

# KIC 007187184

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007187184-01	OBS	No	568.949674	301.107530	169.7	17.535	10.1	10.1	0.99	6127	1.49	0.69

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007187184-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

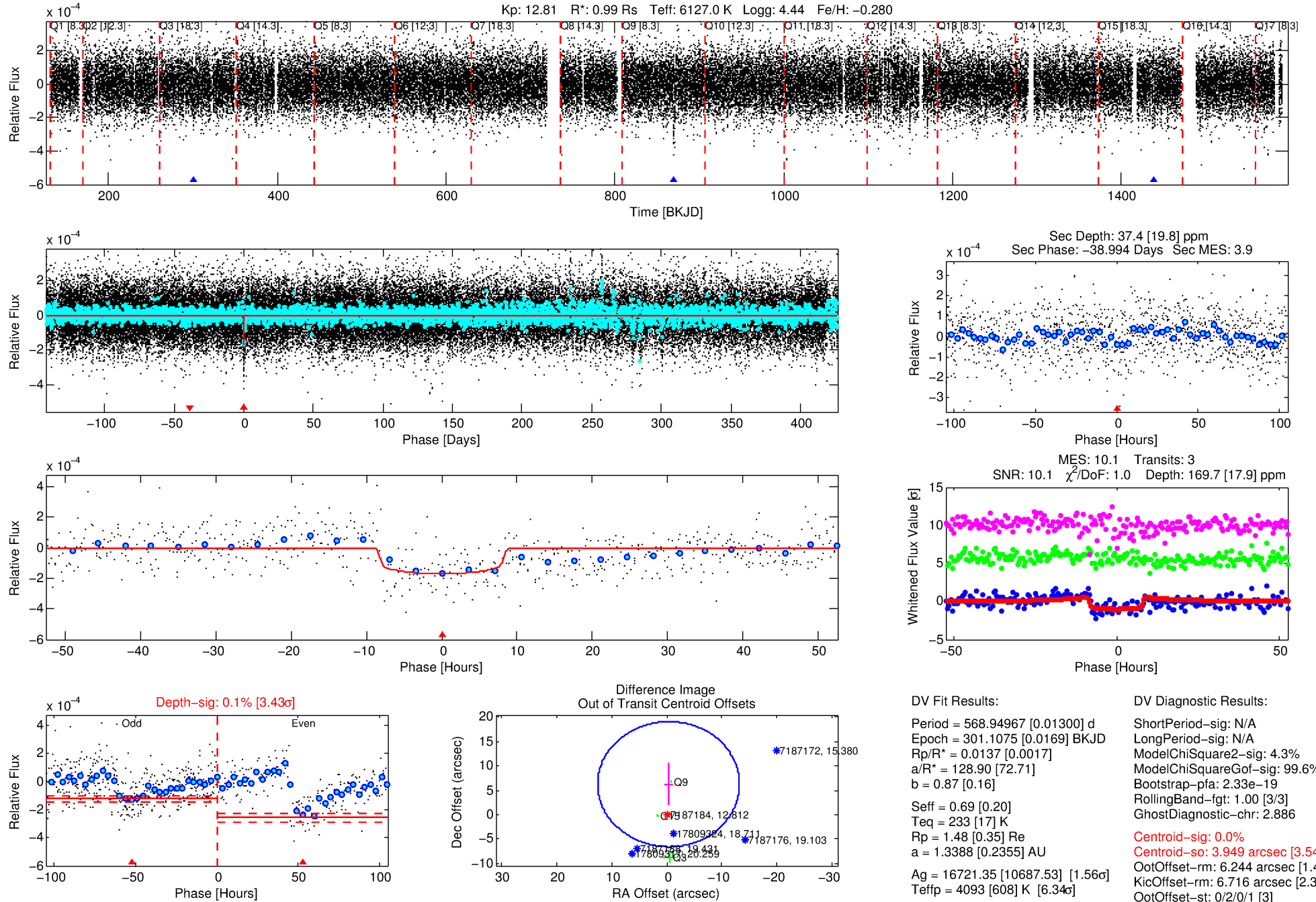
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007187184-01

No Significant Match Found

# DV One-Page Summary

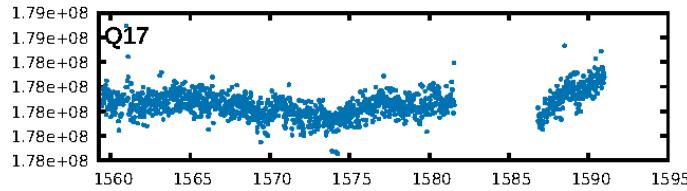
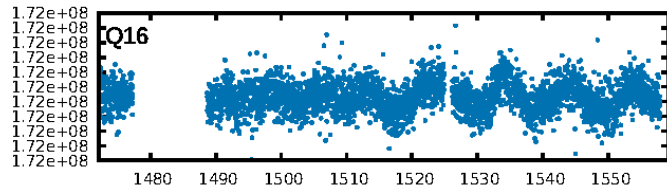
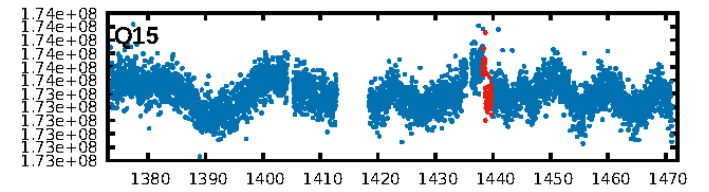
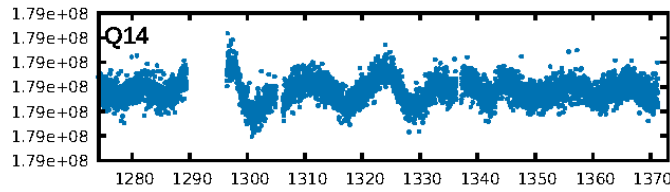
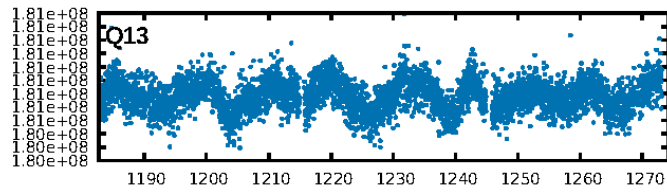
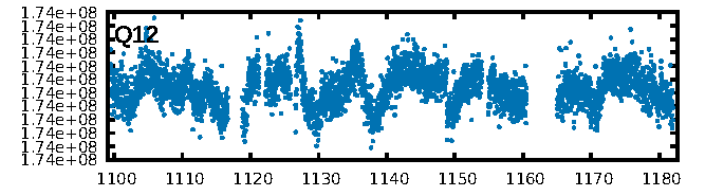
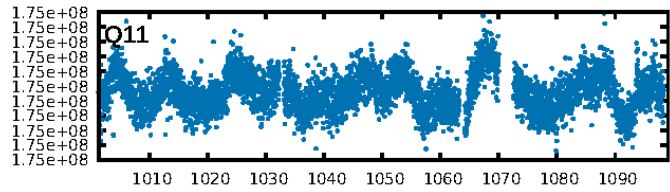
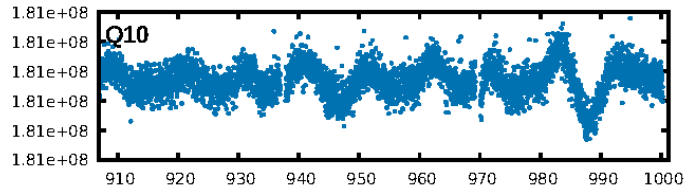
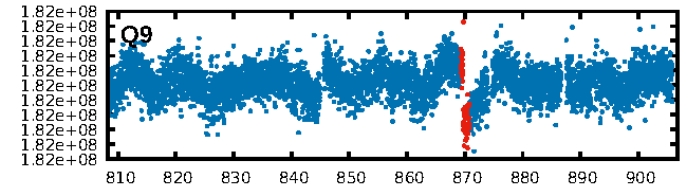
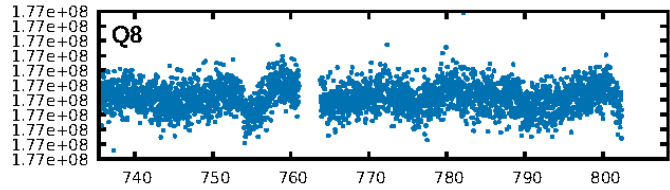
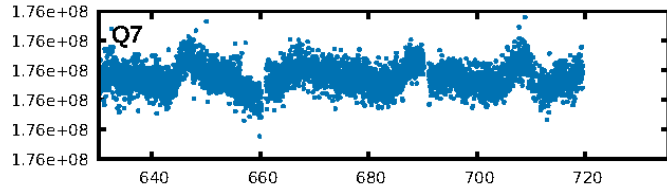
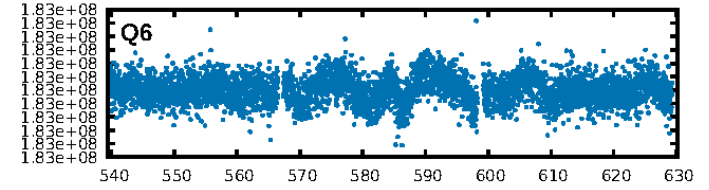
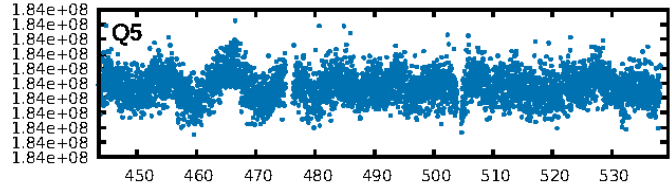
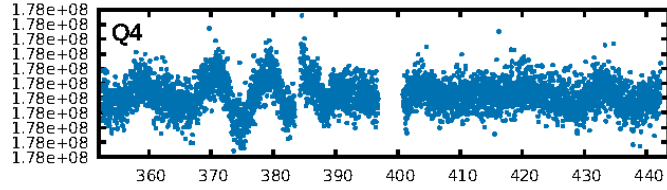
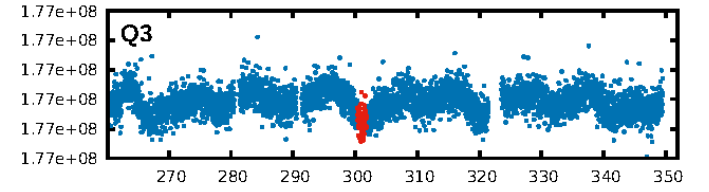
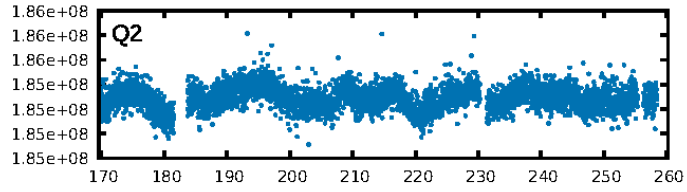
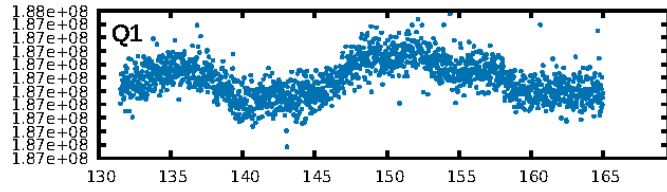
KIC: 7187184 Candidate: 1 of 1 Period: 568.950 d



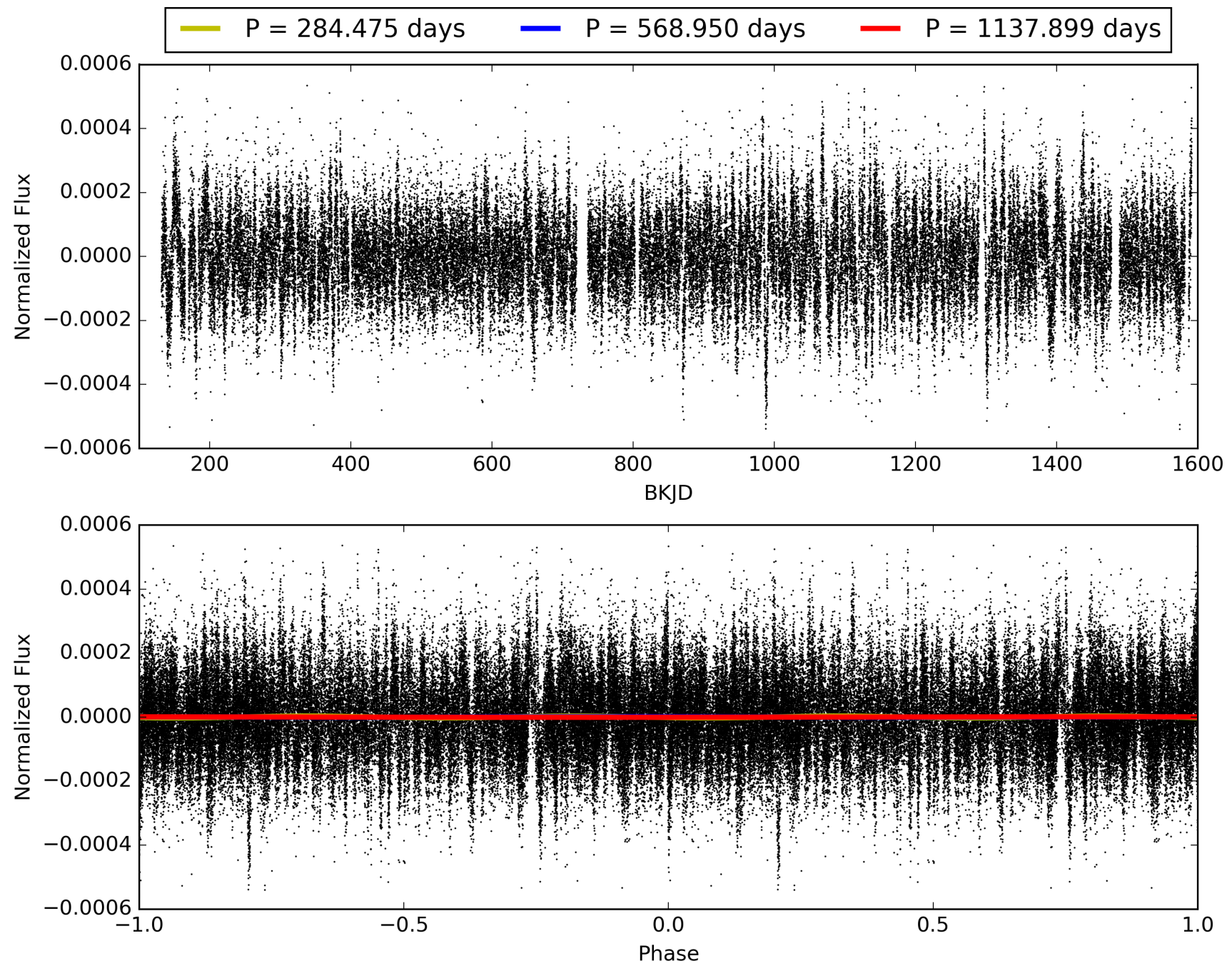
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:18:52 Z

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

## TCE 007187184-01, PDC Light Curves

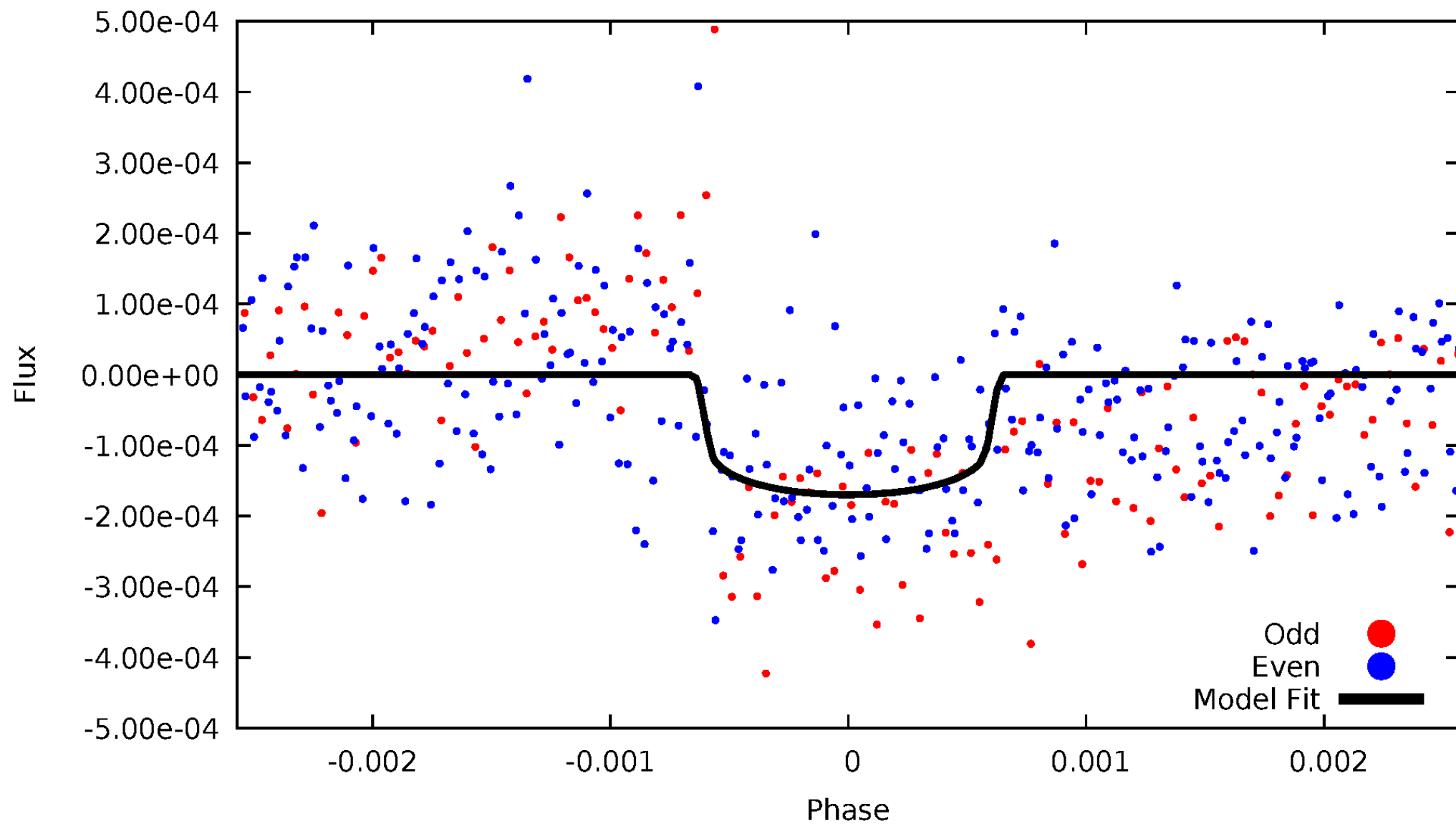


TCE 007187184-01



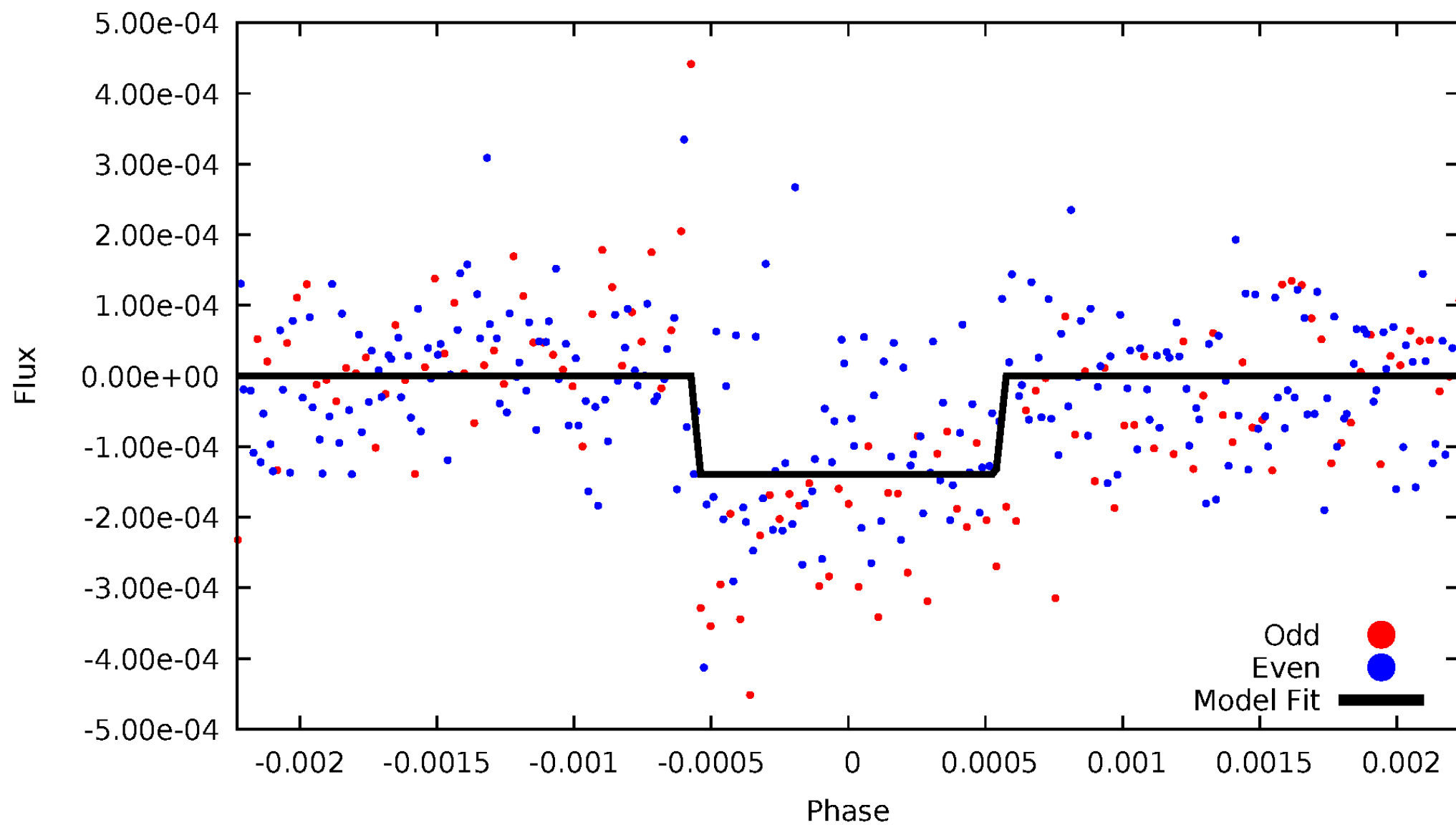
# DV Odd/Even

TCE 007187184-01



# ALT Odd/Even

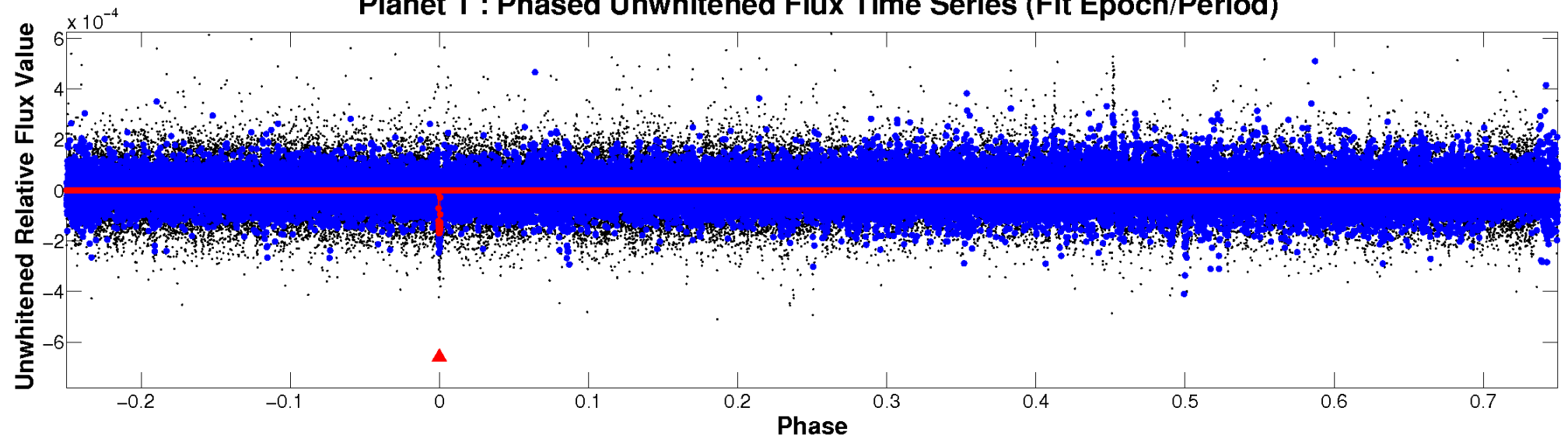
TCE 007187184-01



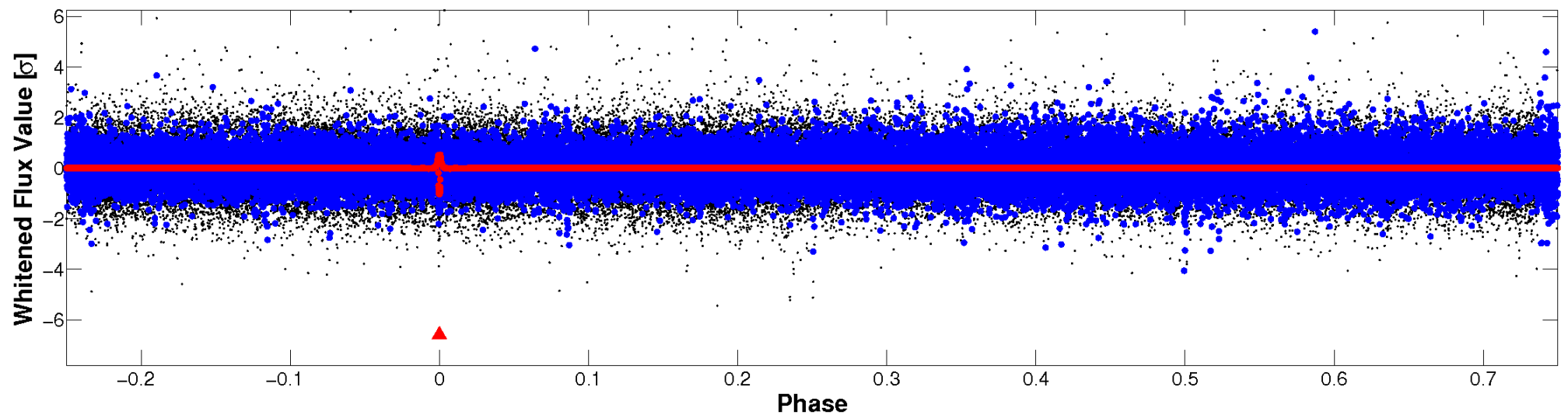


# Non-Whitened Vs. Whitened Light Curve

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

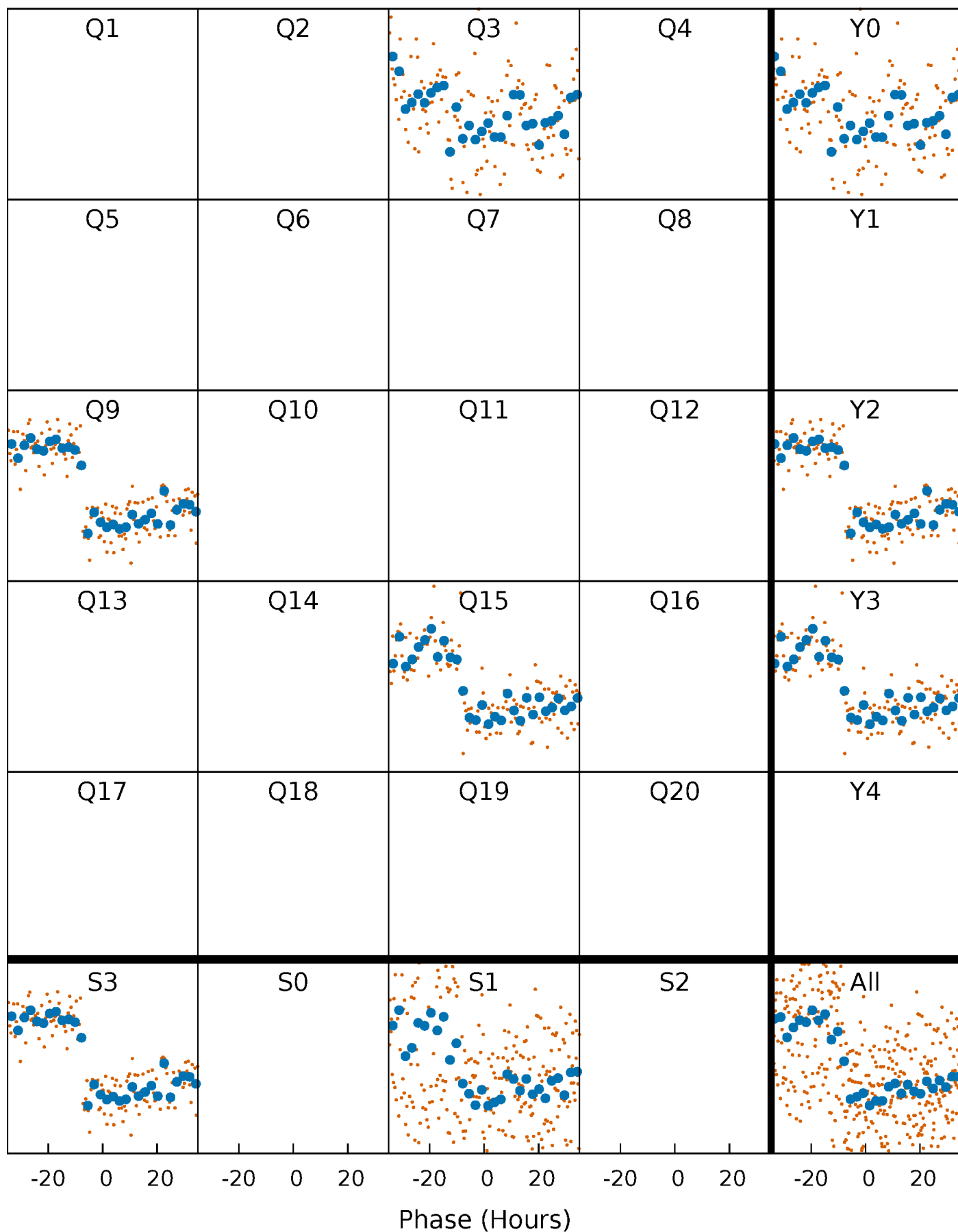


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

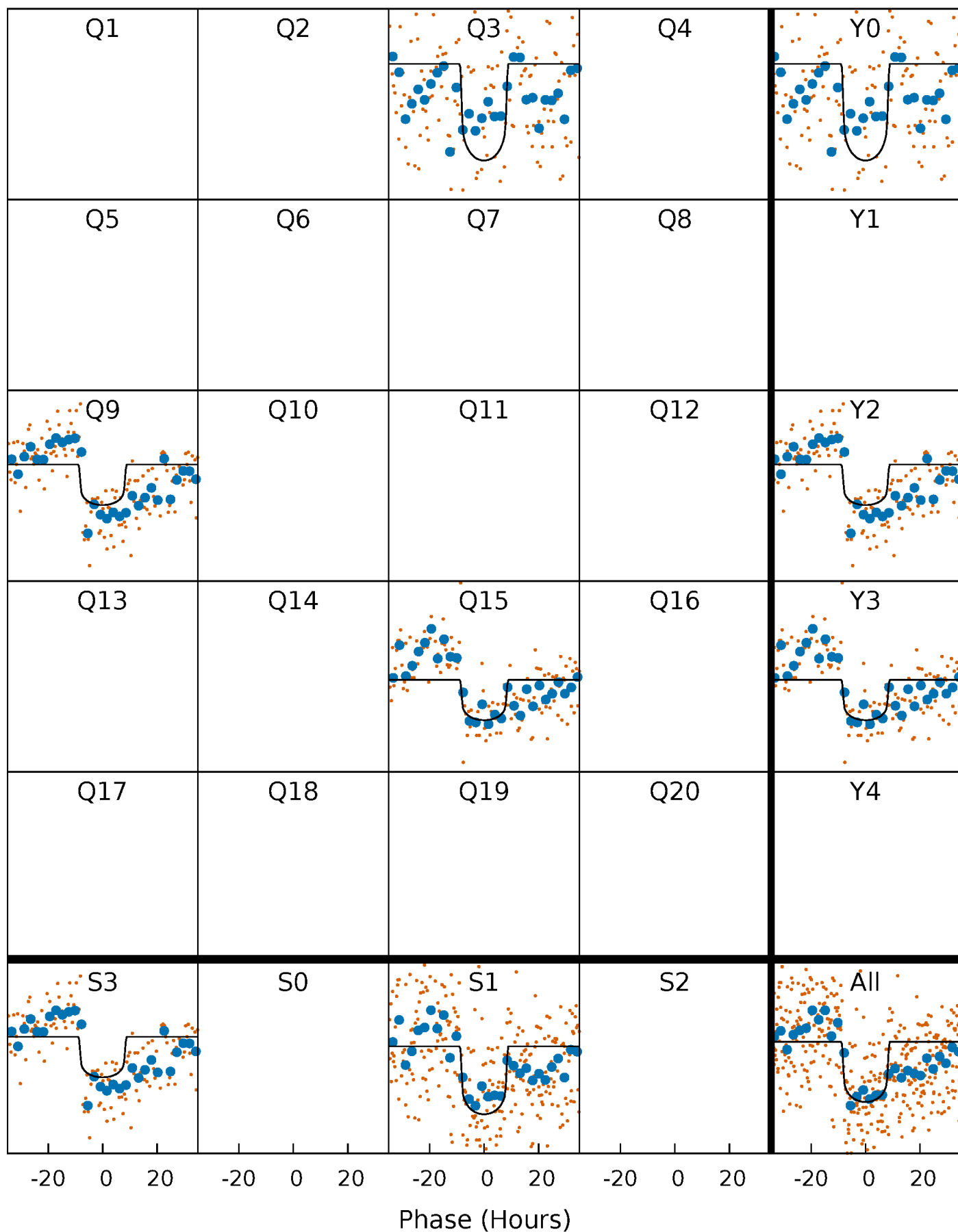
TCE 007187184-01 P=568.949674 Days  $T_0=301.107530$  (BKJD)





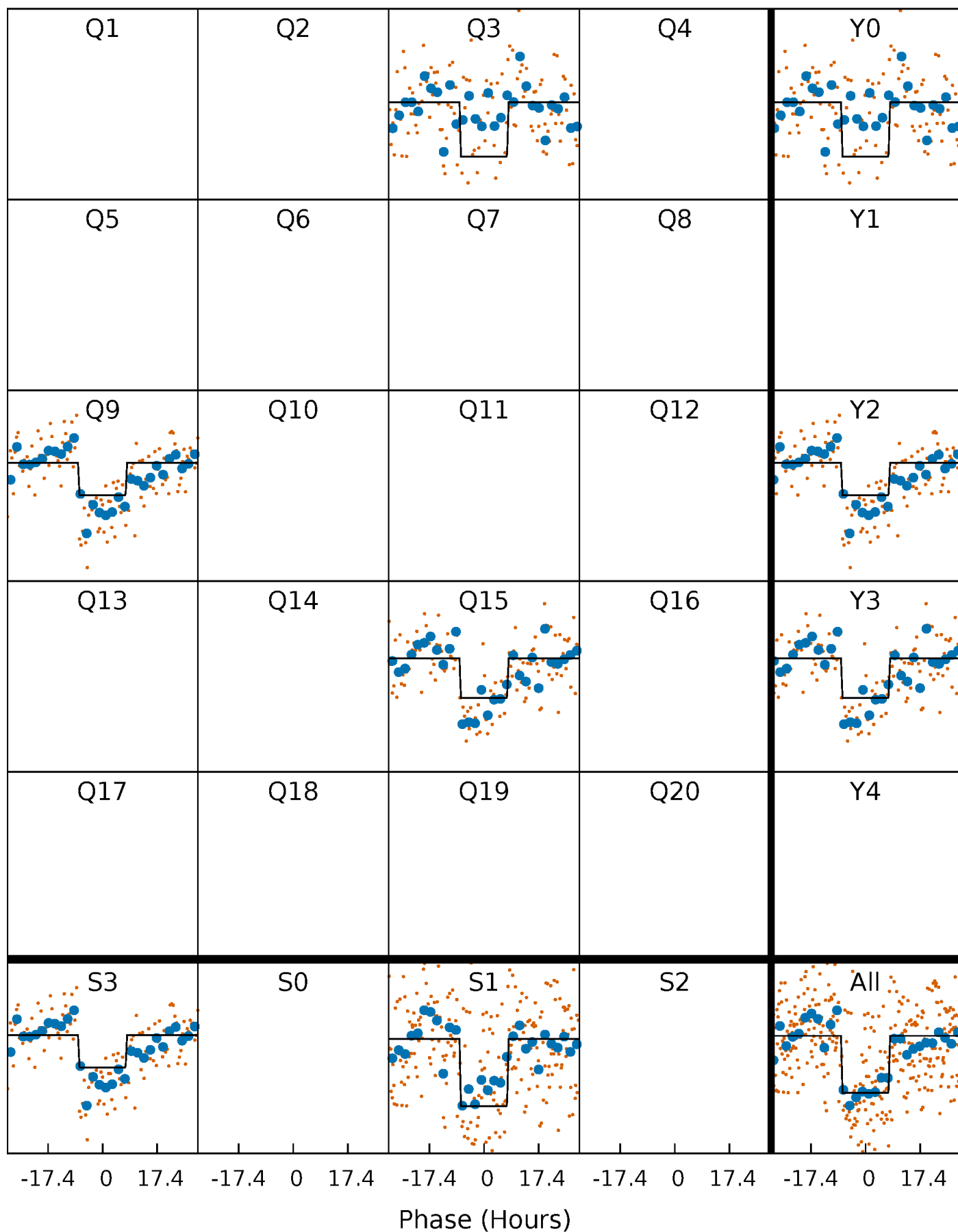
# DV Quarter-Phased Transit Curves

TCE 007187184-01 P=568.949674 Days  $T_0=301.107530$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

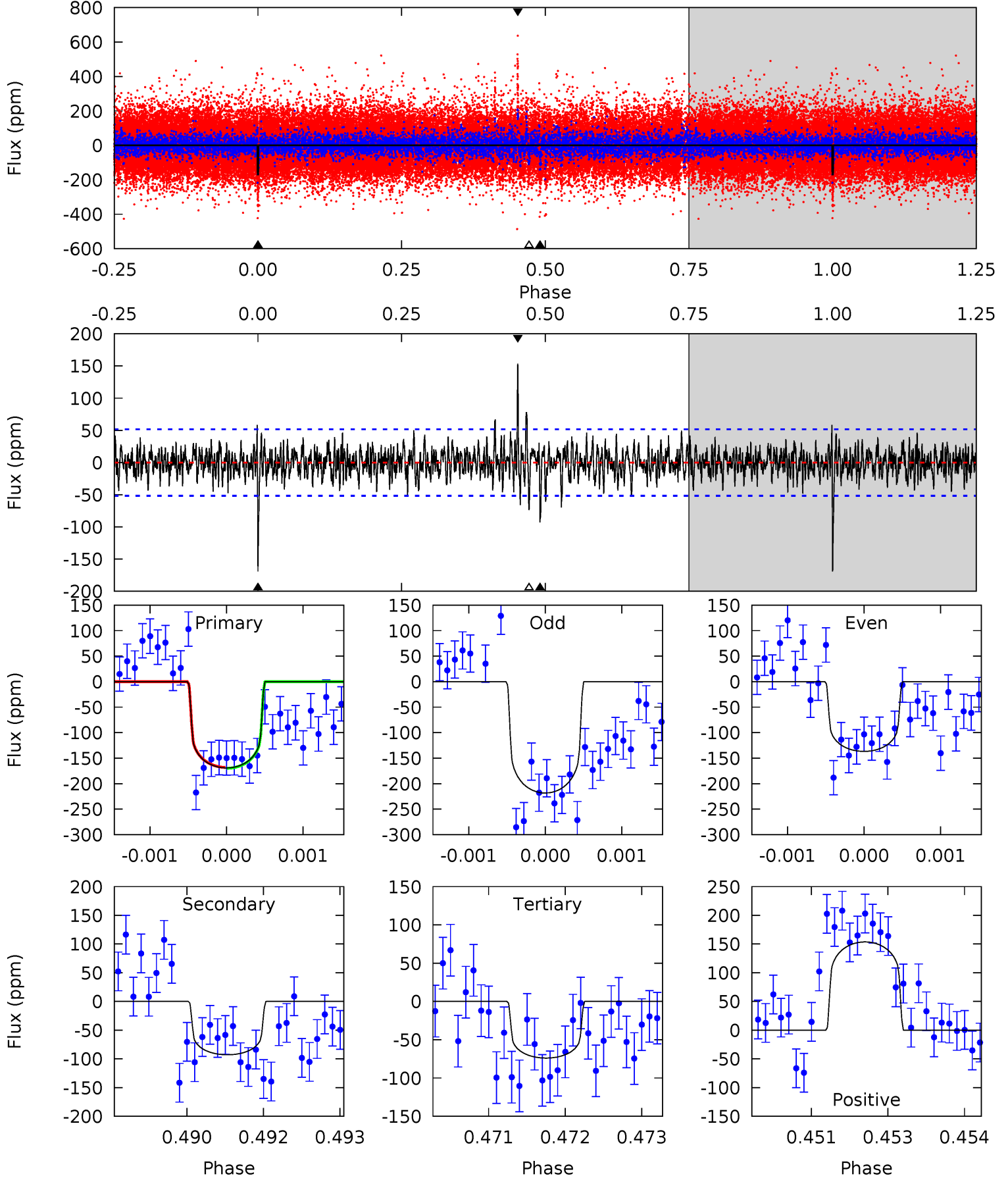
TCE 007187184-01 P=568.924800 Days  $T_0=301.139167$  (BKJD)



# DV Model-Shift Uniqueness Test

007187184-01, P = 568.949674 Days, E = 301.107530 Days

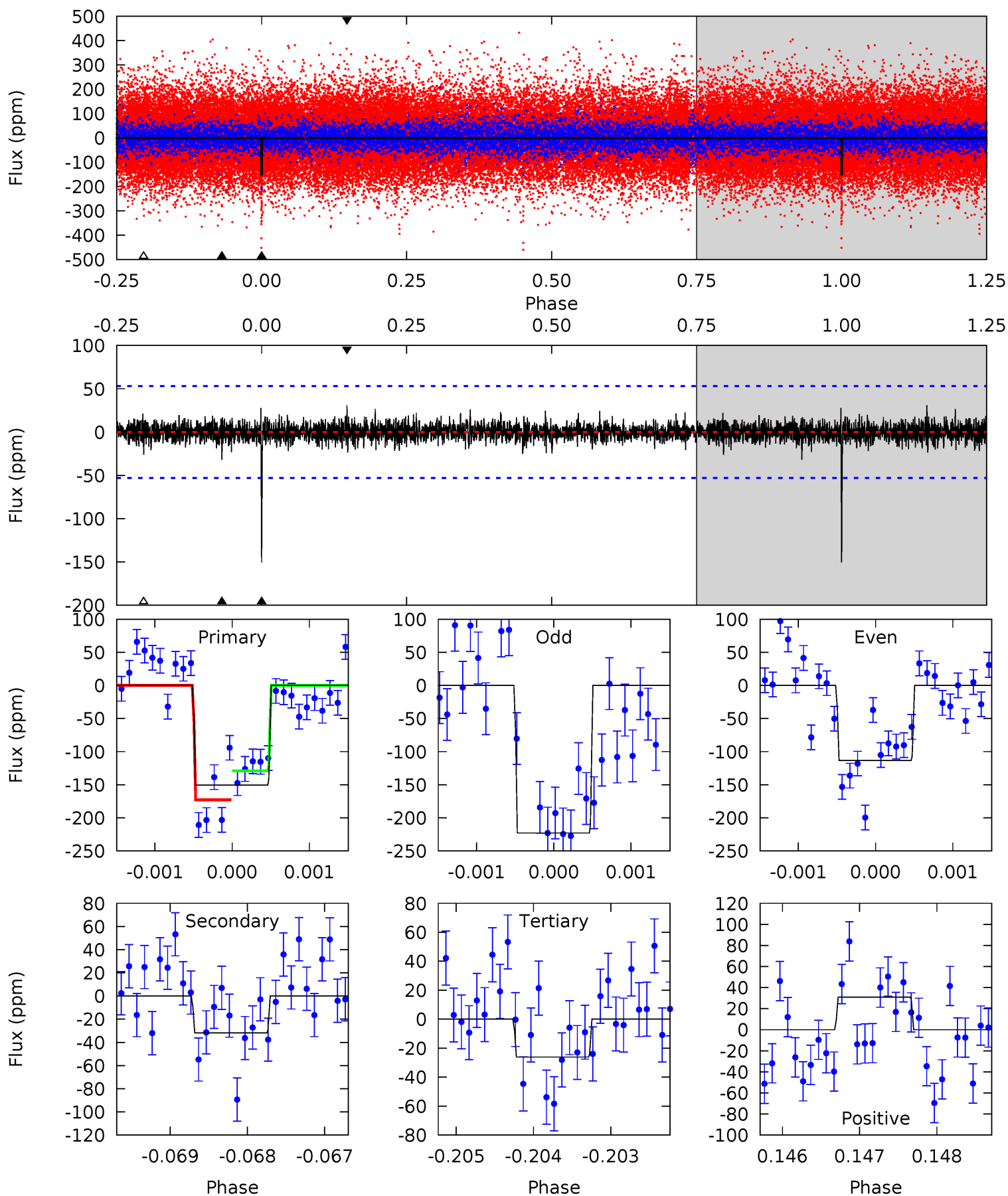
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	9.69	7.71	16.0	5.40	3.22	1.90	9.92	1.61	1.97	-6.34	4.01	0.98	0.48	0.09



# Alt Model-Shift Uniqueness Test

007187184-01, P = 568.924800 Days, E = 301.139167 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
15.4	3.26	2.67	3.15	5.43	3.25	0.67	12.7	12.2	0.59	0.11	5.29	0.81	0.17	2.24



### Stellar Parameters For KIC 007187184

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6127^{+164}_{-183}$	$4.439^{+0.073}_{-0.147}$	$-0.280^{+0.250}_{-0.350}$	$0.993^{+0.201}_{-0.108}$	$0.987^{+0.118}_{-0.118}$	$1.420^{+0.466}_{-0.583}$
	+3%/-3%	+2%/-3%	+89%/-125%	+20%/-11%	+12%/-12%	+33%/-41%
Source	PHO1	FLK73	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 007187184-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-93 \pm 10$	$1.52^{+0.24}_{-0.21}$	$329^{+18}_{-14}$	$5195^{+360}_{-297}$	$39482^{+14811}_{-10056}$
Alt.	$-32 \pm 10$	$1.30^{+0.22}_{-0.21}$	$328^{+17}_{-13}$	$4452^{+369}_{-386}$	$18354^{+9625}_{-6970}$

$T_{max}$  = 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

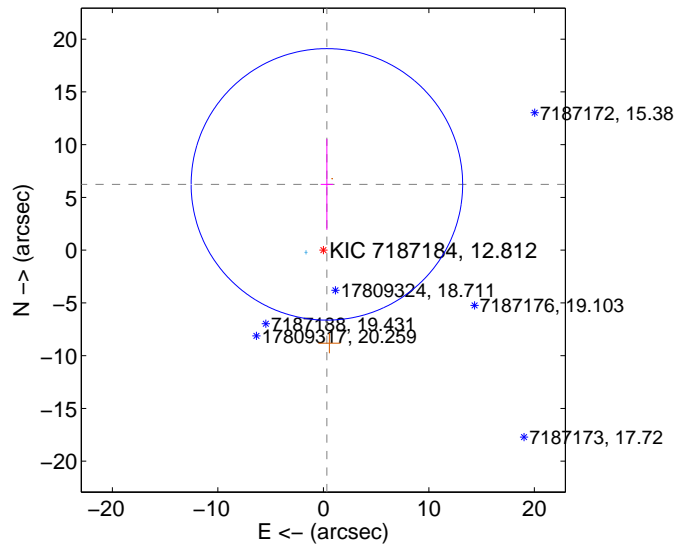
Supplemental centroid analysis for 007187184-01. Kepler magnitude: 12.81. Transit SNR 10.07

There are 1 quarters with good PRF difference image offsets

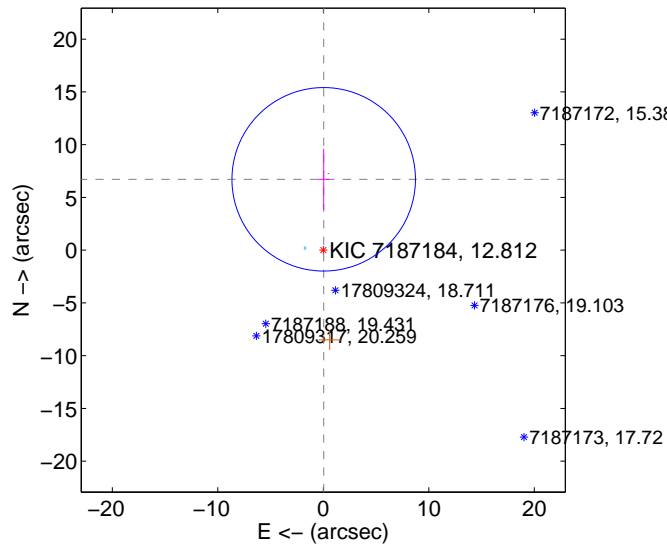
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$6.244 \pm 4.288$	1.46	$-0.334 \pm 0.584$	$6.235 \pm 4.308$
PRF-fit source offset from KIC position	$6.716 \pm 2.898$	2.32	$-0.035 \pm 0.532$	$6.716 \pm 2.897$
photometric centroid source offset	$3.95 \pm 1.11$	3.54	$1.19 \pm 1.11$	$3.76 \pm 1.12$

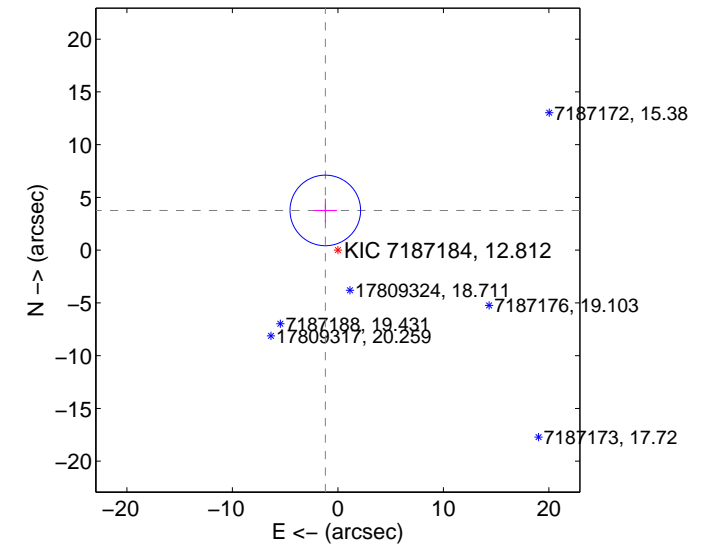
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

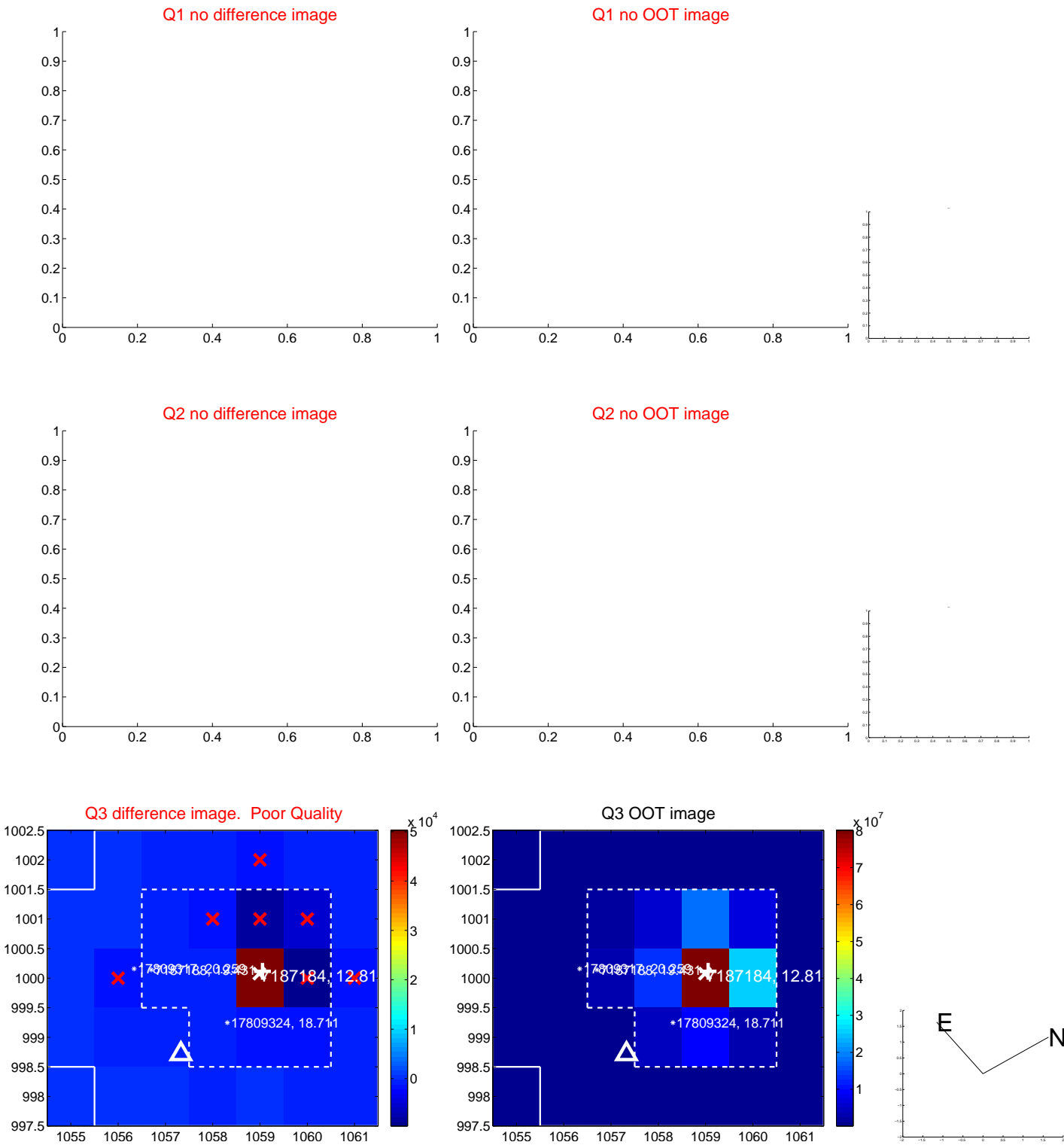


offset from photometric centroids



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.

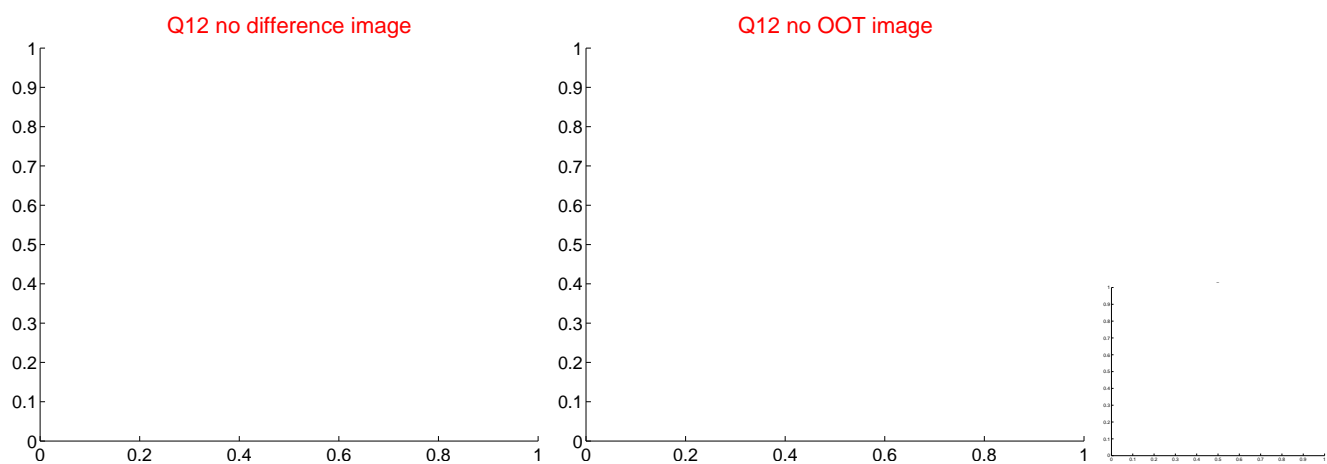
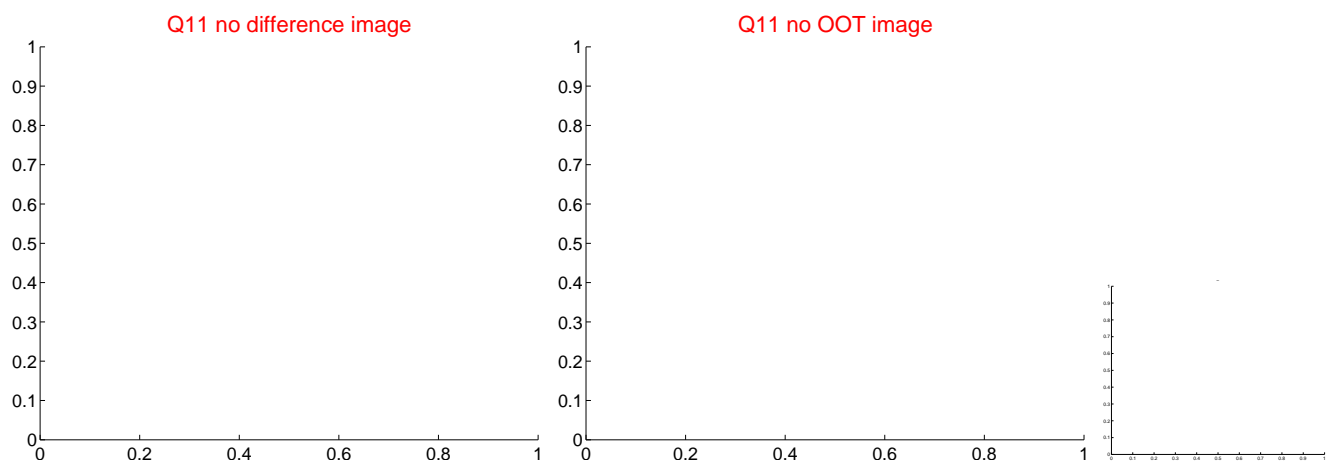
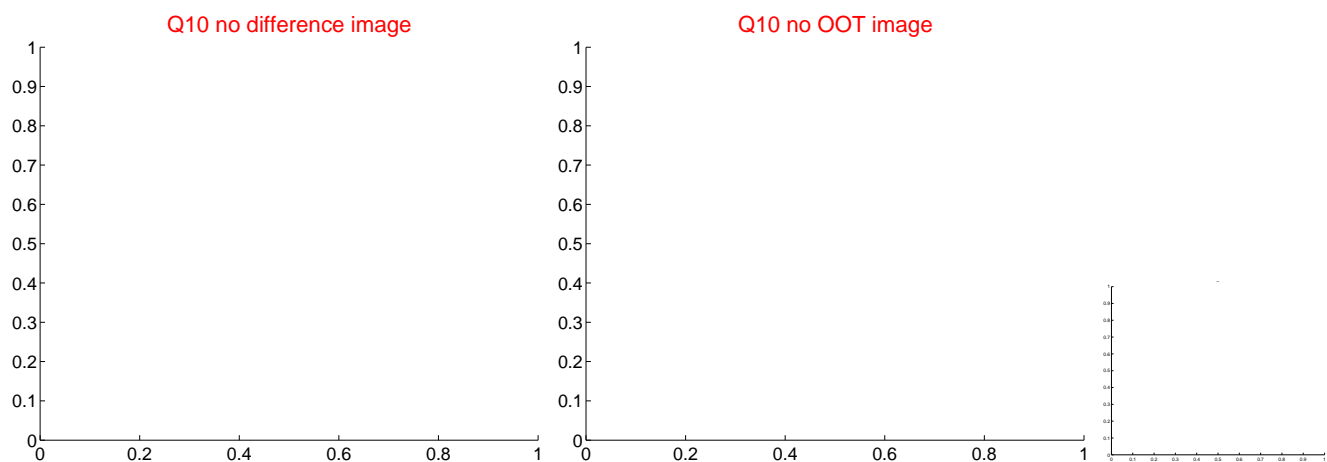
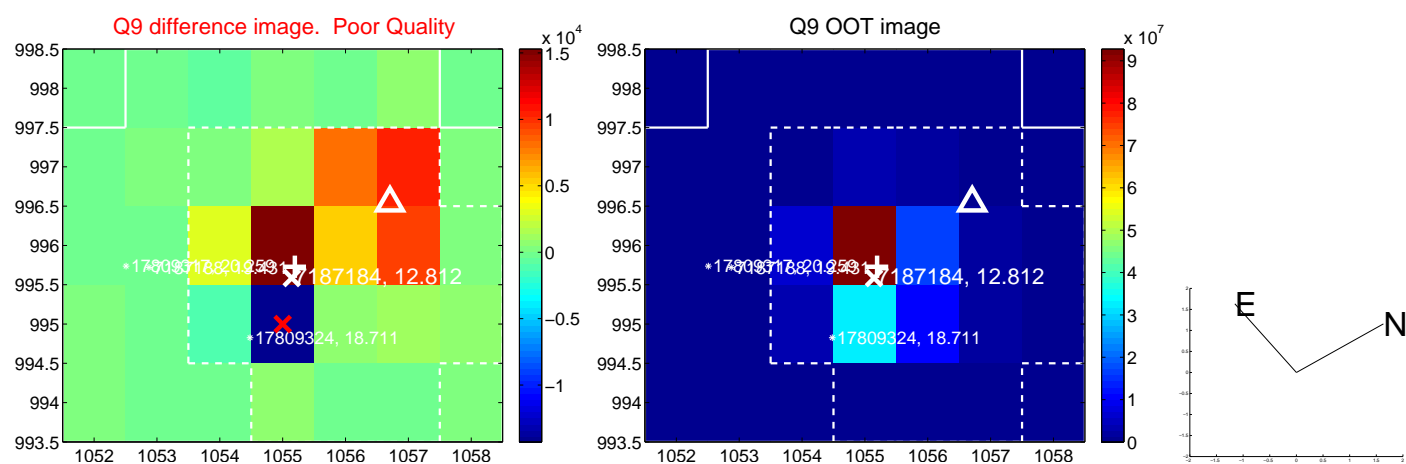




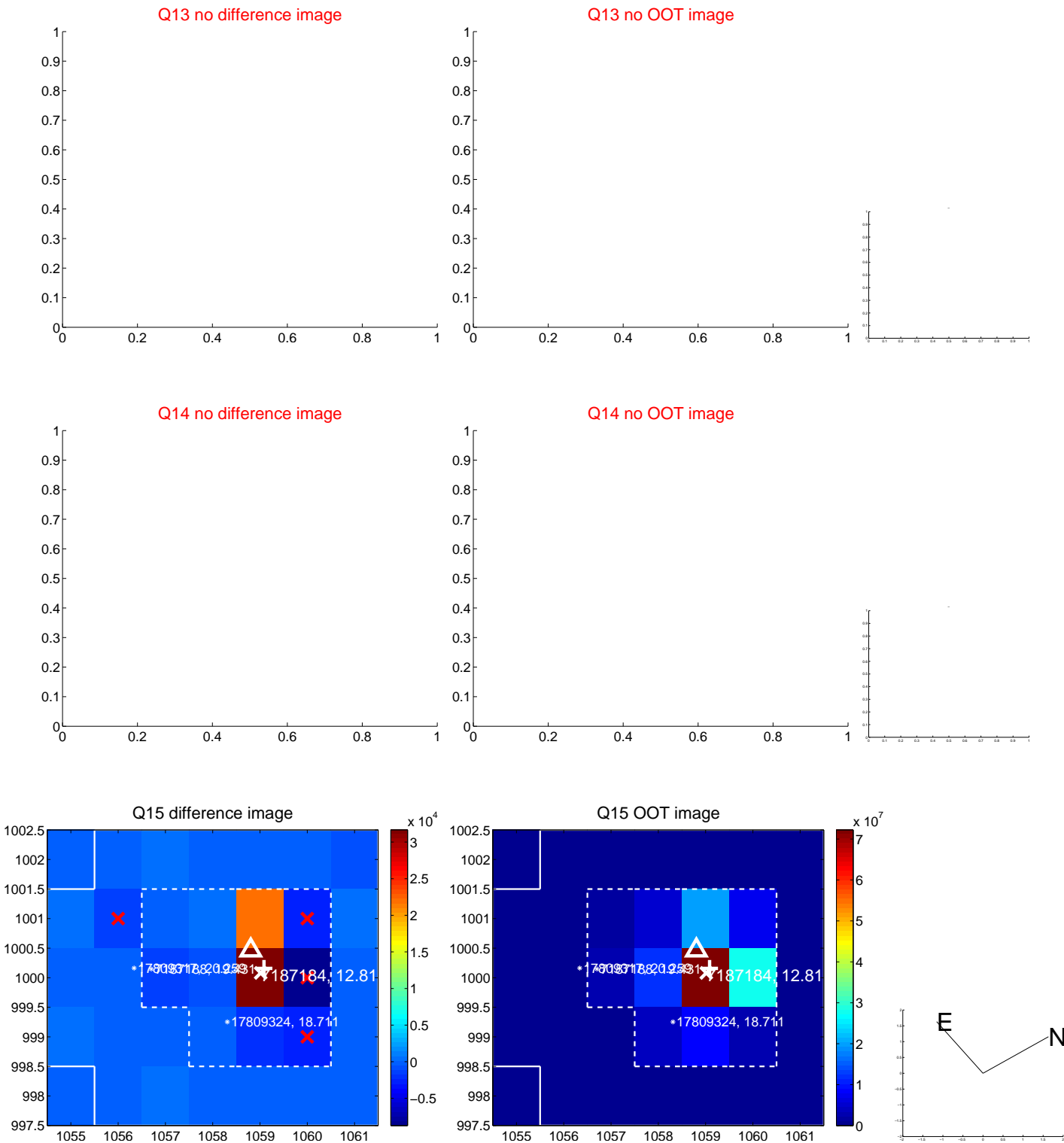
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



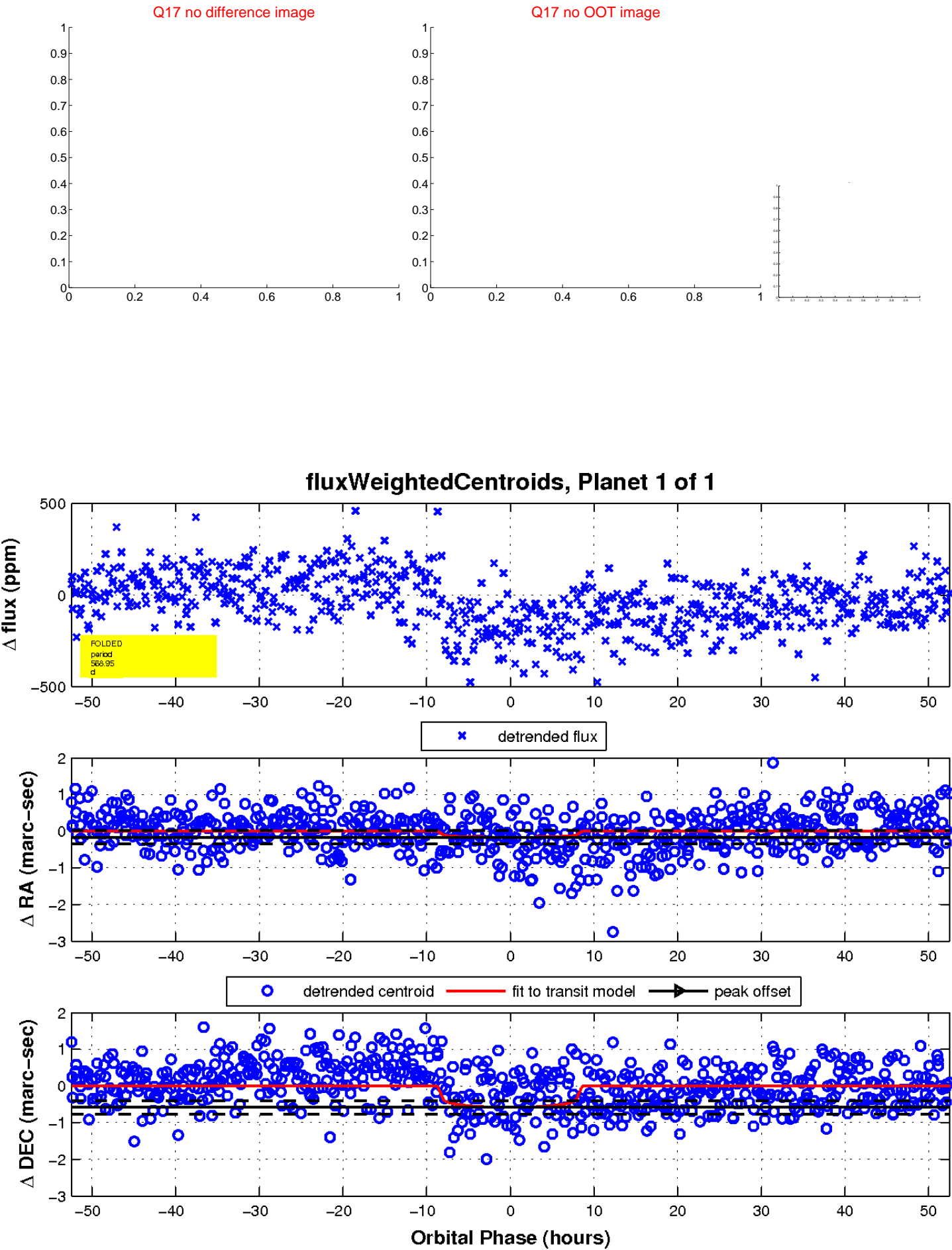
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



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

