

# KIC 008091343

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008091343-01	OBS	No	352.729788	314.221700	161.2	7.300	10.2	5.3	1.93	6014	3.14	4.29

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008091343-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—CENT_NOFITS—HALO_GHOST

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

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

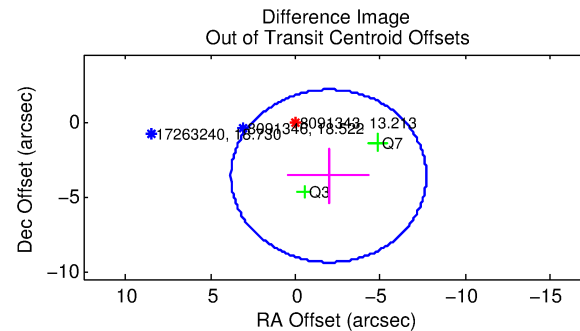
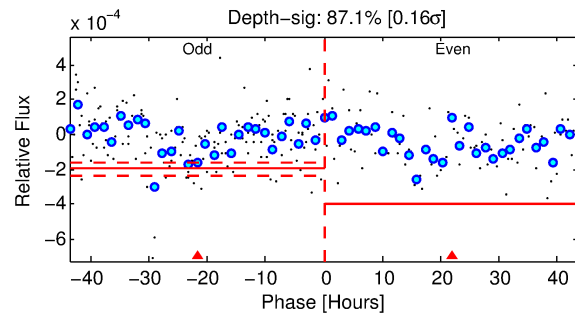
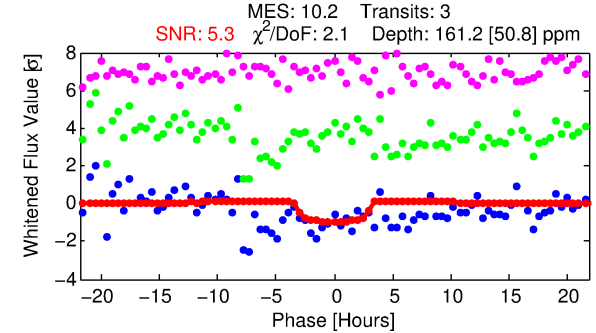
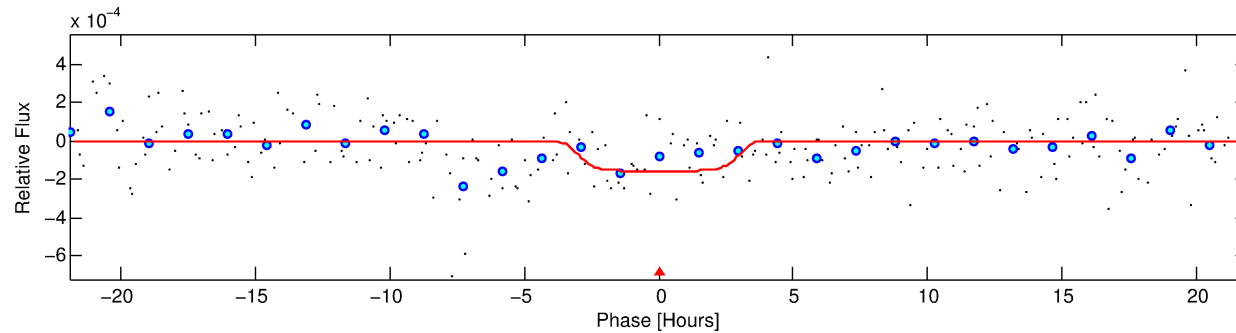
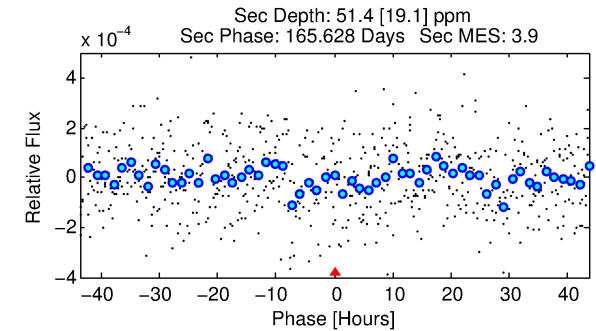
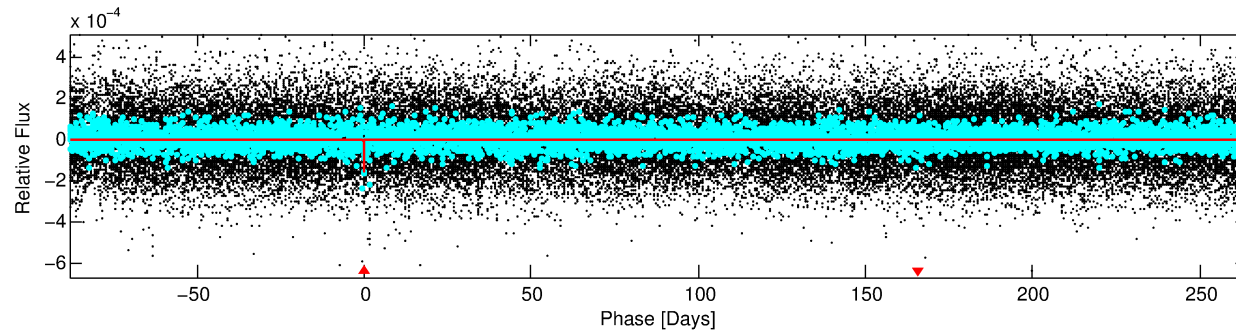
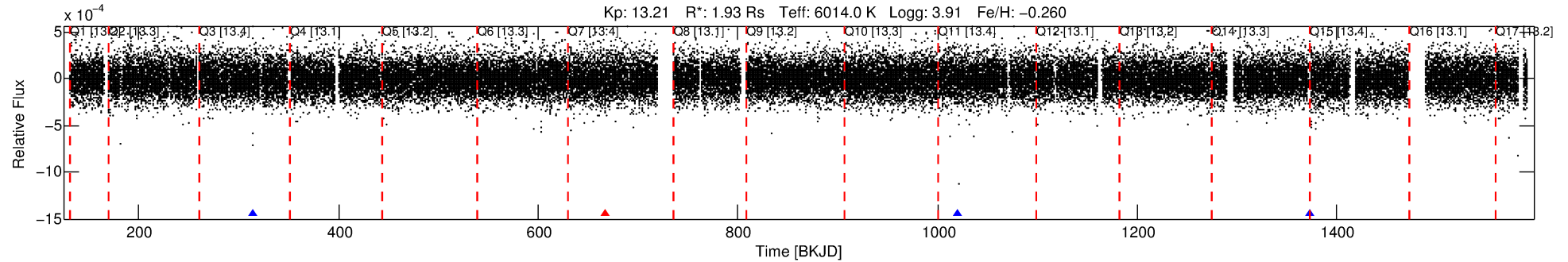
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008091343-01

No Significant Match Found

# DV One-Page Summary

KIC: 8091343 Candidate: 1 of 1 Period: 352.730 d



## DV Fit Results:

Period = 352.72979 [0.02000] d  
Epoch = 314.2217 [0.0258] BKJD  
Rp/R\* = 0.0149 [0.0059]  
a/R\* = 119.05 [341.82]  
b = 0.96 [0.23]  
Seff = 4.29 [2.26]  
Teq = 367 [48] K  
Rp = 3.14 [1.65] Re  
a = 1.0100 [0.3276] AU  
Ag = 2929.82 [2985.83] [0.98σ]  
Teffp = 4174 [927] K [4.10σ]

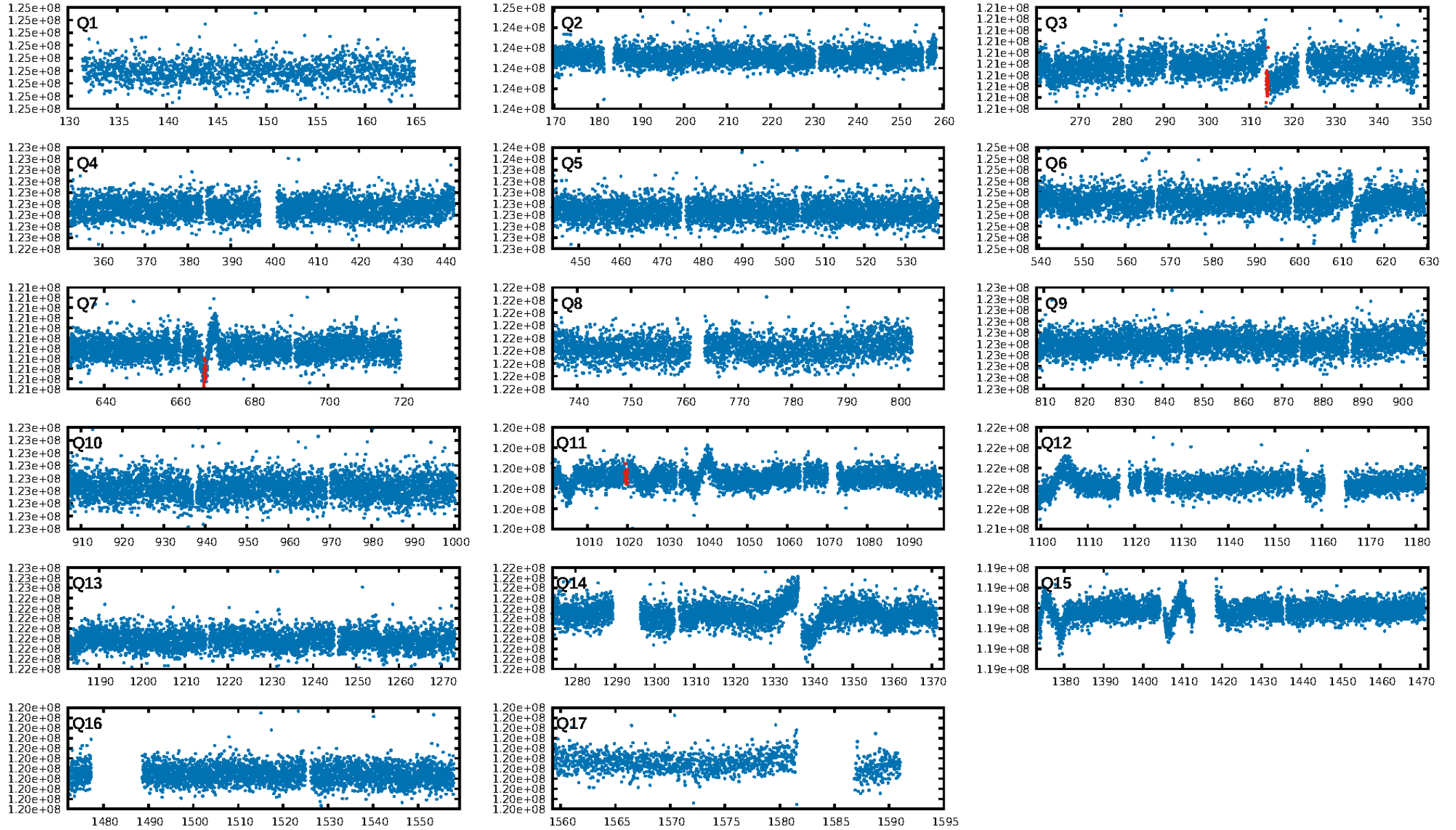
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.2%  
ModelChiSquareGof-sig: 33.2%  
Bootstrap-pfa: 1.45e-19  
RollingBand-fgt: 0.67 [2/3]  
GhostDiagnostic-chr: 0.04823  
Centroid-sig: 5.3%  
Centroid-so: 4.231 arcsec [1.41σ]  
OotOffset-rm: 4.126 arcsec [2.15σ]  
KicOffset-rm: 4.231 arcsec [2.16σ]  
OotOffset-st: 0/2/0/0 [2]  
KicOffset-st: 0/2/0/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [3/3]

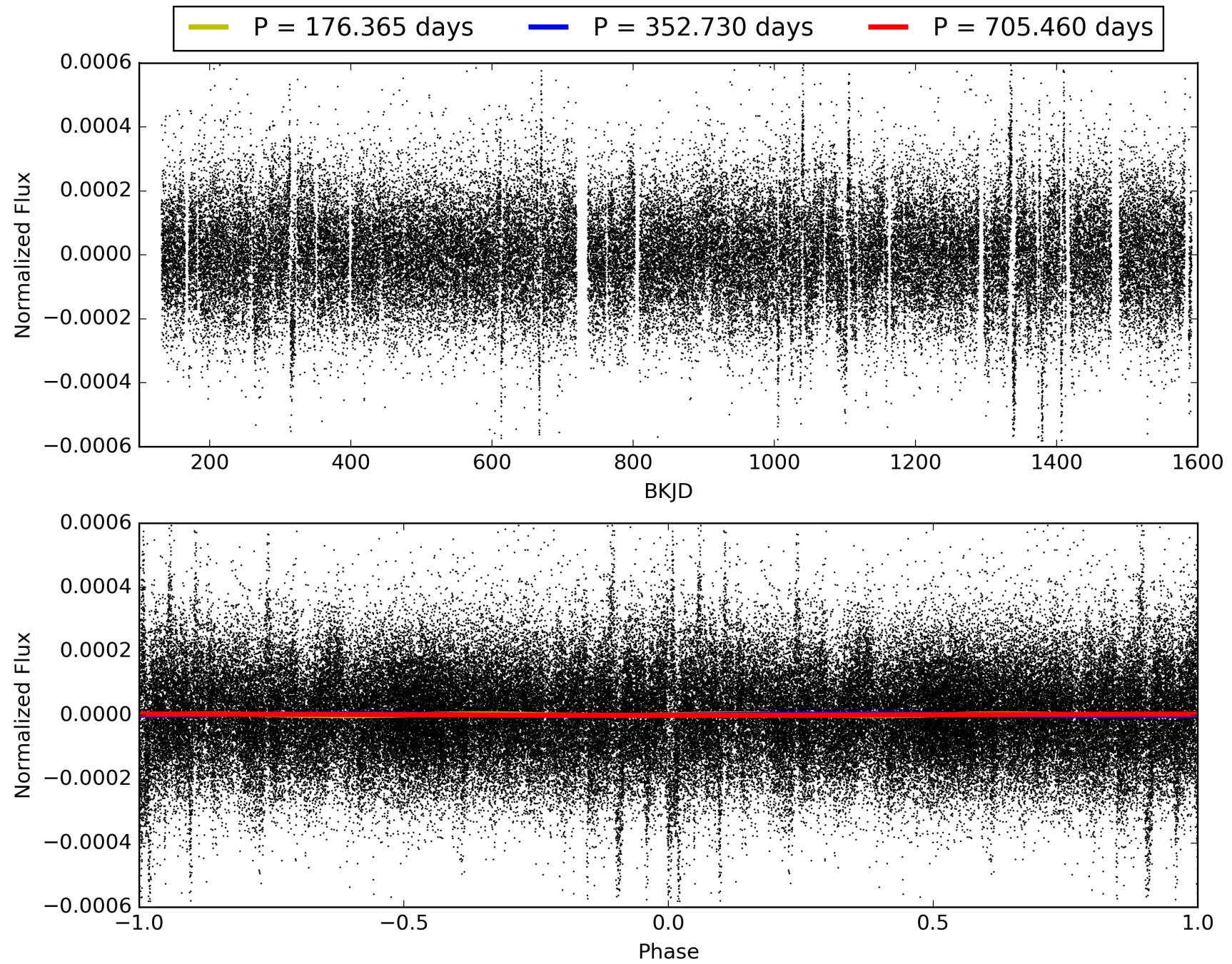
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:11:31 Z

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

# TCE 008091343-01, PDC Light Curves

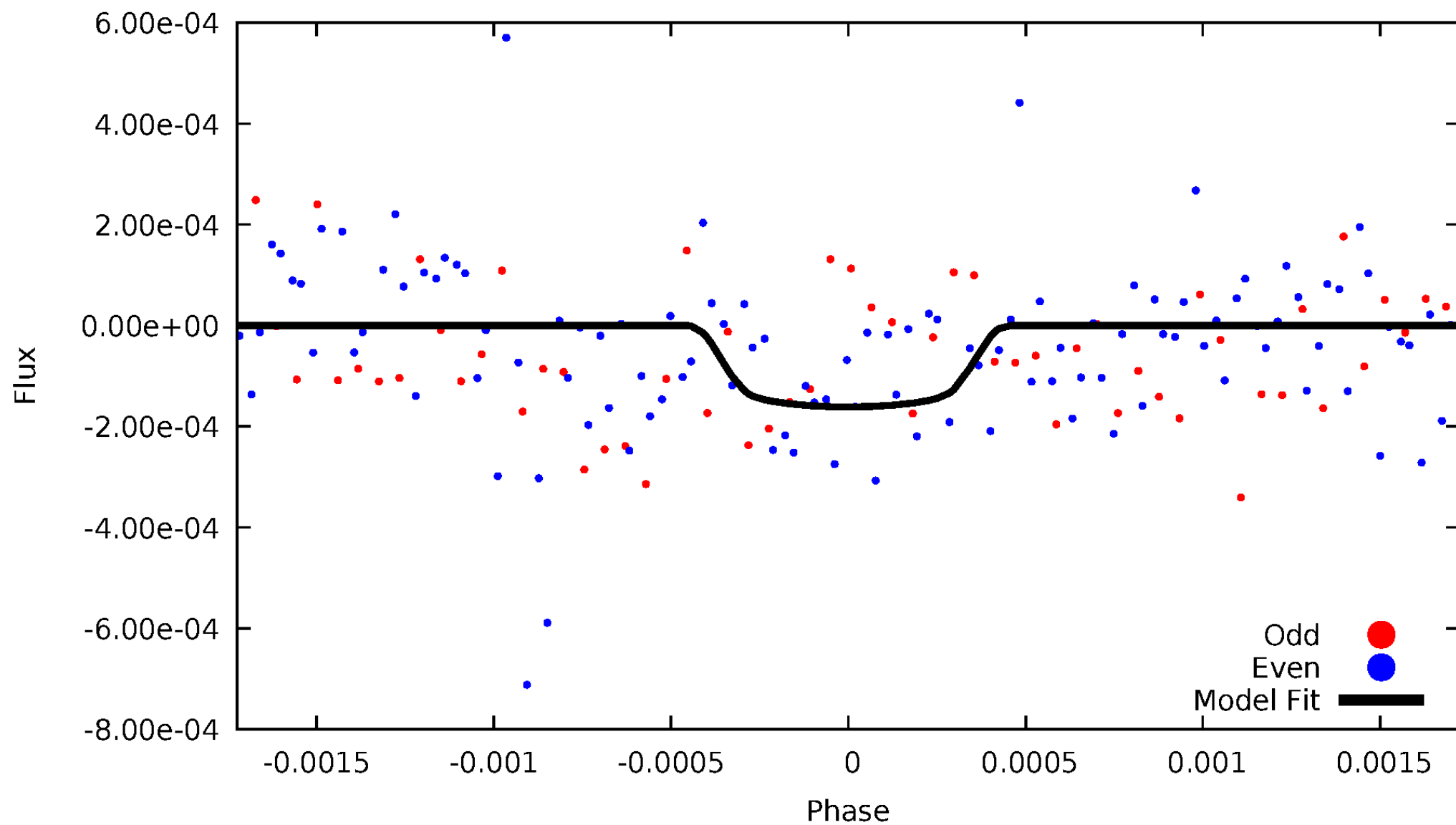


TCE 008091343-01



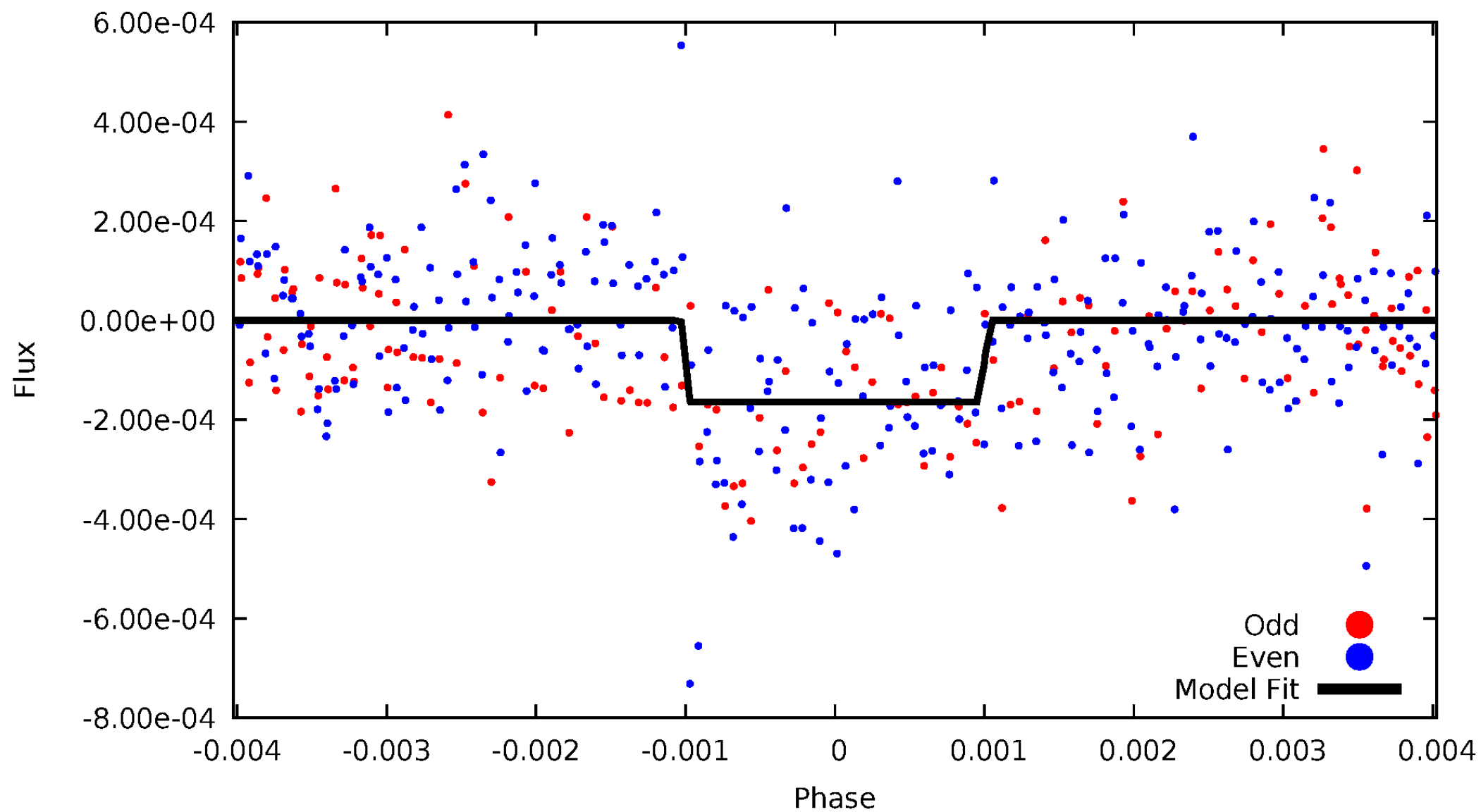
# DV Odd/Even

TCE 008091343-01



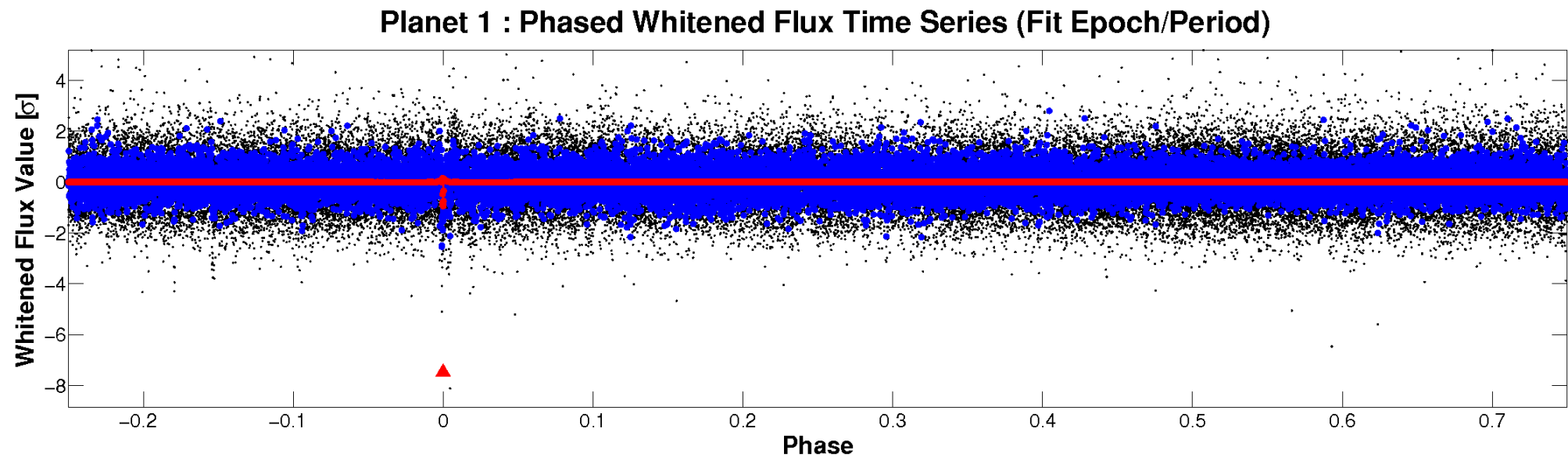
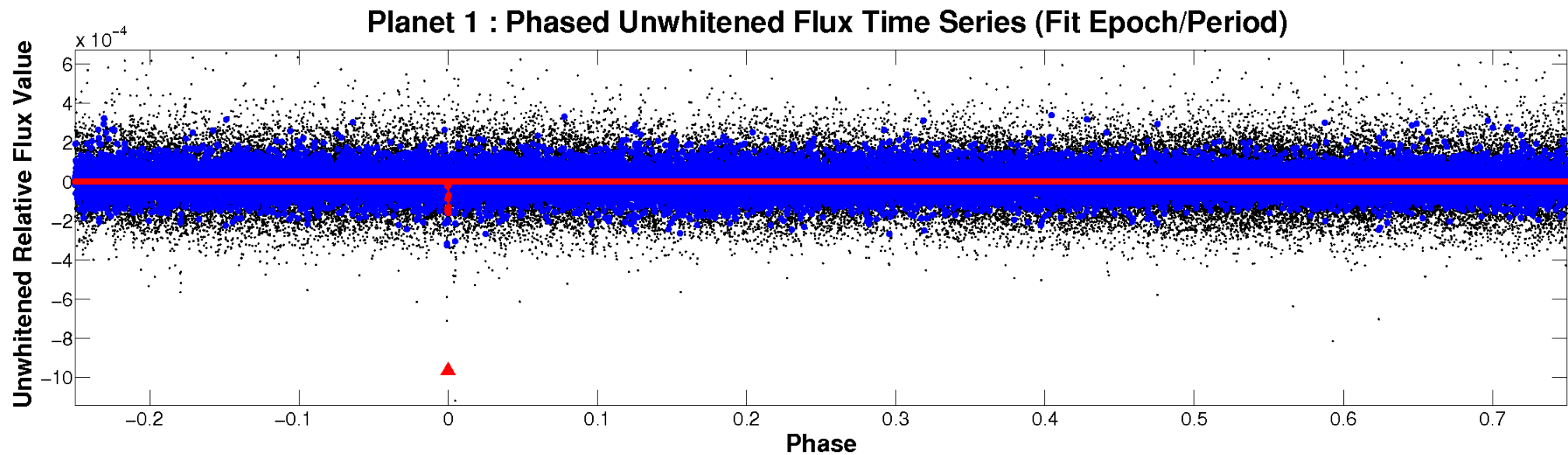
# ALT Odd/Even

TCE 008091343-01





# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

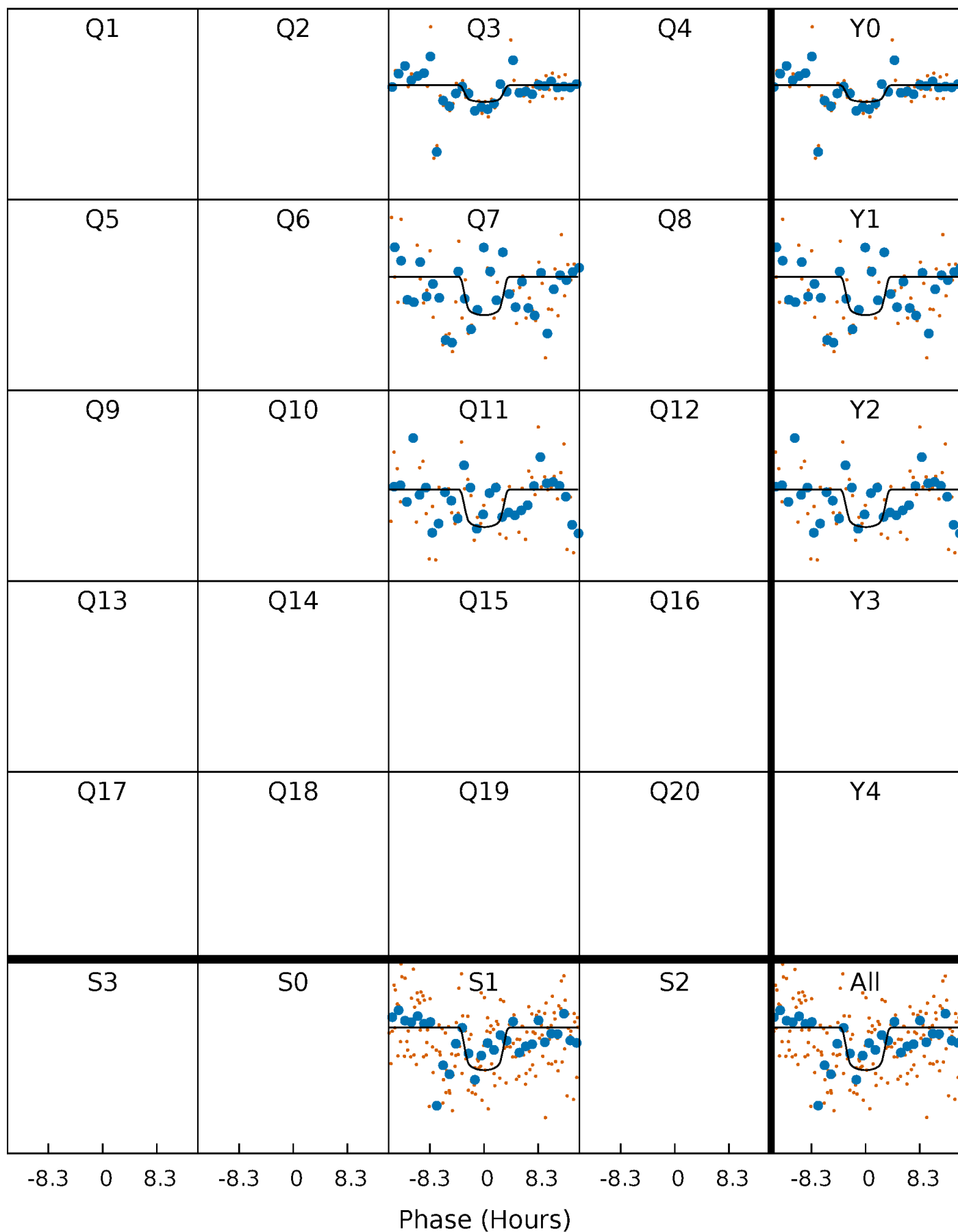
TCE 008091343-01 P=352.729788 Days  $T_0=314.221700$  (BKJD)





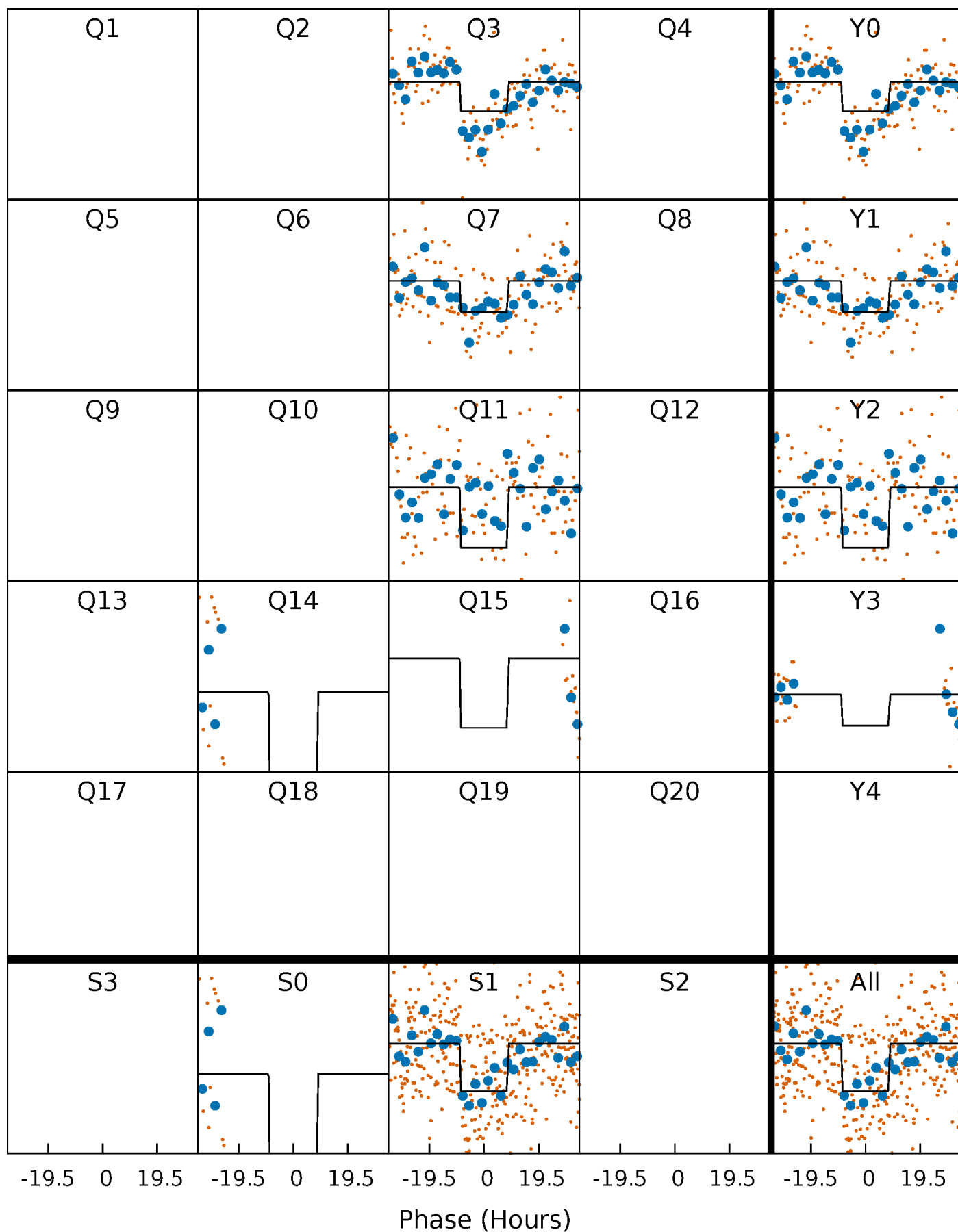
# DV Quarter-Phased Transit Curves

TCE 008091343-01 P=352.729788 Days  $T_0=314.221700$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

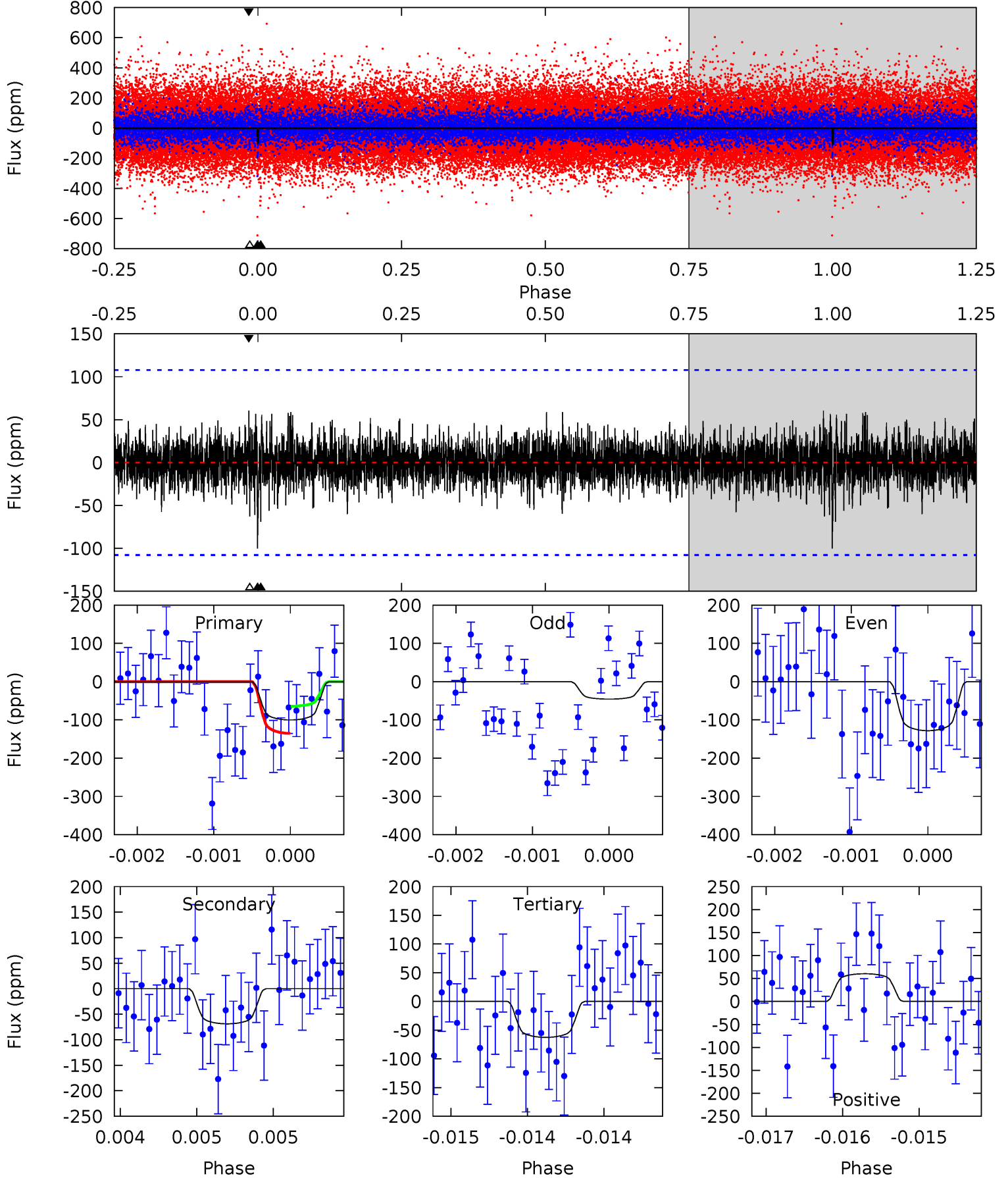
TCE 008091343-01 P=352.703679 Days  $T_0=314.244328$  (BKJD)



# DV Model-Shift Uniqueness Test

008091343-01, P = 352.729788 Days, E = 314.221700 Days

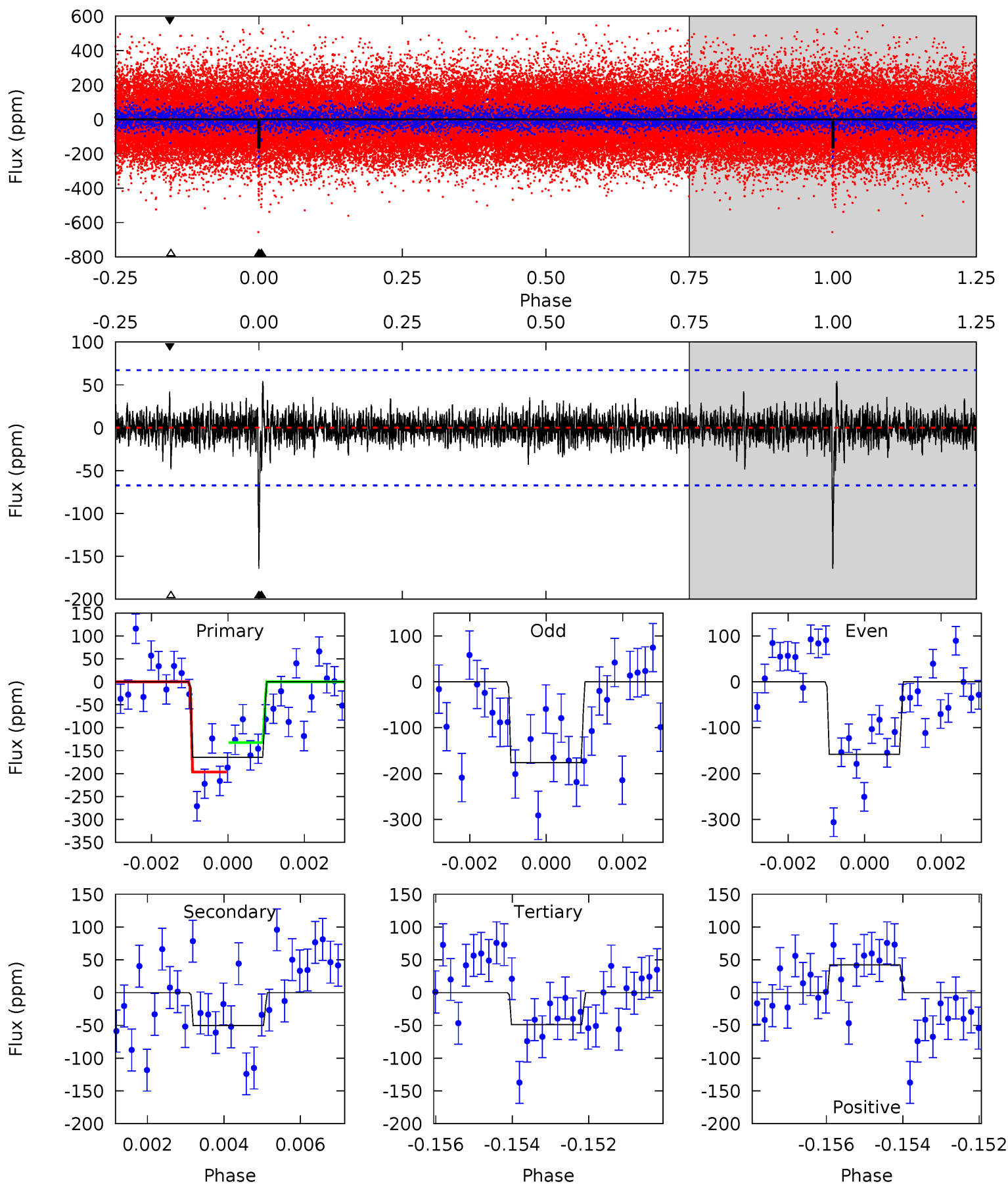
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.09	3.49	3.17	3.06	5.47	3.32	0.86	1.91	2.02	0.32	0.43	2.00	1.42	0.38	1.81



# Alt Model-Shift Uniqueness Test

008091343-01, P = 352.703679 Days, E = 314.244328 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
13.0	3.98	3.86	3.35	5.32	3.08	0.87	9.18	9.68	0.13	0.64	0.67	0.97	0.25	2.56



### Stellar Parameters For KIC 008091343

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6014^{+180}_{-162}$	$3.909^{+0.300}_{-0.100}$	$-0.260^{+0.350}_{-0.250}$	$1.932^{+0.357}_{-0.662}$	$1.103^{+0.190}_{-0.190}$	$0.216^{+0.447}_{-0.068}$
	+3%/-3%	+8%/-3%	+135%/-96%	+18%/-34%	+17%/-17%	+207%/-32%
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 008091343-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-69 \pm 20$	$2.98^{+1.26}_{-1.17}$	$501^{+34}_{-42}$	$4593^{+1205}_{-586}$	$4173^{+8726}_{-2213}$
Alt.	$-50 \pm 13$	$2.55^{+1.34}_{-1.10}$	$504^{+35}_{-44}$	$4642^{+1168}_{-686}$	$4350^{+8689}_{-2510}$

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

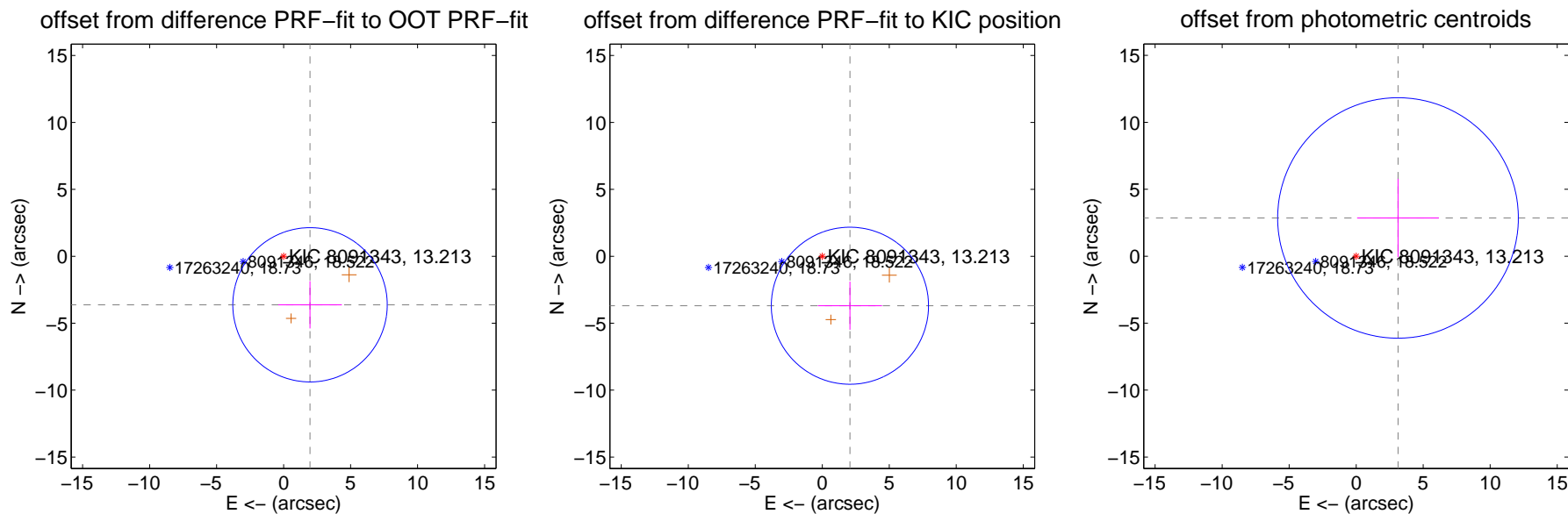
## DV Centroid Data

Supplemental centroid analysis for 008091343-01. Kepler magnitude: 13.21. Transit SNR 5.27

There are 0 quarters with good PRF difference image offsets

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

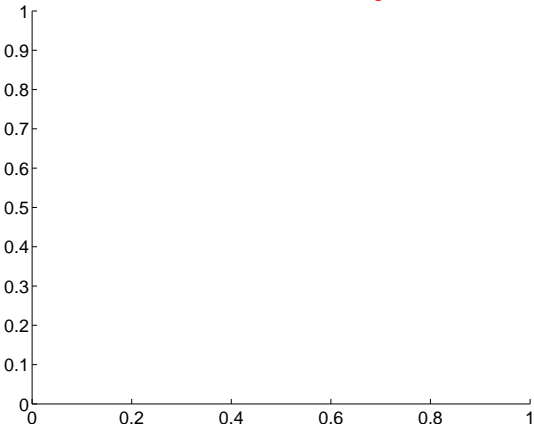
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.126 \pm 1.921$	2.15	$-1.972 \pm 2.375$	$-3.625 \pm 1.764$
PRF-fit source offset from KIC position	$4.231 \pm 1.955$	2.16	$-2.064 \pm 2.392$	$-3.694 \pm 1.797$
photometric centroid source offset	$4.23 \pm 2.99$	1.41	$-3.12 \pm 3.05$	$2.86 \pm 2.92$



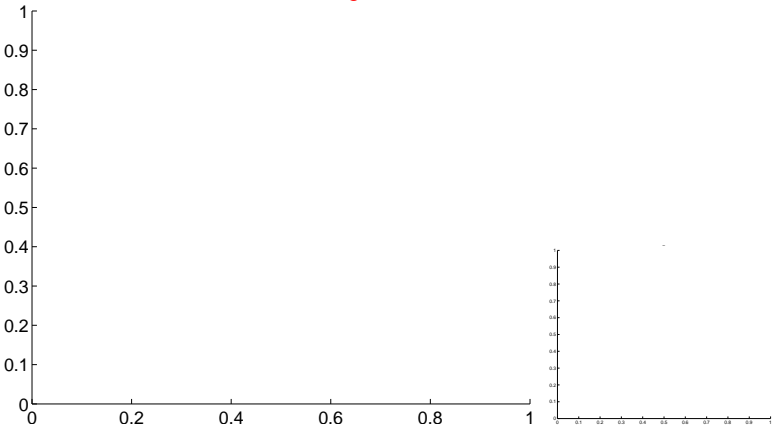
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

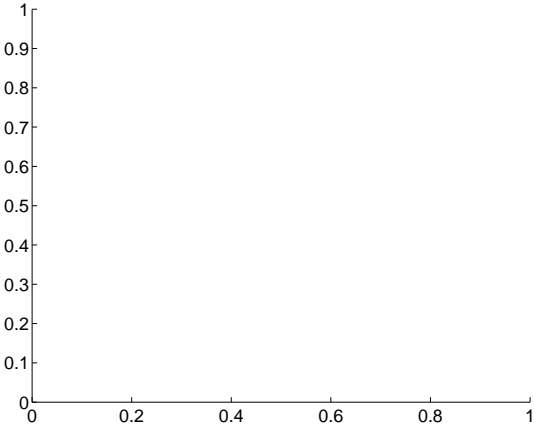
Q1 no difference image



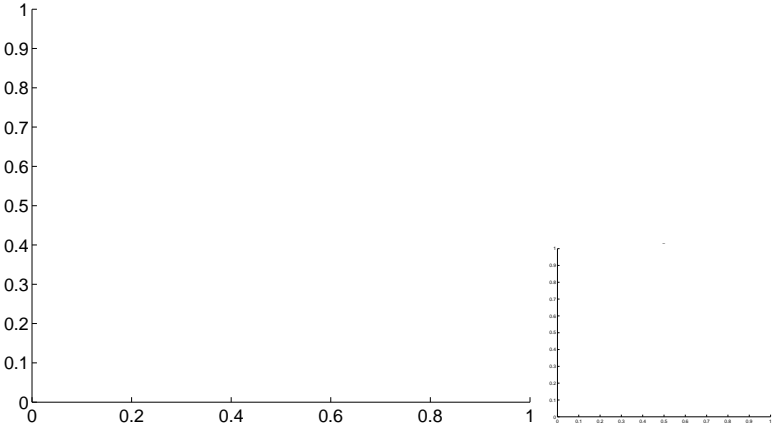
Q1 no OOT image



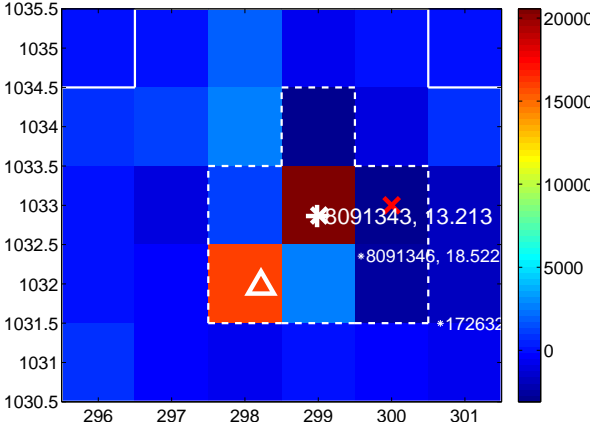
Q2 no difference image



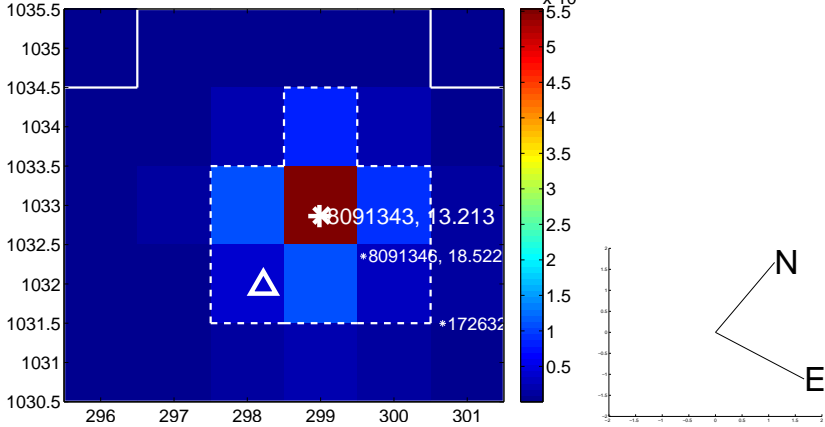
Q2 no OOT image



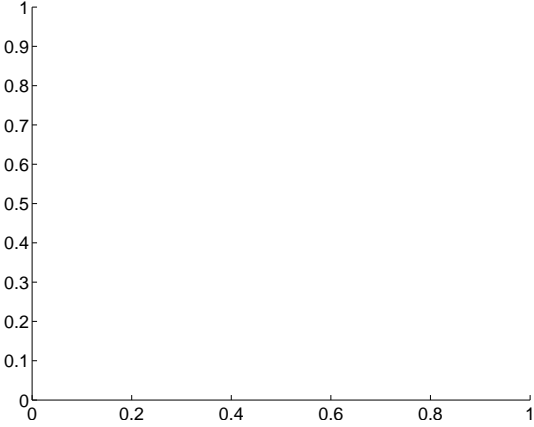
Q3 difference image. Poor Quality



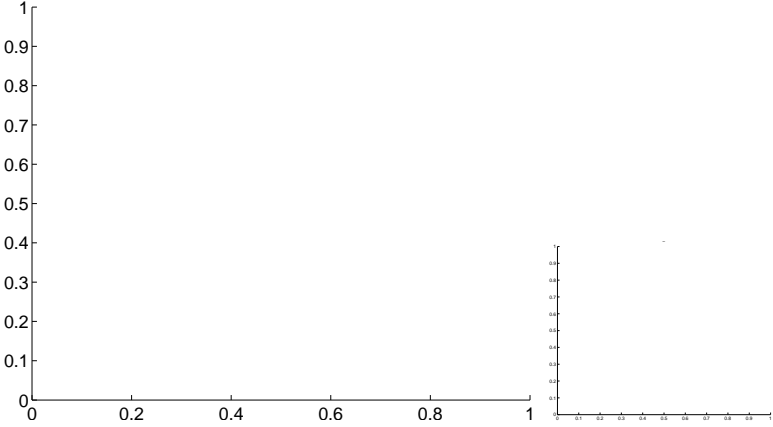
Q3 OOT image



Q4 no difference image



Q4 no OOT image





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

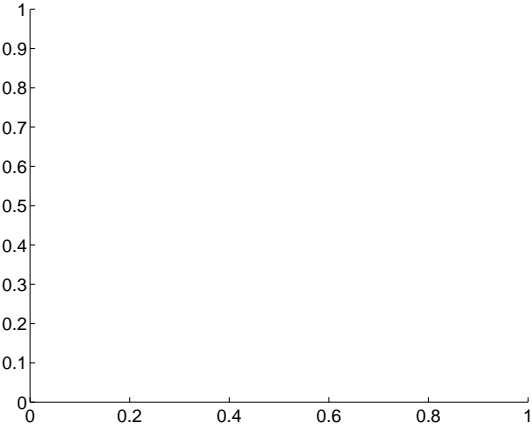
Q5 no difference image



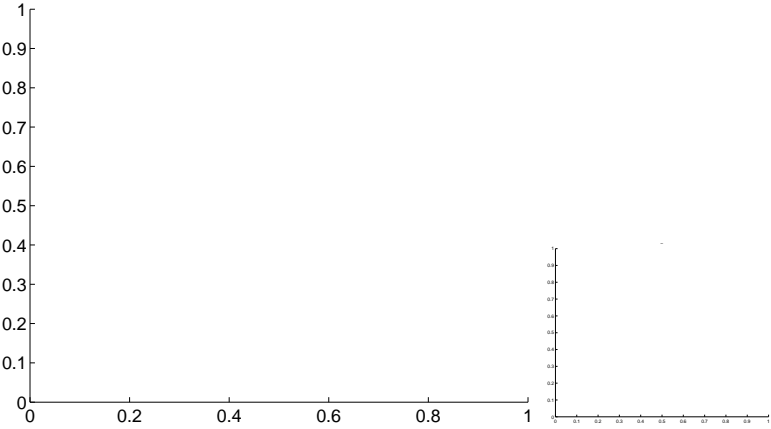
Q5 no OOT image



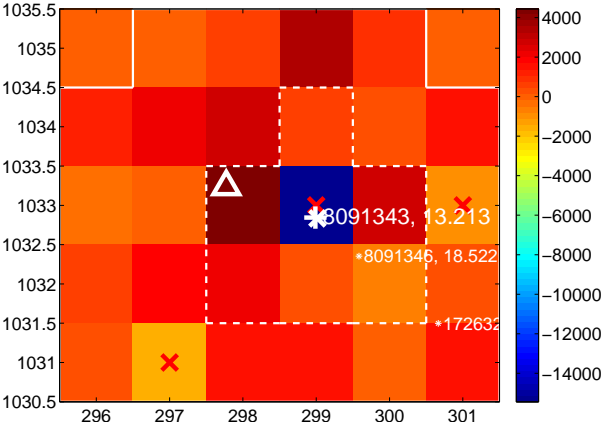
Q6 no difference image



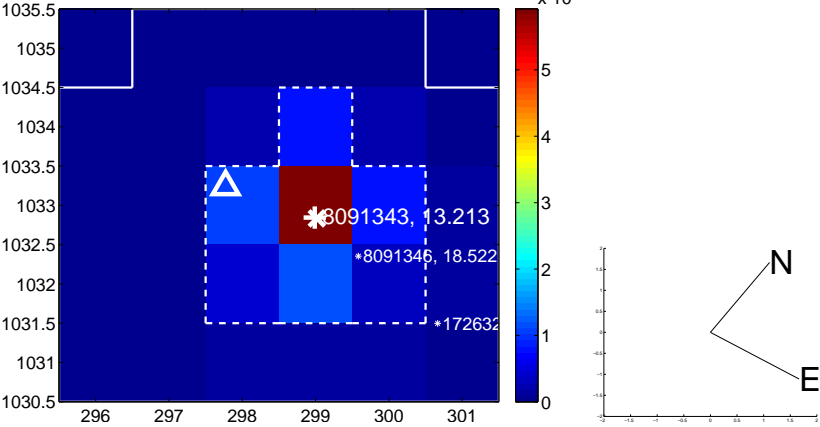
Q6 no OOT image



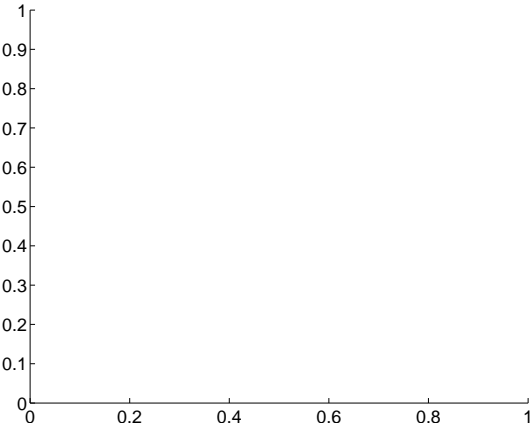
Q7 difference image. Poor Quality



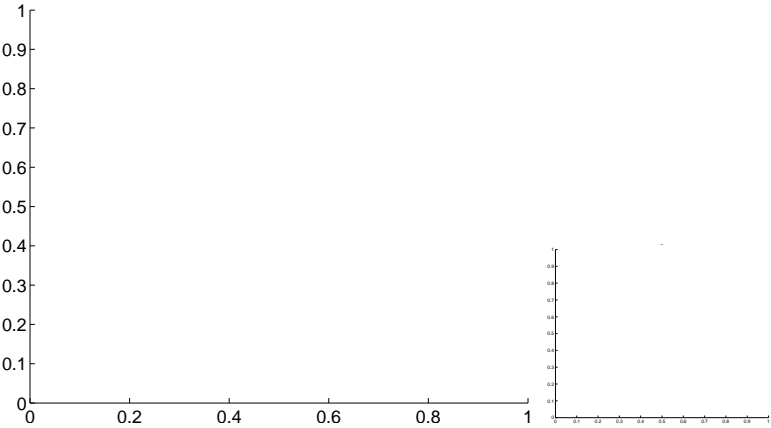
Q7 OOT image



Q8 no difference image

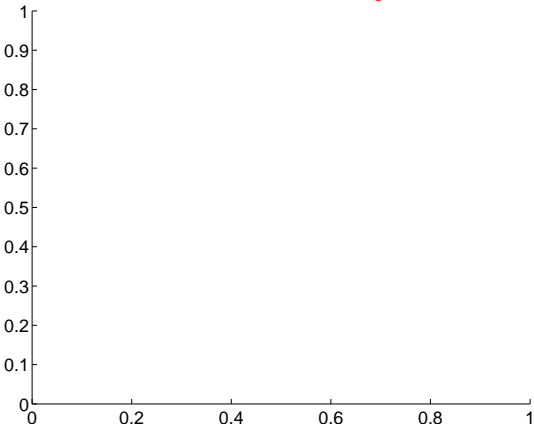


Q8 no OOT image

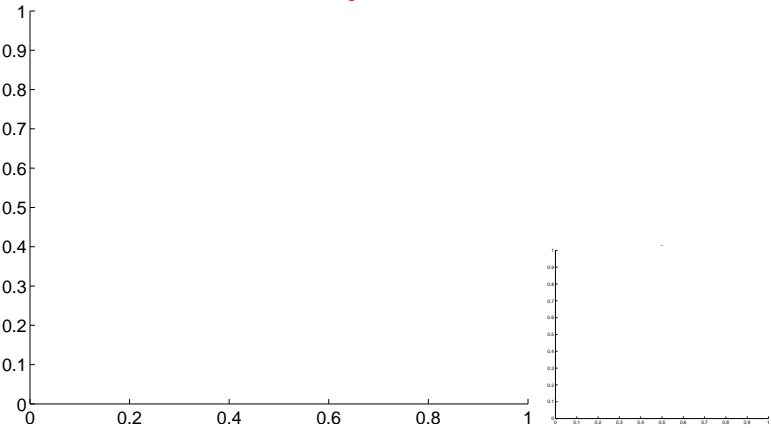


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

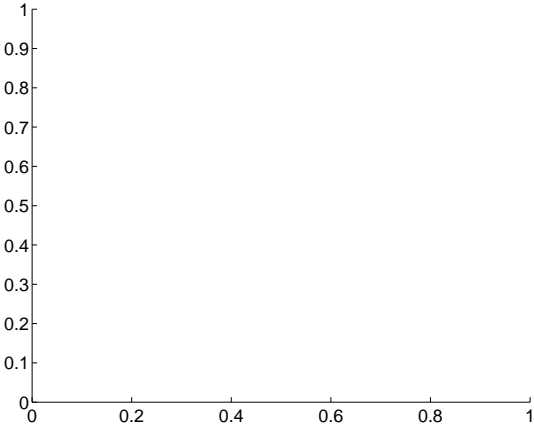
Q9 no difference image



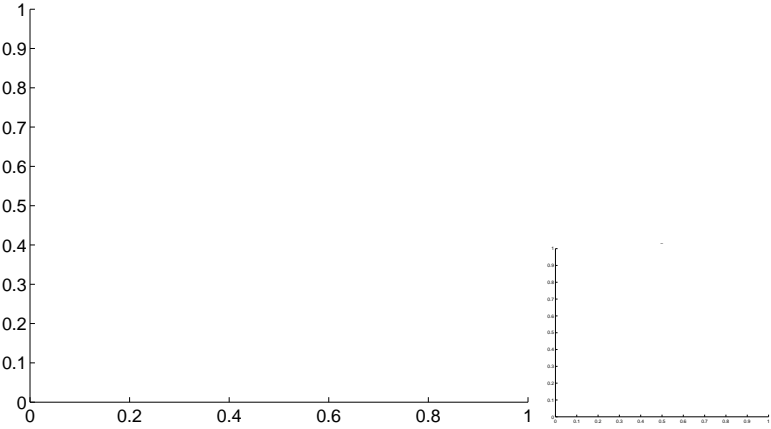
Q9 no OOT image



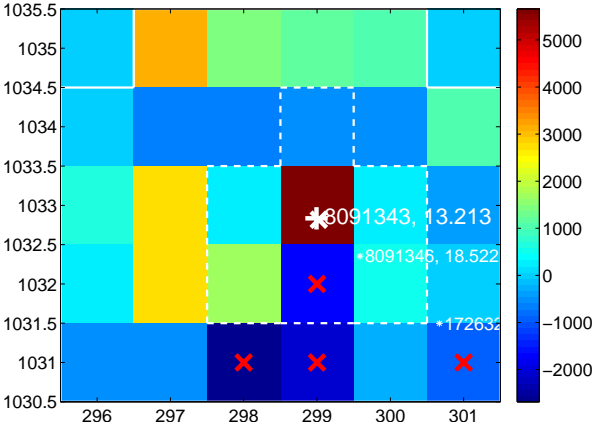
Q10 no difference image



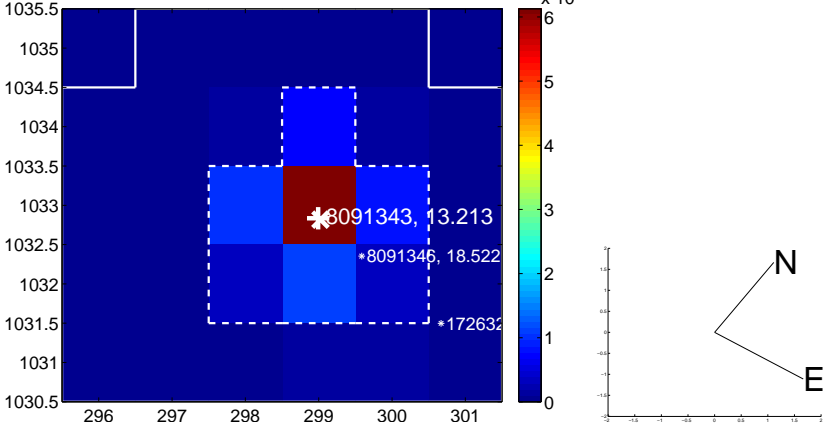
Q10 no OOT image



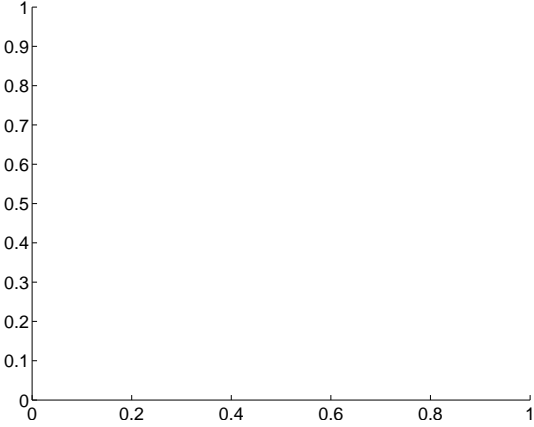
Q11 difference image. Poor Quality



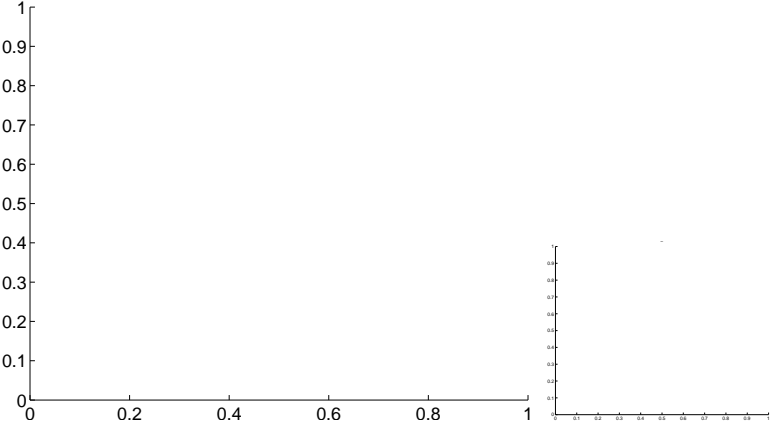
Q11 OOT image



Q12 no difference image



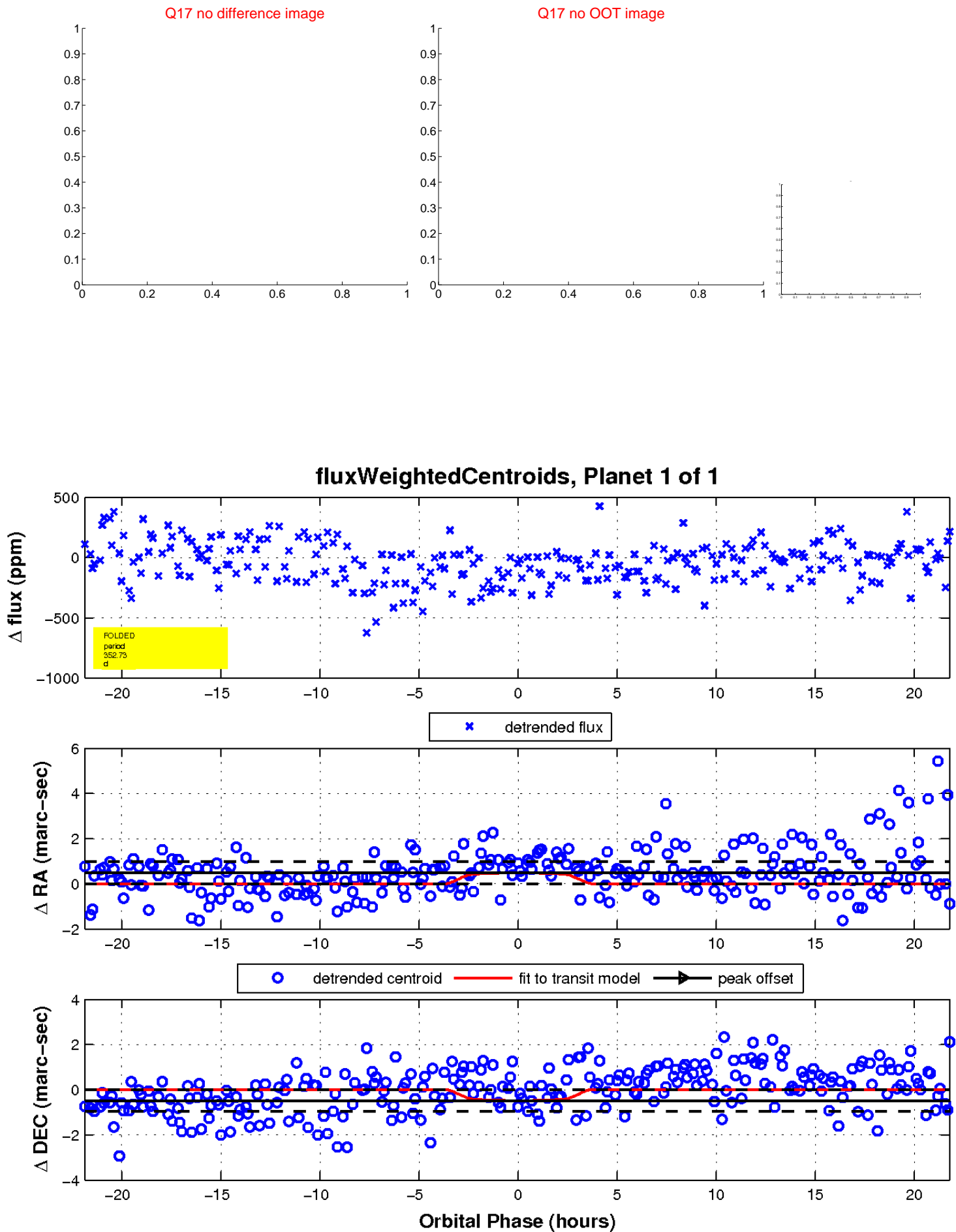
Q12 no OOT image



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

