

# KIC 008294484

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008294484-01	OBS	7011.01	1.012591	131.533105	114178.5	3.389	983.5	373.4	1.23	6487	46.61	5858.68

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008294484-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—DEEP_V_SHAPED—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.

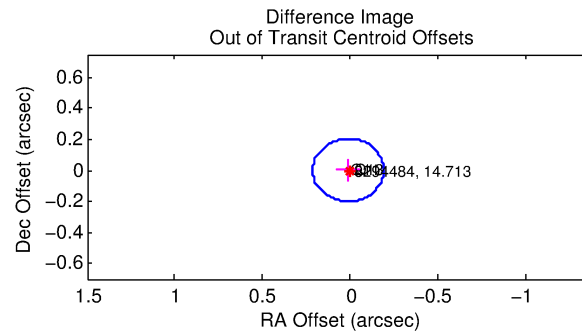
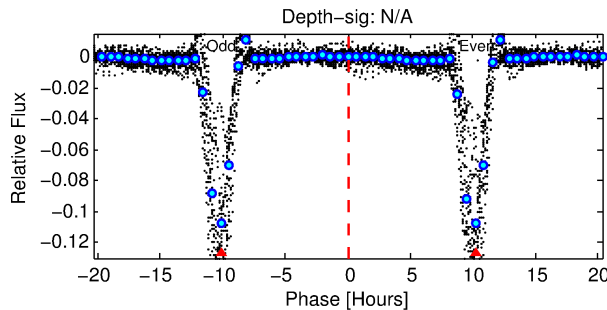
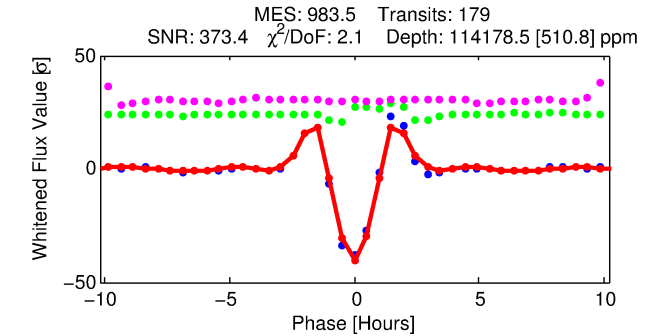
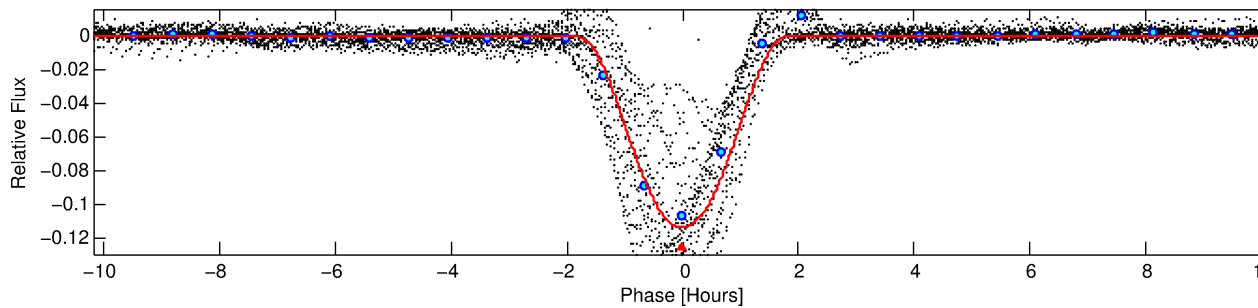
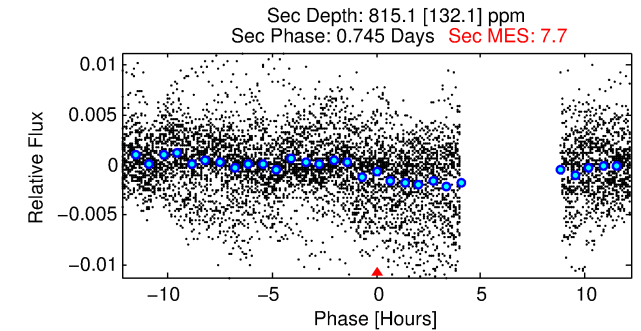
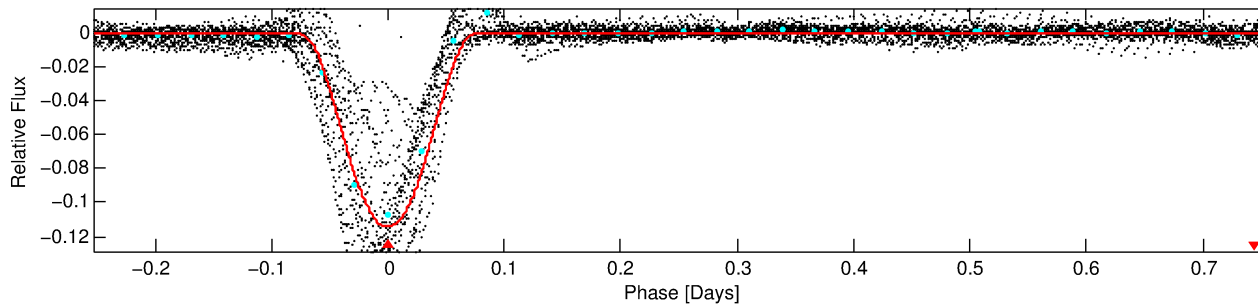
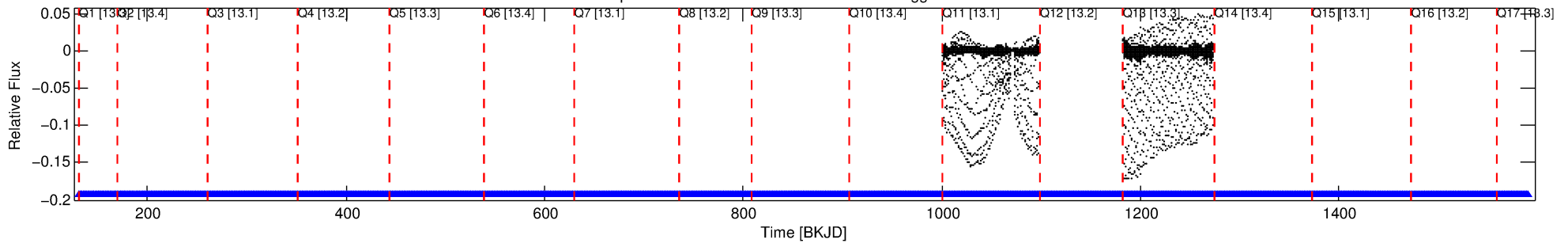
## Ephemeris Match Information For 008294484-01

No Significant Match Found

# DV One-Page Summary

KIC: 8294484 Candidate: 1 of 1 Period: 1.013 d  
KOI: K07011 Corr: No Ephemeris Match

Kp: 14.71 R\*: 1.23 Rs Teff: 6487.0 K Logg: 4.29 Fe/H: -0.300



## DV Fit Results:

Period = 1.01259 [0.00000] d  
Epoch = 131.5331 [0.0001] BKJD  
Rp/R\* = 0.3464 [0.0023]  
a/R\* = 2.80 [0.01]  
b = 0.70 [0.01]  
Seff = 5858.68 [2290.47]  
Teq = 2231 [218] K  
Rp = 46.61 [14.37] Re  
a = 0.0203 [0.0051] AU  
Ag = 0.08 [0.03] [-27.31σ]  
Teffp = 1862 [104] K [-1.53σ]

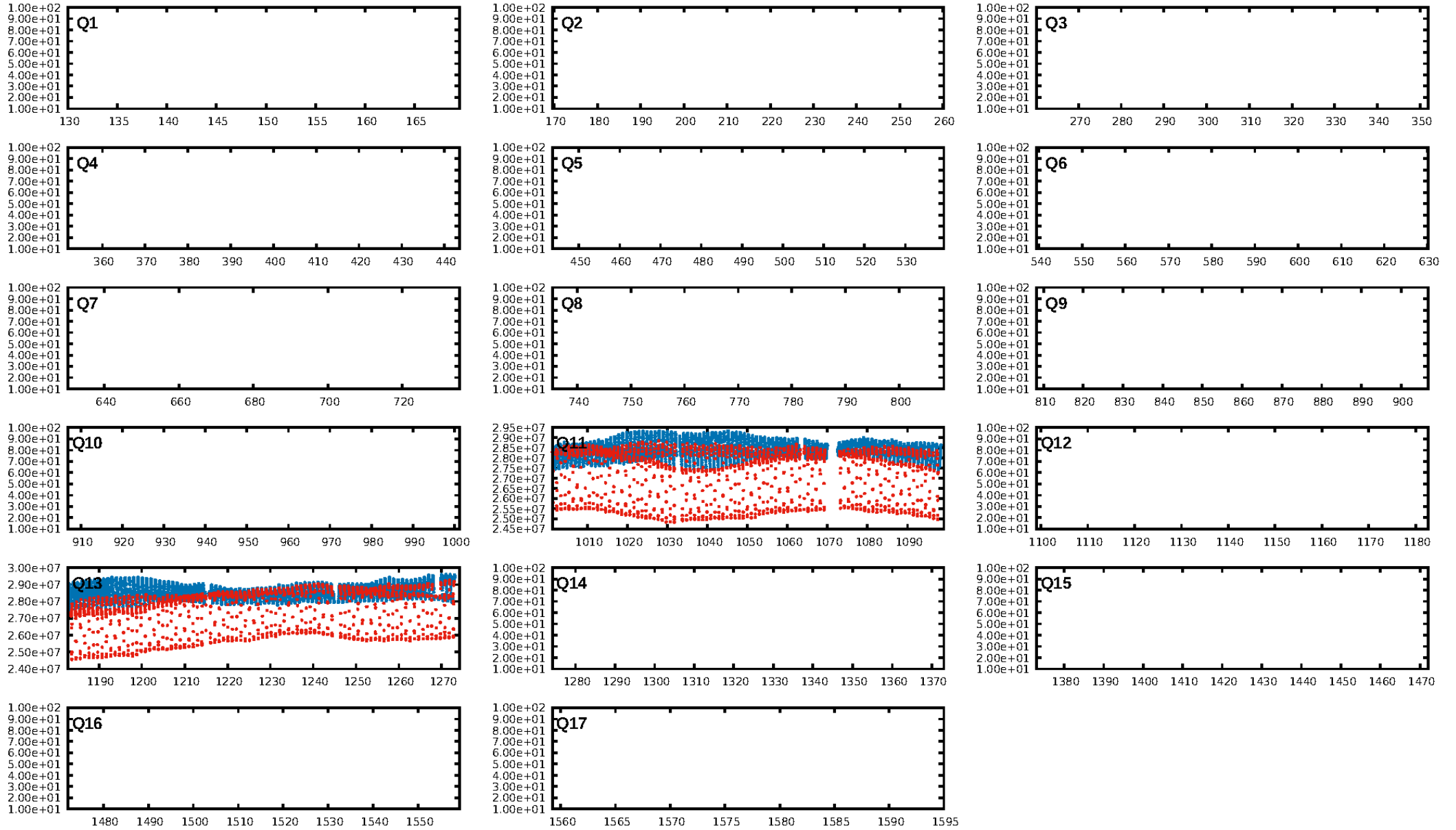
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [179/179]  
GhostDiagnostic-chr: 0.618  
Centroid-sig: N/A  
Centroid-so: 0.112 arcsec [53.27σ]  
OotOffset-rm: 0.013 arcsec [0.19σ]  
KicOffset-rm: 0.091 arcsec [1.30σ]  
OotOffset-st: 0/1/0/1 [2]  
KicOffset-st: 0/1/0/1 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [2/2]

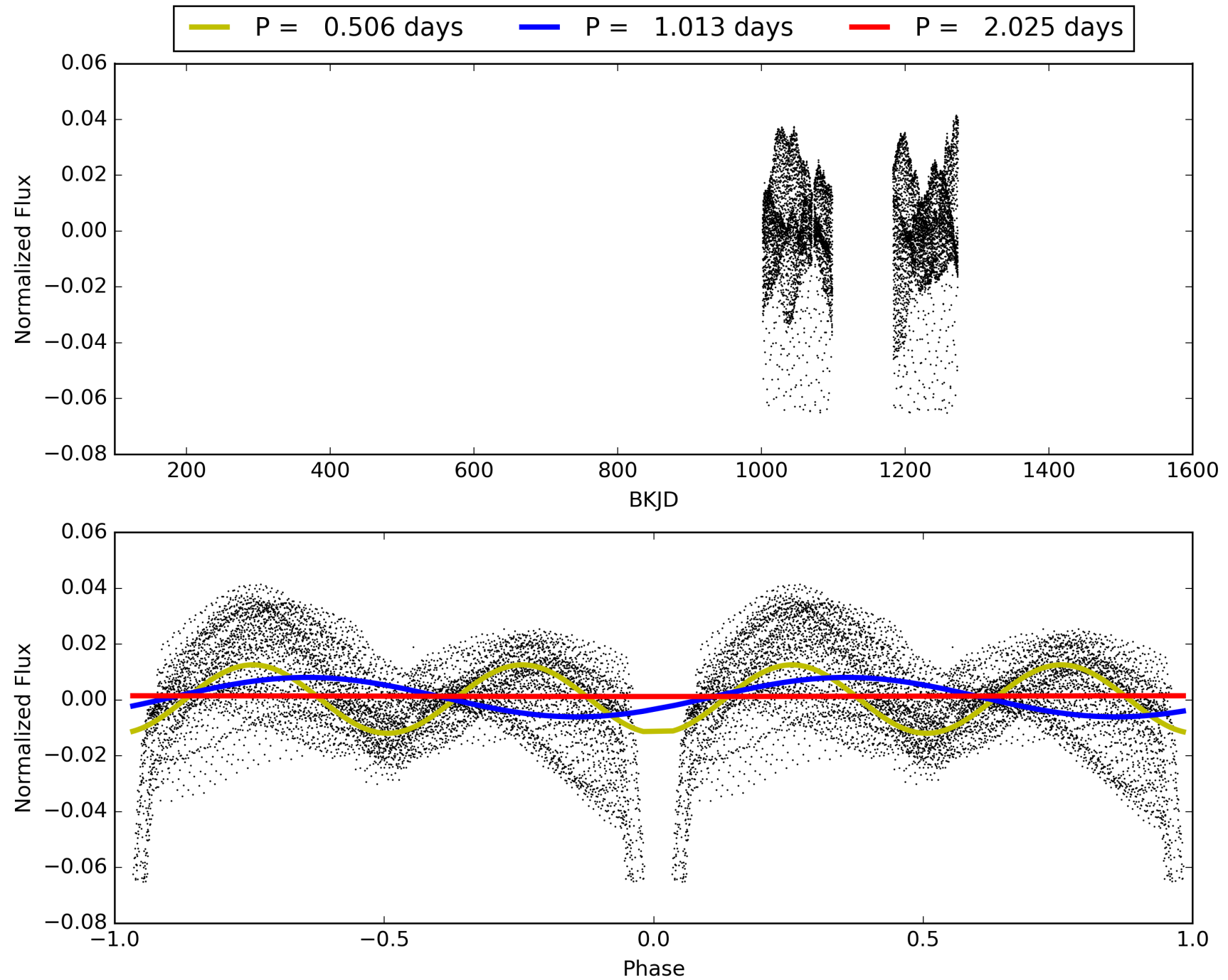
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:07:30 Z

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

# TCE 008294484-01, PDC Light Curves

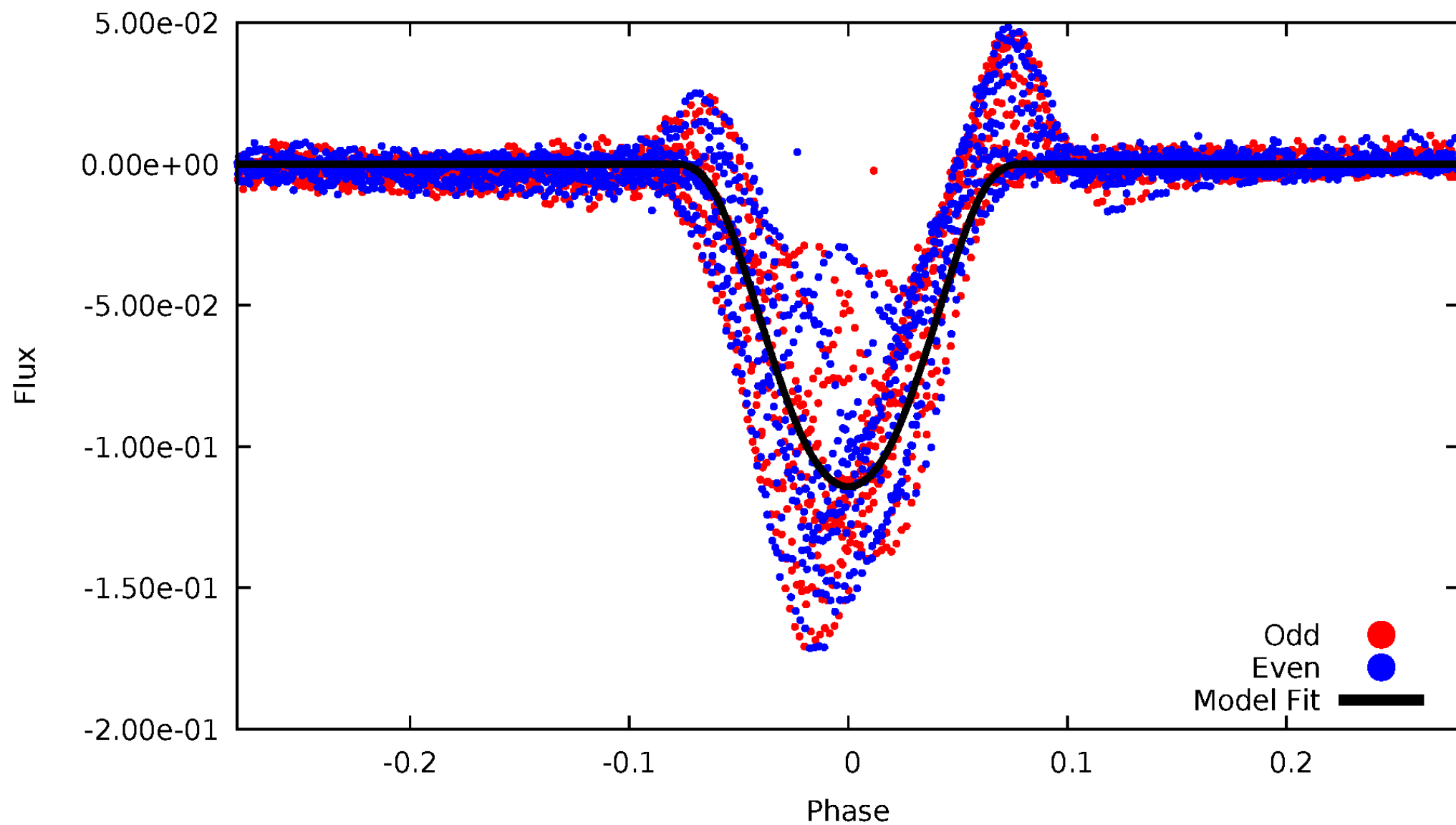


TCE 008294484-01



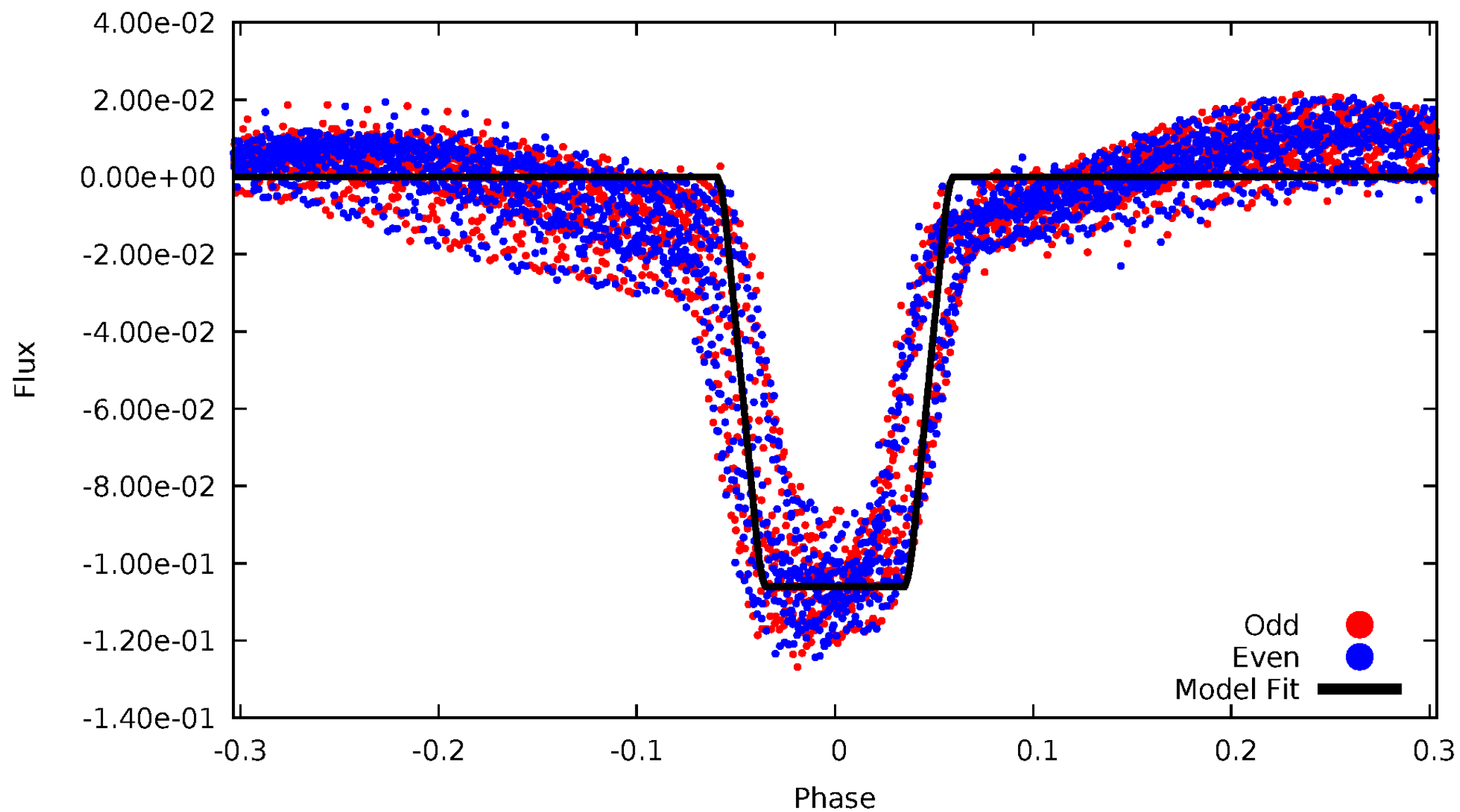
# DV Odd/Even

TCE 008294484-01



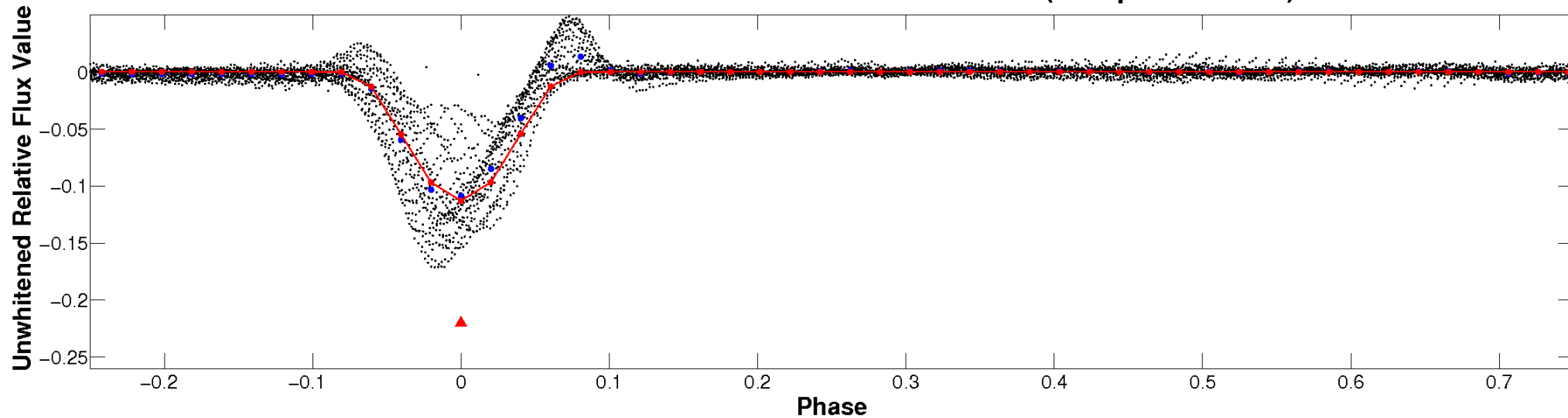
# ALT Odd/Even

TCE 008294484-01

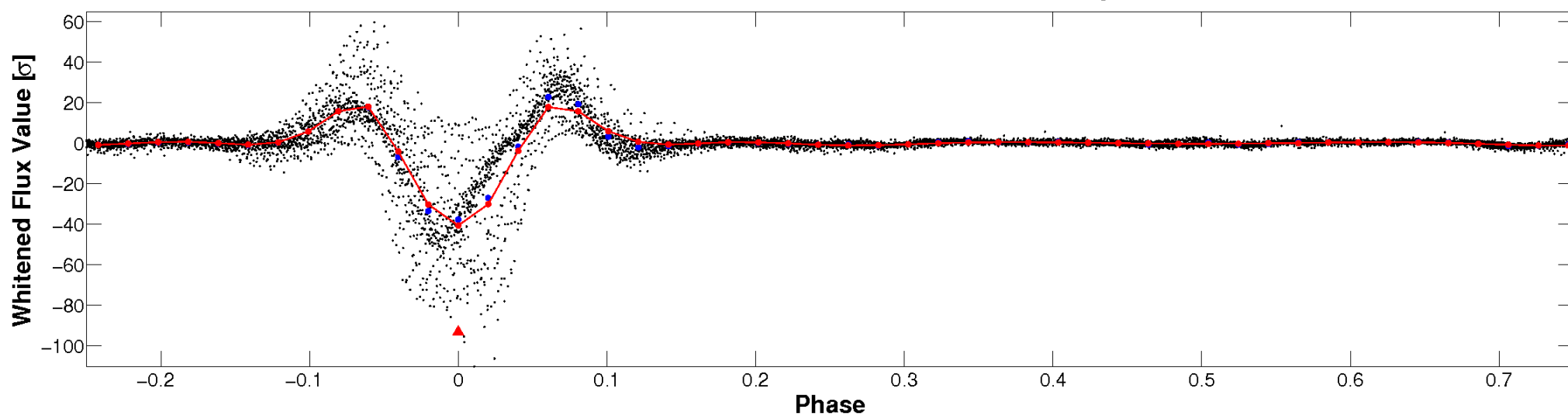


# Non-Whitened Vs. Whitened Light Curve

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

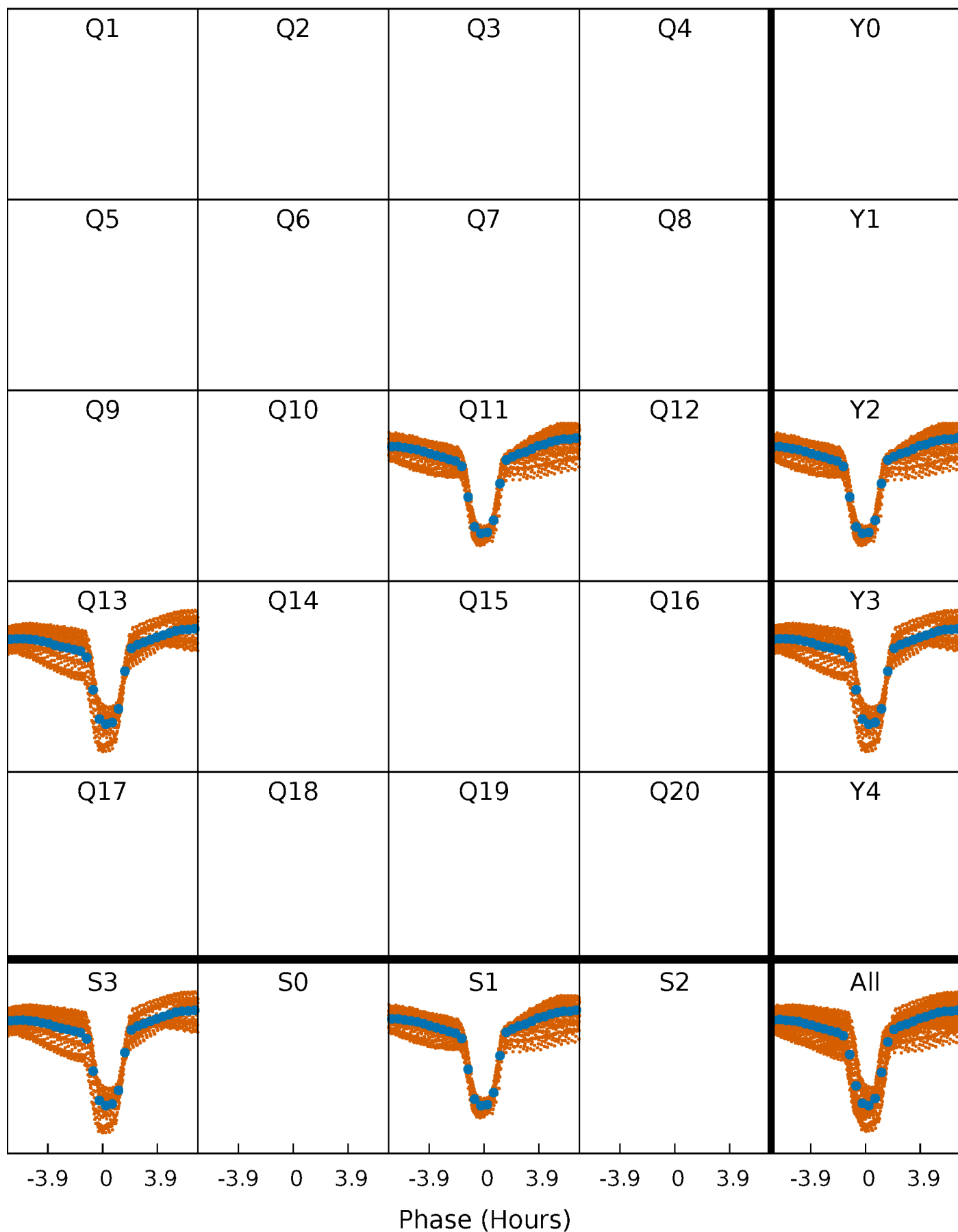


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

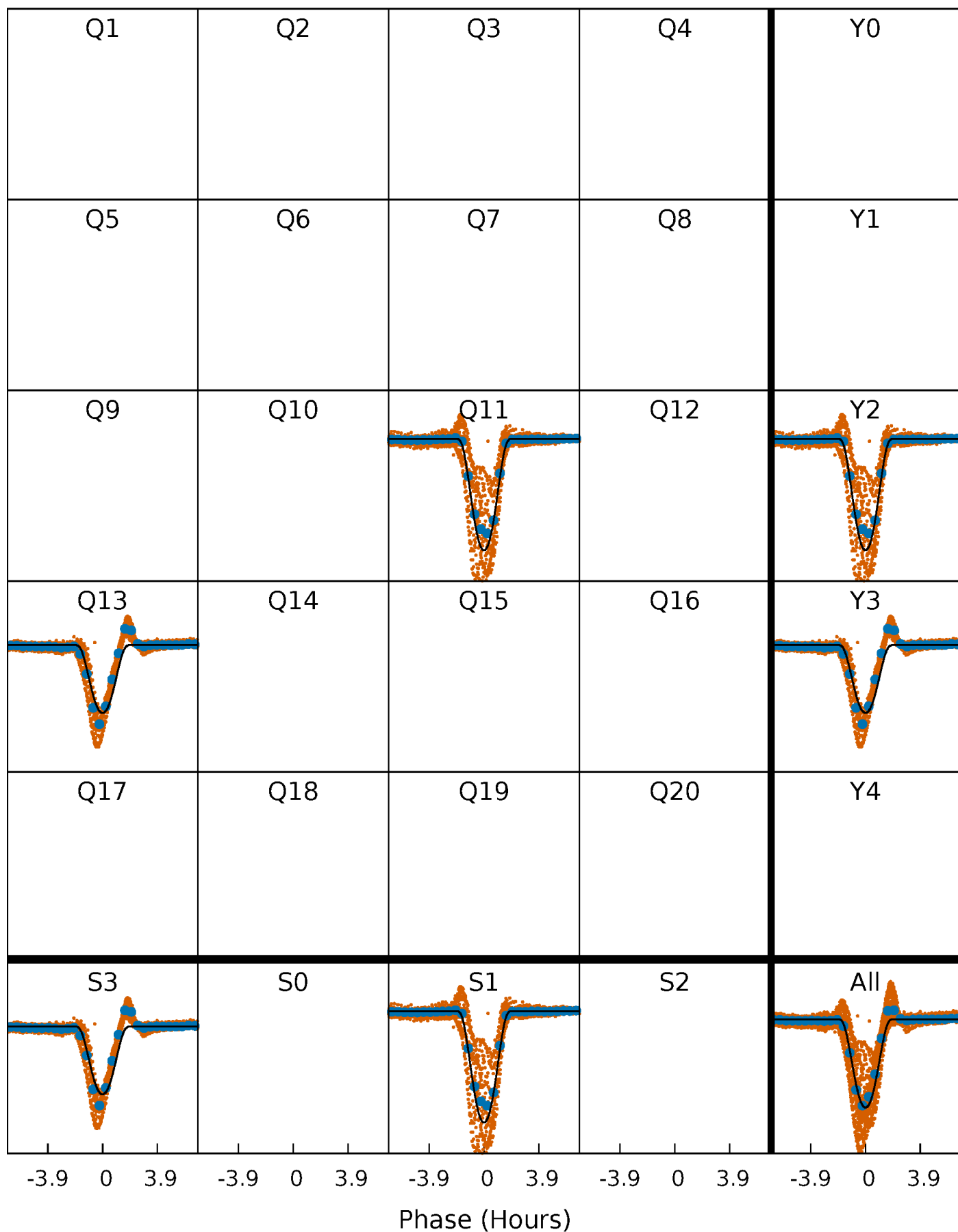
TCE 008294484-01   P= 1.012591 Days    $T_0=131.533105$  (BKJD)





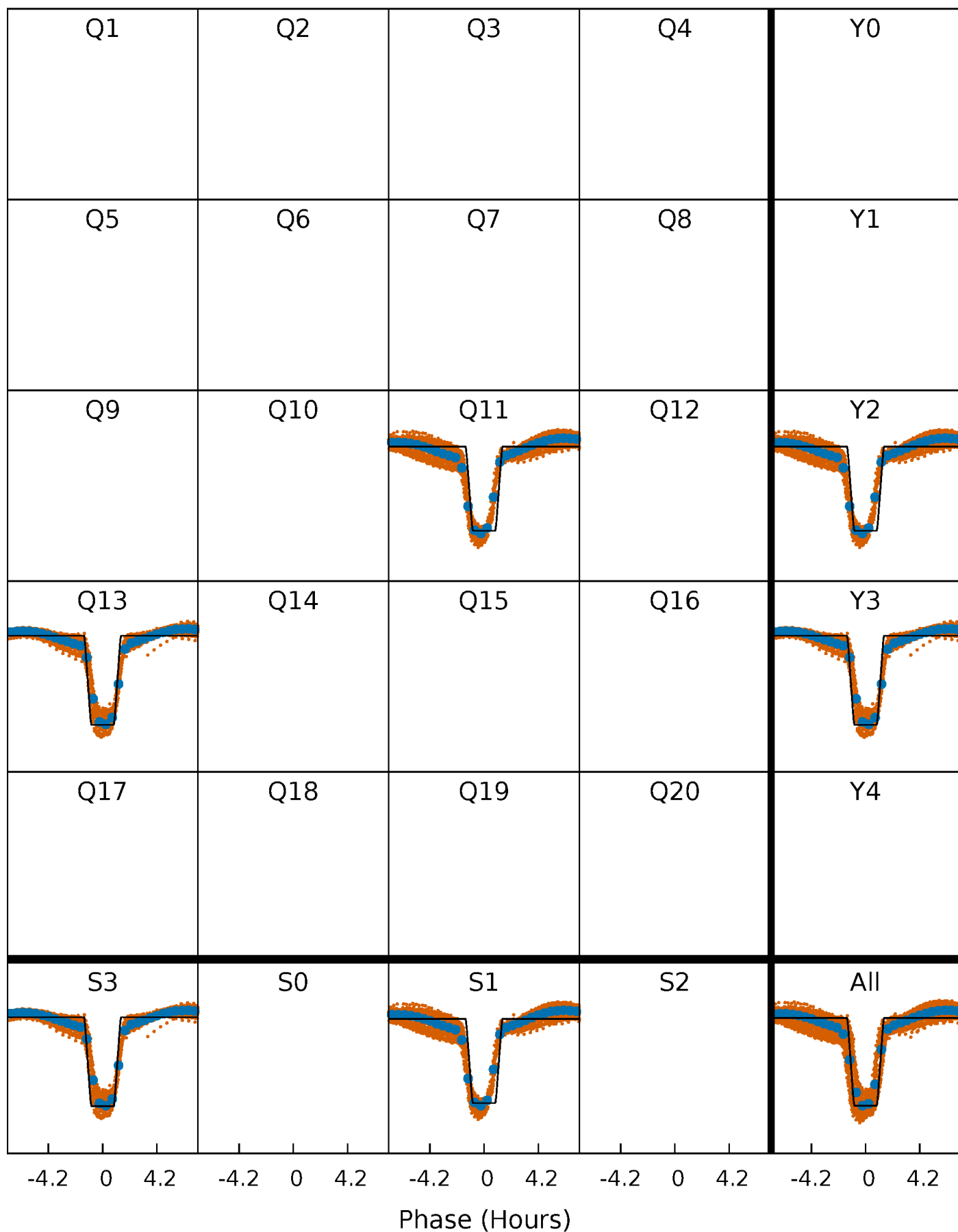
# DV Quarter-Phased Transit Curves

TCE 008294484-01 P= 1.012591 Days  $T_0=131.533105$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

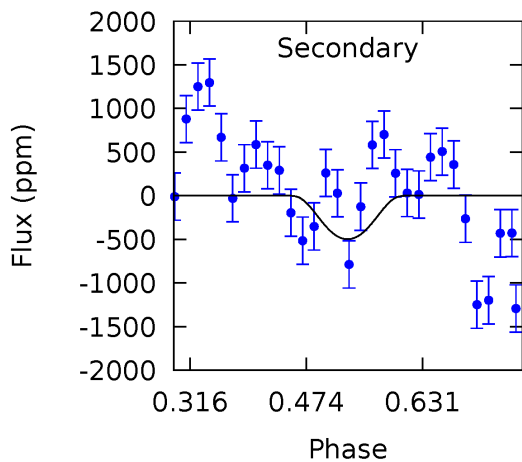
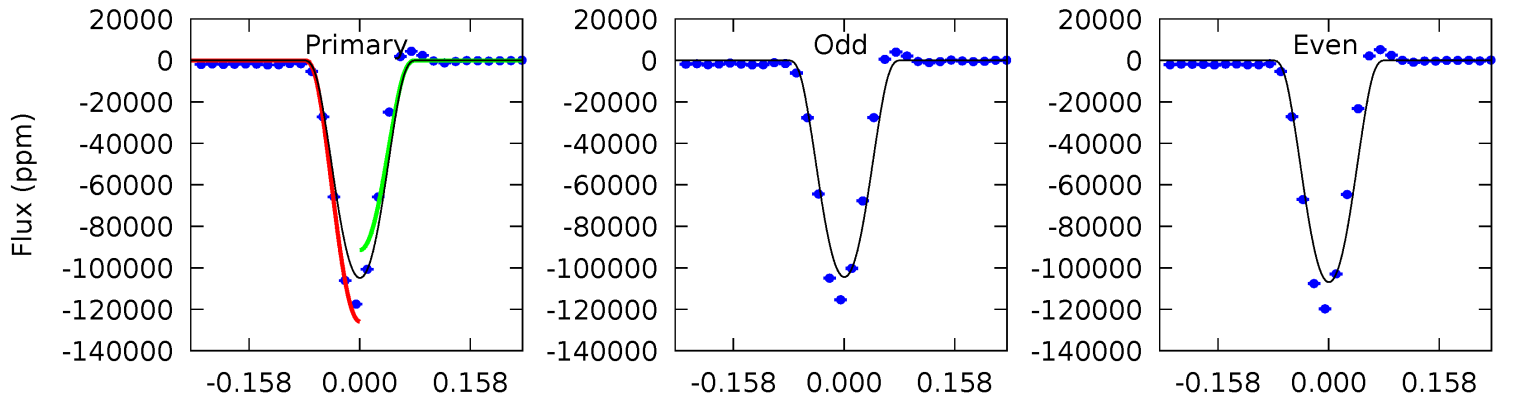
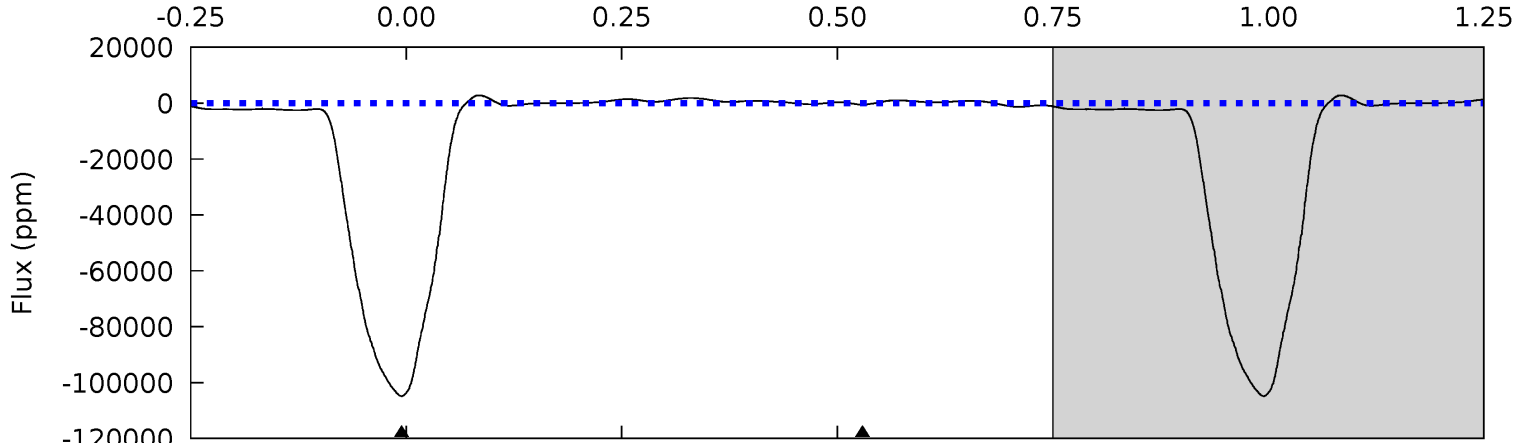
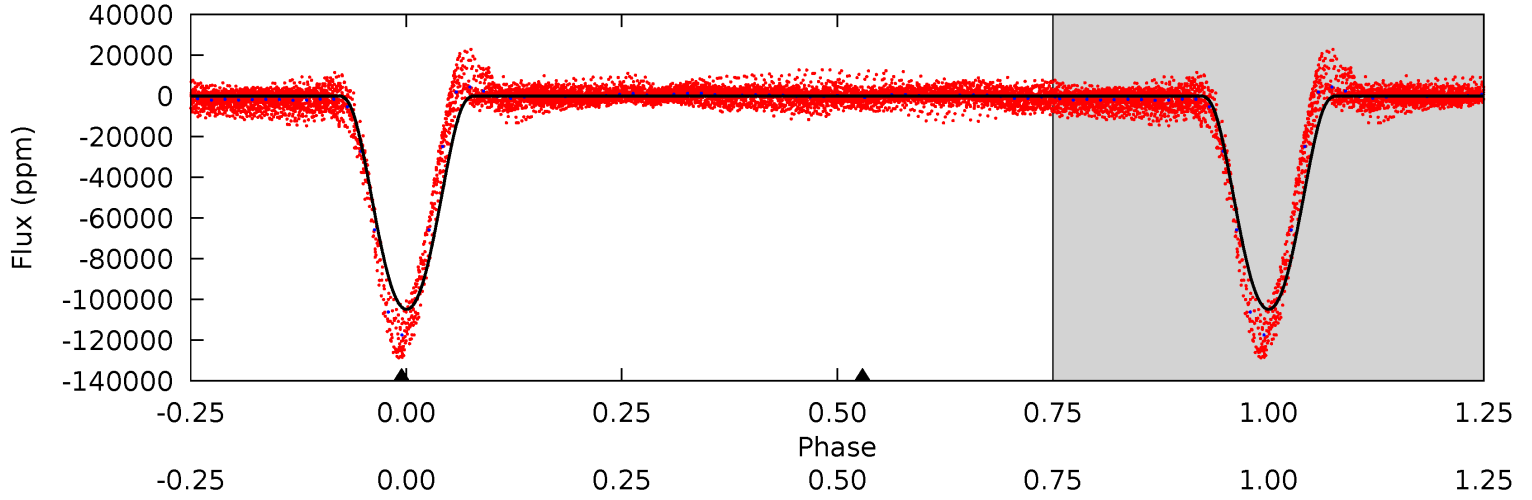
TCE 008294484-01   P= 1.012586 Days    $T_0=131.547460$  (BKJD)



# DV Model-Shift Uniqueness Test

008294484-01, P = 1.012591 Days, E = 131.533105 Days

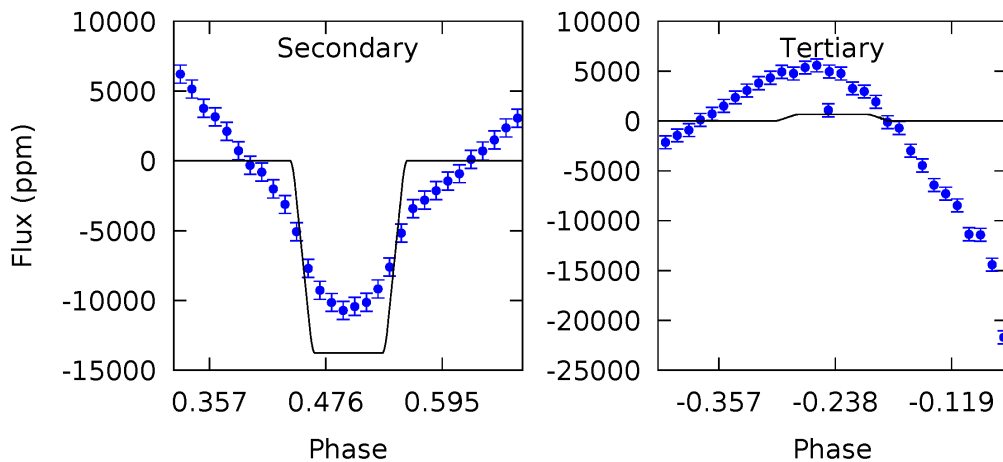
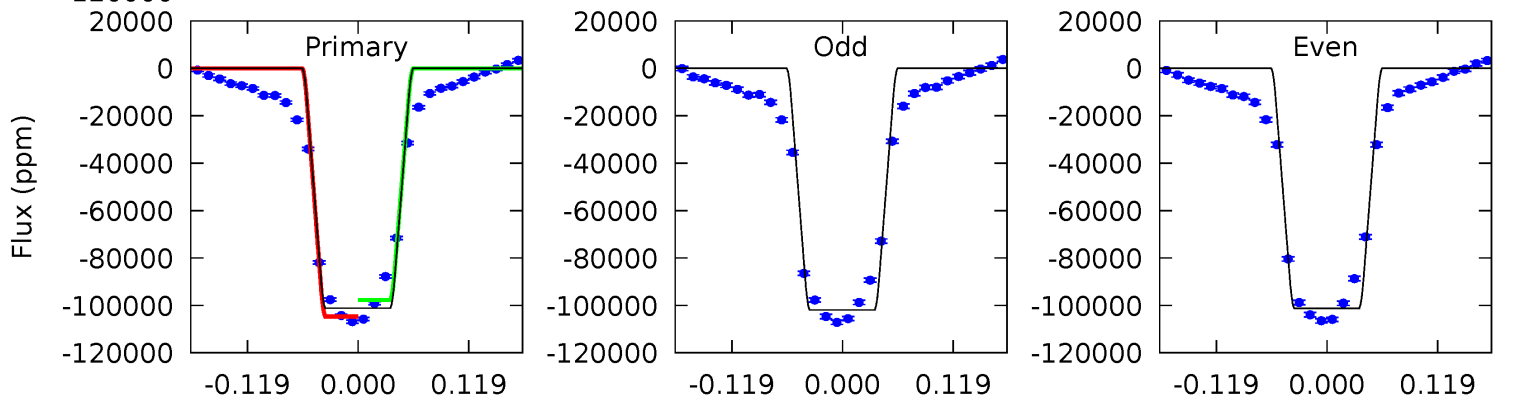
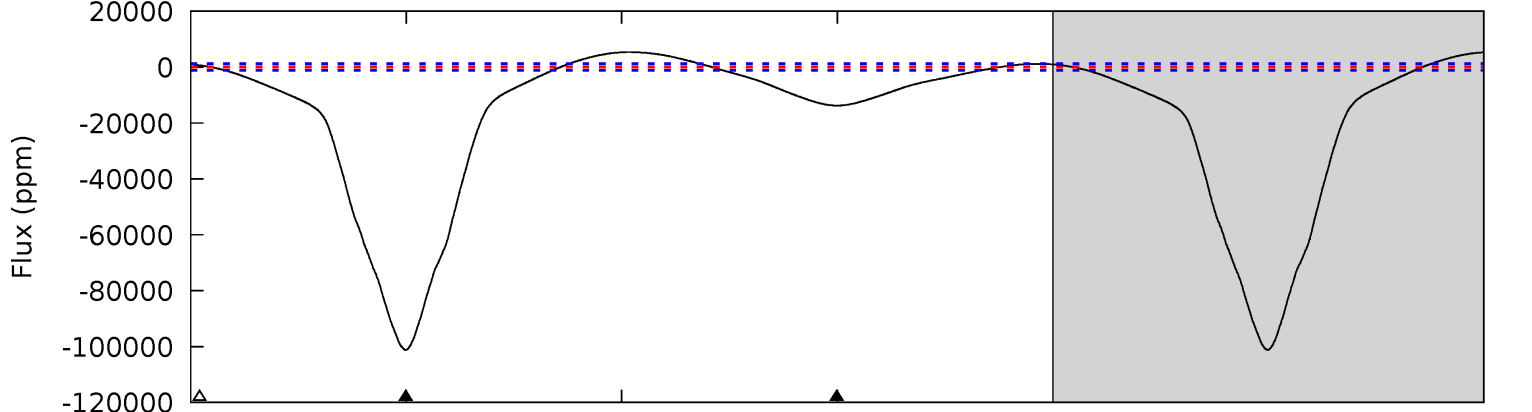
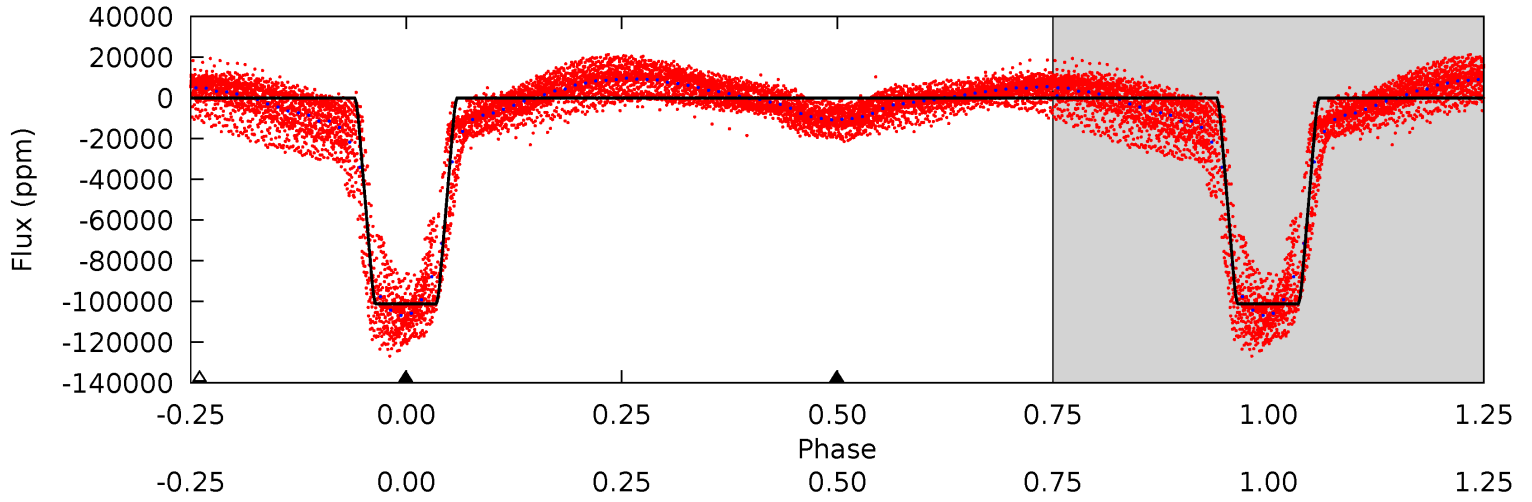
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
797.9	3.79	0	0	4.47	1.41	10.1	797.9	797.9	3.79	3.79	9.16	1.01	0.03	125.8



# Alt Model-Shift Uniqueness Test

008294484-01, P = 1.012586 Days, E = 131.547460 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
389.5	53.0	-2.55	0	4.53	1.56	15.8	392.1	389.5	55.5	53.0	1.31	1.00	0.05	13.1



### Stellar Parameters For KIC 008294484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6487^{+181}_{-250}$	$4.292^{+0.128}_{-0.192}$	$-0.300^{+0.250}_{-0.300}$	$1.233^{+0.380}_{-0.205}$	$1.085^{+0.177}_{-0.129}$	$0.815^{+0.491}_{-0.414}$
	+3%/-4%	+3%/-4%	+83%/-100%	+31%/-17%	+16%/-12%	+60%/-51%
Source	KIC0	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 008294484-01 / KOI 7011.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-498 \pm 131$	$46.56^{+8.70}_{-4.40}$	$3128^{+251}_{-194}$	$-3079^{+123}_{-172}$	$0.049^{+0.020}_{-0.017}$
Alt.	$-13755 \pm 260$	$44.22^{+6.95}_{-4.35}$	$3137^{+222}_{-203}$	$4009^{+93}_{-118}$	$1.603^{+0.370}_{-0.374}$

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

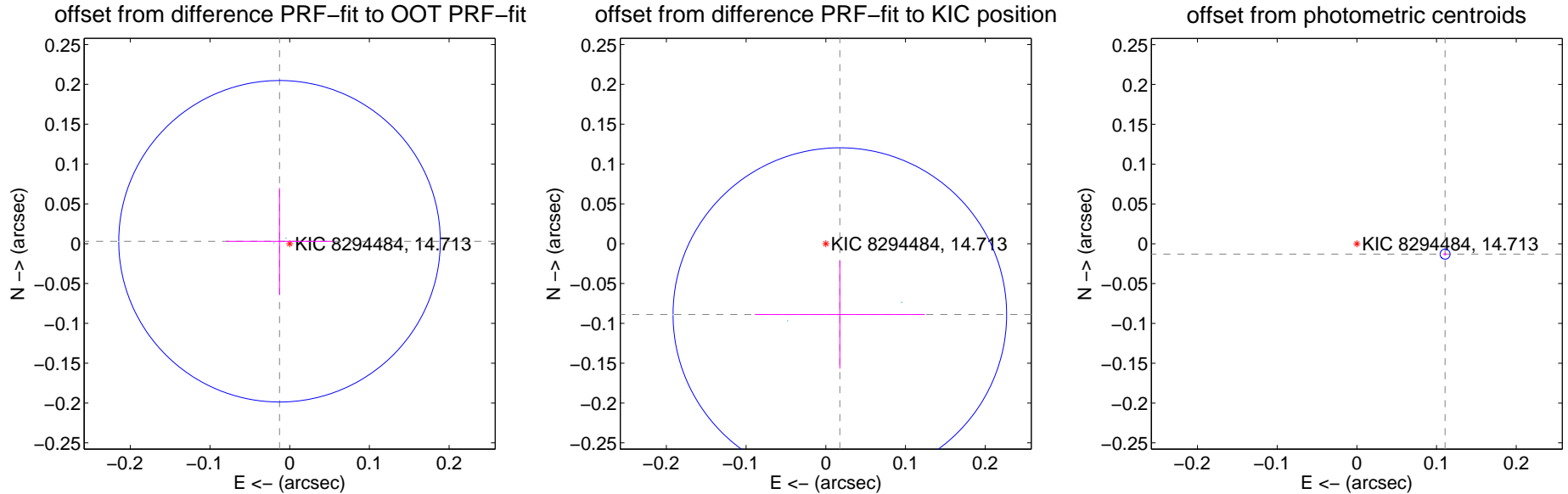
## DV Centroid Data

Supplemental centroid analysis for 008294484-01. Kepler magnitude: 14.71. Transit SNR 373.40

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.013 \pm 0.067$	0.19	$0.013 \pm 0.067$	$0.003 \pm 0.067$
PRF-fit source offset from KIC position	$0.091 \pm 0.070$	1.30	$-0.018 \pm 0.107$	$-0.089 \pm 0.068$
photometric centroid source offset	$0.11 \pm 0.00$	53.27	$-0.11 \pm 0.00$	$-0.01 \pm 0.00$



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.

Q9 no difference image



Q9 no OOT image



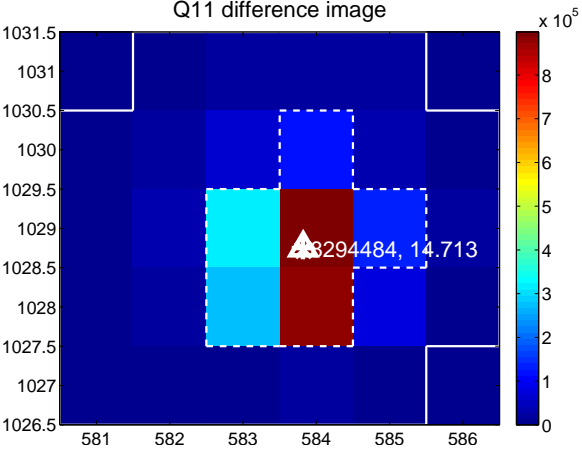
Q10 no difference image



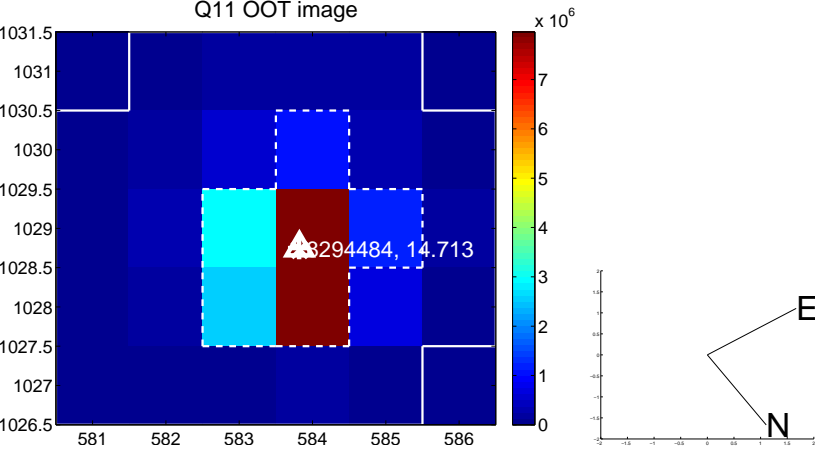
Q10 no OOT image



Q11 difference image



Q11 OOT image



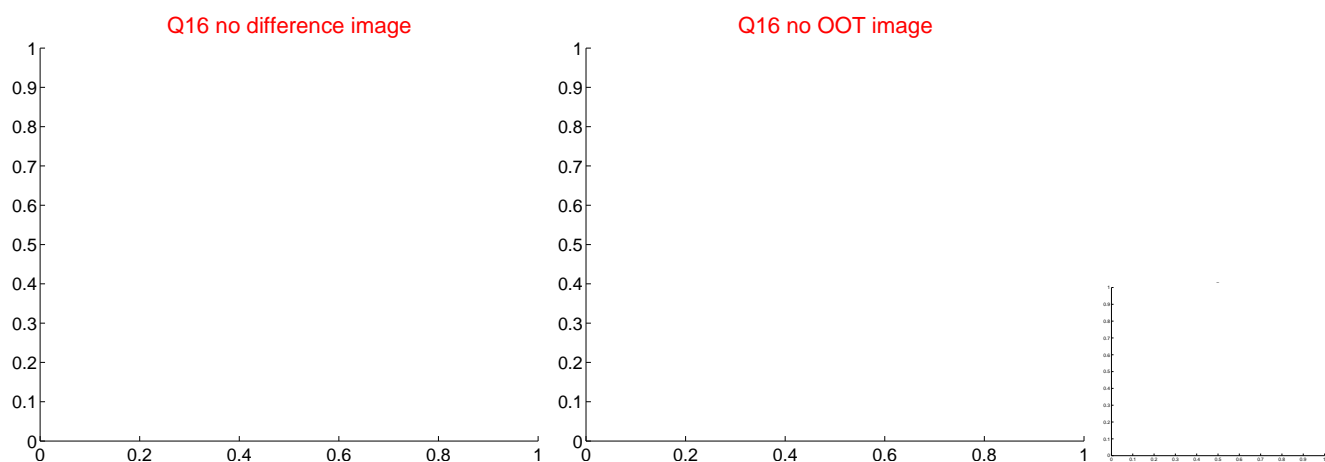
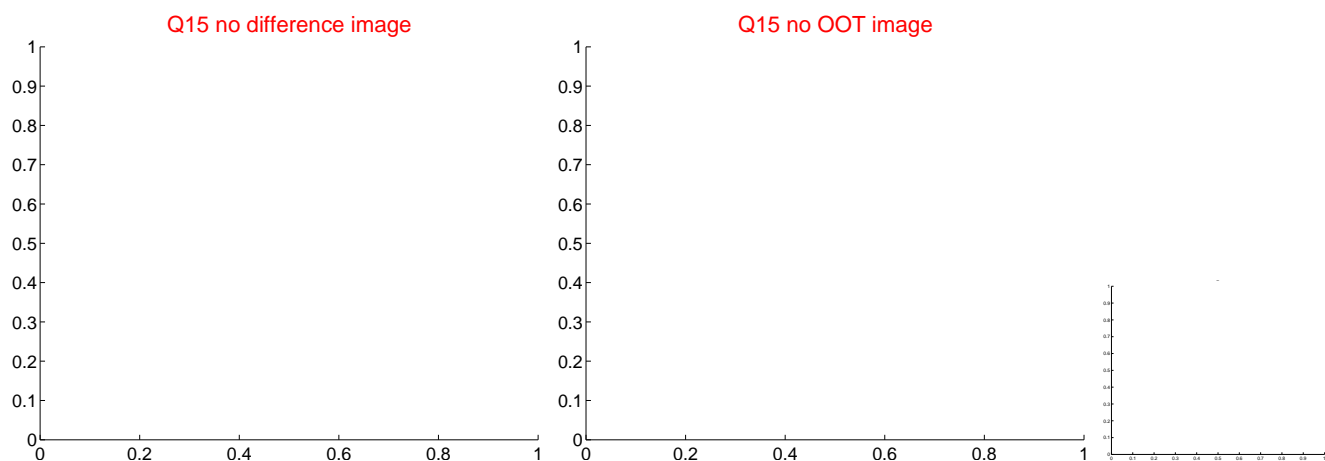
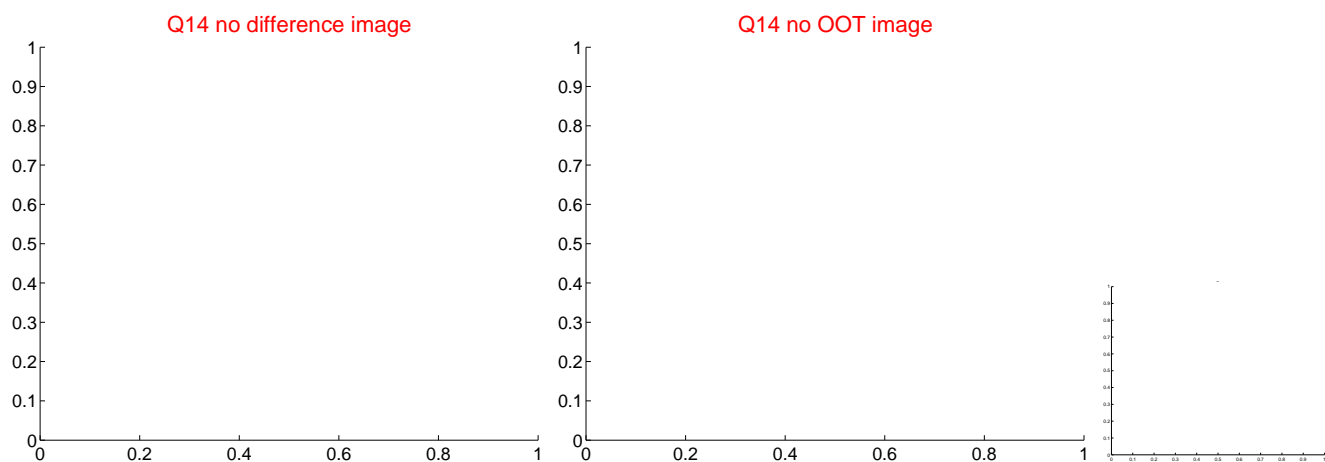
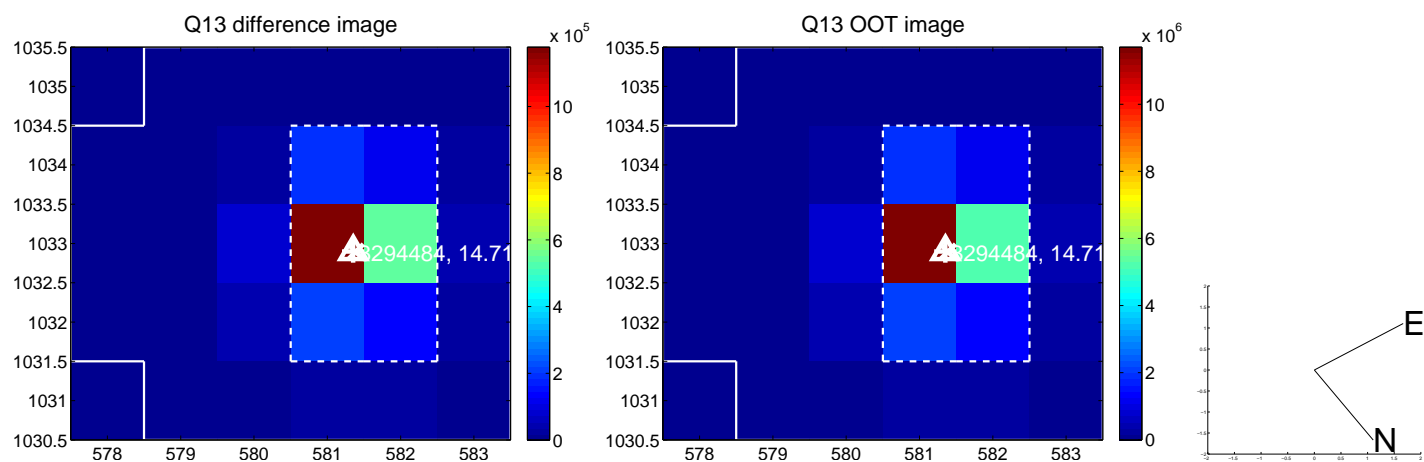
Q12 no difference image



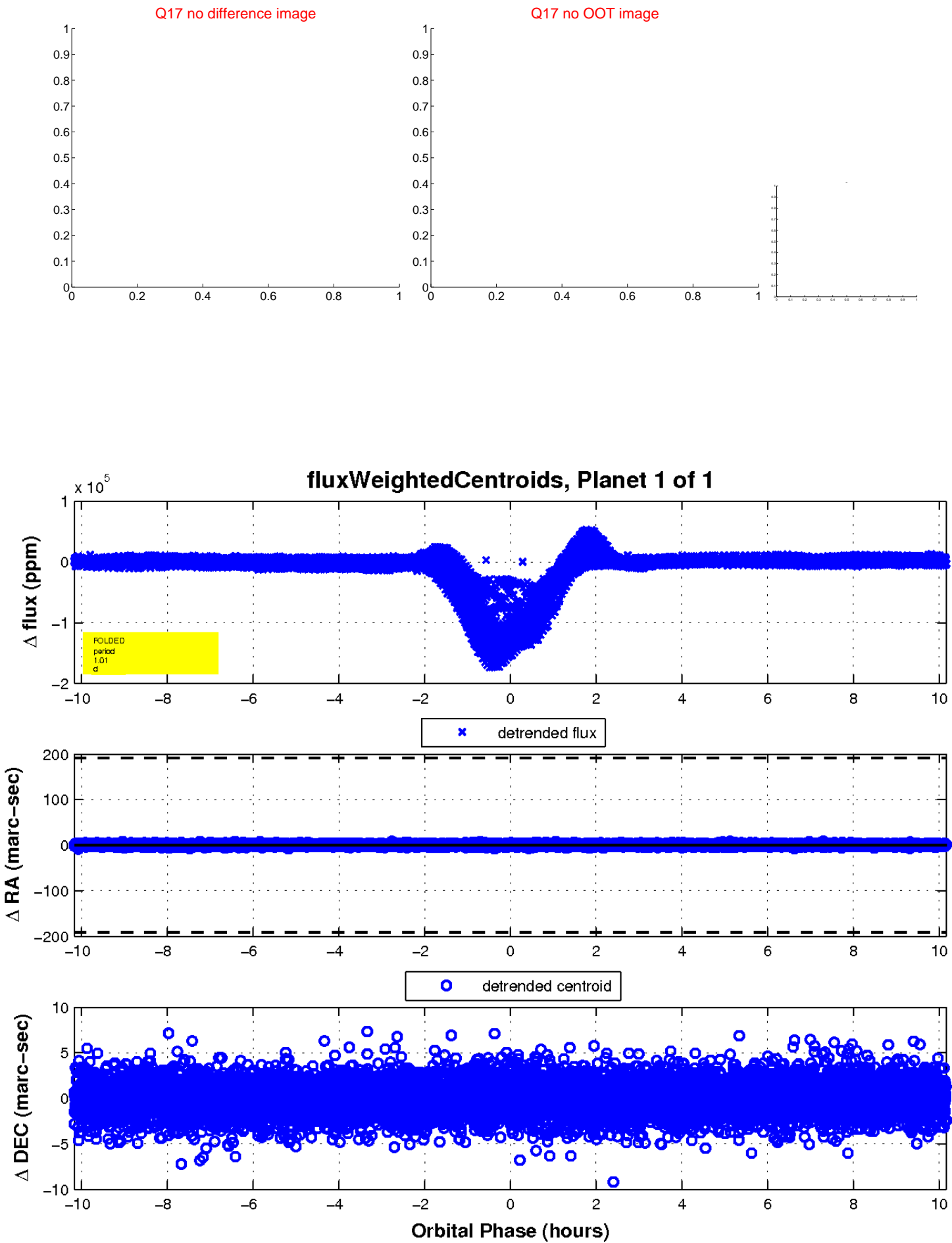
Q12 no OOT image



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

