

# KIC 007026347

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007026347-01	OBS	No	394.899134	278.200664	812.0	17.235	7.3	7.2	1.11	5857	3.33	1.20

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007026347-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

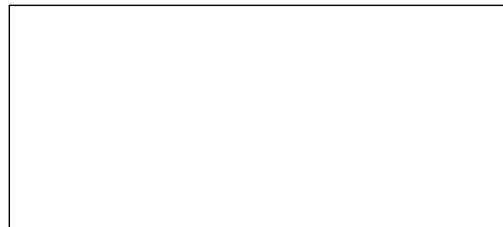
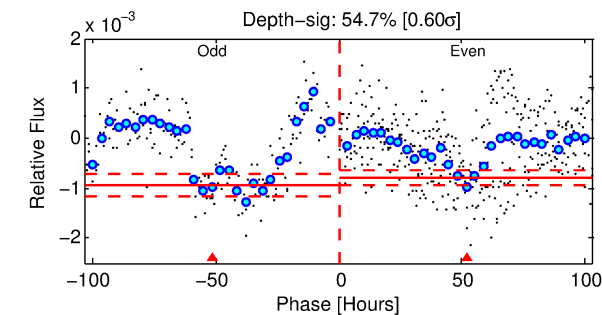
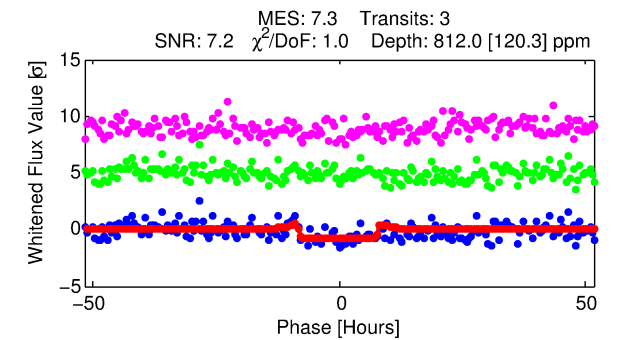
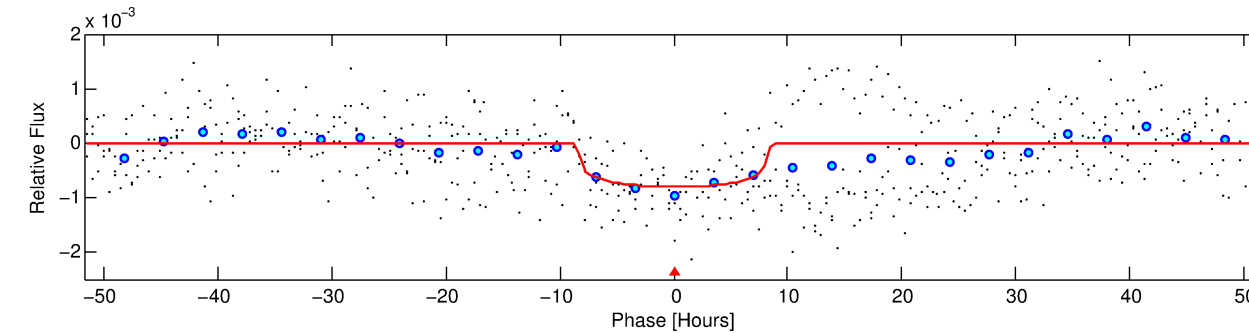
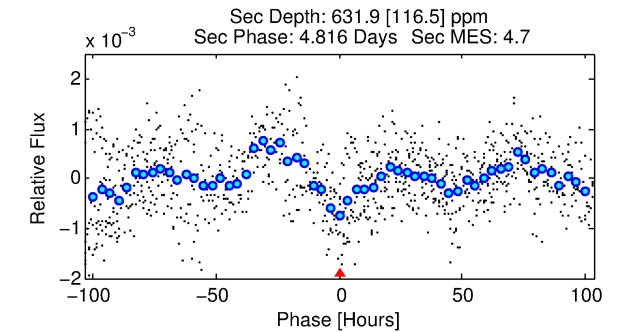
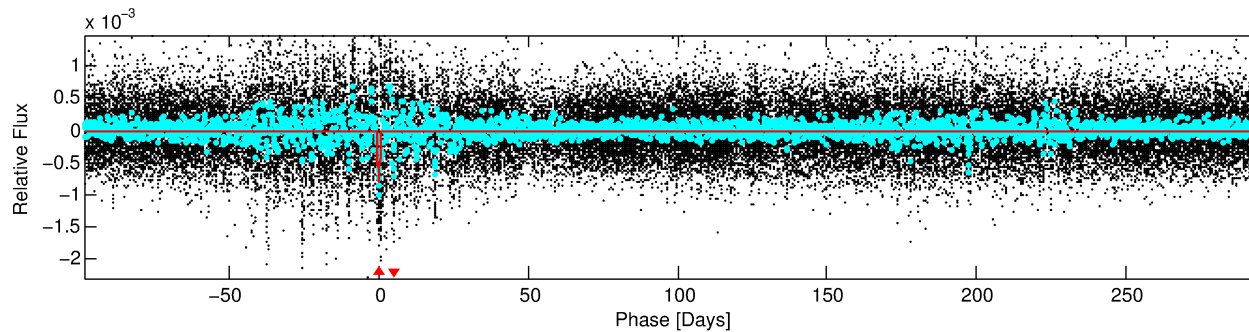
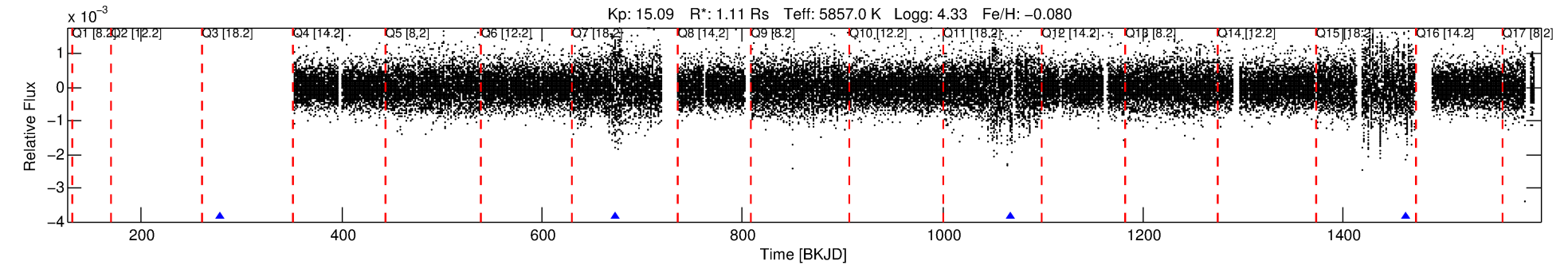
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007026347-01

No Significant Match Found

# DV One-Page Summary

KIC: 7026347 Candidate: 1 of 1 Period: 394.899 d



## DV Fit Results:

Period = 394.89913 [0.01300] d  
Epoch = 278.2007 [0.0280] BKJD  
Rp/R\* = 0.0276 [0.0057]  
a/R\* = 138.27 [117.86]  
b = 0.66 [0.74]  
Seff = 1.20 [0.45]  
Teq = 267 [25] K  
Rp = 3.33 [1.16] Re  
a = 1.0400 [0.2472] AU  
Ag = 33869.44 [19394.65] [1.75σ]  
Teffp = 5594 [665] K [8.00σ]

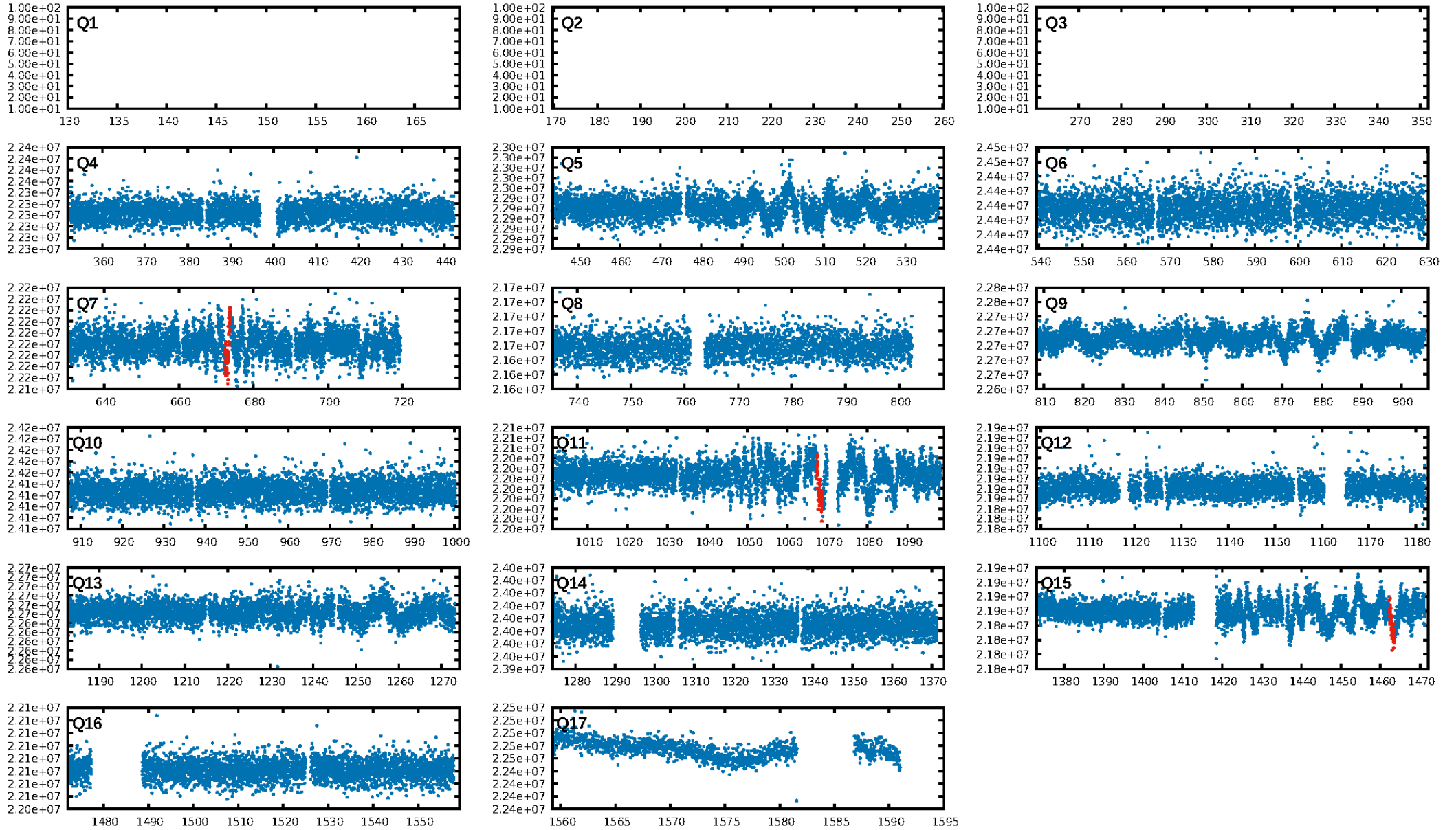
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 90.1%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 6.99e-09**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.6007  
Centroid-sig: 97.6%  
Centroid-so: 1.152 arcsec [0.63σ]  
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: 1.00 [3/3]

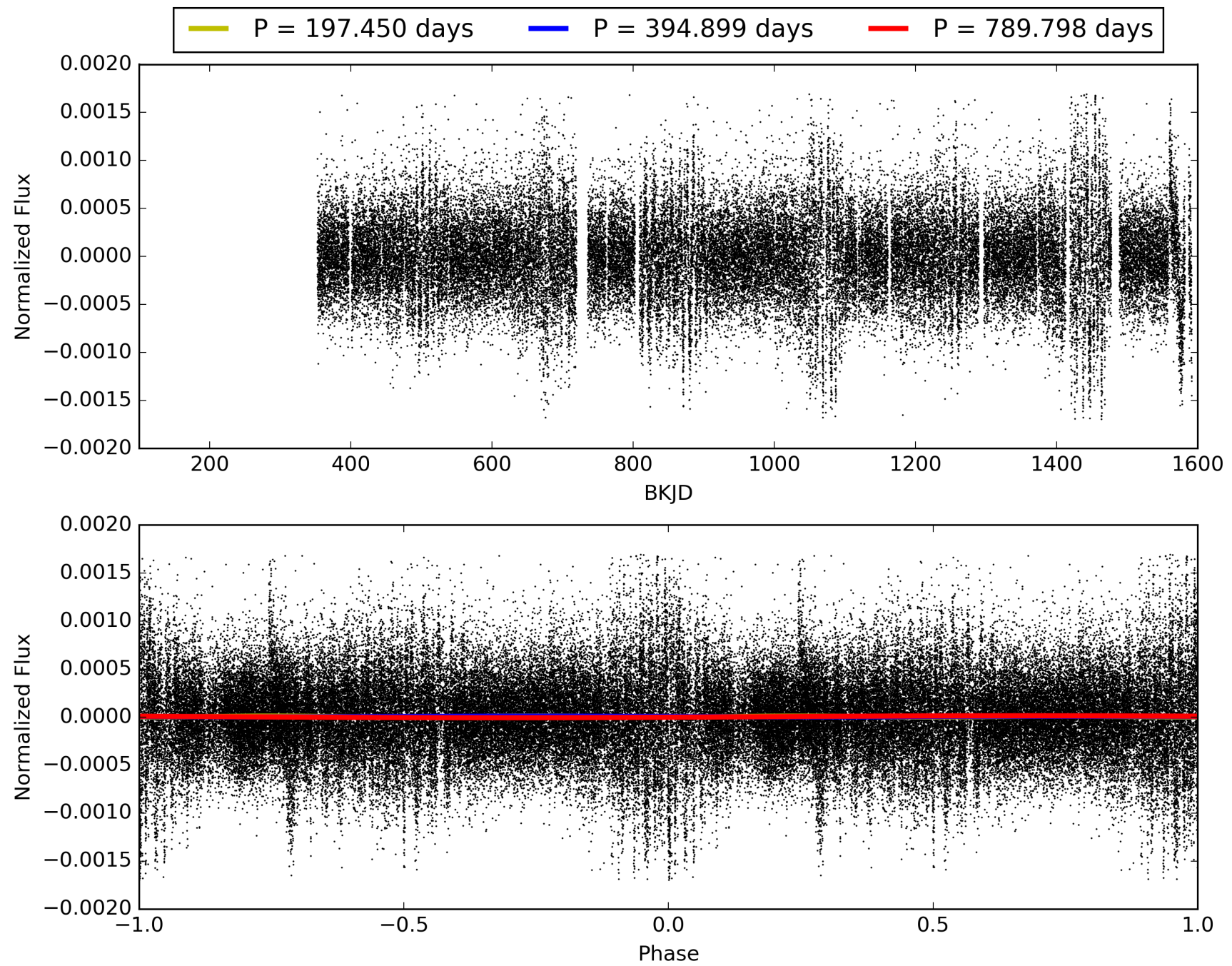
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:49:21 Z

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

# TCE 007026347-01, PDC Light Curves

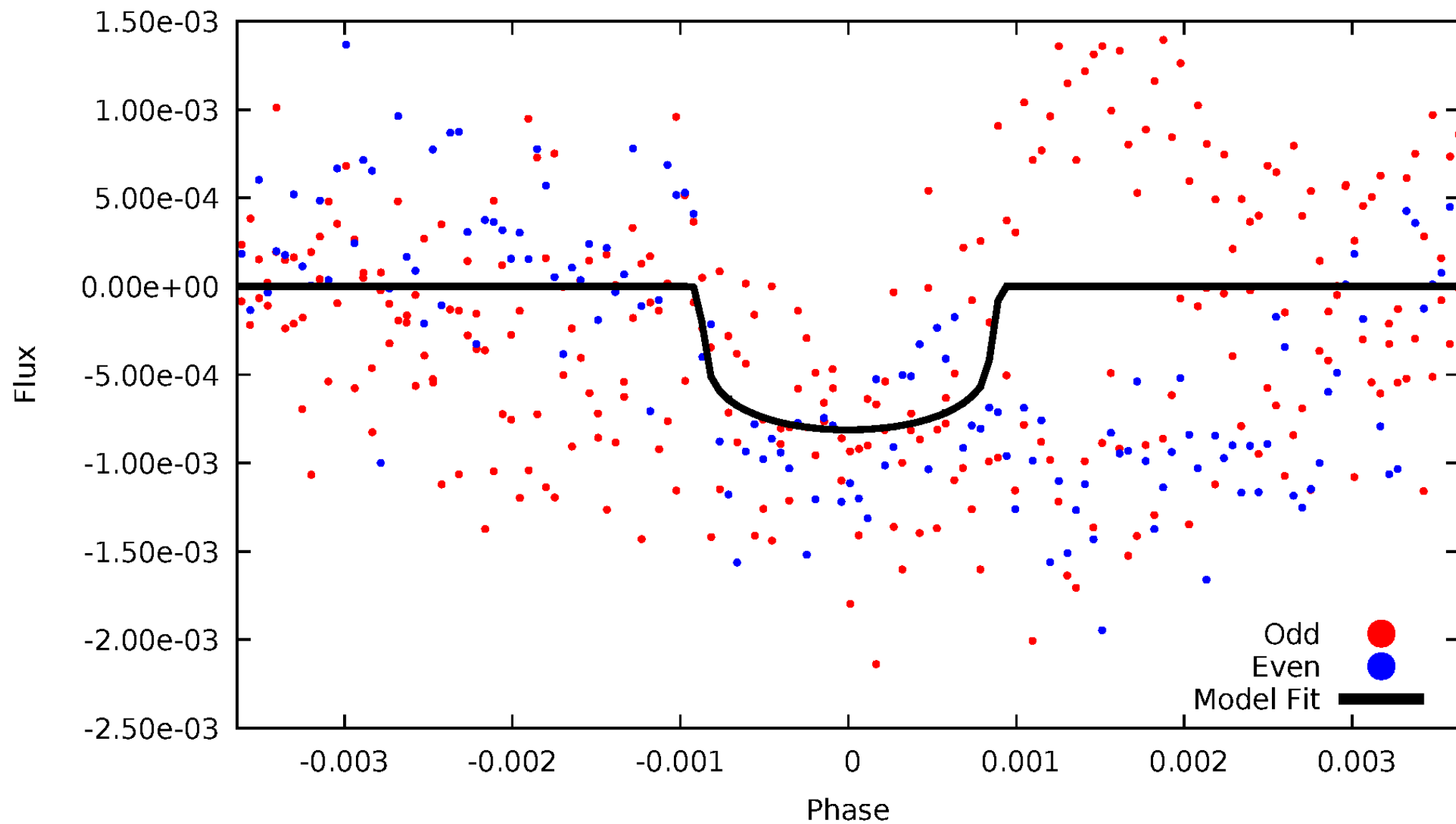


TCE 007026347-01



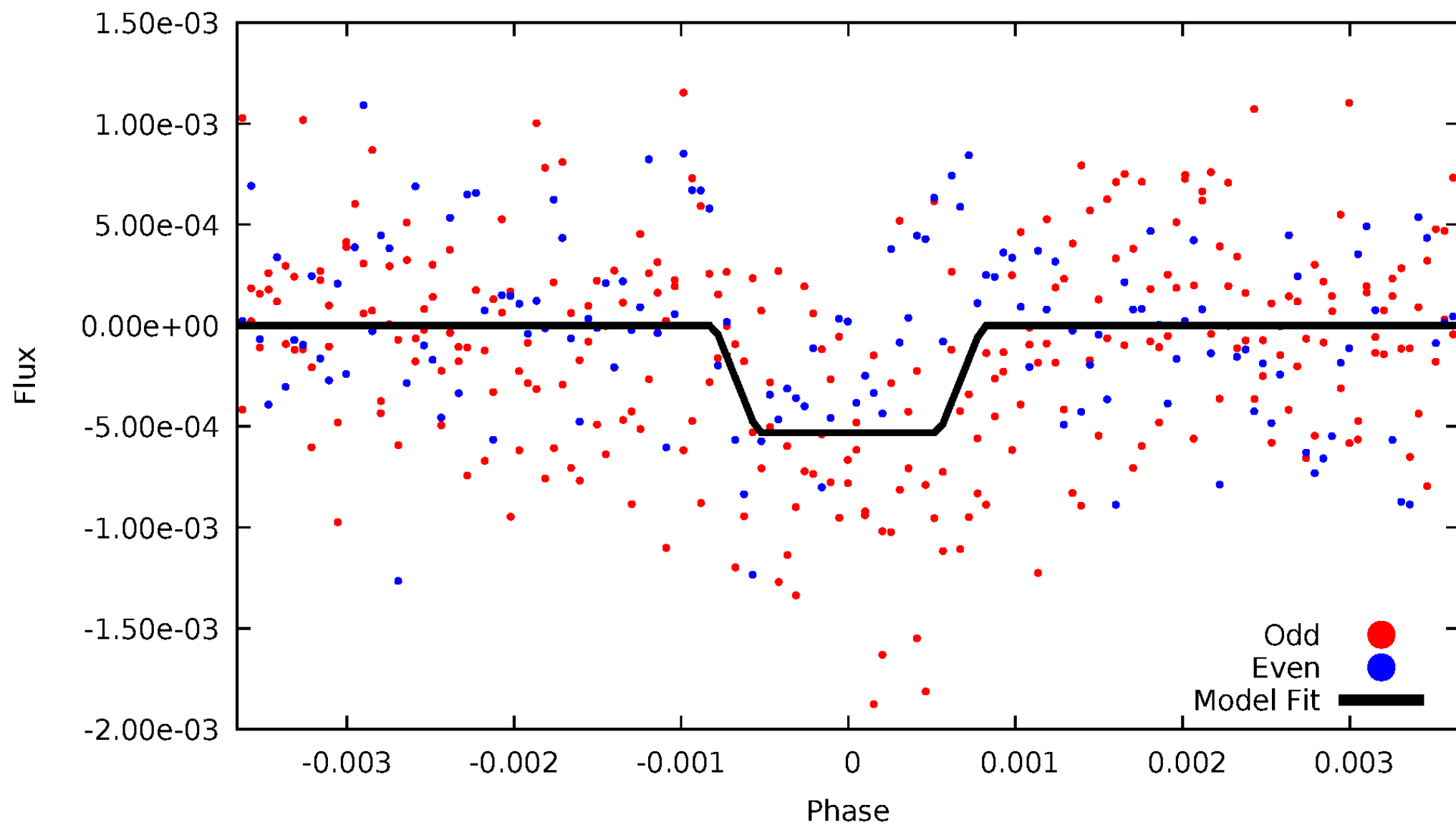
# DV Odd/Even

TCE 007026347-01



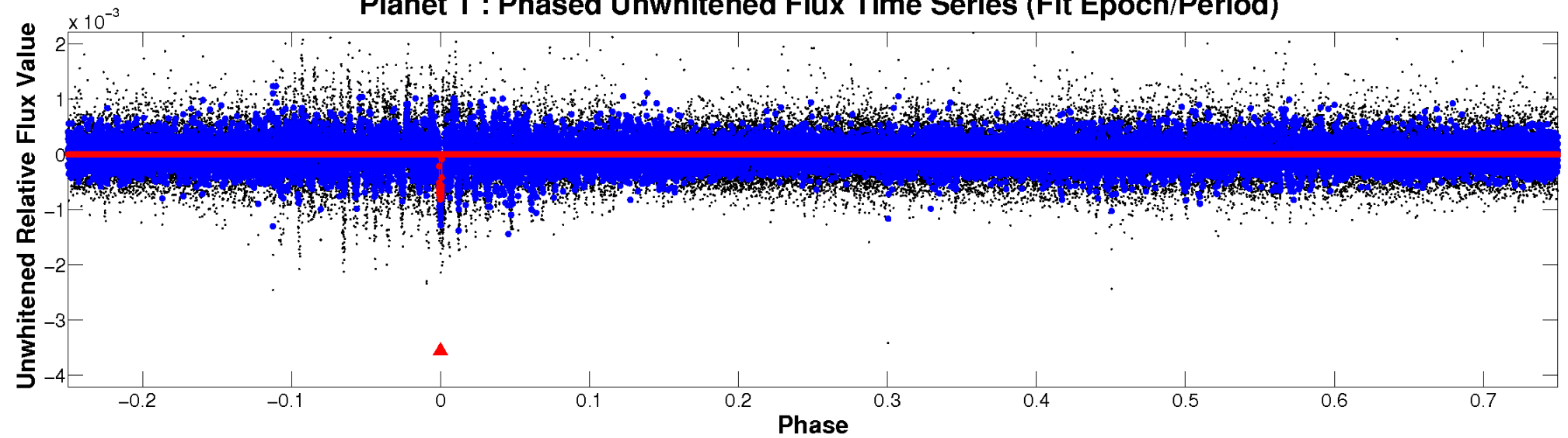
# ALT Odd/Even

TCE 007026347-01

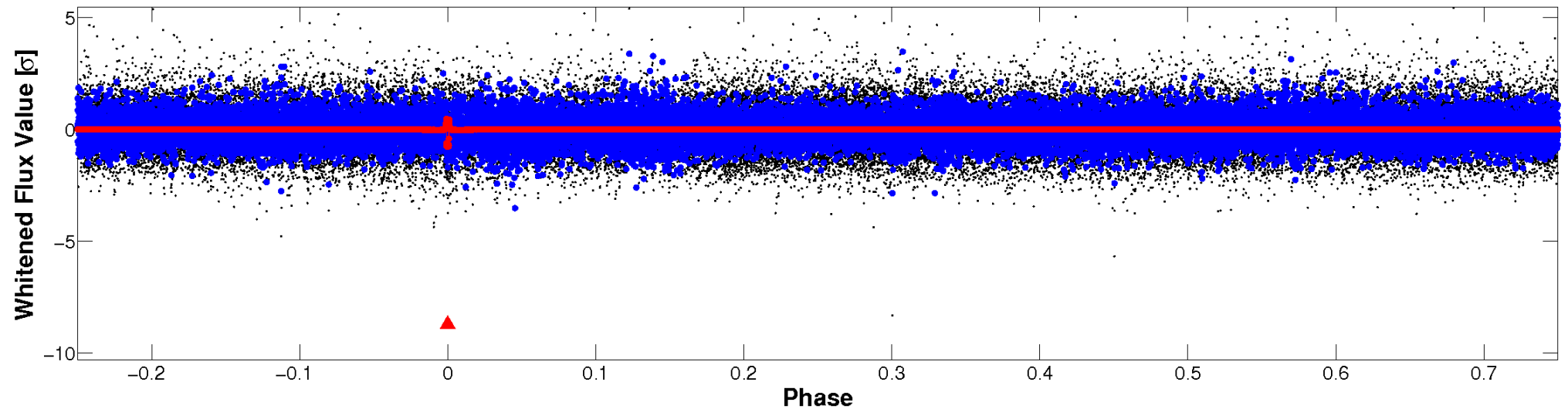


# Non-Whitened Vs. Whitened Light Curve

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



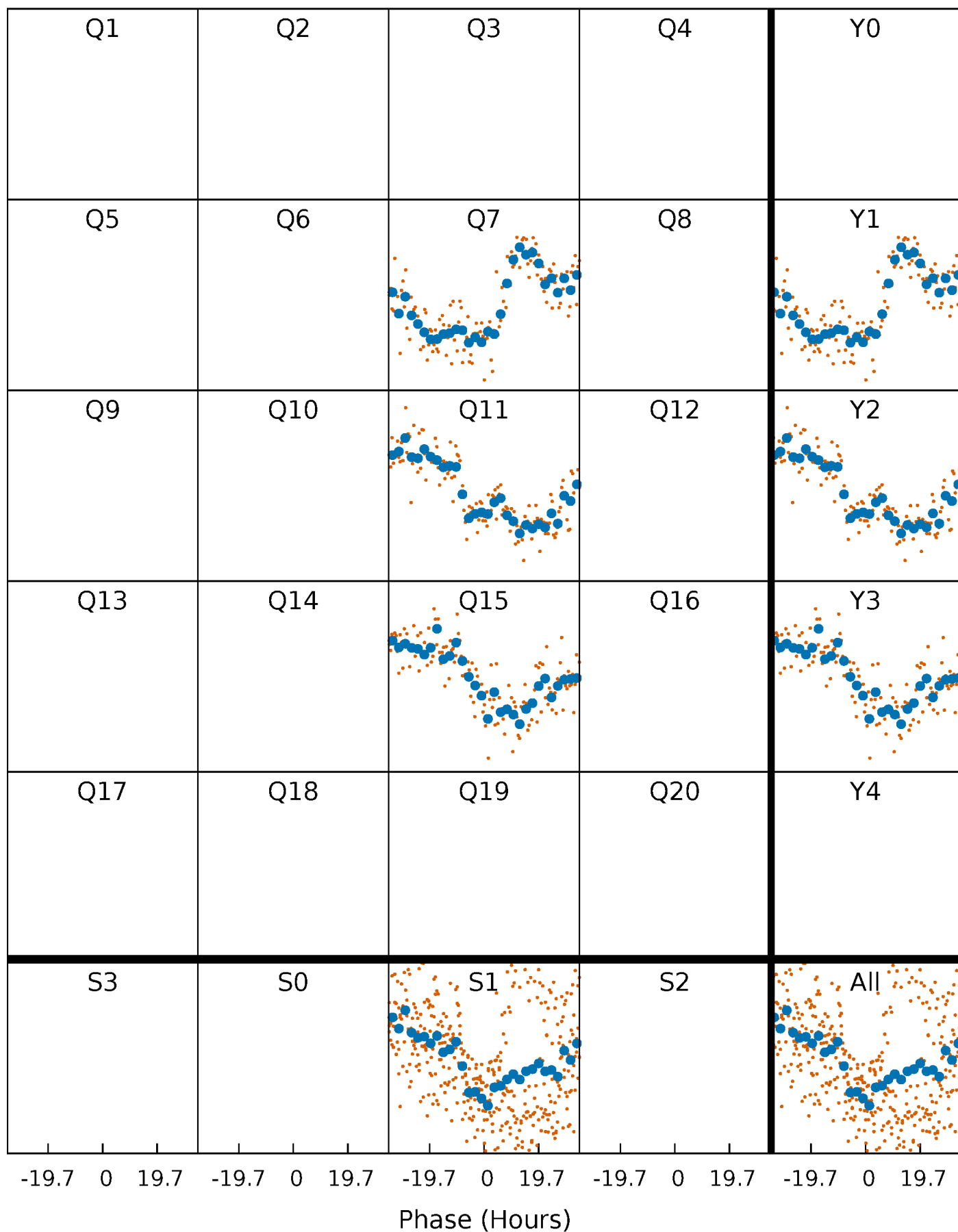
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

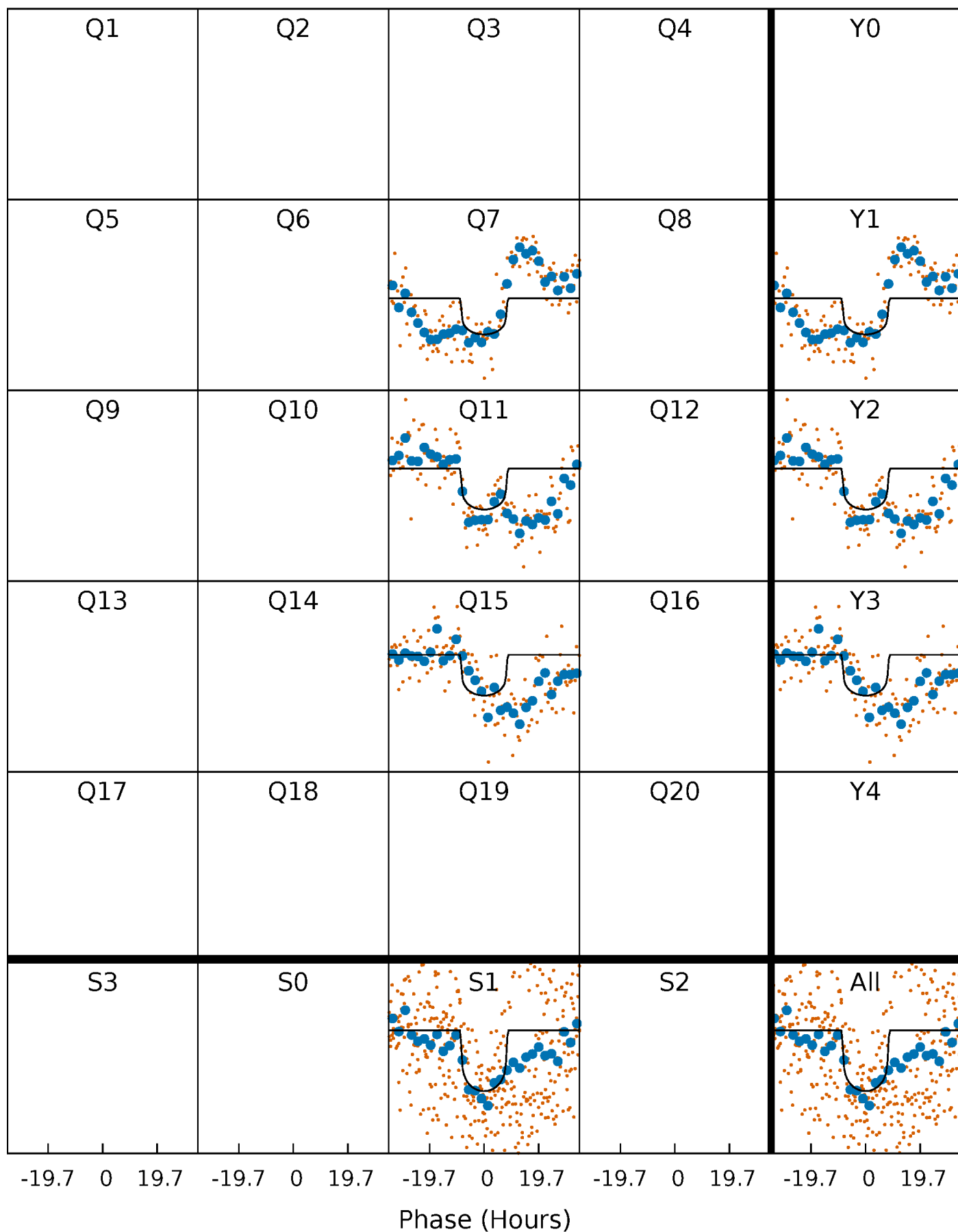
TCE 007026347-01 P=394.899134 Days  $T_0=278.200664$  (BKJD)





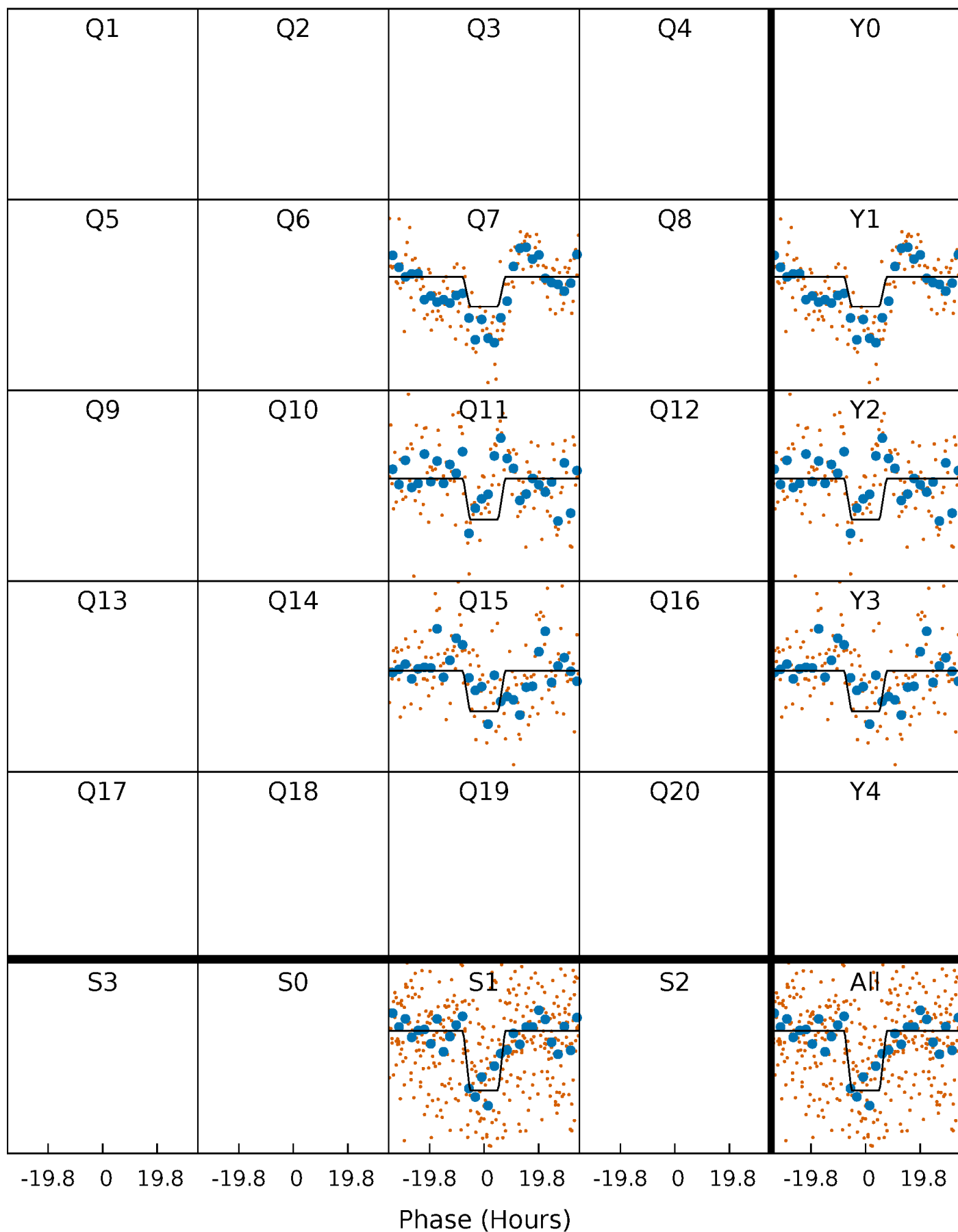
# DV Quarter-Phased Transit Curves

TCE 007026347-01     $P=394.899134$  Days     $T_0=278.200664$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

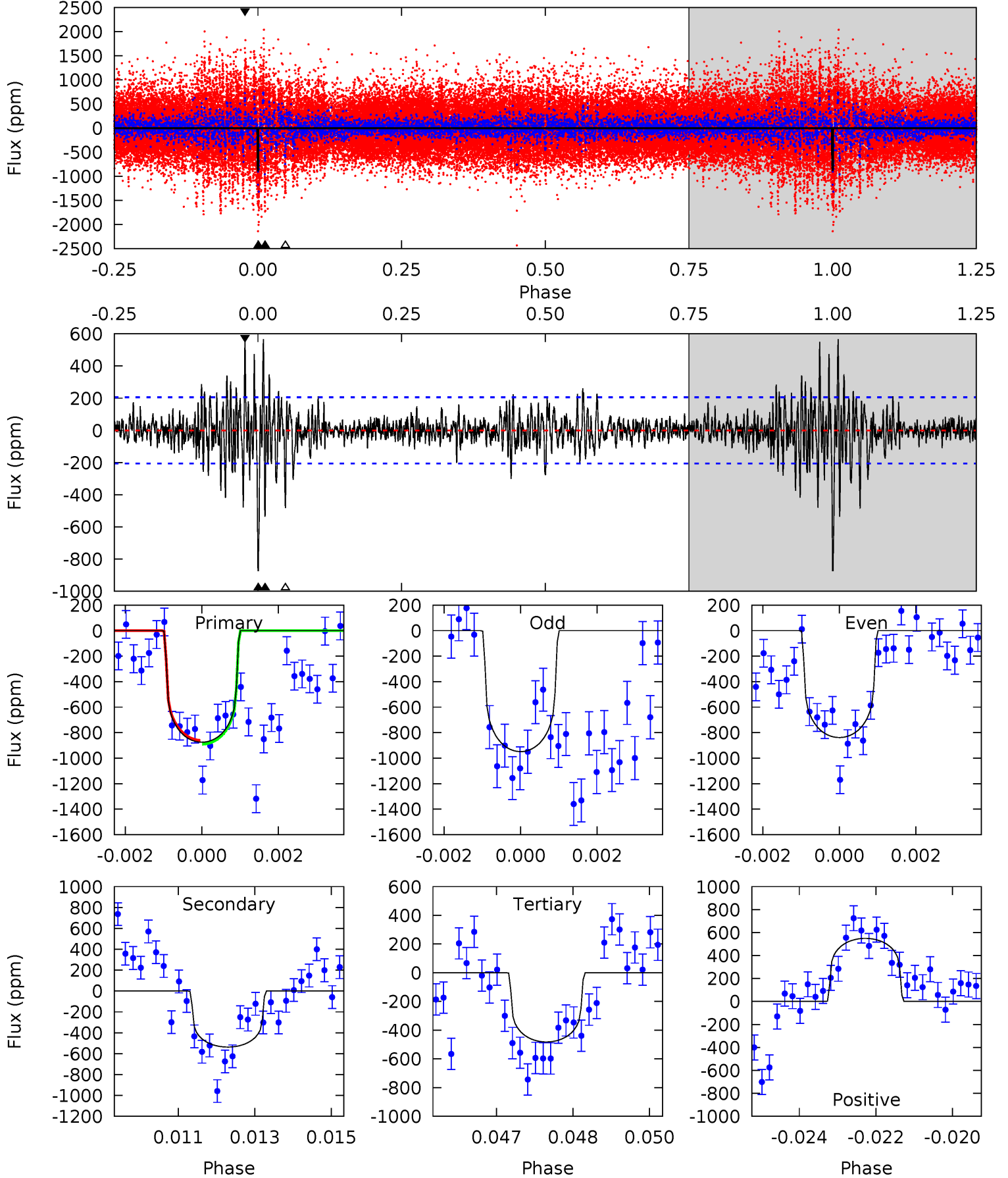
TCE 007026347-01 P=394.919414 Days  $T_0=278.124777$  (BKJD)



# DV Model-Shift Uniqueness Test

007026347-01, P = 394.899134 Days, E = 278.200664 Days

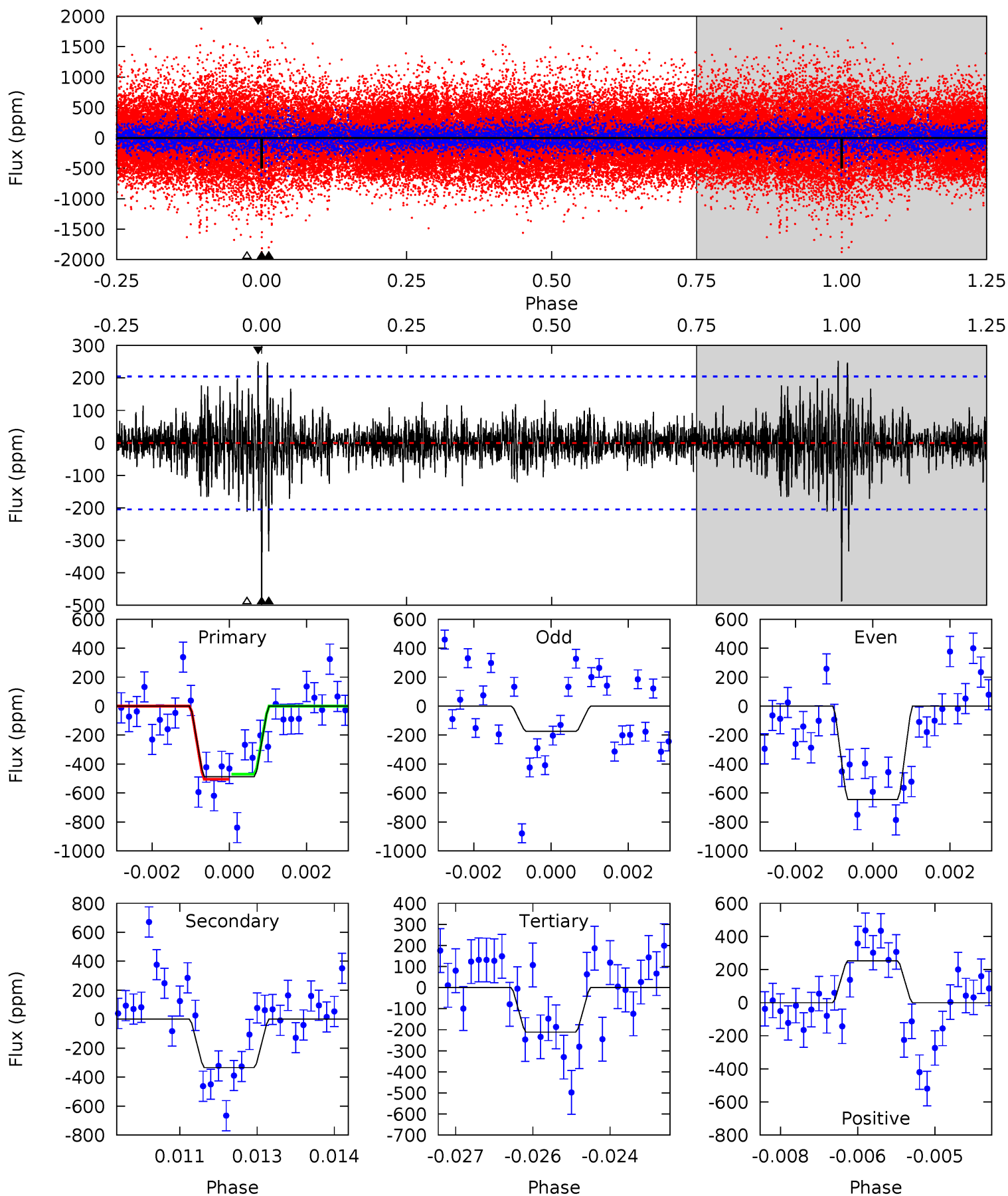
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	13.9	12.5	14.2	5.34	3.11	2.32	10.2	8.44	1.41	-0.33	1.35	1.01	0.39	0.38



# Alt Model-Shift Uniqueness Test

007026347-01, P = 394.919414 Days, E = 278.124777 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
12.8	8.75	5.54	6.61	5.37	3.16	1.21	7.26	6.18	3.22	2.14	5.85	1.62	0.34	0.46



### Stellar Parameters For KIC 007026347

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5857^{+176}_{-211}$	$4.332^{+0.158}_{-0.193}$	$-0.080^{+0.300}_{-0.300}$	$1.108^{+0.309}_{-0.206}$	$0.963^{+0.140}_{-0.102}$	$0.996^{+0.775}_{-0.506}$
	+3%/-4%	+4%/-4%	+375%/-375%	+28%/-19%	+15%/-11%	+78%/-51%
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 007026347-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-537 \pm 39$	$3.37^{+0.87}_{-0.80}$	$370^{+29}_{-21}$	$5379^{+642}_{-466}$	$28331^{+21129}_{-10368}$
Alt.	$-334 \pm 38$	$2.81^{+0.85}_{-0.75}$	$373^{+28}_{-26}$	$5265^{+777}_{-538}$	$25286^{+23441}_{-10705}$

$T_{max}$  = 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

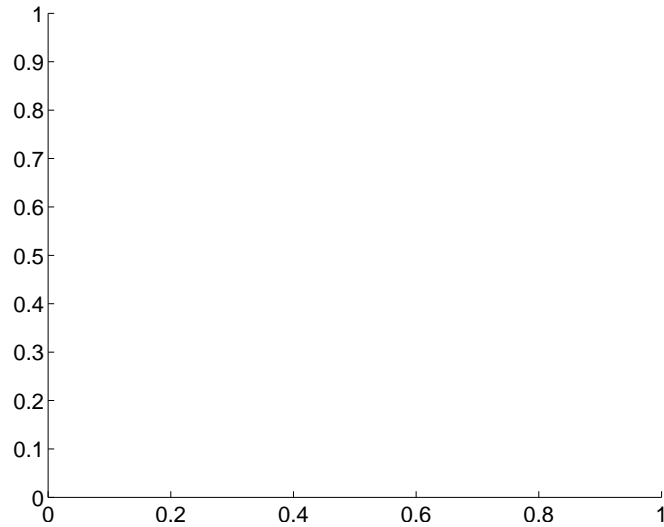
Supplemental centroid analysis for 007026347-01. Kepler magnitude: 15.09. Transit SNR 7.22

There are 0 quarters with good PRF difference image offsets

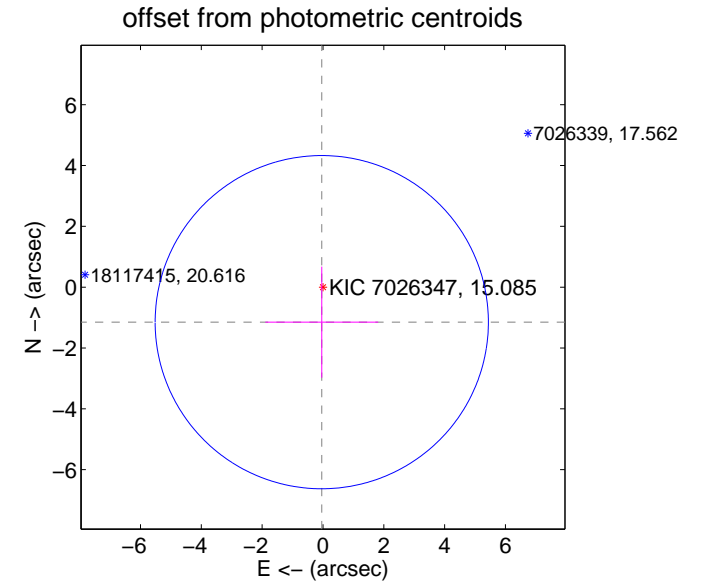
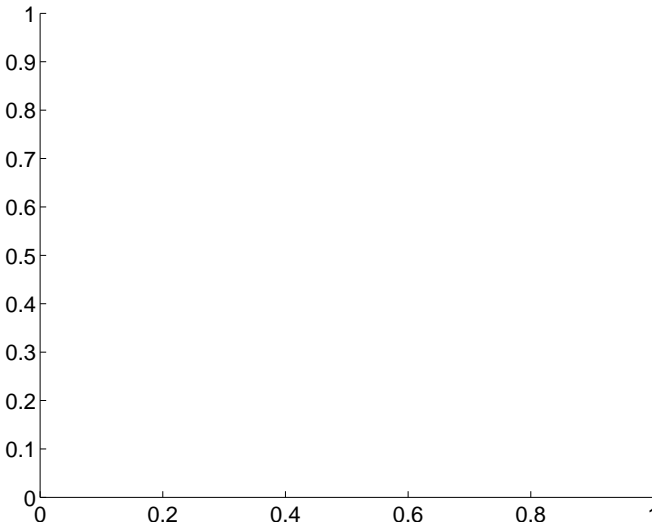
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	$1.15 \pm 1.83$	0.63	$0.04 \pm 1.86$	$-1.15 \pm 1.83$

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



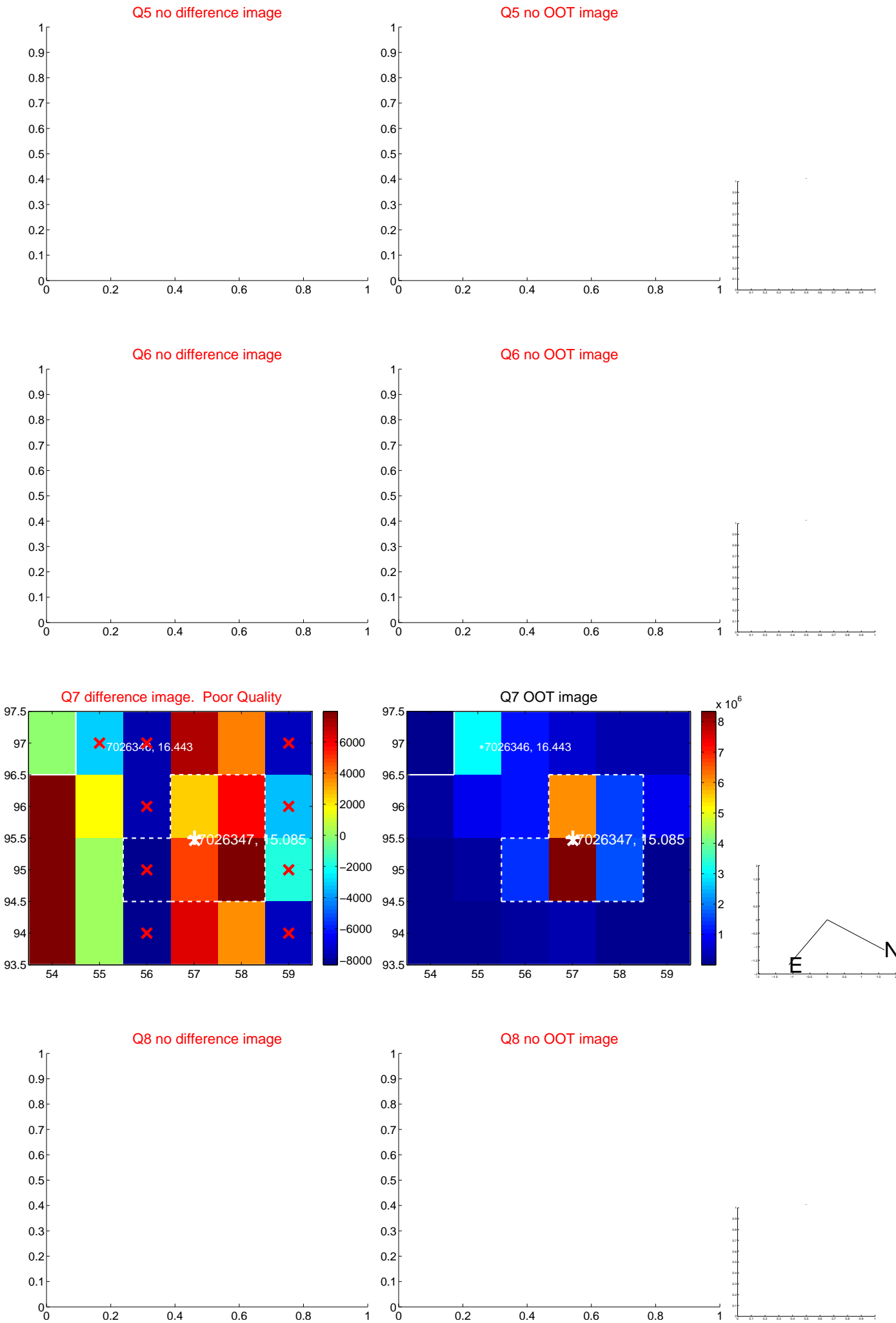
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

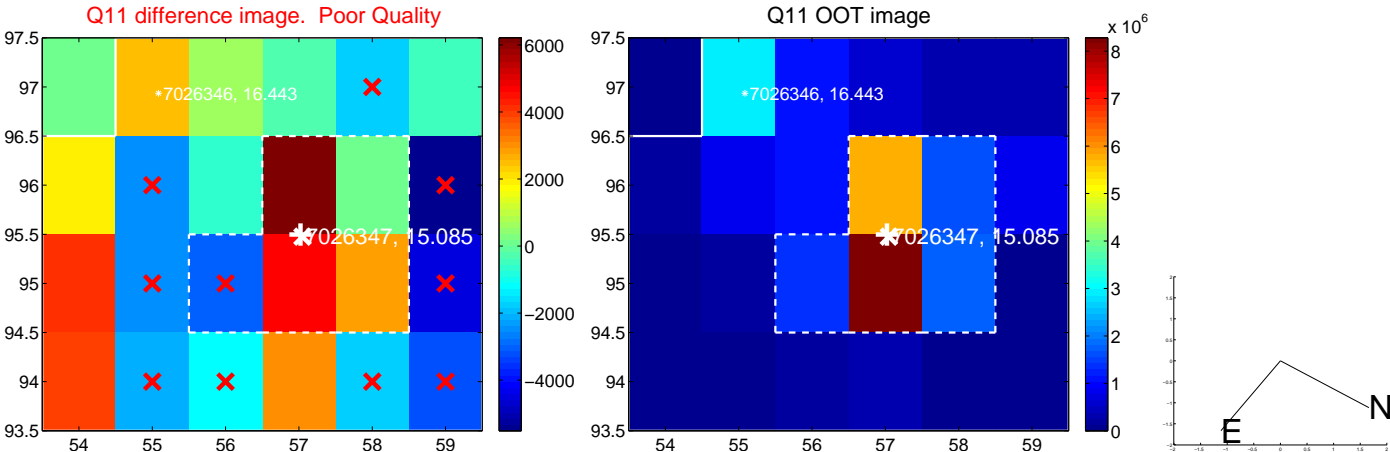




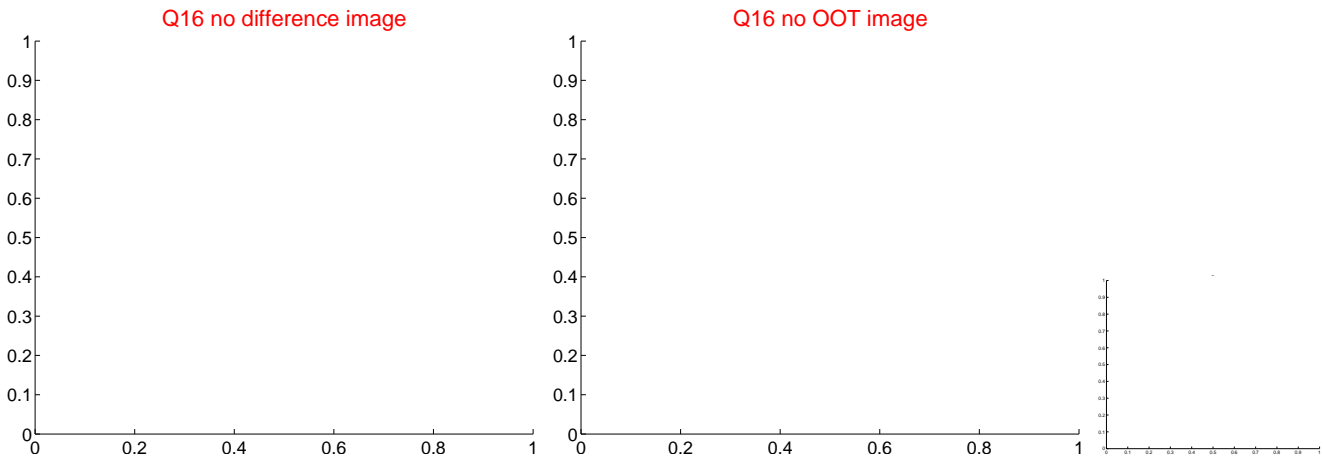
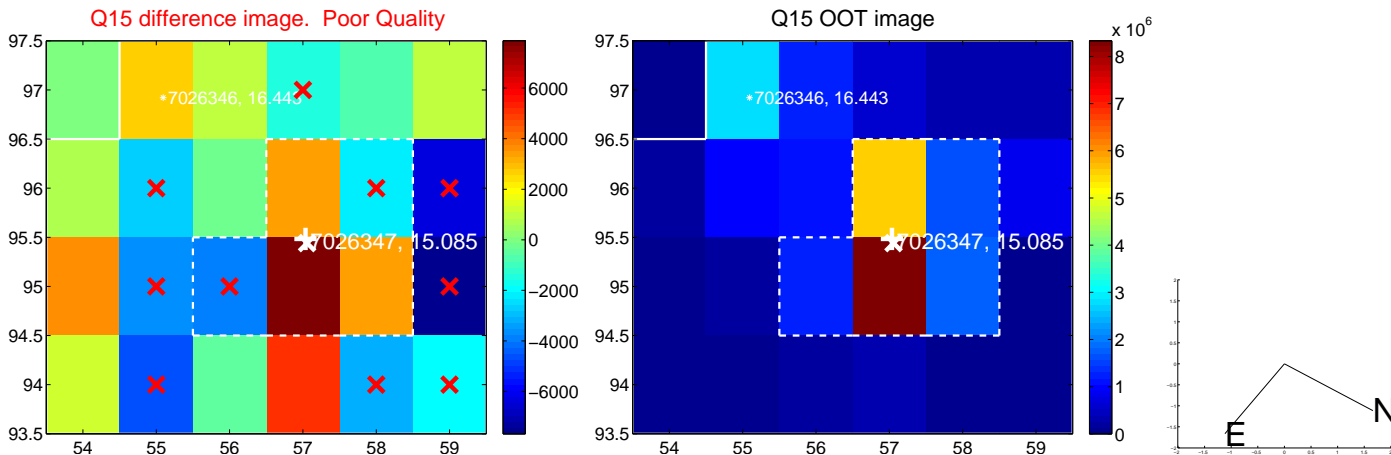
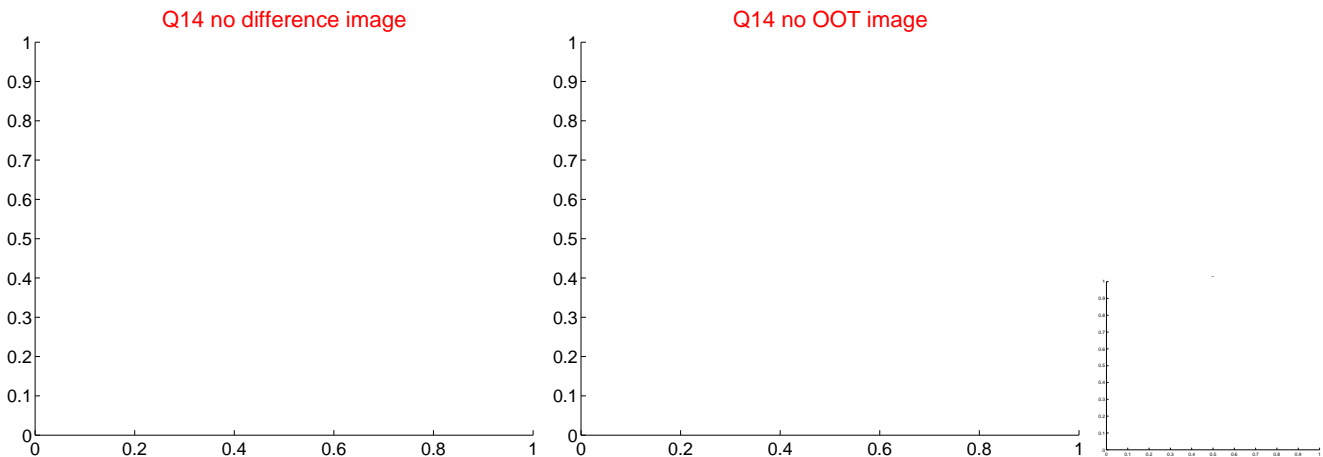
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



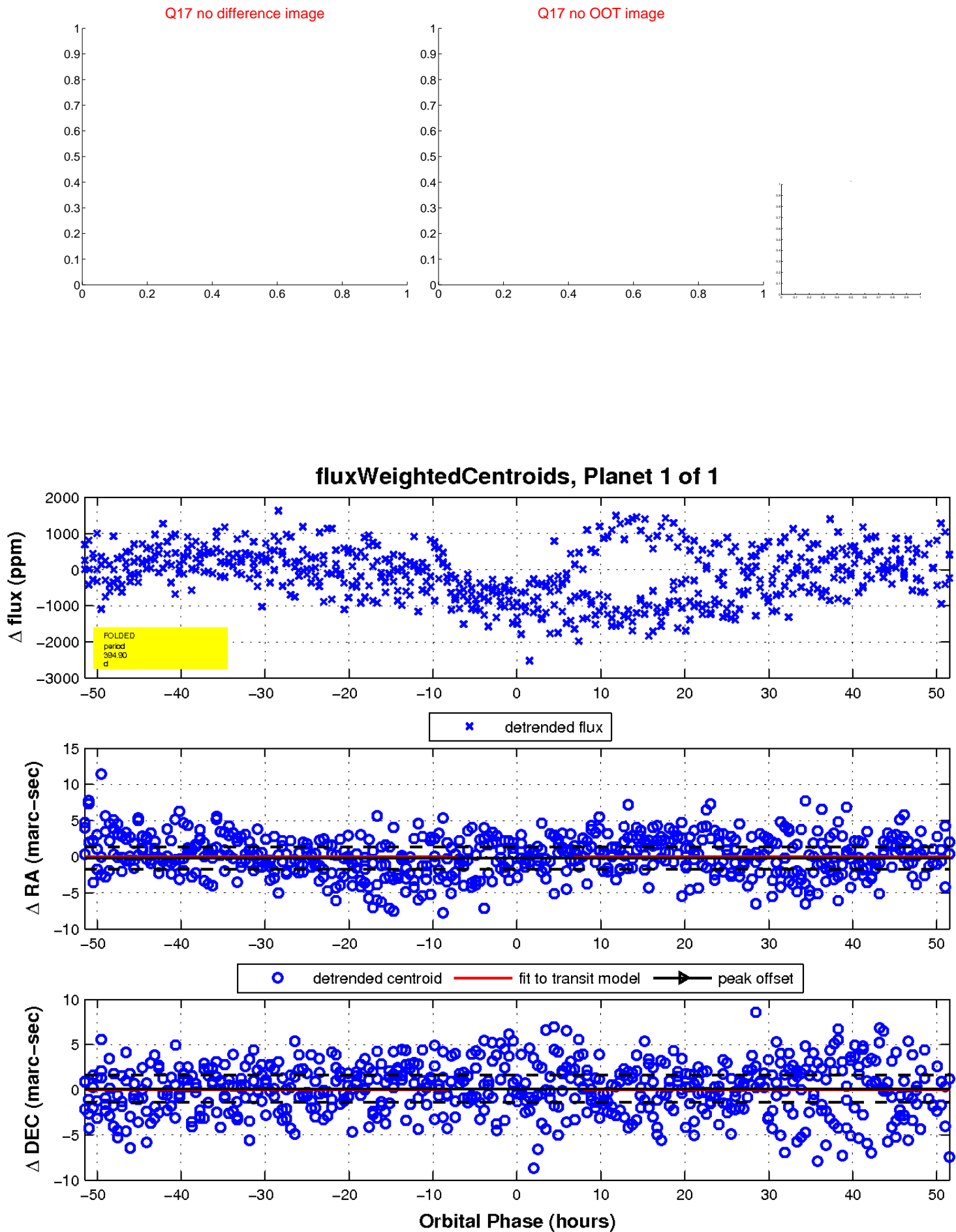
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

