

# KIC 006267712

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006267712-01	OBS	No	272.612769	277.889650	294.8	3.249	7.8	7.8	1.55	6084	3.12	4.48

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006267712-01	OBS	FP	0.01	1	0	0	0	MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS

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

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

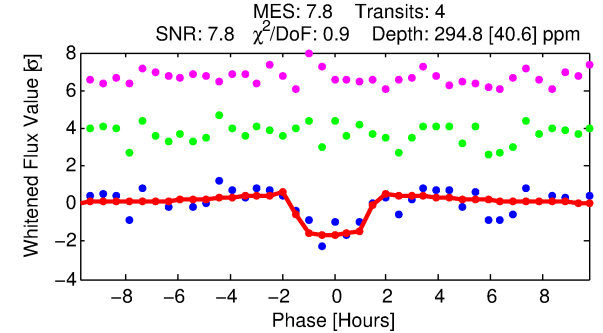
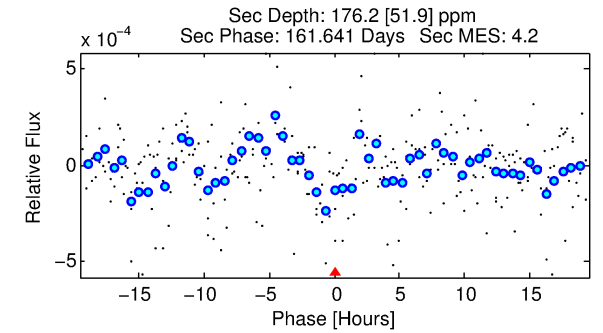
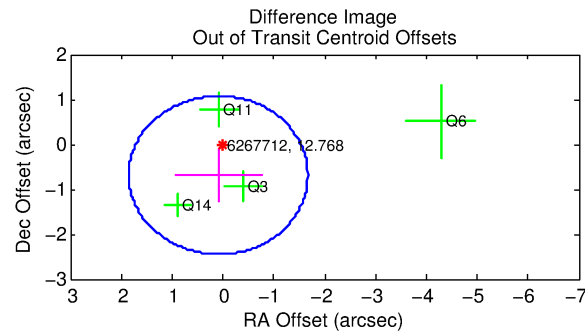
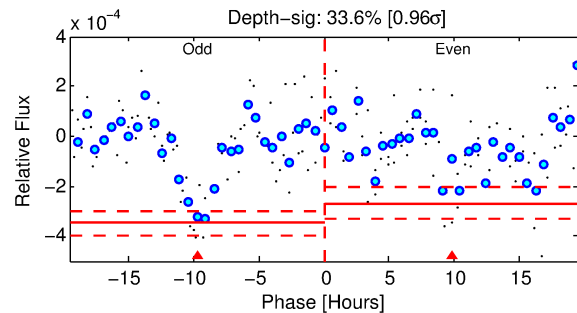
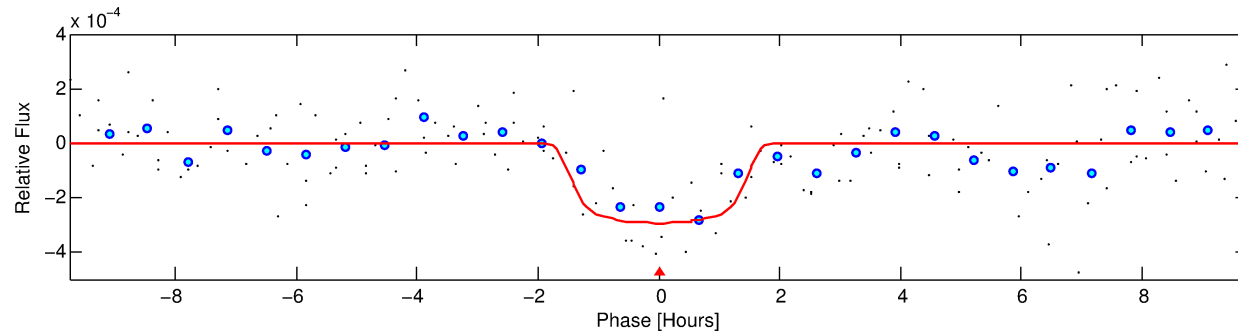
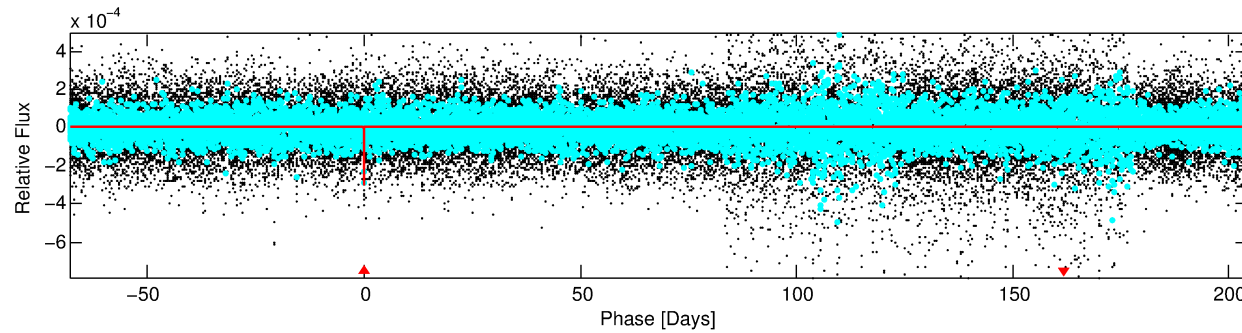
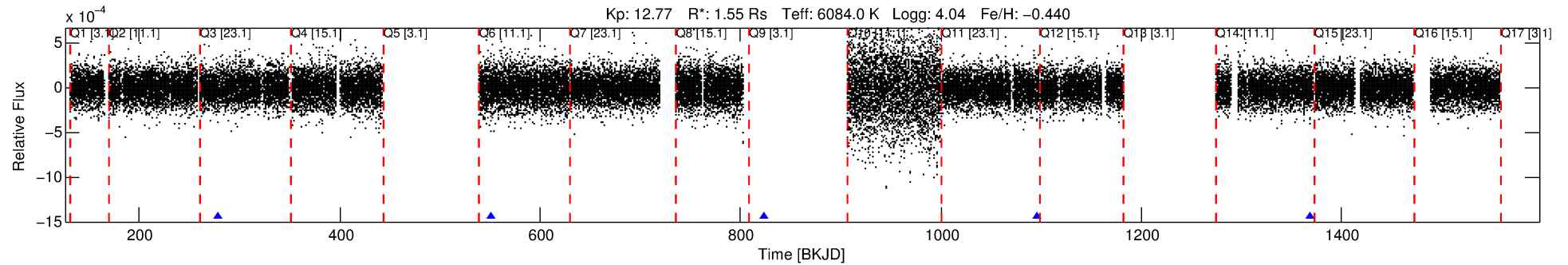
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006267712-01

No Significant Match Found

# DV One-Page Summary

KIC: 6267712 Candidate: 1 of 1 Period: 272.613 d



## DV Fit Results:

Period = 272.61277 [0.00256] d  
Epoch = 277.8896 [0.0075] BKJD  
Rp/R\* = 0.0184 [0.0083]  
a/R\* = 310.49 [742.10]  
b = 0.90 [0.53]  
Seff = 4.48 [3.11]  
Teq = 371 [64] K  
Rp = 3.12 [1.80] Re  
a = 0.8122 [0.3245] AU  
Ag = 6579.34 [7652.45] [0.86 $\sigma$ ]  
Teffp = 5166 [1233] K [3.88 $\sigma$ ]

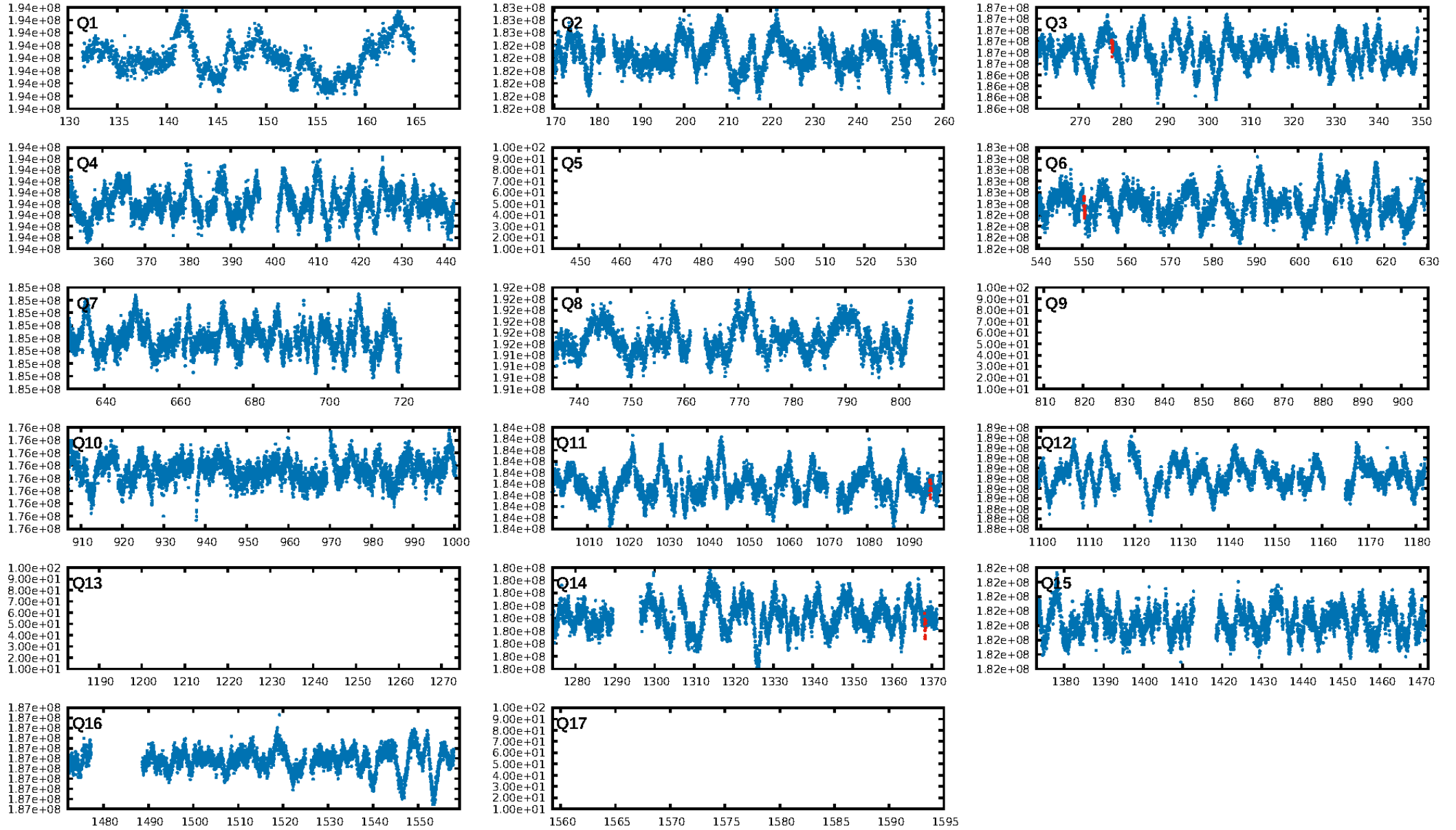
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 36.3%  
ModelChiSquareGof-sig: 96.8%  
**Bootstrap-pfa: 2.46e-12**  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: -4.043  
Centroid-sig: 21.9%  
Centroid-so: 0.957 arcsec [0.97 $\sigma$ ]  
OotOffset-rm: 0.696 arcsec [1.18 $\sigma$ ]  
KicOffset-rm: 0.790 arcsec [1.38 $\sigma$ ]  
OotOffset-st: 2/2/0/0 [4]  
KicOffset-st: 2/2/0/0 [4]  
DiffImageQuality-fgm: 0.75 [3/4]  
DiffImageOverlap-fno: 1.00 [4/4]

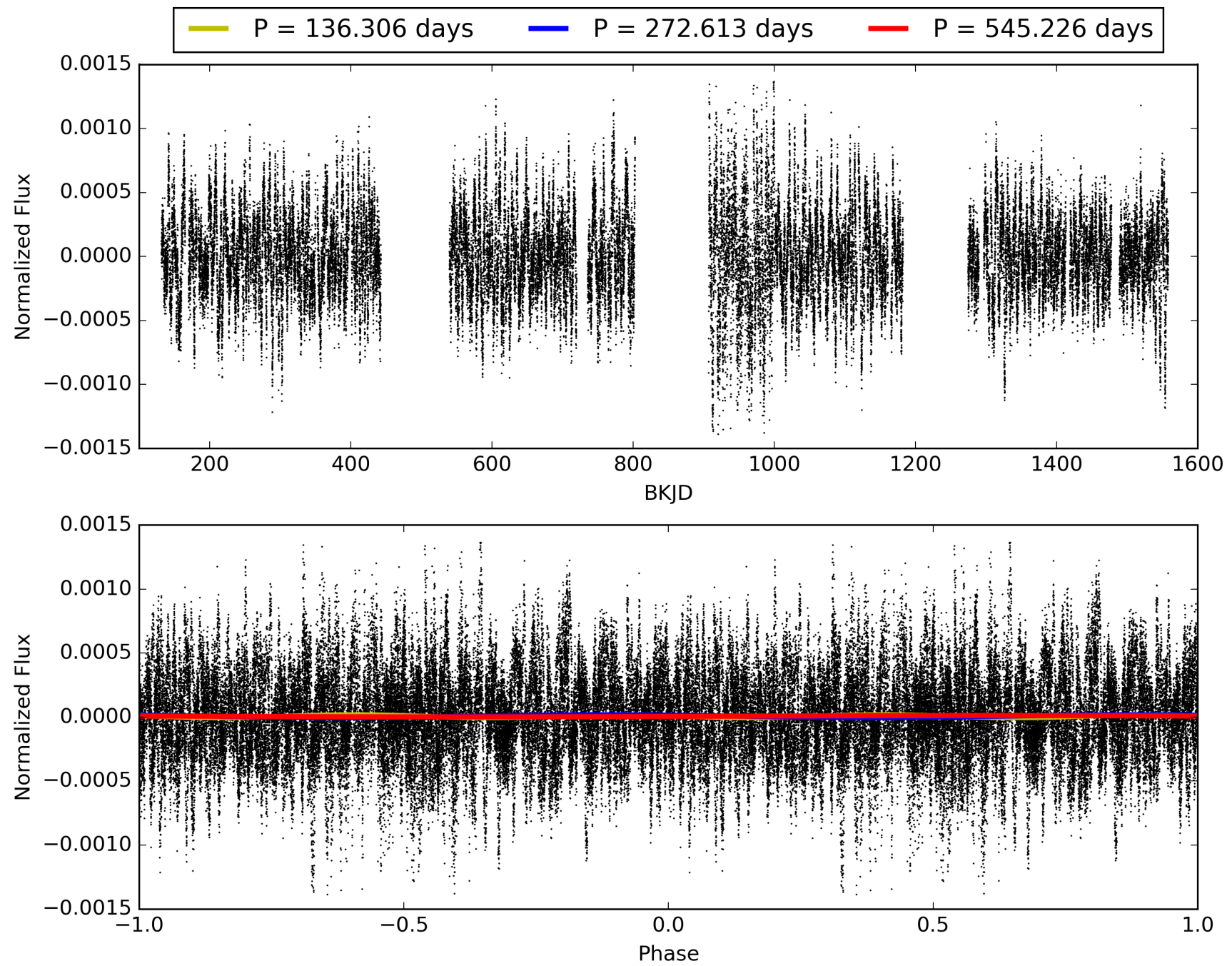
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:22:44 Z

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

# TCE 006267712-01, PDC Light Curves

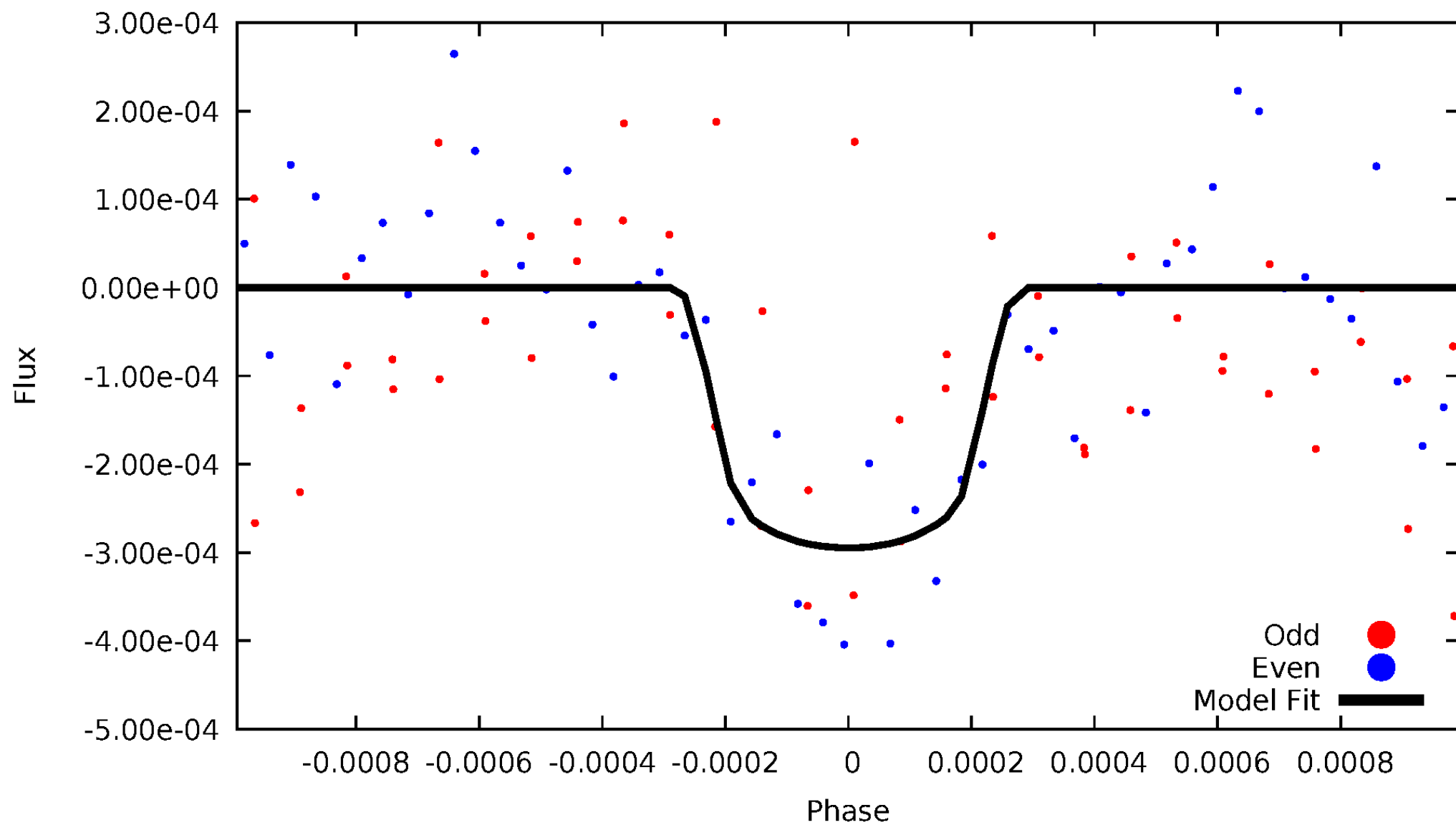


TCE 006267712-01



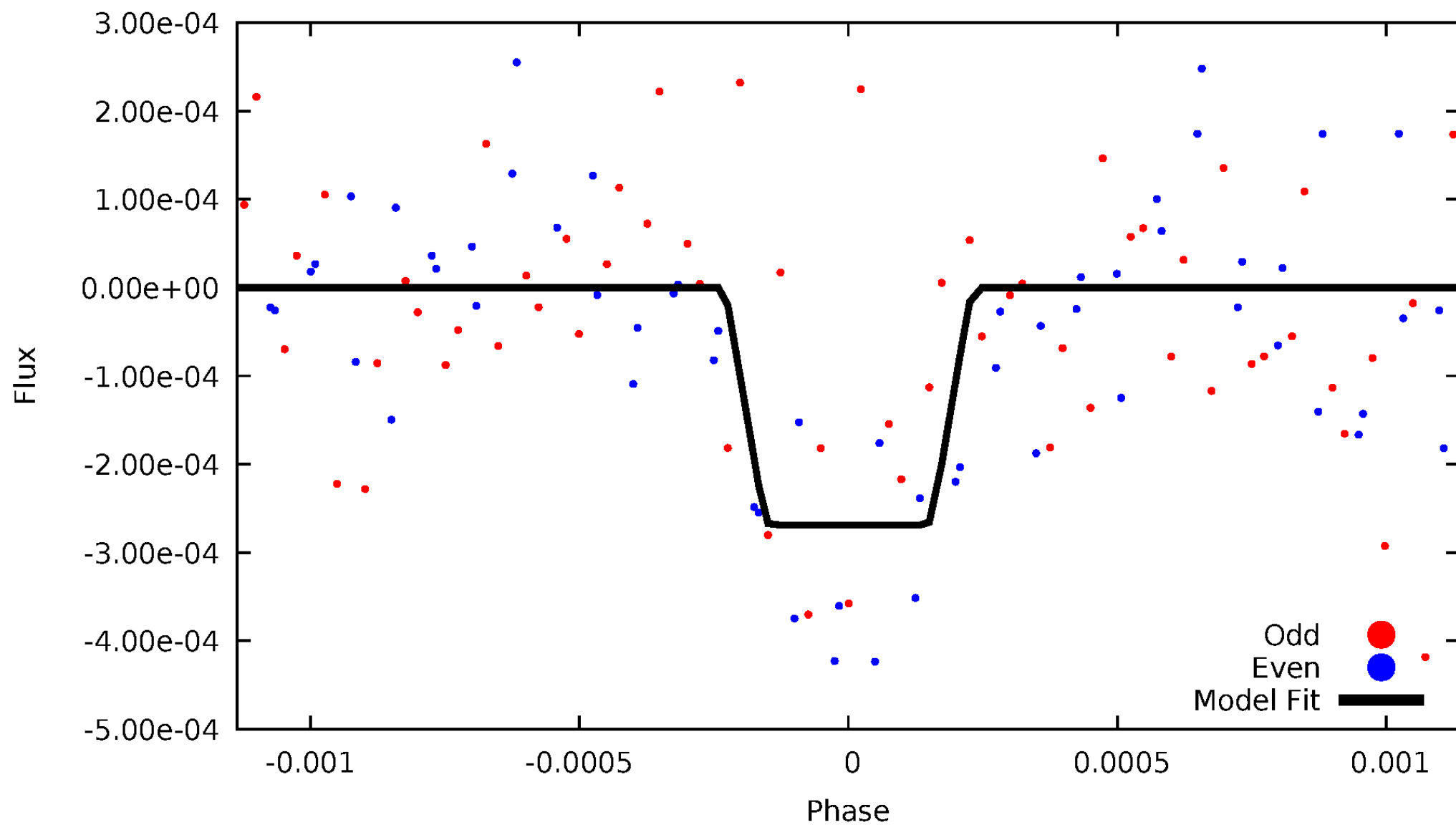
# DV Odd/Even

TCE 006267712-01

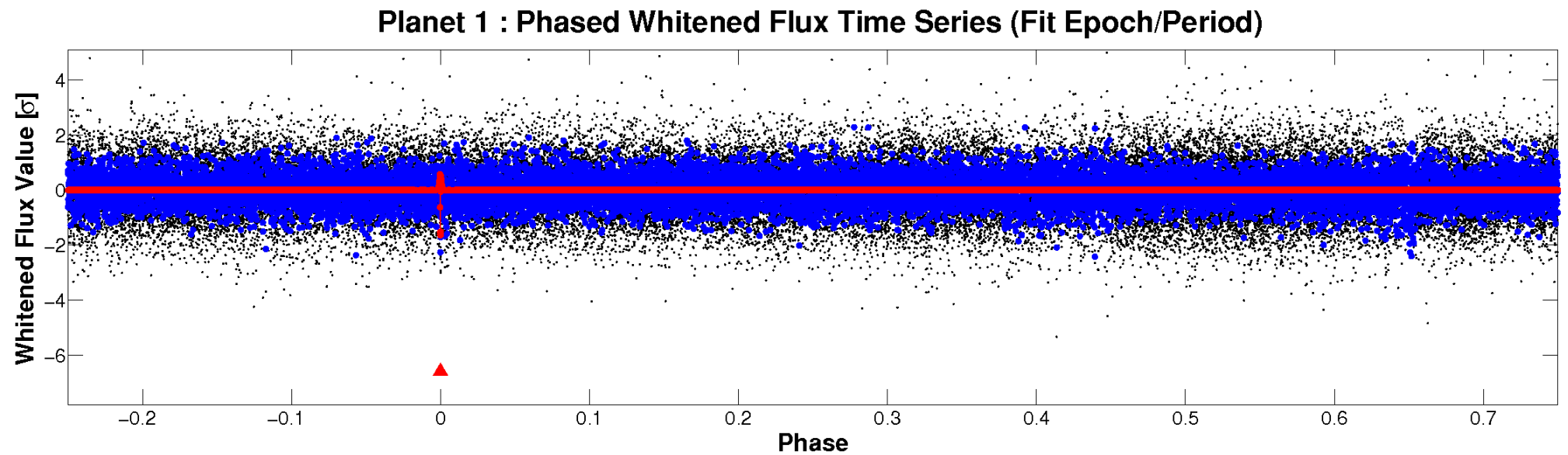
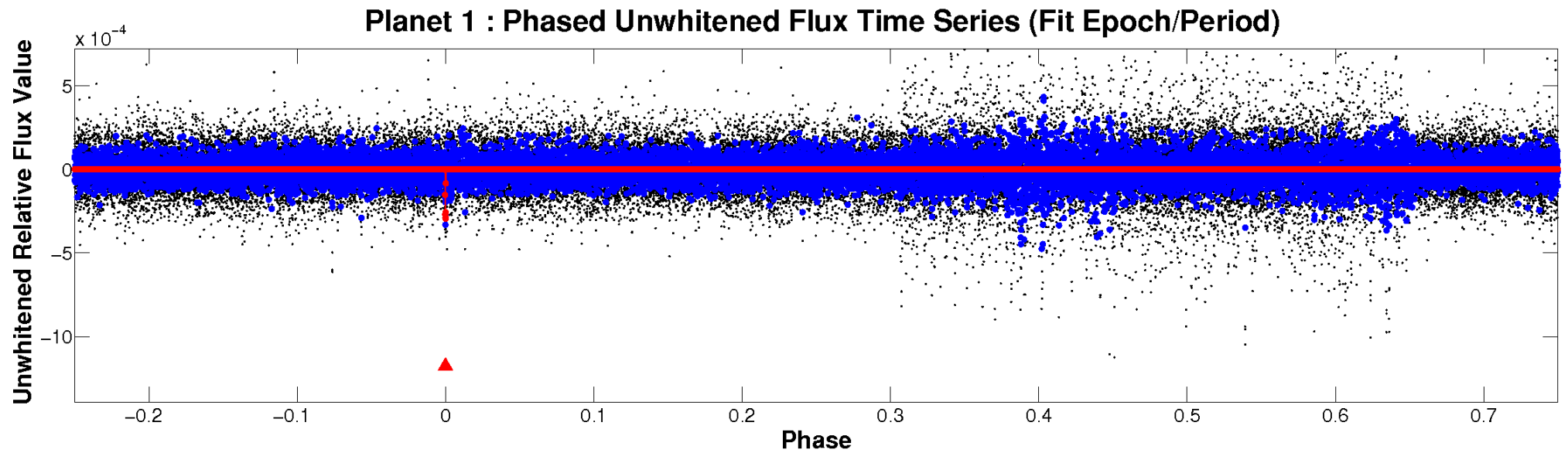


# ALT Odd/Even

TCE 006267712-01

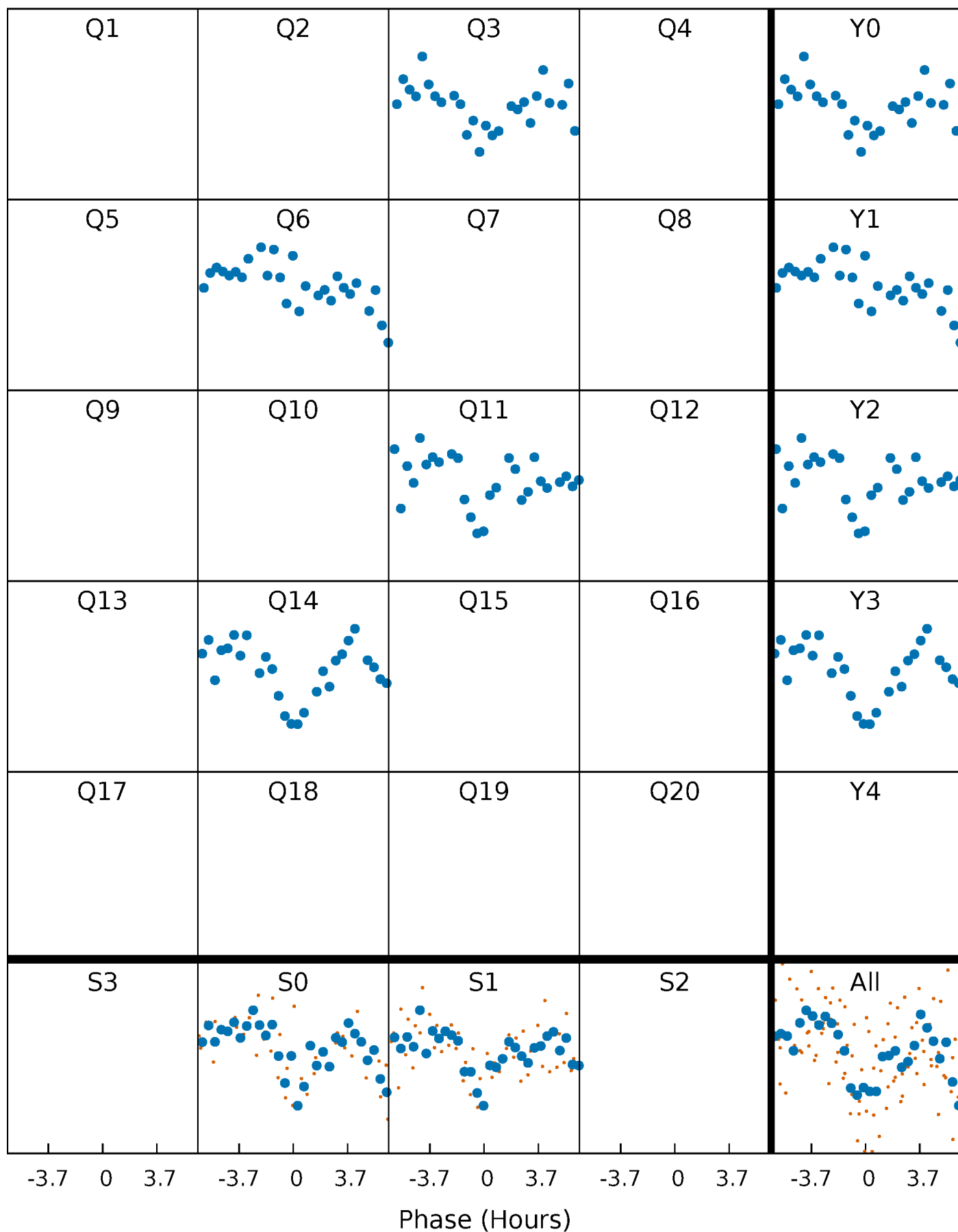


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

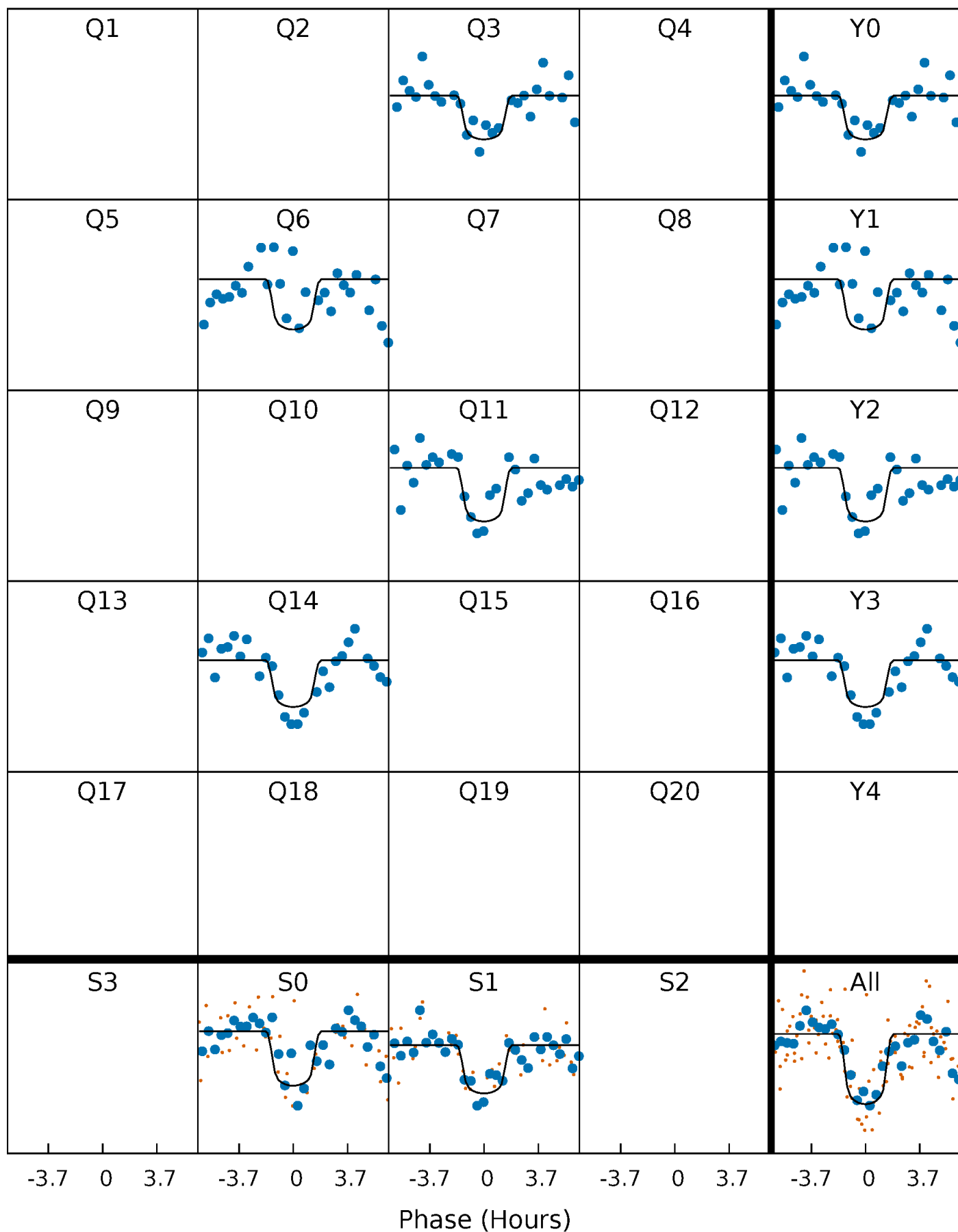
TCE 006267712-01 P=272.612769 Days  $T_0=277.889650$  (BKJD)





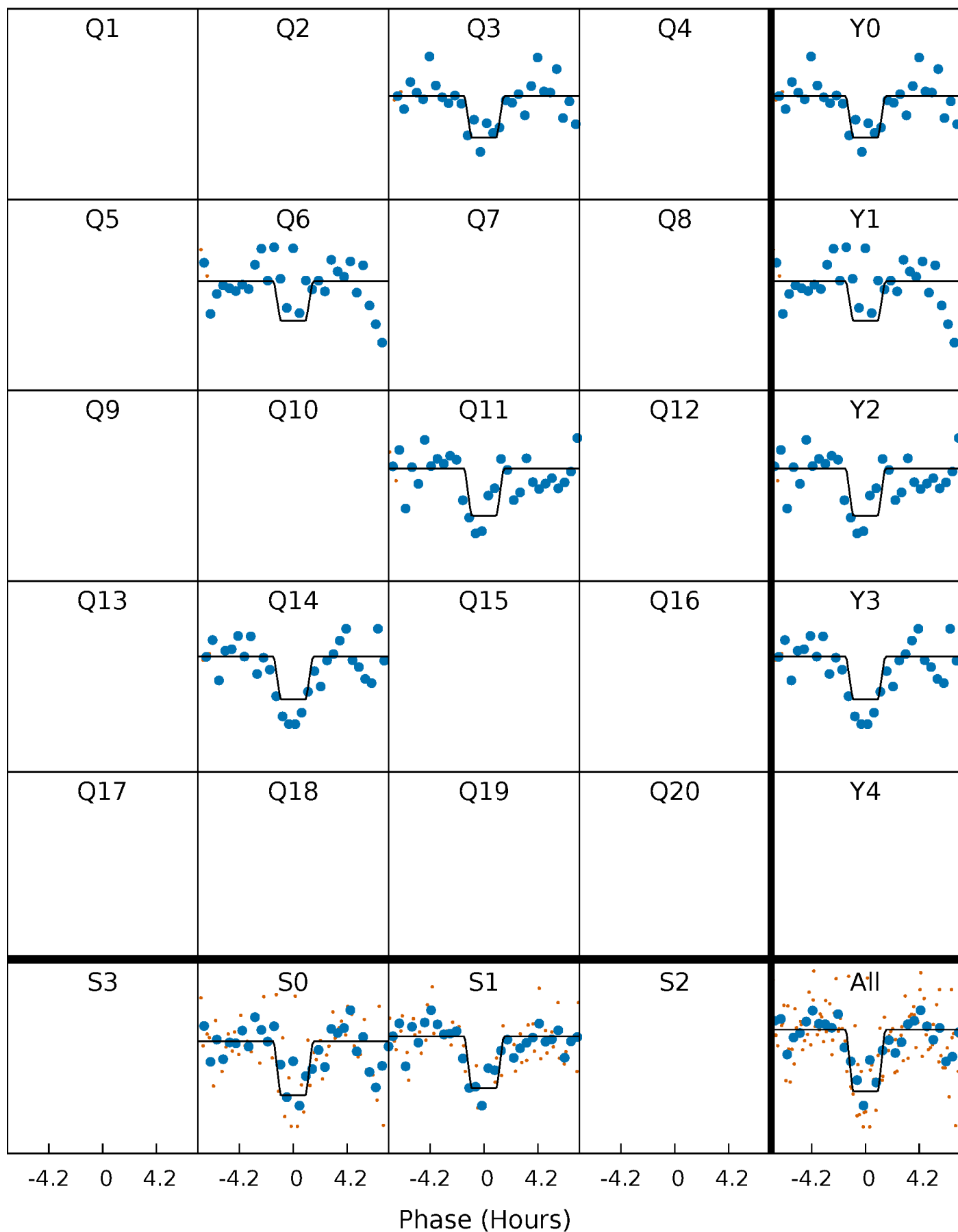
# DV Quarter-Phased Transit Curves

TCE 006267712-01 P=272.612769 Days  $T_0=277.889650$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

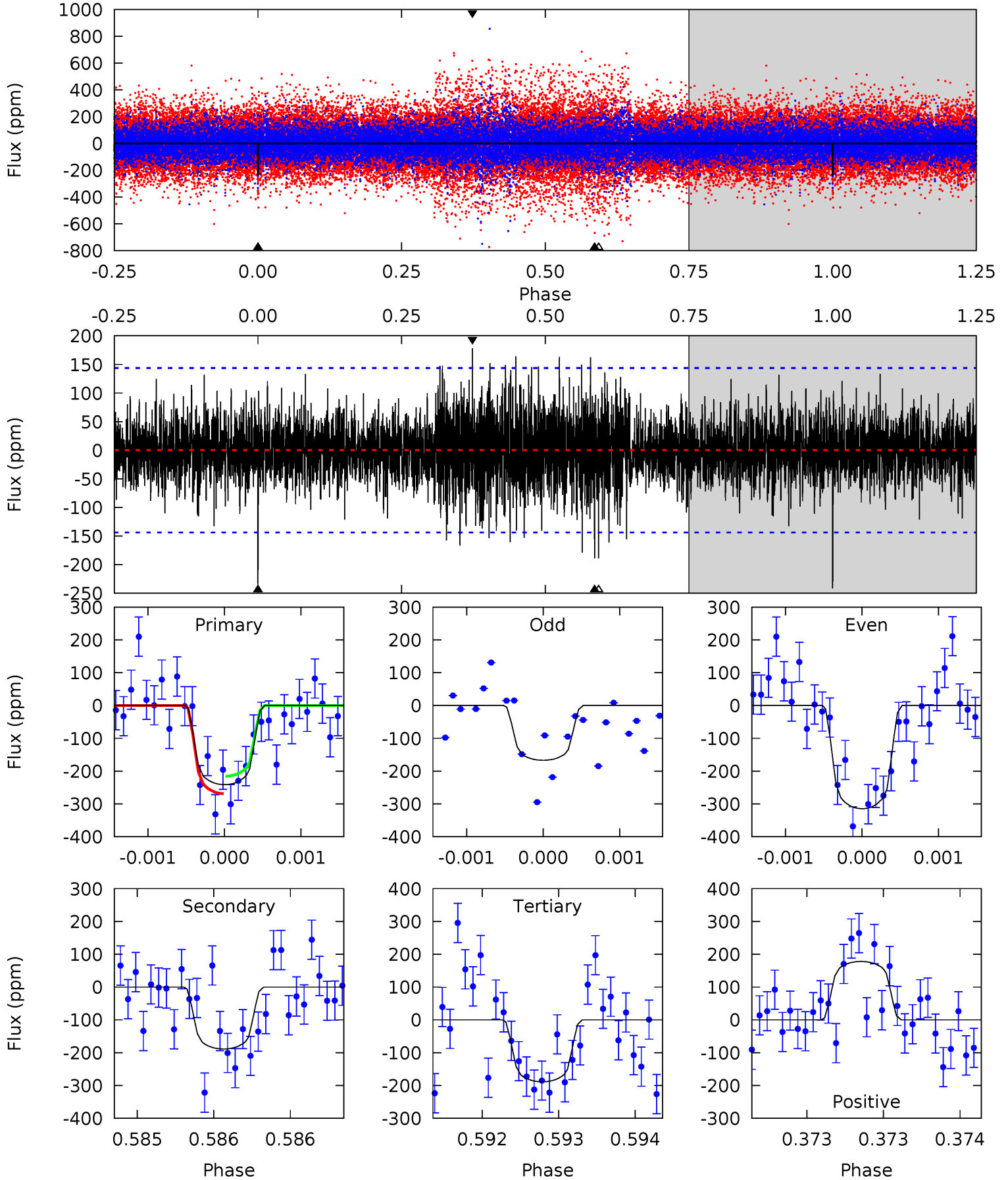
TCE 006267712-01 P=272.615665 Days  $T_0=277.883084$  (BKJD)



# DV Model-Shift Uniqueness Test

006267712-01, P = 272.612769 Days, E = 5.276881 Days

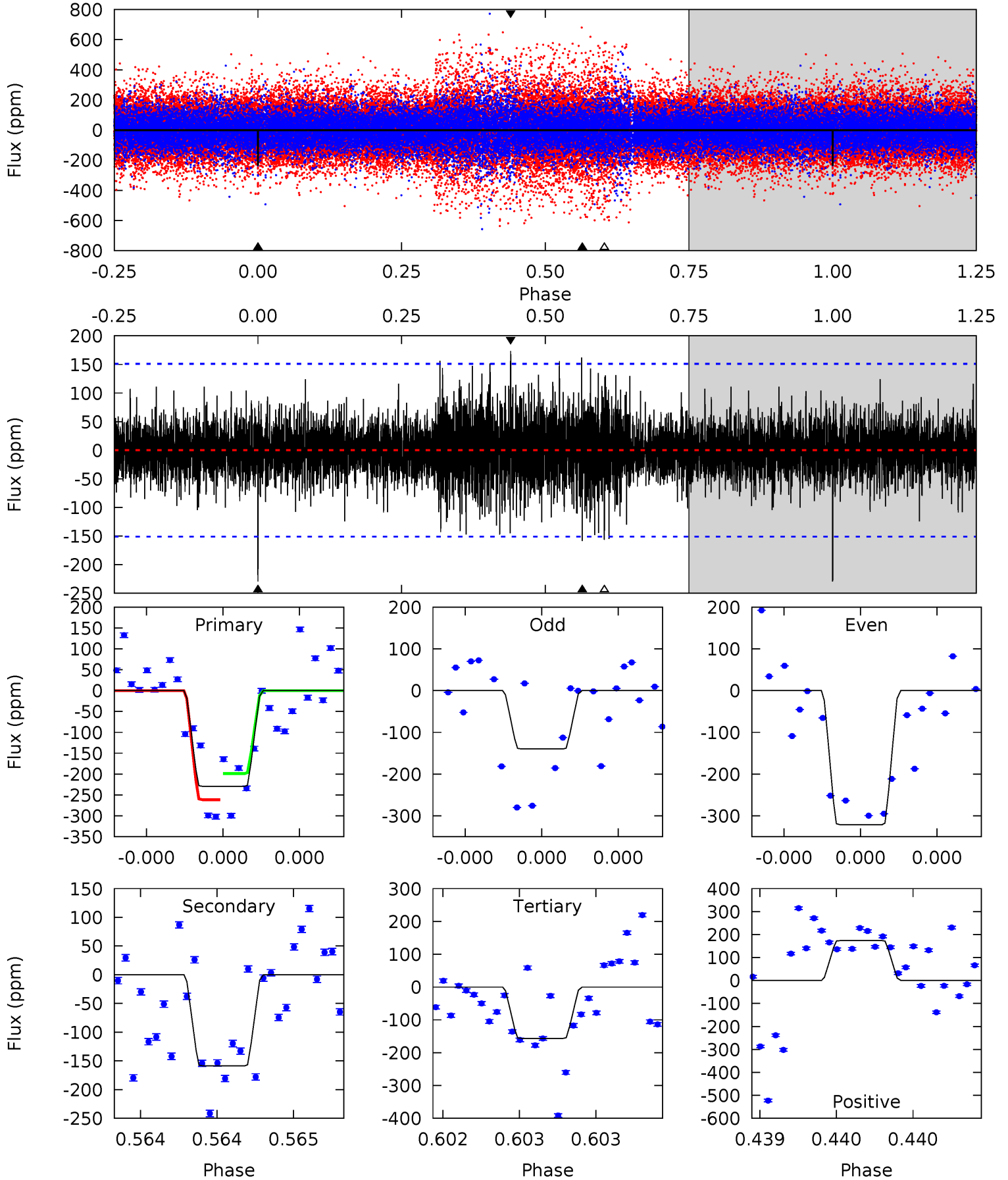
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	7.30	7.30	6.88	5.55	3.45	1.64	2.03	2.45	0.00	0.42	2.80	0.91	0.42	1.03



# Alt Model-Shift Uniqueness Test

006267712-01, P = 272.615665 Days, E = 5.267419 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
8.49	5.88	5.78	6.42	5.58	3.50	1.42	2.71	2.07	0.09	-0.55	3.31	0.90	0.43	1.16



### Stellar Parameters For KIC 006267712

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6084^{+214}_{-193}$	$4.039^{+0.413}_{-0.165}$	$-0.440^{+0.300}_{-0.300}$	$1.552^{+0.412}_{-0.566}$	$0.962^{+0.139}_{-0.127}$	$0.362^{+1.182}_{-0.155}$
	+4%/-3%	+10%/-4%	+68%/-68%	+27%/-36%	+14%/-13%	+326%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 006267712-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-189 \pm 26$	$2.98^{+1.42}_{-1.31}$	$514^{+43}_{-55}$	$5274^{+1807}_{-726}$	$7624^{+17033}_{-4154}$
Alt.	$-159 \pm 27$	$2.56^{+1.55}_{-1.22}$	$508^{+46}_{-55}$	$5364^{+1946}_{-863}$	$9097^{+21207}_{-5671}$

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

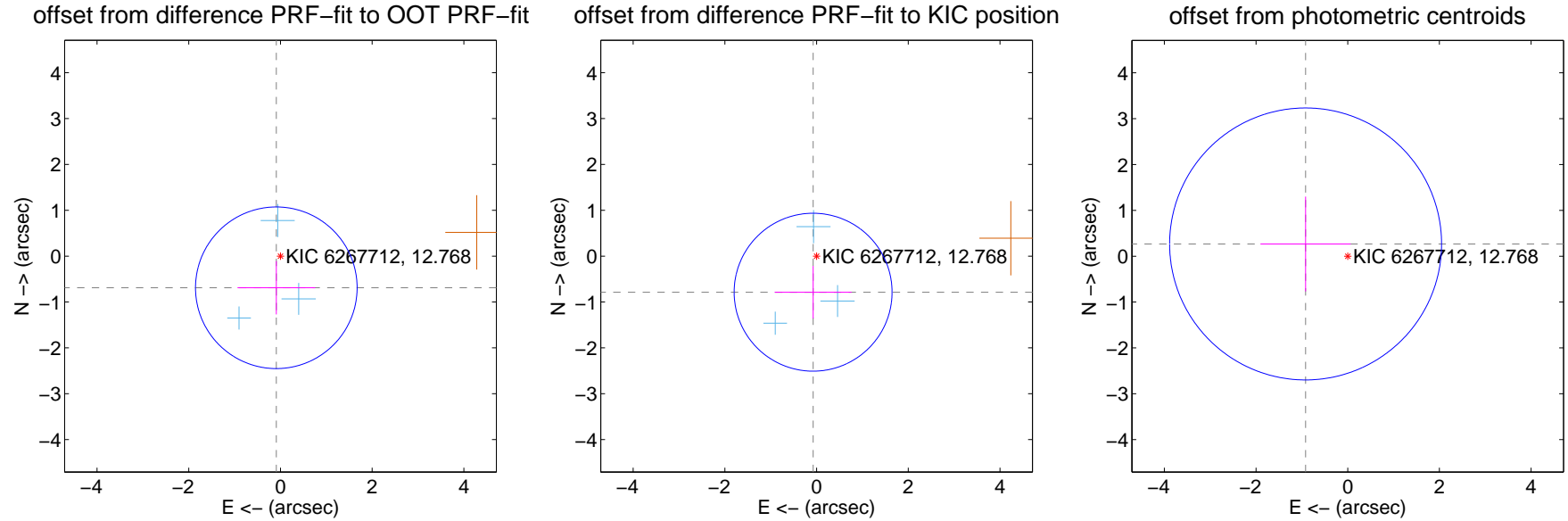
## DV Centroid Data

Supplemental centroid analysis for 006267712-01. Kepler magnitude: 12.77. Transit SNR 7.77

There are 3 quarters with good PRF difference image offsets

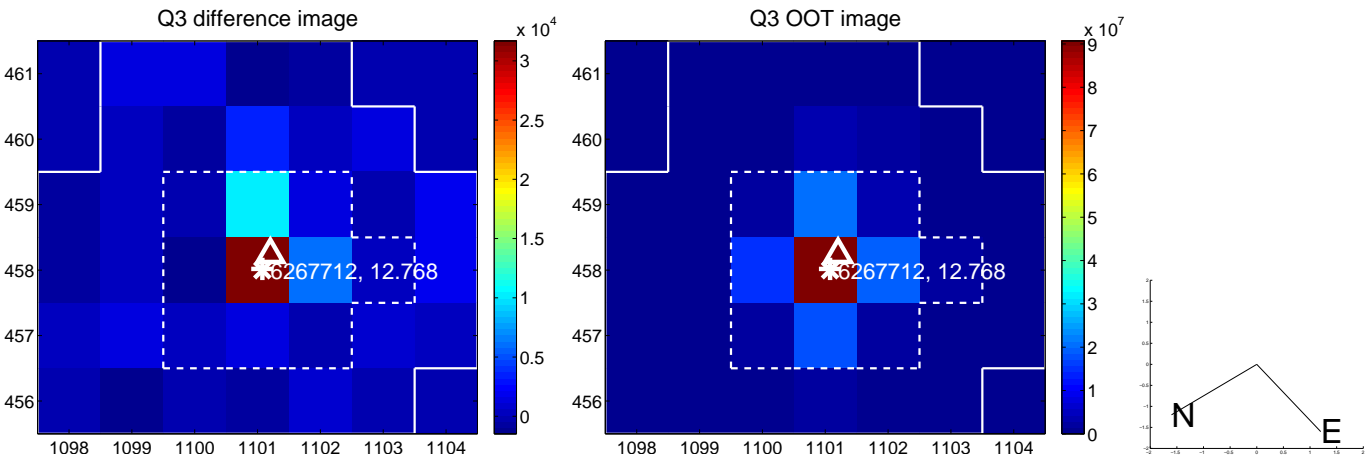
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.696 \pm 0.587$	1.18	$0.090 \pm 0.846$	$-0.690 \pm 0.582$
PRF-fit source offset from KIC position	$0.790 \pm 0.574$	1.38	$0.076 \pm 0.839$	$-0.787 \pm 0.571$
photometric centroid source offset	$0.96 \pm 0.99$	0.97	$0.92 \pm 0.98$	$0.27 \pm 1.03$

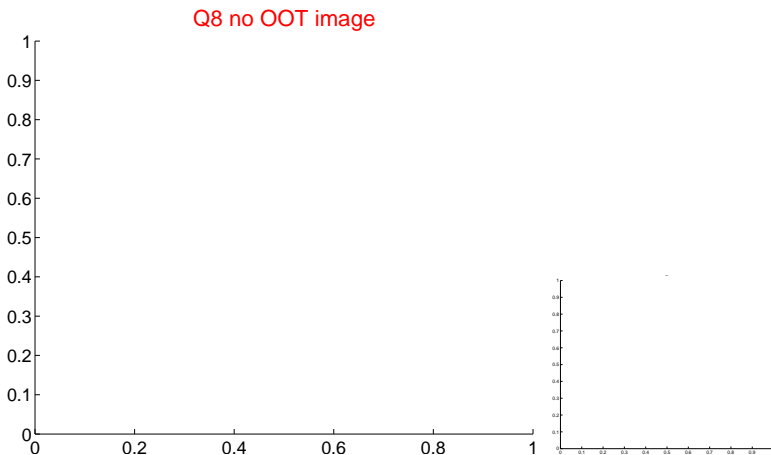
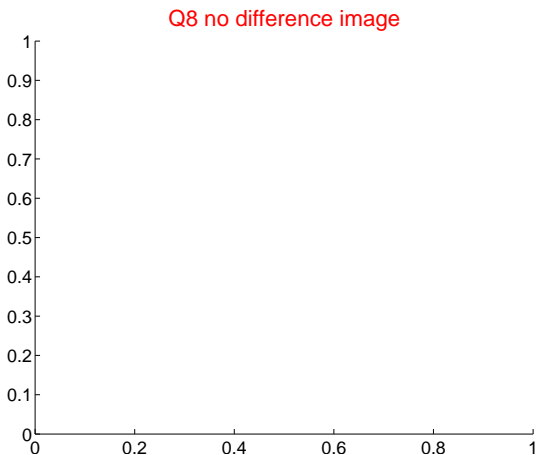
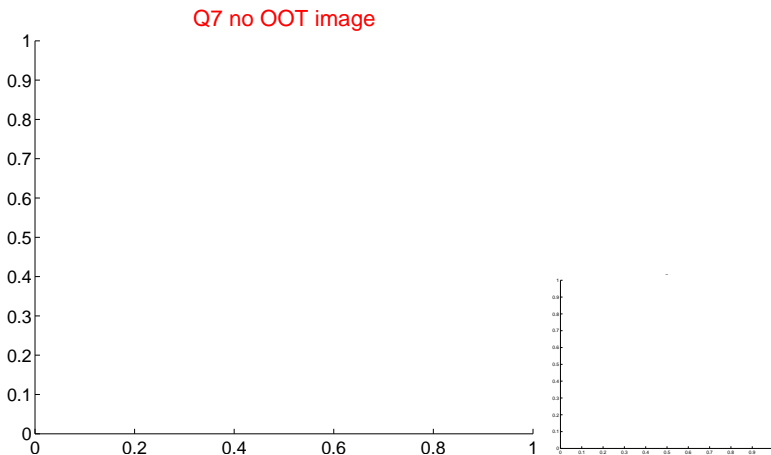
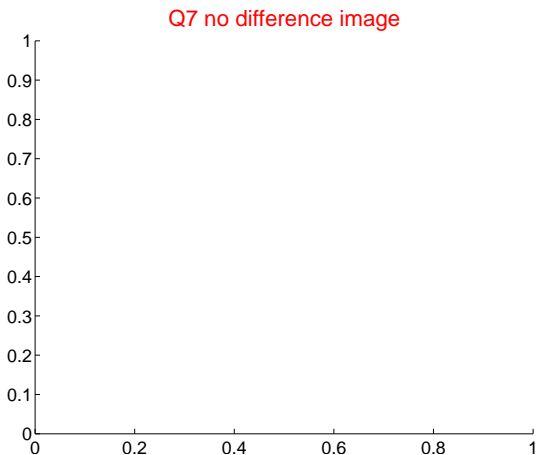
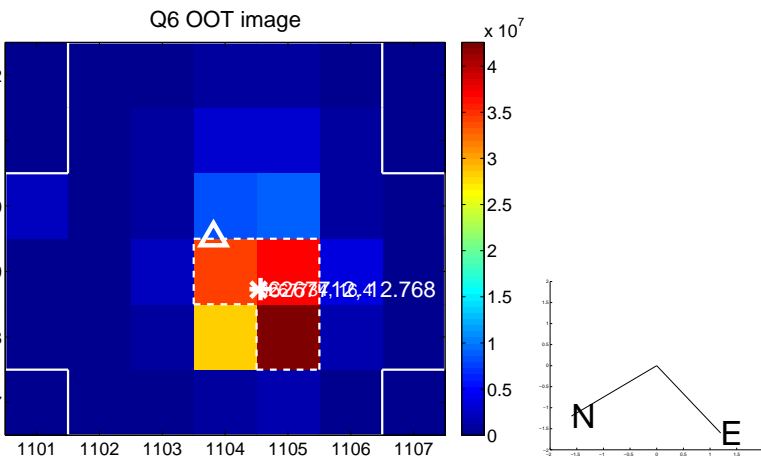
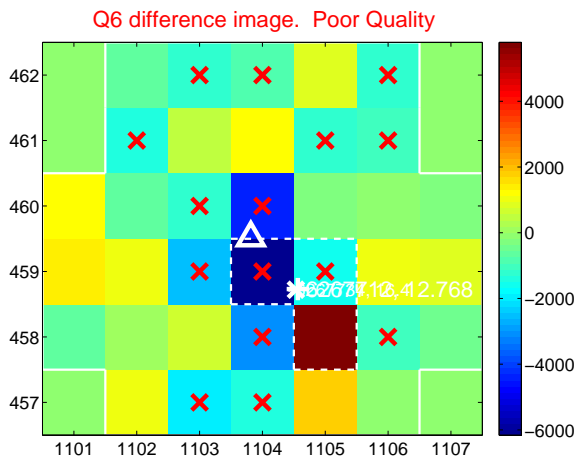
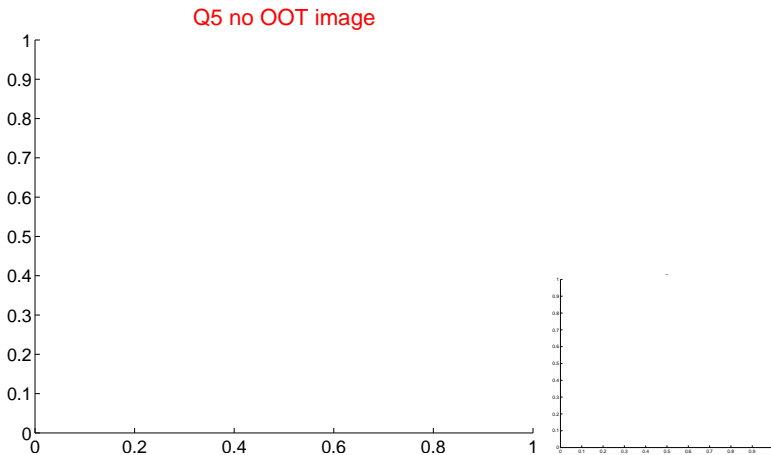
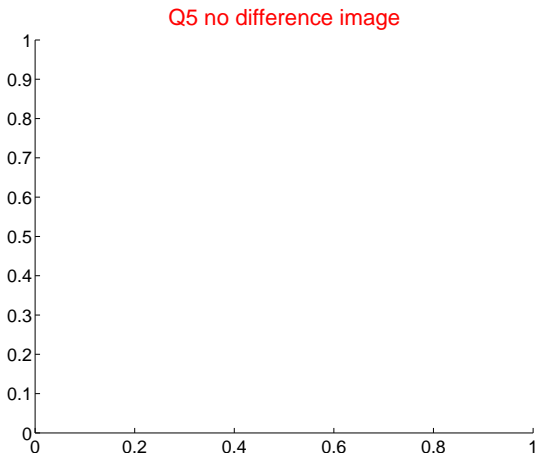


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

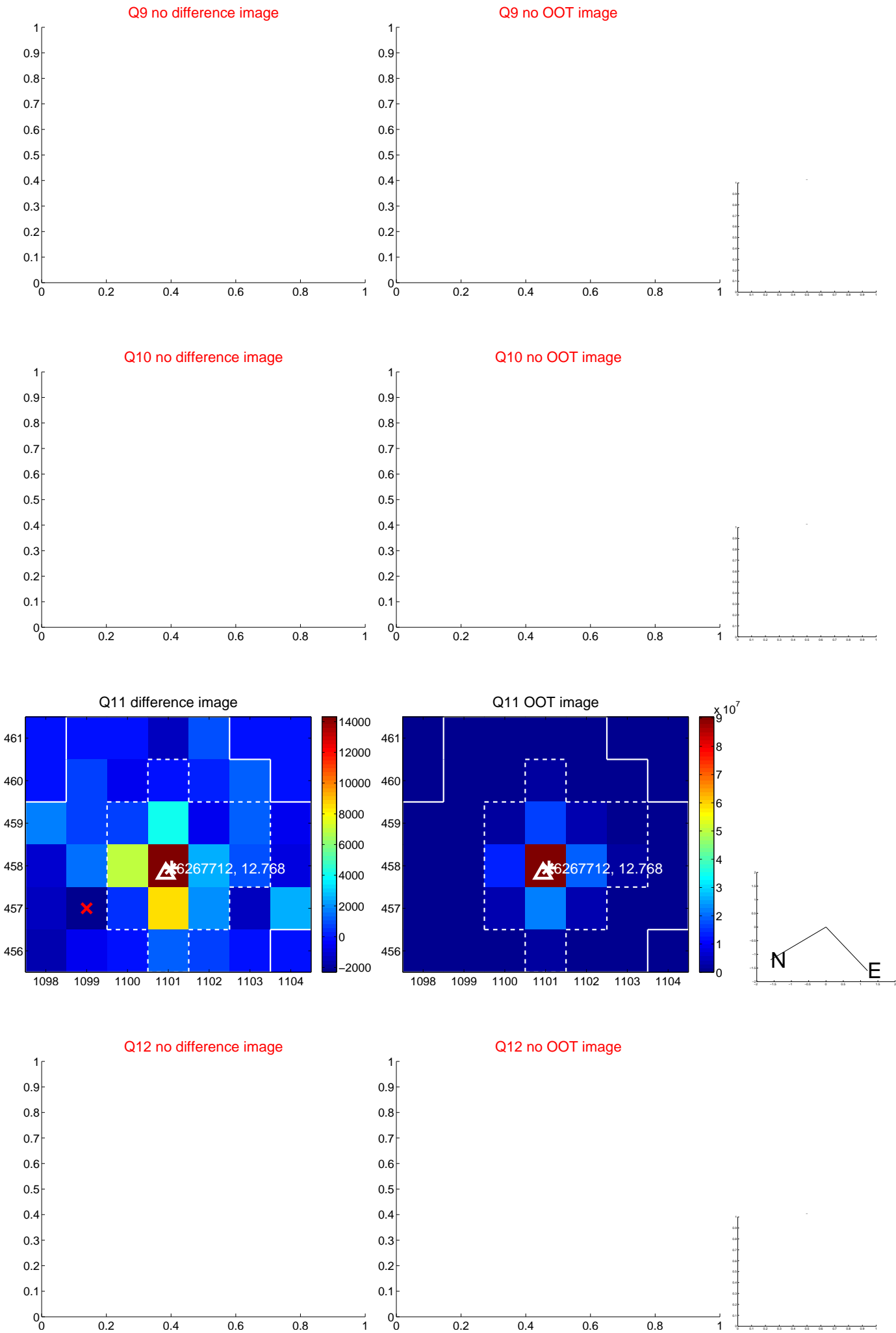


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value

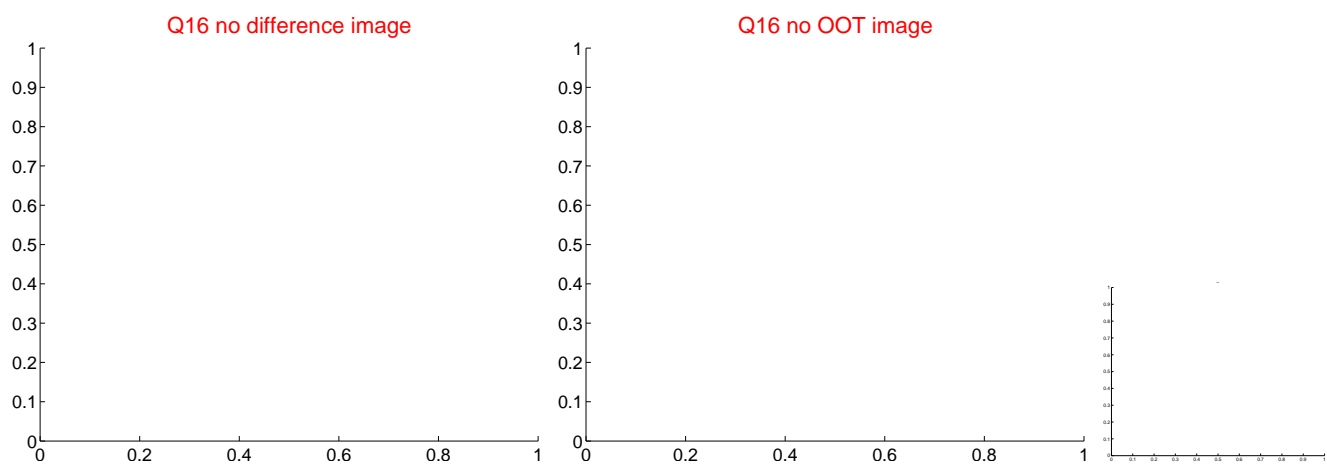
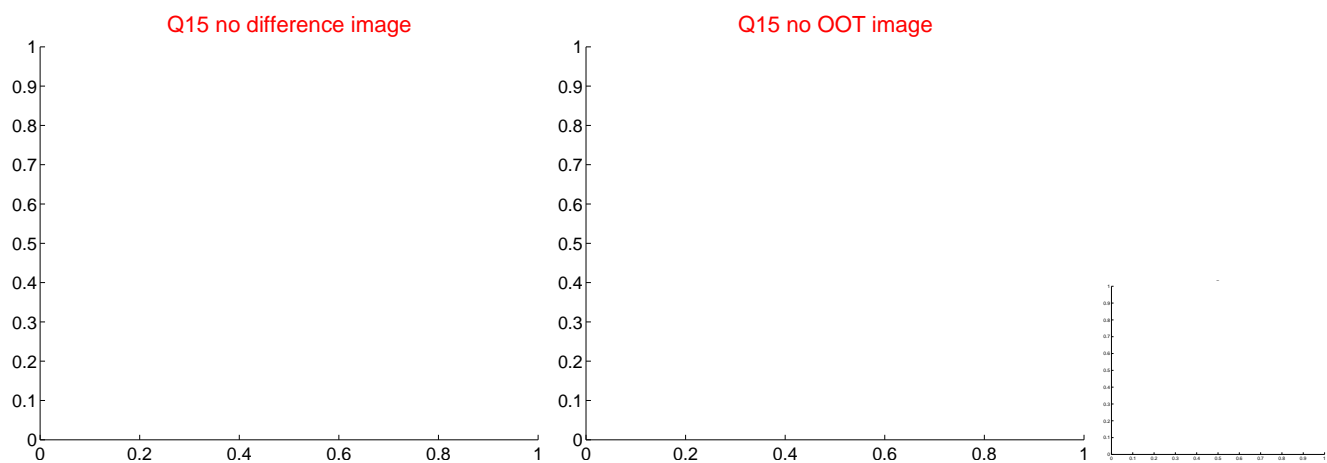
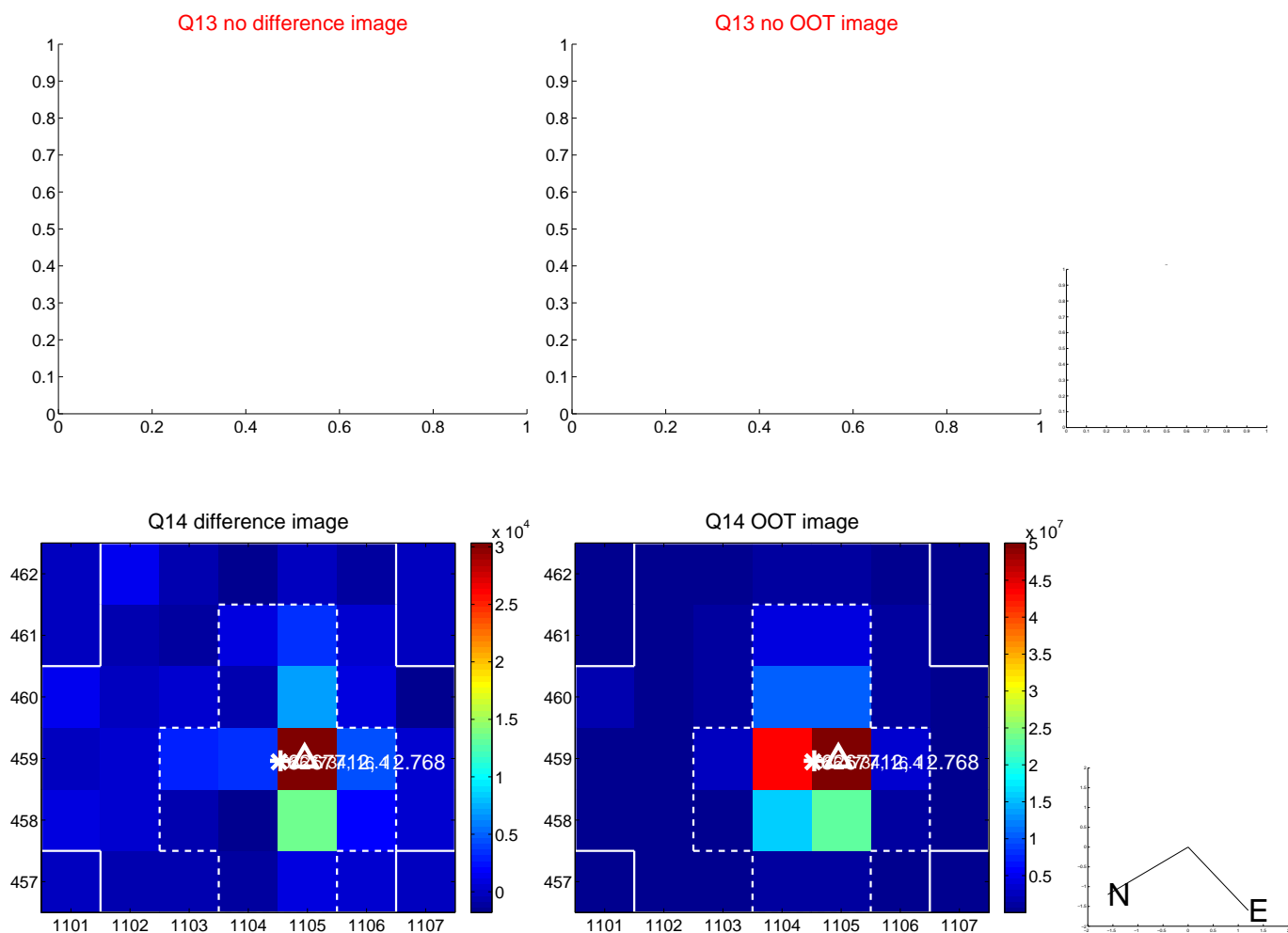




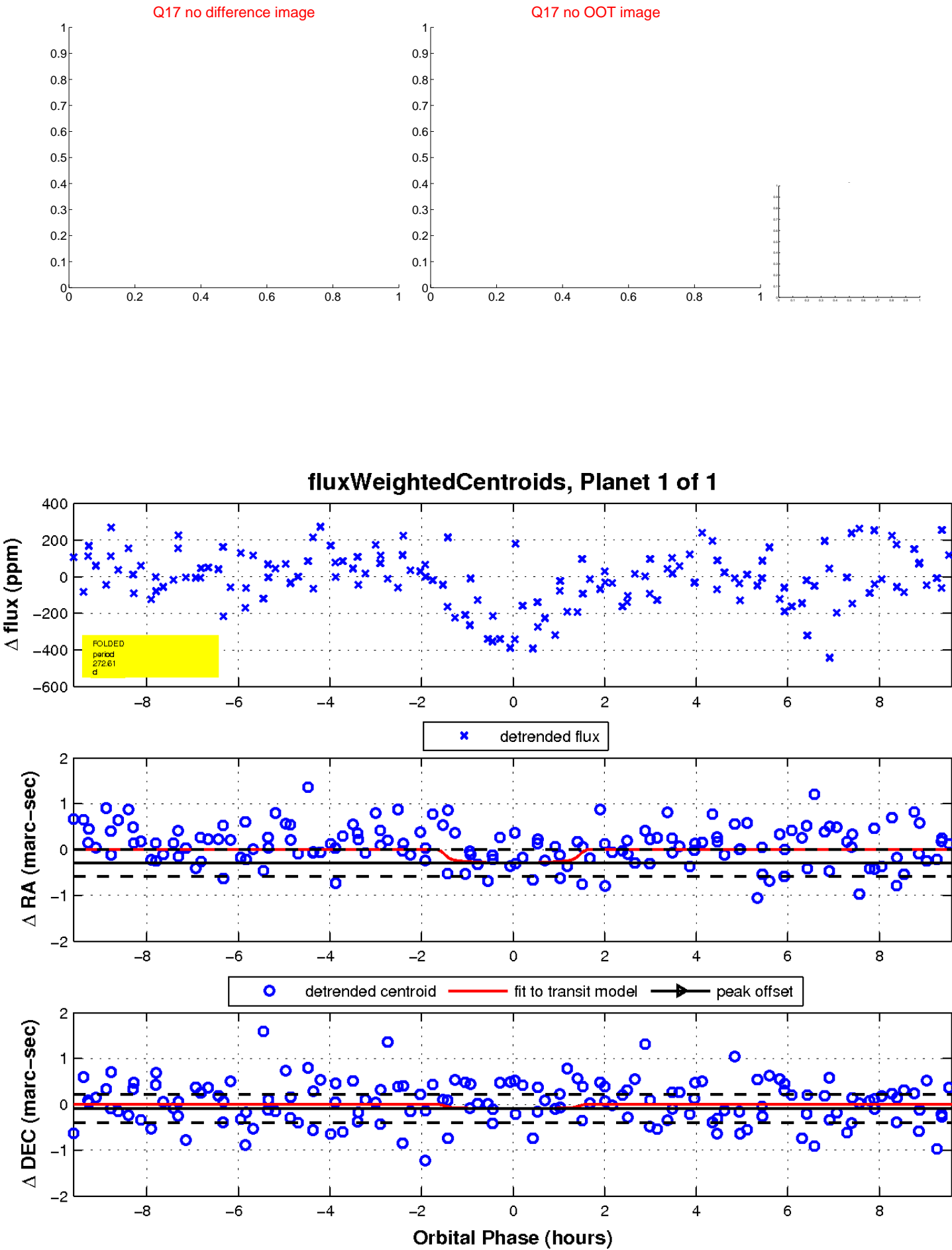
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

