

# KIC 008175048

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008175048-02	OBS	No	367.982590	228.413981	464.0	21.723	7.6	8.3	0.76	5562	1.73	0.55

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008175048-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

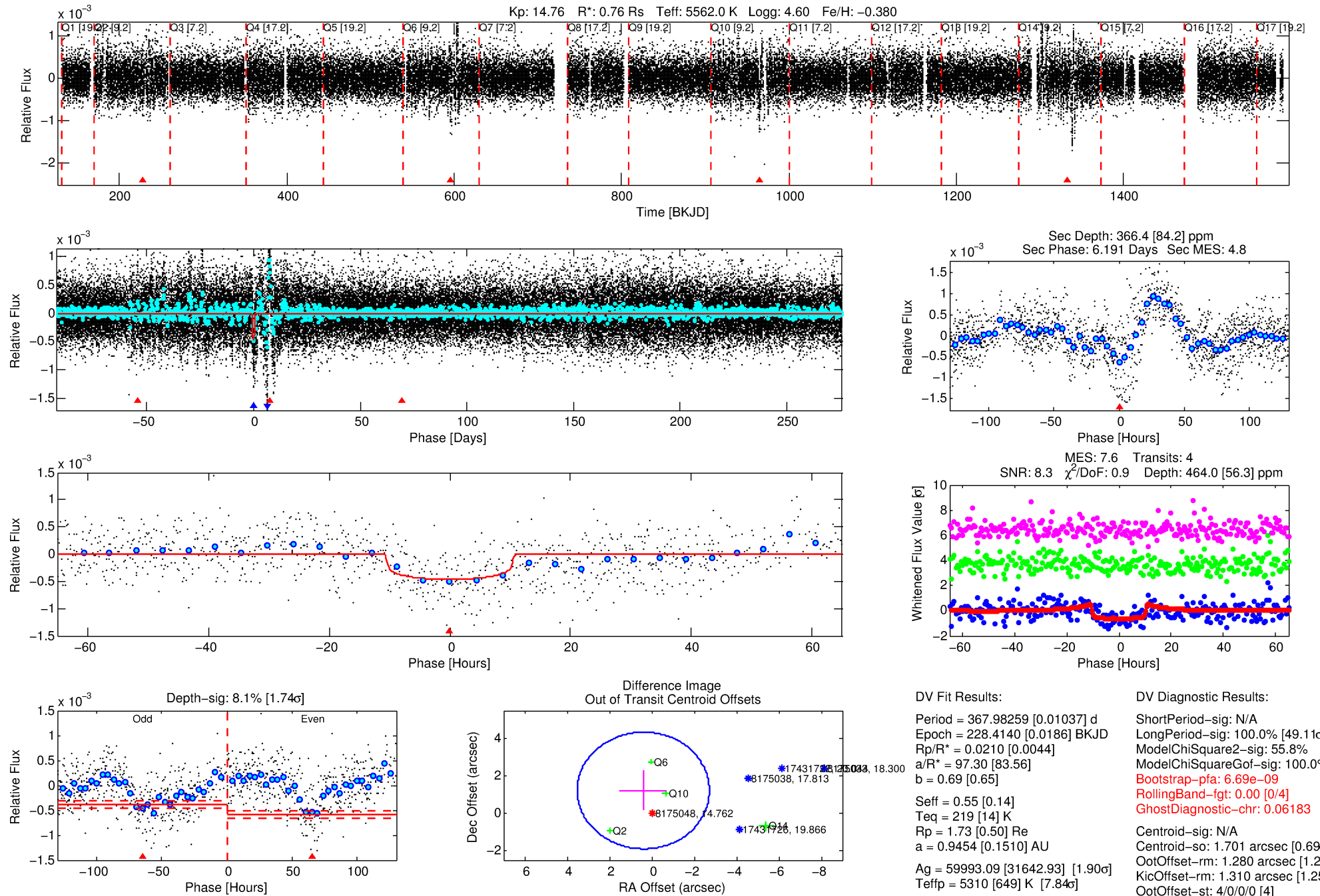
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008175048-02

No Significant Match Found

# DV One-Page Summary

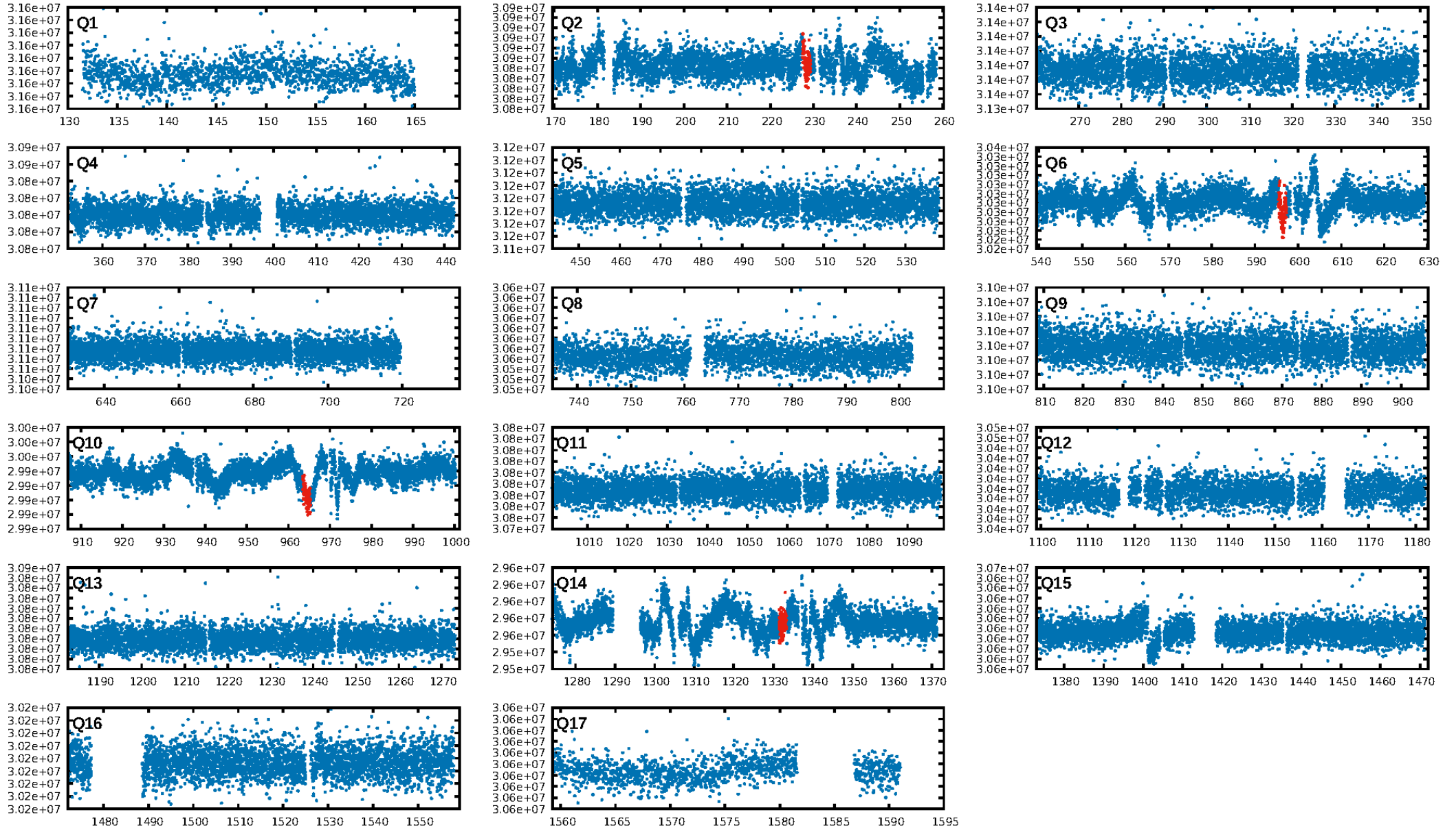
KIC: 8175048 Candidate: 2 of 2 Period: 367.983 d



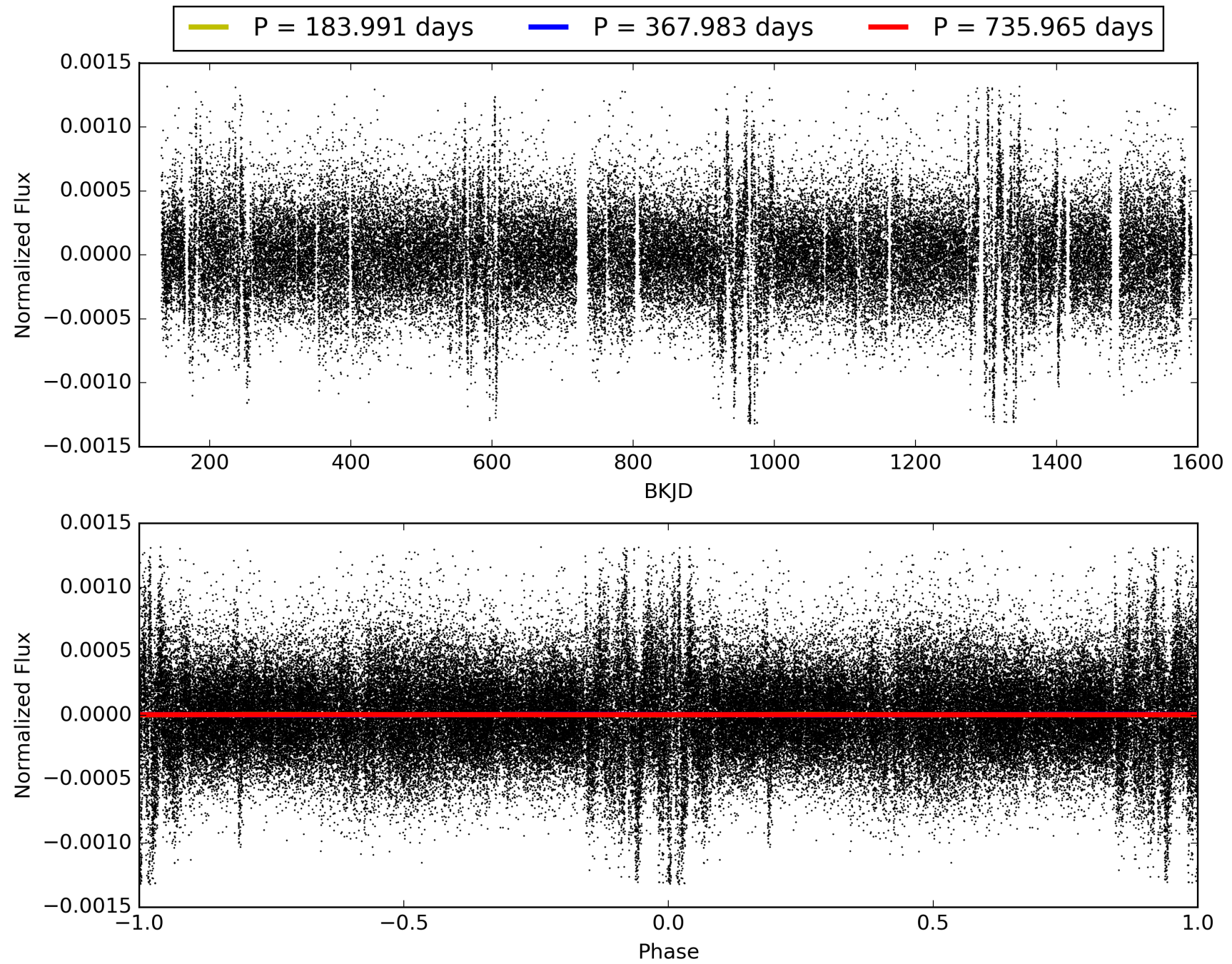
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:50:53 Z

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

# TCE 008175048-02, PDC Light Curves

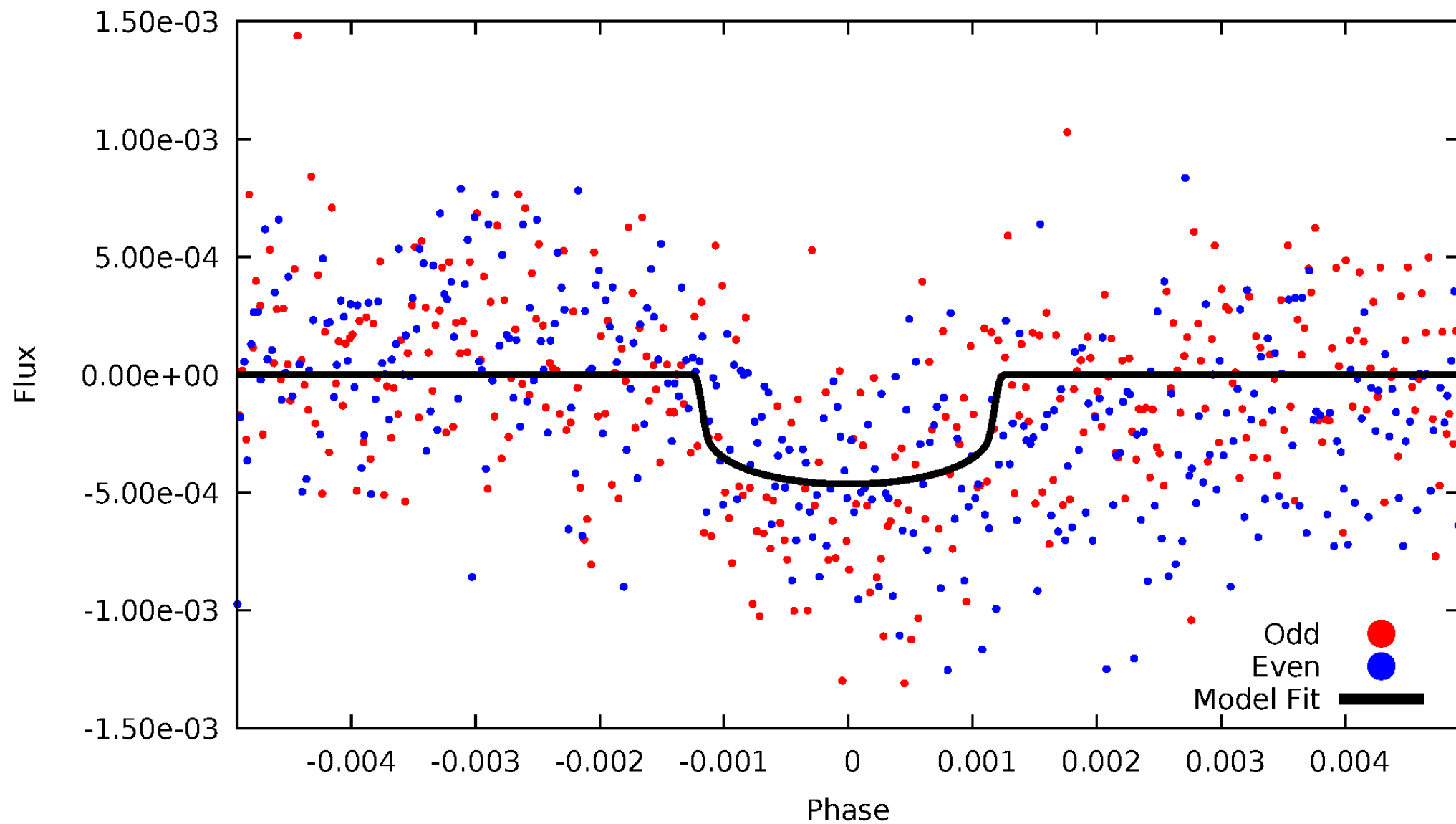


TCE 008175048-02



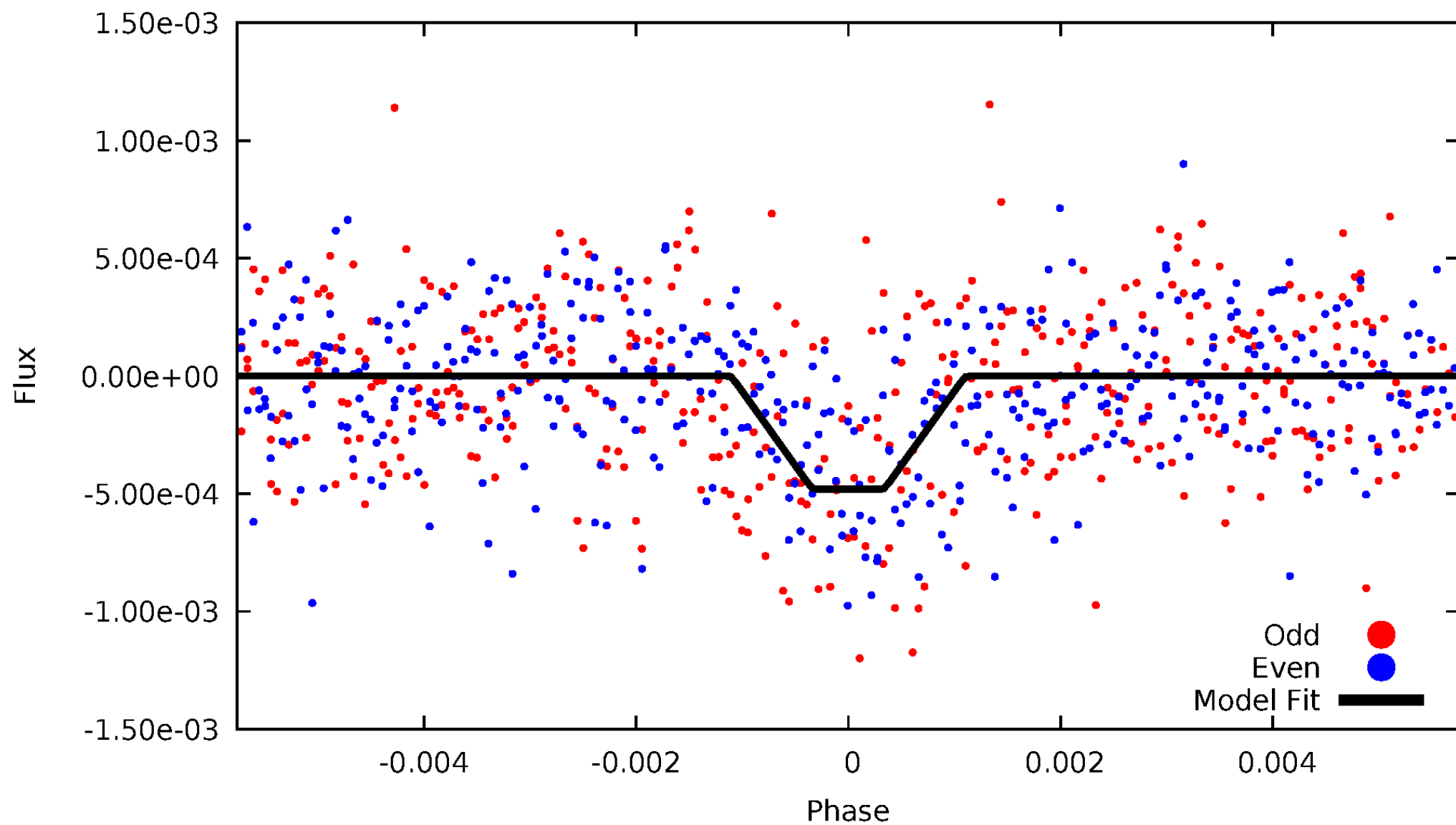
# DV Odd/Even

TCE 008175048-02



# ALT Odd/Even

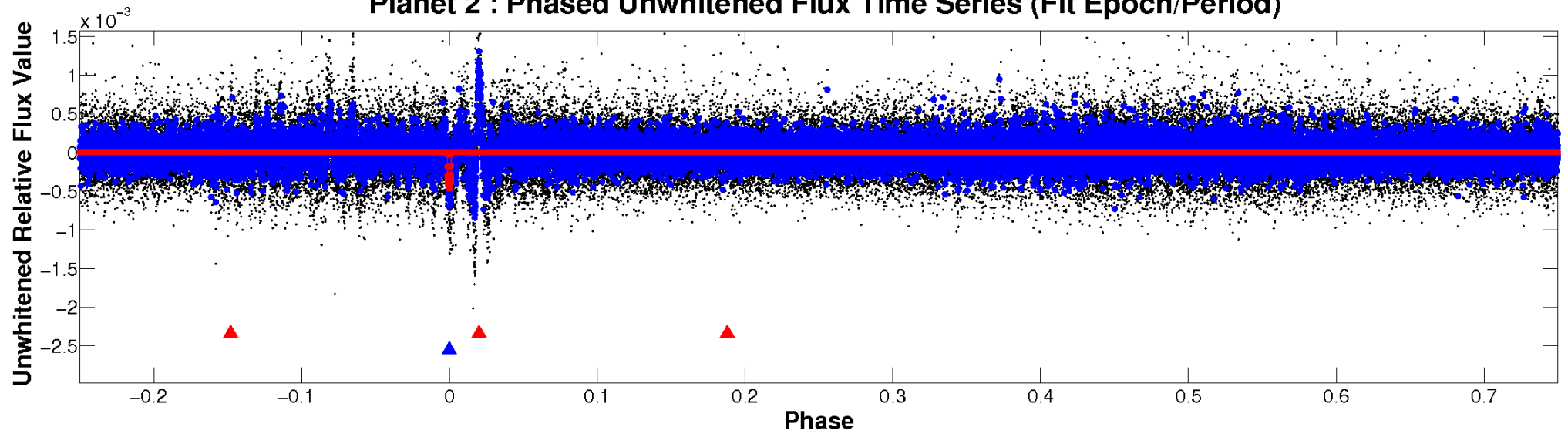
TCE 008175048-02



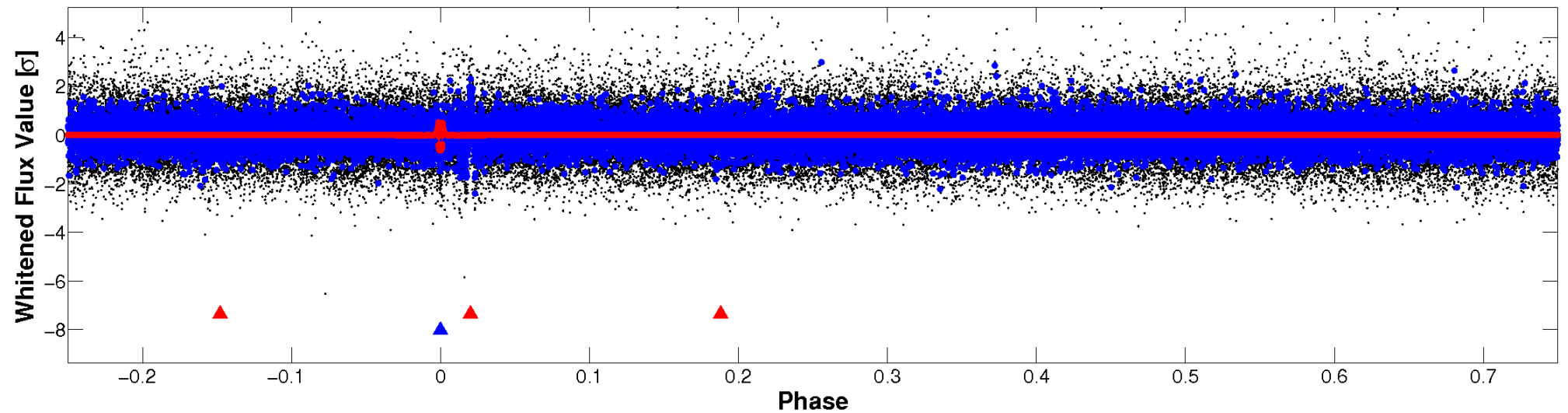


# Non-Whitened Vs. Whitened Light Curve

## Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

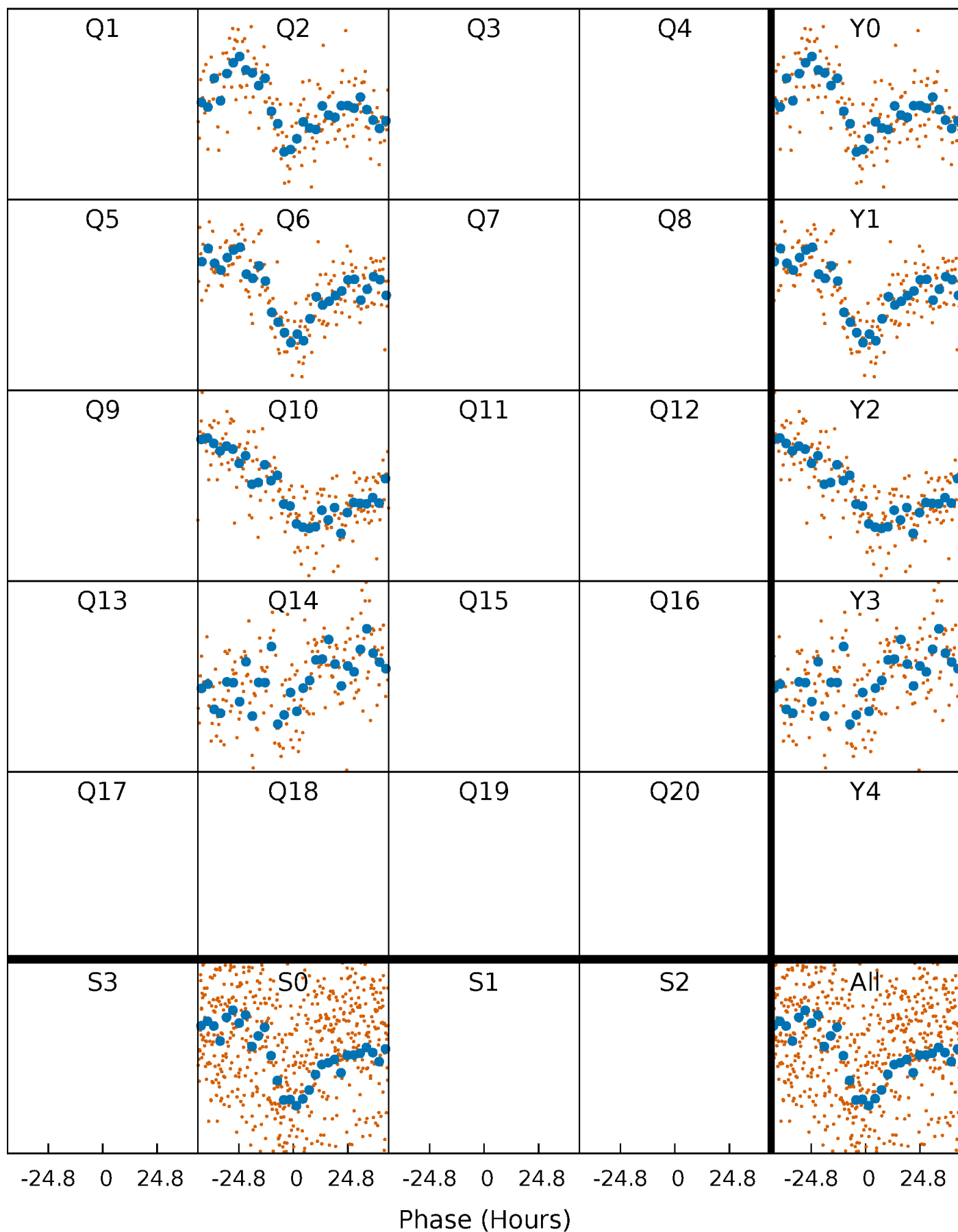


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

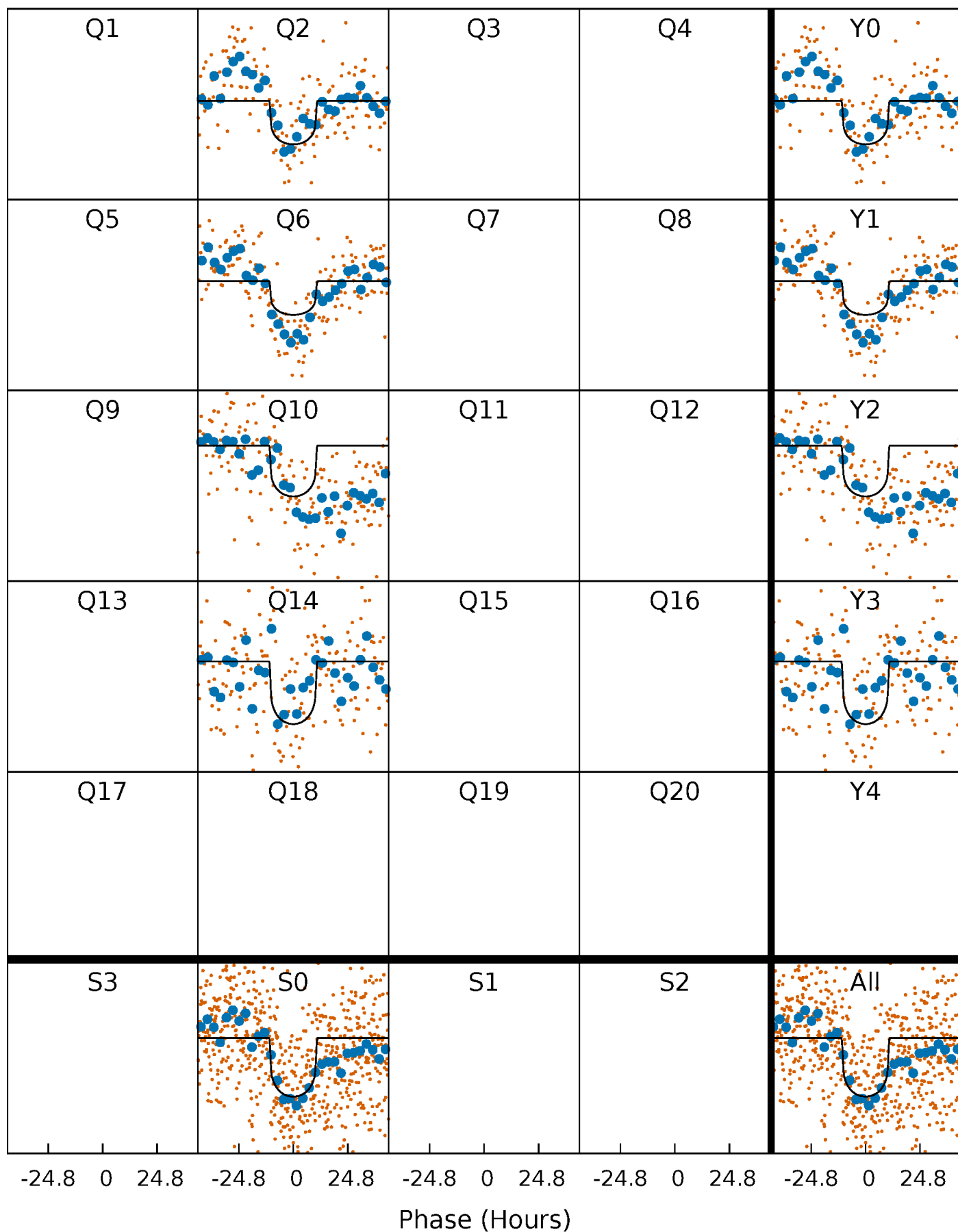
TCE 008175048-02     $P=367.982590$  Days     $T_0=228.413982$  (BKJD)





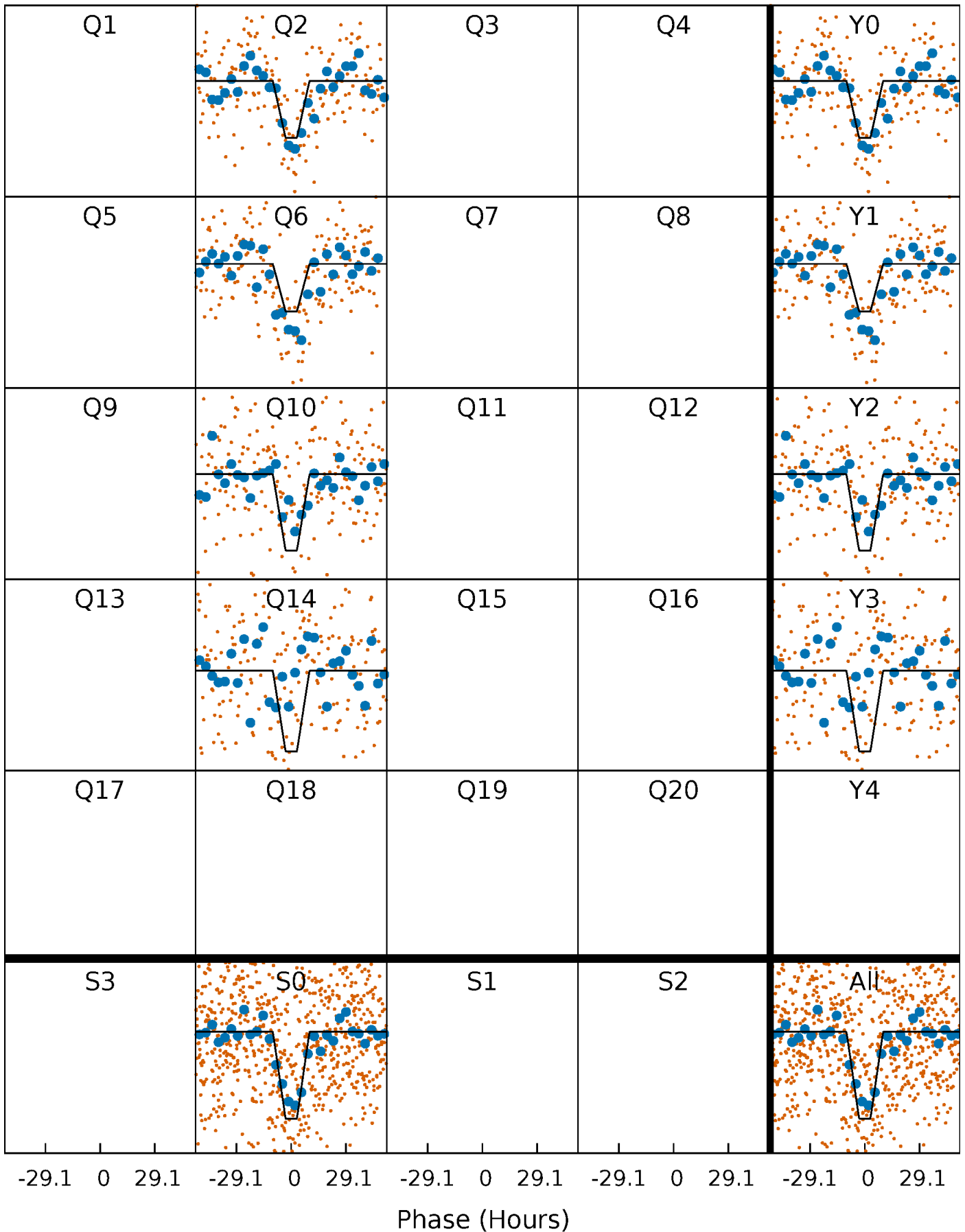
# DV Quarter-Phased Transit Curves

TCE 008175048-02 P=367.982590 Days  $T_0=228.413982$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

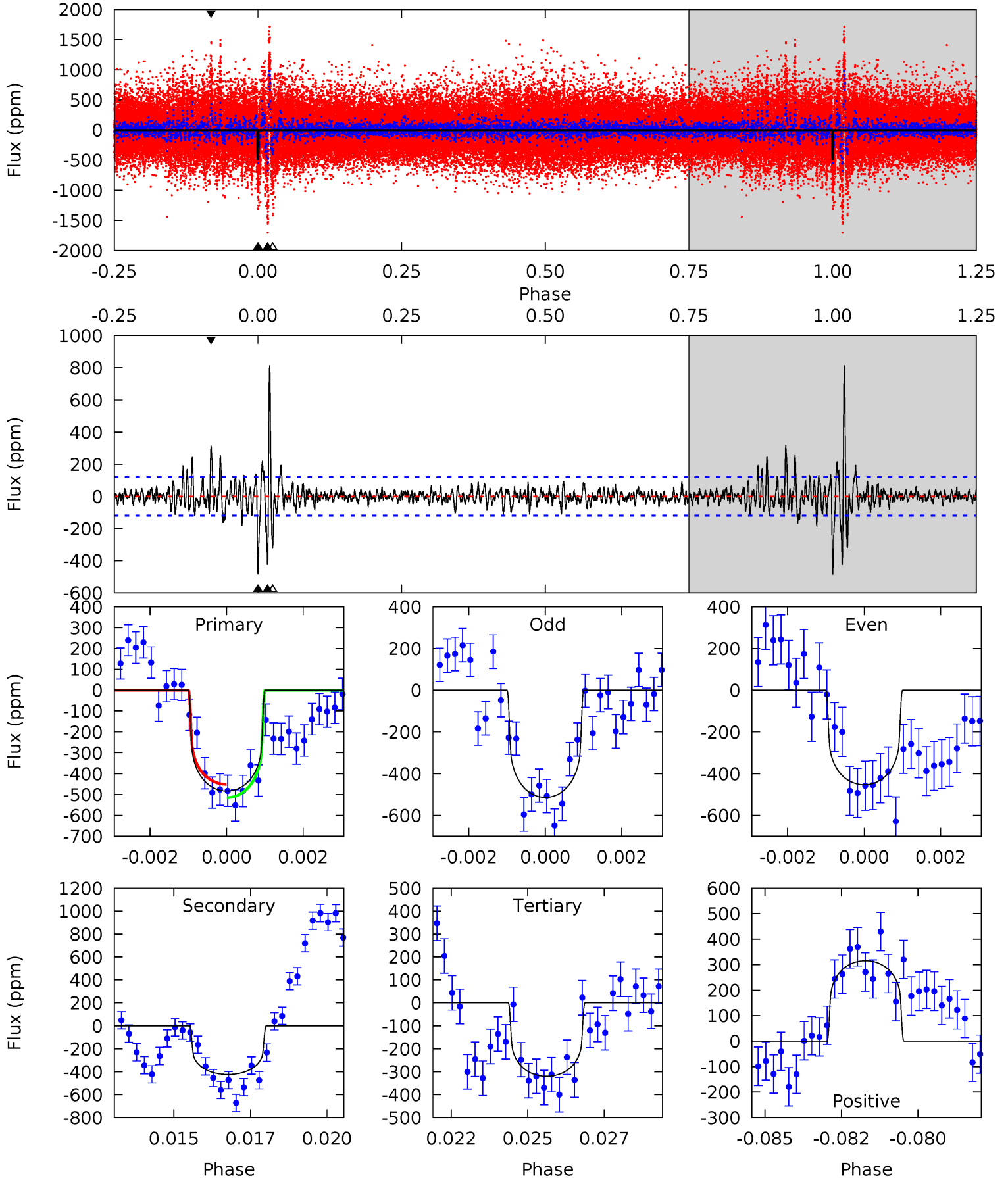
TCE 008175048-02     $P=368.090150$  Days     $T_0=228.248963$  (BKJD)



# DV Model-Shift Uniqueness Test

008175048-02,  $P = 367.982590$  Days,  $E = 228.413982$  Days

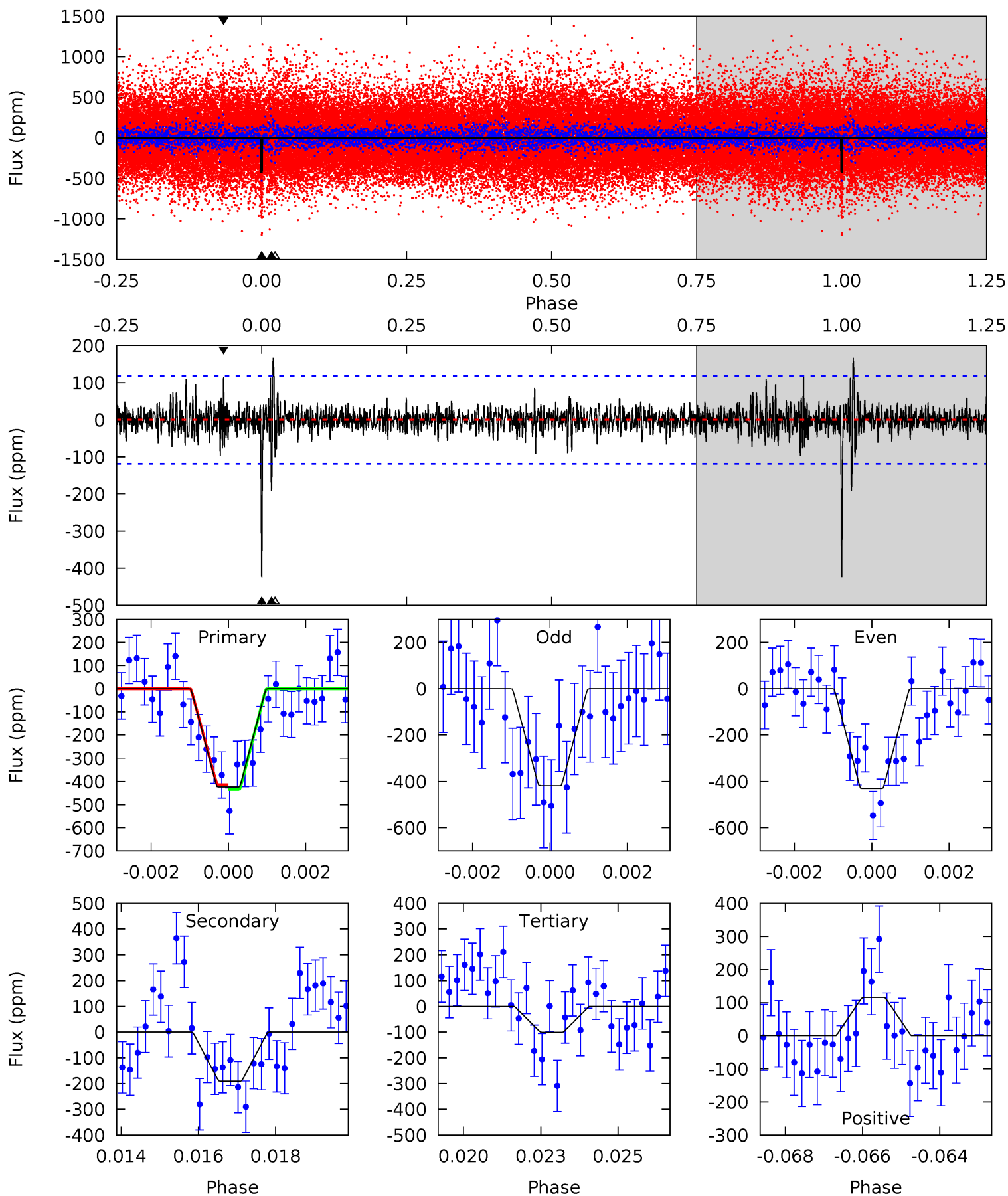
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	18.7	14.1	13.9	5.29	3.02	2.69	7.22	7.44	4.57	4.79	1.34	1.07	0.63	1.41



# Alt Model-Shift Uniqueness Test

008175048-02, P = 368.090150 Days, E = 228.248963 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
19.0	8.54	4.50	5.16	5.30	3.05	1.11	14.5	13.8	4.04	3.38	0.28	1.00	0.28	0.45



### Stellar Parameters For KIC 008175048

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5562^{+150}_{-150}$	$4.601^{+0.032}_{-0.120}$	$-0.380^{+0.300}_{-0.300}$	$0.756^{+0.148}_{-0.059}$	$0.845^{+0.082}_{-0.090}$	$2.758^{+0.466}_{-1.032}$
	+3%/-3%	+1%/-3%	+79%/-79%	+20%/-8%	+10%/-11%	+17%/-37%
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 008175048-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-424 \pm 23$	$1.80^{+0.41}_{-0.41}$	$311^{+15}_{-12}$	$5507^{+654}_{-464}$	$63601^{+42912}_{-21006}$
Alt.	$-191 \pm 22$	$1.88^{+0.39}_{-0.37}$	$312^{+14}_{-12}$	$4553^{+441}_{-330}$	$26548^{+15166}_{-9022}$

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

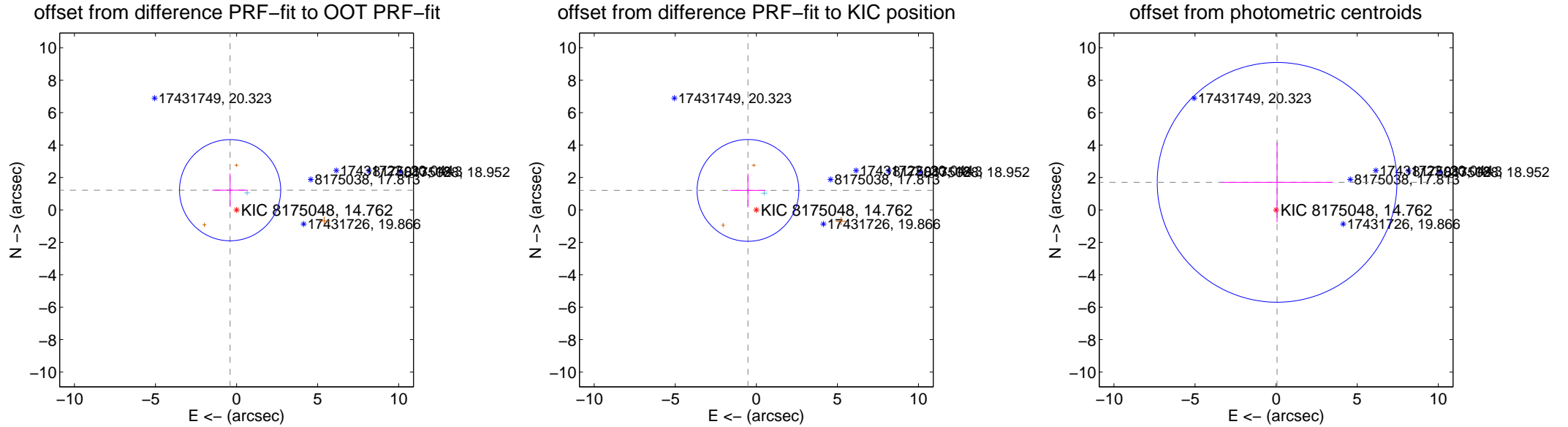
## DV Centroid Data

Supplemental centroid analysis for 008175048-02. Kepler magnitude: 14.76. Transit SNR 8.31

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

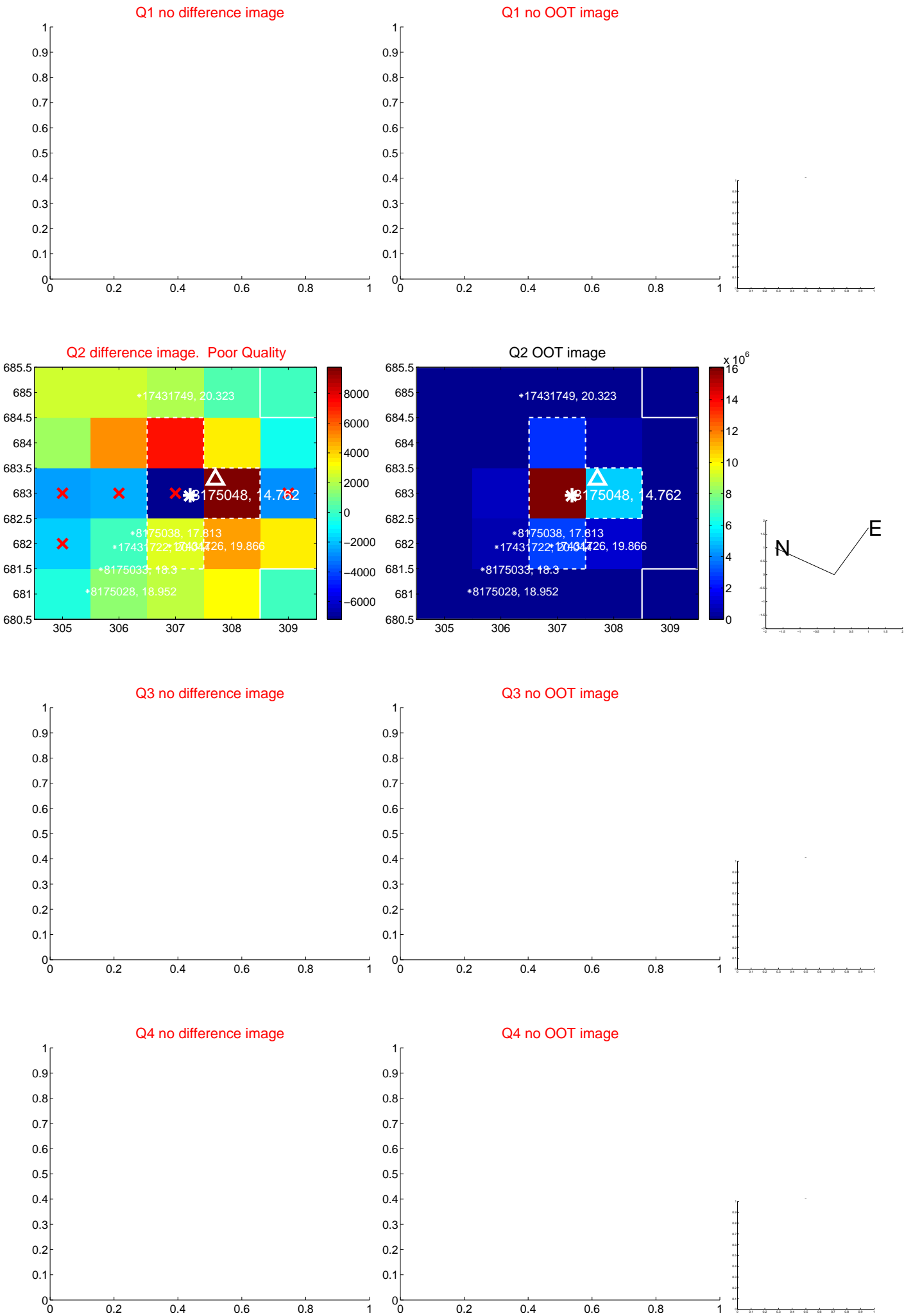
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.280 \pm 1.040$	1.23	$0.398 \pm 1.104$	$1.216 \pm 1.033$
PRF-fit source offset from KIC position	$1.310 \pm 1.047$	1.25	$0.517 \pm 1.082$	$1.204 \pm 1.040$
photometric centroid source offset	$1.70 \pm 2.46$	0.69	$-0.06 \pm 3.44$	$1.70 \pm 2.46$



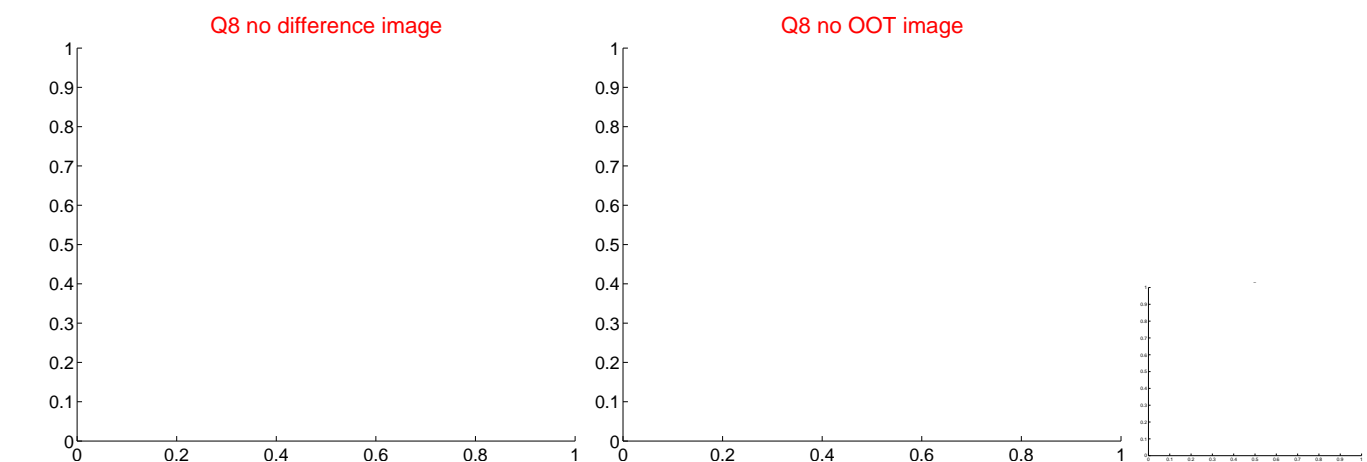
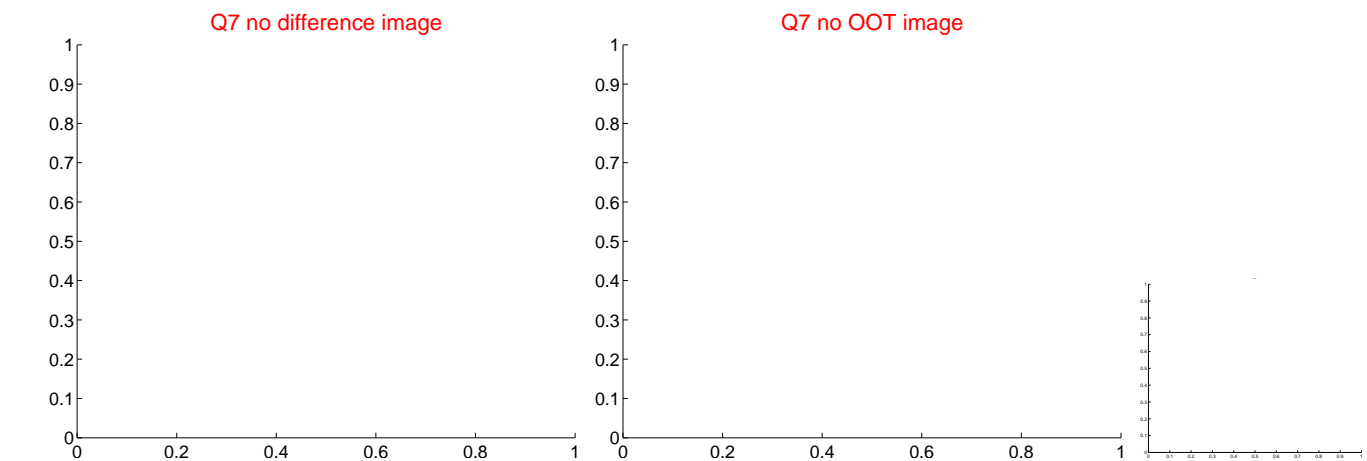
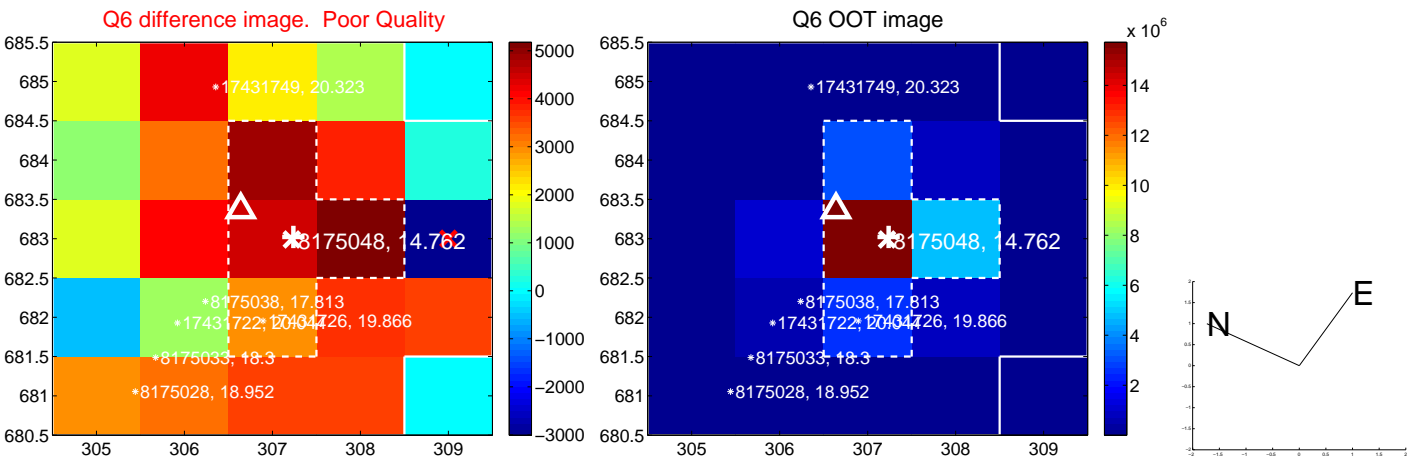
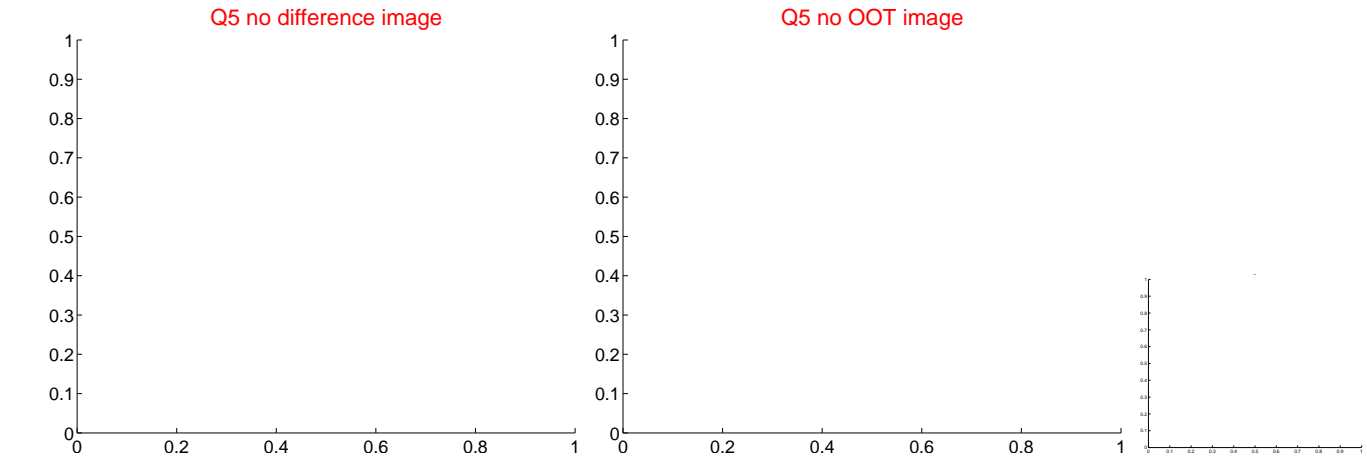
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



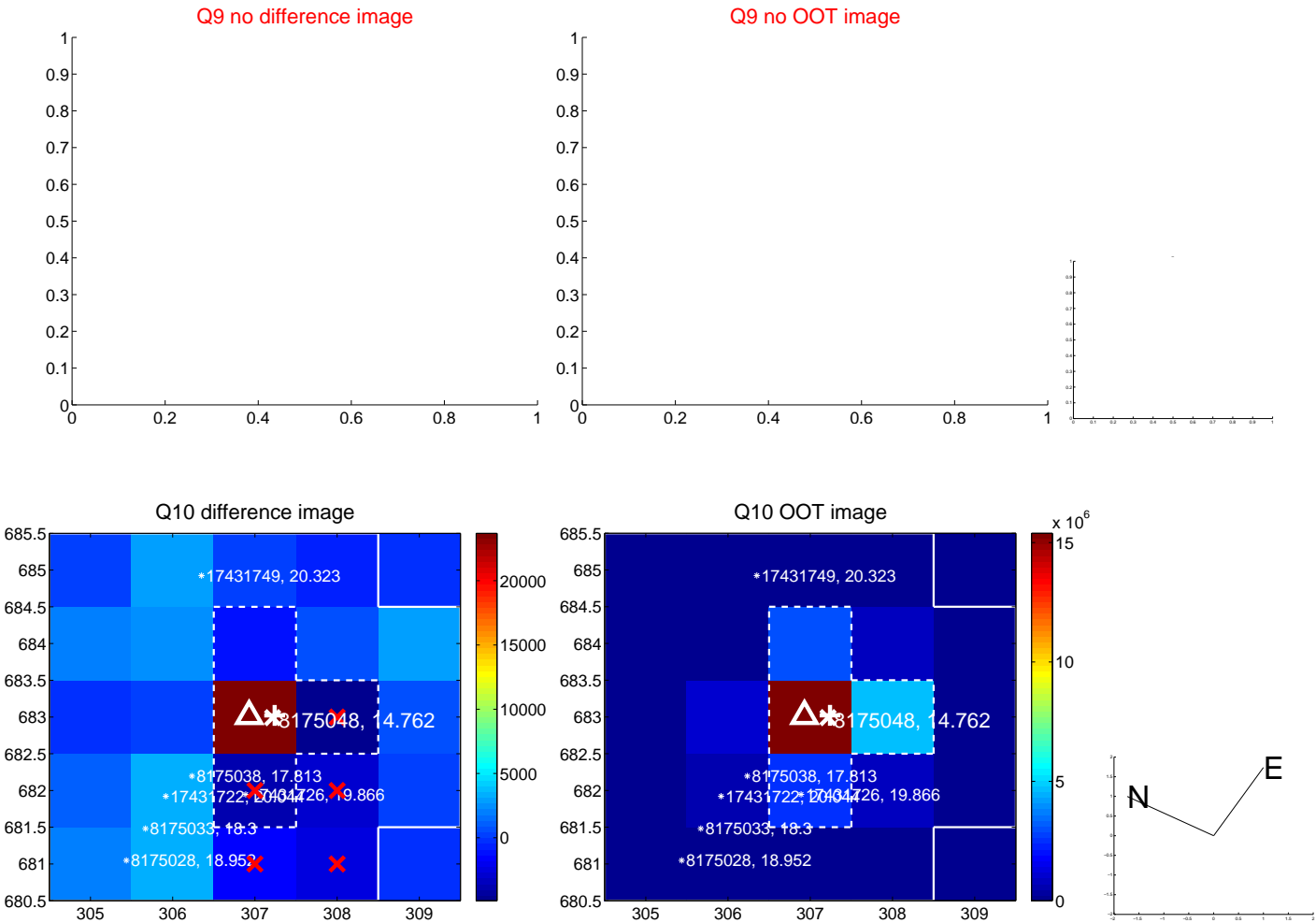
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



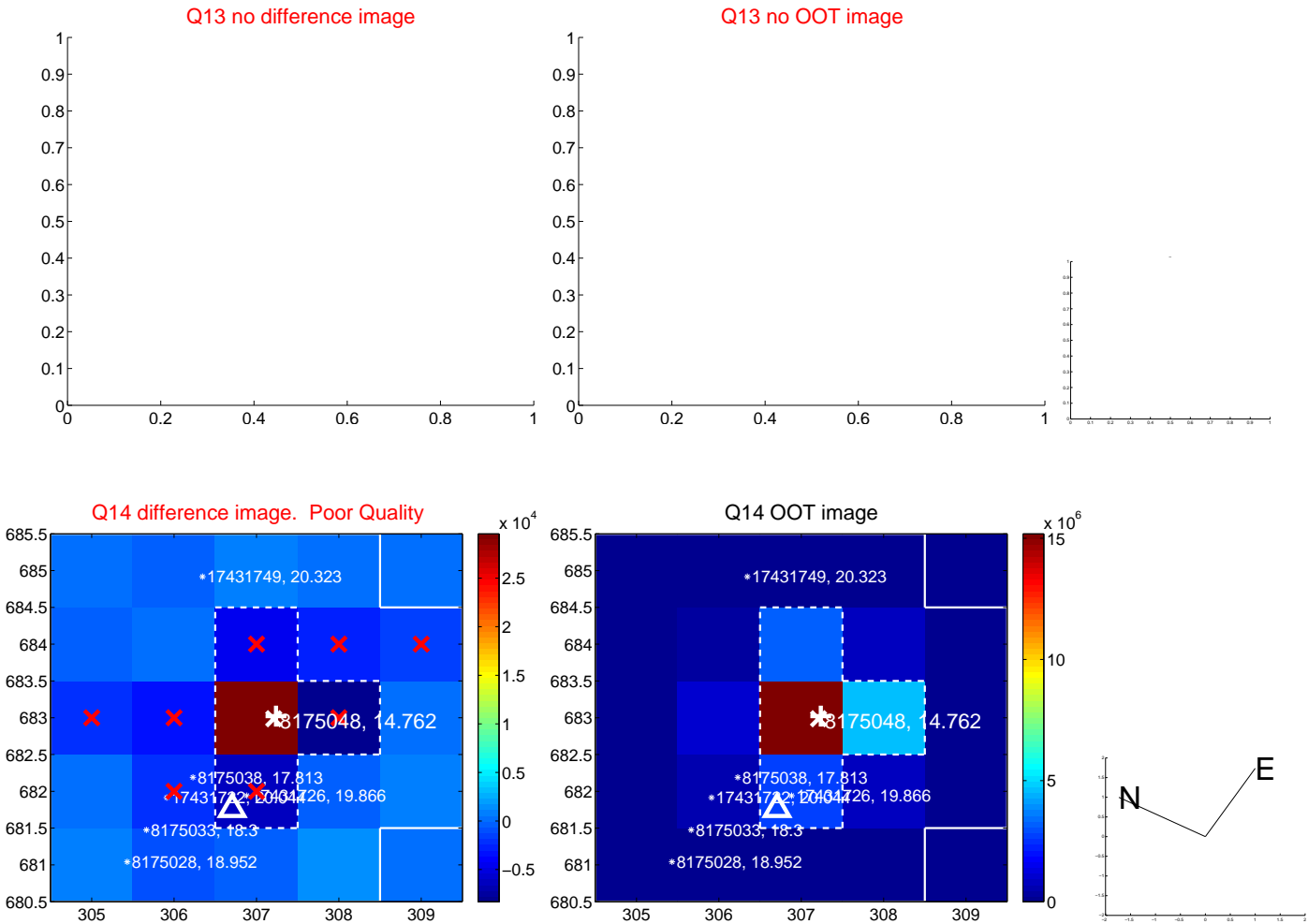
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



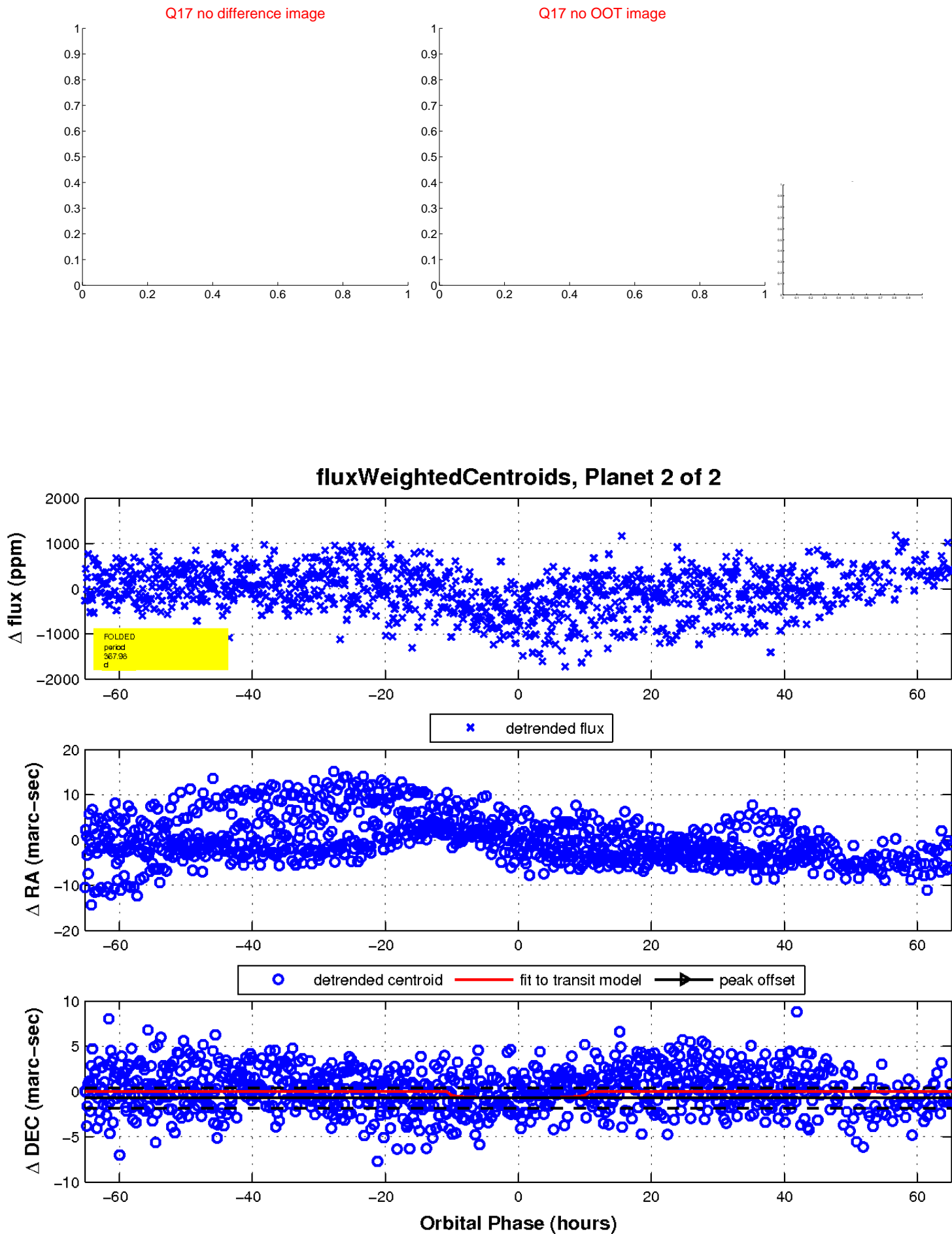
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



# UKIRT Image

Declination

