

# KIC 006058608

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006058608-01	OBS	No	125.232791	248.490202	266.5	17.670	15.8	11.4	152.28	3293	339.92	0.00

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006058608-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

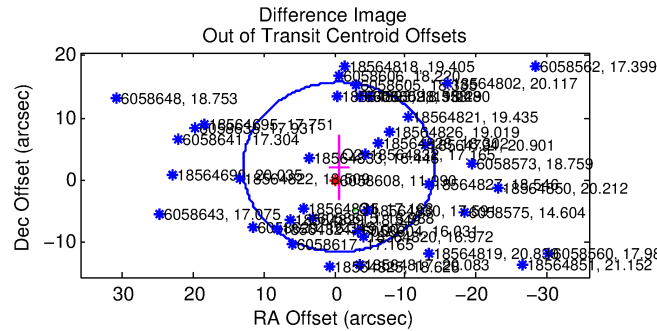
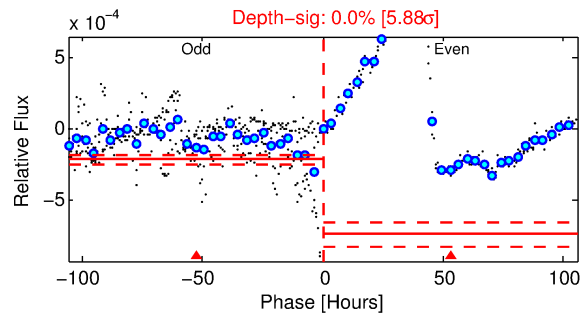
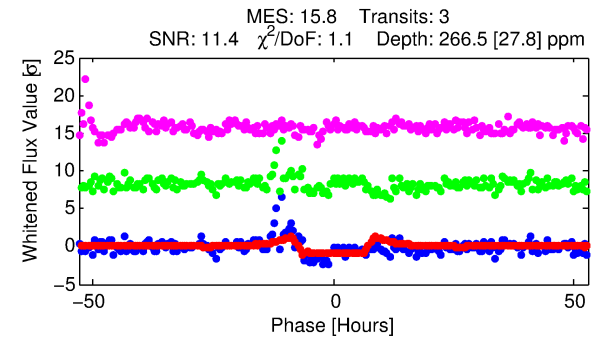
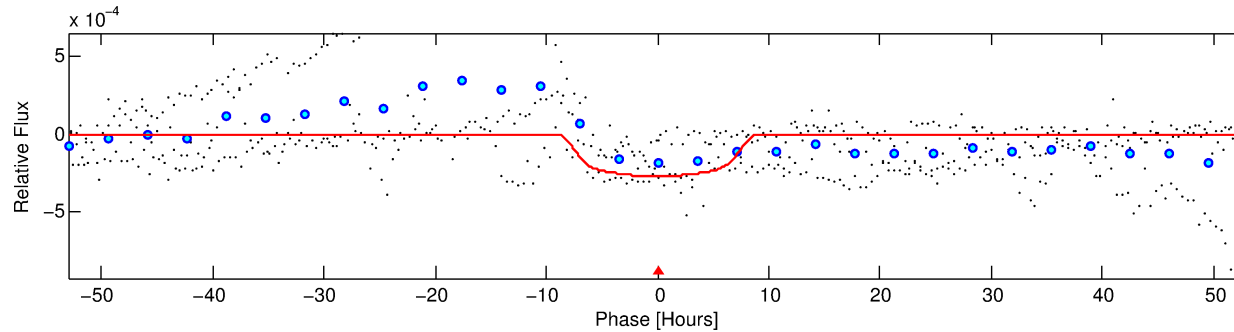
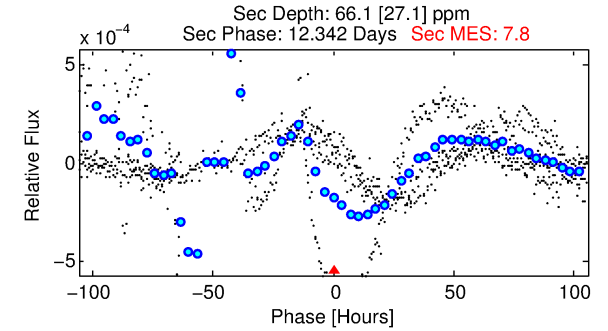
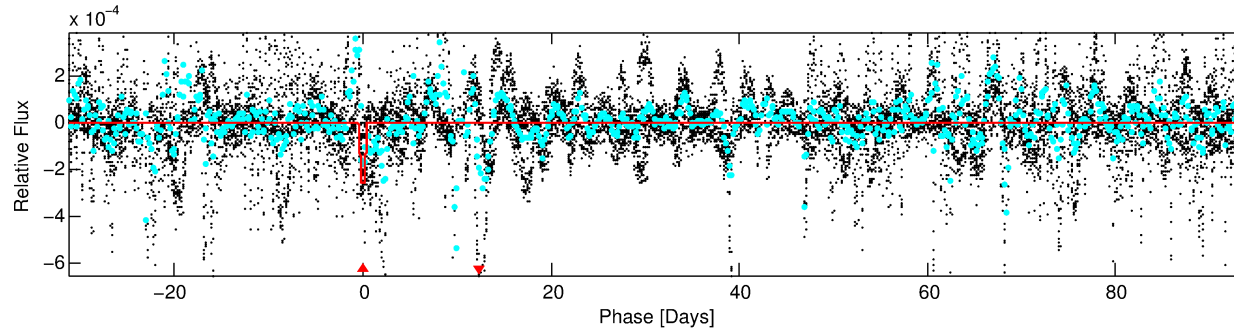
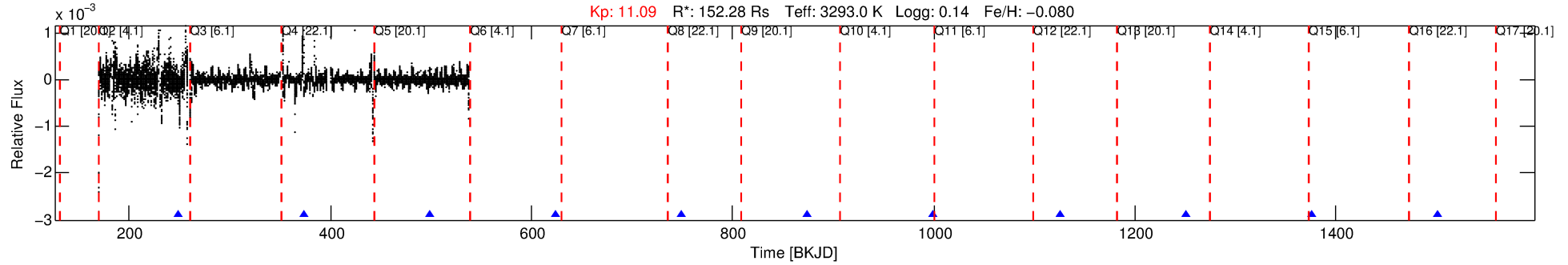
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006058608-01

No Significant Match Found

# DV One-Page Summary

KIC: 6058608 Candidate: 1 of 1 Period: 125.233 d



## DV Fit Results:

Period = 125.23279 [0.01441] d  
Epoch = 248.4902 [0.0239] BKJD  
Rp/R\* = 0.0205 [0.0015]  
a/R\* = 22.14 [3.37]  
b = 0.94 [0.02]  
Seff = N/A  
Teq = N/A  
**Rp = 339.92 [70.27] Re**  
a = N/A  
Ag = N/A  
Teffp = N/A

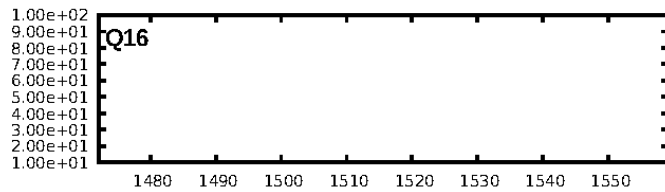
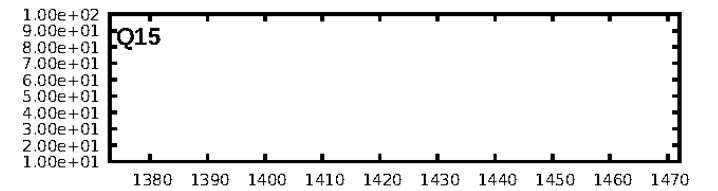
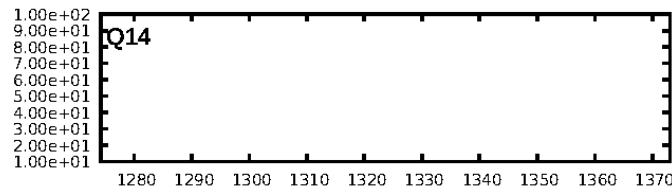
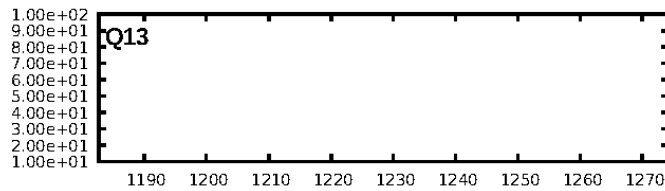
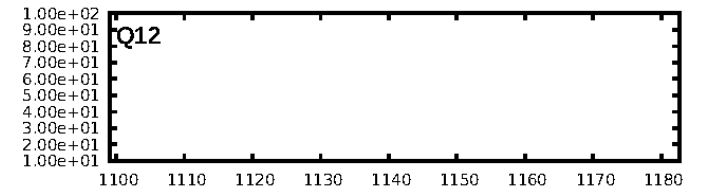
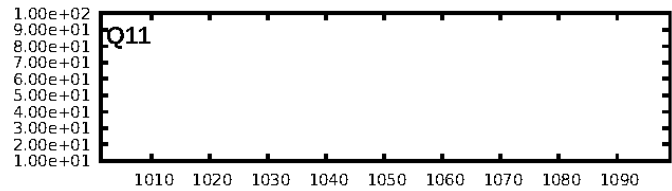
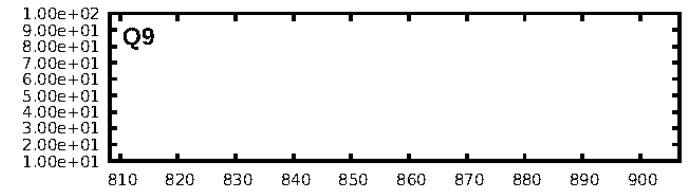
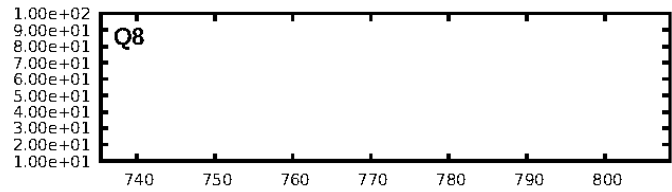
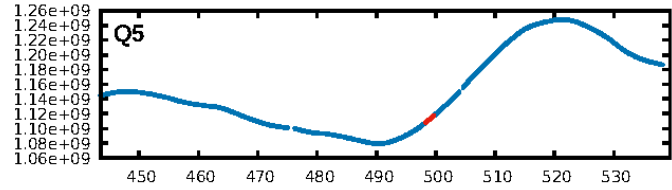
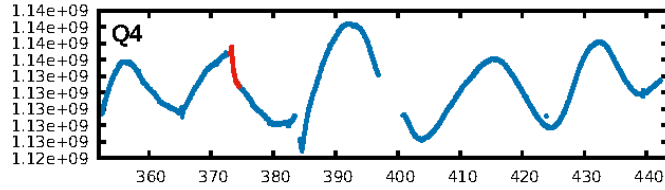
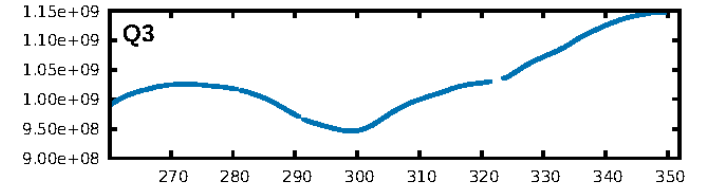
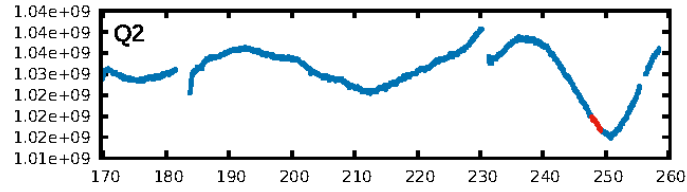
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
**ModelChiSquare2-sig: 0.0%**  
ModelChiSquareGof-sig: 23.6%  
Bootstrap-pfa: 4.73e-23  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 0.41  
Centroid-sig: N/A  
Centroid-so: 0.396 arcsec [0.20σ]  
OotOffset-rm: 2.215 arcsec [0.49σ]  
OotOffset-st: 1/0/0/1 [2]  
KicOffset-rm: 1.594 arcsec [0.48σ]  
KicOffset-st: 1/0/0/1 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [2/2]

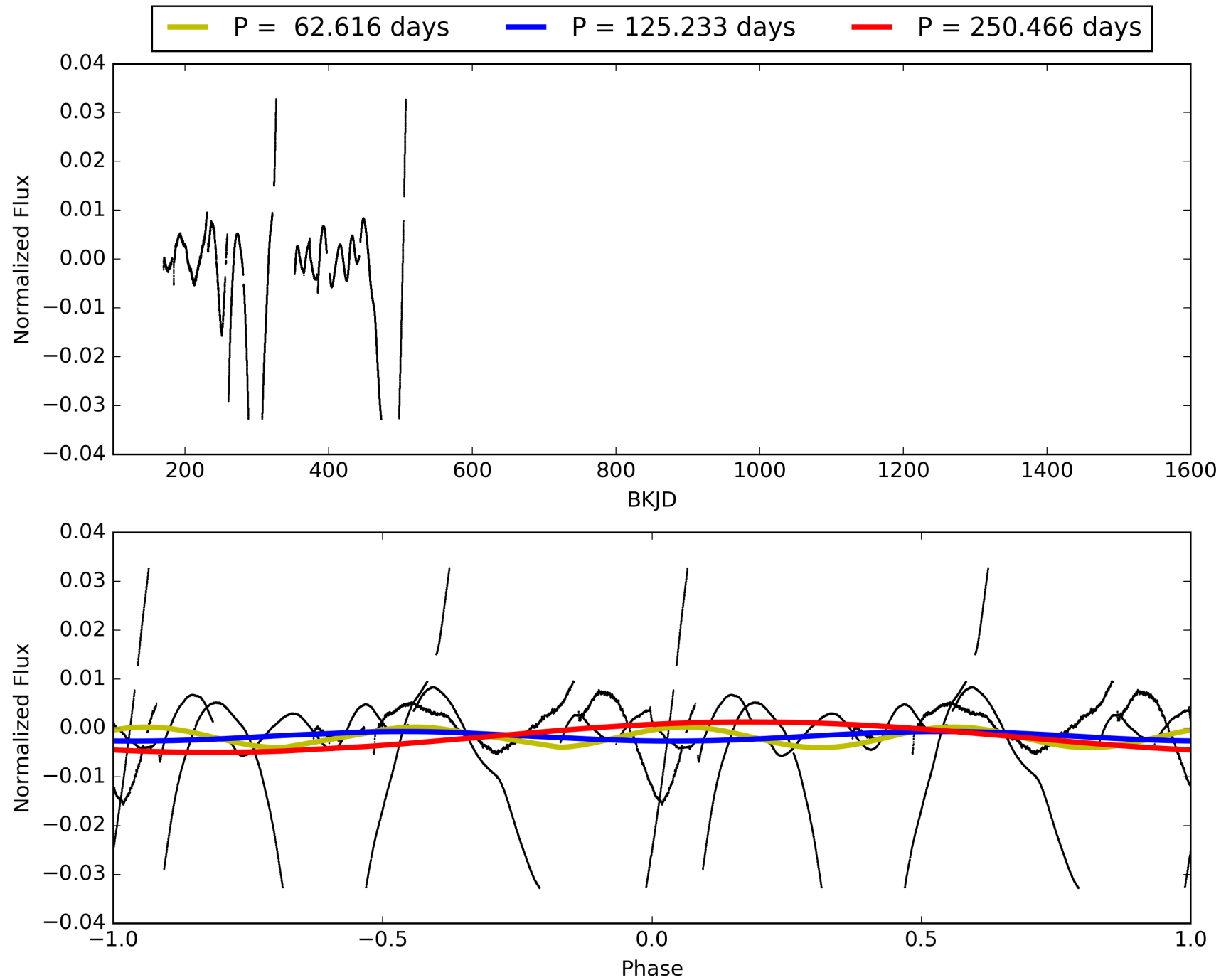
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:59:59 Z

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

# TCE 006058608-01, PDC Light Curves

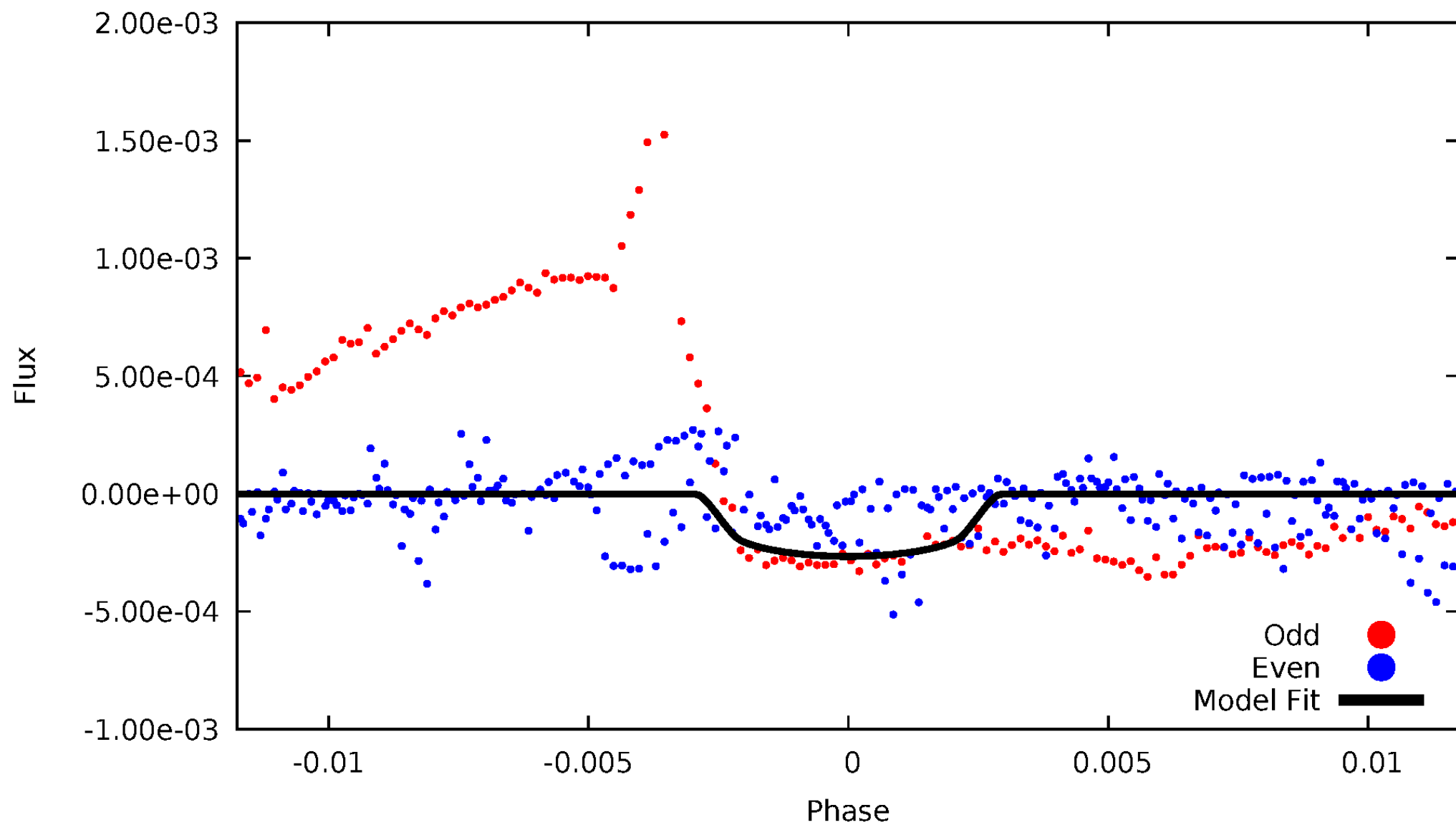


# TCE 006058608-01



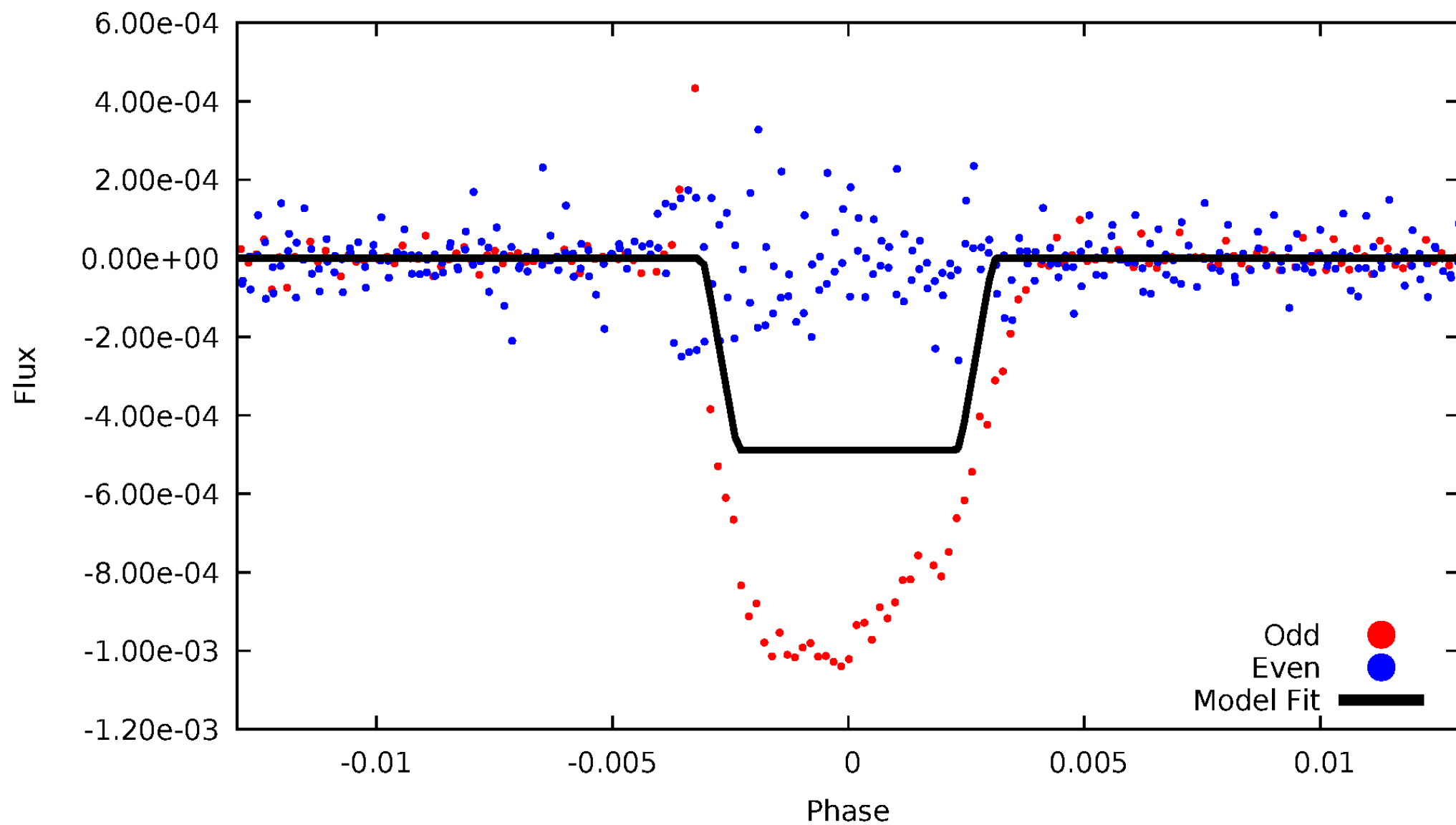
# DV Odd/Even

TCE 006058608-01

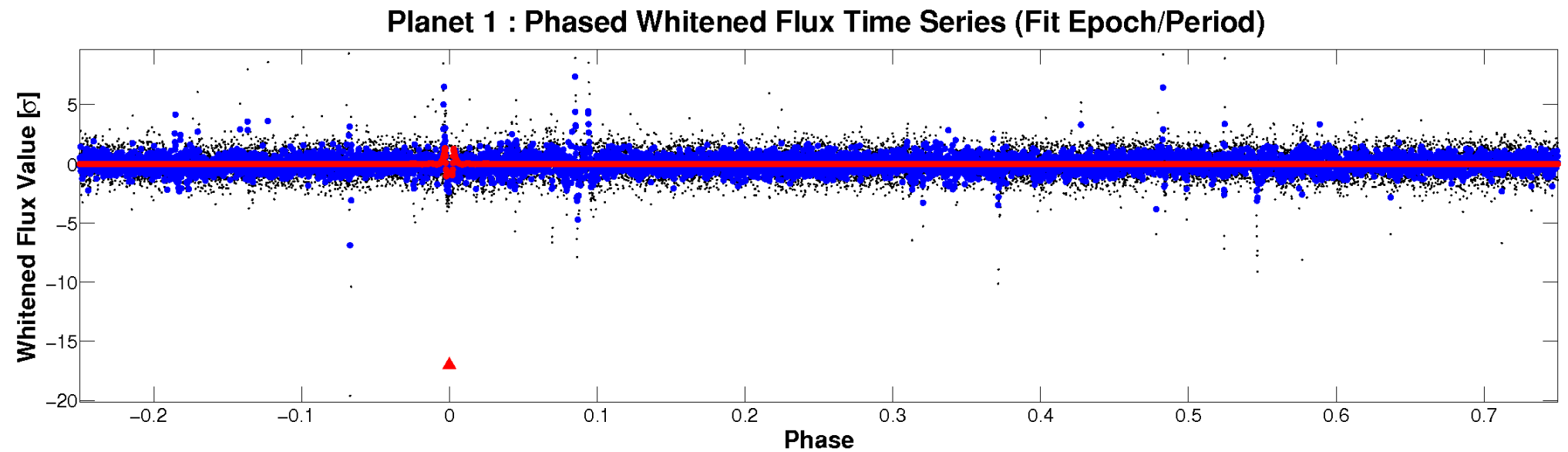
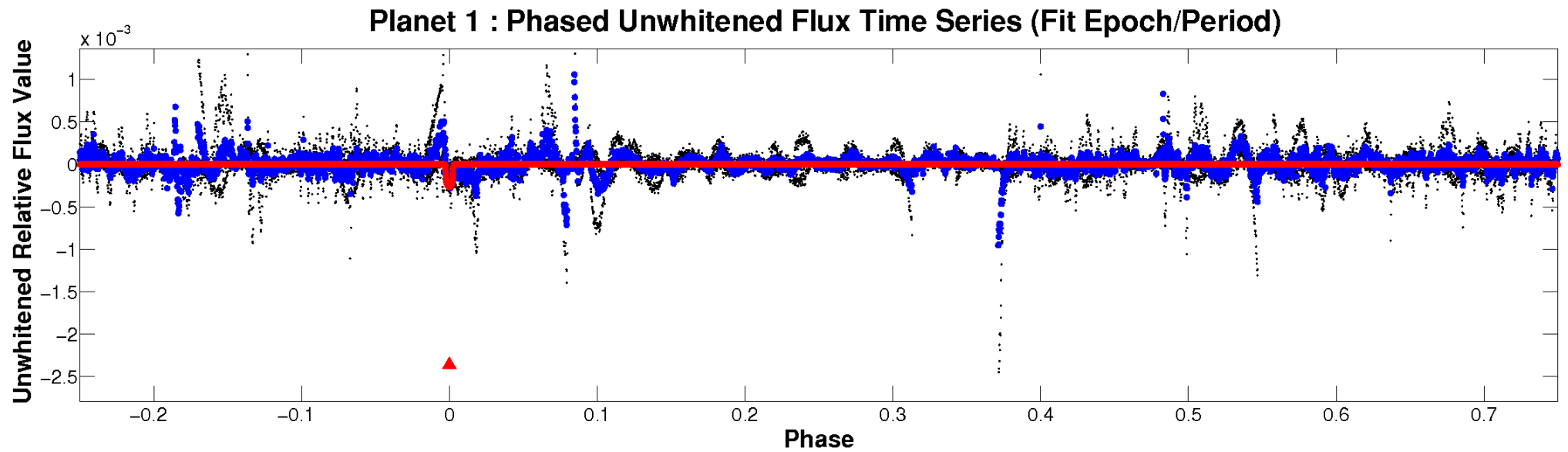


# ALT Odd/Even

TCE 006058608-01

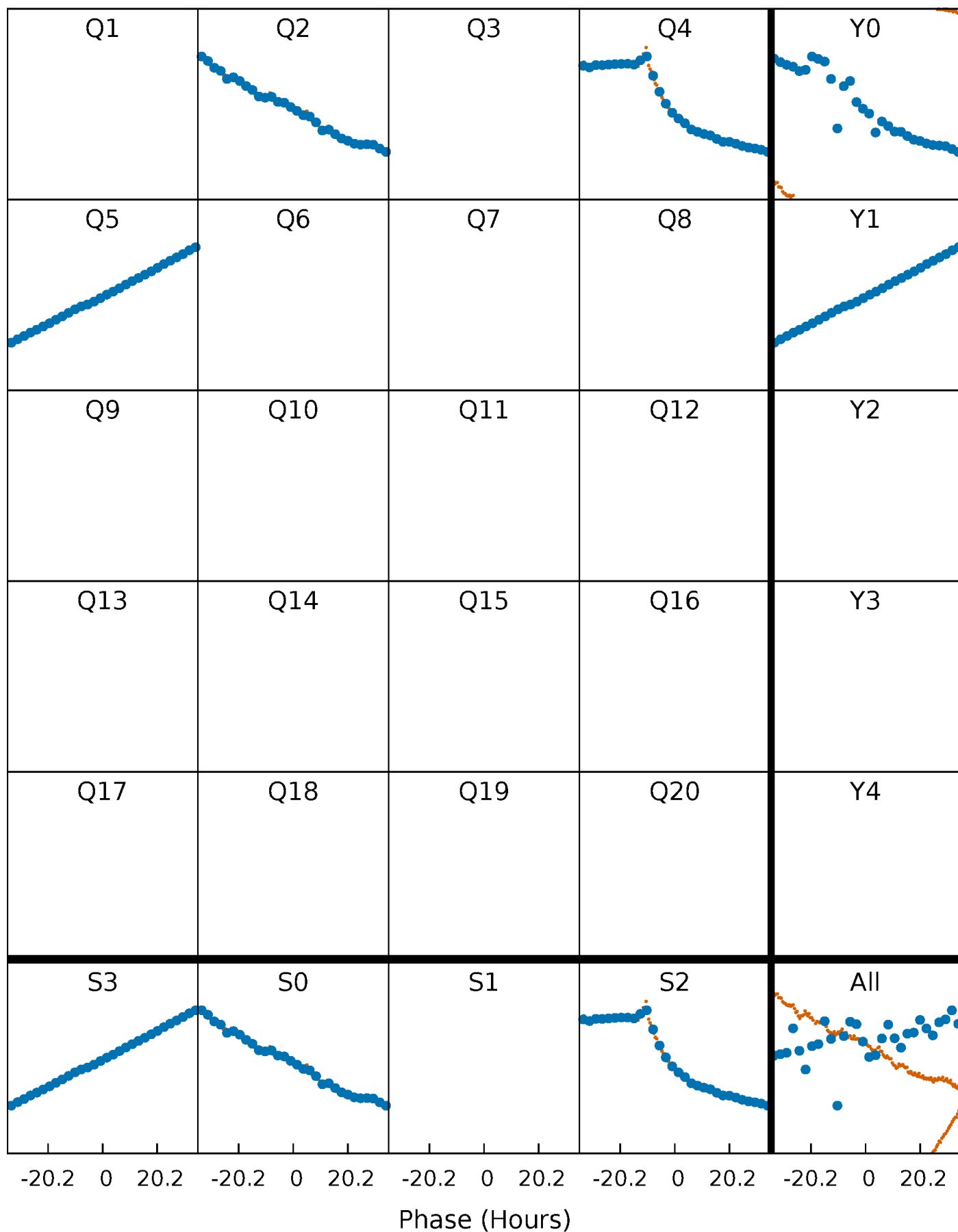


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

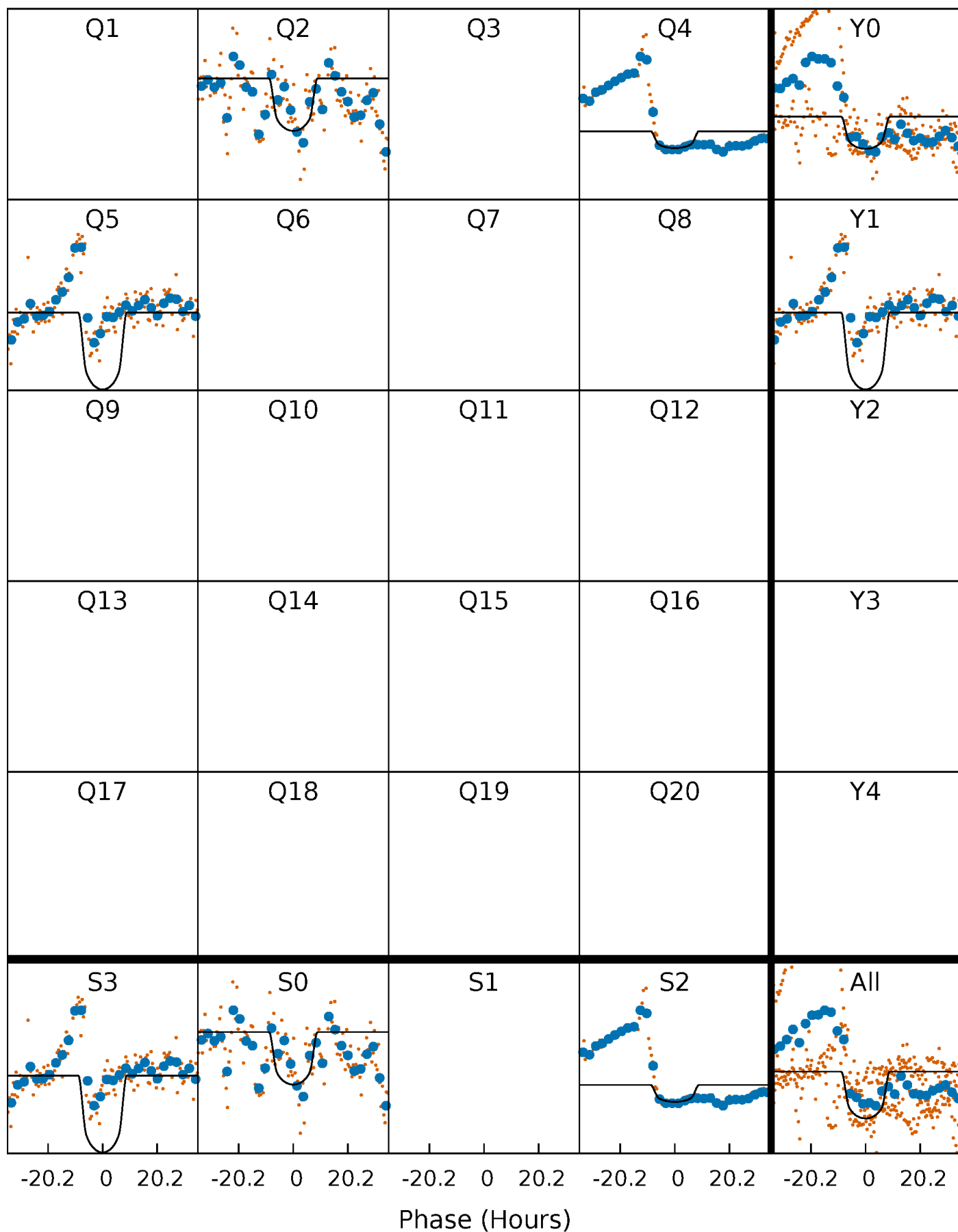
TCE 006058608-01 P=125.232792 Days  $T_0=248.490202$  (BKJD)





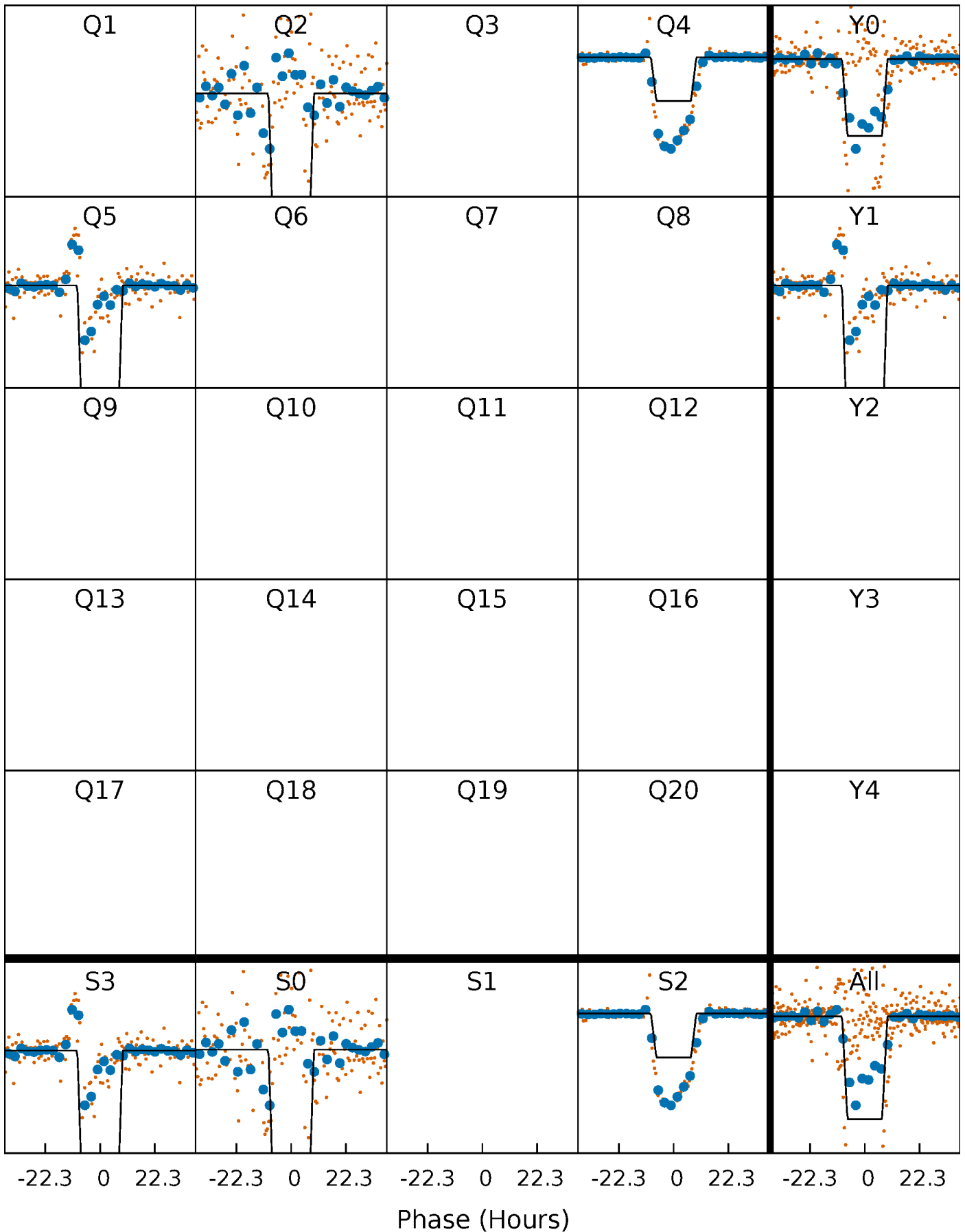
# DV Quarter-Phased Transit Curves

TCE 006058608-01 P=125.232792 Days  $T_0=248.490202$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

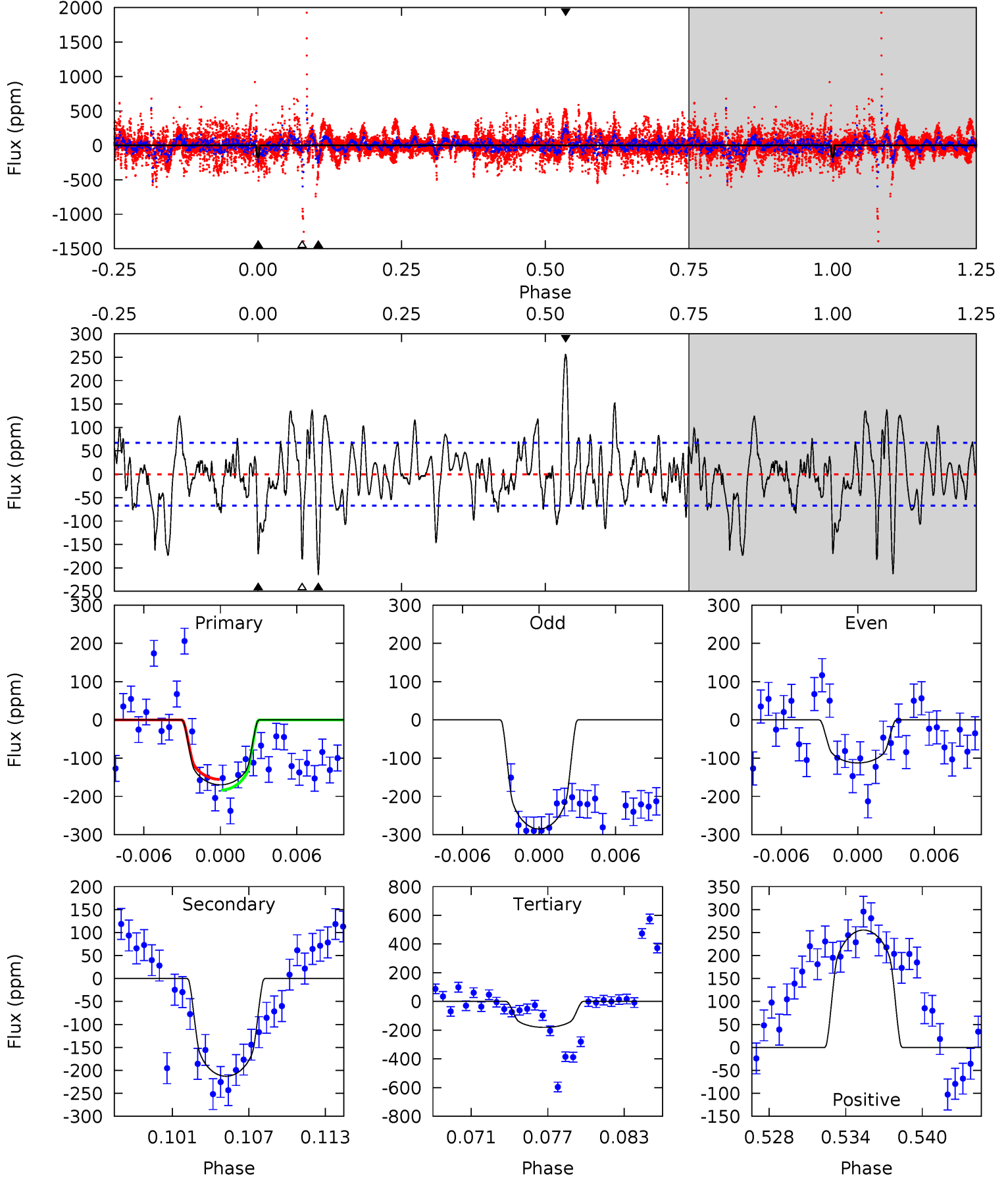
TCE 006058608-01 P=125.319024 Days  $T_0=248.367770$  (BKJD)



# DV Model-Shift Uniqueness Test

006058608-01, P = 125.232792 Days, E = 123.257410 Days

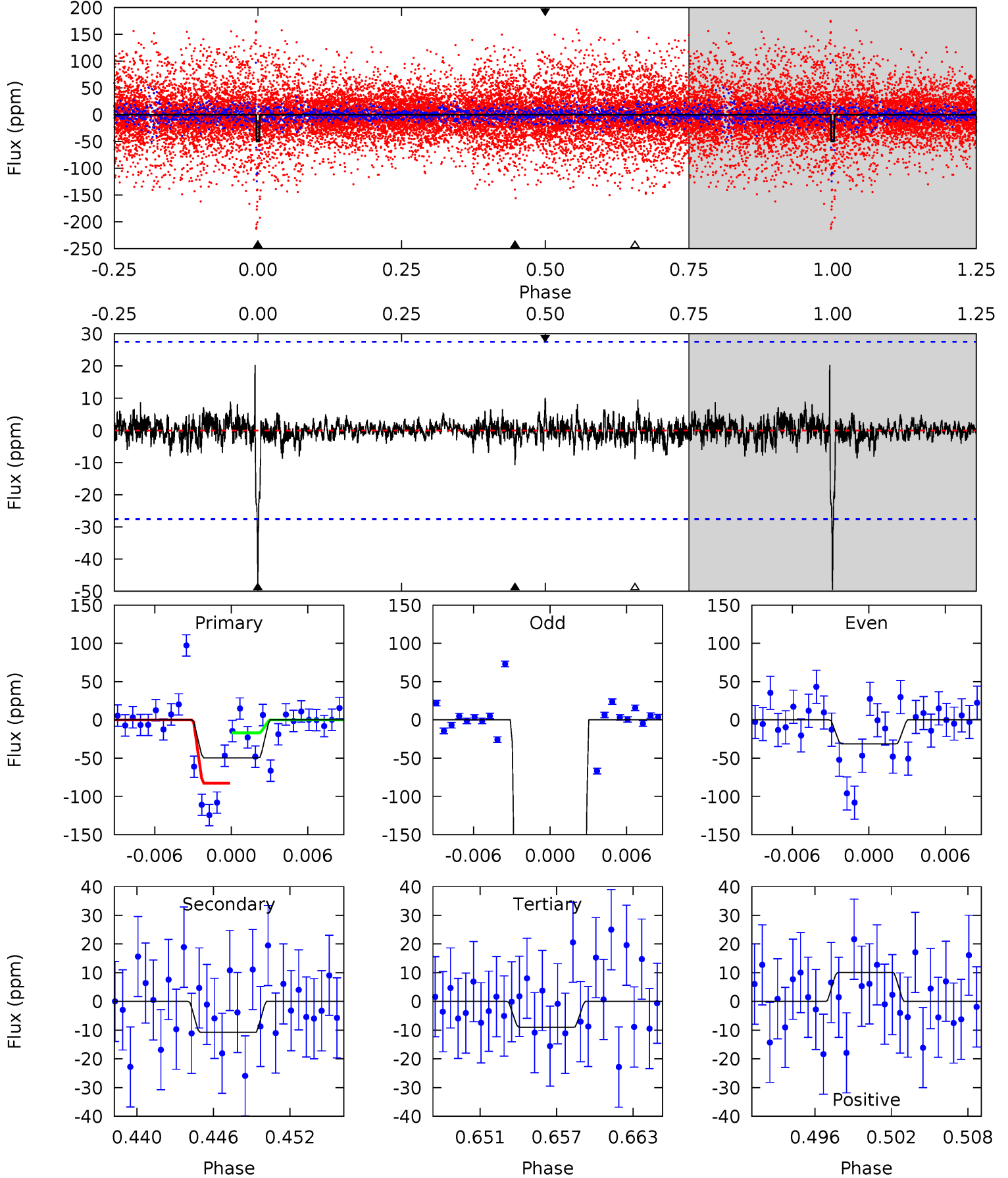
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	16.3	13.8	19.6	5.13	2.75	4.44	-0.86	-6.57	2.45	-3.26	5.05	0.90	0.55	1.10



# Alt Model-Shift Uniqueness Test

006058608-01, P = 125.319024 Days, E = 123.048746 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
9.21	2.00	1.66	1.87	5.12	2.74	0.44	7.55	7.34	0.34	0.13	111.2	4.40	0.29	6.08



### Stellar Parameters For KIC 006058608

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3293^{+107}_{-88}$	$0.136^{+0.204}_{-0.048}$	$-0.080^{+0.250}_{-0.150}$	$152.284^{+9.192}_{-29.414}$	$1.156^{+0.189}_{-0.155}$	$0.000^{+0.000}_{-0.000}$
	+3%/-3%	+150%/-35%	+312%/-188%	+6%/-19%	+16%/-13%	+90%/-14%
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 006058608-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-213 \pm 13$	$332.48^{+34.46}_{-43.68}$	$3433^{+146}_{-181}$	$-1936^{+4388}_{-552}$	$0.292^{+0.084}_{-0.057}$
Alt.	$-11 \pm 5$	$355.57^{+37.76}_{-46.65}$	$3434^{+161}_{-197}$	$-2982^{+119}_{-114}$	$0.013^{+0.009}_{-0.006}$

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

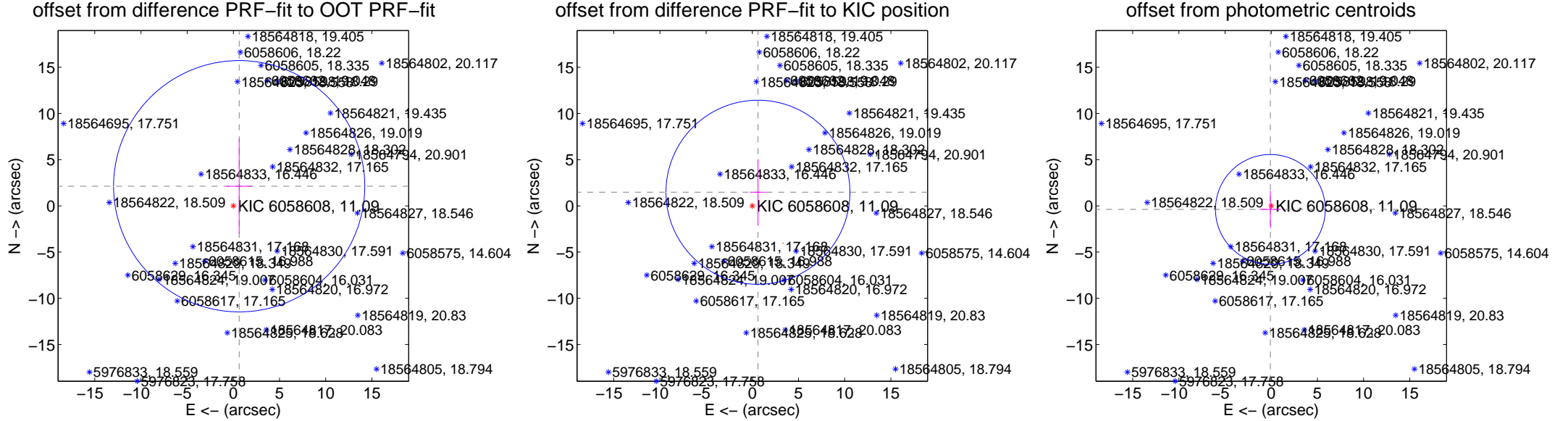
## DV Centroid Data

Supplemental centroid analysis for 006058608-01. **Kepler magnitude: 11.09.** Transit SNR 11.43

**There are 1 quarters with good PRF difference image offsets**

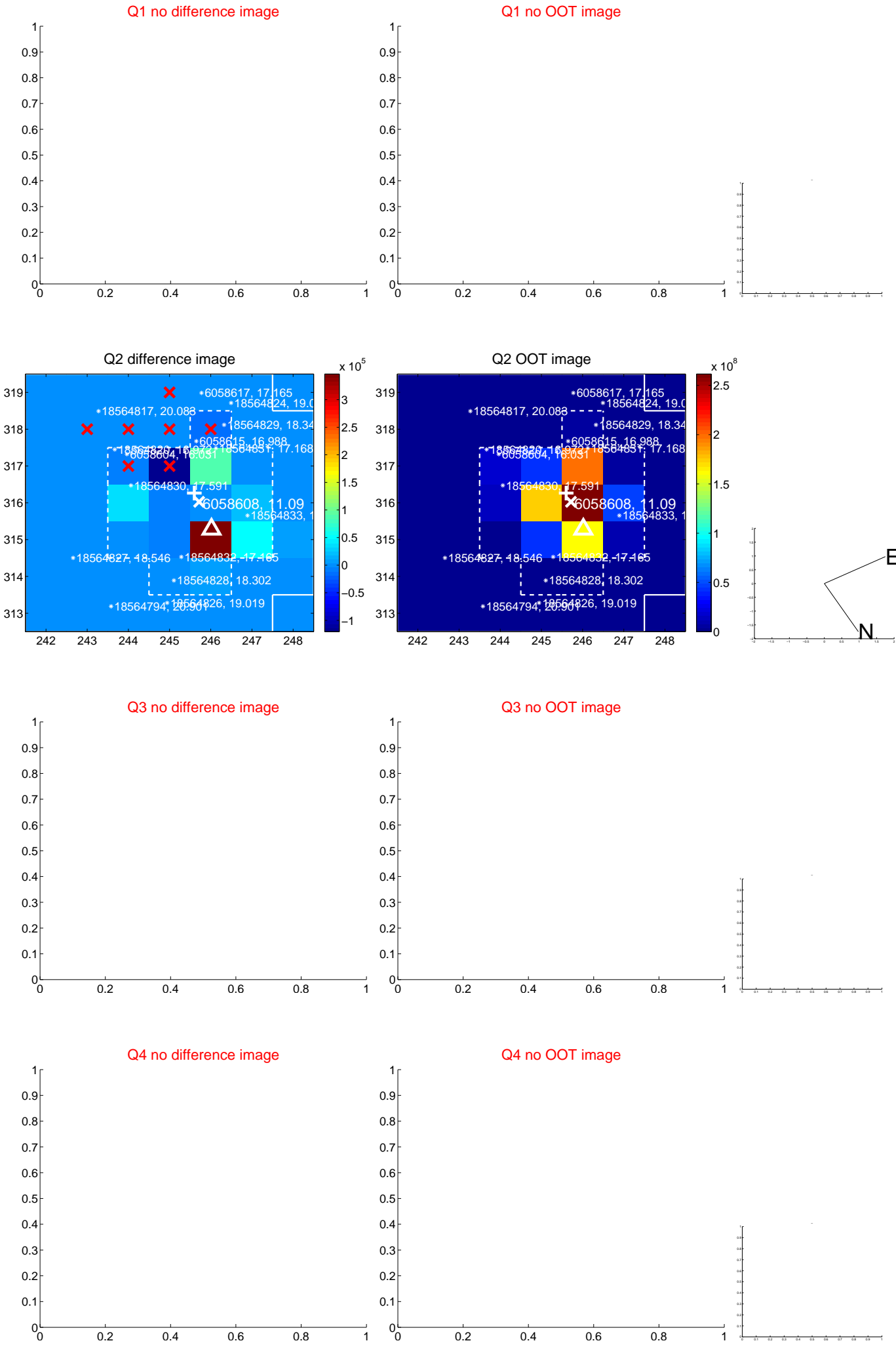
The direct PRF centroid is offset from the target star catalog position by about 0.79 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.215 \pm 4.531$	0.49	$-0.630 \pm 1.388$	$2.124 \pm 5.137$
PRF-fit source offset from KIC position	$1.594 \pm 3.319$	0.48	$-0.611 \pm 0.882$	$1.473 \pm 3.574$
photometric centroid source offset	$0.40 \pm 1.98$	0.20	$0.10 \pm 1.14$	$-0.38 \pm 2.02$

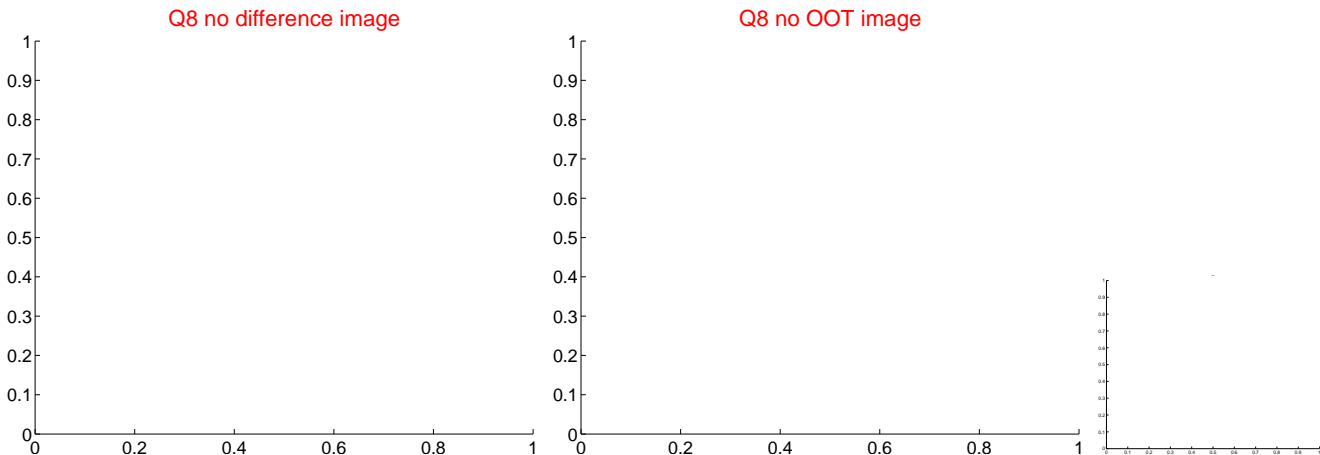
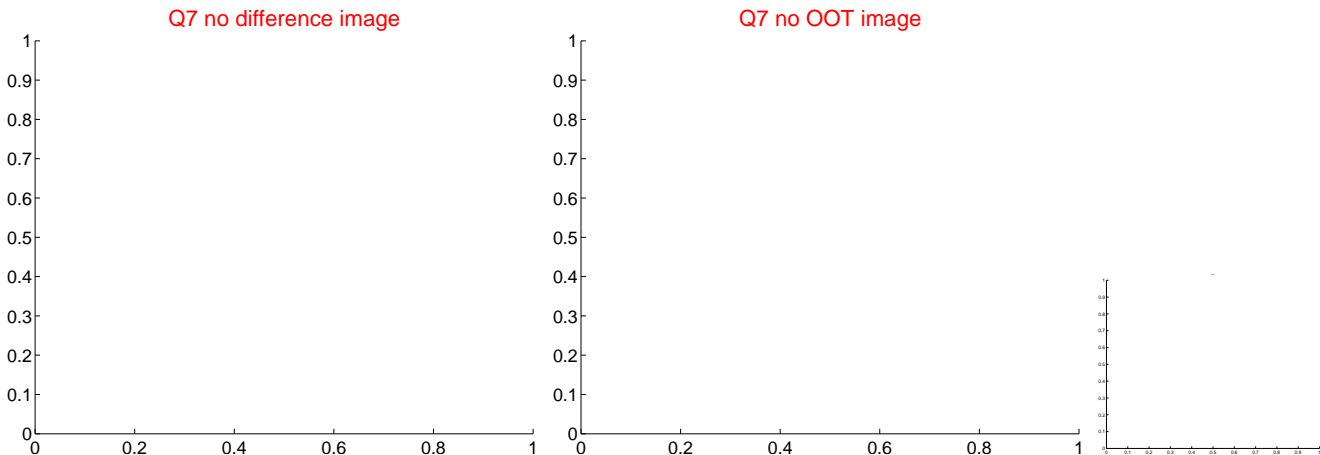
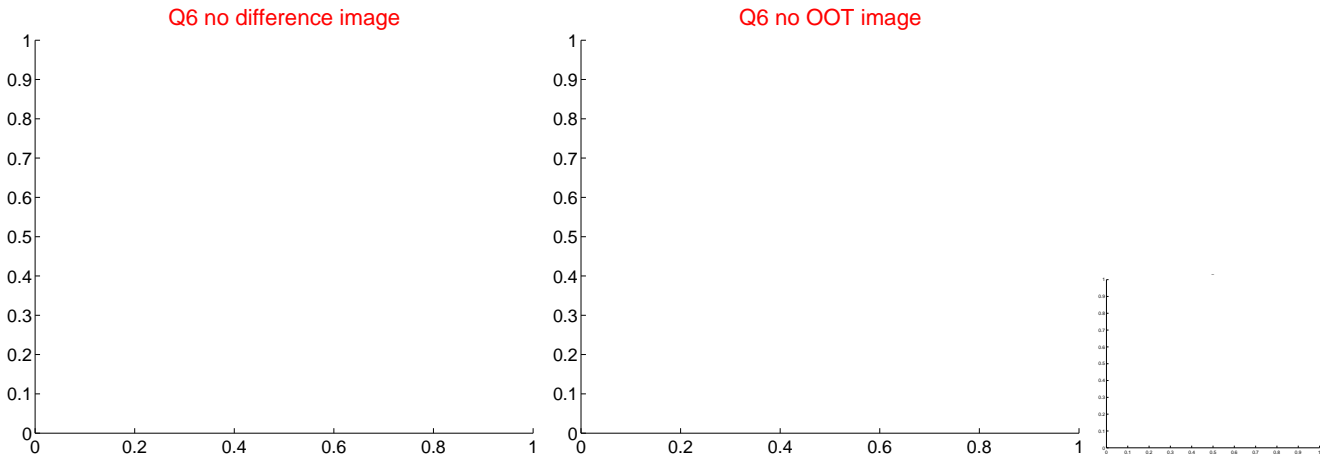
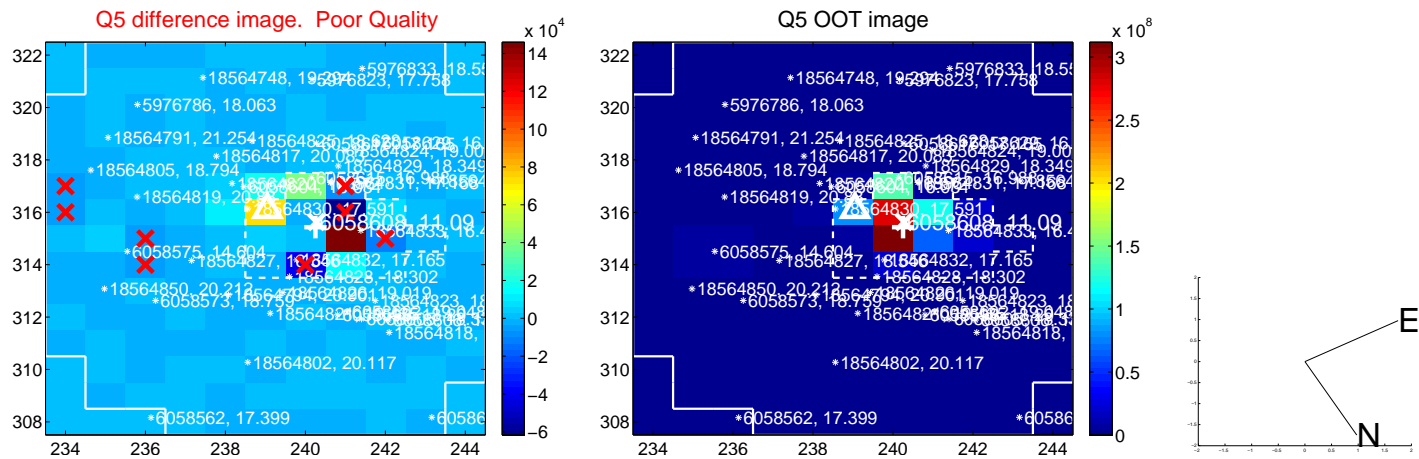


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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





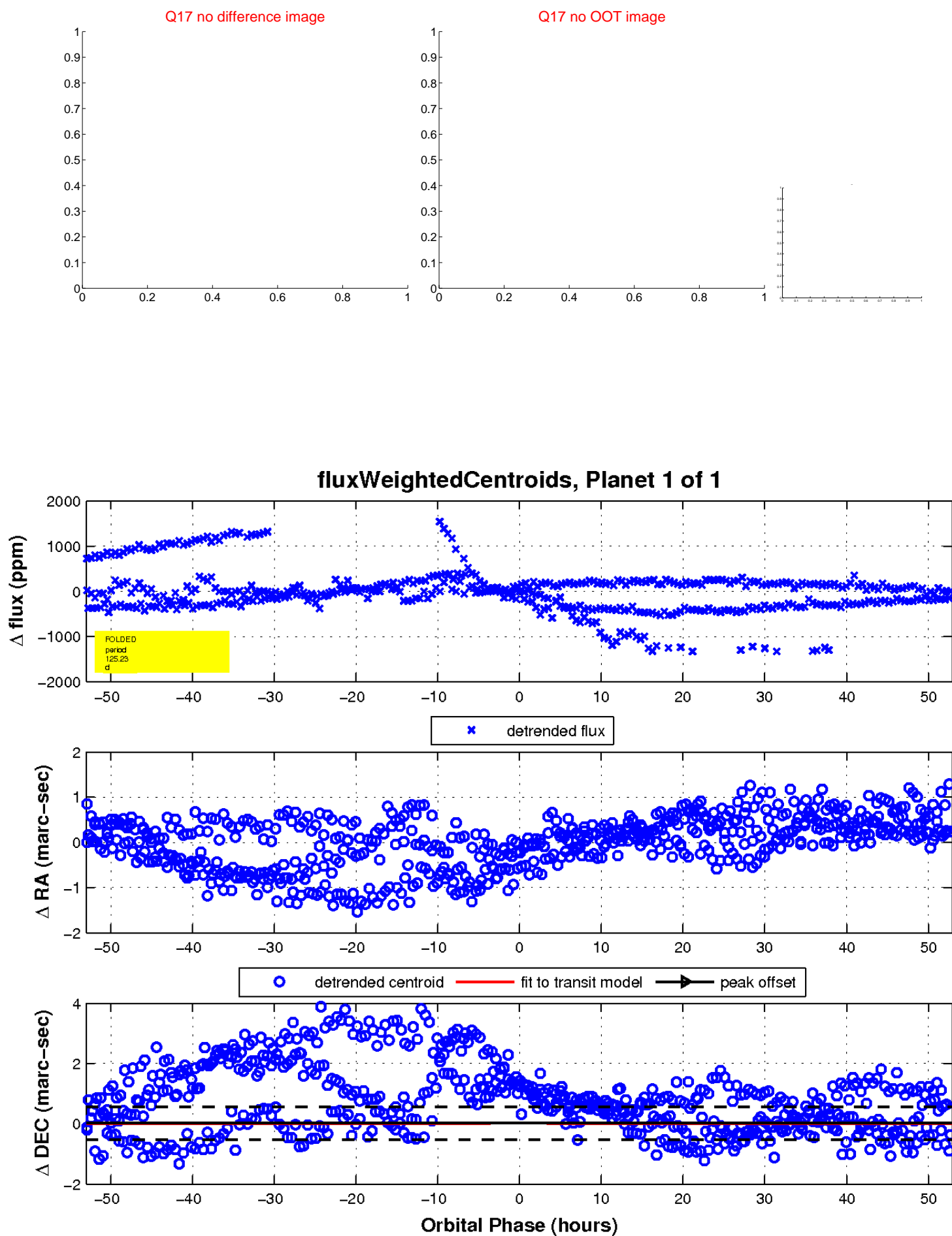
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

