

# KIC 007384508

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007384508-01	OBS	No	379.868154	375.618167	537.0	4.126	11.8	7.7	2.23	5258	5.69	3.27

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007384508-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—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.

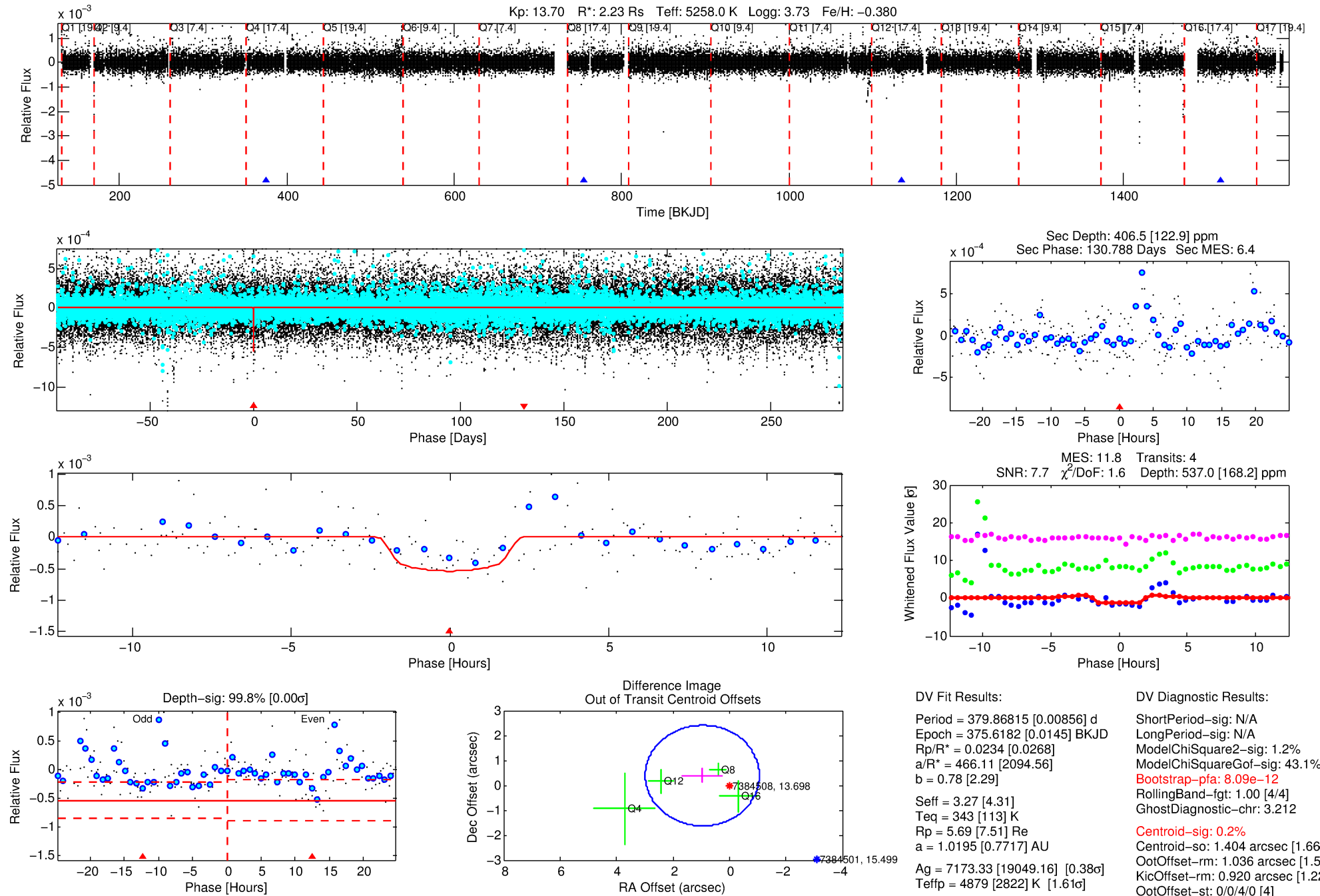
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007384508-01

No Significant Match Found

# DV One-Page Summary

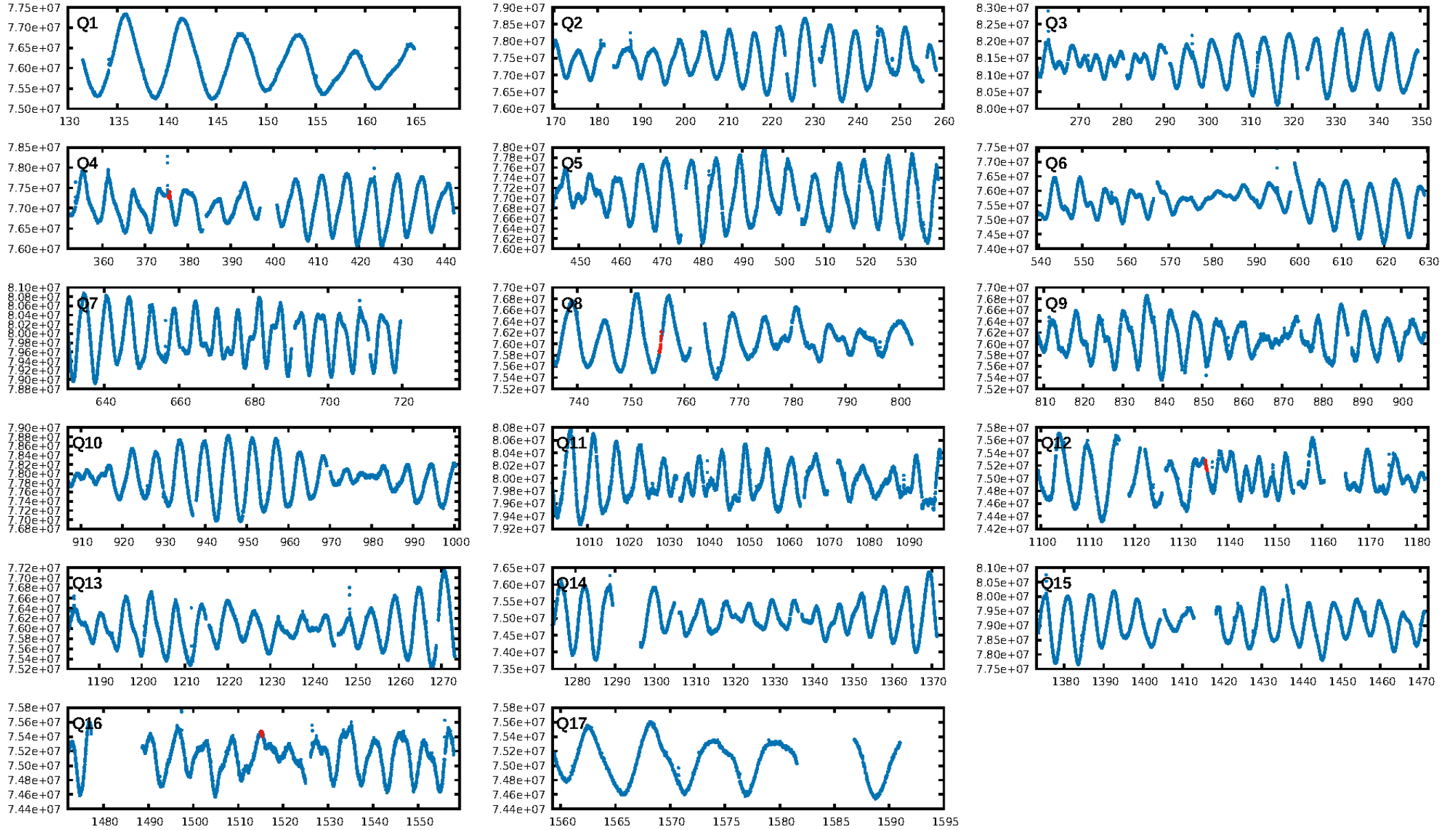
KIC: 7384508 Candidate: 1 of 1 Period: 379.868 d



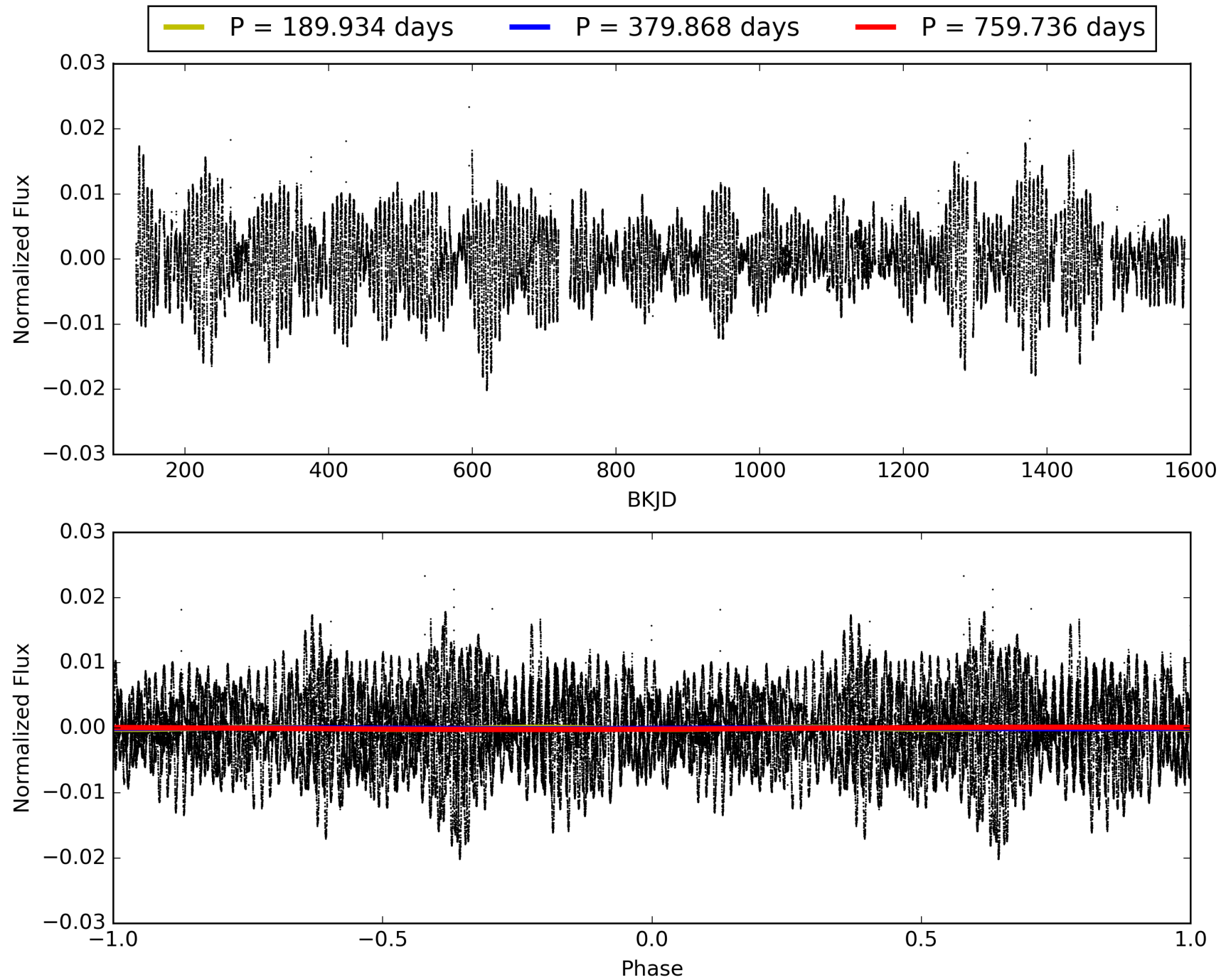
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:08:02 Z

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

# TCE 007384508-01, PDC Light Curves

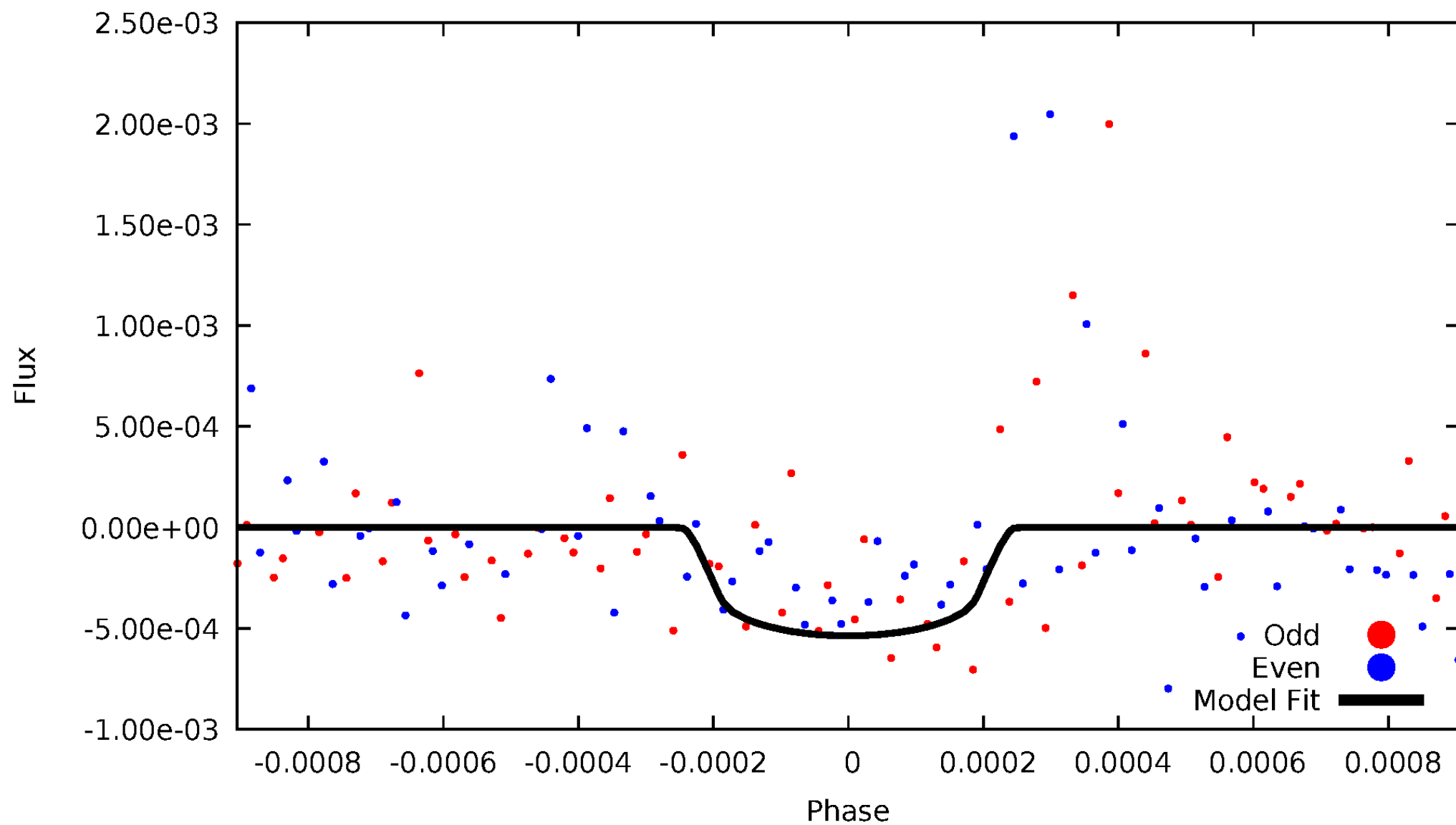


# TCE 007384508-01



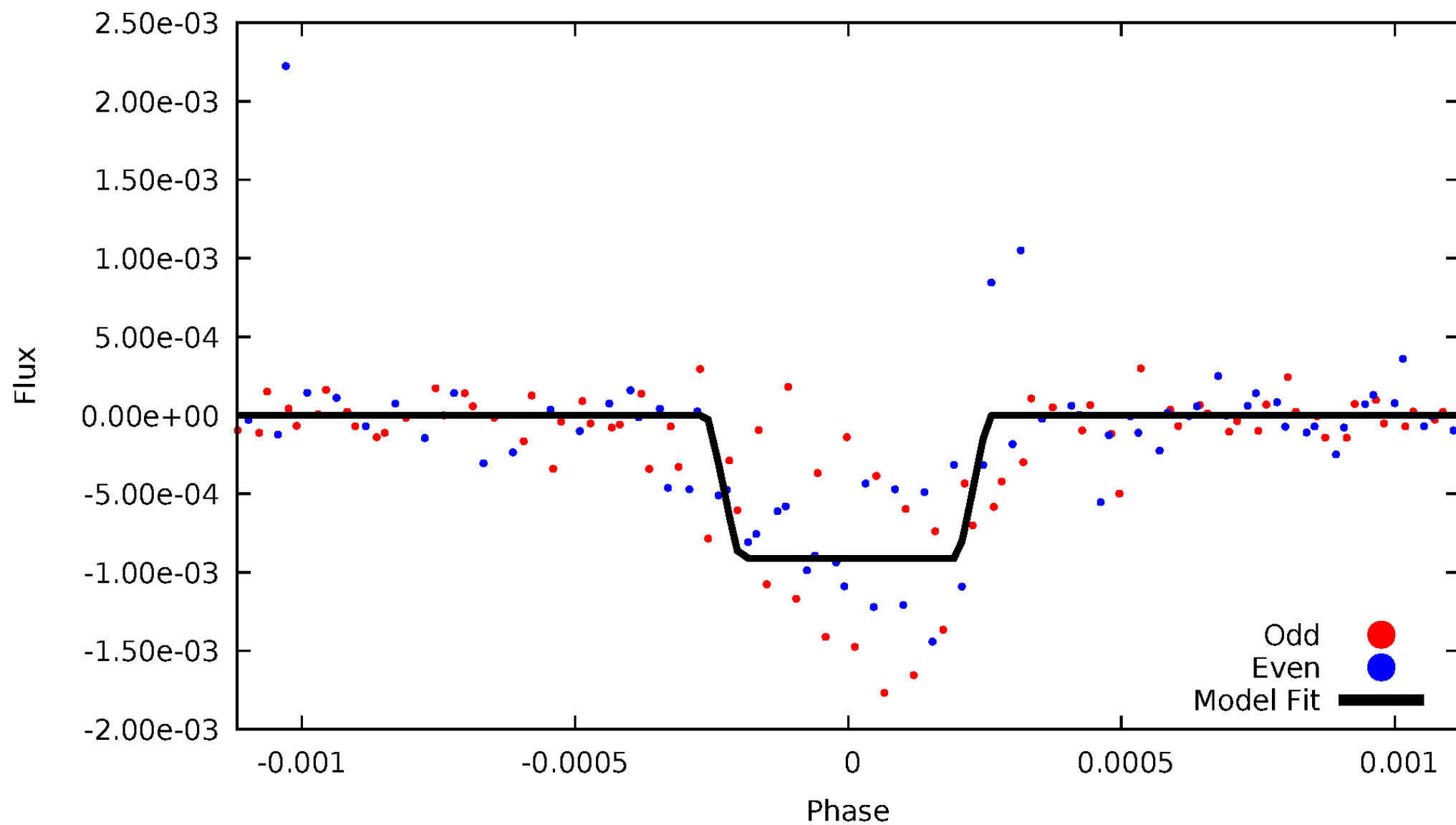
# DV Odd/Even

TCE 007384508-01



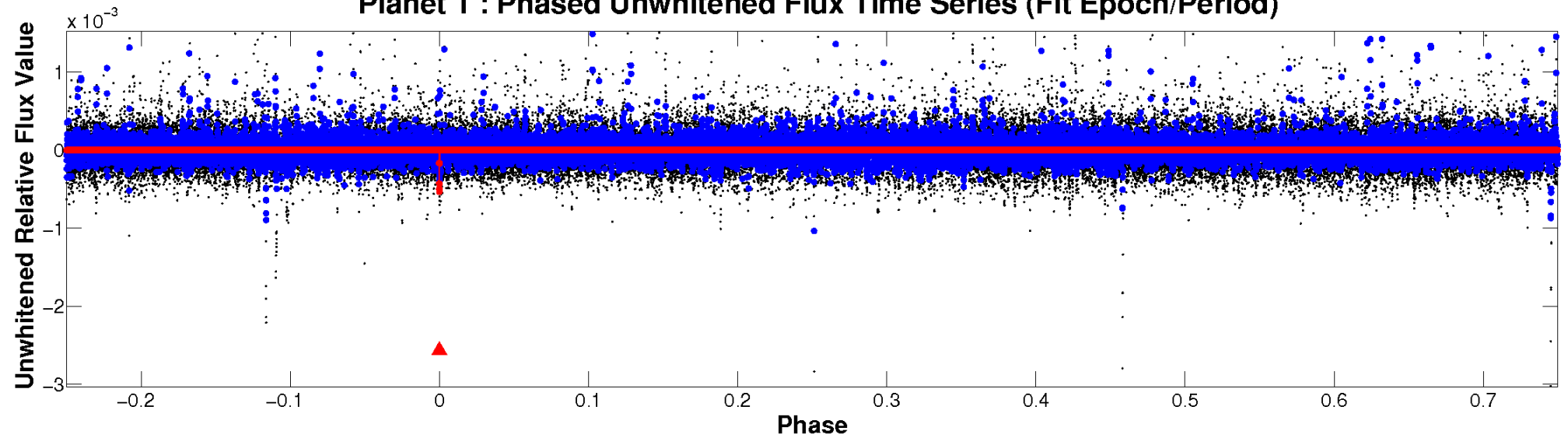
# ALT Odd/Even

TCE 007384508-01

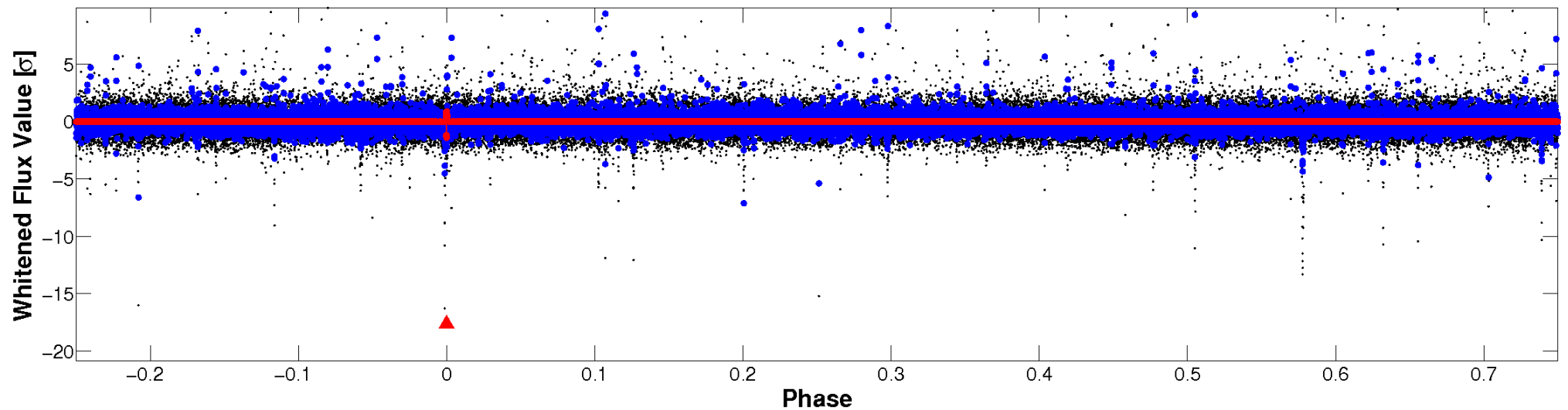


# Non-Whitened Vs. Whitened Light Curve

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

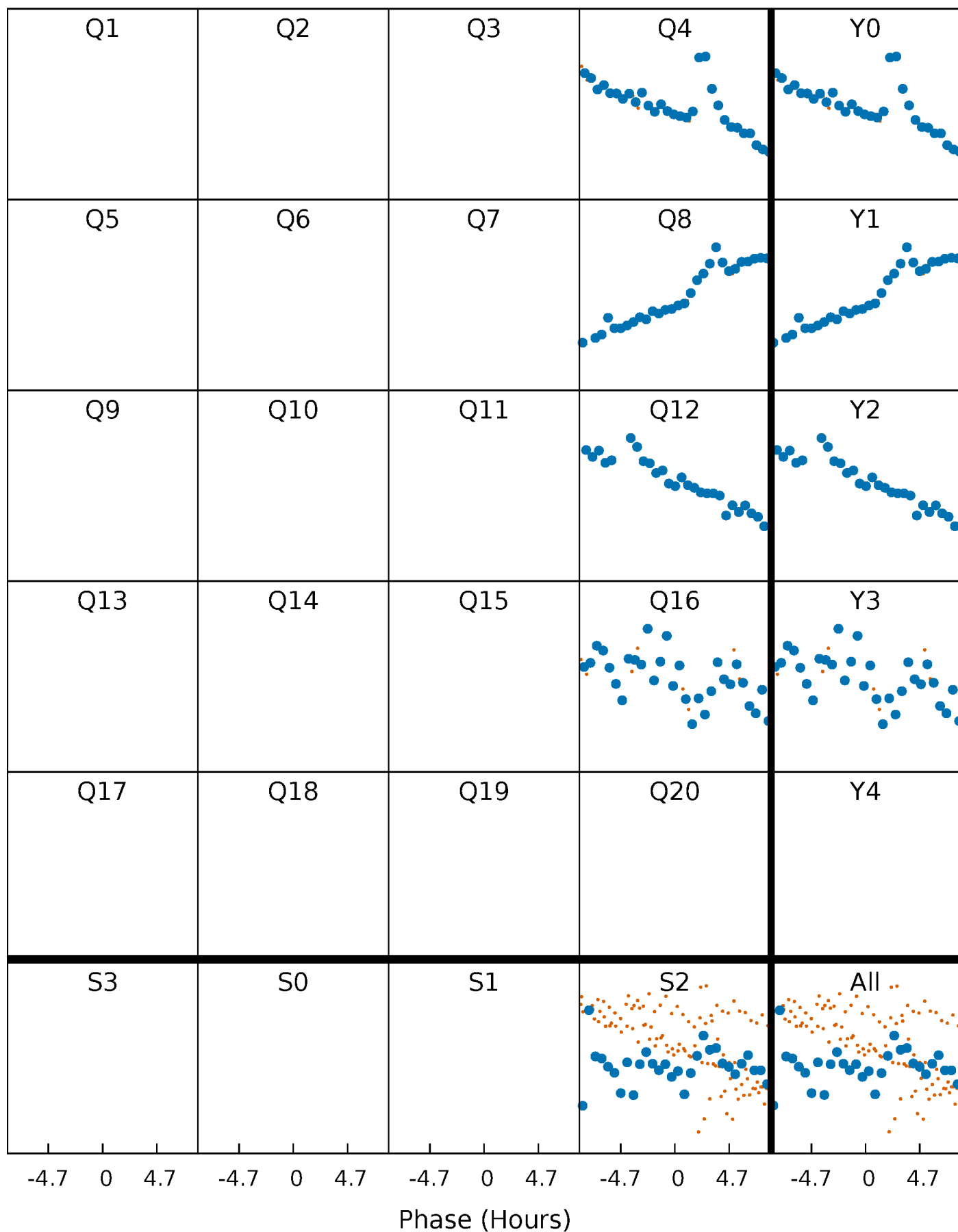


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

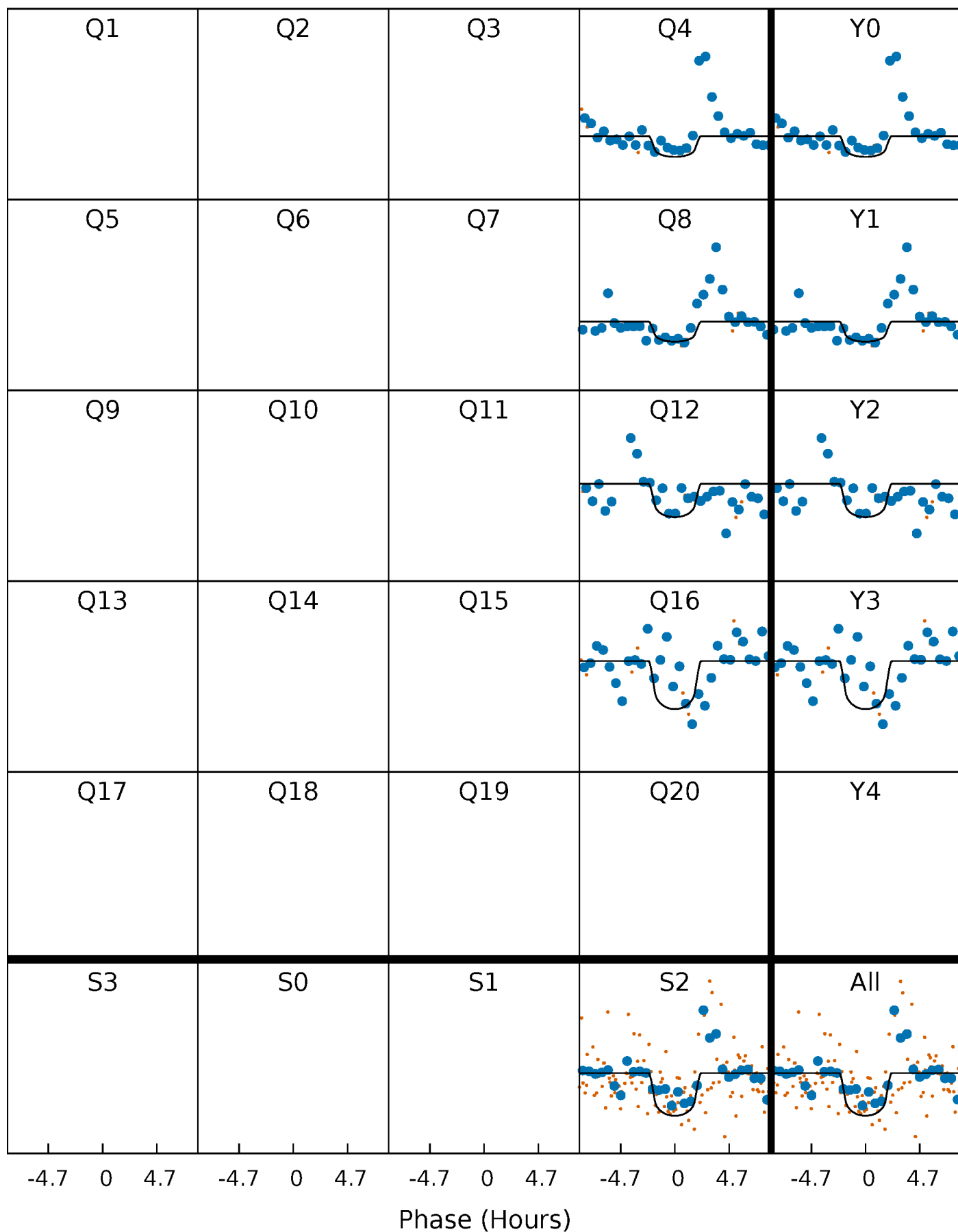
TCE 007384508-01 P=379.868154 Days  $T_0=375.618167$  (BKJD)





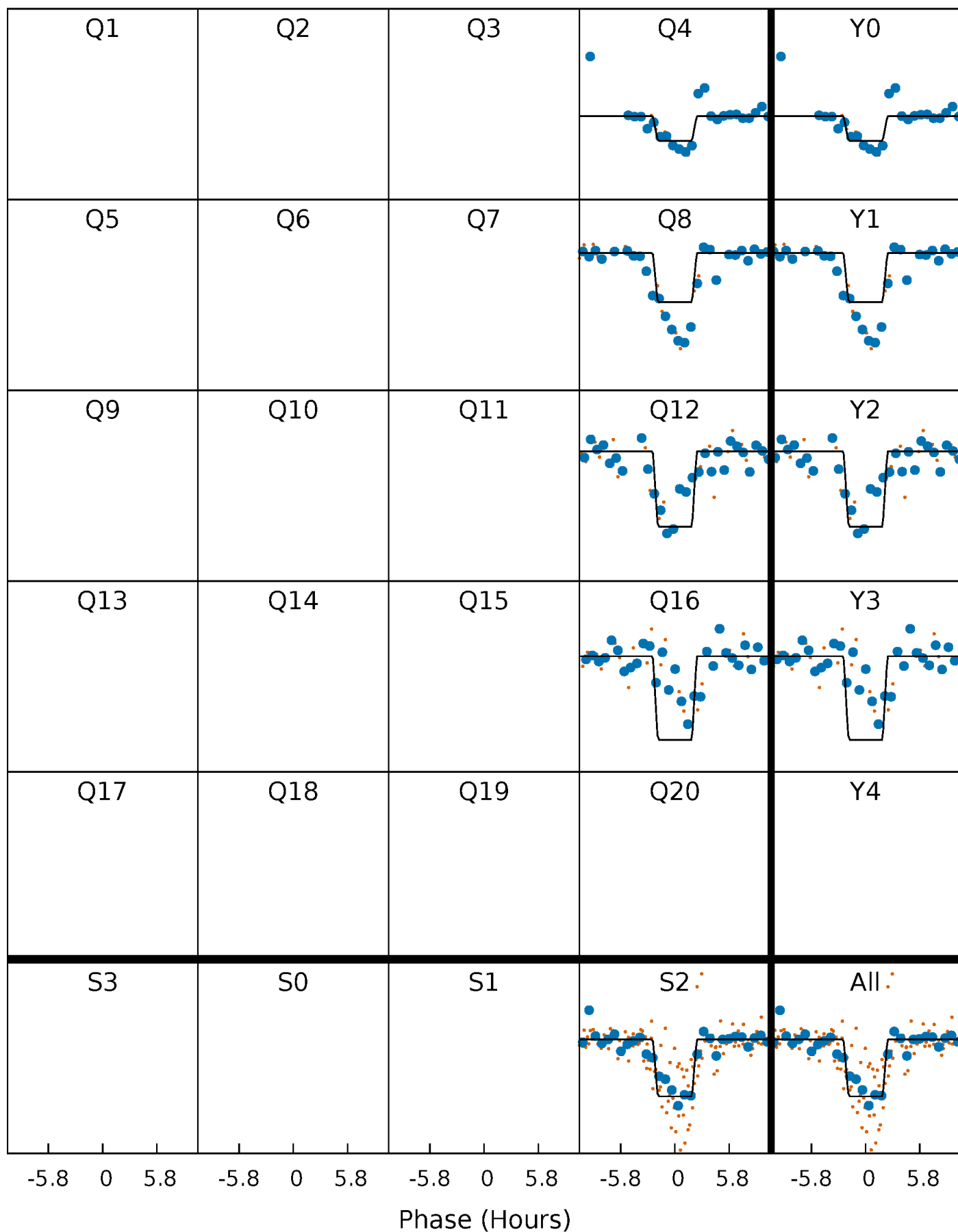
# DV Quarter-Phased Transit Curves

TCE 007384508-01 P=379.868154 Days  $T_0=375.618167$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

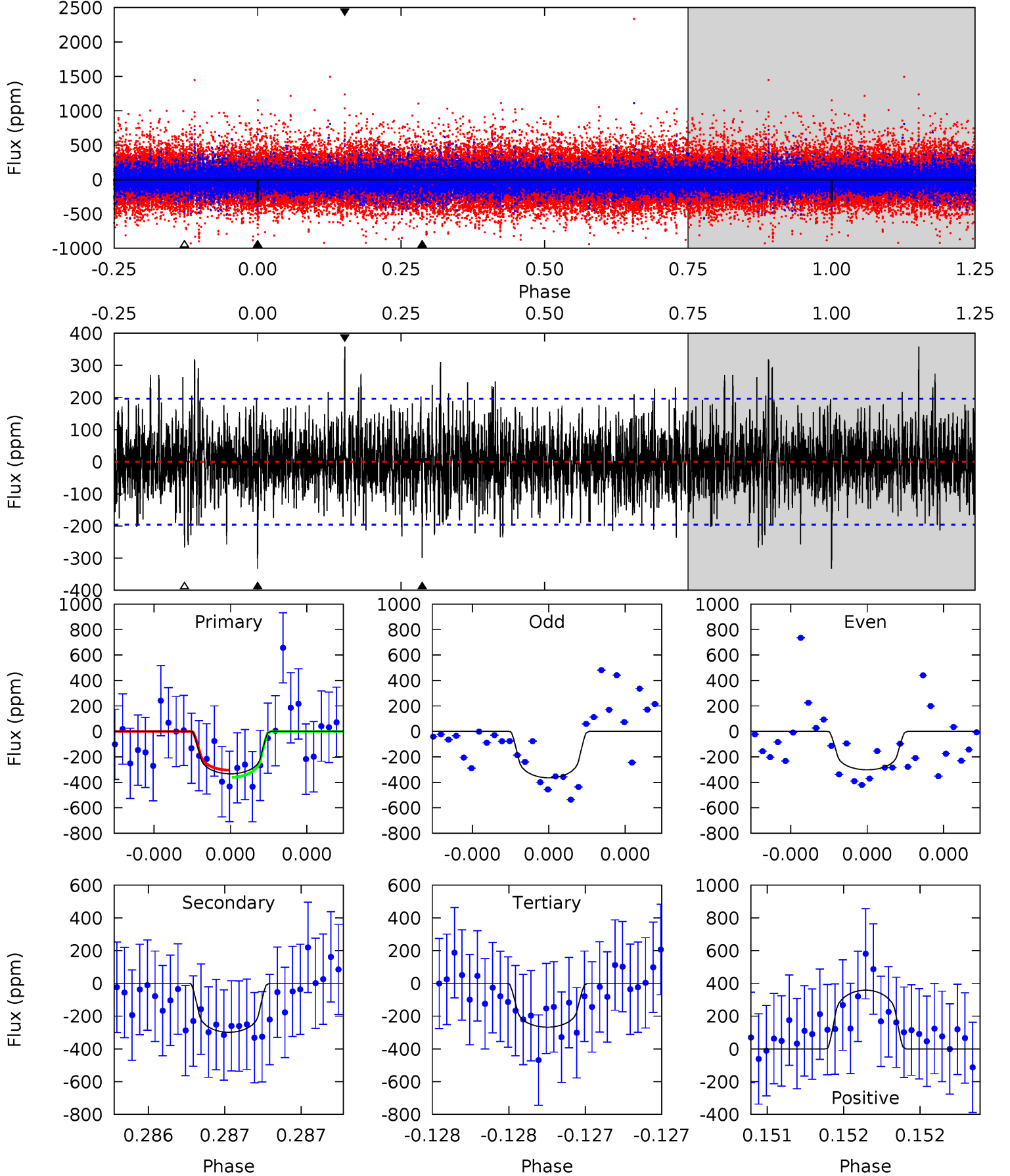
TCE 007384508-01 P=379.873503 Days  $T_0=375.611912$  (BKJD)



# DV Model-Shift Uniqueness Test

007384508-01, P = 379.868154 Days, E = 375.618167 Days

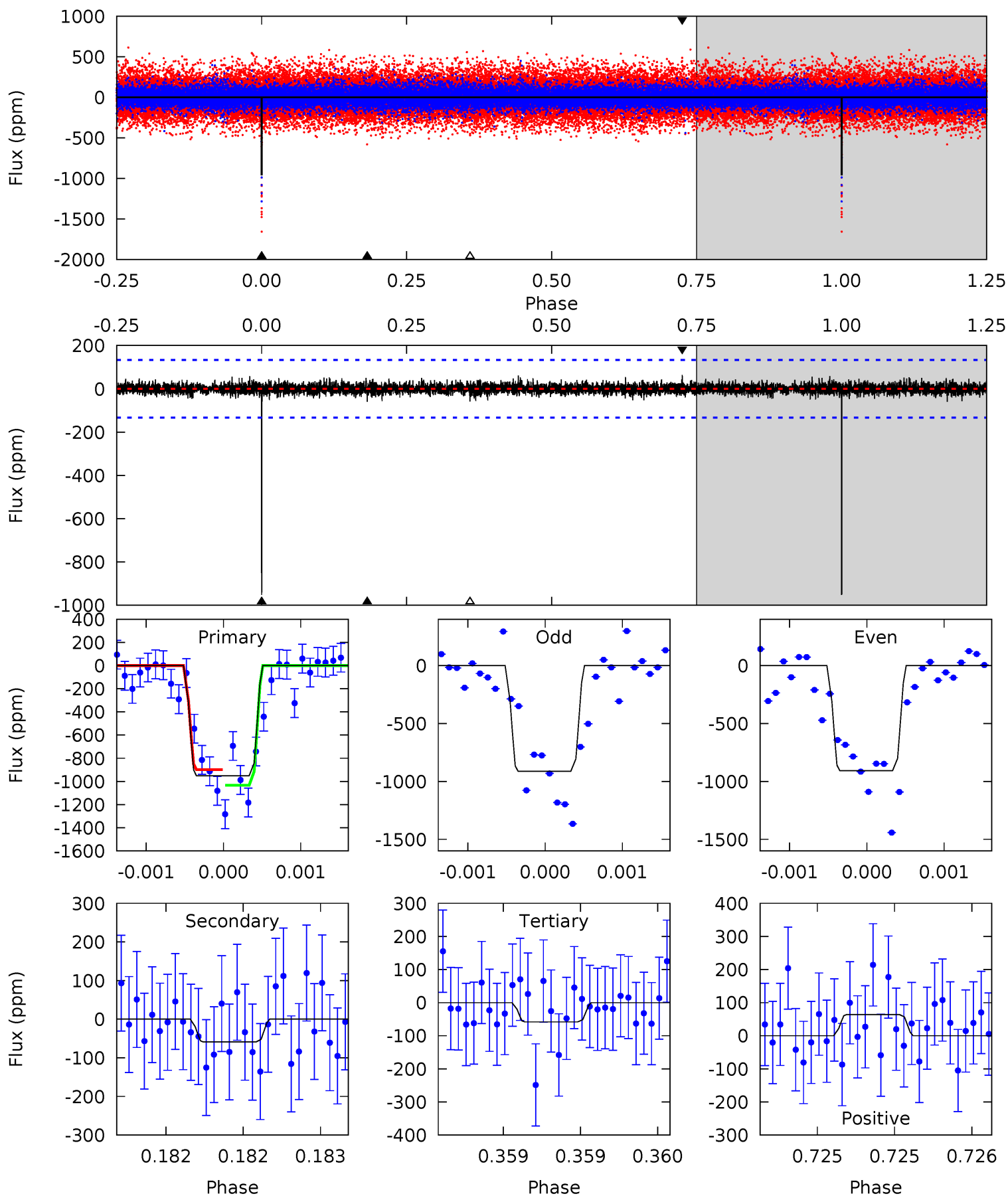
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.47	8.49	7.60	10.2	5.58	3.49	2.03	1.87	-0.72	0.89	-1.70	0.84	1.11	0.52	0.80



# Alt Model-Shift Uniqueness Test

007384508-01, P = 379.873503 Days, E = 375.611912 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
39.9	2.47	2.44	2.68	5.57	3.47	0.56	37.4	37.2	0.03	-0.21	0.11	0.99	0.06	0



### Stellar Parameters For KIC 007384508

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5258^{+174}_{-143}$	$3.733^{+0.805}_{-0.345}$	$-0.380^{+0.350}_{-0.250}$	$2.228^{+1.195}_{-1.461}$	$0.979^{+0.251}_{-0.205}$	$0.125^{+2.494}_{-0.074}$
	+3%/-3%	+22%/-9%	+92%/-66%	+54%/-66%	+26%/-21%	+2002%/-60%
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 007384508-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-298 \pm 35$	$6.56^{+6.97}_{-4.13}$	$468^{+75}_{-85}$	$4155^{+2055}_{-677}$	$4069^{+25117}_{-3111}$
Alt.	$-59 \pm 24$	$7.70^{+7.54}_{-4.90}$	$482^{+68}_{-90}$	$3061^{+1031}_{-423}$	$530^{+3404}_{-404}$

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

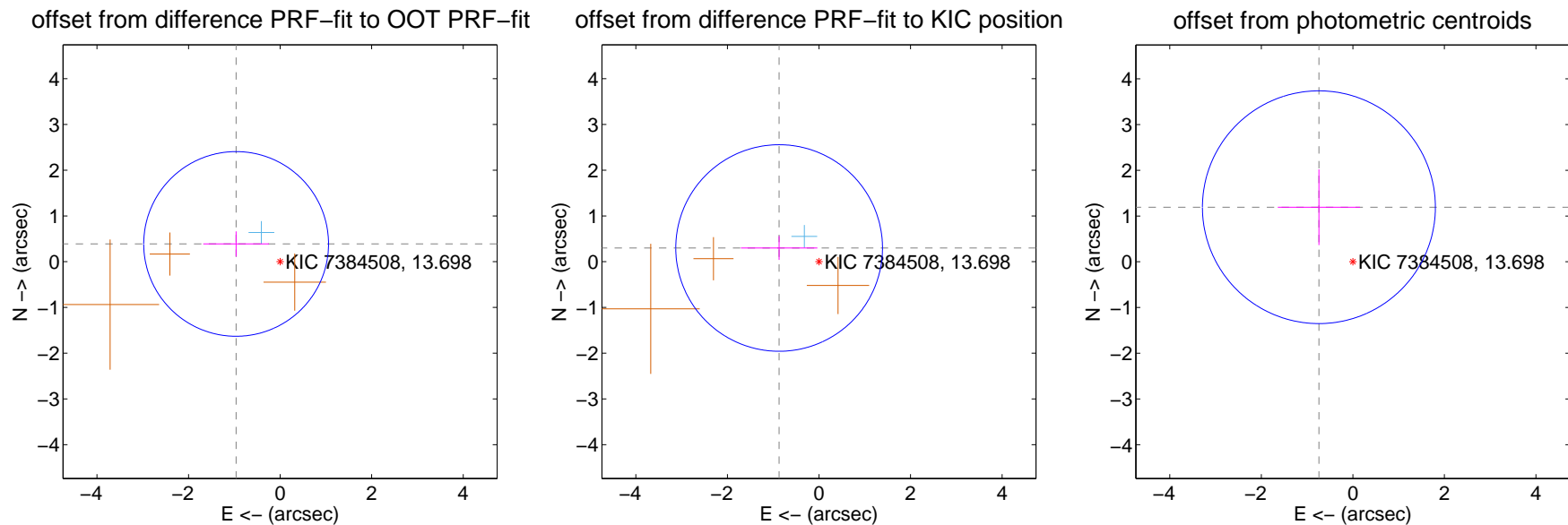
## DV Centroid Data

Supplemental centroid analysis for 007384508-01. Kepler magnitude: 13.70. Transit SNR 7.66

There are 1 quarters with good PRF difference image offsets

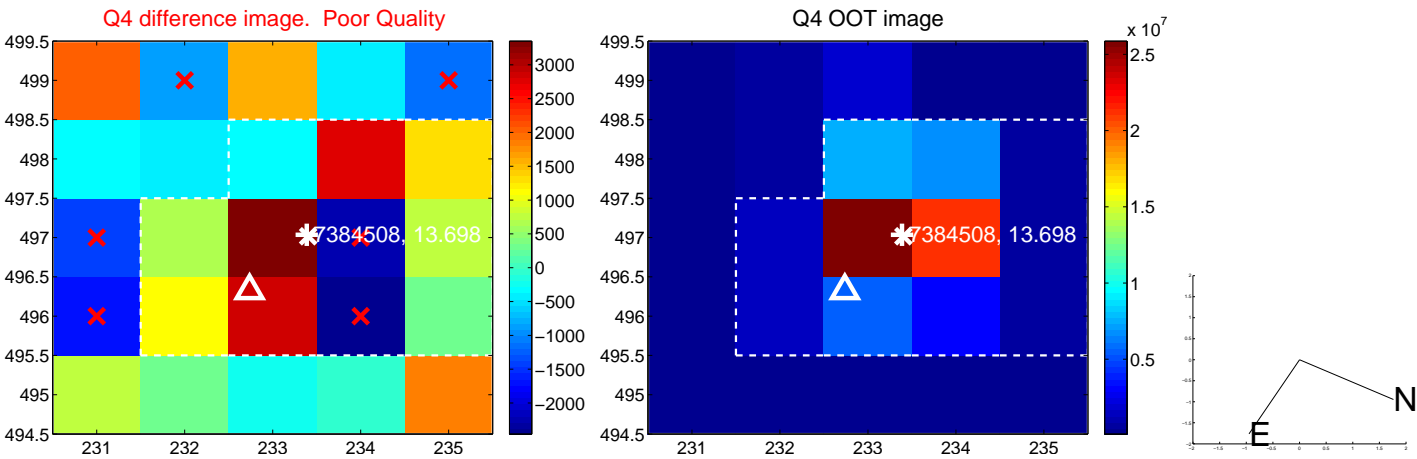
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.036 \pm 0.673$	1.54	$0.960 \pm 0.717$	$0.388 \pm 0.274$
PRF-fit source offset from KIC position	$0.920 \pm 0.752$	1.22	$0.870 \pm 0.835$	$0.299 \pm 0.259$
photometric centroid source offset	$1.40 \pm 0.85$	1.66	$0.74 \pm 0.90$	$1.19 \pm 0.83$



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.

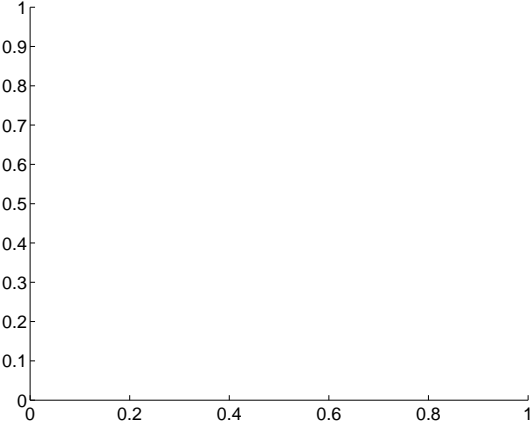
Q5 no difference image



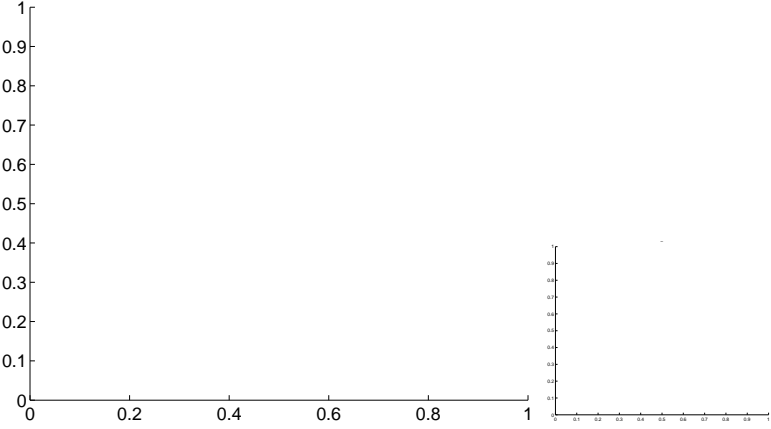
Q5 no OOT image



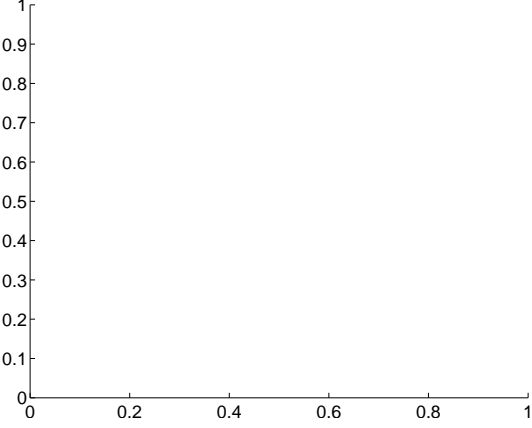
Q6 no difference image



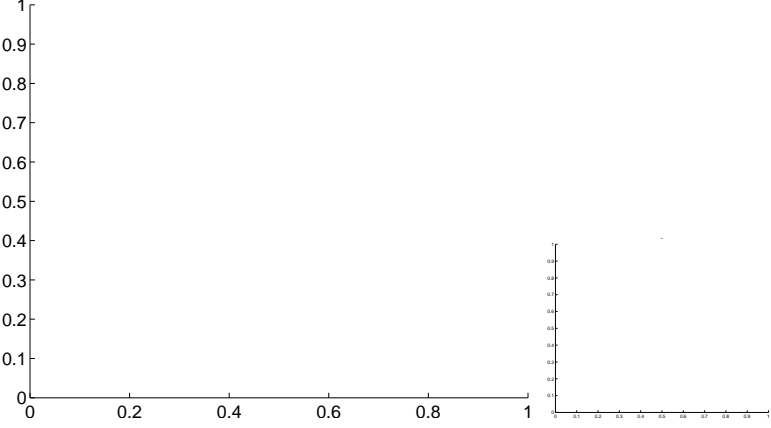
Q6 no OOT image



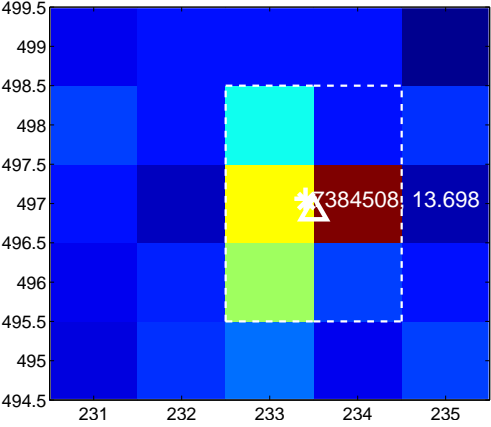
Q7 no difference image



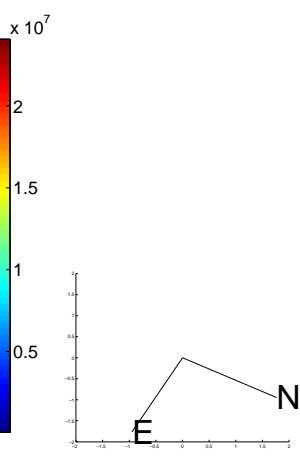
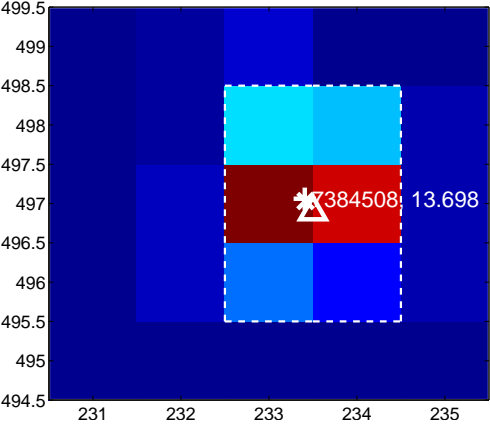
Q7 no OOT image



Q8 difference image

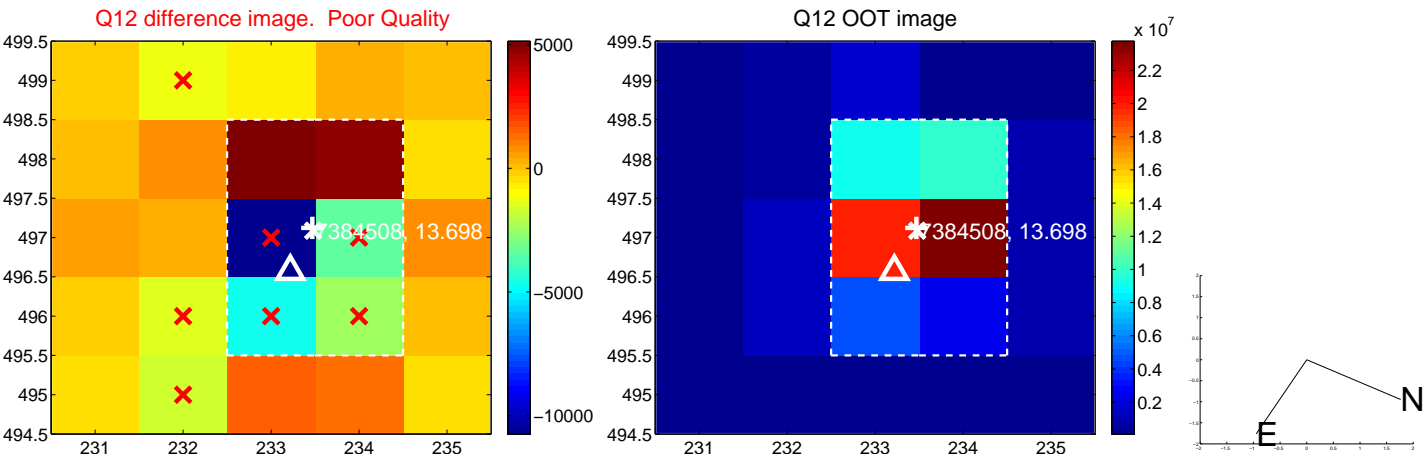


Q8 OOT image

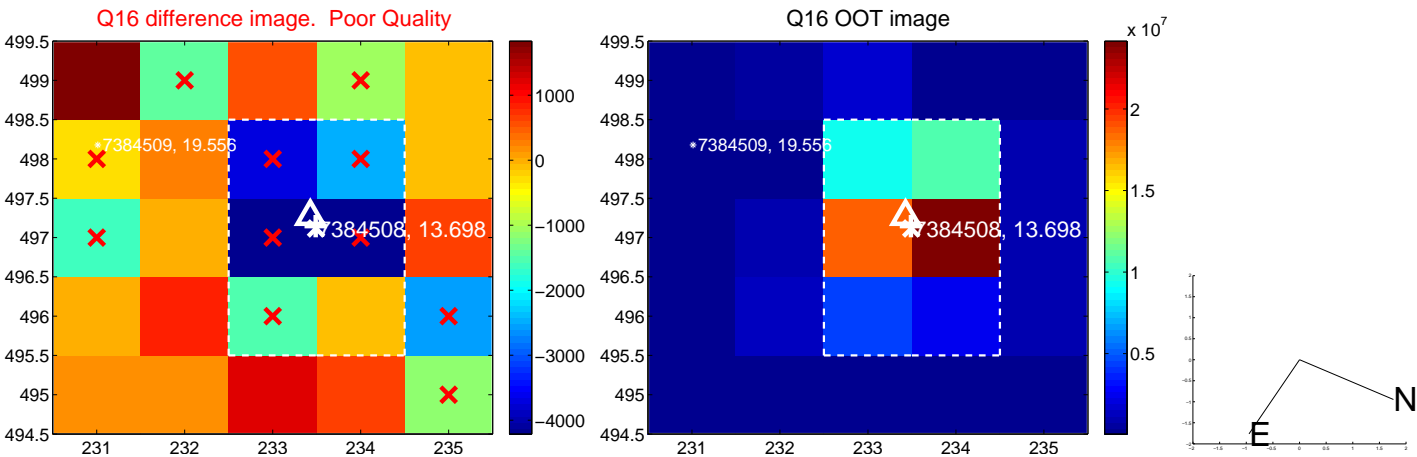




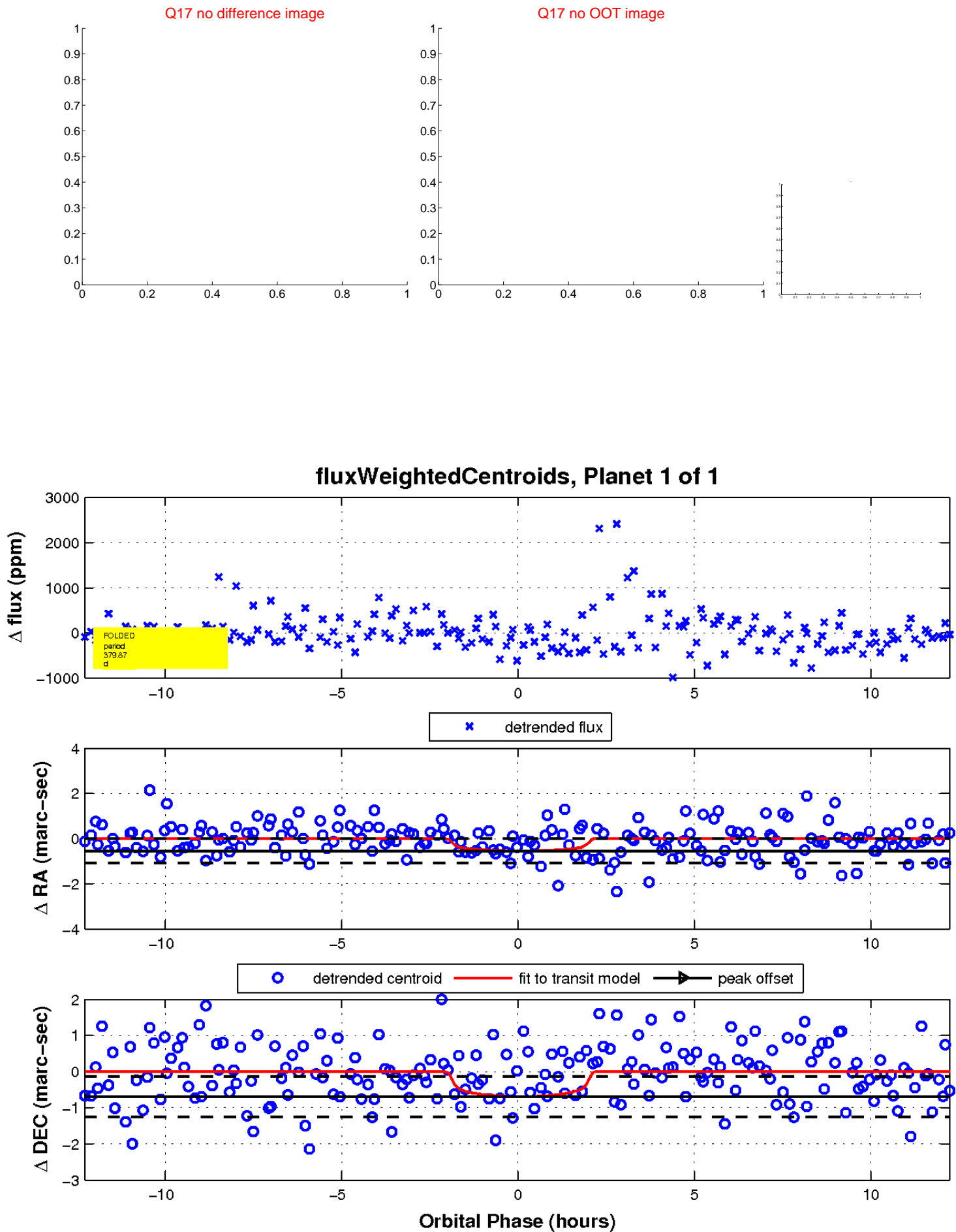
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

Declination

