

# KIC 004831769

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004831769-01	OBS	No	0.660859	131.685465	2.3	6.459	8.9	12.2	2.85	8707	0.44	121000.48

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004831769-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

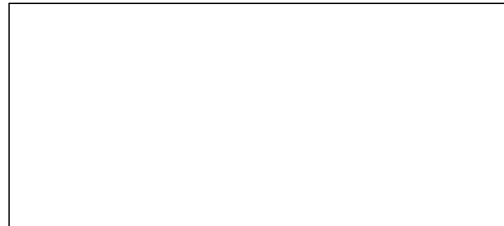
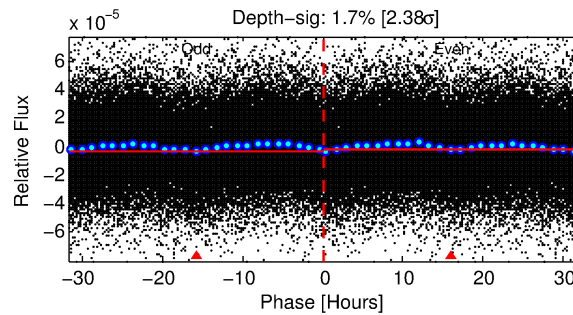
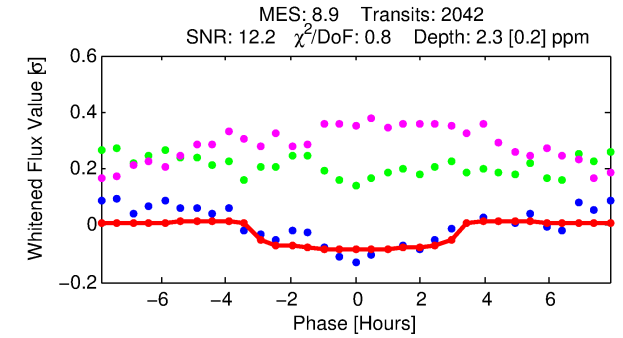
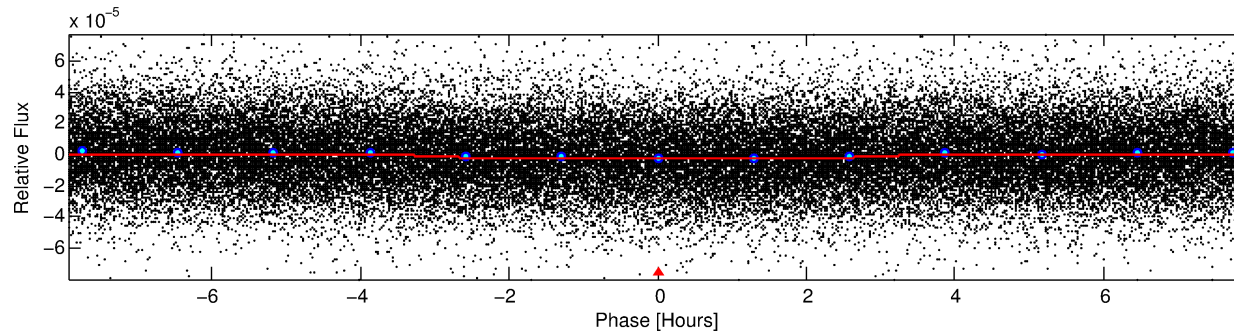
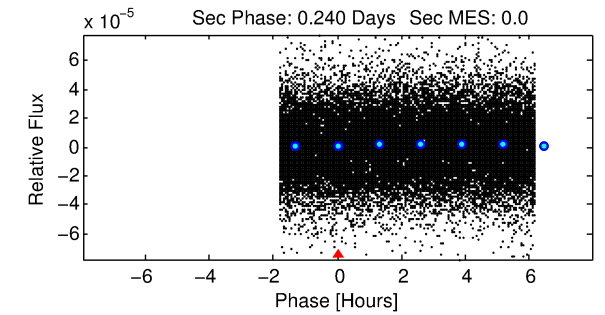
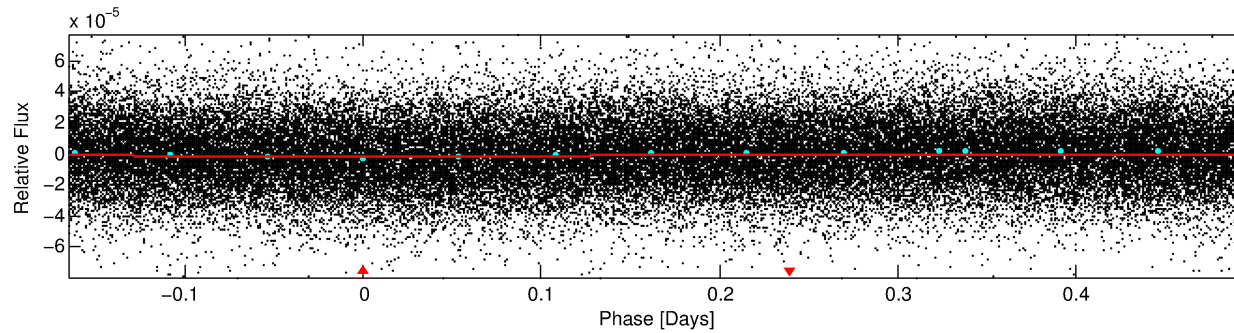
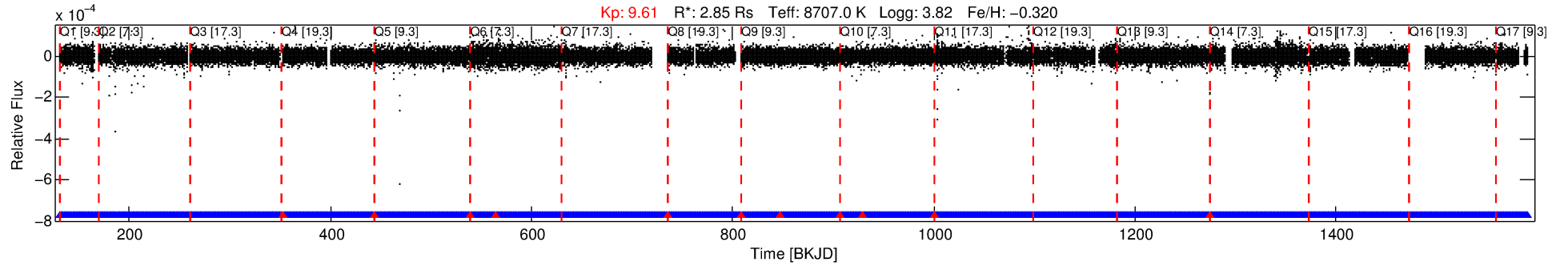
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004831769-01

No Significant Match Found

# DV One-Page Summary

KIC: 4831769 Candidate: 1 of 1 Period: 0.661 d



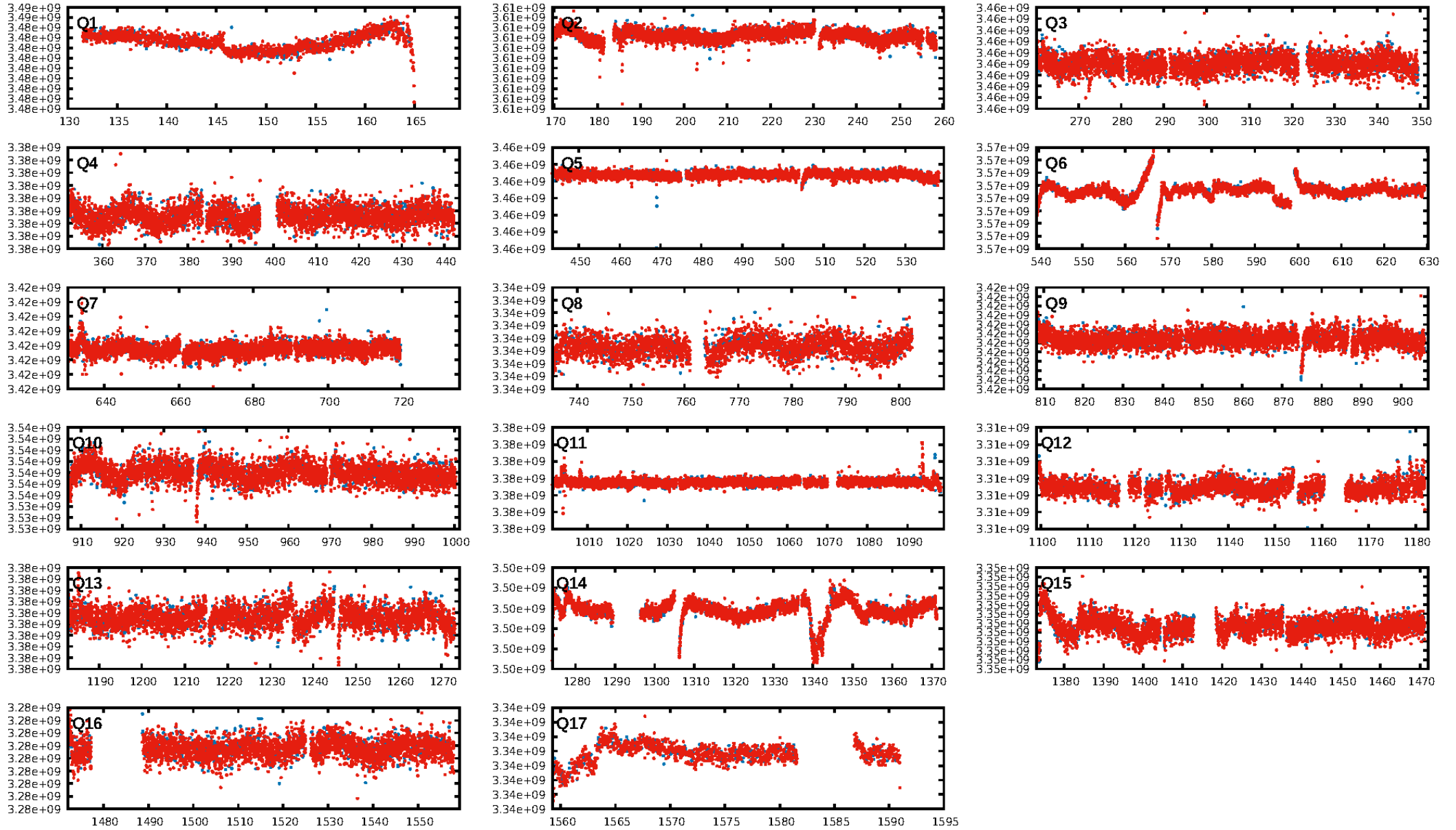
## DV Fit Results:

Period = 0.66086 [0.00001] d  
Epoch = 131.6855 [0.0044] BKJD  
 $R_p/R^* = 0.0014$  [0.0007]  
 $a/R^* = 1.05$  [0.28]  
 $b = 0.09$  [34.88]  
 $\text{Seff} = 121000.48$  [66180.10]  
 $T_{\text{eq}} = 4756$  [650] K  
 $R_p = 0.44$  [0.27]  $R_{\text{e}}$   
 $a = 0.0186$  [0.0062] AU  
 $A_g = \text{N/A}$   
 $T_{\text{eff}} = \text{N/A}$

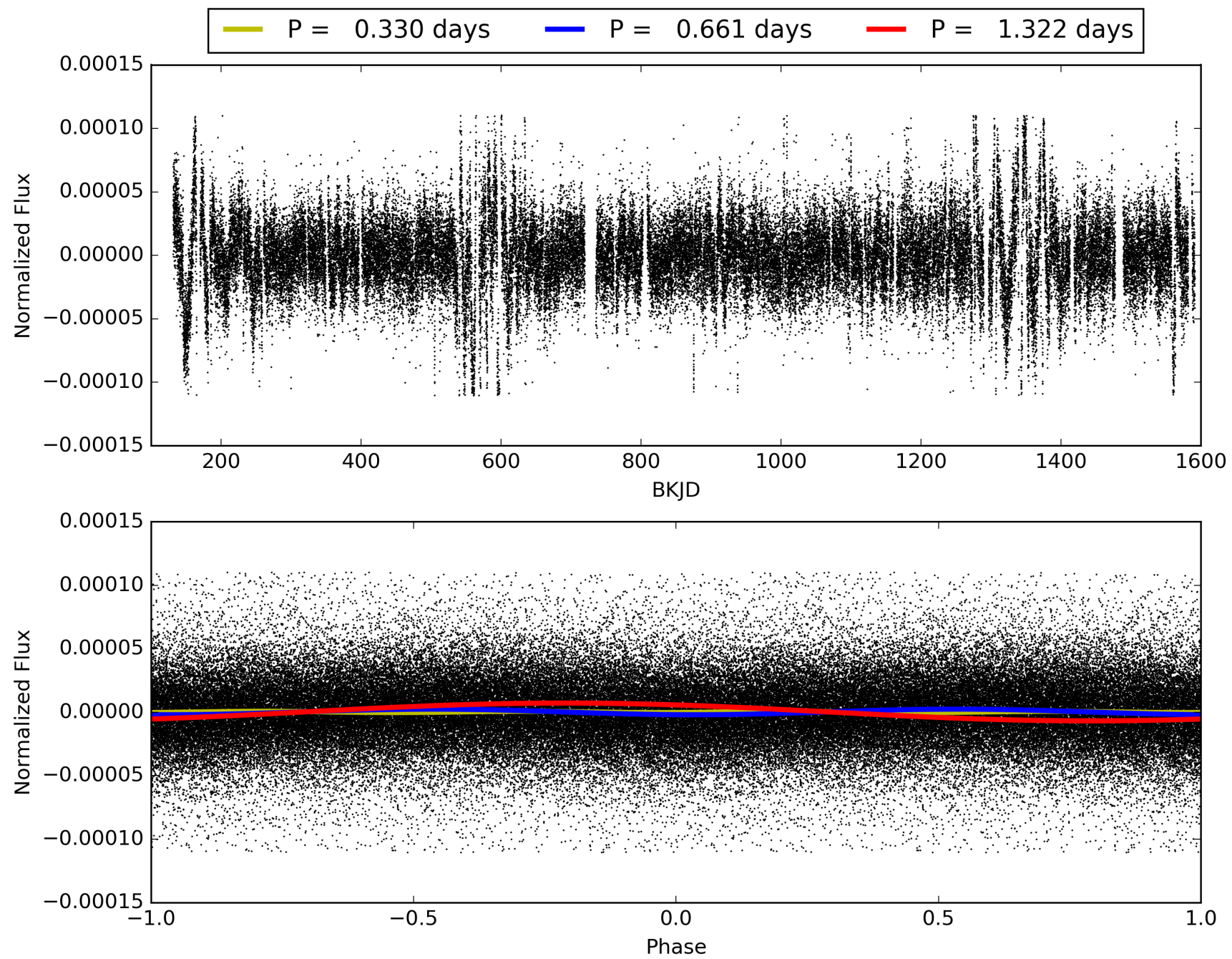
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [1938/1949]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 004831769-01, PDC Light Curves

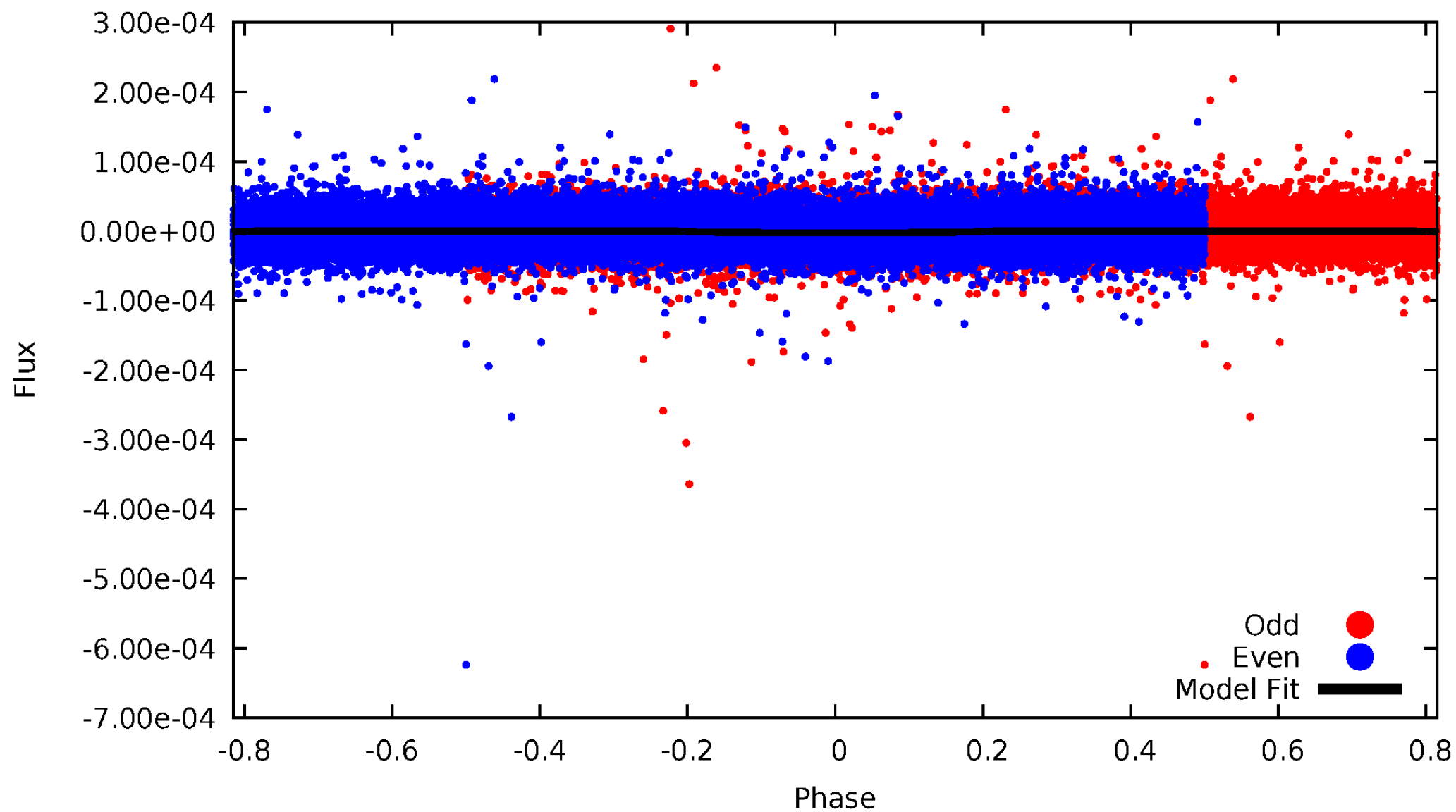


TCE 004831769-01



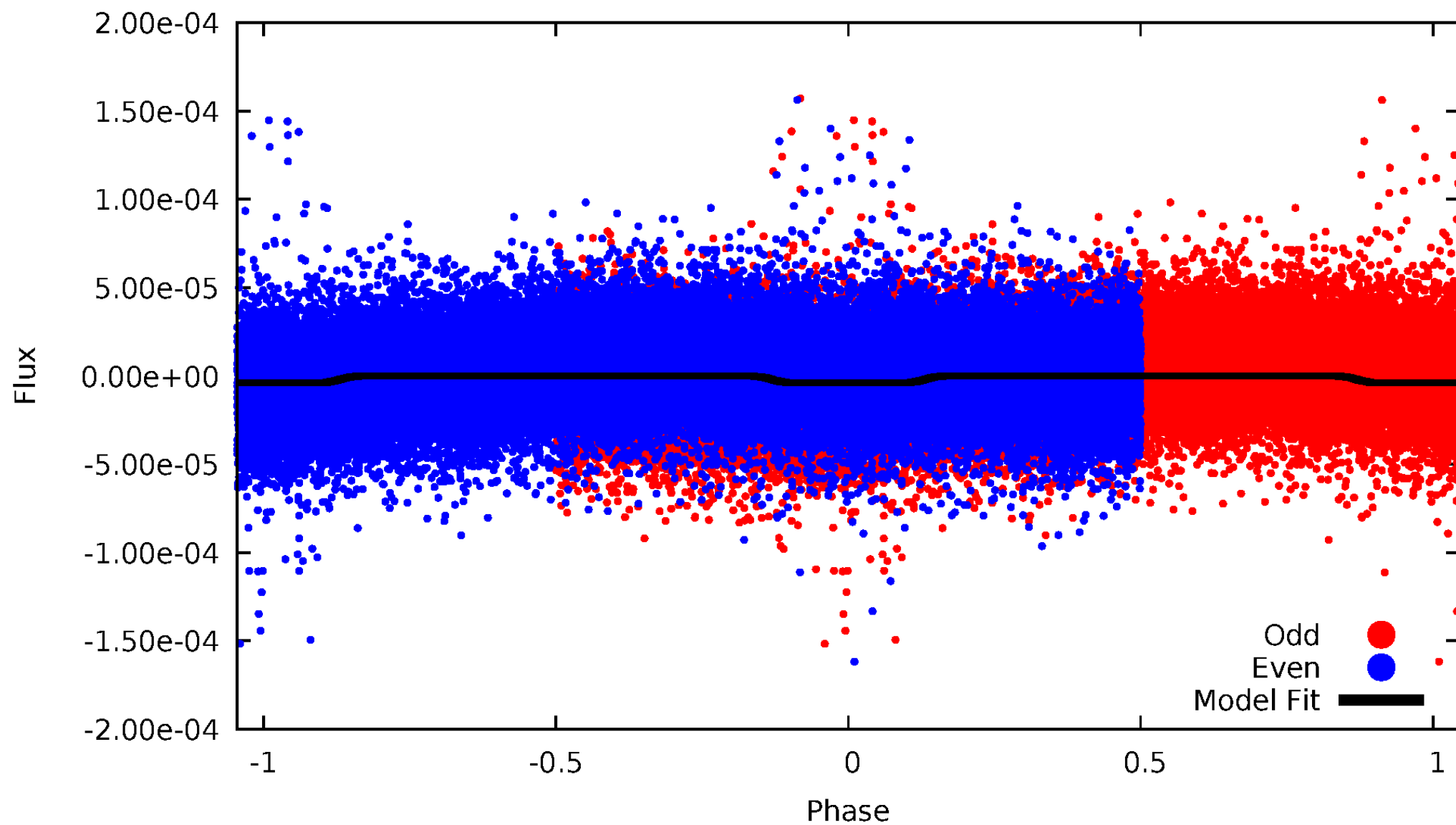
# DV Odd/Even

TCE 004831769-01



# ALT Odd/Even

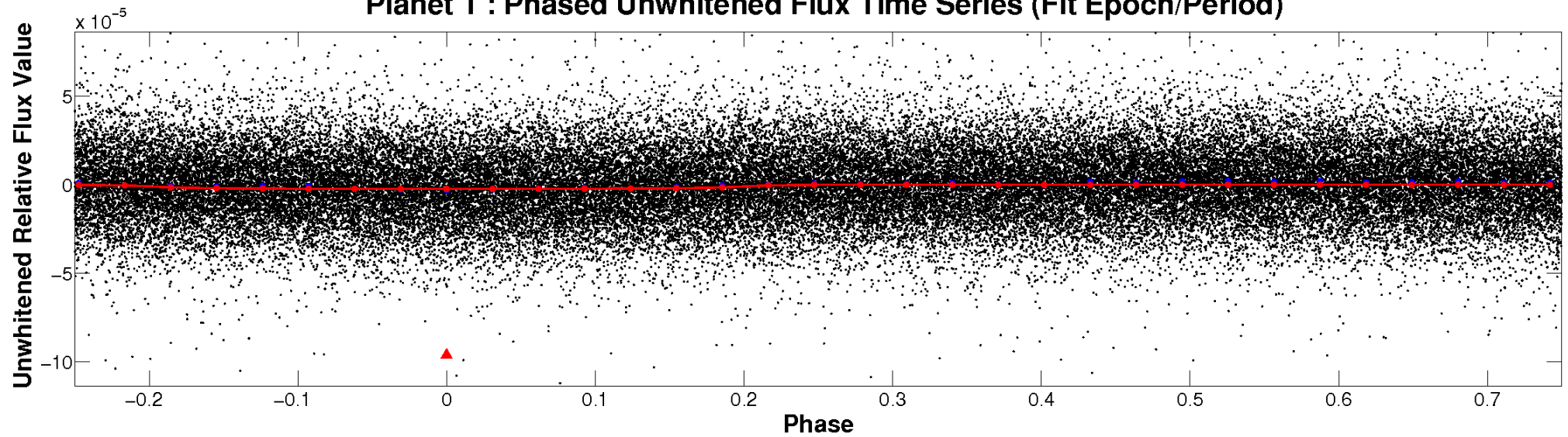
TCE 004831769-01



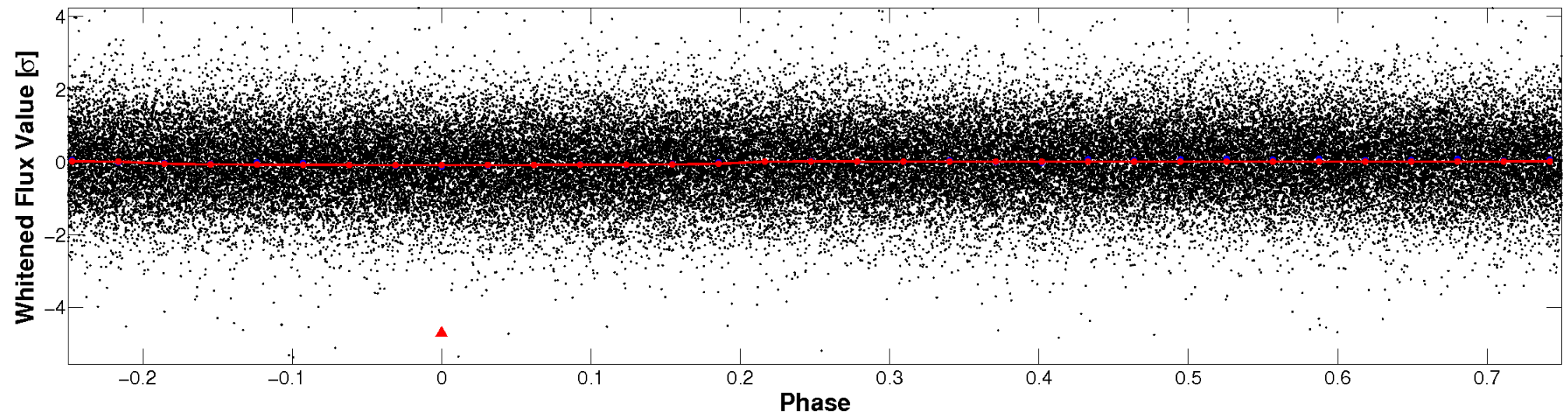


# Non-Whitened Vs. Whitened Light Curve

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

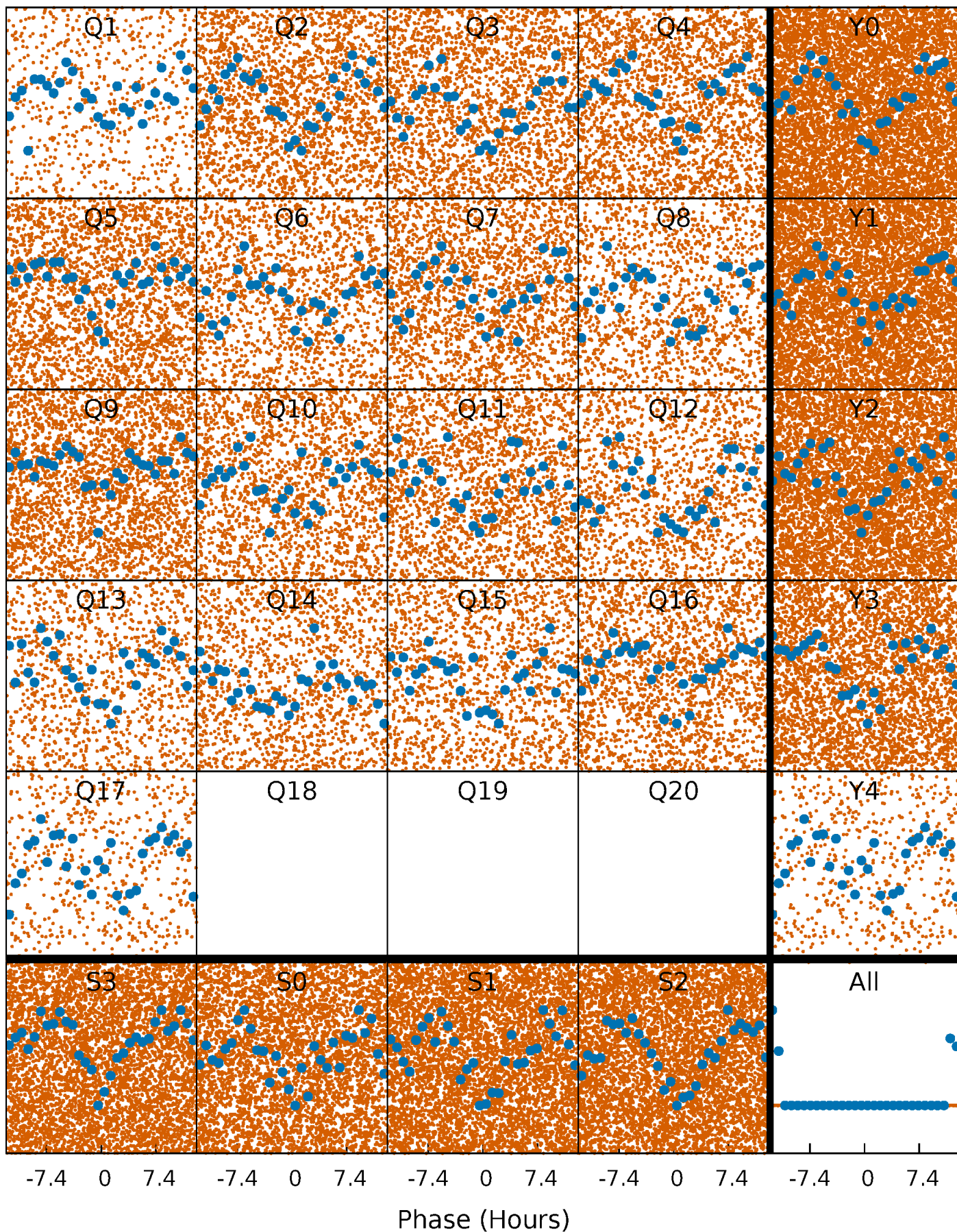


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

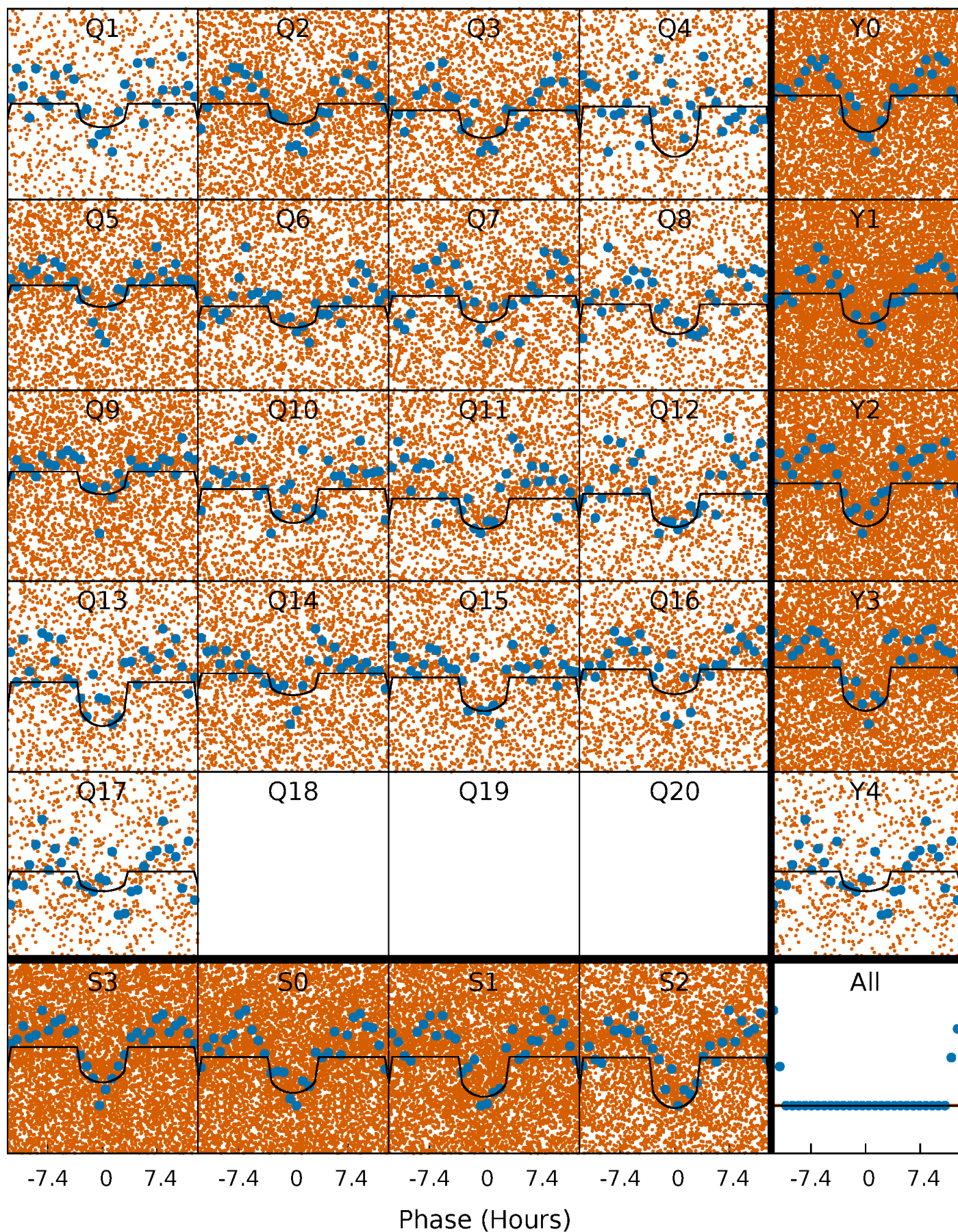
TCE 004831769-01 P= 0.660859 Days  $T_0=131.685465$  (BKJD)





# DV Quarter-Phased Transit Curves

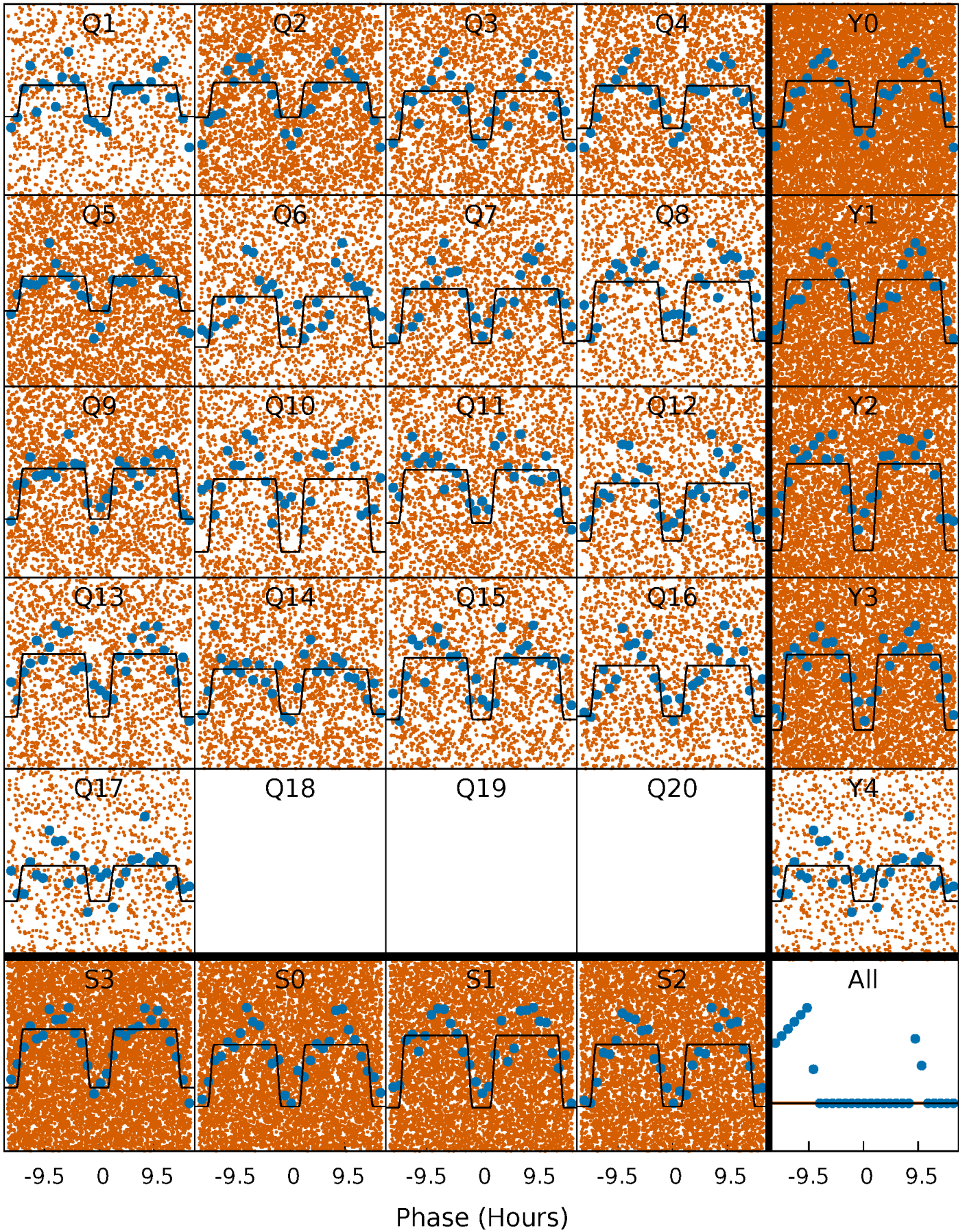
TCE 004831769-01 P= 0.660859 Days  $T_0=131.685465$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

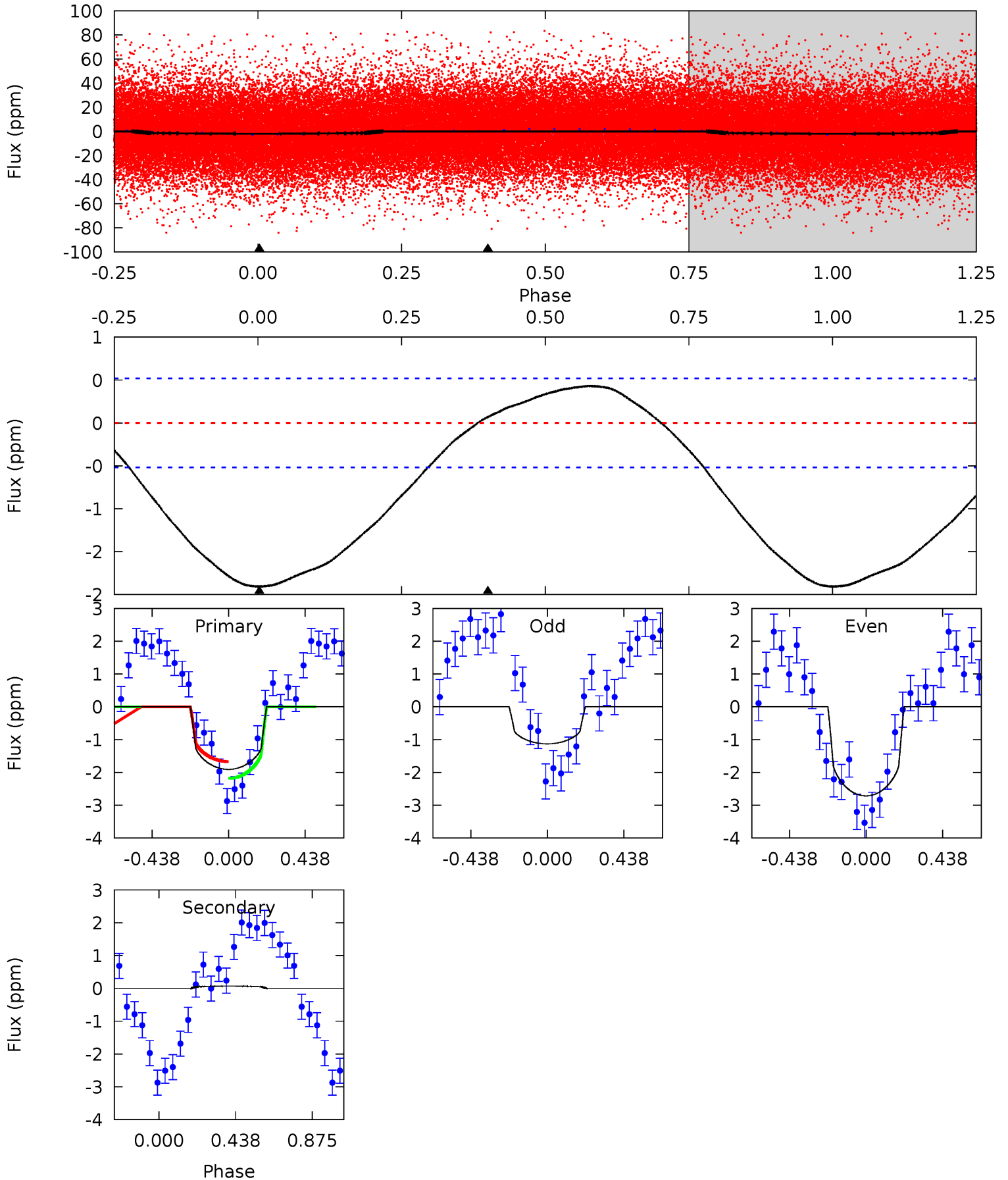
TCE 004831769-01 P= 0.660852 Days  $T_0=131.704431$  (BKJD)



# DV Model-Shift Uniqueness Test

004831769-01, P = 0.660859 Days, E = 131.024606 Days

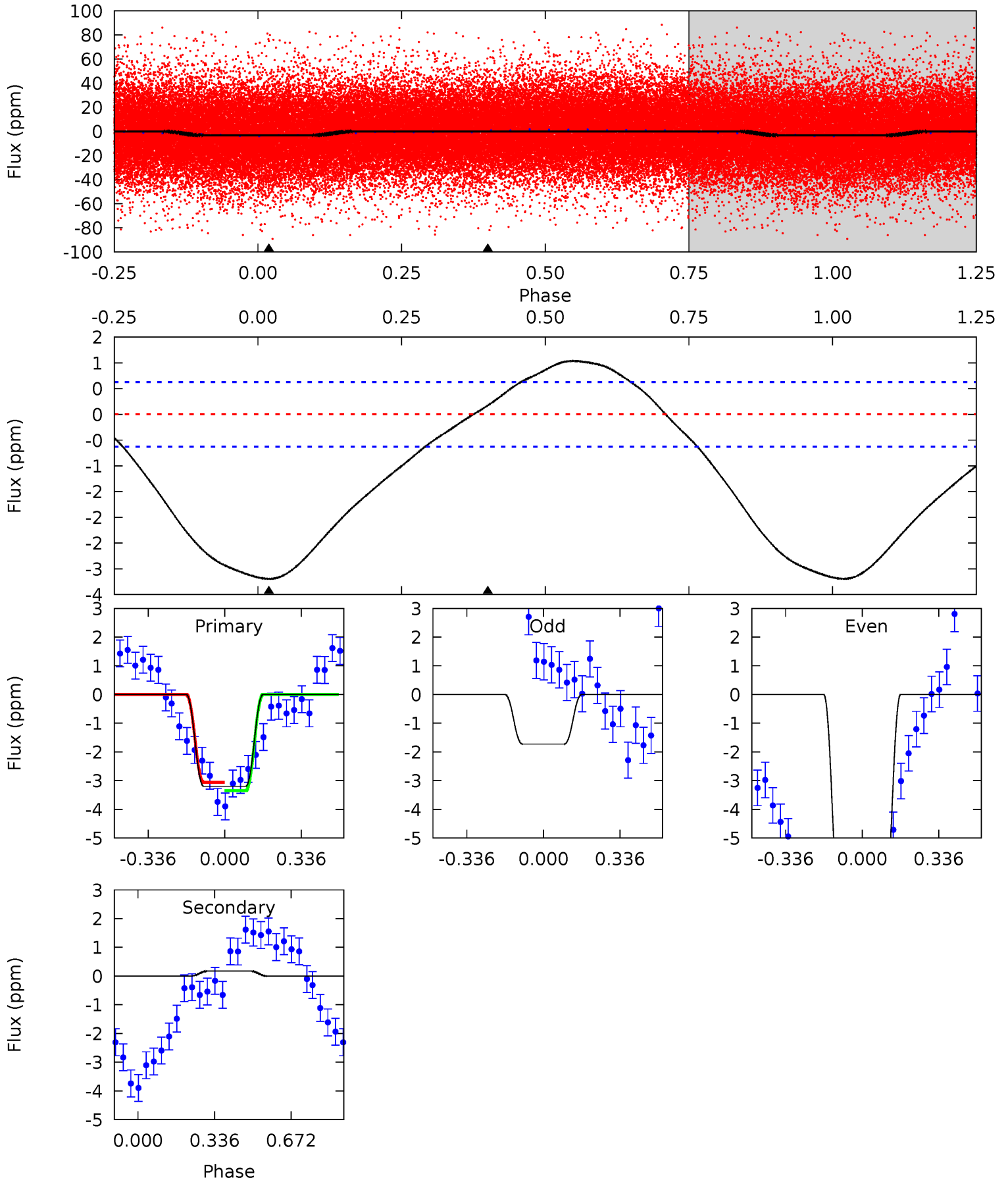
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	-0.56	0	0	4.24	0.78	1.43	15.6	15.6	-0.56	-0.56	6.56	1.01	0.18	2.11



# Alt Model-Shift Uniqueness Test

004831769-01, P = 0.660852 Days, E = 131.043579 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
21.9	-1.19	0	0	4.30	0.96	2.28	21.9	21.9	-1.19	-1.19	22.9	1.12	0.25	1.03





### Stellar Parameters For KIC 004831769

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8707^{+69}_{-86}$	$3.821^{+0.324}_{-0.054}$	$-0.320^{+0.400}_{-0.200}$	$2.850^{+0.255}_{-0.958}$	$1.964^{+0.148}_{-0.275}$	$0.119^{+0.260}_{-0.022}$
	+1%/-1%	+8%/-1%	+125%/-62%	+9%/-34%	+8%/-14%	+218%/-18%
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 004831769-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 0$	$0.42^{+0.22}_{-0.21}$	$6546^{+227}_{-583}$	$-5393^{+588}_{-776}$	$-0.071^{+0.113}_{-0.333}$
Alt.	$0 \pm 0$	$0.56^{+0.25}_{-0.21}$	$6542^{+226}_{-616}$	$-5461^{+409}_{-485}$	$-0.093^{+0.080}_{-0.212}$

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

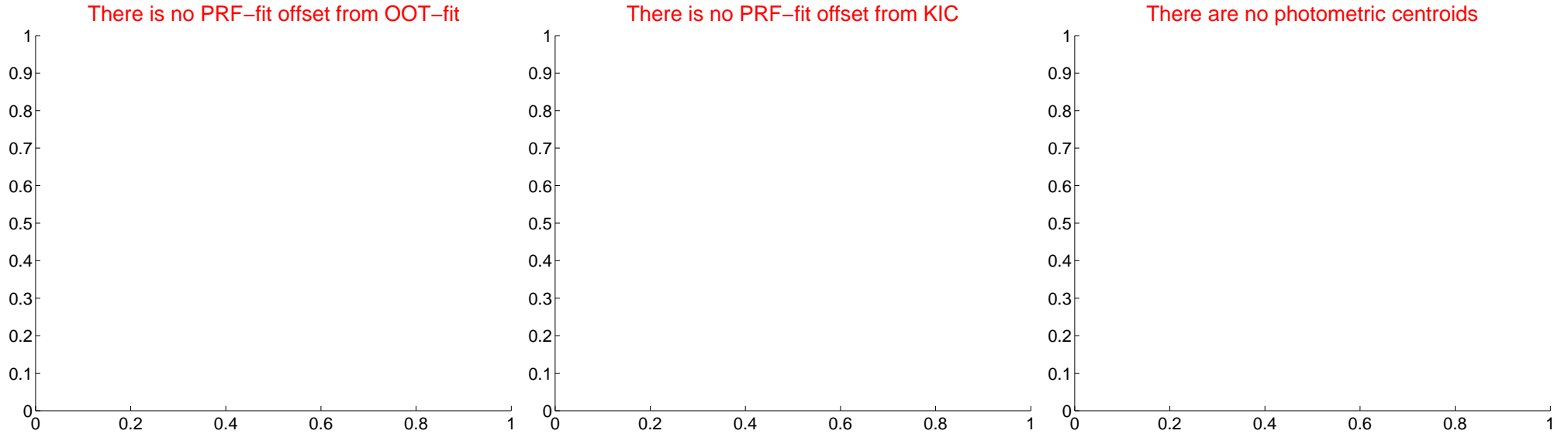
## DV Centroid Data

Supplemental centroid analysis for 004831769-01. **Kepler magnitude: 9.61.** Transit SNR 12.21

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

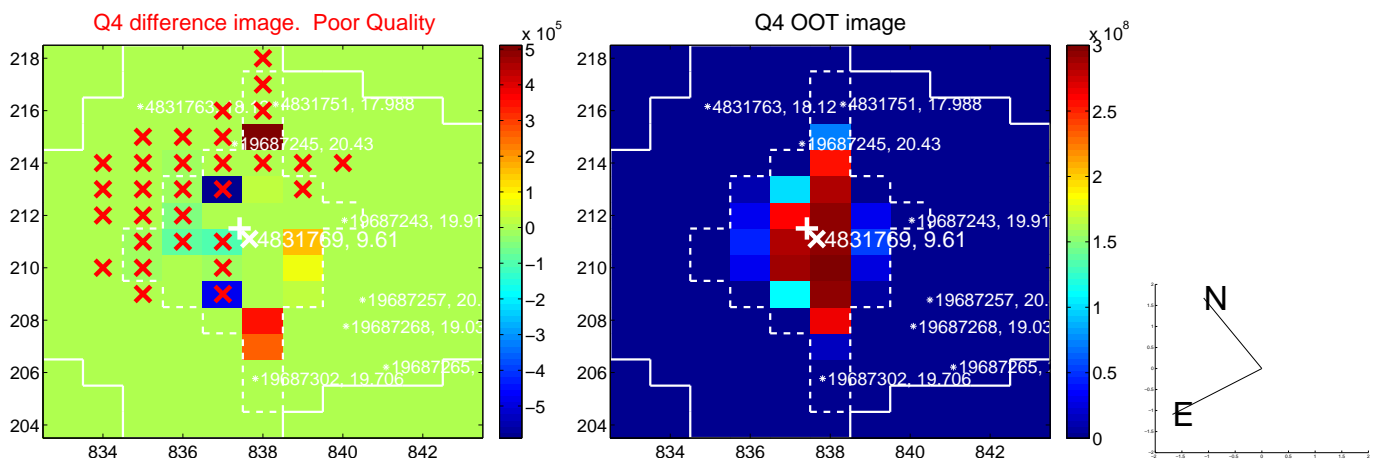
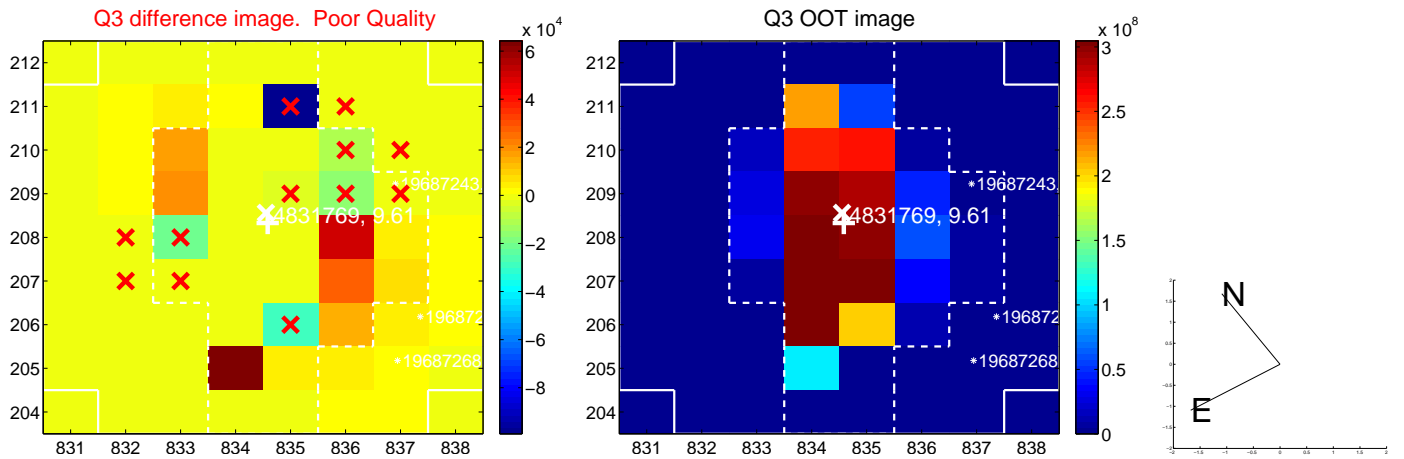
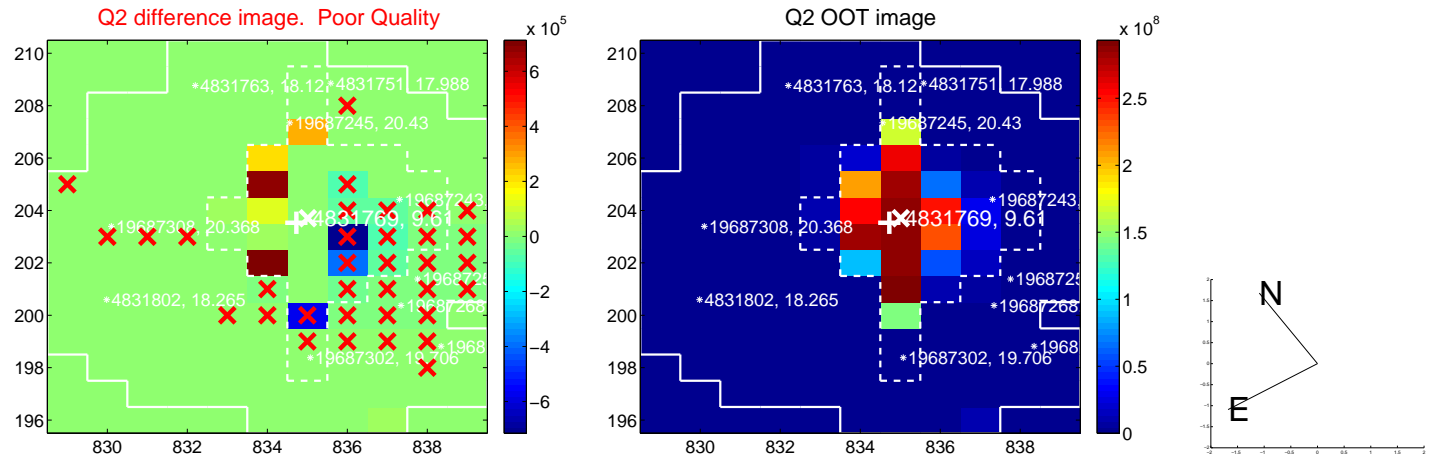
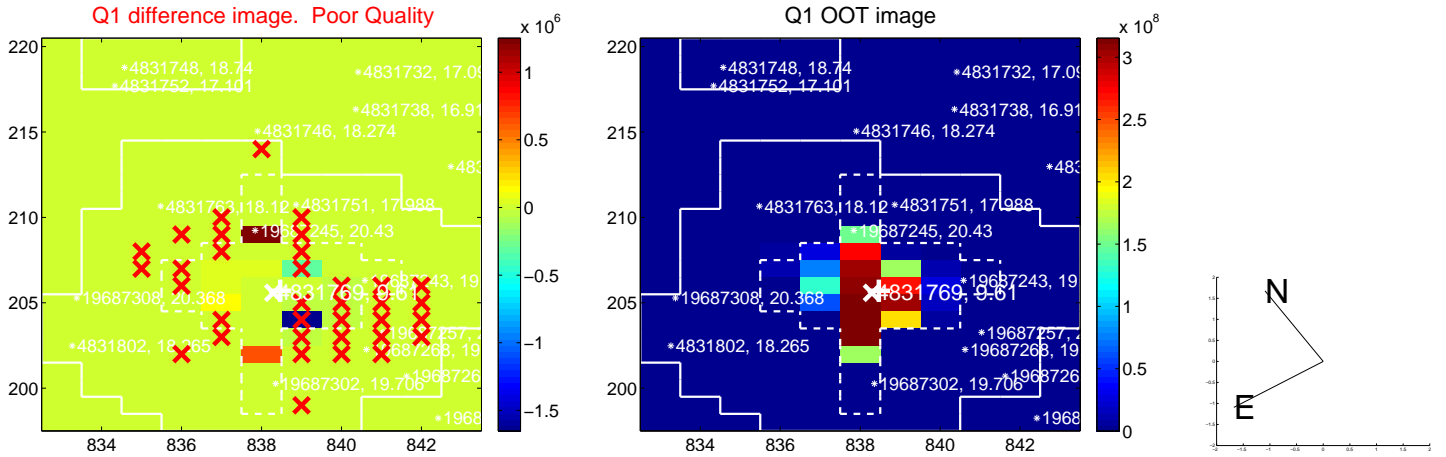
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

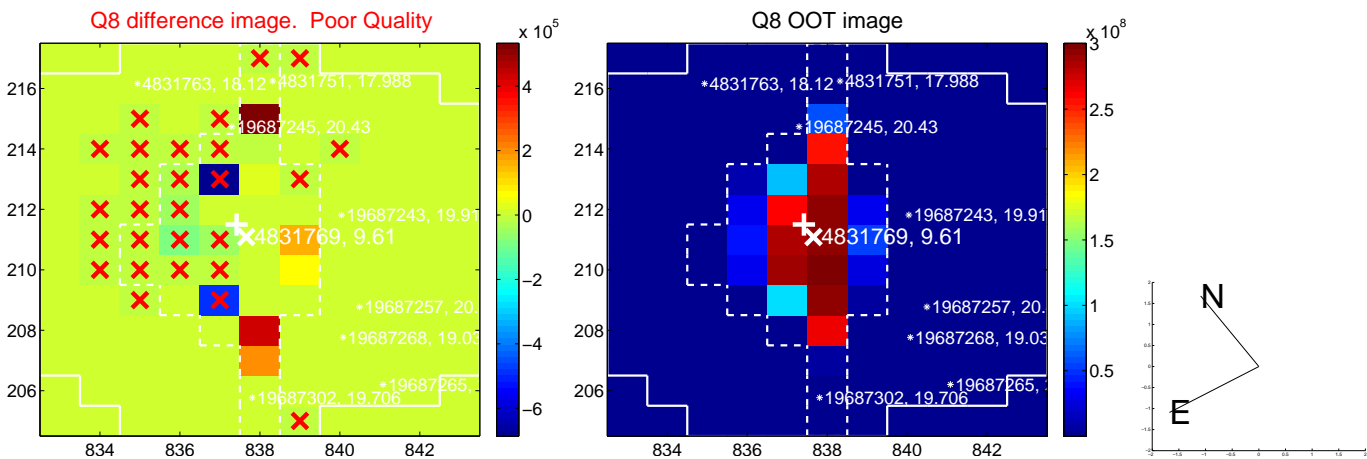
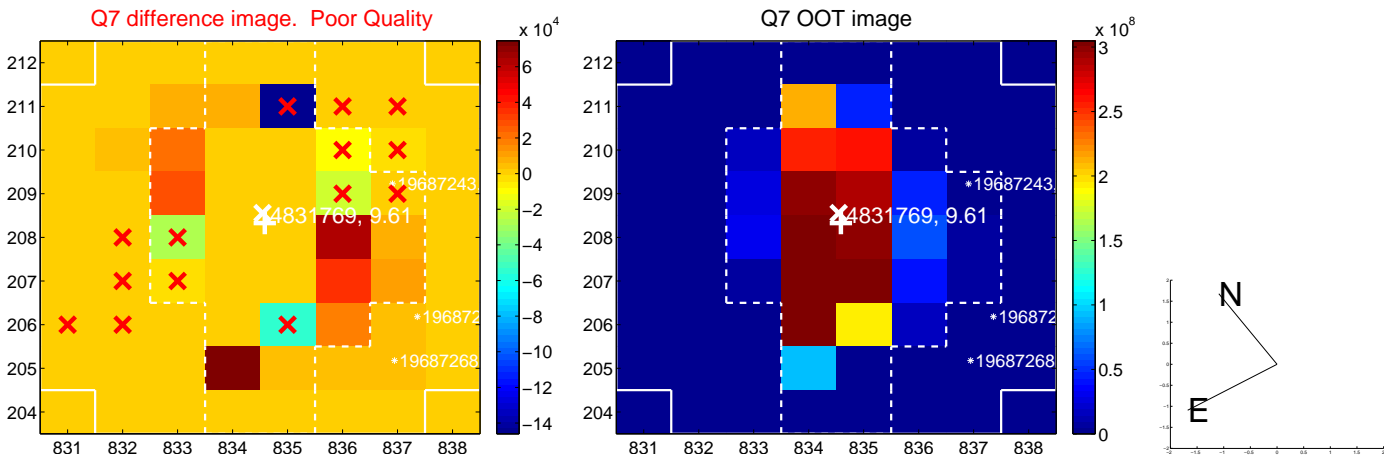
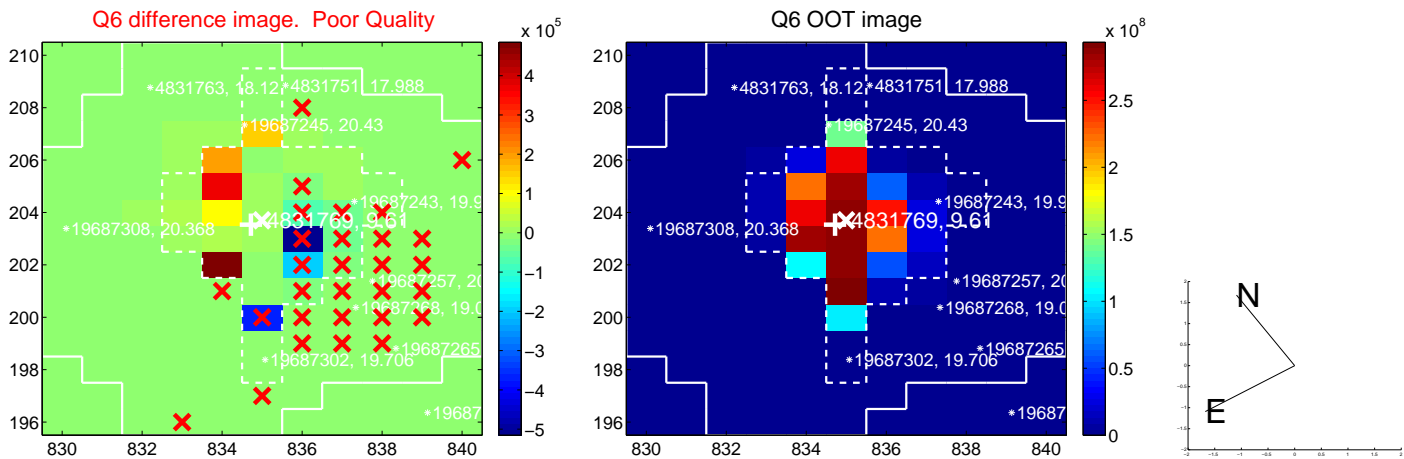
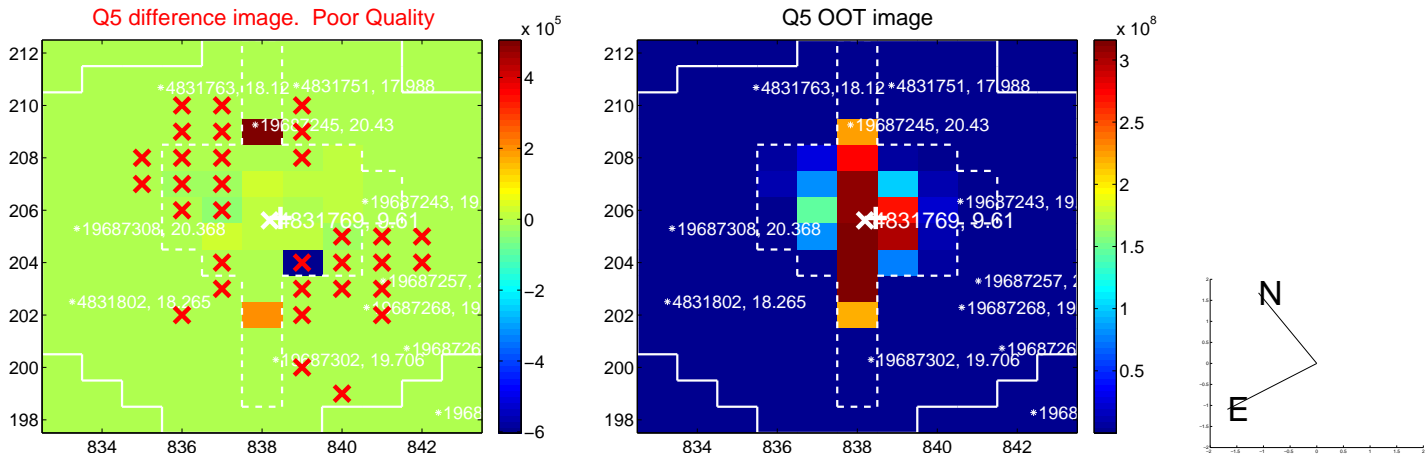


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

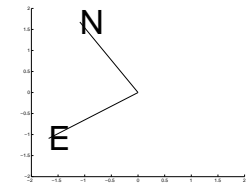
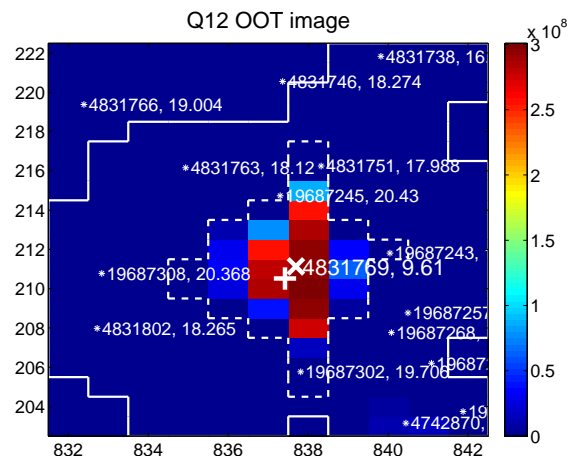
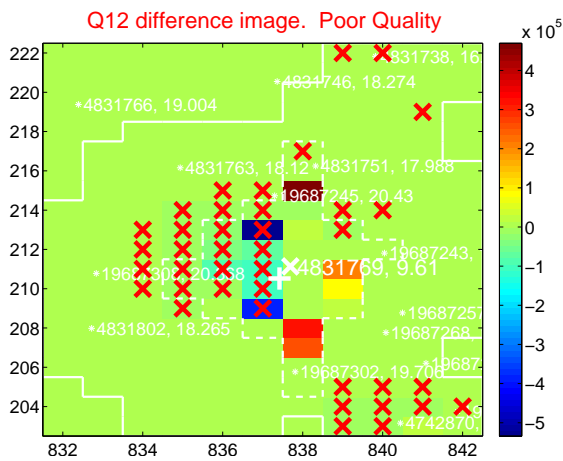
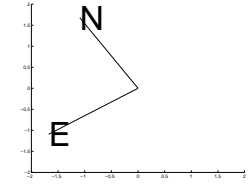
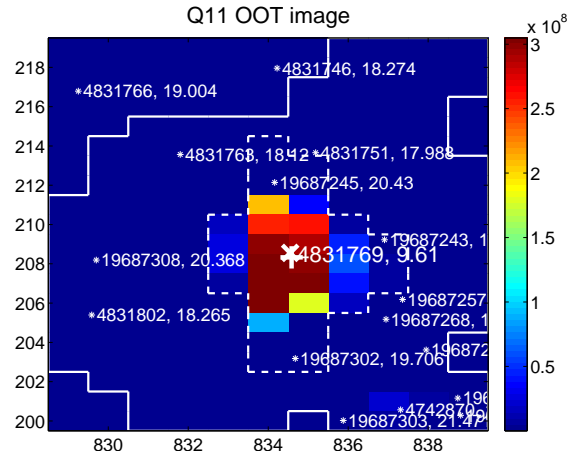
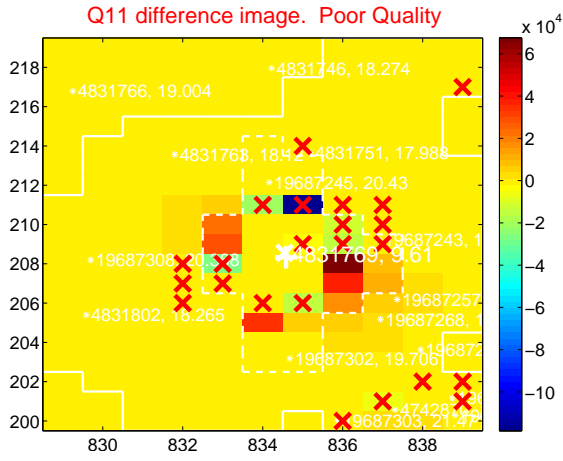
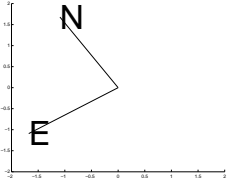
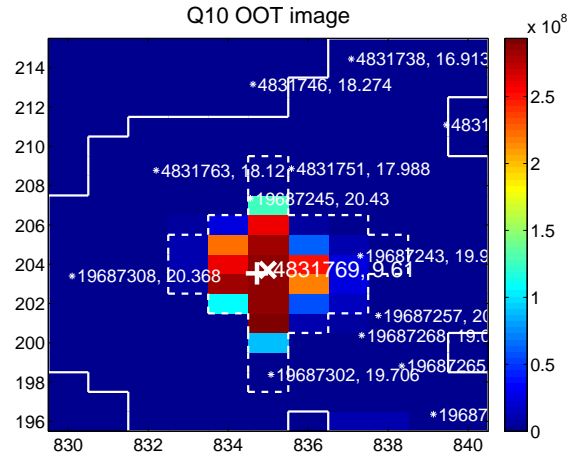
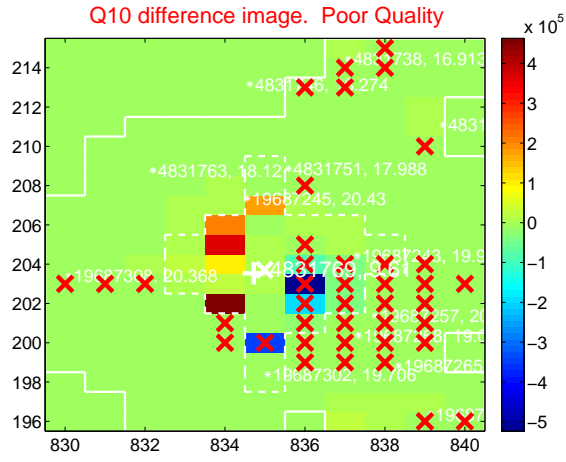
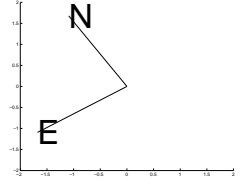
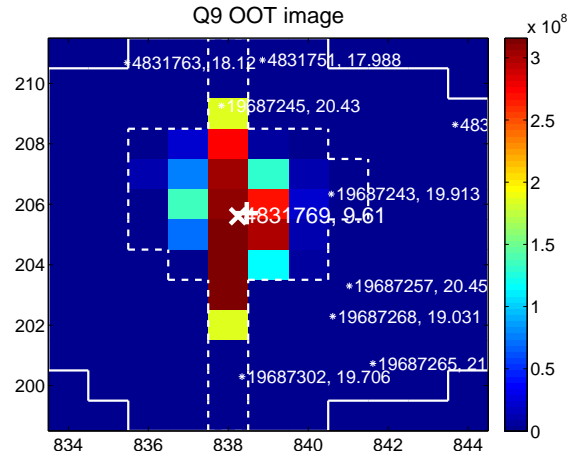
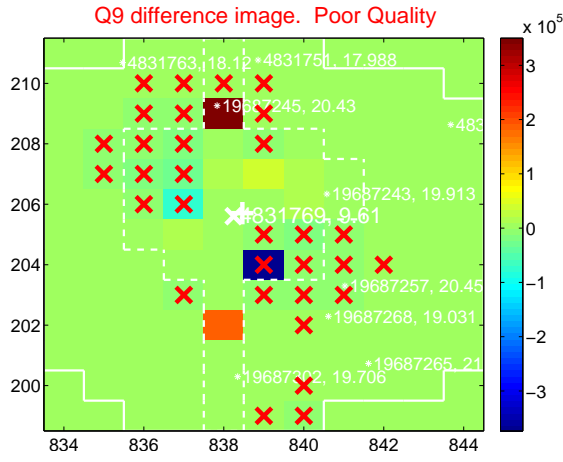


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

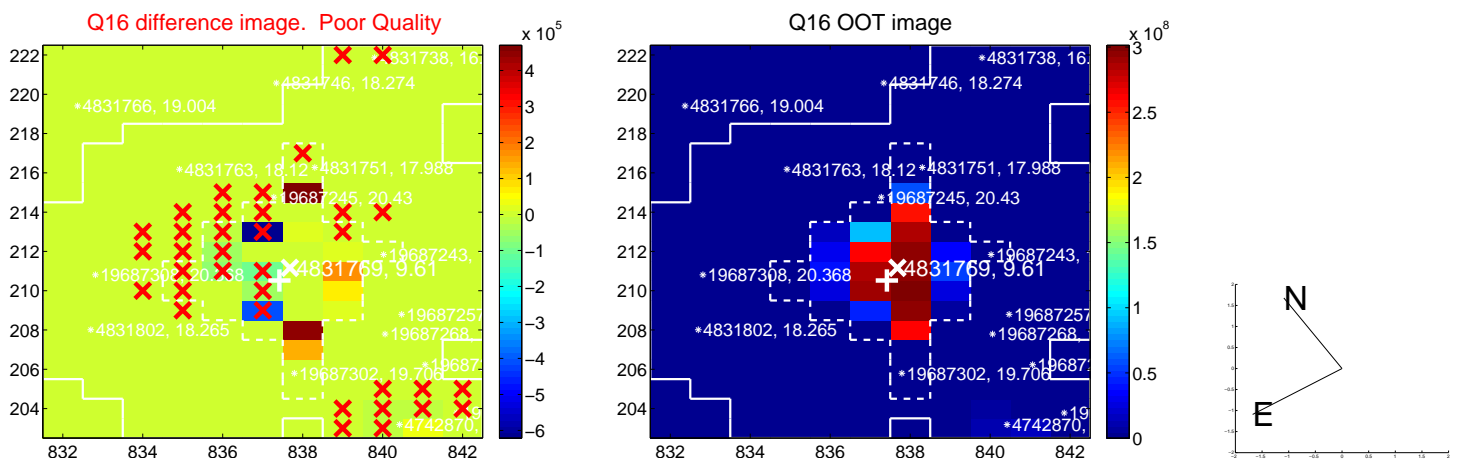
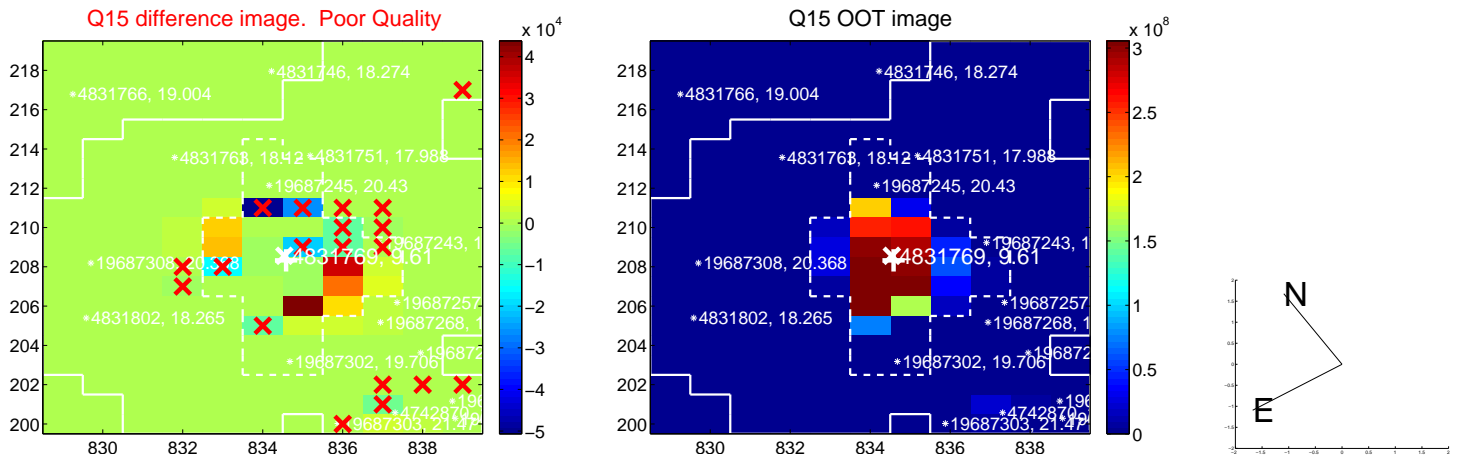
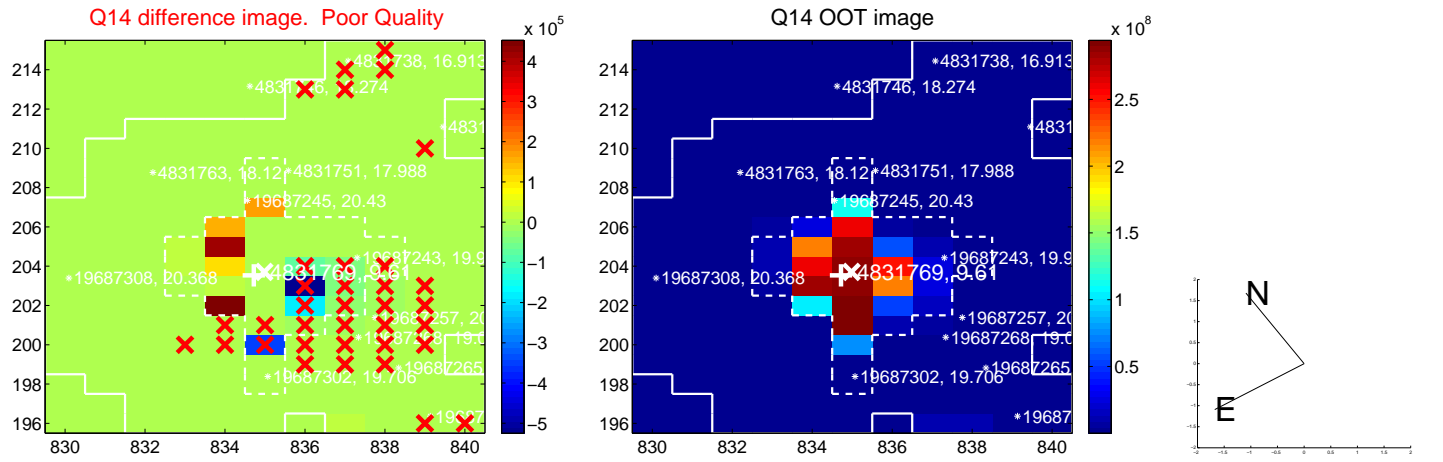
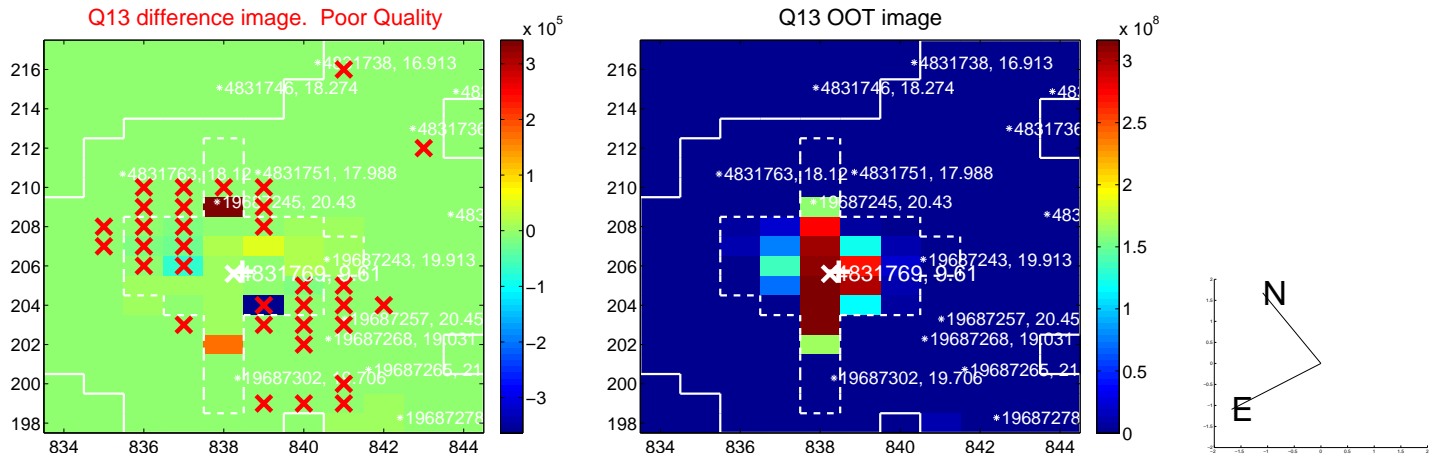




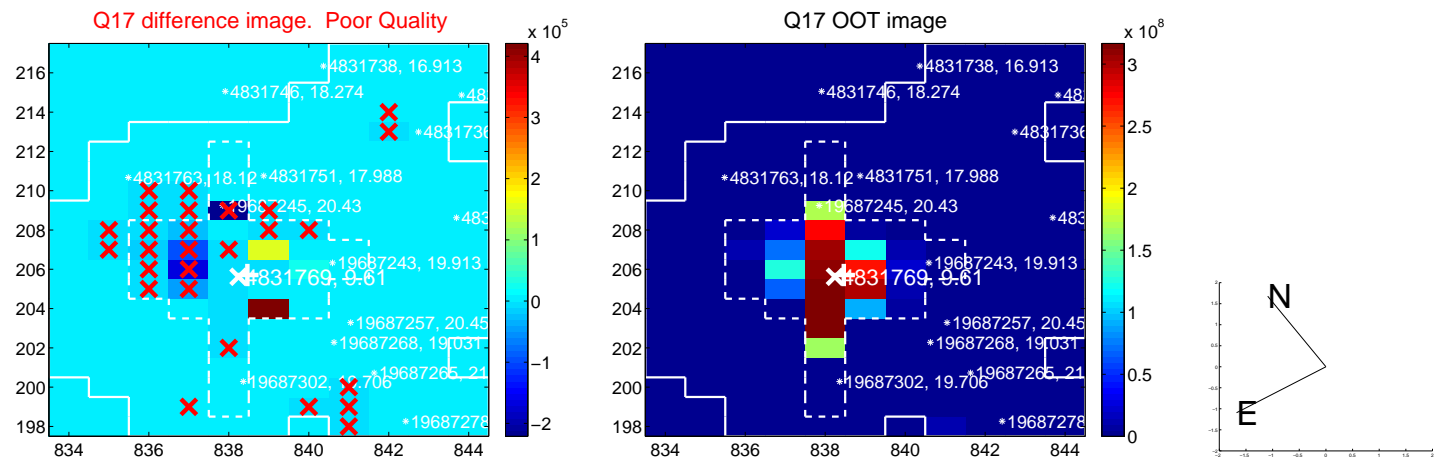
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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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

