

# KIC 008330056

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008330056-01	OBS	No	0.610944	131.889119	862.6	1.500	7.7	-1.0	1.88	7464	5.61	35818.99

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008330056-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

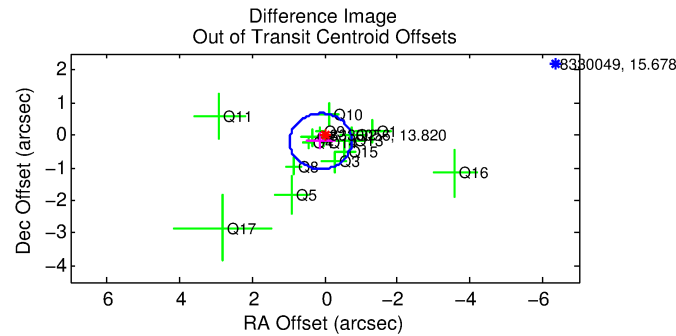
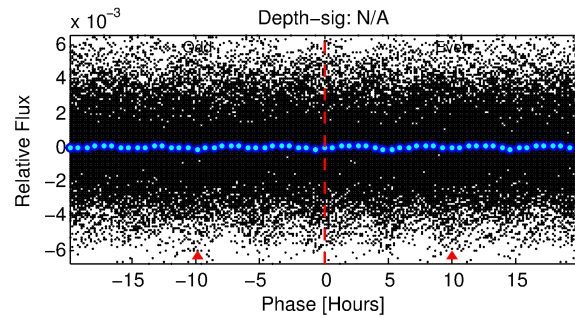
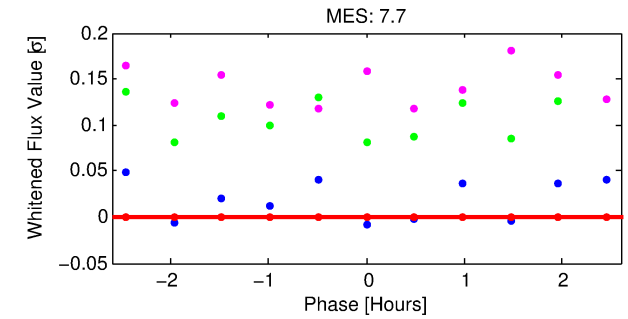
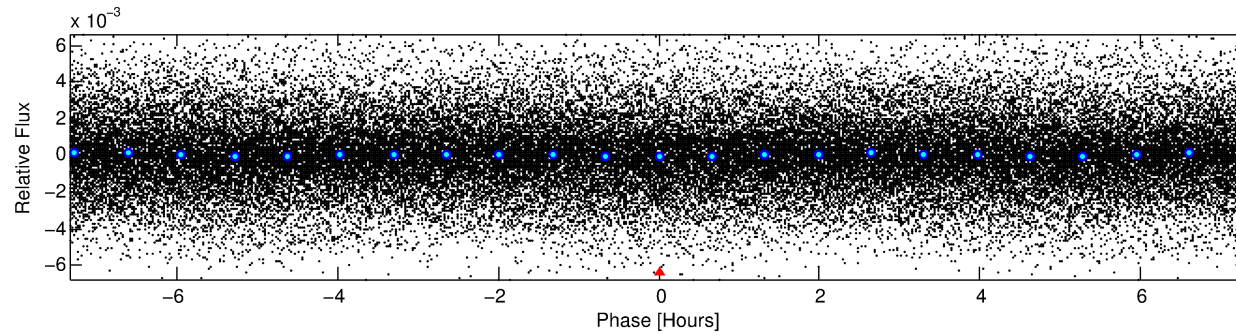
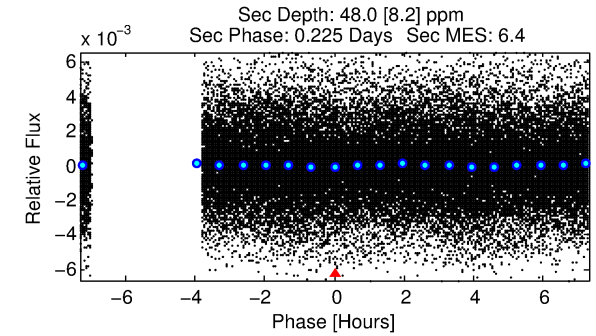
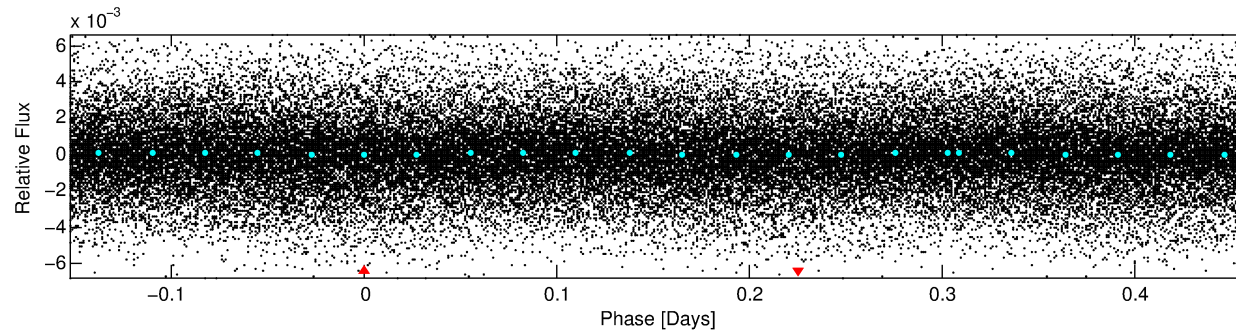
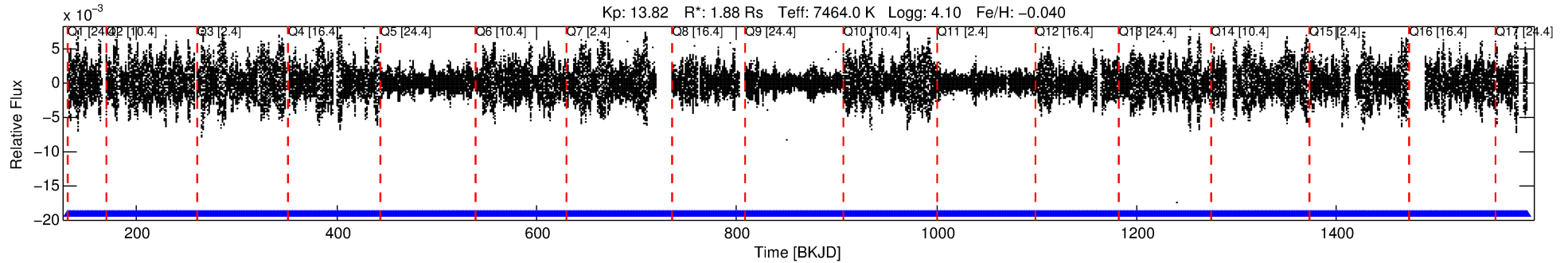
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008330056-01

No Significant Match Found

# DV One-Page Summary

KIC: 8330056 Candidate: 1 of 1 Period: 0.611 d



TPS TCE Results:

Period = 0.61094 d  
Epoch = 131.8891 BKJD

DV fit results are unavailable

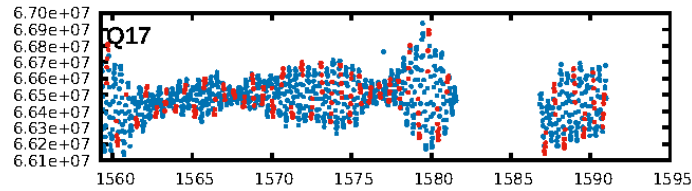
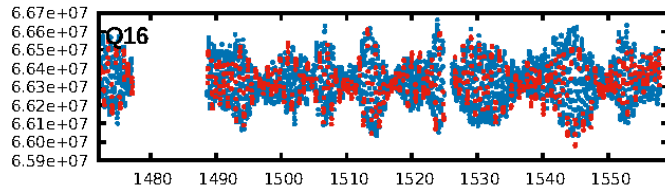
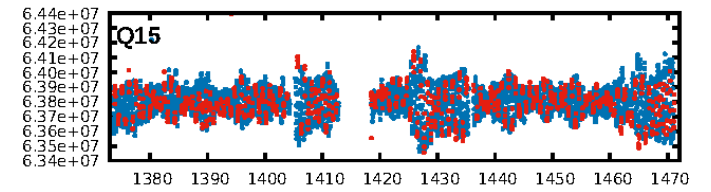
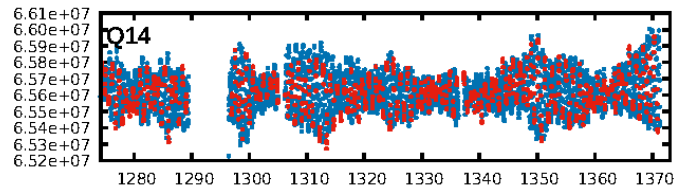
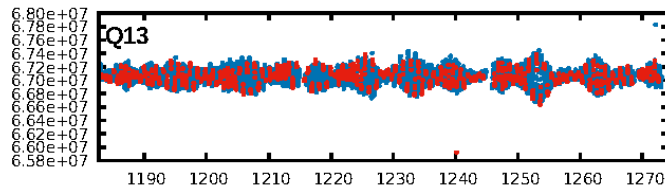
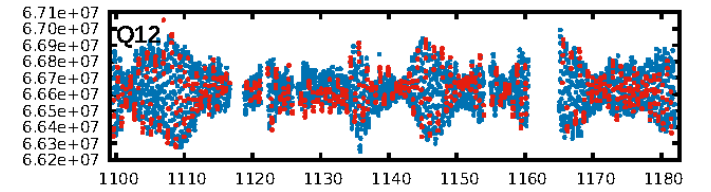
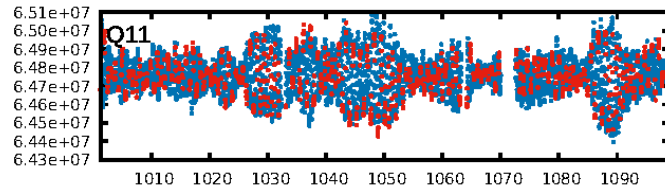
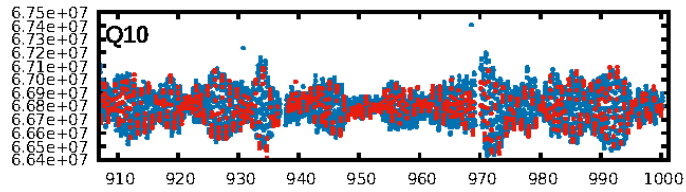
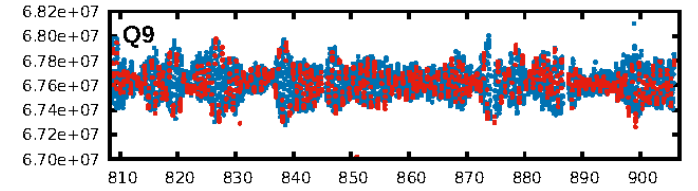
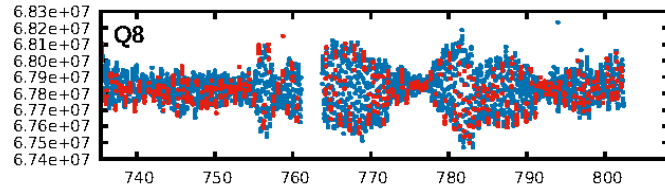
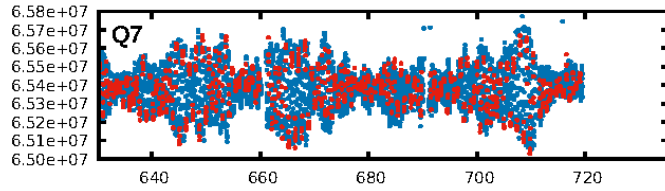
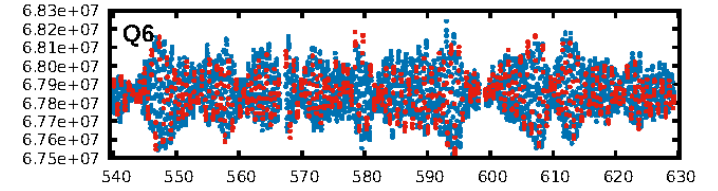
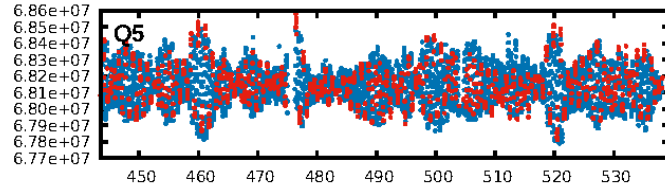
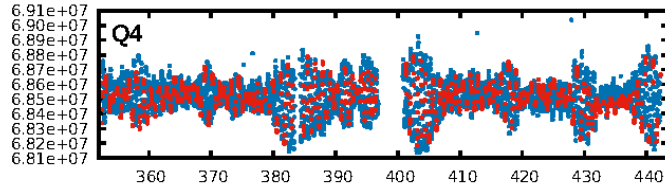
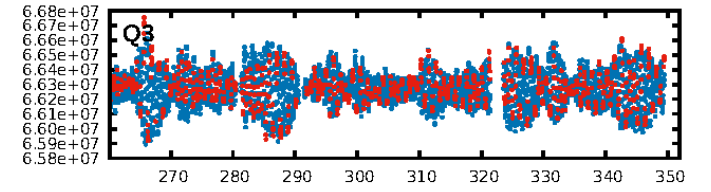
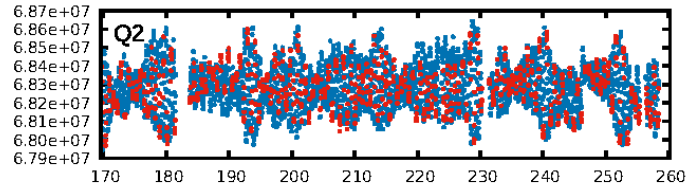
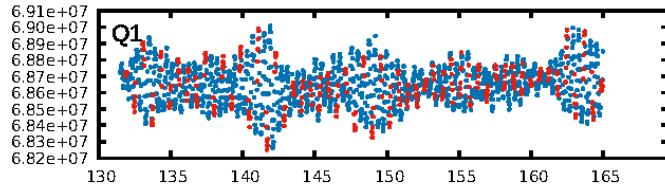
DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.28e-19  
RollingBand-fgt: 1.00 [2103/2103]  
GhostDiagnostic-chr: 1.93  
Centroid-sig: 15.0%  
Centroid-so: 0.538 arcsec [1.16σ]  
OotOffset-rm: 0.218 arcsec [0.76σ]  
KicOffset-rm: 0.058 arcsec [0.15σ]  
OotOffset-st: 3/4/3/5 [15]  
KicOffset-st: 3/4/3/5 [15]  
DiffImageQuality-fgm: 0.60 [9/15]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:23:06 Z

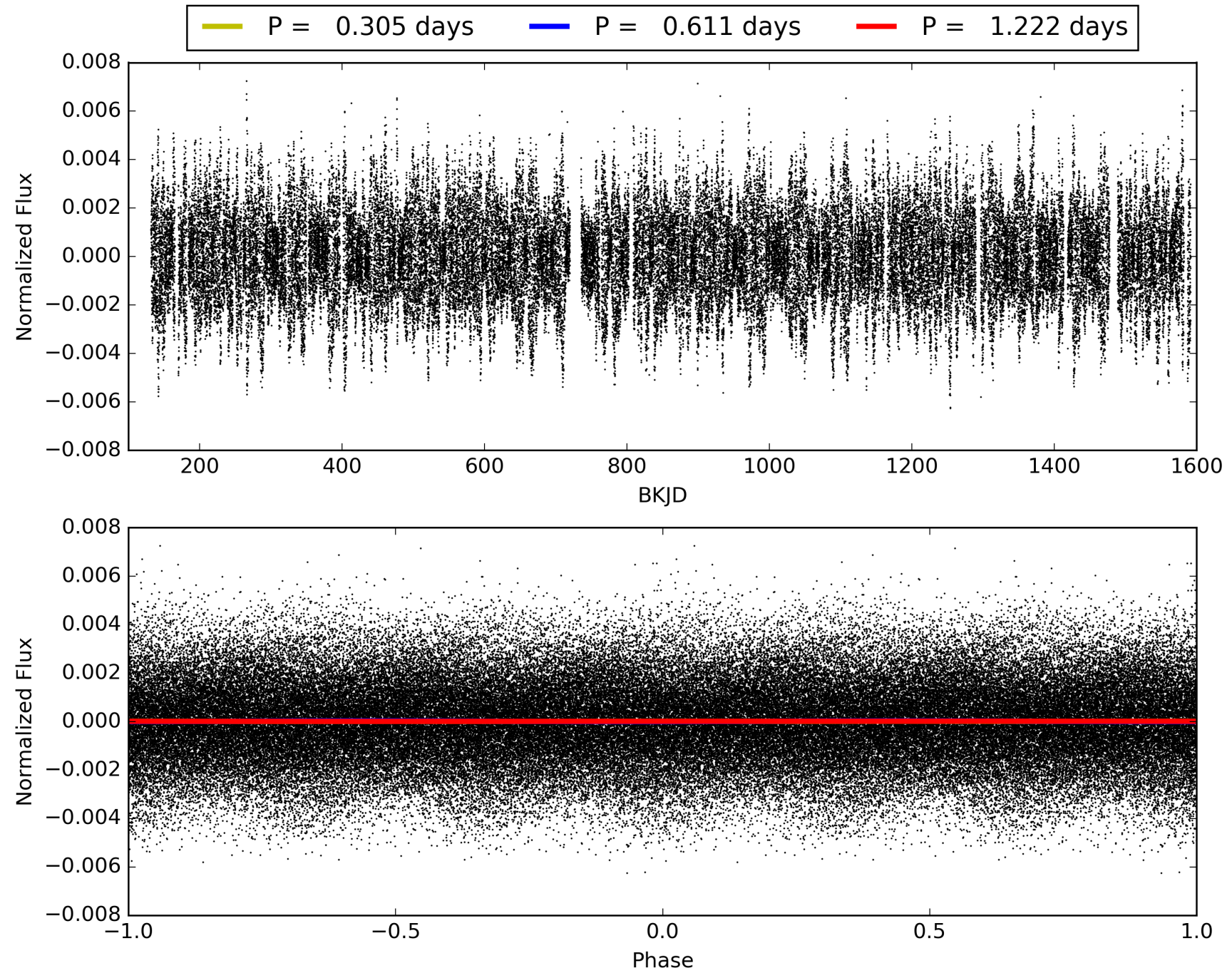
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008330056-01, PDC Light Curves



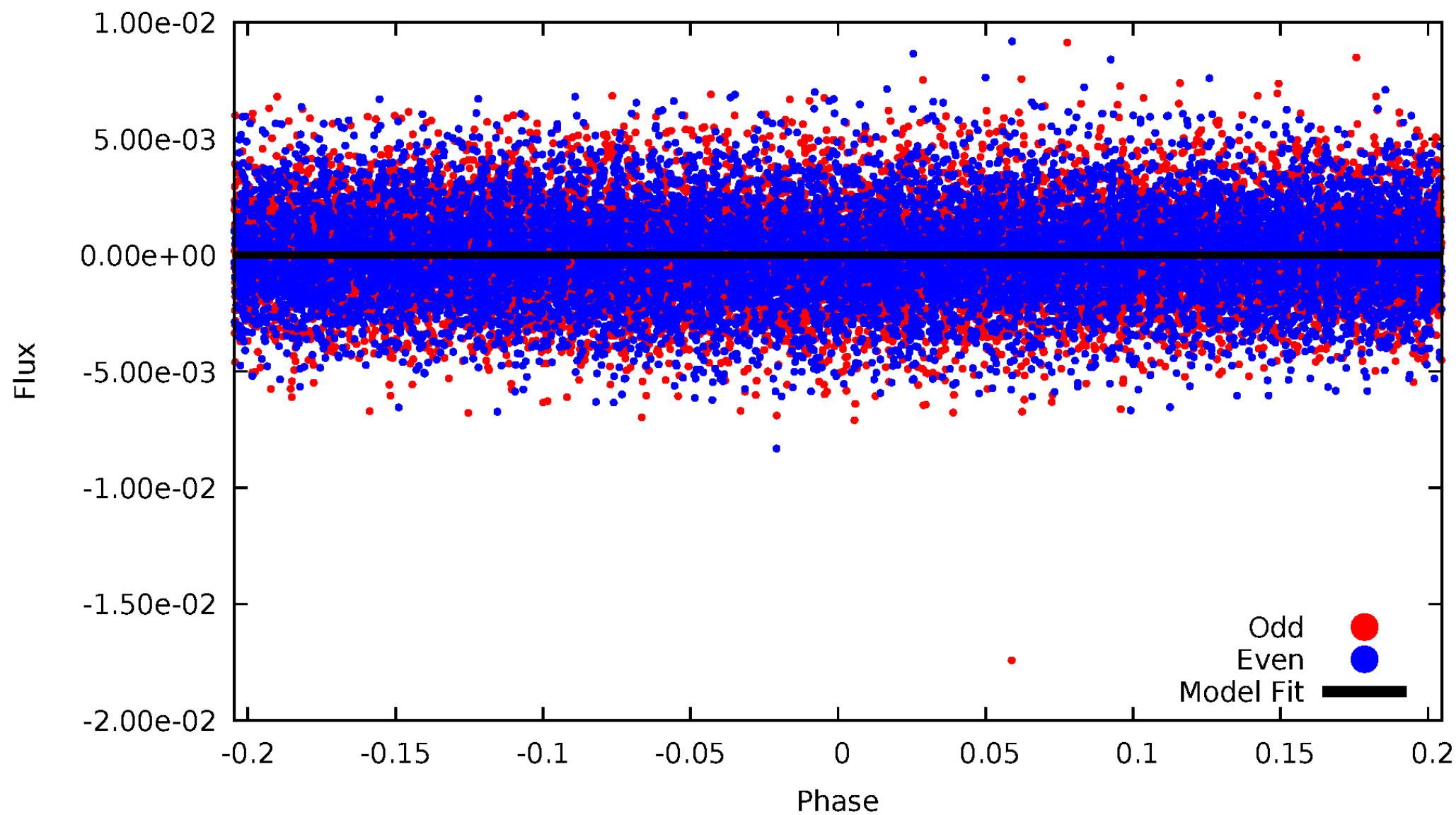


TCE 008330056-01



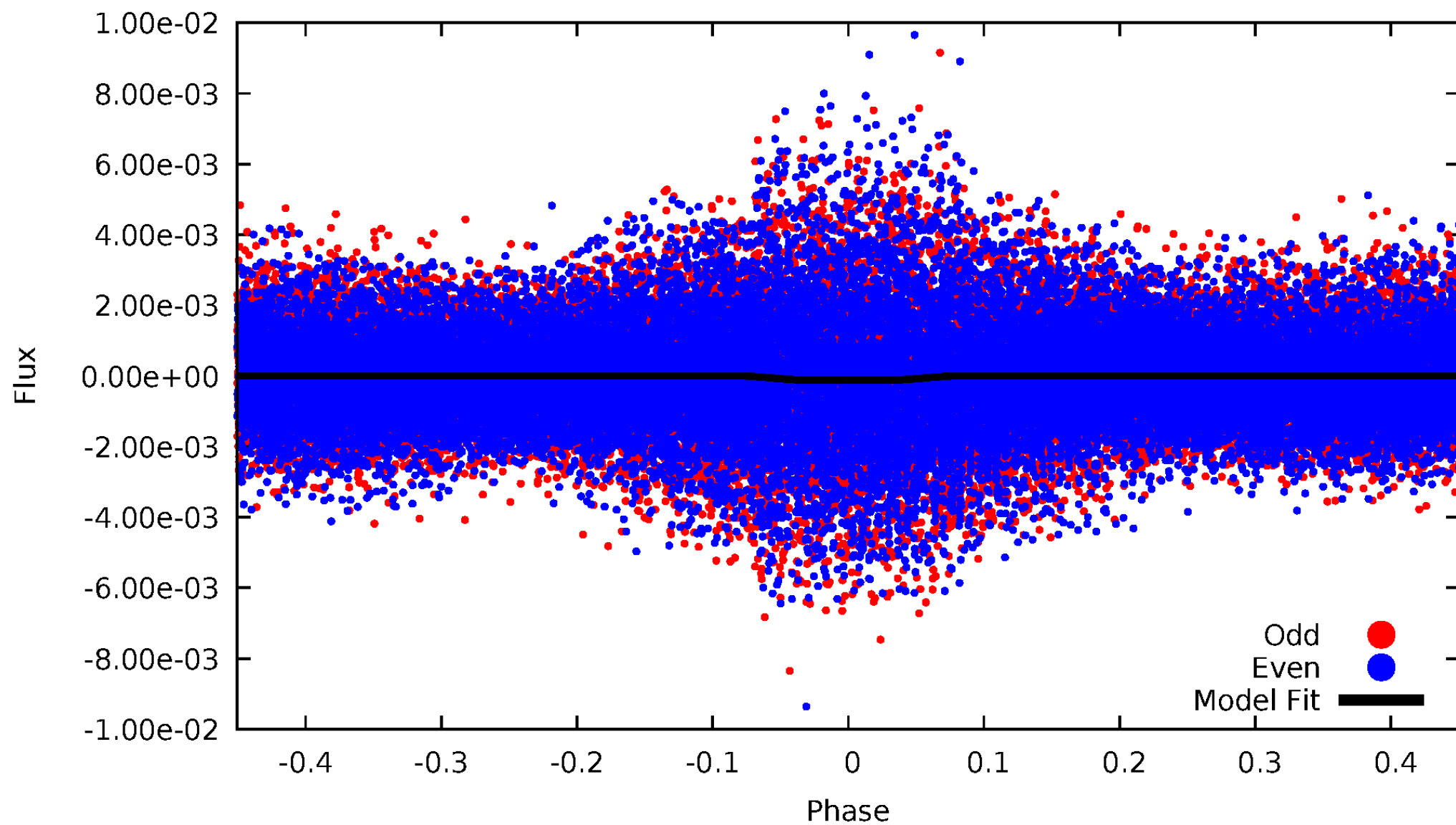
# DV Odd/Even

TCE 008330056-01

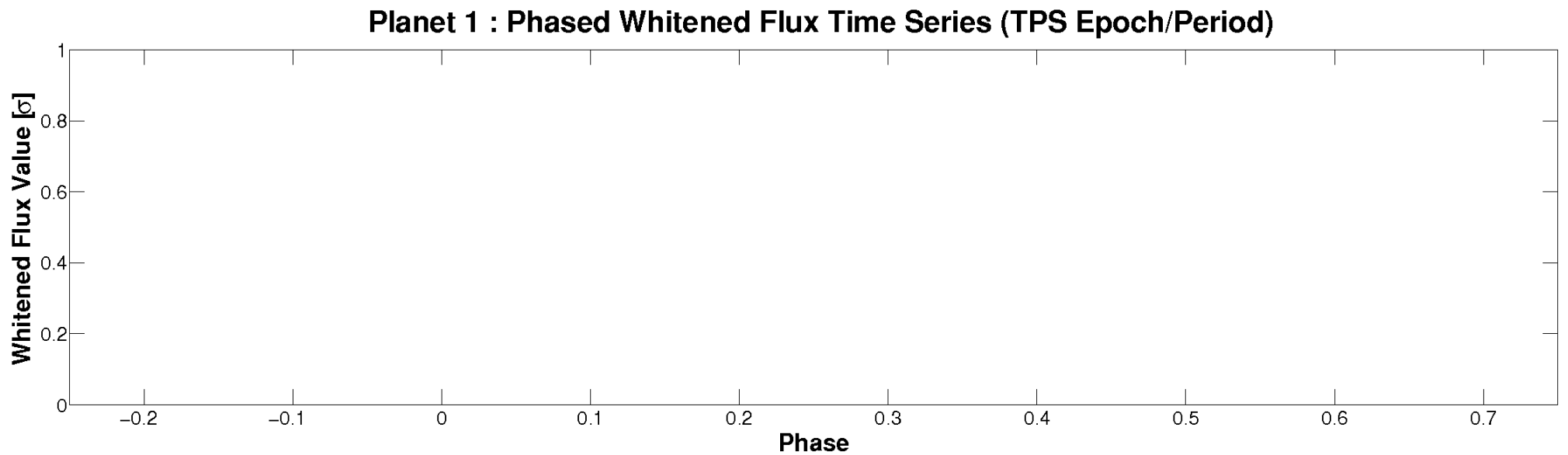
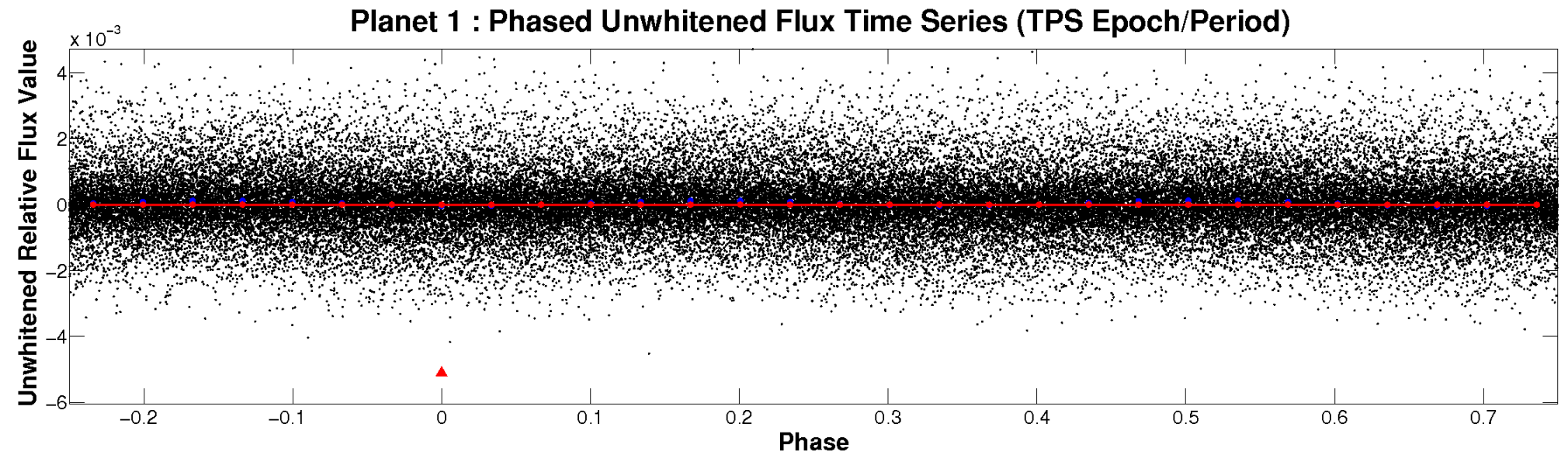


# ALT Odd/Even

TCE 008330056-01



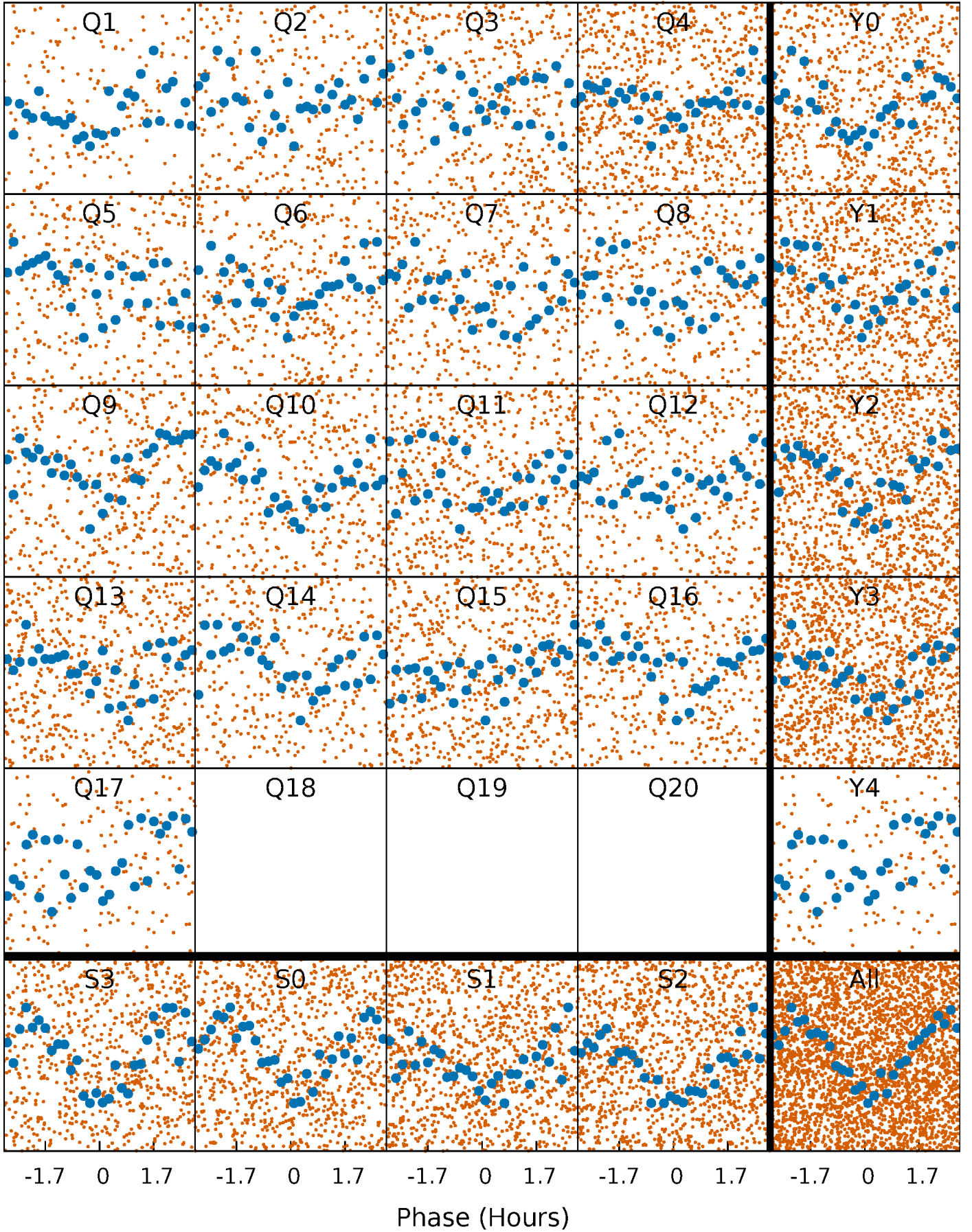
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

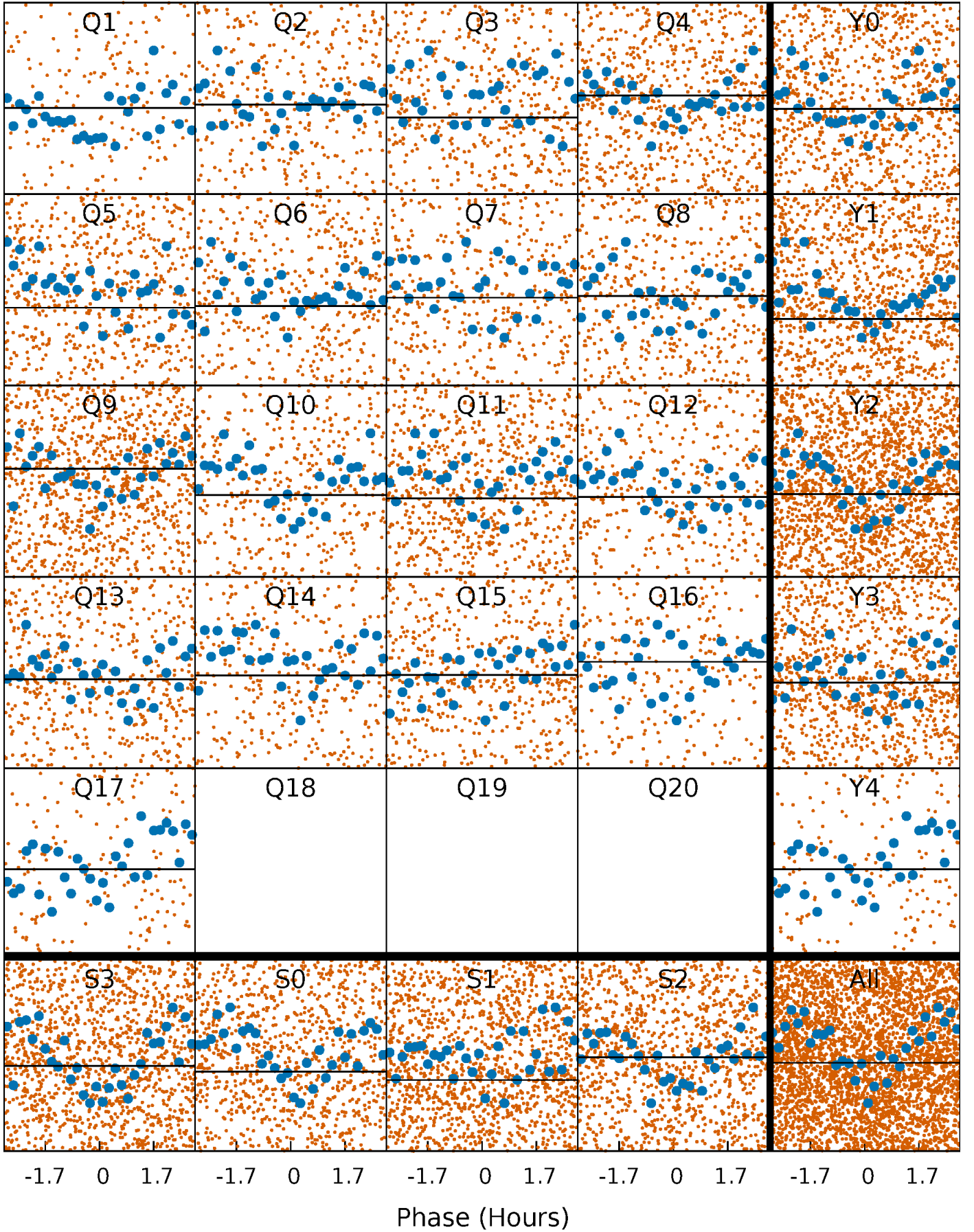
TCE 008330056-01   P= 0.610944 Days    $T_0=131.889119$  (BKJD)





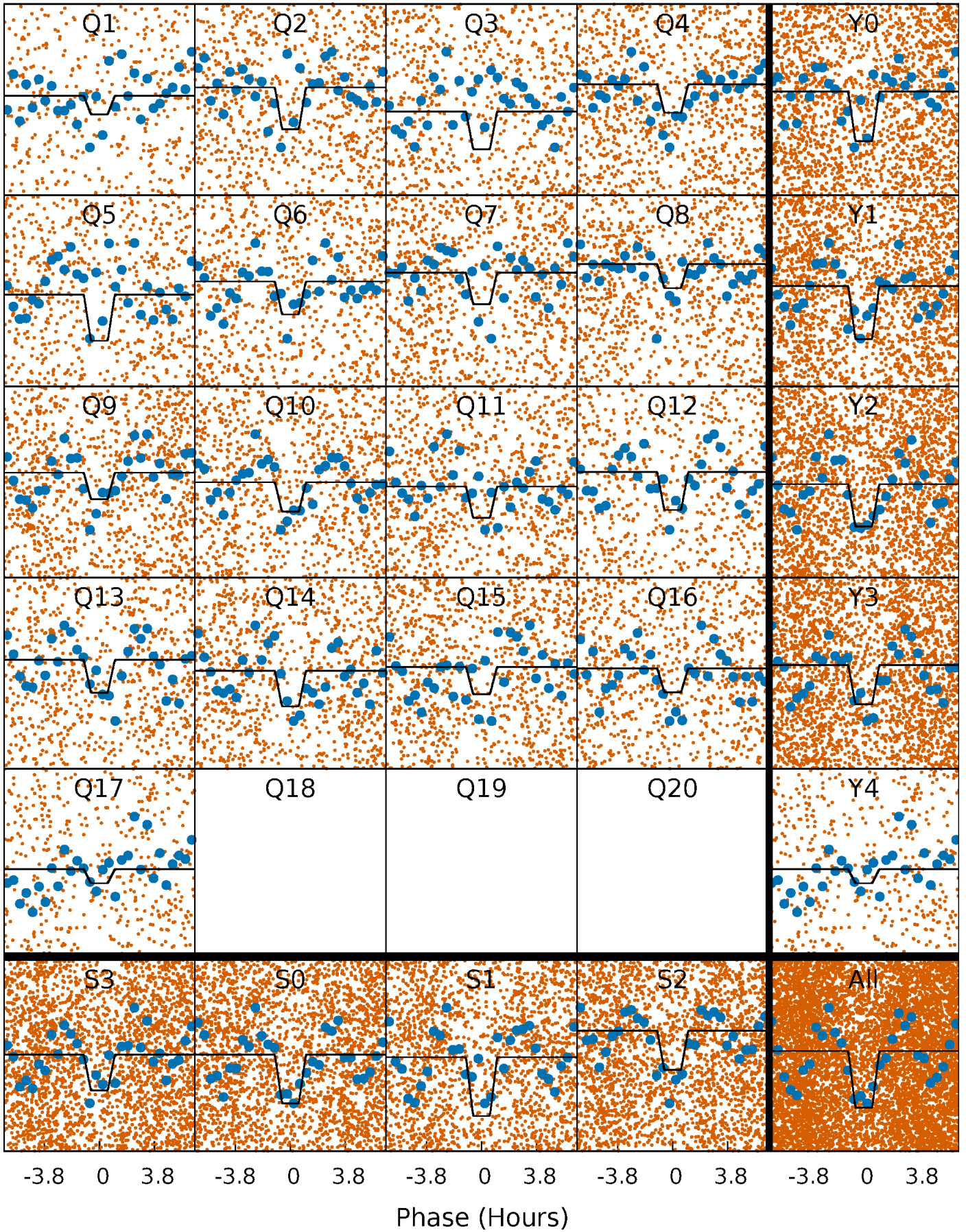
# DV Quarter-Phased Transit Curves

TCE 008330056-01 P= 0.610944 Days  $T_0=131.889119$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

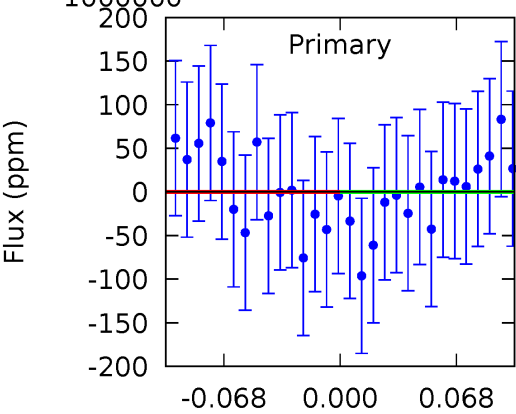
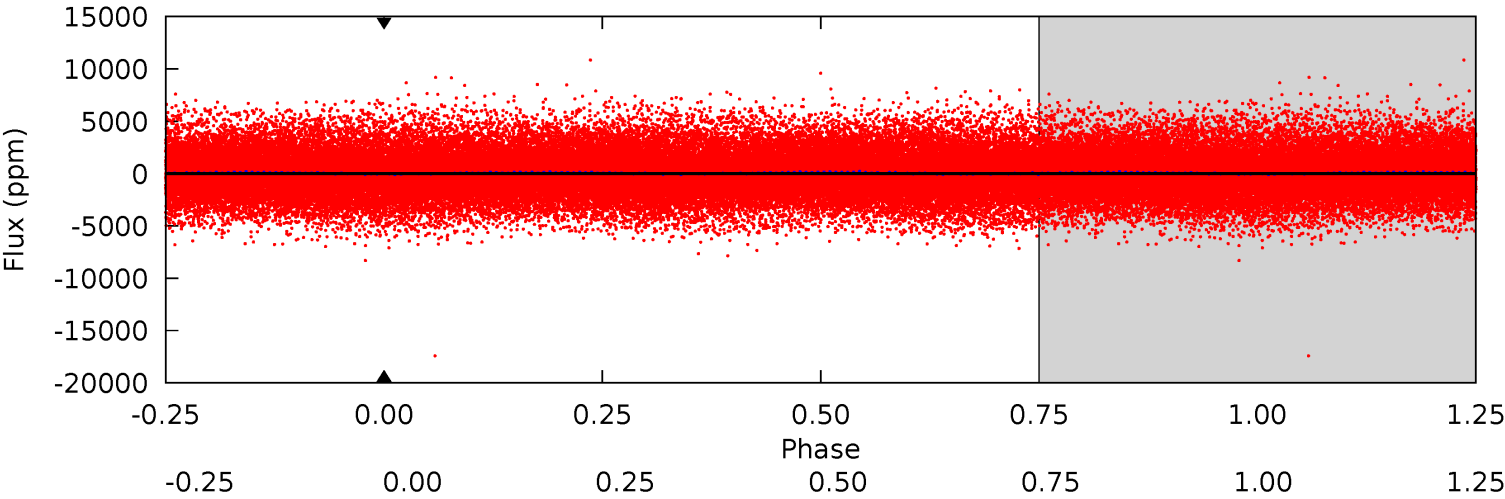
TCE 008330056-01 P= 0.610944 Days  $T_0=131.895312$  (BKJD)



DV Model-Shift Uniqueness Test

008330056-01, P = 0.610944 Days, E = 131.278175 Days

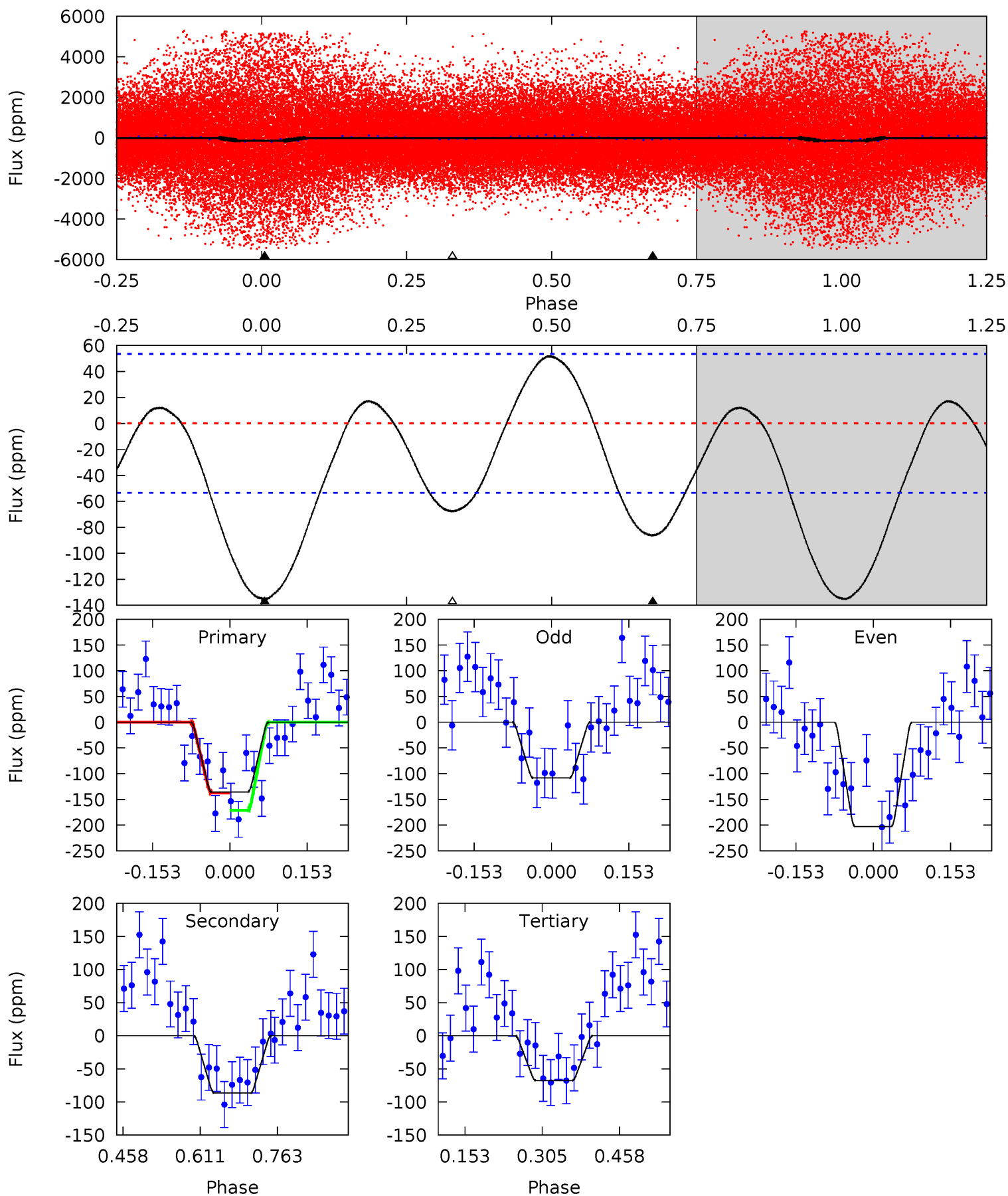
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

008330056-01, P = 0.610944 Days, E = 131.284368 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
11.3	7.22	5.67	0	4.48	1.43	3.21	5.67	11.3	1.56	7.22	3.96	0.65	0.28	1.45





### Stellar Parameters For KIC 008330056

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7464^{+233}_{-311}$	$4.099^{+0.144}_{-0.176}$	$-0.040^{+0.200}_{-0.350}$	$1.875^{+0.521}_{-0.426}$	$1.610^{+0.189}_{-0.260}$	$0.344^{+0.282}_{-0.164}$
	+3%/-4%	+4%/-4%	+500%/-875%	+28%/-23%	+12%/-16%	+82%/-48%
Source	KIC0	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 008330056-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$16.52^{+16.48}_{-11.96}$	$4912^{+349}_{-361}$	$-6009^{+39183}_{-29526}$	$-1.191^{+97.561}_{-96.036}$
Alt.	$-86 \pm 12$	$13.64^{+15.60}_{-9.21}$	$4931^{+352}_{-329}$	$-3968^{+8193}_{-332}$	$0.067^{+0.566}_{-0.052}$

$T_{max}$  = 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

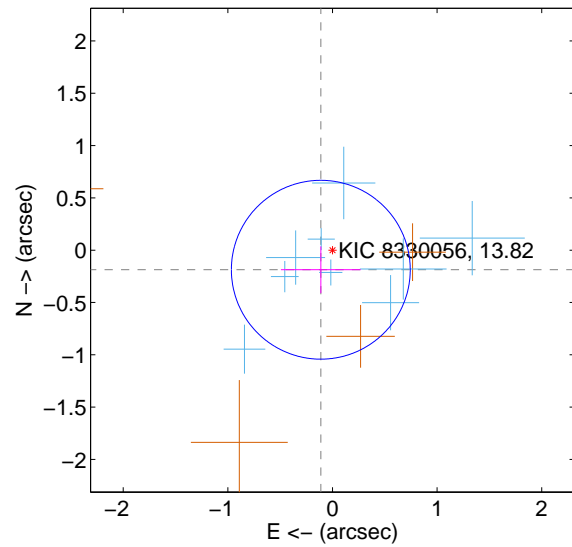
Supplemental centroid analysis for 008330056-01. Kepler magnitude: 13.82. Transit SNR -1.00

There are 9 quarters with good PRF difference image offsets

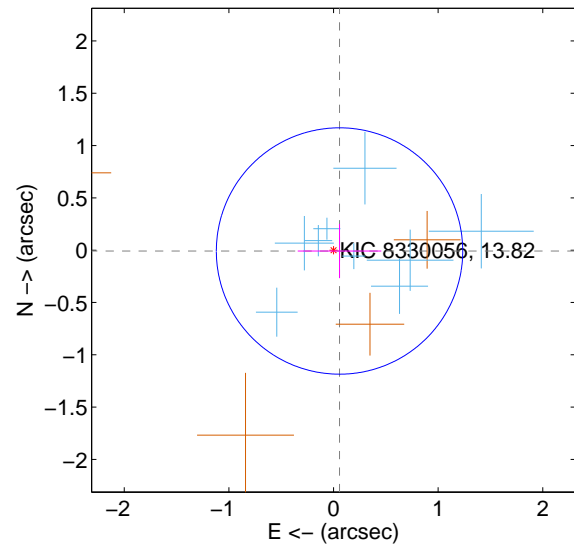
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.218 \pm 0.285$	0.76	$0.111 \pm 0.382$	$-0.187 \pm 0.224$
PRF-fit source offset from KIC position	$0.058 \pm 0.392$	0.15	$-0.058 \pm 0.400$	$-0.008 \pm 0.259$
photometric centroid source offset	$0.54 \pm 0.46$	1.16	$0.51 \pm 0.47$	$0.15 \pm 0.42$

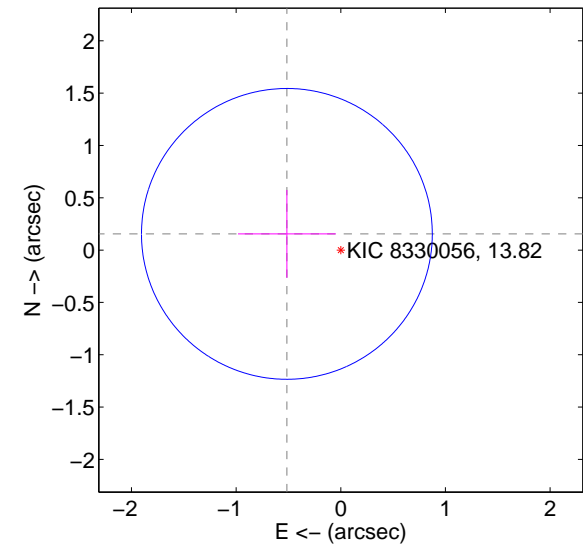
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

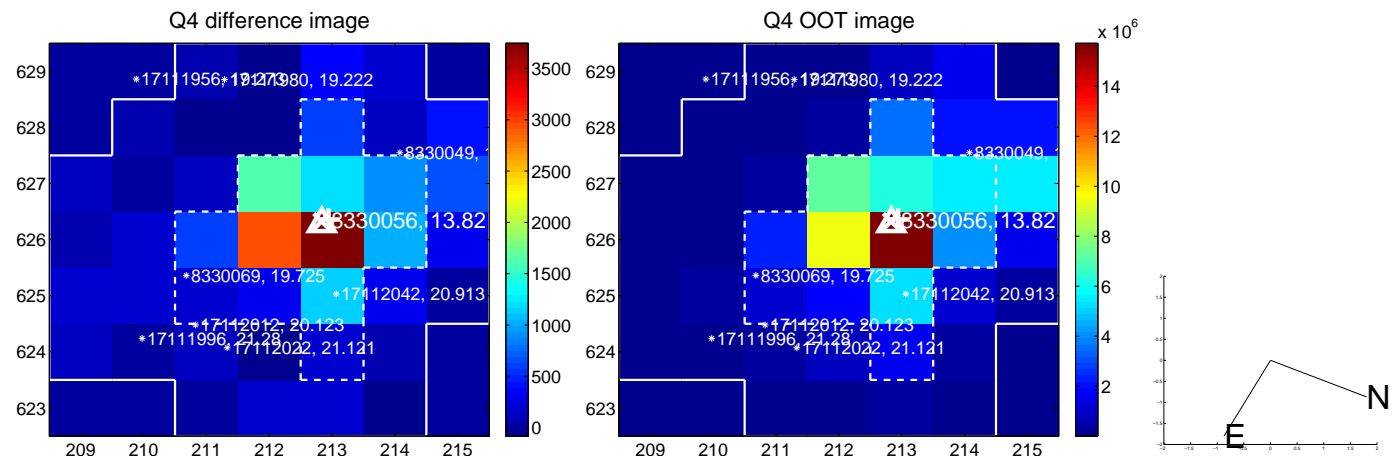
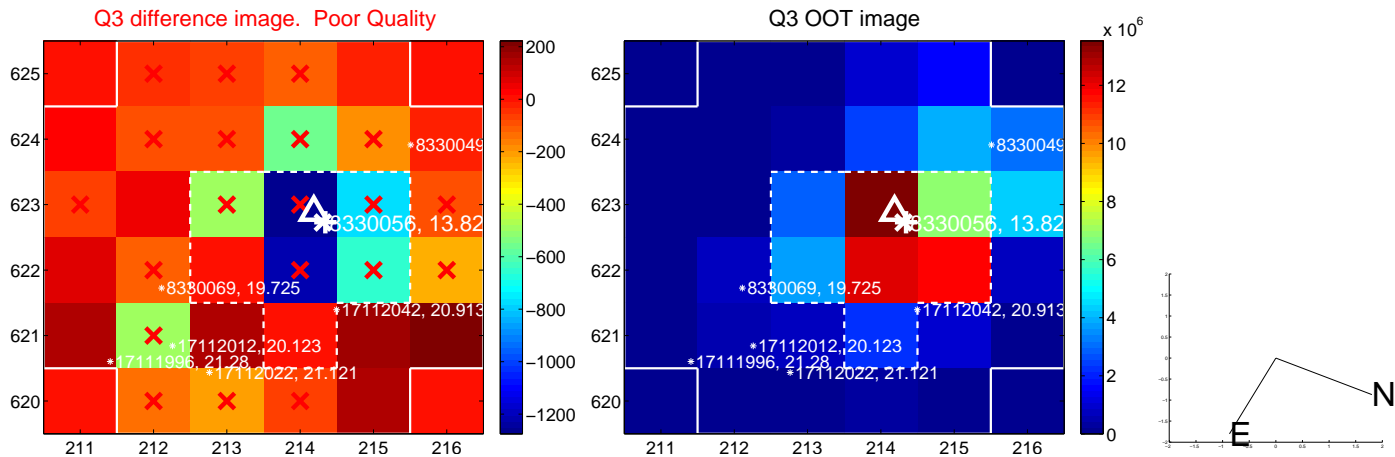
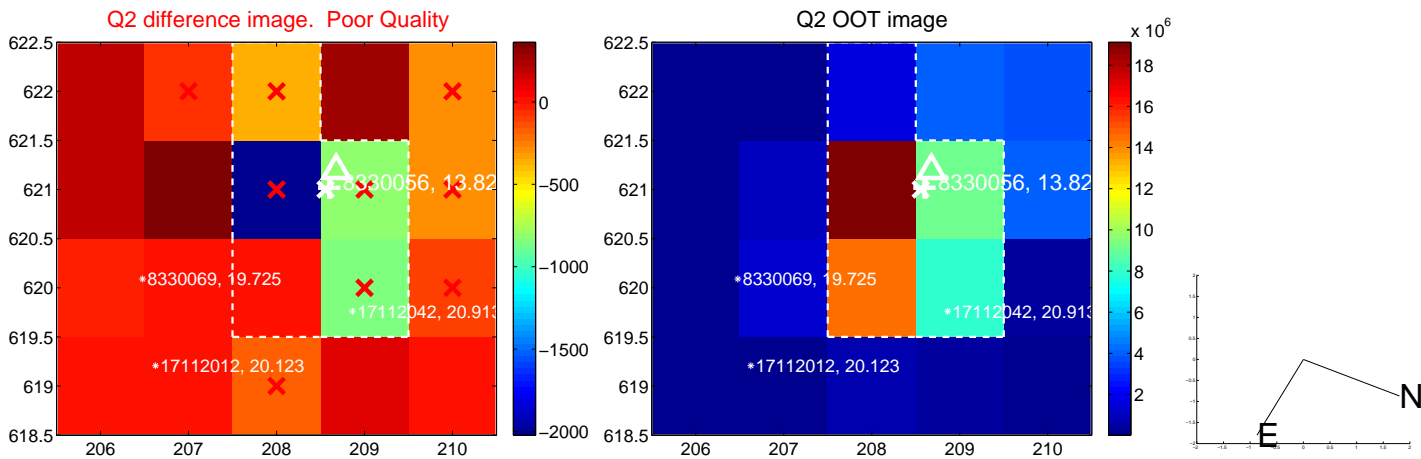
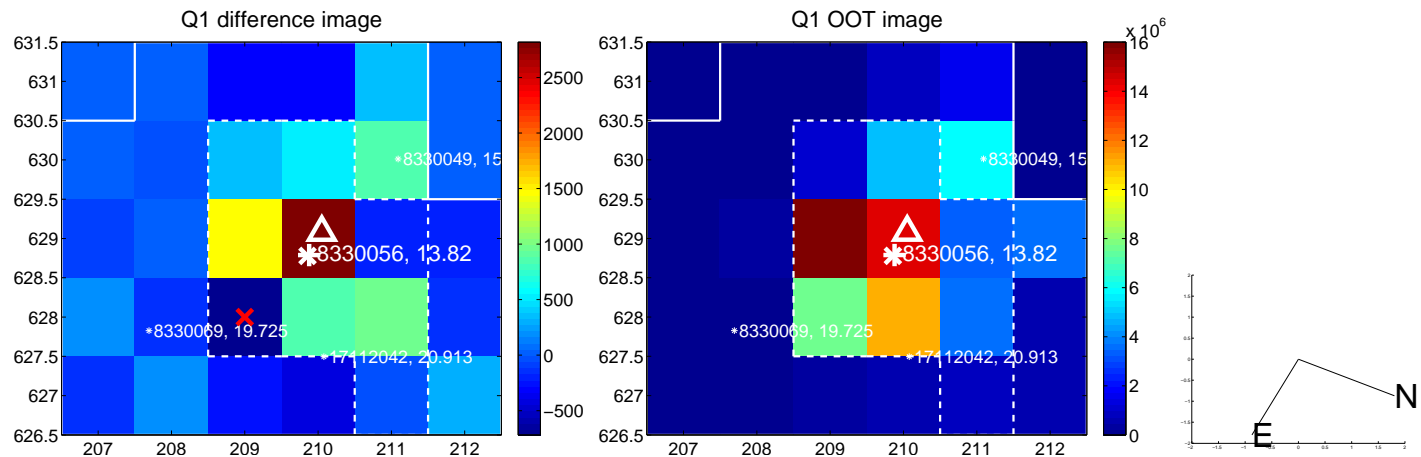


offset from photometric centroids

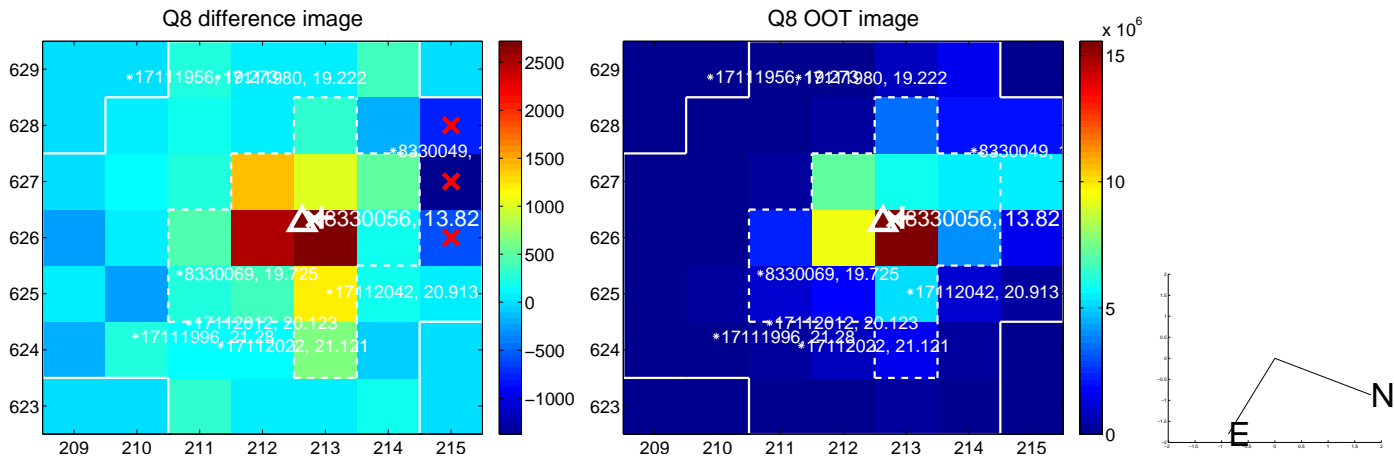
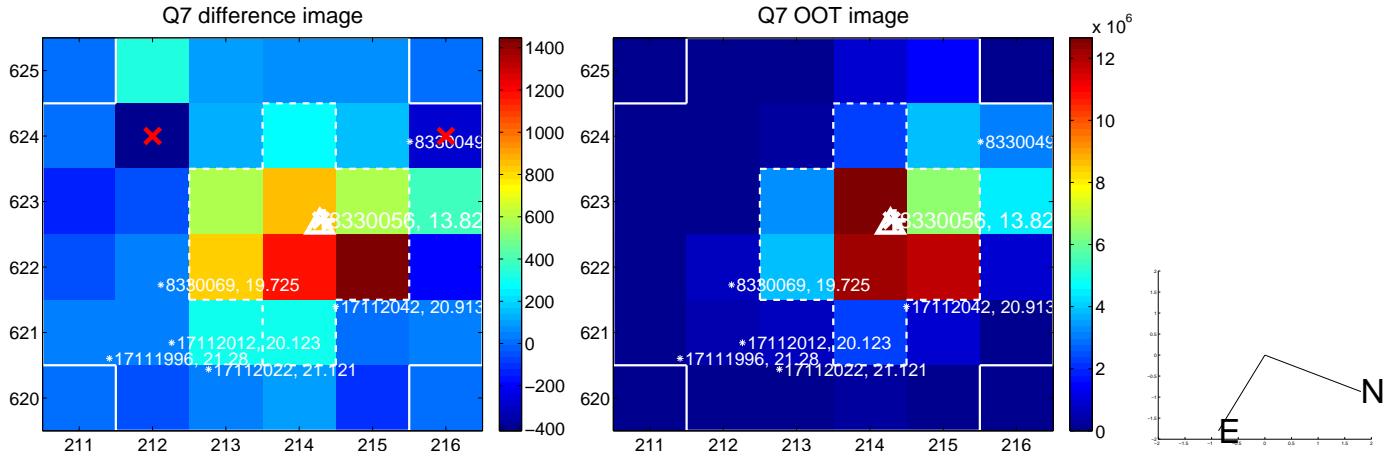
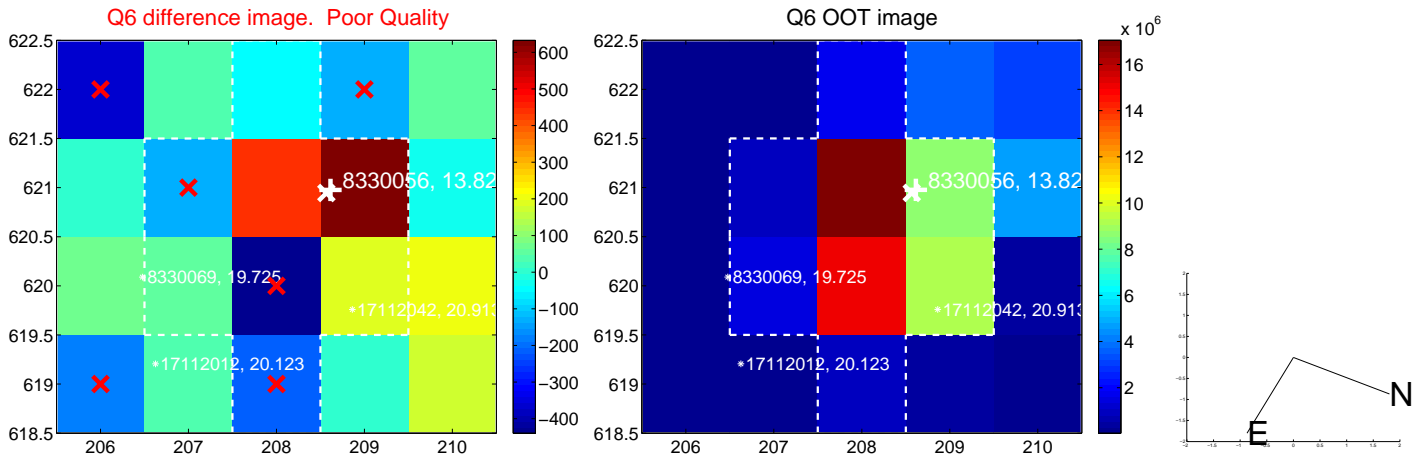
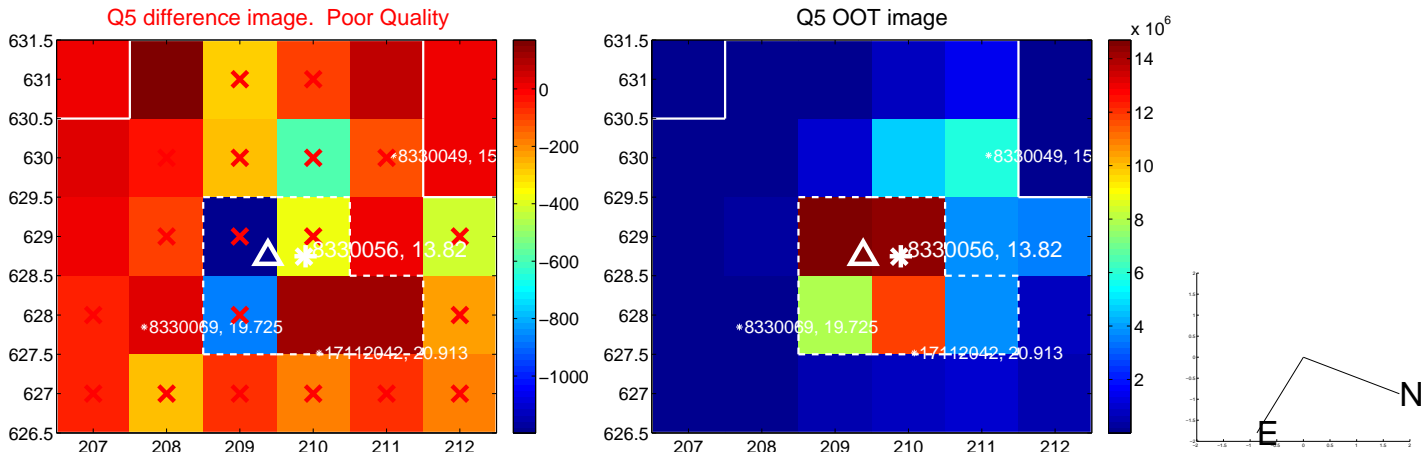


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



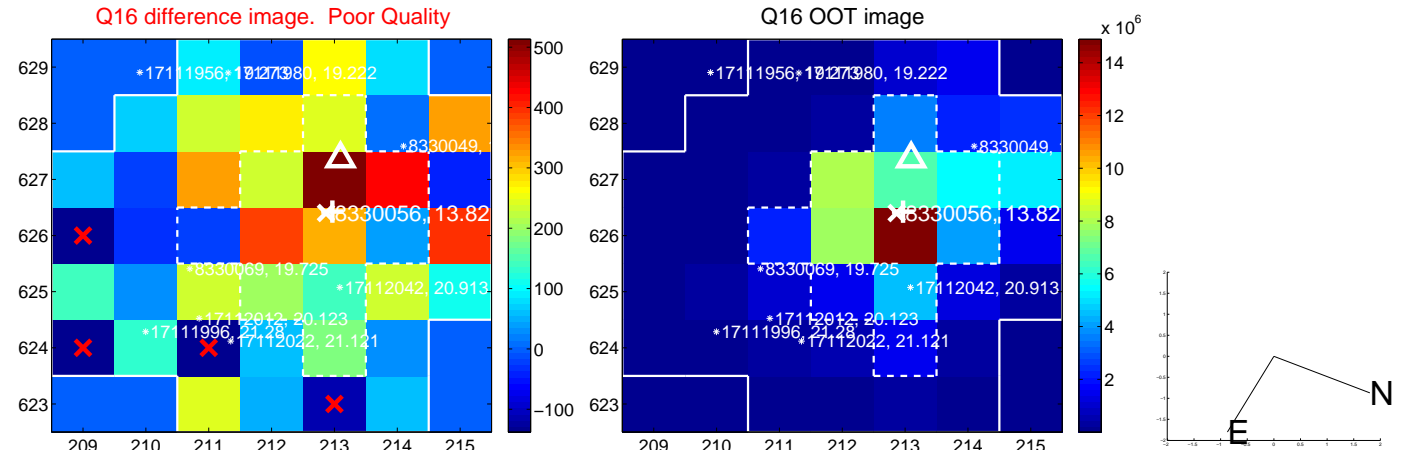
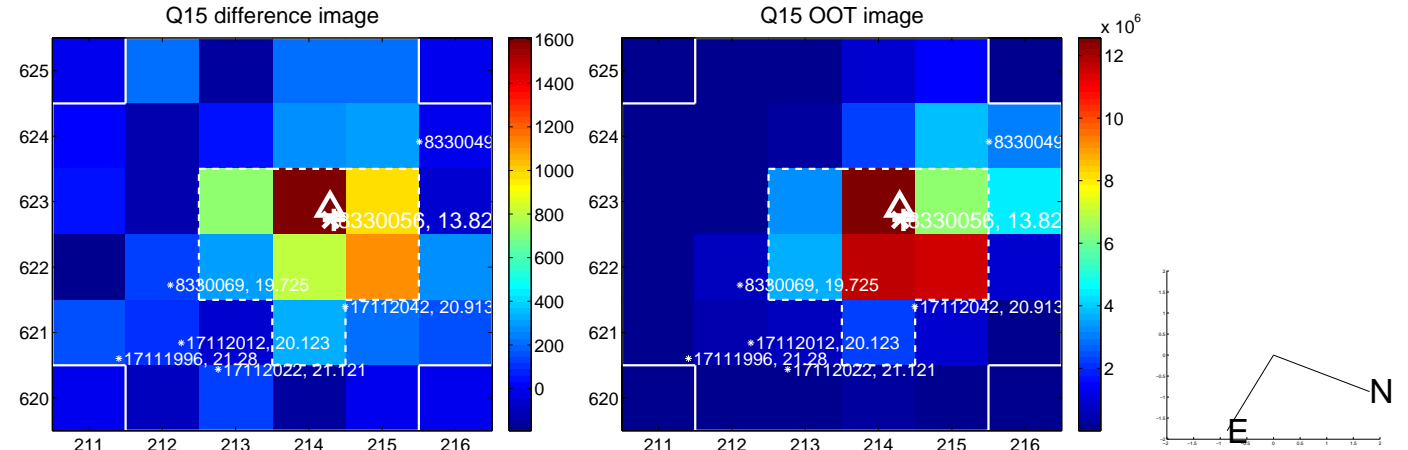
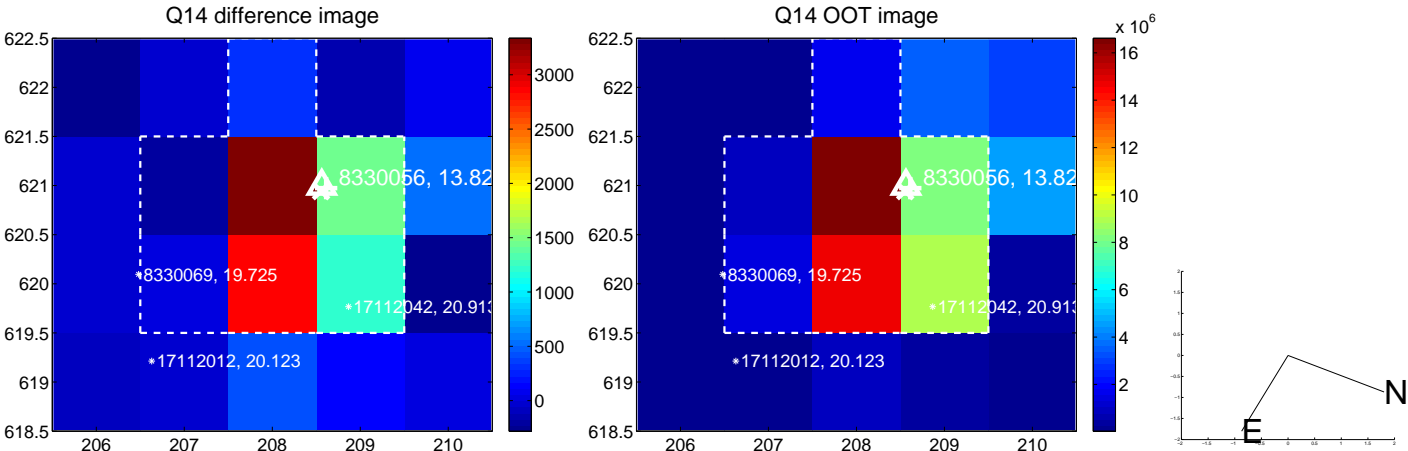
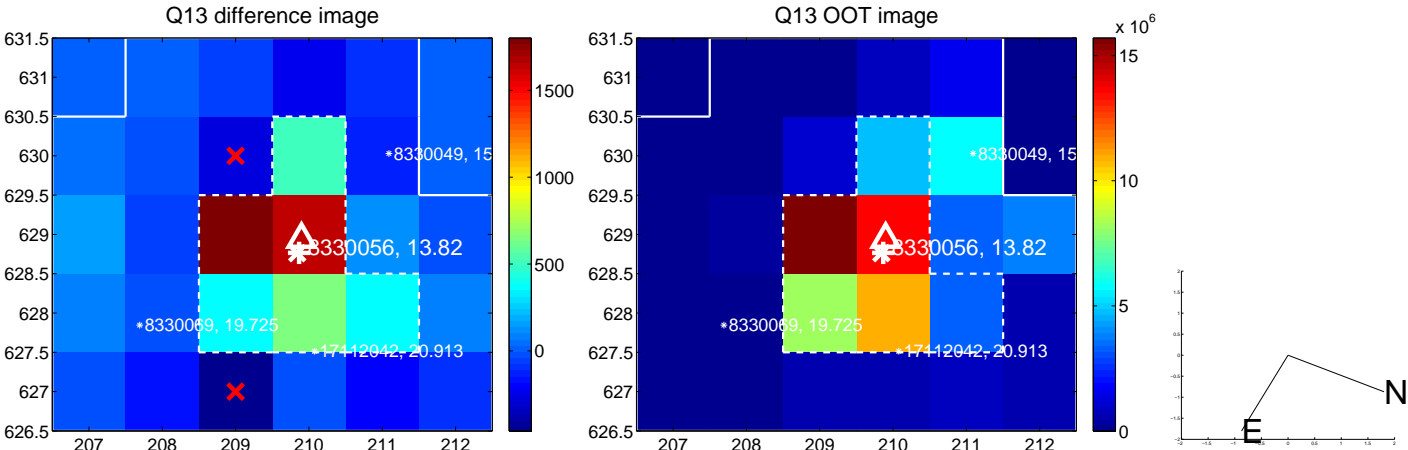
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



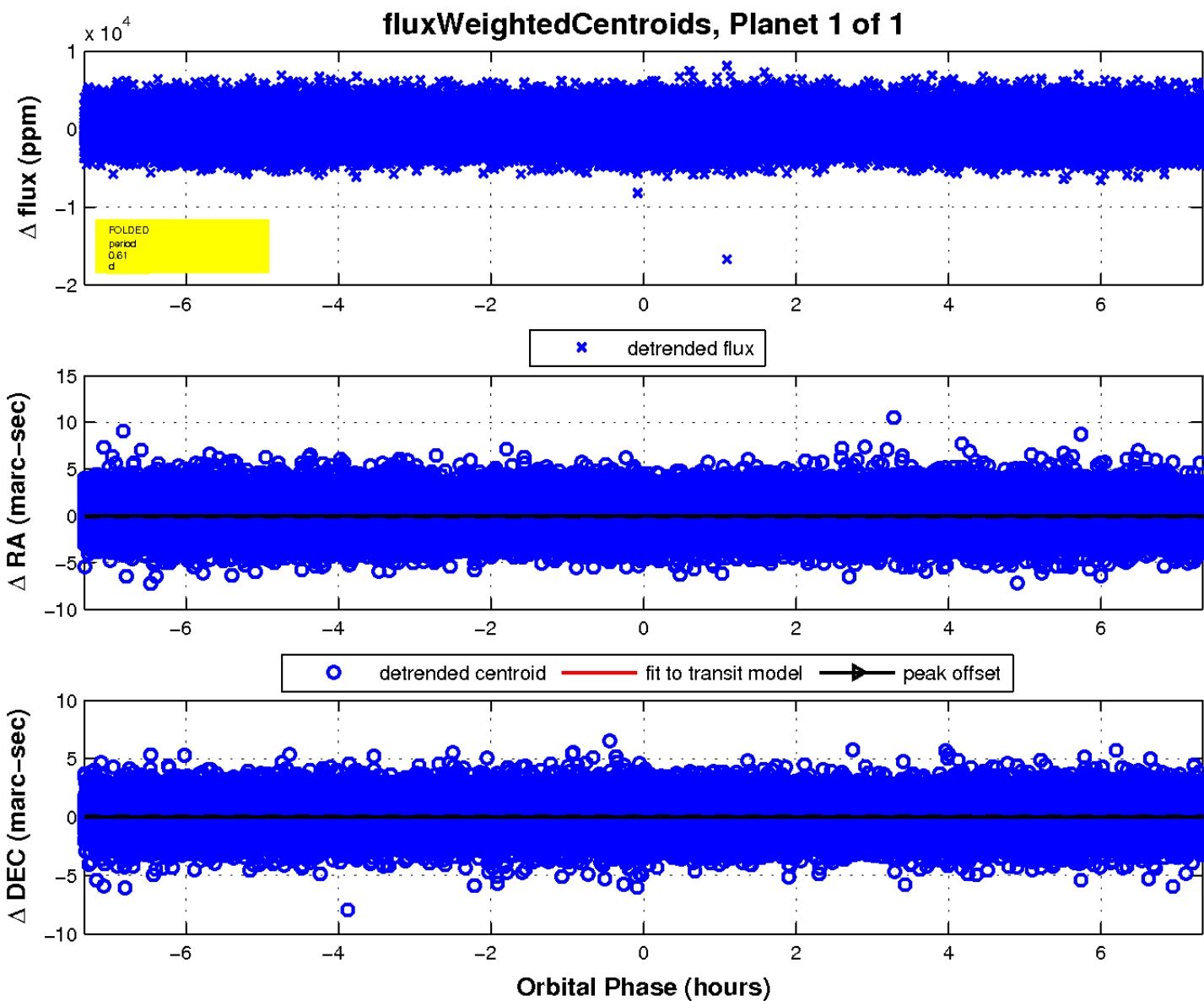
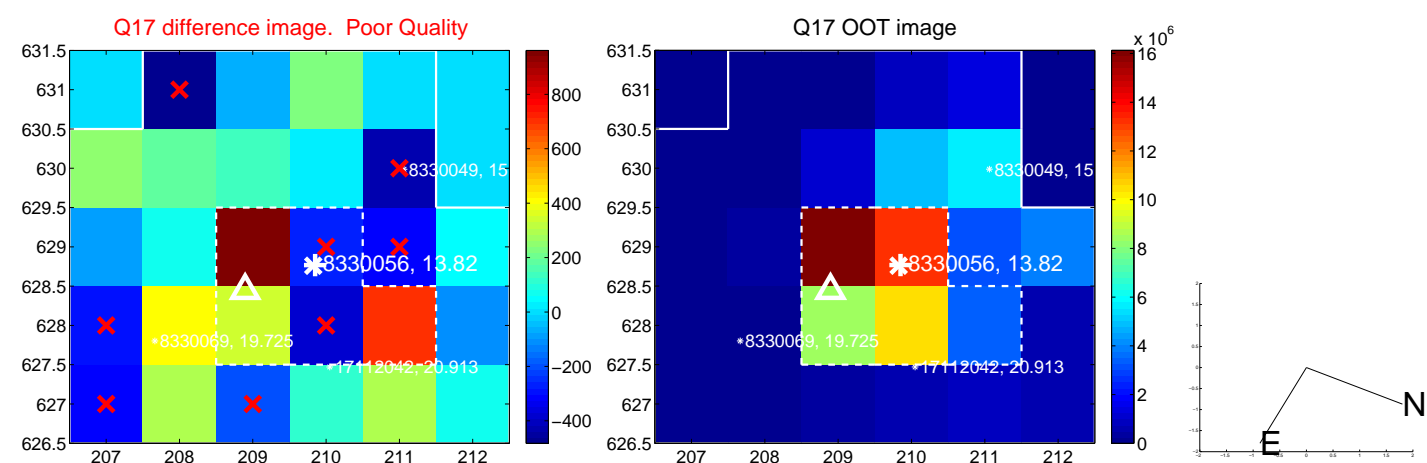




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

