

# KIC 011603064

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011603064-01	OBS	No	521.771512	141.934933	112.3	21.951	39.2	1.9	28.67	4654	30.62	90.34

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011603064-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQU_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

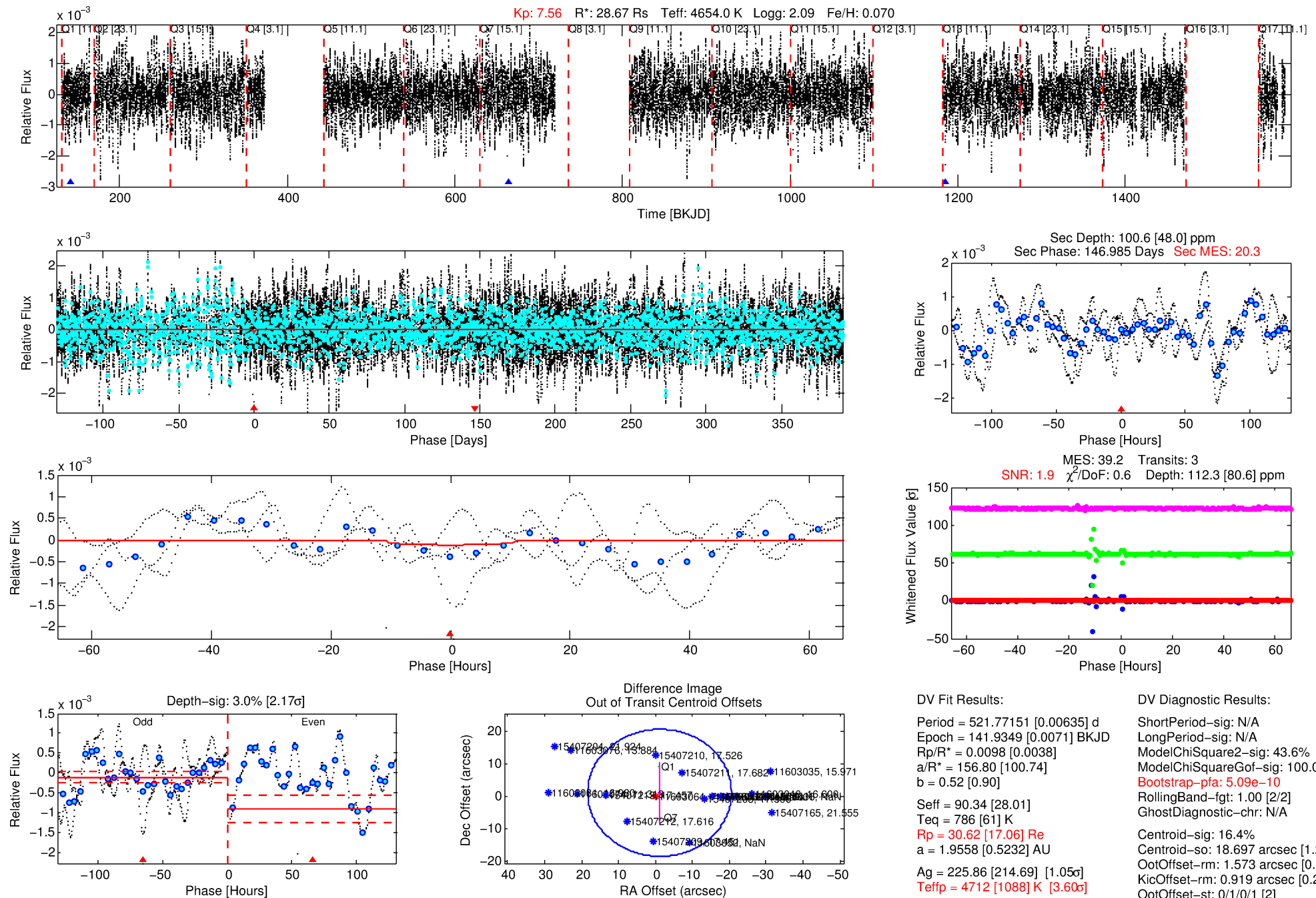
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011603064-01

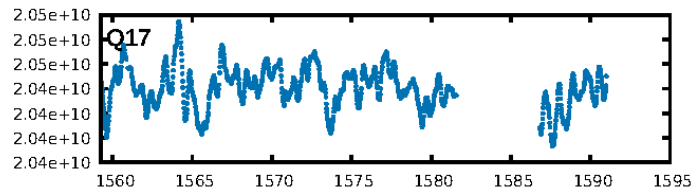
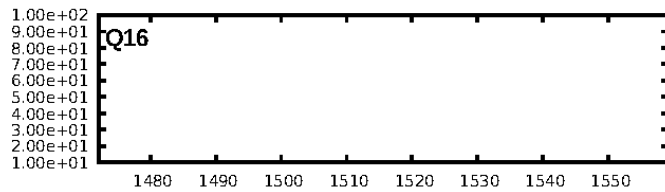
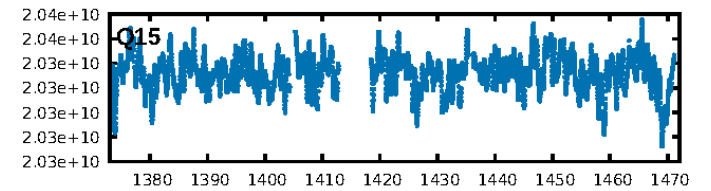
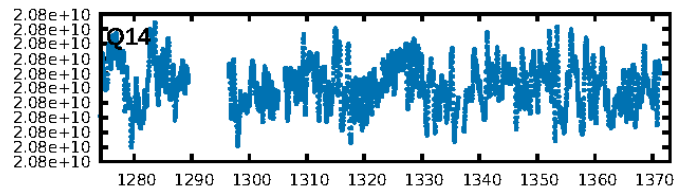
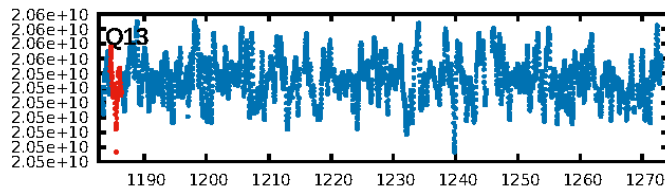
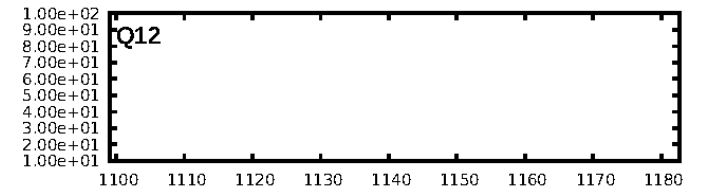
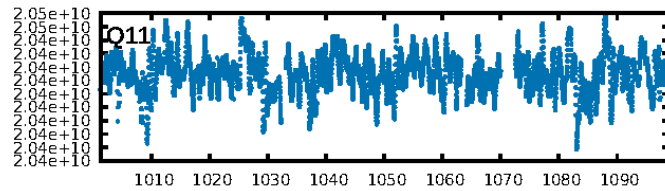
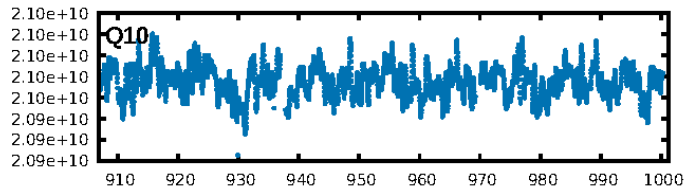
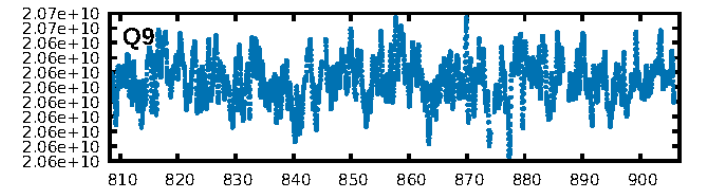
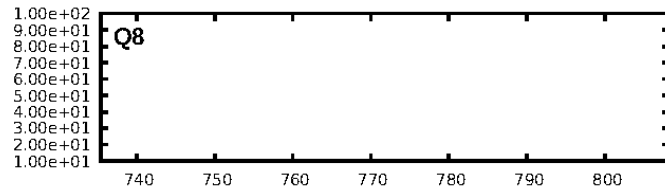
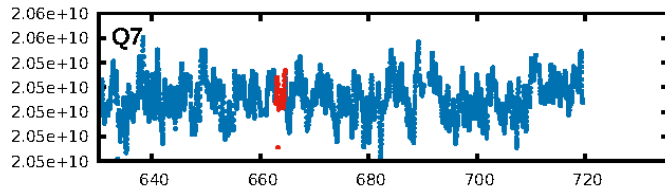
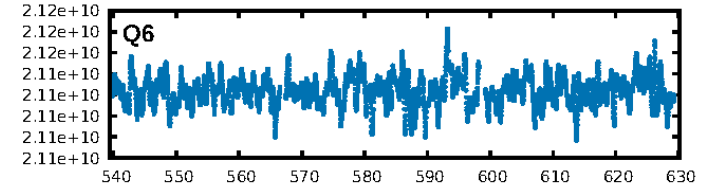
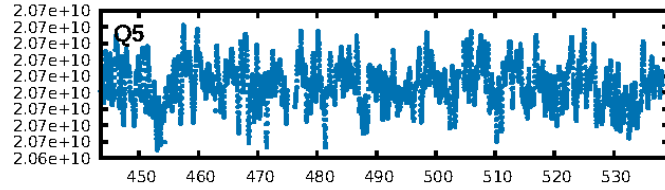
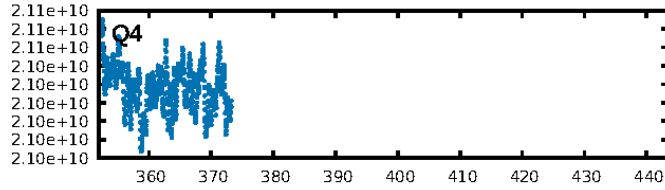
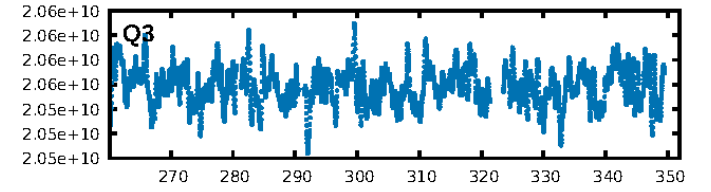
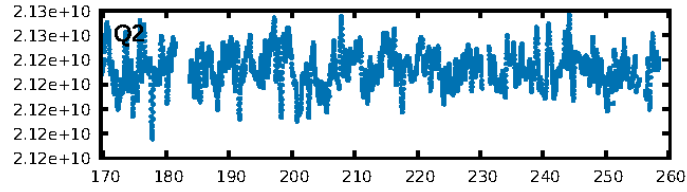
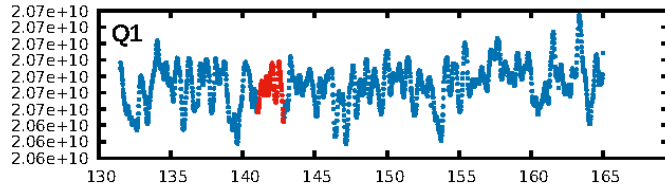
No Significant Match Found

# DV One-Page Summary

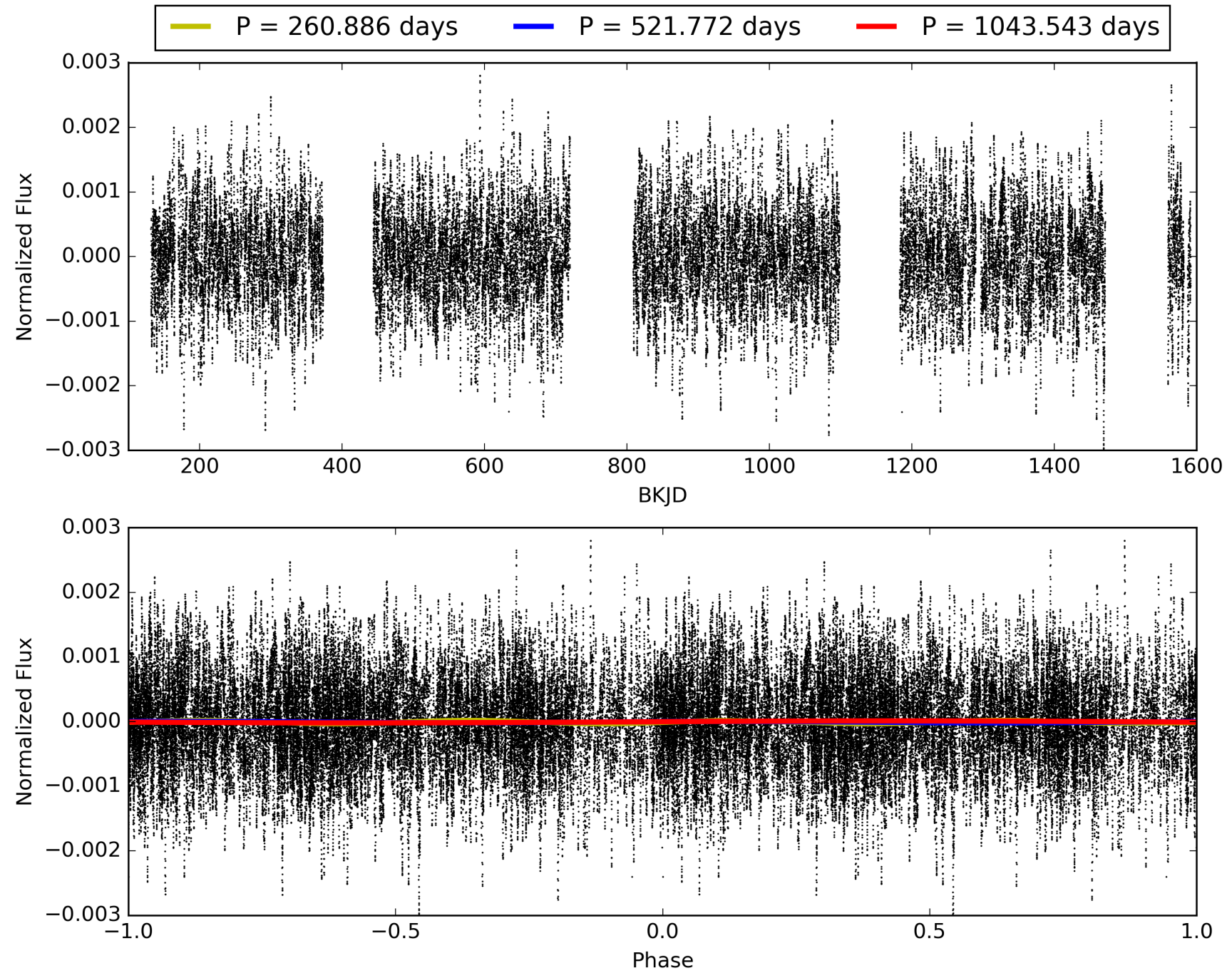
KIC: 11603064 Candidate: 1 of 1 Period: 521.772 d



# TCE 011603064-01, PDC Light Curves

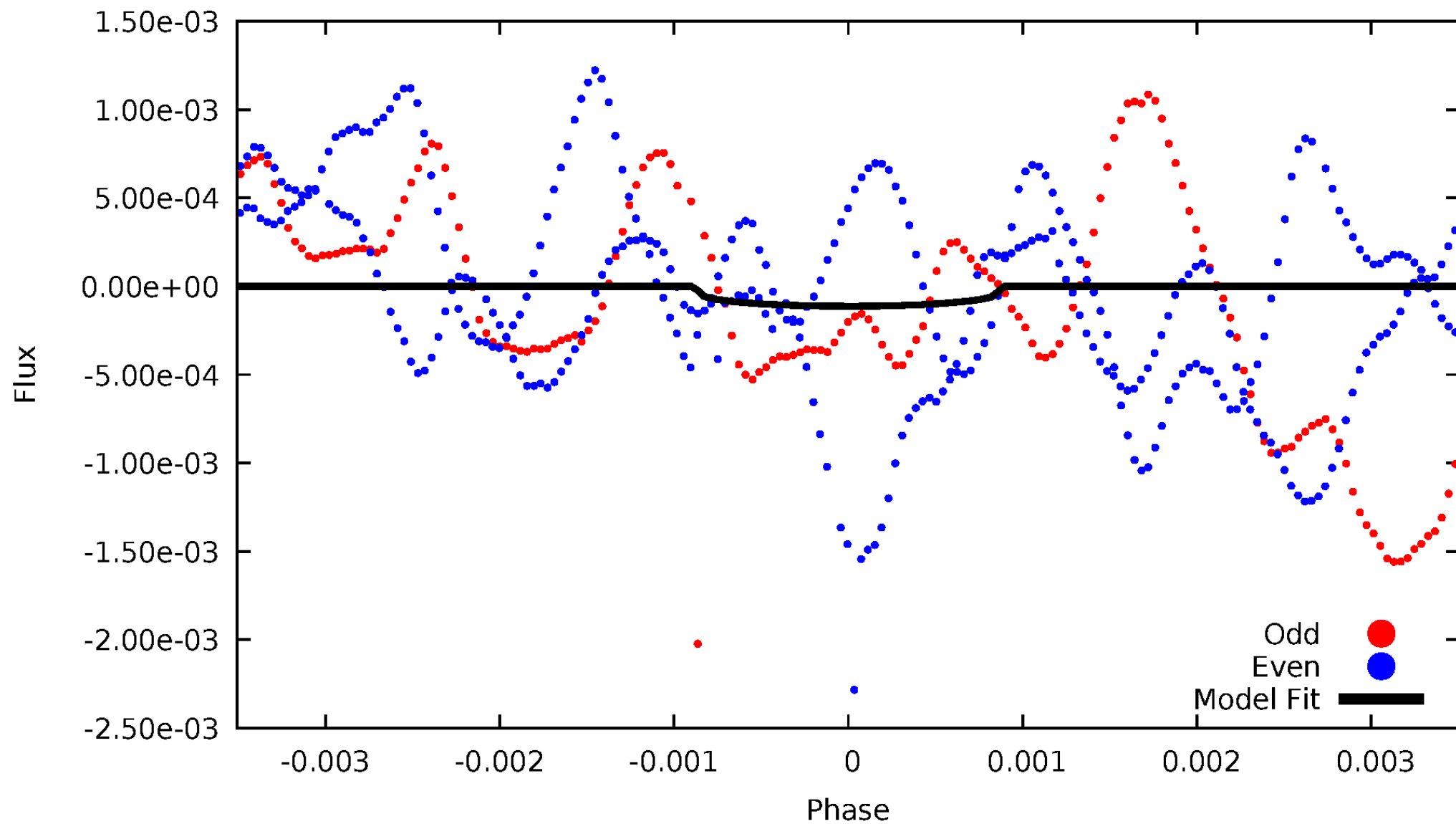


TCE 011603064-01



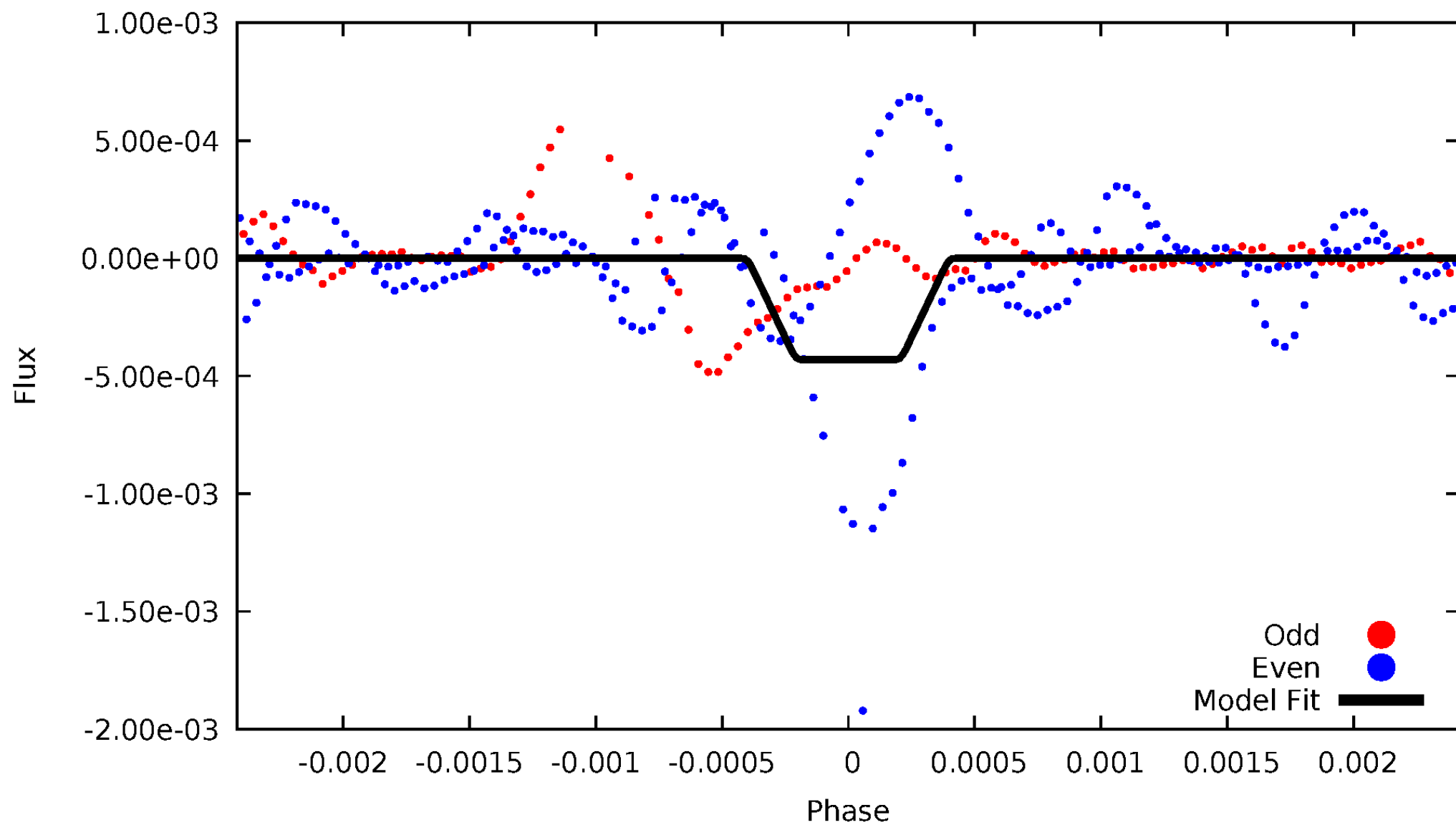
# DV Odd/Even

TCE 011603064-01



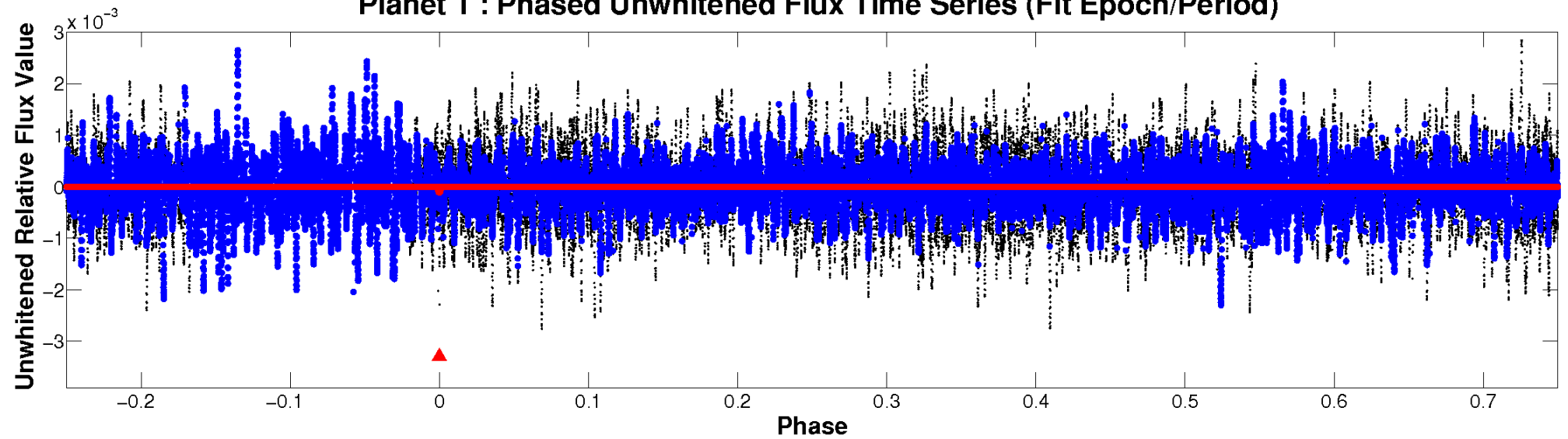
# ALT Odd/Even

TCE 011603064-01

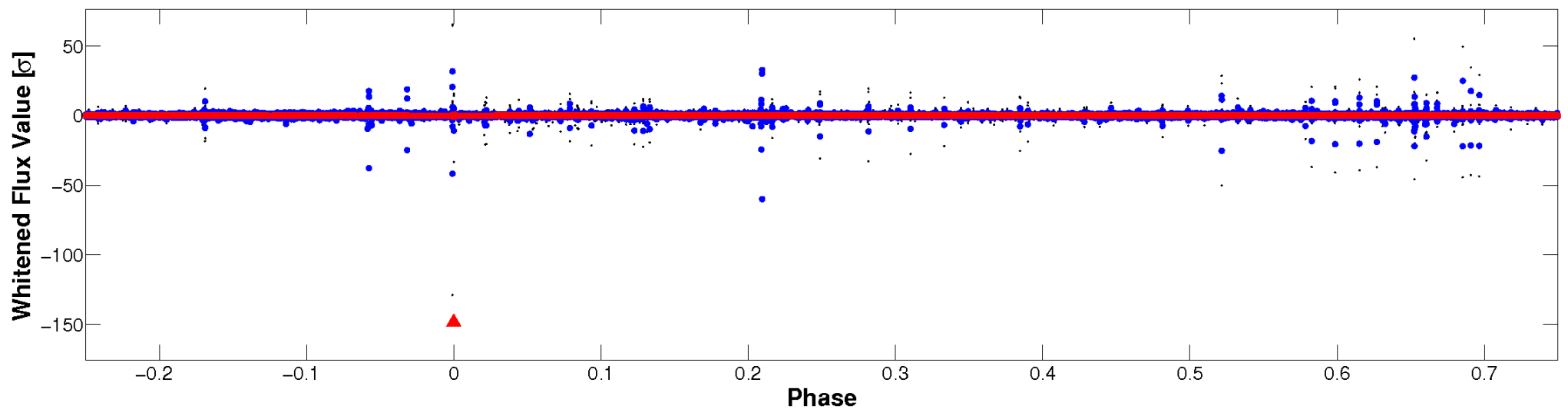


# Non-Whitened Vs. Whitened Light Curve

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



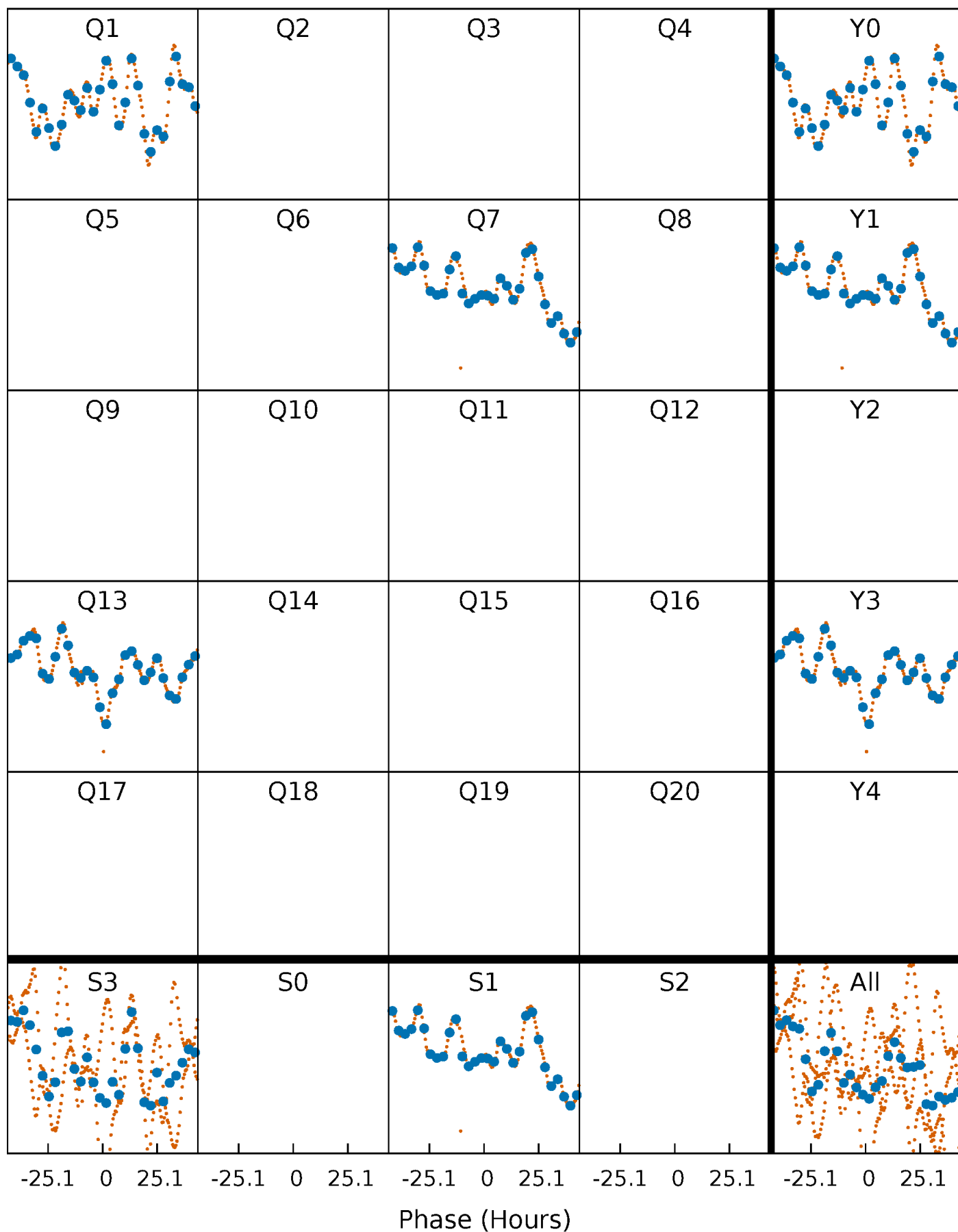
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

TCE 011603064-01 P=521.771512 Days  $T_0=141.934933$  (BKJD)





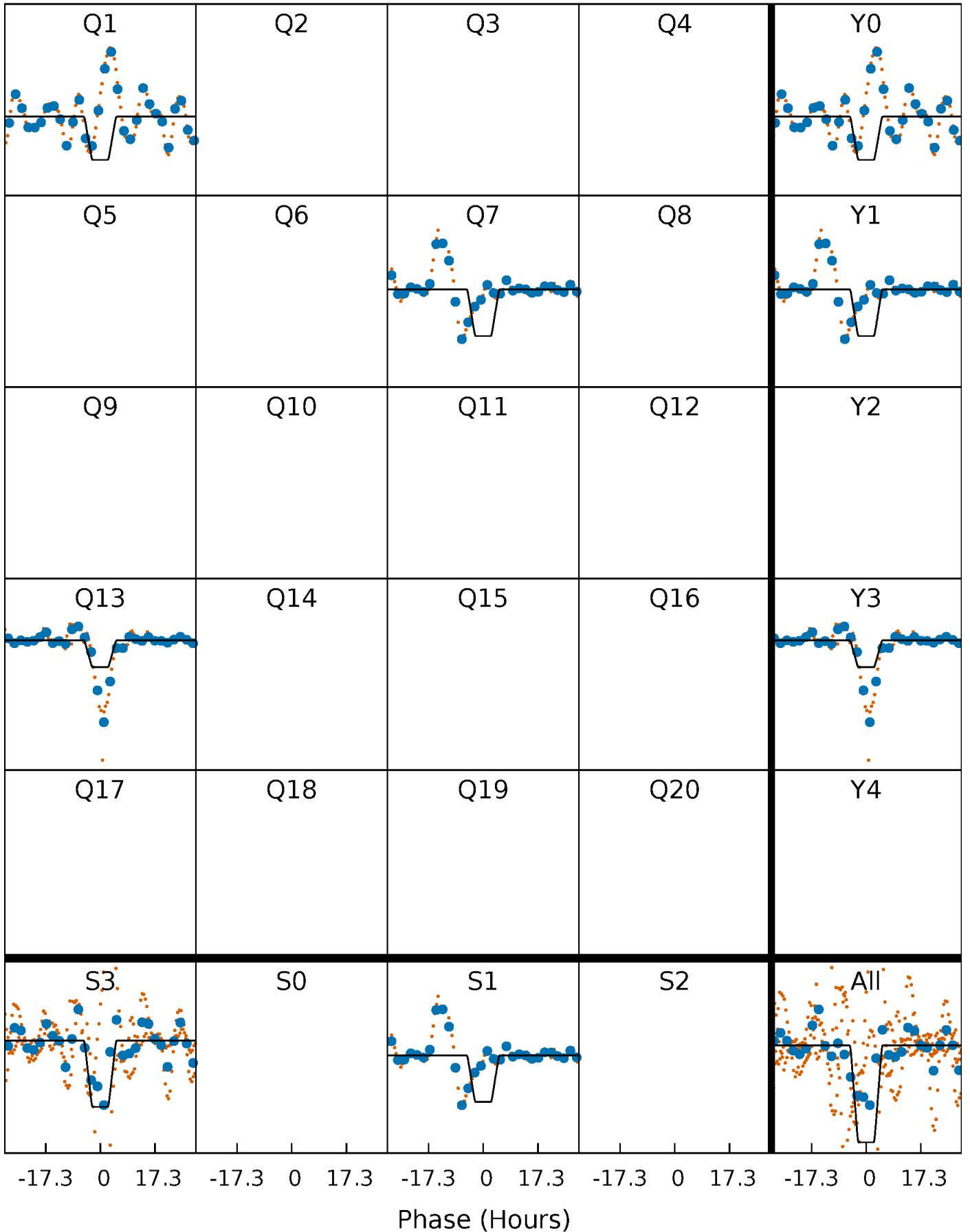
# DV Quarter-Phased Transit Curves

TCE 011603064-01 P=521.771512 Days  $T_0=141.934933$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

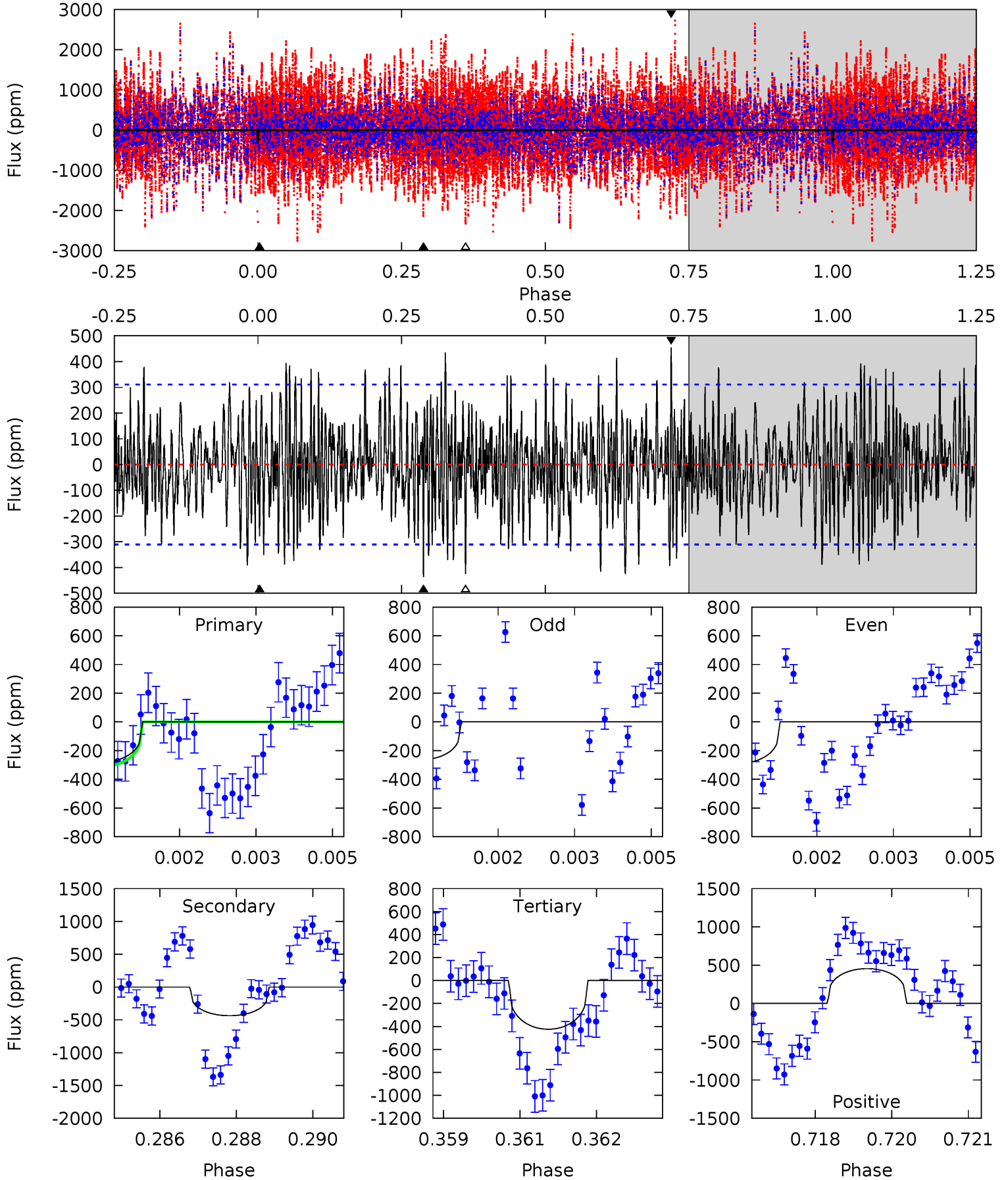
TCE 011603064-01 P=521.777766 Days  $T_0=141.910352$  (BKJD)



# DV Model-Shift Uniqueness Test

011603064-01, P = 521.771512 Days, E = 141.934933 Days

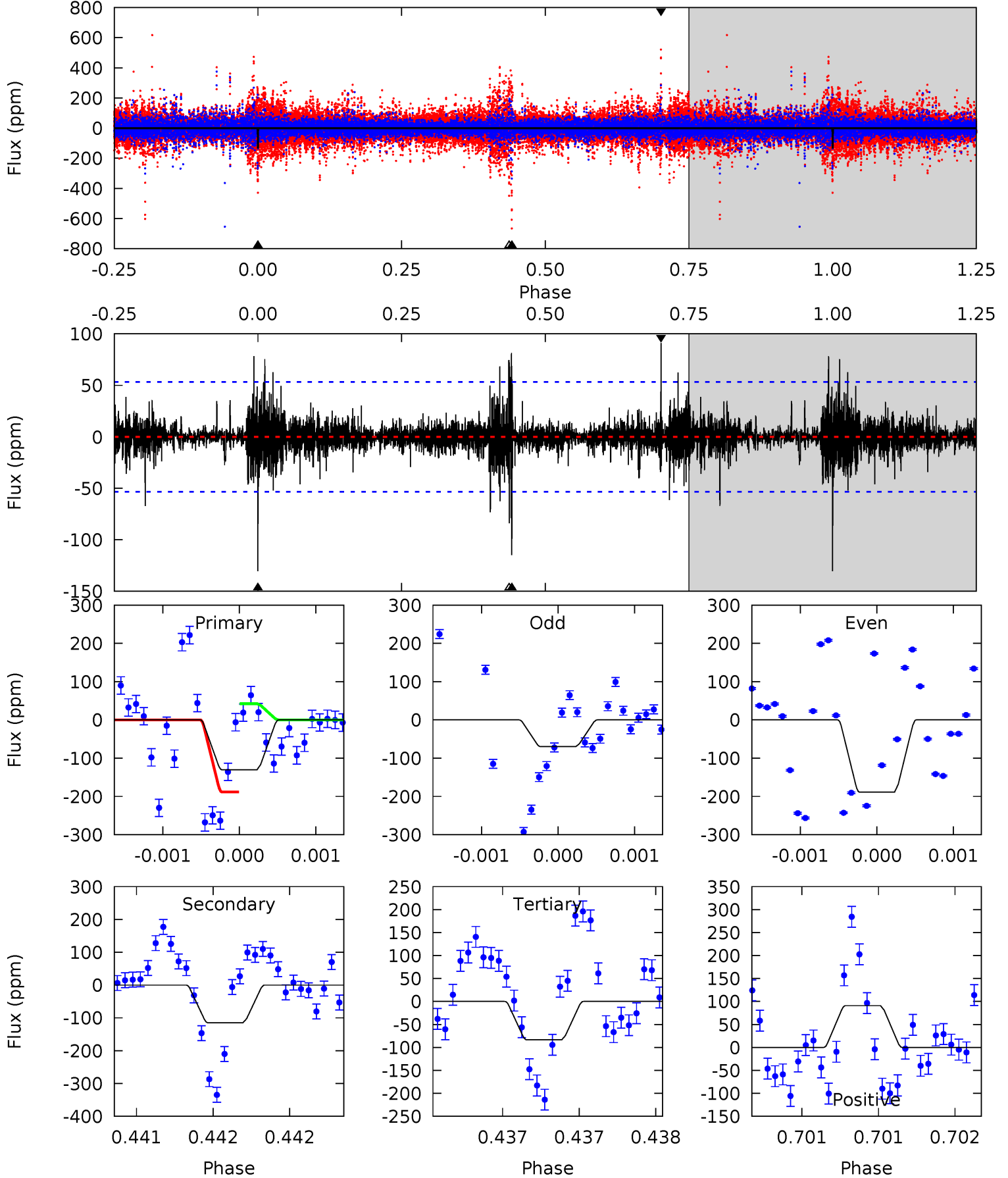
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.80	7.52	7.31	7.83	5.35	3.13	2.52	-2.51	-3.03	0.21	-0.31	0.19	1.10	0.51	0.53



# Alt Model-Shift Uniqueness Test

011603064-01, P = 521.777766 Days, E = 141.910352 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
13.4	11.8	8.59	9.35	5.49	3.35	1.19	4.82	4.06	3.22	2.46	6.99	3.44	0.41	7.36



### Stellar Parameters For KIC 011603064

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$4654^{+67}_{-175}$	$2.087^{+0.033}_{-0.024}$	$0.070^{+0.150}_{-0.400}$	$28.672^{+0.603}_{-11.453}$	$3.664^{+0.073}_{-2.309}$	$0.000^{+0.000}_{-0.000}$
	+1%/-4%	+2%/-1%	+214%/-571%	+2%/-40%	+2%/-63%	+71%/-9%
Source	PHO1	AST11	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 011603064-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-437 \pm 58$	$30.83^{+12.46}_{-12.48}$	$1097^{+22}_{-44}$	$6480^{+2279}_{-1014}$	$978^{+1647}_{-495}$
Alt.	$-115 \pm 10$	$65.54^{+12.65}_{-12.91}$	$1096^{+22}_{-43}$	$3614^{+290}_{-210}$	$55^{+31}_{-16}$

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

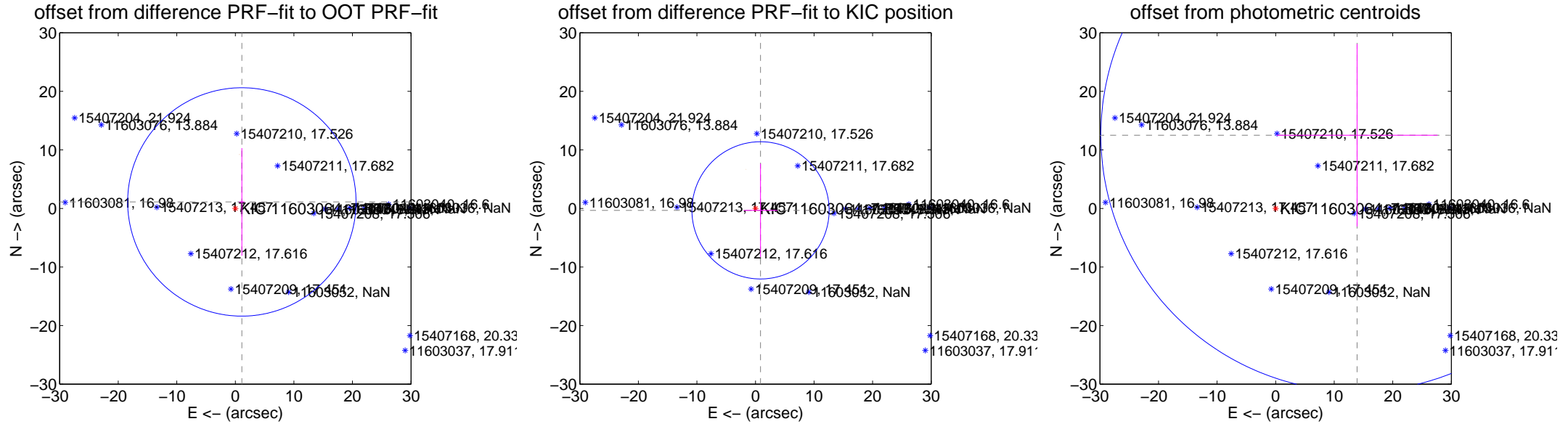
## DV Centroid Data

Supplemental centroid analysis for 011603064-01. **Kepler magnitude: 7.56.** Transit SNR 1.87

**There are 0 quarters with good PRF difference image offsets**

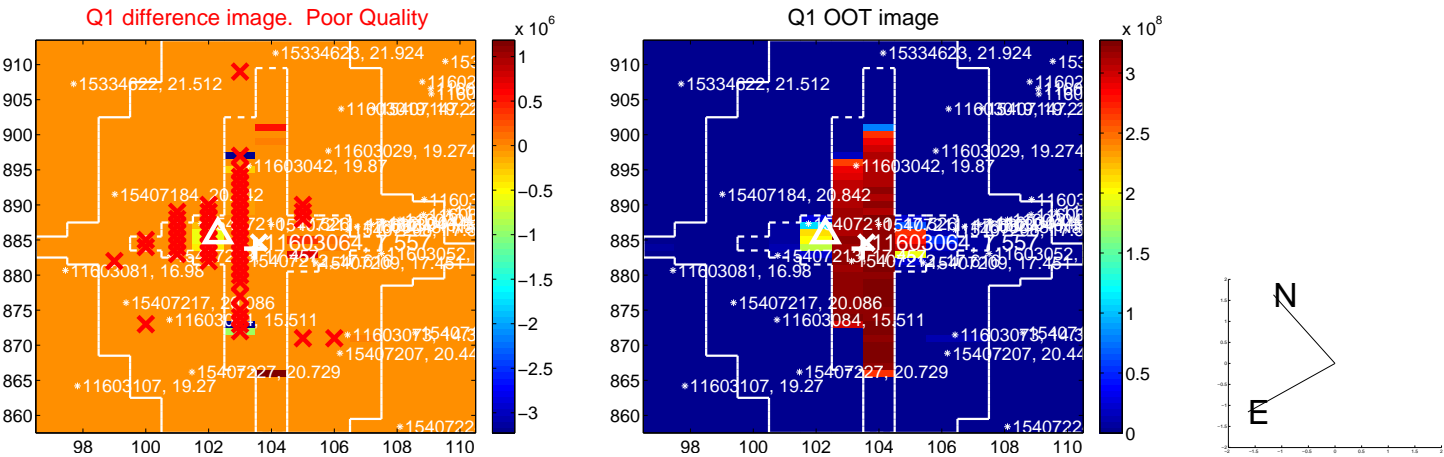
The direct PRF centroid is offset from the target star catalog position by about 1.84 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.573 \pm 6.499$	0.24	$-1.113 \pm 0.465$	$1.111 \pm 9.185$
PRF-fit source offset from KIC position	$0.919 \pm 3.905$	0.24	$-0.859 \pm 2.876$	$-0.327 \pm 7.974$
photometric centroid source offset	$18.70 \pm 14.58$	1.28	$-13.90 \pm 13.73$	$12.50 \pm 15.57$



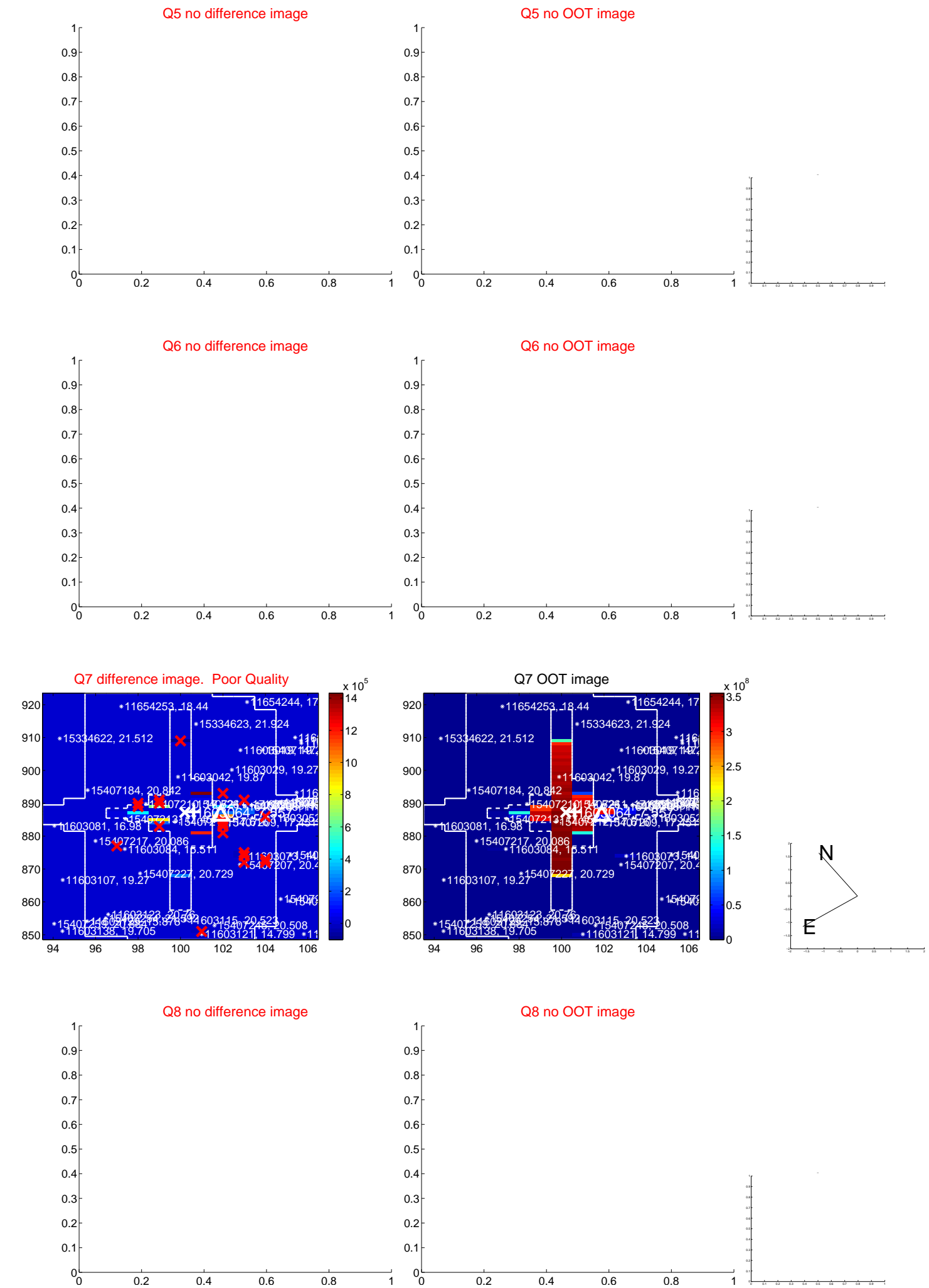
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



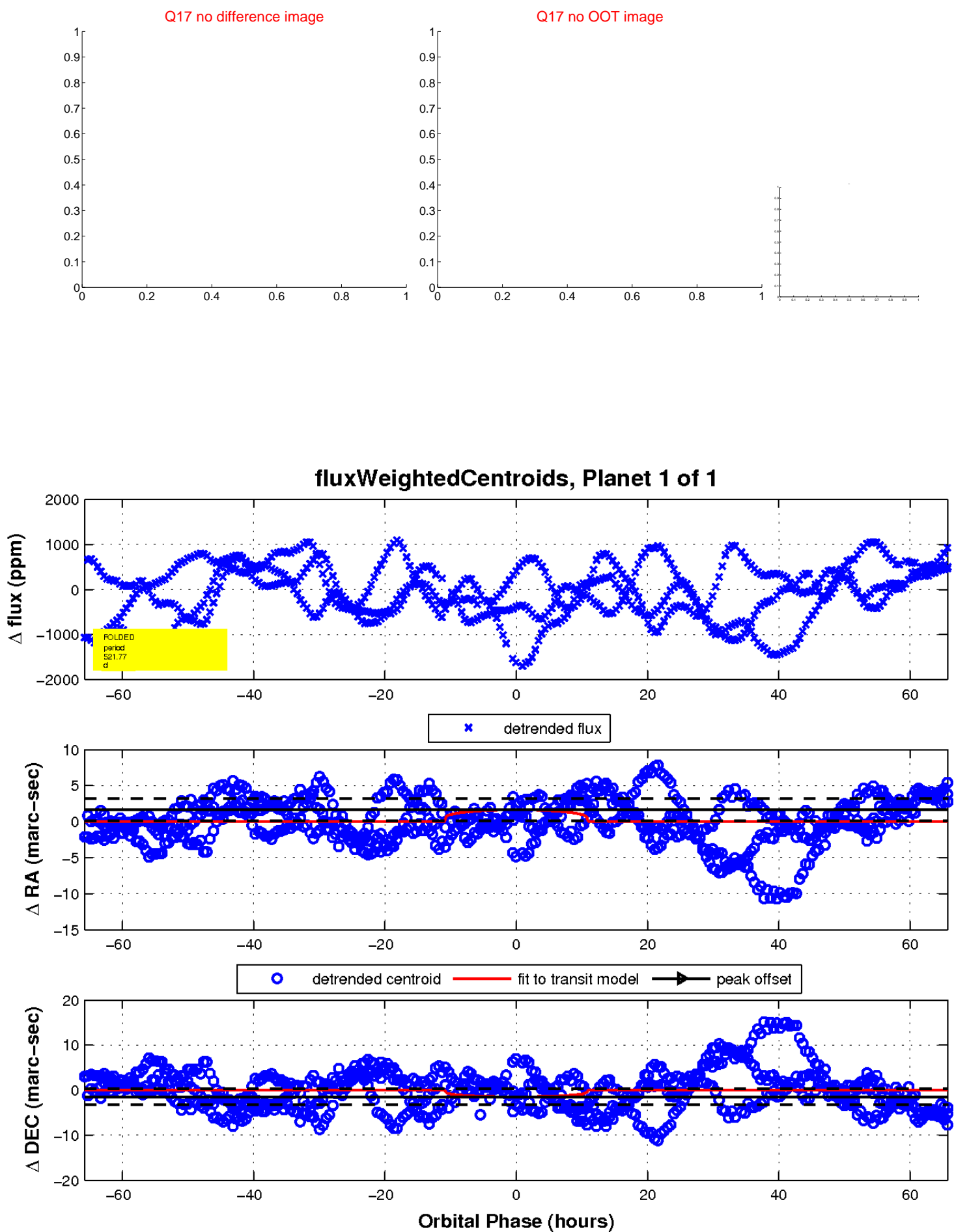
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



UKIRT Image

Declination

