

# KIC 002569995

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
002569995-01	OBS	7634.01	80.849746	177.212952	9851.7	8.595	18.2	22.5	1.60	5511	15.49	14.85

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002569995-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_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.

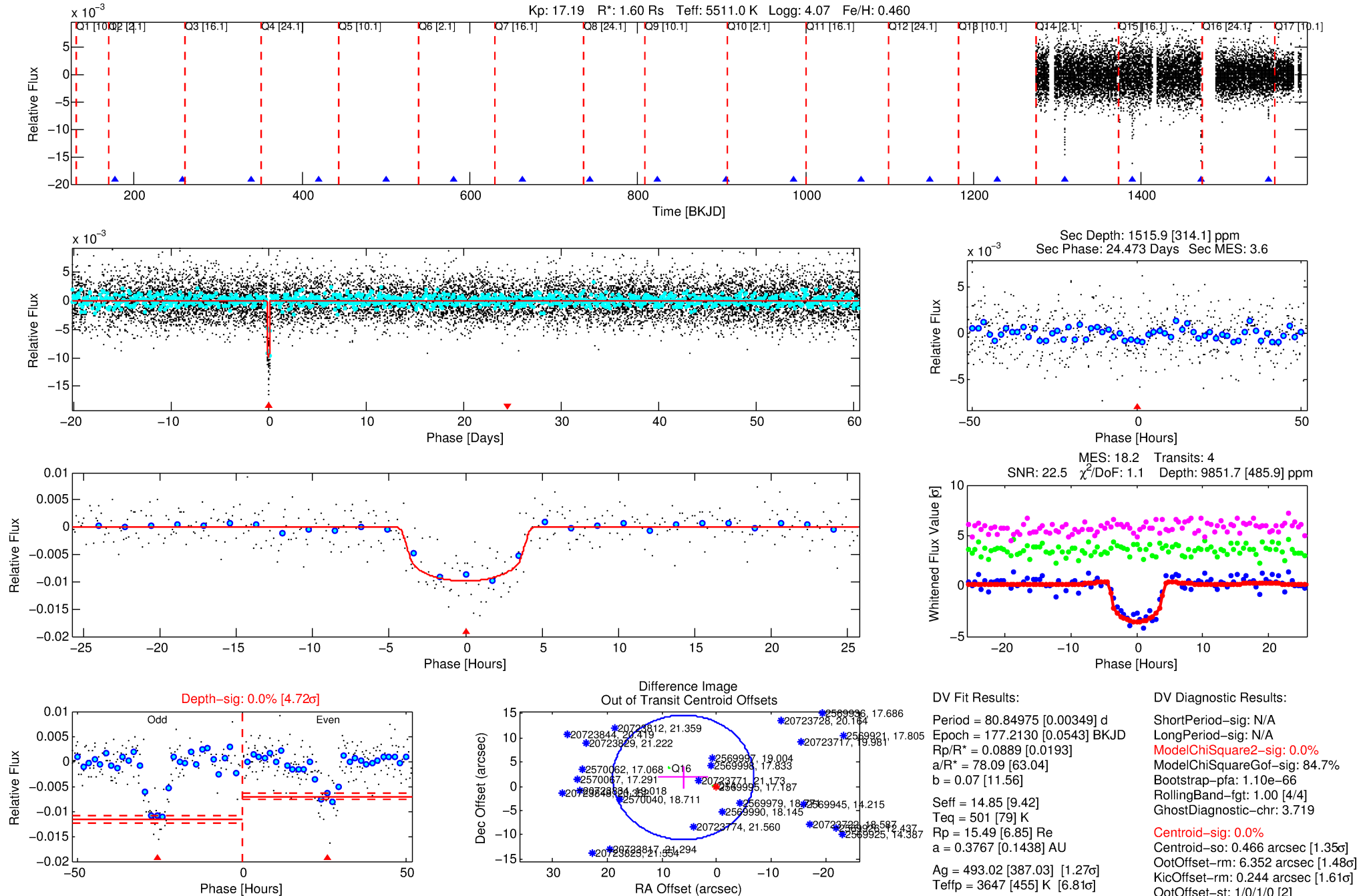
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 002569995-01

No Significant Match Found

# DV One-Page Summary

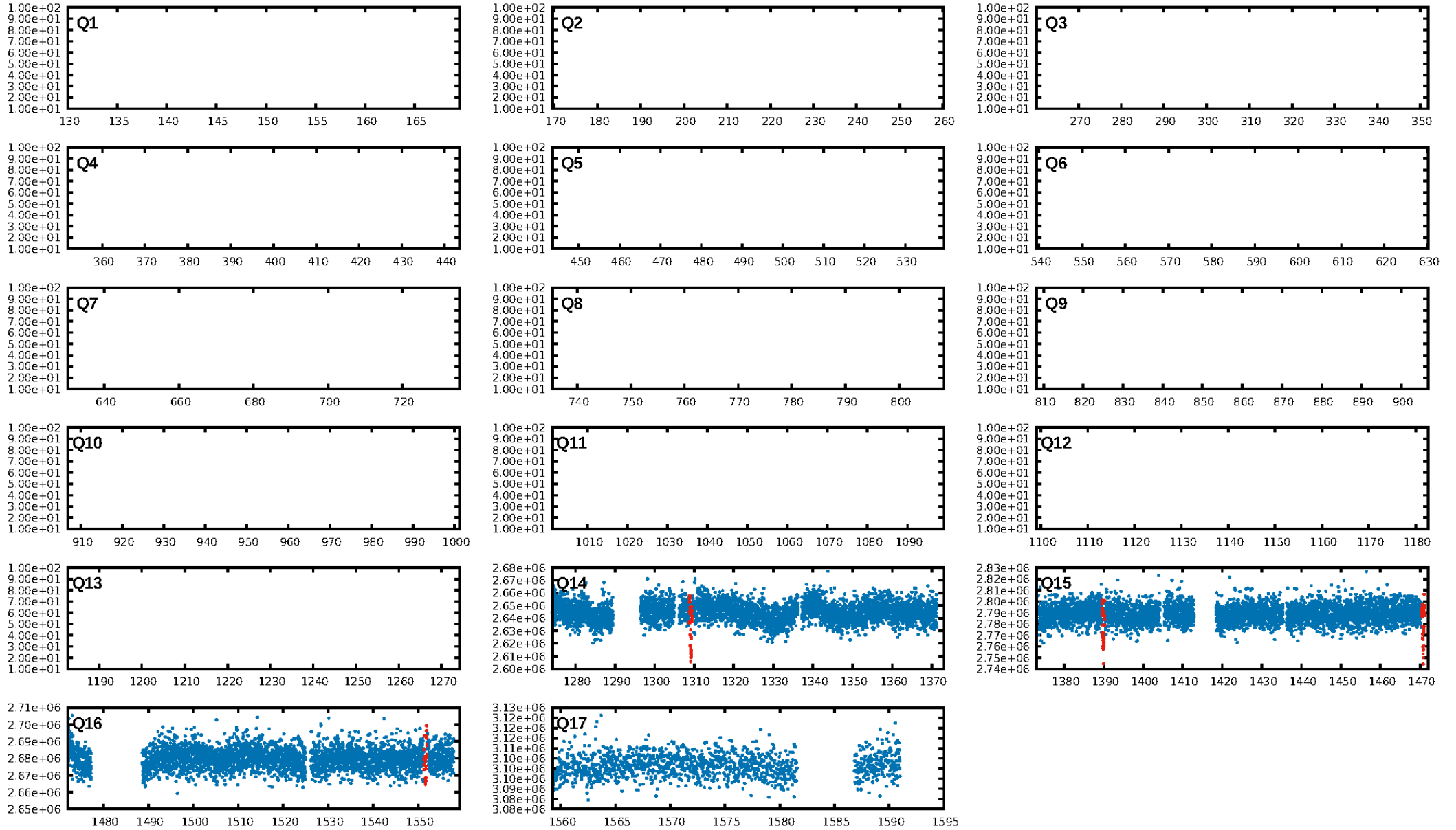
KIC: 2569995 Candidate: 1 of 1 Period: 80.850 d



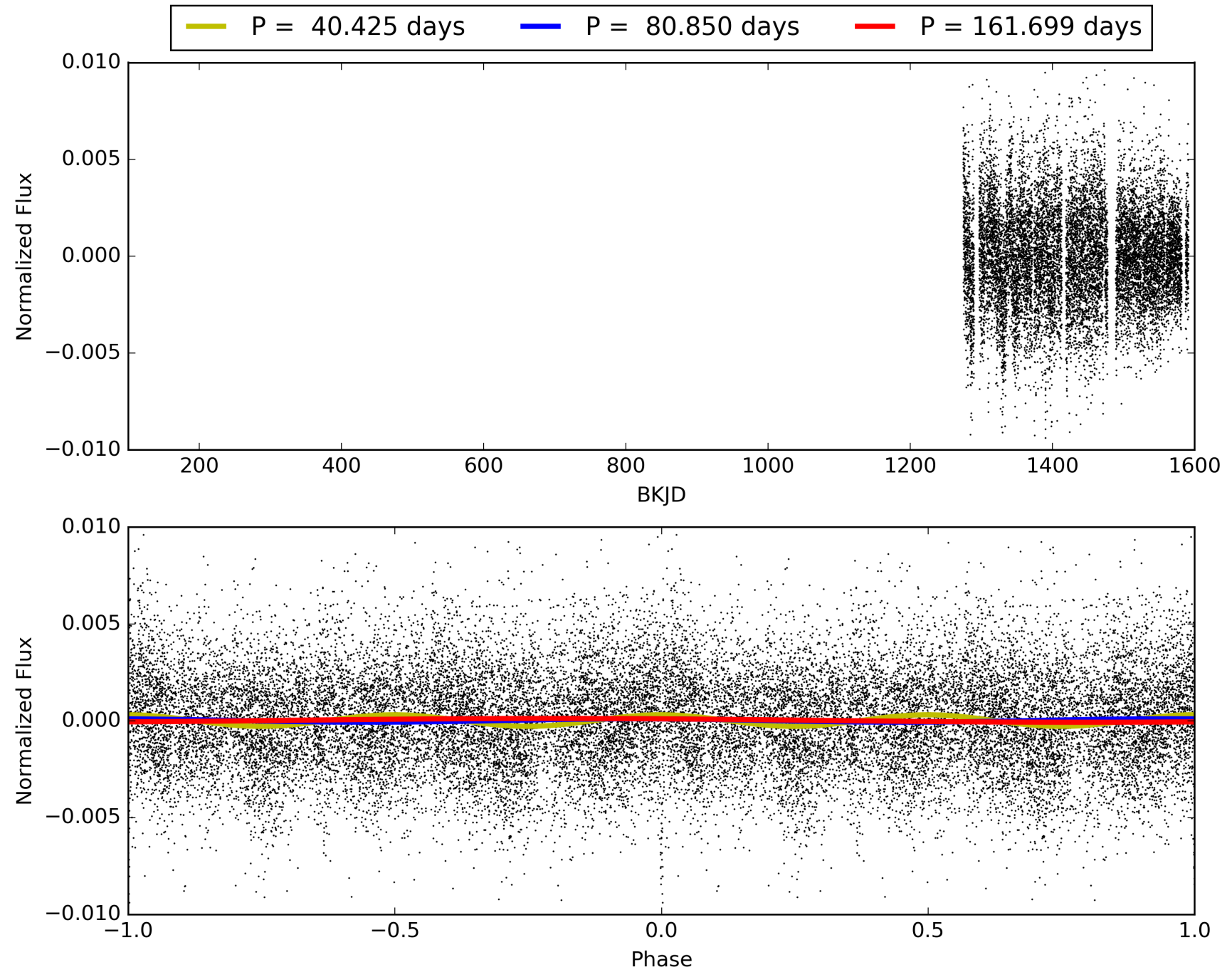
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:46:43 Z

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

# TCE 002569995-01, PDC Light Curves

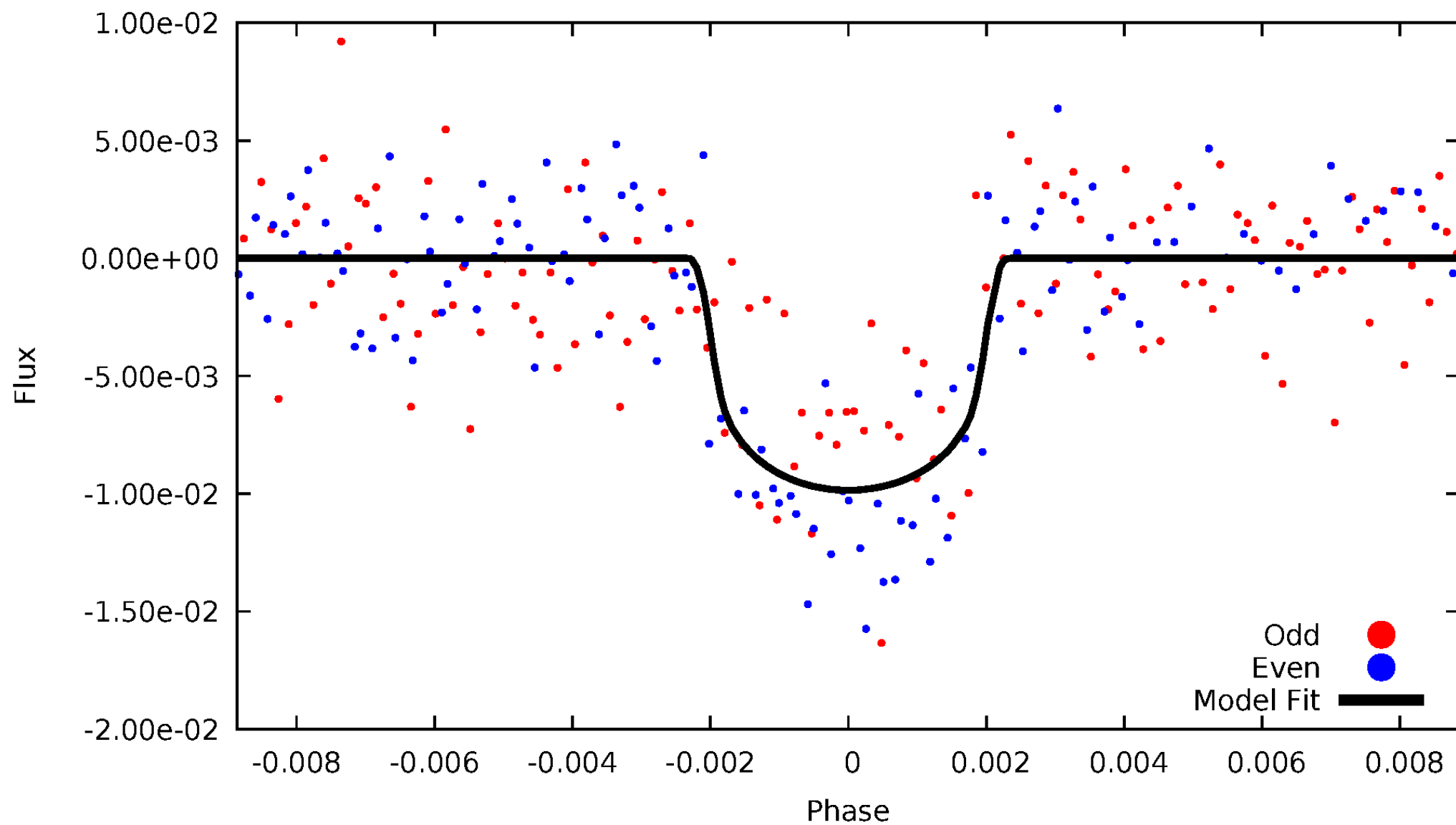


# TCE 002569995-01



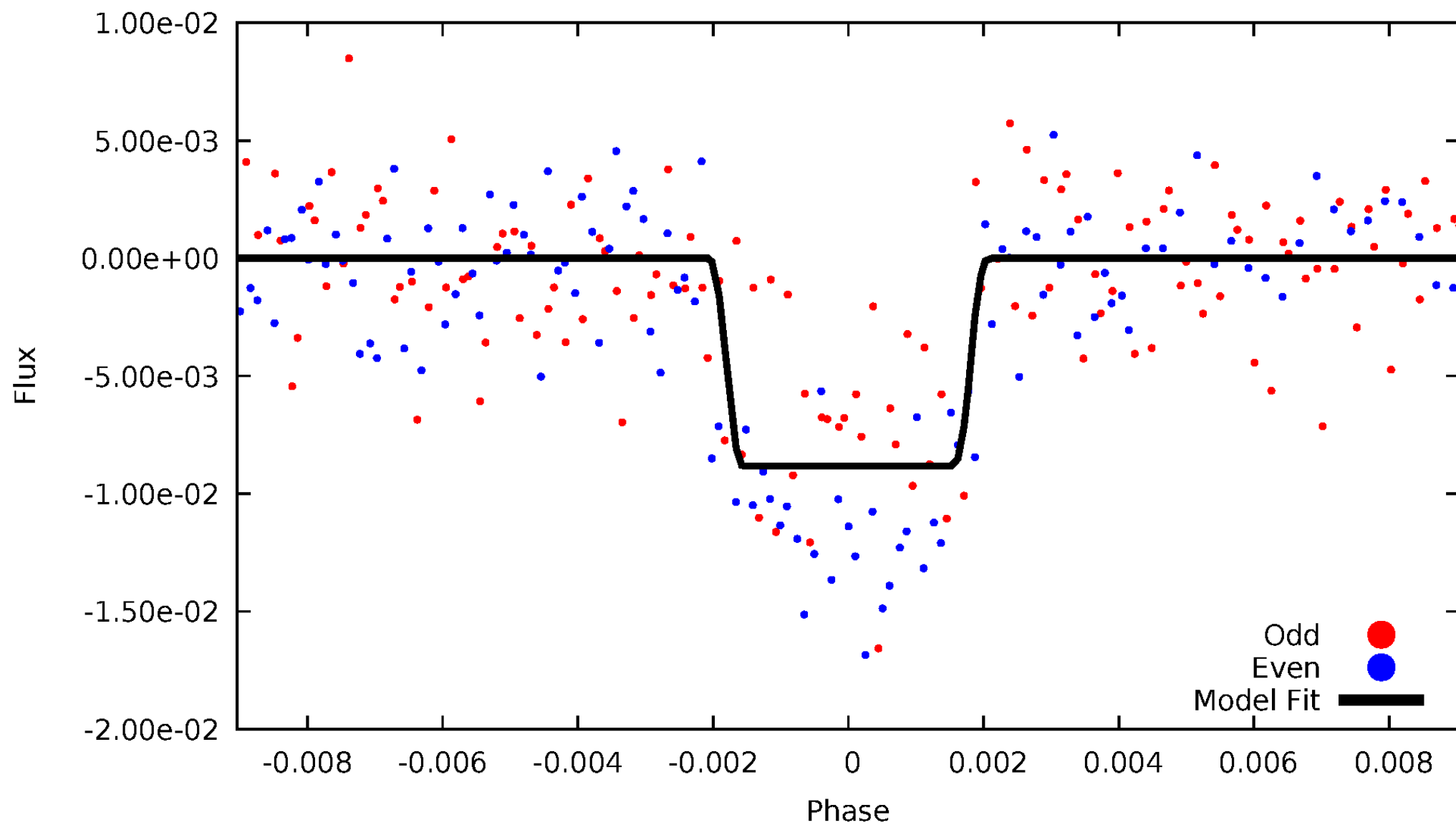
# DV Odd/Even

TCE 00256995-01



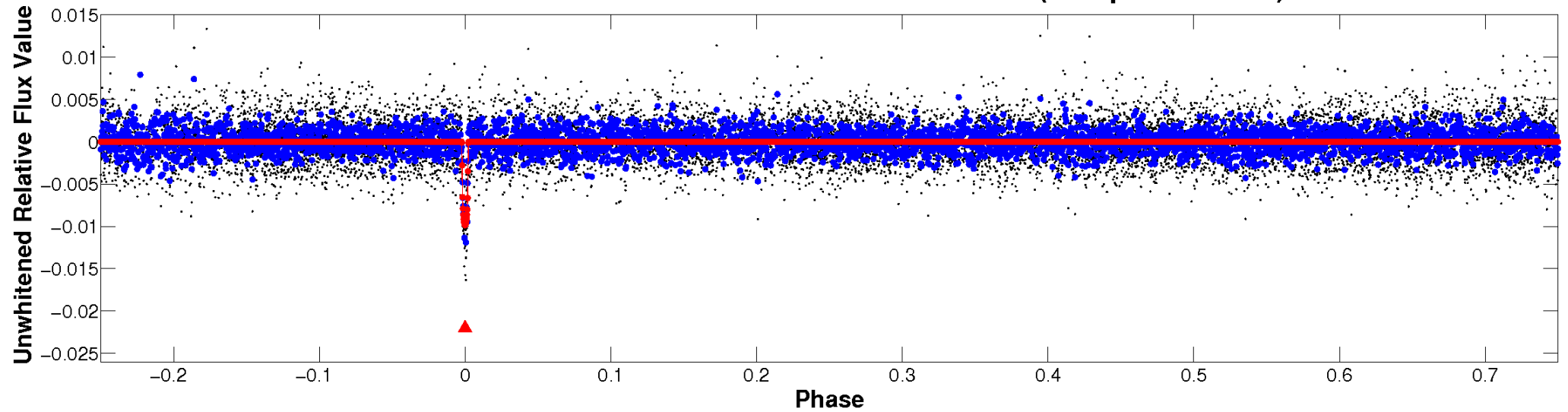
# ALT Odd/Even

TCE 00256995-01

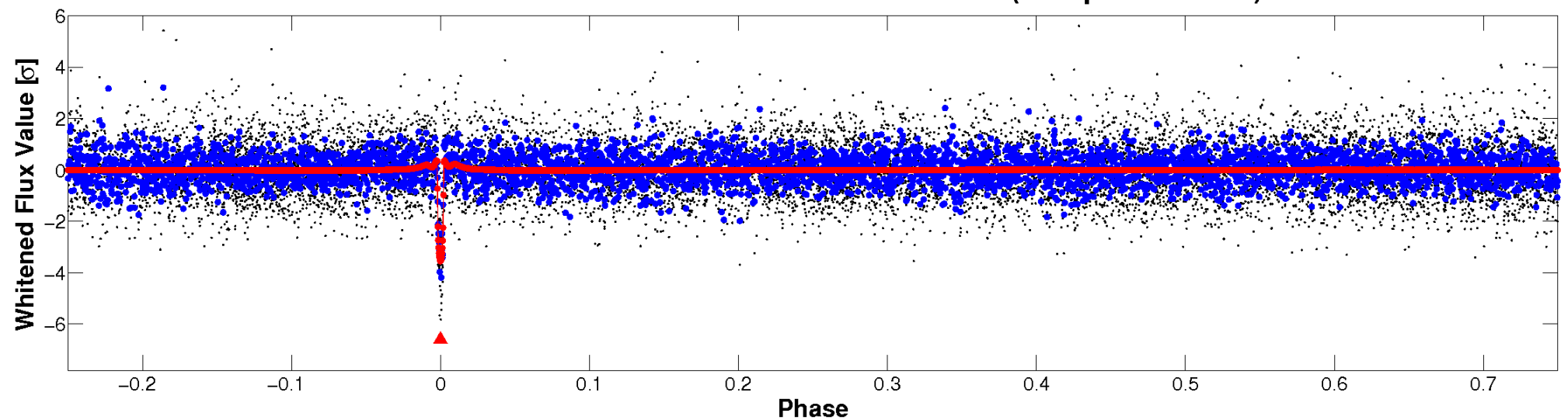


# Non-Whitened Vs. Whitened Light Curve

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

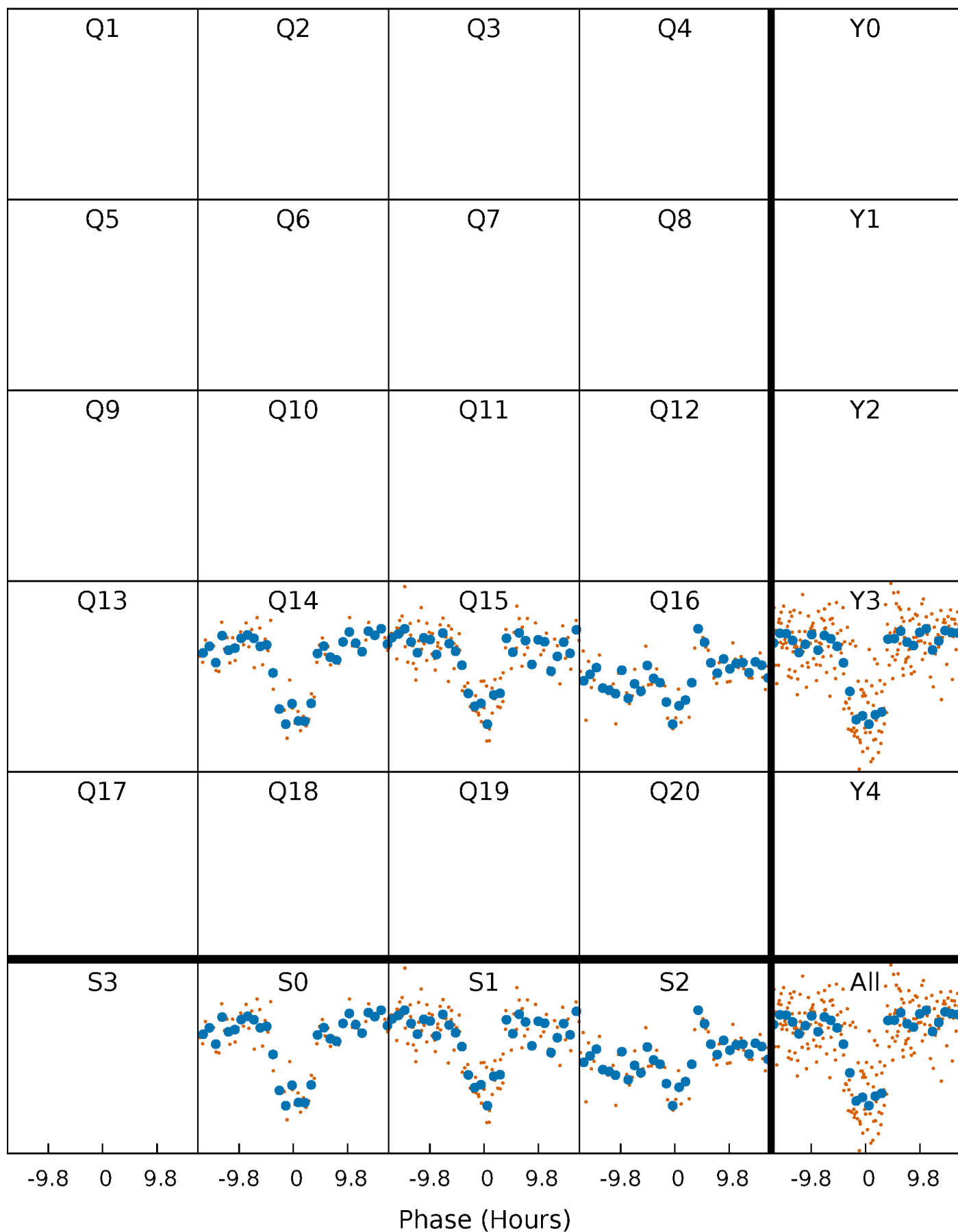


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

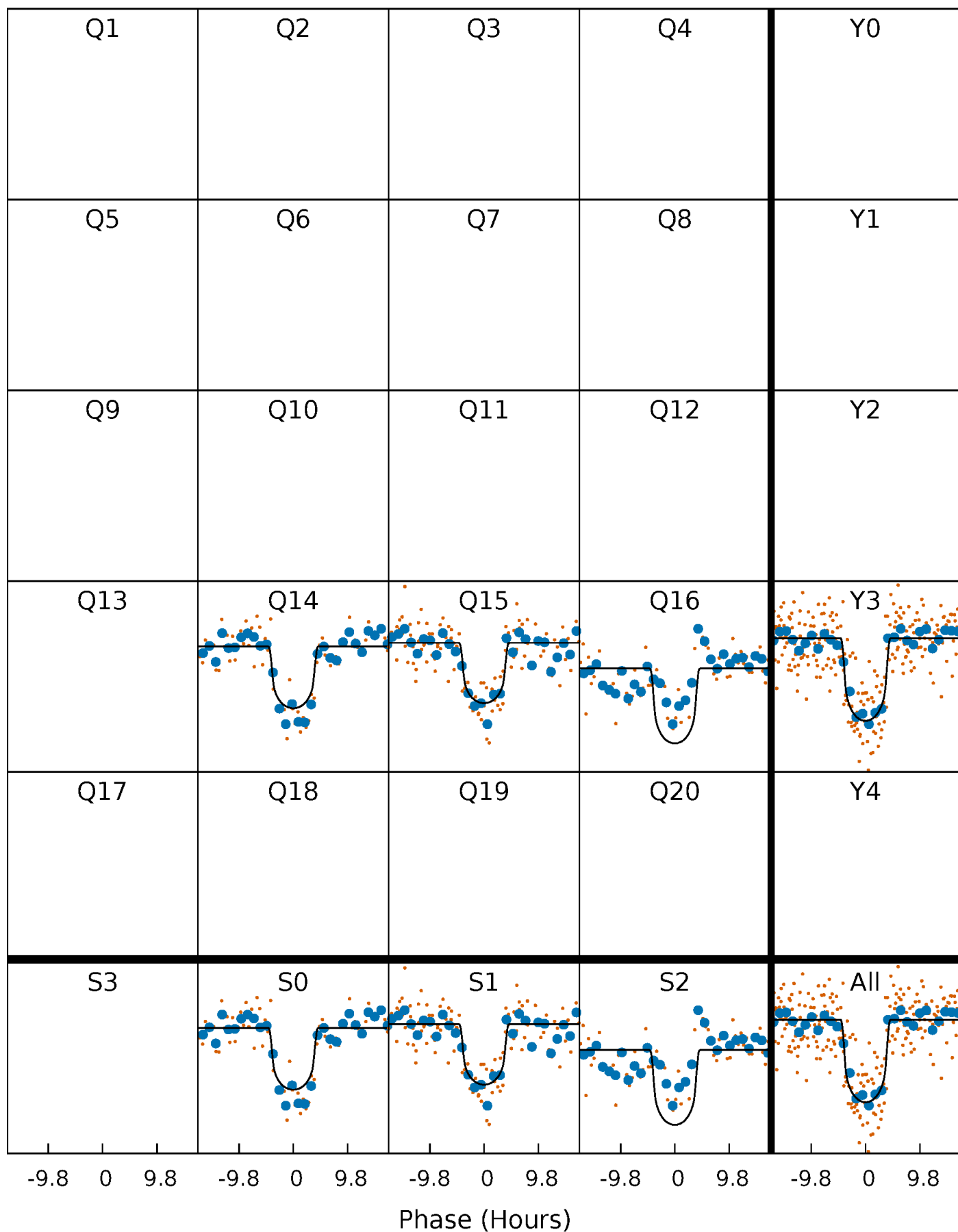
TCE 002569995-01     $P = 80.849746$  Days     $T_0 = 177.212952$  (BKJD)





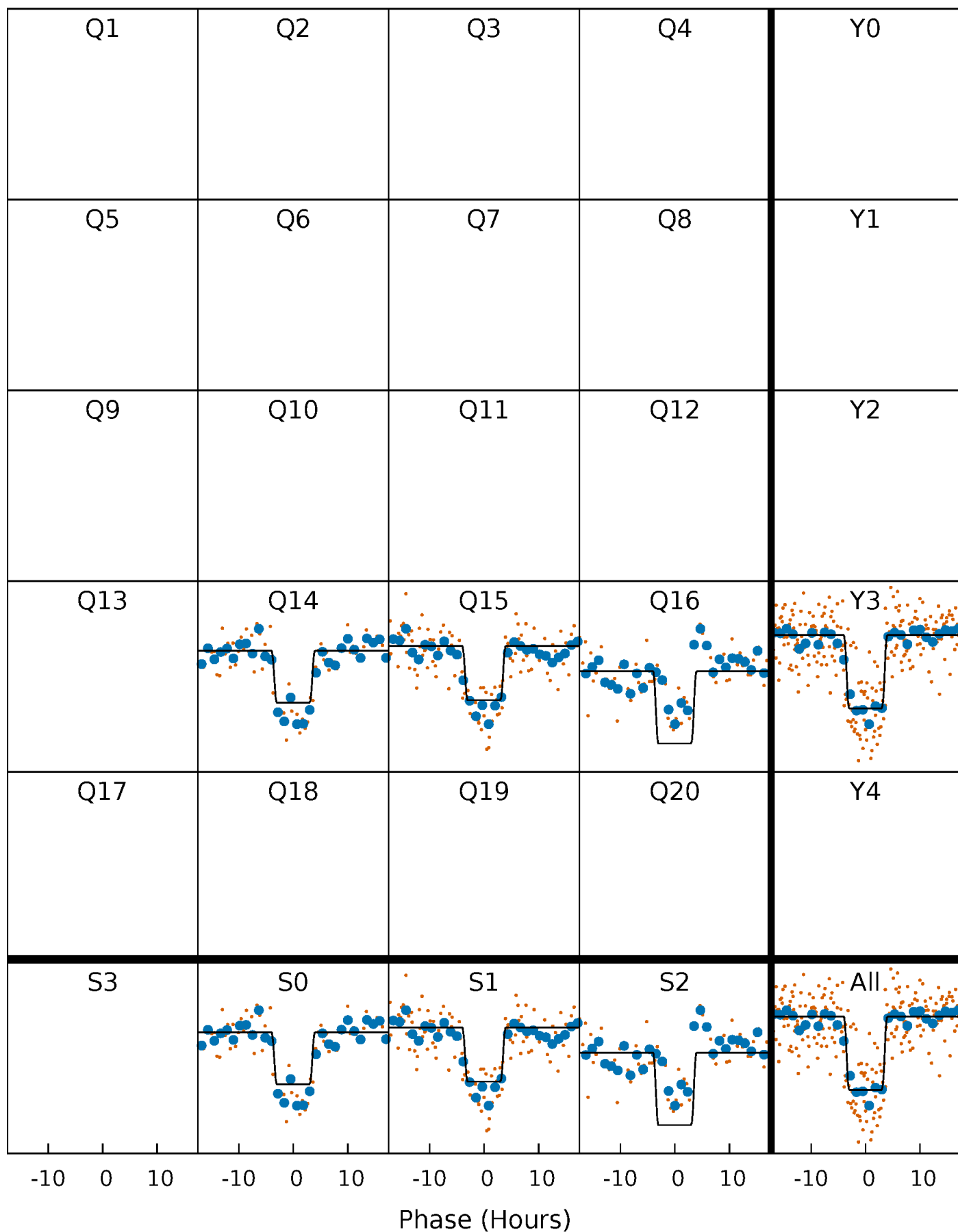
# DV Quarter-Phased Transit Curves

TCE 002569995-01   P= 80.849746 Days    $T_0=177.212952$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

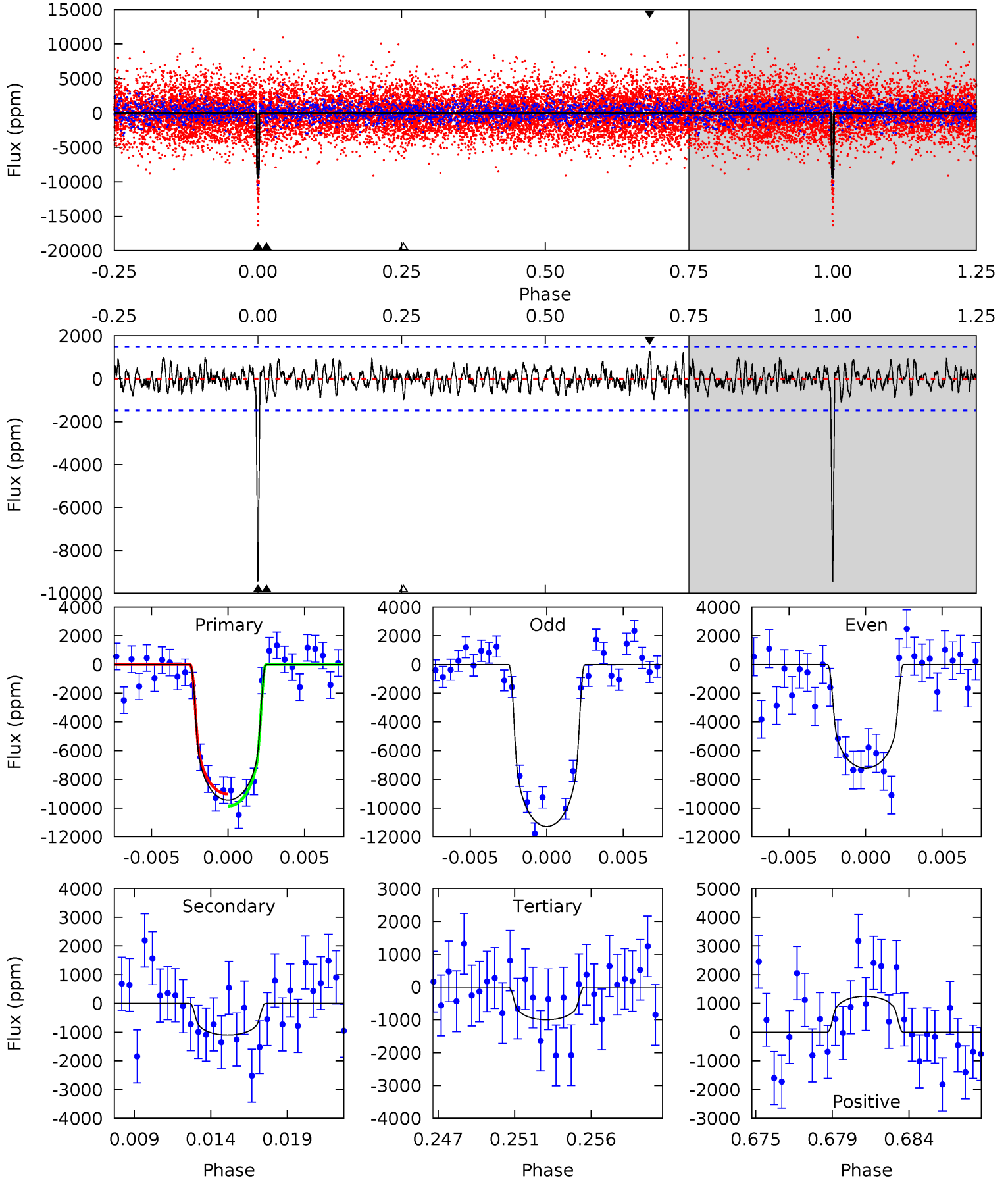
TCE 002569995-01     $P = 80.846946$  Days     $T_0 = 177.257817$  (BKJD)



# DV Model-Shift Uniqueness Test

002569995-01,  $P = 80.849746$  Days,  $E = 177.212952$  Days

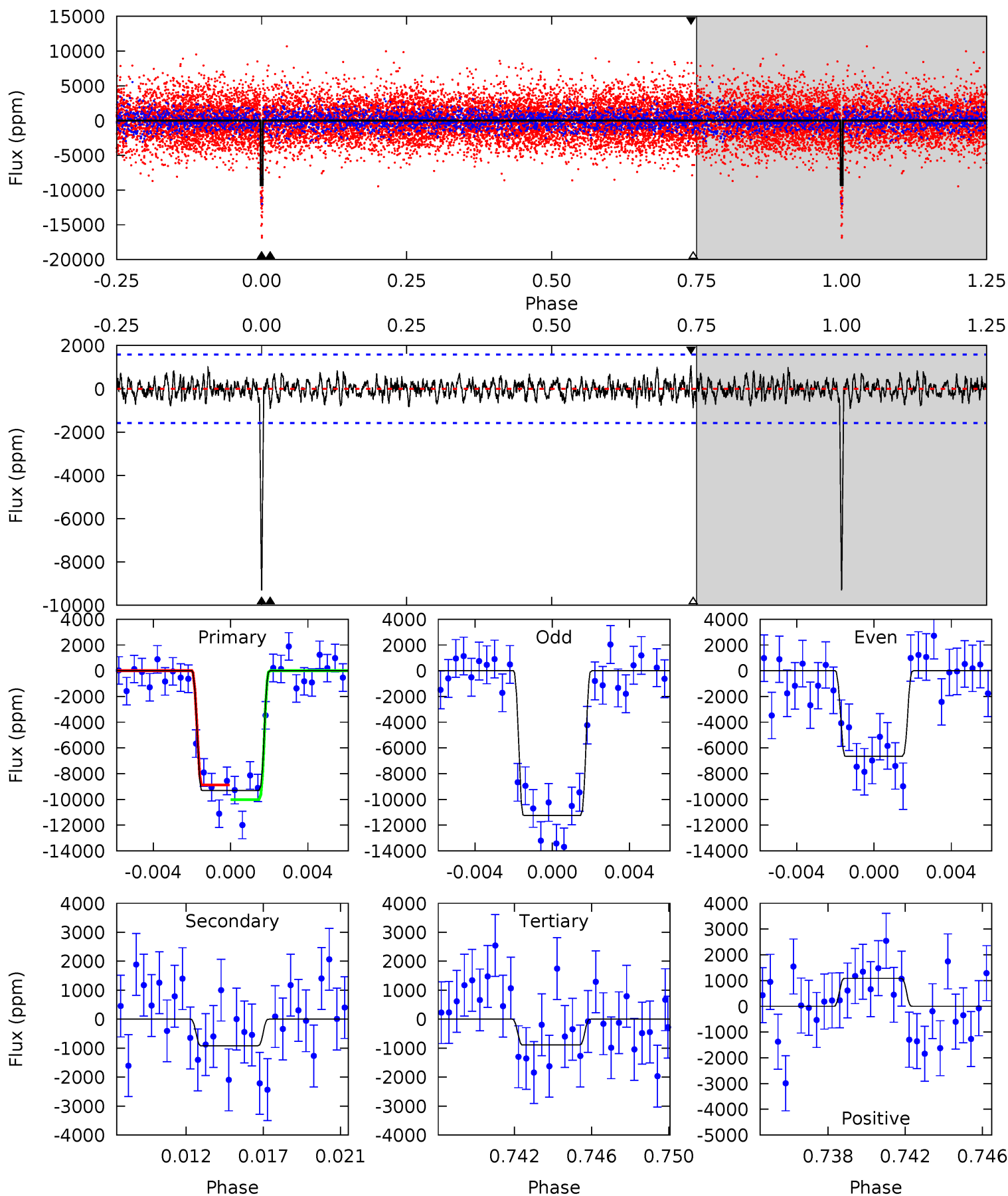
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.9	3.83	3.47	4.35	5.17	2.83	1.27	29.4	28.6	0.36	-0.52	7.09	0.89	0.12	1.47



# Alt Model-Shift Uniqueness Test

002569995-01,  $P = 80.846946$  Days,  $E = 177.257817$  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
30.6	3.02	2.93	3.56	5.19	2.87	1.01	27.7	27.1	0.09	-0.55	7.56	0.86	0.10	1.86



### Stellar Parameters For KIC 002569995

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5511^{+183}_{-166}$	$4.069^{+0.368}_{-0.123}$	$0.460^{+0.050}_{-0.250}$	$1.597^{+0.331}_{-0.615}$	$1.089^{+0.123}_{-0.150}$	$0.377^{+1.098}_{-0.140}$
	+3%/-3%	+9%/-3%	+11%/-54%	+21%/-39%	+11%/-14%	+291%/-37%
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 002569995-01 / KOI 7634.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1099 \pm 287$	$14.45^{+3.99}_{-4.18}$	$688^{+48}_{-76}$	$3764^{+386}_{-301}$	$415^{+393}_{-179}$
Alt.	$-917 \pm 304$	$15.53^{+4.06}_{-4.07}$	$687^{+50}_{-66}$	$3552^{+389}_{-296}$	$286^{+284}_{-127}$

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

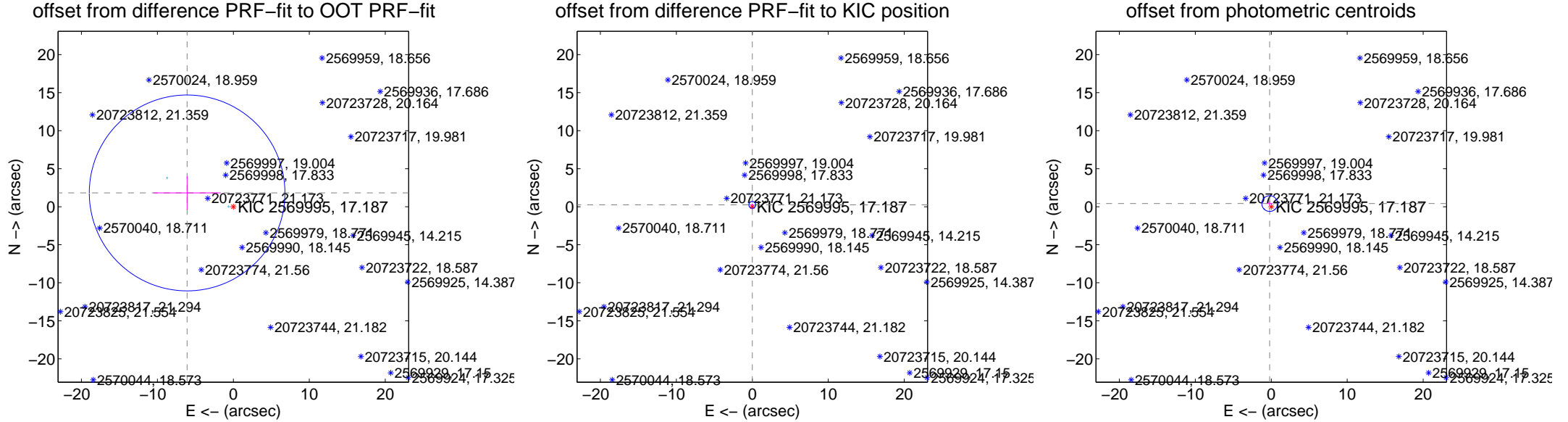
## DV Centroid Data

Supplemental centroid analysis for 002569995-01. Kepler magnitude: 17.19. Transit SNR 22.46

There are 3 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 9.74 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$6.352 \pm 4.293$	1.48	$6.088 \pm 4.431$	$1.814 \pm 2.204$
PRF-fit source offset from KIC position	$0.244 \pm 0.152$	1.61	$-0.000 \pm 0.131$	$0.244 \pm 0.152$
photometric centroid source offset	$0.47 \pm 0.34$	1.35	$0.21 \pm 0.41$	$0.42 \pm 0.33$



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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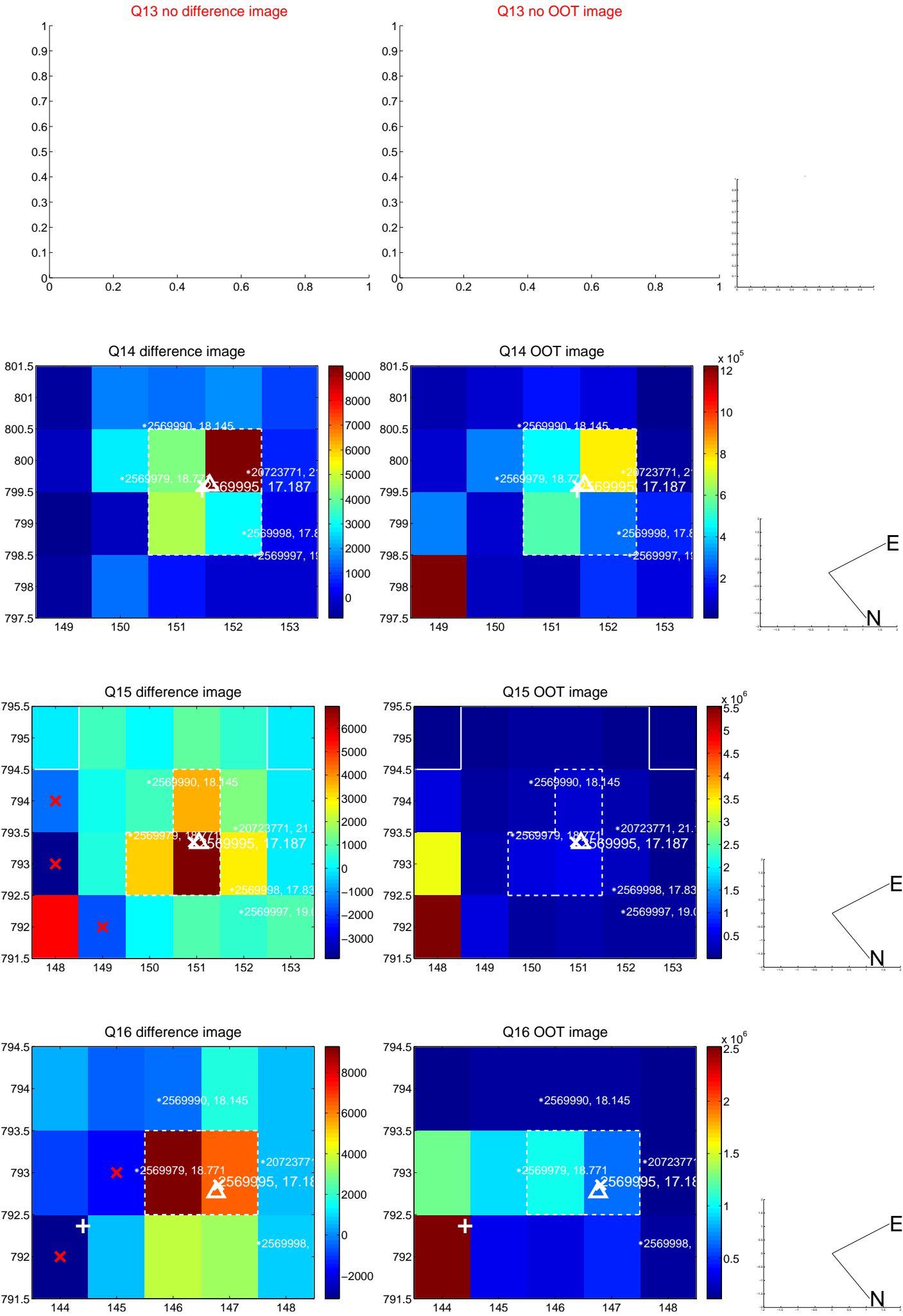




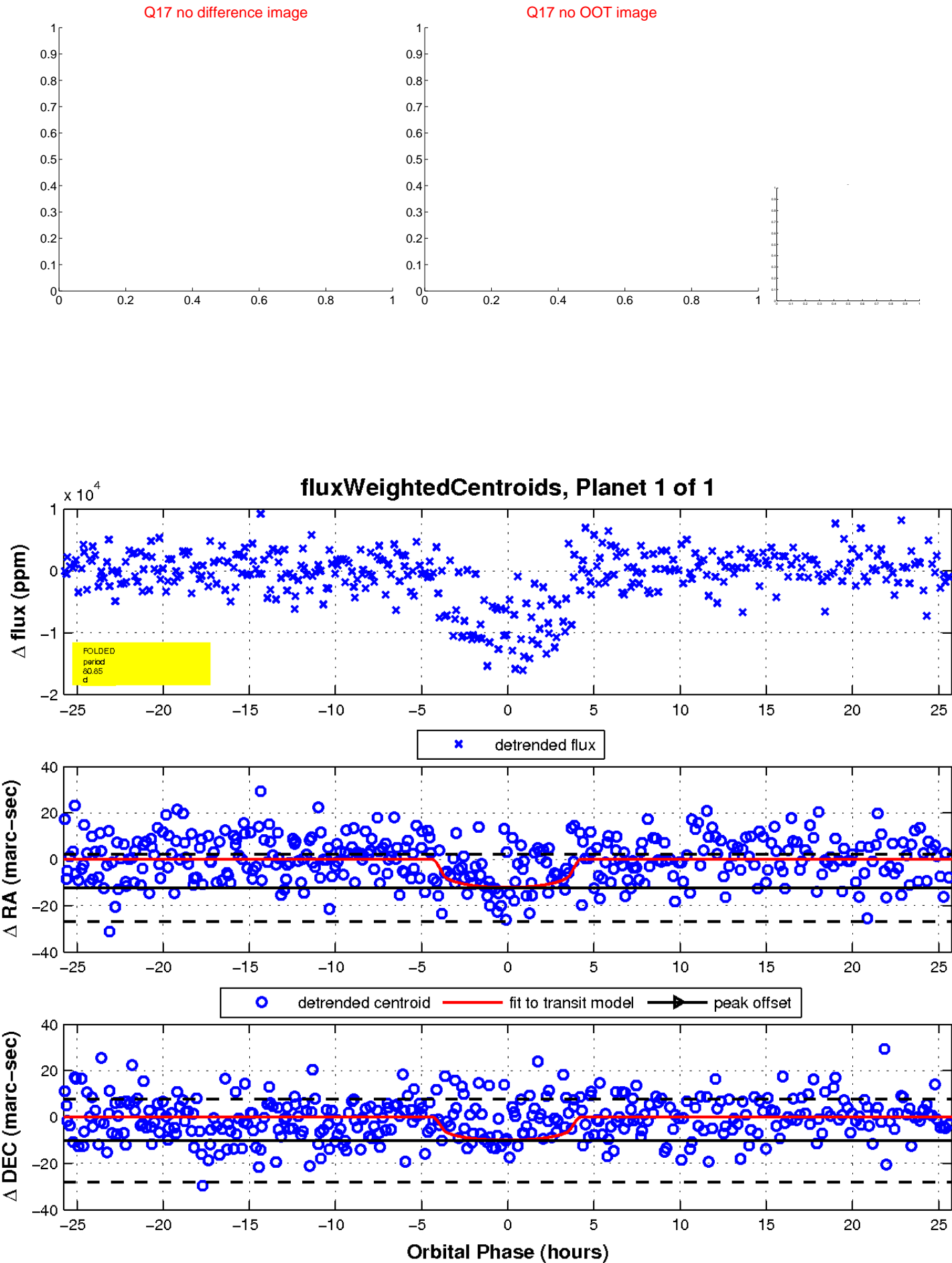
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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# UKIRT Image

Declination

