

# KIC 003548480

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003548480-01	OBS	No	404.233139	509.589513	360.0	13.006	8.9	8.0	1.62	6244	3.57	2.85

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003548480-01	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

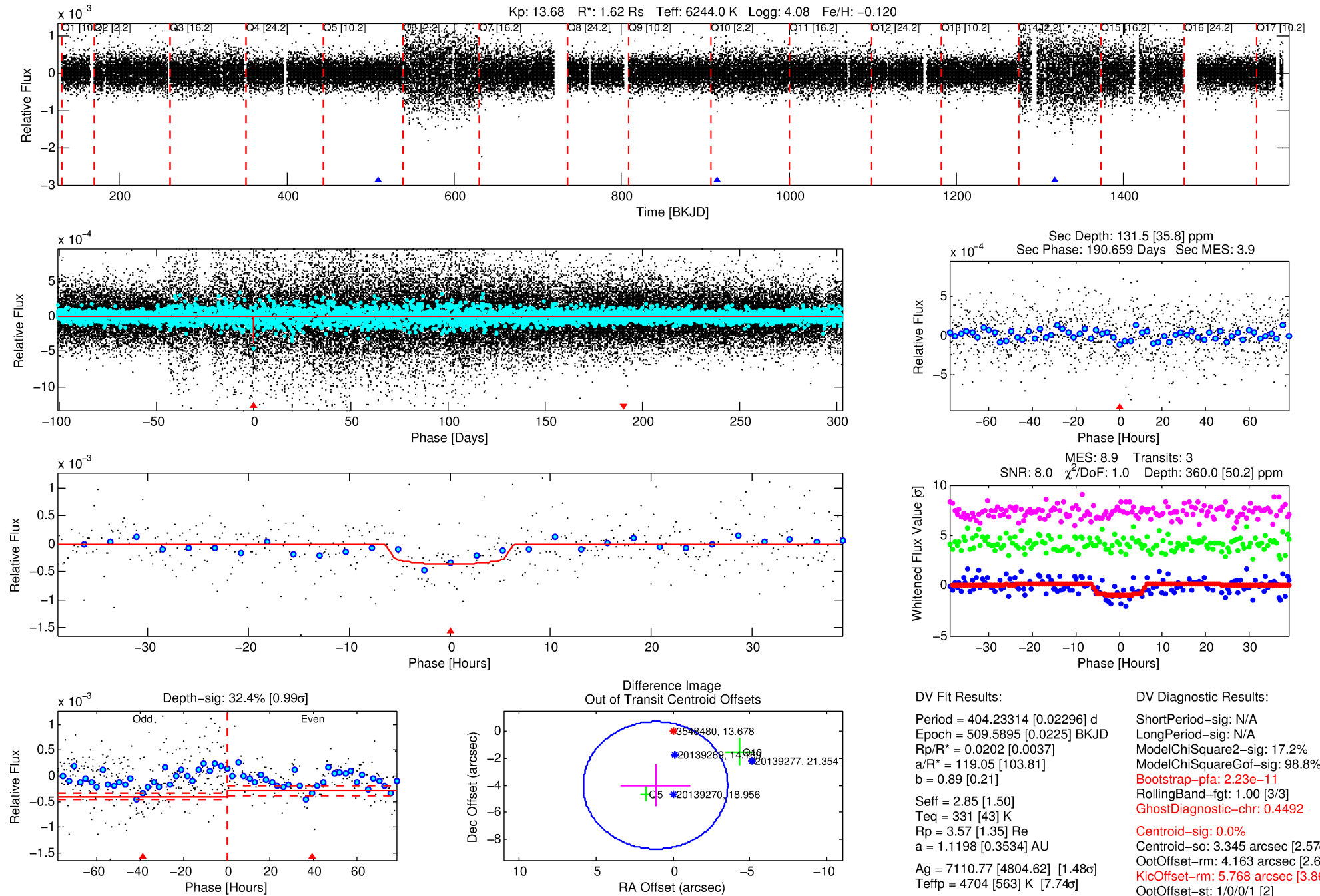
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003548480-01

No Significant Match Found

# DV One-Page Summary

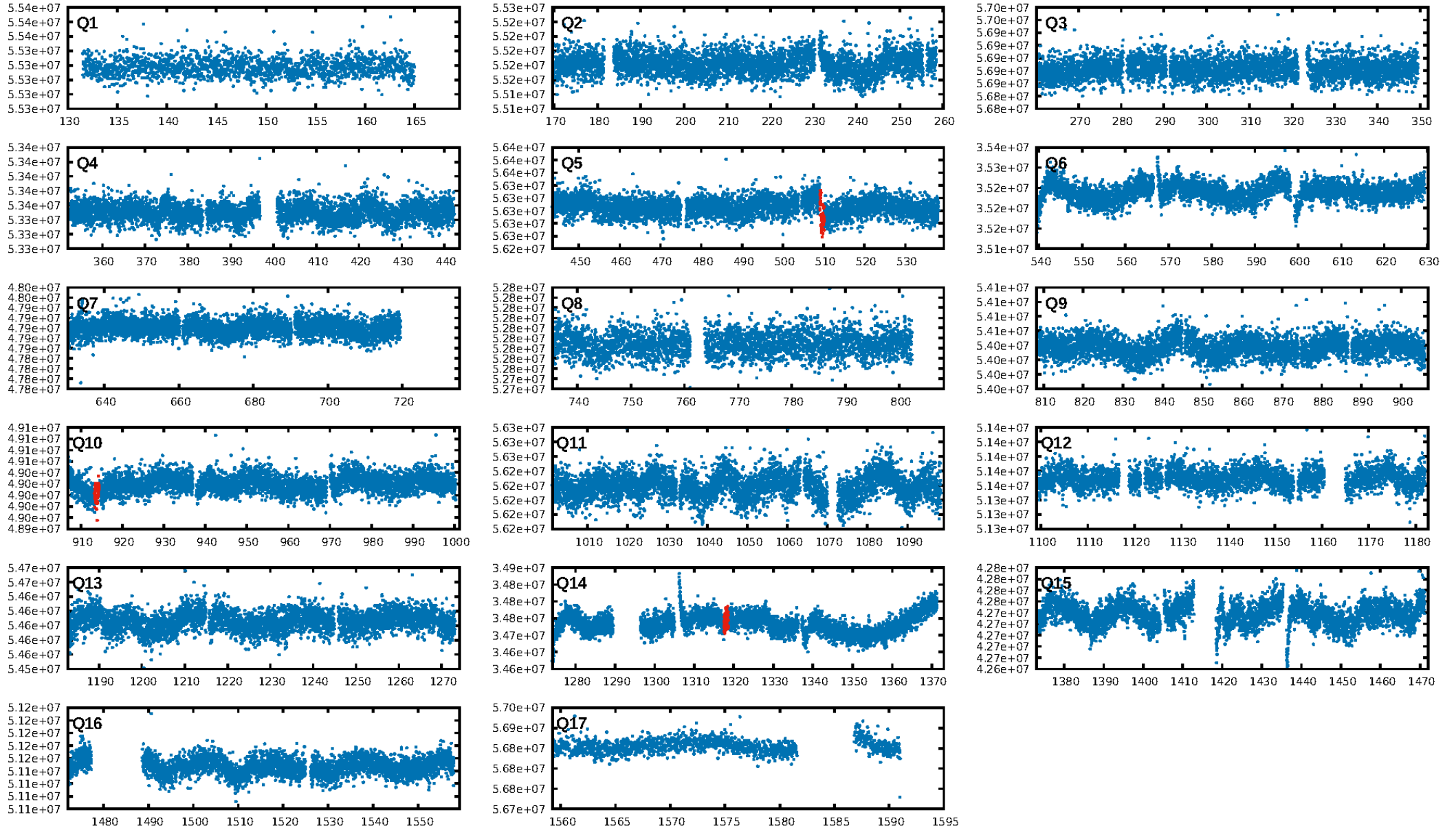
KIC: 3548480 Candidate: 1 of 1 Period: 404.233 d



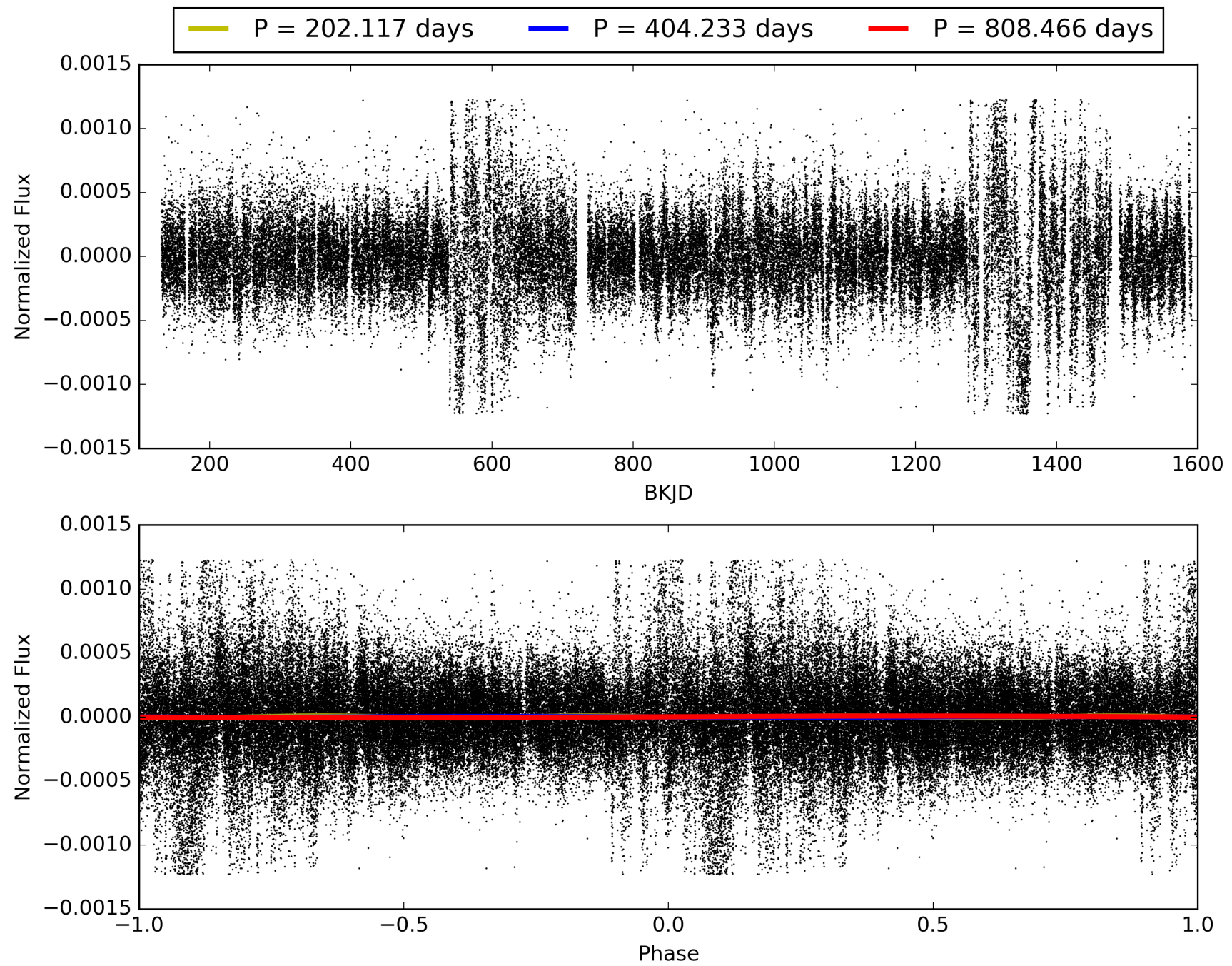
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:31:59 Z

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

# TCE 003548480-01, PDC Light Curves

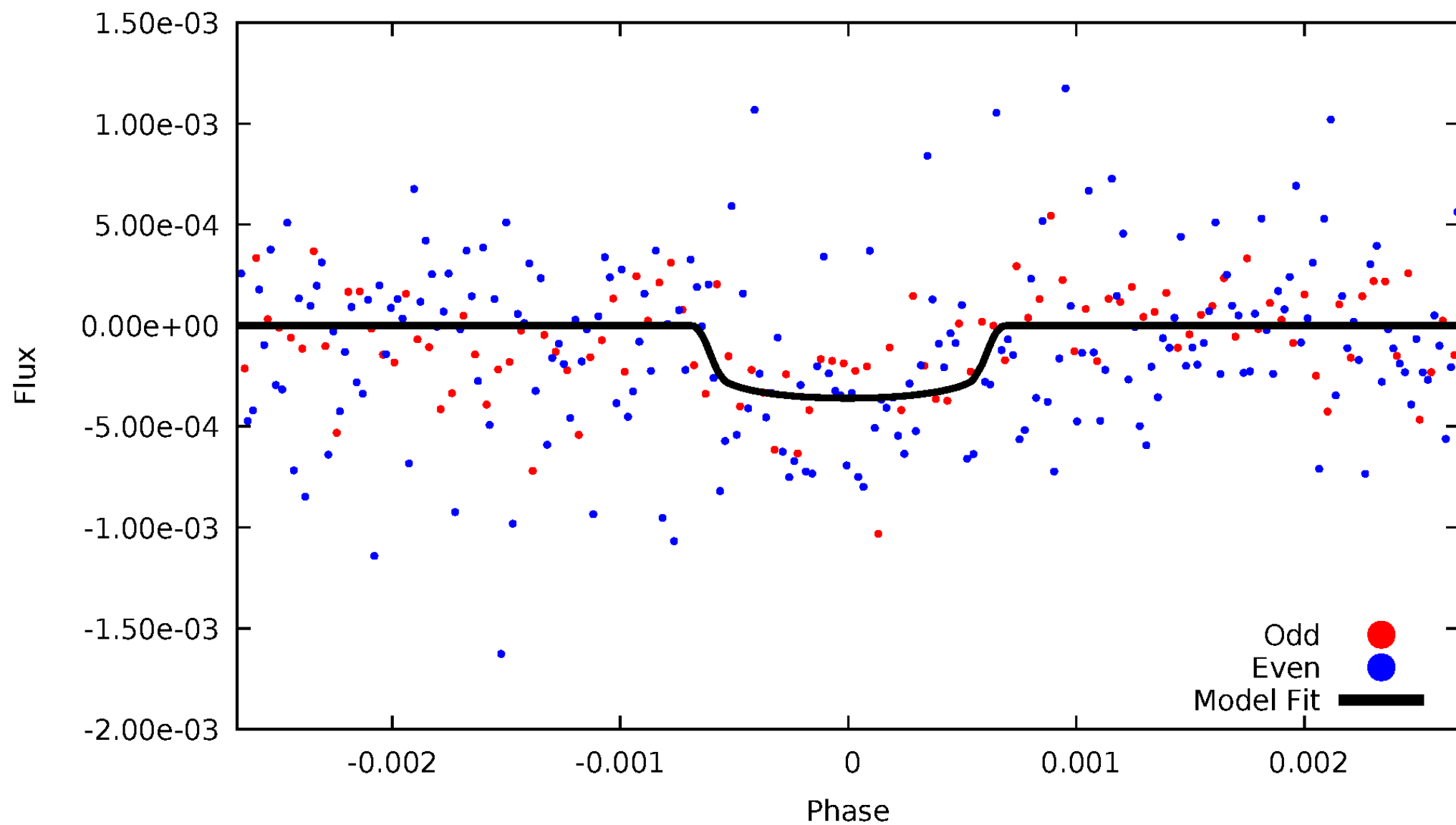


TCE 003548480-01



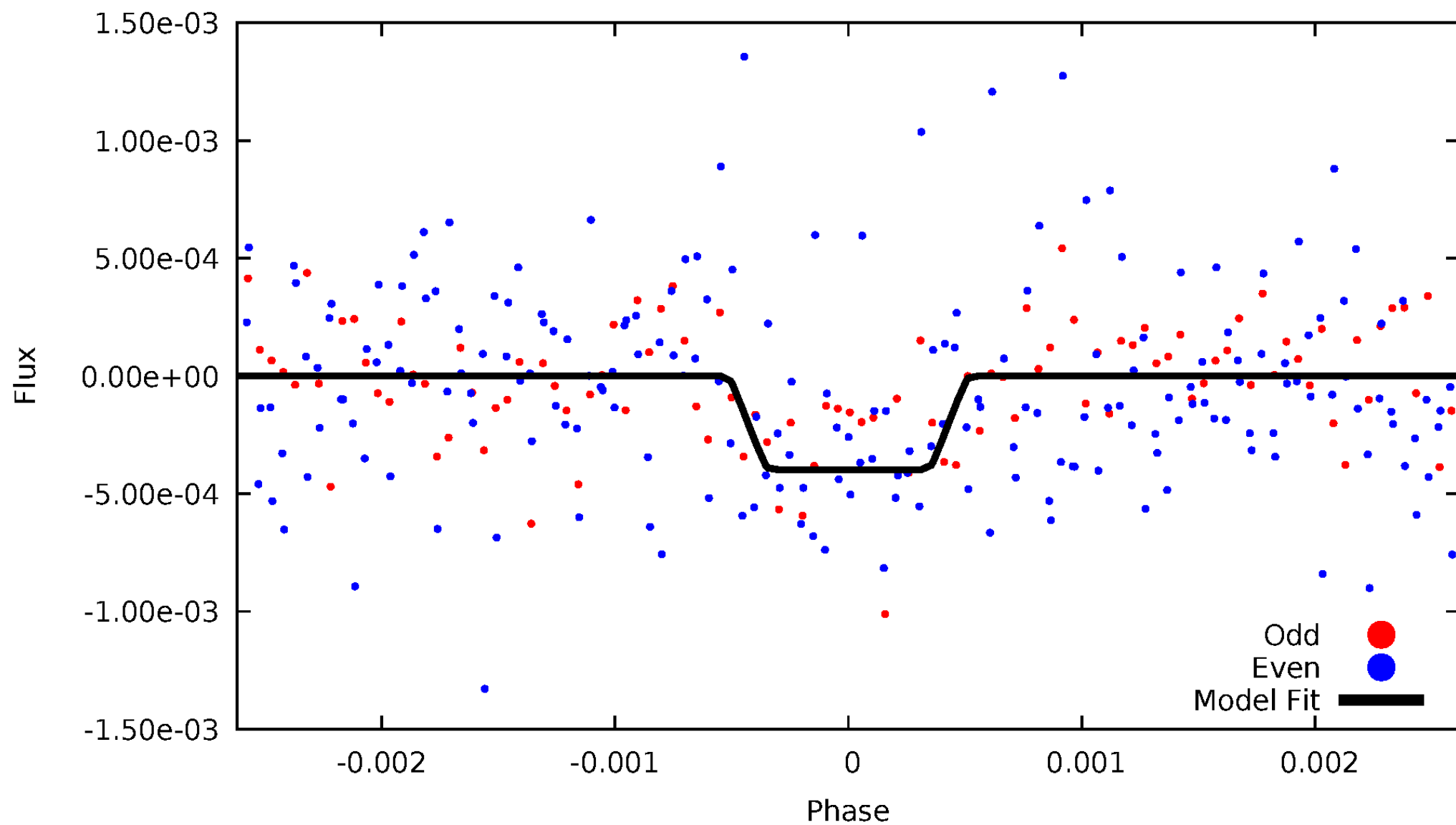
# DV Odd/Even

TCE 003548480-01



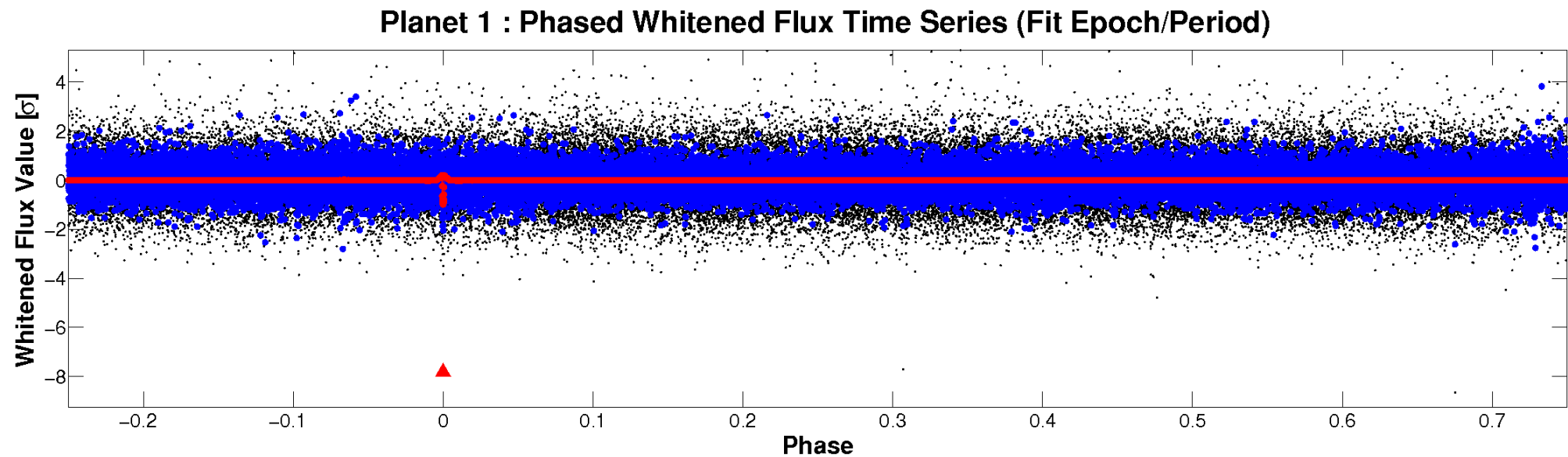
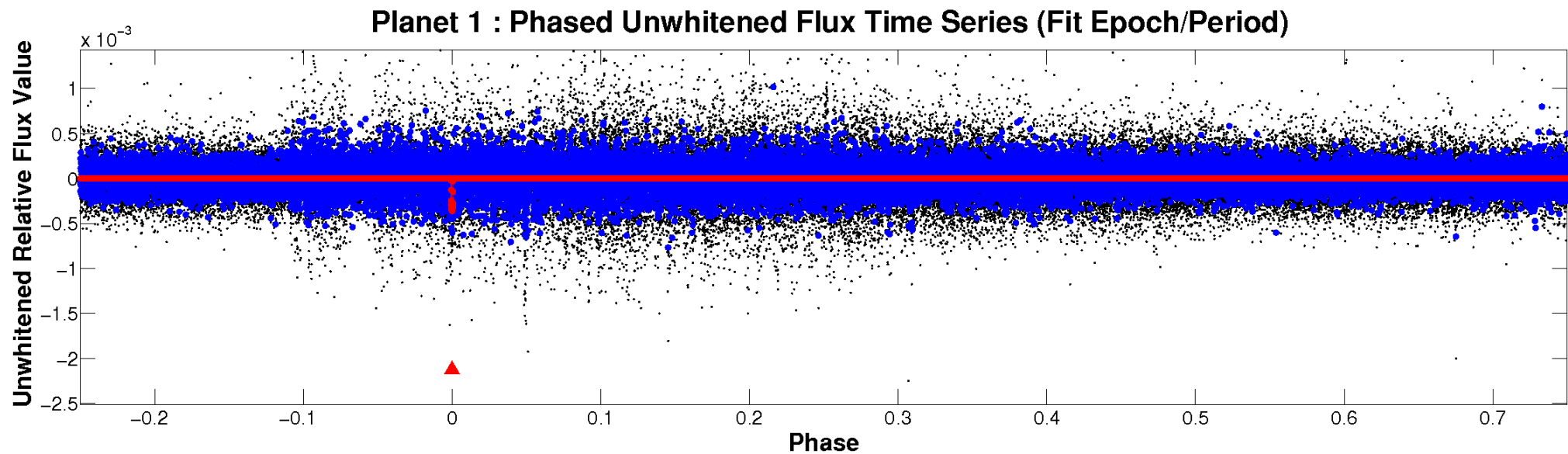
# ALT Odd/Even

TCE 003548480-01



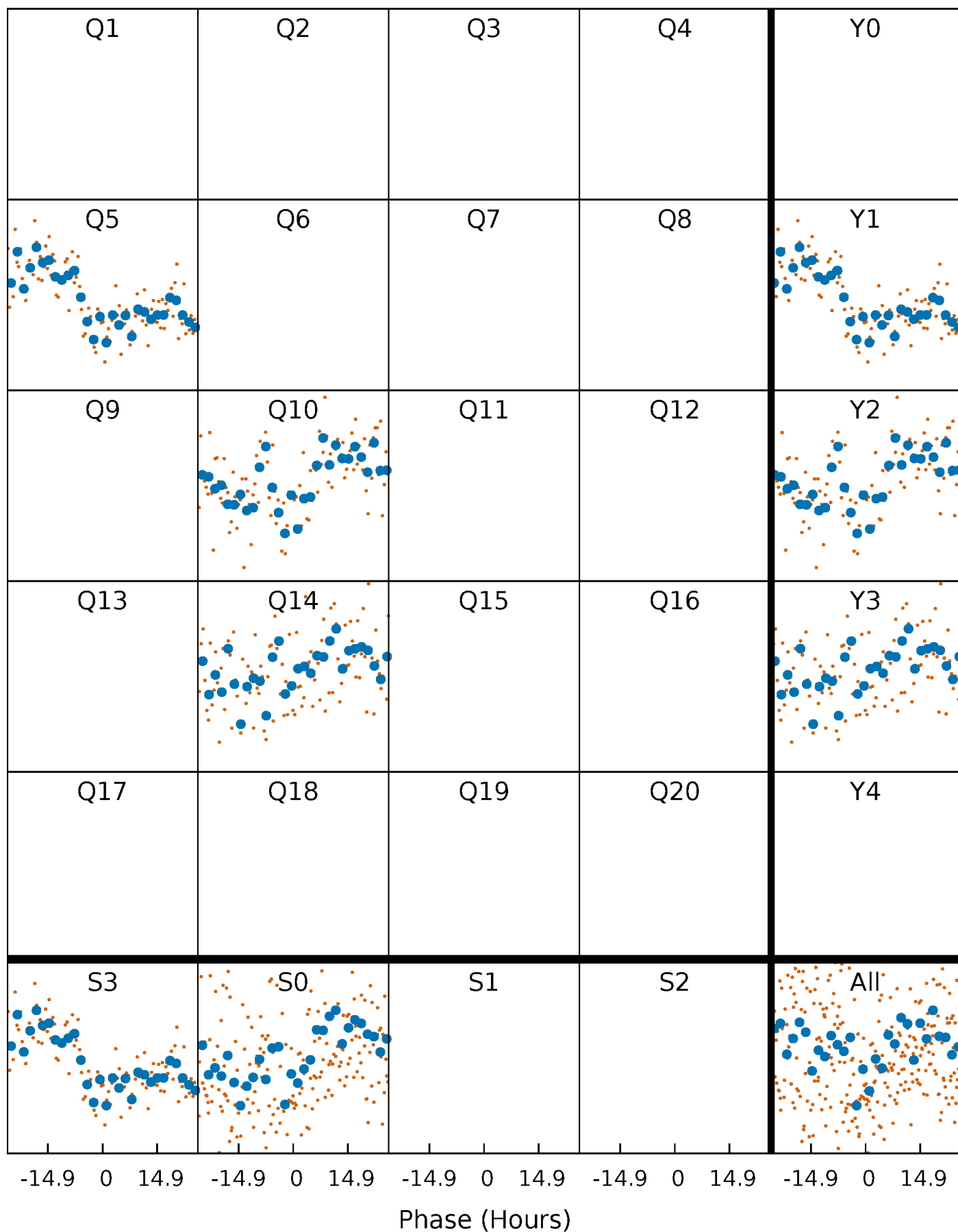


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

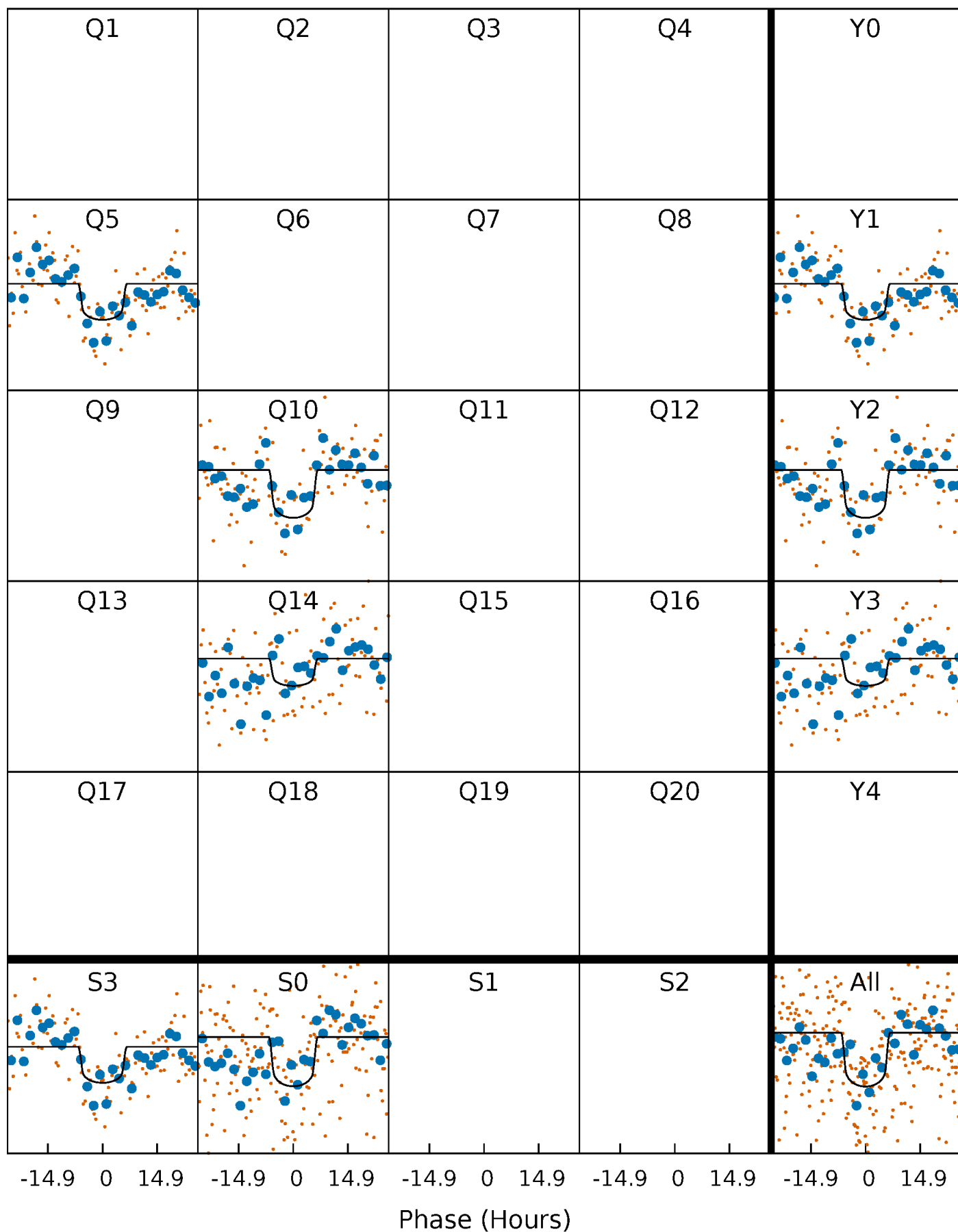
TCE 003548480-01   P=404.233139 Days    $T_0=509.589513$  (BKJD)





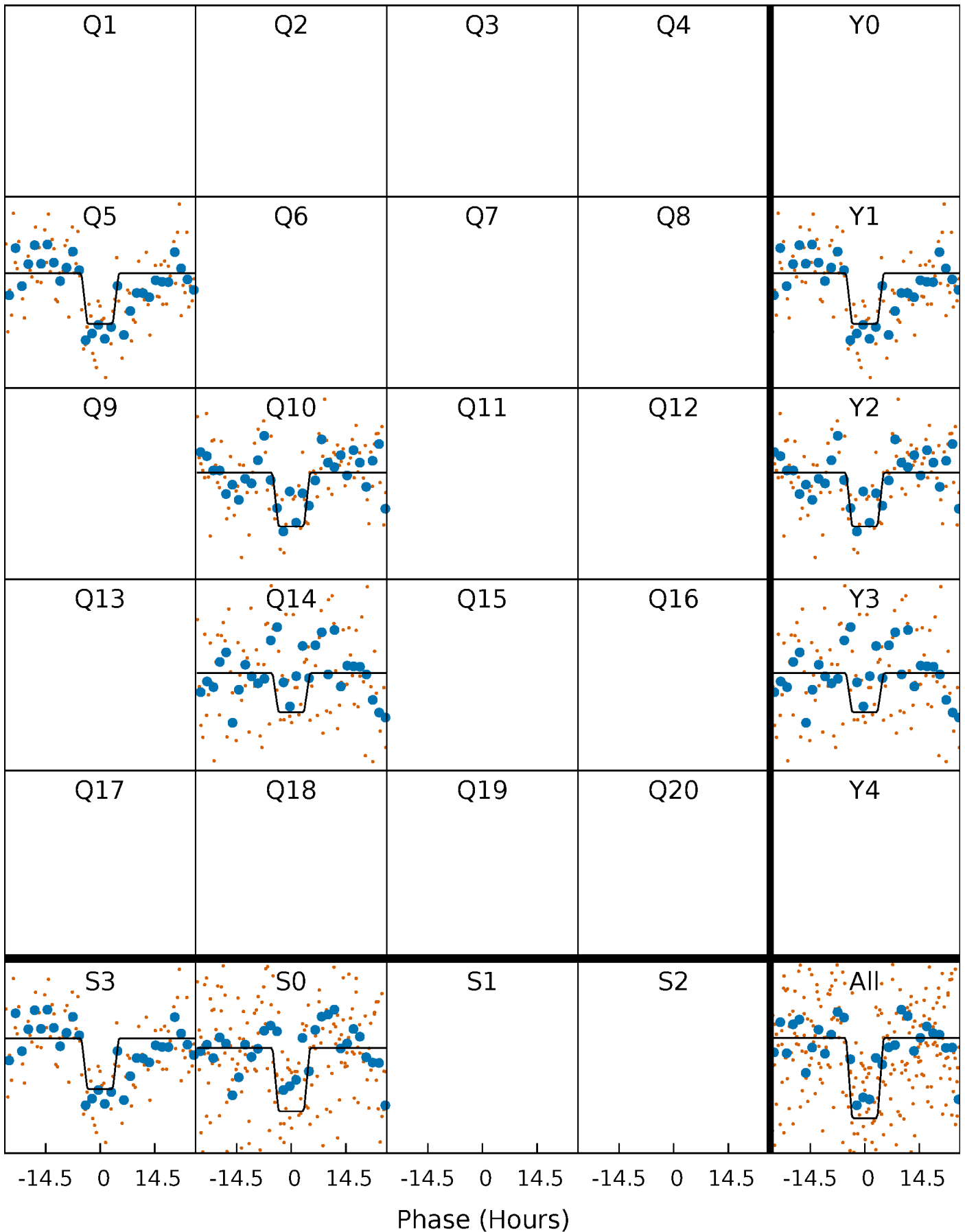
# DV Quarter-Phased Transit Curves

TCE 003548480-01 P=404.233139 Days  $T_0=509.589513$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

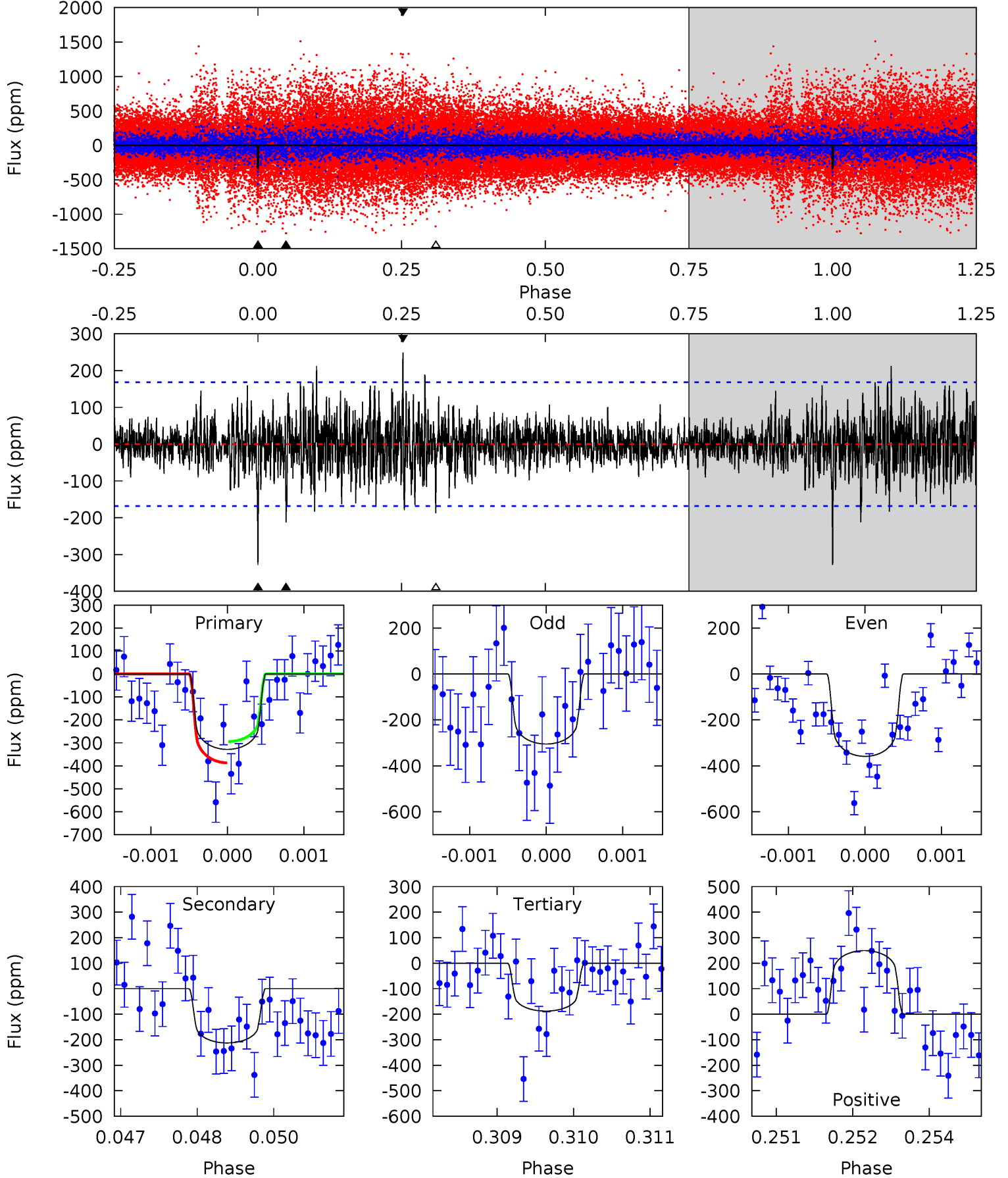
TCE 003548480-01 P=404.257551 Days  $T_0=509.554543$  (BKJD)



# DV Model-Shift Uniqueness Test

003548480-01, P = 404.233139 Days, E = 105.356374 Days

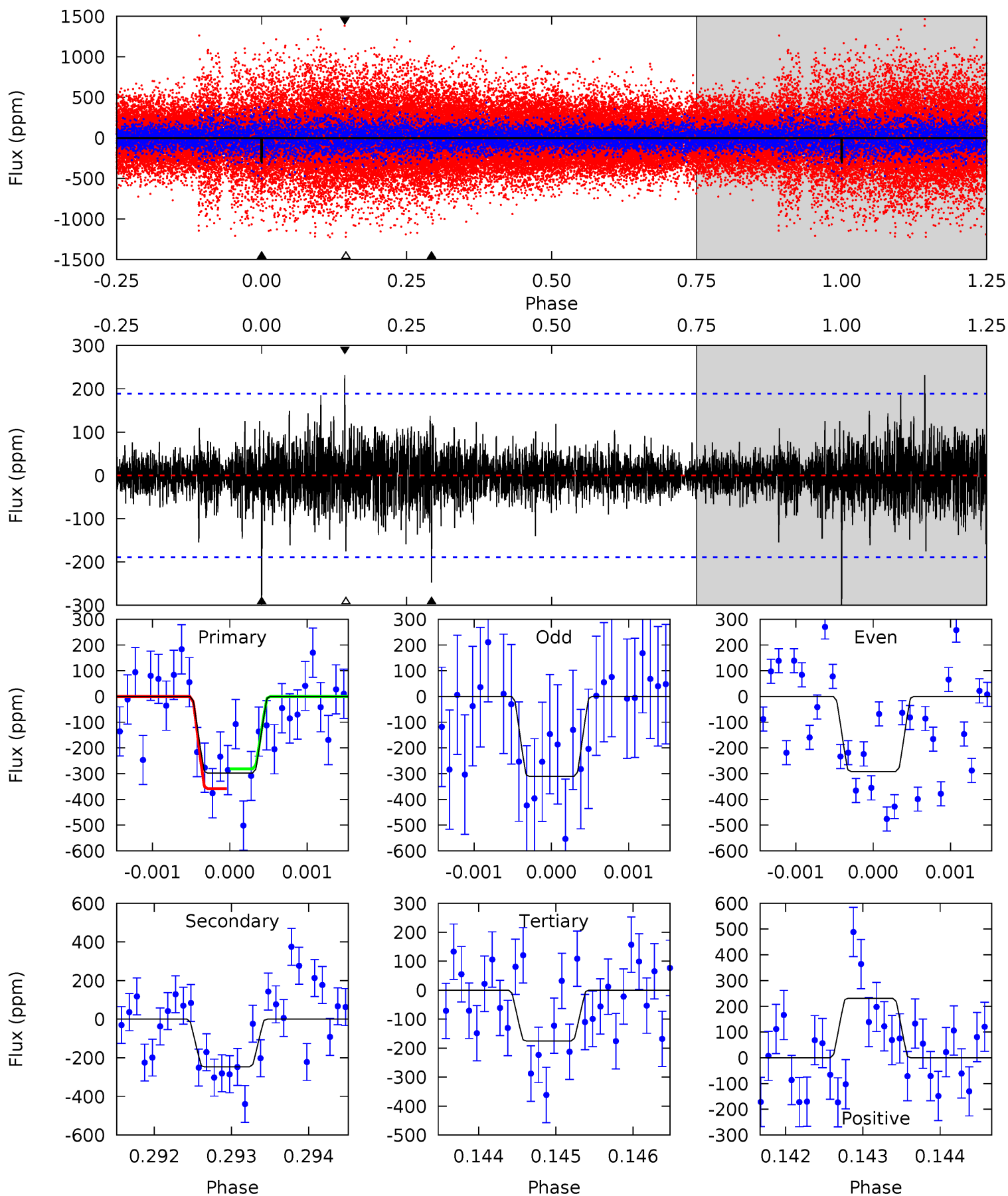
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	6.82	6.02	8.00	5.39	3.20	1.52	4.52	2.54	0.80	-1.18	0.86	1.01	0.43	1.49



# Alt Model-Shift Uniqueness Test

003548480-01, P = 404.257551 Days, E = 105.296992 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
8.59	7.13	5.05	6.66	5.44	3.27	1.13	3.54	1.93	2.07	0.47	0.28	0.83	0.44	1.12



### Stellar Parameters For KIC 003548480

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6244^{+199}_{-243}$	$4.078^{+0.293}_{-0.158}$	$-0.120^{+0.250}_{-0.300}$	$1.620^{+0.440}_{-0.538}$	$1.144^{+0.194}_{-0.177}$	$0.379^{+0.720}_{-0.164}$
	+3%/-4%	+7%/-4%	+208%/-250%	+27%/-33%	+17%/-15%	+190%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 003548480-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-213 \pm 31$	$3.49^{+0.80}_{-0.82}$	$455^{+38}_{-44}$	$5300^{+576}_{-430}$	$12166^{+8246}_{-4533}$
Alt.	$-247 \pm 35$	$3.37^{+0.97}_{-0.84}$	$455^{+36}_{-43}$	$5552^{+677}_{-472}$	$14952^{+11669}_{-5718}$

$T_{\text{max}}$  = 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

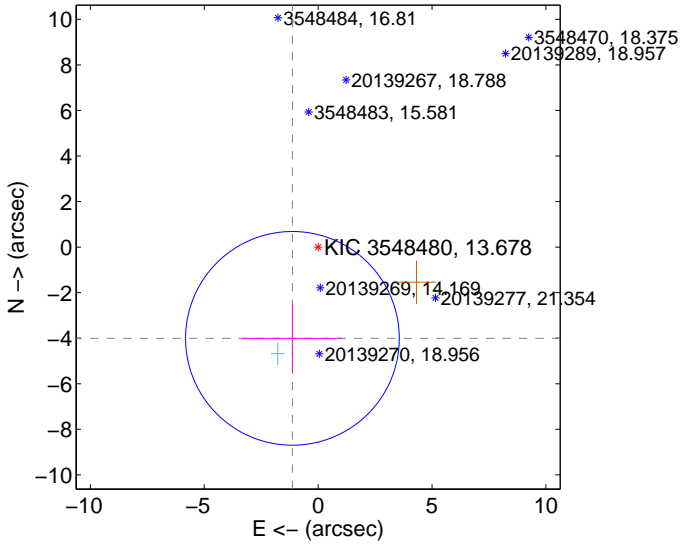
Supplemental centroid analysis for 003548480-01. Kepler magnitude: 13.68. Transit SNR 8.01

There are 1 quarters with good PRF difference image offsets

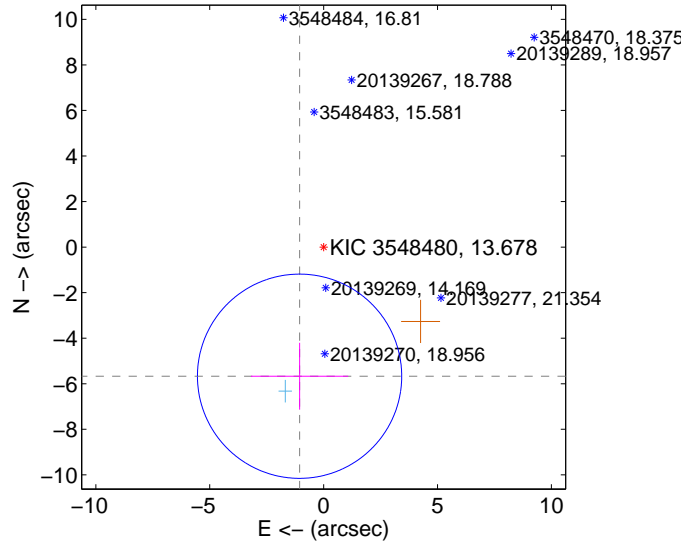
The direct PRF centroid is offset from the target star catalog position by about 1.72 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.163 \pm 1.564$	2.66	$1.129 \pm 2.189$	$-4.007 \pm 1.503$
PRF-fit source offset from KIC position	<b><math>5.768 \pm 1.495</math></b>	<b>3.86</b>	$1.056 \pm 2.135$	$-5.670 \pm 1.468$
photometric centroid source offset	$3.34 \pm 1.30$	2.57	$0.33 \pm 1.03$	$-3.33 \pm 1.30$

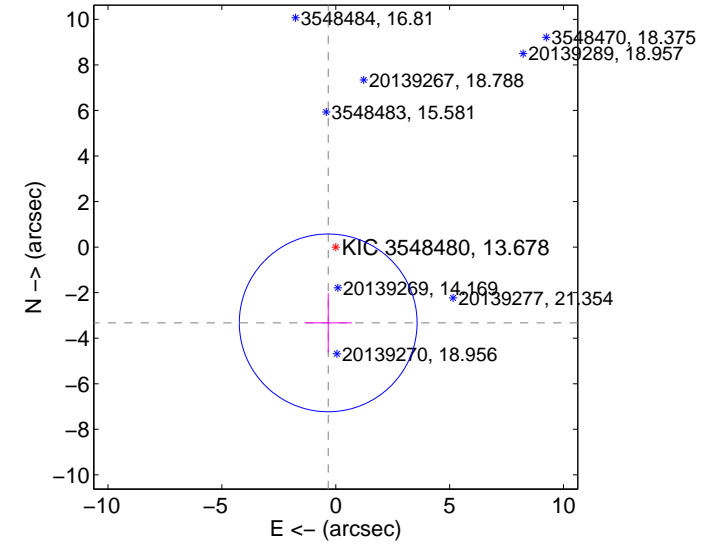
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



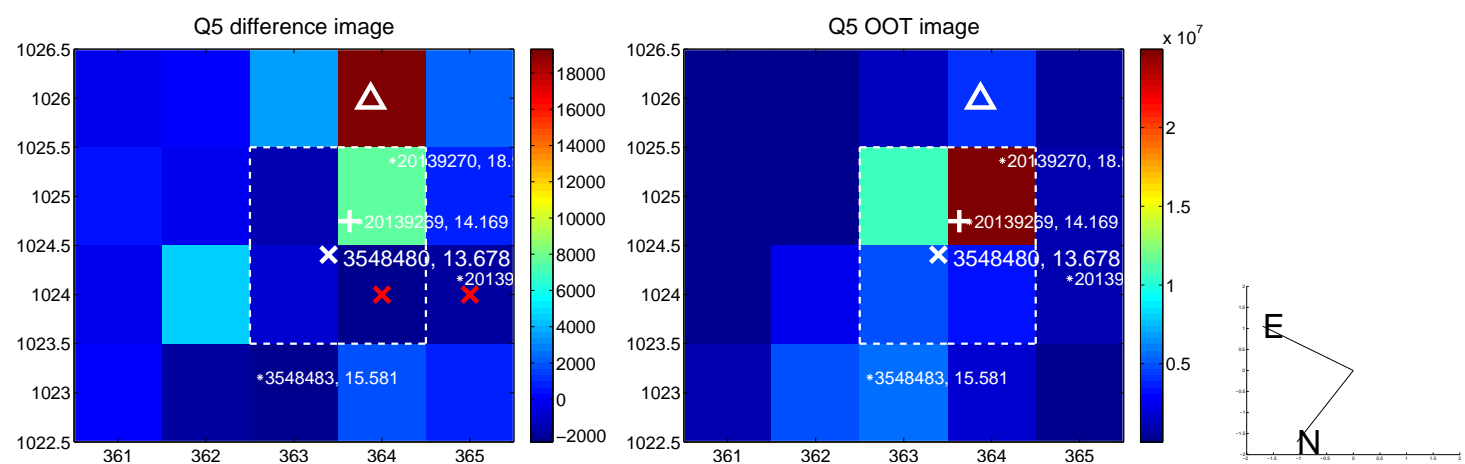
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

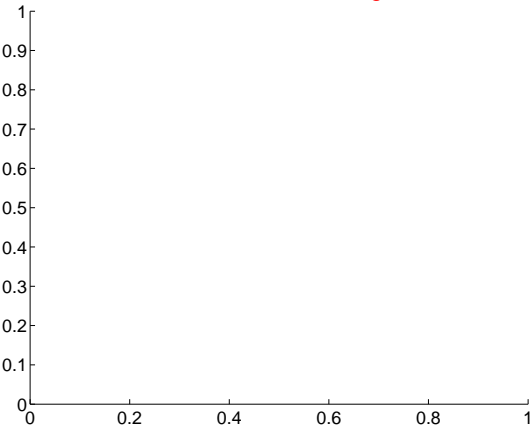




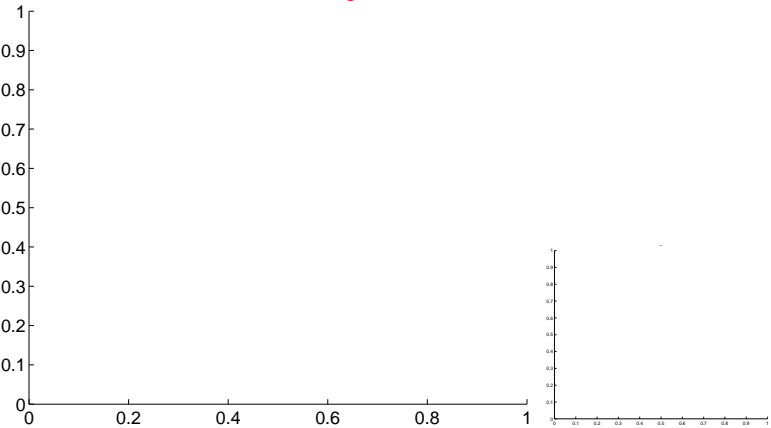
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



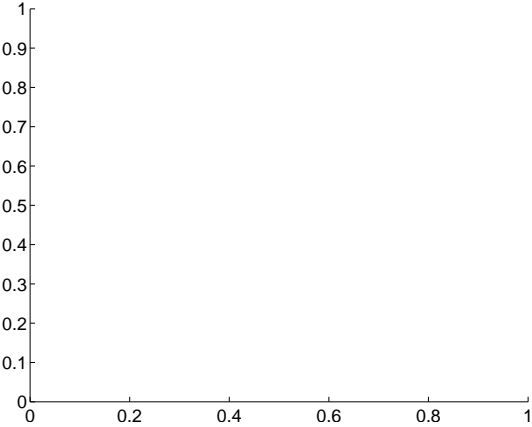
Q6 no difference image



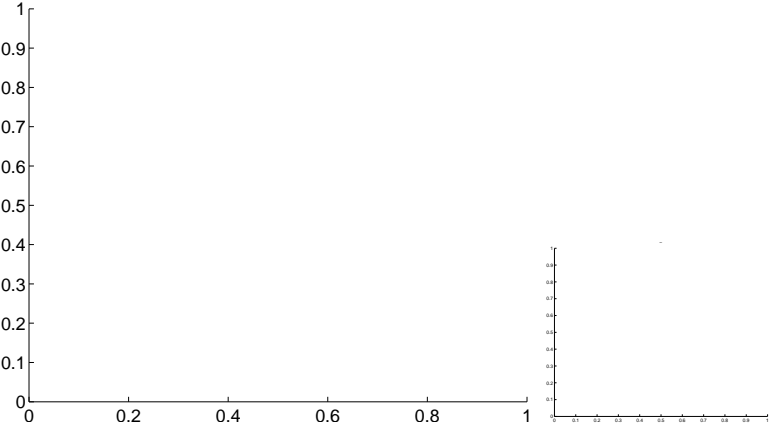
Q6 no OOT image



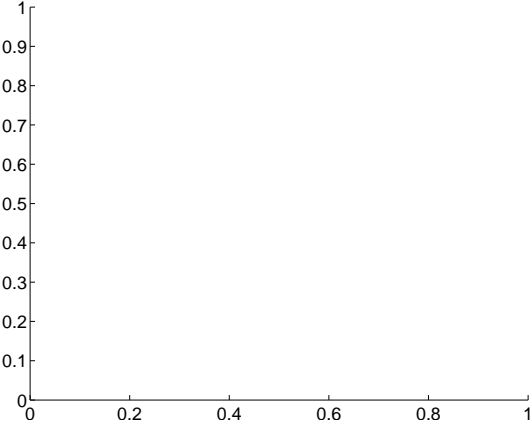
Q7 no difference image



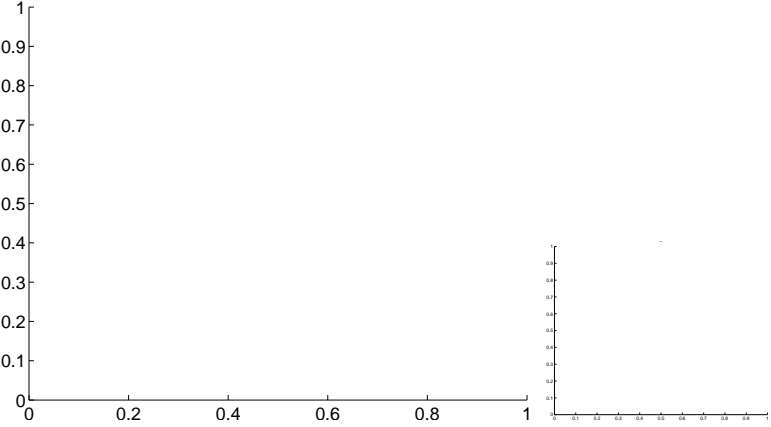
Q7 no OOT image



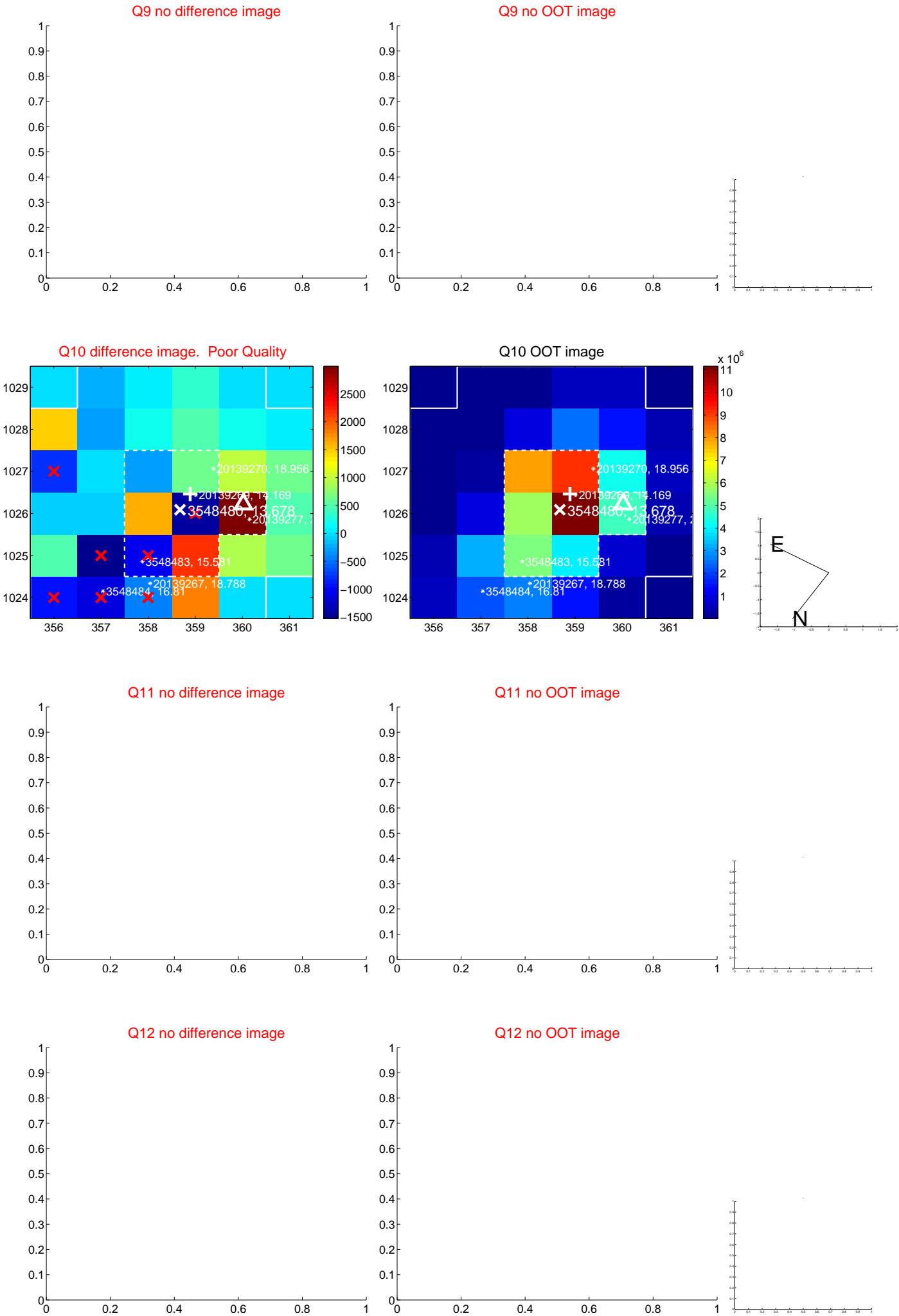
Q8 no difference image



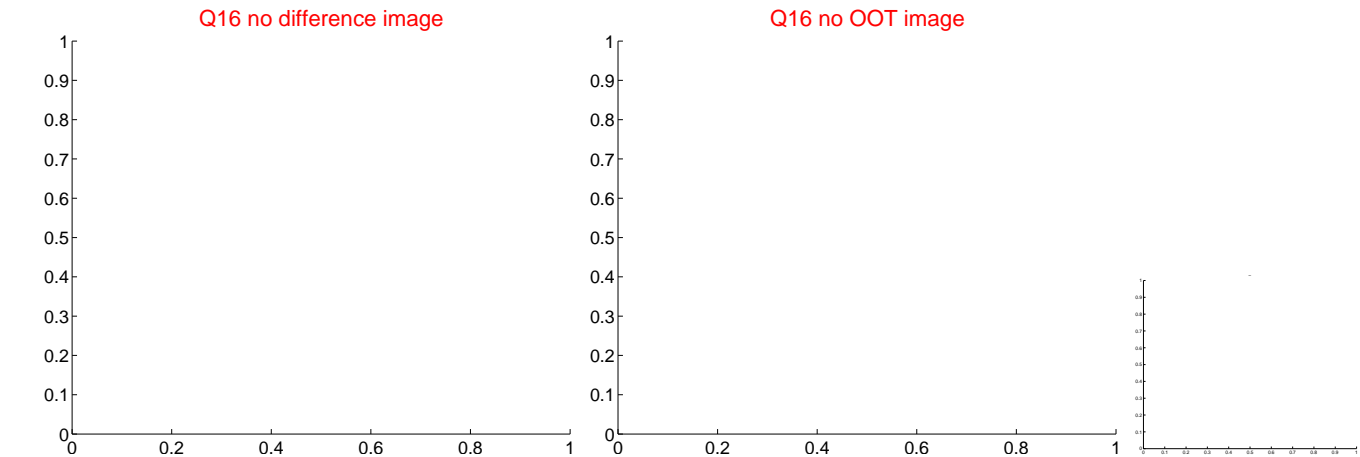
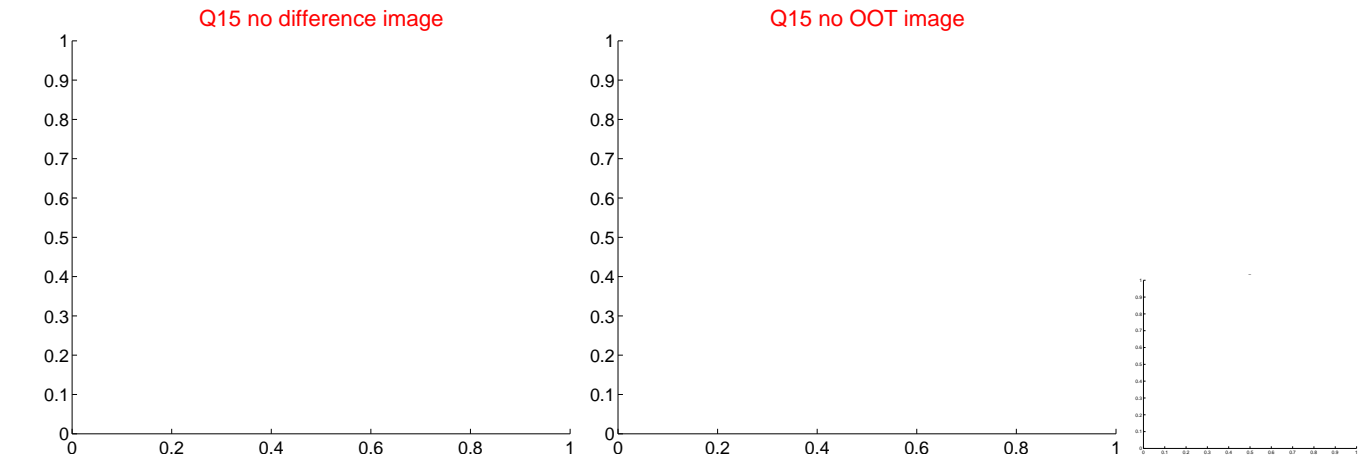
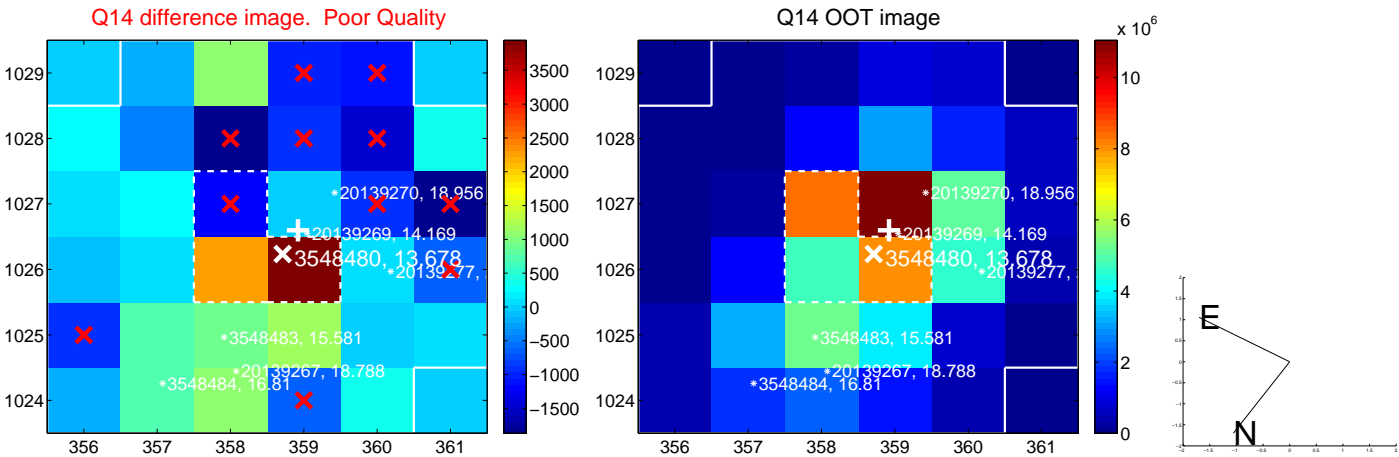
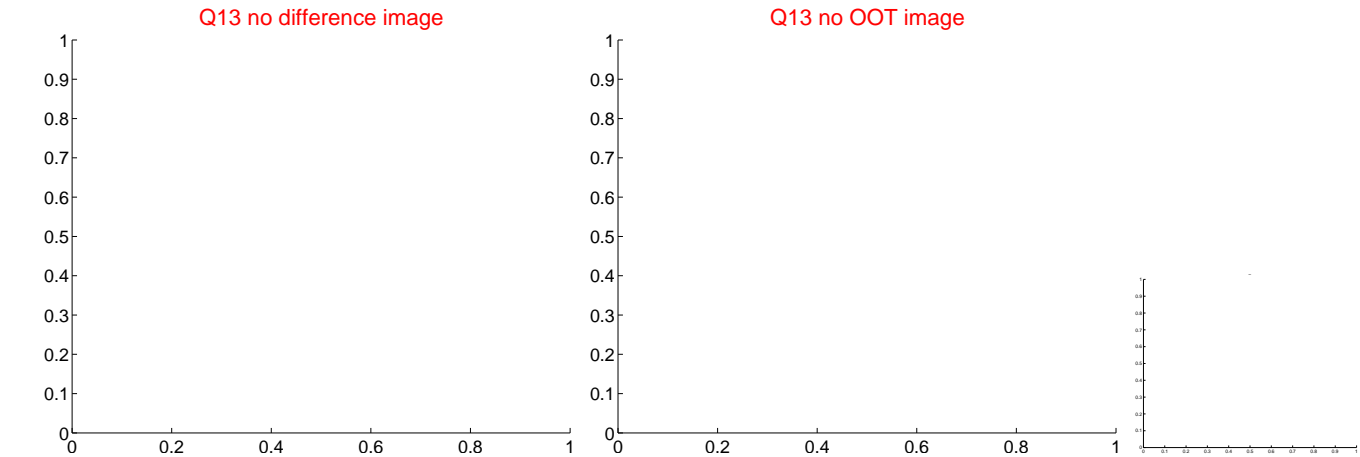
Q8 no OOT image



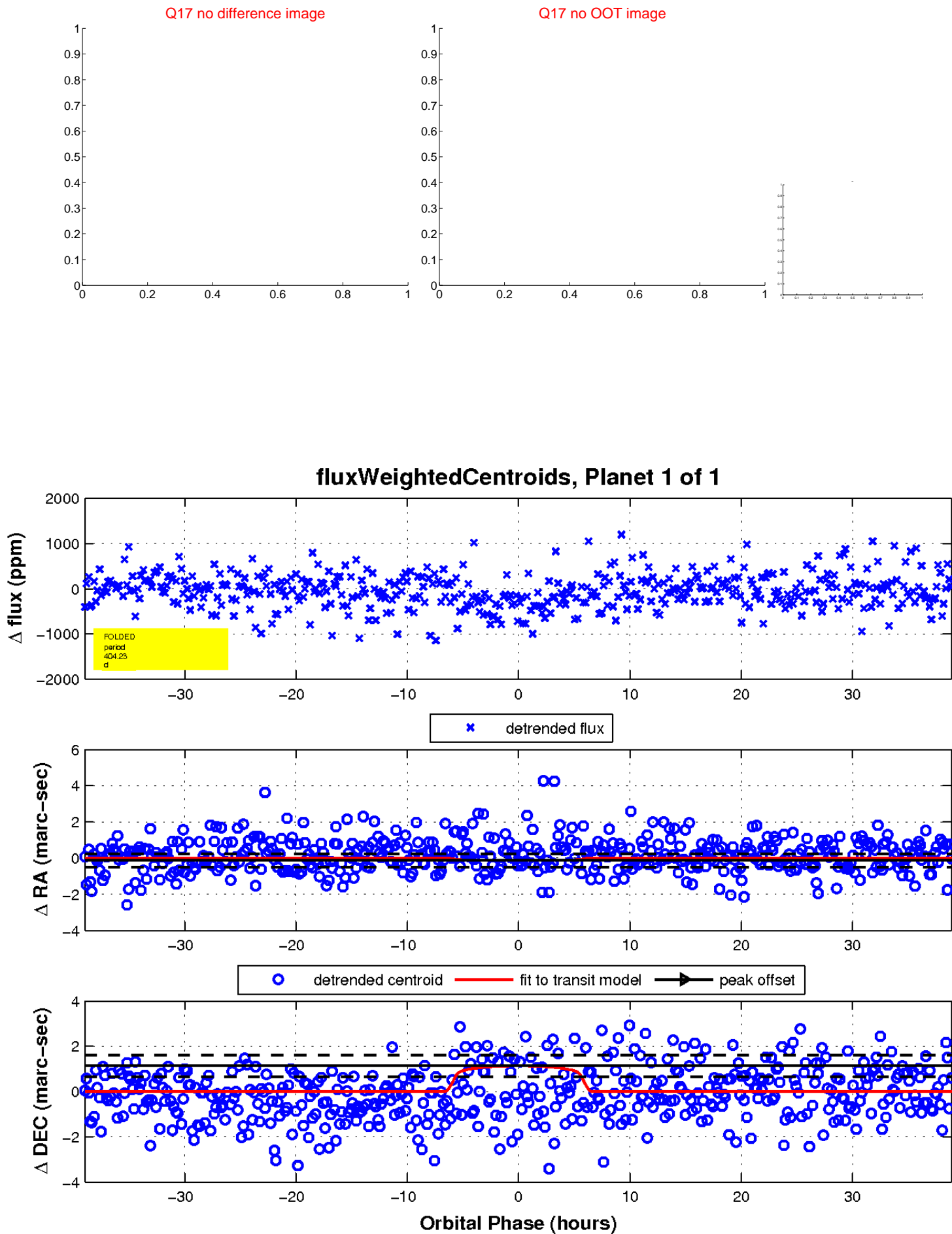
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

