

# KIC 008801883

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008801883-01	OBS	No	324.871247	248.173487	160.7	4.756	7.2	7.9	1.19	6788	1.80	2.87

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008801883-01	OBS	FP	0.09	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

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

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

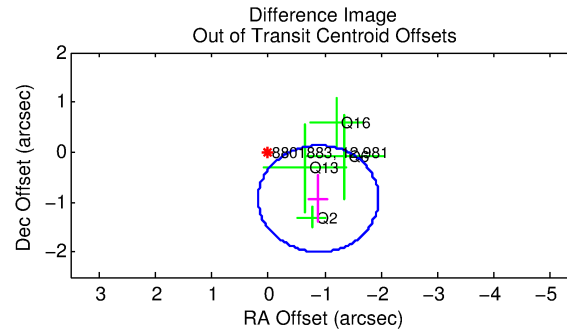
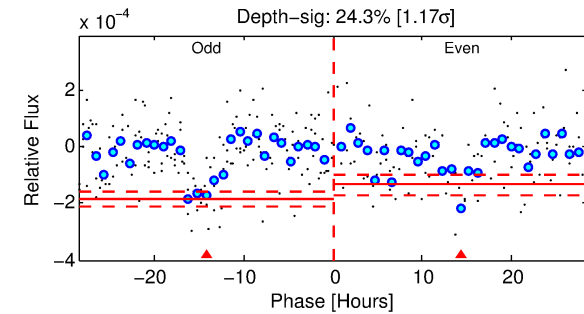
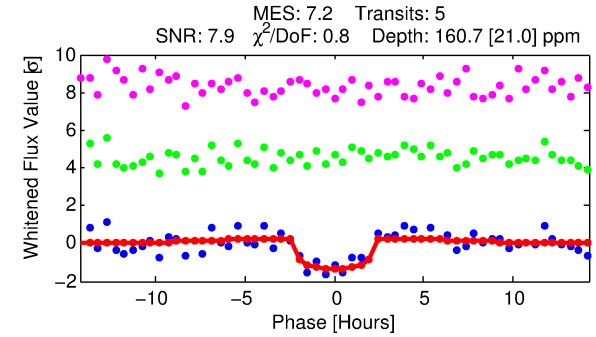
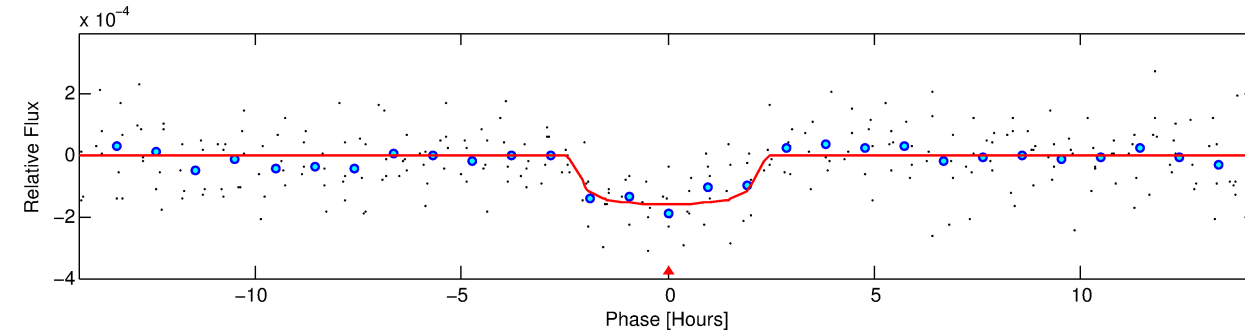
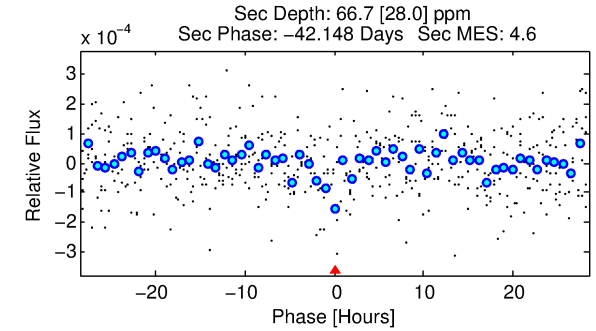
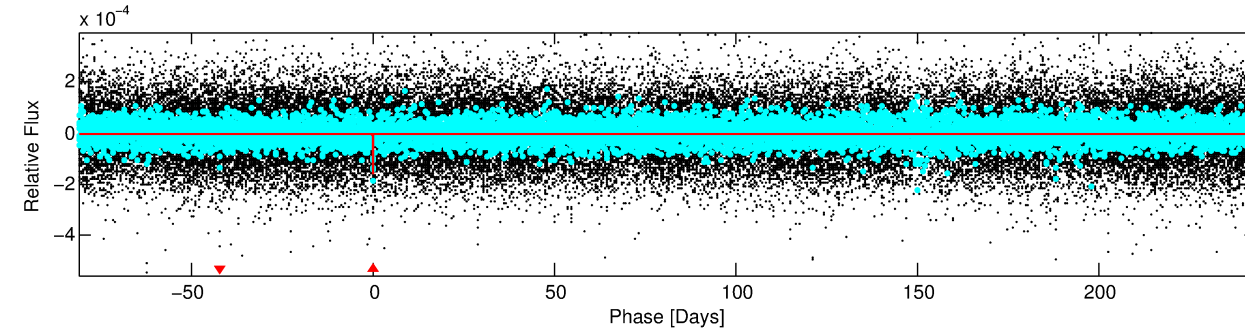
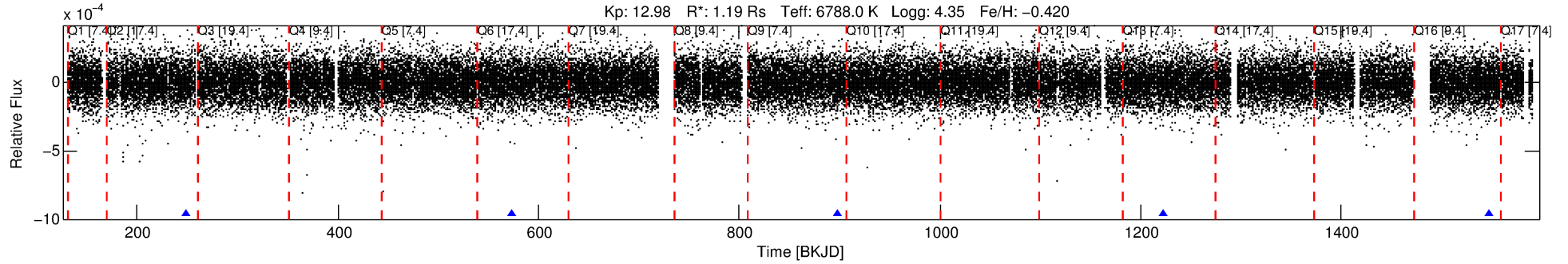
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008801883-01

No Significant Match Found

# DV One-Page Summary

KIC: 8801883 Candidate: 1 of 1 Period: 324.871 d



## DV Fit Results:

Period = 324.87125 [0.00387] d  
Epoch = 248.1735 [0.0092] BKJD  
Rp/R\* = 0.0139 [0.0025]  
a/R\* = 211.92 [214.97]  
b = 0.93 [0.15]  
Seff = 2.86 [0.85]  
Teq = 332 [25] K  
Rp = 1.80 [0.50] Re  
a = 0.9713 [0.1714] AU  
Ag = 10632.60 [6534.79] [1.63 $\sigma$ ]  
Teffp = 5208 [749] K [6.51 $\sigma$ ]

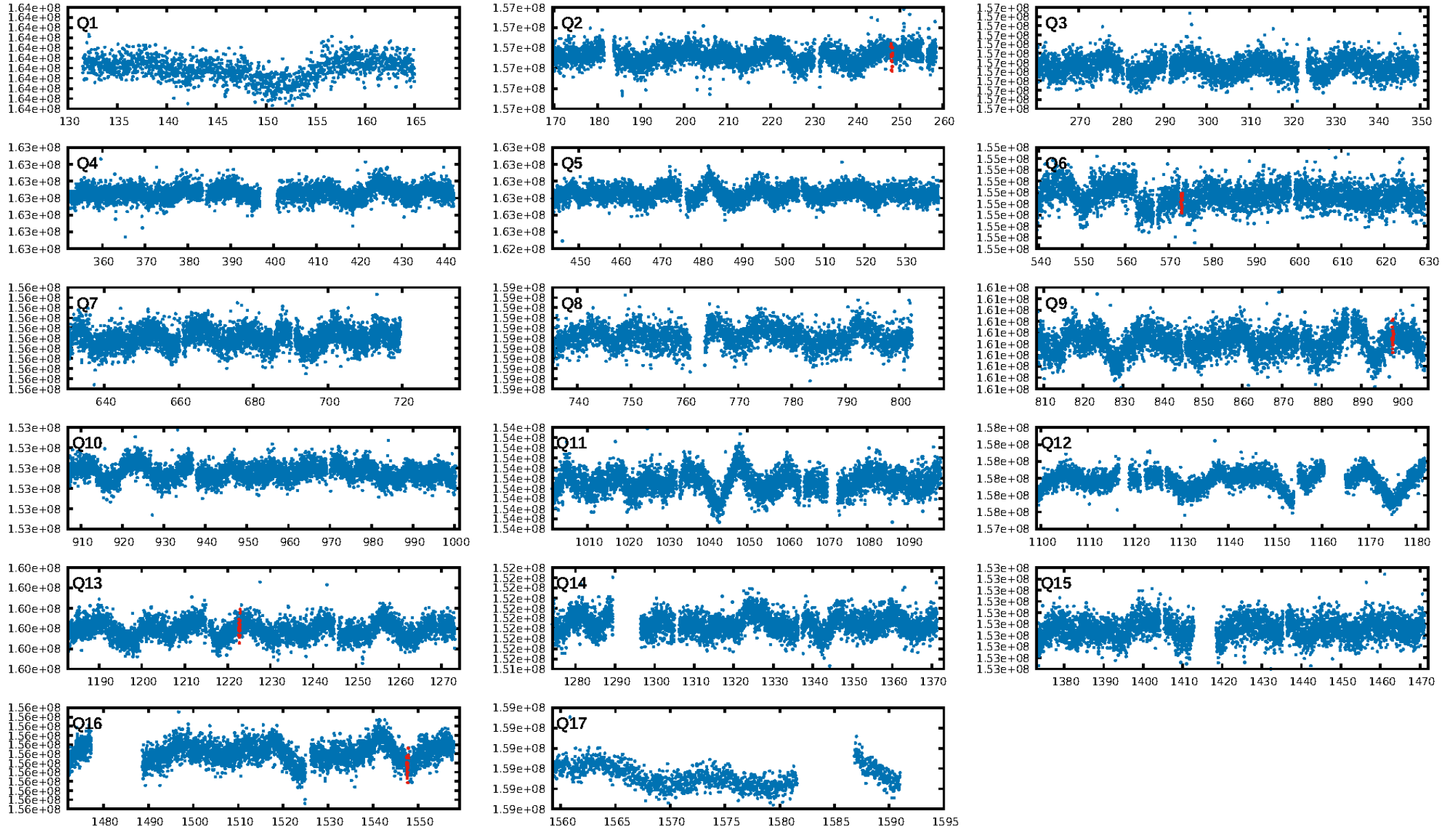
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 18.9%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 2.00e-09**  
RollingBand-fgt: 1.00 [5/5]  
GhostDiagnostic-chr: -9.191  
Centroid-sig: 5.7%  
Centroid-so: 2.048 arcsec [1.37 $\sigma$ ]  
**OotOffset-rm: 1.288 arcsec [3.63 $\sigma$ ]**  
**KicOffset-rm: 1.352 arcsec [3.88 $\sigma$ ]**  
OotOffset-st: 2/0/1/1 [4]  
KicOffset-st: 2/0/1/1 [4]  
DiffImageQuality-fgm: 1.00 [4/4]  
DiffImageOverlap-fno: 1.00 [5/5]

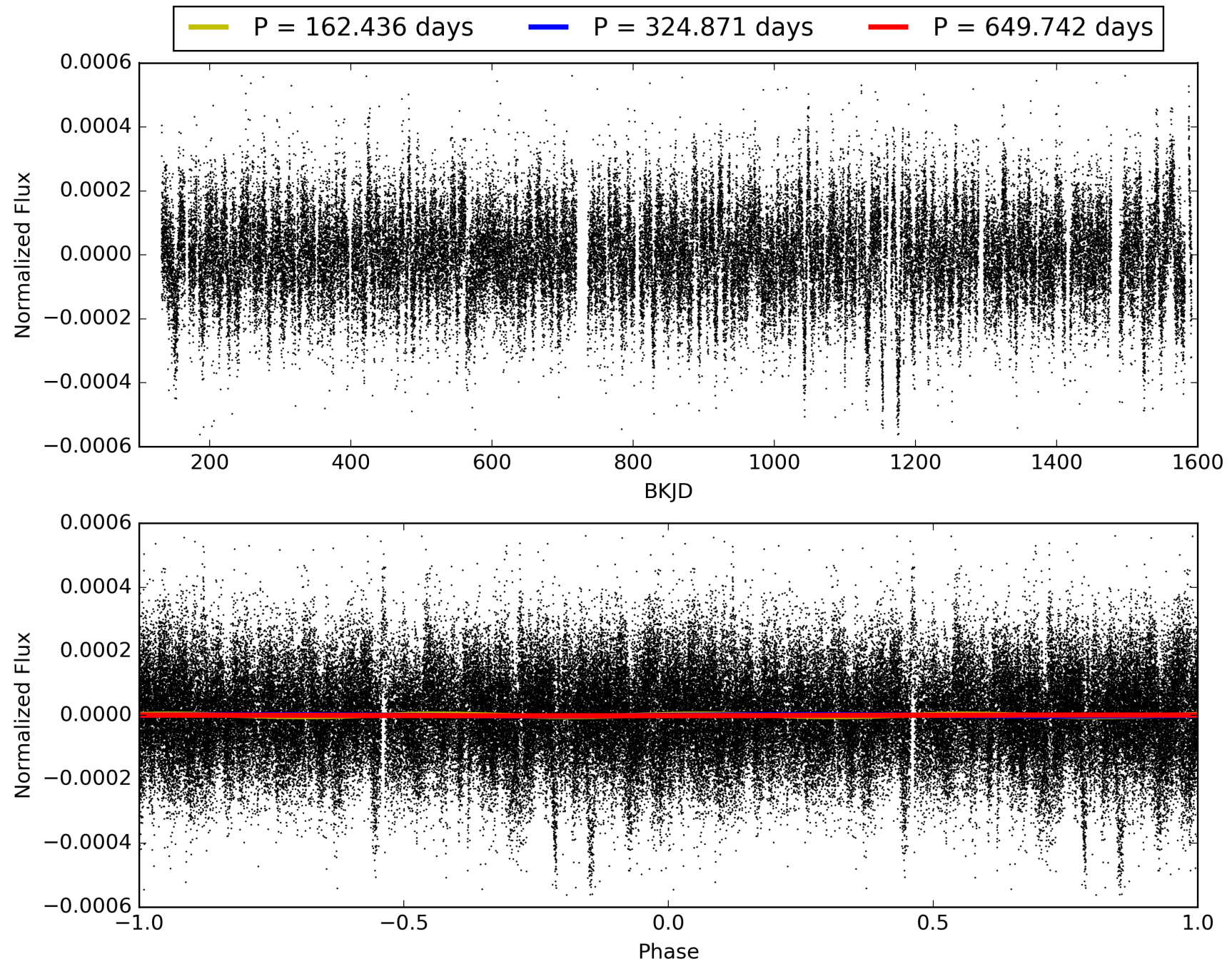
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:53:36 Z

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

# TCE 008801883-01, PDC Light Curves

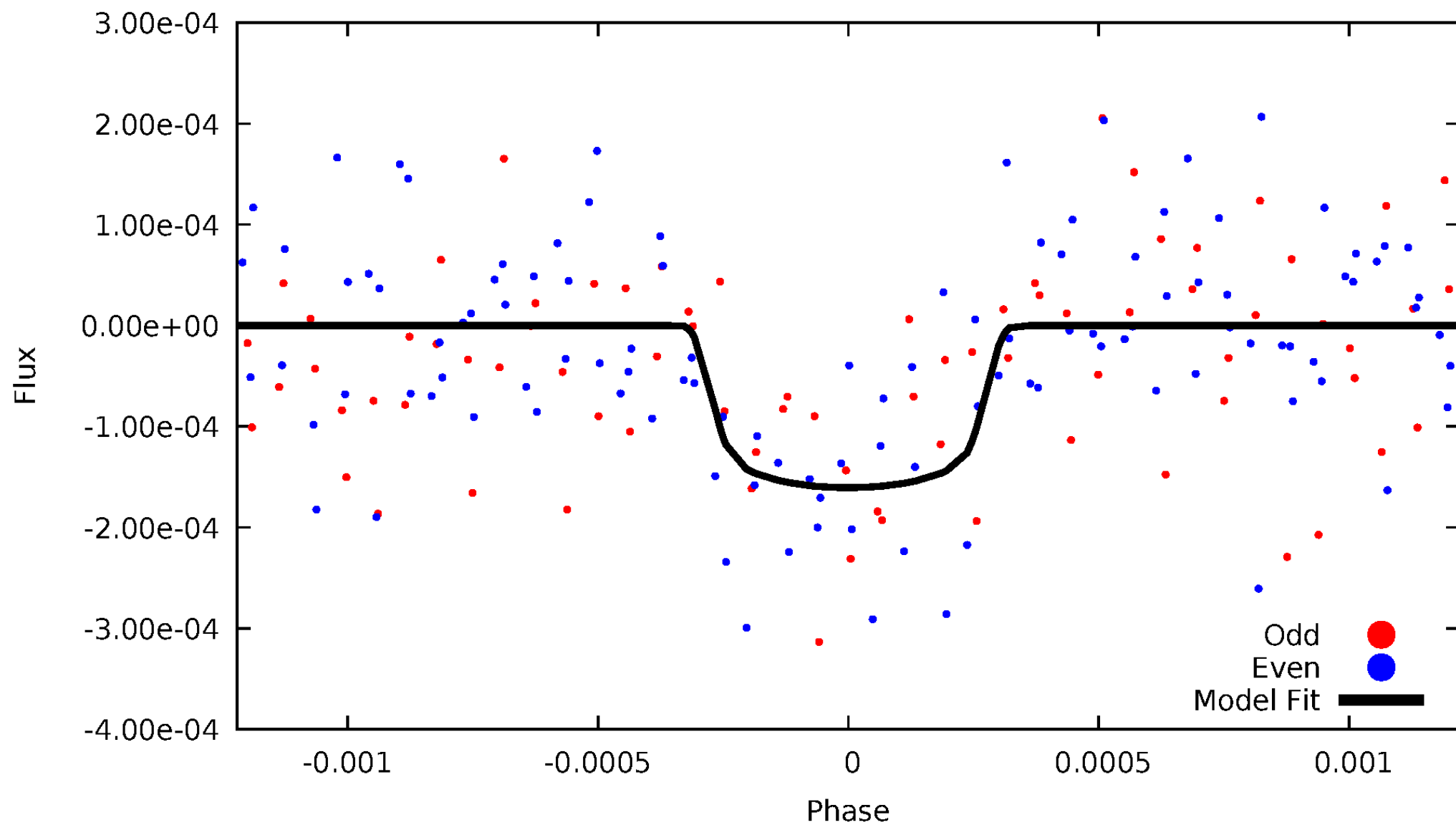


TCE 008801883-01



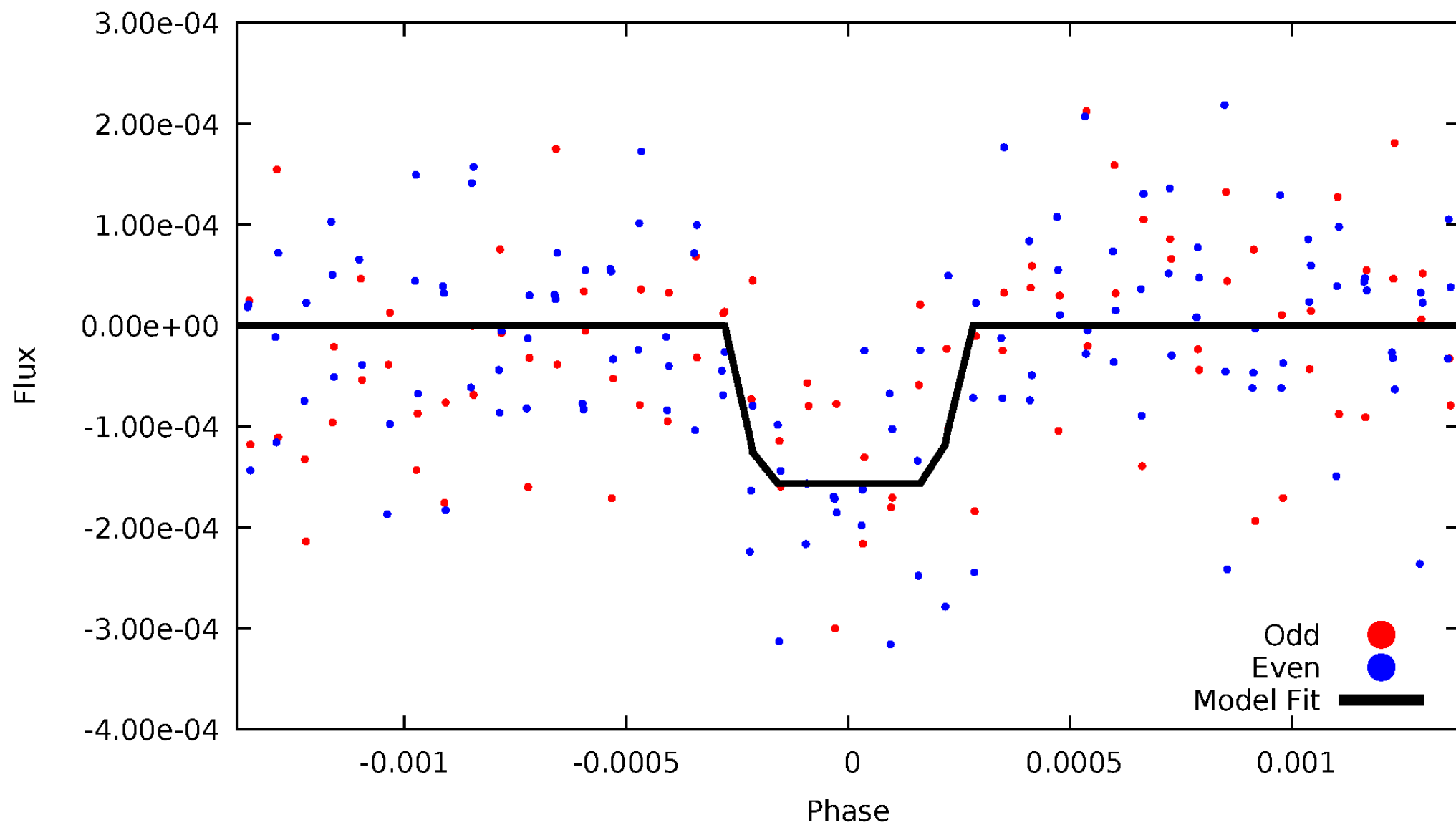
# DV Odd/Even

TCE 008801883-01



# ALT Odd/Even

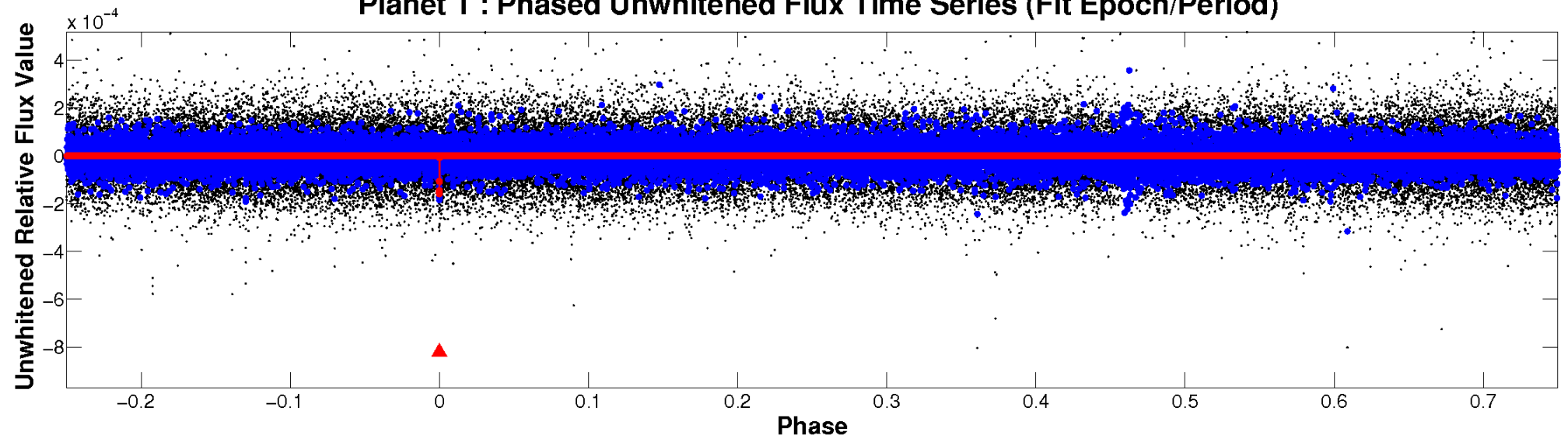
TCE 008801883-01



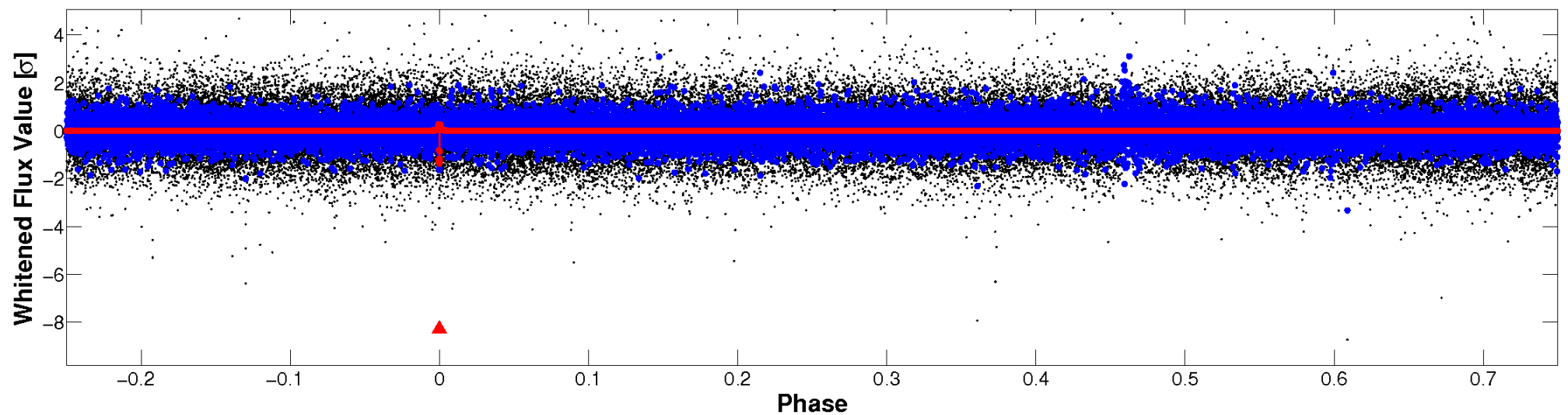


# Non-Whitened Vs. Whitened Light Curve

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

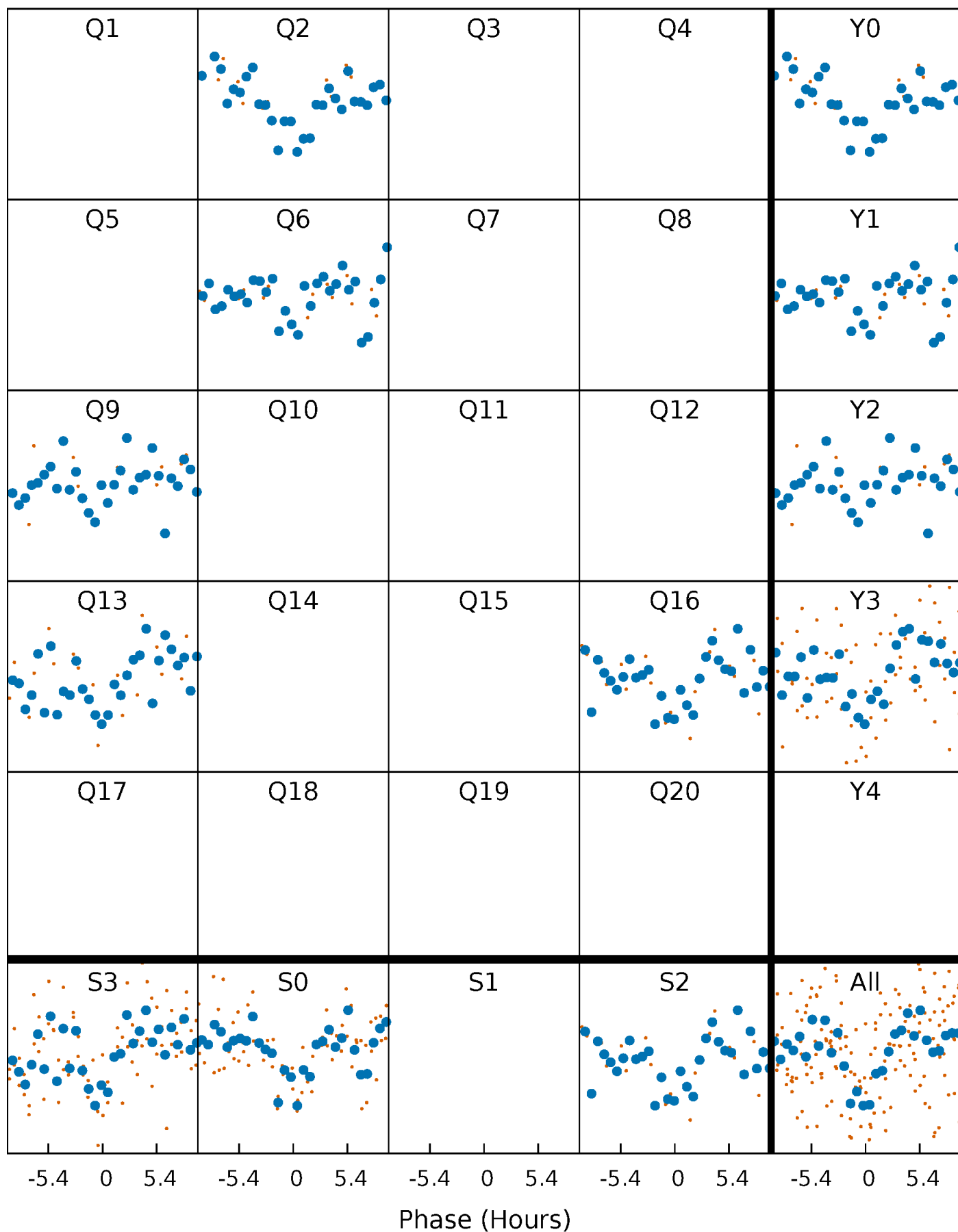


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

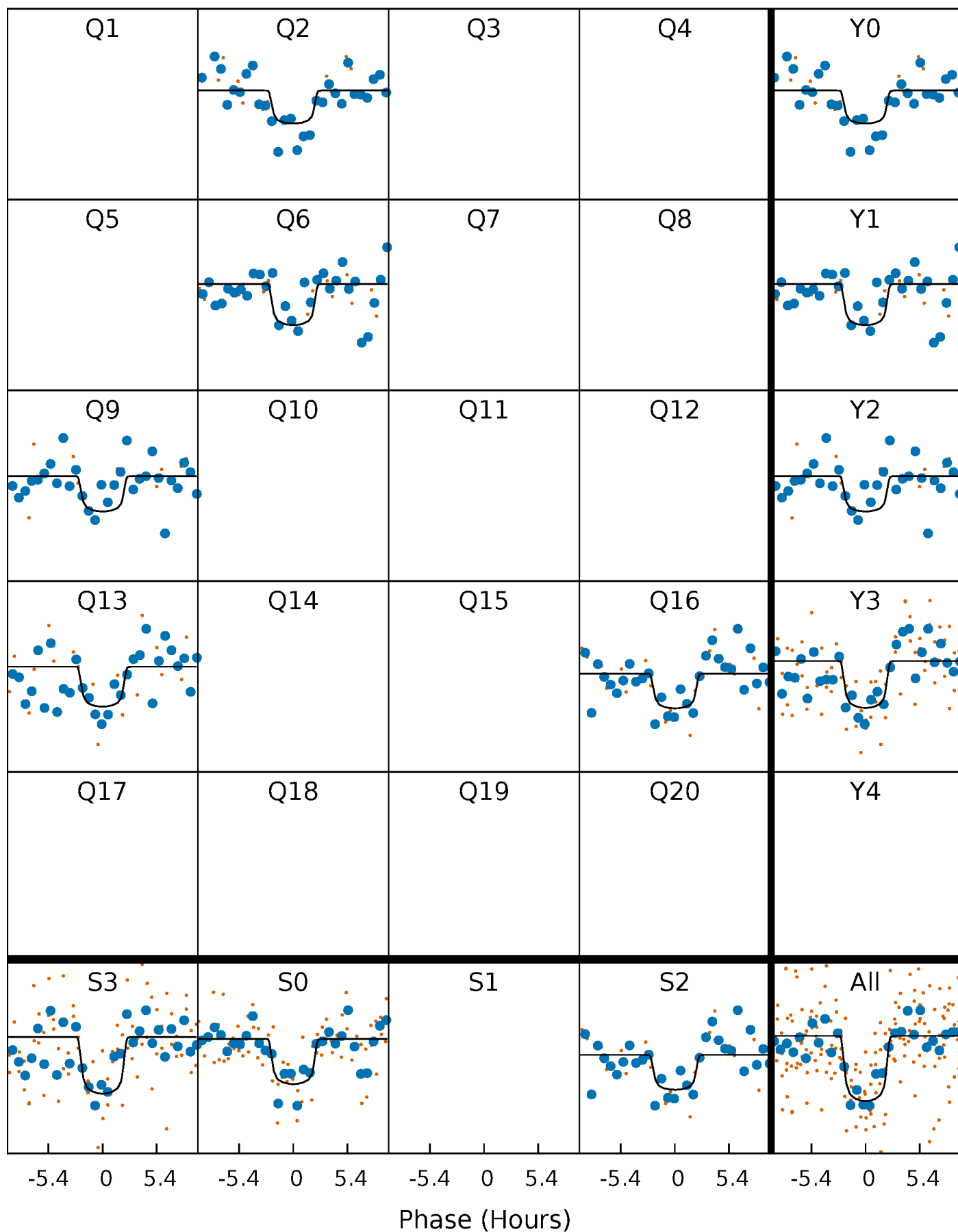
TCE 008801883-01 P=324.871247 Days  $T_0=248.173486$  (BKJD)





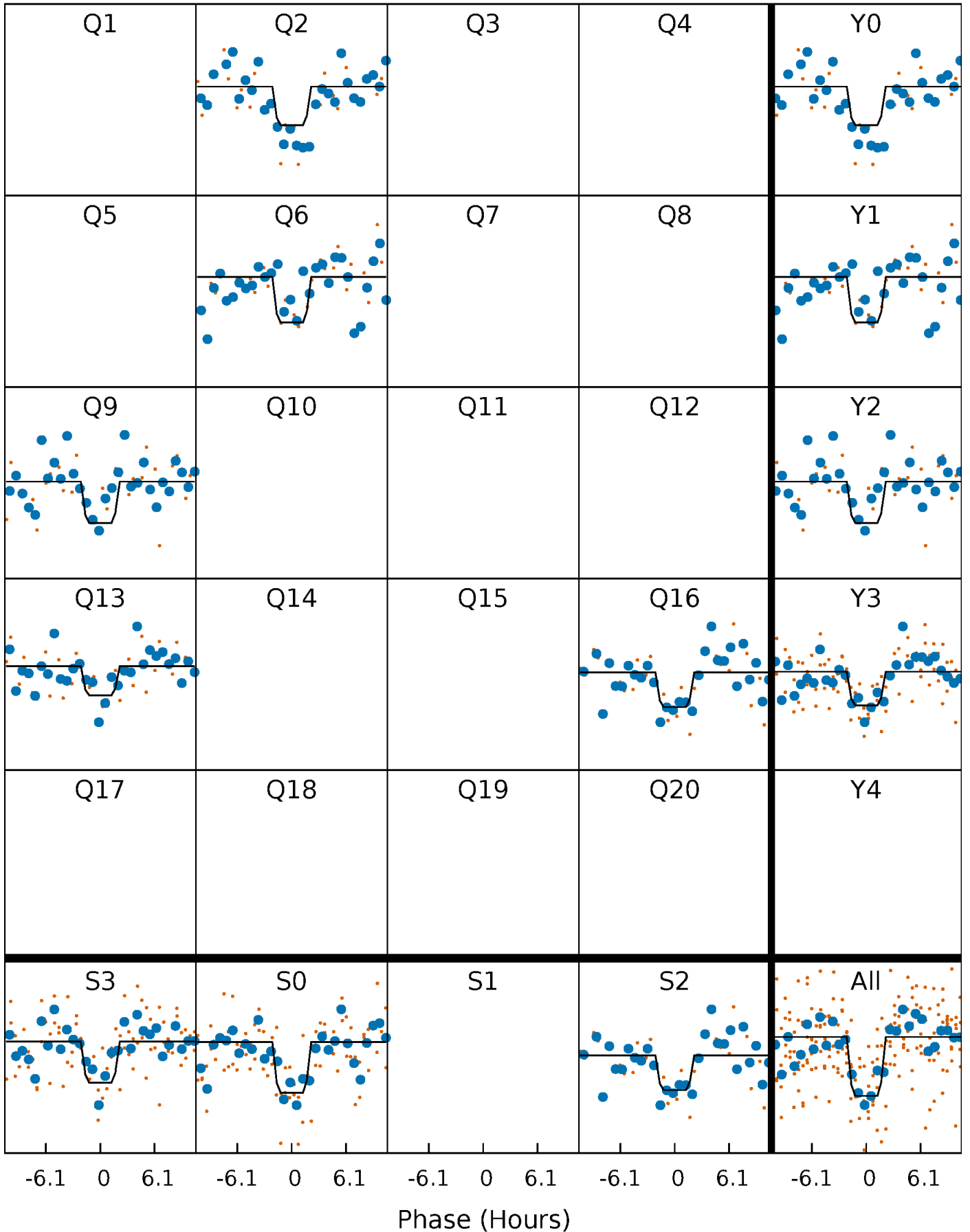
# DV Quarter-Phased Transit Curves

TCE 008801883-01 P=324.871247 Days  $T_0=248.173486$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

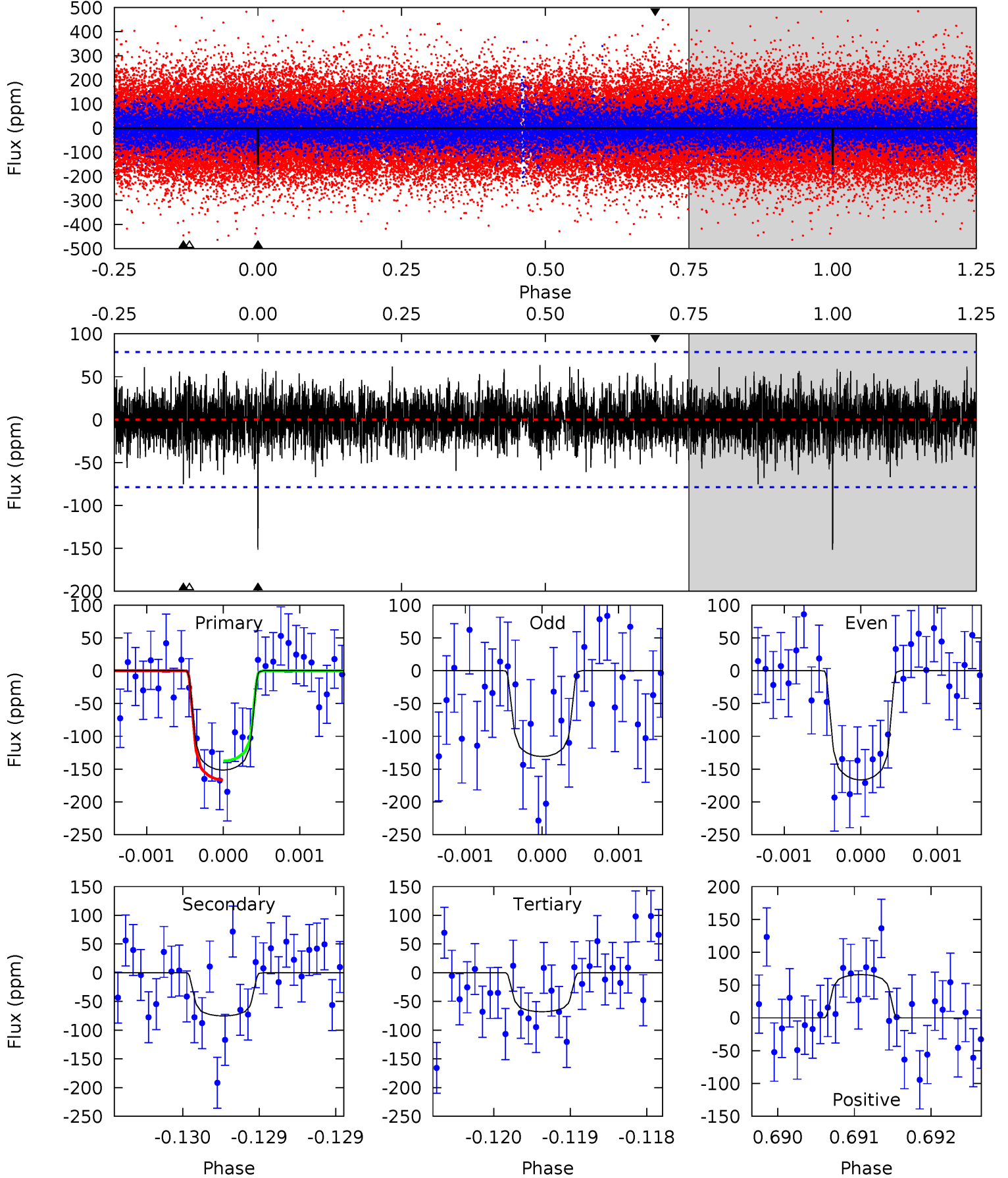
TCE 008801883-01 P=324.873170 Days  $T_0=248.158369$  (BKJD)



# DV Model-Shift Uniqueness Test

008801883-01, P = 324.871247 Days, E = 248.173486 Days

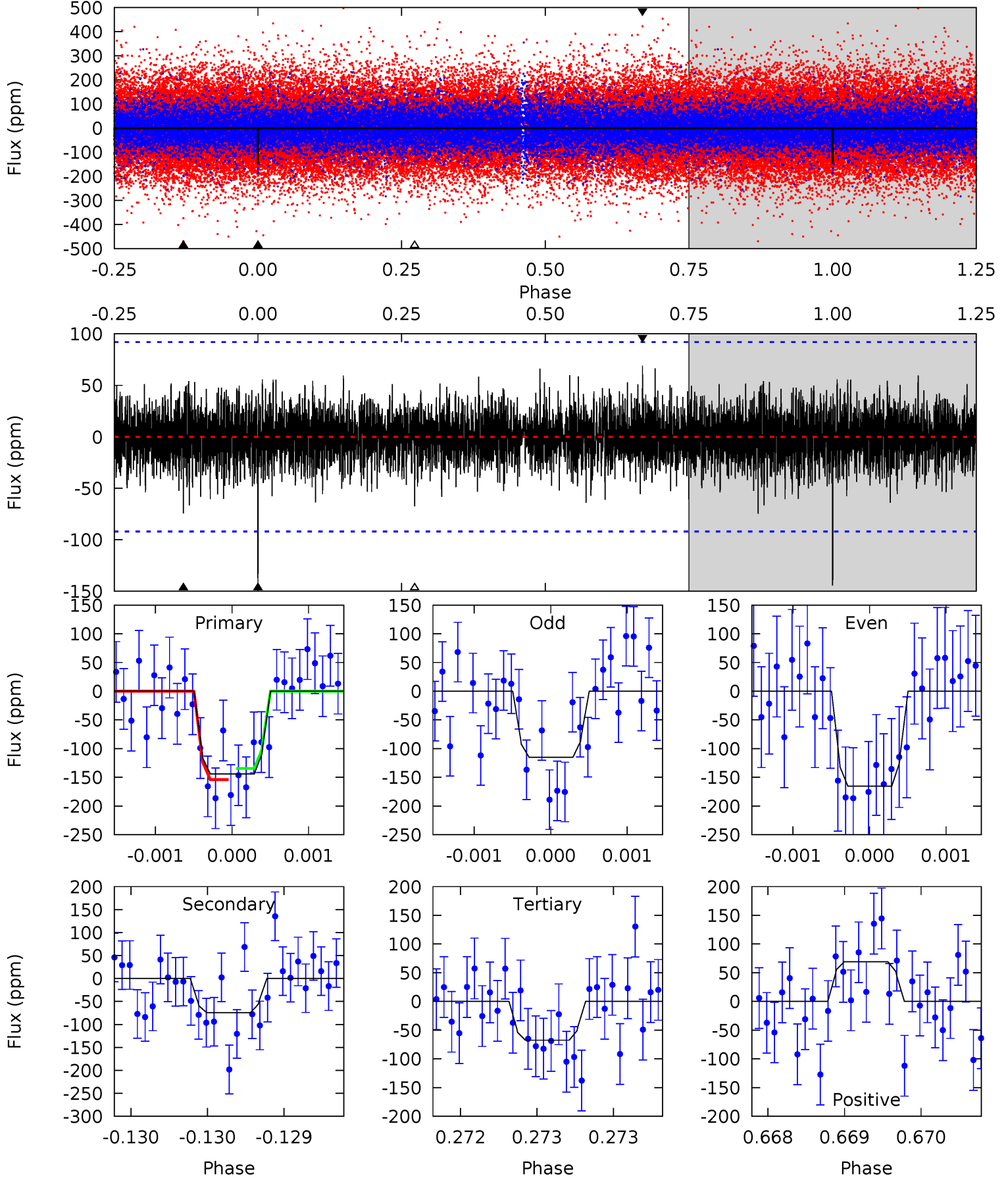
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	5.27	4.76	4.62	5.52	3.39	1.30	5.86	5.99	0.52	0.65	1.25	0.93	0.30	1.01



# Alt Model-Shift Uniqueness Test

008801883-01, P = 324.873170 Days, E = 248.158369 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
8.71	4.49	4.07	4.16	5.55	3.45	1.09	4.64	4.55	0.42	0.33	1.50	1.02	0.32	0.59



### Stellar Parameters For KIC 008801883

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6788^{+161}_{-242}$	$4.349^{+0.077}_{-0.143}$	$-0.420^{+0.250}_{-0.350}$	$1.192^{+0.247}_{-0.144}$	$1.163^{+0.128}_{-0.157}$	$0.968^{+0.321}_{-0.402}$
	+2%/-4%	+2%/-3%	+60%/-83%	+21%/-12%	+11%/-13%	+33%/-41%
Source	PHO1	FLK73	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 008801883-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-75 \pm 14$	$1.85^{+0.39}_{-0.40}$	$466^{+25}_{-22}$	$5348^{+656}_{-481}$	$11130^{+7489}_{-3926}$
Alt.	$-74 \pm 17$	$1.65^{+0.38}_{-0.37}$	$466^{+25}_{-23}$	$5610^{+791}_{-538}$	$13953^{+10070}_{-5377}$

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

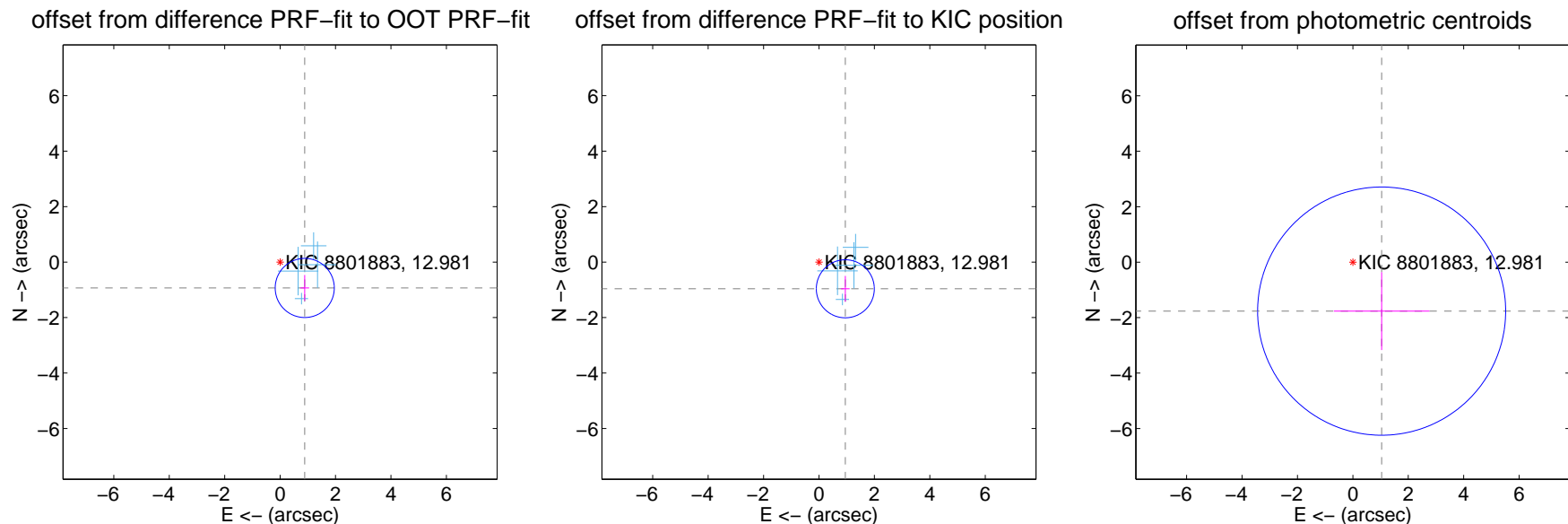
## DV Centroid Data

Supplemental centroid analysis for 008801883-01. Kepler magnitude: 12.98. Transit SNR 7.95

There are 4 quarters with good PRF difference image offsets

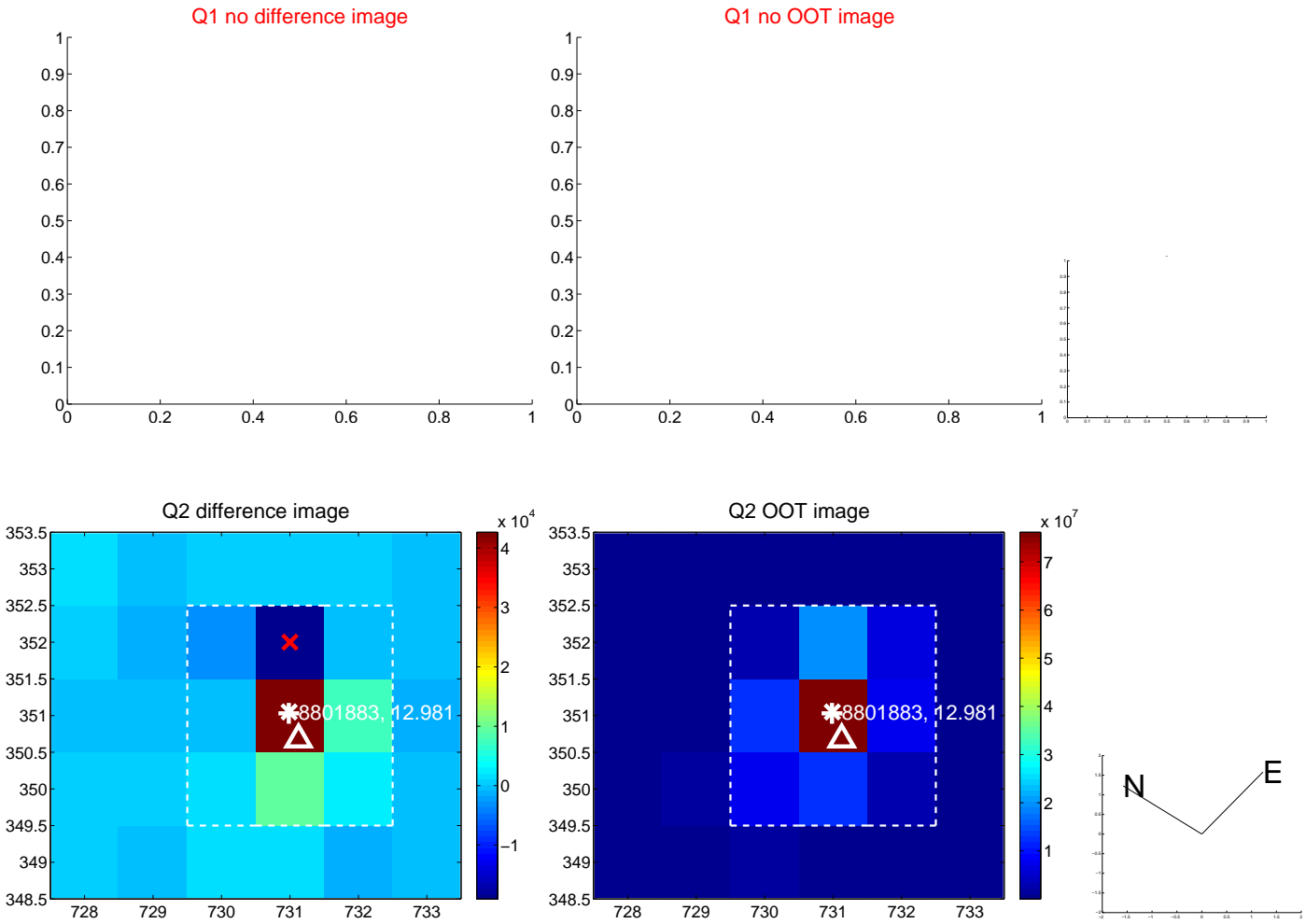
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.288 \pm 0.355$	<b>3.63</b>	$-0.889 \pm 0.157$	$-0.932 \pm 0.468$
PRF-fit source offset from KIC position	$1.352 \pm 0.349$	<b>3.88</b>	$-0.950 \pm 0.155$	$-0.962 \pm 0.465$
photometric centroid source offset	$2.05 \pm 1.49$	1.37	$-1.04 \pm 1.72$	$-1.76 \pm 1.40$



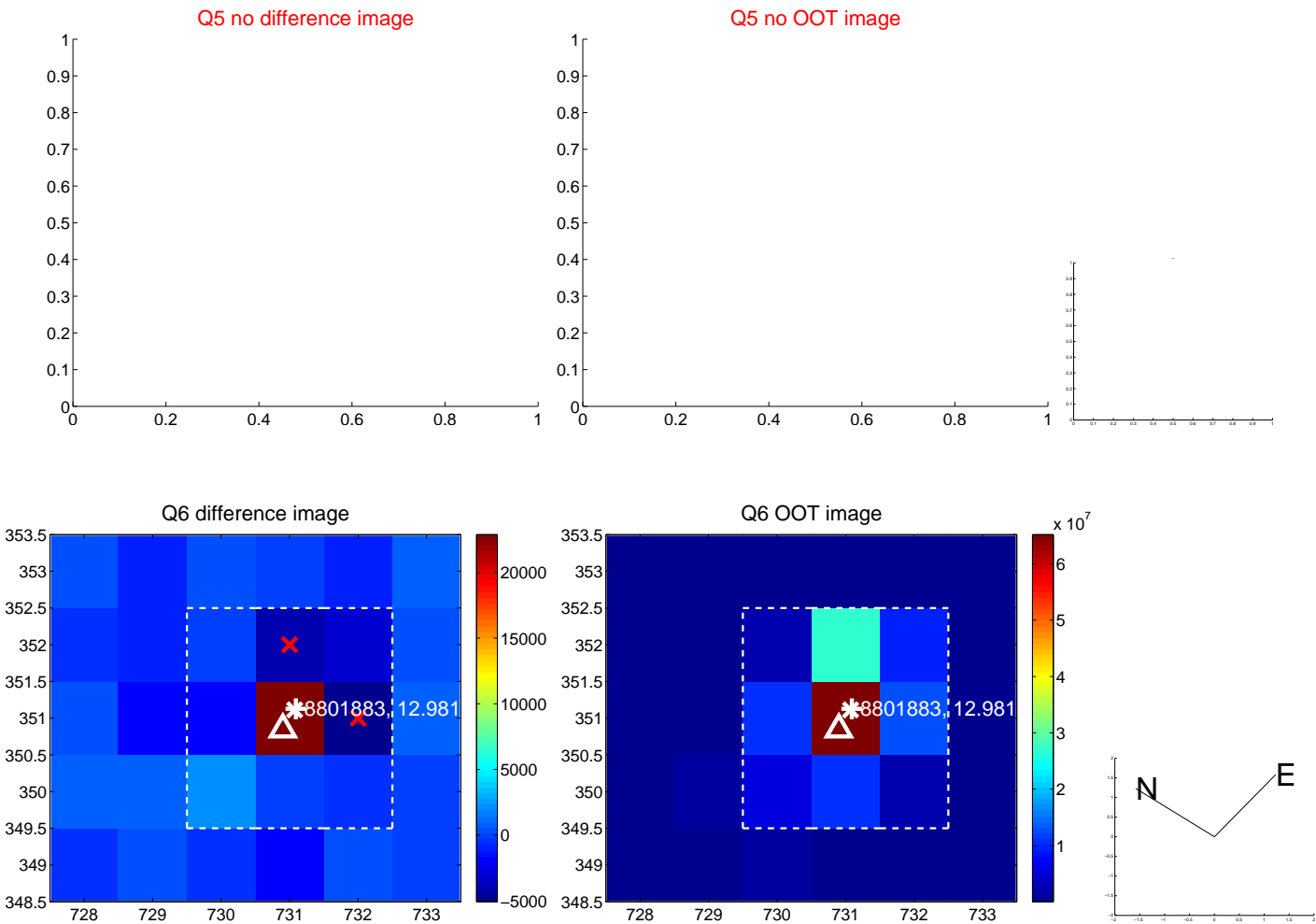
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

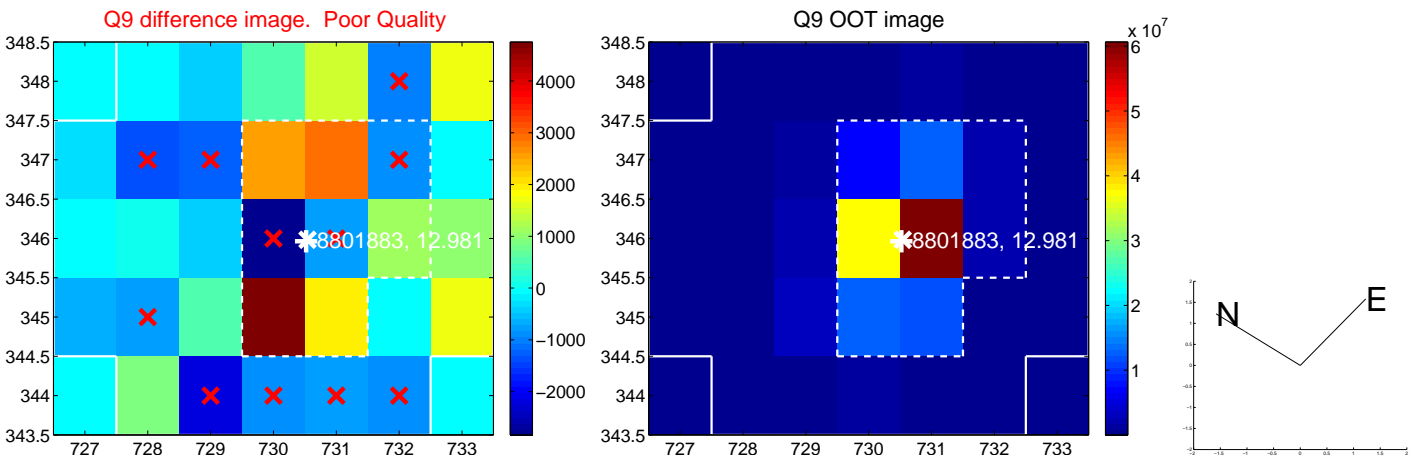




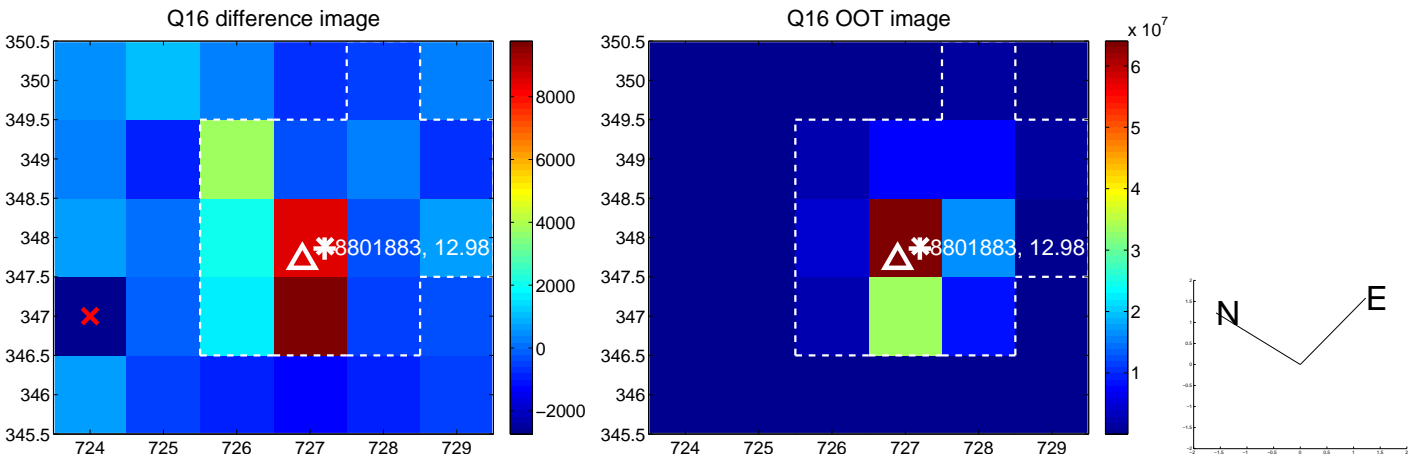
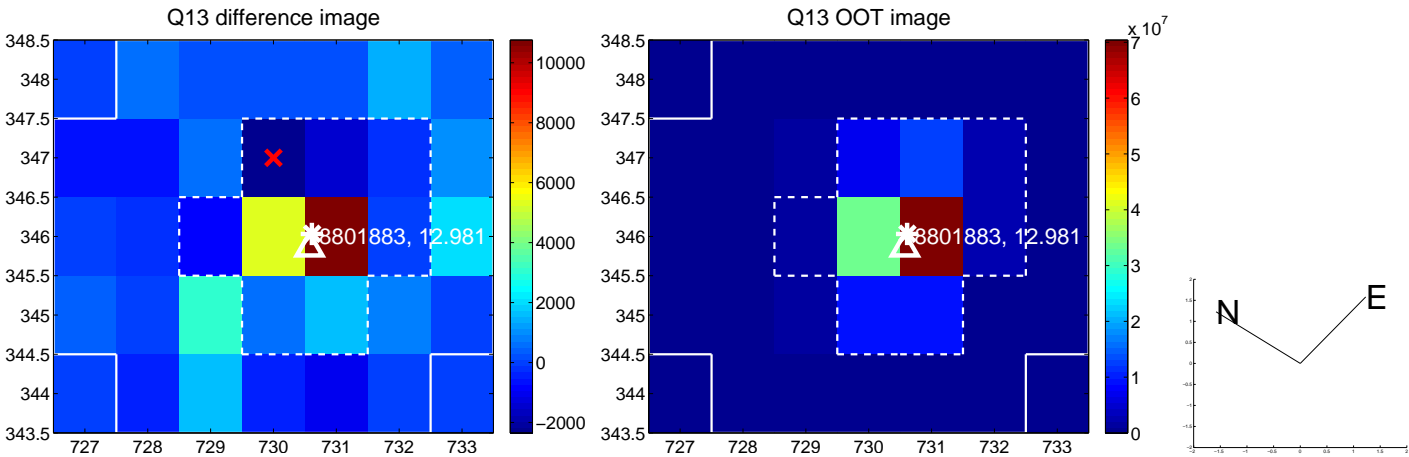
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



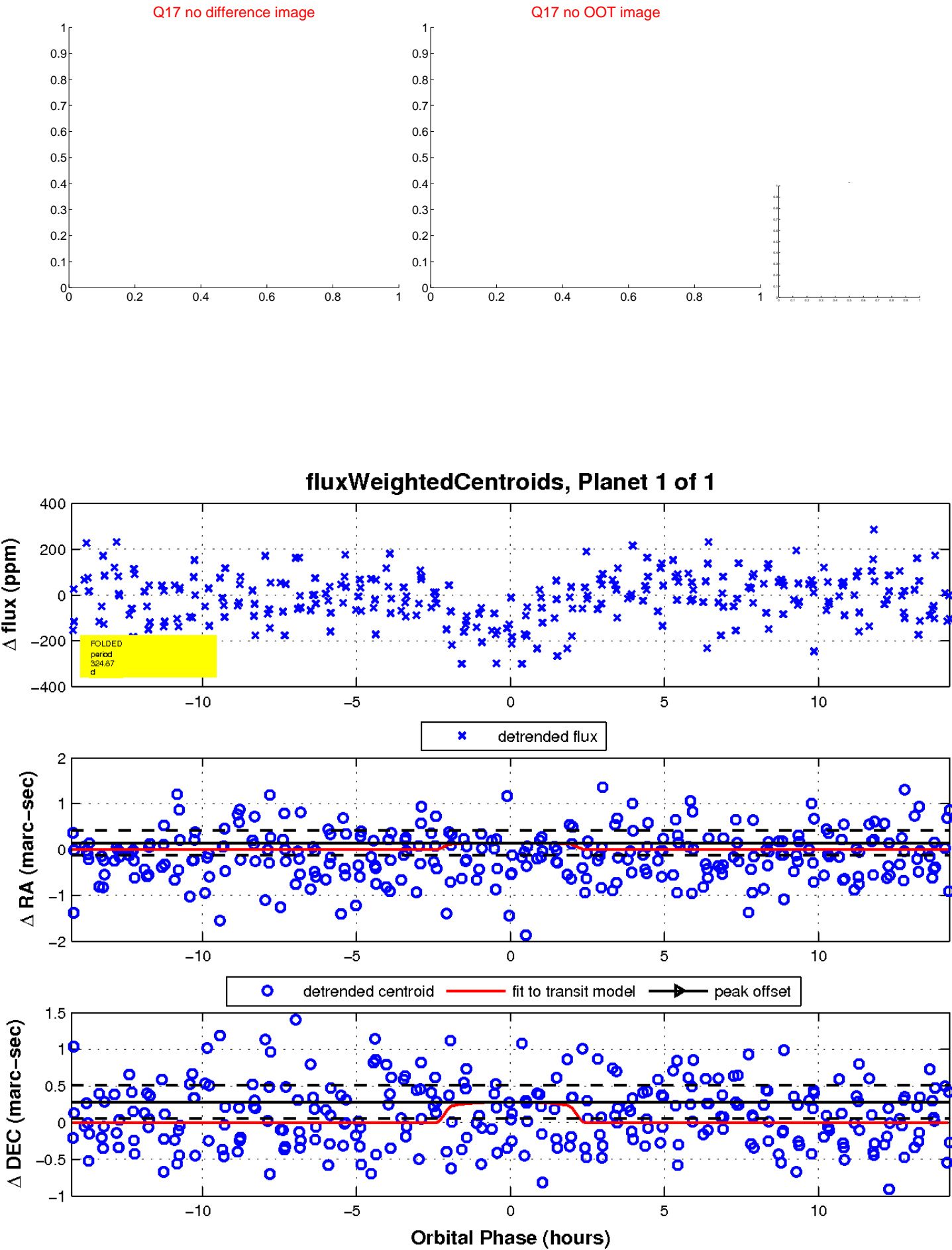
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

