

# KIC 007115661

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007115661-01	OBS	3174.01	0.567631	131.943733	0.0	2.387	12.7	0.0	1.00	5780	0.01	5552.88

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115661-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

**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 007115661-01

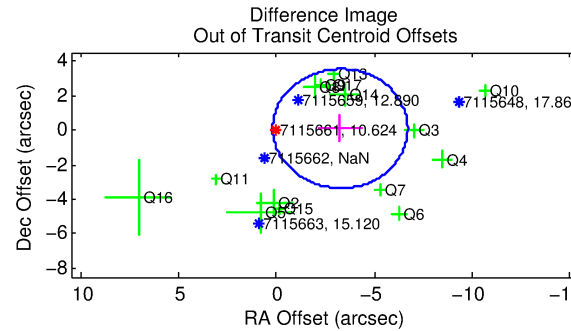
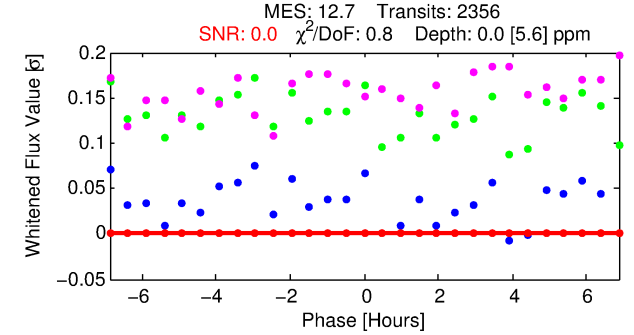
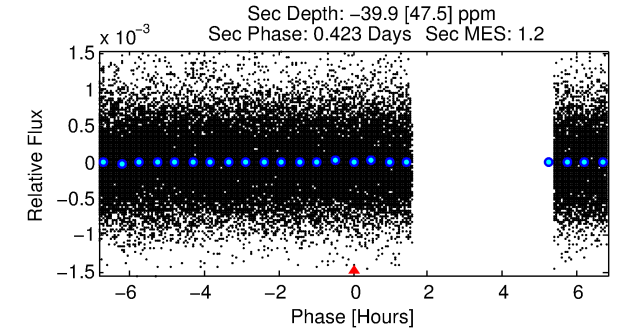
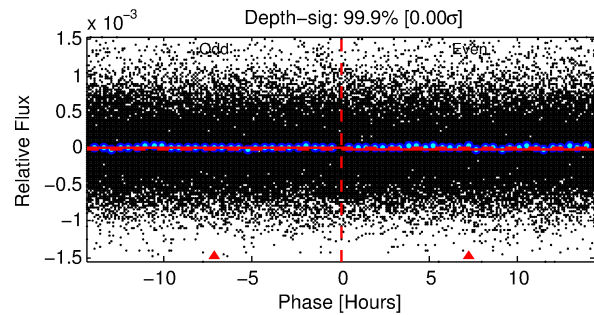
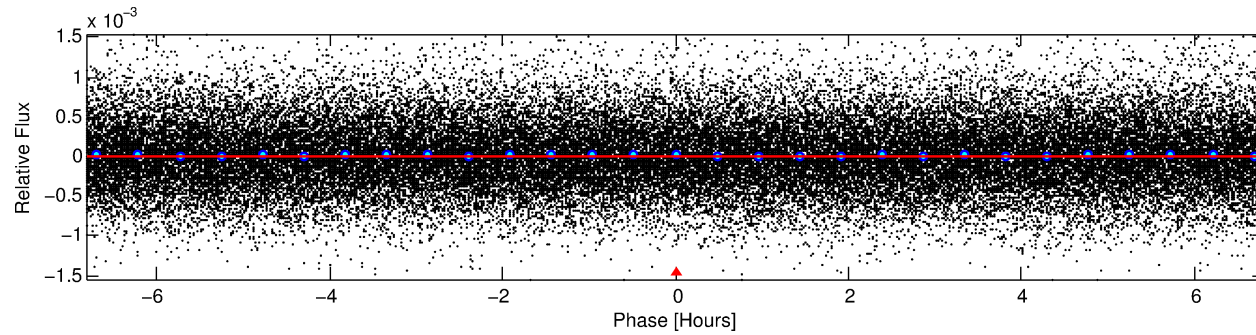
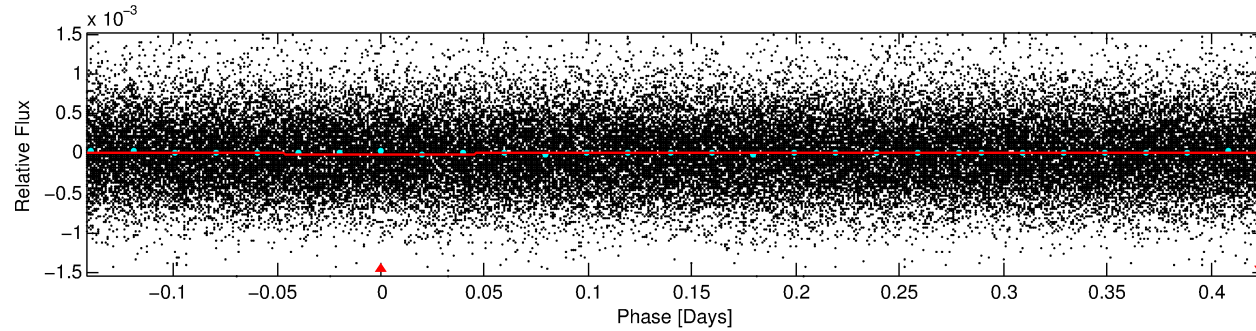
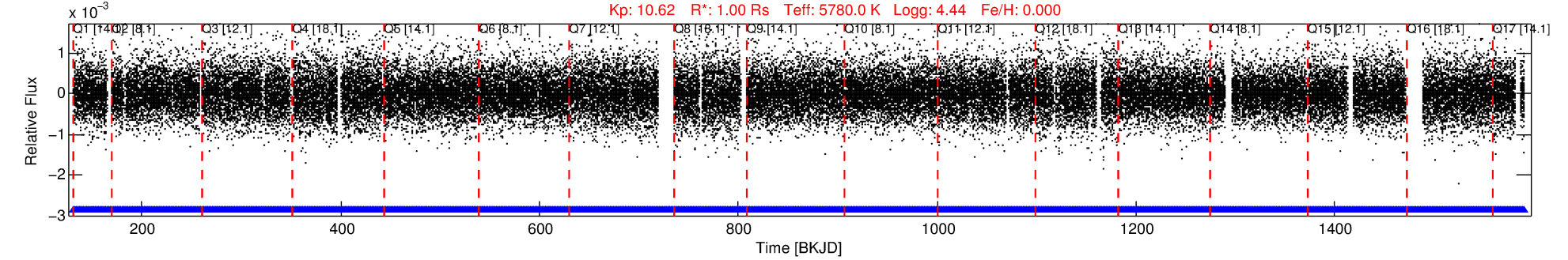
No Significant Match Found

# DV One-Page Summary

KIC: 7115661 Candidate: 1 of 1 Period: 0.568 d

KOI: K03174 Corr: No Ephemeris Match

Kp: 10.62 R\*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



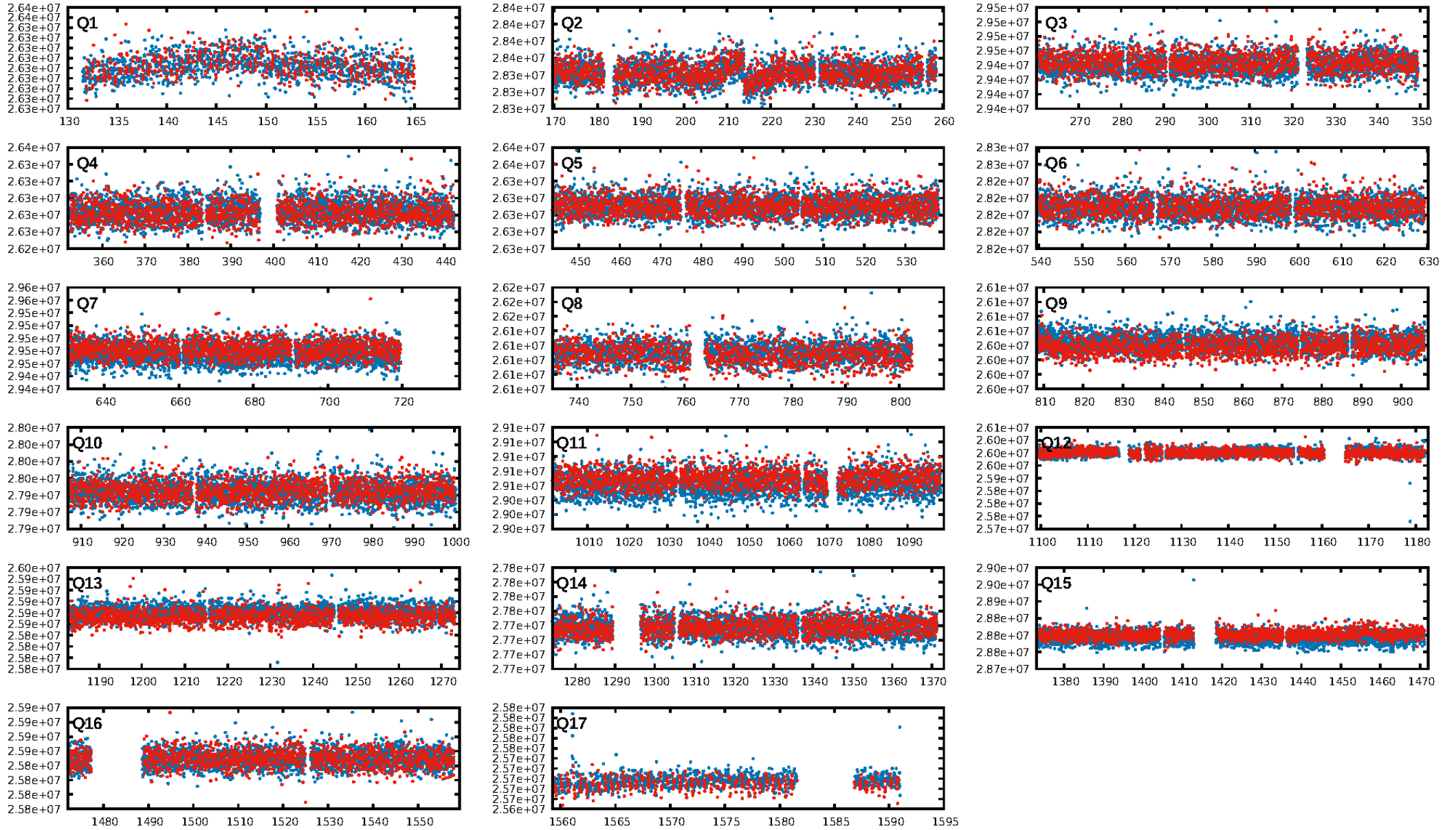
## DV Fit Results:

Period = 0.56763 [0.04558] d  
Epoch = 131.9437 [15.0057] BKJD  
Rp/R\* = 0.0001 [0.0296]  
a/R\* = 1.40 [73.05]  
b = 0.80 [68.38]  
Seff = 5552.88 [594.55]  
Teff = 2201 [59] K  
Rp = 0.01 [3.23] Re  
a = 0.0134 [0.0007] AU  
Ag = N/A  
Teffp = N/A

## DV Diagnostic Results:

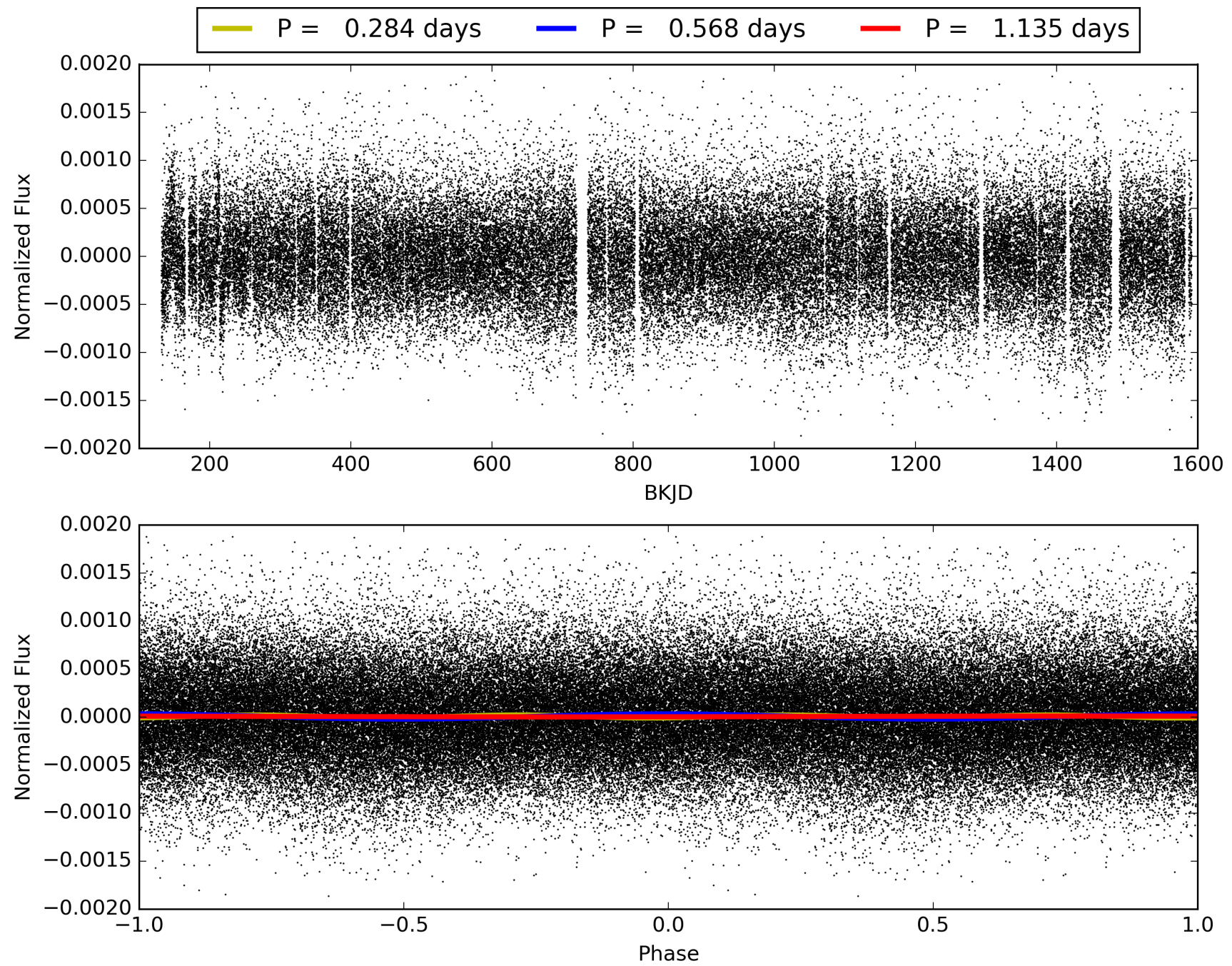
ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.72e-35  
RollingBand-fgt: 1.00 [2250/2250]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 3.259 arcsec [2.84σ]  
KicOffset-rm: 3.519 arcsec [3.57σ]  
OotOffset-st: 4/4/3/4 [15]  
KicOffset-st: 4/4/3/4 [15]  
DiffImageQuality-fgm: 0.00 [0/15]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 007115661-01, PDC Light Curves



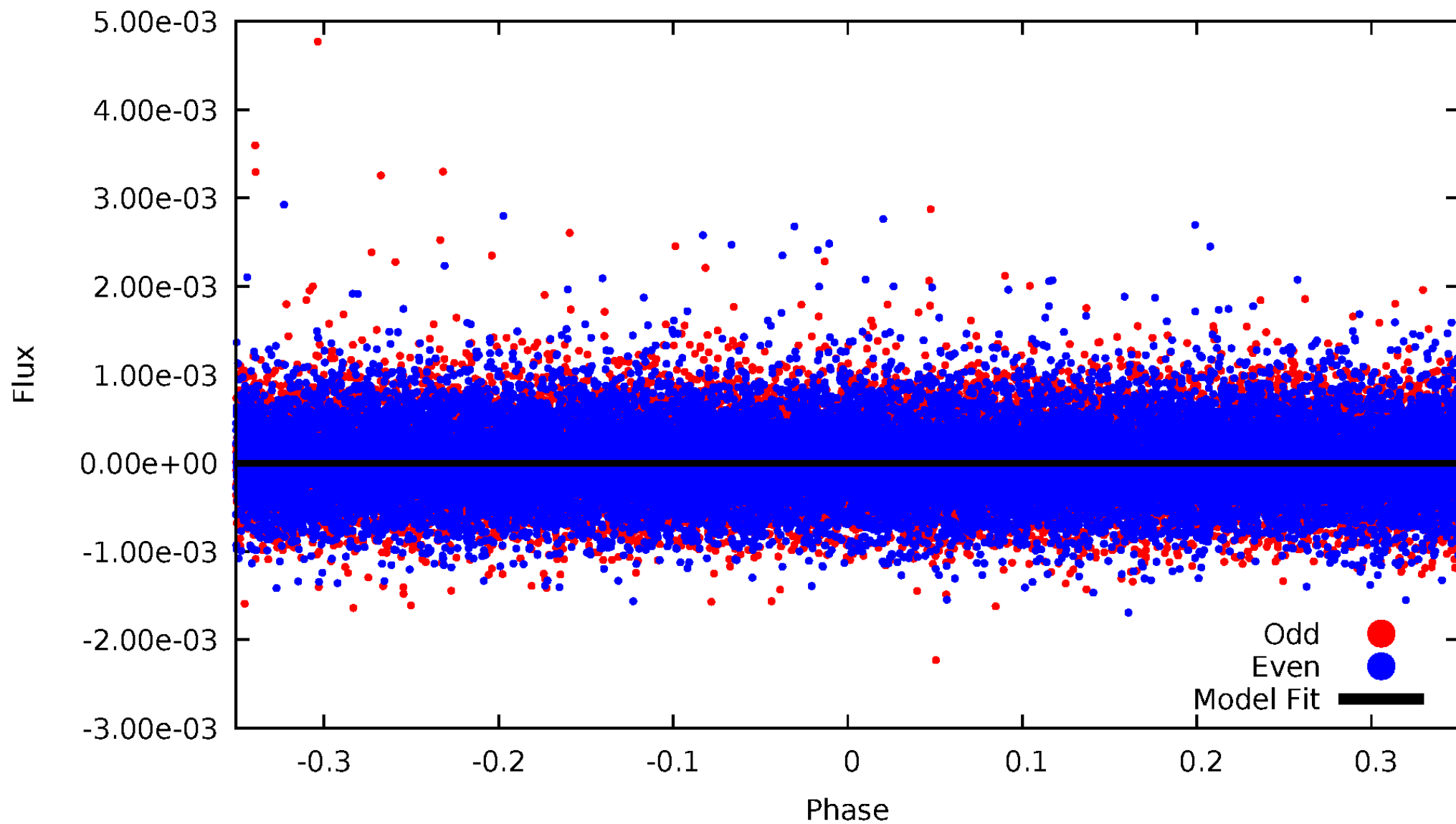


TCE 007115661-01



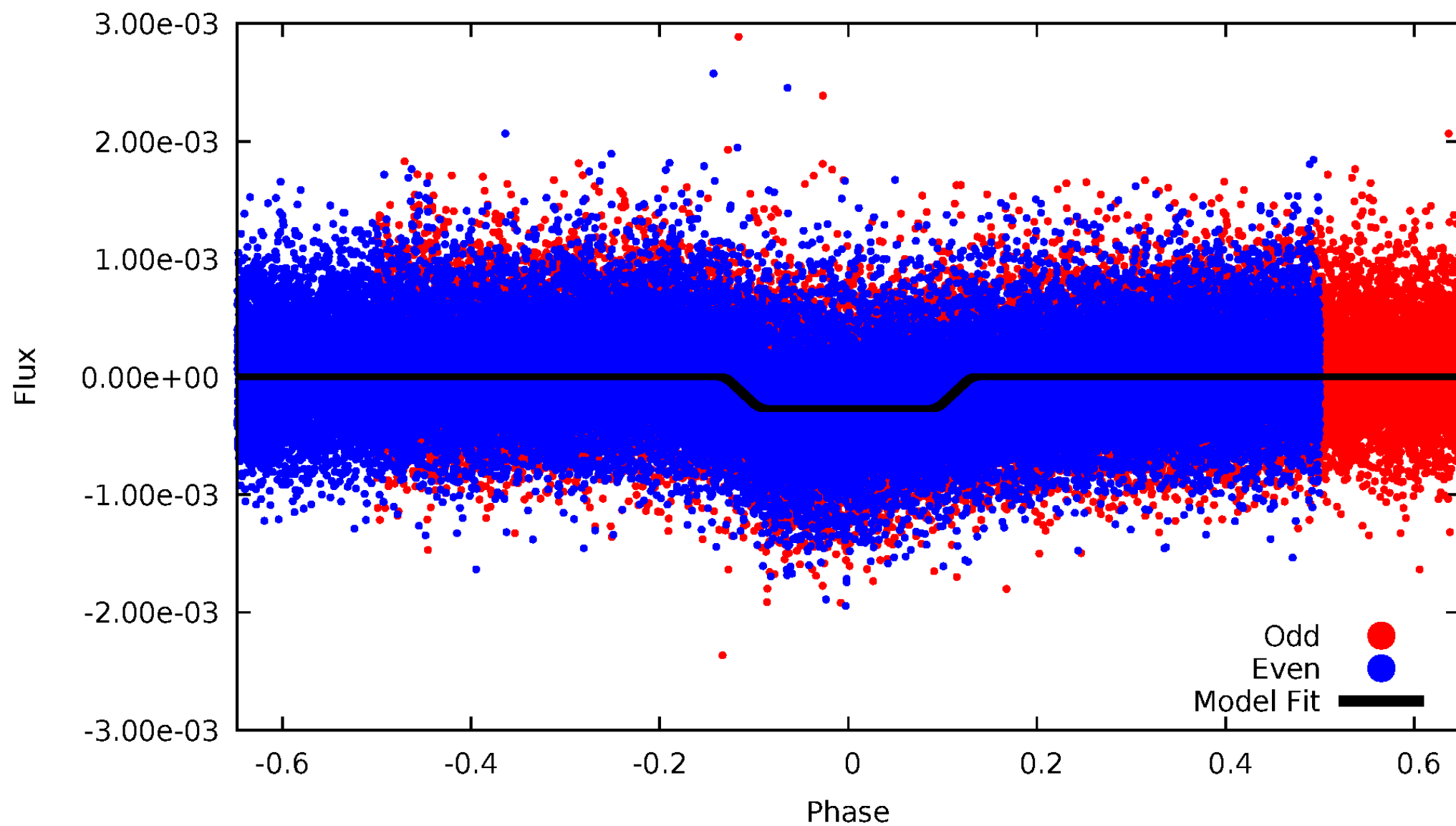
# DV Odd/Even

TCE 007115661-01

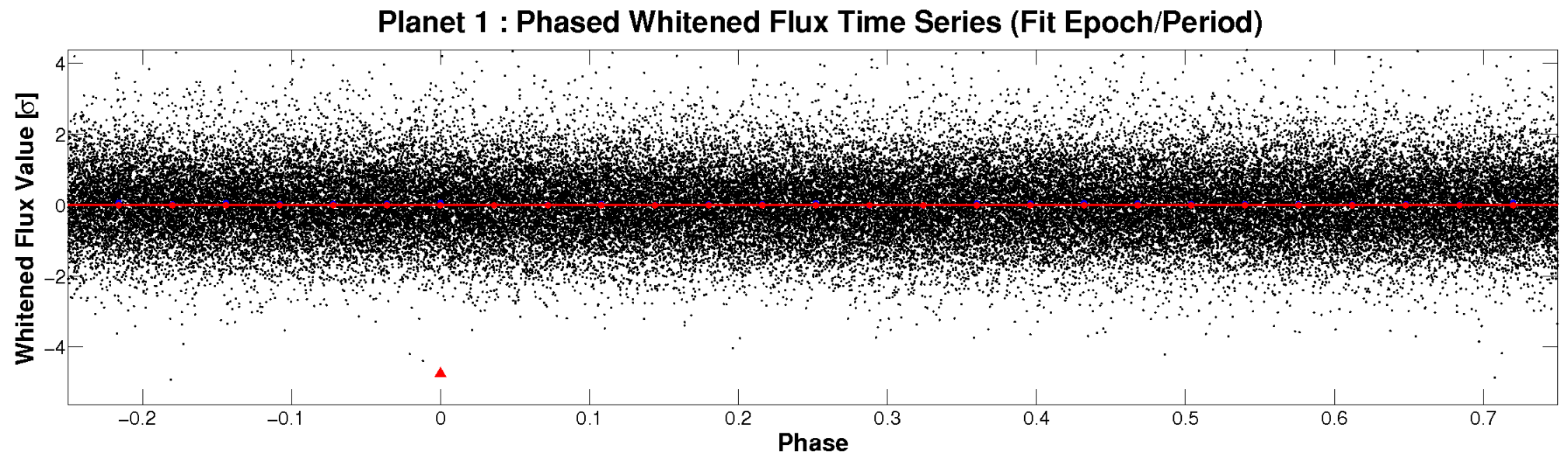
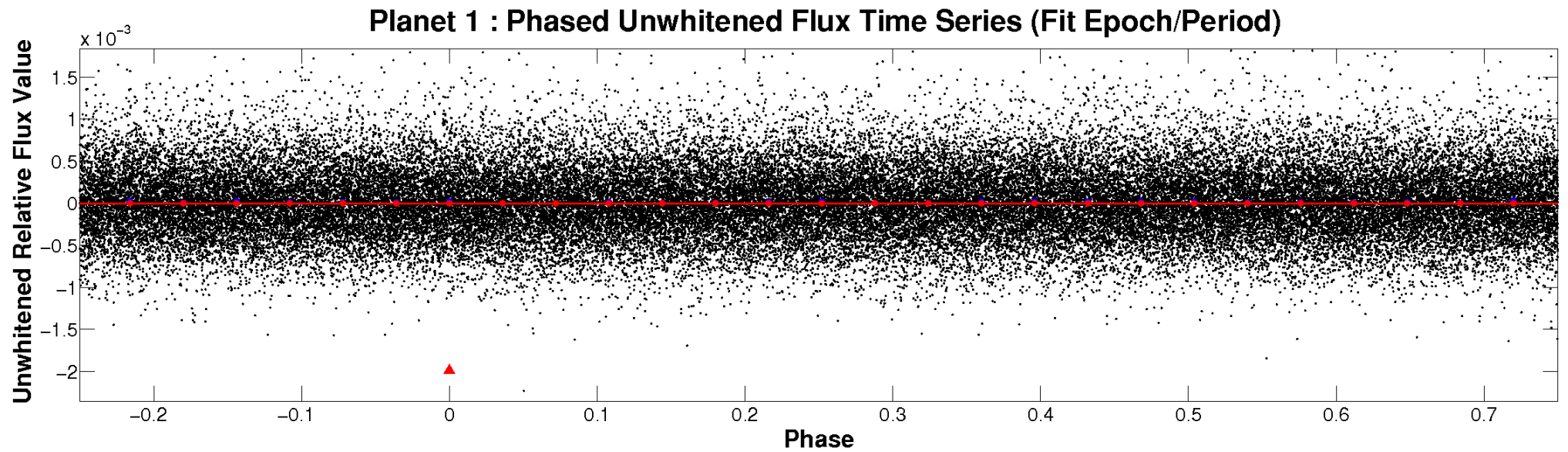


# ALT Odd/Even

TCE 007115661-01



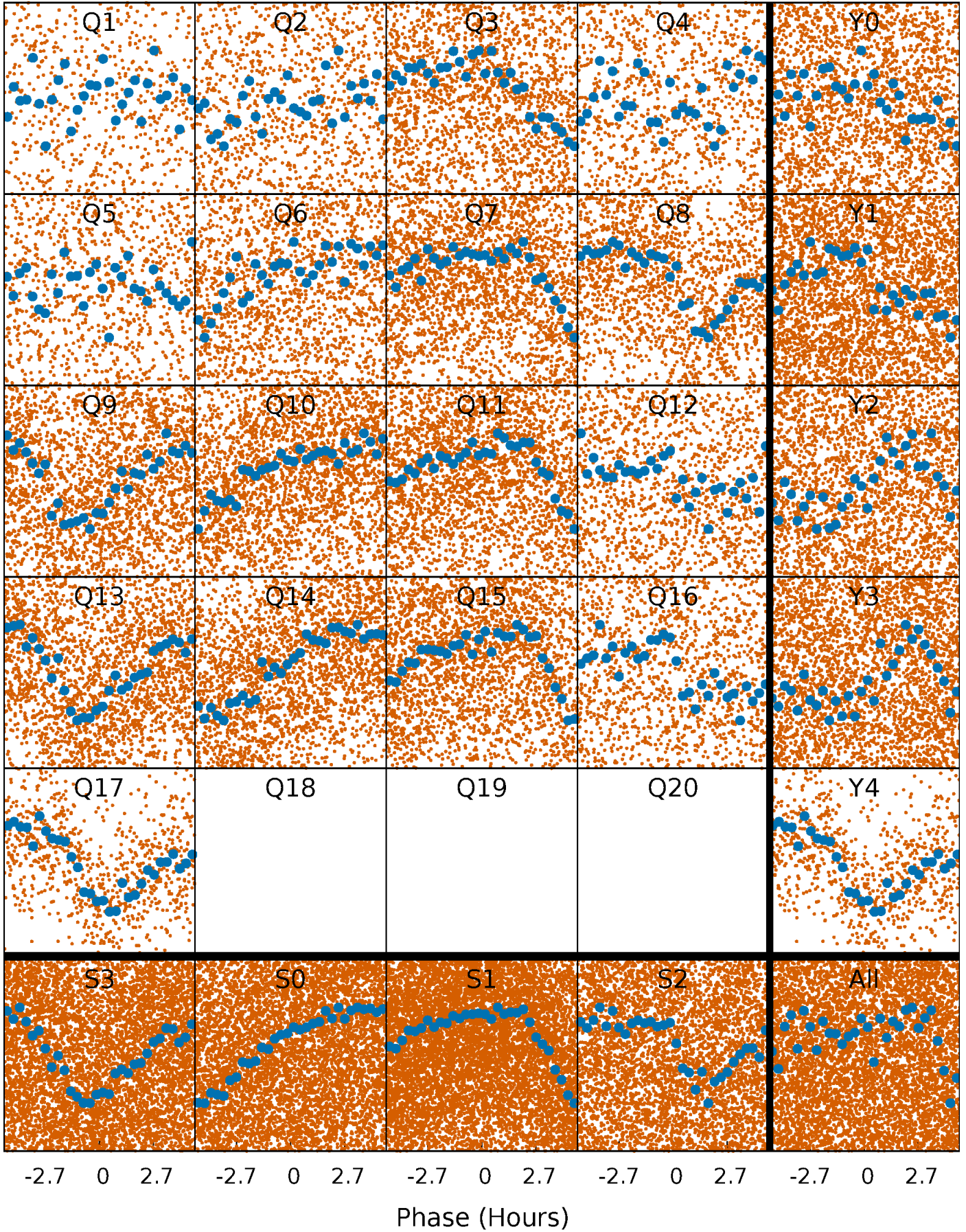
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

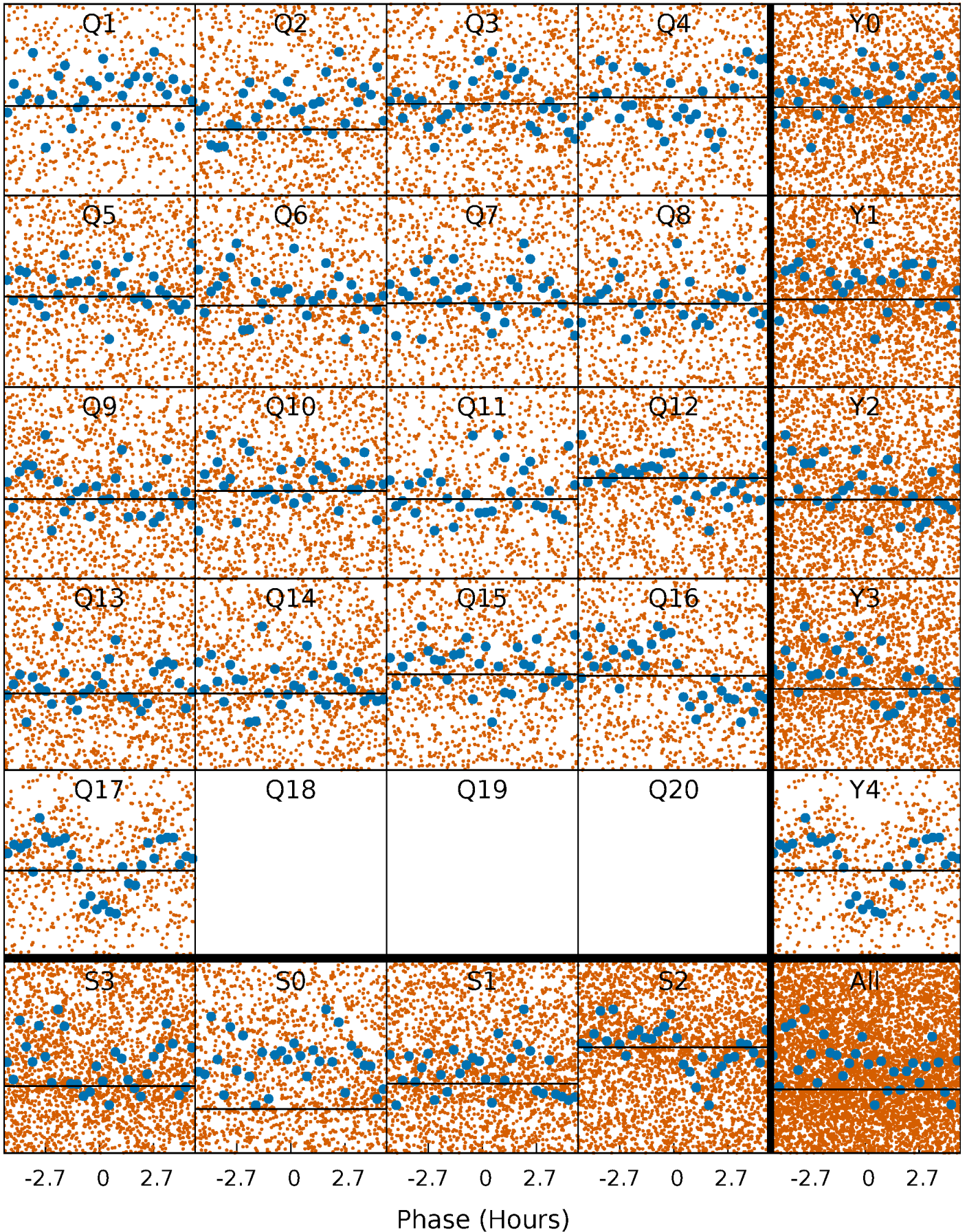
TCE 007115661-01 P= 0.567630 Days  $T_0=131.943733$  (BKJD)





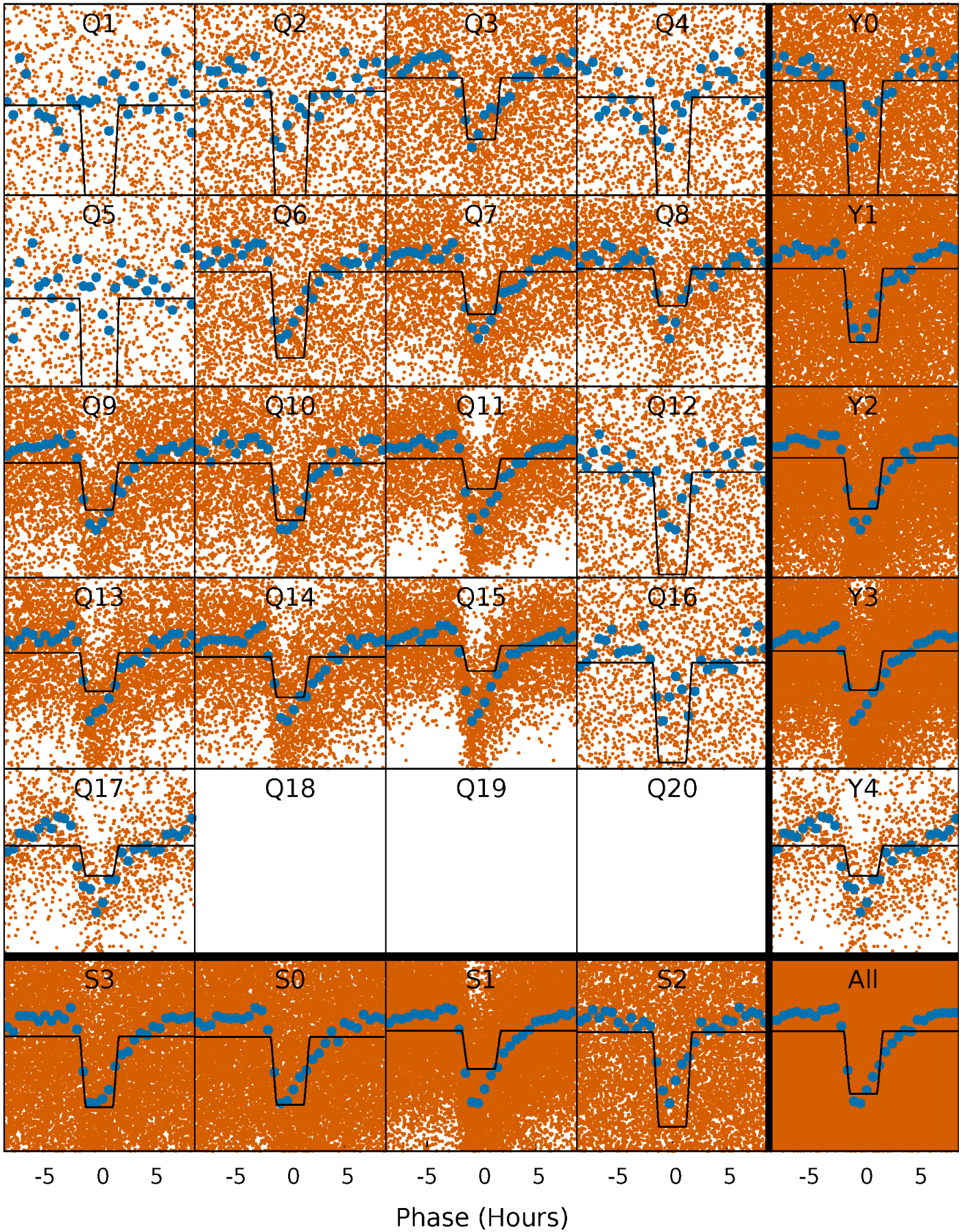
# DV Quarter-Phased Transit Curves

TCE 007115661-01 P= 0.567630 Days  $T_0=131.943733$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007115661-01 P= 0.566798 Days  $T_0=131.822644$  (BKJD)

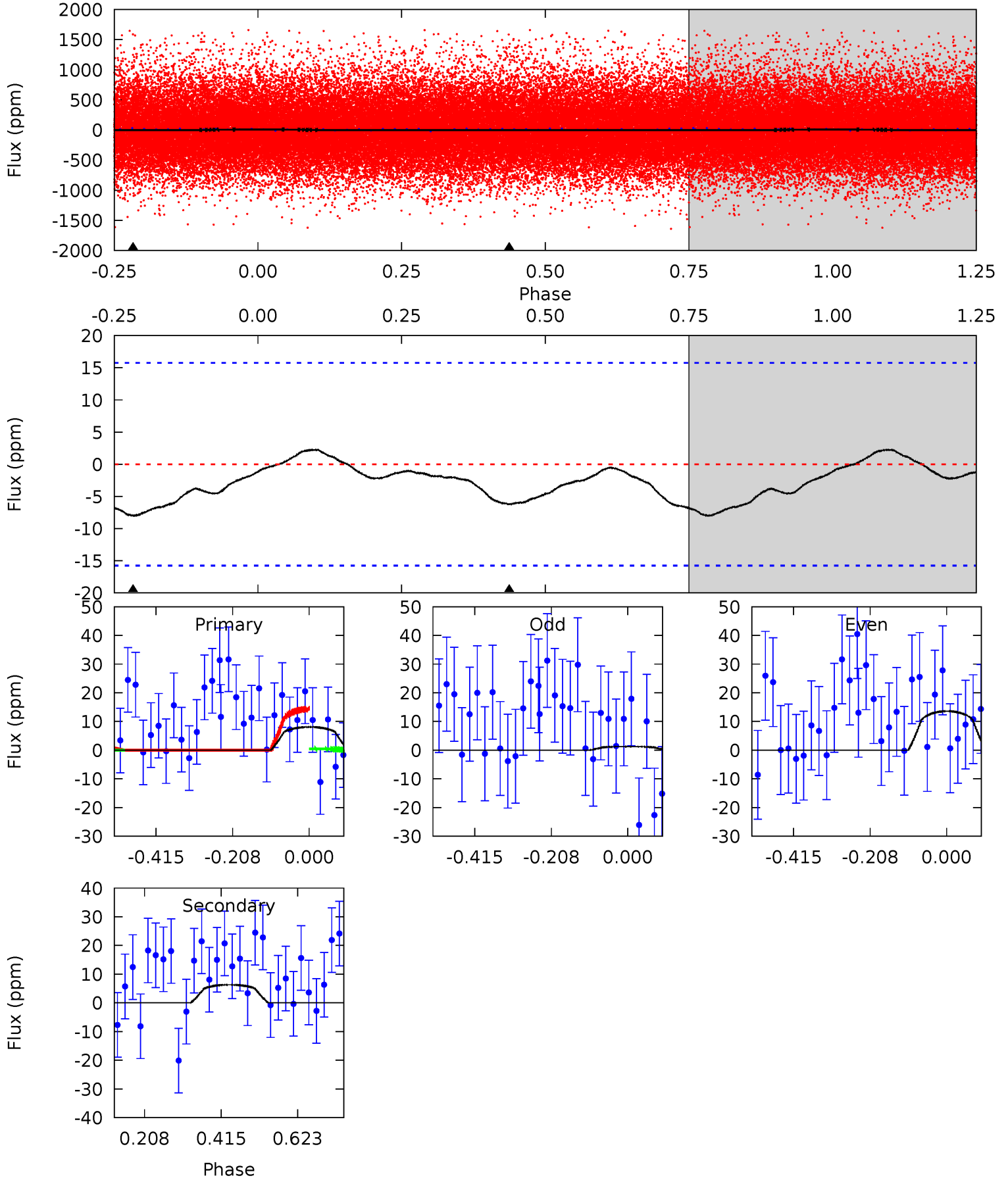




# DV Model-Shift Uniqueness Test

007115661-01,  $P = 0.567630$  Days,  $E = 131.376103$  Days

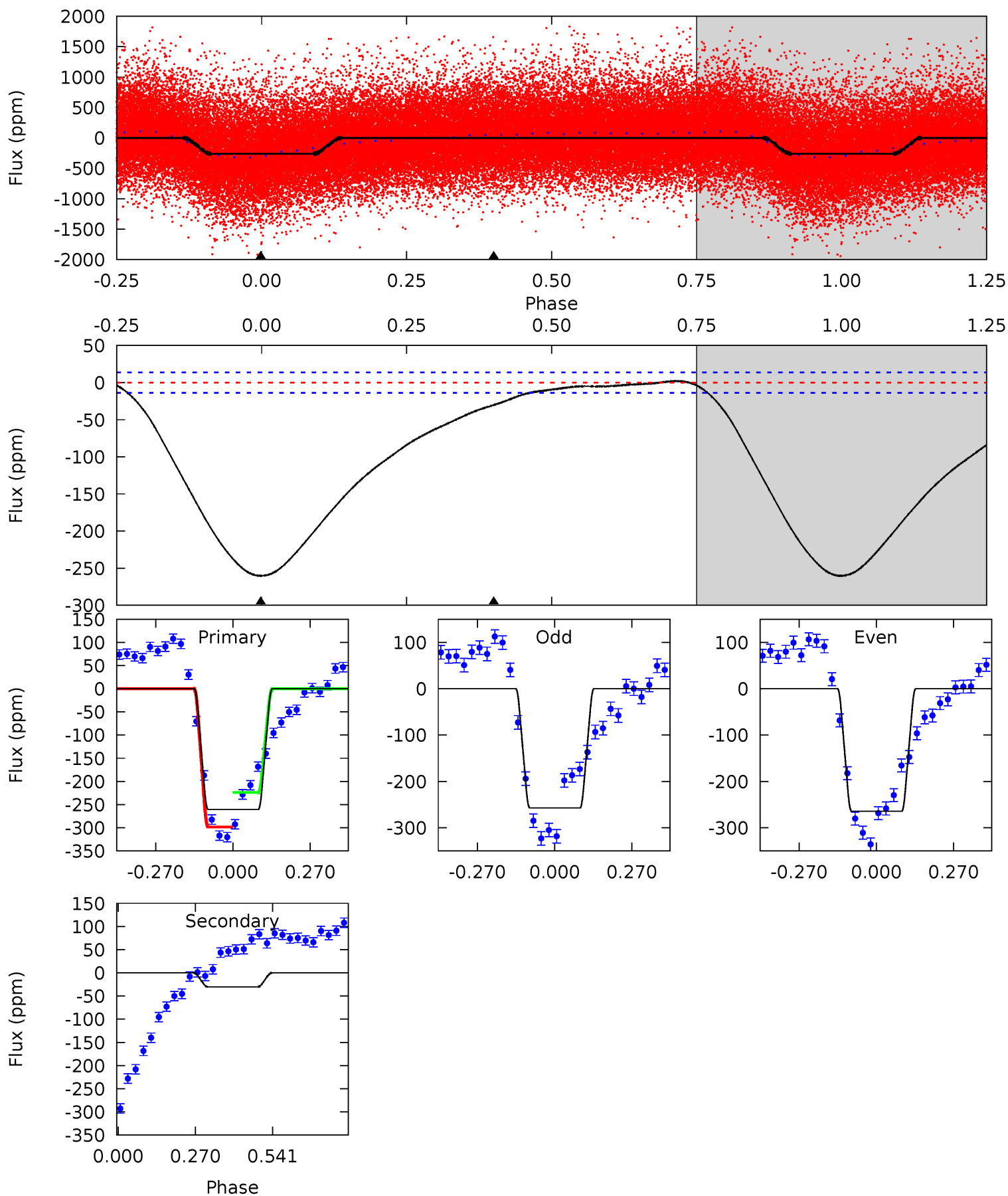
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.26	1.76	0	0	4.41	1.26	0.41	2.26	2.26	1.76	1.76	1.73	1.46	0.22	1.96



# Alt Model-Shift Uniqueness Test

007115661-01, P = 0.566798 Days, E = 131.255846 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
82.5	9.57	0	0	4.35	1.10	0.48	82.5	82.5	9.57	9.57	1.10	1.01	0.01	11.9





### Stellar Parameters For KIC 007115661

	$T_{\text{eff}}(K)$	$\log(g)$	[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 007115661-01 / KOI 3174.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-6\pm4$	$2.10^{+2.30}_{-1.50}$	$3074^{+170}_{-174}$	$-2884^{+6754}_{-249}$	$0.125^{+1.348}_{-0.103}$
Alt.	$-30\pm3$	$2.93^{+2.87}_{-1.91}$	$3083^{+177}_{-170}$	$2440^{+1983}_{-5420}$	$0.348^{+2.358}_{-0.256}$

$T_{max}$  = 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

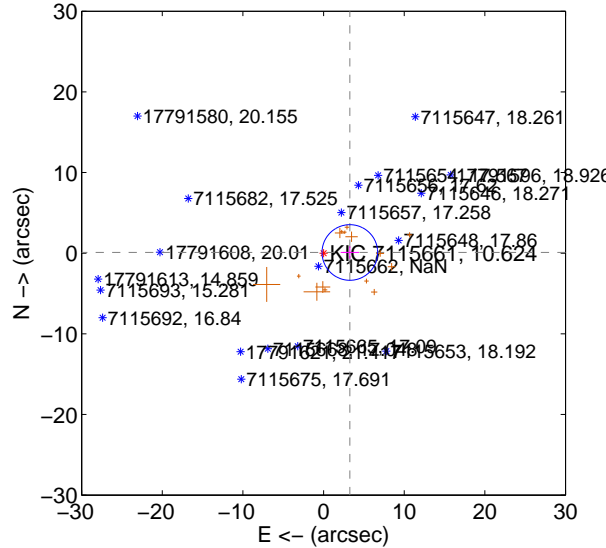
Supplemental centroid analysis for 007115661-01. **Kepler magnitude: 10.62.** Transit SNR 0.00

**There are 0 quarters with good PRF difference image offsets**

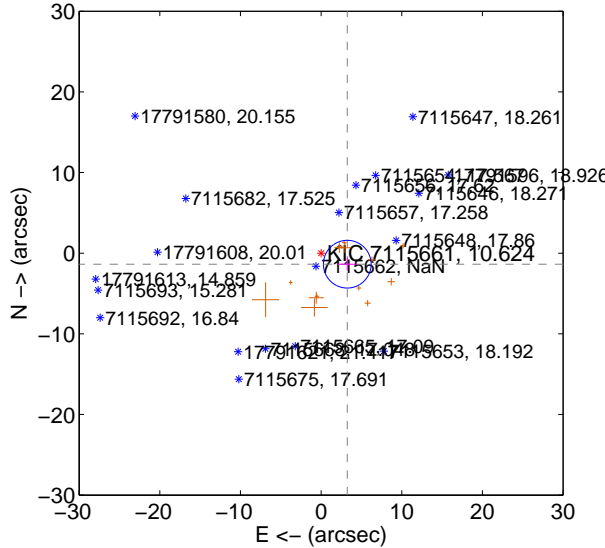
The direct PRF centroid is offset from the target star catalog position by about 1.86 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.259 \pm 1.149$	2.84	$-3.258 \pm 1.140$	$0.085 \pm 0.771$
PRF-fit source offset from KIC position	<b><math>3.519 \pm 0.986</math></b>	<b>3.57</b>	$-3.243 \pm 1.180$	$-1.365 \pm 0.809$
photometric centroid source offset	—	—	—	—

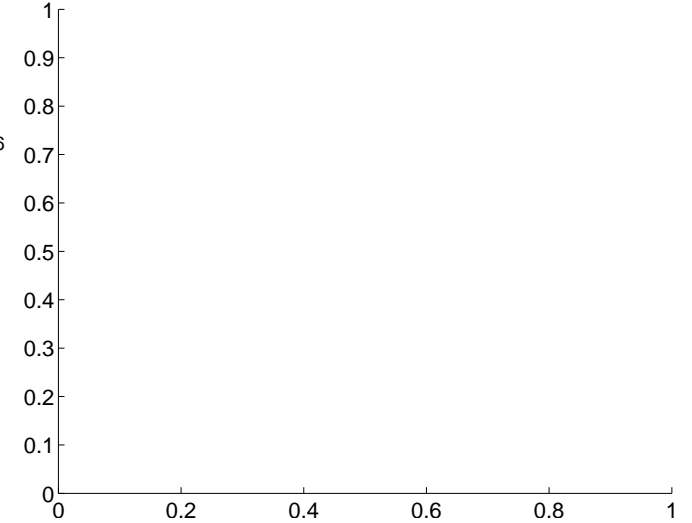
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

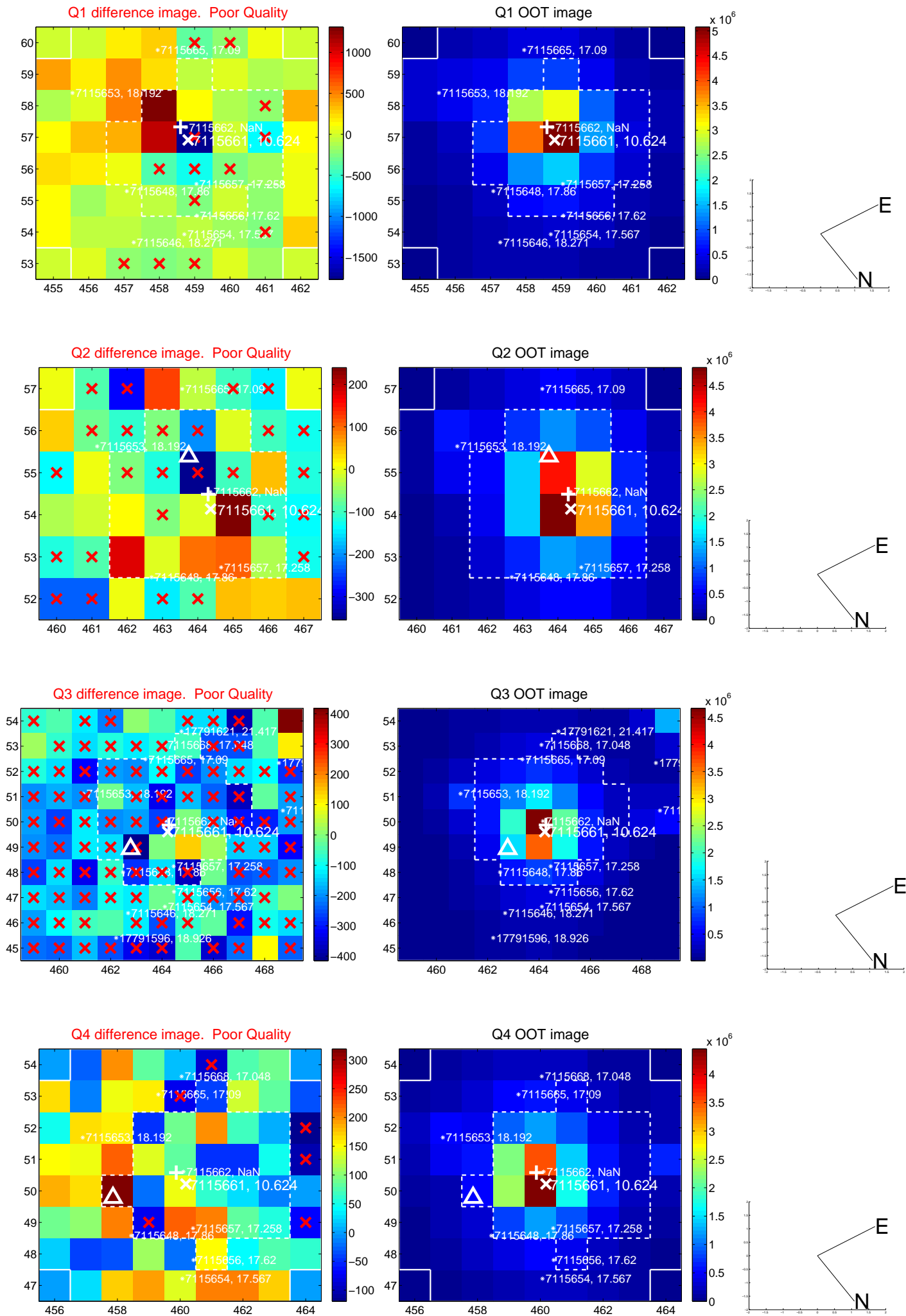


**There are no photometric centroids**

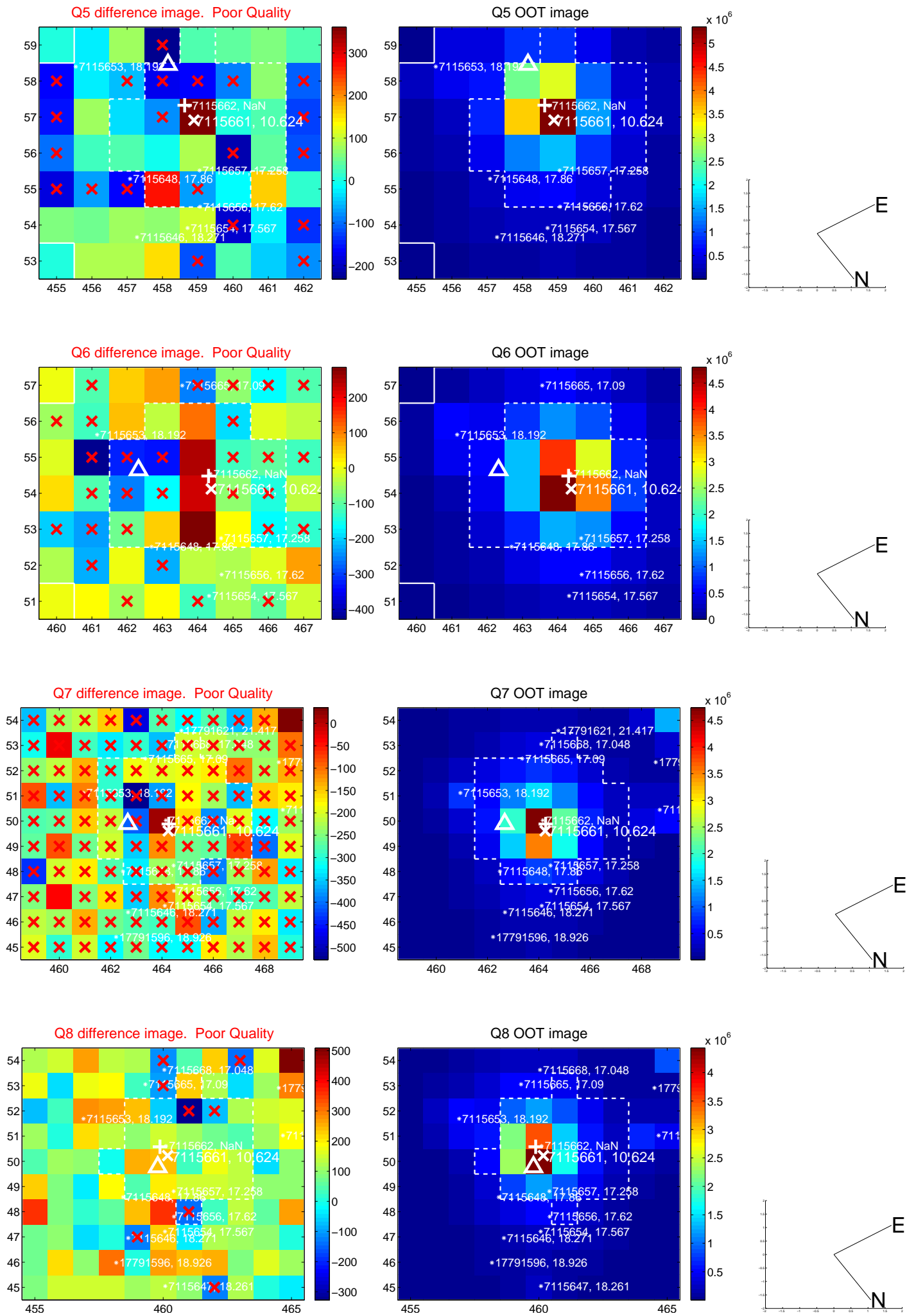


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

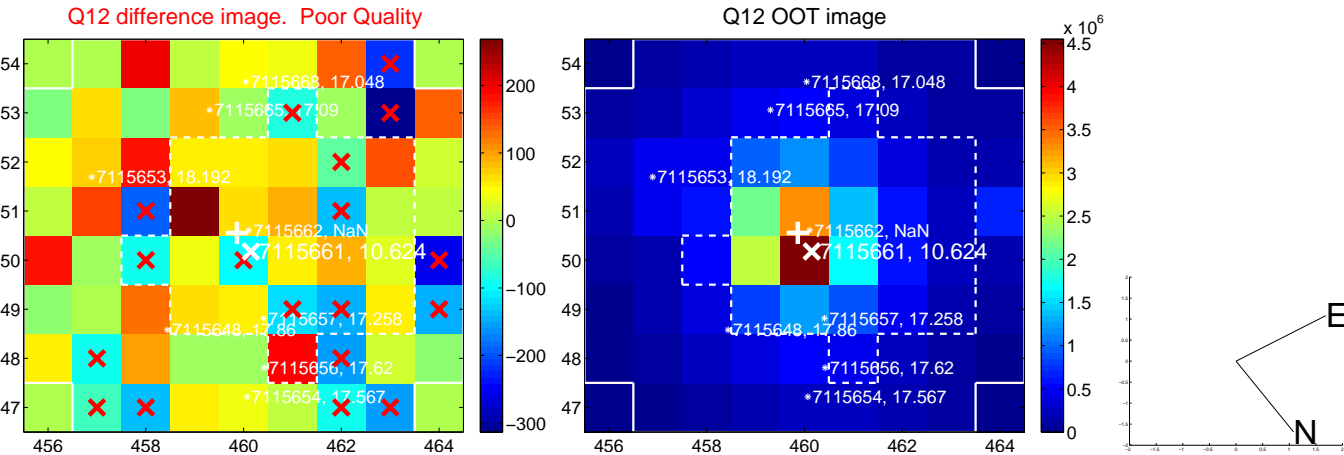
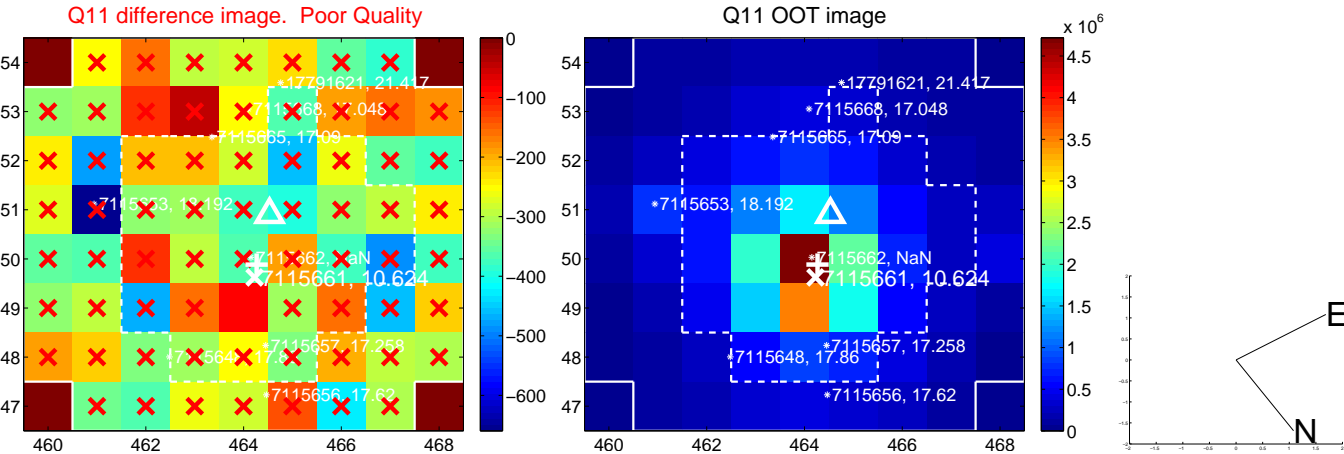
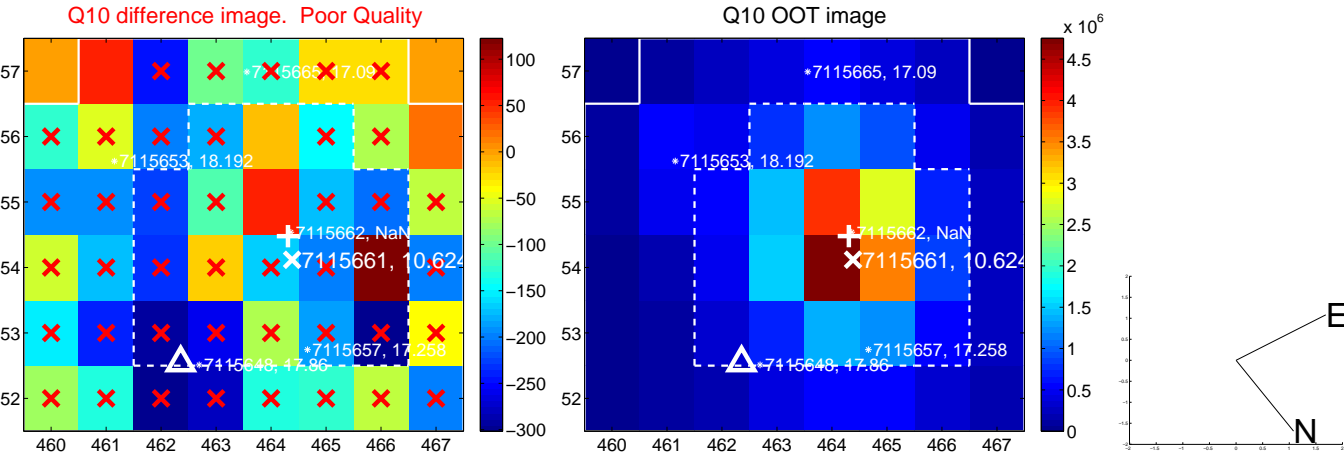
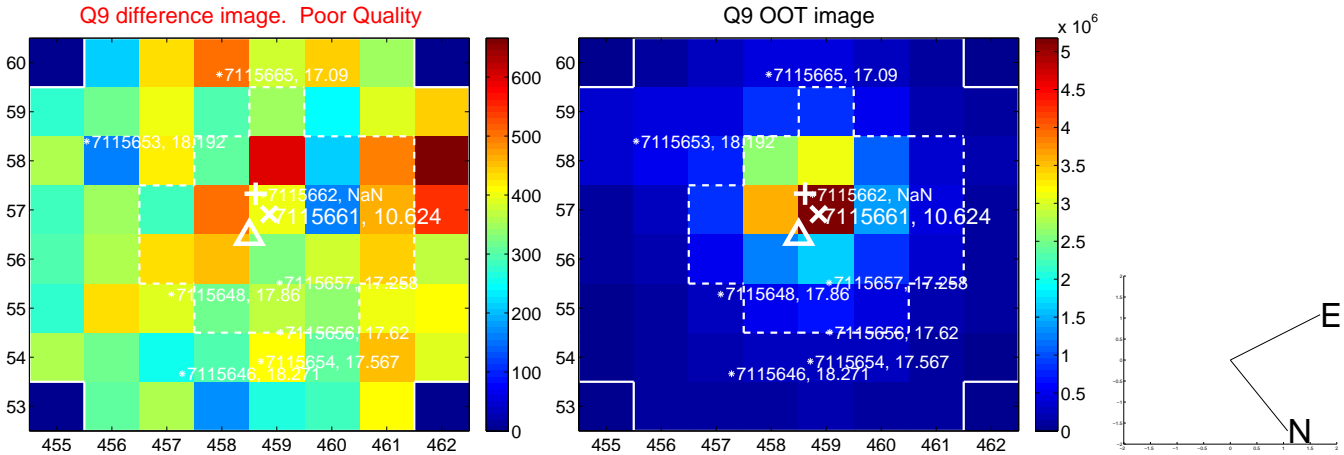


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

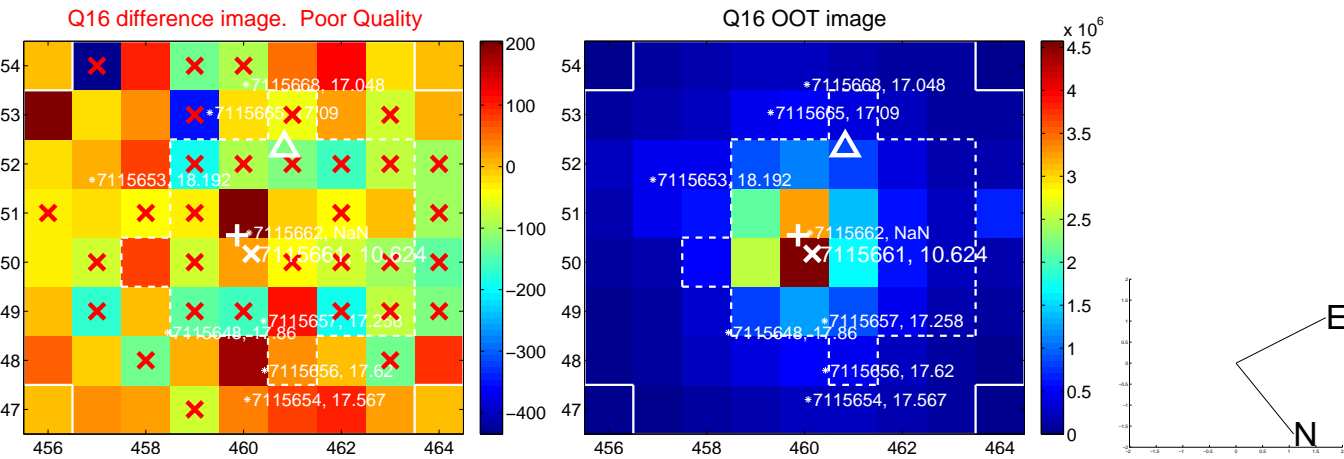
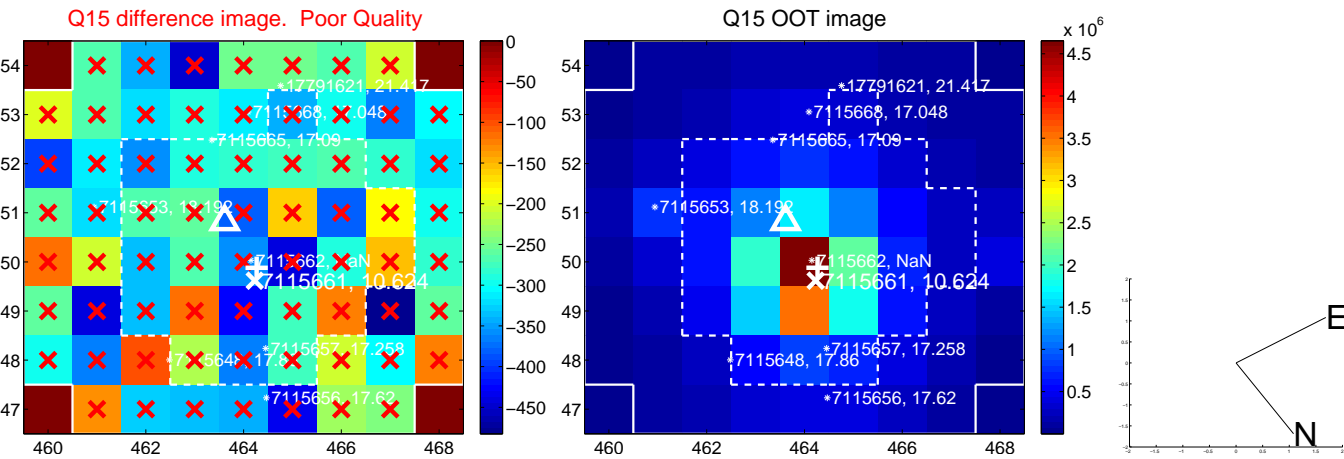
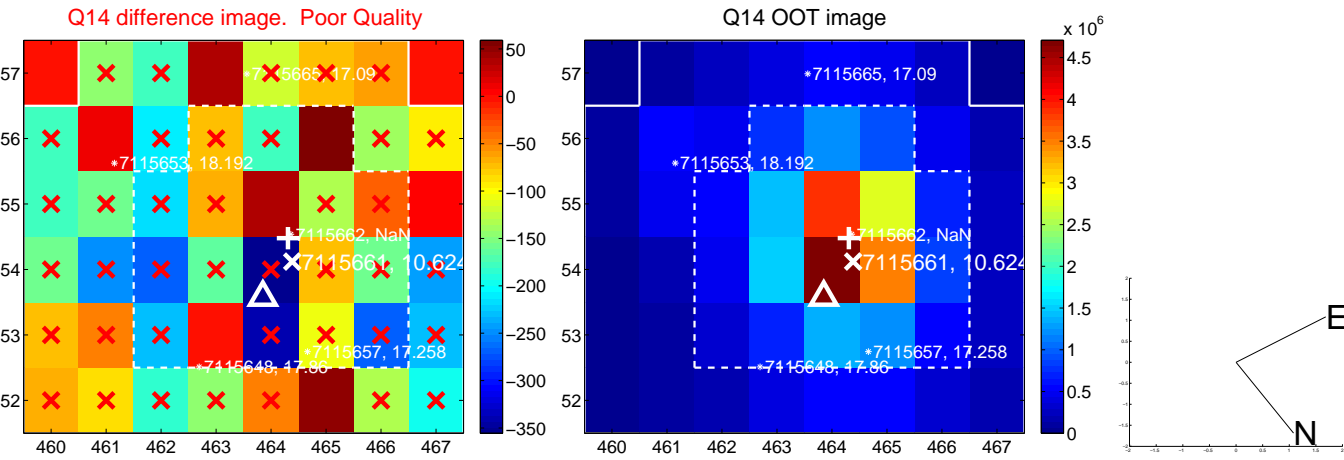
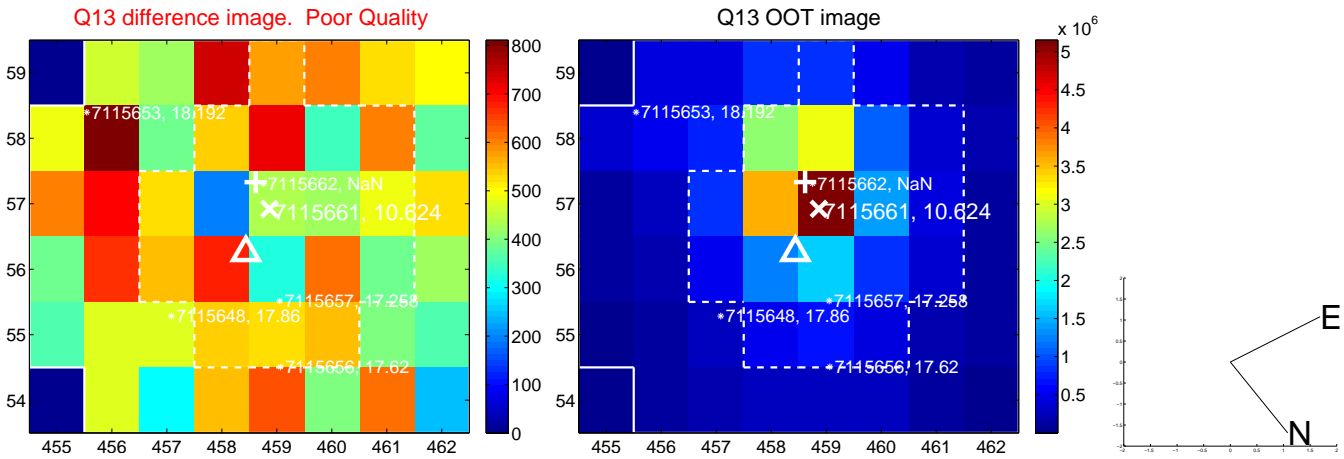




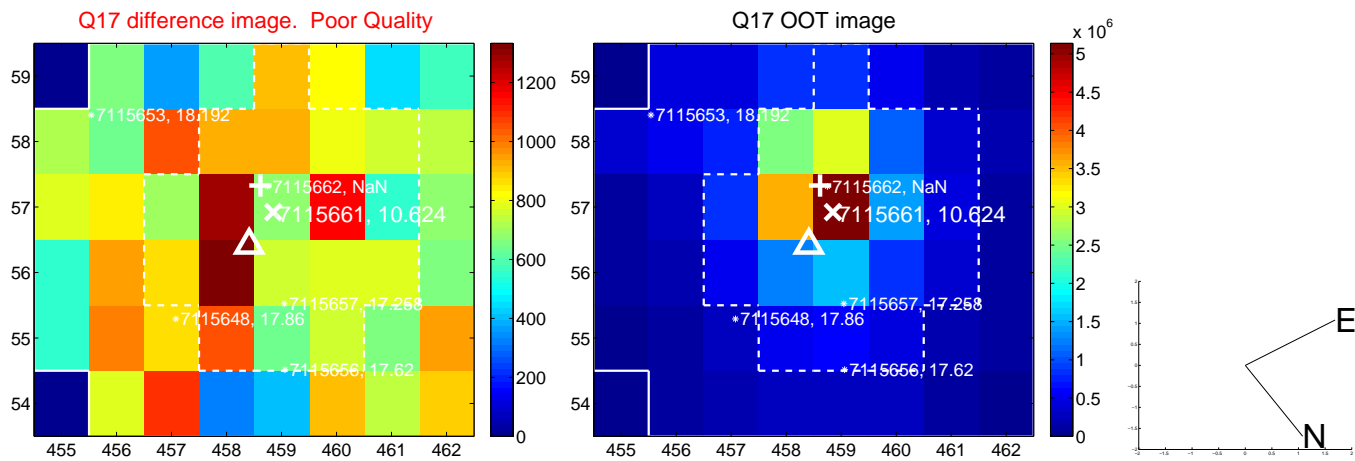
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

