

# KIC 009592850

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
009592850-01	OBS	3883.01	0.609670	131.934110	168056.4	2.000	1577.2	-1.0	0.90	5455	36.68	3612.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009592850-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—SEASONAL_DEPTH_ALT—CENT_NOFITS

**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.

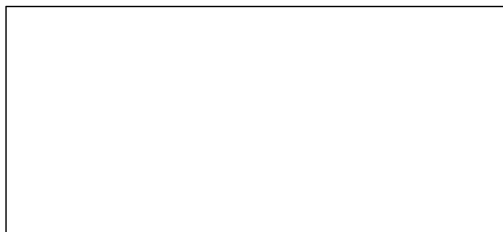
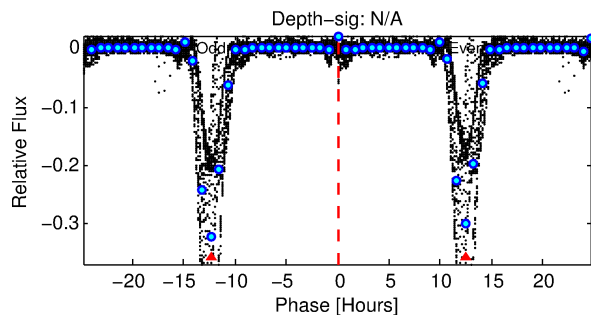
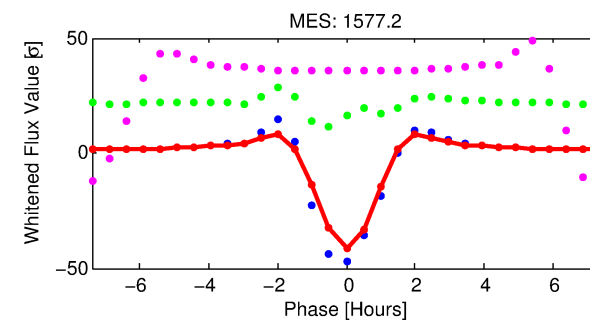
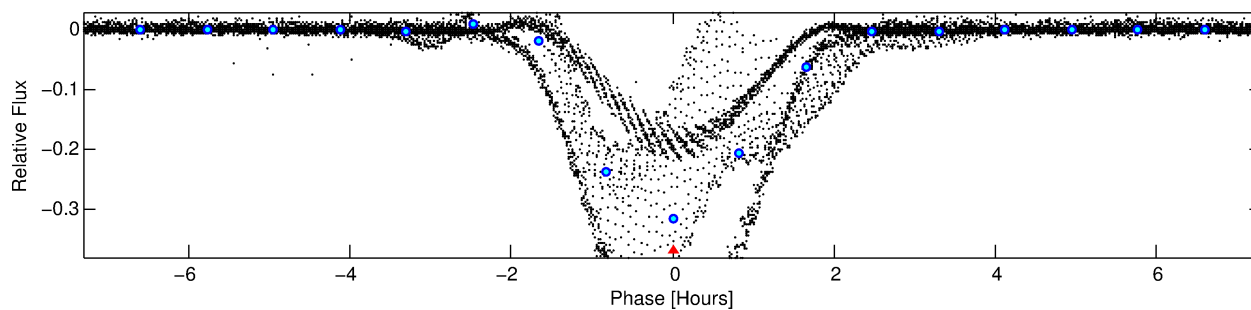
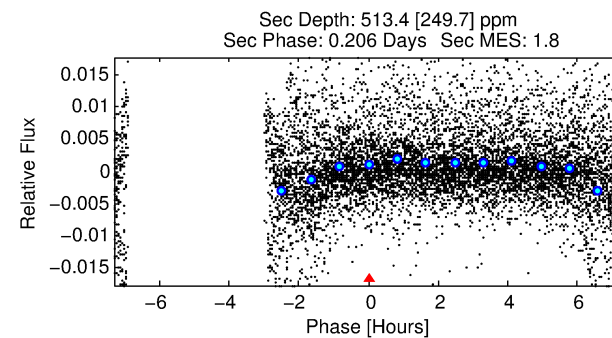
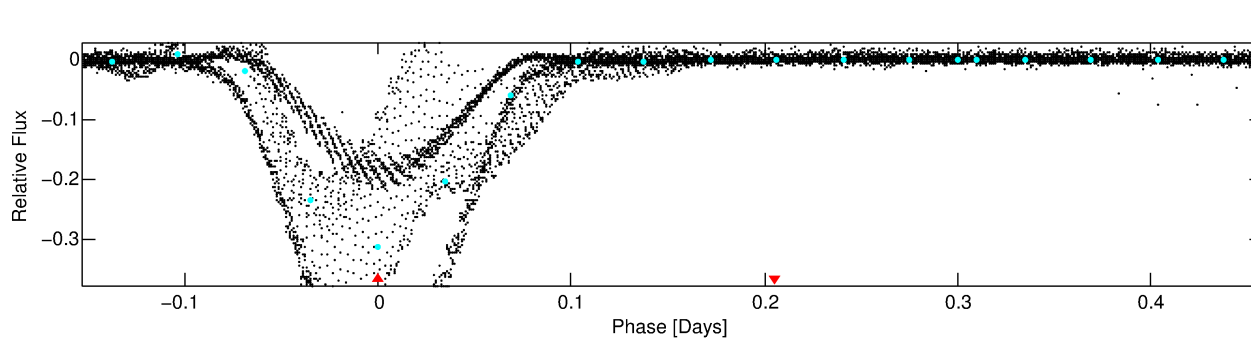
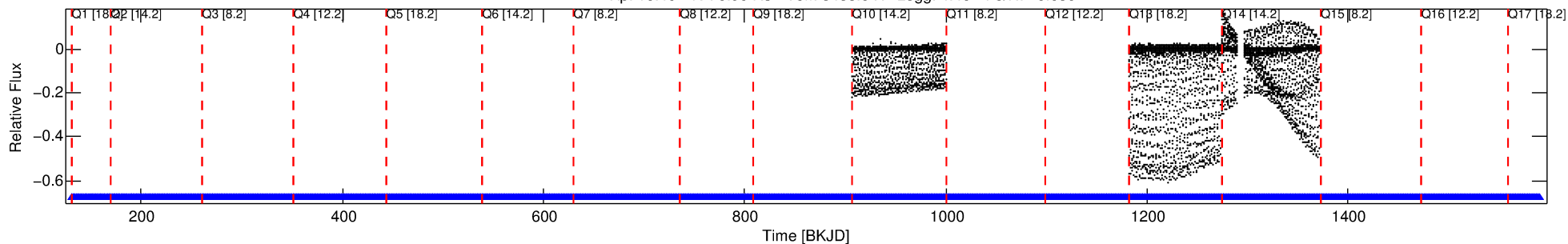
## Ephemeris Match Information For 009592850-01

No Significant Match Found

# DV One-Page Summary

KIC: 9592850 Candidate: 1 of 1 Period: 0.610 d  
KOI: K03883 Corr: No Ephemeris Match

Kp: 16.40 R\*: 0.90 Rs Teff: 5455.0 K Logg: 4.46 Fe/H: -0.080



## TPS TCE Results:

Period = 0.60967 d  
Epoch = 131.9341 BKJD

DV fit results are unavailable

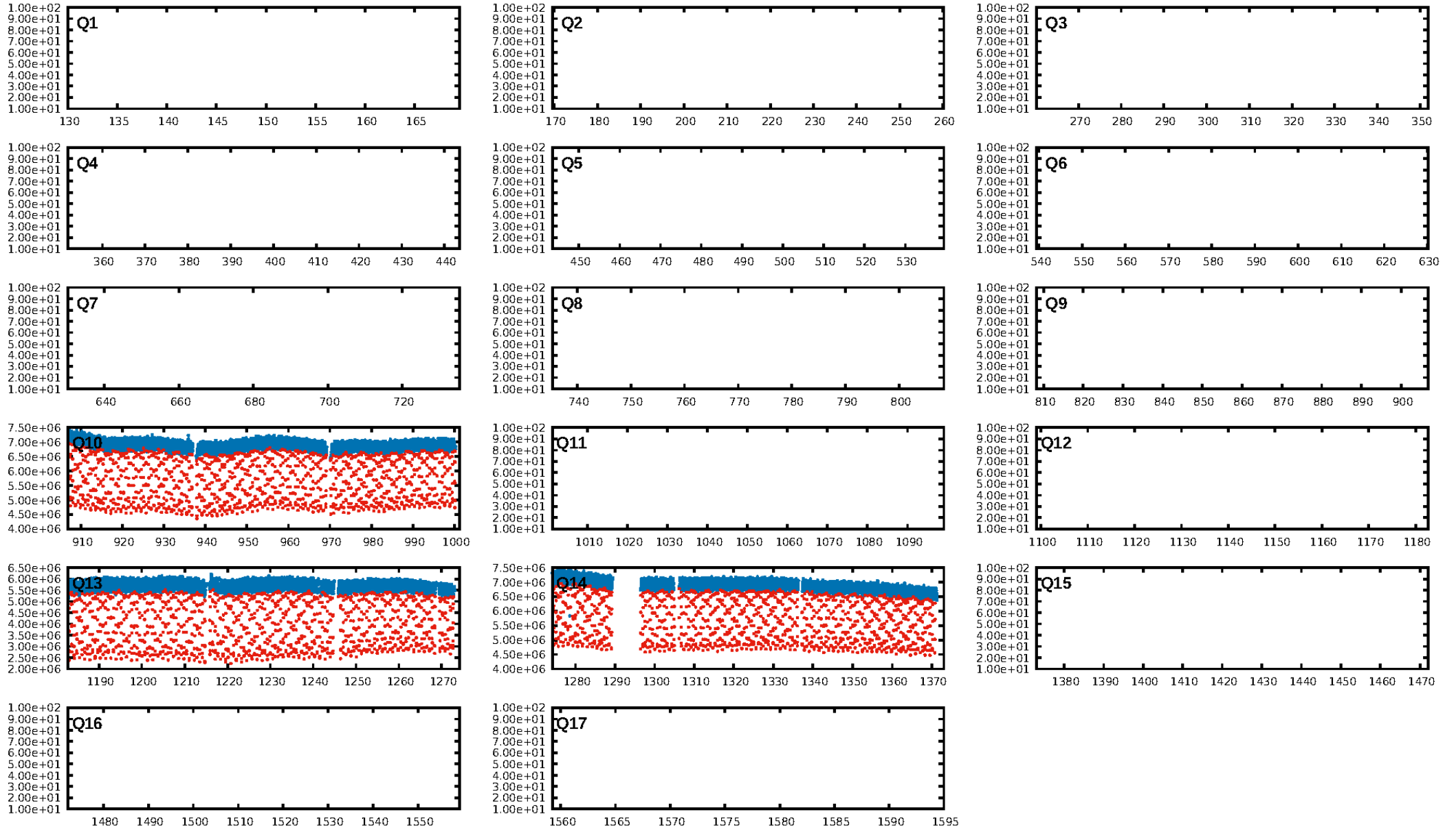
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [444/444]  
GhostDiagnostic-chr: -1.012  
Centroid-sig: 0.0%  
Centroid-so: 5.736 arcsec [14617.51σ]  
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: 1.00 [3/3]

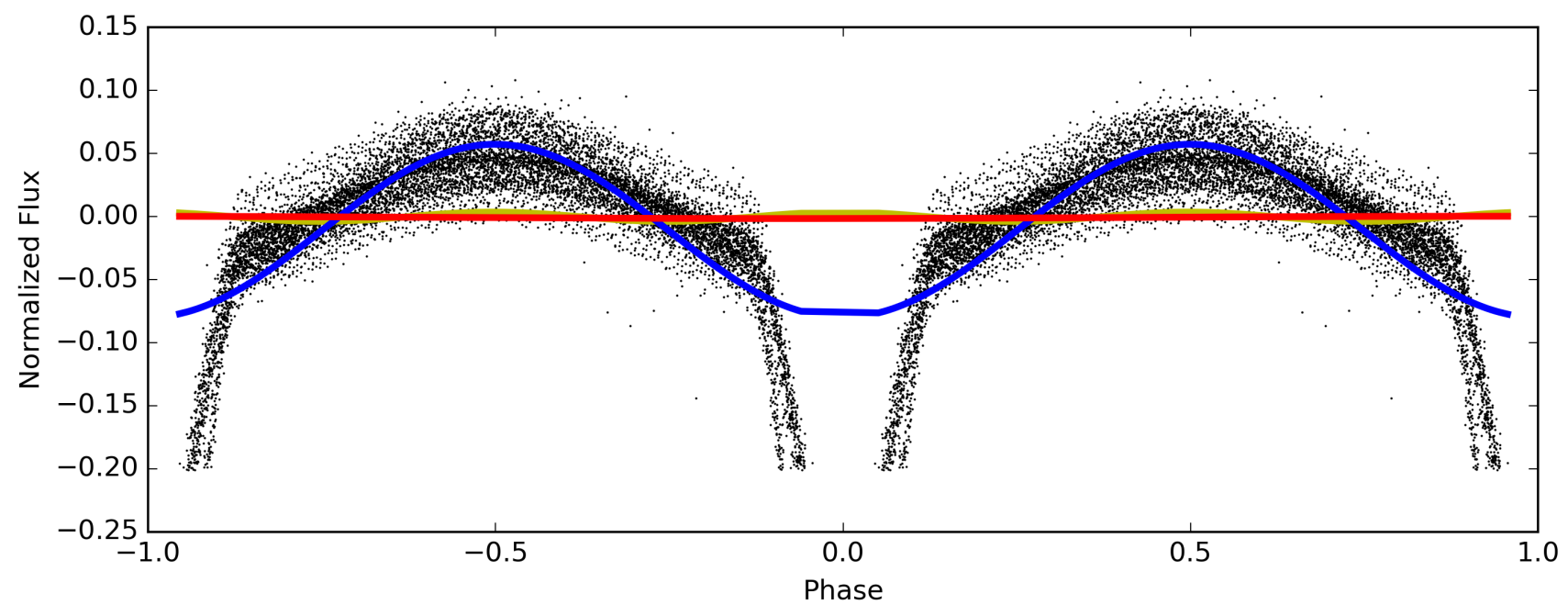
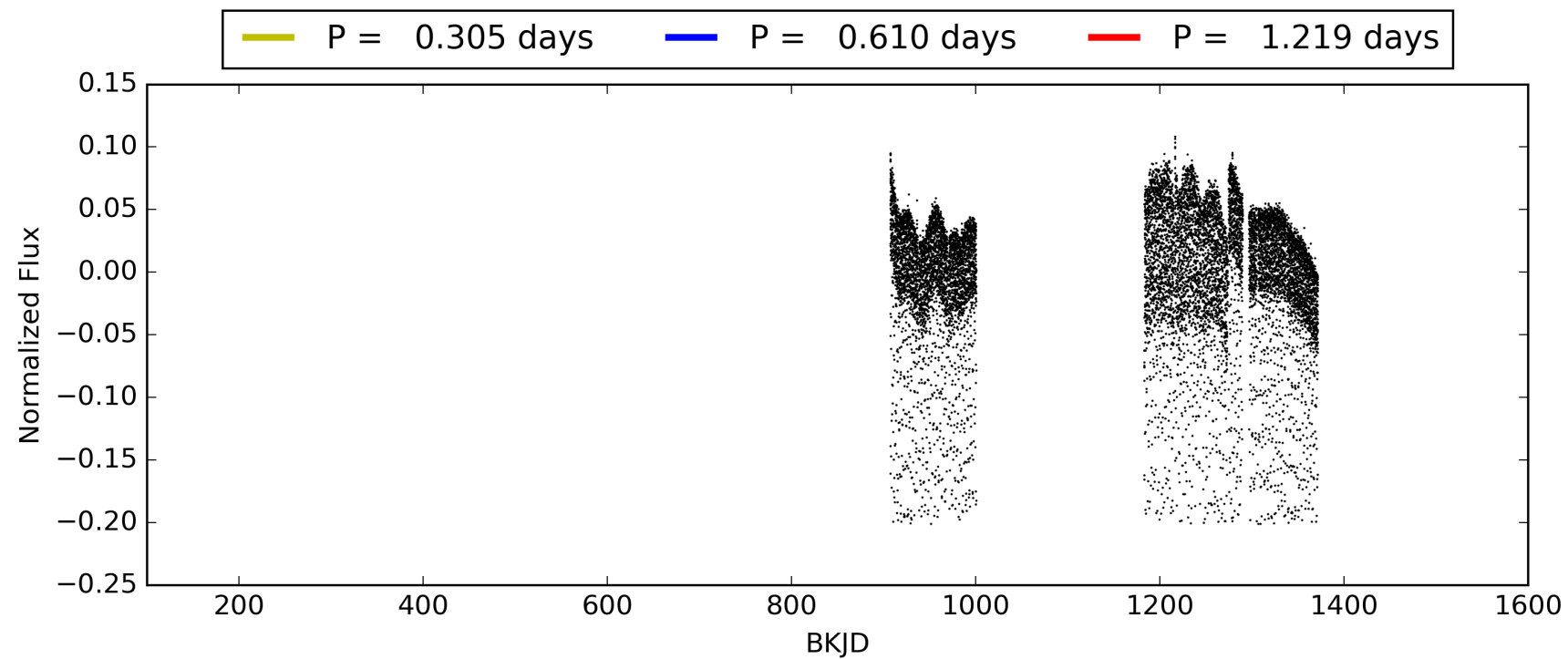
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:20:02 Z

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

# TCE 009592850-01, PDC Light Curves

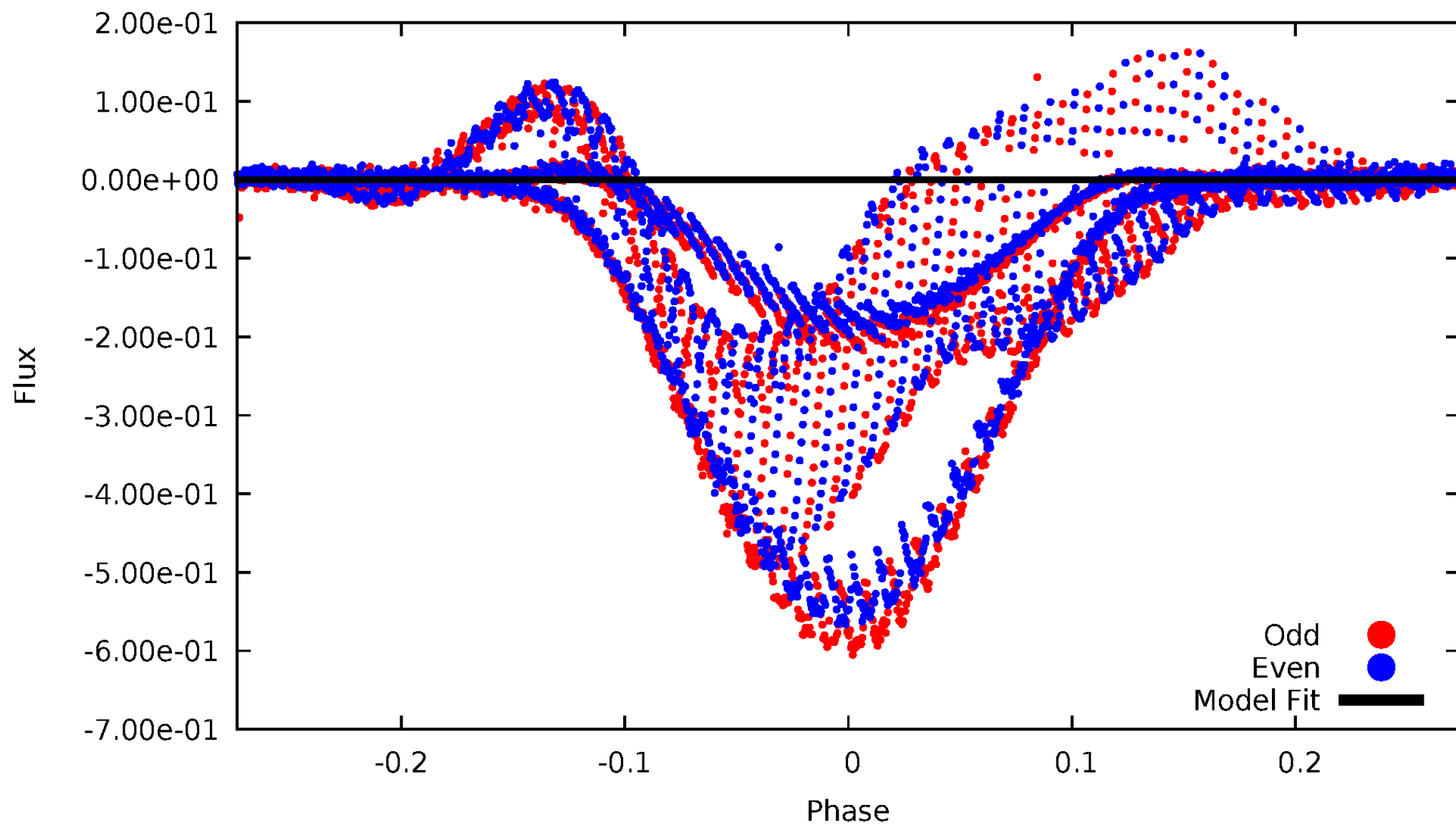


TCE 009592850-01



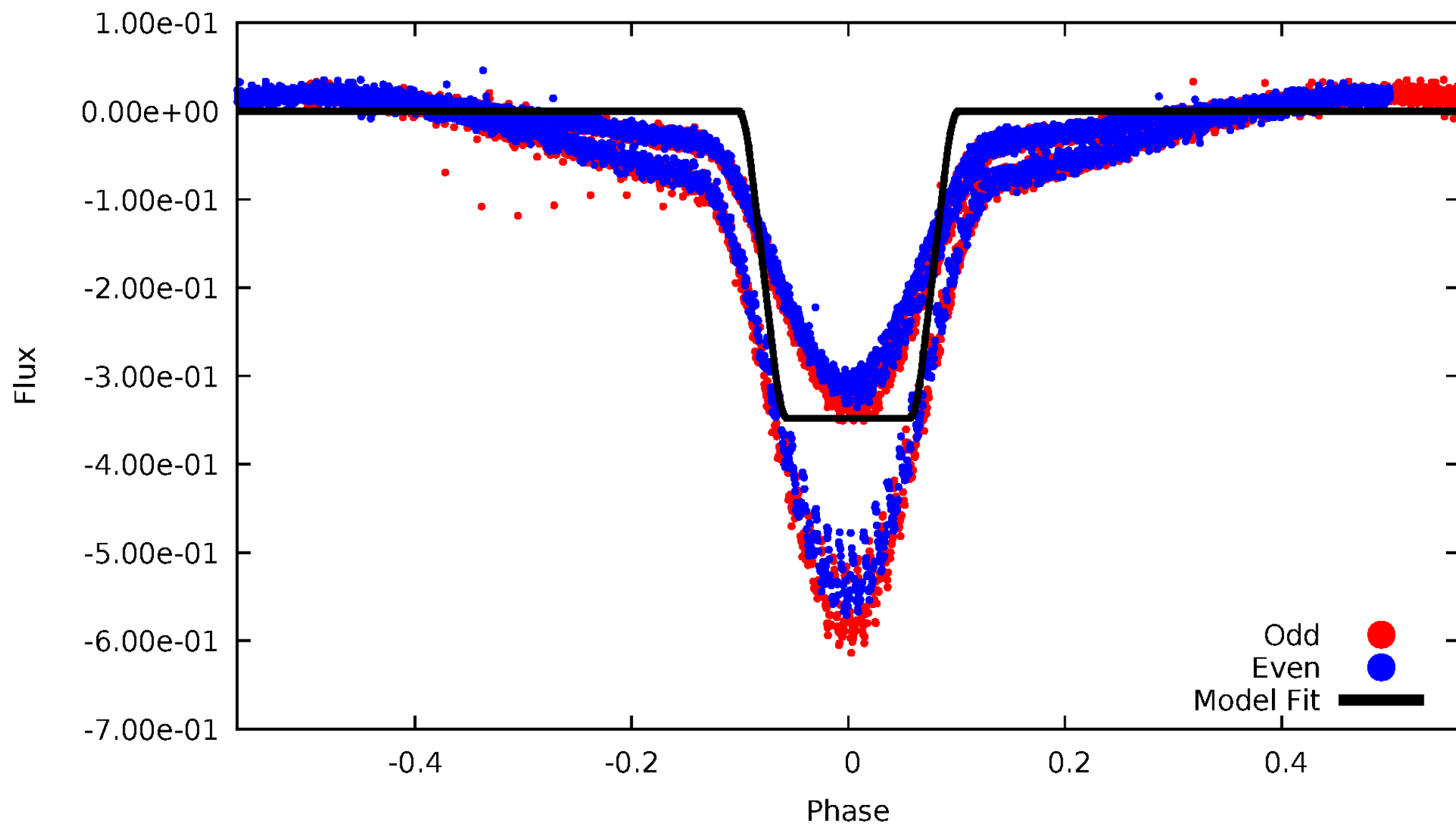
# DV Odd/Even

TCE 009592850-01



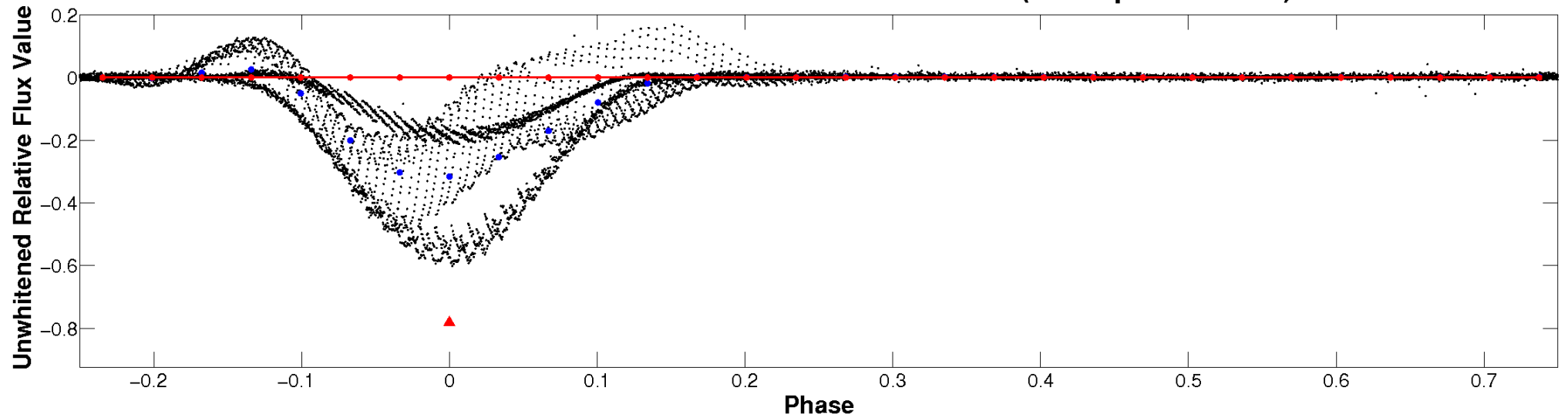
# ALT Odd/Even

TCE 009592850-01



# Non-Whitened Vs. Whitened Light Curve

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

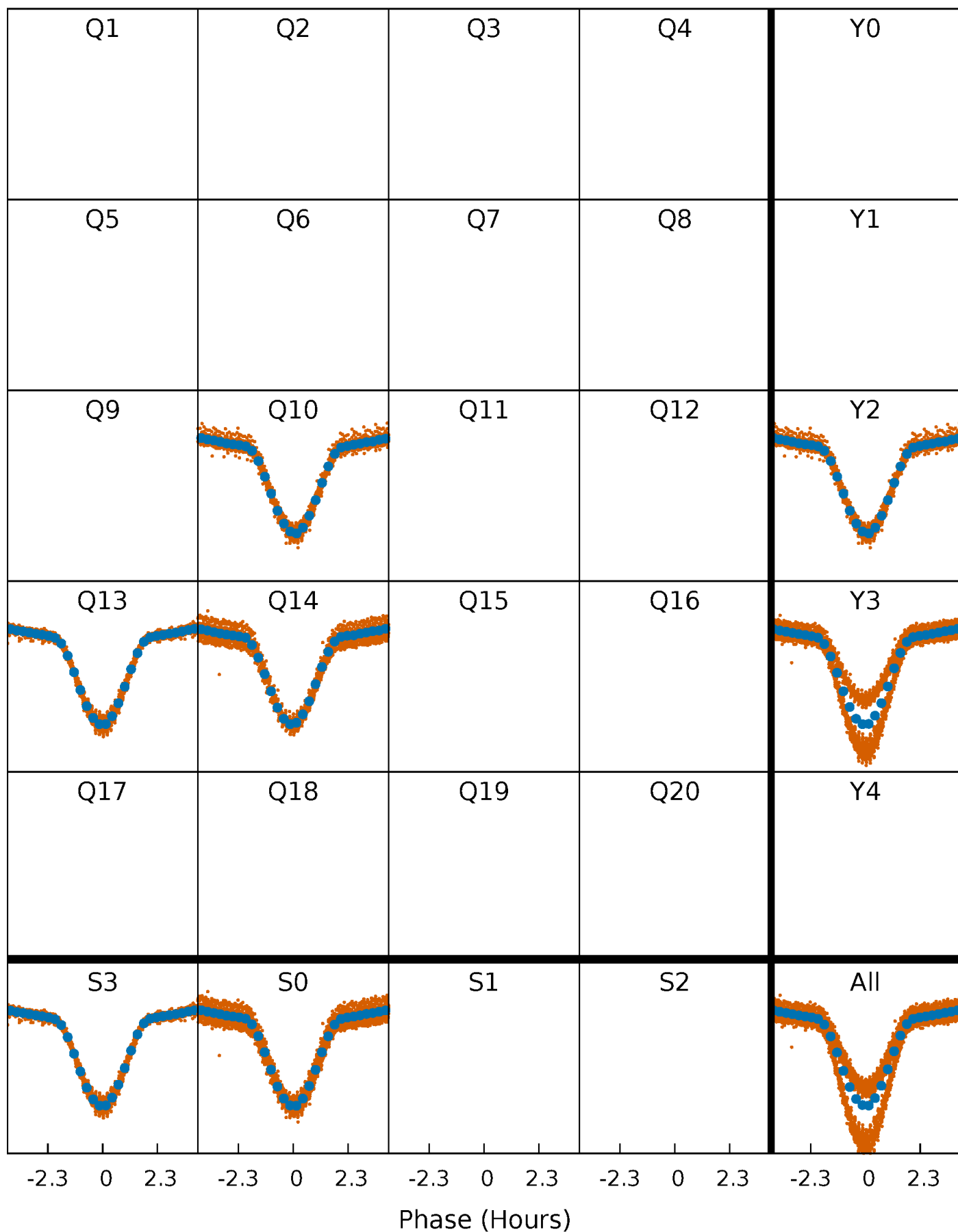


**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

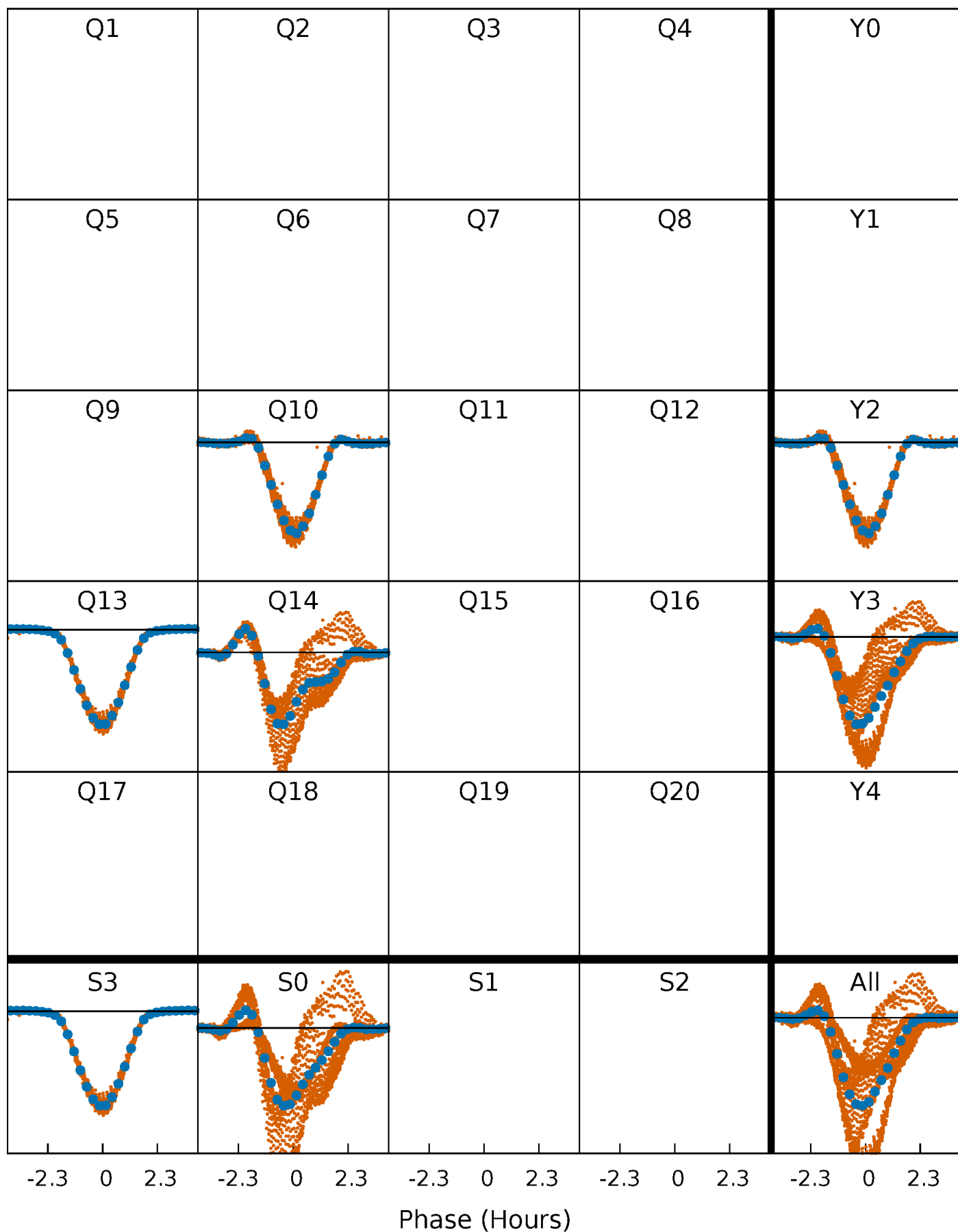
TCE 009592850-01   P= 0.609670 Days    $T_0=131.934111$  (BKJD)





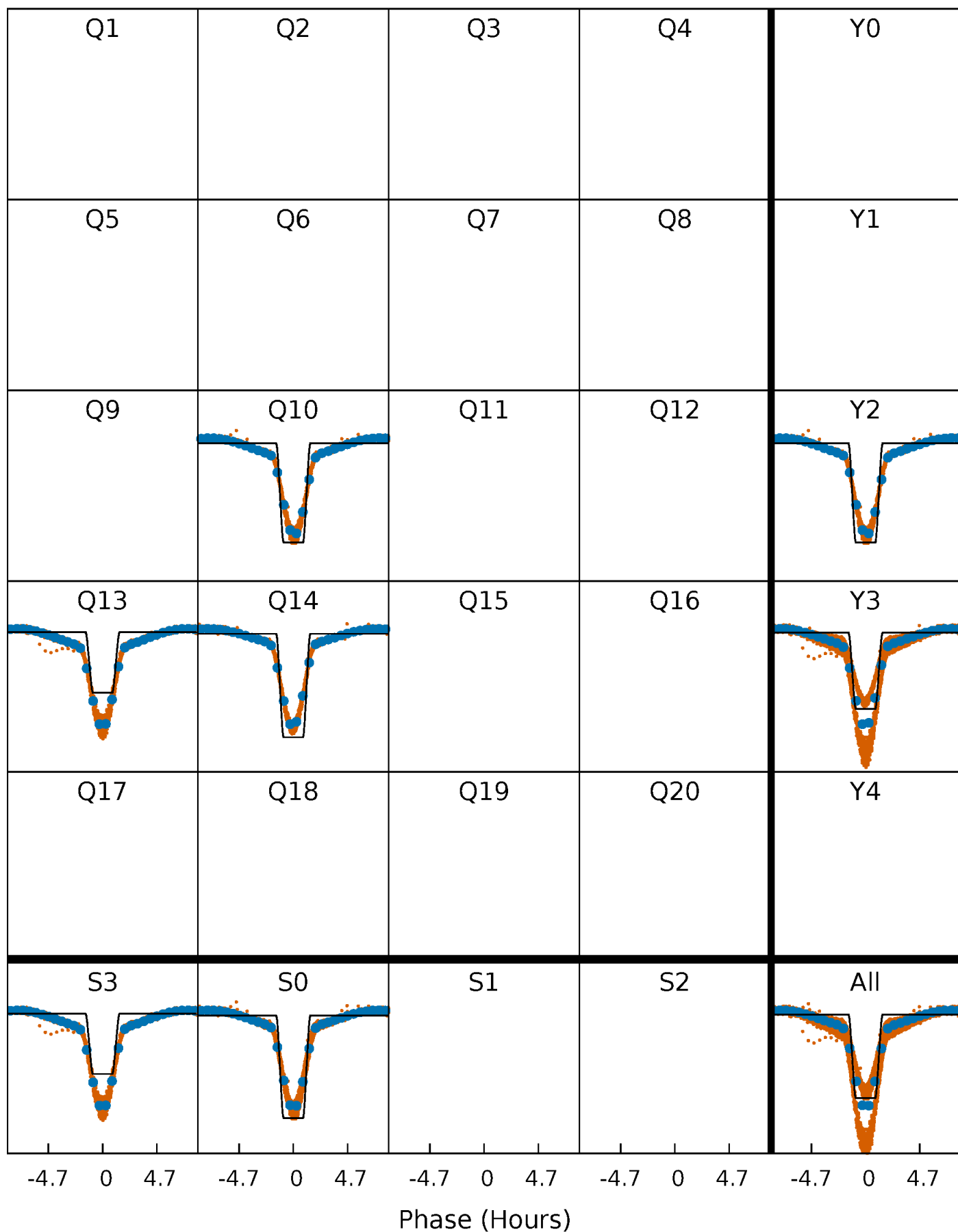
# DV Quarter-Phased Transit Curves

TCE 009592850-01 P= 0.609670 Days  $T_0=131.934111$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

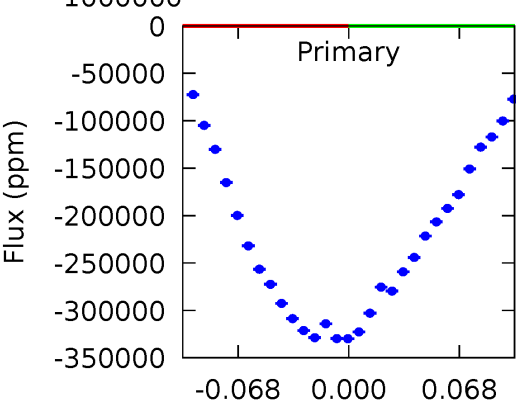
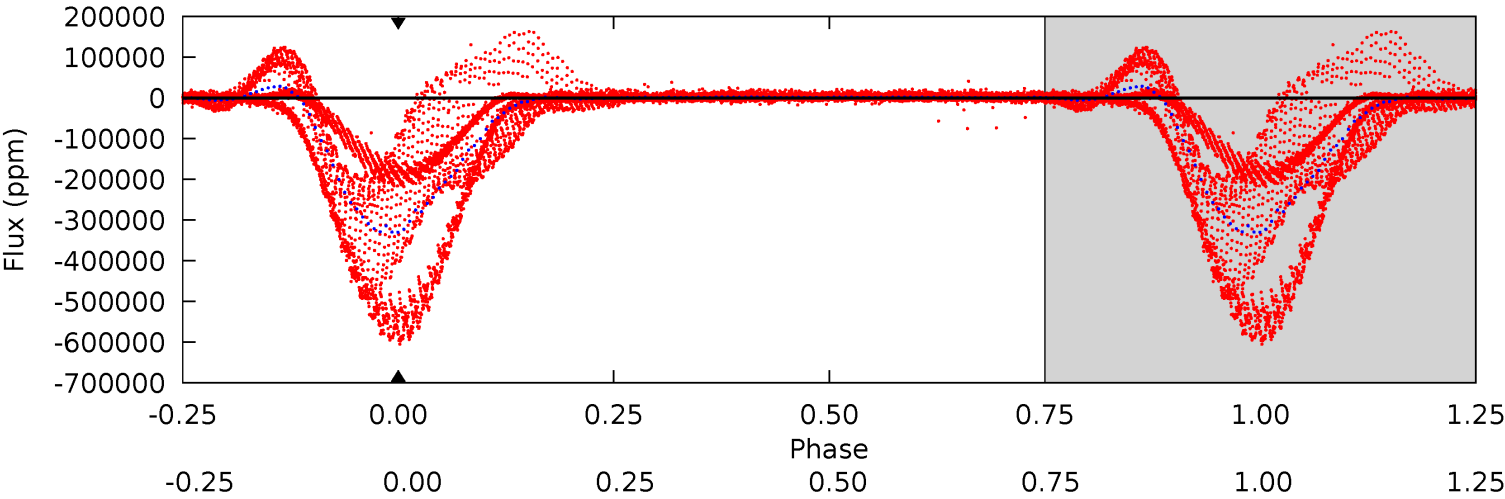
TCE 009592850-01   P= 0.609670 Days    $T_0=131.933636$  (BKJD)



# DV Model-Shift Uniqueness Test

009592850-01, P = 0.609670 Days, E = 131.934111 Days

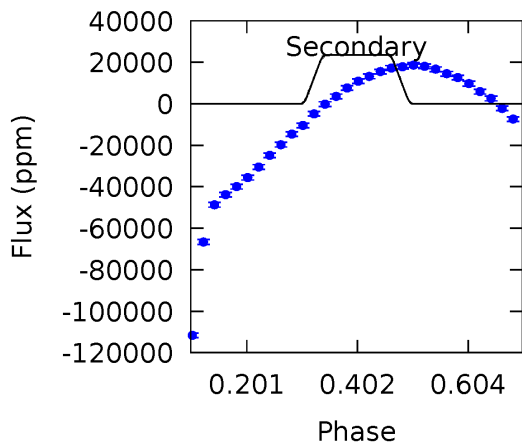
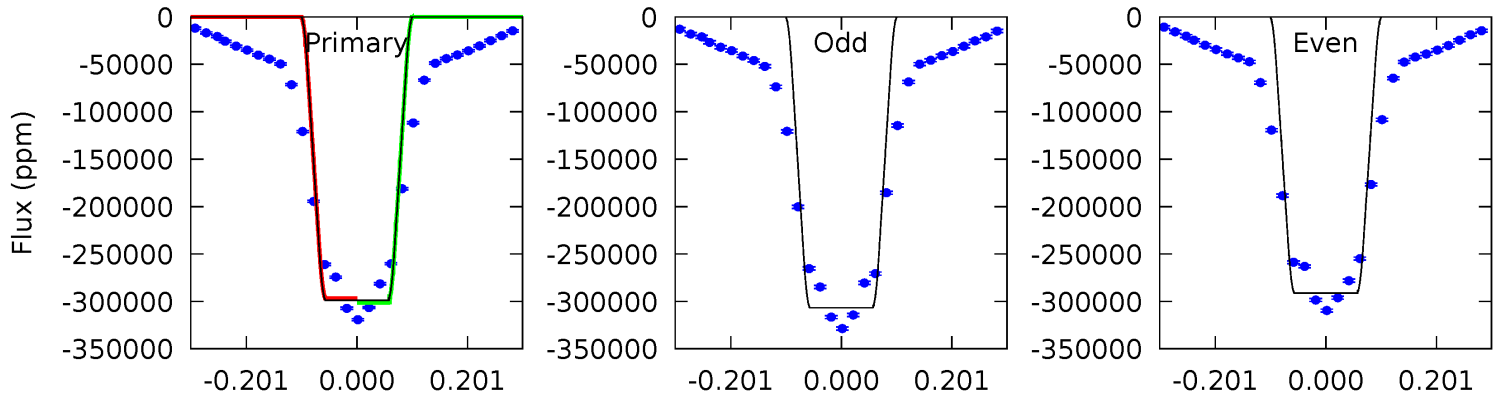
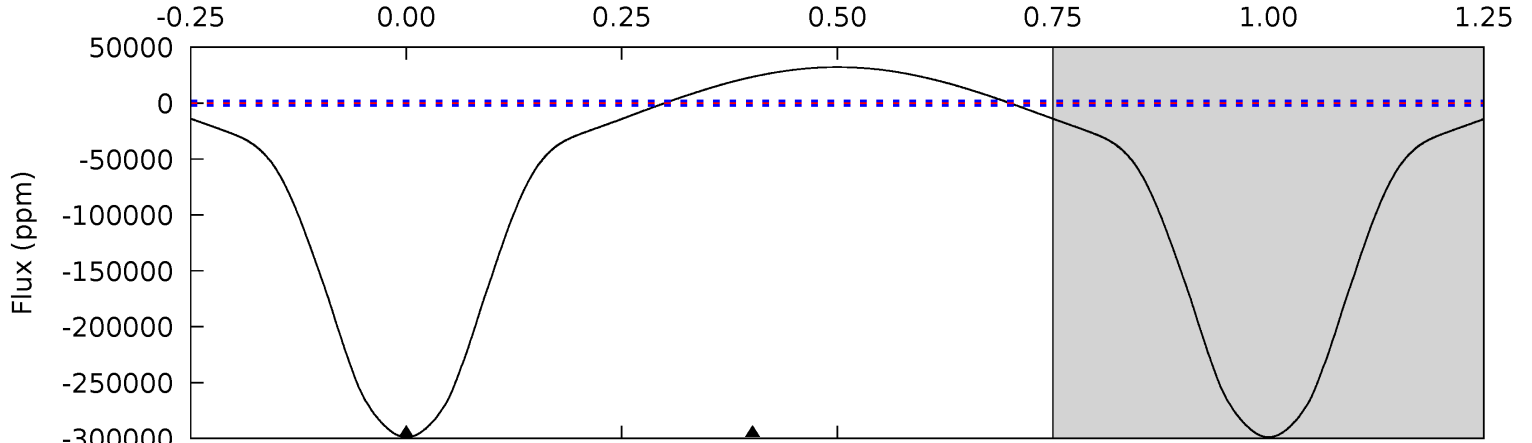
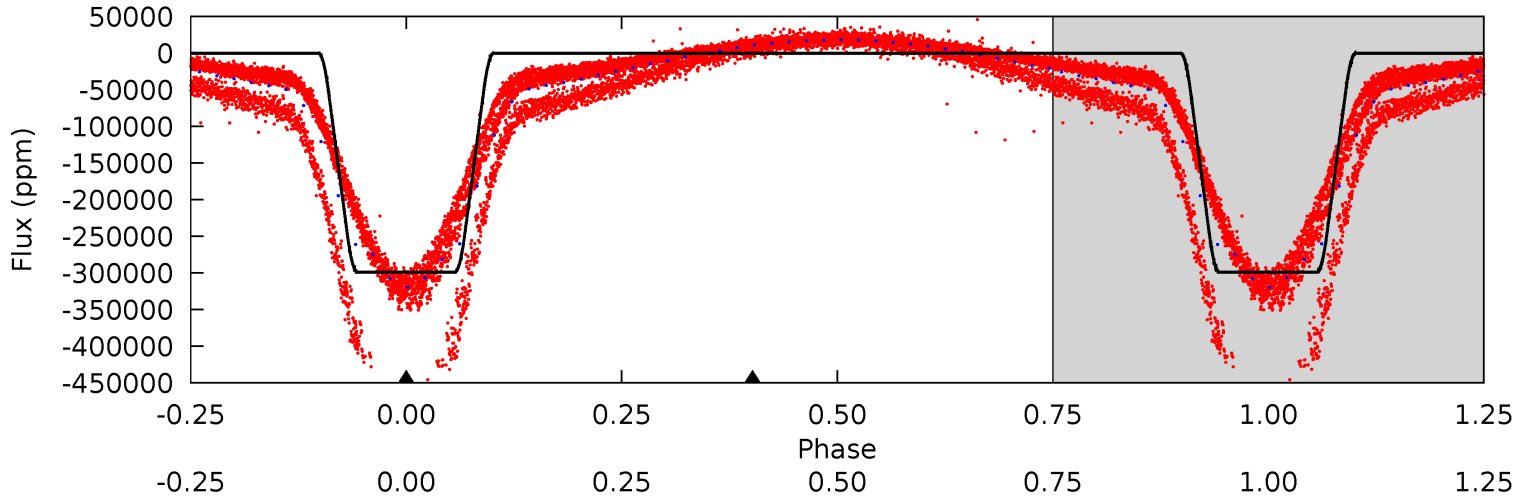
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

009592850-01, P = 0.609670 Days, E = 131.933636 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
652.3	-51.2	0	0	4.42	1.28	32.5	652.3	652.3	-51.2	-51.2	17.1	1.21	0.10	3.86



### Stellar Parameters For KIC 009592850

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5455^{+191}_{-172}$	$4.458^{+0.104}_{-0.156}$	$-0.080^{+0.300}_{-0.300}$	$0.897^{+0.217}_{-0.117}$	$0.844^{+0.110}_{-0.073}$	$1.647^{+0.747}_{-0.704}$
	+4%/-3%	+2%/-3%	+375%/-375%	+24%/-13%	+13%/-9%	+45%/-43%
Source	KIC0	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 009592850-01 / KOI 3883.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$37.02^{+11.60}_{-9.50}$	$2780^{+190}_{-150}$	$-2986^{+8117}_{-2189}$	$-0.021^{+7.626}_{-7.103}$
Alt.	$23467 \pm 458$	$59.10^{+12.65}_{-11.18}$	$2780^{+179}_{-141}$	$-3516^{+163}_{-172}$	$-0.640^{+0.201}_{-0.325}$

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

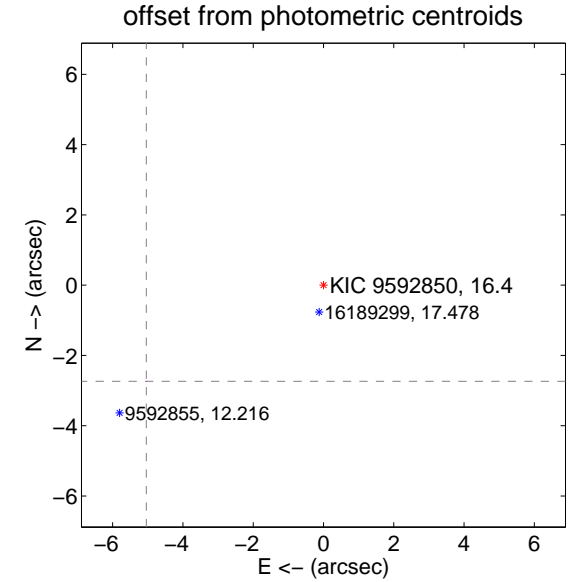
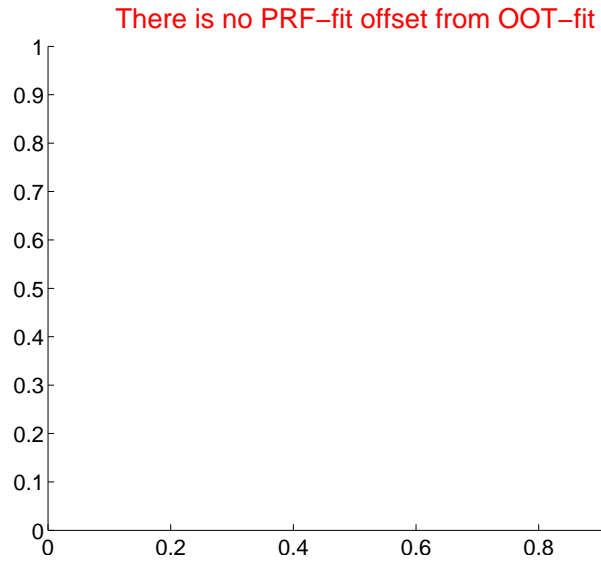
## DV Centroid Data

Supplemental centroid analysis for 009592850-01. Kepler magnitude: 16.40. Transit SNR -1.00

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	$5.74 \pm 0.00$	14617.51	$5.04 \pm 0.00$	$-2.73 \pm 0.00$



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.

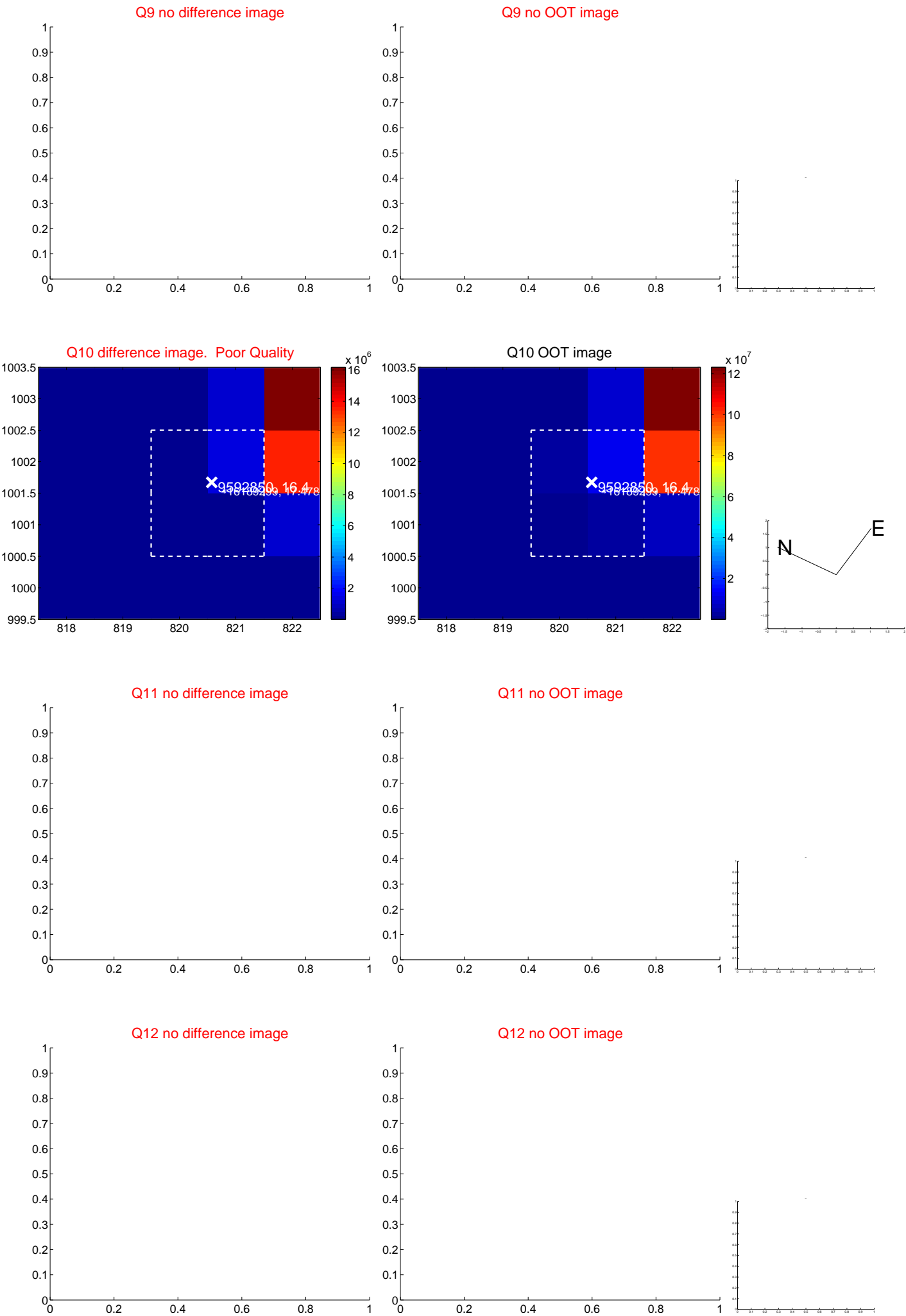


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

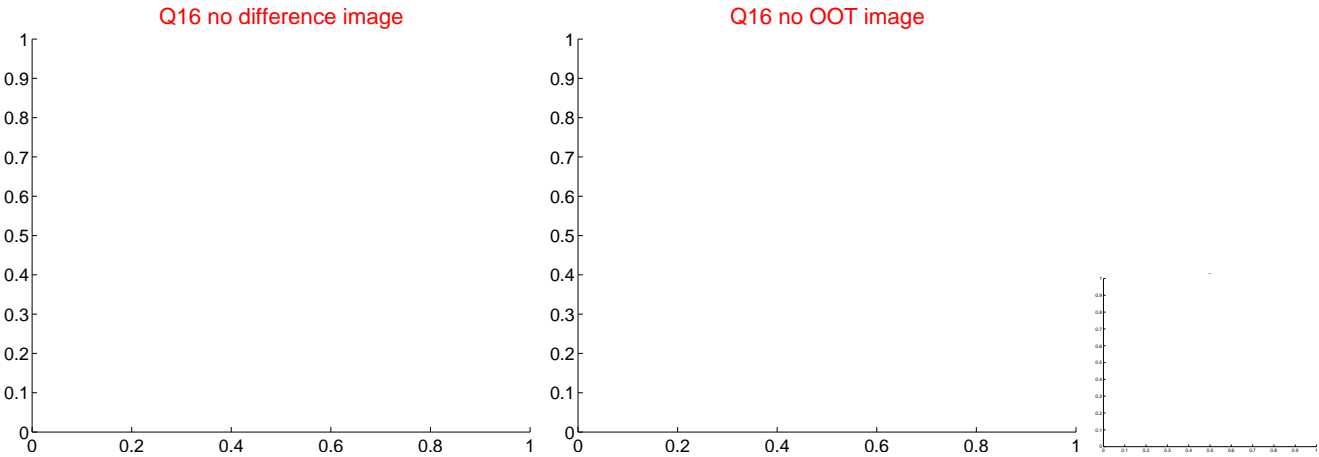
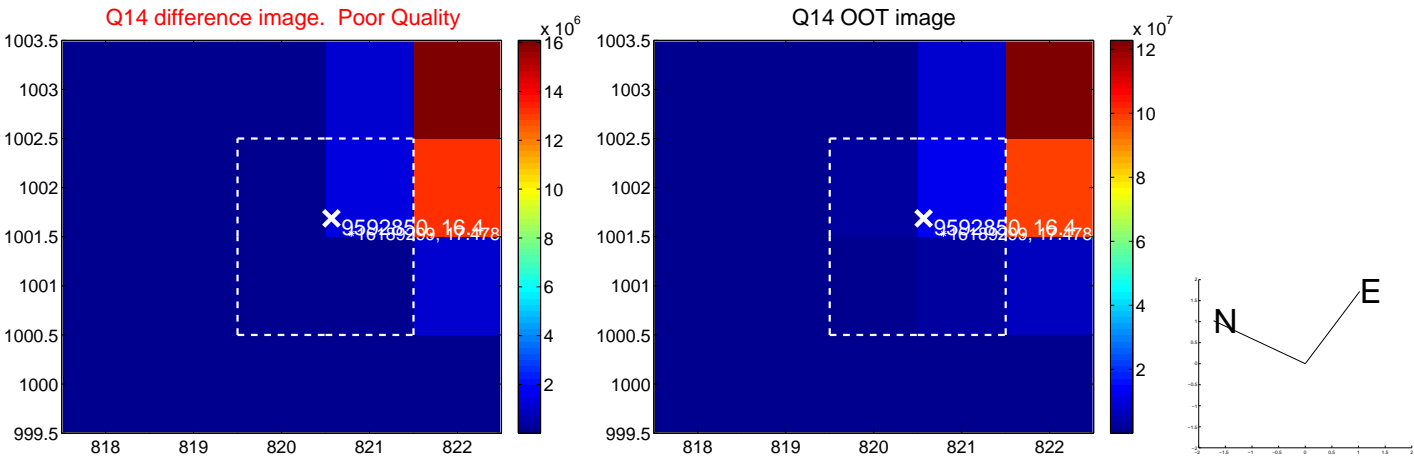
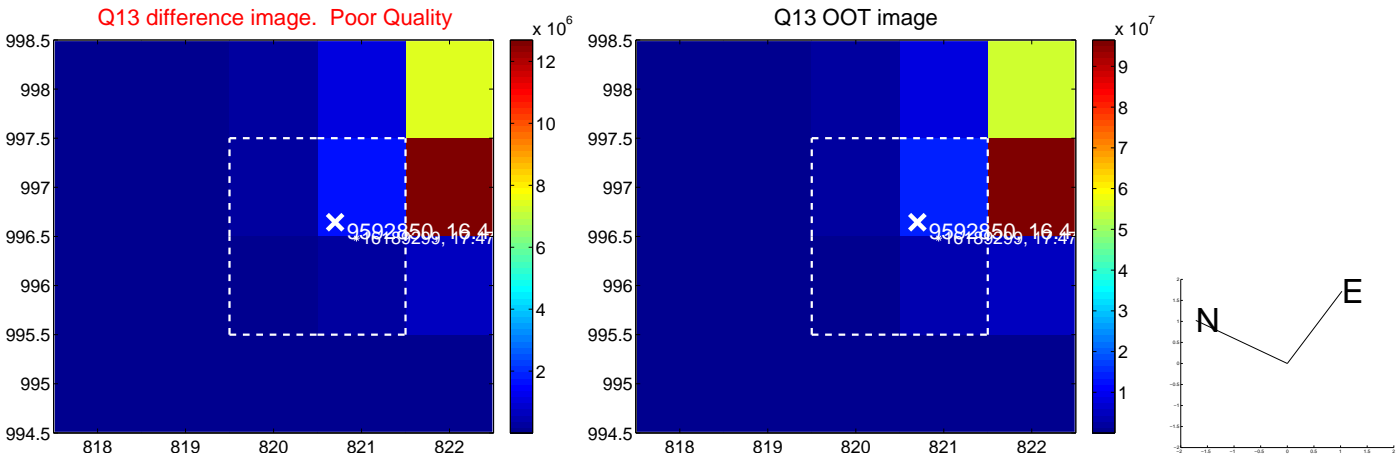




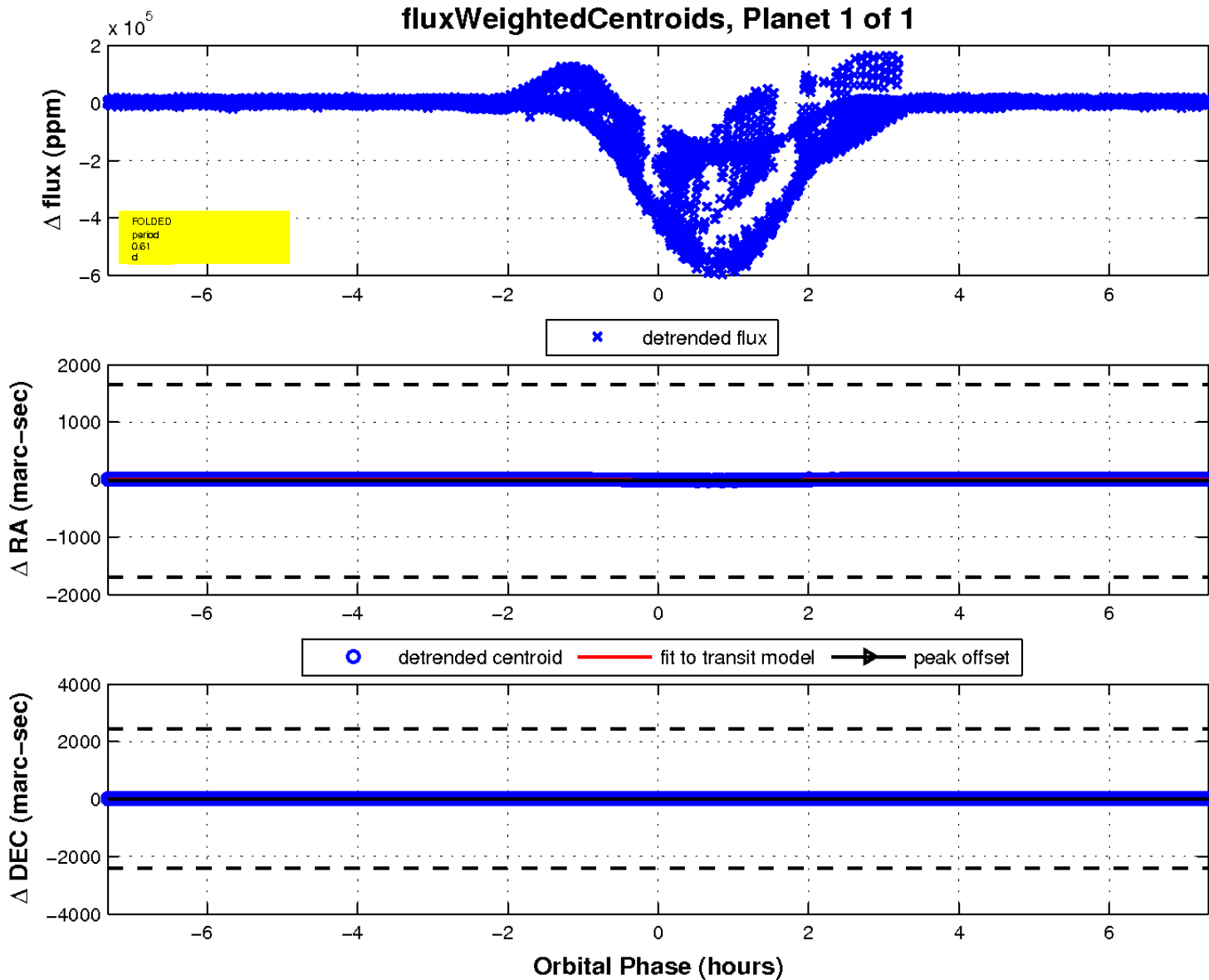
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

