

# KIC 011146710

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011146710-01	OBS	No	388.213703	447.067941	1991.2	86.914	13.2	20.3	0.87	5701	7.40	0.72

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011146710-01	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_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.

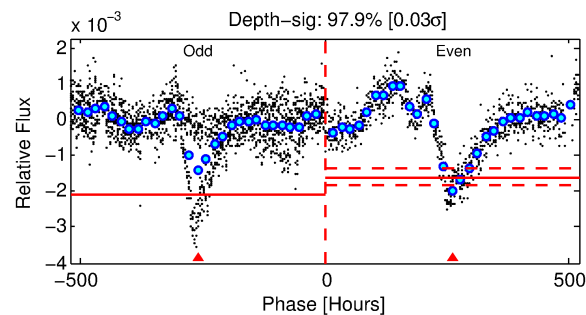
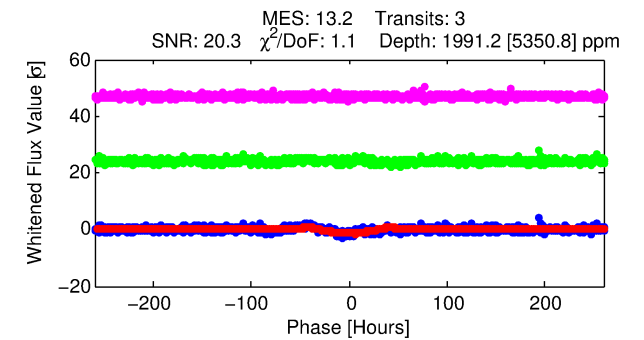
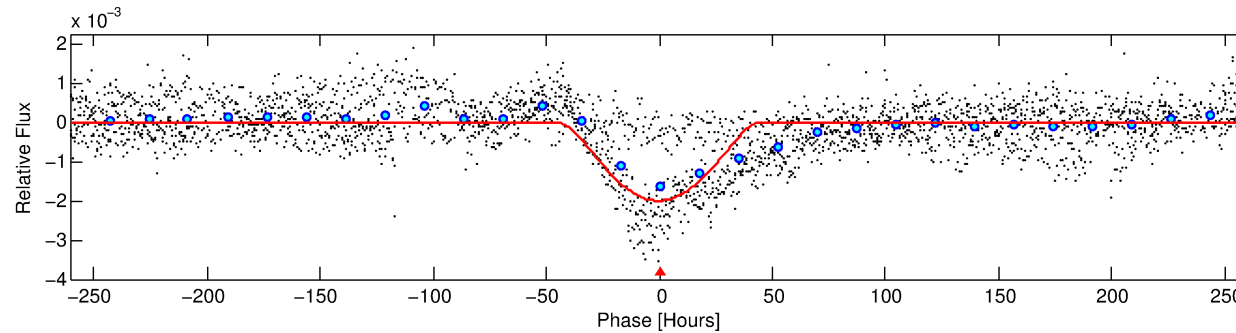
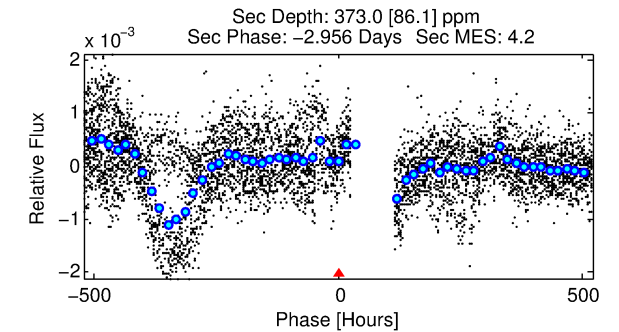
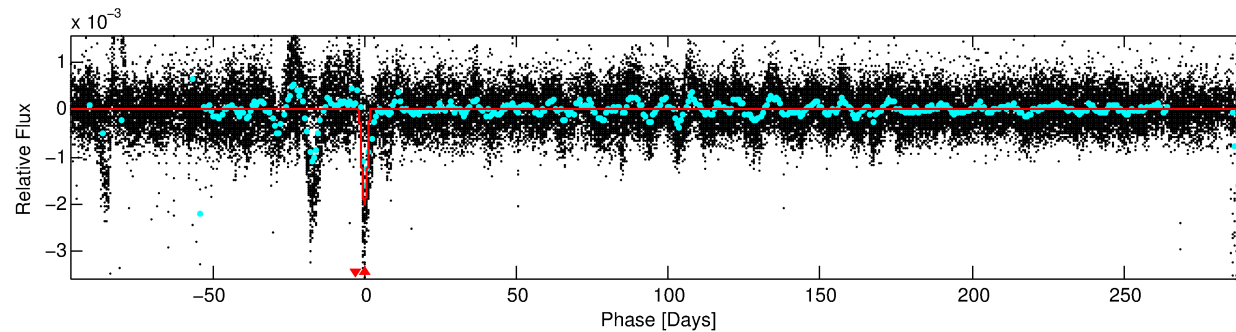
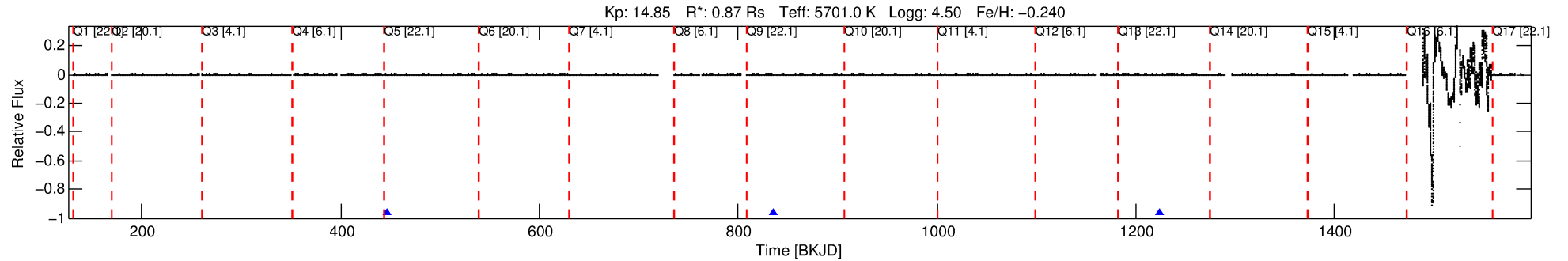
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011146710-01

No Significant Match Found

# DV One-Page Summary

KIC: 11146710 Candidate: 1 of 1 Period: 388.214 d



## DV Fit Results:

Period = 388.21370 [0.04921] d  
Epoch = 447.0679 [0.0461] BKJD  
Rp/R\* = 0.0778 [0.0725]  
a/R\* = 13.76 [2.71]  
b = 1.00 [0.04]  
Seff = 0.72 [0.24]  
Teq = 235 [20] K  
Rp = 7.40 [7.16] Re  
a = 0.9971 [0.2170] AU  
Ag = 3729.24 [7097.30] [0.53σ]  
Teffp = 2840 [1336] K [1.95σ]

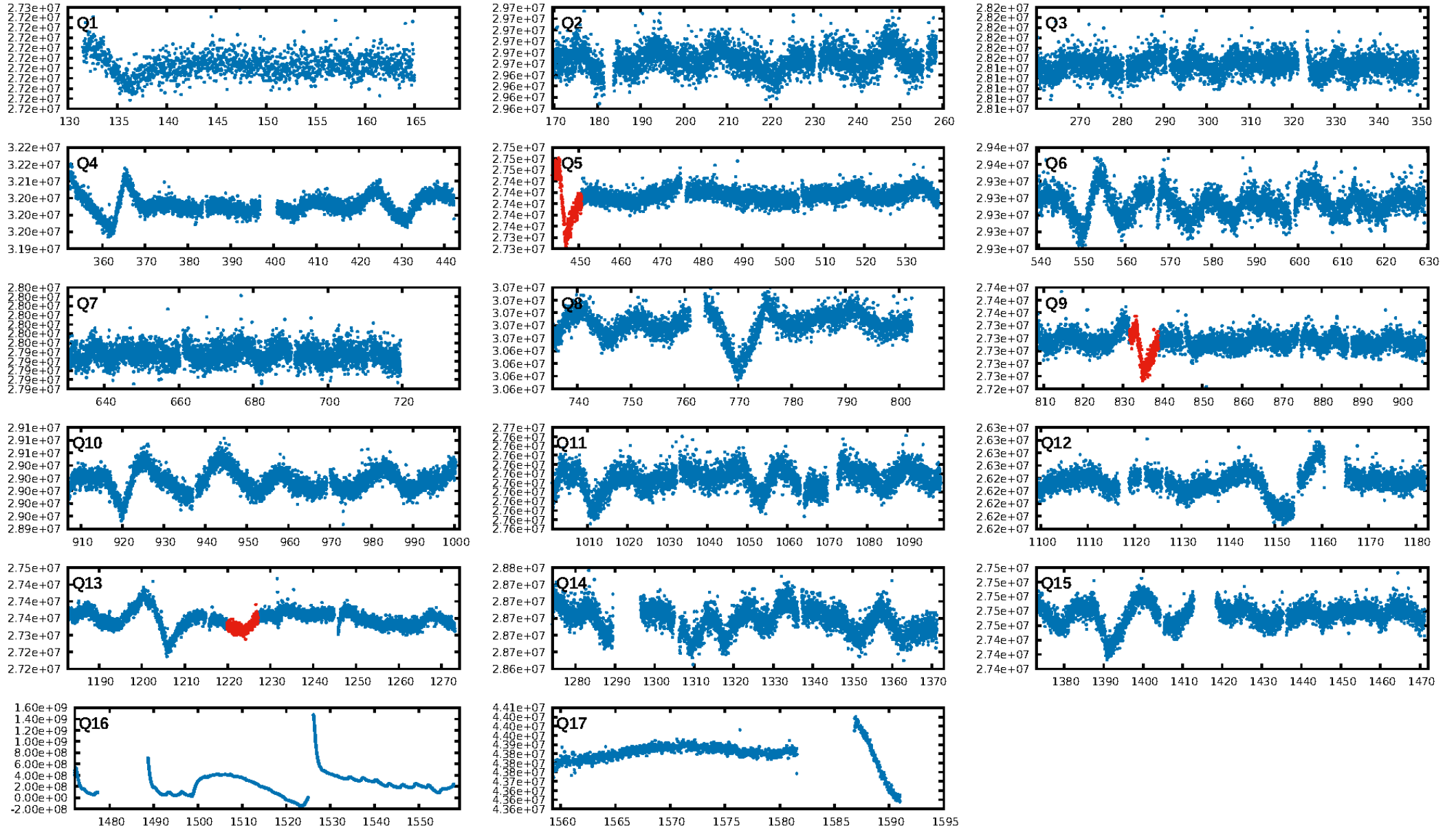
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 9.45e-08  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -6.421  
Centroid-sig: 2.7%  
Centroid-so: N/A  
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]

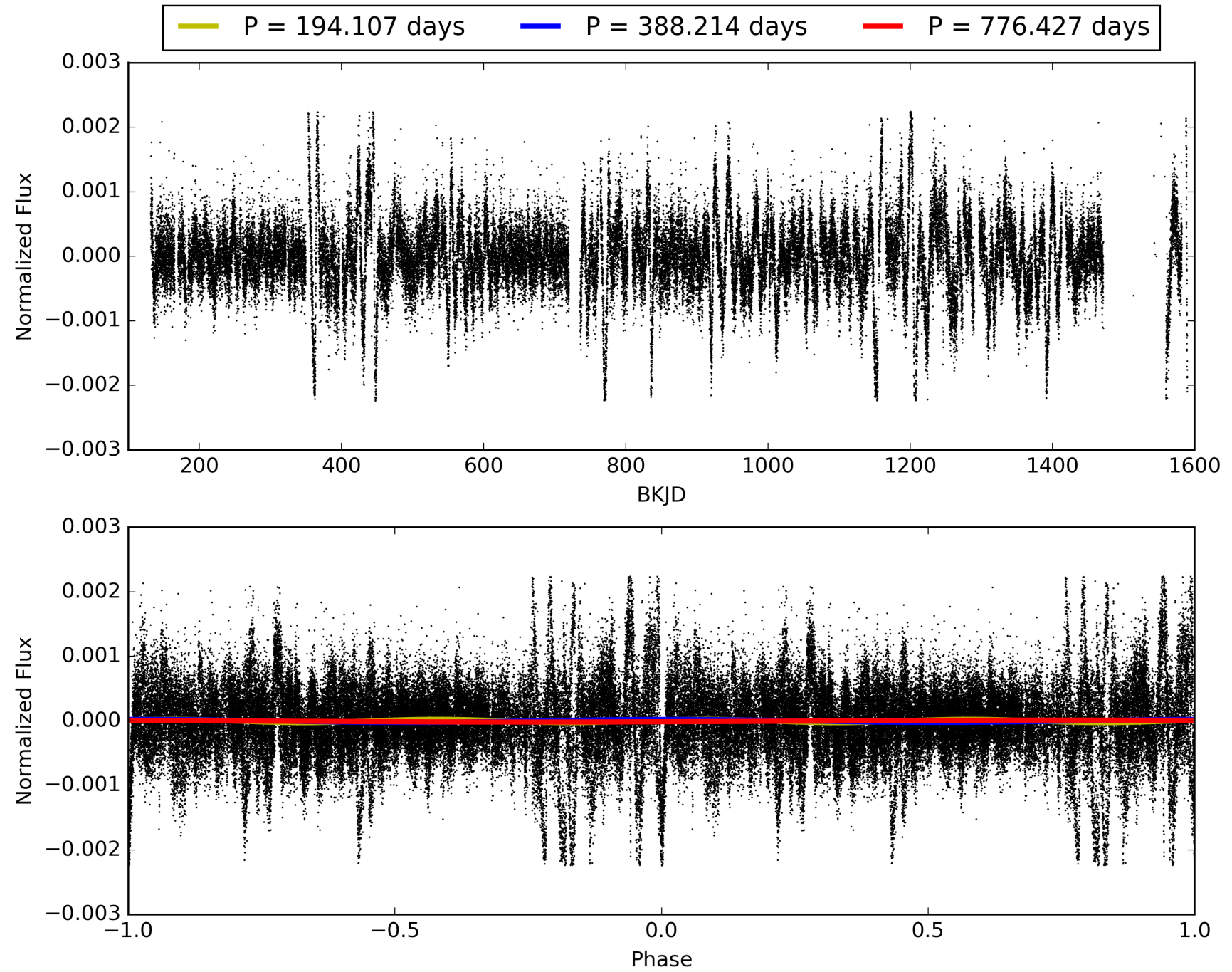
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:48:33 Z

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

# TCE 011146710-01, PDC Light Curves

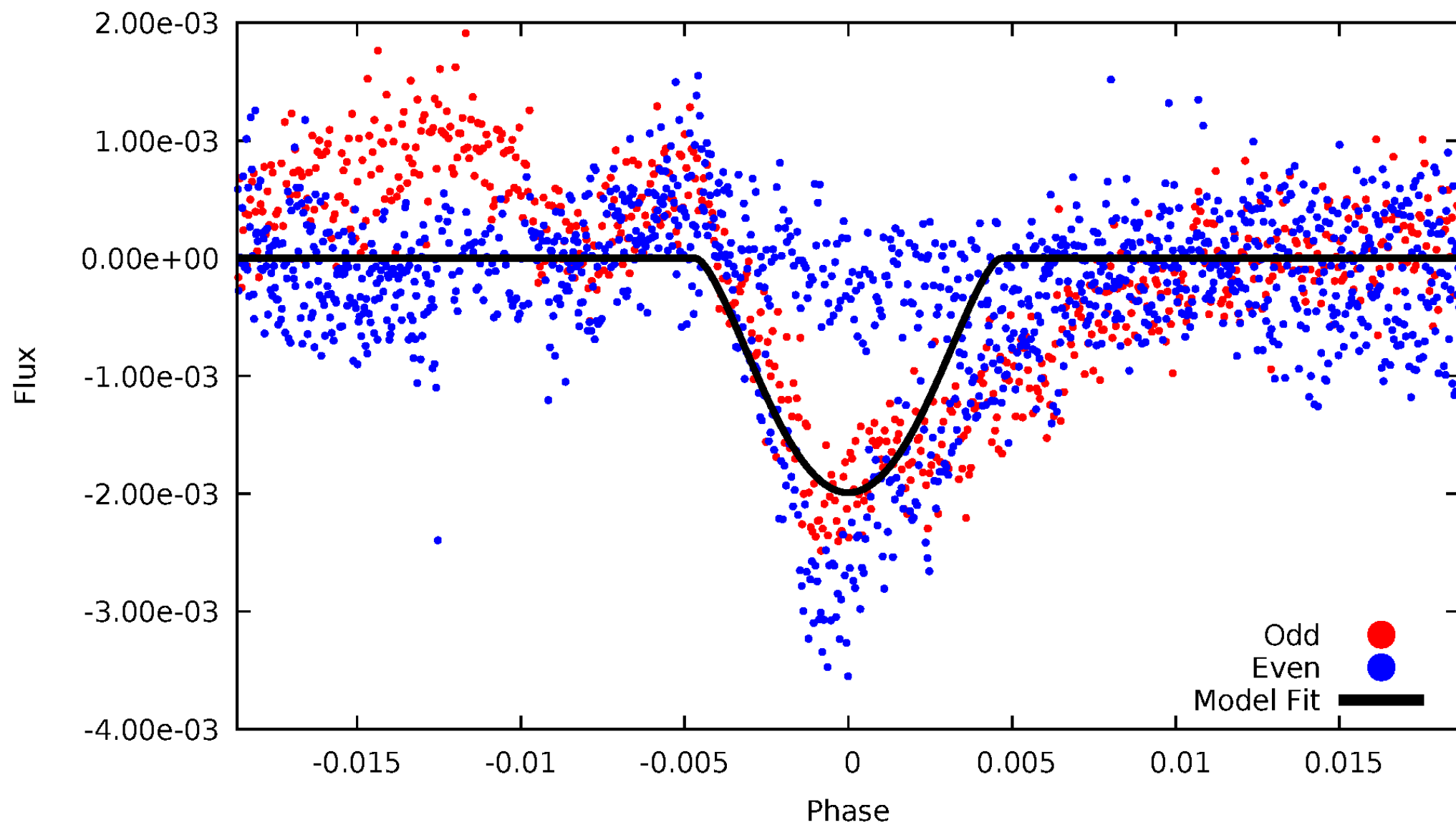


# TCE 011146710-01



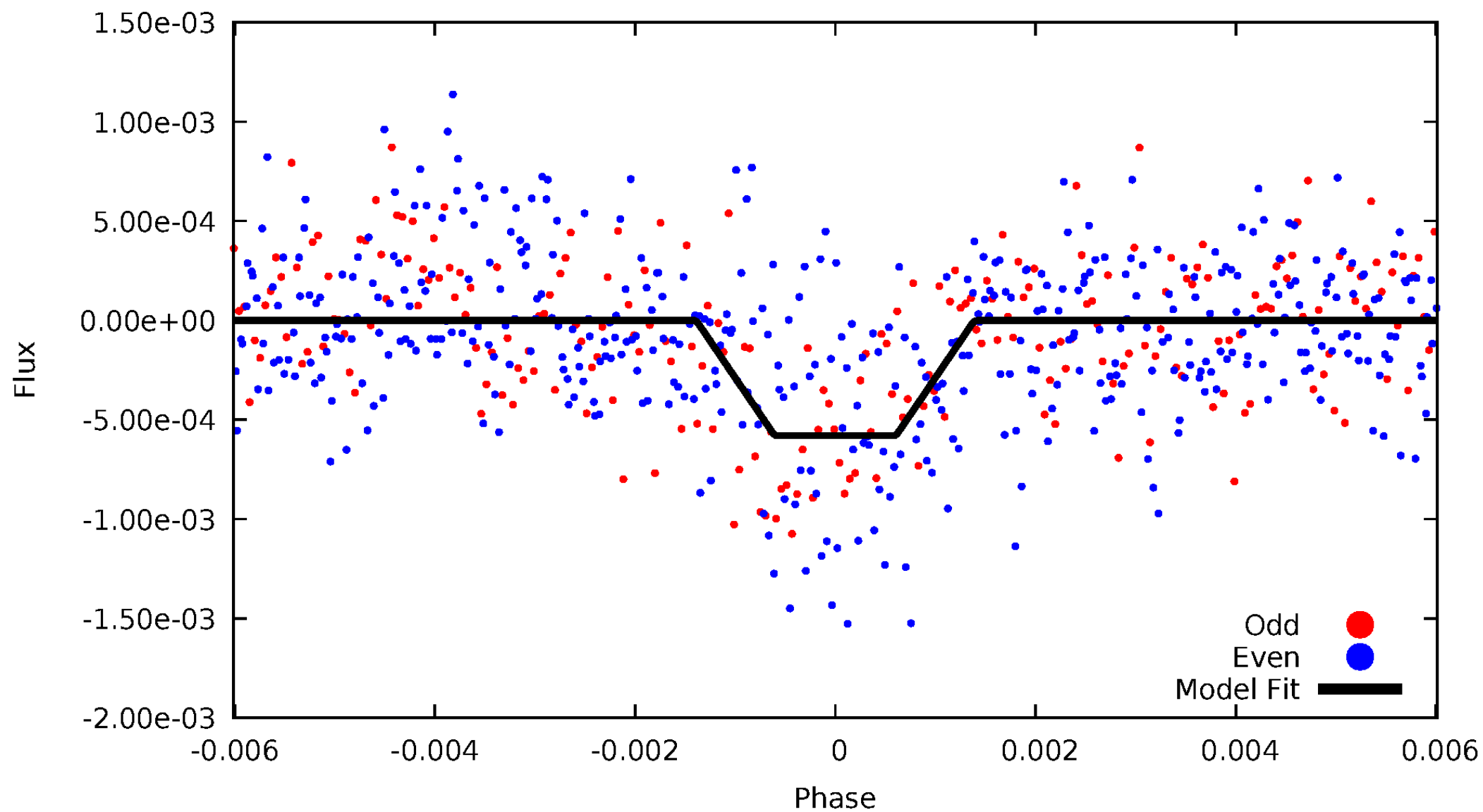
# DV Odd/Even

TCE 011146710-01



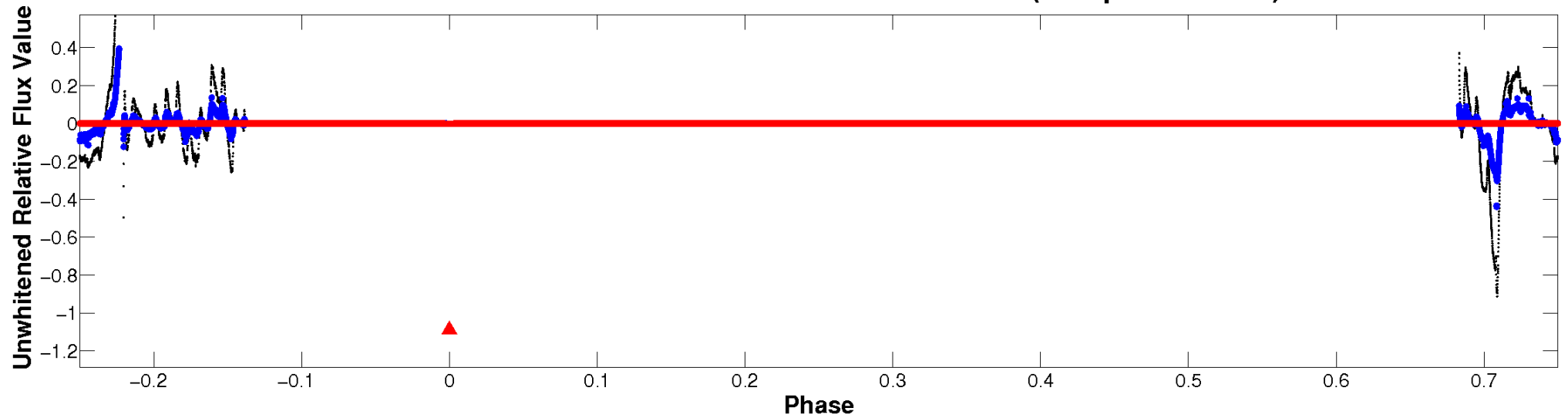
# ALT Odd/Even

TCE 011146710-01

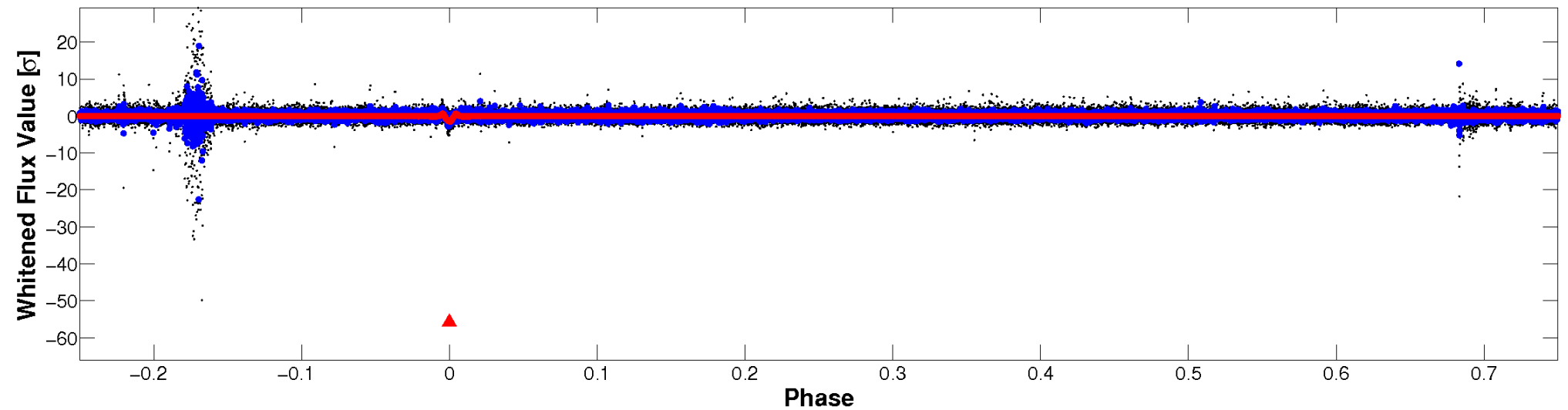


# Non-Whitened Vs. Whitened Light Curve

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

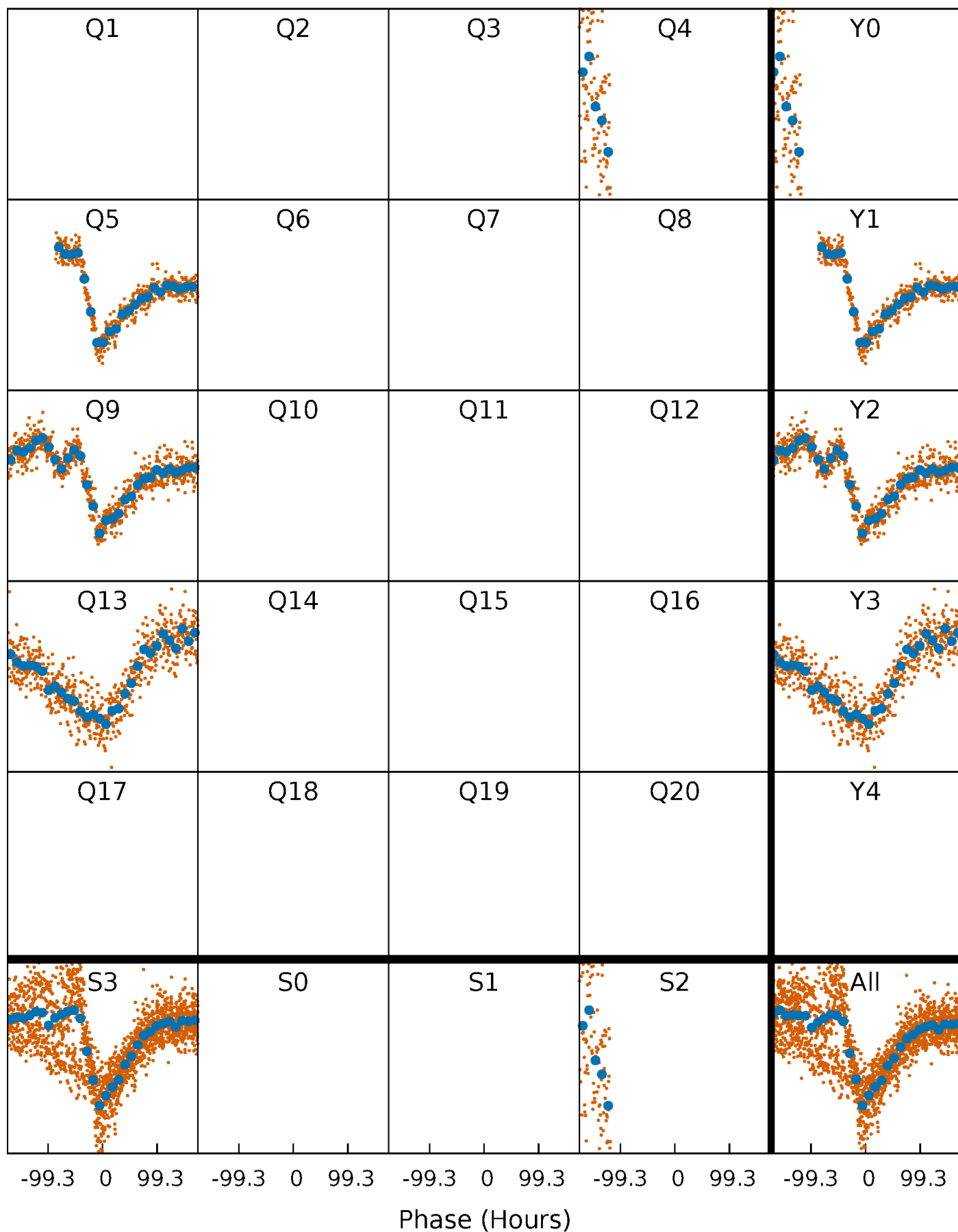


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

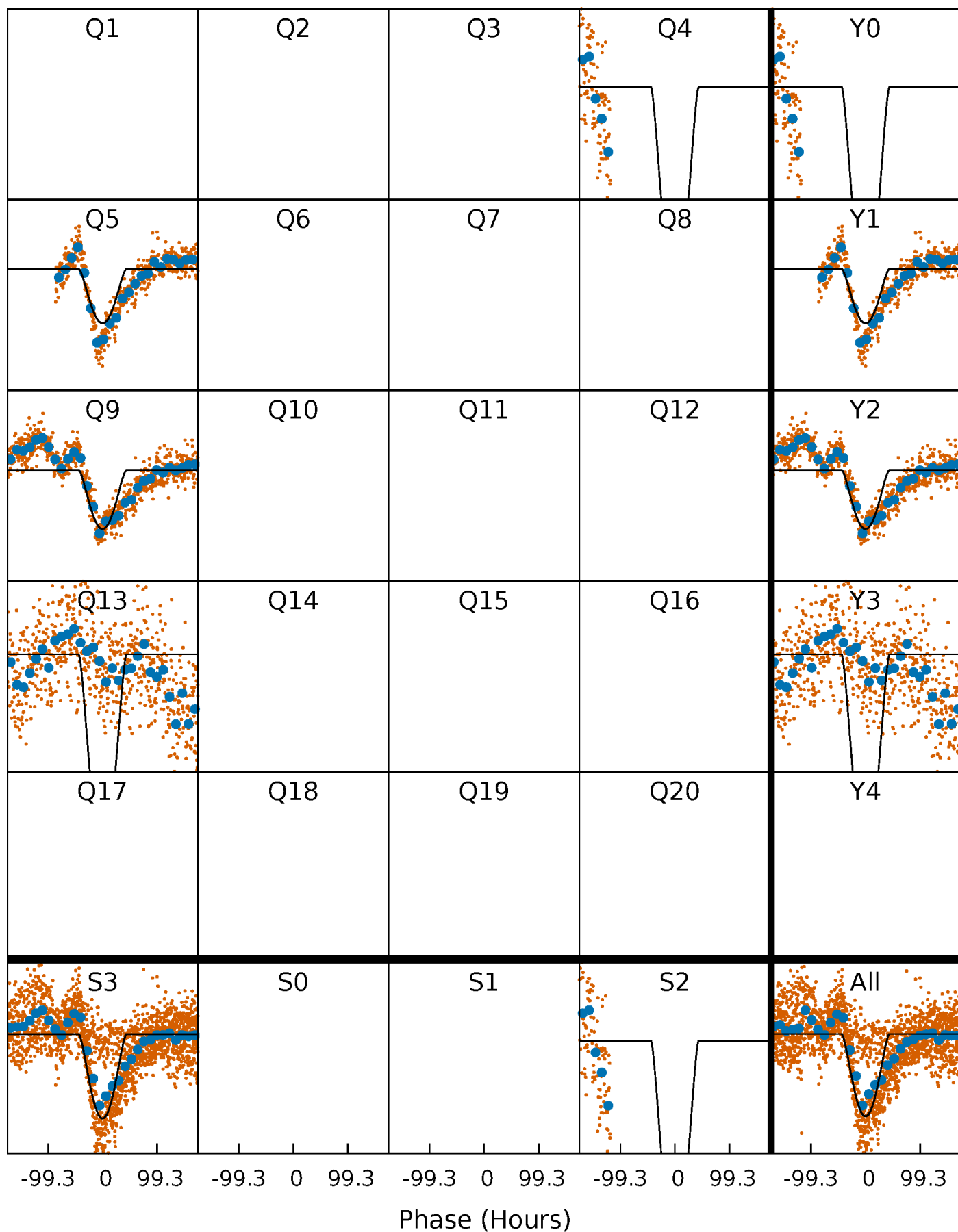
TCE 011146710-01 P=388.213703 Days  $T_0=447.067941$  (BKJD)





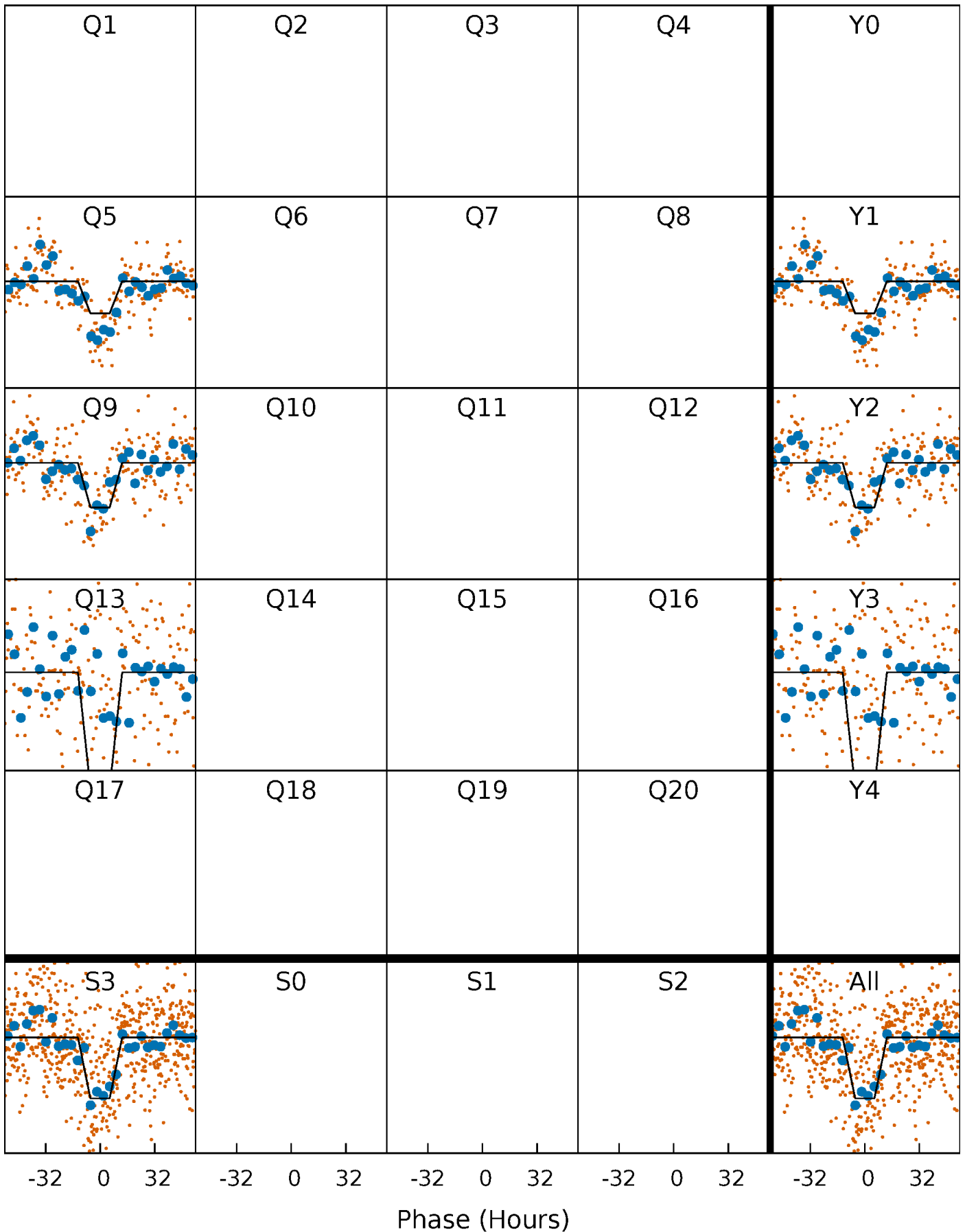
# DV Quarter-Phased Transit Curves

TCE 011146710-01 P=388.213703 Days  $T_0=447.067941$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

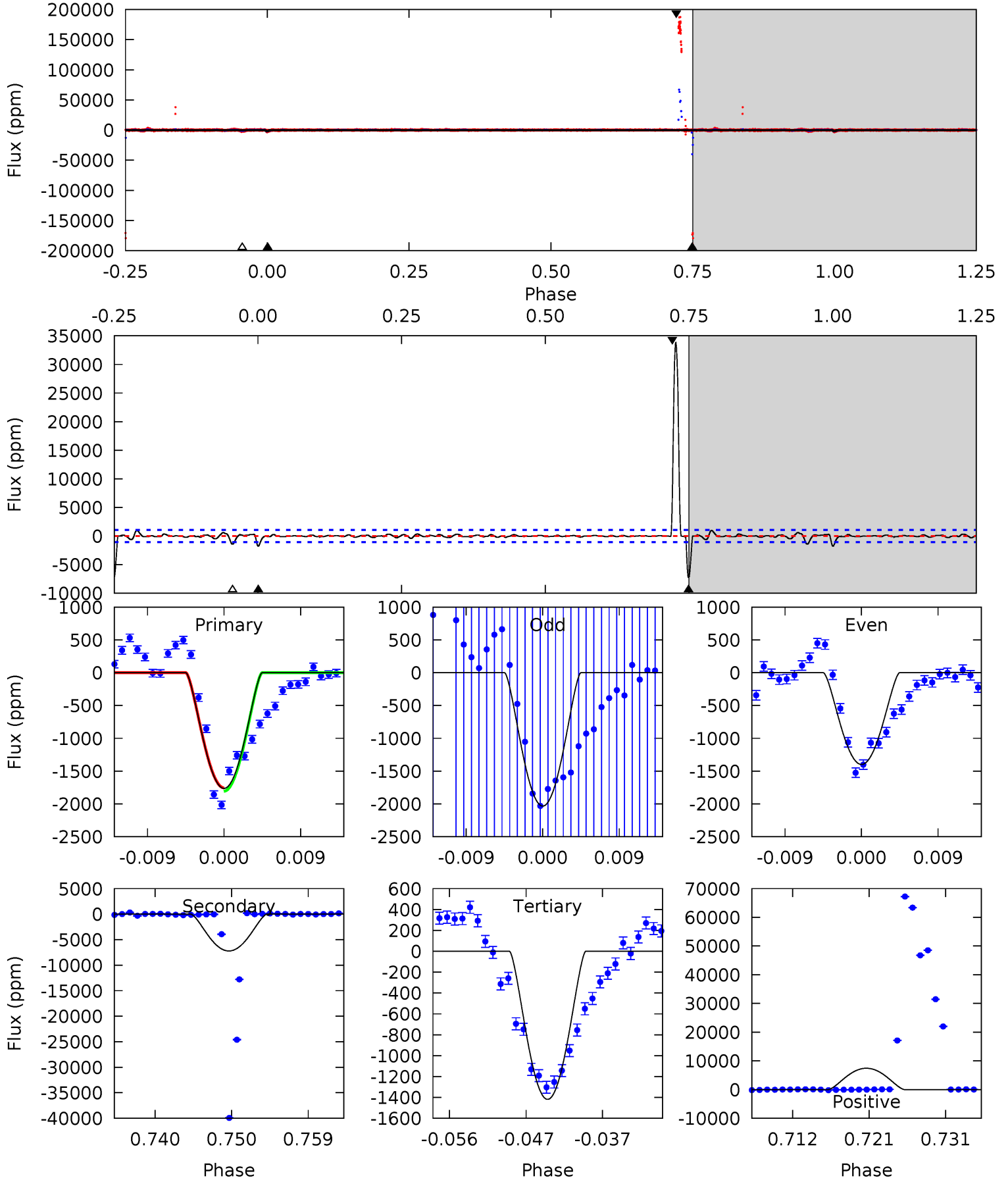
TCE 011146710-01     $P=388.353430$  Days     $T_0=446.772280$  (BKJD)



# DV Model-Shift Uniqueness Test

011146710-01, P = 388.213703 Days, E = 58.854238 Days

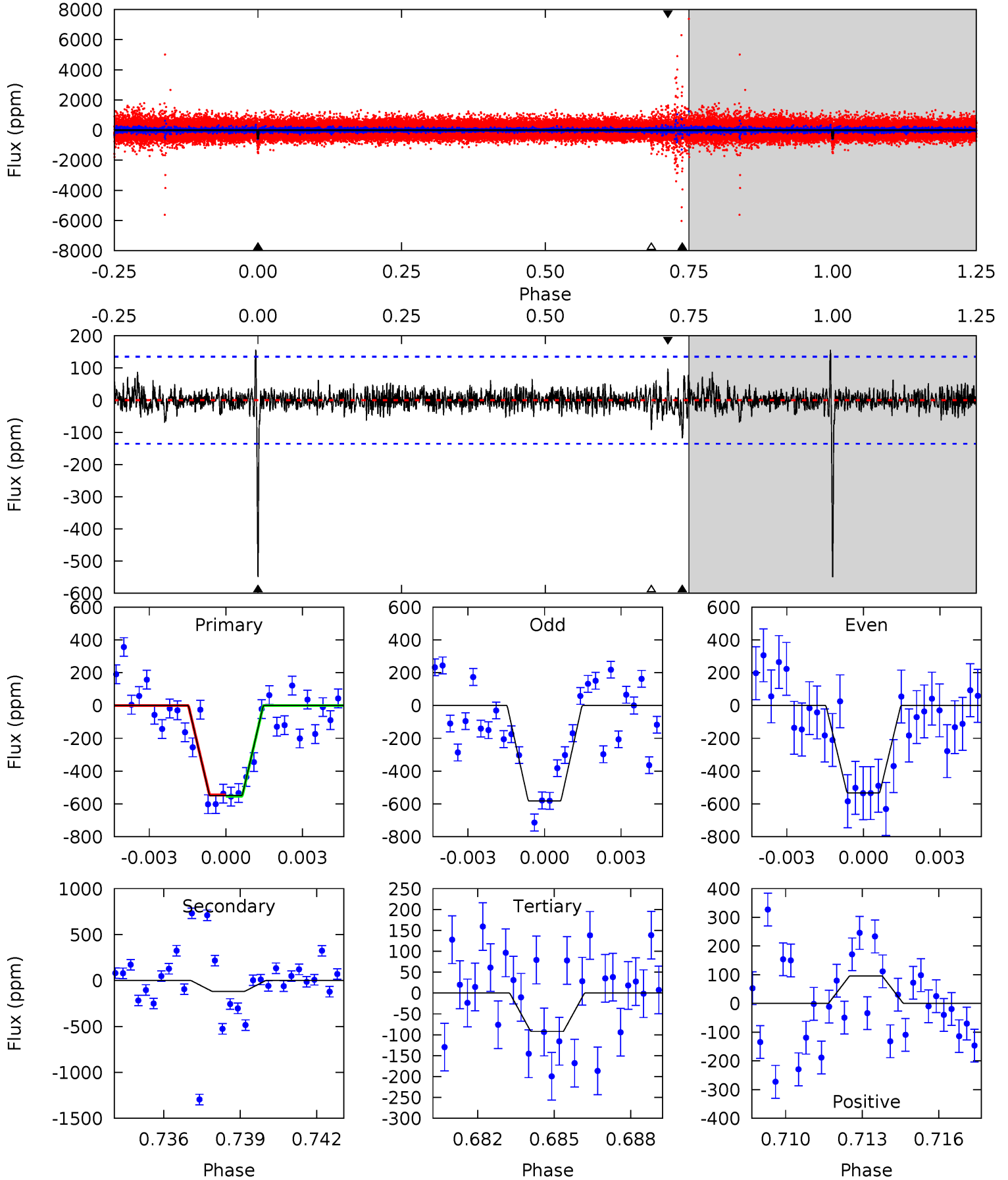
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.36	34.2	6.73	35.2	5.04	2.60	9.87	1.63	-26.9	27.5	-1.03	0.28	0.79	0.82	0.11



# Alt Model-Shift Uniqueness Test

011146710-01, P = 388.353430 Days, E = 58.418850 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
21.4	4.60	3.58	3.73	5.26	2.98	0.84	17.8	17.6	1.03	0.87	0.31	0.94	0.22	0.14



### Stellar Parameters For KIC 011146710

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5701^{+154}_{-171}$	$4.501^{+0.072}_{-0.168}$	$-0.240^{+0.300}_{-0.300}$	$0.871^{+0.229}_{-0.098}$	$0.877^{+0.109}_{-0.079}$	$1.868^{+0.588}_{-0.887}$
	+3%/-3%	+2%/-4%	+125%/-125%	+26%/-11%	+12%/-9%	+31%/-47%
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 011146710-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-7217 \pm 211$	$8.66^{+6.74}_{-5.47}$	$331^{+19}_{-15}$	$5543^{+4225}_{-1133}$	$53337^{+343709}_{-36340}$
Alt.	$-118 \pm 26$	$5.72^{+5.52}_{-3.97}$	$332^{+22}_{-16}$	$3110^{+1453}_{-544}$	$1982^{+19274}_{-1497}$

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

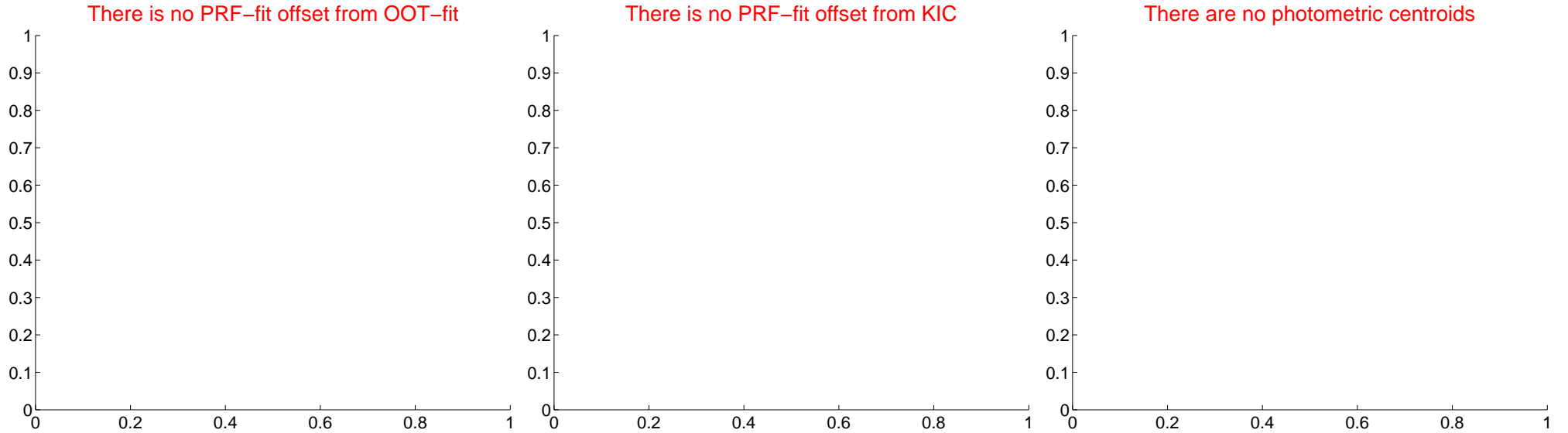
## DV Centroid Data

Supplemental centroid analysis for 011146710-01. Kepler magnitude: 14.85. Transit SNR 20.25

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	—	—	—	—



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.

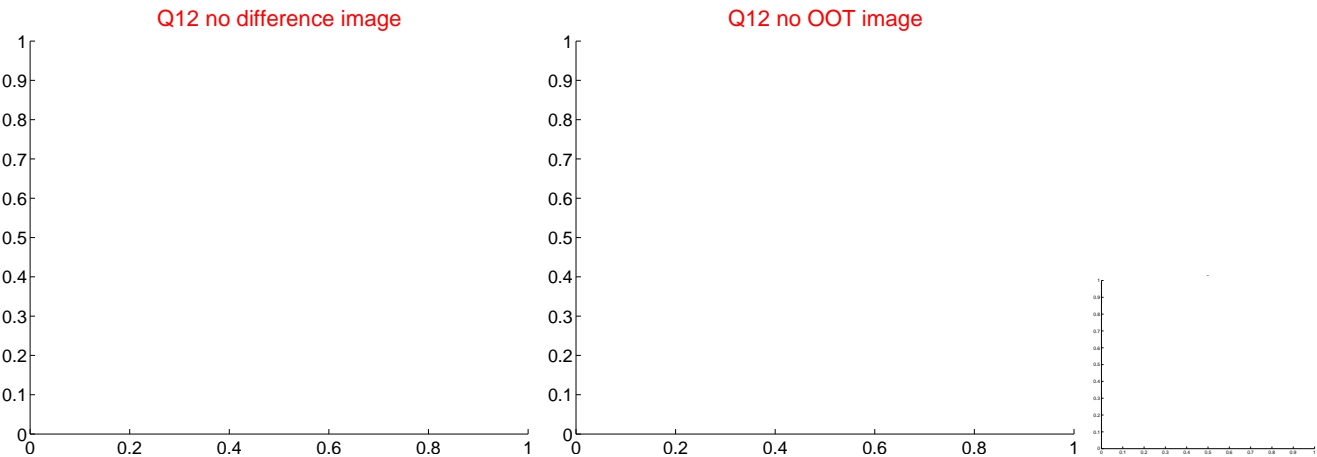
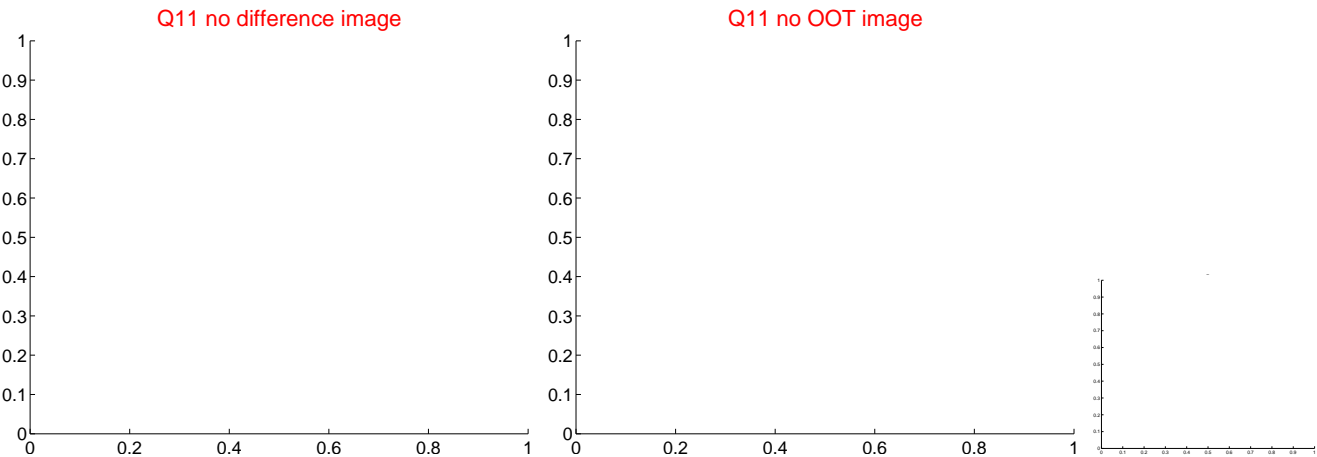
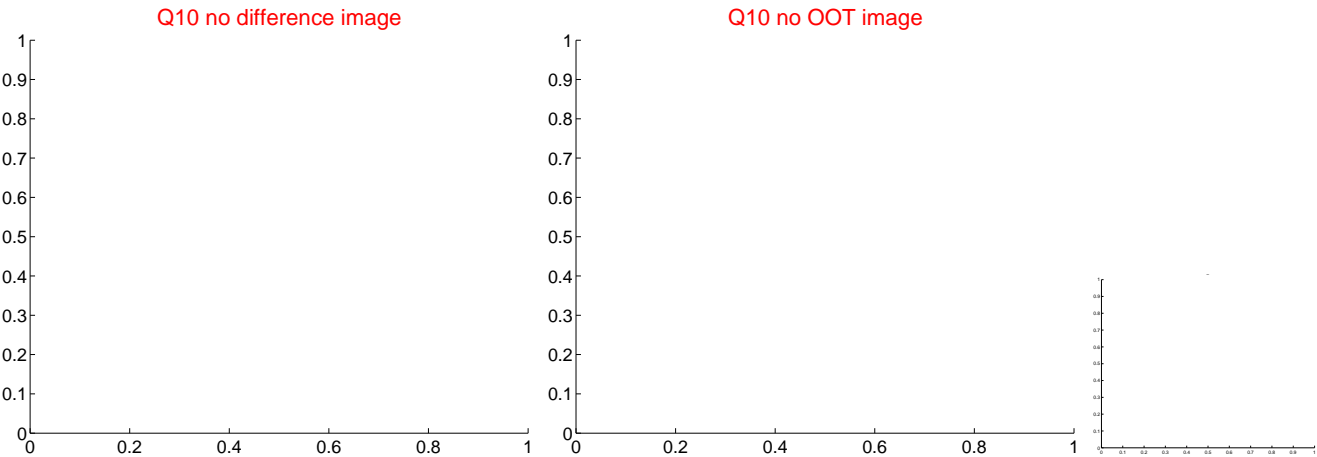
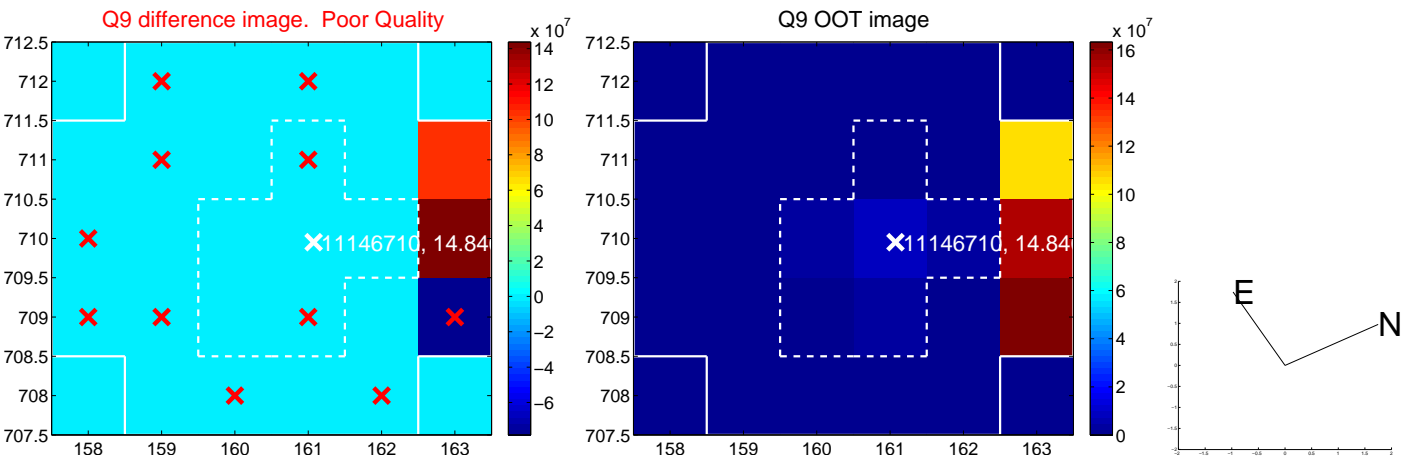


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





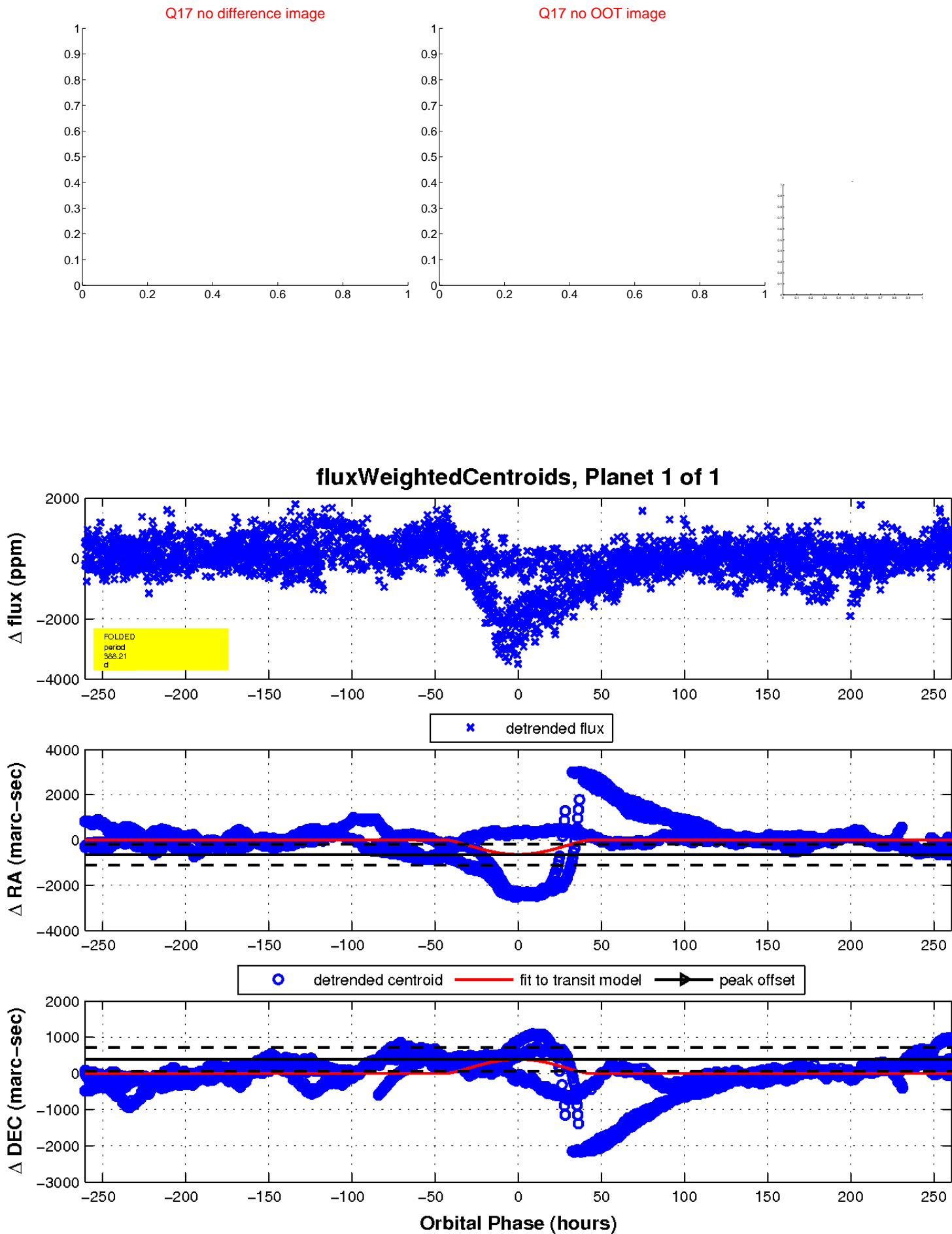
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

