

# KIC 008324292

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008324292-01	OBS	No	0.532220	131.748265	104.7	4.672	7.8	13.0	1.00	5780	1.04	6050.85

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008324292-01	OBS	FP	0.00	1	0	1	0	LPP_DV—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.

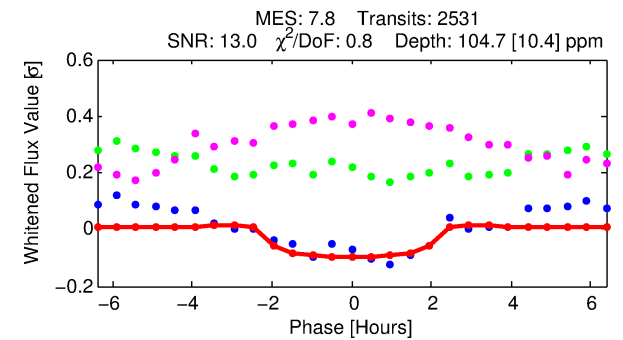
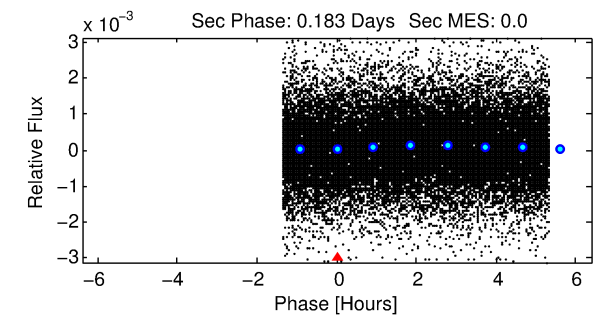
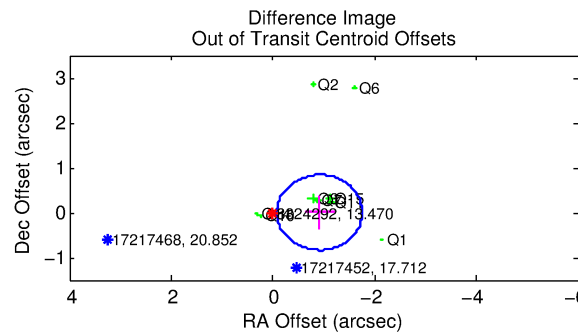
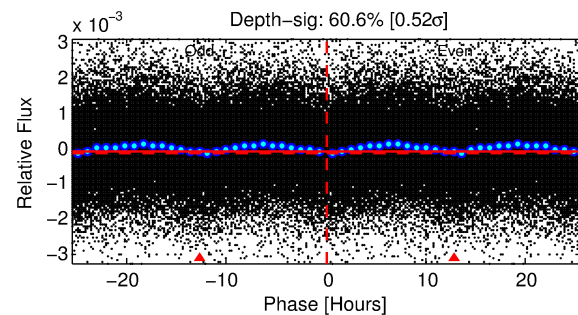
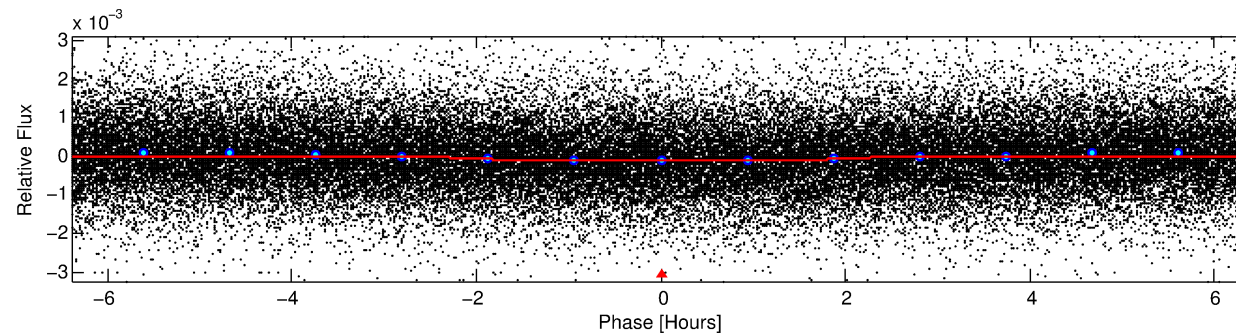
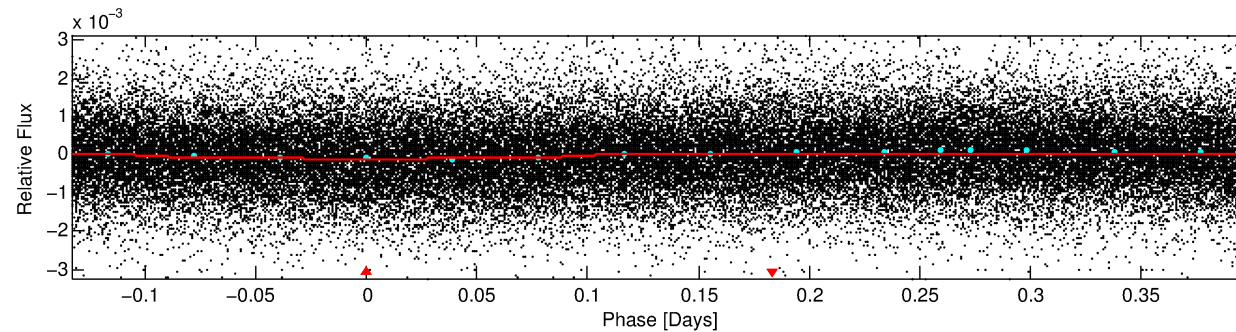
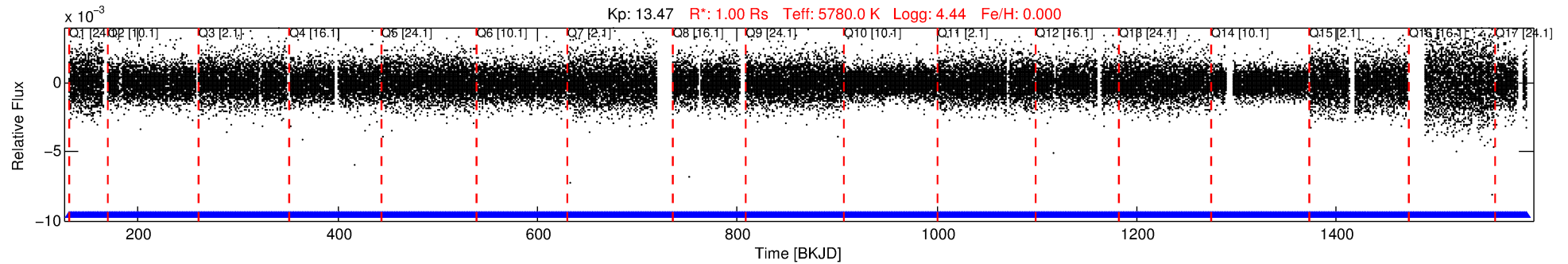
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008324292-01

No Significant Match Found

# DV One-Page Summary

KIC: 8324292 Candidate: 1 of 1 Period: 0.532 d



## DV Fit Results:

Period = 0.53222 [0.00001] d  
Epoch = 131.7483 [0.0034] BKJD  
Rp/R\* = 0.0095 [0.0090]  
a/R\* = 1.09 [0.67]  
b = 0.46 [7.10]  
Seff = 6050.86 [0.12]  
Teq = 2249 [0] K  
Rp = 1.04 [0.98] Re  
a = 0.0129 [0.0000] AU  
Ag = N/A  
Teffp = N/A

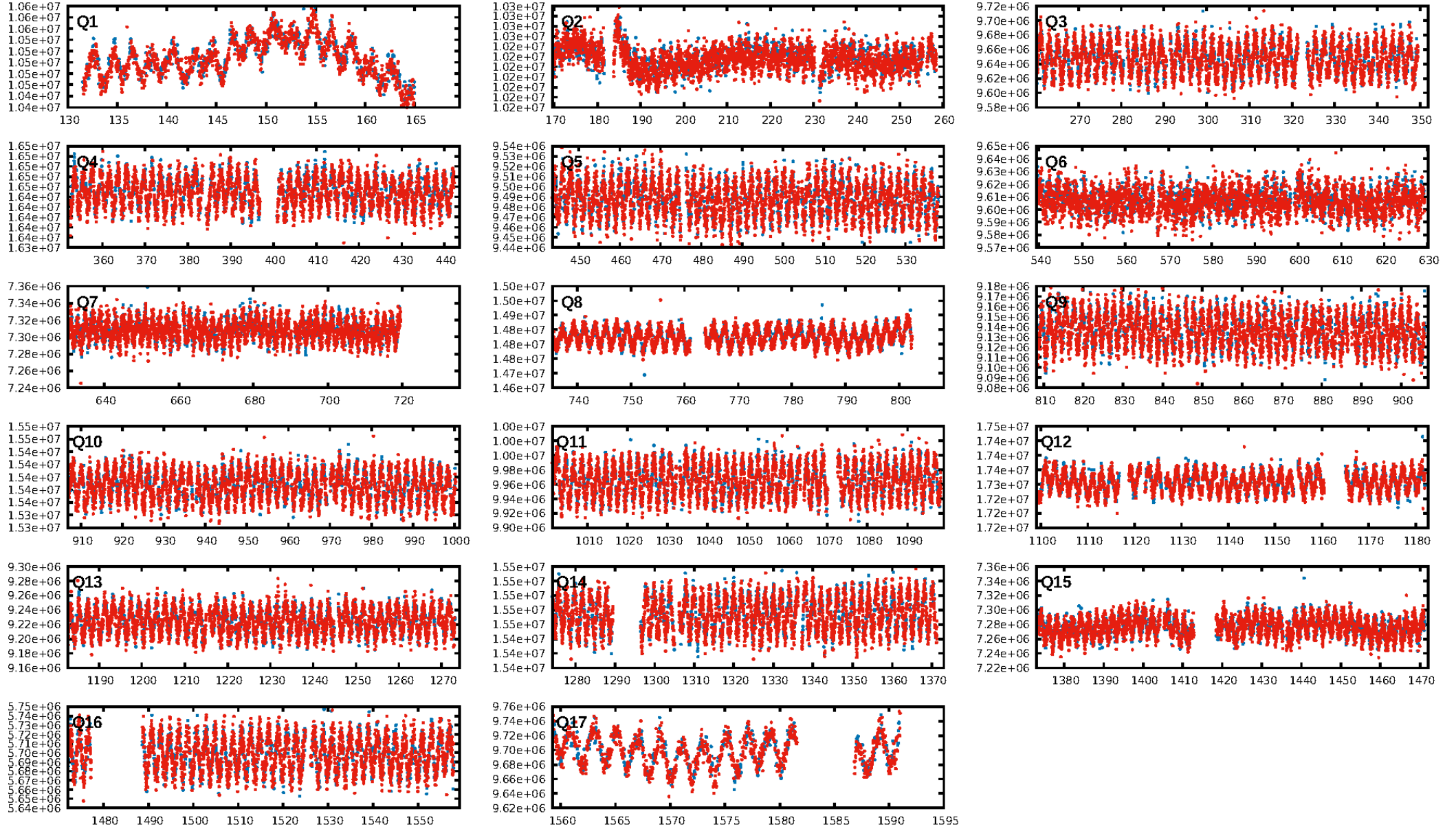
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2416/2416]  
GhostDiagnostic-chr: -1.675  
Centroid-sig: 0.0%  
Centroid-so: 5.430 arcsec [14.31σ]  
OotOffset-rm: 0.916 arcsec [3.28σ]  
KicOffset-rm: 4.086 arcsec [17.53σ]  
OotOffset-st: 4/4/0/1 [9]  
KicOffset-st: 4/4/0/1 [9]  
DiffImageQuality-fgm: 0.89 [8/9]  
DiffImageOverlap-fno: 1.00 [17/17]

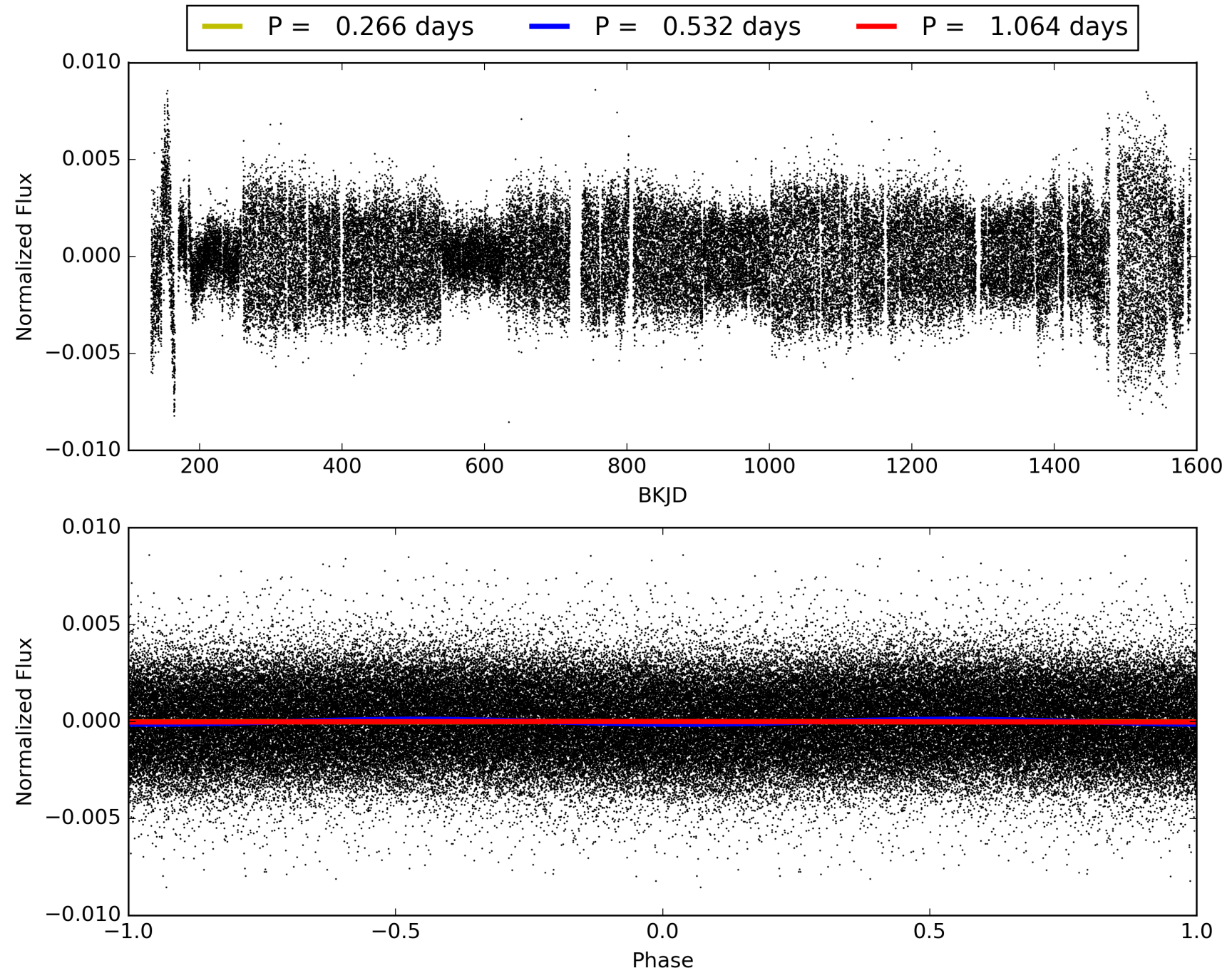
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:05:29 Z

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

# TCE 008324292-01, PDC Light Curves



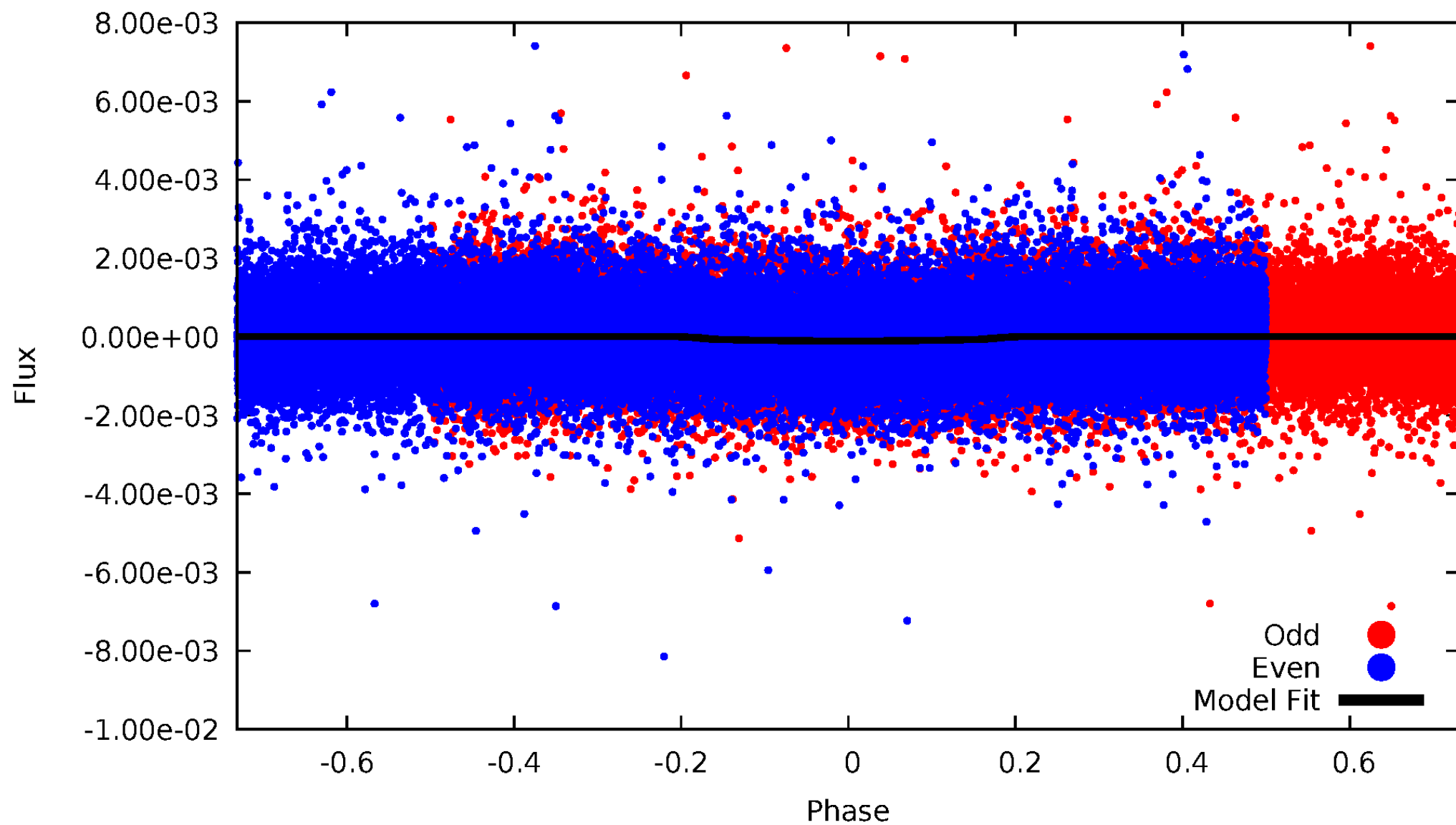
TCE 008324292-01





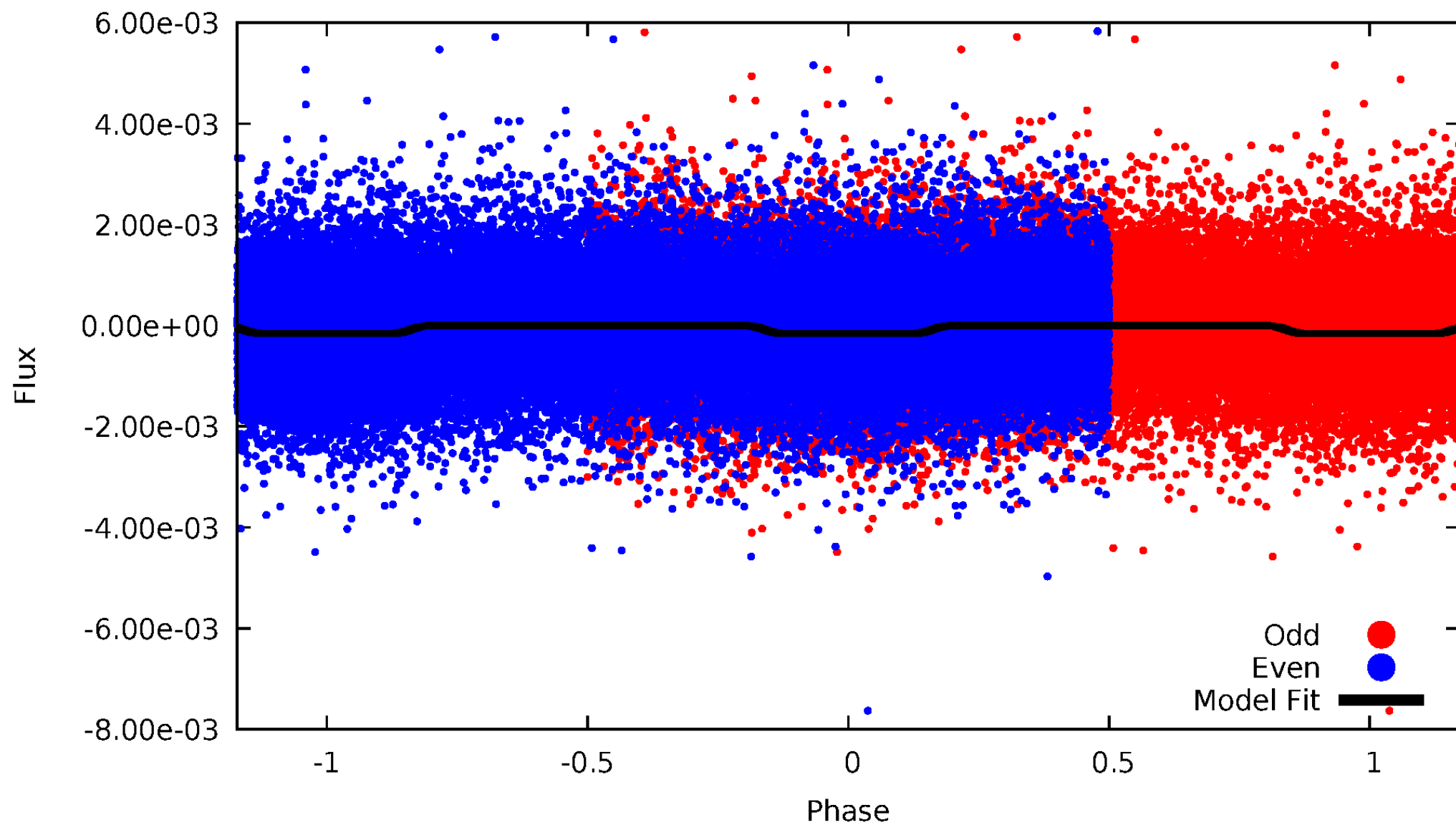
DV Odd/Even

TCE 008324292-01



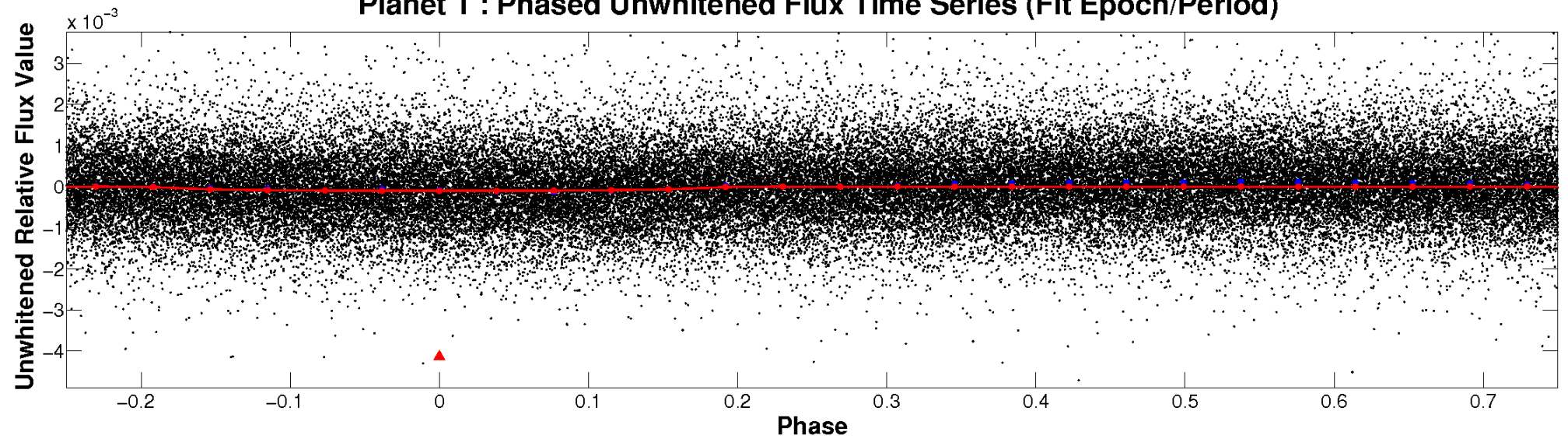
# ALT Odd/Even

TCE 008324292-01

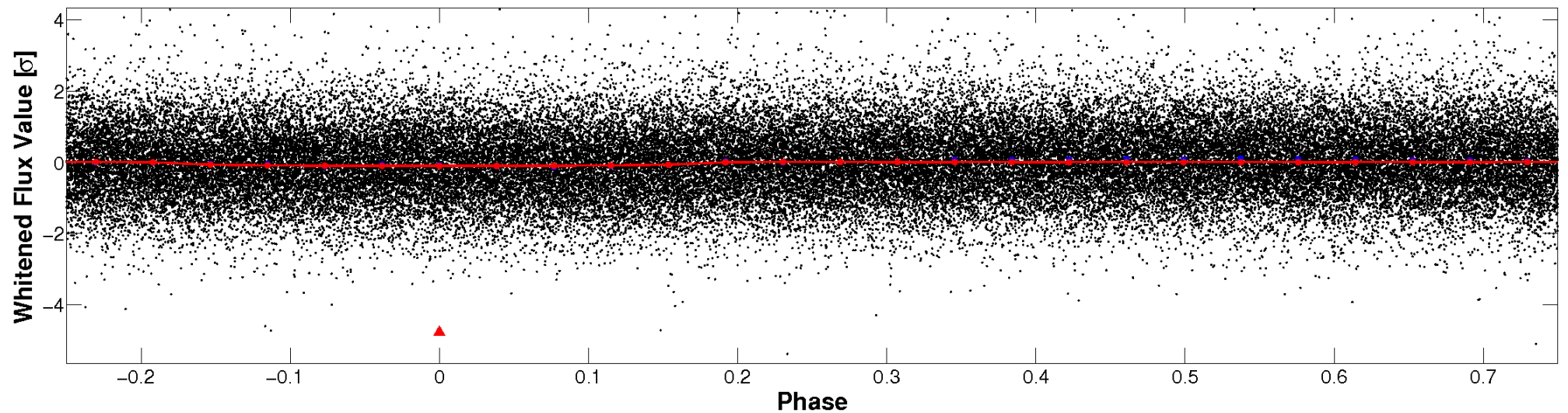


# Non-Whitened Vs. Whitened Light Curve

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

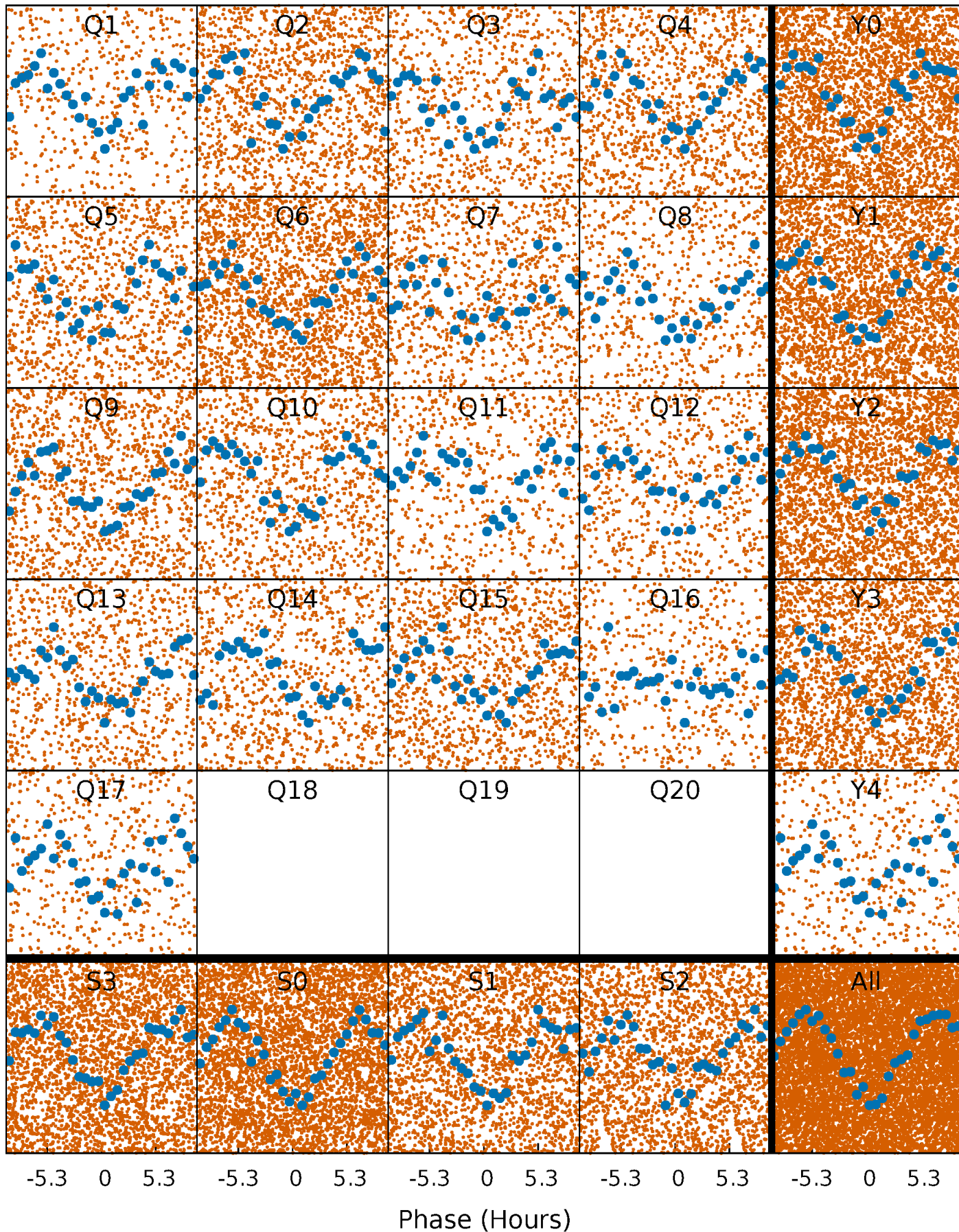


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

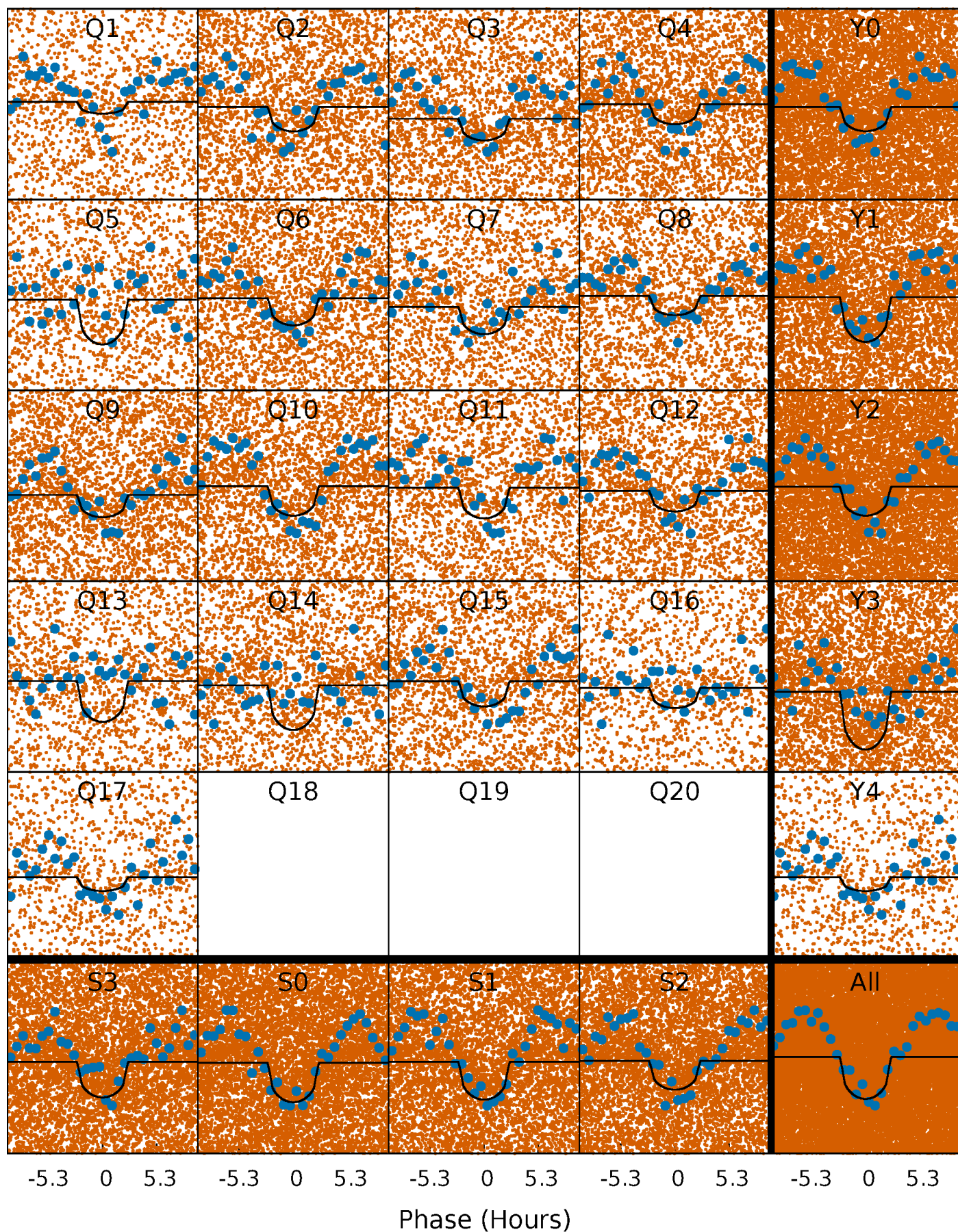
TCE 008324292-01   P= 0.532220 Days    $T_0=131.748265$  (BKJD)





# DV Quarter-Phased Transit Curves

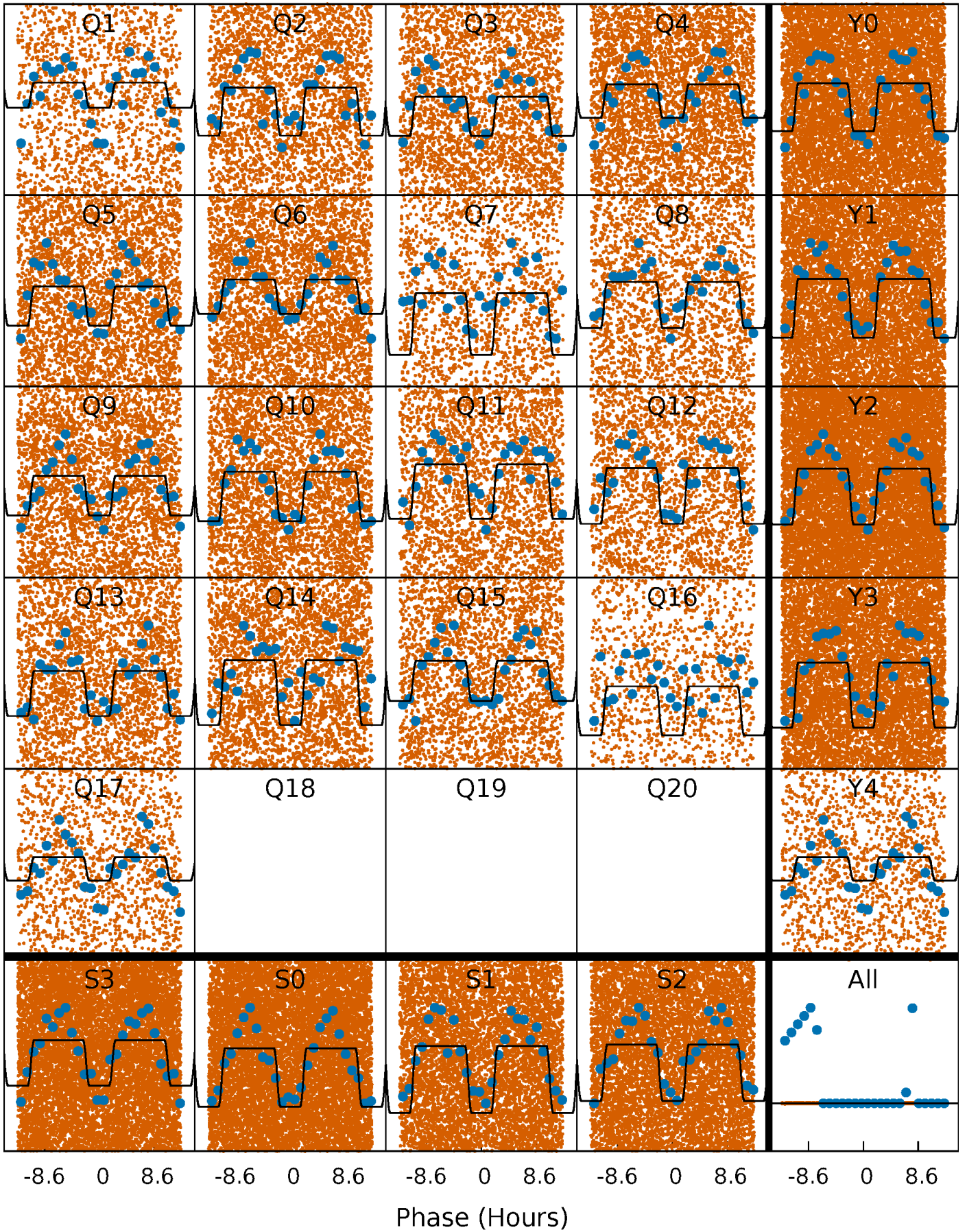
TCE 008324292-01   P= 0.532220 Days    $T_0=131.748265$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

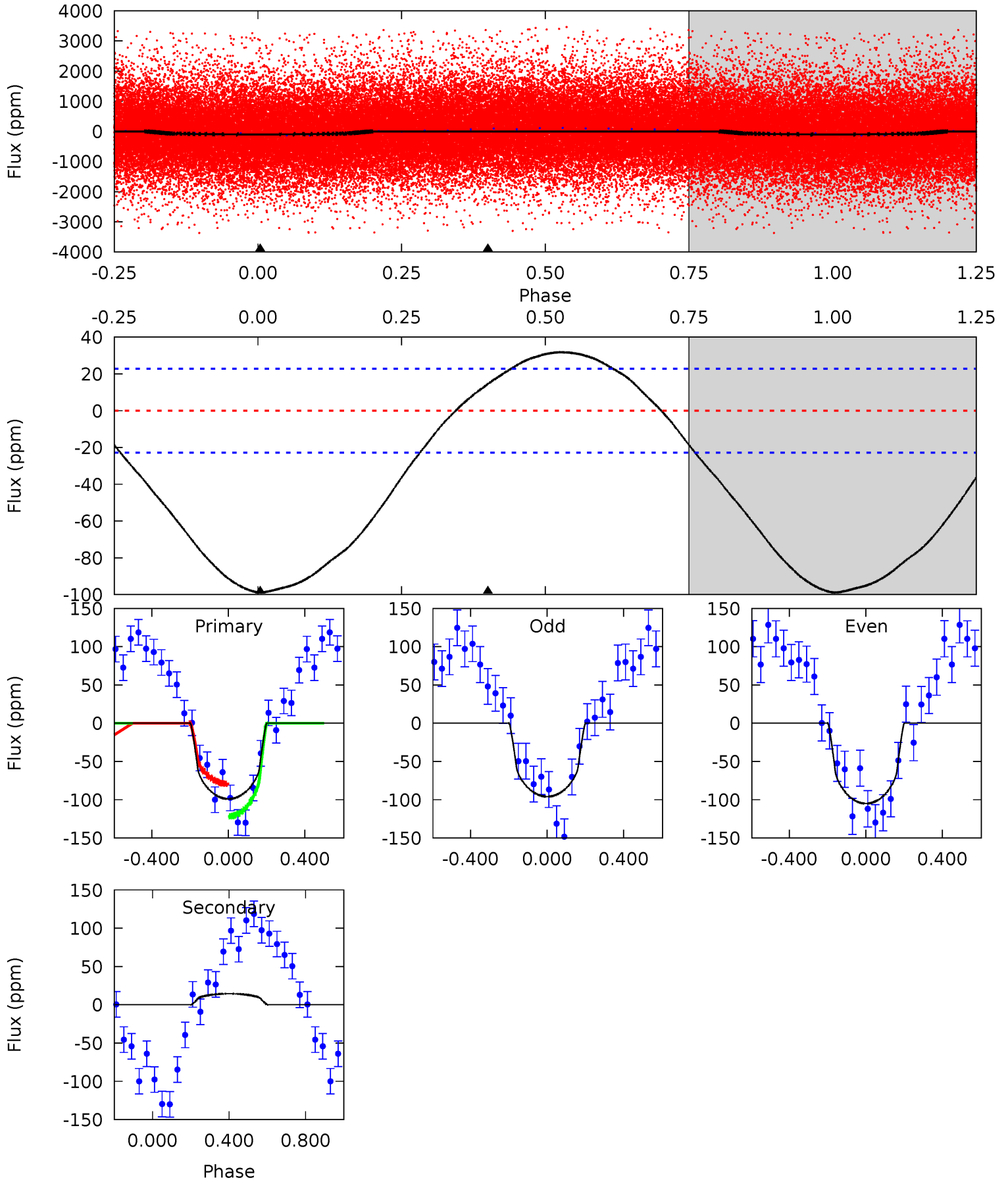
TCE 008324292-01 P= 0.532225 Days  $T_0=131.761848$  (BKJD)



# DV Model-Shift Uniqueness Test

008324292-01,  $P = 0.532220$  Days,  $E = 131.216045$  Days

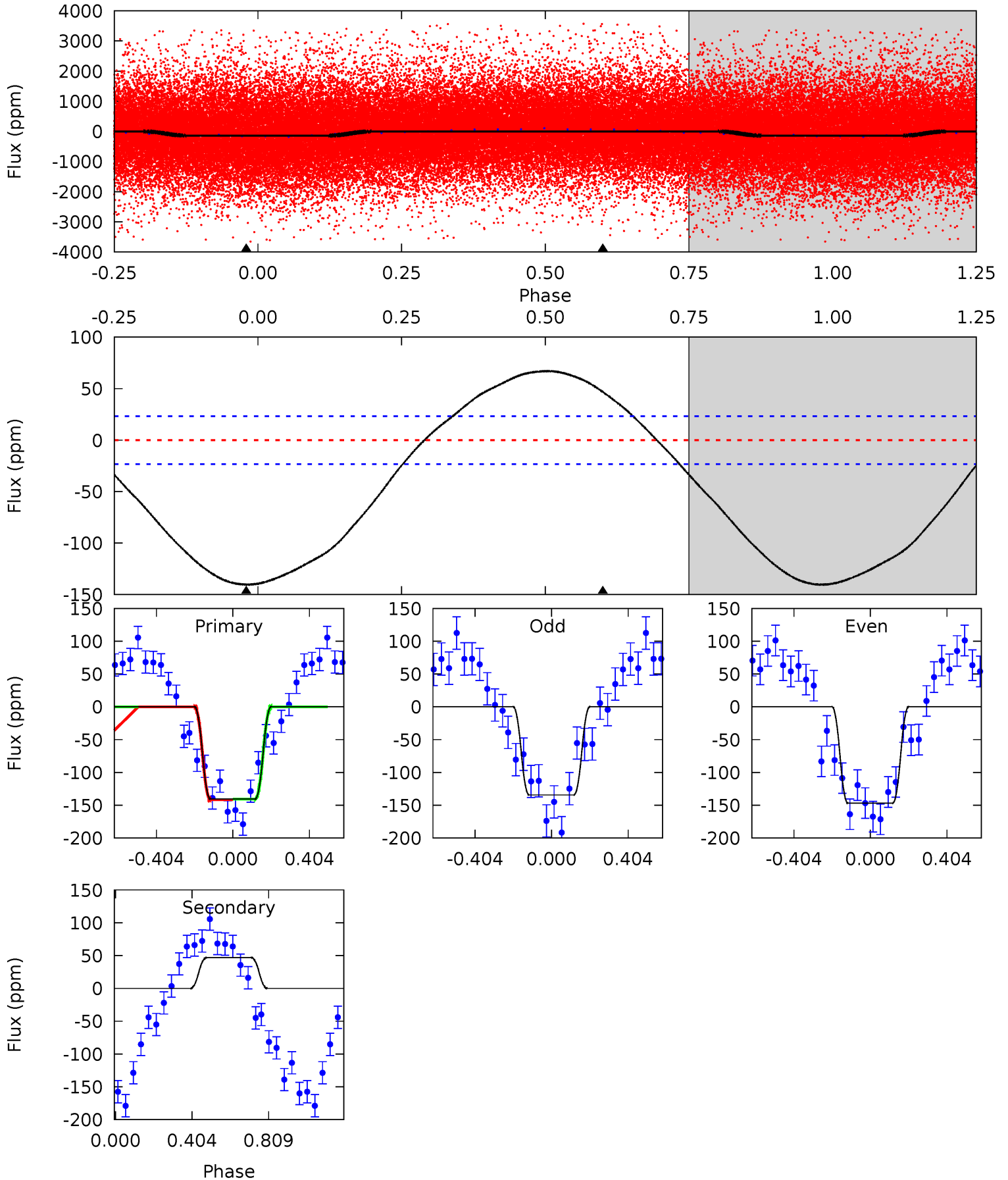
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	-2.71	0	0	4.26	0.84	1.94	18.5	18.5	-2.71	-2.71	0.86	1.02	0.24	3.98



# Alt Model-Shift Uniqueness Test

008324292-01, P = 0.532225 Days, E = 131.229623 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
25.7	-8.56	0	0	4.26	0.83	2.99	25.7	25.7	-8.56	-8.56	1.16	1.01	0.32	0.11





### Stellar Parameters For KIC 008324292

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 008324292-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$14 \pm 5$	$1.22^{+0.90}_{-0.73}$	$3144^{+155}_{-145}$	$-3930^{+451}_{-1473}$	$-0.841^{+0.592}_{-4.620}$
Alt.	$47 \pm 5$	$1.42^{+0.95}_{-0.79}$	$3146^{+155}_{-143}$	$-4499^{+626}_{-2036}$	$-2.093^{+1.349}_{-8.984}$

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

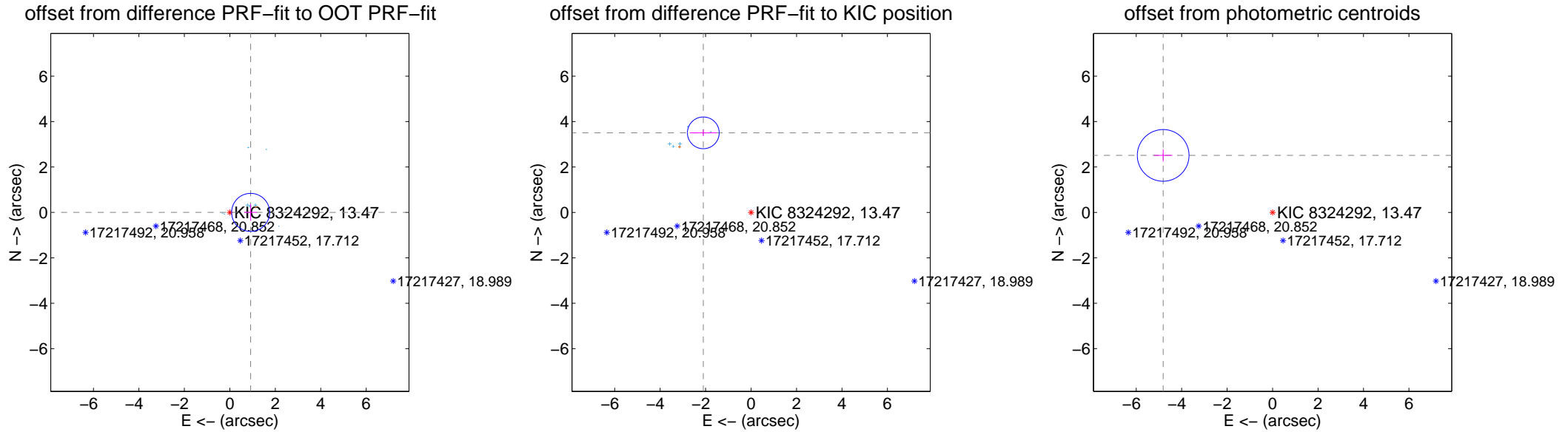
## DV Centroid Data

Supplemental centroid analysis for 008324292-01. Kepler magnitude: 13.47. Transit SNR 12.96

There are 8 quarters with good PRF difference image offsets

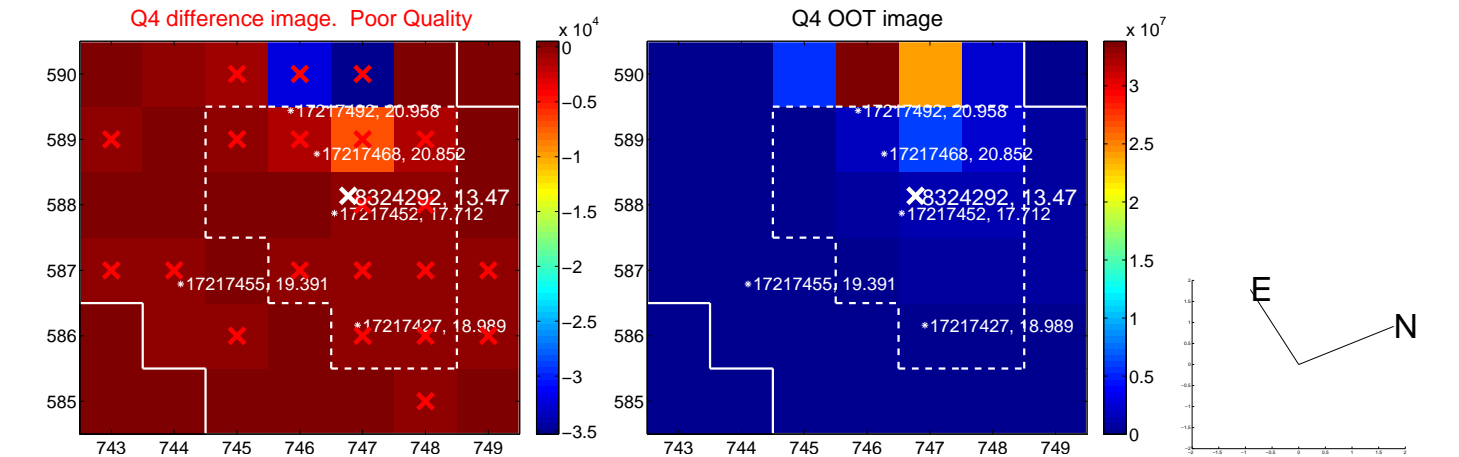
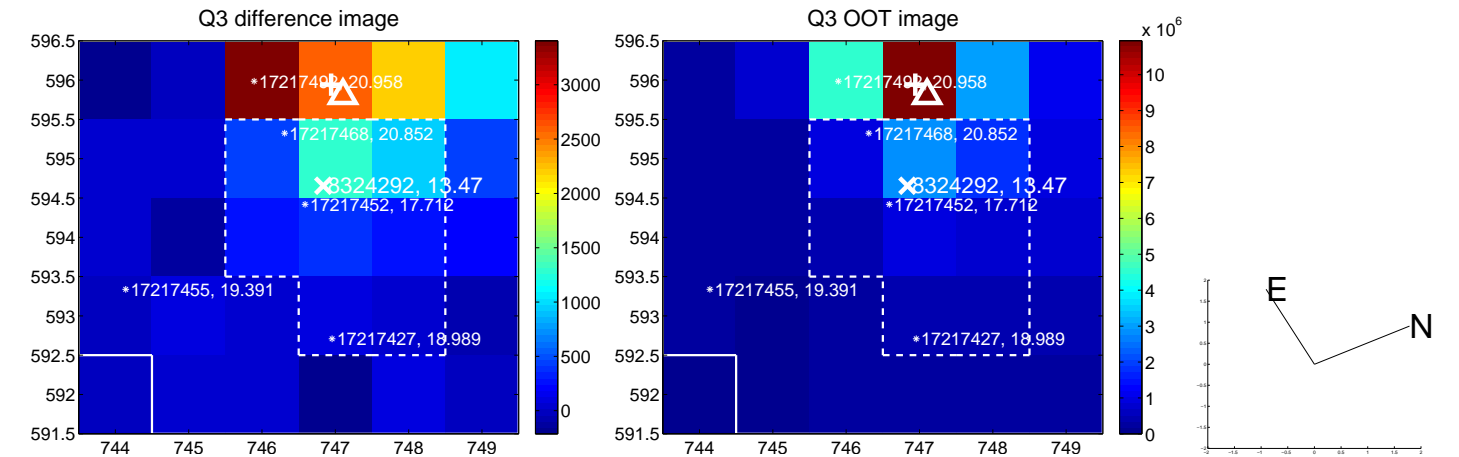
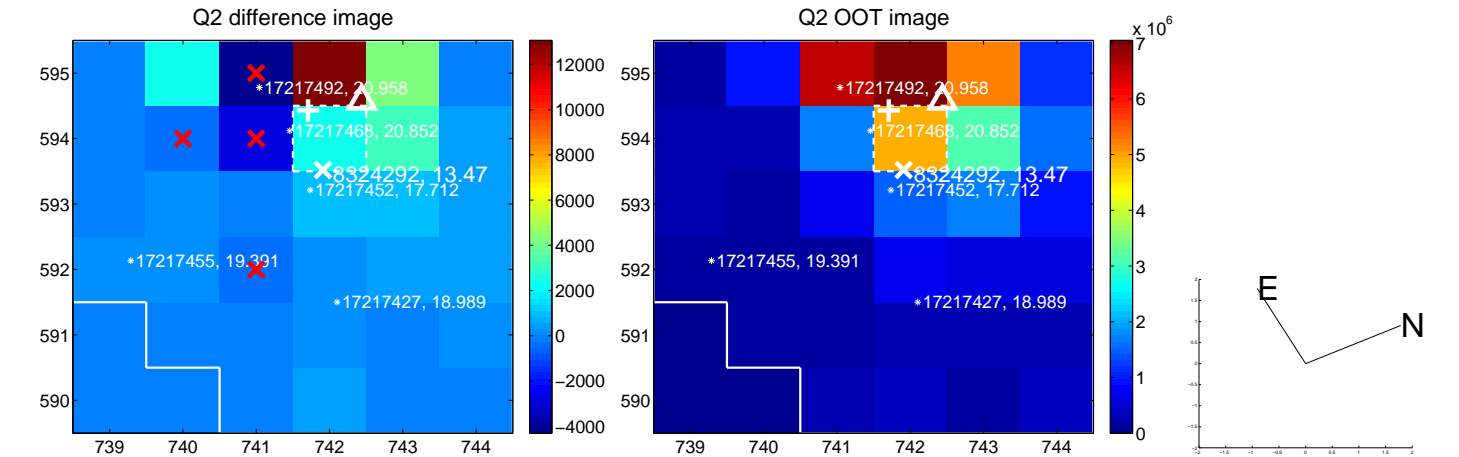
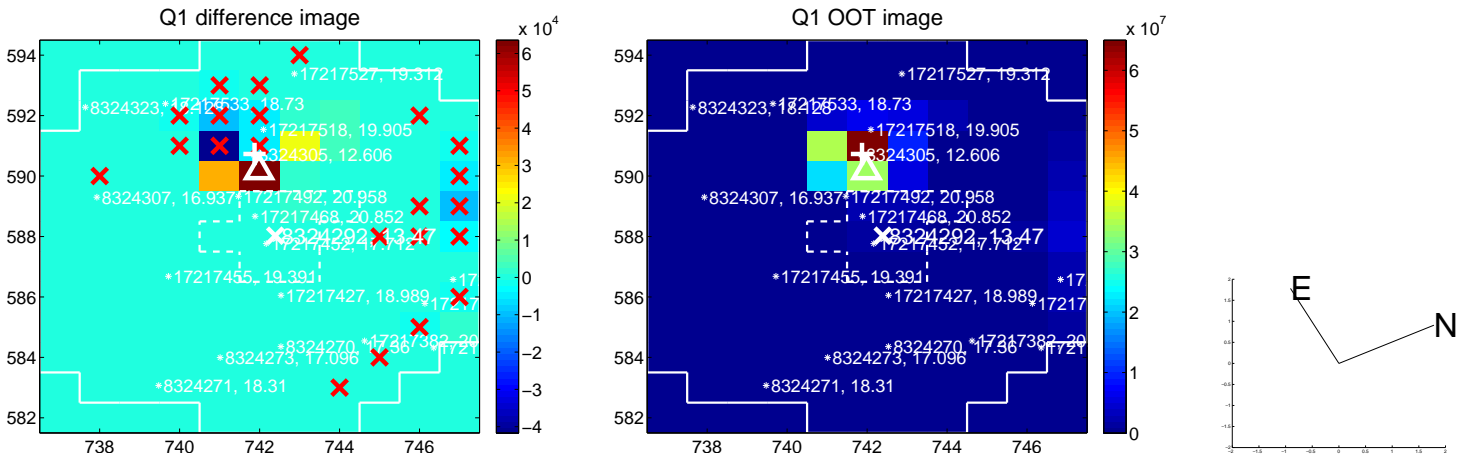
The OOT PRF centroid is offset from the target star catalog position by about 5.04 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.916 \pm 0.279$	3.28	$-0.916 \pm 0.279$	$0.002 \pm 0.366$
PRF-fit source offset from KIC position	$4.086 \pm 0.233$	17.53	$2.102 \pm 0.597$	$3.505 \pm 0.145$
photometric centroid source offset	$5.43 \pm 0.38$	14.31	$4.81 \pm 0.40$	$2.51 \pm 0.27$

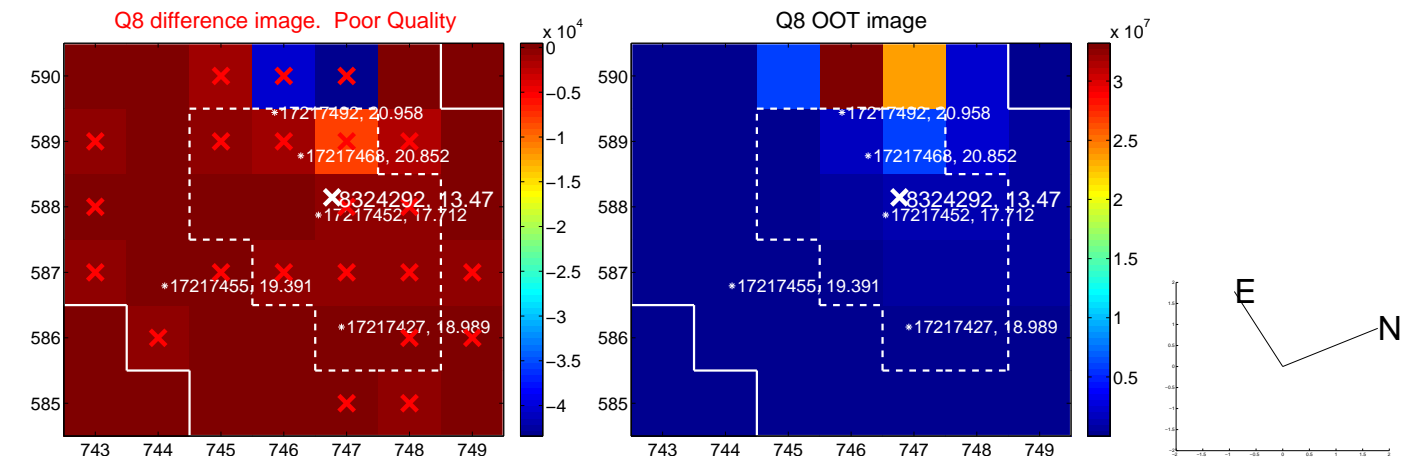
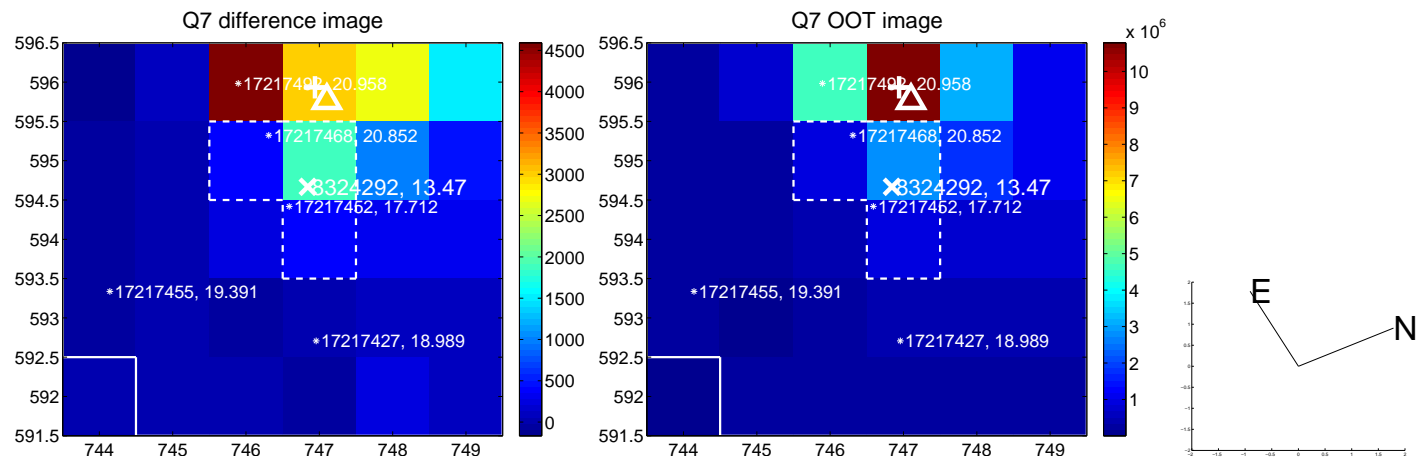
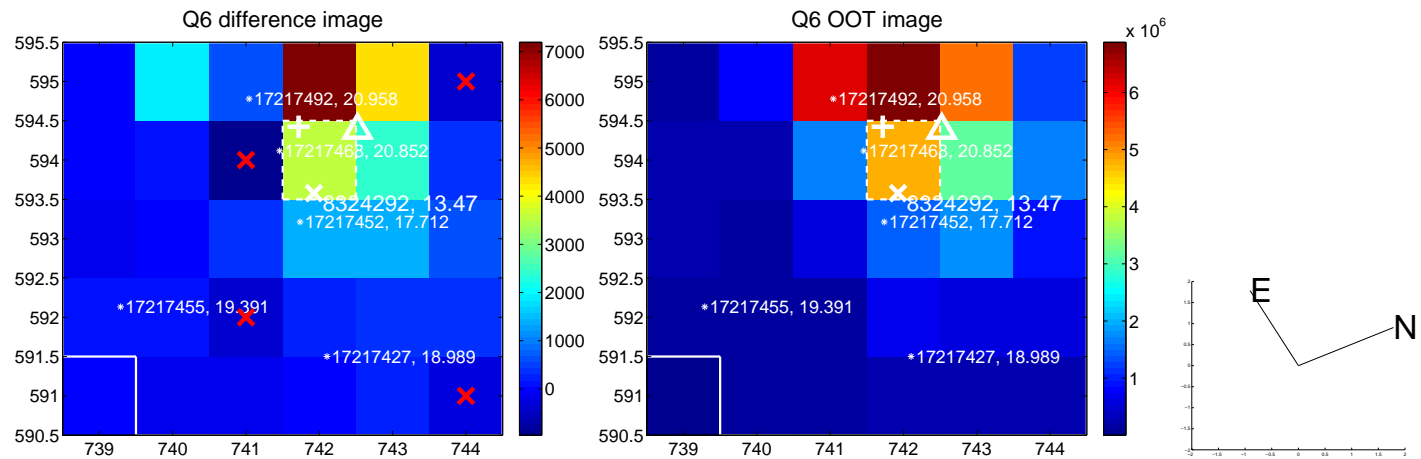
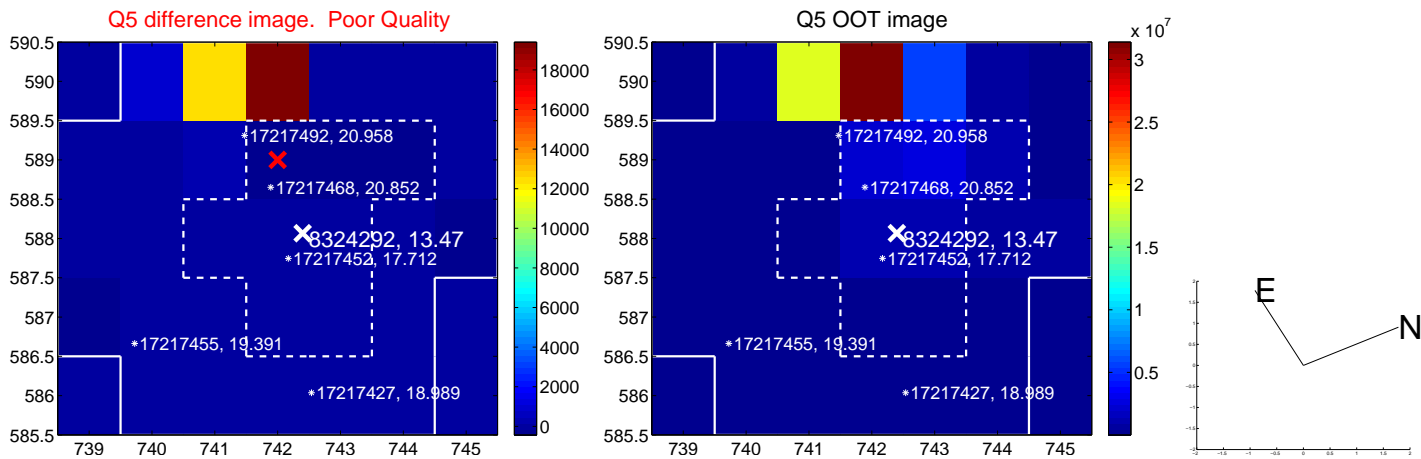


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

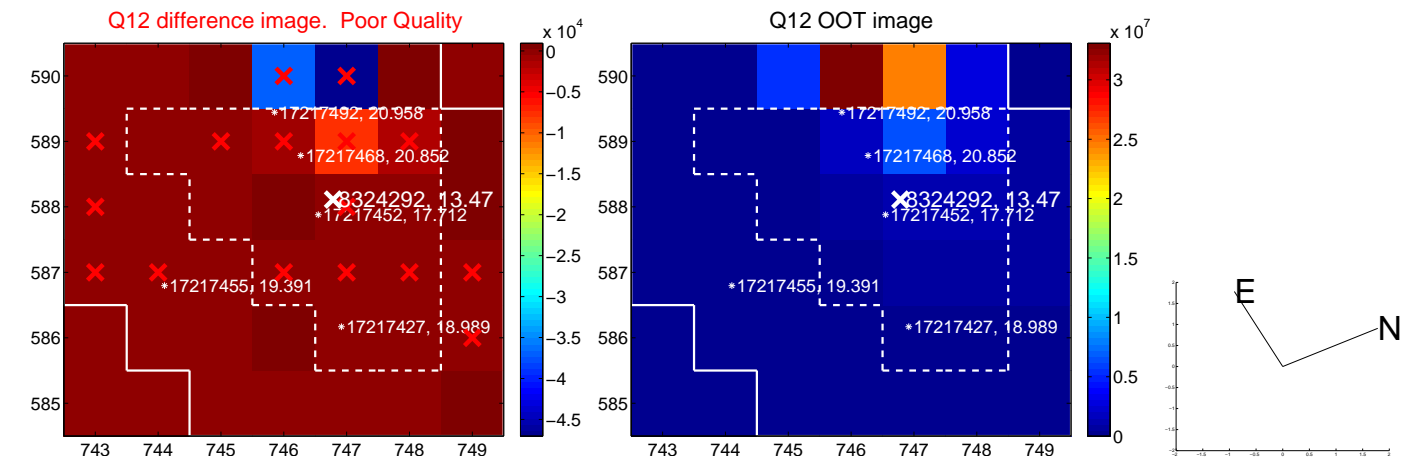
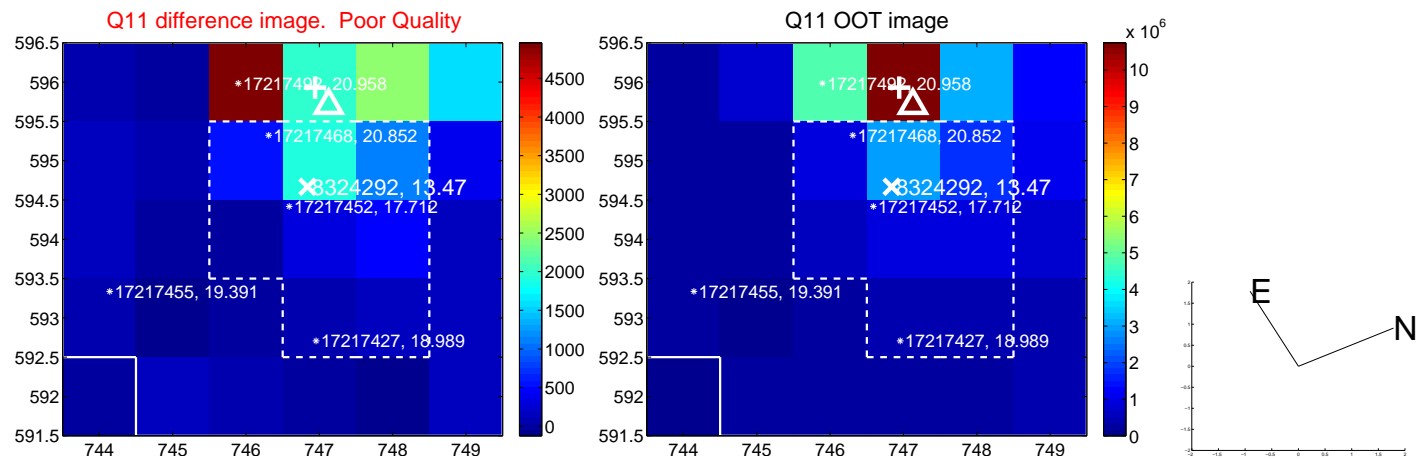
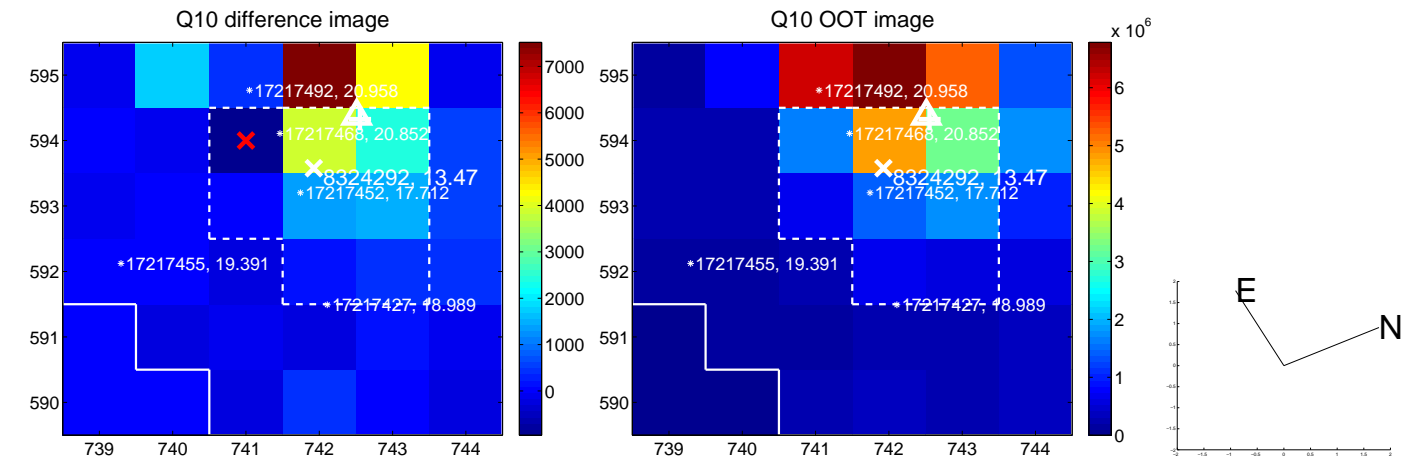
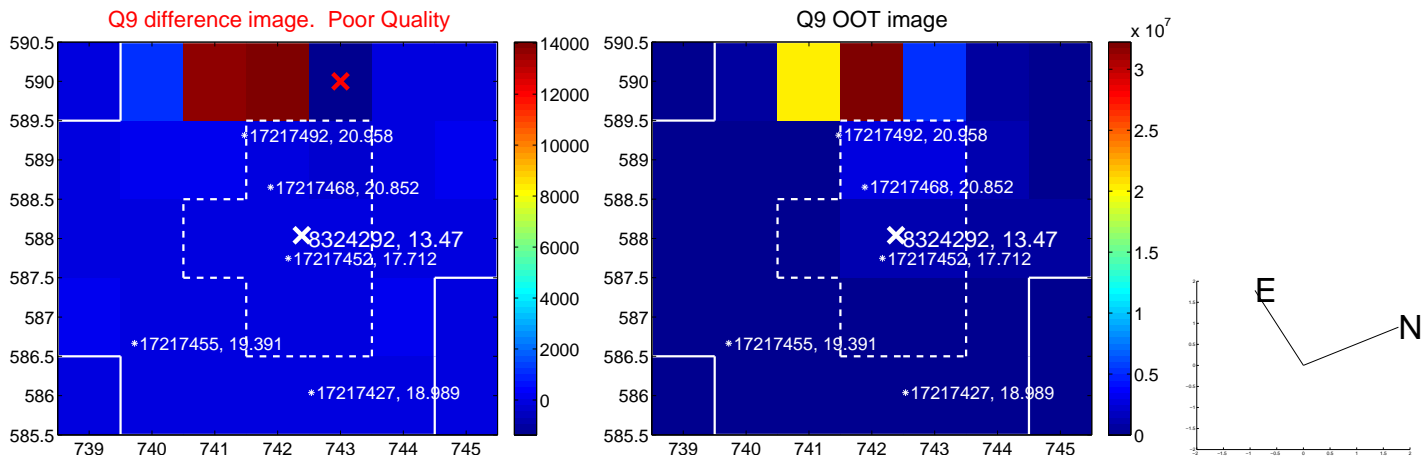


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

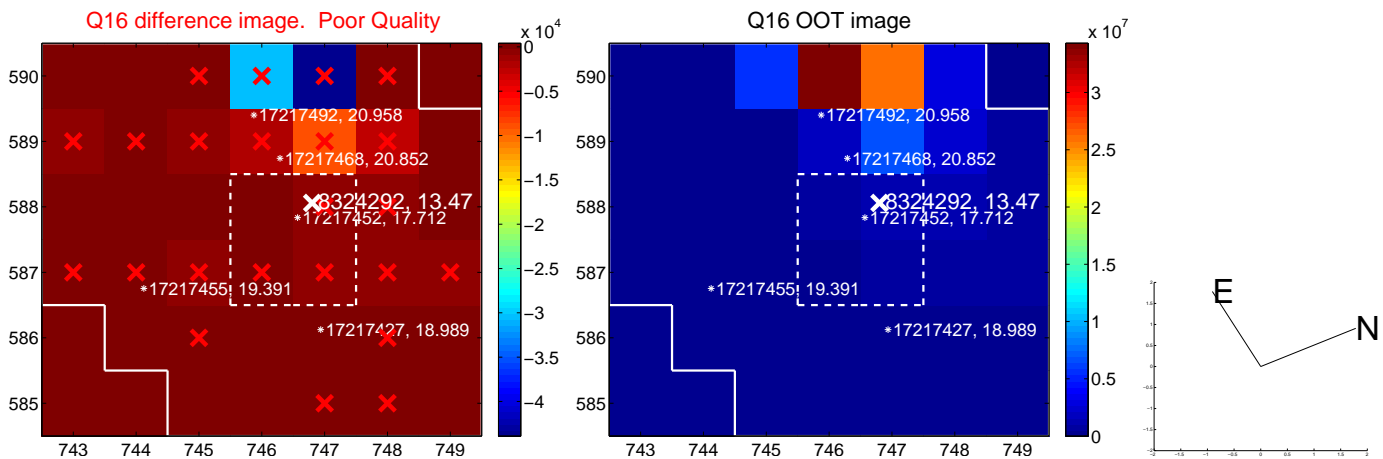
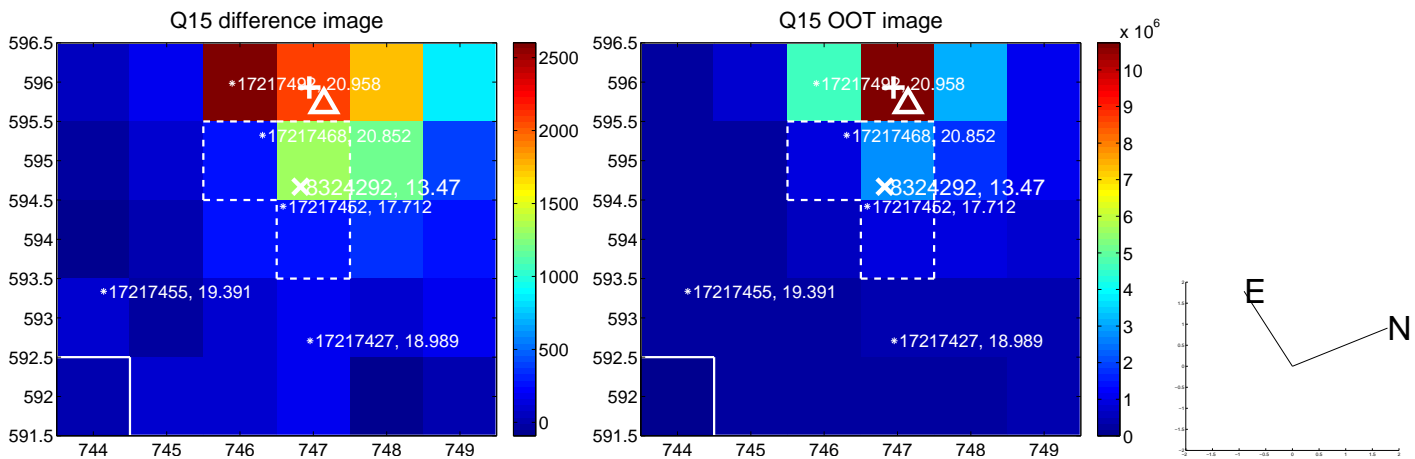
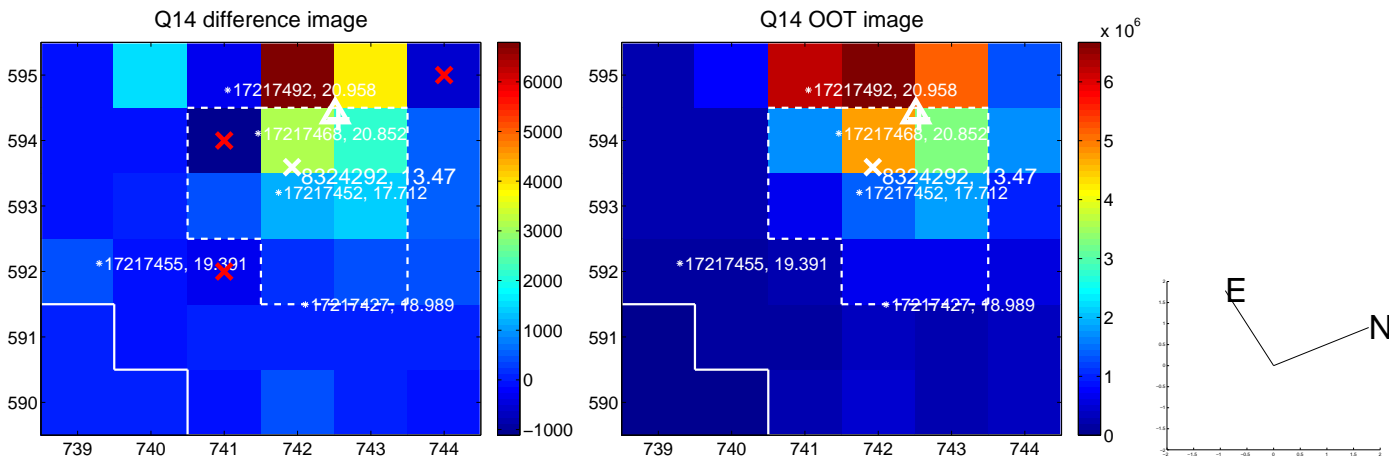
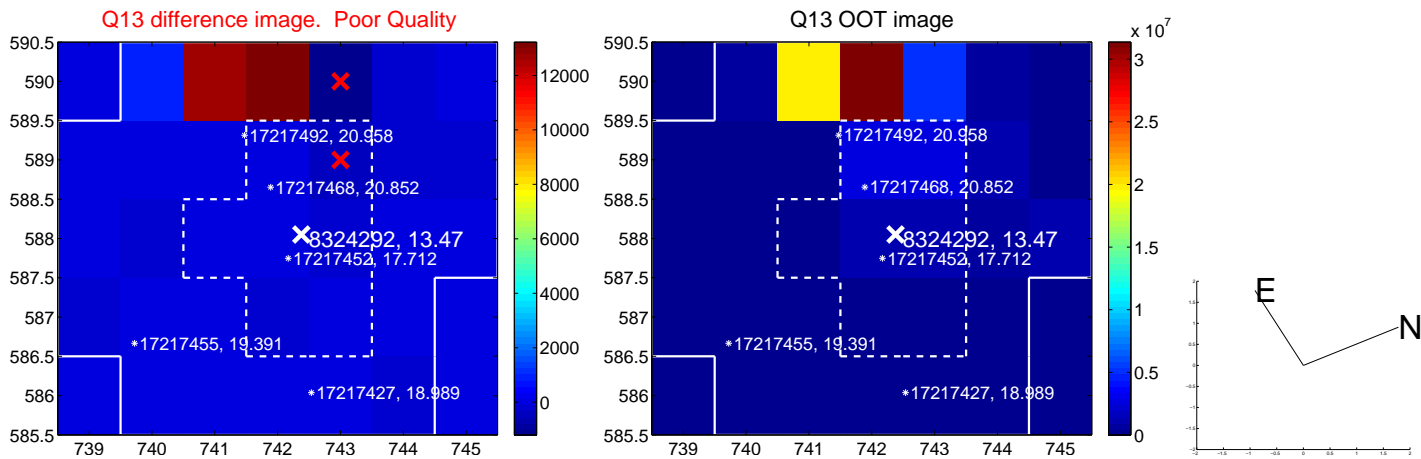




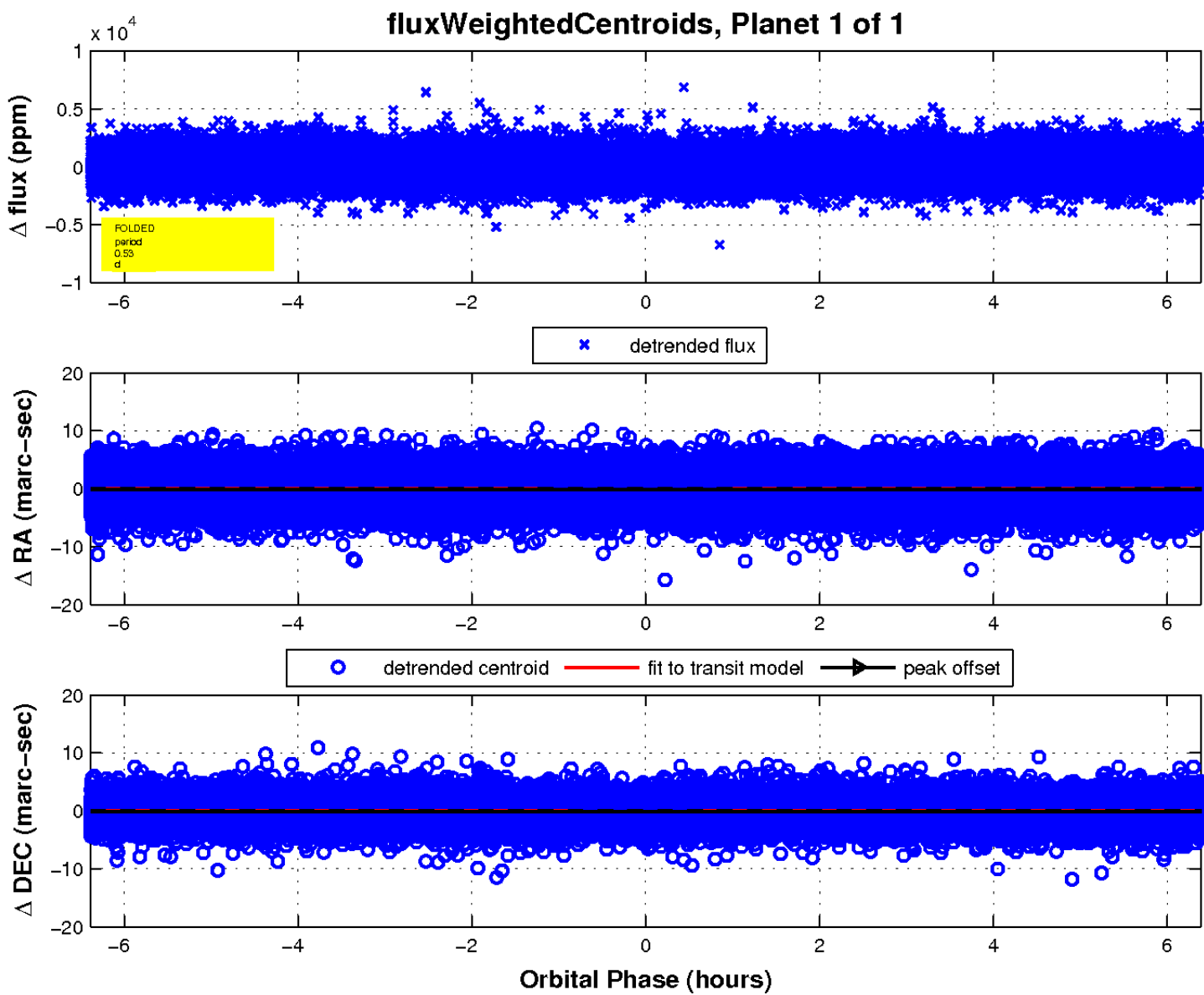
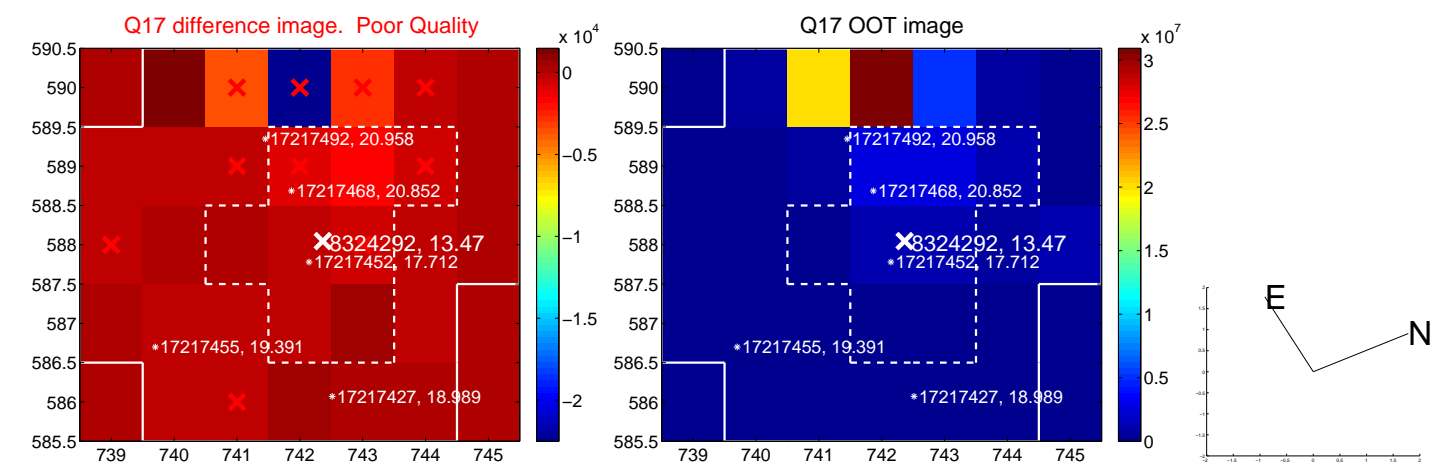
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

