

# KIC 006280995

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006280995-01	OBS	No	361.074042	158.768989	1370.7	16.616	7.1	6.9	0.79	5679	3.38	0.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006280995-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

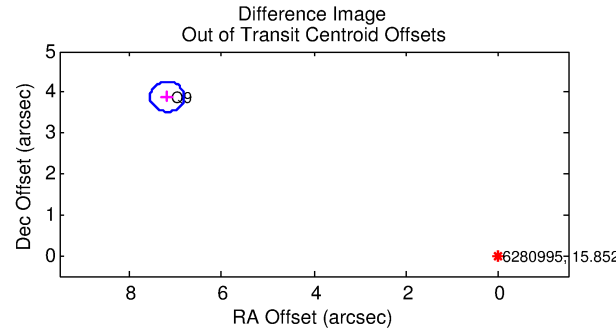
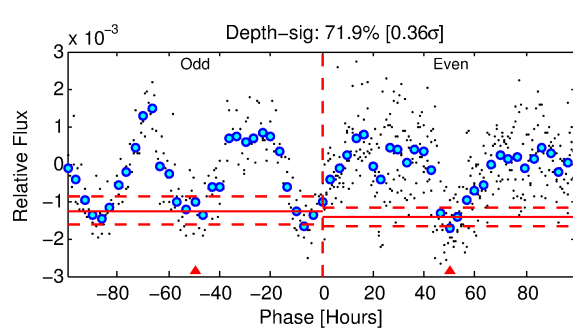
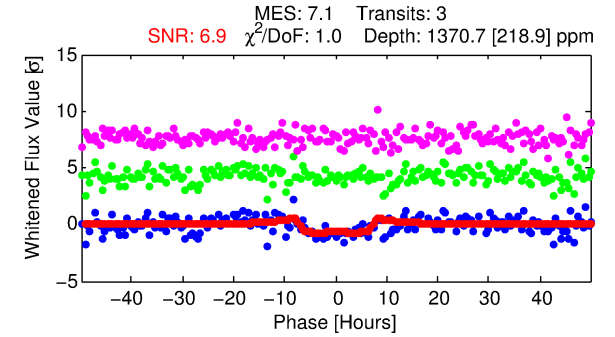
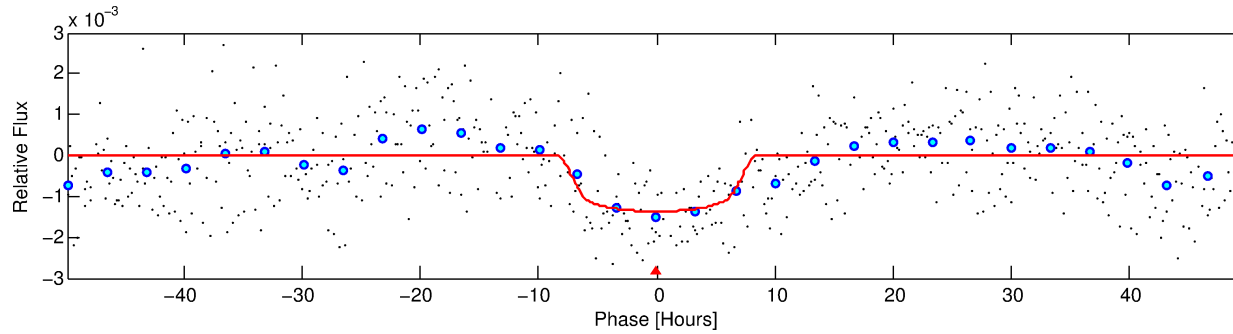
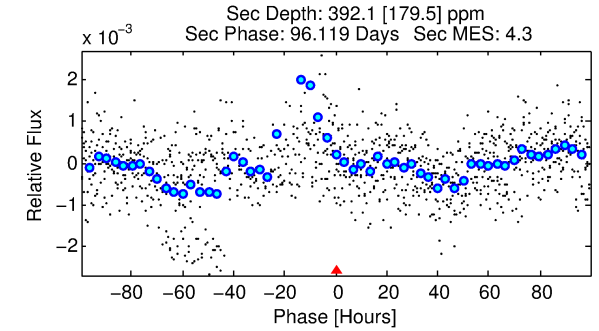
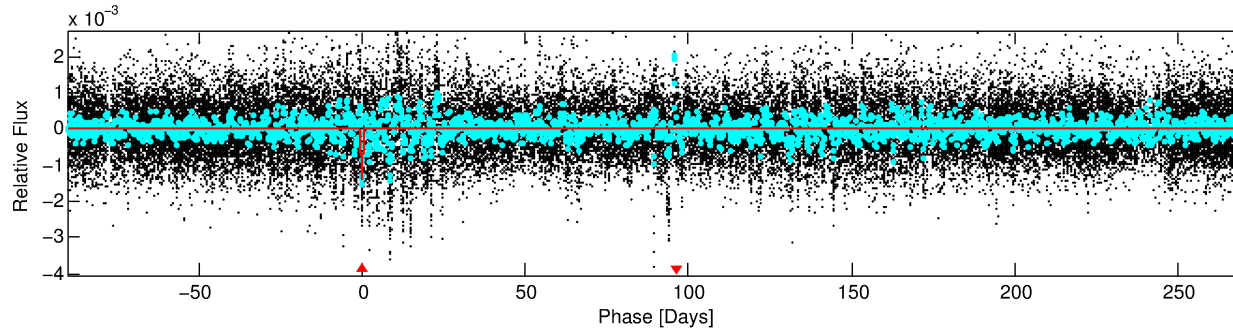
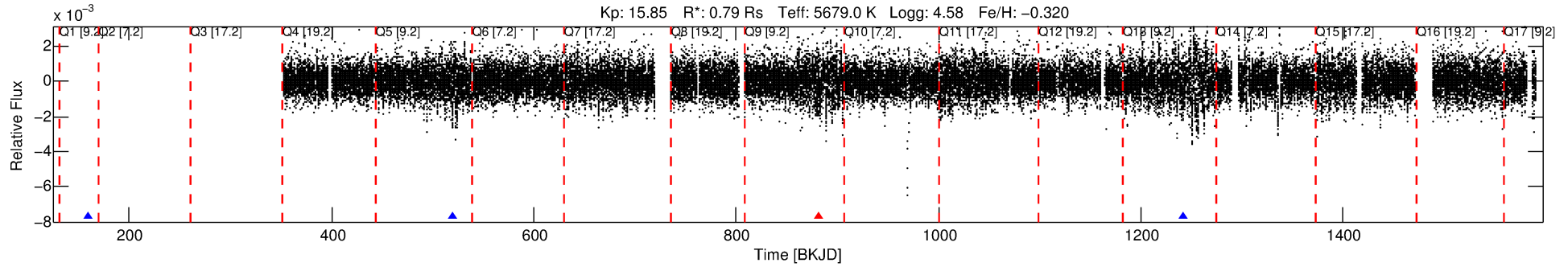
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006280995-01

No Significant Match Found

# DV One-Page Summary

KIC: 6280995 Candidate: 1 of 1 Period: 361.074 d



## DV Fit Results:

Period = 361.07404 [0.01894] d  
Epoch = 158.7690 [0.0377] BKJD  
Rp/R\* = 0.0390 [0.0044]  
a/R\* = 96.93 [31.75]  
b = 0.86 [0.10]  
Seff = 0.65 [0.21]  
Teq = 229 [18] K  
Rp = 3.38 [0.91] Re  
a = 0.9498 [0.1938] AU  
Ag = 17078.12 [10083.51] [1.69σ]  
Teff = 4049 [535] K [7.14σ]

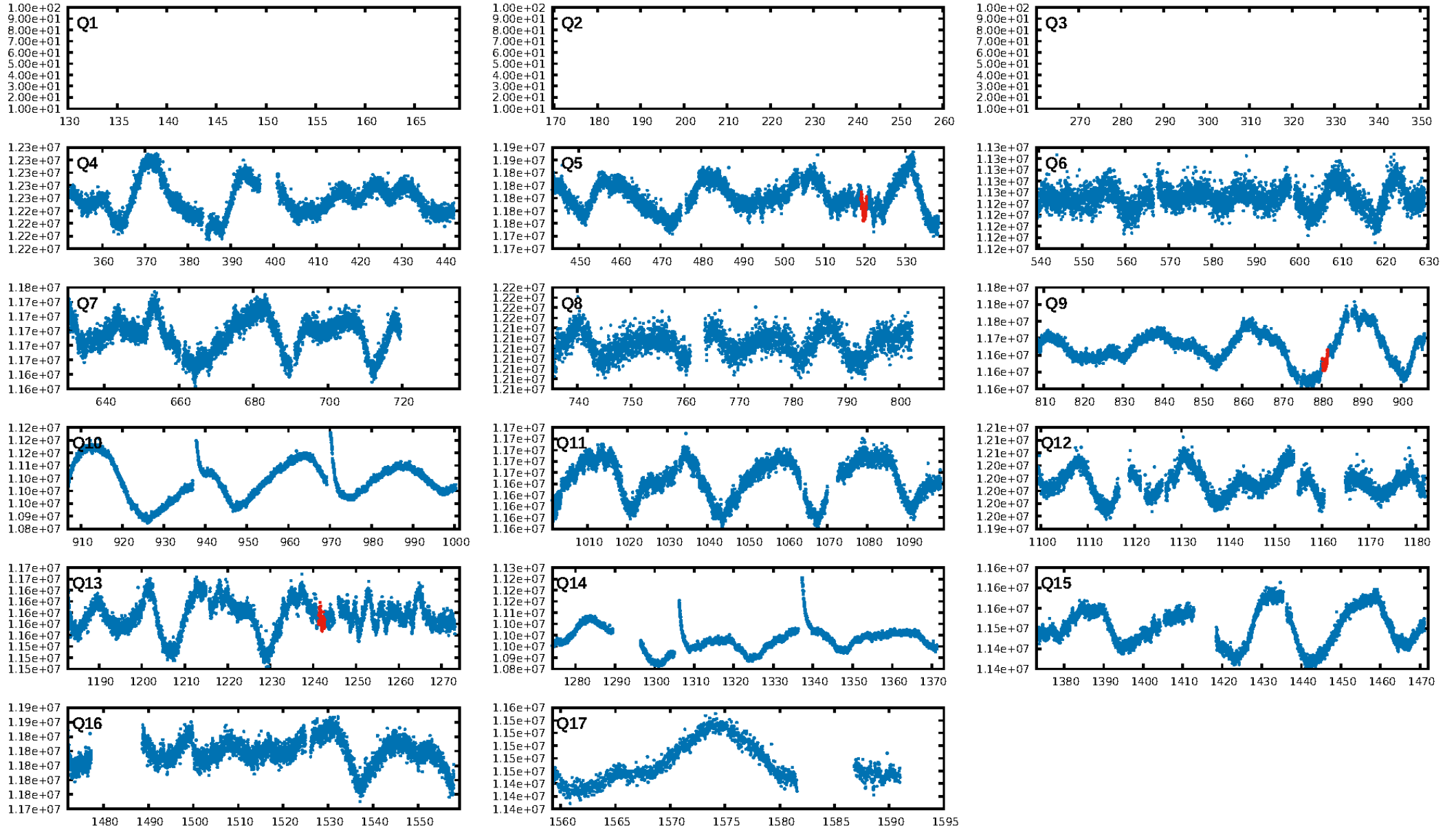
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 96.6%  
ModelChiSquareGoF-sig: 99.7%  
Bootstrap-pfa: 3.51e-09  
RollingBand-fgt: 0.67 [2/3]  
GhostDiagnostic-chr: -2.359  
Centroid-sig: 12.3%  
Centroid-so: 2.921 arcsec [1.92σ]  
OotOffset-rm: 8.155 arcsec [66.77σ]  
KicOffset-rm: 8.051 arcsec [65.60σ]  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [2/2]

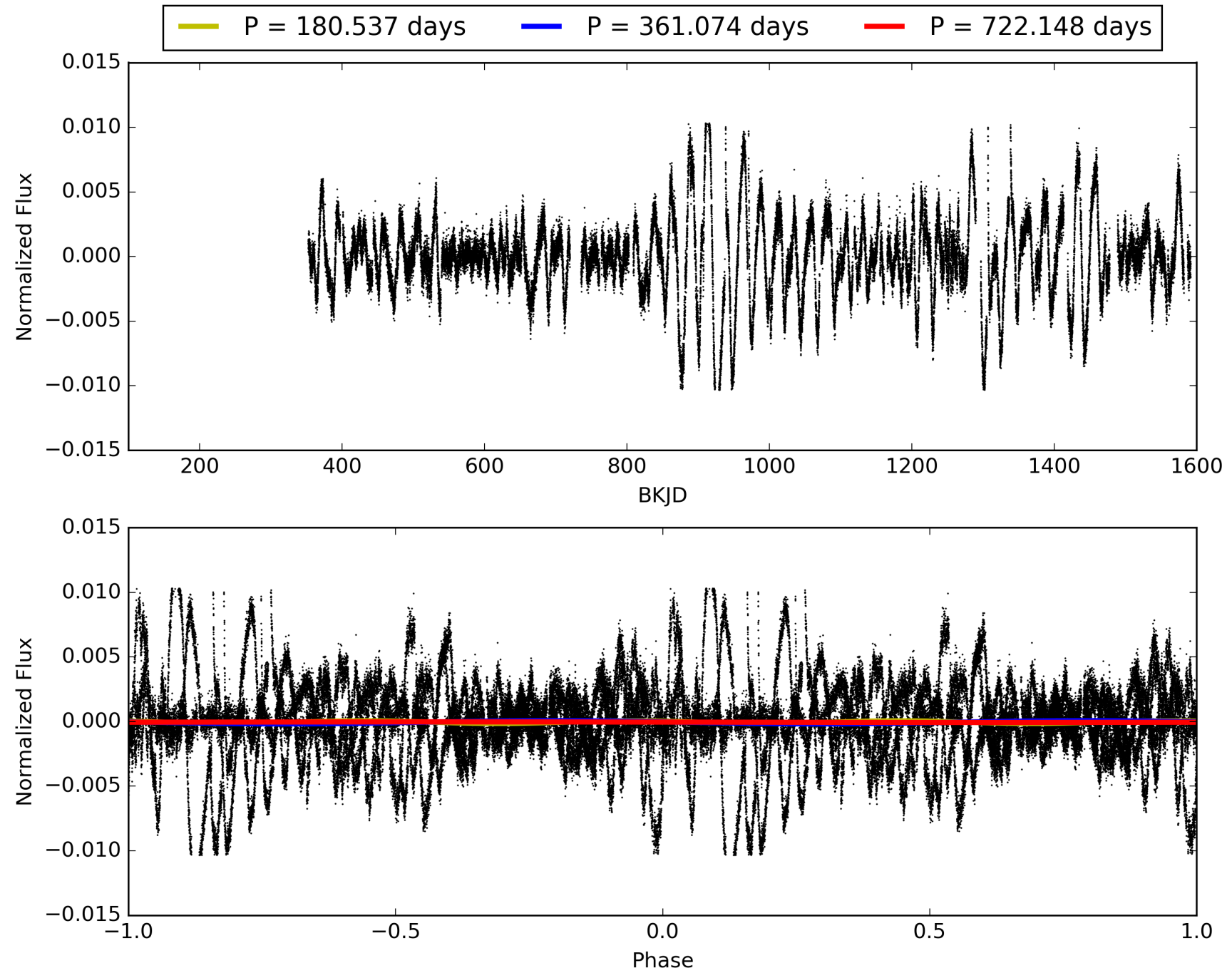
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:49:00 Z

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

# TCE 006280995-01, PDC Light Curves

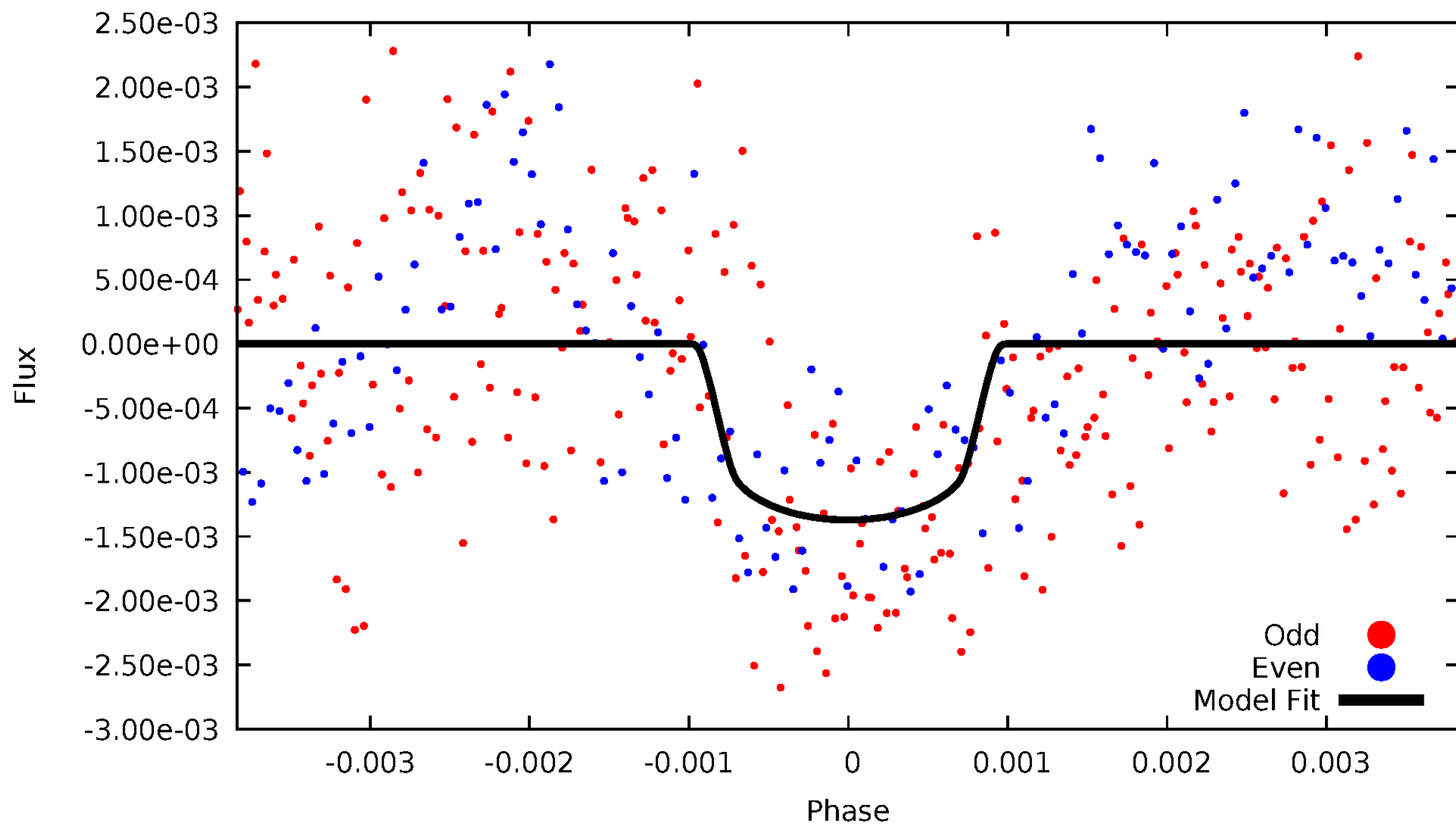


# TCE 006280995-01



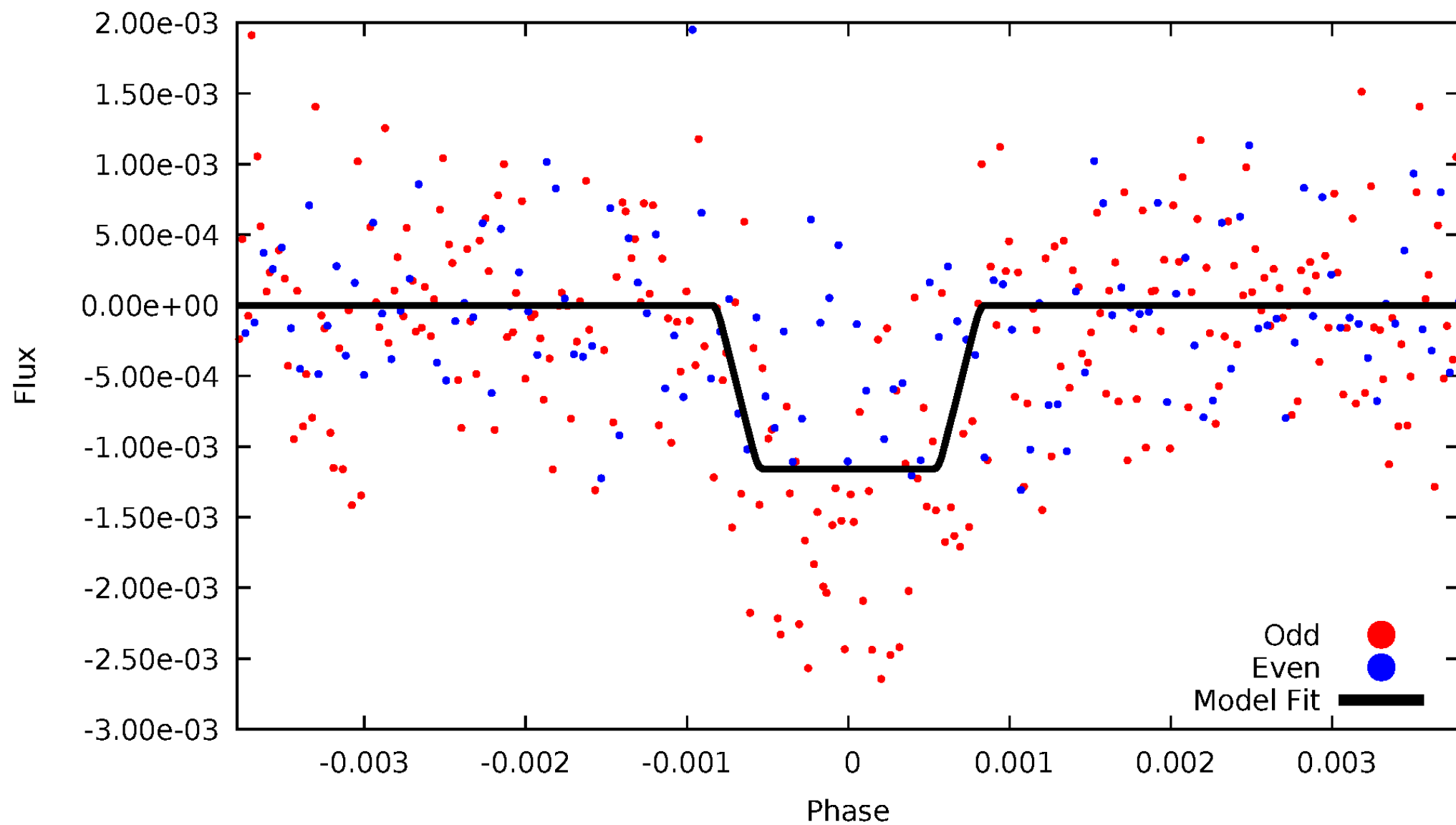
# DV Odd/Even

TCE 006280995-01

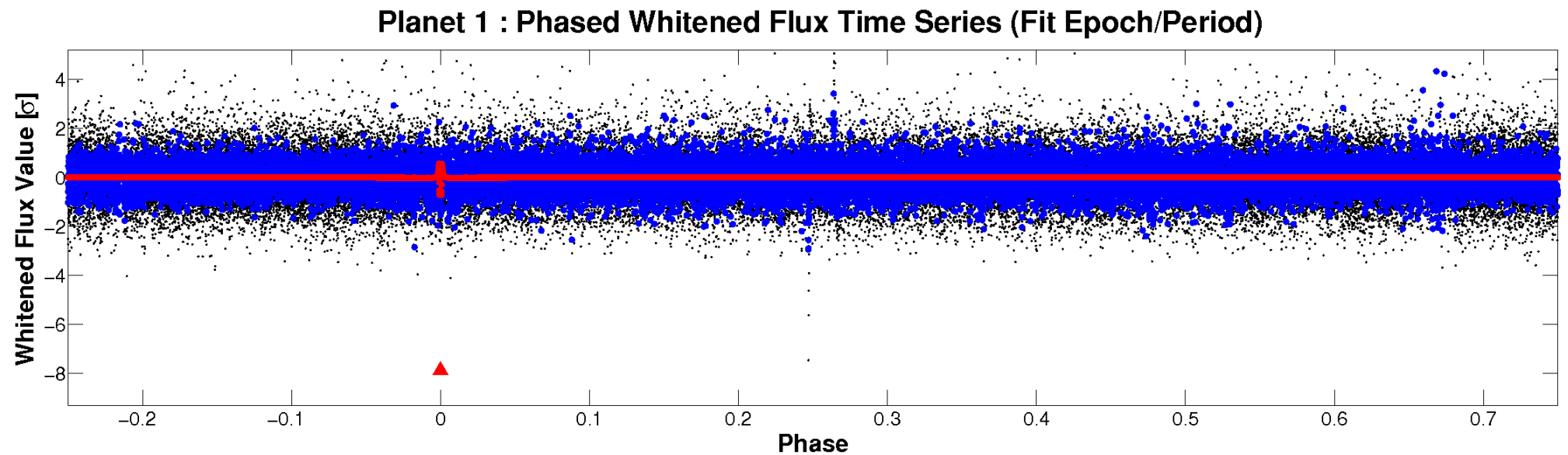
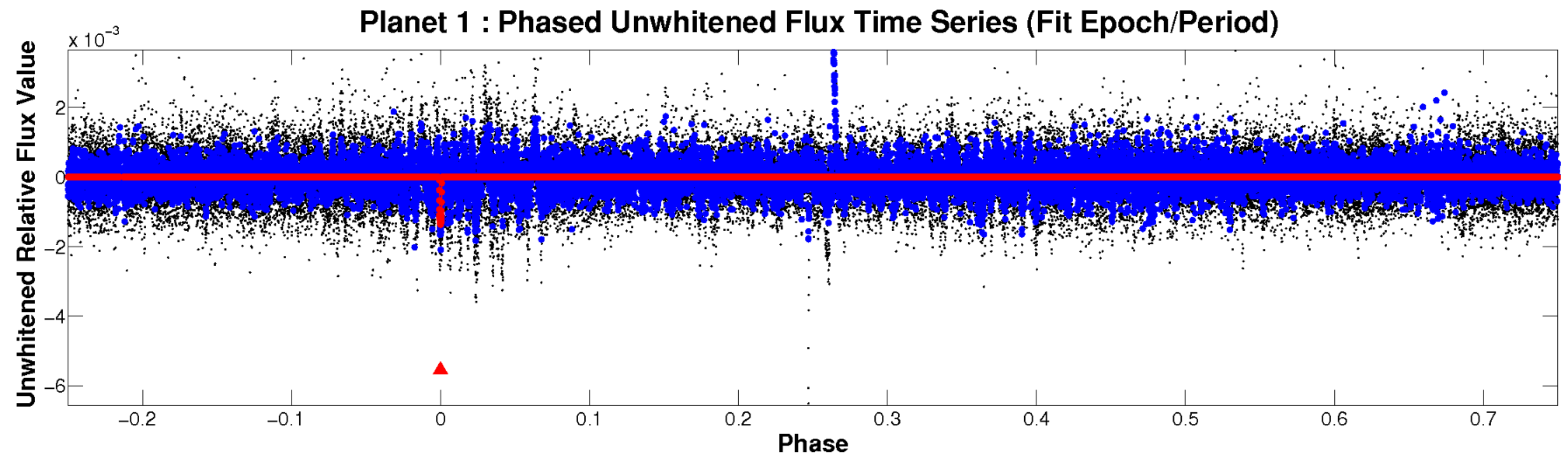


# ALT Odd/Even

TCE 006280995-01

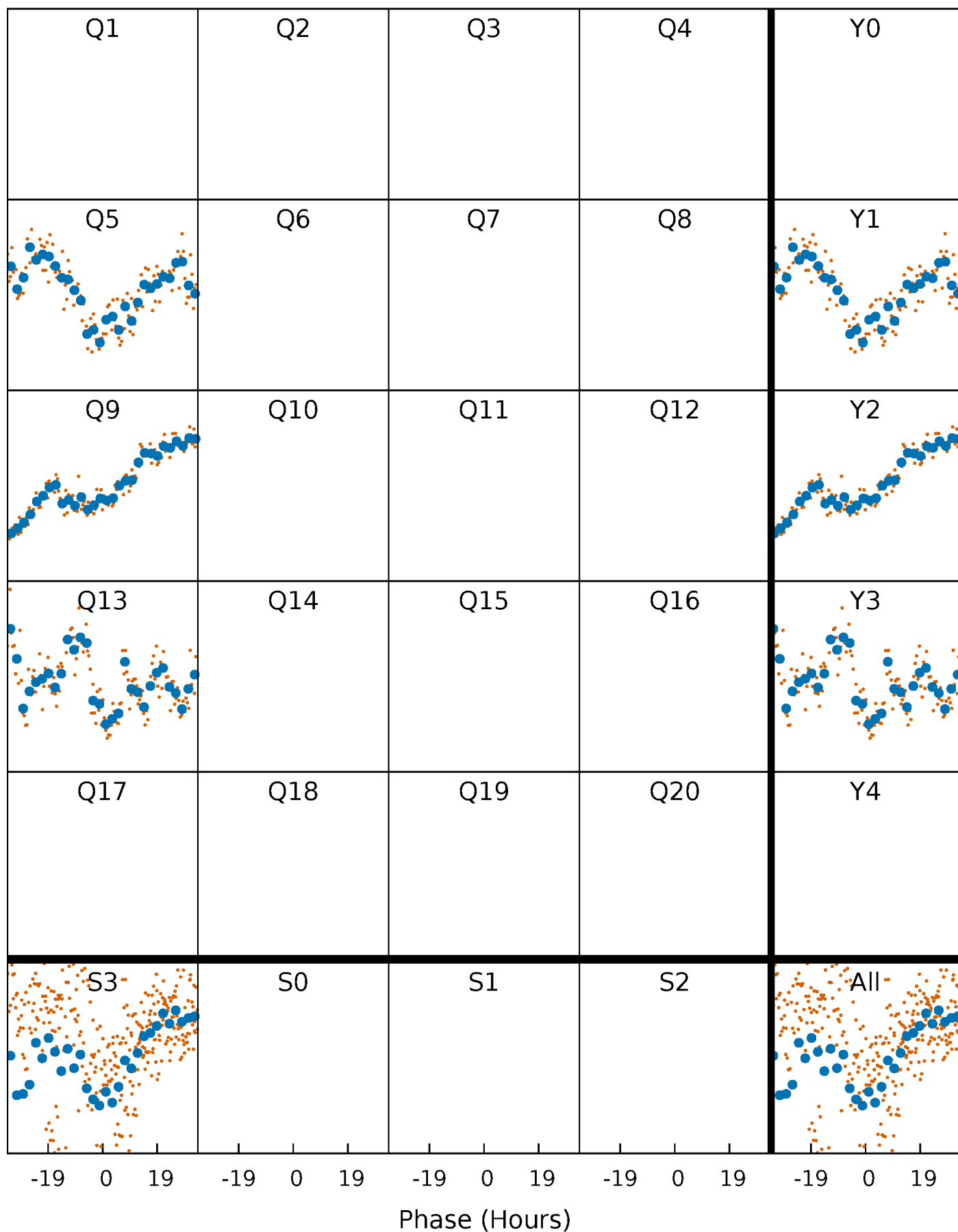


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

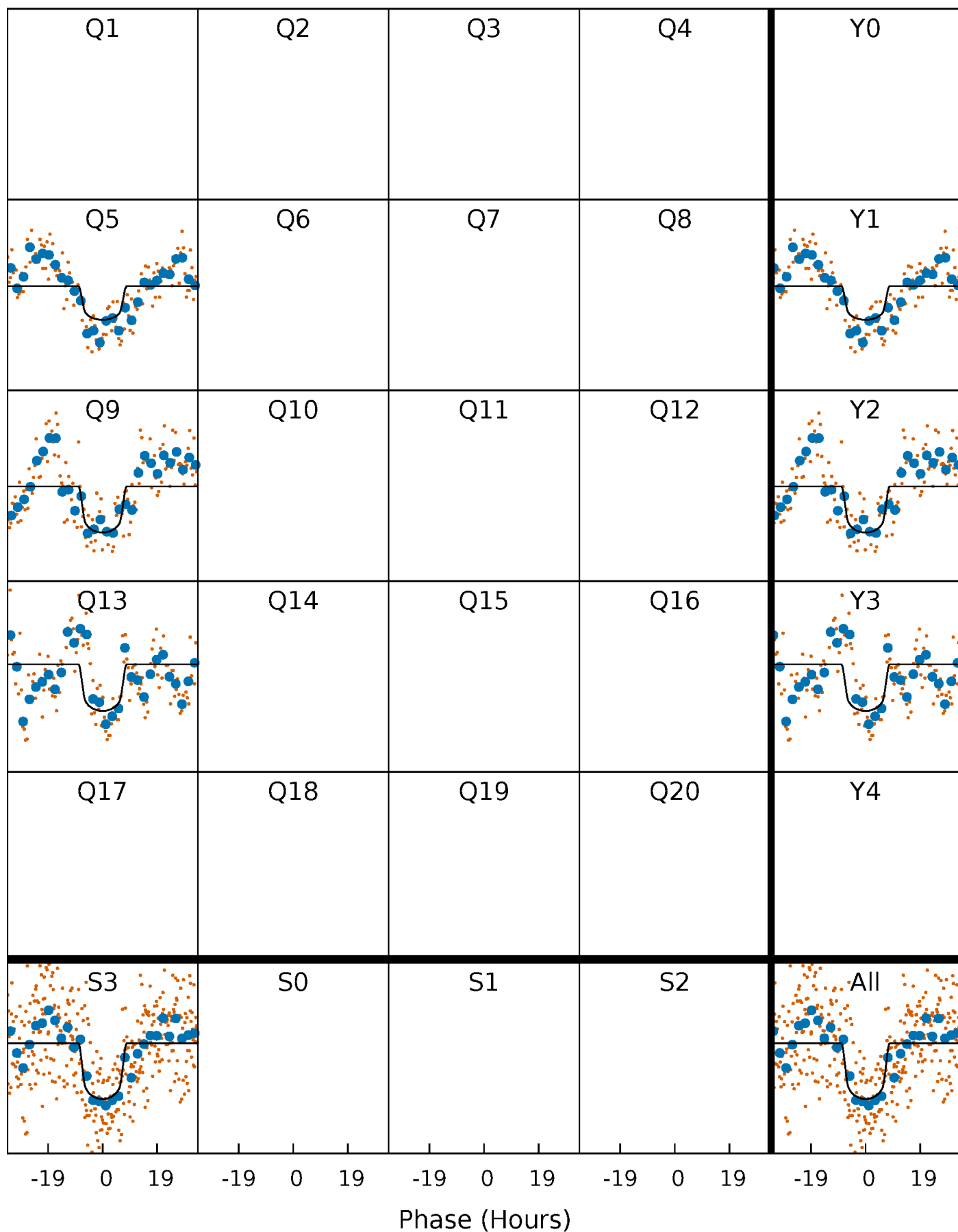
TCE 006280995-01 P=361.074042 Days  $T_0=158.768989$  (BKJD)





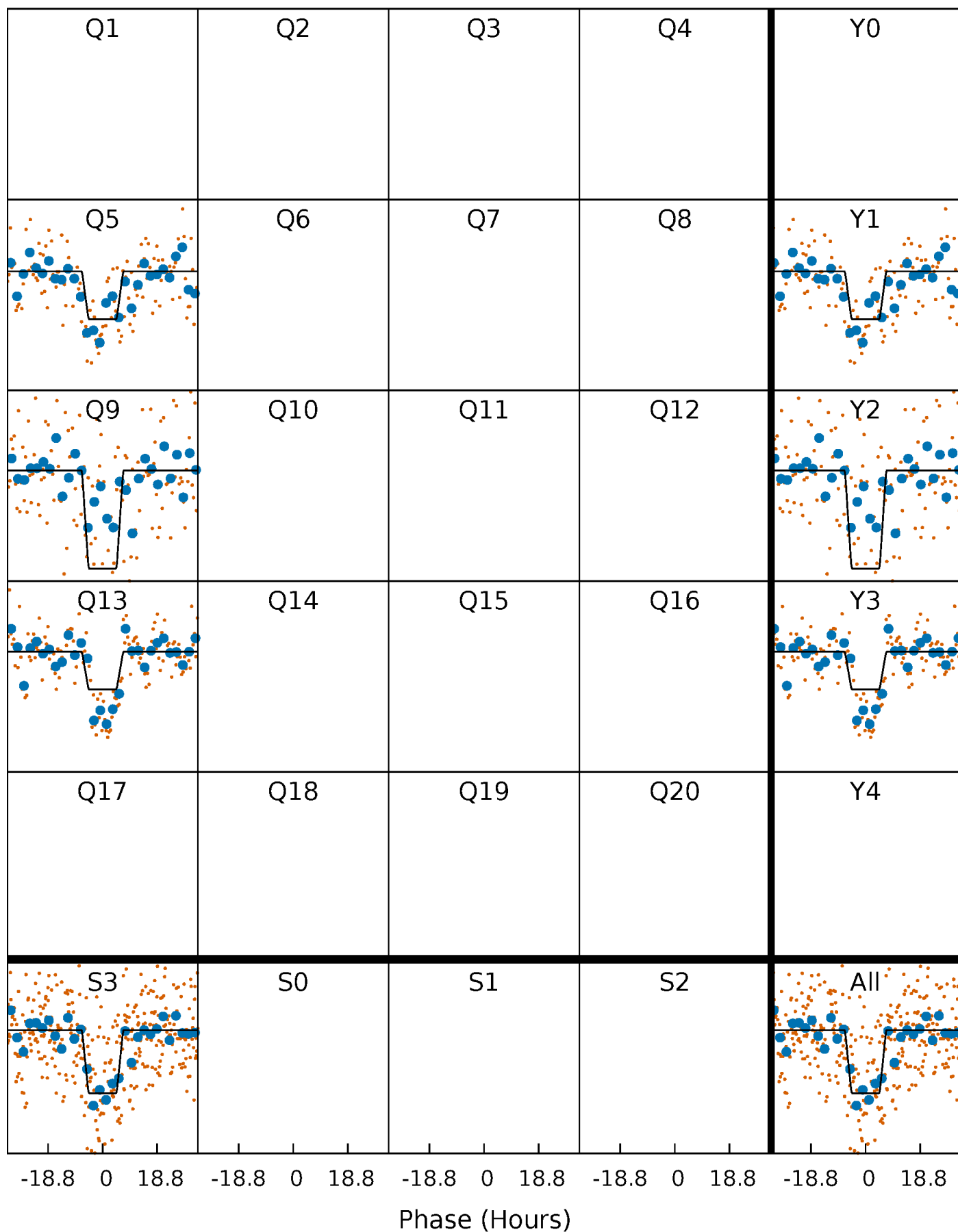
# DV Quarter-Phased Transit Curves

TCE 006280995-01     $P=361.074042$  Days     $T_0=158.768989$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

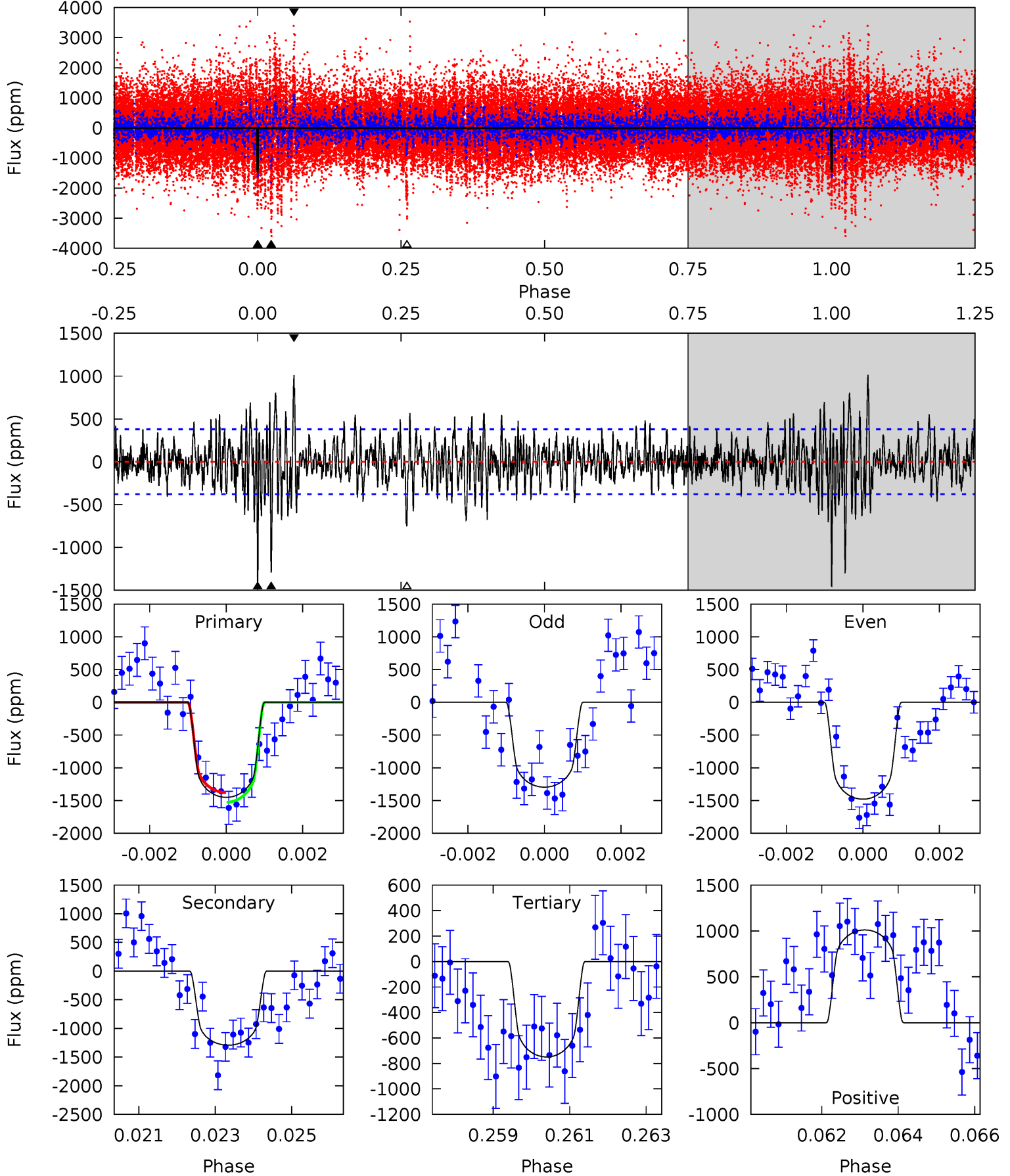
TCE 006280995-01 P=361.067816 Days  $T_0=158.780921$  (BKJD)



# DV Model-Shift Uniqueness Test

006280995-01, P = 361.074042 Days, E = 158.768989 Days

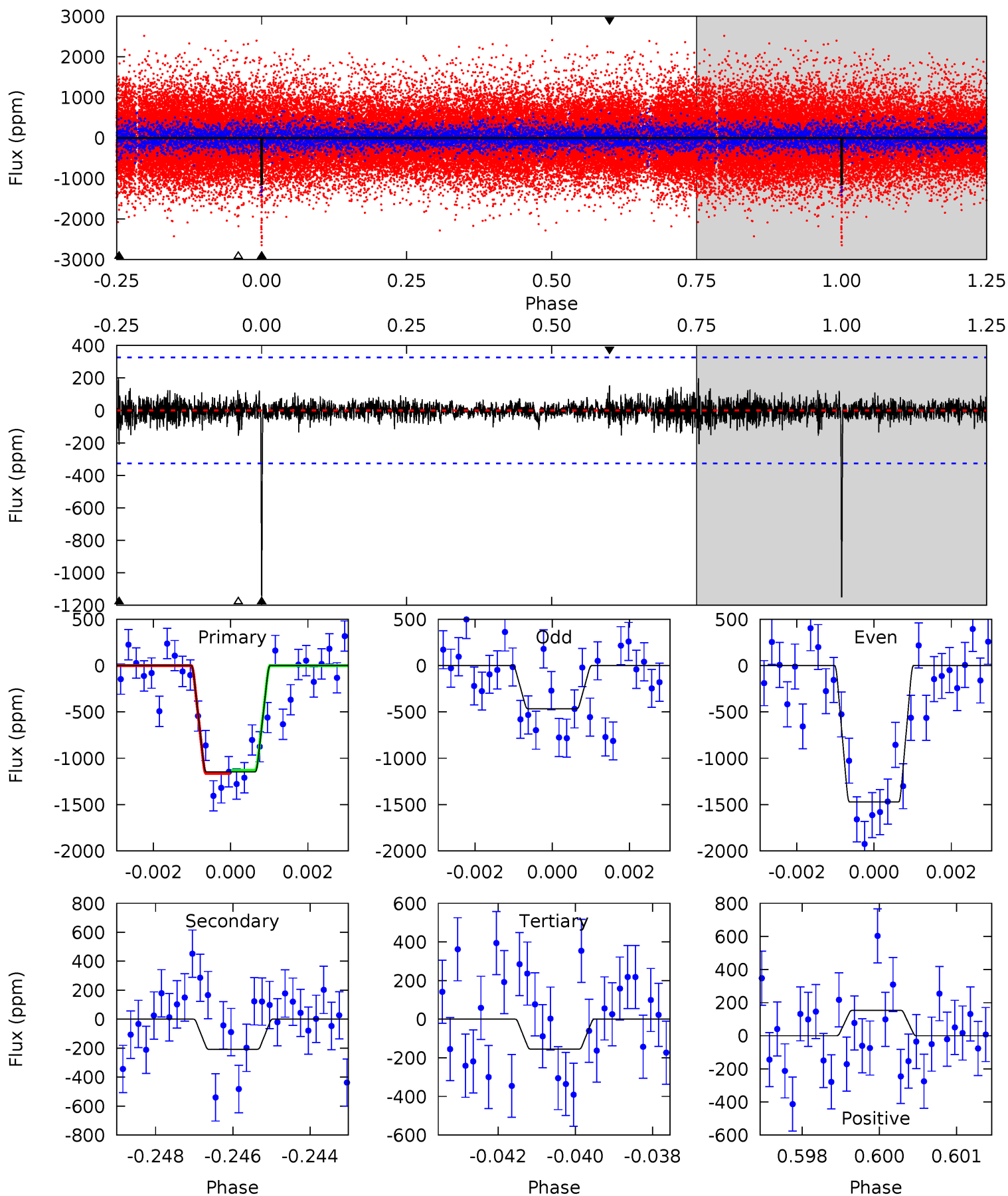
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	18.2	10.6	14.2	5.33	3.10	2.99	9.90	6.20	7.66	3.96	1.21	1.09	0.41	1.04



# Alt Model-Shift Uniqueness Test

006280995-01, P = 361.067816 Days, E = 158.780921 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
18.8	3.41	2.54	2.51	5.36	3.14	0.60	16.3	16.3	0.87	0.90	7.75	0.94	0.15	0.29



### Stellar Parameters For KIC 006280995

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5679^{+186}_{-186}$	$4.581^{+0.040}_{-0.160}$	$-0.320^{+0.300}_{-0.300}$	$0.794^{+0.194}_{-0.077}$	$0.886^{+0.088}_{-0.107}$	$2.497^{+0.498}_{-1.097}$
	+3%/-3%	+1%/-3%	+94%/-94%	+24%/-10%	+10%/-12%	+20%/-44%
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 006280995-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1292 \pm 71$	$3.51^{+0.60}_{-0.49}$	$327^{+20}_{-15}$	$5481^{+403}_{-330}$	$51139^{+17418}_{-13214}$
Alt.	$-208 \pm 61$	$3.08^{+0.52}_{-0.48}$	$326^{+20}_{-15}$	$3996^{+300}_{-300}$	$10546^{+5492}_{-3873}$

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

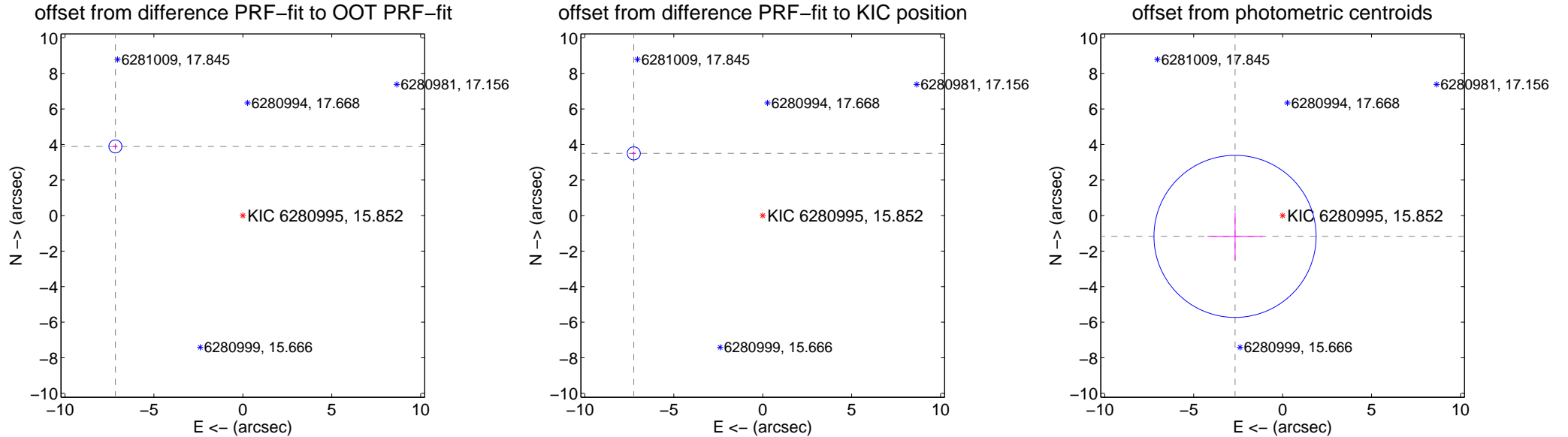
## DV Centroid Data

Supplemental centroid analysis for 006280995-01. Kepler magnitude: 15.85. Transit SNR 6.88

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	8.155 $\pm$ 0.122	66.77	7.167 $\pm$ 0.126	3.890 $\pm$ 0.109
PRF-fit source offset from KIC position	8.051 $\pm$ 0.123	65.60	7.251 $\pm$ 0.126	3.500 $\pm$ 0.109
photometric centroid source offset	2.92 $\pm$ 1.52	1.92	2.68 $\pm$ 1.55	-1.17 $\pm$ 1.35

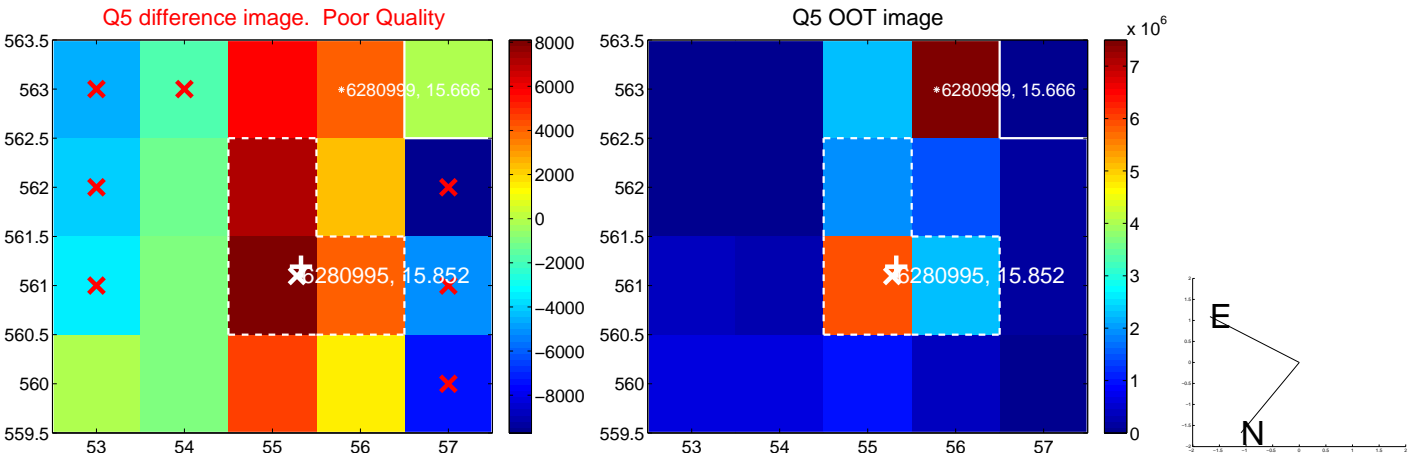


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . 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.

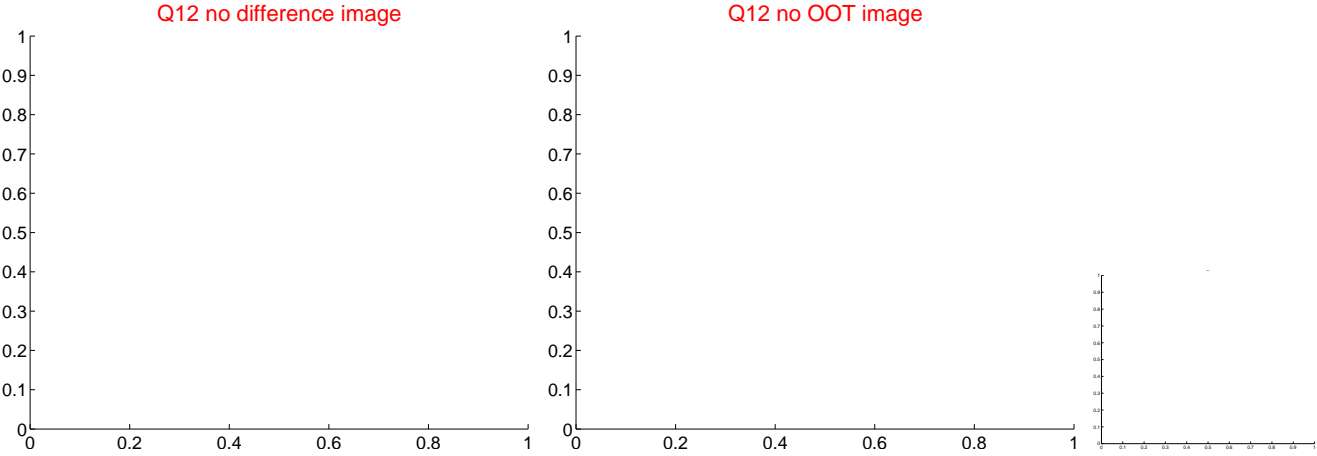
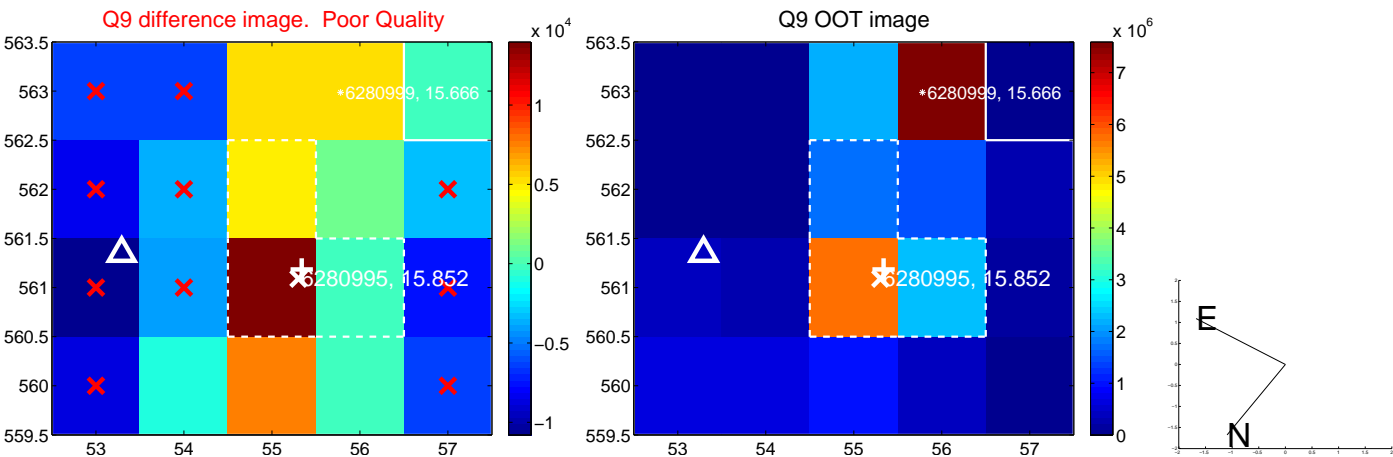


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.





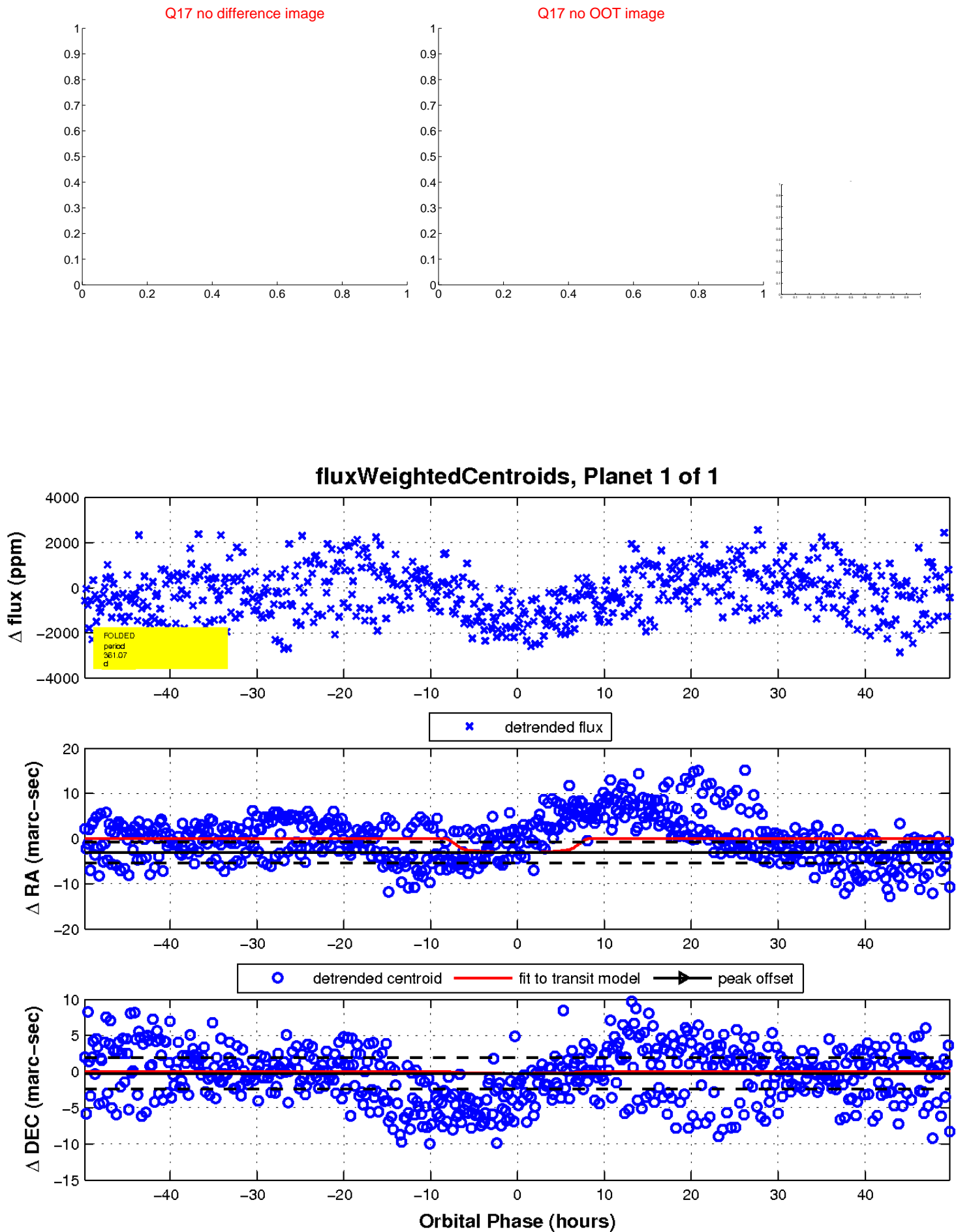
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

