

# KIC 007802933

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007802933-01	OBS	No	517.971453	410.767847	578.9	14.596	7.5	7.9	0.47	3698	1.20	0.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007802933-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS—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.

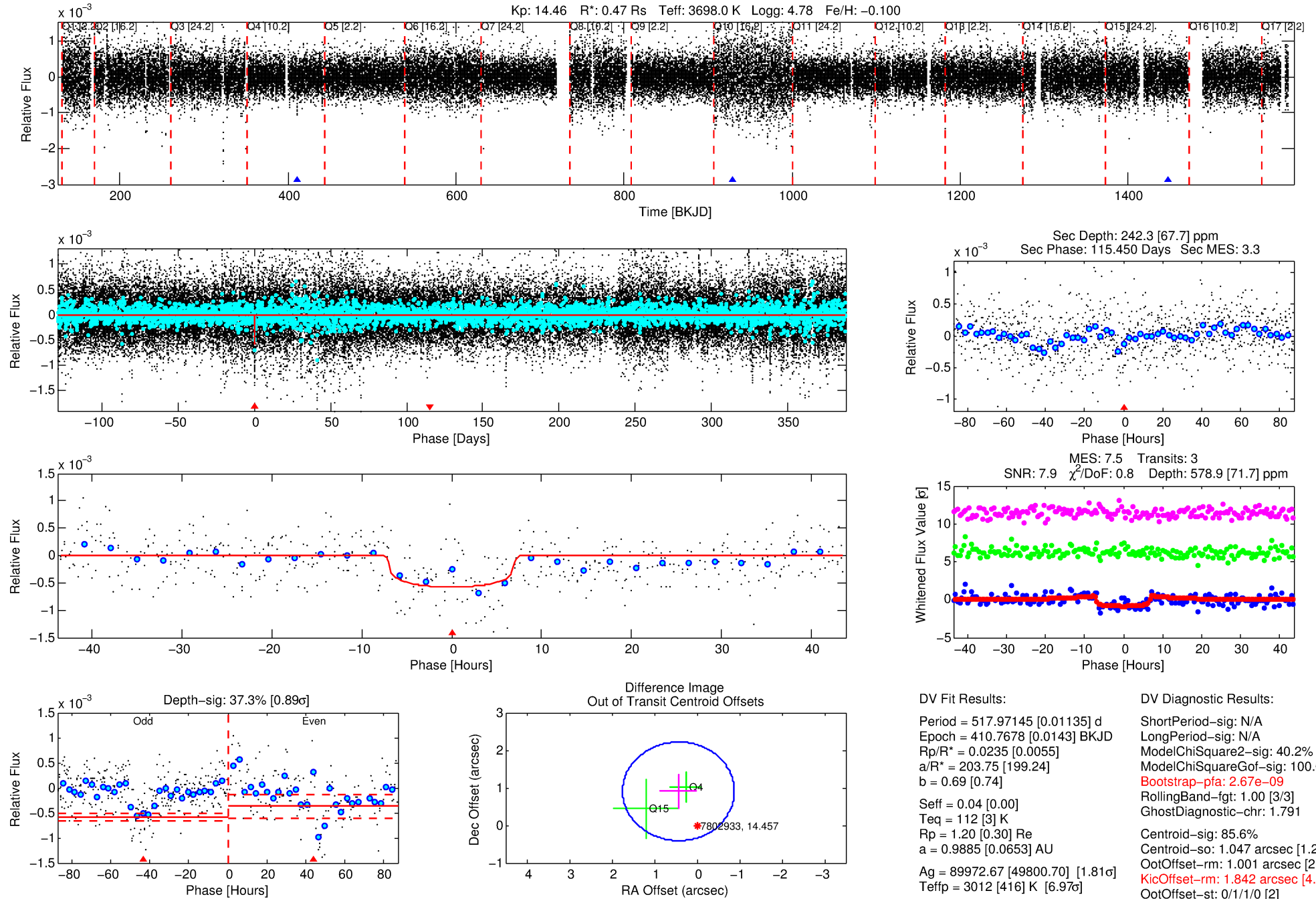
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007802933-01

No Significant Match Found

# DV One-Page Summary

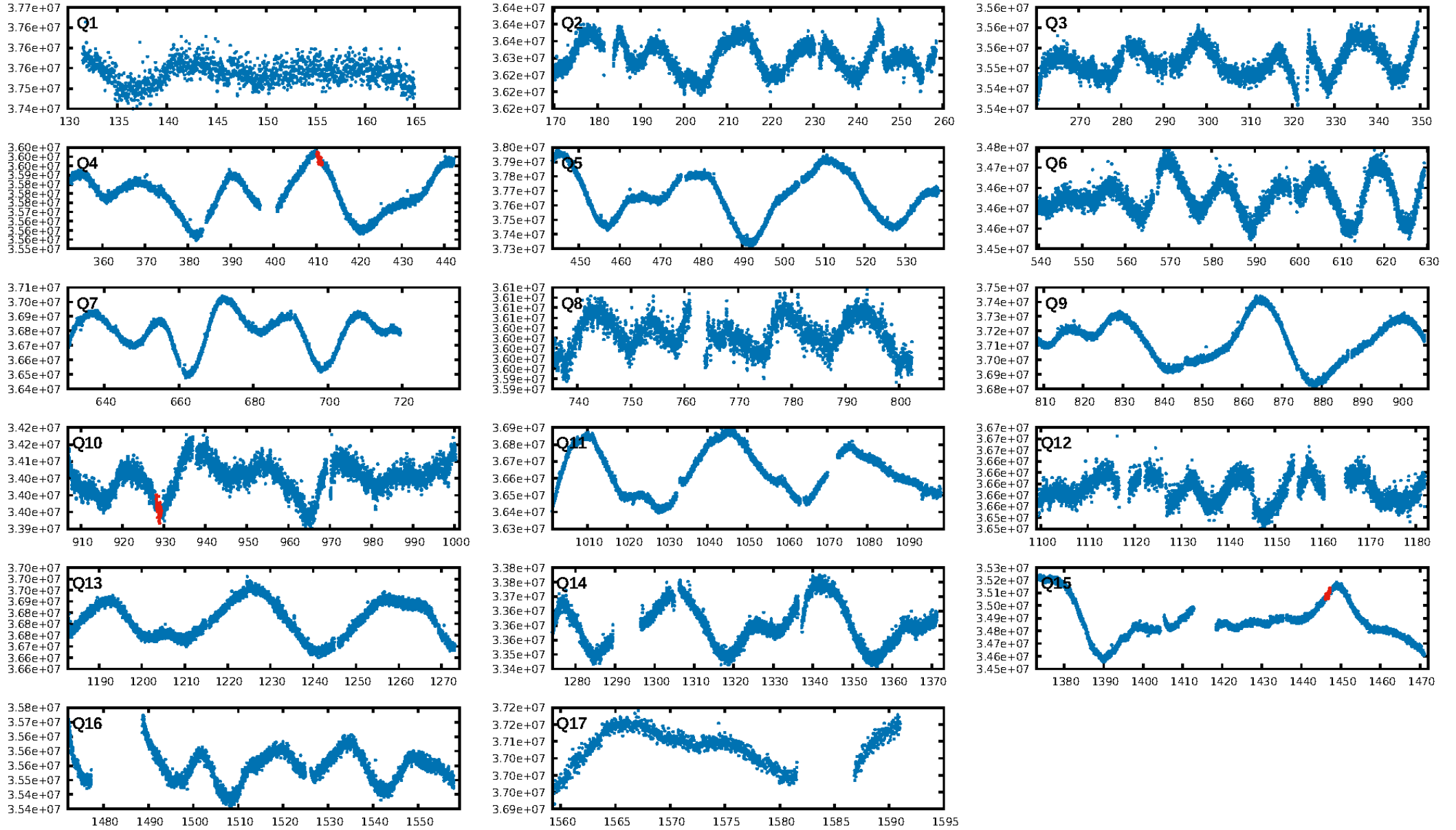
KIC: 7802933 Candidate: 1 of 1 Period: 517.971 d



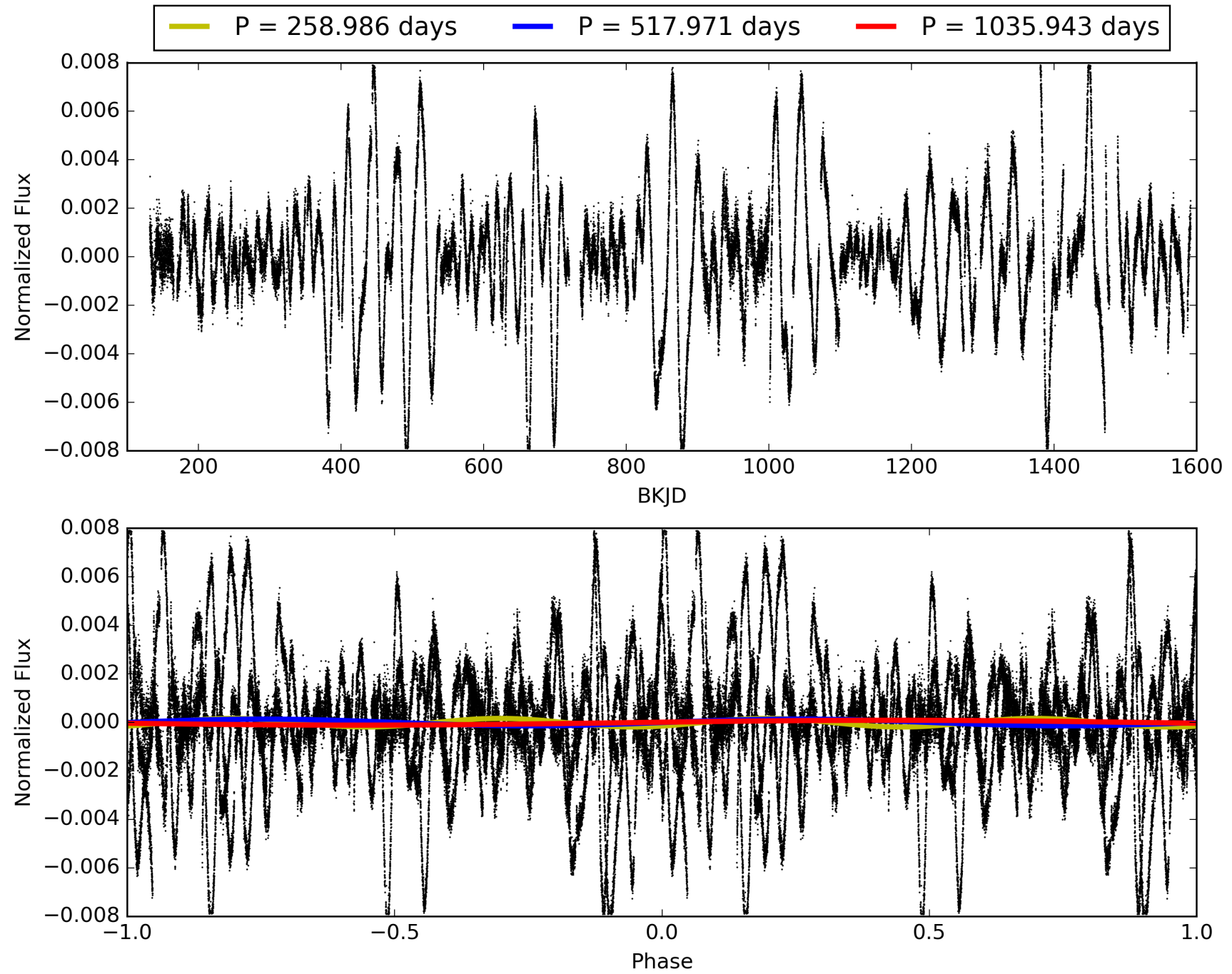
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:07:22 Z

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

# TCE 007802933-01, PDC Light Curves

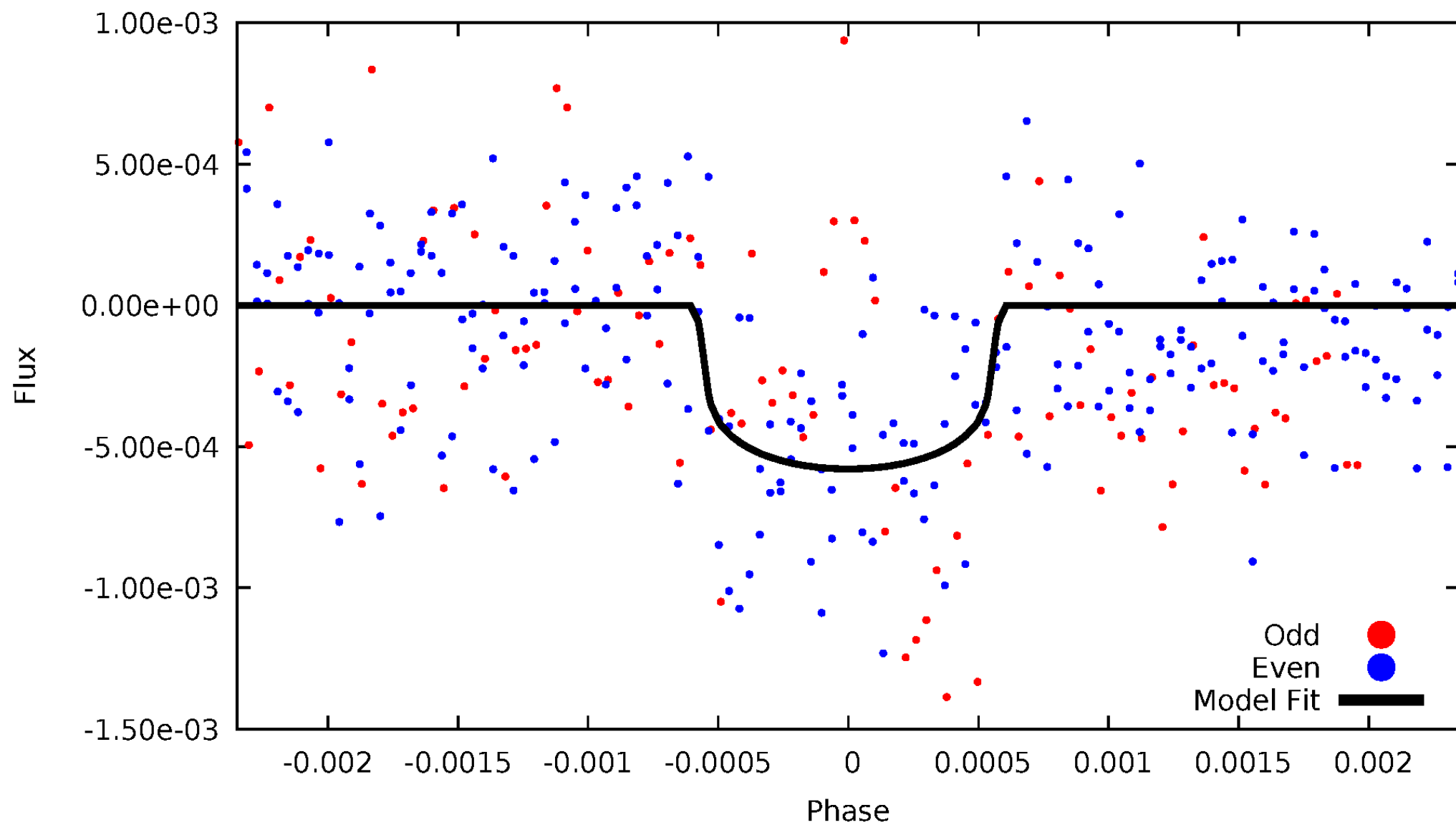


TCE 007802933-01



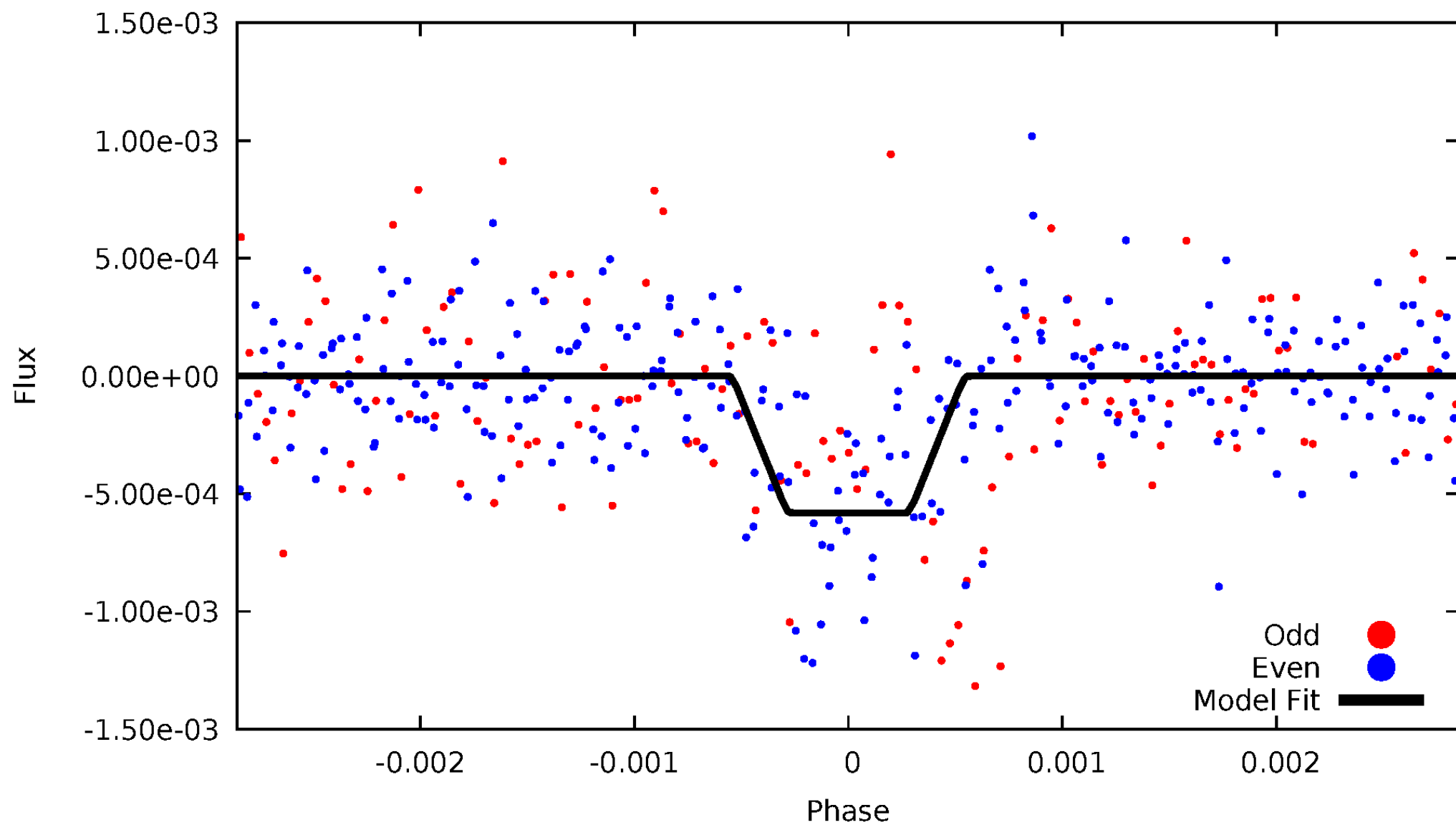
# DV Odd/Even

TCE 007802933-01



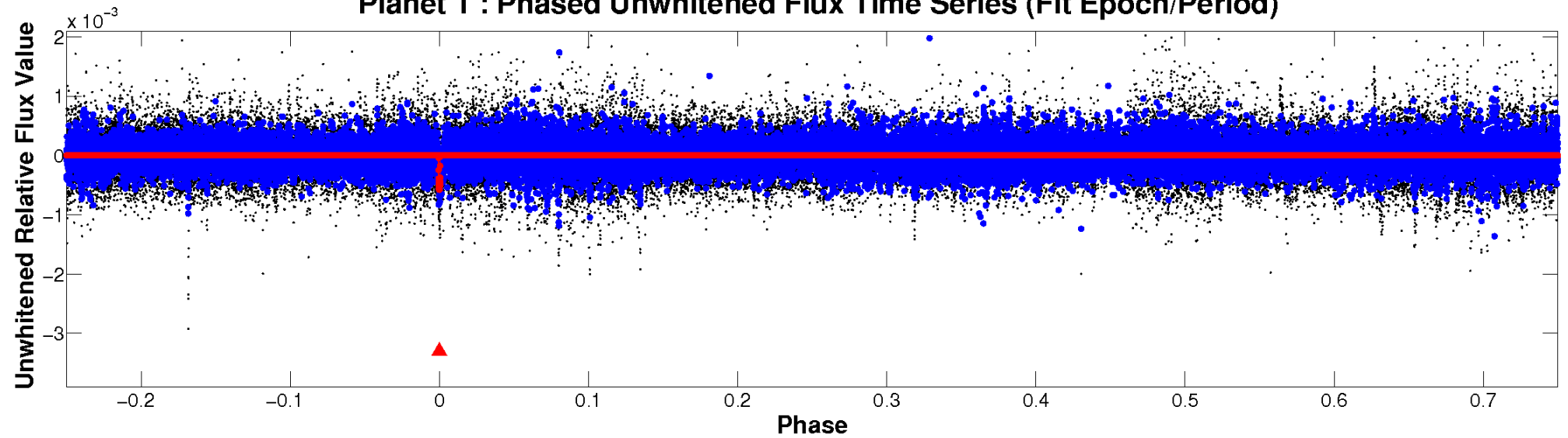
# ALT Odd/Even

TCE 007802933-01

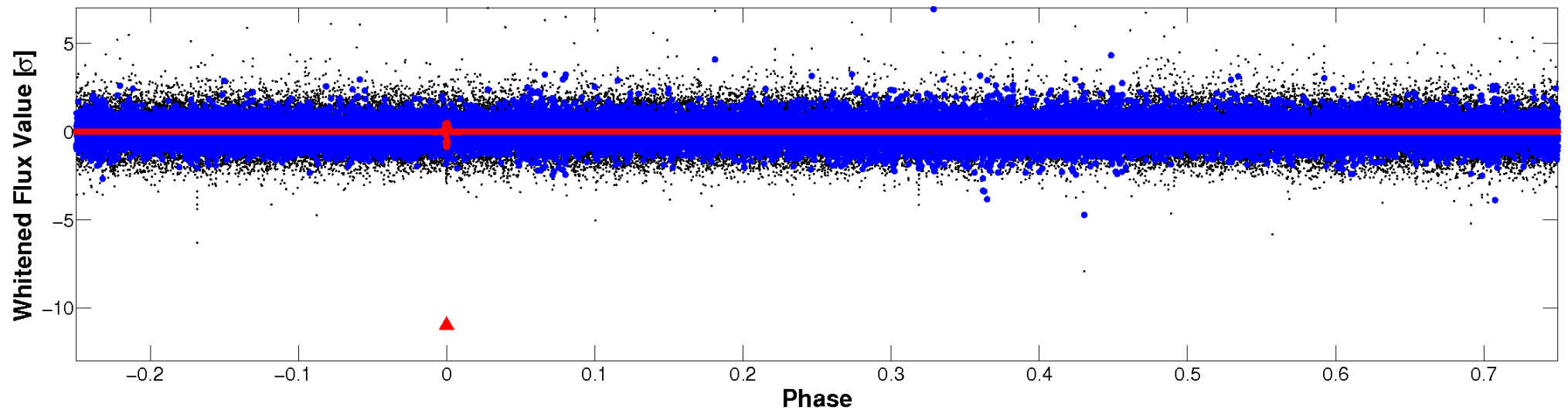


# Non-Whitened Vs. Whitened Light Curve

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

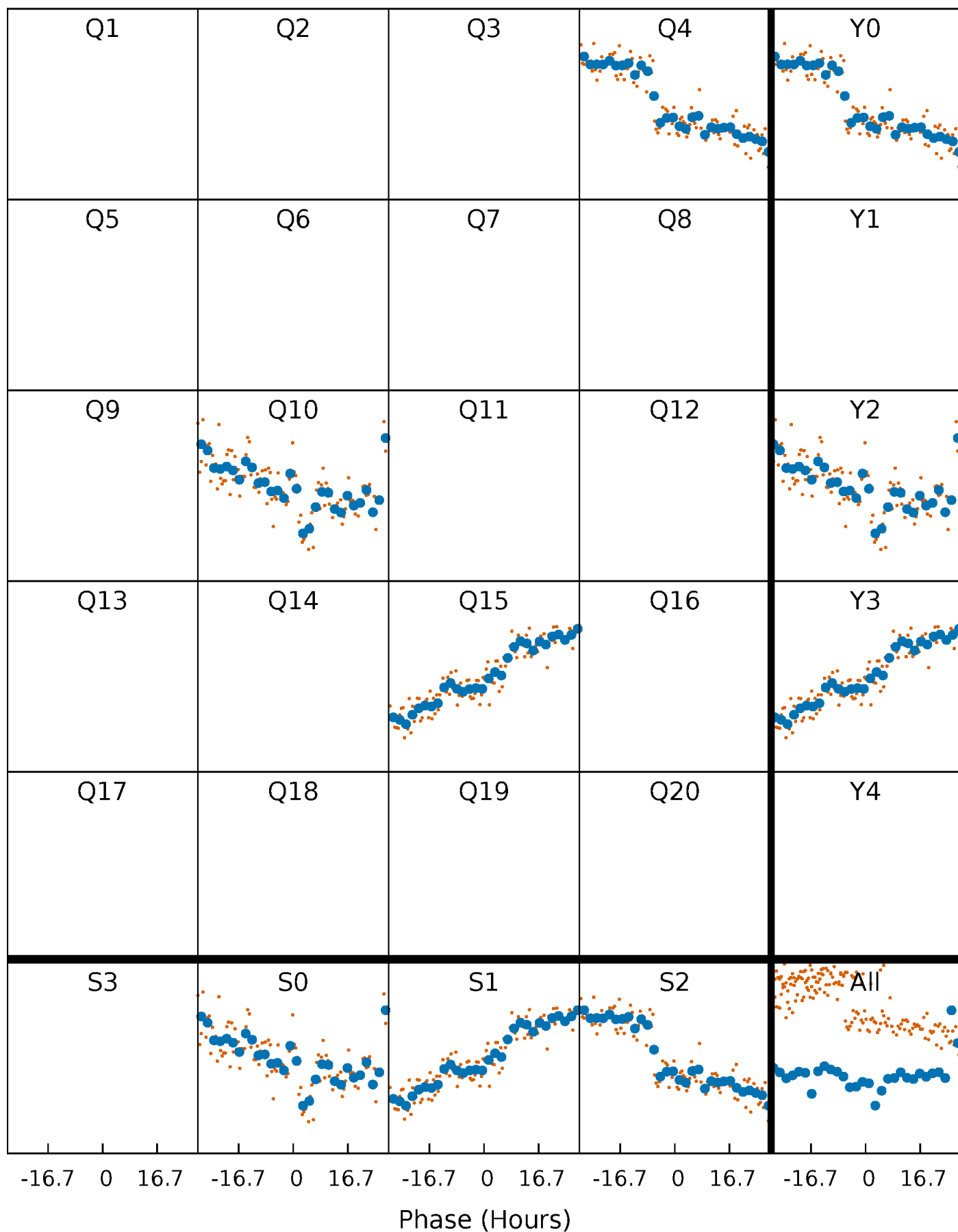


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

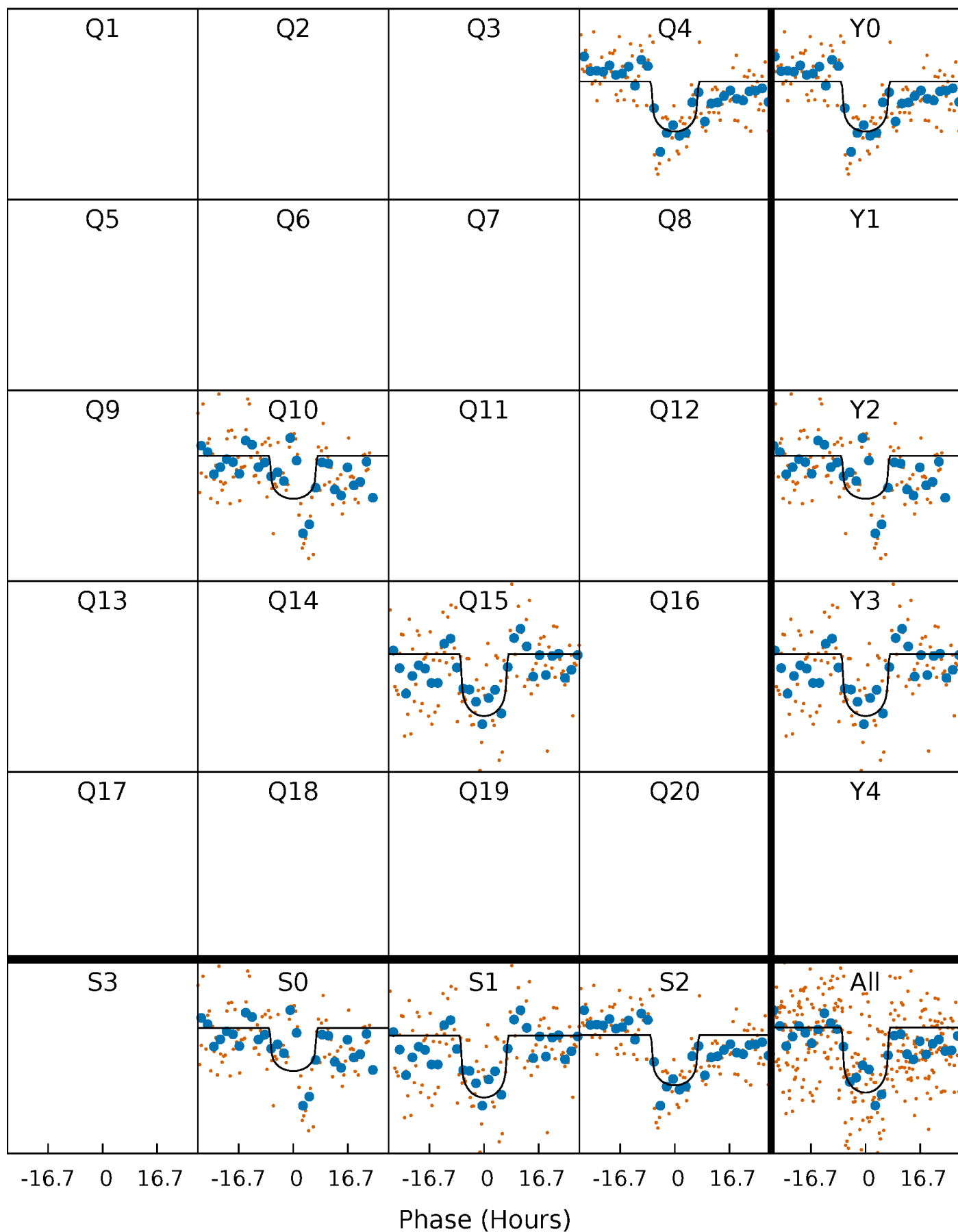
TCE 007802933-01 P=517.971453 Days  $T_0=410.767847$  (BKJD)





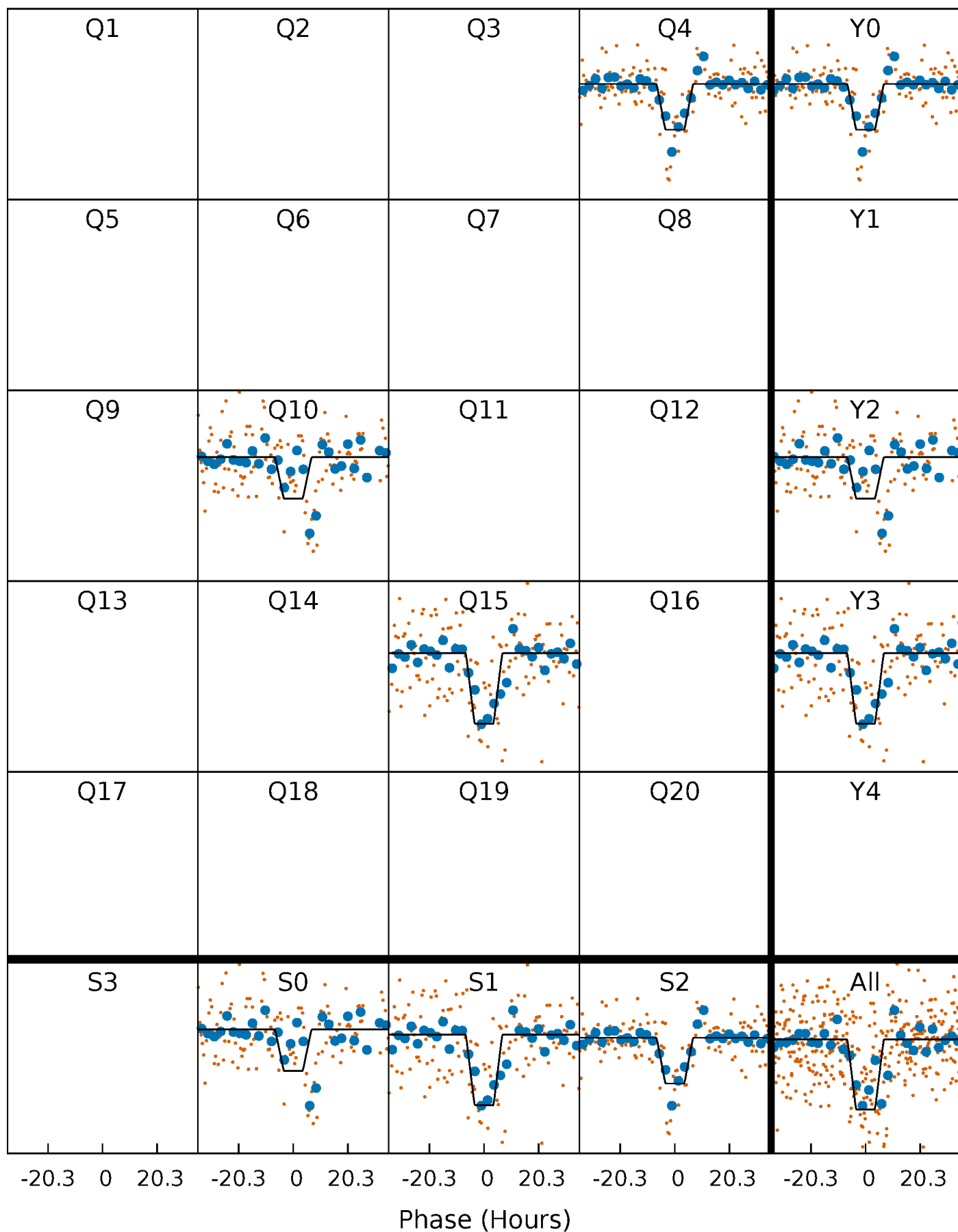
# DV Quarter-Phased Transit Curves

TCE 007802933-01 P=517.971453 Days  $T_0=410.767847$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

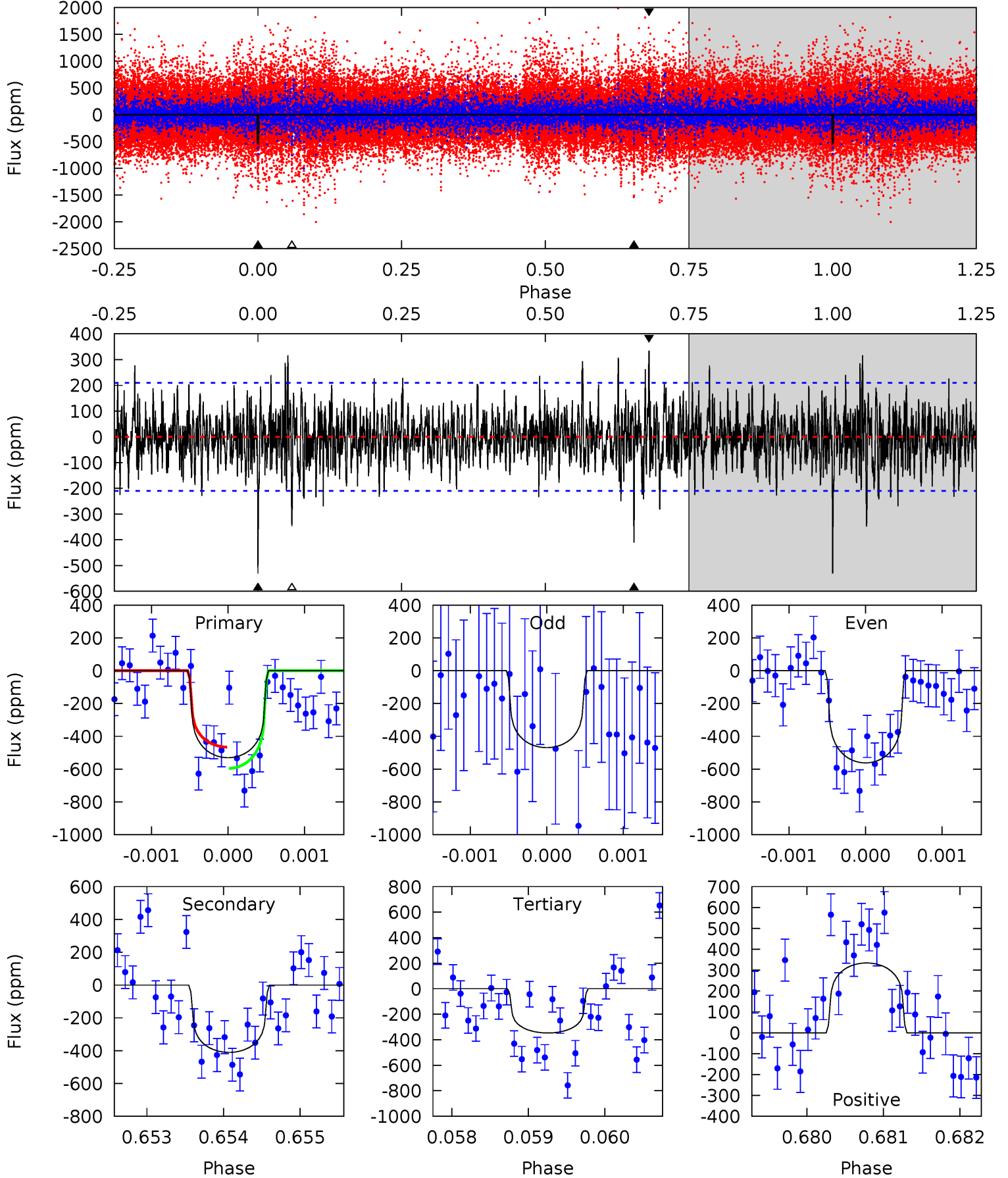
TCE 007802933-01 P=517.990746 Days  $T_0=410.637330$  (BKJD)



# DV Model-Shift Uniqueness Test

007802933-01, P = 517.971453 Days, E = 410.767847 Days

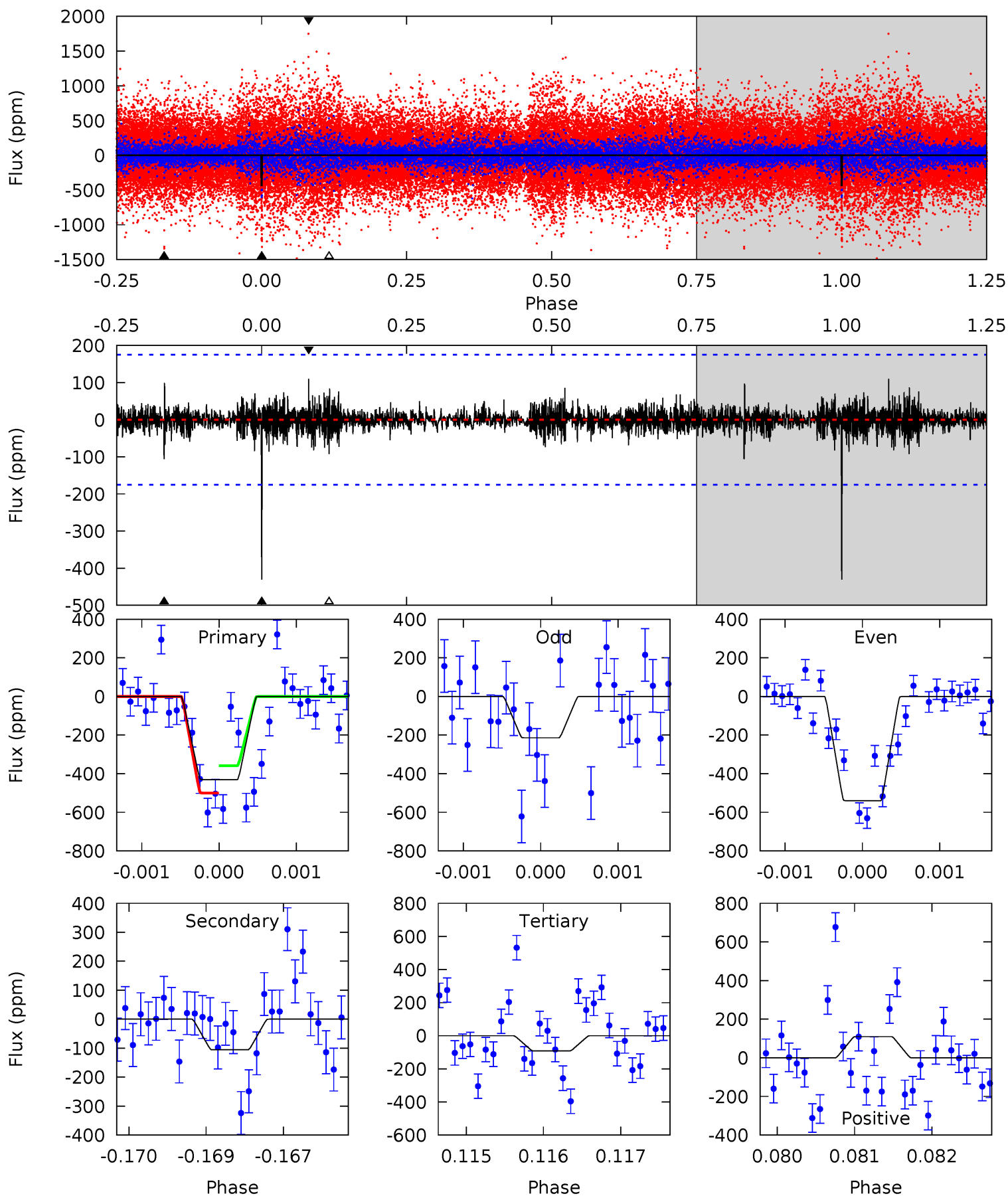
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	10.6	8.97	8.64	5.43	3.25	2.09	4.74	5.07	1.64	1.96	1.10	1.05	0.39	1.68



# Alt Model-Shift Uniqueness Test

007802933-01, P = 517.990746 Days, E = 410.637330 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
13.3	3.28	2.85	3.40	5.43	3.25	0.59	10.5	9.93	0.42	-0.13	4.68	0.89	0.20	2.21



### Stellar Parameters For KIC 007802933

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$3698^{+73}_{-73}$	$4.775^{+0.044}_{-0.024}$	$-0.100^{+0.100}_{-0.100}$	$0.470^{+0.029}_{-0.040}$	$0.479^{+0.034}_{-0.034}$	$6.517^{+1.380}_{-0.783}$
	+2%/-2%	+1%/-1%	+100%/-100%	+6%/-9%	+7%/-7%	+21%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 007802933-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-410 \pm 39$	$1.20^{+0.28}_{-0.31}$	$157^{+3}_{-4}$	$3534^{+353}_{-242}$	$153359^{+124069}_{-53397}$
Alt.	$-106 \pm 32$	$1.23^{+0.31}_{-0.29}$	$156^{+4}_{-4}$	$2859^{+260}_{-198}$	$37849^{+29506}_{-16221}$

$T_{max}$  = 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

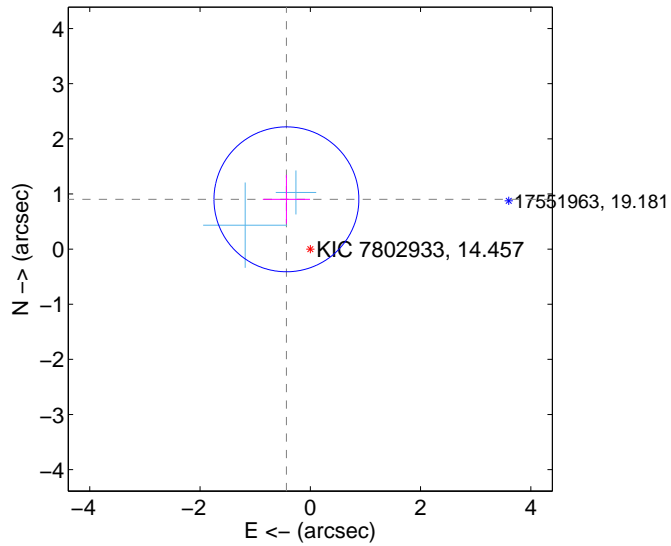
Supplemental centroid analysis for 007802933-01. Kepler magnitude: 14.46. Transit SNR 7.89

There are 2 quarters with good PRF difference image offsets

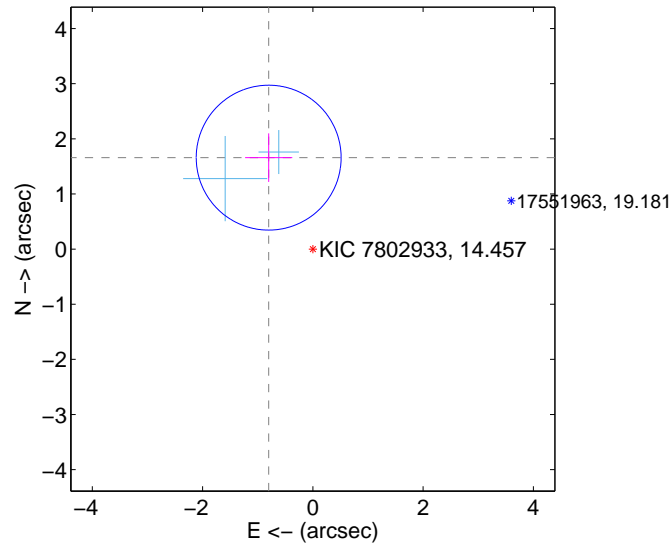
The direct PRF centroid is offset from the target star catalog position by about 0.94 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.001 \pm 0.438$	2.29	$0.433 \pm 0.428$	$0.903 \pm 0.440$
PRF-fit source offset from KIC position	<b><math>1.842 \pm 0.438</math></b>	<b>4.21</b>	$0.801 \pm 0.428$	$1.659 \pm 0.440$
photometric centroid source offset	$1.05 \pm 0.87$	1.20	$0.61 \pm 0.82$	$0.85 \pm 0.90$

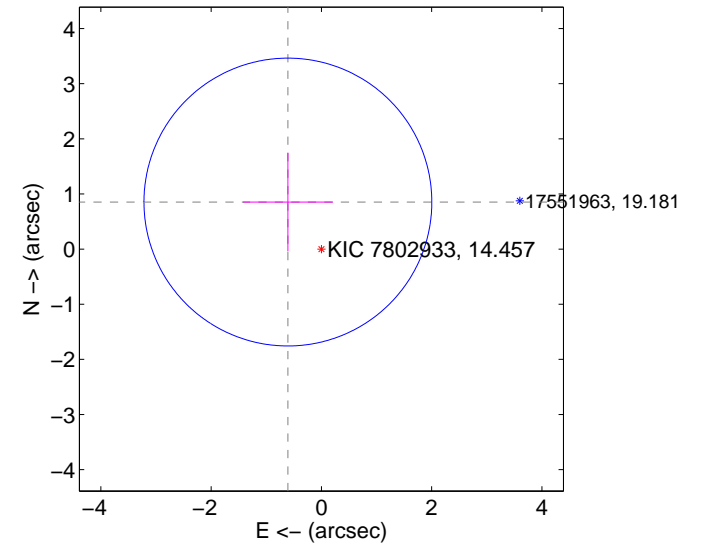
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

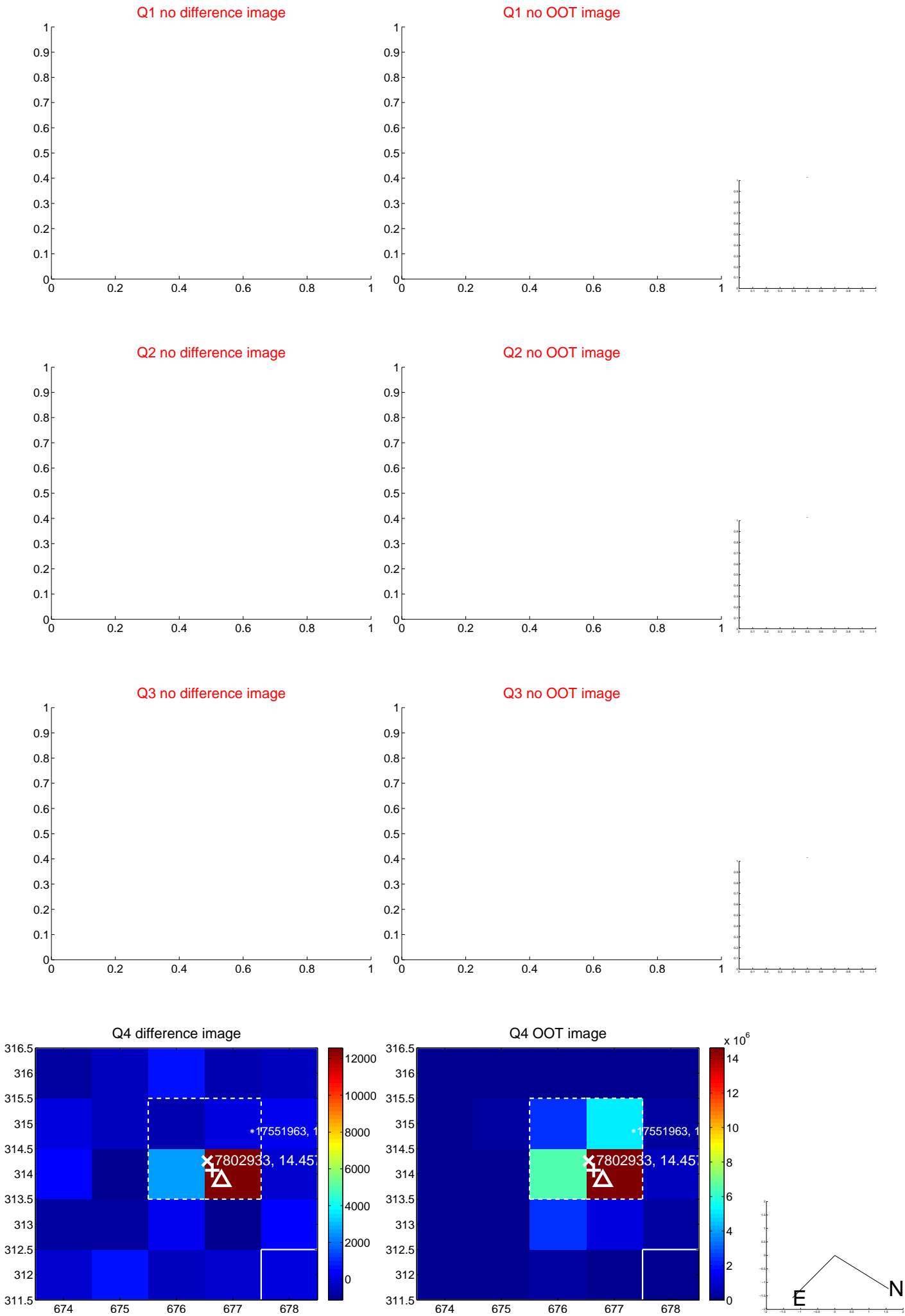


offset from photometric centroids



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.

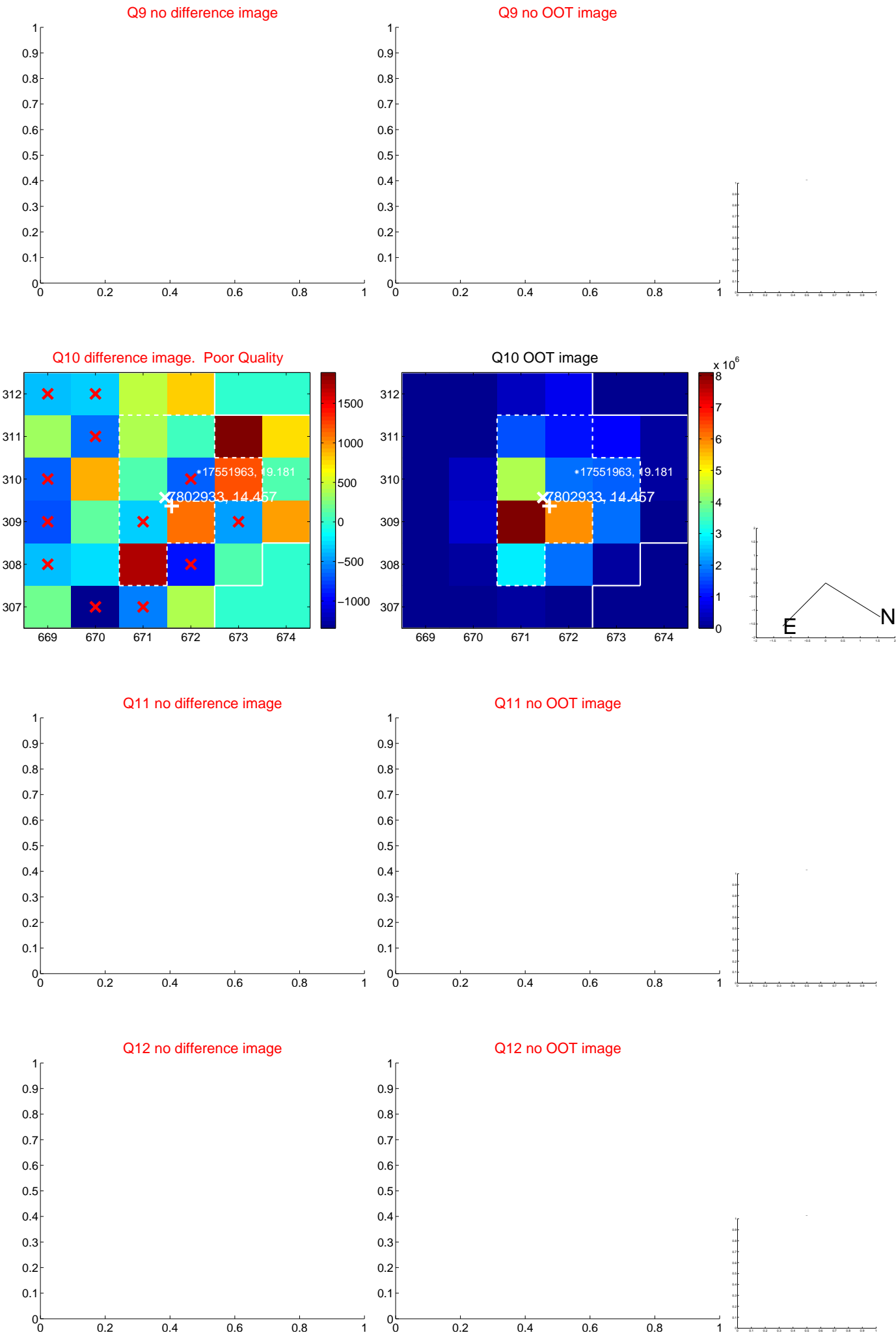


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

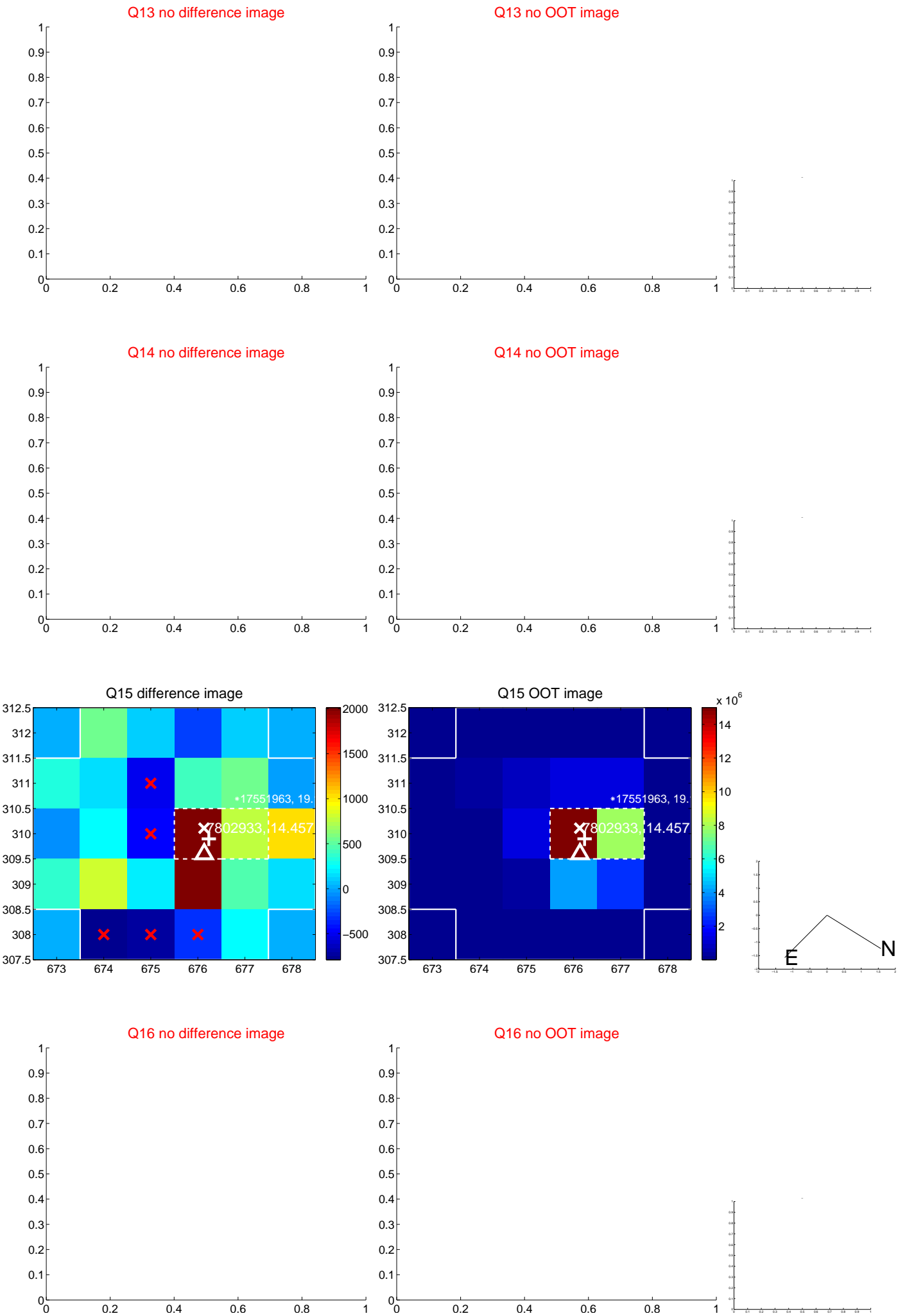




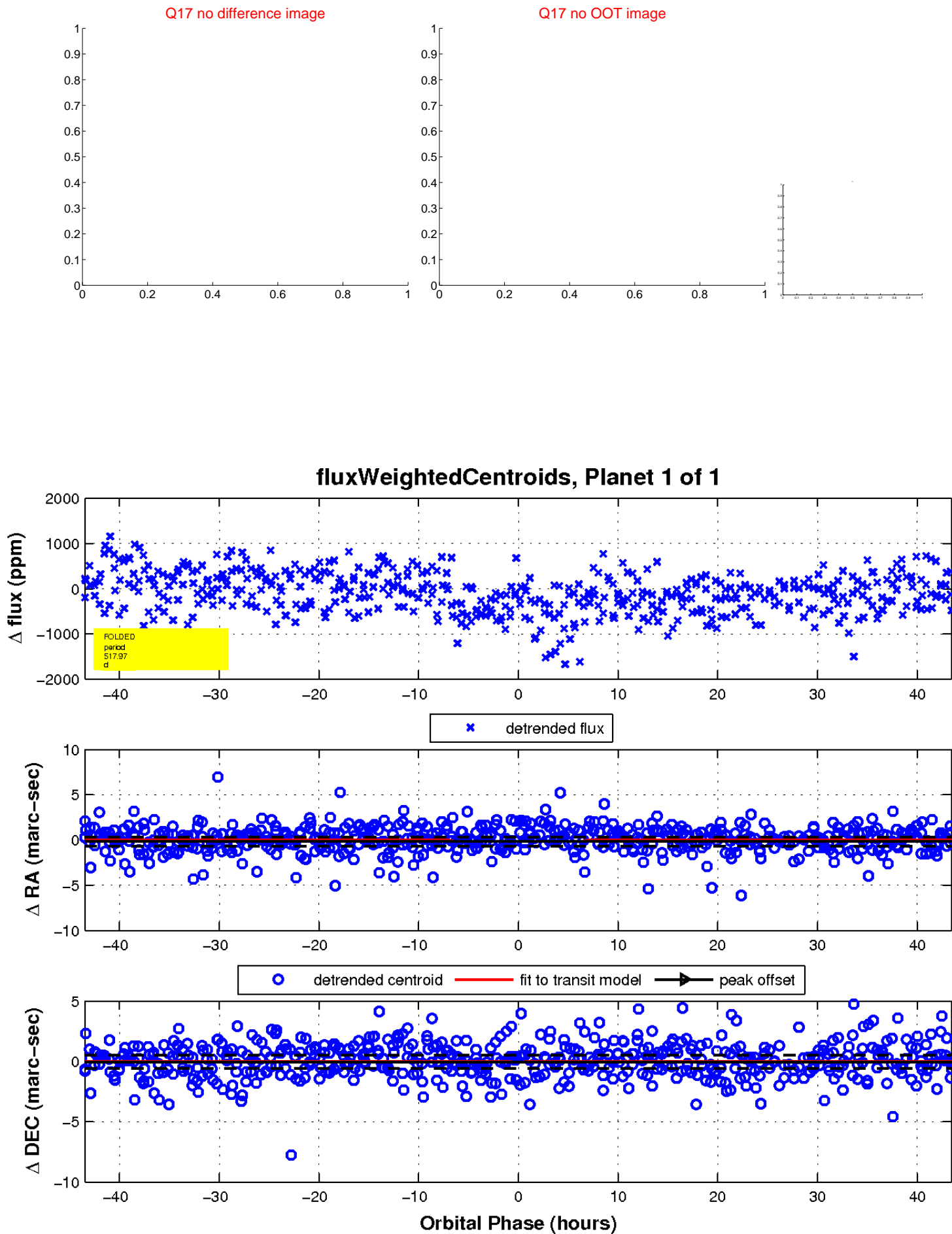
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

Declination

