

# KIC 011501697

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011501697-01	OBS	No	372.981549	307.313124	687.7	19.814	7.5	7.5	0.81	5371	4.22	0.51

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011501697-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

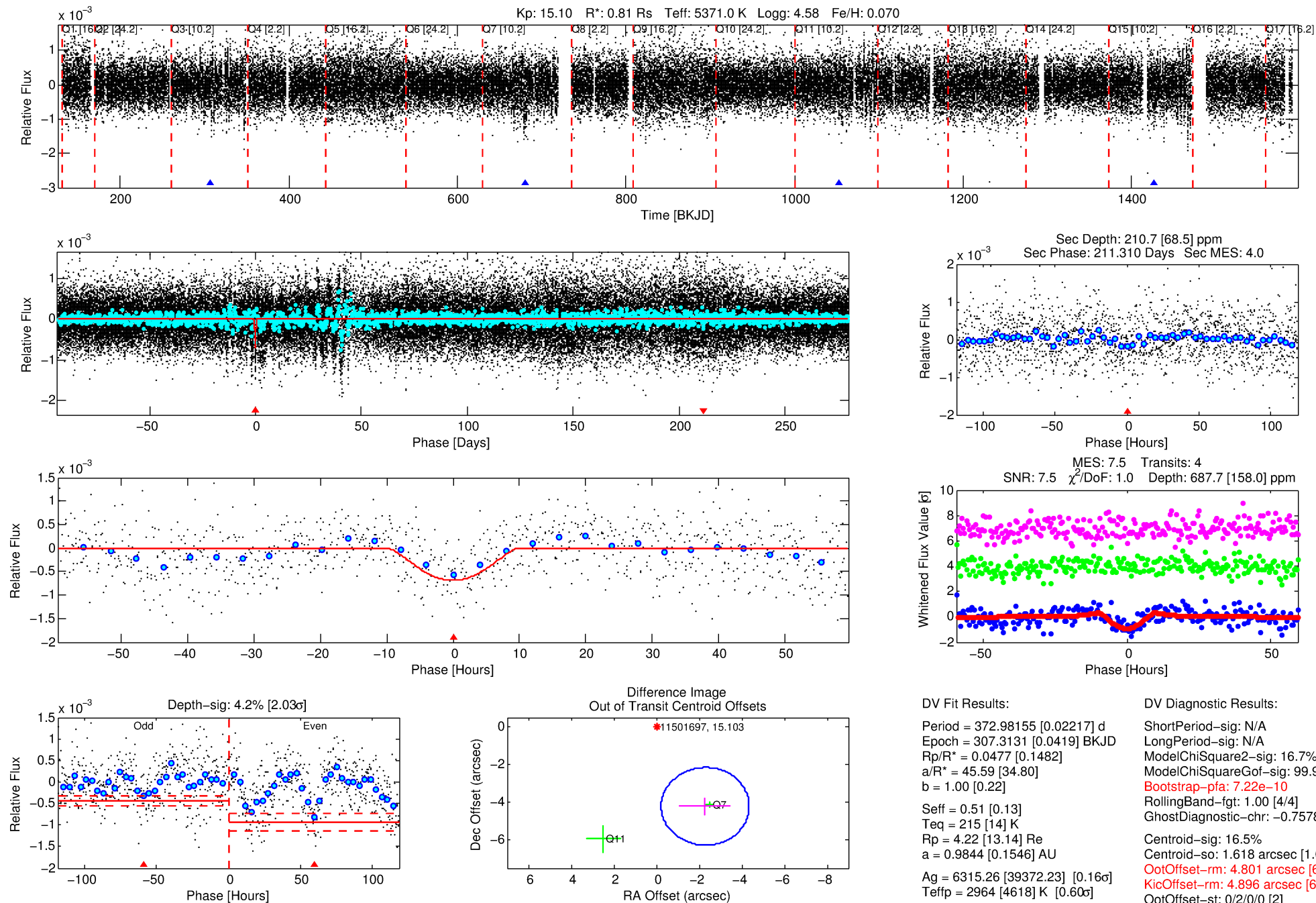
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011501697-01

No Significant Match Found

# DV One-Page Summary

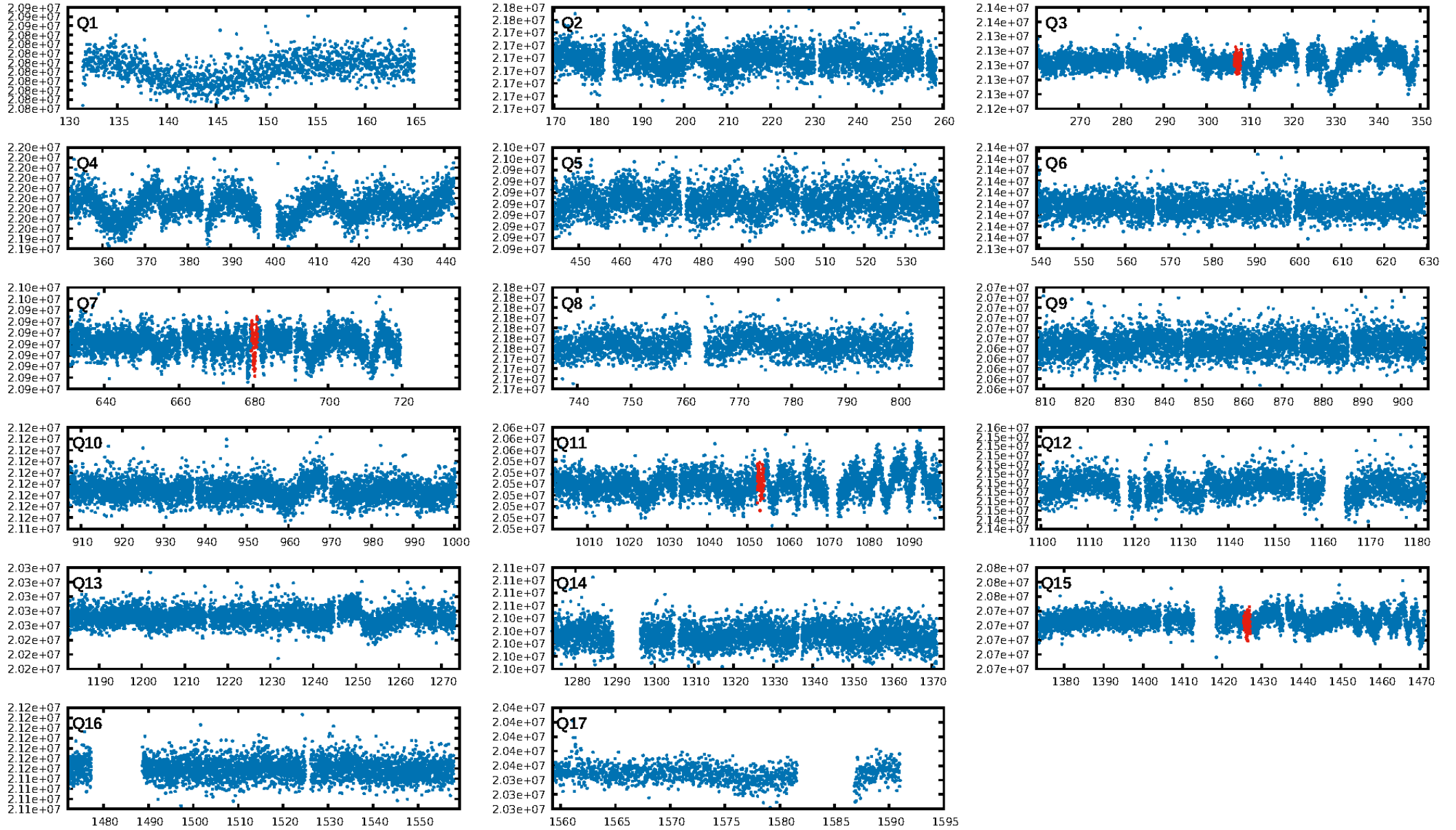
KIC: 11501697 Candidate: 1 of 1 Period: 372.982 d



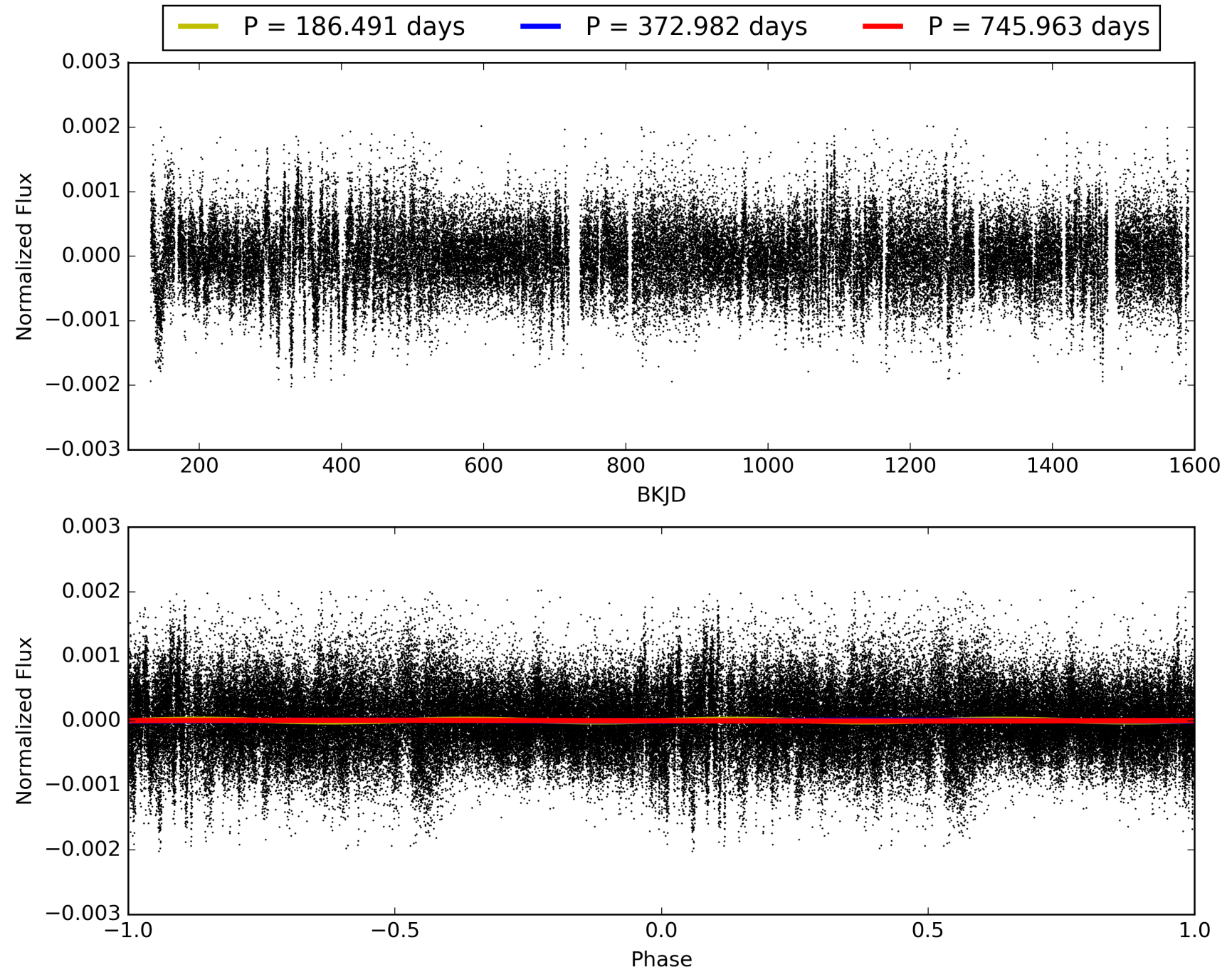
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:14:01 Z

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

# TCE 011501697-01, PDC Light Curves

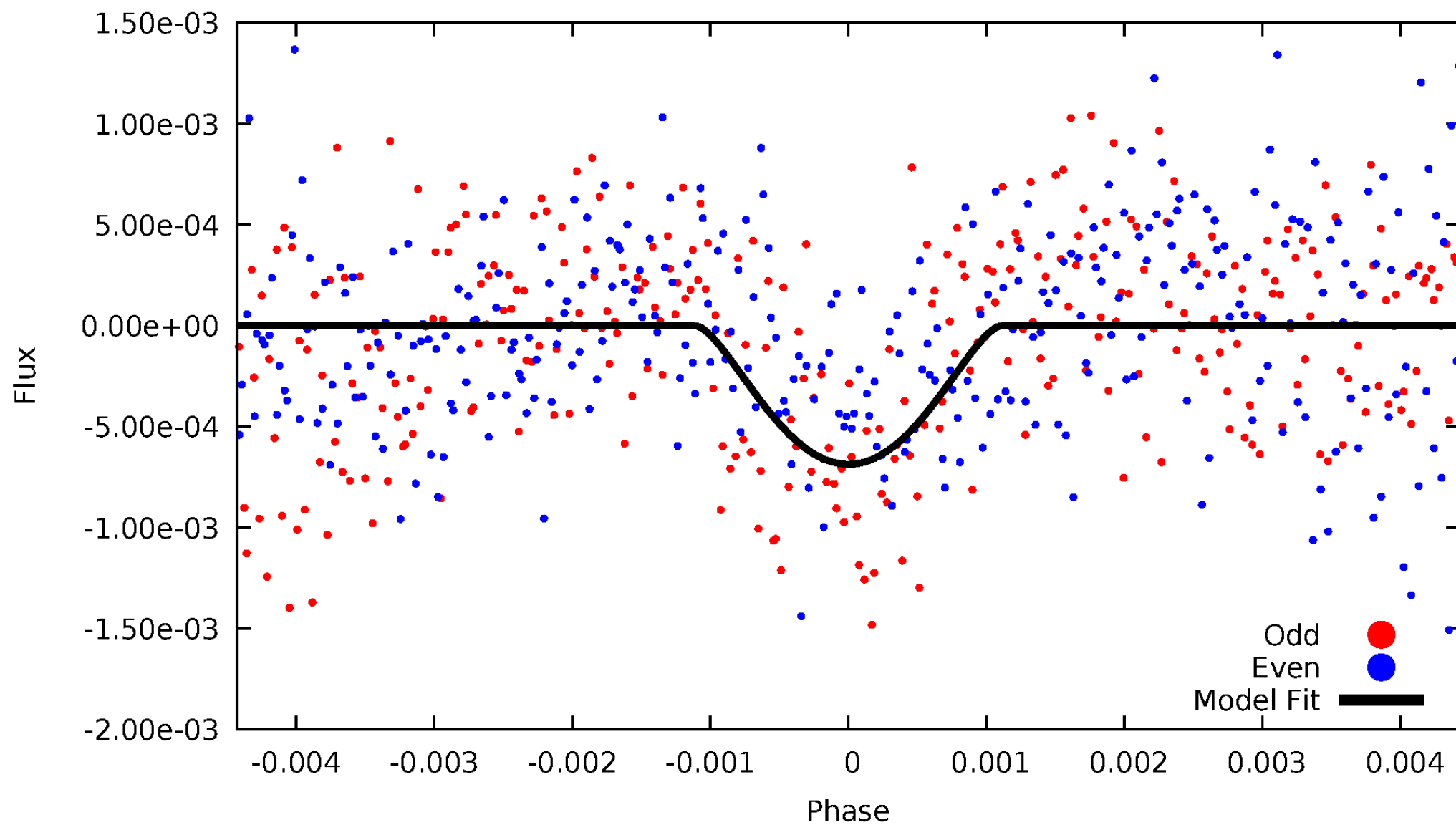


TCE 011501697-01



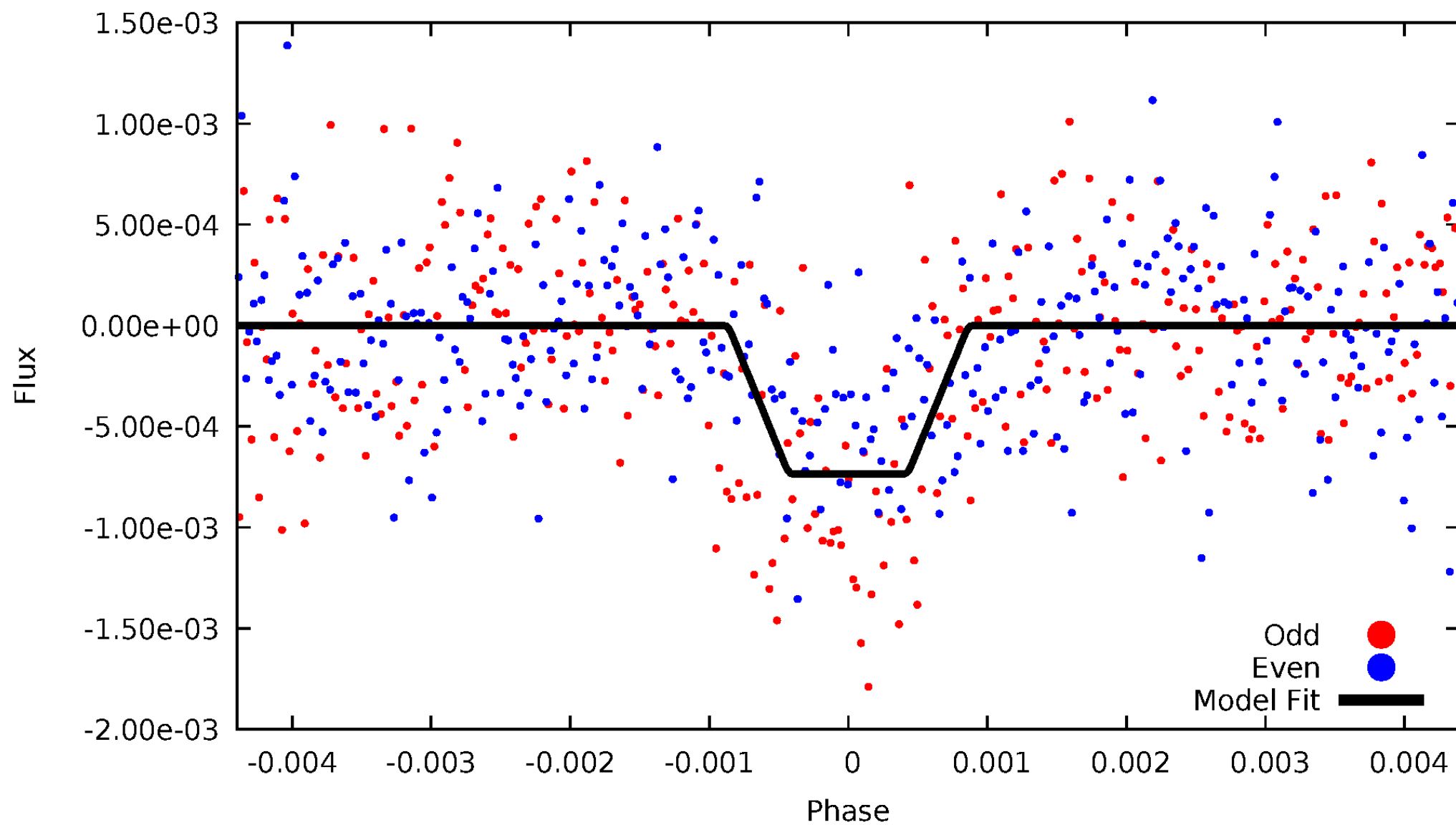
# DV Odd/Even

TCE 011501697-01



# ALT Odd/Even

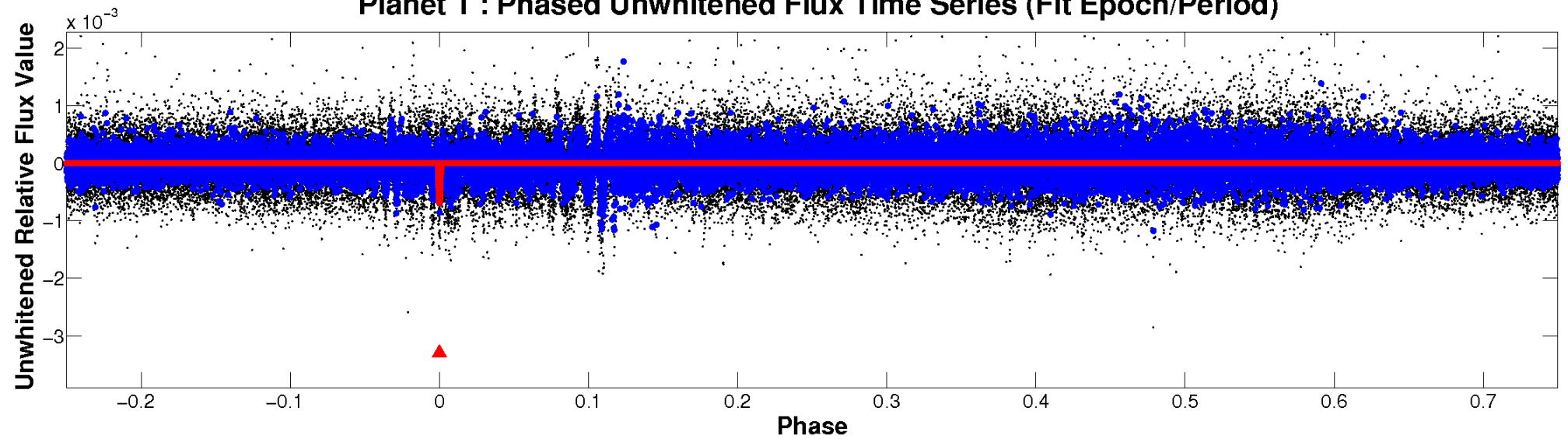
TCE 011501697-01



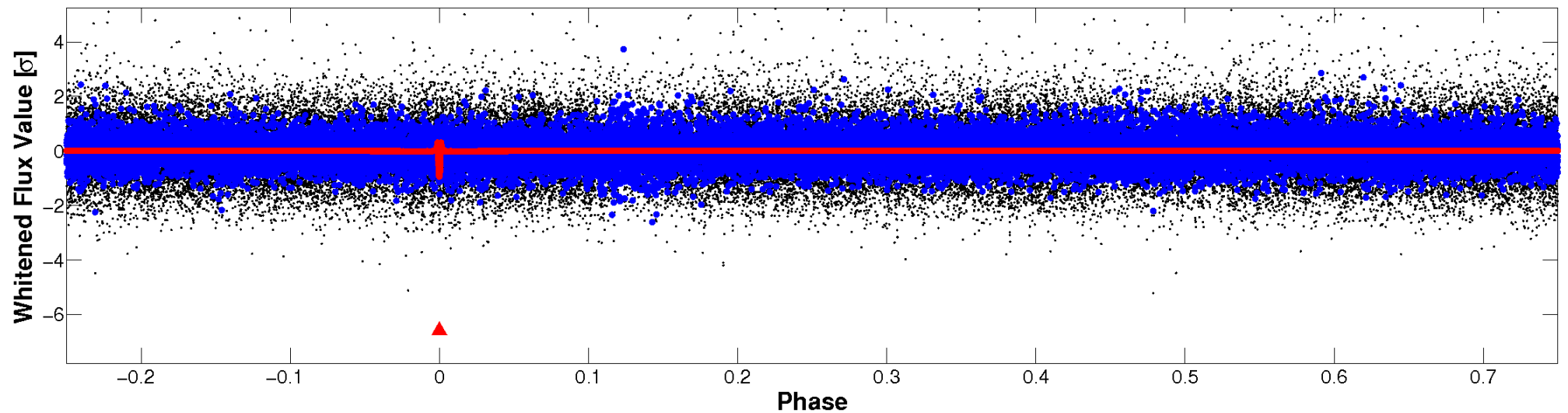


# Non-Whitened Vs. Whitened Light Curve

**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

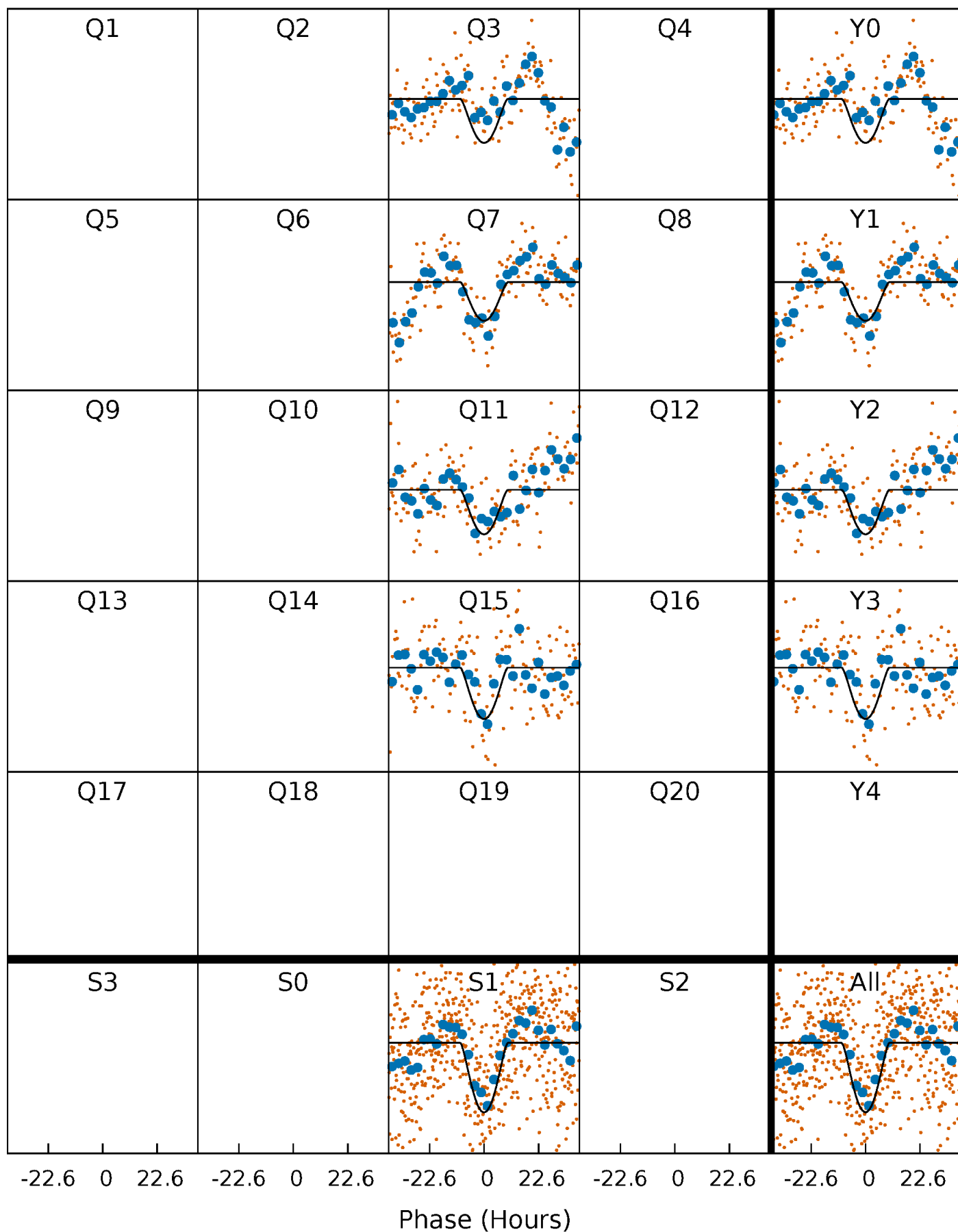
TCE 011501697-01 P=372.981550 Days  $T_0=307.313124$  (BKJD)





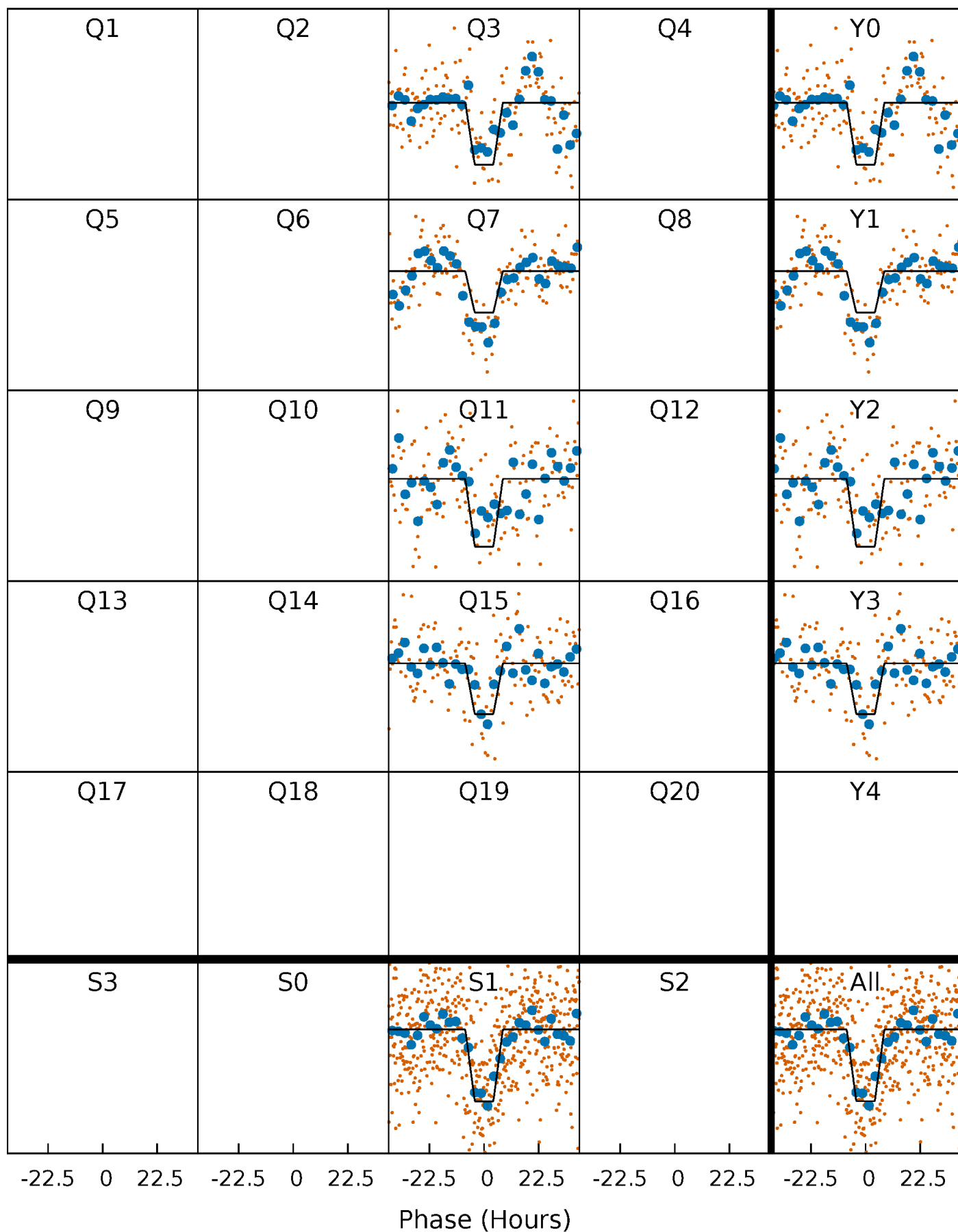
# DV Quarter-Phased Transit Curves

TCE 011501697-01 P=372.981550 Days  $T_0=307.313124$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

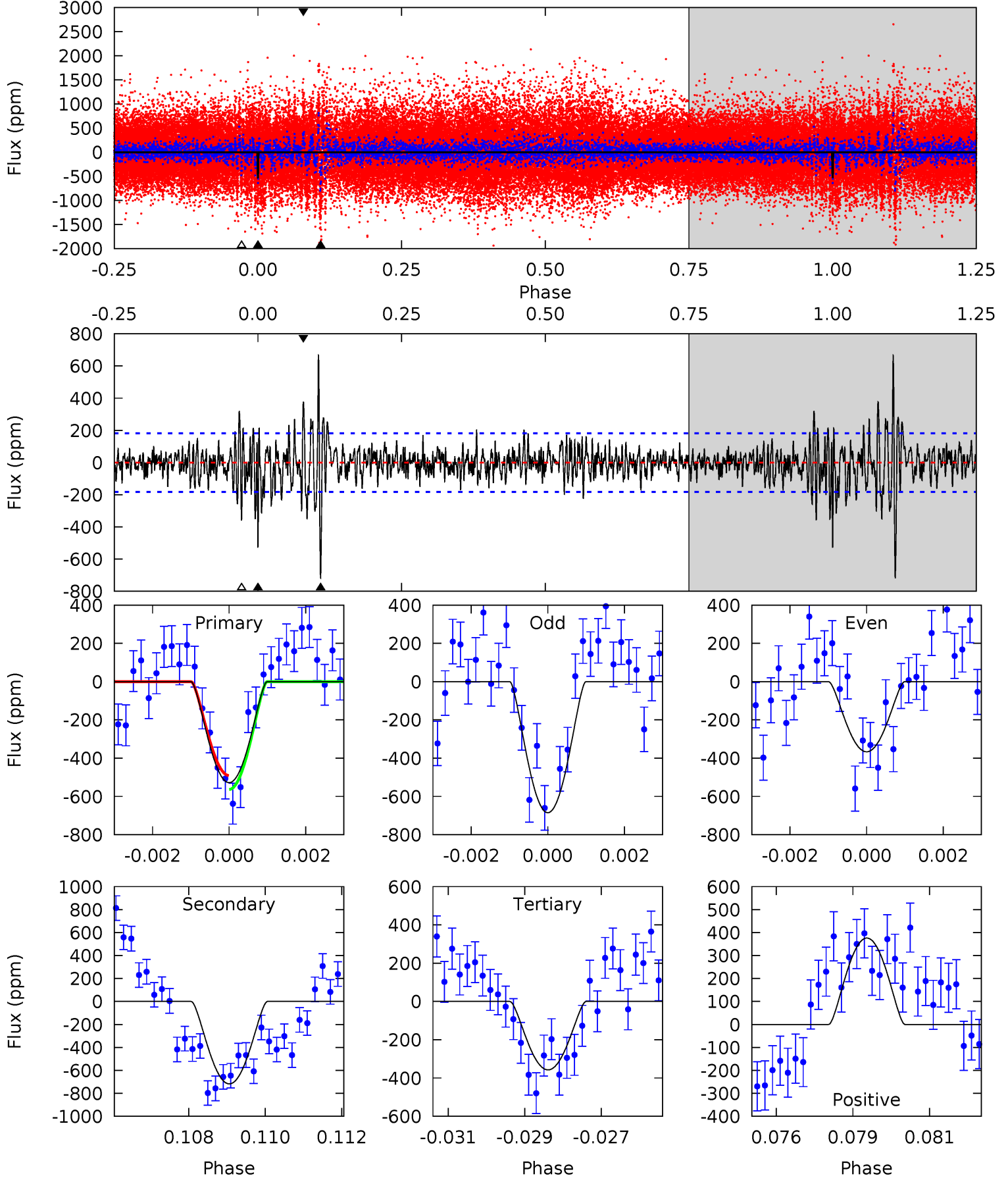
TCE 011501697-01 P=372.980582 Days  $T_0=307.323553$  (BKJD)



# DV Model-Shift Uniqueness Test

011501697-01, P = 372.981550 Days, E = 307.313124 Days

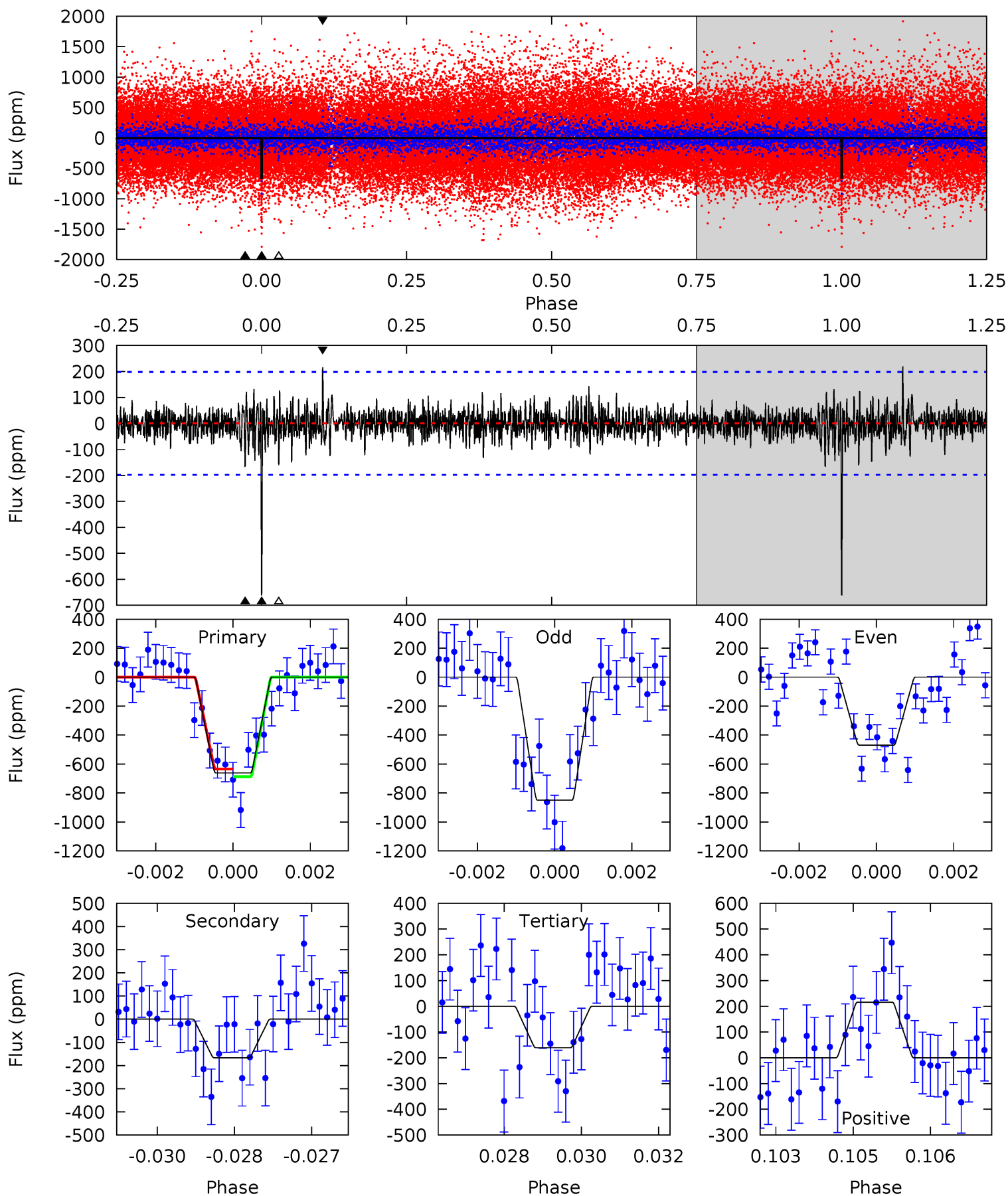
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	20.9	10.4	10.9	5.31	3.06	2.56	4.96	4.41	10.5	9.93	4.65	1.01	0.48	1.06



# Alt Model-Shift Uniqueness Test

011501697-01, P = 372.980582 Days, E = 307.323553 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
17.9	4.51	4.35	5.84	5.35	3.13	1.07	13.5	12.0	0.16	-1.33	5.15	1.21	0.25	0.71



### Stellar Parameters For KIC 011501697

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5371^{+159}_{-159}$	$4.581^{+0.032}_{-0.128}$	$0.070^{+0.250}_{-0.300}$	$0.811^{+0.149}_{-0.064}$	$0.922^{+0.058}_{-0.102}$	$2.430^{+0.392}_{-0.925}$
	+3%/-3%	+1%/-3%	+357%/-429%	+18%/-8%	+6%/-11%	+16%/-38%
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 011501697-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-718 \pm 34$	$10.88^{+12.14}_{-7.23}$	$306^{+14}_{-12}$	$3137^{+1435}_{-570}$	$3118^{+25678}_{-2398}$
Alt.	$-167 \pm 37$	$9.74^{+11.37}_{-6.64}$	$306^{+14}_{-12}$	$2633^{+1065}_{-430}$	$902^{+8166}_{-717}$

$T_{max}$  = 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

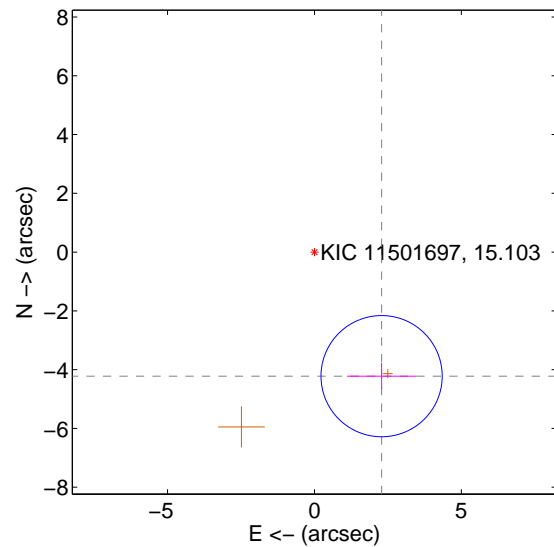
Supplemental centroid analysis for 011501697-01. Kepler magnitude: 15.10. Transit SNR 7.50

There are 0 quarters with good PRF difference image offsets

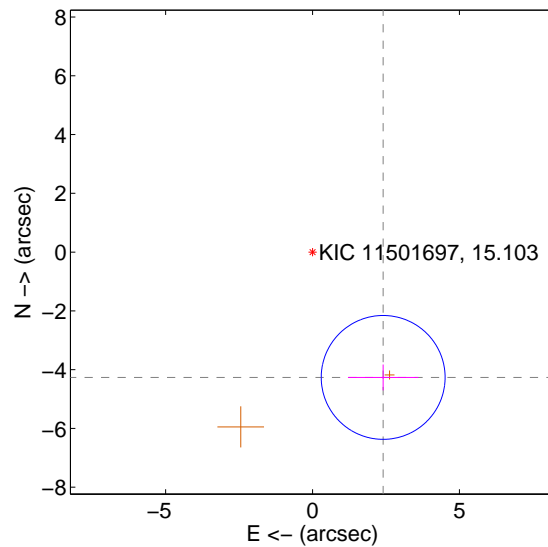
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.801 \pm 0.687$	6.98	$-2.286 \pm 1.179$	$-4.223 \pm 0.451$
PRF-fit source offset from KIC position	$4.896 \pm 0.703$	6.97	$-2.404 \pm 1.199$	$-4.265 \pm 0.440$
photometric centroid source offset	$1.62 \pm 1.52$	1.06	$1.17 \pm 1.52$	$1.11 \pm 1.52$

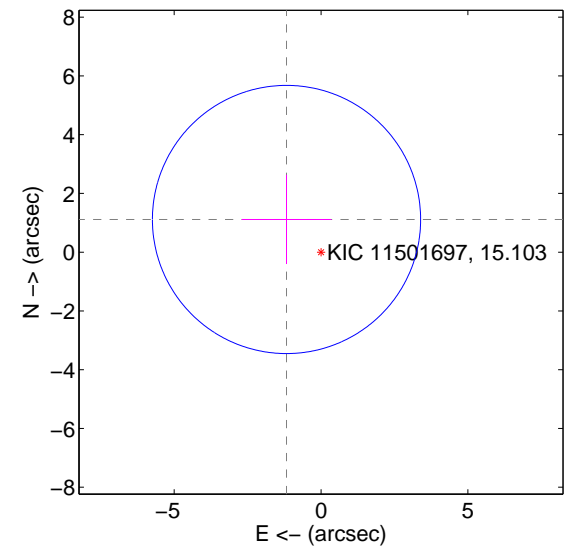
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

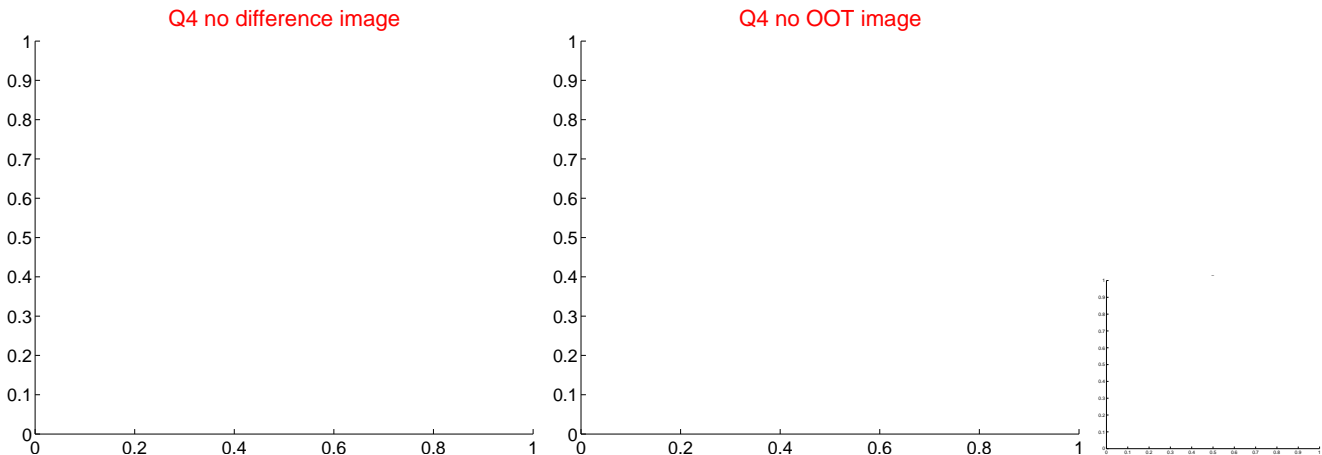
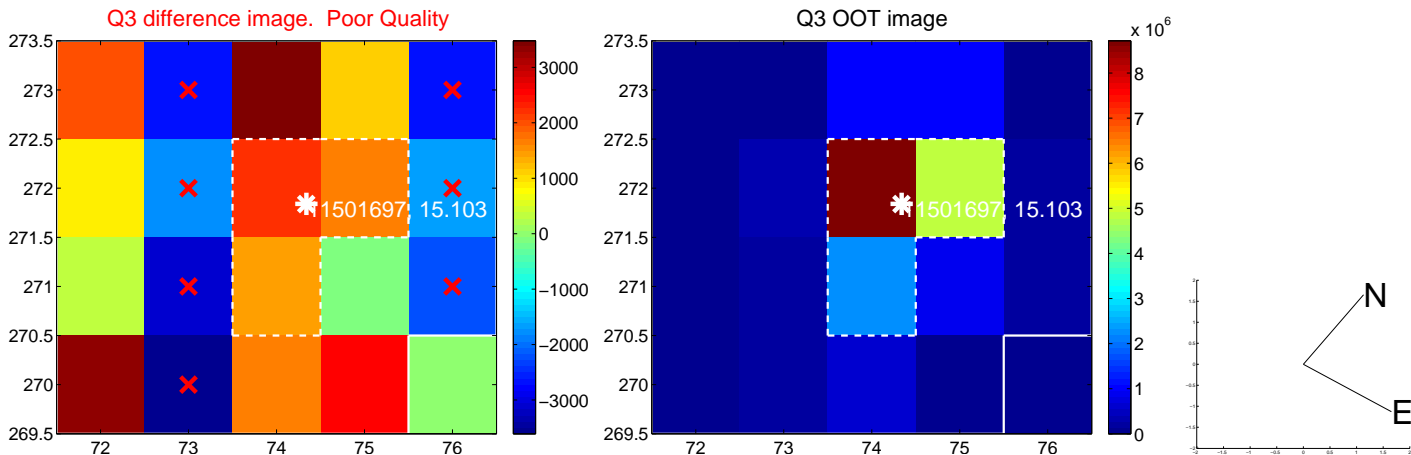
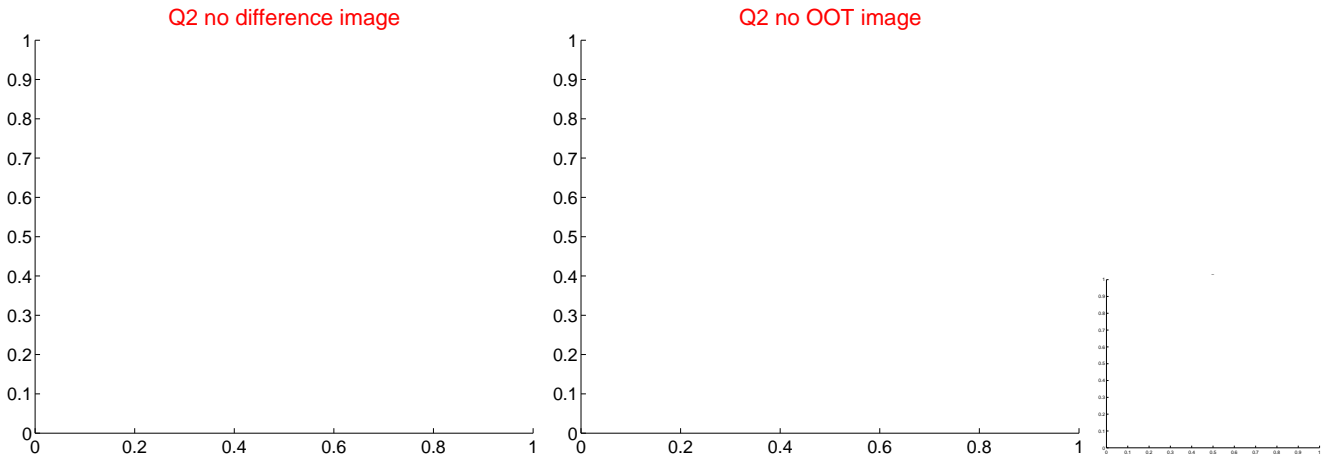


offset from photometric centroids



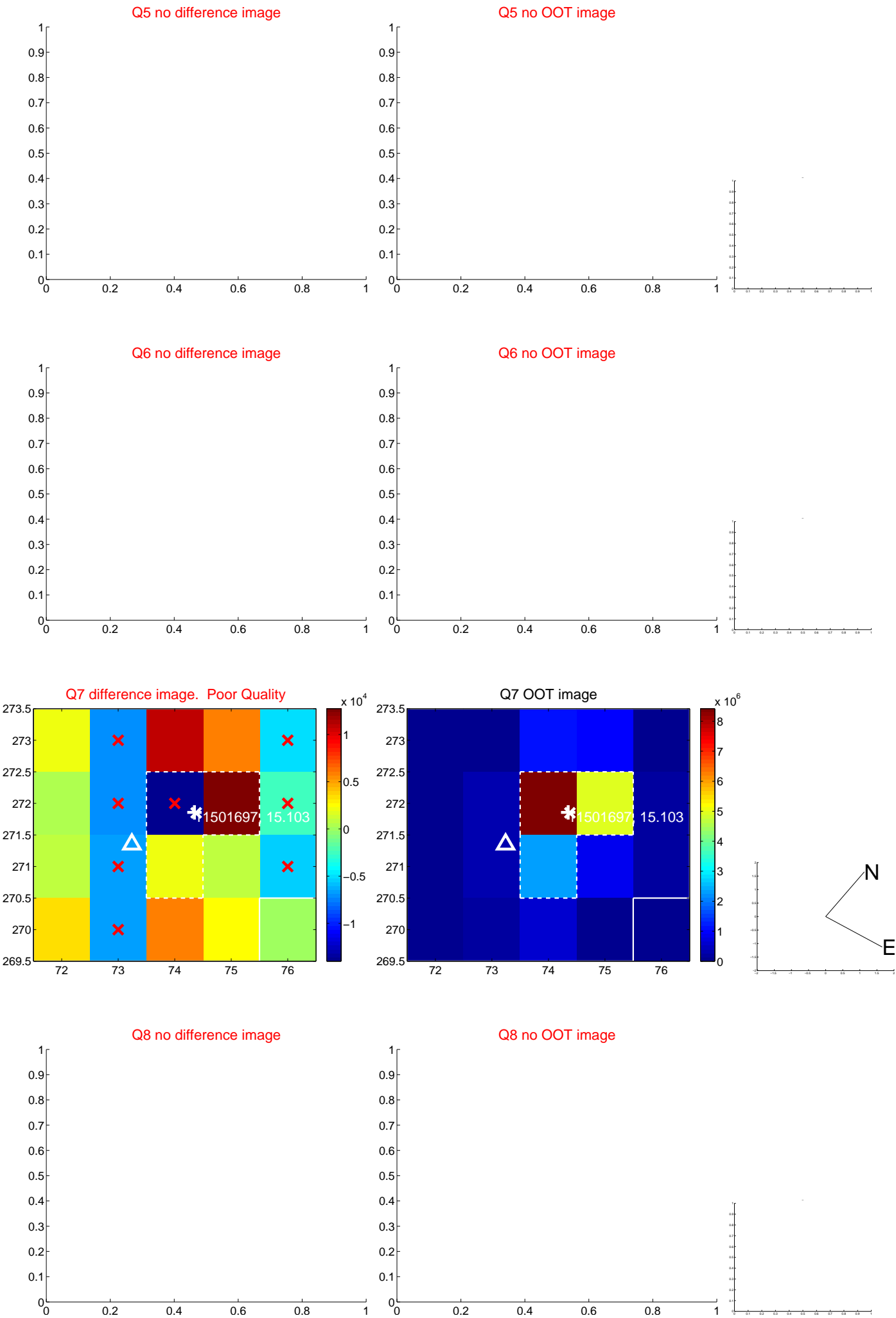
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

Q9 no difference image



Q9 no OOT image



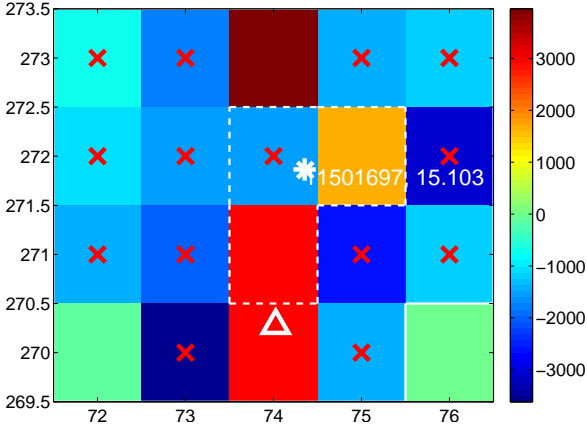
Q10 no difference image



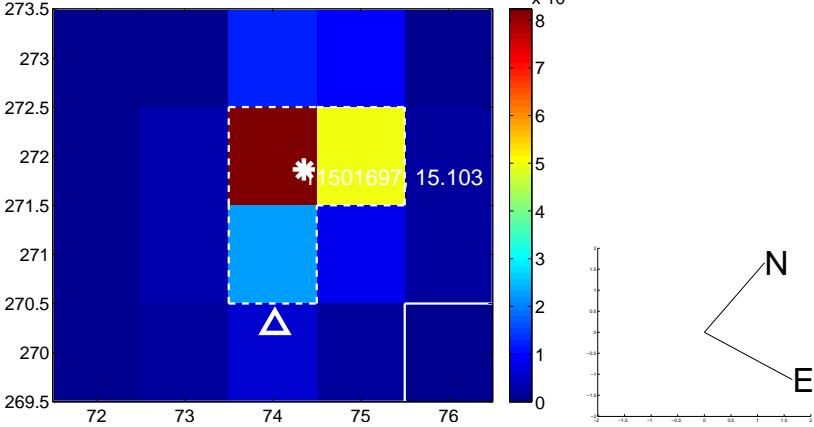
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



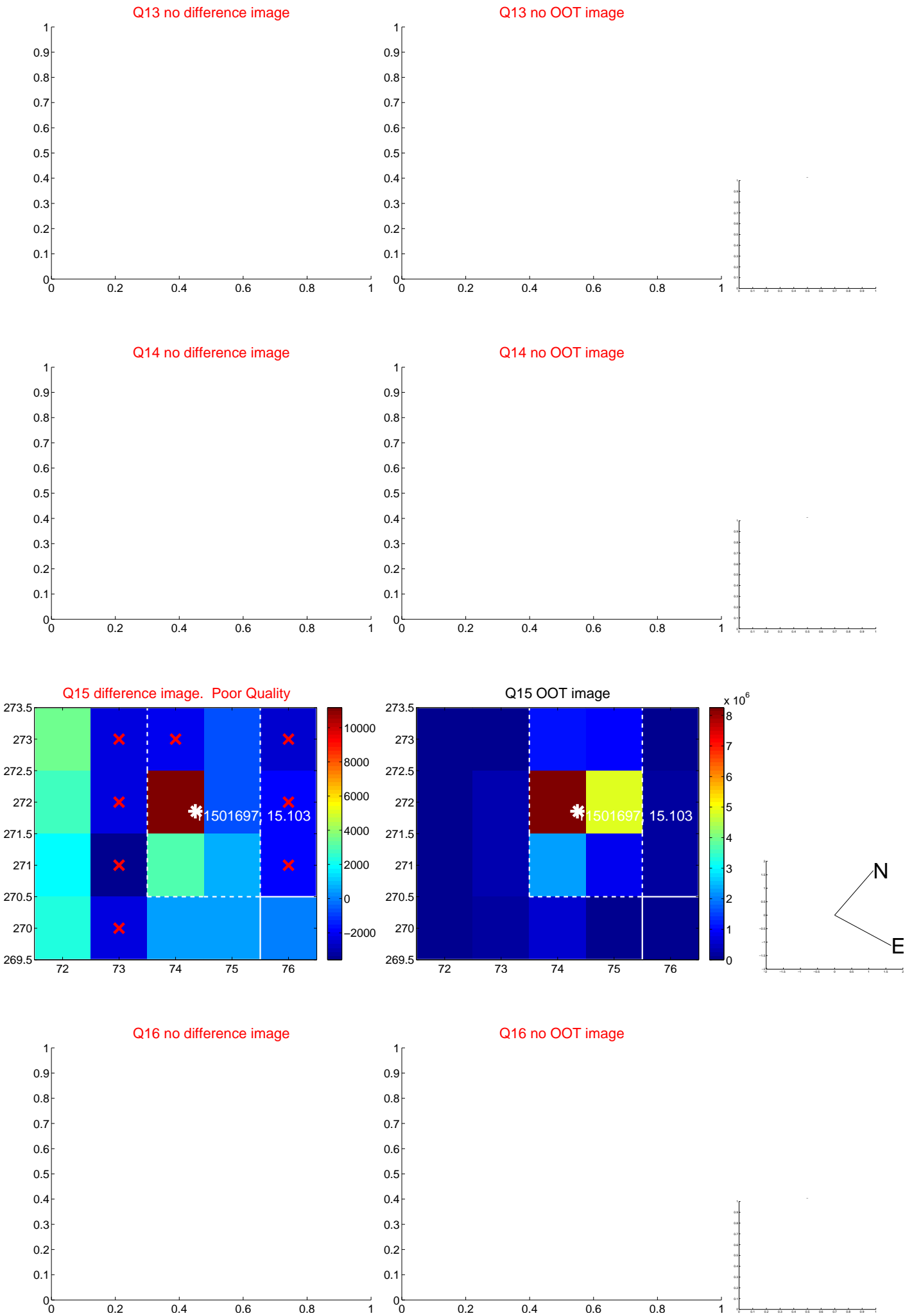
Q12 no difference image



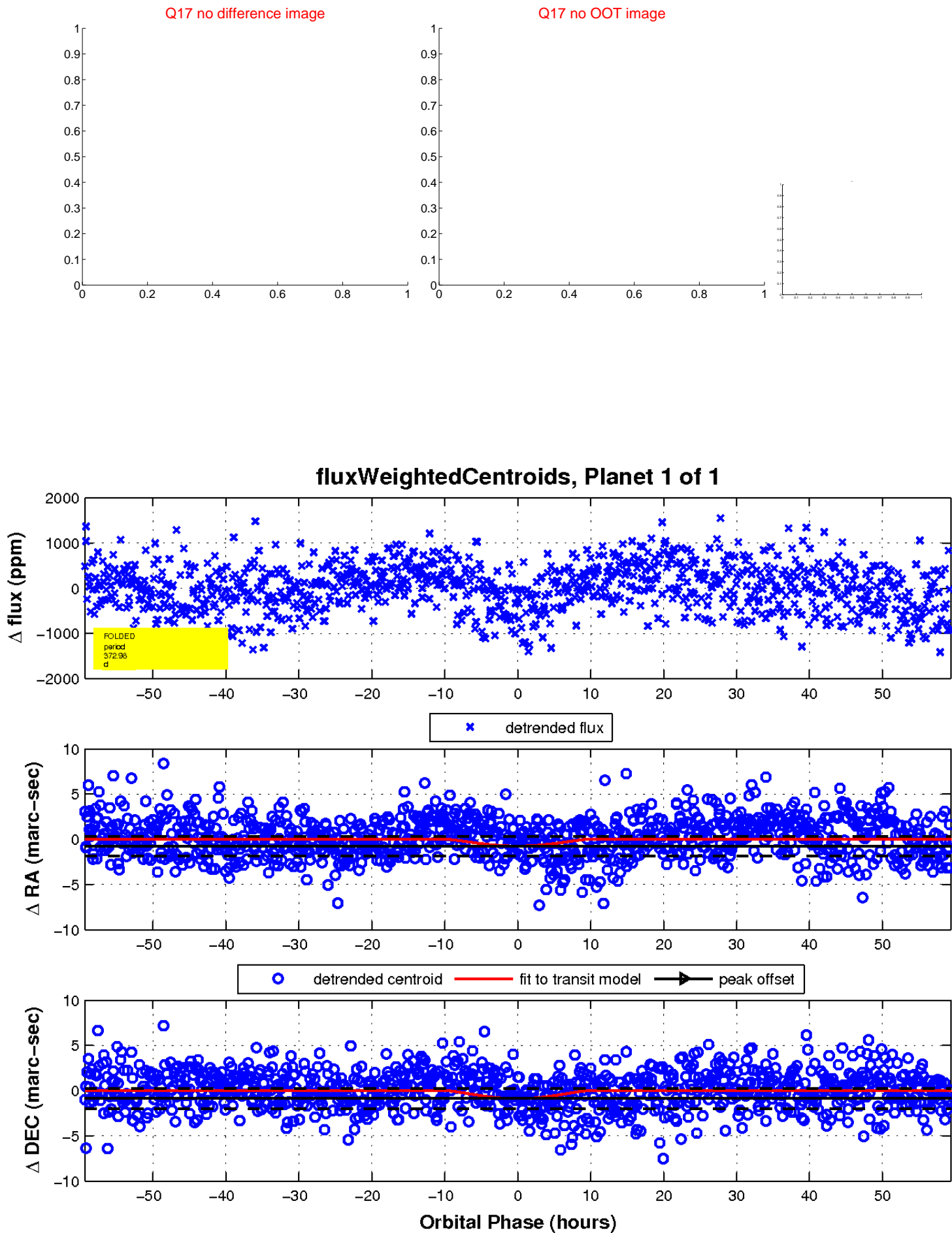
Q12 no OOT image



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

