

# KIC 006116277

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006116277-01	OBS	No	547.833220	347.163360	759.6	18.523	7.6	7.8	0.55	4412	1.85	0.09

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006116277-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_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.

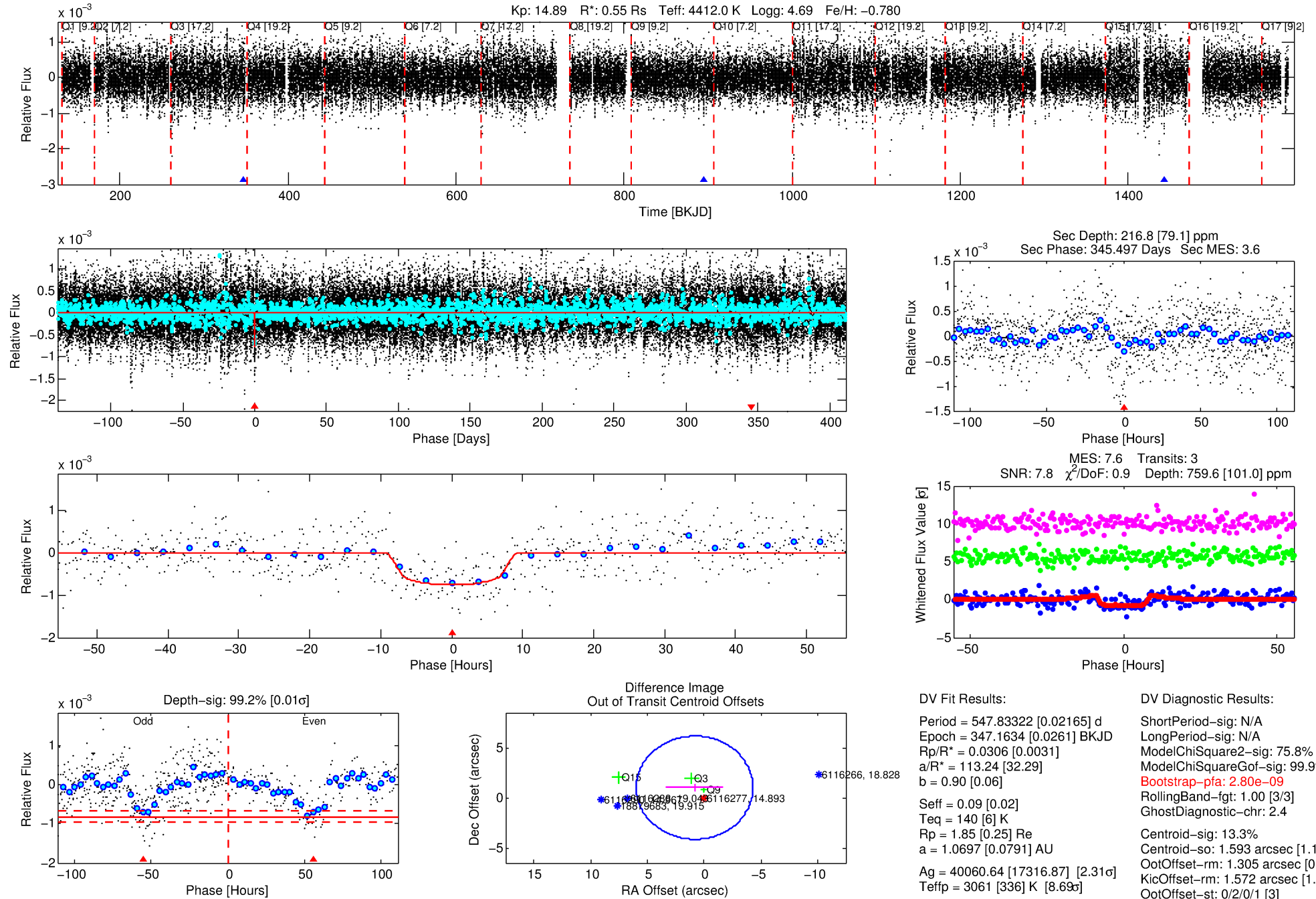
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006116277-01

No Significant Match Found

# DV One-Page Summary

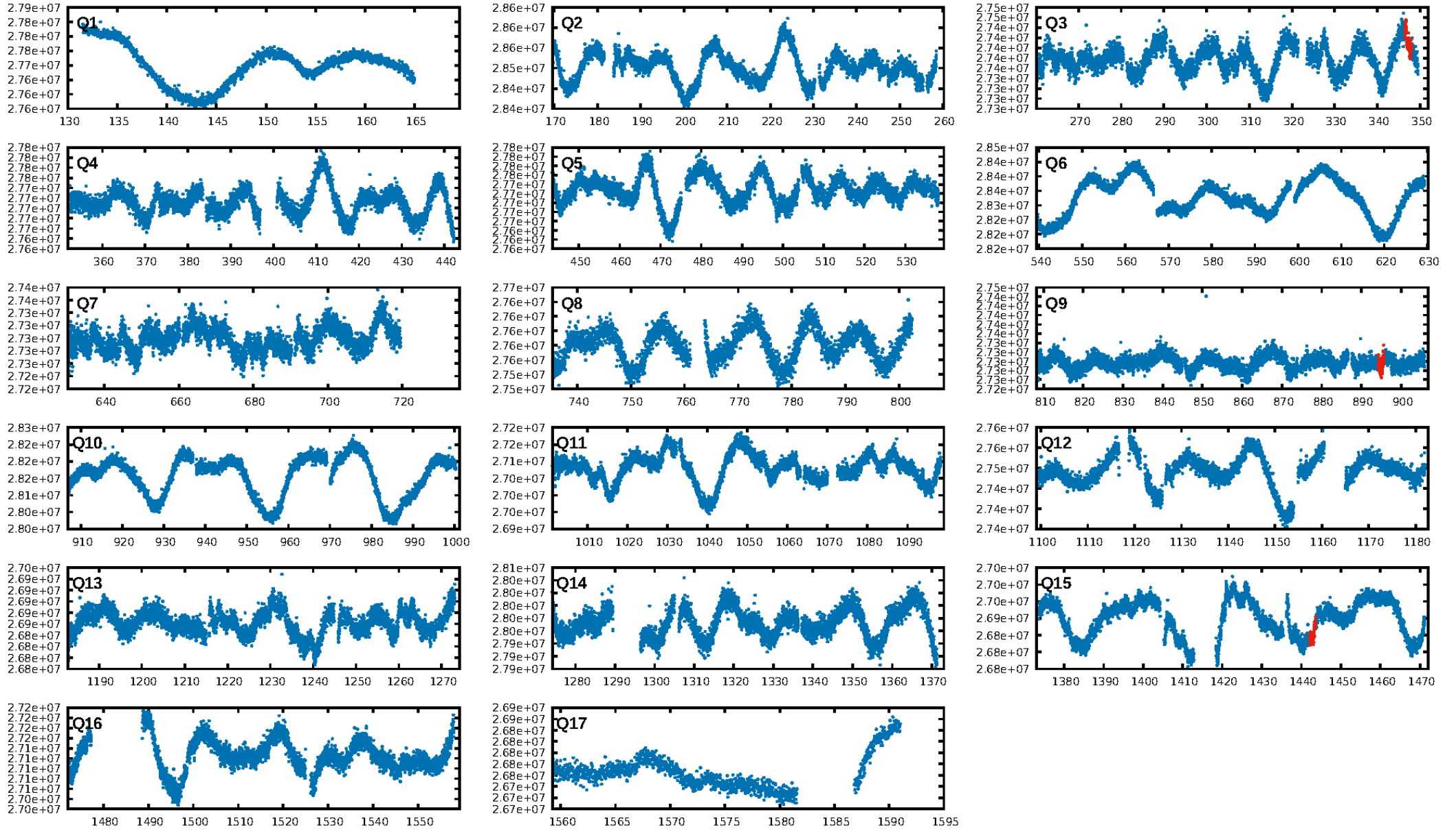
KIC: 6116277 Candidate: 1 of 1 Period: 547.833 d



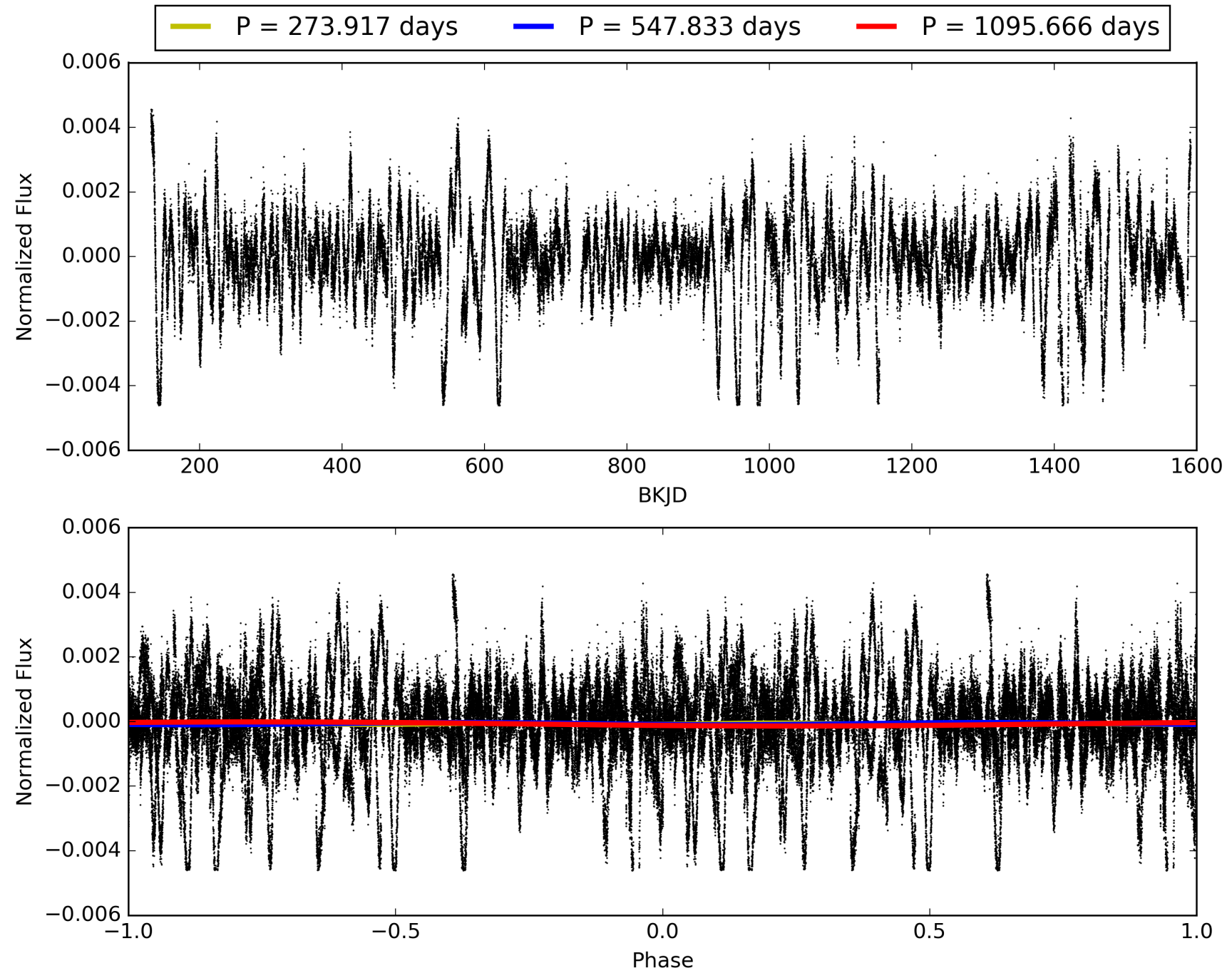
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:23:23 Z

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

# TCE 006116277-01, PDC Light Curves

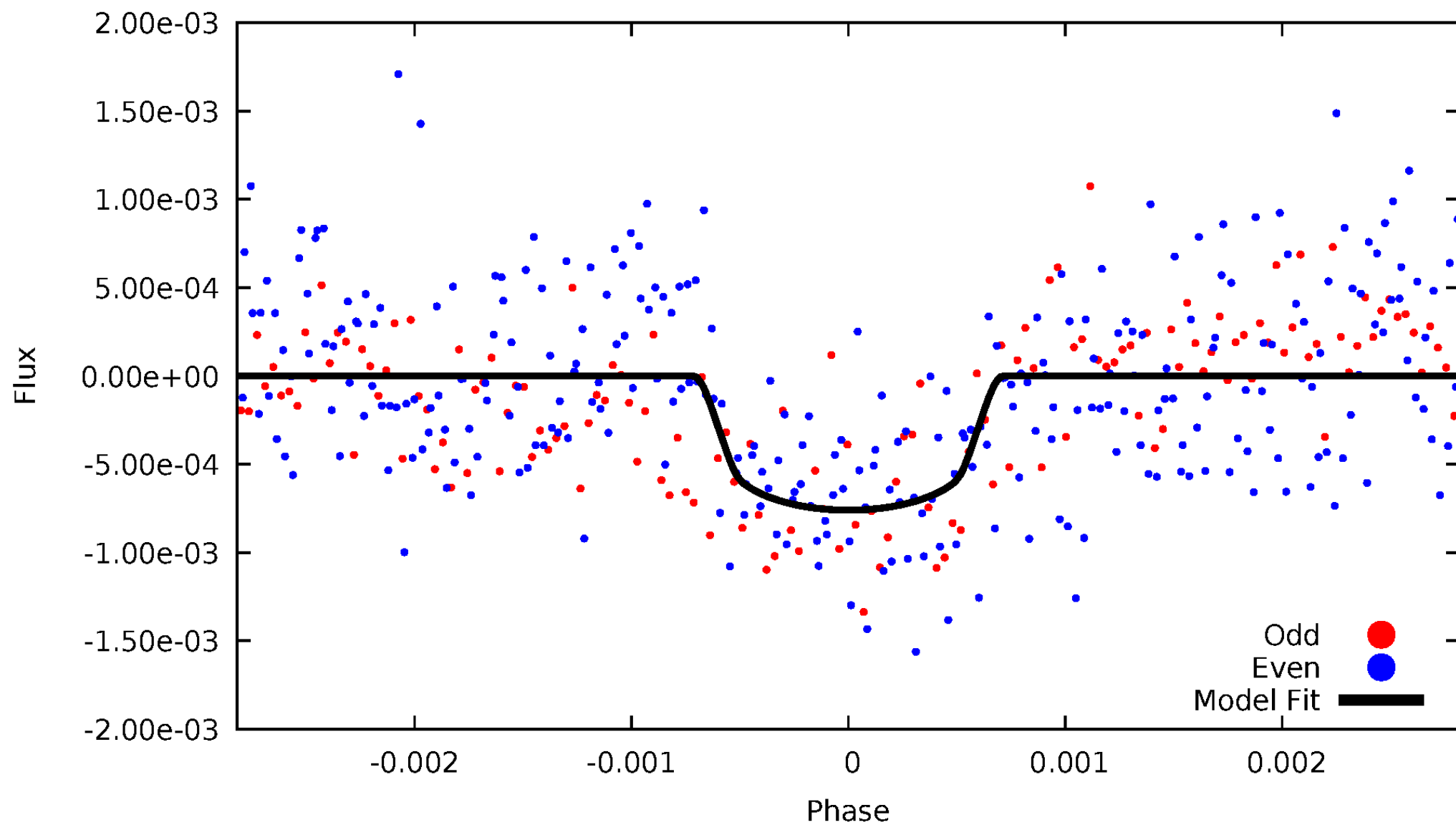


TCE 006116277-01



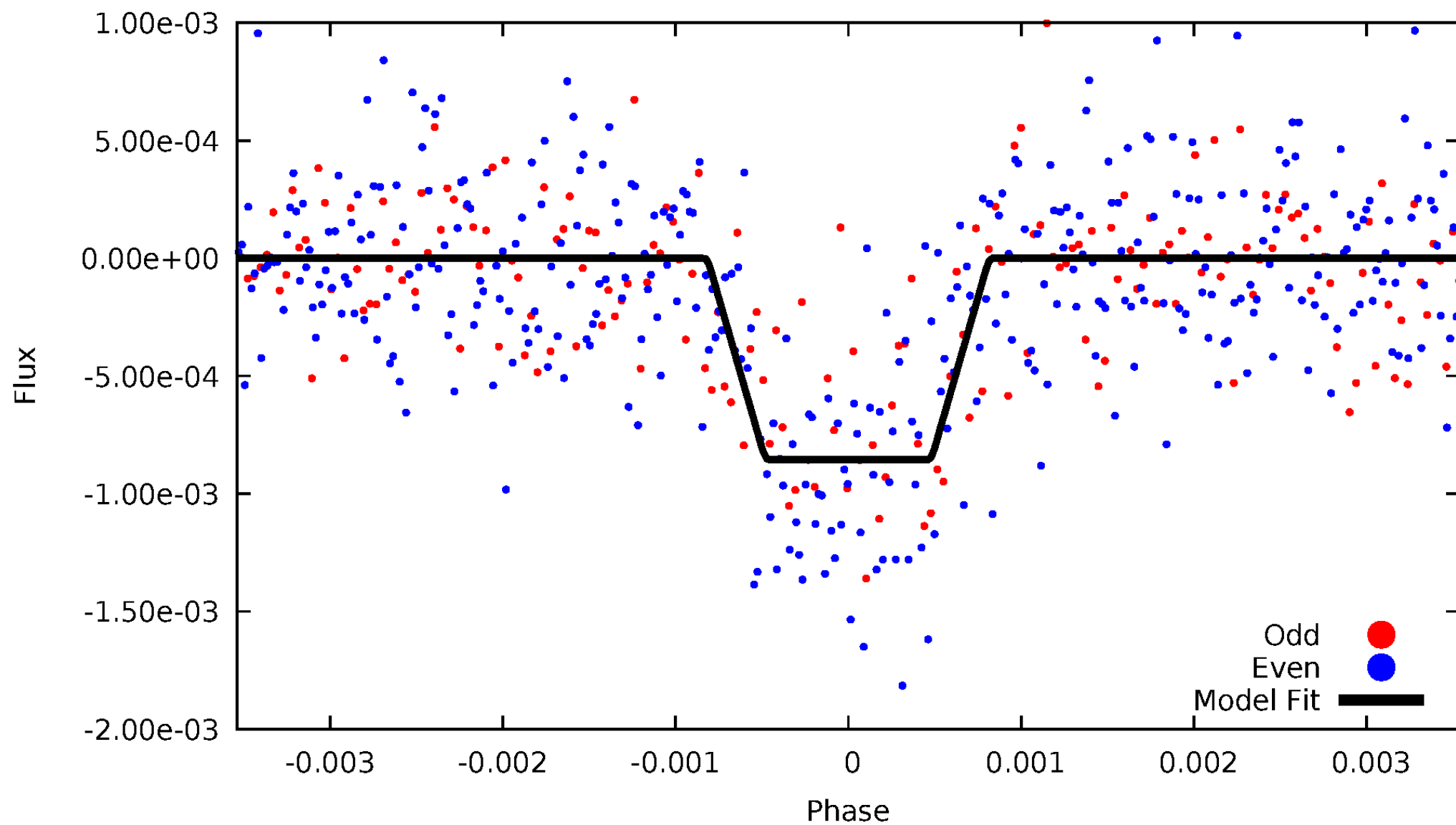
# DV Odd/Even

TCE 006116277-01



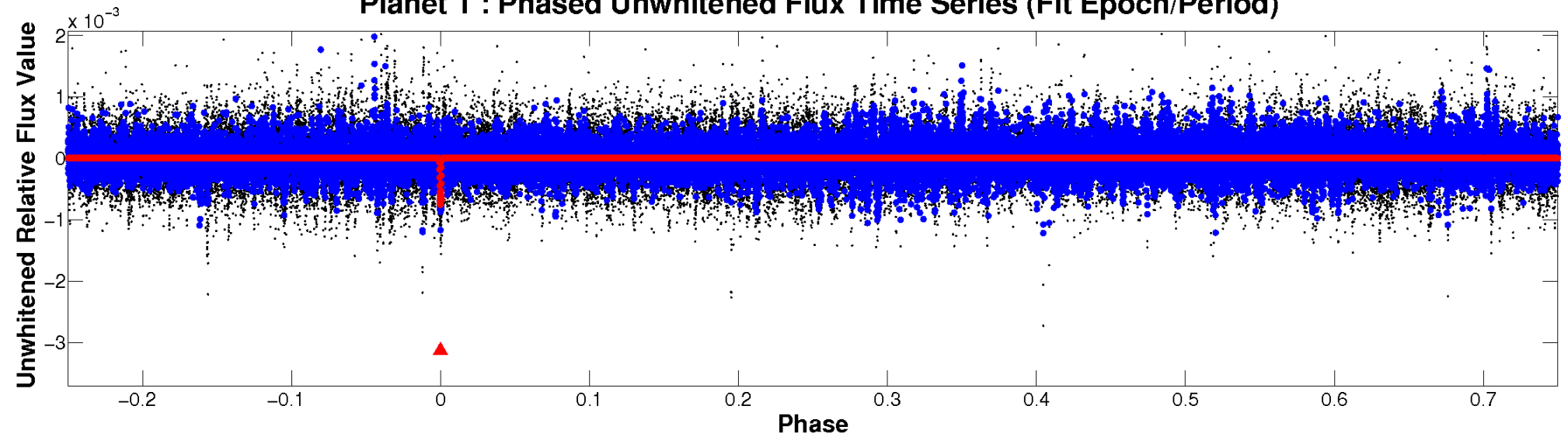
# ALT Odd/Even

TCE 006116277-01

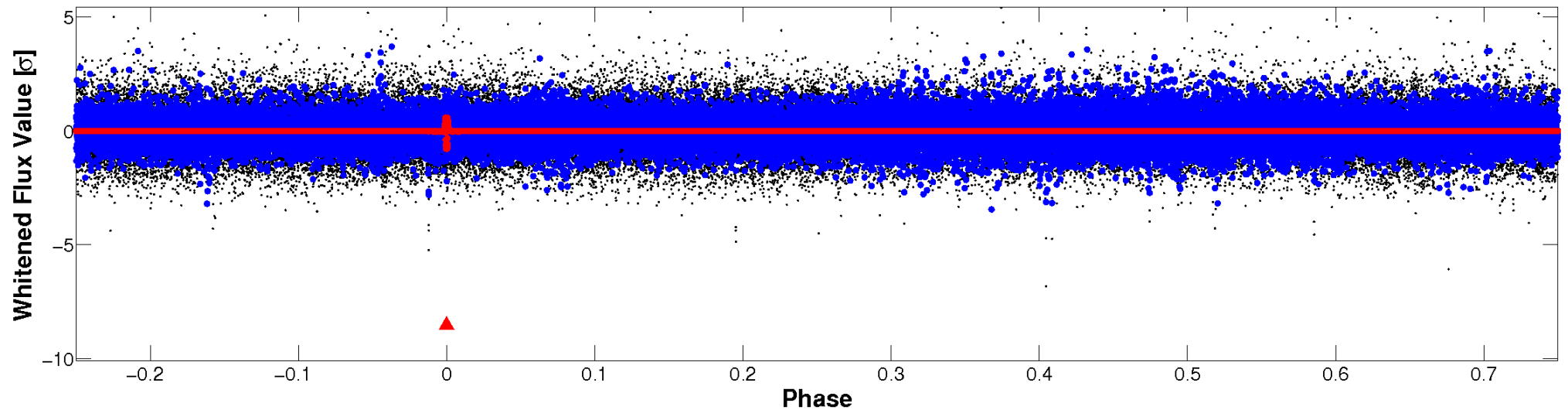


# Non-Whitened Vs. Whitened Light Curve

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

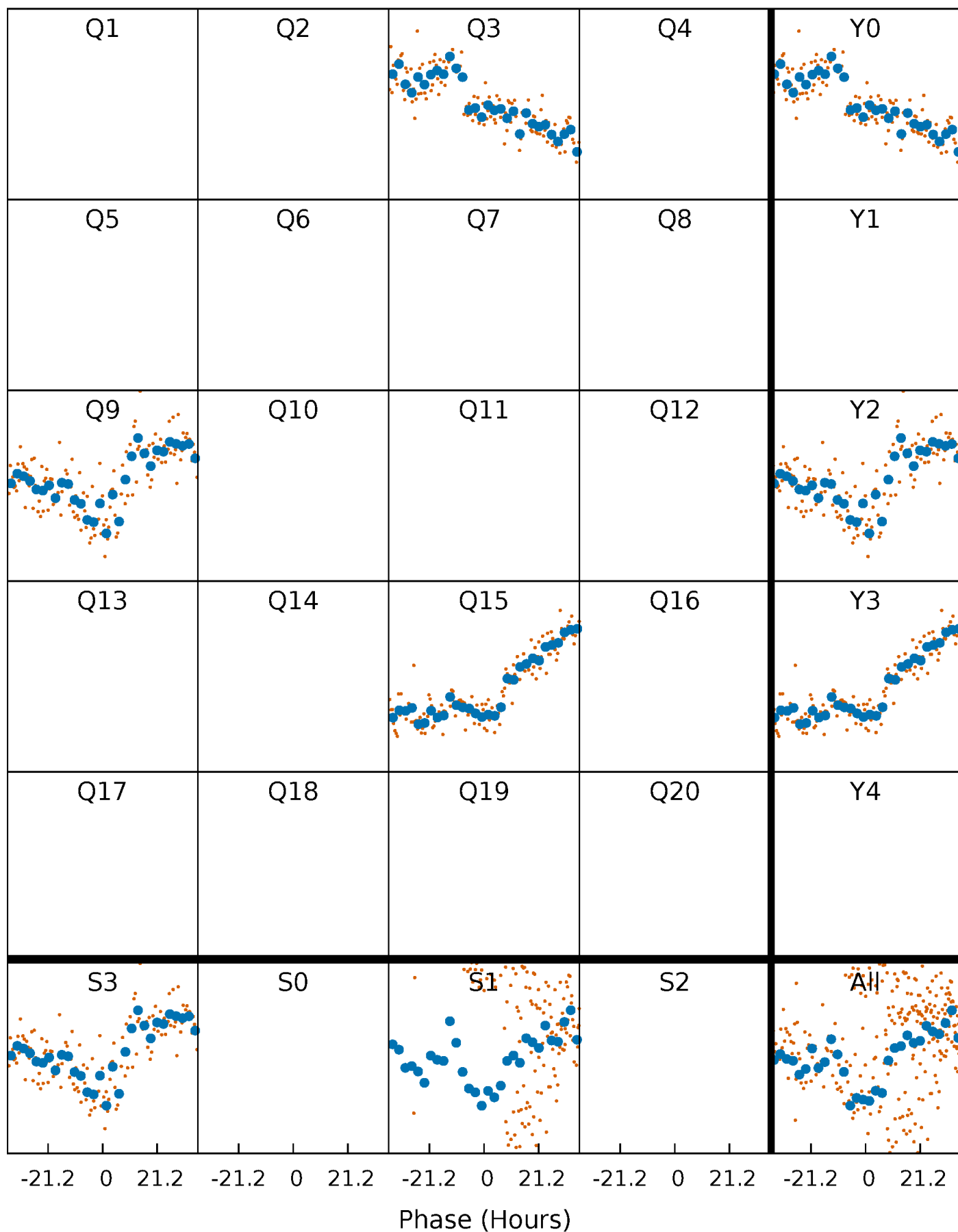


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

TCE 006116277-01 P=547.833220 Days  $T_0=347.163360$  (BKJD)





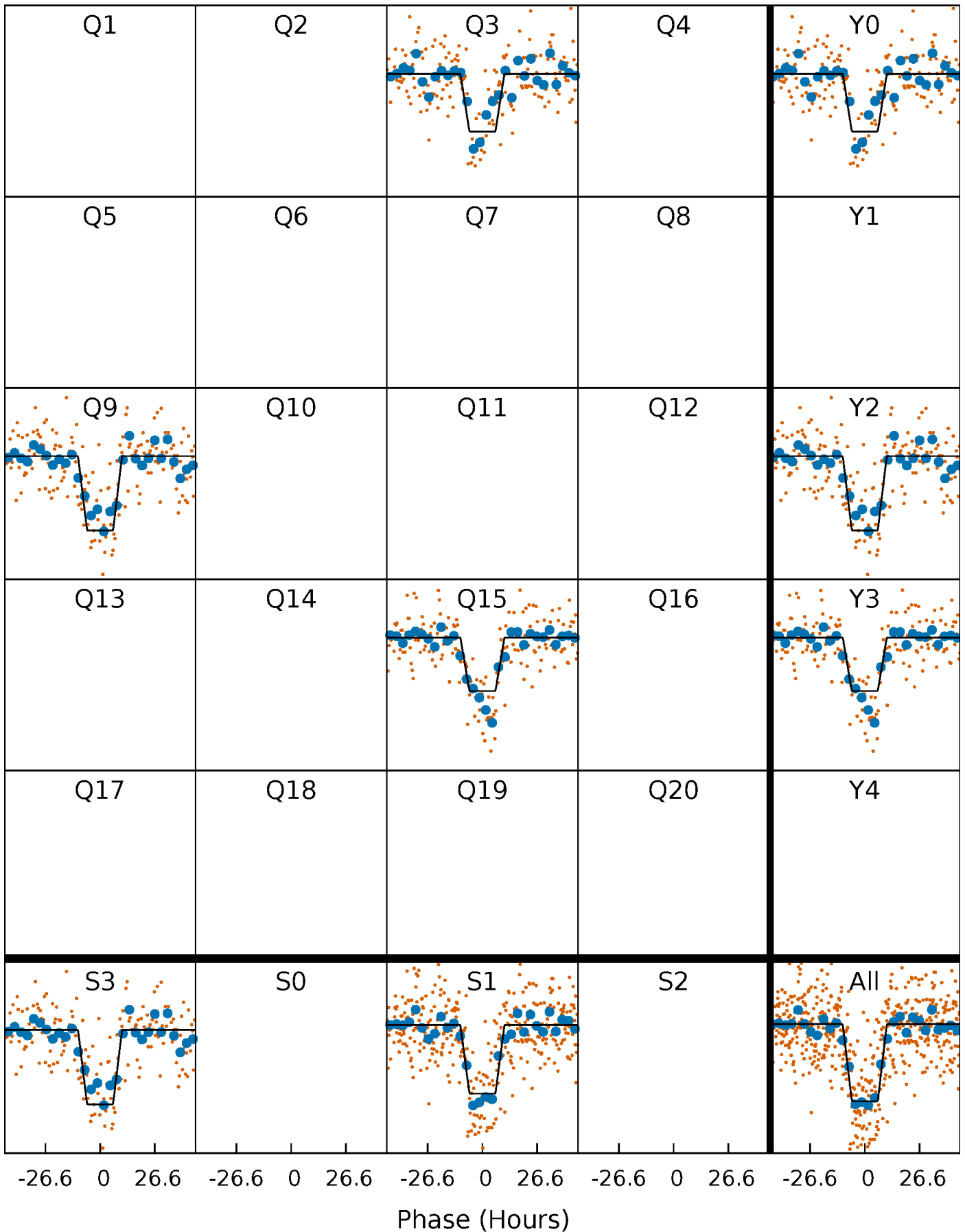
# DV Quarter-Phased Transit Curves

TCE 006116277-01 P=547.833220 Days  $T_0=347.163360$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

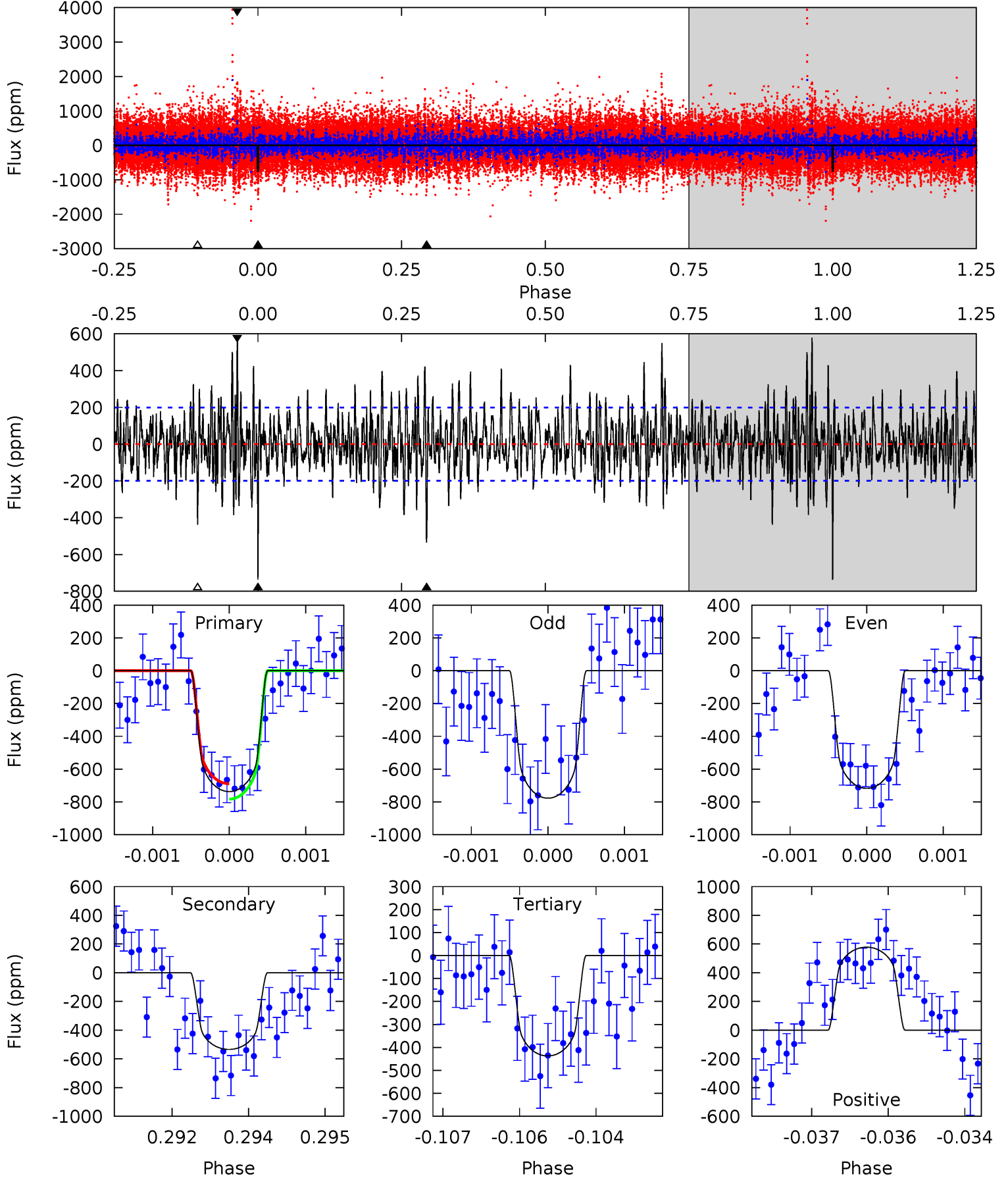
TCE 006116277-01 P=547.850988 Days  $T_0=347.127307$  (BKJD)



# DV Model-Shift Uniqueness Test

006116277-01, P = 547.833220 Days, E = 347.163360 Days

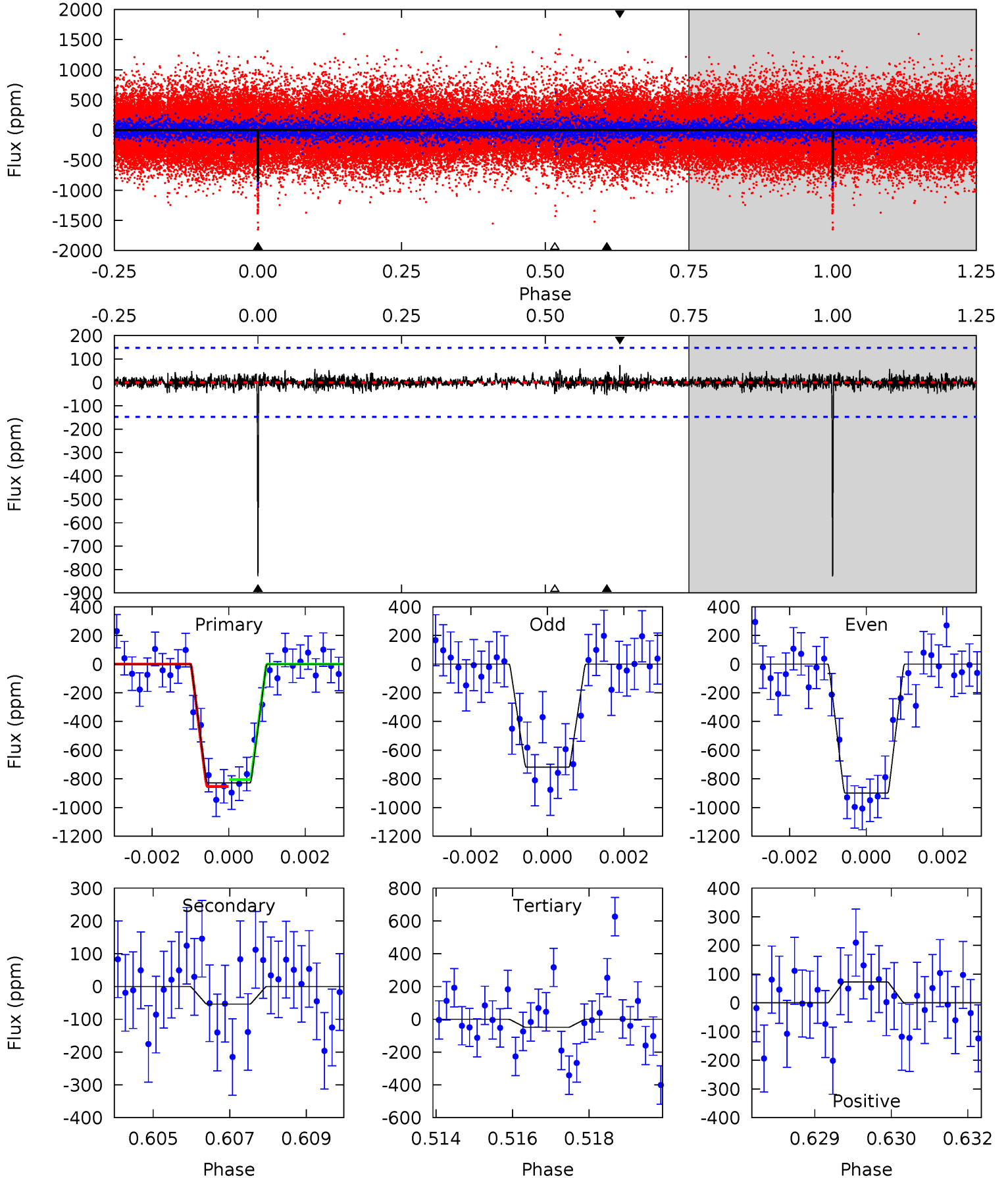
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	14.5	11.9	15.7	5.39	3.19	3.55	8.13	4.31	2.62	-1.19	0.77	0.95	0.44	1.28



# Alt Model-Shift Uniqueness Test

006116277-01, P = 547.850988 Days, E = 347.127307 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
30.2	1.96	1.79	2.66	5.36	3.15	0.49	28.4	27.5	0.17	-0.70	3.09	1.12	0.08	0.89



### Stellar Parameters For KIC 006116277

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4412^{+119}_{-145}$	$4.688^{+0.058}_{-0.027}$	$-0.780^{+0.300}_{-0.300}$	$0.553^{+0.045}_{-0.049}$	$0.543^{+0.049}_{-0.033}$	$4.529^{+1.130}_{-0.626}$
	+3%/-3%	+1%/-1%	+38%/-38%	+8%/-9%	+9%/-6%	+25%/-14%
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 006116277-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-534 \pm 37$	$1.83^{+0.22}_{-0.21}$	$194^{+6}_{-7}$	$3971^{+204}_{-189}$	$101036^{+27193}_{-20457}$
Alt.	$-54 \pm 27$	$1.74^{+0.19}_{-0.20}$	$194^{+6}_{-7}$	$2828^{+210}_{-261}$	$11454^{+6779}_{-6020}$

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

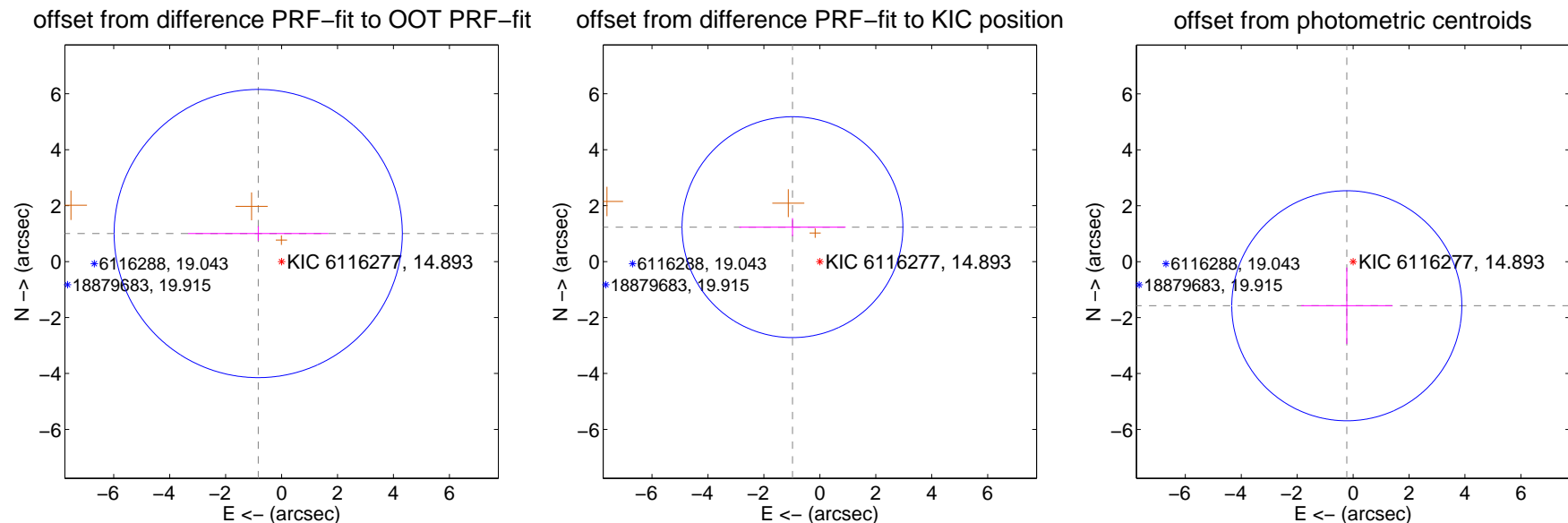
## DV Centroid Data

Supplemental centroid analysis for 006116277-01. Kepler magnitude: 14.89. Transit SNR 7.78

There are 0 quarters with good PRF difference image offsets

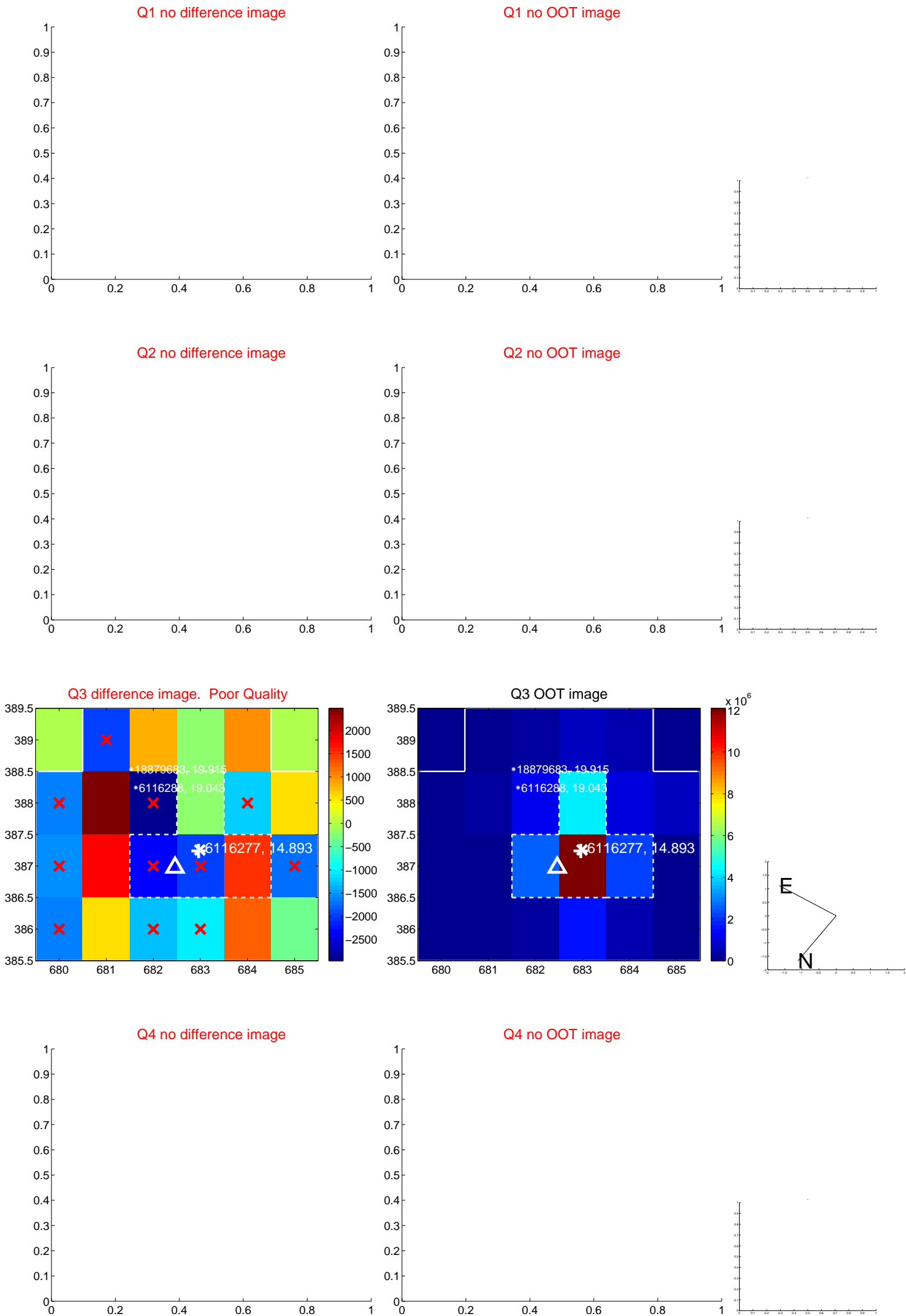
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.305 \pm 1.717$	0.76	$0.835 \pm 2.507$	$1.003 \pm 0.257$
PRF-fit source offset from KIC position	$1.572 \pm 1.316$	1.19	$0.978 \pm 1.900$	$1.231 \pm 0.321$
photometric centroid source offset	$1.59 \pm 1.37$	1.16	$0.23 \pm 1.63$	$-1.58 \pm 1.37$



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.

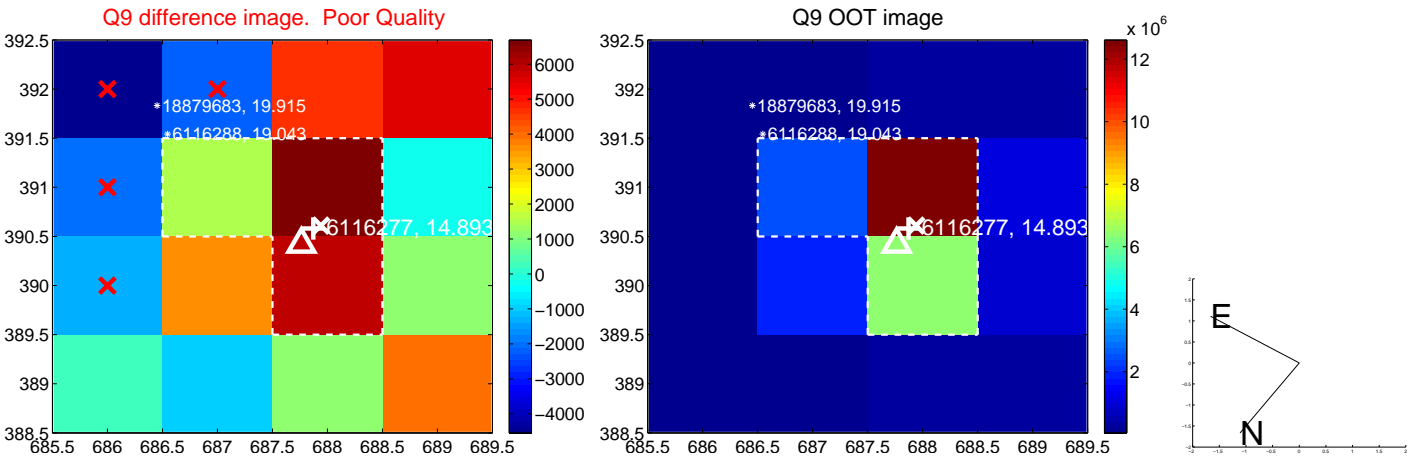


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

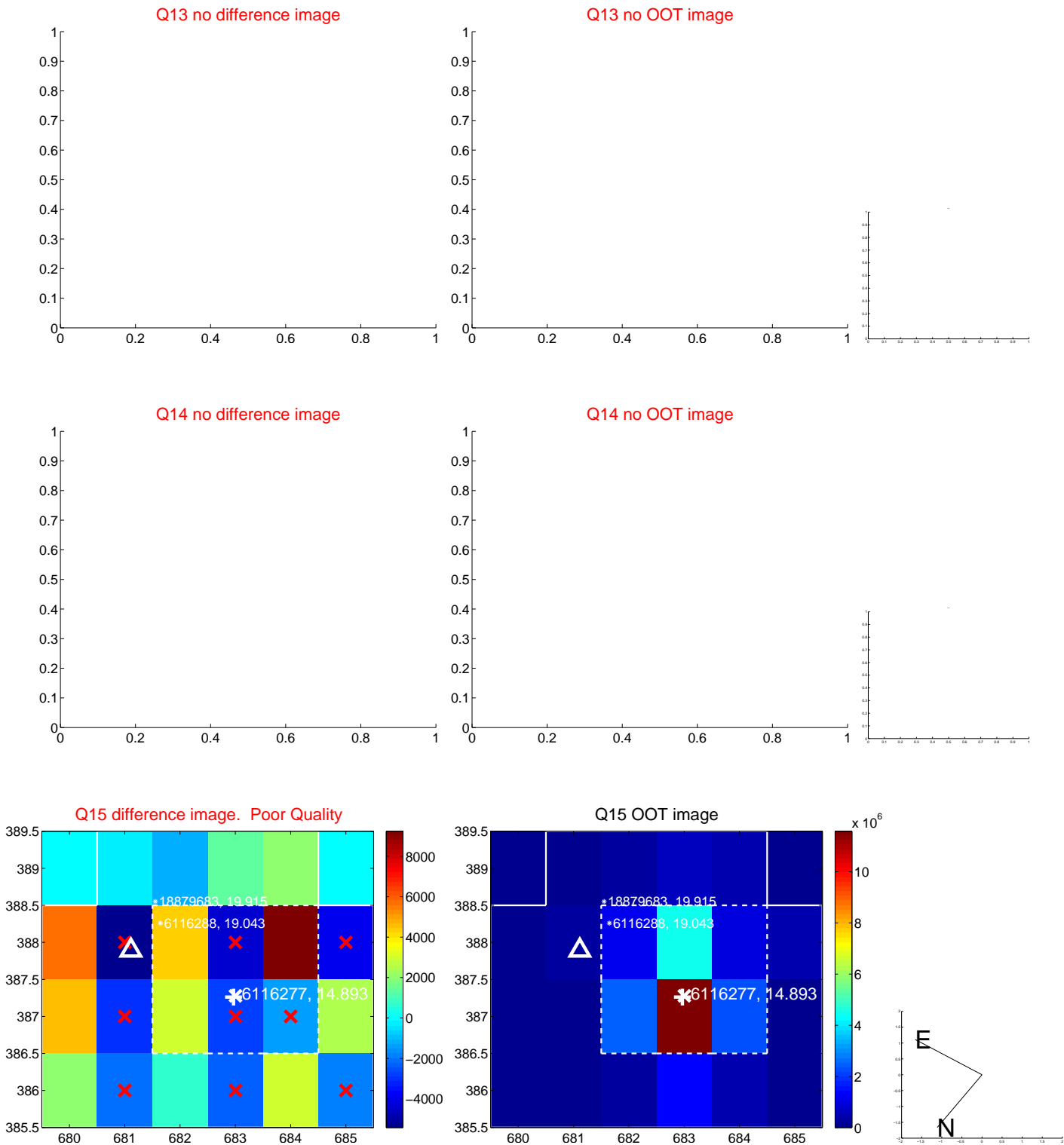




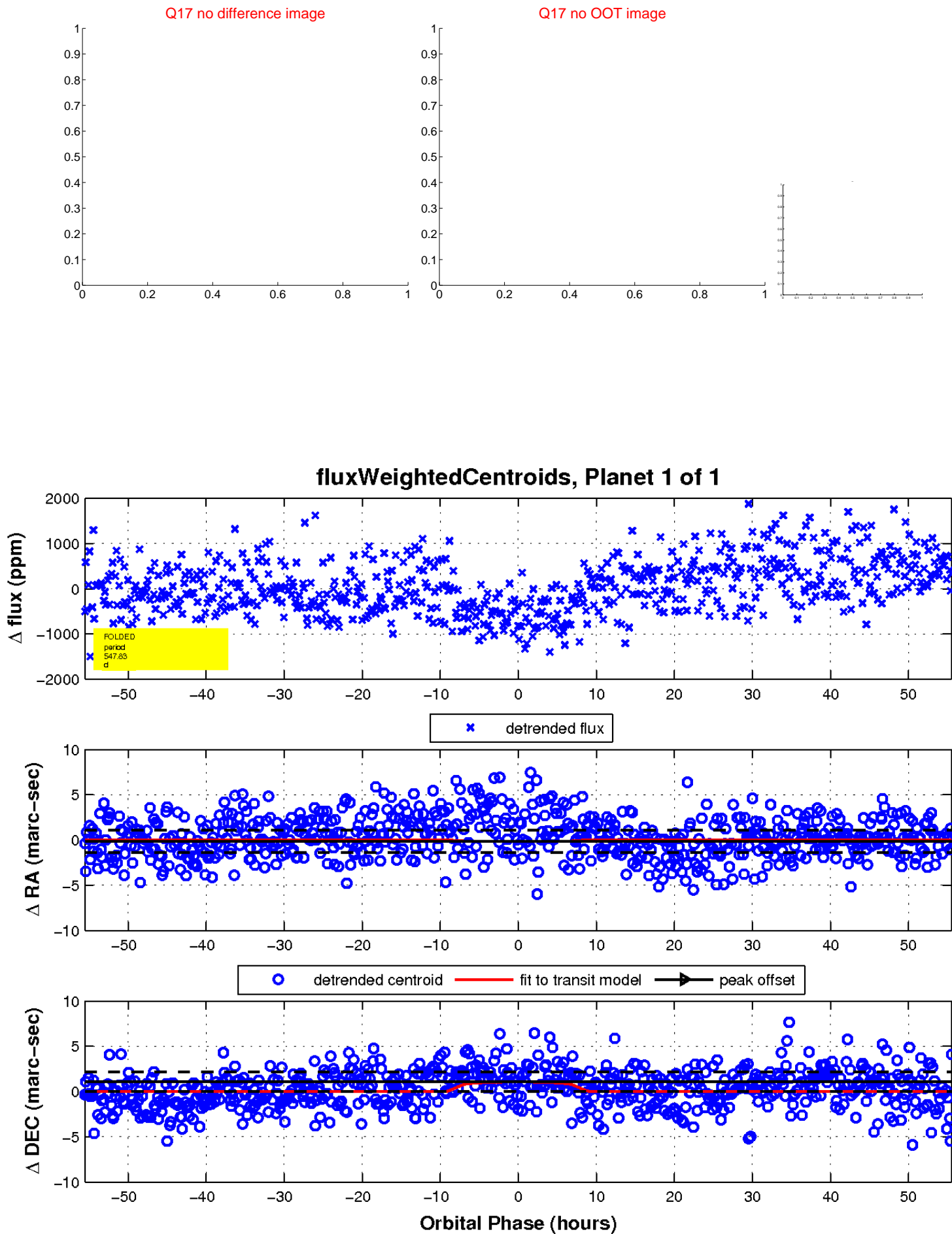
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UKIRT Image

Declination

