

# KIC 008556776

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008556776-01	OBS	No	376.338588	133.249647	897.2	30.256	9.6	10.7	0.92	5880	3.09	0.86

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008556776-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—INCONSISTENT_TRANS—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.

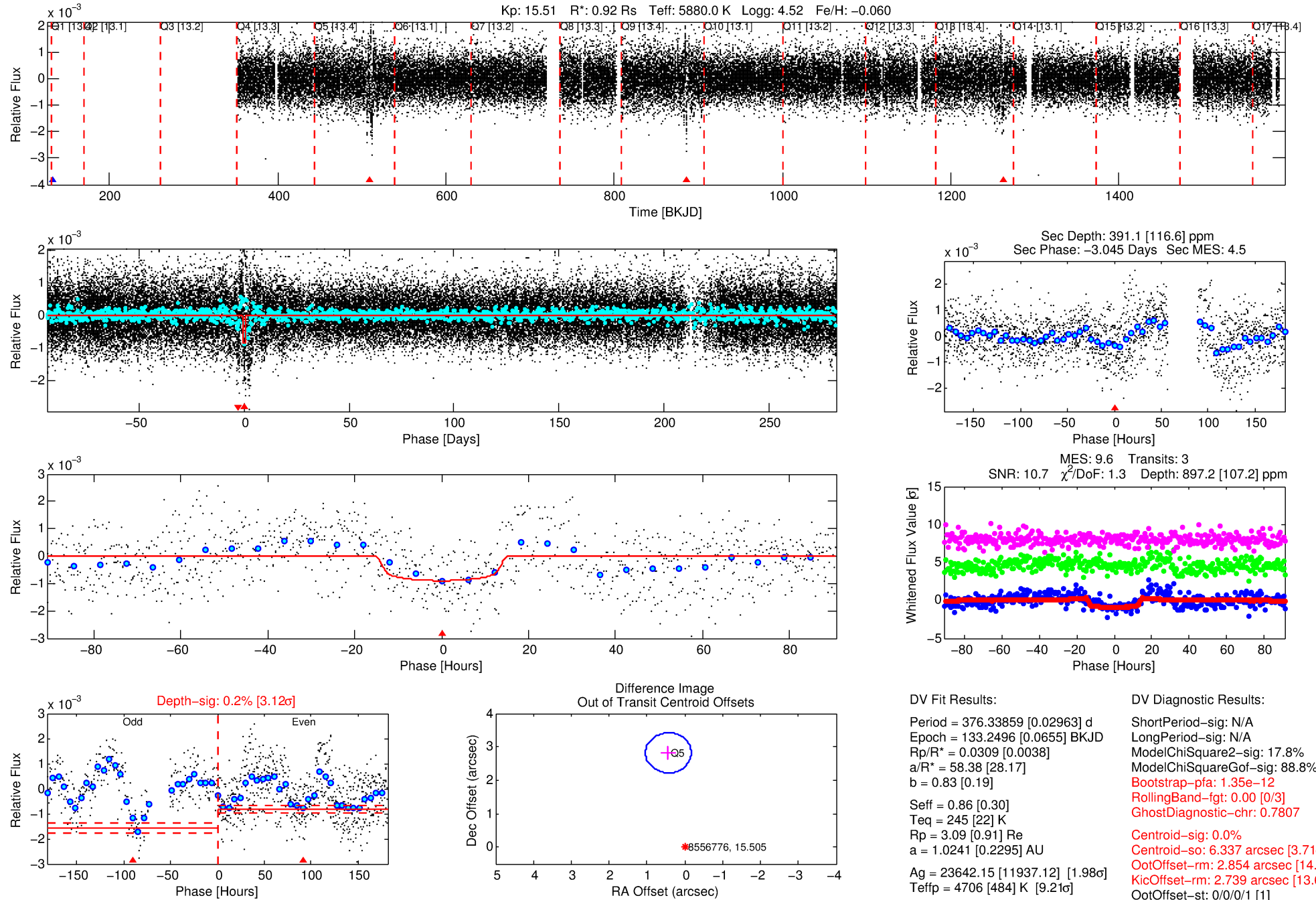
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008556776-01

No Significant Match Found

# DV One-Page Summary

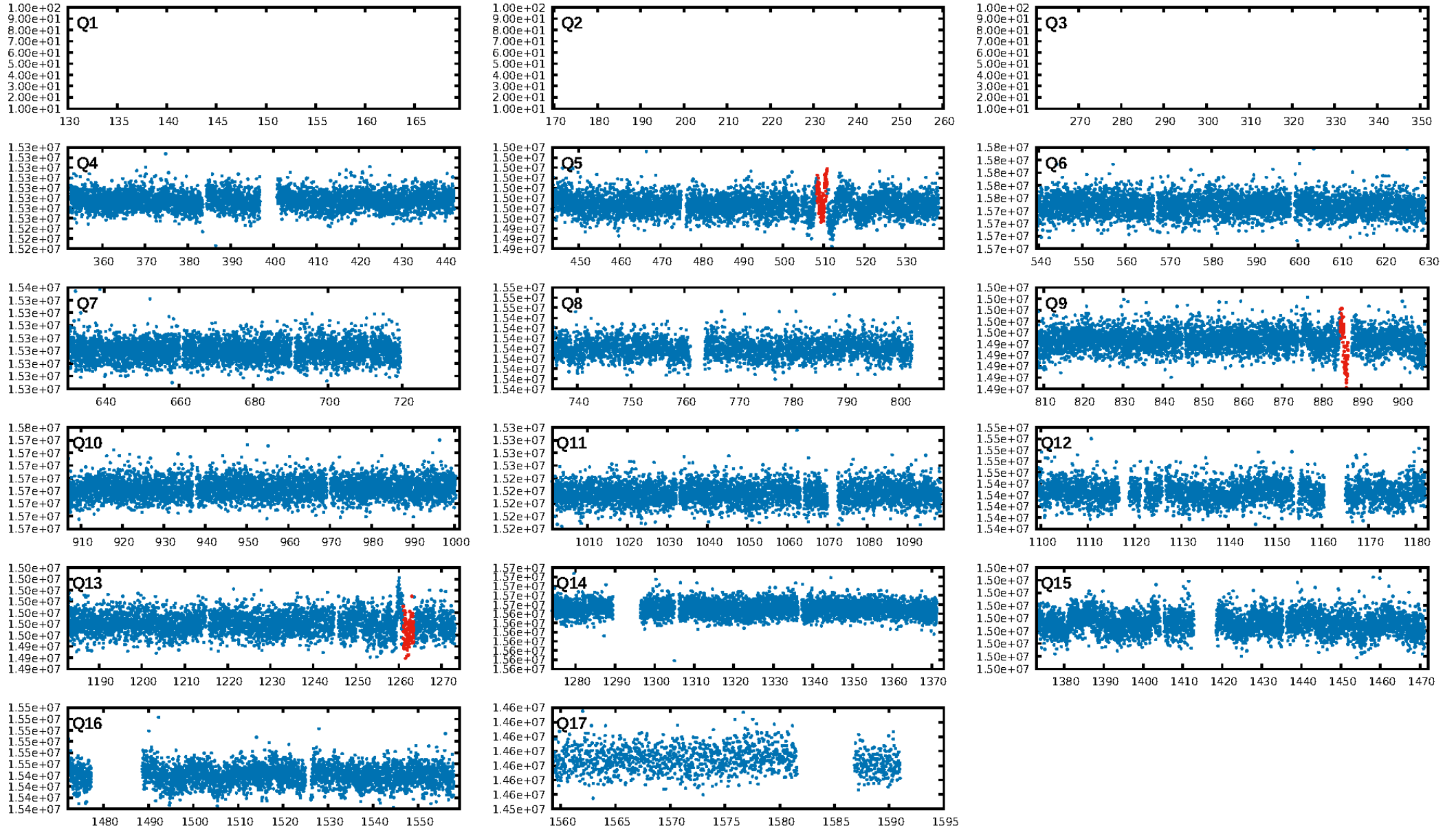
KIC: 8556776 Candidate: 1 of 1 Period: 376.339 d



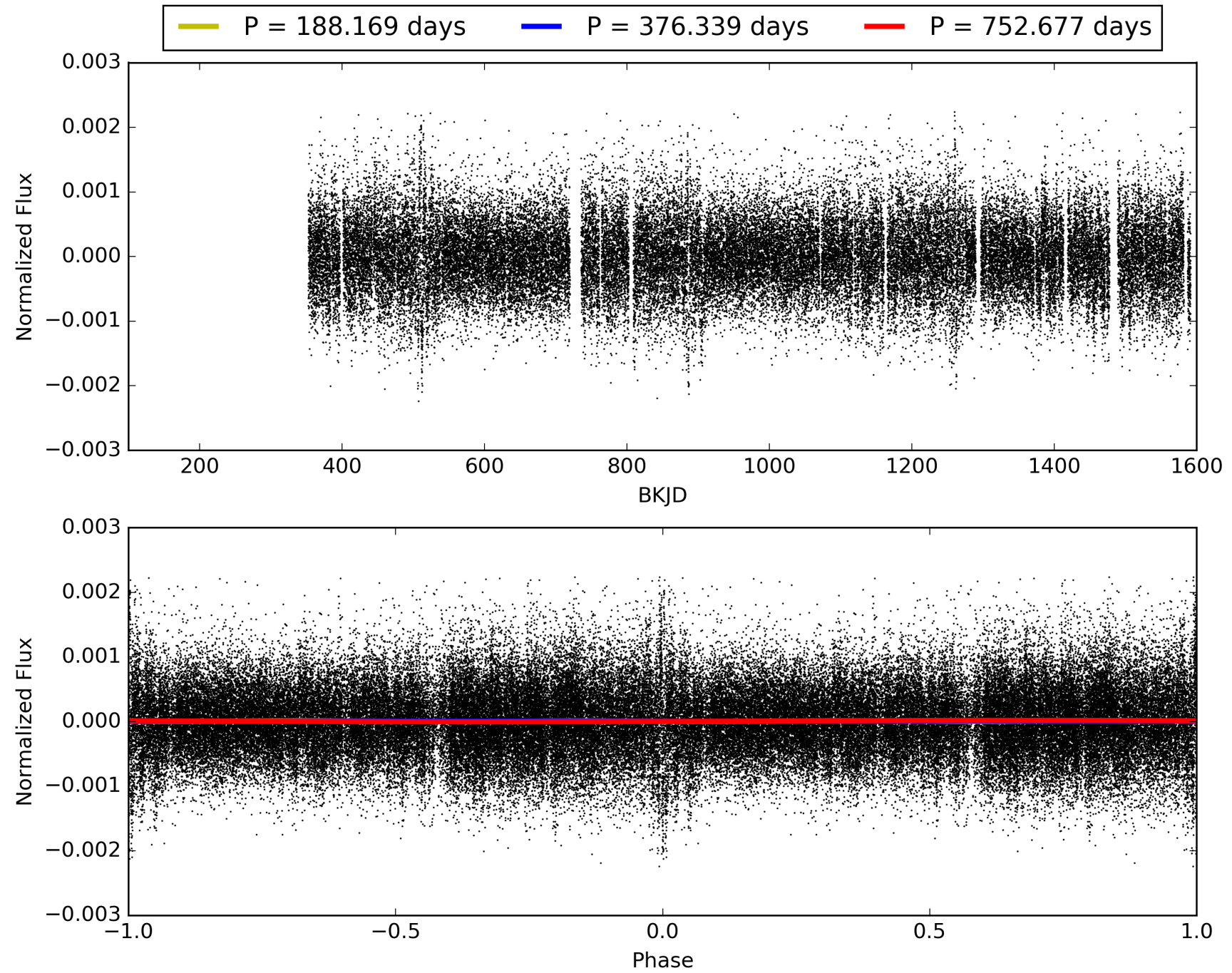
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:04:37 Z

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

# TCE 008556776-01, PDC Light Curves

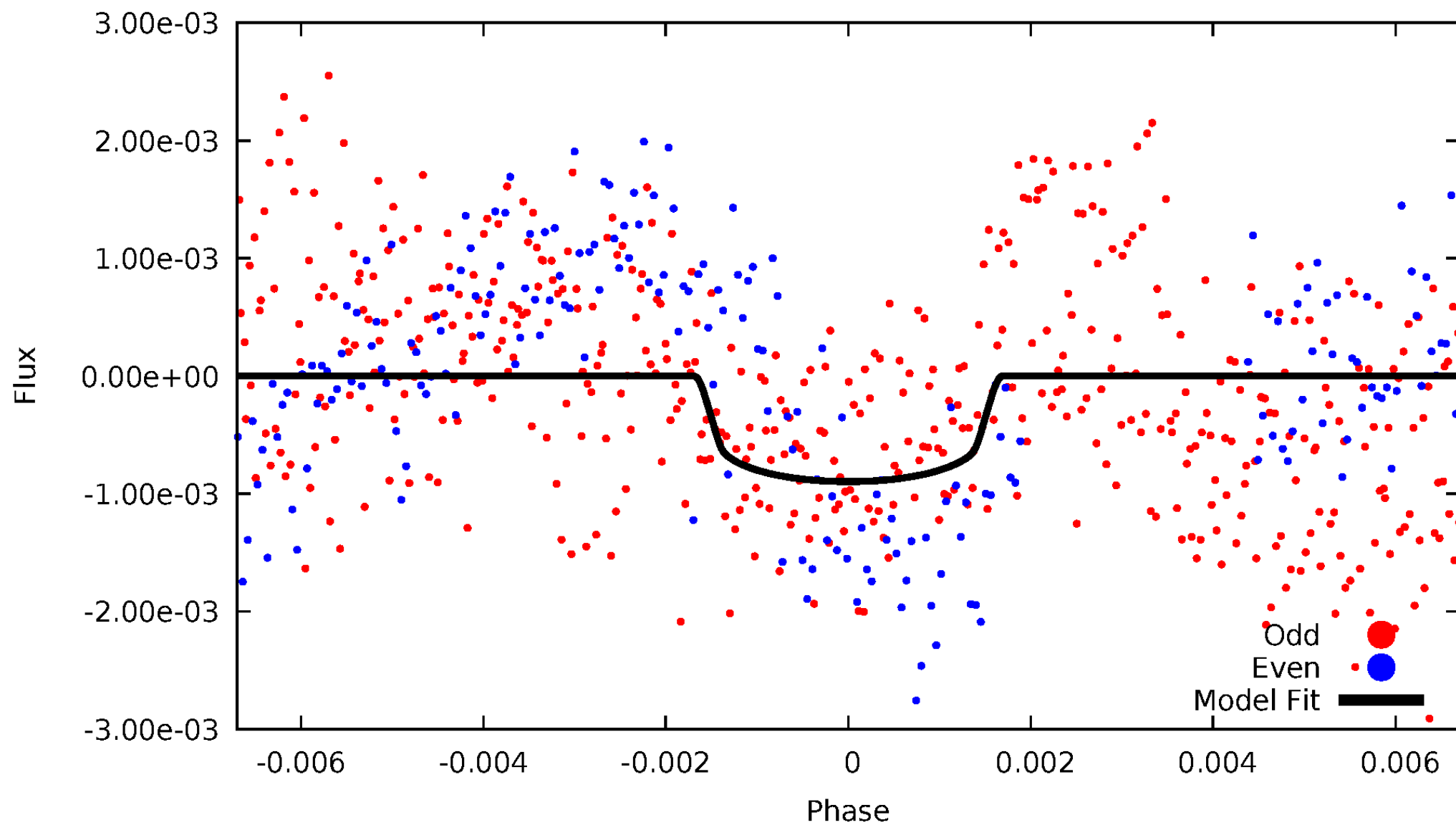


TCE 008556776-01



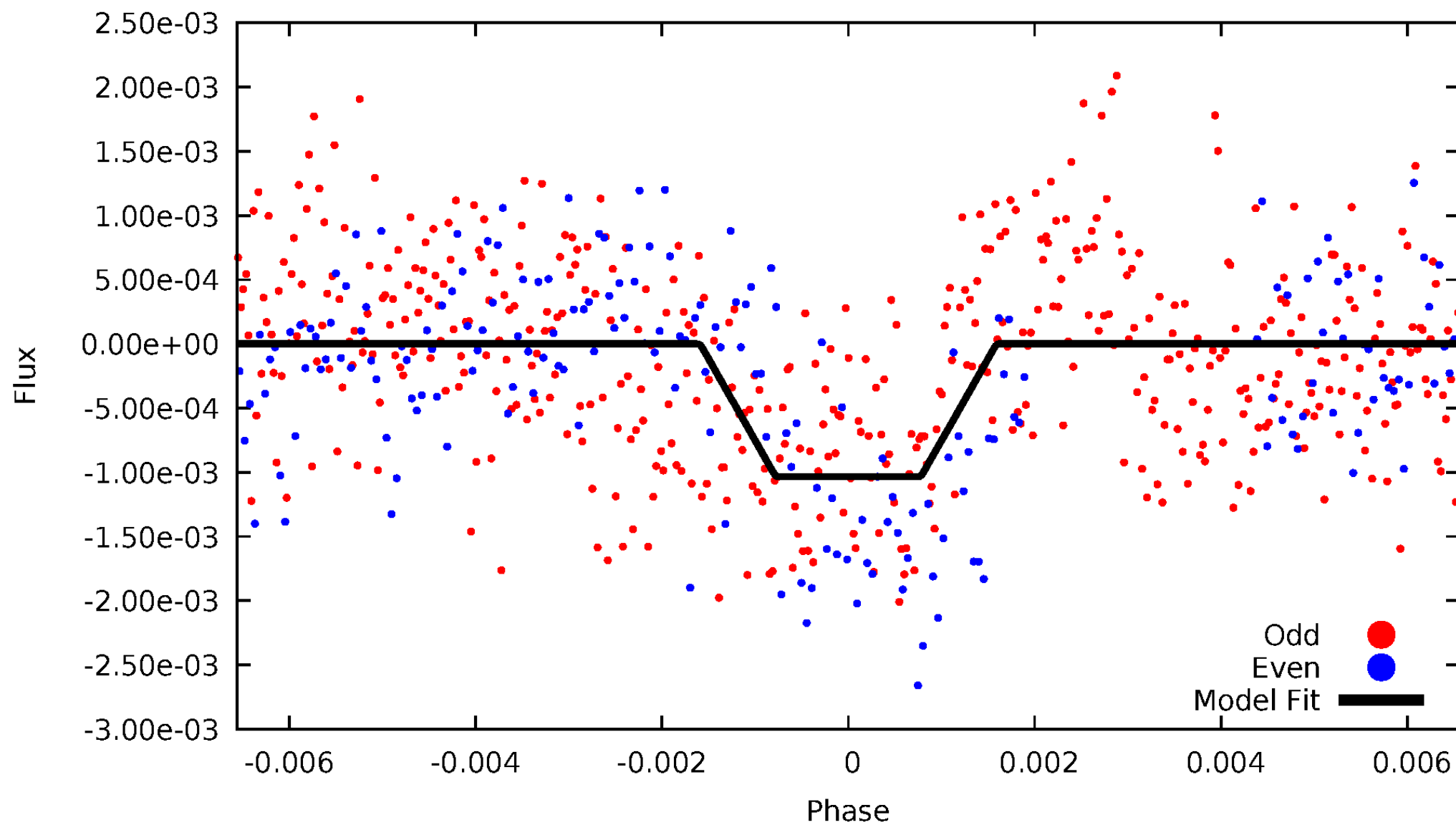
# DV Odd/Even

TCE 008556776-01



# ALT Odd/Even

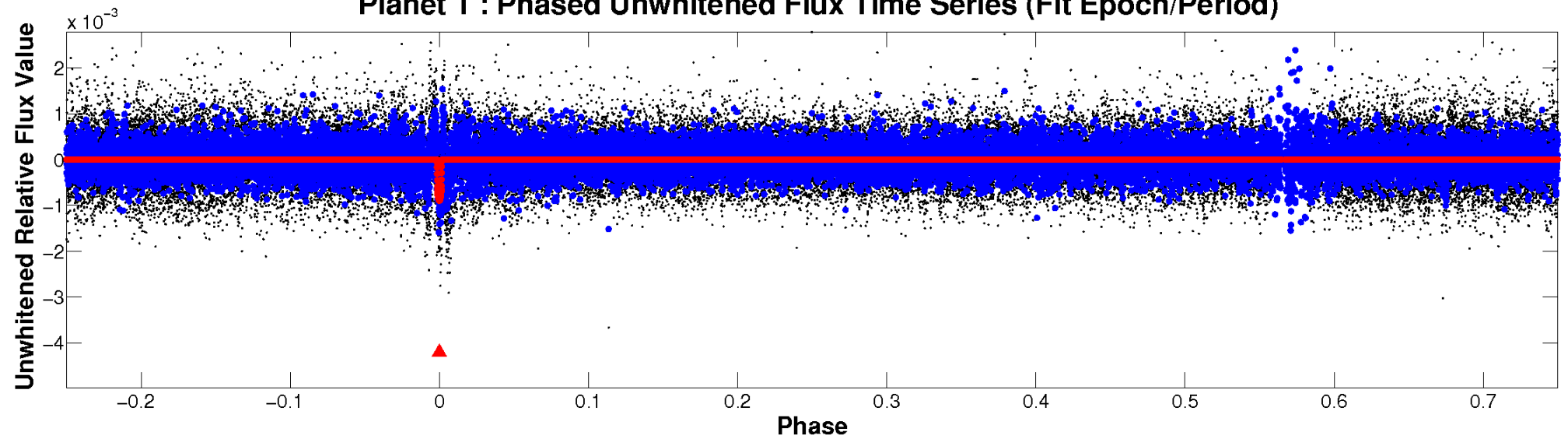
TCE 008556776-01



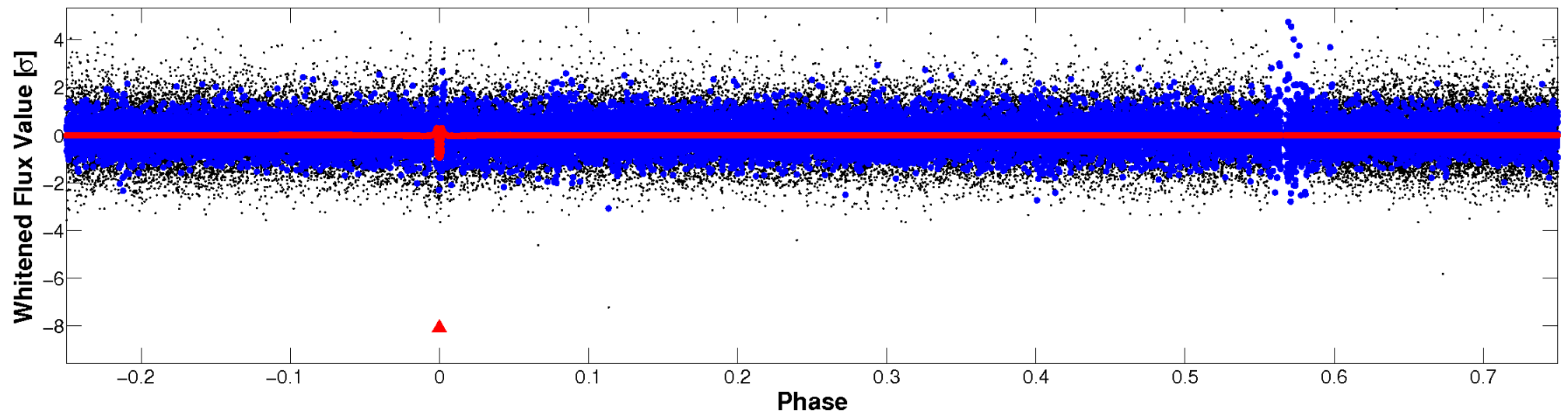


# Non-Whitened Vs. Whitened Light Curve

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

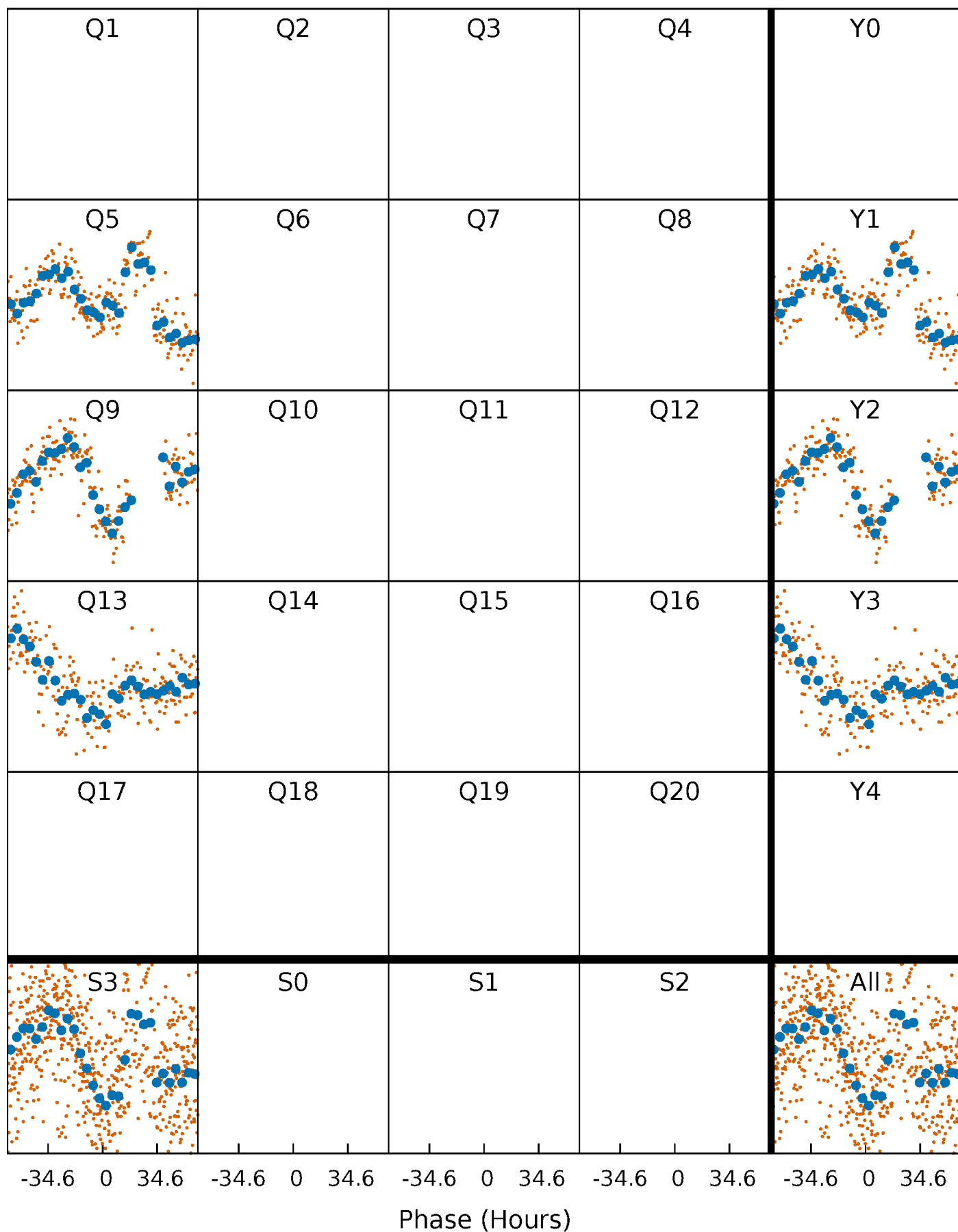


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

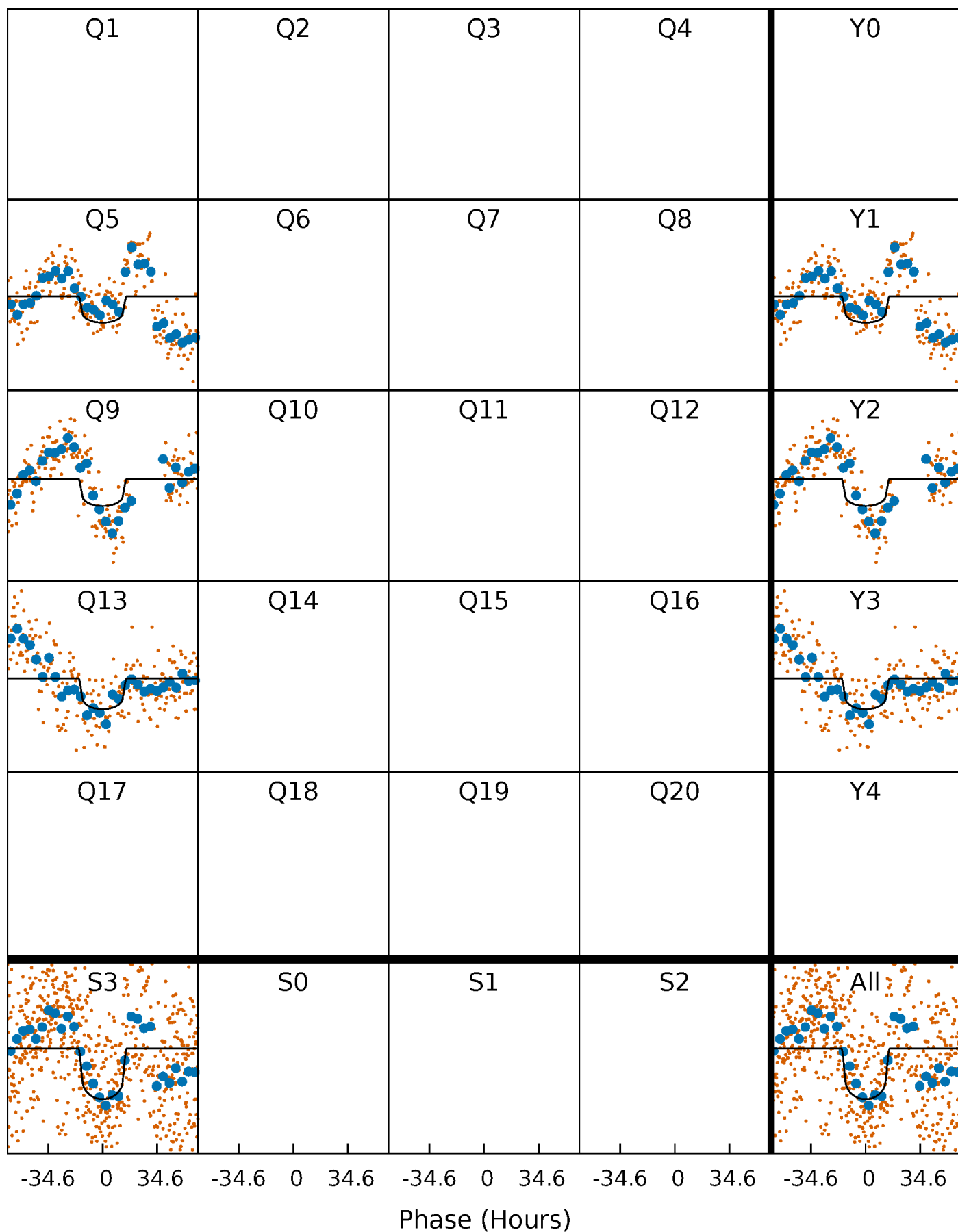
TCE 008556776-01   P=376.338589 Days    $T_0=133.249648$  (BKJD)





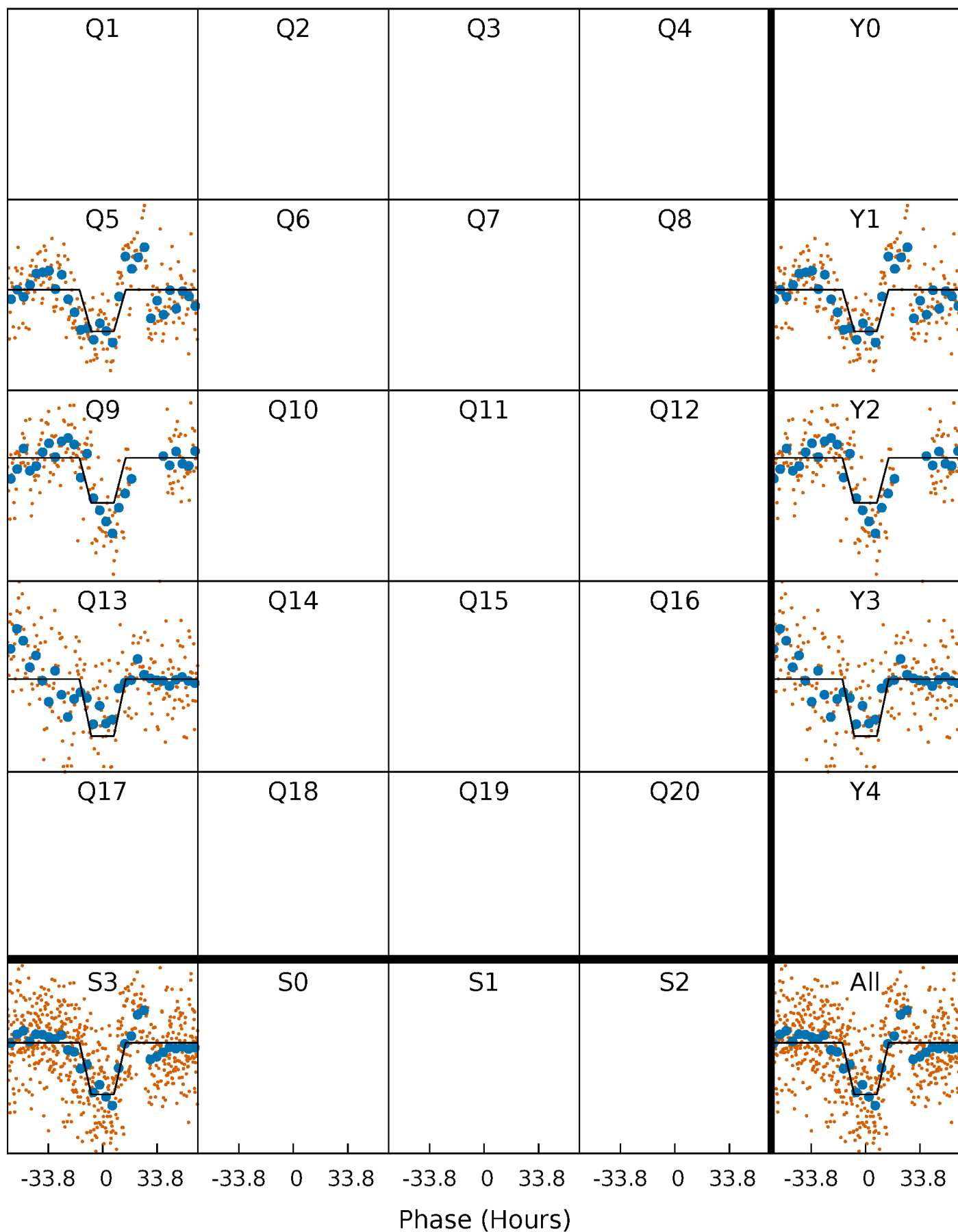
# DV Quarter-Phased Transit Curves

TCE 008556776-01 P=376.338589 Days  $T_0=133.249648$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

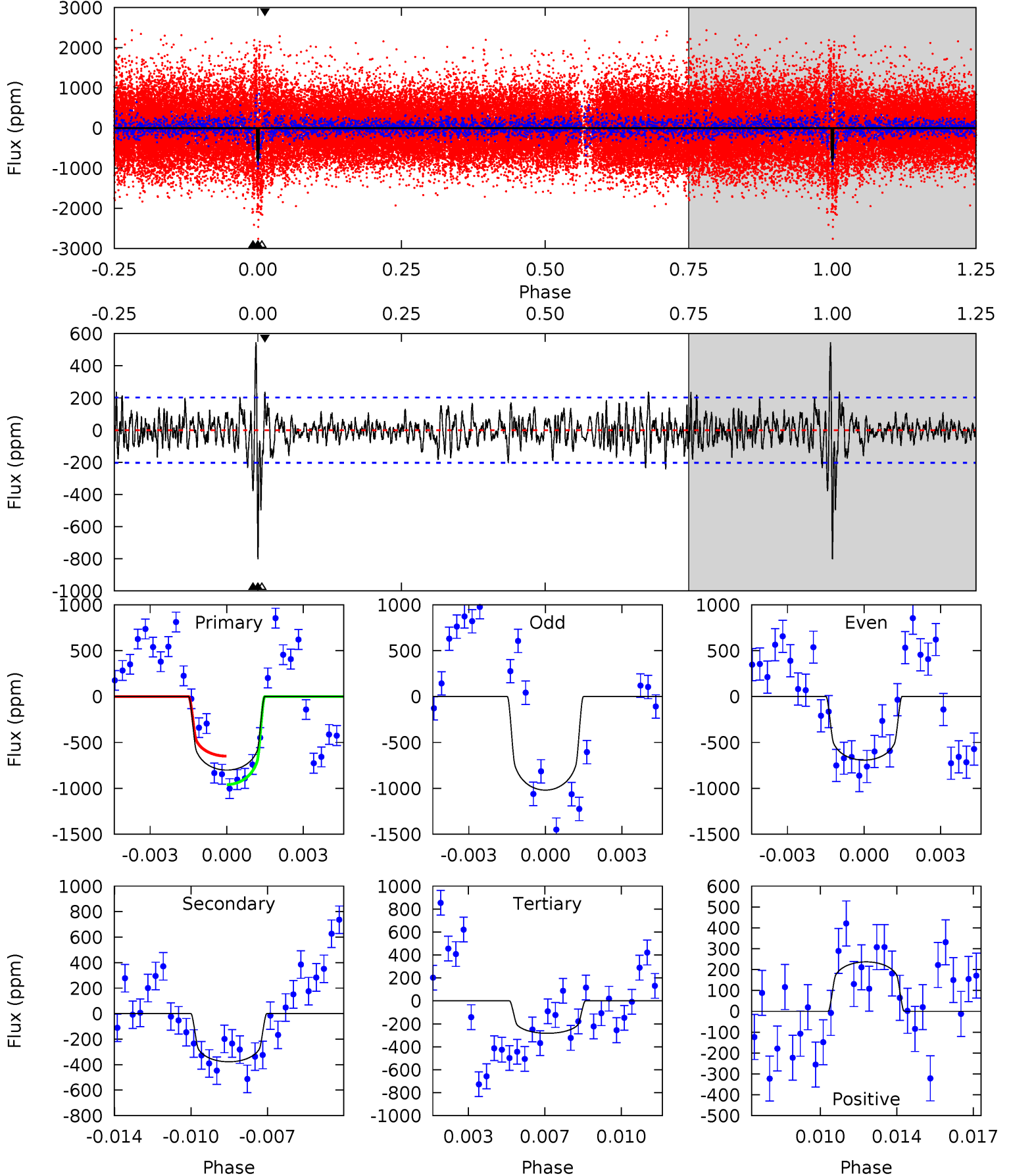
TCE 008556776-01 P=376.168217 Days  $T_0=133.589815$  (BKJD)



# DV Model-Shift Uniqueness Test

008556776-01, P = 376.338589 Days, E = 133.249648 Days

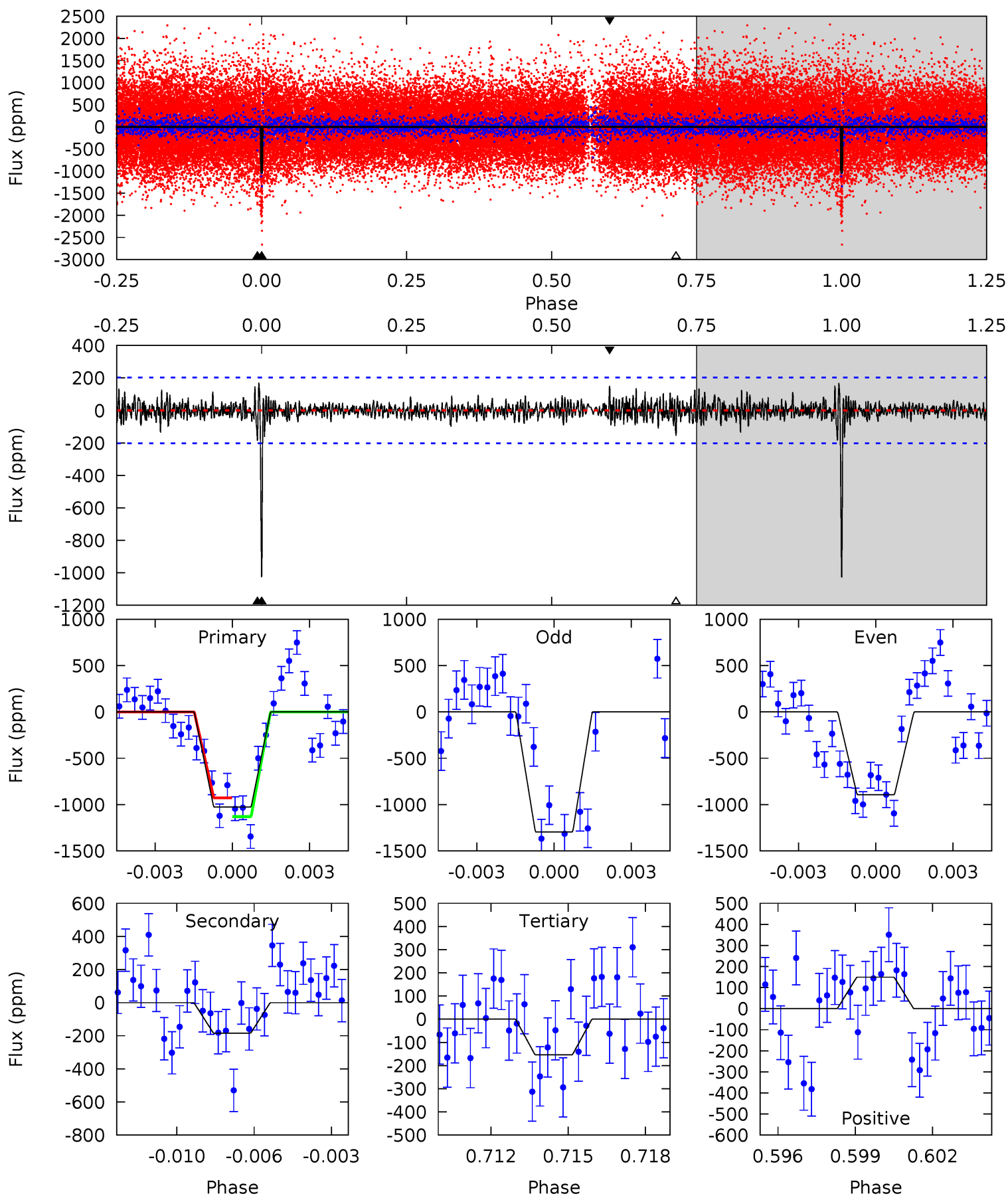
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	9.72	7.27	6.10	5.23	2.93	1.97	13.4	14.5	2.45	3.62	3.96	0.83	0.41	3.99



# Alt Model-Shift Uniqueness Test

008556776-01, P = 376.168217 Days, E = 133.589815 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
26.5	4.75	3.97	3.86	5.24	2.95	0.97	22.6	22.7	0.78	0.89	4.91	0.94	0.14	2.63



### Stellar Parameters For KIC 008556776

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5880^{+184}_{-204}$	$4.518^{+0.044}_{-0.176}$	$-0.060^{+0.250}_{-0.300}$	$0.917^{+0.246}_{-0.098}$	$1.010^{+0.116}_{-0.127}$	$1.844^{+0.428}_{-0.852}$
	+3%/-3%	+1%/-4%	+417%/-500%	+27%/-11%	+11%/-13%	+23%/-46%
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 008556776-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-378 \pm 39$	$3.23^{+0.59}_{-0.47}$	$352^{+23}_{-18}$	$4787^{+314}_{-268}$	$20341^{+7892}_{-5786}$
Alt.	$-184 \pm 39$	$3.33^{+0.57}_{-0.46}$	$352^{+20}_{-17}$	$4109^{+267}_{-243}$	$9286^{+3926}_{-2995}$

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

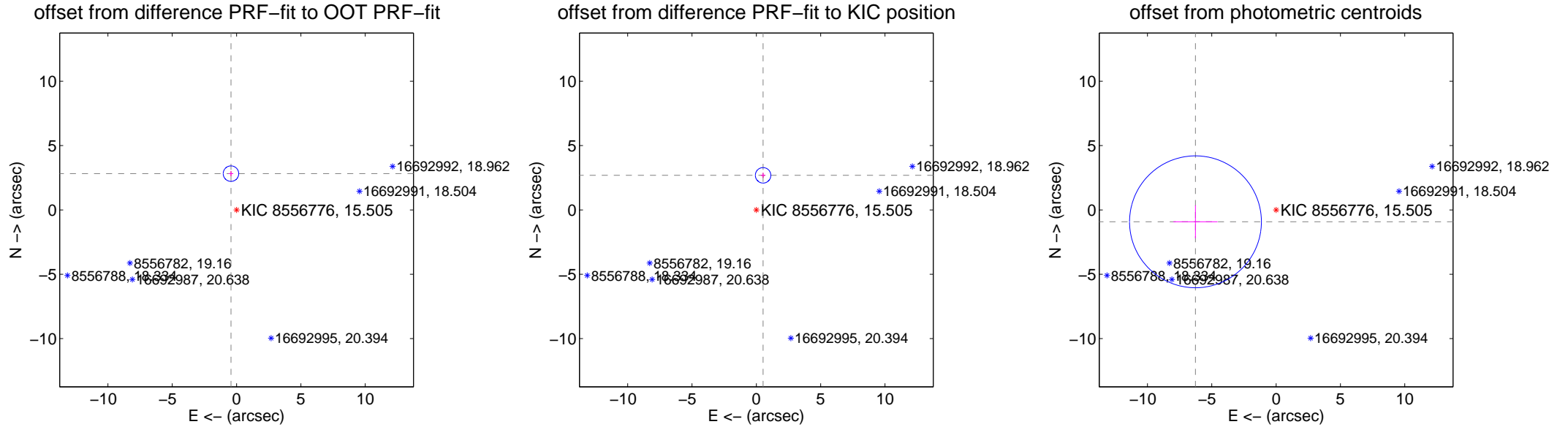
## DV Centroid Data

Supplemental centroid analysis for 008556776-01. Kepler magnitude: 15.51. Transit SNR 10.65

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.97 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.854 \pm 0.201$	14.22	$0.436 \pm 0.180$	$2.820 \pm 0.201$
PRF-fit source offset from KIC position	$2.739 \pm 0.200$	13.67	$-0.525 \pm 0.180$	$2.689 \pm 0.201$
photometric centroid source offset	$6.34 \pm 1.71$	3.71	$6.27 \pm 1.72$	$-0.92 \pm 1.28$



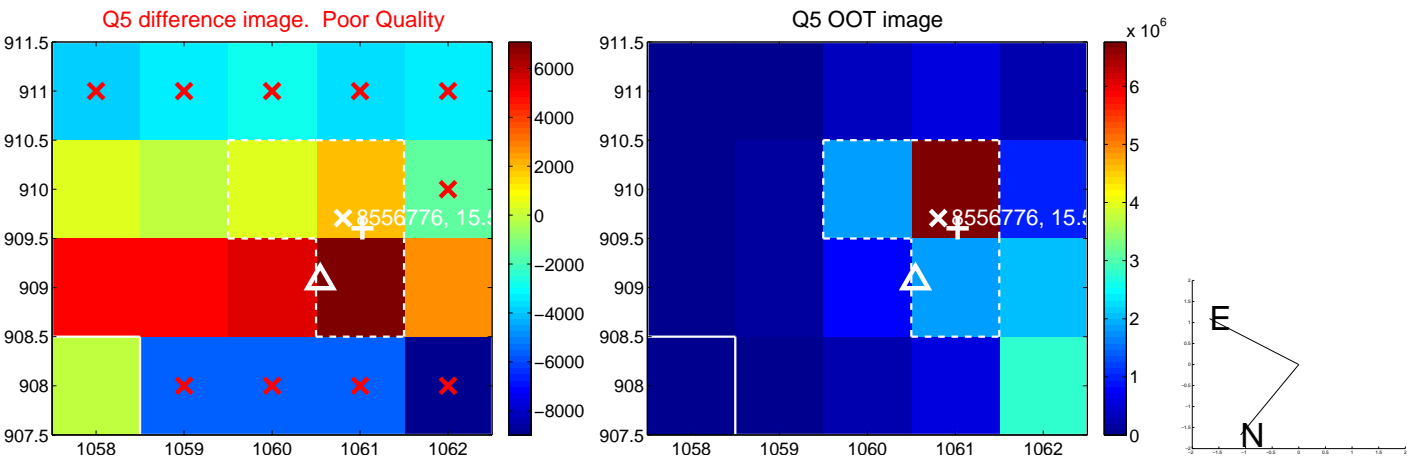
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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





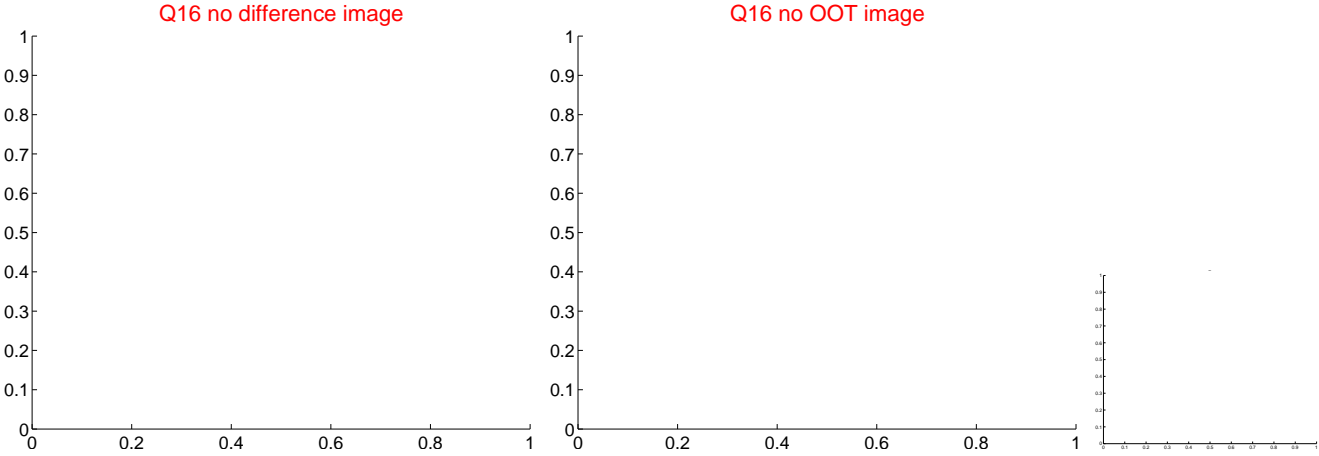
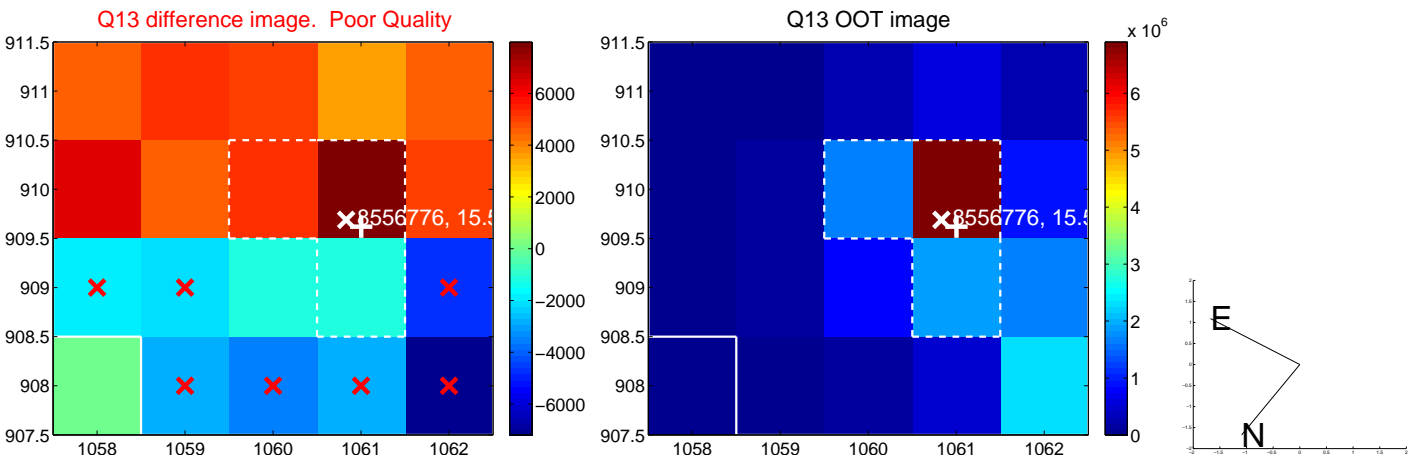
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



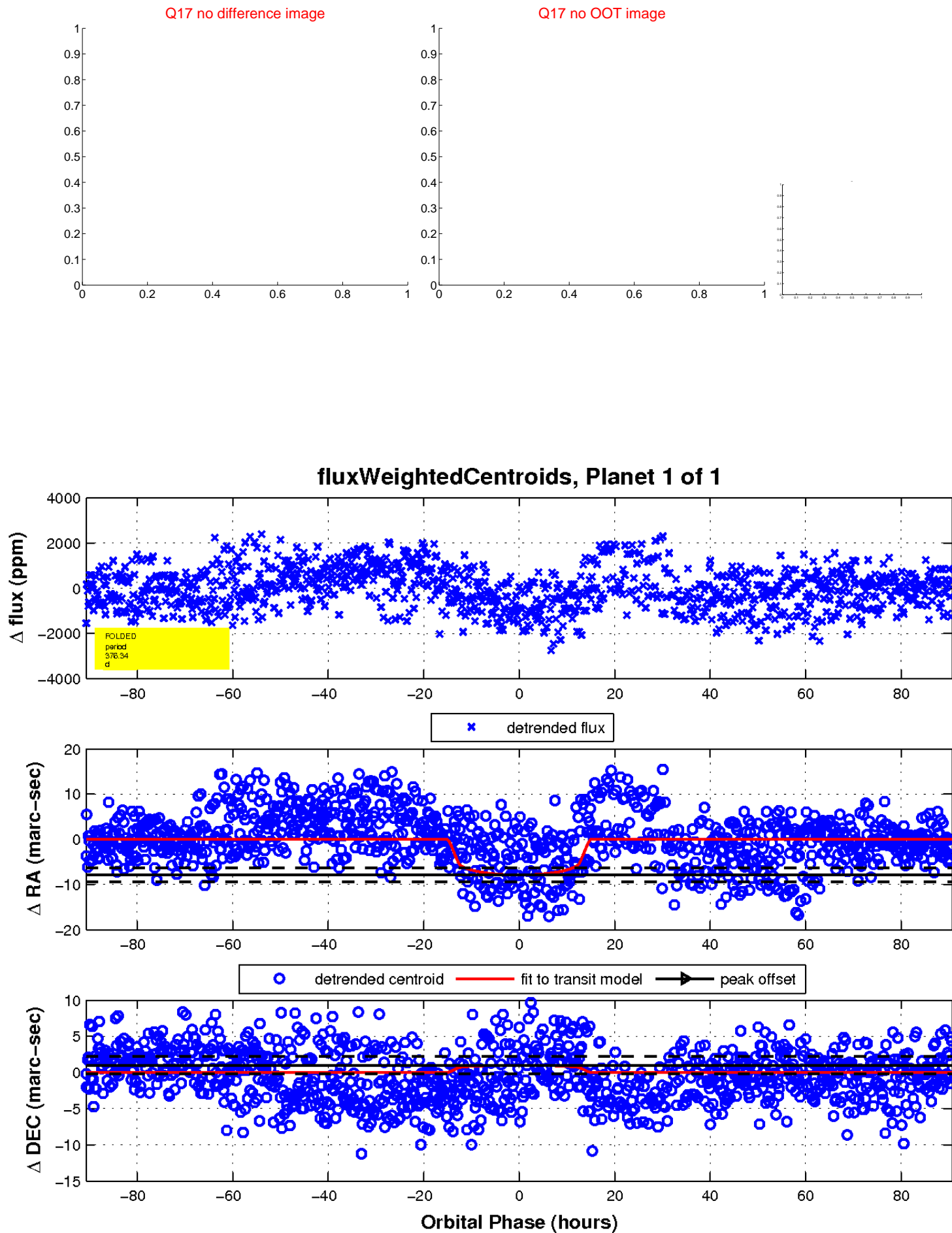
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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UKIRT Image

Declination

