

# KIC 011803074

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011803074-01	OBS	5932.01	355.868863	358.018980	1273.9	28.301	12.1	14.3	0.80	5736	3.46	0.70

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011803074-01	OBS	PC	0.90	0	0	0	0	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.

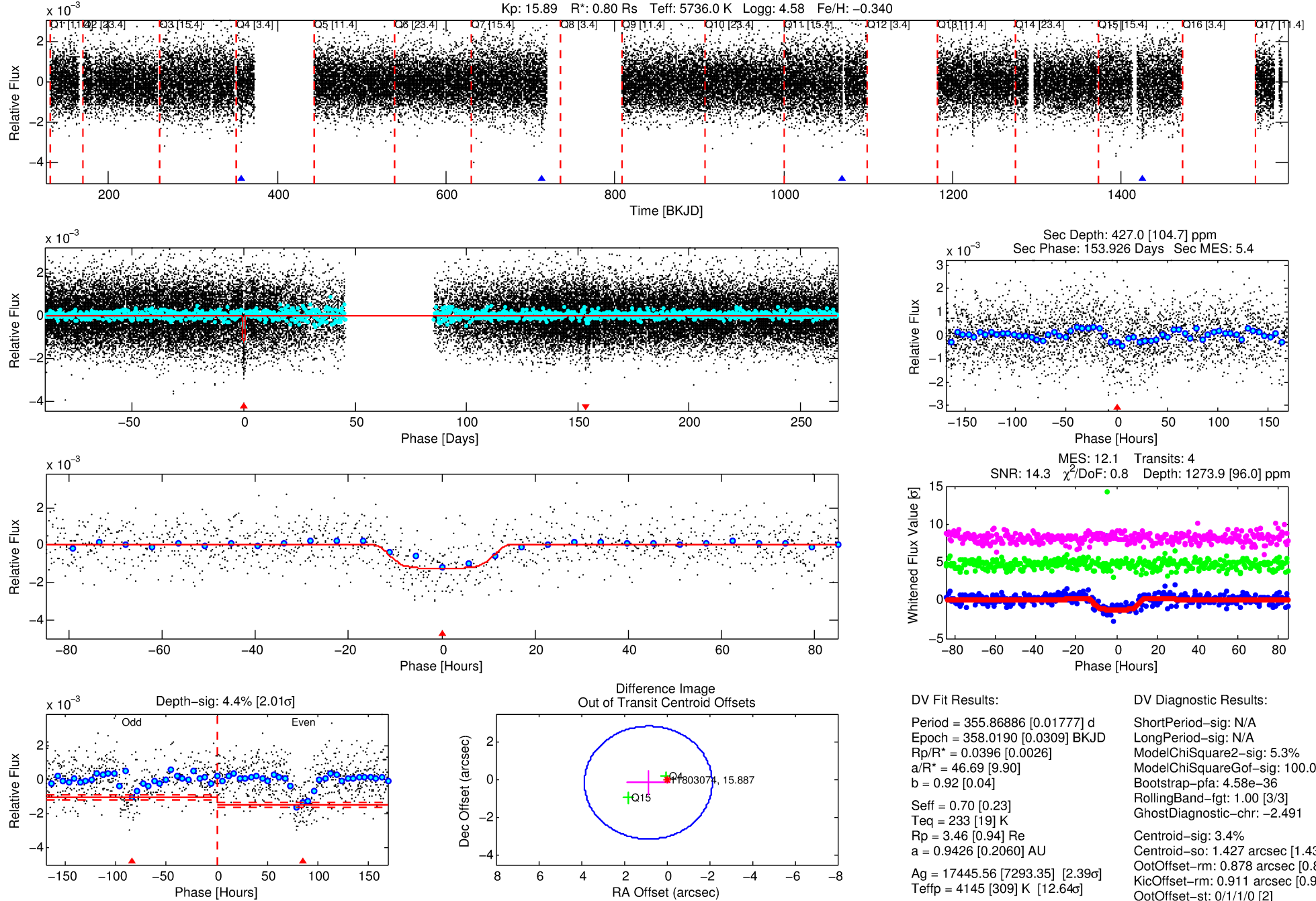
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011803074-01

No Significant Match Found

# DV One-Page Summary

KIC: 11803074 Candidate: 1 of 1 Period: 355.869 d  
KOI: K05932.01 Corr: 0.907



## DV Fit Results:

Period = 355.86886 [0.01777] d  
Epoch = 358.0190 [0.0309] BKJD  
Rp/R\* = 0.0396 [0.0026]  
a/R\* = 46.69 [9.90]  
b = 0.92 [0.04]  
Seff = 0.70 [0.23]  
Teq = 233 [19] K  
Rp = 3.46 [0.94] Re  
a = 0.9426 [0.2060] AU  
Ag = 17445.56 [7293.35] [2.39 $\sigma$ ]  
Teffp = 4145 [309] K [12.64 $\sigma$ ]

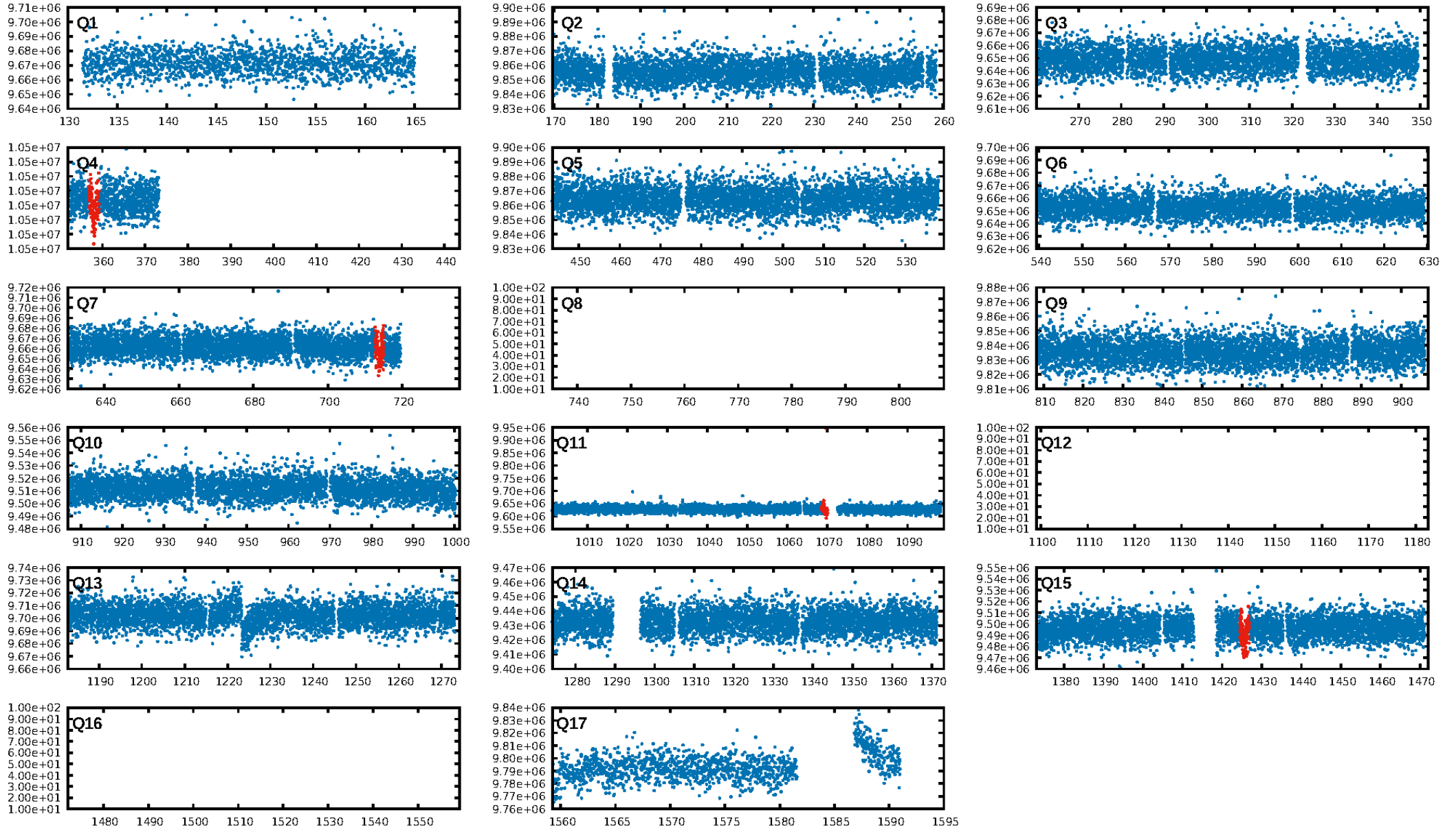
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 5.3%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 4.58e-36  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -2.491  
Centroid-sig: 3.4%  
Centroid-so: 1.427 arcsec [1.43 $\sigma$ ]  
OotOffset-rm: 0.878 arcsec [0.88 $\sigma$ ]  
KicOffset-rm: 0.911 arcsec [0.94 $\sigma$ ]  
OotOffset-st: 0/1/1/0 [2]  
KicOffset-st: 0/1/1/0 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [2/2]

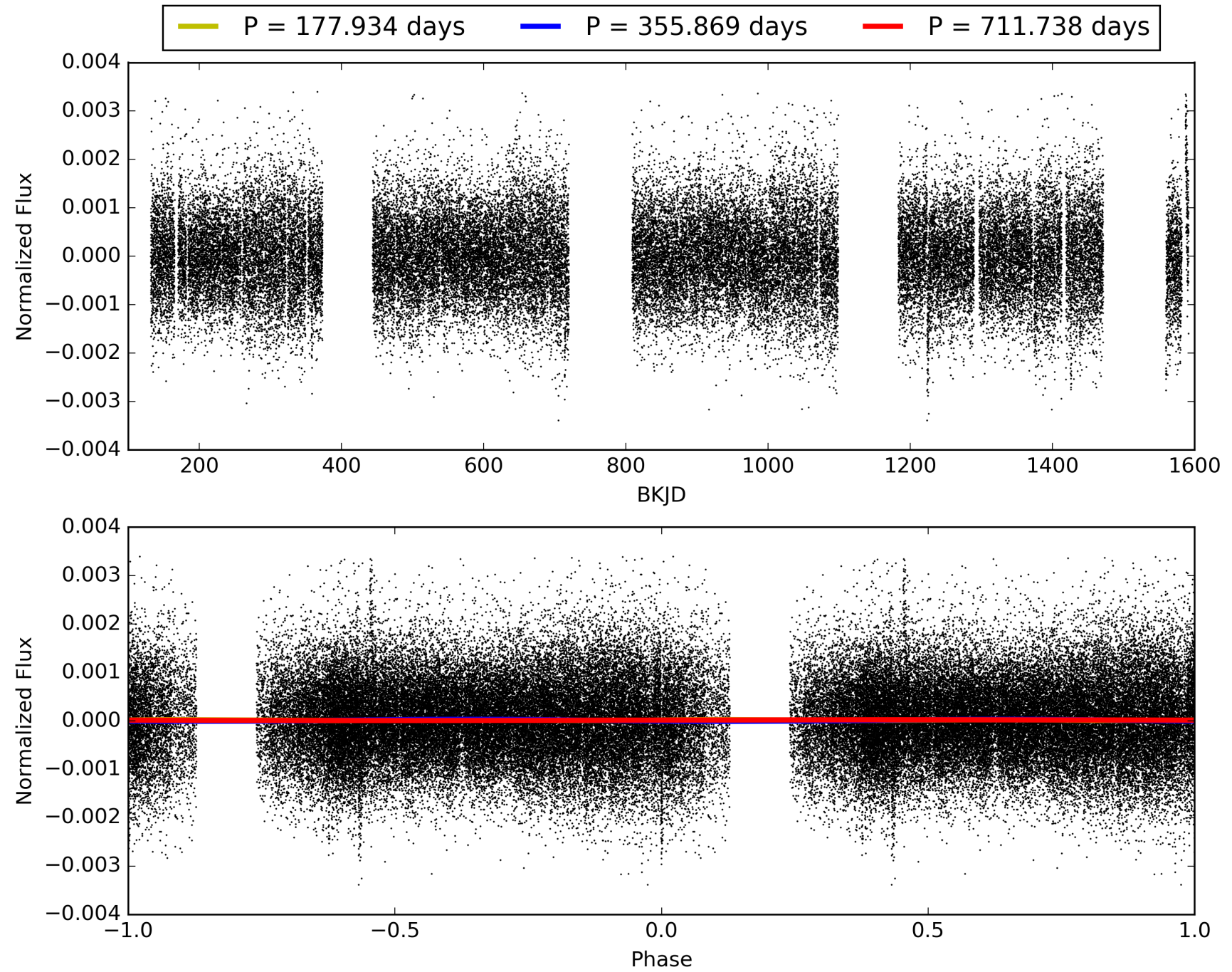
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:30:25 Z

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

# TCE 011803074-01, PDC Light Curves

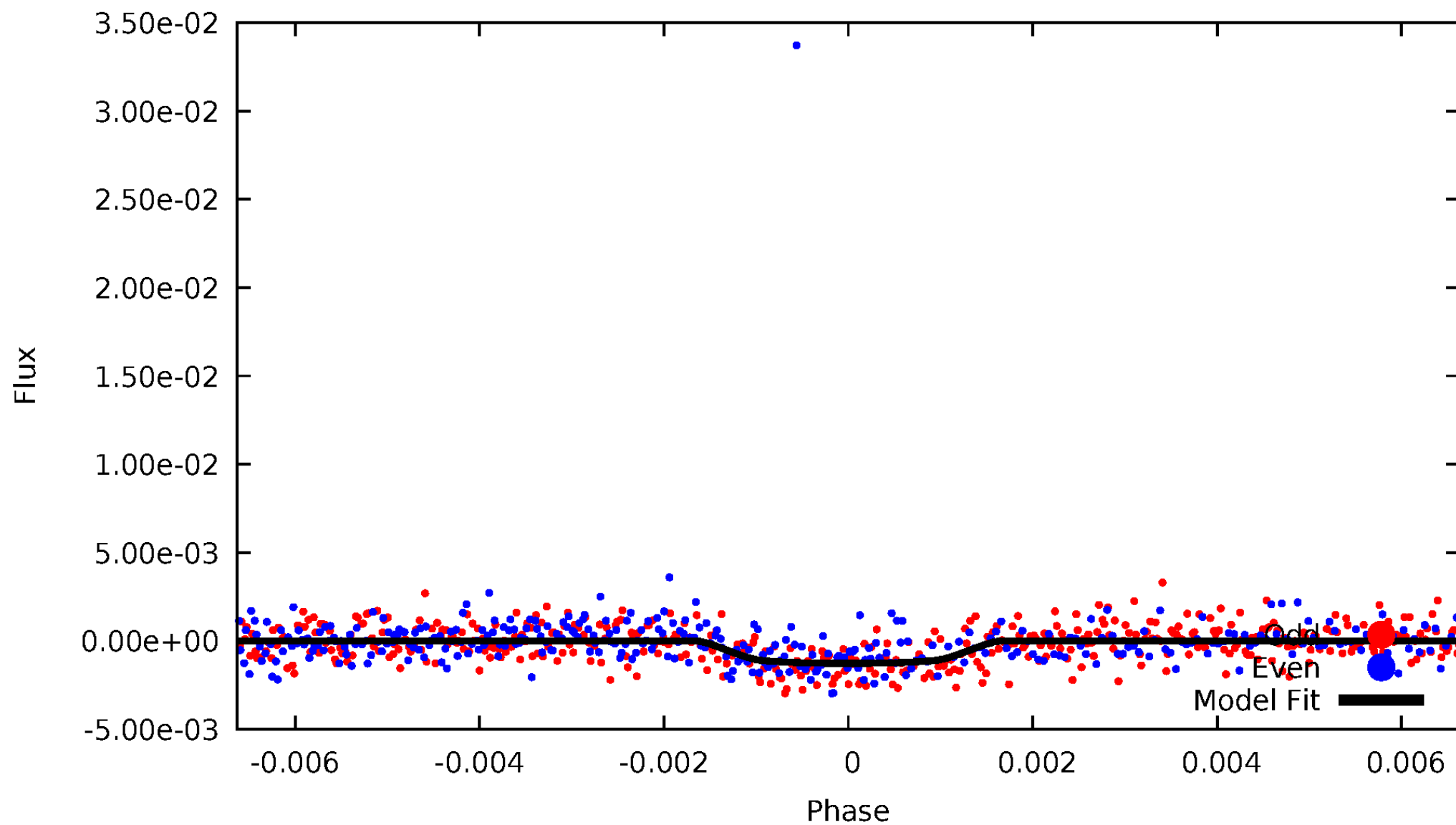


# TCE 011803074-01



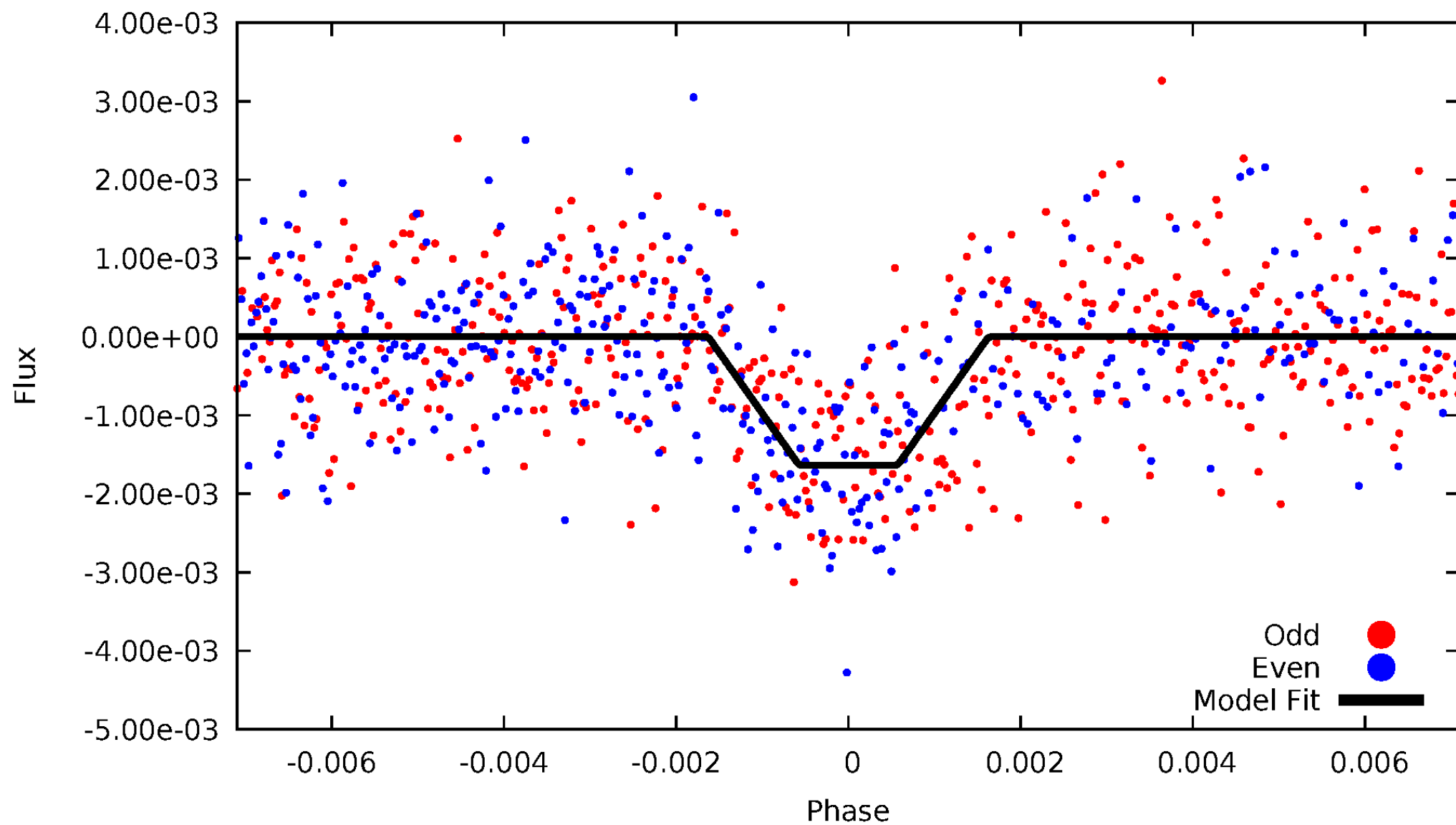
# DV Odd/Even

TCE 011803074-01



# ALT Odd/Even

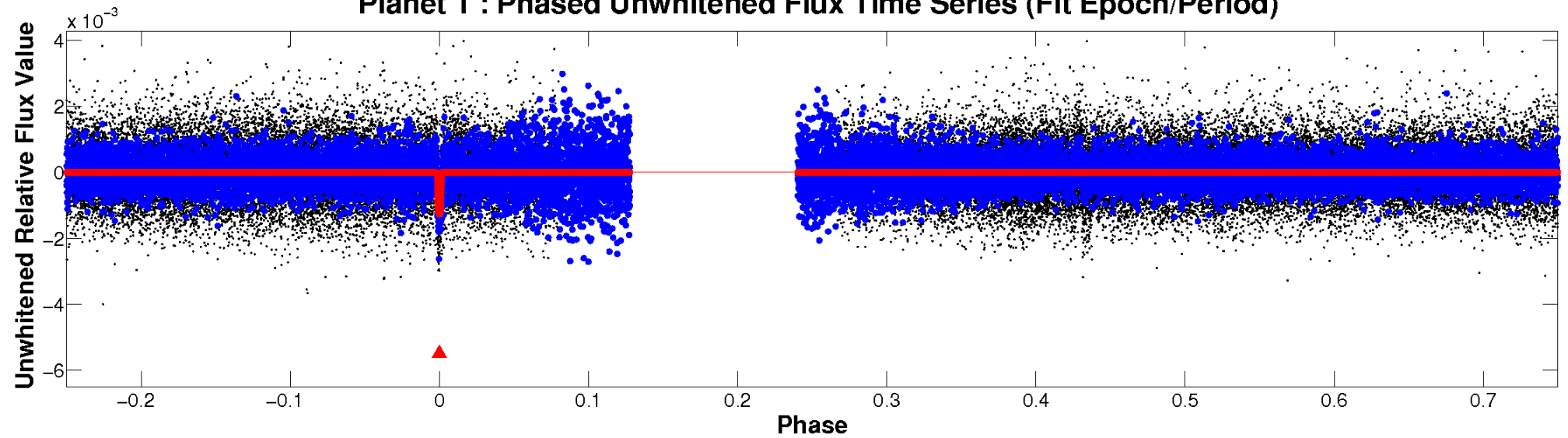
TCE 011803074-01



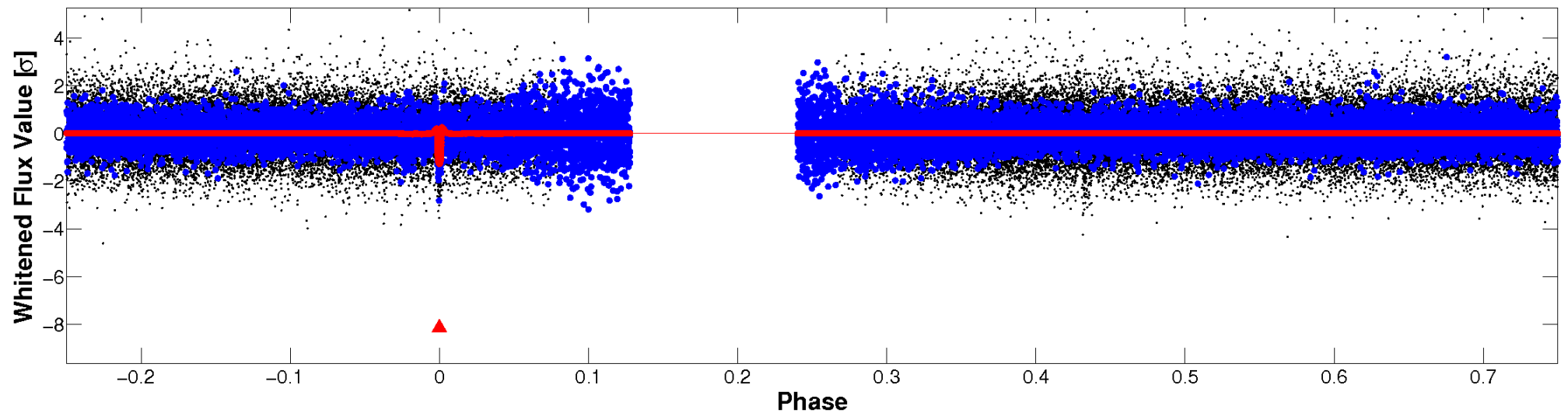


# Non-Whitened Vs. Whitened Light Curve

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

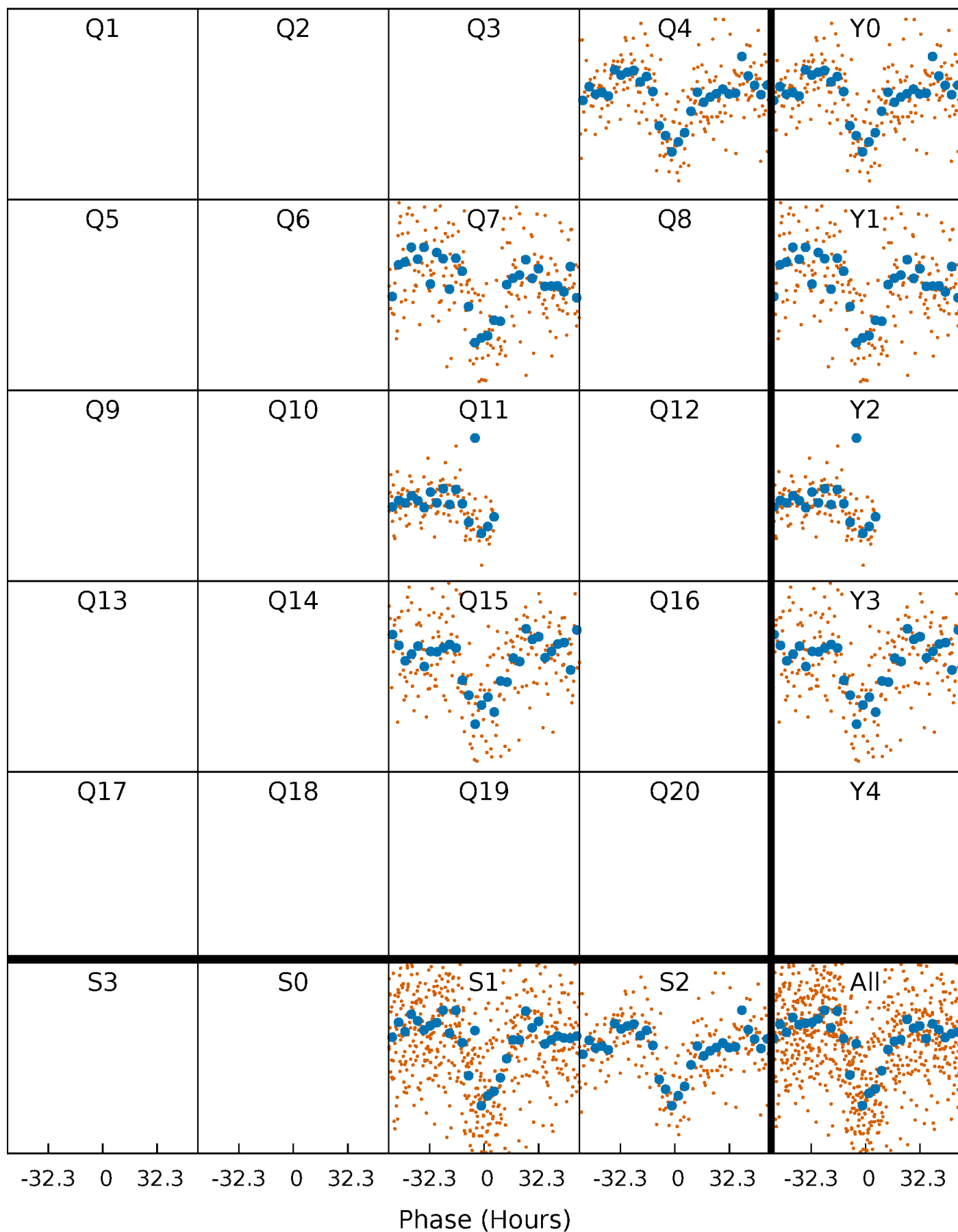


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

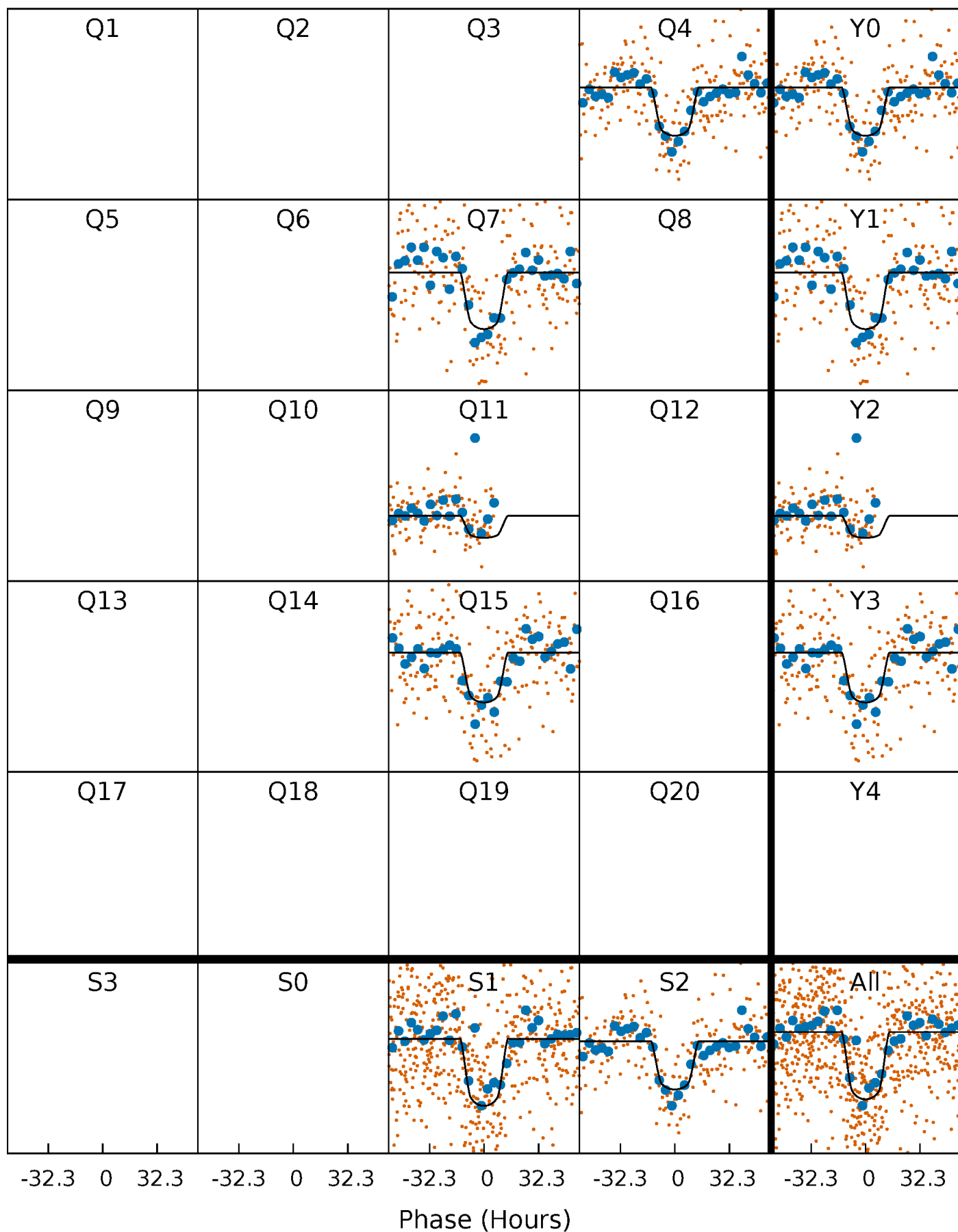
TCE 011803074-01 P=355.868863 Days  $T_0=358.018980$  (BKJD)





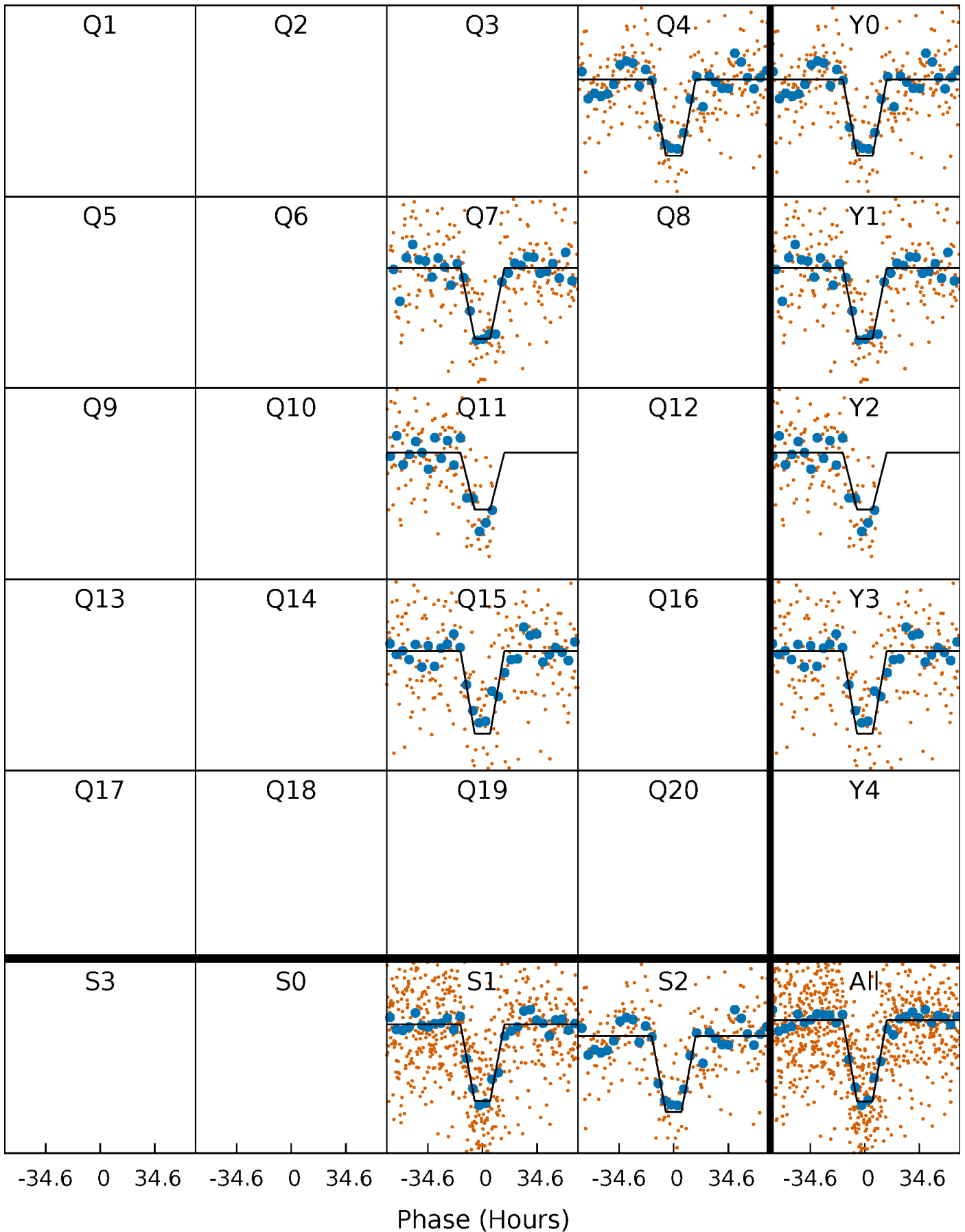
# DV Quarter-Phased Transit Curves

TCE 011803074-01 P=355.868863 Days  $T_0=358.018980$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

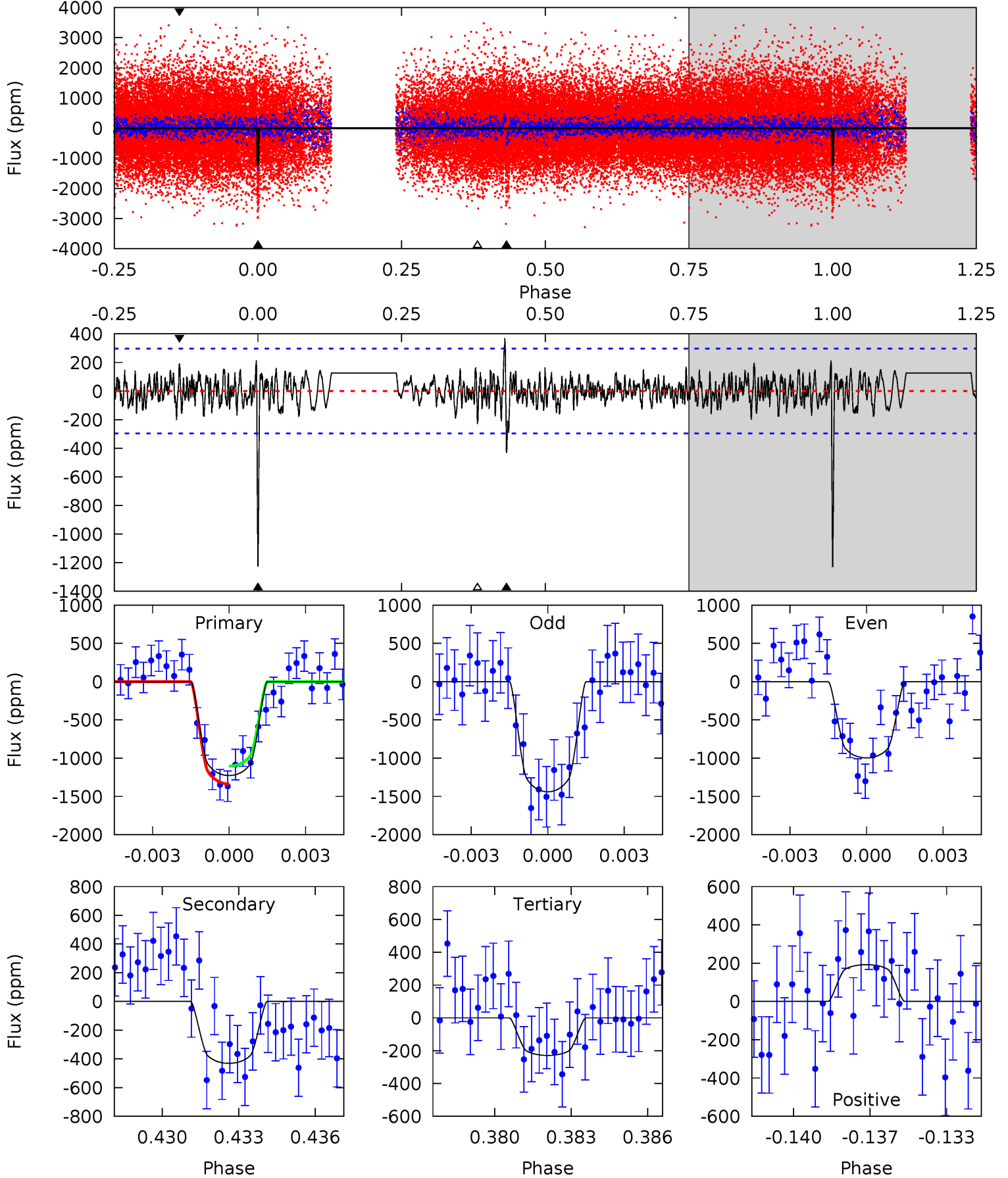
TCE 011803074-01 P=355.836825 Days  $T_0=358.031718$  (BKJD)



# DV Model-Shift Uniqueness Test

011803074-01, P = 355.868863 Days, E = 2.150117 Days

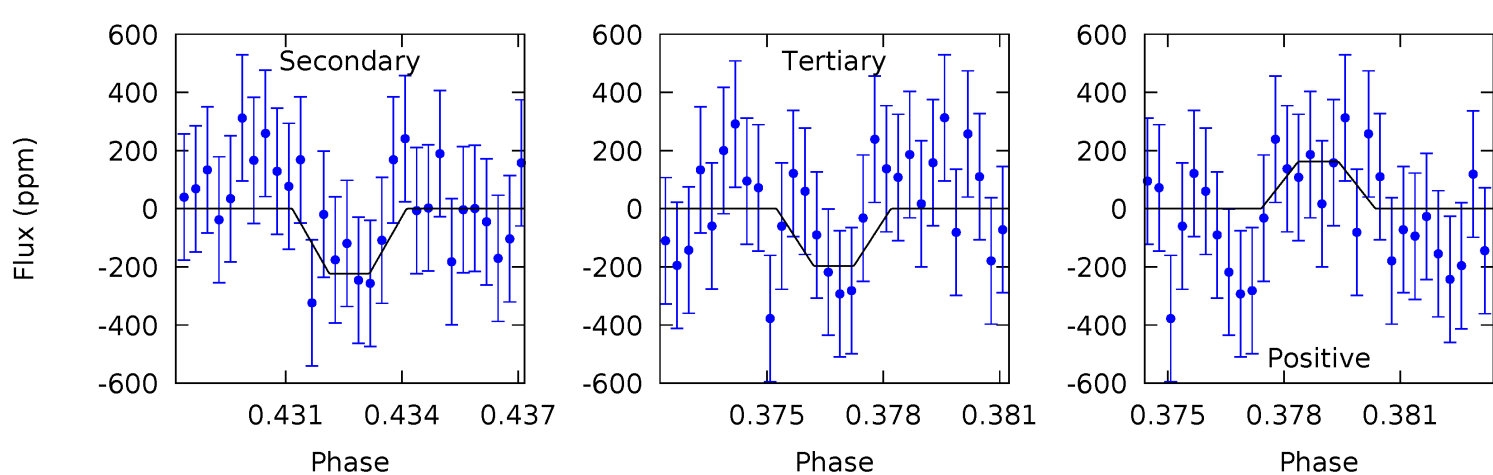
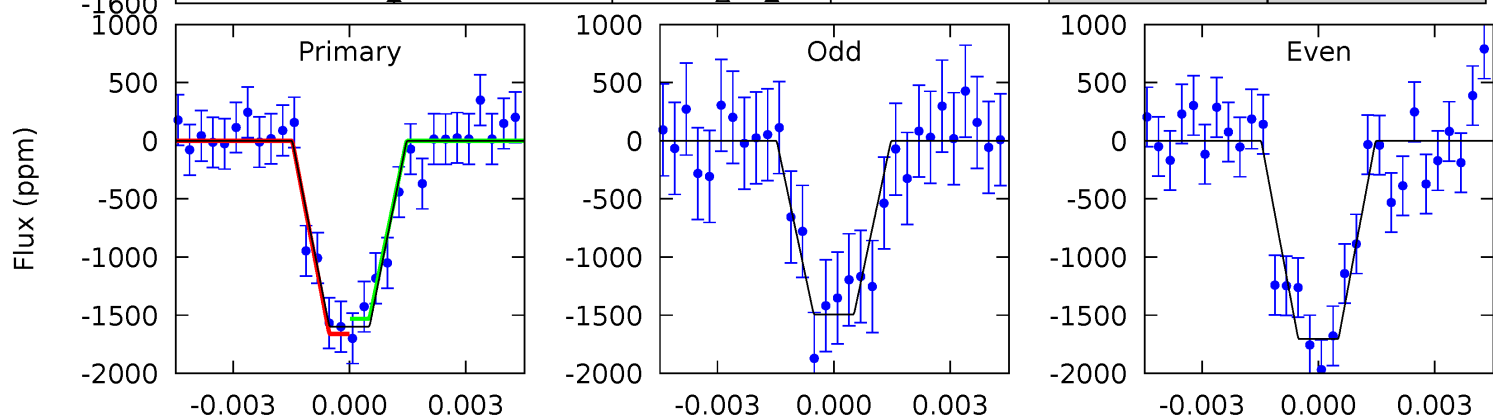
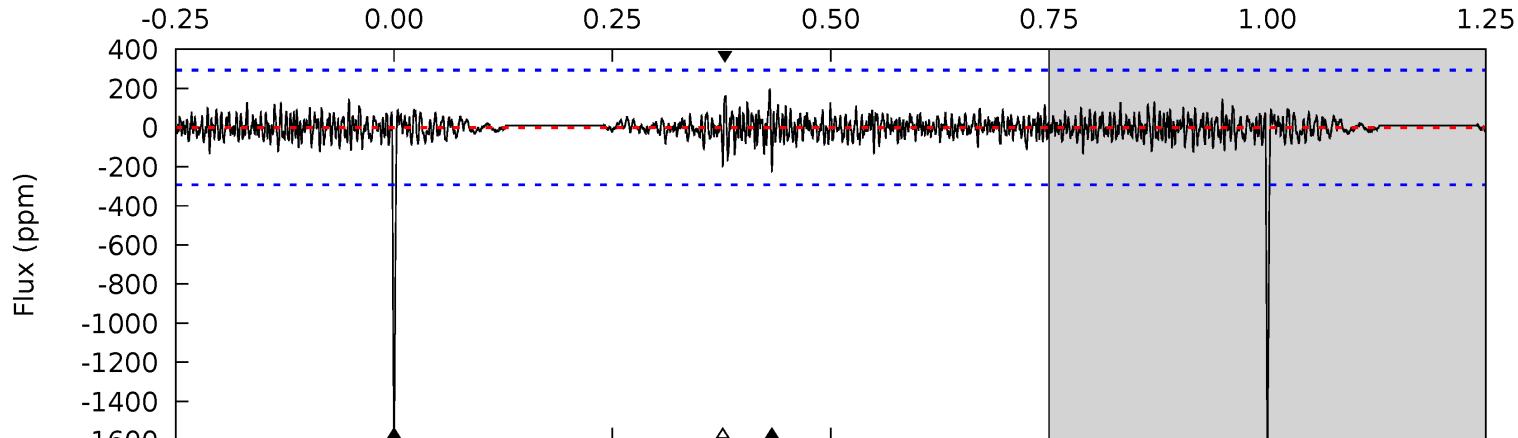
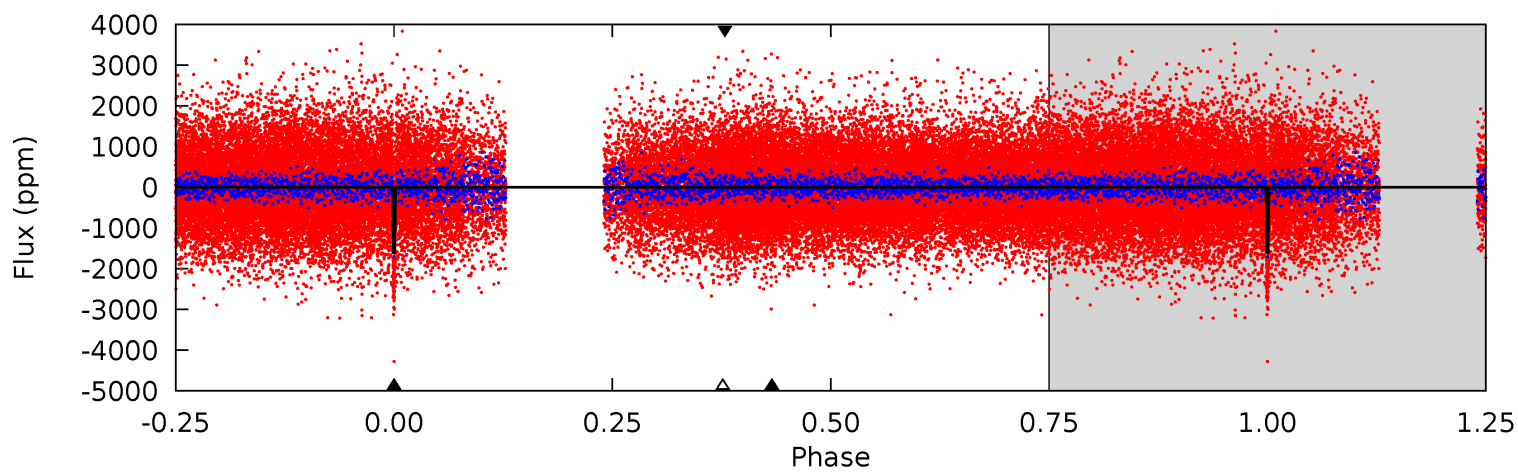
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	7.61	4.04	3.39	5.23	2.94	1.27	17.6	18.3	3.56	4.21	3.90	0.66	0.23	2.05



# Alt Model-Shift Uniqueness Test

011803074-01, P = 355.836825 Days, E = 2.194893 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
28.6	3.99	3.52	2.90	5.23	2.94	0.84	25.1	25.7	0.47	1.09	1.88	1.03	0.11	1.17



### Stellar Parameters For KIC 011803074

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5736^{+155}_{-155}$	$4.576^{+0.042}_{-0.168}$	$-0.340^{+0.300}_{-0.300}$	$0.801^{+0.212}_{-0.071}$	$0.892^{+0.090}_{-0.100}$	$2.448^{+0.419}_{-1.150}$
	+3%/-3%	+1%/-4%	+88%/-88%	+26%/-9%	+10%/-11%	+17%/-47%
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 011803074-01 / KOI 5932.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-431 \pm 57$	$3.60^{+0.53}_{-0.39}$	$333^{+19}_{-15}$	$4371^{+174}_{-191}$	$15991^{+4529}_{-3844}$
Alt.	$-223 \pm 56$	$3.66^{+0.50}_{-0.37}$	$332^{+20}_{-14}$	$3850^{+190}_{-217}$	$7787^{+3052}_{-2212}$

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

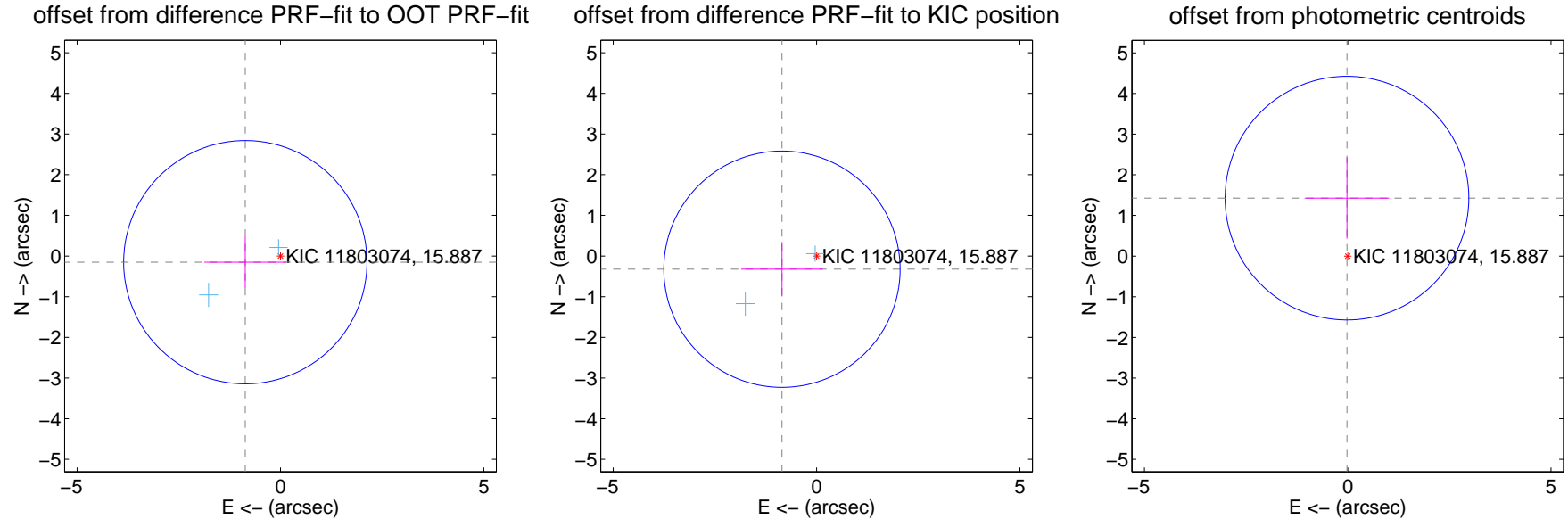
## DV Centroid Data

Supplemental centroid analysis for 011803074-01. Kepler magnitude: 15.89. Transit SNR 14.30

There are 2 quarters with good PRF difference image offsets

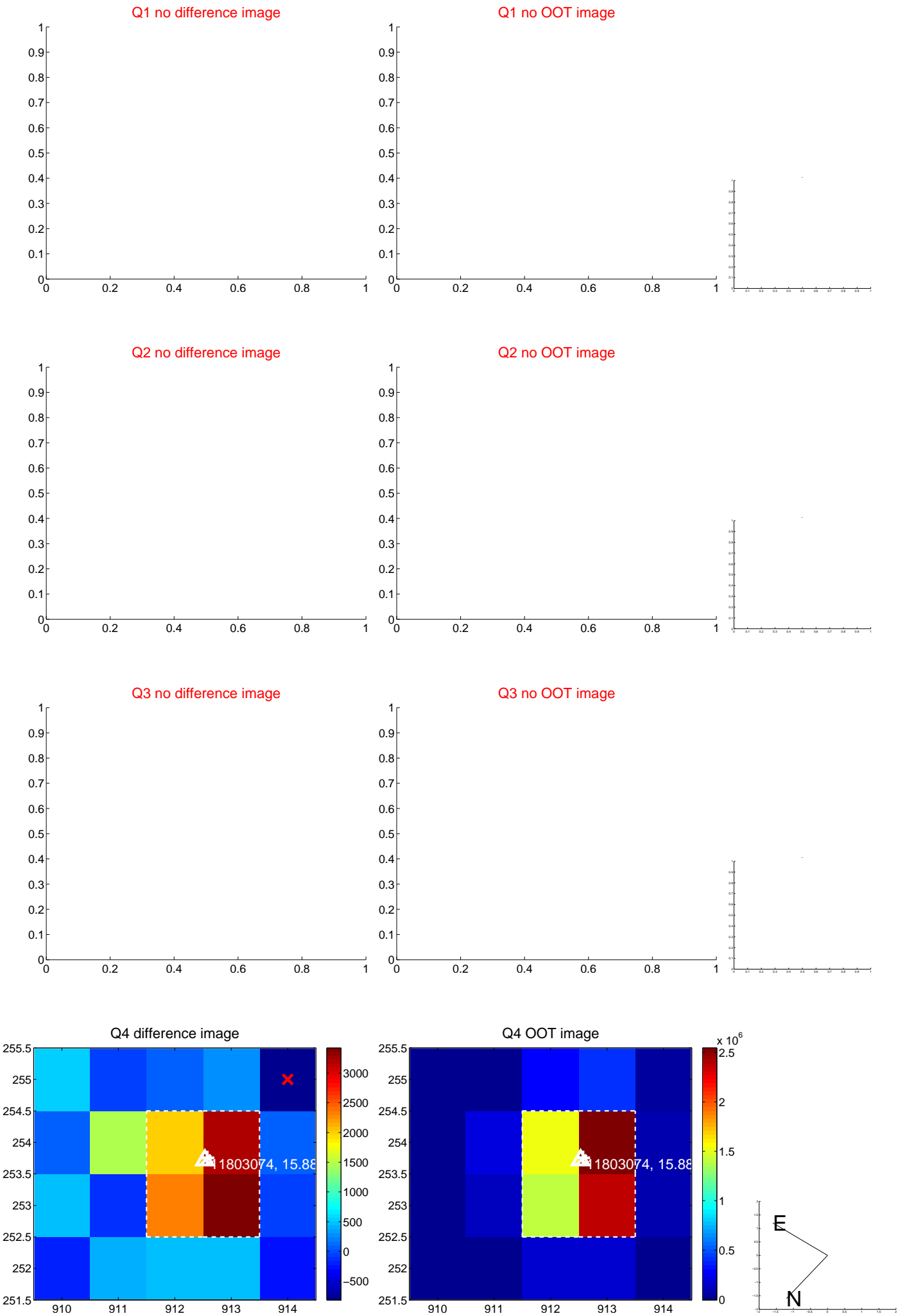
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.878 \pm 0.997$	0.88	$0.864 \pm 1.006$	$-0.152 \pm 0.635$
PRF-fit source offset from KIC position	$0.911 \pm 0.969$	0.94	$0.851 \pm 1.005$	$-0.324 \pm 0.670$
photometric centroid source offset	$1.43 \pm 1.00$	1.43	$0.02 \pm 1.04$	$1.43 \pm 1.00$



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.





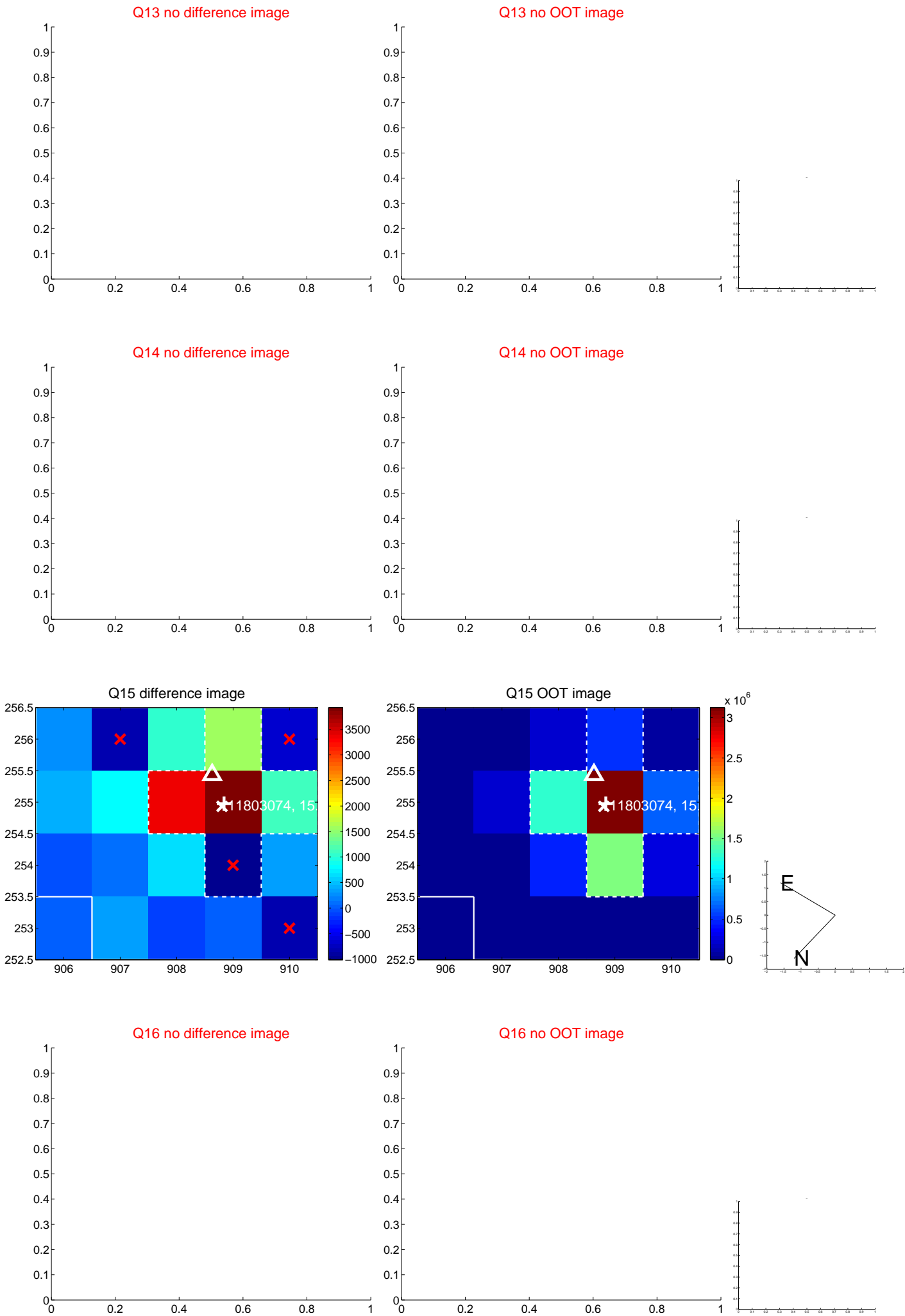
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



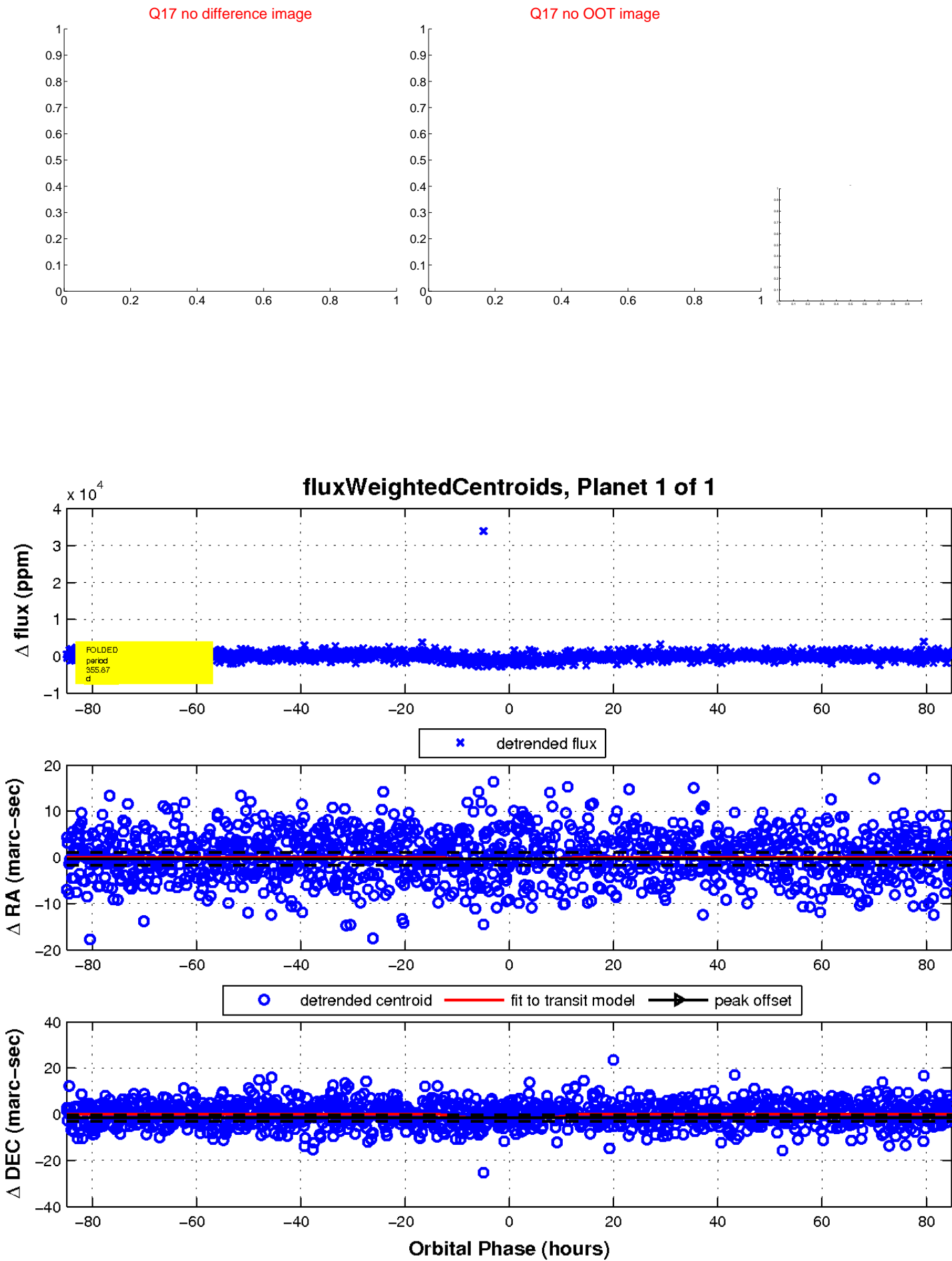
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



# UKIRT Image

Declination

