

# KIC 004845003

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004845003-01	OBS	No	8.699510	139.137619	79.3	34.069	9.6	12.2	0.93	6002	1.12	146.14

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004845003-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

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

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

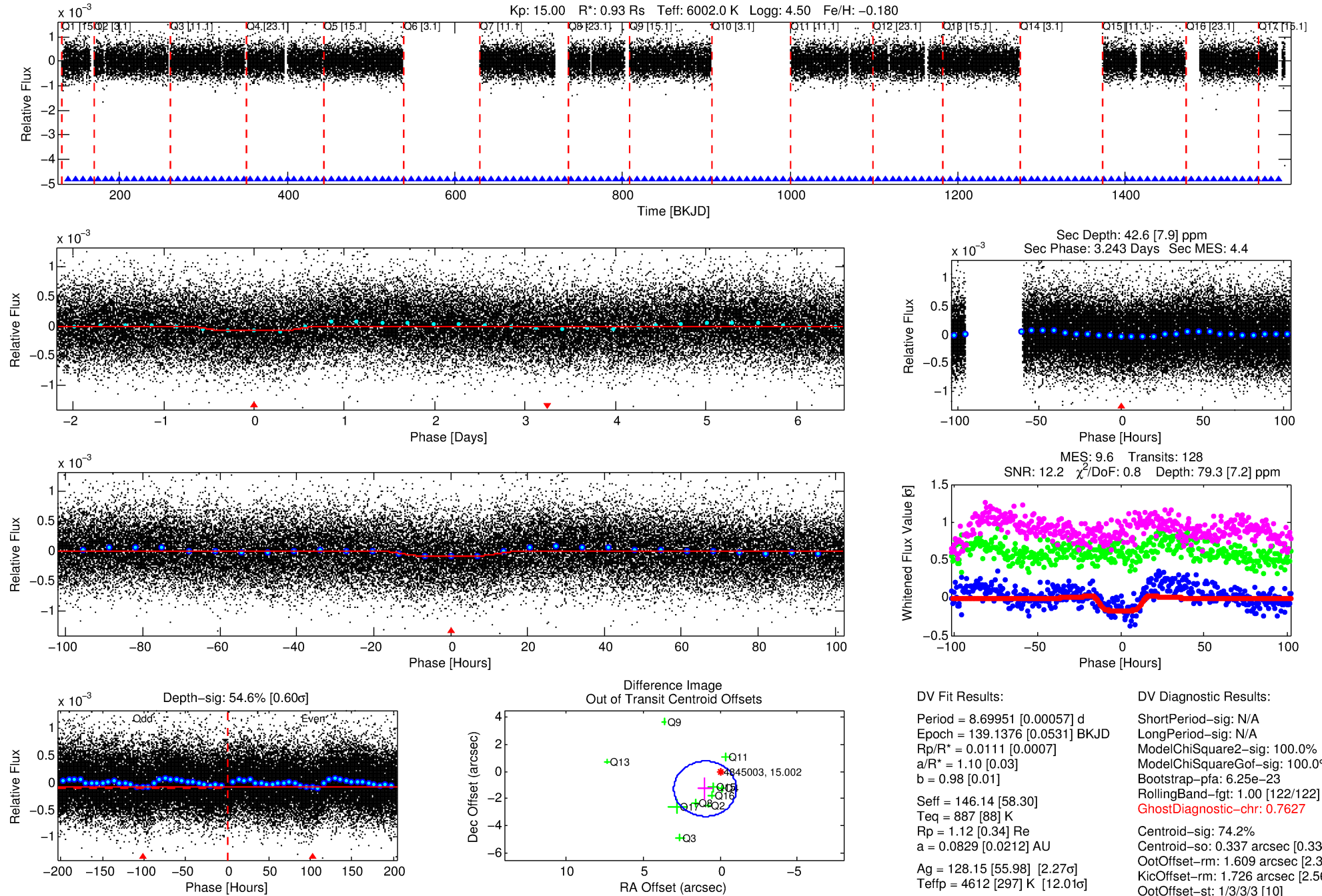
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004845003-01

No Significant Match Found

# DV One-Page Summary

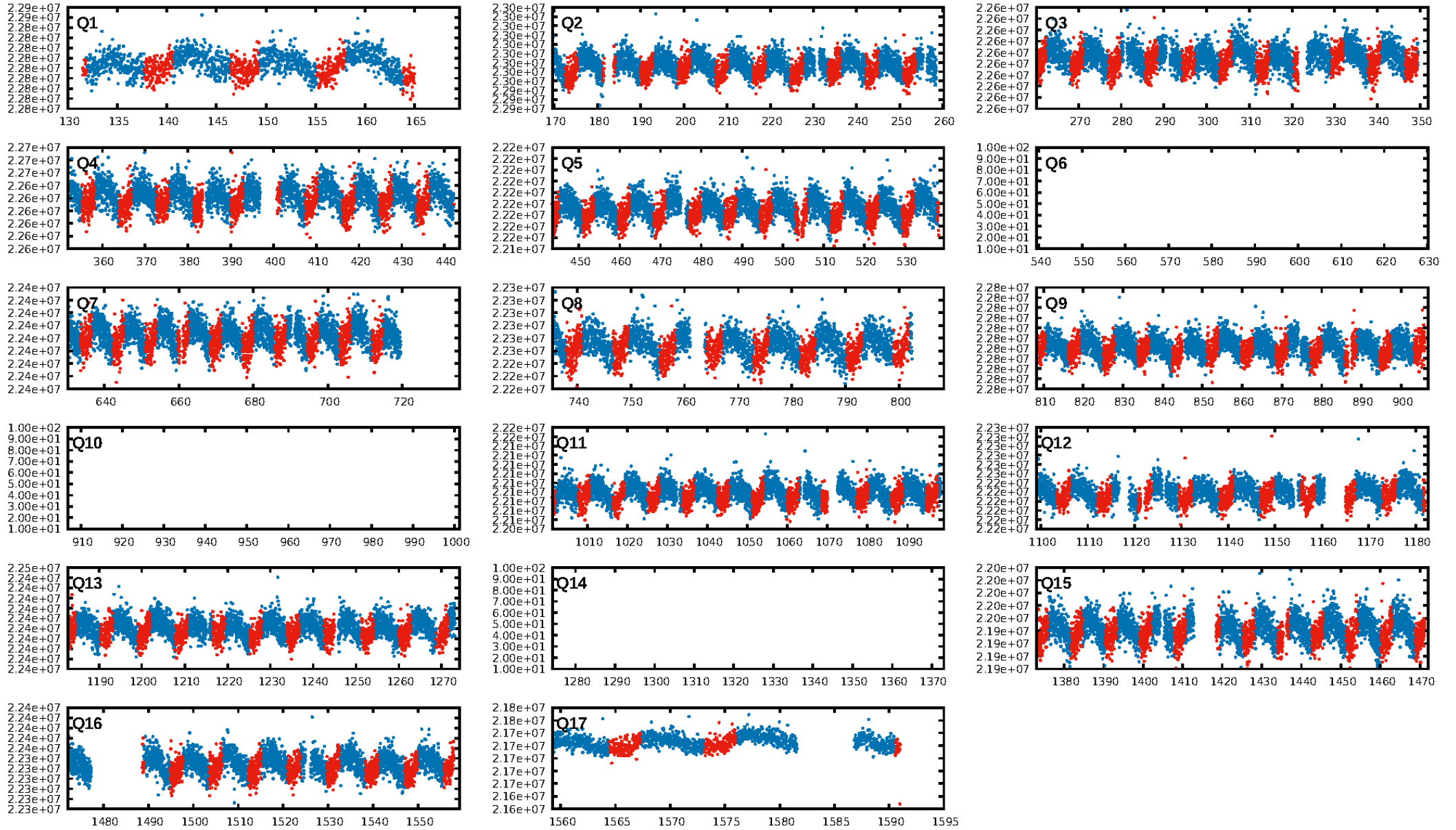
KIC: 4845003 Candidate: 1 of 1 Period: 8.700 d



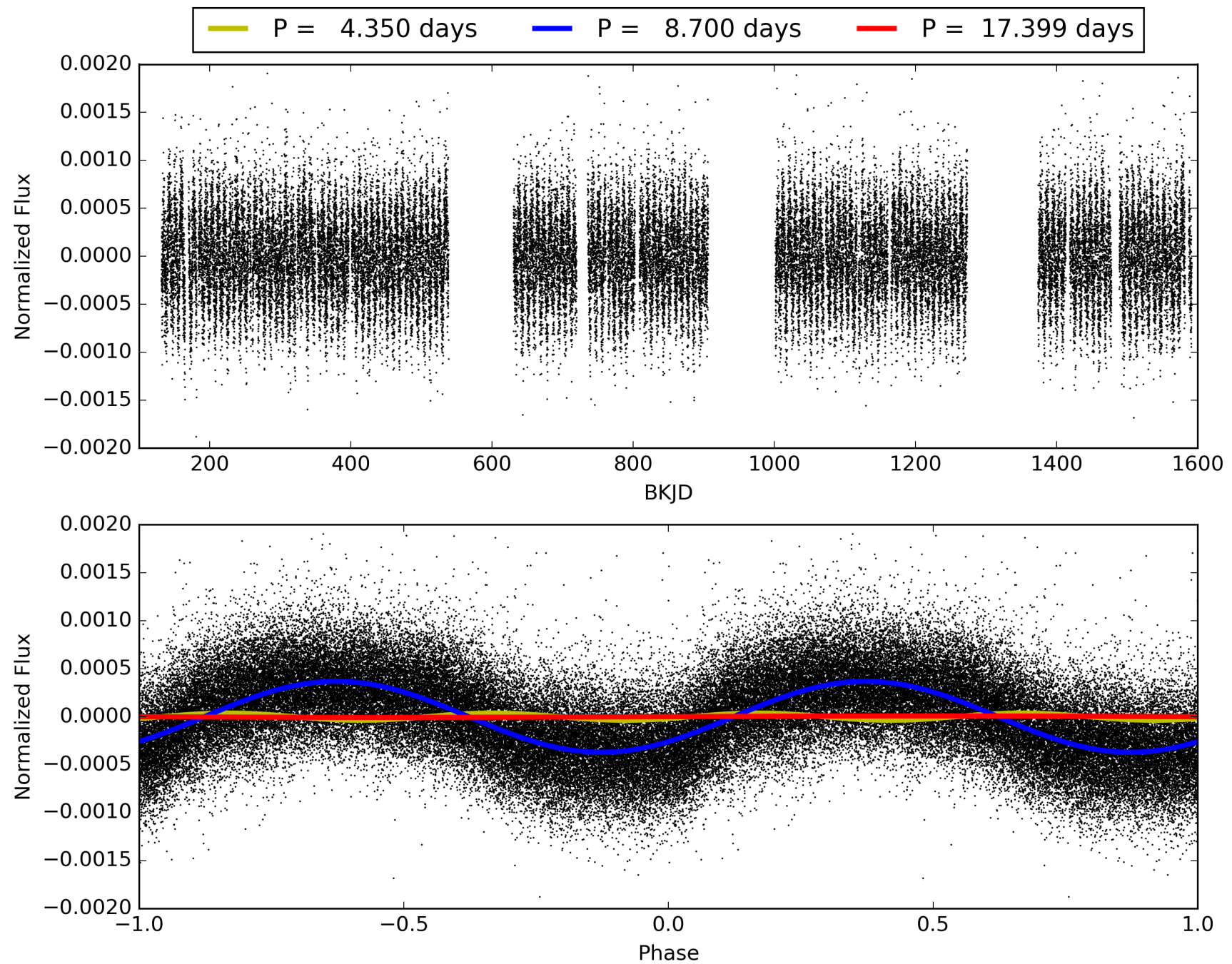
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:06:34 Z

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

# TCE 004845003-01, PDC Light Curves

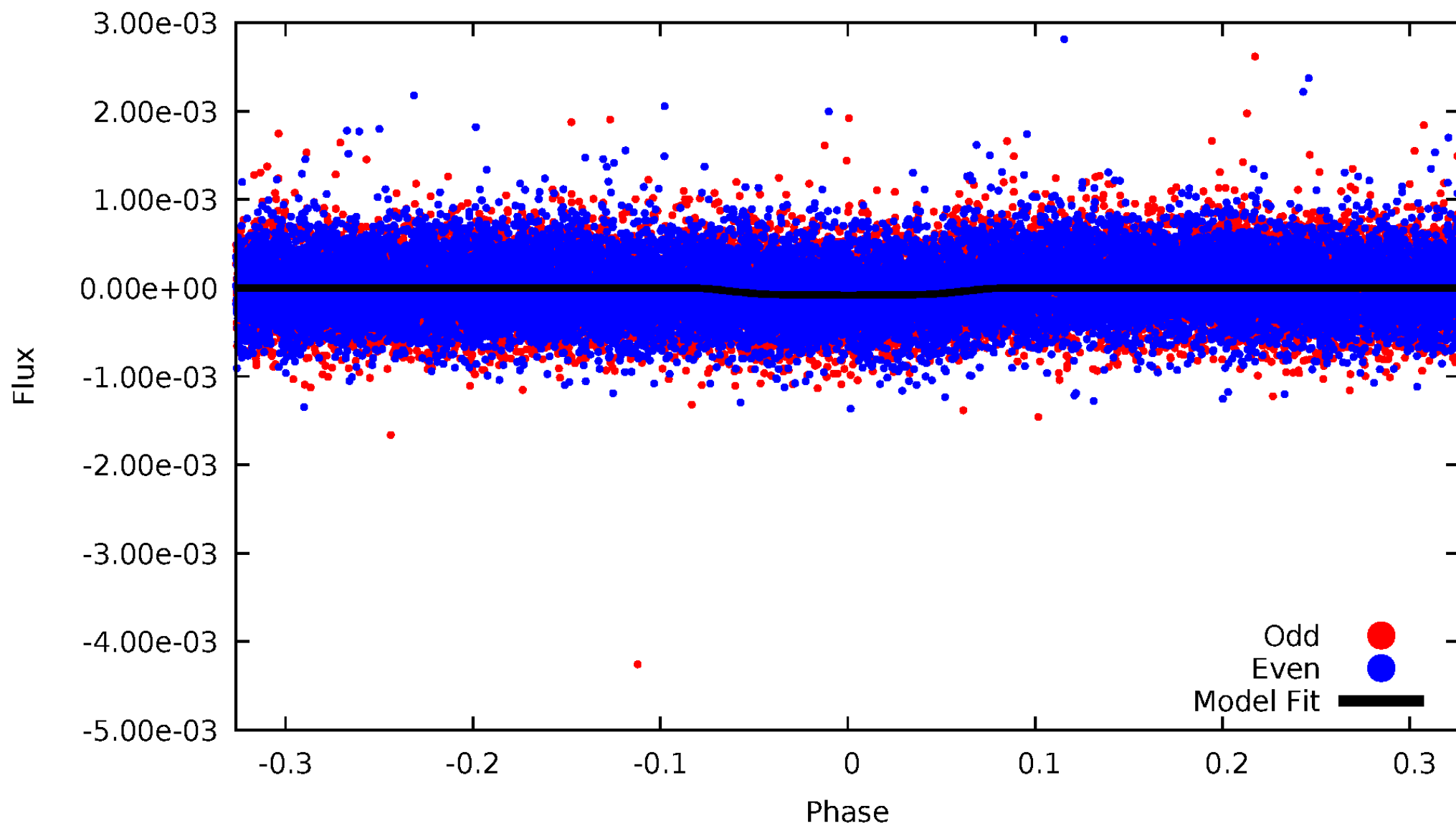


TCE 004845003-01



# DV Odd/Even

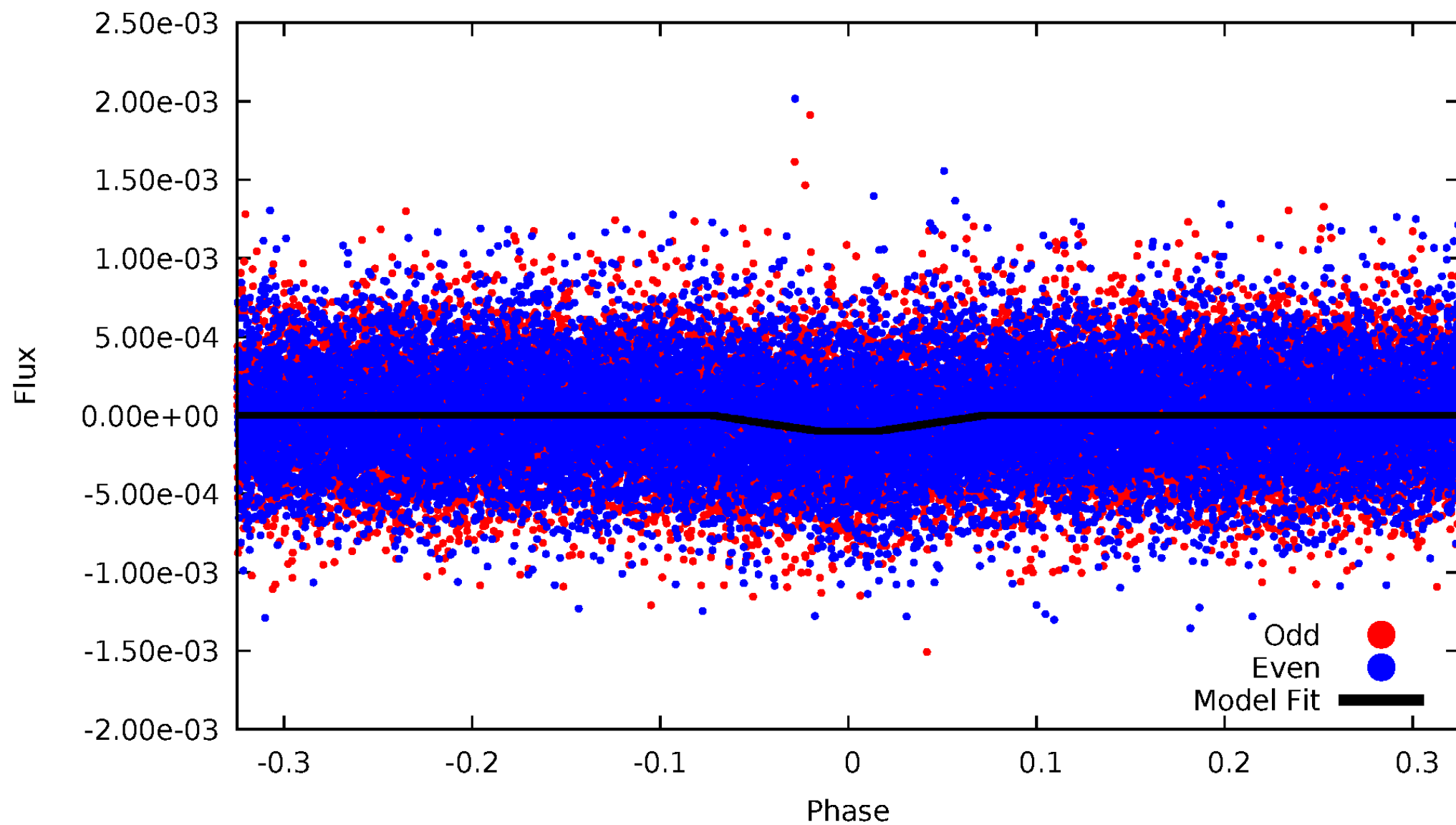
TCE 004845003-01





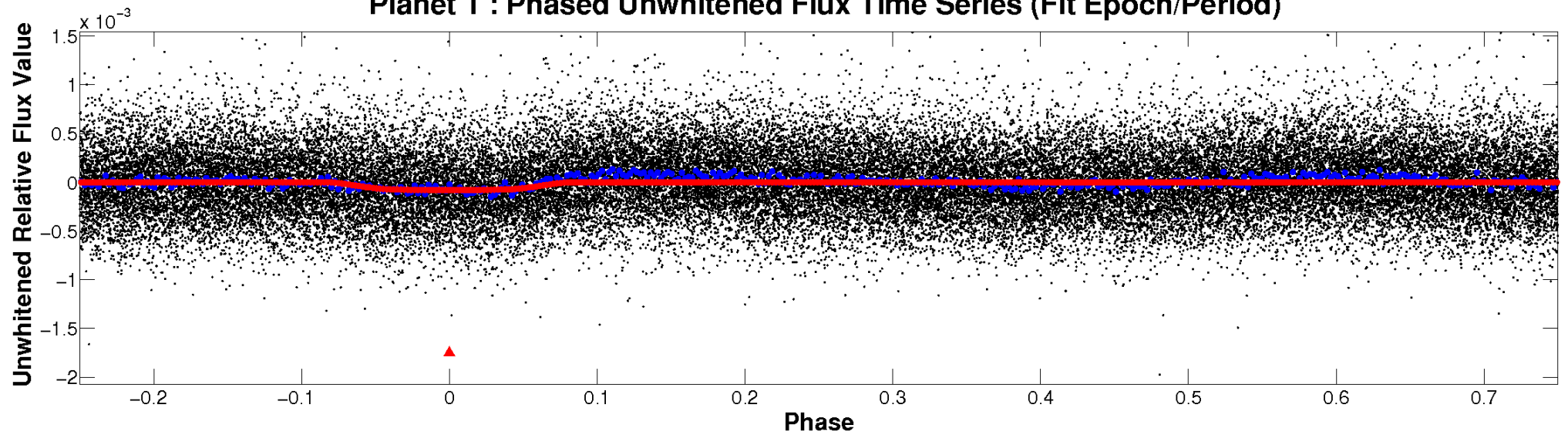
# ALT Odd/Even

TCE 004845003-01

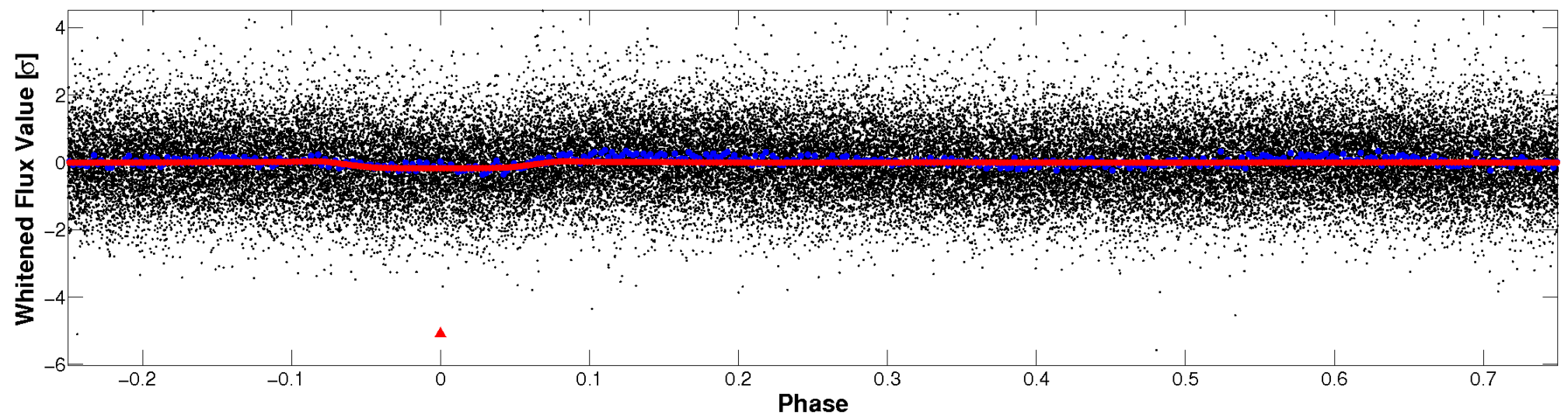


# Non-Whitened Vs. Whitened Light Curve

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

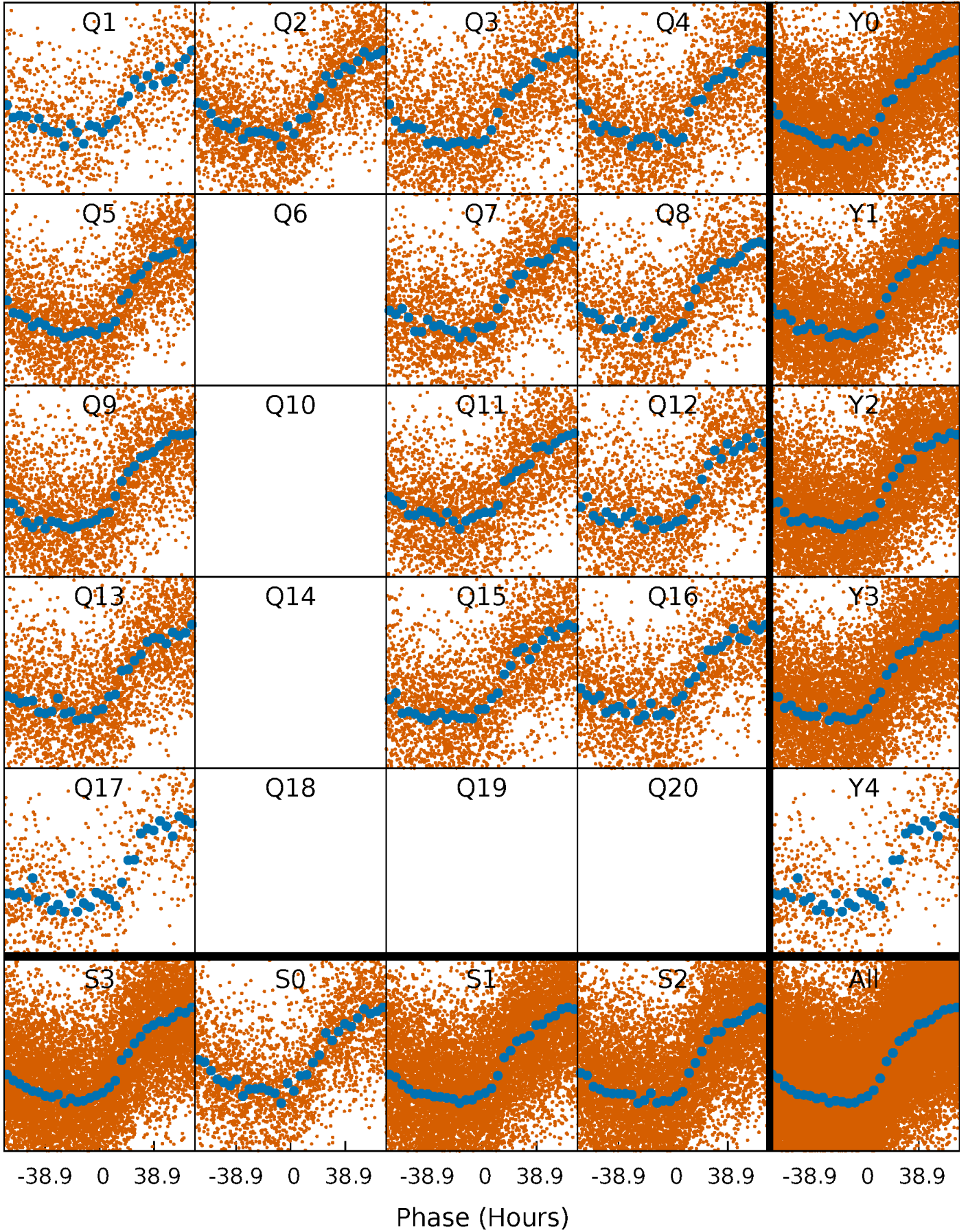


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

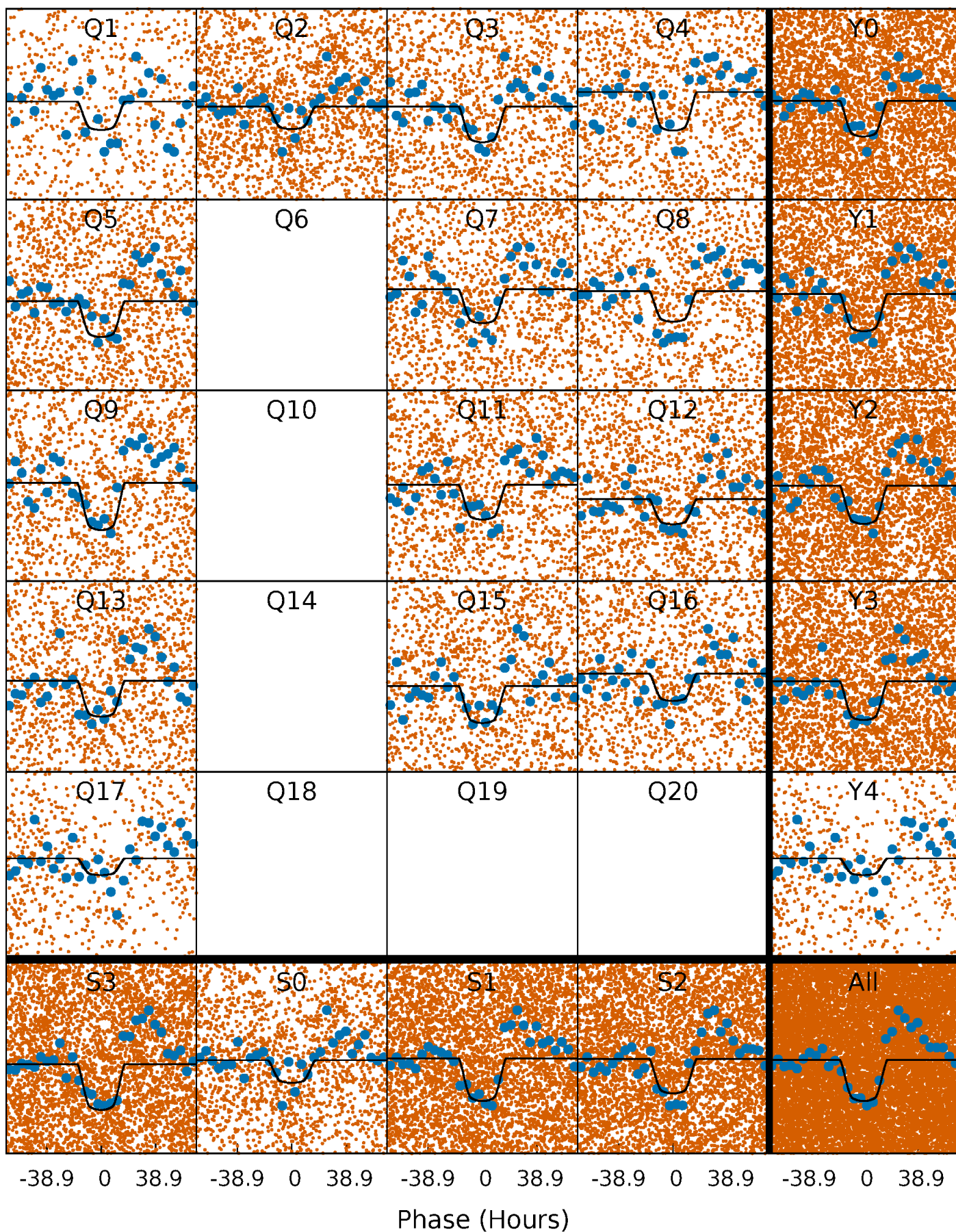
TCE 004845003-01   P= 8.699510 Days    $T_0=139.137619$  (BKJD)





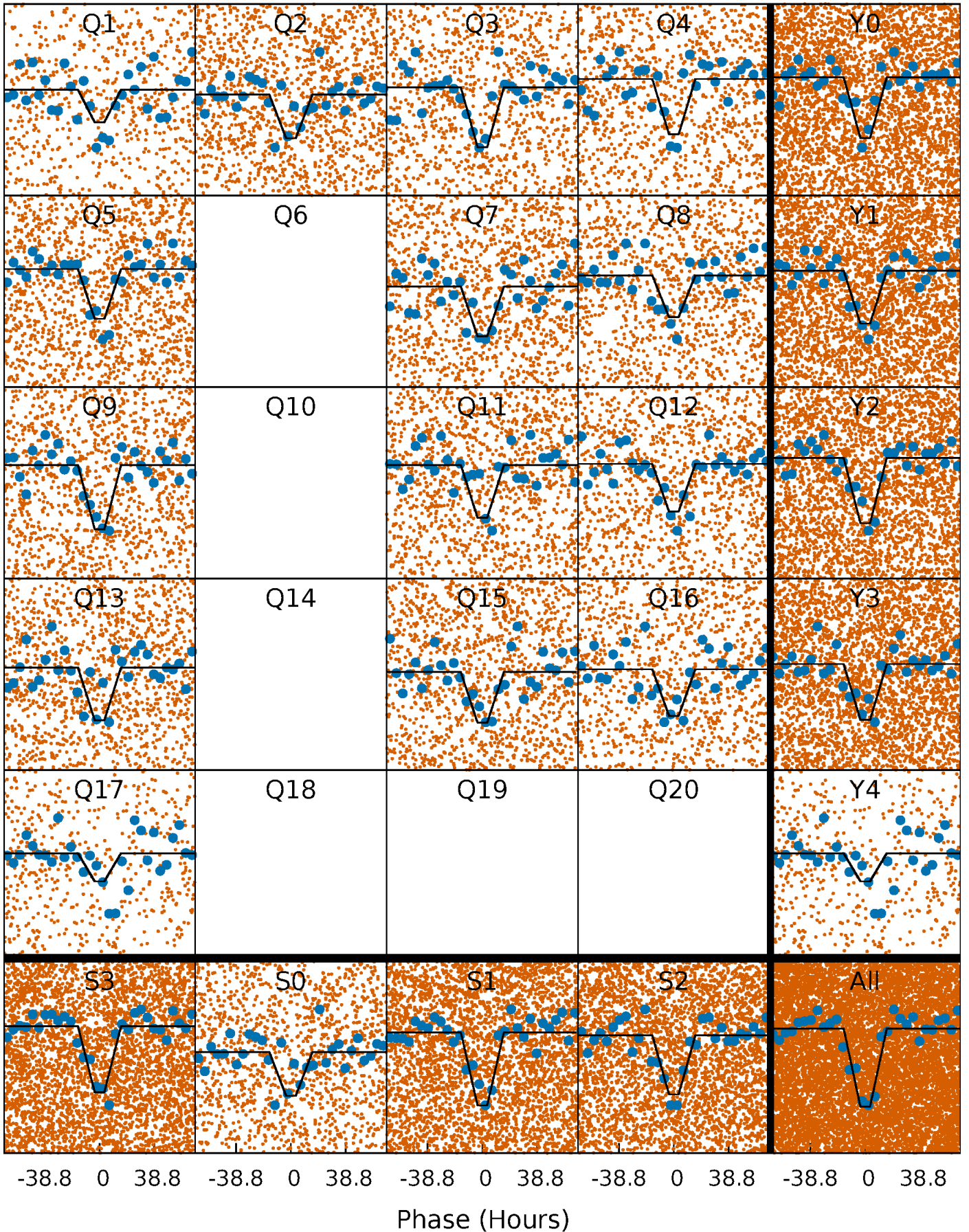
# DV Quarter-Phased Transit Curves

TCE 004845003-01 P= 8.699510 Days  $T_0=139.137619$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 004845003-01 P= 8.699171 Days  $T_0=139.333863$  (BKJD)

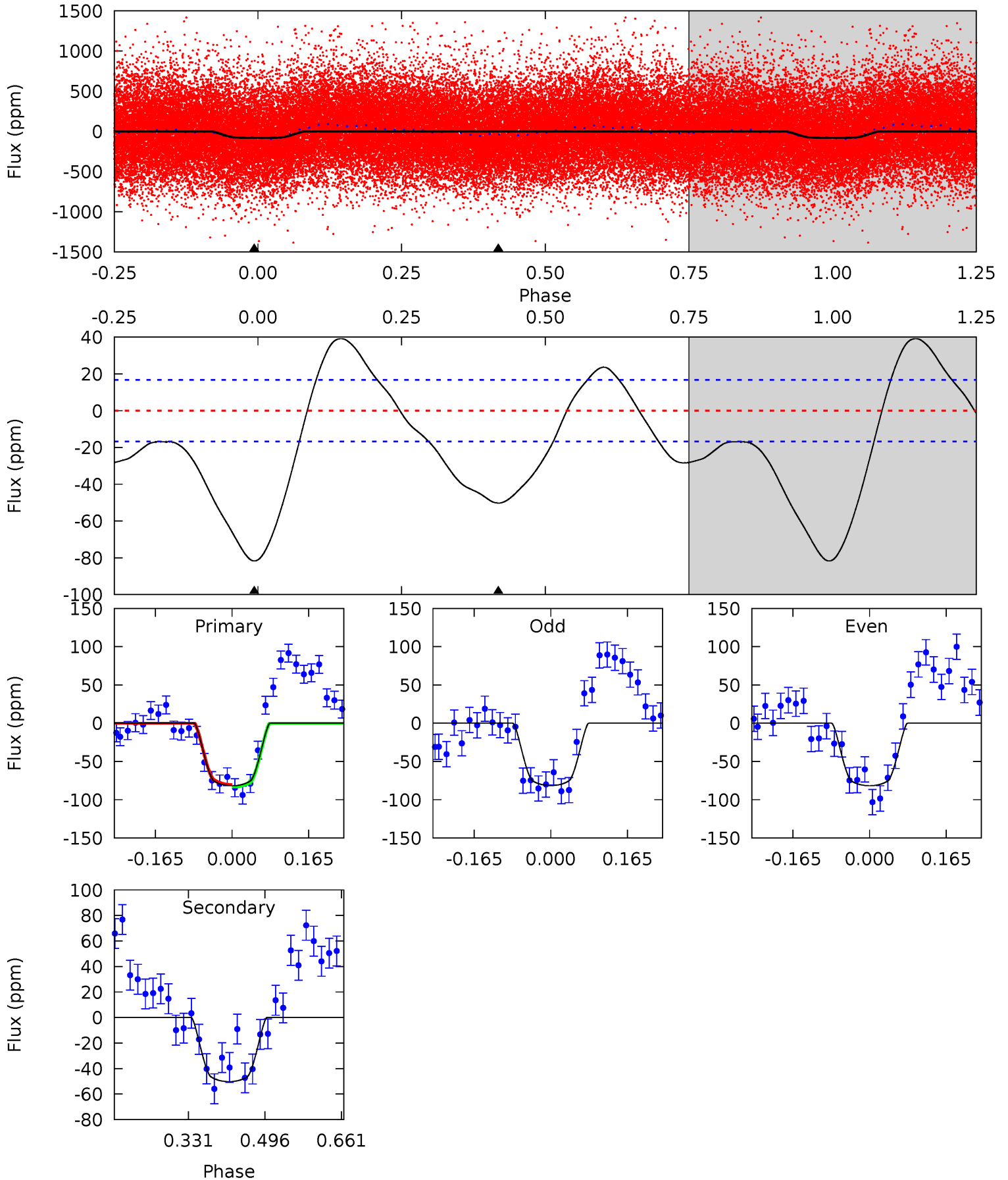




# DV Model-Shift Uniqueness Test

004845003-01, P = 8.699510 Days, E = 130.438109 Days

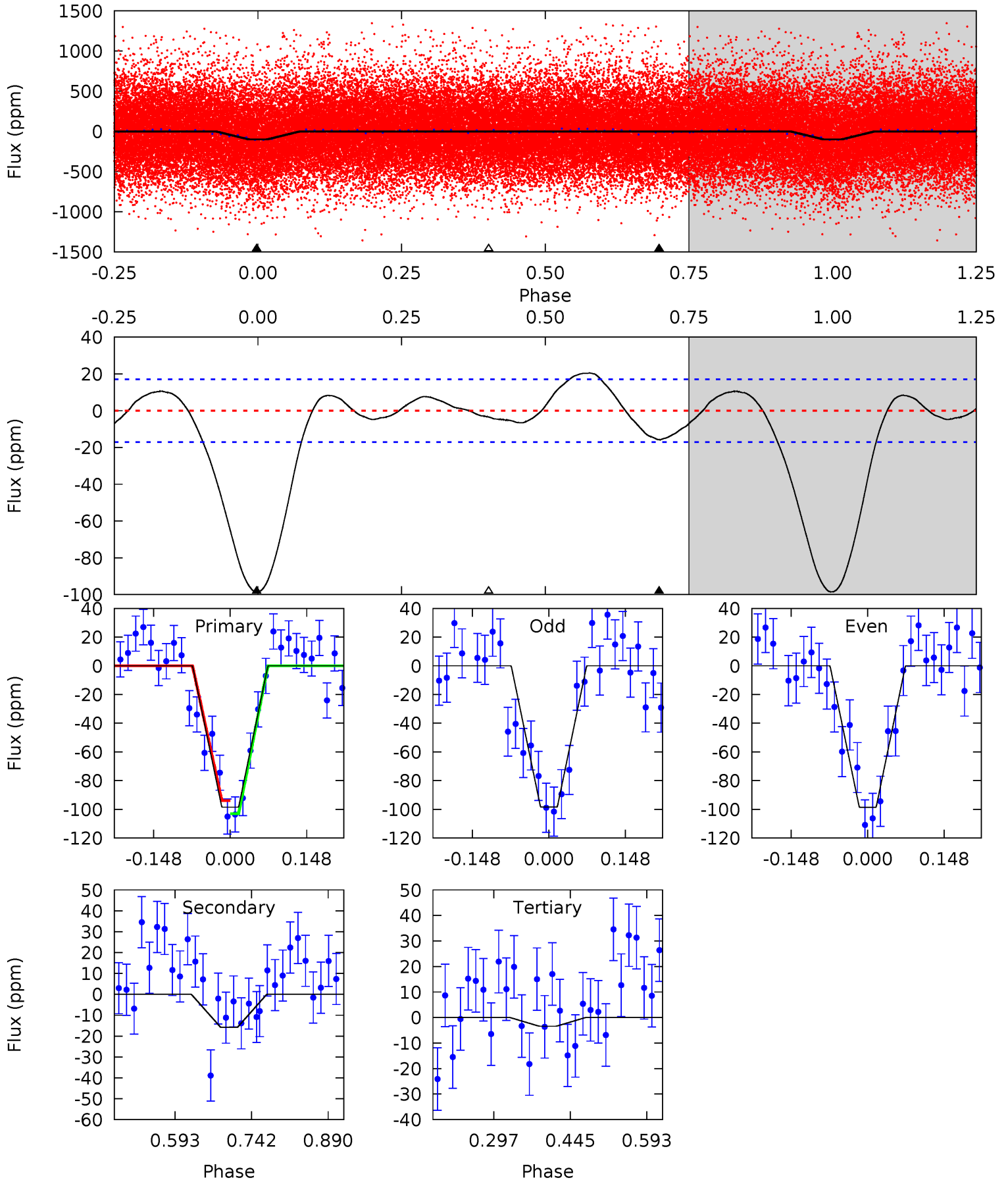
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	13.4	0	0	4.46	1.39	5.50	21.8	21.8	13.4	13.4	0.03	1.02	0.32	0.40



# Alt Model-Shift Uniqueness Test

004845003-01, P = 8.699171 Days, E = 130.634692 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
25.8	4.15	0.90	0	4.48	1.45	1.55	24.9	25.8	3.25	4.15	0.03	0.91	0.17	1.19





### Stellar Parameters For KIC 004845003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6002^{+180}_{-198}$	$4.503^{+0.052}_{-0.208}$	$-0.180^{+0.300}_{-0.300}$	$0.929^{+0.278}_{-0.093}$	$1.001^{+0.131}_{-0.131}$	$1.762^{+0.474}_{-0.893}$
	+3%/-3%	+1%/-5%	+167%/-167%	+30%/-10%	+13%/-13%	+27%/-51%
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 004845003-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-50 \pm 4$	$1.16^{+0.19}_{-0.12}$	$1265^{+90}_{-60}$	$4893^{+207}_{-183}$	$135^{+35}_{-32}$
Alt.	$-16 \pm 4$	$1.06^{+0.16}_{-0.12}$	$1265^{+99}_{-58}$	$4072^{+217}_{-228}$	$52^{+19}_{-16}$

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

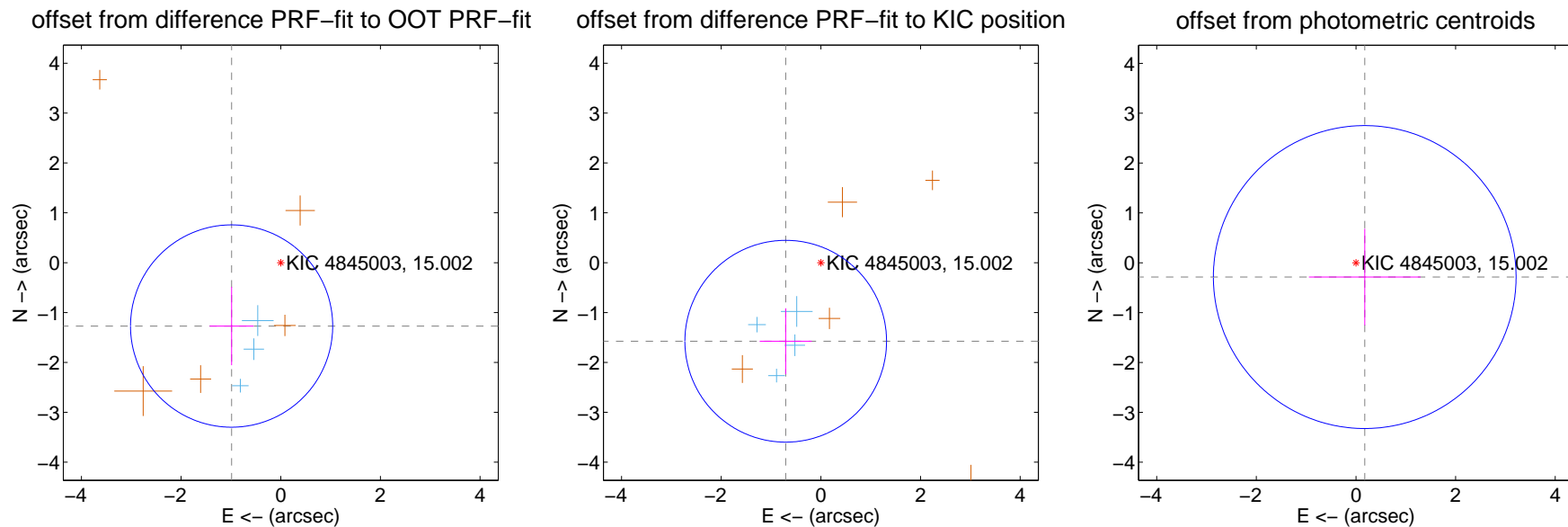
## DV Centroid Data

Supplemental centroid analysis for 004845003-01. Kepler magnitude: 15.00. Transit SNR 12.23

There are 4 quarters with good PRF difference image offsets

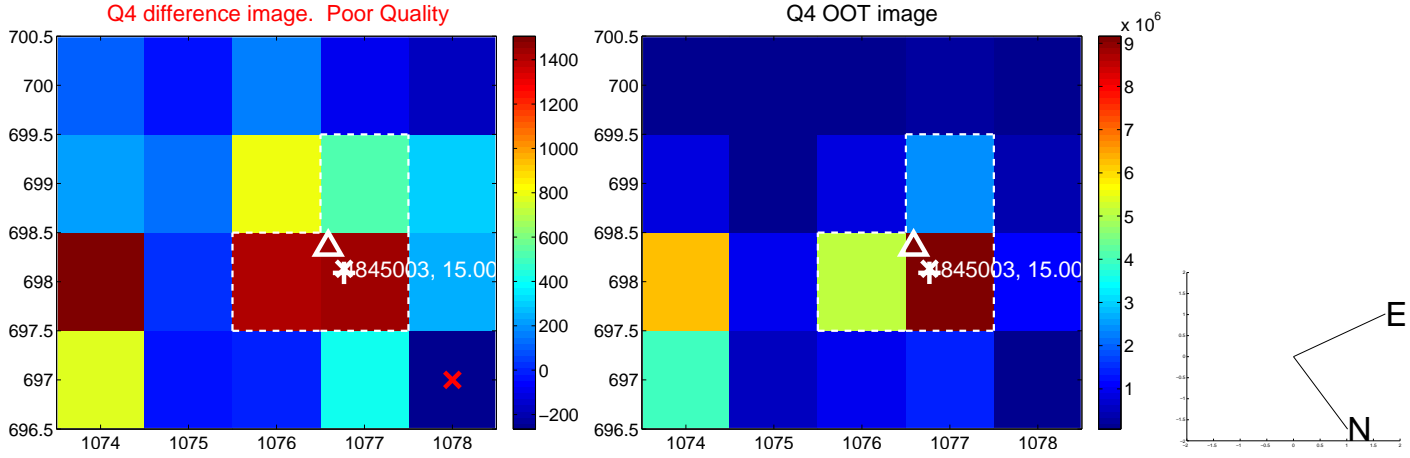
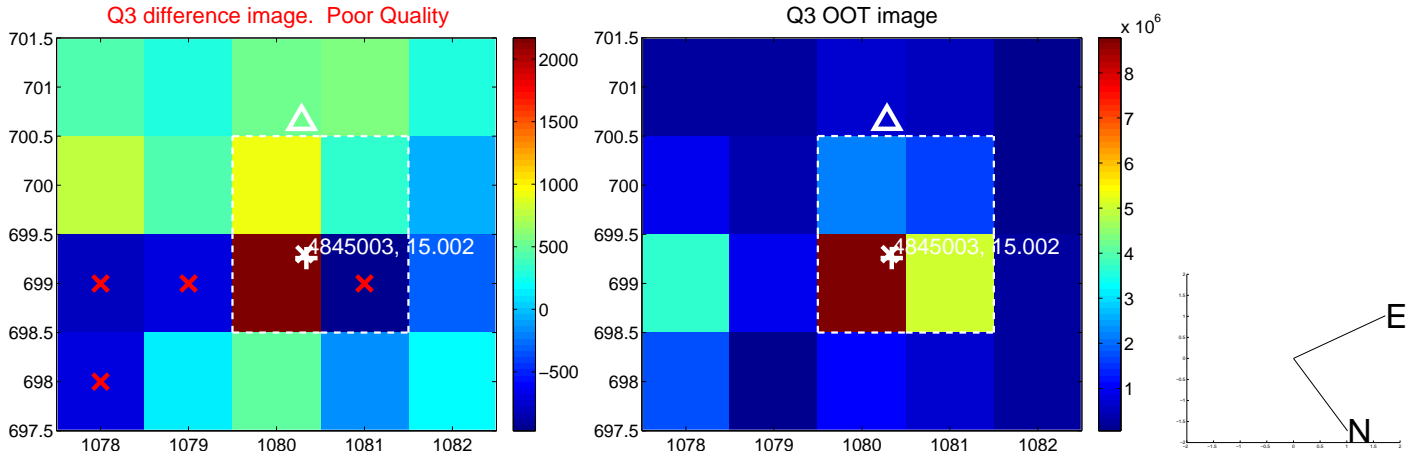
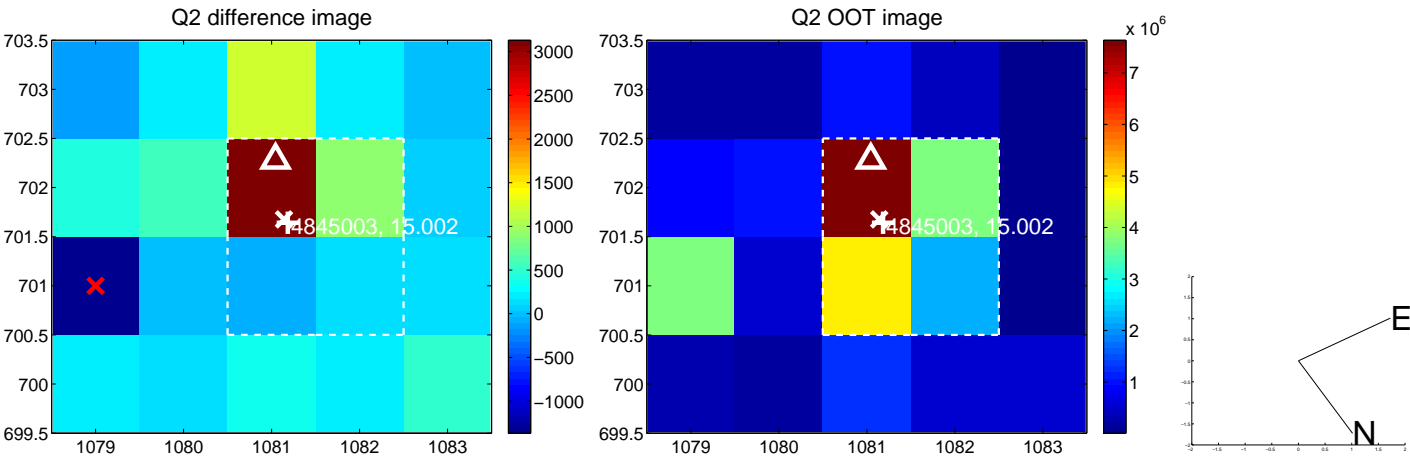
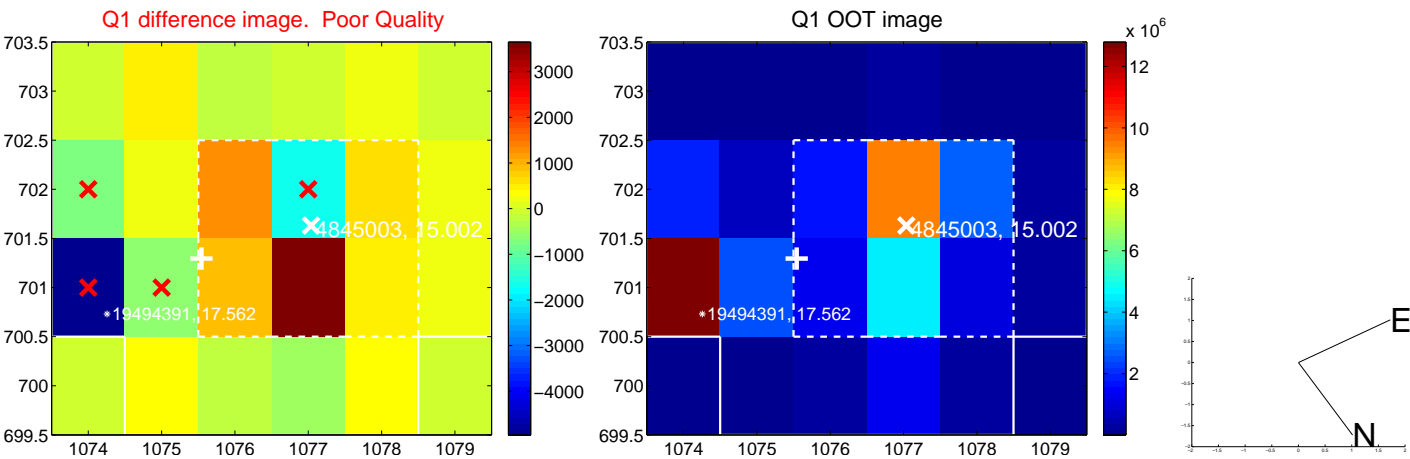
The OOT PRF centroid is offset from the target star catalog position by about 6.10 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.609 \pm 0.676$	2.38	$0.987 \pm 0.440$	$-1.271 \pm 0.785$
PRF-fit source offset from KIC position	$1.726 \pm 0.675$	2.56	$0.706 \pm 0.522$	$-1.576 \pm 0.661$
photometric centroid source offset	$0.34 \pm 1.01$	0.33	$-0.18 \pm 1.12$	$-0.29 \pm 0.97$

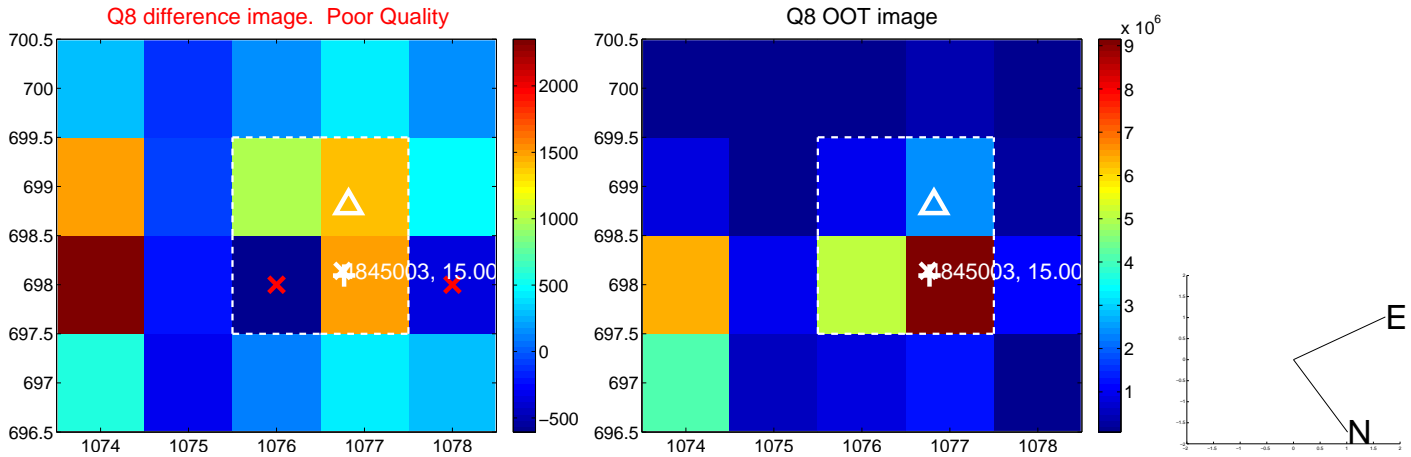
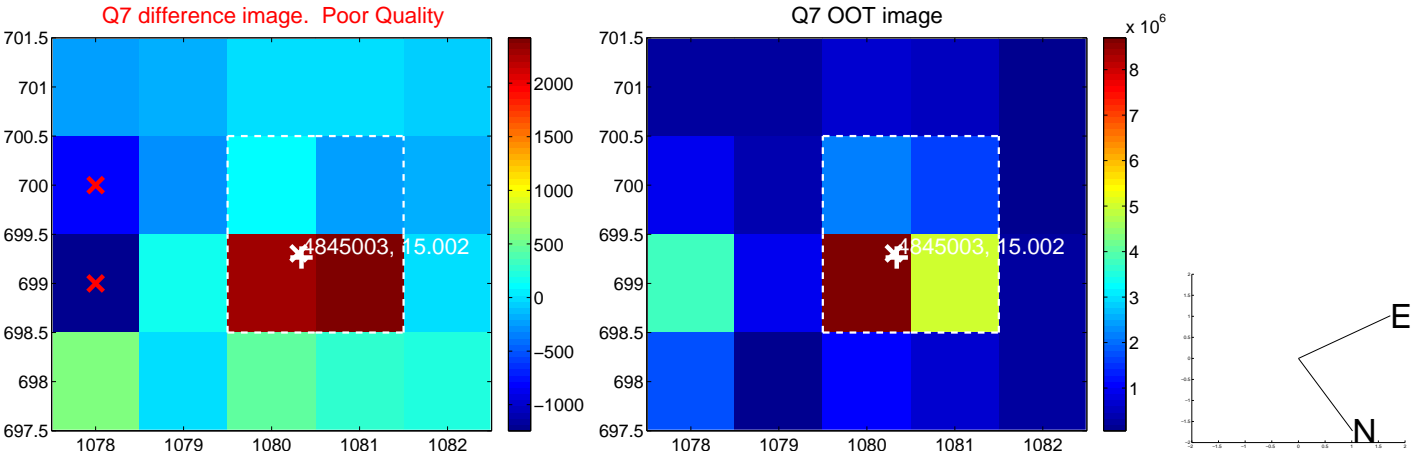
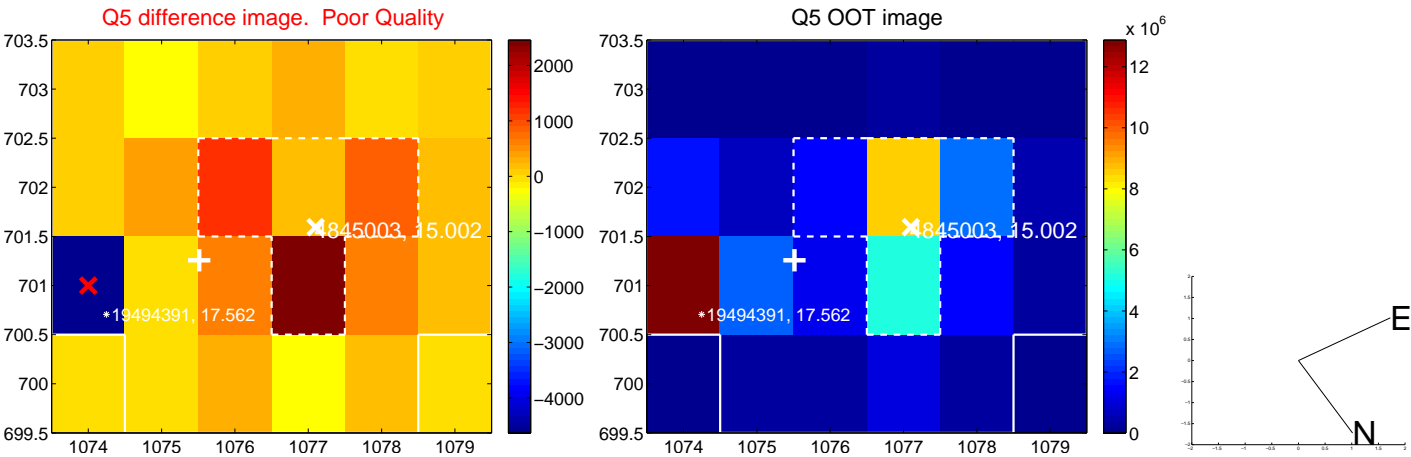


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

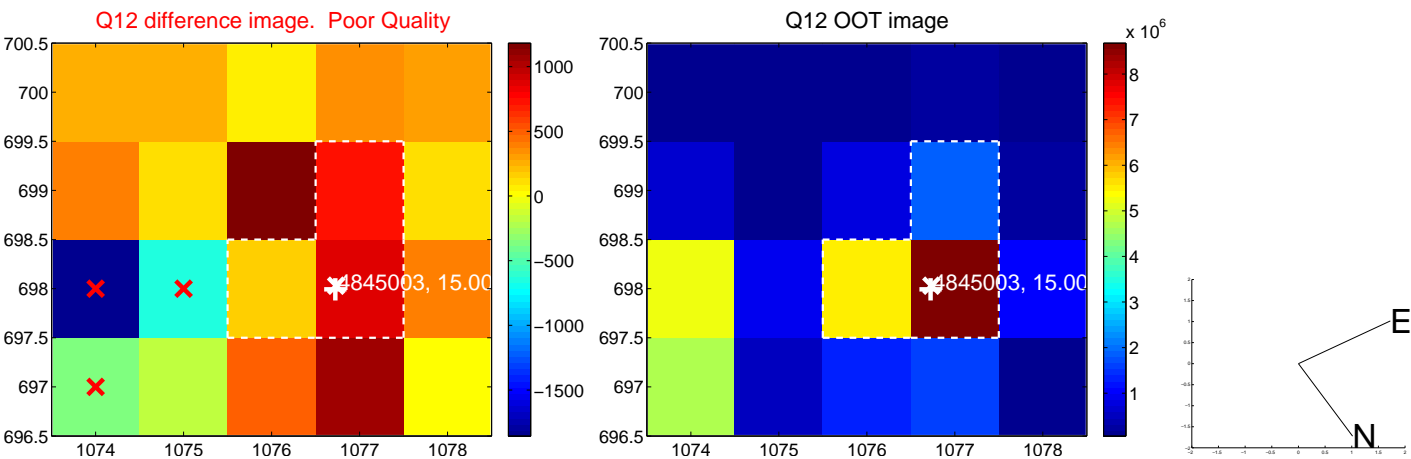
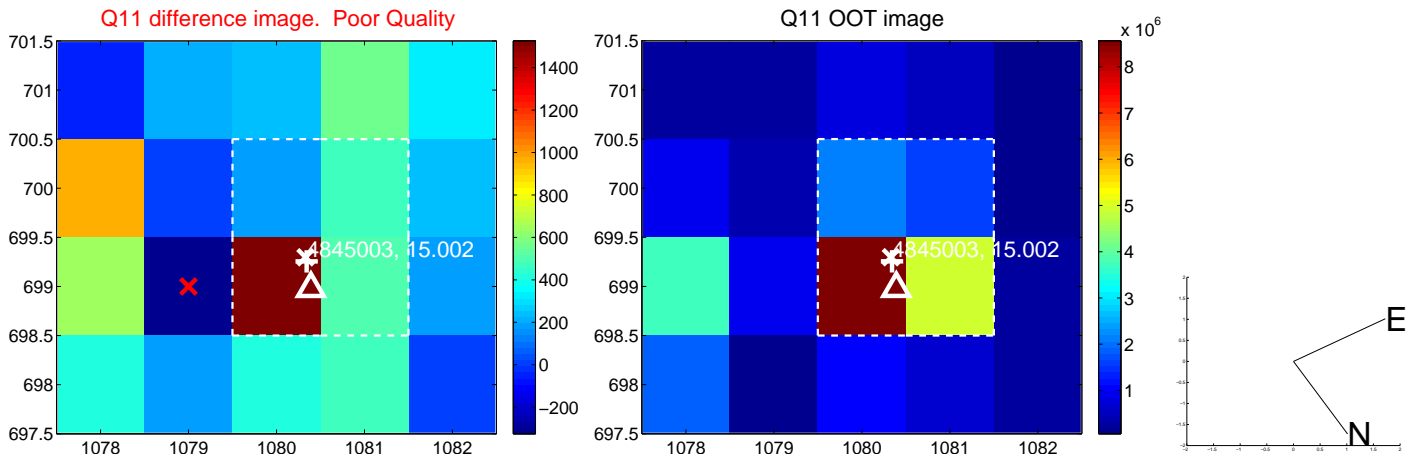
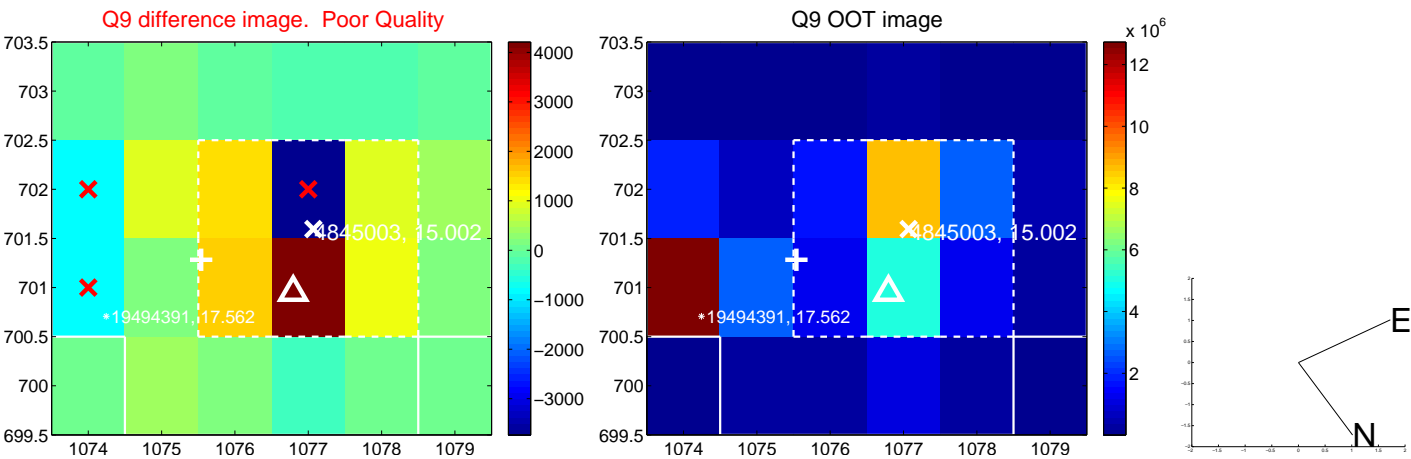


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

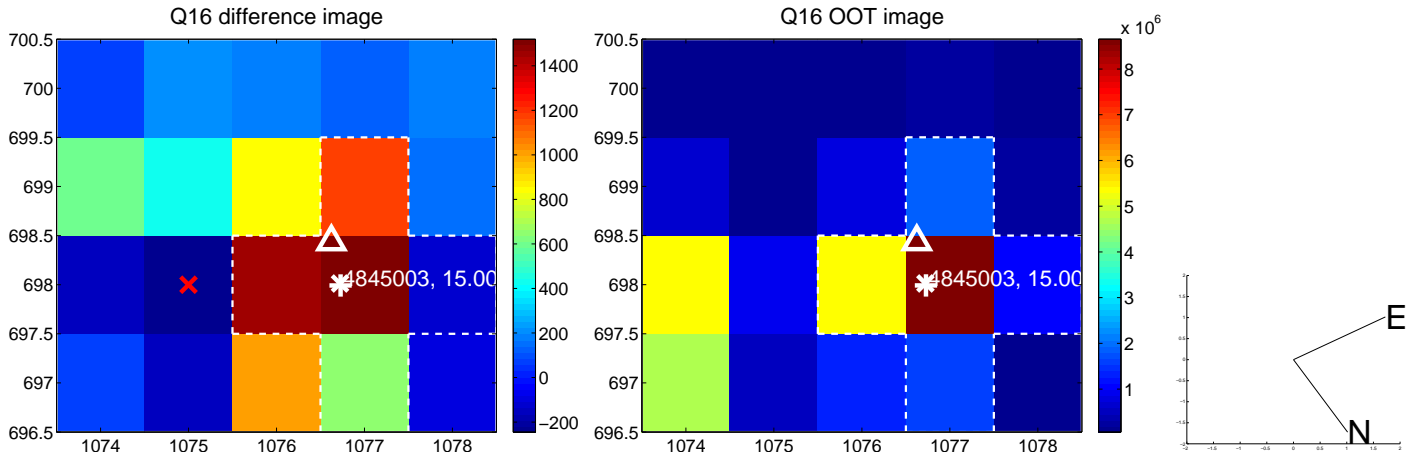
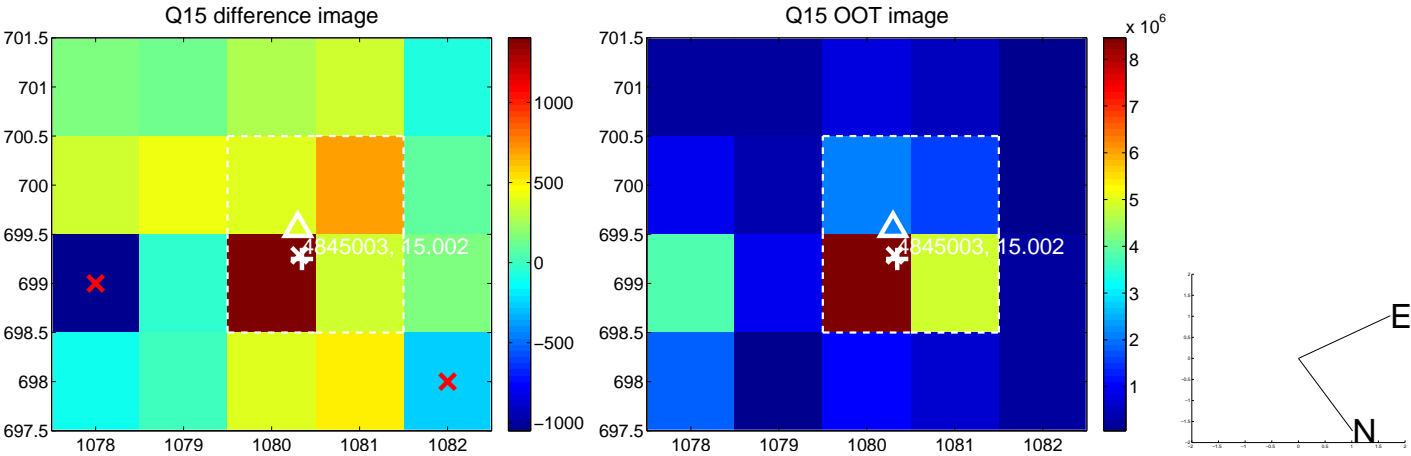
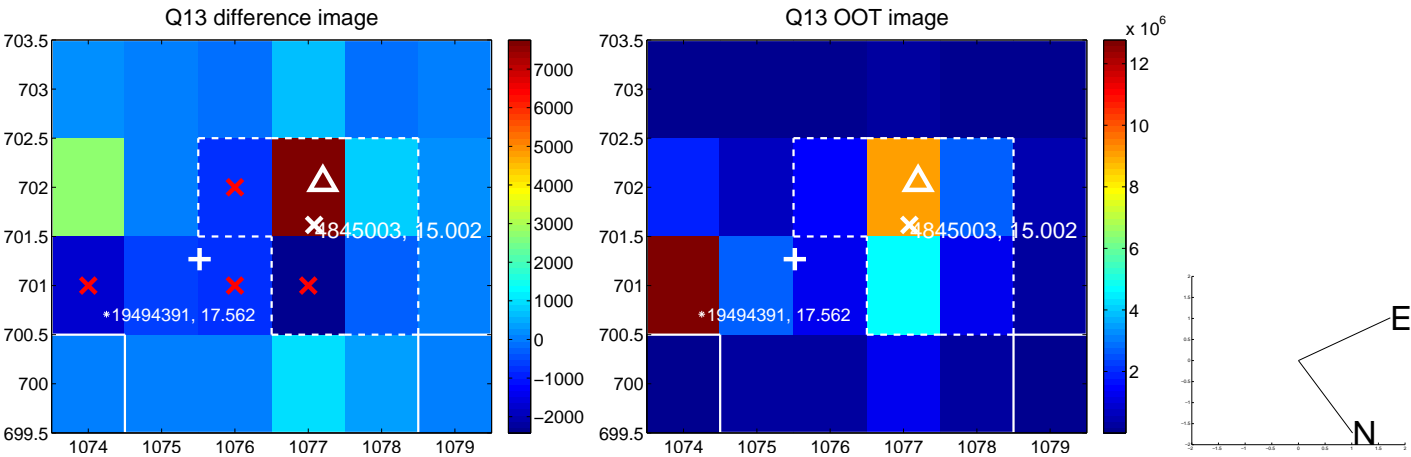




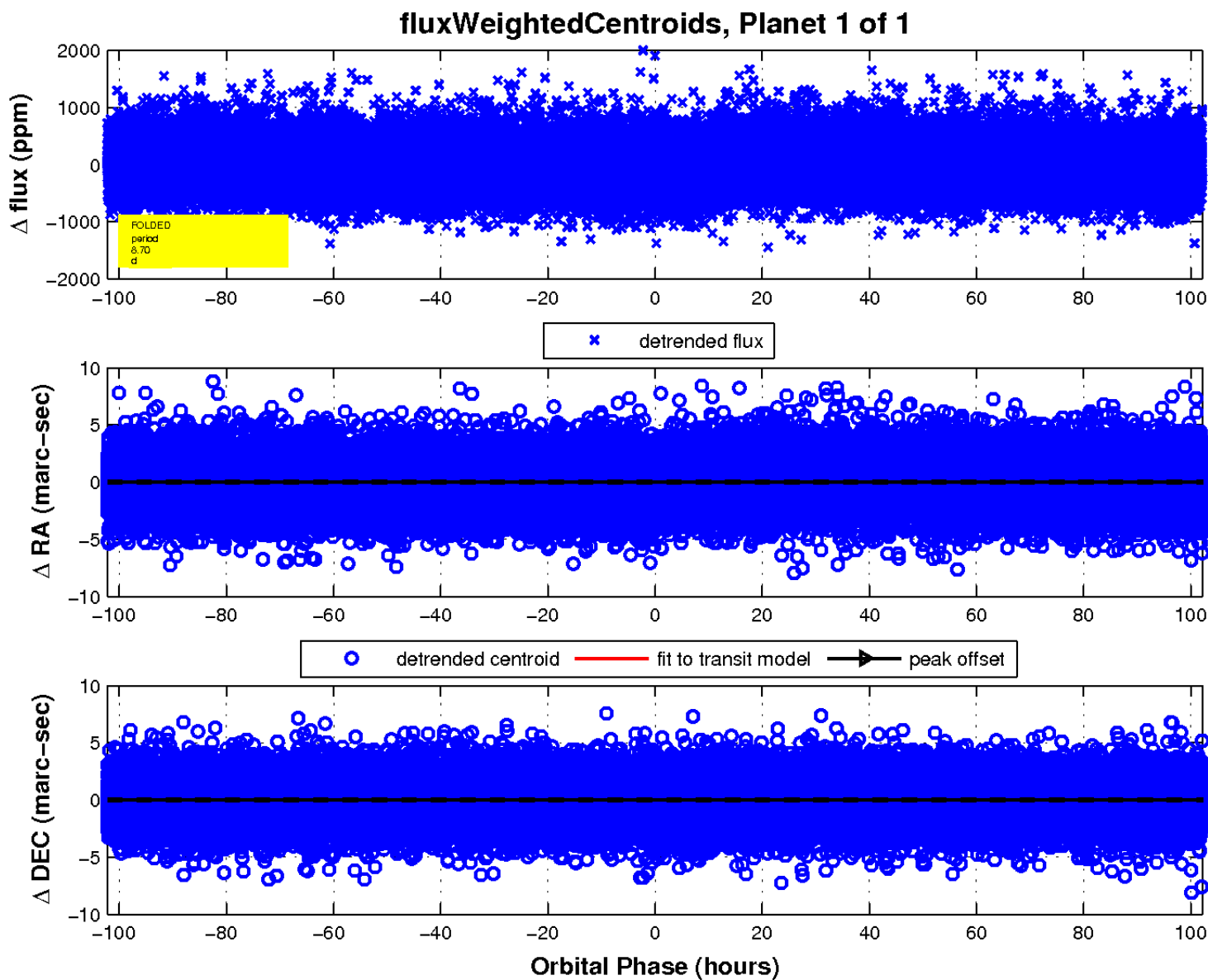
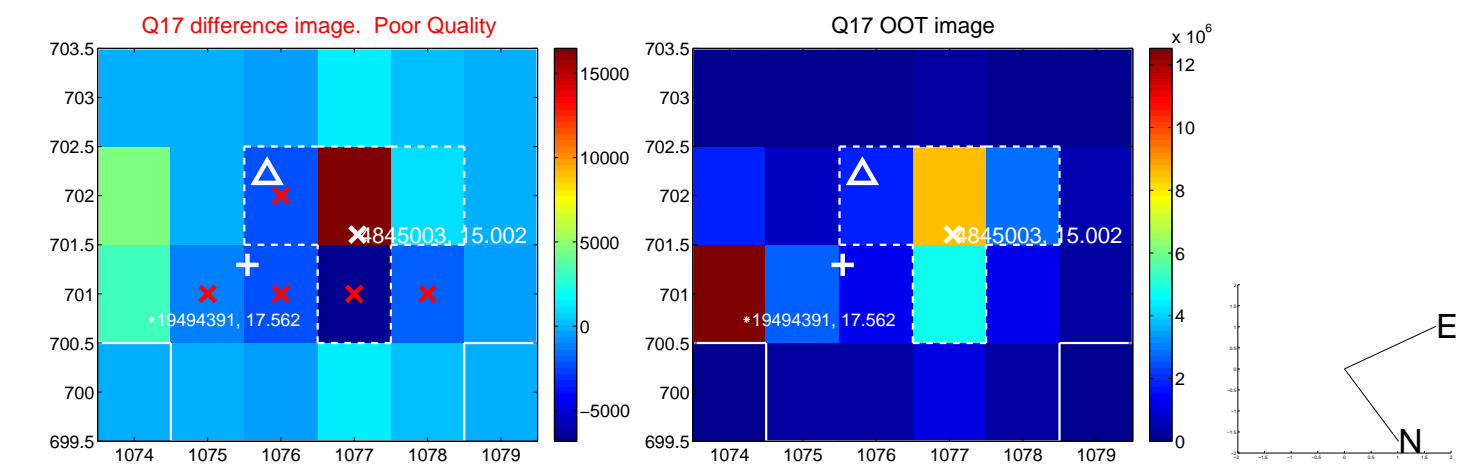
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

