

# KIC 007671833

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007671833-01	OBS	No	0.669607	131.884734	2.4	5.894	8.8	2.2	1.66	6920	0.26	20128.23

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007671833-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

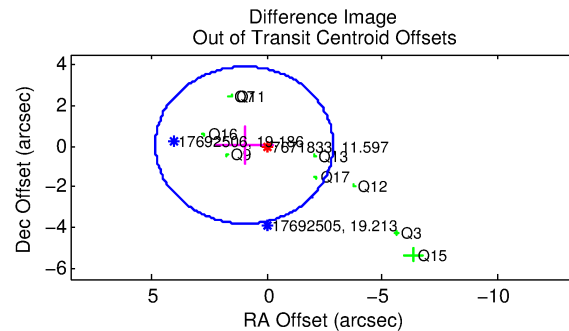
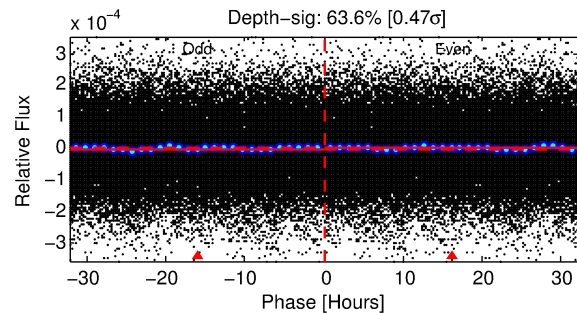
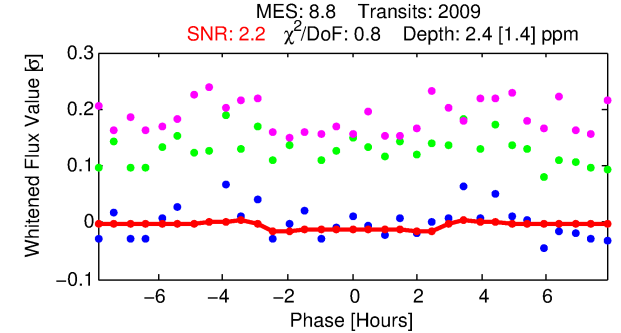
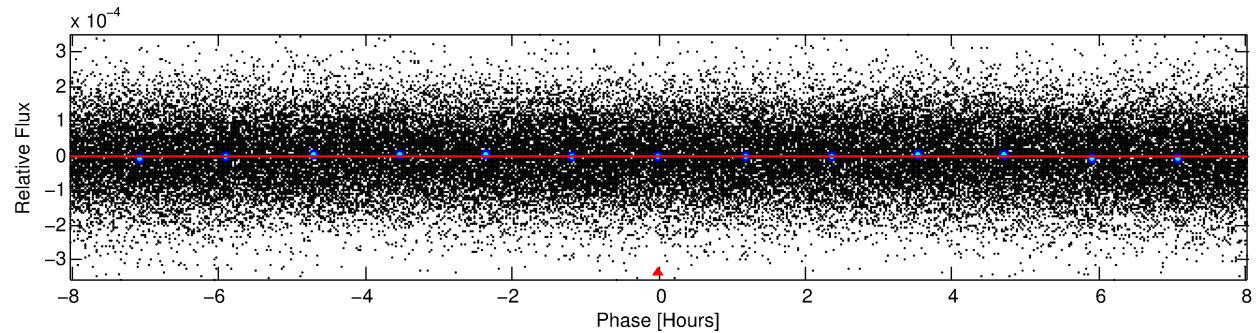
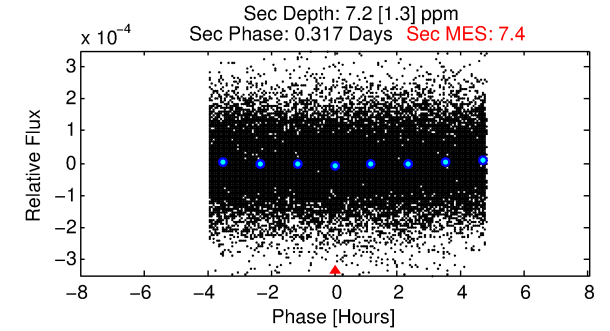
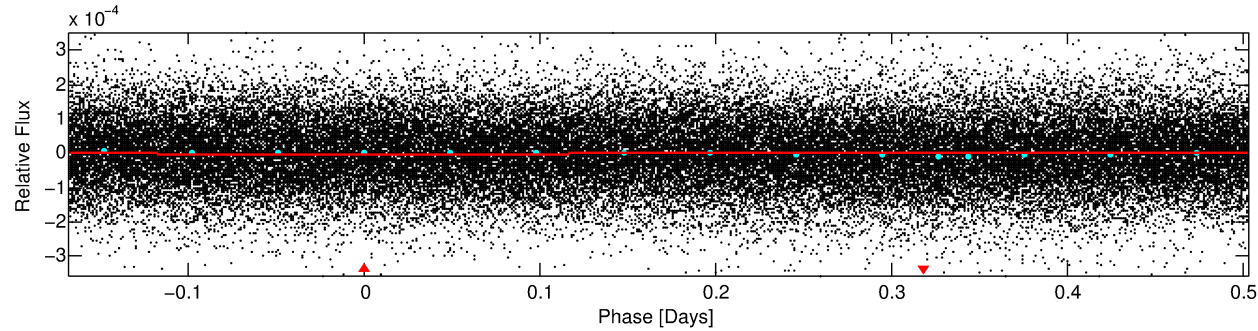
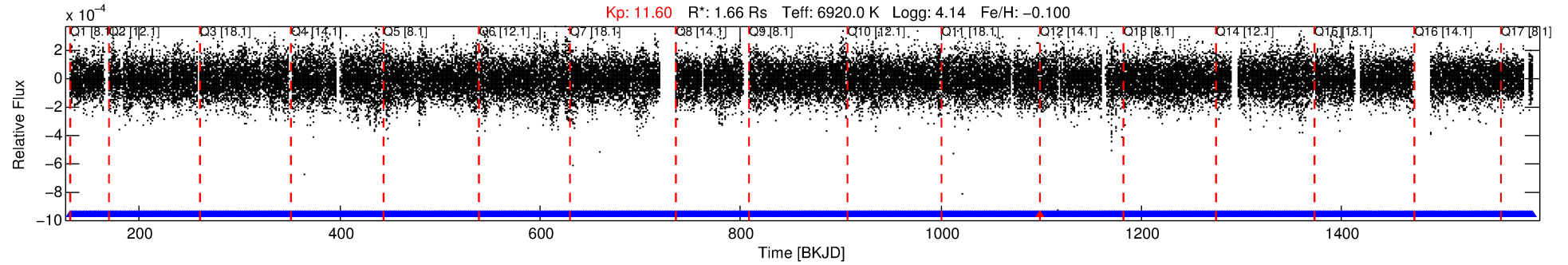
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007671833-01

No Significant Match Found

# DV One-Page Summary

KIC: 7671833 Candidate: 1 of 1 Period: 0.670 d



## DV Fit Results:

Period = 0.66961 [0.00005] d  
Epoch = 131.8847 [0.0148] BKJD  
 $R_p/R^* = 0.0014$  [0.0038]  
 $a/R^* = 1.09$  [2.61]  
 $b = 0.27$  [52.13]  
 $S_{\text{eff}} = 20128.23$  [4507.05]  
 $T_{\text{eq}} = 3037$  [170] K  
 $R_p = 0.26$  [0.69]  $R_e$   
 $a = 0.0168$  [0.0025] AU  
 $A_g = 16.29$  [86.18] [0.18σ]  
 $T_{\text{eff}} = 9434$  [12467] K [0.51σ]

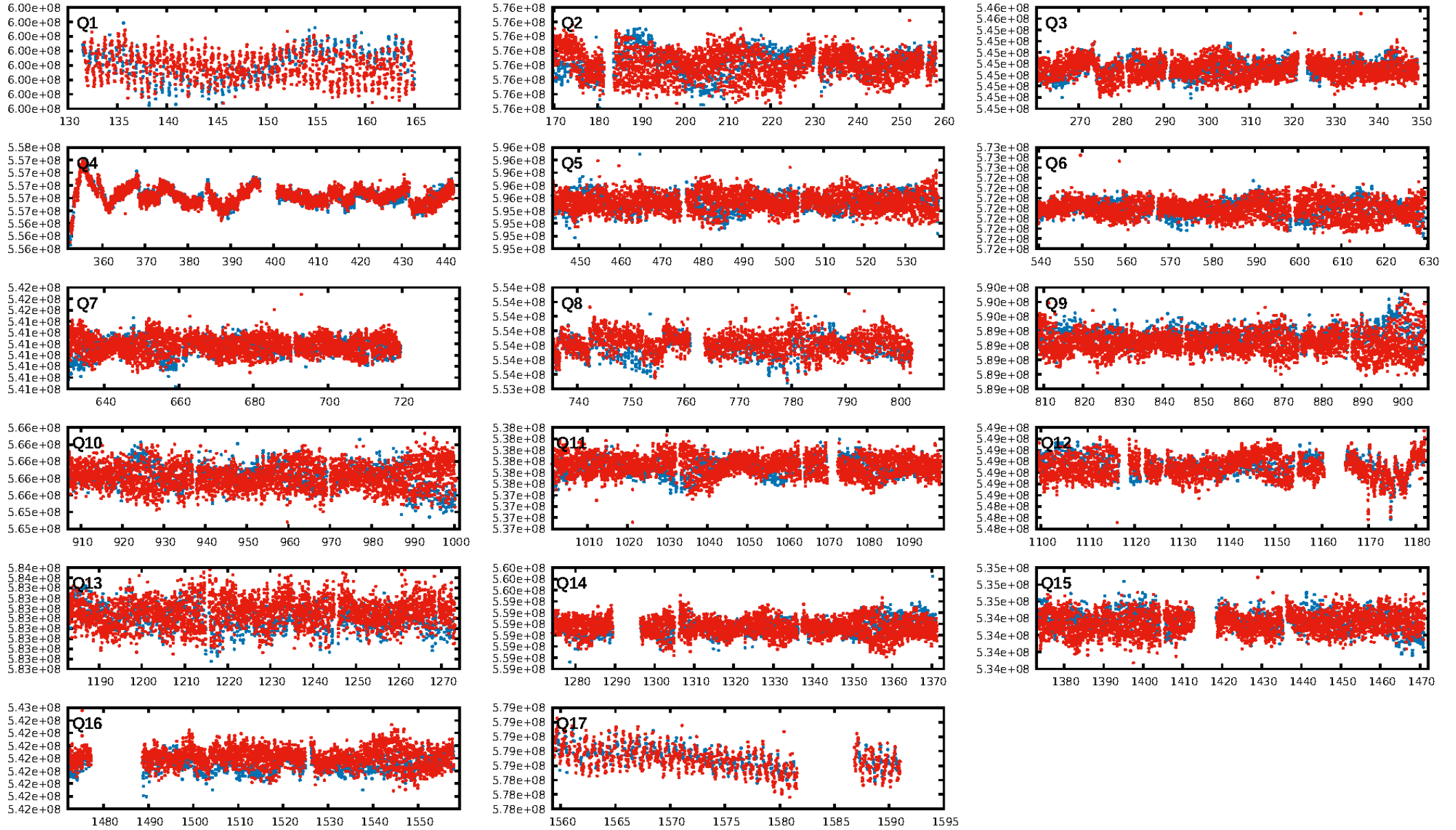
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1917/1918]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 0.972 arcsec [0.76σ]  
KicOffset-rm: 1.101 arcsec [0.83σ]  
OotOffset-st: 0/4/2/3 [9]  
KicOffset-st: 0/4/2/3 [9]  
DiffImageQuality-fgm: 0.22 [2/9]  
DiffImageOverlap-fno: 1.00 [17/17]

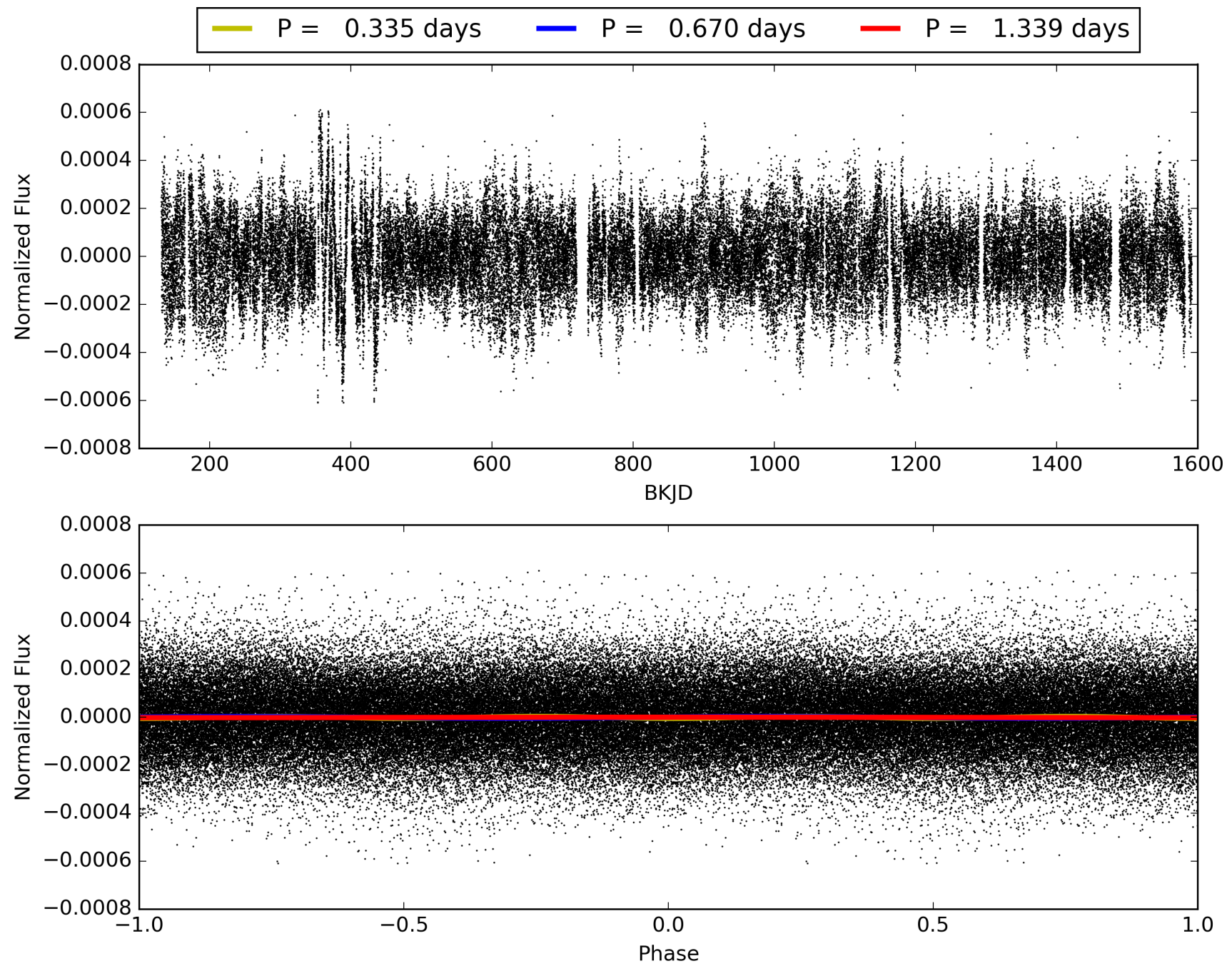
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:17:25 Z

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

# TCE 007671833-01, PDC Light Curves

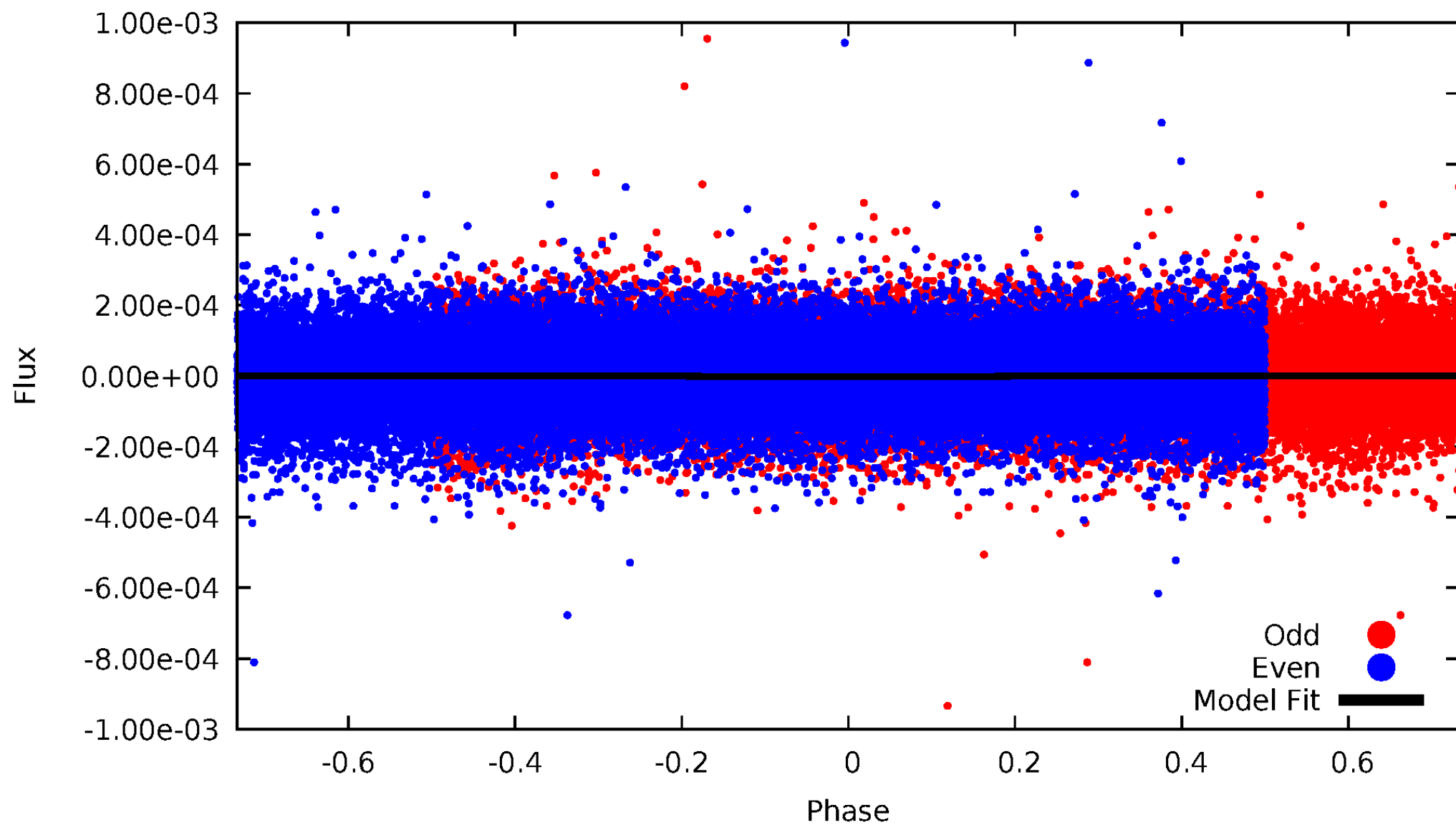


TCE 007671833-01



# DV Odd/Even

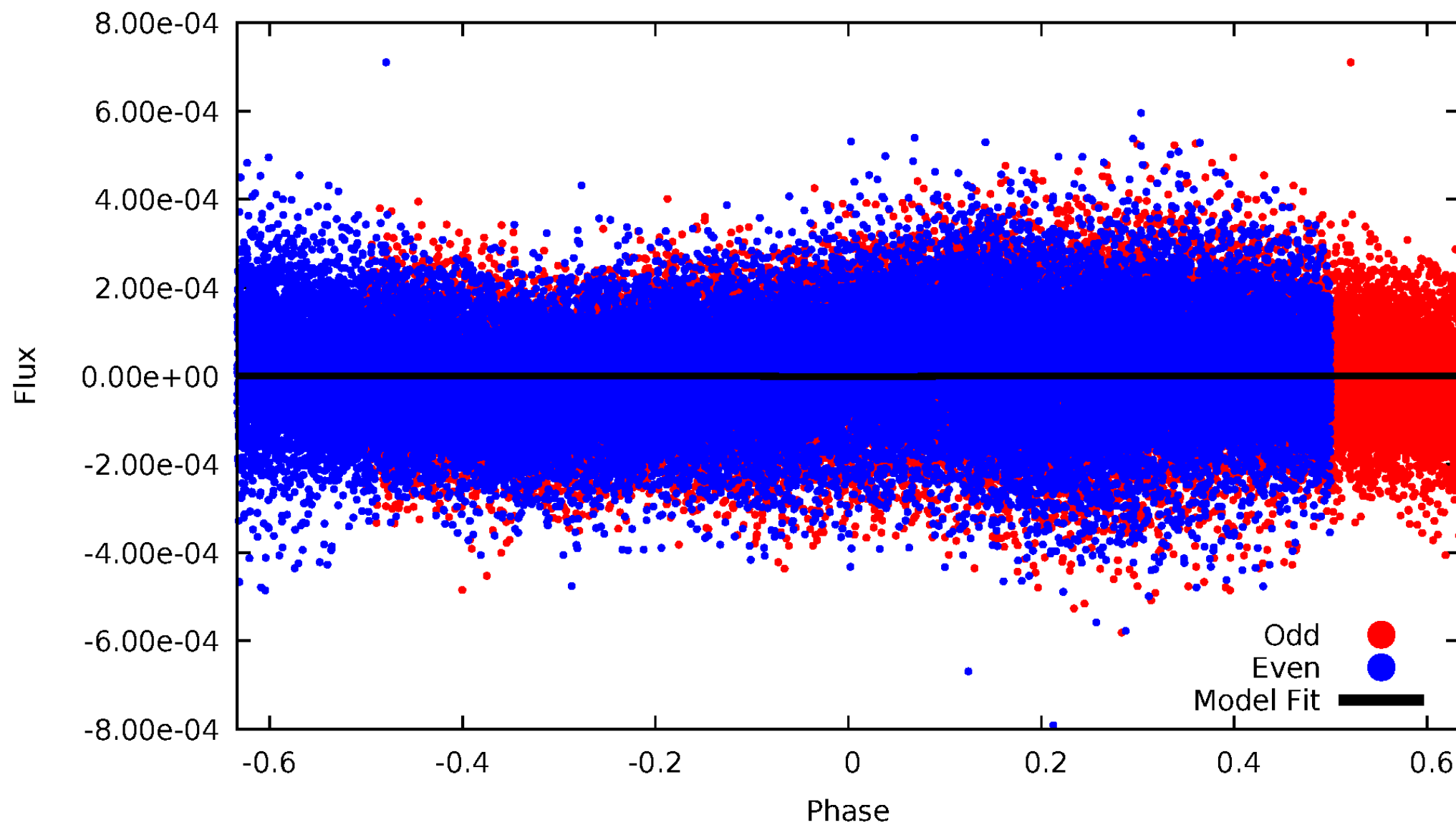
TCE 007671833-01





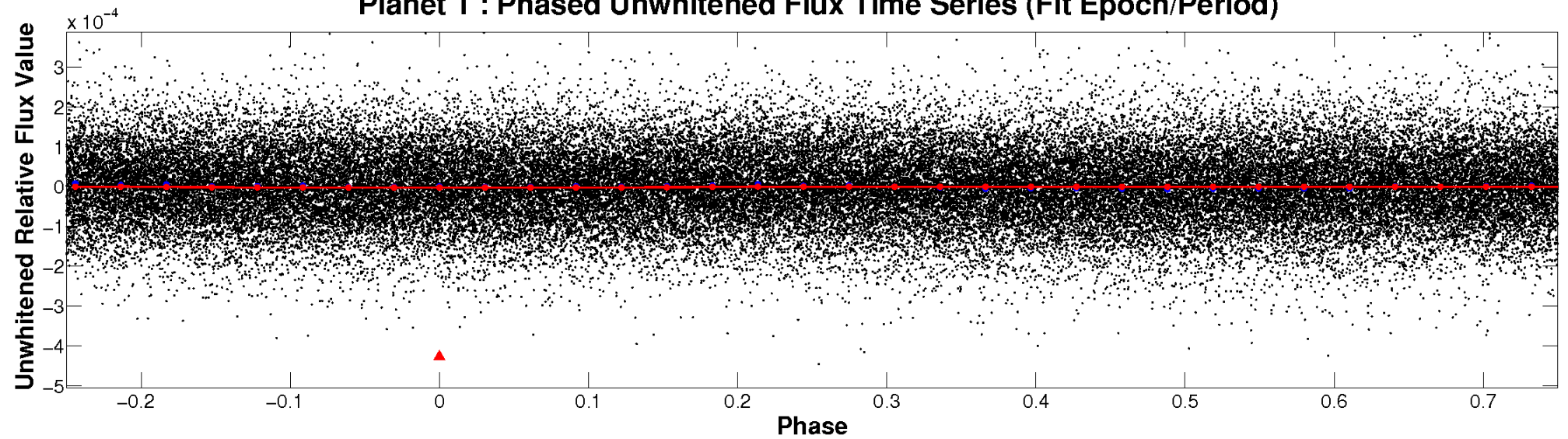
# ALT Odd/Even

TCE 007671833-01

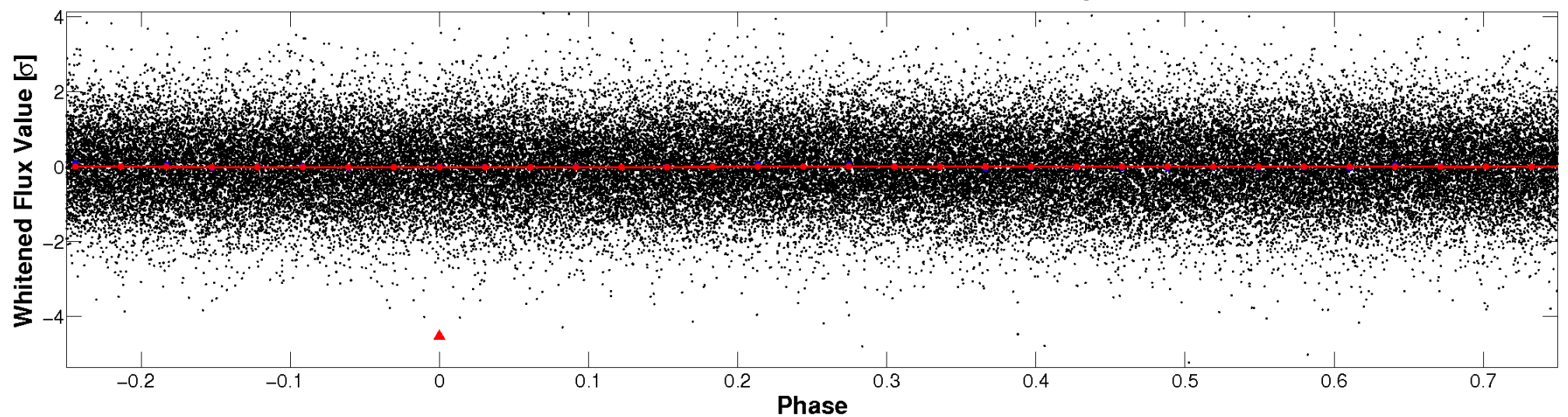


# Non-Whitened Vs. Whitened Light Curve

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

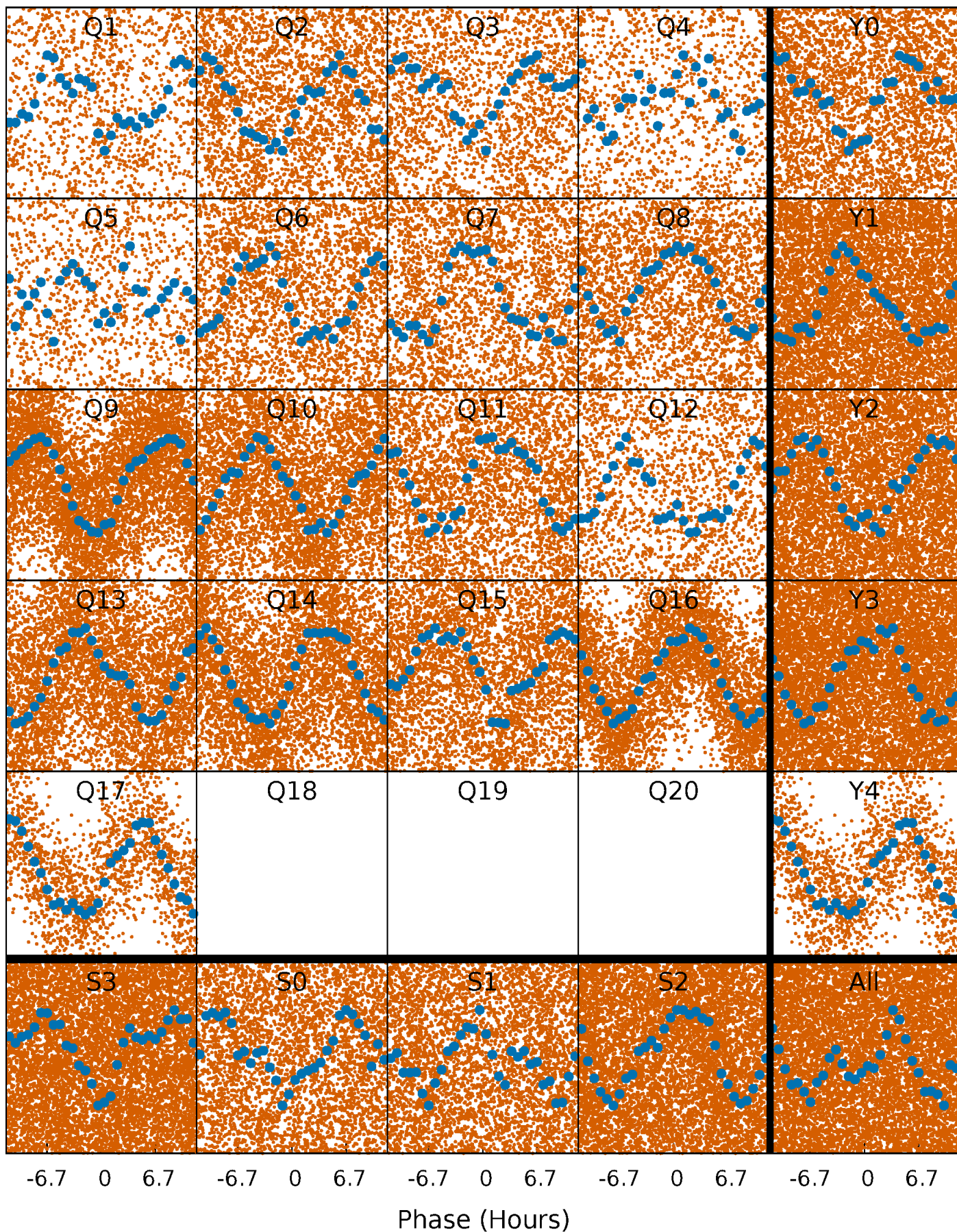


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

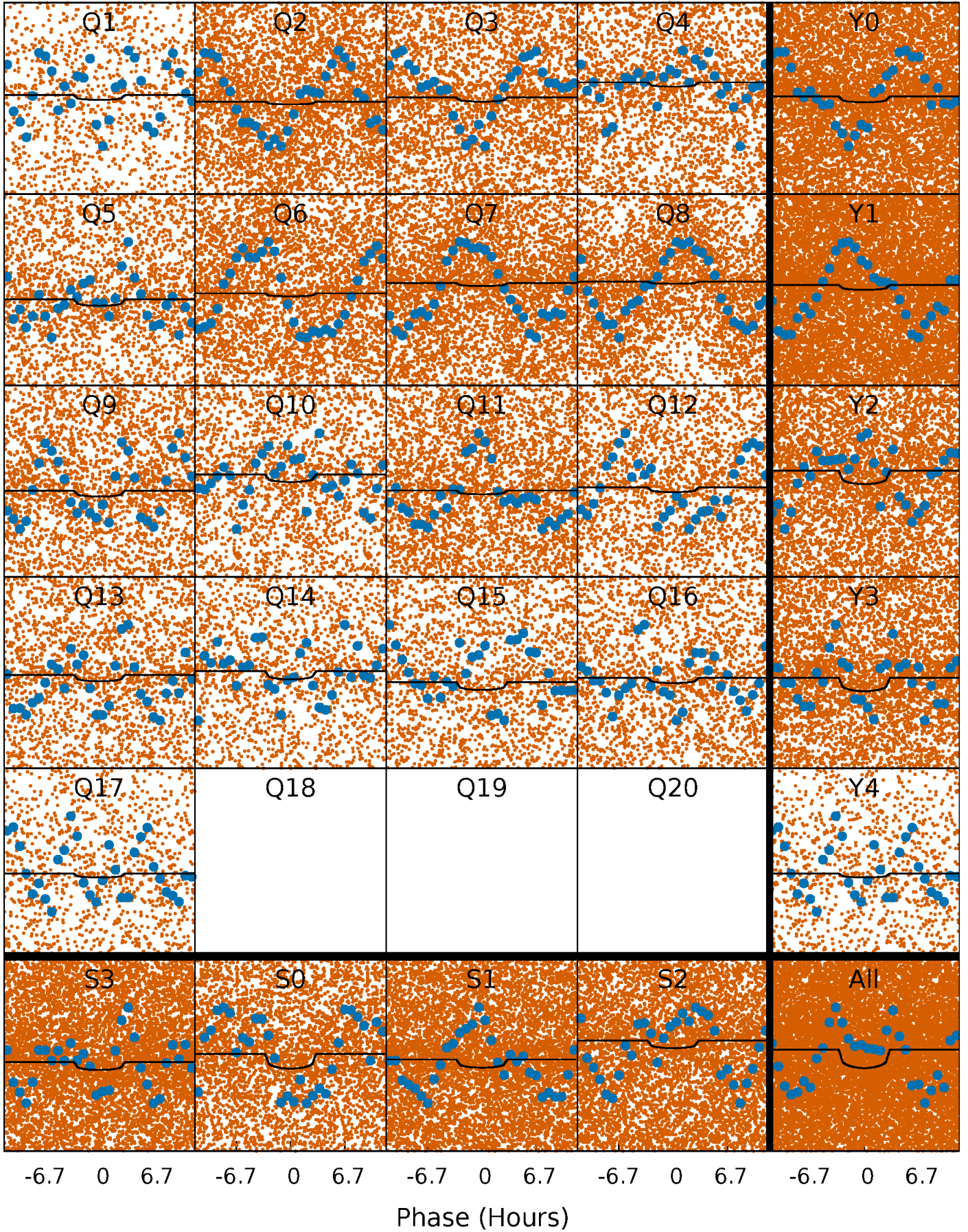
TCE 007671833-01 P= 0.669607 Days  $T_0=131.884734$  (BKJD)





# DV Quarter-Phased Transit Curves

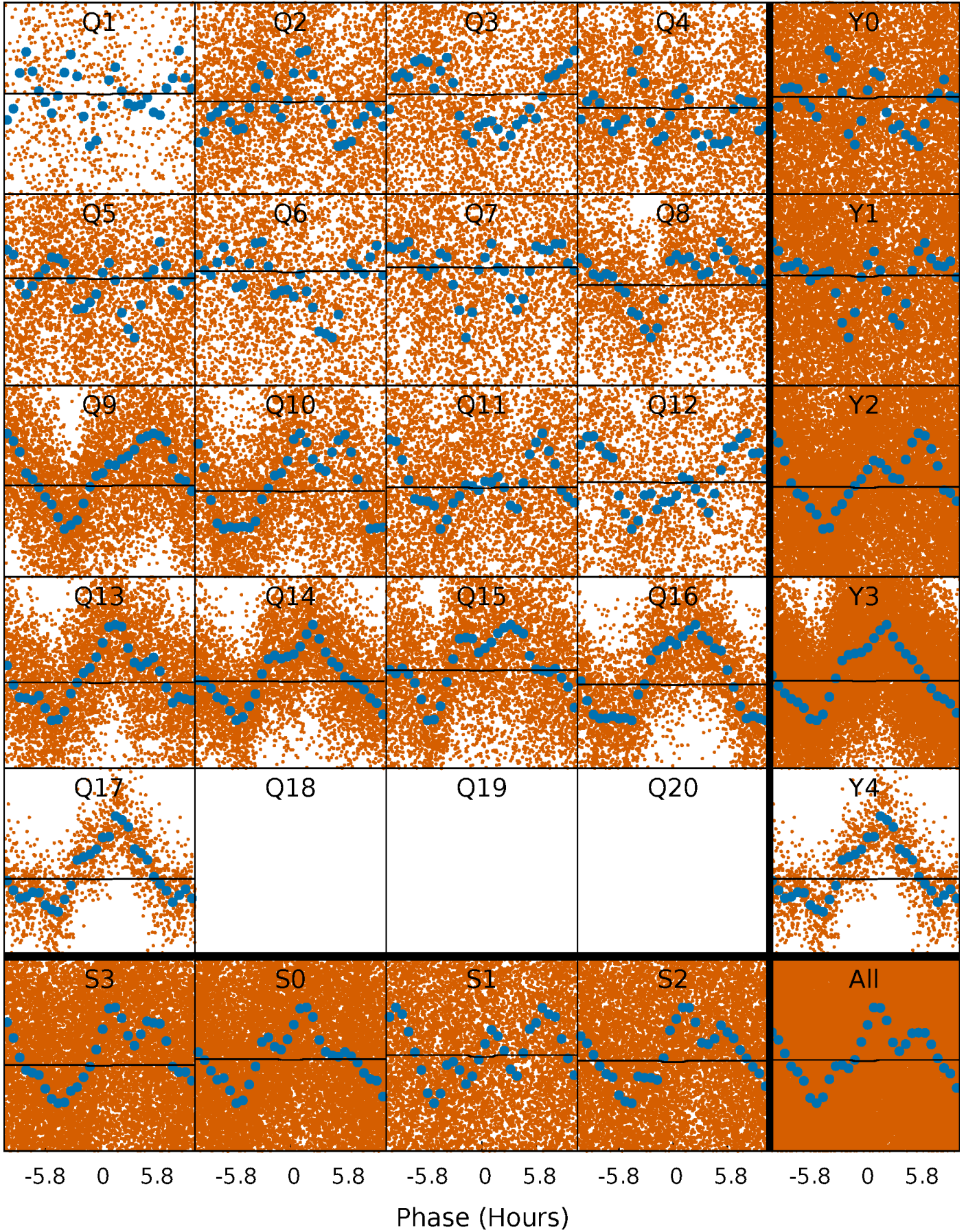
TCE 007671833-01   P= 0.669607 Days    $T_0=131.884734$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

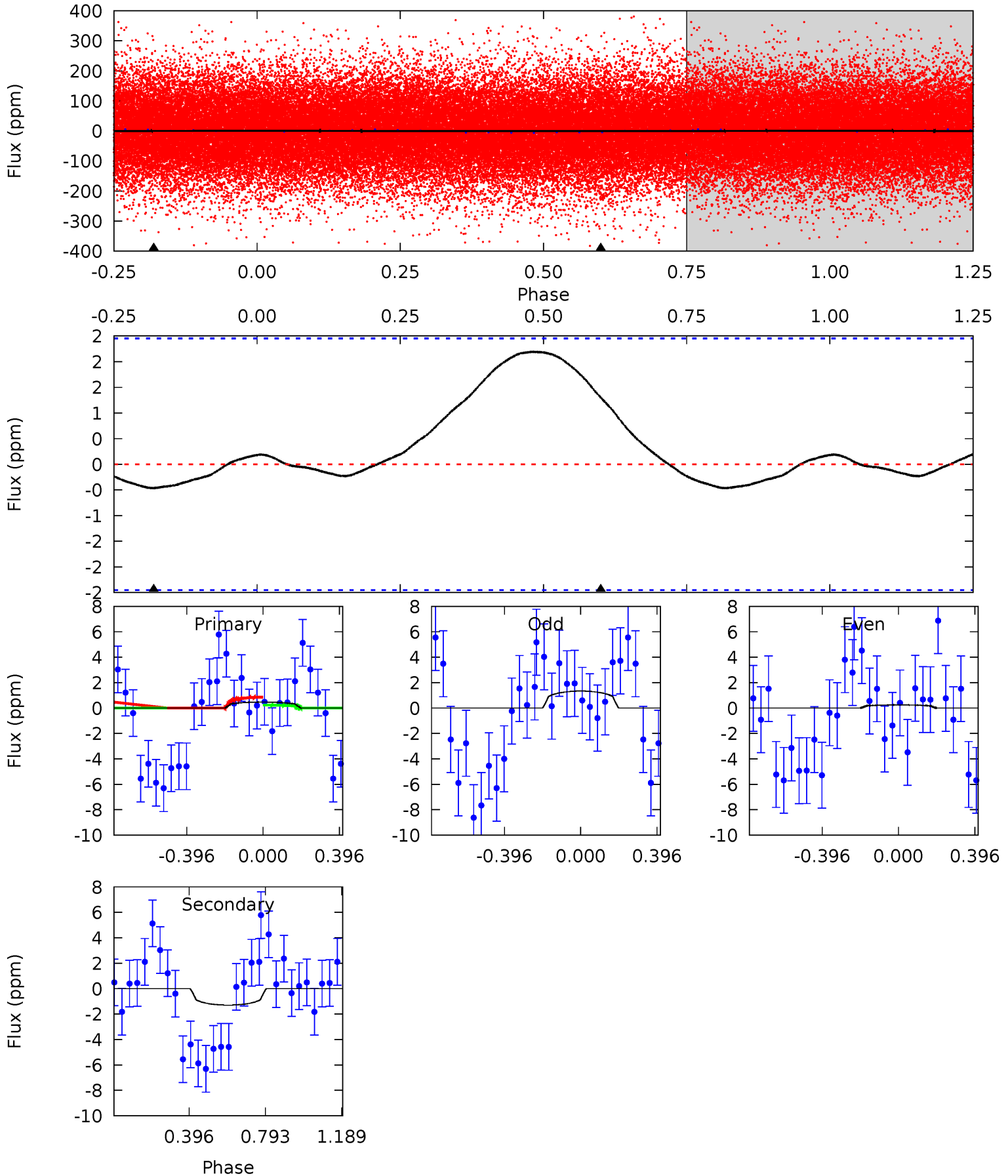
TCE 007671833-01 P= 0.671538 Days  $T_0=131.887625$  (BKJD)



# DV Model-Shift Uniqueness Test

007671833-01, P = 0.669607 Days, E = 131.215127 Days

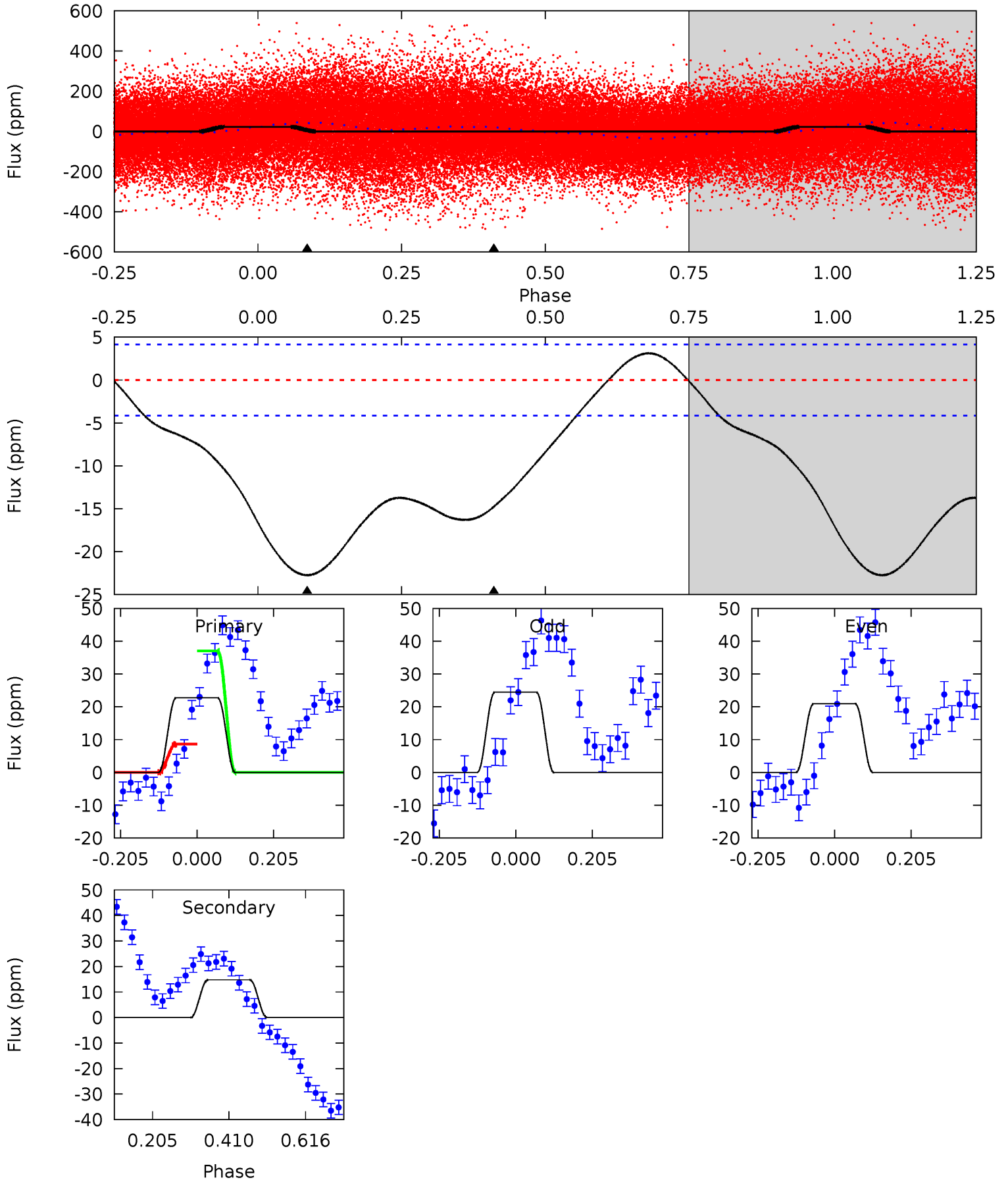
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.81	-2.26	0	0	4.27	0.85	0.25	0.81	0.81	-2.26	-2.26	0.95	2.21	0.82	0.54



# Alt Model-Shift Uniqueness Test

007671833-01, P = 0.671538 Days, E = 131.216087 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
24.2	15.7	0	0	4.41	1.27	3.76	24.2	24.2	15.7	15.7	1.89	0.75	0.12	12.8





### Stellar Parameters For KIC 007671833

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6920^{+72}_{-92}$	$4.145^{+0.099}_{-0.121}$	$-0.100^{+0.150}_{-0.150}$	$1.661^{+0.282}_{-0.231}$	$1.412^{+0.104}_{-0.104}$	$0.434^{+0.187}_{-0.153}$
	+1%/-1%	+2%/-3%	+150%/-150%	+17%/-14%	+7%/-7%	+43%/-35%
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 007671833-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$1\pm1$	$0.62^{+0.63}_{-0.43}$	$4258^{+205}_{-168}$	$-4580^{+516}_{-2607}$	$-0.467^{+0.359}_{-4.502}$
Alt.	$-15\pm1$	$0.53^{+0.57}_{-0.35}$	$4253^{+197}_{-179}$	$8113^{+12972}_{-2748}$	$8.288^{+64.819}_{-6.404}$

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

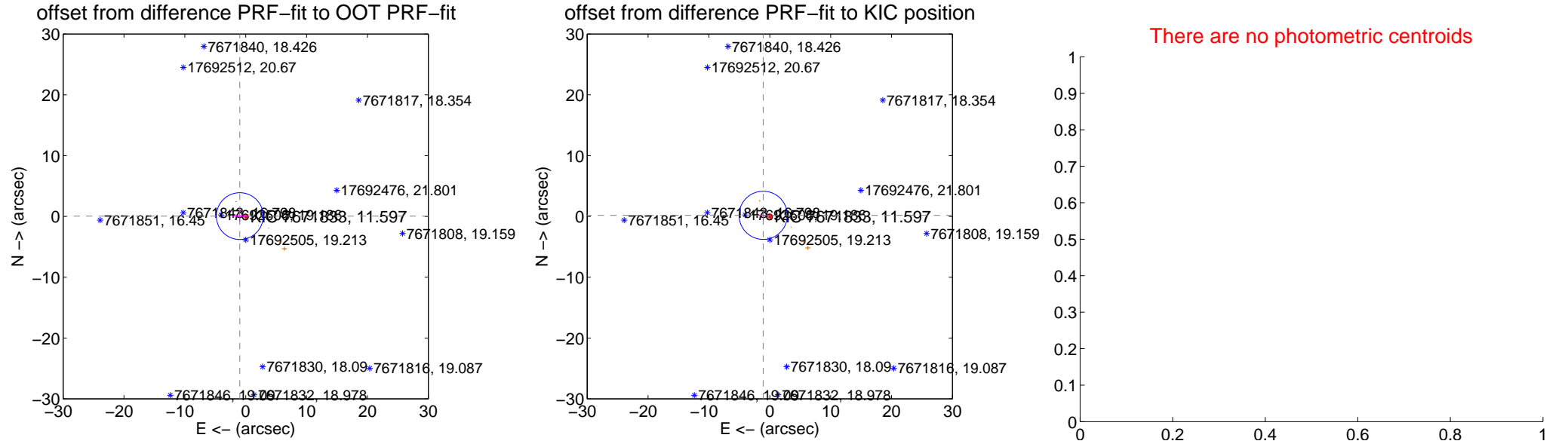
## DV Centroid Data

Supplemental centroid analysis for 007671833-01. **Kepler magnitude: 11.60.** Transit SNR 2.22

**There are 2 quarters with good PRF difference image offsets**

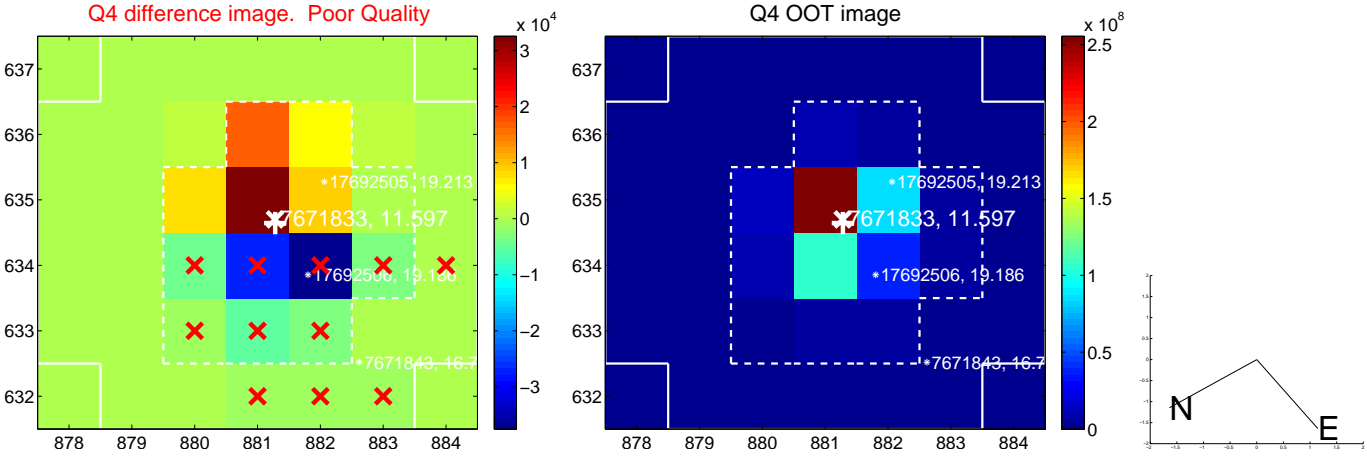
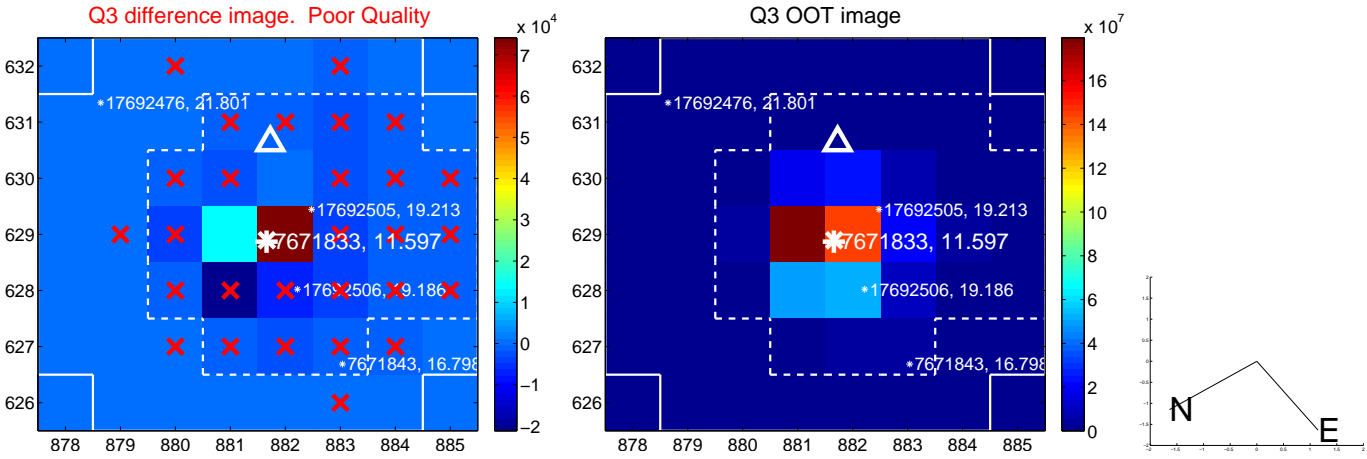
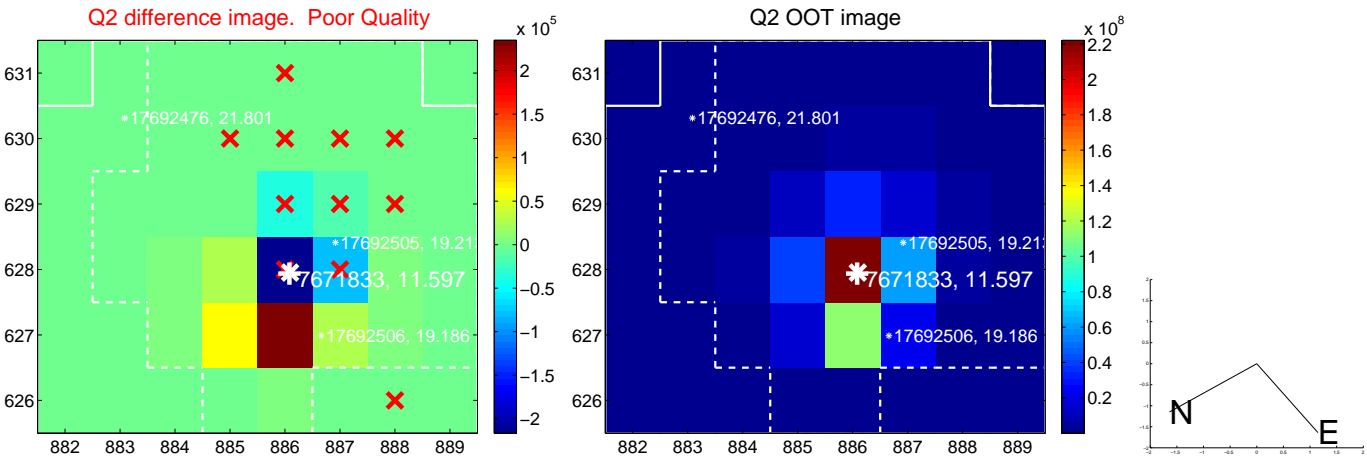
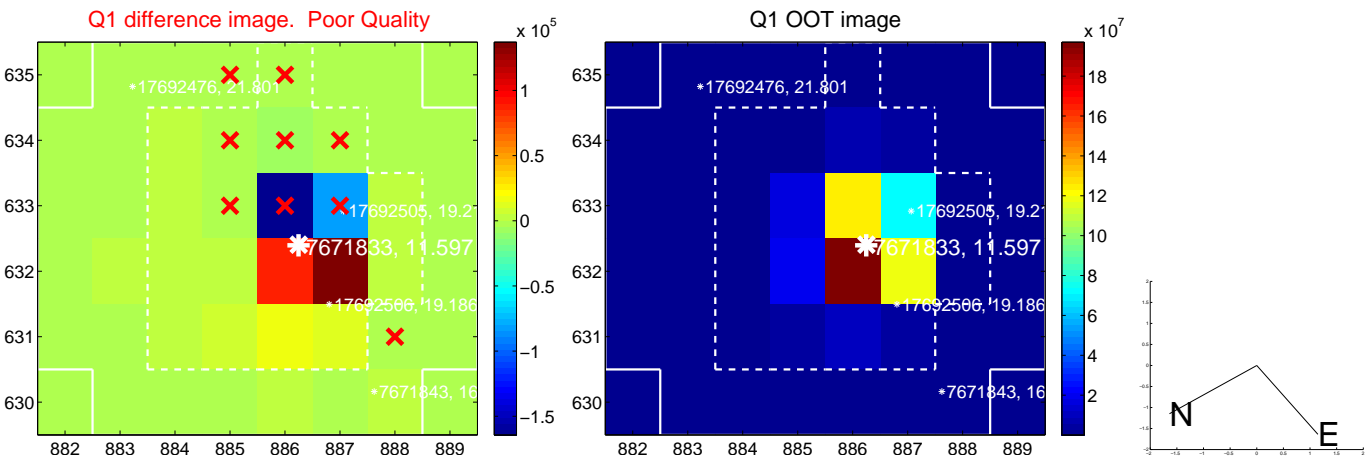
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.972 \pm 1.282$	0.76	$0.971 \pm 1.238$	$0.051 \pm 0.940$
PRF-fit source offset from KIC position	$1.101 \pm 1.320$	0.83	$1.086 \pm 1.192$	$0.183 \pm 0.934$
photometric centroid source offset	—	—	—	—

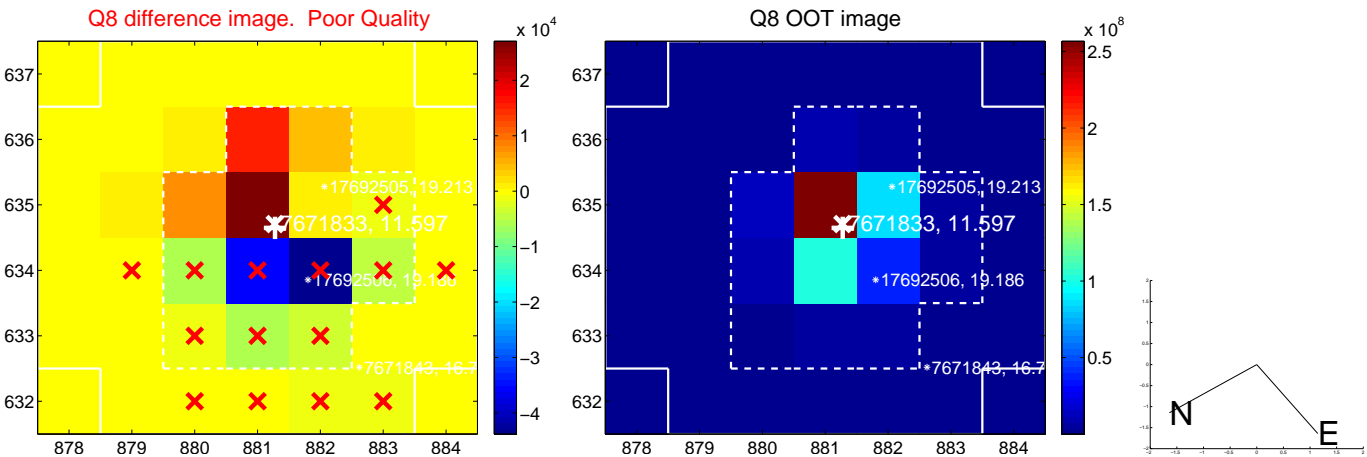
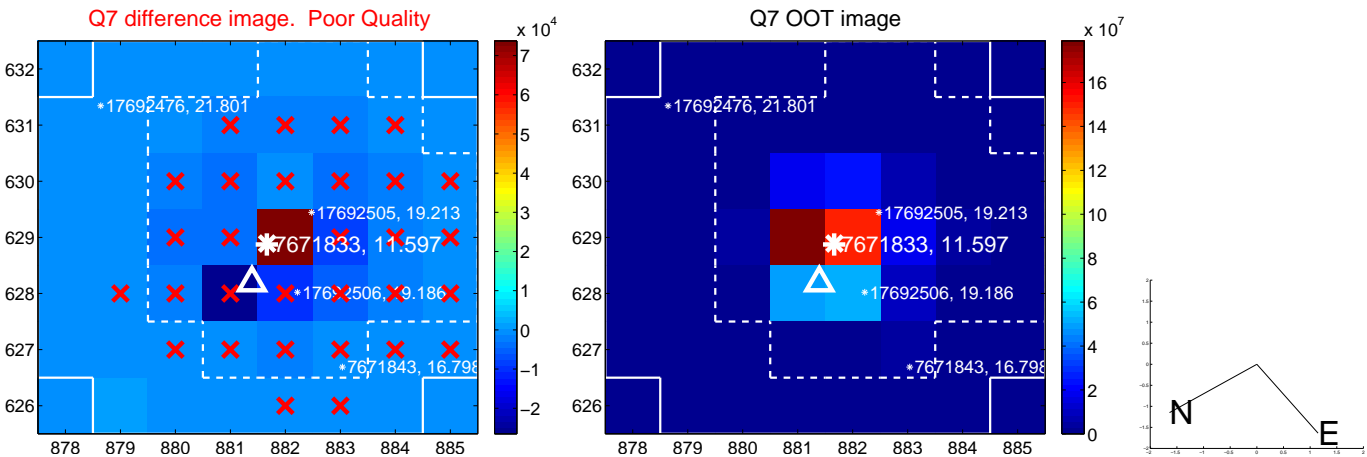
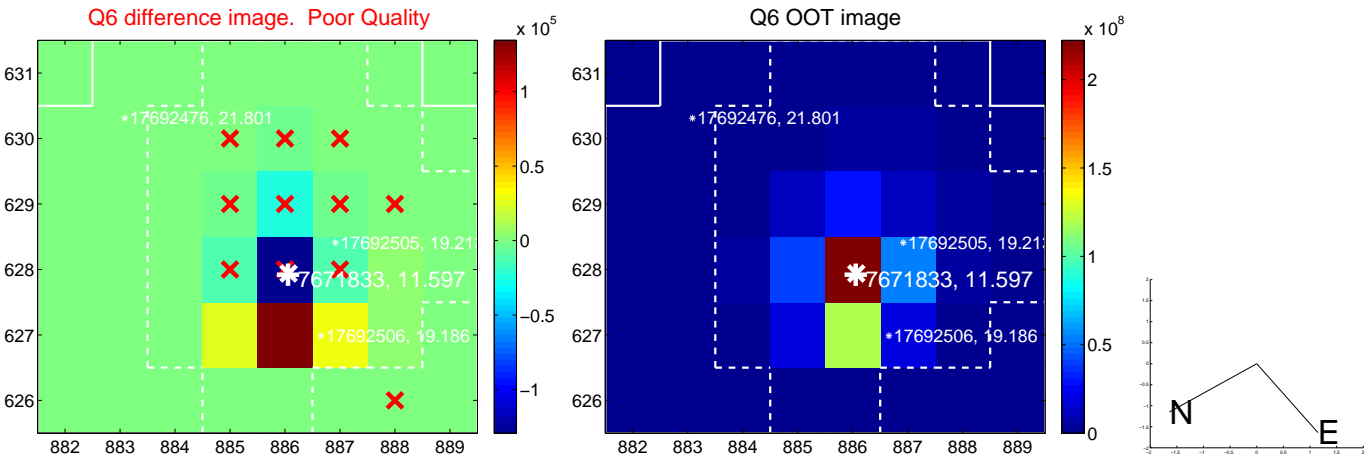
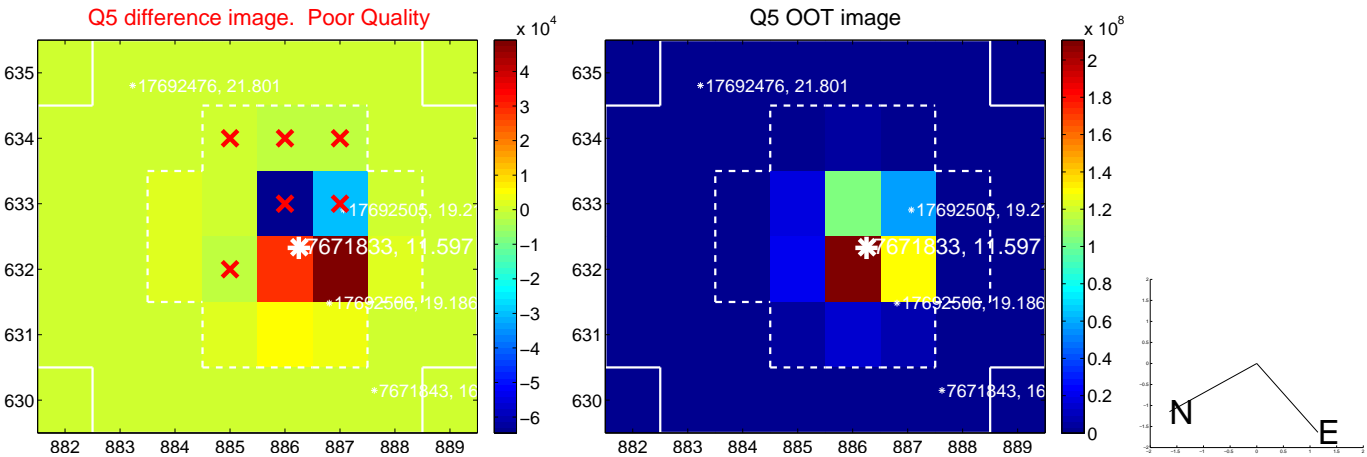


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

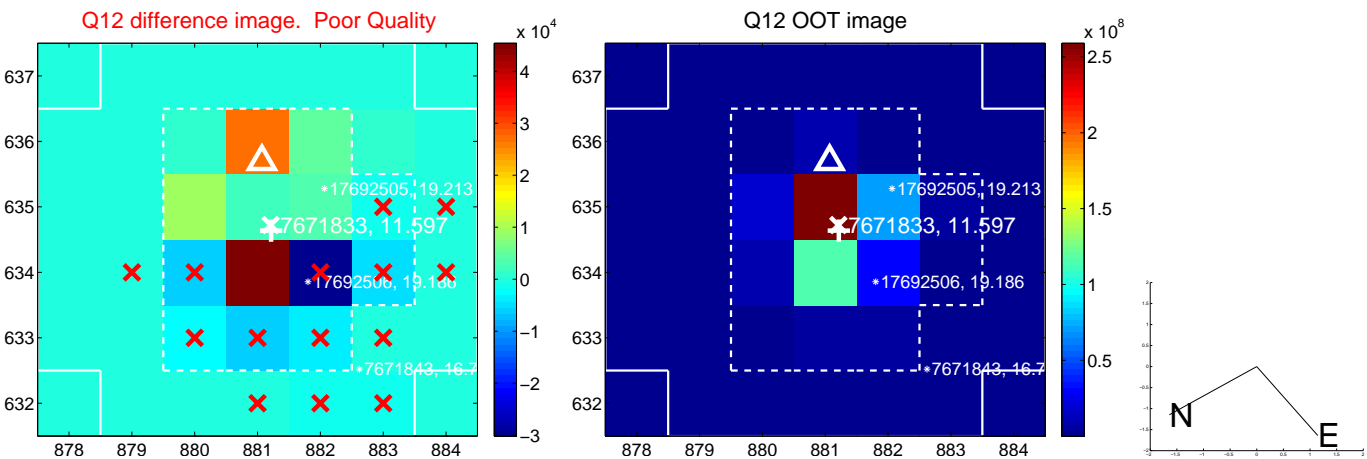
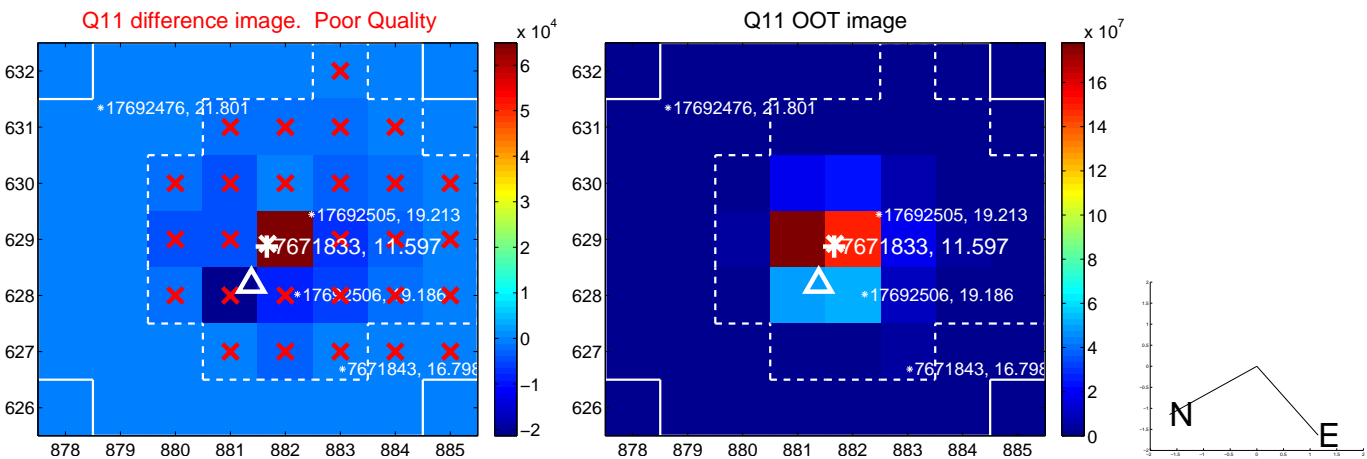
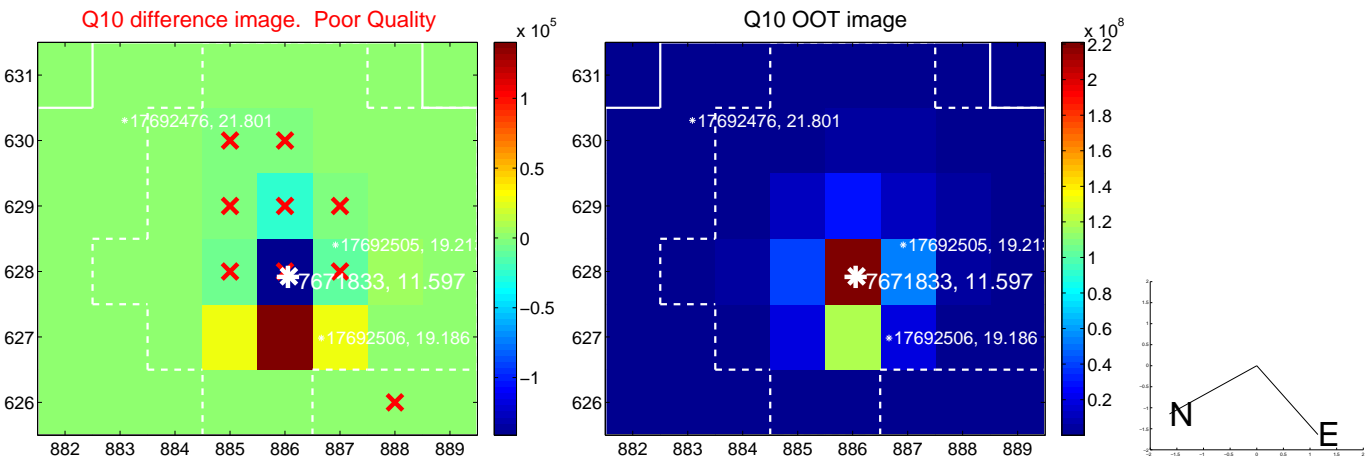
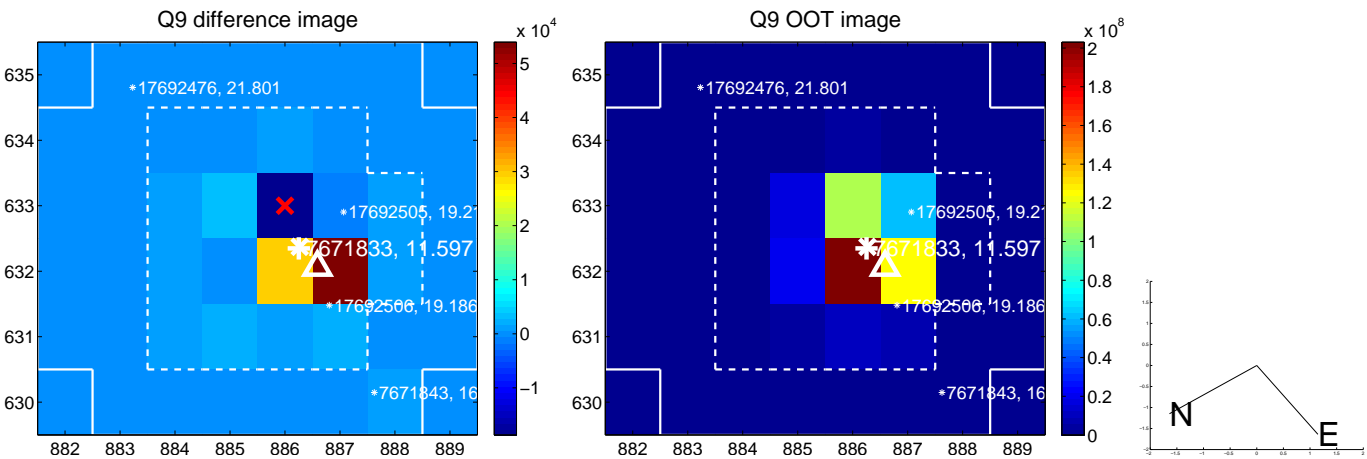


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

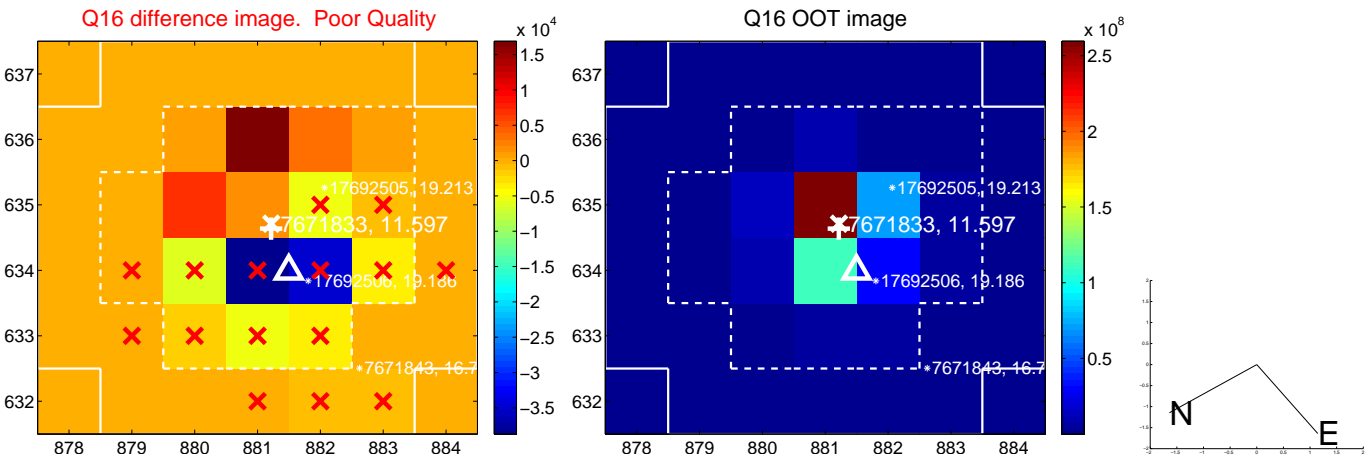
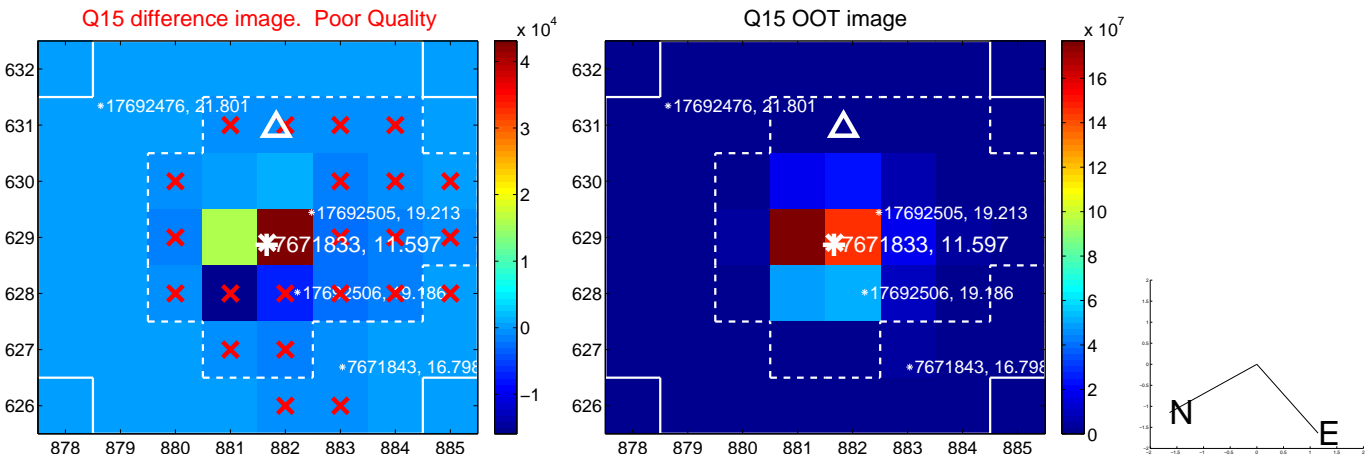
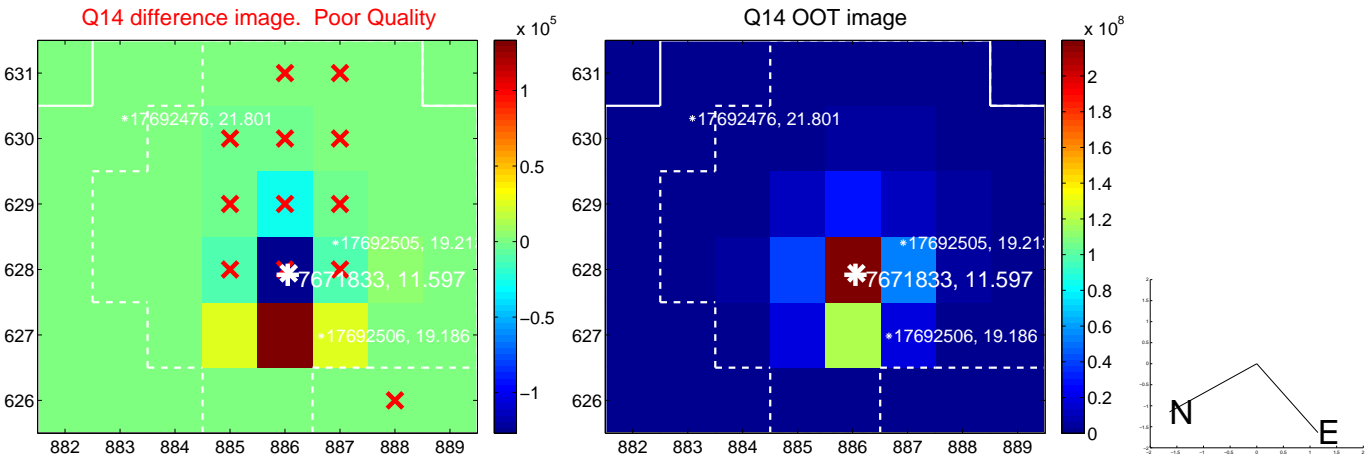
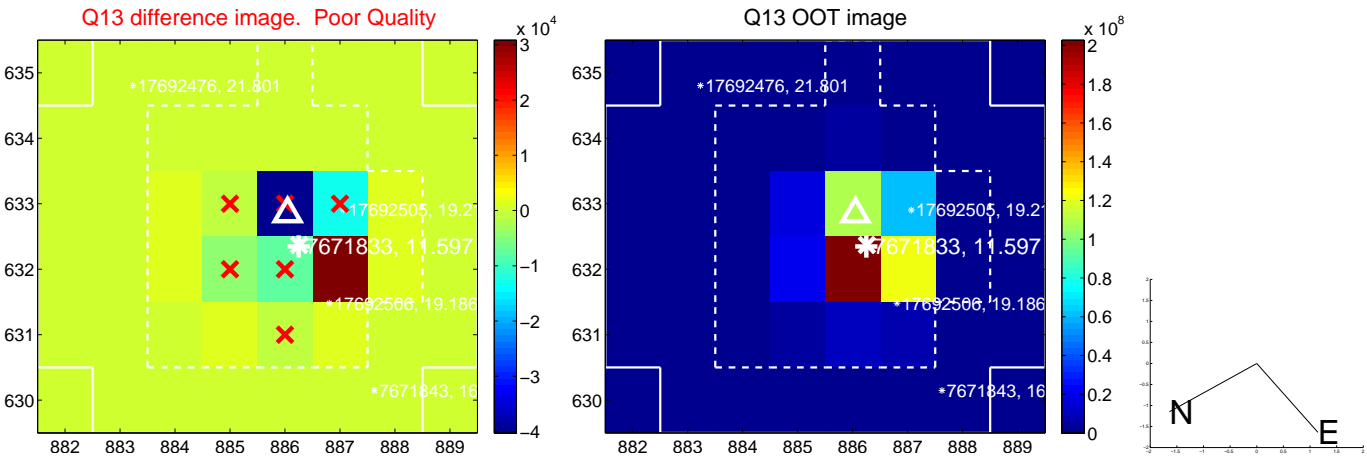




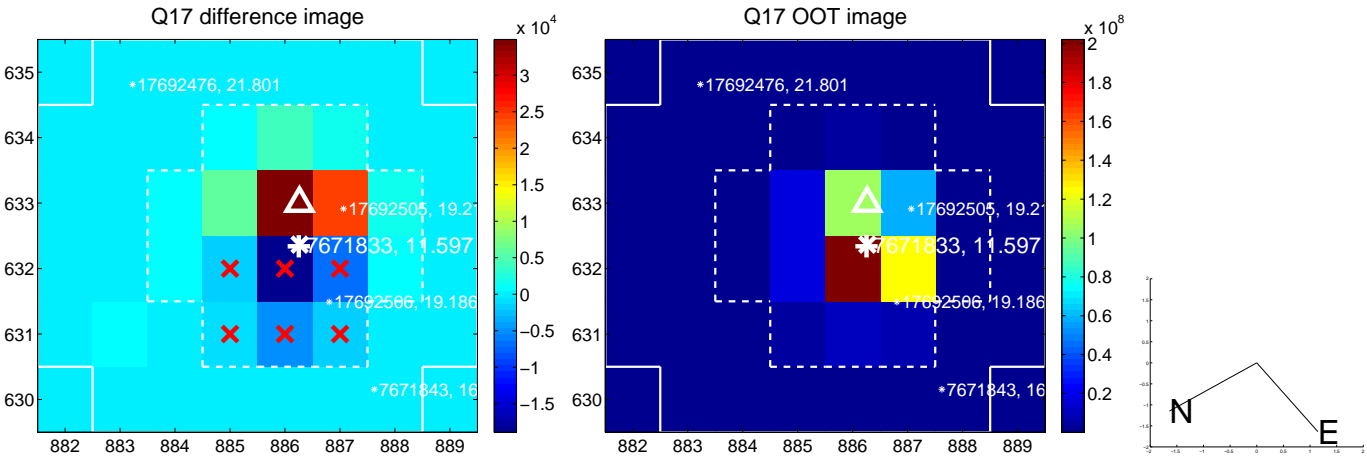
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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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.

03.0 02.0 01.0 19:11:00.0 59.0 10:58.0

10.043:23:20.030.0 40.0

Declination