

# KIC 011494620

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011494620-01	OBS	No	364.411775	243.819184	650.4	13.727	7.8	8.1	0.99	6070	2.68	1.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011494620-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS

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

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

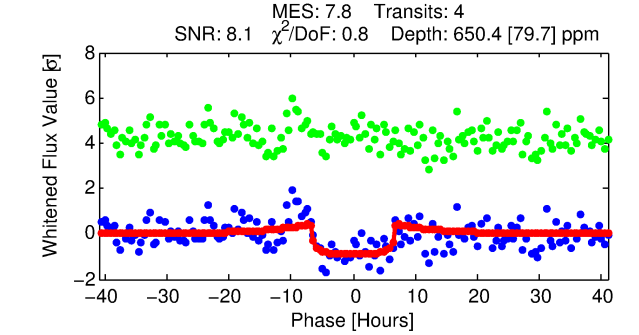
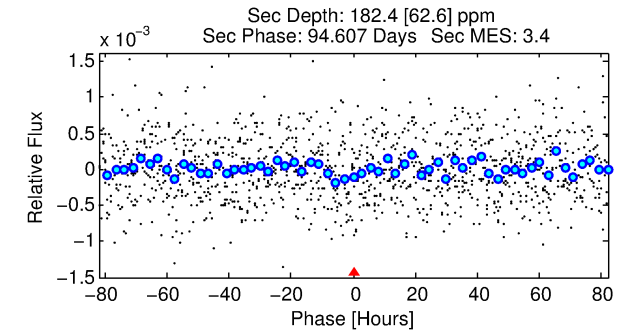
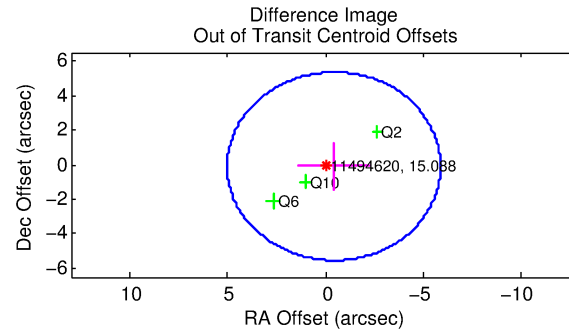
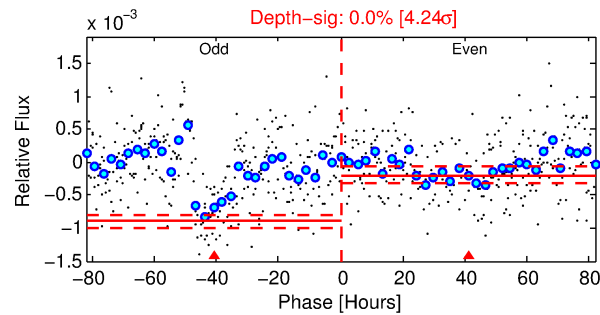
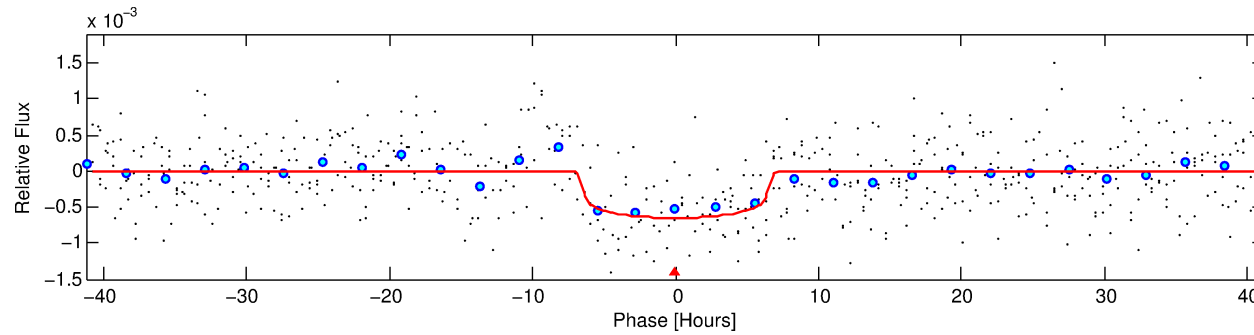
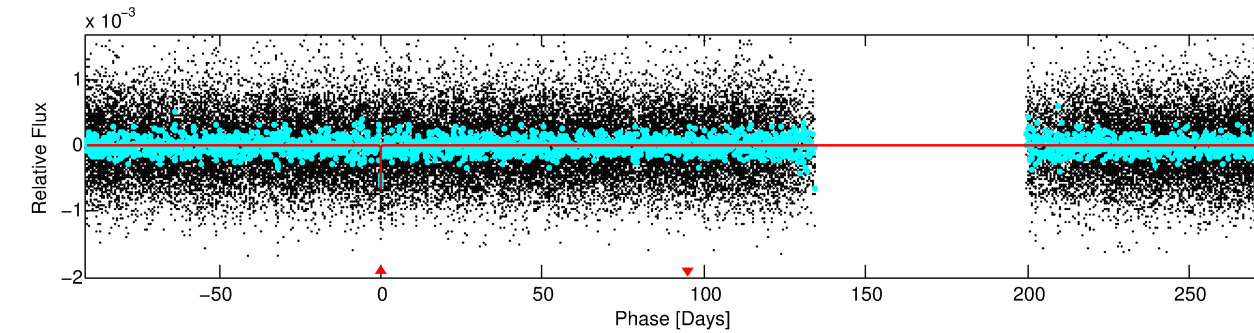
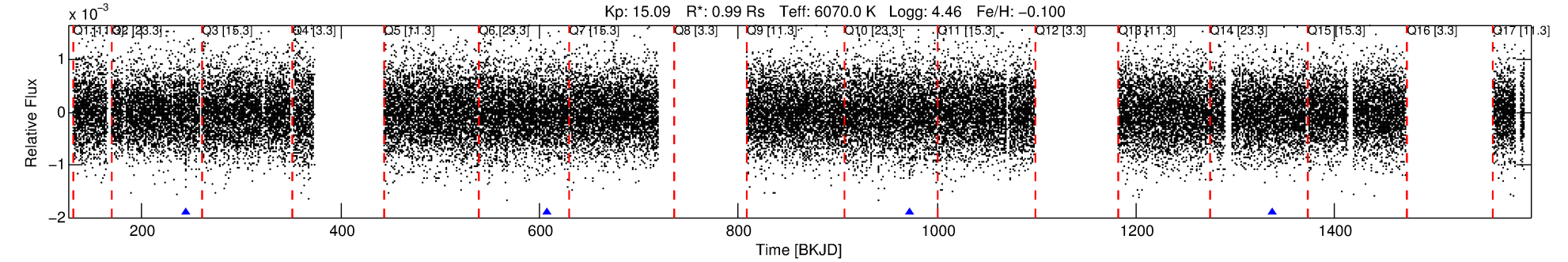
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011494620-01

No Significant Match Found

# DV One-Page Summary

KIC: 11494620 Candidate: 1 of 1 Period: 364.412 d



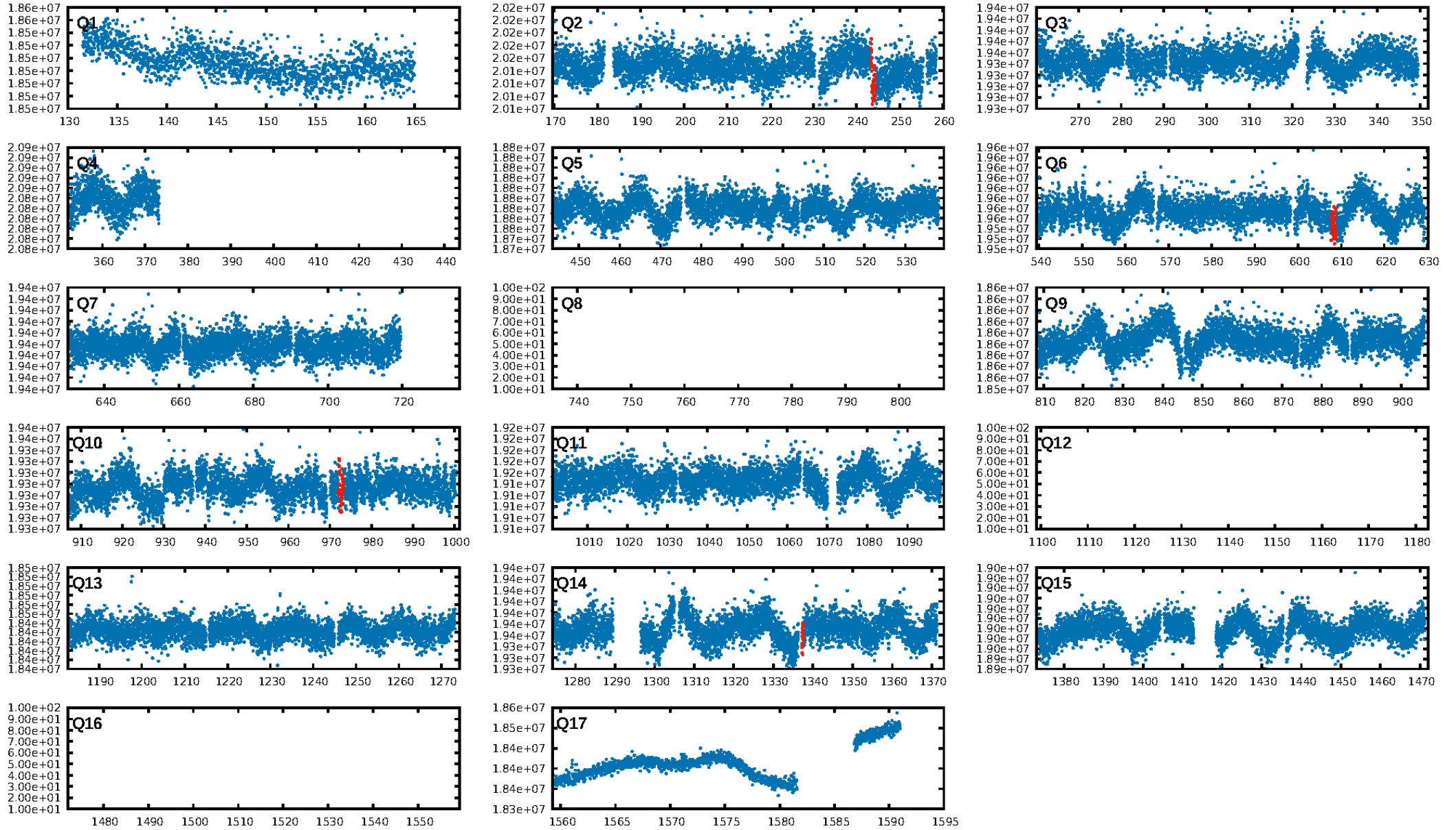
## DV Fit Results:

Period = 364.41178 [0.01000] d  
Epoch = 243.8192 [0.0158] BKJD  
Rp/R\* = 0.0247 [0.0068]  
a/R\* = 158.98 [204.92]  
b = 0.66 [1.10]  
Seff = 1.17 [0.50]  
Teq = 265 [28] K  
Rp = 2.68 [1.15] Re  
a = 1.0110 [0.2837] AU  
Ag = 14326.23 [10973.46] [1.31σ]  
Teffp = 4487 [741] K [5.69σ]

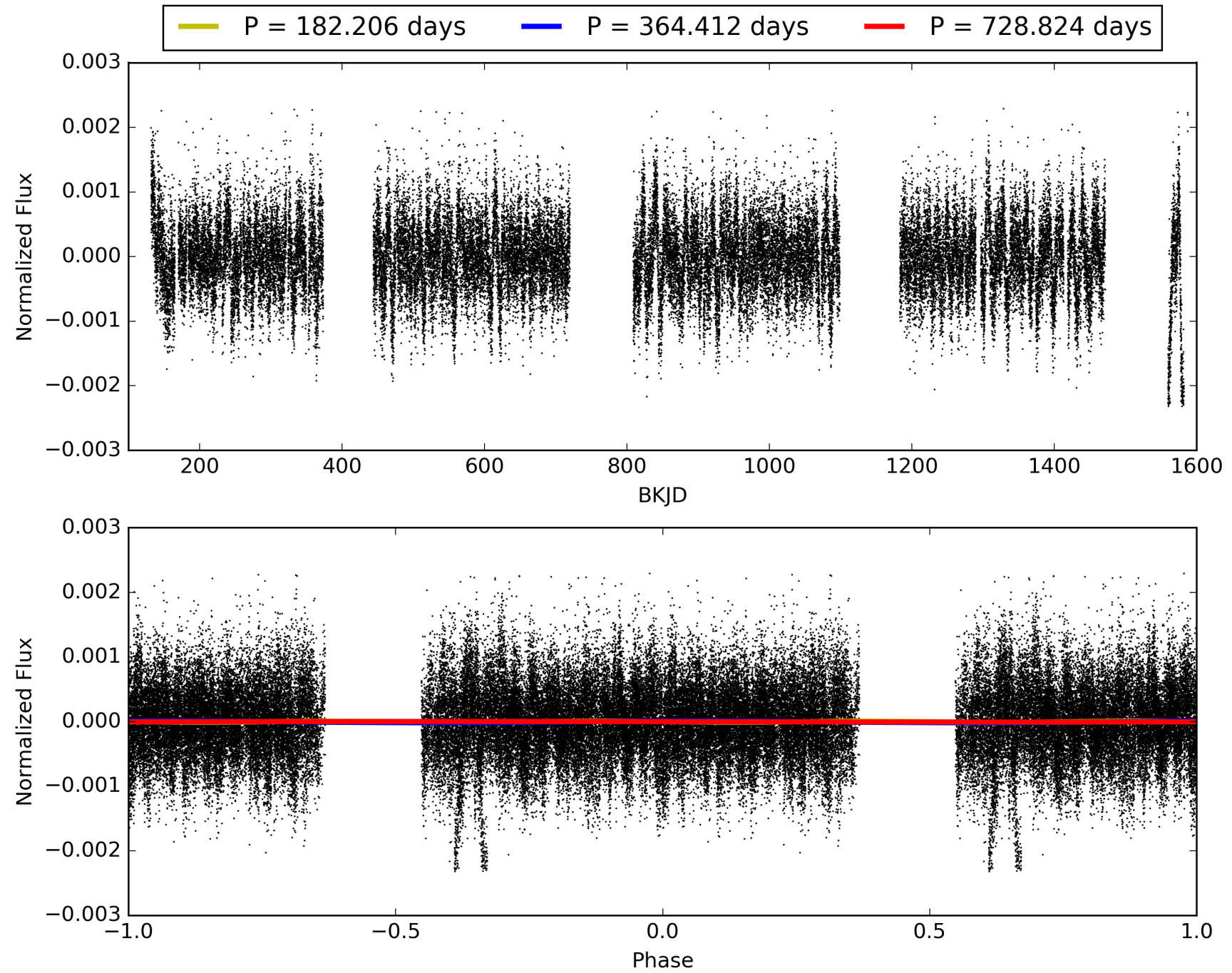
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 5.8%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 2.93e-12**  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: -13.88  
Centroid-sig: 70.7%  
Centroid-so: 0.526 arcsec [0.28σ]  
OotOffset-rm: 0.441 arcsec [0.24σ]  
KicOffset-rm: 0.534 arcsec [0.32σ]  
OotOffset-st: 3/0/0/0 [3]  
KicOffset-st: 3/0/0/0 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 1.00 [3/3]

# TCE 011494620-01, PDC Light Curves

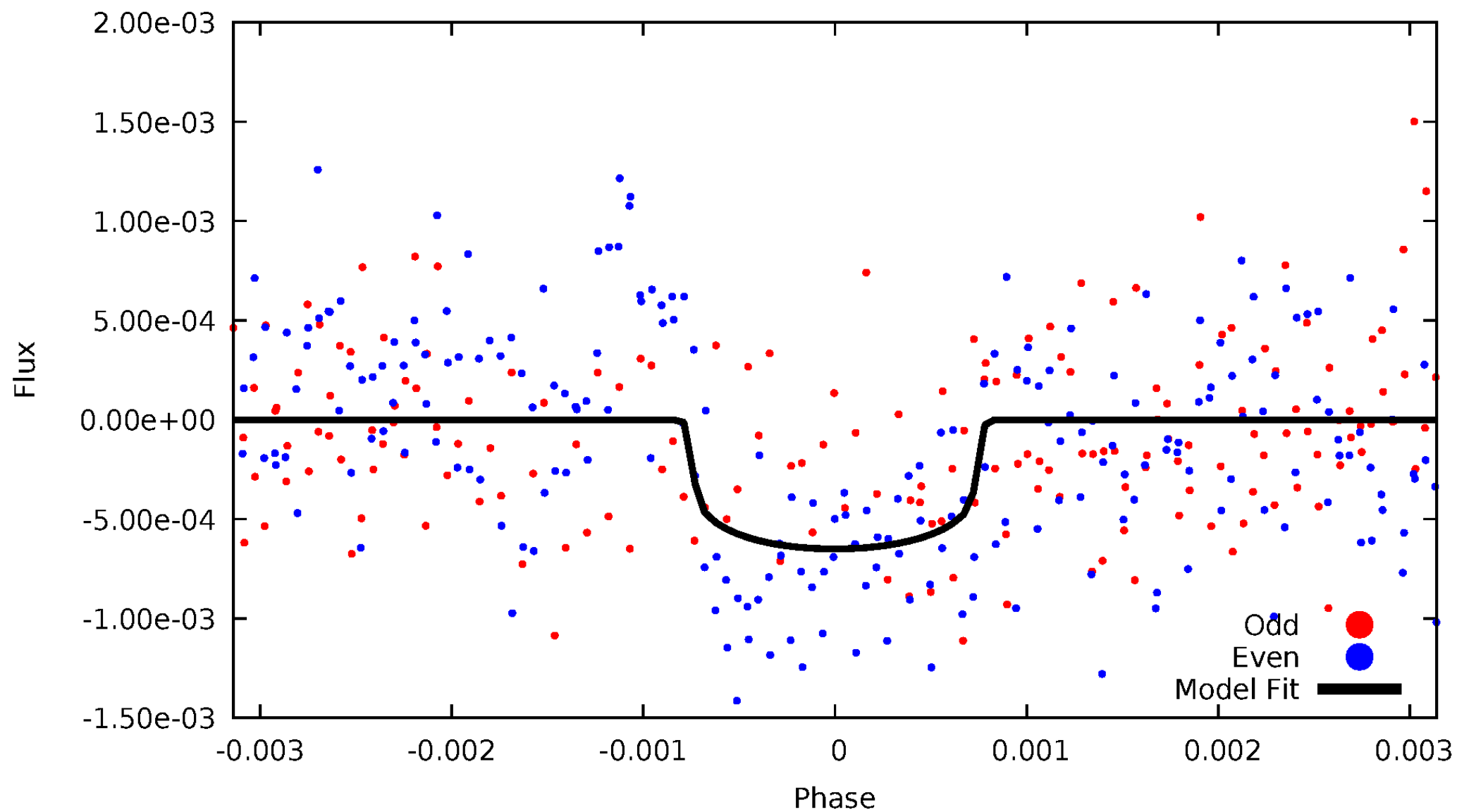


TCE 011494620-01



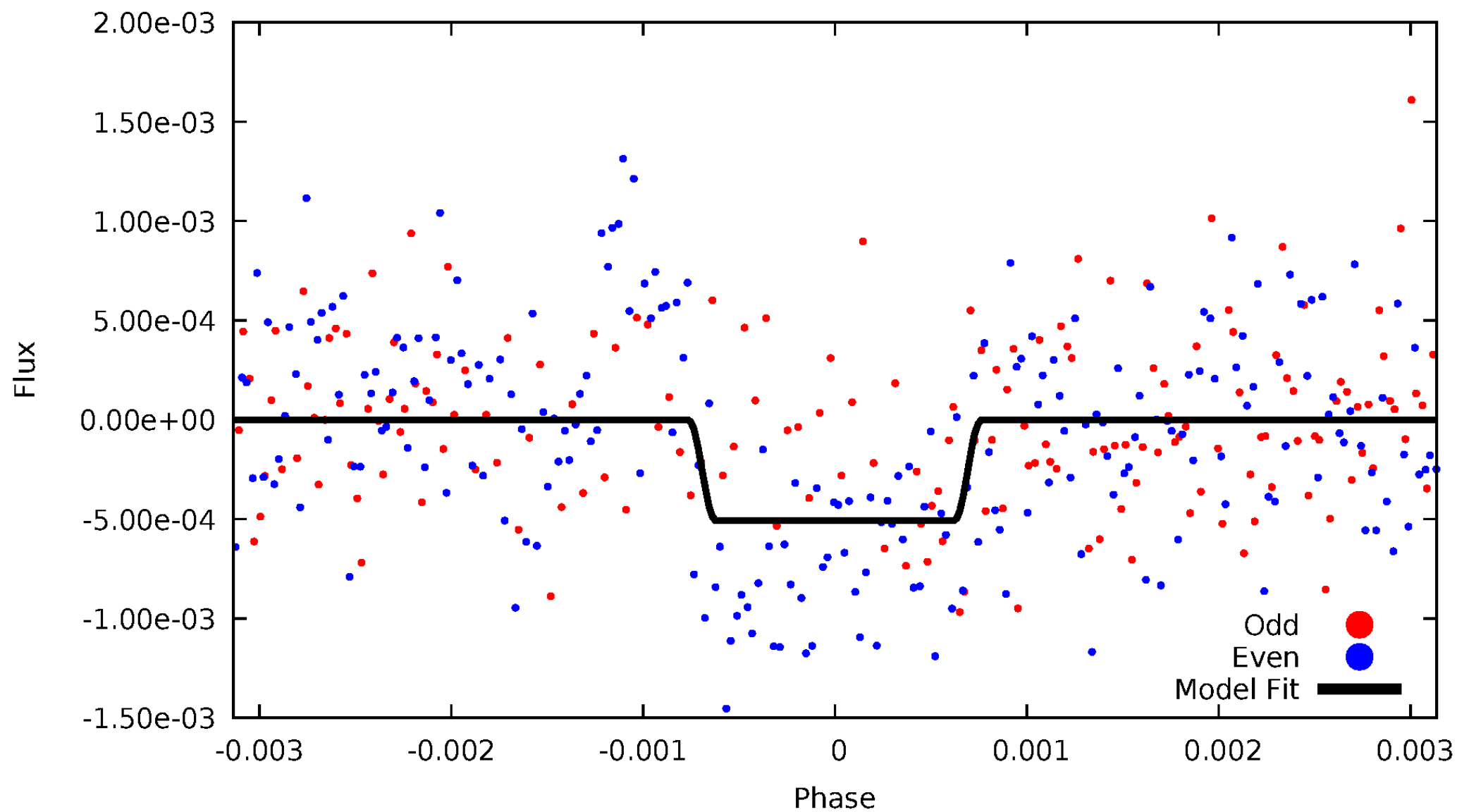
# DV Odd/Even

TCE 011494620-01

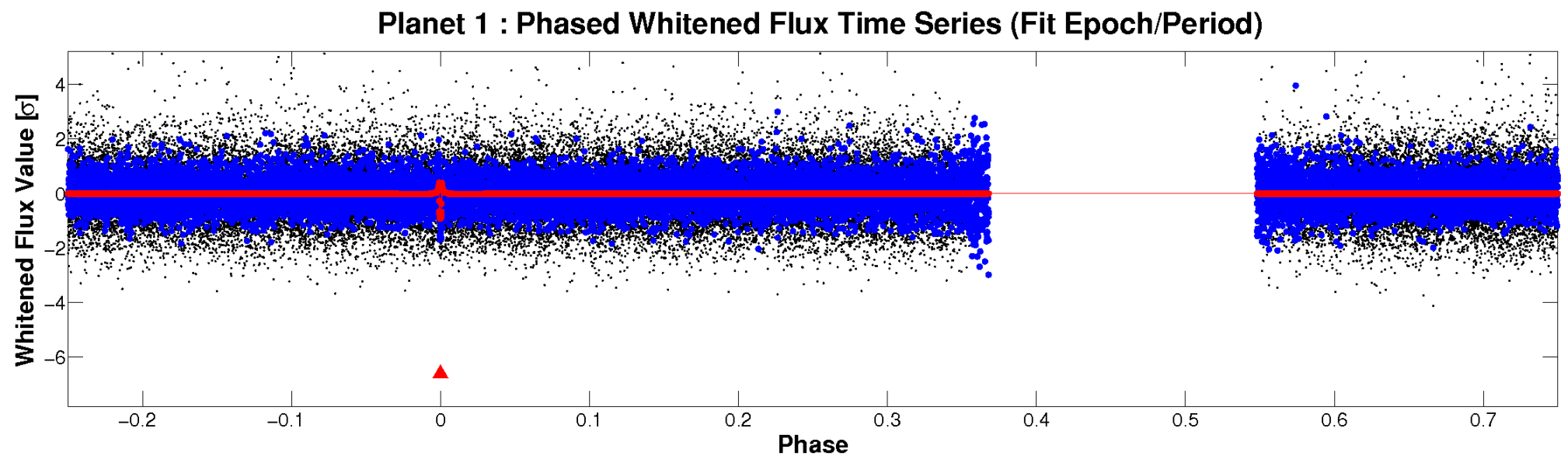
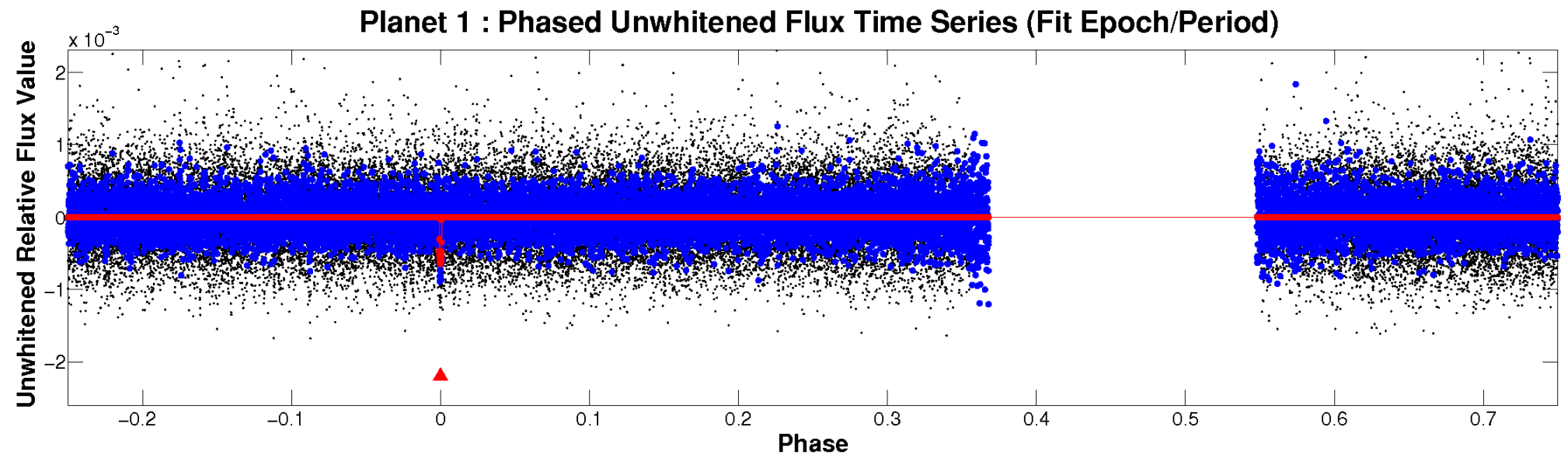


# ALT Odd/Even

TCE 011494620-01



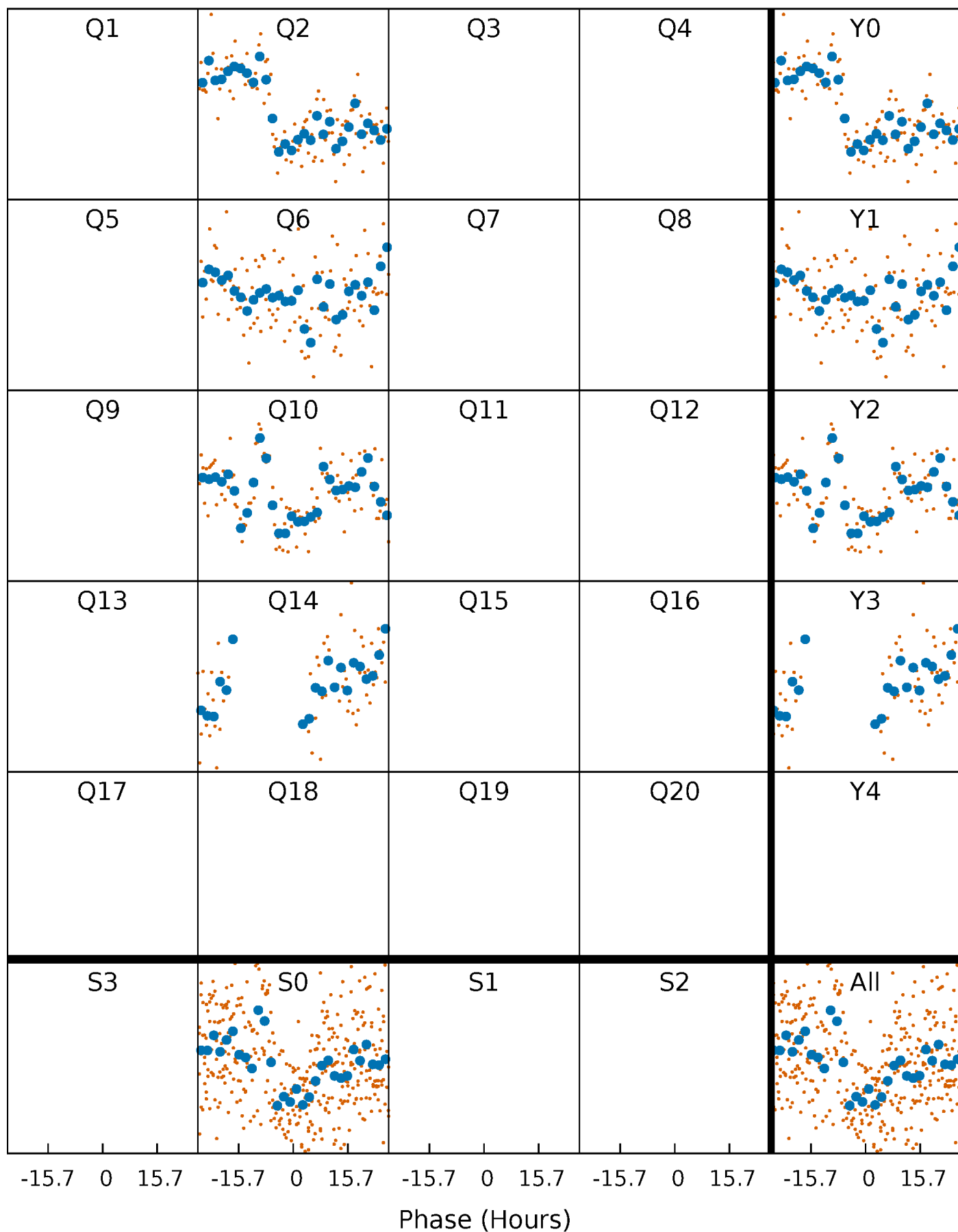
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

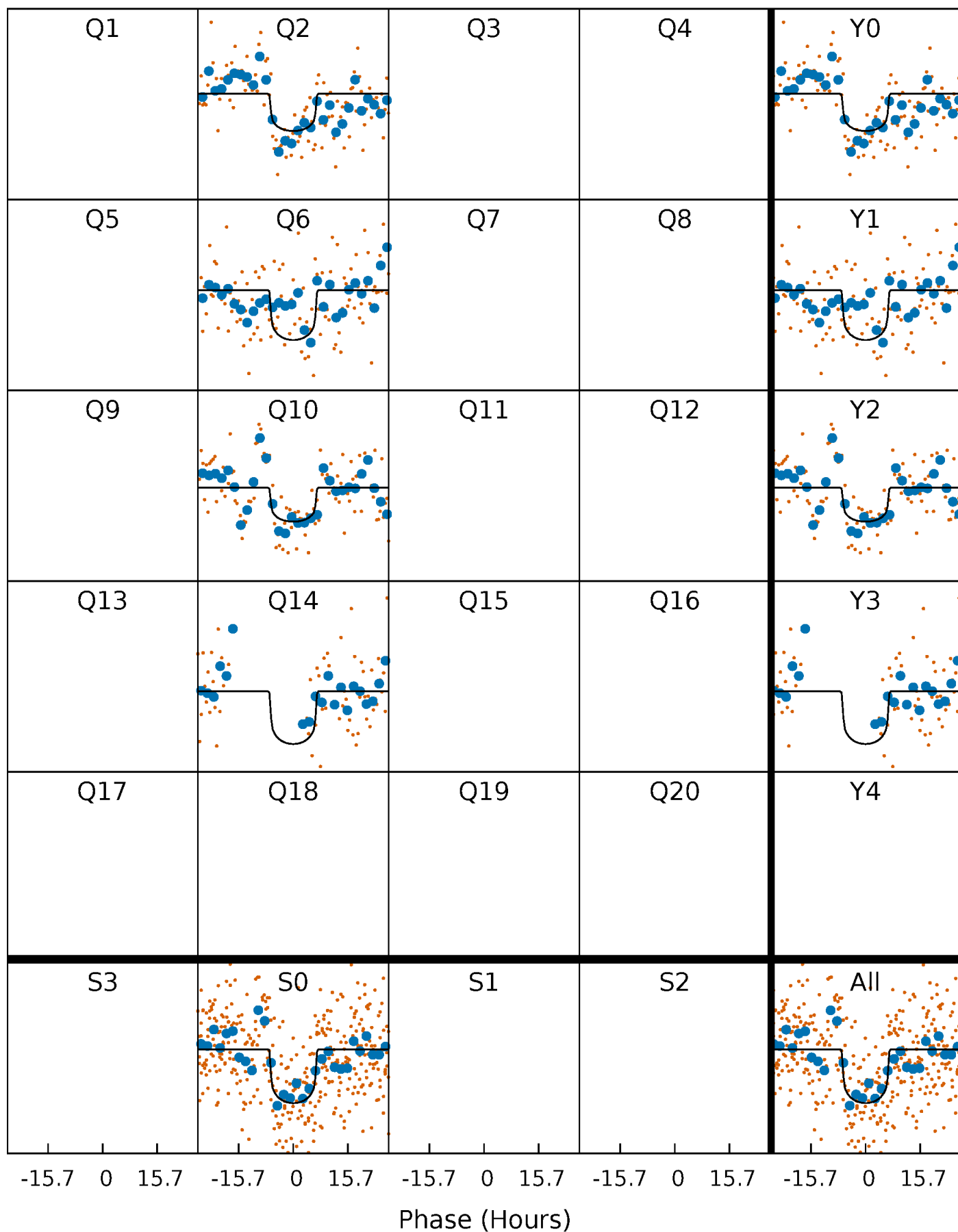
TCE 011494620-01 P=364.411775 Days  $T_0=243.819184$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 011494620-01 P=364.411775 Days  $T_0=243.819184$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

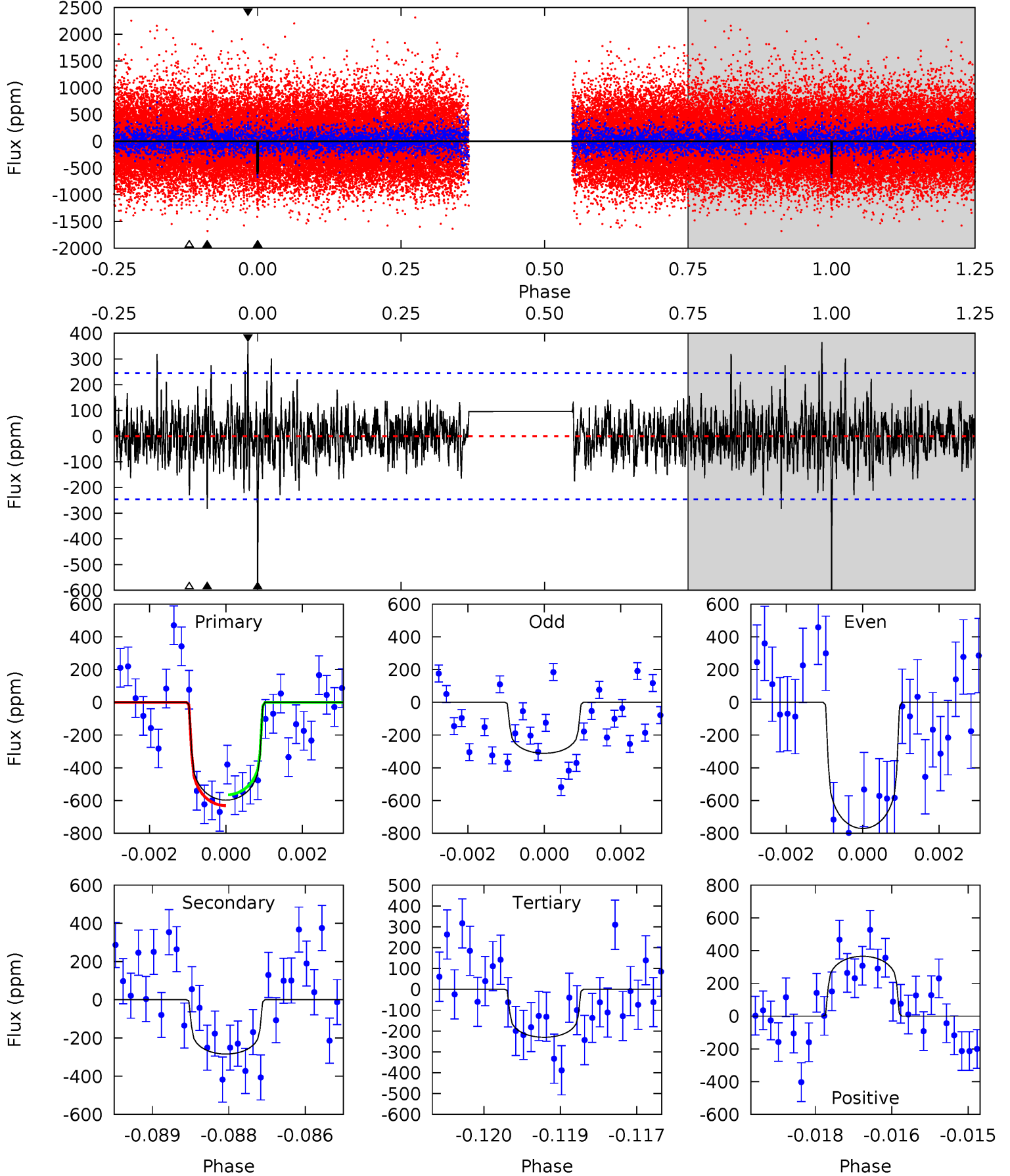
TCE 011494620-01 P=364.398487 Days  $T_0=243.839006$  (BKJD)



# DV Model-Shift Uniqueness Test

011494620-01, P = 364.411775 Days, E = 243.819184 Days

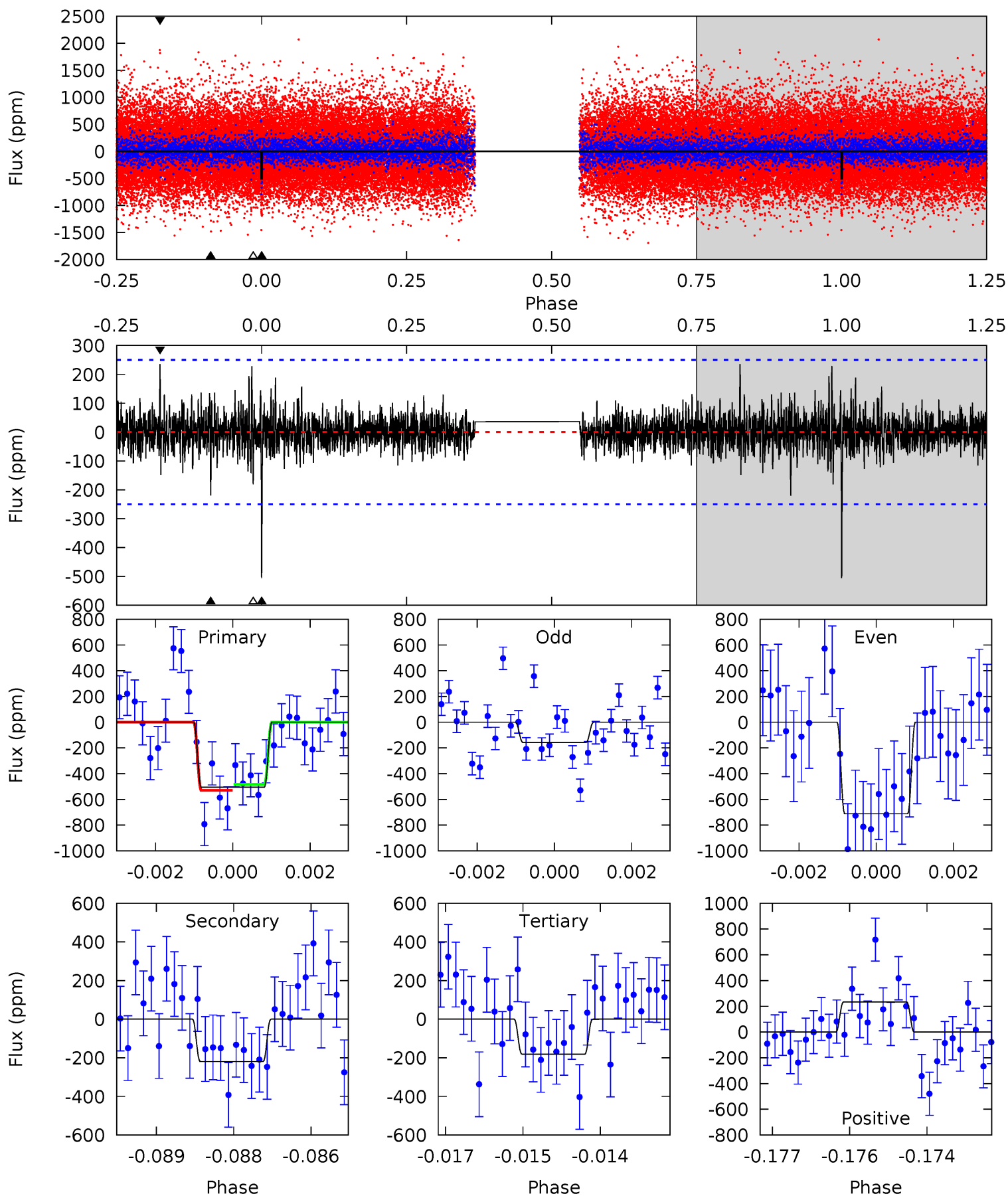
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	6.20	5.03	7.98	5.36	3.15	1.48	8.02	5.07	1.18	-1.77	4.92	0.97	0.38	0.72



# Alt Model-Shift Uniqueness Test

011494620-01, P = 364.398487 Days, E = 243.839006 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	4.72	3.89	5.05	5.38	3.17	0.94	6.98	5.81	0.83	-0.33	5.78	0.90	0.32	0.50



### Stellar Parameters For KIC 011494620

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6070^{+180}_{-198}$	$4.461^{+0.056}_{-0.224}$	$-0.100^{+0.250}_{-0.350}$	$0.992^{+0.330}_{-0.110}$	$1.031^{+0.153}_{-0.126}$	$1.489^{+0.430}_{-0.787}$
	+3%/-3%	+1%/-5%	+250%/-350%	+33%/-11%	+15%/-12%	+29%/-53%
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 011494620-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-284 \pm 46$	$2.81^{+0.94}_{-0.79}$	$378^{+29}_{-19}$	$5048^{+799}_{-501}$	$19389^{+18548}_{-8337}$
Alt.	$-220 \pm 47$	$2.56^{+0.94}_{-0.84}$	$380^{+27}_{-20}$	$4977^{+983}_{-556}$	$17757^{+21600}_{-8245}$

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

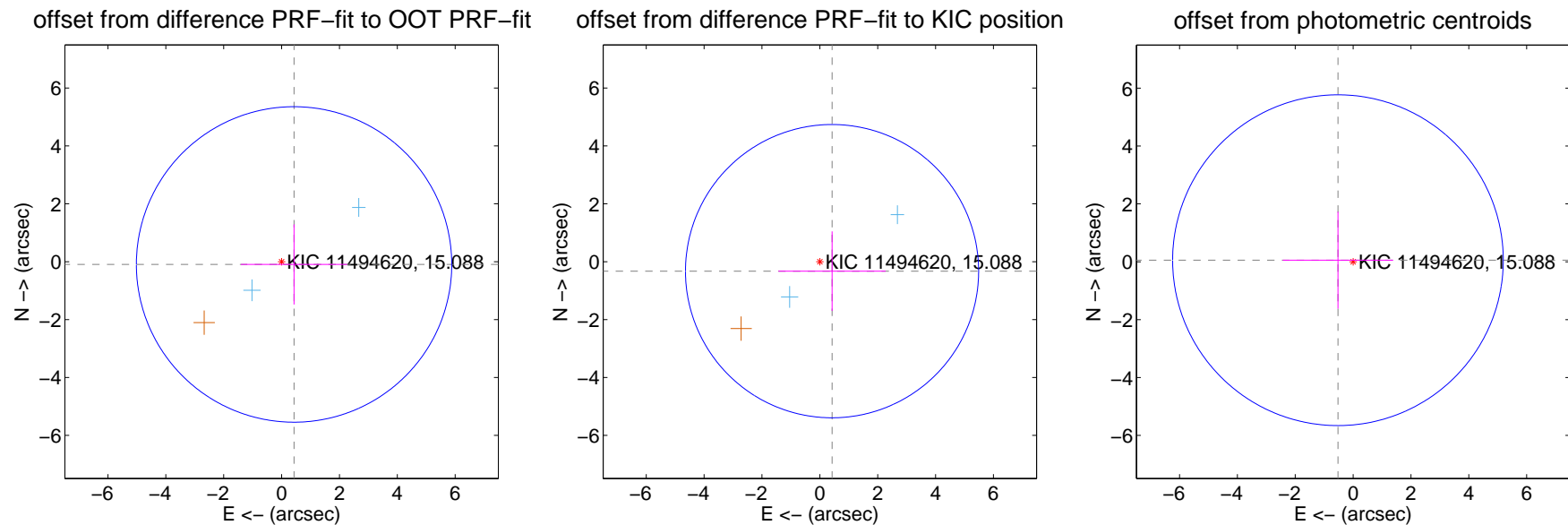
## DV Centroid Data

Supplemental centroid analysis for 011494620-01. Kepler magnitude: 15.09. Transit SNR 8.05

There are 2 quarters with good PRF difference image offsets

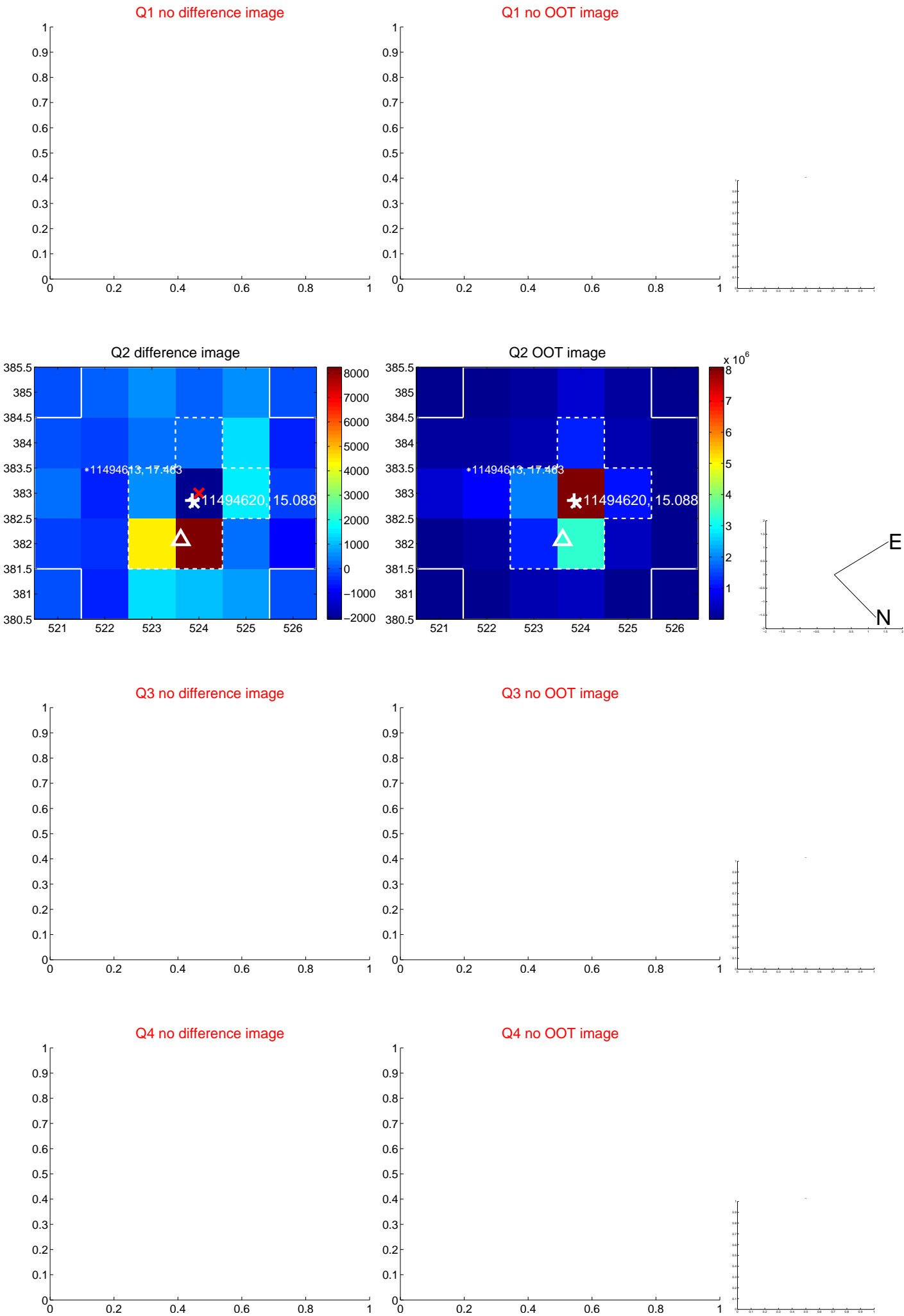
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.441 \pm 1.816$	0.24	$-0.431 \pm 1.835$	$-0.095 \pm 1.385$
PRF-fit source offset from KIC position	$0.534 \pm 1.688$	0.32	$-0.422 \pm 1.852$	$-0.327 \pm 1.373$
photometric centroid source offset	$0.53 \pm 1.90$	0.28	$0.52 \pm 1.91$	$0.05 \pm 1.68$



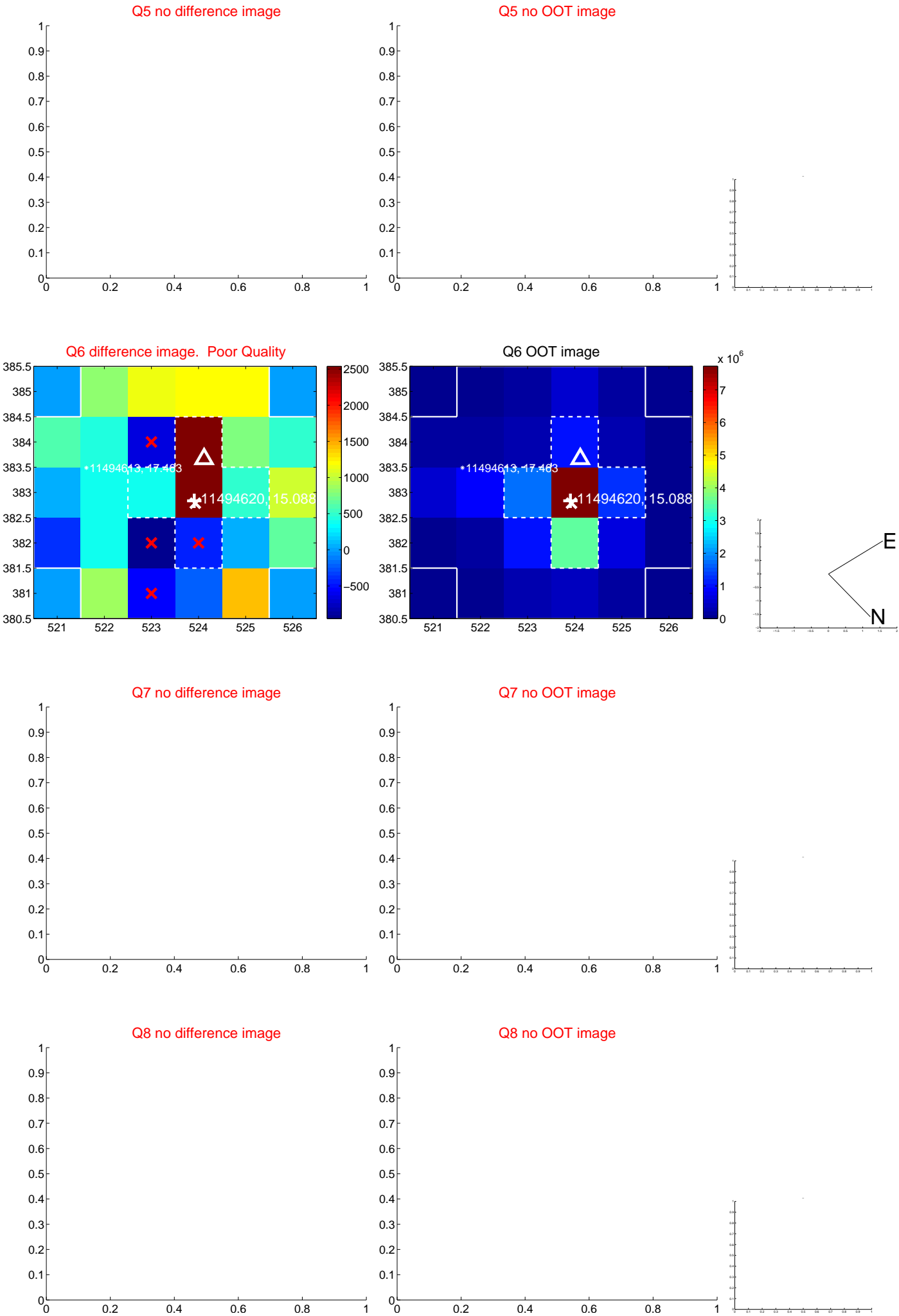
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

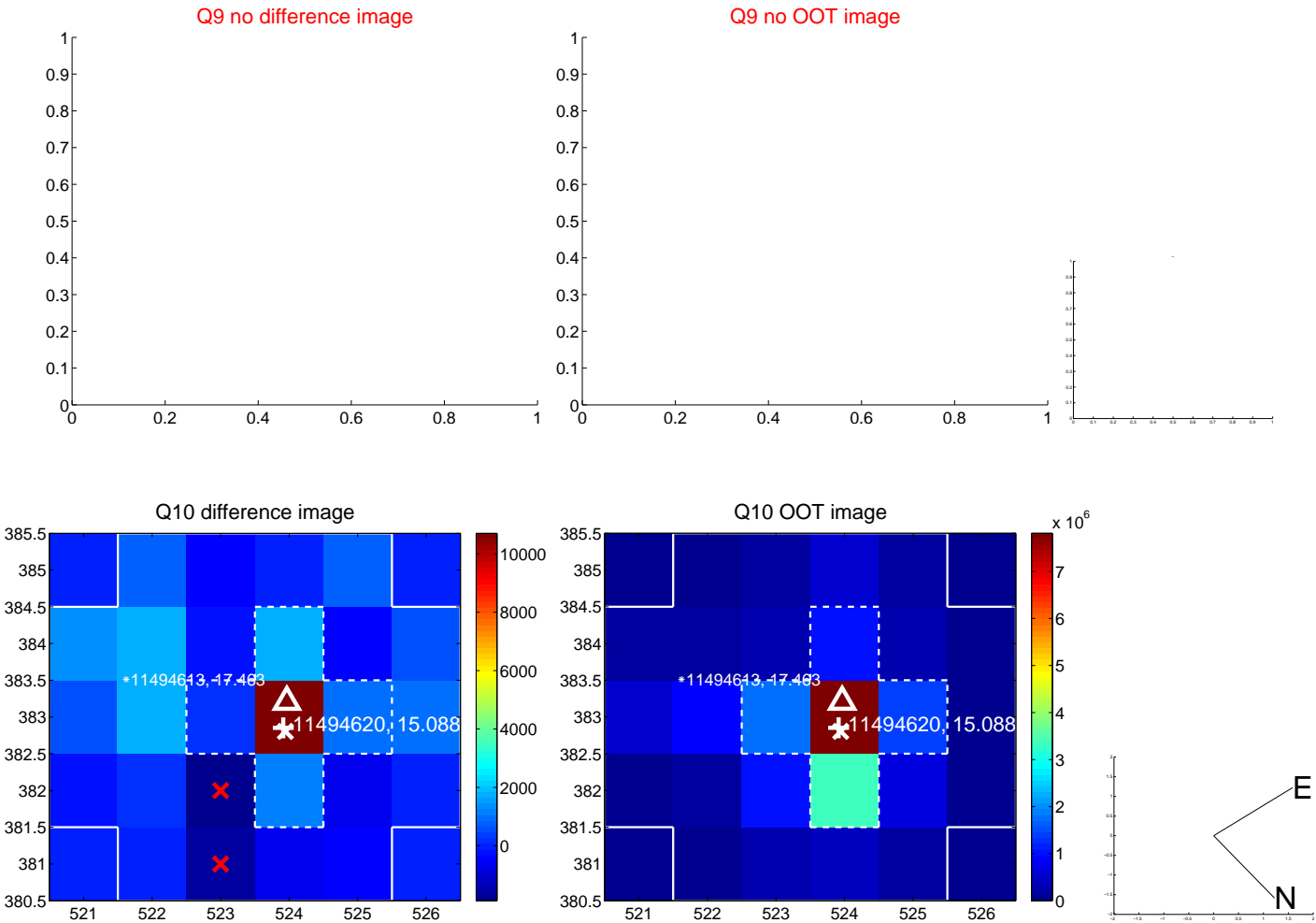




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



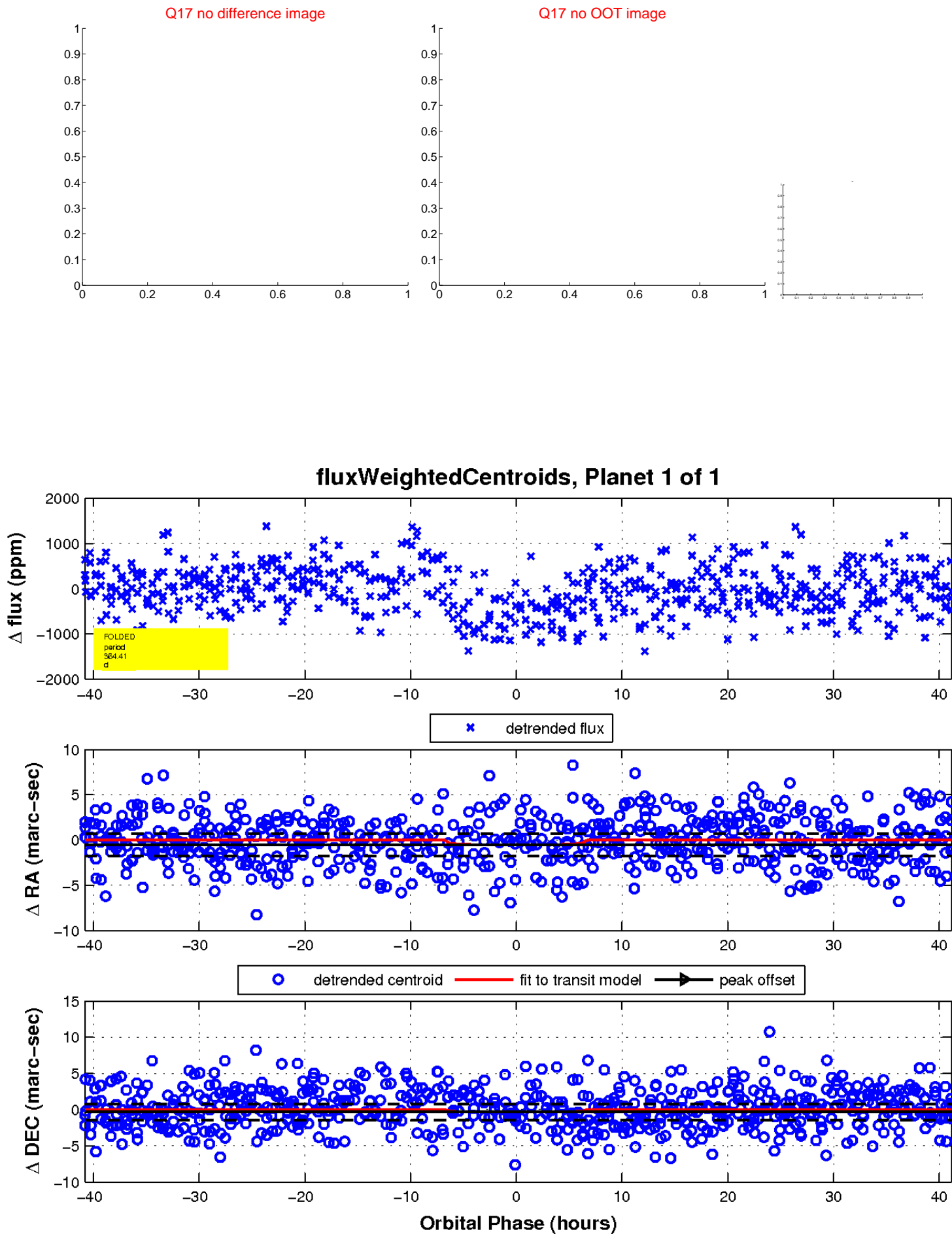
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

