

# KIC 007288585

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007288585-01	OBS	No	367.094424	173.690408	531.6	21.465	8.4	9.2	0.79	6047	3.52	0.82

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007288585-01	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.

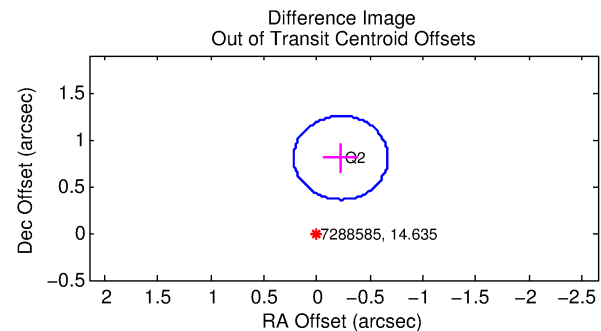
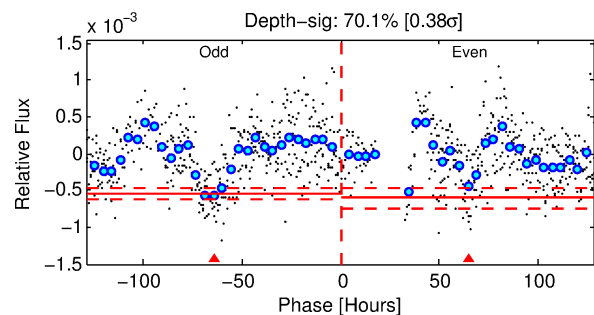
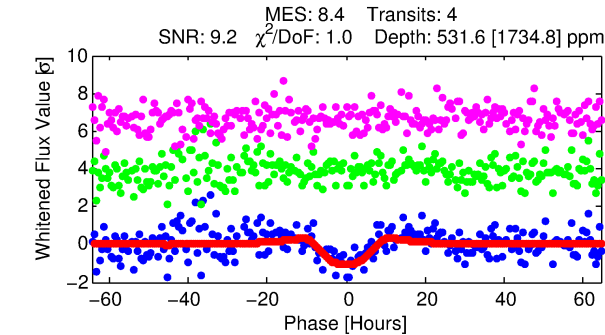
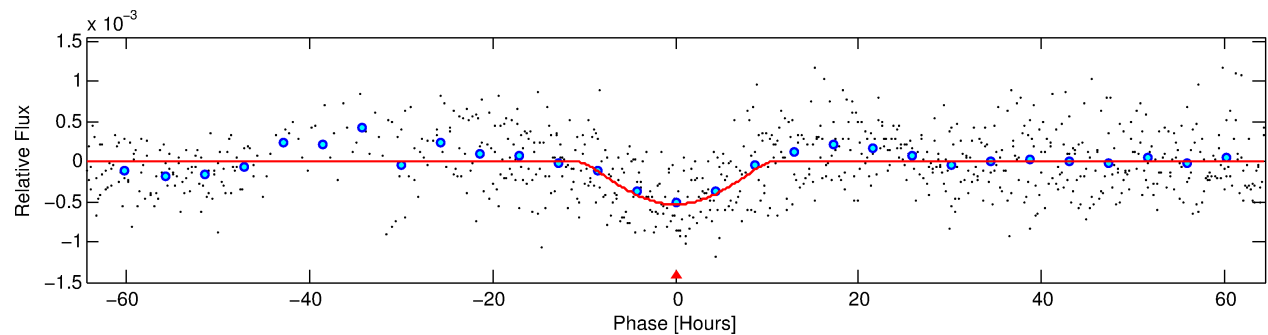
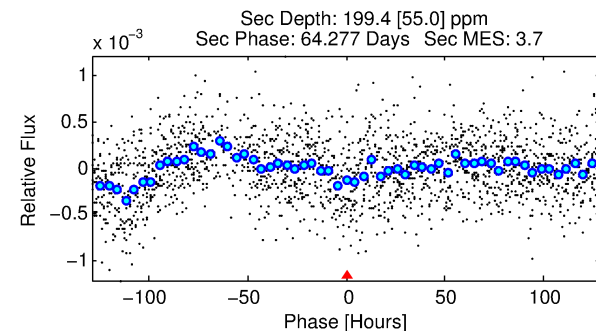
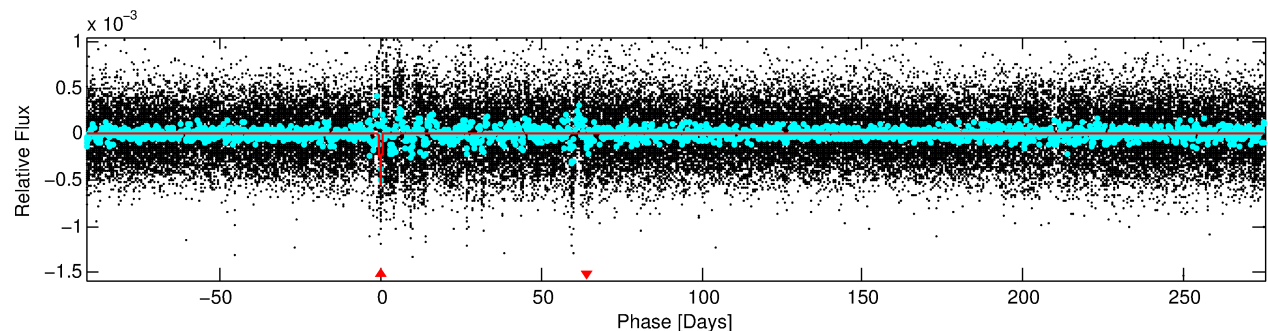
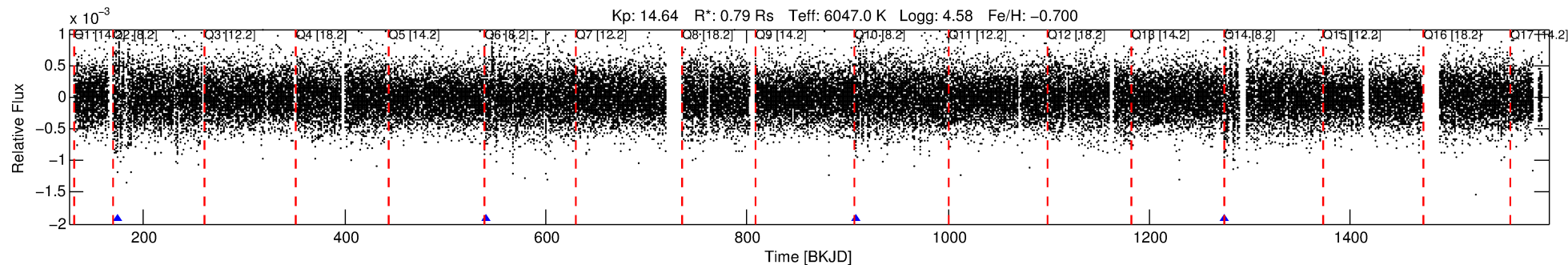
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007288585-01

No Significant Match Found

# DV One-Page Summary

KIC: 7288585 Candidate: 1 of 1 Period: 367.094 d



## DV Fit Results:

Period = 367.09442 [0.02134] d  
Epoch = 173.6904 [0.0390] BKJD  
Rp/R\* = 0.0409 [0.1199]  
a/R\* = 37.74 [28.05]  
b = 1.00 [0.08]  
Seff = 0.82 [0.29]  
Teq = 242 [21] K  
Rp = 3.52 [10.37] Re  
a = 0.9564 [0.2113] AU  
Ag = 8087.83 [47589.36] [0.17 $\sigma$ ]  
Teffp = 3555 [5222] K [0.63 $\sigma$ ]

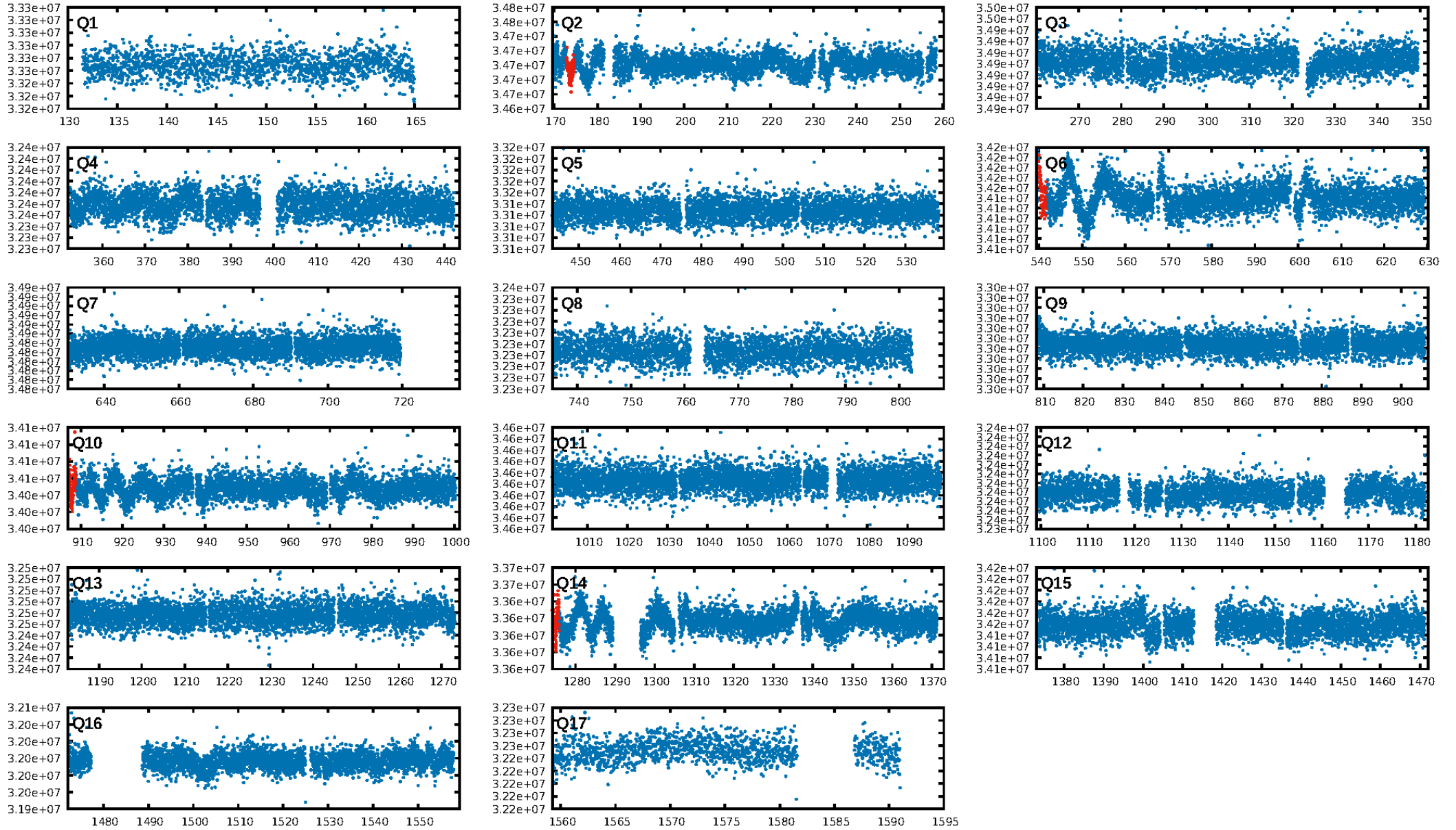
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 22.5%  
ModelChiSquareGof-sig: 99.6%  
**Bootstrap-pfa: 4.35e-12**  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 2.723  
**Centroid-sig: 0.0%**  
Centroid-so: 4.151 arcsec [2.56 $\sigma$ ]  
**OotOffset-rm: 0.836 arcsec [5.62 $\sigma$ ]**  
**KicOffset-rm: 0.824 arcsec [5.54 $\sigma$ ]**  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 1.00 [1/1]

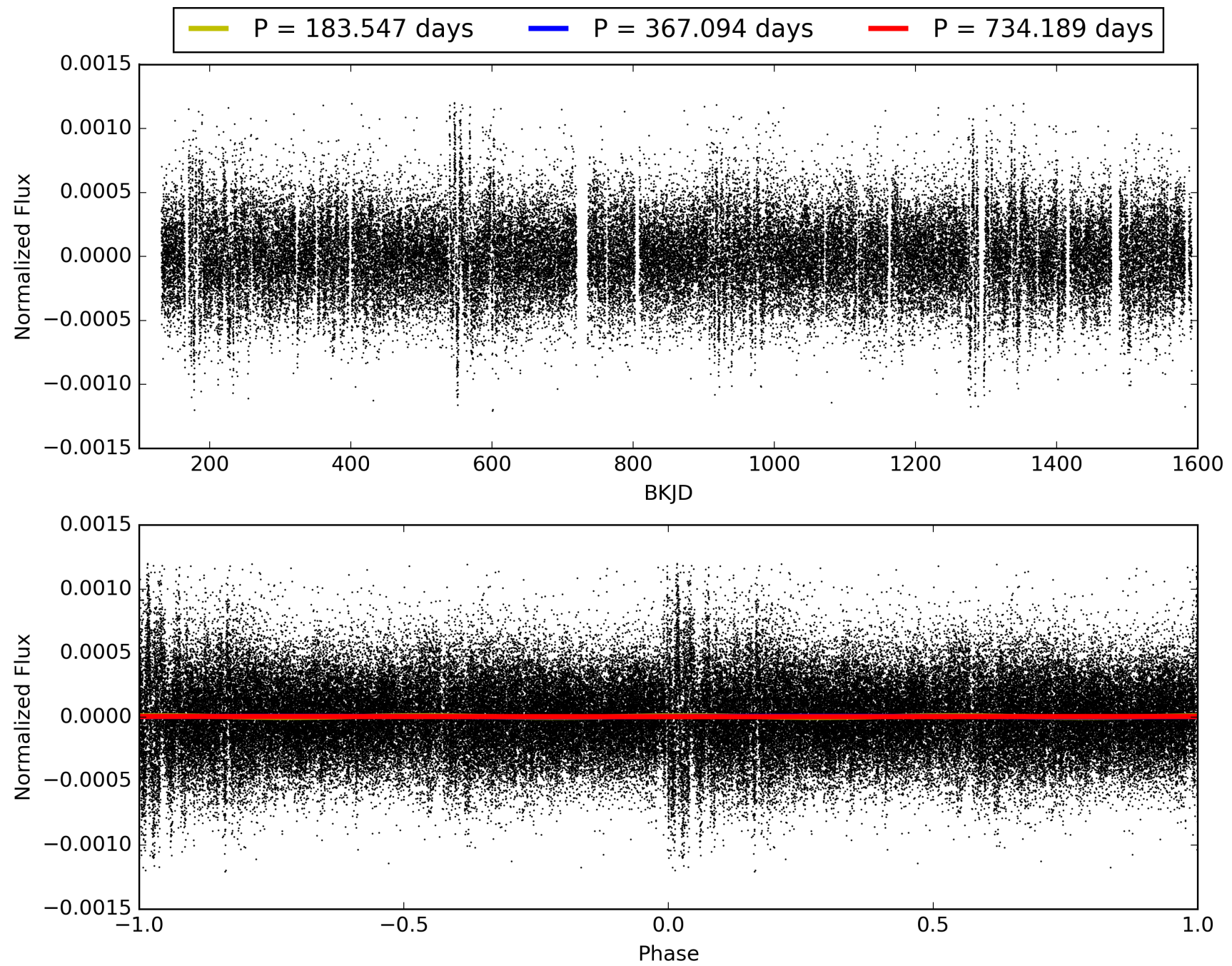
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:30:18 Z

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

# TCE 007288585-01, PDC Light Curves

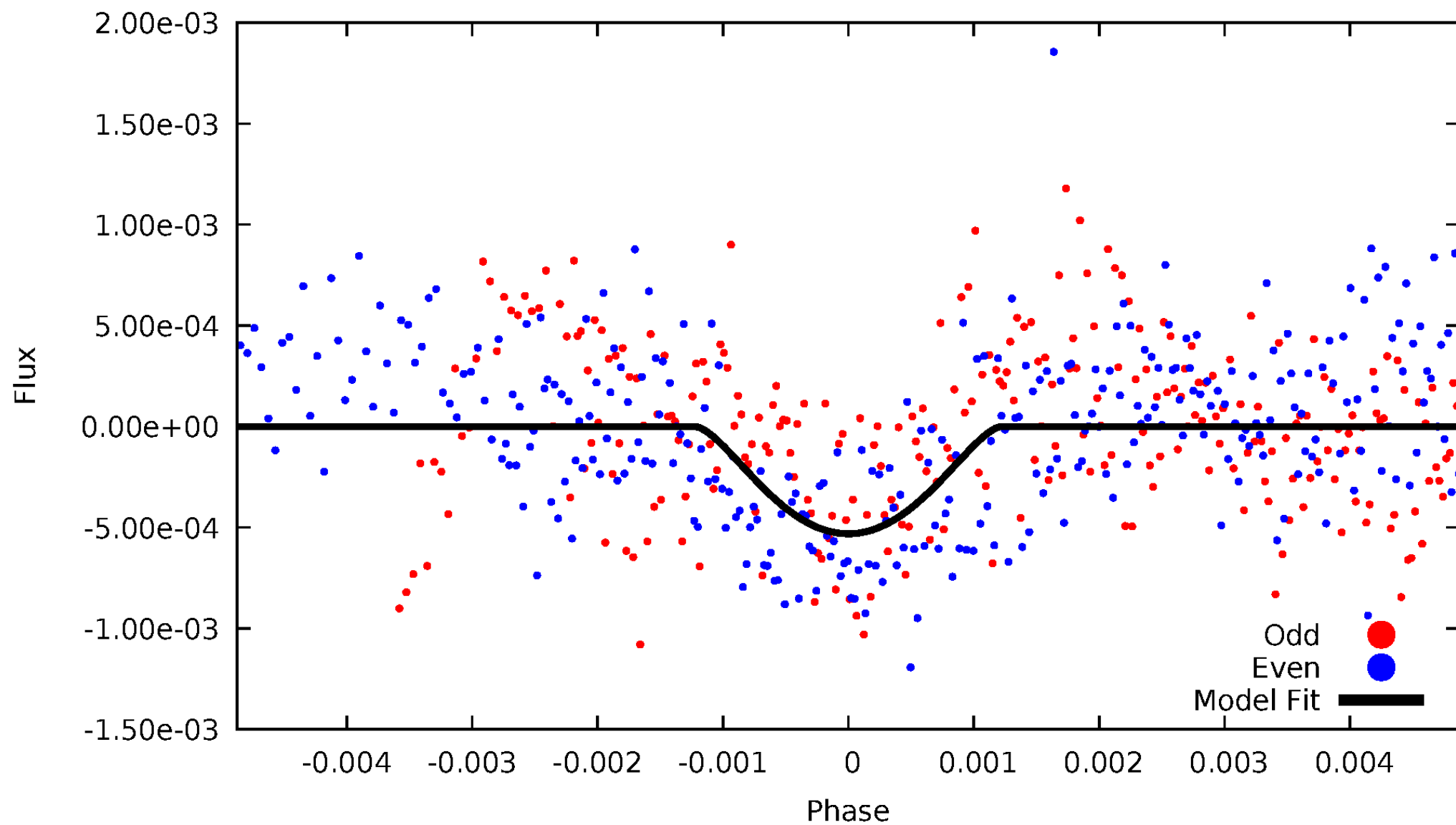


TCE 007288585-01



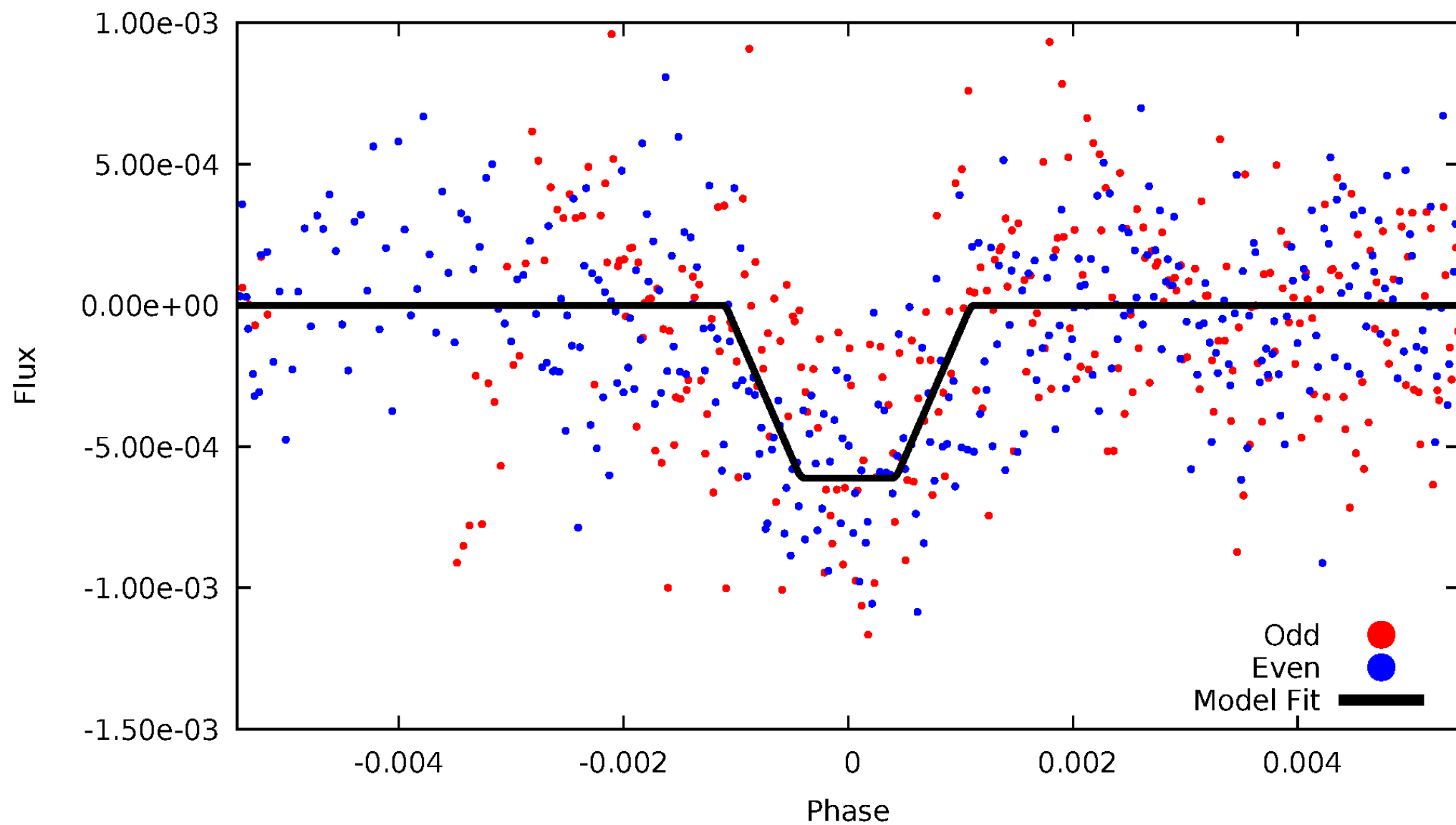
# DV Odd/Even

TCE 007288585-01



# ALT Odd/Even

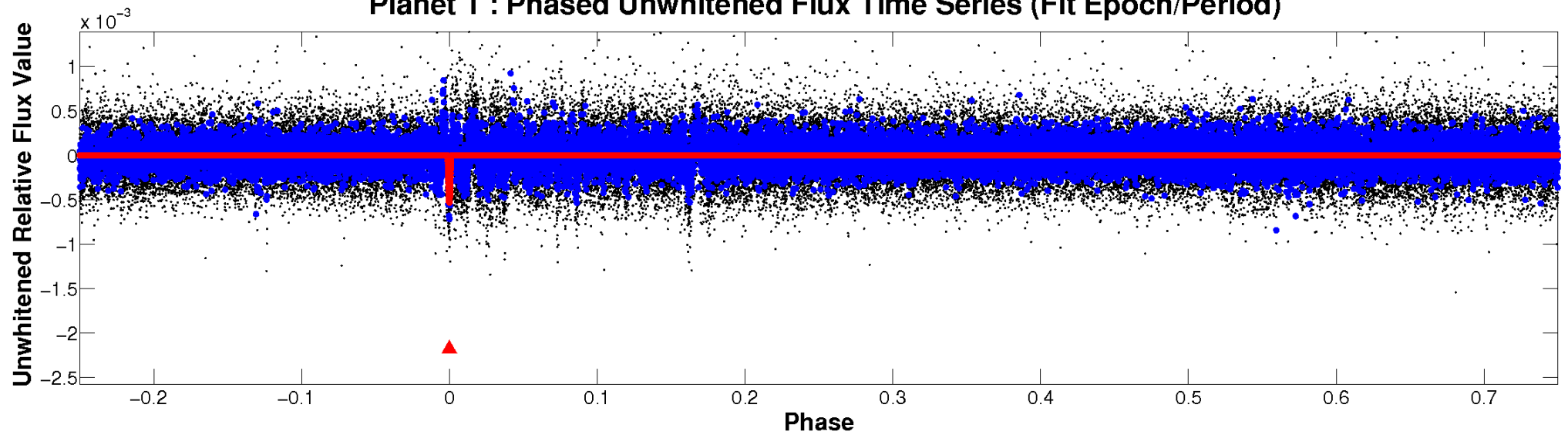
TCE 007288585-01



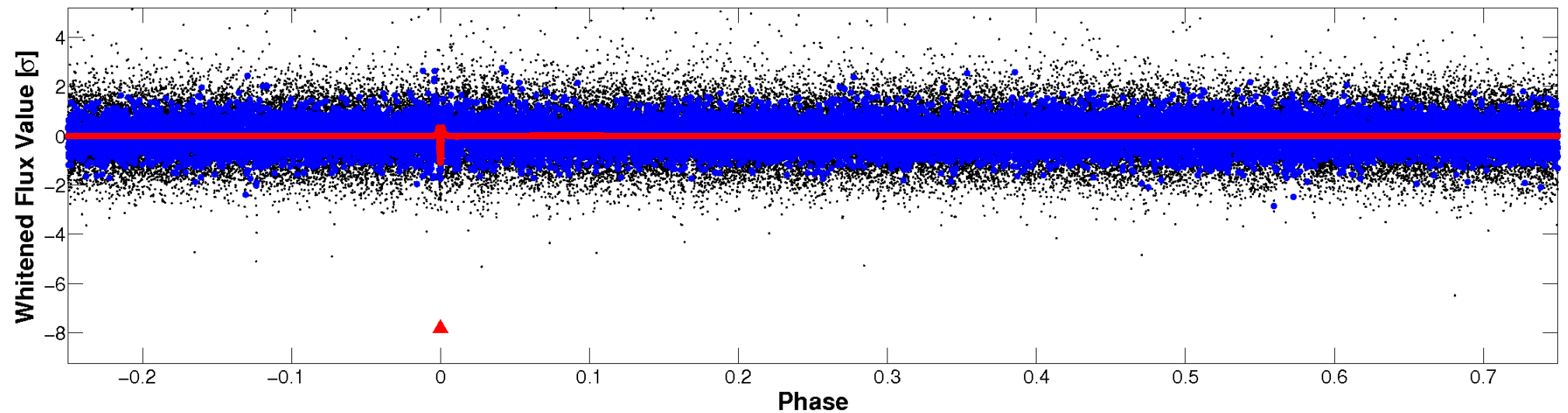


# Non-Whitened Vs. Whitened Light Curve

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

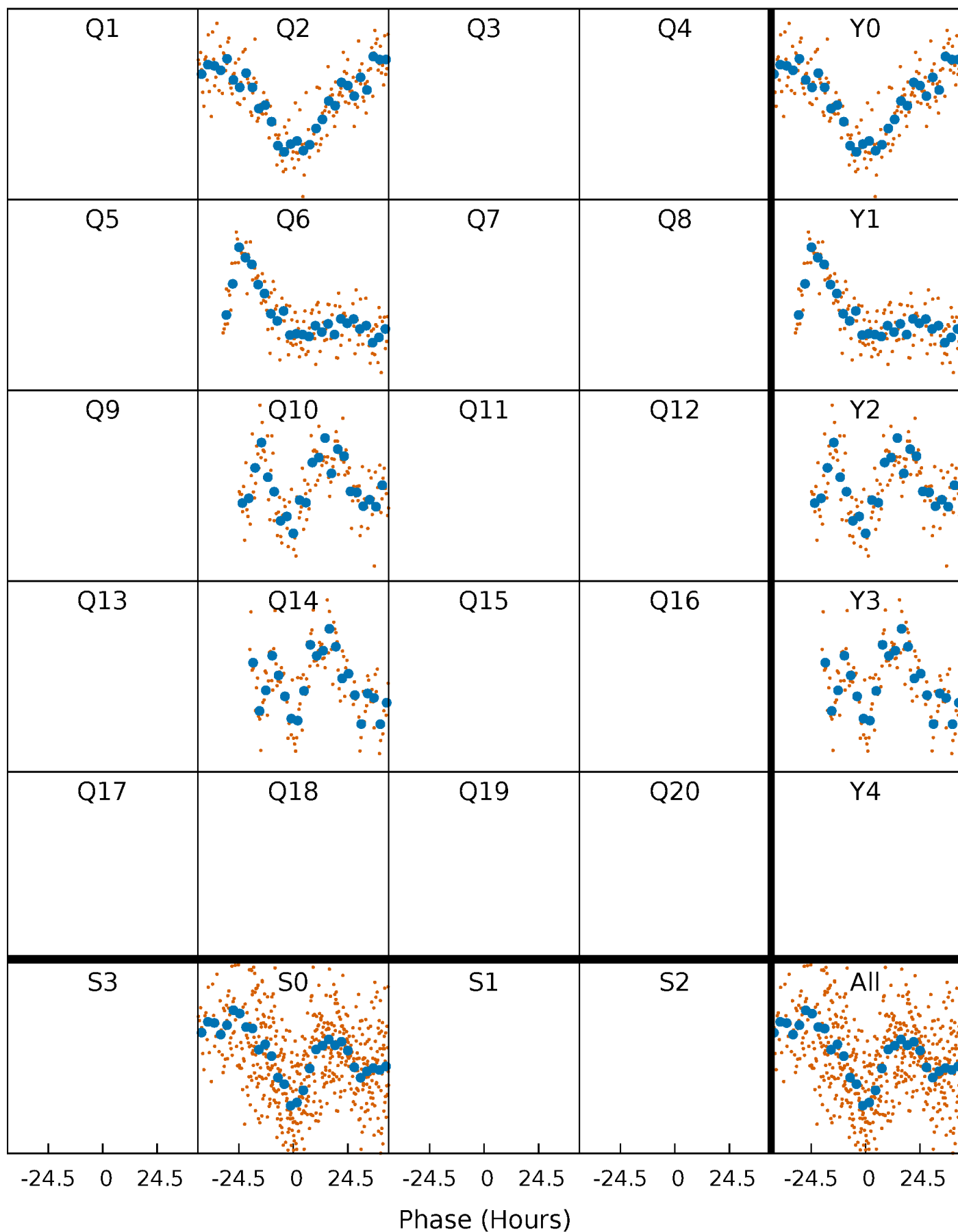


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

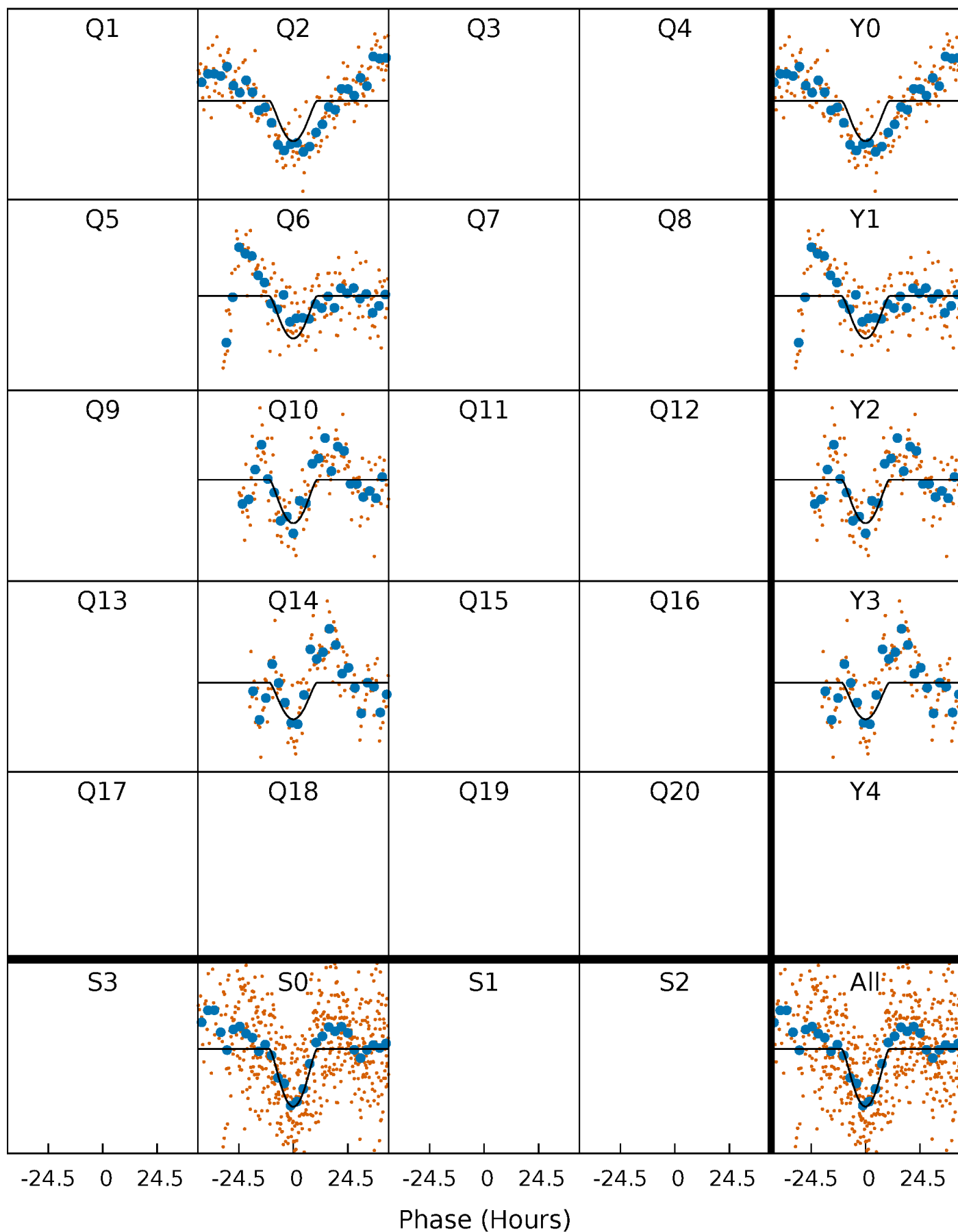
TCE 007288585-01     $P=367.094424$  Days     $T_0=173.690408$  (BKJD)





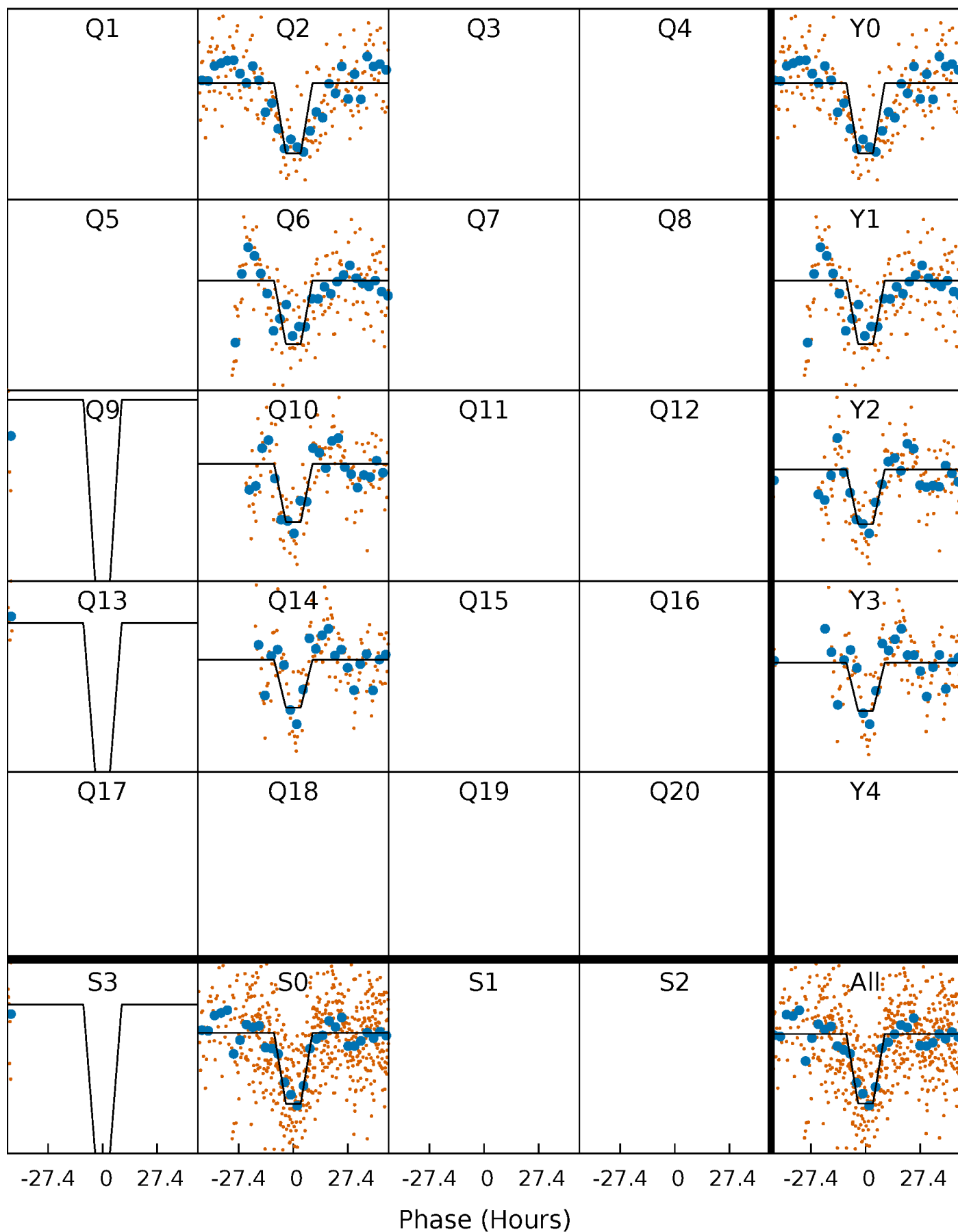
# DV Quarter-Phased Transit Curves

TCE 007288585-01 P=367.094424 Days  $T_0=173.690408$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

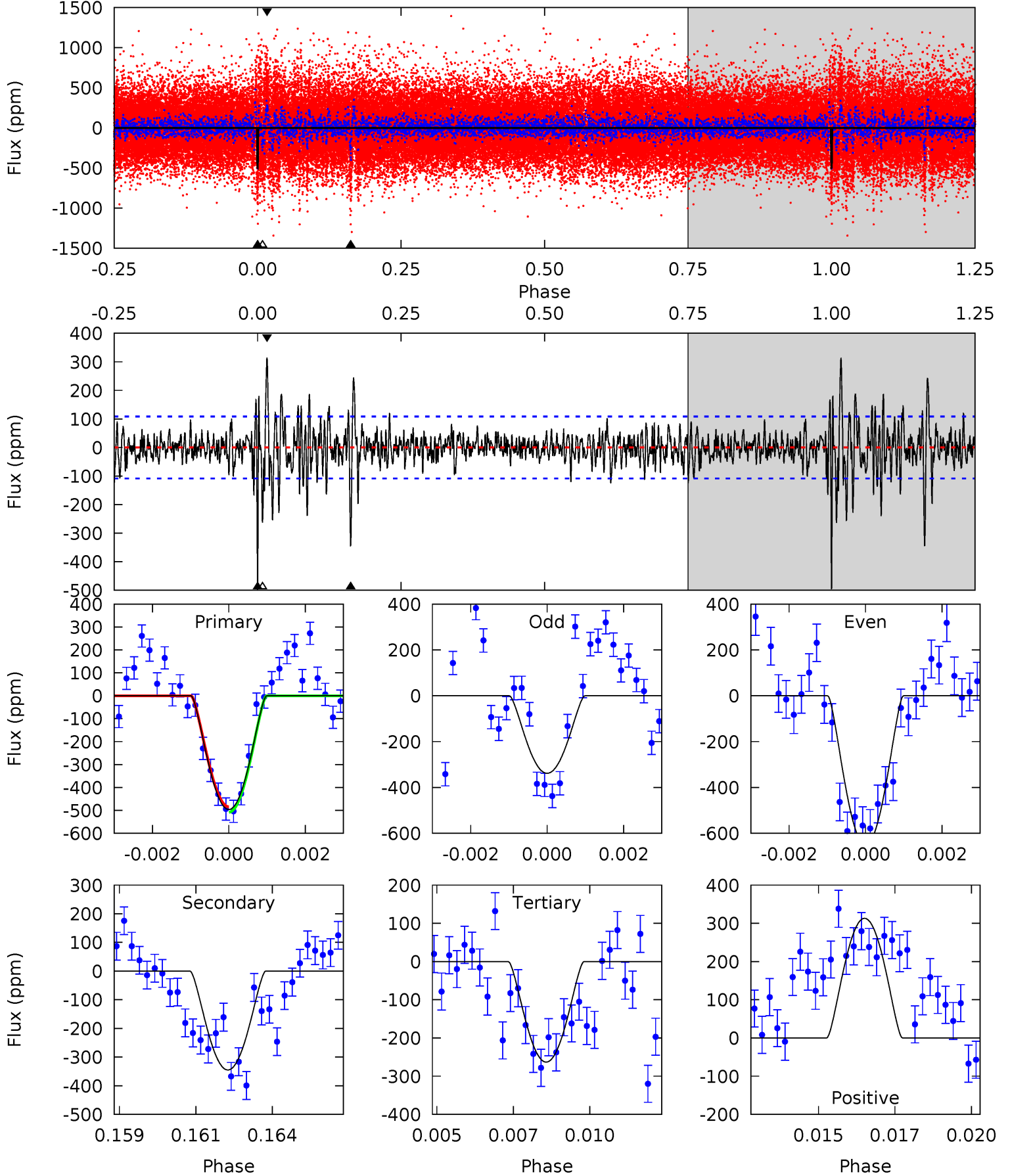
TCE 007288585-01 P=367.102528 Days  $T_0=173.646364$  (BKJD)



# DV Model-Shift Uniqueness Test

007288585-01, P = 367.094424 Days, E = 173.690408 Days

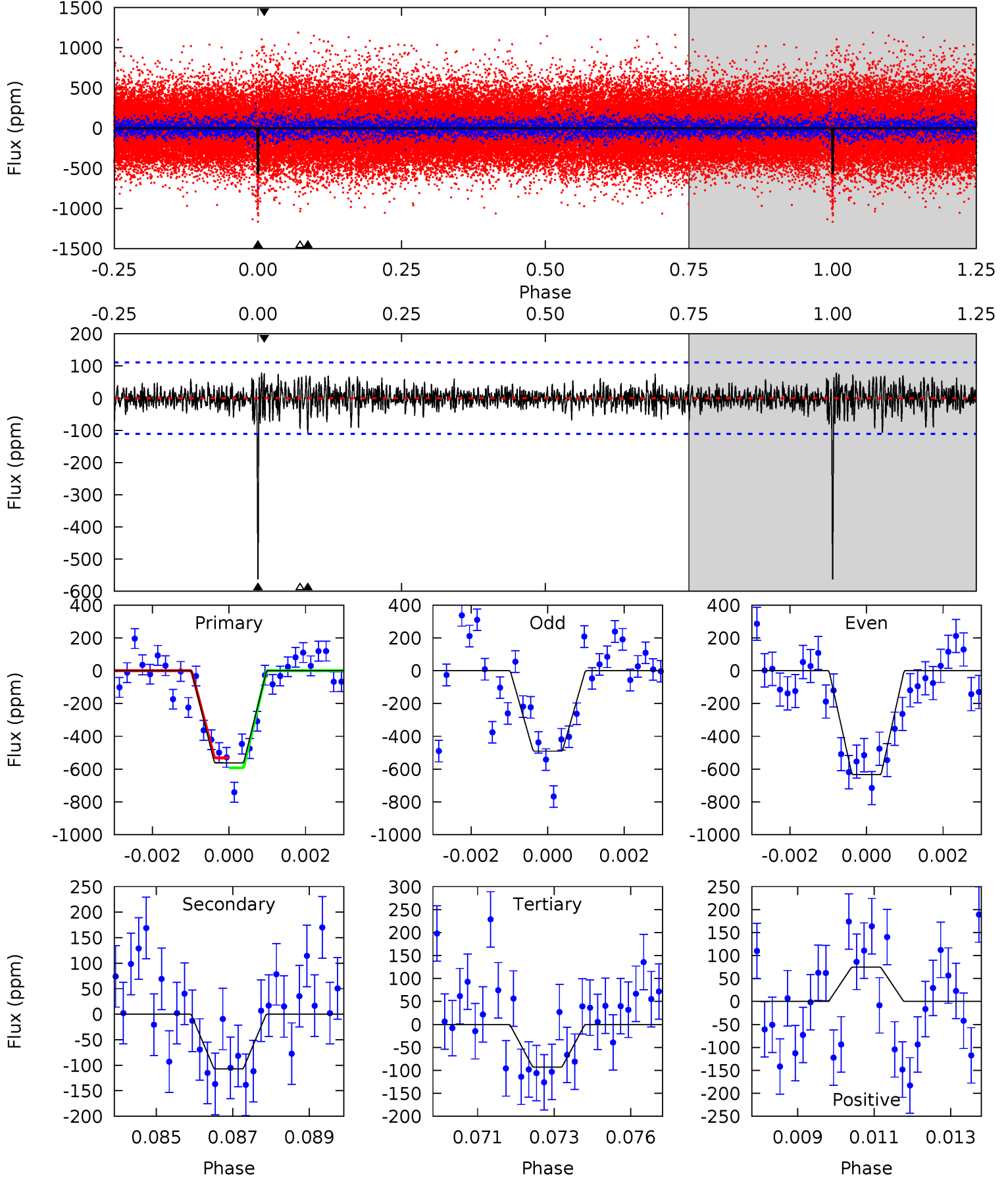
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	16.8	12.8	15.2	5.29	3.03	2.58	11.3	8.91	3.98	1.55	7.64	1.08	0.39	0.57



# Alt Model-Shift Uniqueness Test

007288585-01, P = 367.102528 Days, E = 173.646364 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
26.9	5.12	4.45	3.57	5.31	3.06	1.11	22.5	23.3	0.67	1.56	3.43	1.01	0.12	1.46



### Stellar Parameters For KIC 007288585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6047^{+164}_{-182}$	$4.580^{+0.044}_{-0.187}$	$-0.700^{+0.300}_{-0.300}$	$0.790^{+0.199}_{-0.062}$	$0.867^{+0.081}_{-0.090}$	$2.480^{+0.428}_{-1.162}$
	+3%/-3%	+1%/-4%	+43%/-43%	+25%/-8%	+9%/-10%	+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 007288585-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-345 \pm 21$	$8.12^{+9.06}_{-5.71}$	$345^{+22}_{-15}$	$3307^{+1709}_{-613}$	$2602^{+25541}_{-2016}$
Alt.	$-107 \pm 21$	$8.32^{+8.45}_{-6.06}$	$345^{+23}_{-15}$	$2767^{+1333}_{-445}$	$764^{+8591}_{-581}$

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

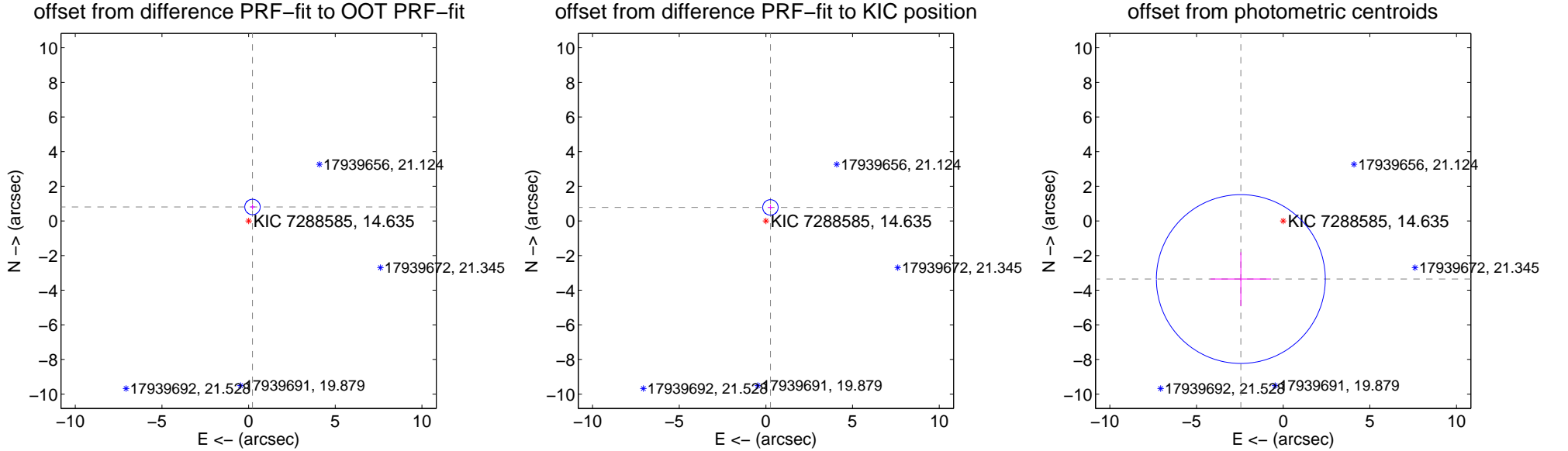
## DV Centroid Data

Supplemental centroid analysis for 007288585-01. Kepler magnitude: 14.63. Transit SNR 9.19

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

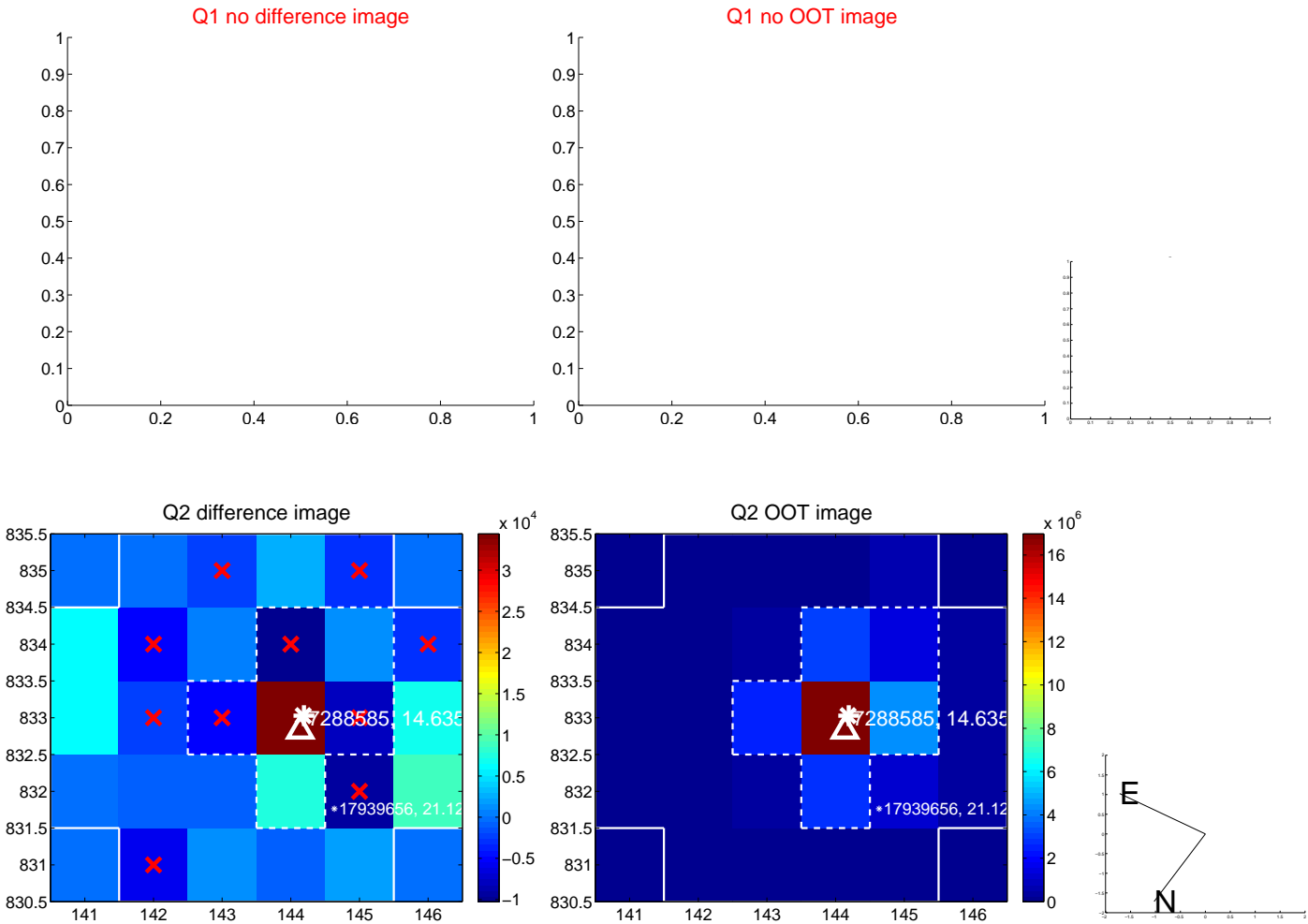
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.836 \pm 0.149$	5.62	$-0.224 \pm 0.152$	$0.805 \pm 0.148$
PRF-fit source offset from KIC position	$0.824 \pm 0.149$	5.54	$-0.261 \pm 0.152$	$0.781 \pm 0.148$
photometric centroid source offset	$4.15 \pm 1.62$	2.56	$2.44 \pm 1.75$	$-3.36 \pm 1.55$



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.



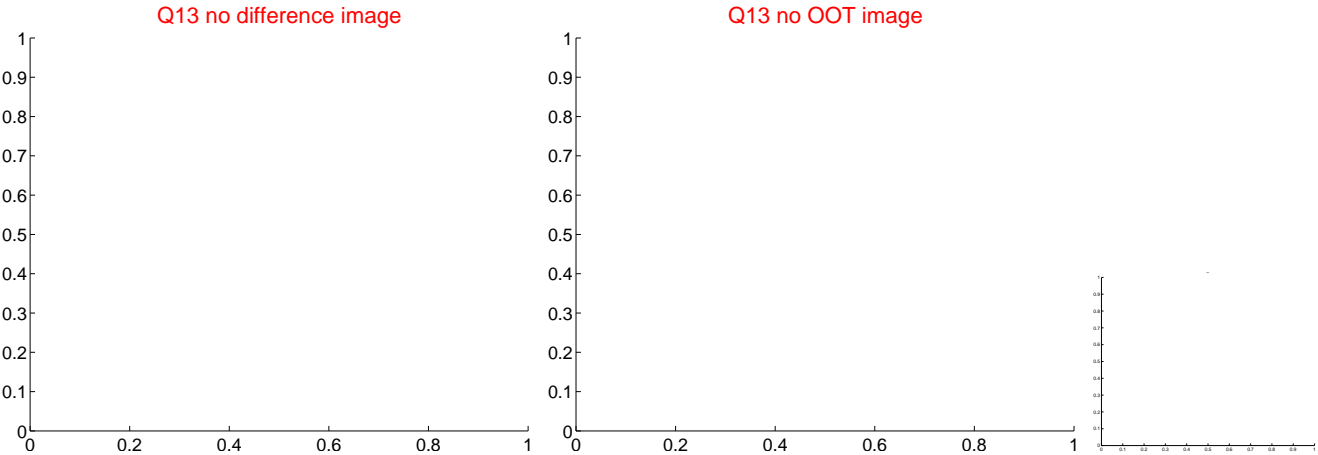
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



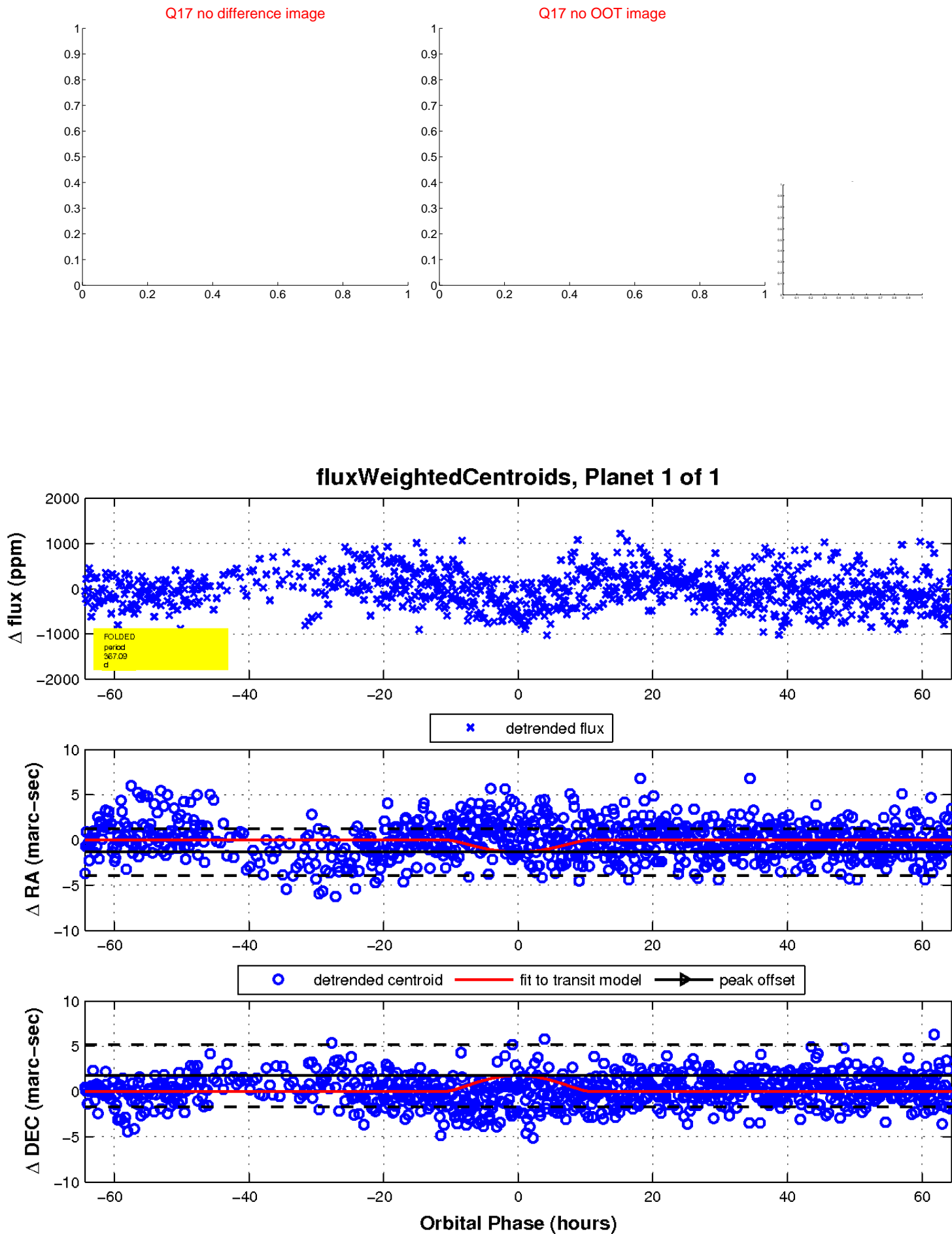
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

