

# KIC 011085850

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011085850-01	OBS	No	336.305029	270.342102	358.5	13.433	8.7	6.2	0.53	3876	1.12	0.10

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011085850-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—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.

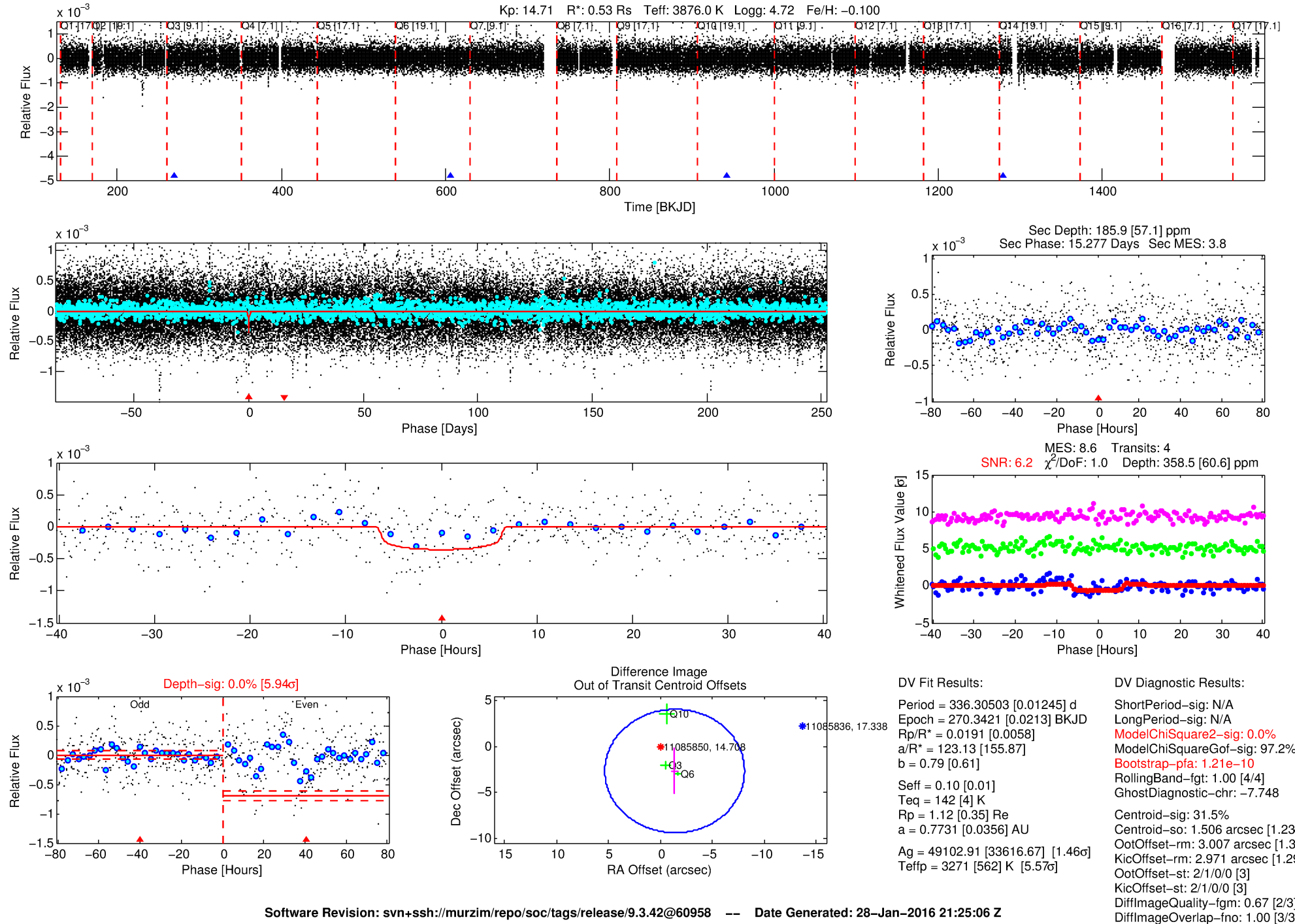
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011085850-01

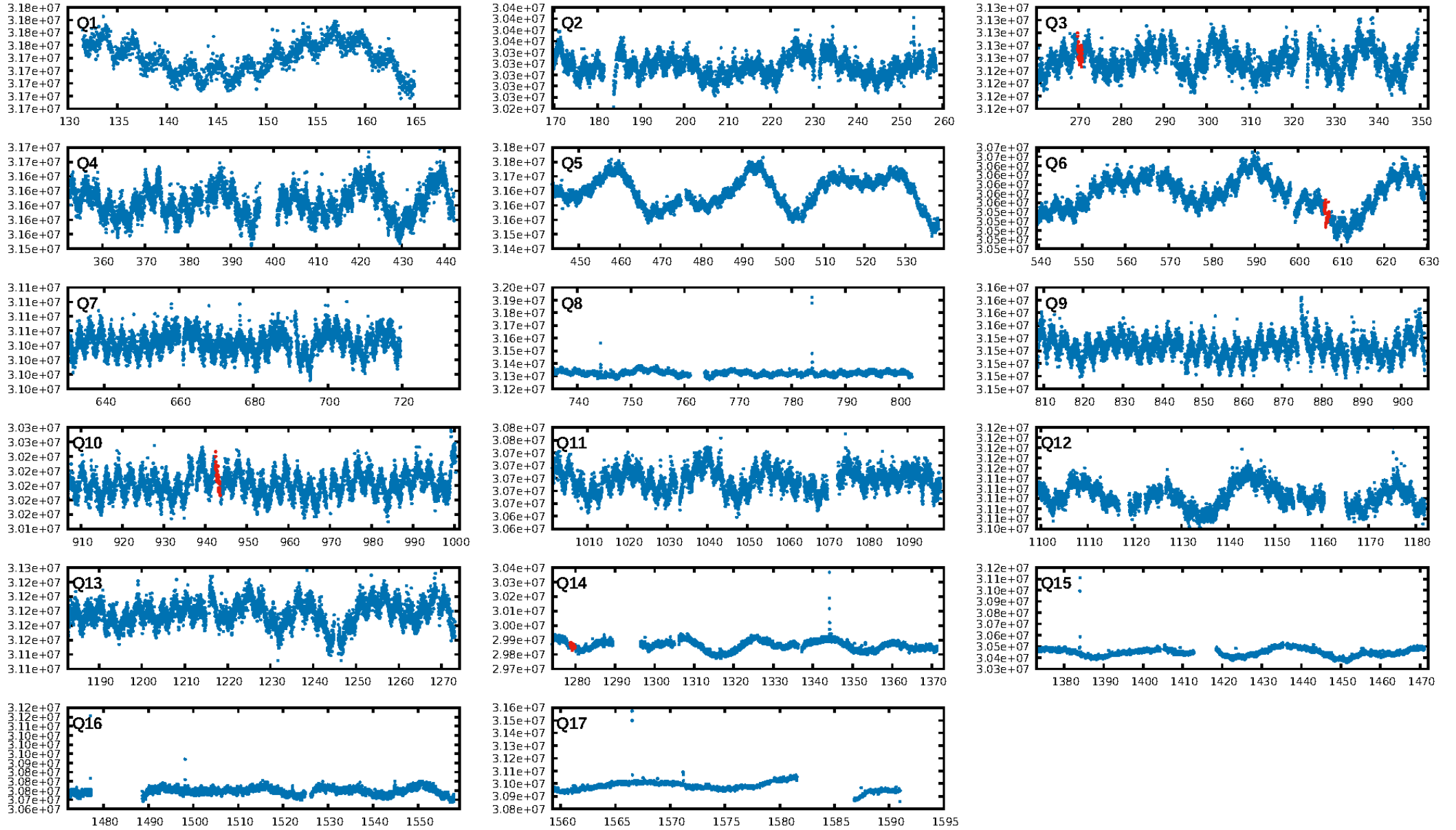
No Significant Match Found

# DV One-Page Summary

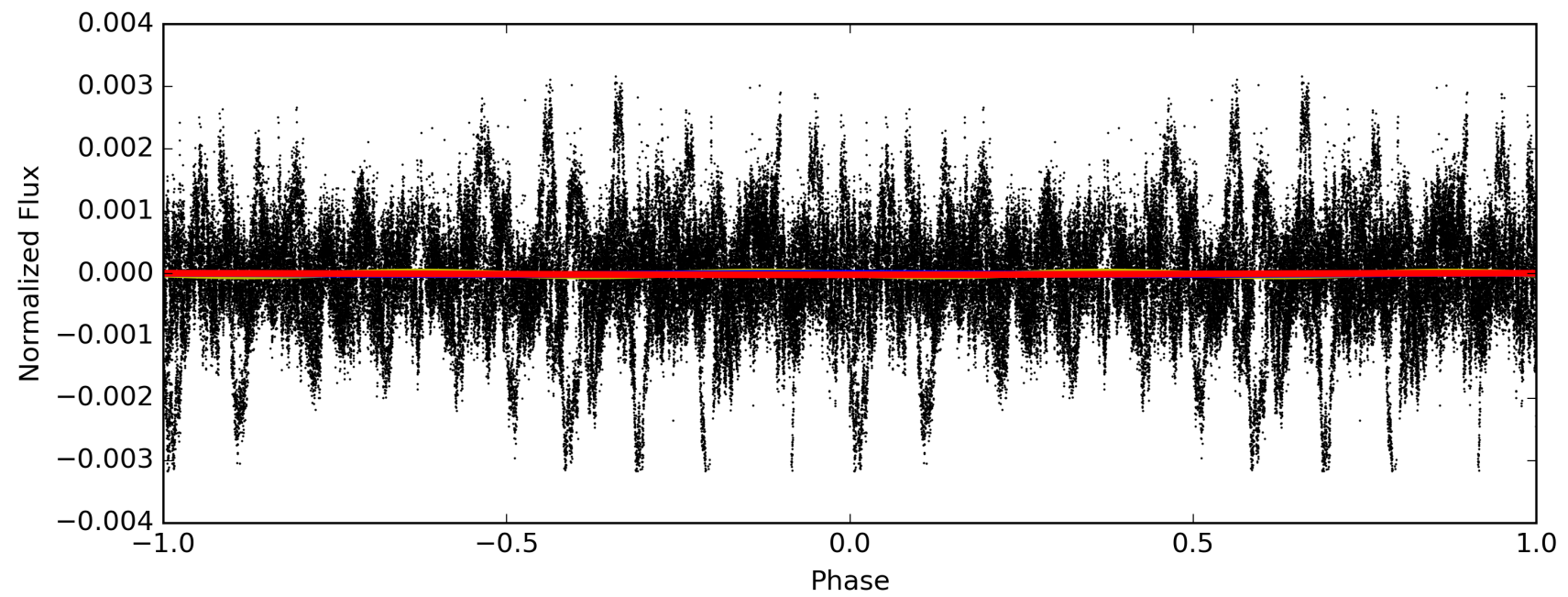
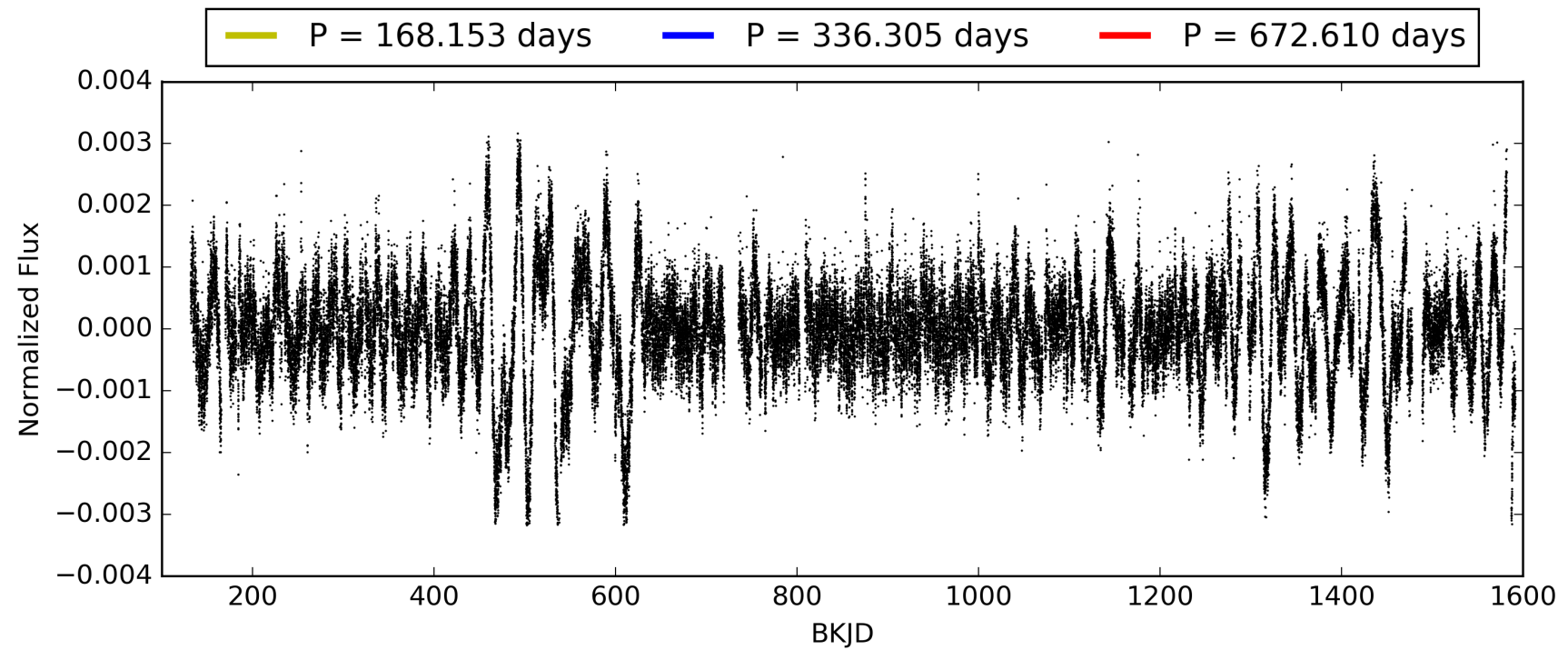
KIC: 11085850 Candidate: 1 of 1 Period: 336.305 d



# TCE 011085850-01, PDC Light Curves

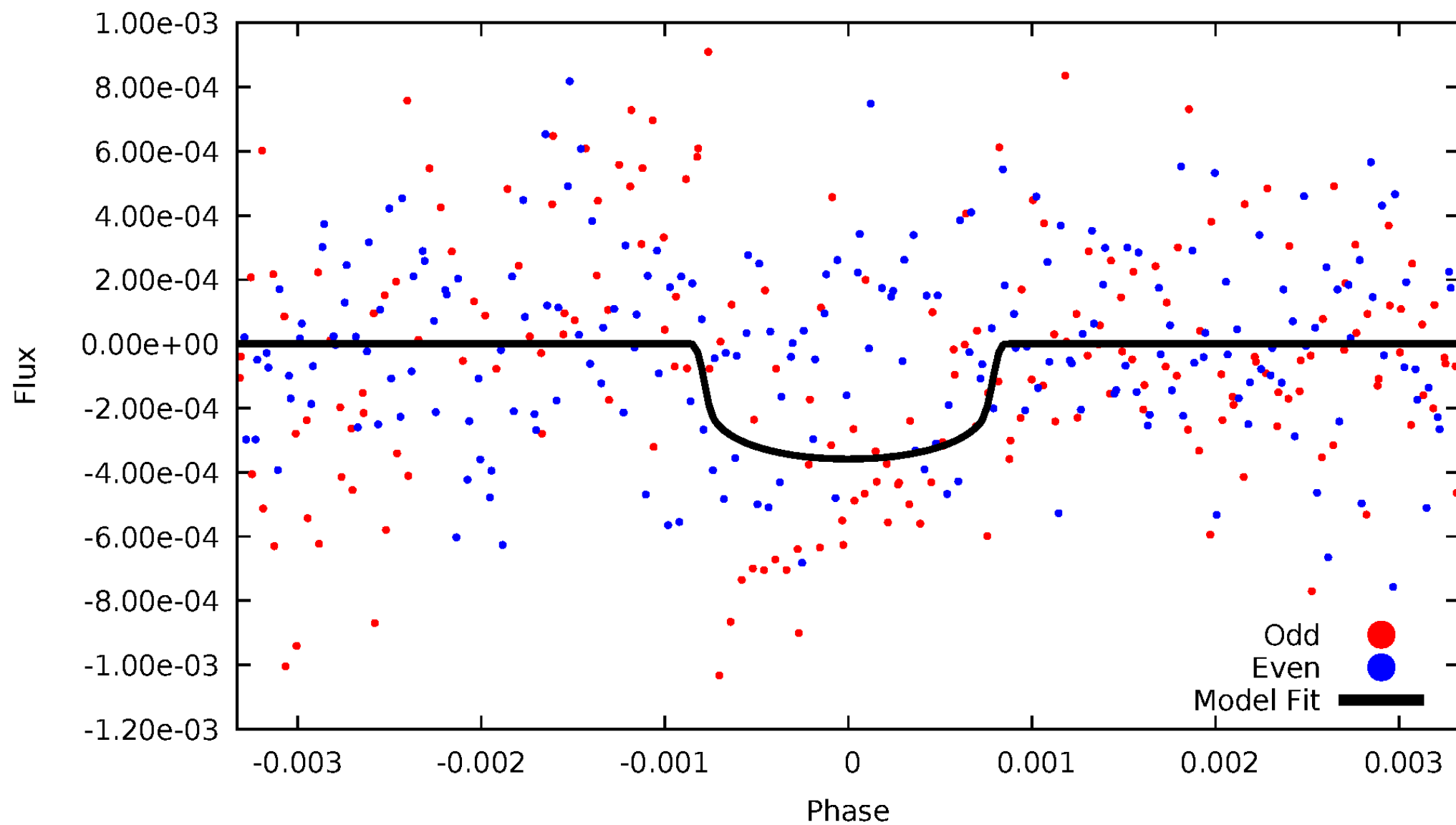


TCE 011085850-01



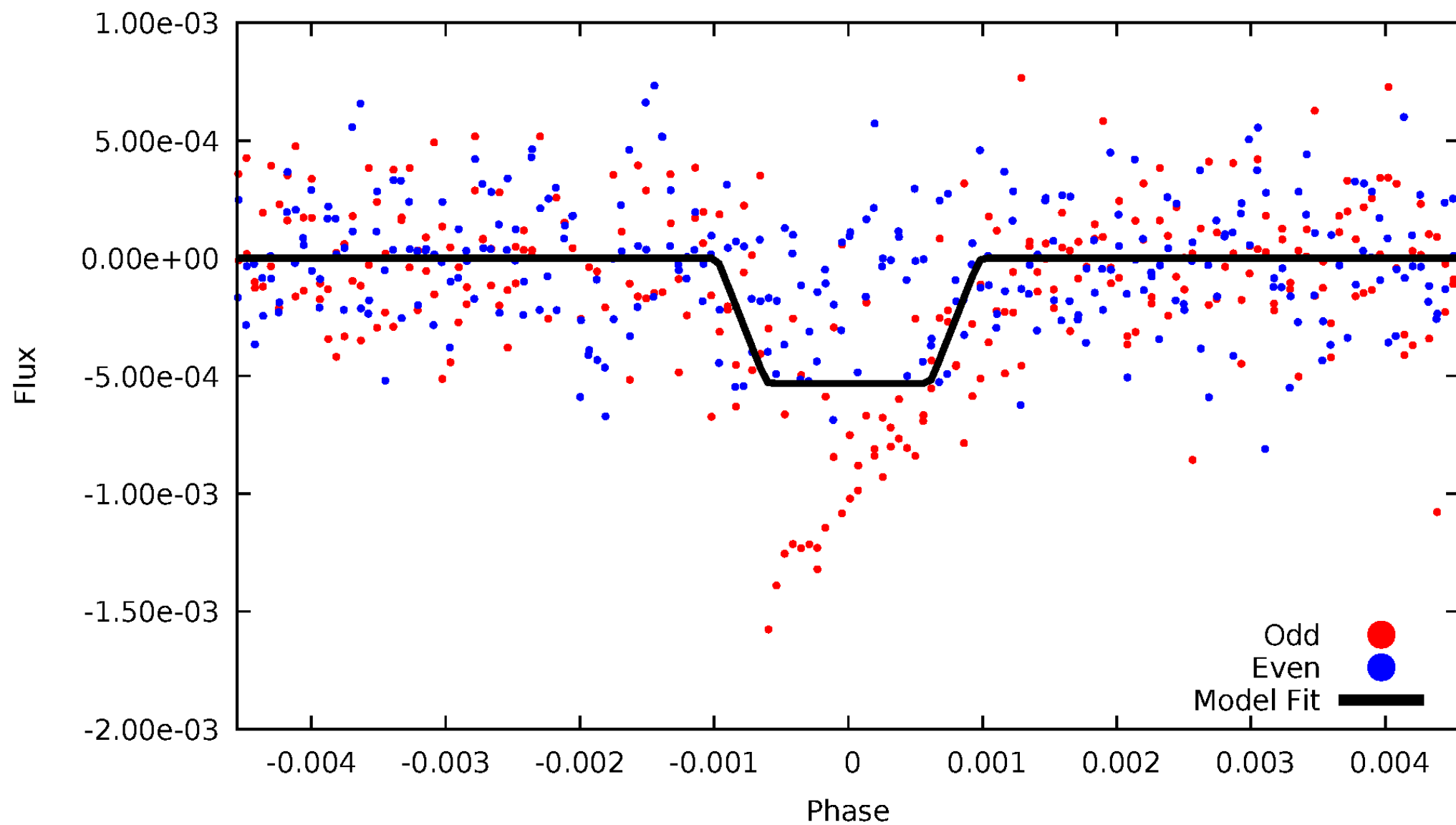
# DV Odd/Even

TCE 011085850-01



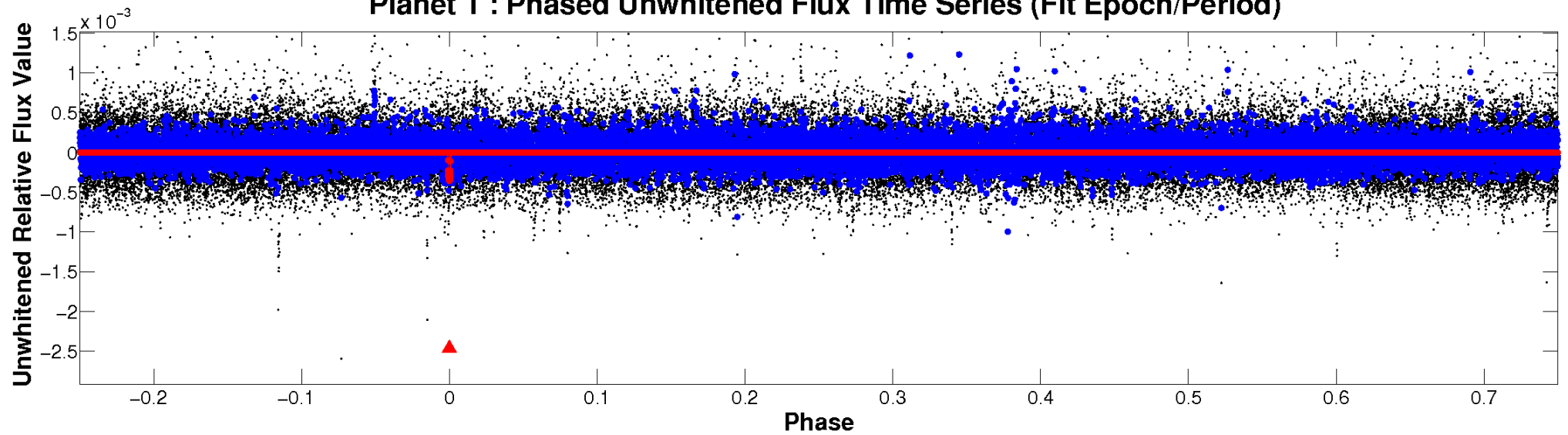
# ALT Odd/Even

TCE 011085850-01

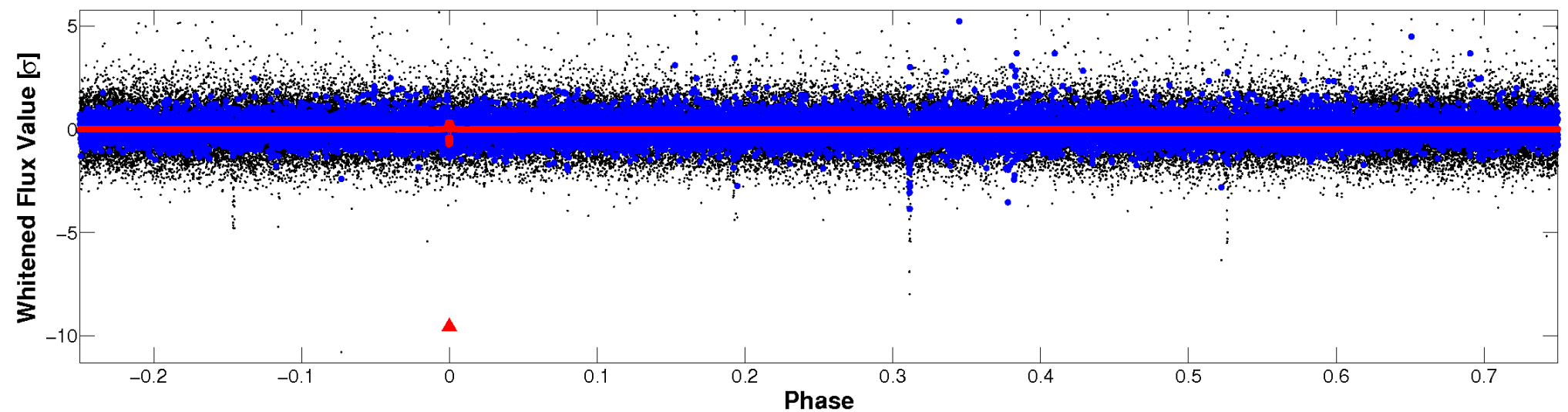


# Non-Whitened Vs. Whitened Light Curve

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

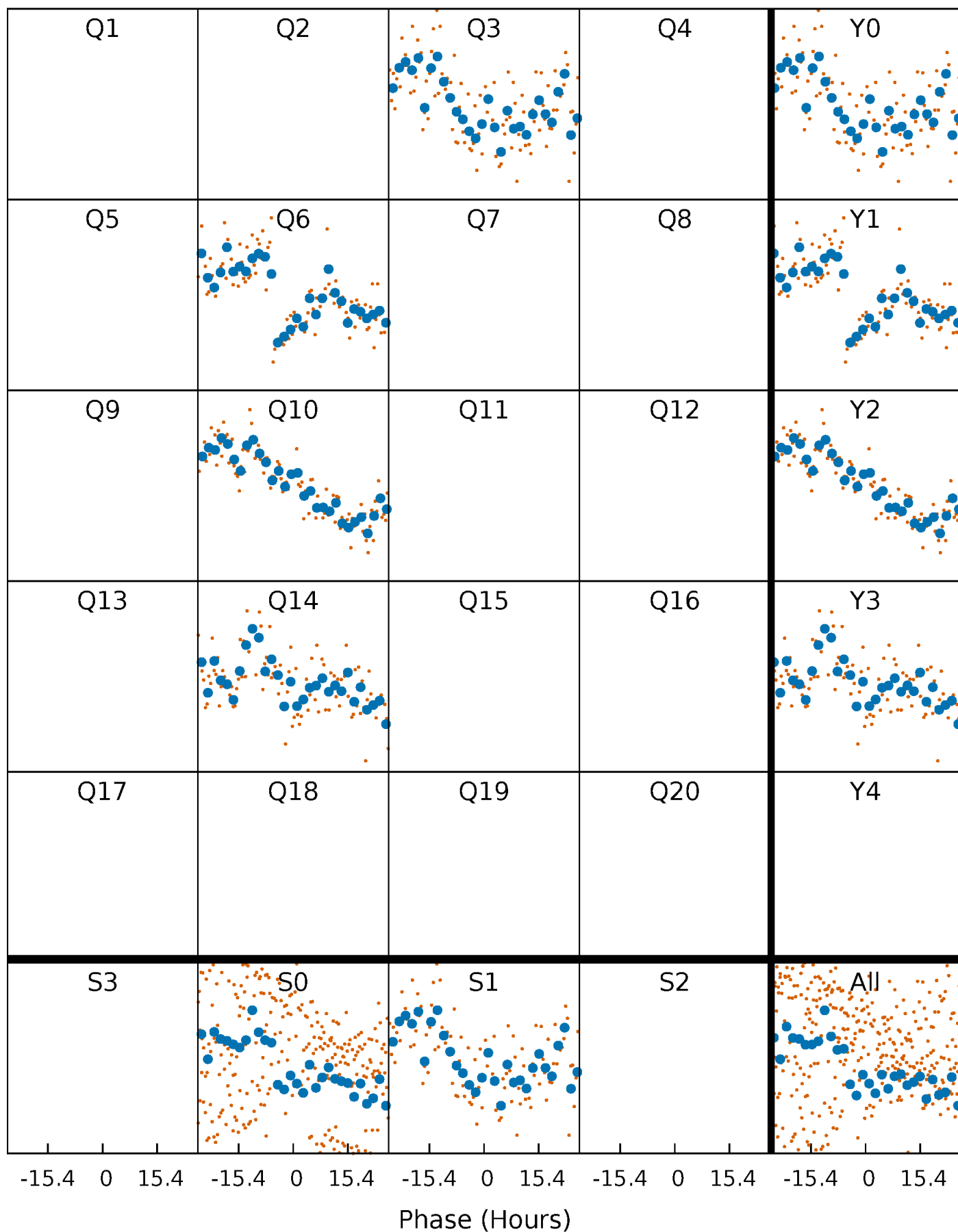


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

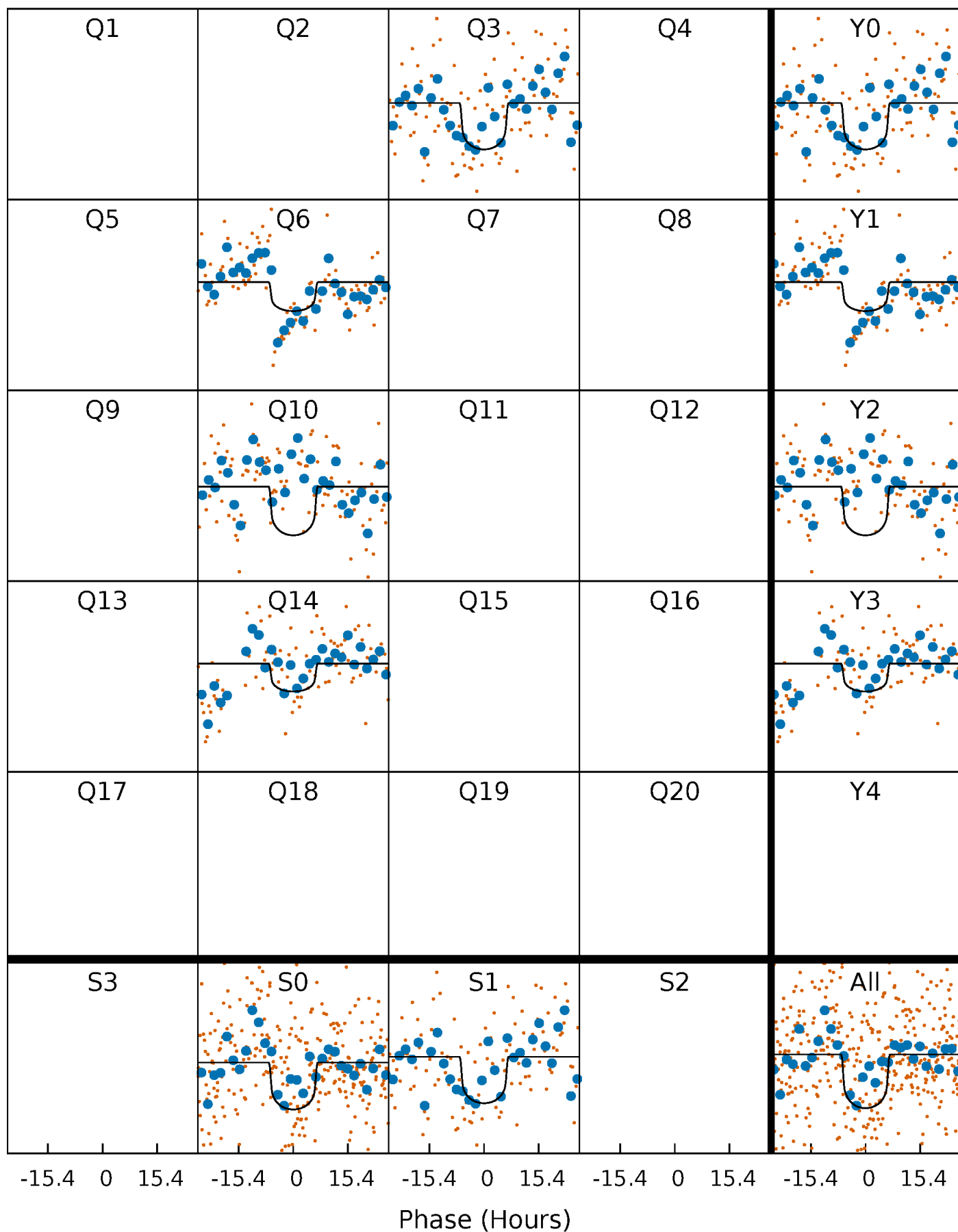
TCE 011085850-01 P=336.305029 Days  $T_0=270.342102$  (BKJD)





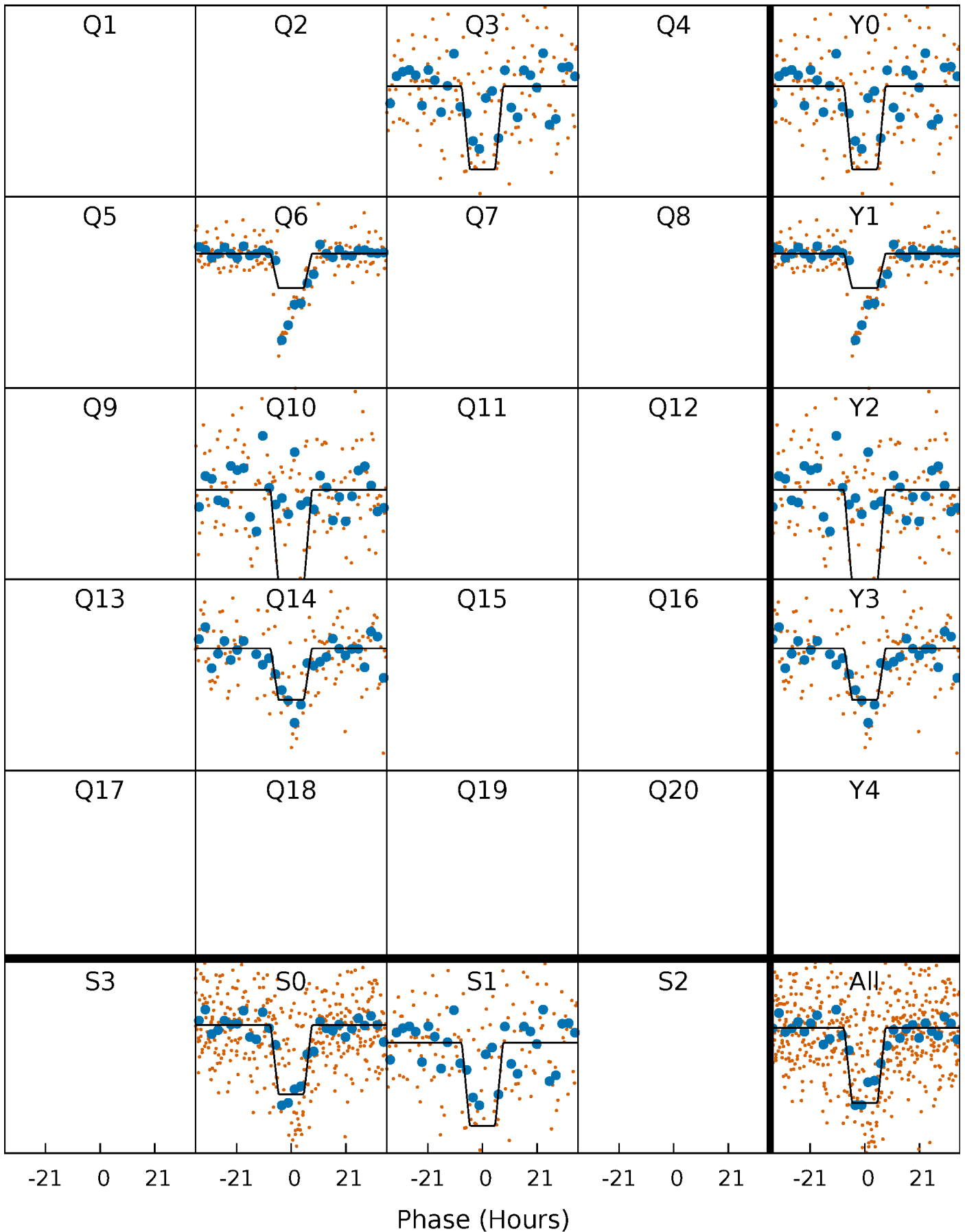
# DV Quarter-Phased Transit Curves

TCE 011085850-01 P=336.305029 Days  $T_0=270.342102$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

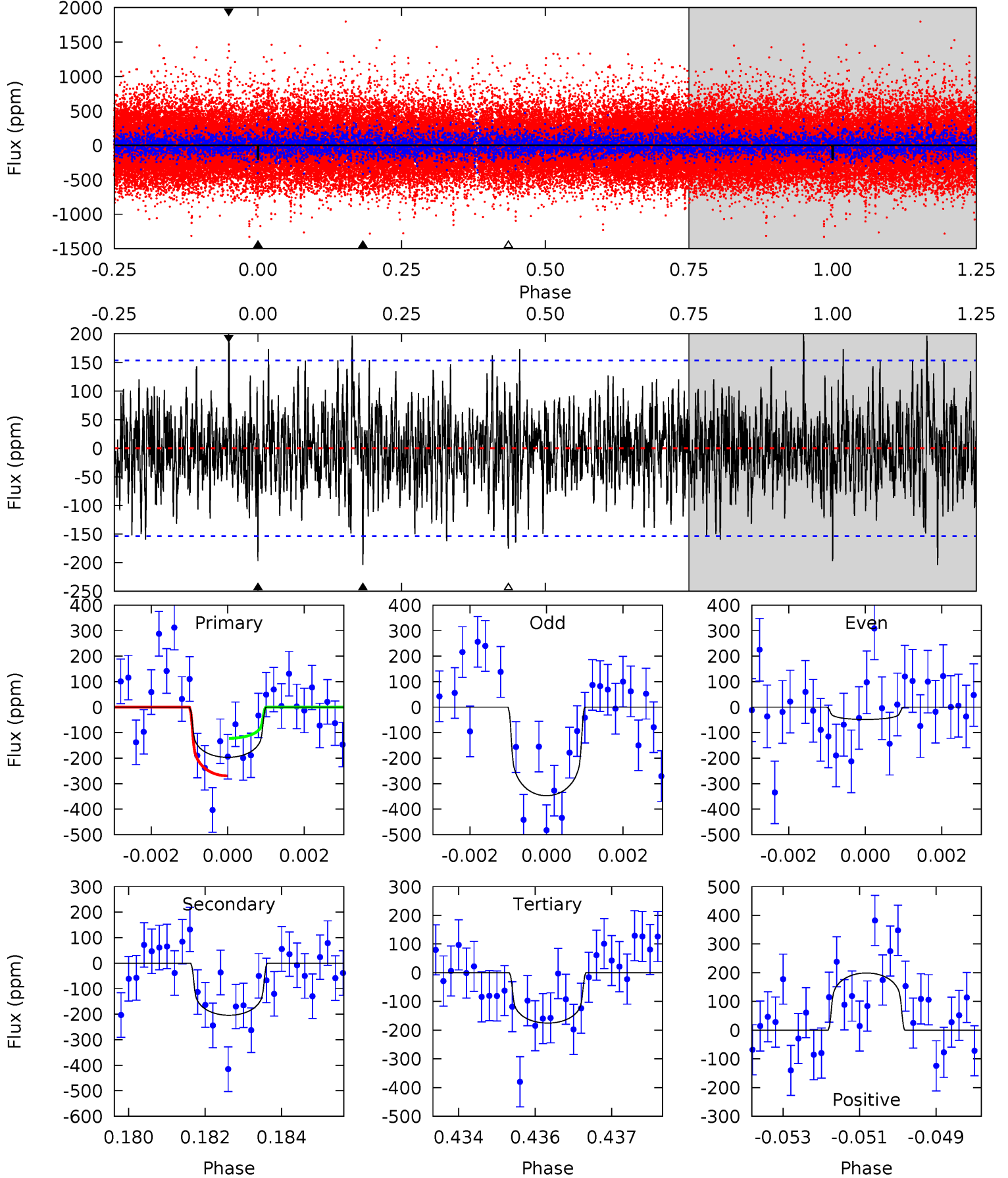
TCE 011085850-01 P=336.315964 Days  $T_0=270.295525$  (BKJD)



# DV Model-Shift Uniqueness Test

011085850-01, P = 336.305029 Days, E = 270.342102 Days

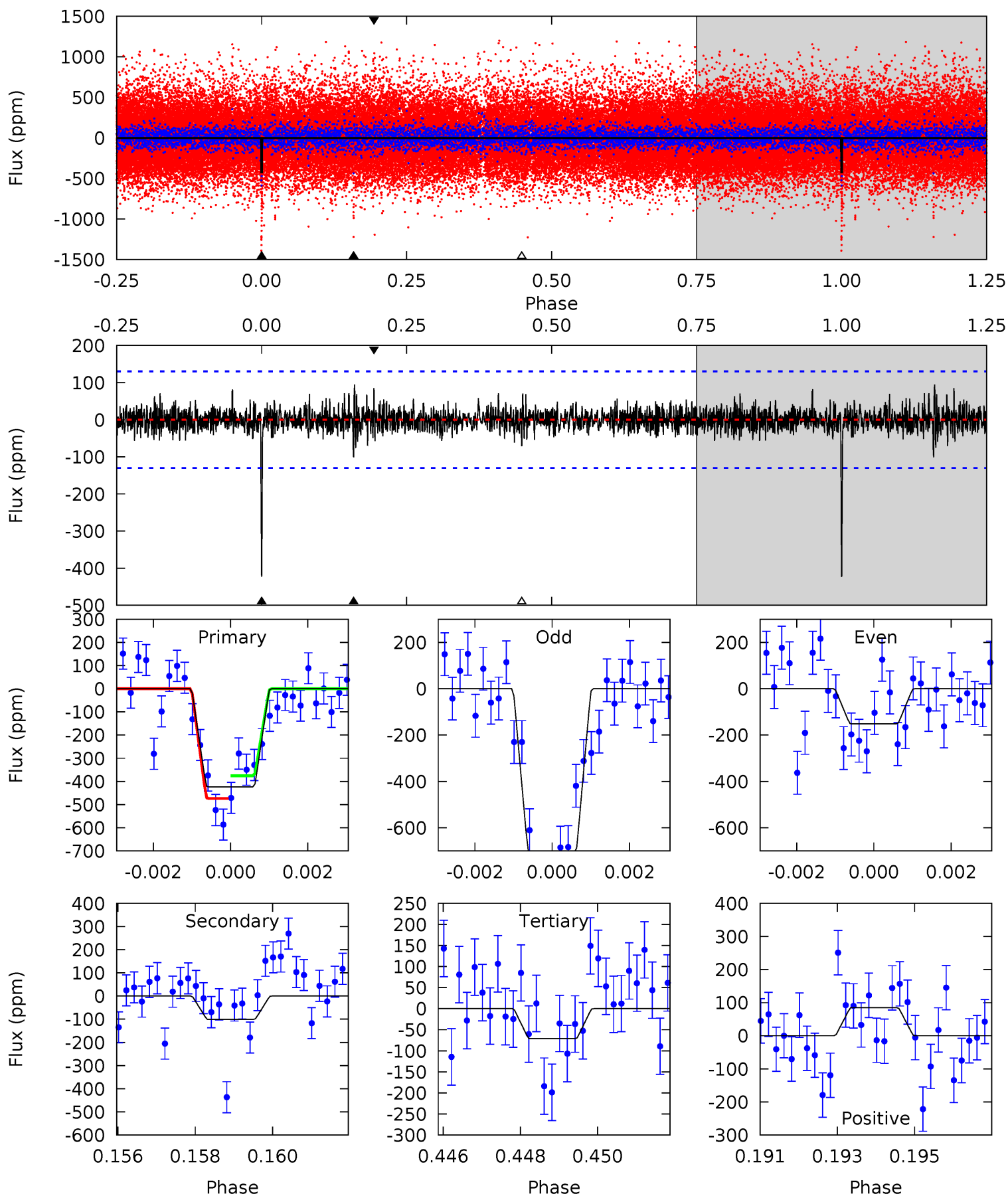
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.87	7.12	6.12	6.95	5.36	3.14	1.89	0.75	-0.08	1.00	0.17	5.02	0.98	0.49	2.57



# Alt Model-Shift Uniqueness Test

011085850-01, P = 336.315964 Days, E = 270.295525 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
17.4	4.14	2.93	3.48	5.33	3.10	0.85	14.4	13.9	1.21	0.65	11.4	1.08	0.18	2.01



### Stellar Parameters For KIC 011085850

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$3876^{+77}_{-85}$	$4.719^{+0.030}_{-0.022}$	$-0.100^{+0.100}_{-0.100}$	$0.534^{+0.027}_{-0.032}$	$0.544^{+0.028}_{-0.031}$	$5.041^{+0.682}_{-0.497}$
	+2%/-2%	+1%/-0%	+100%/-100%	+5%/-6%	+5%/-6%	+14%/-10%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 011085850-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-204 \pm 29$	$1.12^{+0.33}_{-0.35}$	$198^{+4}_{-5}$	$3493^{+495}_{-275}$	$52263^{+63095}_{-21142}$
Alt.	$-101 \pm 24$	$1.35^{+0.33}_{-0.31}$	$198^{+5}_{-5}$	$2982^{+265}_{-211}$	$18663^{+13539}_{-7849}$

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

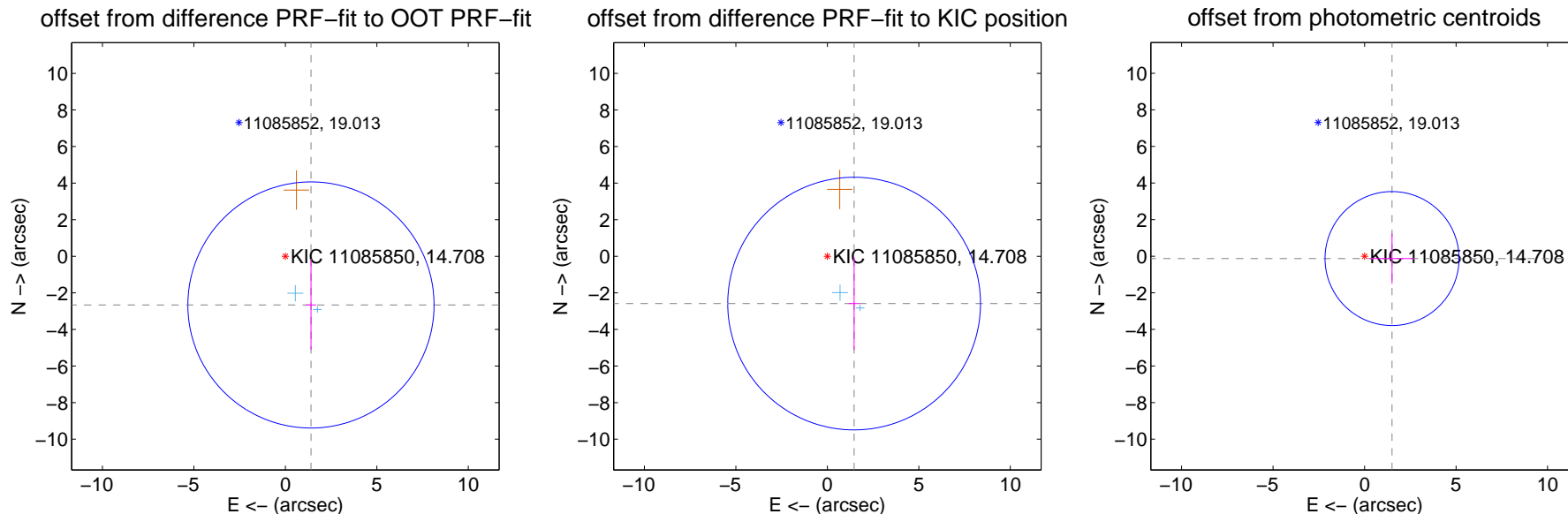
## DV Centroid Data

Supplemental centroid analysis for 011085850-01. Kepler magnitude: 14.71. Transit SNR 6.22

There are 2 quarters with good PRF difference image offsets

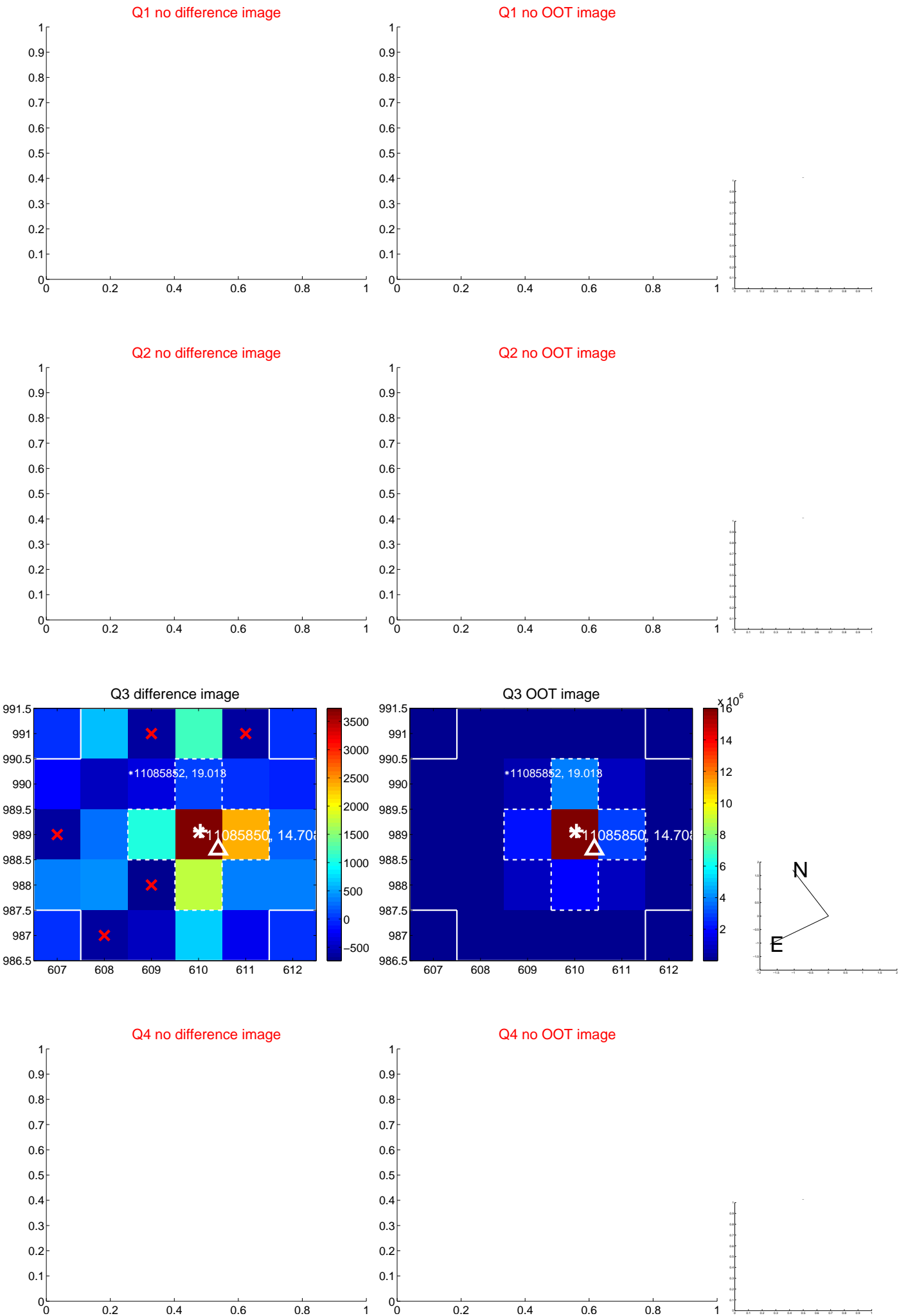
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.007 \pm 2.242$	1.34	$-1.399 \pm 0.286$	$-2.661 \pm 2.442$
PRF-fit source offset from KIC position	$2.971 \pm 2.302$	1.29	$-1.463 \pm 0.298$	$-2.586 \pm 2.530$
photometric centroid source offset	$1.51 \pm 1.22$	1.23	$-1.50 \pm 1.22$	$-0.13 \pm 1.38$

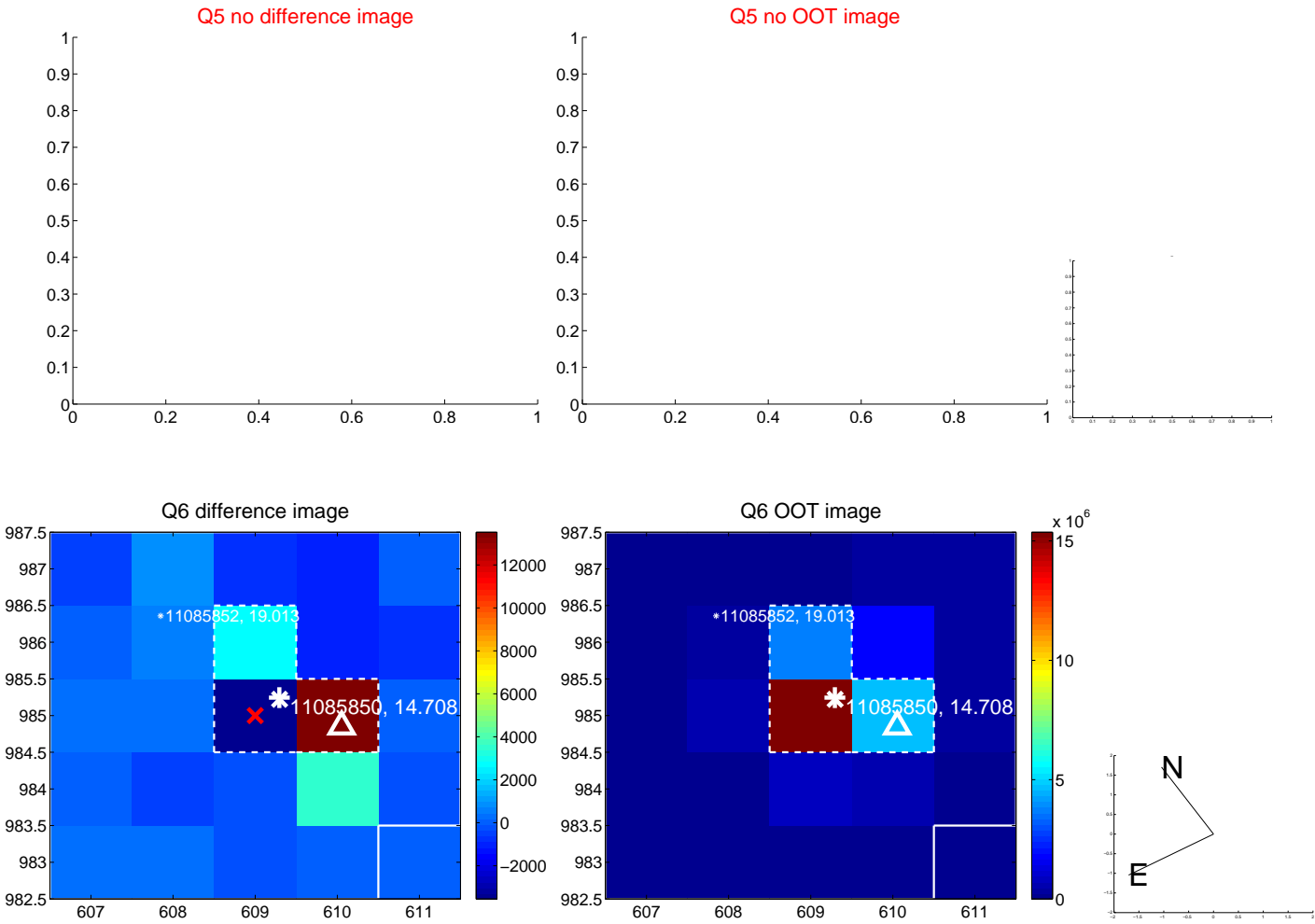


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

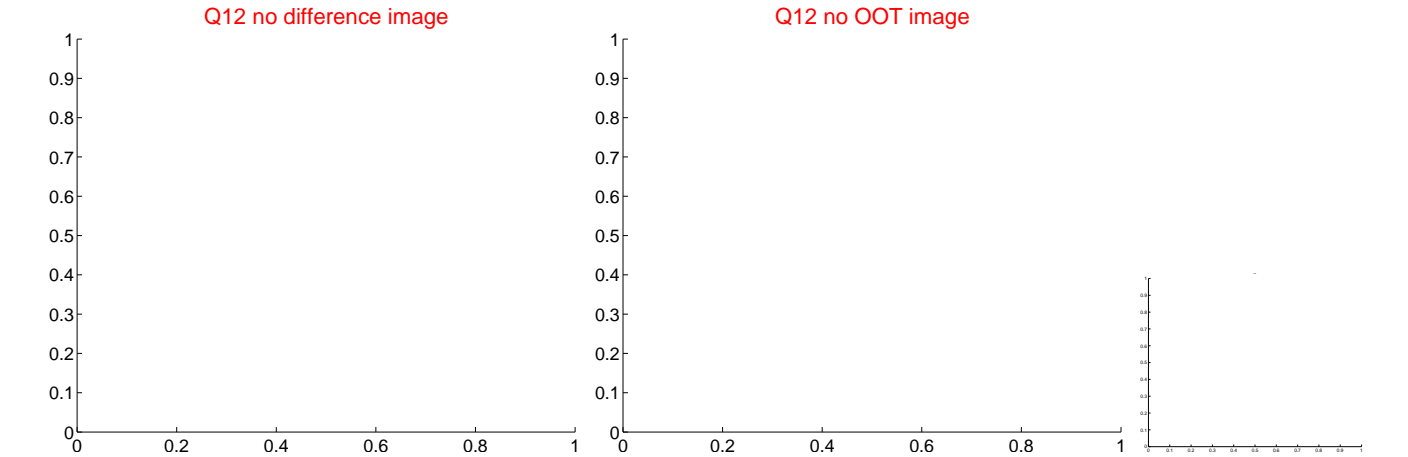
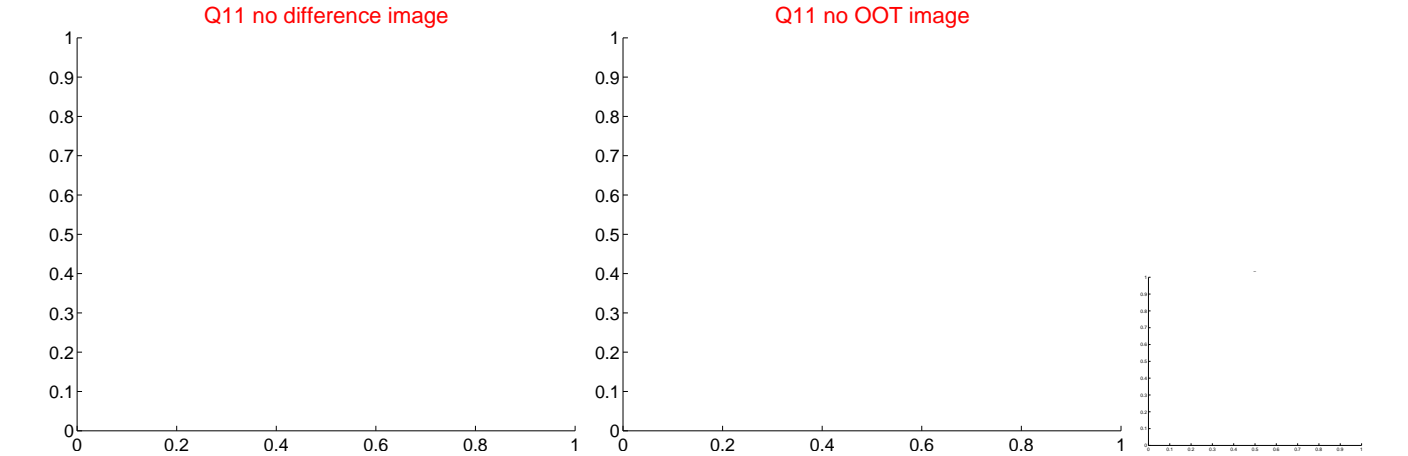
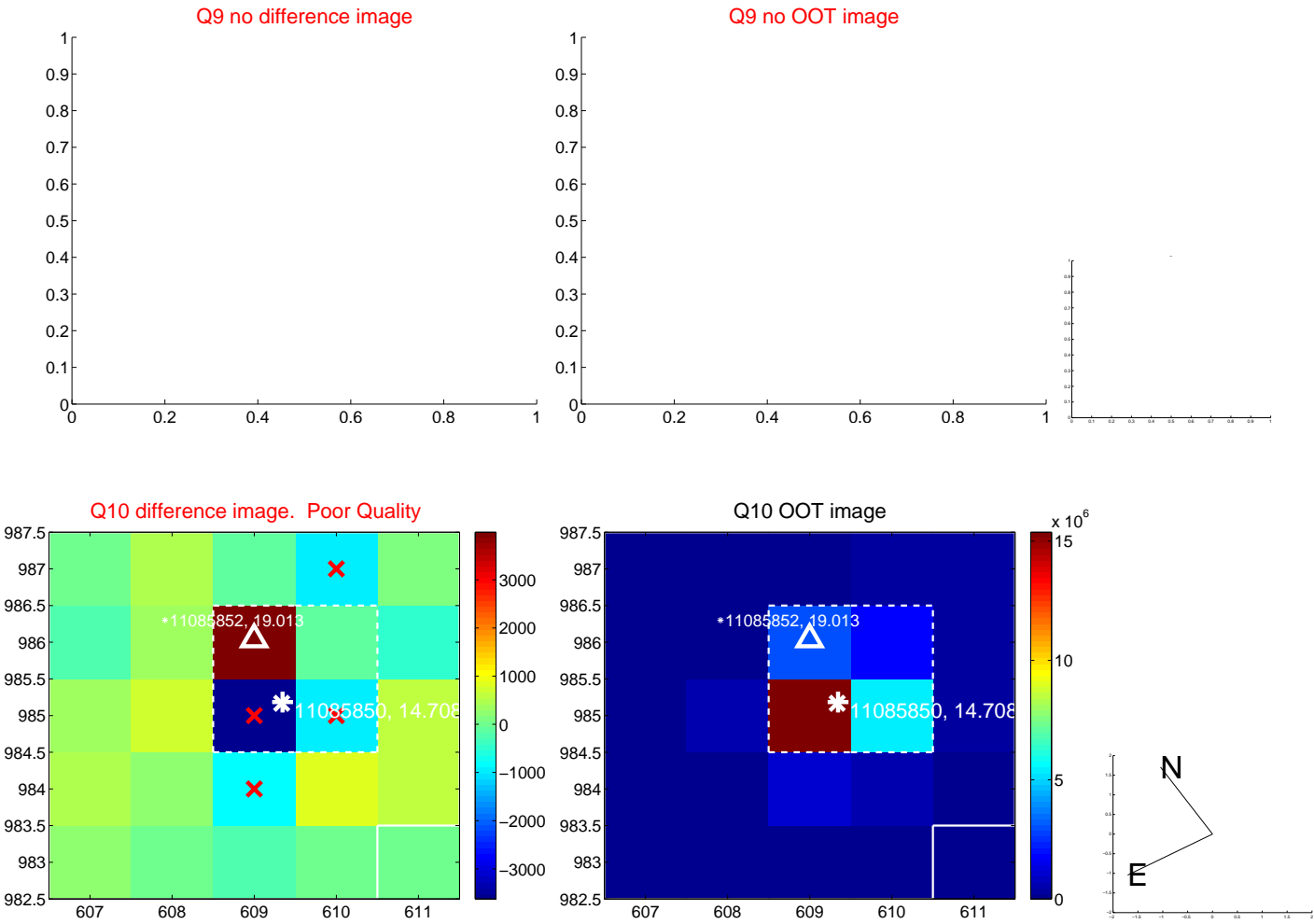


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





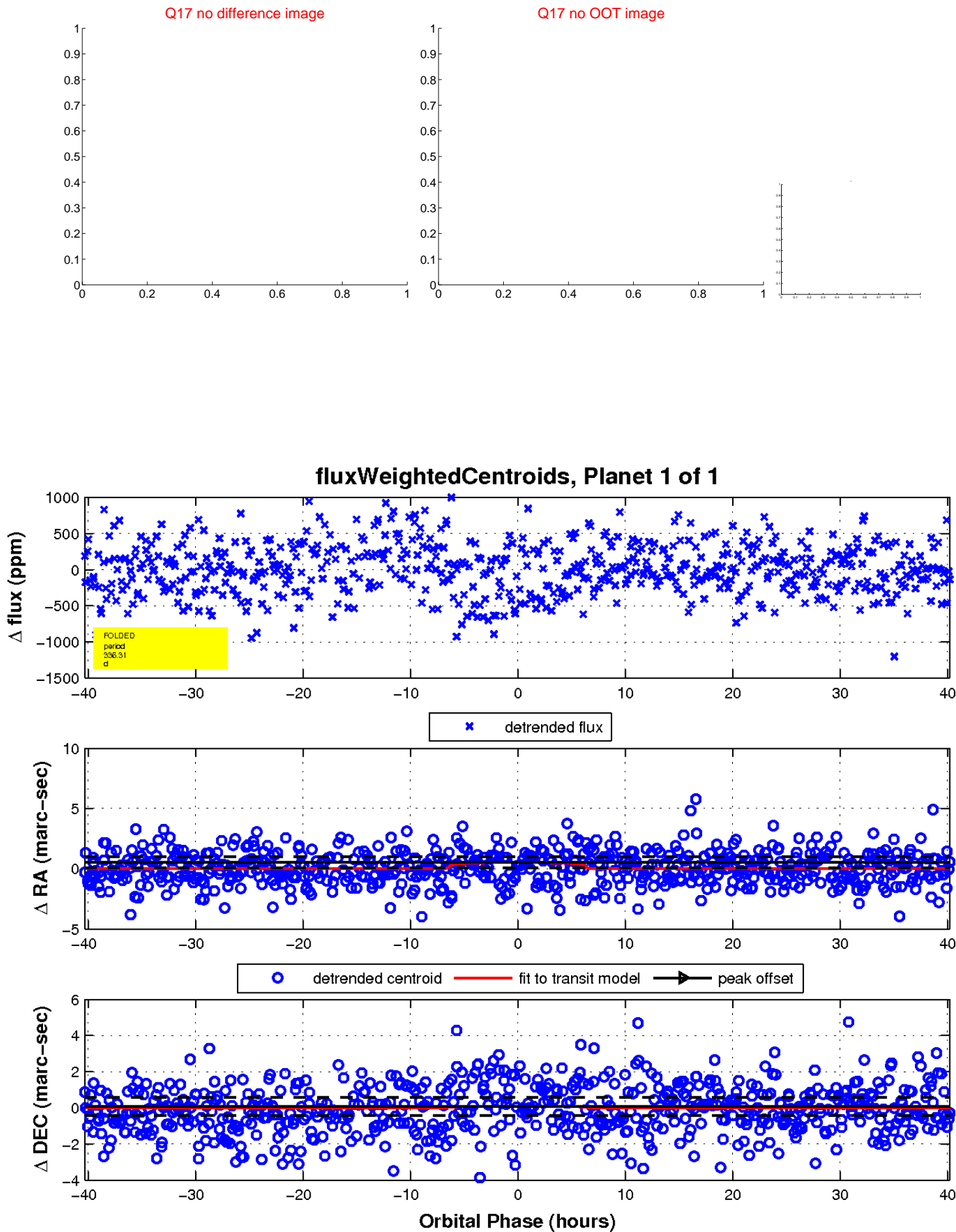
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : 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

