

# KIC 002995823

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
002995823-01	OBS	No	3.145791	133.521230	0.2	26.500	11.1	0.1	1.24	6571	0.06	1349.26

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002995823-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

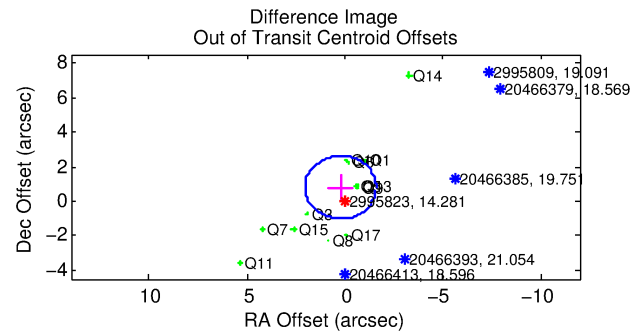
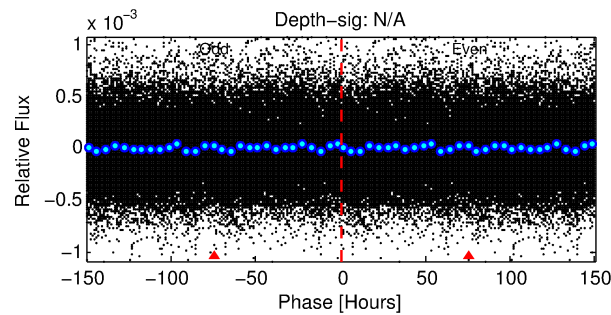
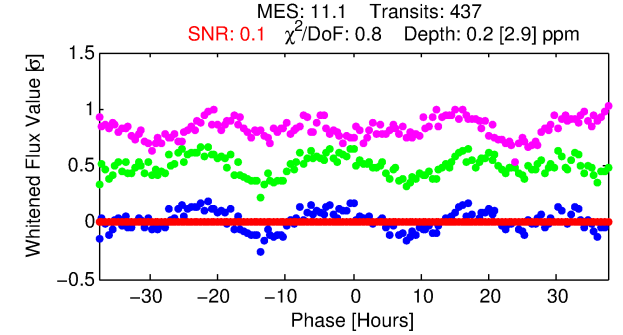
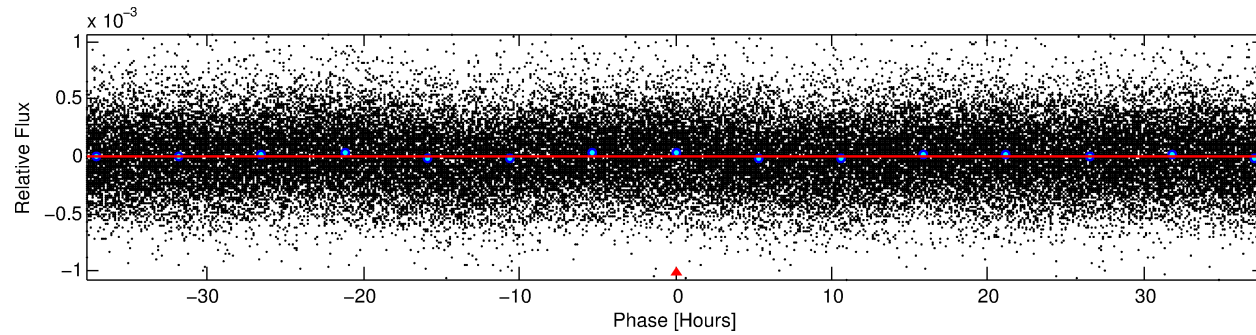
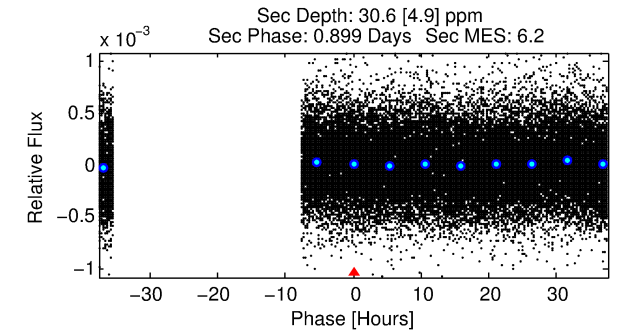
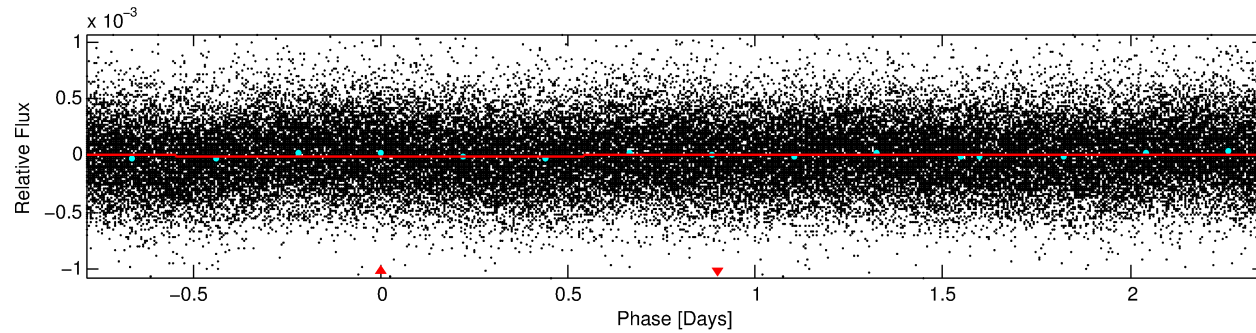
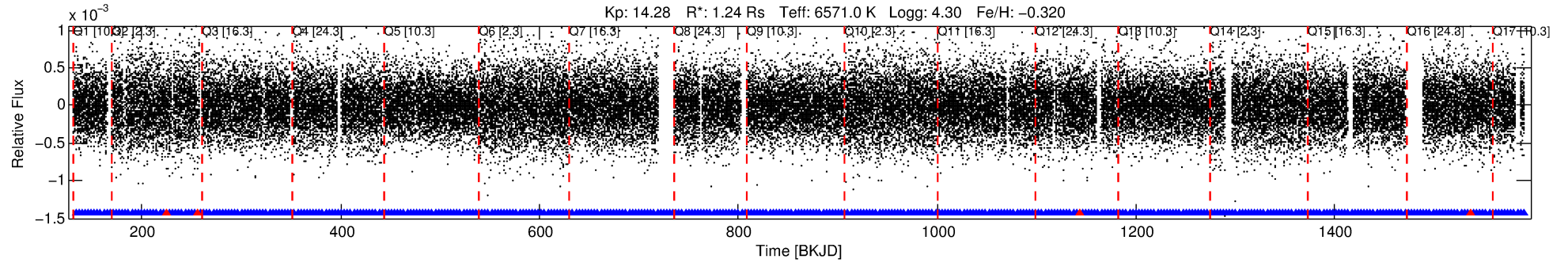
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 002995823-01

No Significant Match Found

# DV One-Page Summary

KIC: 2995823 Candidate: 1 of 1 Period: 3.146 d



## DV Fit Results:

Period = 3.14579 [0.01016] d  
Epoch = 133.5212 [2.0608] BKJD  
Rp/R\* = 0.0004 [0.0208]  
a/R\* = 1.12 [60.31]  
b = 0.00 [124889.65]  
Seff = 1349.26 [279.48]  
Teff = 1545 [80] K  
Rp = 0.06 [2.83] Re  
a = 0.0437 [0.0058] AU  
Ag = 9386.97 [905176.65] [0.01σ]  
Teffp = 23519 [566984] K [0.04σ]

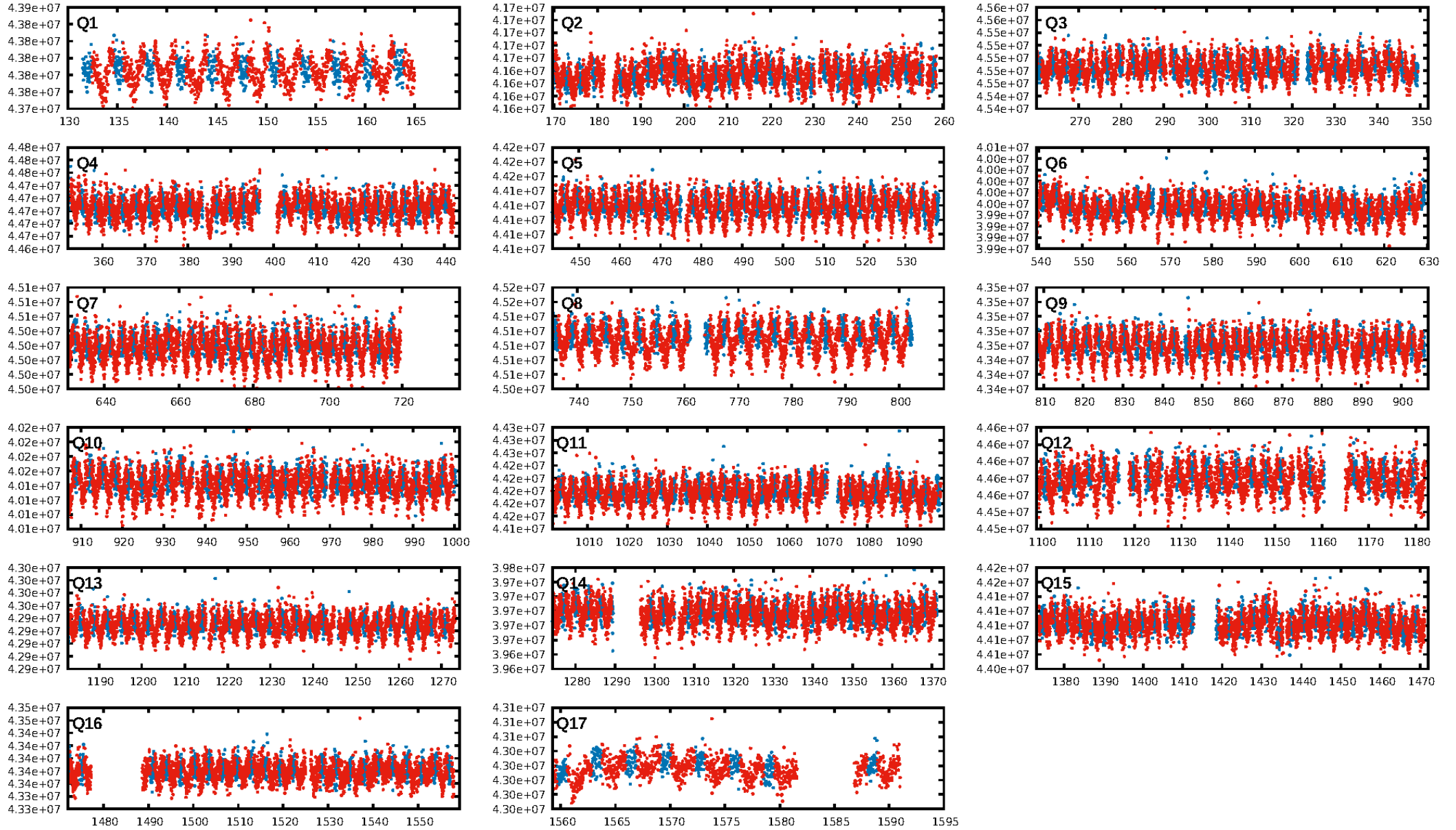
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [413/417]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 0.830 arcsec [1.37σ]  
KicOffset-rm: 0.871 arcsec [1.40σ]  
OotOffset-st: 3/4/1/5 [13]  
KicOffset-st: 3/4/1/5 [13]  
DiffImageQuality-fgm: 0.69 [9/13]  
DiffImageOverlap-fno: 1.00 [17/17]

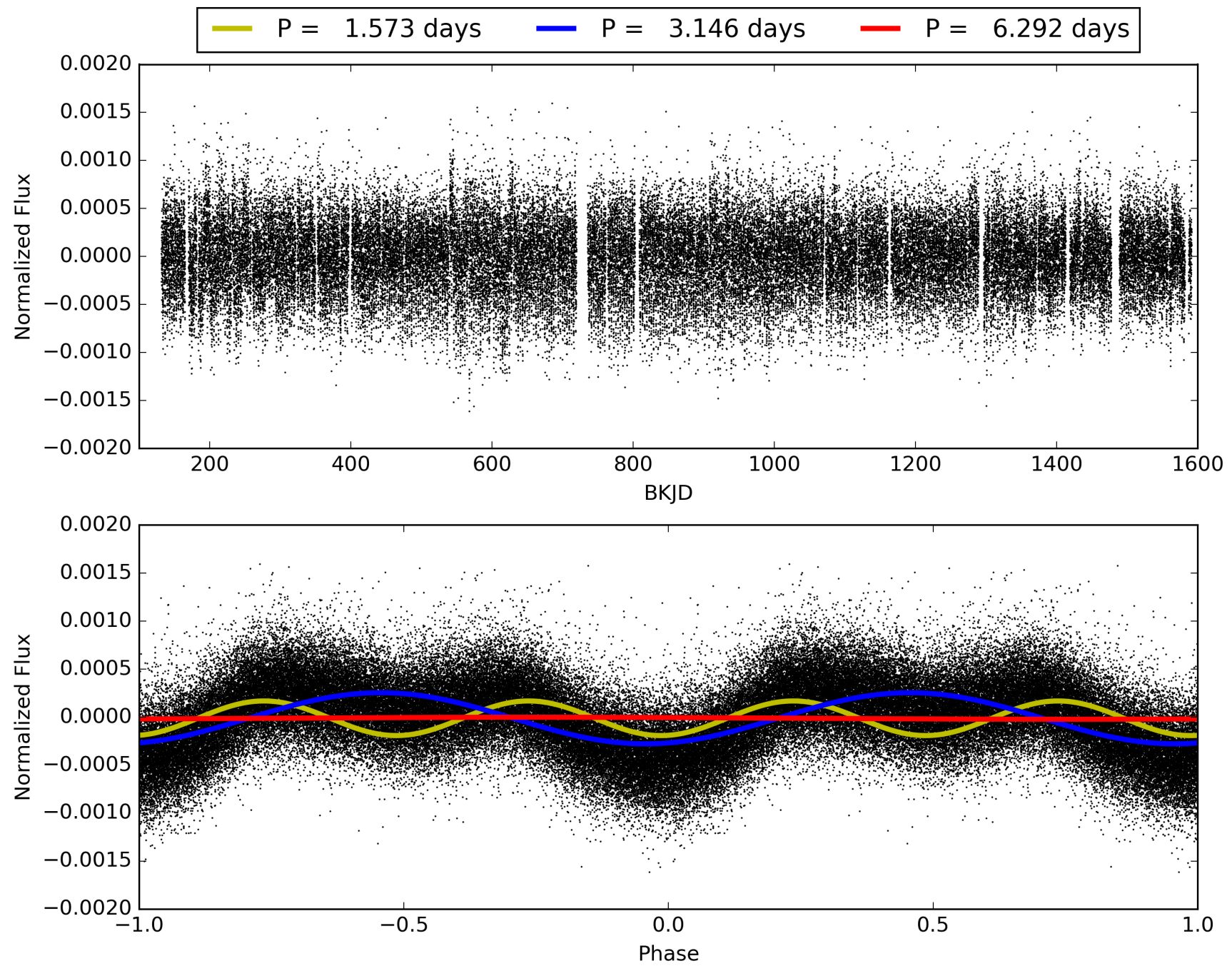
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:54:19 Z

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

# TCE 002995823-01, PDC Light Curves



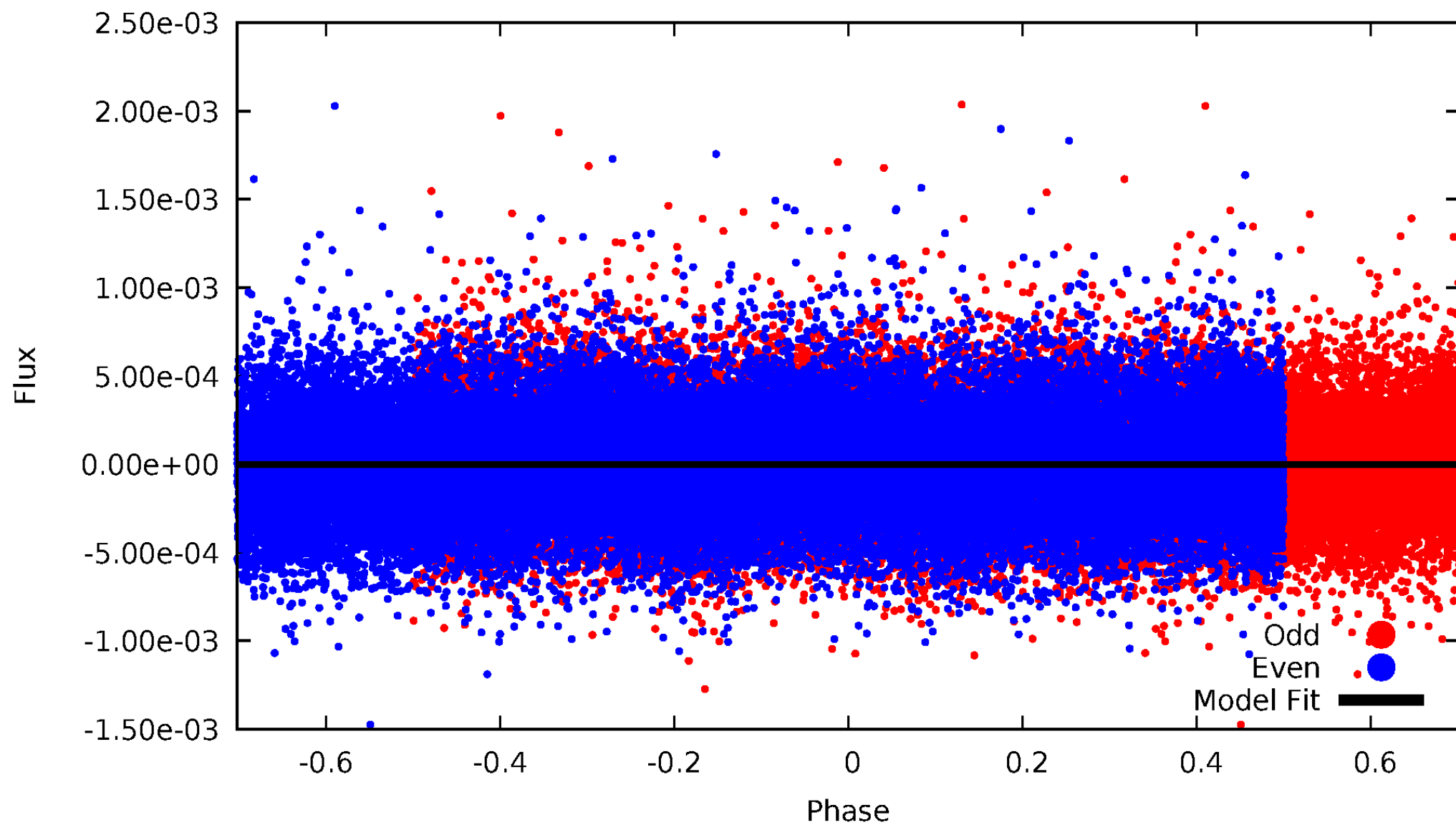
TCE 002995823-01





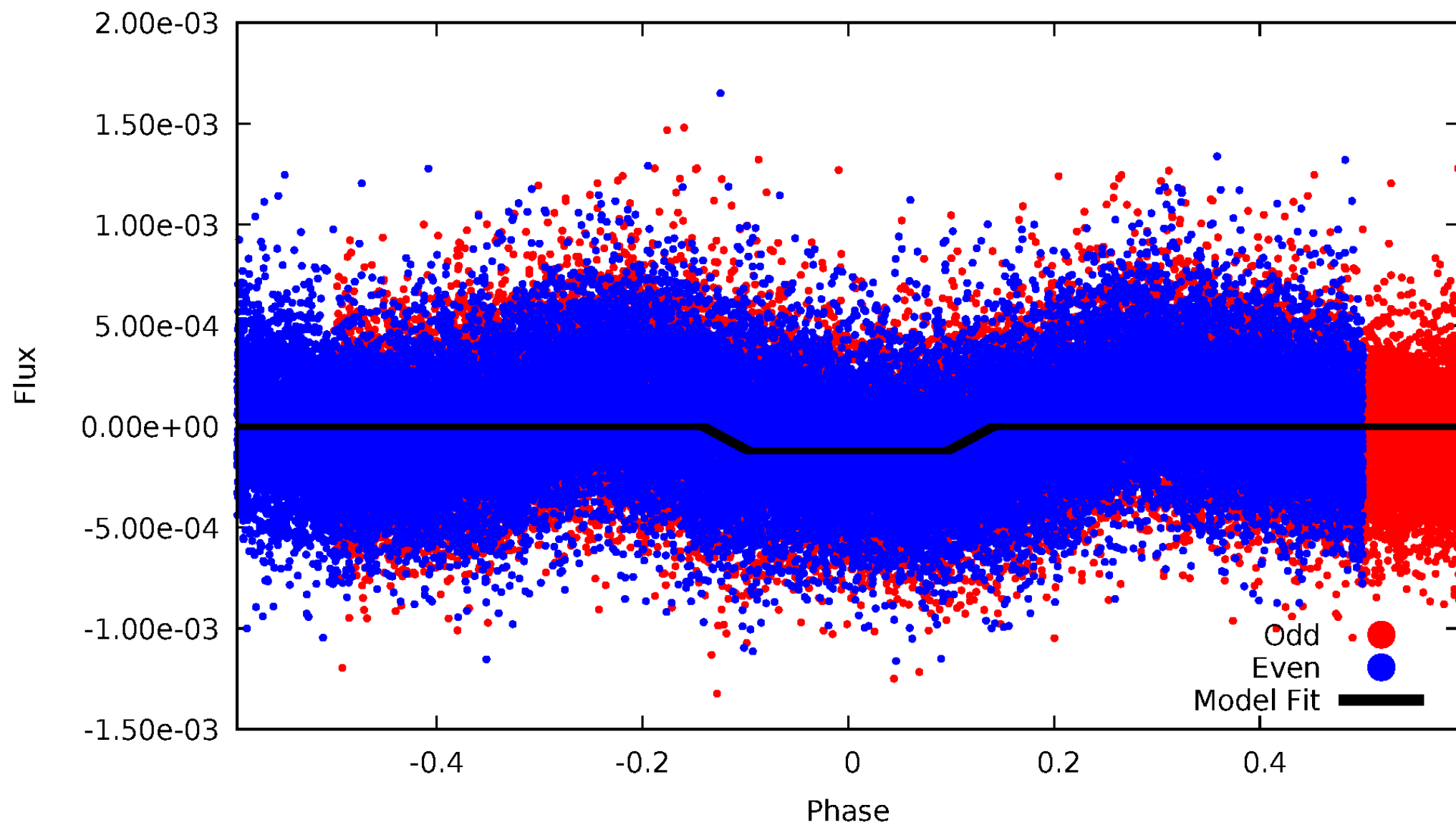
# DV Odd/Even

TCE 002995823-01



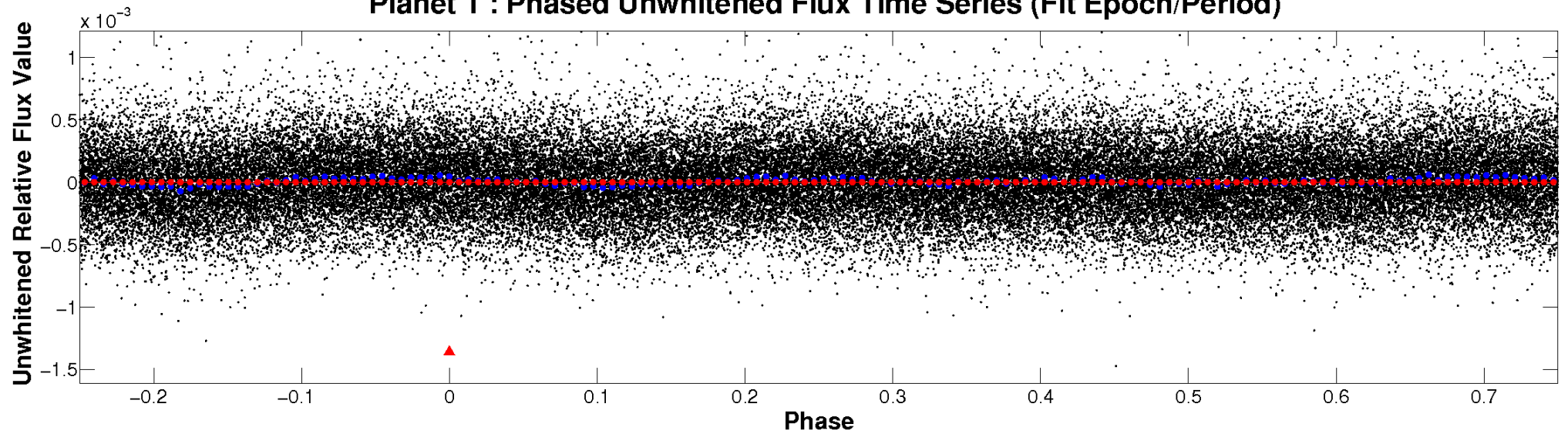
# ALT Odd/Even

TCE 002995823-01

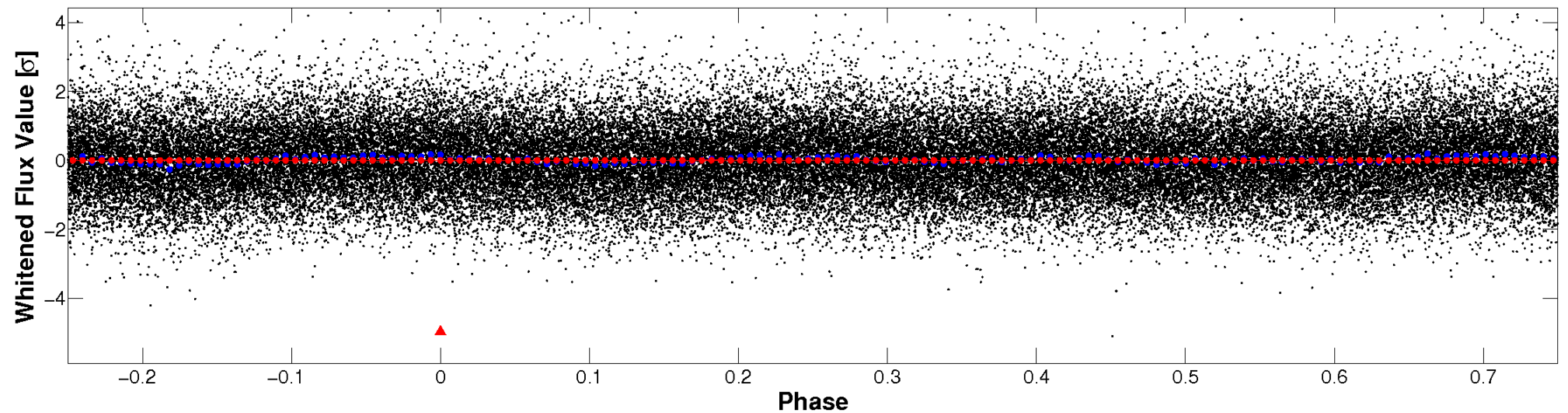


# Non-Whitened Vs. Whitened Light Curve

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

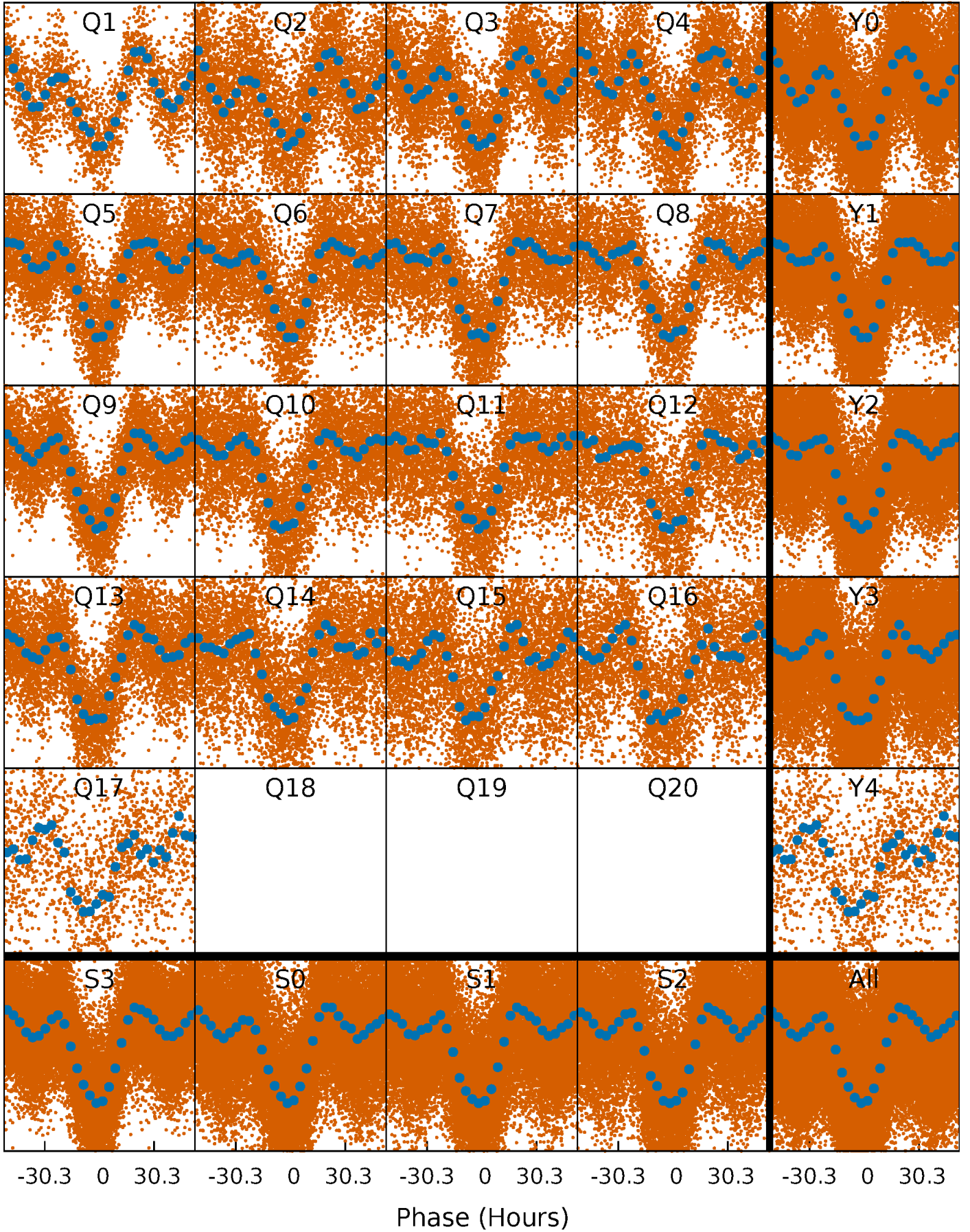


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

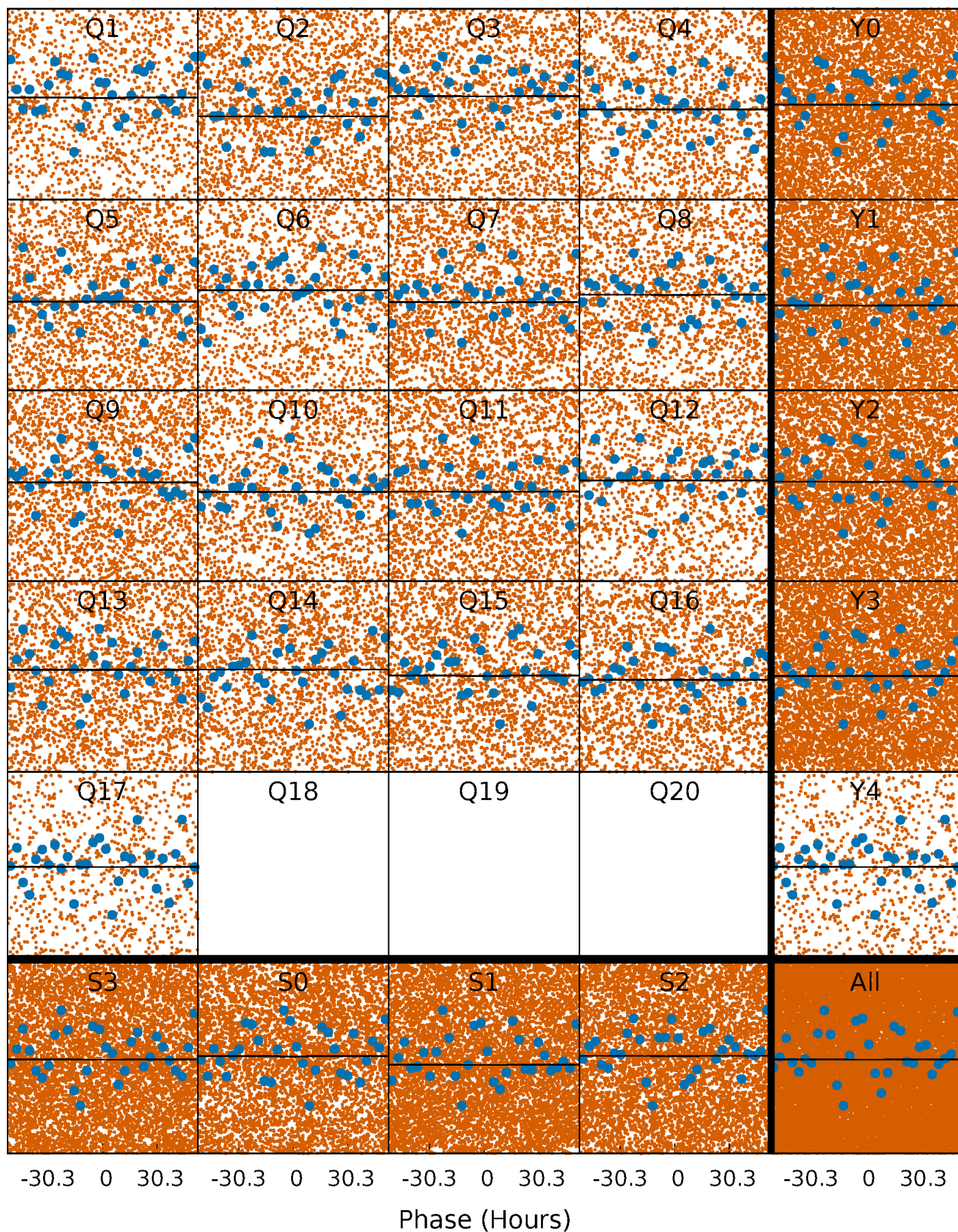
TCE 002995823-01 P= 3.145791 Days  $T_0=133.521230$  (BKJD)





# DV Quarter-Phased Transit Curves

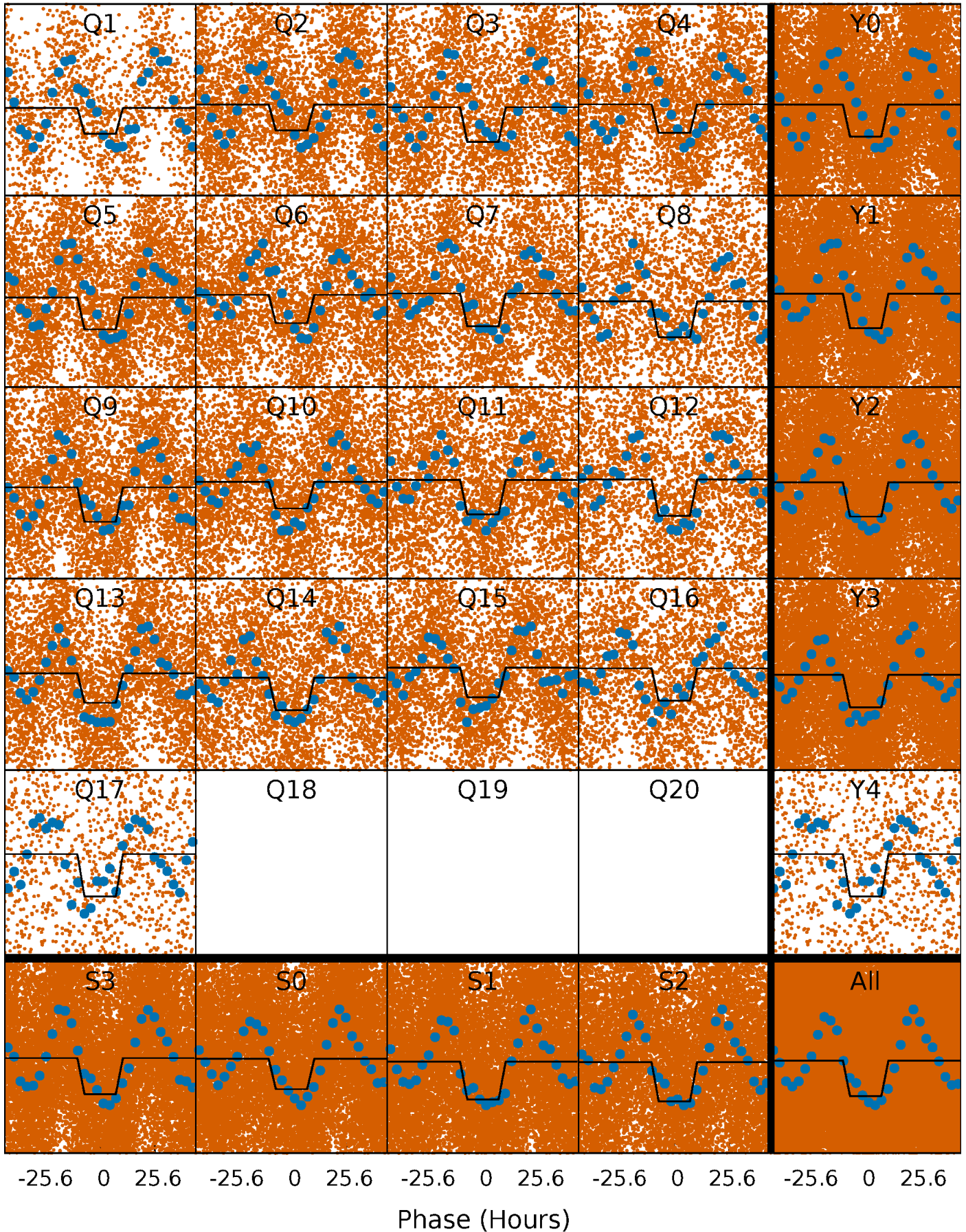
TCE 002995823-01 P= 3.145791 Days  $T_0=133.521230$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

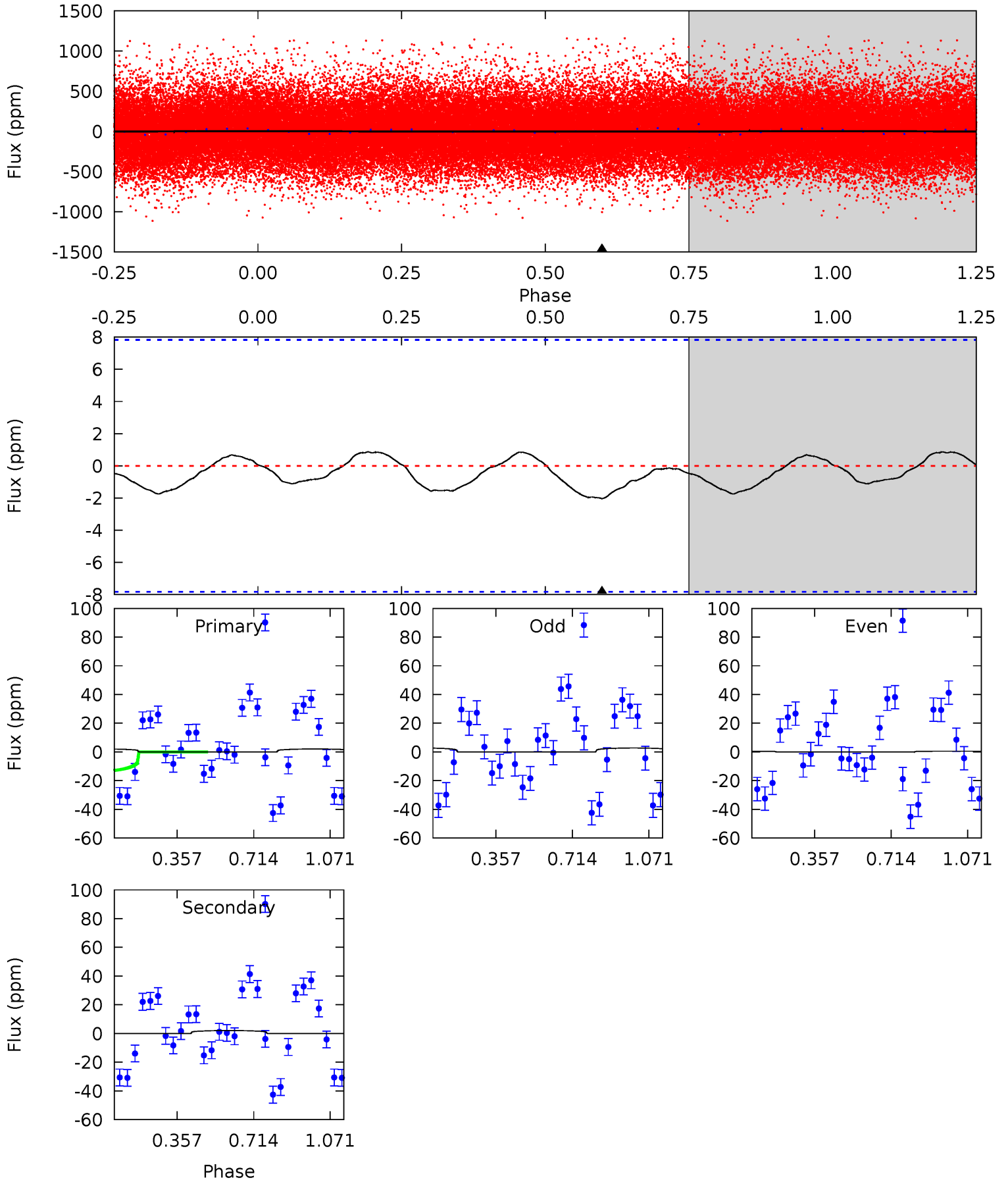
TCE 002995823-01 P= 3.146134 Days  $T_0=133.277069$  (BKJD)



# DV Model-Shift Uniqueness Test

002995823-01, P = 3.145791 Days, E = 130.375439 Days

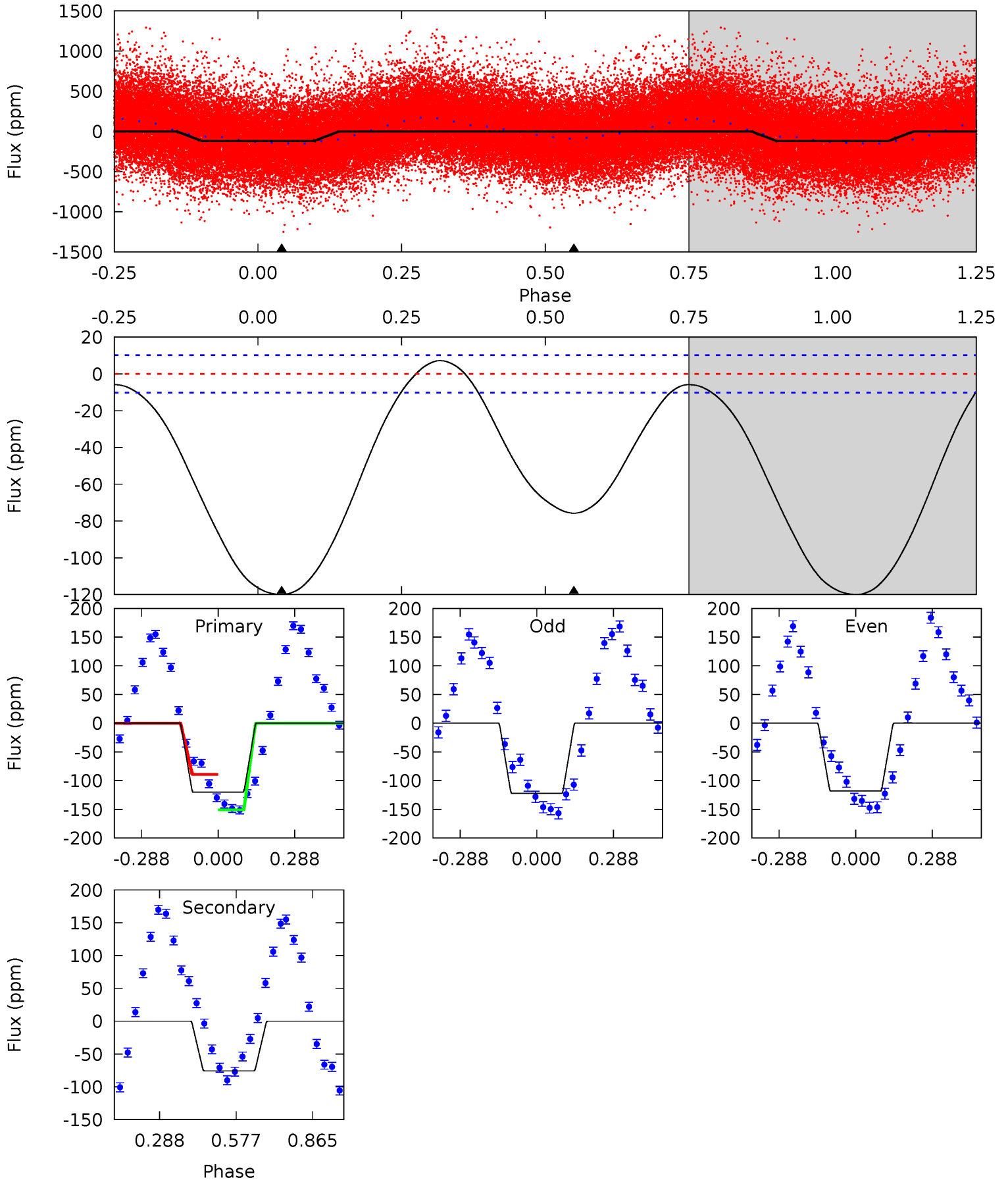
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.11	1.11	0	0	4.29	0.92	0.37	1.11	1.11	1.11	1.11	0.61	0.97	0.30	0.93



# Alt Model-Shift Uniqueness Test

002995823-01, P = 3.146134 Days, E = 130.130935 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
50.9	32.2	0	0	4.34	1.06	3.59	50.9	50.9	32.2	32.2	0.89	1.05	0.06	15.0





### Stellar Parameters For KIC 002995823

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6571^{+72}_{-79}$	$4.301^{+0.076}_{-0.114}$	$-0.320^{+0.150}_{-0.150}$	$1.243^{+0.186}_{-0.124}$	$1.129^{+0.081}_{-0.073}$	$0.828^{+0.252}_{-0.272}$
	+1%/-1%	+2%/-3%	+47%/-47%	+15%/-10%	+7%/-6%	+30%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 002995823-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-2\pm2$	$2.02^{+2.31}_{-1.37}$	$2173^{+84}_{-76}$	$2345^{+1451}_{-4927}$	$0.433^{+3.742}_{-0.406}$
Alt.	$-76\pm2$	$2.69^{+2.33}_{-1.81}$	$2166^{+92}_{-66}$	$4552^{+3285}_{-962}$	$11^{+94}_{-8}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

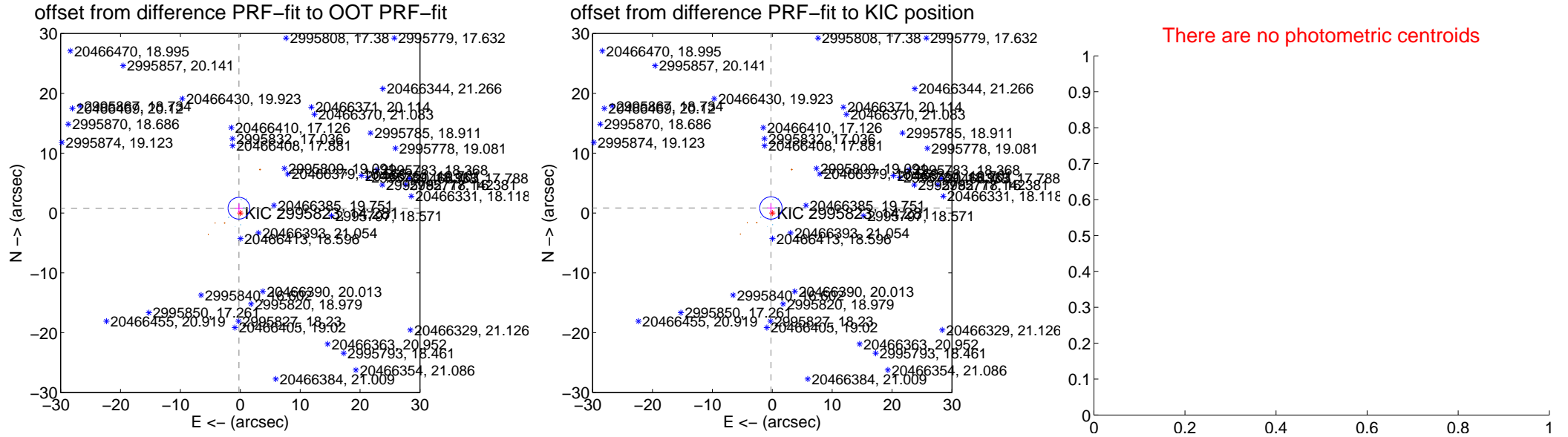
## DV Centroid Data

Supplemental centroid analysis for 002995823-01. Kepler magnitude: 14.28. Transit SNR 0.08

There are 9 quarters with good PRF difference image offsets

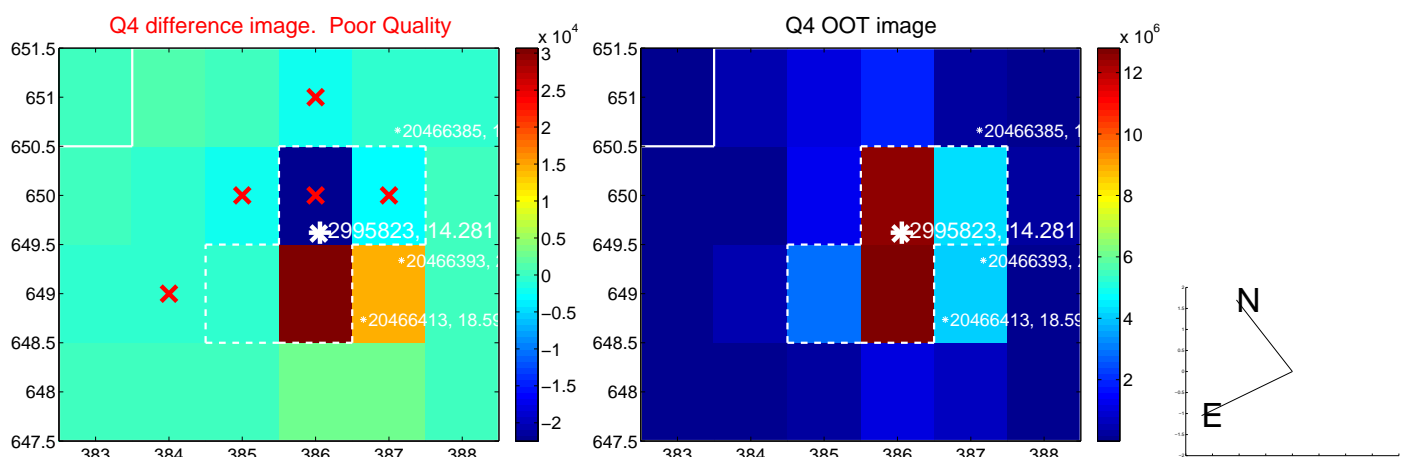
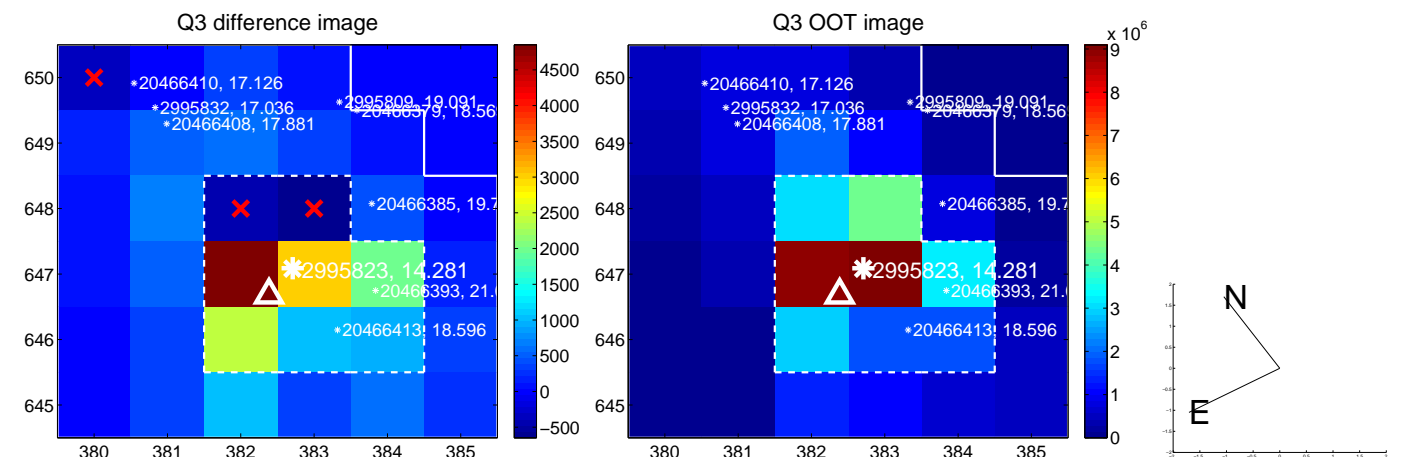
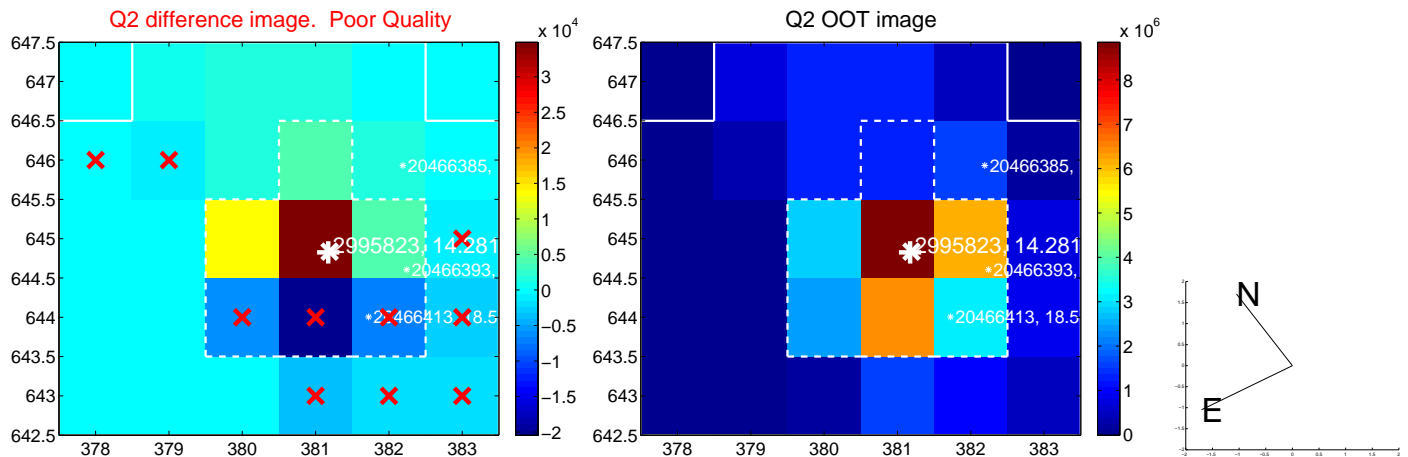
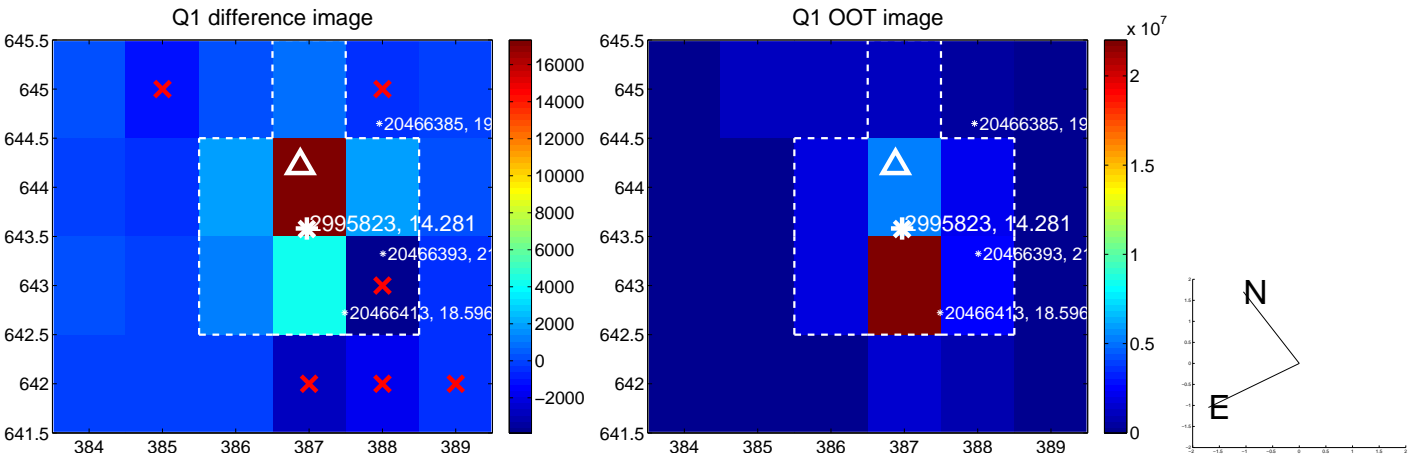
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.830 \pm 0.606$	1.37	$0.227 \pm 0.646$	$0.798 \pm 0.766$
PRF-fit source offset from KIC position	$0.871 \pm 0.623$	1.40	$0.225 \pm 0.626$	$0.841 \pm 0.779$
photometric centroid source offset	—	—	—	—

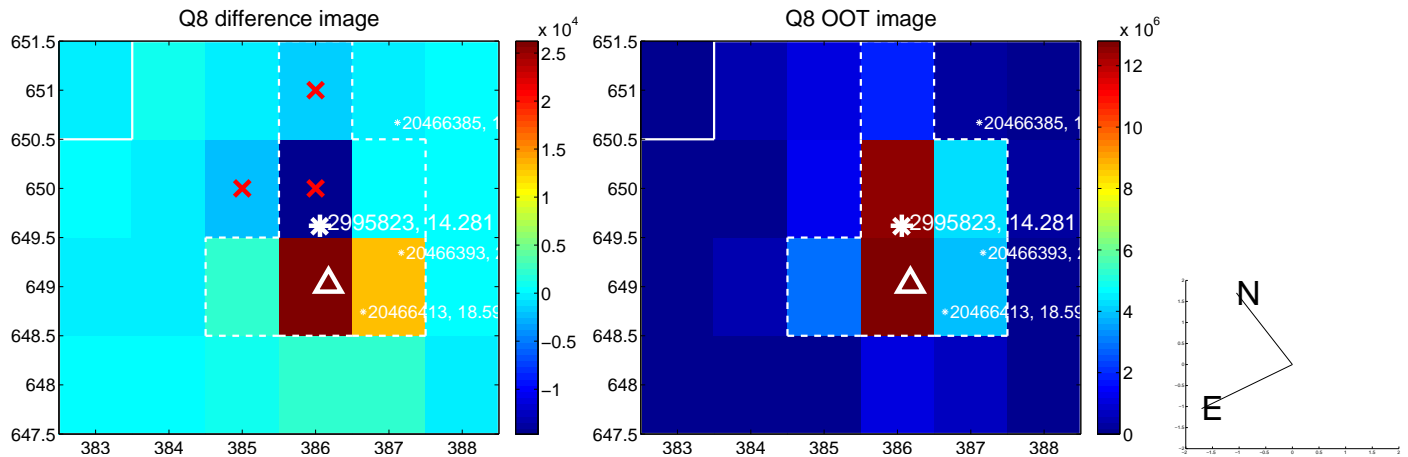
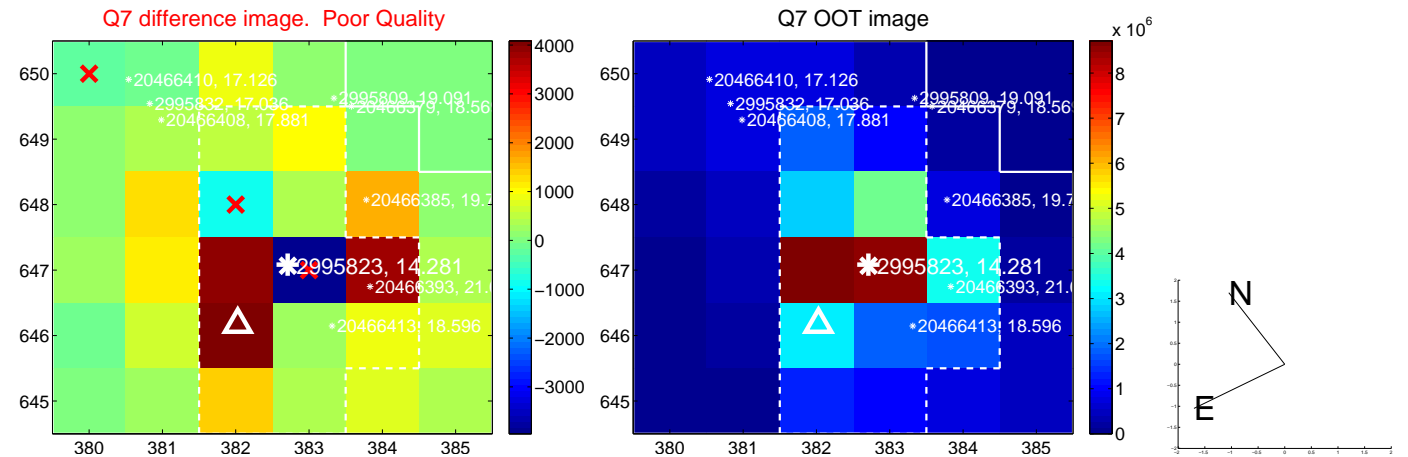
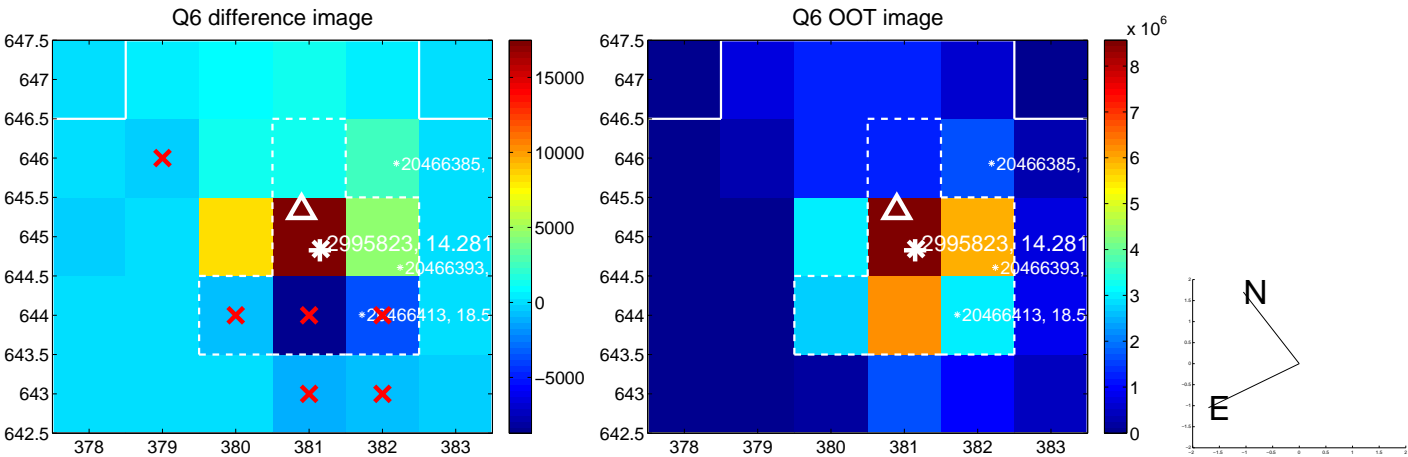
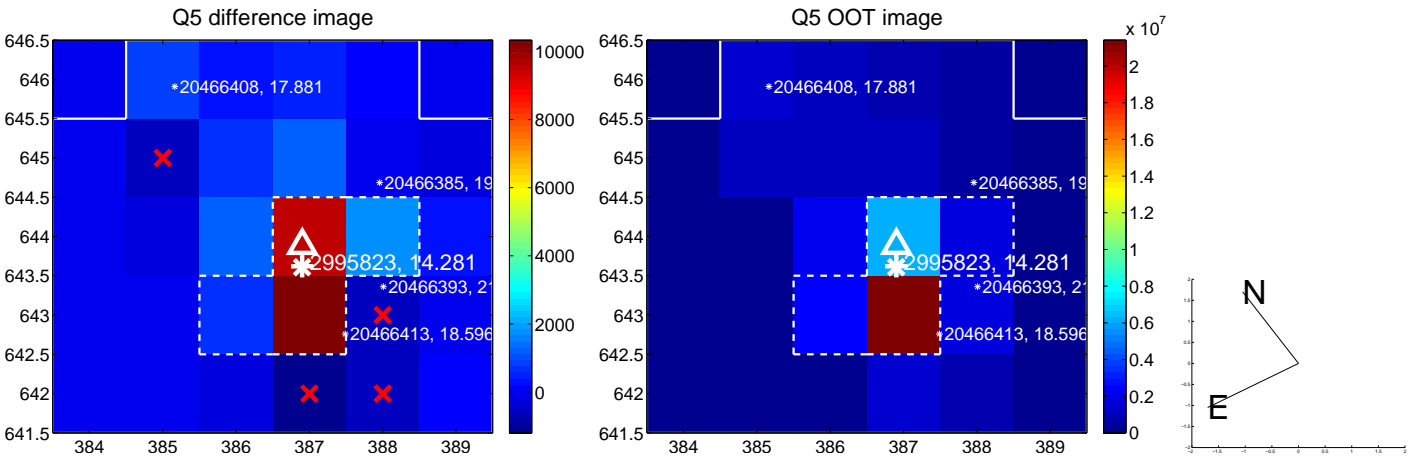


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

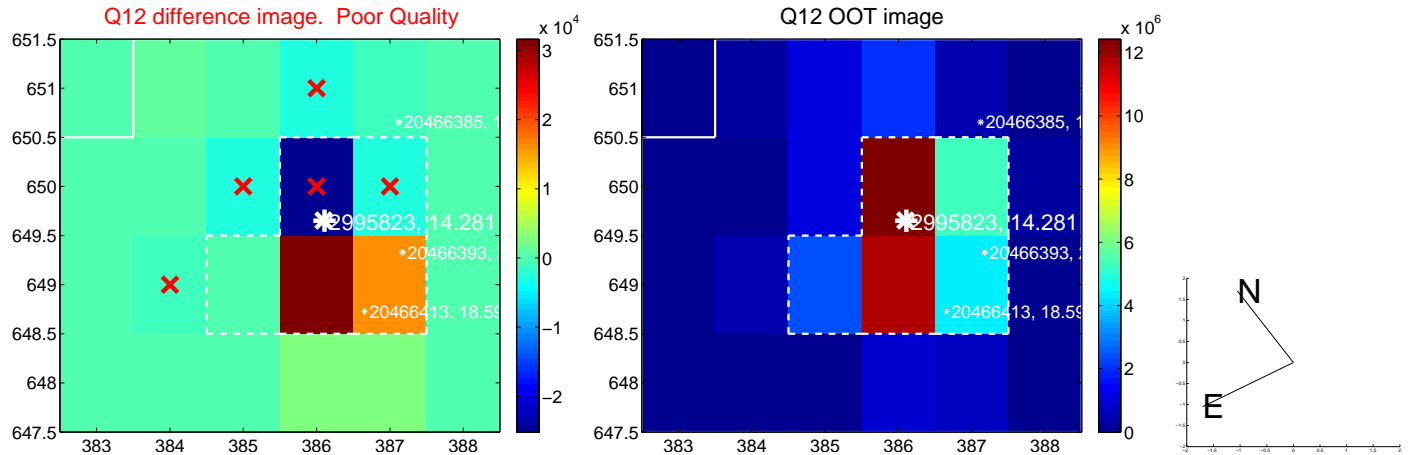
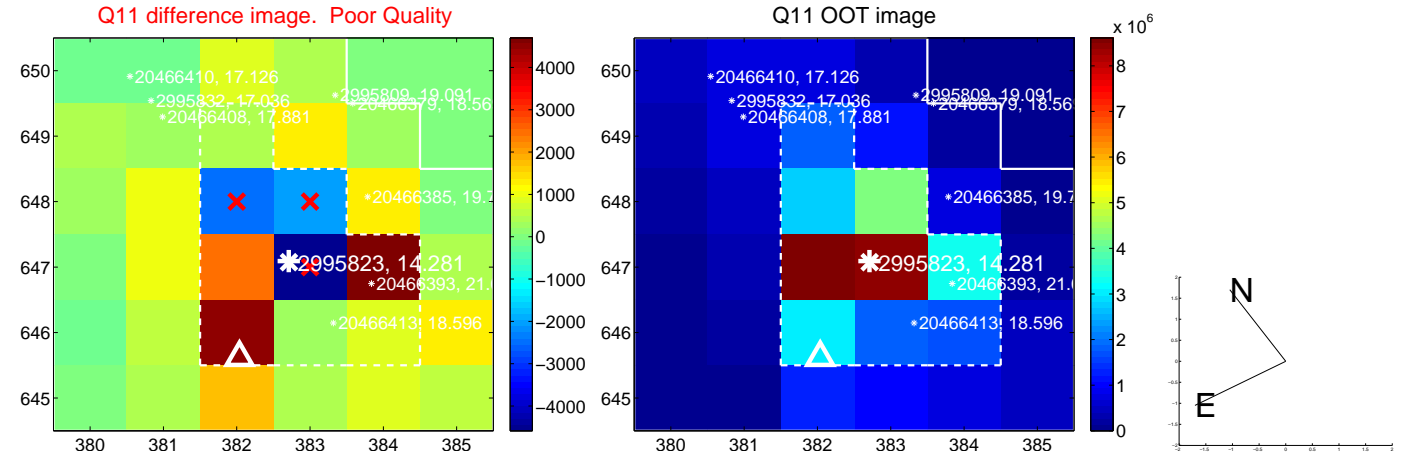
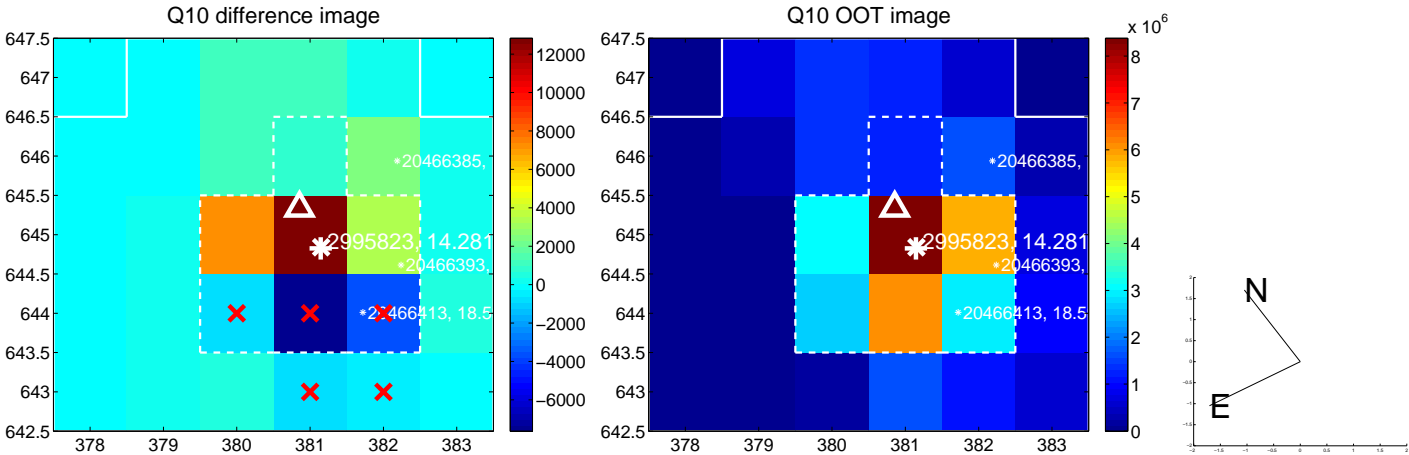
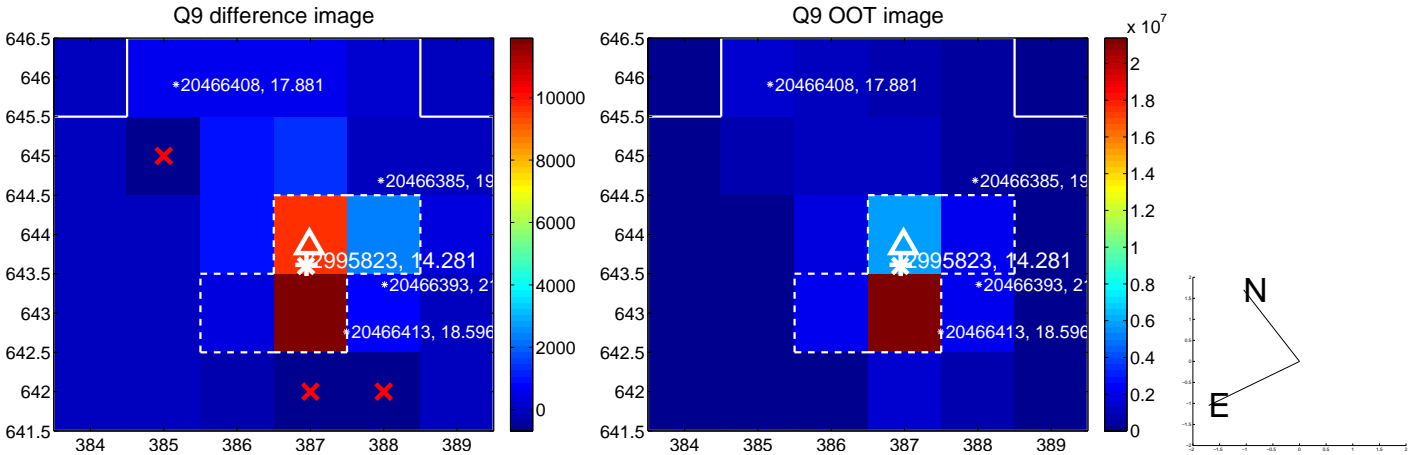


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

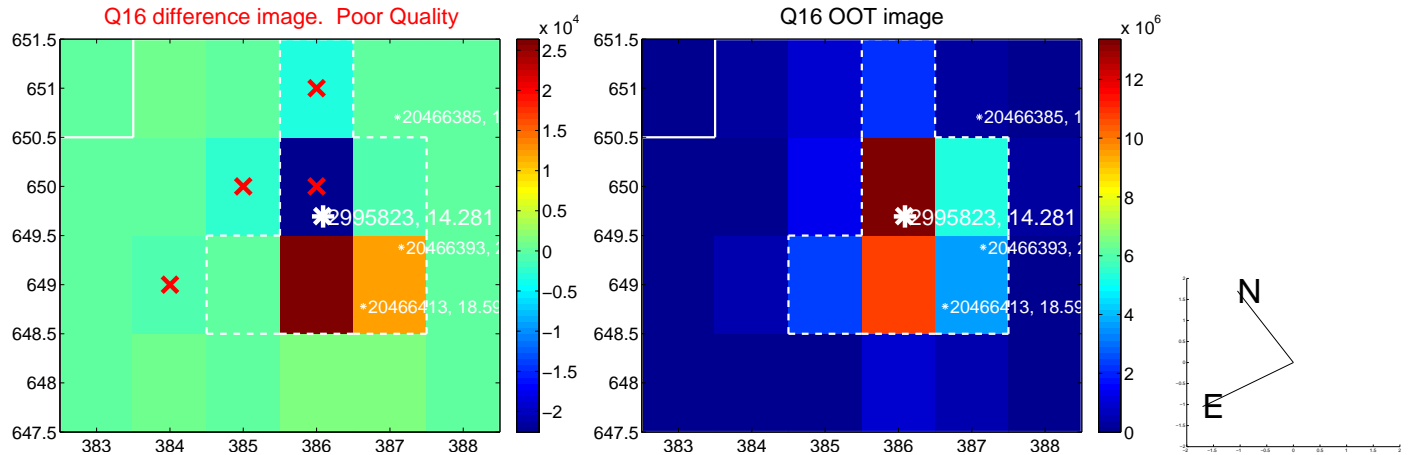
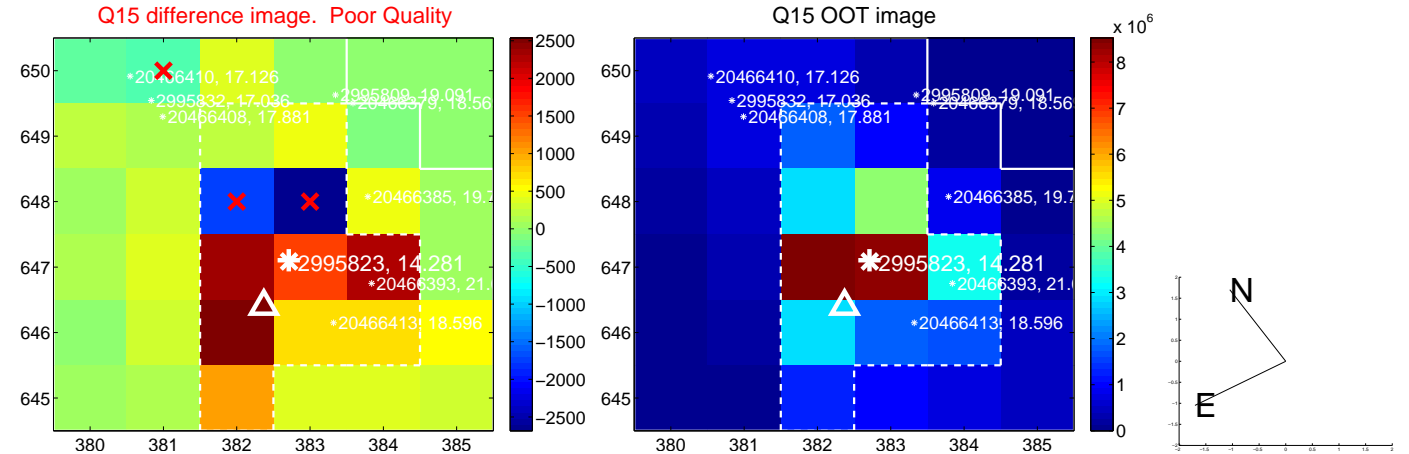
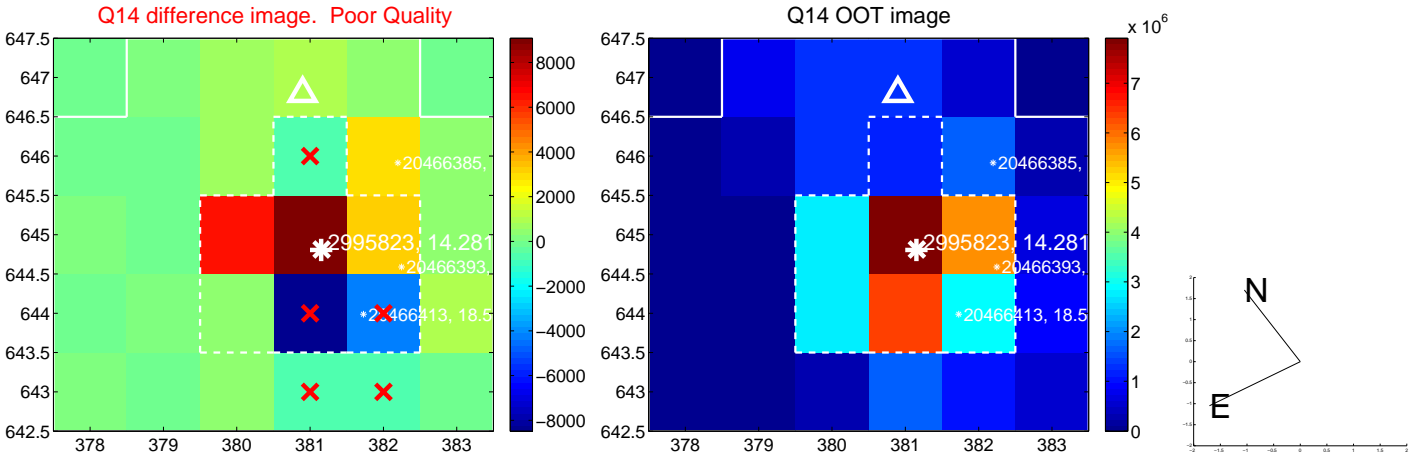
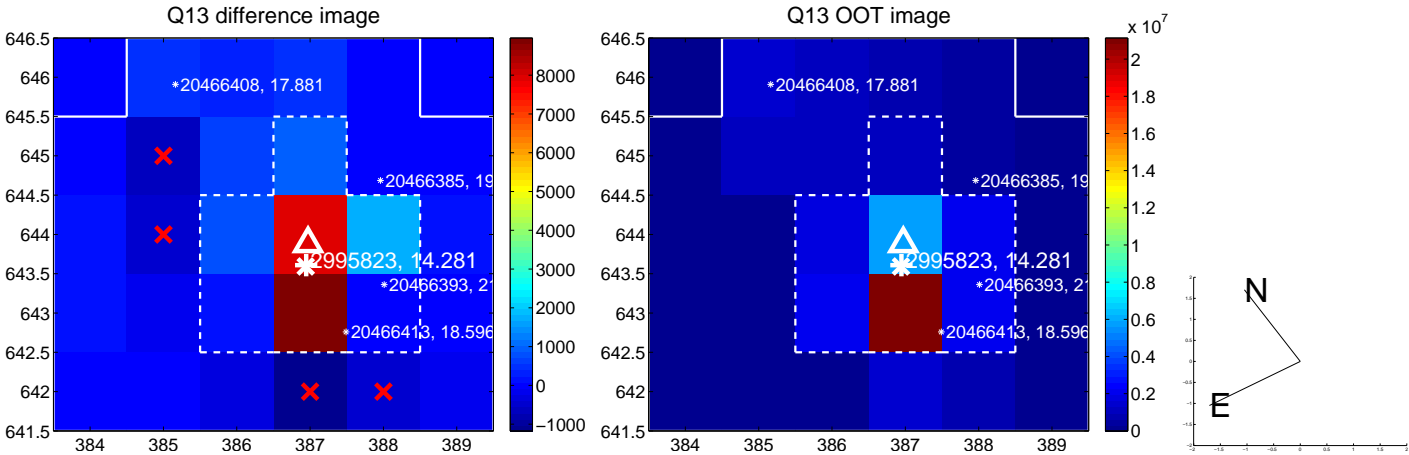




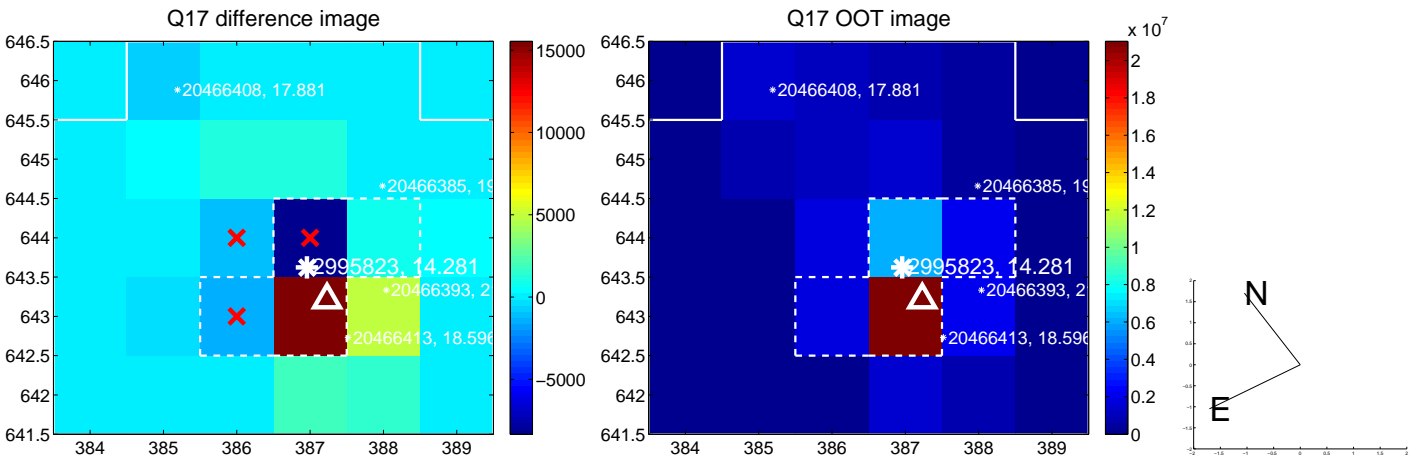
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

