

# KIC 007619403

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007619403-01	OBS	No	368.960296	232.328540	2990.2	24.974	9.8	12.1	0.71	5010	5.47	0.34

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007619403-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

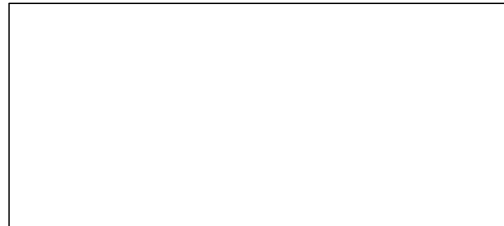
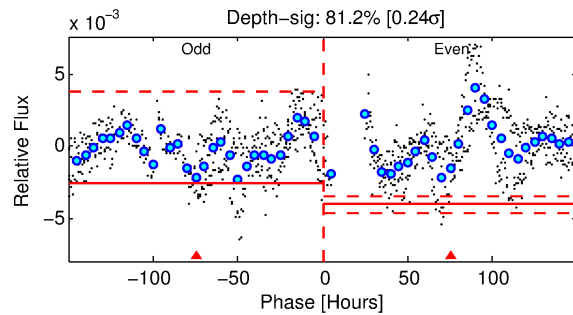
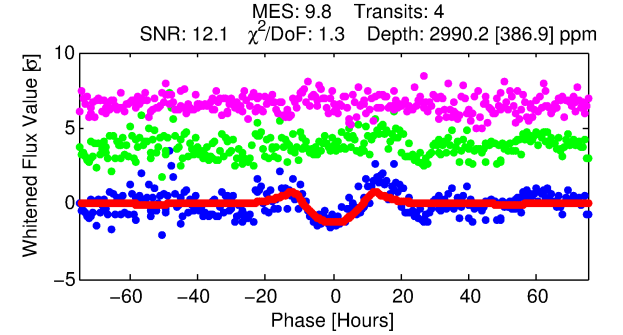
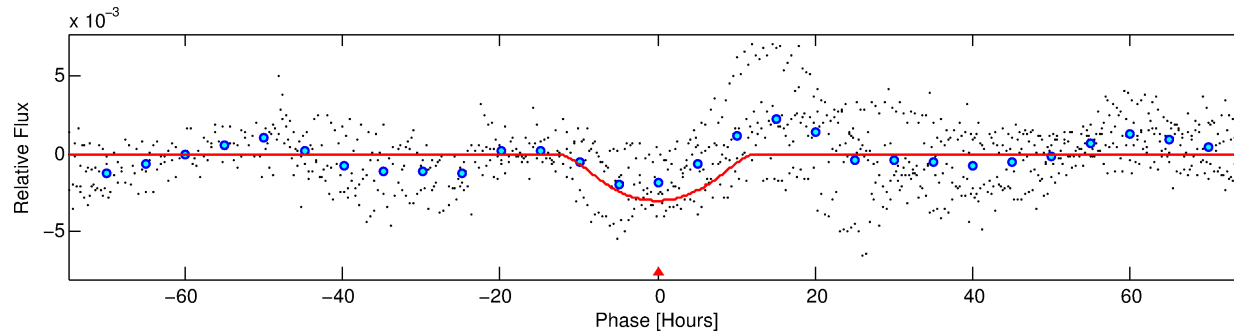
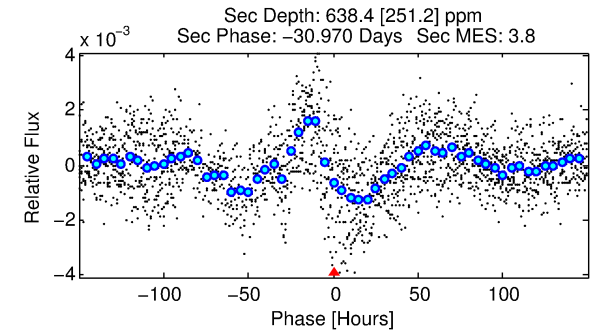
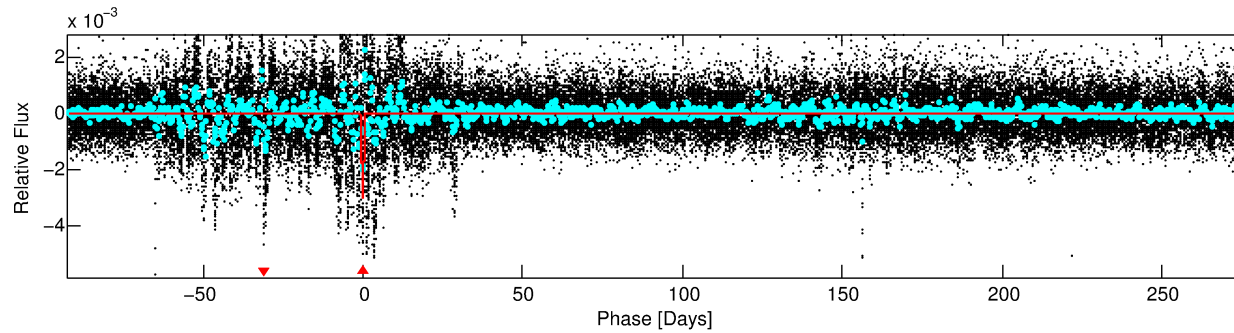
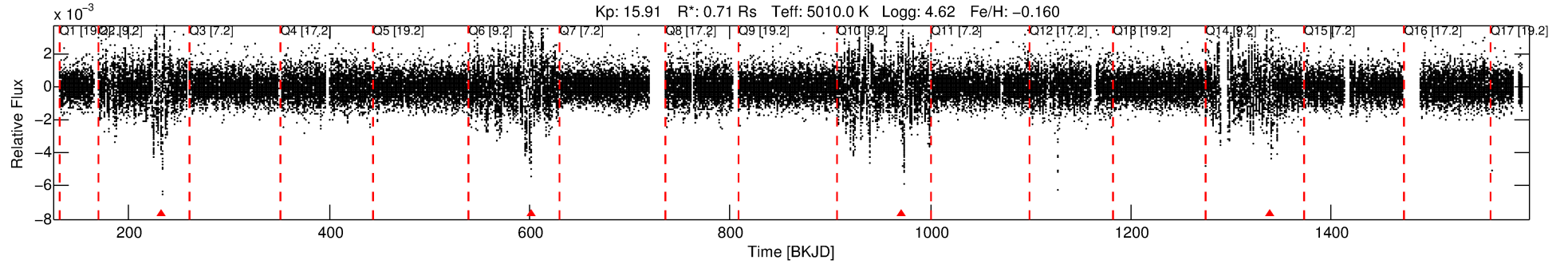
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007619403-01

No Significant Match Found

# DV One-Page Summary

KIC: 7619403 Candidate: 1 of 1 Period: 368.960 d



## DV Fit Results:

Period = 368.96030 [0.01676] d  
Epoch = 232.3285 [0.0289] BKJD  
Rp/R\* = 0.0701 [0.0269]  
a/R\* = 55.02 [10.06]  
b = 0.95 [0.06]  
Seff = 0.34 [0.06]  
Teq = 194 [9] K  
Rp = 5.47 [2.20] Re  
a = 0.9280 [0.0896] AU  
Ag = 10121.96 [8831.60] [1.15σ]  
Teffp = 3009 [655] K [4.30σ]

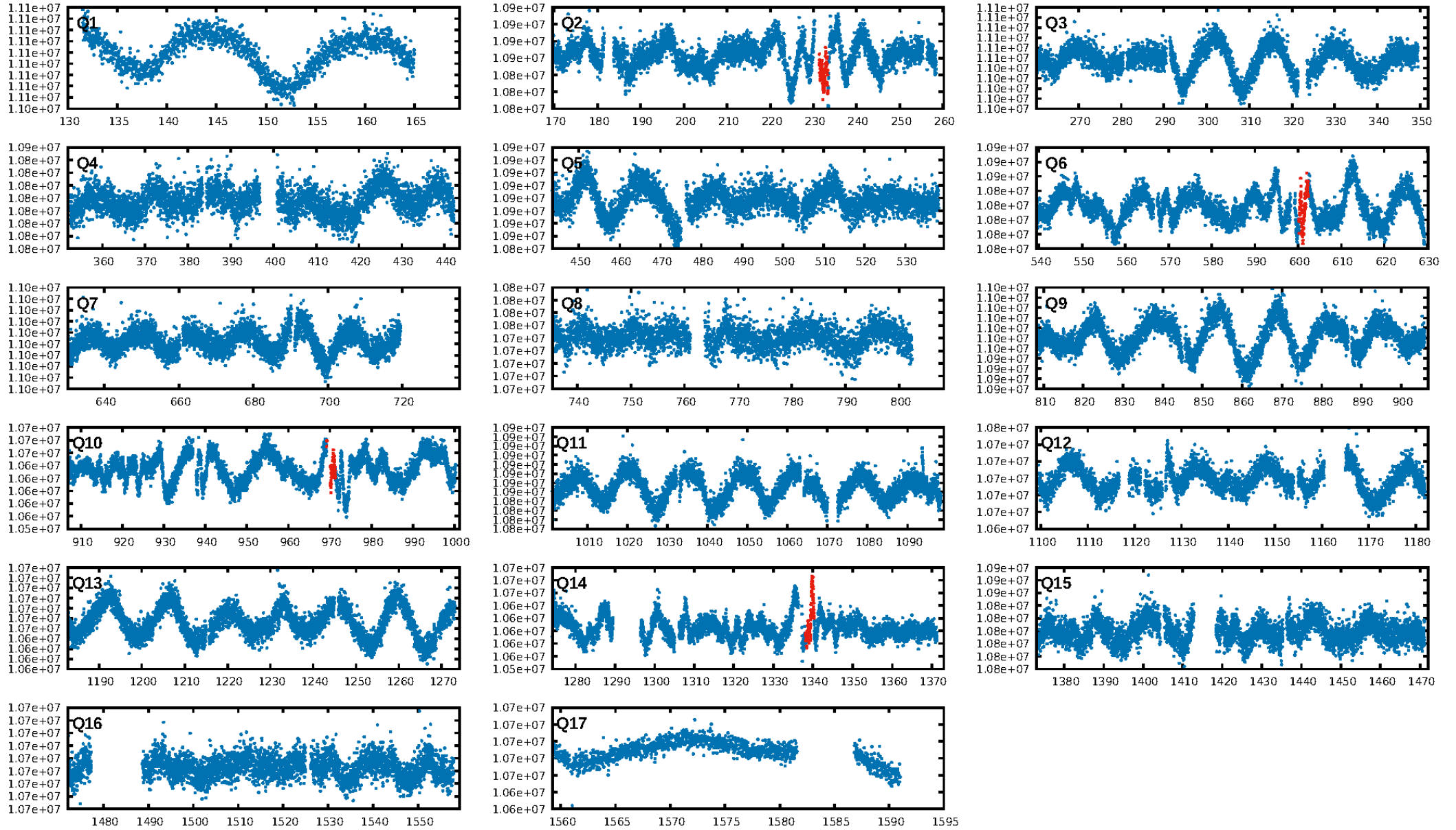
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 58.2%  
ModelChiSquareGof-sig: 99.1%  
Bootstrap-pfa: 4.50e-12  
RollingBand-fgt: 0.00 [0/4]  
GhostDiagnostic-chr: 0.2207  
Centroid-sig: 0.1%  
Centroid-so: 4.821 arcsec [2.93σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: N/A

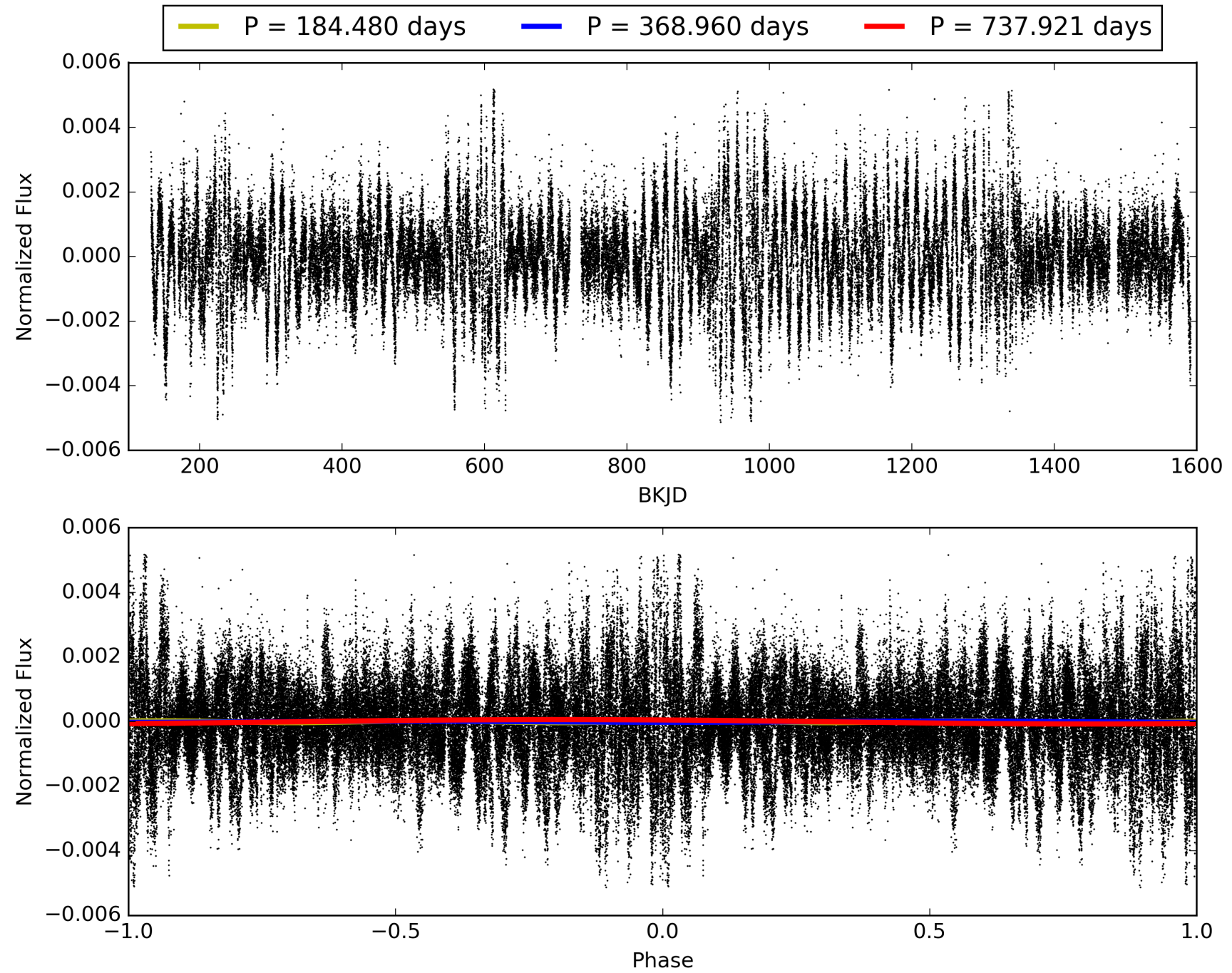
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:07:54 Z

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

# TCE 007619403-01, PDC Light Curves

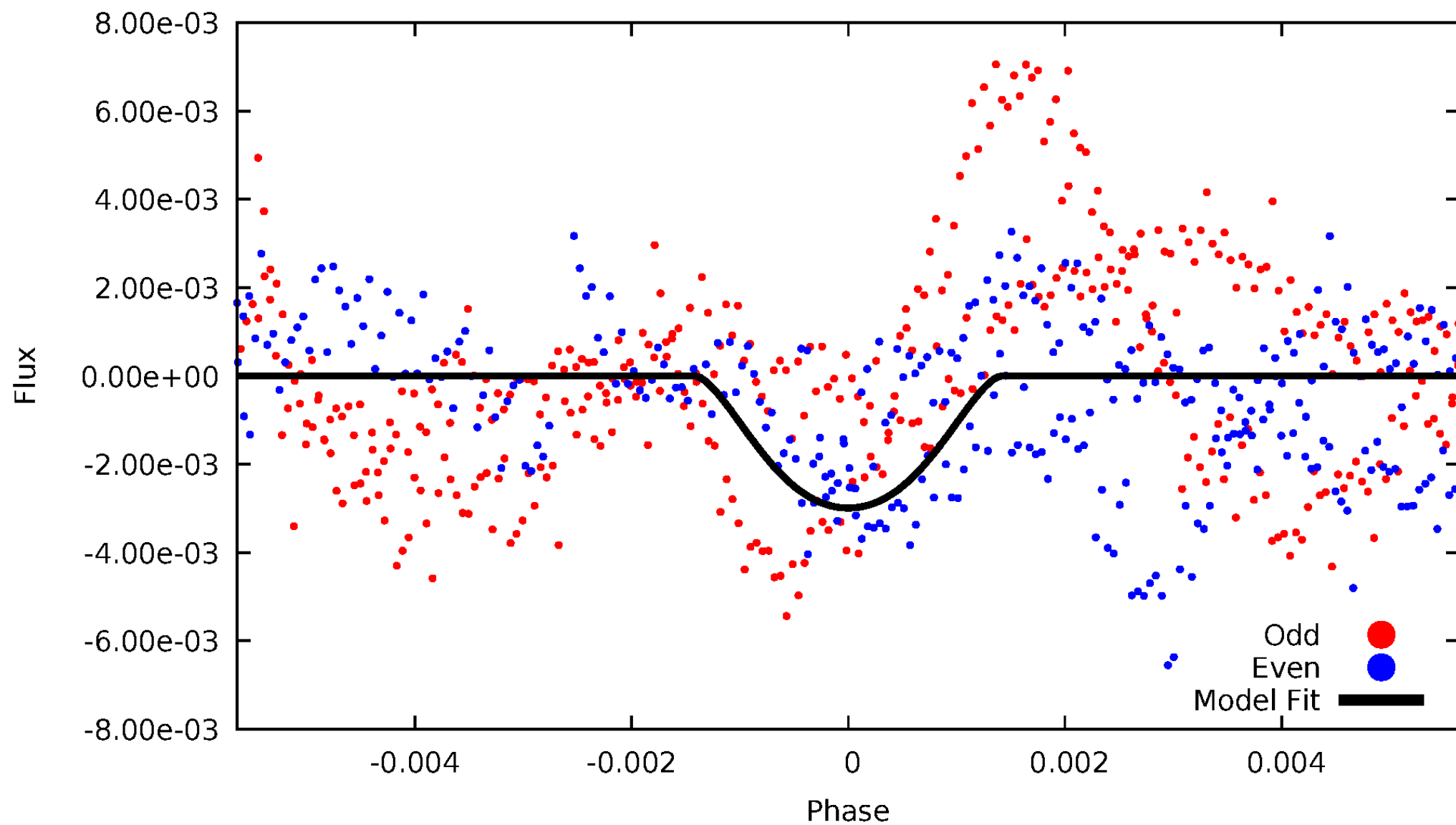


TCE 007619403-01



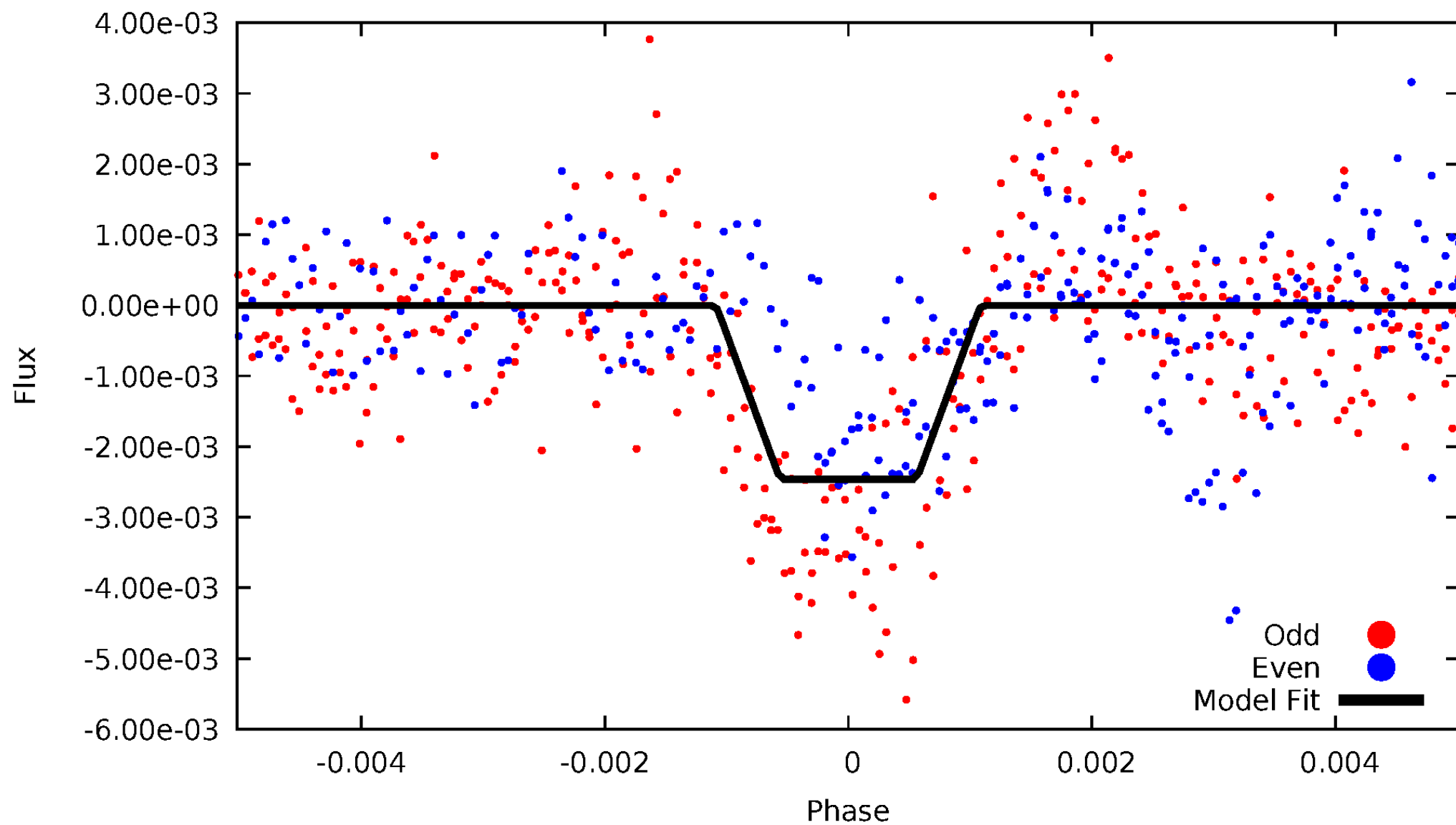
# DV Odd/Even

TCE 007619403-01



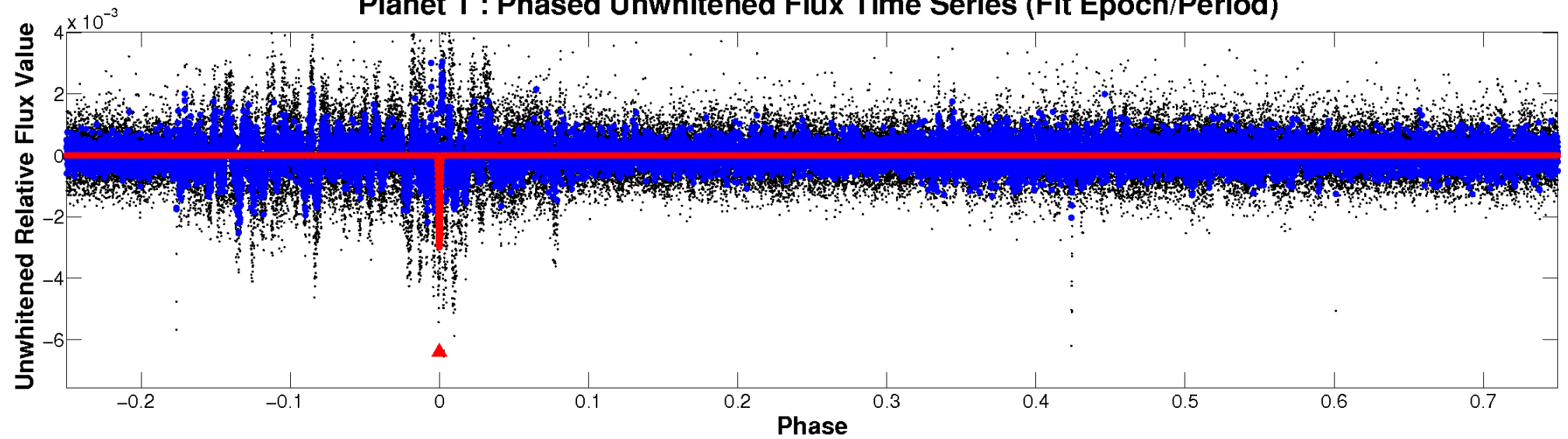
# ALT Odd/Even

TCE 007619403-01

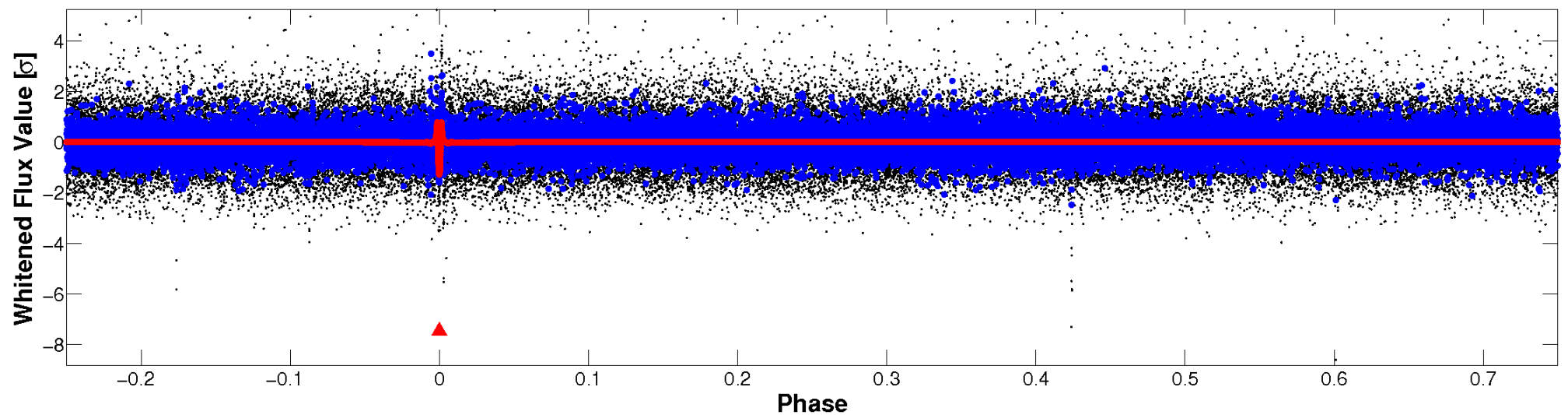


# Non-Whitened Vs. Whitened Light Curve

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



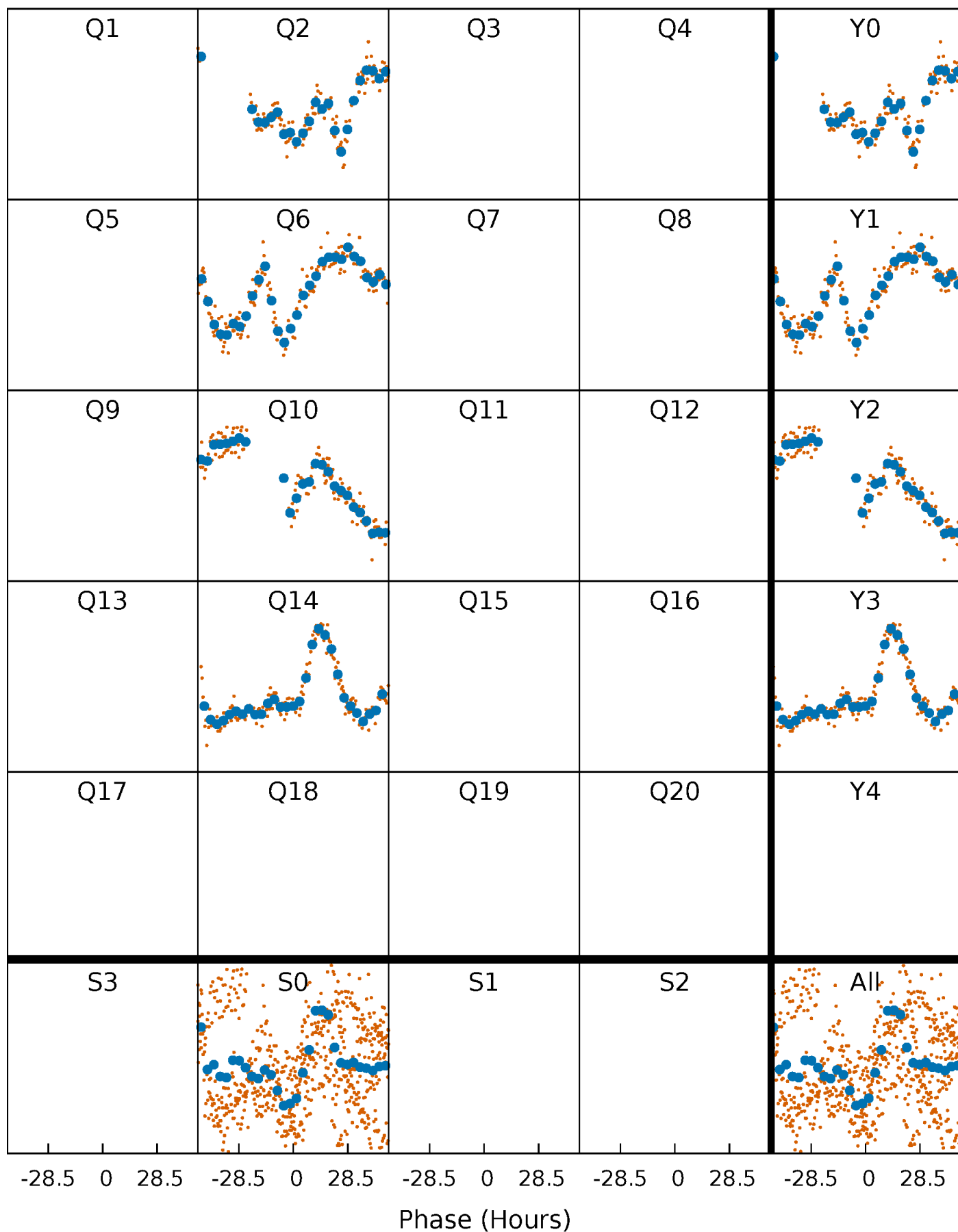
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

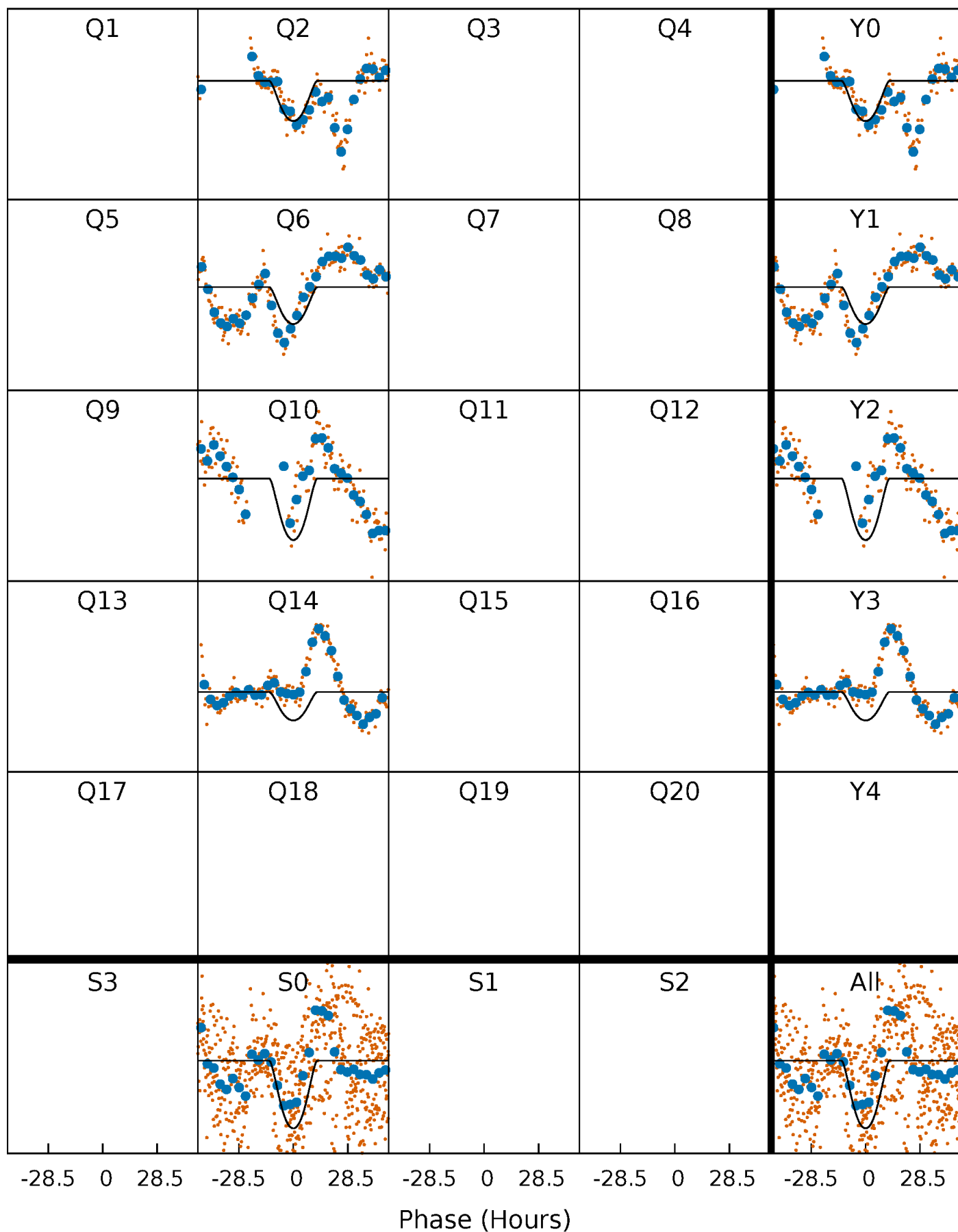
TCE 007619403-01 P=368.960296 Days  $T_0=232.328540$  (BKJD)





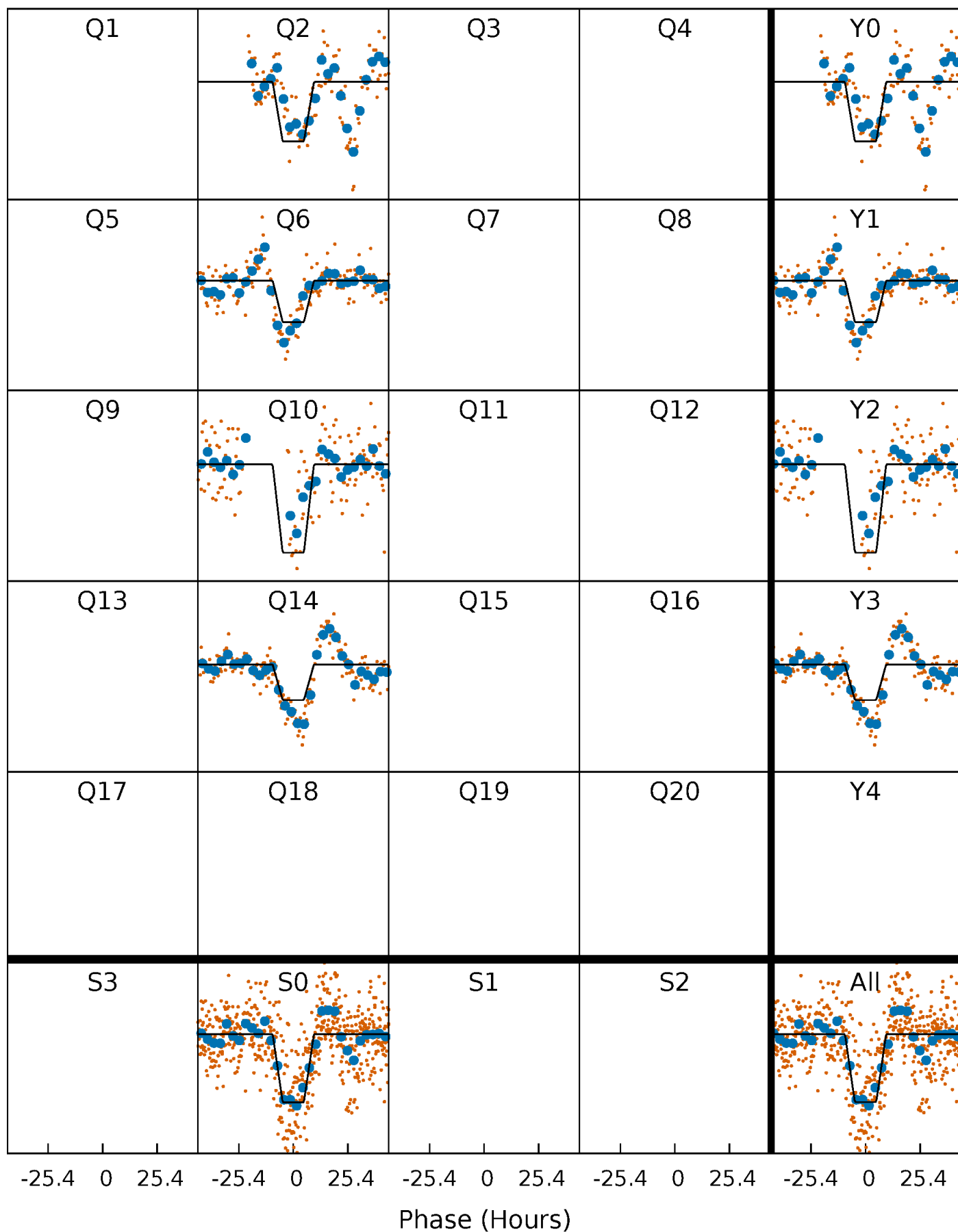
# DV Quarter-Phased Transit Curves

TCE 007619403-01 P=368.960296 Days  $T_0=232.328540$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

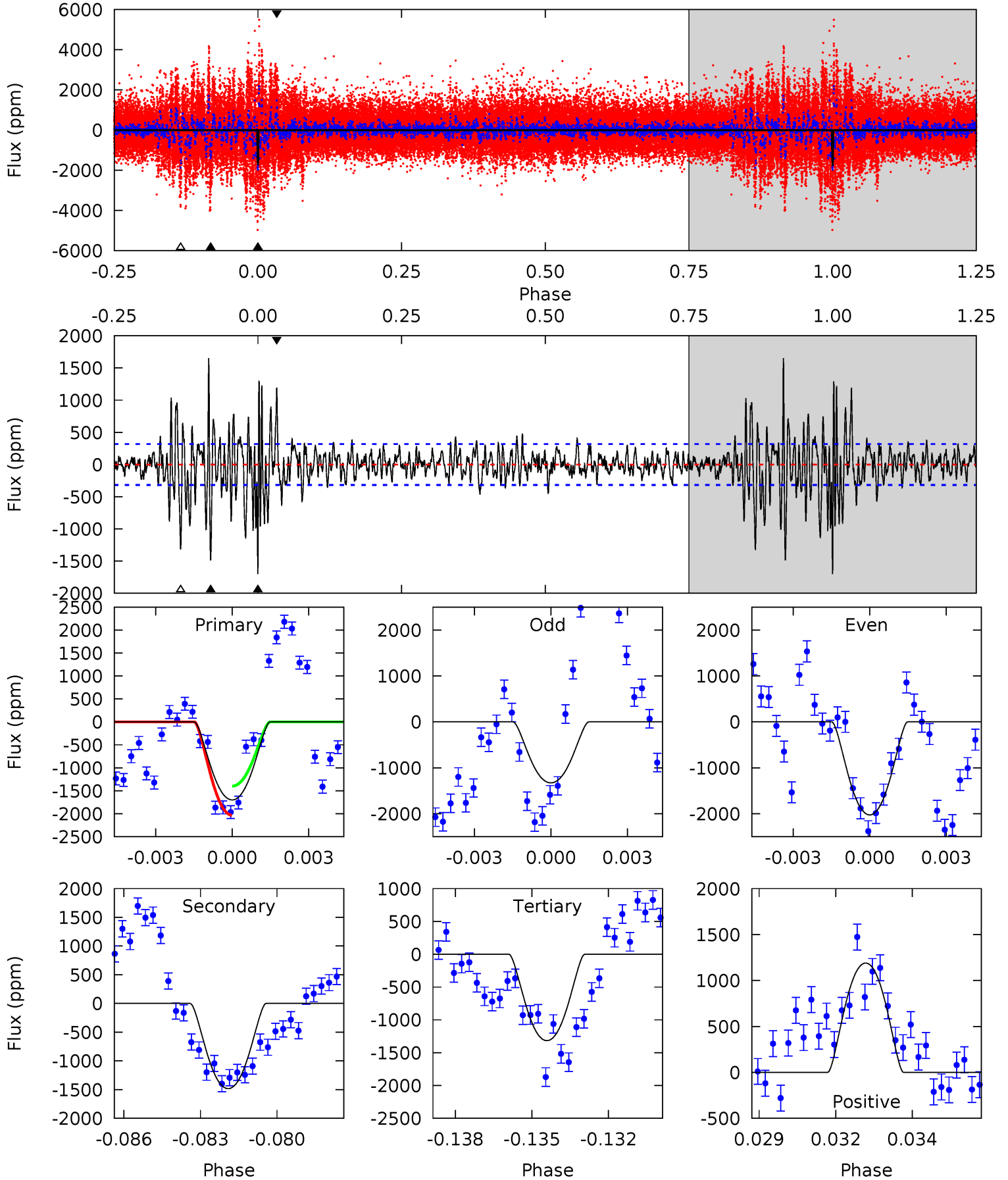
TCE 007619403-01 P=368.968793 Days  $T_0=232.262177$  (BKJD)



# DV Model-Shift Uniqueness Test

007619403-01, P = 368.960296 Days, E = 232.328540 Days

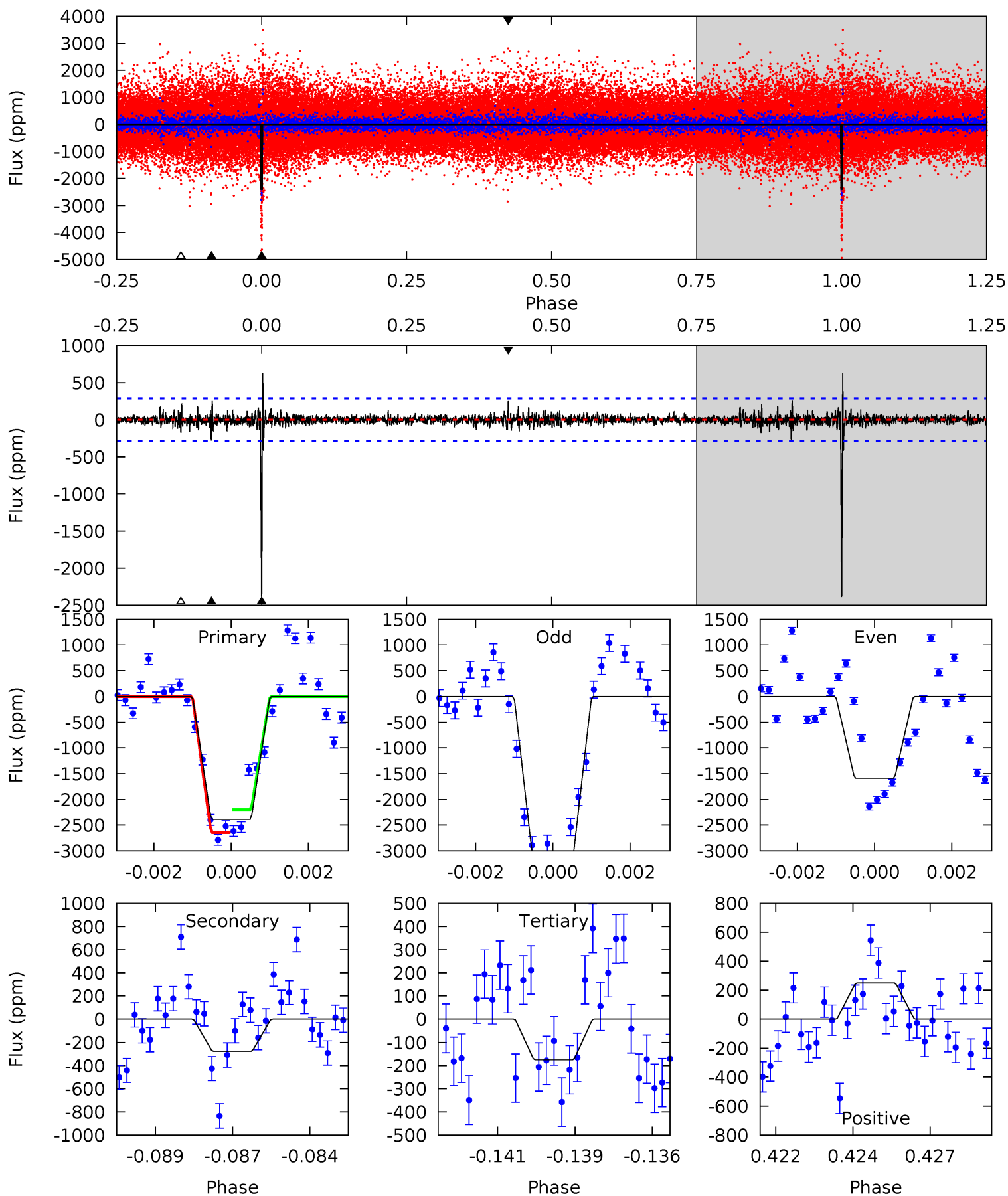
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.2	24.6	21.8	19.7	5.26	2.98	4.38	6.34	8.45	2.75	4.85	5.84	0.85	0.49	5.16



# Alt Model-Shift Uniqueness Test

007619403-01, P = 368.968793 Days, E = 232.262177 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
44.3	5.13	3.25	4.63	5.31	3.07	0.80	41.1	39.7	1.88	0.50	14.8	1.10	0.21	4.13



### Stellar Parameters For KIC 007619403

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5010^{+151}_{-136}$	$4.623^{+0.030}_{-0.070}$	$-0.160^{+0.300}_{-0.300}$	$0.715^{+0.086}_{-0.058}$	$0.798^{+0.055}_{-0.095}$	$3.079^{+0.477}_{-0.722}$
	+3%/-3%	+1%/-2%	+188%/-188%	+12%/-8%	+7%/-12%	+16%/-23%
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 007619403-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1483 \pm 60$	$5.62^{+2.04}_{-2.17}$	$274^{+10}_{-10}$	$3990^{+786}_{-427}$	$22367^{+38121}_{-10490}$
Alt.	$-276 \pm 54$	$4.08^{+2.26}_{-2.06}$	$273^{+10}_{-9}$	$3329^{+905}_{-401}$	$7798^{+24032}_{-4610}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

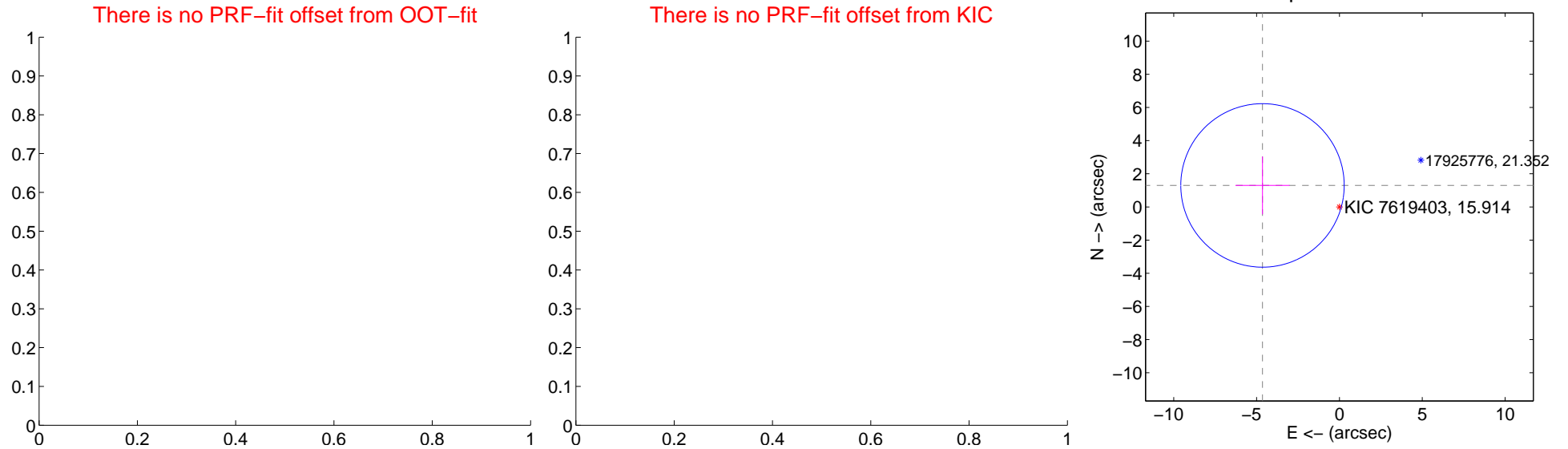
## DV Centroid Data

Supplemental centroid analysis for 007619403-01. Kepler magnitude: 15.91. Transit SNR 12.06

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	$4.82 \pm 1.64$	2.93	$4.64 \pm 1.64$	$1.30 \pm 1.74$



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.





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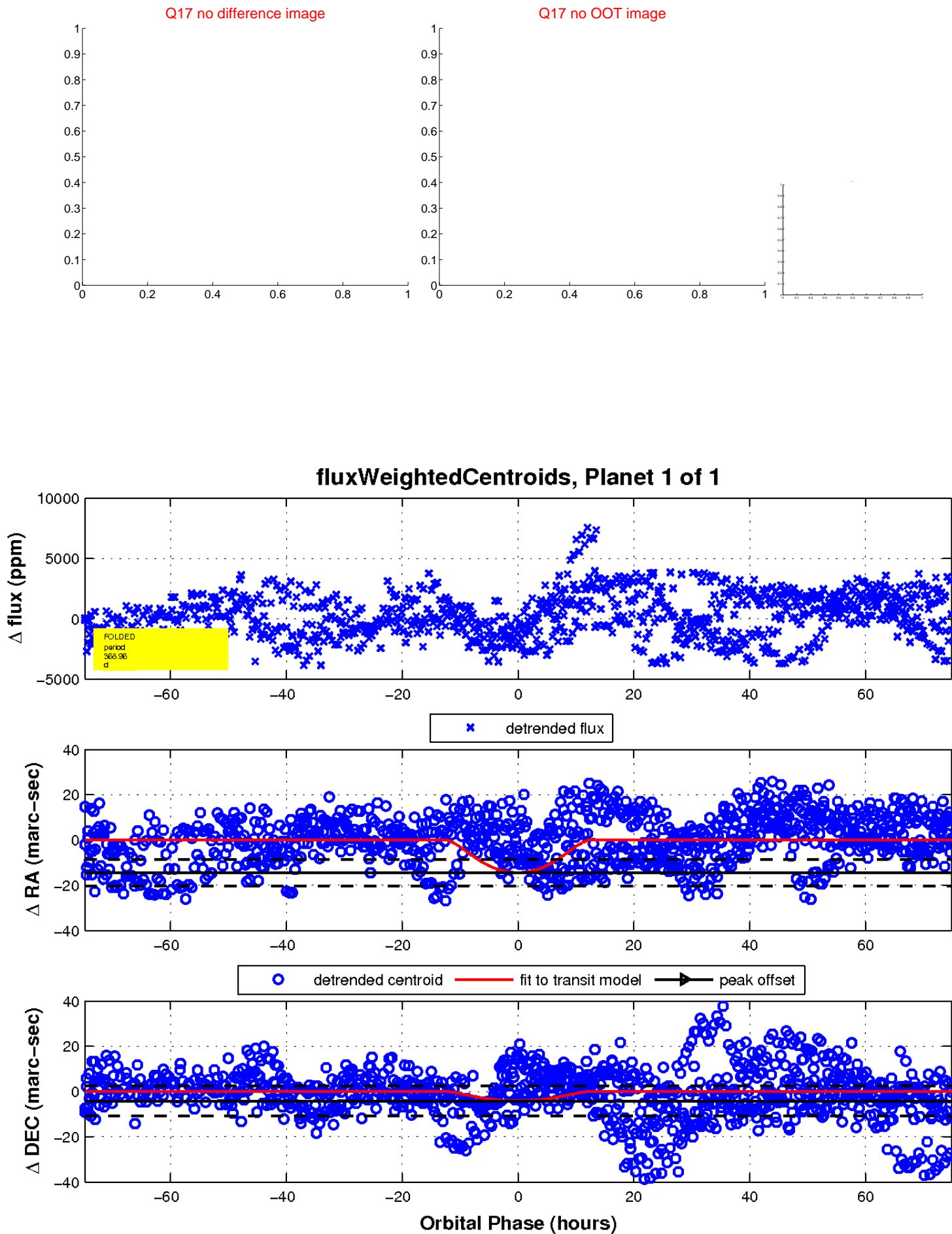
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



# UKIRT Image

Declination

