

# KIC 008148818

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008148818-01	OBS	No	434.304633	357.833885	342.8	15.850	8.8	8.8	1.10	6268	2.15	1.19

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008148818-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_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.

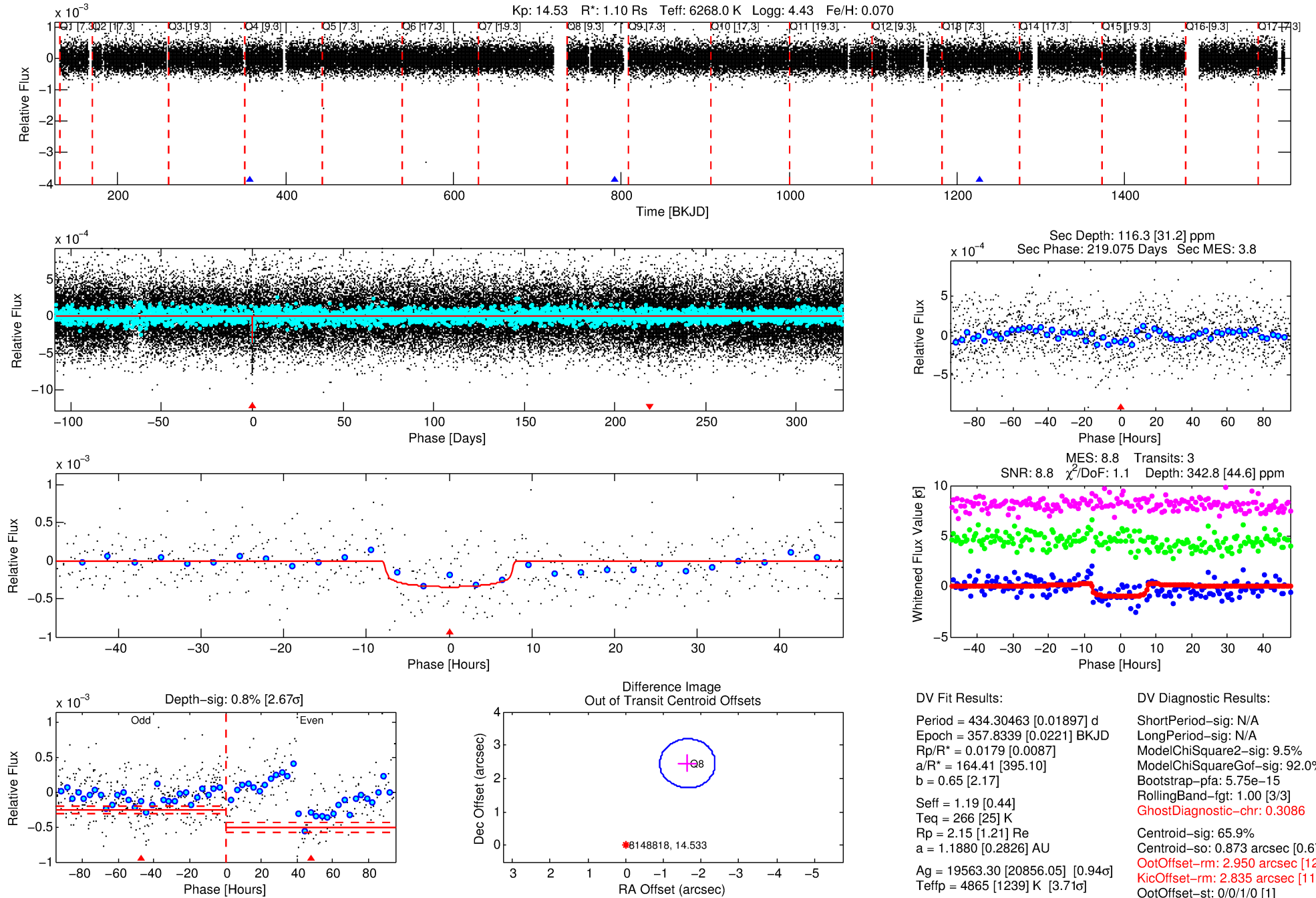
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008148818-01

No Significant Match Found

# DV One-Page Summary

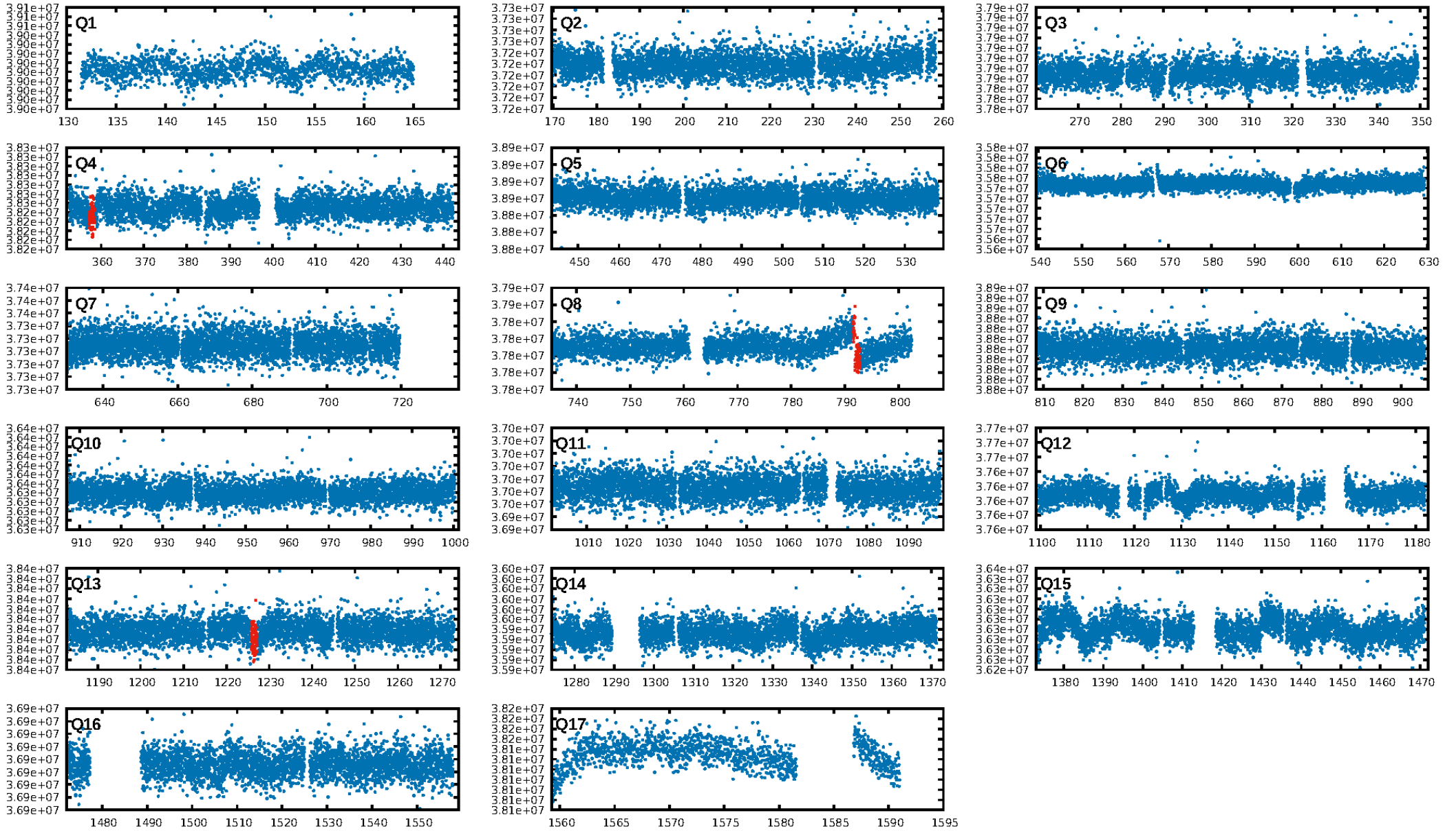
KIC: 8148818 Candidate: 1 of 1 Period: 434.305 d



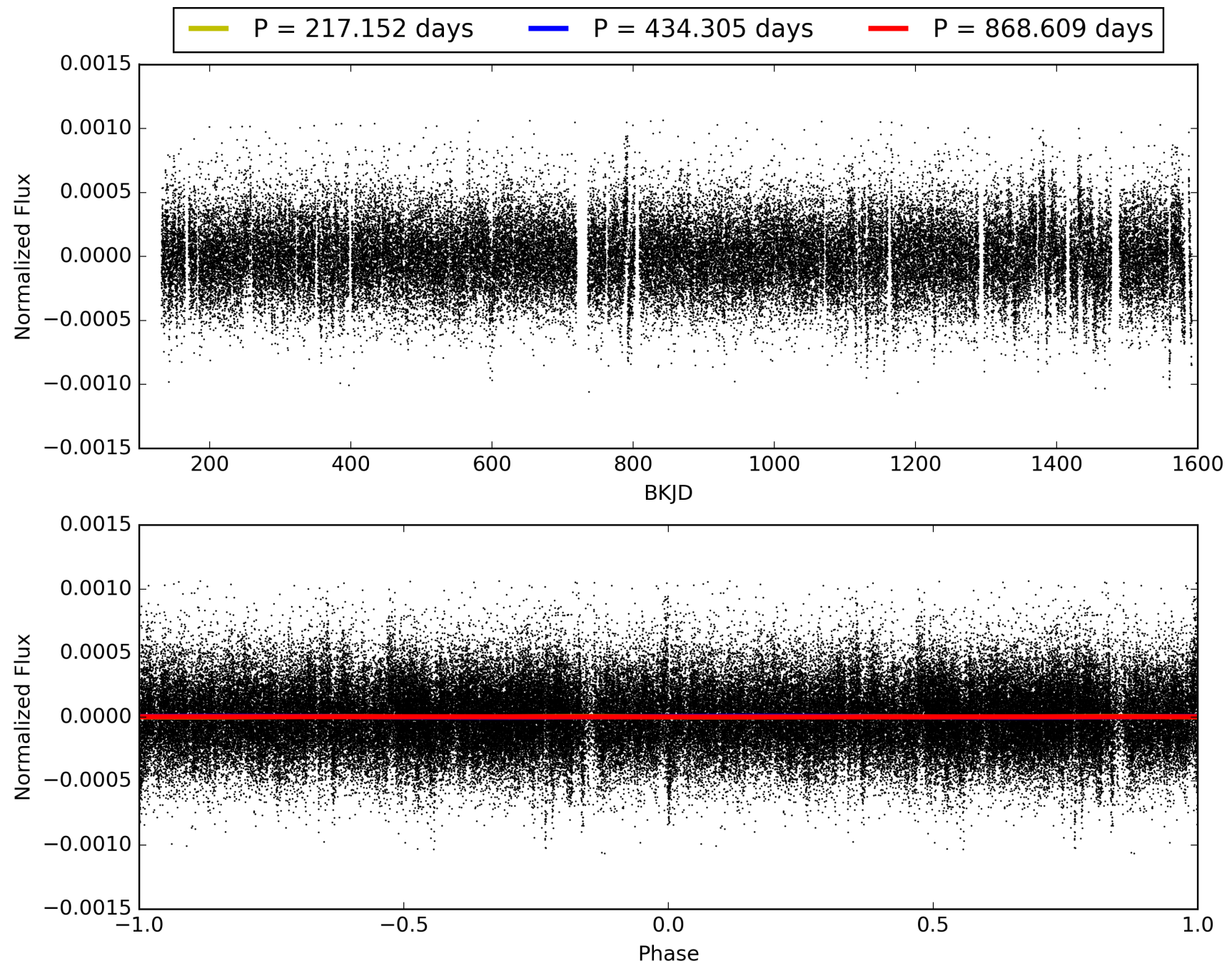
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:57:54 Z

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

# TCE 008148818-01, PDC Light Curves

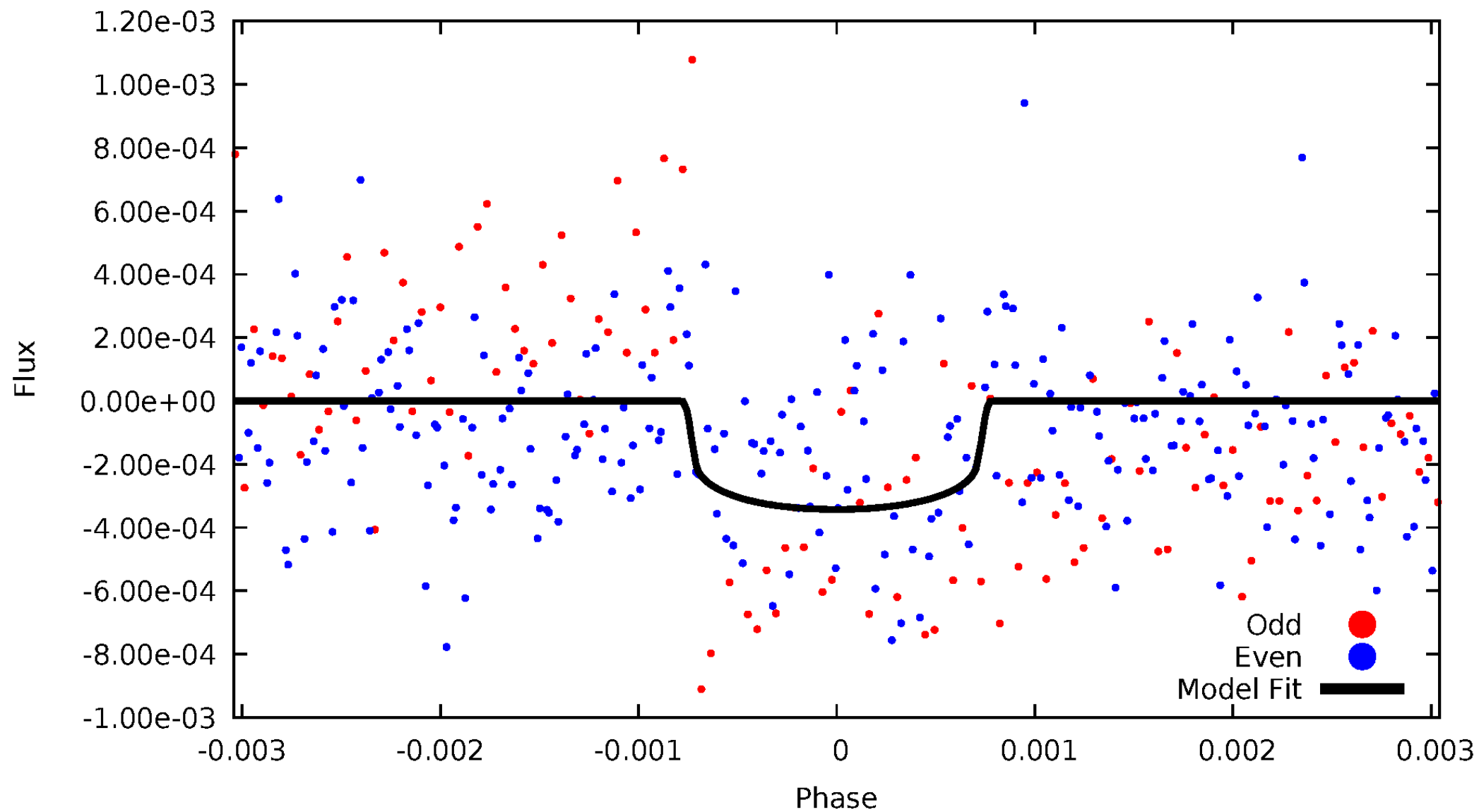


# TCE 008148818-01



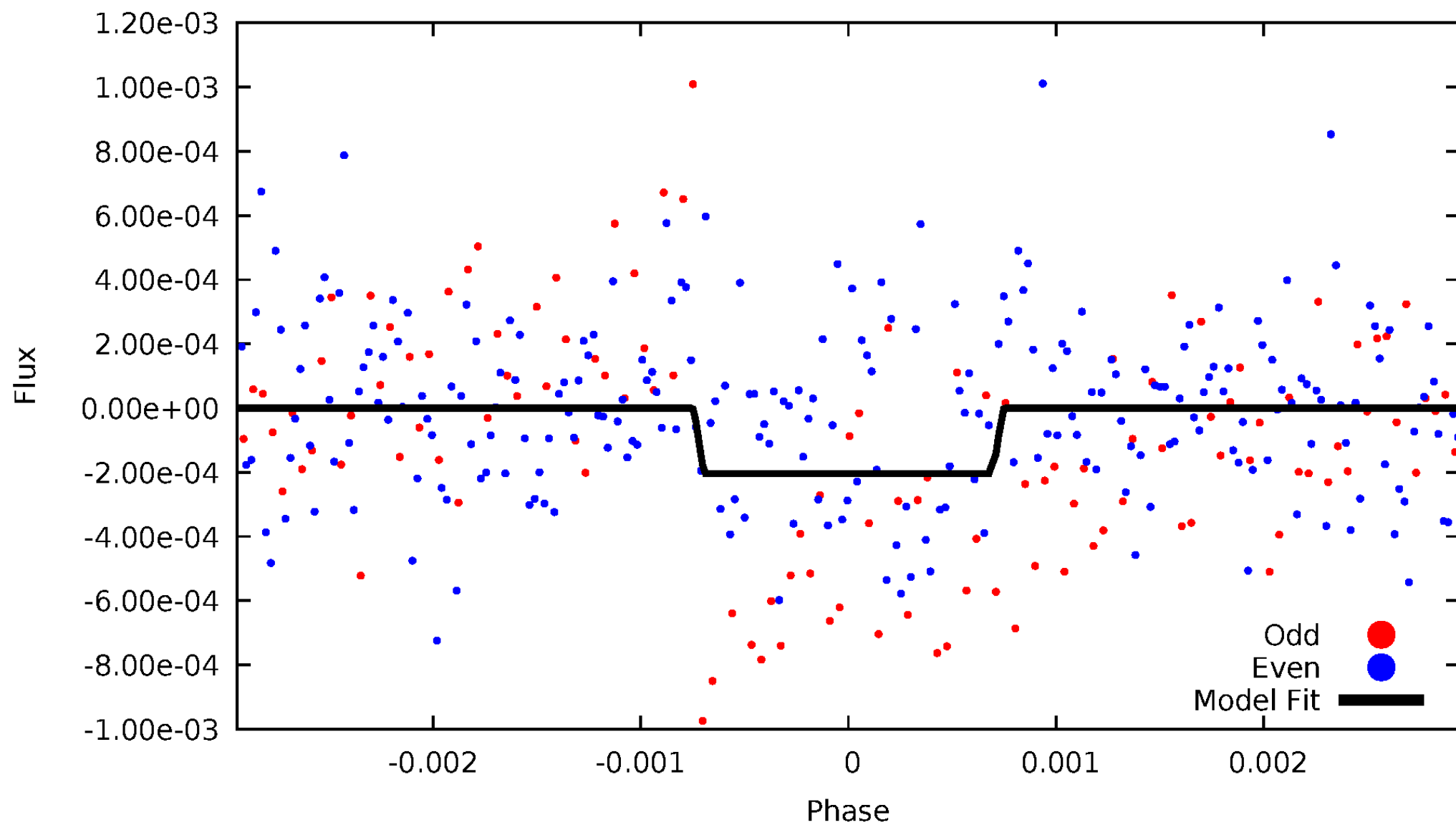
# DV Odd/Even

TCE 008148818-01



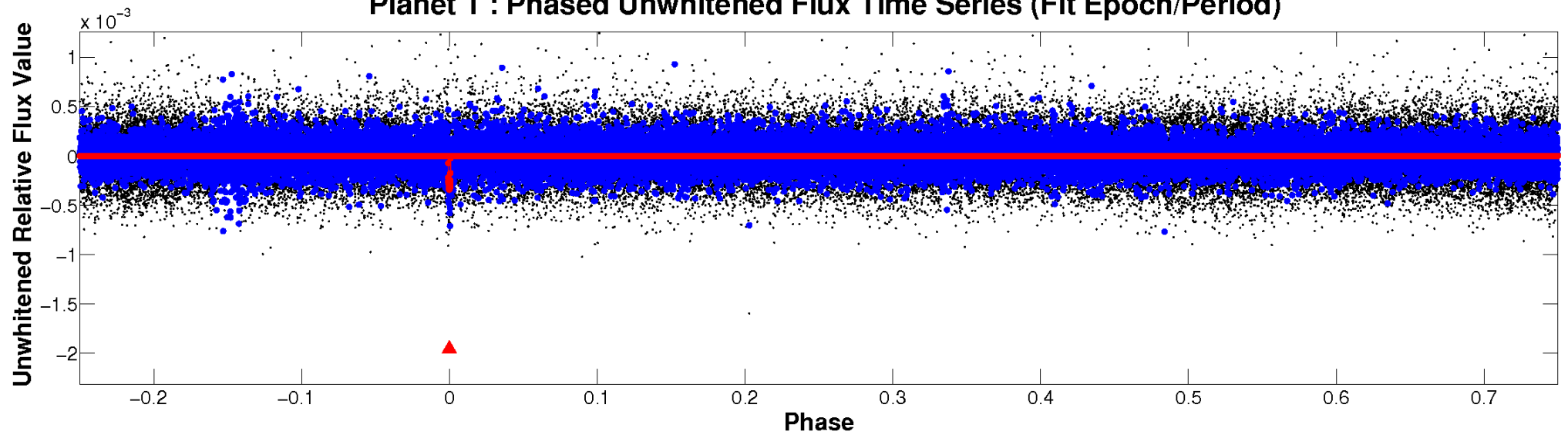
# ALT Odd/Even

TCE 008148818-01

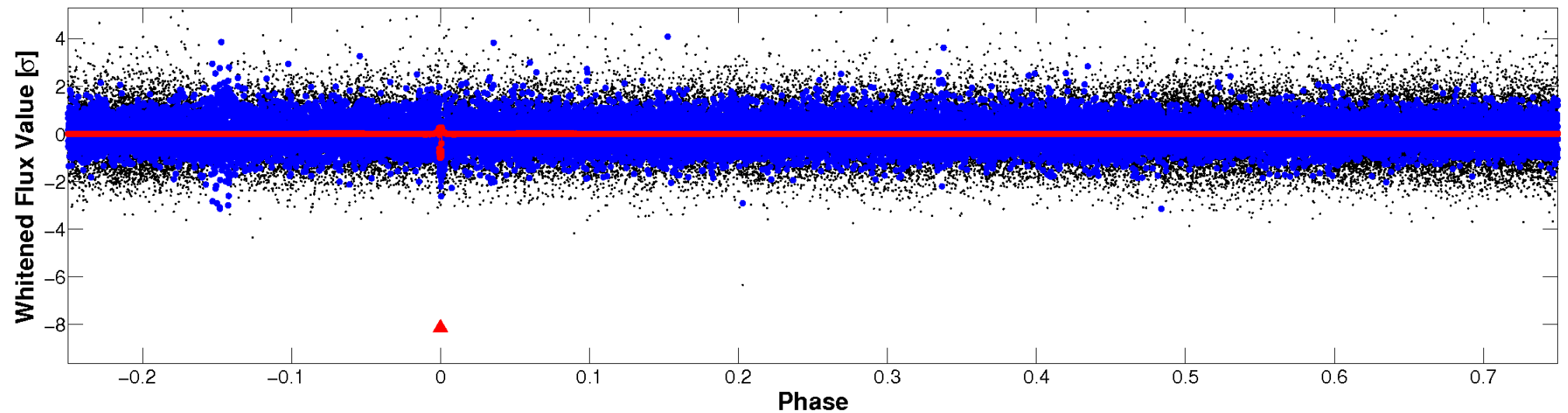


# Non-Whitened Vs. Whitened Light Curve

**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 008148818-01 P=434.304633 Days  $T_0=357.833885$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 008148818-01 P=434.304633 Days  $T_0=357.833885$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

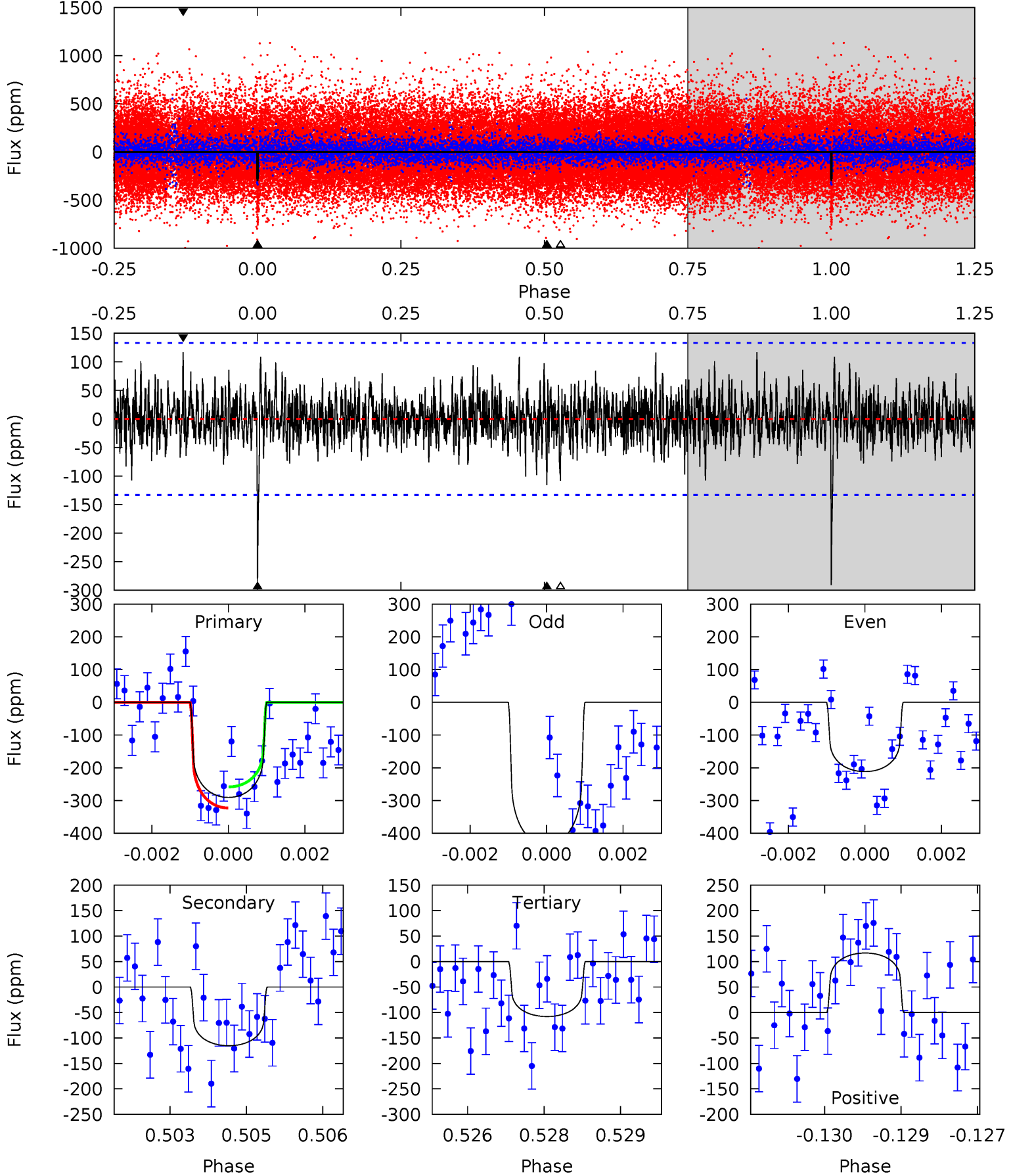
TCE 008148818-01 P=434.301695 Days  $T_0=357.844810$  (BKJD)



# DV Model-Shift Uniqueness Test

008148818-01, P = 434.304633 Days, E = 357.833885 Days

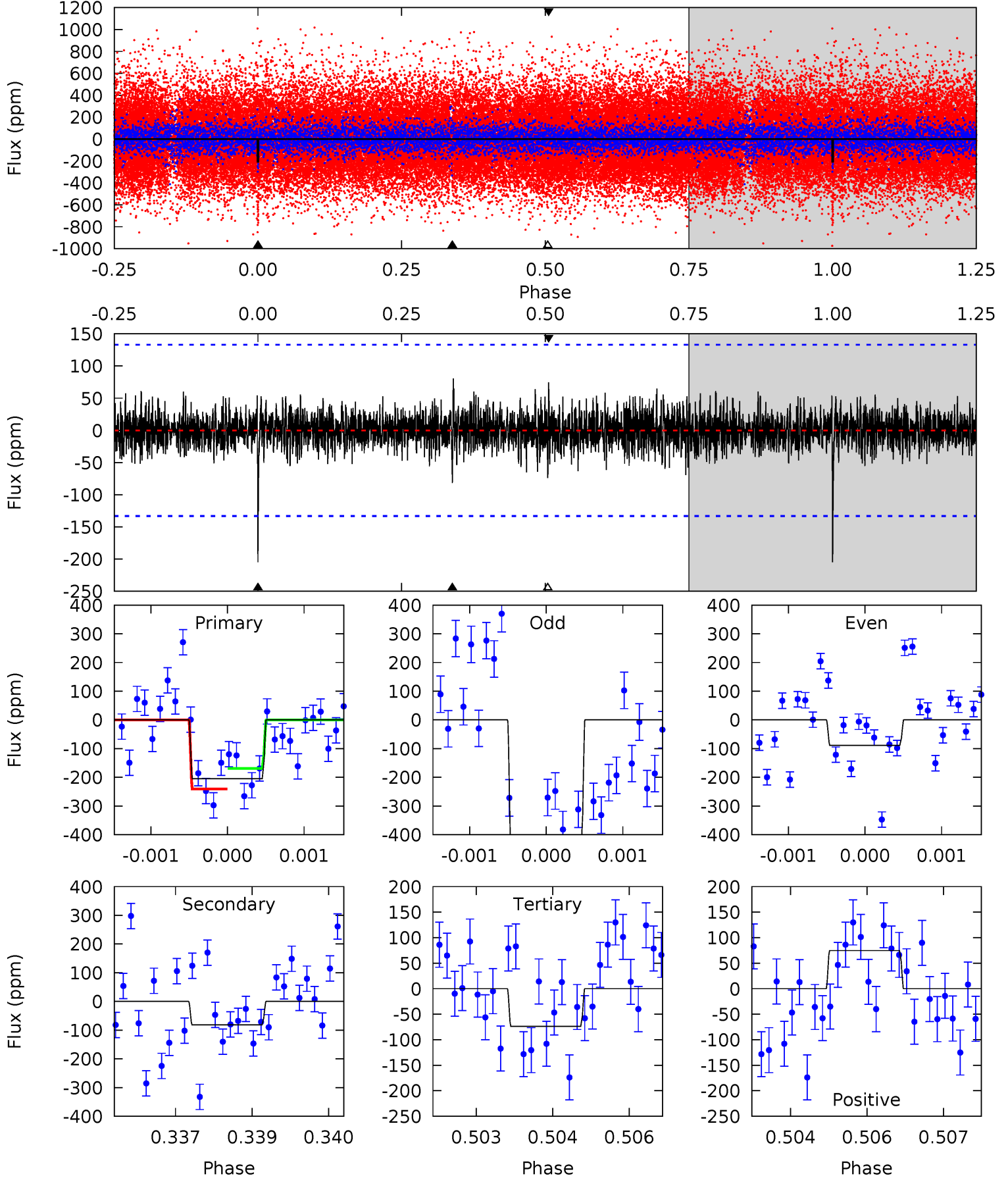
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	4.65	4.36	4.71	5.37	3.16	1.25	7.37	7.02	0.29	-0.06	4.24	1.31	0.29	1.30



# Alt Model-Shift Uniqueness Test

008148818-01, P = 434.301695 Days, E = 357.844810 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
8.28	3.30	2.98	3.02	5.38	3.18	0.78	5.30	5.26	0.32	0.28	7.19	1.49	0.28	1.46



### Stellar Parameters For KIC 008148818

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6268^{+152}_{-217}$	$4.429^{+0.062}_{-0.187}$	$0.070^{+0.200}_{-0.350}$	$1.100^{+0.313}_{-0.134}$	$1.188^{+0.141}_{-0.173}$	$1.257^{+0.324}_{-0.624}$
	+2%/-3%	+1%/-4%	+286%/-500%	+28%/-12%	+12%/-15%	+26%/-50%
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 008148818-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-115 \pm 25$	$2.24^{+1.13}_{-1.05}$	$378^{+27}_{-19}$	$4928^{+1605}_{-750}$	$17216^{+43241}_{-9961}$
Alt.	$-82 \pm 25$	$1.83^{+1.10}_{-1.00}$	$378^{+23}_{-18}$	$4986^{+2241}_{-929}$	$18347^{+66649}_{-12073}$

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

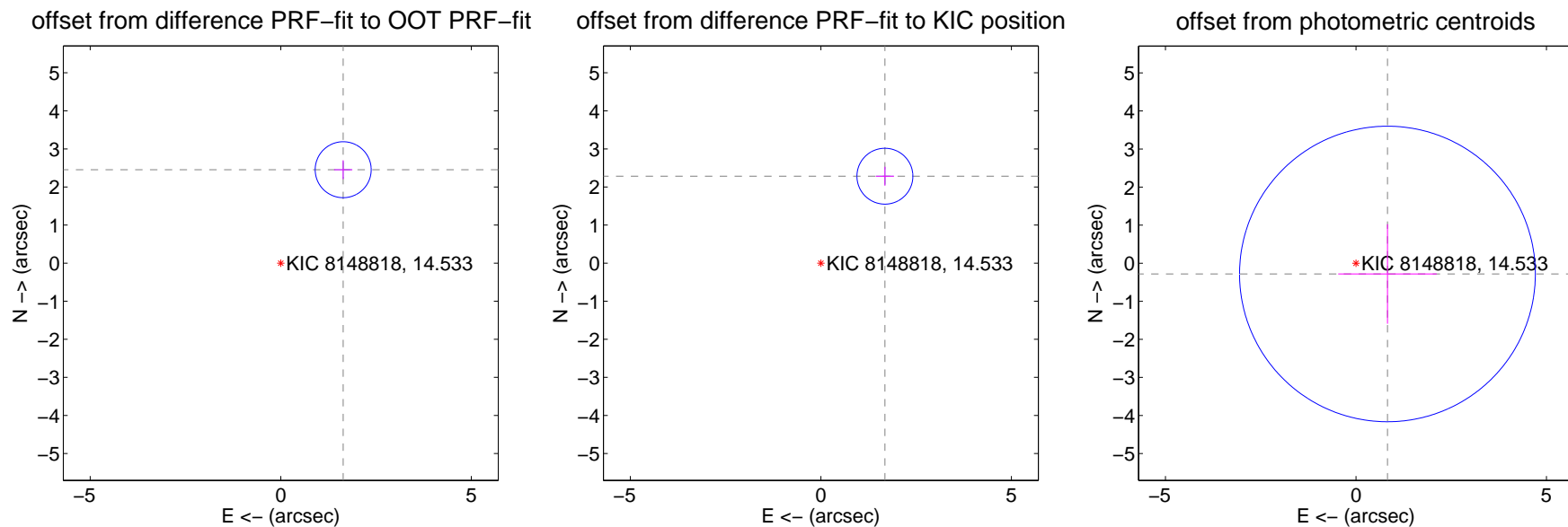
## DV Centroid Data

Supplemental centroid analysis for 008148818-01. Kepler magnitude: 14.53. Transit SNR 8.76

There are 1 quarters with good PRF difference image offsets

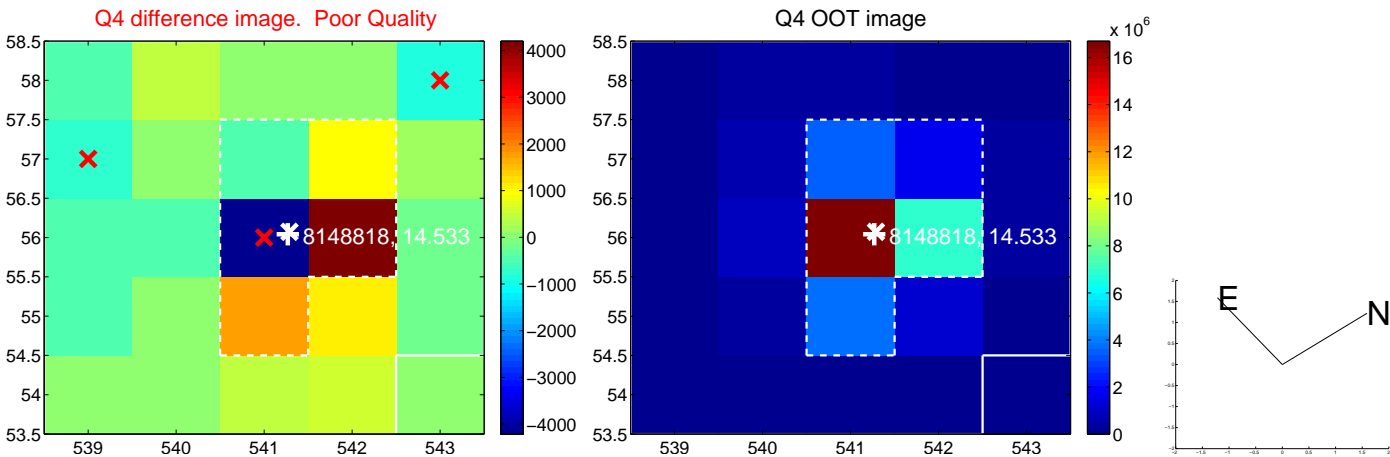
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.950 \pm 0.245$	12.05	$-1.638 \pm 0.239$	$2.454 \pm 0.247$
PRF-fit source offset from KIC position	$2.835 \pm 0.245$	11.59	$-1.680 \pm 0.239$	$2.283 \pm 0.247$
photometric centroid source offset	$0.87 \pm 1.29$	0.67	$-0.83 \pm 1.29$	$-0.28 \pm 1.31$



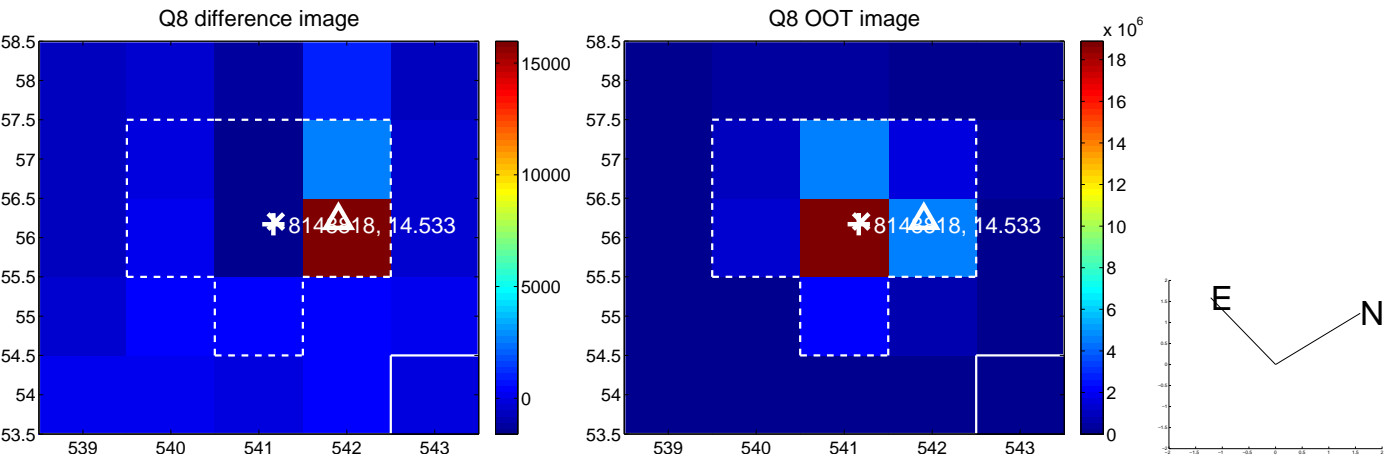
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.





white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



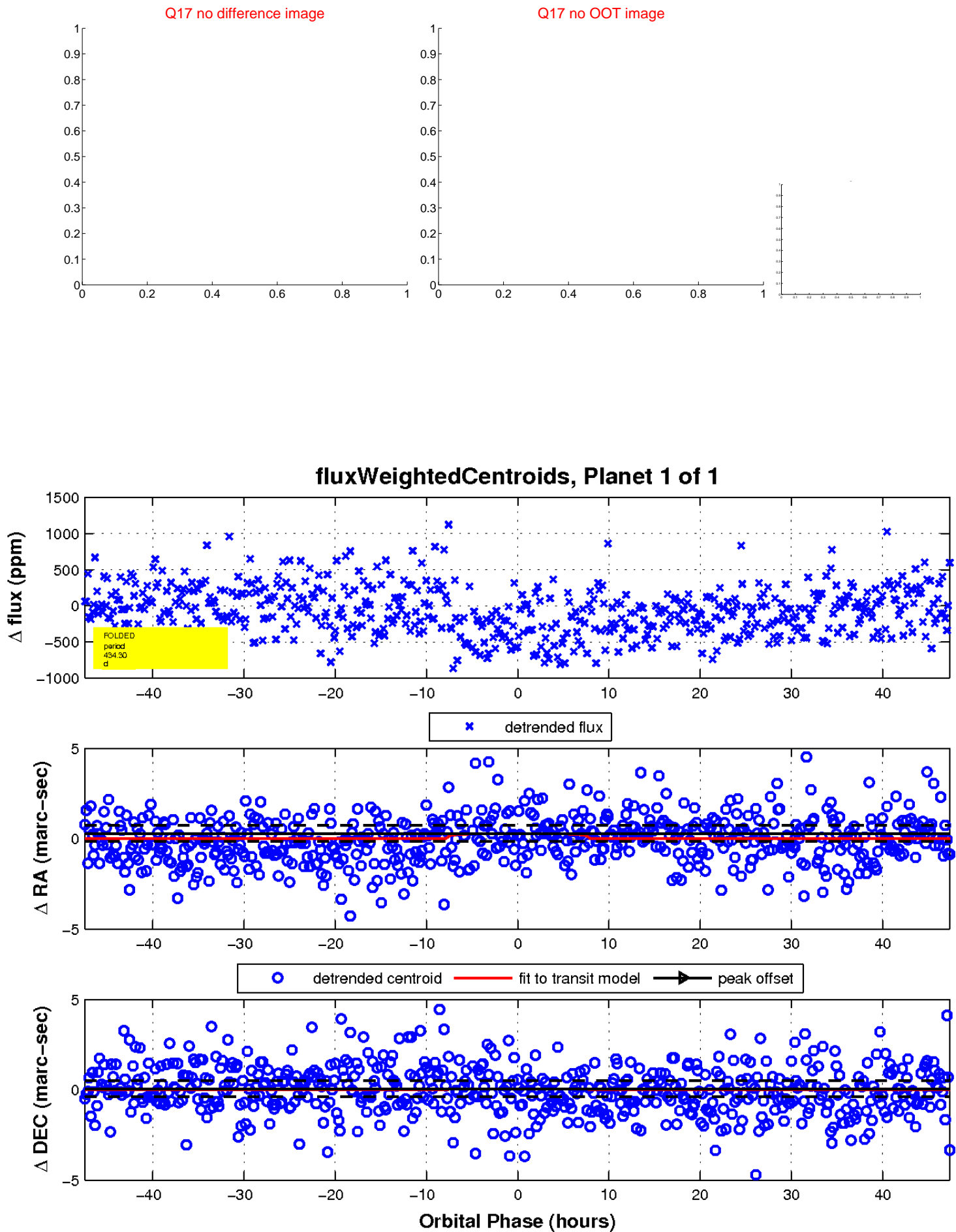
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

Declination

