

# KIC 009593795

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
009593795-01	OBS	No	0.785015	131.972096	0.0	7.491	9.2	0.0	1.00	5780	0.00	3603.86

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009593795-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

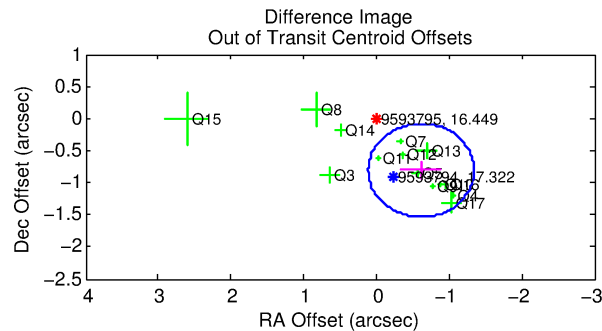
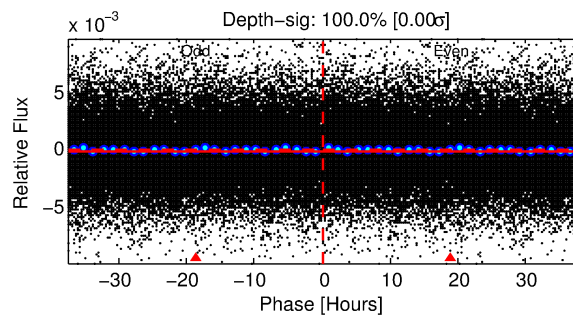
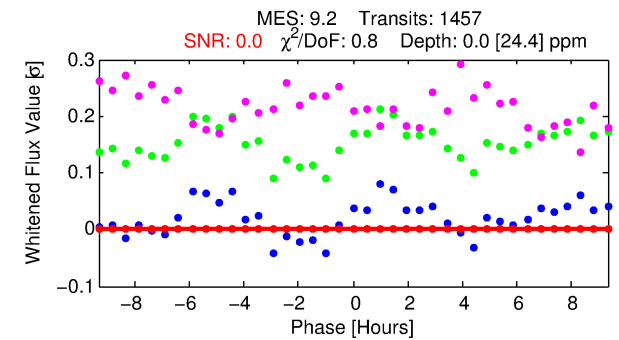
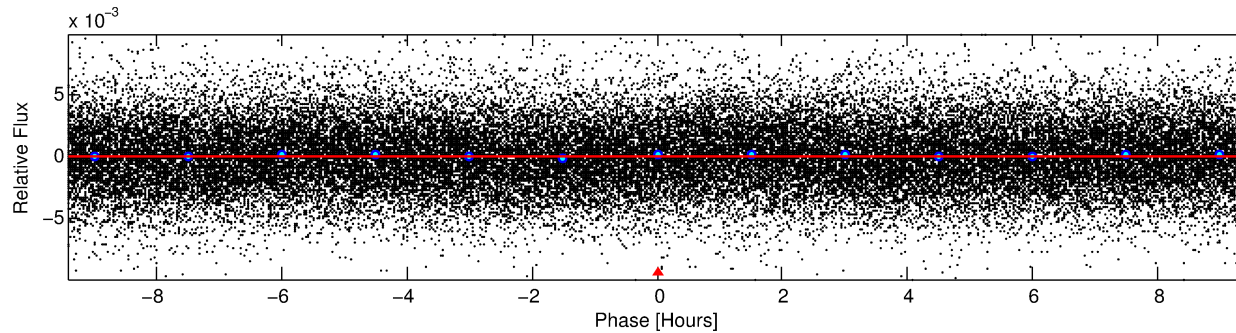
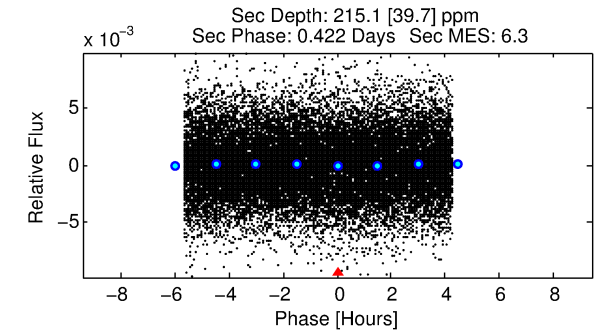
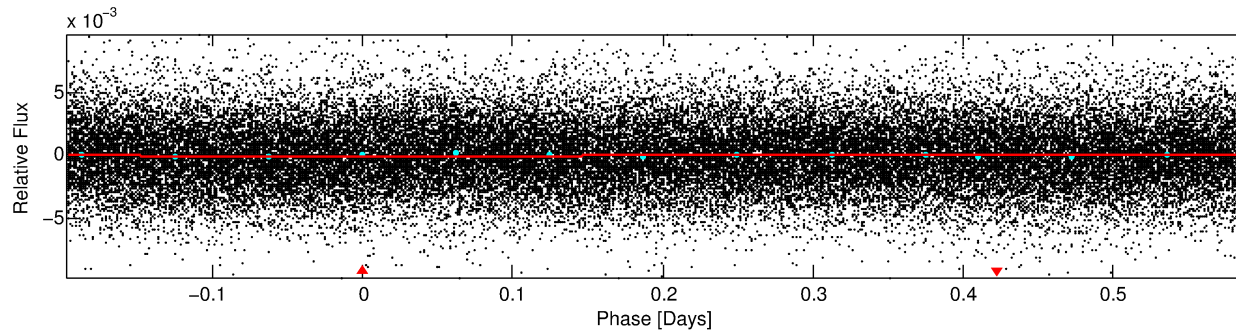
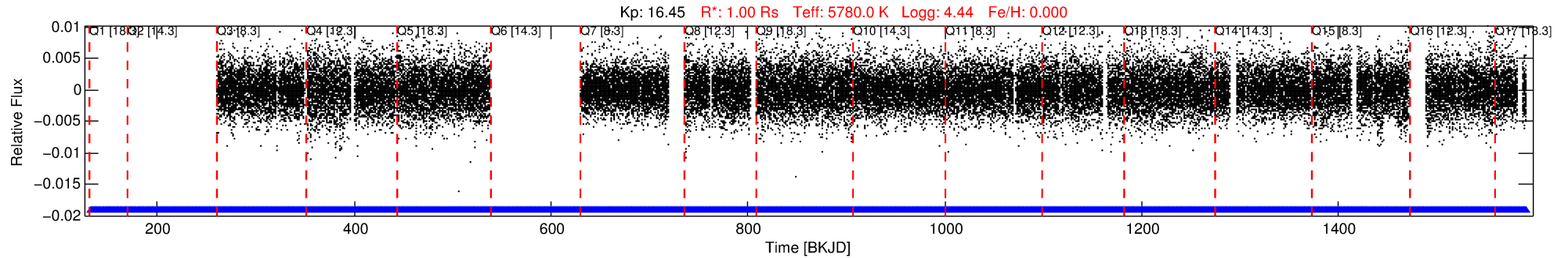
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 009593795-01

No Significant Match Found

# DV One-Page Summary

KIC: 9593795 Candidate: 1 of 1 Period: 0.785 d



## DV Fit Results:

Period = 0.78502 [39.41842] d  
Epoch = 131.9721 [16916.7695] BKJD  
Rp/R\* = 0.0000 [1.1338]  
a/R\* = 1.05 [15610.77]  
b = 0.17 [709997.92]  
Seff = 3603.86 [241283.49]  
Teq = 1976 [33069] K  
Rp = 0.00 [123.72] Re  
a = 0.0167 [0.5576] AU  
Ag = 32820117.73 [8118112917412.00] 10.000  
Teff = 231203 [14298338958] K

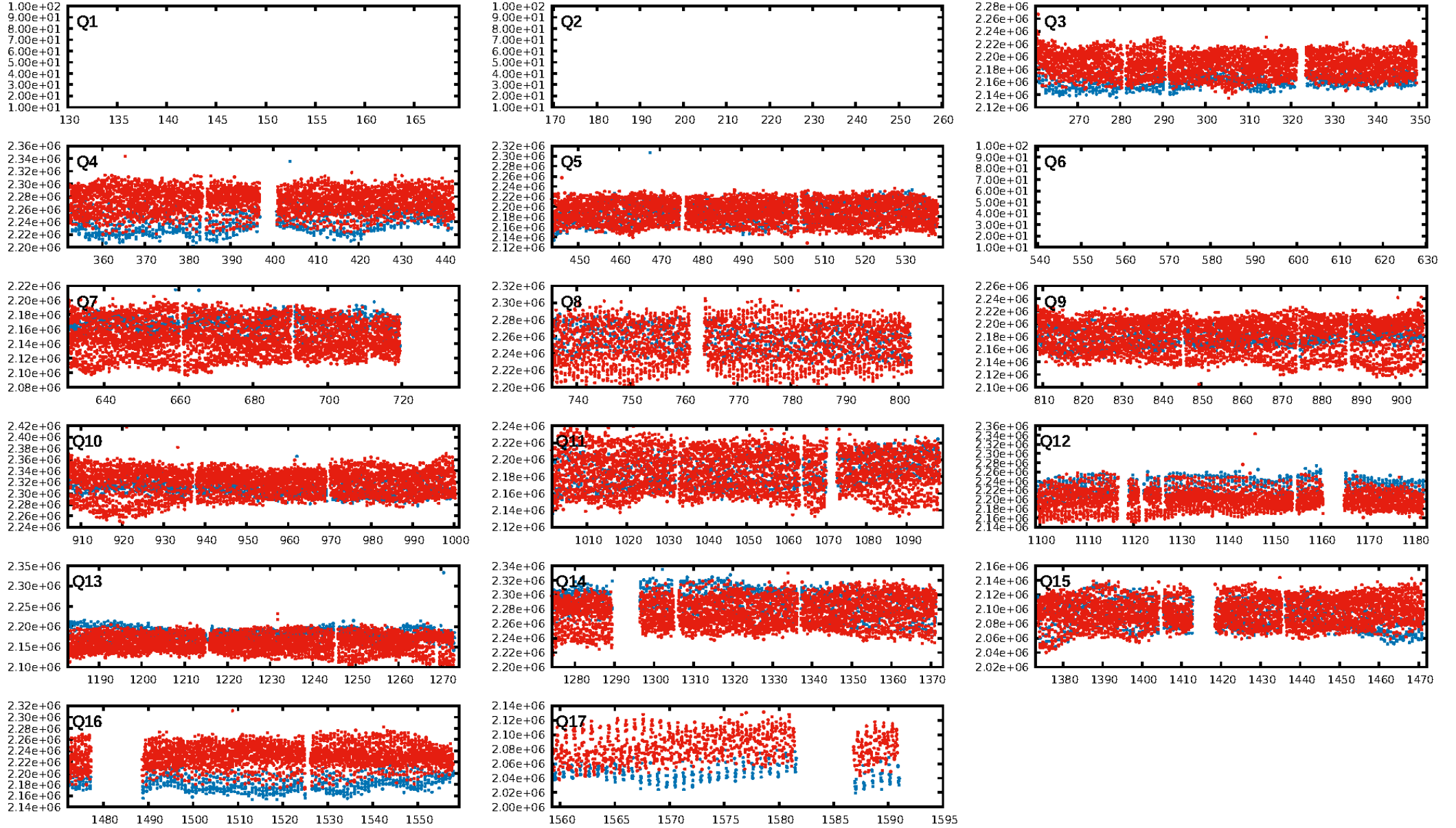
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1423/1423]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
QotOffset-rm: 1.014 arcsec [4.18σ]  
QicOffset-rm: 1.361 arcsec [7.71σ]  
QotOffset-st: 2/4/4/4 [14]  
QicOffset-st: 2/4/4/4 [14]  
DiffImageQuality-fgm: 0.50 [7/14]  
DiffImageOverlap-fno: 1.00 [14/14]

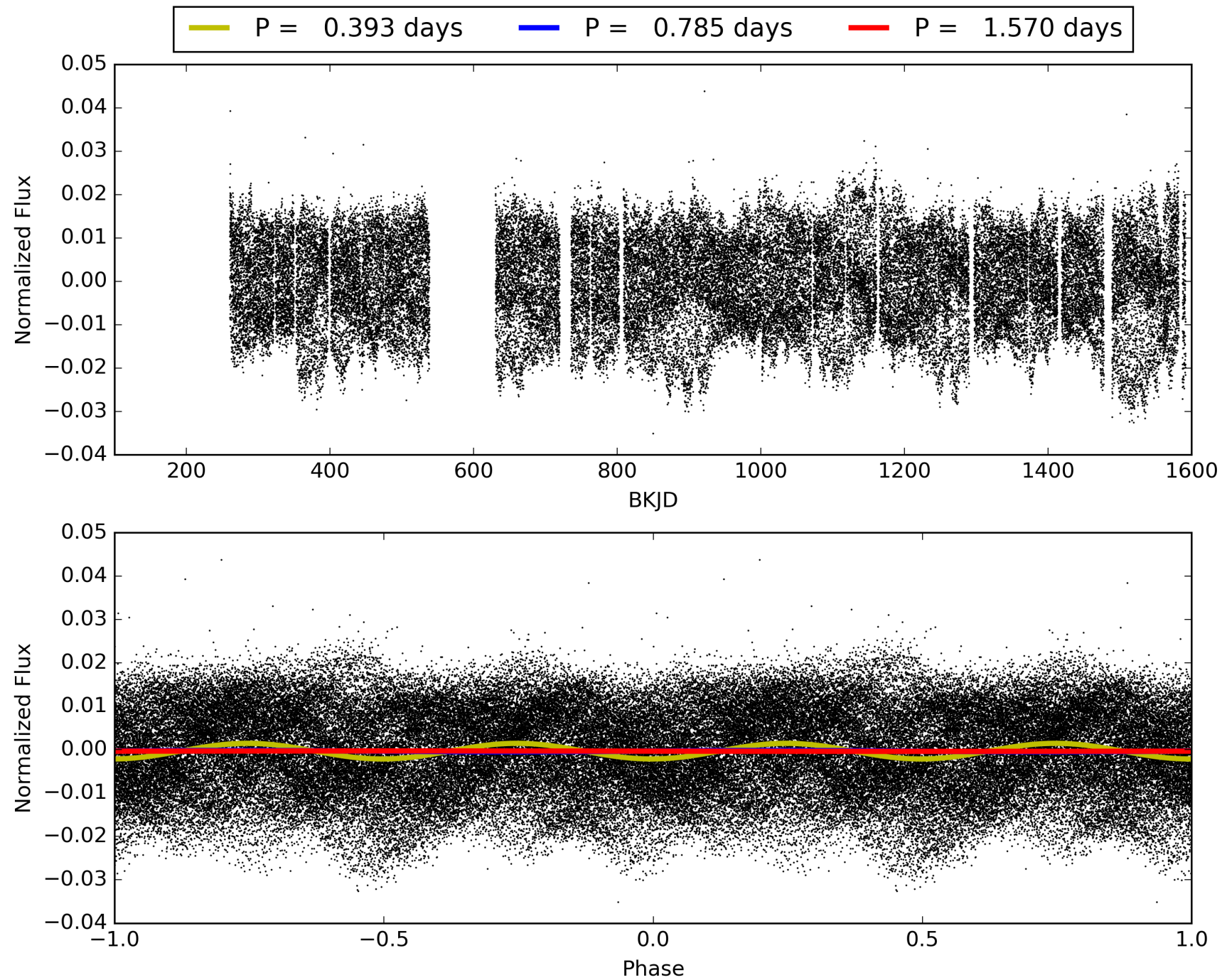
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:56:09 Z

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

# TCE 009593795-01, PDC Light Curves

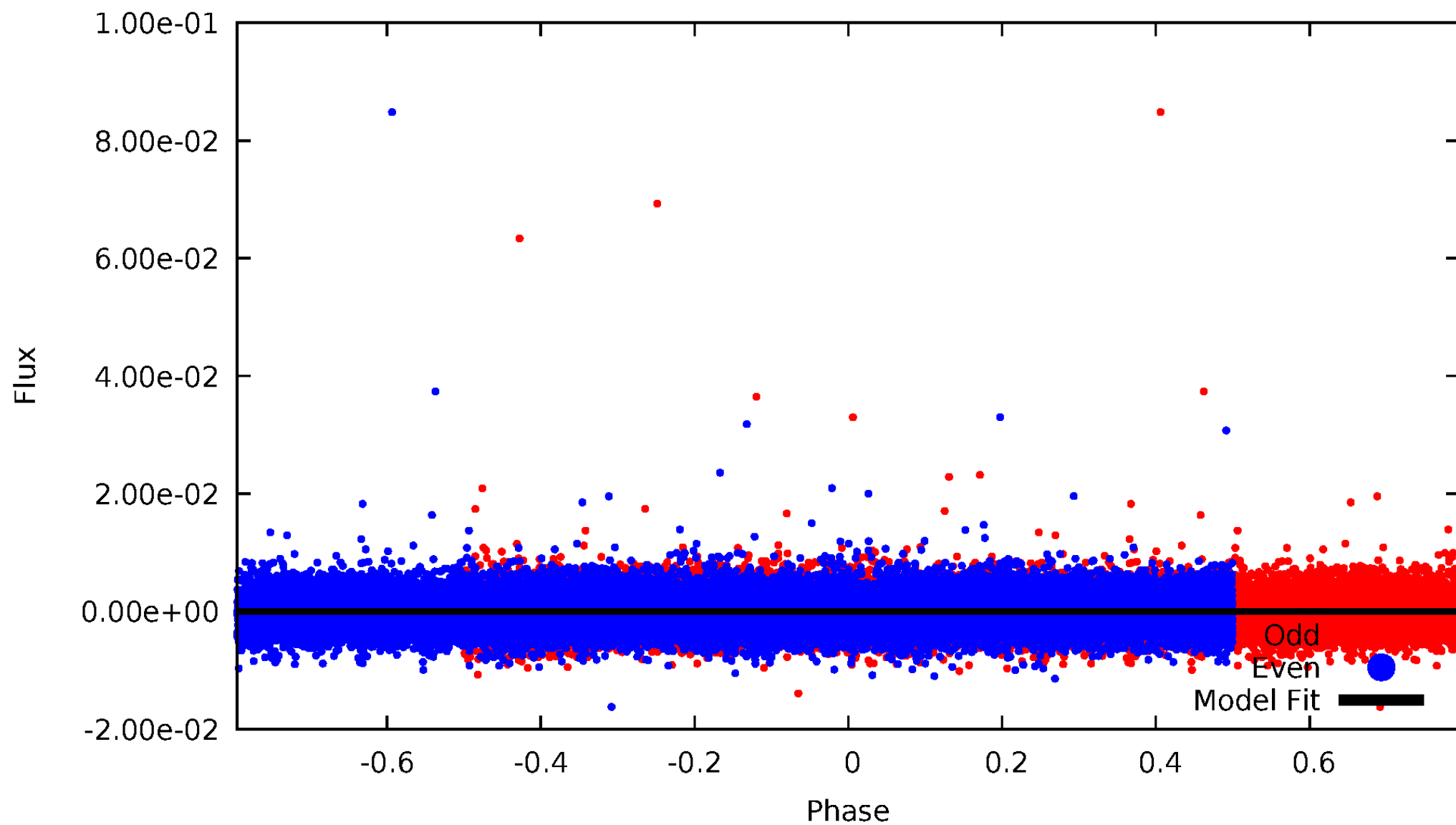


TCE 009593795-01



# DV Odd/Even

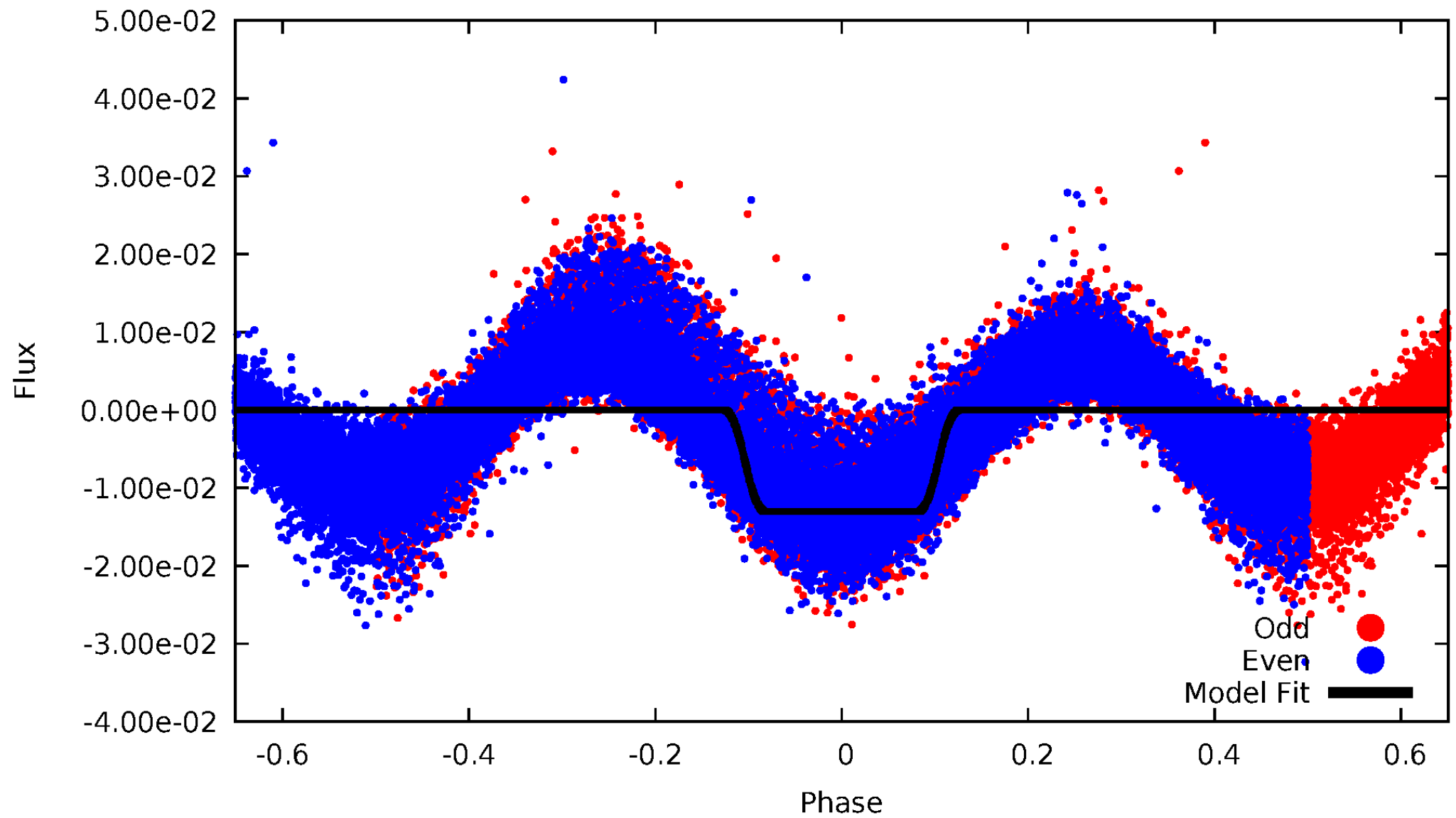
TCE 009593795-01





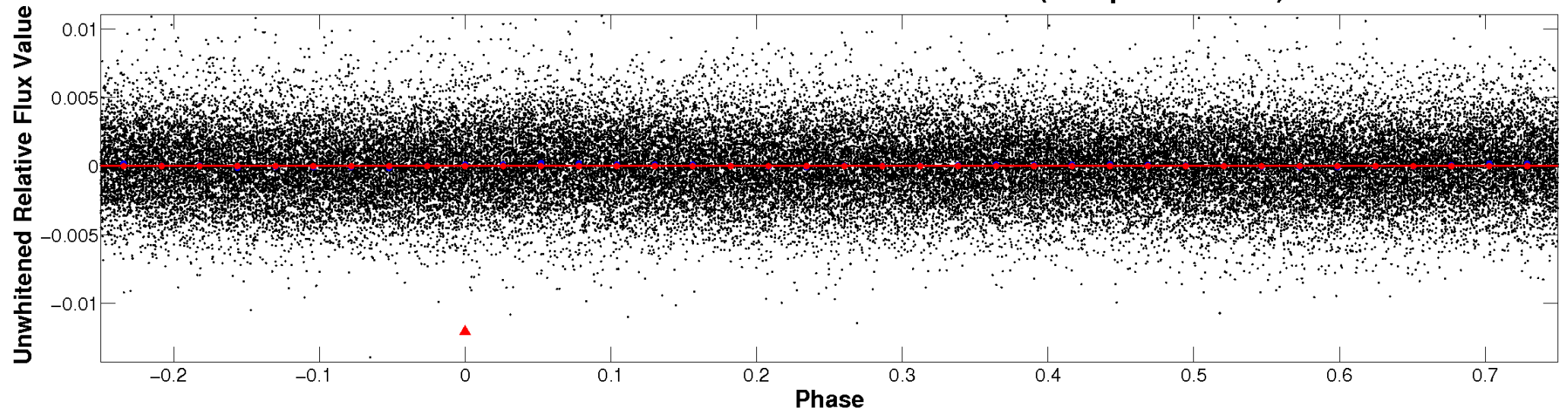
# ALT Odd/Even

TCE 009593795-01

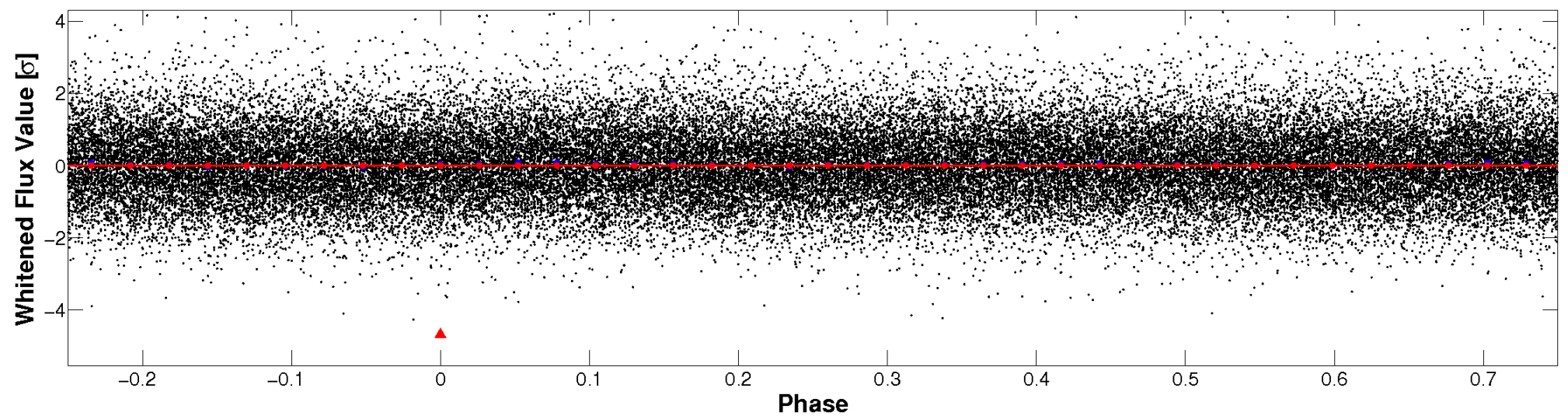


# Non-Whitened Vs. Whitened Light Curve

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

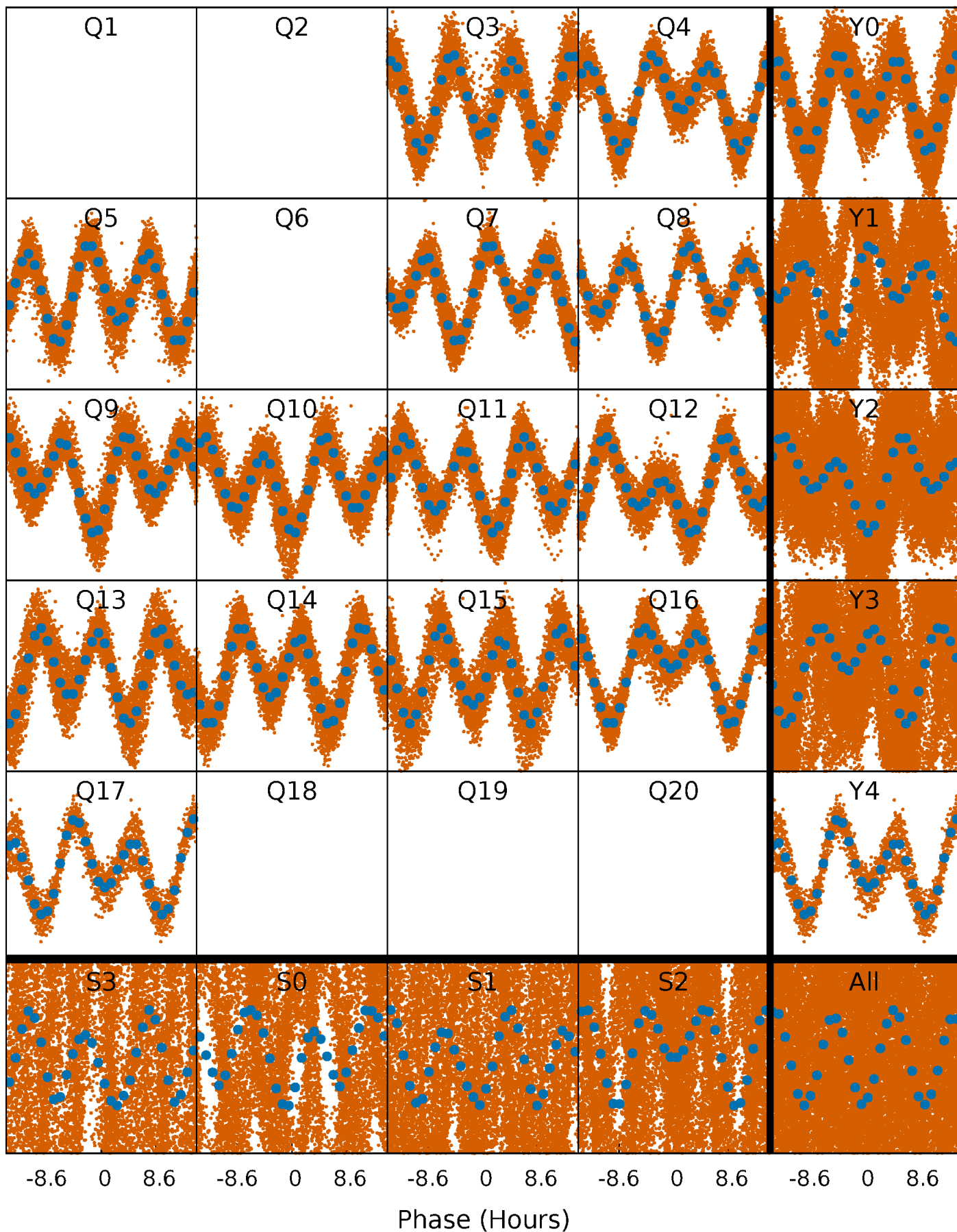


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

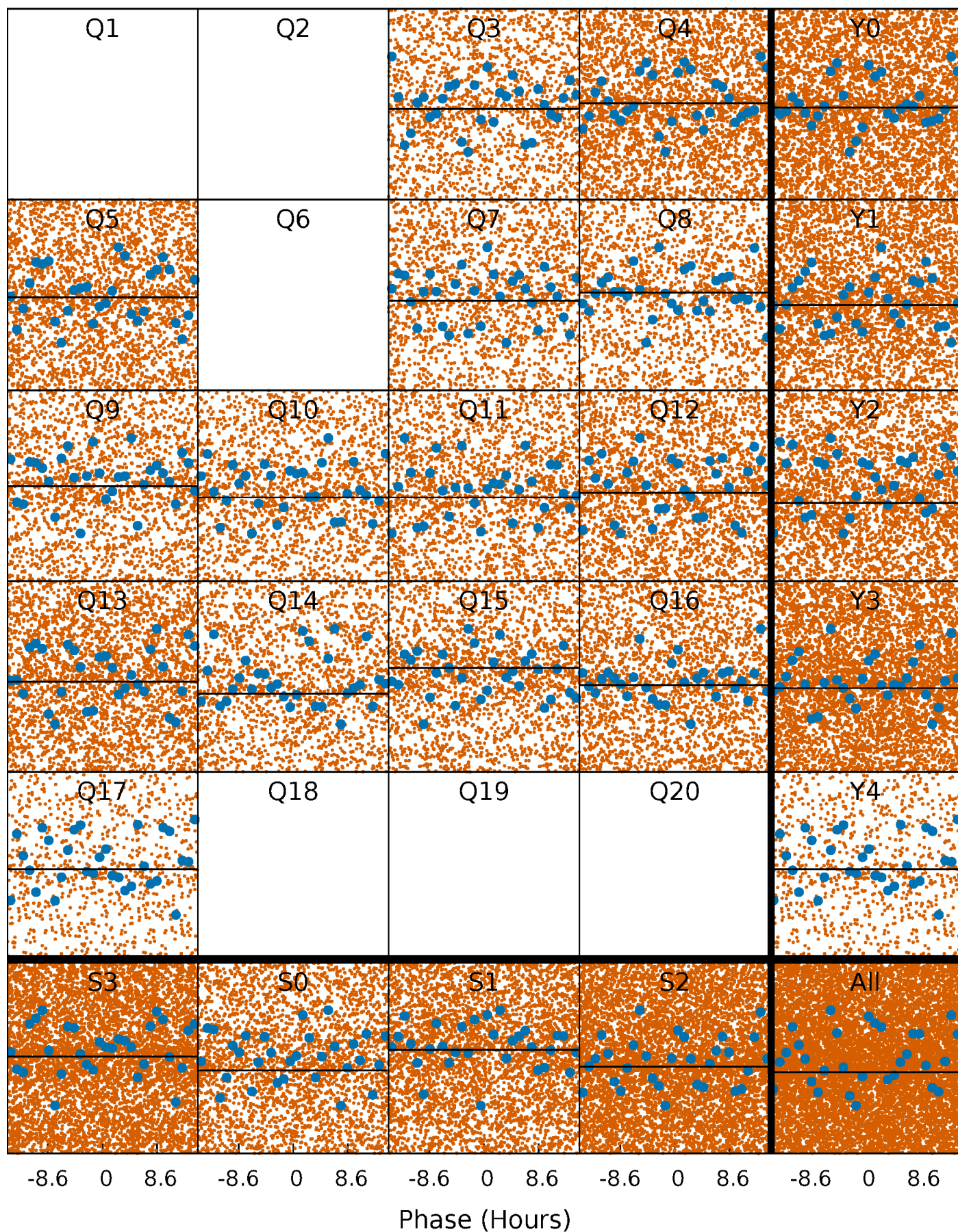
TCE 009593795-01   P= 0.785015 Days    $T_0=131.972096$  (BKJD)





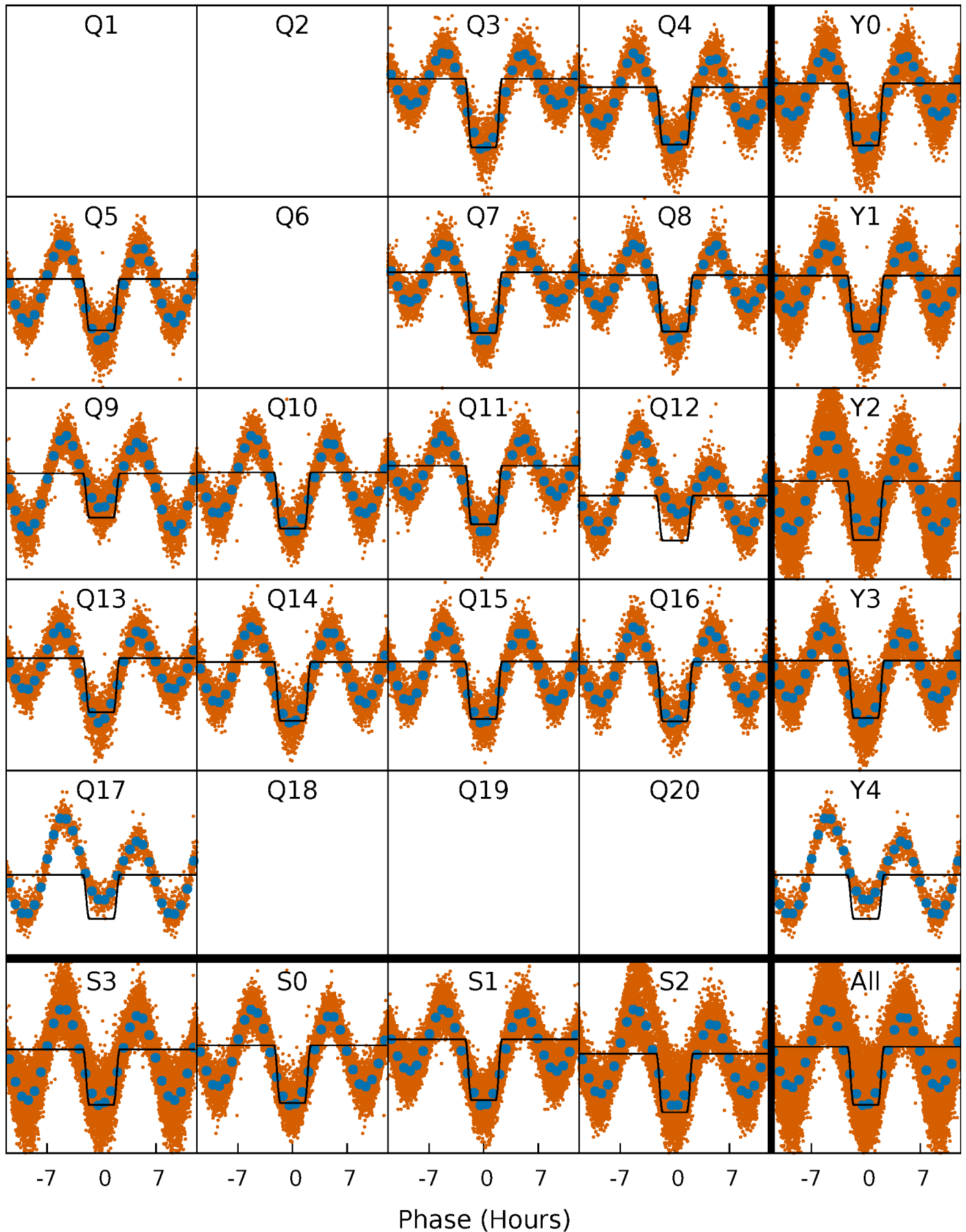
# DV Quarter-Phased Transit Curves

TCE 009593795-01 P= 0.785015 Days  $T_0=131.972096$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

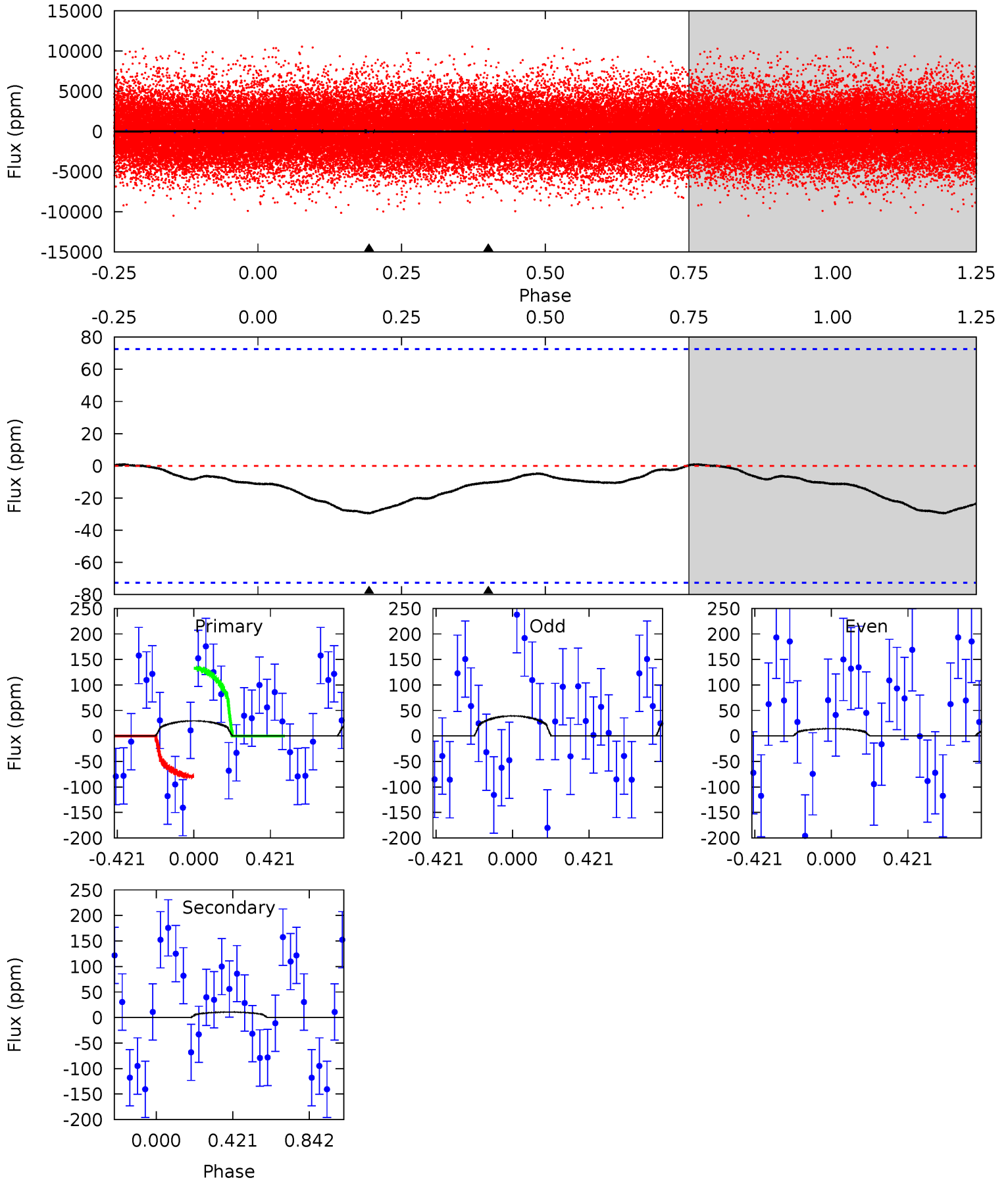
TCE 009593795-01   P= 0.785520 Days    $T_0=131.854146$  (BKJD)



# DV Model-Shift Uniqueness Test

009593795-01, P = 0.785015 Days, E = 131.972096 Days

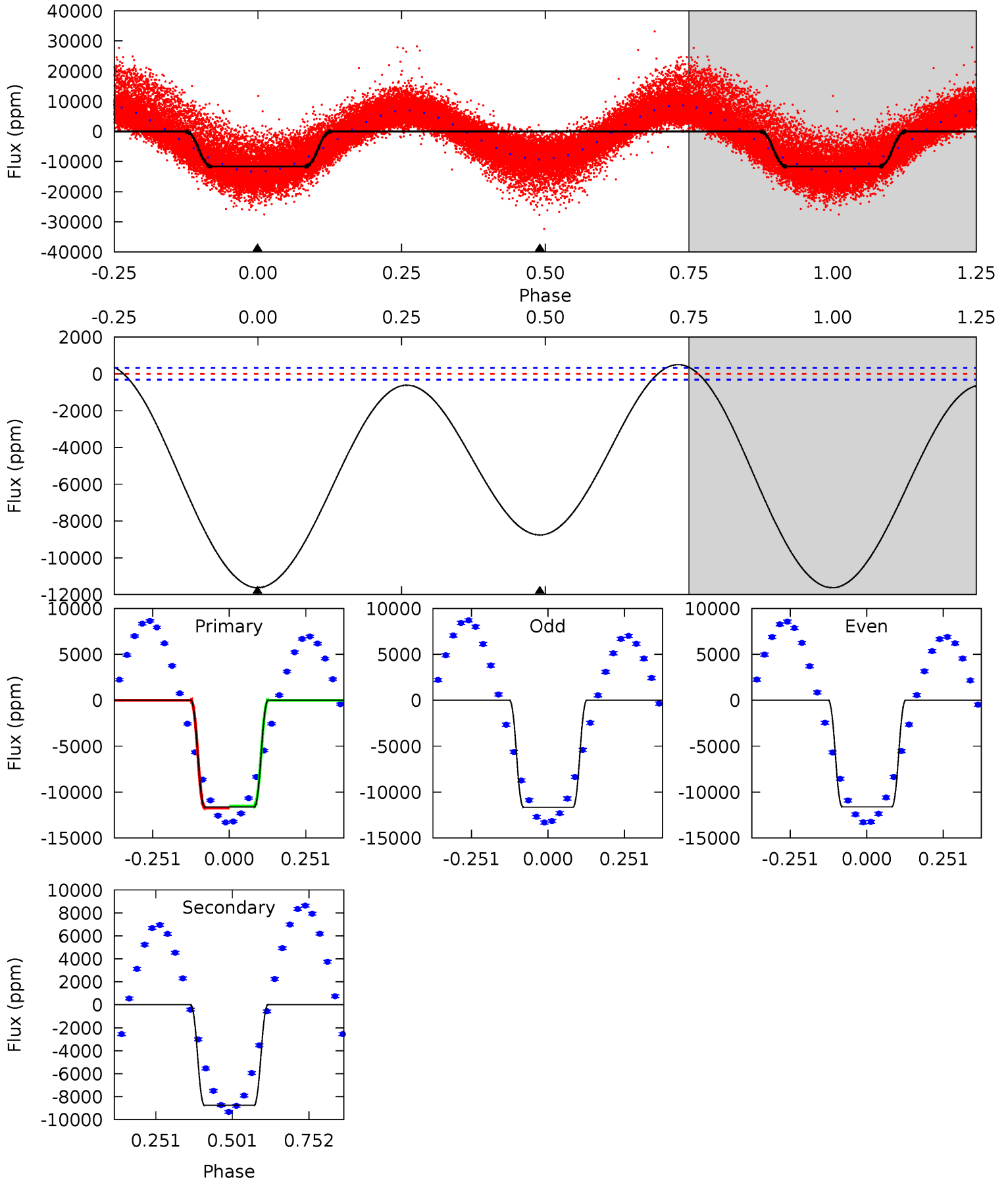
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.73	0.62	0	0	4.25	0.80	0.08	1.73	1.73	0.62	0.62	0.74	0.86	0.03	1.58



# Alt Model-Shift Uniqueness Test

009593795-01, P = 0.785520 Days, E = 131.854146 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
159.8	120.3	0	0	4.37	1.15	7.66	159.8	159.8	120.3	120.3	0.29	0.95	0.04	2.52



### Stellar Parameters For KIC 009593795

	$T_{\text{eff}}(K)$	$\log(g)$	[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 009593795-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-11 \pm 17$	$83.53^{+87.55}_{-59.87}$	$839^{+405}_{-171}$	$-1710^{+310}_{-320}$	$0.011^{+0.249}_{-0.022}$
Alt.	$-8757 \pm 73$	$91.04^{+93.48}_{-62.96}$	$854^{+438}_{-194}$	$2678^{+1190}_{-441}$	$17^{+200}_{-15}$

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



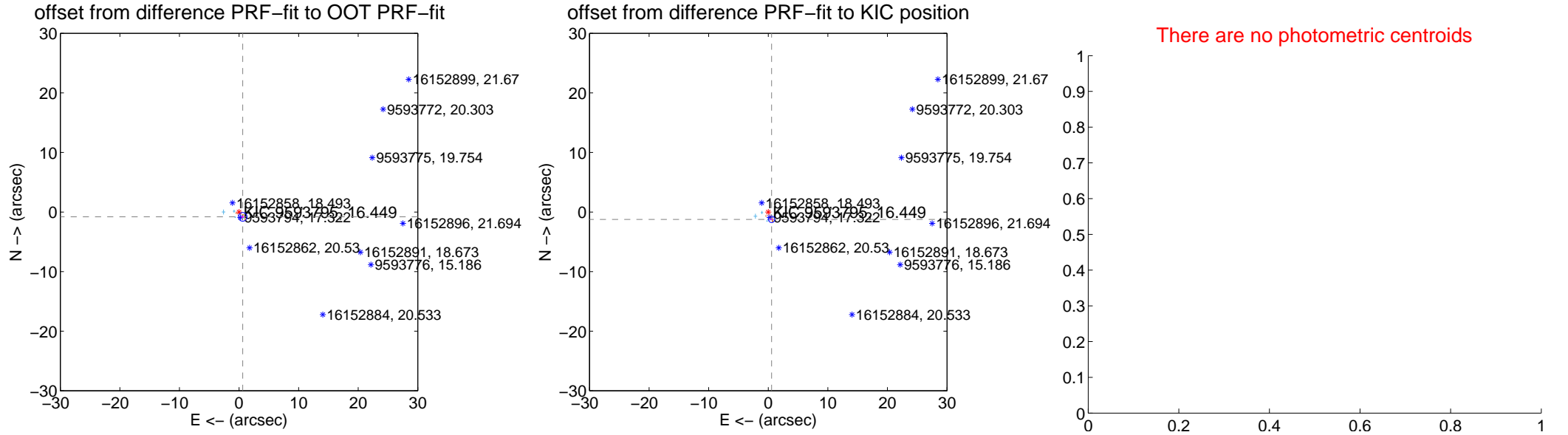
## DV Centroid Data

Supplemental centroid analysis for 009593795-01. Kepler magnitude: 16.45. Transit SNR 0.00

There are 7 quarters with good PRF difference image offsets

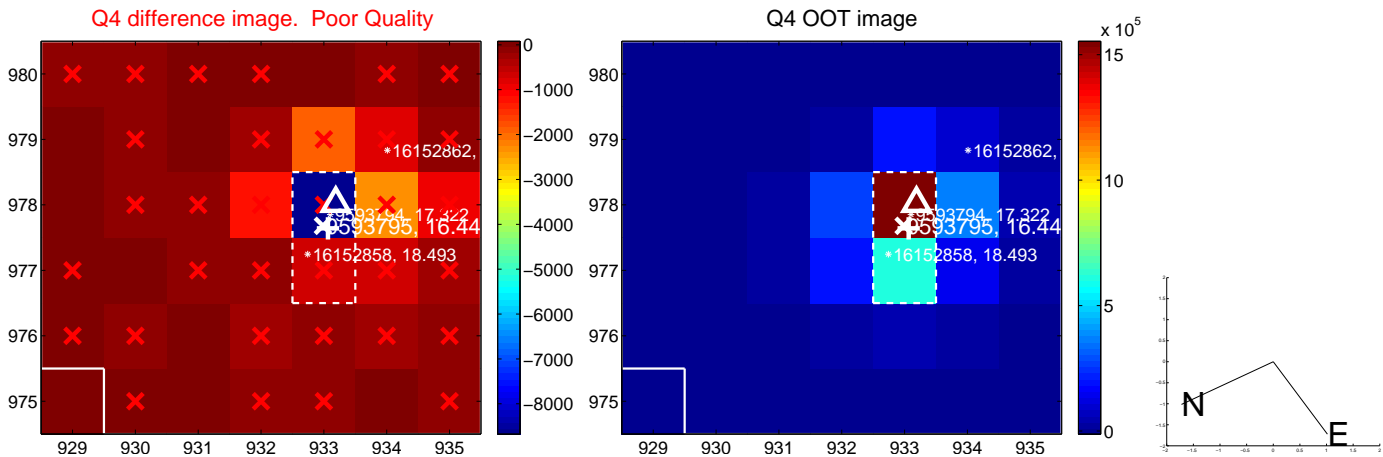
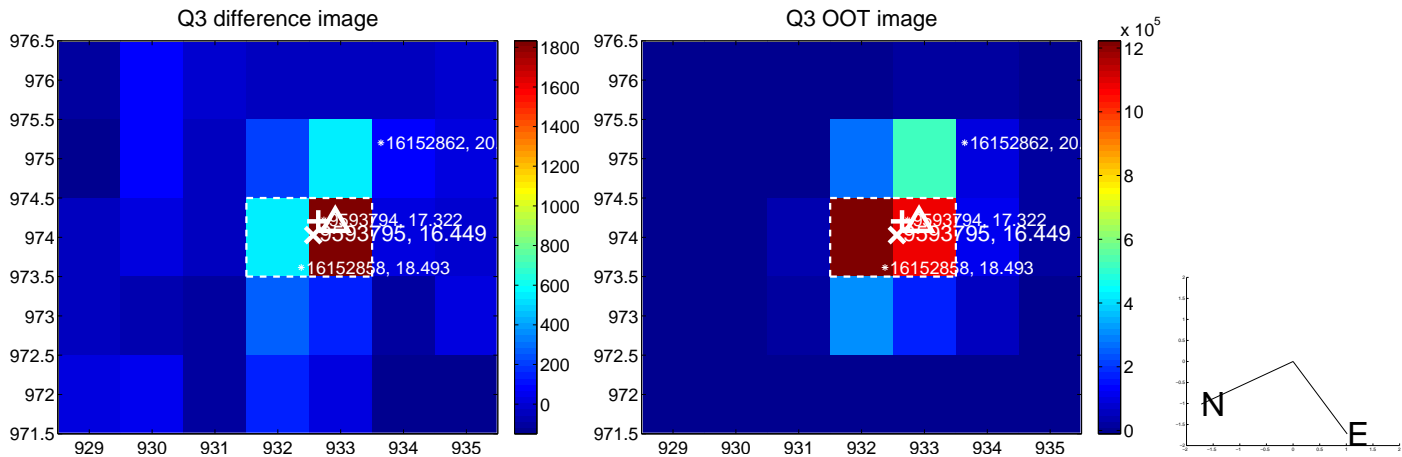
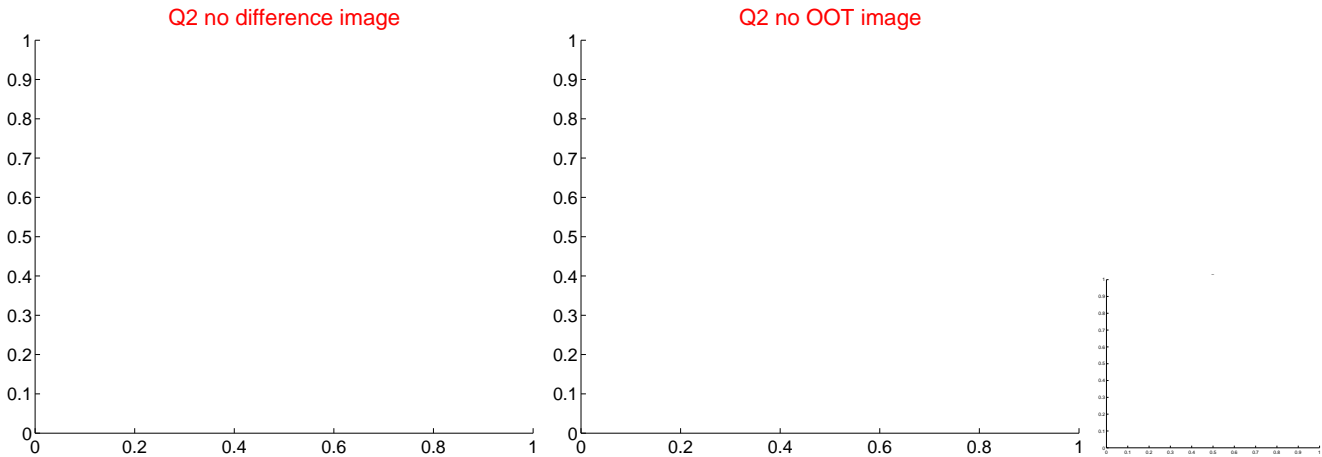
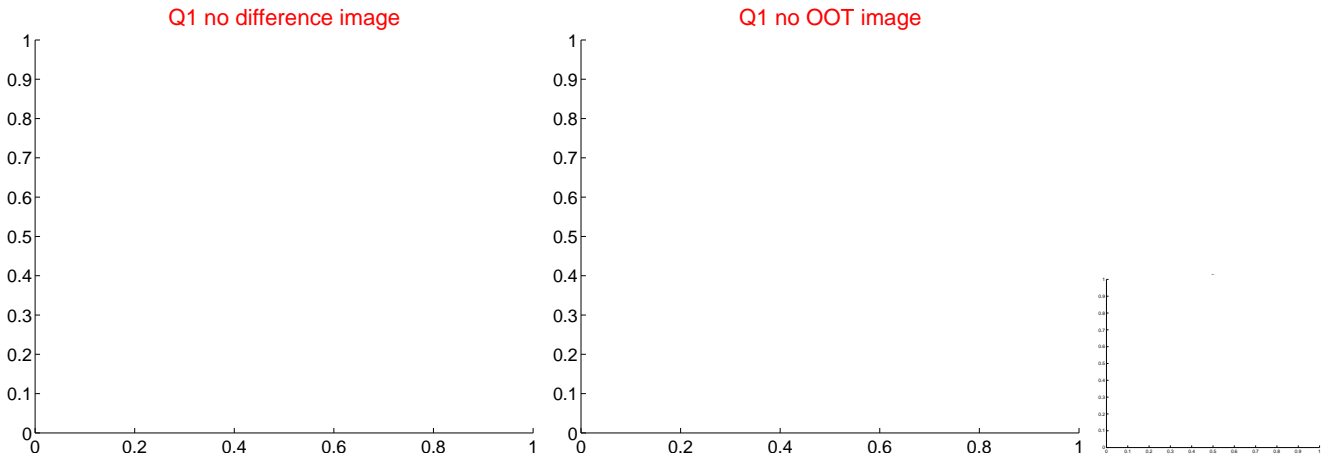
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.014 \pm 0.242$	4.18	$-0.612 \pm 0.266$	$-0.808 \pm 0.133$
PRF-fit source offset from KIC position	$1.361 \pm 0.176$	7.71	$-0.564 \pm 0.225$	$-1.238 \pm 0.120$
photometric centroid source offset	—	—	—	—

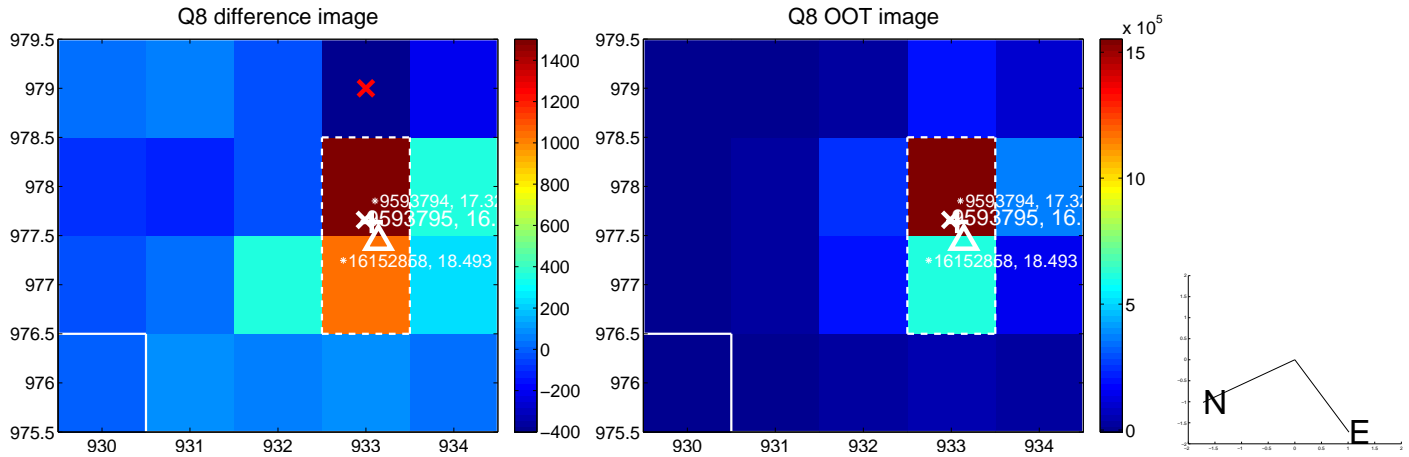
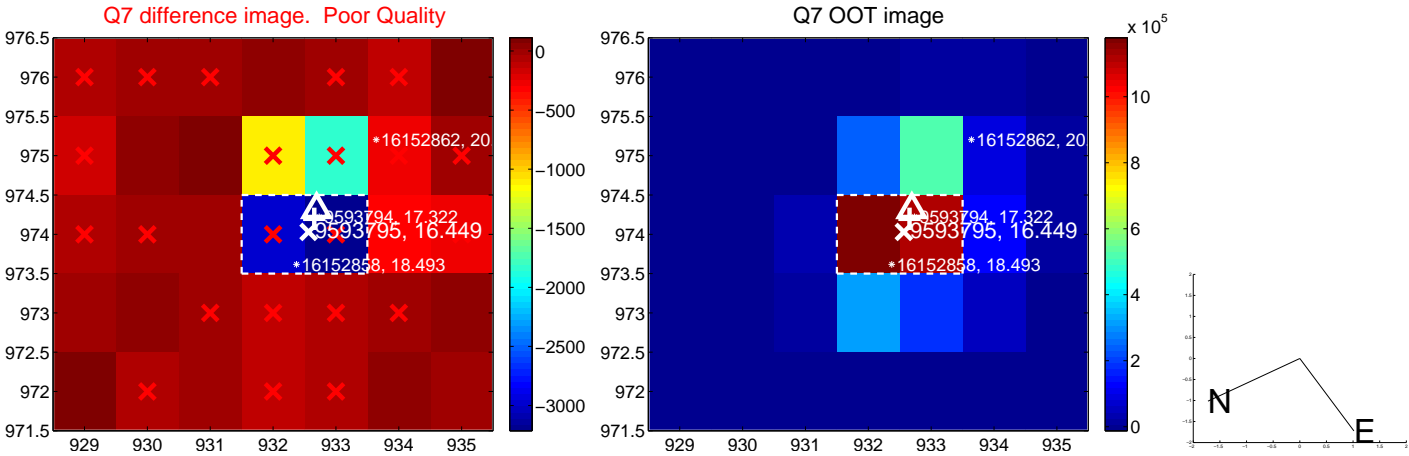
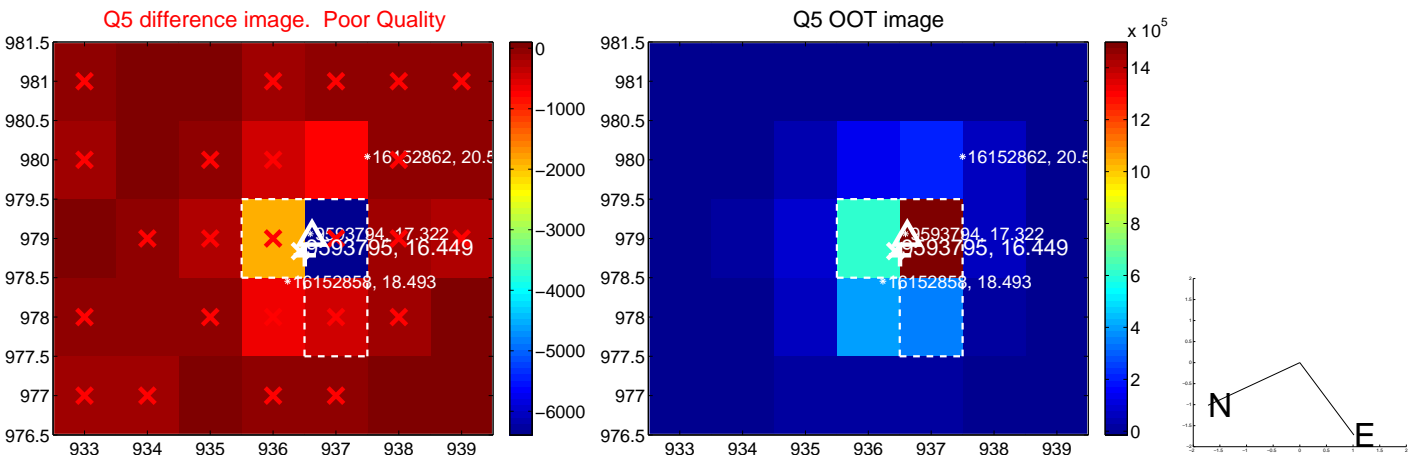


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

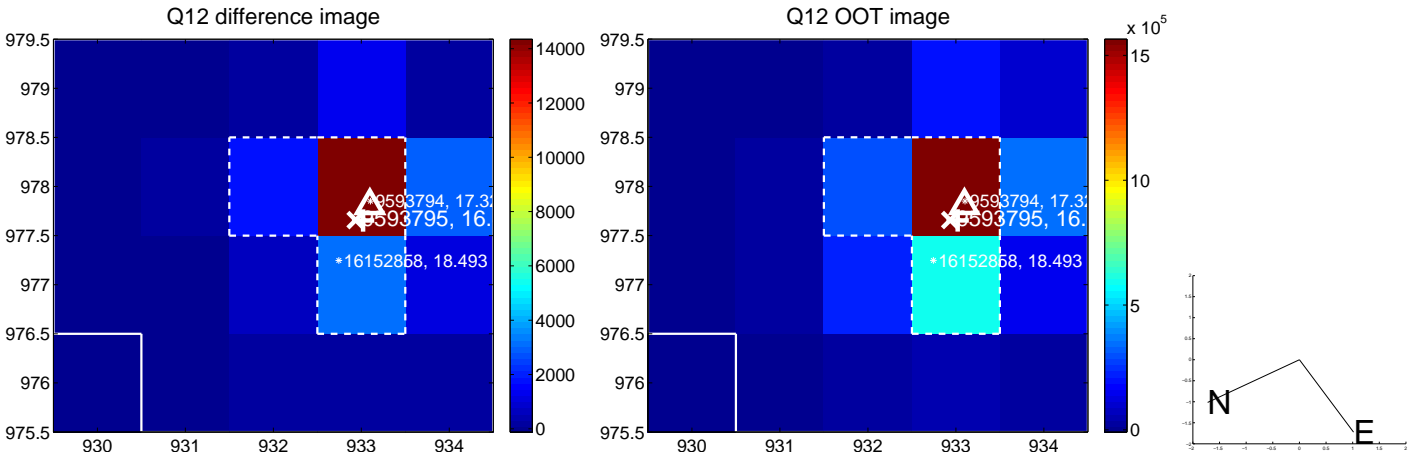
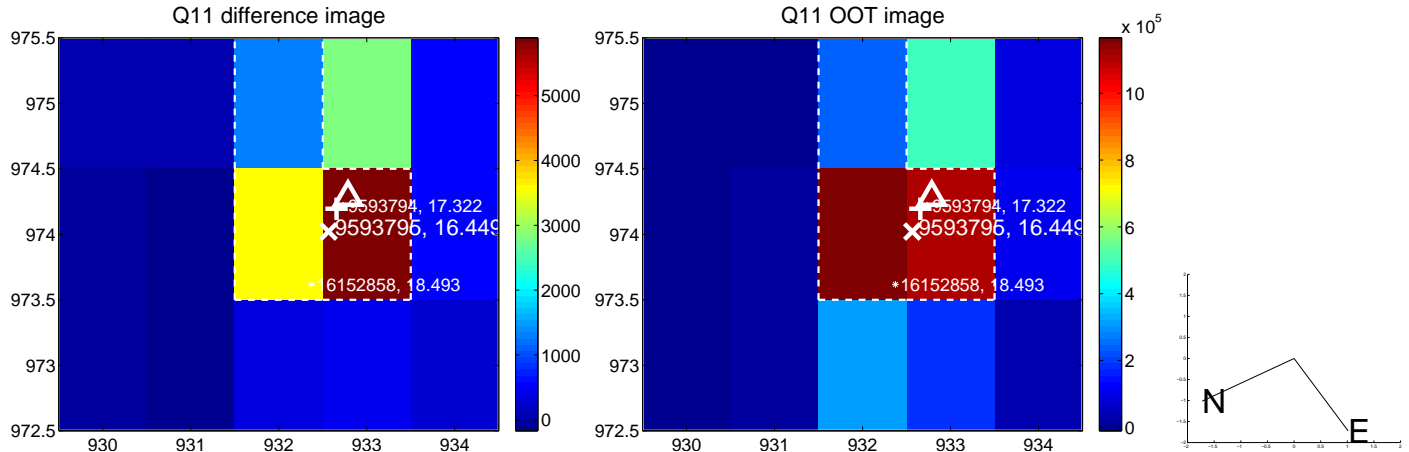
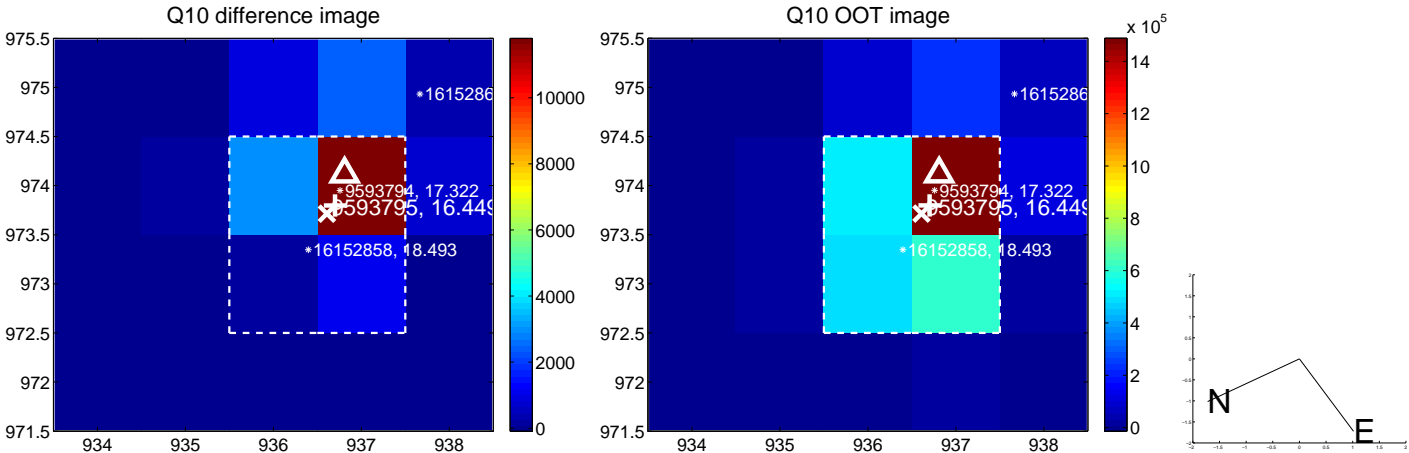
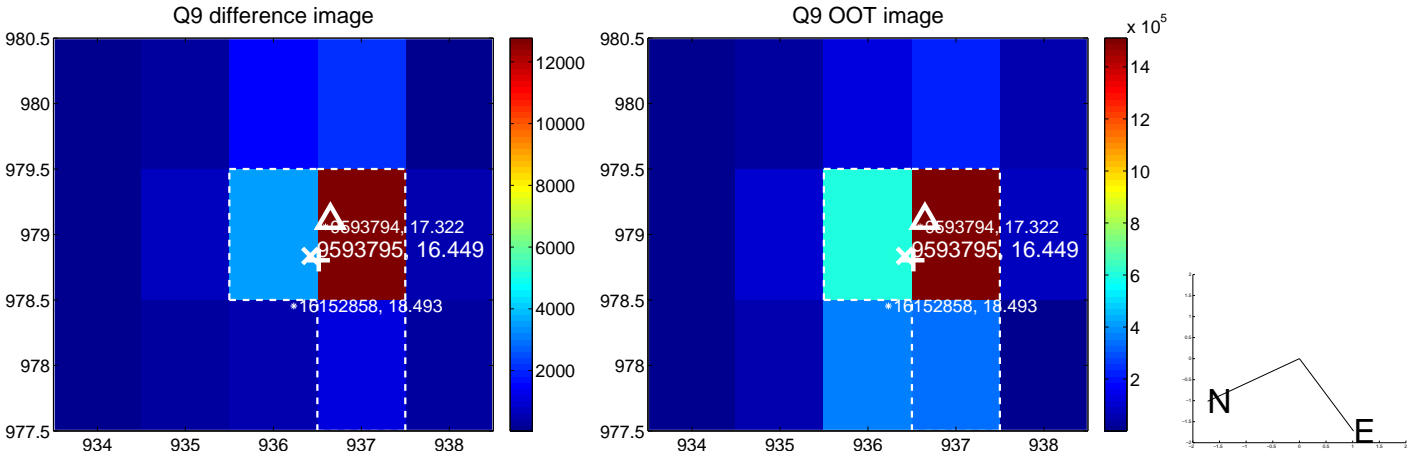
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



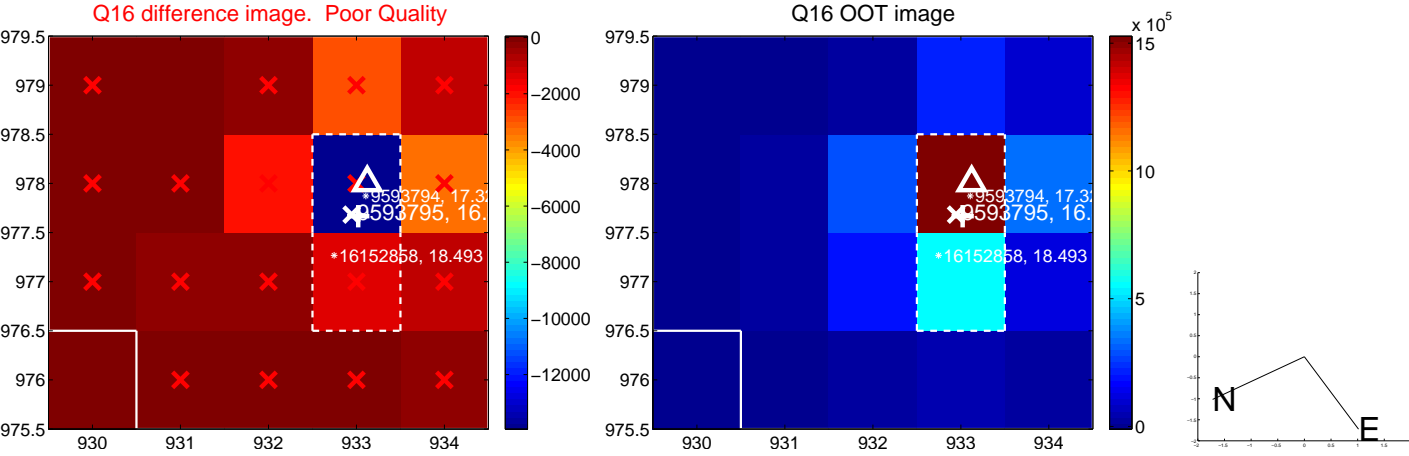
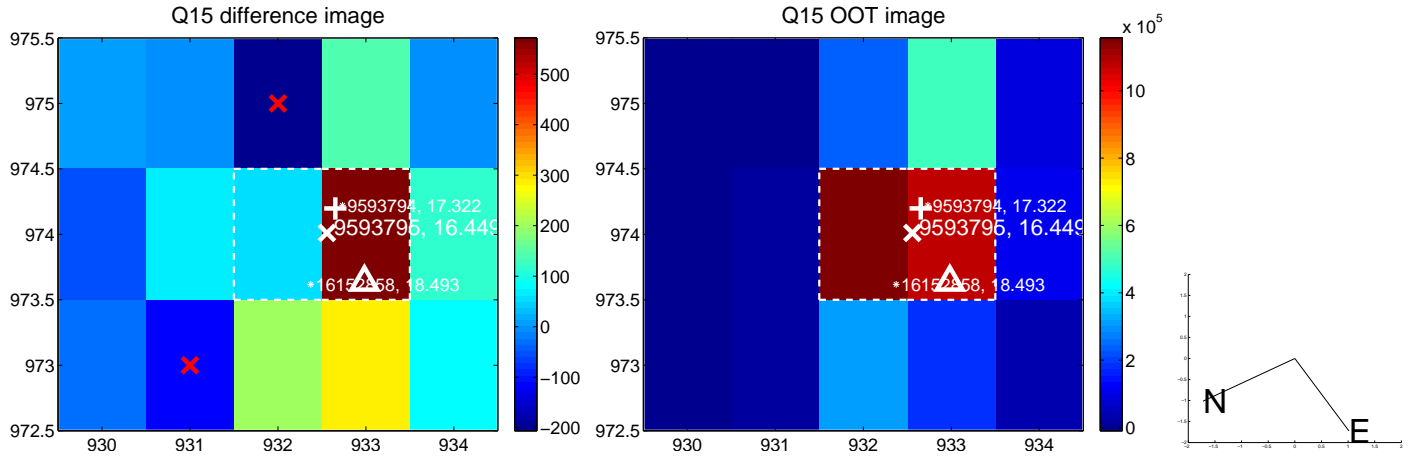
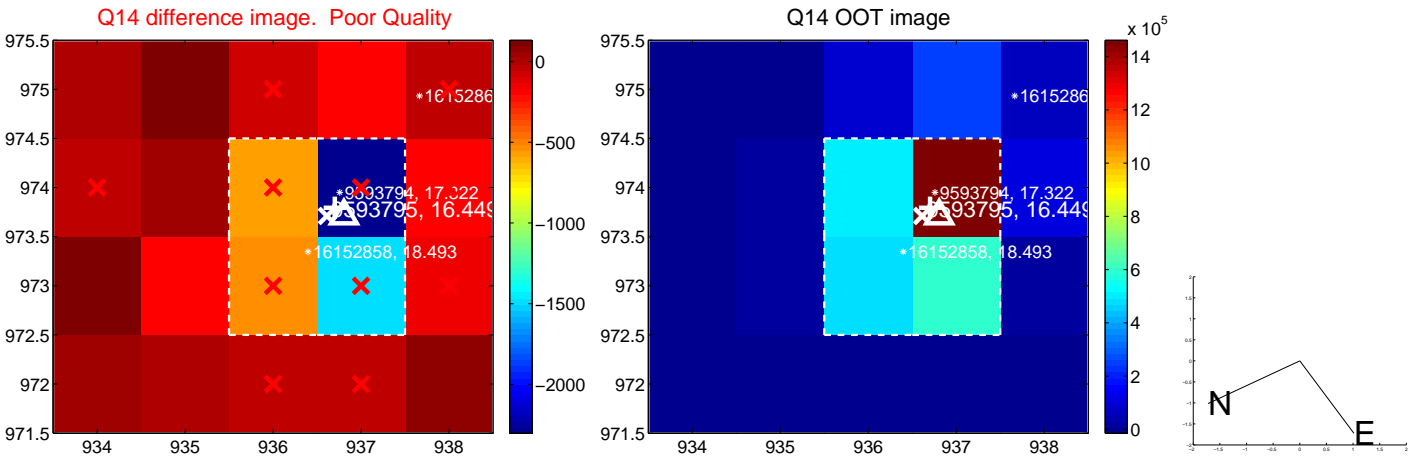
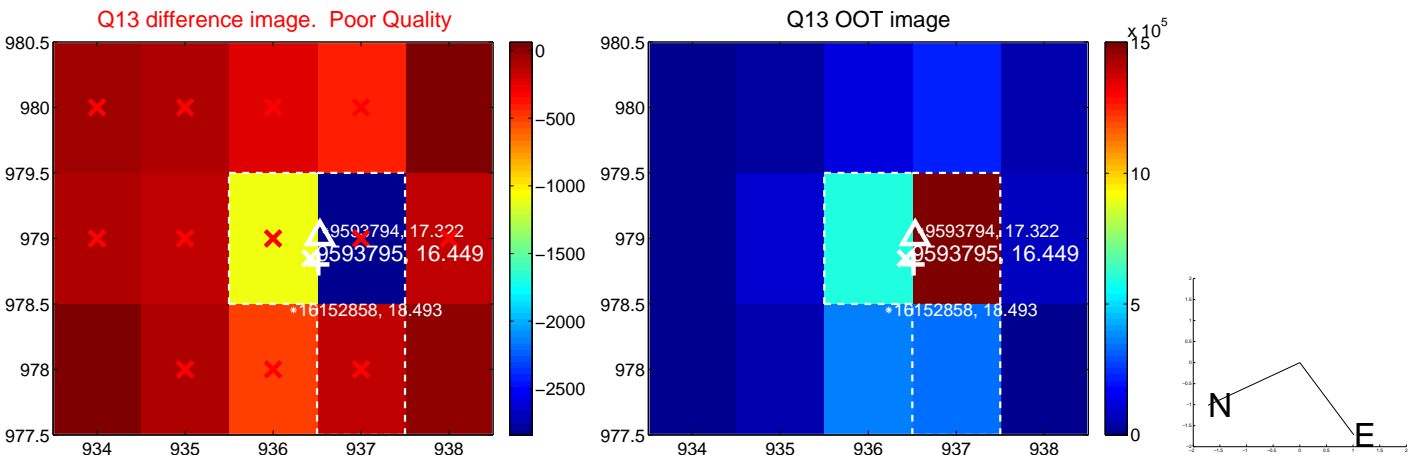
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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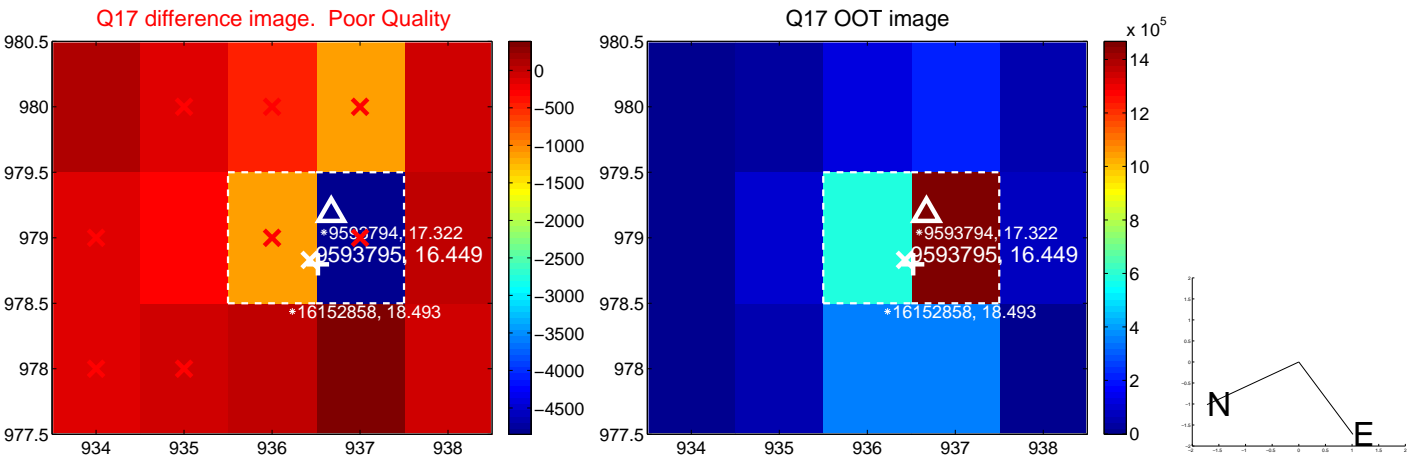


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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

