

# KIC 008817483

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008817483-01	OBS	No	375.317113	138.686134	2783.3	72.195	10.9	21.8	0.84	5662	5.66	0.66

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008817483-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

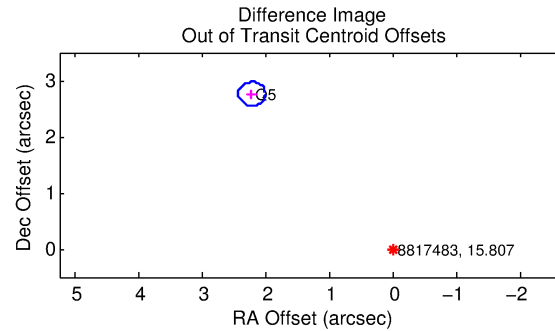
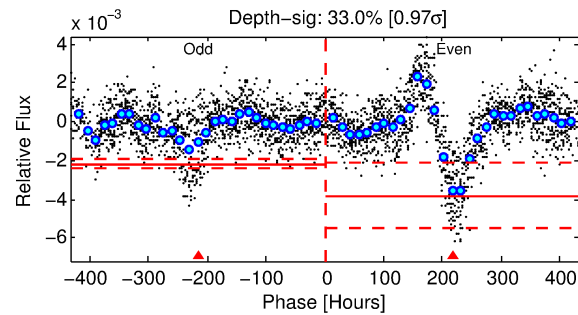
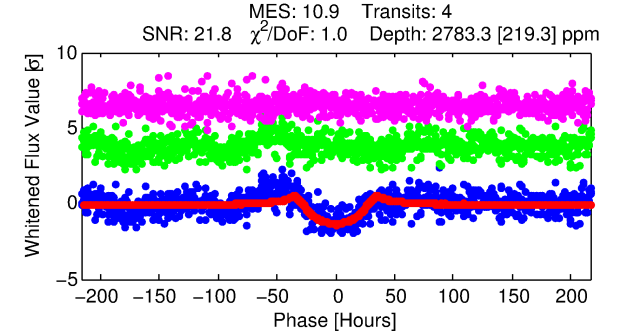
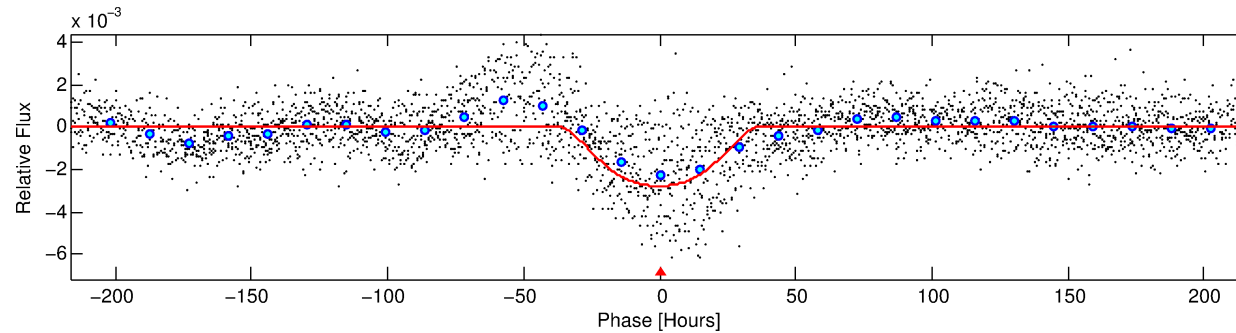
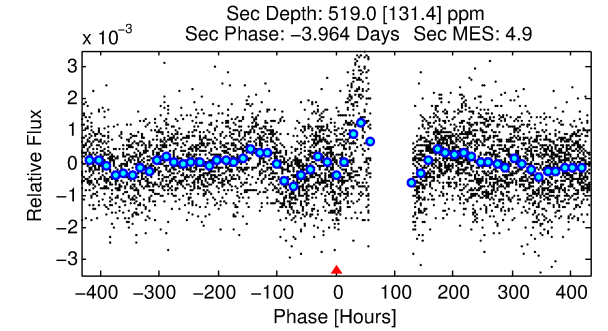
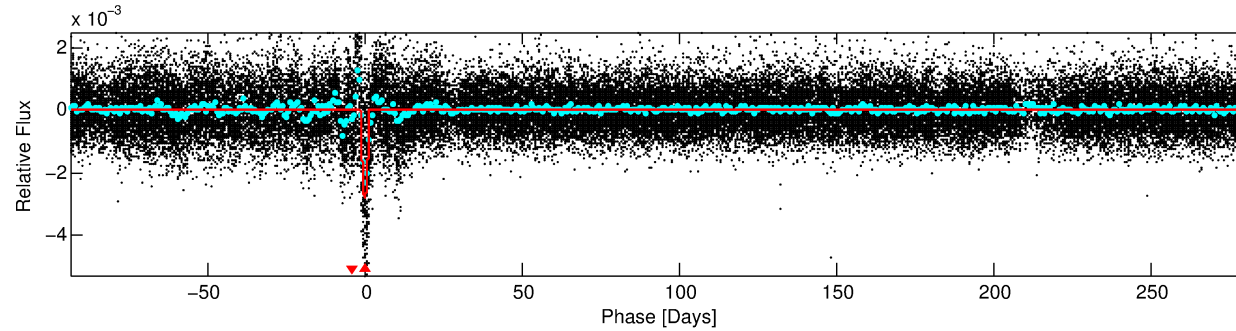
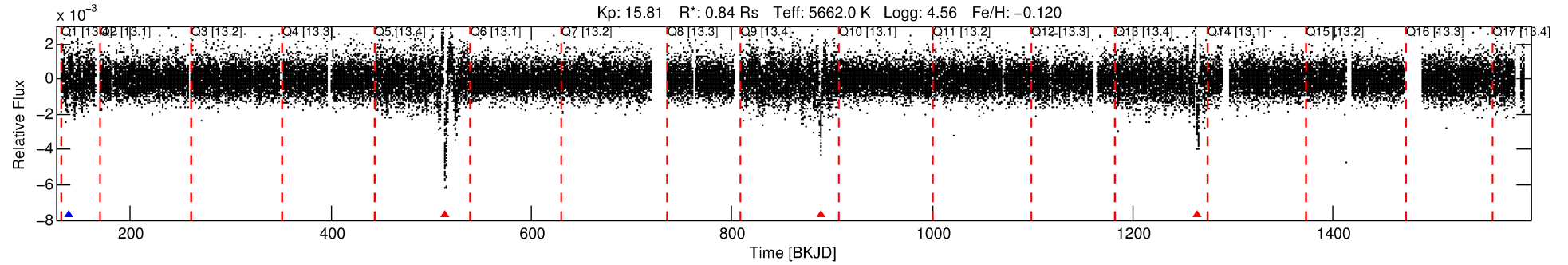
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008817483-01

No Significant Match Found

# DV One-Page Summary

KIC: 8817483 Candidate: 1 of 1 Period: 375.317 d



## DV Fit Results:

Period = 375.31711 [0.02971] d  
Epoch = 138.6861 [0.0596] BKJD  
Rp/R\* = 0.0618 [0.0050]  
a/R\* = 19.43 [1.26]  
b = 0.94 [0.02]  
Seff = 0.66 [0.19]  
Teq = 229 [17] K  
Rp = 5.66 [1.30] Re  
a = 0.9957 [0.1800] AU  
Ag = 8824.39 [3519.91] [2.51σ]  
Teff = 3438 [278] K [11.53σ]

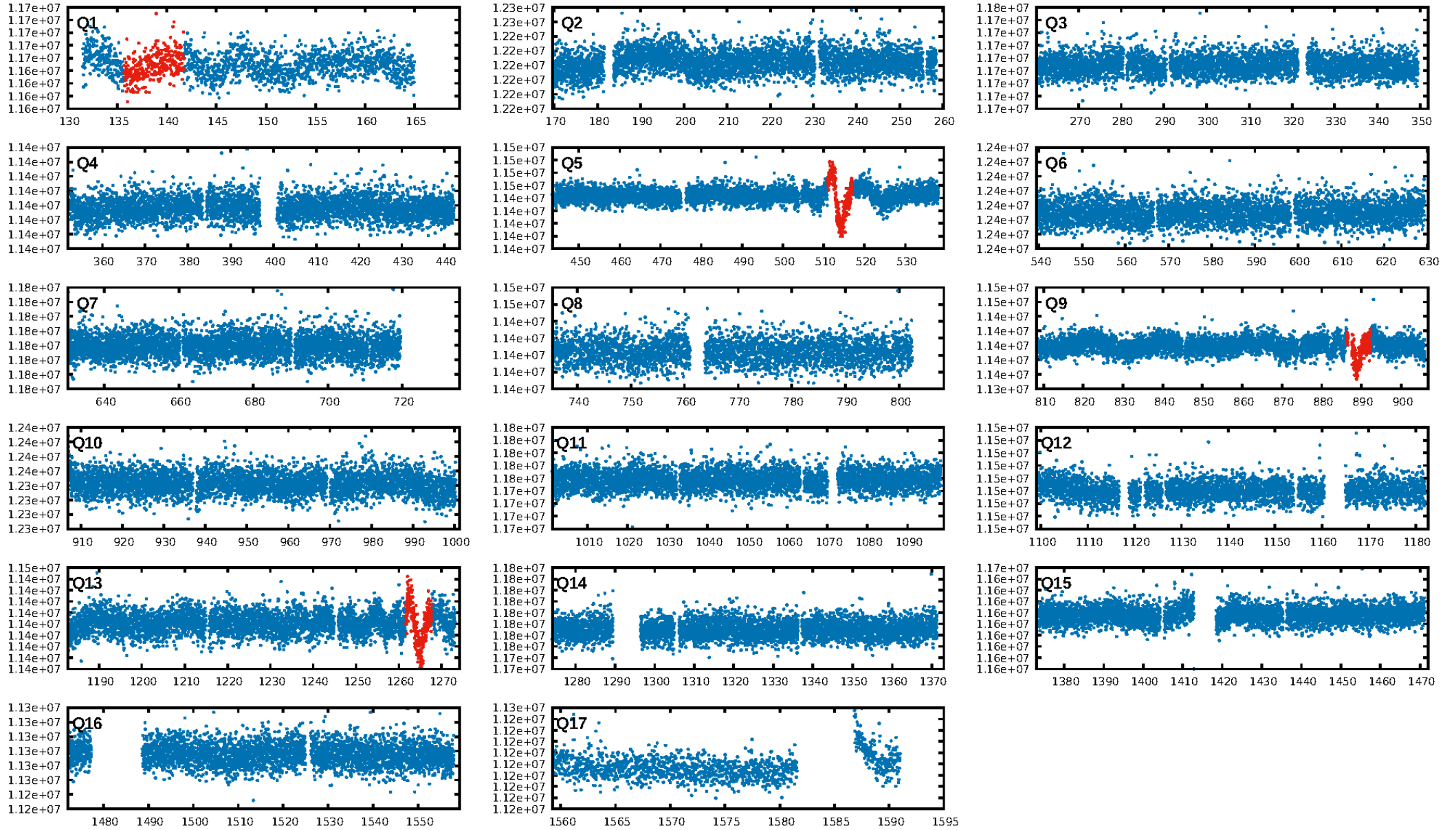
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGoF-sig: 100.0%  
Bootstrap-pfa: 1.85e-28  
RollingBand-fgt: 0.00 [0/3]  
GhostDiagnostic-chr: -0.8565  
Centroid-sig: 6.8%  
Centroid-so: 0.482 arcsec [1.53σ]  
OotOffset-rm: 3.544 arcsec [50.22σ]  
KicOffset-rm: 3.498 arcsec [49.57σ]  
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]

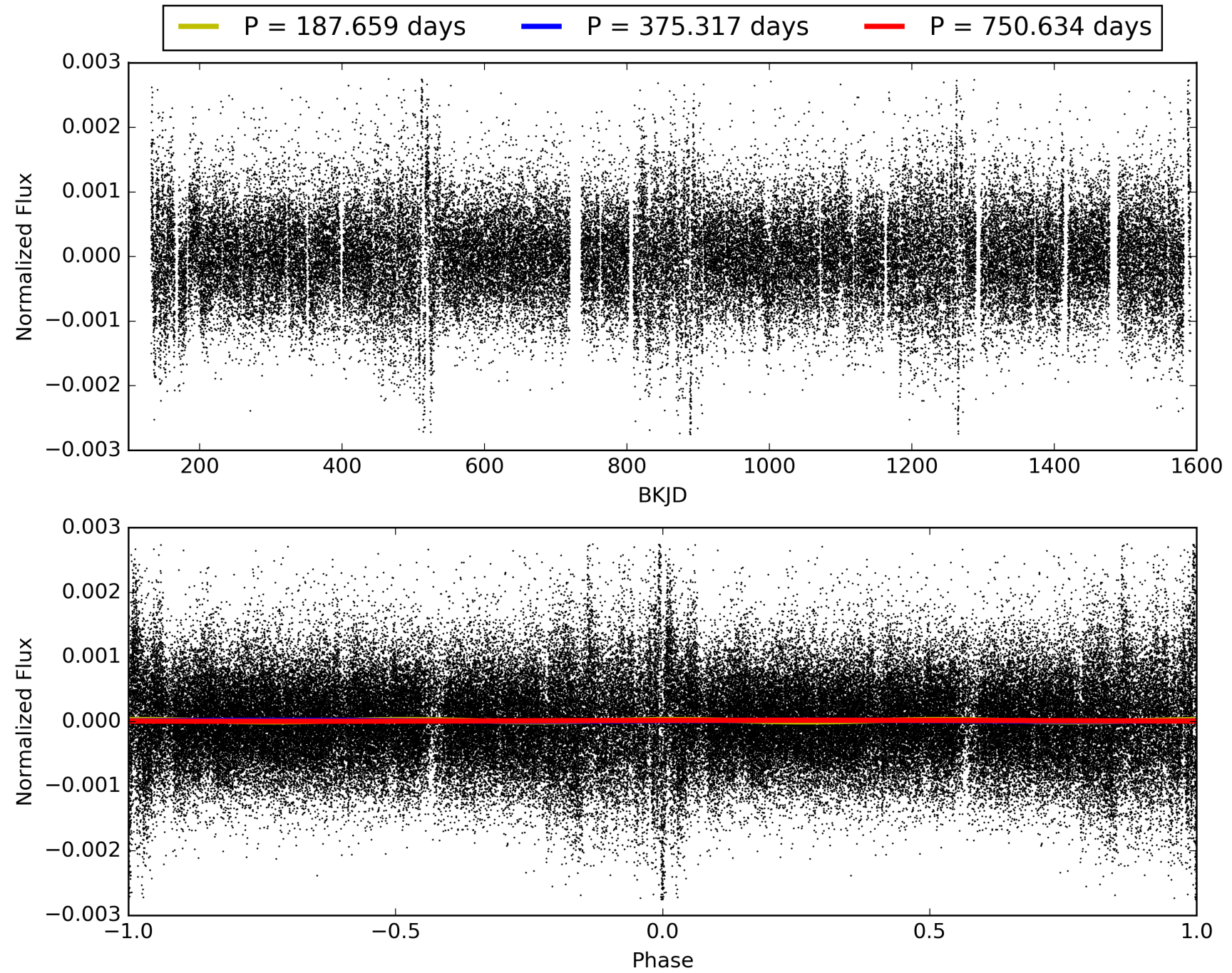
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:25:16 Z

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

# TCE 008817483-01, PDC Light Curves

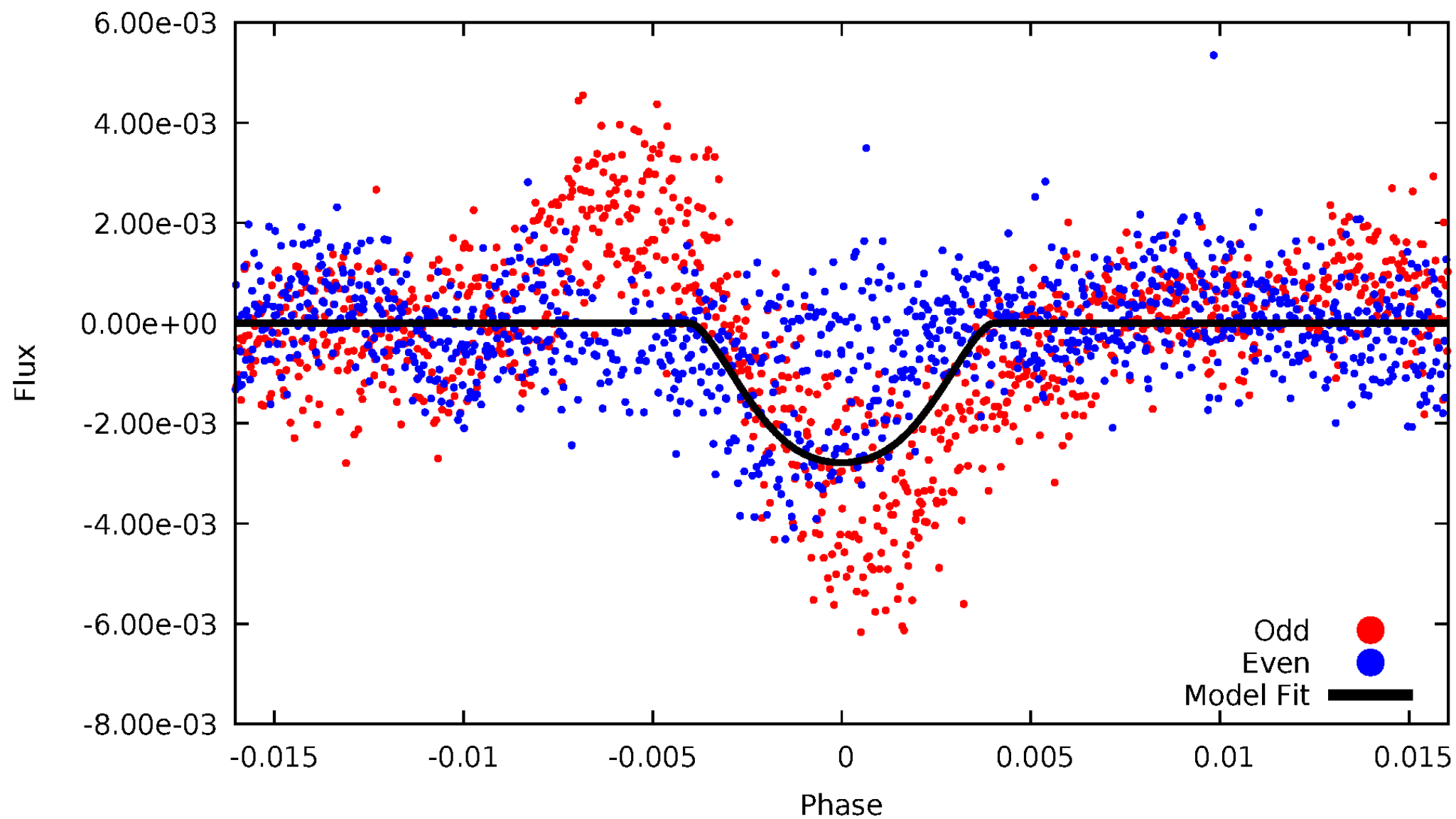


TCE 008817483-01



# DV Odd/Even

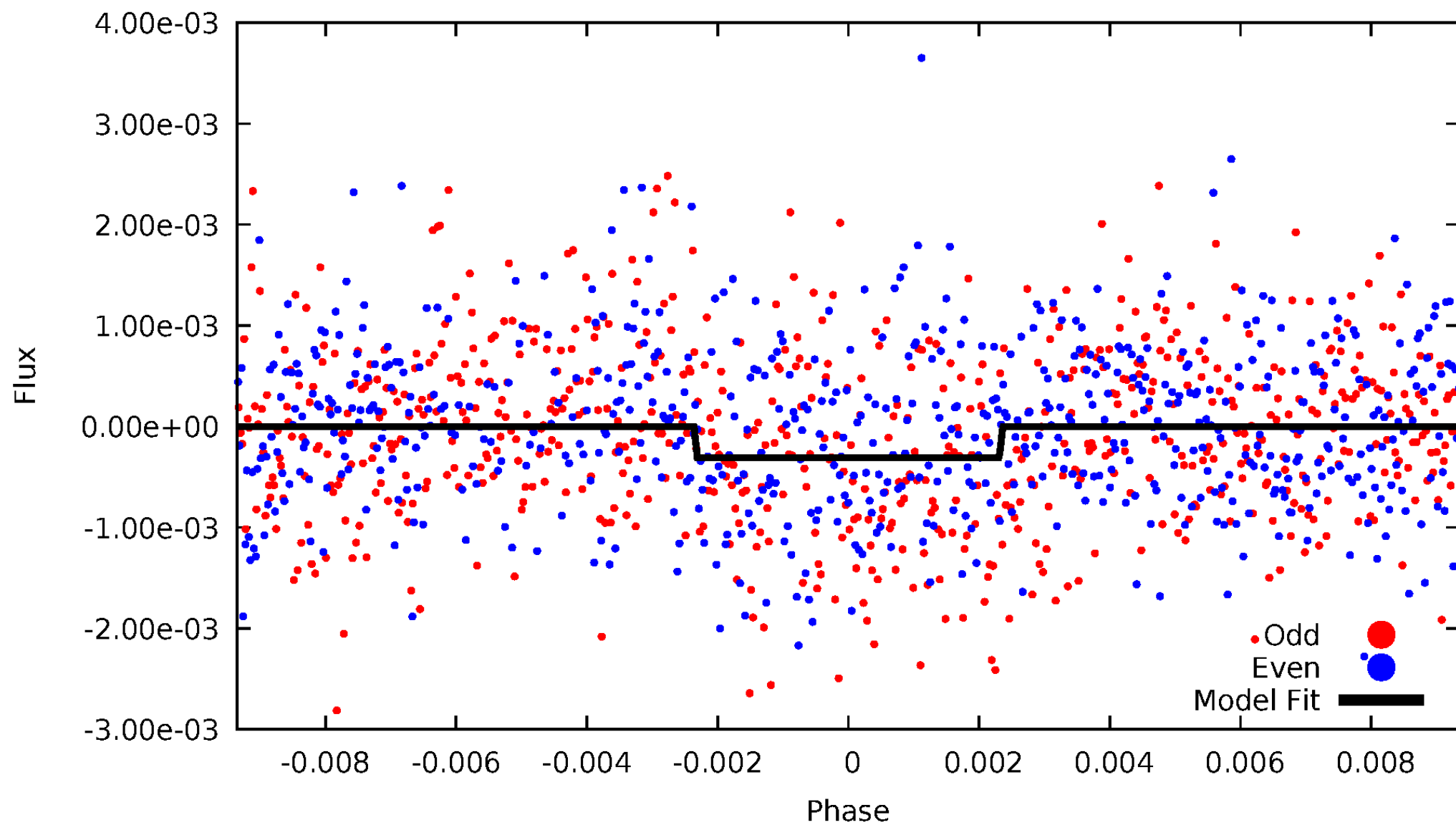
TCE 008817483-01





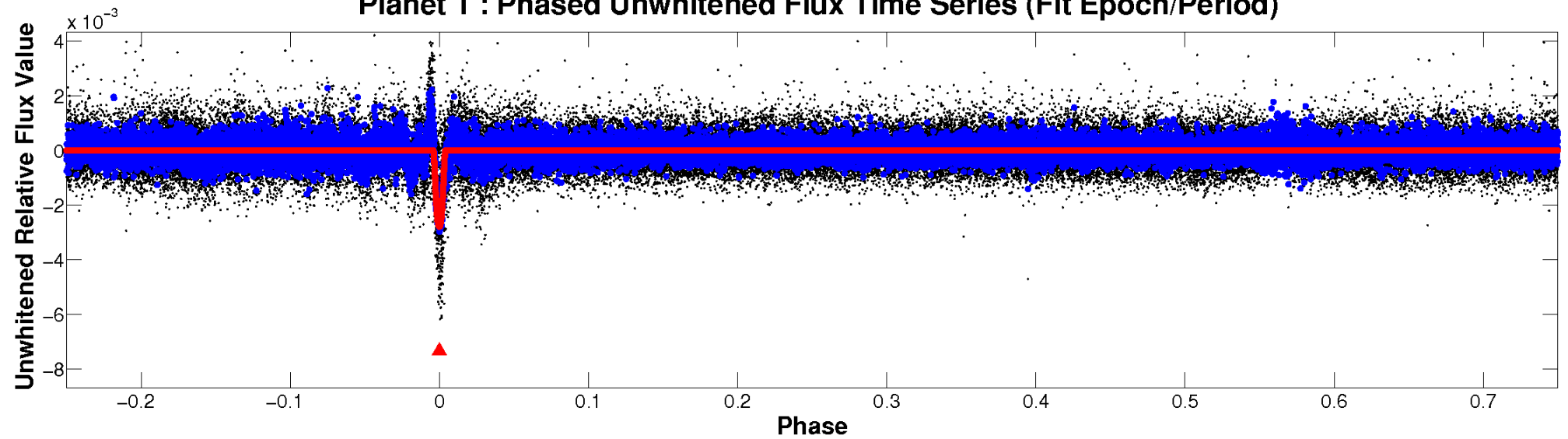
# ALT Odd/Even

TCE 008817483-01

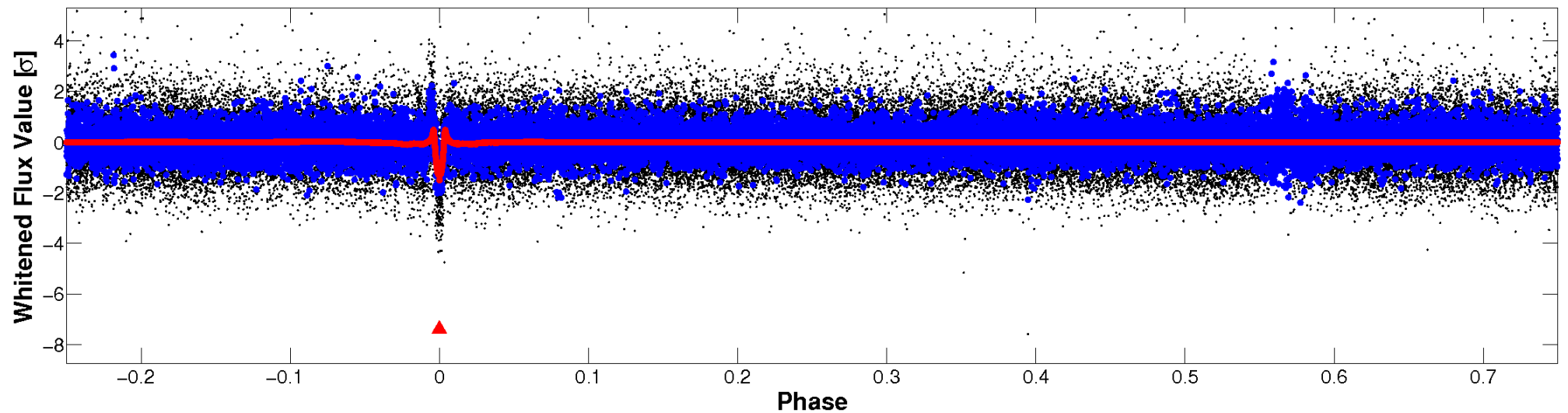


# Non-Whitened Vs. Whitened Light Curve

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

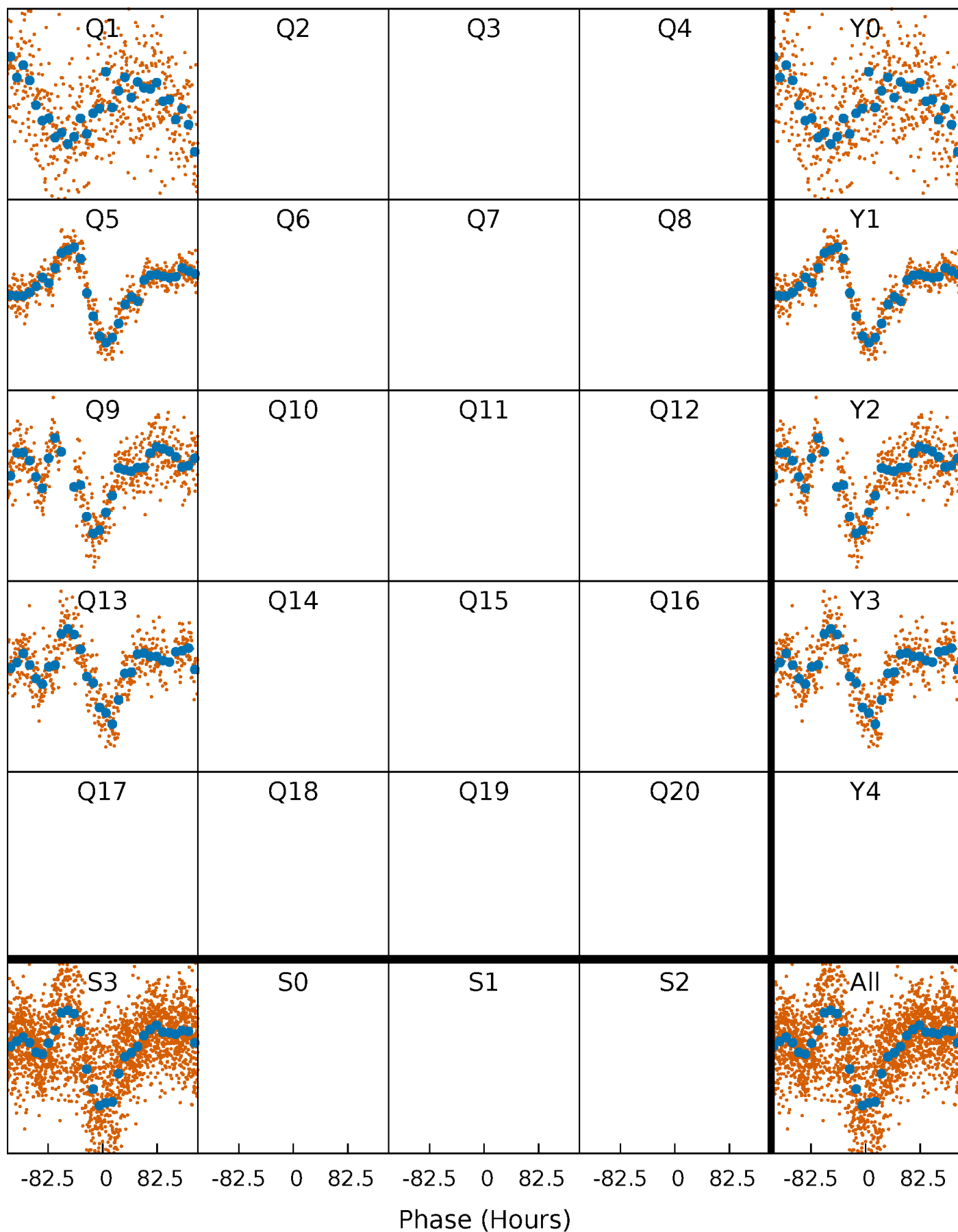


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

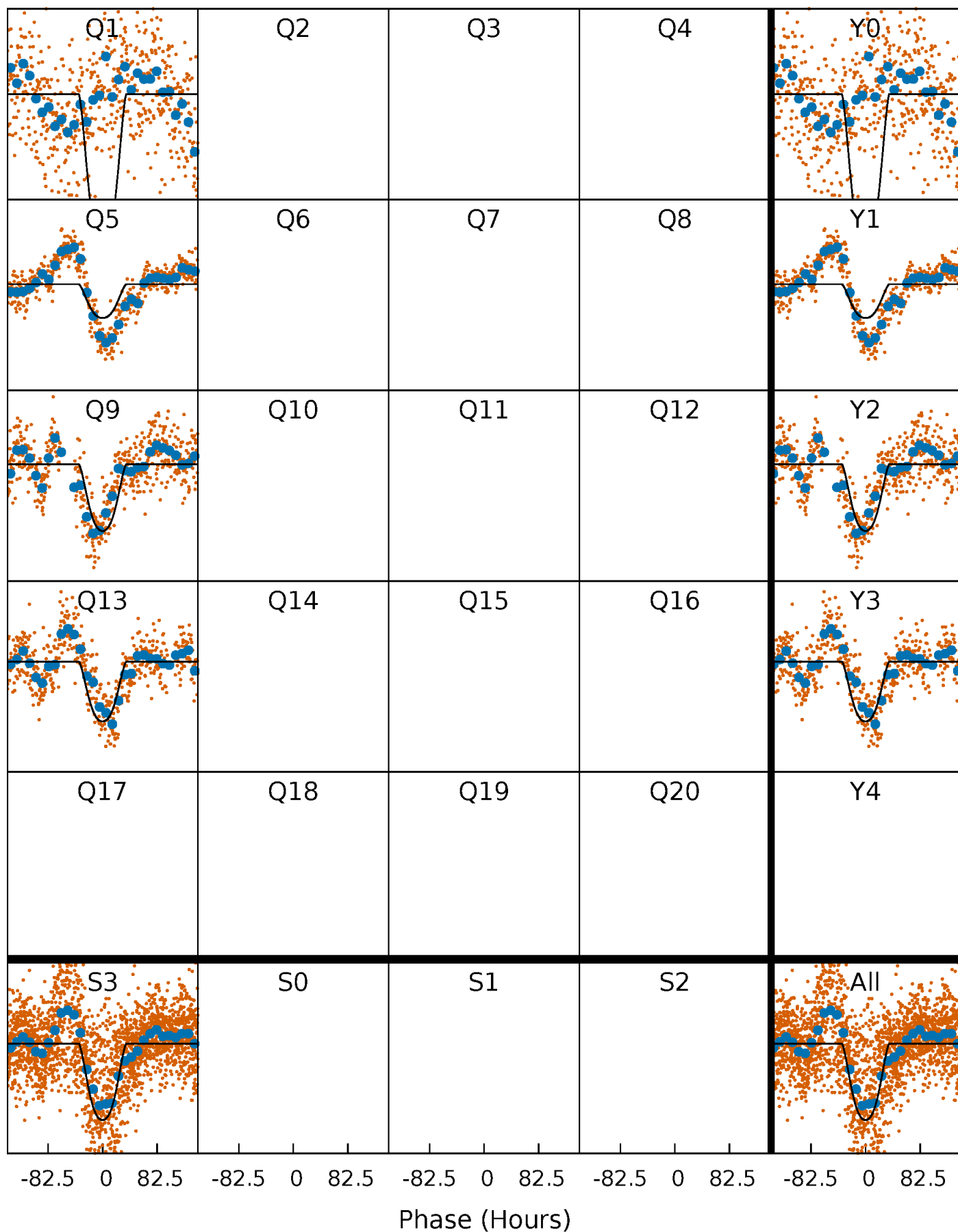
TCE 008817483-01 P=375.317113 Days  $T_0=138.686134$  (BKJD)





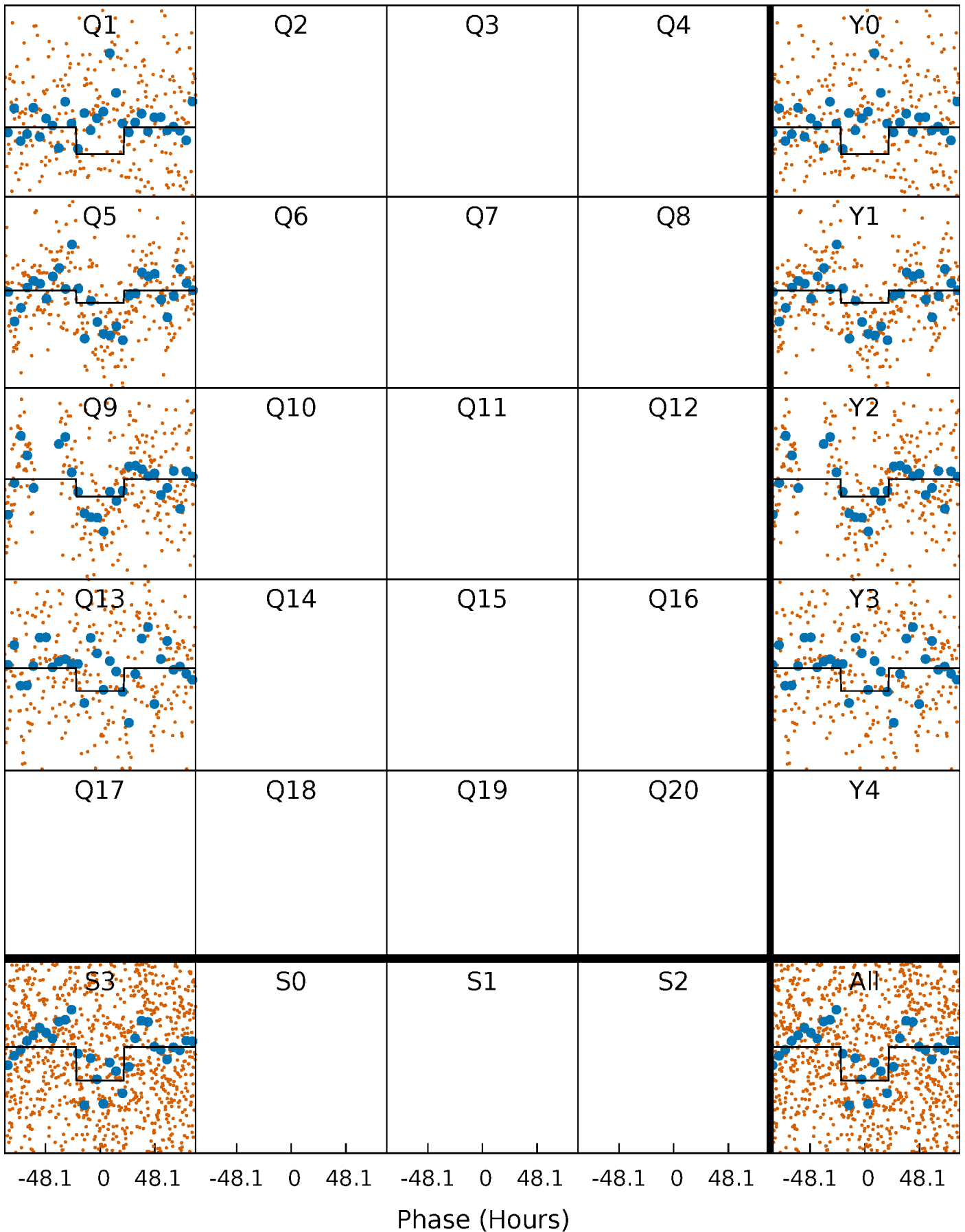
# DV Quarter-Phased Transit Curves

TCE 008817483-01 P=375.317113 Days  $T_0=138.686134$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

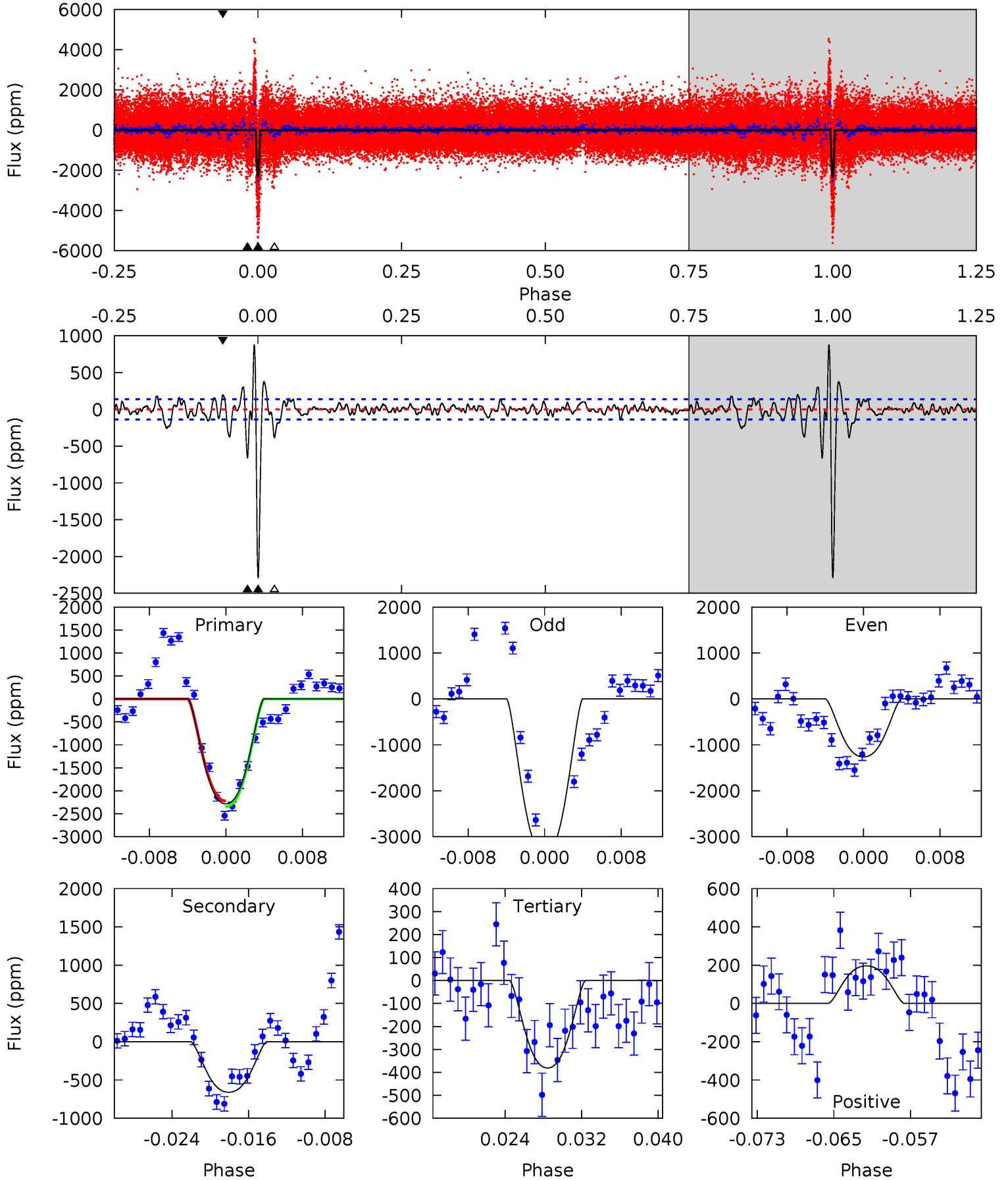
TCE 008817483-01 P=375.269141 Days  $T_0=138.509903$  (BKJD)



# DV Model-Shift Uniqueness Test

008817483-01, P = 375.317113 Days, E = 138.686134 Days

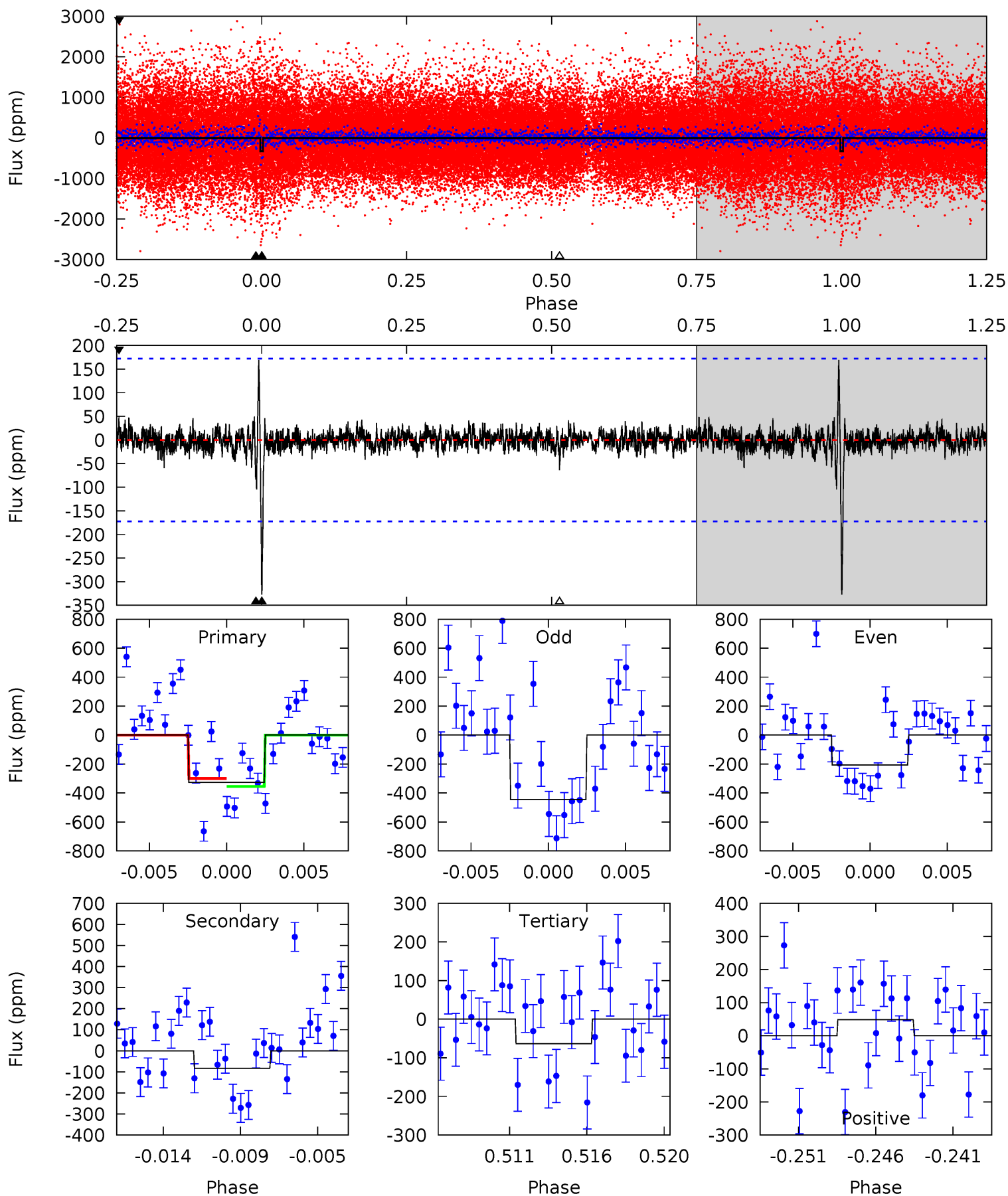
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
83.7	24.2	14.0	7.18	5.07	2.65	2.92	69.7	76.5	10.2	17.0	40.2	0.94	0.28	2.18



# Alt Model-Shift Uniqueness Test

008817483-01, P = 375.269141 Days, E = 138.509903 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
9.81	2.50	1.91	1.46	5.17	2.82	0.44	7.90	8.34	0.59	1.04	3.59	1.03	0.34	0.82



### Stellar Parameters For KIC 008817483

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5662^{+152}_{-169}$	$4.560^{+0.038}_{-0.143}$	$-0.120^{+0.300}_{-0.300}$	$0.840^{+0.181}_{-0.072}$	$0.937^{+0.085}_{-0.114}$	$2.228^{+0.441}_{-0.935}$
	+3%/-3%	+1%/-3%	+250%/-250%	+22%/-9%	+9%/-12%	+20%/-42%
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 008817483-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-660 \pm 27$	$5.77^{+0.80}_{-0.56}$	$326^{+17}_{-14}$	$3971^{+153}_{-141}$	$10465^{+2364}_{-2078}$
Alt.	$-83 \pm 33$	$1.66^{+0.51}_{-0.50}$	$326^{+16}_{-14}$	$4297^{+729}_{-511}$	$16600^{+18873}_{-9114}$

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

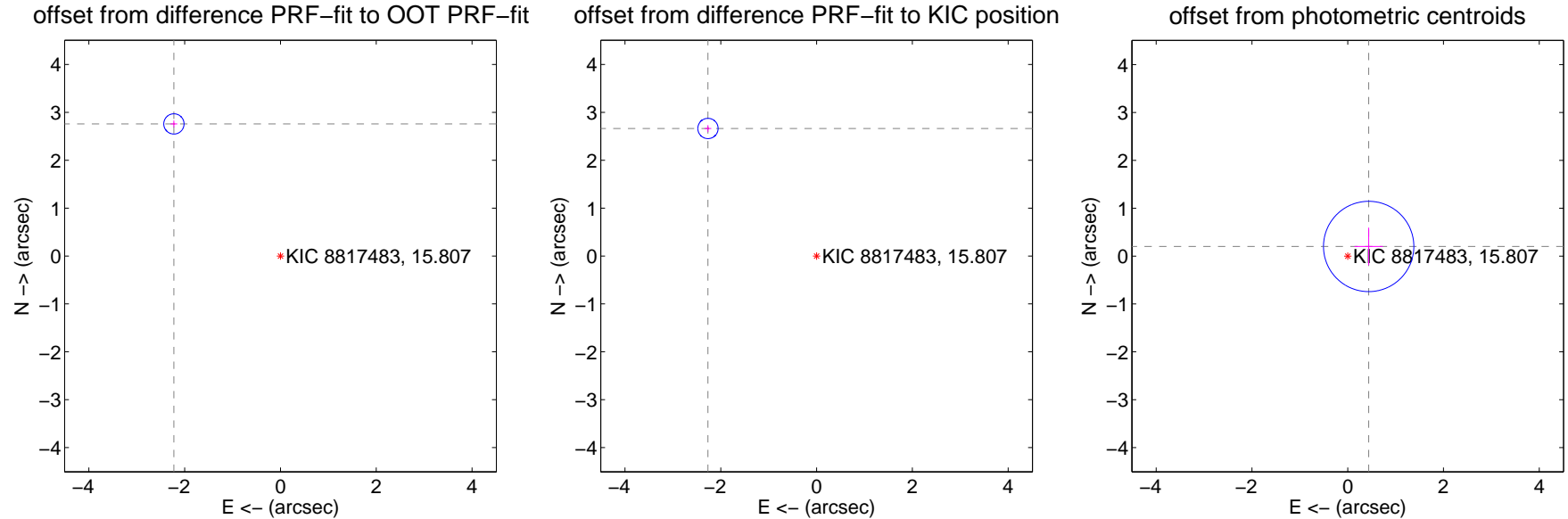
## DV Centroid Data

Supplemental centroid analysis for 008817483-01. Kepler magnitude: 15.81. Transit SNR 21.81

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

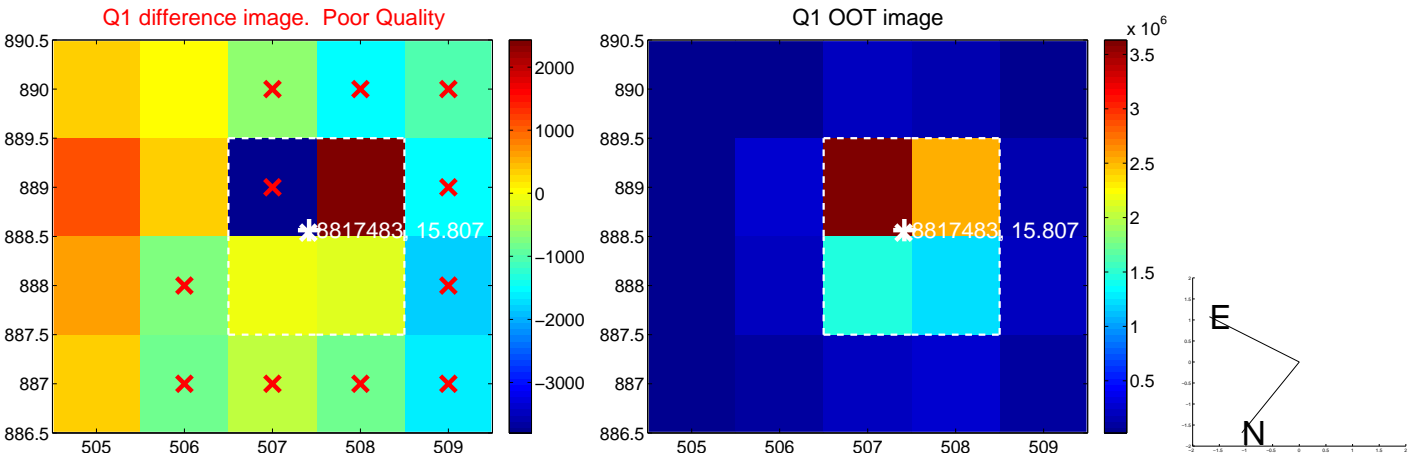
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.544 \pm 0.071$	50.22	$2.225 \pm 0.071$	$2.759 \pm 0.071$
PRF-fit source offset from KIC position	$3.498 \pm 0.071$	49.57	$2.268 \pm 0.071$	$2.664 \pm 0.071$
photometric centroid source offset	$0.48 \pm 0.31$	1.53	$-0.44 \pm 0.30$	$0.20 \pm 0.39$



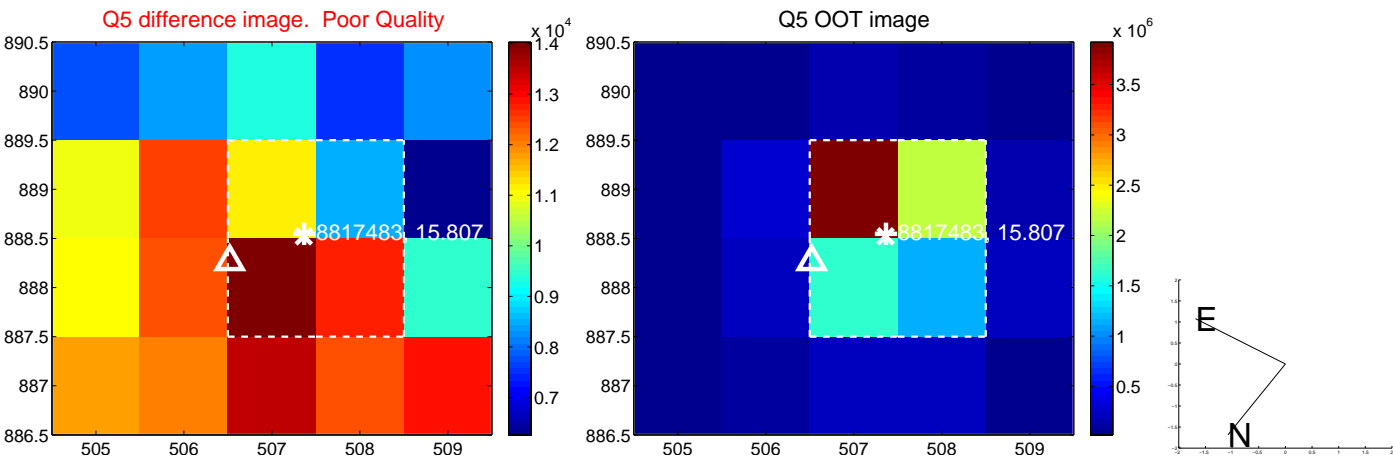
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



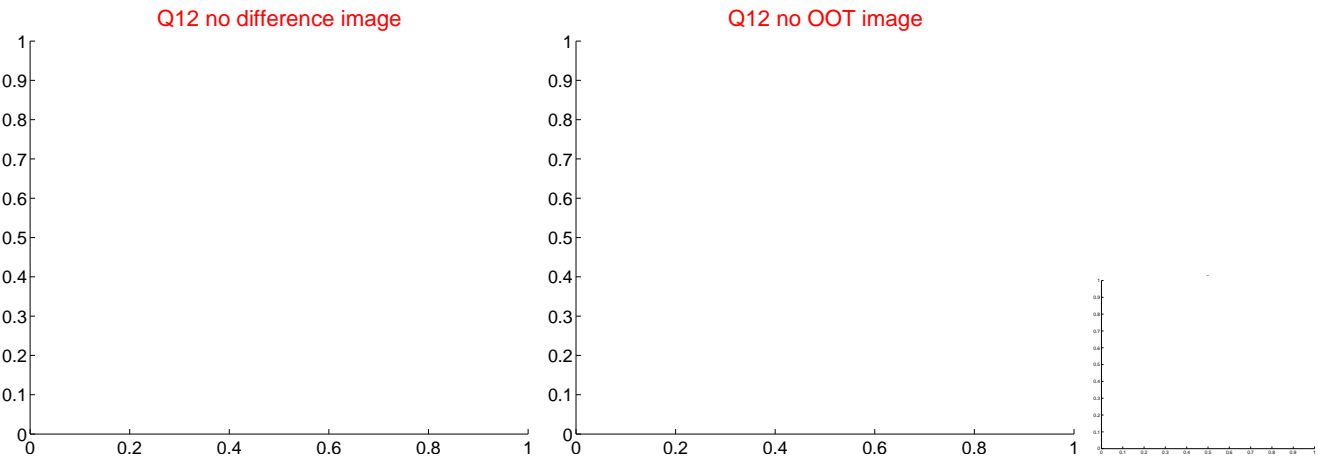
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



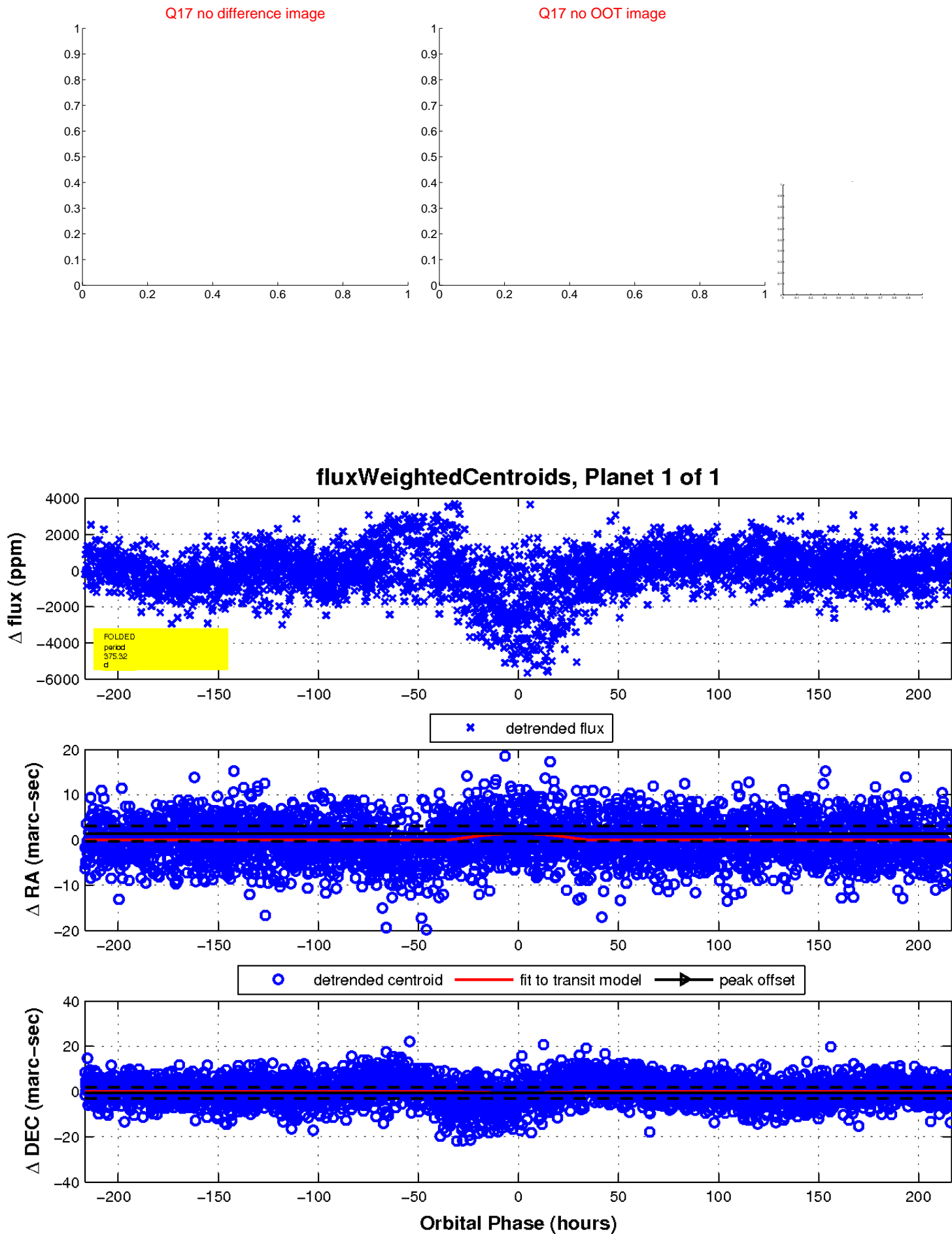
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

