

# KIC 005726910

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005726910-01	OBS	No	323.730188	446.328285	748.4	4.316	10.6	7.7	0.96	5750	3.03	1.26

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005726910-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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 005726910-01

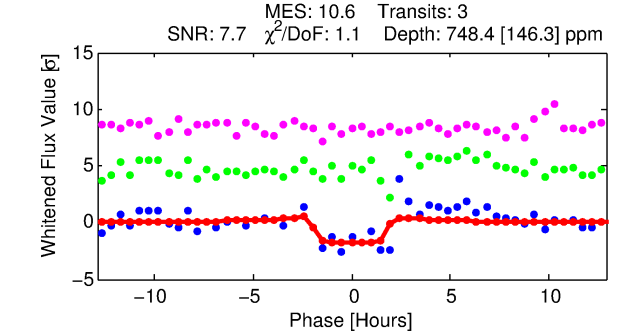
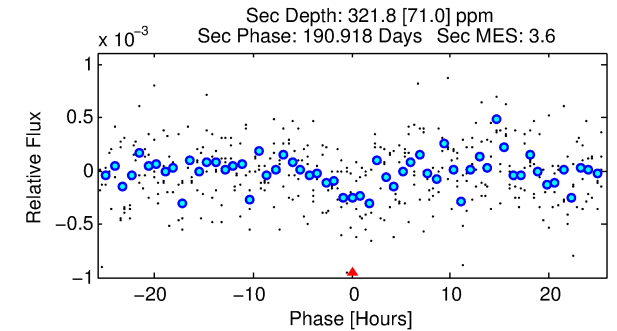
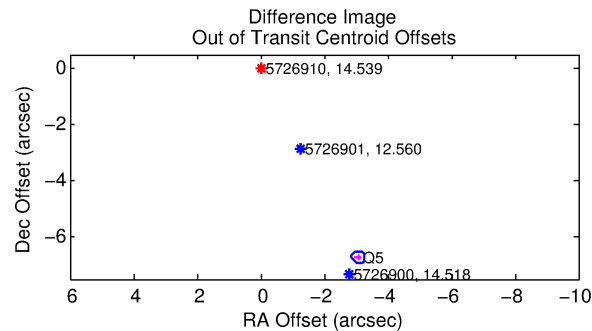
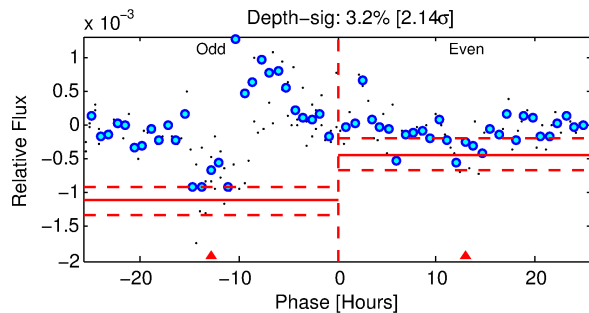
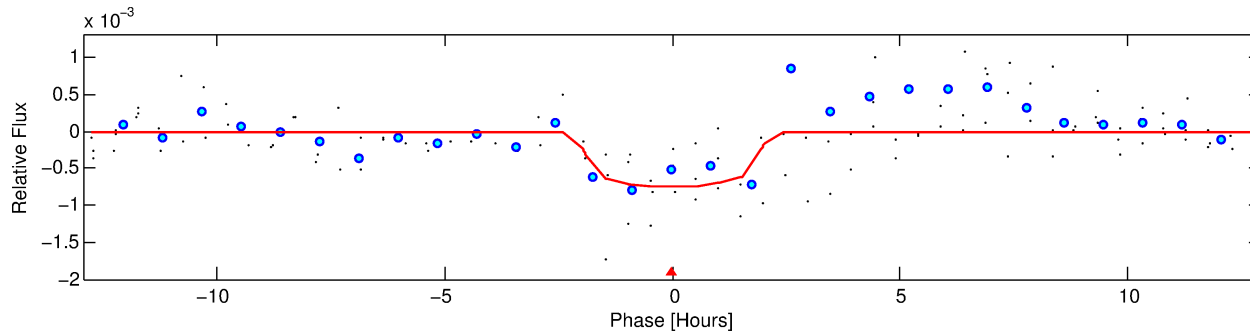
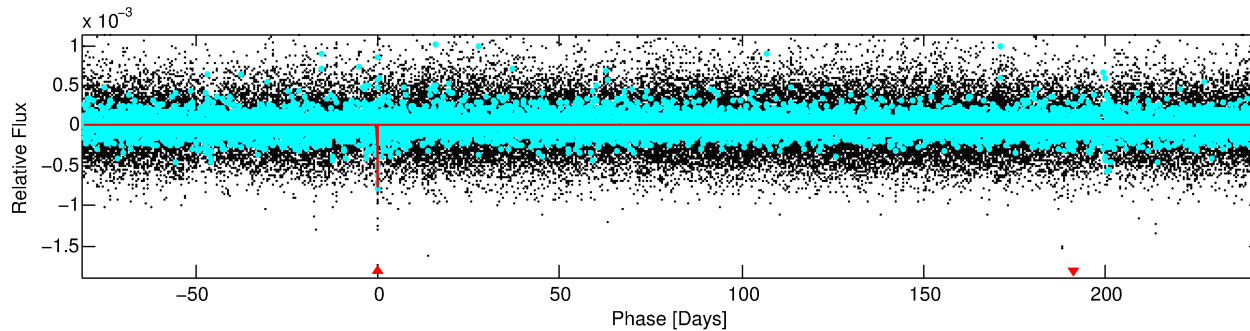
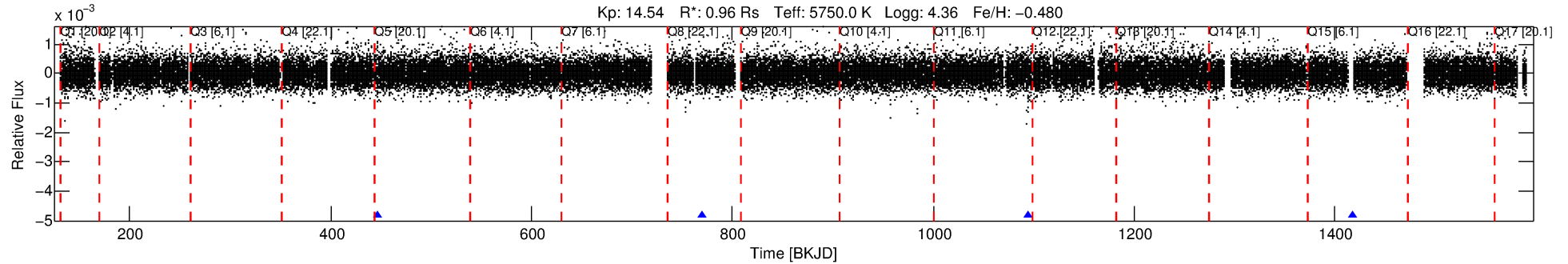
No Significant Match Found

# DV One-Page Summary

KIC: 5726910 Candidate: 1 of 1 Period: 323.730 d

KOI: K04124 Corr: No Ephemeris Match

Kp: 14.54 R\*: 0.96 Rs Teff: 5750.0 K Logg: 4.36 Fe/H: -0.480



## DV Fit Results:

Period = 323.73019 [0.01409] d  
Epoch = 446.3283 [0.0114] BKJD  
Rp/R\* = 0.0288 [0.0528]  
a/R\* = 319.30 [2820.62]  
b = 0.86 [2.64]  
Seff = 1.26 [0.47]  
Teq = 270 [25] K  
Rp = 3.03 [5.62] Re  
a = 0.8515 [0.2036] AU  
Ag = 13948.39 [51412.00] [0.27σ]  
Teffp = 4537 [4164] K [1.02σ]

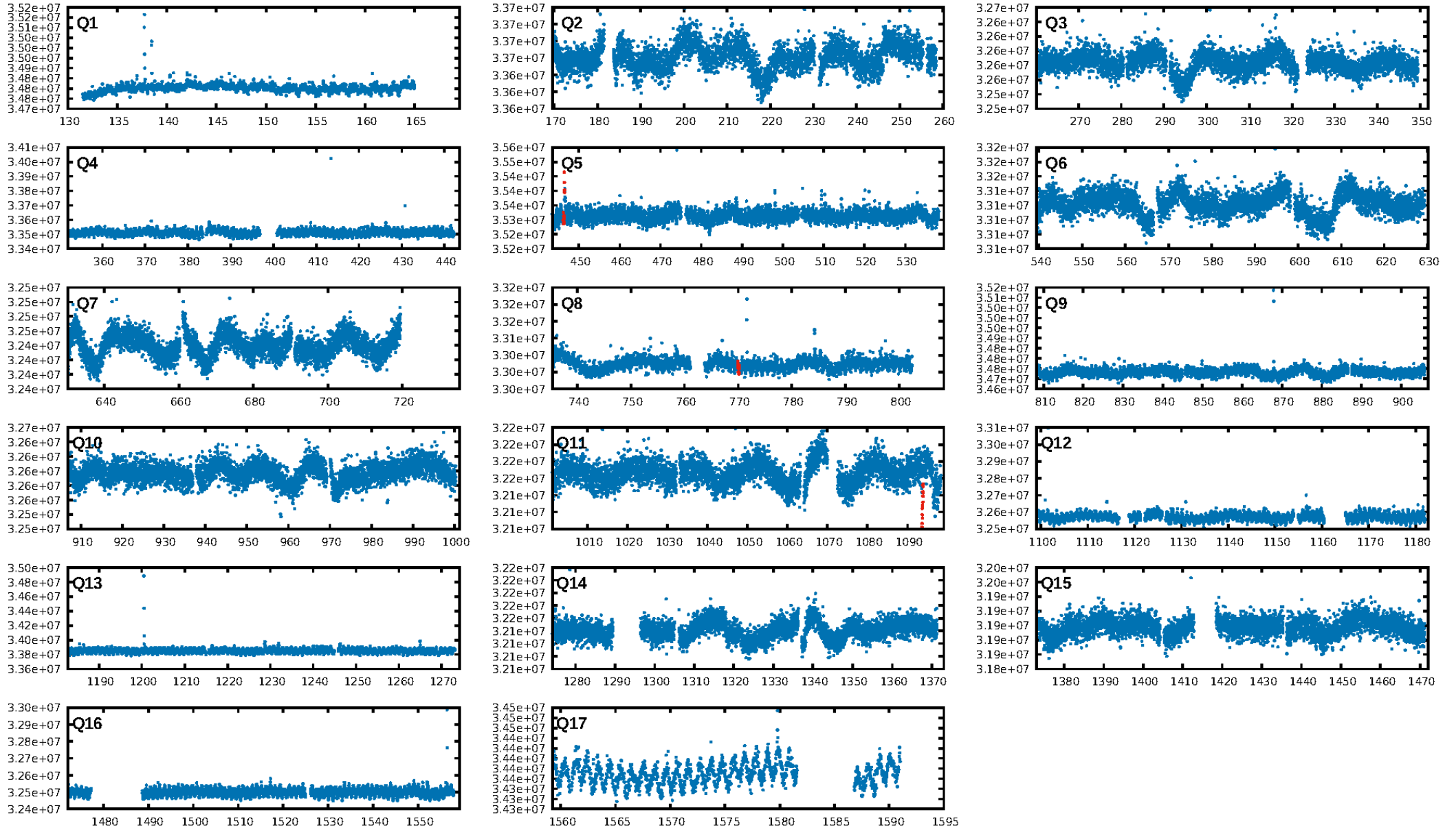
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 8.5%  
ModelChiSquareGof-sig: 91.7%  
Bootstrap-pfa: 1.58e-21  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 0.6507  
Centroid-sig: 8.7%  
Centroid-so: 4.702 arcsec [1.89σ]  
OotOffset-rm: 7.390 arcsec [105.24σ]  
KicOffset-rm: 7.735 arcsec [110.20σ]  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 1.00 [2/2]

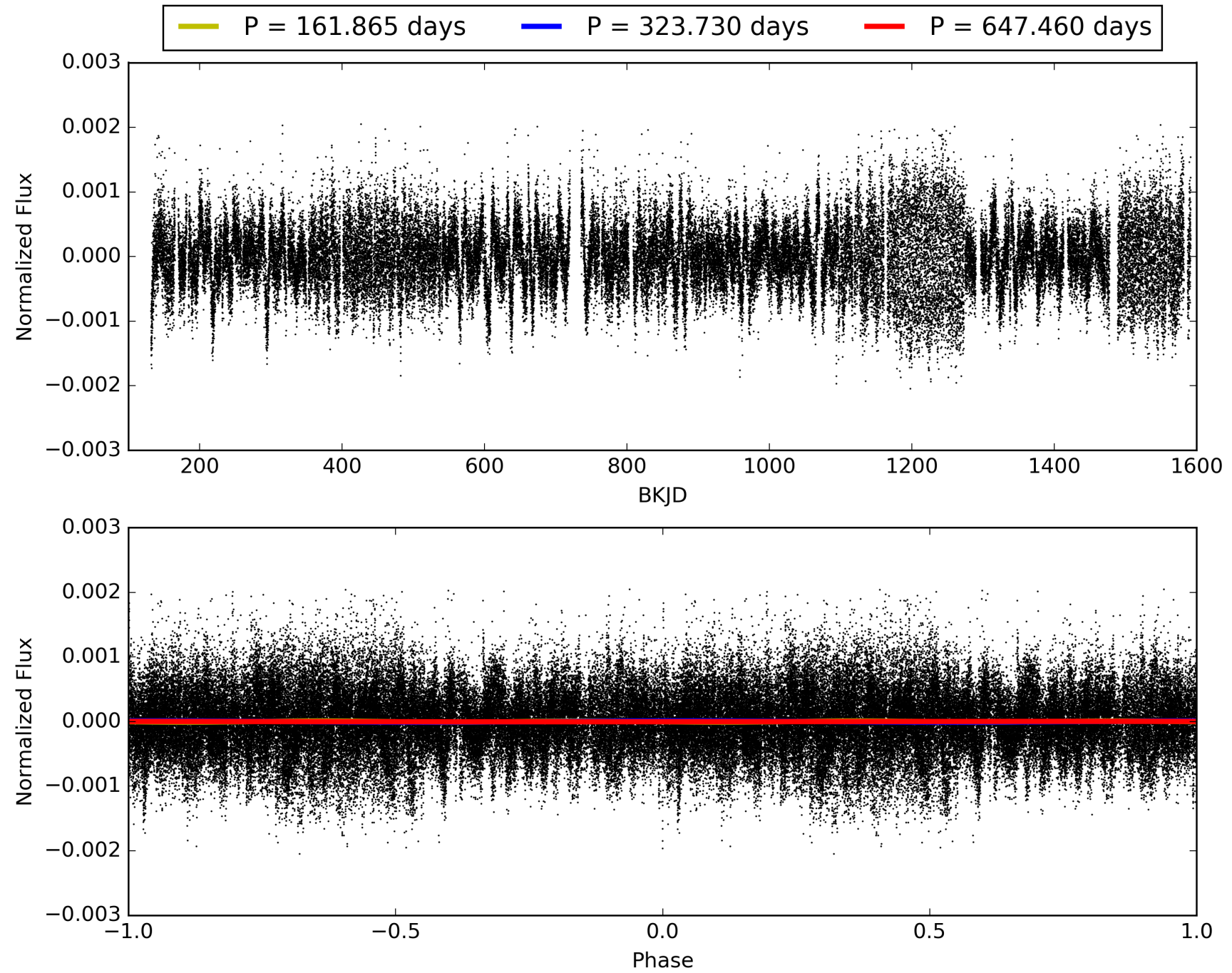
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:53:17 Z

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

# TCE 005726910-01, PDC Light Curves

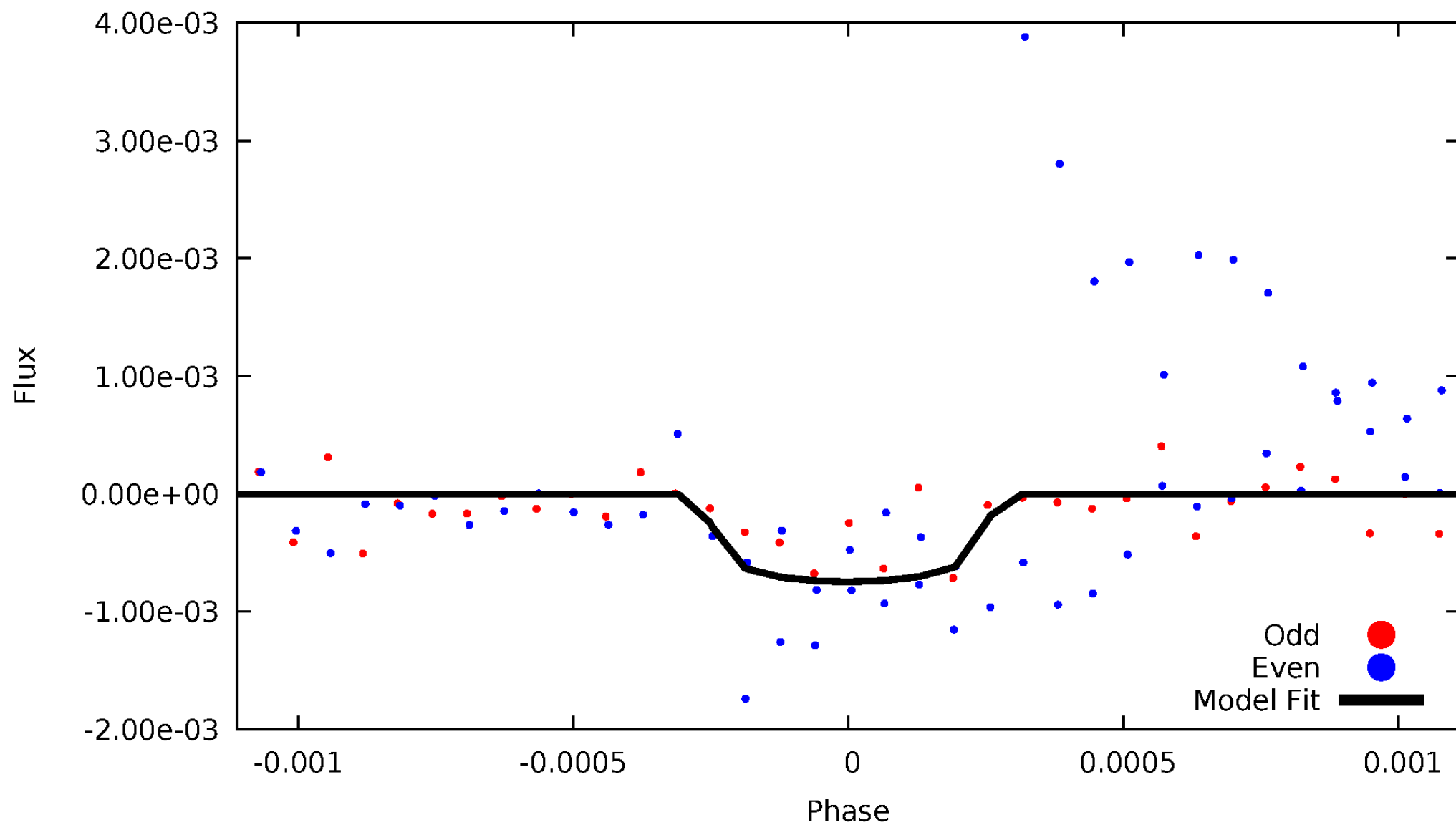


TCE 005726910-01



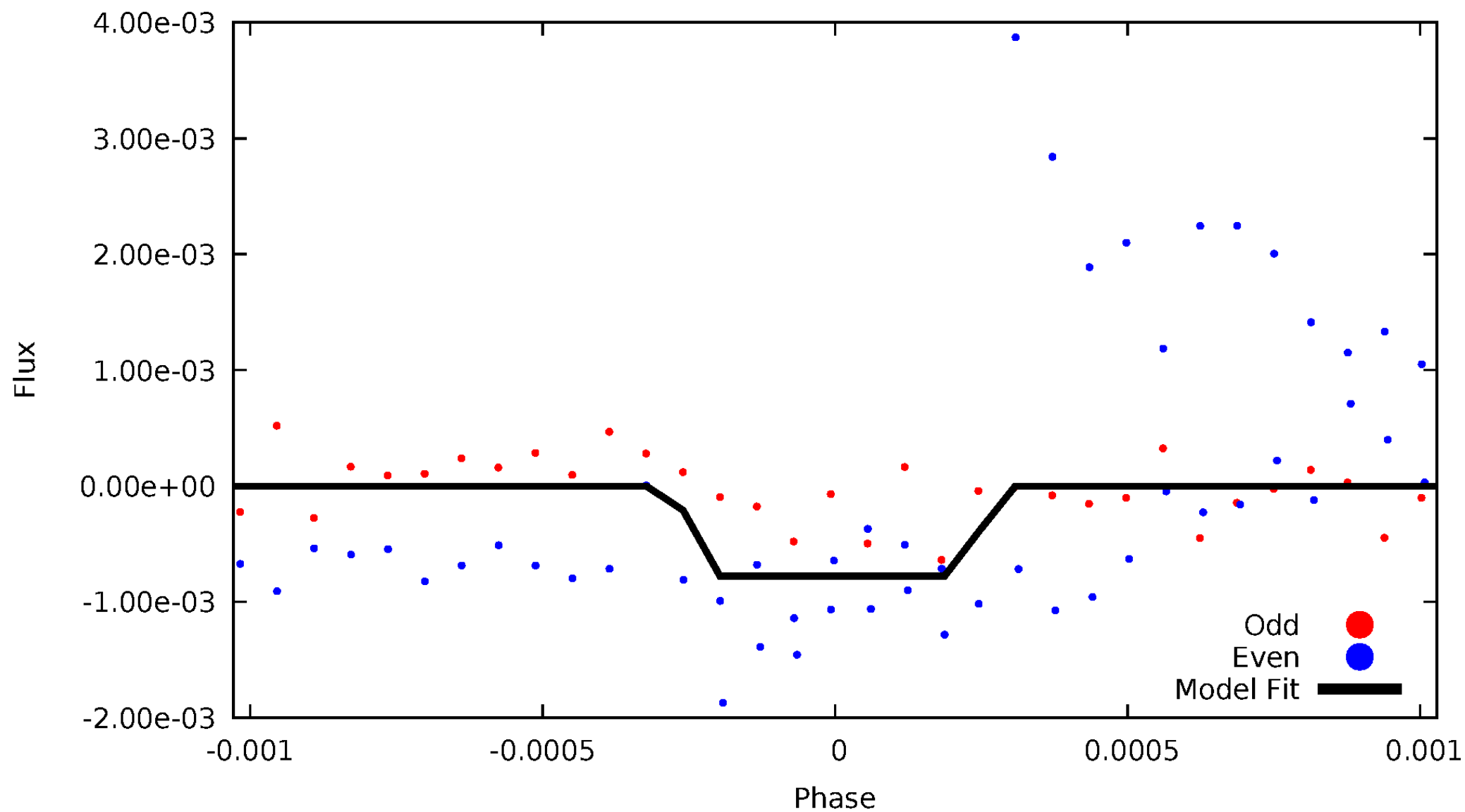
# DV Odd/Even

TCE 005726910-01



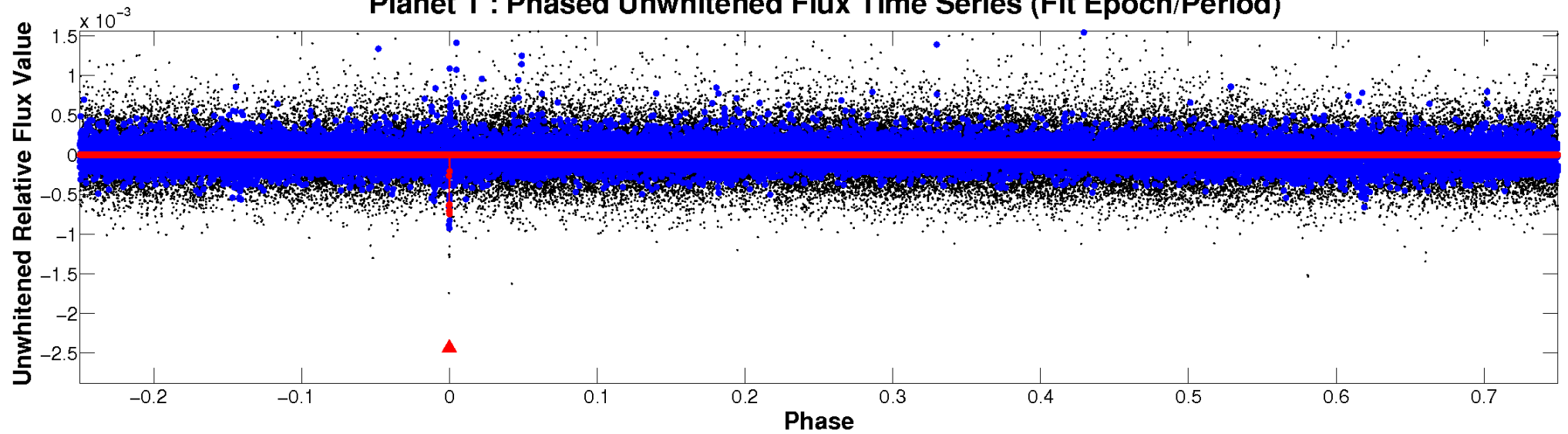
# ALT Odd/Even

TCE 005726910-01

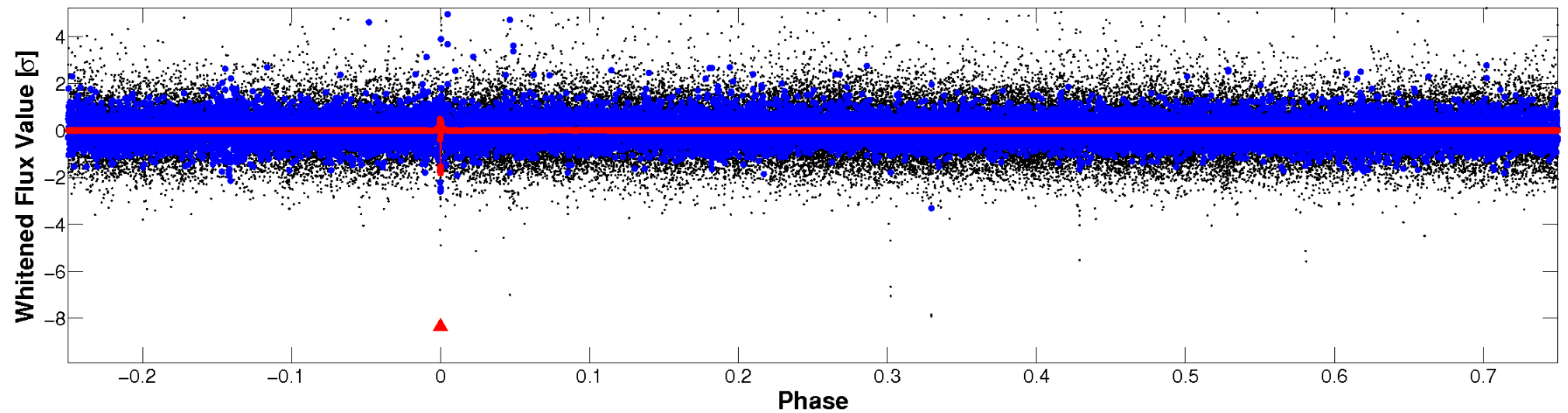


# Non-Whitened Vs. Whitened Light Curve

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

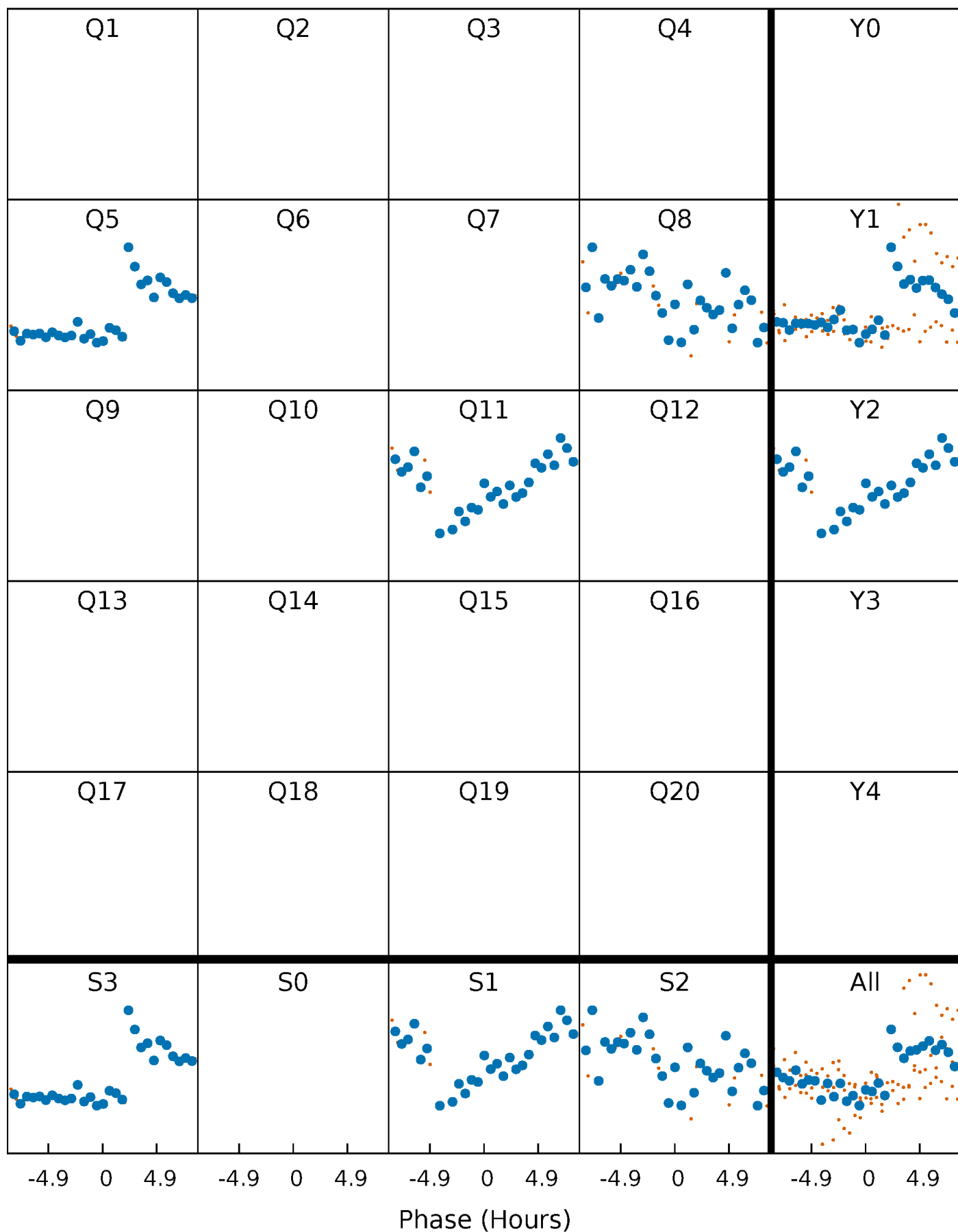


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

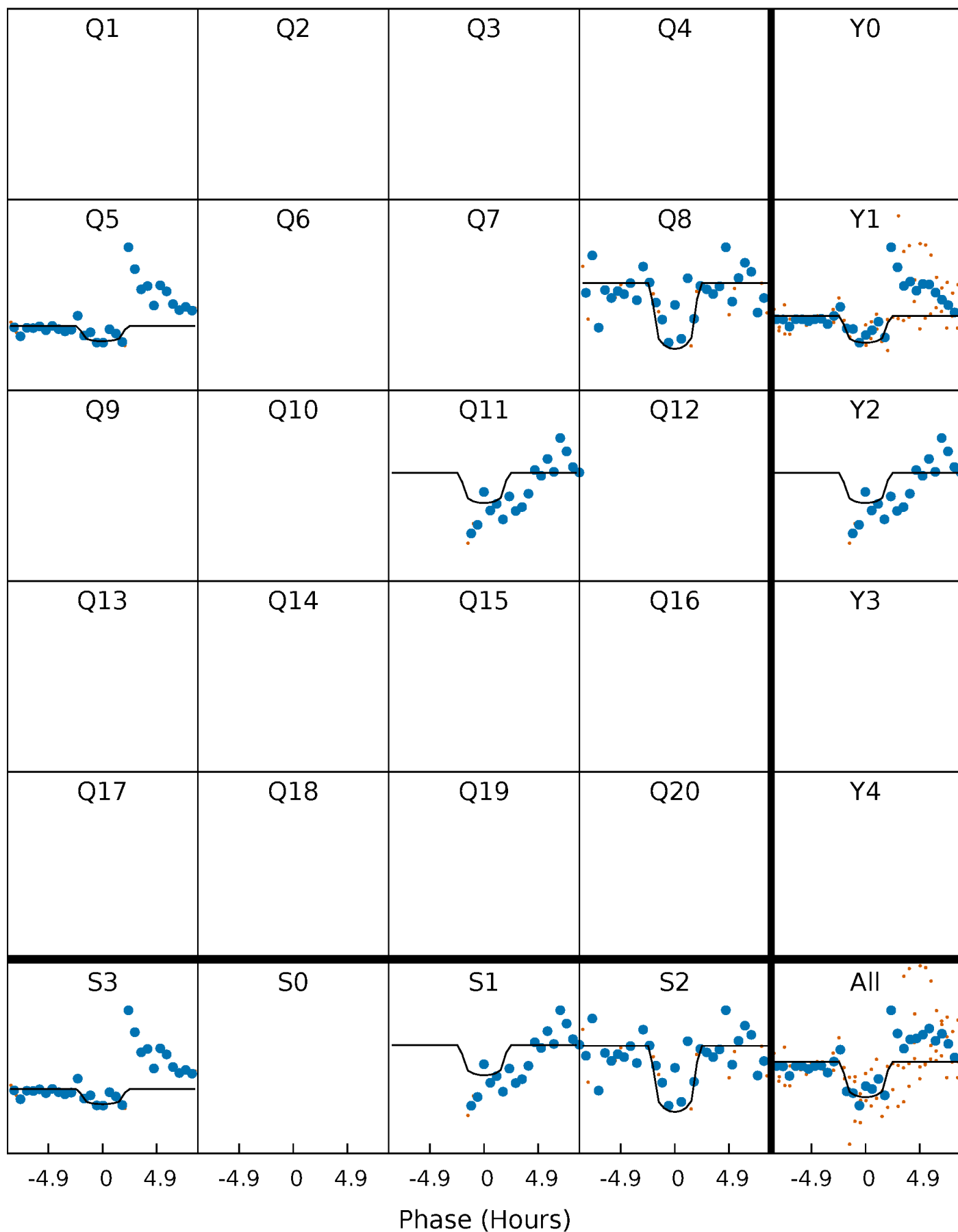
TCE 005726910-01 P=323.730188 Days  $T_0=446.328285$  (BKJD)





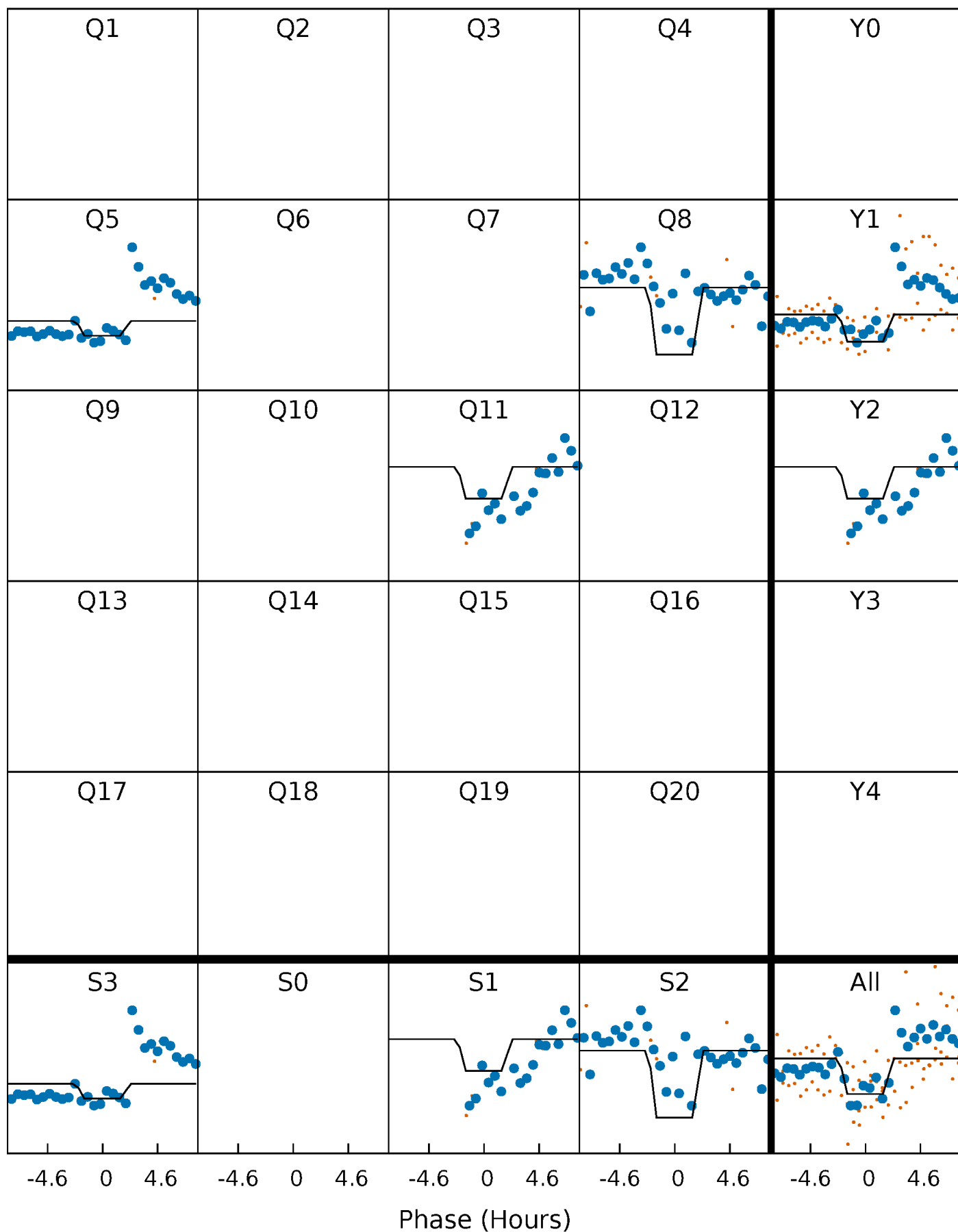
# DV Quarter-Phased Transit Curves

TCE 005726910-01   P=323.730188 Days    $T_0=446.328285$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

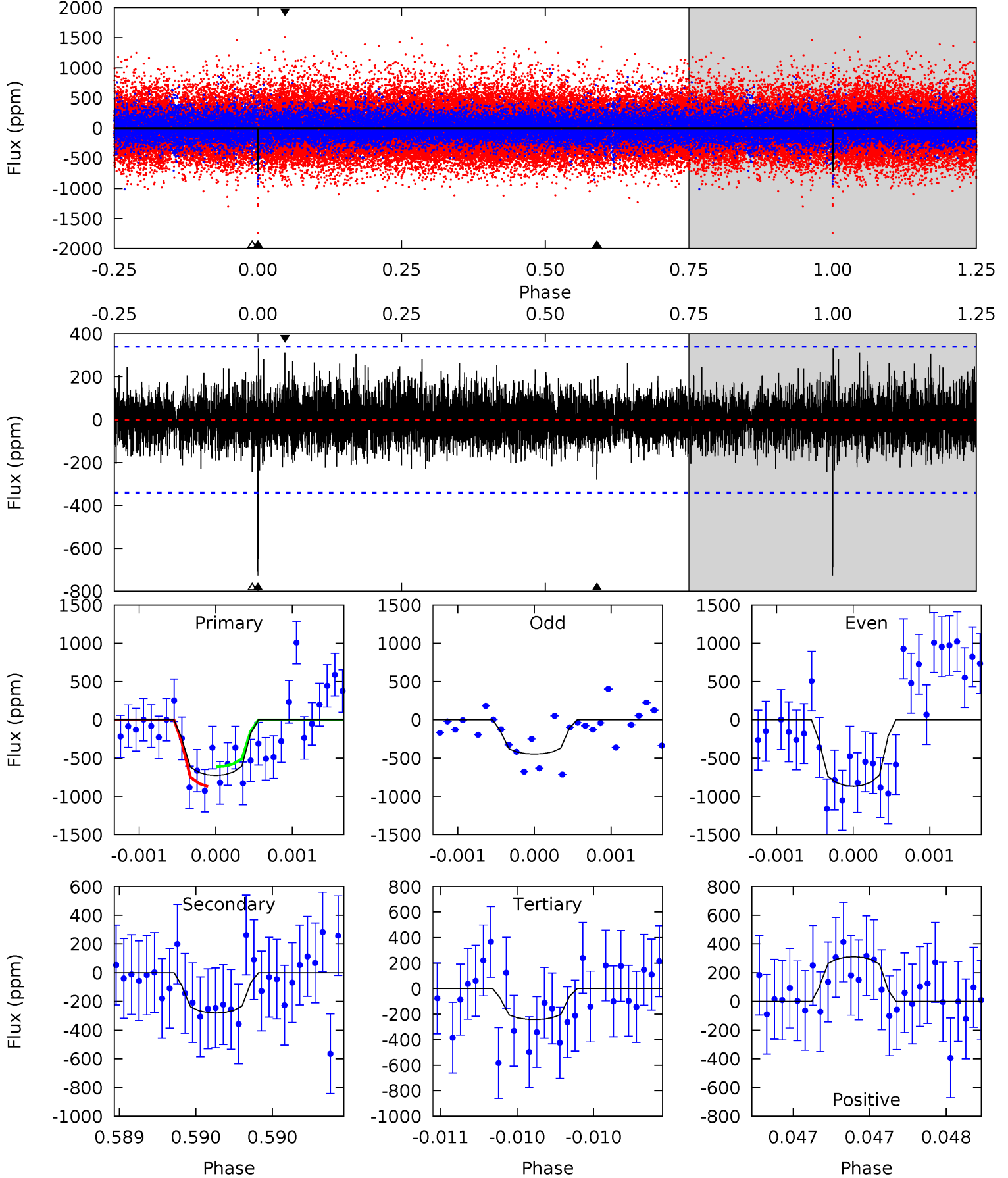
TCE 005726910-01 P=323.728891 Days  $T_0=446.332372$  (BKJD)



# DV Model-Shift Uniqueness Test

005726910-01, P = 323.730188 Days, E = 122.598097 Days

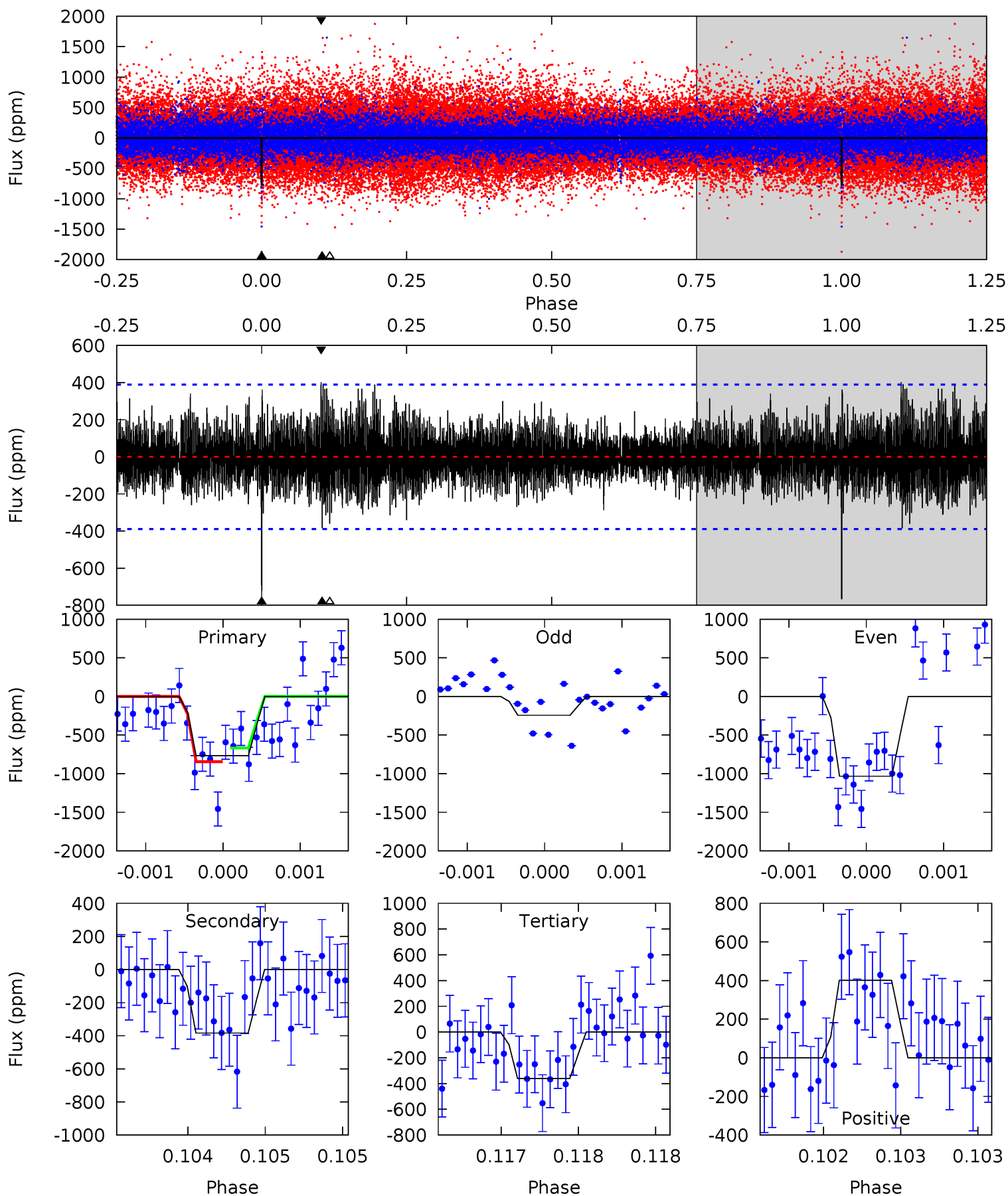
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	4.57	3.96	5.10	5.55	3.45	1.20	7.90	6.77	0.61	-0.53	3.23	1.21	0.31	2.08



# Alt Model-Shift Uniqueness Test

005726910-01,  $P = 323.728891$  Days,  $E = 122.603481$  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
10.9	5.48	5.15	5.73	5.55	3.45	1.41	5.79	5.20	0.33	-0.26	5.36	0.91	0.34	1.26



### Stellar Parameters For KIC 005726910

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5750^{+173}_{-155}$	$4.364^{+0.195}_{-0.195}$	$-0.480^{+0.300}_{-0.300}$	$0.965^{+0.270}_{-0.202}$	$0.785^{+0.123}_{-0.053}$	$1.229^{+1.190}_{-0.603}$
	+3%/-3%	+4%/-4%	+62%/-62%	+28%/-21%	+16%/-7%	+97%/-49%
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 005726910-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-280 \pm 61$	$5.19^{+4.58}_{-3.42}$	$379^{+29}_{-26}$	$3766^{+1884}_{-683}$	$4148^{+30719}_{-3036}$
Alt.	$-384 \pm 70$	$5.02^{+4.95}_{-3.33}$	$379^{+30}_{-26}$	$4009^{+2363}_{-762}$	$6081^{+50331}_{-4495}$

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

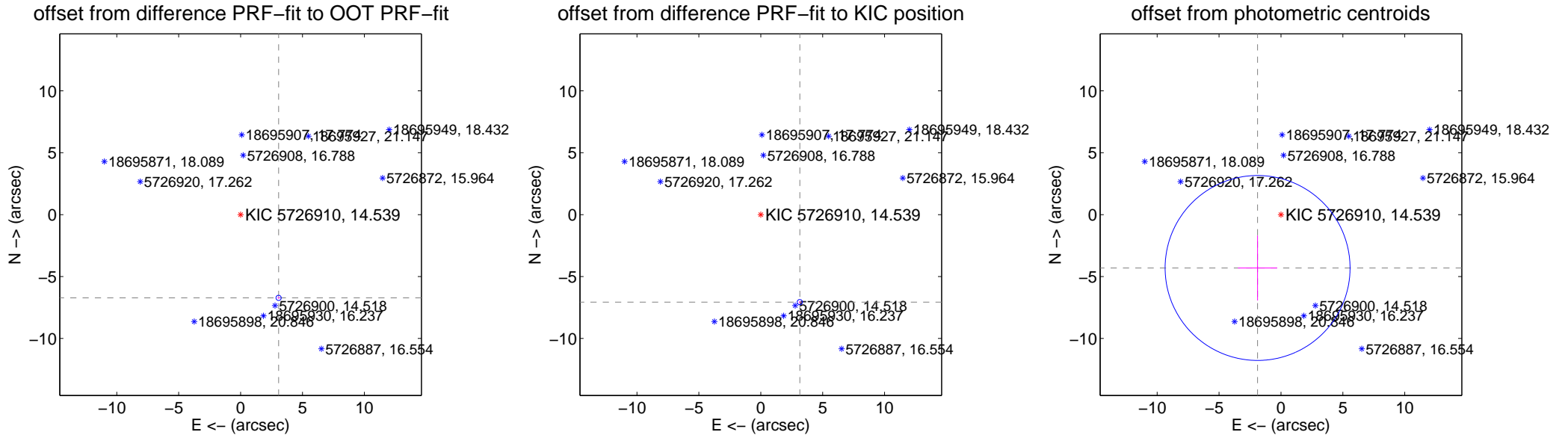
## DV Centroid Data

Supplemental centroid analysis for 005726910-01. Kepler magnitude: 14.54. Transit SNR 7.65

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$7.390 \pm 0.070$	105.24	$-3.070 \pm 0.074$	$-6.722 \pm 0.070$
PRF-fit source offset from KIC position	$7.735 \pm 0.070$	110.20	$-3.152 \pm 0.074$	$-7.064 \pm 0.070$
photometric centroid source offset	$4.70 \pm 2.49$	1.89	$1.89 \pm 1.59$	$-4.31 \pm 2.63$

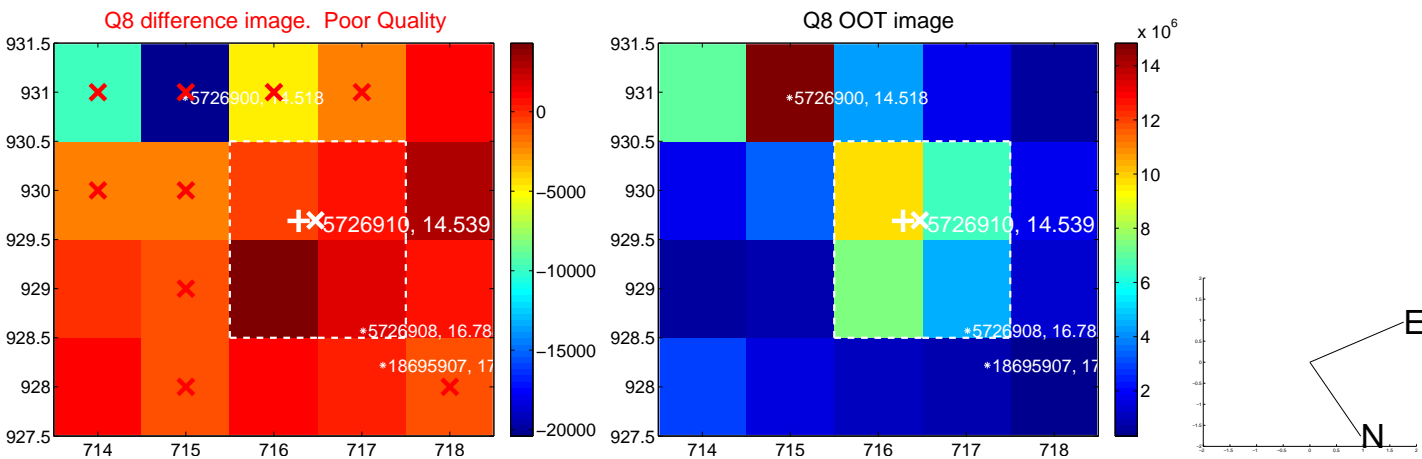
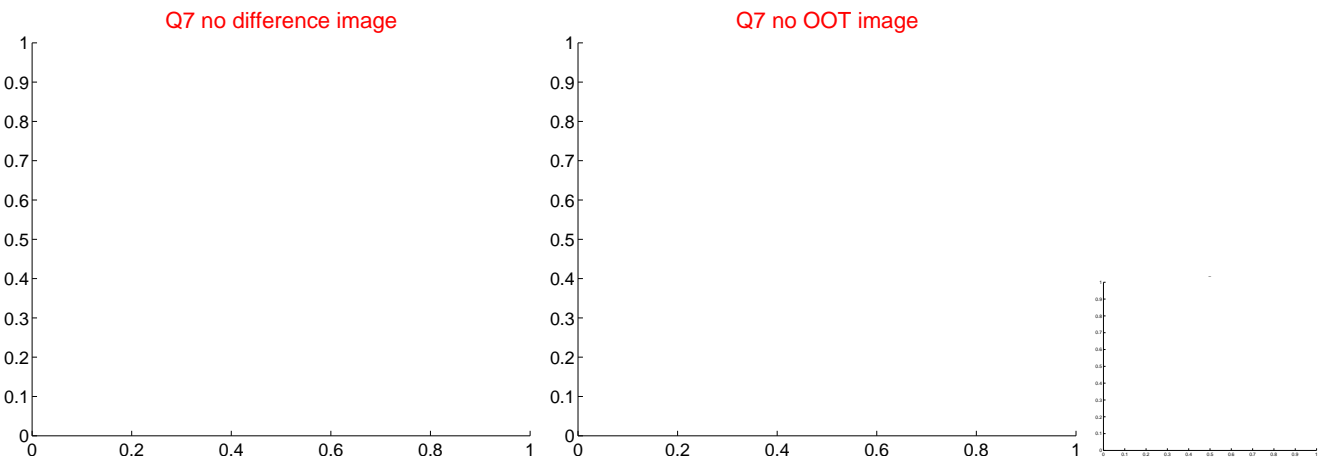
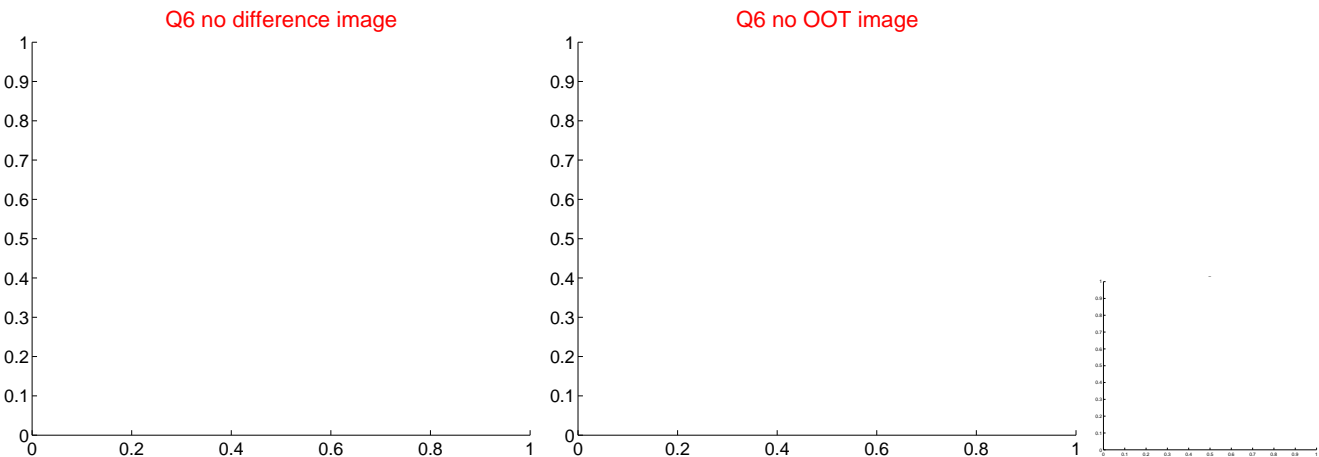
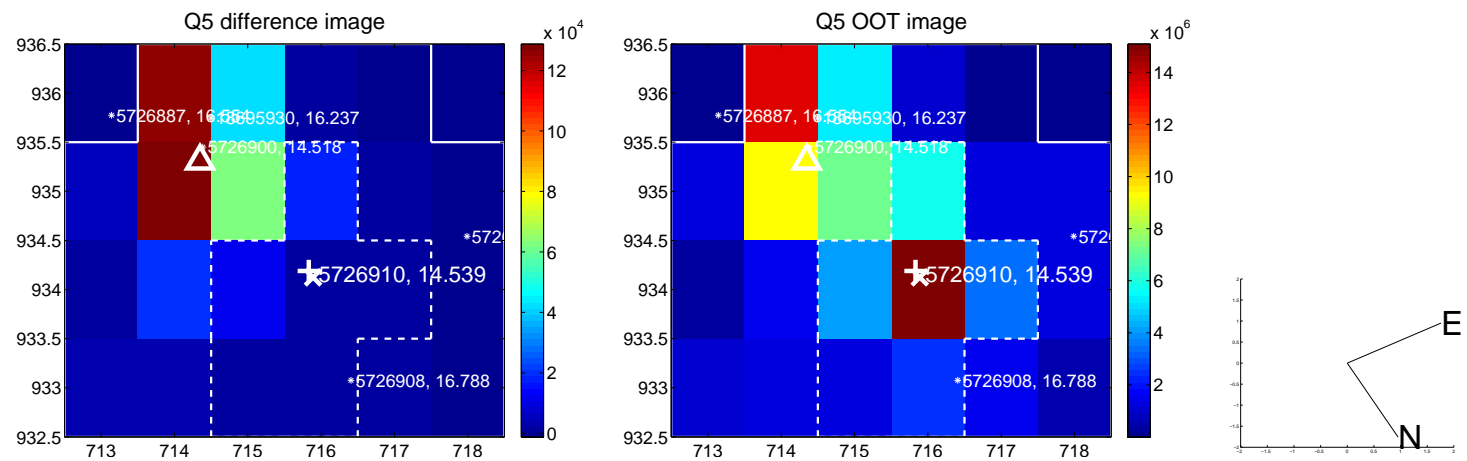


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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





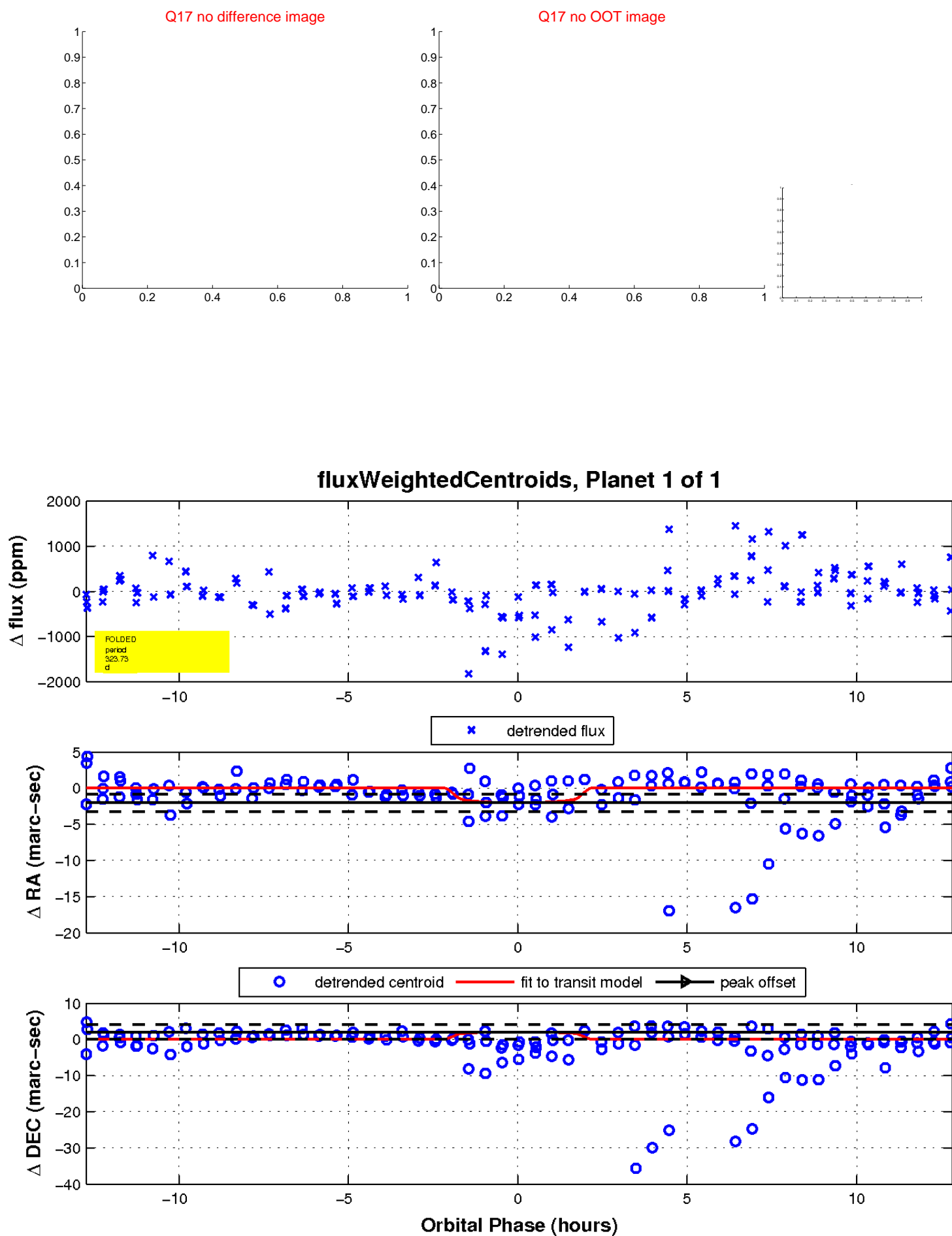
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

