

# KIC 010407191

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010407191-01	OBS	8011.01	0.934207	131.742574	22011.7	3.500	131.6	-1.0	0.56	3719	8.06	225.86

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010407191-01	OBS	PC	1.00	0	0	0	0	CENT_NOFITS

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

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

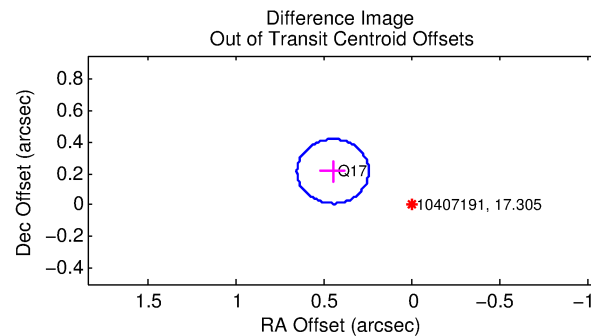
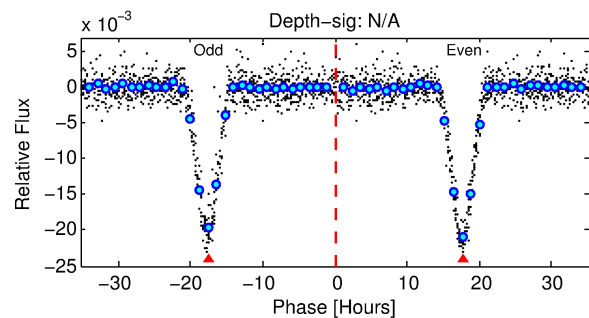
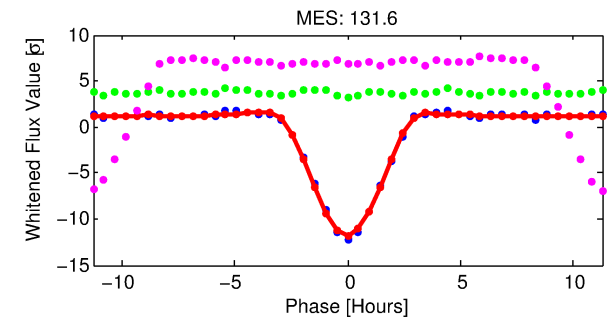
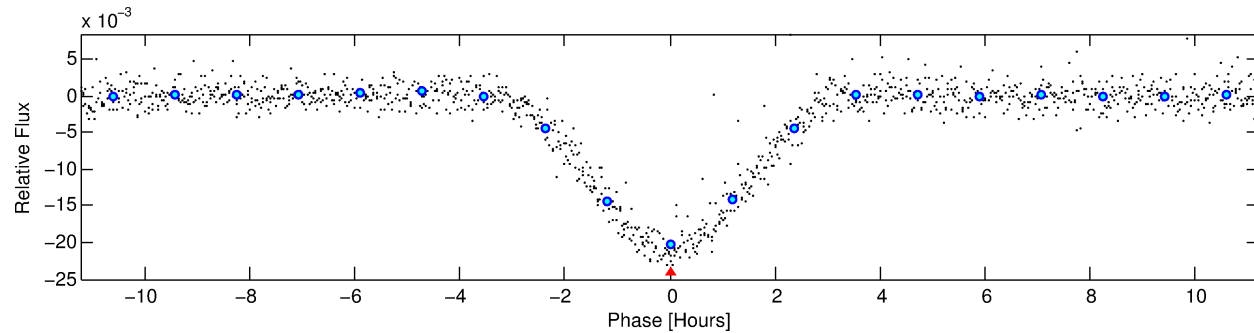
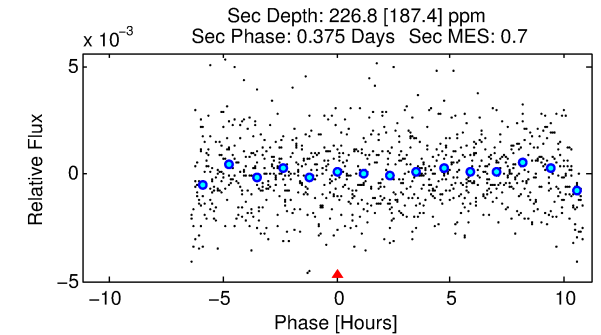
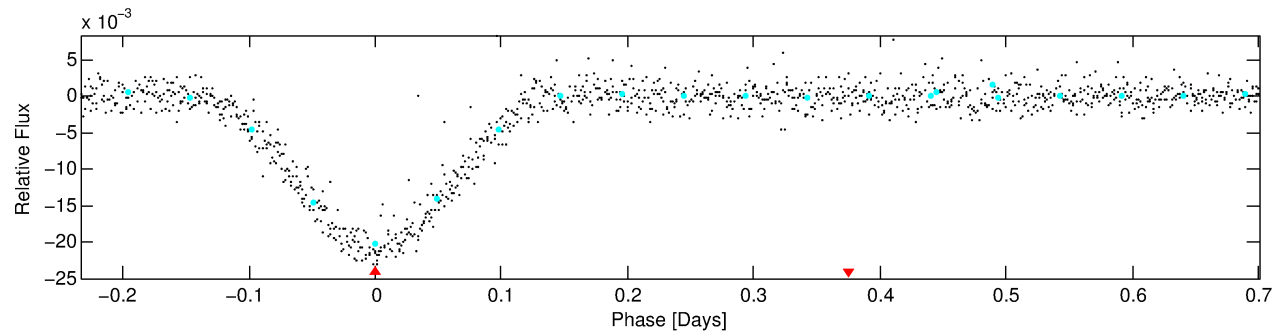
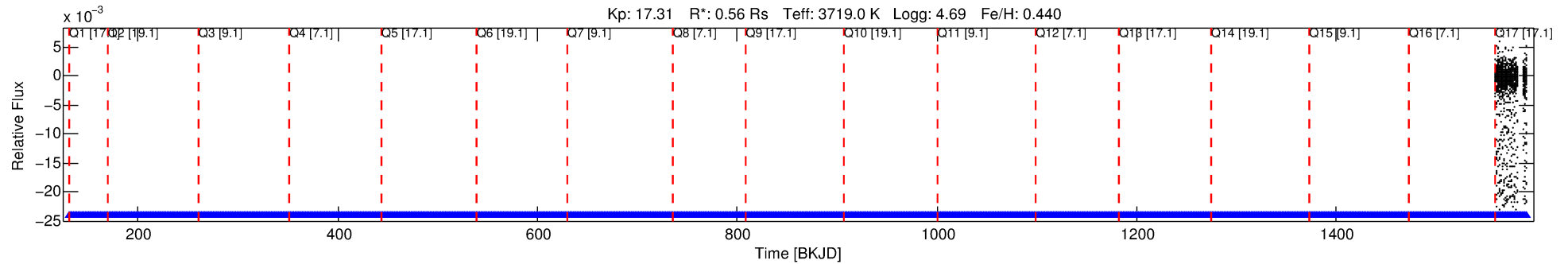
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010407191-01

No Significant Match Found

# DV One-Page Summary

KIC: 10407191 Candidate: 1 of 1 Period: 0.934 d



## TPS TCE Results:

Period = 0.93421 d  
Epoch = 131.7426 BKJD

DV fit results are unavailable

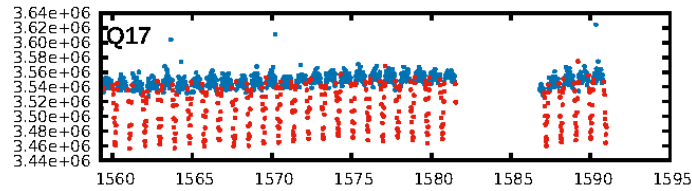
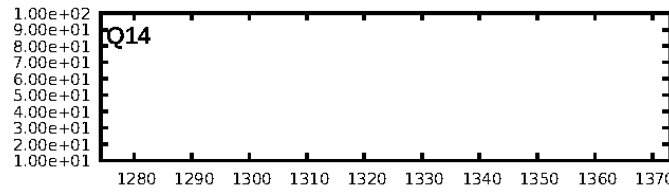
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: N/A  
GhostDiagnostic-chr: 0.4287  
Centroid-sig: 0.1%  
Centroid-so: 0.414 arcsec [3.01 $\sigma$ ]  
OotOffset-rm: 0.500 arcsec [7.35 $\sigma$ ]  
KicOffset-rm: 0.705 arcsec [10.35 $\sigma$ ]  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [1/1]

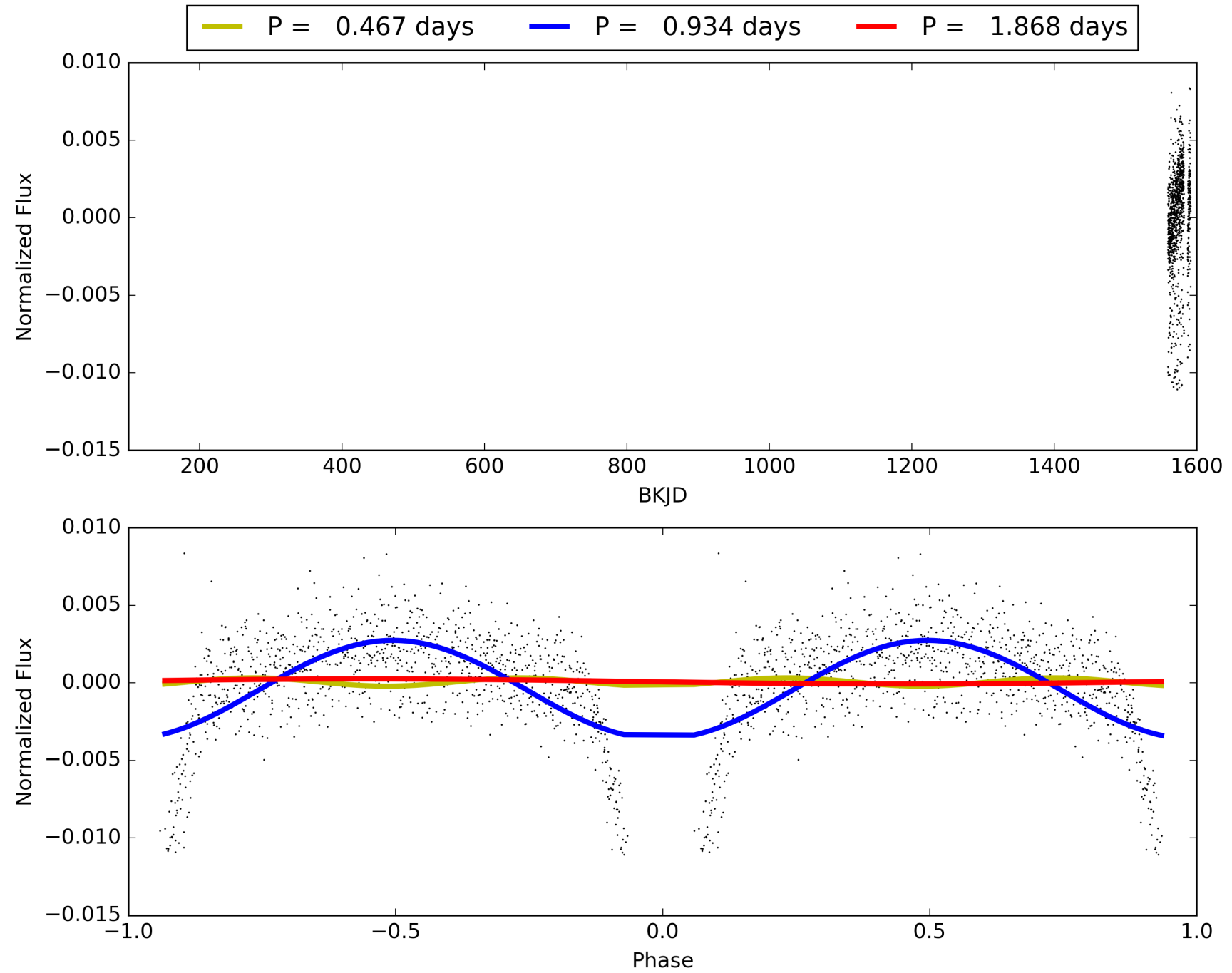
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:54:56 Z

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

# TCE 010407191-01, PDC Light Curves

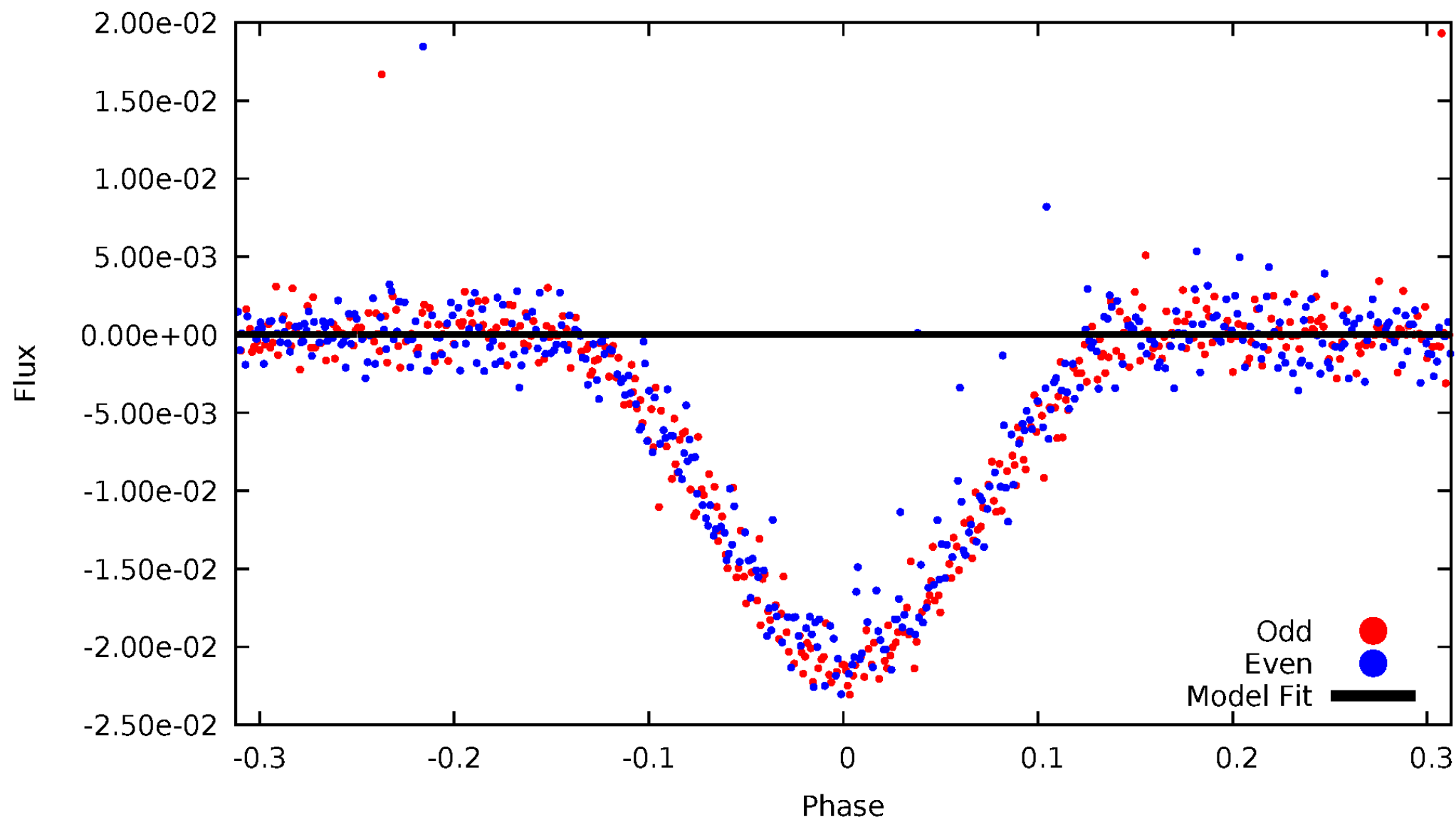


# TCE 010407191-01



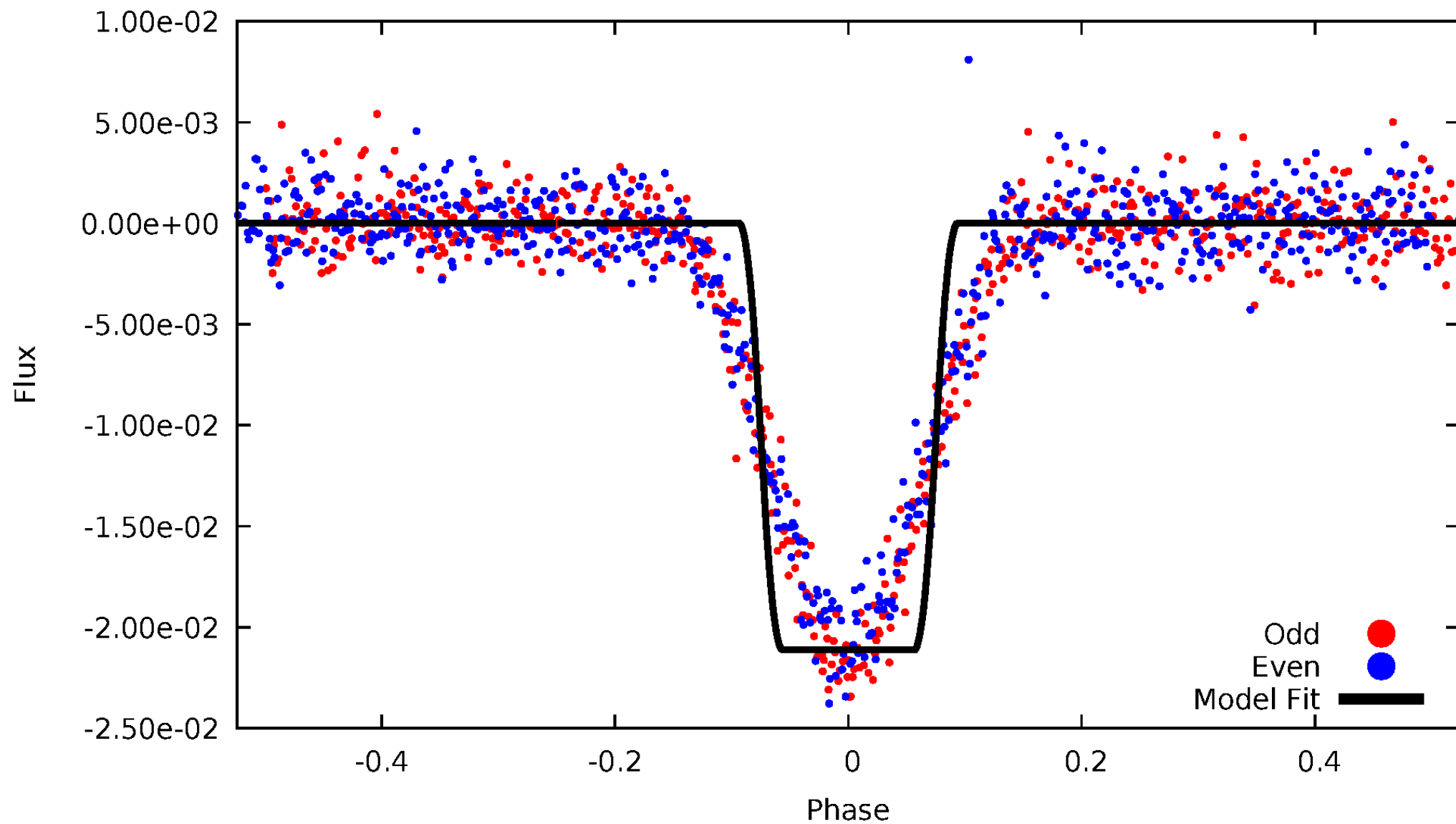
# DV Odd/Even

TCE 010407191-01



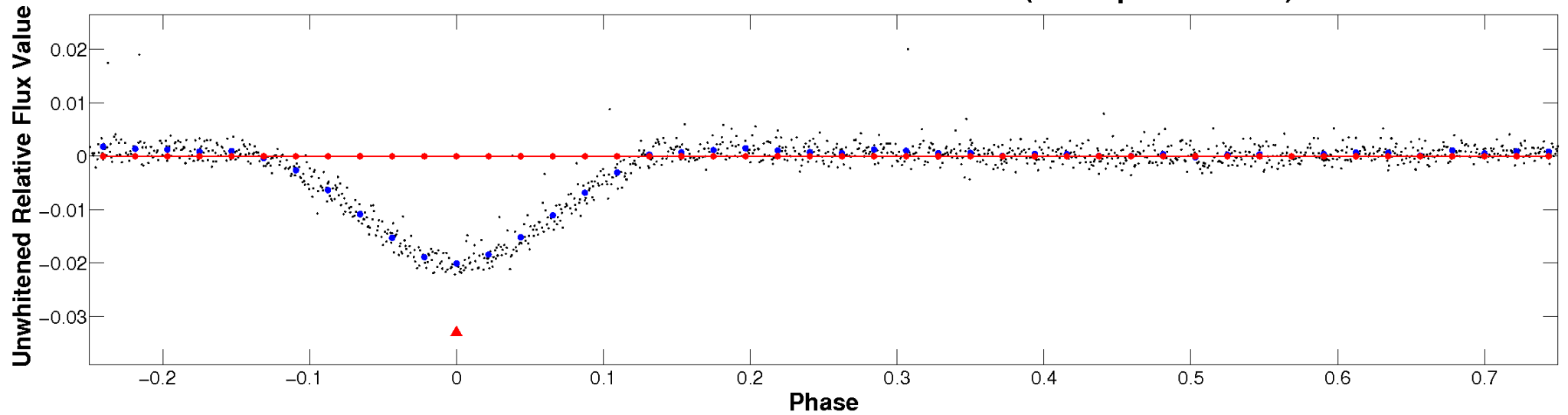
# ALT Odd/Even

TCE 010407191-01

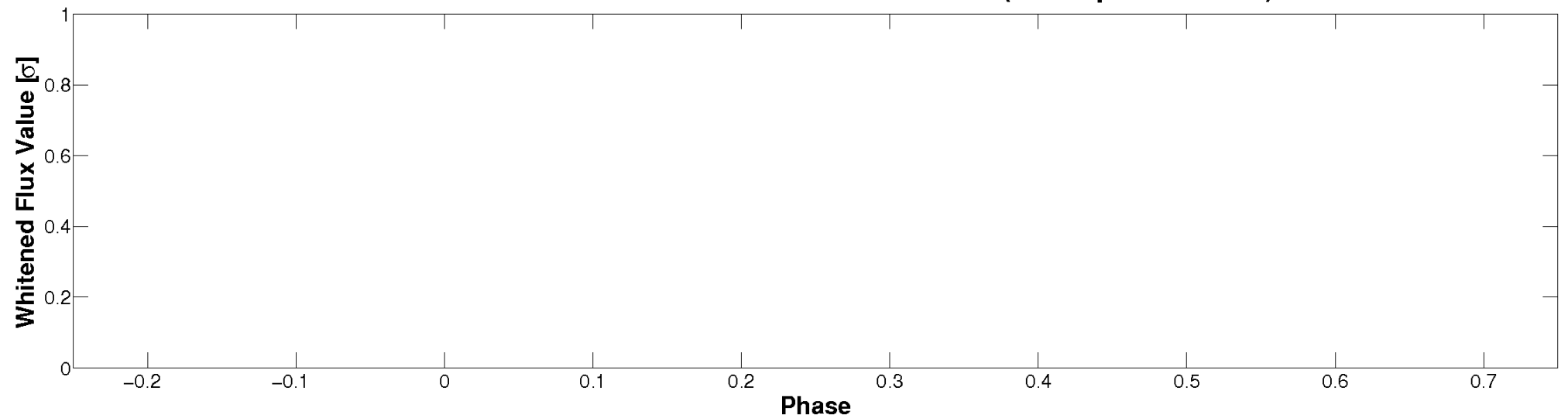


# Non-Whitened Vs. Whitened Light Curve

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

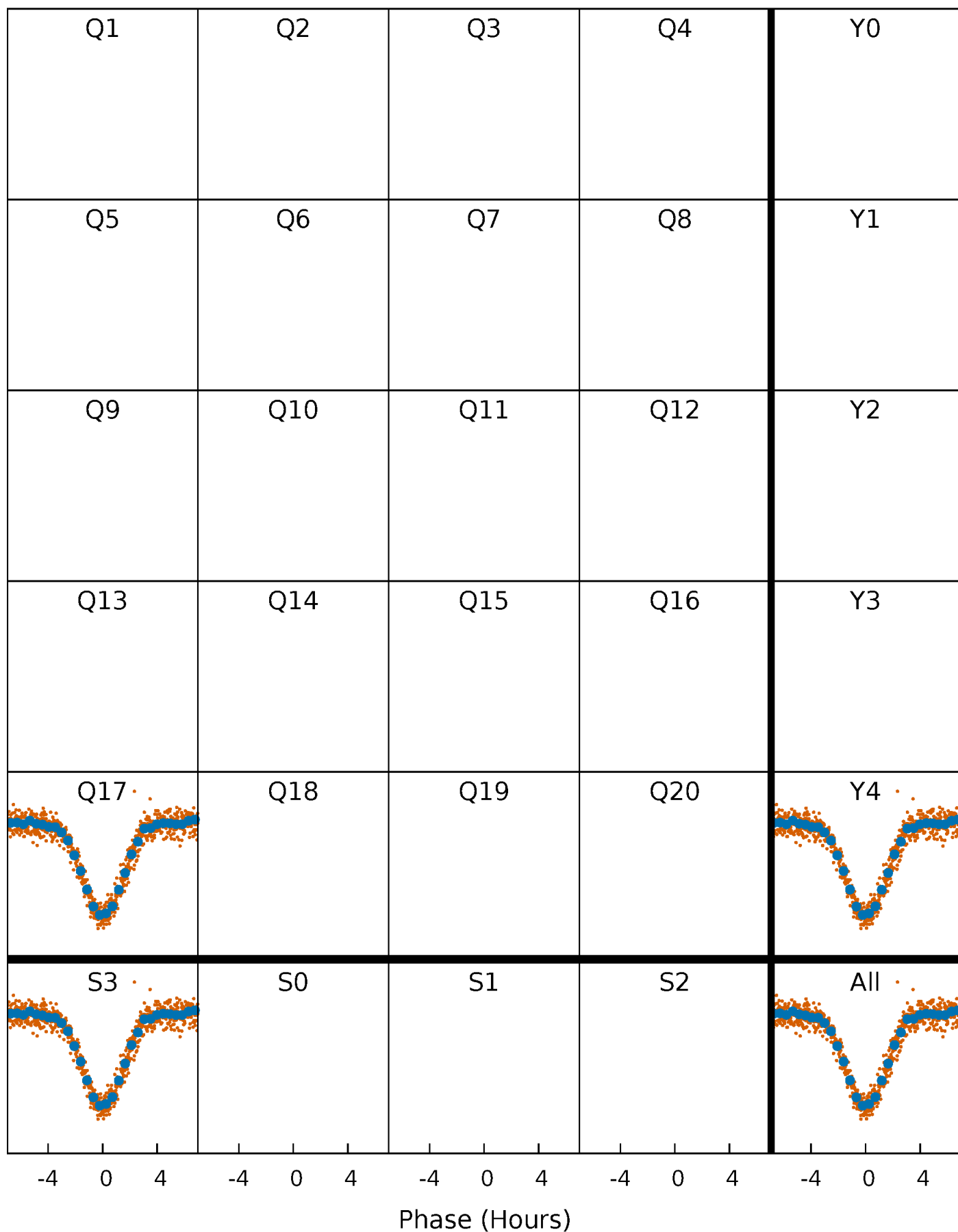


**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

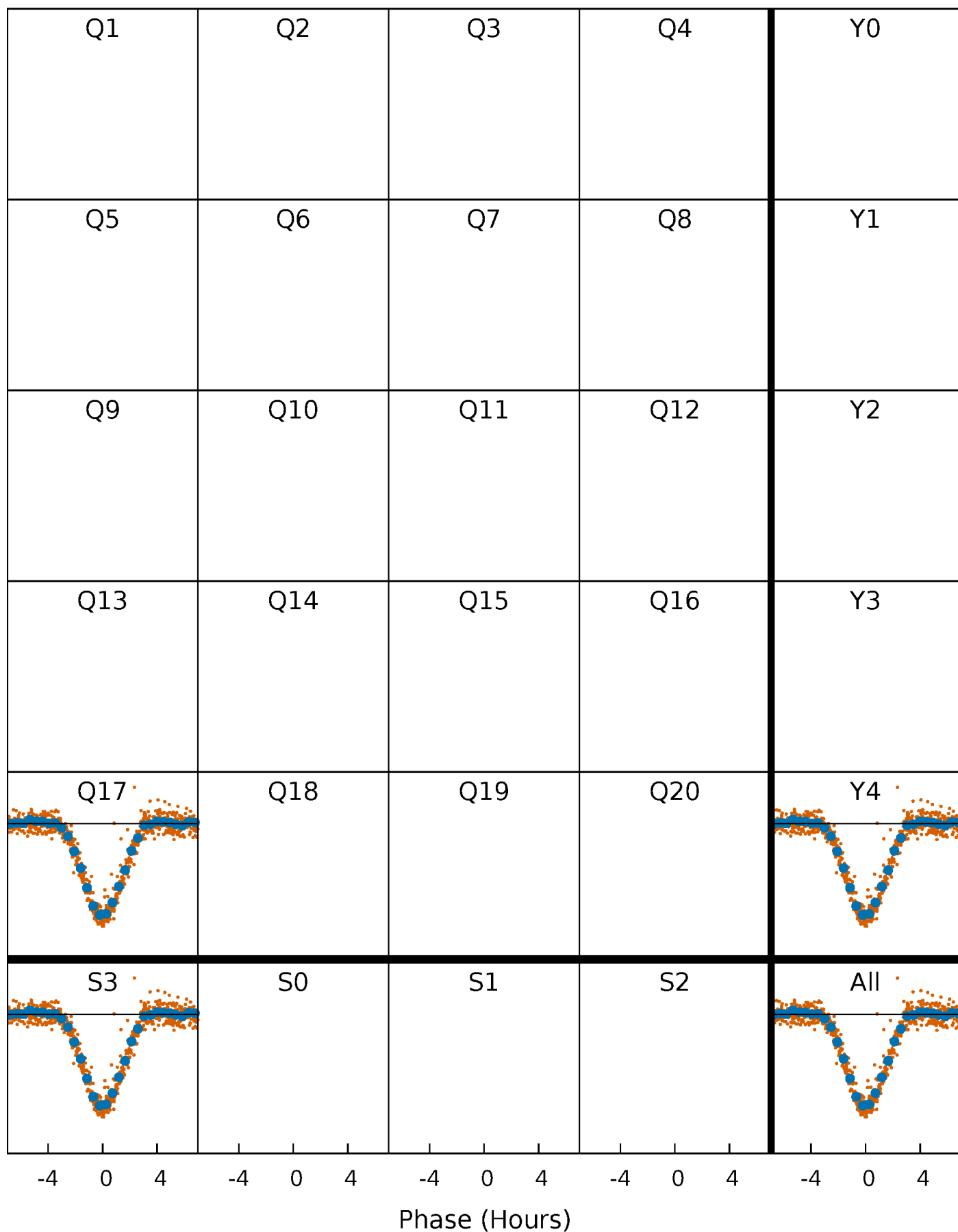
TCE 010407191-01   P= 0.934207 Days    $T_0=131.742574$  (BKJD)





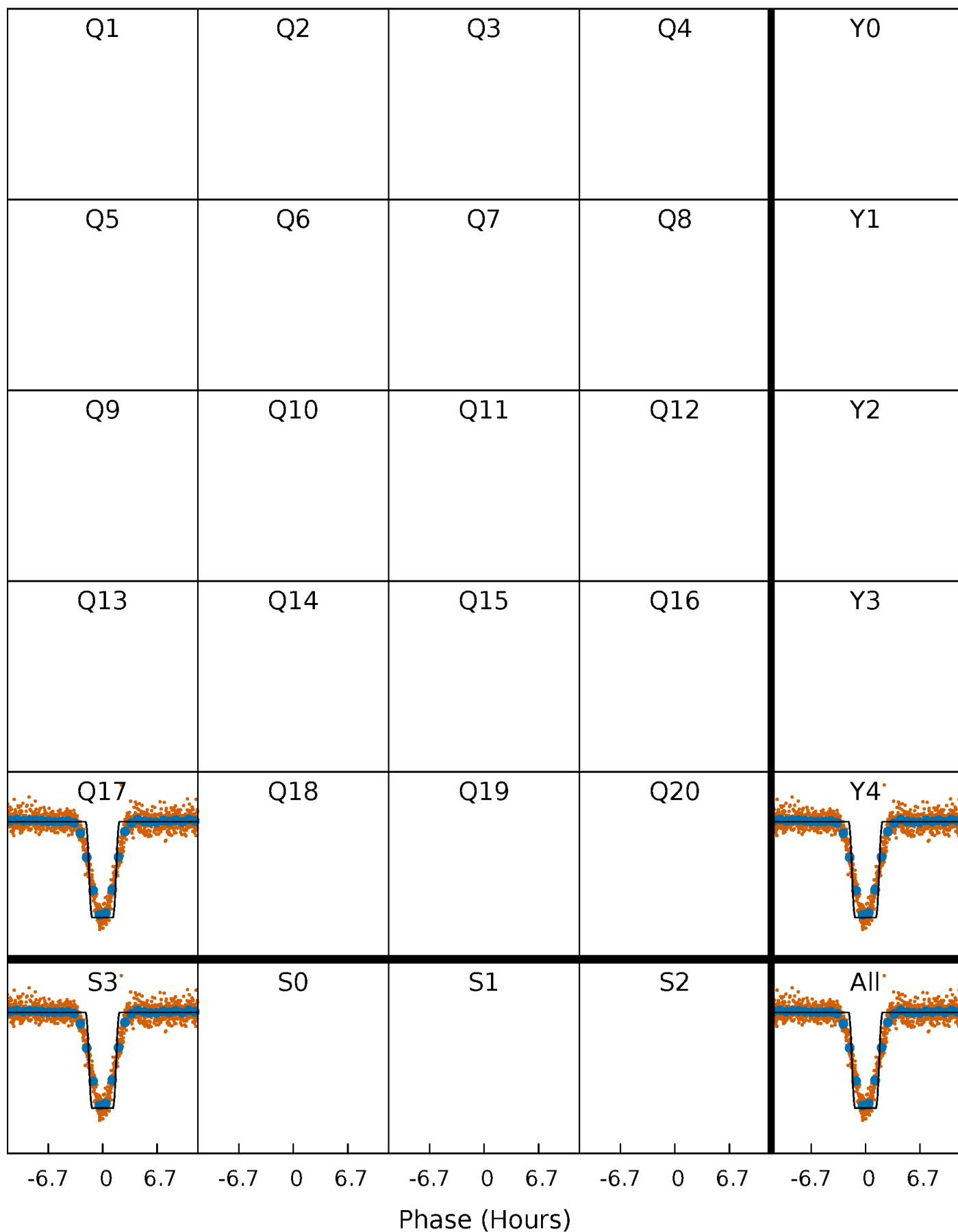
# DV Quarter-Phased Transit Curves

TCE 010407191-01 P= 0.934207 Days  $T_0=131.742574$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

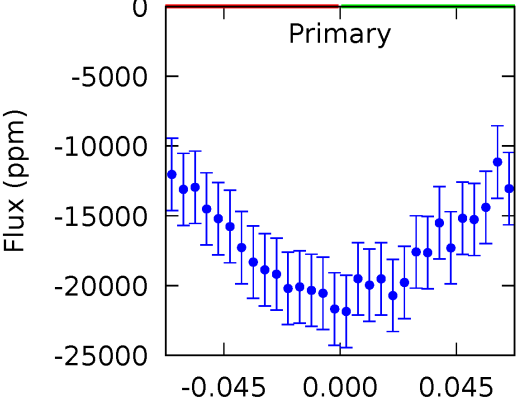
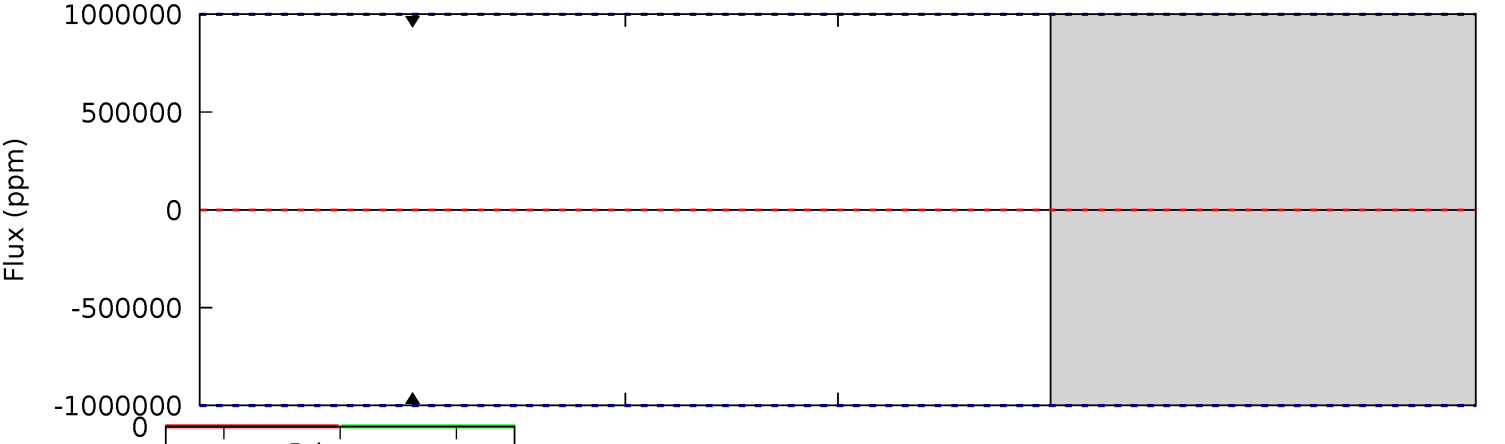
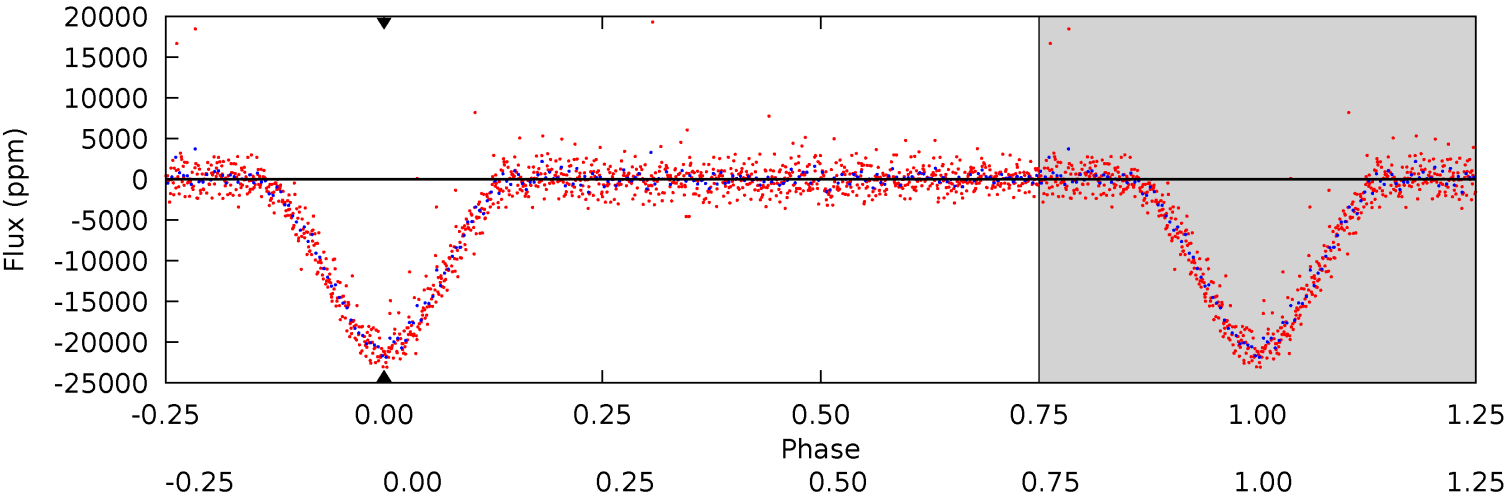
TCE 010407191-01     $P = 0.934207$  Days     $T_0 = 131.743767$  (BKJD)



# DV Model-Shift Uniqueness Test

010407191-01, P = 0.934207 Days, E = 131.742574 Days

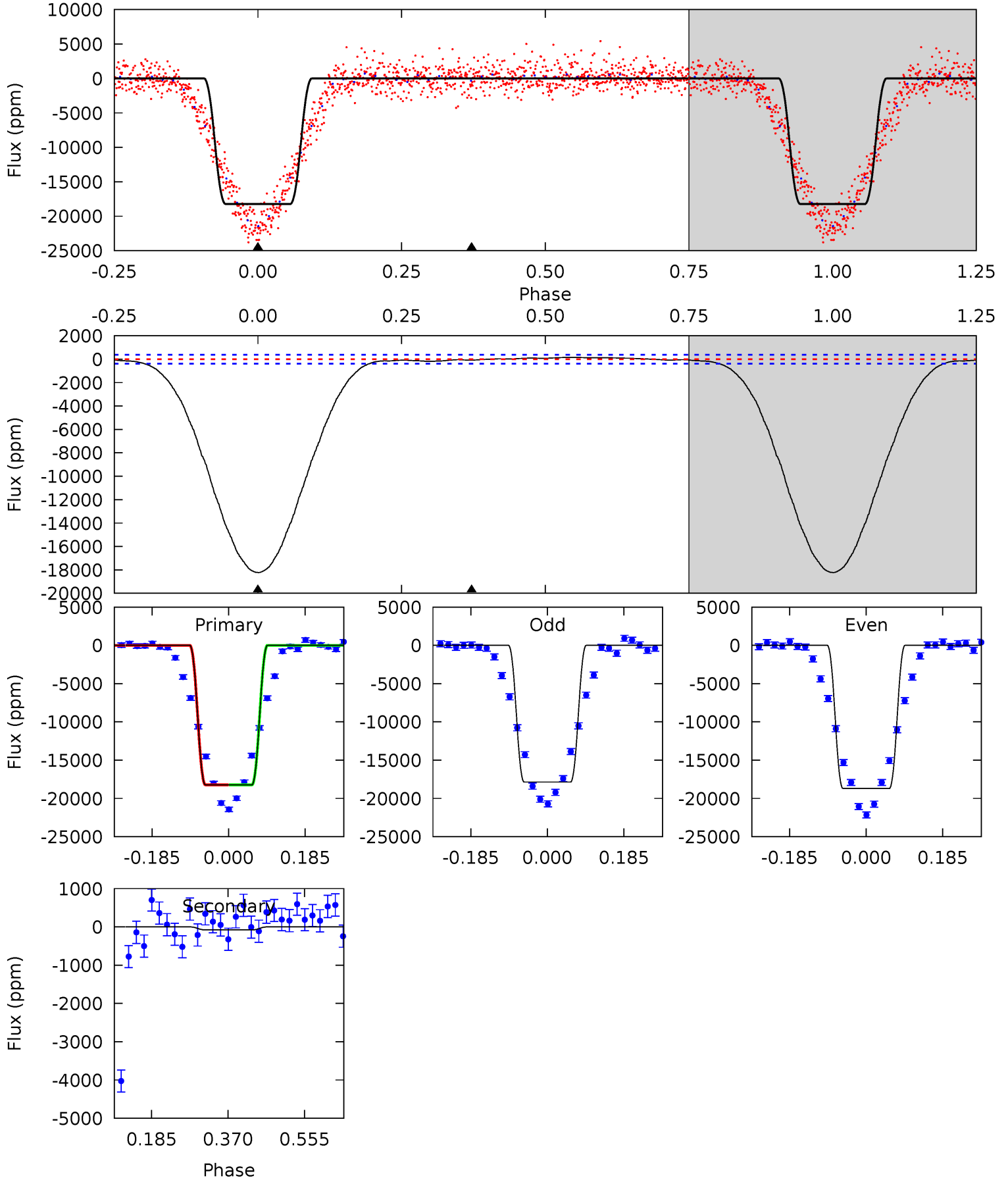
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

010407191-01, P = 0.934207 Days, E = 131.743767 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
213.5	0.92	0	0	4.43	1.33	1.92	213.5	213.5	0.92	0.92	4.97	1.00	0.01	0.04



### Stellar Parameters For KIC 010407191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3719^{+100}_{-111}$	$4.692^{+0.064}_{-0.020}$	$0.440^{+0.050}_{-0.300}$	$0.562^{+0.025}_{-0.069}$	$0.566^{+0.032}_{-0.060}$	$4.501^{+1.424}_{-0.394}$
	+3%/-3%	+1%/-0%	+11%/-68%	+4%/-12%	+6%/-11%	+32%/-9%
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 010407191-01 / KOI 8011.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$8.45^{+5.72}_{-4.75}$	$1371^{+41}_{-47}$	$2880^{+2859}_{-8004}$	$7.235^{+322.931}_{-212.210}$
Alt.	$-79 \pm 85$	$9.01^{+5.85}_{-5.26}$	$1370^{+42}_{-47}$	$-1917^{+3919}_{-106}$	$0.094^{+0.547}_{-0.110}$

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

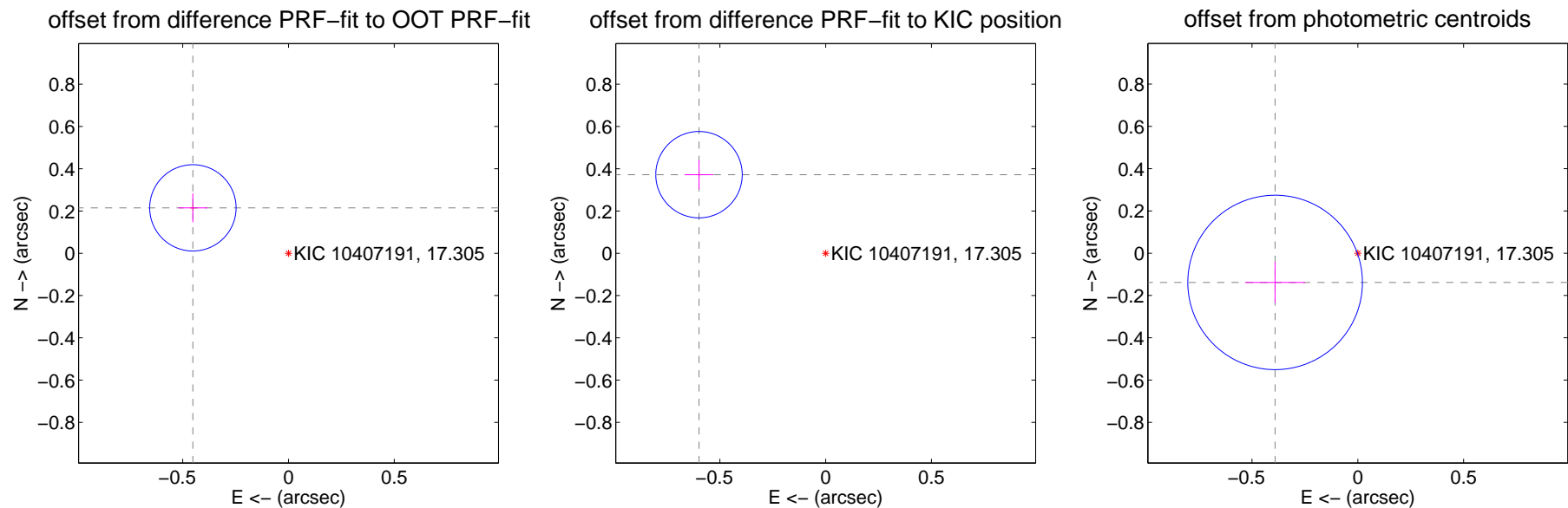
## DV Centroid Data

Supplemental centroid analysis for 010407191-01. Kepler magnitude: 17.30. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.500 \pm 0.068$	7.35	$0.452 \pm 0.068$	$0.215 \pm 0.068$
PRF-fit source offset from KIC position	$0.705 \pm 0.068$	10.35	$0.599 \pm 0.068$	$0.372 \pm 0.068$
photometric centroid source offset	$0.41 \pm 0.14$	3.01	$0.39 \pm 0.14$	$-0.14 \pm 0.10$



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.



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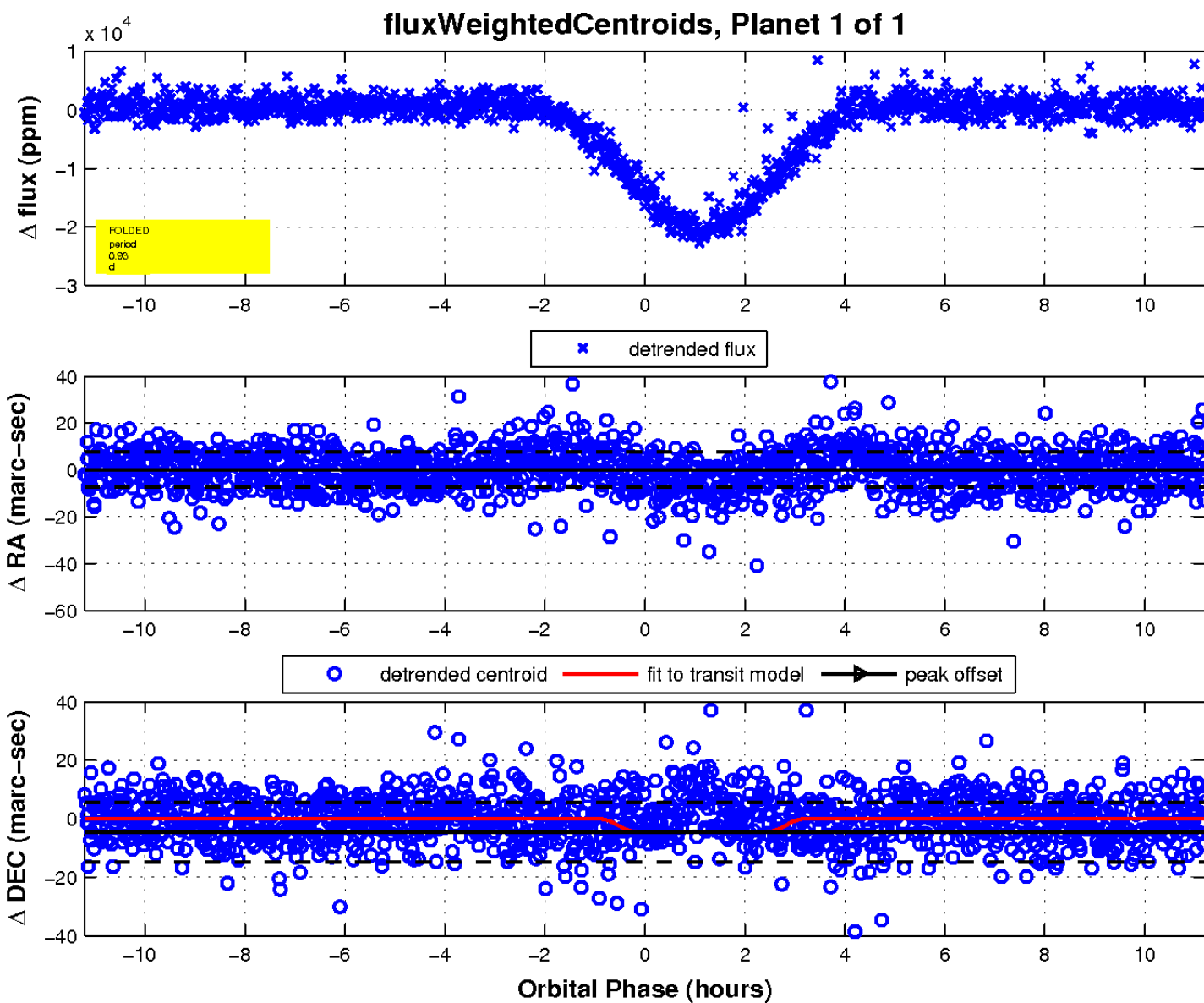
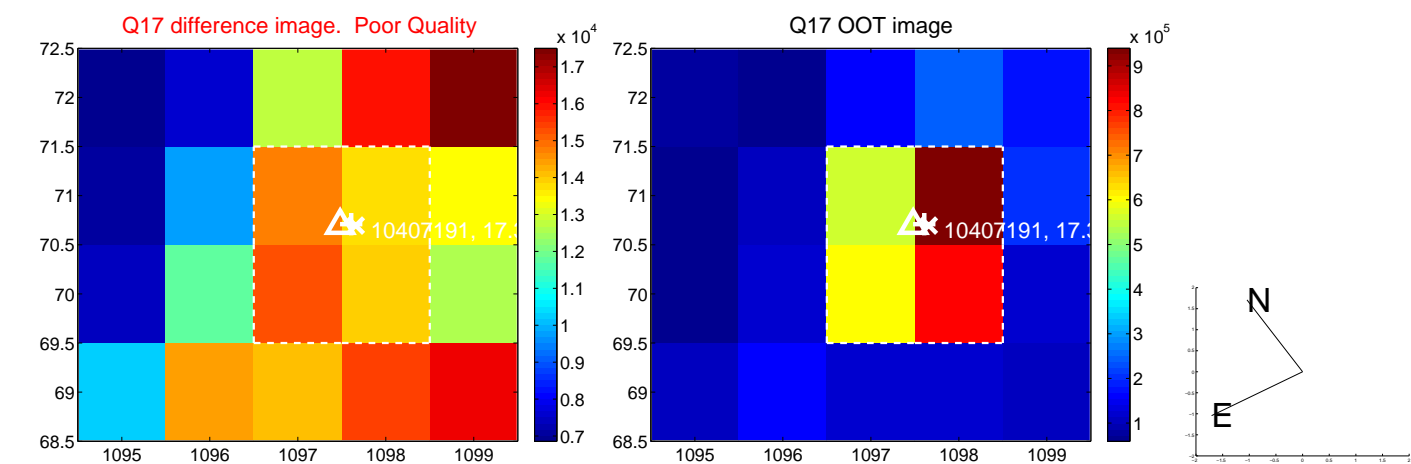
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

