

# KIC 005956123

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005956123-01	OBS	No	367.629766	150.435384	980.9	39.511	8.5	11.4	0.76	5151	3.18	0.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005956123-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

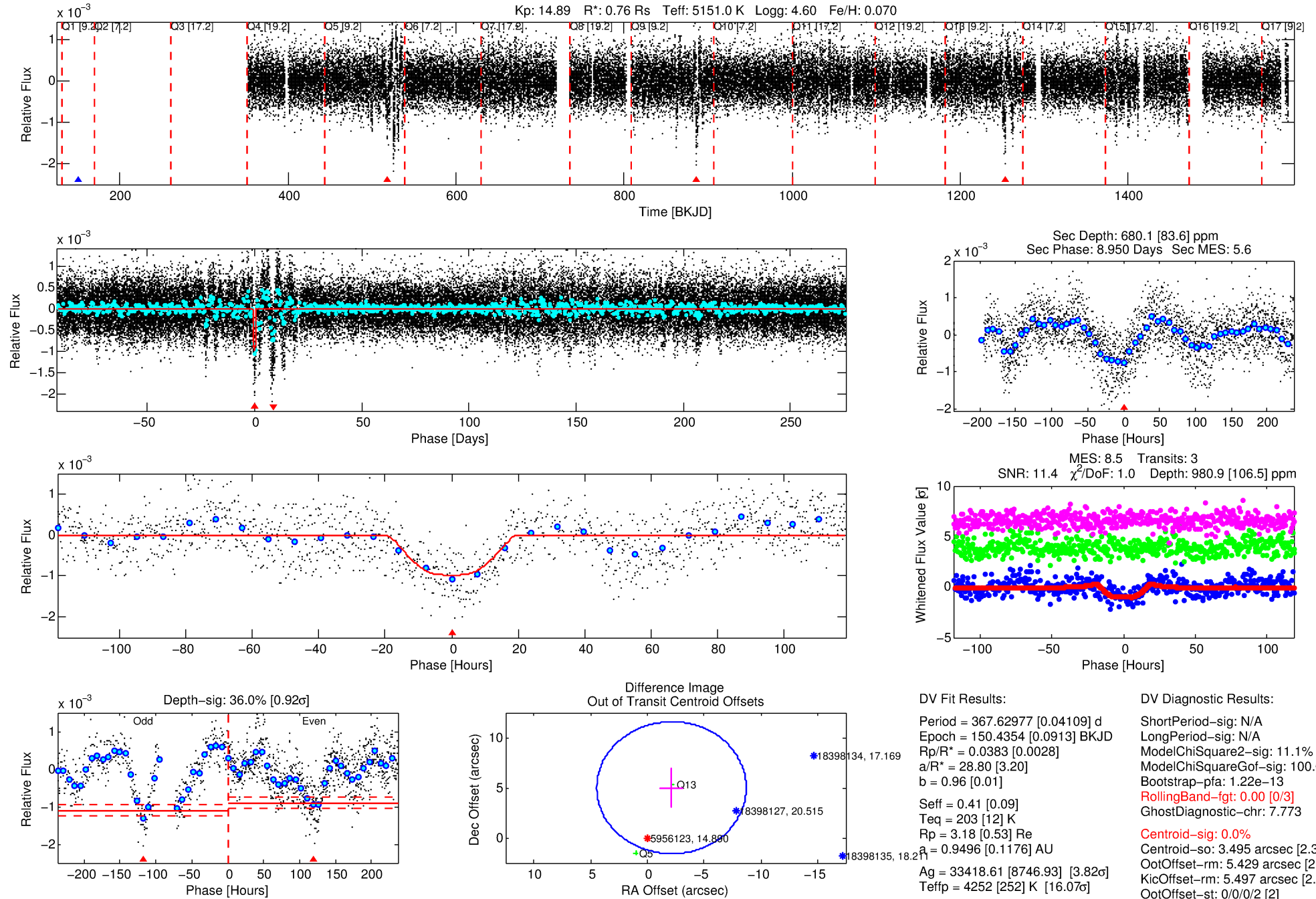
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005956123-01

No Significant Match Found

# DV One-Page Summary

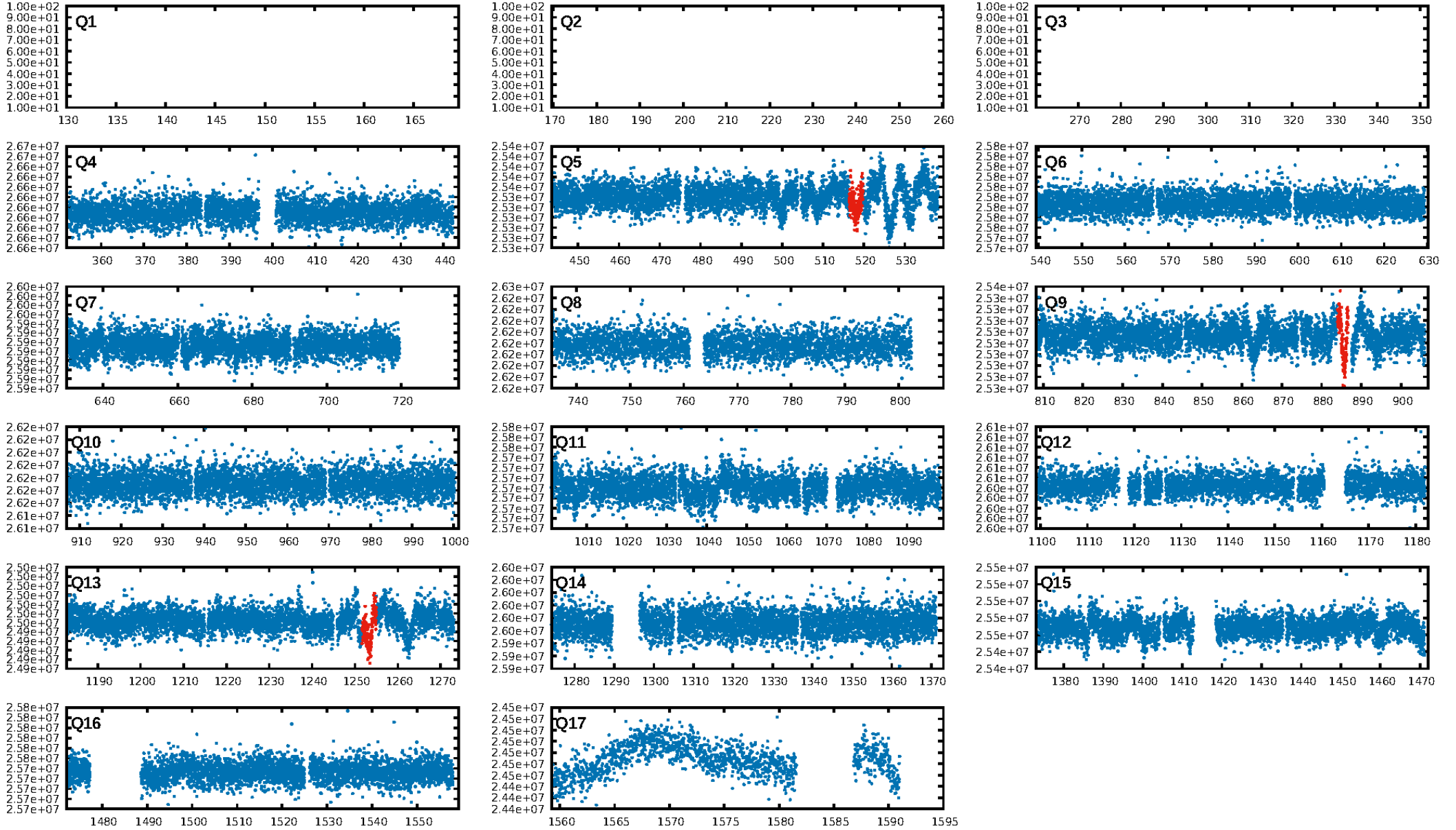
KIC: 5956123 Candidate: 1 of 1 Period: 367.630 d



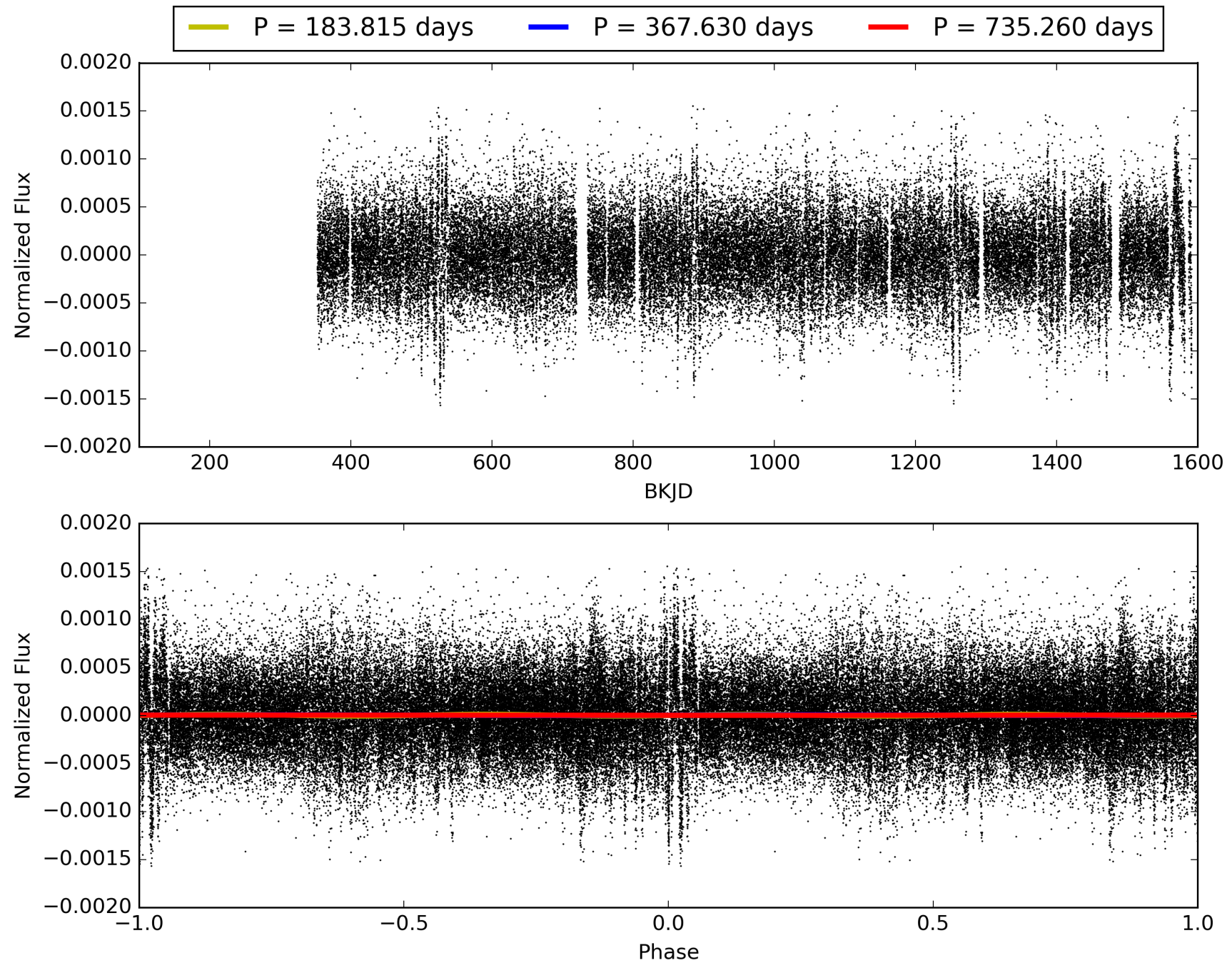
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:02:11 Z

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

# TCE 005956123-01, PDC Light Curves

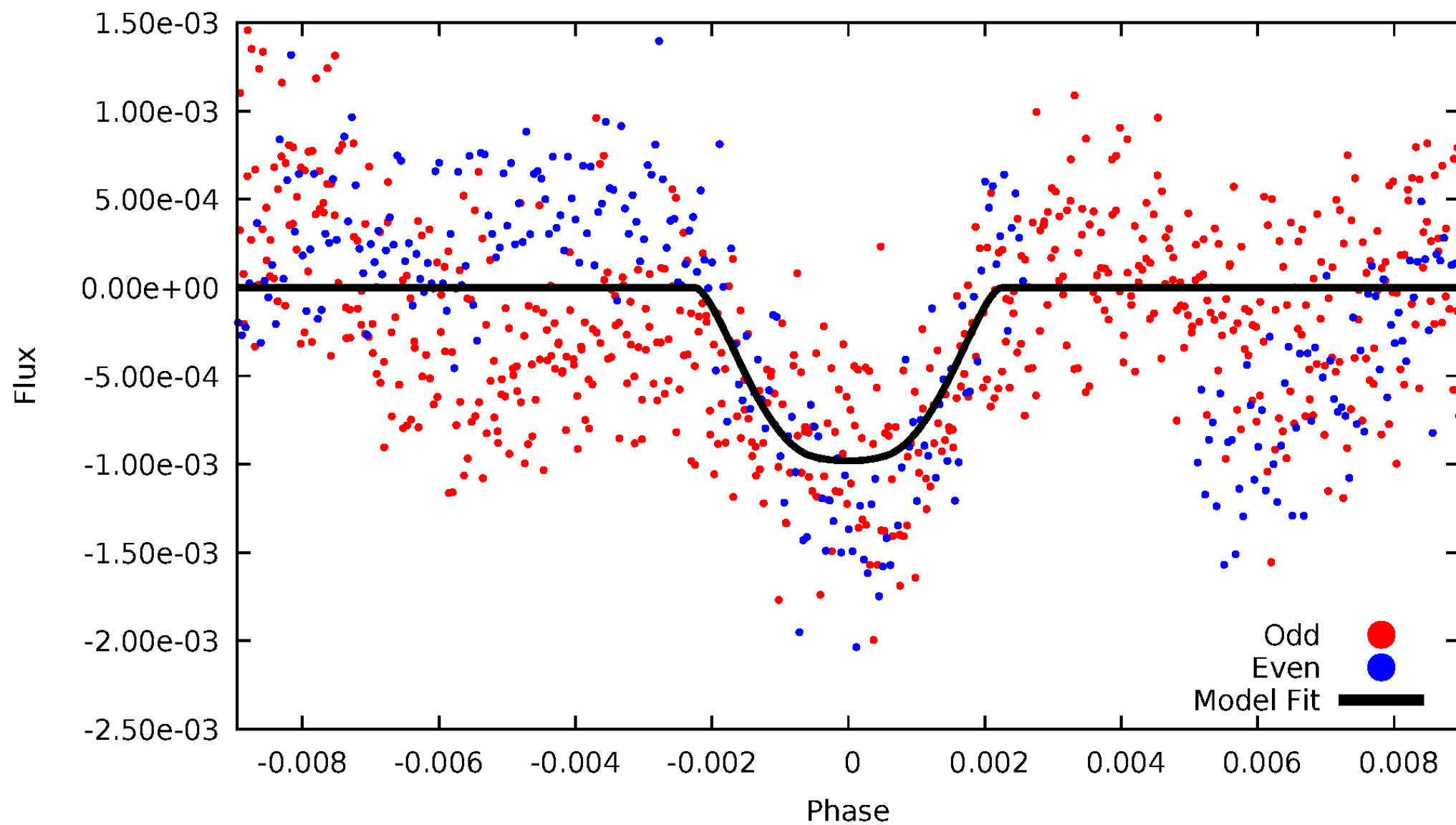


TCE 005956123-01



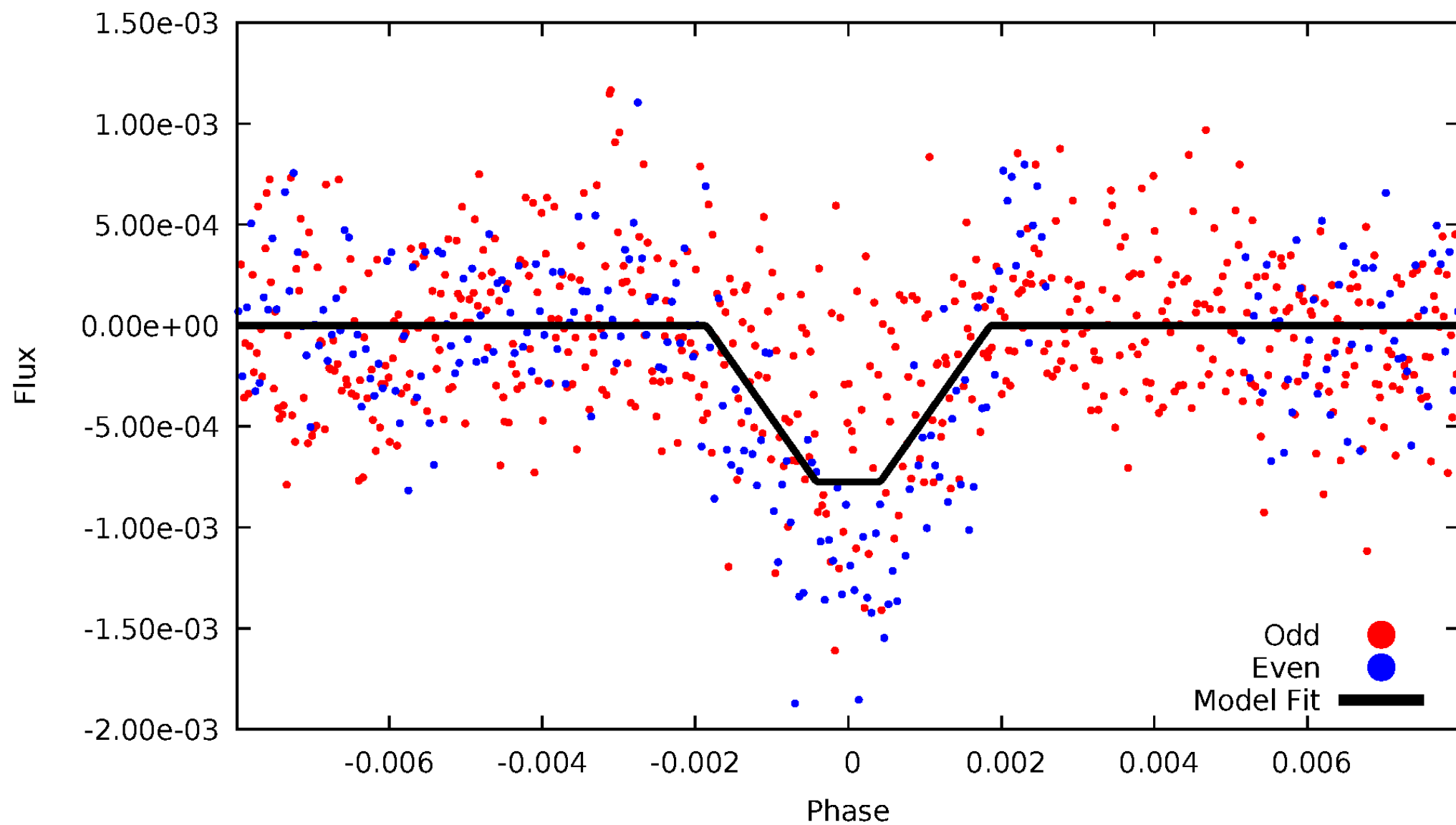
# DV Odd/Even

TCE 005956123-01



# ALT Odd/Even

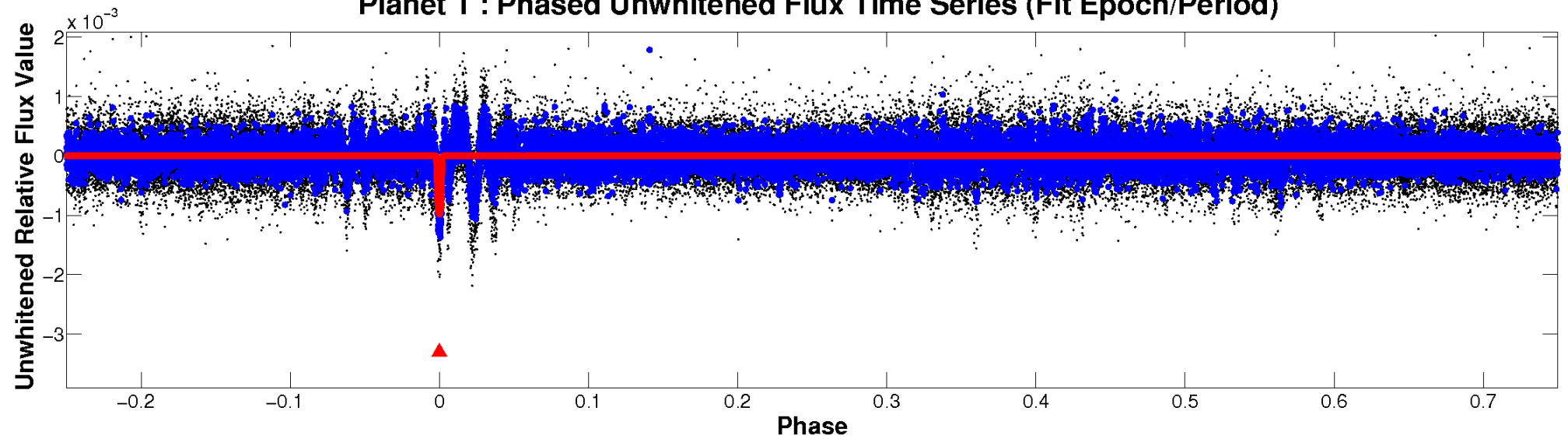
TCE 005956123-01



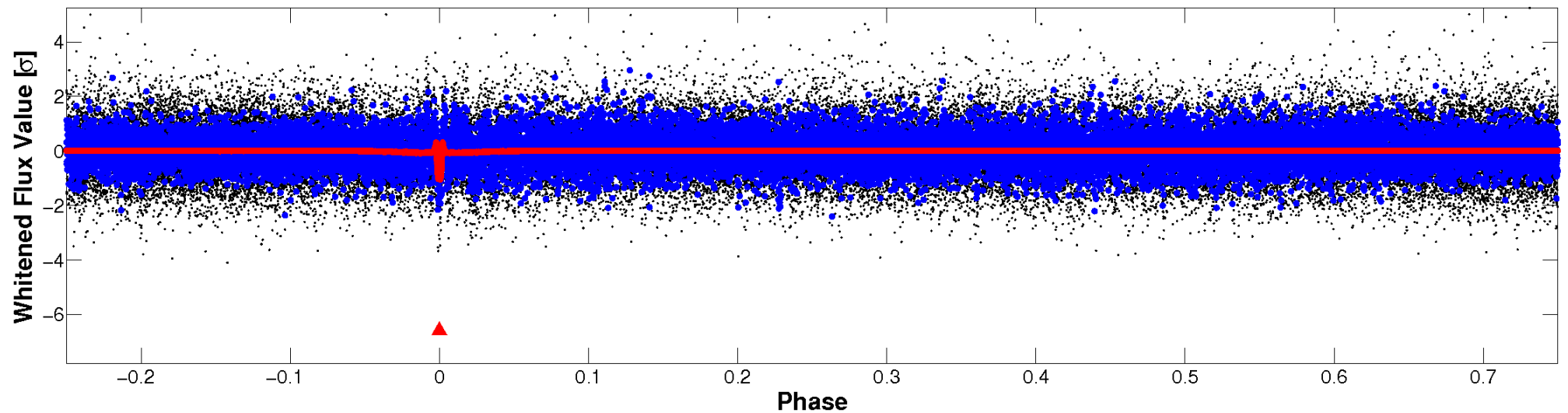


# Non-Whitened Vs. Whitened Light Curve

**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

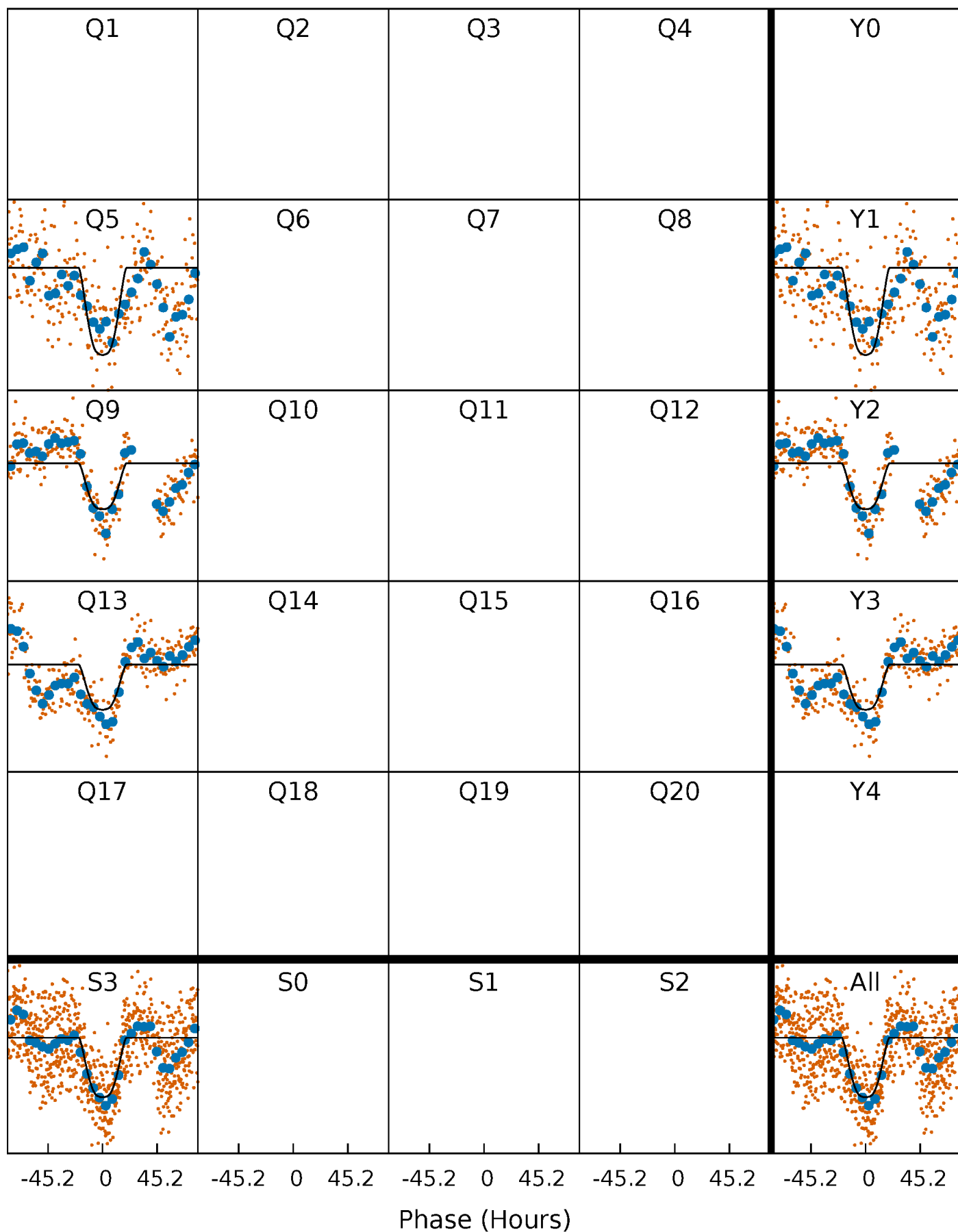
TCE 005956123-01 P=367.629766 Days  $T_0=150.435384$  (BKJD)





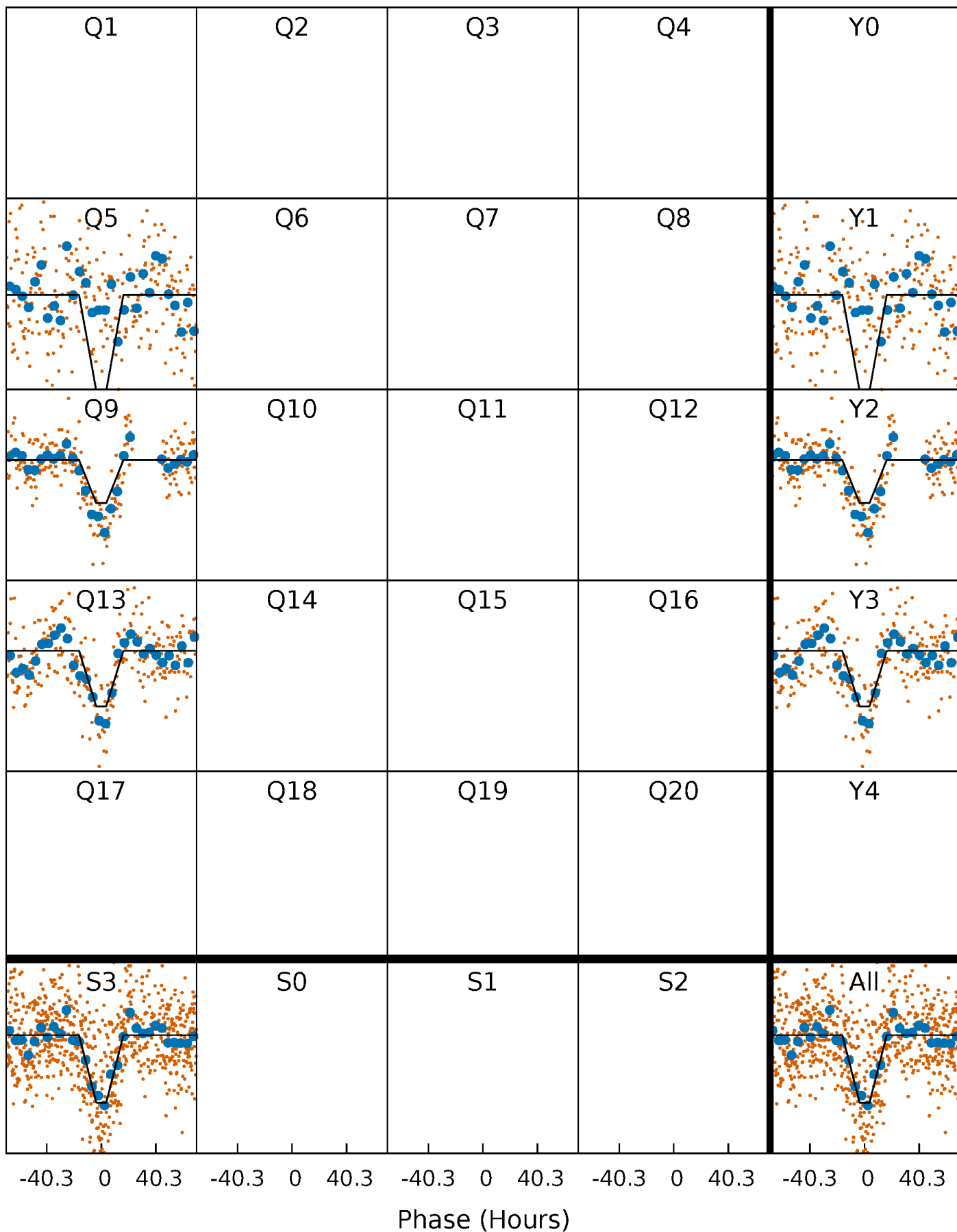
# DV Quarter-Phased Transit Curves

TCE 005956123-01 P=367.629766 Days  $T_0=150.435384$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

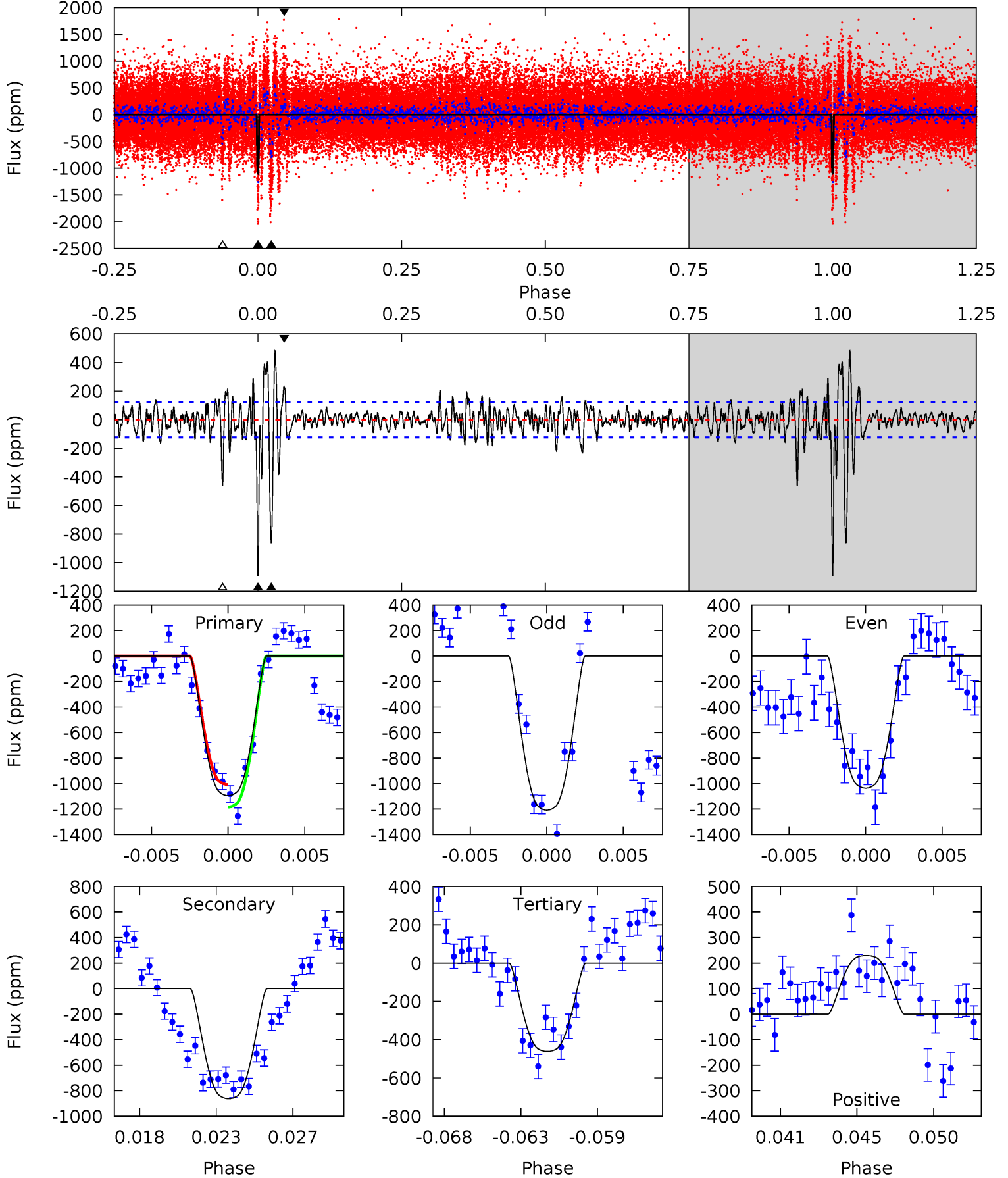
TCE 005956123-01 P=367.838136 Days  $T_0=150.011099$  (BKJD)



# DV Model-Shift Uniqueness Test

005956123-01, P = 367.629766 Days, E = 150.435384 Days

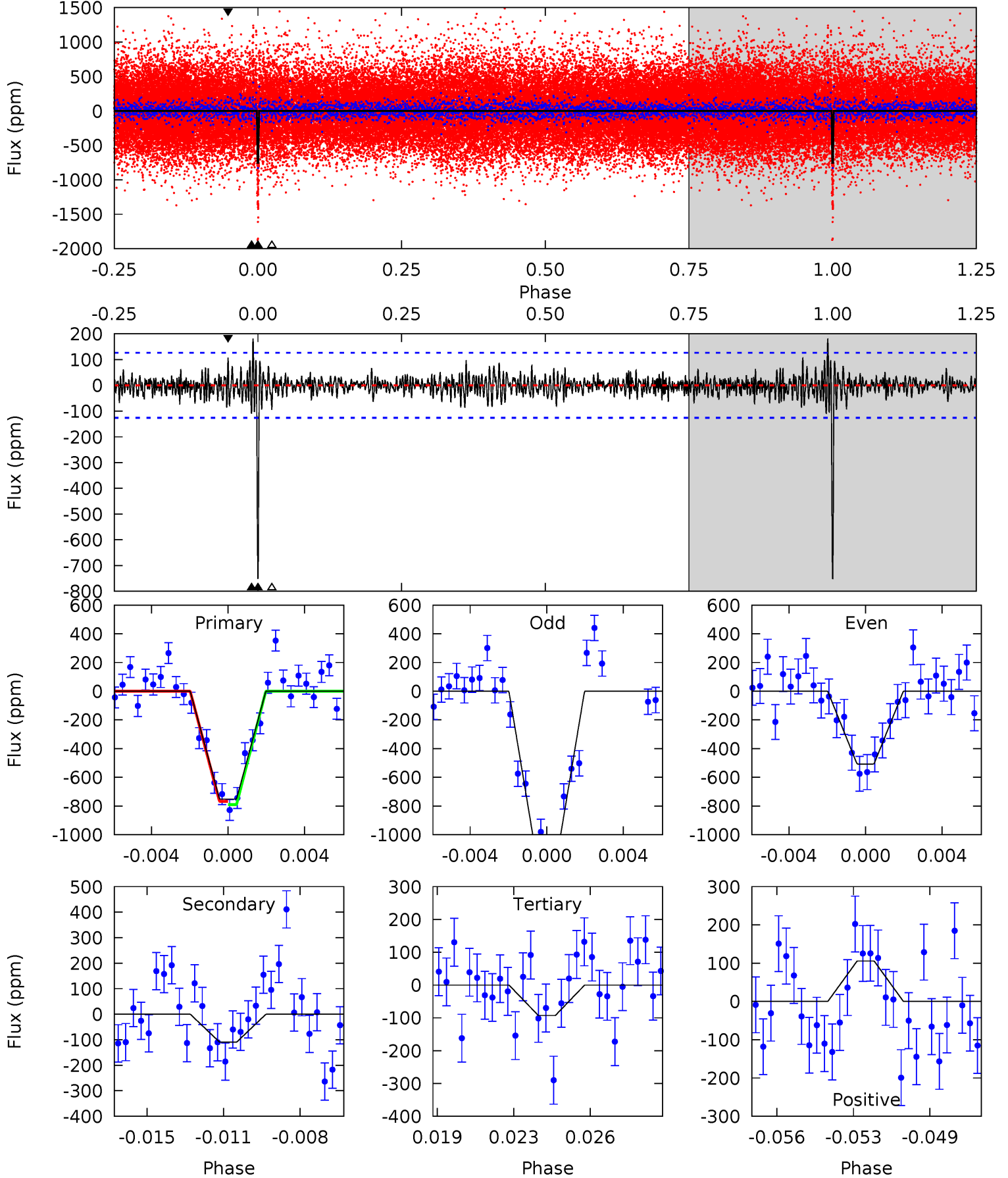
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.5	35.8	19.2	9.58	5.18	2.84	3.57	26.3	35.9	16.7	26.3	3.43	0.90	0.31	3.61



# Alt Model-Shift Uniqueness Test

005956123-01, P = 367.838136 Days, E = 150.011099 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
31.1	4.52	3.84	4.36	5.21	2.90	1.11	27.2	26.7	0.69	0.16	14.1	0.83	0.19	0.46



### Stellar Parameters For KIC 005956123

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5151^{+180}_{-180}$	$4.602^{+0.026}_{-0.097}$	$0.070^{+0.250}_{-0.300}$	$0.761^{+0.113}_{-0.052}$	$0.874^{+0.057}_{-0.099}$	$2.798^{+0.375}_{-0.877}$
	+3%/-3%	+1%/-2%	+357%/-429%	+15%/-7%	+7%/-11%	+13%/-31%
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 005956123-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-862 \pm 24$	$3.28^{+0.36}_{-0.30}$	$289^{+14}_{-12}$	$4625^{+195}_{-195}$	$39659^{+7952}_{-6425}$
Alt.	$-109 \pm 24$	$2.38^{+0.30}_{-0.27}$	$289^{+15}_{-12}$	$3566^{+204}_{-203}$	$9592^{+3387}_{-2923}$

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

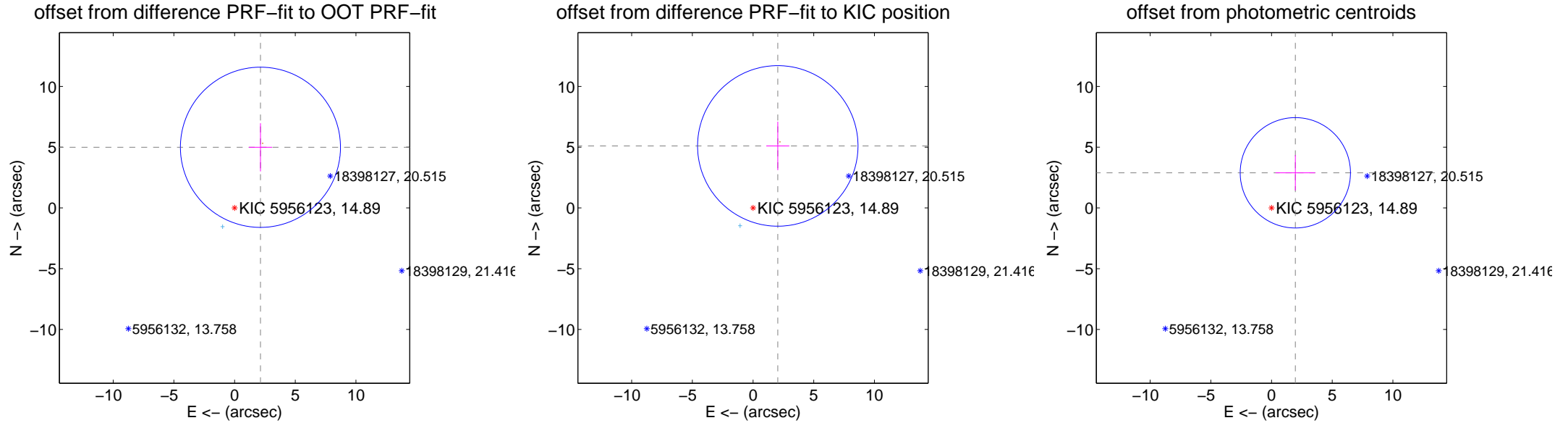
## DV Centroid Data

Supplemental centroid analysis for 005956123-01. Kepler magnitude: 14.89. Transit SNR 11.36

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$5.429 \pm 2.197$	2.47	$-2.131 \pm 0.955$	$4.993 \pm 1.983$
PRF-fit source offset from KIC position	$5.497 \pm 2.202$	2.50	$-2.038 \pm 0.950$	$5.106 \pm 1.993$
photometric centroid source offset	$3.50 \pm 1.51$	2.31	$-1.96 \pm 1.63$	$2.89 \pm 1.46$



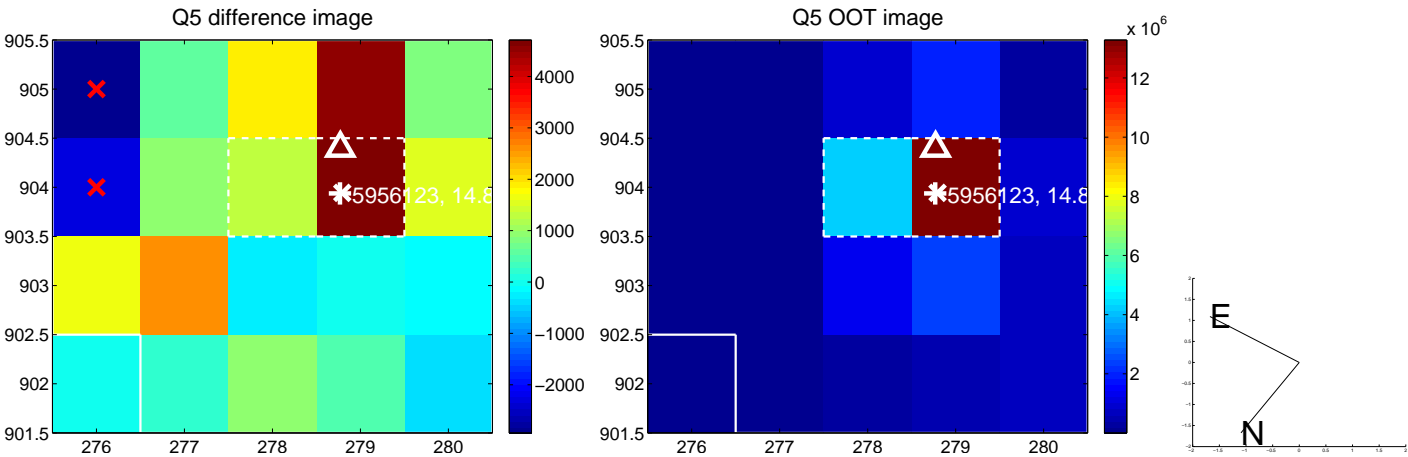
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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





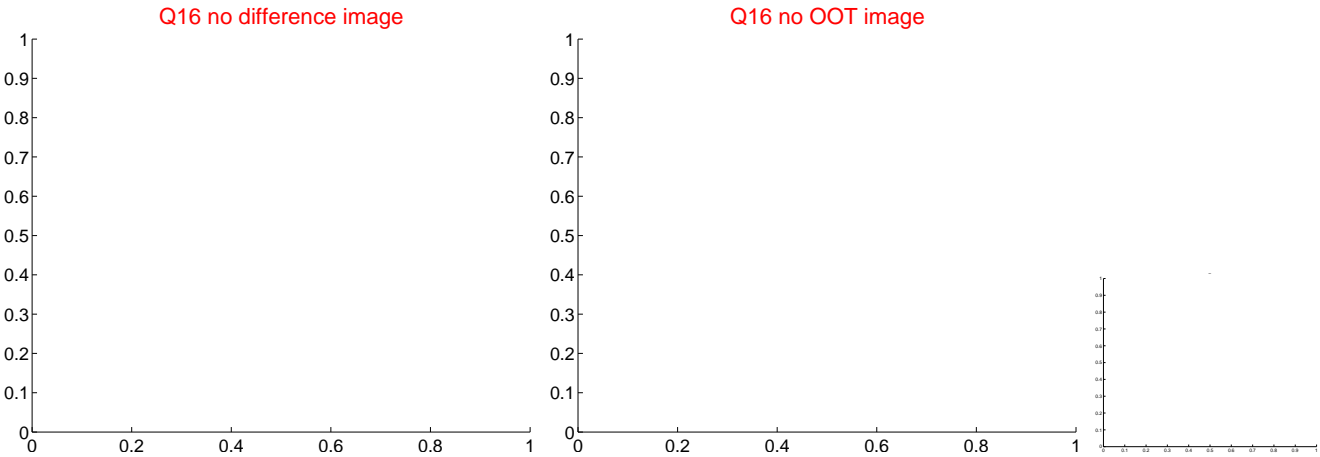
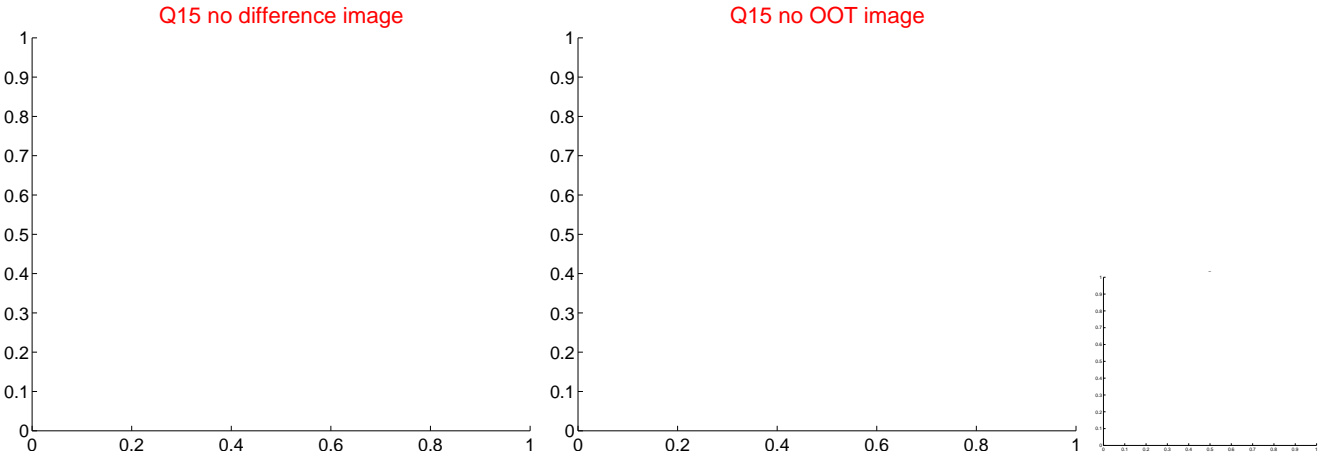
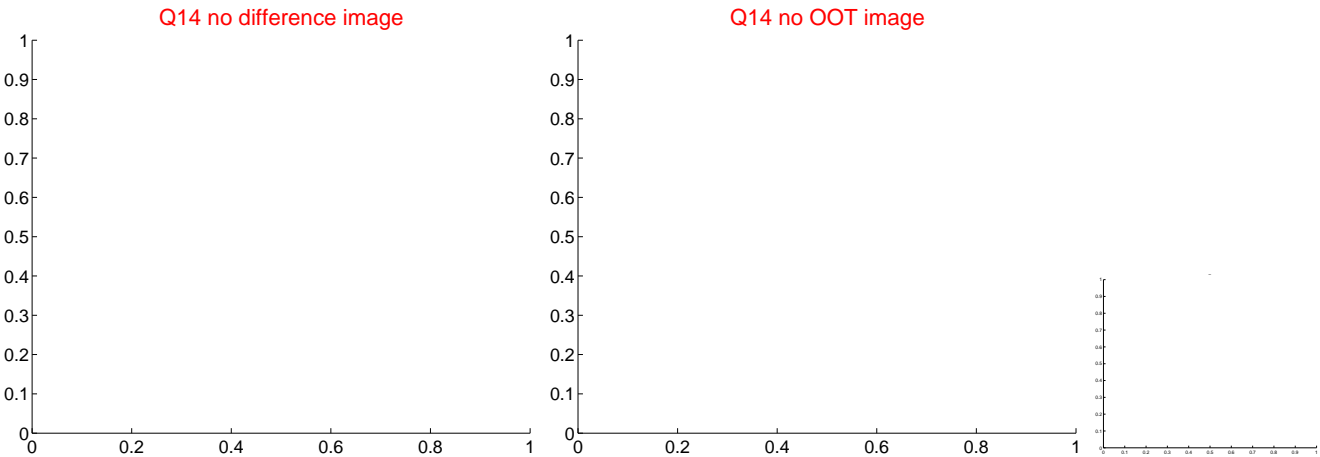
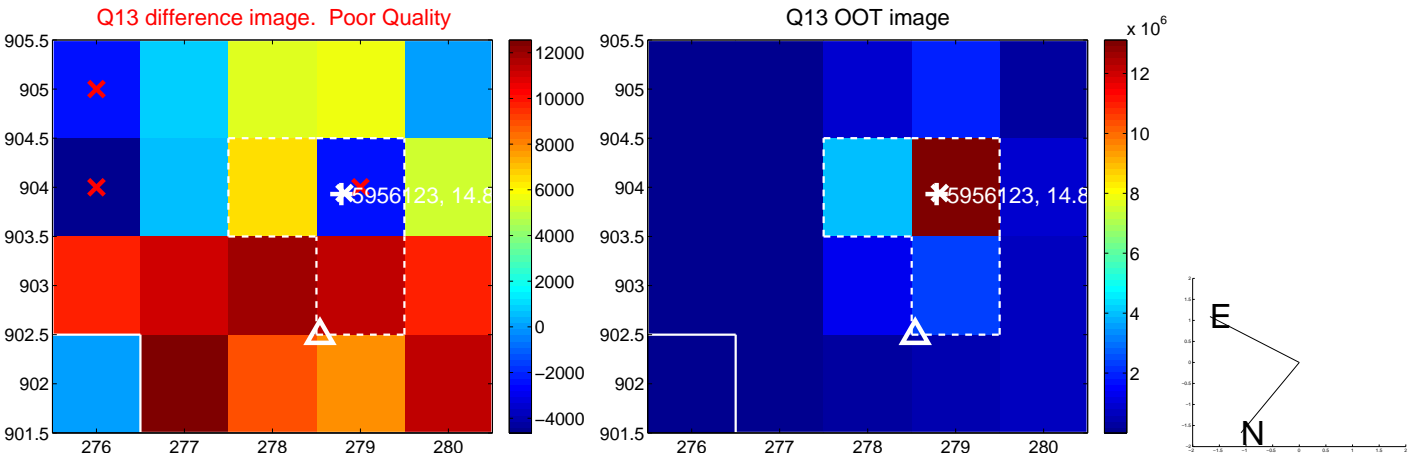
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



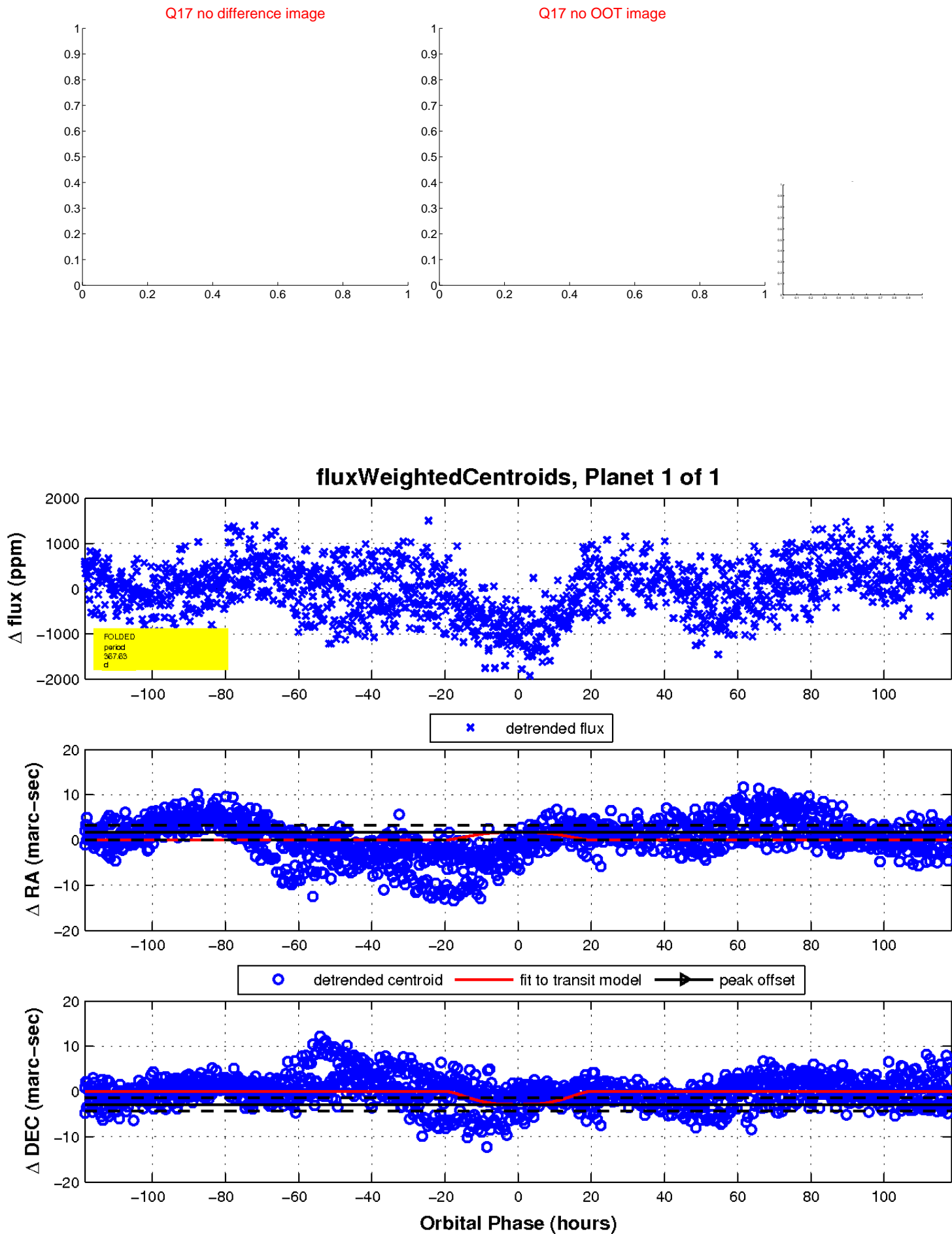
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



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



UKIRT Image

