

# KIC 008885479

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008885479-01	OBS	No	375.771516	140.178123	1021.5	39.173	10.1	12.4	0.99	5993	3.91	1.02

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008885479-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

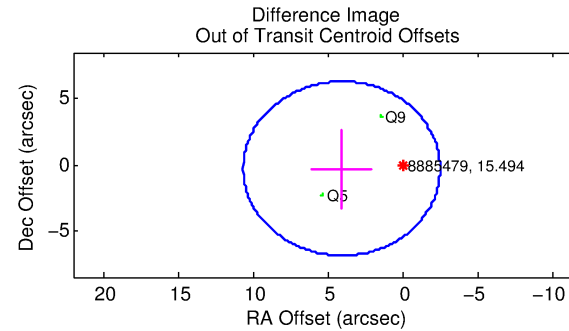
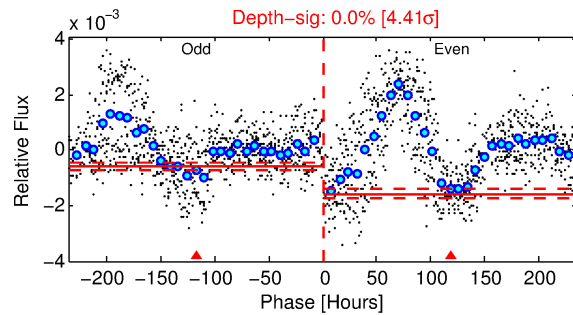
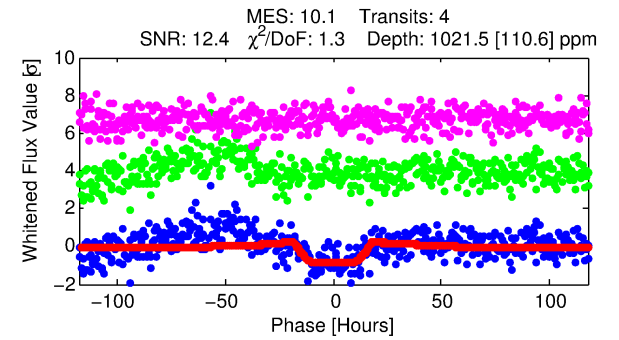
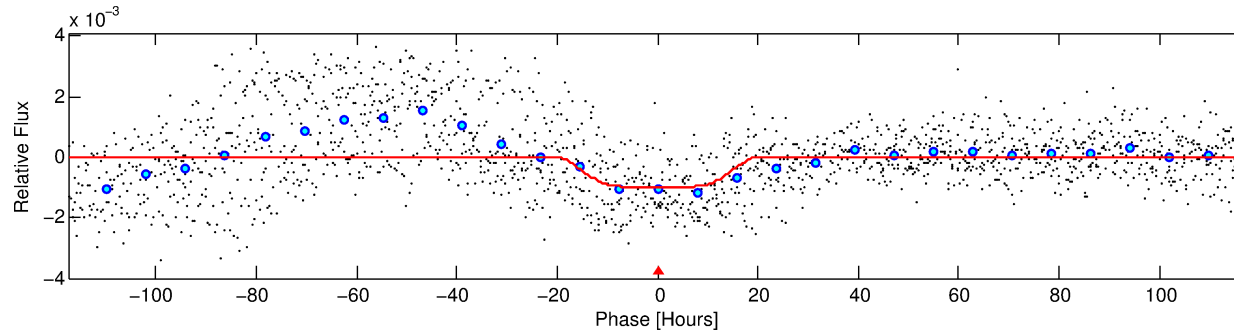
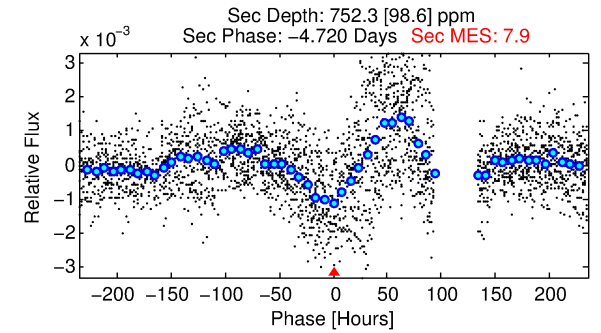
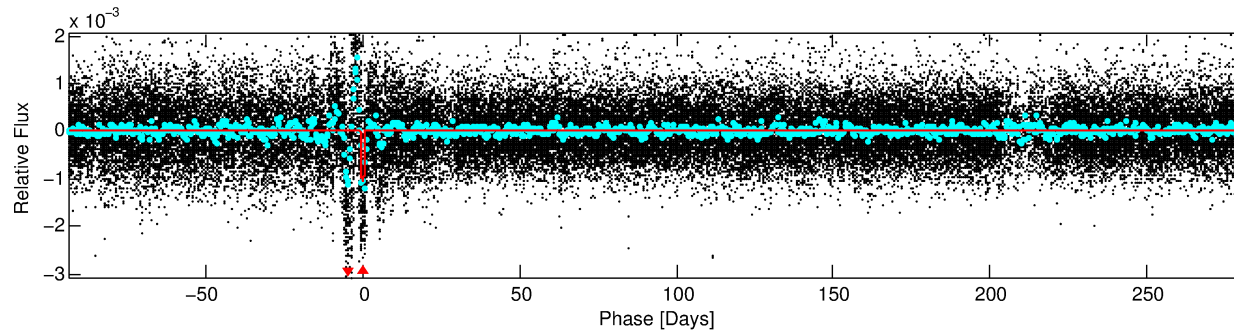
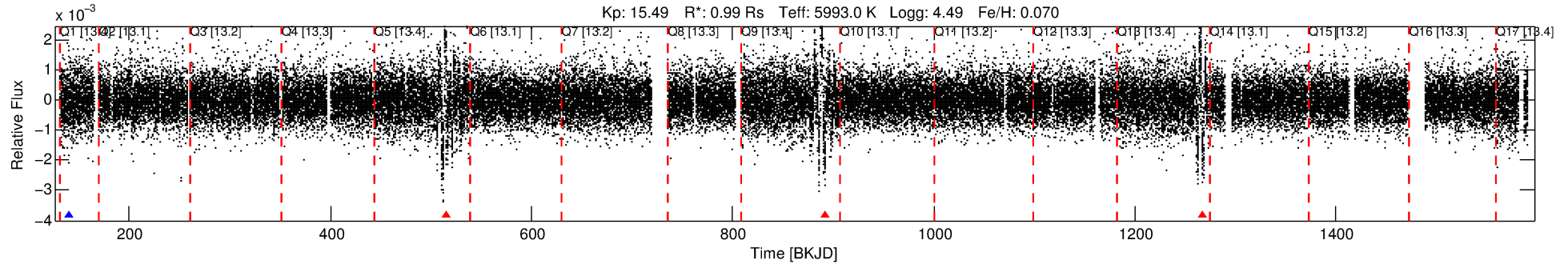
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008885479-01

No Significant Match Found

# DV One-Page Summary

KIC: 8885479 Candidate: 1 of 1 Period: 375.772 d



## DV Fit Results:

Period = 375.77152 [0.03049] d  
Epoch = 140.1781 [0.0567] BKJD  
Rp/R\* = 0.0363 [0.0026]  
a/R\* = 32.19 [5.38]  
b = 0.94 [0.02]  
Seff = 1.02 [0.40]  
Teq = 256 [25] K  
Rp = 3.91 [1.22] Re  
a = 1.0501 [0.2666] AU  
Ag = 29863.72 [12415.73] [2.41σ]  
Teffp = 5207 [310] K [15.90σ]

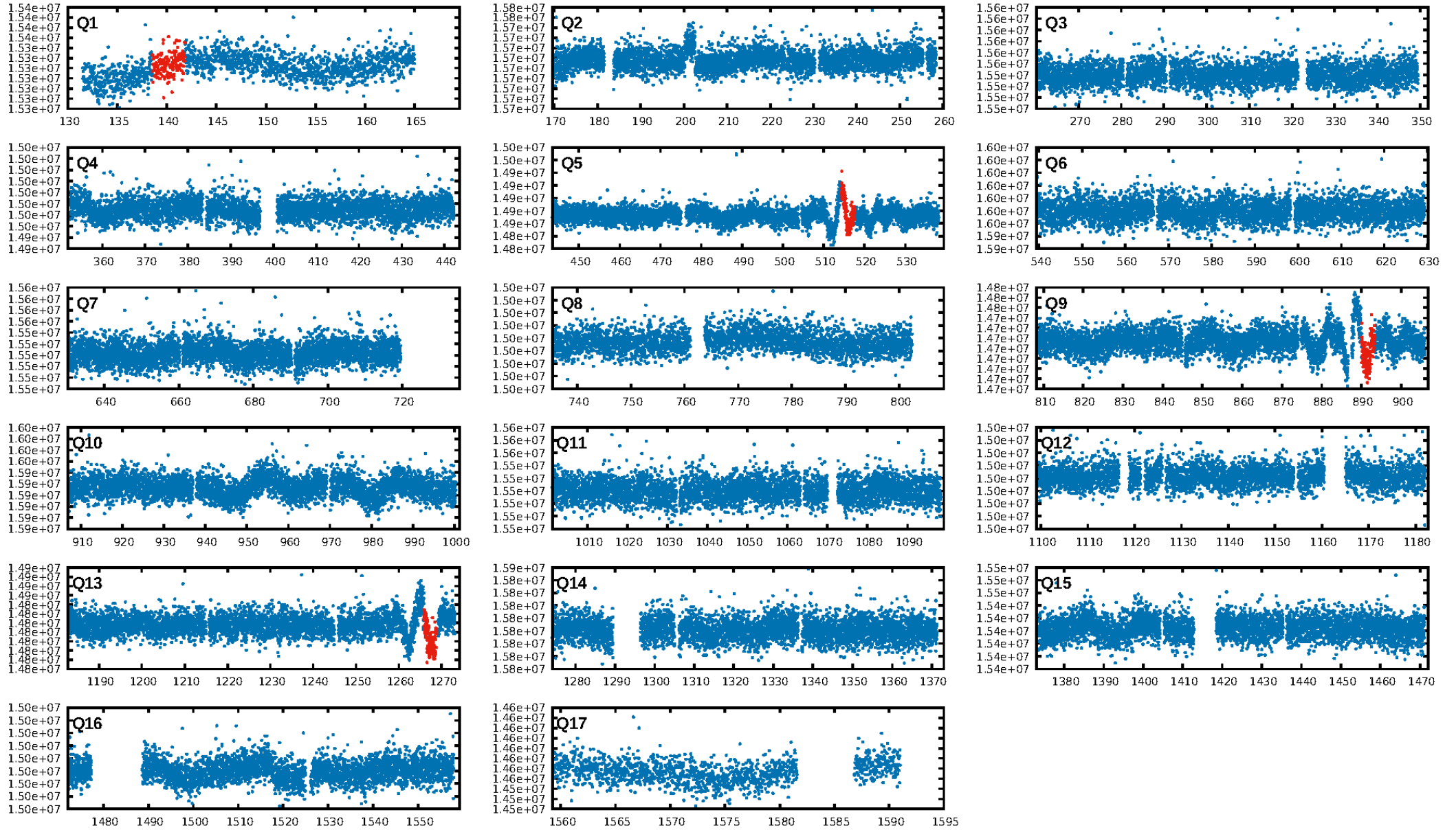
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 91.7%  
Bootstrap-pfa: 1.22e-11  
RollingBand-fgt: 0.00 [0/3]  
GhostDiagnostic-chr: 0.3972  
Centroid-sig: 77.1%  
Centroid-so: 0.580 arcsec [0.49σ]  
OotOffset-rm: 4.065 arcsec [1.85σ]  
OotOffset-st: 0/0/0/2 [2]  
KicOffset-rm: 4.058 arcsec [1.84σ]  
KicOffset-st: 0/0/0/2 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [3/3]

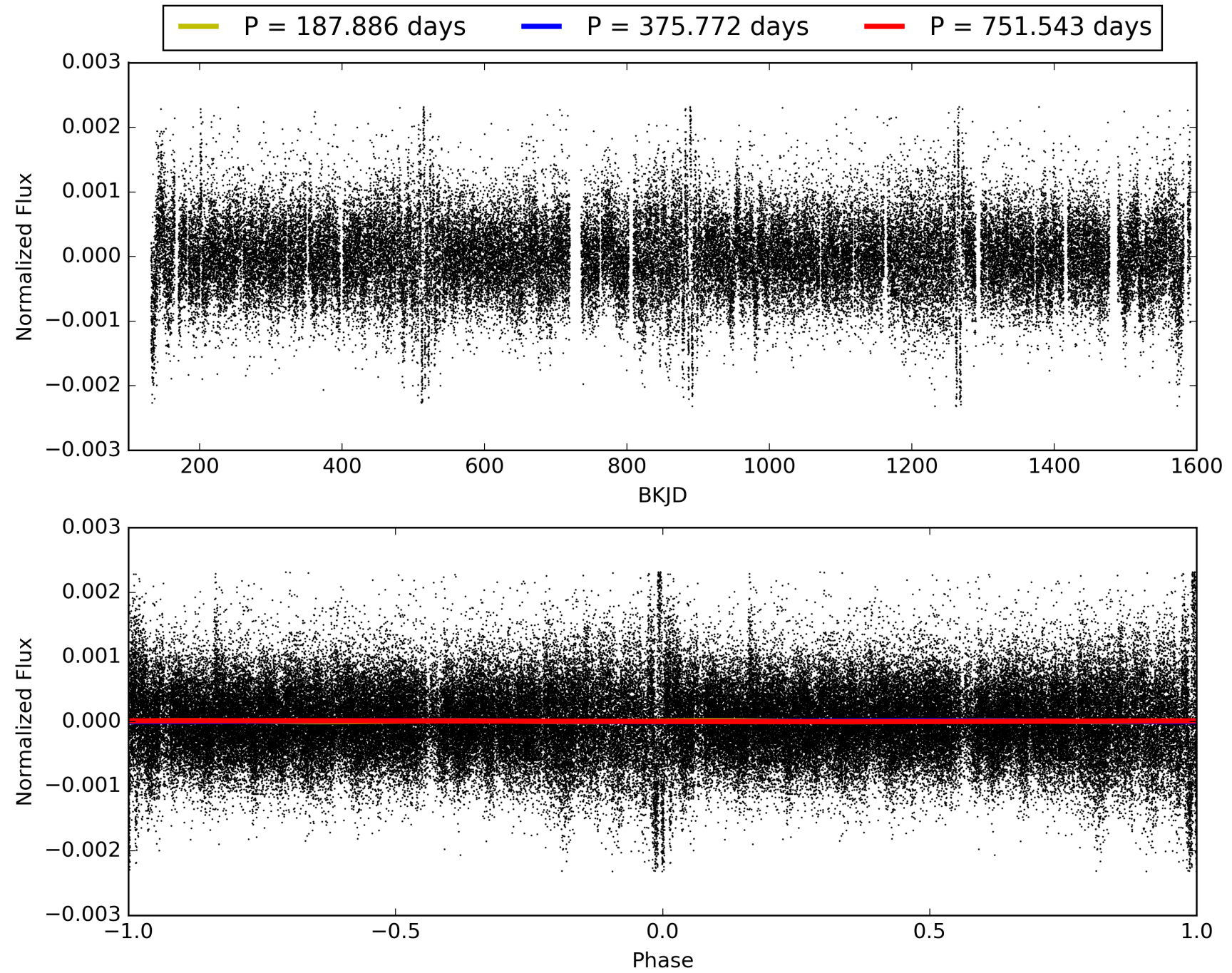
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:24:53 Z

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

# TCE 008885479-01, PDC Light Curves

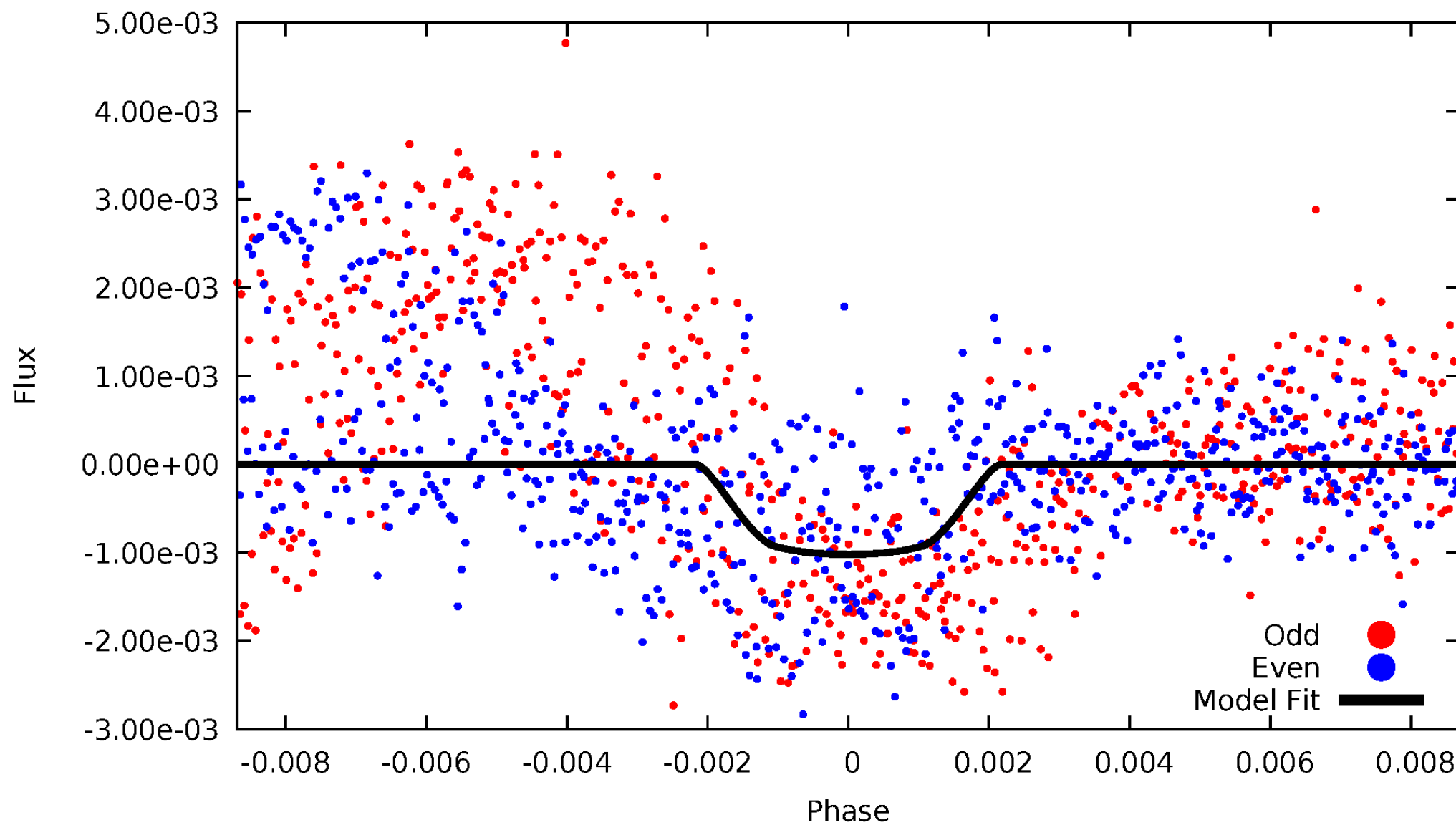


TCE 008885479-01



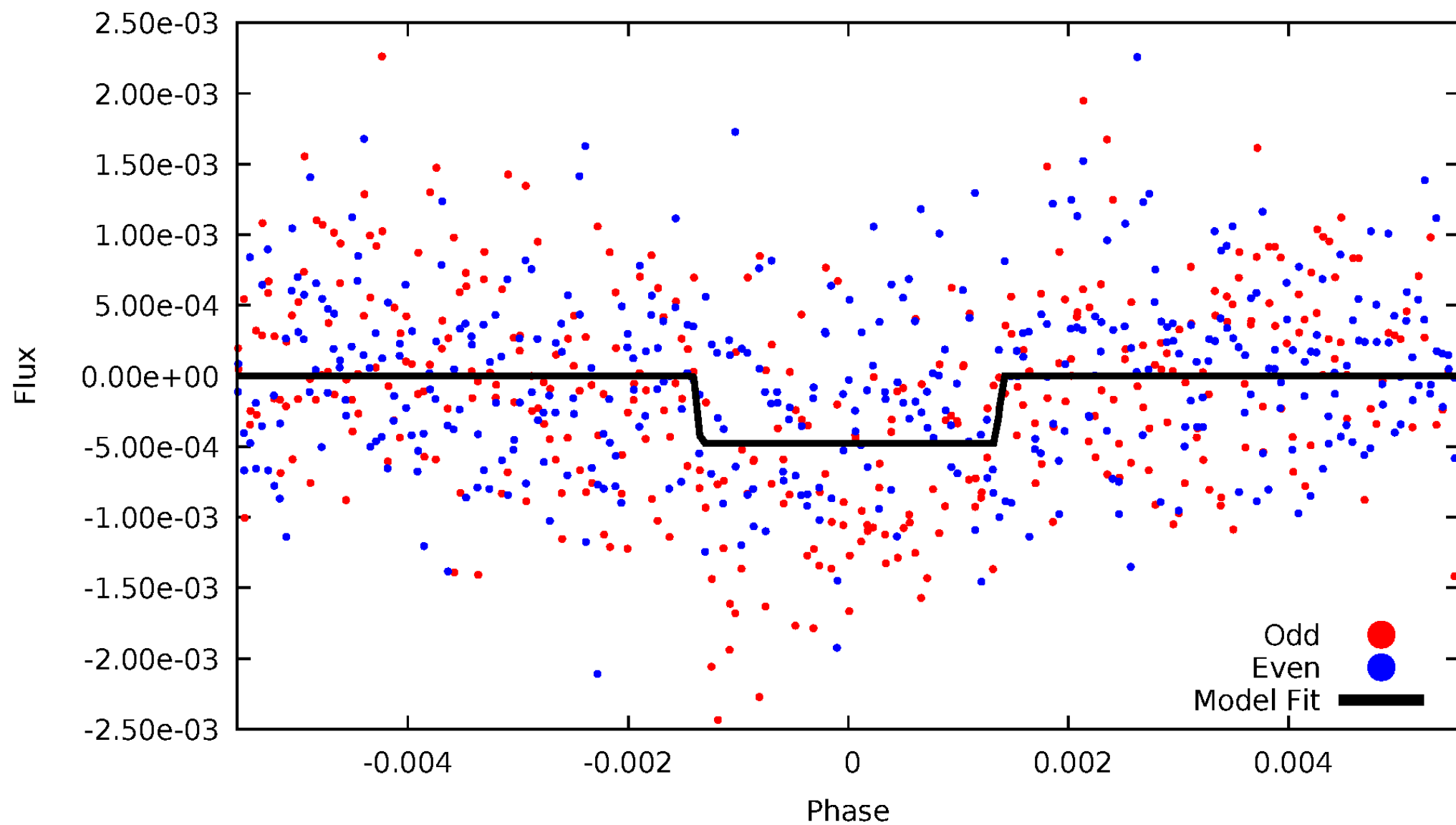
# DV Odd/Even

TCE 008885479-01



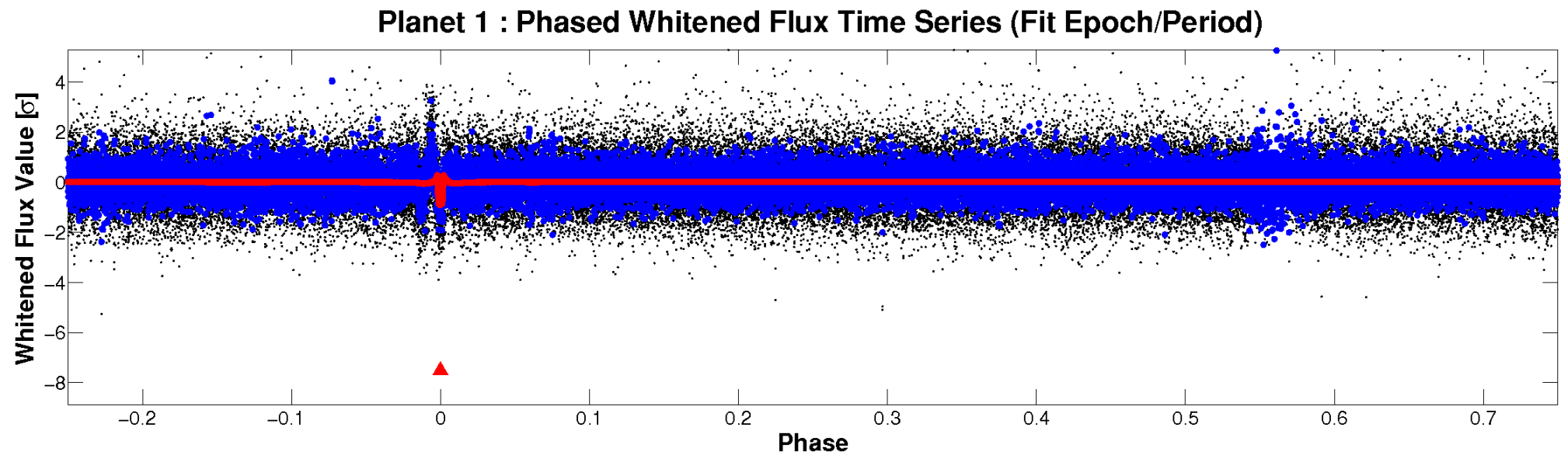
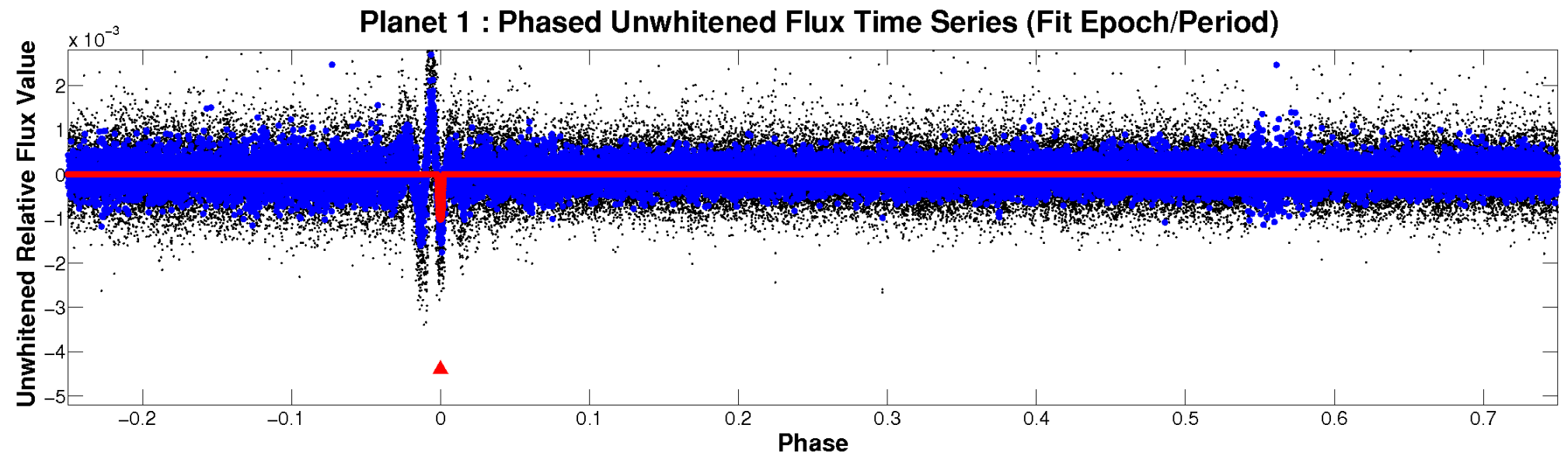
# ALT Odd/Even

TCE 008885479-01



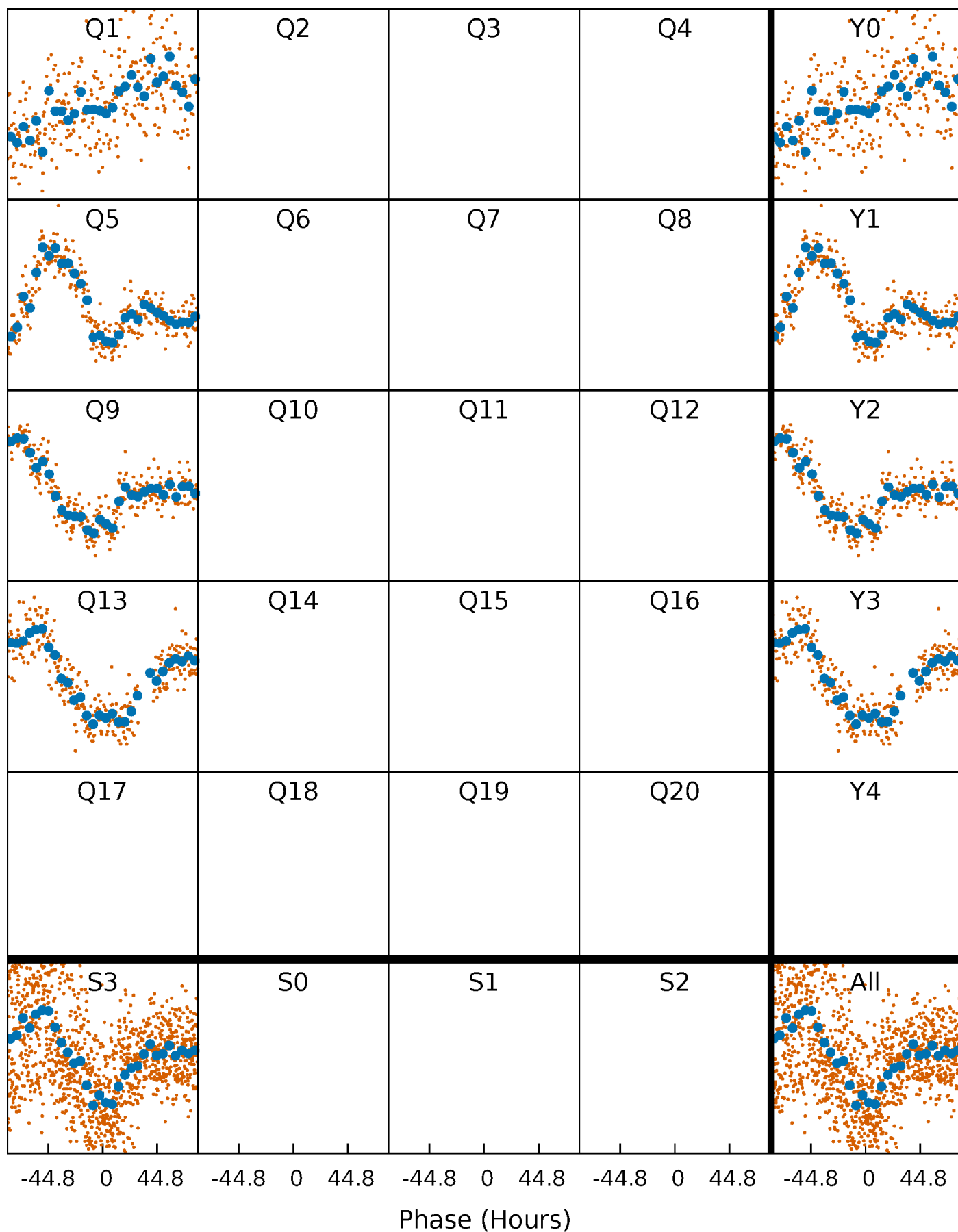


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

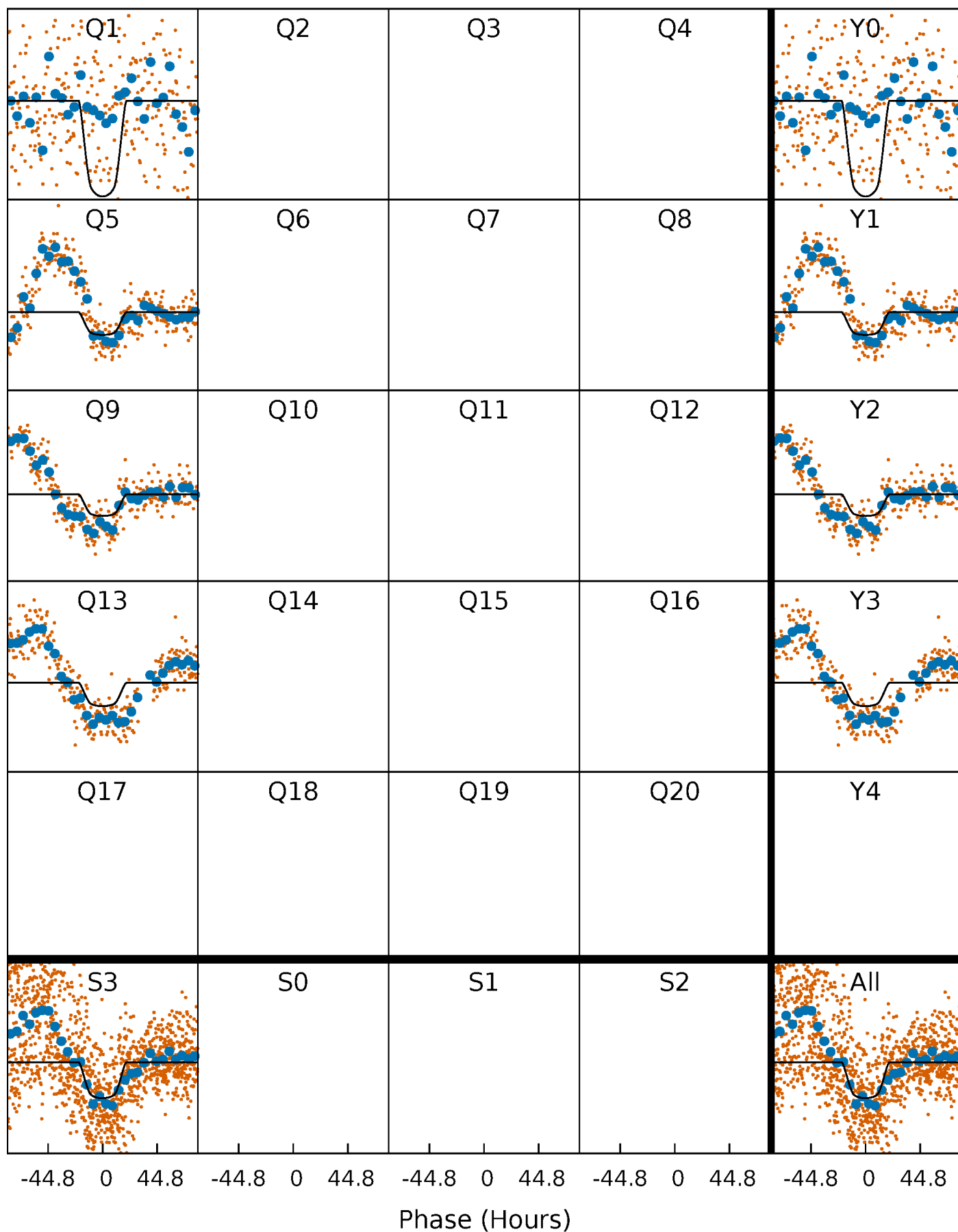
TCE 008885479-01     $P=375.771516$  Days     $T_0=140.178123$  (BKJD)





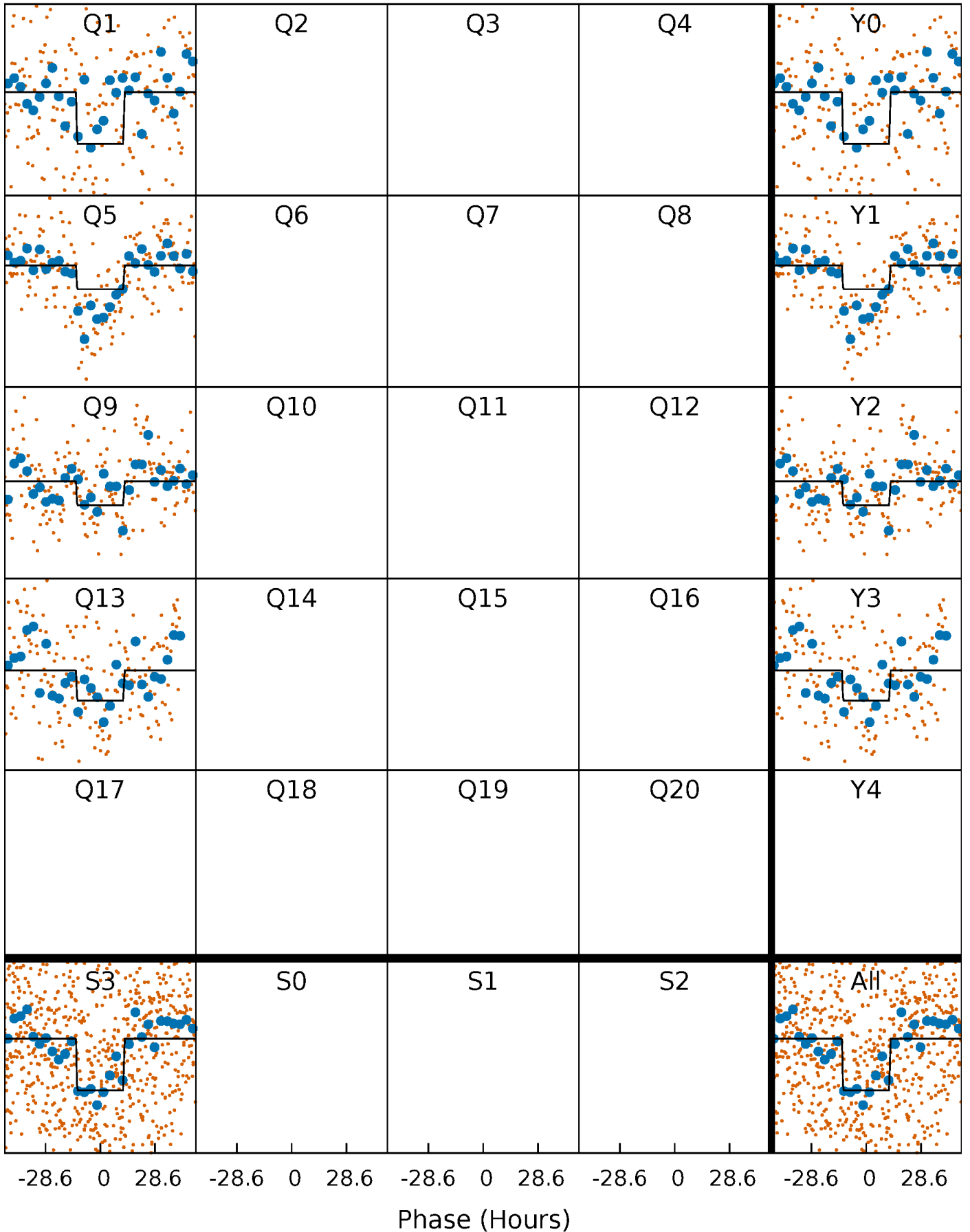
# DV Quarter-Phased Transit Curves

TCE 008885479-01     $P=375.771516$  Days     $T_0=140.178123$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

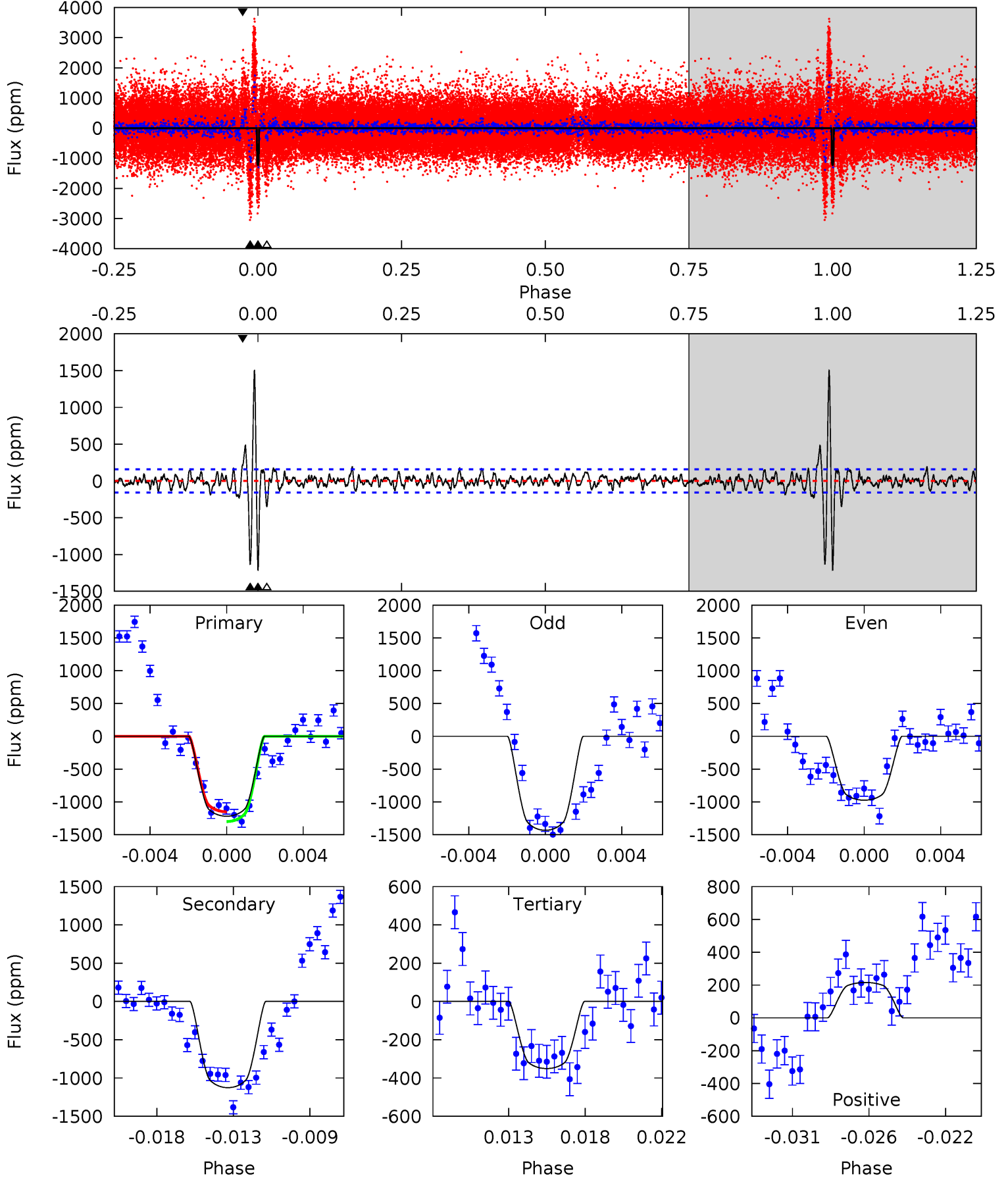
TCE 008885479-01 P=375.487099 Days  $T_0=140.541910$  (BKJD)



# DV Model-Shift Uniqueness Test

008885479-01,  $P = 375.771516$  Days,  $E = 140.178123$  Days

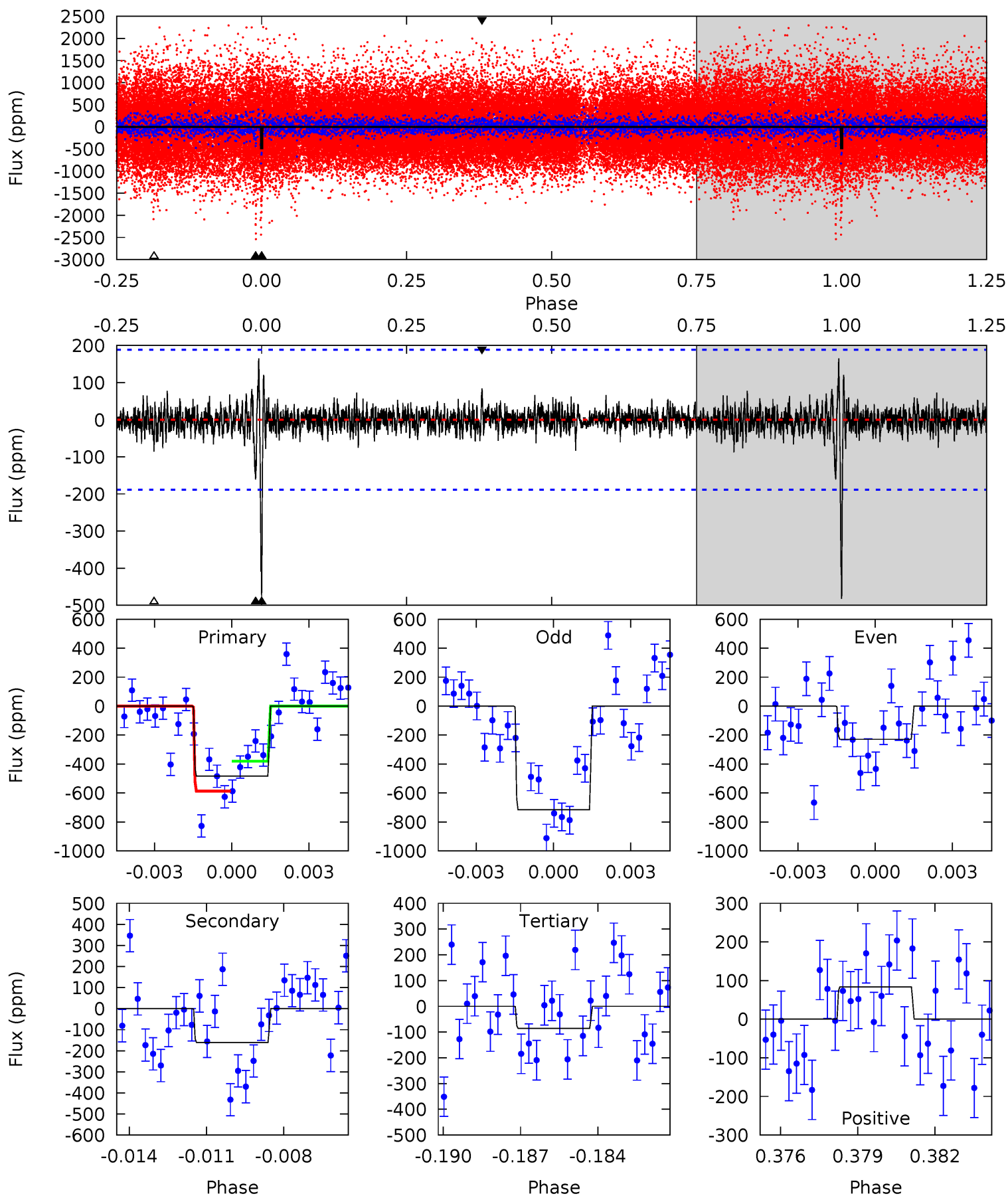
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.0	36.9	11.5	7.07	5.18	2.85	3.65	28.5	32.9	25.4	29.9	7.55	0.86	0.55	2.44



# Alt Model-Shift Uniqueness Test

008885479-01, P = 375.487099 Days, E = 140.541910 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
13.5	4.49	2.40	2.34	5.26	2.99	0.63	11.1	11.1	2.09	2.15	6.81	1.30	0.25	2.87



### Stellar Parameters For KIC 008885479

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5993^{+165}_{-207}$	$4.489^{+0.050}_{-0.200}$	$0.070^{+0.250}_{-0.300}$	$0.986^{+0.299}_{-0.100}$	$1.093^{+0.126}_{-0.154}$	$1.607^{+0.330}_{-0.807}$
	+3%/-3%	+1%/-4%	+357%/-429%	+30%/-10%	+12%/-14%	+21%/-50%
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 008885479-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-1126 \pm 30$	$4.04^{+0.65}_{-0.45}$	$365^{+25}_{-16}$	$5764^{+257}_{-250}$	$40915^{+9665}_{-9728}$
Alt.	$-161 \pm 36$	$2.41^{+0.46}_{-0.36}$	$365^{+25}_{-17}$	$4721^{+335}_{-344}$	$15987^{+7339}_{-5597}$

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

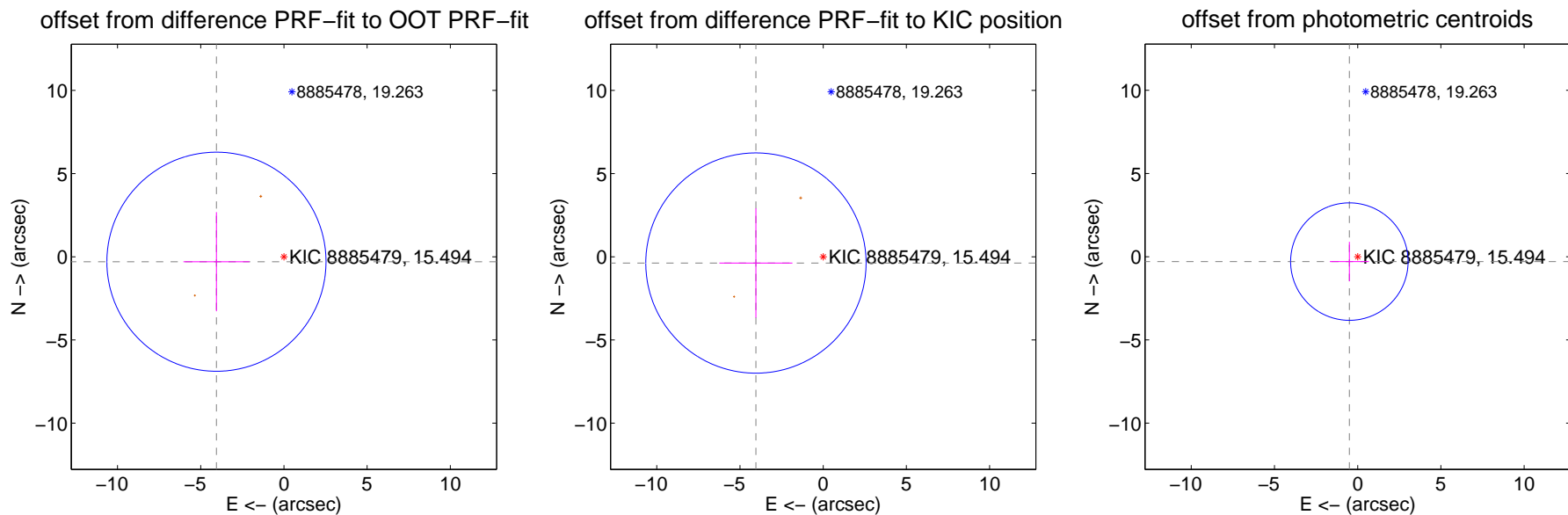
## DV Centroid Data

Supplemental centroid analysis for 008885479-01. Kepler magnitude: 15.49. Transit SNR 12.43

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

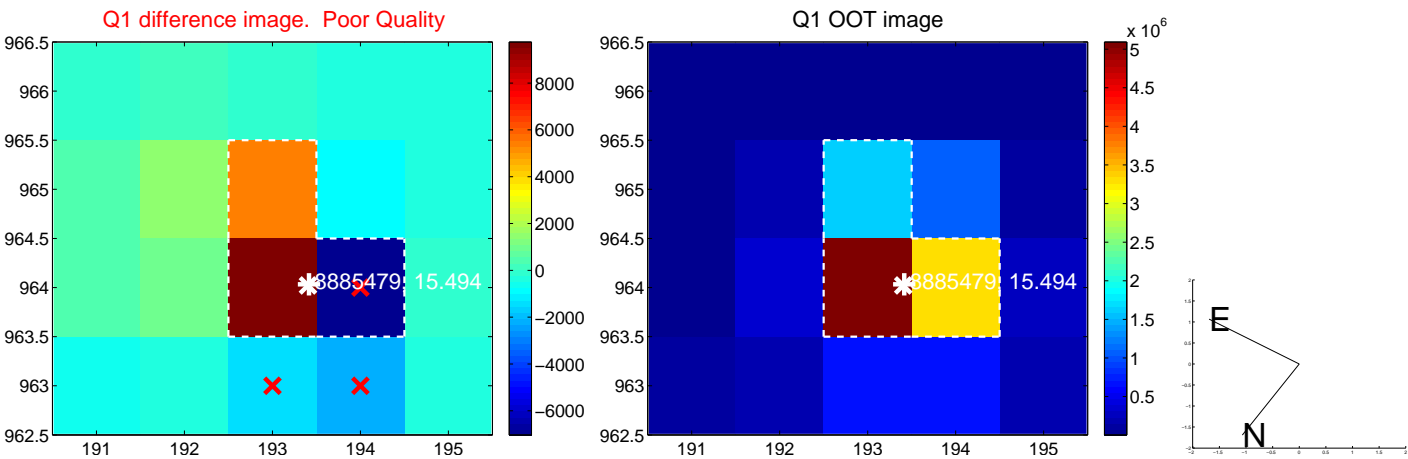
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.065 \pm 2.194$	1.85	$4.054 \pm 1.982$	$-0.297 \pm 2.979$
PRF-fit source offset from KIC position	$4.058 \pm 2.206$	1.84	$4.041 \pm 2.194$	$-0.377 \pm 3.287$
photometric centroid source offset	$0.58 \pm 1.18$	0.49	$0.50 \pm 1.17$	$-0.29 \pm 1.19$



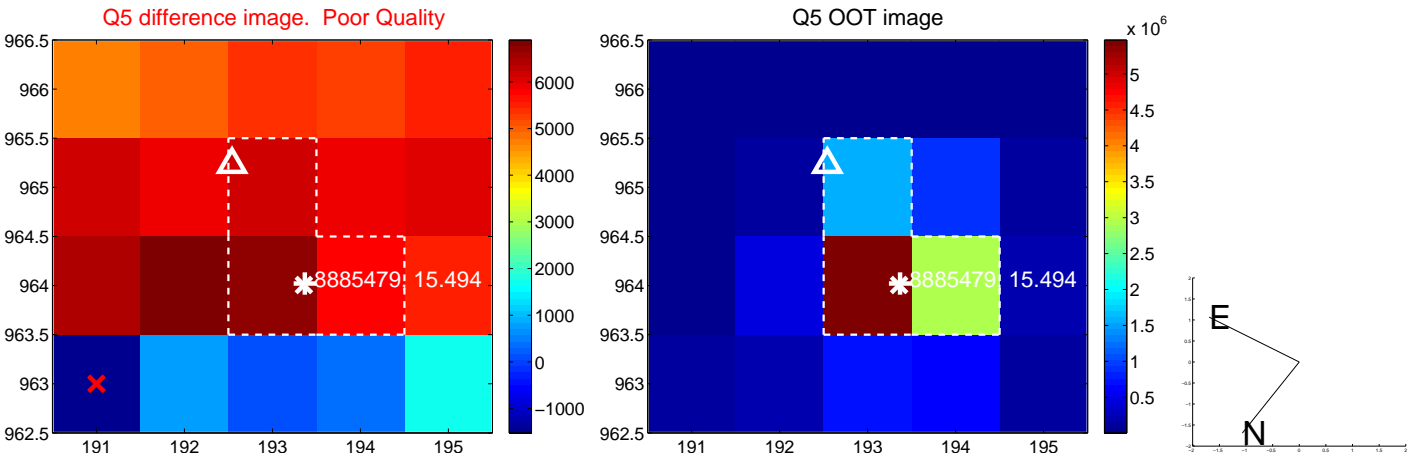
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



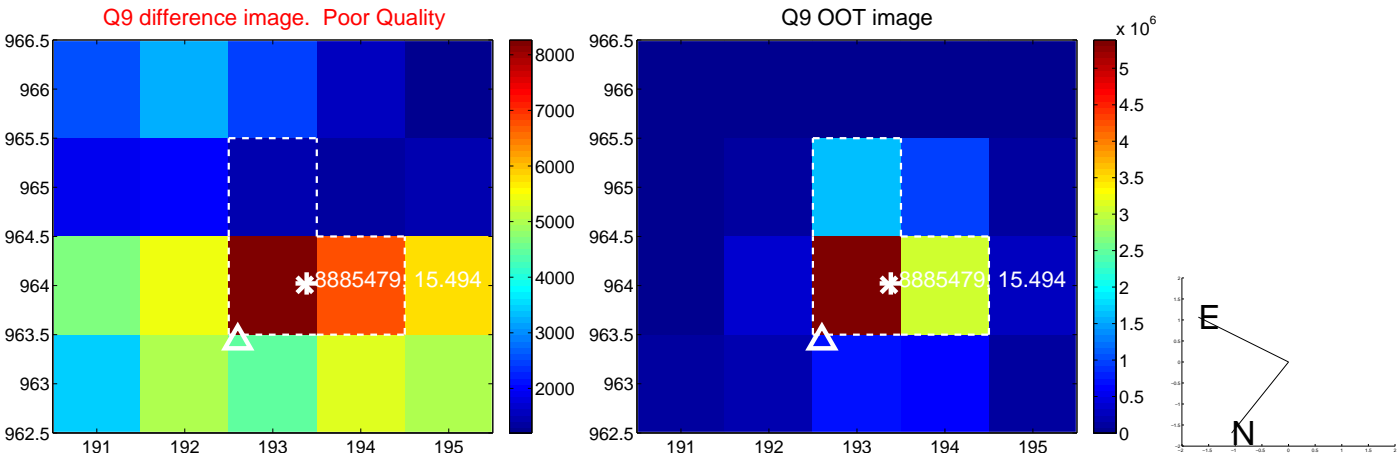
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



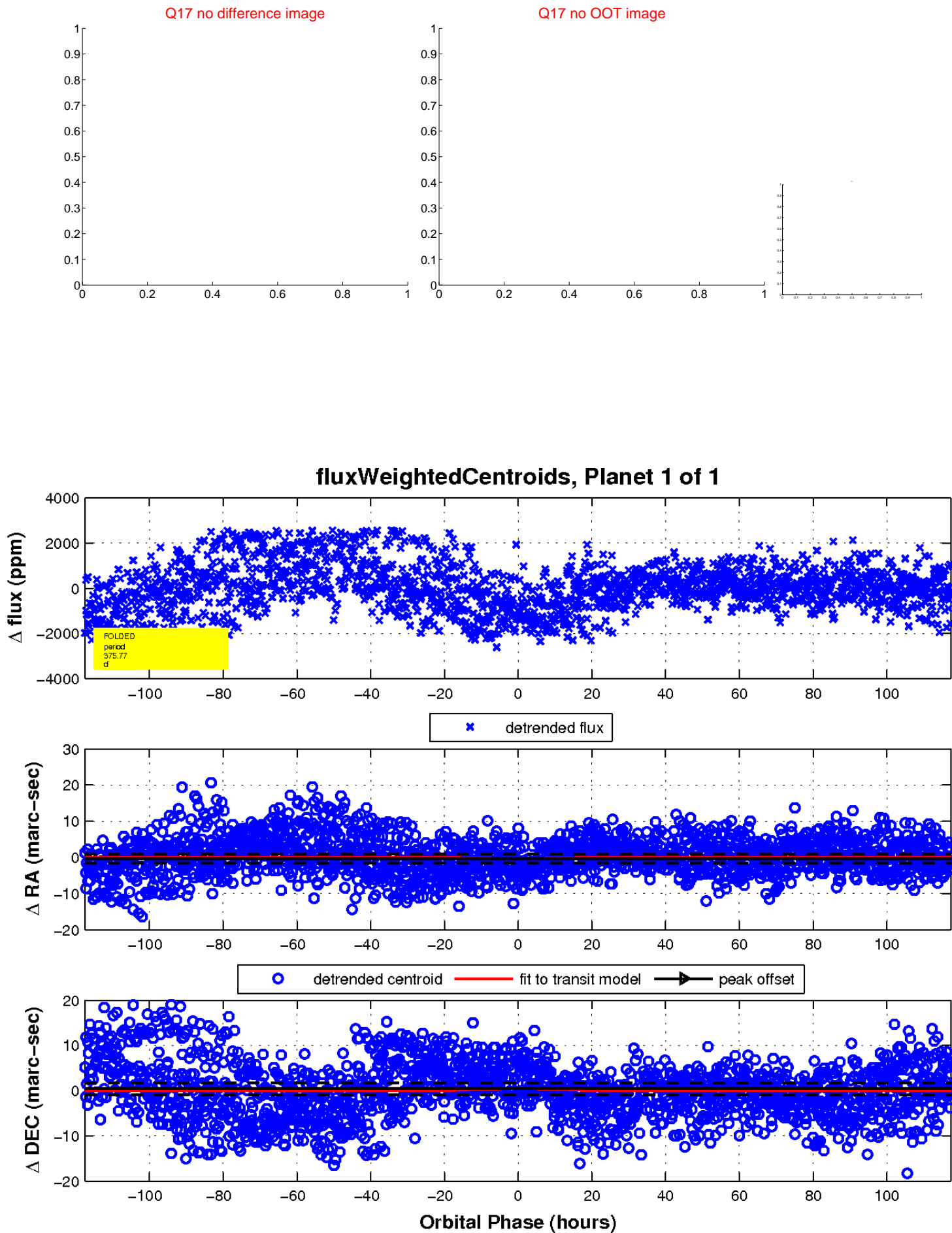
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

