

# KIC 003847763

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003847763-01	OBS	No	1.730541	132.010932	58.2	4.579	7.4	6.0	0.94	5751	0.93	1060.99

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003847763-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS

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

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

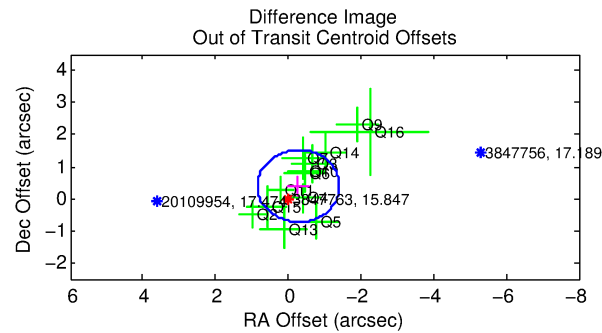
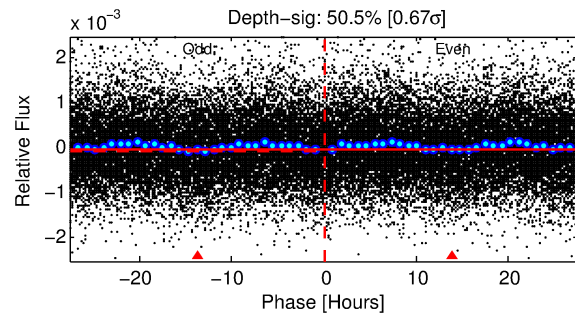
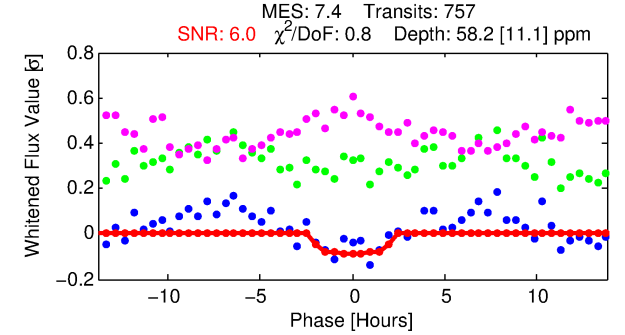
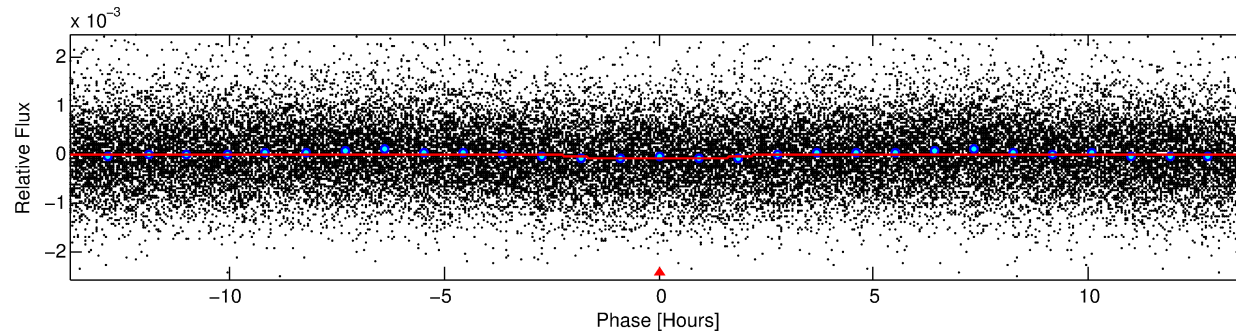
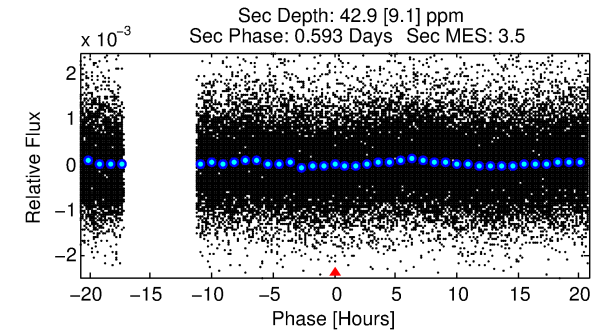
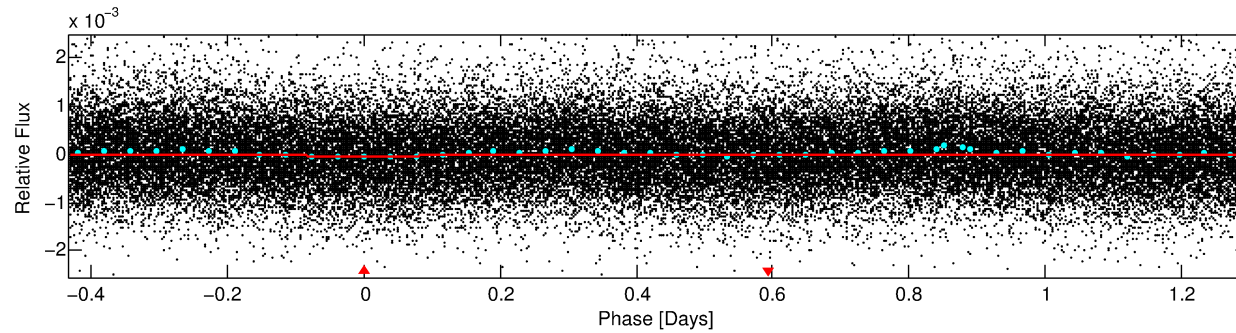
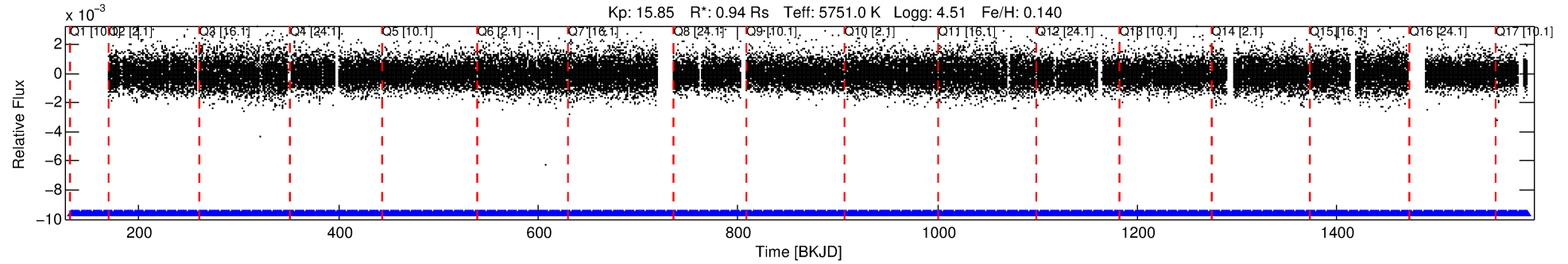
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003847763-01

No Significant Match Found

# DV One-Page Summary

KIC: 3847763 Candidate: 1 of 1 Period: 1.731 d



## DV Fit Results:

Period = 1.73054 [0.00003] d  
Epoch = 132.0109 [0.0098] BKJD  
Rp/R\* = 0.0090 [0.0034]  
a/R\* = 1.35 [1.13]  
b = 0.96 [0.17]  
Seff = 1060.99 [379.31]  
Teff = 1455 [130] K  
Rp = 0.92 [0.42] Re  
a = 0.0286 [0.0064] AU  
Ag = 22.50 [18.93] [1.14σ]  
Teffp = 4900 [960] K [3.55σ]

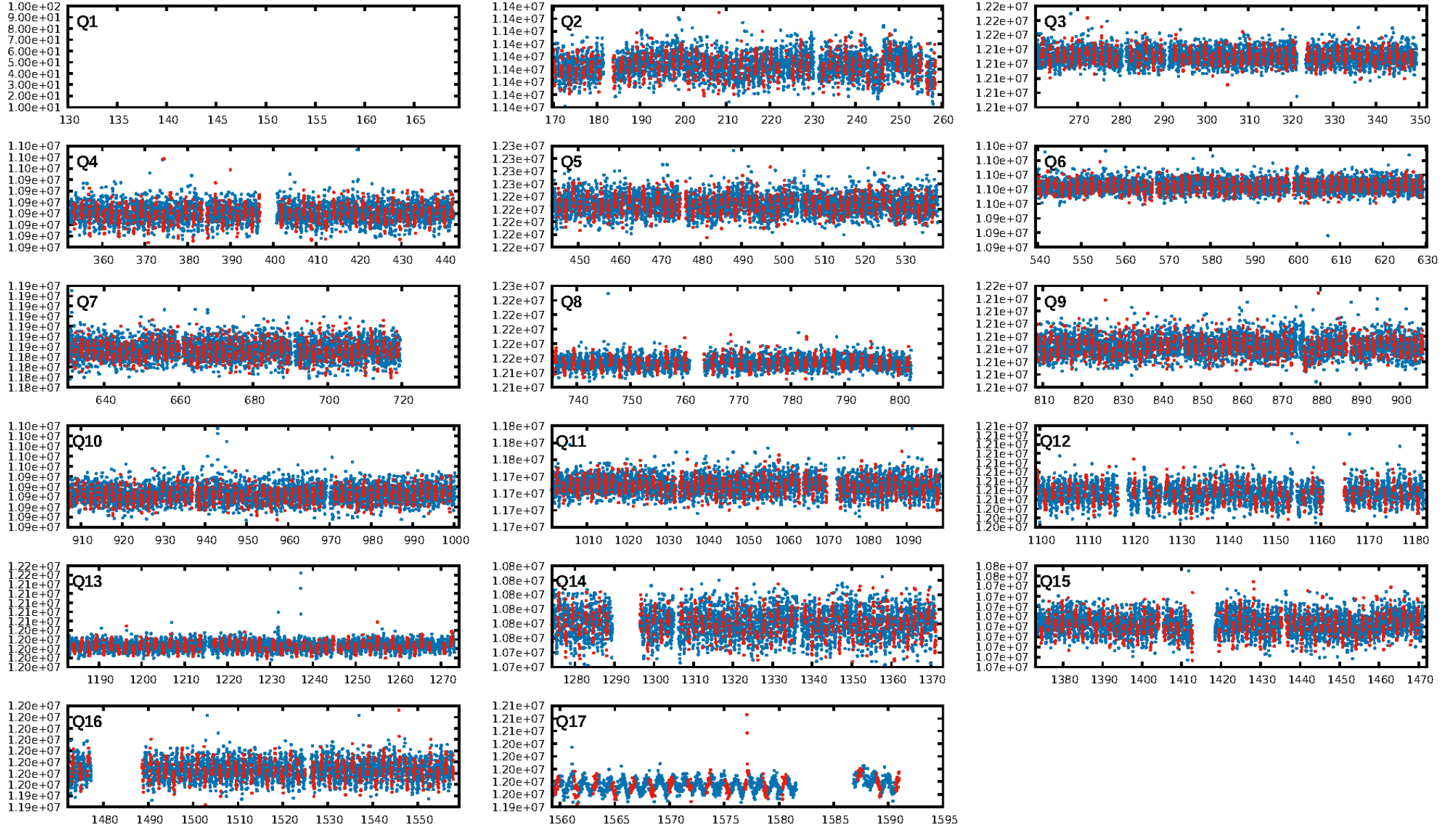
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.08e-13  
RollingBand-fgt: 1.00 [741/741]  
GhostDiagnostic-chr: 2.044  
Centroid-sig: 0.7%  
Centroid-so: 4.678 arcsec [2.13σ]  
OotOffset-rm: 0.484 arcsec [1.29σ]  
KicOffset-rm: 0.413 arcsec [1.35σ]  
OotOffset-st: 4/4/2/3 [13]  
KicOffset-st: 4/4/2/3 [13]  
DiffImageQuality-fgm: 0.62 [8/13]  
DiffImageOverlap-fno: 1.00 [16/16]

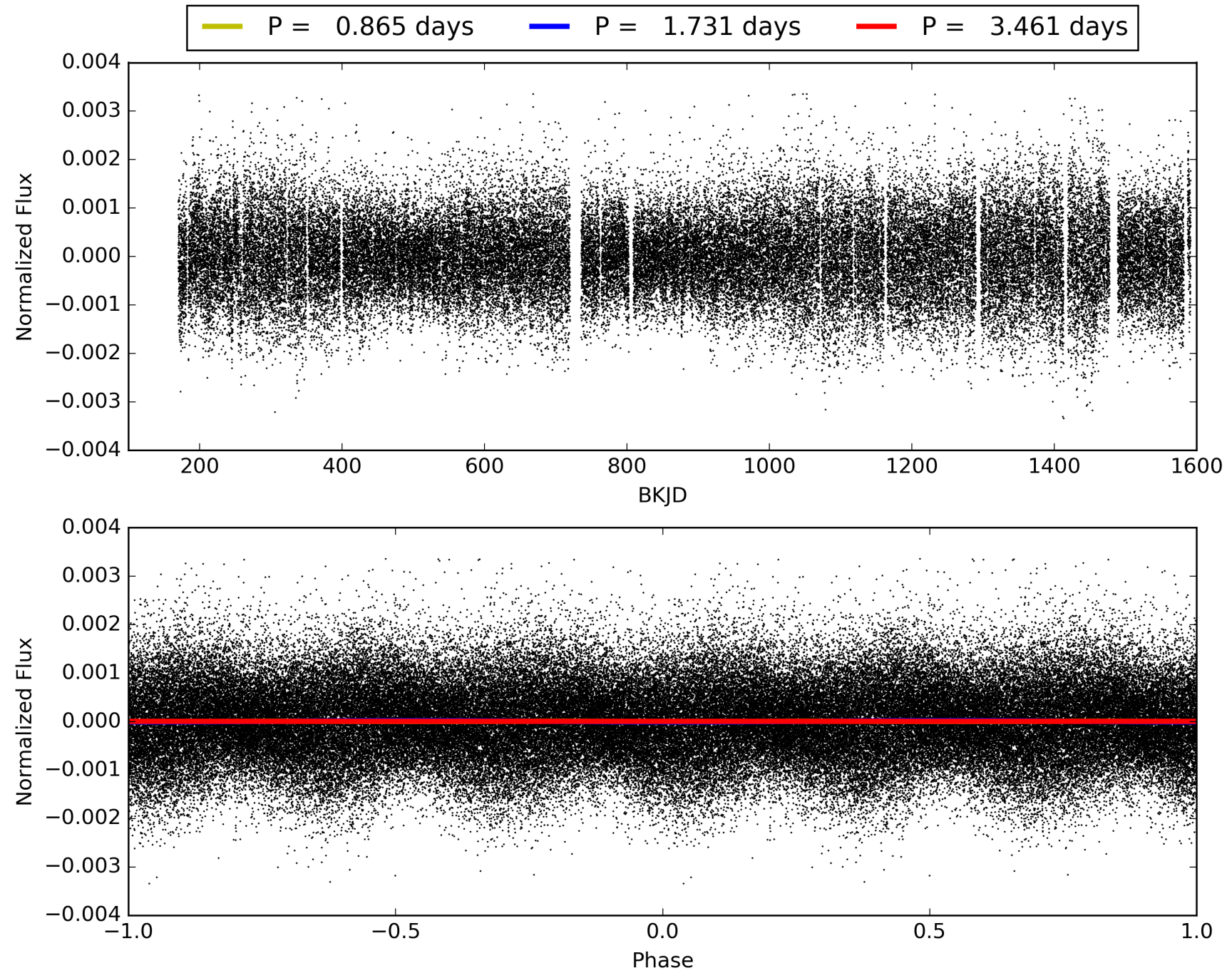
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:32:43 Z

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

# TCE 003847763-01, PDC Light Curves



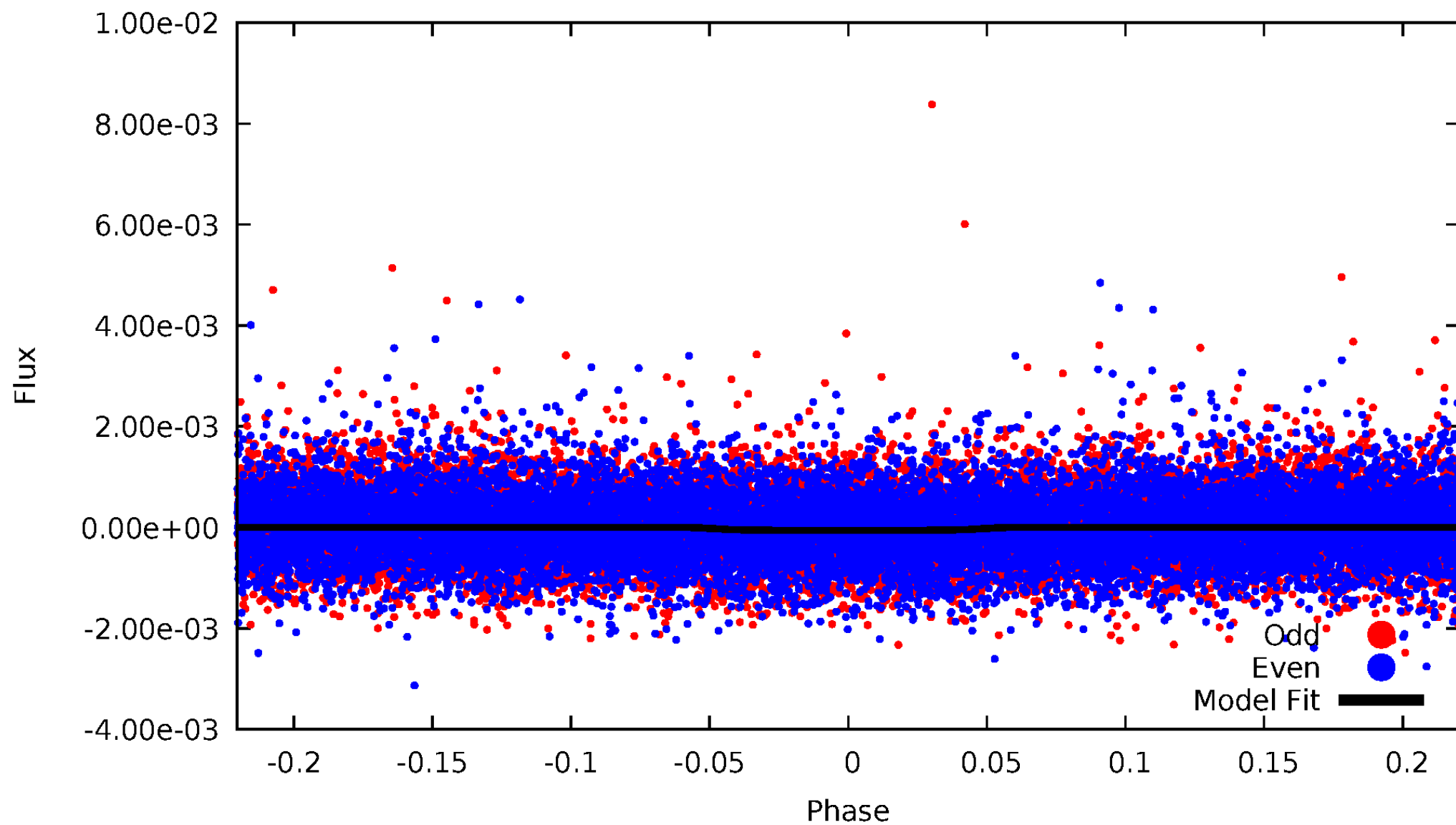
TCE 003847763-01





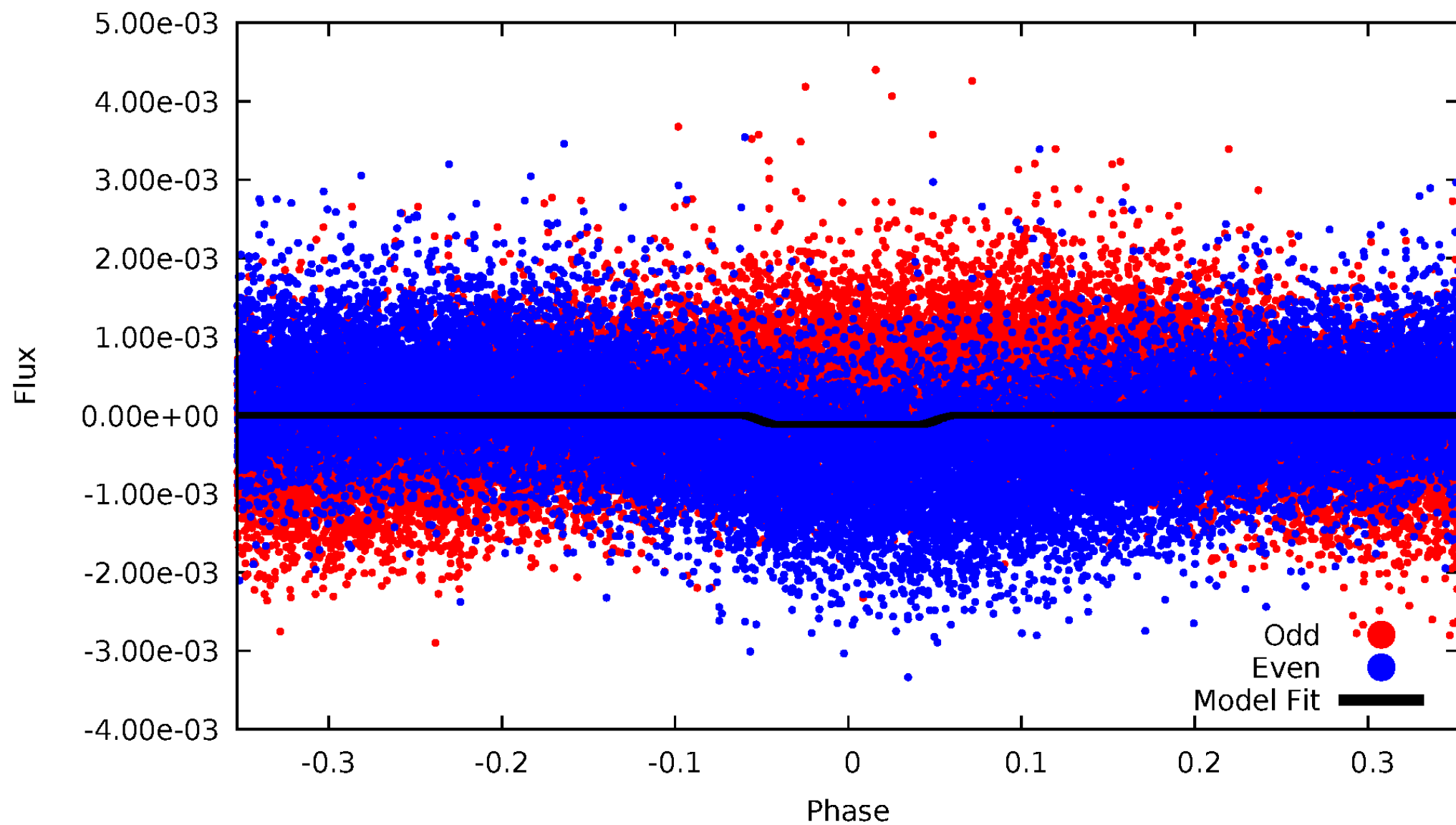
# DV Odd/Even

TCE 003847763-01



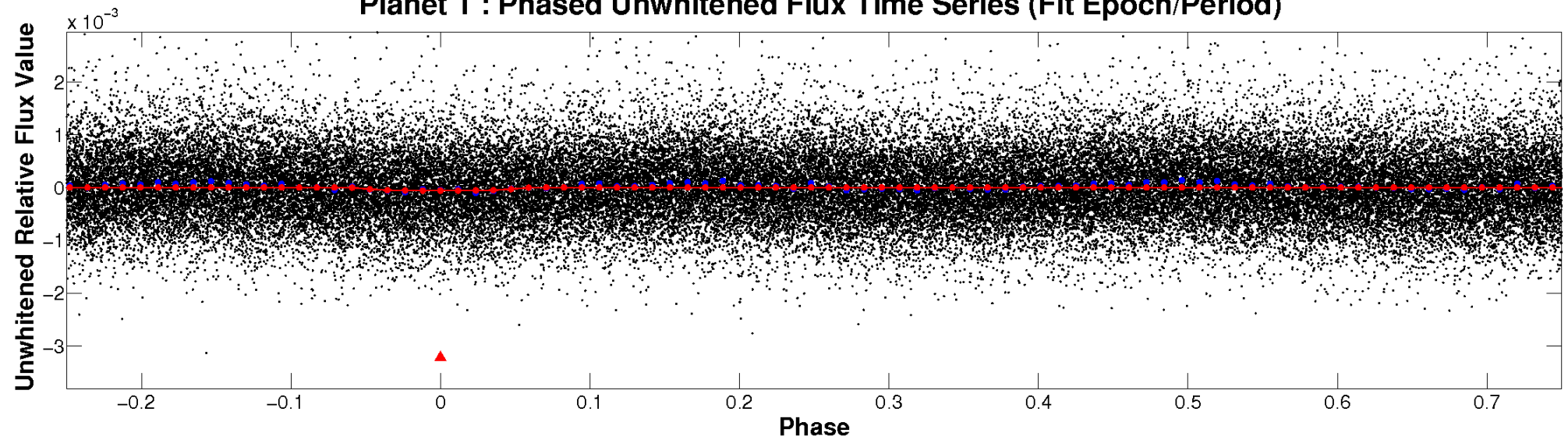
# ALT Odd/Even

TCE 003847763-01

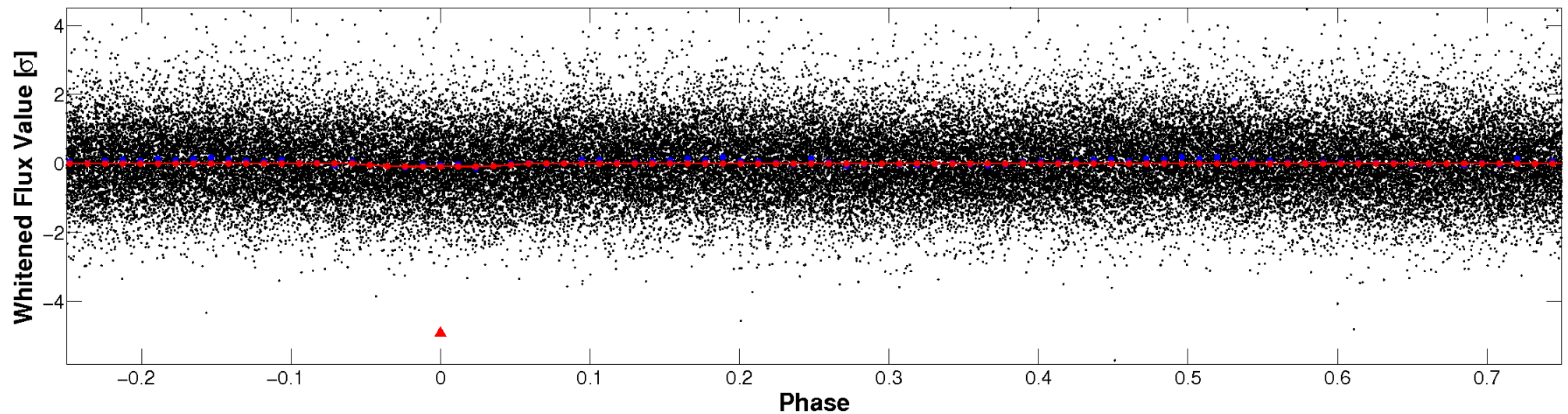


# Non-Whitened Vs. Whitened Light Curve

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

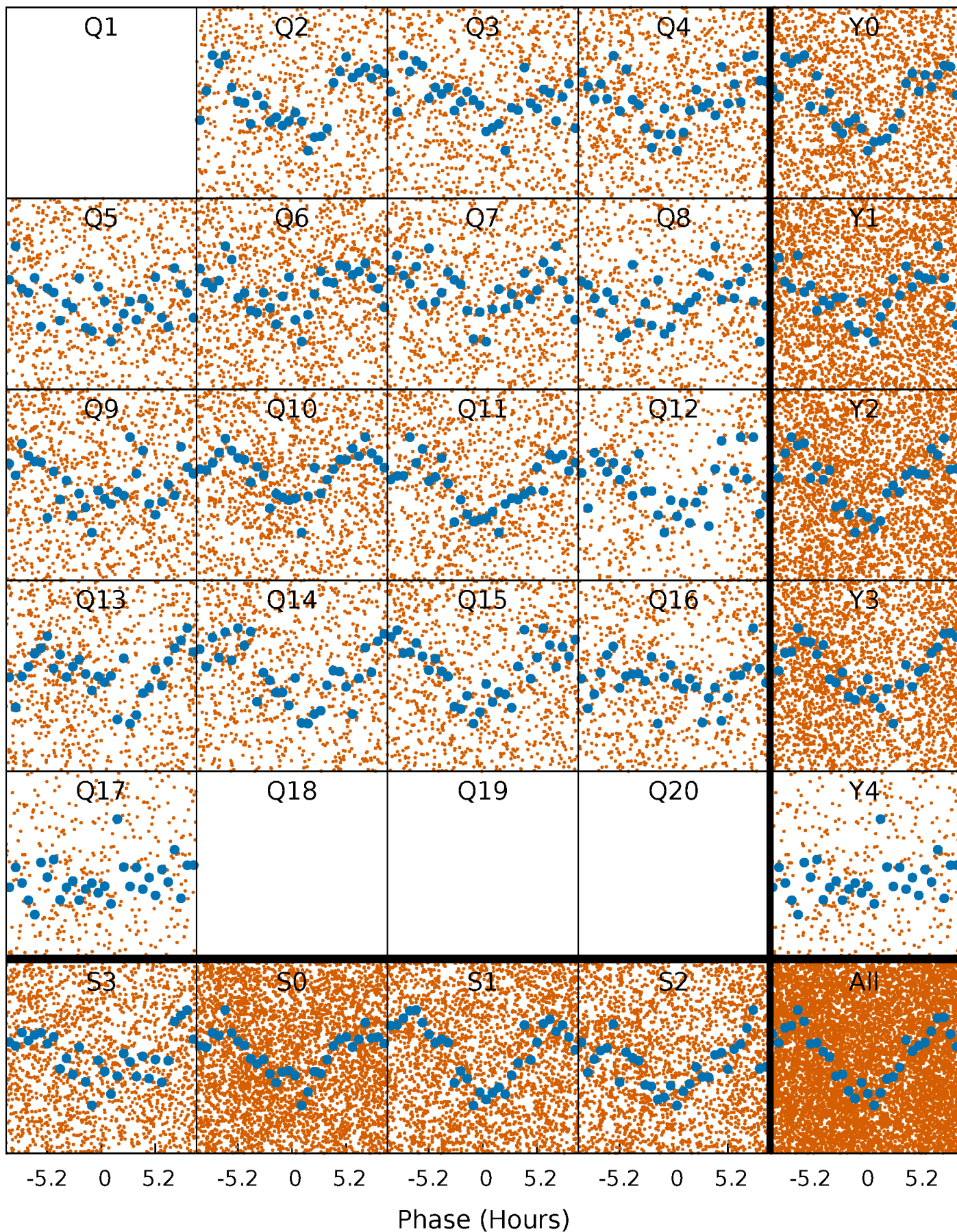


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

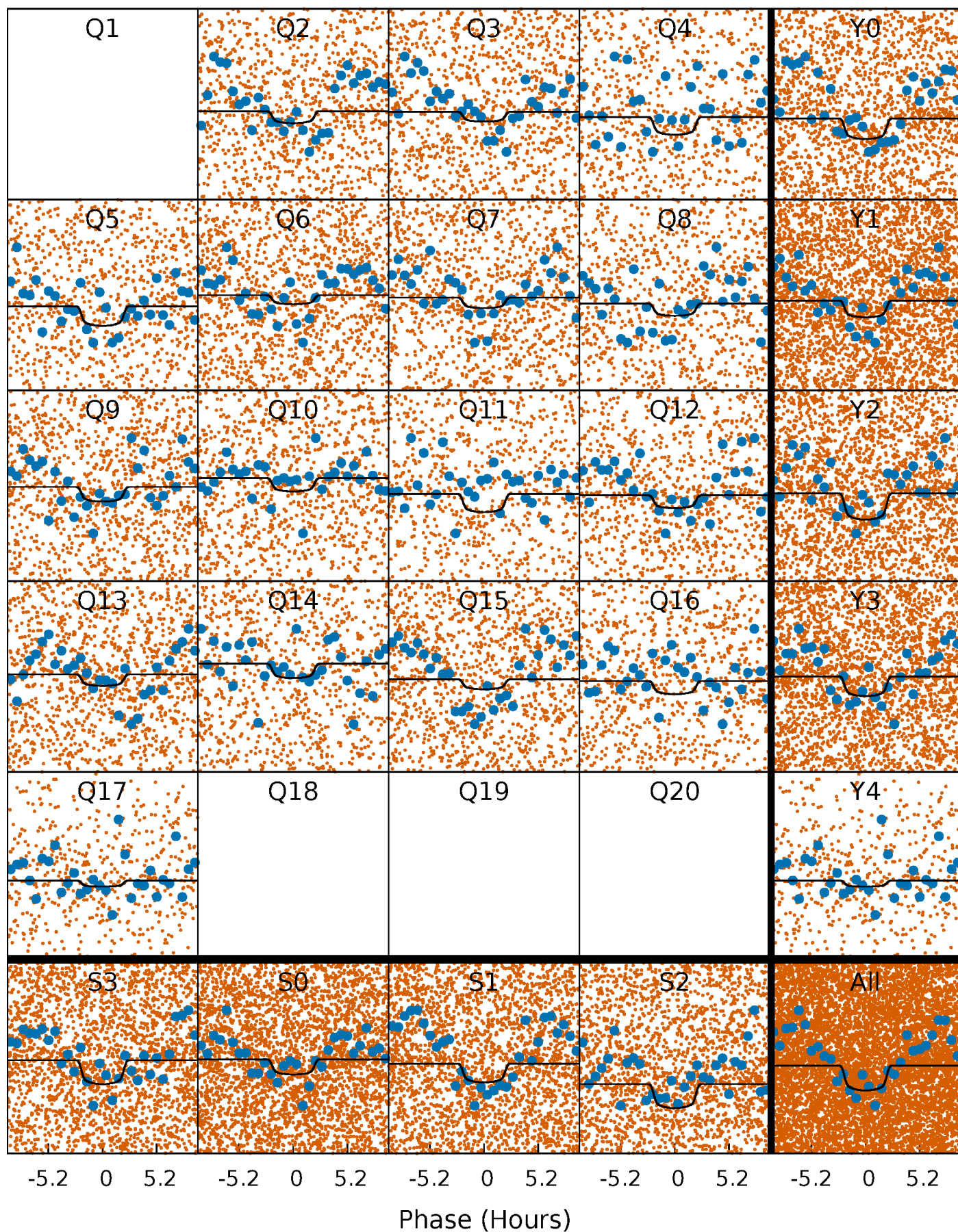
TCE 003847763-01 P= 1.730541 Days  $T_0=132.010932$  (BKJD)





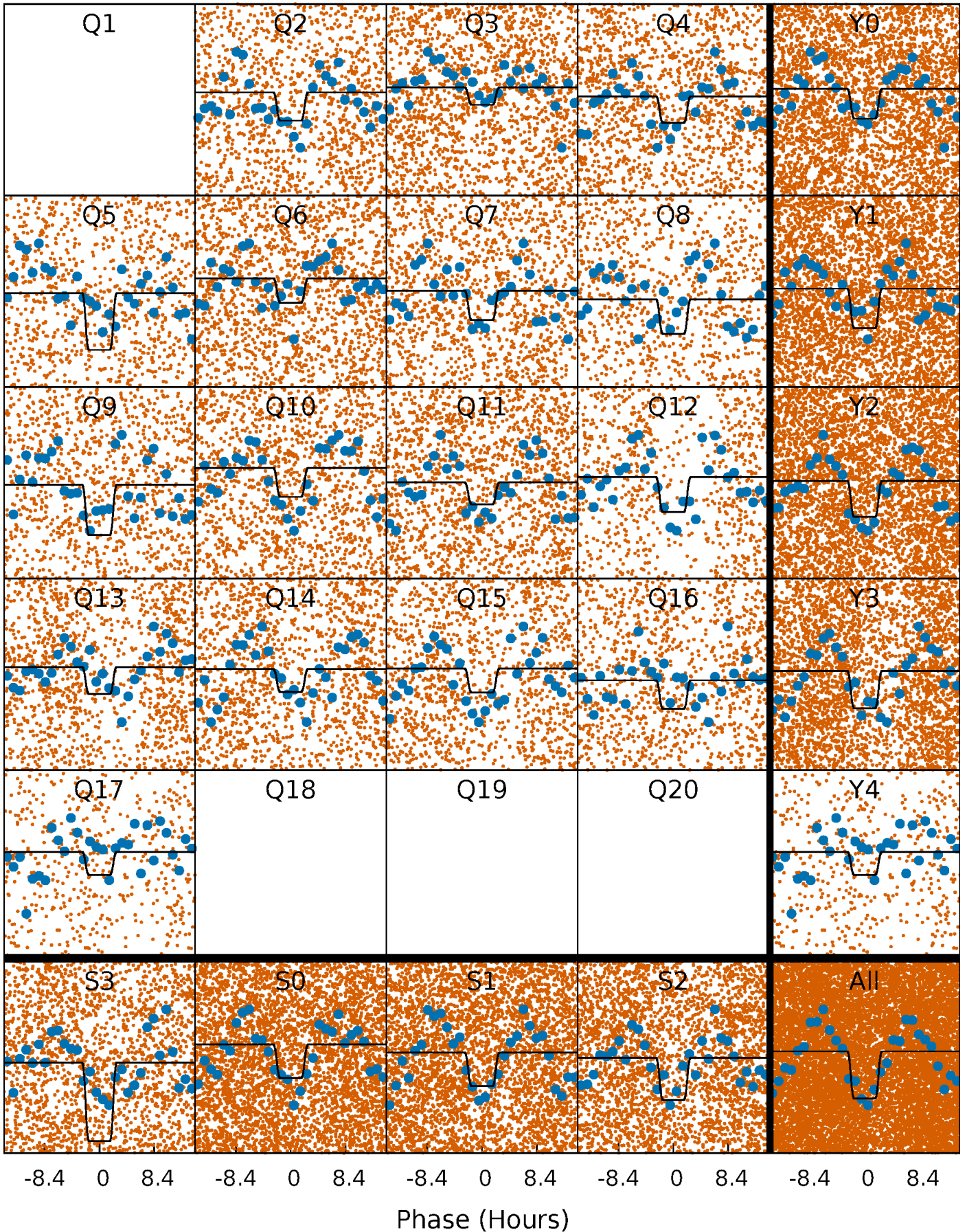
# DV Quarter-Phased Transit Curves

TCE 003847763-01 P= 1.730541 Days  $T_0=132.010932$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003847763-01 P= 1.730457 Days  $T_0=132.051128$  (BKJD)

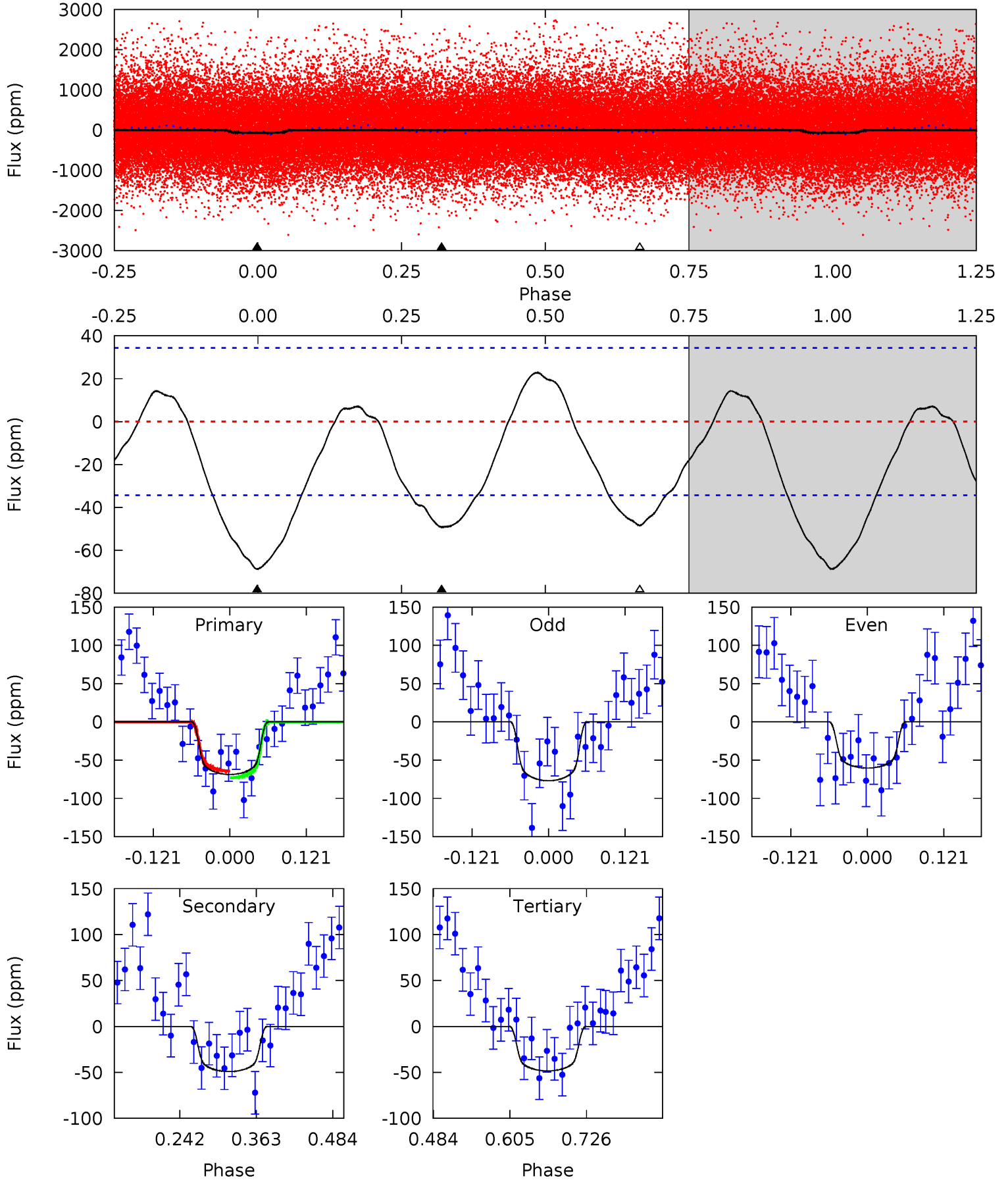




# DV Model-Shift Uniqueness Test

003847763-01, P = 1.730541 Days, E = 132.010932 Days

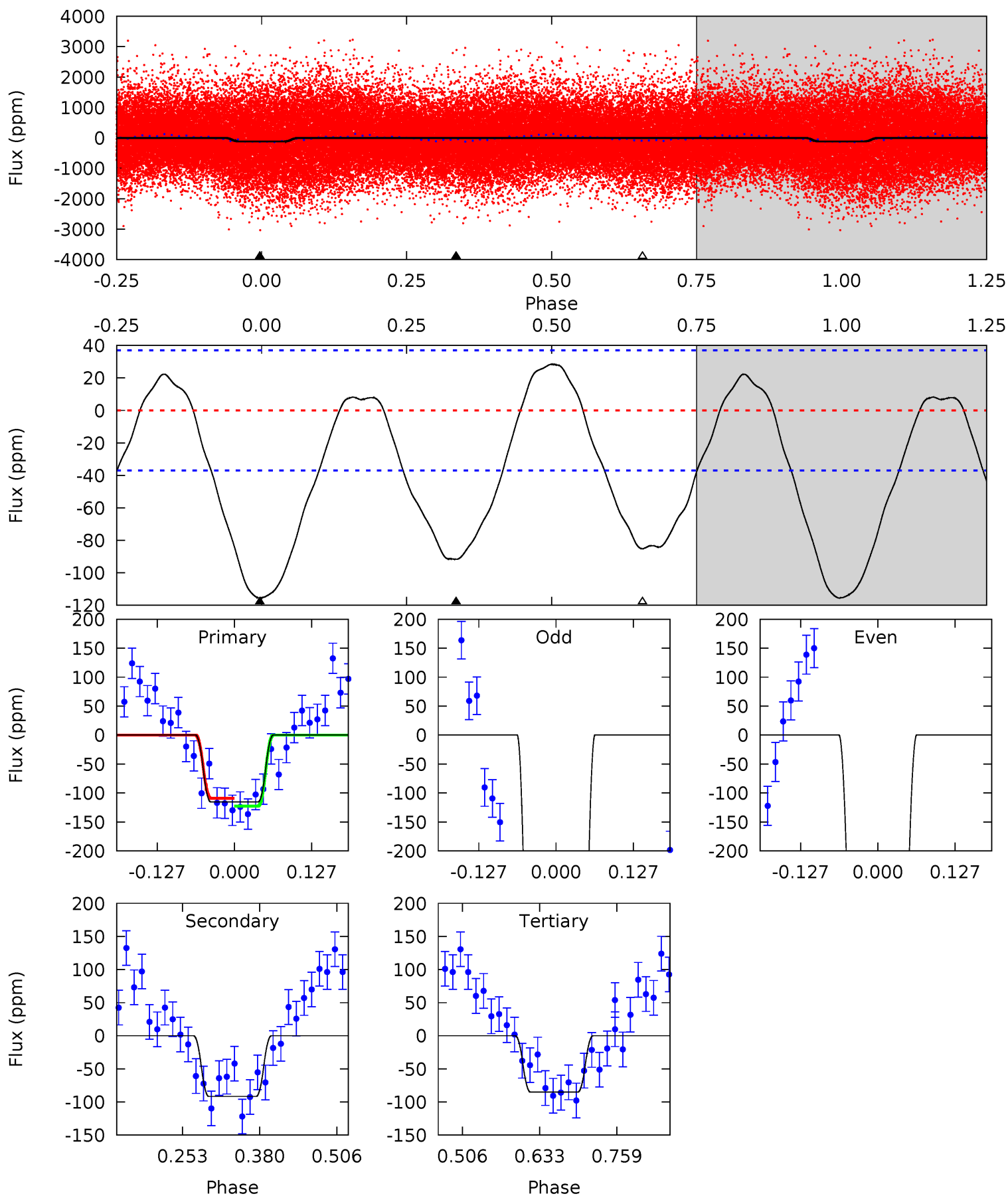
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.05	6.48	6.38	0	4.52	1.55	2.90	2.67	9.05	0.10	6.48	1.10	0.92	0.25	0.58



# Alt Model-Shift Uniqueness Test

003847763-01, P = 1.730457 Days, E = 132.051128 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
14.1	11.2	10.4	0	4.52	1.53	4.71	3.71	14.1	0.80	11.2	14.3	1.12	0.20	0.82





### Stellar Parameters For KIC 003847763

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5751^{+154}_{-188}$	$4.508^{+0.046}_{-0.184}$	$0.140^{+0.200}_{-0.300}$	$0.940^{+0.248}_{-0.099}$	$1.038^{+0.100}_{-0.133}$	$1.761^{+0.341}_{-0.857}$
	+3%/-3%	+1%/-4%	+143%/-214%	+26%/-11%	+10%/-13%	+19%/-49%
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 003847763-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-49 \pm 8$	$0.95^{+0.37}_{-0.34}$	$2075^{+126}_{-94}$	$5113^{+1279}_{-695}$	$23^{+34}_{-12}$
Alt.	$-92 \pm 8$	$1.18^{+0.38}_{-0.37}$	$2068^{+134}_{-96}$	$5352^{+1003}_{-599}$	$29^{+31}_{-12}$

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

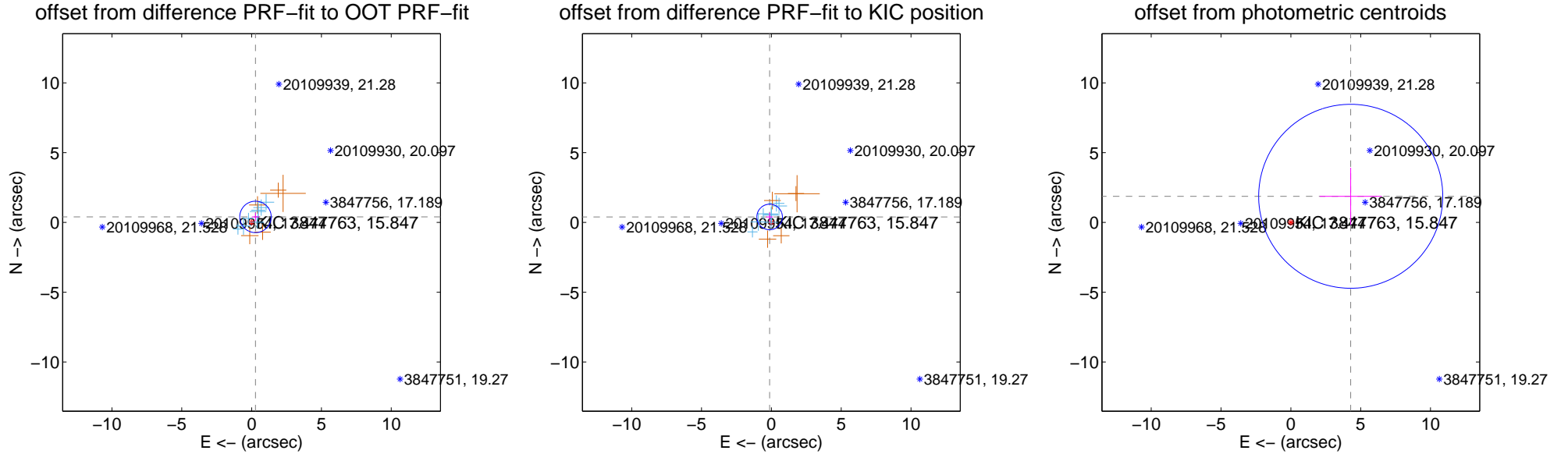
## DV Centroid Data

Supplemental centroid analysis for 003847763-01. Kepler magnitude: 15.85. Transit SNR 5.99

There are 8 quarters with good PRF difference image offsets

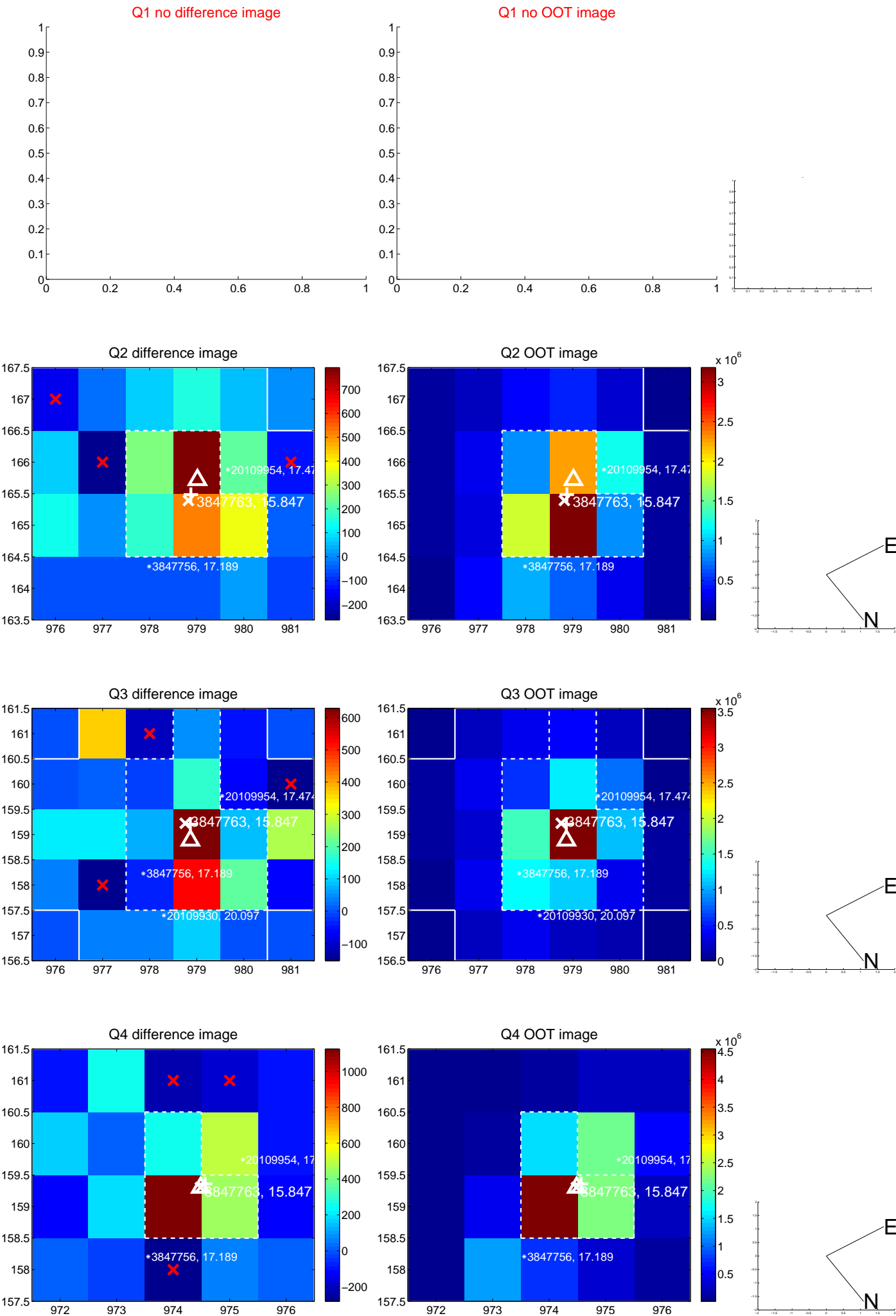
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.484 \pm 0.375$	1.29	$-0.277 \pm 0.261$	$0.397 \pm 0.299$
PRF-fit source offset from KIC position	$0.413 \pm 0.305$	1.35	$0.124 \pm 0.243$	$0.393 \pm 0.310$
photometric centroid source offset	$4.68 \pm 2.20$	2.13	$-4.29 \pm 2.22$	$1.87 \pm 2.04$

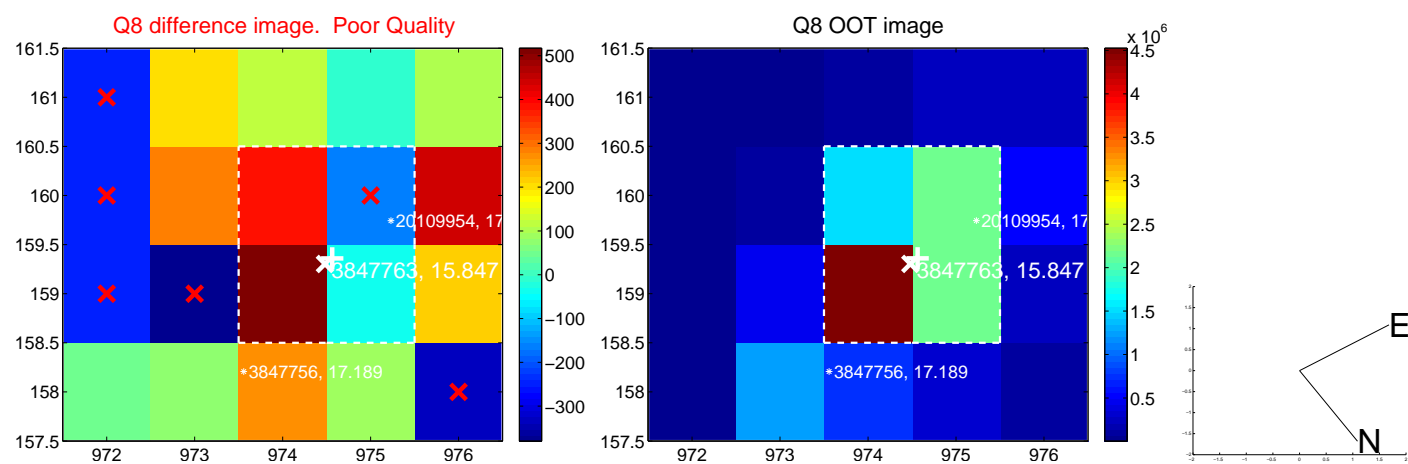
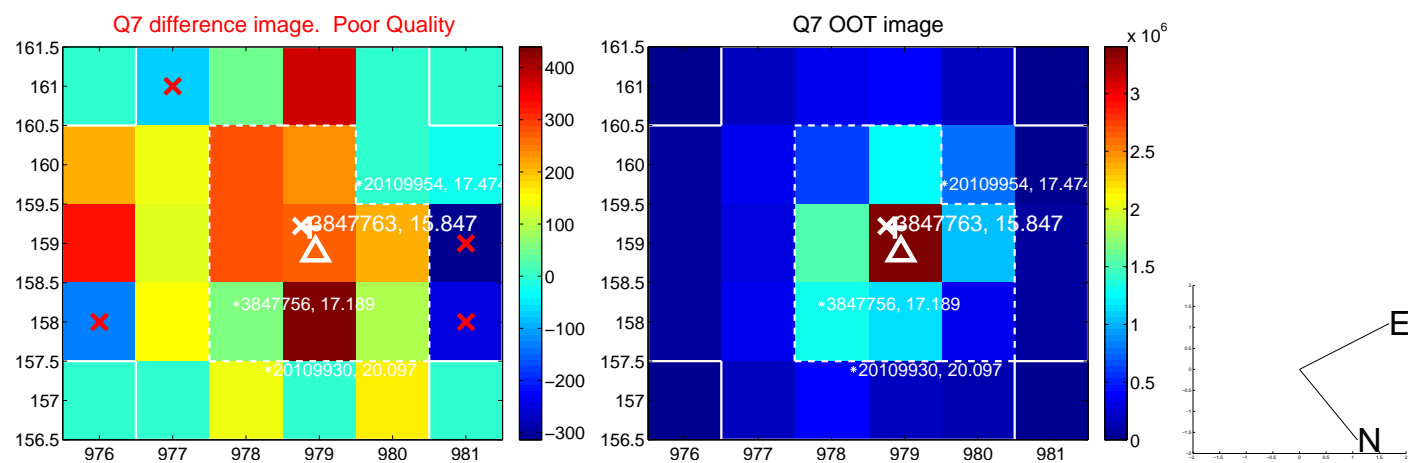
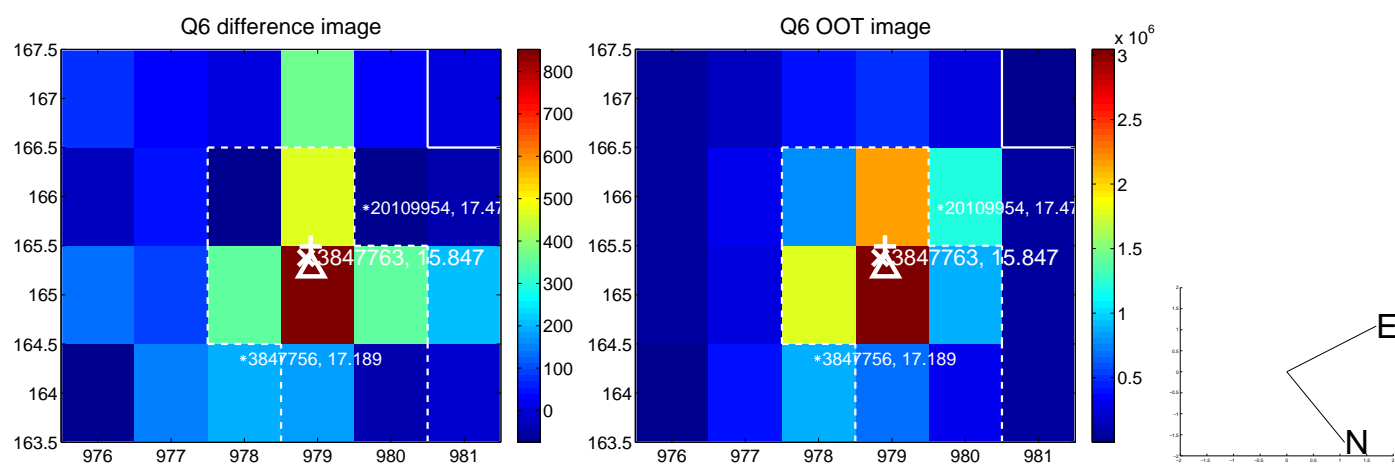
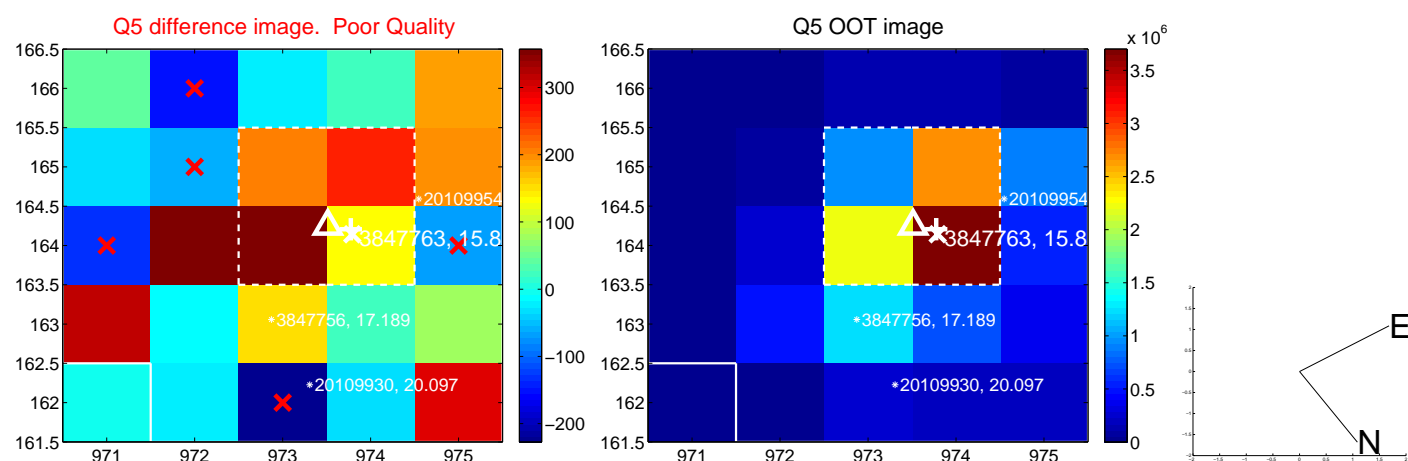


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

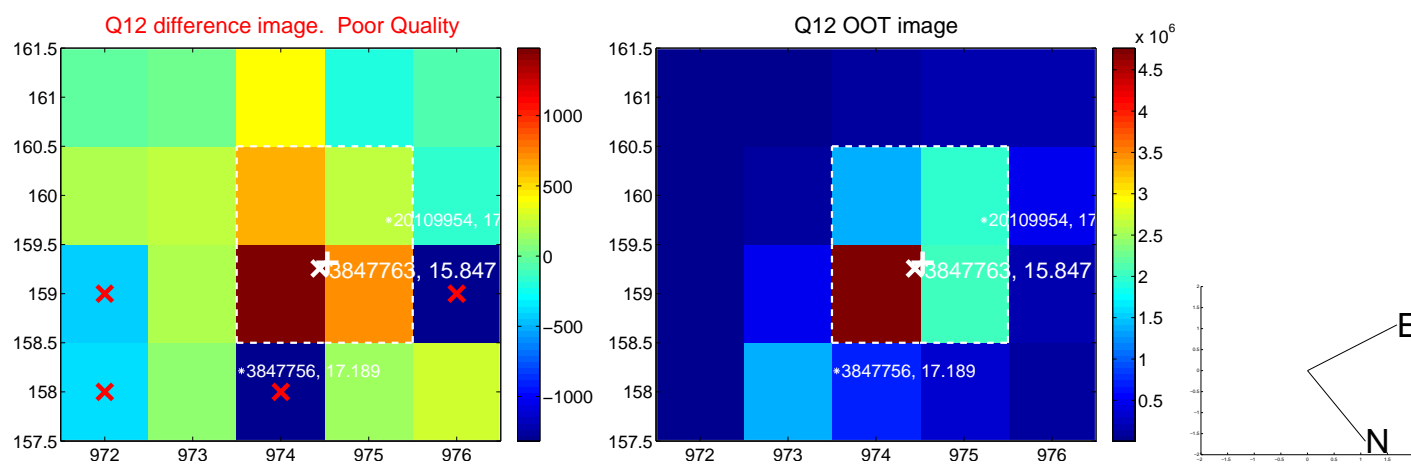
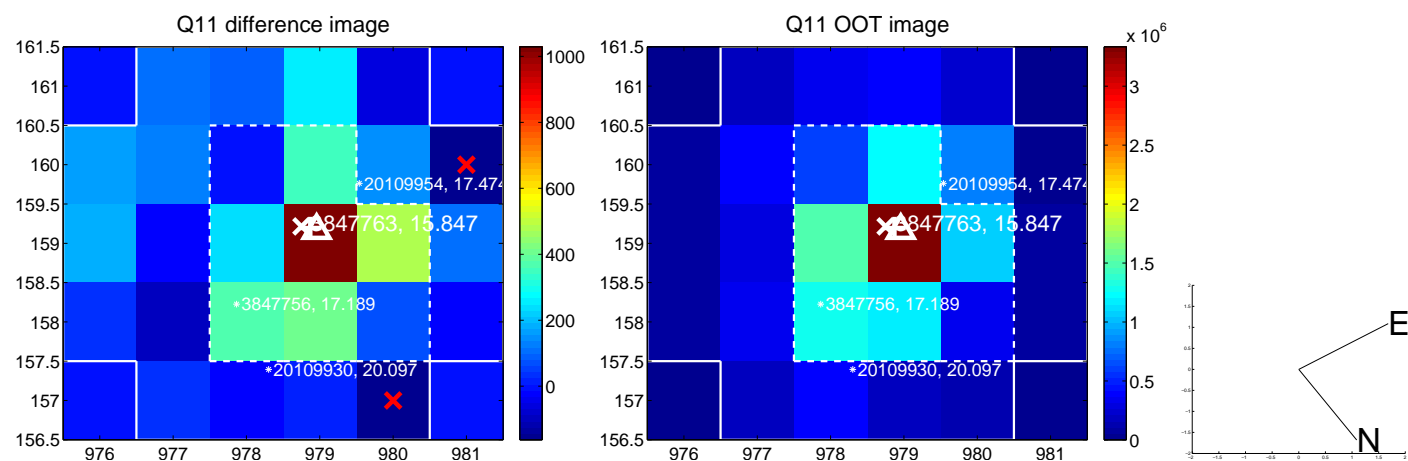
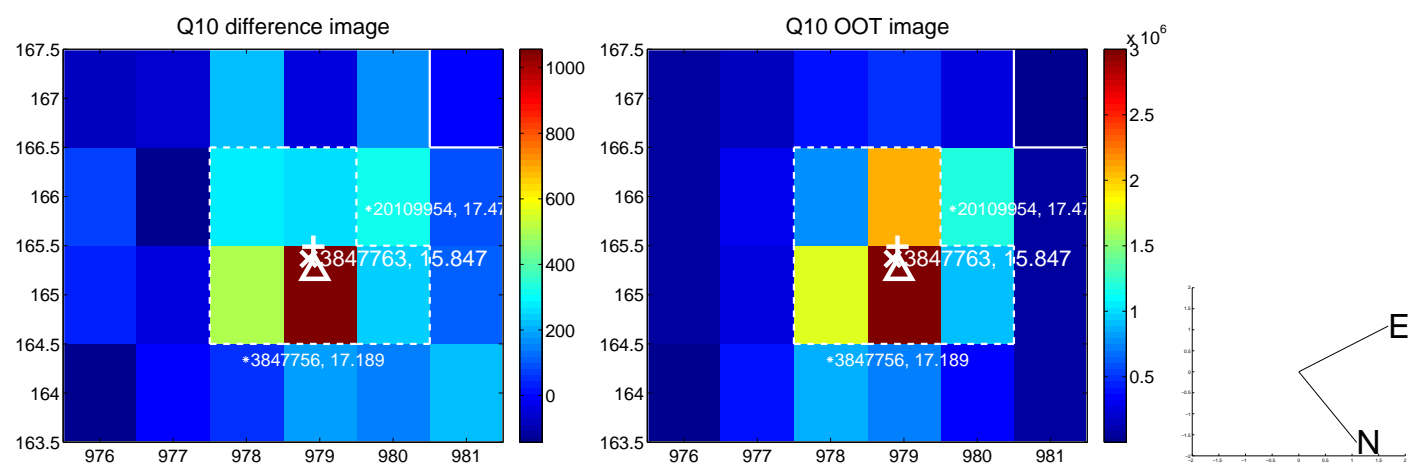
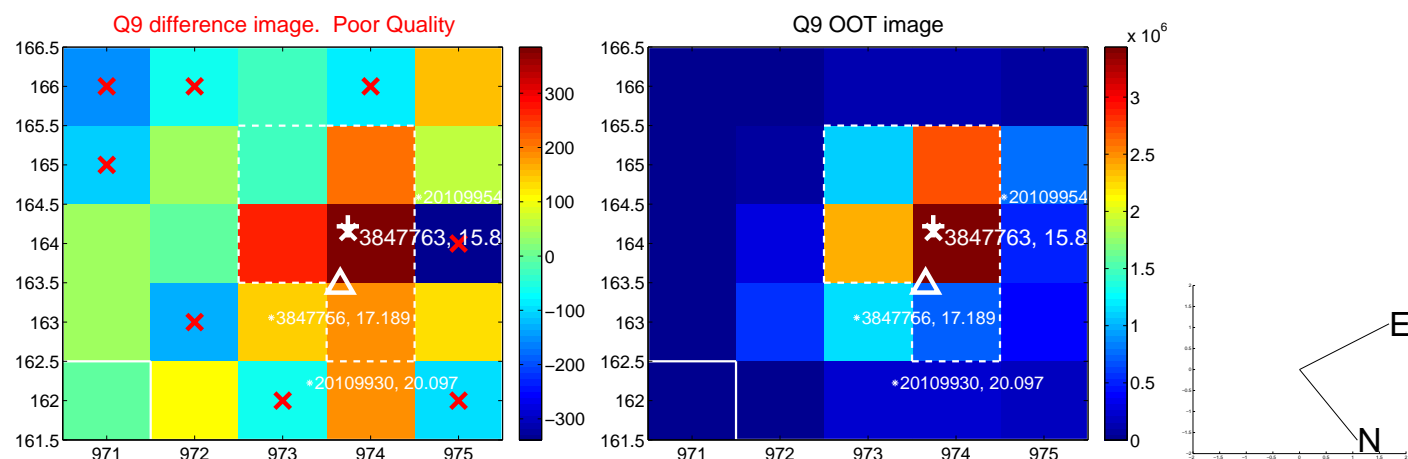


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

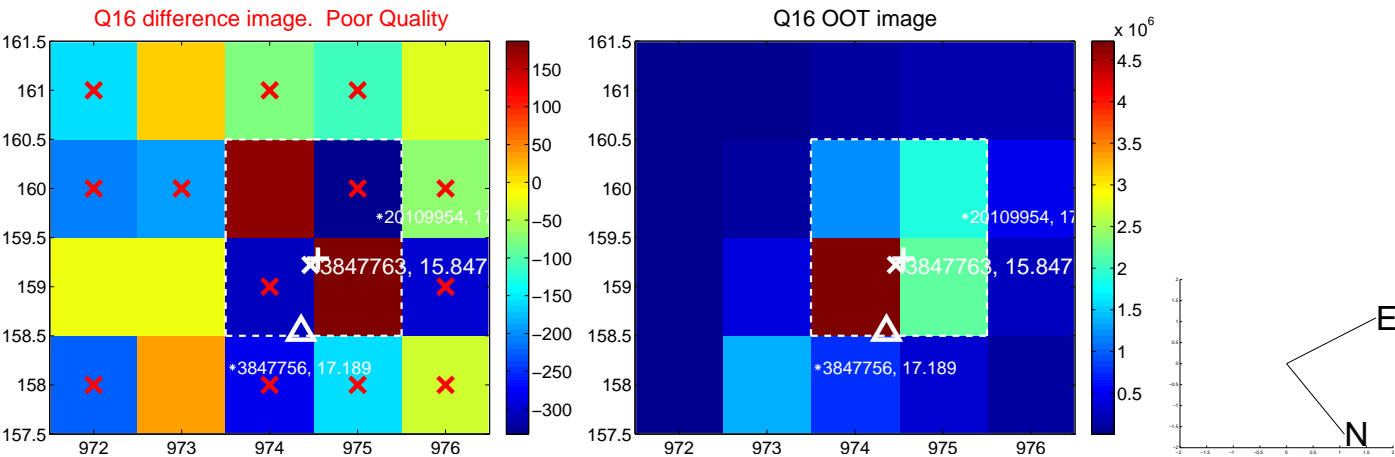
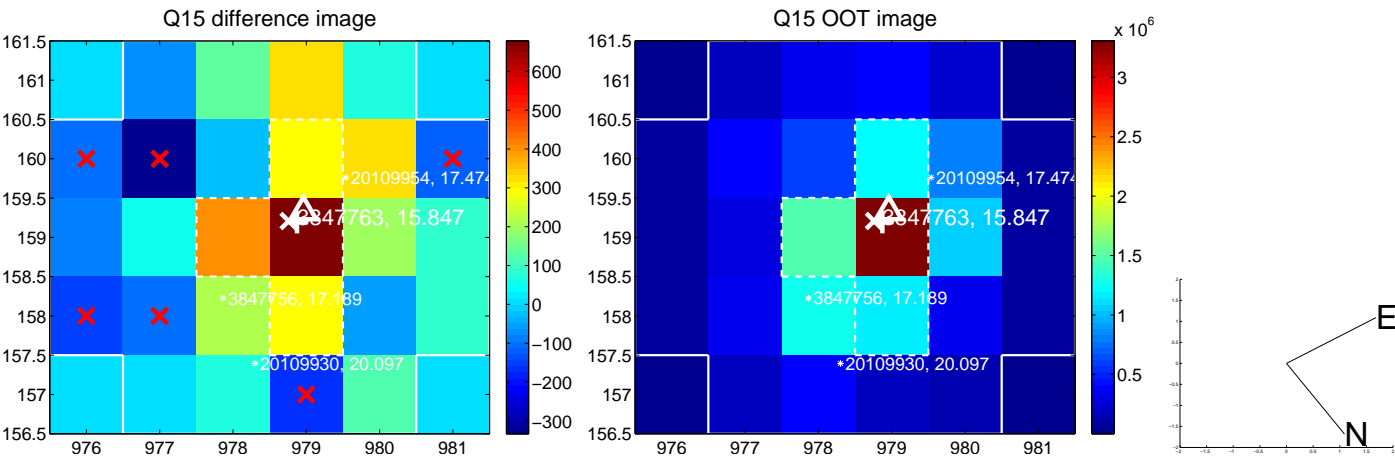
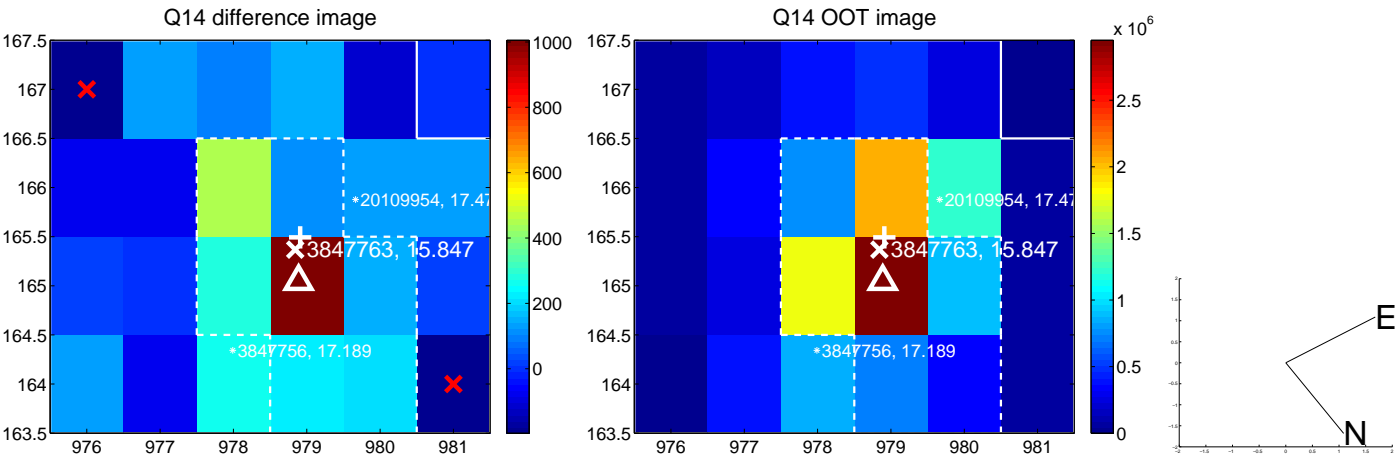
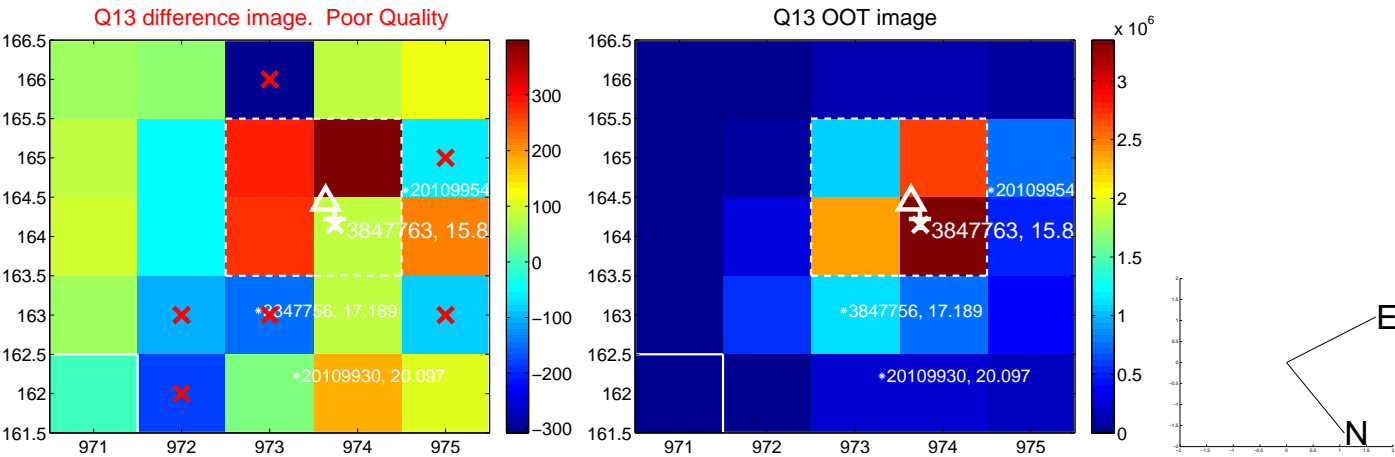




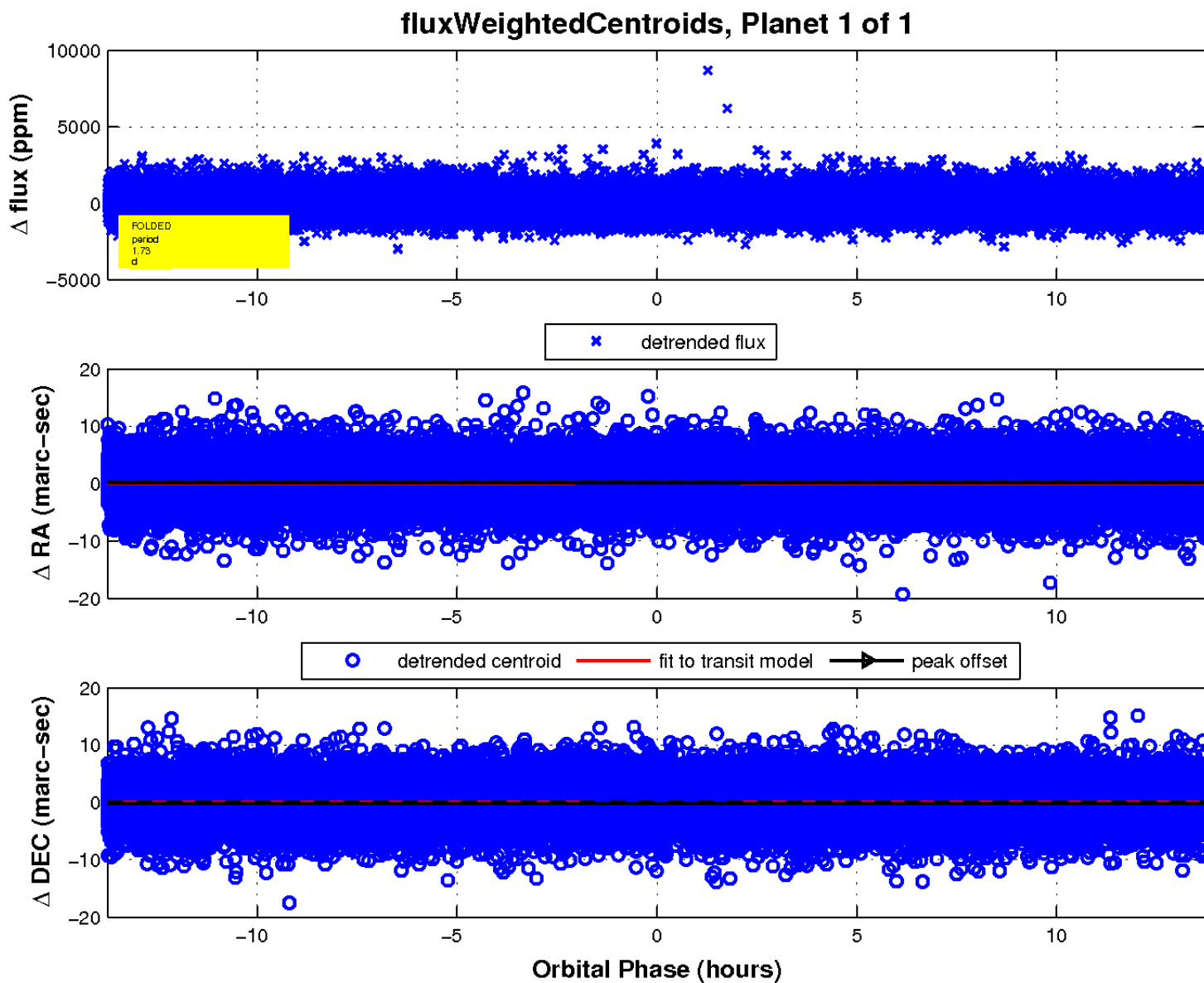
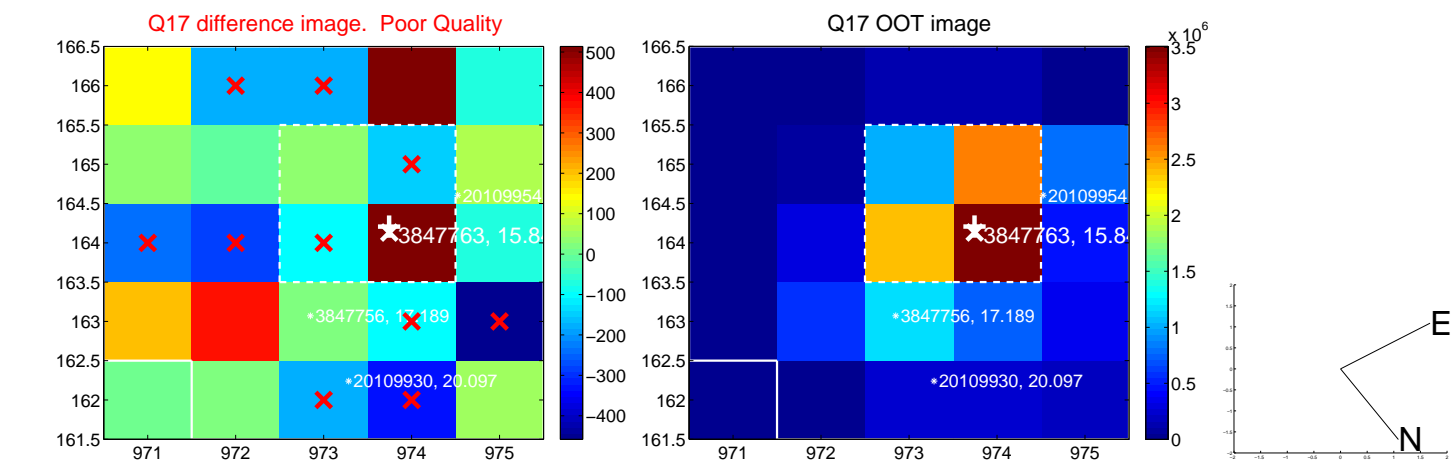
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

