

# KIC 008843268

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008843268-01	OBS	No	7.875867	137.521554	32.6	22.946	7.9	10.1	2.57	6065	1.73	1125.47

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008843268-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

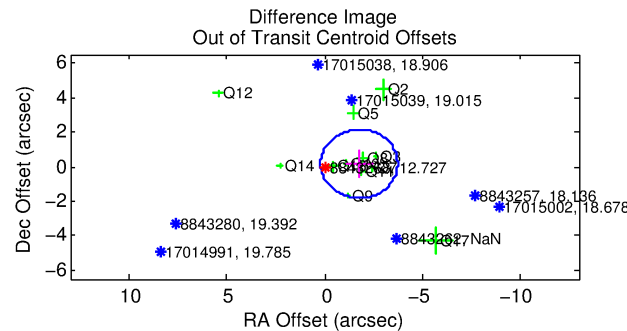
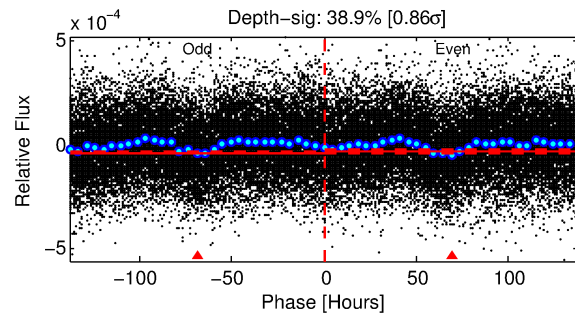
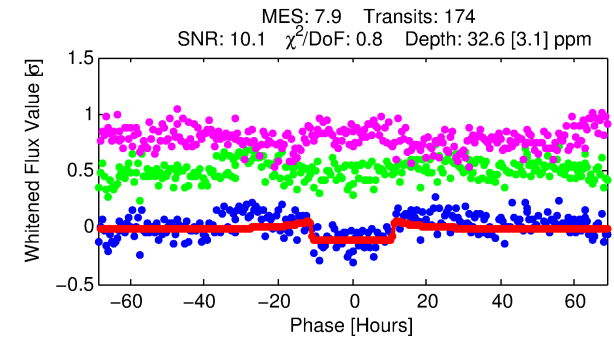
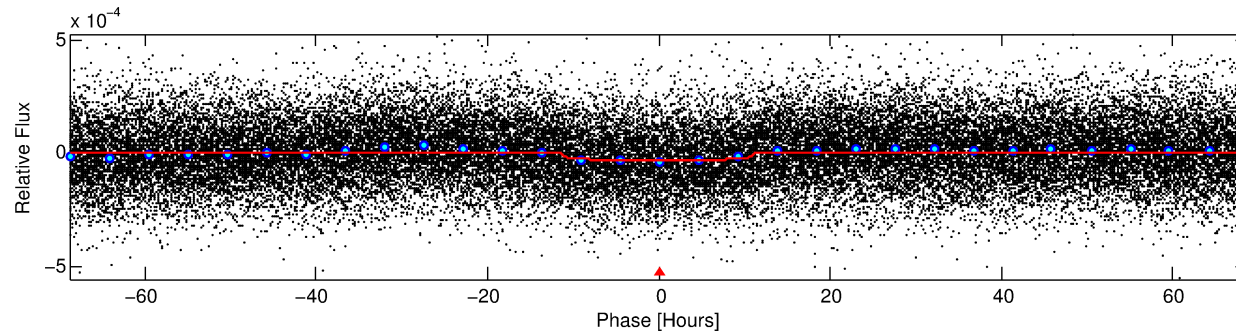
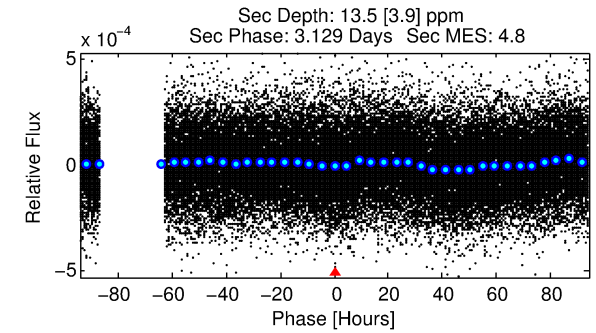
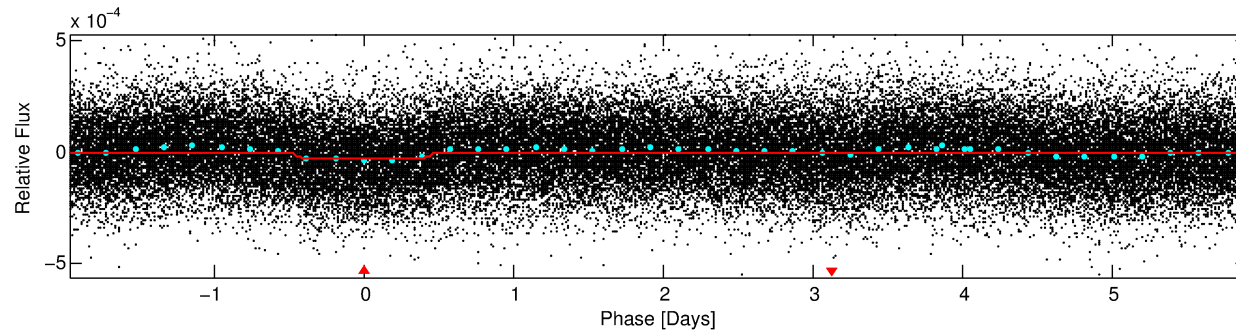
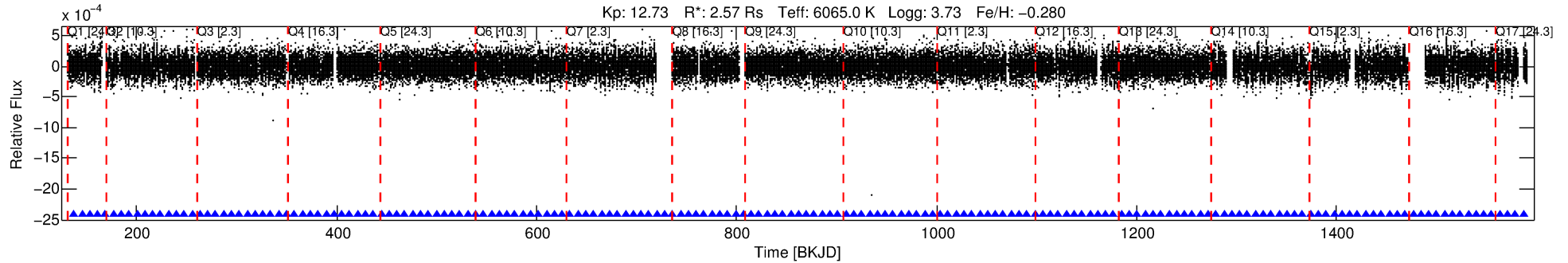
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008843268-01

No Significant Match Found

# DV One-Page Summary

KIC: 8843268 Candidate: 1 of 1 Period: 7.876 d



## DV Fit Results:

Period = 7.87587 [0.00017] d  
Epoch = 137.5216 [0.0164] BKJD  
Rp/R\* = 0.0062 [0.0006]  
a/R\* = 1.50 [0.34]  
b = 0.90 [0.08]  
Seff = 1125.47 [646.25]  
Teq = 1477 [212] K  
Rp = 1.73 [0.69] Re  
a = 0.0844 [0.0302] AU  
Ag = 17.75 [11.64] [1.44σ]  
Teffp = 4687 [430] K [6.70σ]

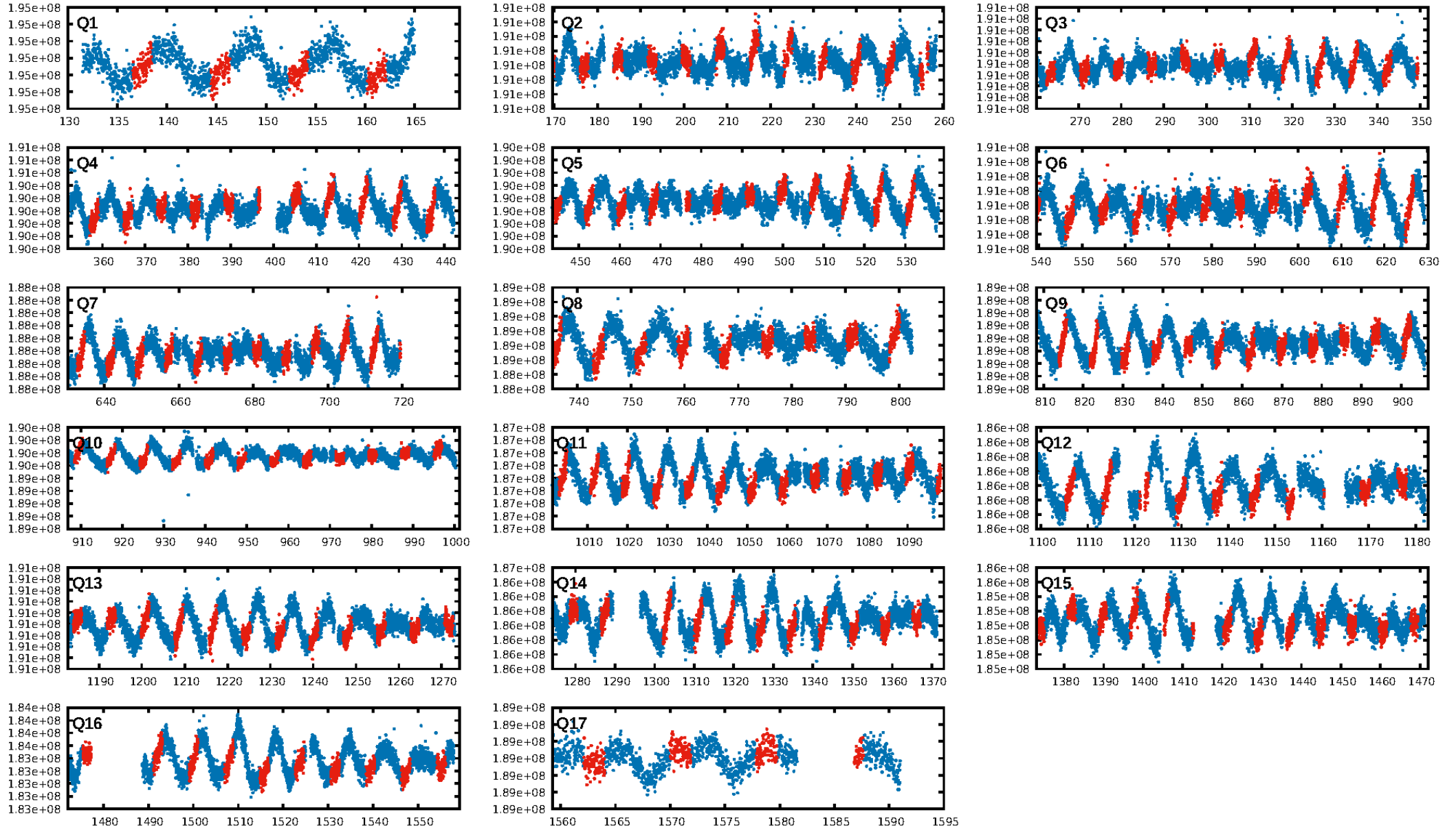
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 100.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 2.41e-13  
RollingBand-fgt: 1.00 [166/166]  
GhostDiagnostic-chr: 4.877  
Centroid-sig: 30.0%  
Centroid-so: 1.163 arcsec [1.33σ]  
OotOffset-rm: 1.771 arcsec [2.69σ]  
KicOffset-rm: 2.029 arcsec [2.91σ]  
OotOffset-st: 3/3/2/4 [12]  
KicOffset-st: 3/3/2/4 [12]  
DiffImageQuality-fgm: 0.50 [6/12]  
DiffImageOverlap-fno: 1.00 [17/17]

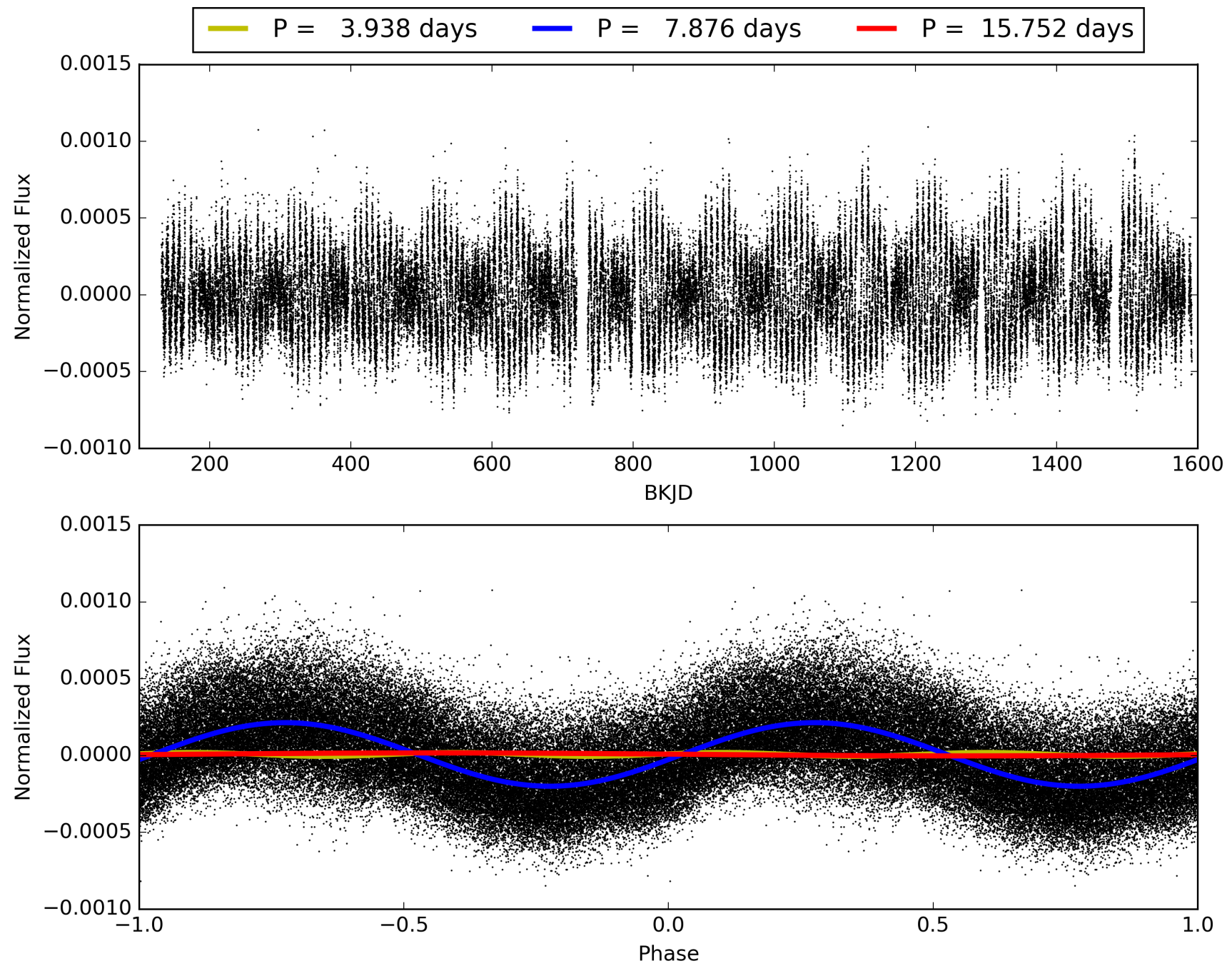
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:13:48 Z

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

# TCE 008843268-01, PDC Light Curves

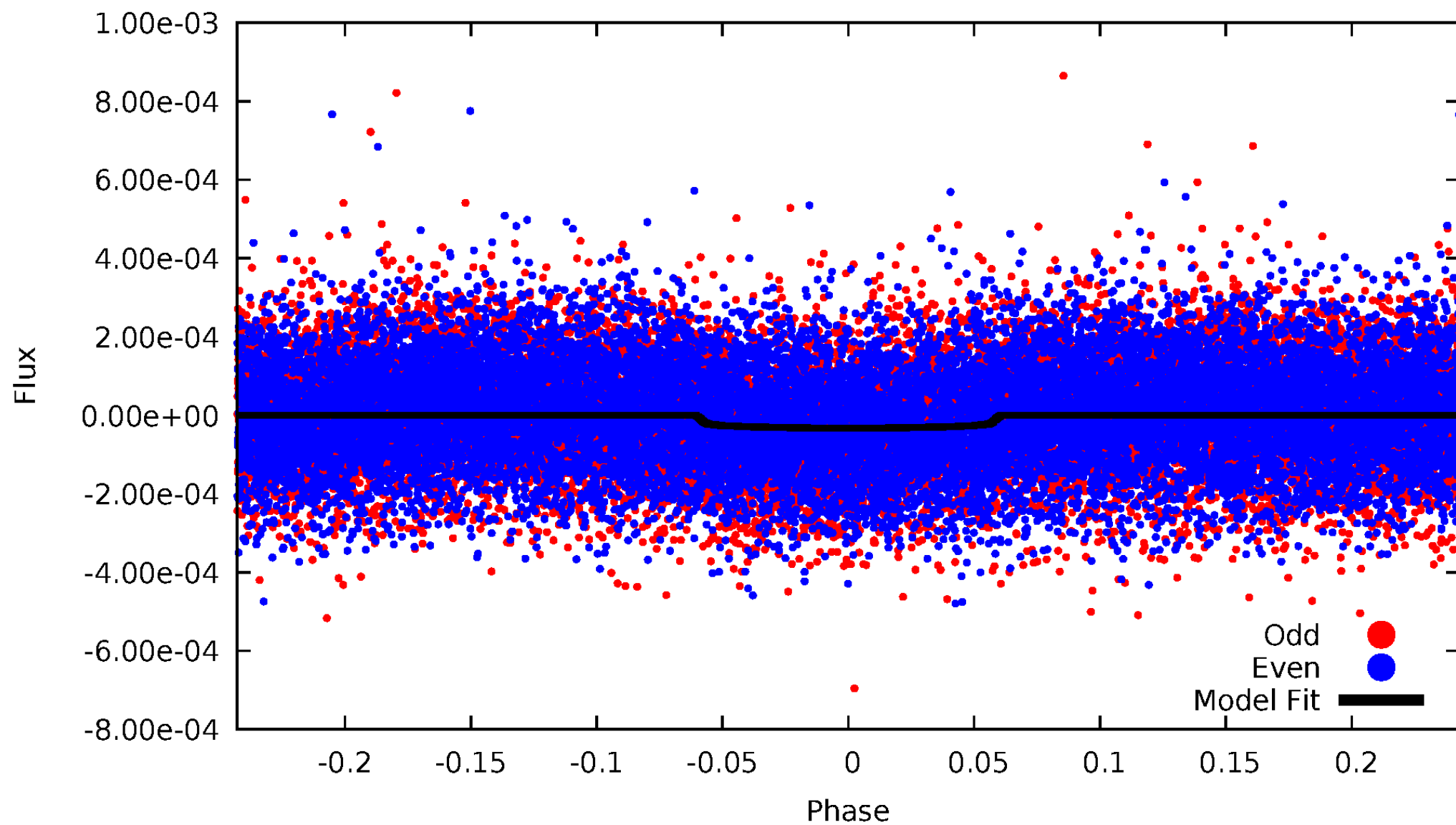


TCE 008843268-01



# DV Odd/Even

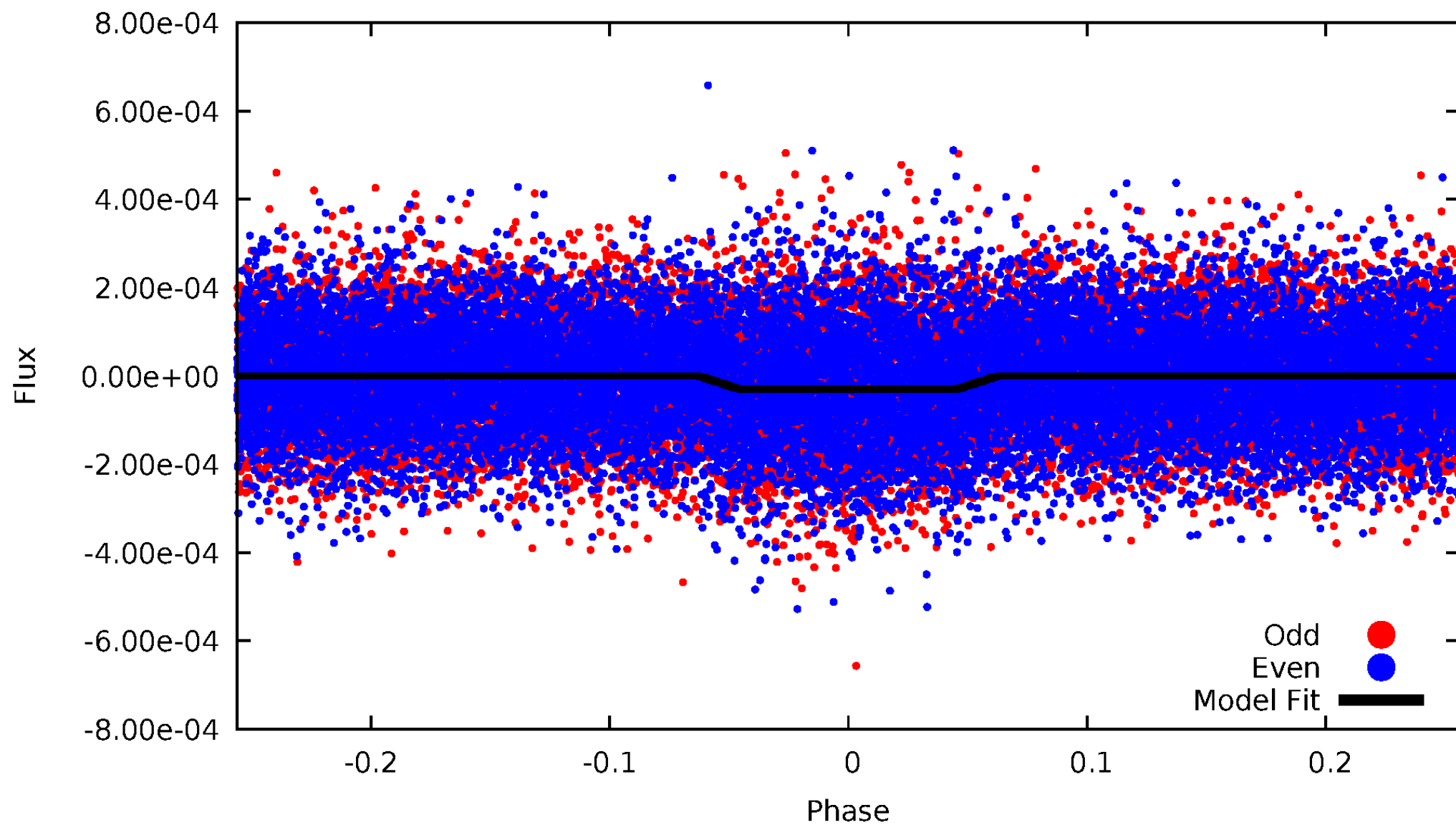
TCE 008843268-01



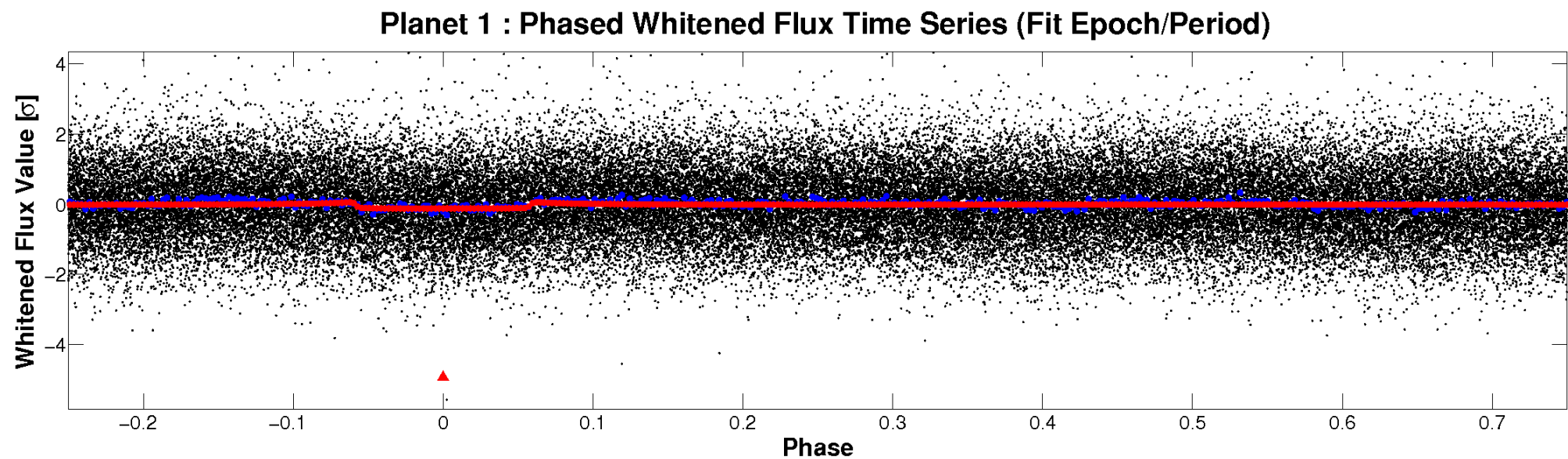
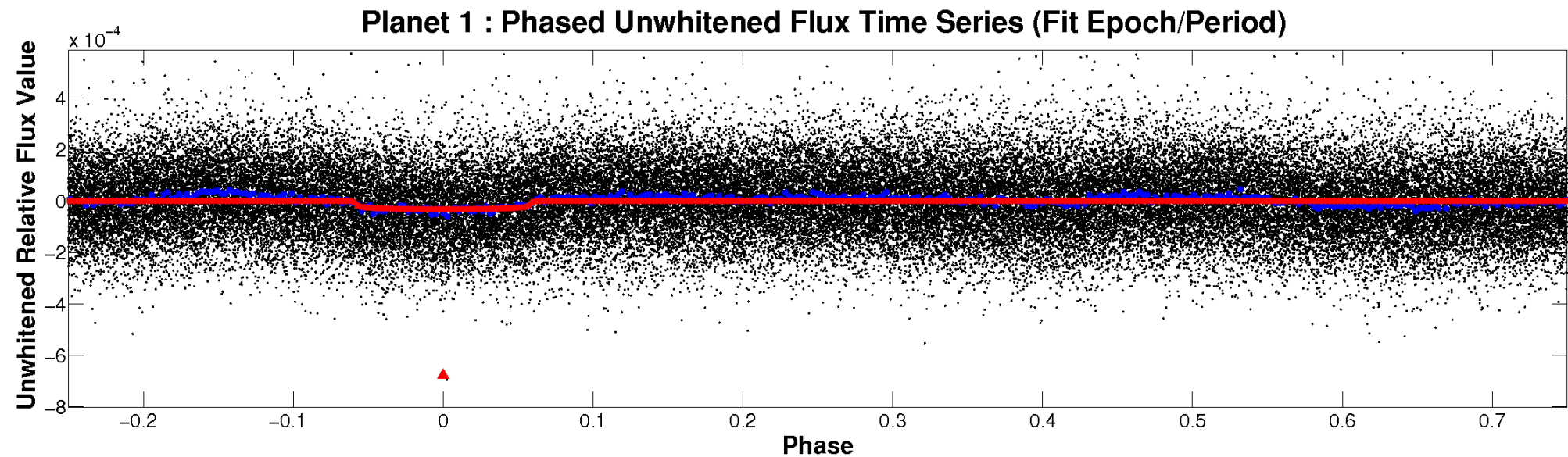


# ALT Odd/Even

TCE 008843268-01

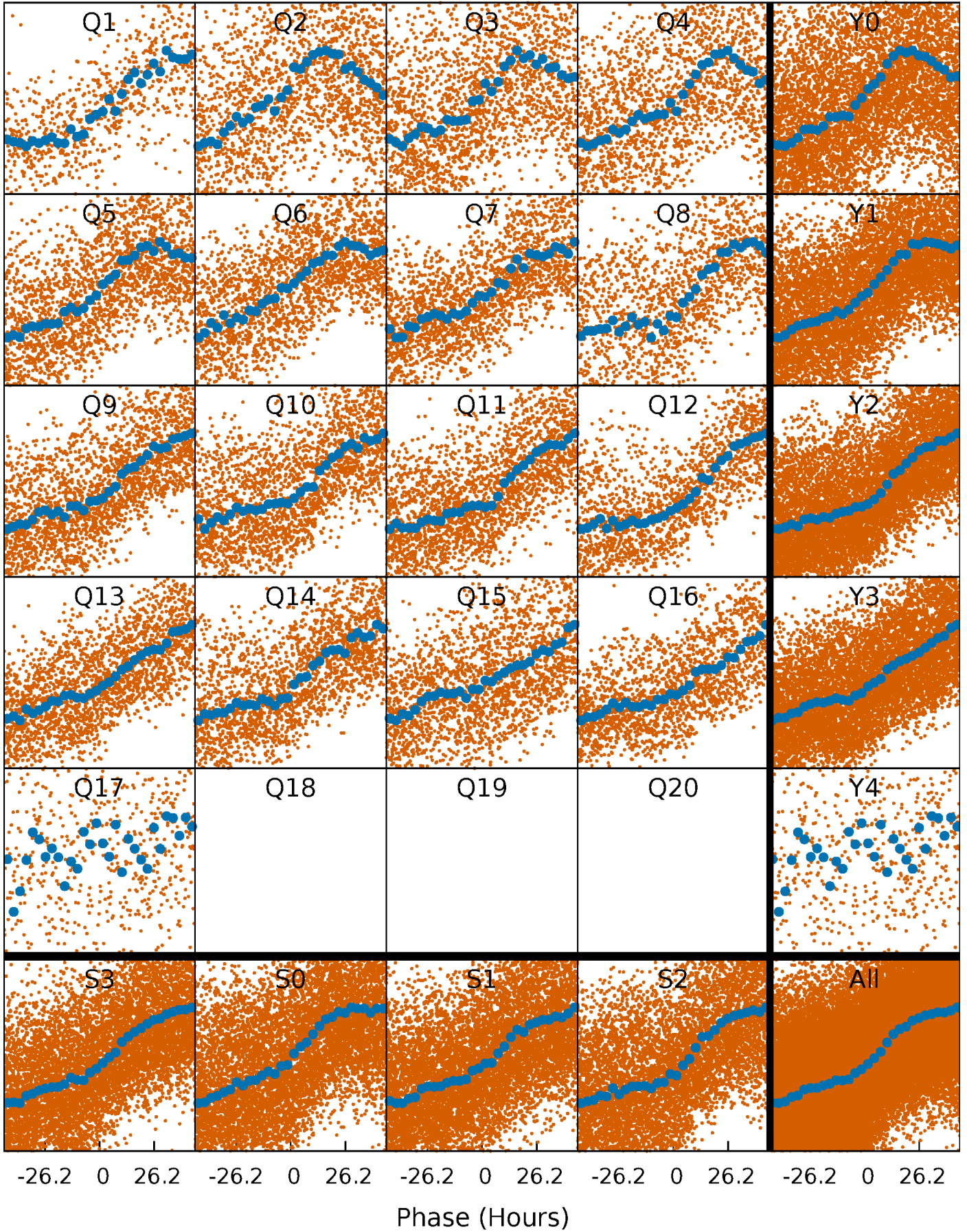


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

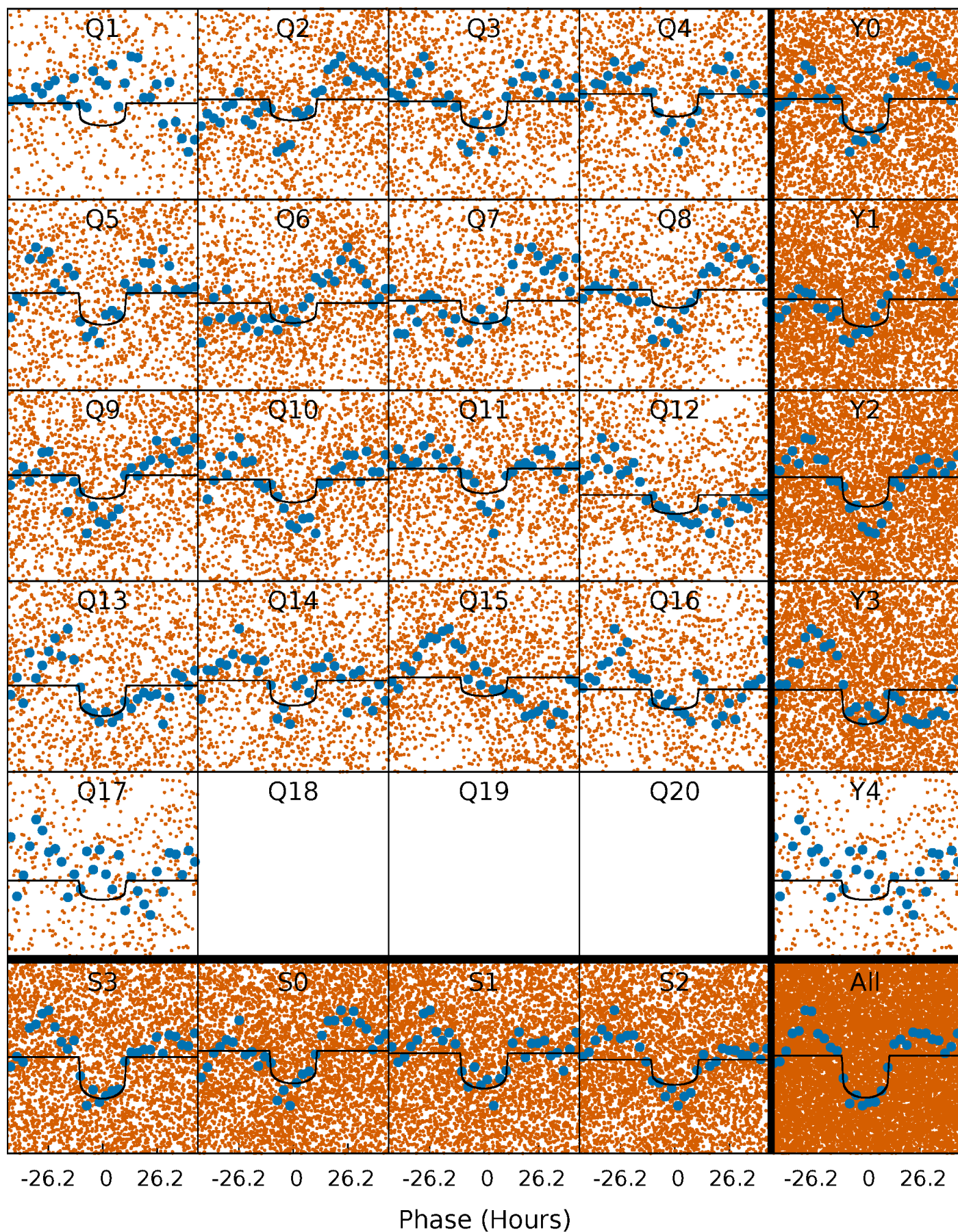
TCE 008843268-01 P= 7.875867 Days  $T_0=137.521555$  (BKJD)





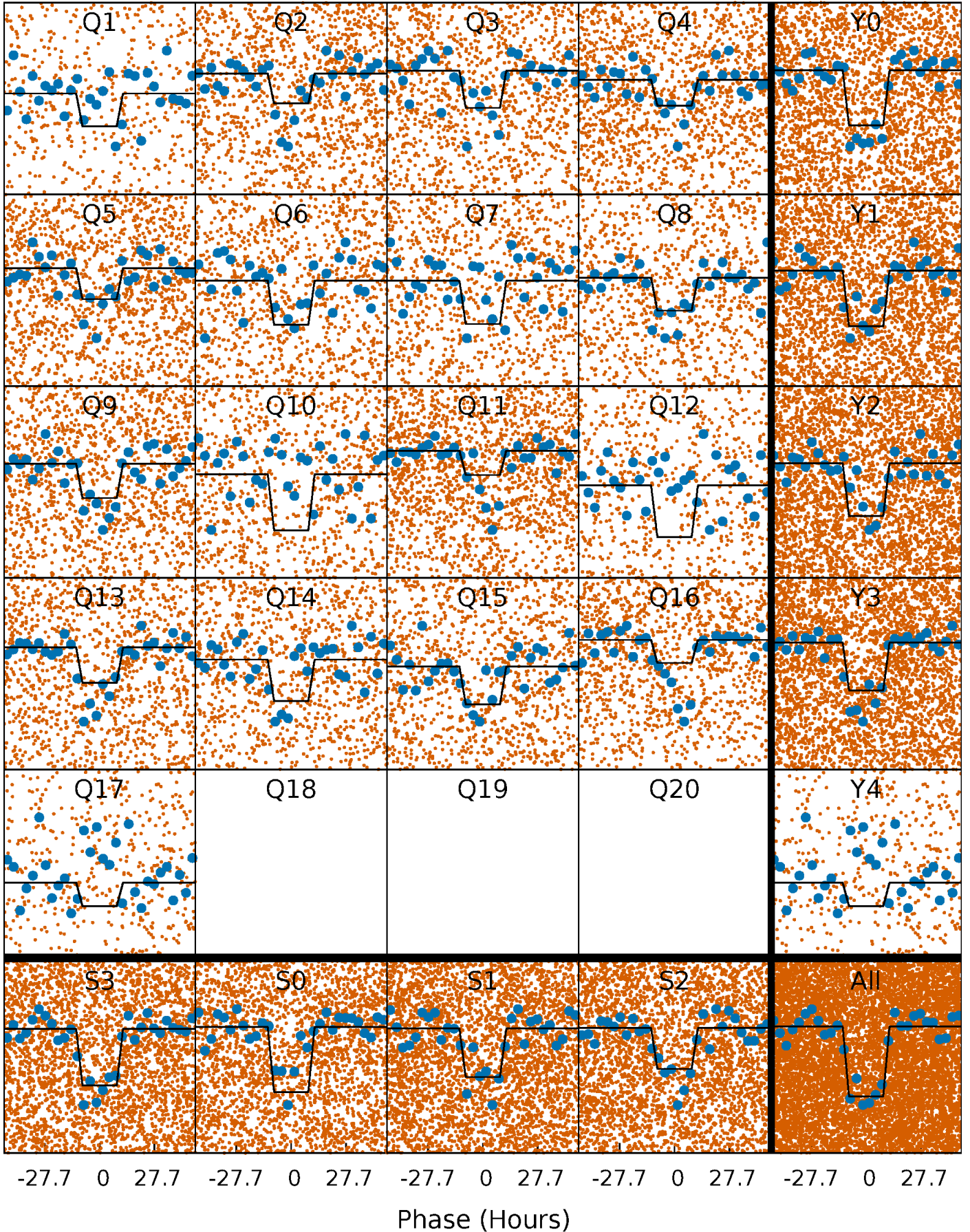
# DV Quarter-Phased Transit Curves

TCE 008843268-01   P= 7.875867 Days    $T_0=137.521555$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008843268-01 P= 7.876025 Days  $T_0=137.493515$  (BKJD)

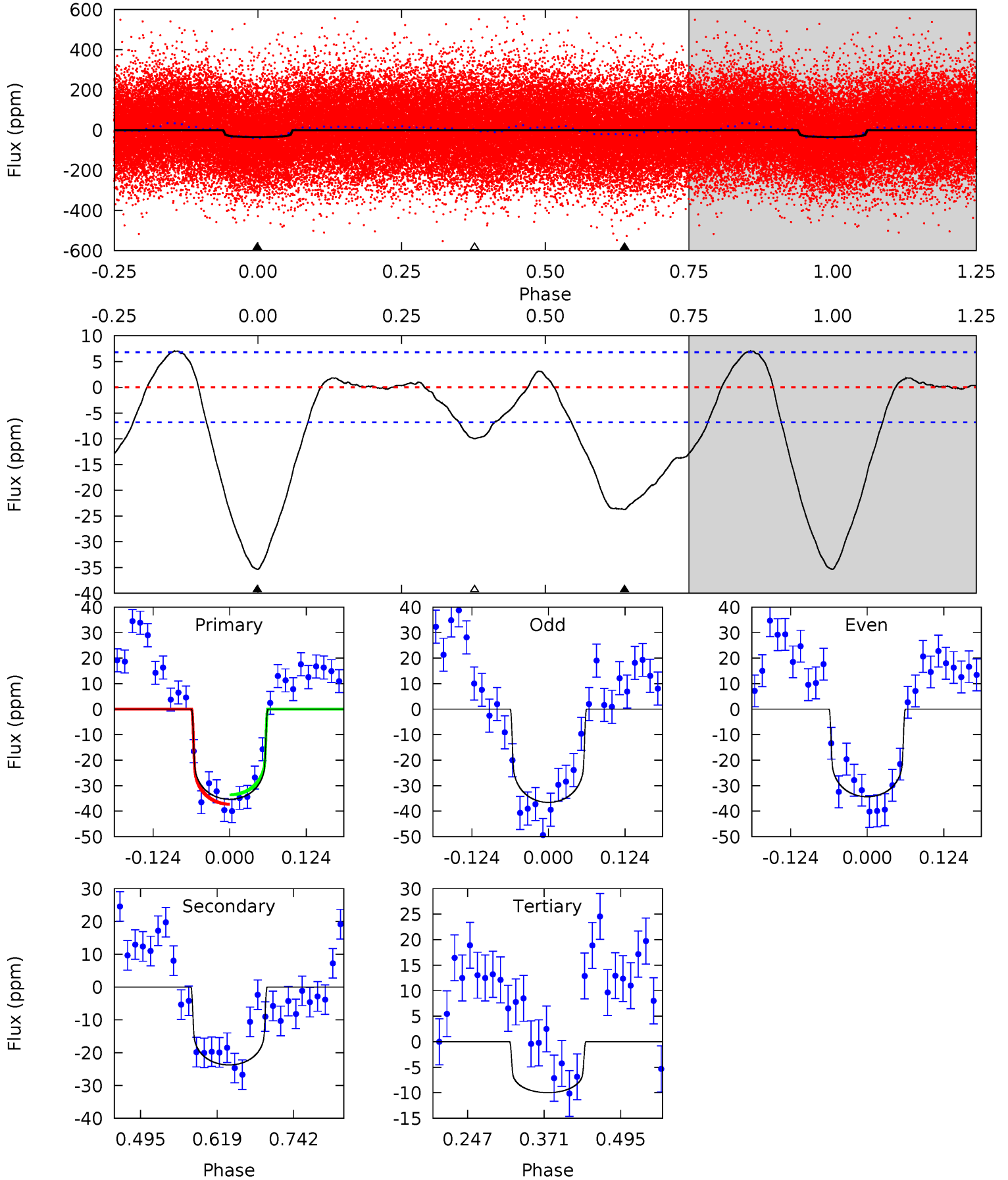




# DV Model-Shift Uniqueness Test

008843268-01, P = 7.875867 Days, E = 129.645688 Days

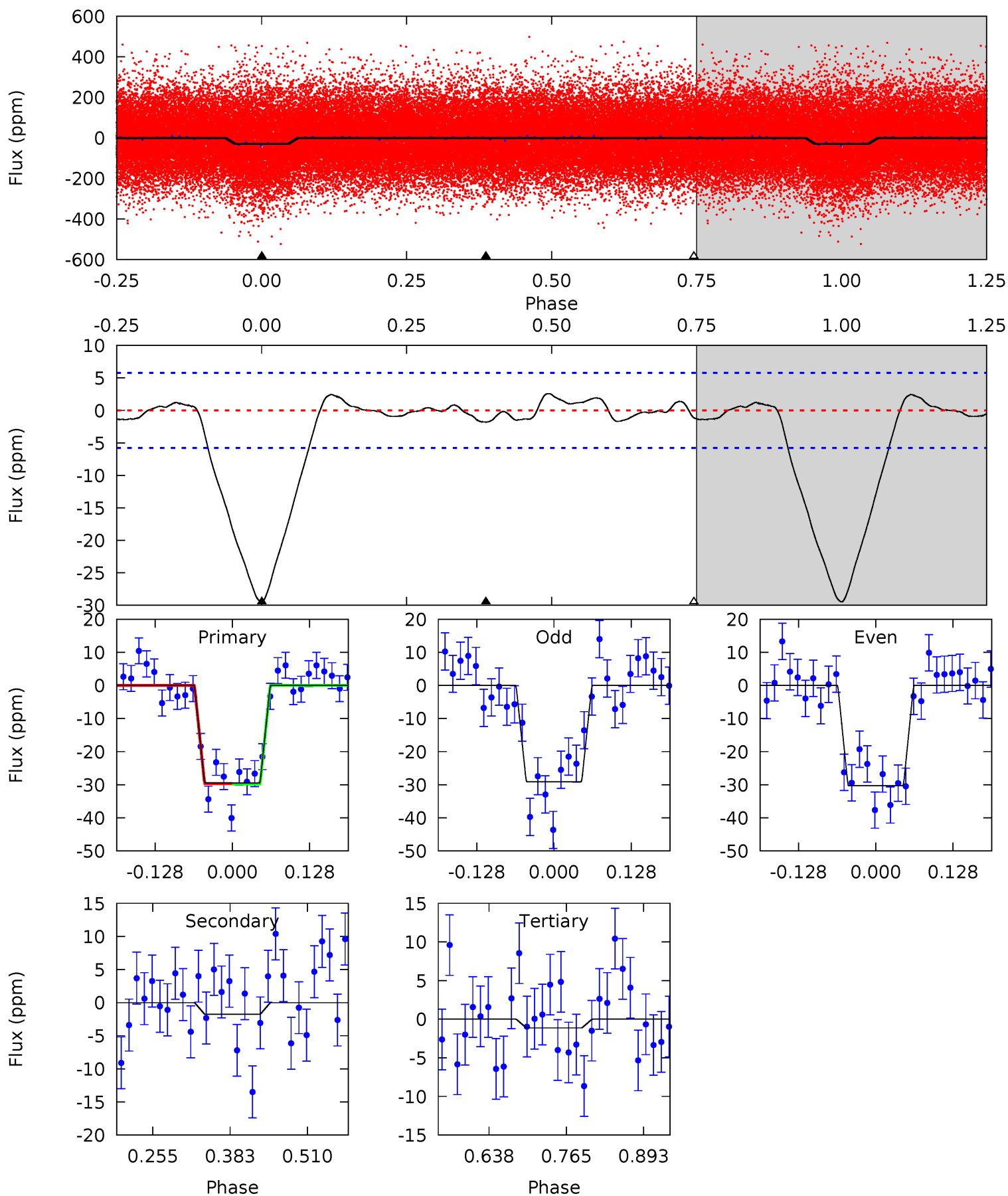
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	15.7	6.62	0	4.52	1.54	2.99	16.8	23.4	9.12	15.7	0.74	0.96	0.17	1.23



# Alt Model-Shift Uniqueness Test

008843268-01, P = 7.876025 Days, E = 129.617490 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
23.0	1.39	0.89	0	4.51	1.52	0.79	22.1	23.0	0.50	1.39	0.47	0.75	0.08	0.06





### Stellar Parameters For KIC 008843268

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6065^{+199}_{-181}$	$3.729^{+0.323}_{-0.108}$	$-0.280^{+0.350}_{-0.300}$	$2.572^{+0.427}_{-0.996}$	$1.294^{+0.232}_{-0.283}$	$0.107^{+0.266}_{-0.034}$
	+3%/-3%	+9%/-3%	+125%/-107%	+17%/-39%	+18%/-22%	+248%/-32%
Source	PHO1	FLK73	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 008843268-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-24 \pm 2$	$1.70^{+0.30}_{-0.38}$	$2041^{+137}_{-203}$	$5434^{+304}_{-283}$	$34^{+18}_{-10}$
Alt.	$-2 \pm 1$	$1.49^{+0.25}_{-0.33}$	$2027^{+135}_{-186}$	$3439^{+364}_{-661}$	$3.175^{+3.516}_{-2.225}$

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

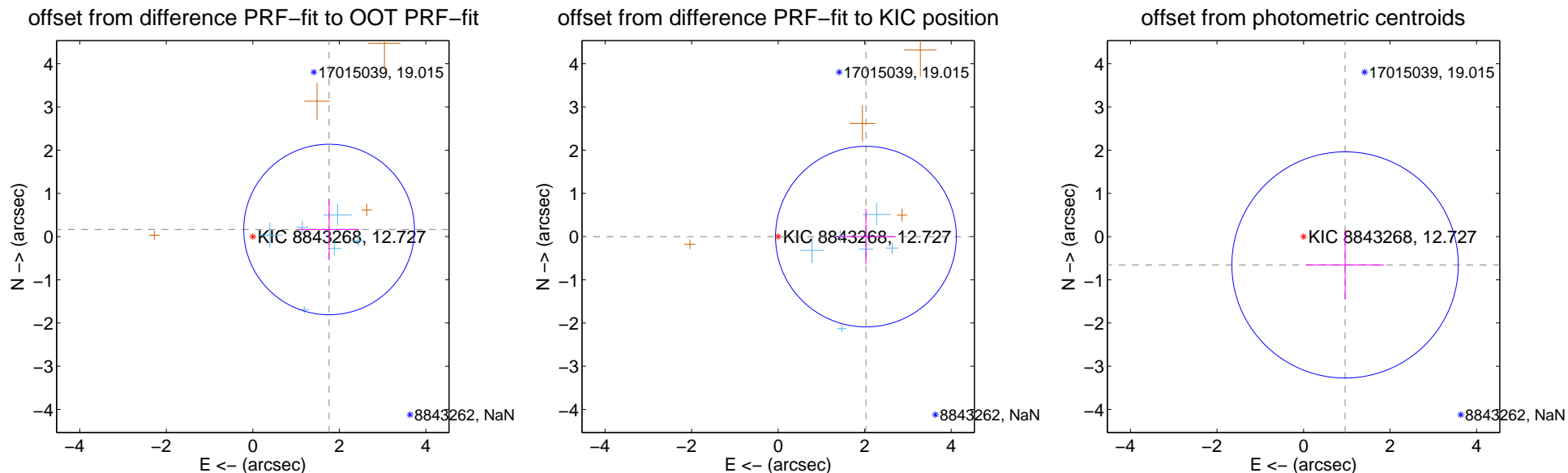
## DV Centroid Data

Supplemental centroid analysis for 008843268-01. Kepler magnitude: 12.73. Transit SNR 10.13

There are 6 quarters with good PRF difference image offsets

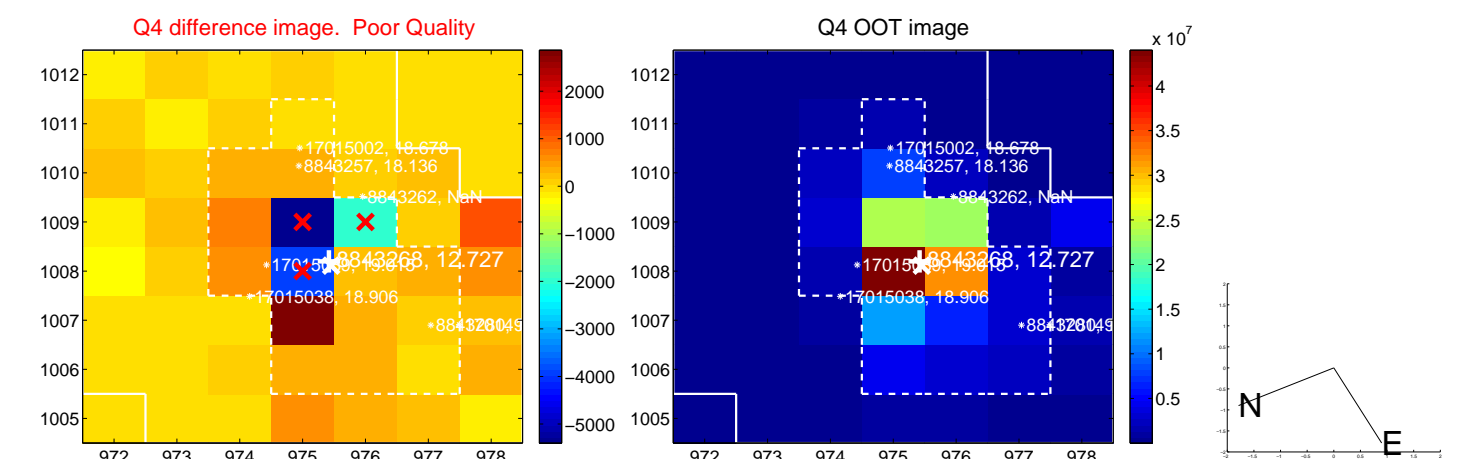
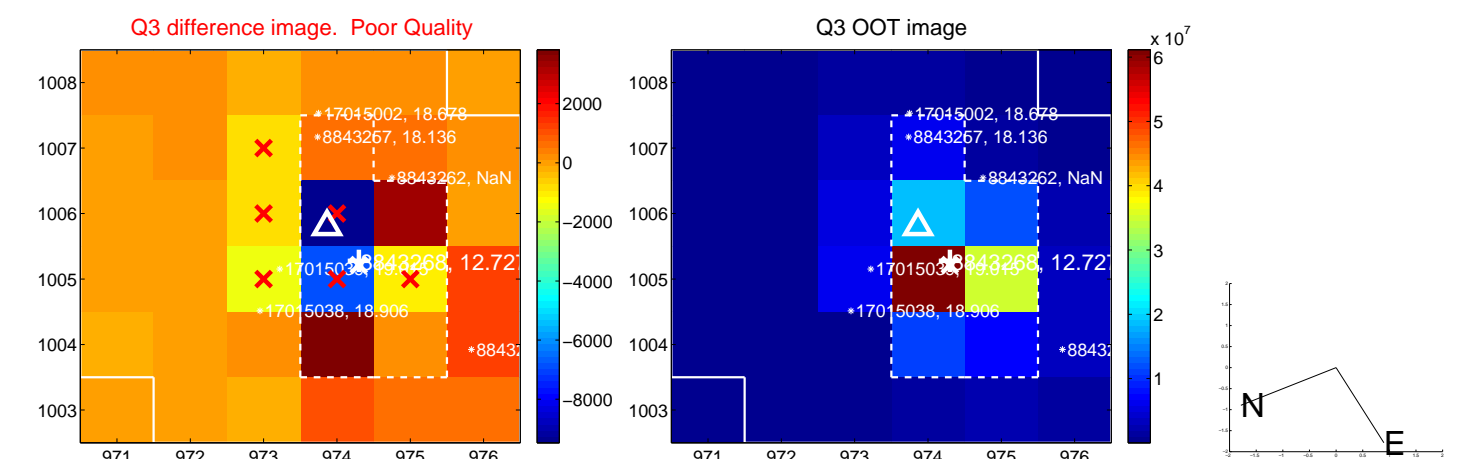
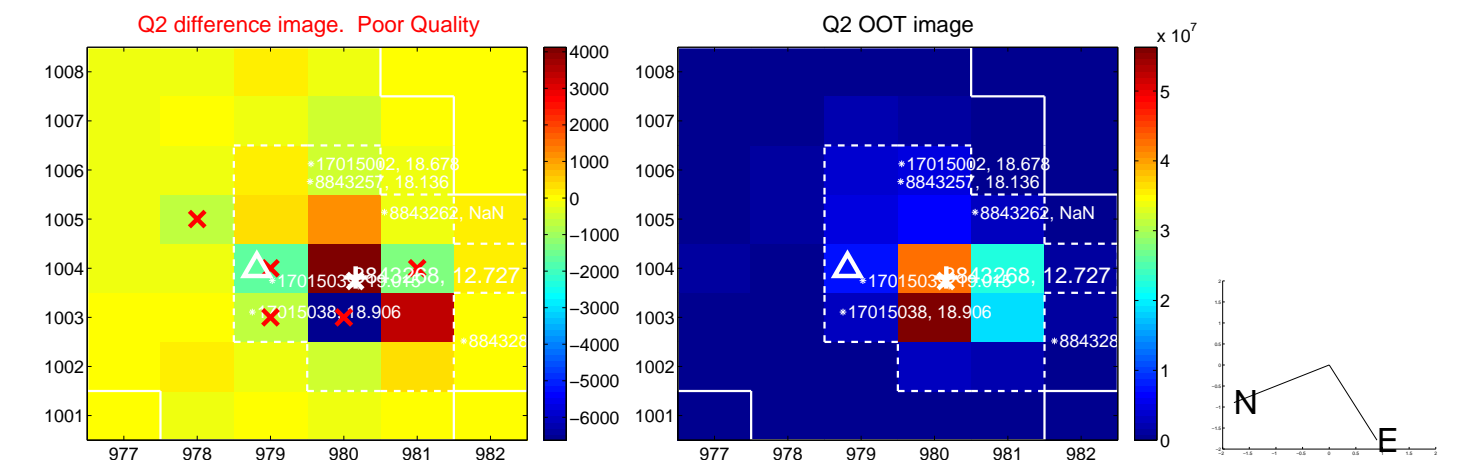
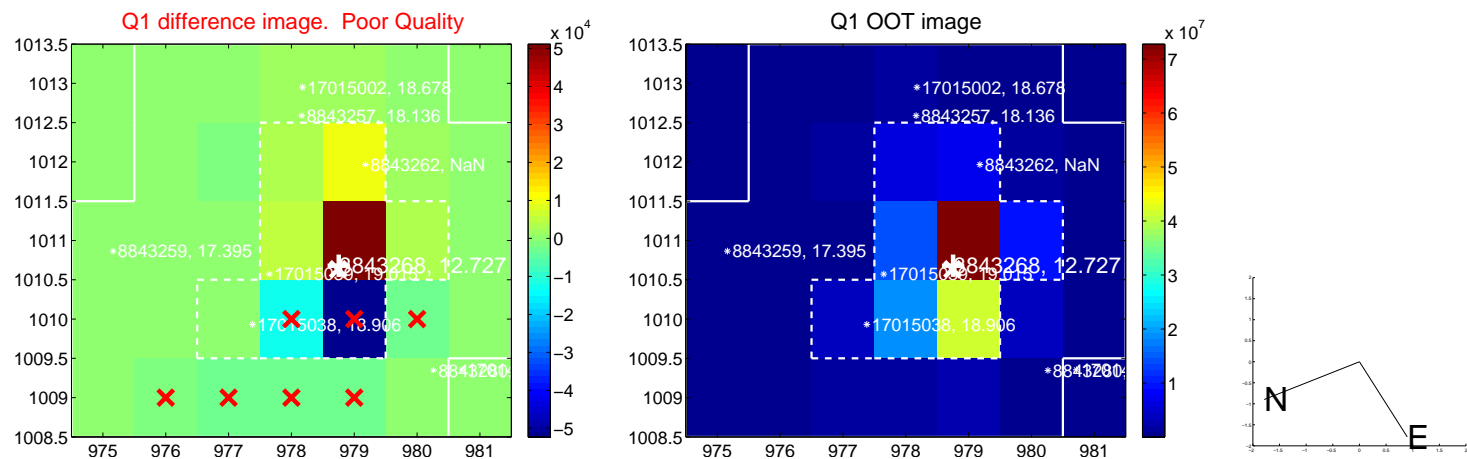
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.771 \pm 0.658$	2.69	$-1.764 \pm 0.695$	$0.164 \pm 0.708$
PRF-fit source offset from KIC position	$2.029 \pm 0.696$	2.91	$-2.029 \pm 0.696$	$-0.000 \pm 0.642$
photometric centroid source offset	$1.16 \pm 0.87$	1.33	$-0.96 \pm 0.90$	$-0.66 \pm 0.80$

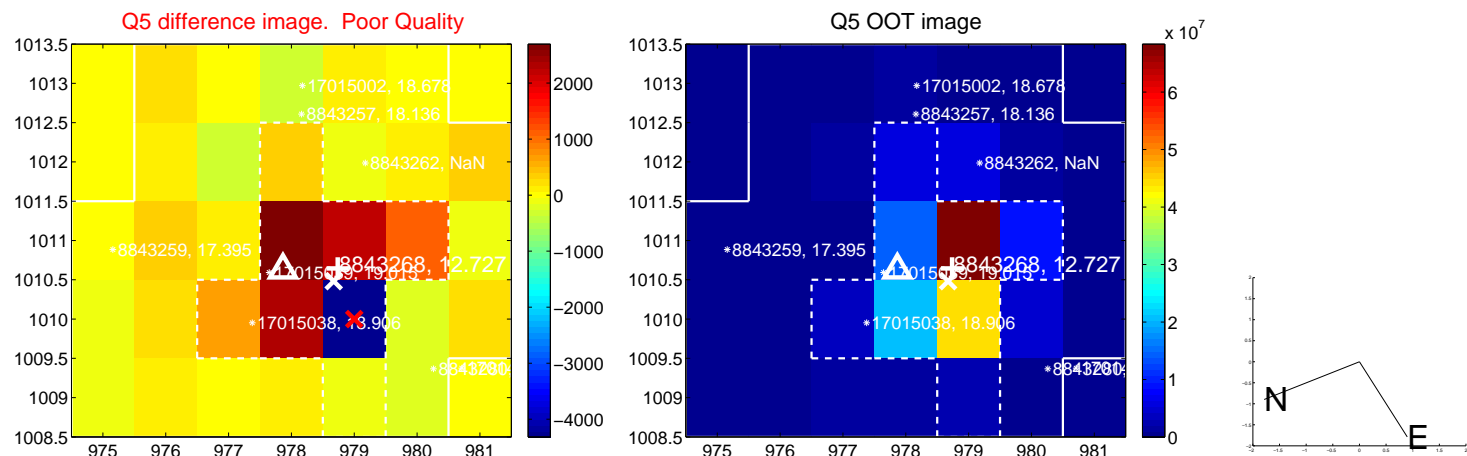


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

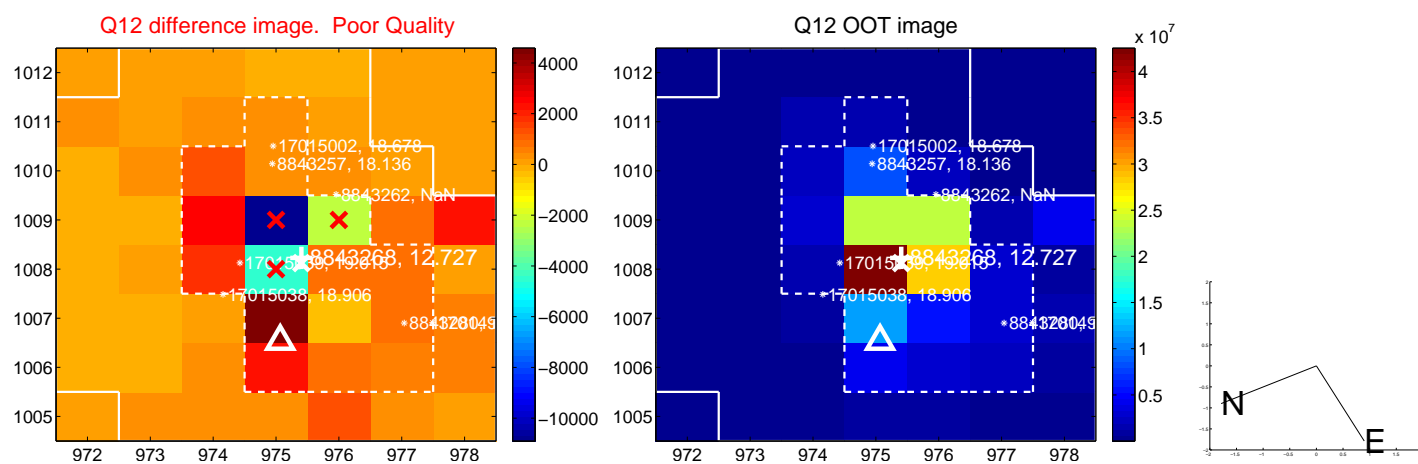
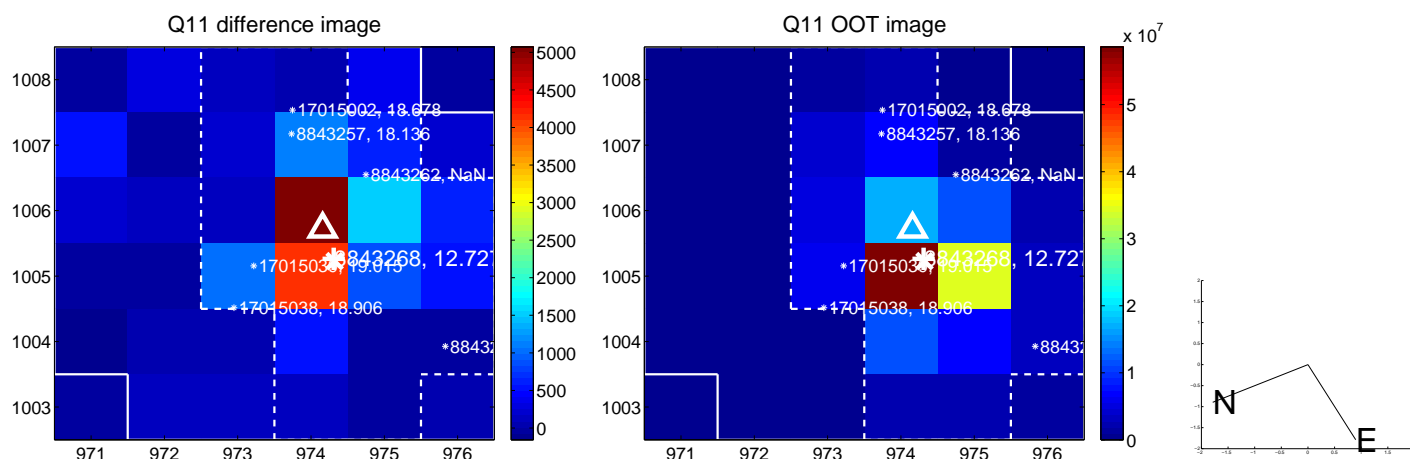
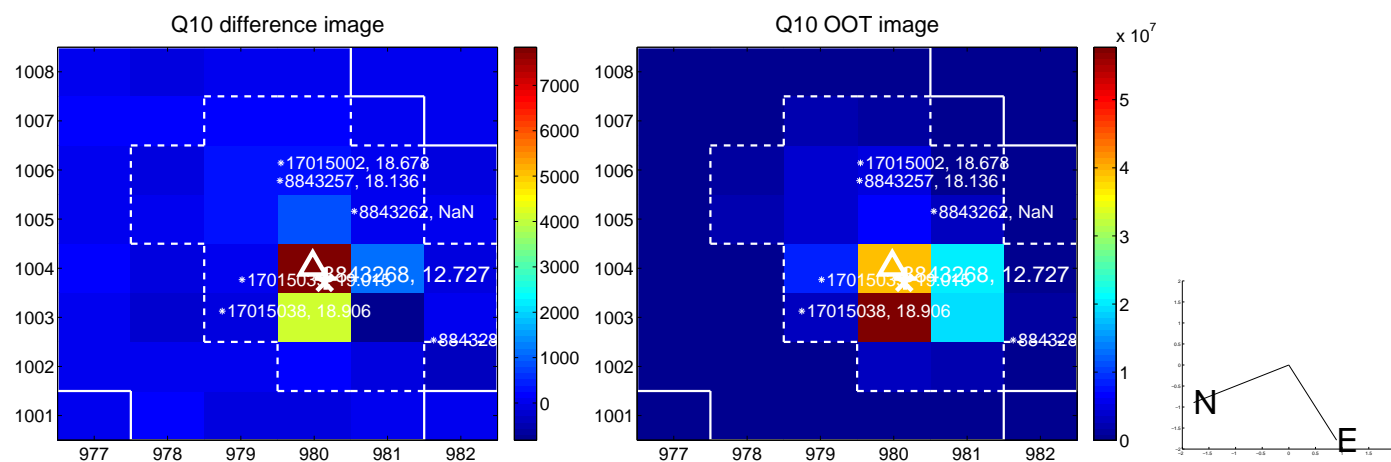
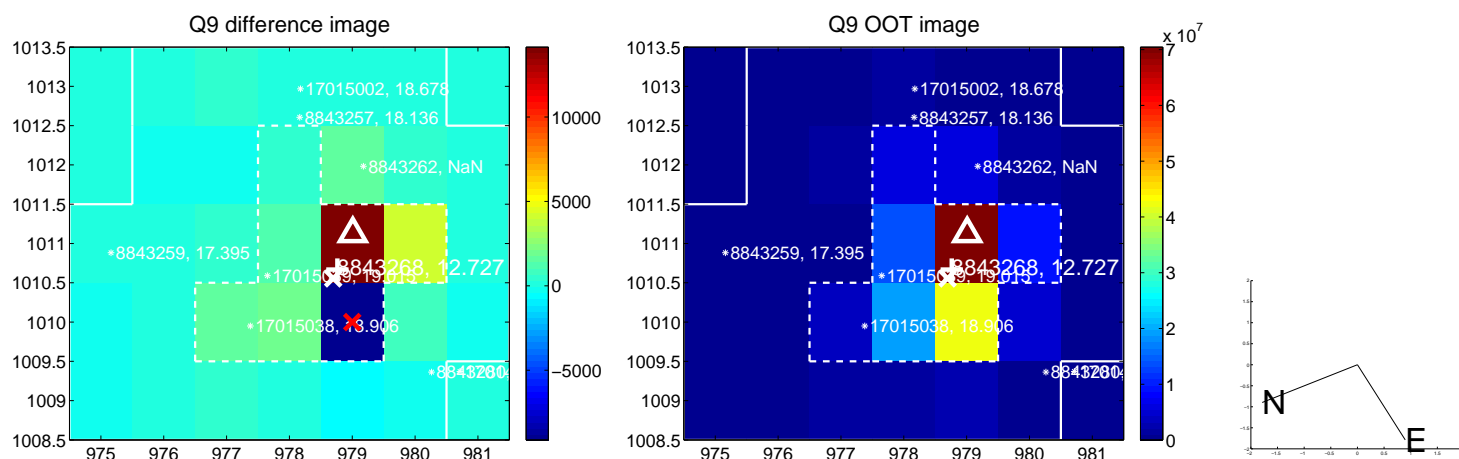


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

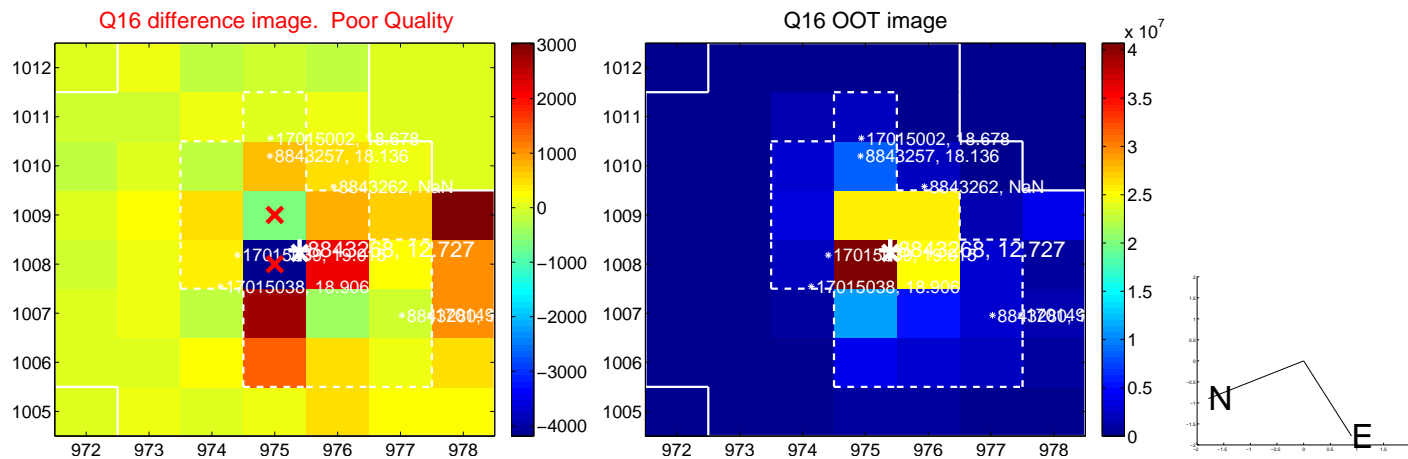
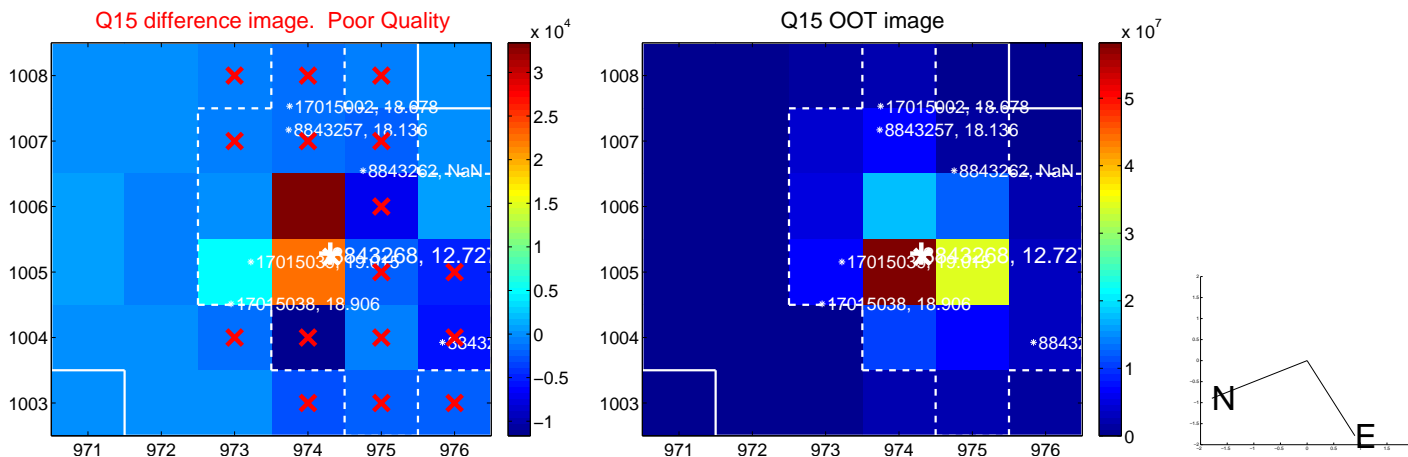
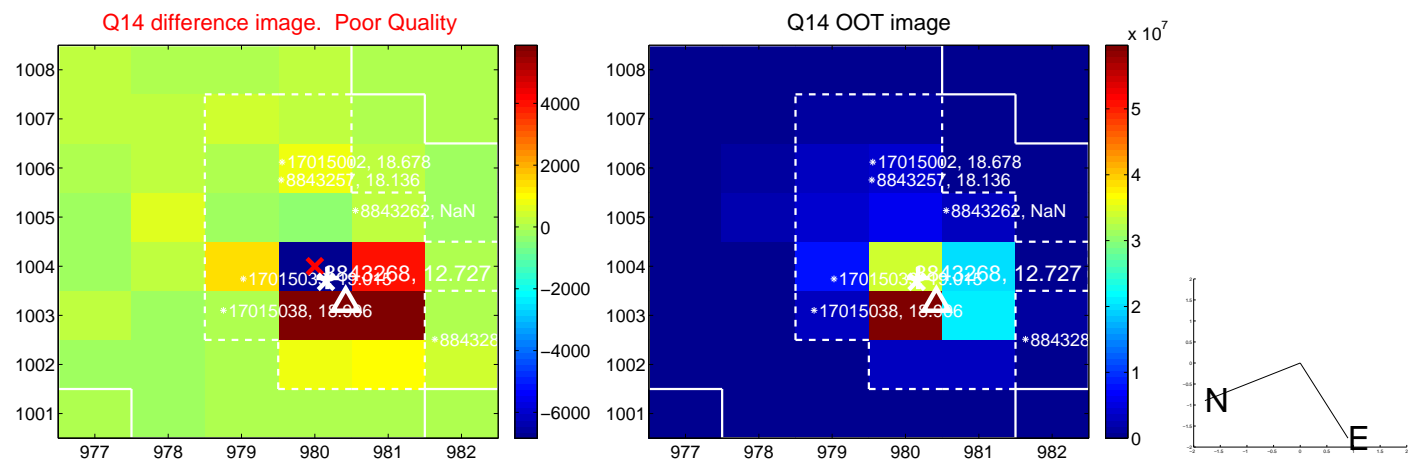
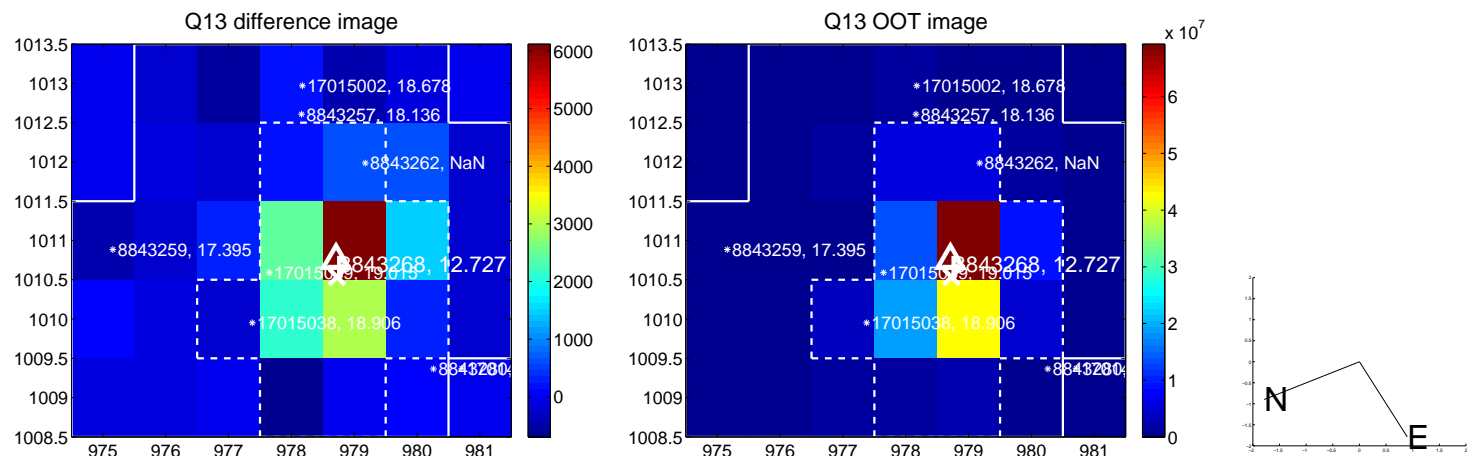




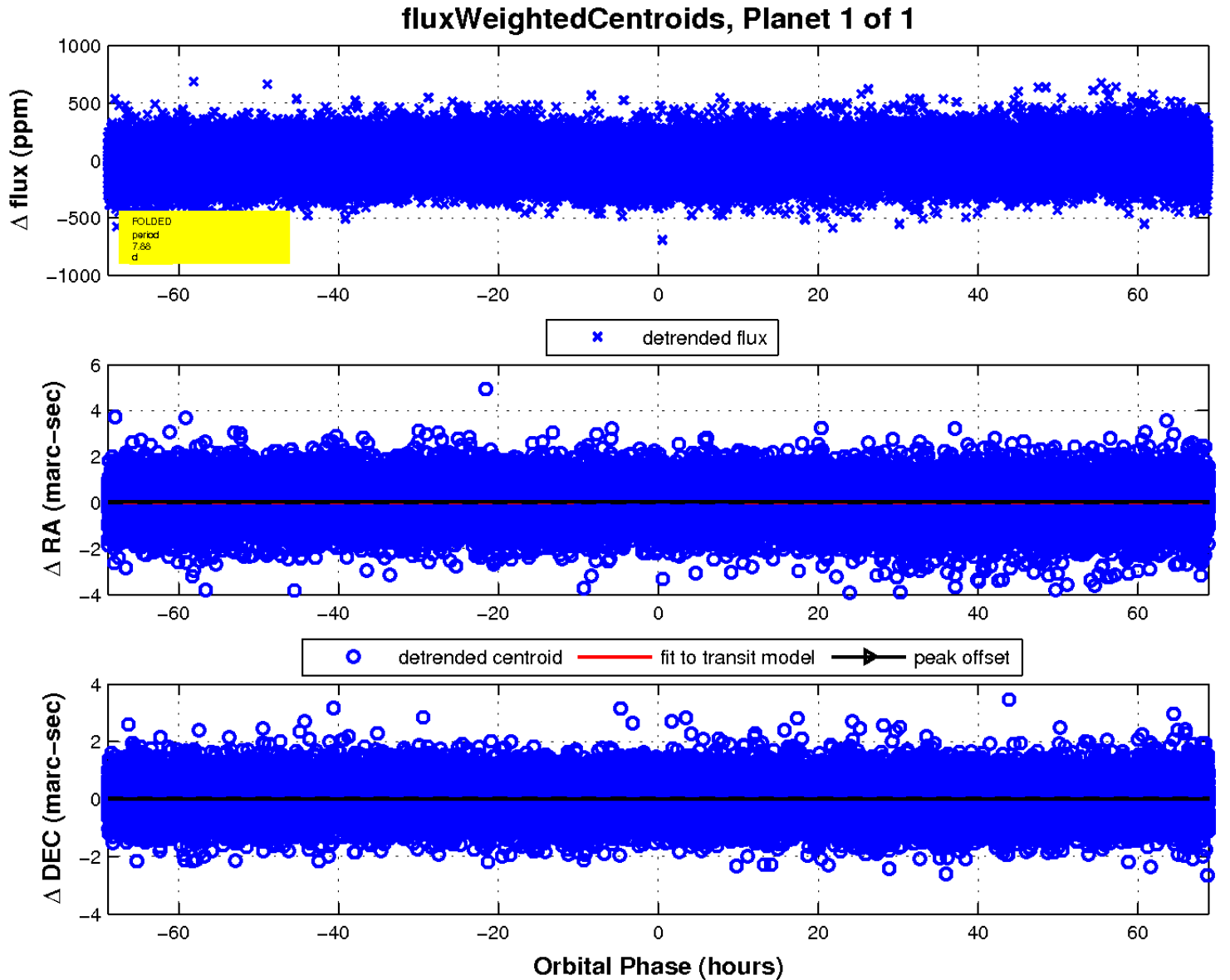
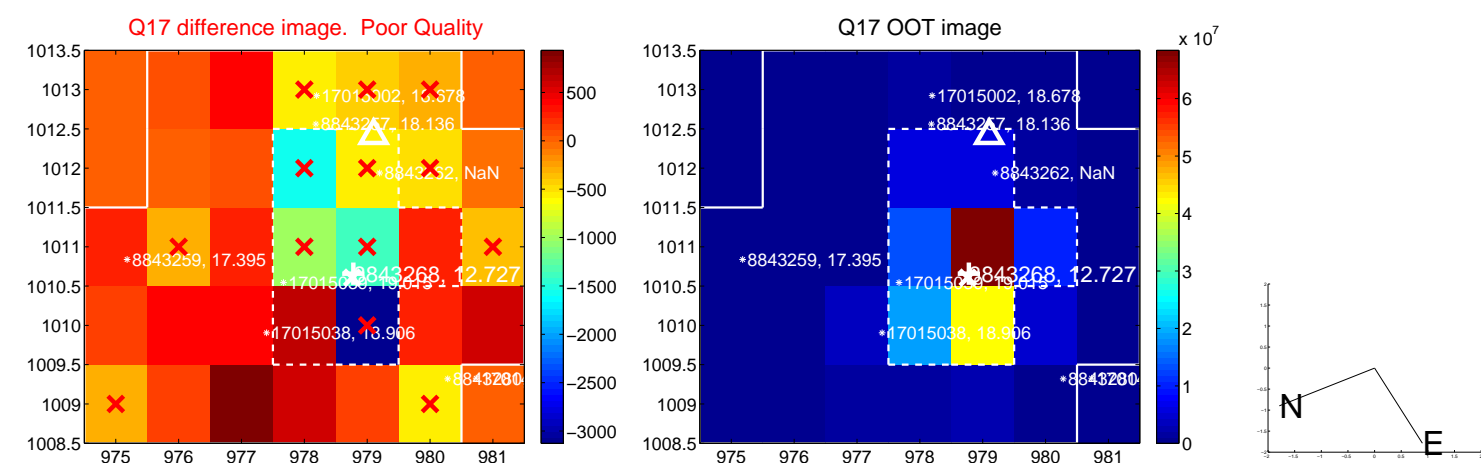
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

