

# KIC 010395363

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010395363-01	OBS	No	373.410710	271.362649	60.6	14.944	10.5	3.8	1.30	6260	1.19	2.13

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010395363-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

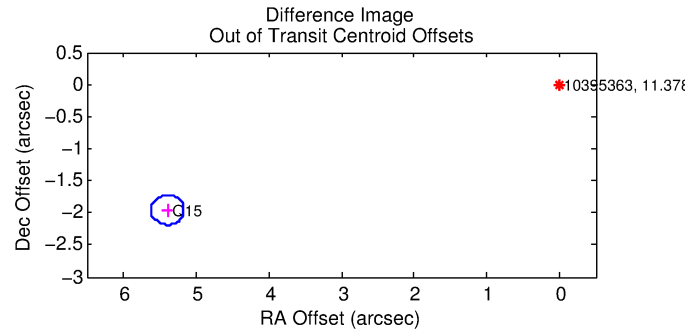
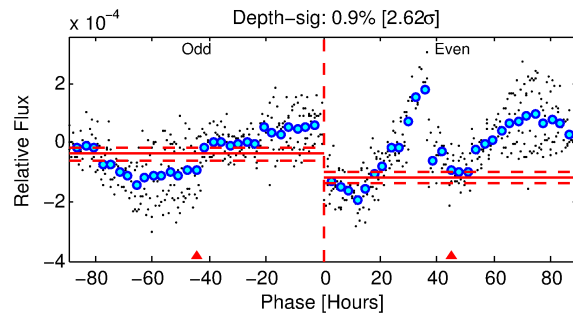
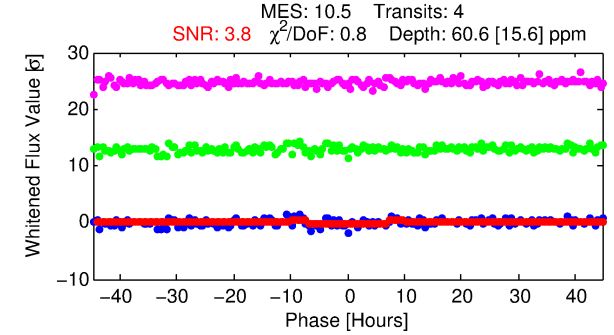
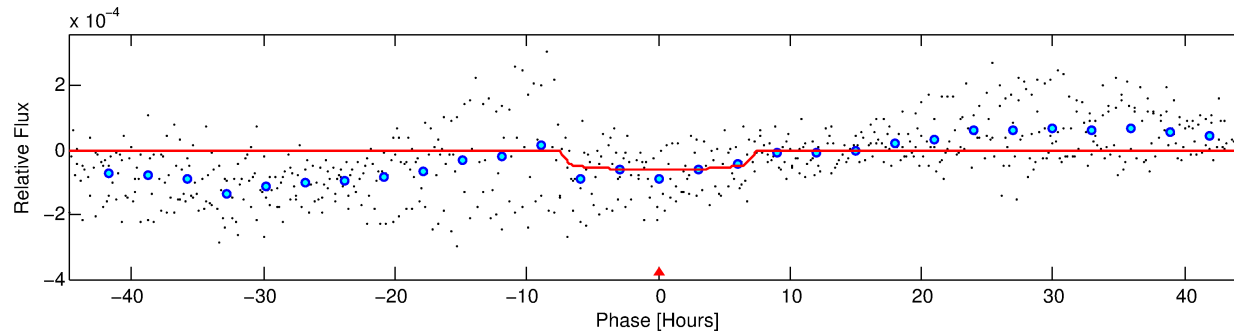
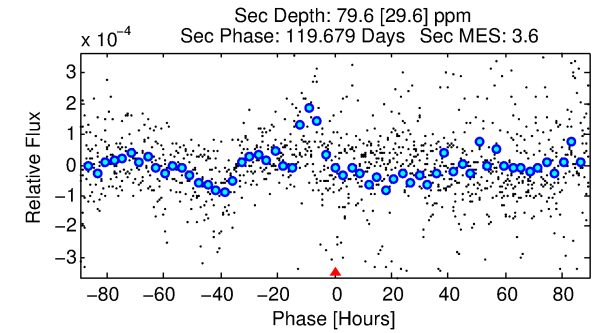
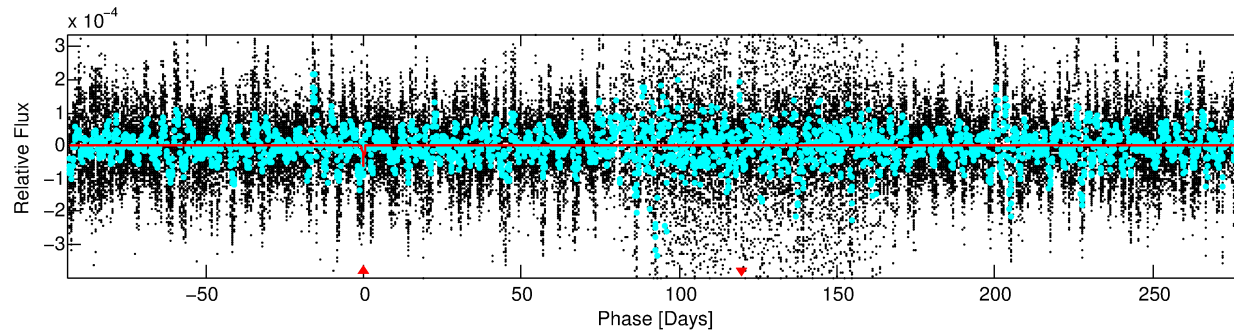
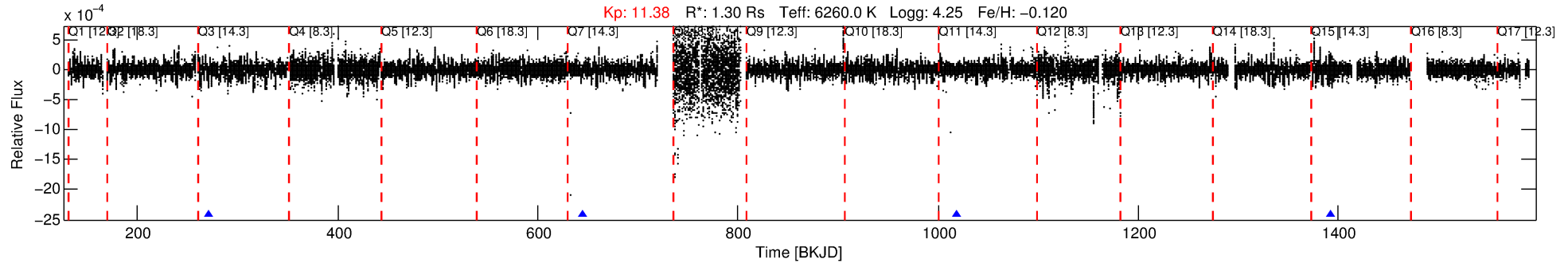
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010395363-01

No Significant Match Found

# DV One-Page Summary

KIC: 10395363 Candidate: 1 of 1 Period: 373.411 d



## DV Fit Results:

Period = 373.41071 [0.01030] d  
Epoch = 271.3626 [0.0183] BKJD  
Rp/R\* = 0.0084 [0.0016]  
a/R\* = 85.77 [59.71]  
b = 0.90 [0.14]  
Seff = 2.13 [0.85]  
Teq = 308 [31] K  
Rp = 1.19 [0.44] Re  
a = 1.0431 [0.2705] AU  
Ag = 33799.83 [22115.32] [1.53σ]  
Teffp = 6458 [907] K [6.78σ]

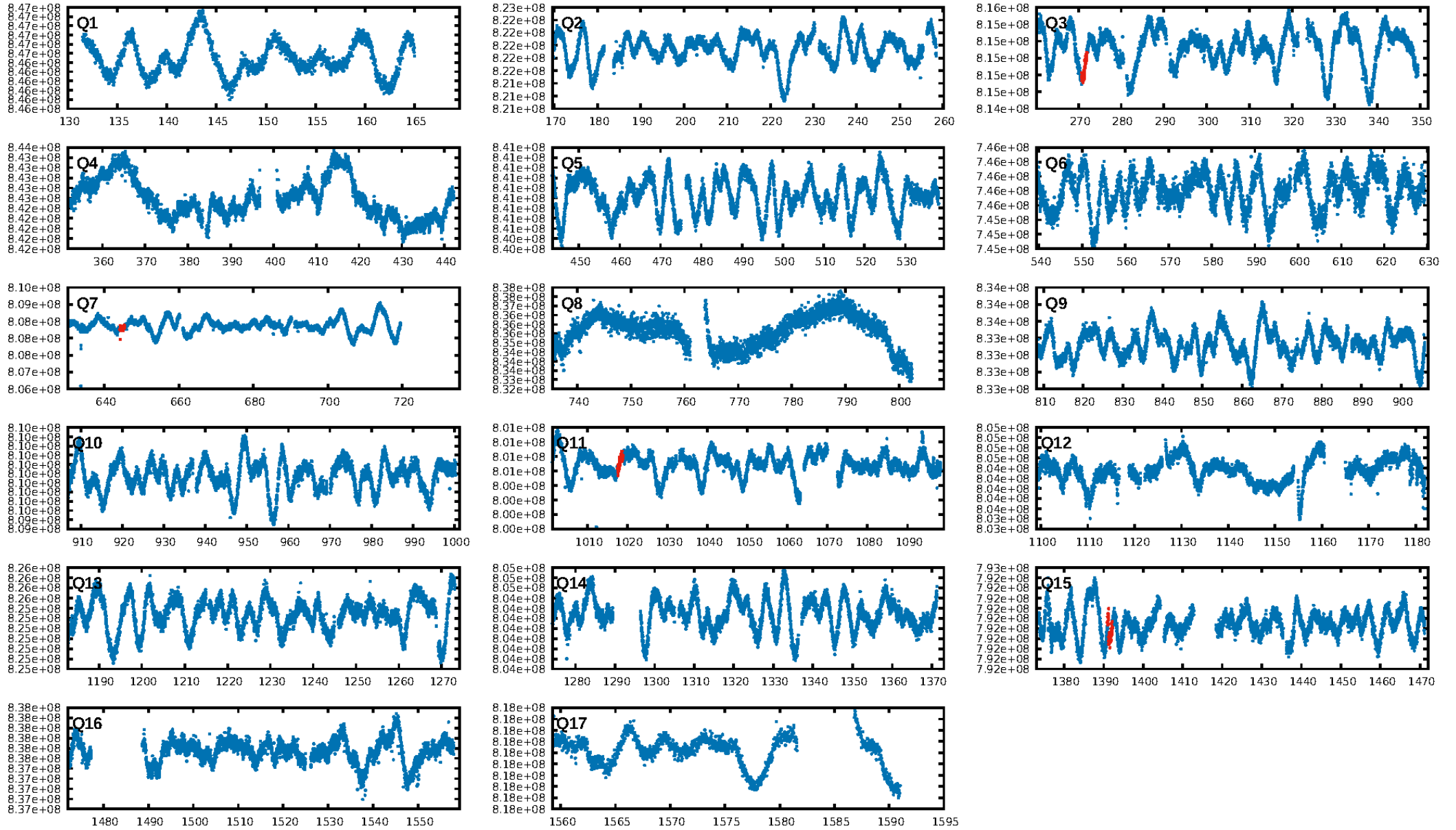
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 4.1%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.98e-11  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 2.33  
Centroid-sig: 0.0%  
Centroid-so: 6.326 arcsec [3.21σ]  
OotOffset-rm: 5.736 arcsec [75.44σ]  
KicOffset-rm: 5.641 arcsec [74.20σ]  
OotOffset-st: 0/1/0/0 [1]  
KicOffset-st: 0/1/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [2/2]

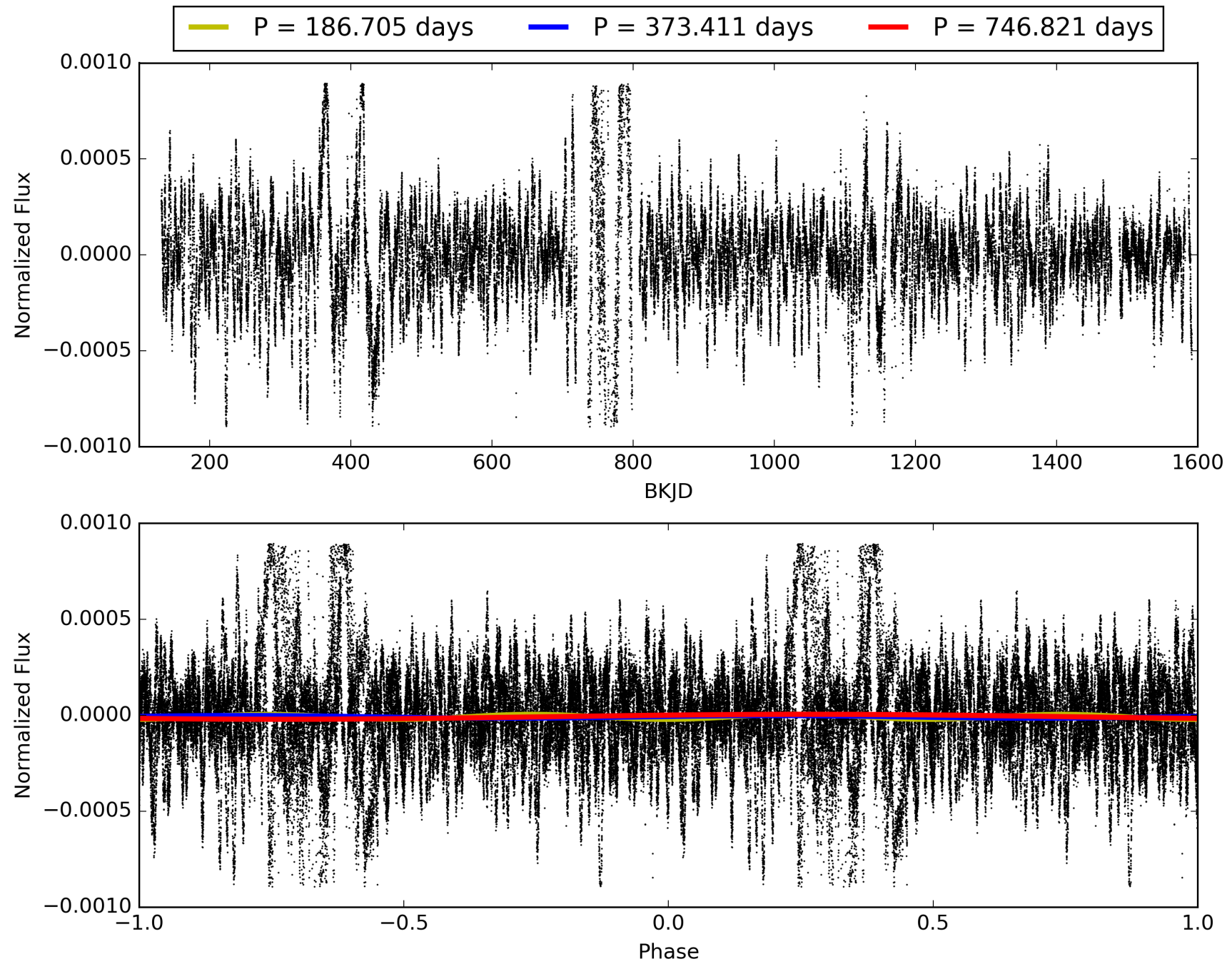
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:21:46 Z

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

# TCE 010395363-01, PDC Light Curves

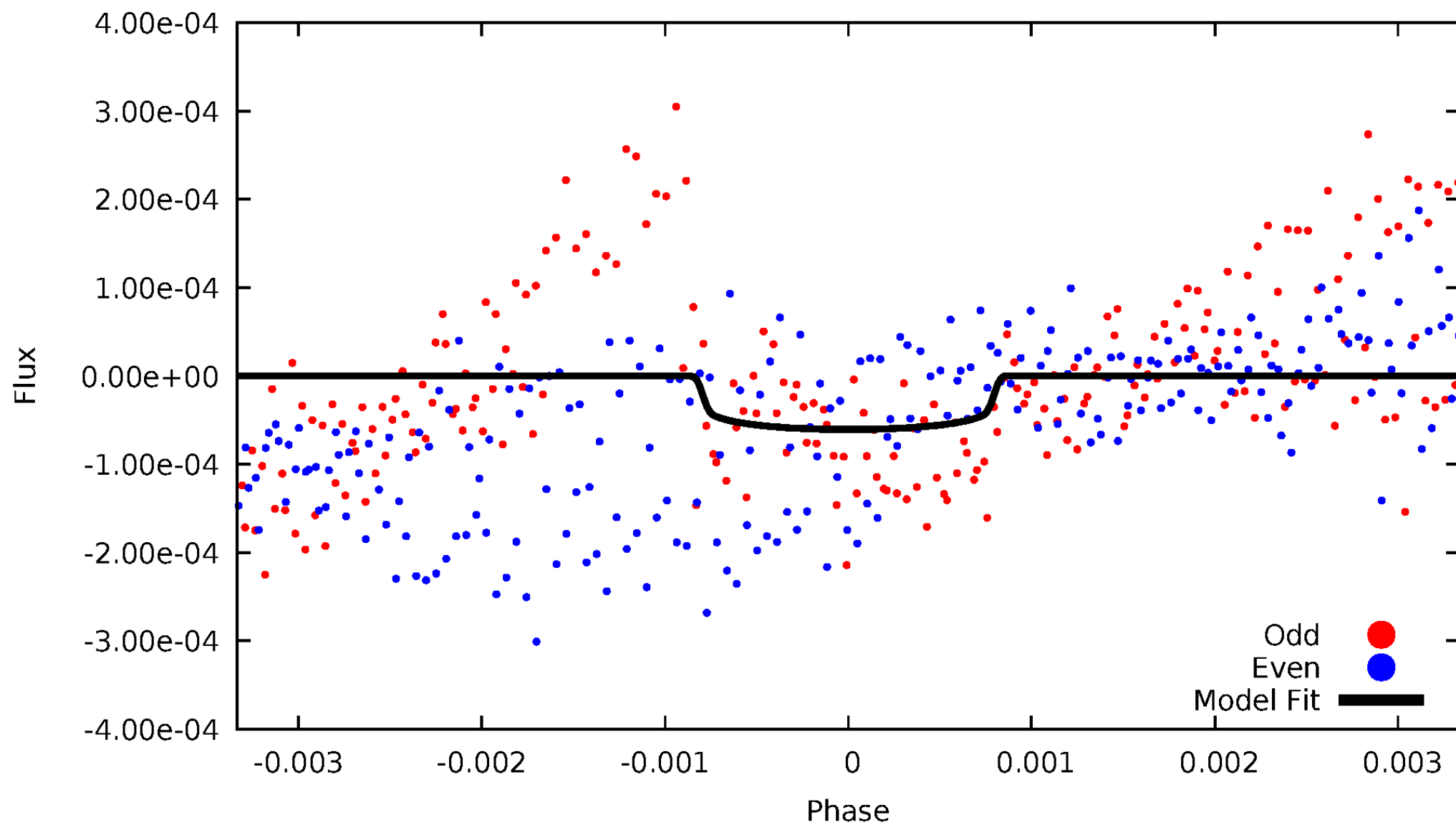


TCE 010395363-01



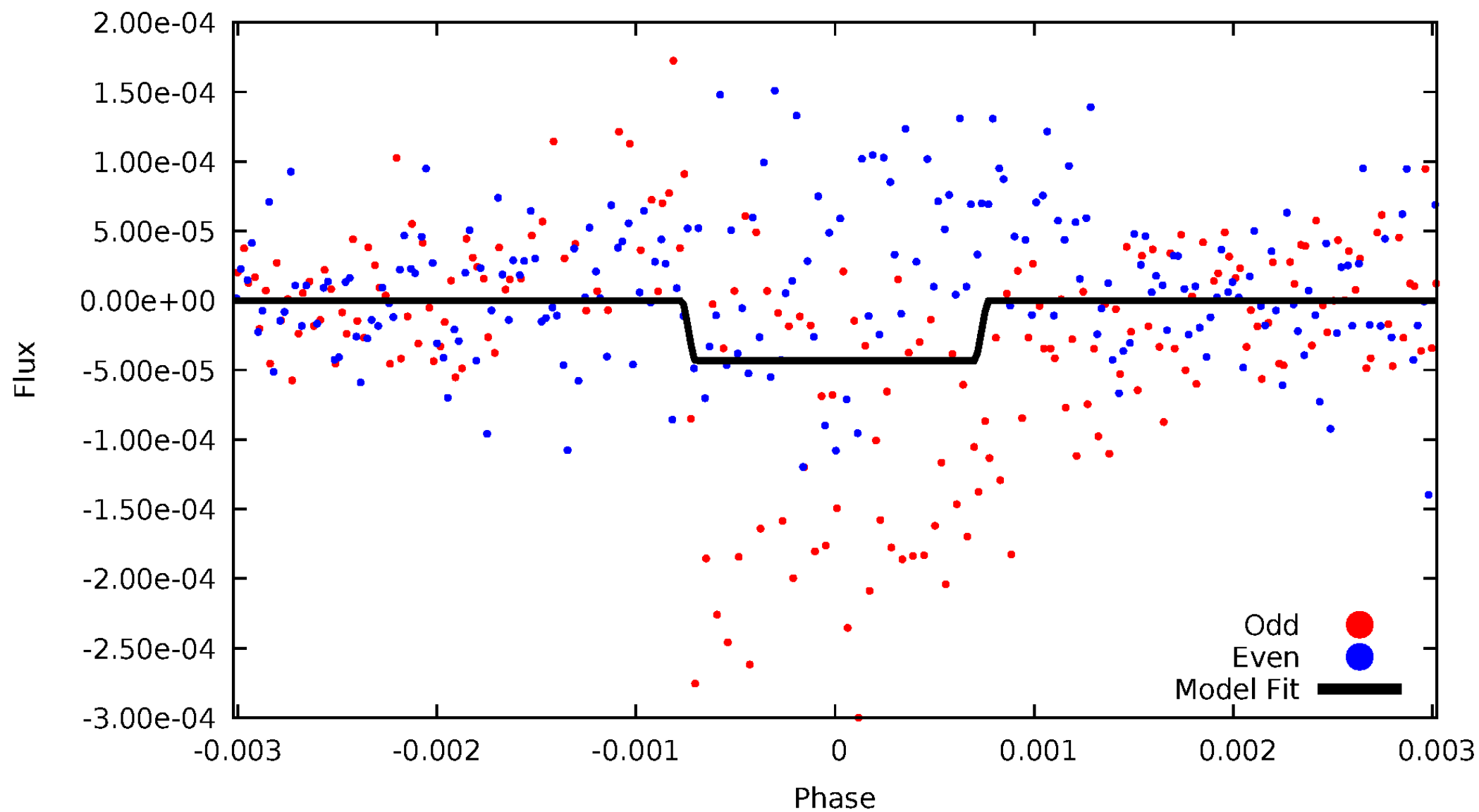
# DV Odd/Even

TCE 010395363-01

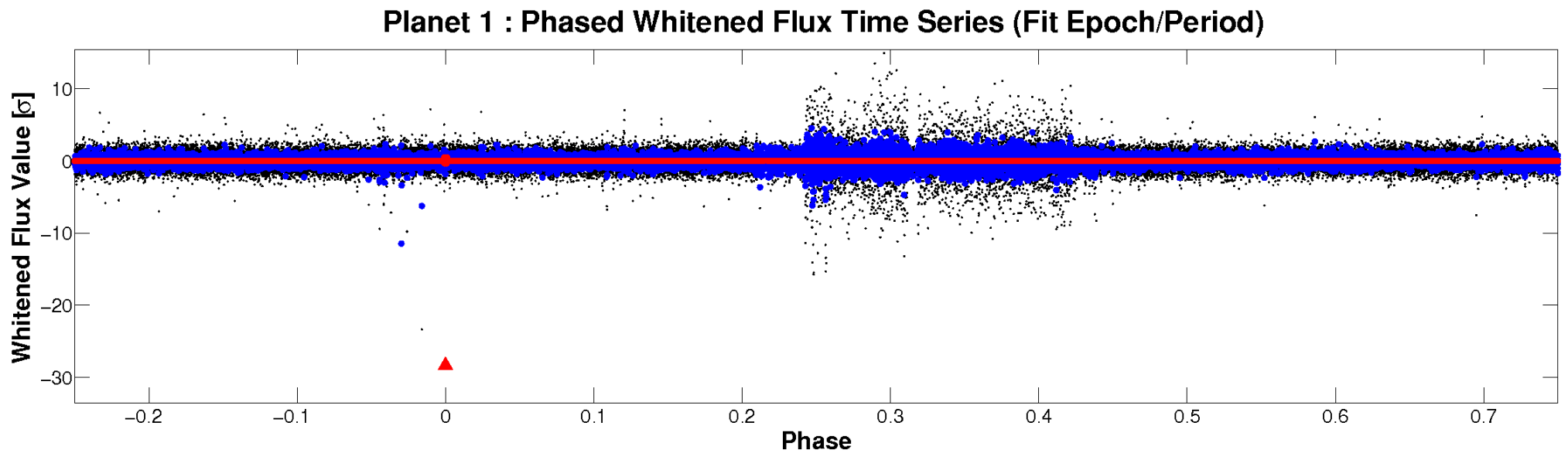
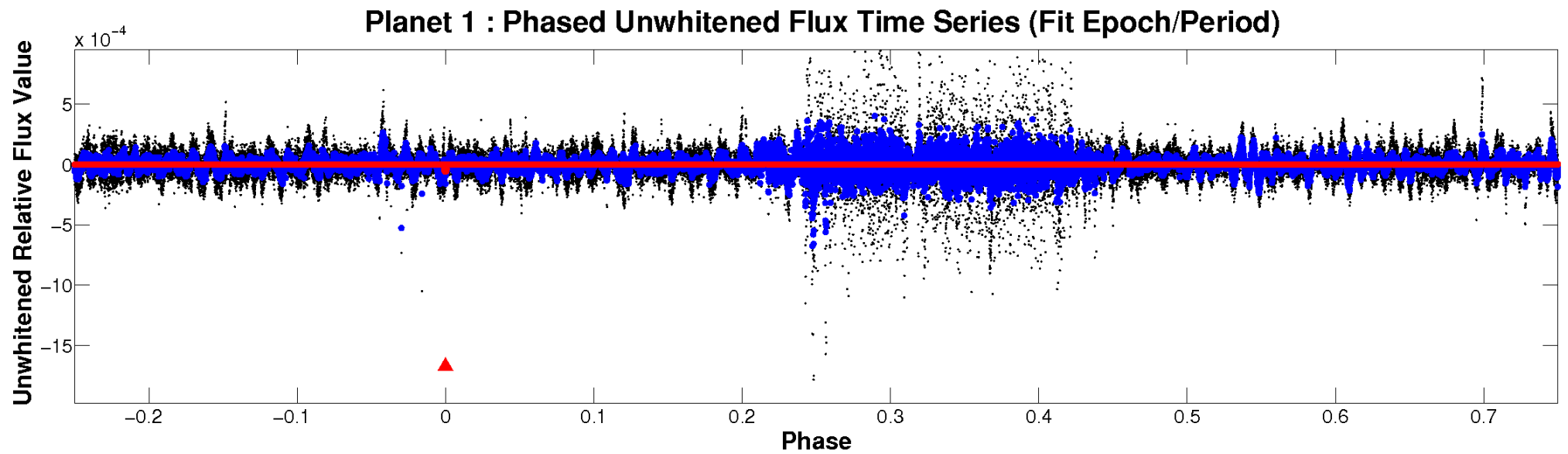


# ALT Odd/Even

TCE 010395363-01

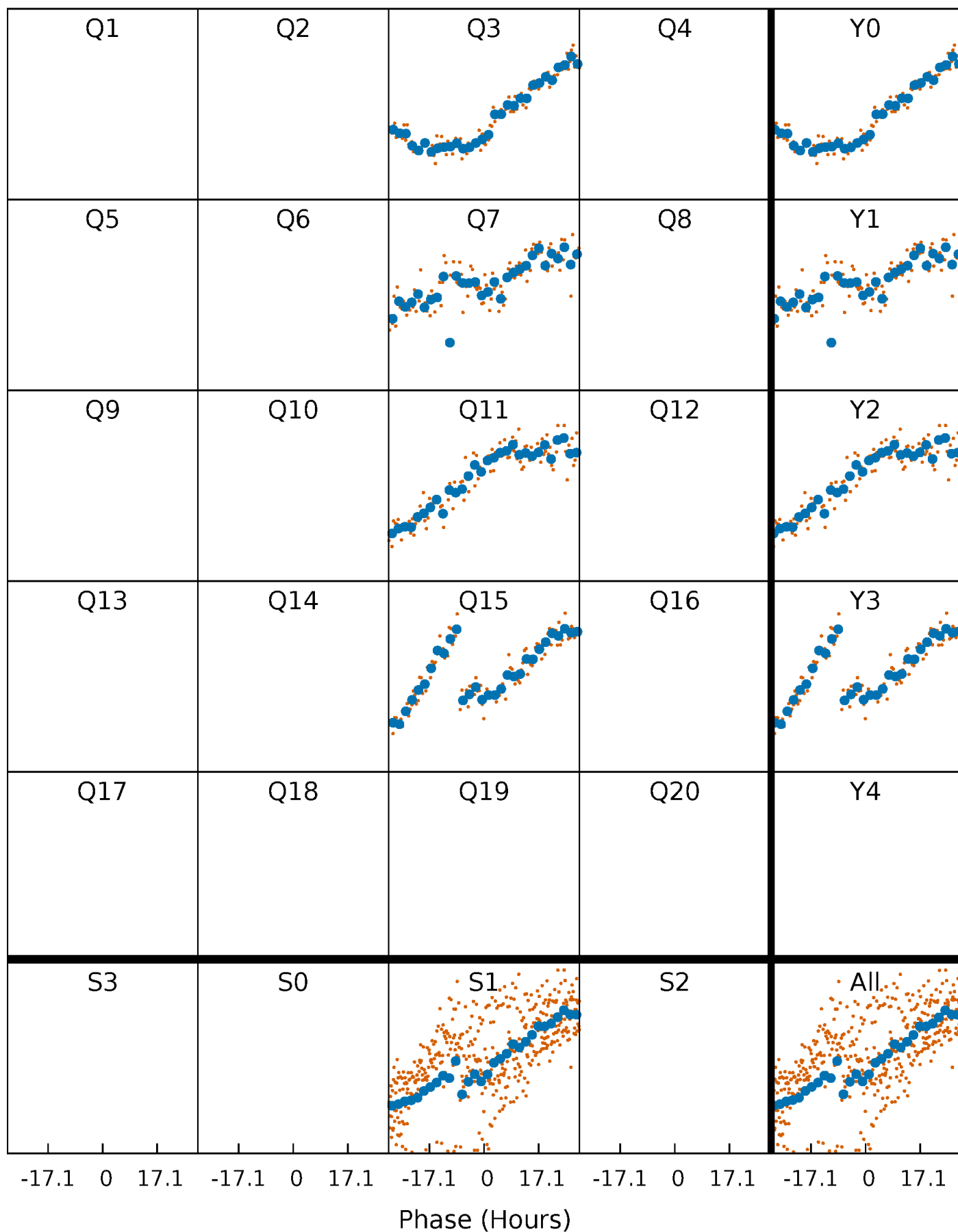


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

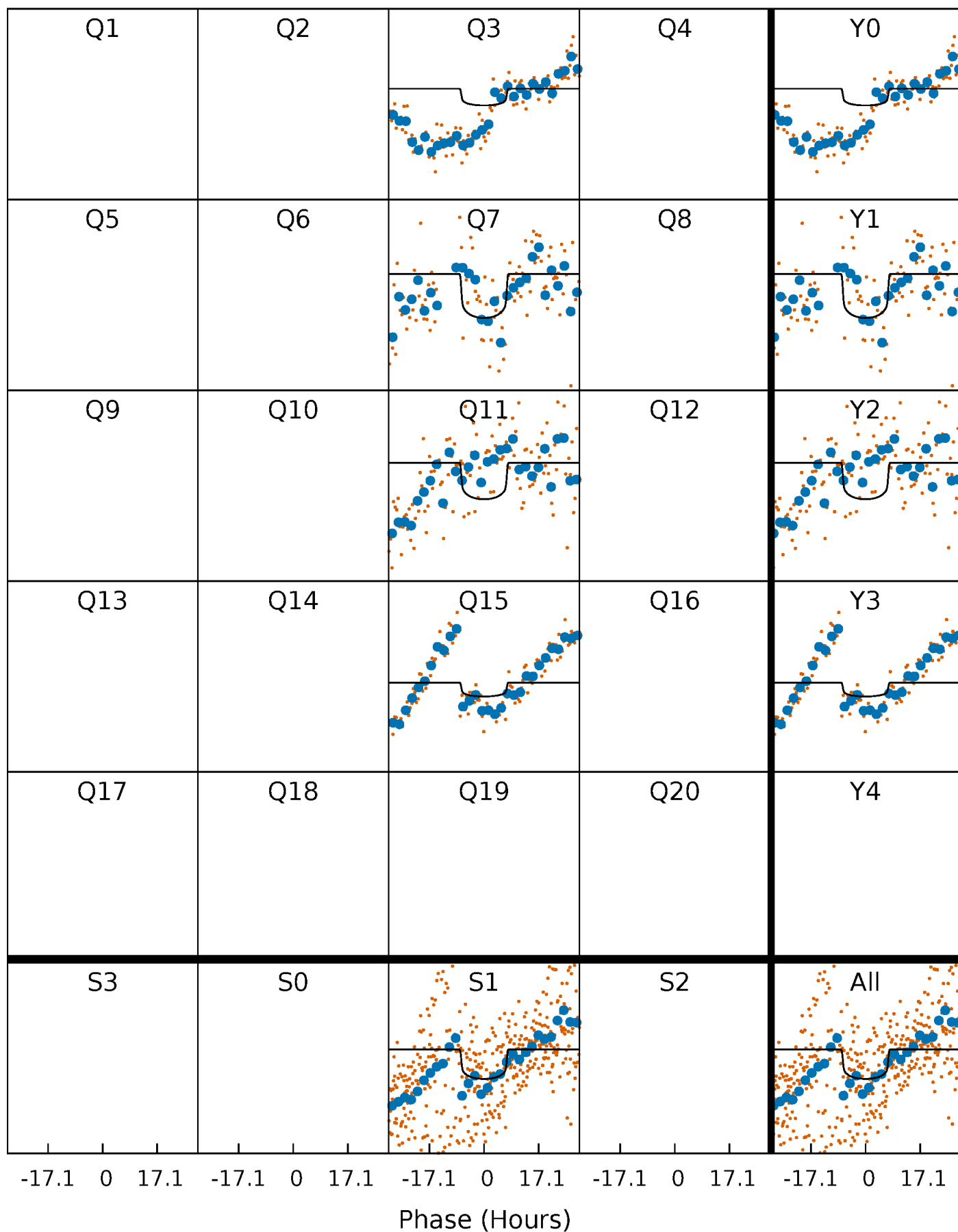
TCE 010395363-01 P=373.410710 Days  $T_0=271.362649$  (BKJD)





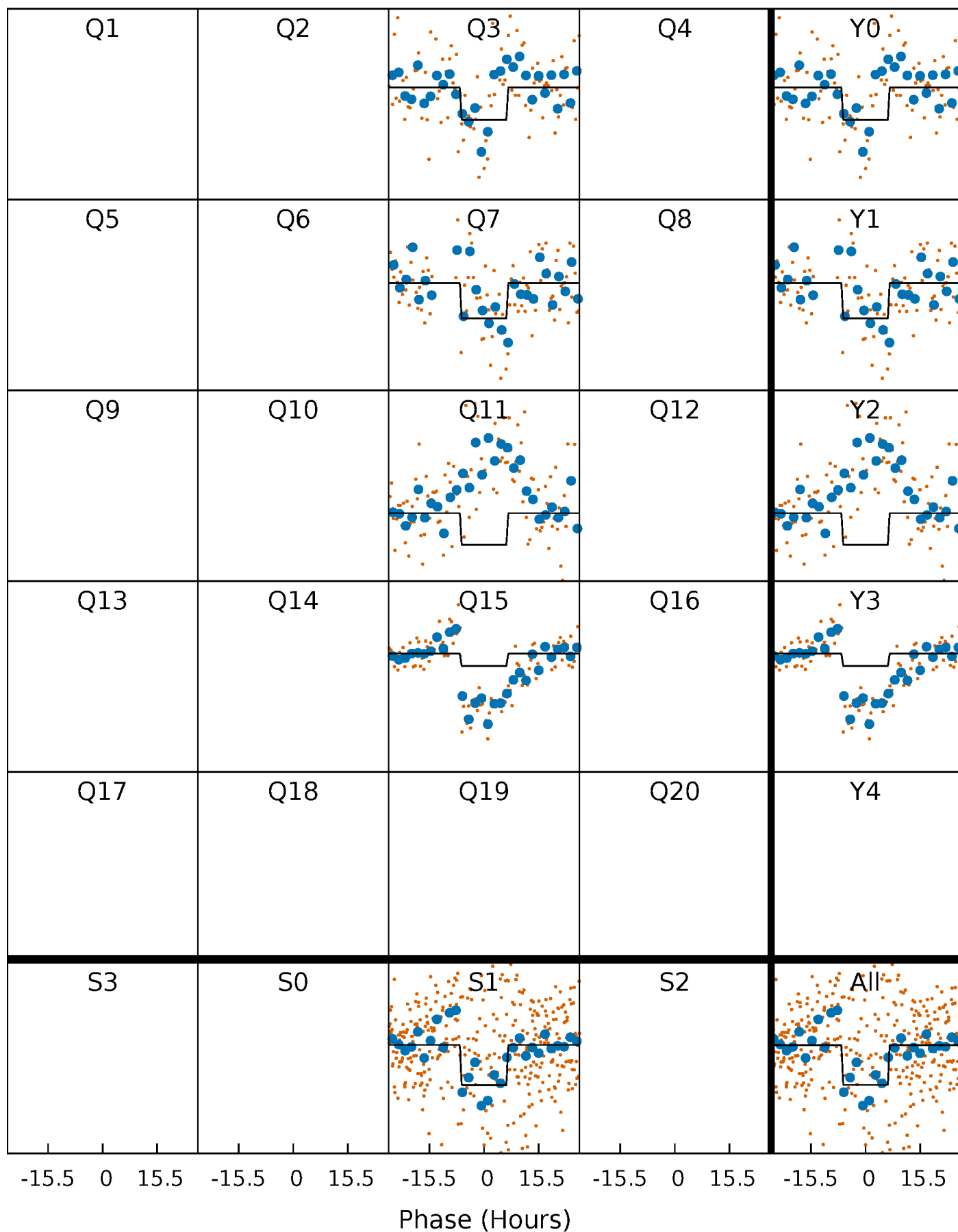
# DV Quarter-Phased Transit Curves

TCE 010395363-01 P=373.410710 Days  $T_0=271.362649$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

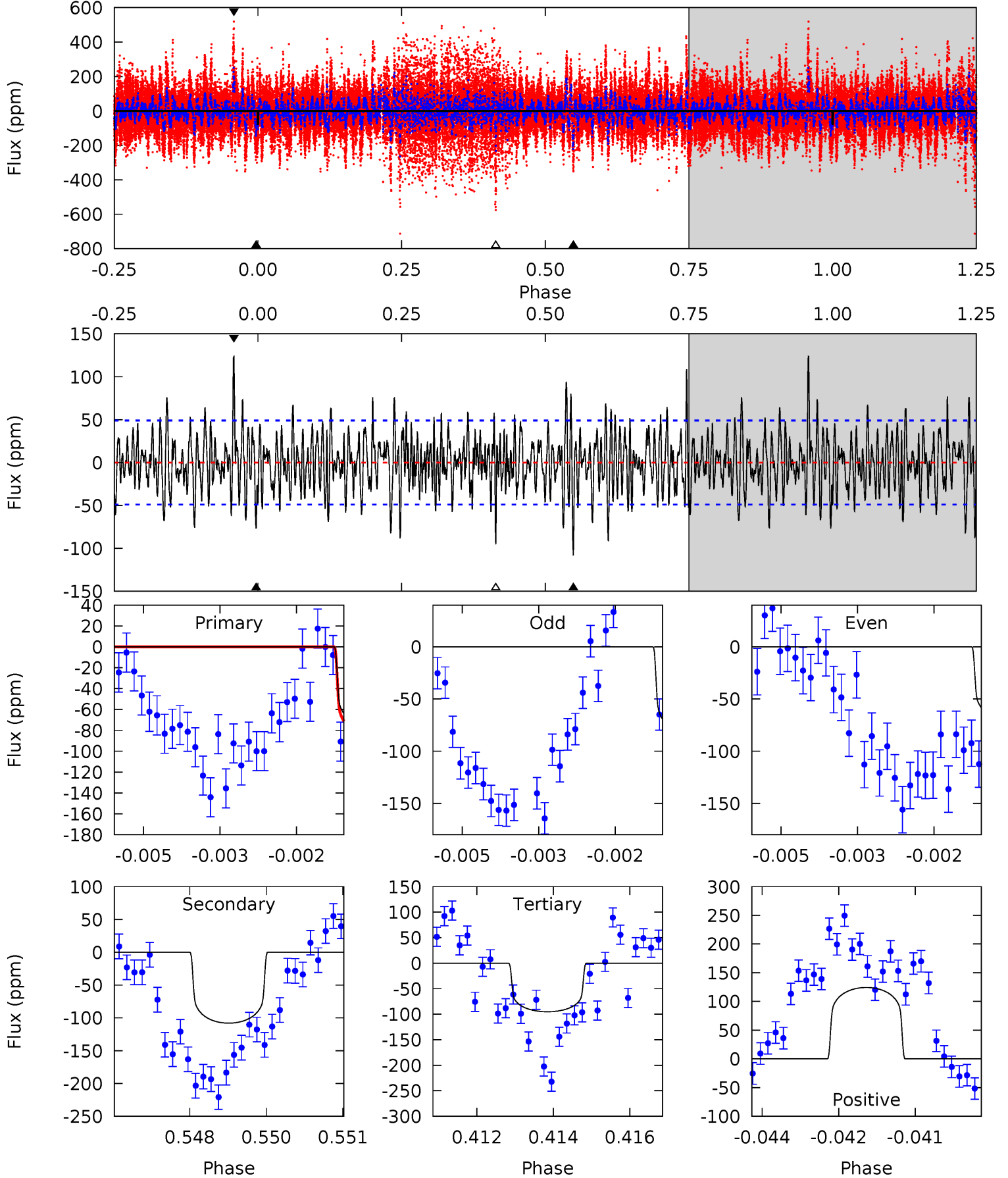
TCE 010395363-01 P=373.389253 Days  $T_0=271.379464$  (BKJD)



# DV Model-Shift Uniqueness Test

010395363-01, P = 373.410710 Days, E = 271.362649 Days

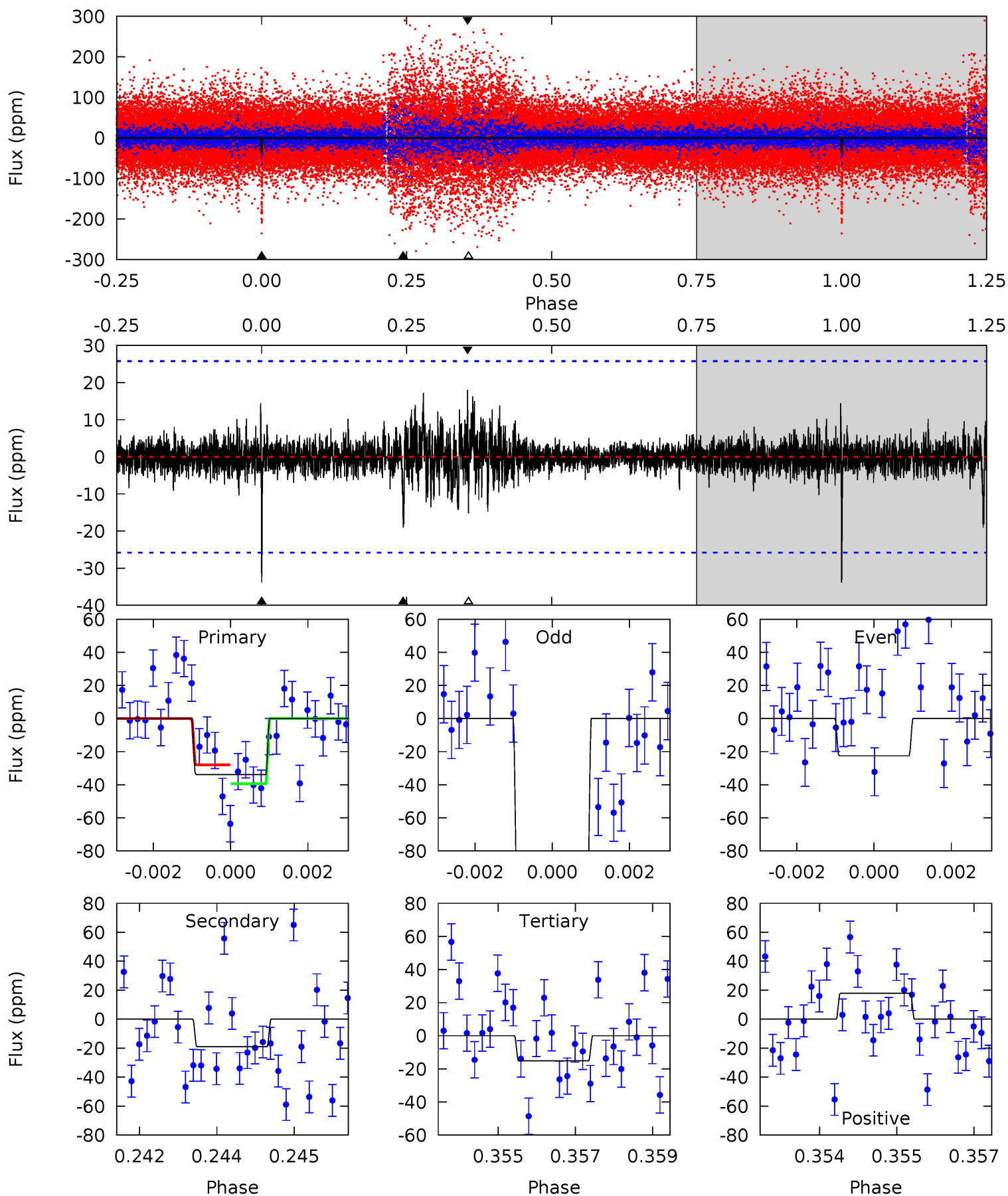
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	11.8	10.4	13.6	5.36	3.14	3.10	-2.02	-5.22	1.41	-1.79	0.70	0.93	0.54	0.97



# Alt Model-Shift Uniqueness Test

010395363-01, P = 373.389253 Days, E = 271.379464 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
7.06	3.98	3.16	3.75	5.37	3.17	0.62	3.90	3.32	0.81	0.23	9.17	1.50	0.35	1.17



### Stellar Parameters For KIC 010395363

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6260^{+177}_{-243}$	$4.247^{+0.180}_{-0.198}$	$-0.120^{+0.250}_{-0.300}$	$1.298^{+0.409}_{-0.273}$	$1.080^{+0.182}_{-0.136}$	$0.696^{+0.662}_{-0.336}$
	+3%/-4%	+4%/-5%	+208%/-250%	+32%/-21%	+17%/-13%	+95%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 010395363-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-108 \pm 9$	$1.20^{+0.30}_{-0.30}$	$429^{+37}_{-28}$	$7011^{+1037}_{-765}$	$44998^{+31960}_{-16114}$
Alt.	$-19 \pm 5$	$0.92^{+0.29}_{-0.24}$	$429^{+35}_{-32}$	$5158^{+701}_{-560}$	$13244^{+11528}_{-6118}$

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

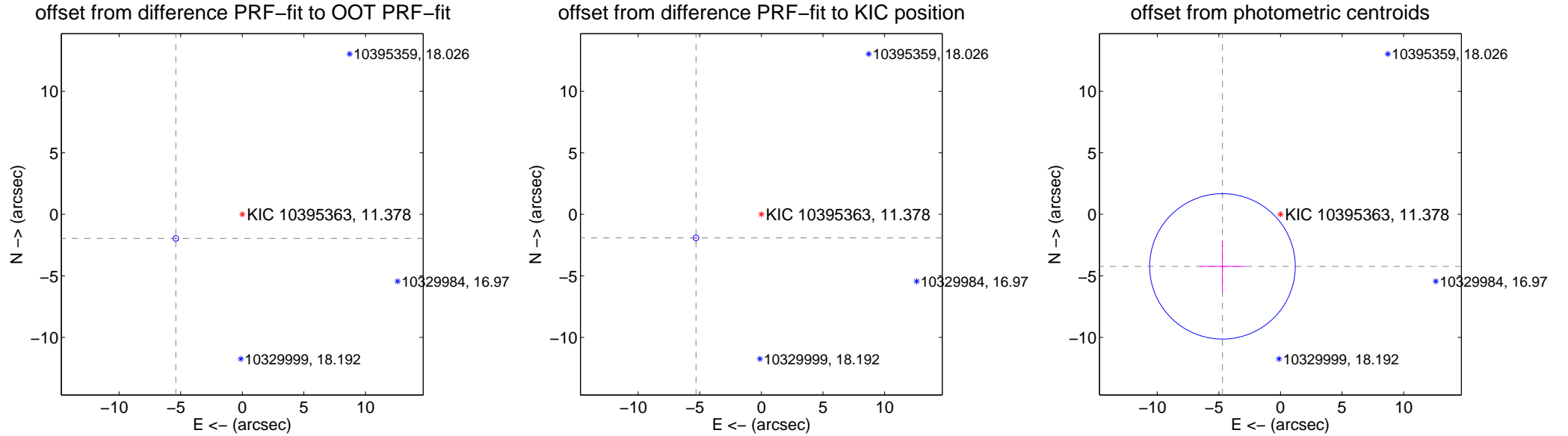
## DV Centroid Data

Supplemental centroid analysis for 010395363-01. **Kepler magnitude: 11.38.** Transit SNR 3.79

**There are 0 quarters with good PRF difference image offsets**

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>5.736 \pm 0.076</math></b>	<b>75.44</b>	$5.392 \pm 0.075$	$-1.958 \pm 0.084$
PRF-fit source offset from KIC position	<b><math>5.641 \pm 0.076</math></b>	<b>74.20</b>	$5.307 \pm 0.075$	$-1.913 \pm 0.084$
photometric centroid source offset	<b><math>6.33 \pm 1.97</math></b>	<b>3.21</b>	$4.71 \pm 1.84$	$-4.23 \pm 2.11$



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.

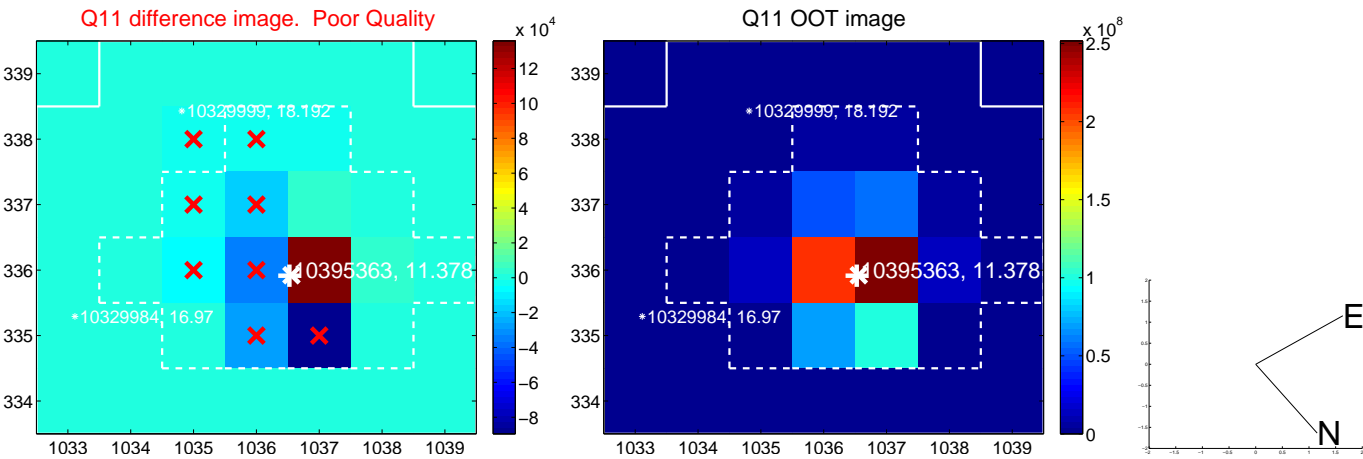


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

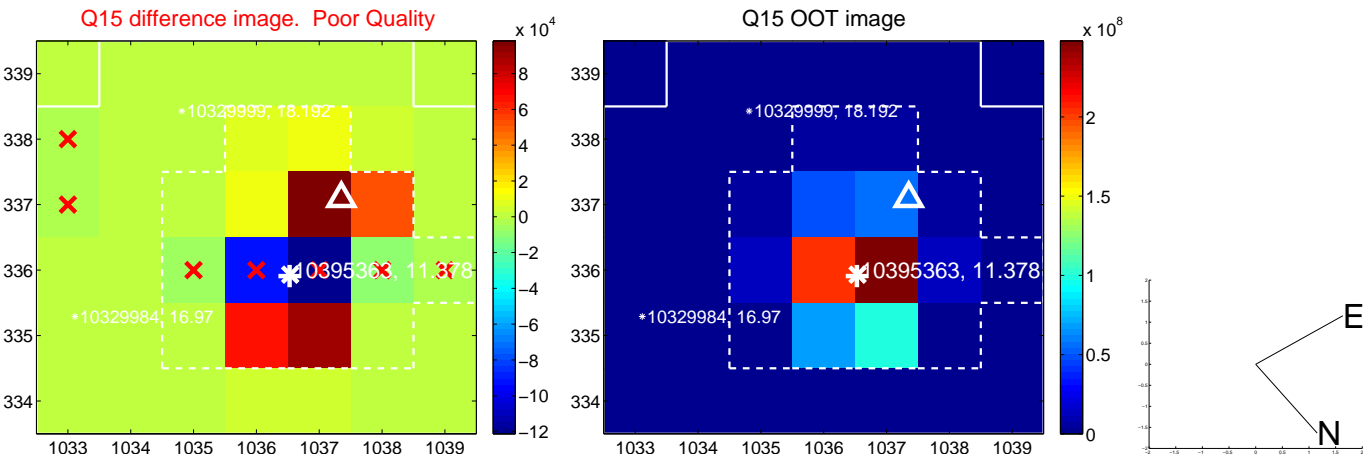




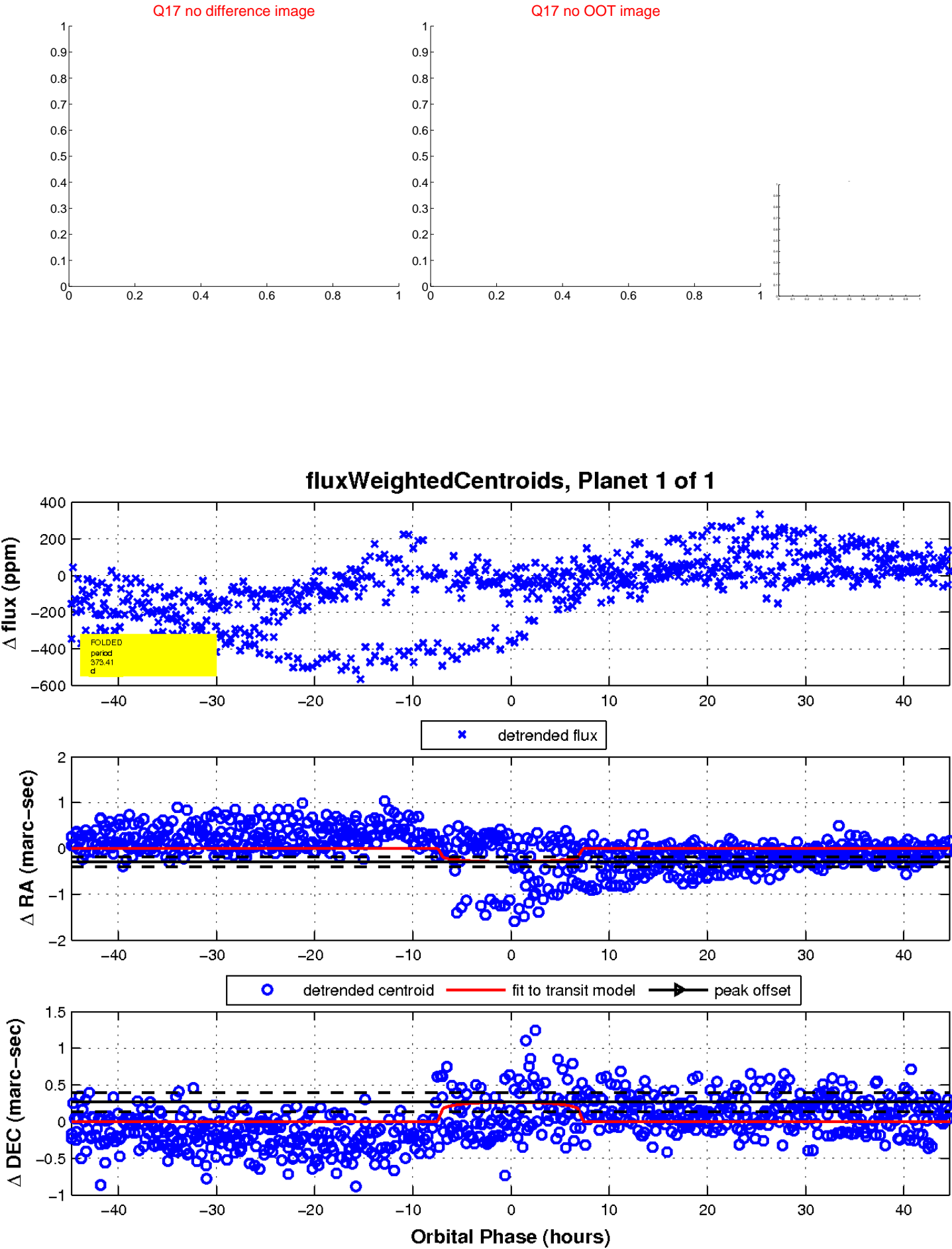
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

