

# KIC 007877907

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007877907-01	OBS	No	434.706326	362.640509	356.0	14.415	7.9	7.3	1.16	6381	2.63	1.41

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007877907-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

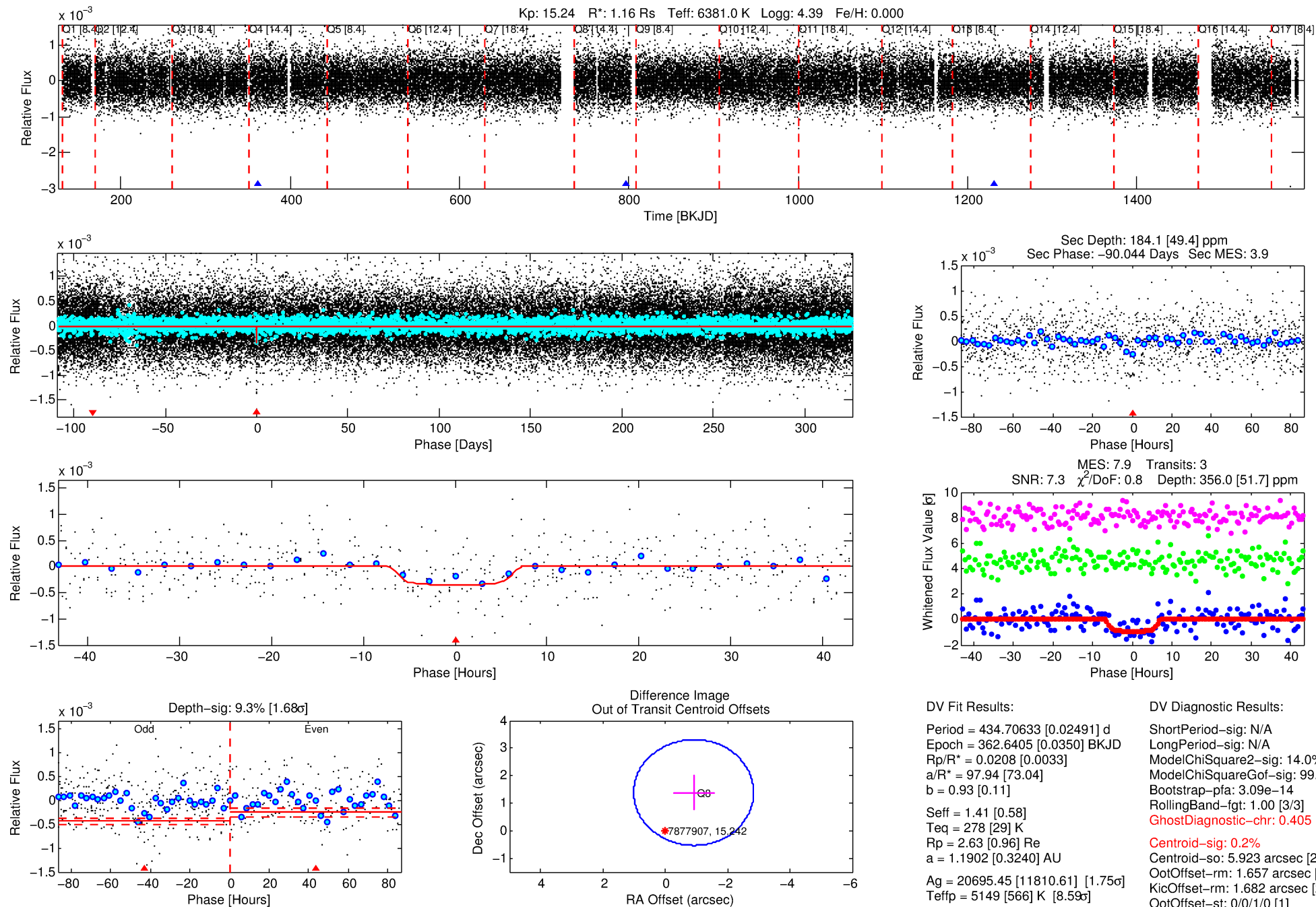
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007877907-01

No Significant Match Found

# DV One-Page Summary

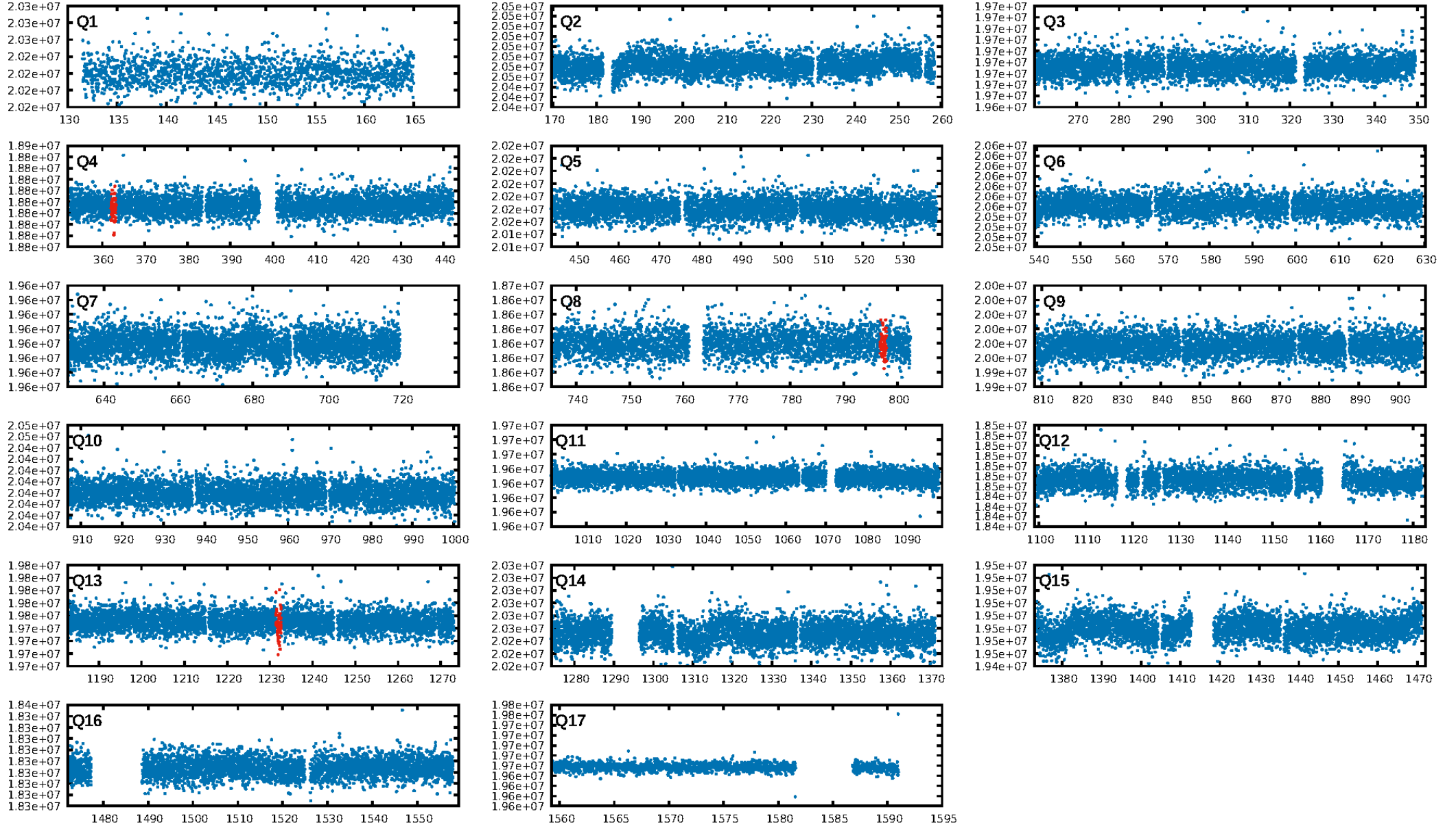
KIC: 7877907 Candidate: 1 of 1 Period: 434.706 d



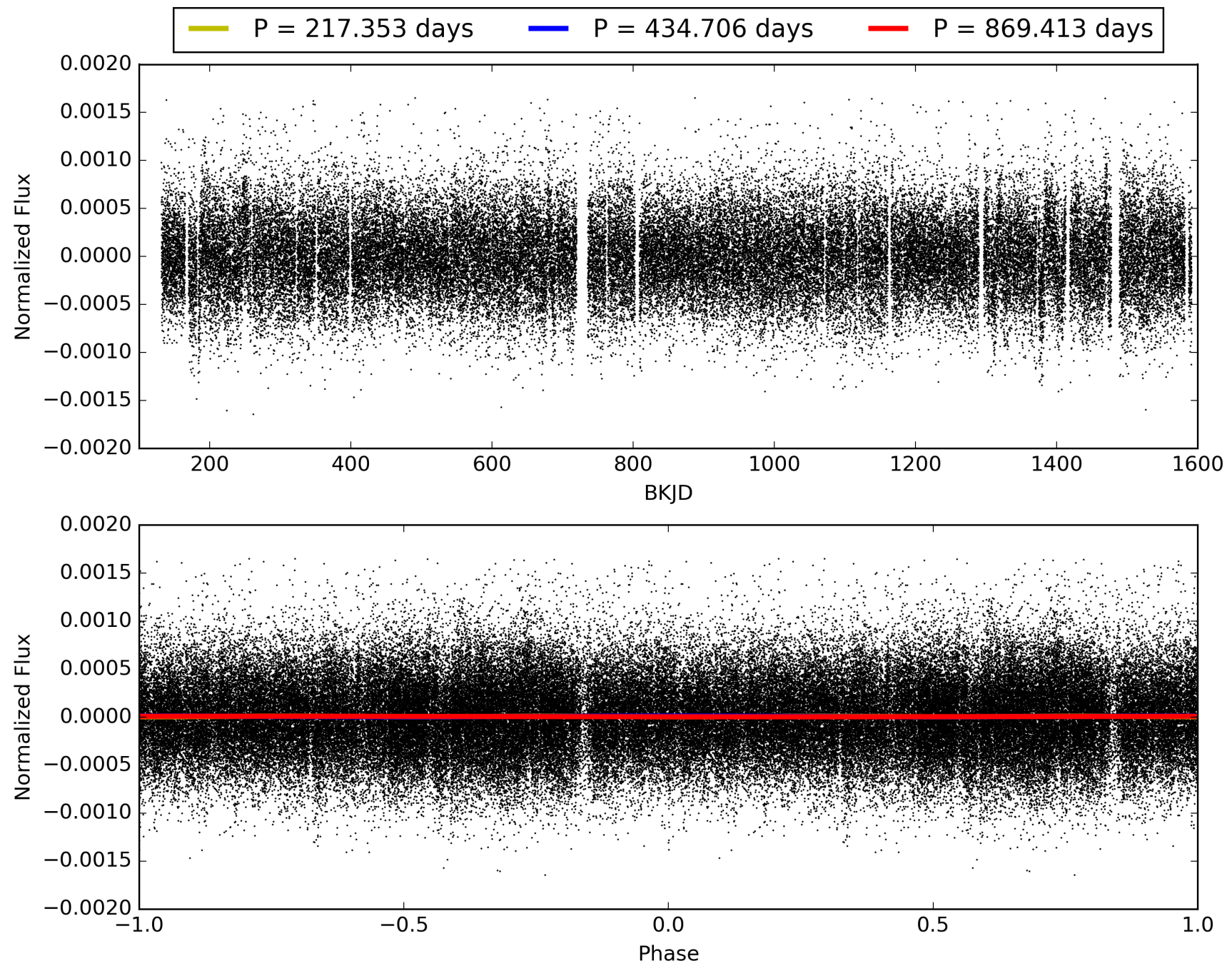
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:16:04 Z

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

# TCE 007877907-01, PDC Light Curves

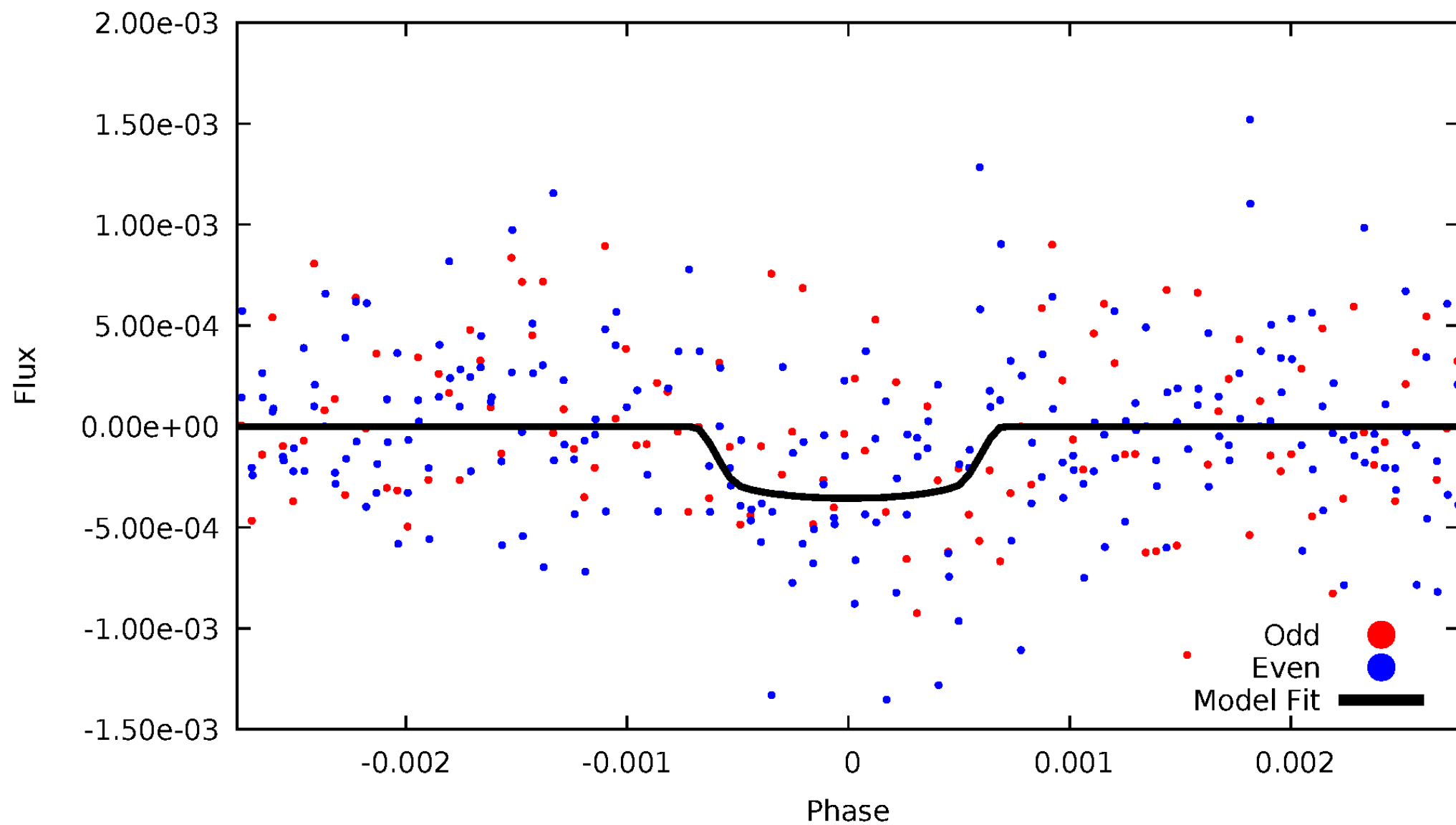


TCE 007877907-01



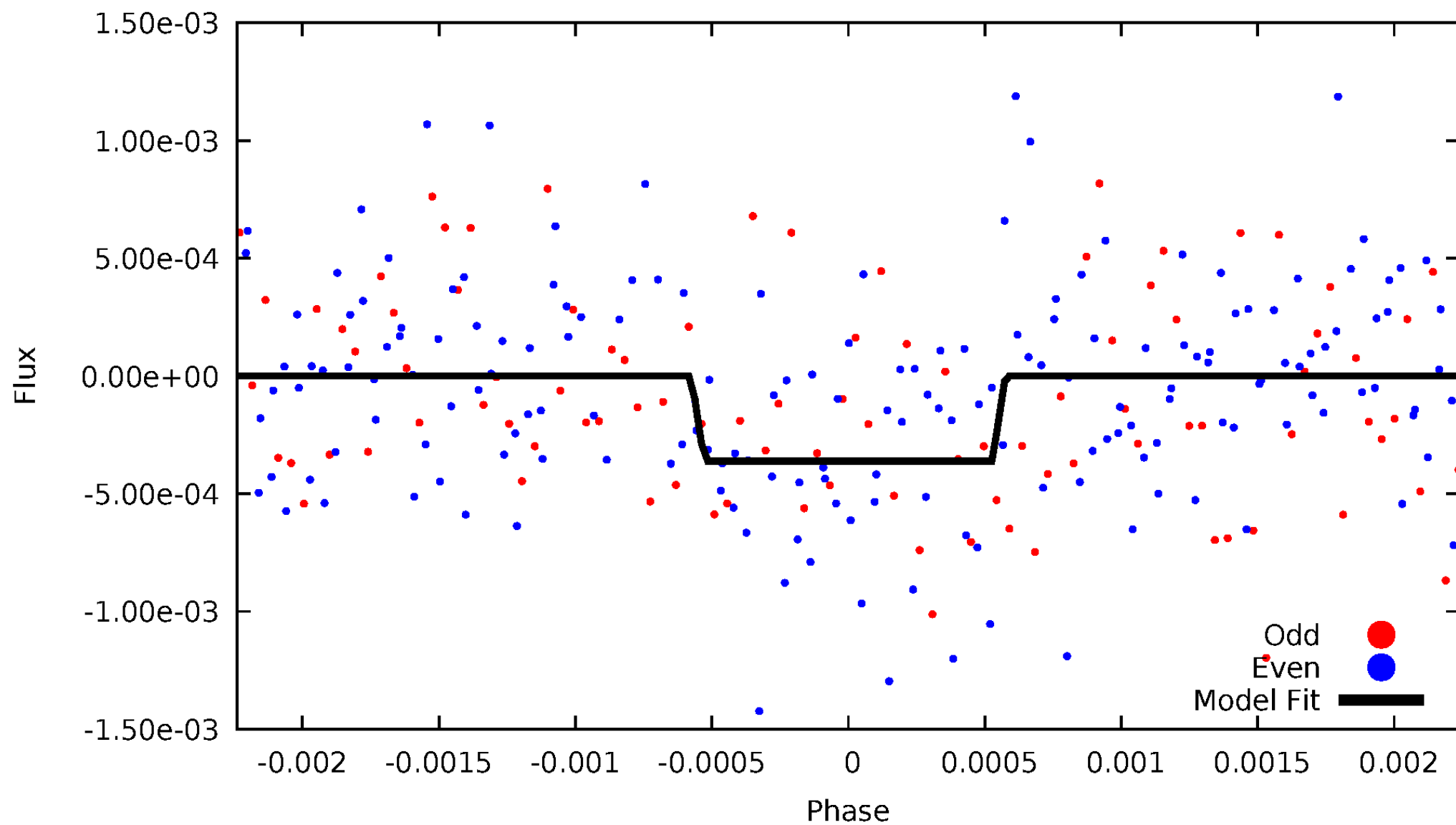
# DV Odd/Even

TCE 007877907-01



# ALT Odd/Even

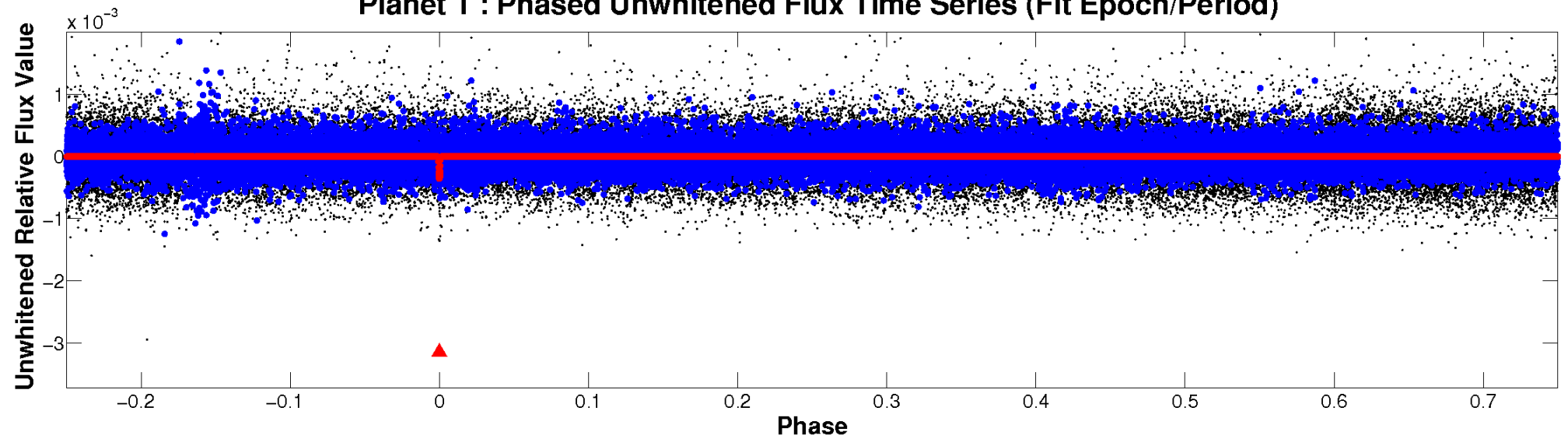
TCE 007877907-01



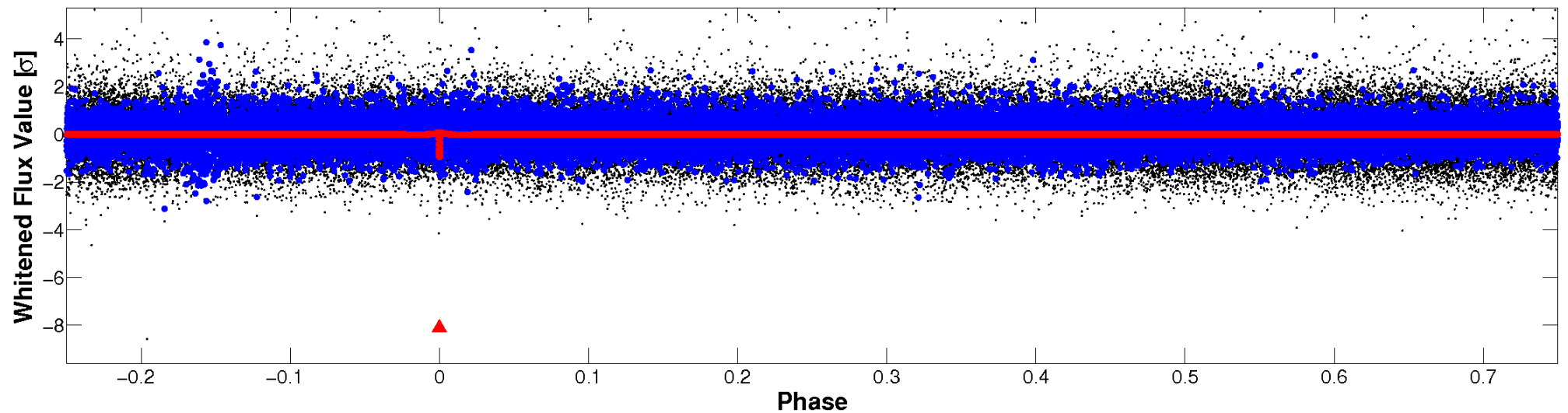


# Non-Whitened Vs. Whitened Light Curve

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

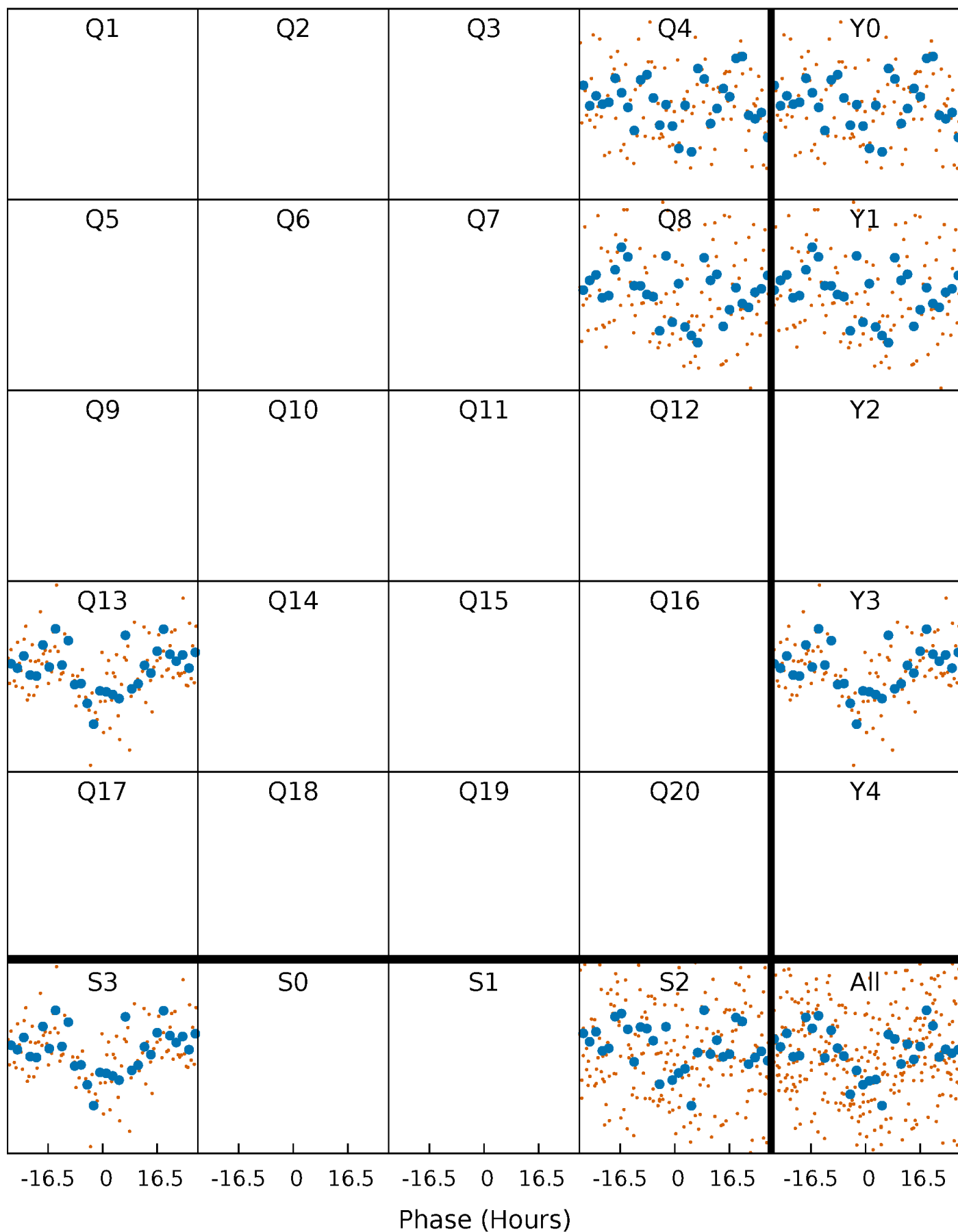


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

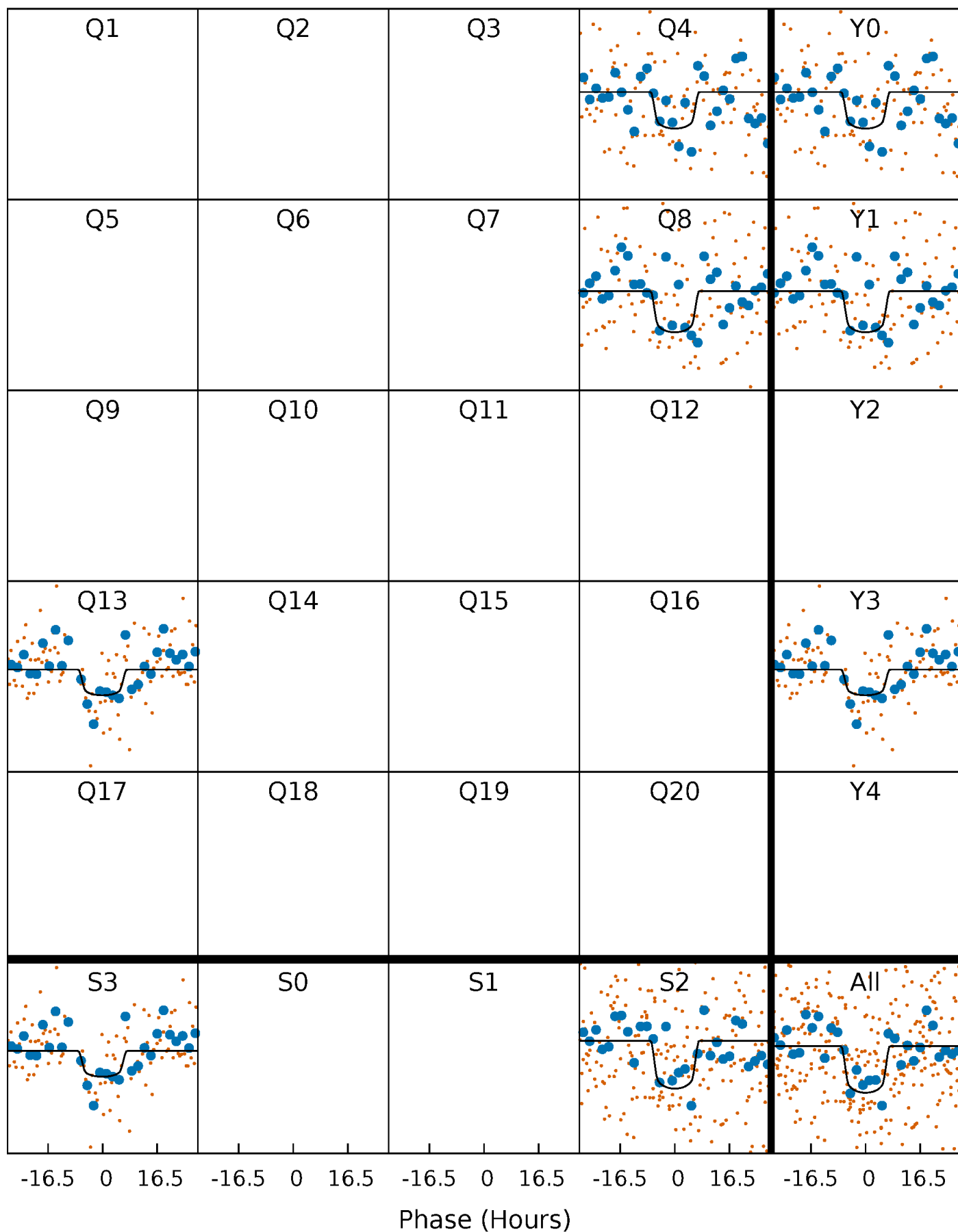
TCE 007877907-01 P=434.706326 Days  $T_0=362.640509$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 007877907-01 P=434.706326 Days  $T_0=362.640509$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

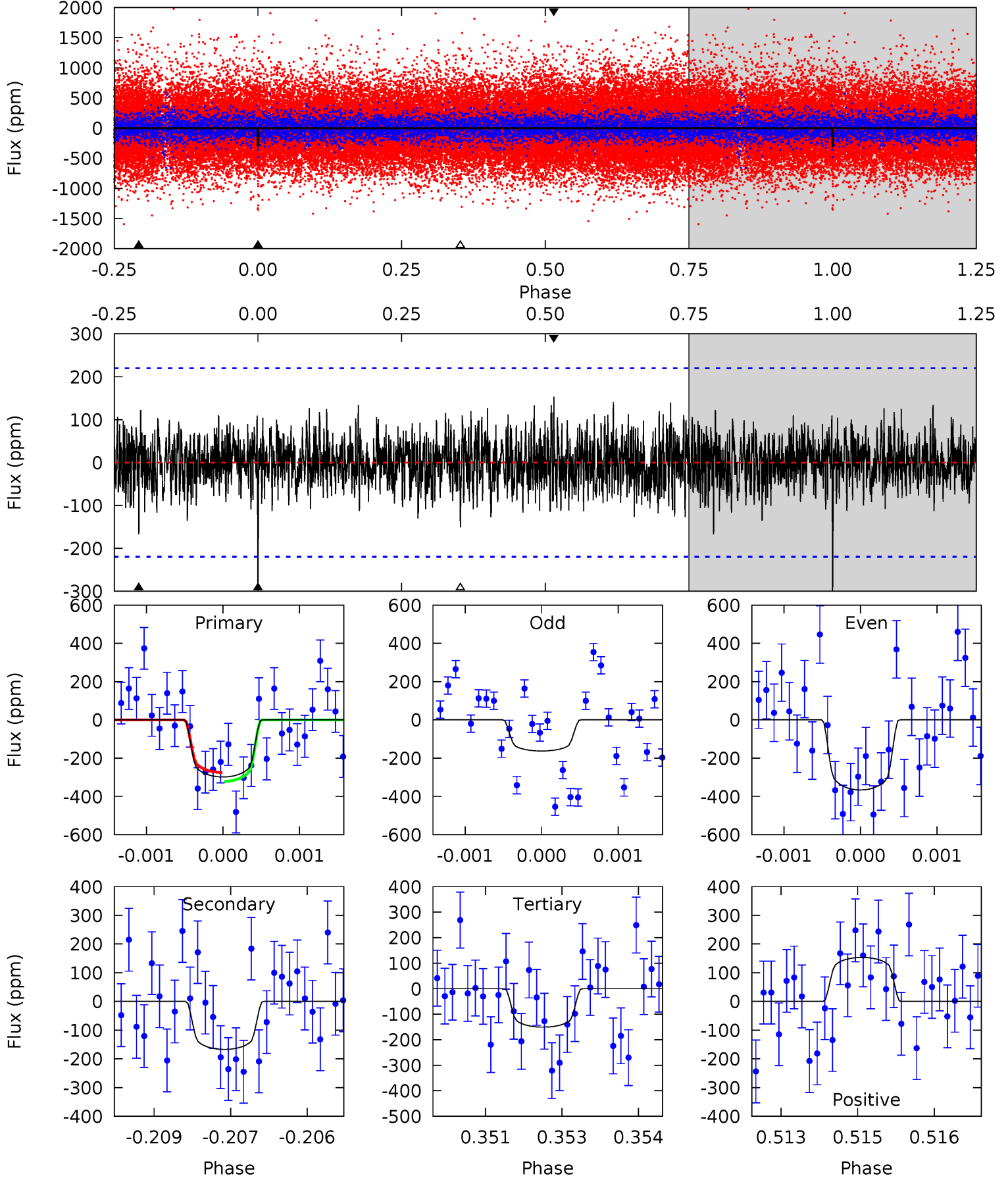
TCE 007877907-01 P=434.696744 Days  $T_0=362.650900$  (BKJD)



# DV Model-Shift Uniqueness Test

007877907-01, P = 434.706326 Days, E = 362.640509 Days

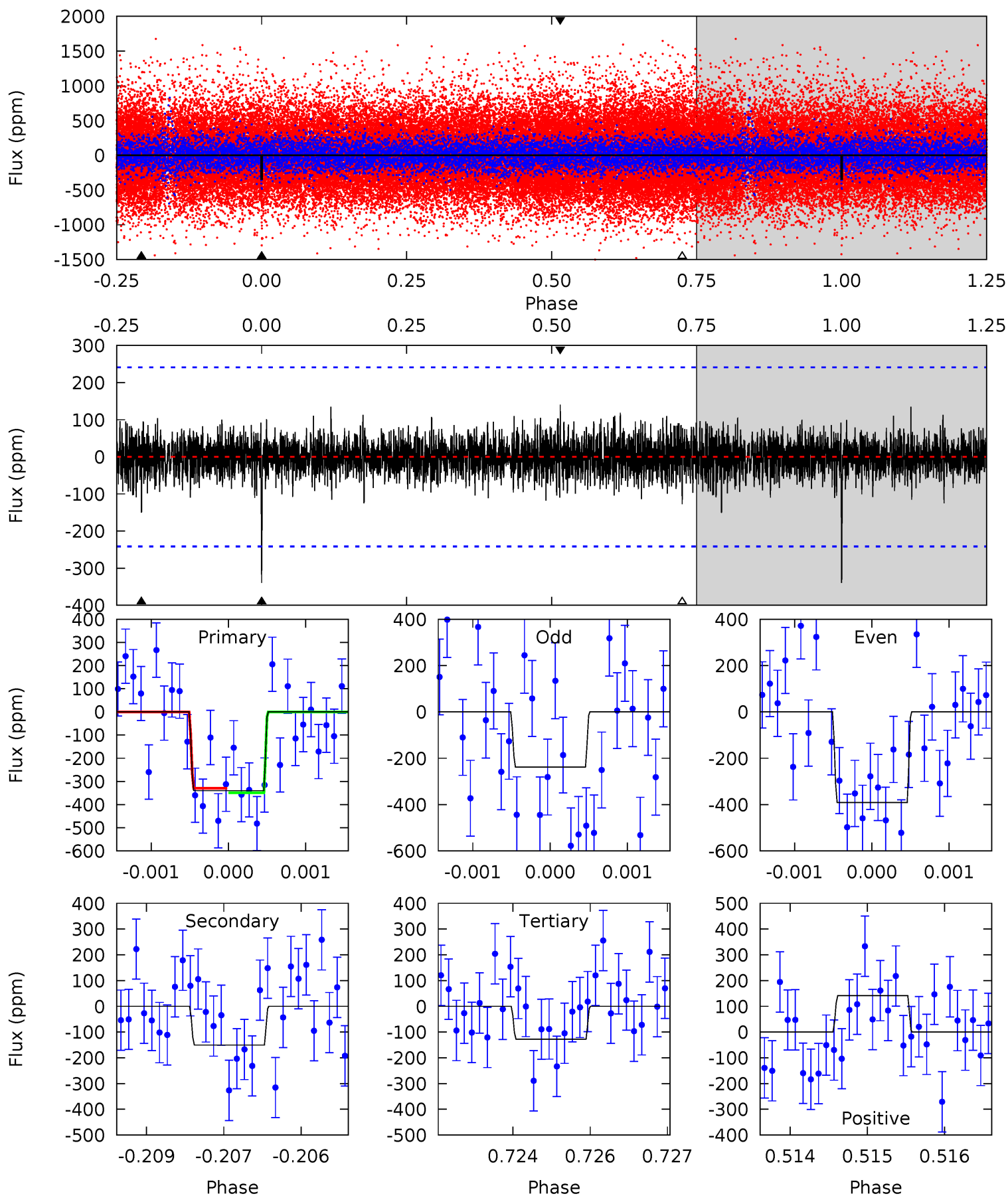
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.32	4.10	3.70	3.76	5.39	3.19	1.09	3.62	3.56	0.40	0.34	2.34	0.95	0.34	0.58



# Alt Model-Shift Uniqueness Test

007877907-01, P = 434.696744 Days, E = 362.650900 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
7.64	3.39	2.87	3.17	5.43	3.25	0.80	4.77	4.47	0.52	0.22	1.62	1.33	0.29	0.22



### Stellar Parameters For KIC 007877907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6381^{+179}_{-224}$	$4.386^{+0.070}_{-0.210}$	$0.000^{+0.250}_{-0.300}$	$1.158^{+0.381}_{-0.136}$	$1.192^{+0.169}_{-0.169}$	$1.080^{+0.321}_{-0.586}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+33%/-12%	+14%/-14%	+30%/-54%
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 007877907-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-167 \pm 41$	$2.70^{+0.60}_{-0.51}$	$393^{+30}_{-19}$	$5090^{+488}_{-420}$	$17154^{+9911}_{-6407}$
Alt.	$-151 \pm 44$	$2.50^{+0.56}_{-0.47}$	$393^{+30}_{-20}$	$5180^{+595}_{-518}$	$18785^{+12112}_{-7896}$

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

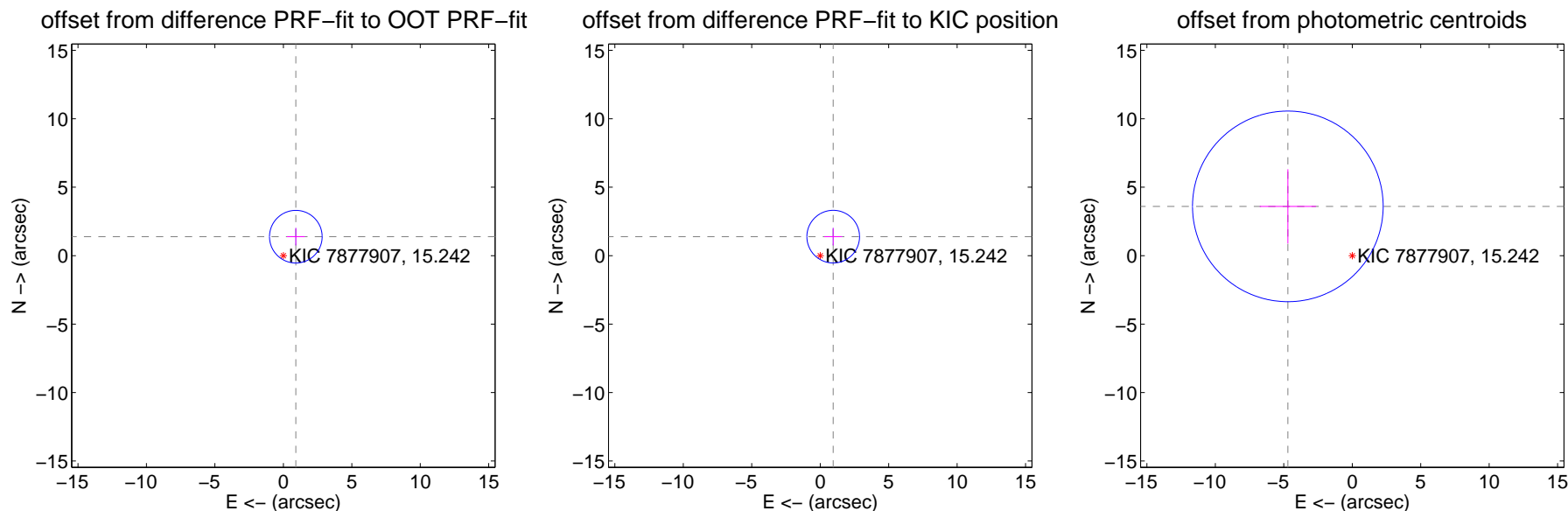
## DV Centroid Data

Supplemental centroid analysis for 007877907-01. Kepler magnitude: 15.24. Transit SNR 7.27

There are 1 quarters with good PRF difference image offsets

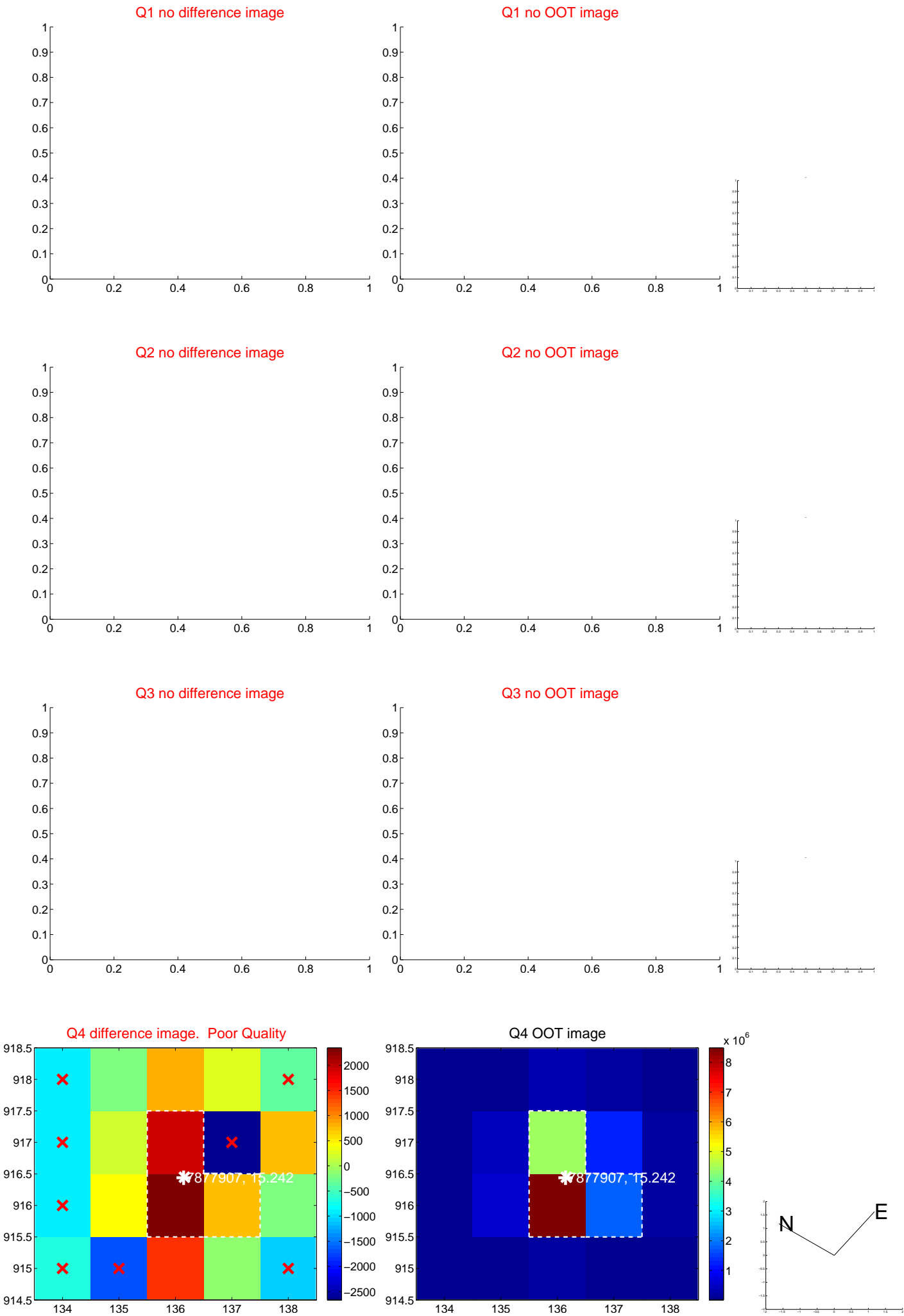
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.657 \pm 0.641$	2.59	$-0.911 \pm 0.650$	$1.385 \pm 0.637$
PRF-fit source offset from KIC position	$1.682 \pm 0.641$	2.62	$-0.950 \pm 0.650$	$1.388 \pm 0.637$
photometric centroid source offset	$5.92 \pm 2.32$	2.55	$4.70 \pm 2.06$	$3.60 \pm 2.71$



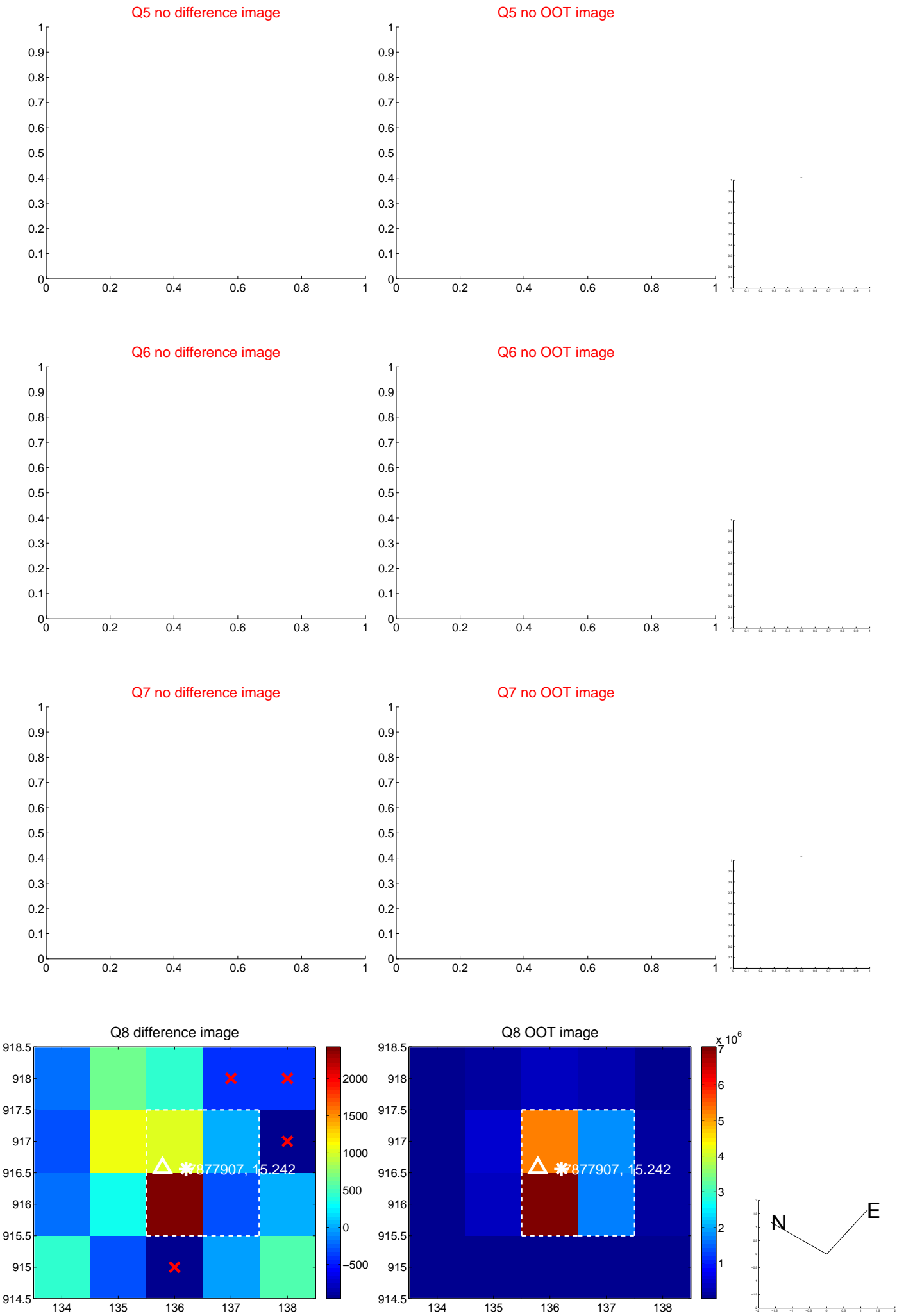
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



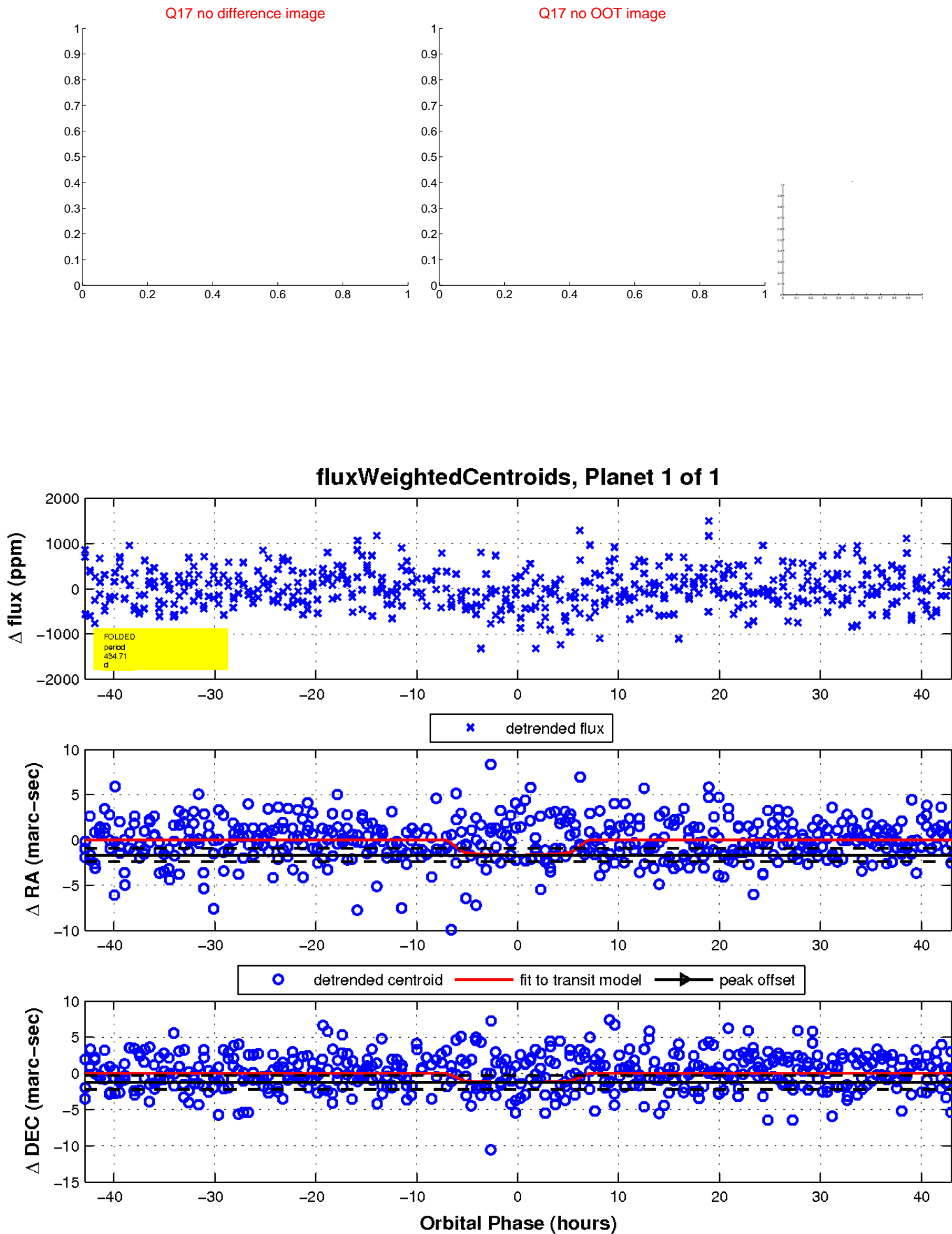
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

