

# KIC 008324032

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008324032-01	OBS	No	0.633448	131.928773	20.0	7.436	10.9	12.2	0.85	5279	0.37	2869.40

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008324032-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_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.

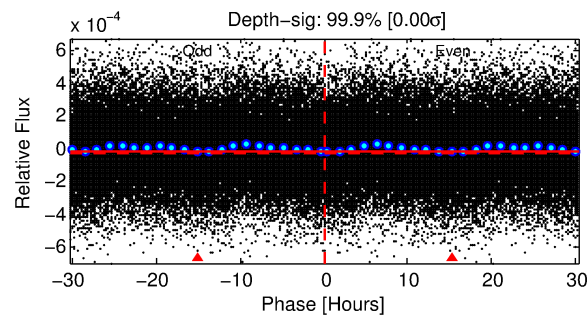
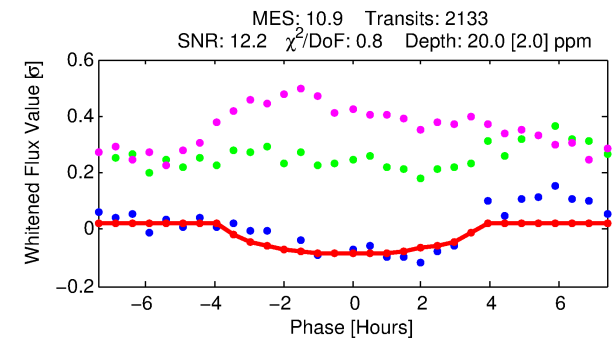
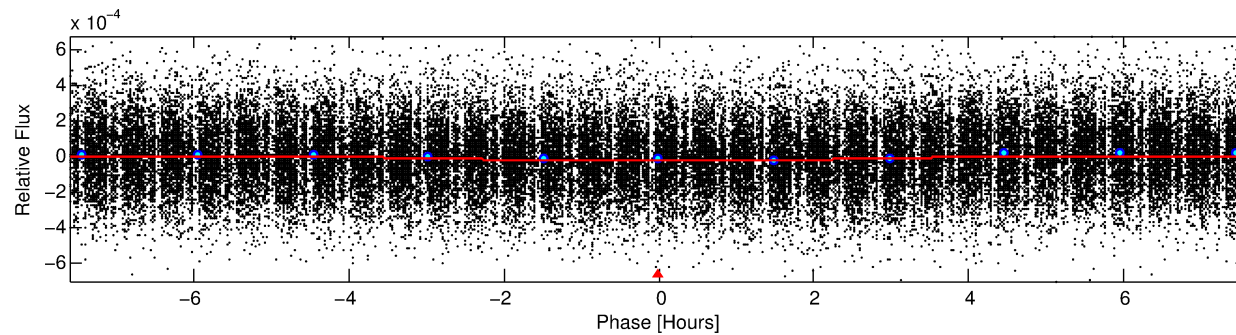
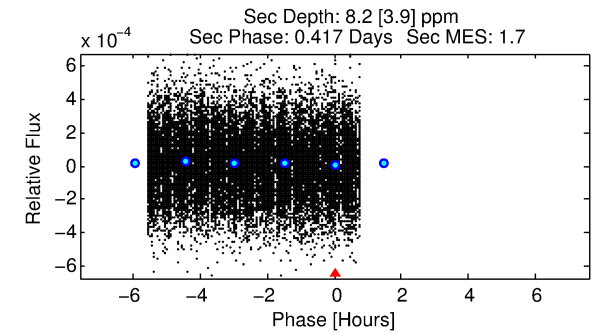
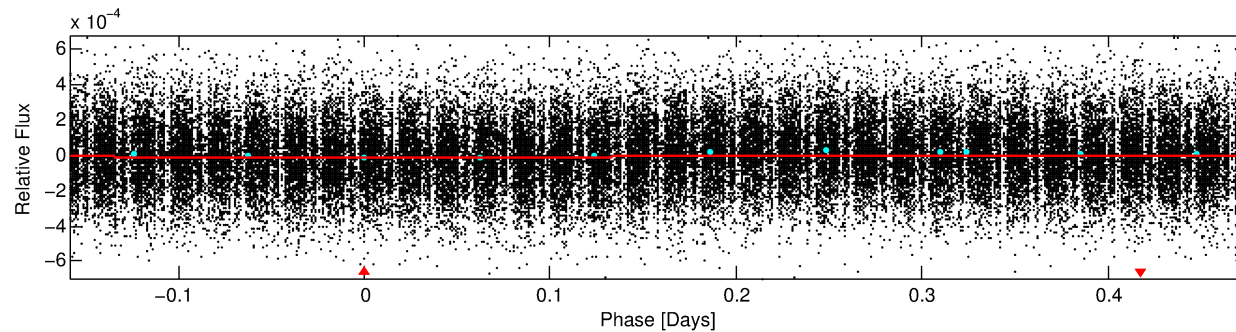
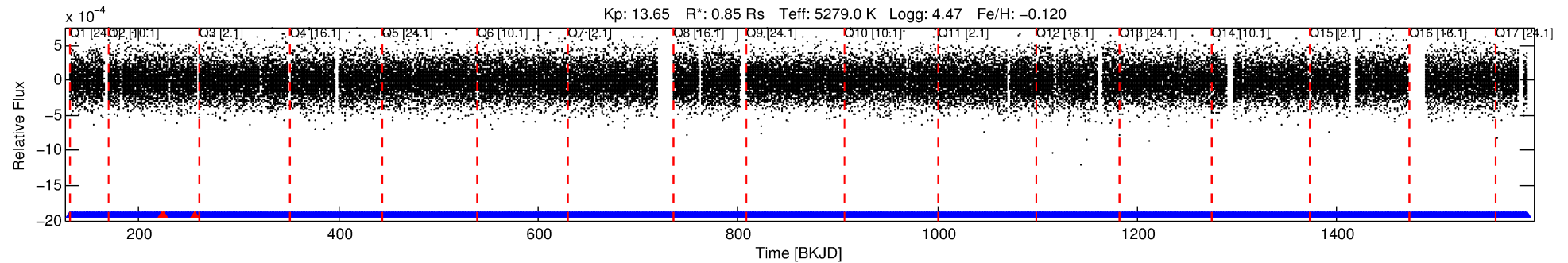
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008324032-01

No Significant Match Found

# DV One-Page Summary

KIC: 8324032 Candidate: 1 of 1 Period: 0.633 d



## DV Fit Results:

Period = 0.63345 [0.00001] d  
Epoch = 131.9288 [0.0061] BKJD  
Rp/R\* = 0.0040 [0.0022]  
a/R\* = 1.00 [0.01]  
b = 0.10 [21.30]  
Seff = 2869.40 [798.22]  
Teq = 1866 [130] K  
Rp = 0.37 [0.21] Re  
a = 0.0133 [0.0021] AU  
Ag = 5.72 [6.98] [0.68σ]  
Teffp = 4462 [1340] K [1.93σ]

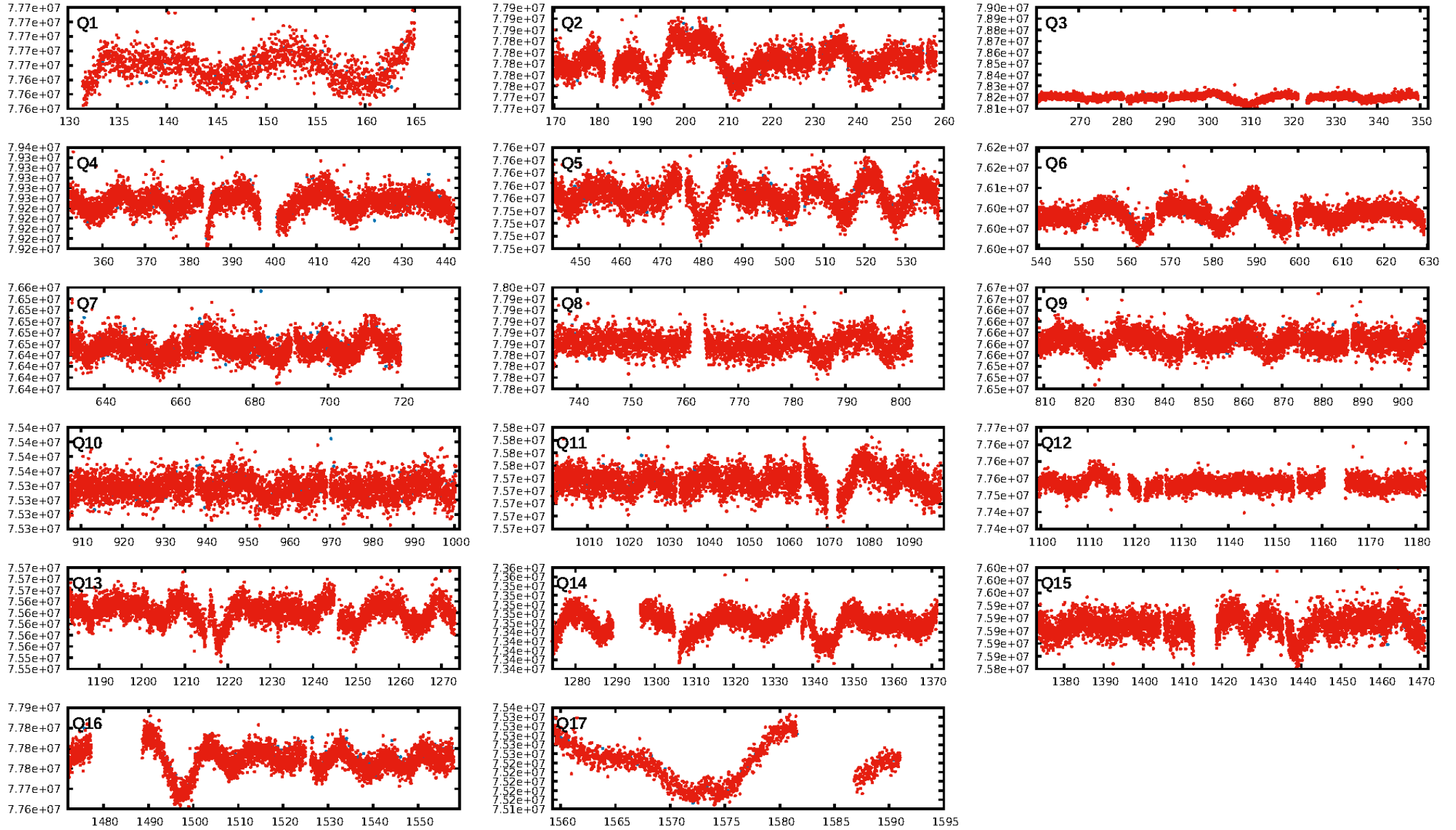
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2034/2037]  
GhostDiagnostic-chr: -0.5838  
Centroid-sig: 0.0%  
Centroid-so: 4.898 arcsec [3.57σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [17/17]

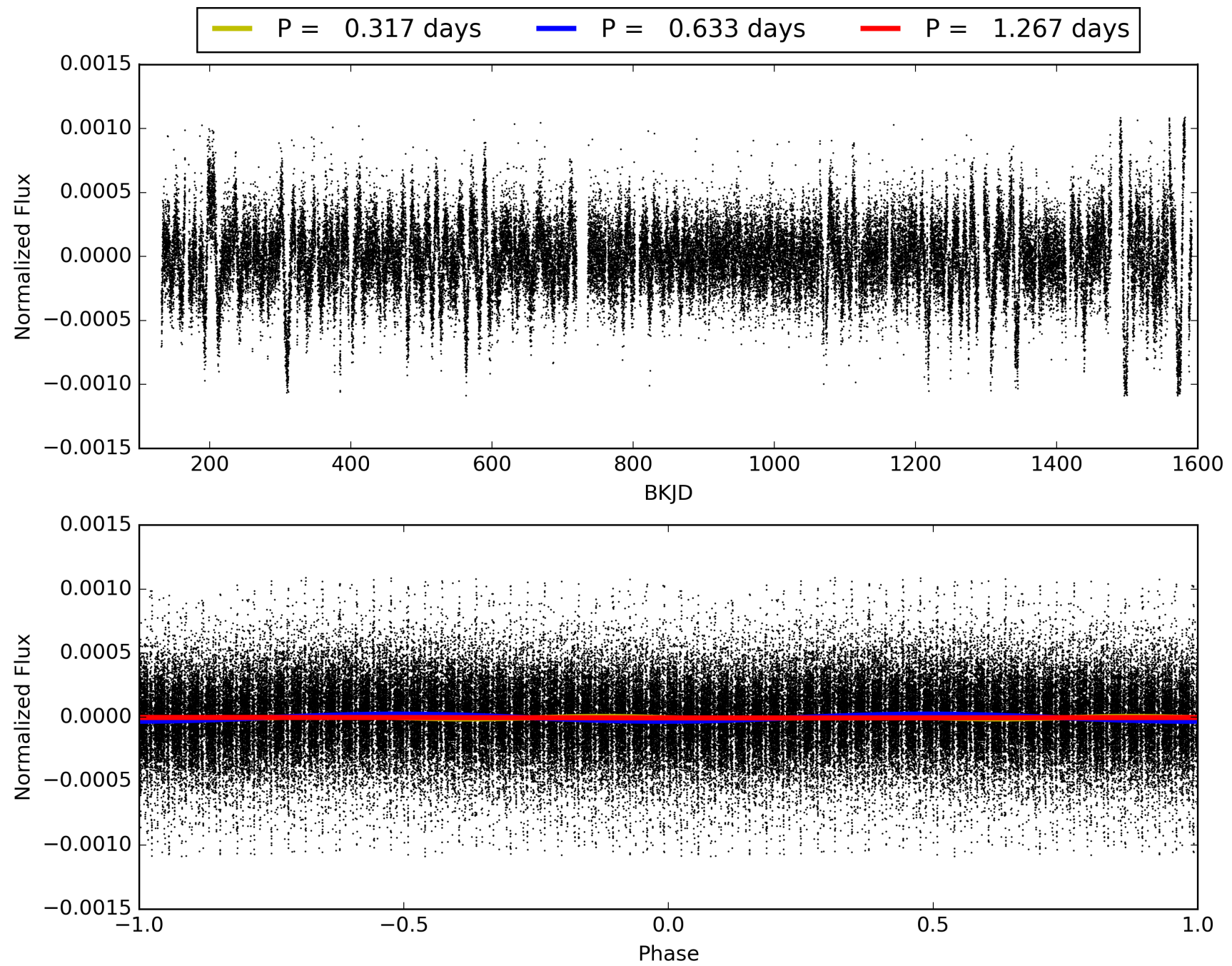
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:27:07 Z

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

# TCE 008324032-01, PDC Light Curves

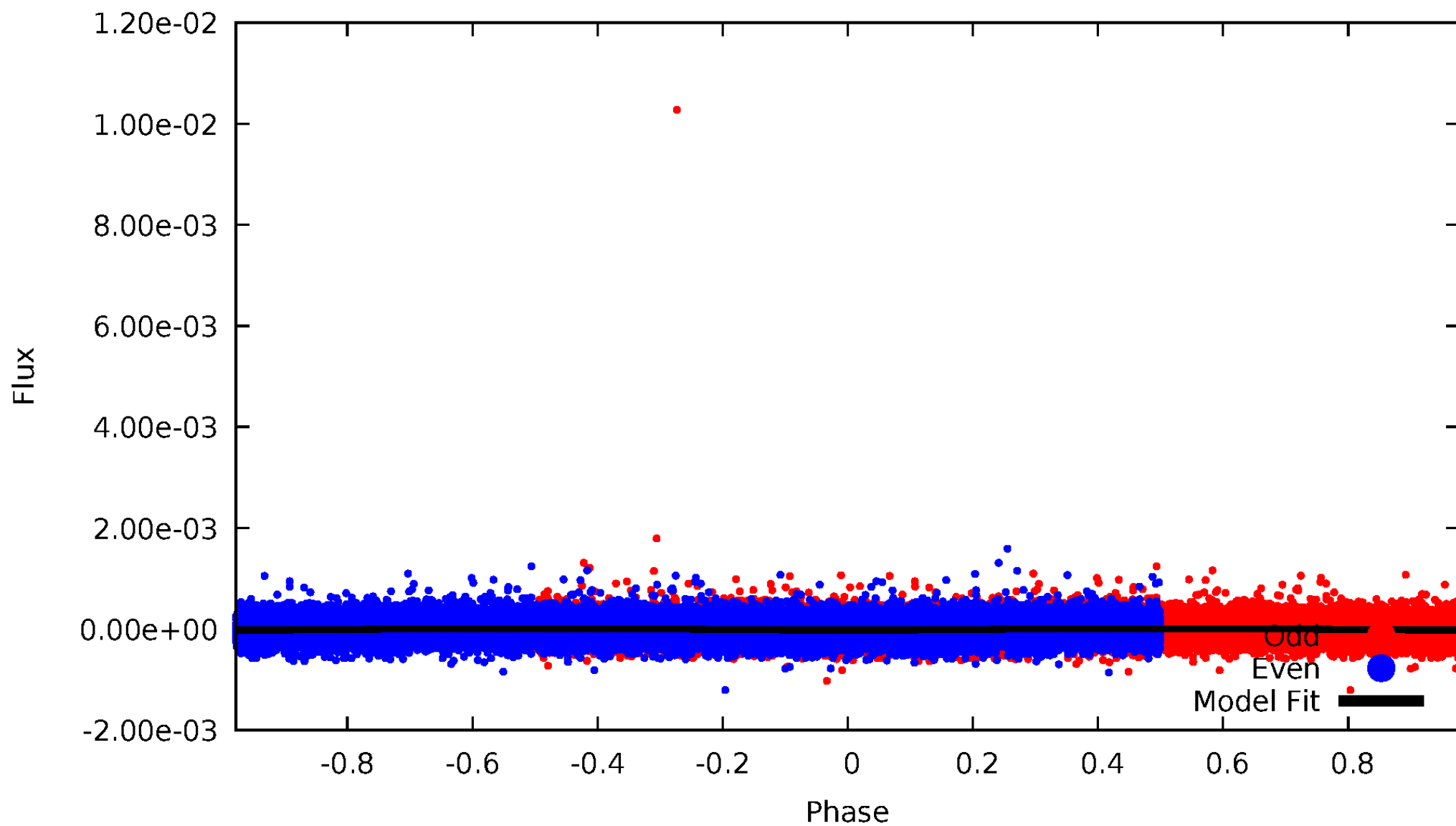


TCE 008324032-01



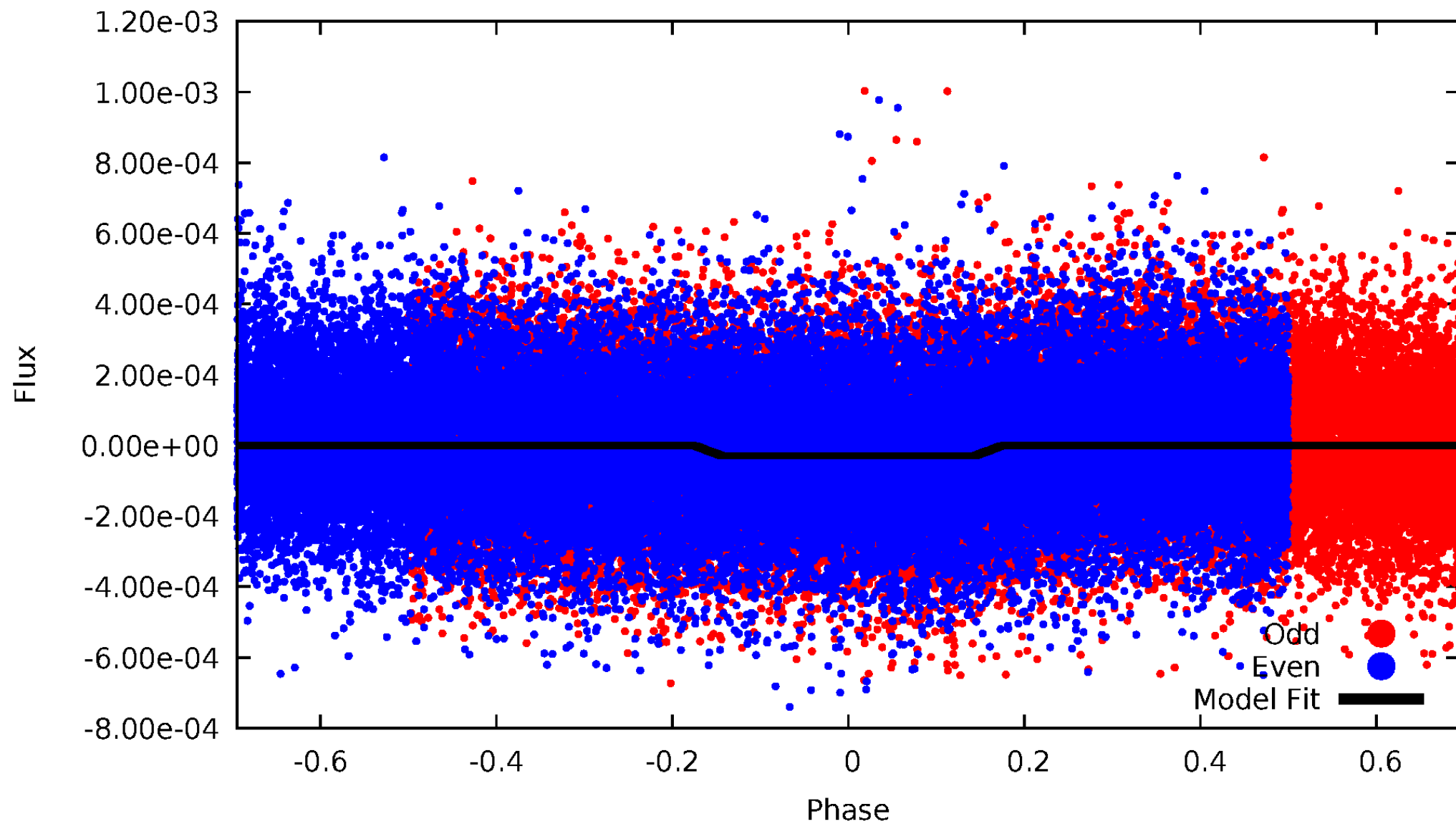
# DV Odd/Even

TCE 008324032-01



# ALT Odd/Even

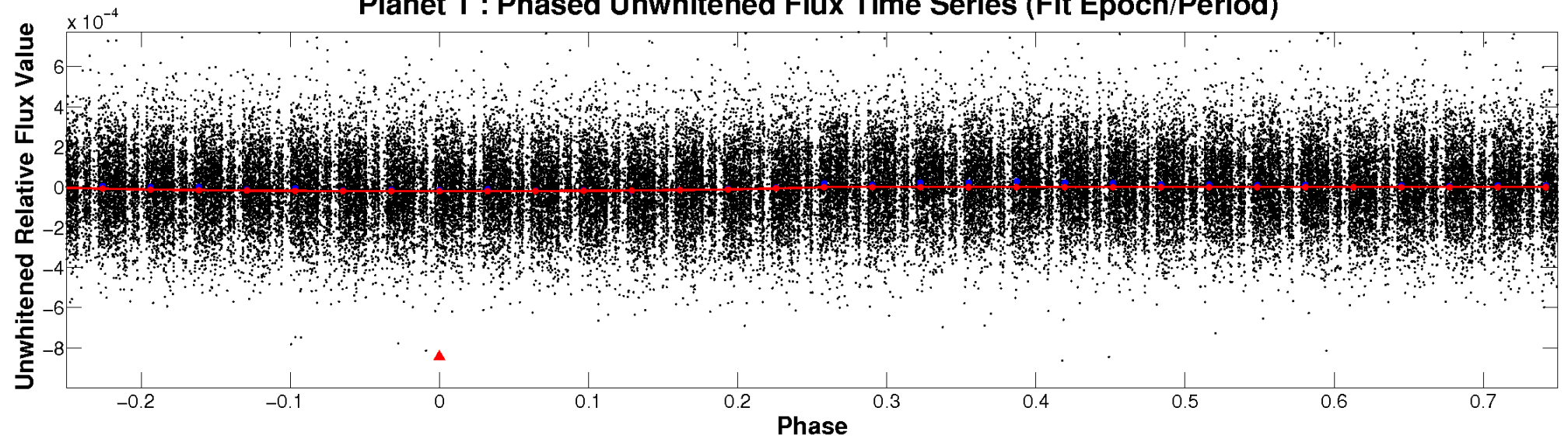
TCE 008324032-01



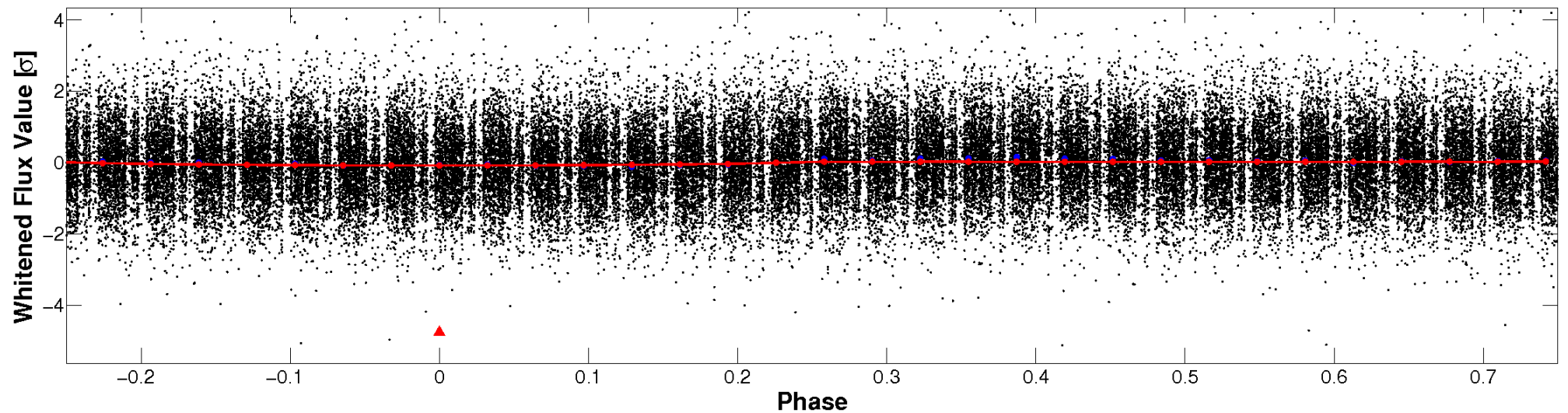


# Non-Whitened Vs. Whitened Light Curve

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

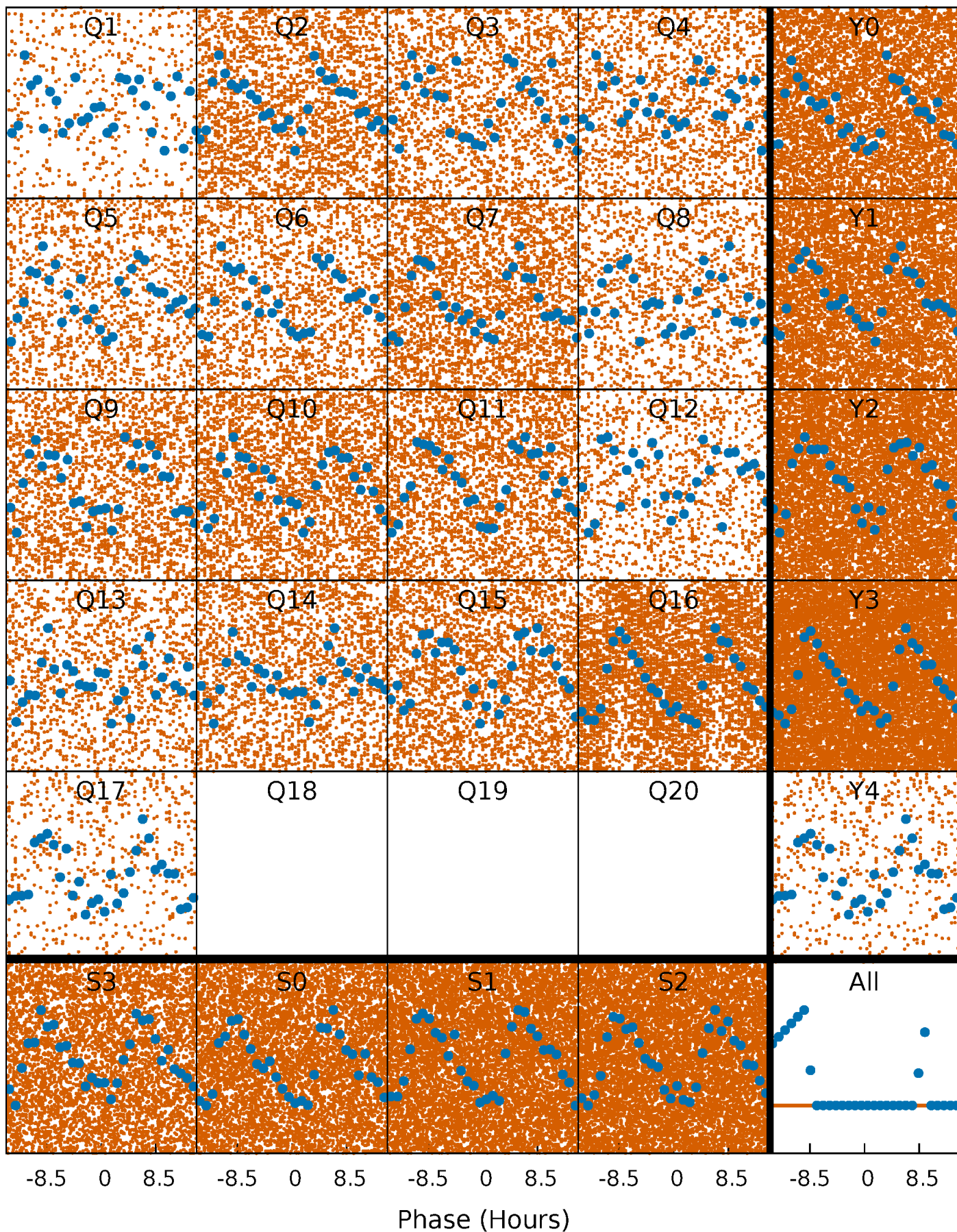


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

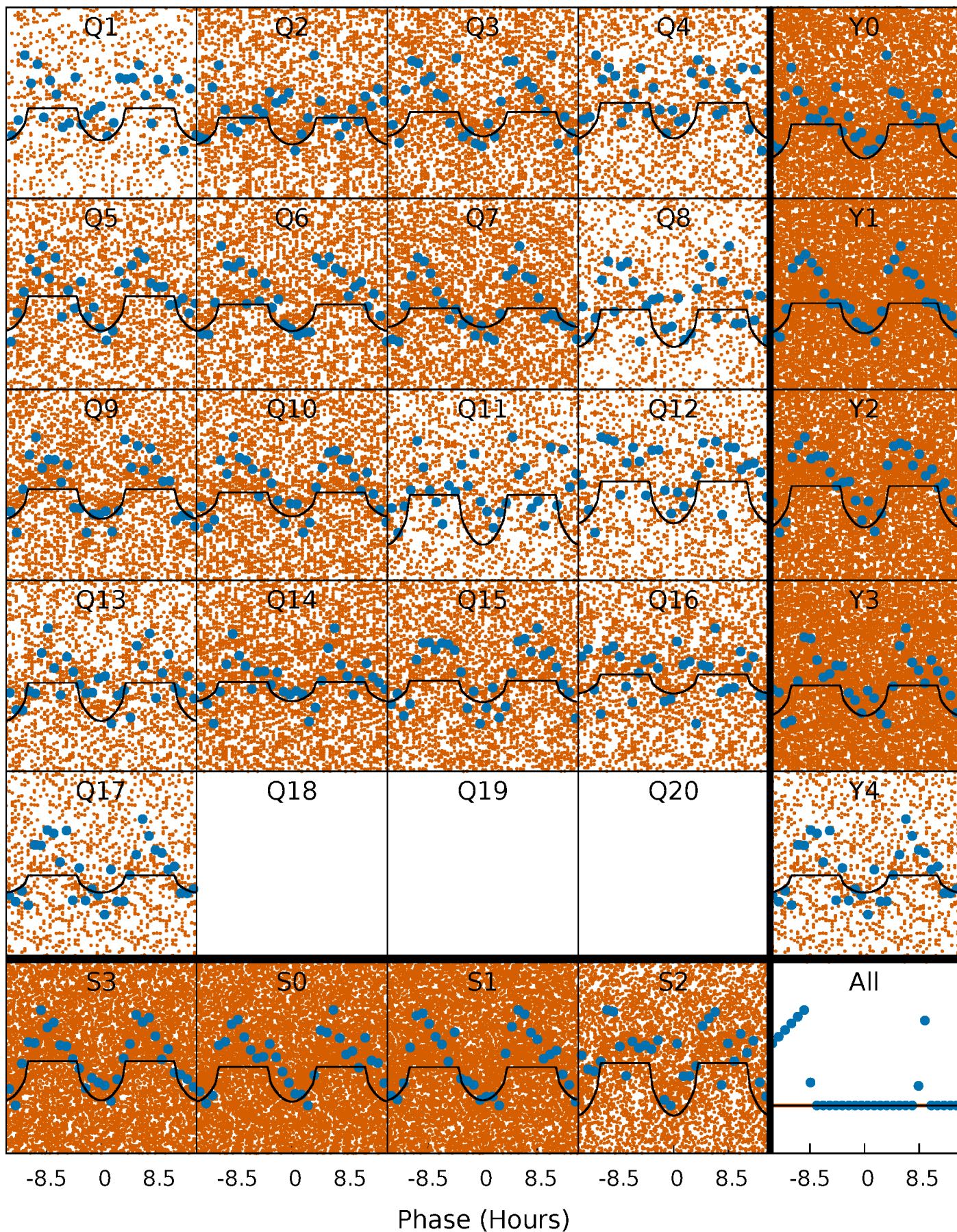
TCE 008324032-01 P= 0.633448 Days  $T_0=131.928773$  (BKJD)





# DV Quarter-Phased Transit Curves

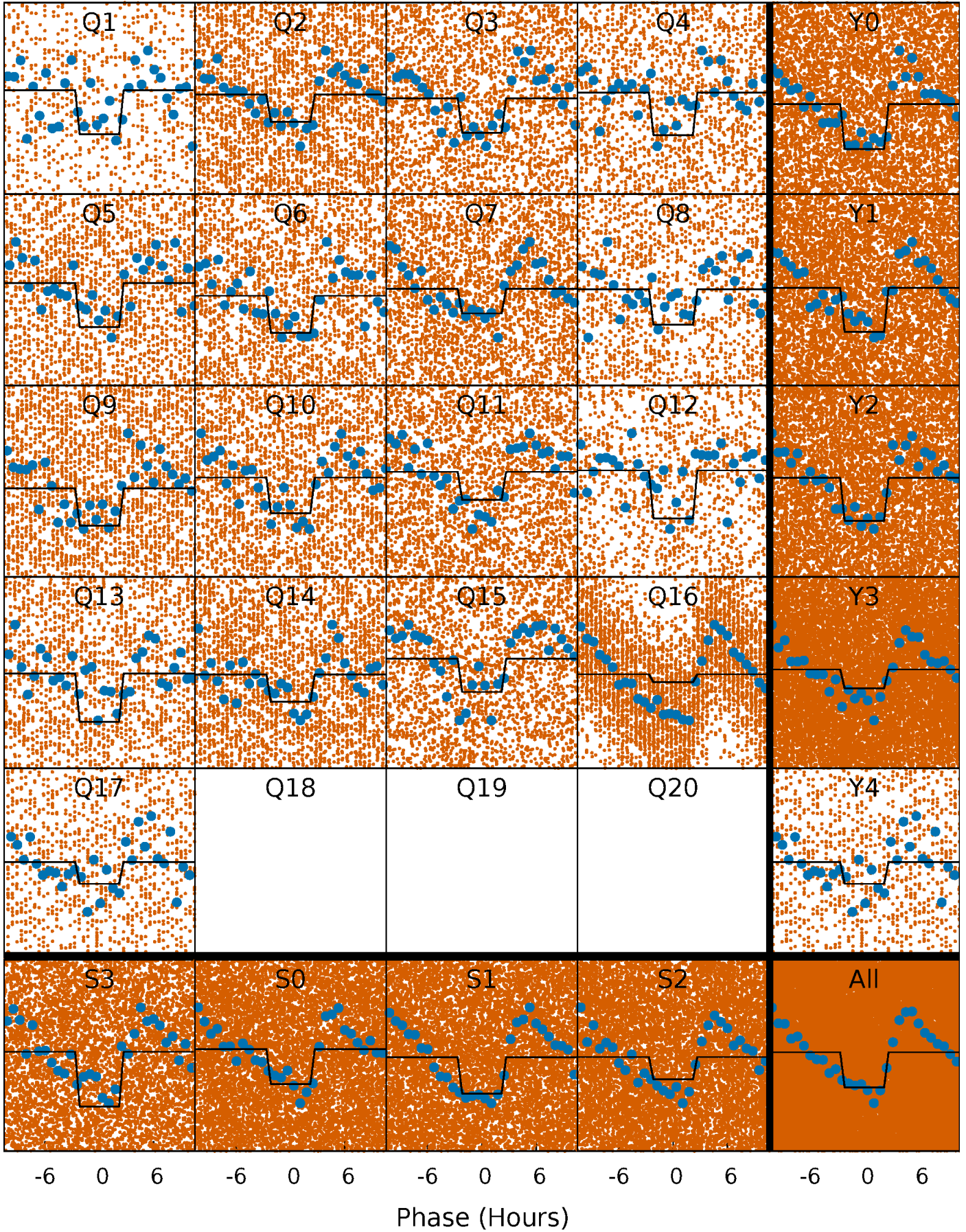
TCE 008324032-01   P= 0.633448 Days    $T_0=131.928773$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

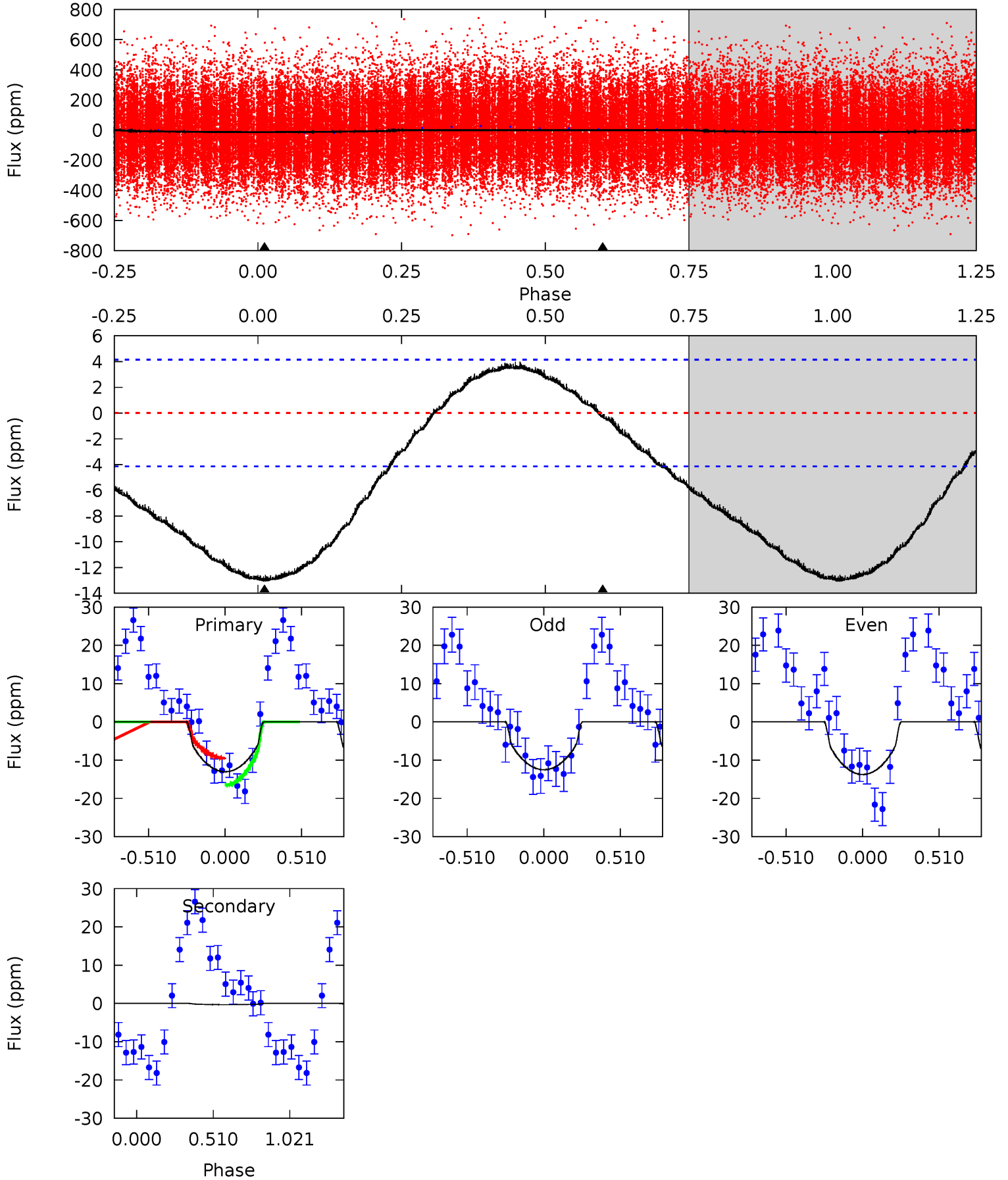
TCE 008324032-01 P= 0.633497 Days  $T_0=131.905940$  (BKJD)



# DV Model-Shift Uniqueness Test

008324032-01, P = 0.633448 Days, E = 131.295325 Days

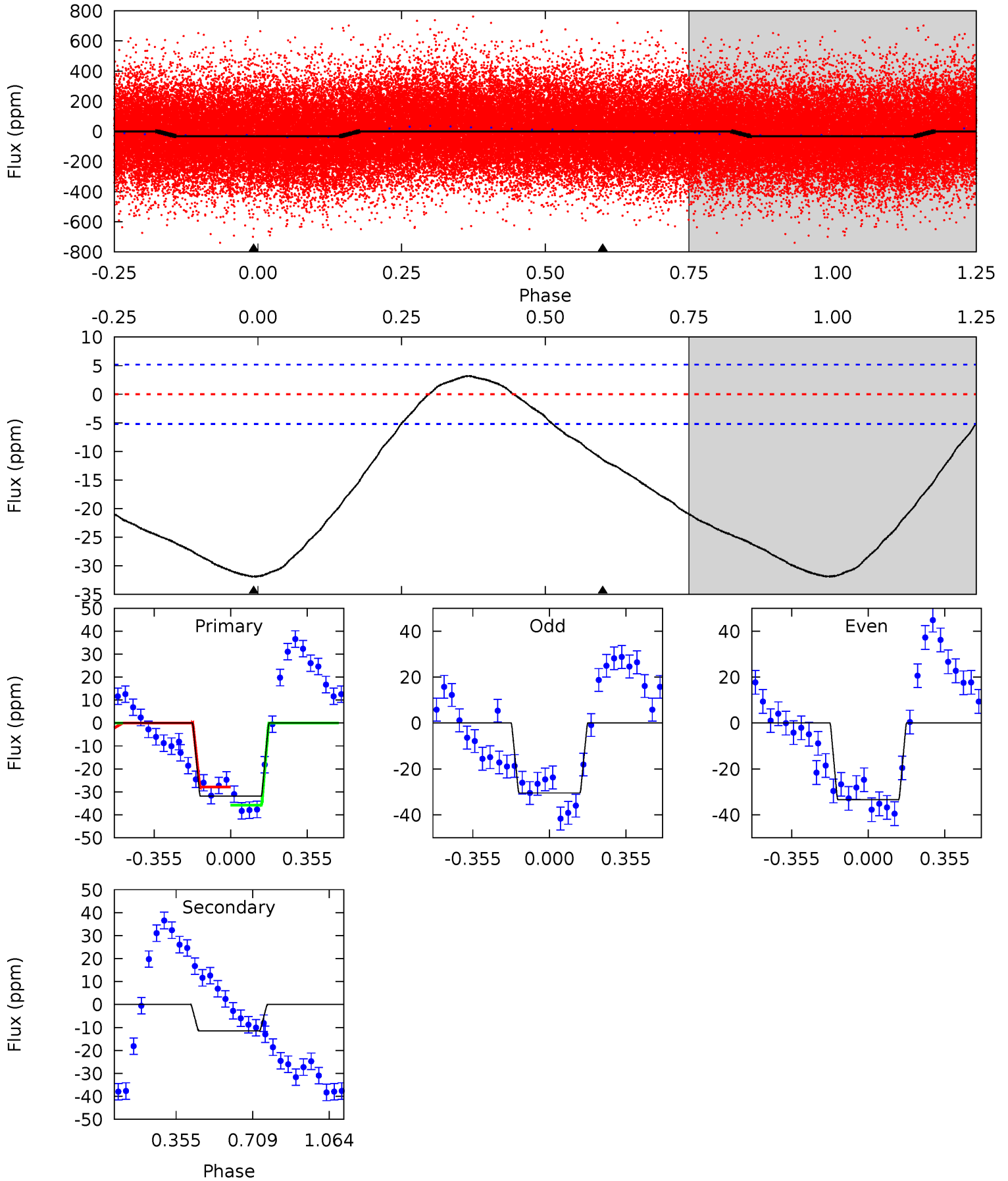
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	0.33	0	0	4.21	0.66	1.38	13.2	13.2	0.33	0.33	0.63	-10.6	0.23	3.60



# Alt Model-Shift Uniqueness Test

008324032-01, P = 0.633497 Days, E = 131.272443 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
26.4	9.45	0	0	4.29	0.93	2.08	26.4	26.4	9.45	9.45	1.19	1.10	0.09	3.39





### Stellar Parameters For KIC 008324032

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5279^{+158}_{-158}$	$4.468^{+0.121}_{-0.148}$	$-0.120^{+0.300}_{-0.300}$	$0.854^{+0.137}_{-0.112}$	$0.782^{+0.112}_{-0.060}$	$1.765^{+0.840}_{-0.623}$
	+3%/-3%	+3%/-3%	+250%/-250%	+16%/-13%	+14%/-8%	+48%/-35%
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 008324032-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-0 \pm 1$	$0.37^{+0.22}_{-0.19}$	$2620^{+145}_{-137}$	$-2476^{+5980}_{-773}$	$0.202^{+1.347}_{-0.584}$
Alt.	$-11 \pm 1$	$0.52^{+0.21}_{-0.21}$	$2626^{+141}_{-138}$	$4266^{+1017}_{-558}$	$4.165^{+7.055}_{-2.071}$

$T_{max}$  = 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

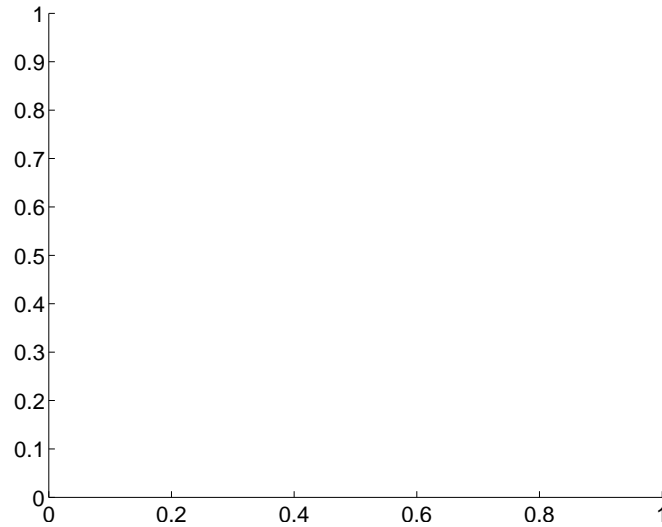
Supplemental centroid analysis for 008324032-01. Kepler magnitude: 13.65. Transit SNR 12.22

There are 0 quarters with good PRF difference image offsets

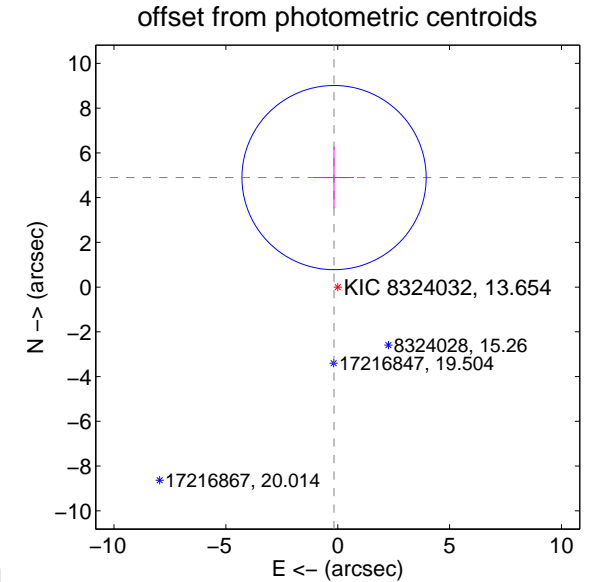
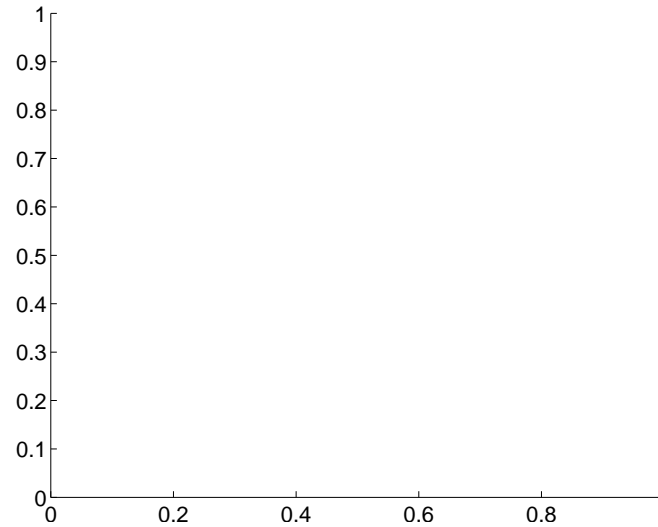
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$4.90 \pm 1.37$	$3.57$	$0.16 \pm 0.89$	$4.90 \pm 1.37$

There is no PRF-fit offset from OOT-fit

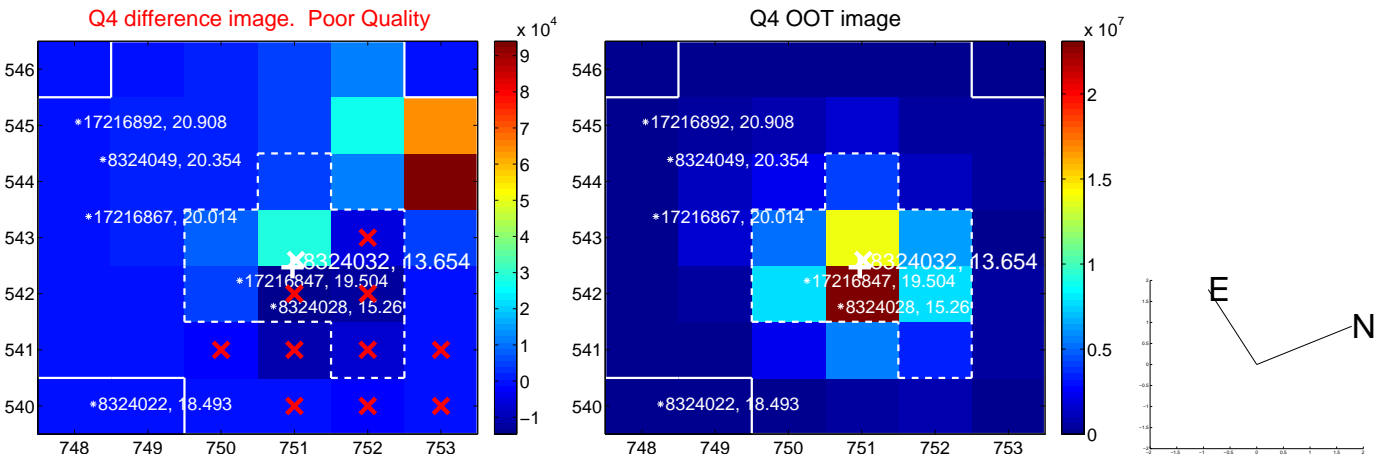
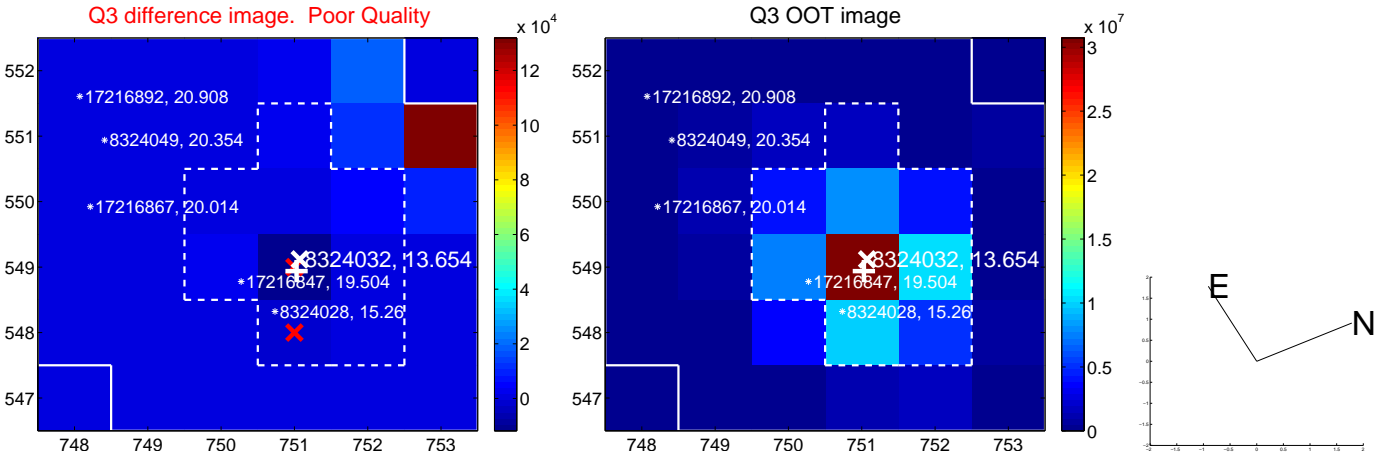
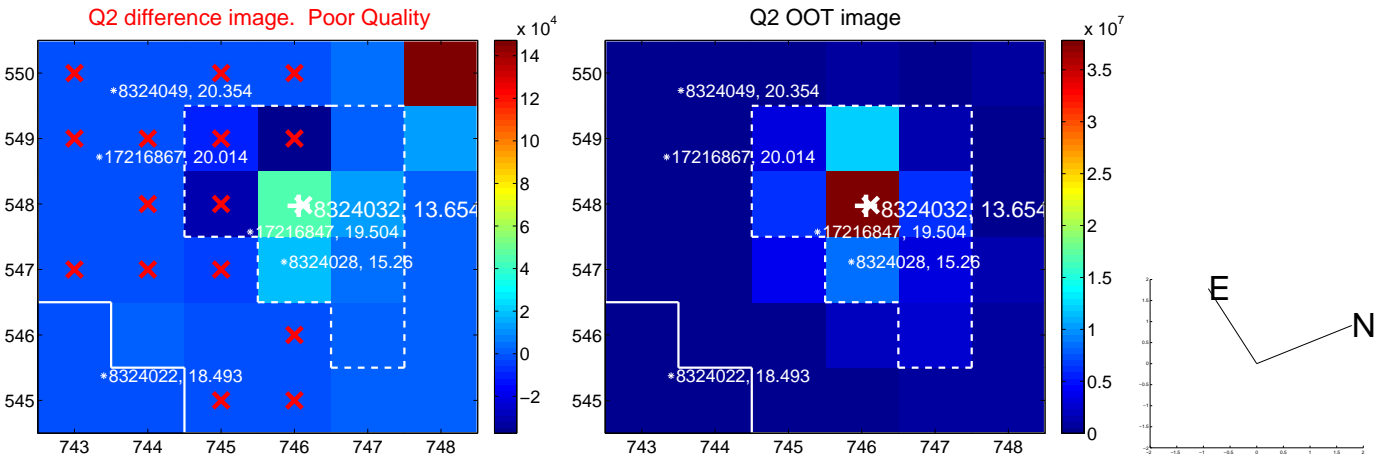
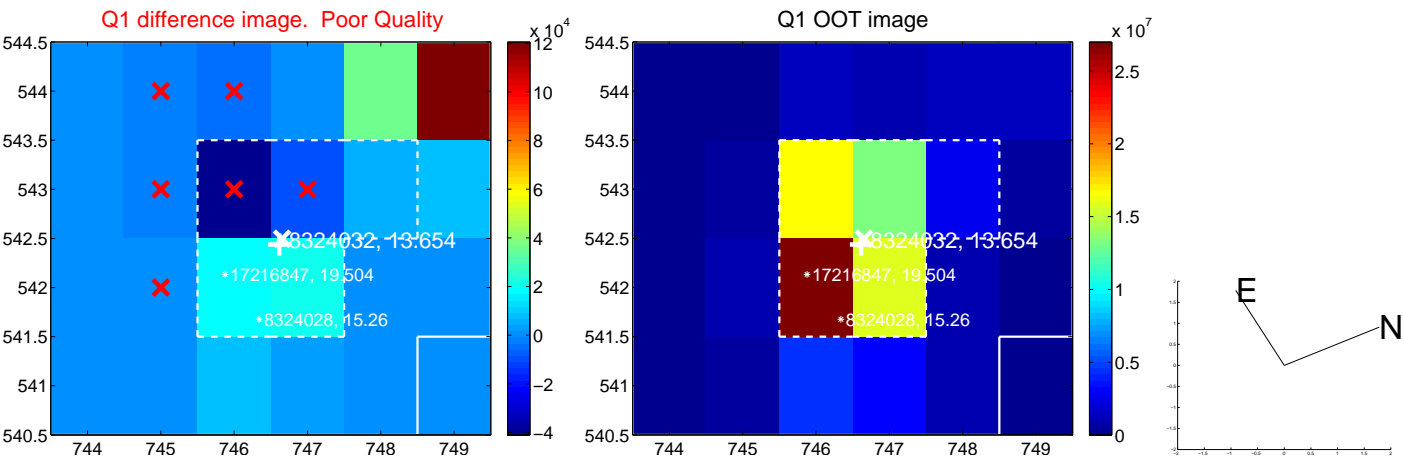


There is no PRF-fit offset from KIC

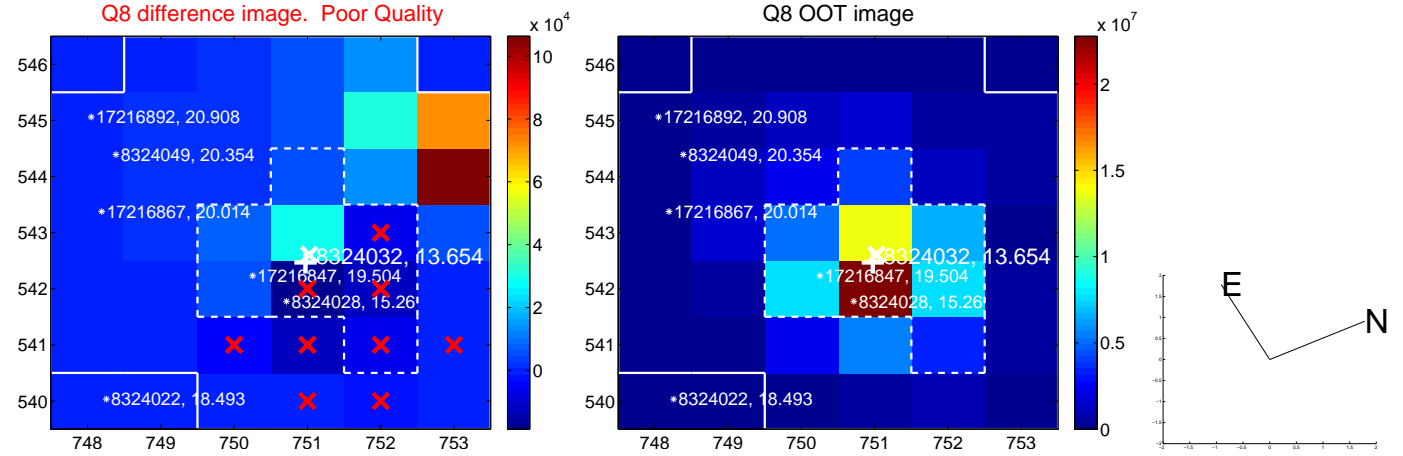
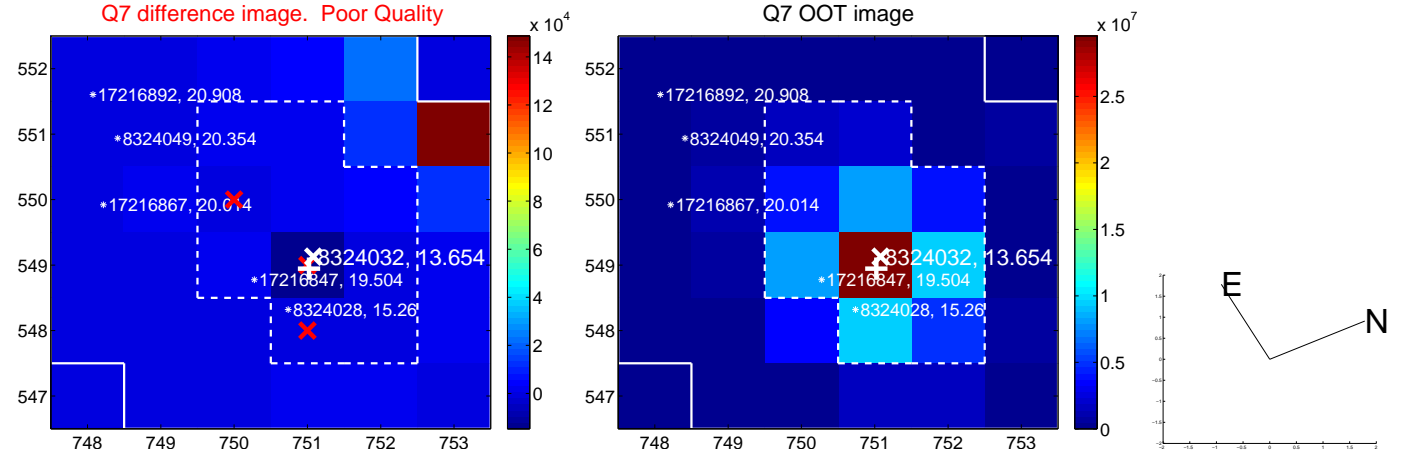
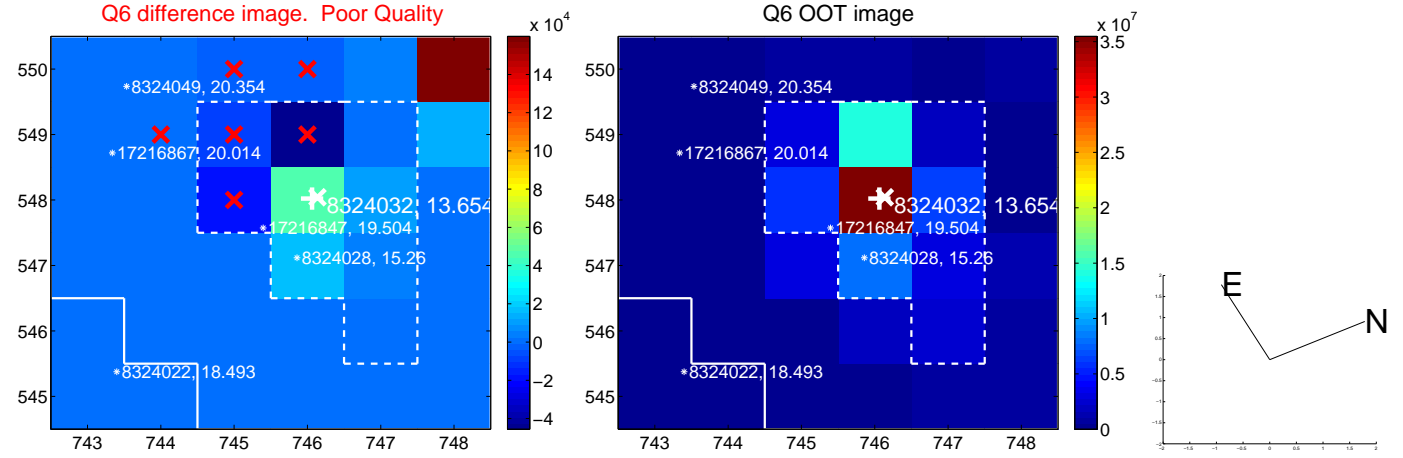
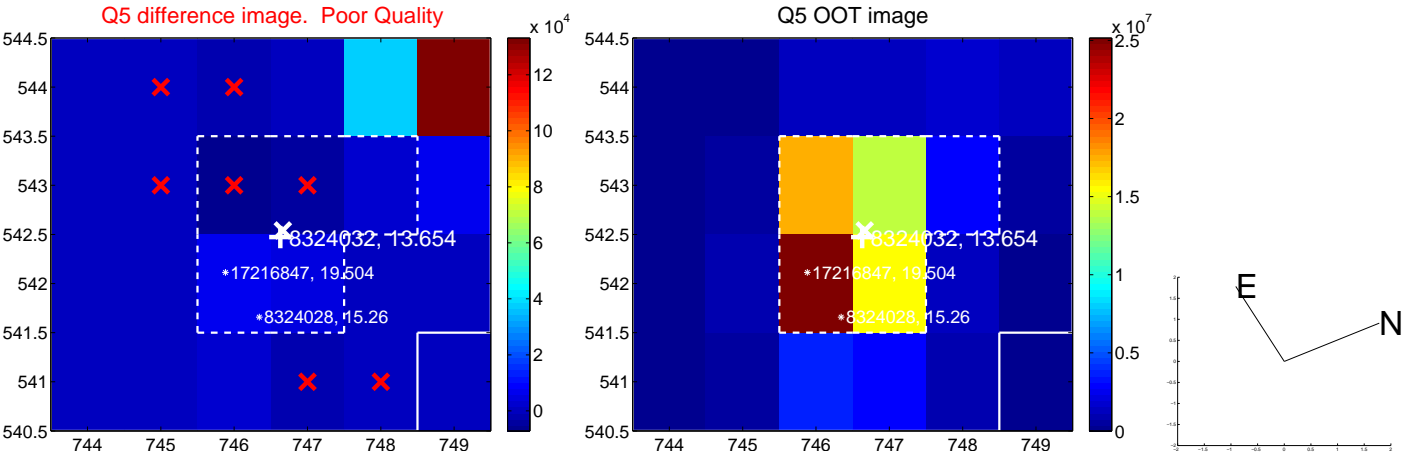


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

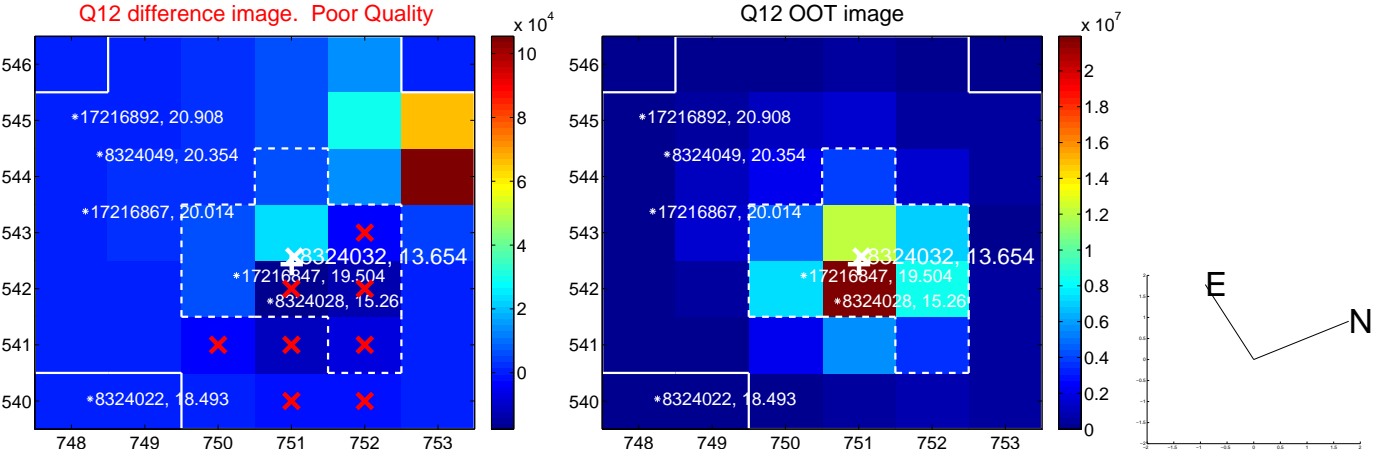
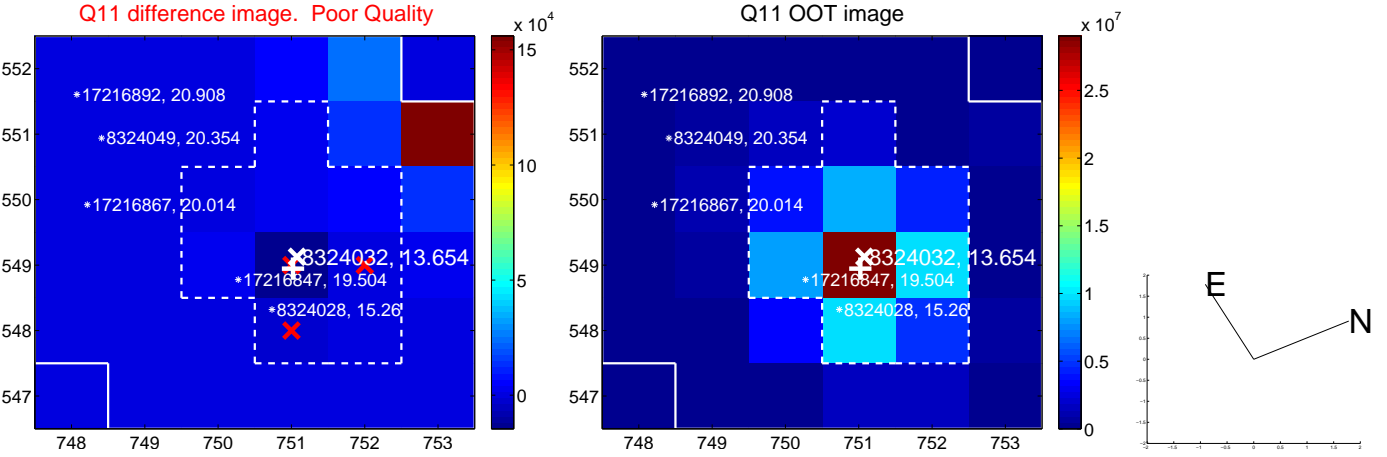
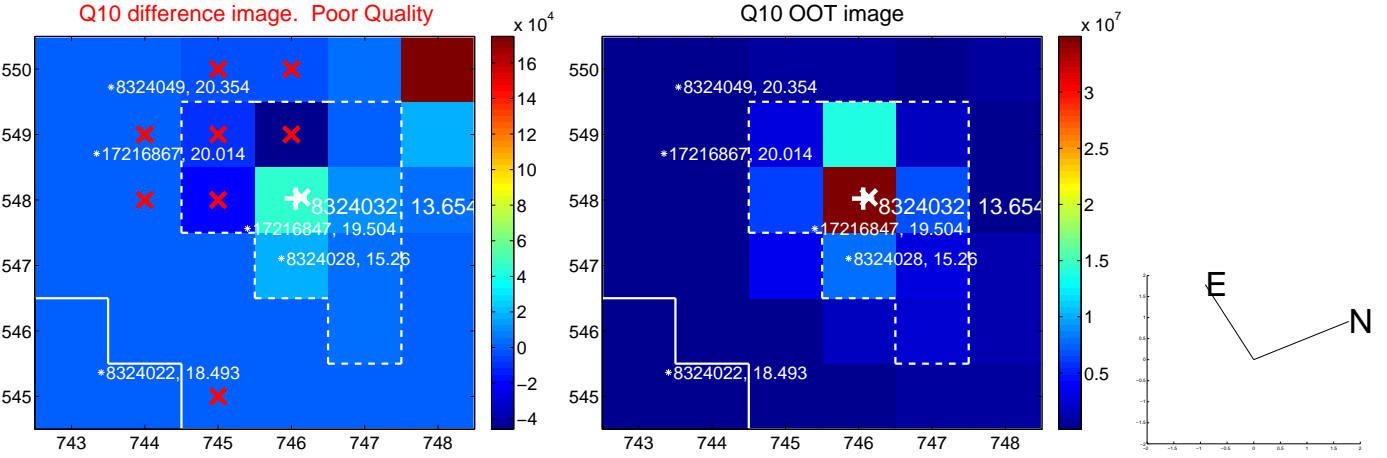
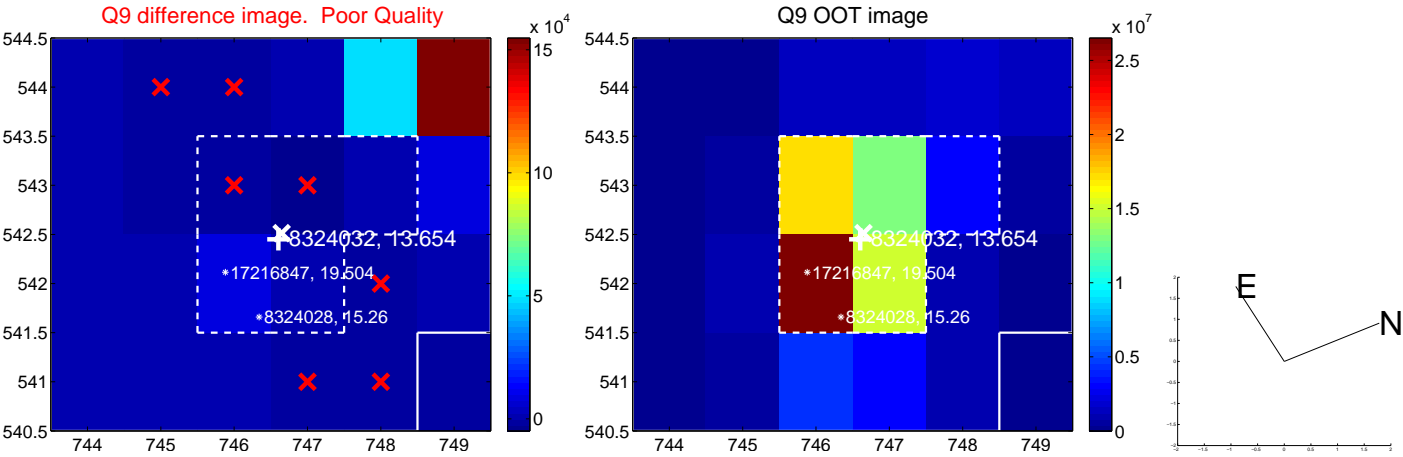


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



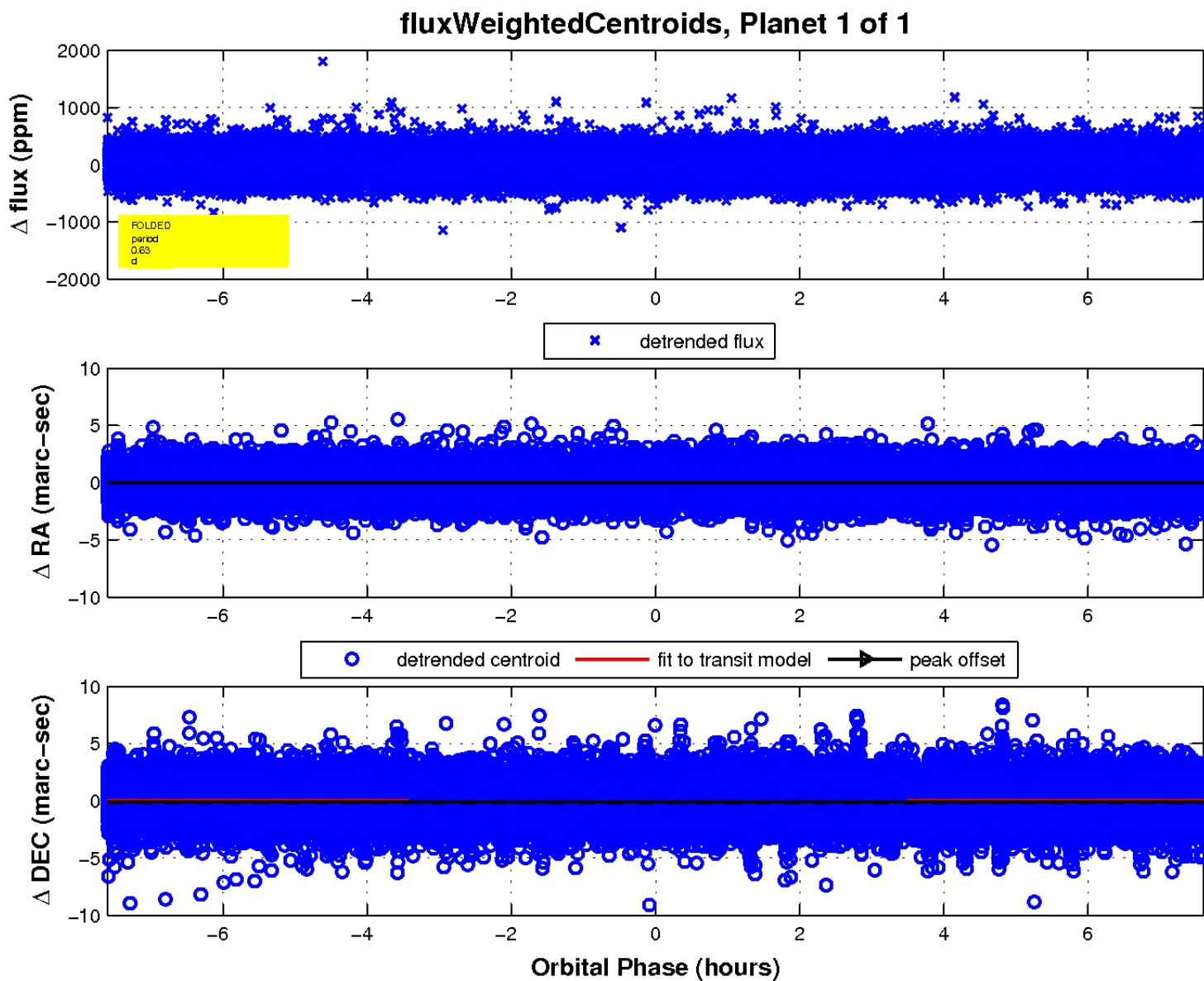
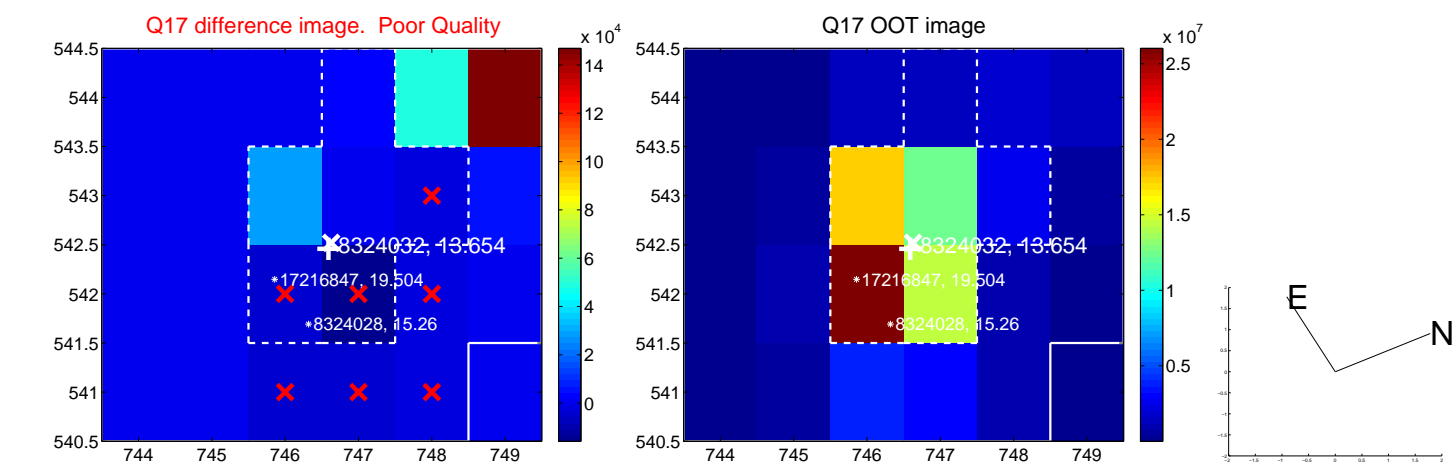


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

