

# KIC 007106438

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007106438-01	OBS	8267.01	269.339079	232.603466	501.6	5.321	7.2	7.1	1.05	6129	2.73	2.02

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007106438-01	OBS	FP	0.13	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

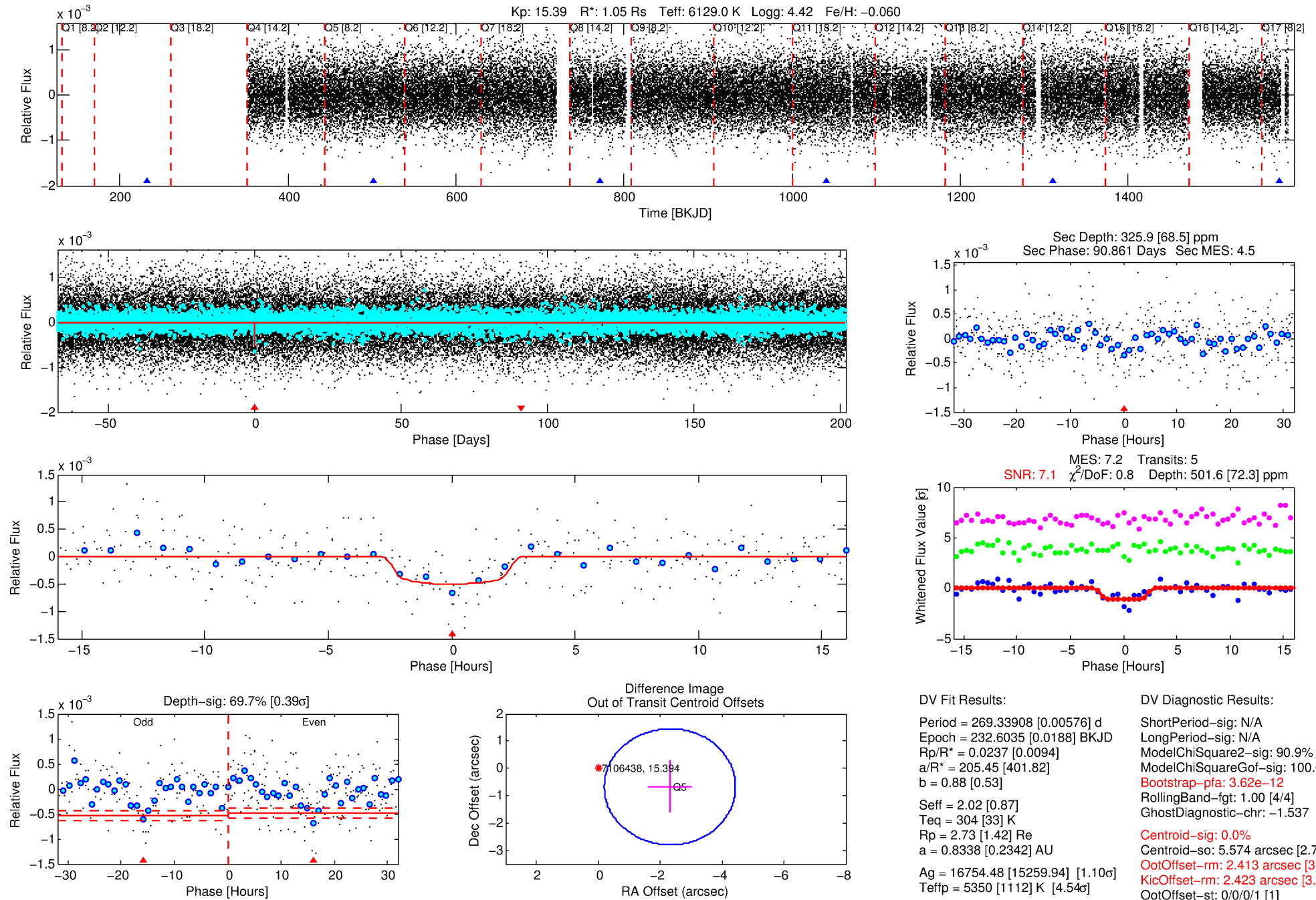
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007106438-01

No Significant Match Found

# DV One-Page Summary

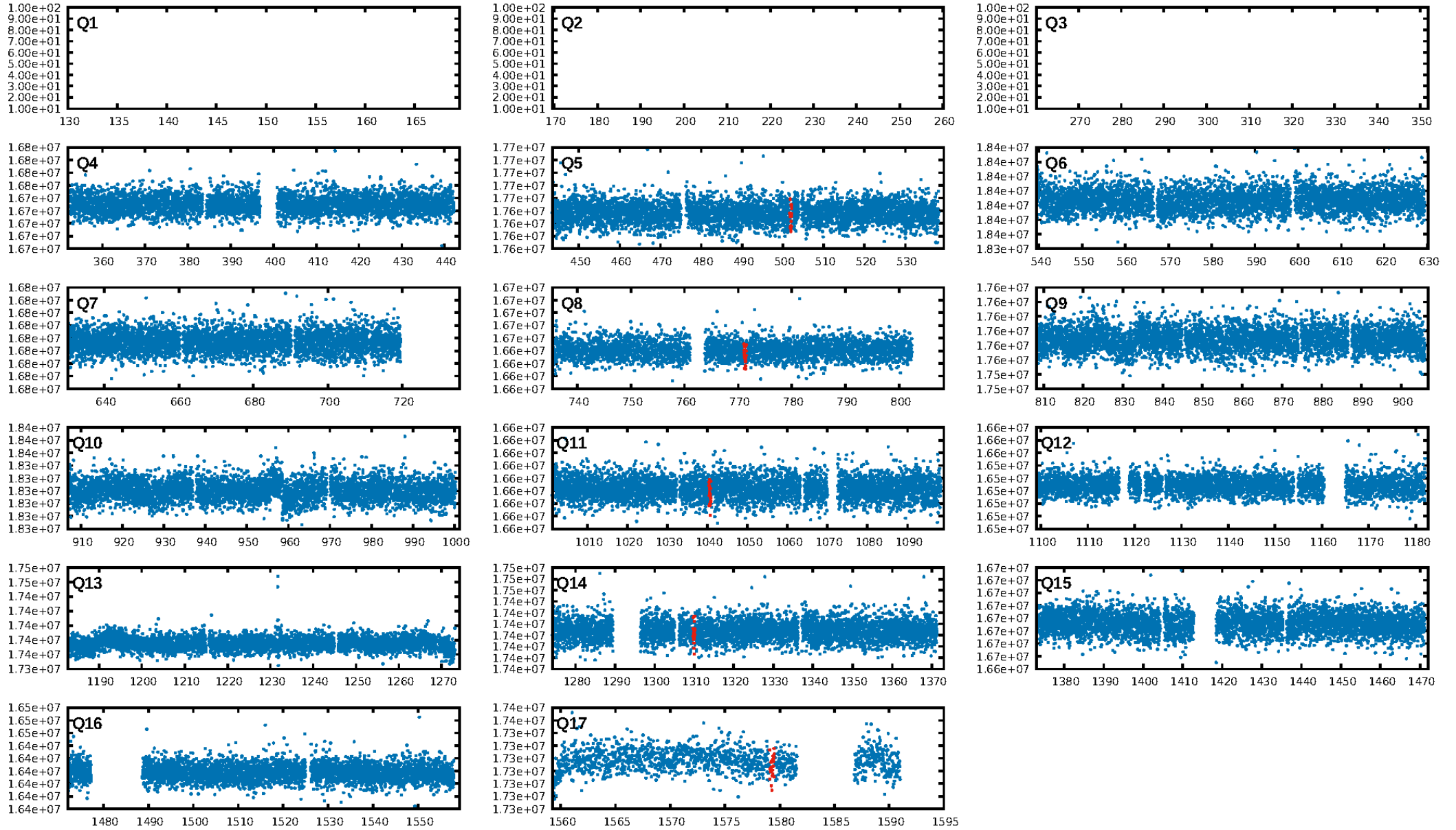
KIC: 7106438 Candidate: 1 of 1 Period: 269.339 d



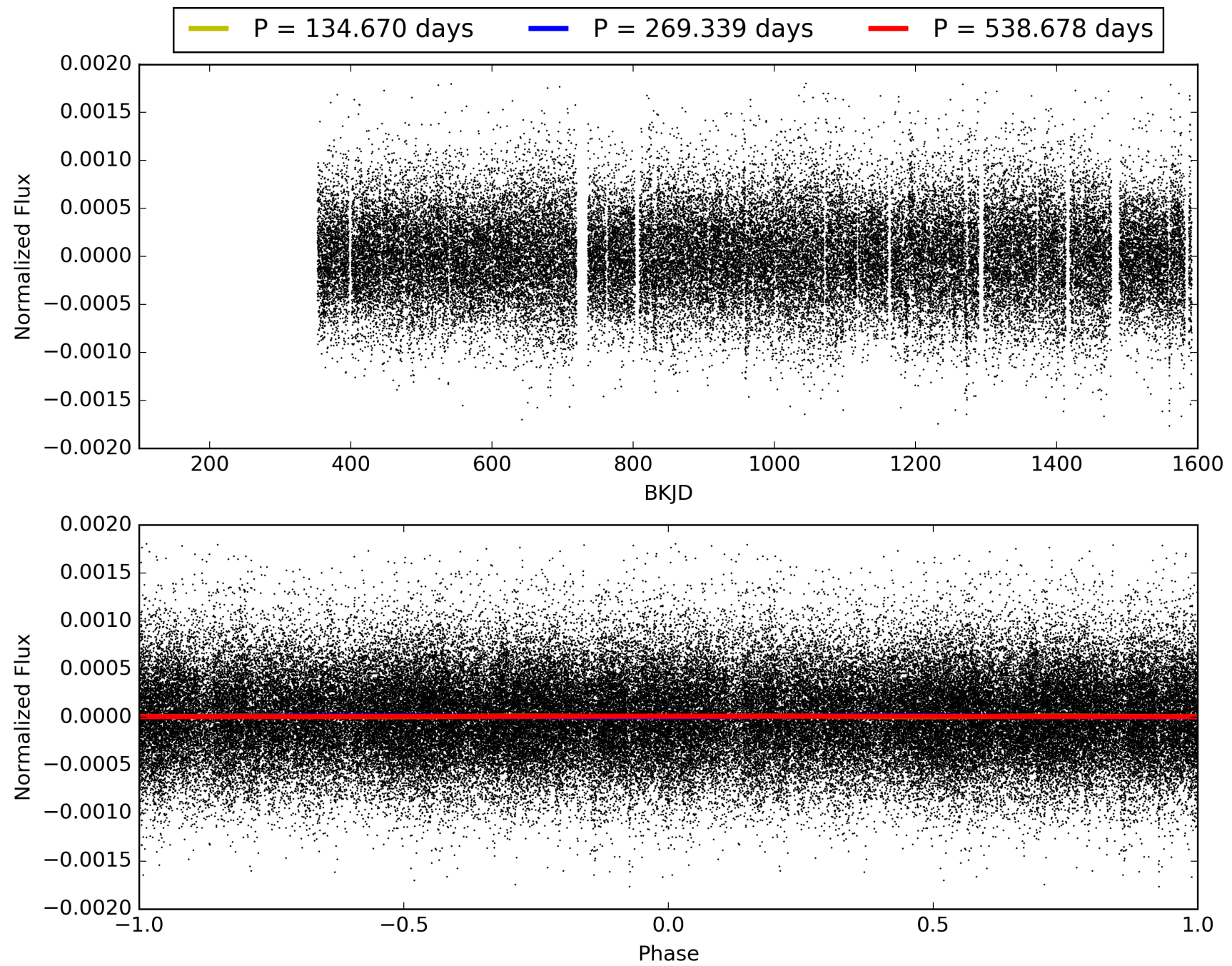
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:33:22 Z

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

# TCE 007106438-01, PDC Light Curves

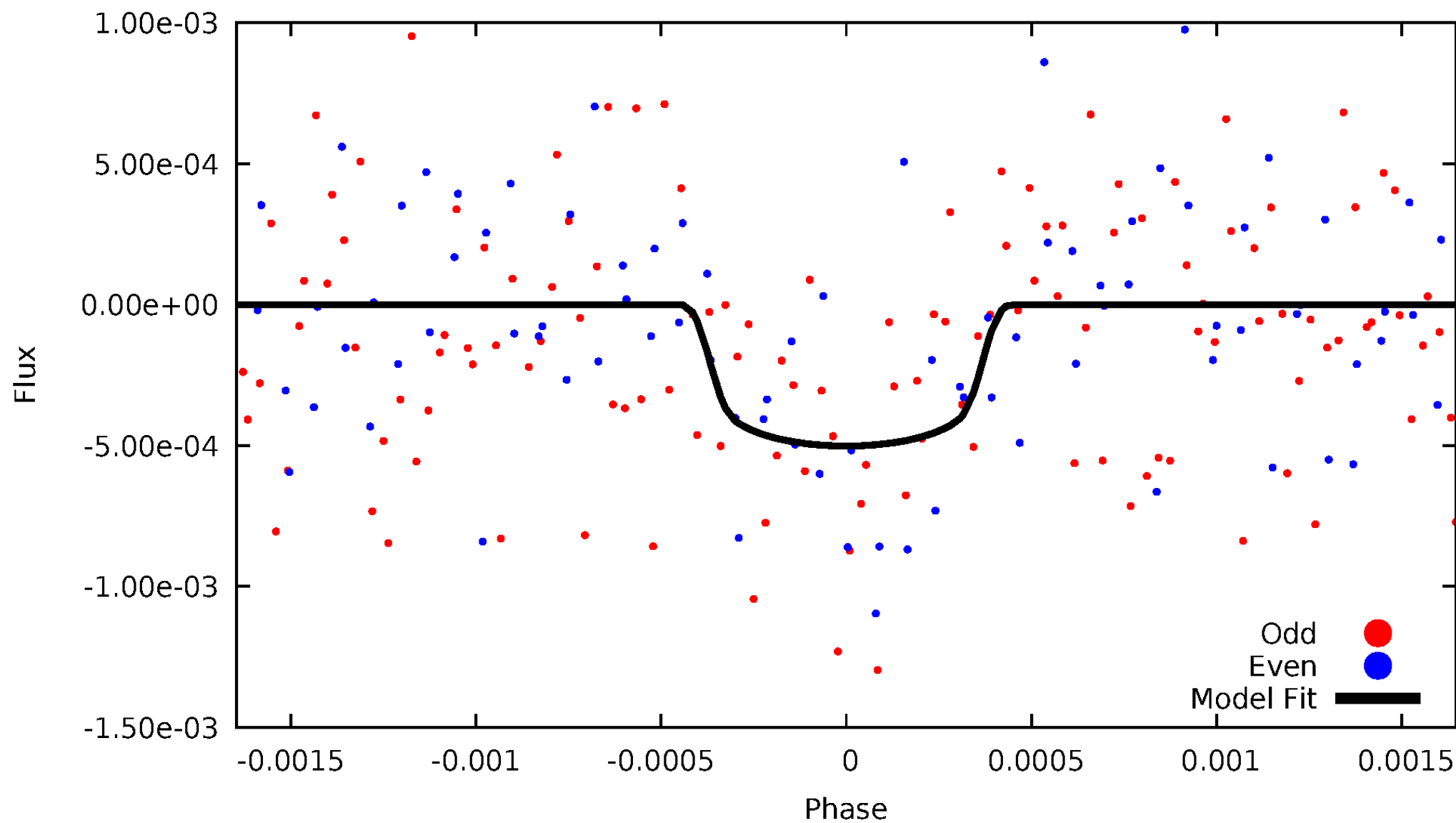


# TCE 007106438-01



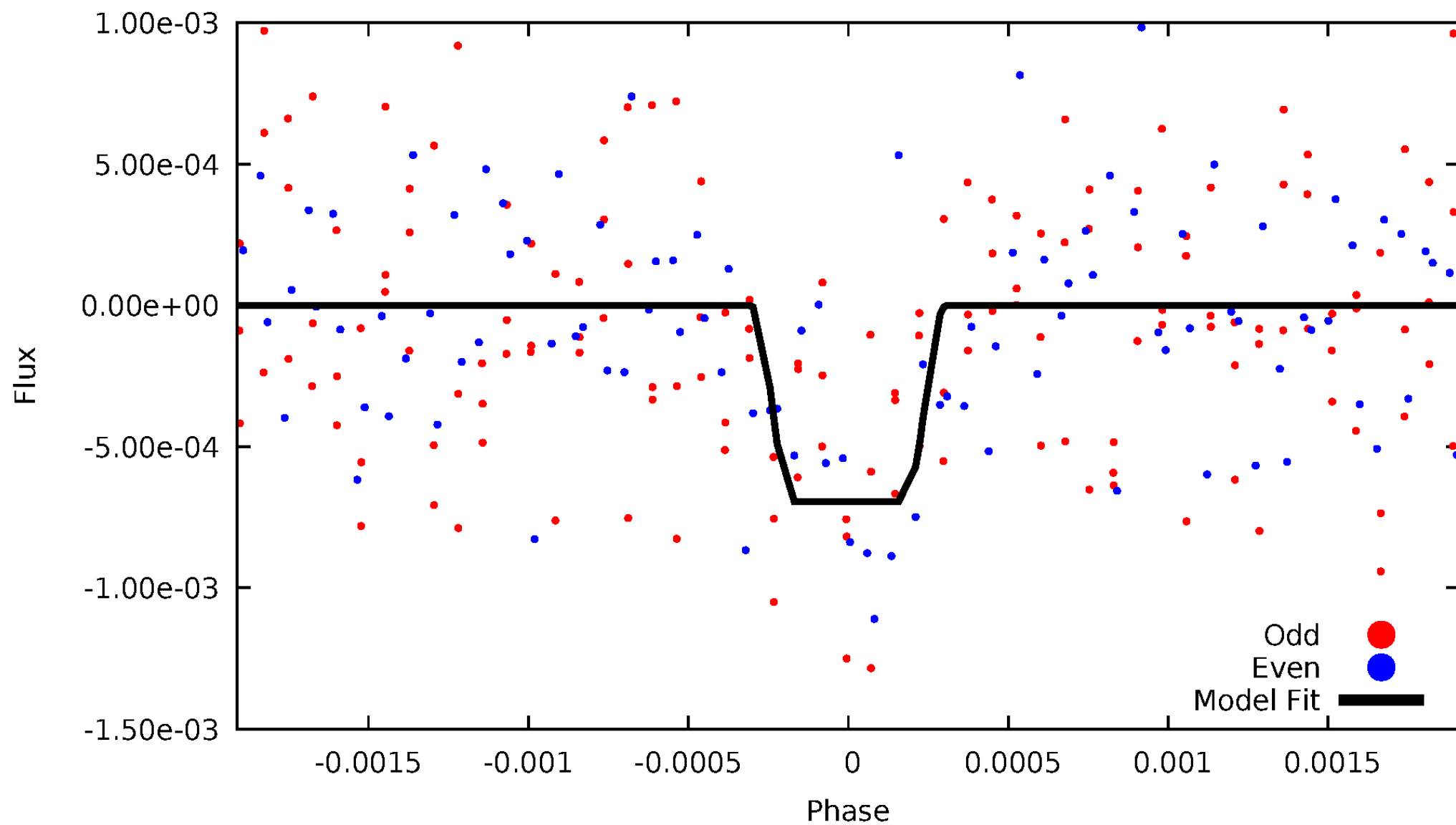
# DV Odd/Even

TCE 007106438-01



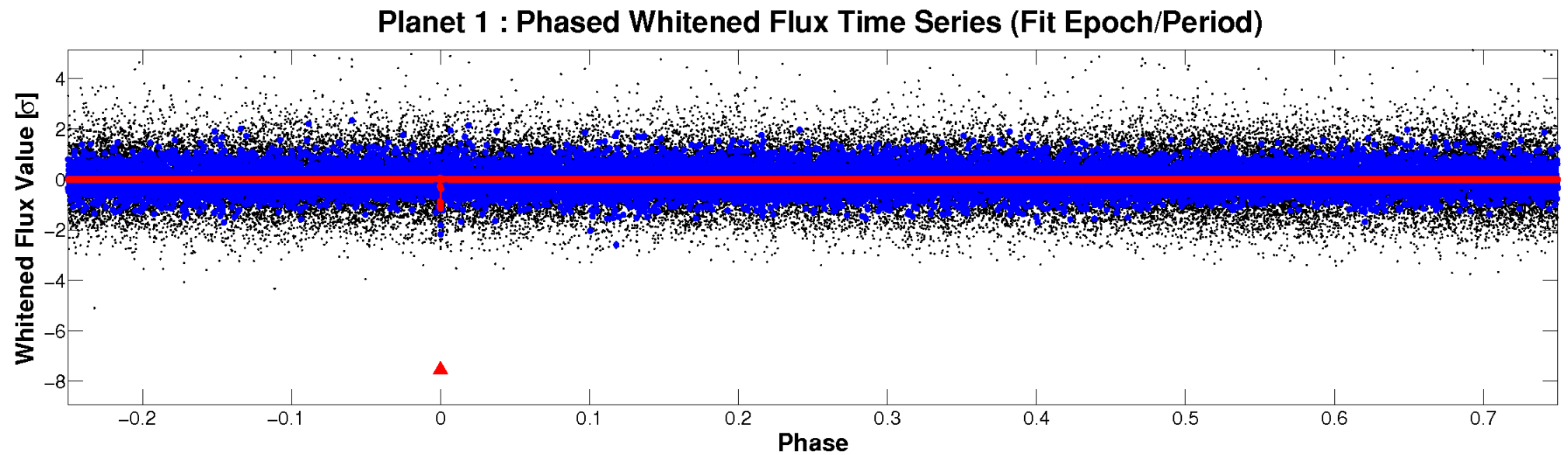
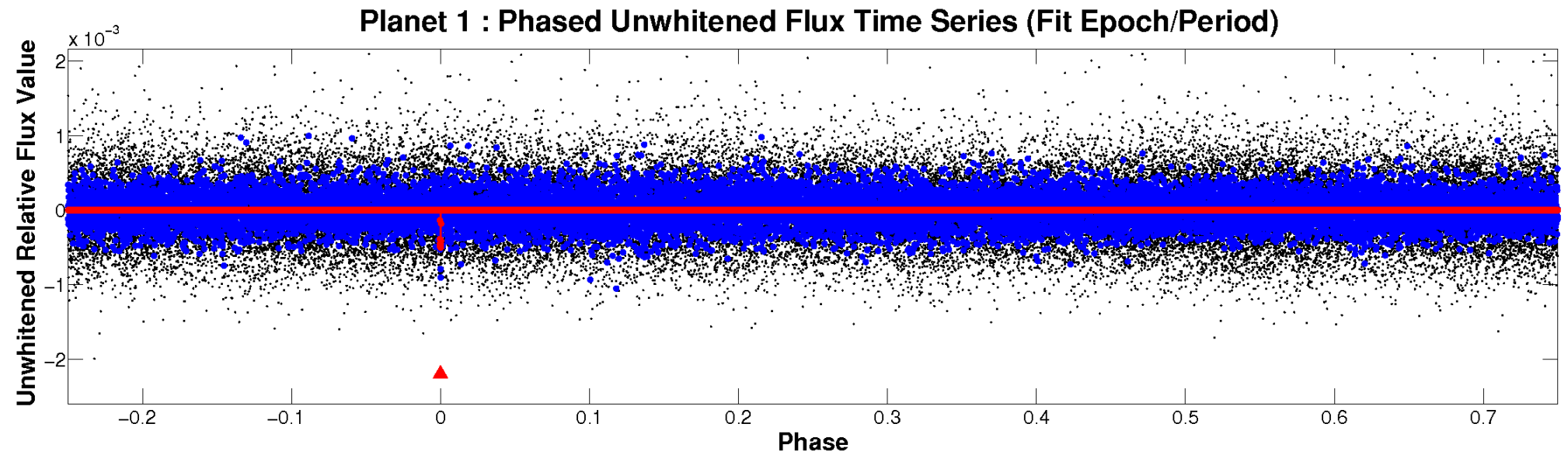
# ALT Odd/Even

TCE 007106438-01



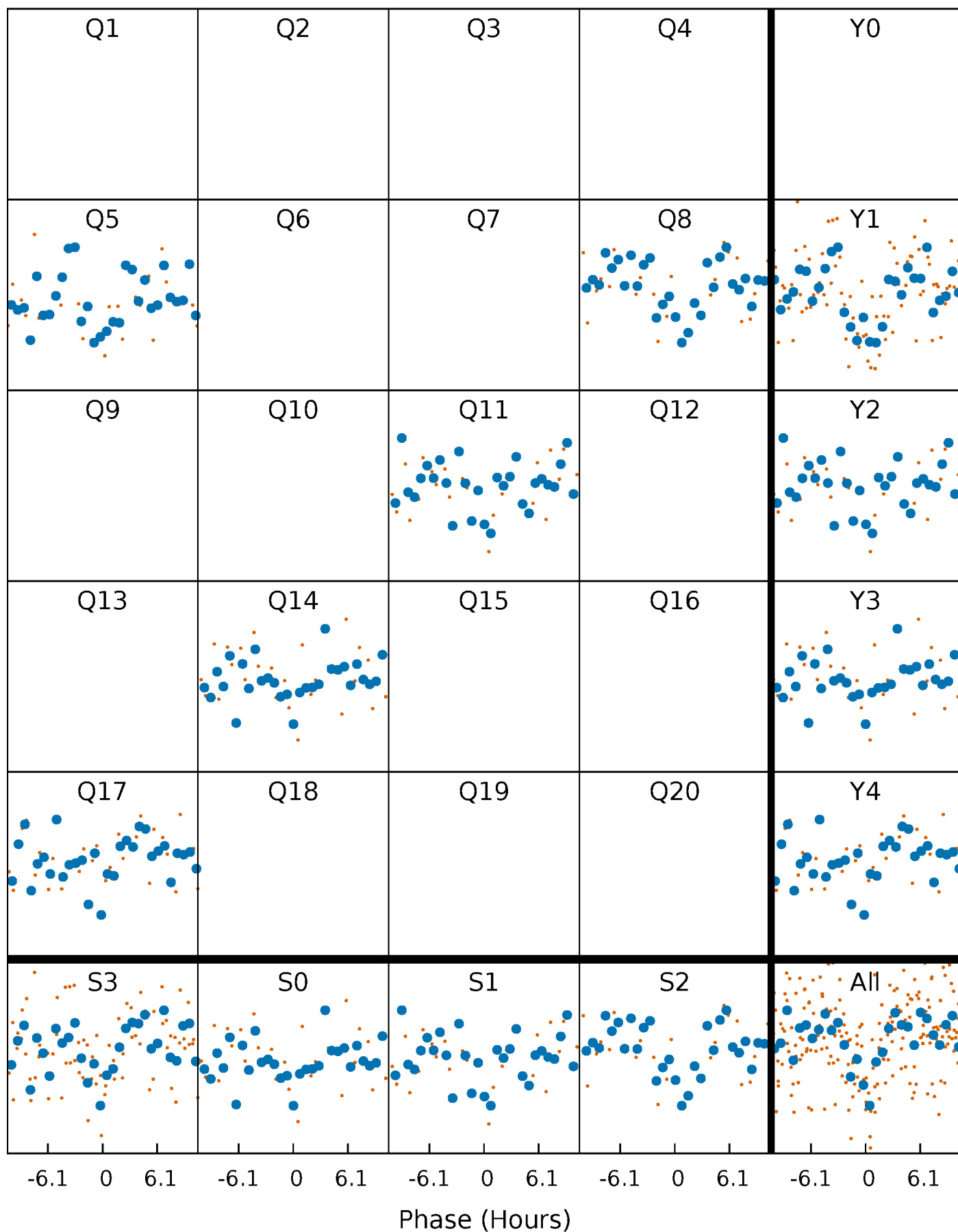


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

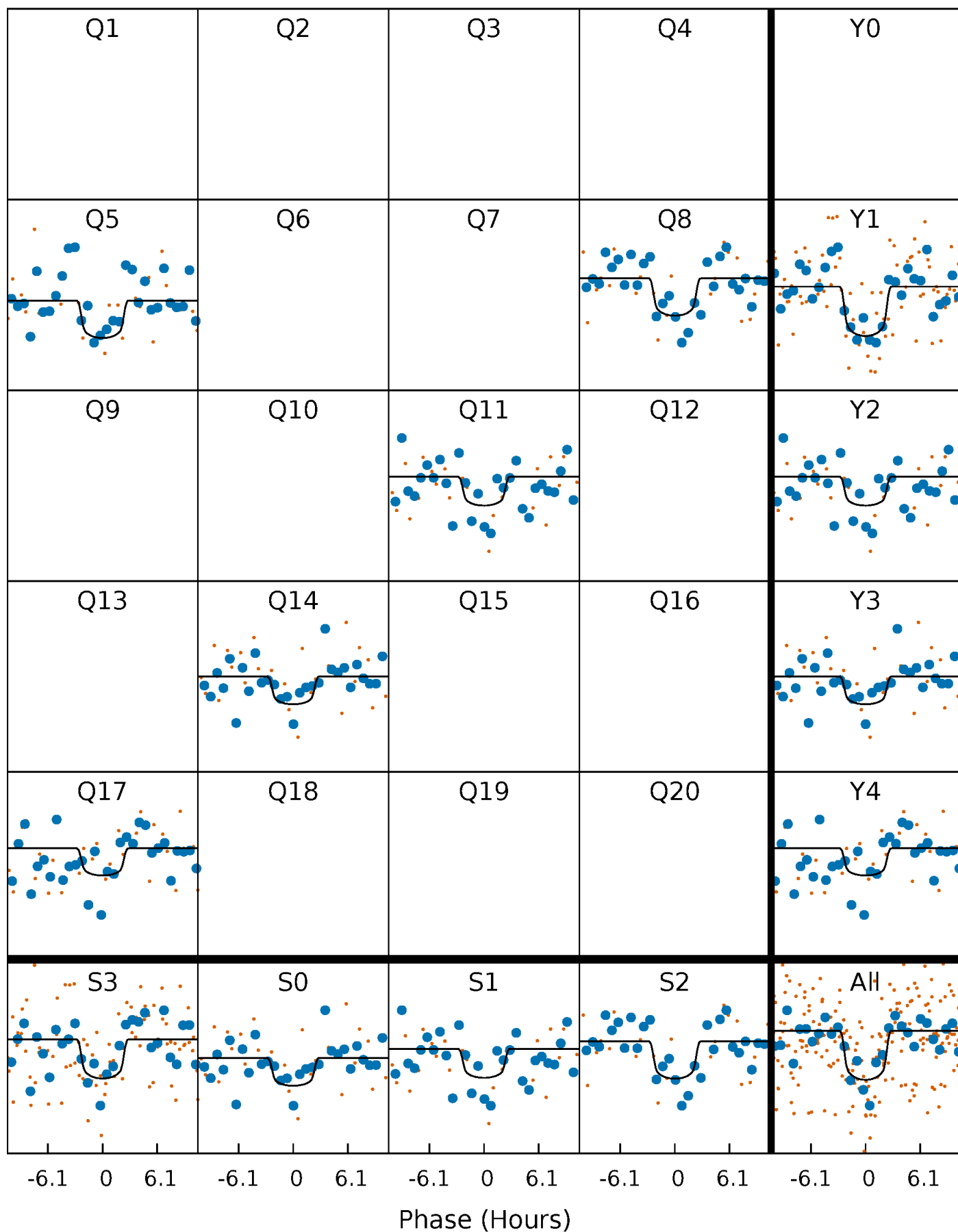
TCE 007106438-01 P=269.339079 Days  $T_0=232.603466$  (BKJD)





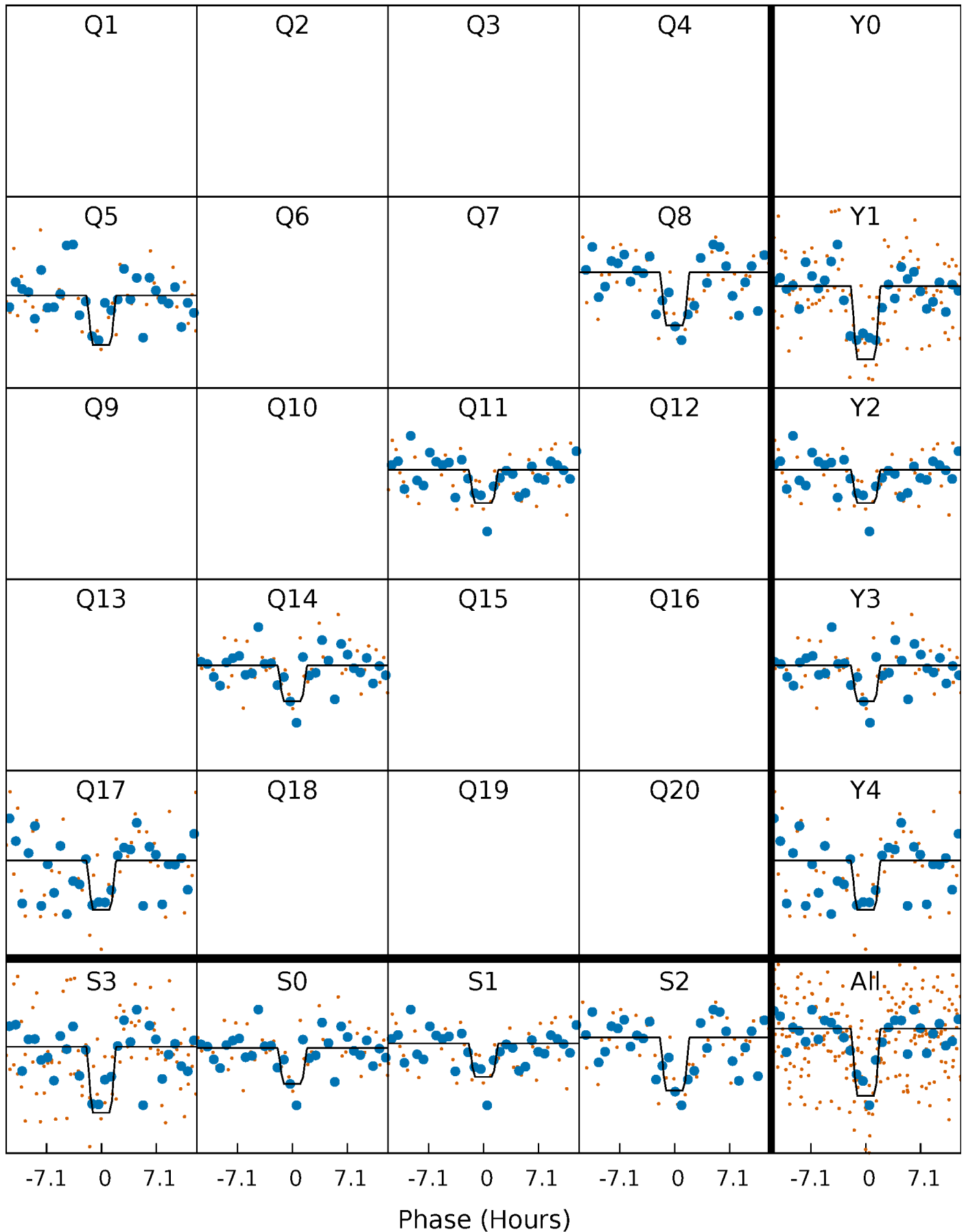
# DV Quarter-Phased Transit Curves

TCE 007106438-01 P=269.339079 Days  $T_0=232.603466$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

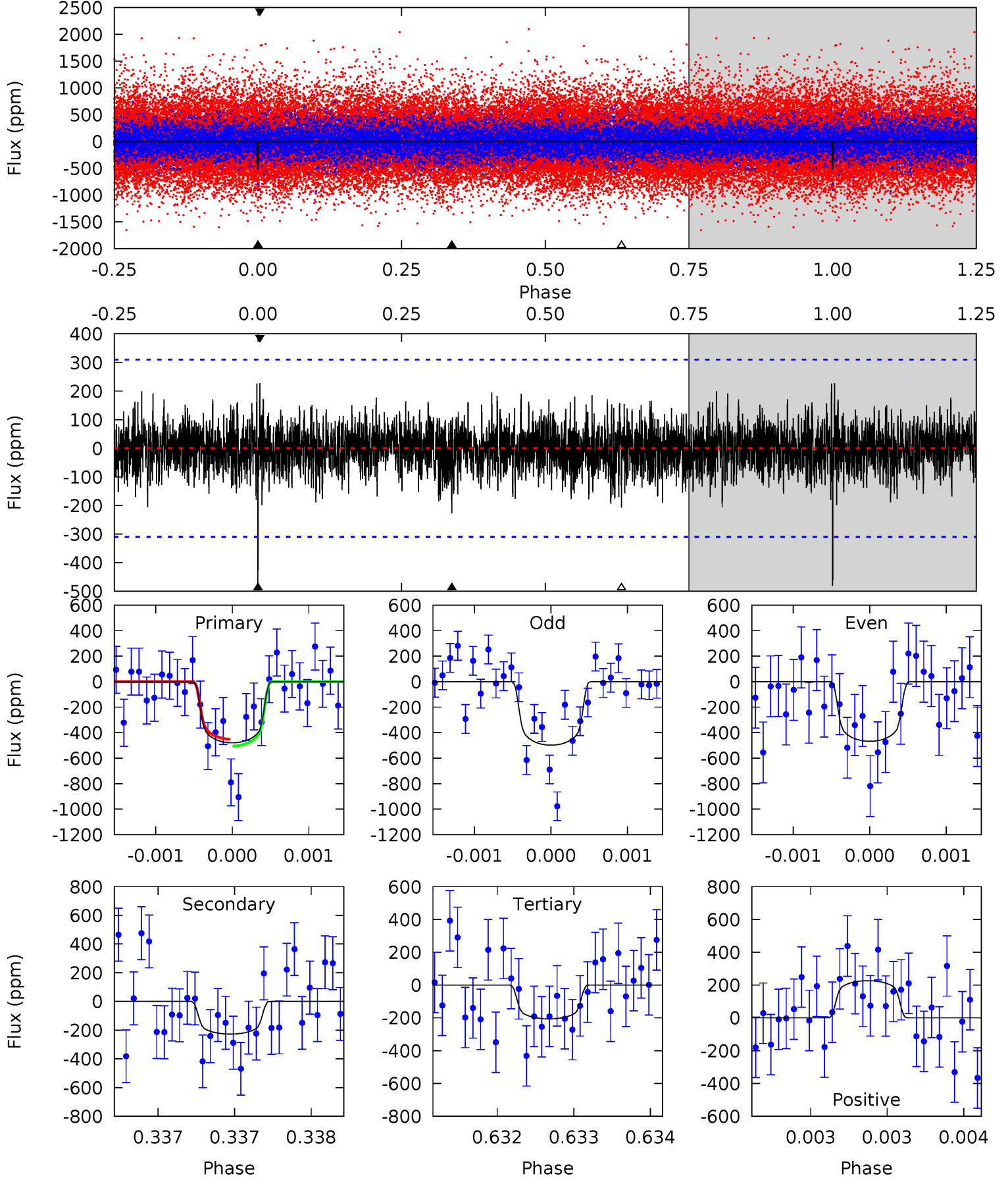
TCE 007106438-01 P=269.334754 Days  $T_0=232.620317$  (BKJD)



# DV Model-Shift Uniqueness Test

007106438-01, P = 269.339079 Days, E = 232.603466 Days

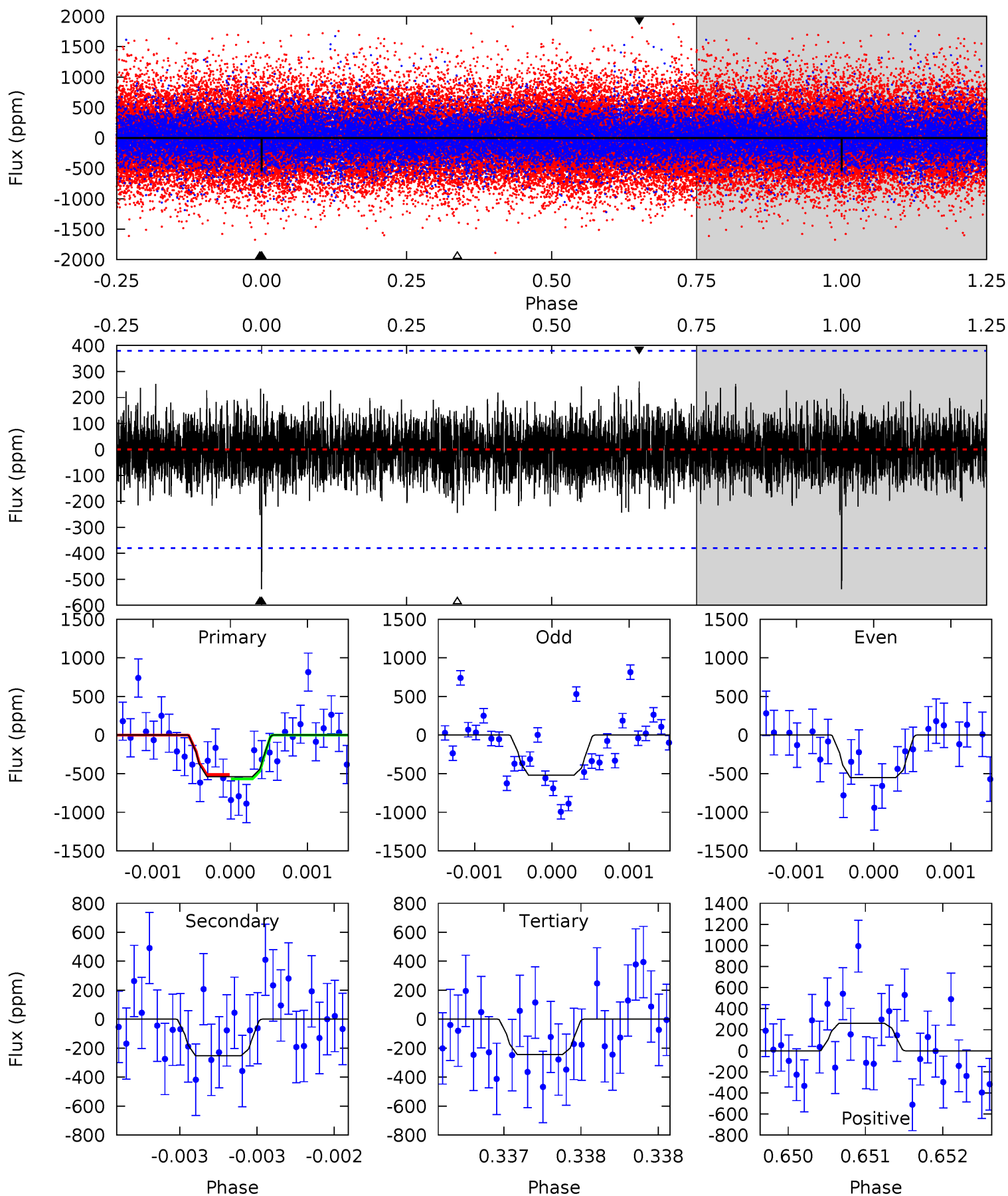
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.48	4.01	3.65	4.00	5.48	3.33	1.09	4.84	4.48	0.37	0.01	0.26	1.14	0.32	0.47



# Alt Model-Shift Uniqueness Test

007106438-01, P = 269.334754 Days, E = 232.620317 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
7.87	3.69	3.56	3.82	5.56	3.45	1.03	4.30	4.04	0.13	-0.13	0.21	0.96	0.33	0.41



### Stellar Parameters For KIC 007106438

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6129^{+193}_{-236}$	$4.419^{+0.072}_{-0.217}$	$-0.060^{+0.250}_{-0.300}$	$1.055^{+0.358}_{-0.143}$	$1.060^{+0.166}_{-0.135}$	$1.272^{+0.492}_{-0.681}$
	+3%/-4%	+2%/-5%	+417%/-500%	+34%/-14%	+16%/-13%	+39%/-54%
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 007106438-01 / KOI 8267.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-227 \pm 57$	$2.83^{+1.21}_{-1.16}$	$433^{+36}_{-23}$	$4985^{+1350}_{-701}$	$10037^{+18631}_{-5176}$
Alt.	$-252 \pm 68$	$3.17^{+1.25}_{-1.16}$	$432^{+36}_{-26}$	$4865^{+1016}_{-663}$	$9546^{+13048}_{-4920}$

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

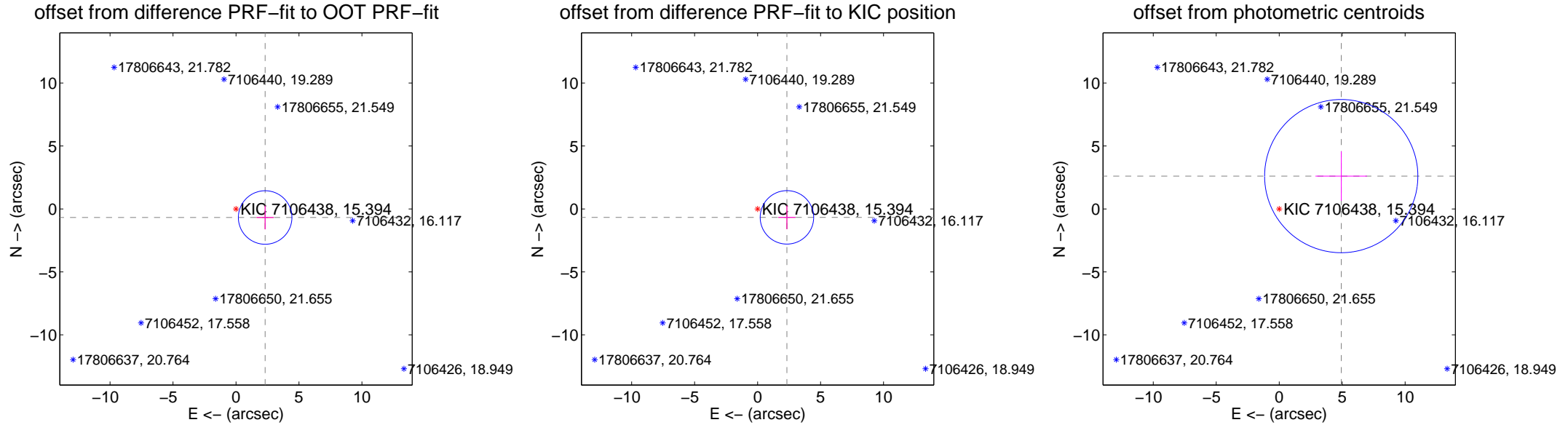
## DV Centroid Data

Supplemental centroid analysis for 007106438-01. Kepler magnitude: 15.39. Transit SNR 7.06

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.413 \pm 0.709$	3.41	$-2.315 \pm 0.685$	$-0.680 \pm 0.939$
PRF-fit source offset from KIC position	$2.423 \pm 0.708$	3.42	$-2.329 \pm 0.685$	$-0.669 \pm 0.939$
photometric centroid source offset	$5.57 \pm 2.03$	2.75	$-4.93 \pm 2.05$	$2.61 \pm 1.96$



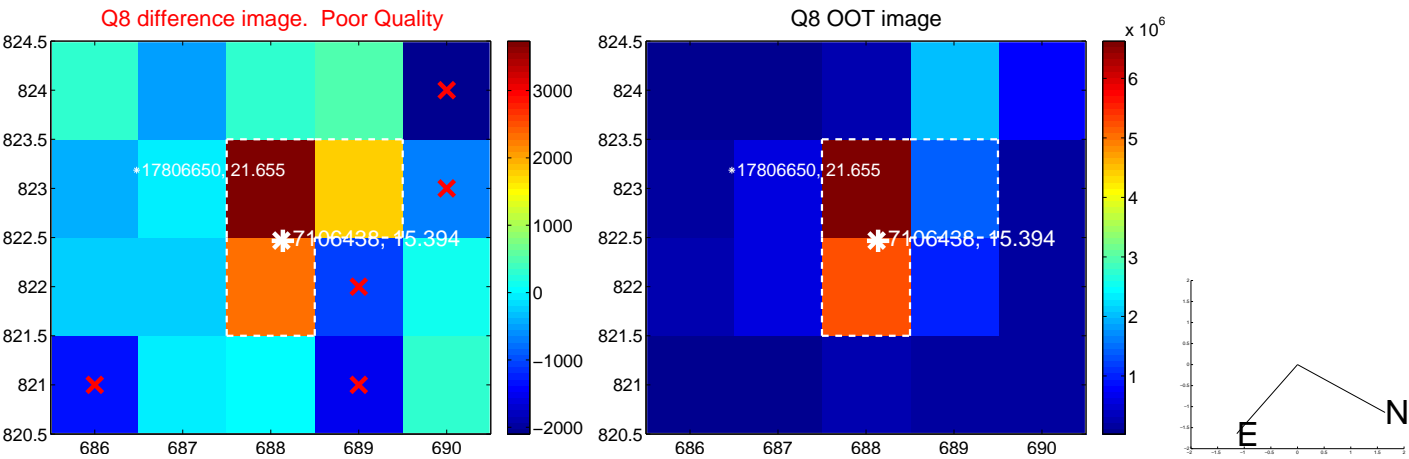
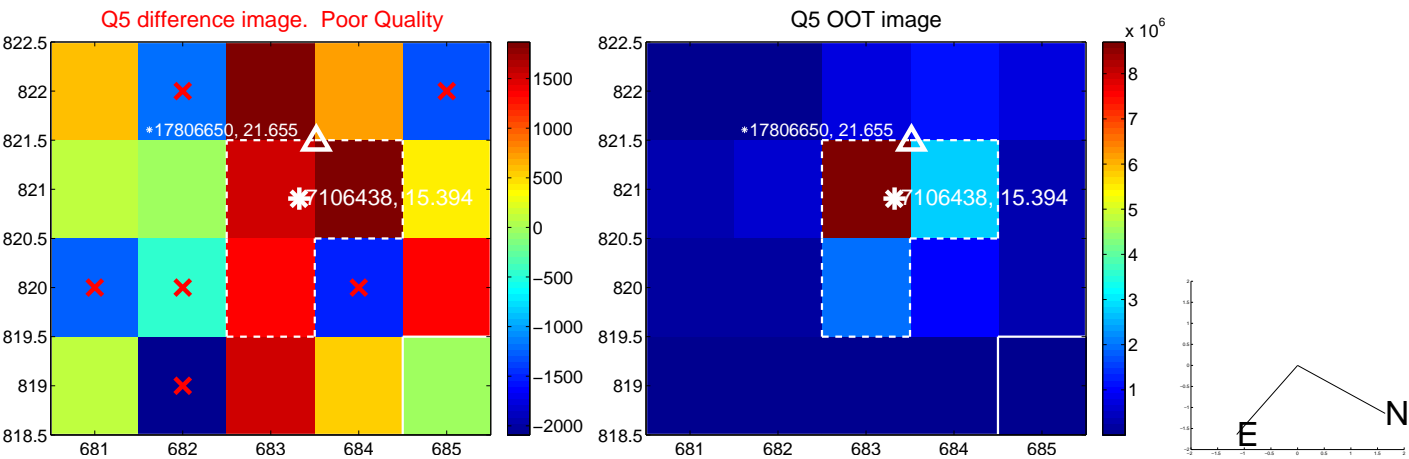
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

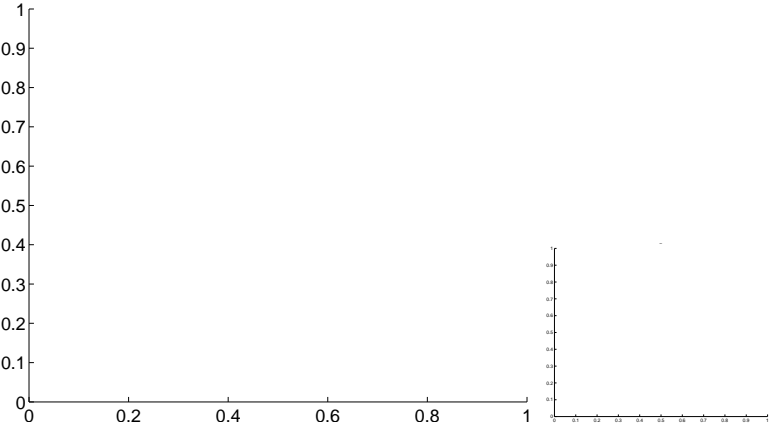


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

Q9 no difference image



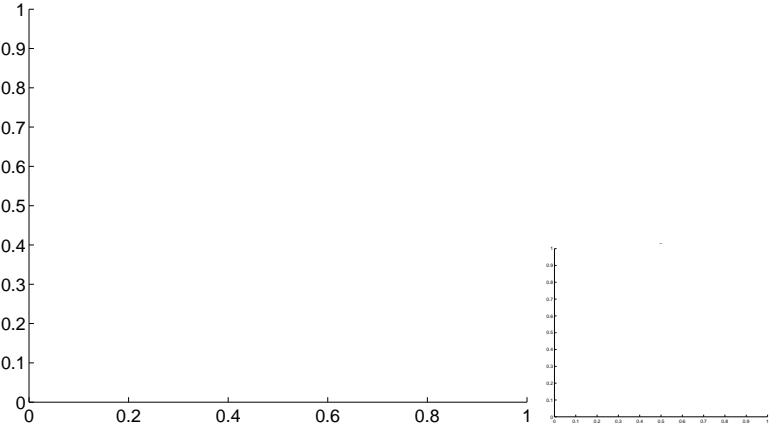
Q9 no OOT image



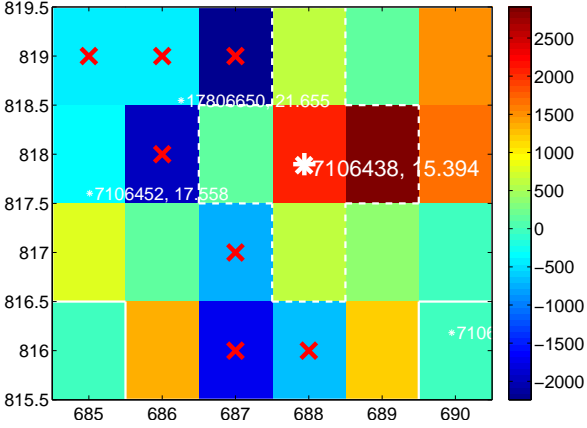
Q10 no difference image



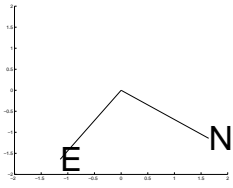
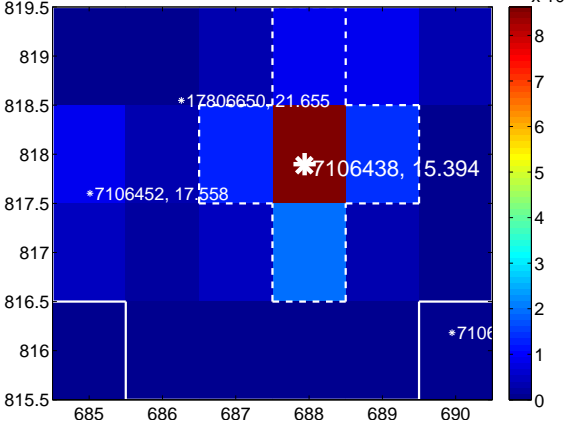
Q10 no OOT image



Q11 difference image. Poor Quality



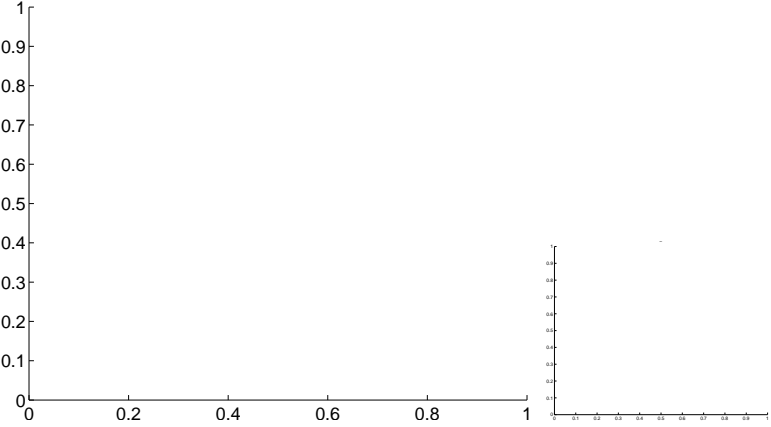
Q11 OOT image



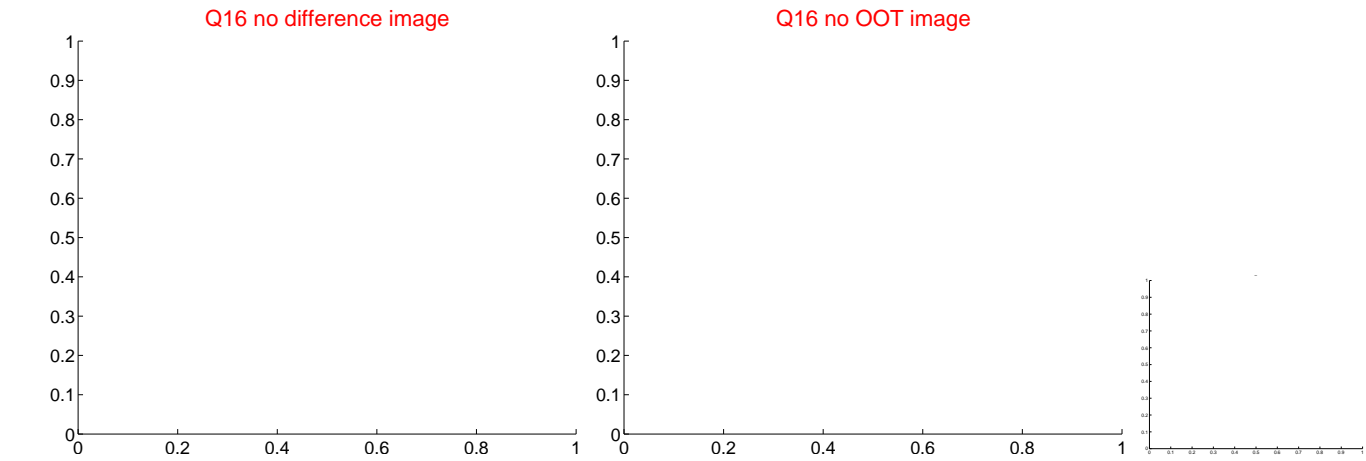
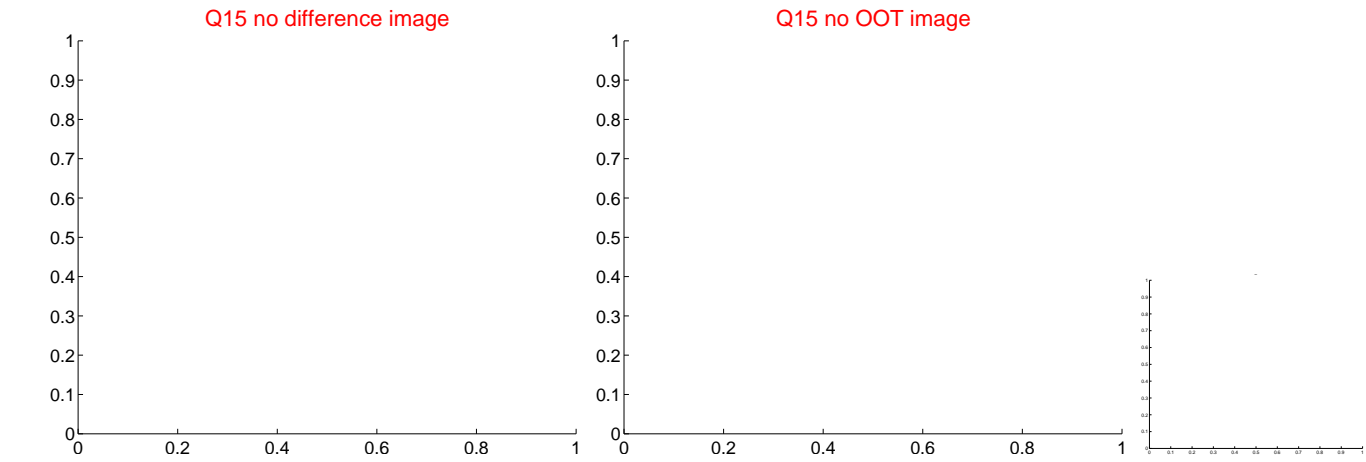
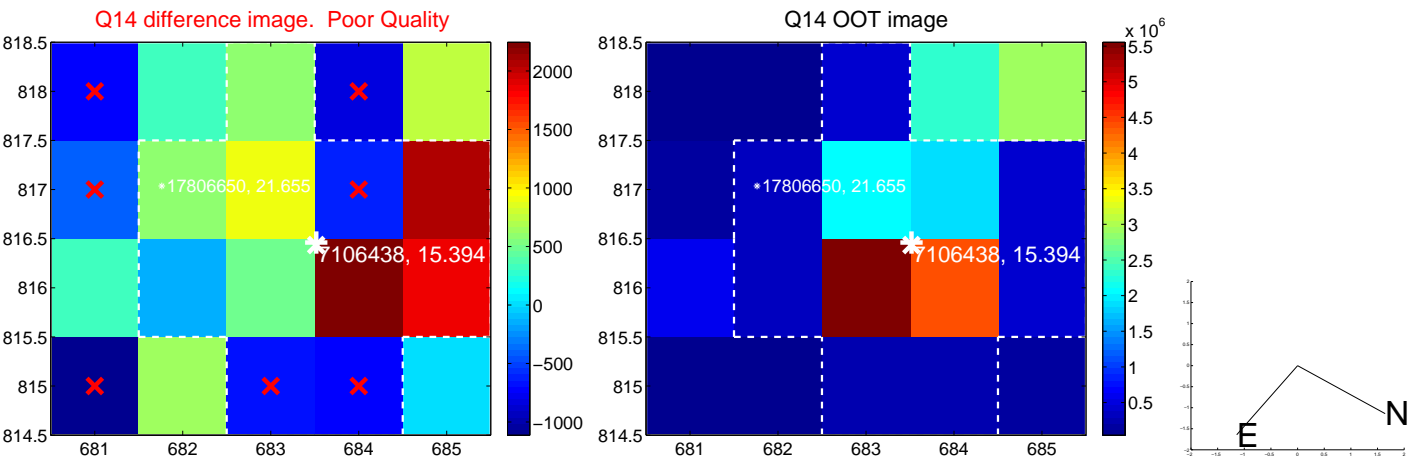
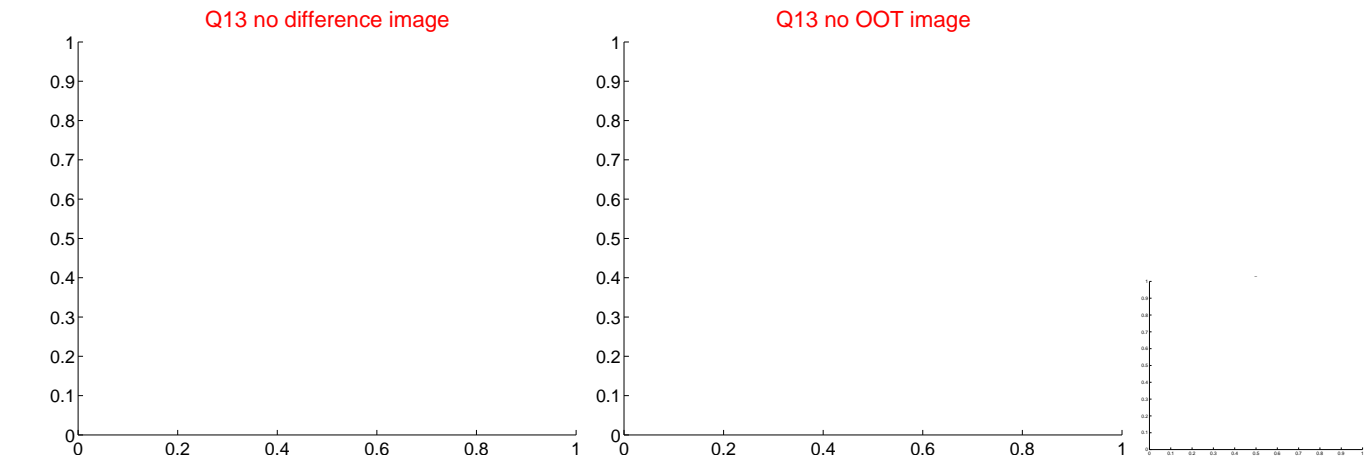
Q12 no difference image



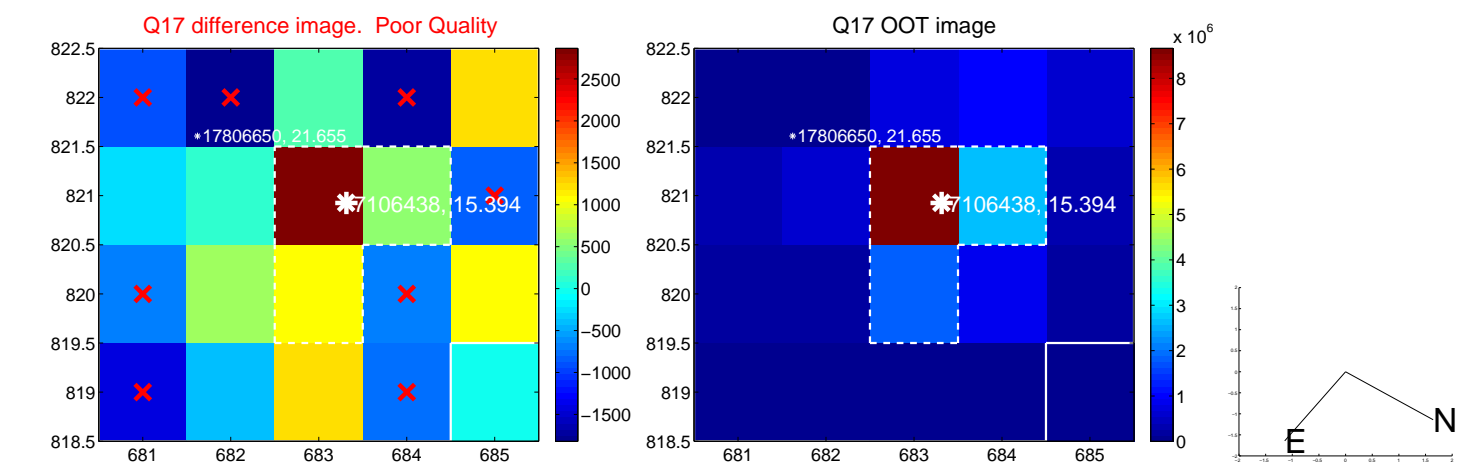
Q12 no OOT image



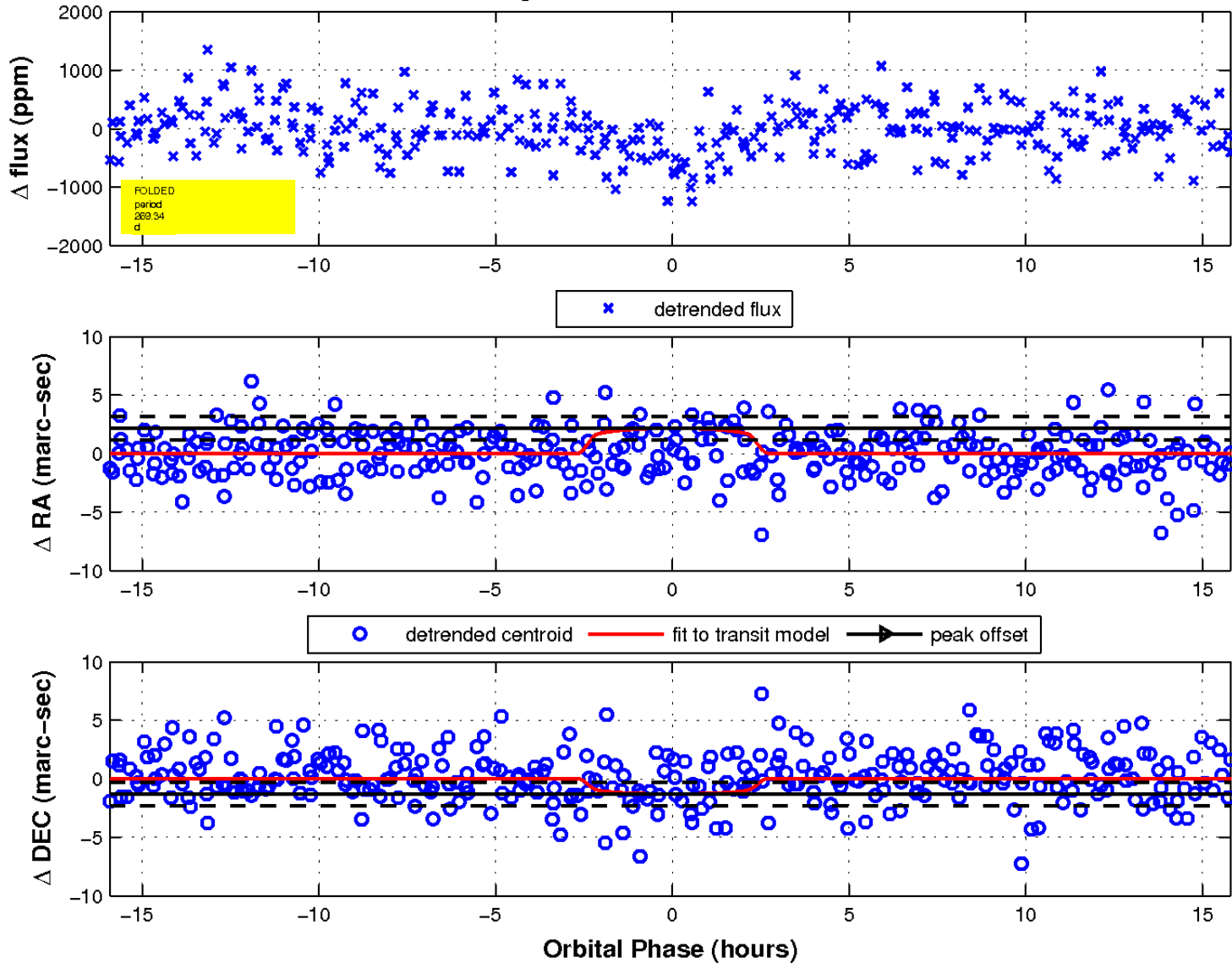
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

