

# KIC 008362629

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008362629-01	OBS	No	373.847491	259.792695	682.0	22.636	9.5	11.1	0.93	6253	2.56	1.14

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008362629-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST

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

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

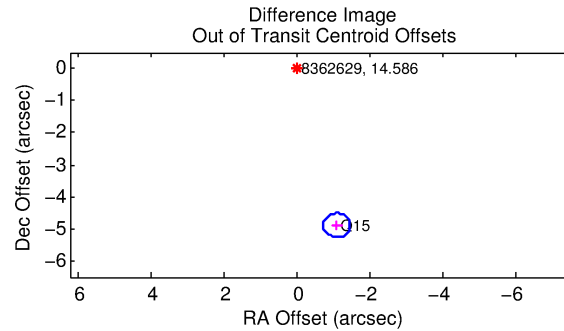
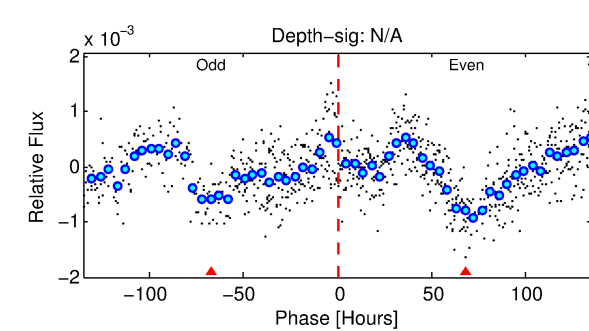
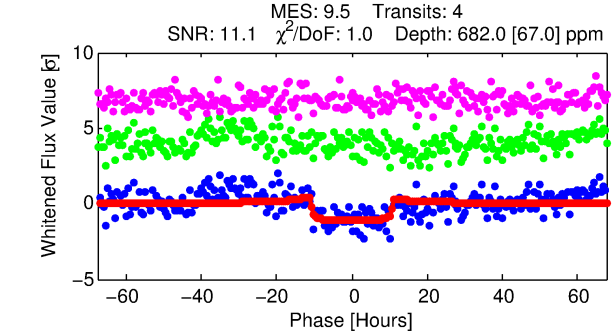
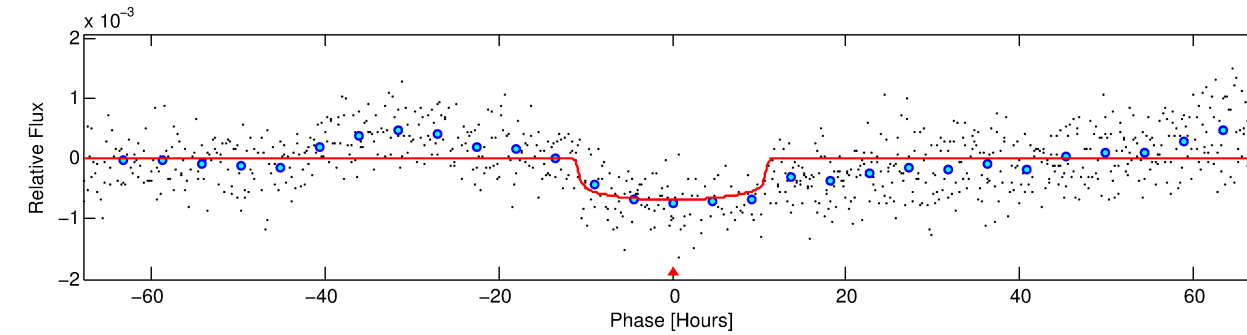
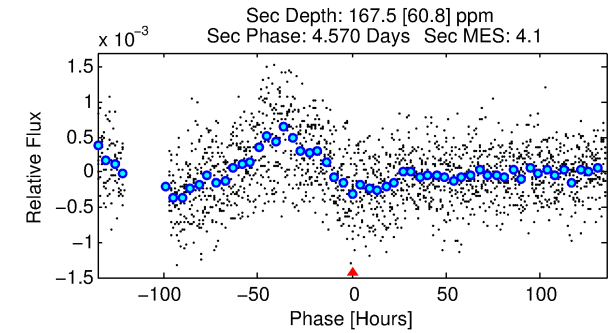
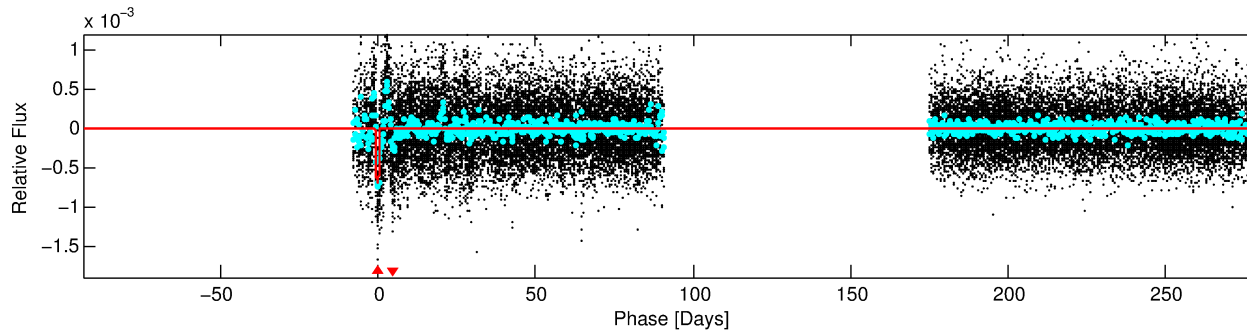
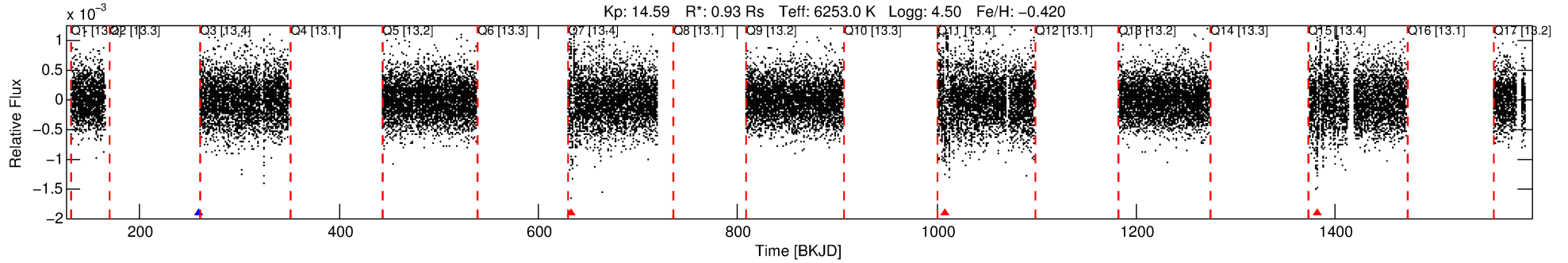
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008362629-01

No Significant Match Found

# DV One-Page Summary

KIC: 8362629 Candidate: 1 of 1 Period: 373.847 d



## DV Fit Results:

Period = 373.84749 [0.01017] d  
Epoch = 259.7927 [0.0217] BKJD  
Rp/R\* = 0.0253 [0.0039]  
a/R\* = 100.10 [75.47]  
b = 0.65 [0.67]  
Seff = 1.14 [0.48]  
Teq = 264 [28] K  
Rp = 2.56 [0.89] Re  
a = 1.0152 [0.2705] AU  
Ag = 14499.96 [8934.01] [1.62σ]  
Teffp = 4472 [559] K [7.52σ]

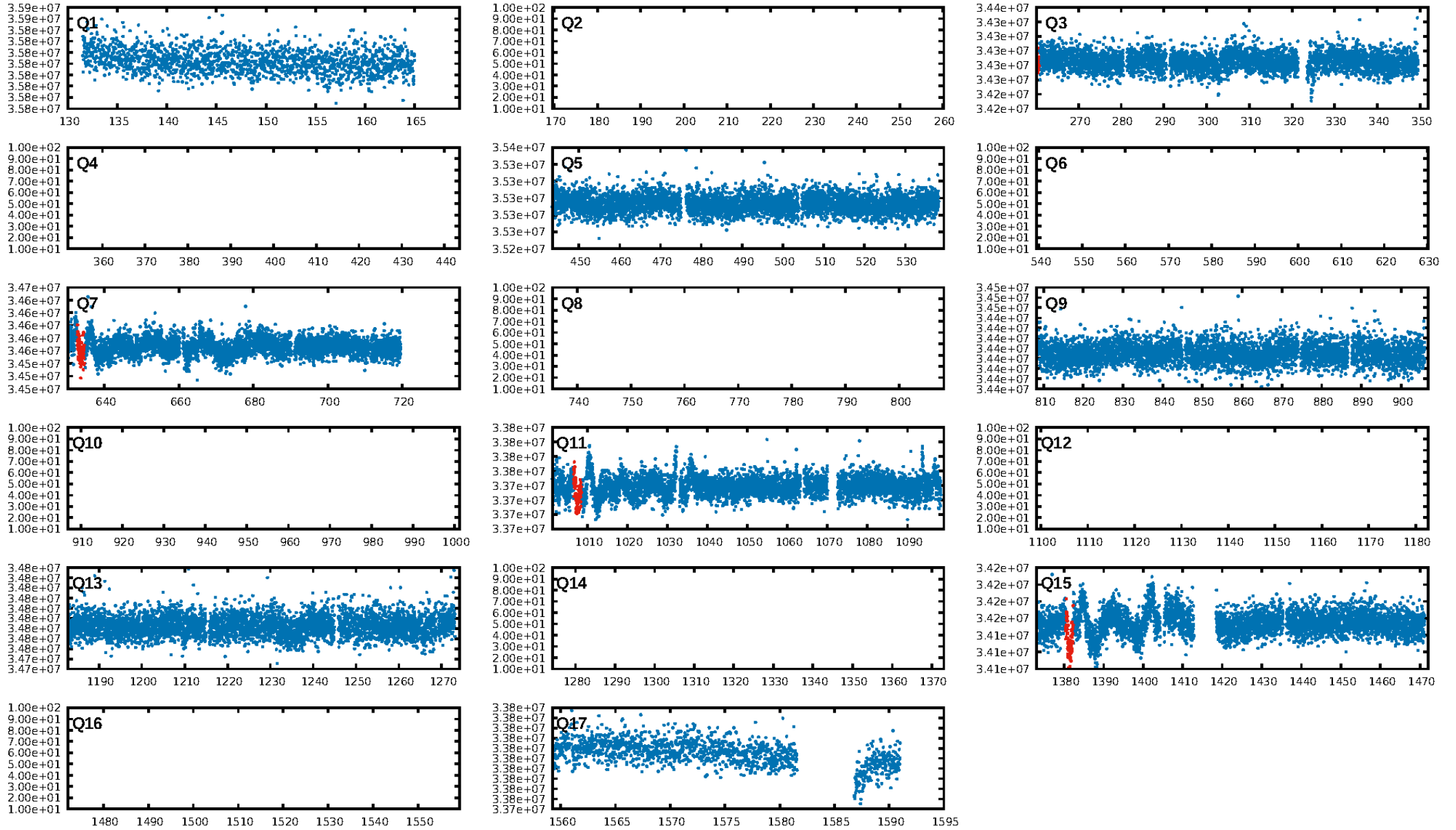
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 14.9%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.74e-10  
RollingBand-fgt: 0.25 [1/4]  
GhostDiagnostic-chr: 0.01114  
Centroid-sig: 0.0%  
Centroid-so: 5.192 arcsec [2.37σ]  
OotOffset-rm: 5.010 arcsec [40.14σ]  
KicOffset-rm: 4.724 arcsec [37.86σ]  
OotOffset-st: 0/1/0/0 [1]  
KicOffset-st: 0/1/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [1/1]

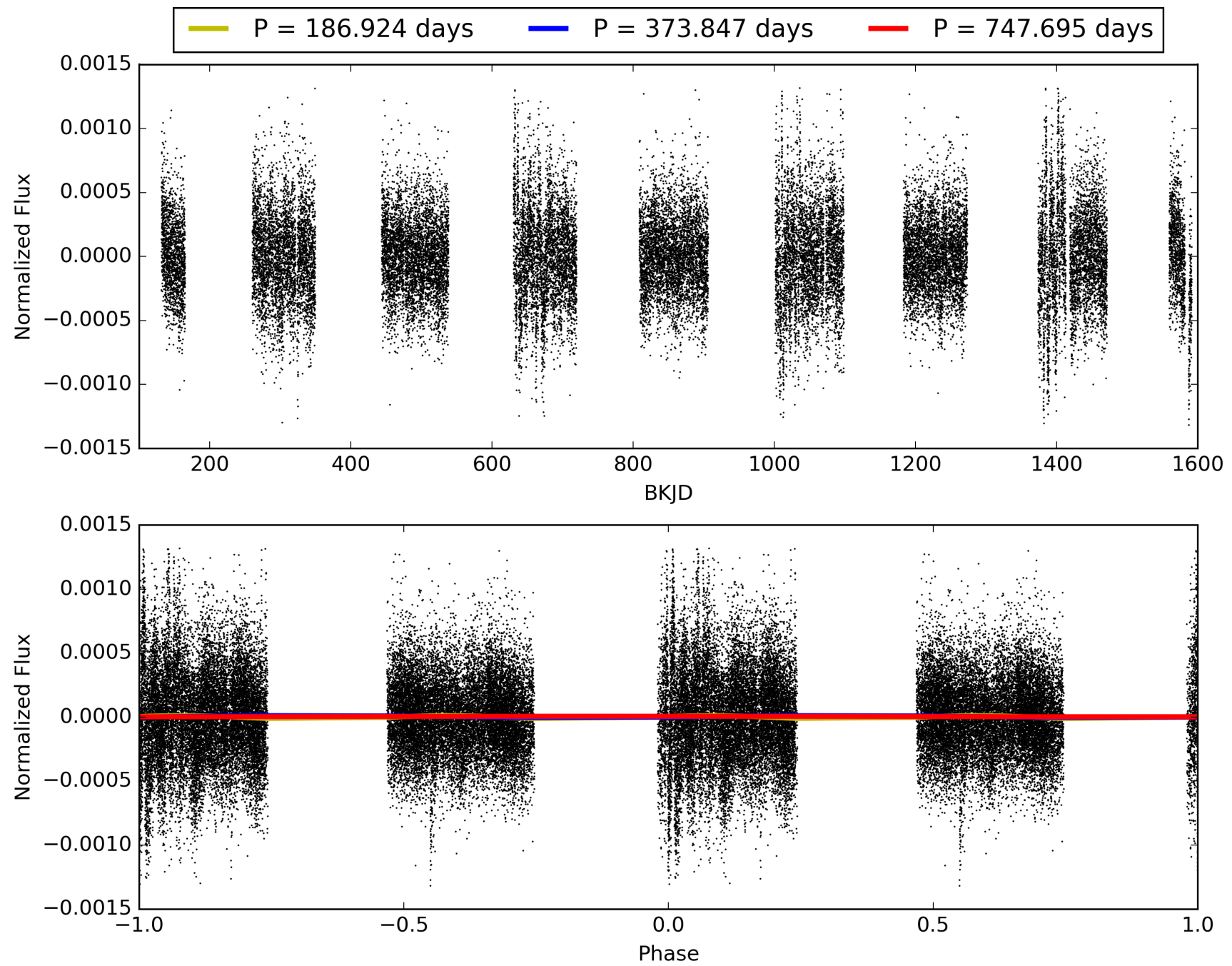
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:12:23 Z

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

# TCE 008362629-01, PDC Light Curves

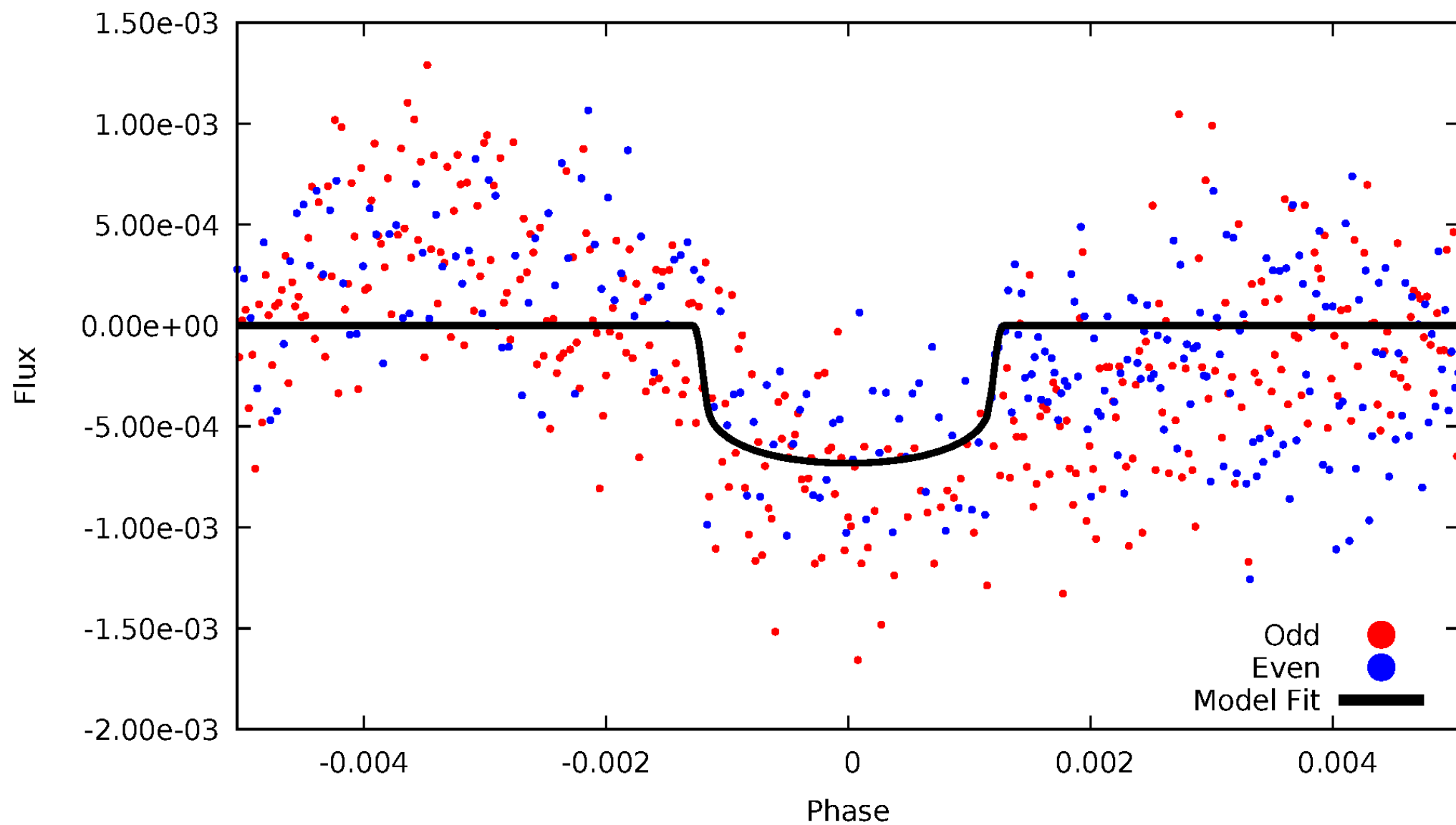


TCE 008362629-01



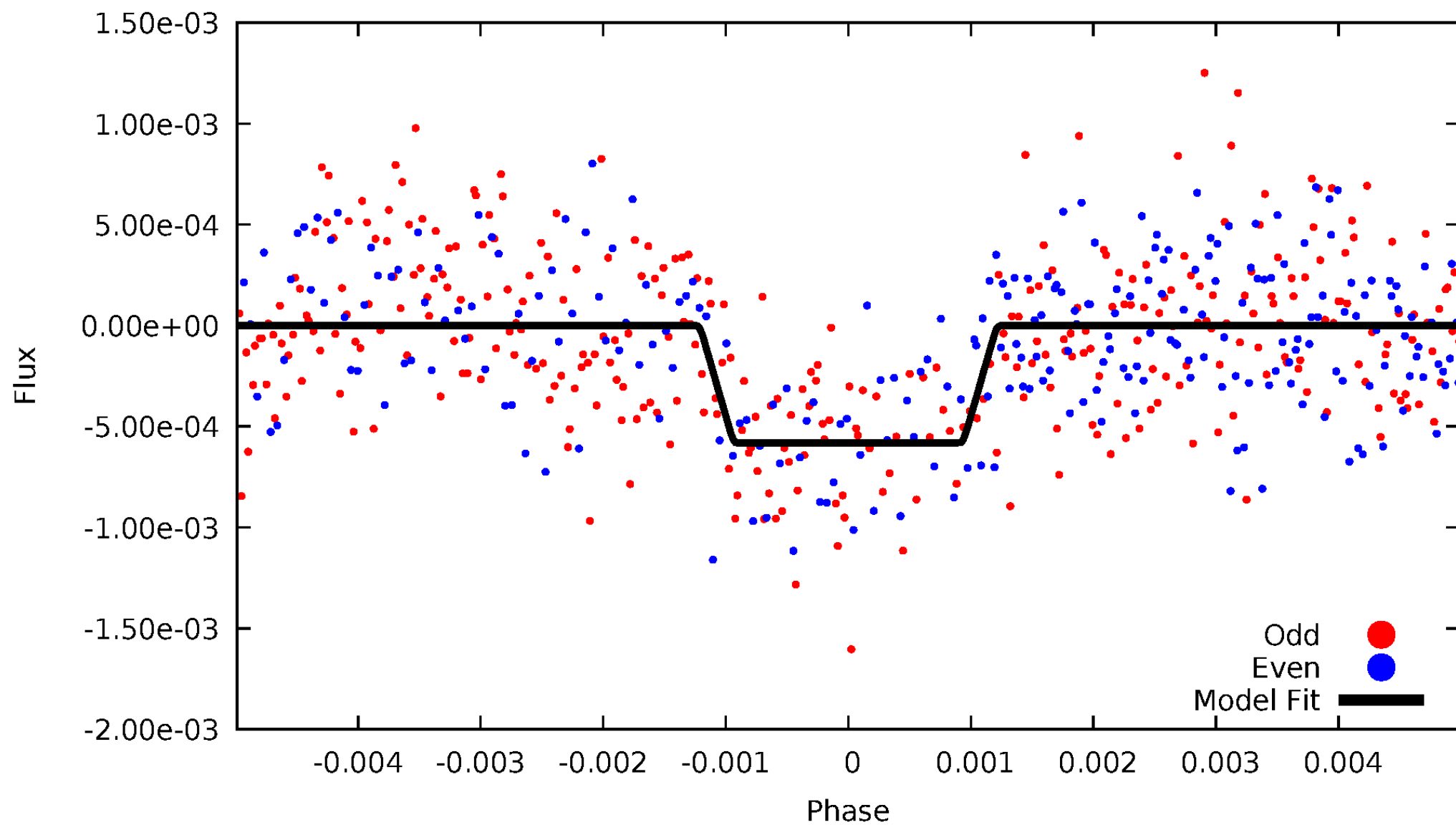
# DV Odd/Even

TCE 008362629-01



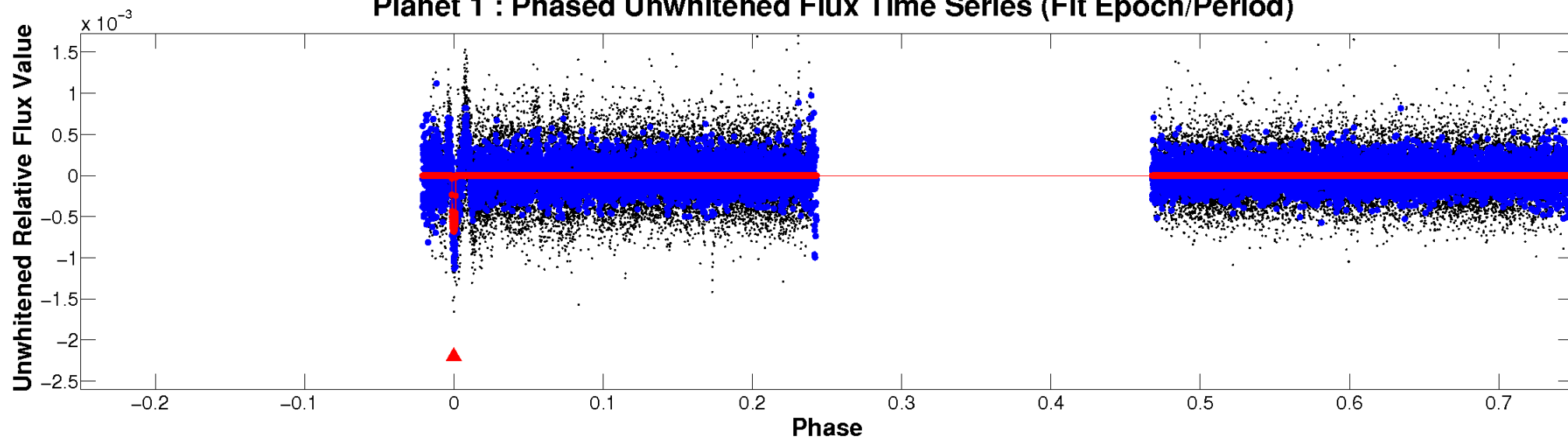
# ALT Odd/Even

TCE 008362629-01

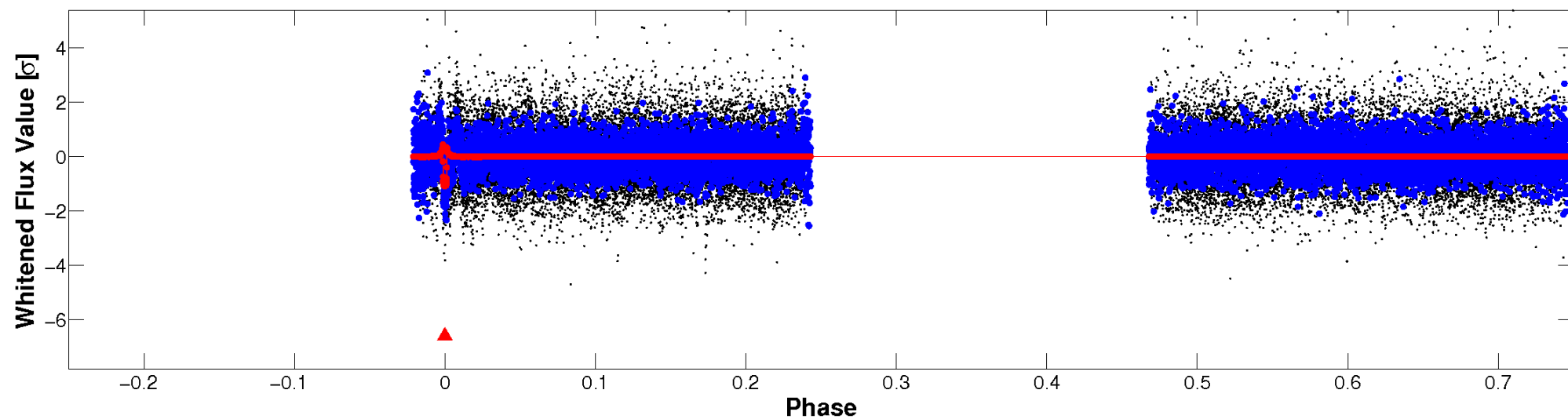


# Non-Whitened Vs. Whitened Light Curve

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

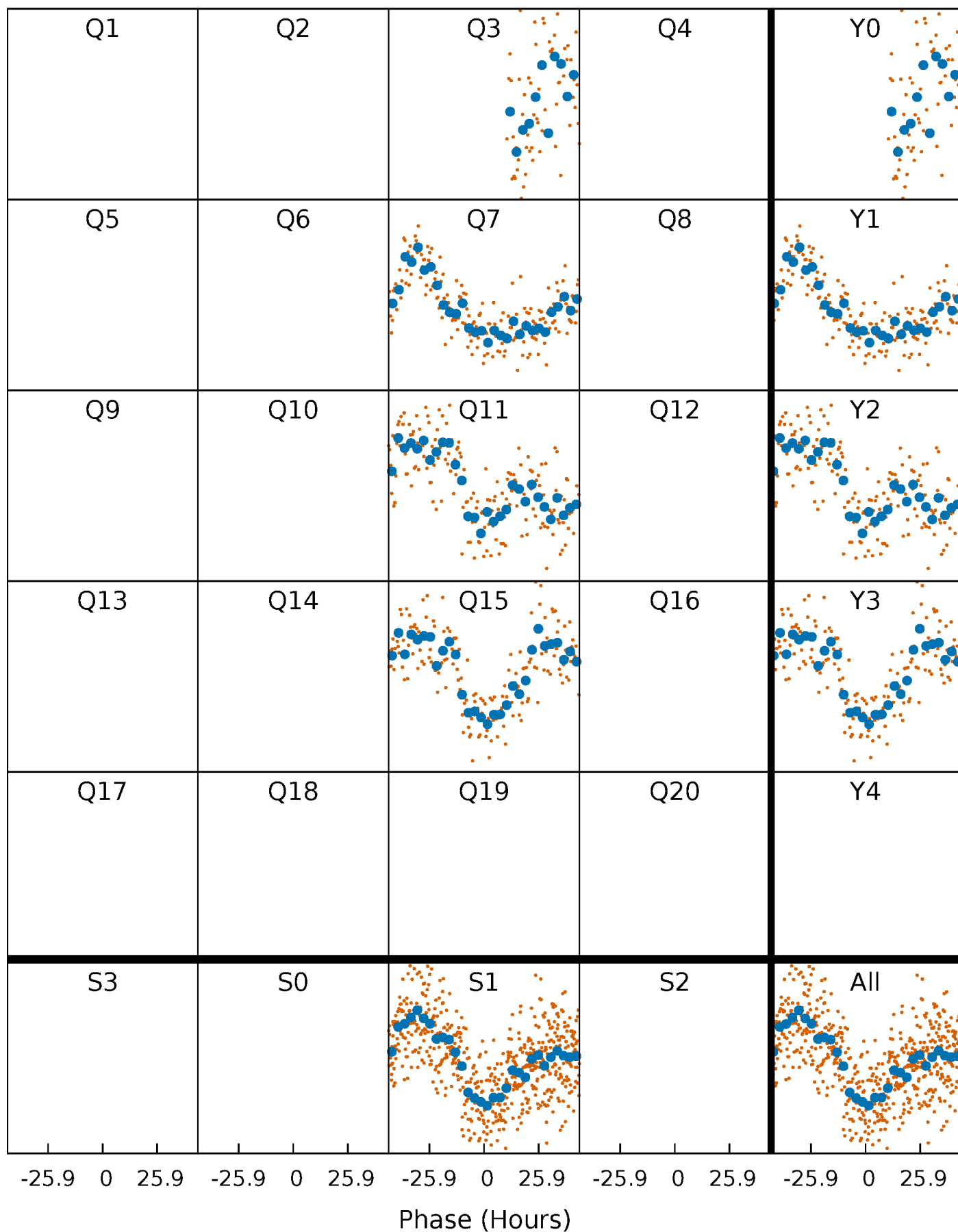


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

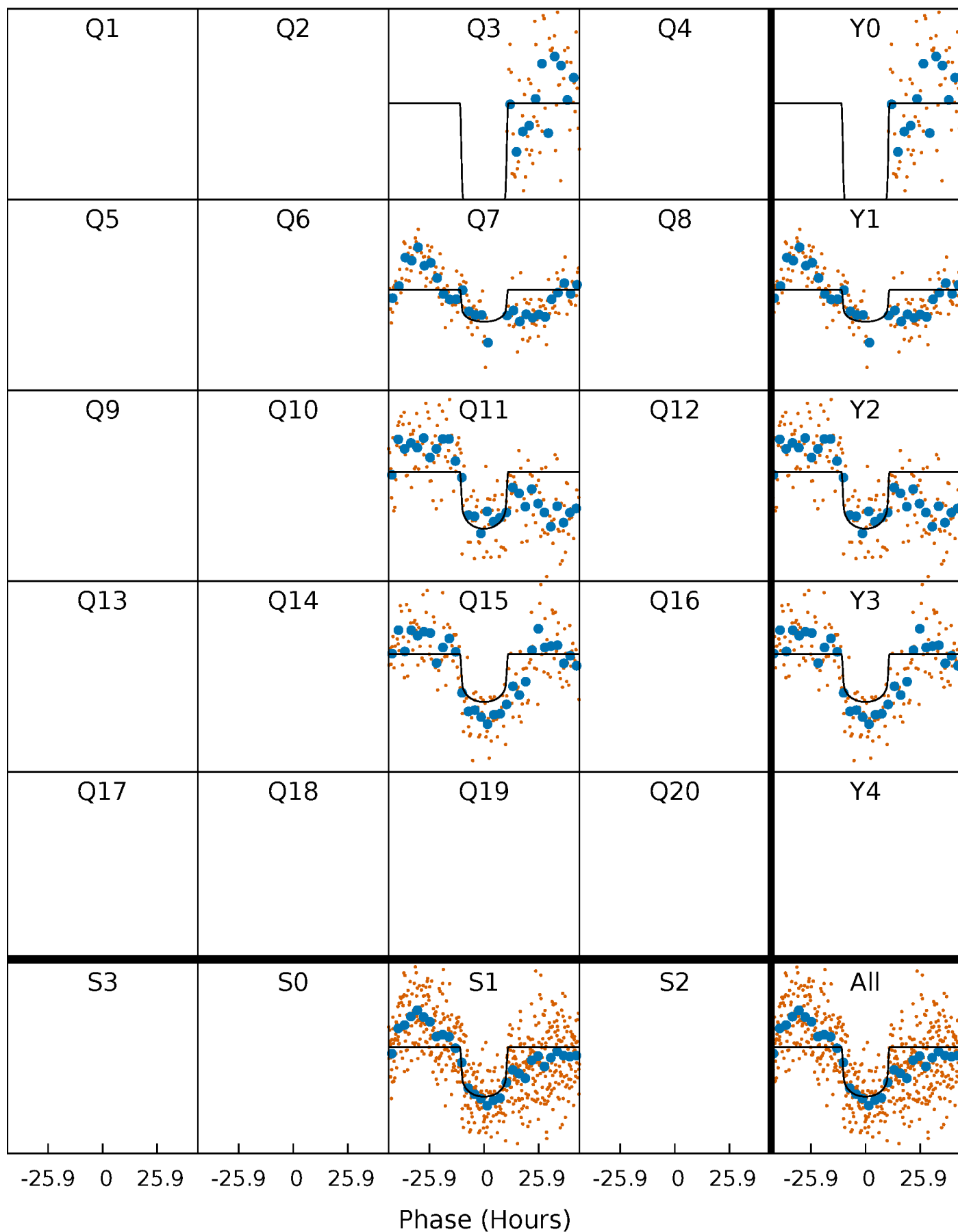
TCE 008362629-01 P=373.847491 Days  $T_0=259.792695$  (BKJD)





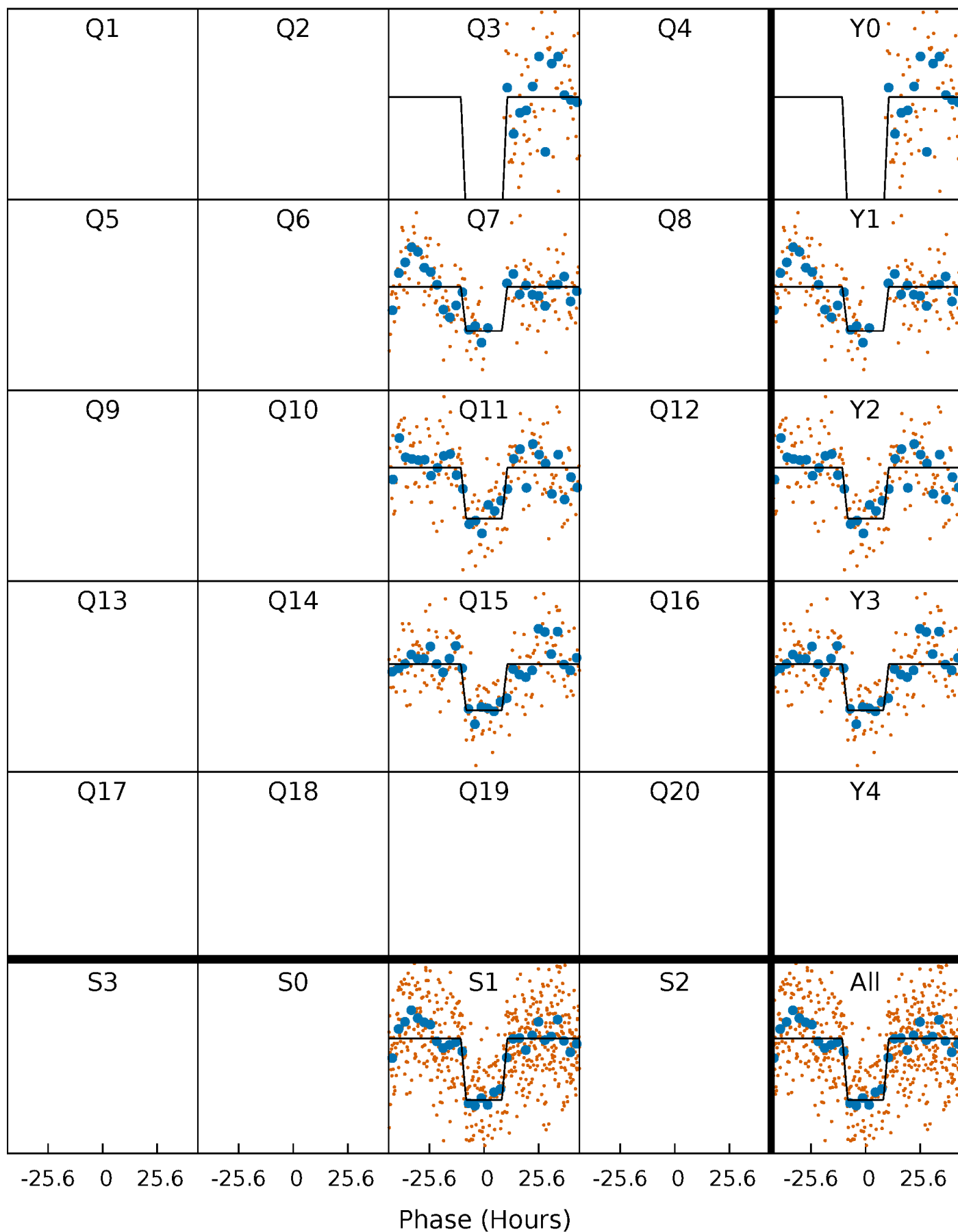
# DV Quarter-Phased Transit Curves

TCE 008362629-01 P=373.847491 Days  $T_0=259.792695$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

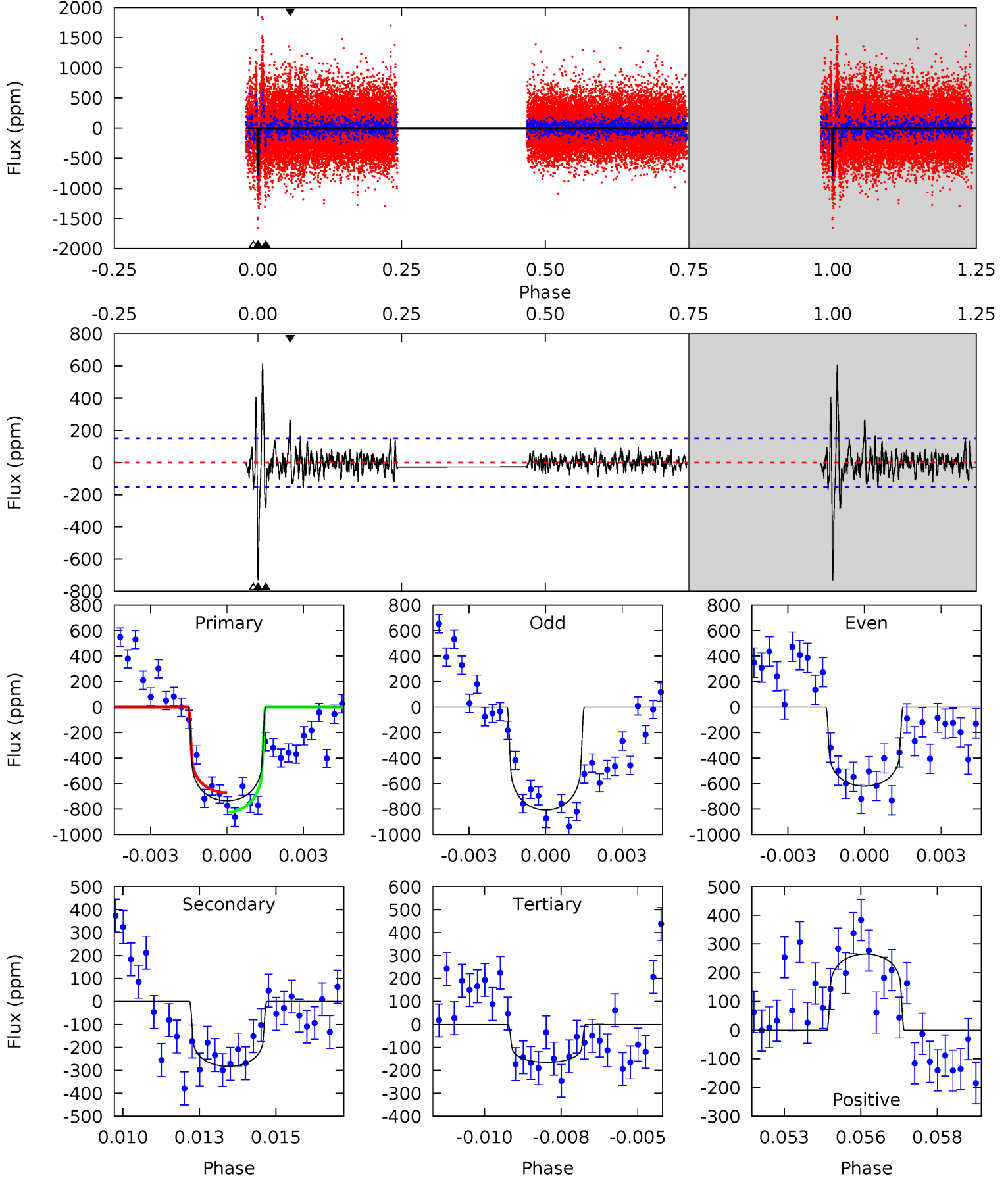
TCE 008362629-01 P=373.804735 Days  $T_0=259.855619$  (BKJD)



# DV Model-Shift Uniqueness Test

008362629-01, P = 373.847491 Days, E = 259.792695 Days

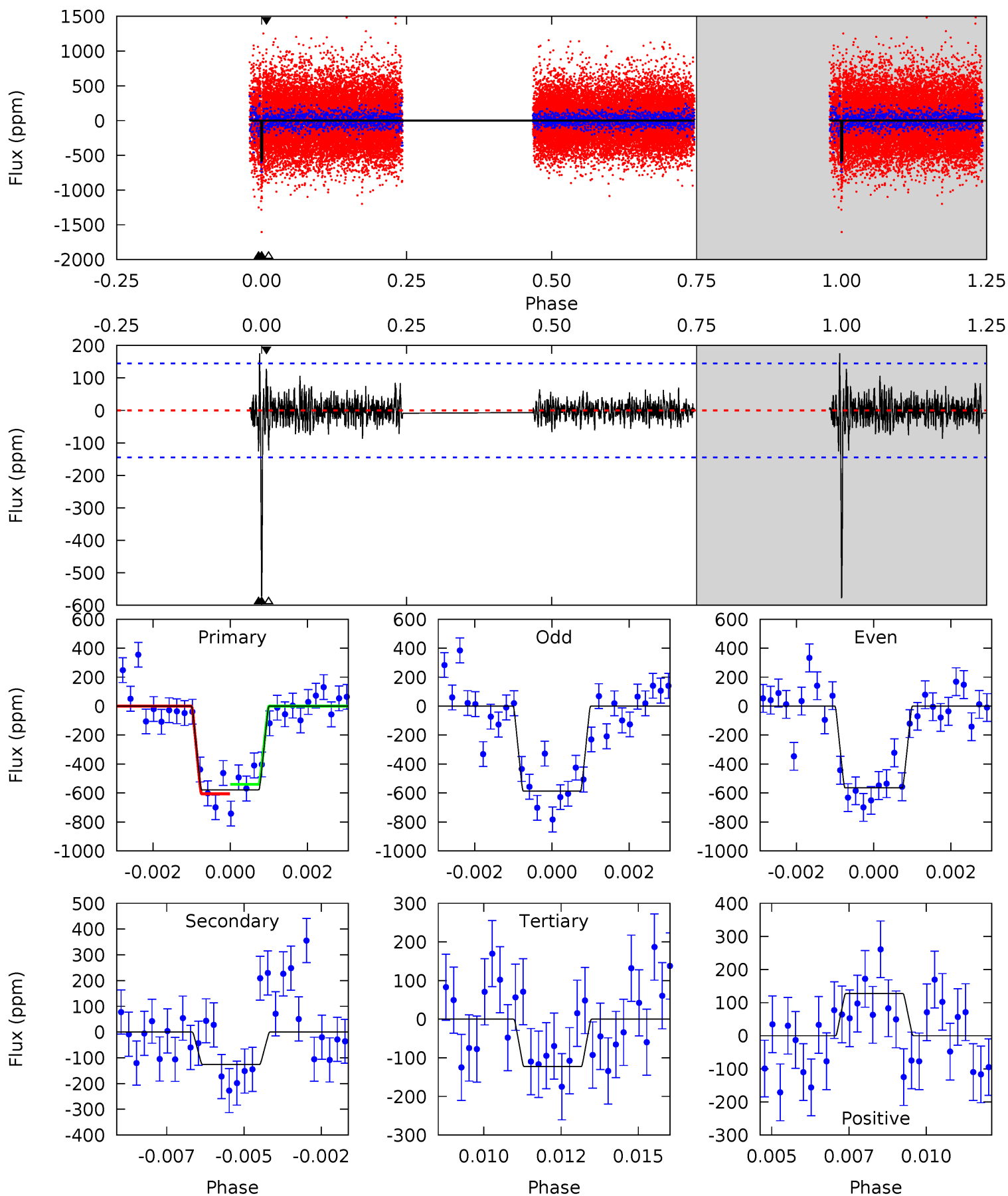
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	9.87	5.78	9.27	5.28	3.02	2.33	19.9	16.4	4.10	0.60	3.21	1.12	0.45	2.62



# Alt Model-Shift Uniqueness Test

008362629-01, P = 373.804735 Days, E = 259.855619 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
21.1	4.59	4.48	4.65	5.29	3.03	1.00	16.7	16.5	0.11	-0.06	0.40	0.74	0.23	1.17



### Stellar Parameters For KIC 008362629

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6253^{+198}_{-242}$	$4.503^{+0.054}_{-0.216}$	$-0.420^{+0.300}_{-0.300}$	$0.927^{+0.290}_{-0.097}$	$0.997^{+0.123}_{-0.135}$	$1.764^{+0.395}_{-0.988}$
	+3%/-4%	+1%/-5%	+71%/-71%	+31%/-10%	+12%/-14%	+22%/-56%
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 008362629-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-282 \pm 29$	$2.69^{+0.50}_{-0.49}$	$376^{+26}_{-21}$	$5133^{+424}_{-339}$	$21860^{+10146}_{-6741}$
Alt.	$-126 \pm 27$	$2.57^{+0.54}_{-0.46}$	$377^{+27}_{-21}$	$4422^{+370}_{-322}$	$10326^{+5701}_{-3692}$

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

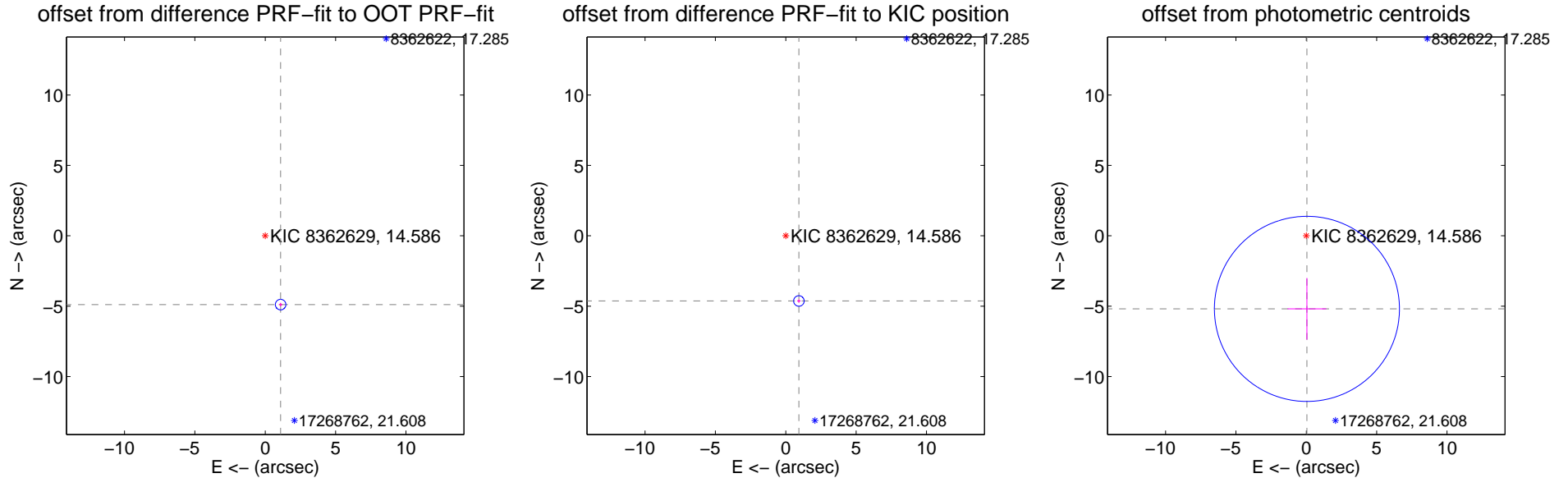
## DV Centroid Data

Supplemental centroid analysis for 008362629-01. Kepler magnitude: 14.59. Transit SNR 11.12

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$5.010 \pm 0.125$	40.14	$-1.094 \pm 0.126$	$-4.889 \pm 0.125$
PRF-fit source offset from KIC position	$4.724 \pm 0.125$	37.86	$-0.933 \pm 0.126$	$-4.631 \pm 0.125$
photometric centroid source offset	$5.19 \pm 2.19$	2.37	$-0.04 \pm 1.38$	$-5.19 \pm 2.19$



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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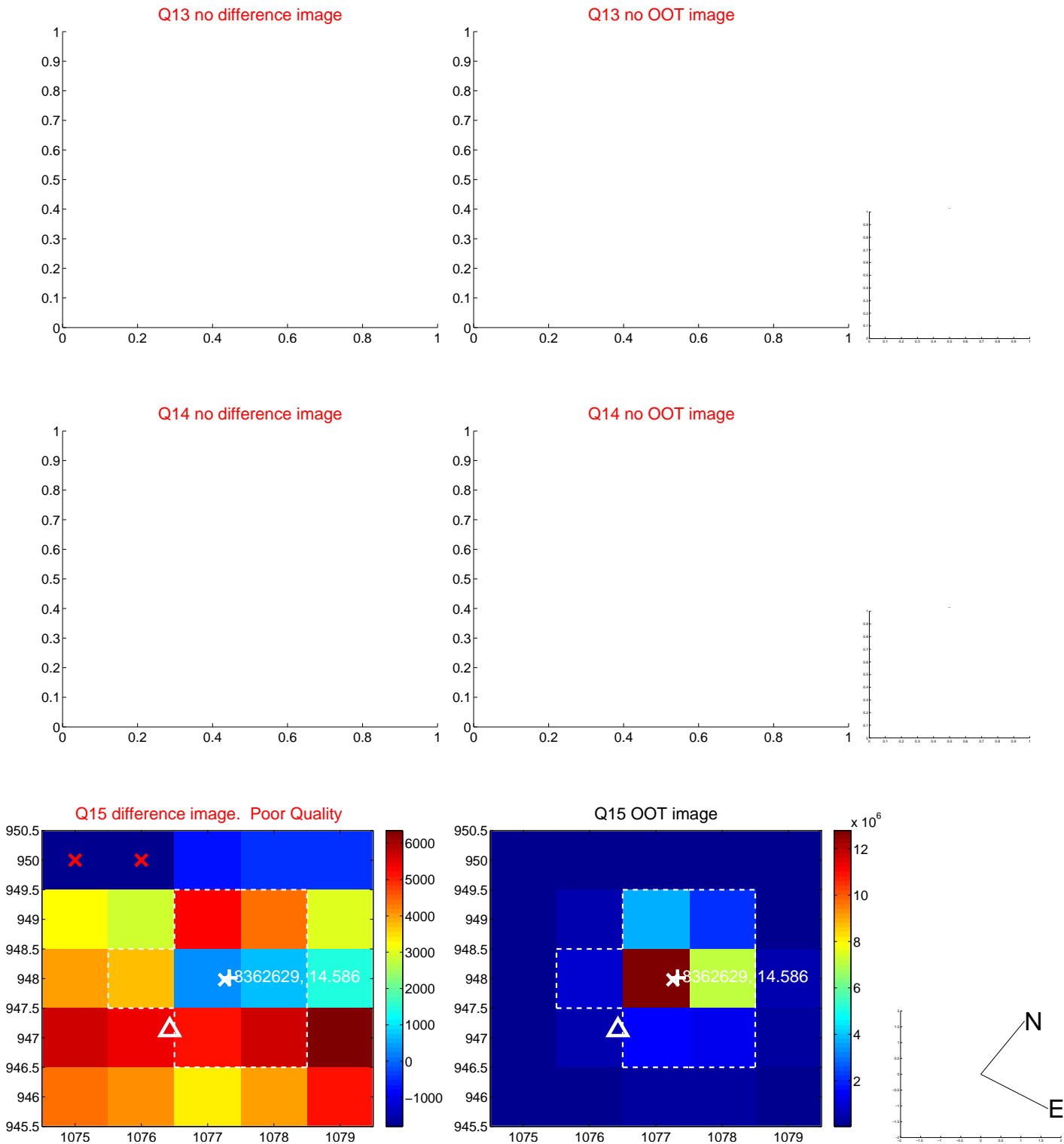




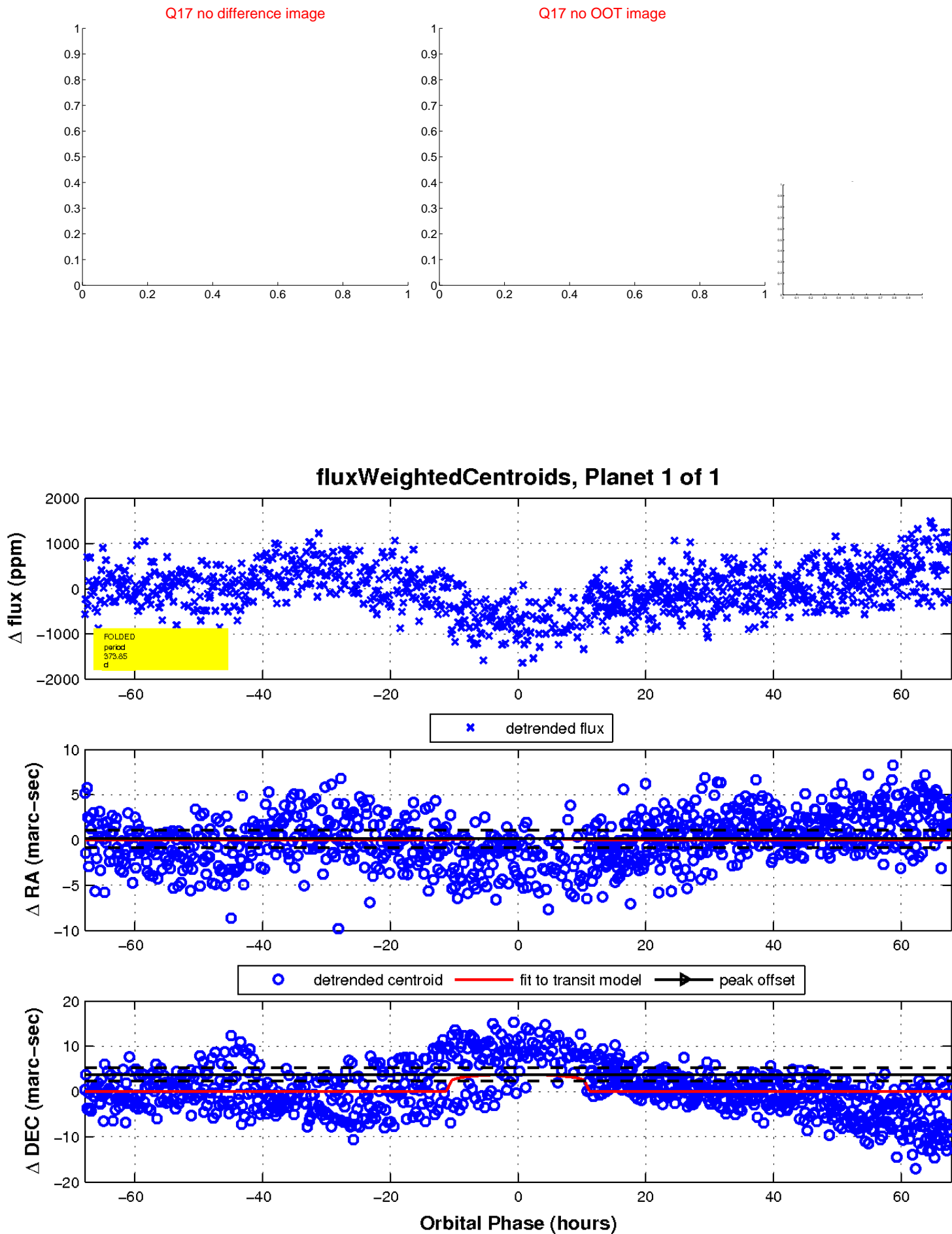
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

