

# KIC 006877292

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006877292-01	OBS	No	345.017856	152.810594	30.5	4.273	21.6	1.5	2.77	9005	1.64	31.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006877292-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

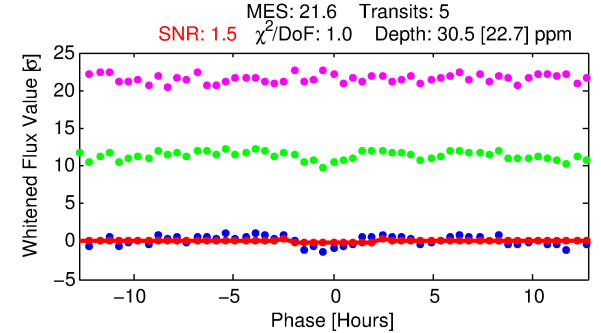
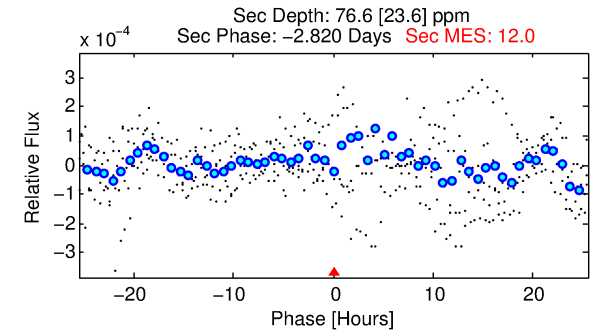
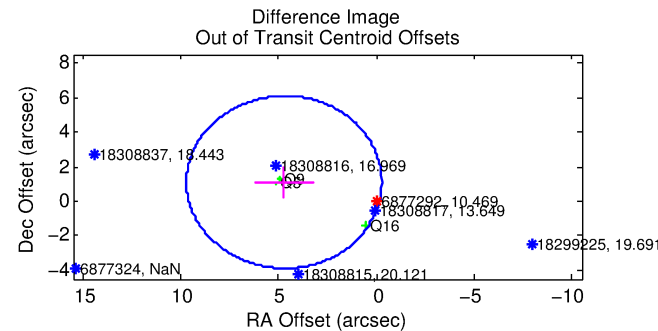
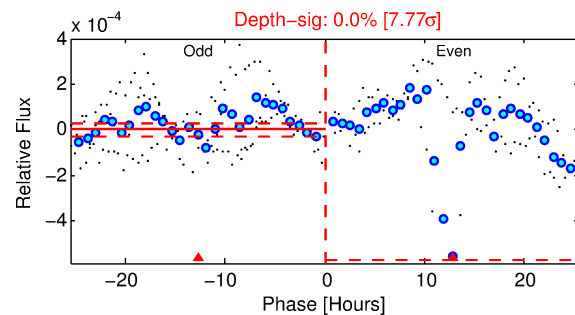
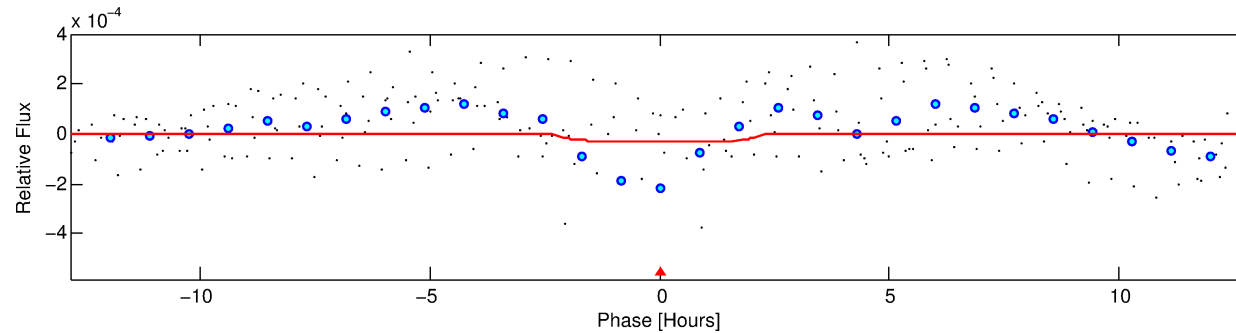
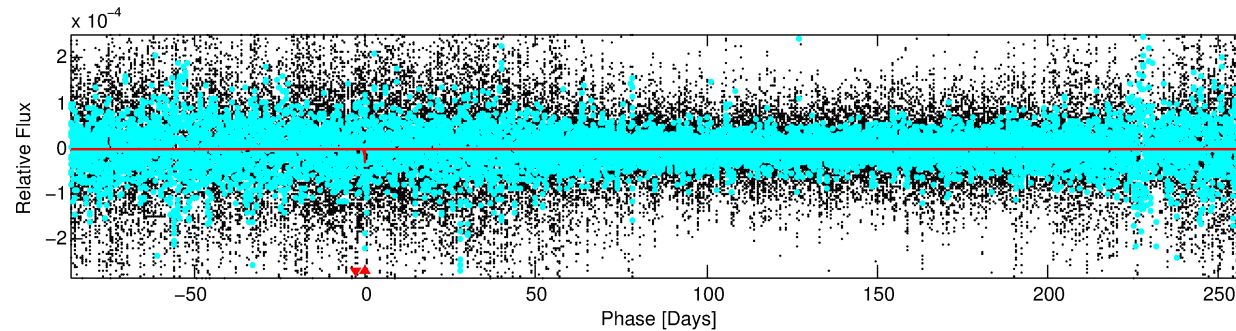
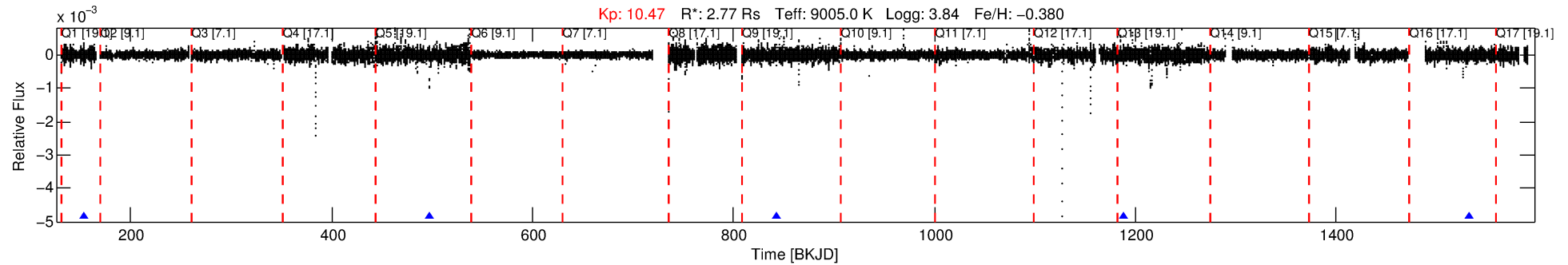
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006877292-01

No Significant Match Found

# DV One-Page Summary

KIC: 6877292 Candidate: 1 of 1 Period: 345.018 d



## DV Fit Results:

Period = 345.01786 [0.01103] d  
Epoch = 152.8106 [0.0279] BKJD  
Rp/R\* = 0.0054 [0.0043]  
a/R\* = 445.37 [1906.51]  
b = 0.70 [3.20]  
Seff = 31.41 [24.33]  
Teq = 604 [117] K  
Rp = 1.64 [1.50] Re  
a = 1.2010 [0.5110] AU  
Ag = 22525.61 [39653.70] [0.57σ]  
Teff = 11434 [4759] K [2.2σ]

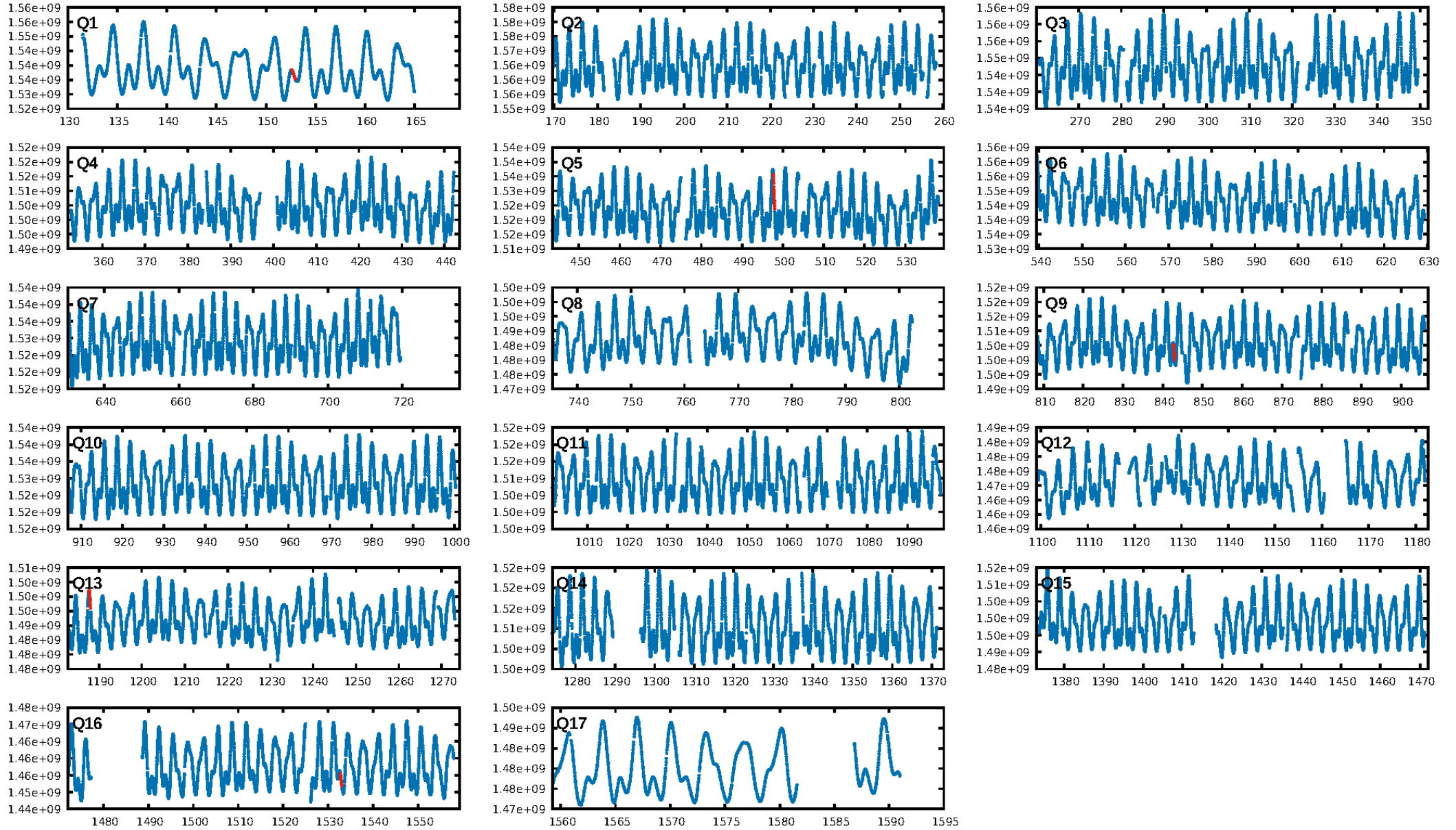
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 29.2%  
ModelChiSquareGof-sig: 99.7%  
Bootstrap-pfa: 1.07e-24  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 2.102  
Centroid-sig: 5.4%  
Centroid-so: 12.727 arcsec [1.36σ]  
OotOffset-rm: 4.841 arcsec [2.91σ]  
KicOffset-rm: 5.150 arcsec [3.33σ]  
OotOffset-st: 0/0/1/2 [3]  
KicOffset-st: 0/0/1/2 [3]  
DiffImageQuality-fgm: 0.00 [0/3]  
DiffImageOverlap-fno: 1.00 [4/4]

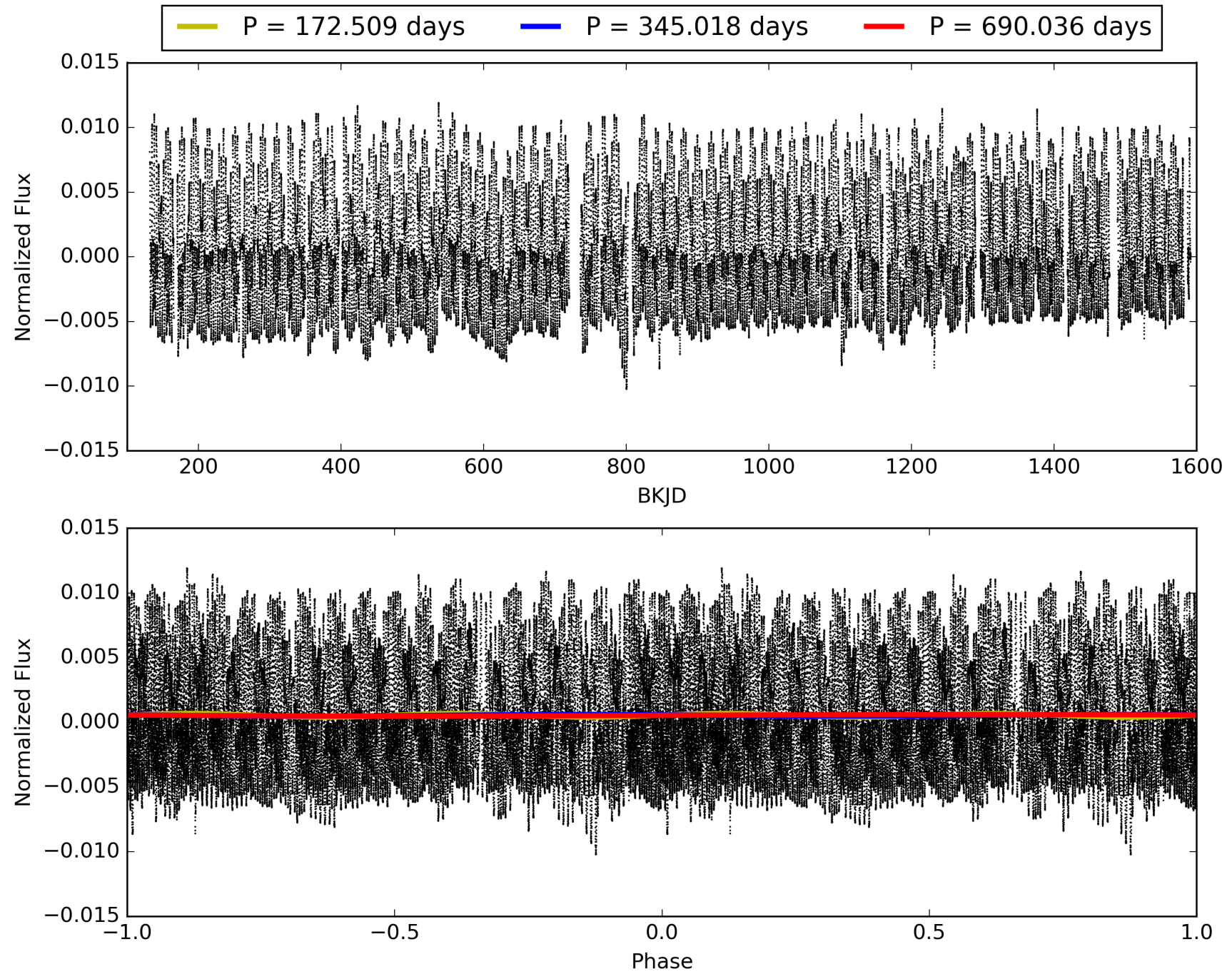
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:52:01 Z

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

# TCE 006877292-01, PDC Light Curves

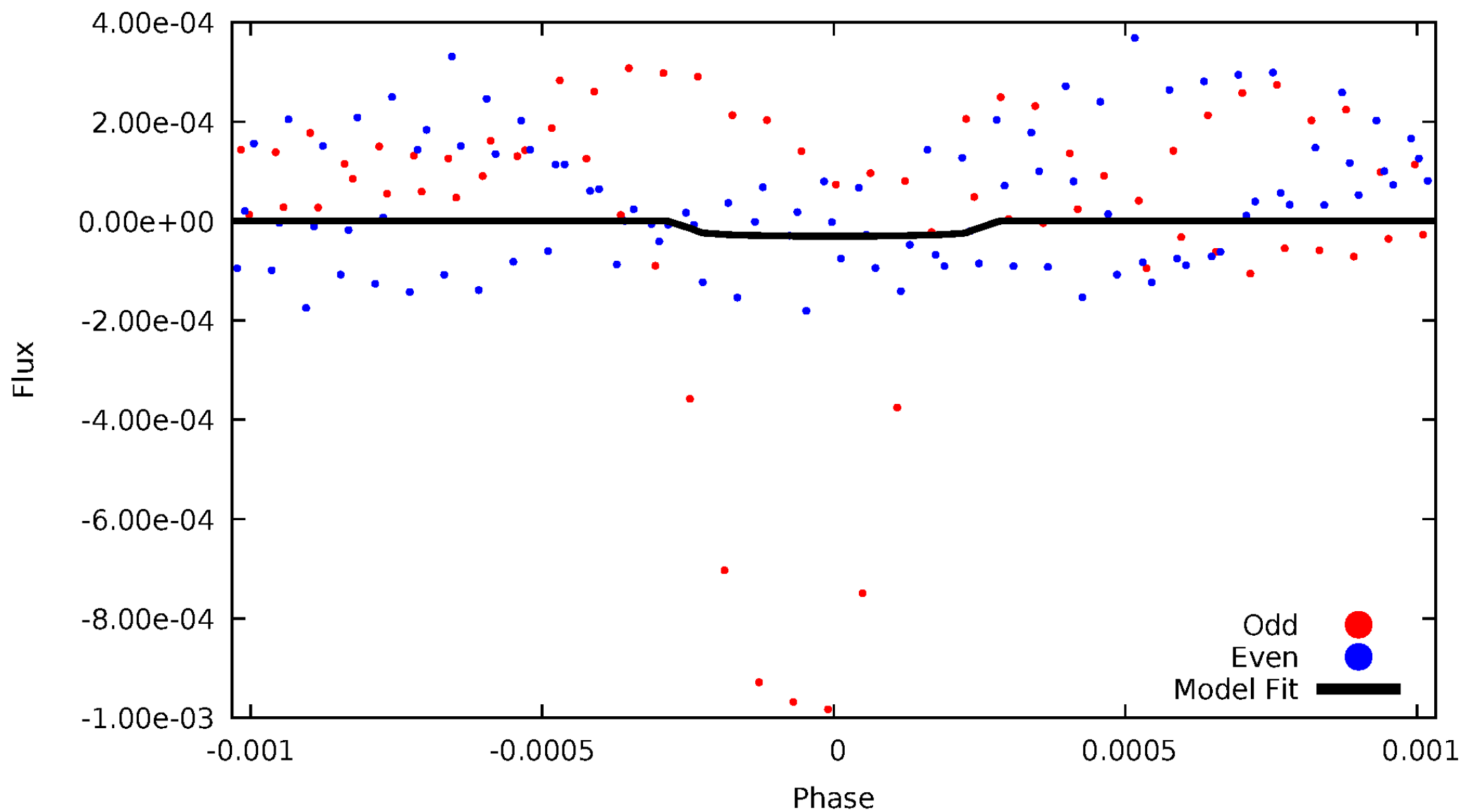


TCE 006877292-01



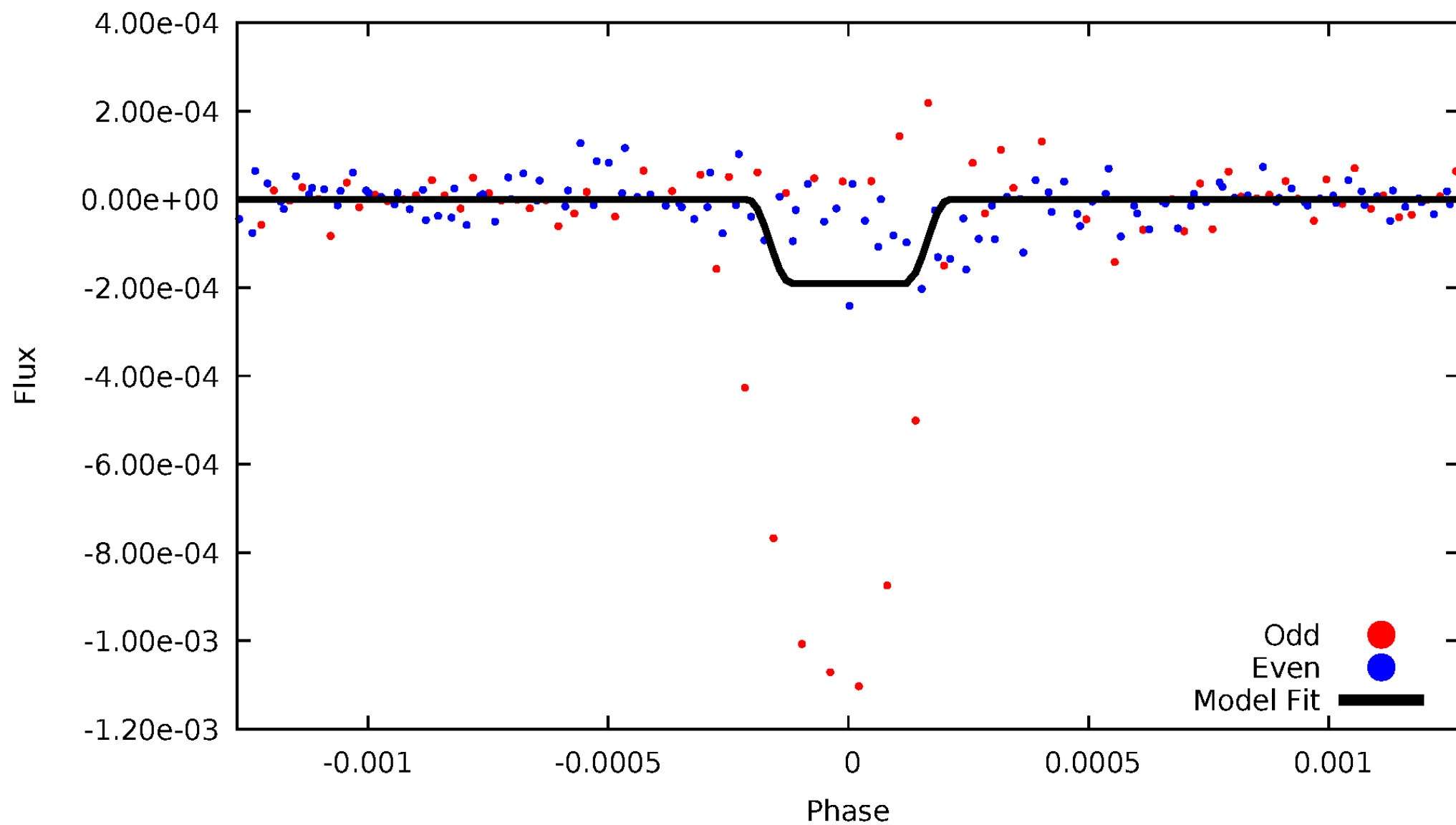
# DV Odd/Even

TCE 006877292-01



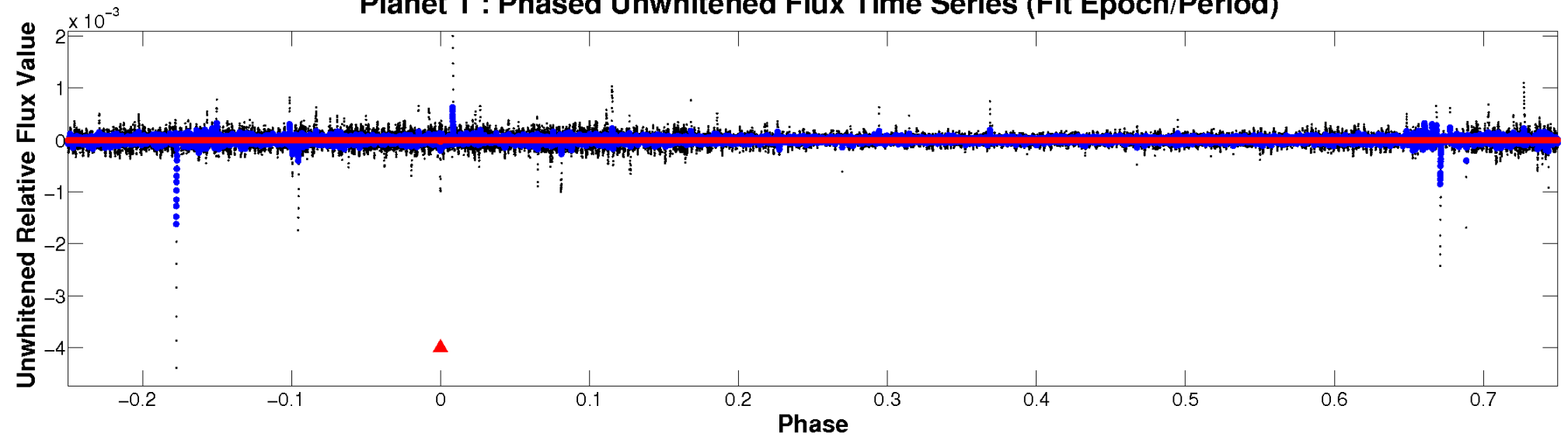
# ALT Odd/Even

TCE 006877292-01

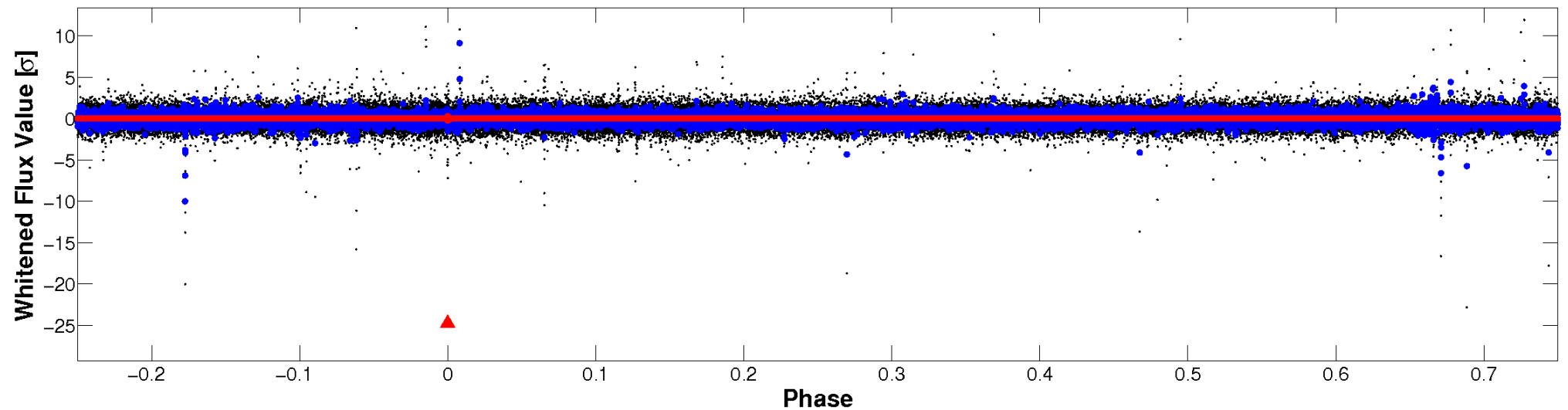


# Non-Whitened Vs. Whitened Light Curve

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



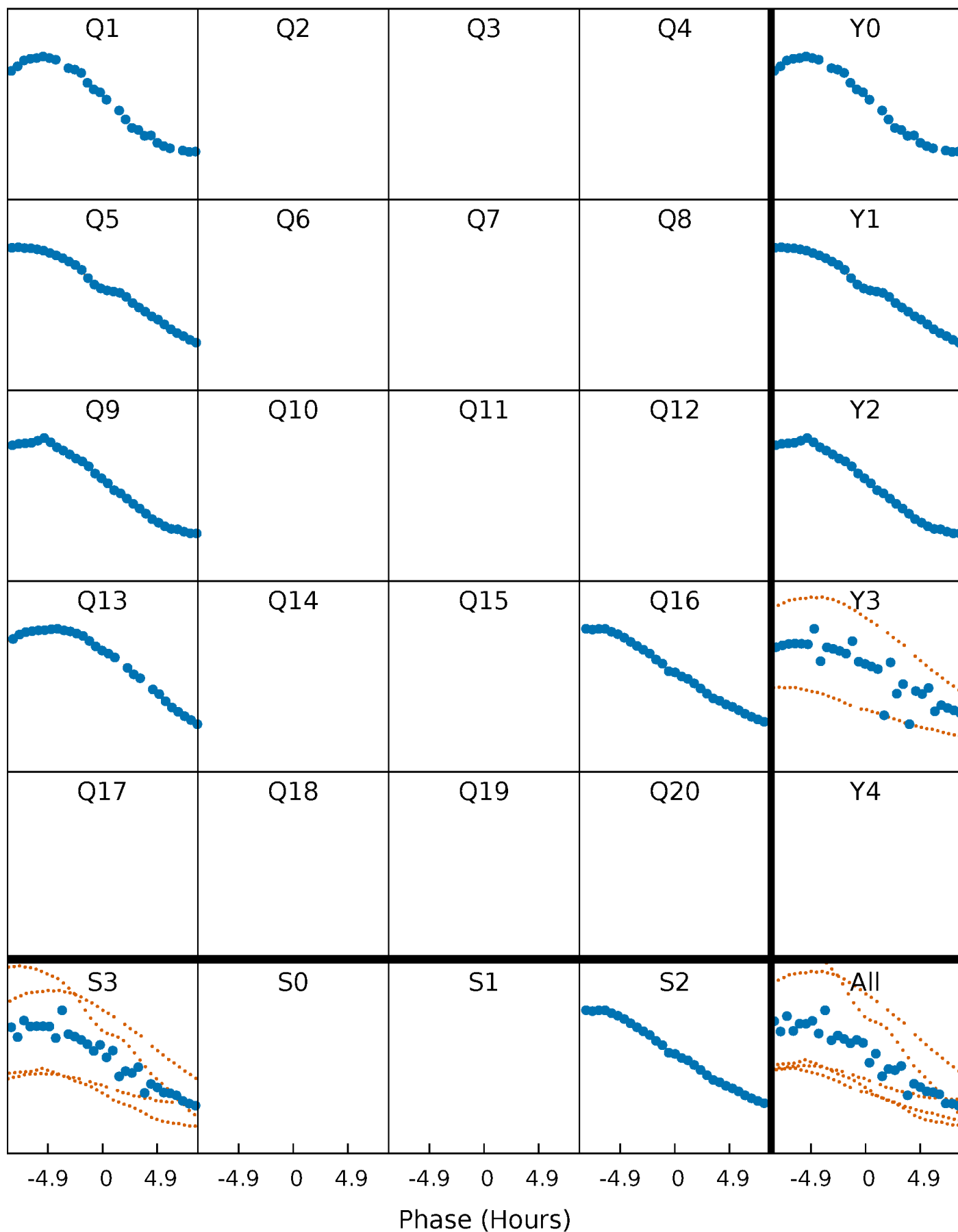
Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)





# PDC Quarter-Phased Transit Curves

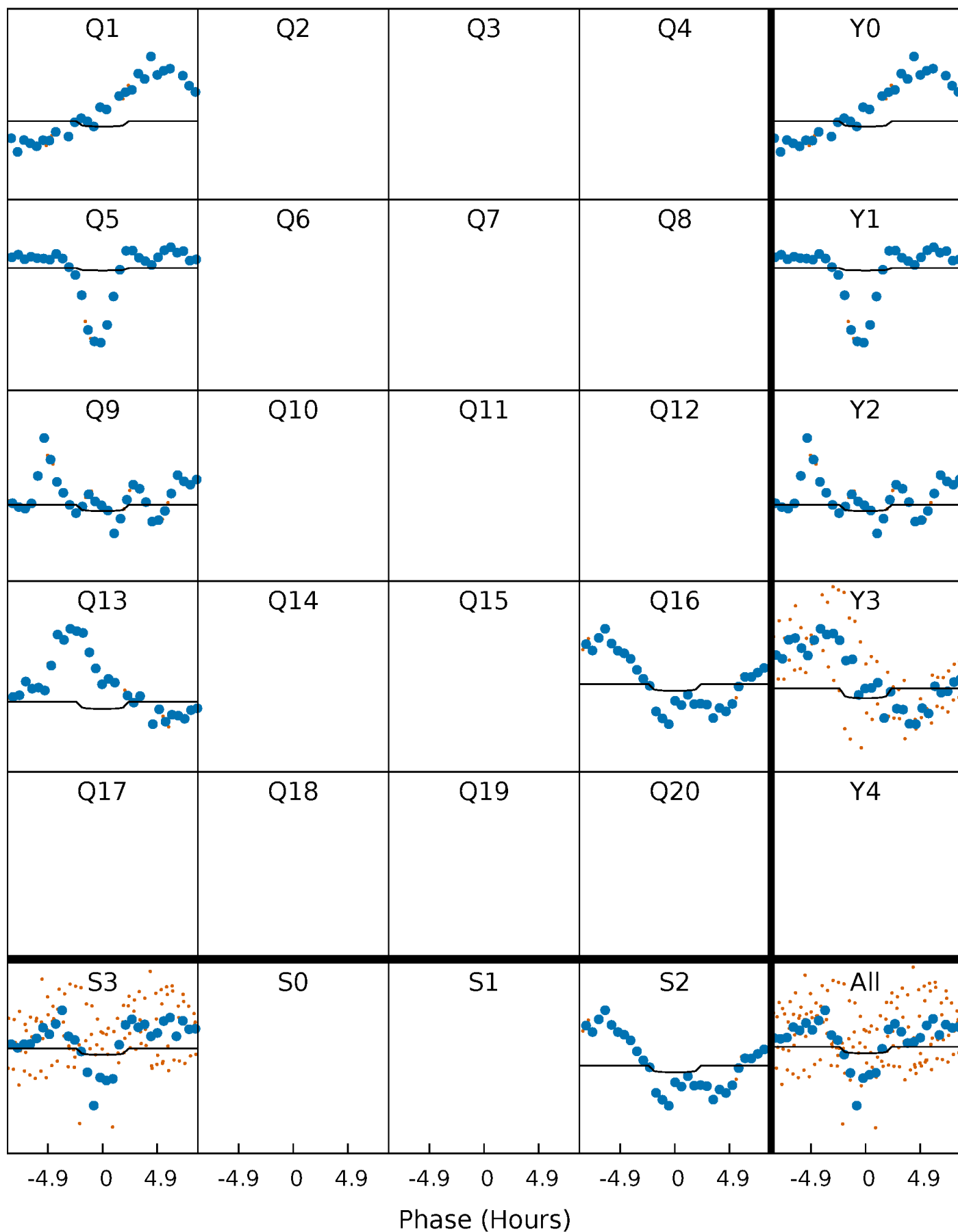
TCE 006877292-01 P=345.017856 Days  $T_0=152.810594$  (BKJD)





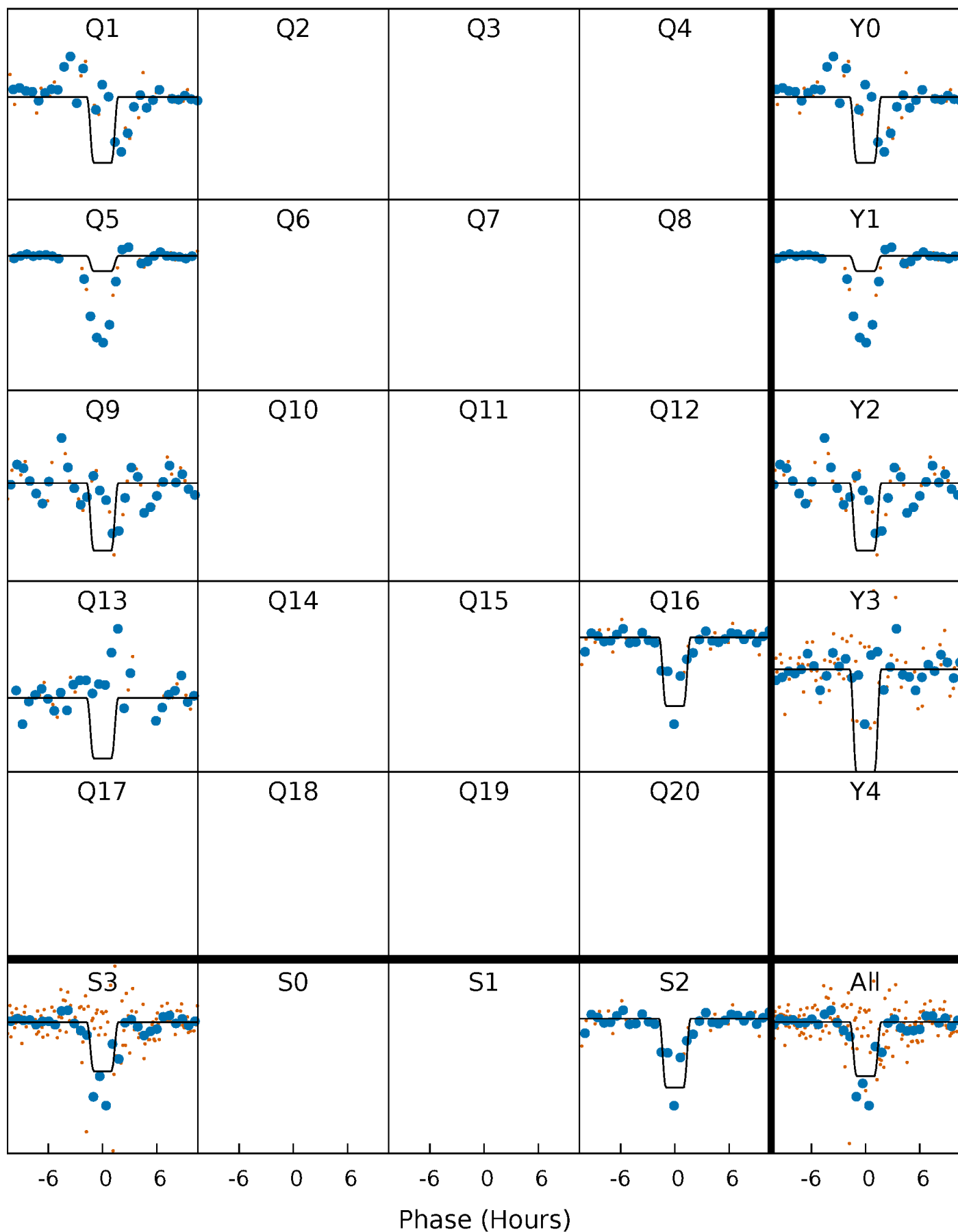
# DV Quarter-Phased Transit Curves

TCE 006877292-01     $P=345.017856$  Days     $T_0=152.810594$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

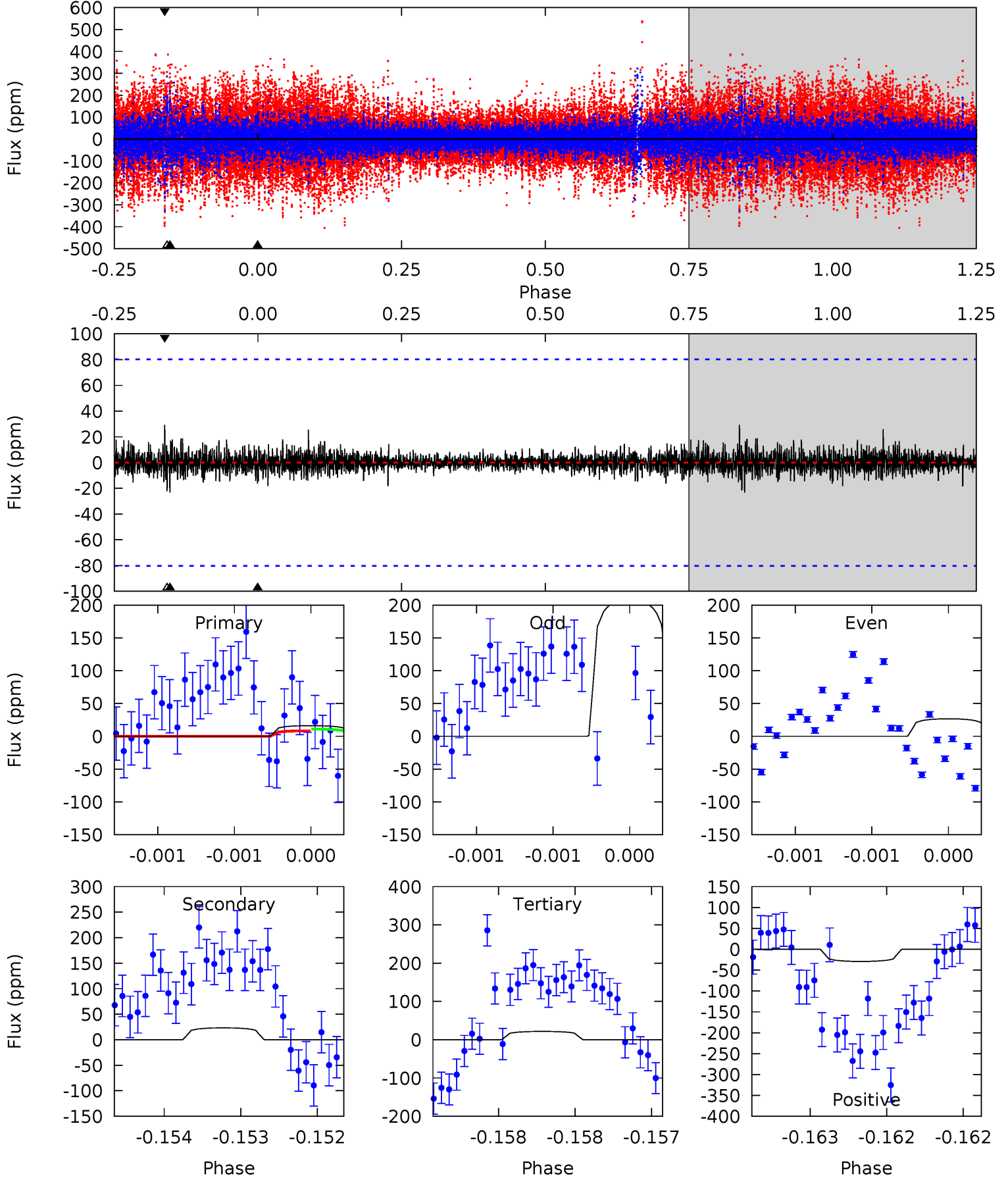
TCE 006877292-01 P=345.015742 Days  $T_0=152.801803$  (BKJD)



# DV Model-Shift Uniqueness Test

006877292-01, P = 345.017856 Days, E = 152.810594 Days

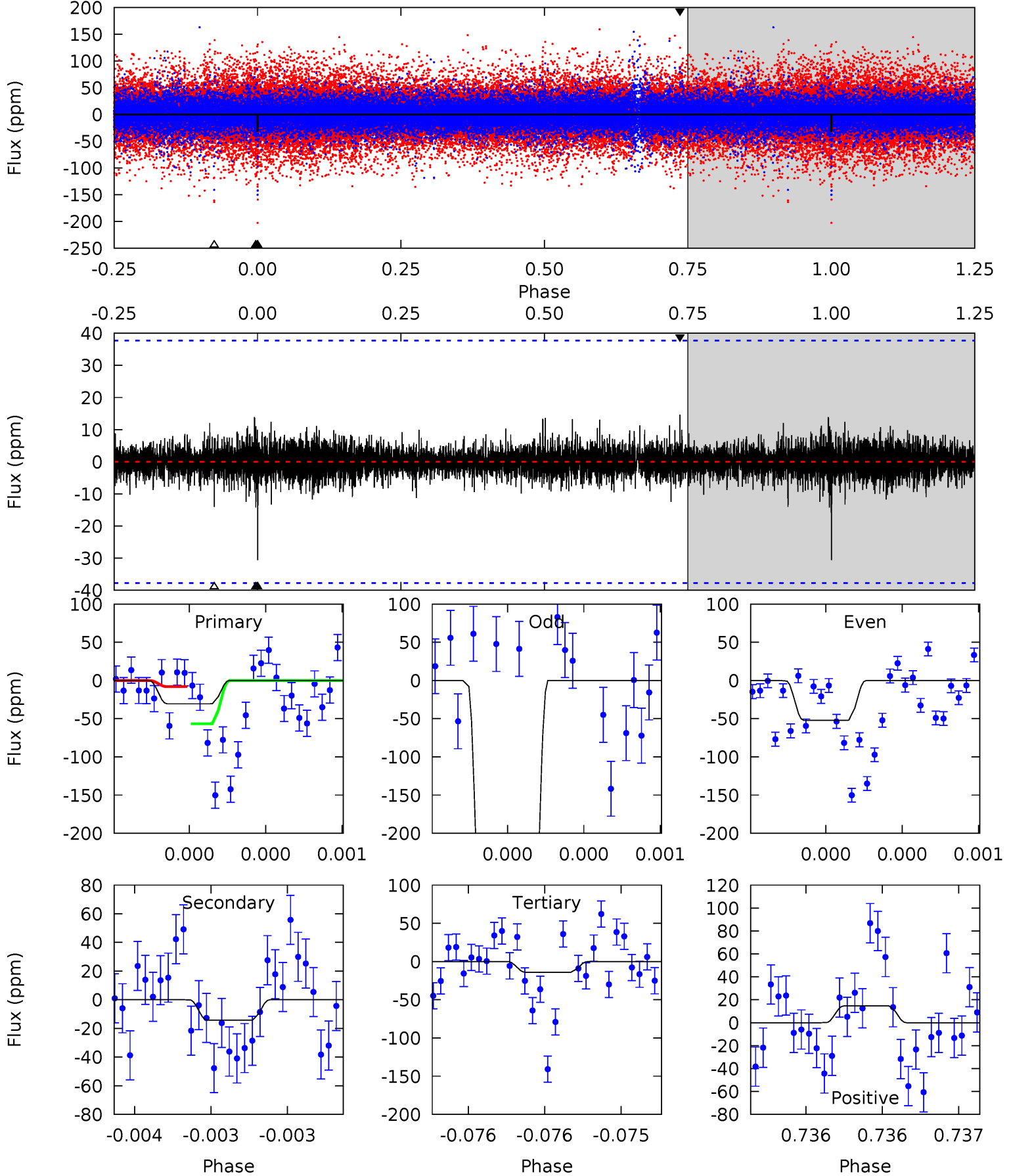
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.13	1.61	1.50	2.03	5.56	3.46	0.34	-0.38	-0.90	0.11	-0.41	6.24	6.08	0.56	0.09



# Alt Model-Shift Uniqueness Test

006877292-01, P = 345.015742 Days, E = 152.801803 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
4.55	2.12	2.09	2.18	5.61	3.54	0.43	2.46	2.37	0.03	-0.06	29.4	4.49	0.32	3.62



### Stellar Parameters For KIC 006877292

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$9005^{+831}_{-604}$	$3.840^{+0.400}_{-0.100}$	$-0.380^{+0.150}_{-0.150}$	$2.773^{+0.613}_{-1.225}$	$1.941^{+0.335}_{-0.335}$	$0.128^{+0.414}_{-0.041}$
	+9%/-7%	+10%/-3%	+39%/-39%	+22%/-44%	+17%/-17%	+323%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 006877292-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-23 \pm 14$	$1.71^{+1.16}_{-0.99}$	$817^{+102}_{-103}$	$7458^{+6009}_{-2163}$	$5762^{+24251}_{-4483}$
Alt.	$-14 \pm 7$	$3.82^{+1.49}_{-1.44}$	$816^{+93}_{-103}$	$4605^{+1015}_{-636}$	$757^{+1428}_{-431}$

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

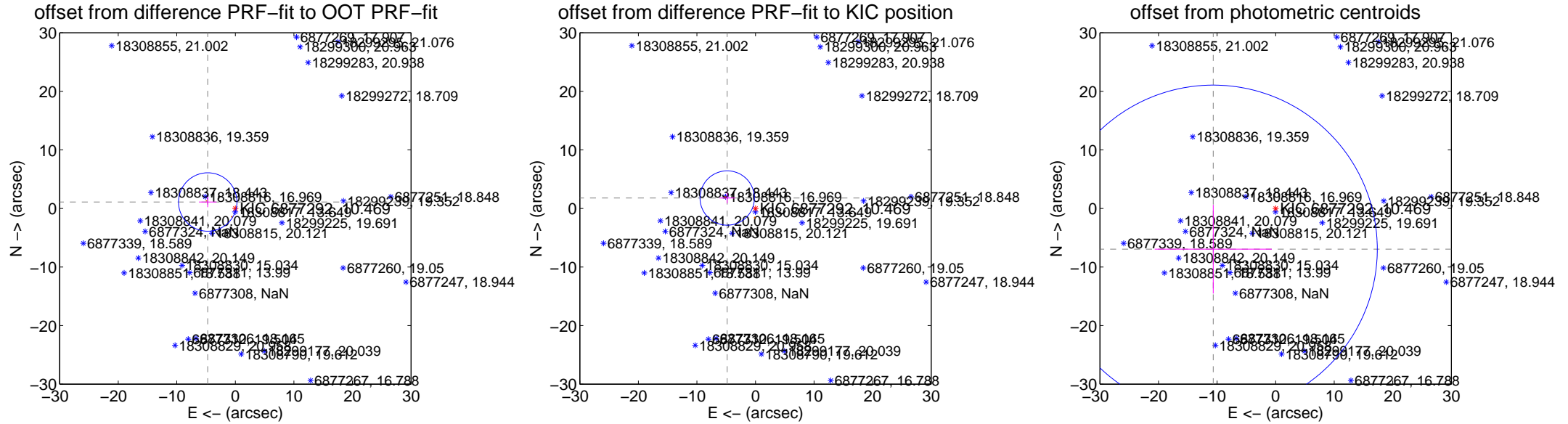
## DV Centroid Data

Supplemental centroid analysis for 006877292-01. **Kepler magnitude: 10.47.** Transit SNR 1.47

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

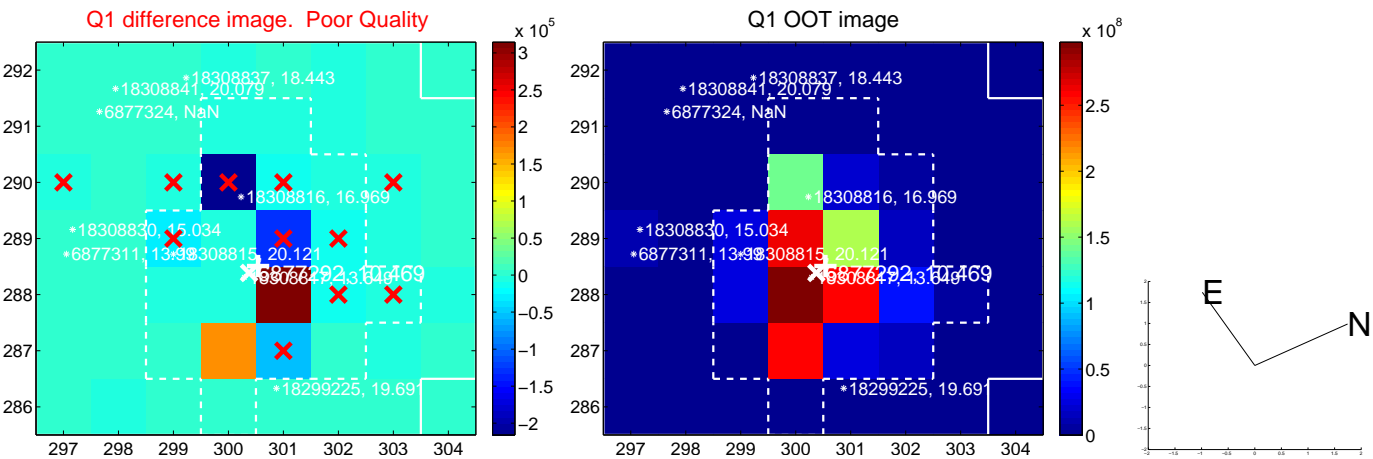
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.841 \pm 1.663$	2.91	$4.714 \pm 1.502$	$1.101 \pm 0.883$
PRF-fit source offset from KIC position	<b><math>5.150 \pm 1.547</math></b>	<b>3.33</b>	$4.831 \pm 1.315$	$1.783 \pm 0.911$
photometric centroid source offset	$12.73 \pm 9.34$	1.36	$10.66 \pm 9.99$	$-6.96 \pm 7.58$



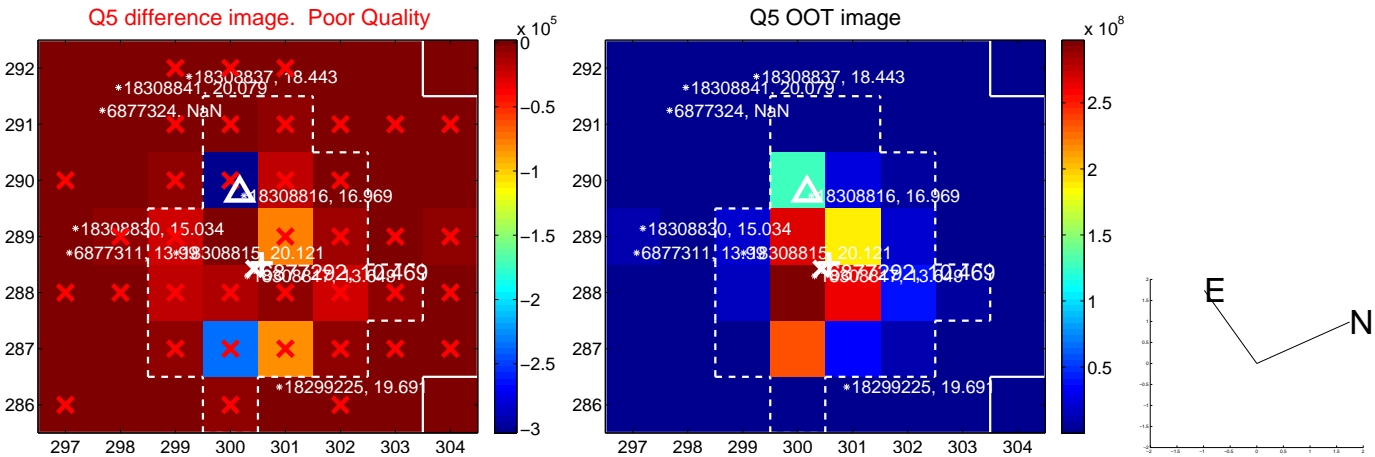
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

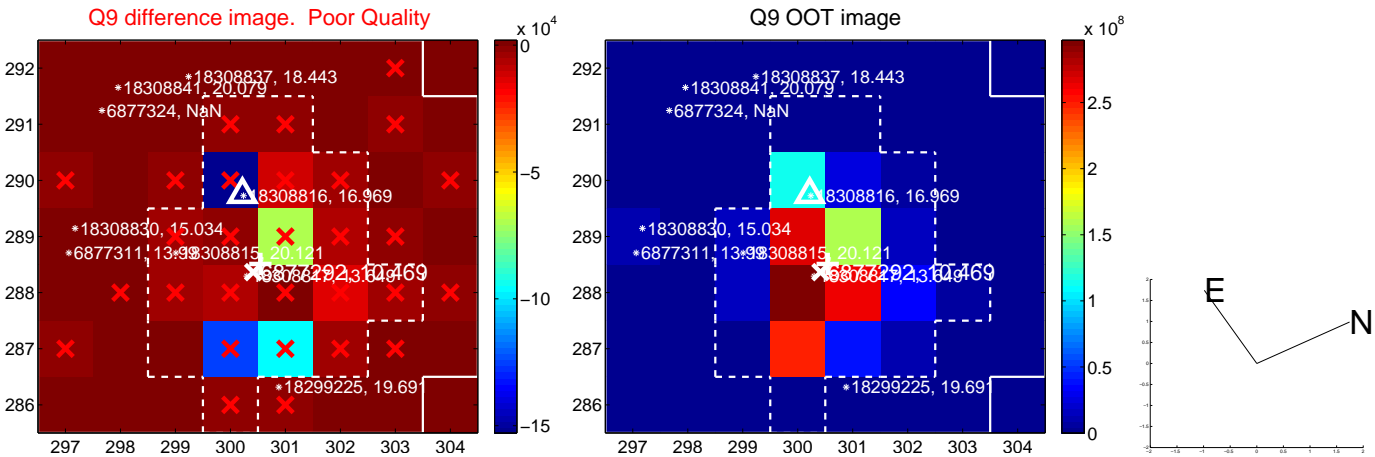




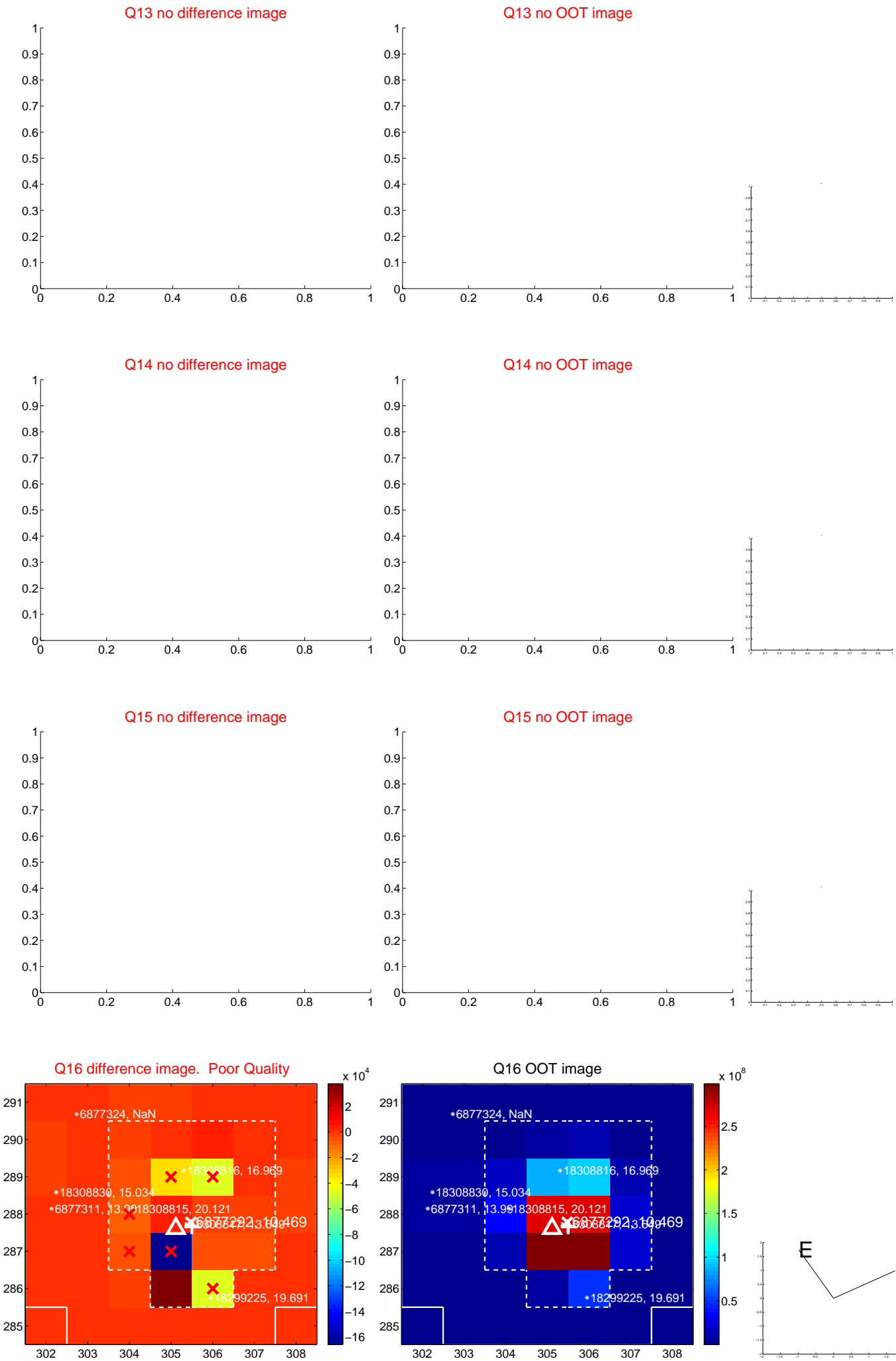
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



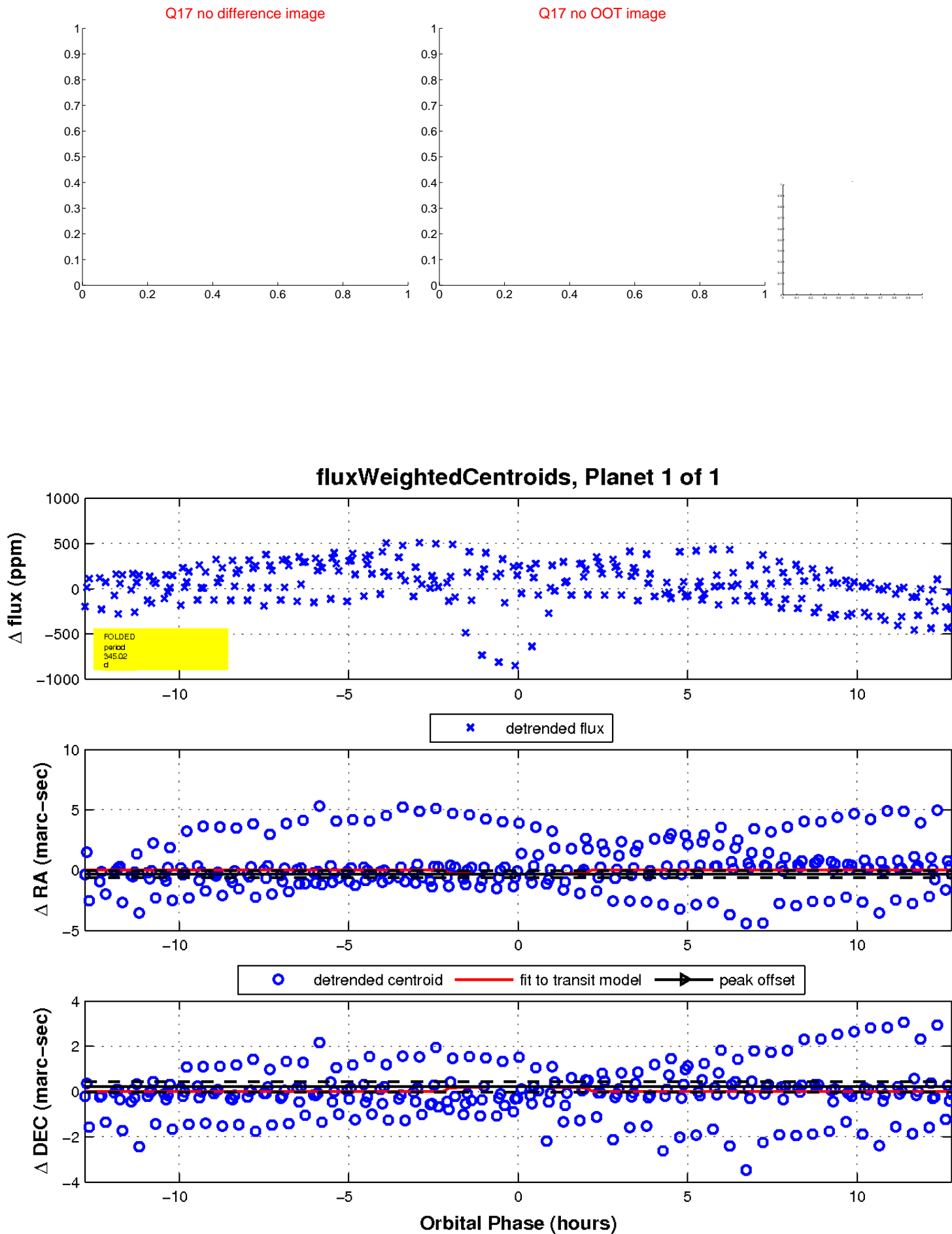
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

