

# KIC 006293855

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006293855-01	OBS	No	402.817849	362.680387	164.9	14.469	7.2	7.3	1.51	5367	2.38	1.58

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006293855-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL

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

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

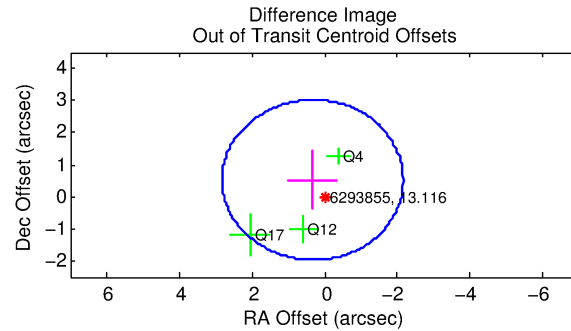
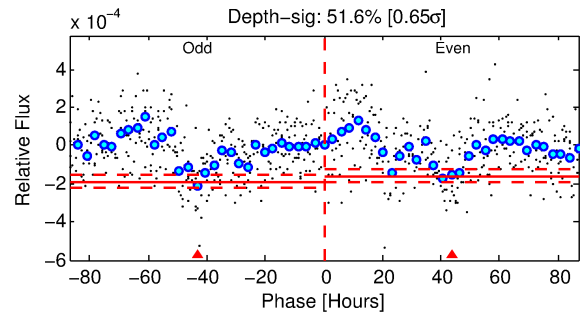
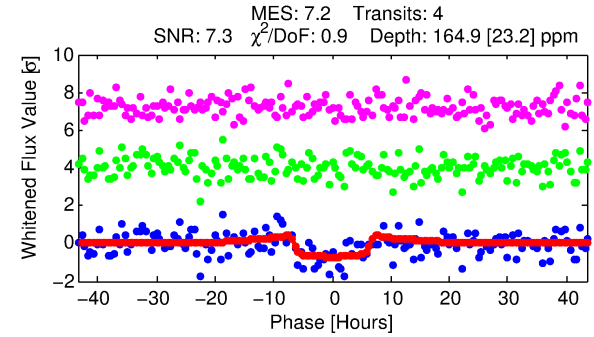
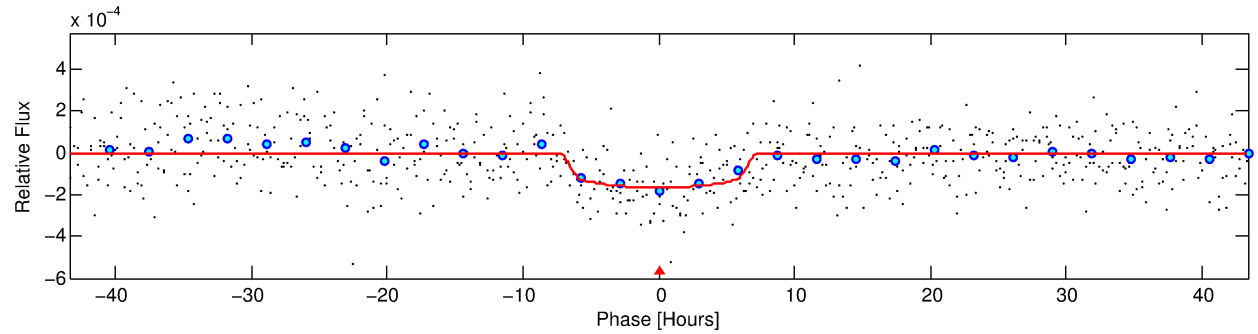
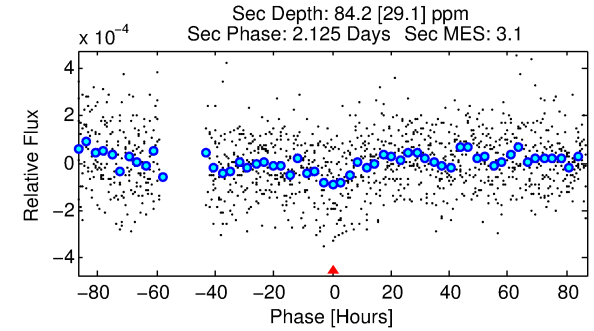
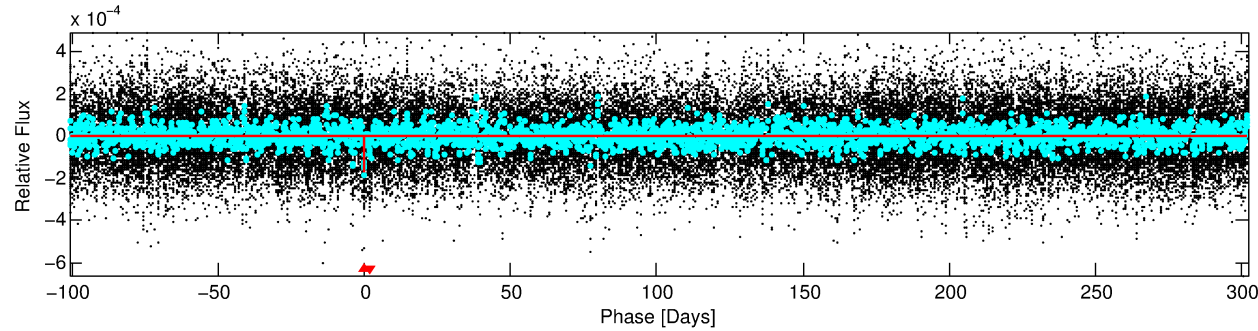
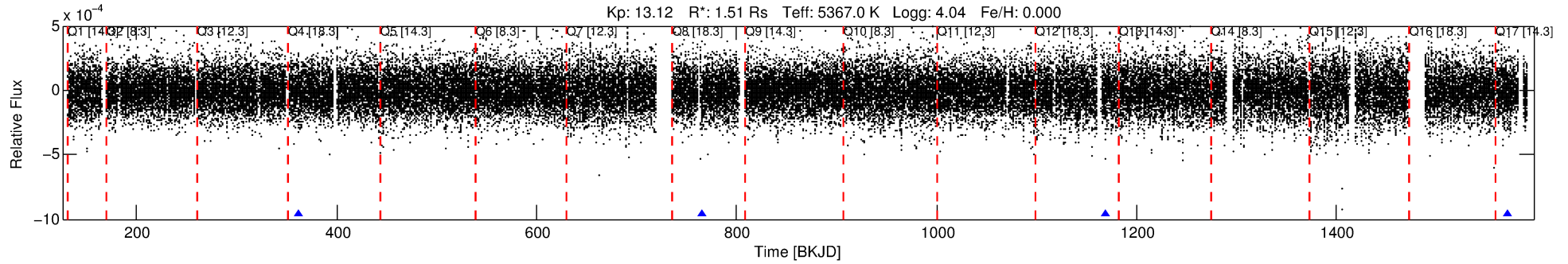
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006293855-01

No Significant Match Found

# DV One-Page Summary

KIC: 6293855 Candidate: 1 of 1 Period: 402.818 d



## DV Fit Results:

Period = 402.81785 [0.01105] d  
Epoch = 362.6804 [0.0205] BKJD  
Rp/R\* = 0.0145 [0.0021]  
a/R\* = 90.56 [48.29]  
b = 0.92 [0.09]  
Seff = 1.58 [1.17]  
Teq = 286 [53] K  
Rp = 2.38 [1.10] Re  
a = 1.0343 [0.4601] AU  
Ag = 8719.03 [7465.40] [1.17 $\sigma$ ]  
Teffp = 4268 [495] K [8.00 $\sigma$ ]

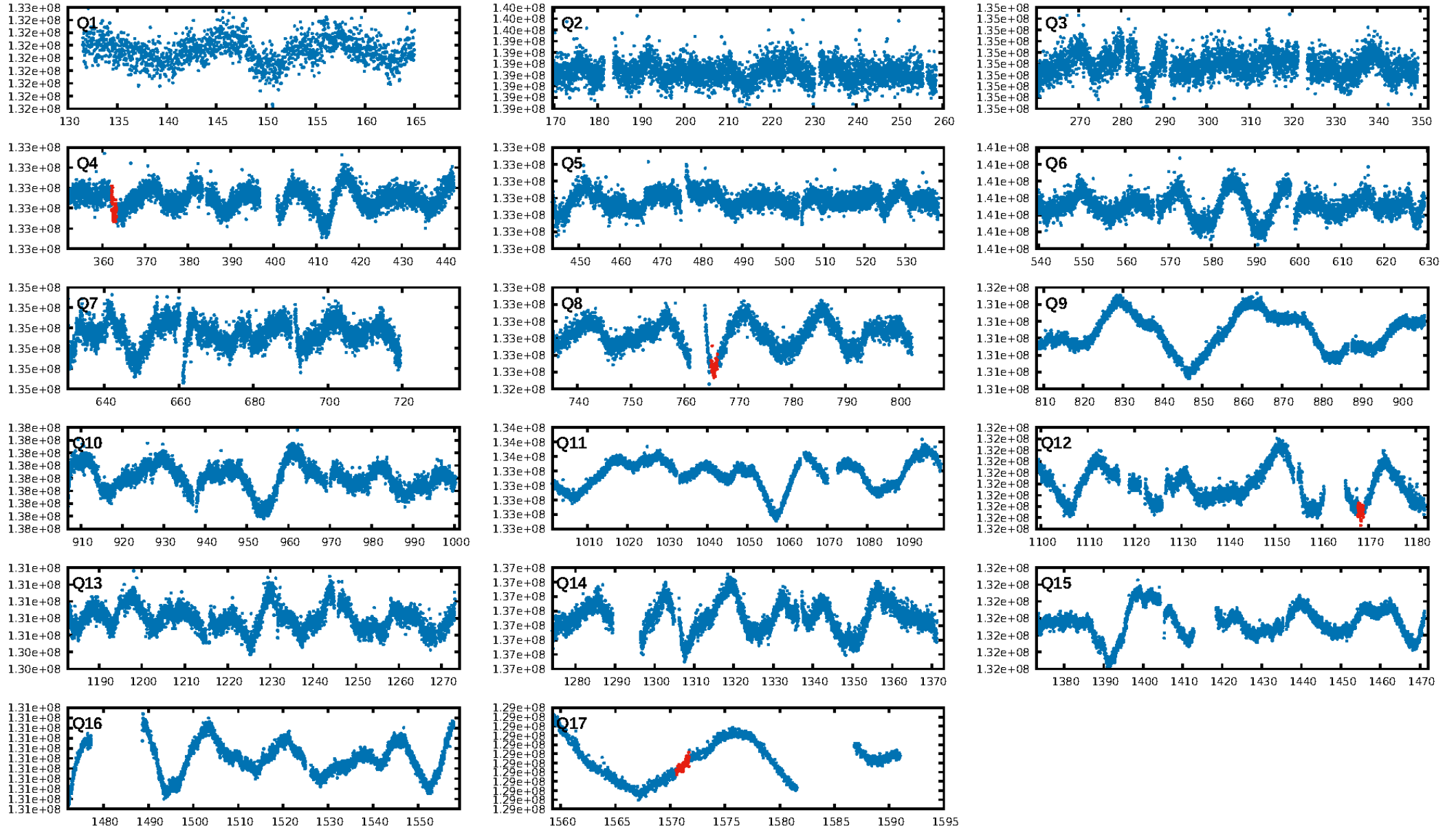
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 40.3%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 2.62e-13  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.6822  
Centroid-sig: 52.5%  
Centroid-so: 2.039 arcsec [1.54 $\sigma$ ]  
OotOffset-rm: 0.617 arcsec [0.74 $\sigma$ ]  
KicOffset-rm: 0.891 arcsec [1.12 $\sigma$ ]  
OotOffset-st: 0/0/2/1 [3]  
KicOffset-st: 0/0/2/1 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [3/3]

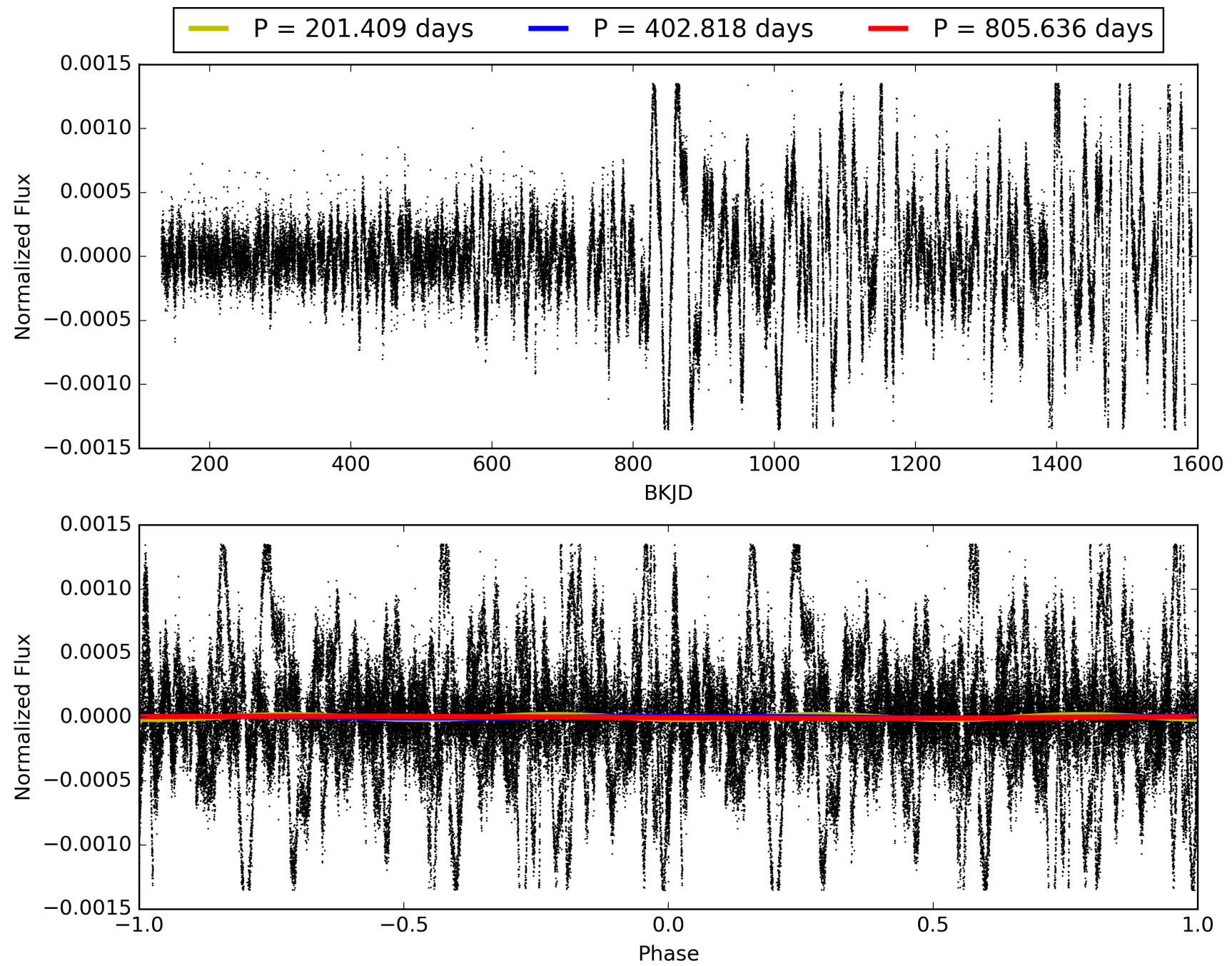
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:04:38 Z

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

# TCE 006293855-01, PDC Light Curves

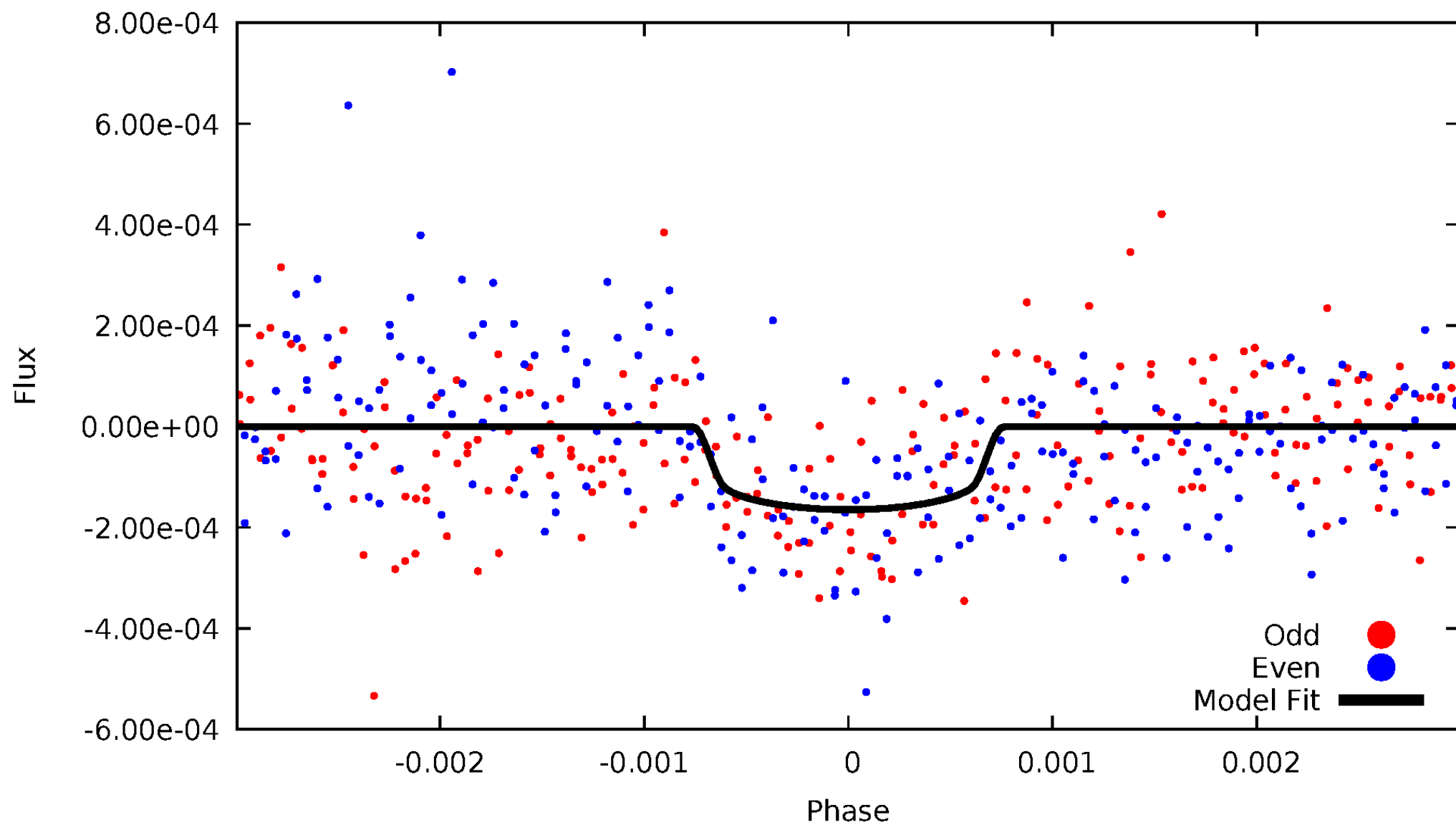


TCE 006293855-01



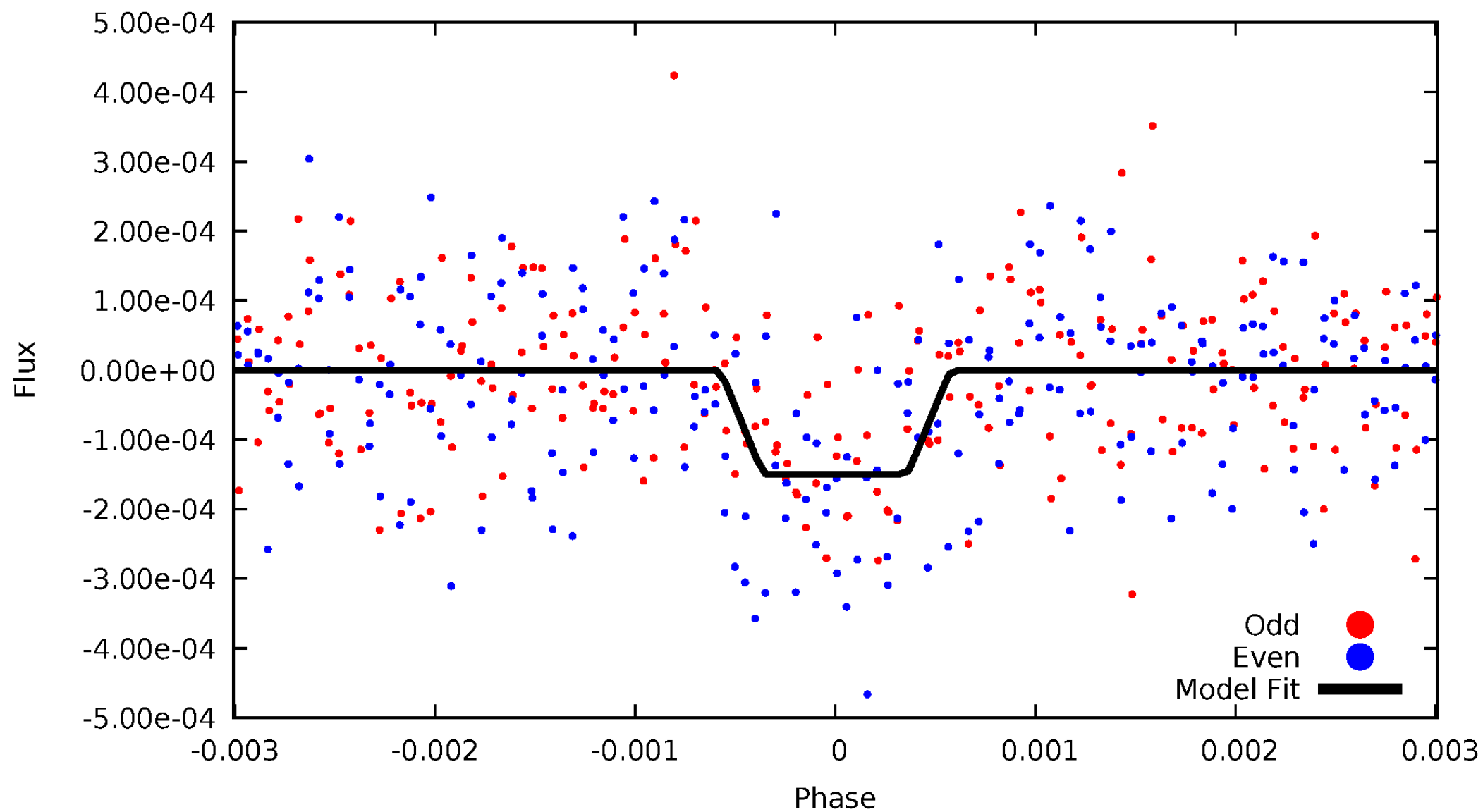
# DV Odd/Even

TCE 006293855-01

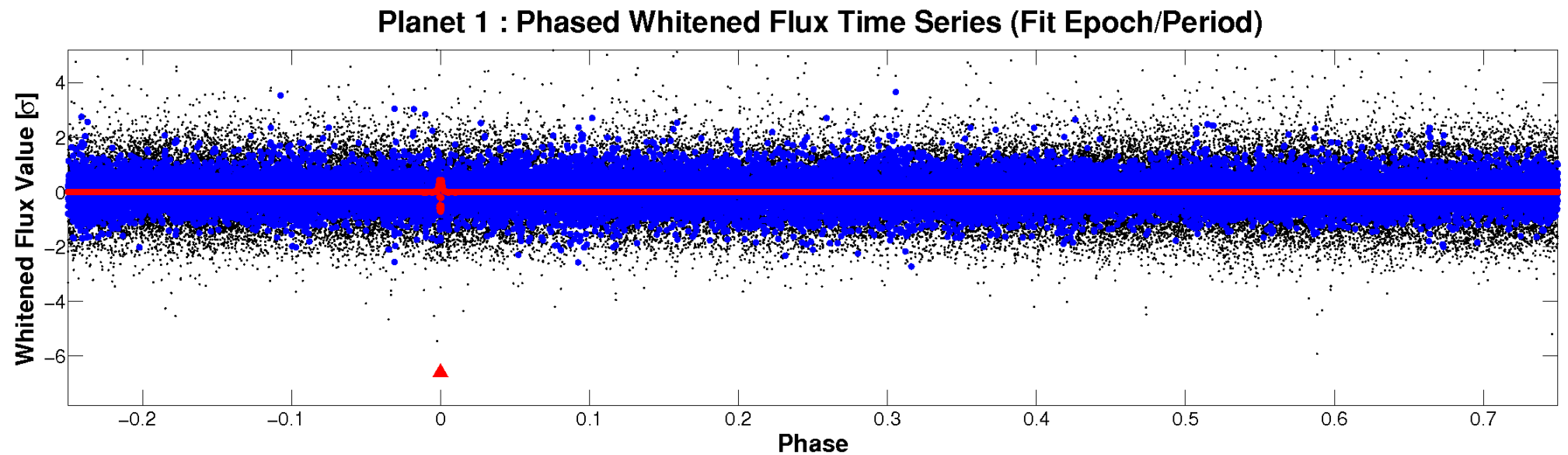
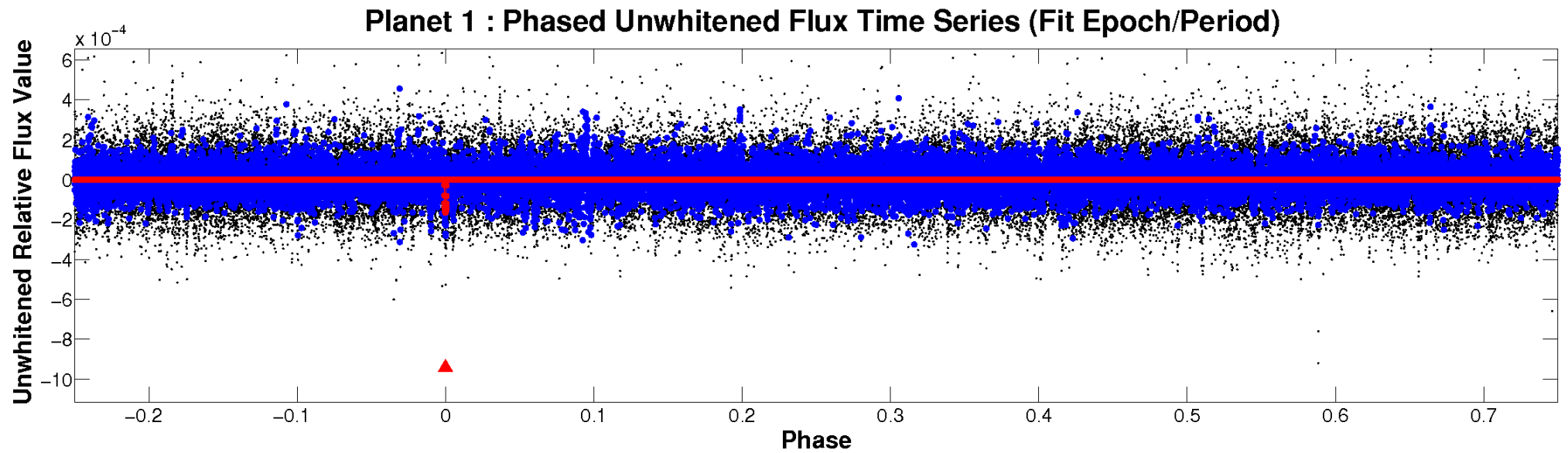


# ALT Odd/Even

TCE 006293855-01

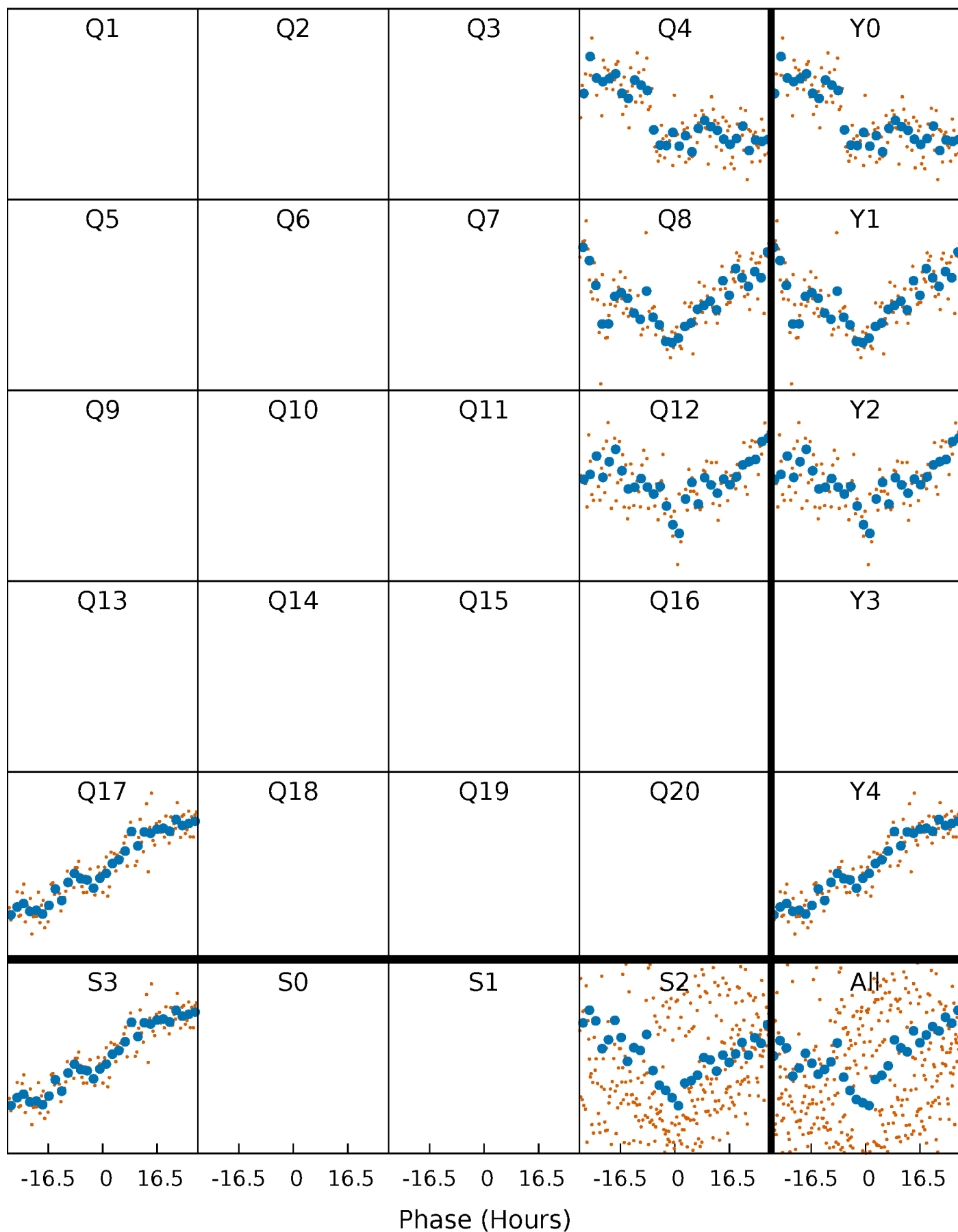


# Non-Whitened Vs. Whitened Light Curve



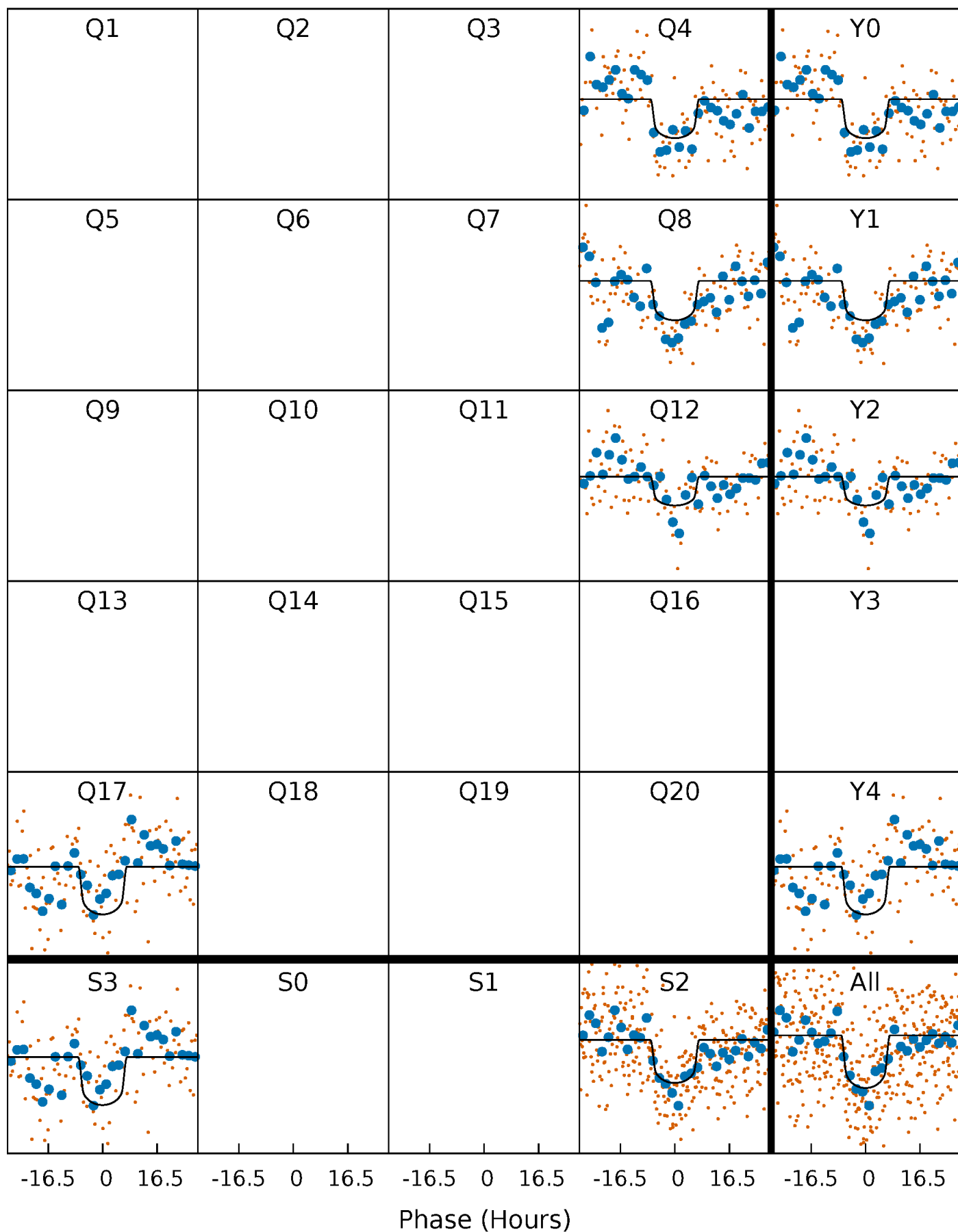
# PDC Quarter-Phased Transit Curves

TCE 006293855-01 P=402.817849 Days  $T_0=362.680387$  (BKJD)



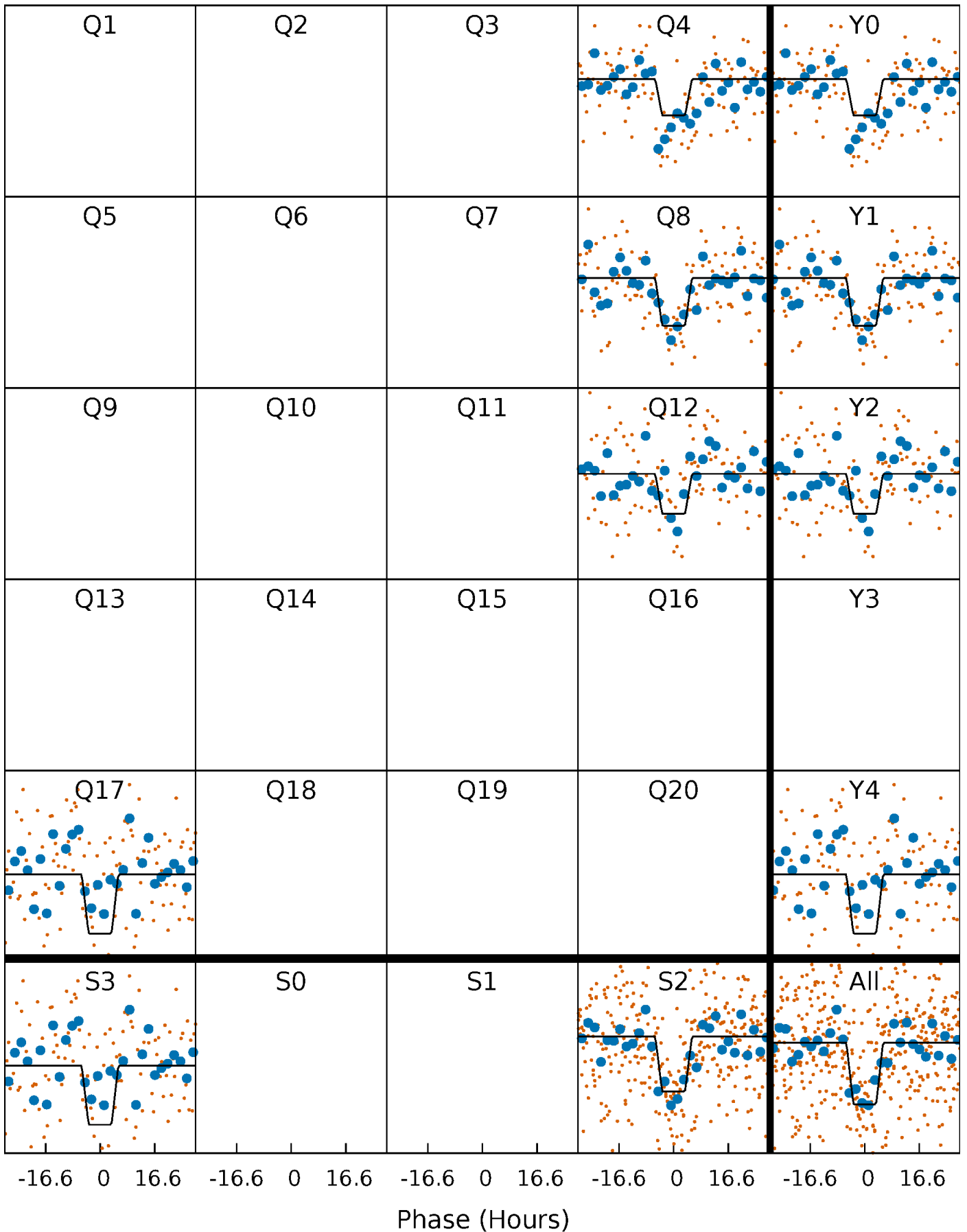
# DV Quarter-Phased Transit Curves

TCE 006293855-01 P=402.817849 Days  $T_0=362.680387$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

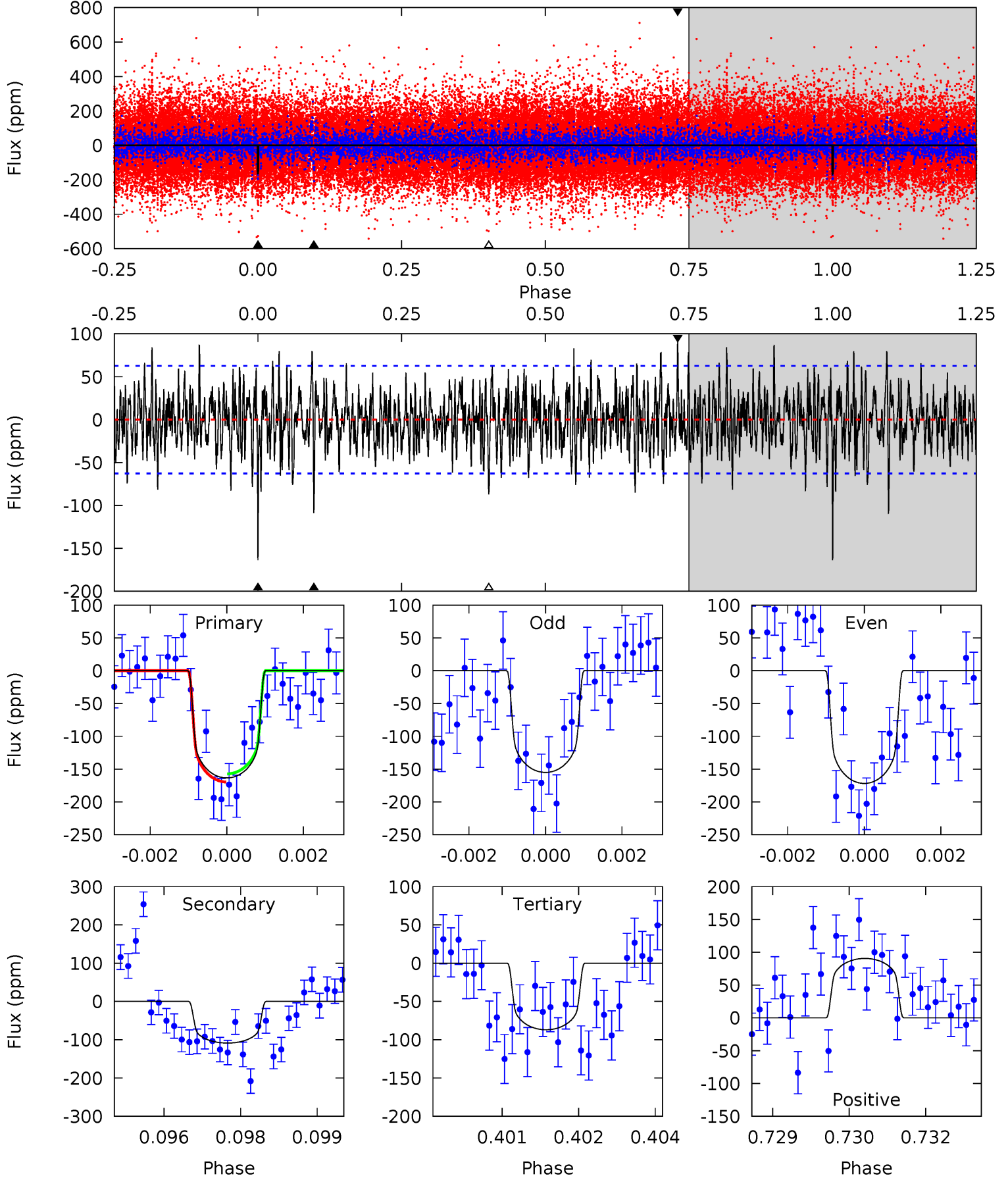
TCE 006293855-01 P=402.827202 Days  $T_0=362.631752$  (BKJD)



# DV Model-Shift Uniqueness Test

006293855-01, P = 402.817849 Days, E = 362.680387 Days

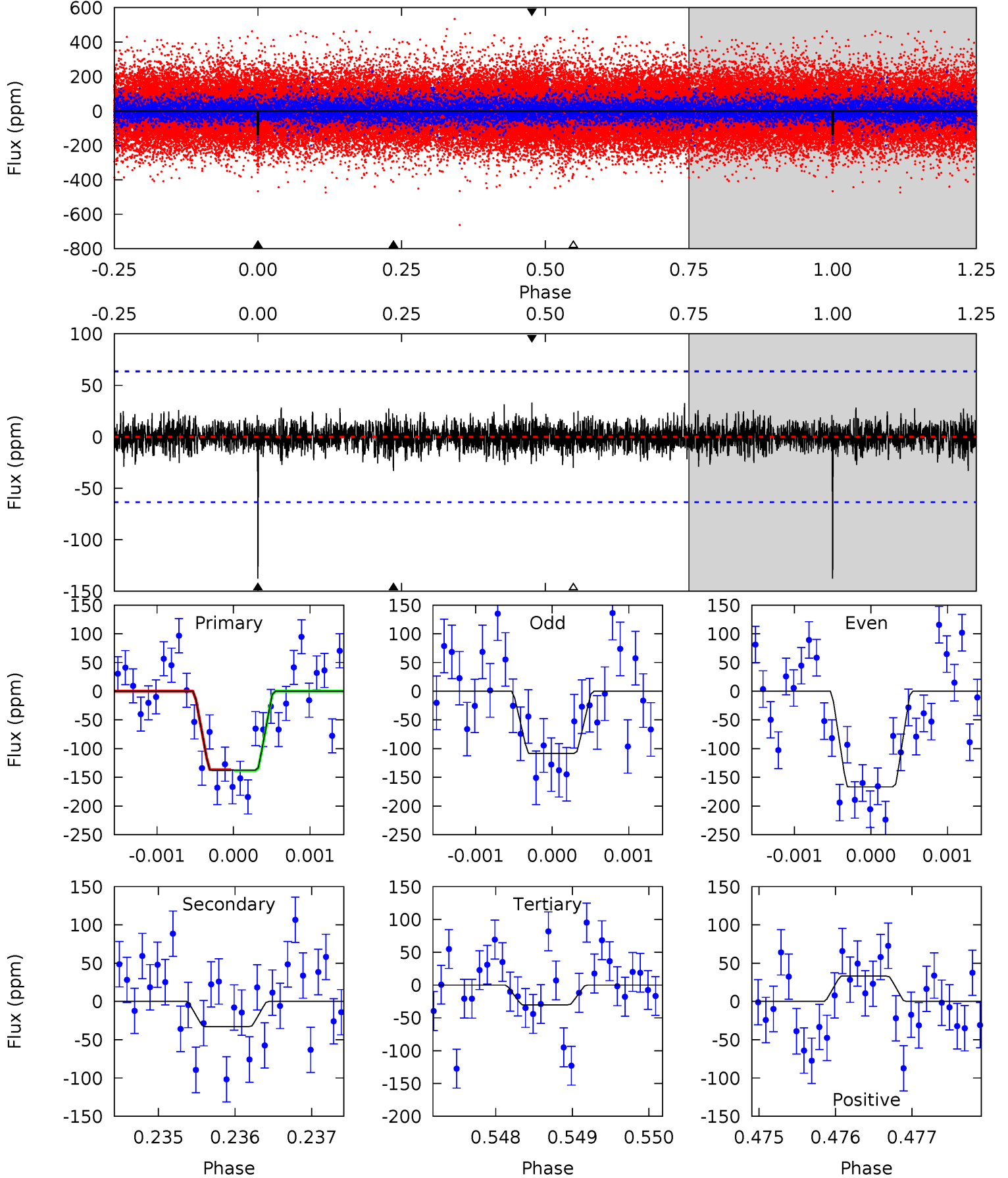
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	9.32	7.46	7.77	5.38	3.17	2.36	6.56	6.26	1.86	1.56	0.72	0.95	0.36	0.53



# Alt Model-Shift Uniqueness Test

006293855-01,  $P = 402.827202$  Days,  $E = 362.631752$  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
11.8	2.82	2.58	2.84	5.43	3.26	0.71	9.20	8.94	0.23	-0.02	2.51	1.02	0.19	0.06



### Stellar Parameters For KIC 006293855

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5367^{+161}_{-128}$	$4.041^{+0.435}_{-0.145}$	$0.000^{+0.300}_{-0.250}$	$1.506^{+0.332}_{-0.664}$	$0.908^{+0.083}_{-0.092}$	$0.375^{+1.488}_{-0.159}$
	+3%/-2%	+11%/-4%	+inf%/-inf%	+22%/-44%	+9%/-10%	+397%/-42%
Source	PHO1	FLK73	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 006293855-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	-109±12	$2.23^{+0.56}_{-0.60}$	$393^{+30}_{-48}$	$4712^{+320}_{-310}$	$12879^{+11028}_{-4766}$
Alt.	-33±12	$1.94^{+0.47}_{-0.48}$	$394^{+32}_{-44}$	$3979^{+358}_{-373}$	$5305^{+4349}_{-2623}$

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

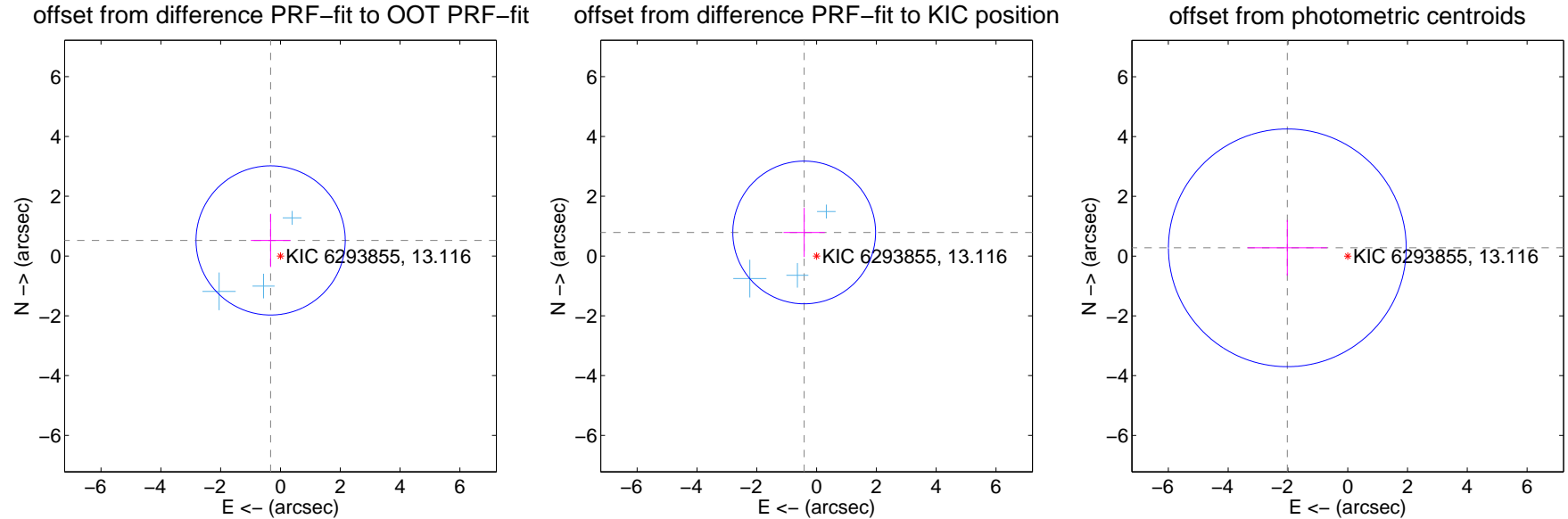
## DV Centroid Data

Supplemental centroid analysis for 006293855-01. Kepler magnitude: 13.12. Transit SNR 7.29

There are 3 quarters with good PRF difference image offsets

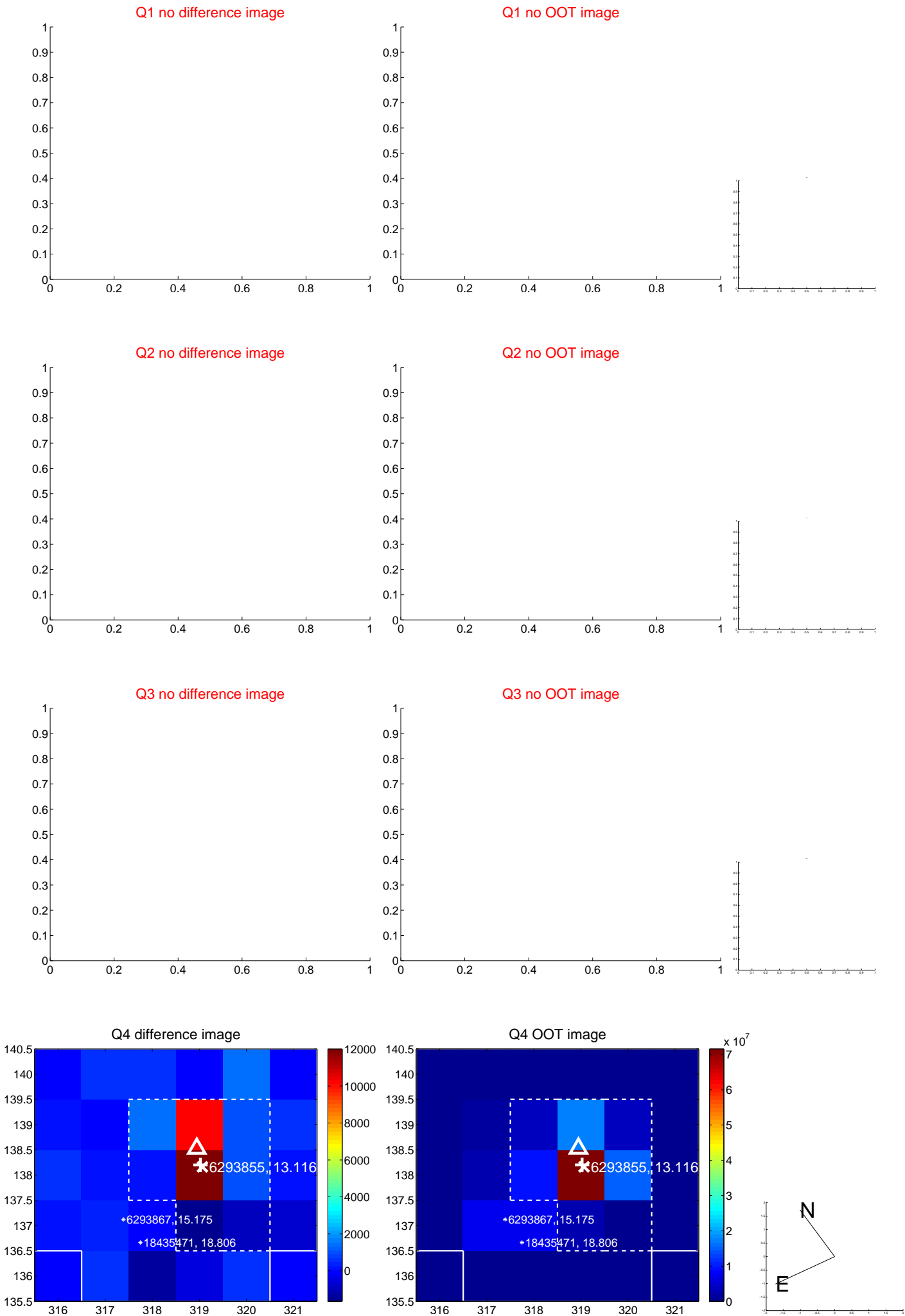
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.617 \pm 0.832$	0.74	$0.329 \pm 0.661$	$0.522 \pm 0.890$
PRF-fit source offset from KIC position	$0.891 \pm 0.796$	1.12	$0.414 \pm 0.690$	$0.788 \pm 0.822$
photometric centroid source offset	$2.04 \pm 1.33$	1.54	$2.02 \pm 1.33$	$0.28 \pm 0.93$



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.

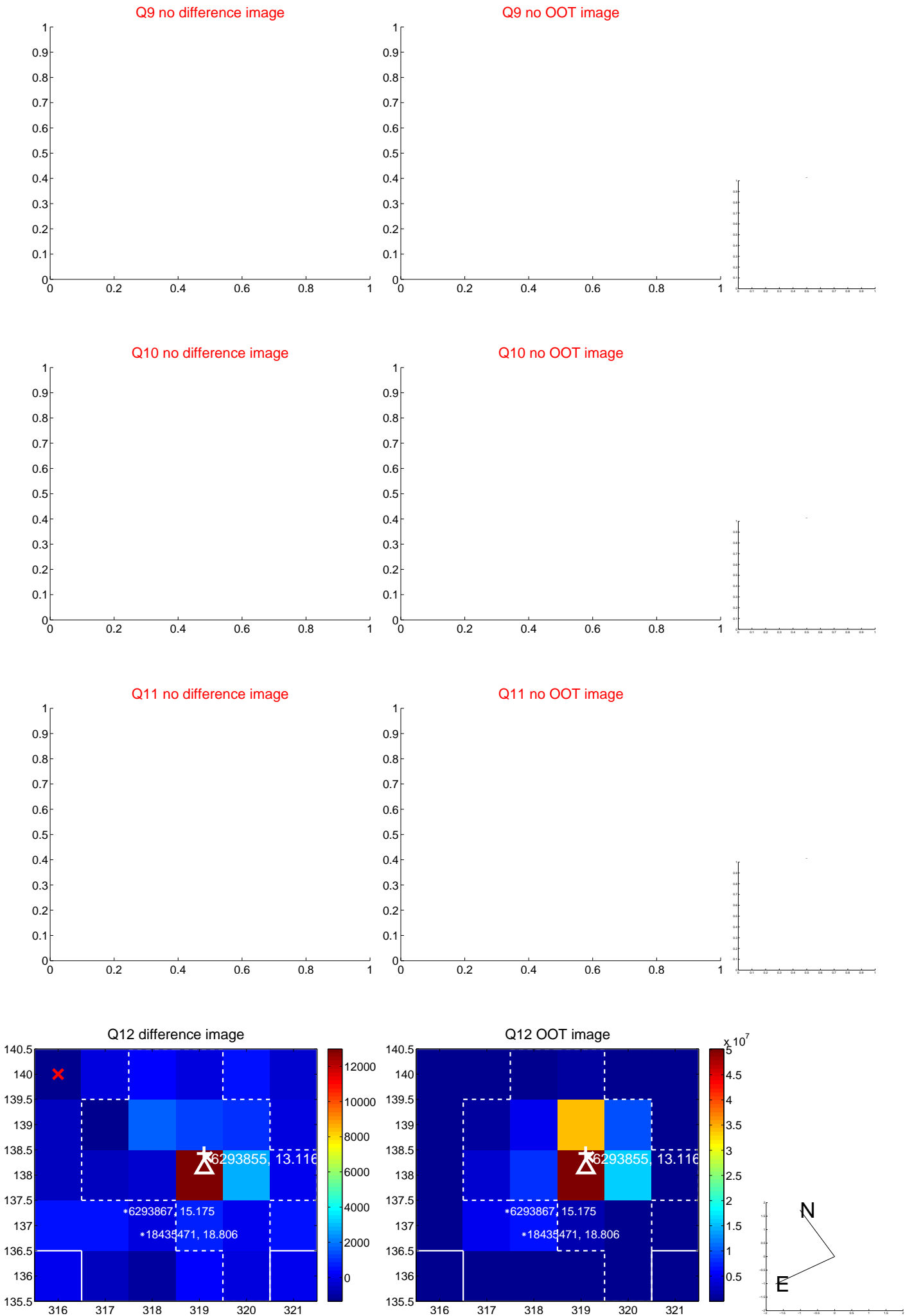
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



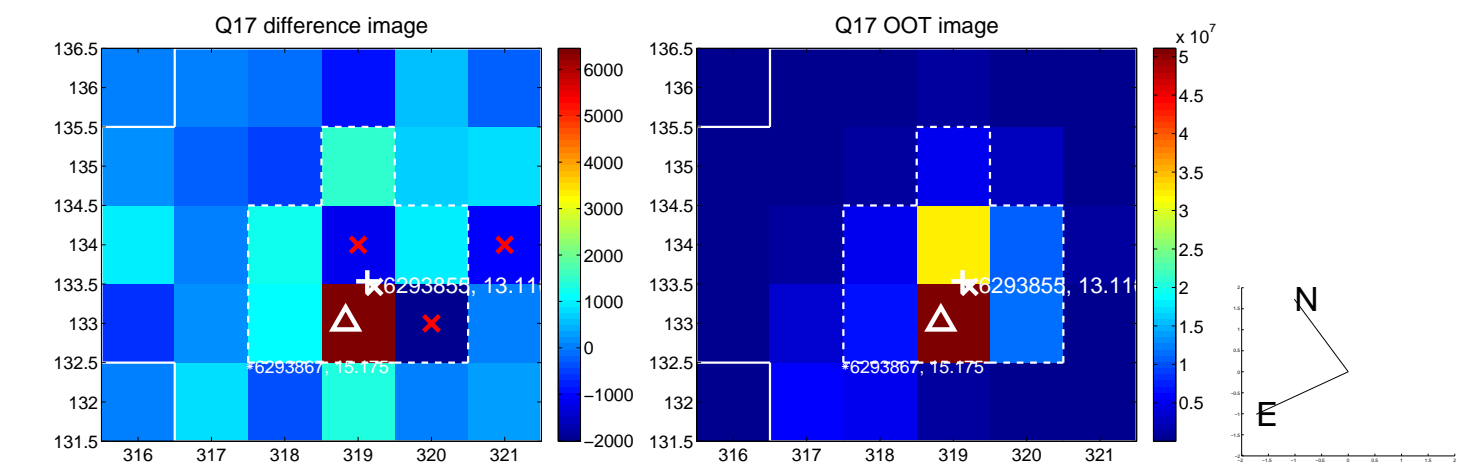
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



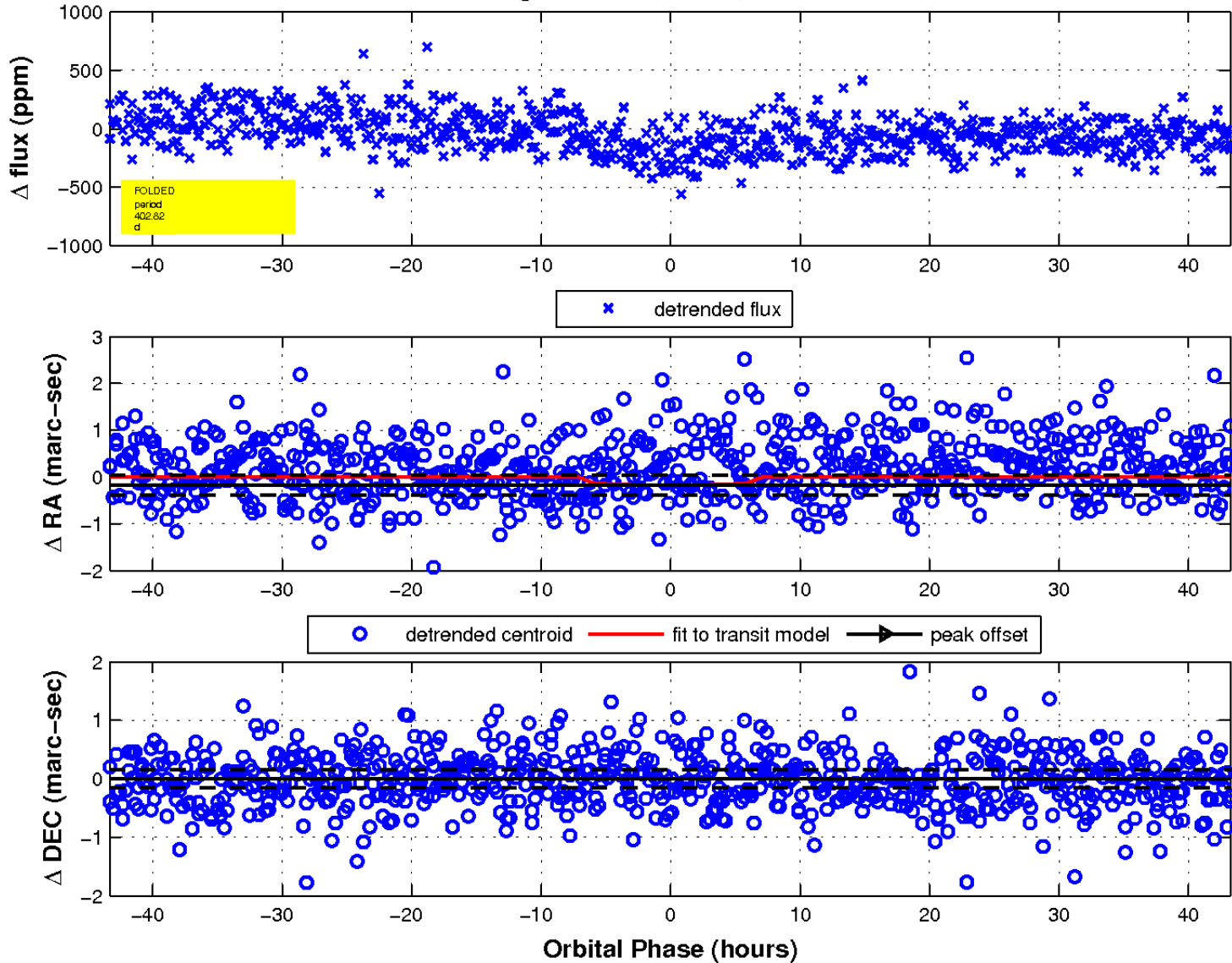
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

