

# KIC 008105352

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008105352-01	OBS	No	369.276544	231.905693	1424.7	15.581	7.8	10.7	0.90	5157	5.53	0.58

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008105352-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

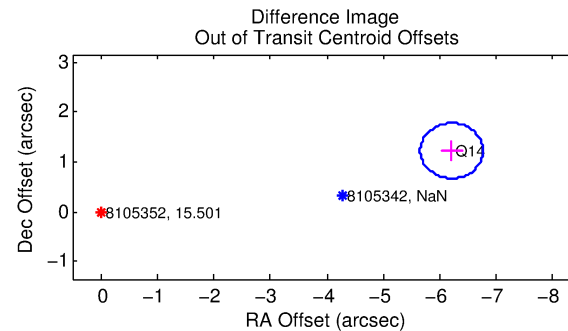
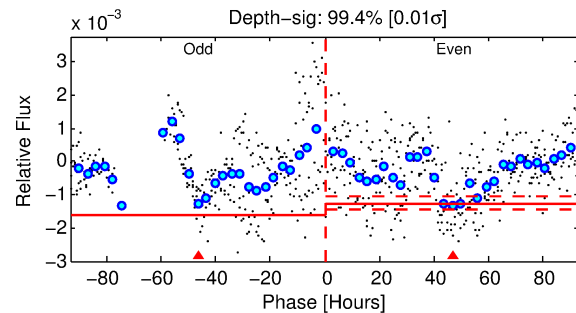
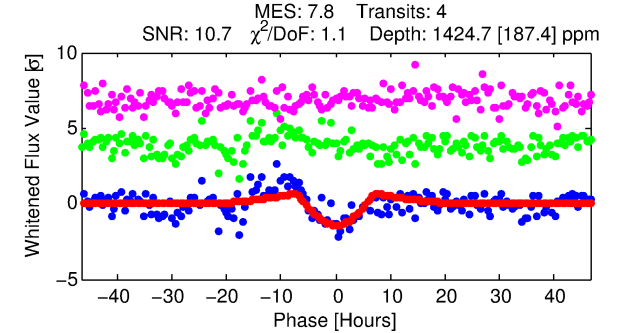
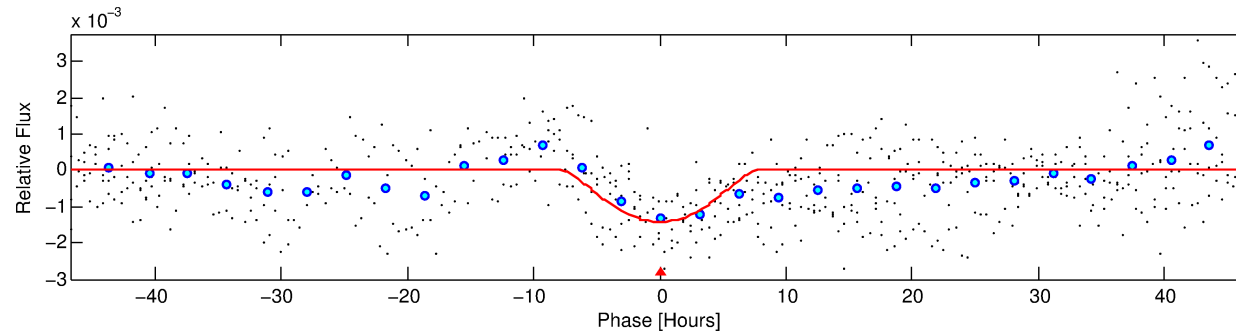
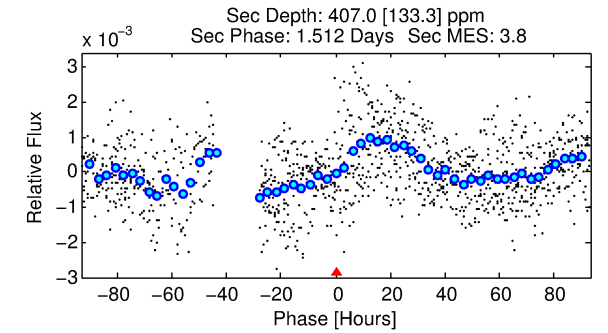
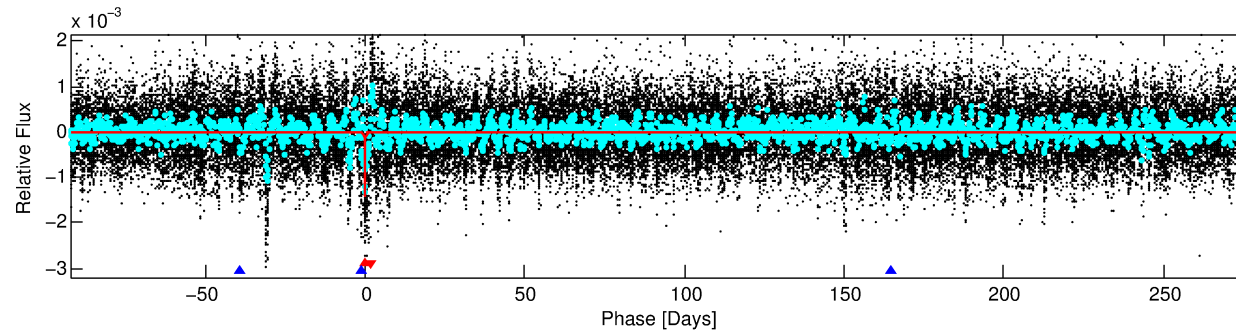
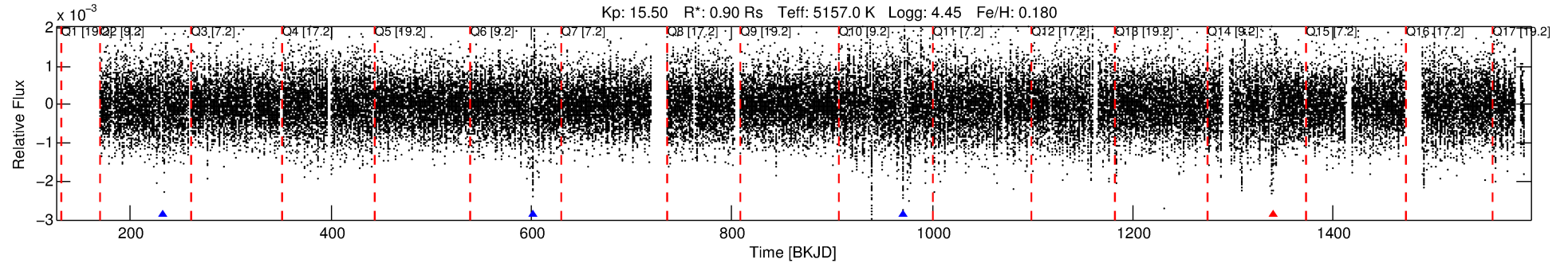
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008105352-01

No Significant Match Found

# DV One-Page Summary

KIC: 8105352 Candidate: 1 of 2 Period: 369.277 d



## DV Fit Results:

Period = 369.27654 [0.01316] d  
Epoch = 231.9057 [0.0244] BKJD  
Rp/R\* = 0.0561 [0.0648]  
a/R\* = 71.65 [27.34]  
b = 0.98 [0.12]  
Seff = 0.58 [0.17]  
Teq = 222 [16] K  
Rp = 5.53 [6.46] Re  
a = 0.9471 [0.1549] AU  
Ag = 6562.85 [15417.98] [0.43σ]  
Teff = 3093 [1808] K [1.59σ]

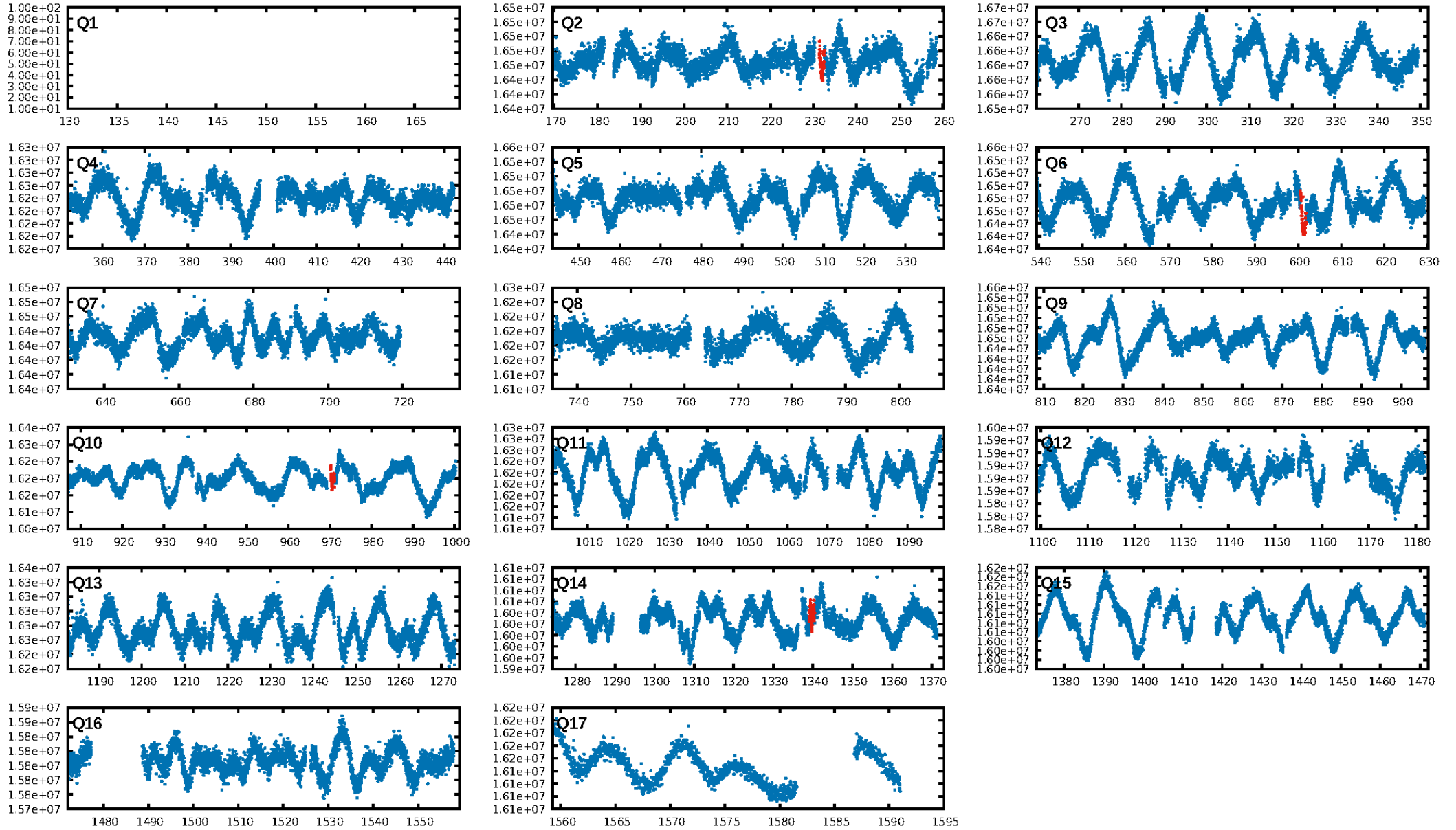
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [228.71σ]  
ModelChiSquare2-sig: 32.8%  
ModelChiSquareGoF-sig: 99.9%  
Bootstrap-pfa: 3.52e-09  
RollingBand-fgt: 0.75 [3/4]  
GhostDiagnostic-chr: 1.404  
Centroid-sig: 0.0%  
Centroid-so: 3.410 arcsec [2.30σ]  
OotOffset-rm: 6.322 arcsec [34.30σ]  
KicOffset-rm: 6.381 arcsec [34.62σ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 0.00 [0/1]

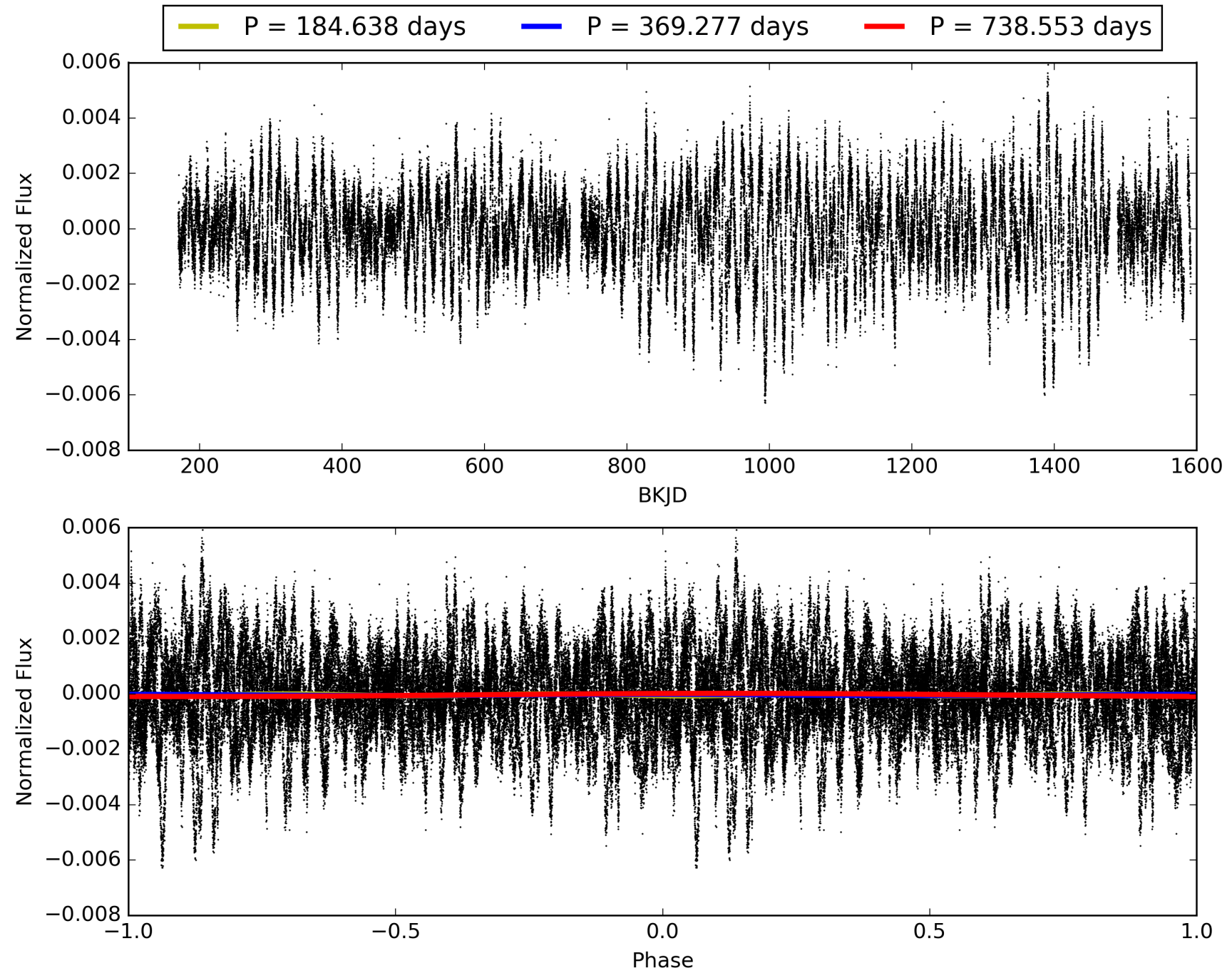
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:29:22 Z

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

# TCE 008105352-01, PDC Light Curves

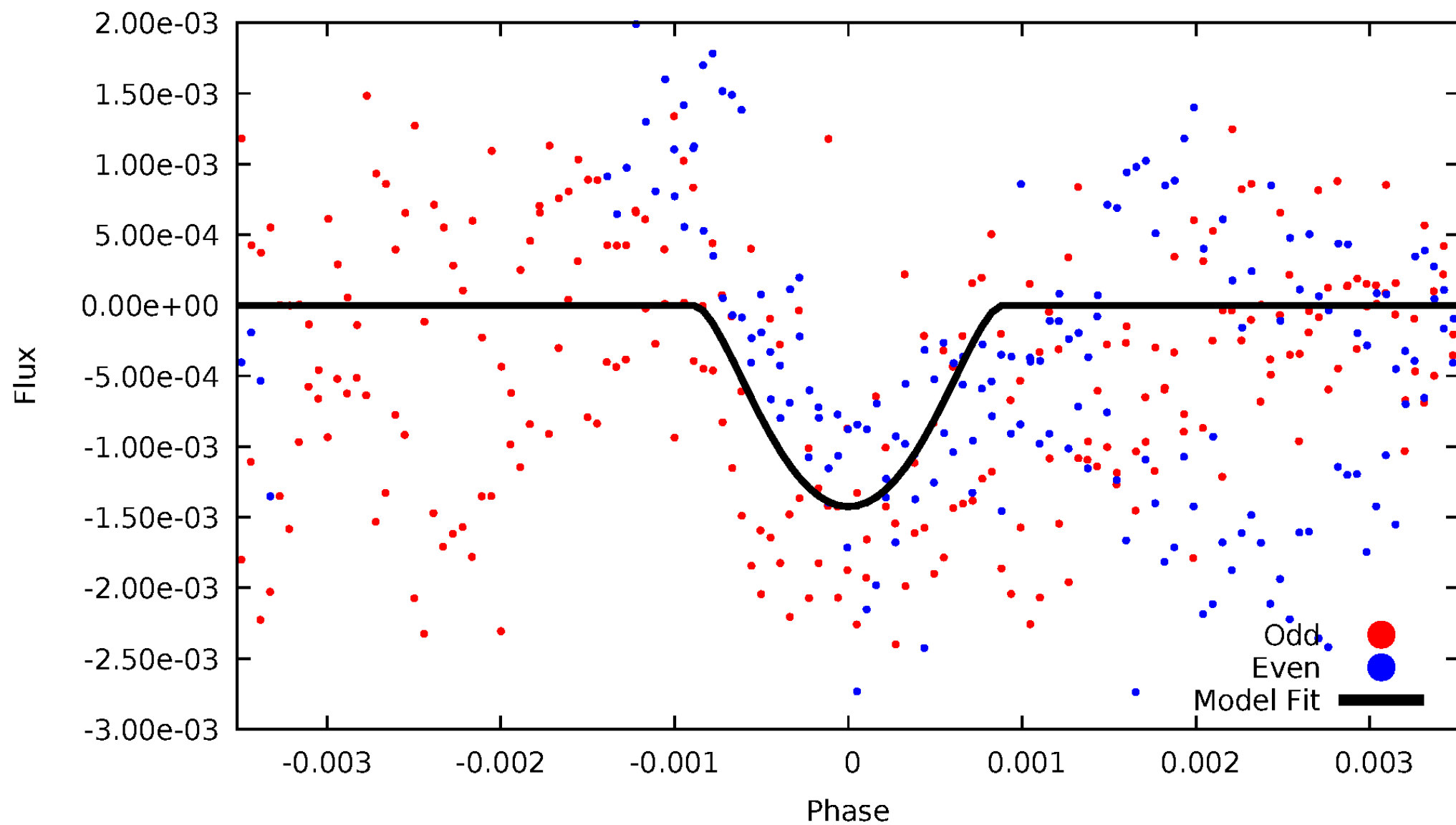


# TCE 008105352-01



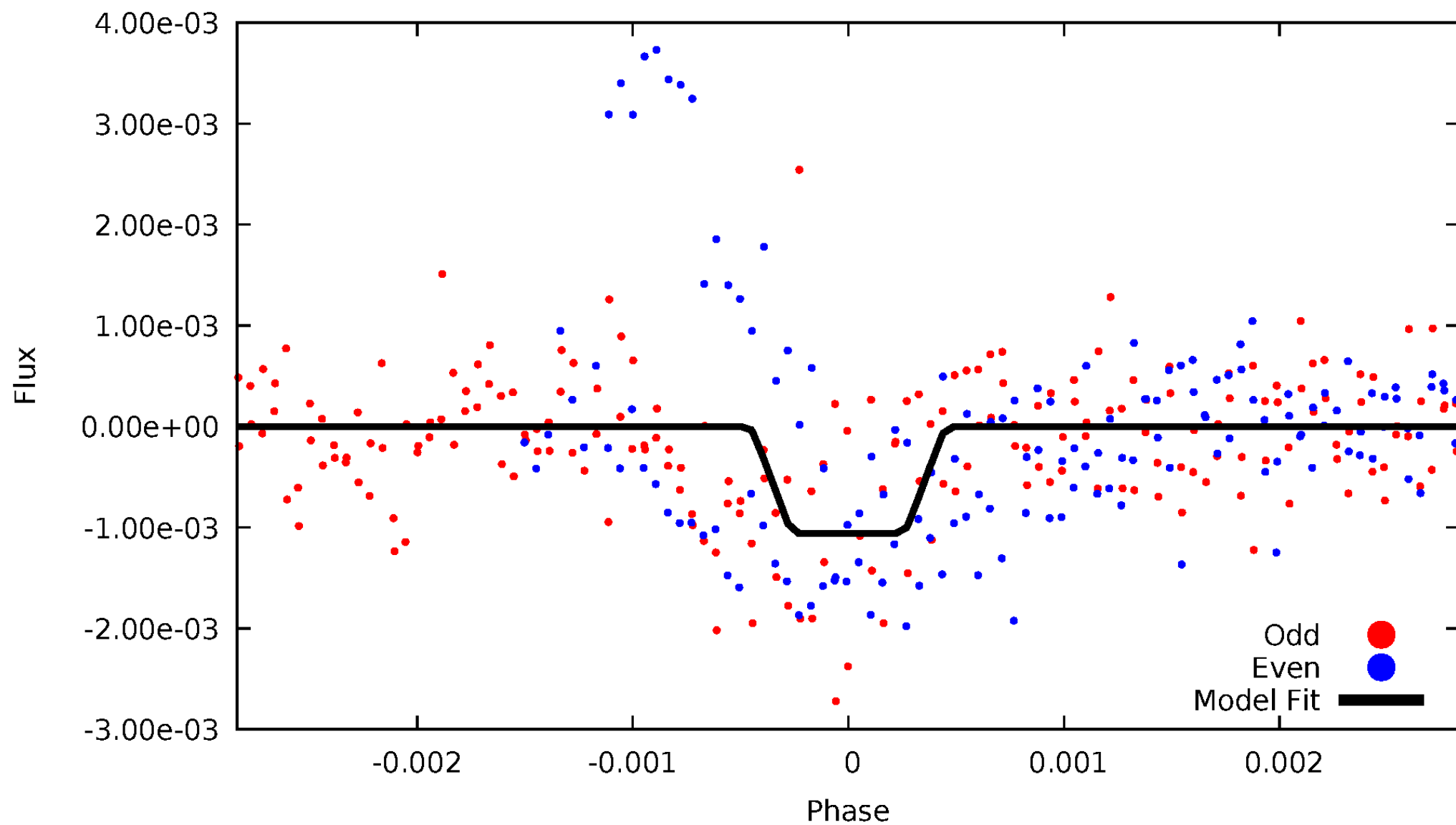
# DV Odd/Even

TCE 008105352-01

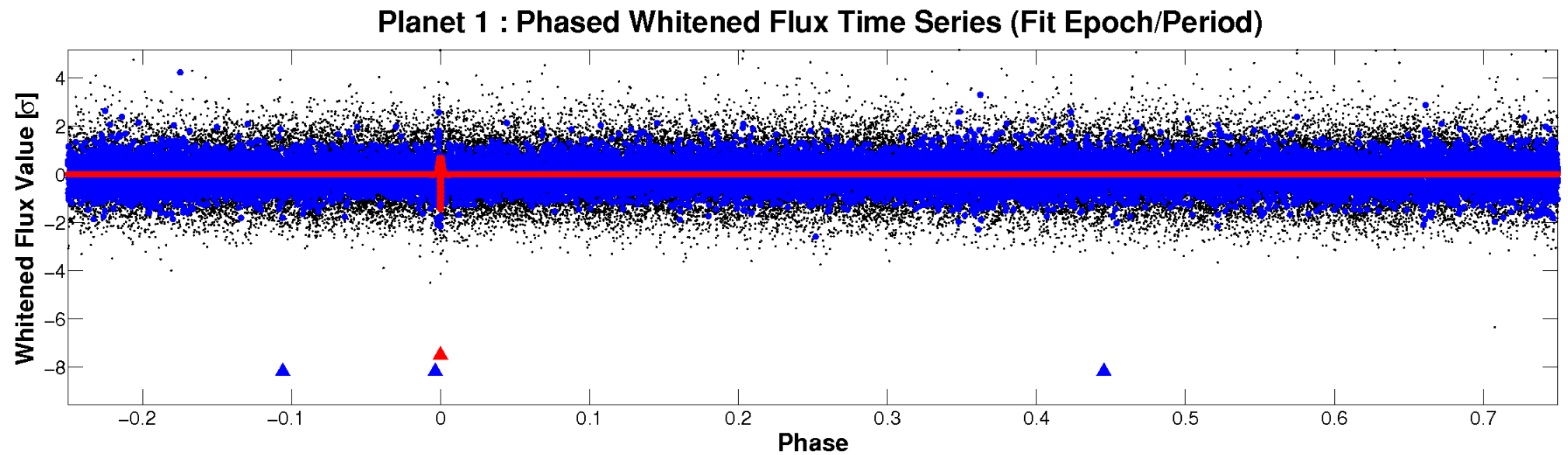
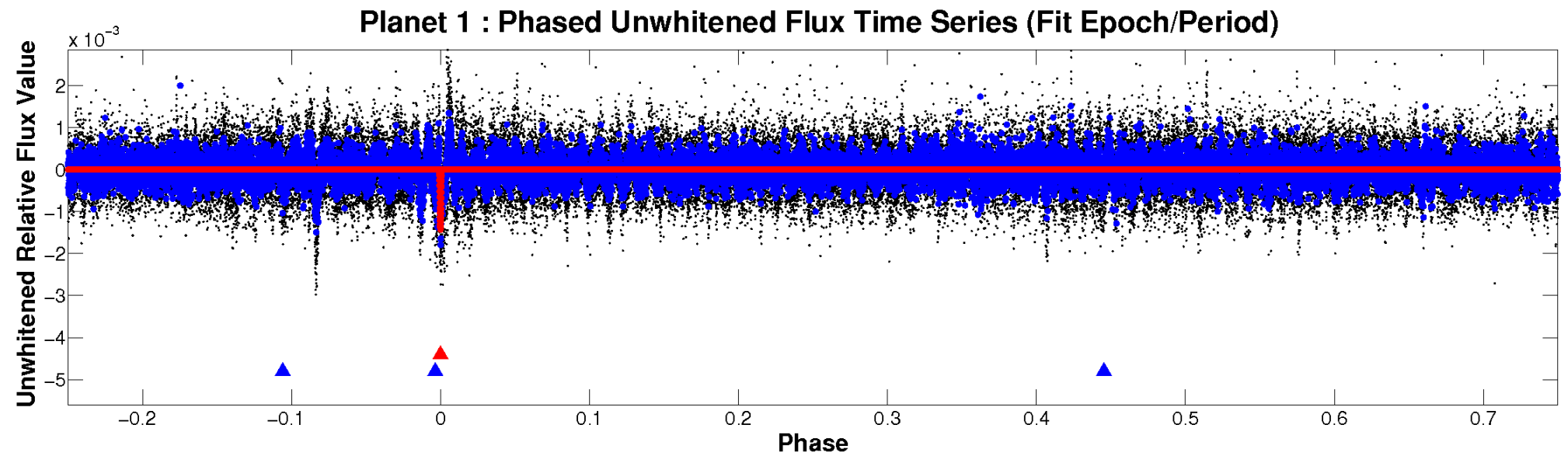


# ALT Odd/Even

TCE 008105352-01



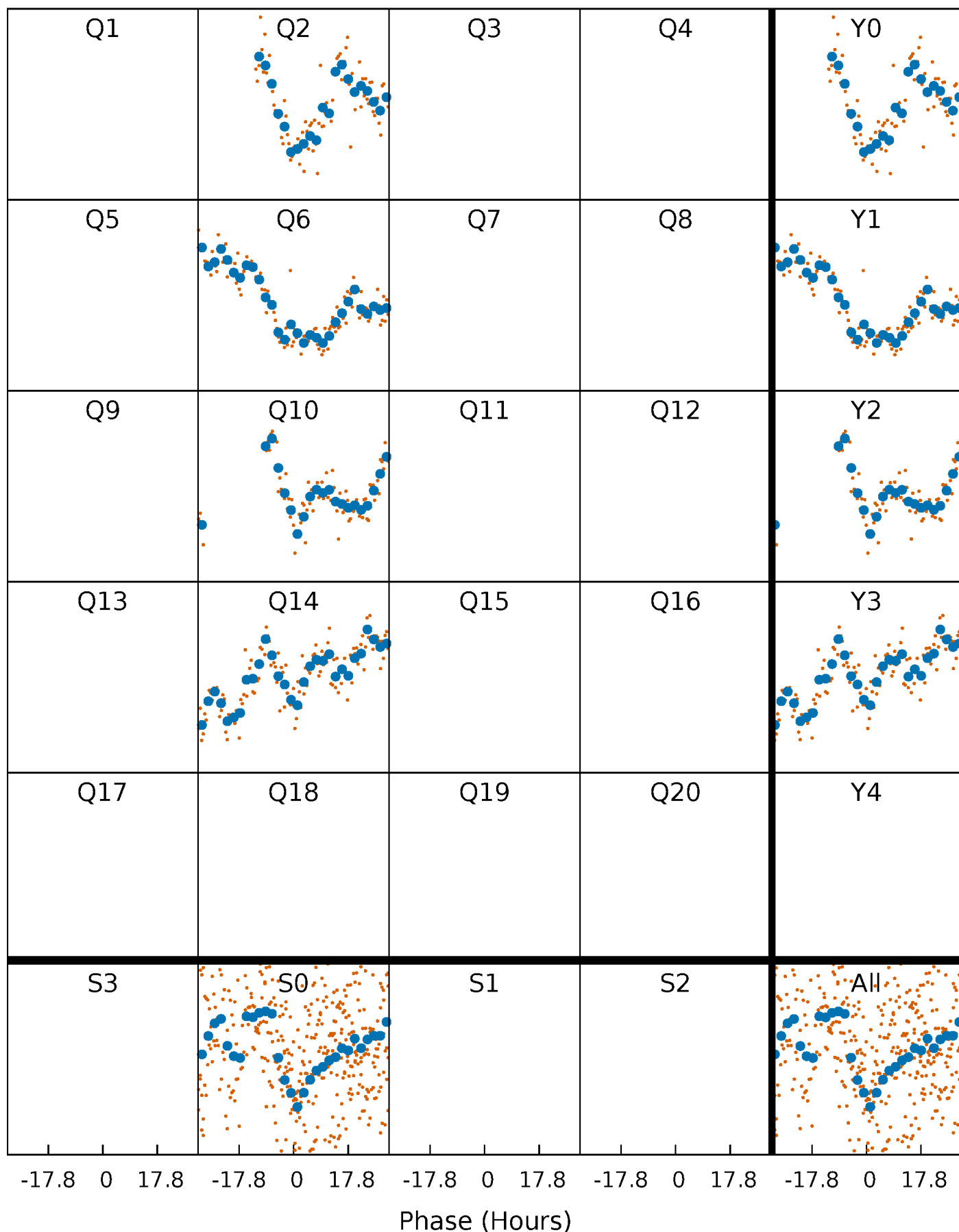
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

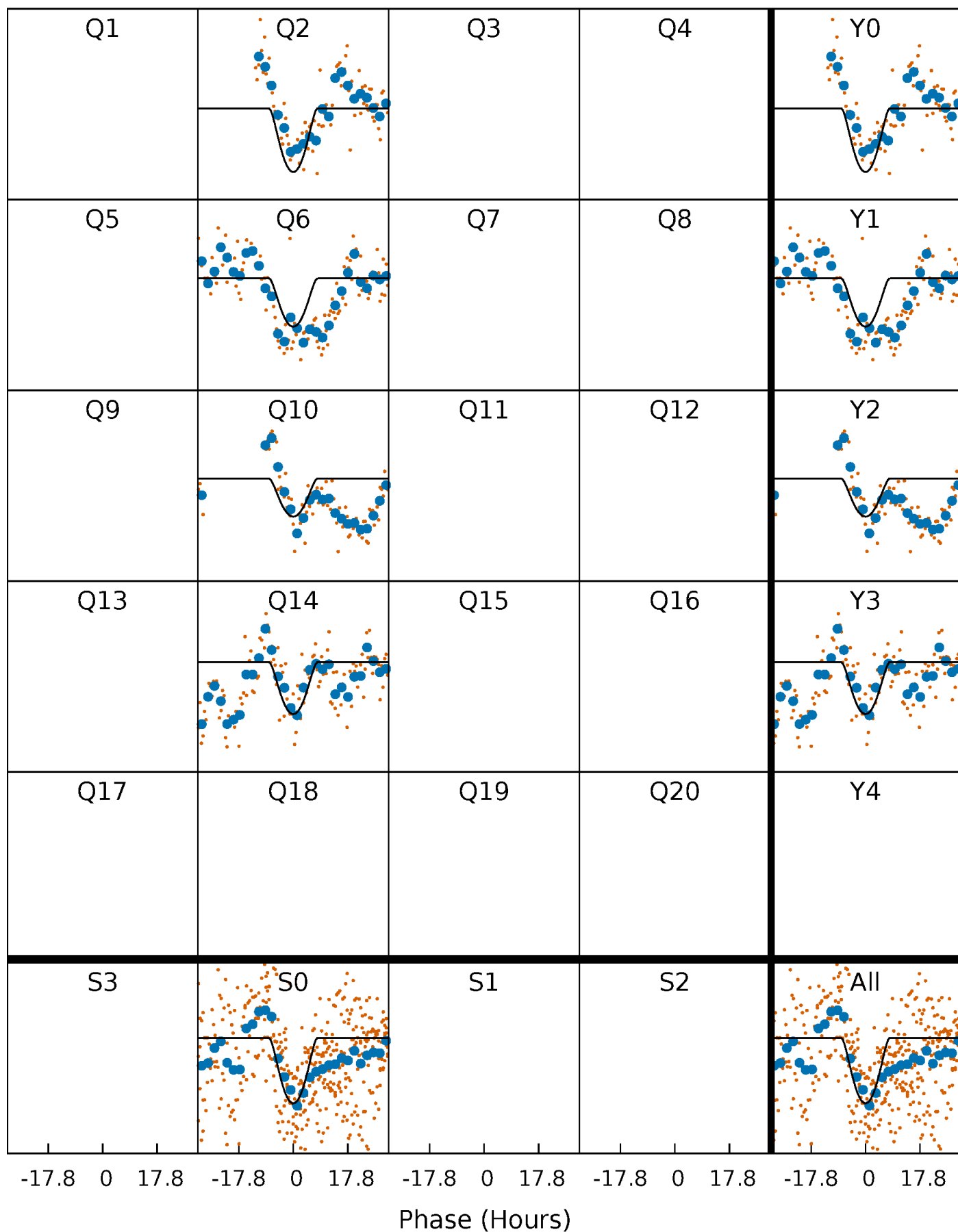
TCE 008105352-01 P=369.276544 Days  $T_0=231.905693$  (BKJD)





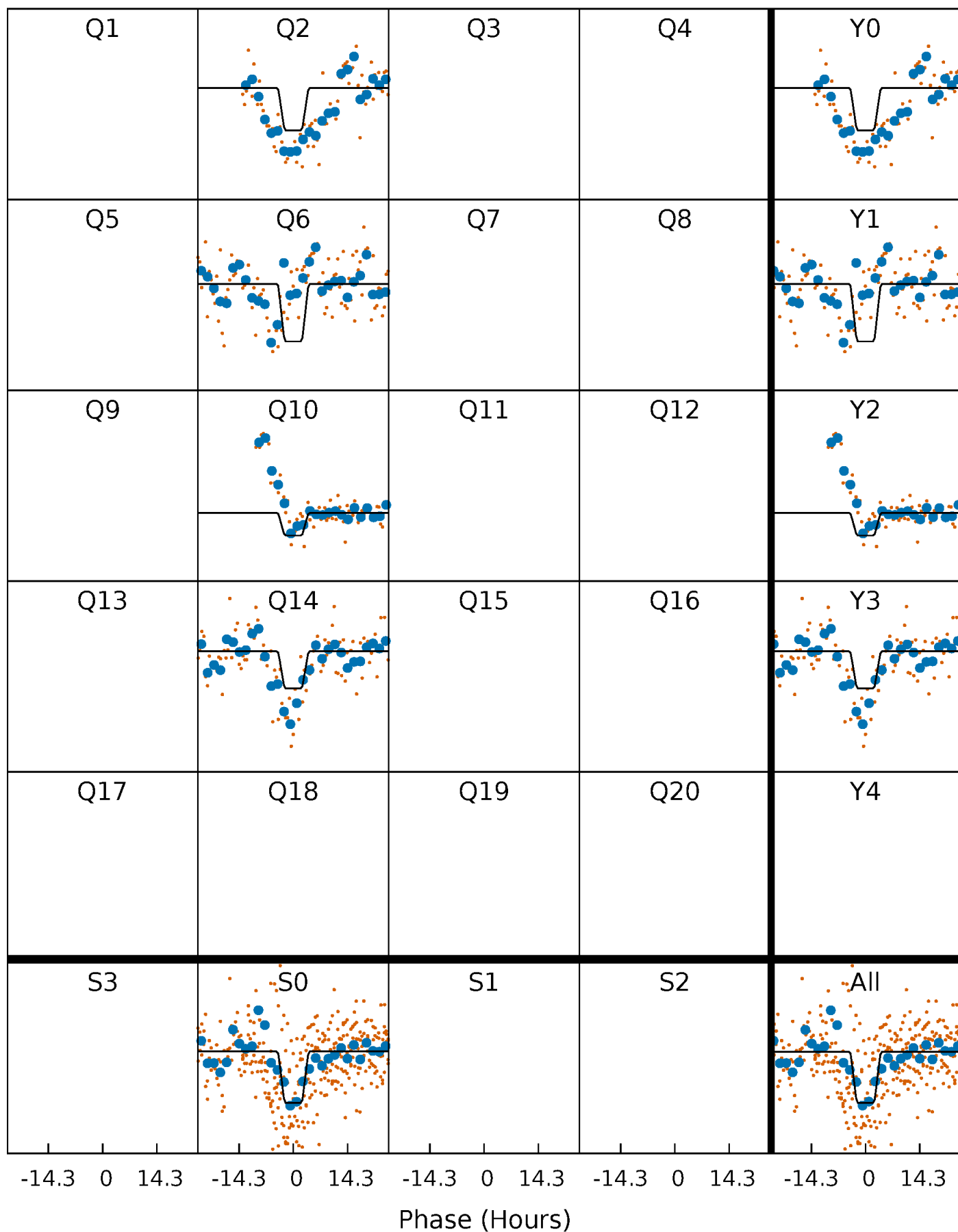
# DV Quarter-Phased Transit Curves

TCE 008105352-01 P=369.276544 Days  $T_0=231.905693$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

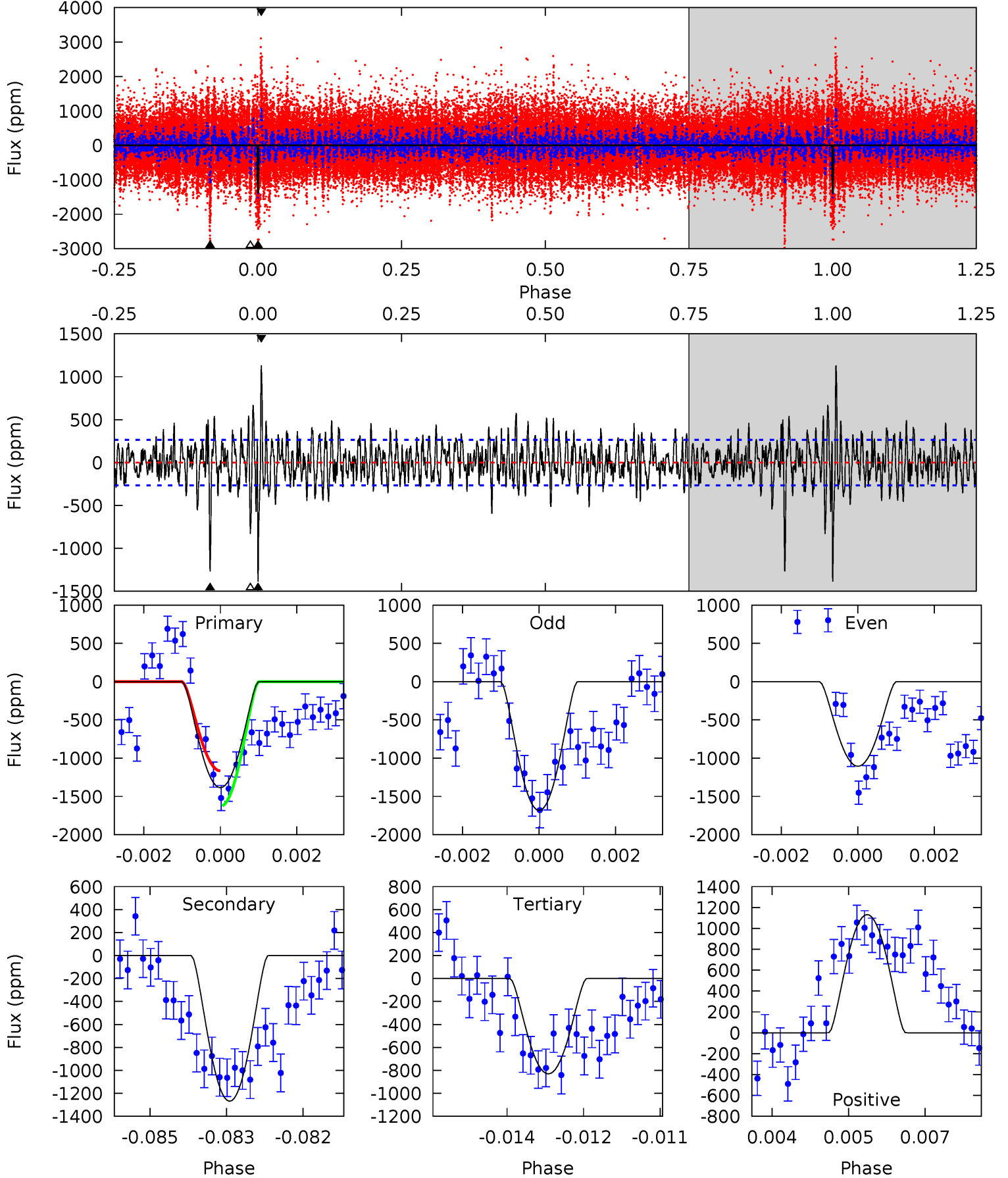
TCE 008105352-01 P=369.275296 Days  $T_0=231.948262$  (BKJD)



# DV Model-Shift Uniqueness Test

008105352-01, P = 369.276544 Days, E = 231.905693 Days

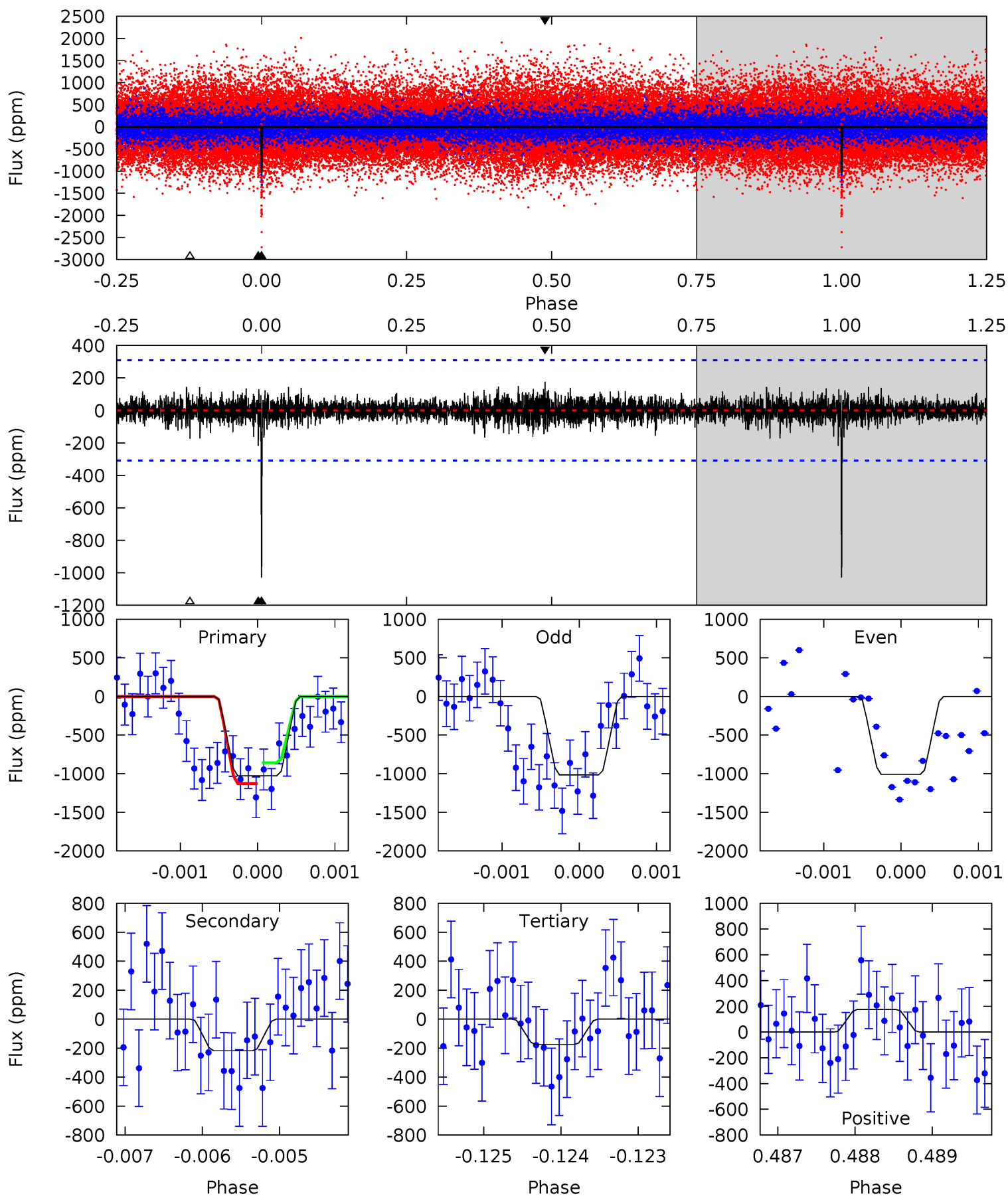
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.0	25.6	16.8	22.9	5.35	3.13	4.06	11.2	5.11	8.85	2.76	5.81	1.09	0.45	4.62



# Alt Model-Shift Uniqueness Test

008105352-01, P = 369.275296 Days, E = 231.948262 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
18.2	3.85	3.09	3.10	5.47	3.32	0.73	15.1	15.1	0.76	0.75	0.08	0.91	0.15	2.37



### Stellar Parameters For KIC 008105352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5157^{+154}_{-154}$	$4.445^{+0.130}_{-0.156}$	$0.180^{+0.200}_{-0.300}$	$0.904^{+0.151}_{-0.126}$	$0.830^{+0.085}_{-0.059}$	$1.584^{+0.799}_{-0.580}$
	+3%/-3%	+3%/-4%	+111%/-167%	+17%/-14%	+10%/-7%	+50%/-37%
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 008105352-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-1269 \pm 49$	$7.04^{+5.86}_{-4.42}$	$313^{+18}_{-16}$	$3985^{+1985}_{-740}$	$13148^{+81785}_{-9399}$
Alt.	$-217 \pm 56$	$6.05^{+5.32}_{-4.04}$	$313^{+18}_{-17}$	$3170^{+1262}_{-564}$	$2987^{+22313}_{-2206}$

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

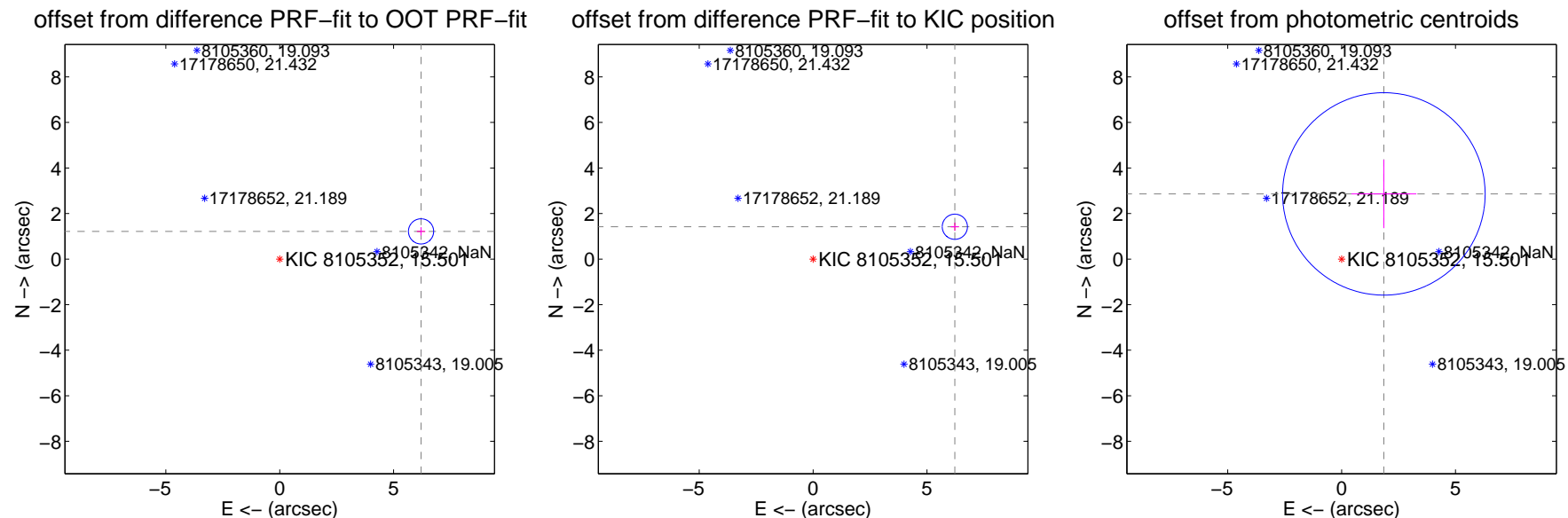
## DV Centroid Data

Supplemental centroid analysis for 008105352-01. Kepler magnitude: 15.50. Transit SNR 10.73

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$6.322 \pm 0.184$	34.30	$-6.203 \pm 0.184$	$1.217 \pm 0.181$
PRF-fit source offset from KIC position	$6.381 \pm 0.184$	34.62	$-6.221 \pm 0.184$	$1.420 \pm 0.181$
photometric centroid source offset	$3.41 \pm 1.48$	2.30	$-1.85 \pm 1.42$	$2.86 \pm 1.50$



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.





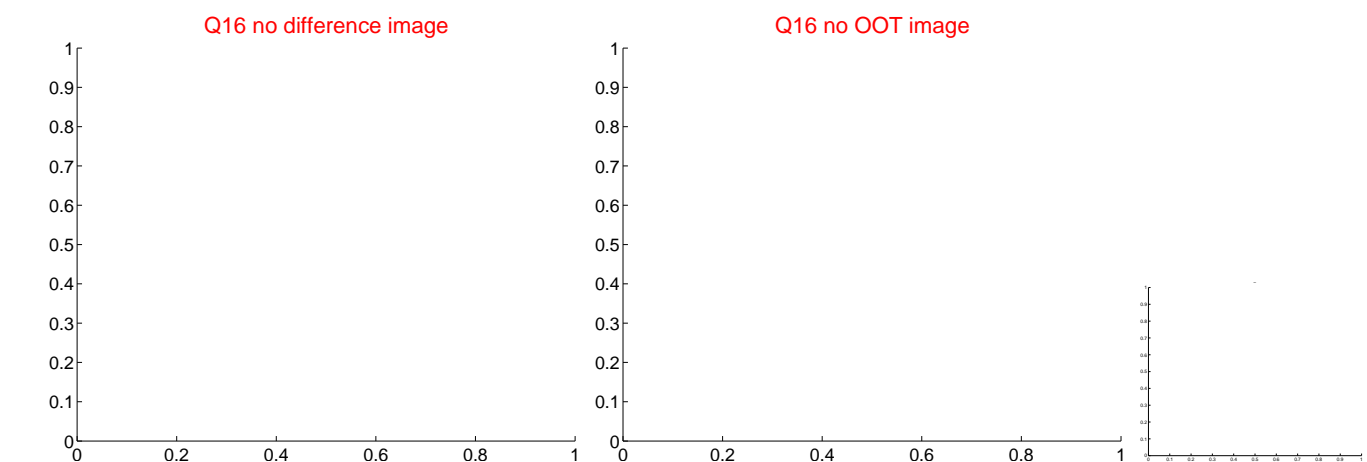
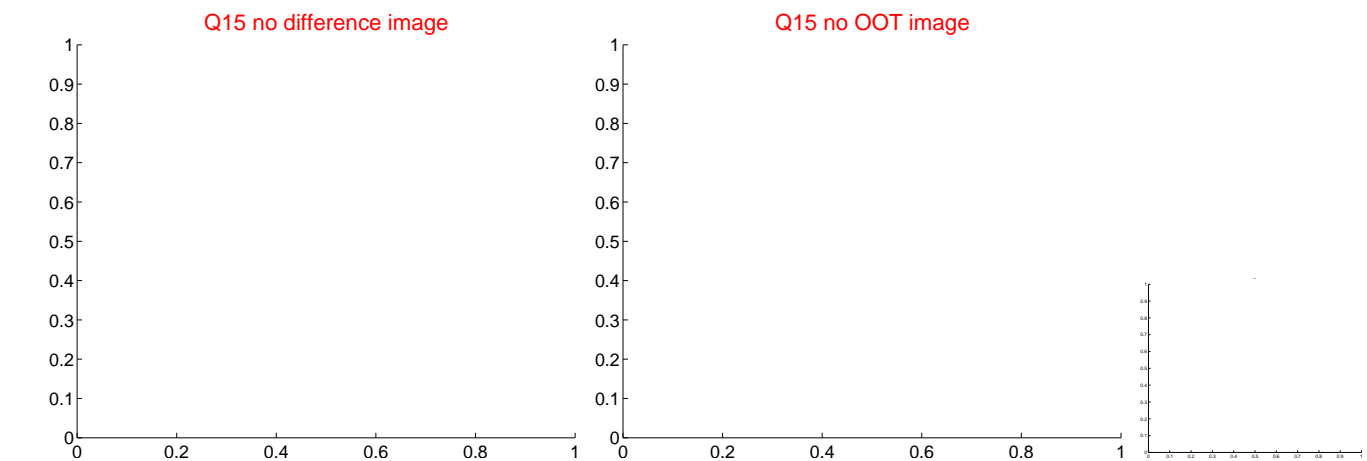
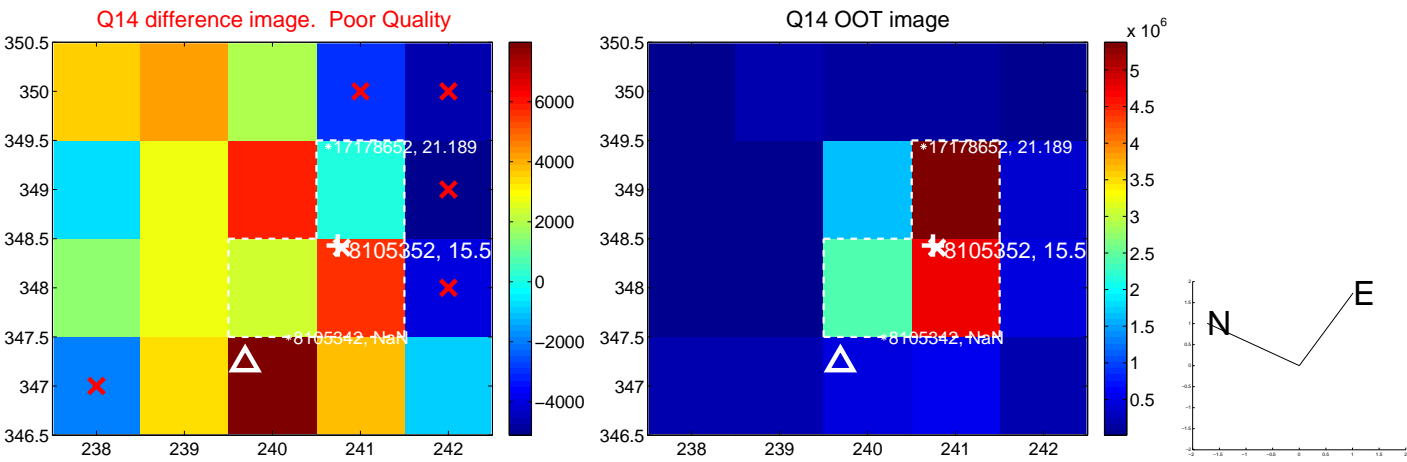
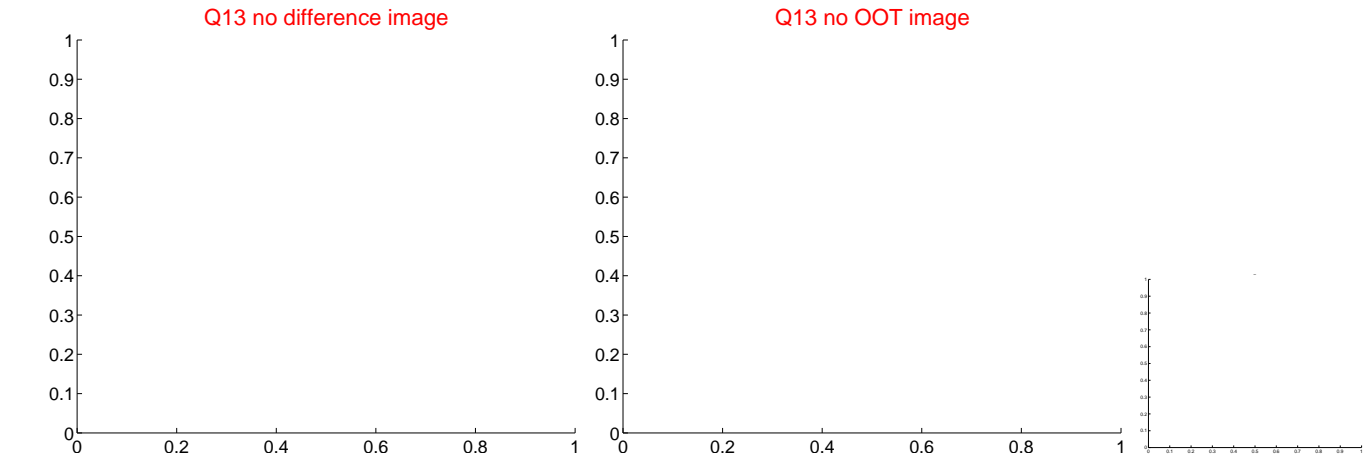
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



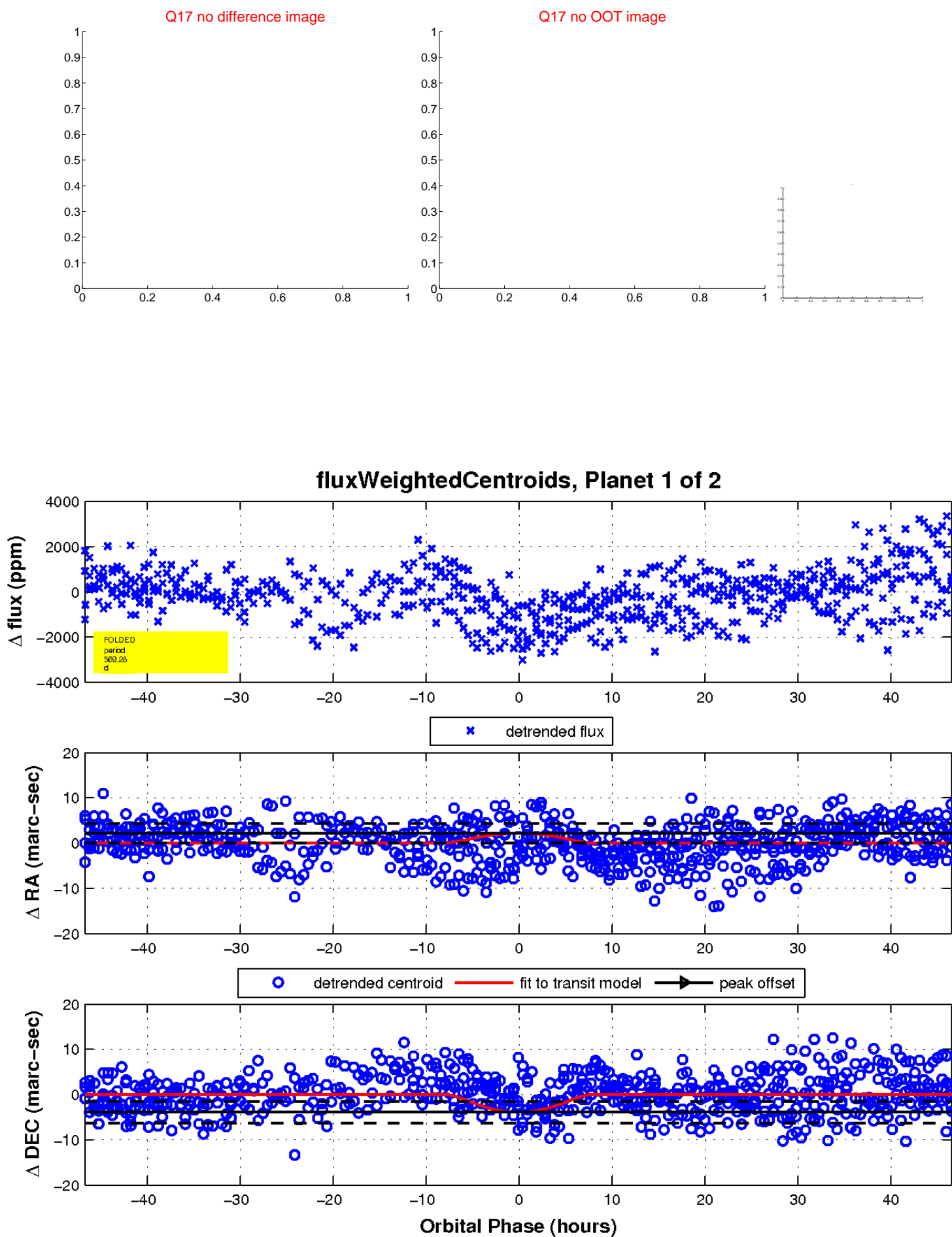
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# UKIRT Image

Declination

