

# KIC 007757483

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007757483-01	OBS	No	363.088584	402.490615	150.4	18.781	8.6	8.4	1.40	6204	1.79	2.47

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007757483-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

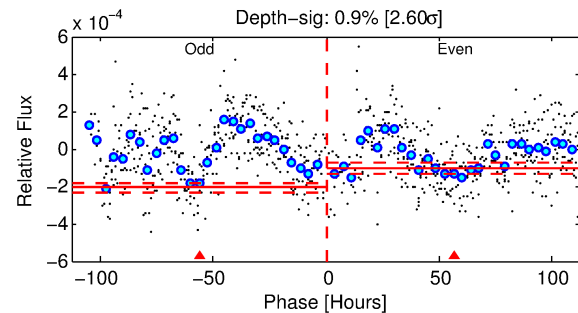
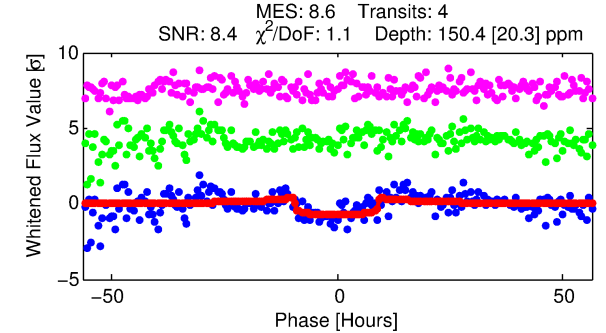
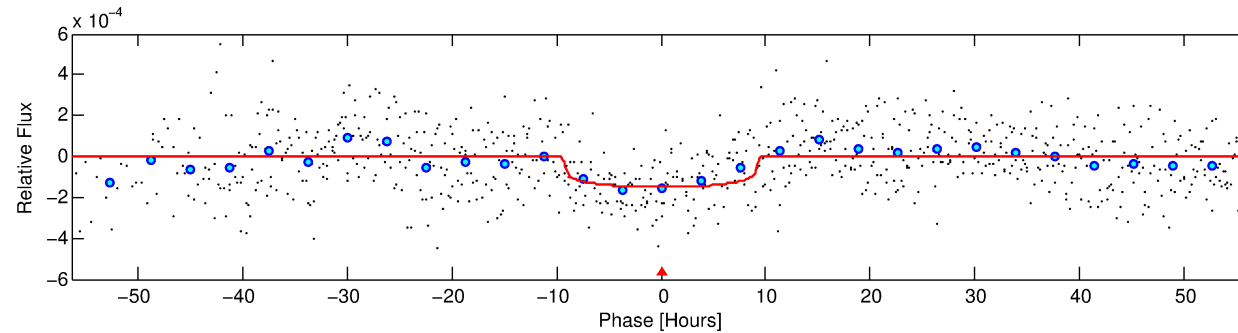
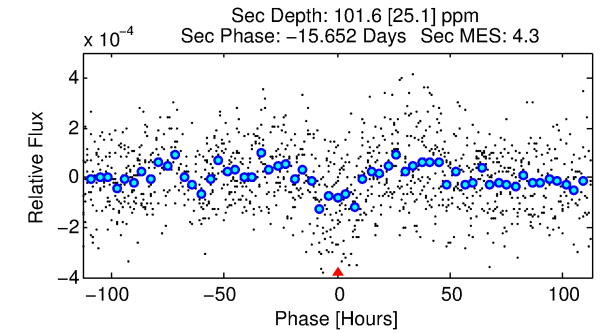
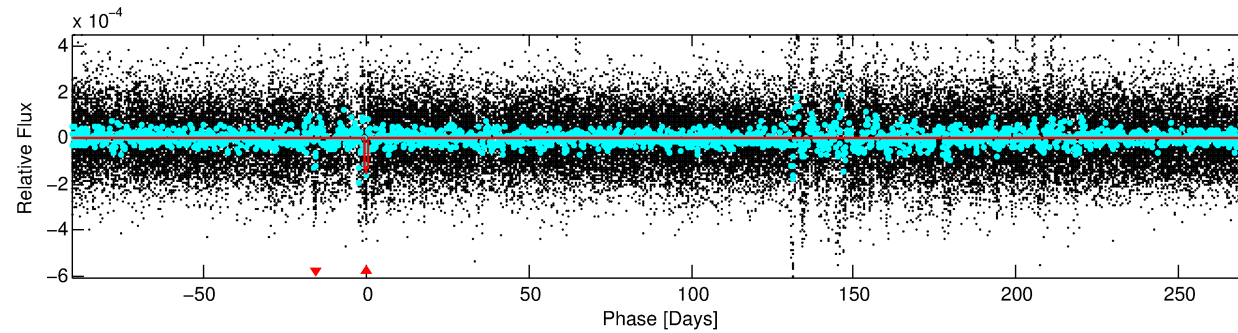
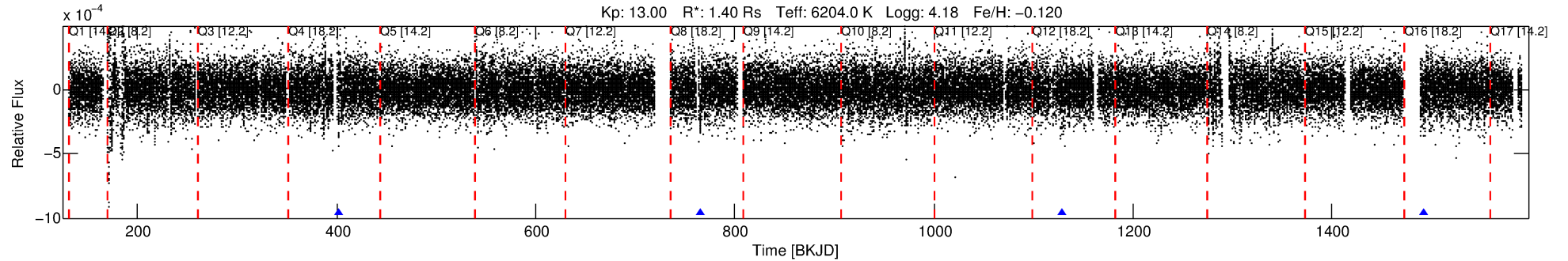
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007757483-01

No Significant Match Found

# DV One-Page Summary

KIC: 7757483 Candidate: 1 of 1 Period: 363.089 d



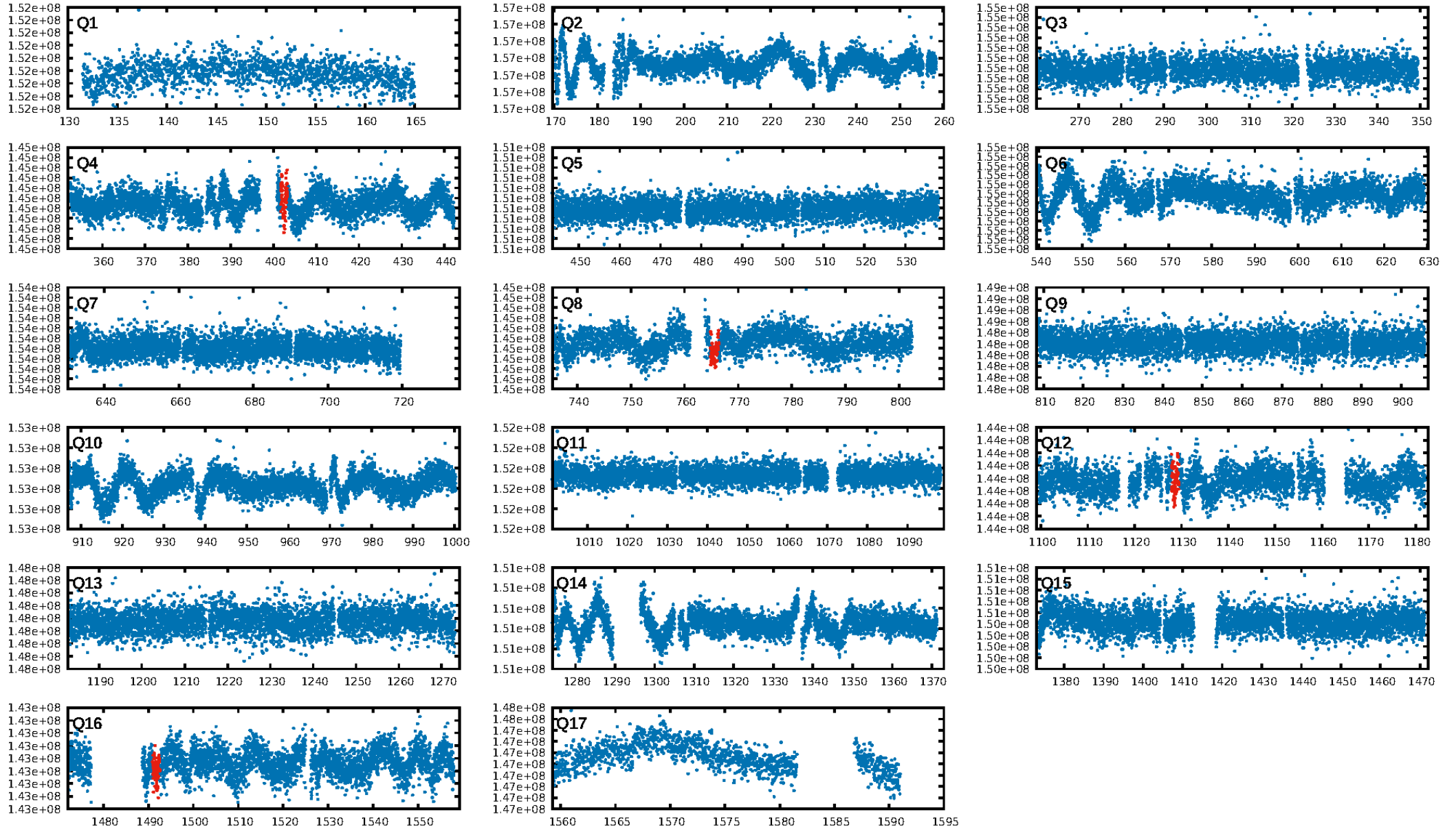
## DV Fit Results:

Period = 363.08858 [0.01035] d  
Epoch = 402.4906 [0.0204] BKJD  
Rp/R\* = 0.0117 [0.0061]  
a/R\* = 120.95 [312.72]  
b = 0.59 [2.84]  
Seff = 2.47 [0.83]  
Teq = 320 [27] K  
Rp = 1.79 [1.01] Re  
a = 1.0255 [0.2083] AU  
Ag = 18306.96 [20278.59] [0.90σ]  
Teffp = 5749 [1536] K [3.53σ]

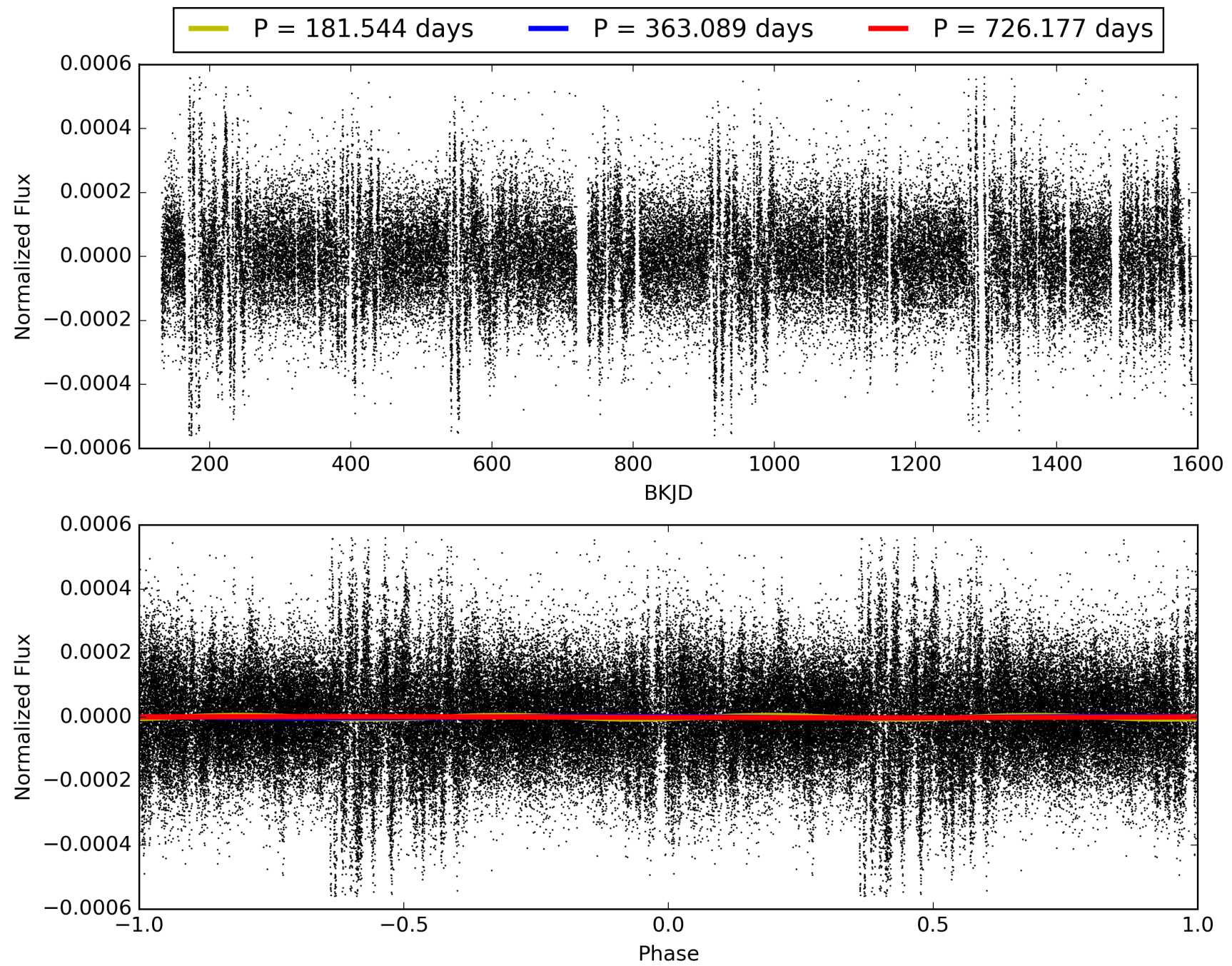
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 30.3%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 5.95e-10**  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: -1.349  
**Centroid-sig: 0.0%**  
Centroid-so: 4.221 arcsec [2.62σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [1/1]

# TCE 007757483-01, PDC Light Curves

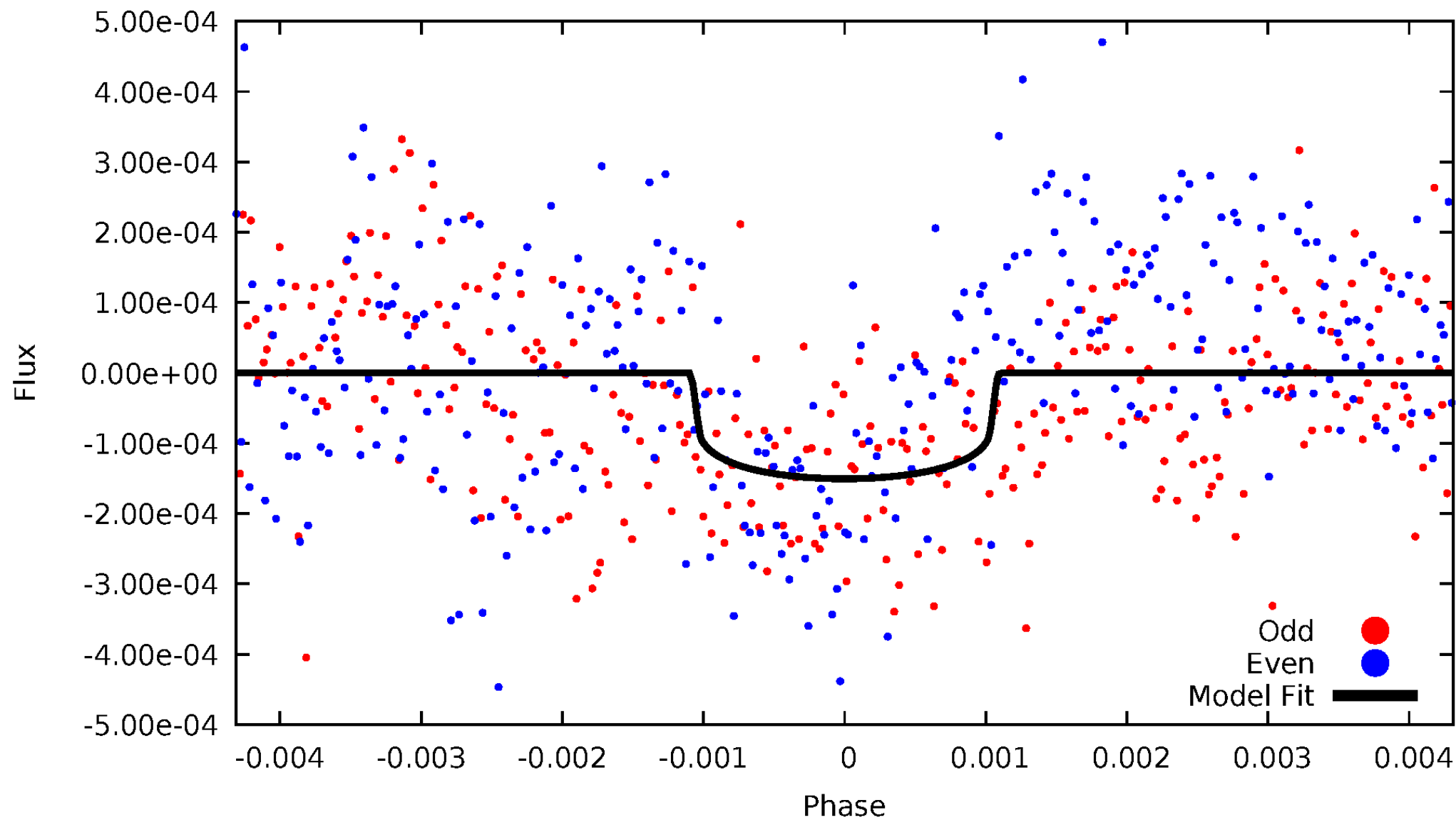


TCE 007757483-01



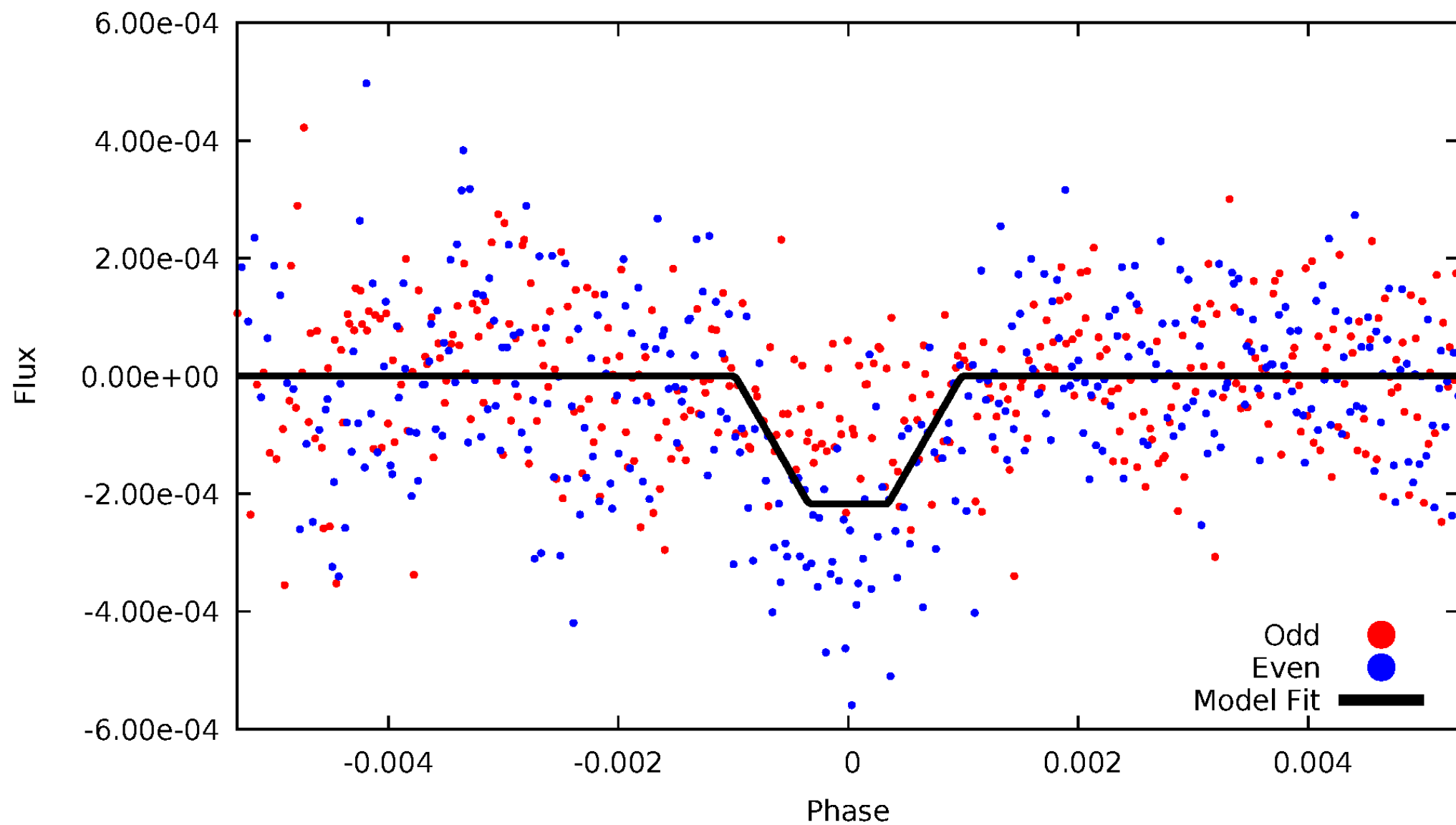
# DV Odd/Even

TCE 007757483-01



# ALT Odd/Even

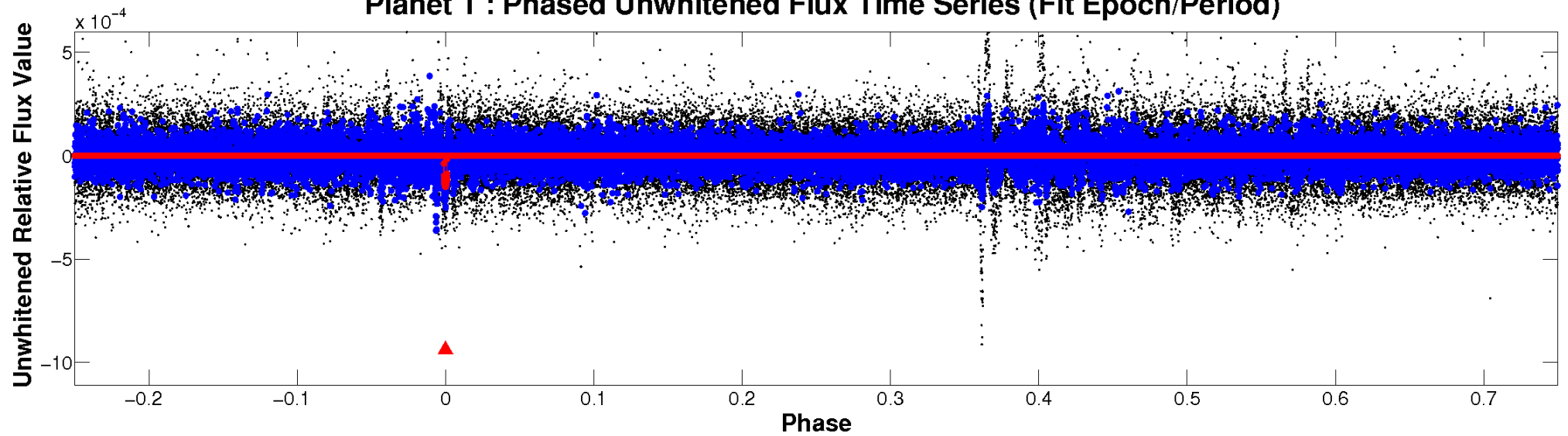
TCE 007757483-01



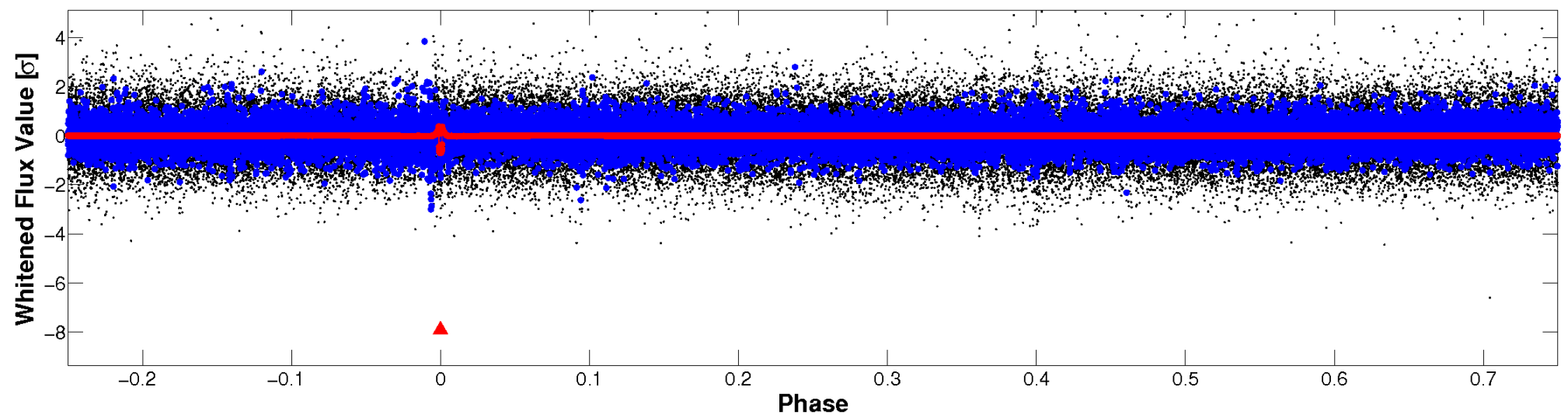


# Non-Whitened Vs. Whitened Light Curve

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

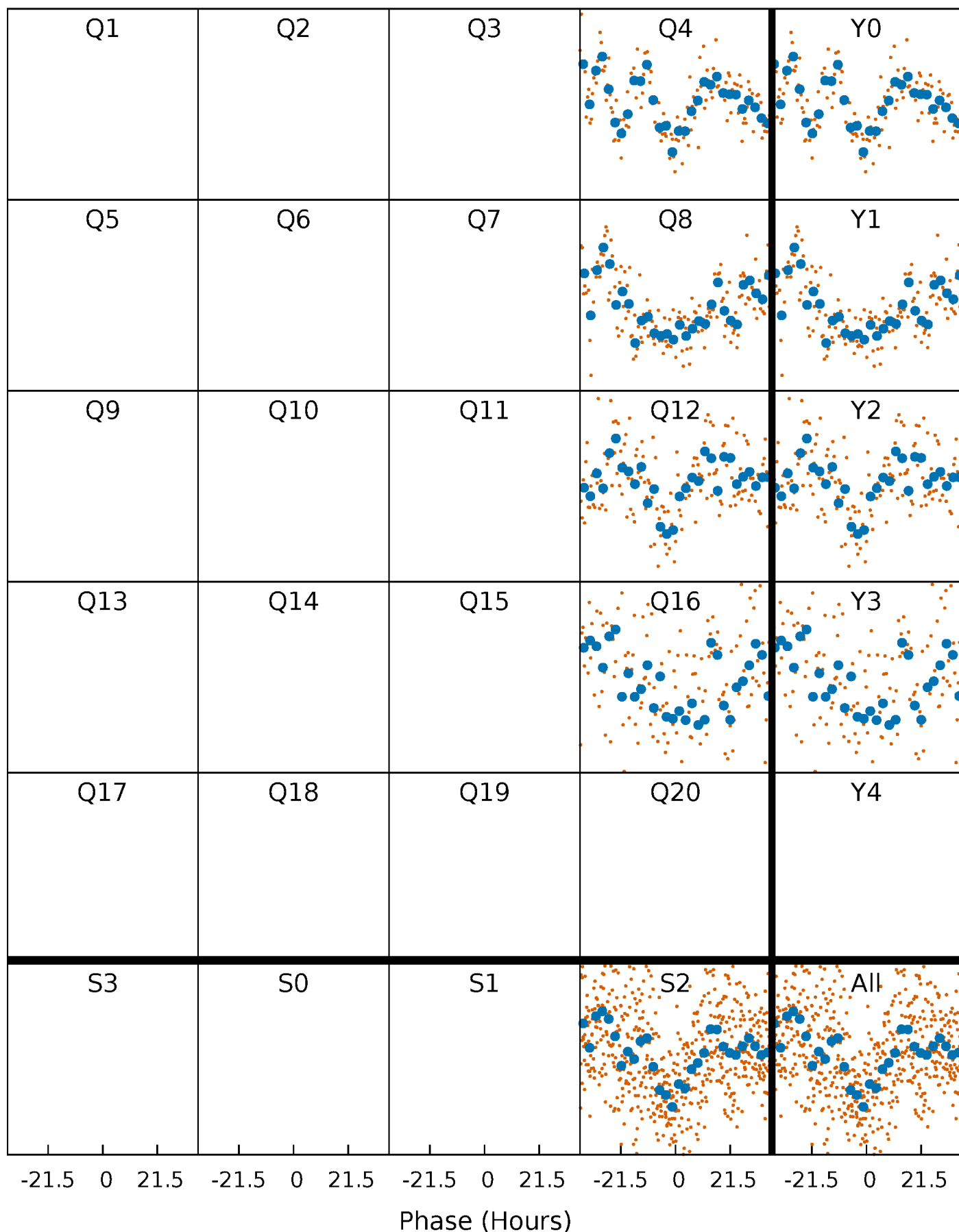


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

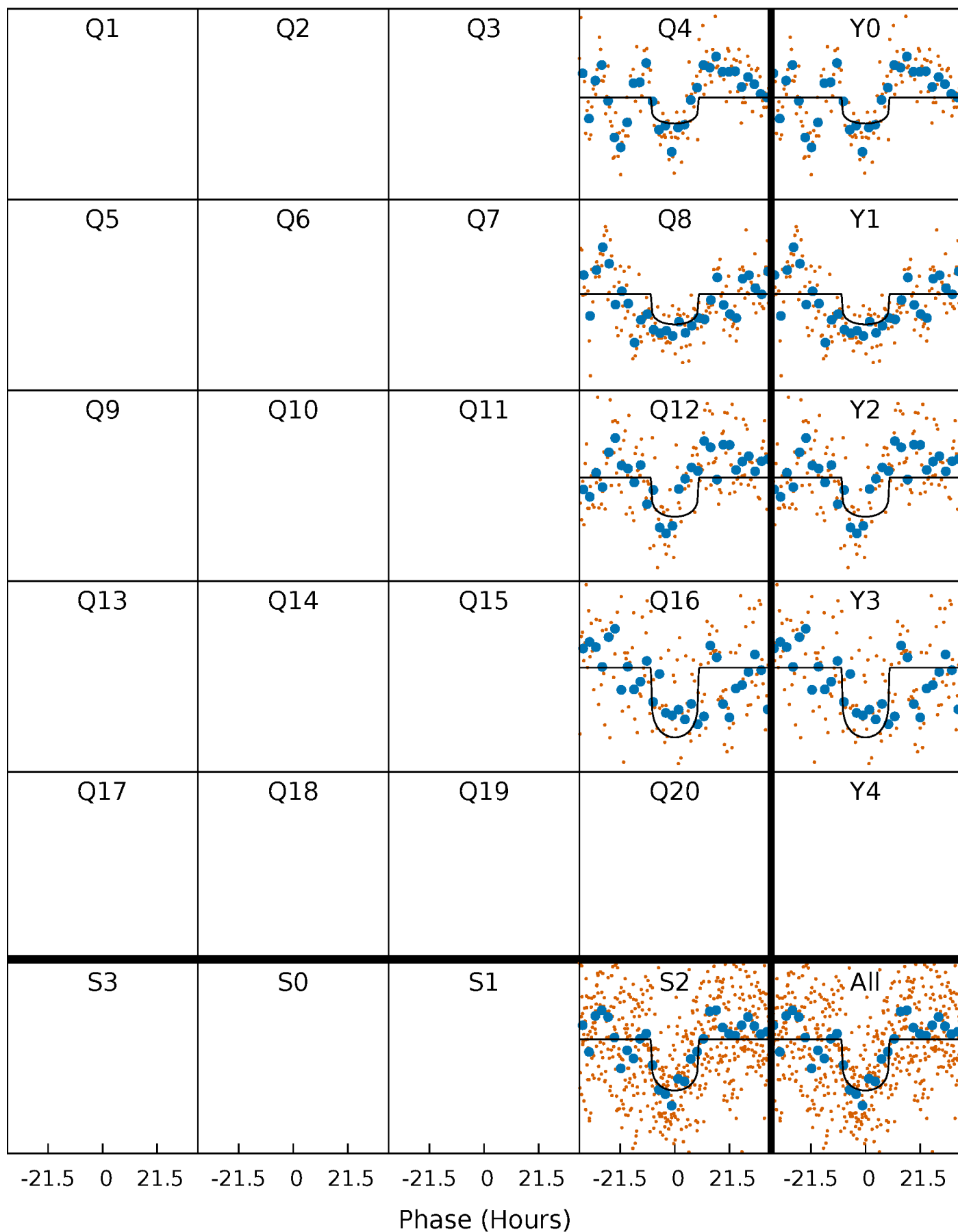
TCE 007757483-01 P=363.088584 Days  $T_0=402.490615$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 007757483-01 P=363.088584 Days  $T_0=402.490615$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

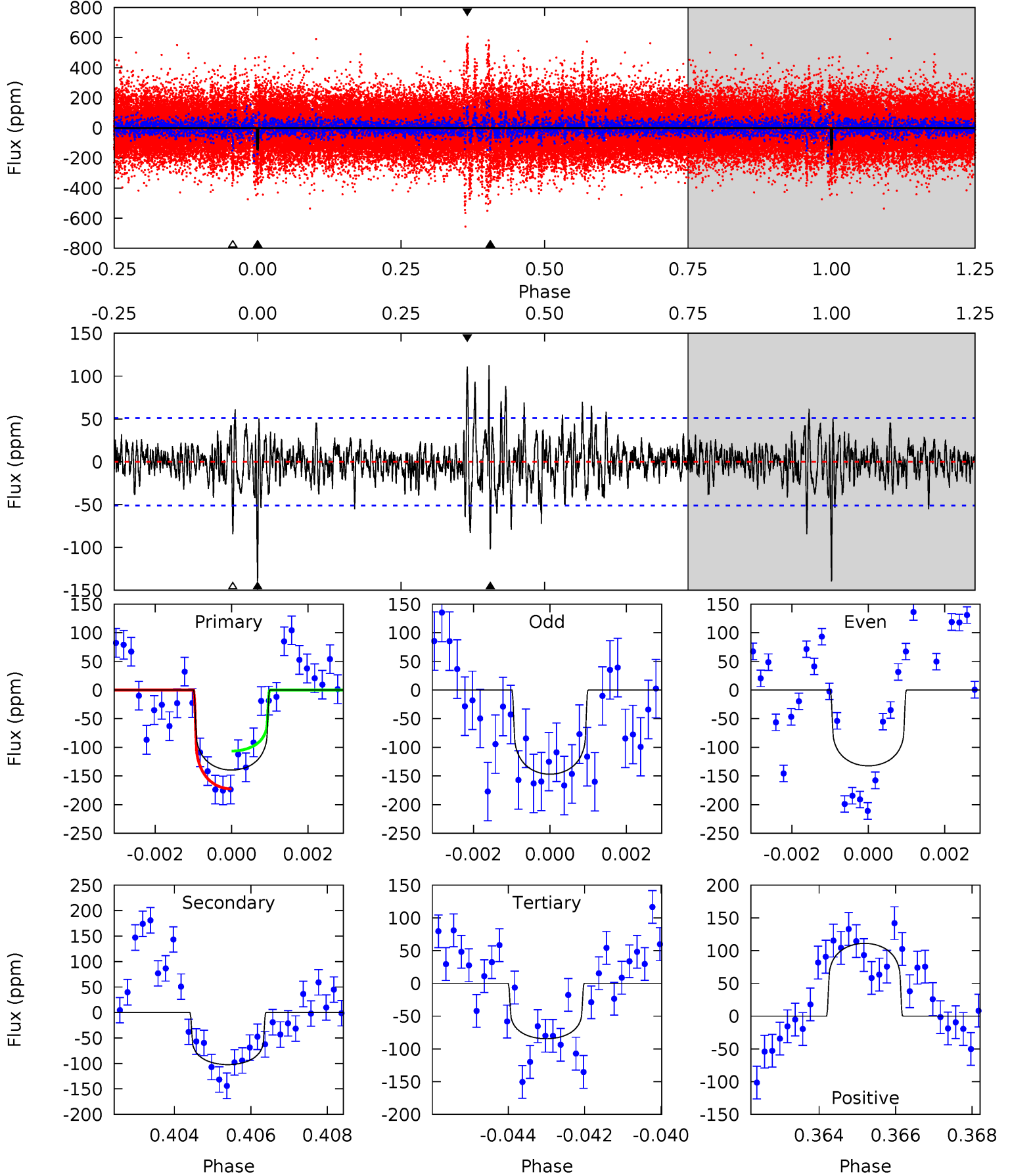
TCE 007757483-01 P=363.077116 Days  $T_0=402.468243$  (BKJD)



# DV Model-Shift Uniqueness Test

007757483-01,  $P = 363.088584$  Days,  $E = 39.402031$  Days

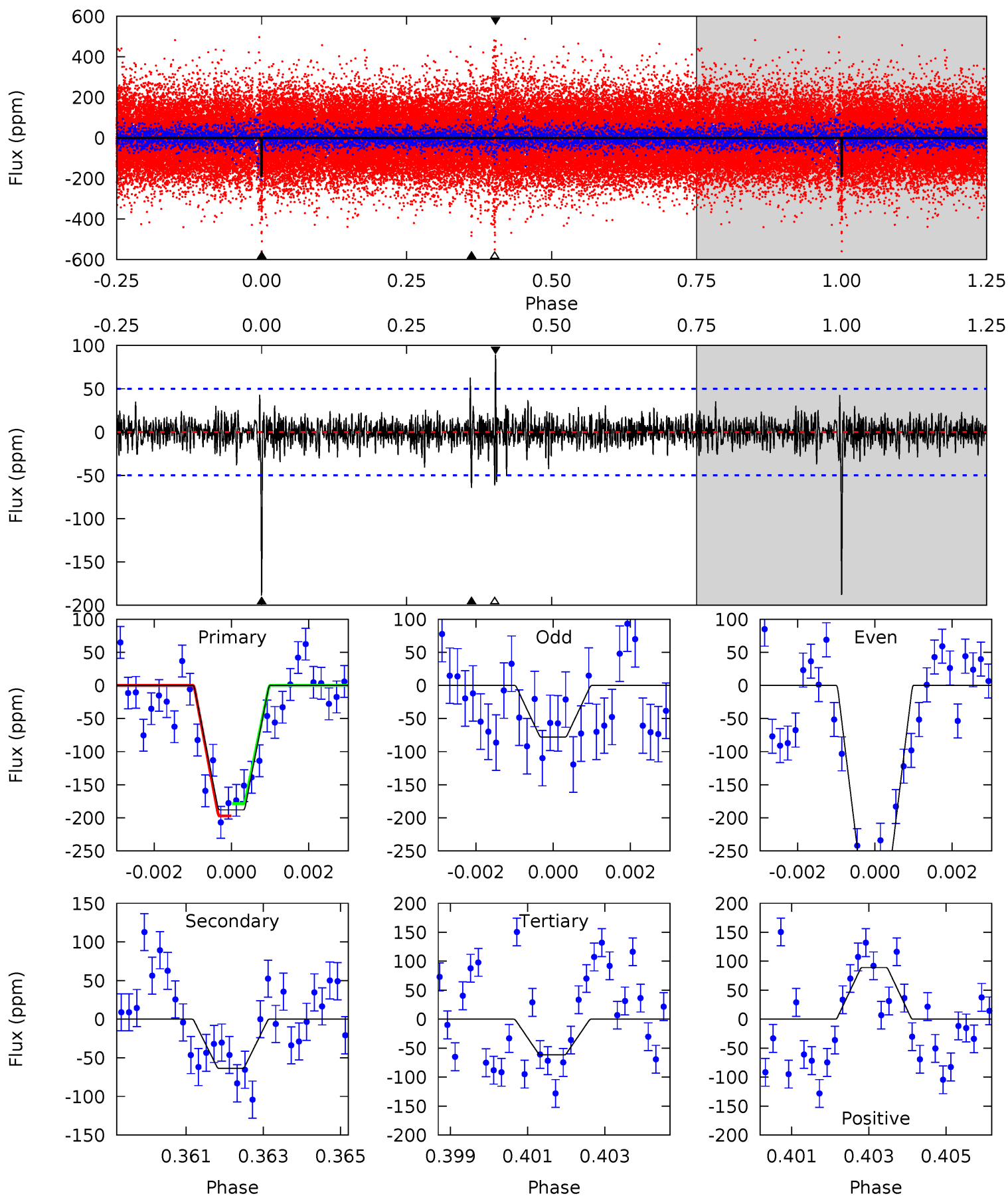
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	10.7	8.80	11.6	5.31	3.06	2.14	5.75	2.98	1.86	-0.91	0.76	1.05	0.45	3.45



# Alt Model-Shift Uniqueness Test

007757483-01, P = 363.077116 Days, E = 39.391127 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
20.1	6.79	6.57	9.51	5.32	3.09	1.22	13.5	10.6	0.22	-2.72	12.0	1.20	0.32	0.98



### Stellar Parameters For KIC 007757483

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6204^{+170}_{-189}$	$4.184^{+0.181}_{-0.132}$	$-0.120^{+0.250}_{-0.300}$	$1.399^{+0.311}_{-0.311}$	$1.090^{+0.167}_{-0.136}$	$0.561^{+0.564}_{-0.226}$
	+3%/-3%	+4%/-3%	+208%/-250%	+22%/-22%	+15%/-12%	+101%/-40%
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 007757483-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	-102±10	$1.81^{+0.95}_{-0.87}$	$444^{+30}_{-28}$	$5707^{+2361}_{-986}$	$18215^{+48151}_{-10669}$
Alt.	-64±9	$2.16^{+0.97}_{-0.93}$	$445^{+26}_{-26}$	$4763^{+1446}_{-658}$	$7889^{+18543}_{-4303}$

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

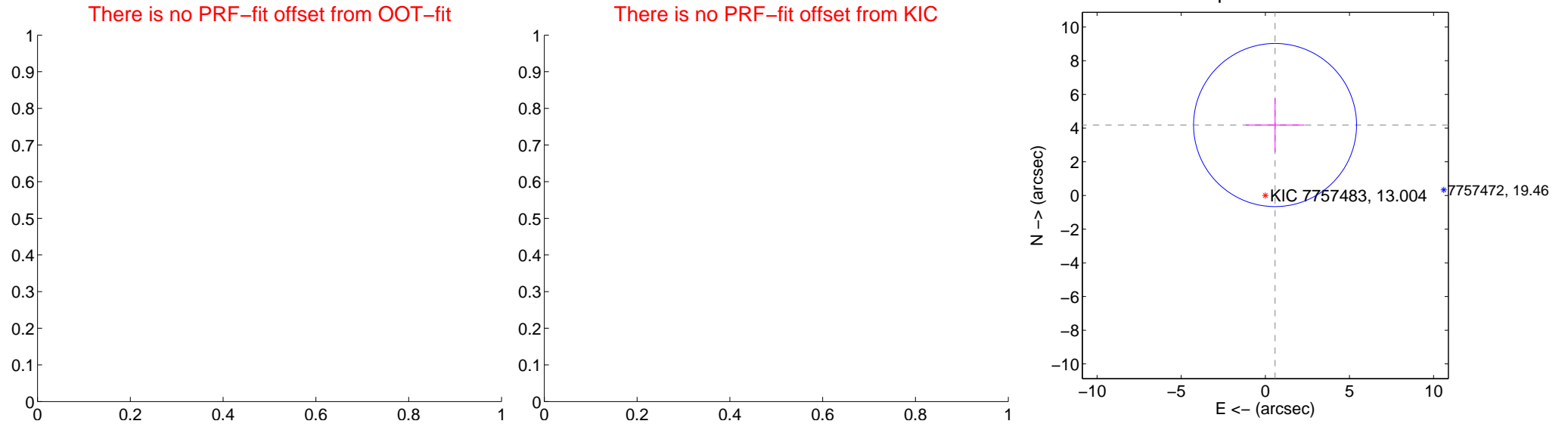
## DV Centroid Data

Supplemental centroid analysis for 007757483-01. Kepler magnitude: 13.00. Transit SNR 8.35

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$4.22 \pm 1.61$	2.62	$-0.58 \pm 1.74$	$4.18 \pm 1.61$



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.



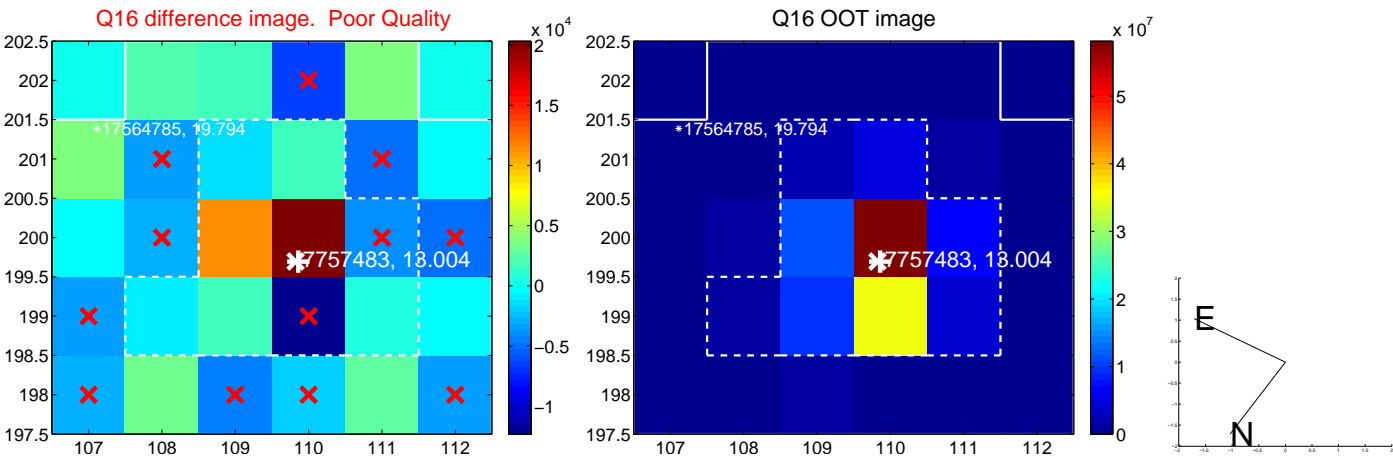
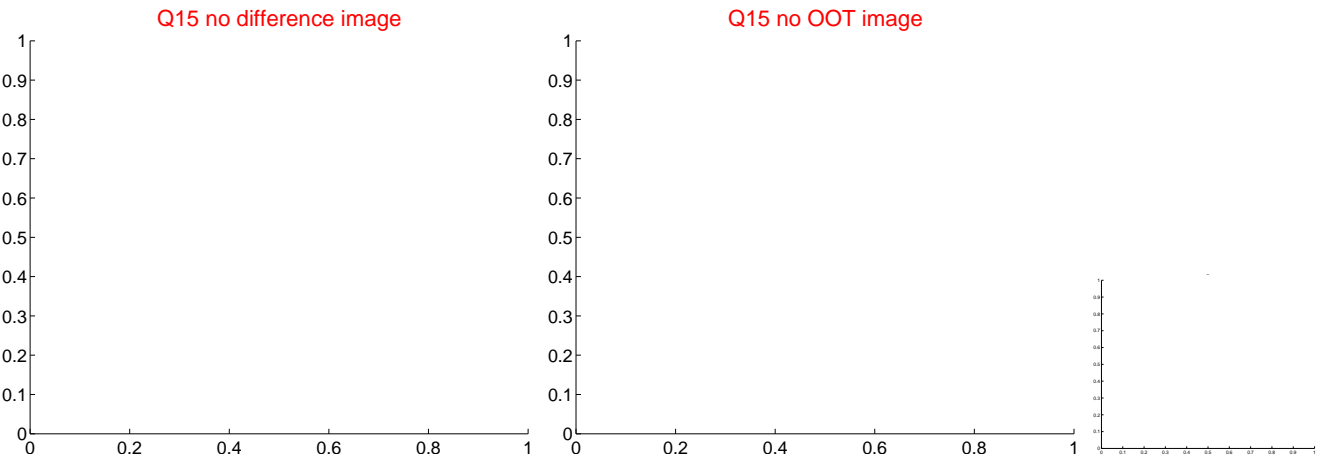
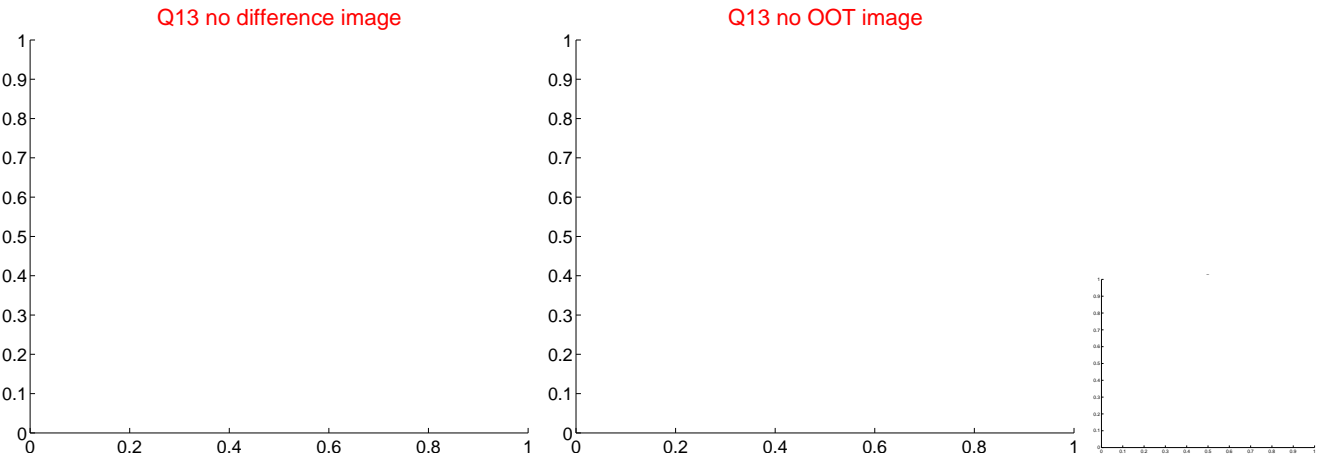
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



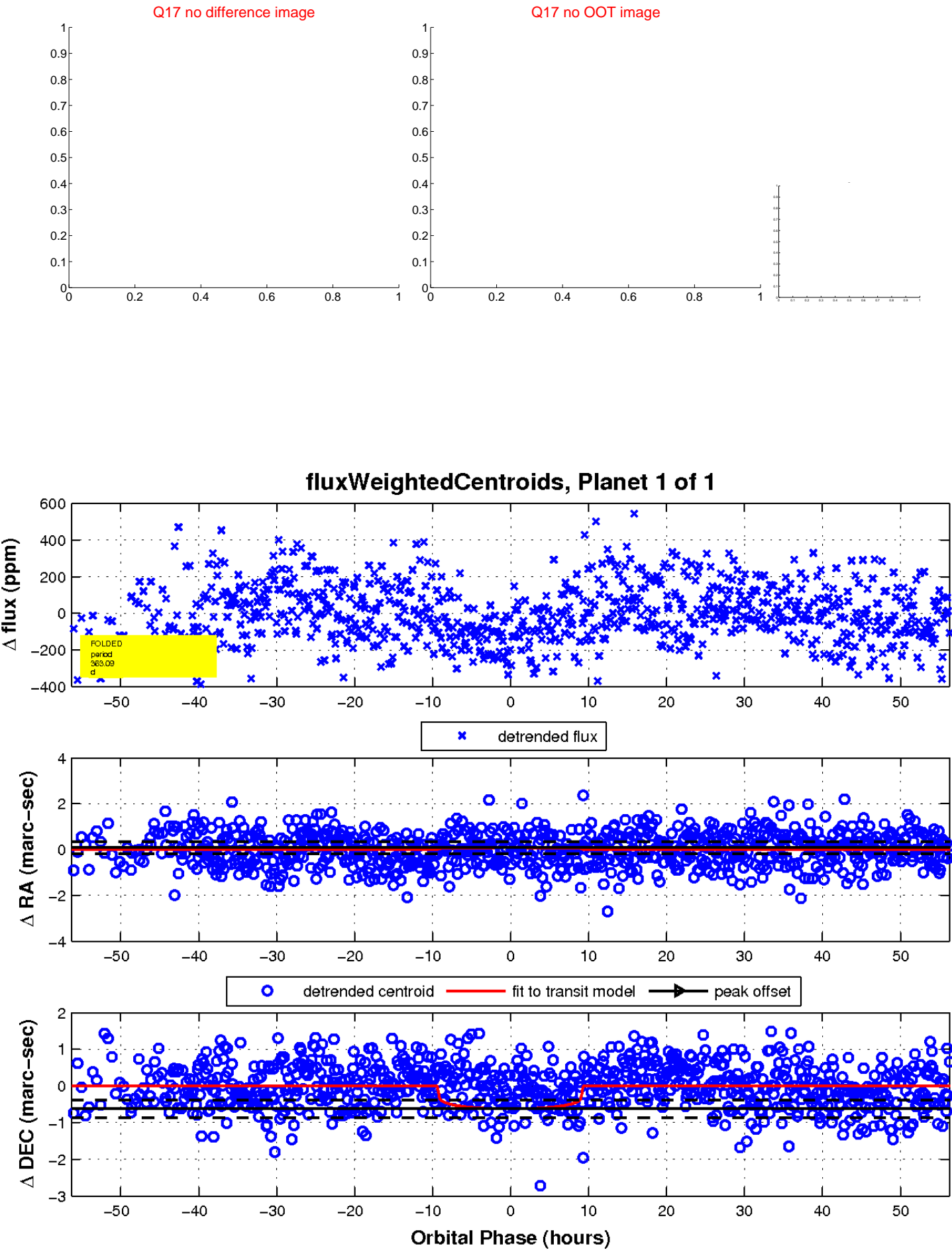
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

