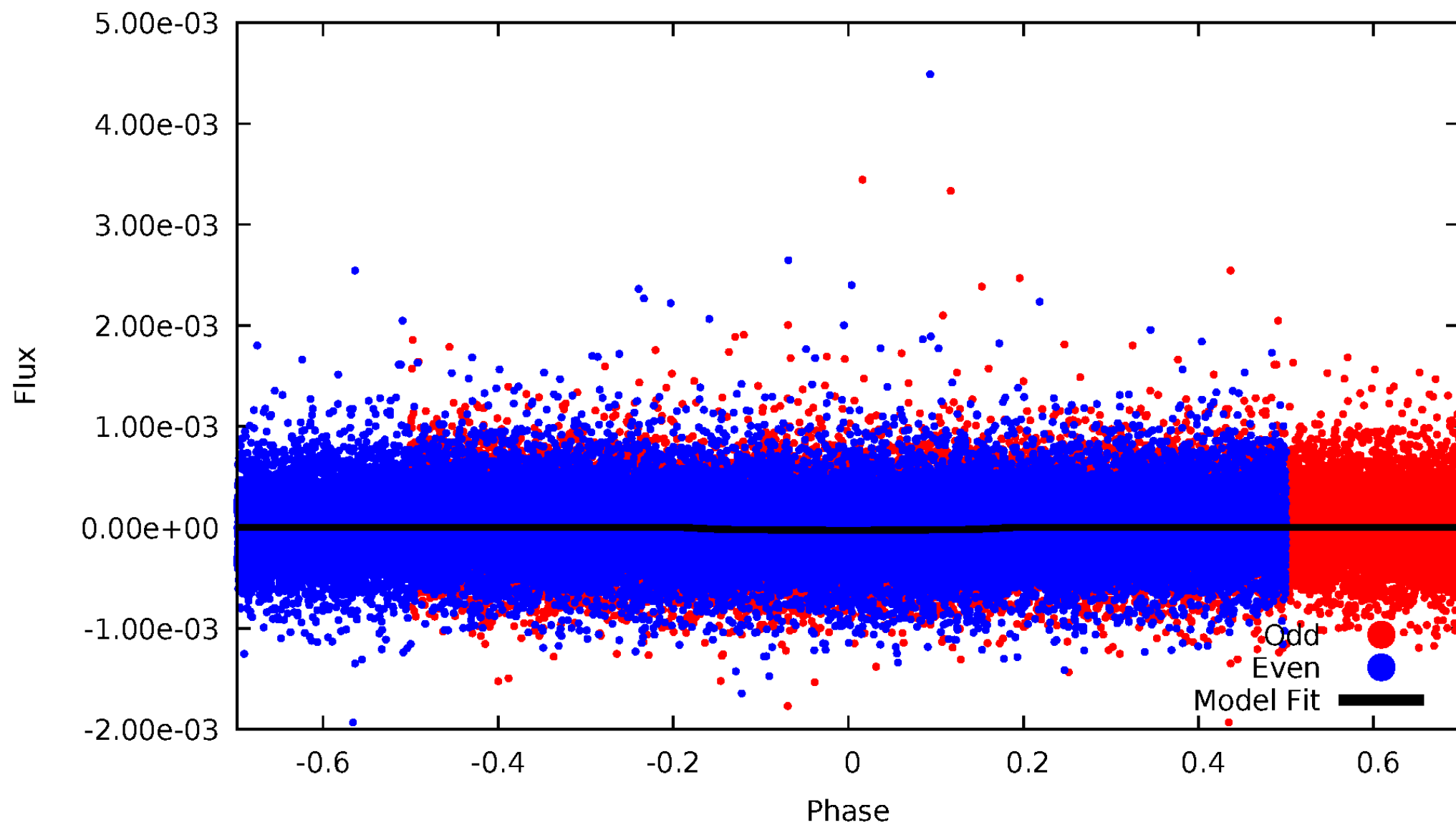
# TCE 008322263-01





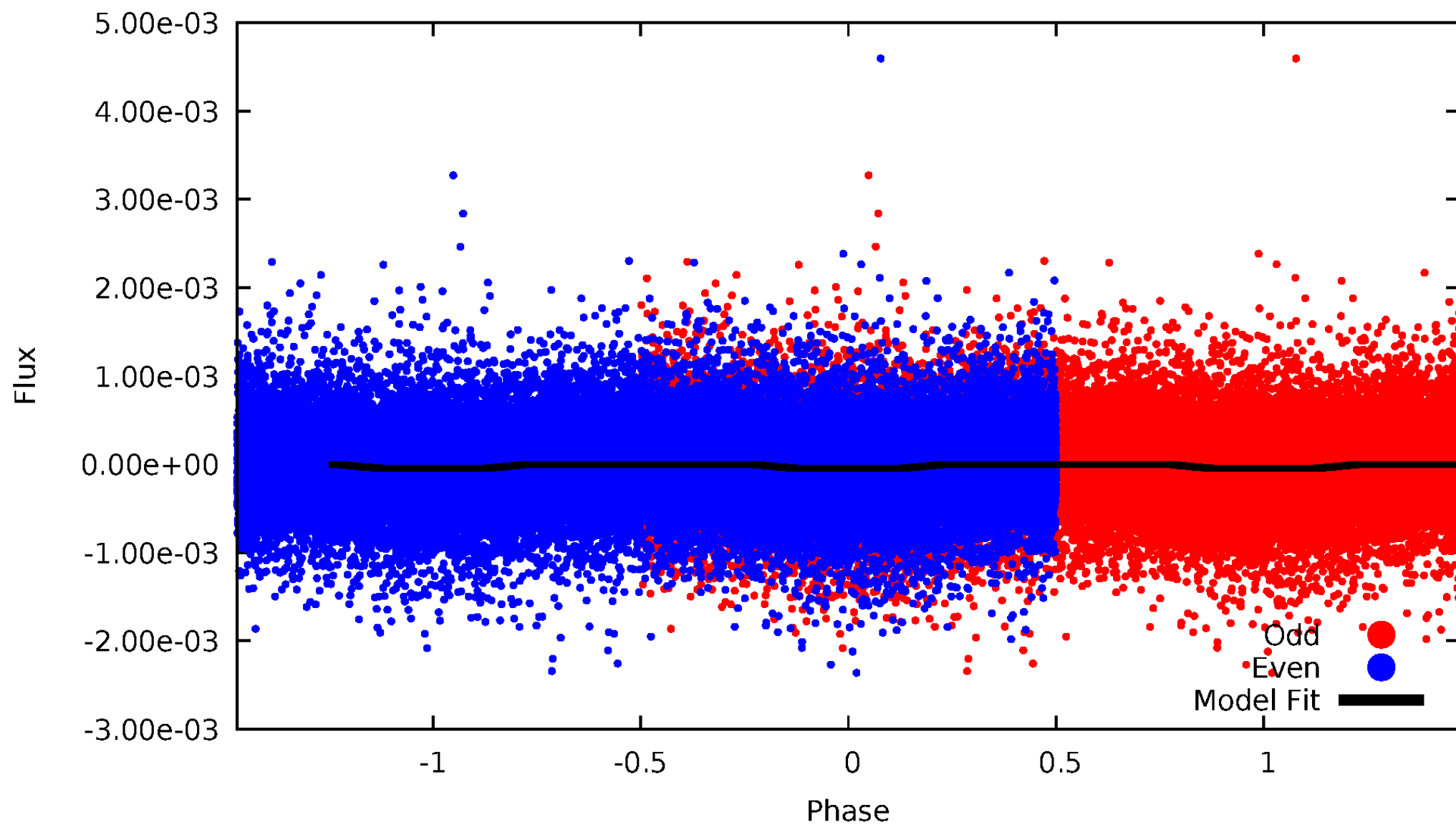
# DV Odd/Even

TCE 008322263-01

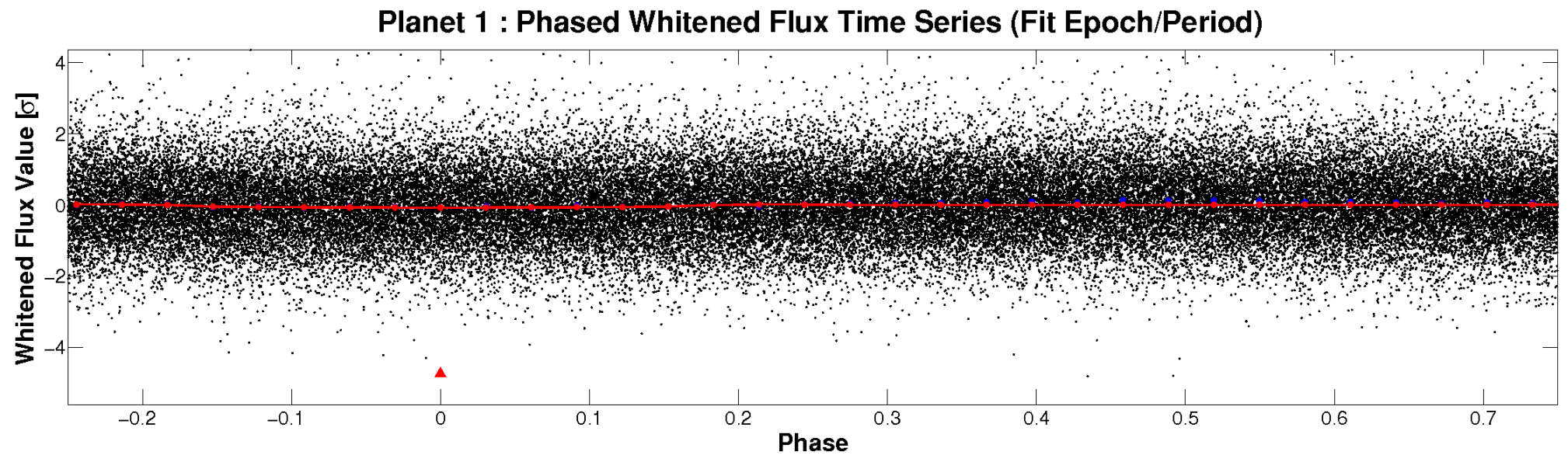
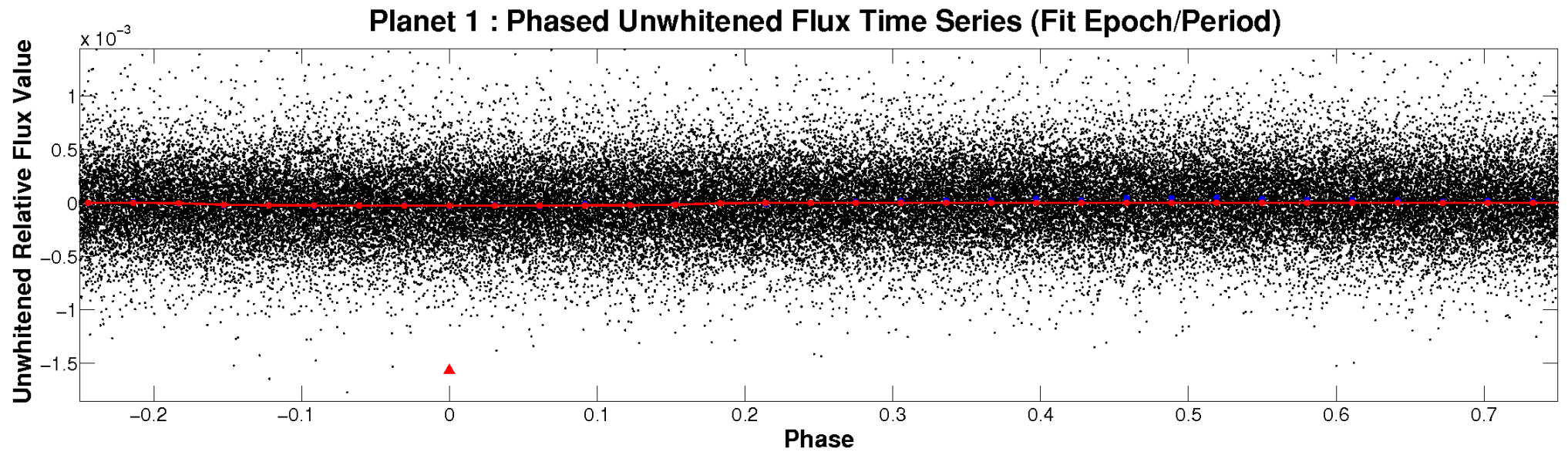


# ALT Odd/Even

TCE 008322263-01

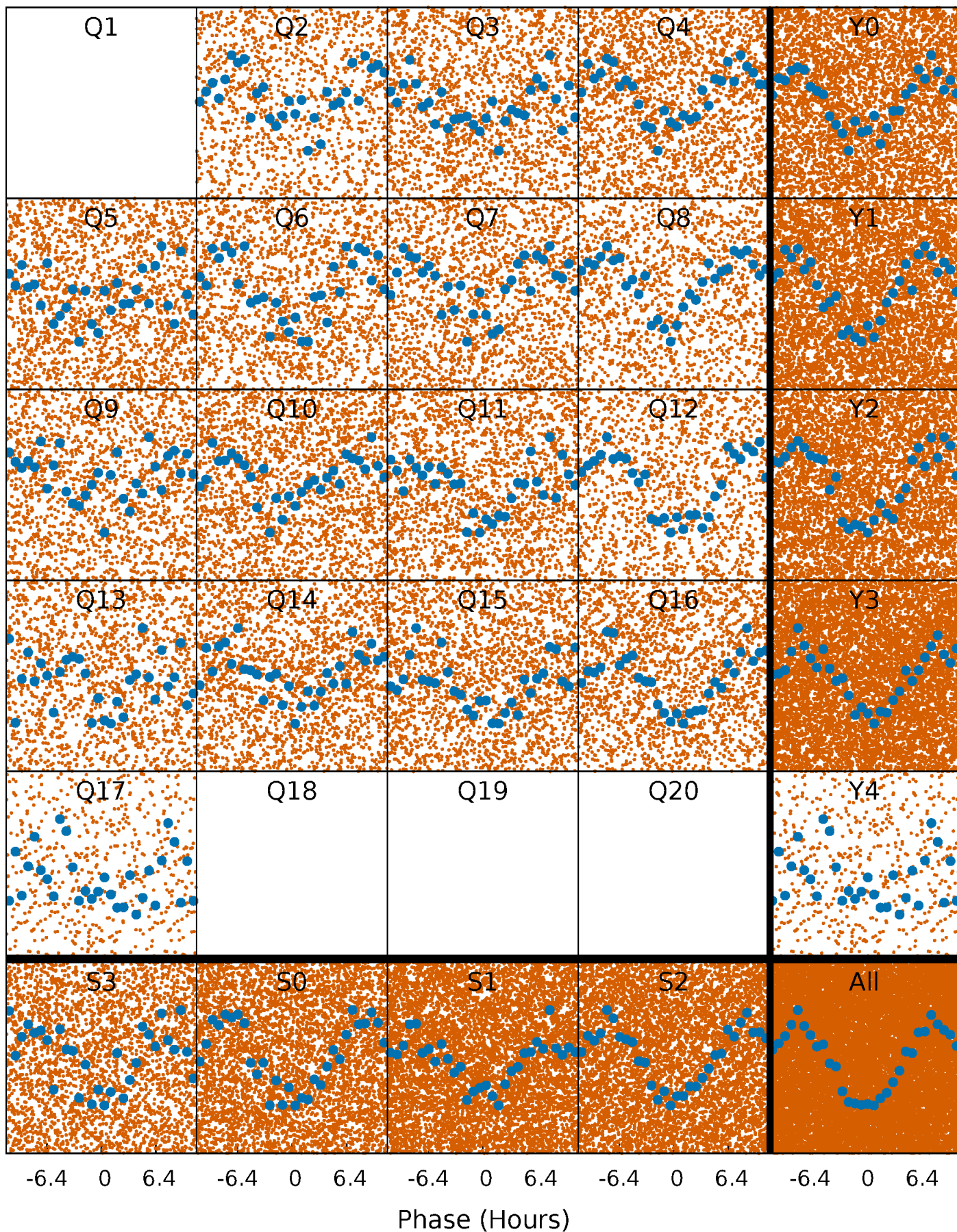


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

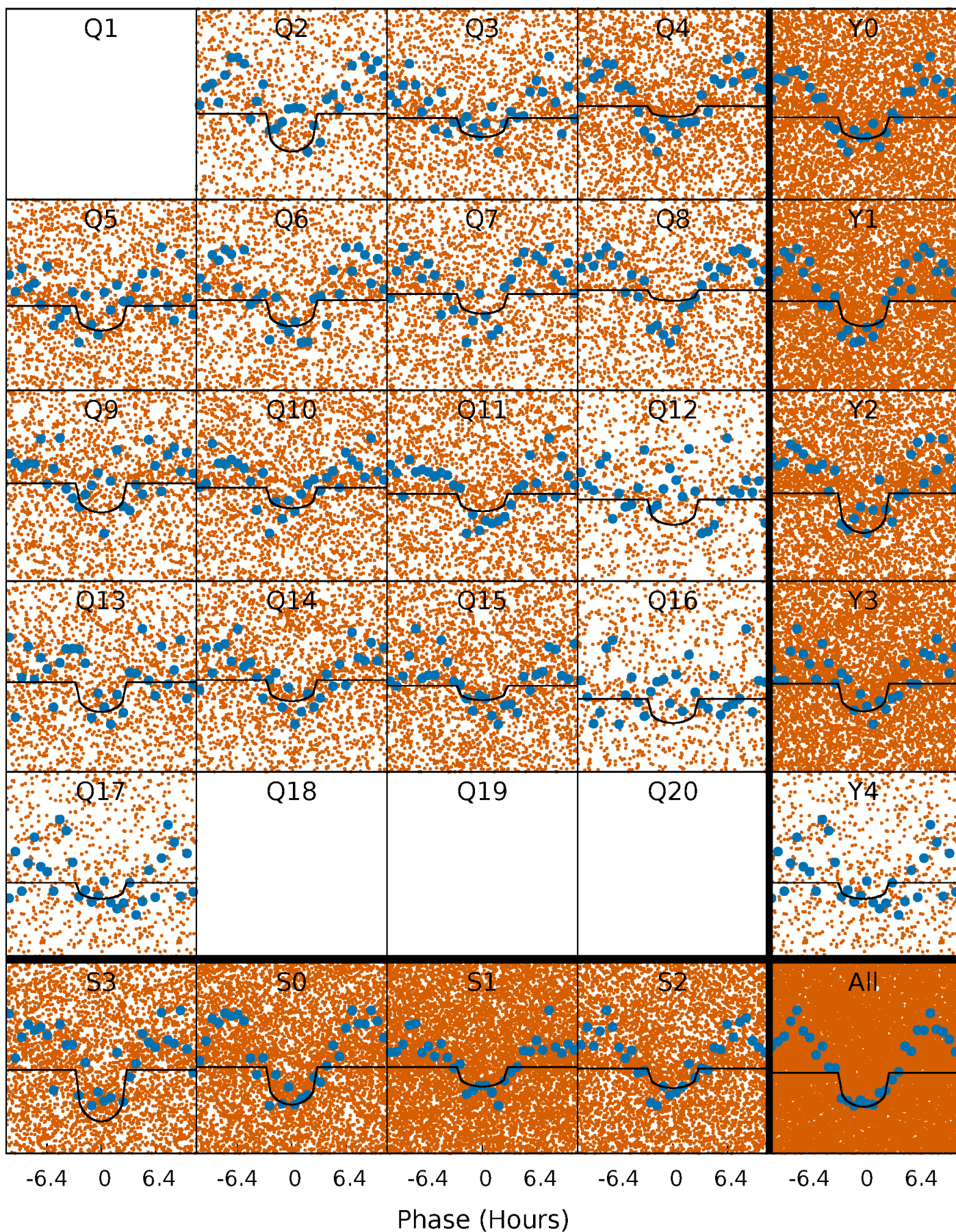
TCE 008322263-01 P= 0.669067 Days  $T_0=132.197672$  (BKJD)





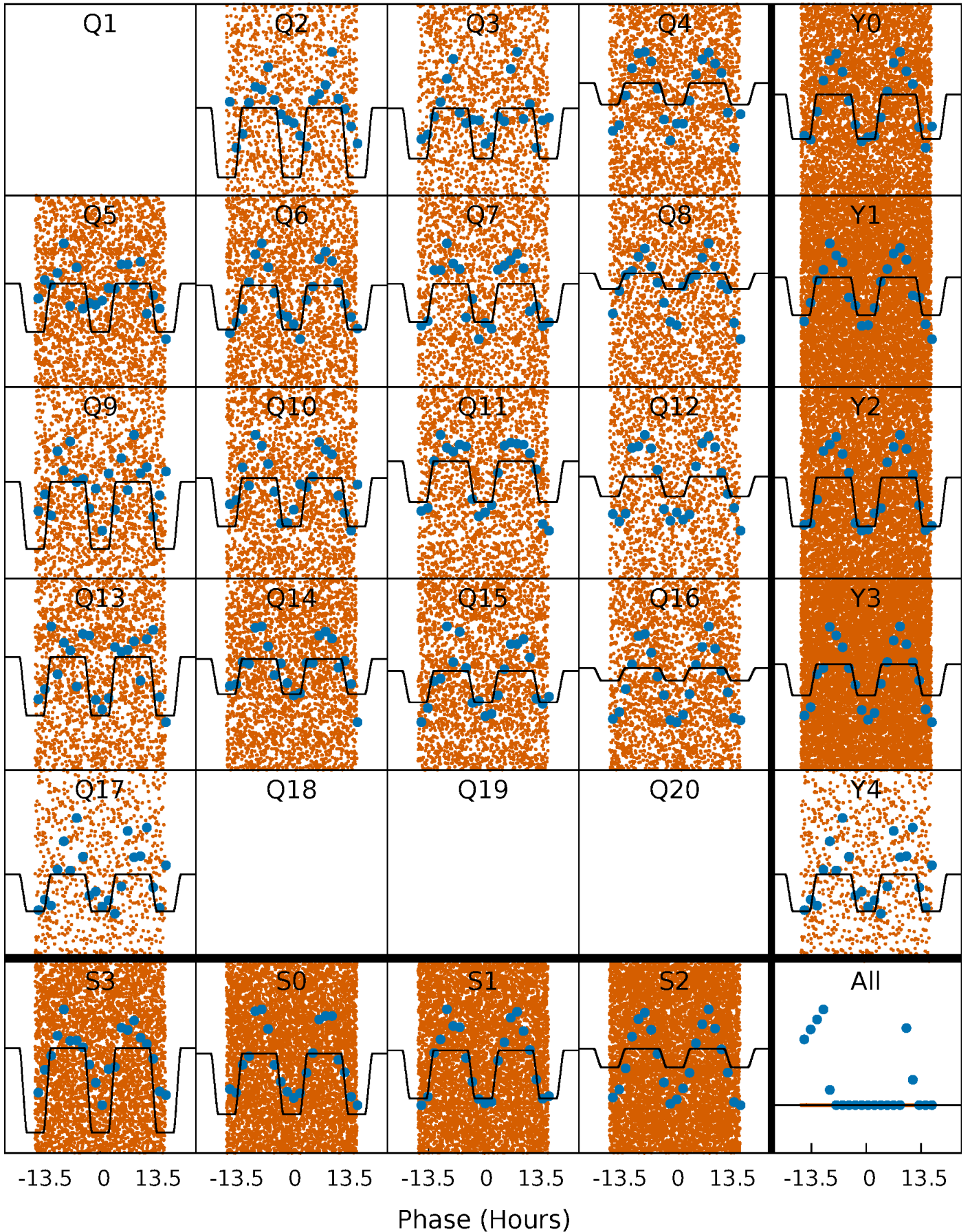
# DV Quarter-Phased Transit Curves

TCE 008322263-01 P= 0.669067 Days  $T_0=132.197672$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008322263-01   P= 0.669098 Days    $T_0=132.162828$  (BKJD)

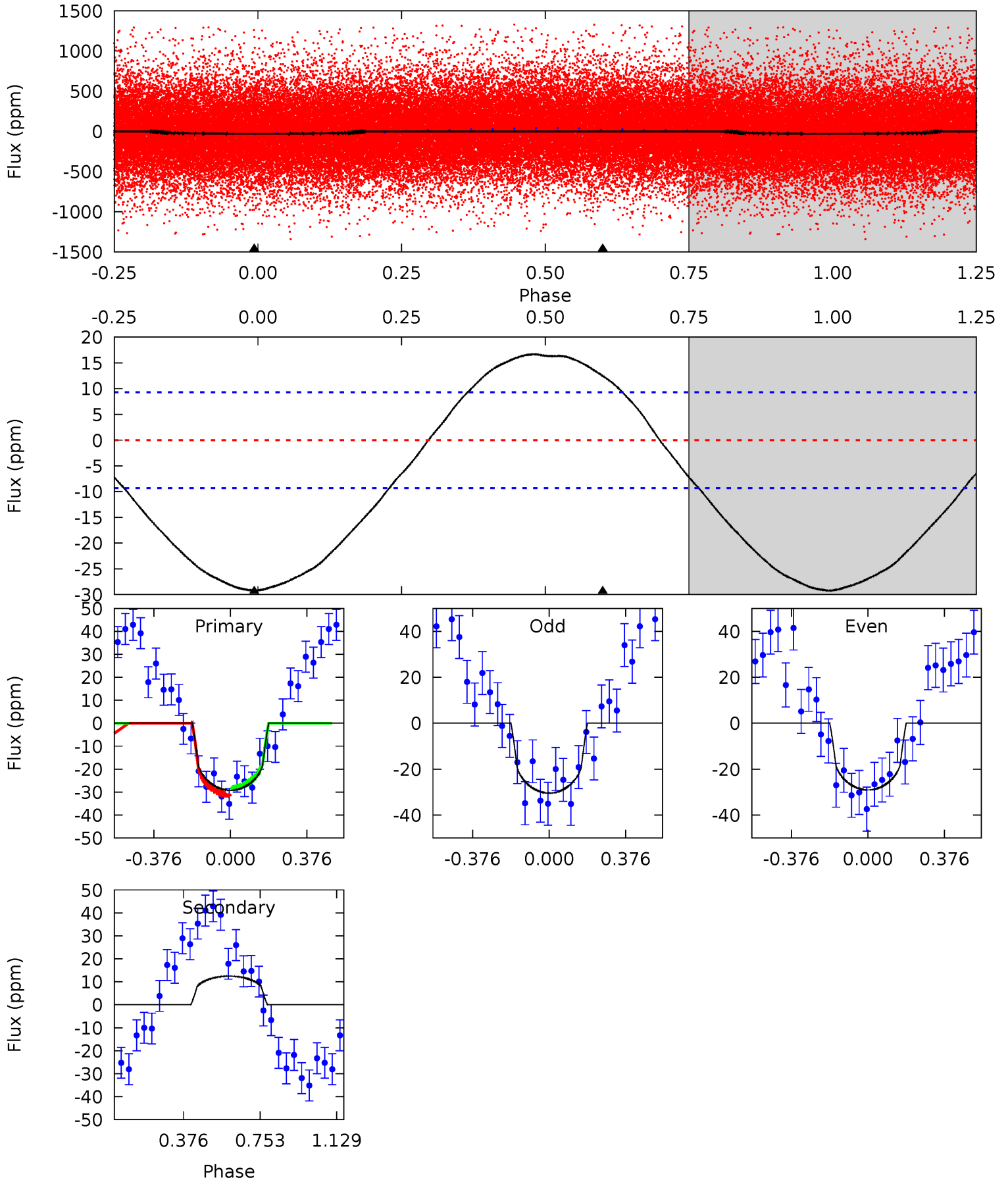




# DV Model-Shift Uniqueness Test

008322263-01, P = 0.669067 Days, E = 132.197672 Days

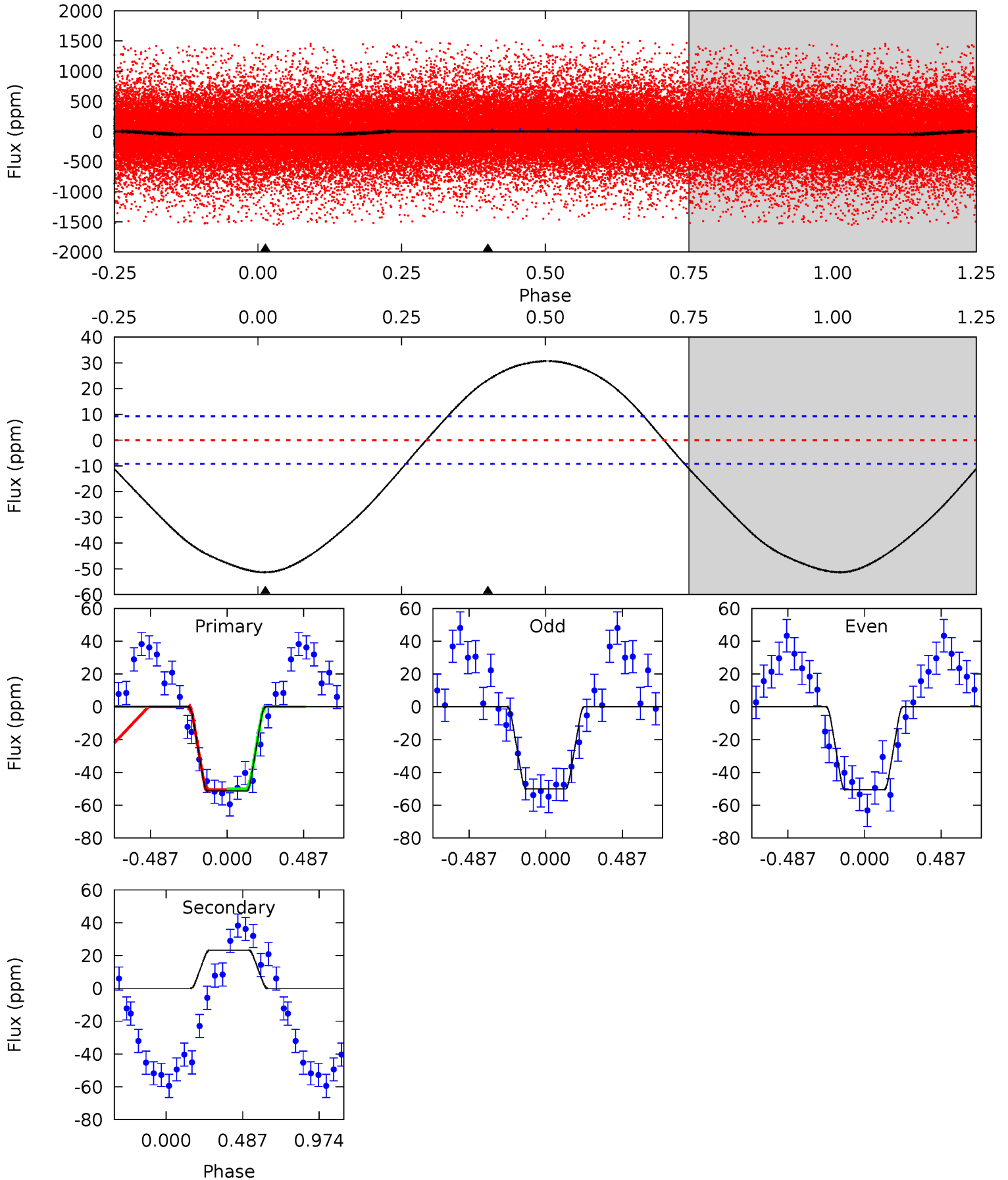
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	-5.73	0	0	4.28	0.88	1.92	13.4	13.4	-5.73	-5.73	0.32	0.93	0.36	0.69



# Alt Model-Shift Uniqueness Test

008322263-01, P = 0.669098 Days, E = 132.162828 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
23.5	-10.7	0	0	4.22	0.70	3.48	23.5	23.5	-10.7	-10.7	0.12	1.23	0.37	0.13





### Stellar Parameters For KIC 008322263

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5931^{+195}_{-177}$	$3.935^{+0.536}_{-0.167}$	$-0.480^{+0.300}_{-0.250}$	$1.752^{+0.452}_{-0.840}$	$0.964^{+0.132}_{-0.145}$	$0.252^{+1.378}_{-0.120}$
	+3%/-3%	+14%/-4%	+62%/-52%	+26%/-48%	+14%/-15%	+546%/-48%
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 008322263-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$12 \pm 2$	$1.14^{+0.93}_{-0.72}$	$3933^{+347}_{-528}$	$-4813^{+667}_{-2316}$	$-1.174^{+0.831}_{-7.535}$
Alt.	$23 \pm 2$	$1.29^{+1.08}_{-0.78}$	$3902^{+351}_{-523}$	$-5022^{+709}_{-2478}$	$-1.716^{+1.216}_{-9.034}$

$T_{max}$  = 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

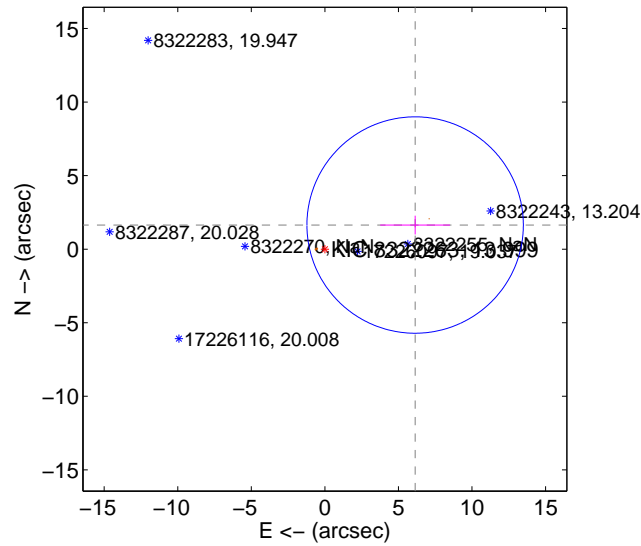
Supplemental centroid analysis for 008322263-01. Kepler magnitude: 14.00. Transit SNR 9.81

There are 0 quarters with good PRF difference image offsets

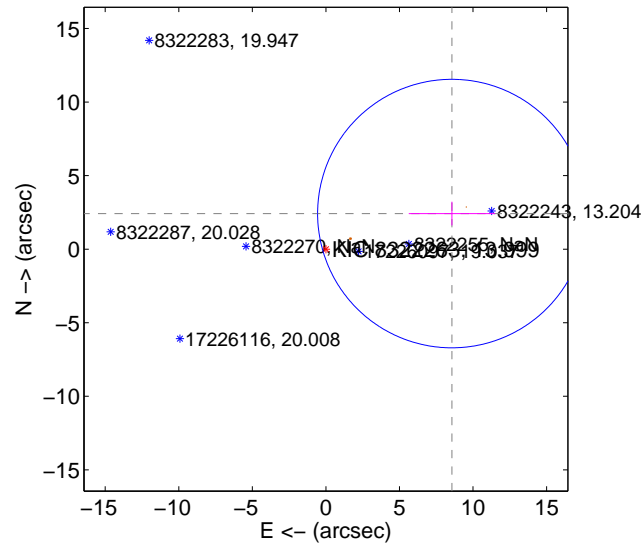
The OOT PRF centroid is offset from the target star catalog position by about 2.58 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$6.350 \pm 2.452$	2.59	$-6.134 \pm 2.368$	$1.640 \pm 0.637$
PRF-fit source offset from KIC position	$8.898 \pm 3.042$	2.93	$-8.562 \pm 2.934$	$2.420 \pm 0.806$
photometric centroid source offset	$5.72 \pm 1.01$	5.68	$-2.80 \pm 1.60$	$4.98 \pm 0.72$

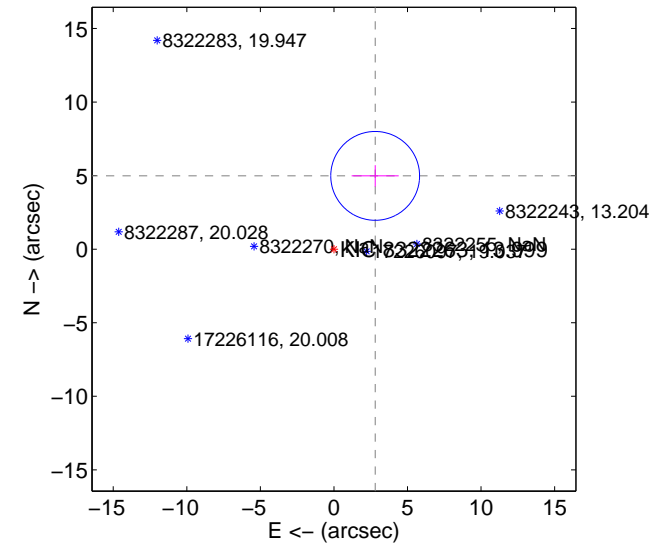
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

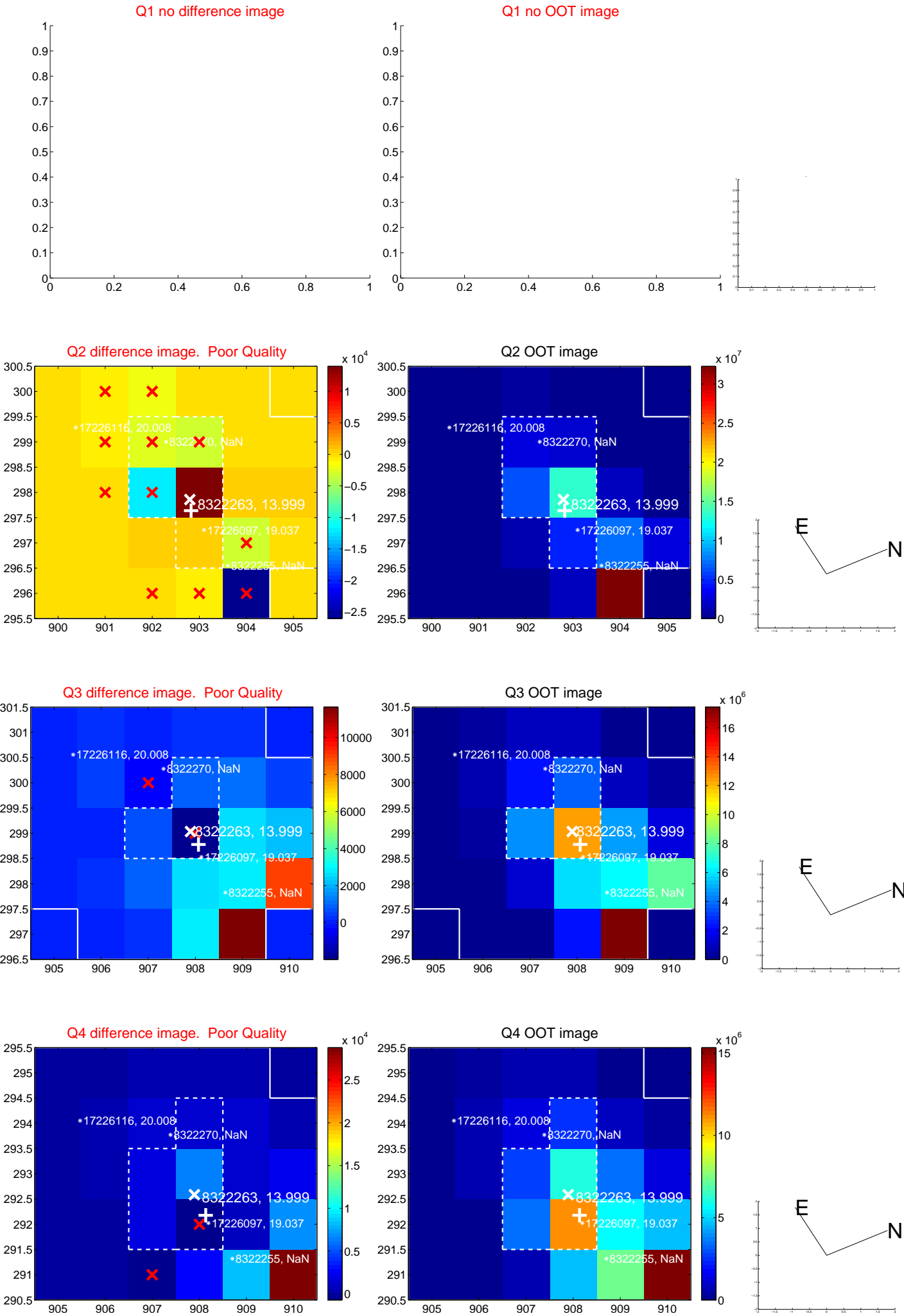


offset from photometric centroids

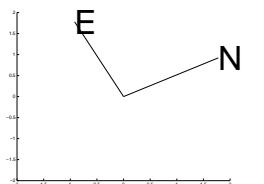
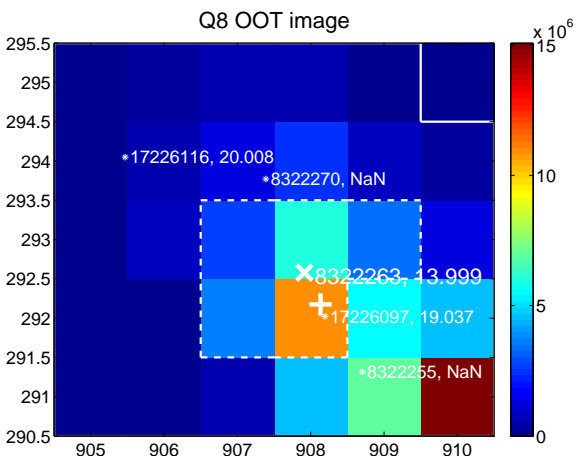
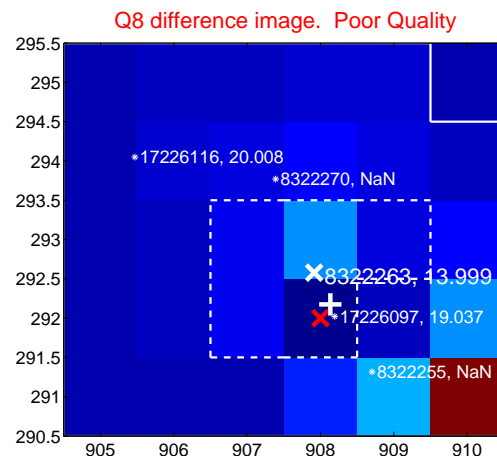
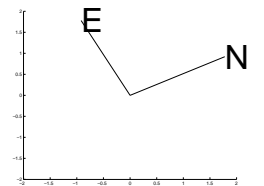
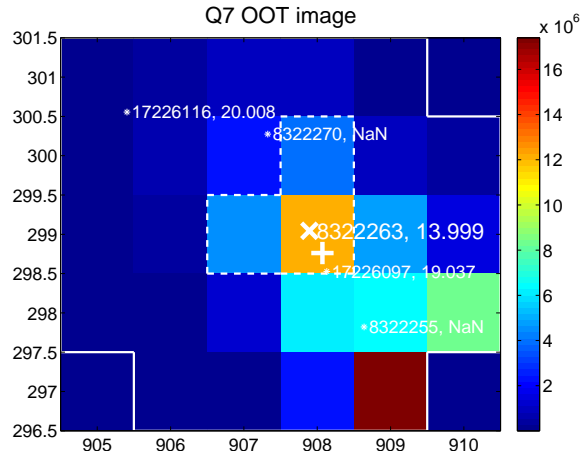
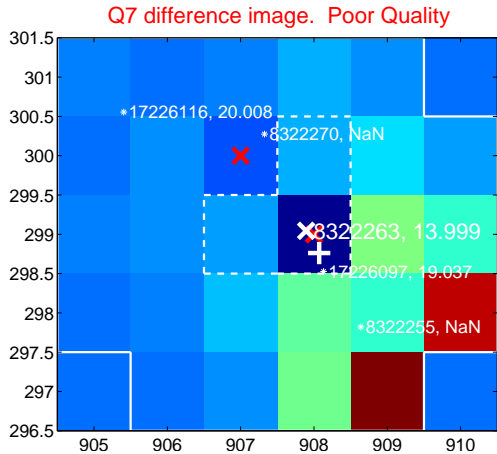
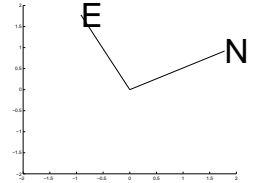
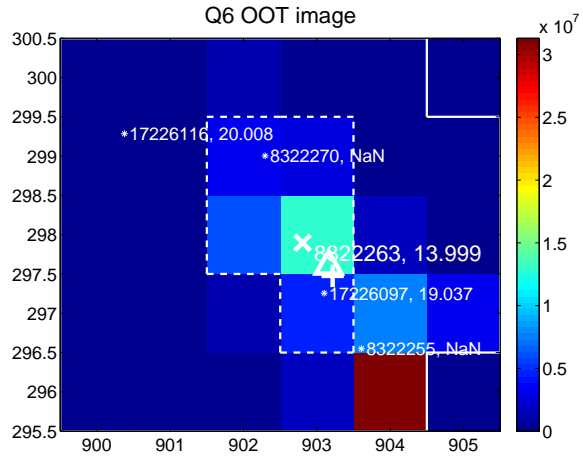
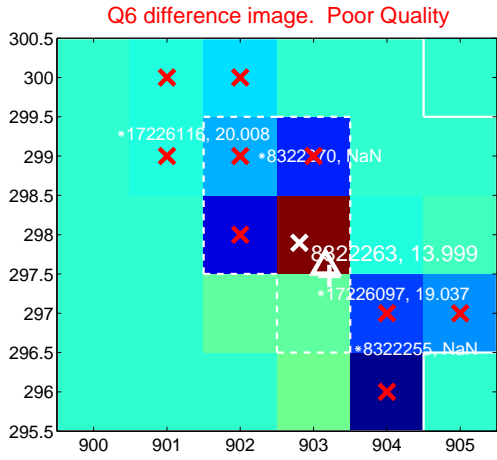
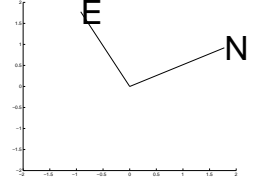
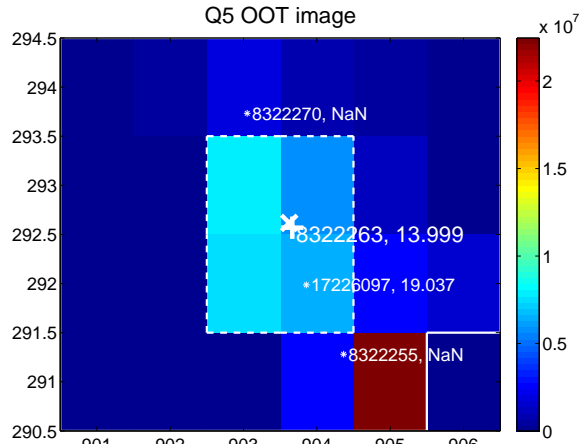
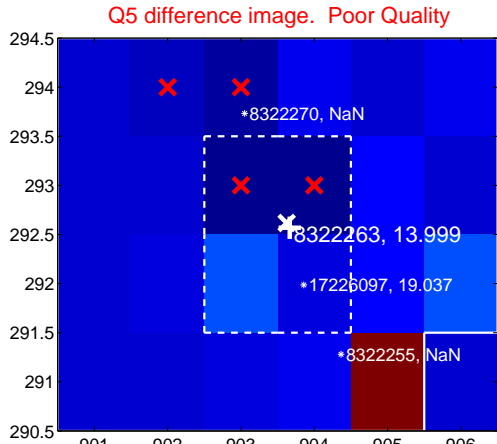


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

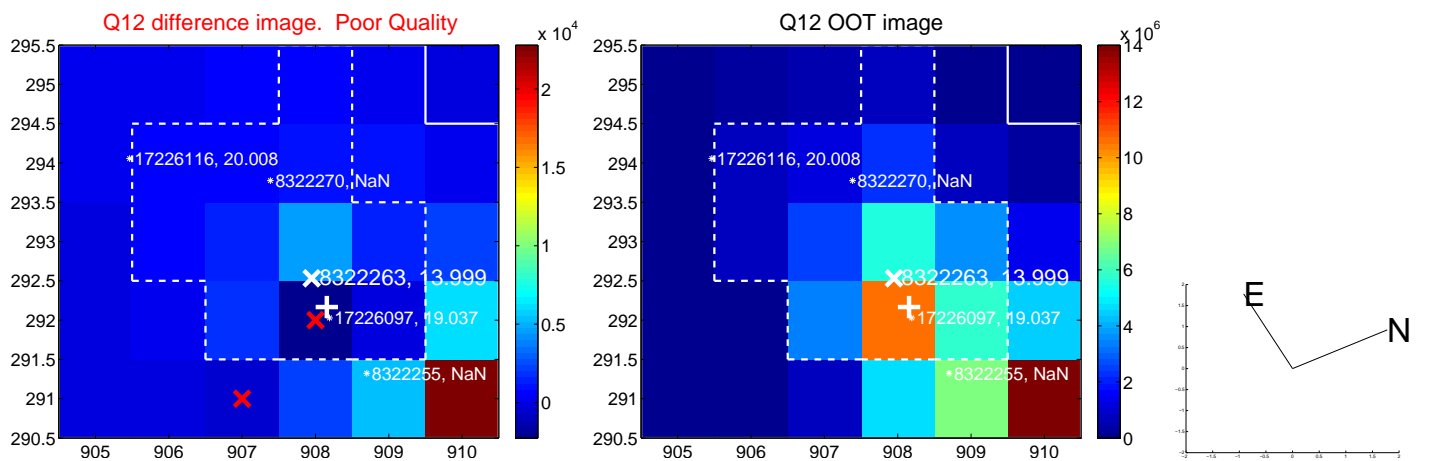
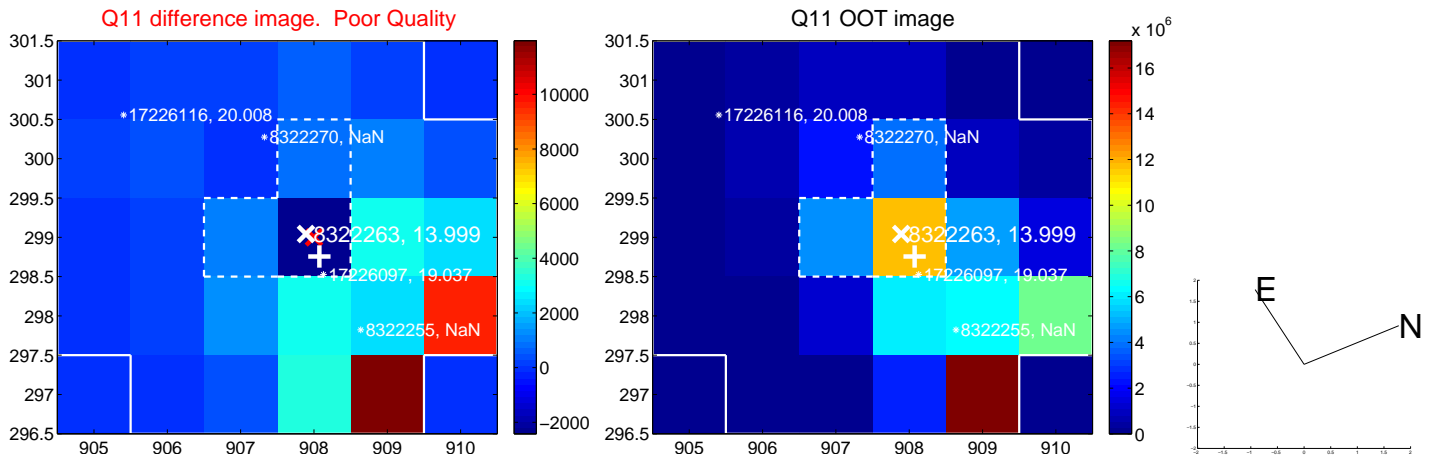
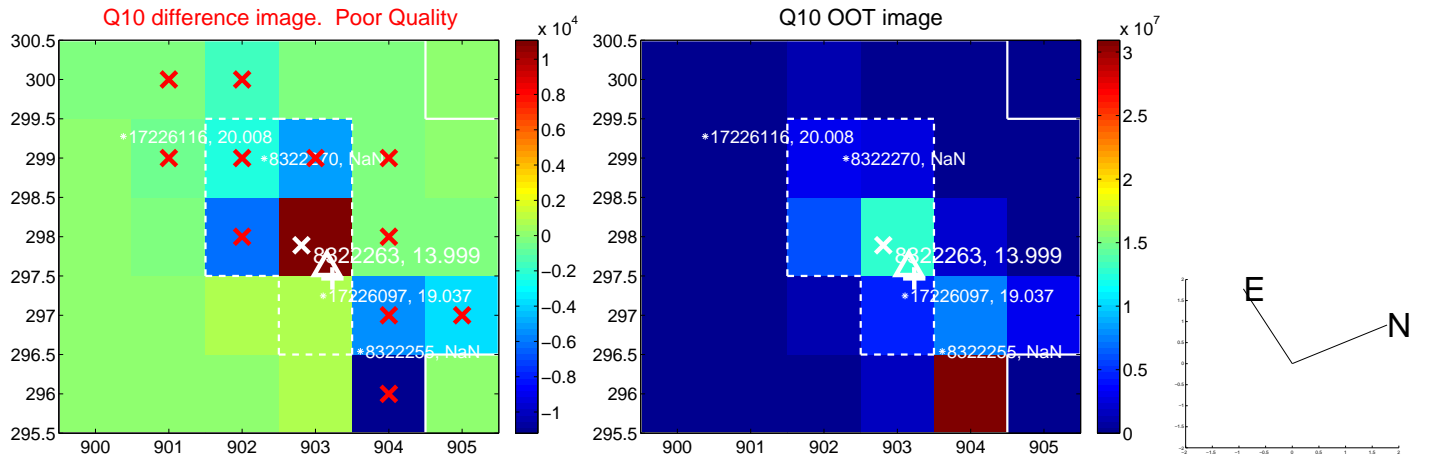
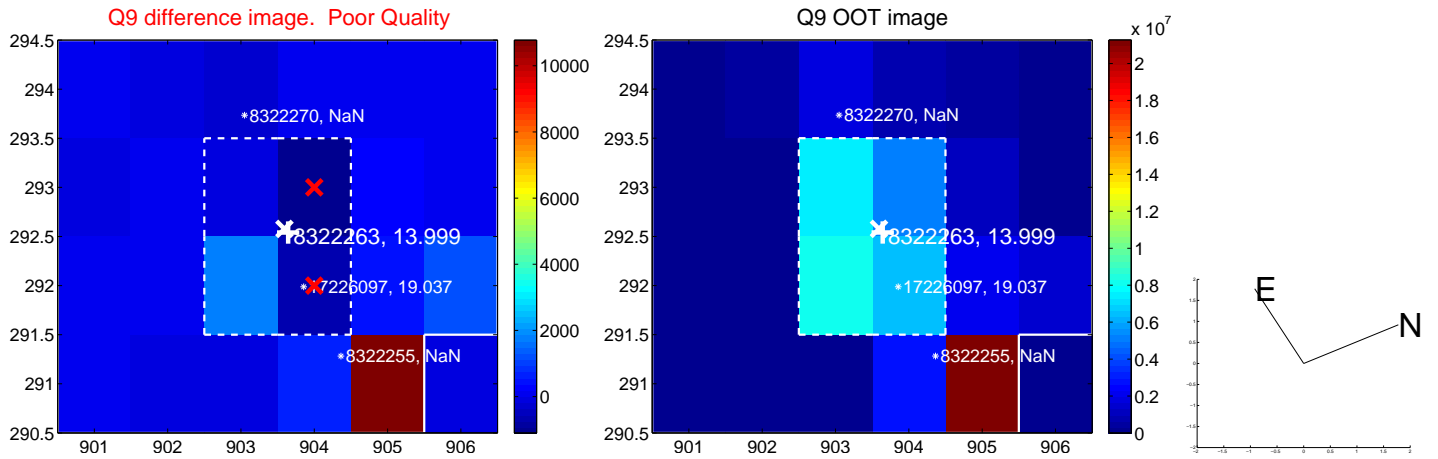


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

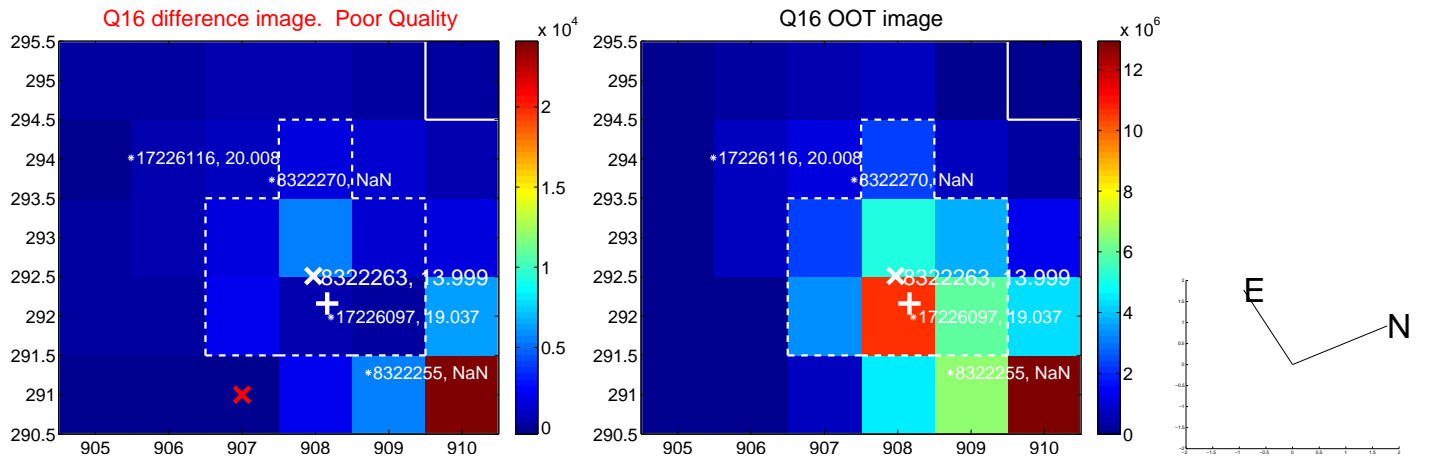
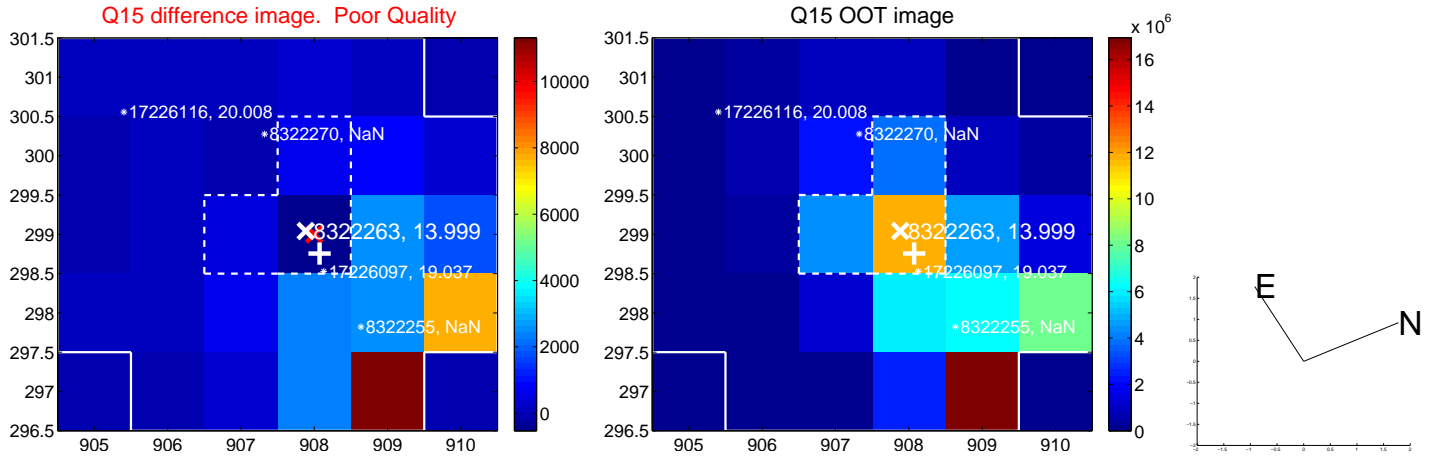
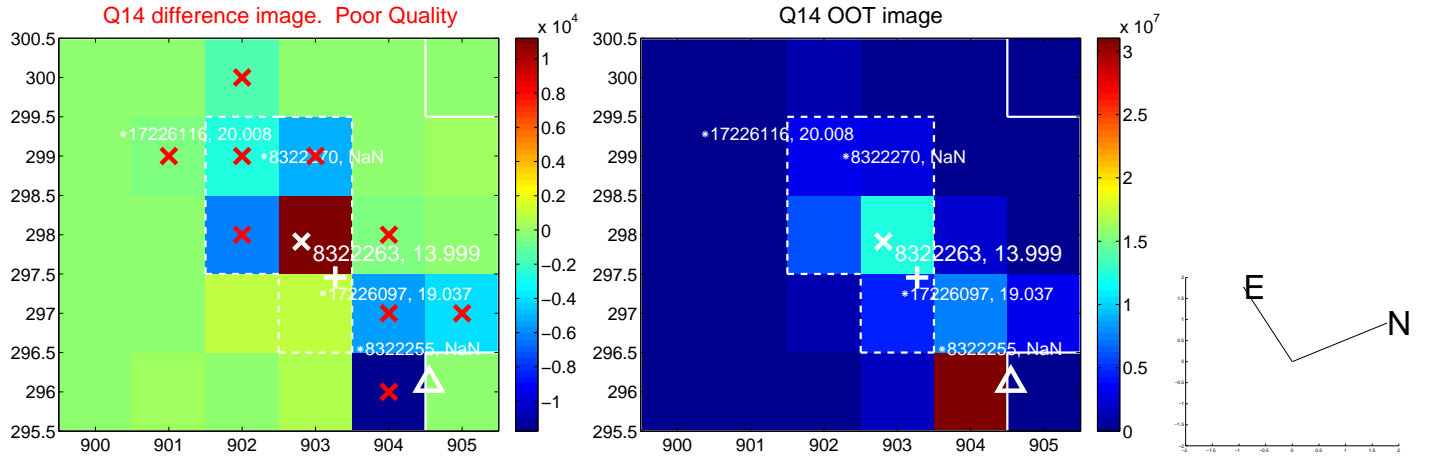
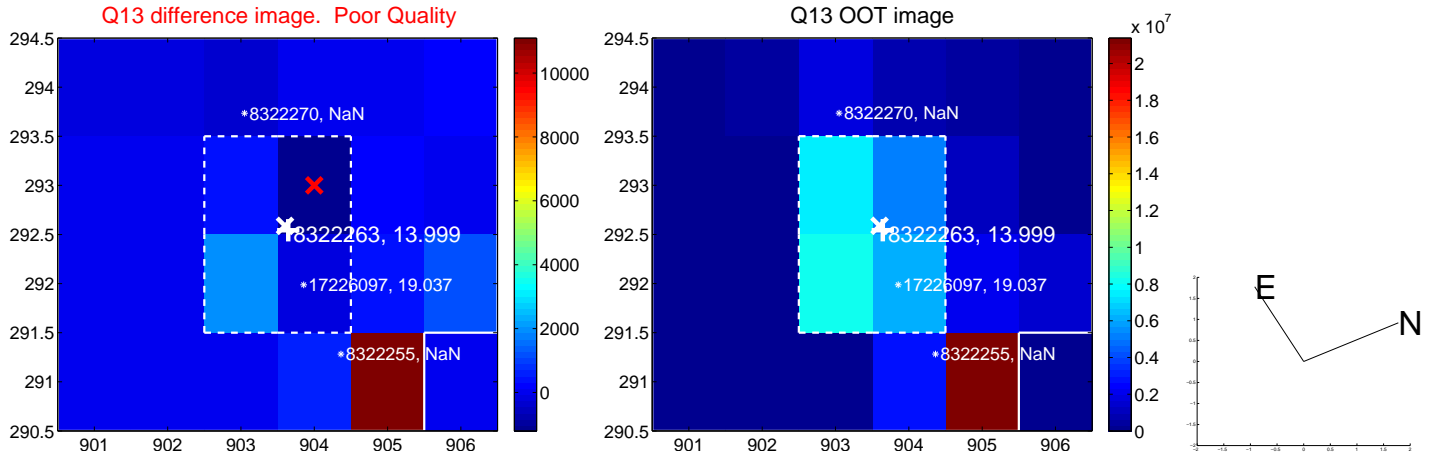




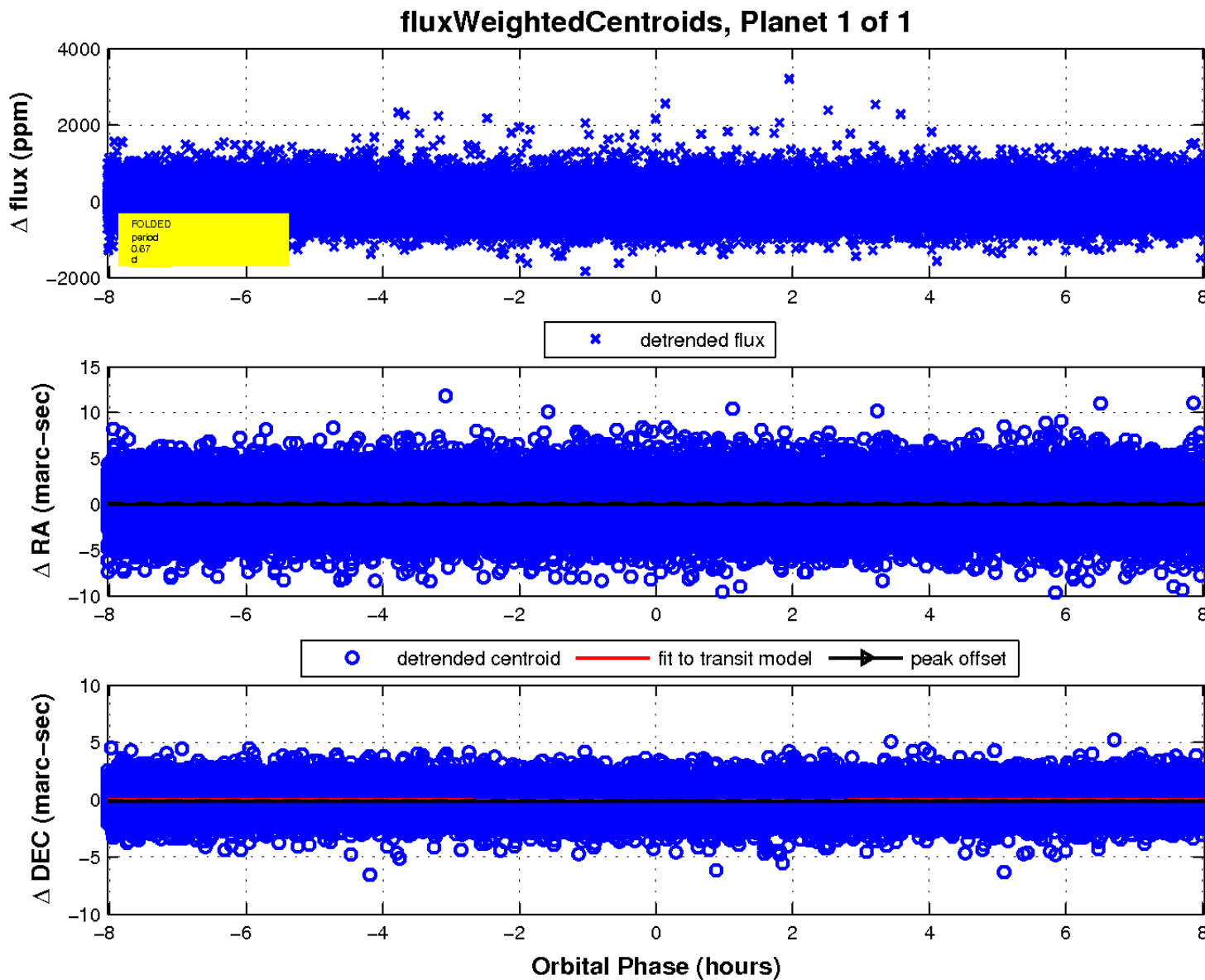
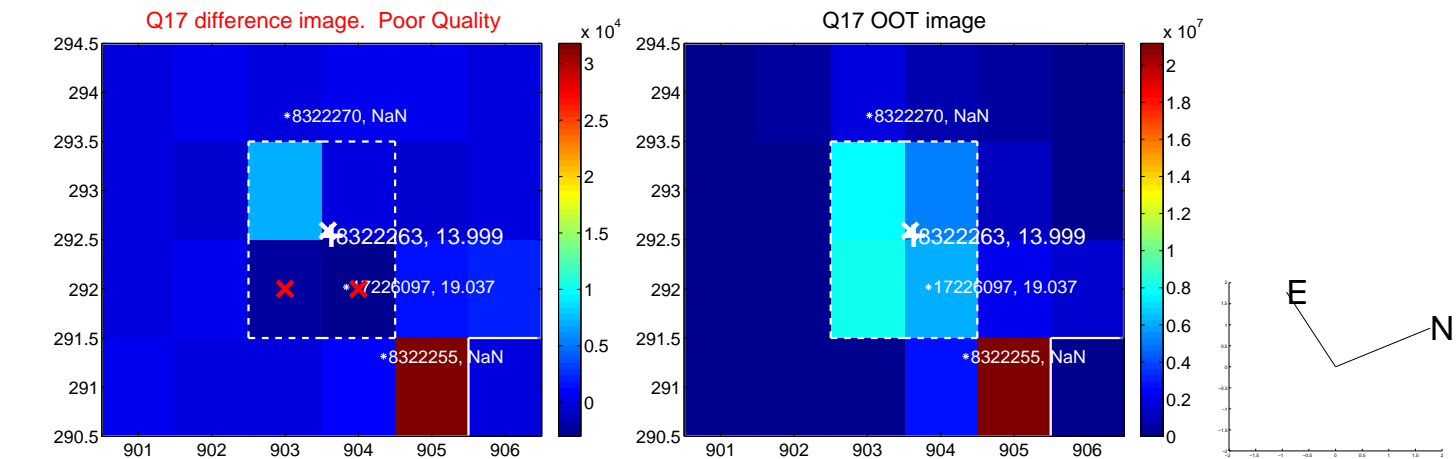
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

