

# KIC 008107692

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008107692-01	OBS	No	368.768793	232.620566	1999.9	26.462	12.7	18.5	1.00	6108	8.04	1.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008107692-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_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.

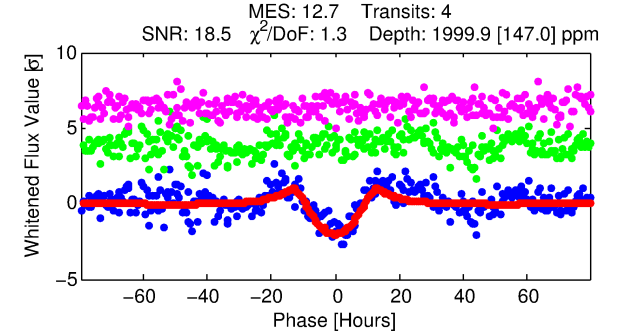
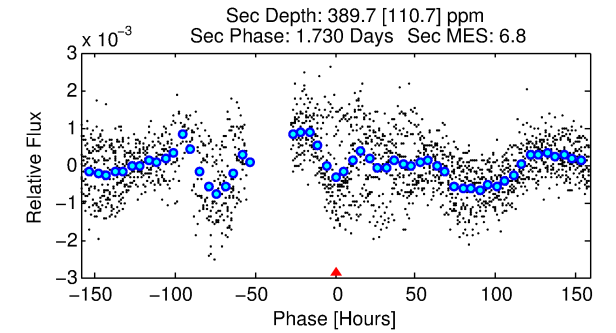
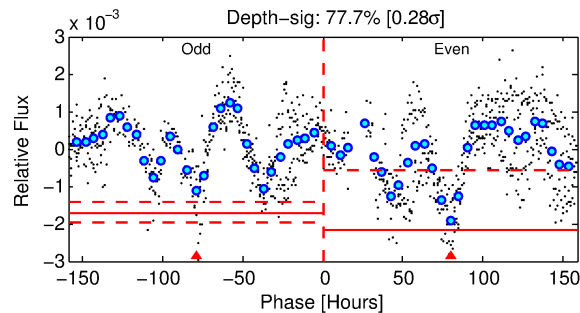
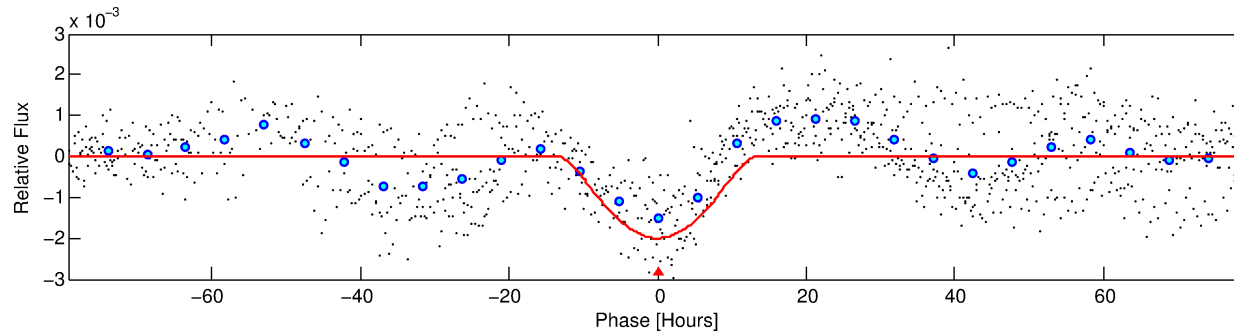
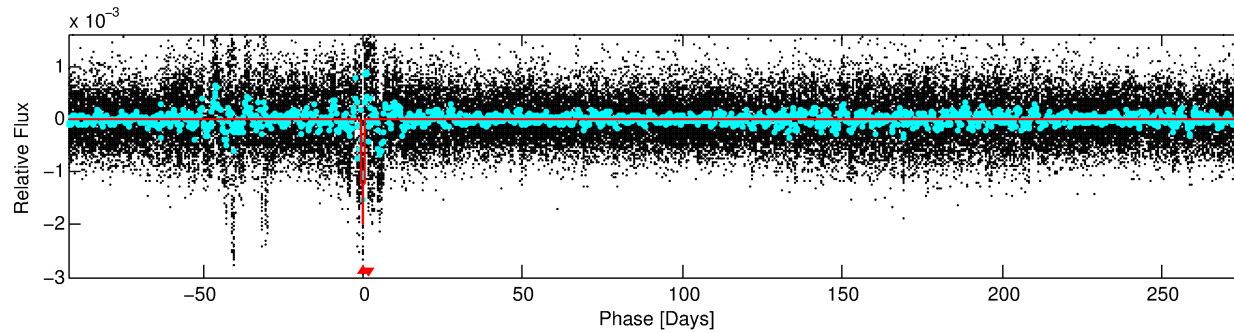
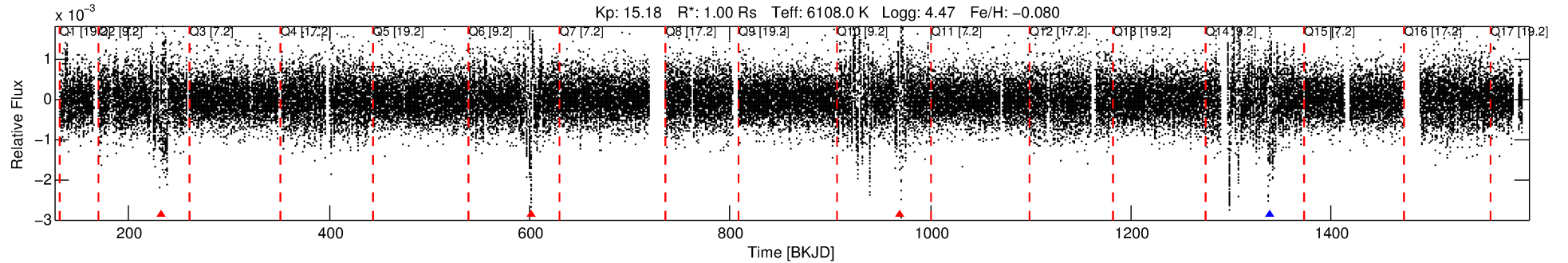
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008107692-01

No Significant Match Found

# DV One-Page Summary

KIC: 8107692 Candidate: 1 of 1 Period: 368.769 d



## DV Fit Results:

Period = 368.76879 [0.01307] d  
Epoch = 232.6206 [0.0231] BKJD  
Rp/R\* = 0.0739 [0.0883]  
a/R\* = 42.86 [11.93]  
b = 1.00 [0.13]  
Seff = 1.17 [0.48]  
Teq = 265 [27] K  
Rp = 8.04 [9.92] Re  
a = 1.0304 [0.2685] AU  
Ag = 3517.16 [8564.31] [0.41 $\sigma$ ]  
Teffp = 3156 [1901] K [1.52 $\sigma$ ]

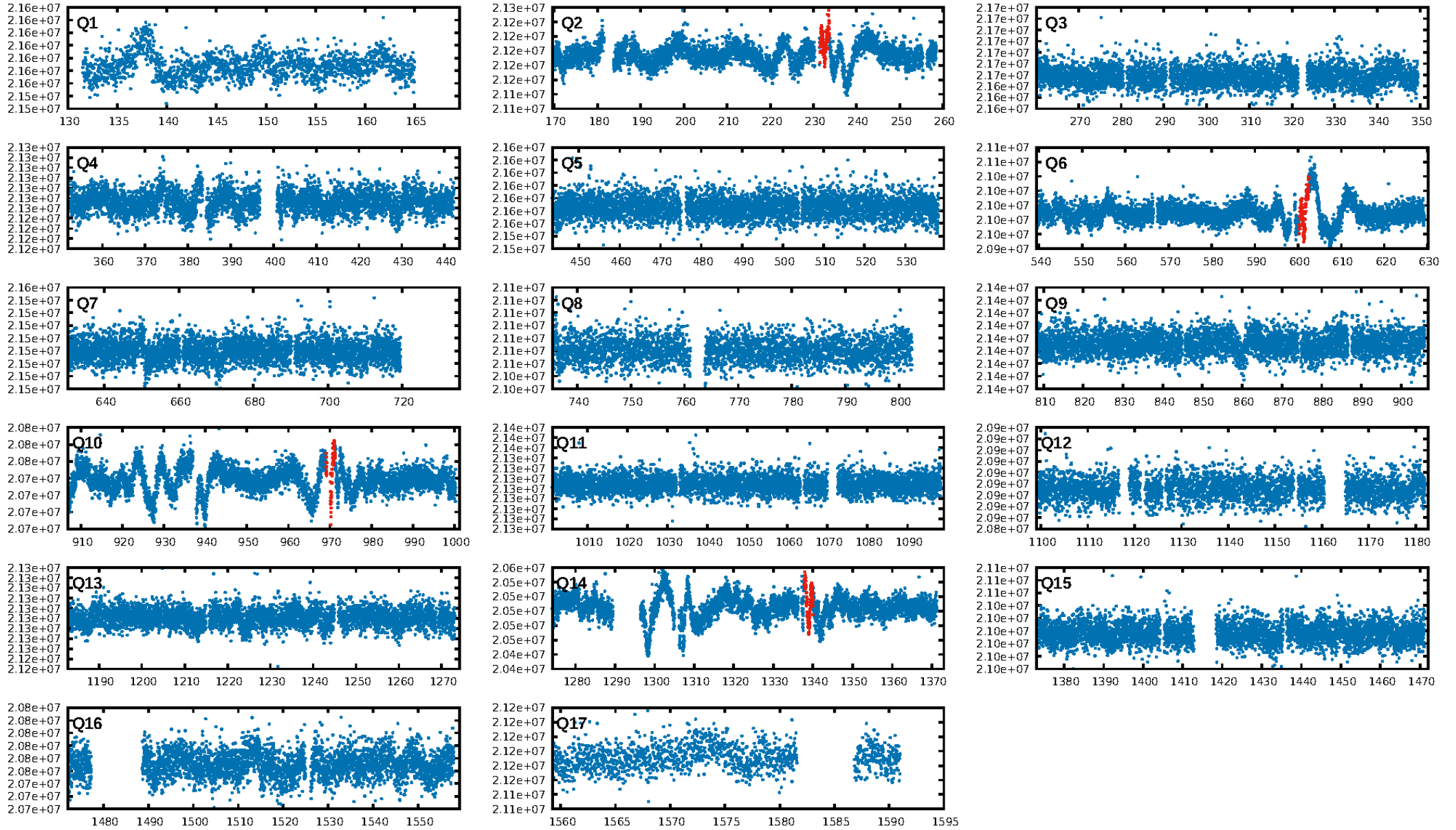
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 1.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 2.50e-18  
RollingBand-fgt: 0.25 [1/4]  
GhostDiagnostic-chr: 2.988  
Centroid-sig: 98.3%  
Centroid-so: 0.205 arcsec [0.17 $\sigma$ ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0 [0]  
KicOffset-st: 0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: N/A

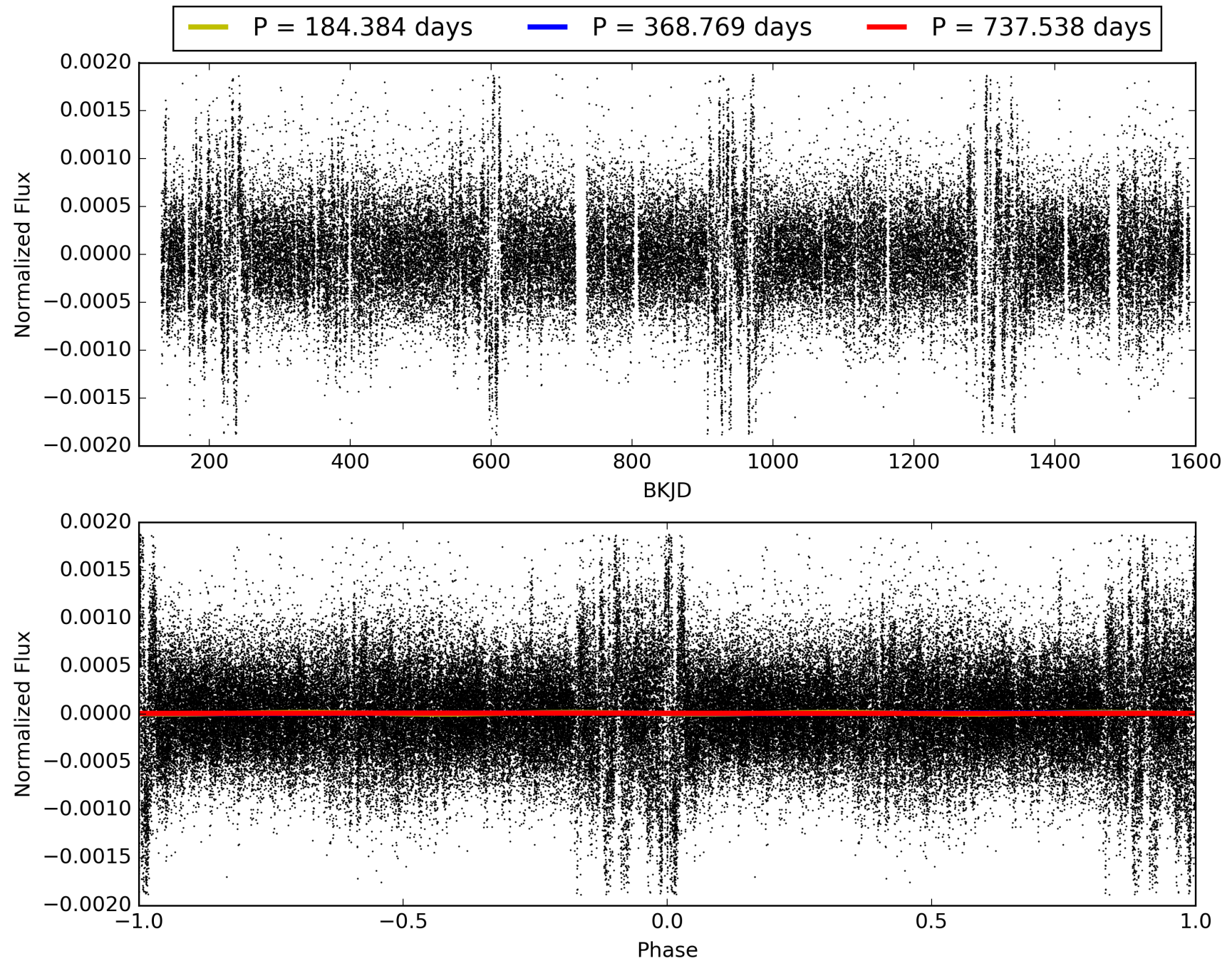
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:57:20 Z

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

# TCE 008107692-01, PDC Light Curves

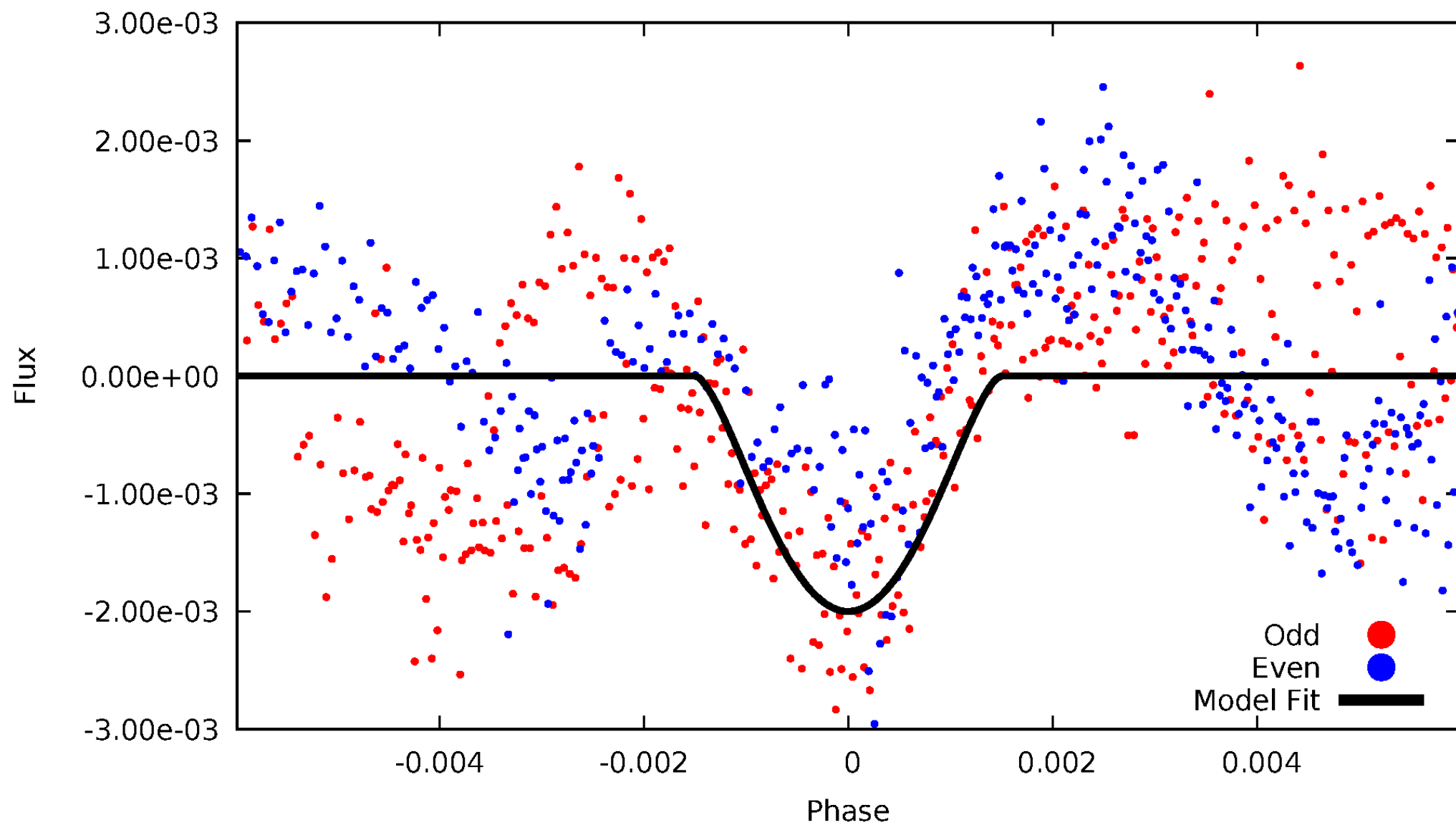


# TCE 008107692-01



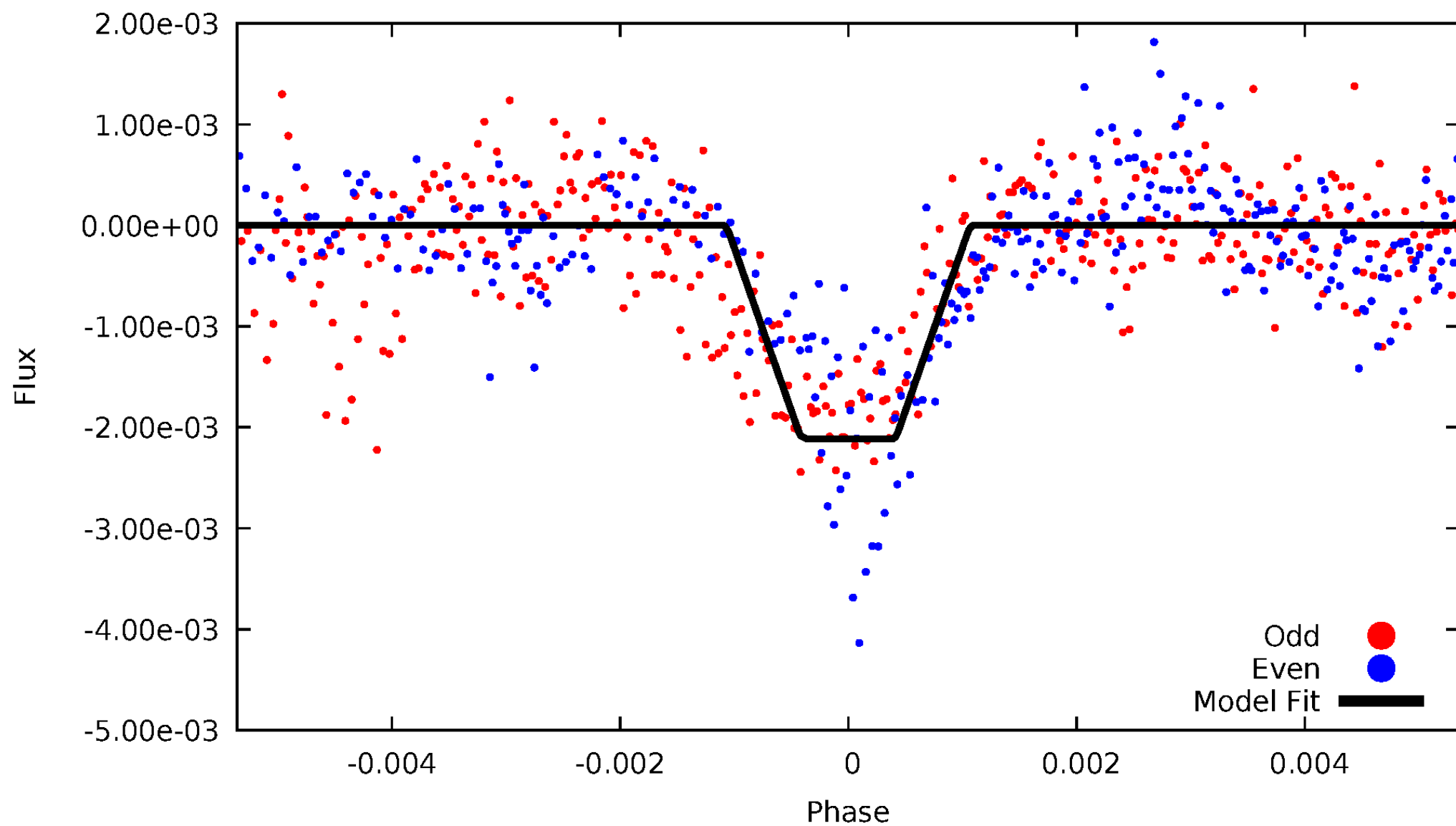
# DV Odd/Even

TCE 008107692-01



# ALT Odd/Even

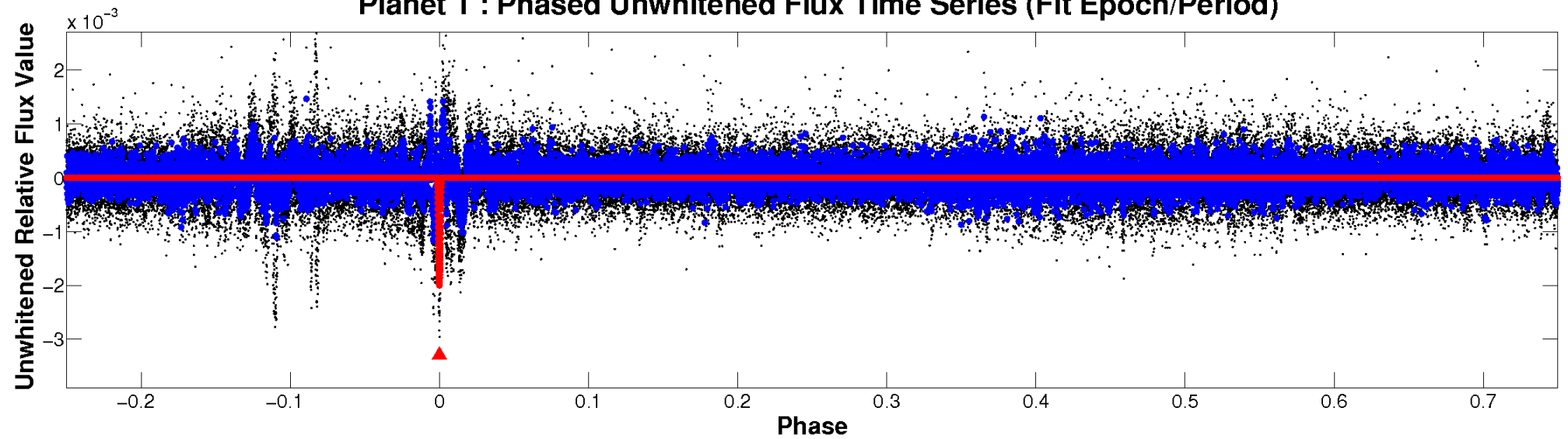
TCE 008107692-01



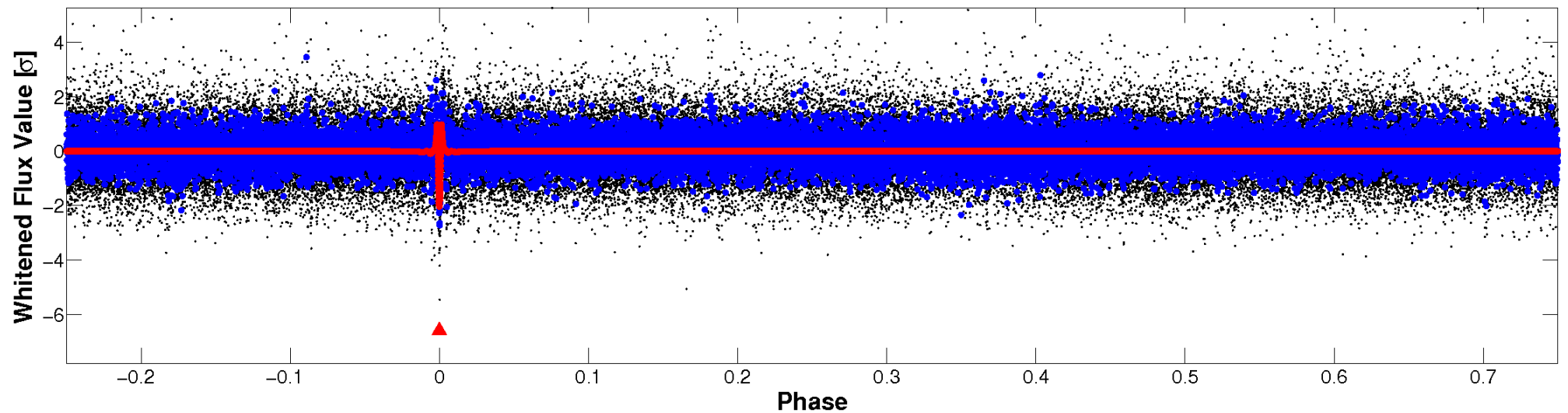


# Non-Whitened Vs. Whitened Light Curve

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

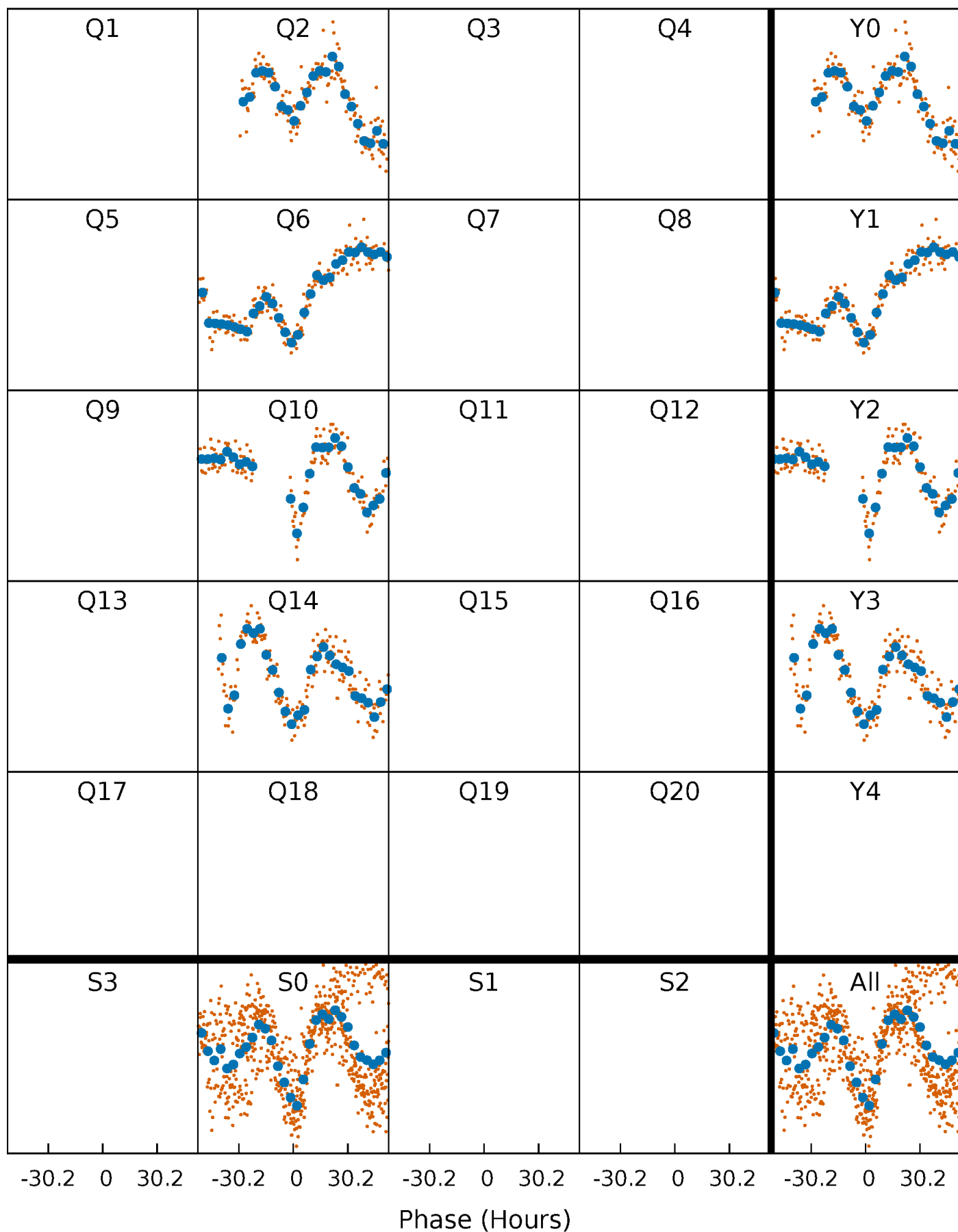


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

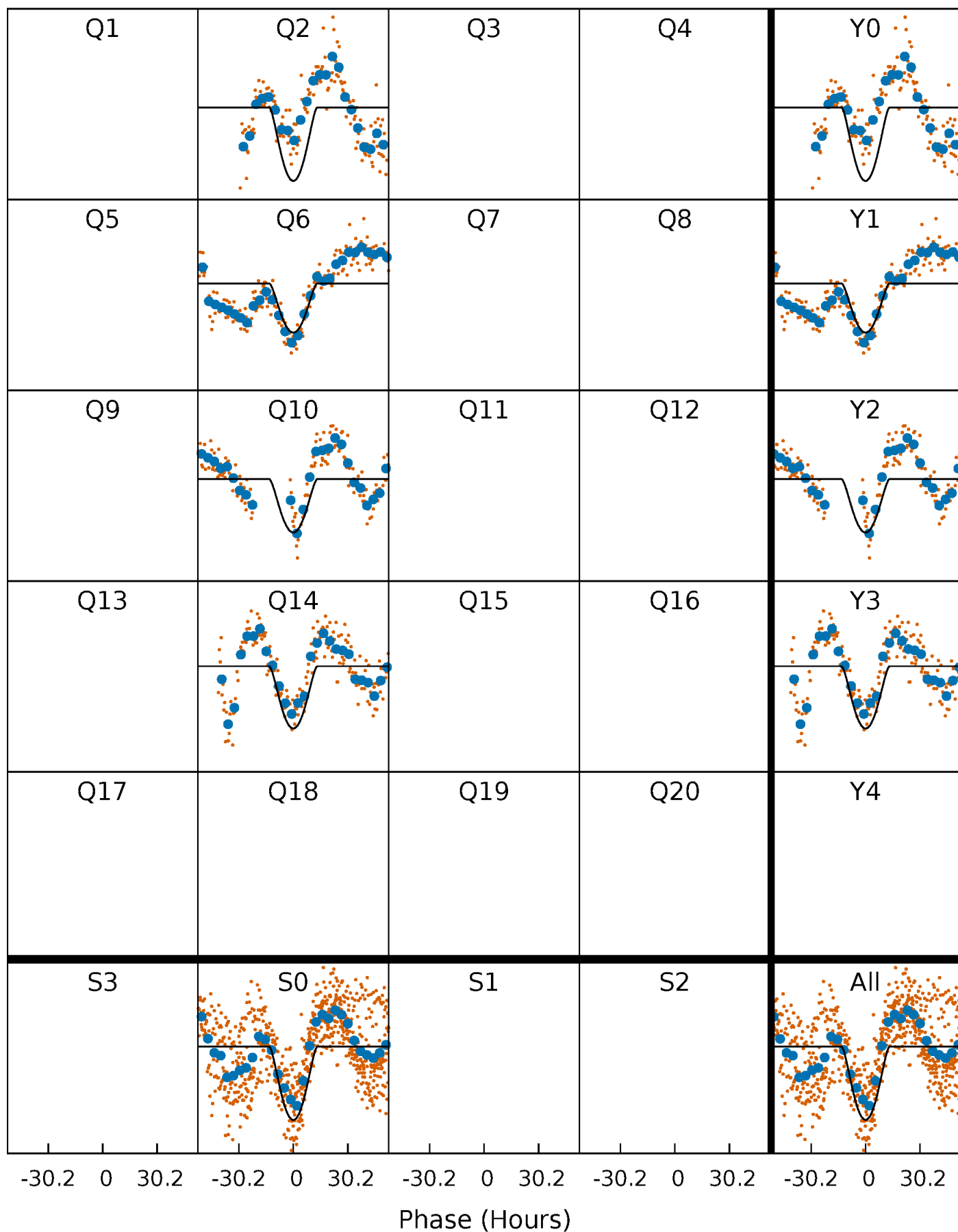
TCE 008107692-01 P=368.768793 Days  $T_0=232.620566$  (BKJD)





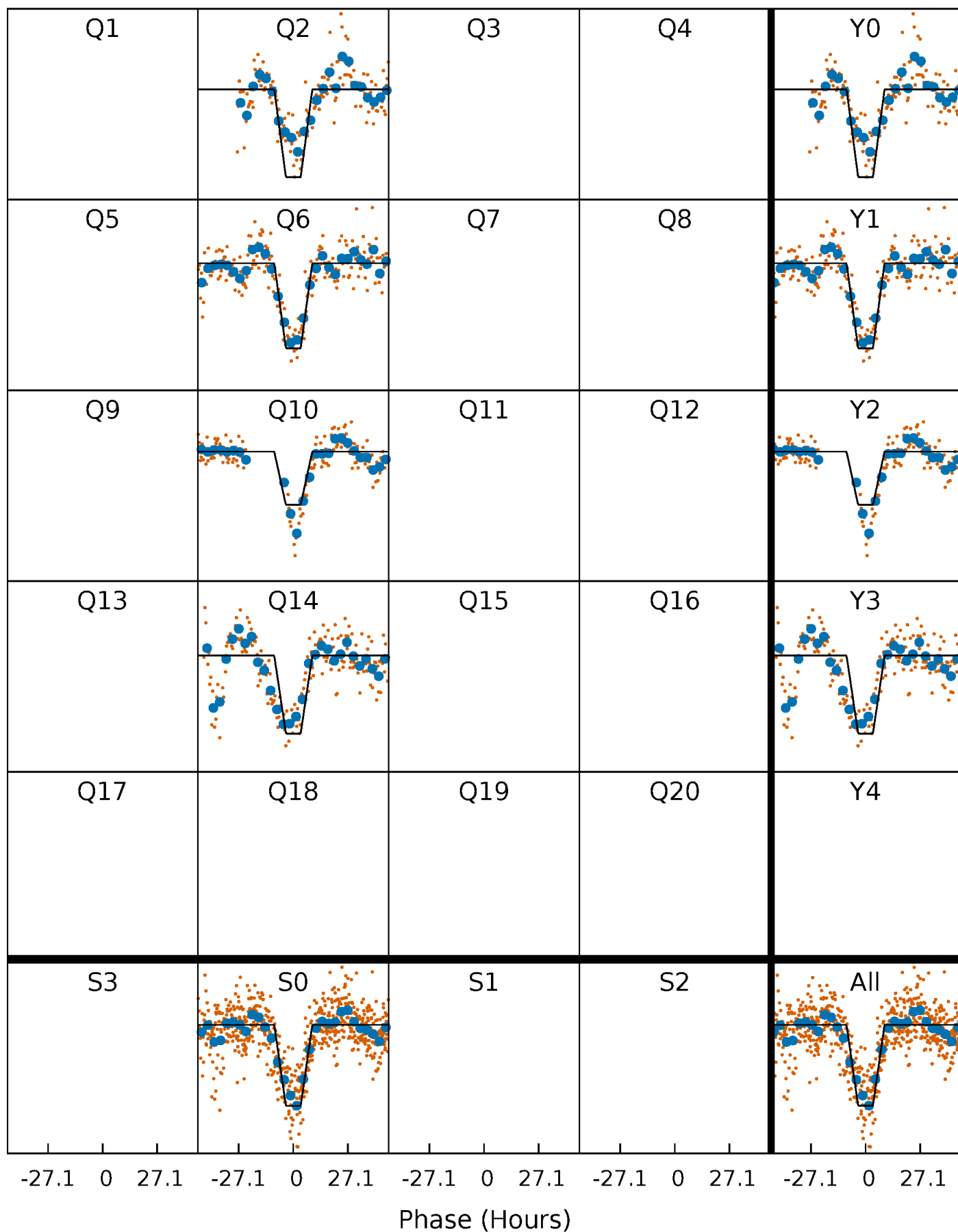
# DV Quarter-Phased Transit Curves

TCE 008107692-01 P=368.768793 Days  $T_0=232.620566$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

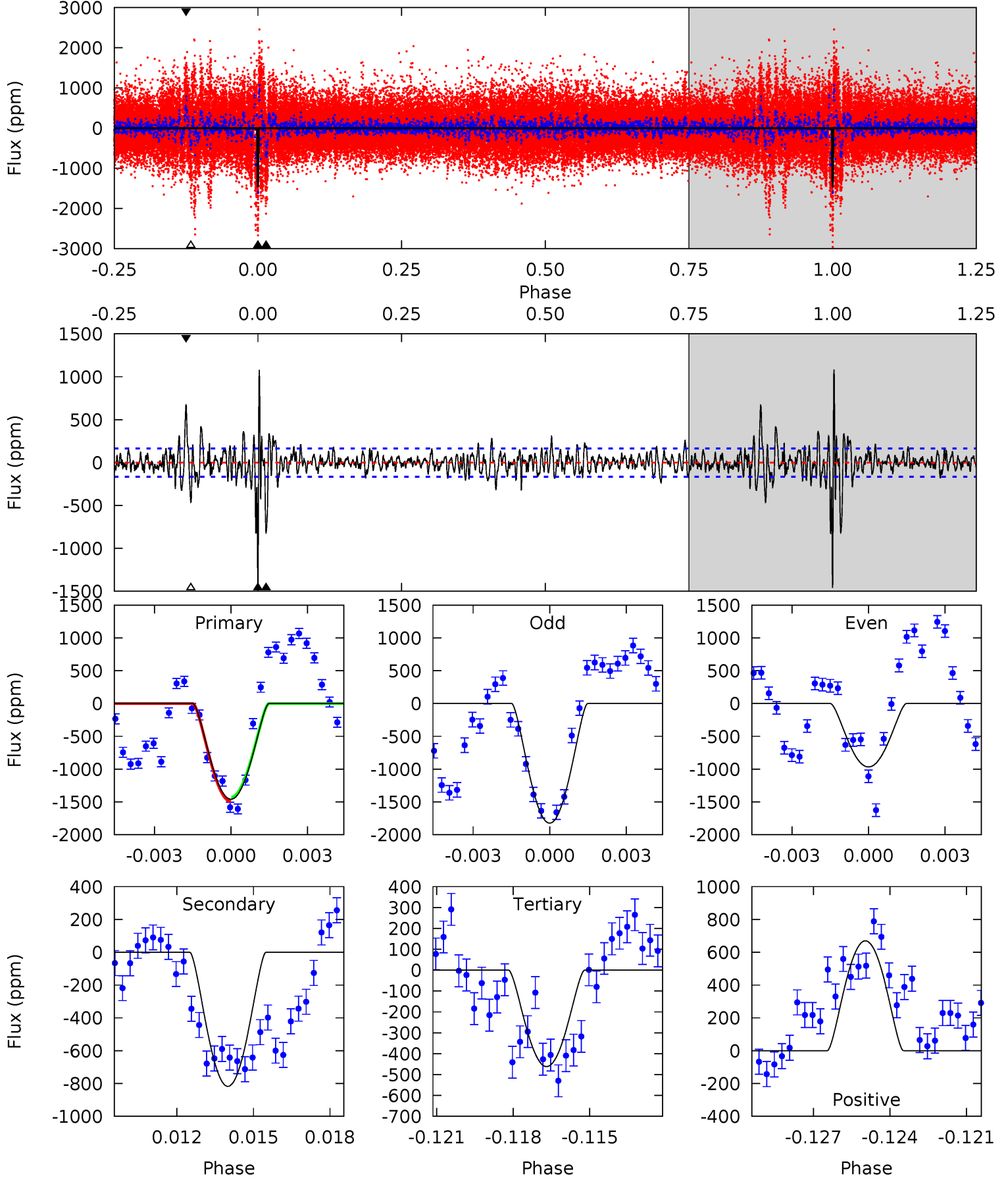
TCE 008107692-01 P=368.832569 Days  $T_0=232.551543$  (BKJD)



# DV Model-Shift Uniqueness Test

008107692-01, P = 368.768793 Days, E = 232.620566 Days

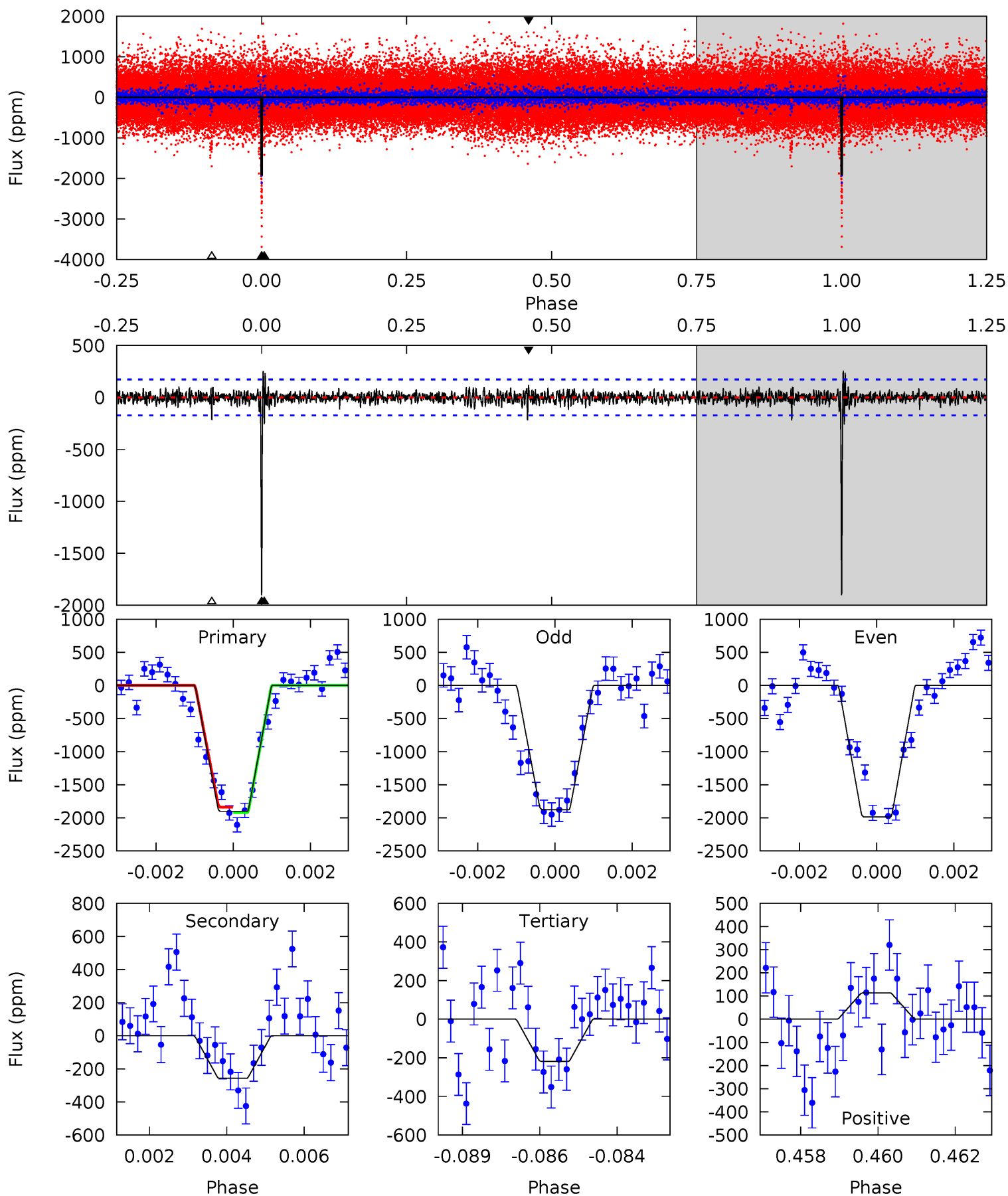
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.5	26.0	14.7	21.3	5.25	2.96	3.58	31.8	25.1	11.3	4.71	13.5	1.01	0.43	1.02



# Alt Model-Shift Uniqueness Test

008107692-01, P = 368.832569 Days, E = 232.551543 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
58.4	7.90	6.71	3.49	5.31	3.07	1.09	51.7	54.9	1.19	4.41	1.69	1.05	0.12	1.25



### Stellar Parameters For KIC 008107692

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6108^{+168}_{-232}$	$4.471^{+0.052}_{-0.208}$	$-0.080^{+0.250}_{-0.350}$	$0.997^{+0.308}_{-0.110}$	$1.072^{+0.135}_{-0.150}$	$1.525^{+0.437}_{-0.806}$
	+3%/-4%	+1%/-5%	+312%/-438%	+31%/-11%	+13%/-14%	+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 008107692-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-818 \pm 31$	$10.76^{+8.91}_{-6.59}$	$380^{+28}_{-21}$	$3773^{+1676}_{-654}$	$4097^{+21397}_{-2905}$
Alt.	$-257 \pm 33$	$8.81^{+9.10}_{-5.89}$	$377^{+27}_{-19}$	$3303^{+1556}_{-574}$	$1863^{+15335}_{-1392}$

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

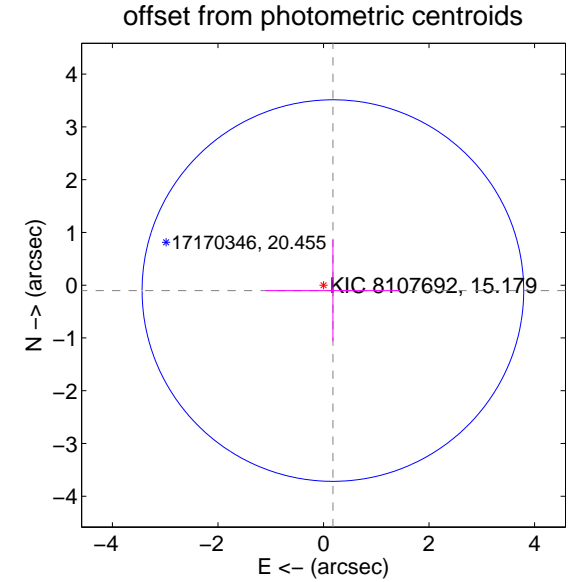
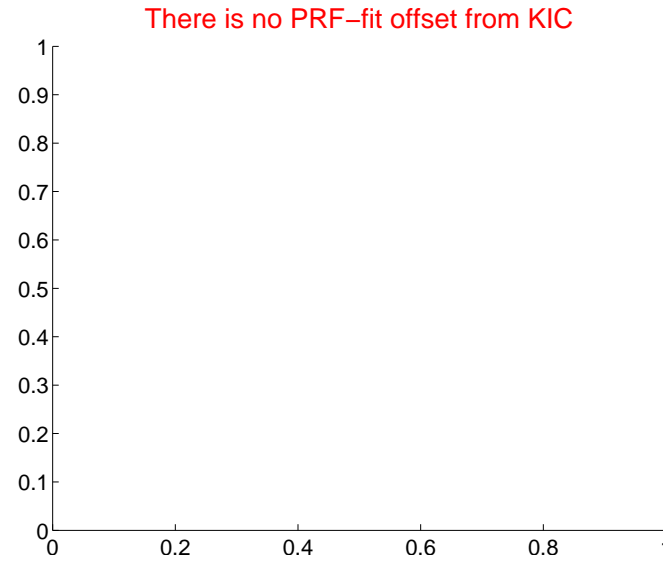
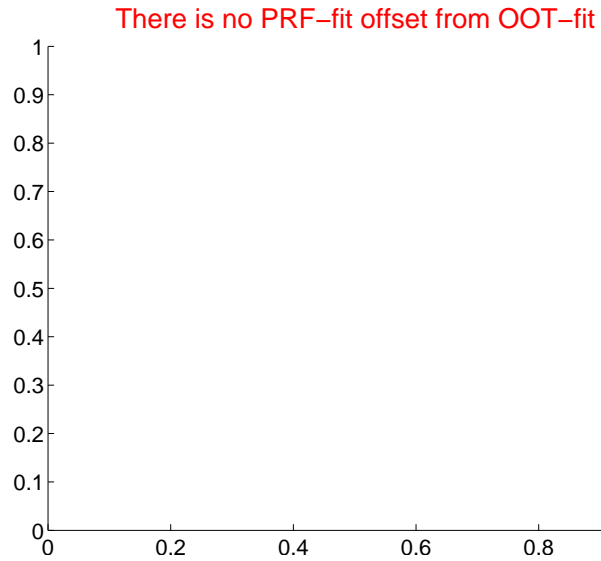
## DV Centroid Data

Supplemental centroid analysis for 008107692-01. Kepler magnitude: 15.18. Transit SNR 18.51

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

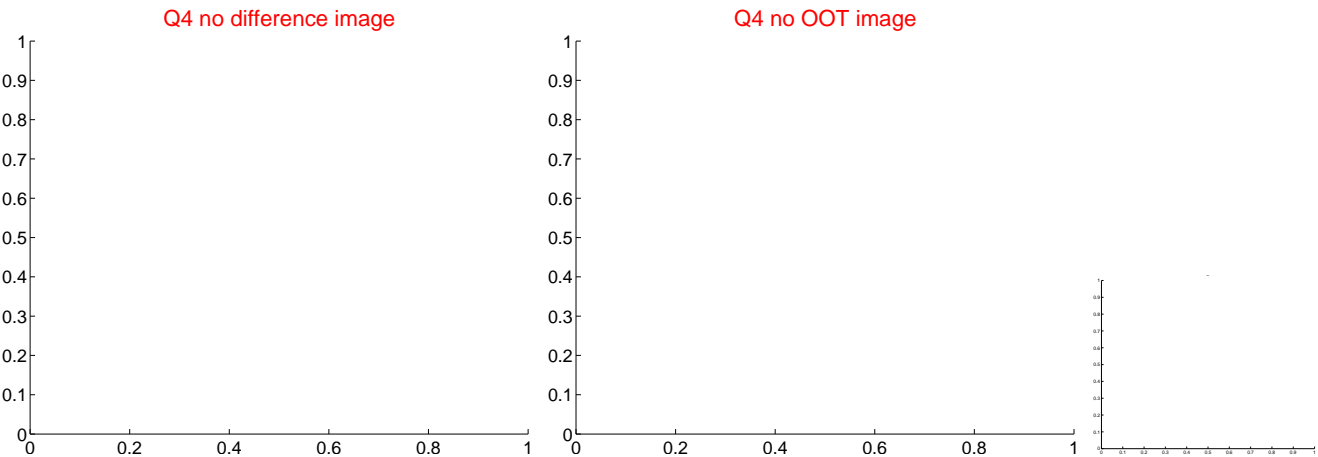
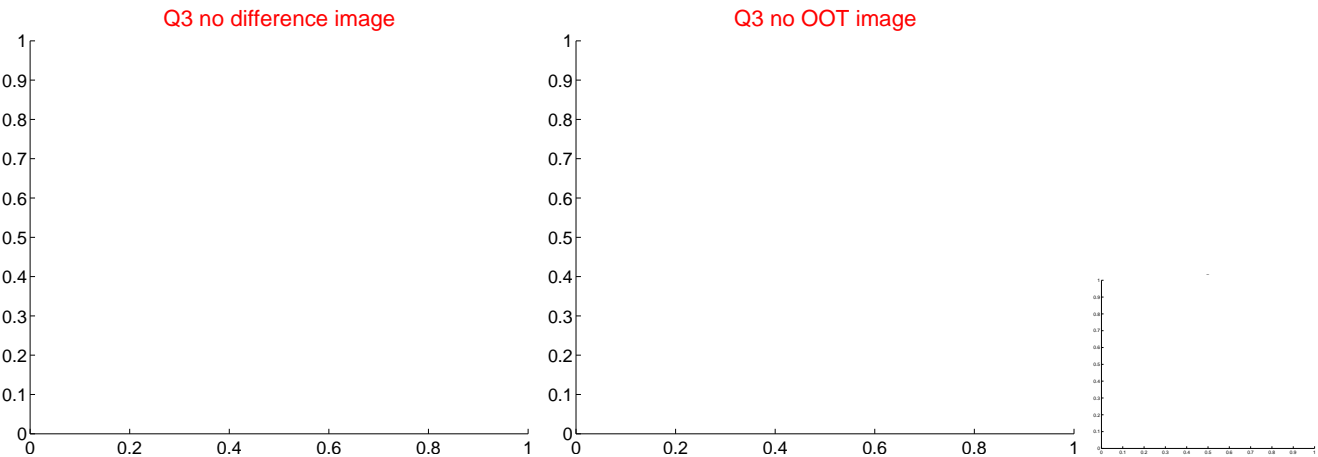
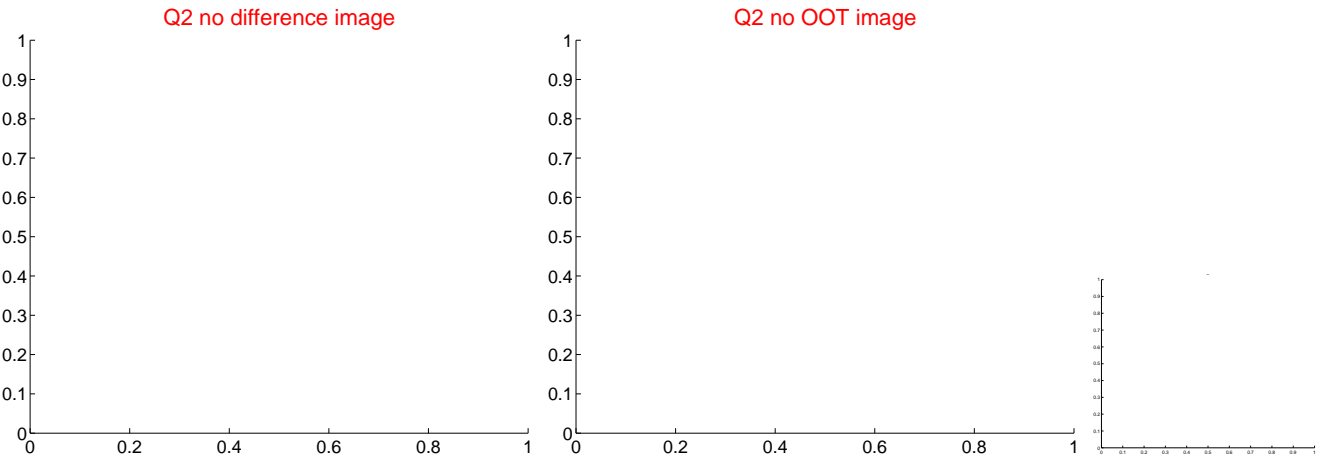
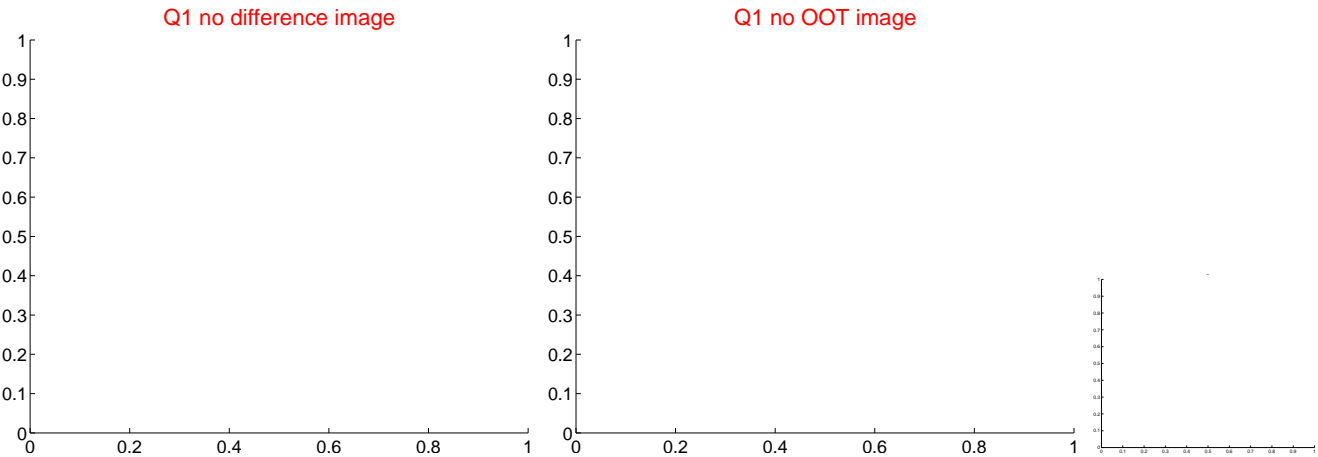
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$0.21 \pm 1.21$	0.17	$-0.18 \pm 1.28$	$-0.10 \pm 0.96$



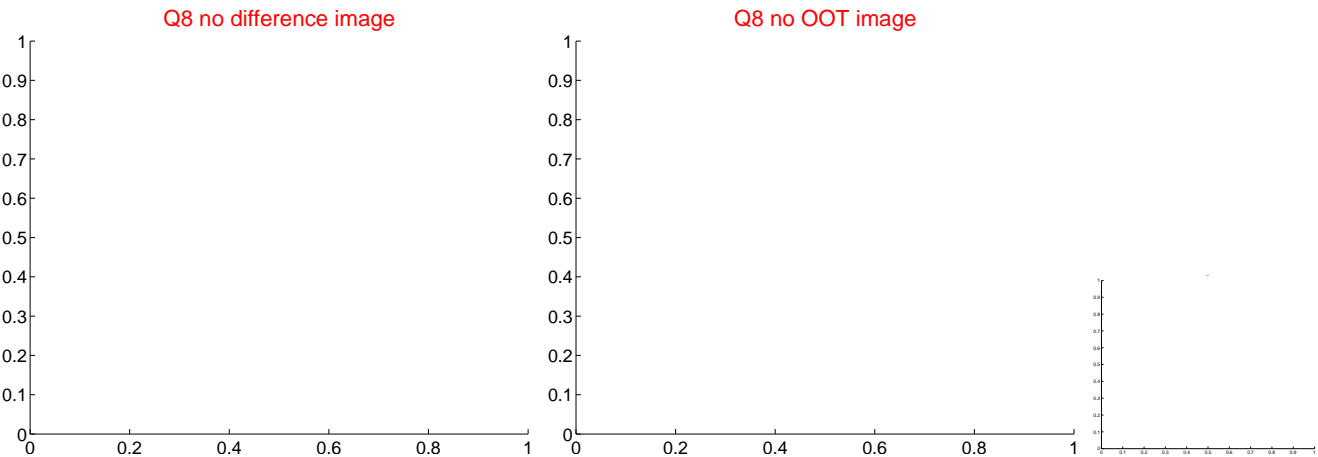
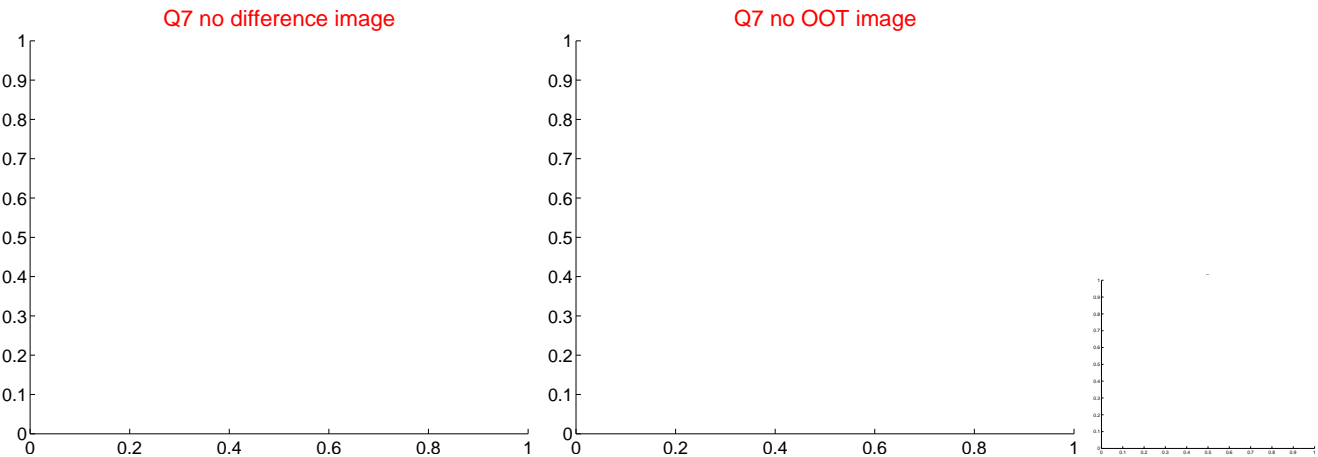
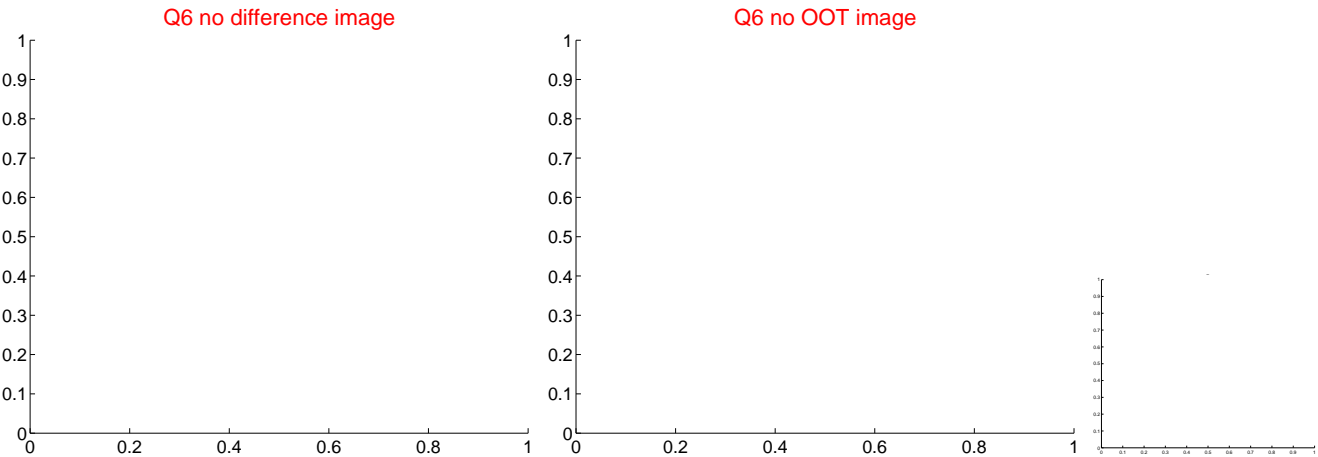
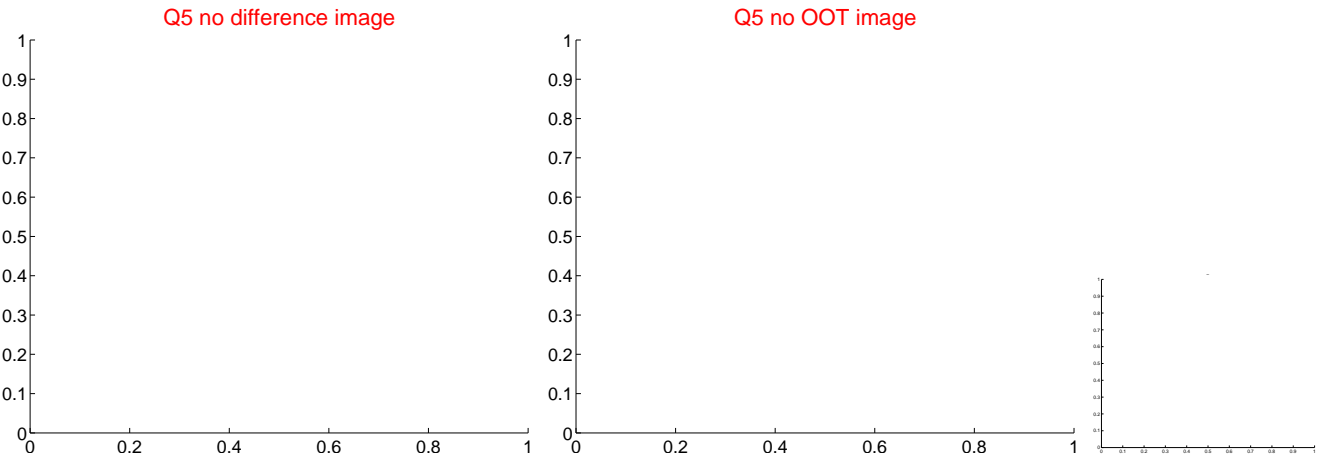
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



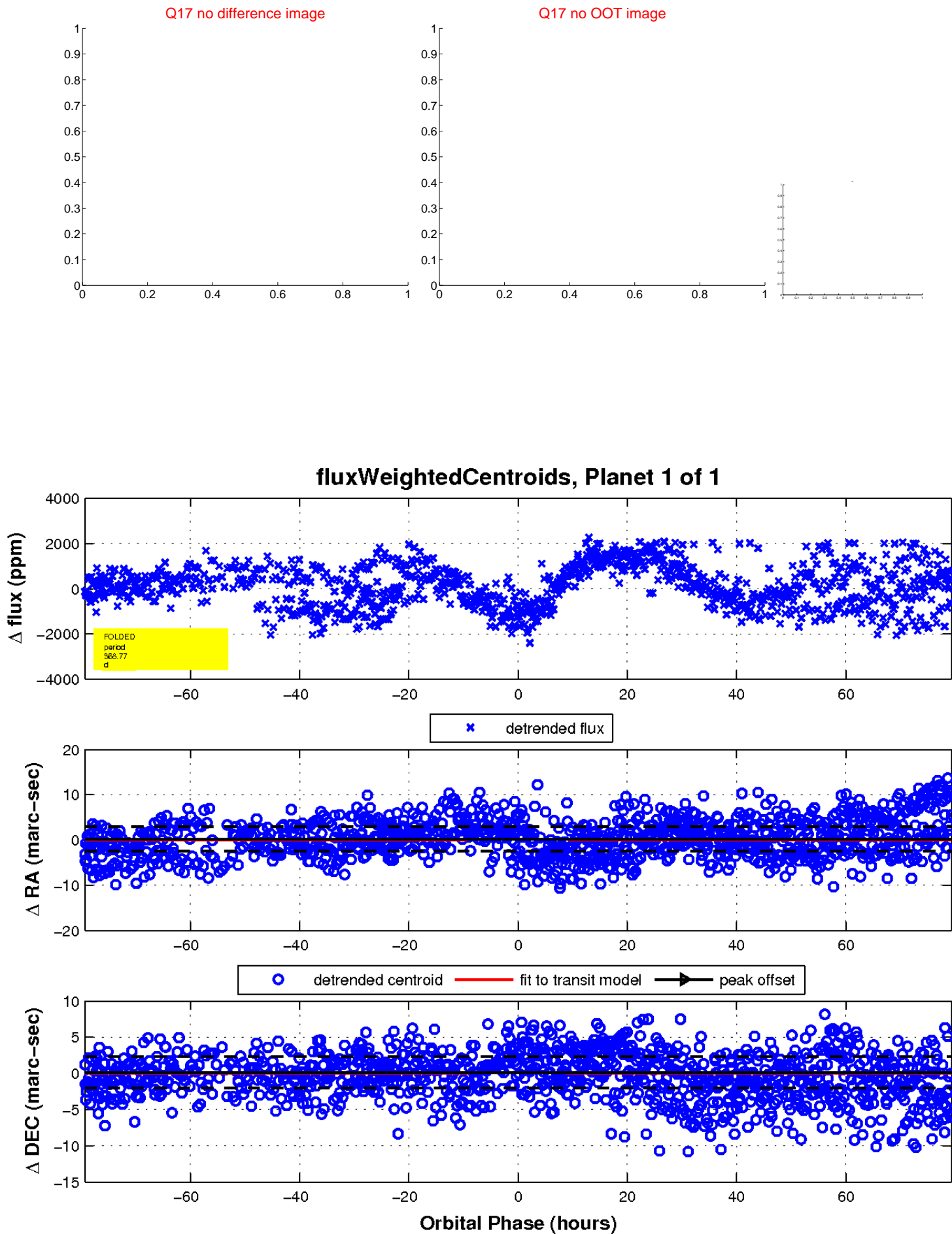
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

