

# KIC 01125756

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011125756-01	OBS	No	0.613191	131.969402	24.7	5.251	8.7	8.7	1.04	6190	0.52	7045.96

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011125756-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT

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

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

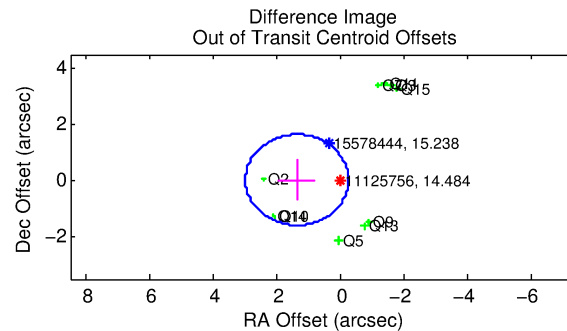
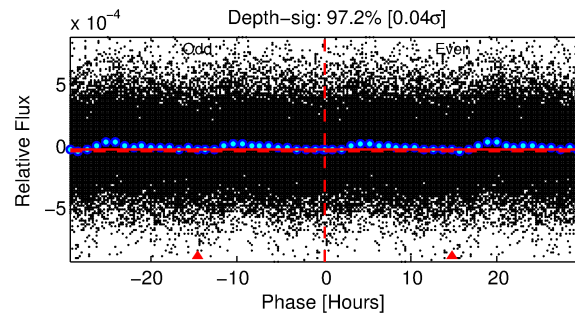
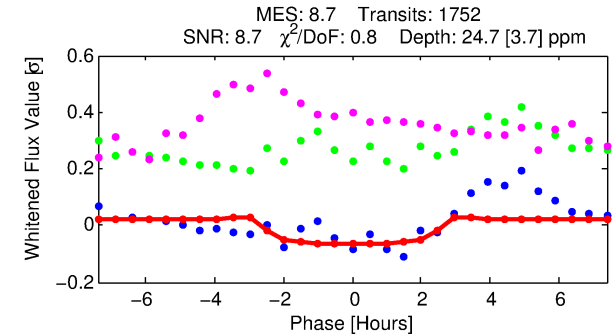
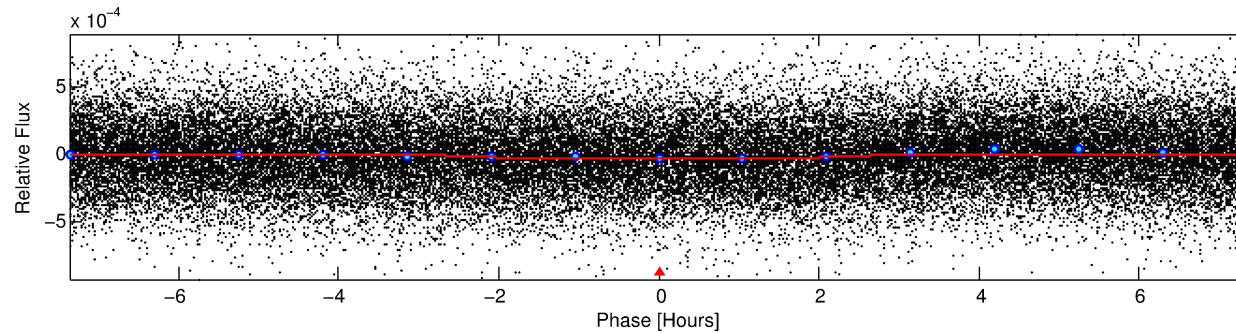
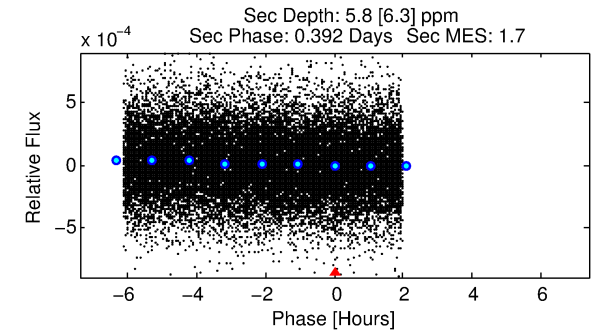
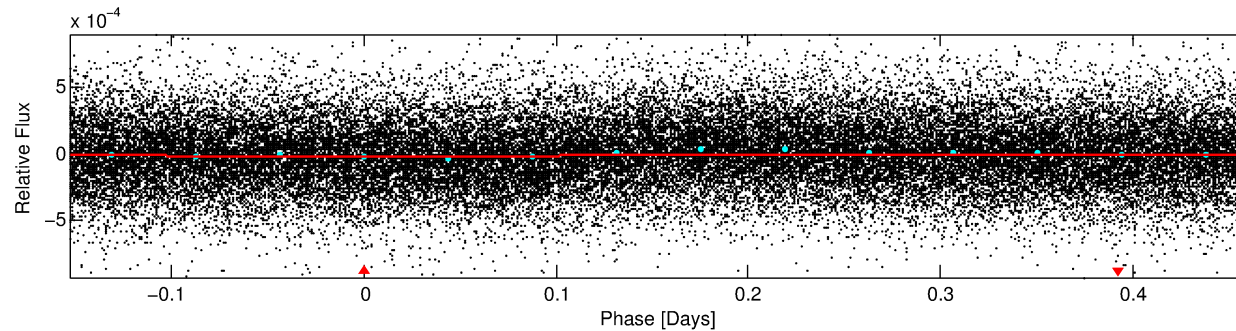
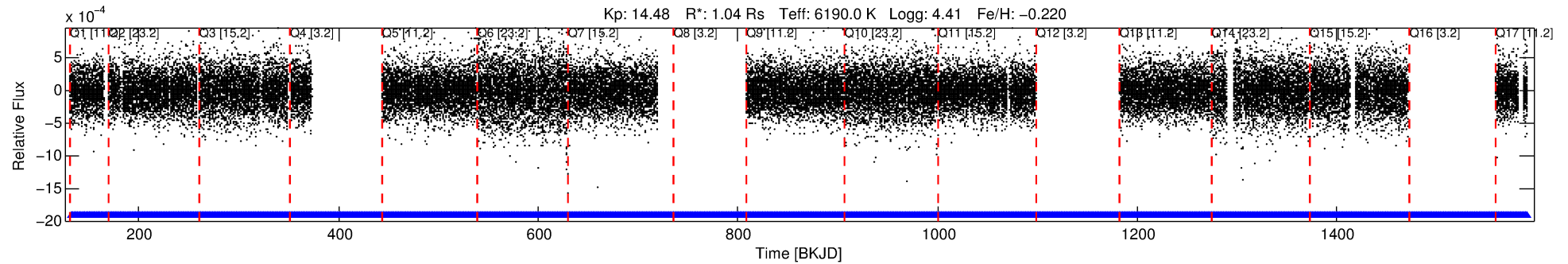
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011125756-01

No Significant Match Found

# DV One-Page Summary

KIC: 11125756 Candidate: 1 of 1 Period: 0.613 d



## DV Fit Results:

Period = 0.61319 [0.00001] d  
Epoch = 131.9694 [0.0050] BKJD  
Rp/R\* = 0.0046 [0.0051]  
a/R\* = 1.11 [1.19]  
b = 0.13 [42.15]  
Seff = 7045.96 [2892.24]  
Teq = 2336 [240] K  
Rp = 0.52 [0.60] Re  
a = 0.0142 [0.0037] AU  
Ag = 2.40 [6.00] [0.23σ]  
Teffp = 4498 [2784] K [0.77σ]

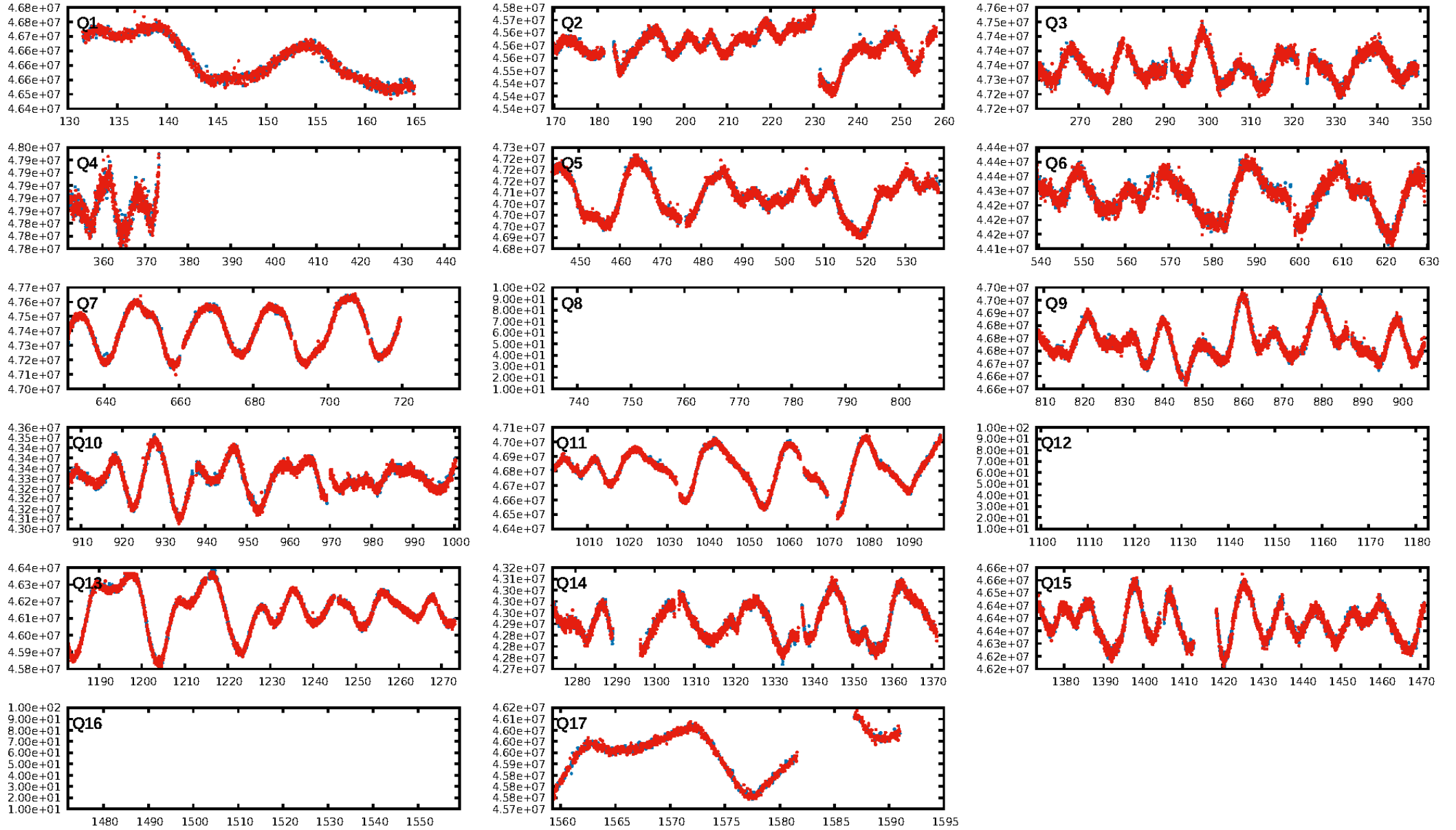
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1619/1619]  
**GhostDiagnostic-chr: 0.3218**  
Centroid-sig: 0.0%  
**Centroid-so: 6.425 arcsec [5.12σ]**  
OotOffset-rm: 1.375 arcsec [2.55σ]  
OotOffset-st: 3/4/0/3 [10]  
KicOffset-rm: 1.370 arcsec [2.47σ]  
KicOffset-st: 3/4/0/3 [10]  
DiffImageQuality-fgm: 0.80 [8/10]  
DiffImageOverlap-fno: 1.00 [14/14]

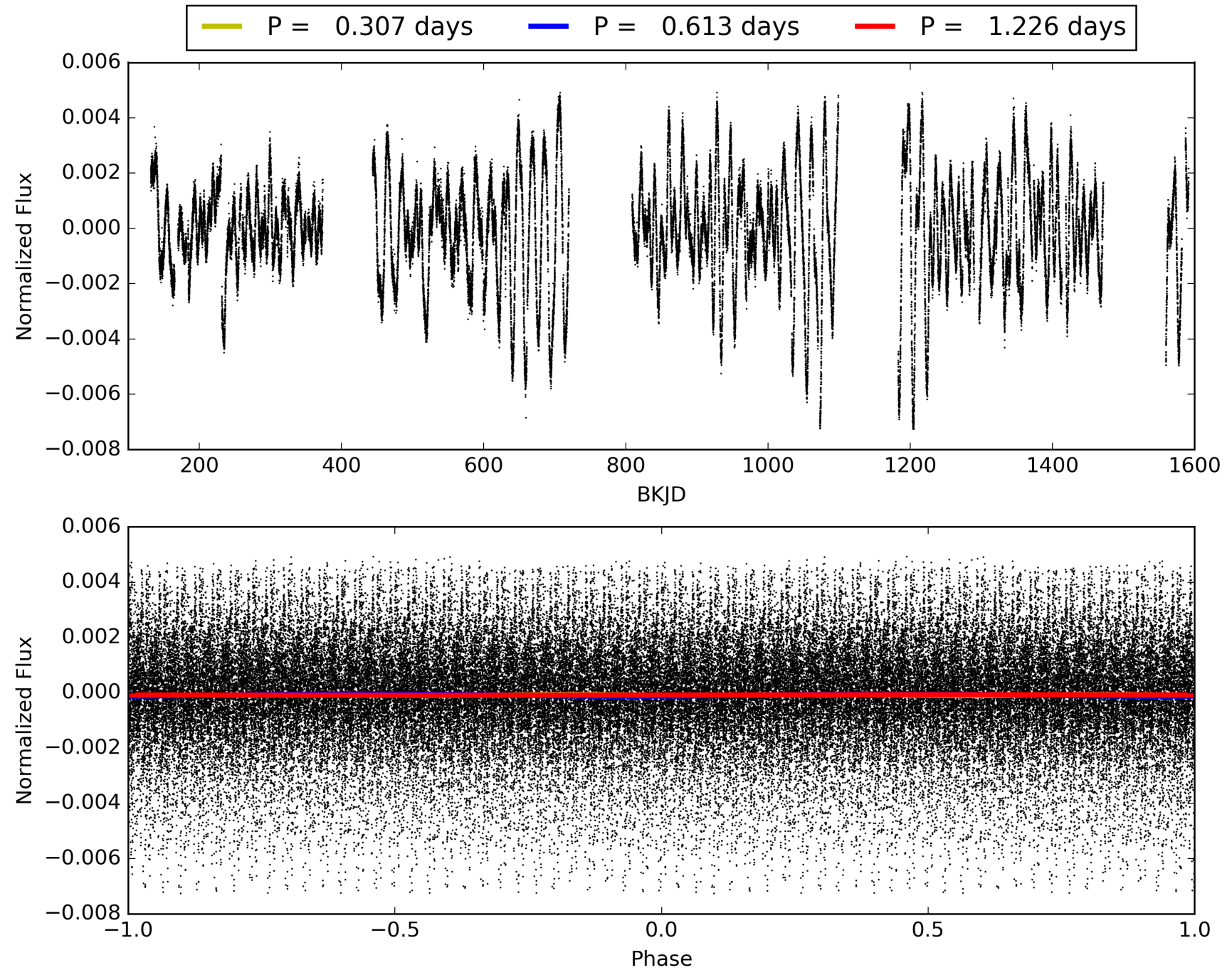
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:04:18 Z

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

# TCE 011125756-01, PDC Light Curves

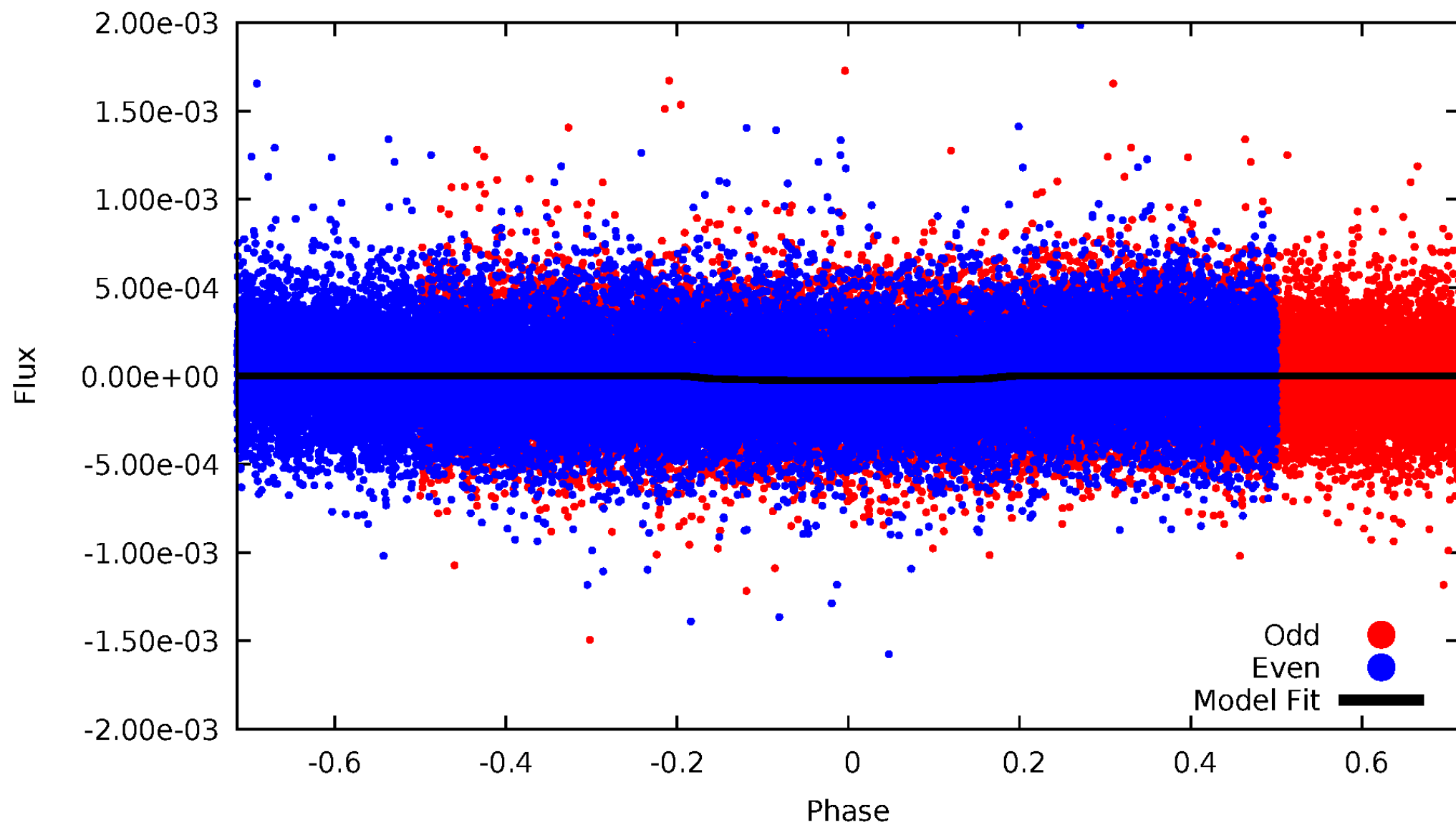


# TCE 011125756-01



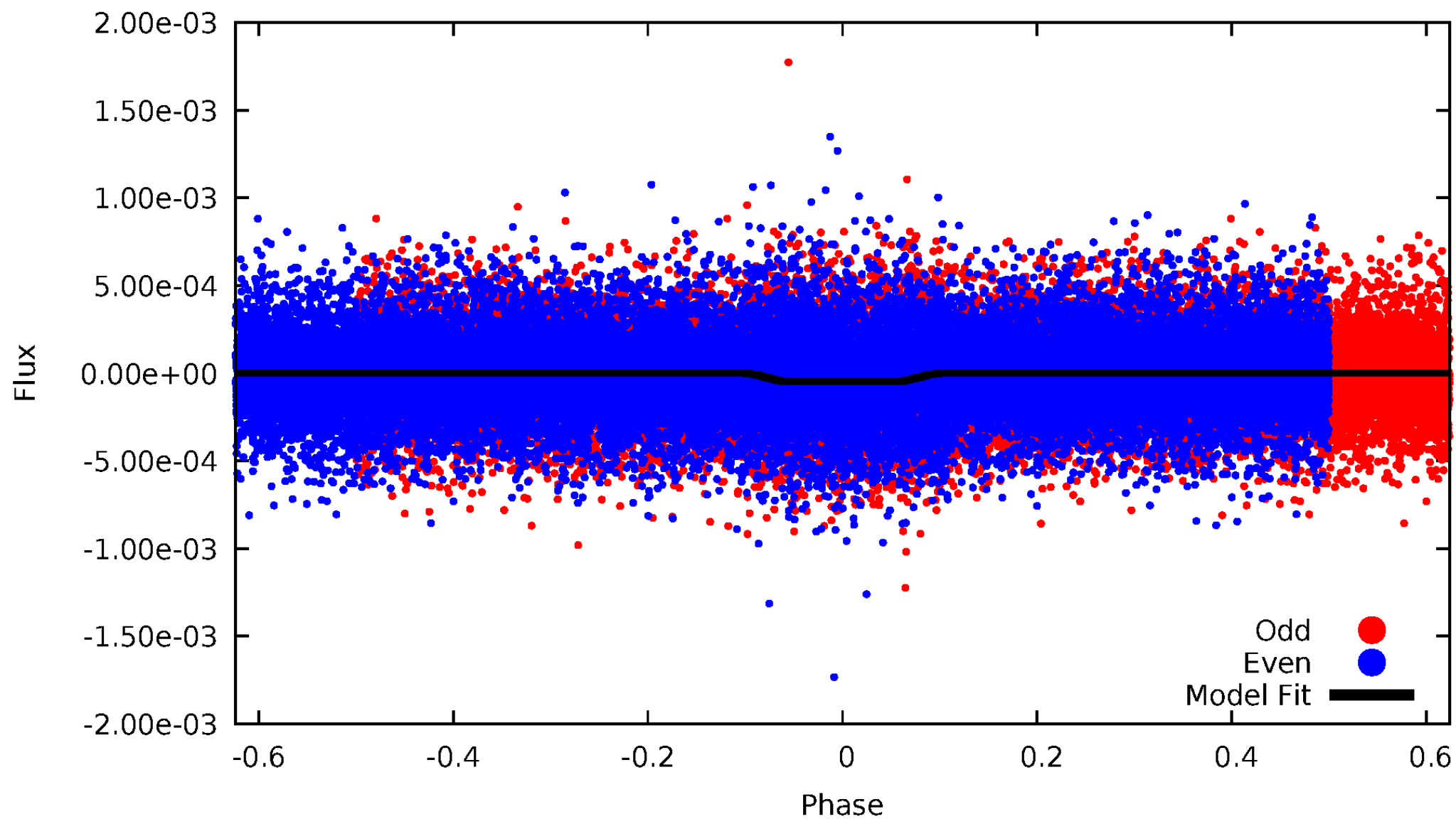
DV Odd/Even

TCE 011125756-01



# ALT Odd/Even

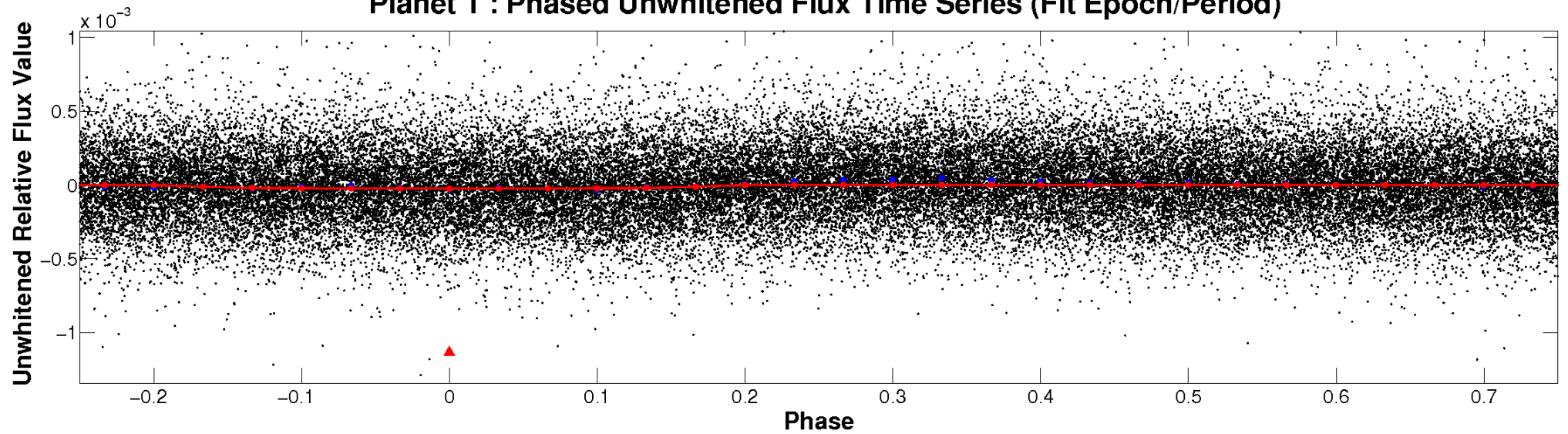
TCE 011125756-01



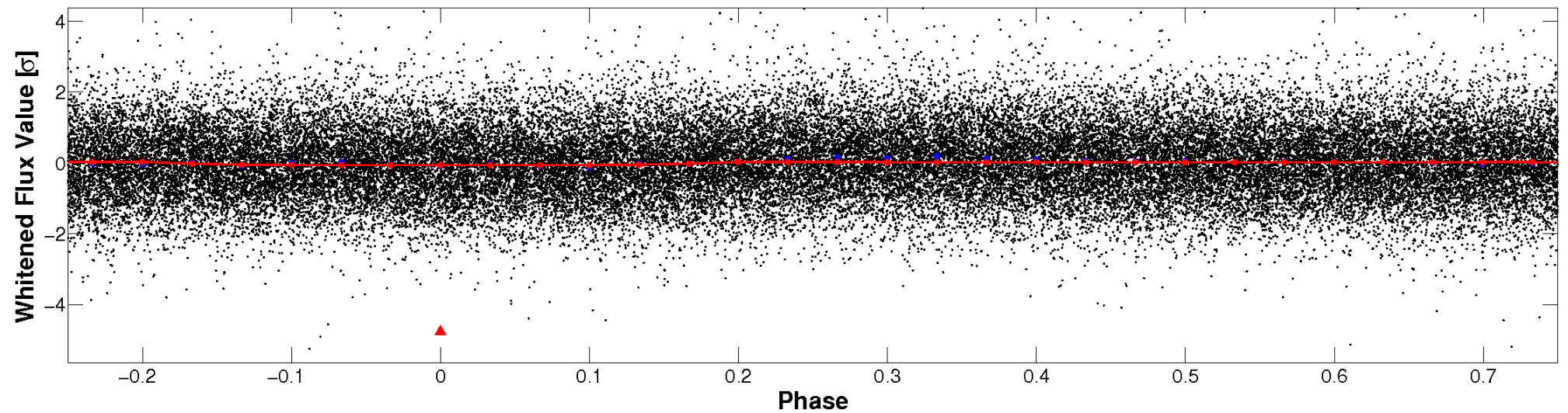


# Non-Whitened Vs. Whitened Light Curve

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

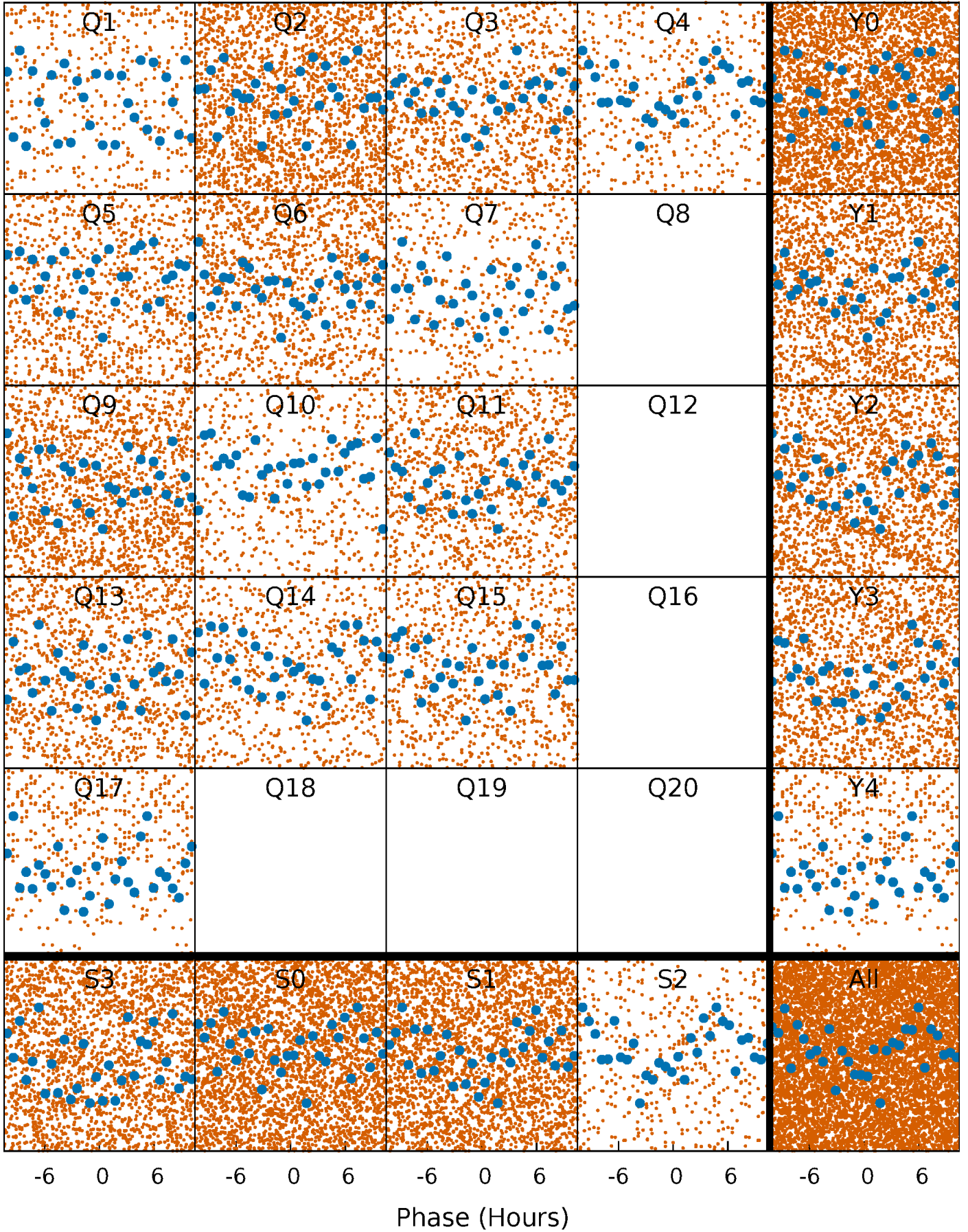


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

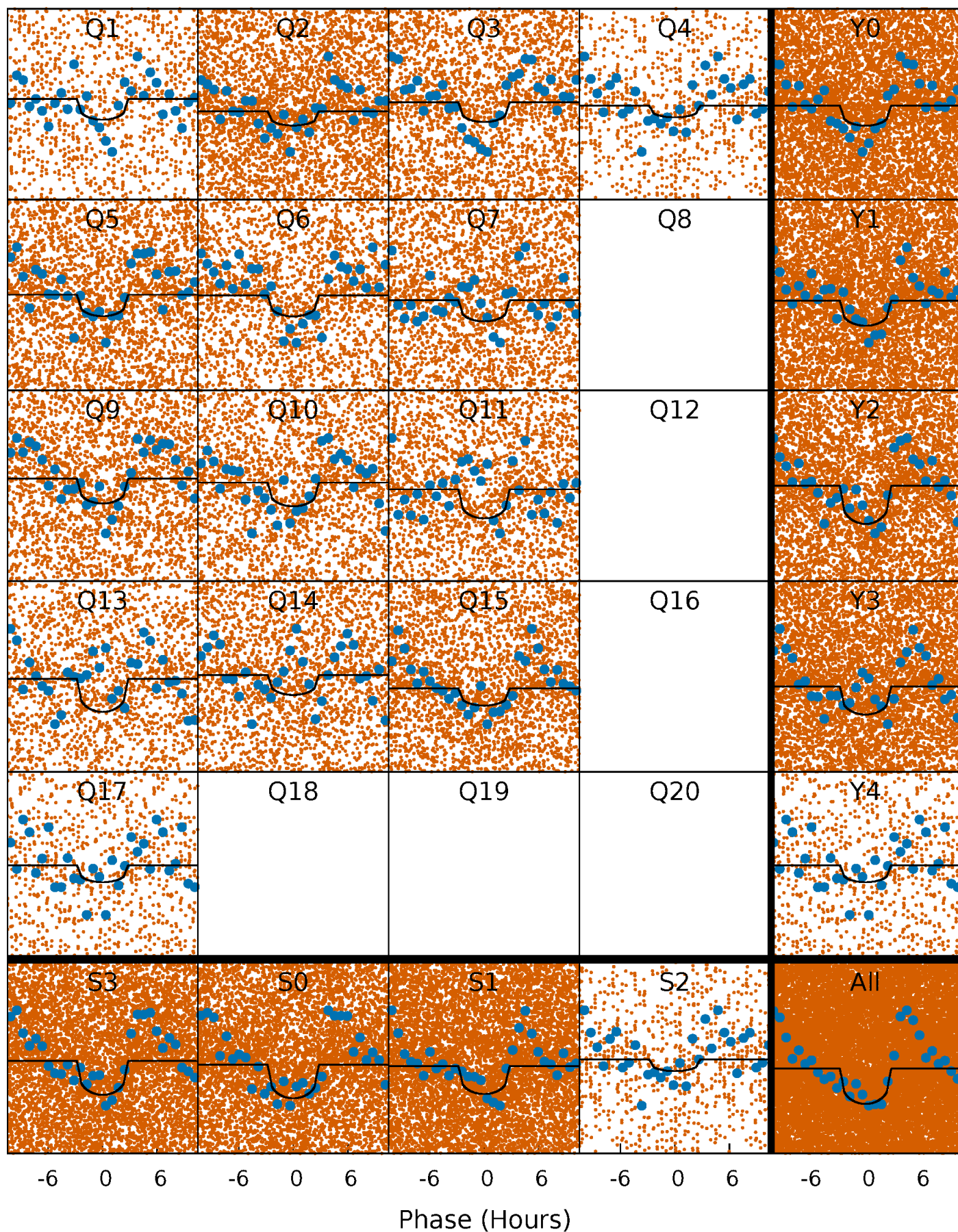
TCE 011125756-01 P= 0.613191 Days  $T_0=131.969402$  (BKJD)





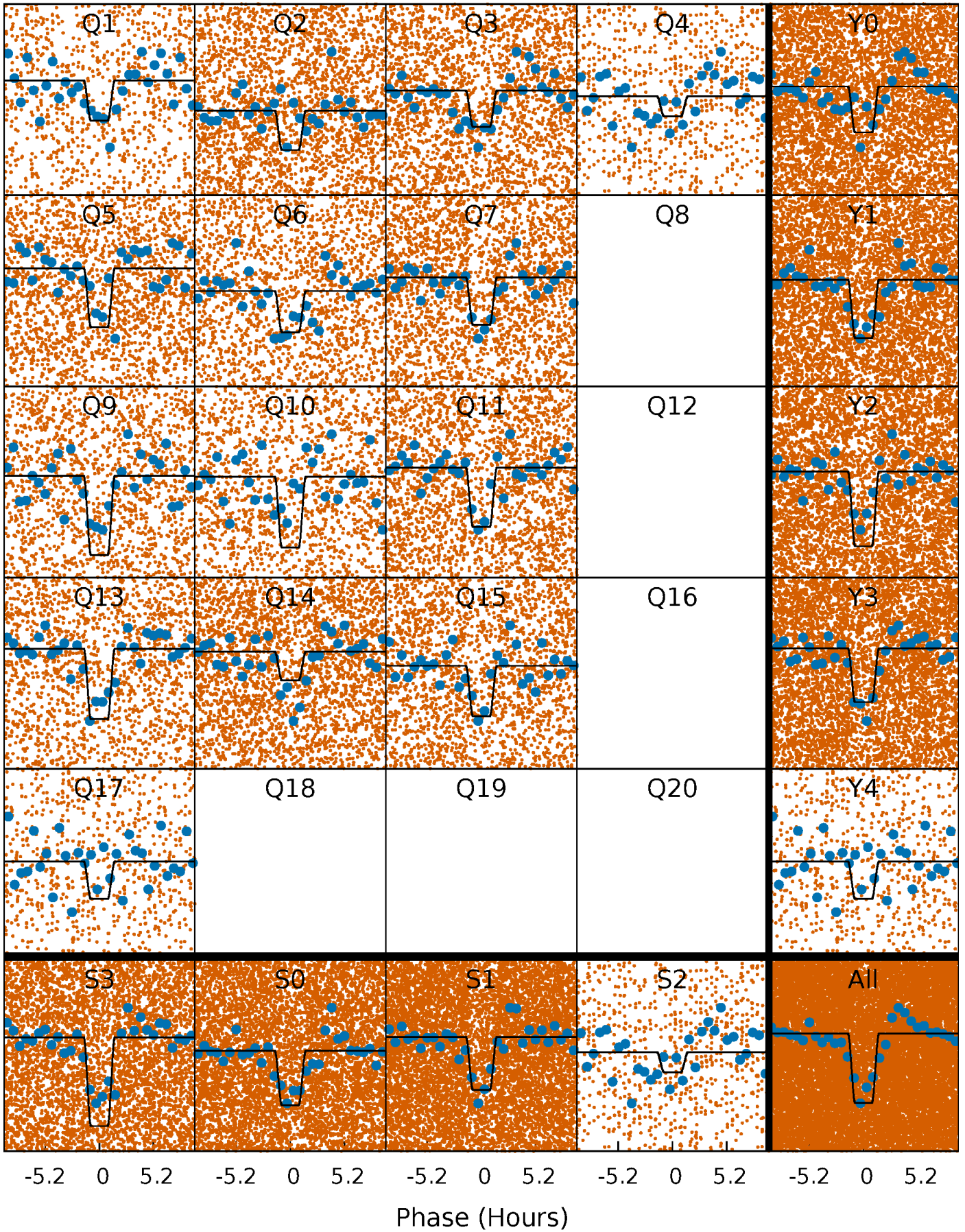
# DV Quarter-Phased Transit Curves

TCE 011125756-01 P= 0.613191 Days  $T_0=131.969402$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 011125756-01 P= 0.613244 Days  $T_0=131.960305$  (BKJD)

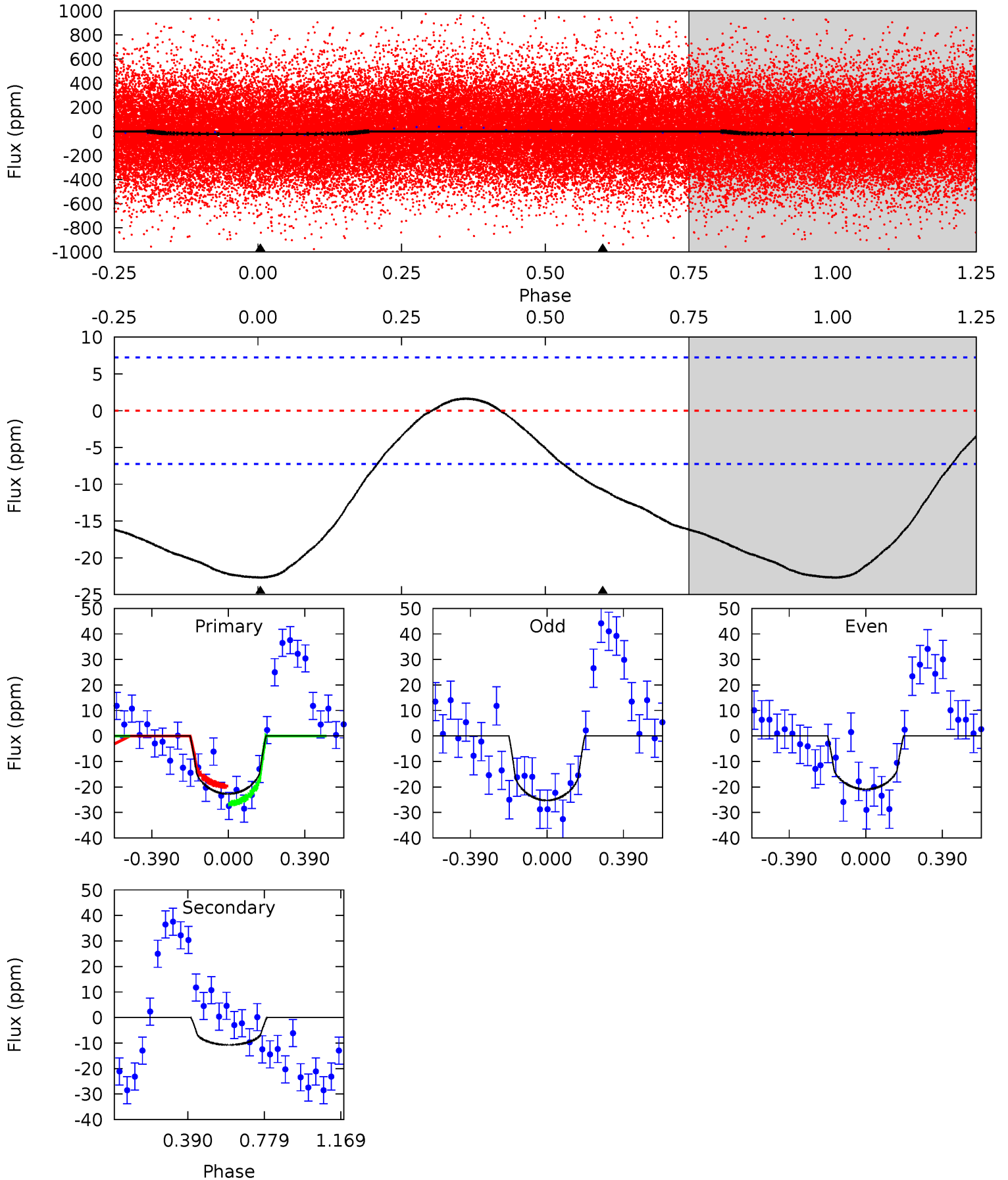




# DV Model-Shift Uniqueness Test

011125756-01, P = 0.613191 Days, E = 131.356211 Days

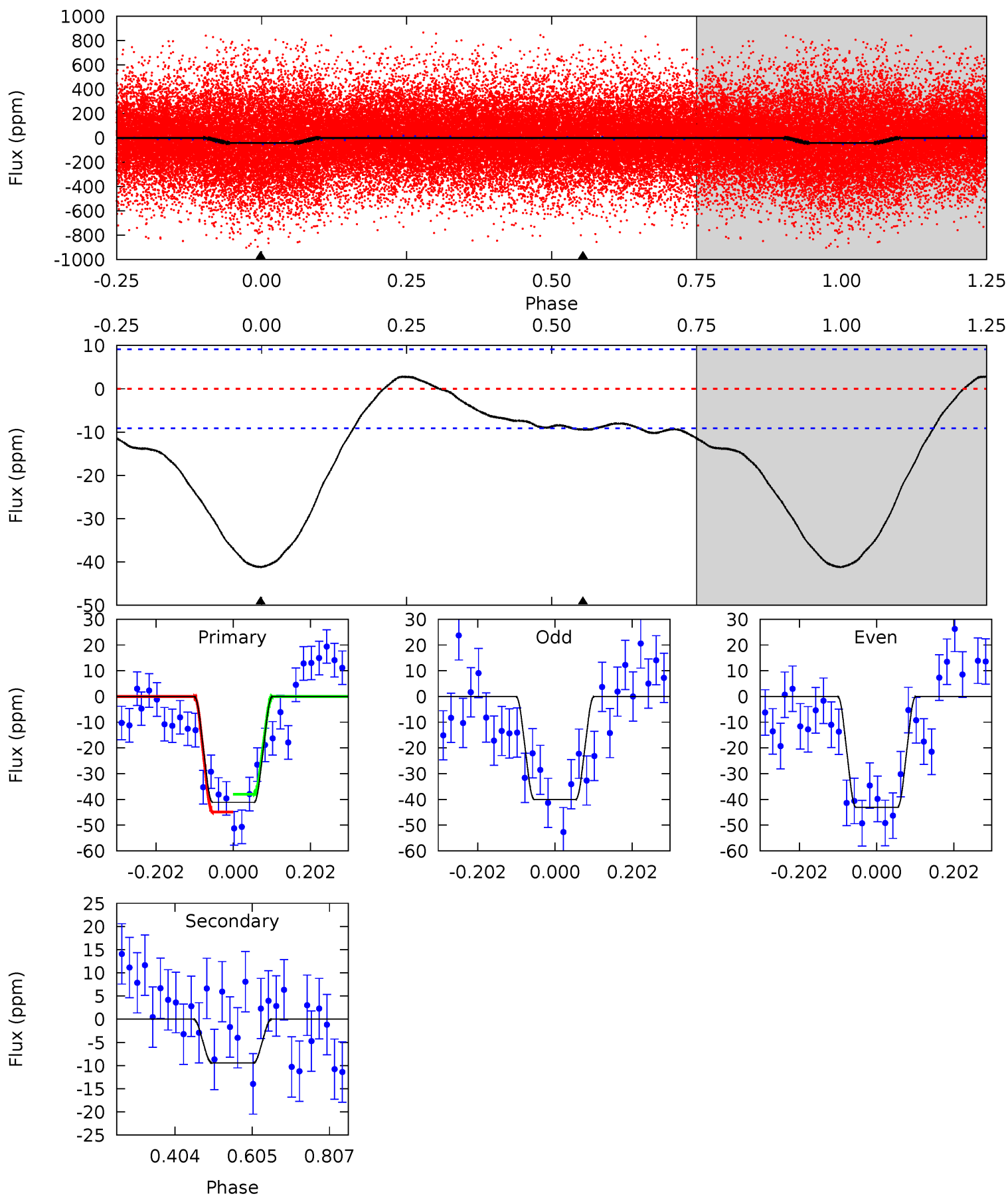
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	6.33	0	0	4.27	0.86	0.85	13.4	13.4	6.33	6.33	1.29	1.02	0.07	2.03



# Alt Model-Shift Uniqueness Test

011125756-01, P = 0.613244 Days, E = 131.347061 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
19.9	4.56	0	0	4.42	1.28	2.84	19.9	19.9	4.56	4.56	0.74	1.04	0.06	1.67





### Stellar Parameters For KIC 011125756

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6190^{+200}_{-275}$	$4.411^{+0.090}_{-0.195}$	$-0.220^{+0.250}_{-0.300}$	$1.039^{+0.339}_{-0.145}$	$1.010^{+0.158}_{-0.129}$	$1.270^{+0.578}_{-0.666}$
	+3%/-4%	+2%/-4%	+114%/-136%	+33%/-14%	+16%/-13%	+45%/-52%
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 011125756-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-11 \pm 2$	$0.68^{+0.53}_{-0.45}$	$3296^{+238}_{-188}$	$4679^{+3417}_{-1137}$	$2.635^{+21.146}_{-1.834}$
Alt.	$-9 \pm 2$	$0.89^{+0.63}_{-0.50}$	$3291^{+255}_{-190}$	$3969^{+1887}_{-1073}$	$1.275^{+5.720}_{-0.854}$

$T_{max}$  = 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

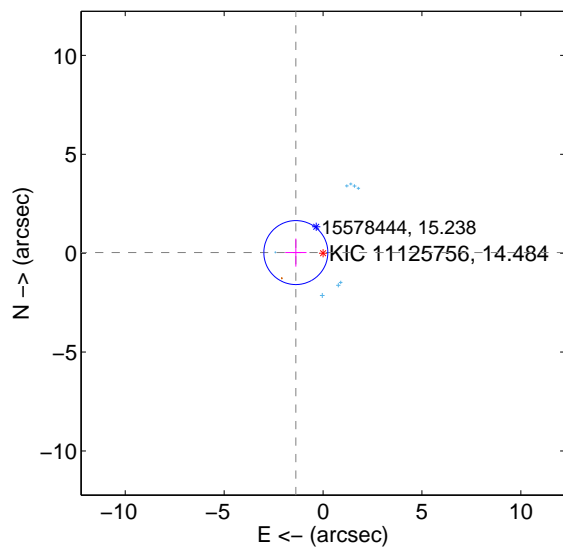
Supplemental centroid analysis for 011125756-01. Kepler magnitude: 14.48. Transit SNR 8.71

There are 8 quarters with good PRF difference image offsets

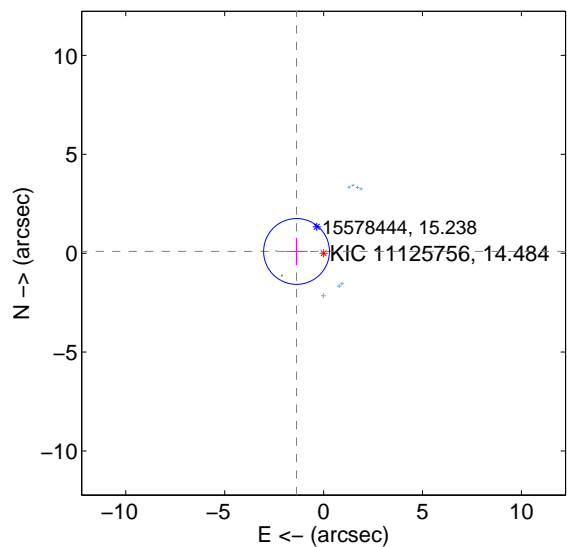
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.375 \pm 0.539$	2.55	$1.375 \pm 0.539$	$0.030 \pm 0.709$
PRF-fit source offset from KIC position	$1.370 \pm 0.554$	2.47	$1.368 \pm 0.554$	$0.087 \pm 0.689$
photometric centroid source offset	$6.42 \pm 1.26$	5.12	$-6.03 \pm 1.25$	$2.22 \pm 1.31$

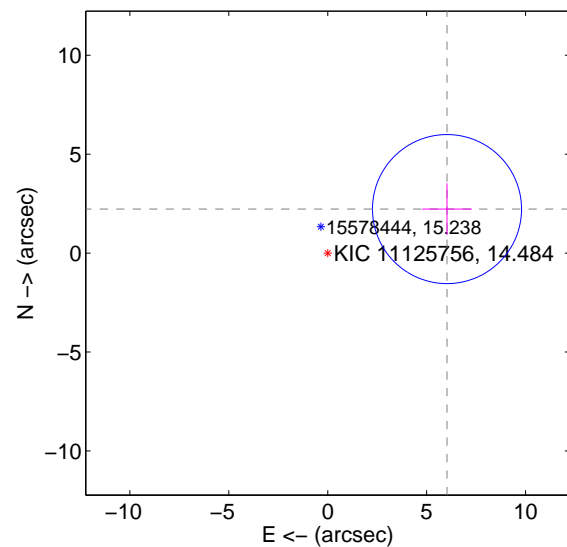
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

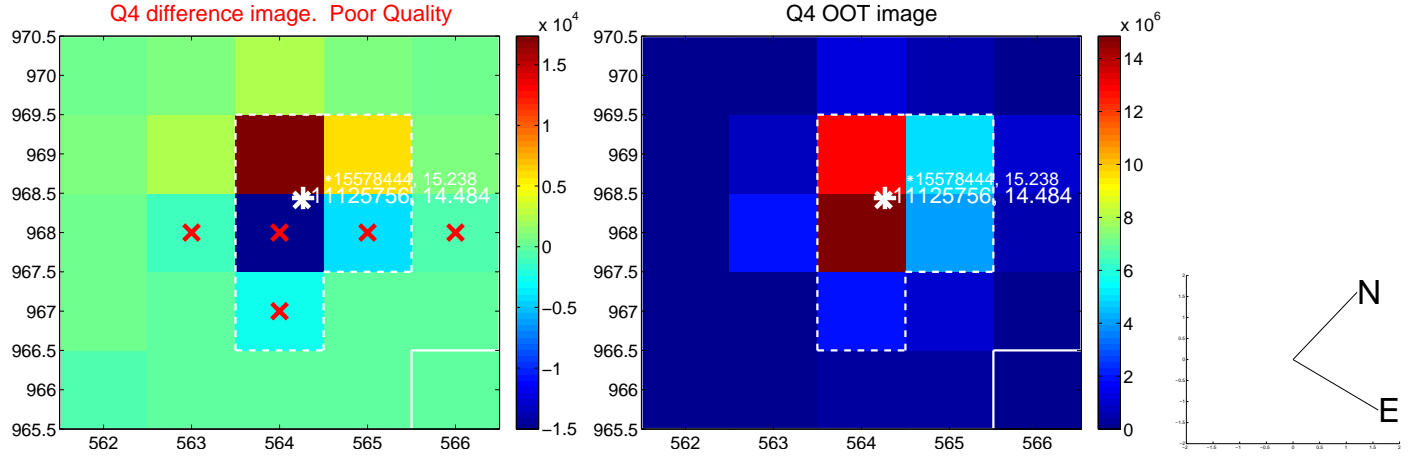
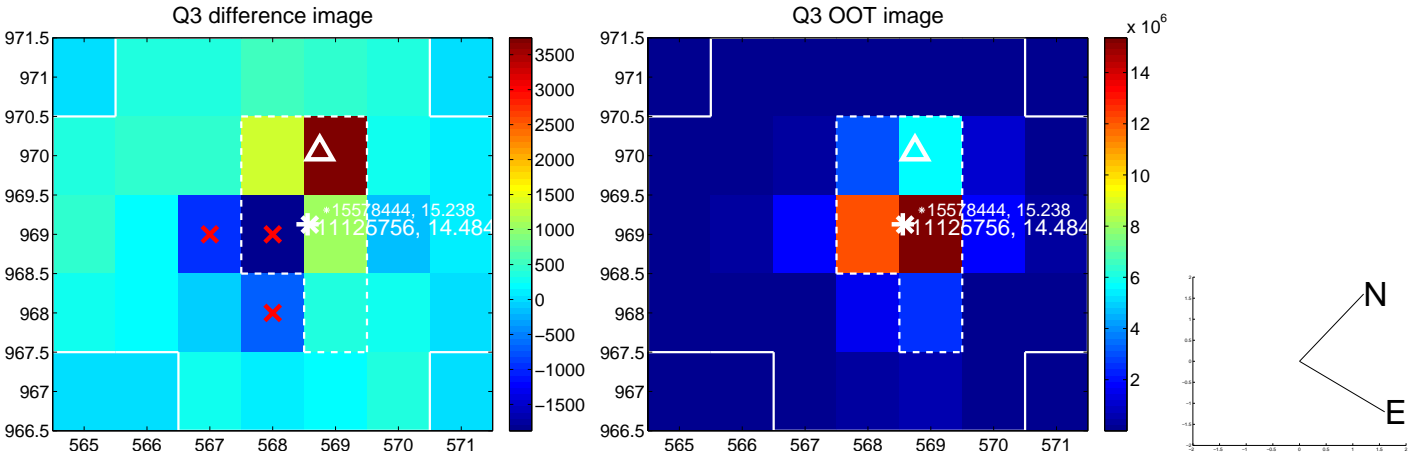
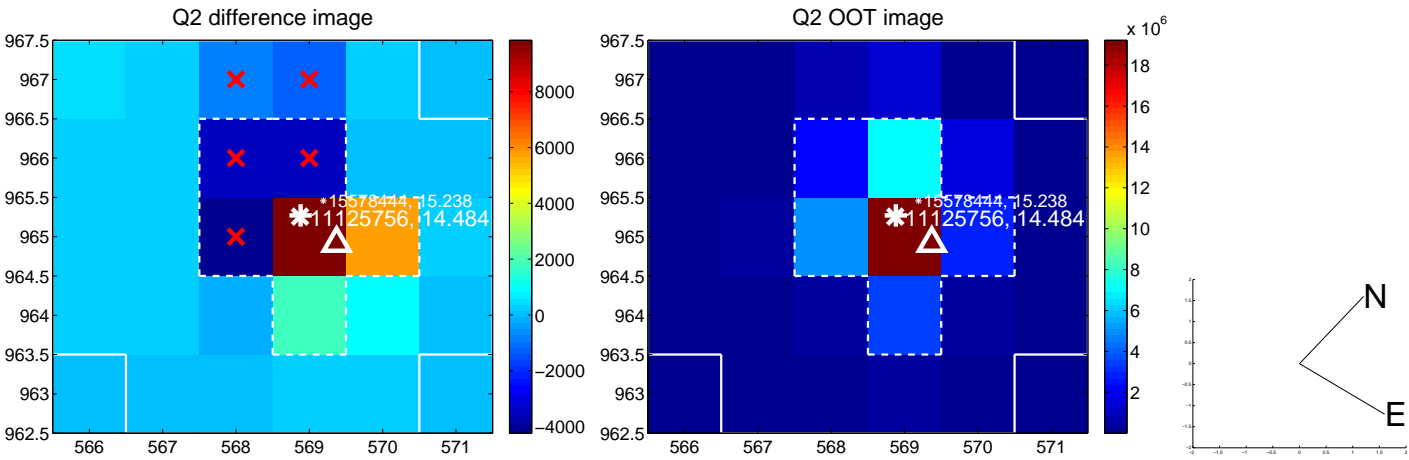
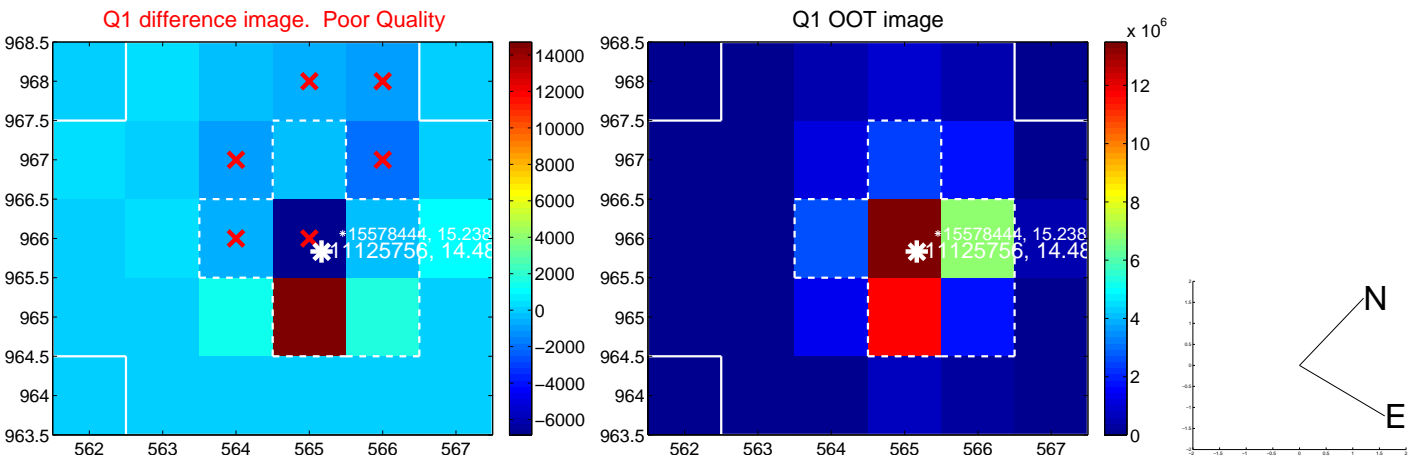


offset from photometric centroids

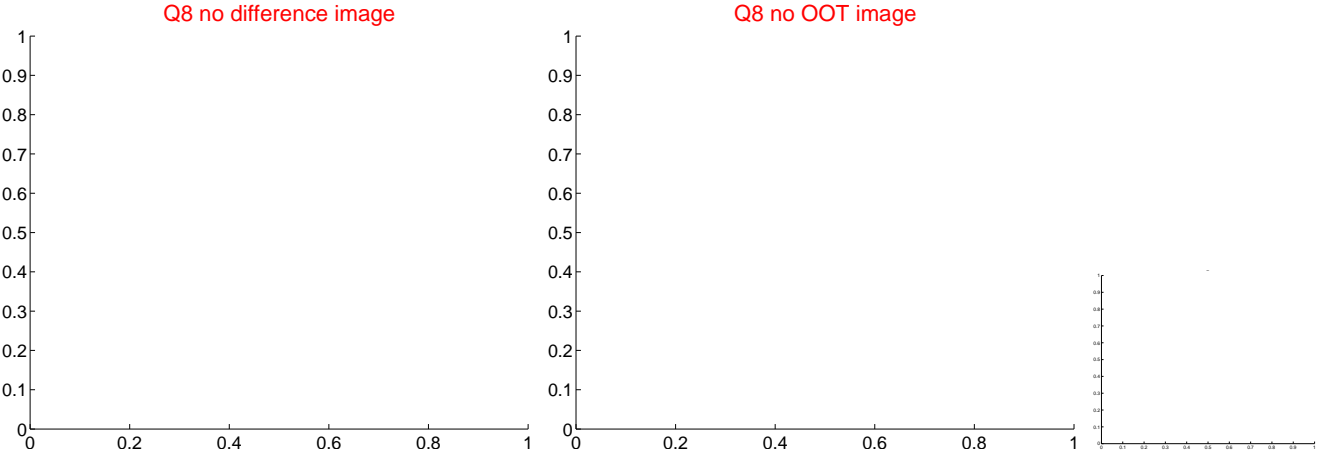
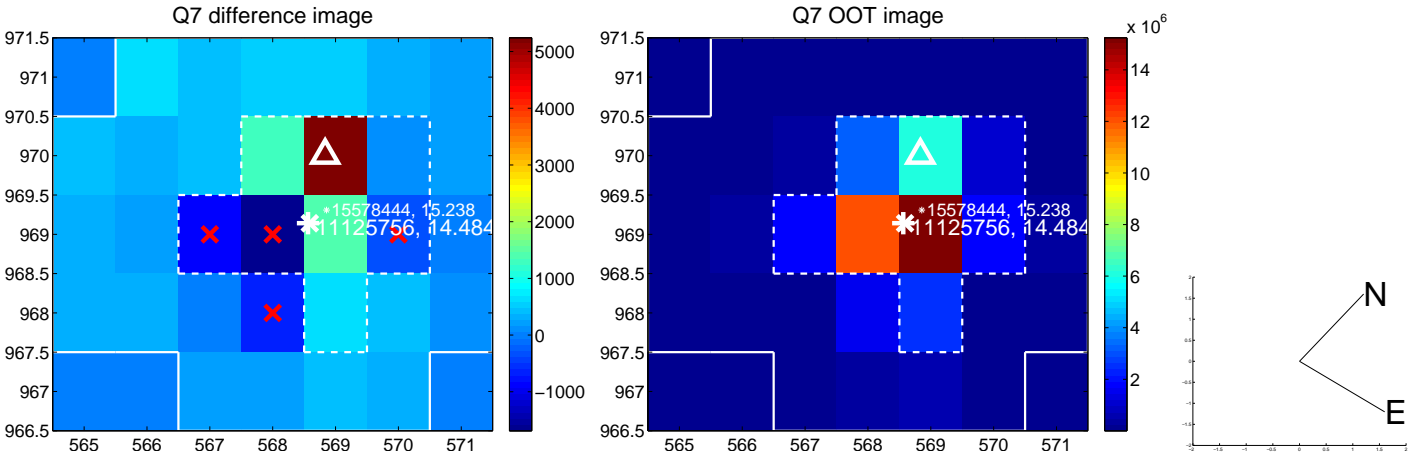
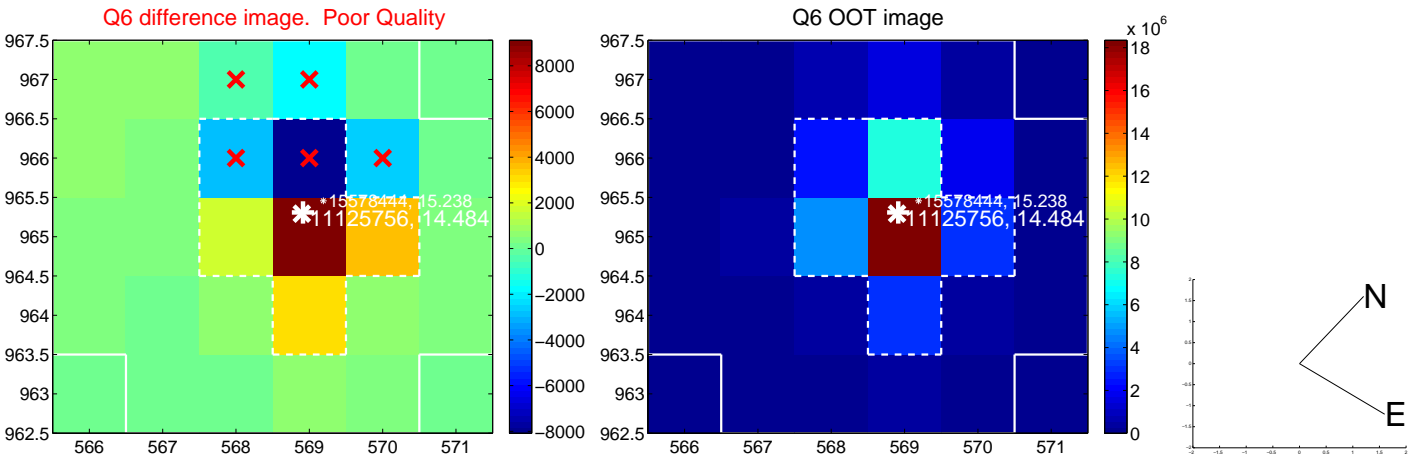
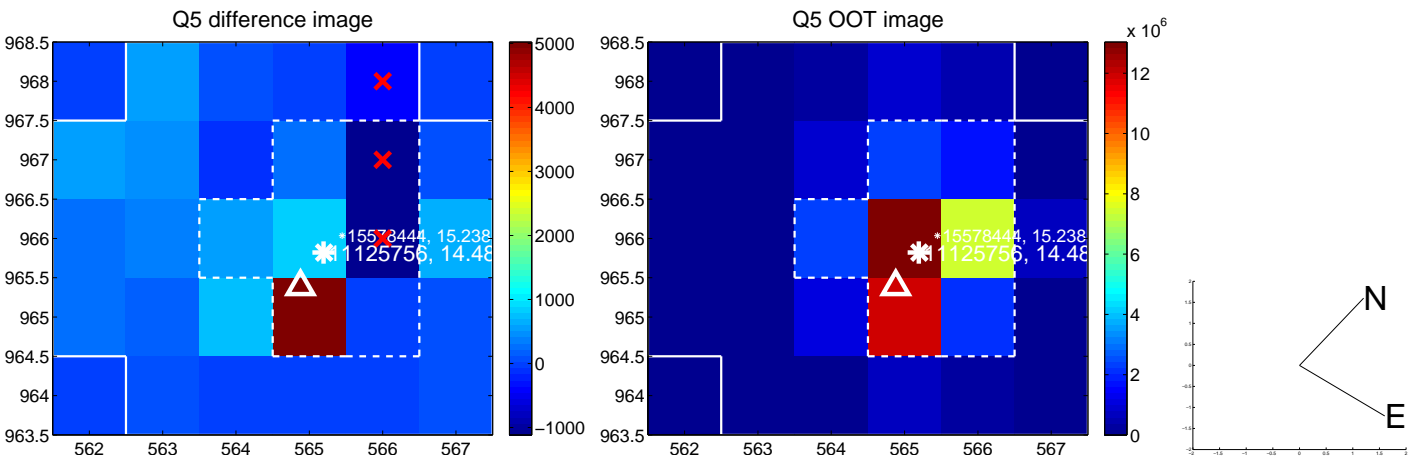


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

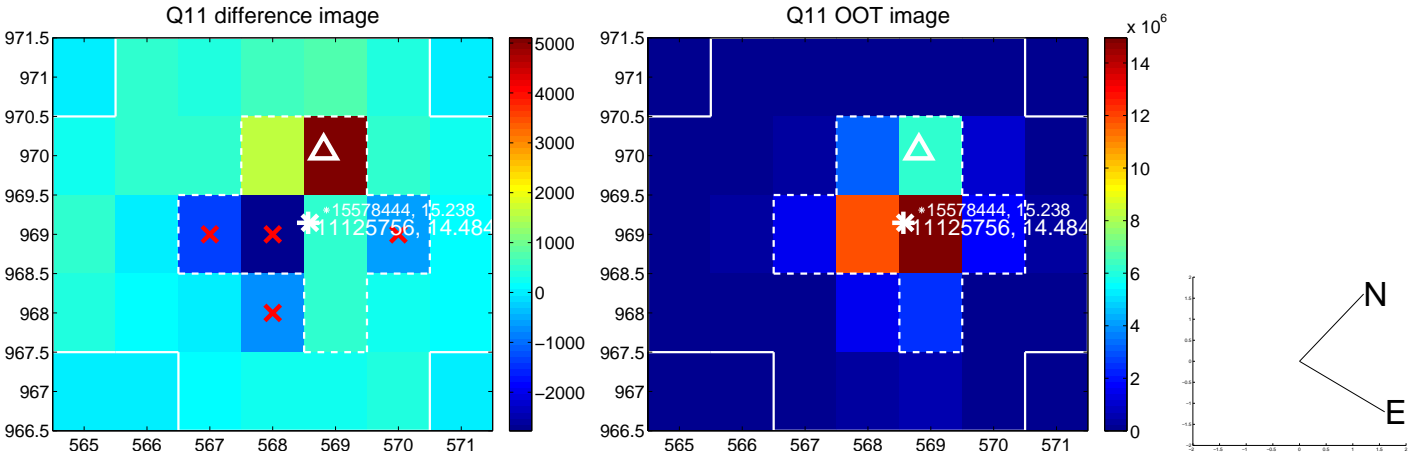
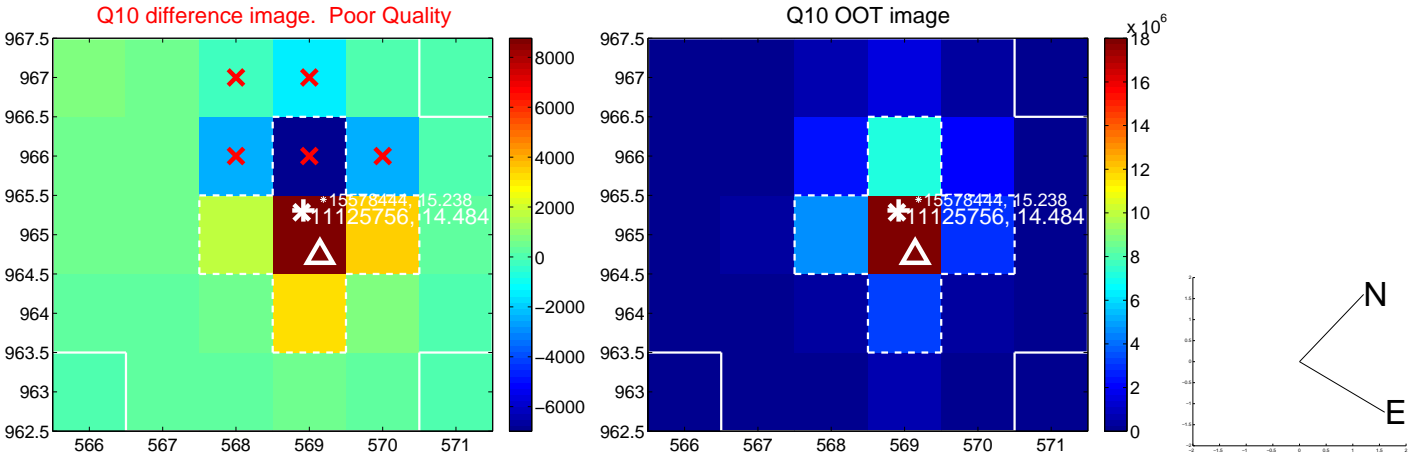
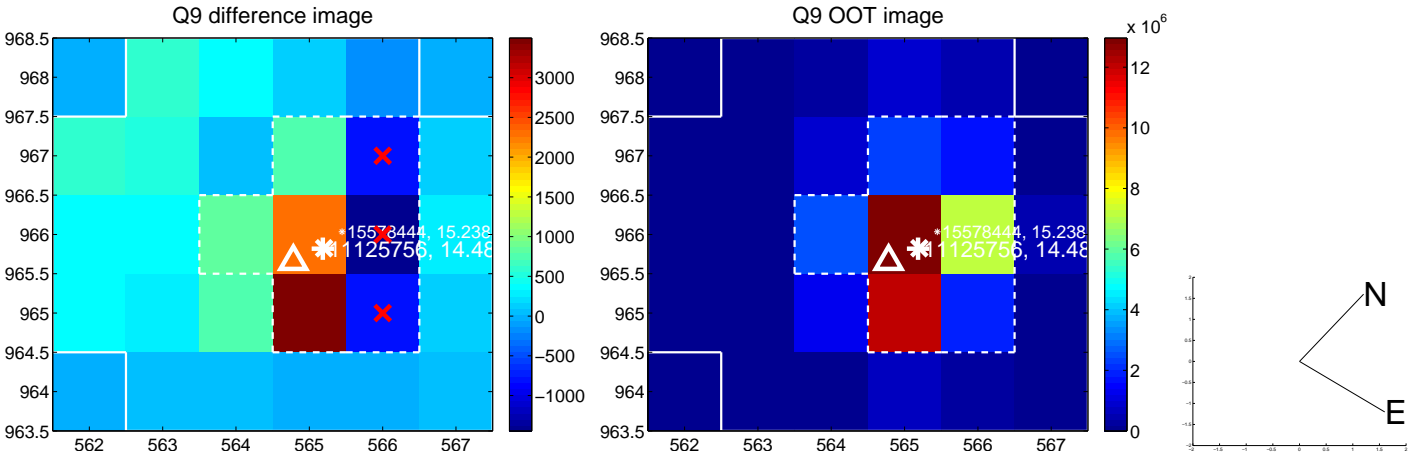


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

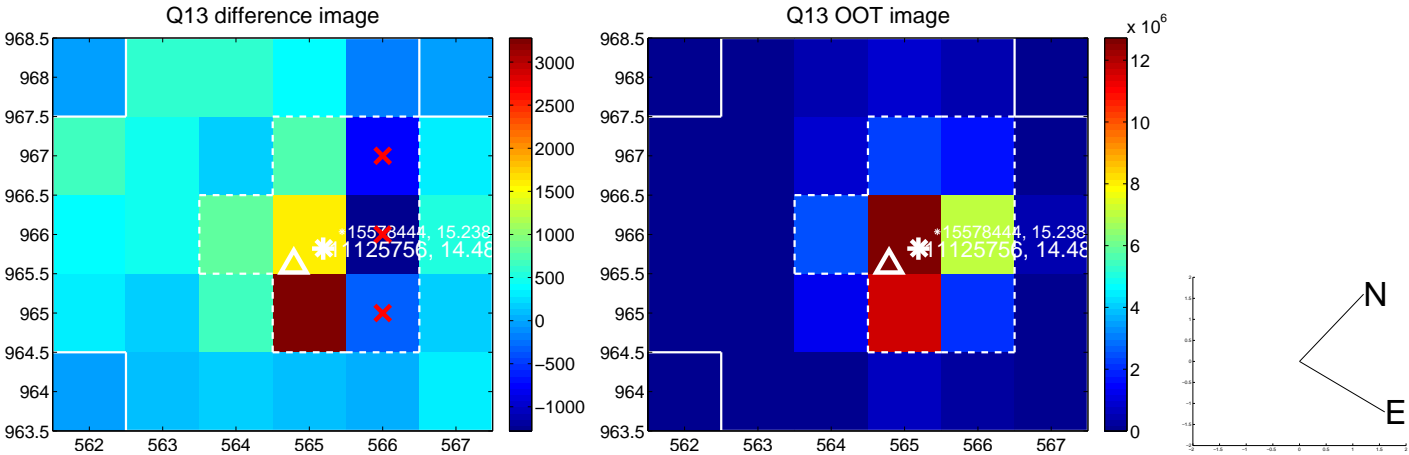




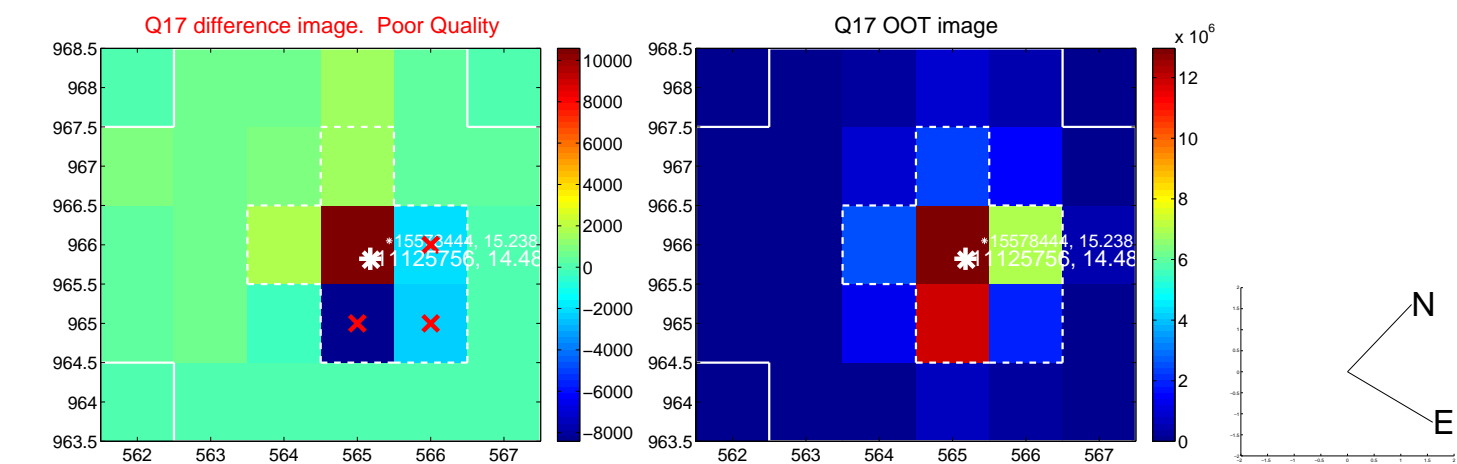
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



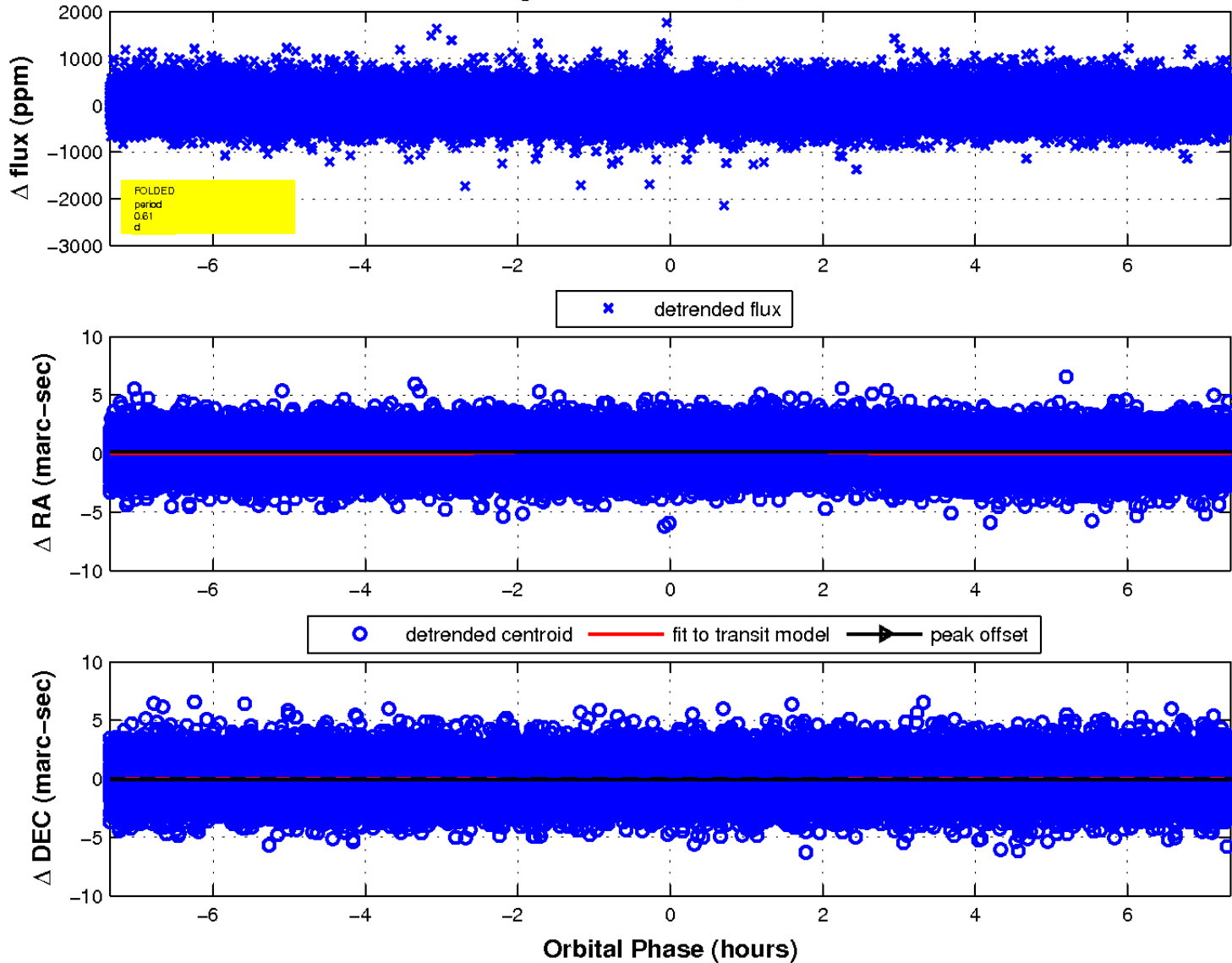
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

