

# KIC 008951096

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008951096-01	OBS	No	407.275766	378.074201	1094.4	5.461	11.7	7.0	3.97	5030	13.47	8.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008951096-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_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.

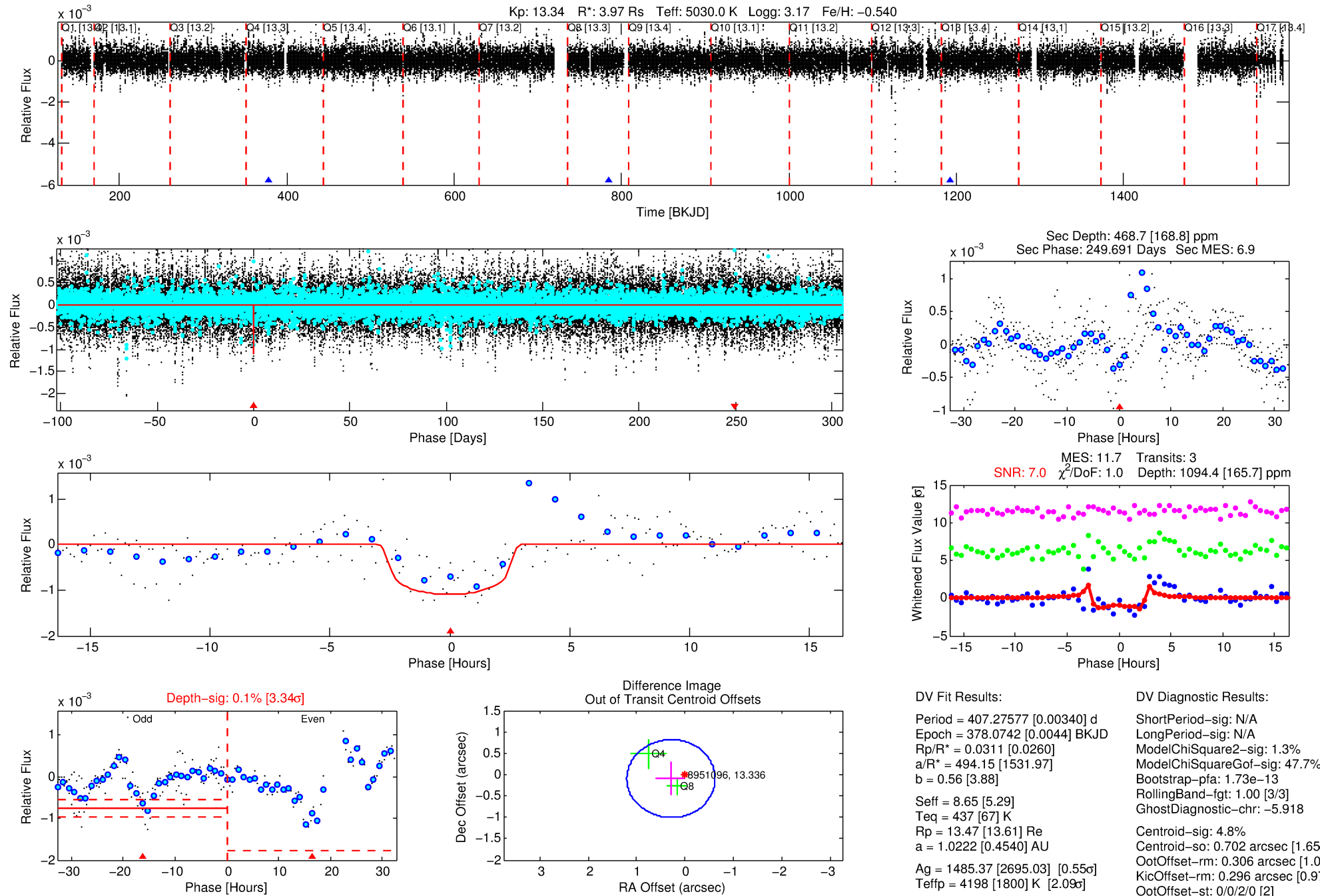
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008951096-01

No Significant Match Found

# DV One-Page Summary

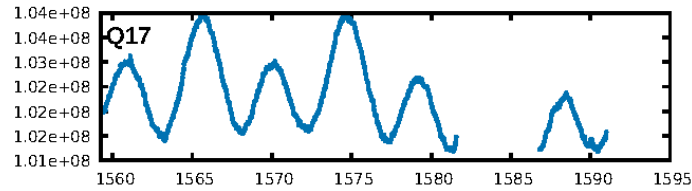
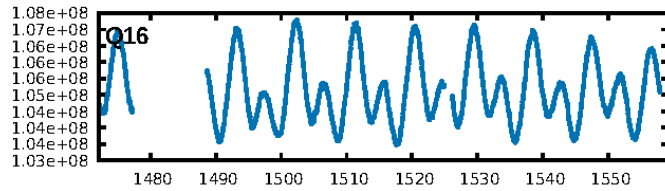
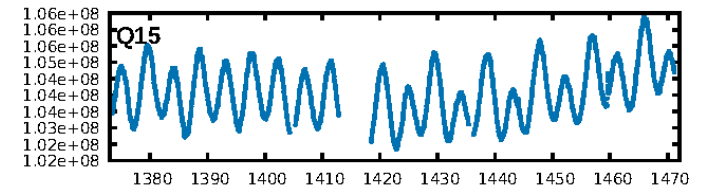
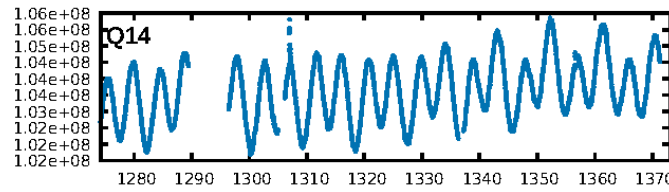
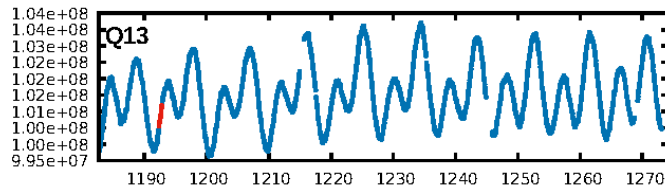
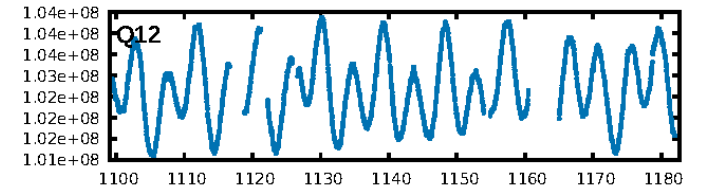
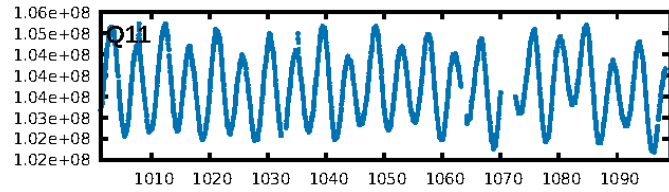
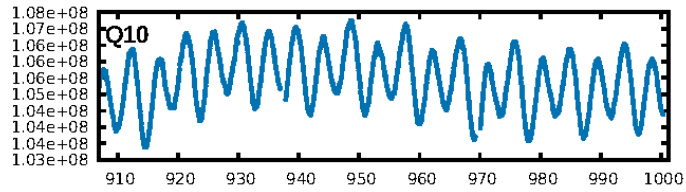
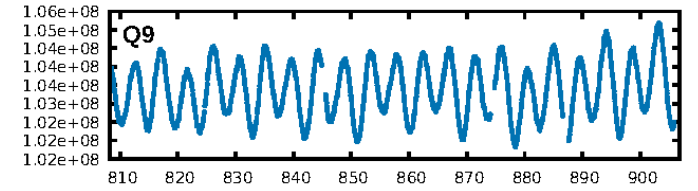
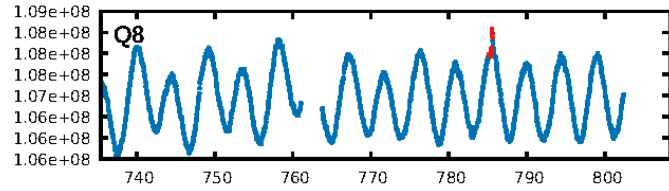
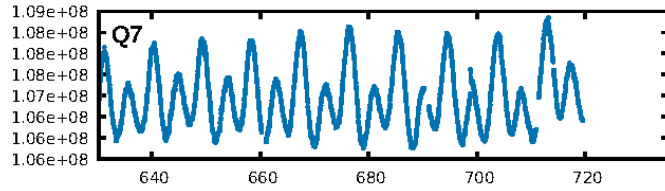
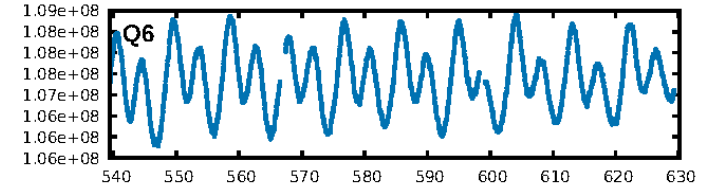
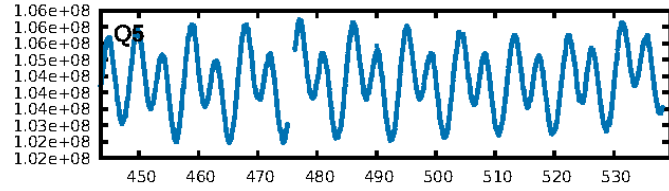
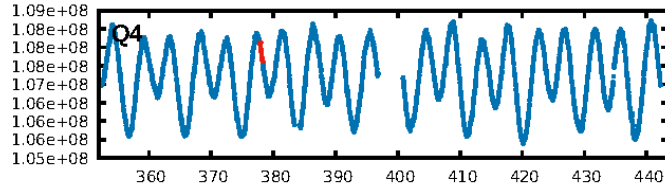
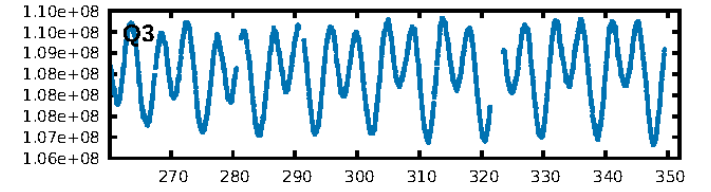
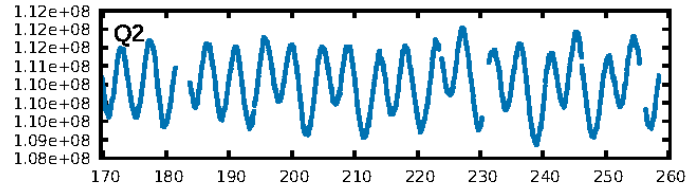
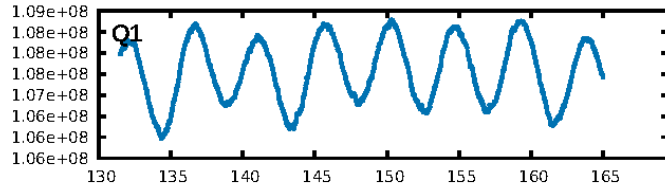
KIC: 8951096 Candidate: 1 of 1 Period: 407.276 d



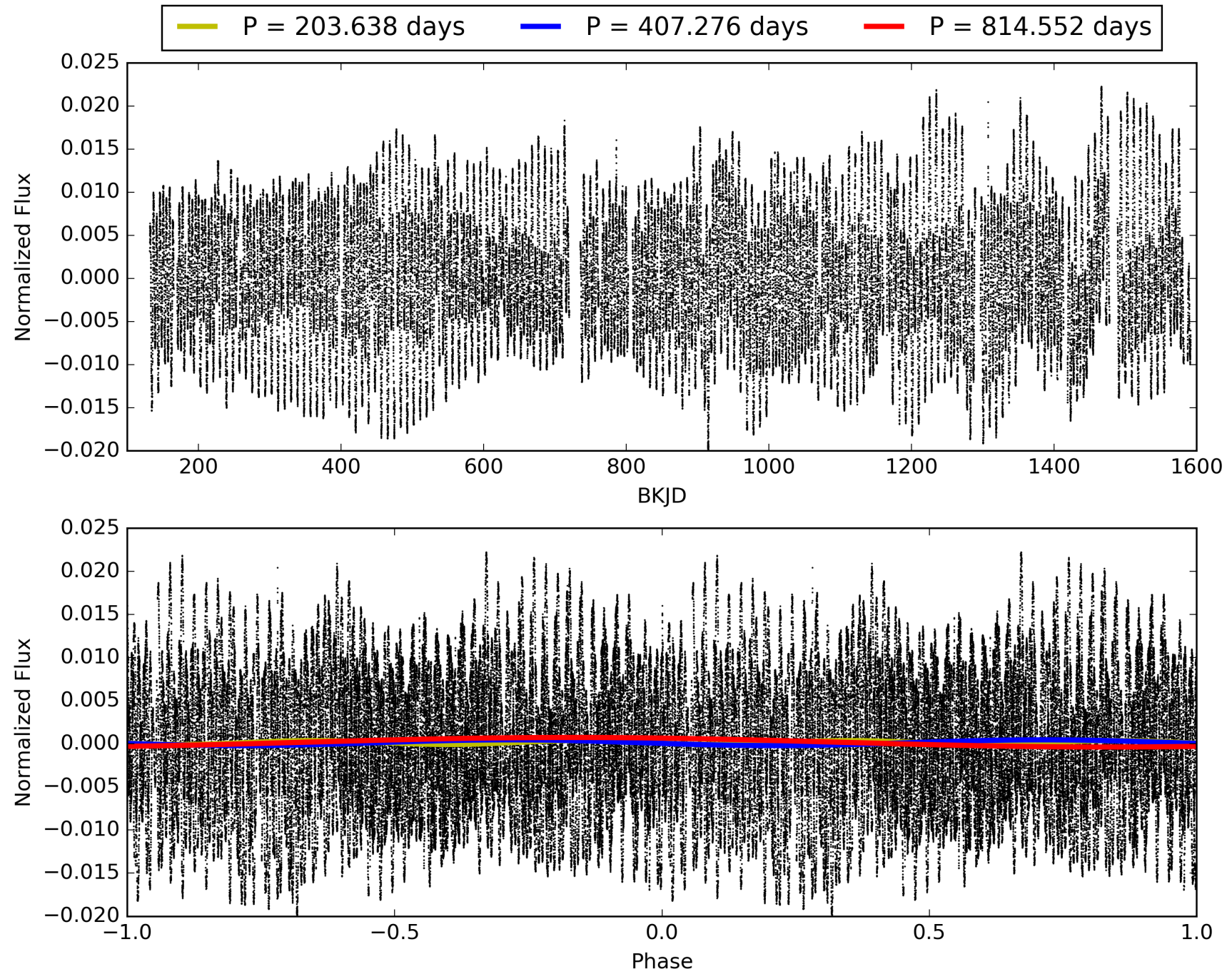
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:59:34 Z

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

# TCE 008951096-01, PDC Light Curves

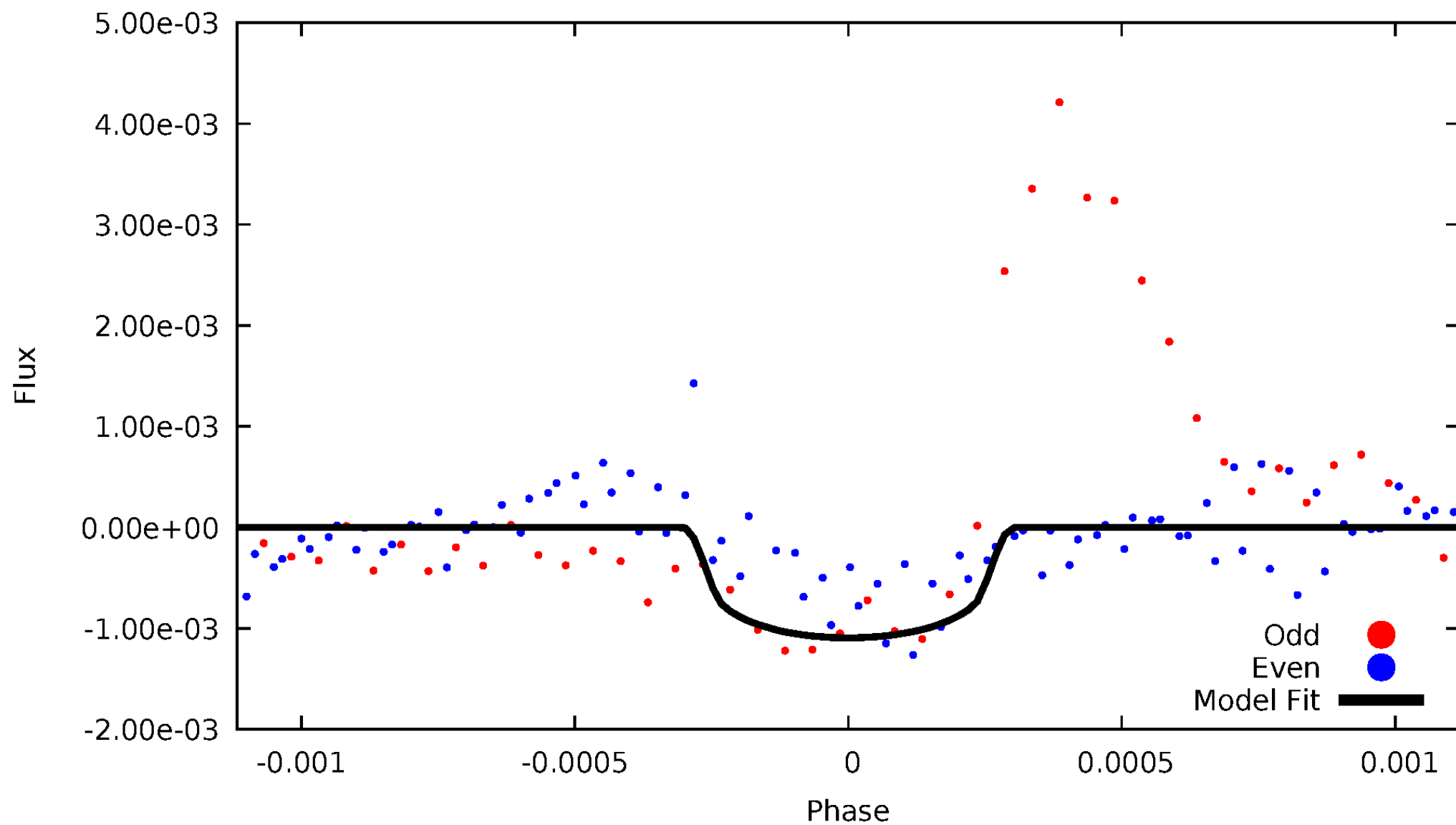


TCE 008951096-01



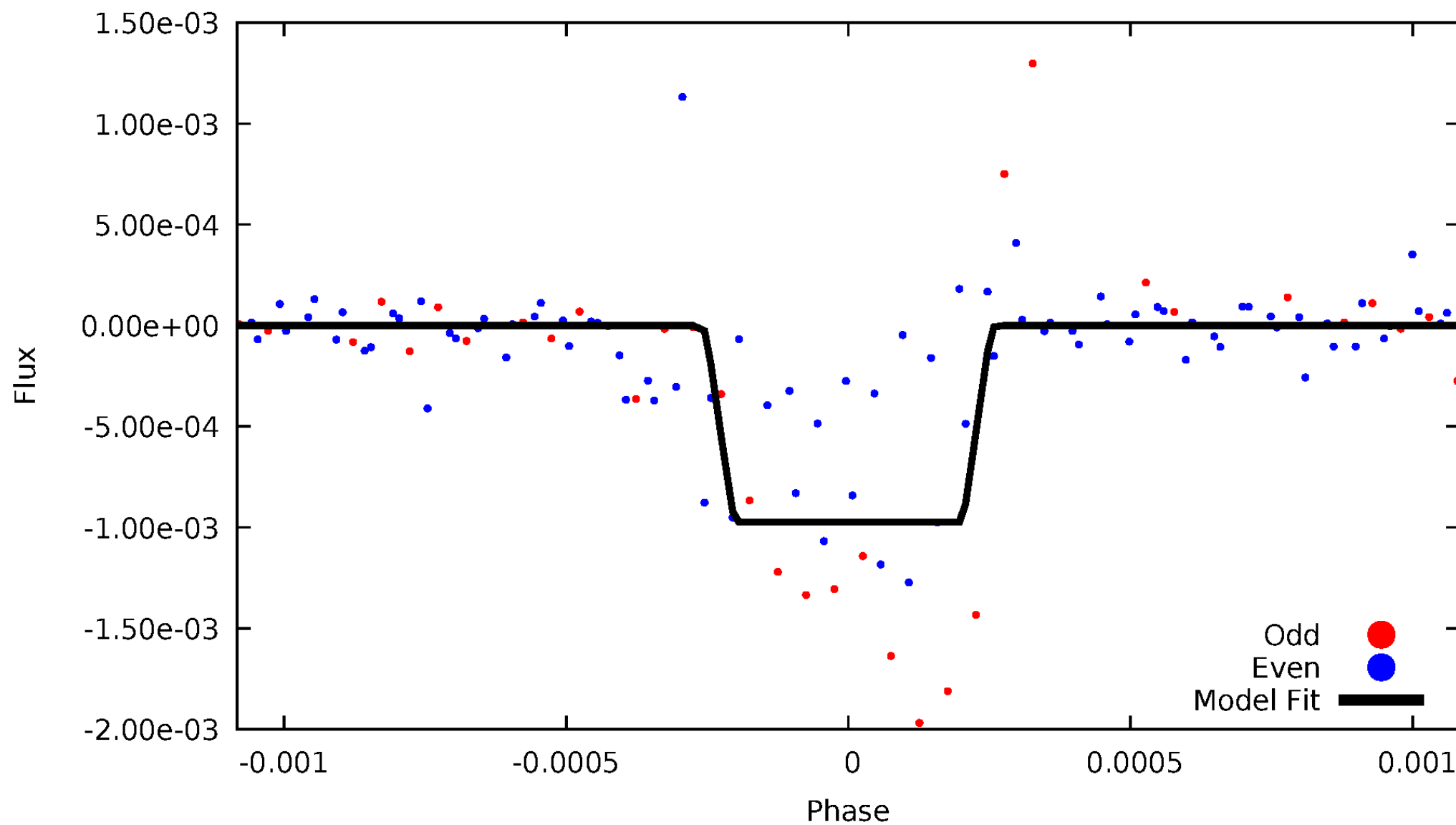
# DV Odd/Even

TCE 008951096-01



# ALT Odd/Even

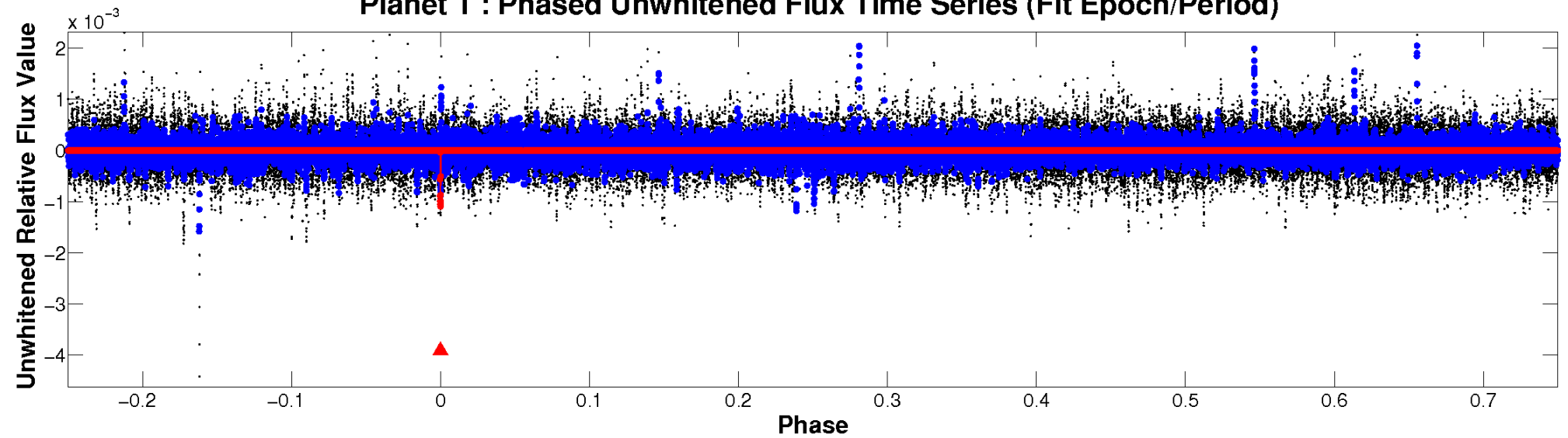
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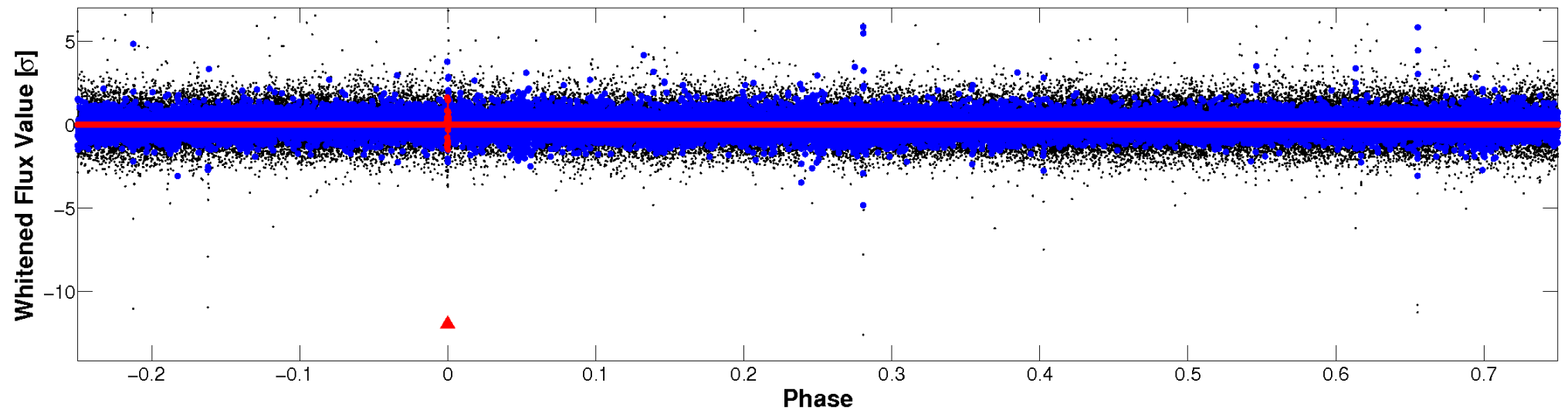


# Non-Whitened Vs. Whitened Light Curve

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

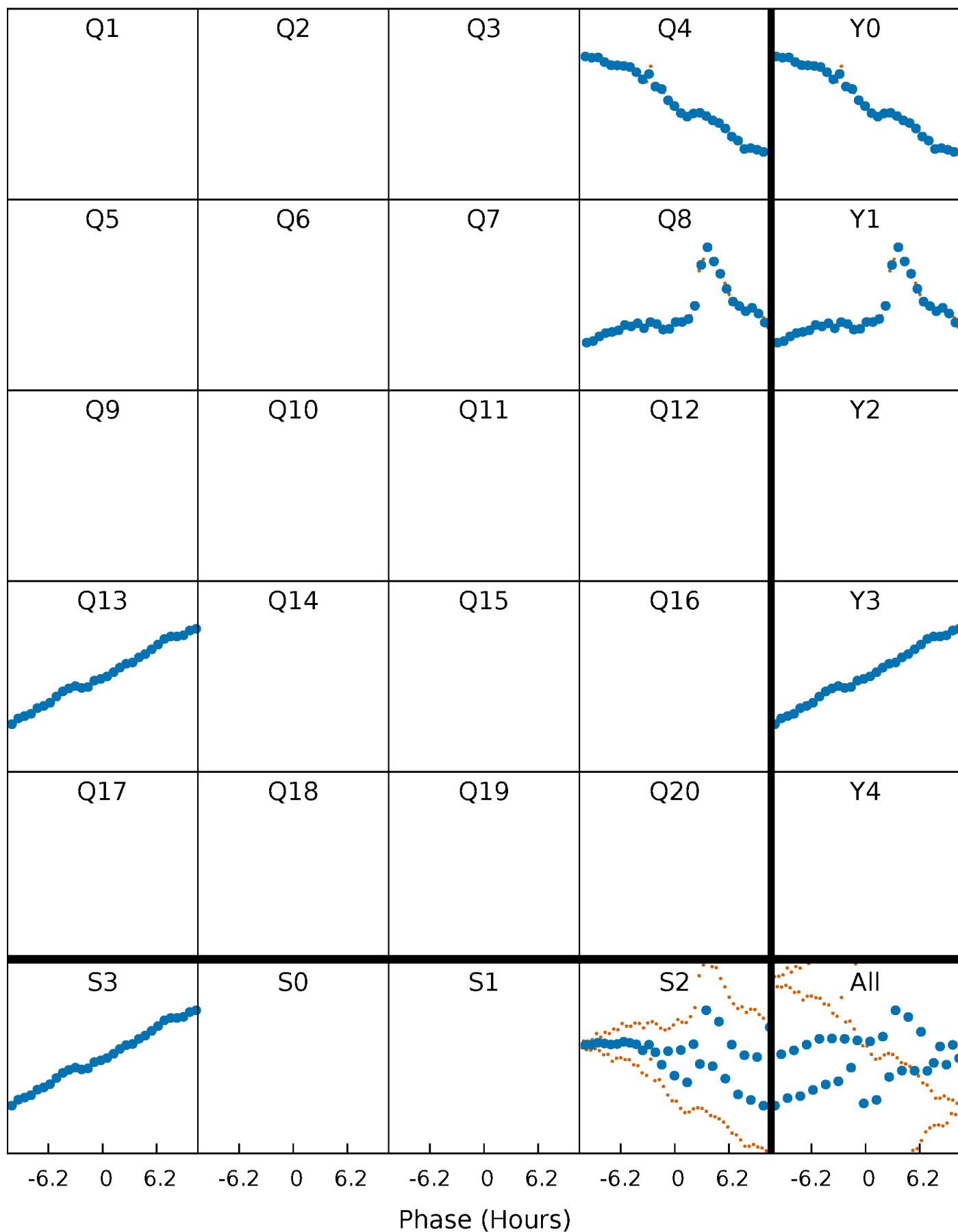


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

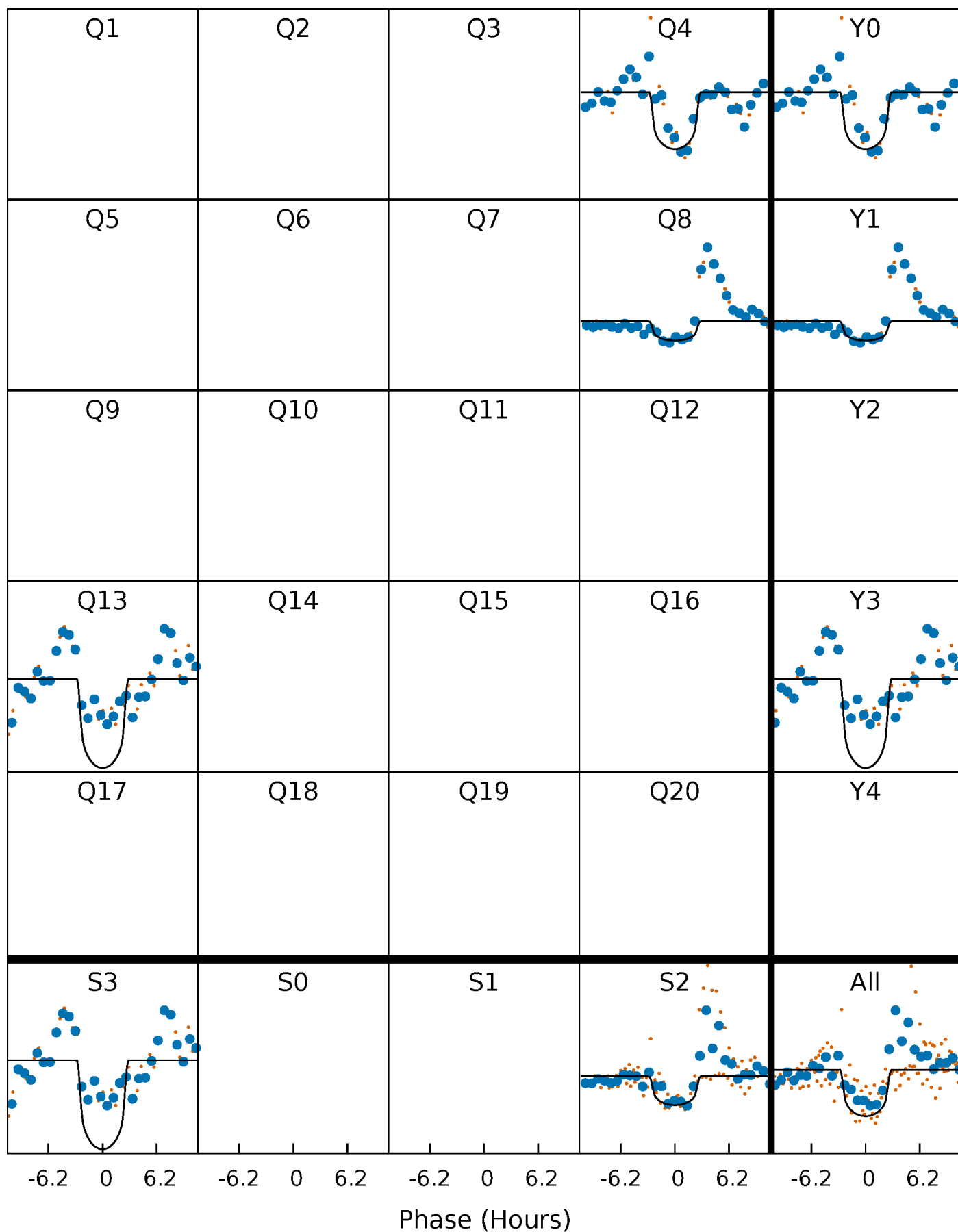
TCE 008951096-01 P=407.275766 Days  $T_0=378.074201$  (BKJD)





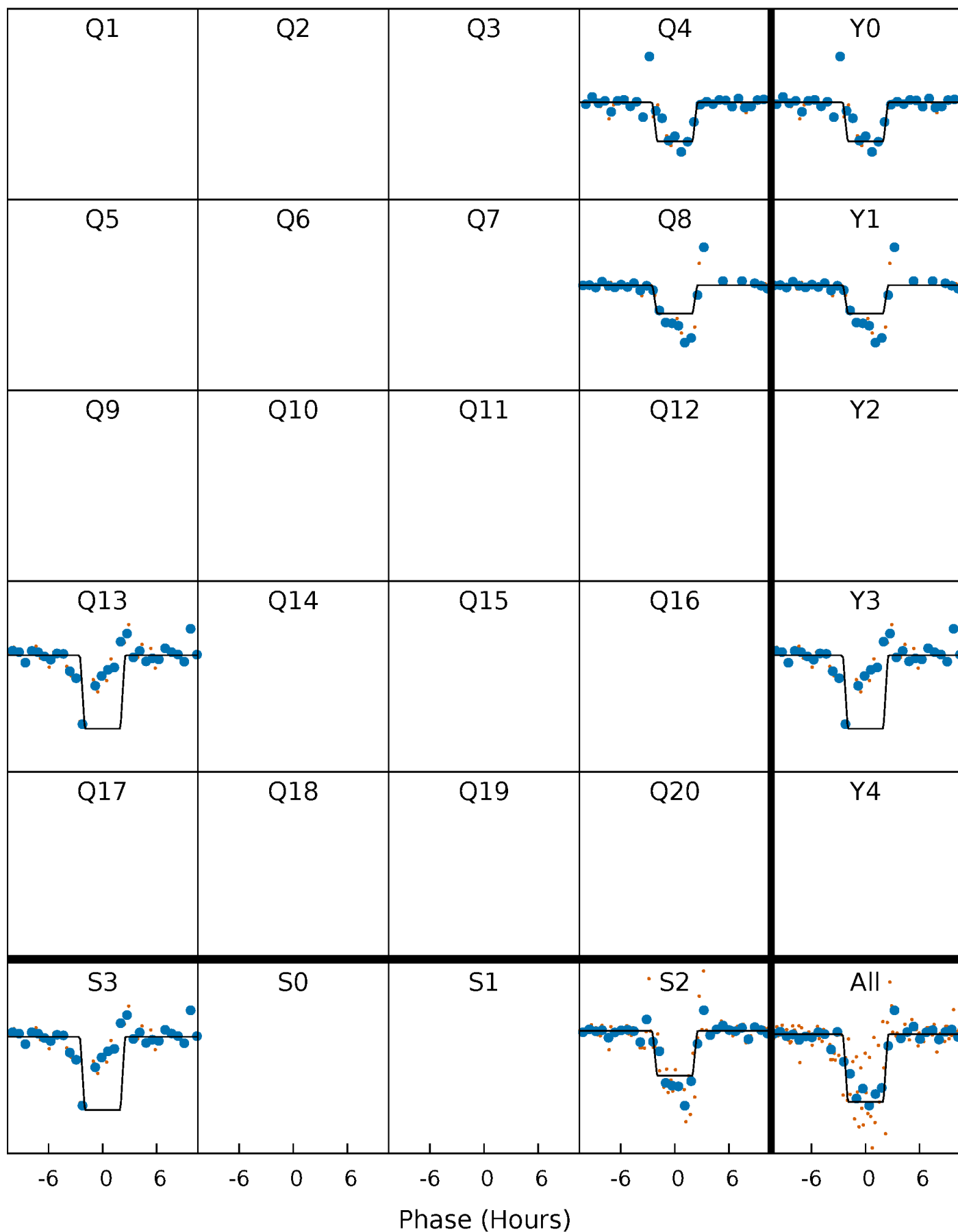
# DV Quarter-Phased Transit Curves

TCE 008951096-01     $P=407.275766$  Days     $T_0=378.074201$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

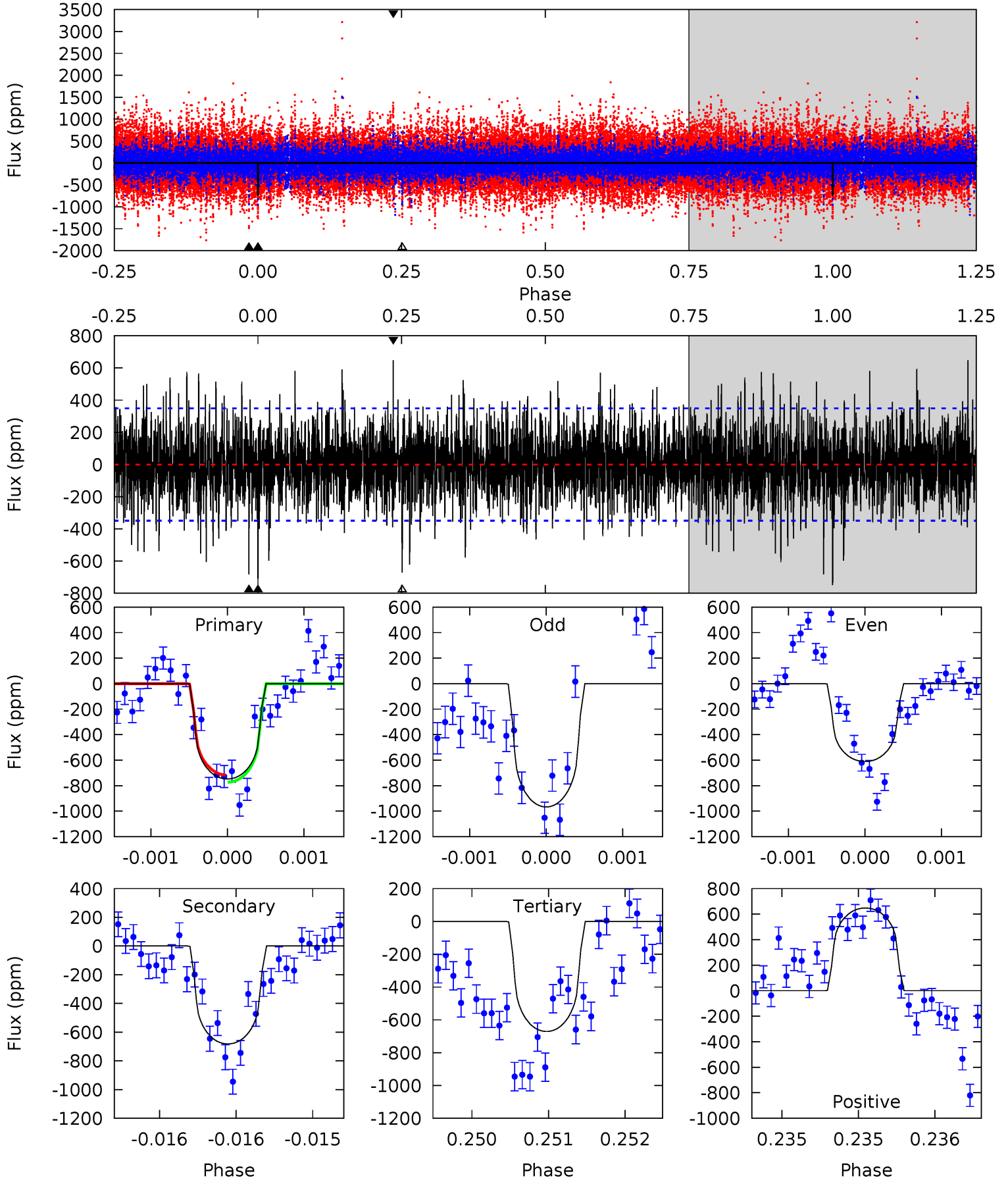
TCE 008951096-01 P=407.274907 Days  $T_0=378.078863$  (BKJD)



# DV Model-Shift Uniqueness Test

008951096-01, P = 407.275766 Days, E = 378.074201 Days

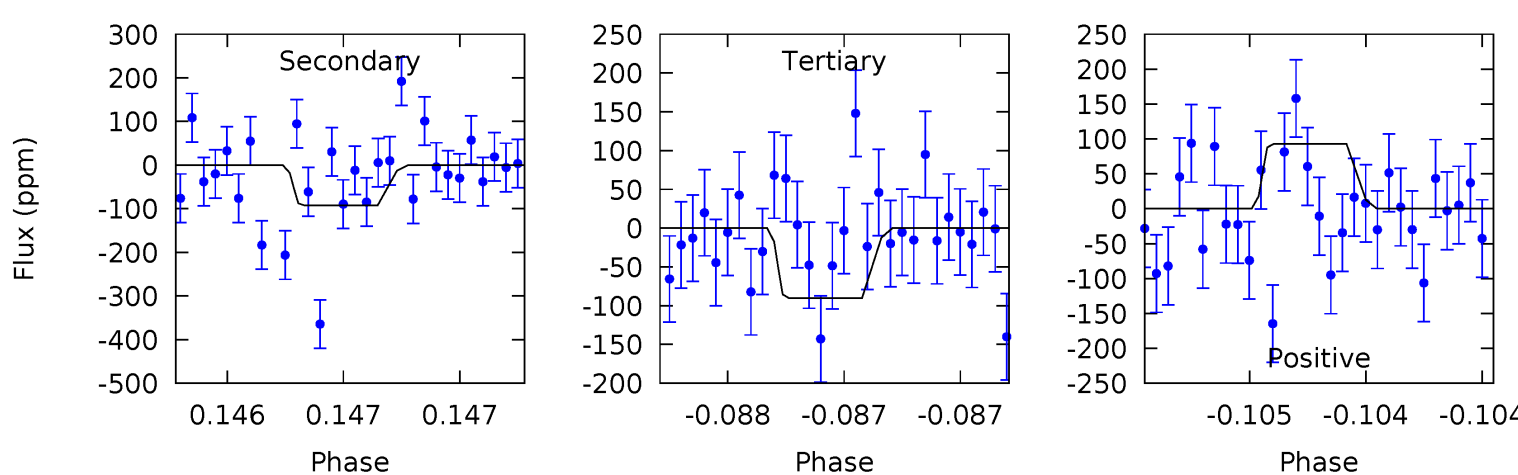
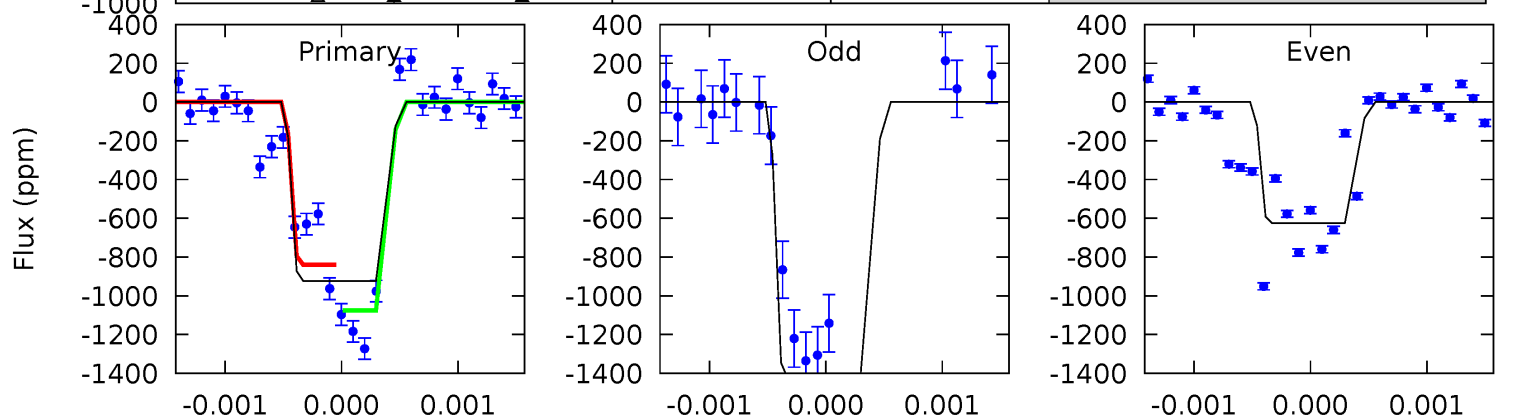
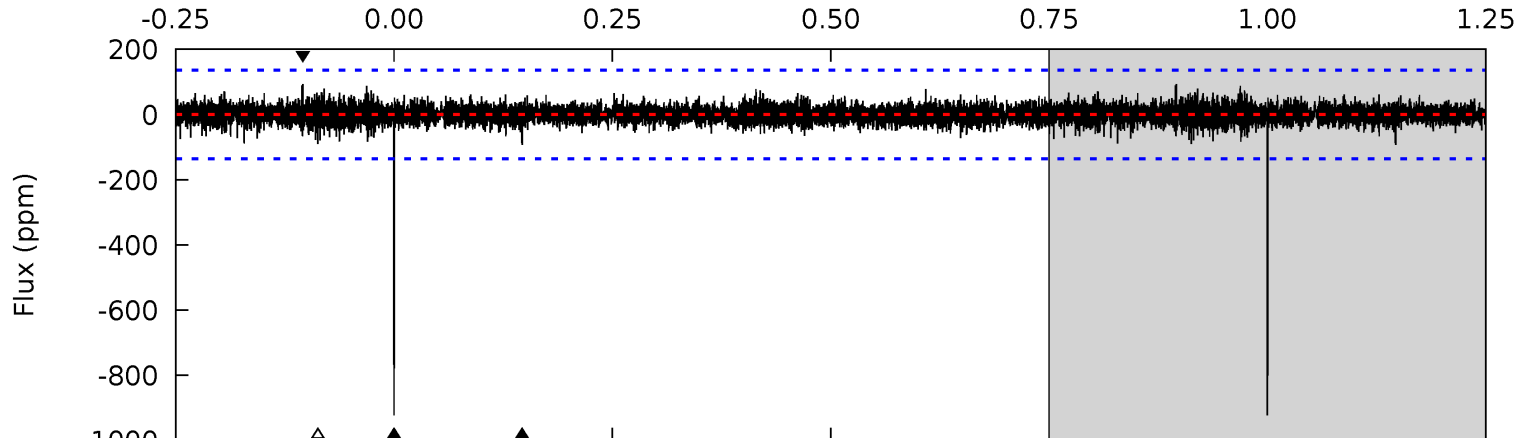
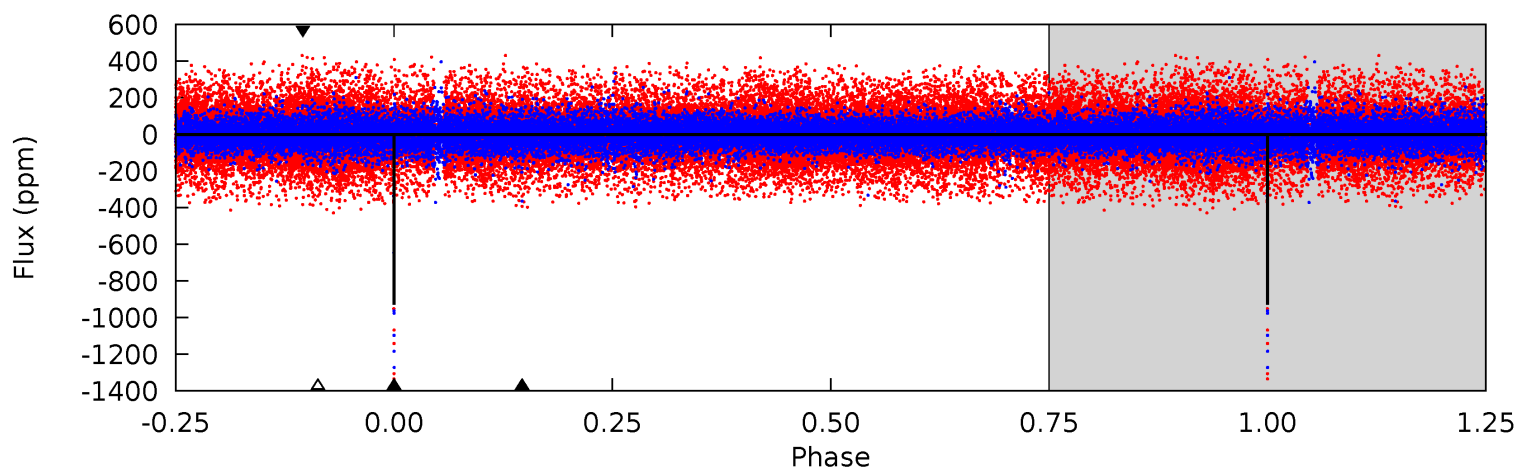
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	10.8	10.6	10.3	5.54	3.43	2.57	1.21	1.57	0.17	0.54	2.71	0.98	0.46	0.44



# Alt Model-Shift Uniqueness Test

008951096-01, P = 407.274907 Days, E = 378.078863 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
37.8	3.79	3.70	3.80	5.56	3.46	0.73	34.1	34.0	0.09	-0.01	20.3	1.04	0.09	0



### Stellar Parameters For KIC 008951096

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5030^{+140}_{-101}$	$3.174^{+0.305}_{-0.305}$	$-0.540^{+0.300}_{-0.200}$	$3.971^{+2.248}_{-1.124}$	$0.858^{+0.343}_{-0.038}$	$0.019^{+0.037}_{-0.012}$
	+3%/-2%	+10%/-10%	+56%/-37%	+57%/-28%	+40%/-4%	+190%/-63%
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 008951096-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-682 \pm 63$	$15.45^{+12.76}_{-9.81}$	$614^{+81}_{-57}$	$4501^{+2537}_{-799}$	$1729^{+11234}_{-1207}$
Alt.	$-93 \pm 24$	$15.28^{+12.35}_{-9.18}$	$611^{+77}_{-55}$	$3220^{+1054}_{-509}$	$235^{+1249}_{-167}$

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

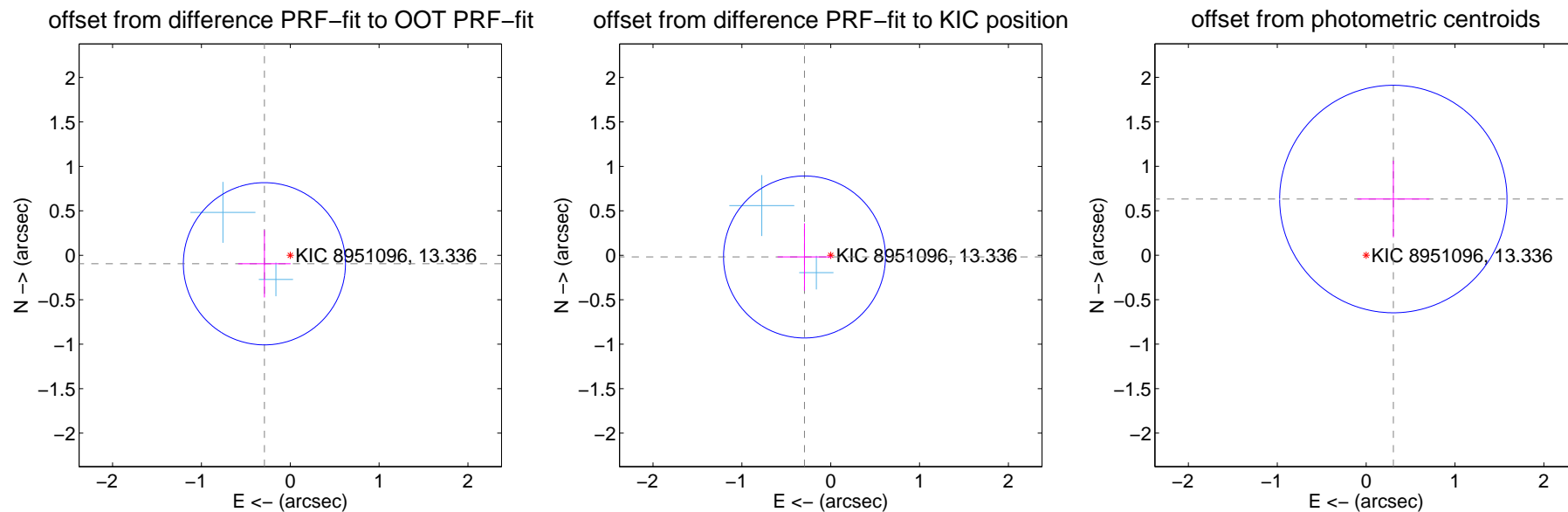
## DV Centroid Data

Supplemental centroid analysis for 008951096-01. Kepler magnitude: 13.34. Transit SNR 7.04

There are 2 quarters with good PRF difference image offsets

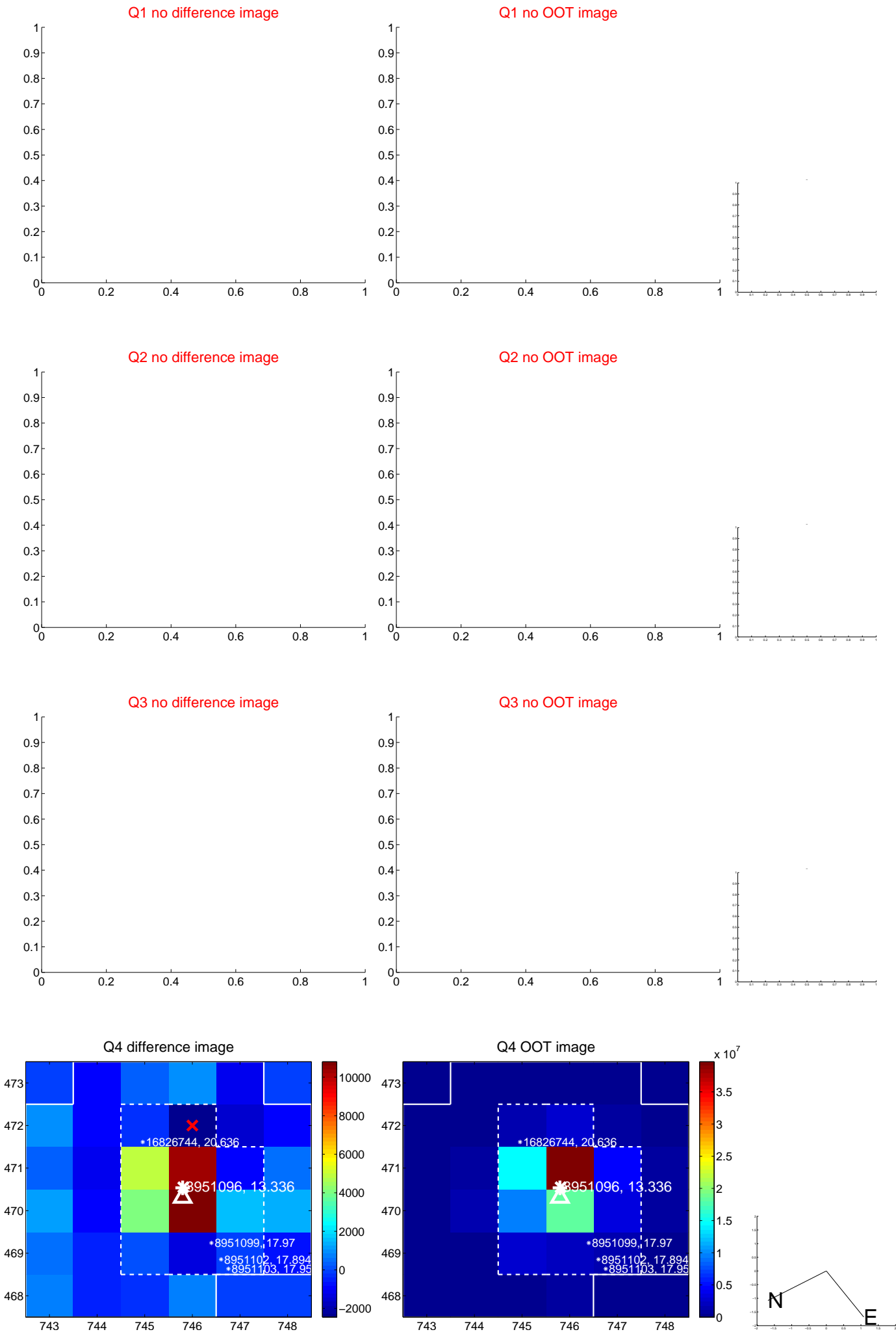
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.306 \pm 0.304$	1.01	$0.291 \pm 0.295$	$-0.095 \pm 0.379$
PRF-fit source offset from KIC position	$0.296 \pm 0.304$	0.97	$0.295 \pm 0.303$	$-0.019 \pm 0.379$
photometric centroid source offset	$0.70 \pm 0.43$	1.65	$-0.31 \pm 0.41$	$0.63 \pm 0.43$



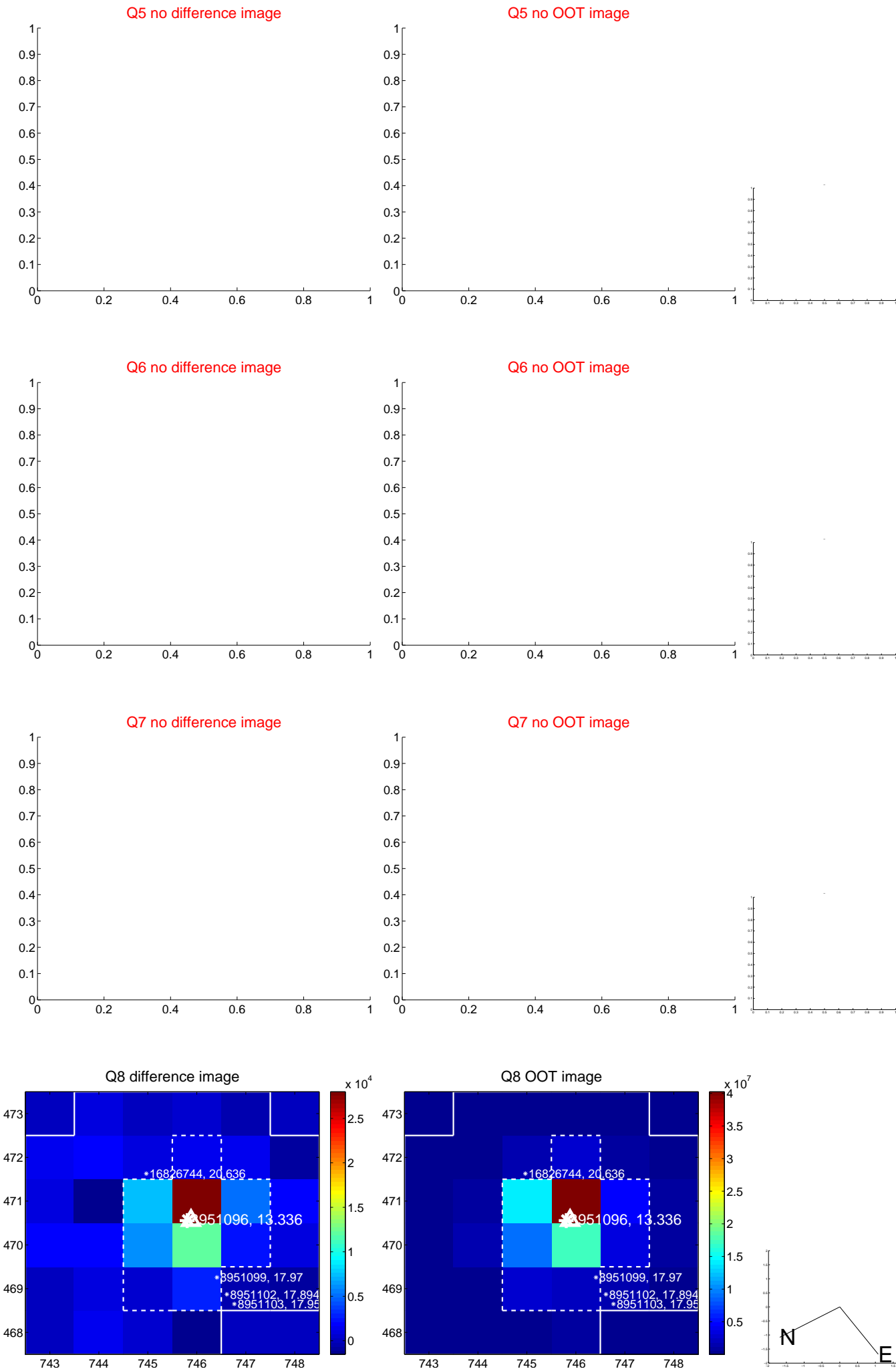
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



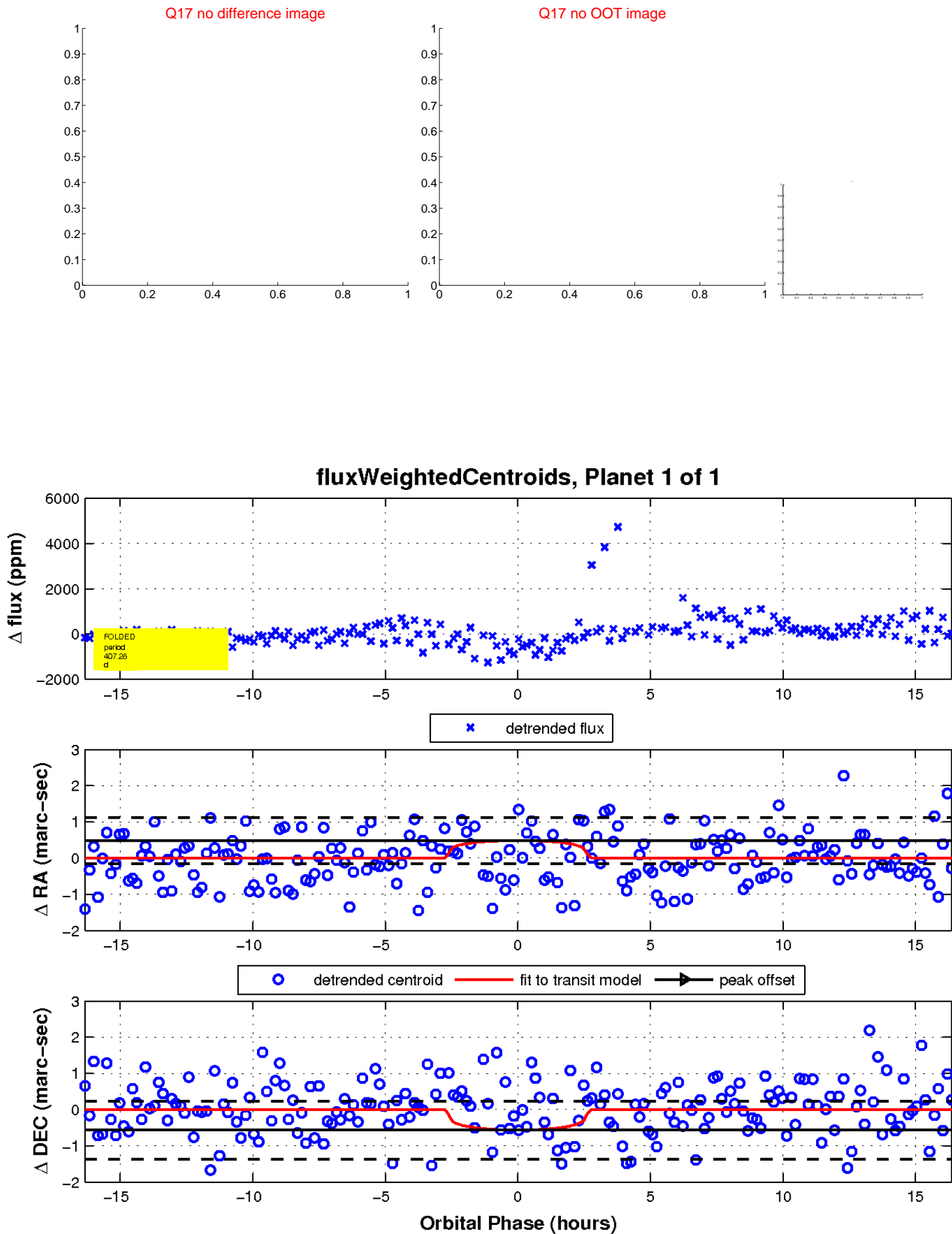
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

