

# KIC 003336765

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003336765-01	OBS	2740.01	1.844841	132.166458	78.0	1.722	18.1	19.7	1.00	6143	1.04	1557.02

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003336765-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—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.

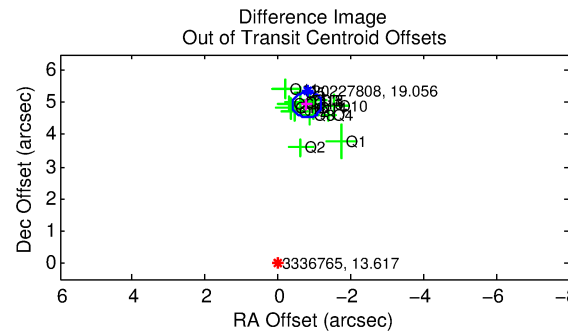
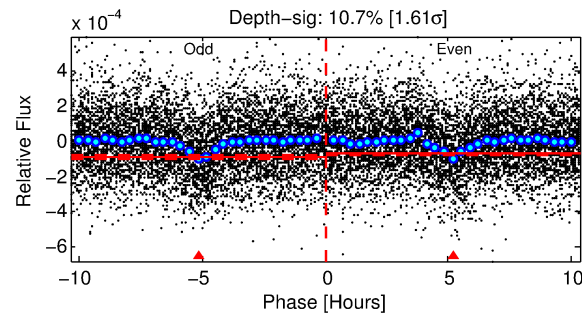
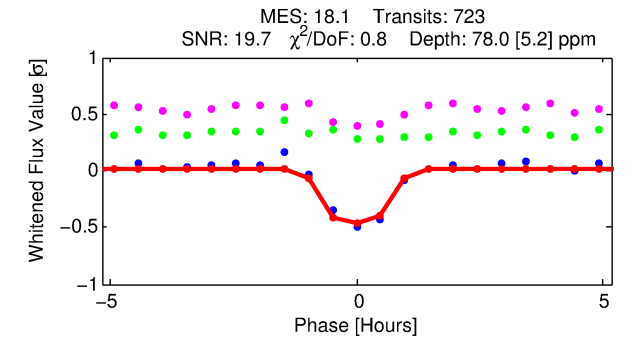
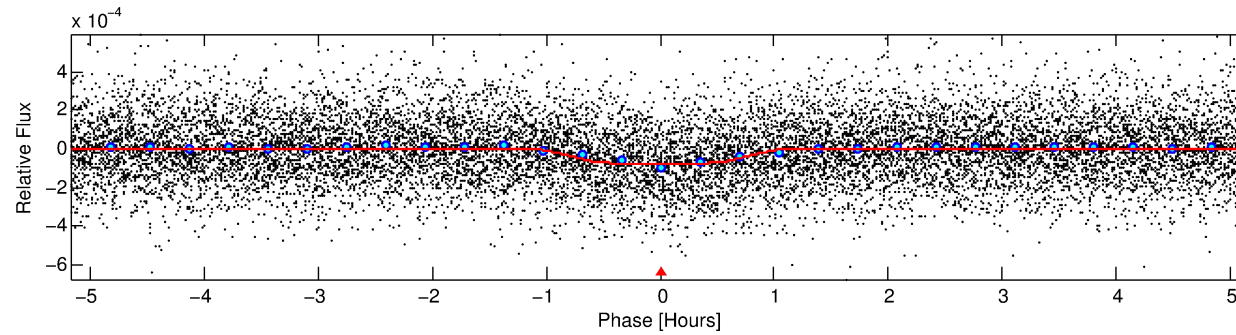
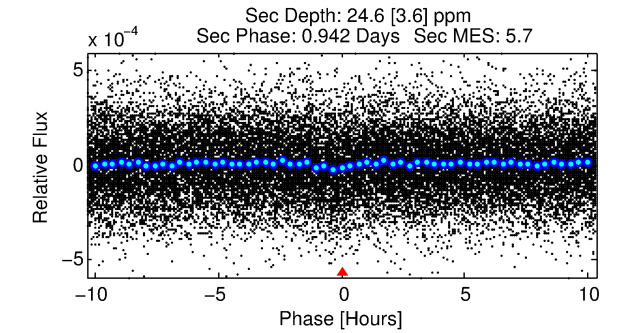
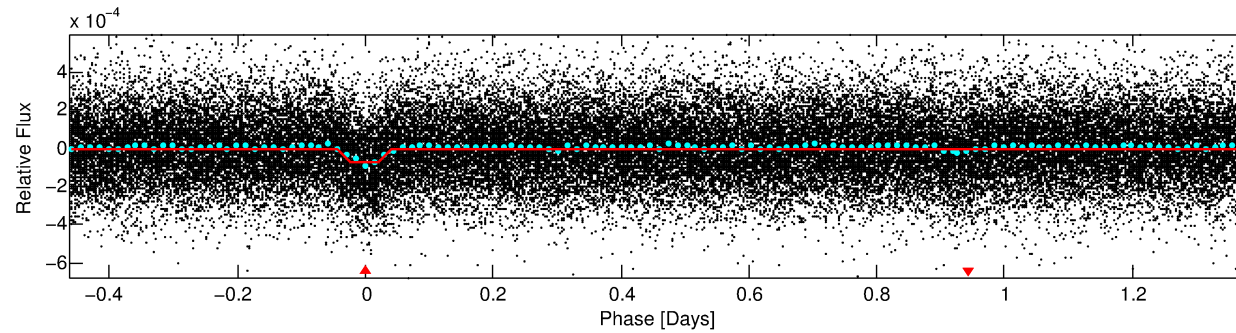
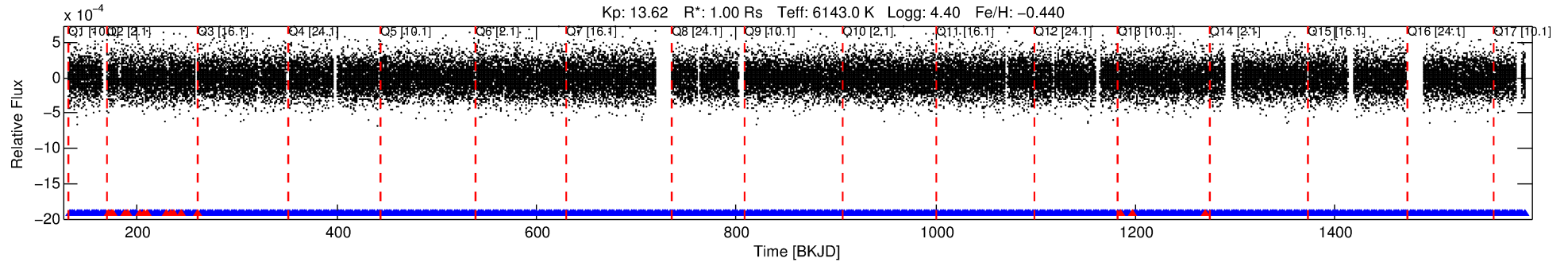
## Ephemeris Match Information For 003336765-01

No Significant Match Found

# DV One-Page Summary

KIC: 3336765 Candidate: 1 of 1 Period: 1.845 d

KOI: K02740.01 Corr: 0.943



## DV Fit Results:

Period = 1.84484 [0.00001] d  
Epoch = 132.1665 [0.0014] BKJD  
Rp/R\* = 0.0095 [0.0025]  
a/R\* = 3.82 [5.13]  
b = 0.90 [0.30]  
Seff = 1557.02 [579.50]  
Teq = 1602 [149] K  
Rp = 1.04 [0.40] Re  
a = 0.0287 [0.0069] AU  
Ag = 10.24 [6.64] [1.39σ]  
Teffp = 4430 [617] K [4.46σ]

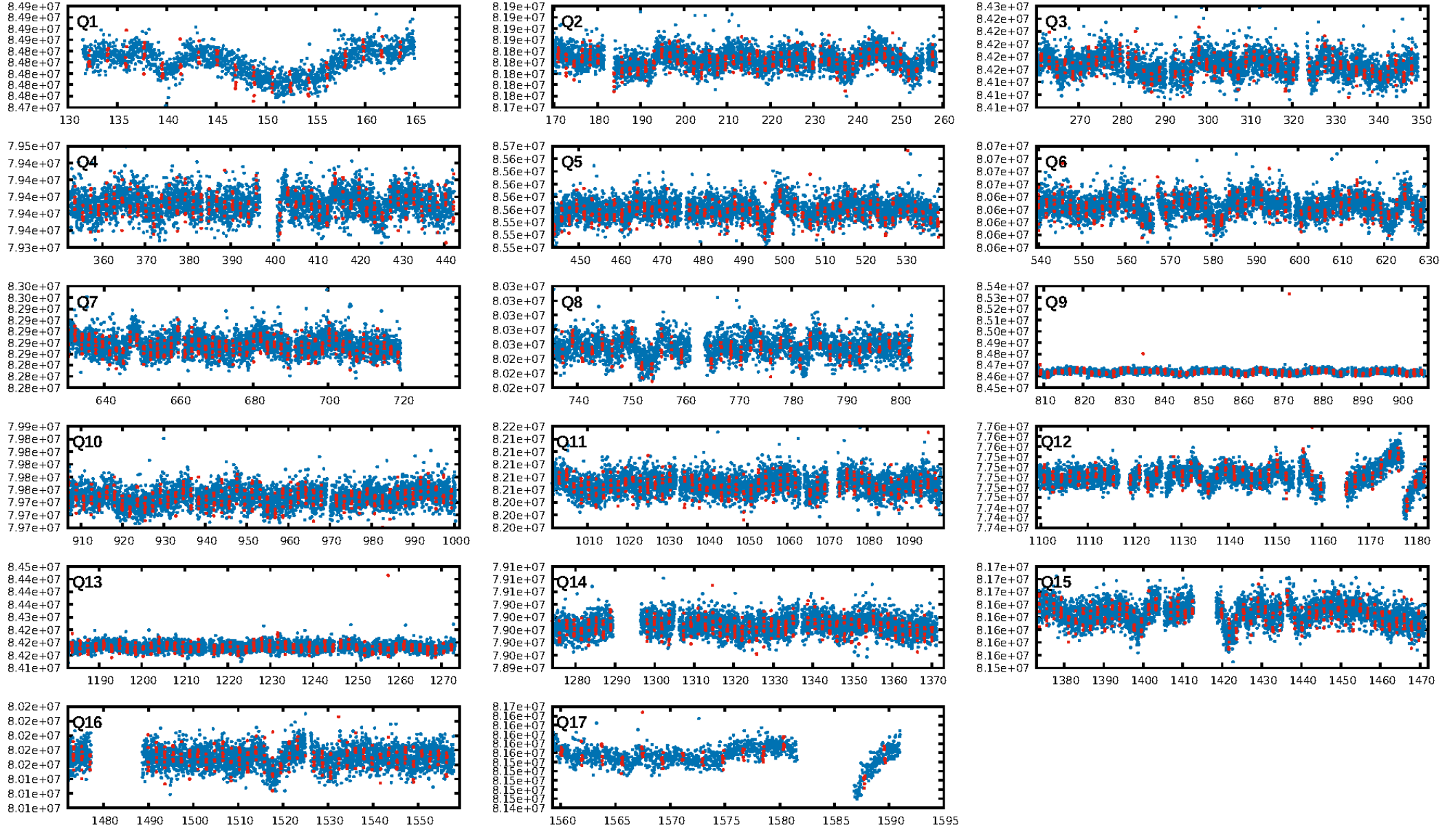
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.71e-70  
RollingBand-fgt: 0.98 [675/691]  
GhostDiagnostic-chr: 0.7427  
Centroid-sig: 0.0%  
Centroid-so: 6.235 arcsec [8.92σ]  
OotOffset-rm: 4.991 arcsec [37.20σ]  
KicOffset-rm: 5.289 arcsec [39.24σ]  
OotOffset-st: 4/4/4/3 [15]  
KicOffset-st: 4/4/4/3 [15]  
DiffImageQuality-fgm: 0.93 [14/15]  
DiffImageOverlap-fno: 1.00 [17/17]

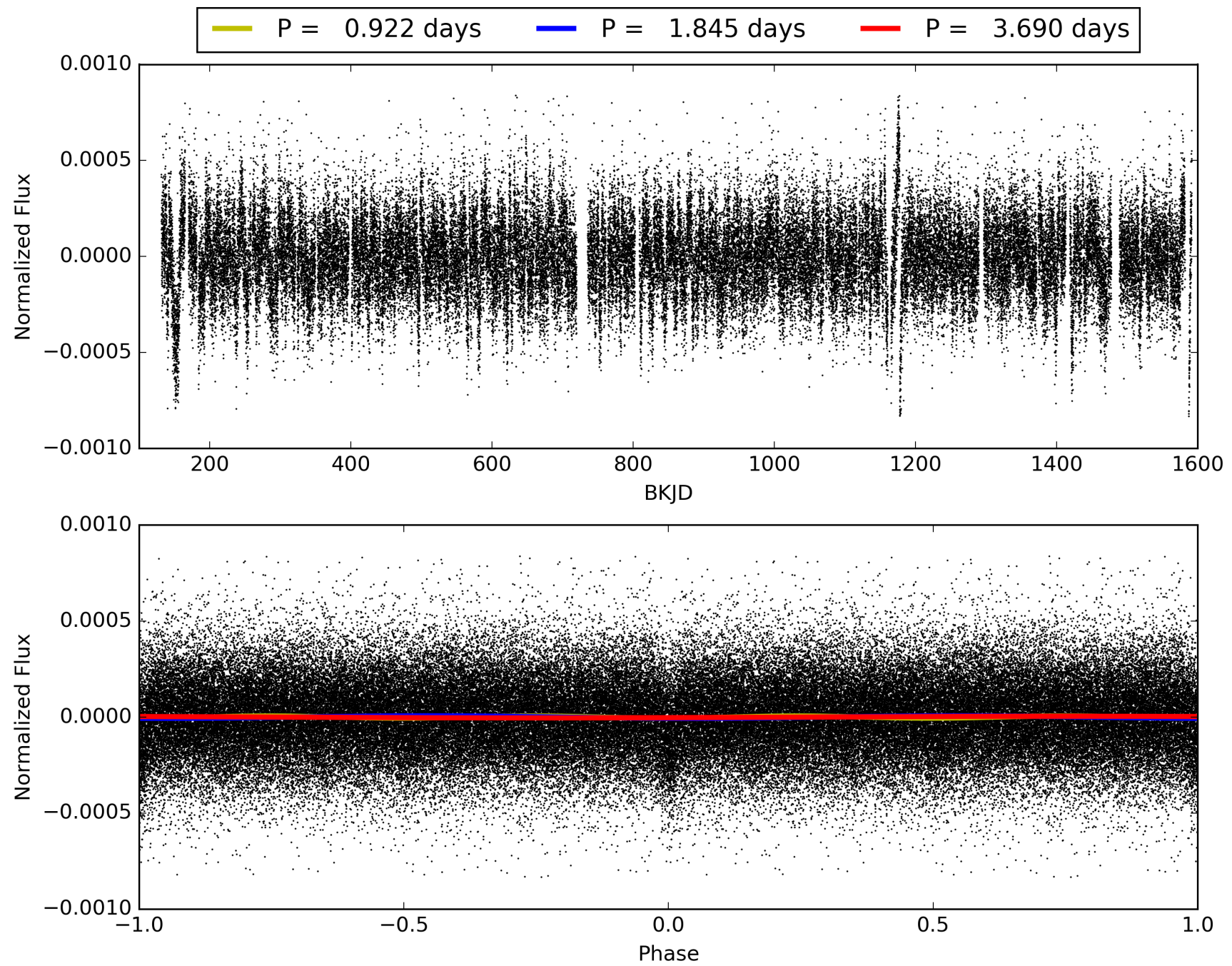
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:22:37 Z

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

# TCE 003336765-01, PDC Light Curves

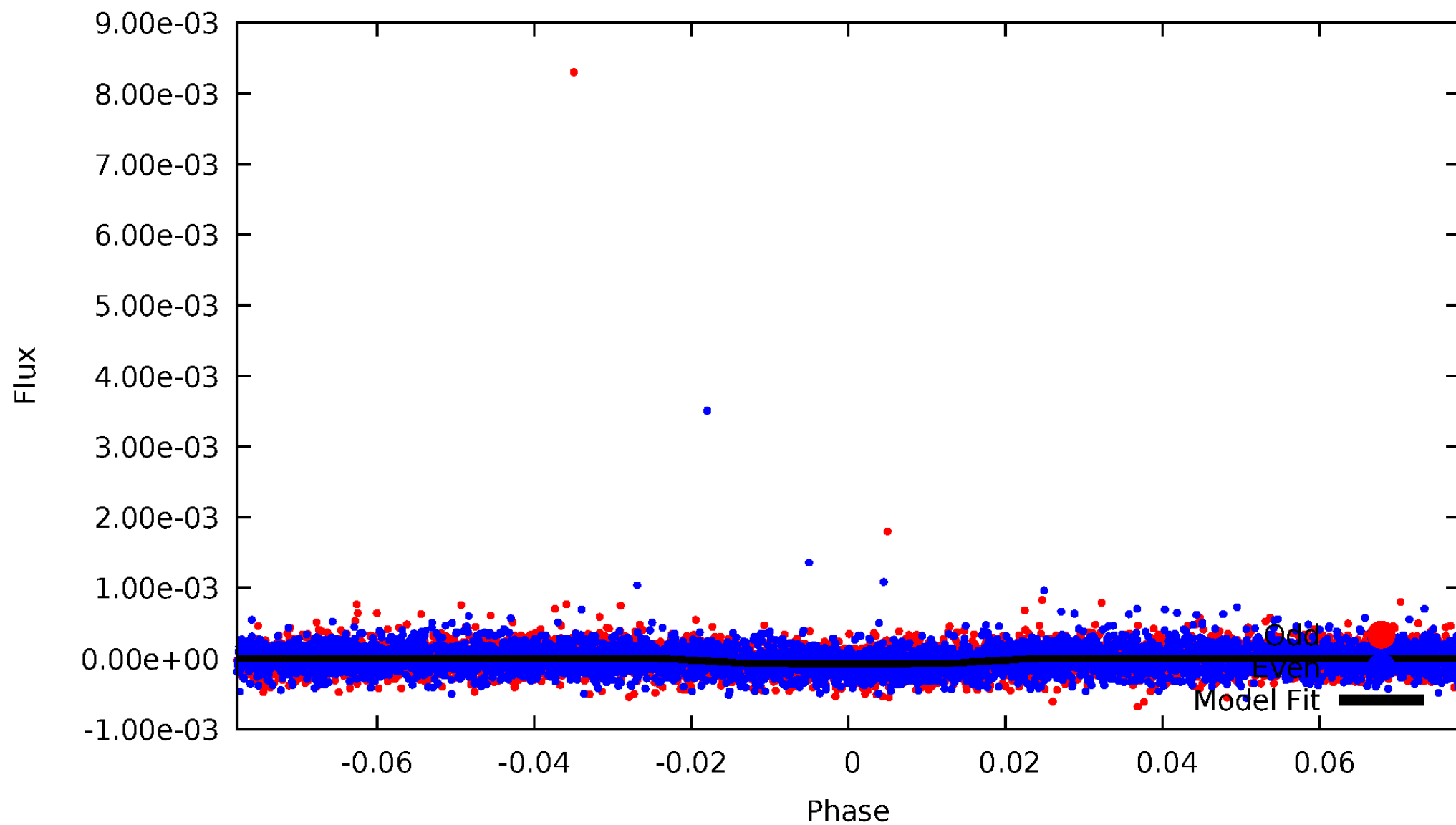


TCE 003336765-01



# DV Odd/Even

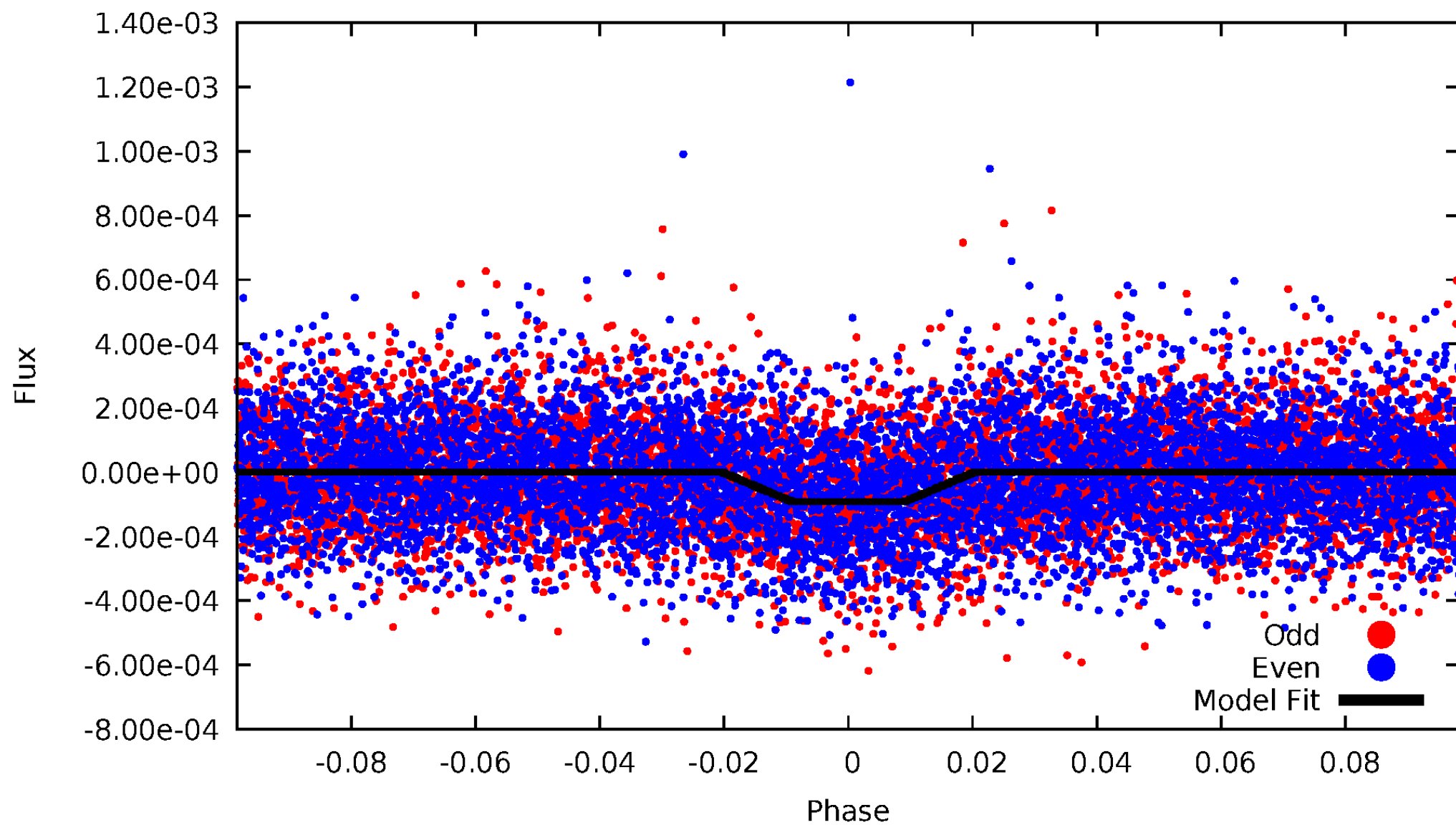
TCE 003336765-01





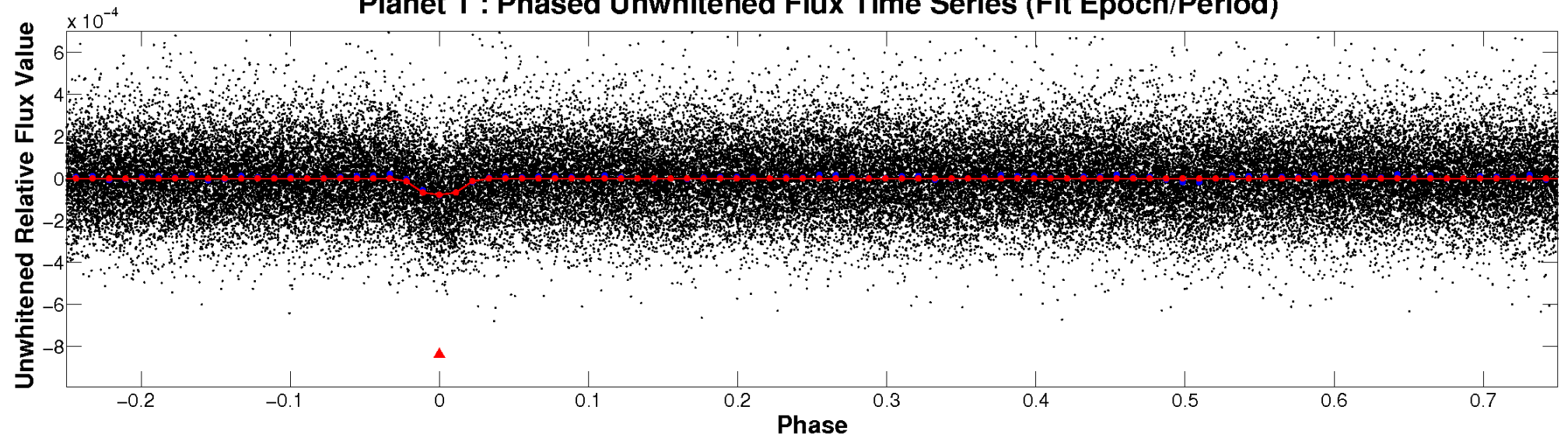
# ALT Odd/Even

TCE 003336765-01

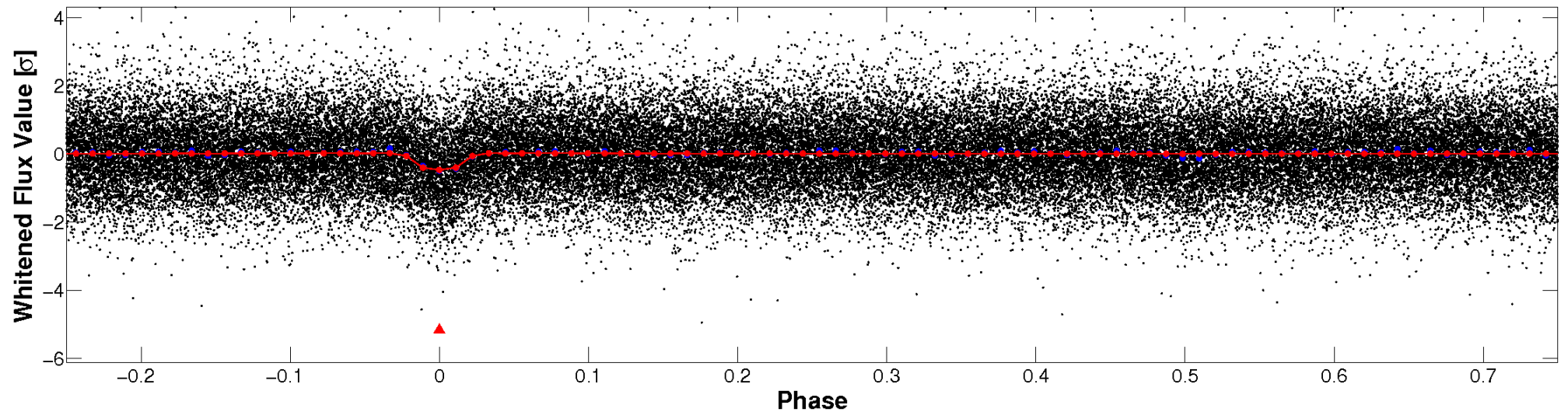


# Non-Whitened Vs. Whitened Light Curve

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

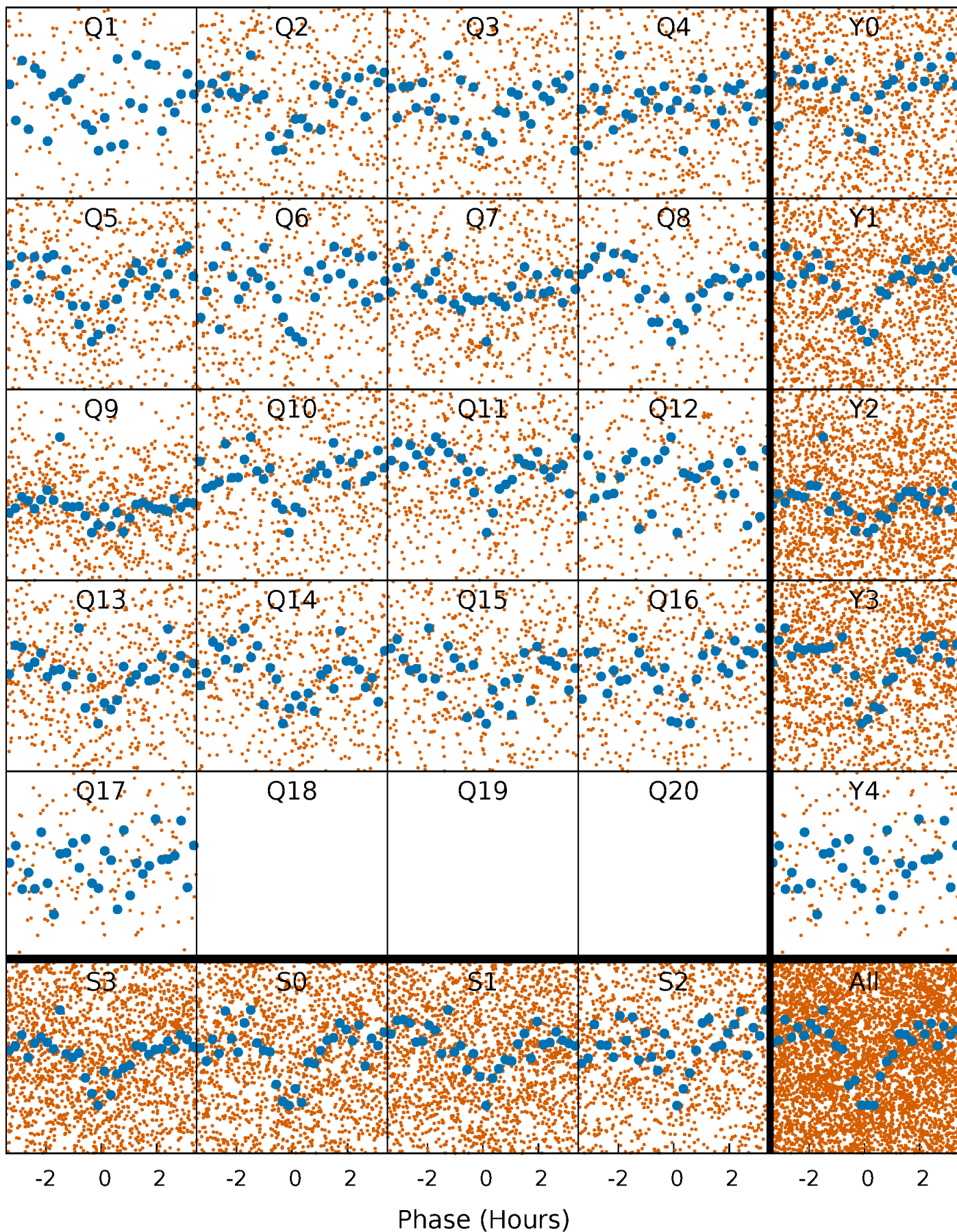


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

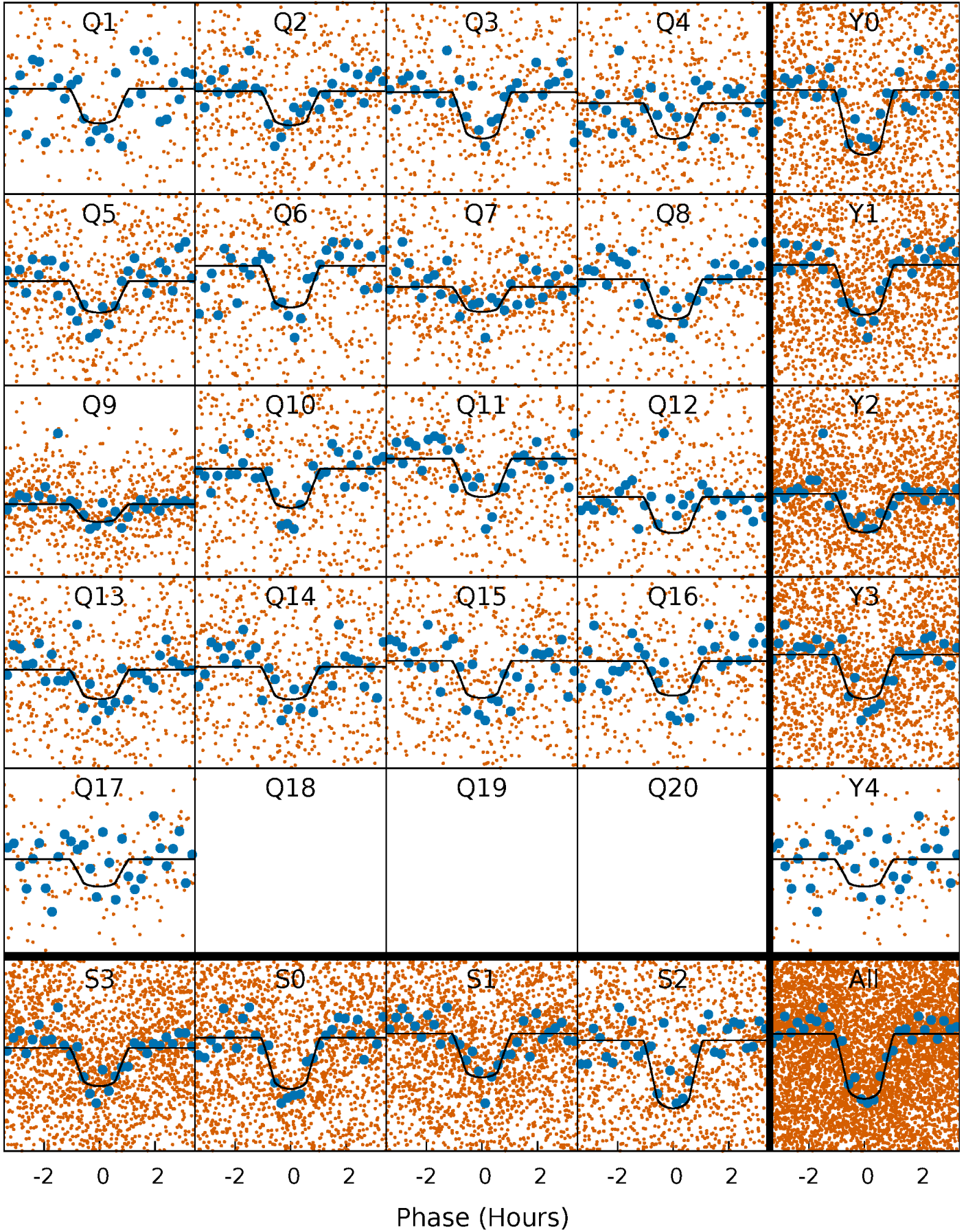
TCE 003336765-01 P= 1.844841 Days  $T_0=132.166458$  (BKJD)





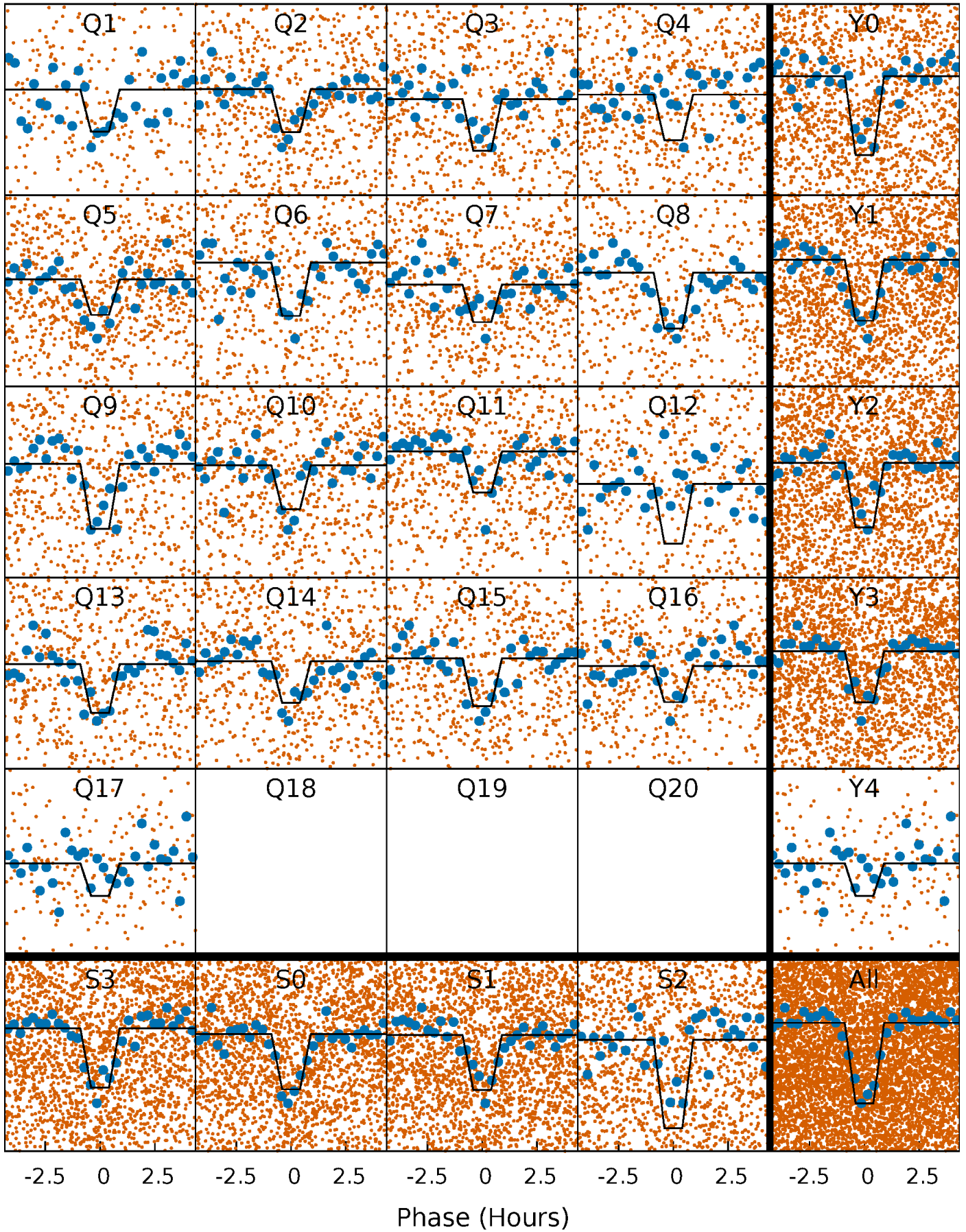
# DV Quarter-Phased Transit Curves

TCE 003336765-01 P= 1.844841 Days  $T_0=132.166458$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

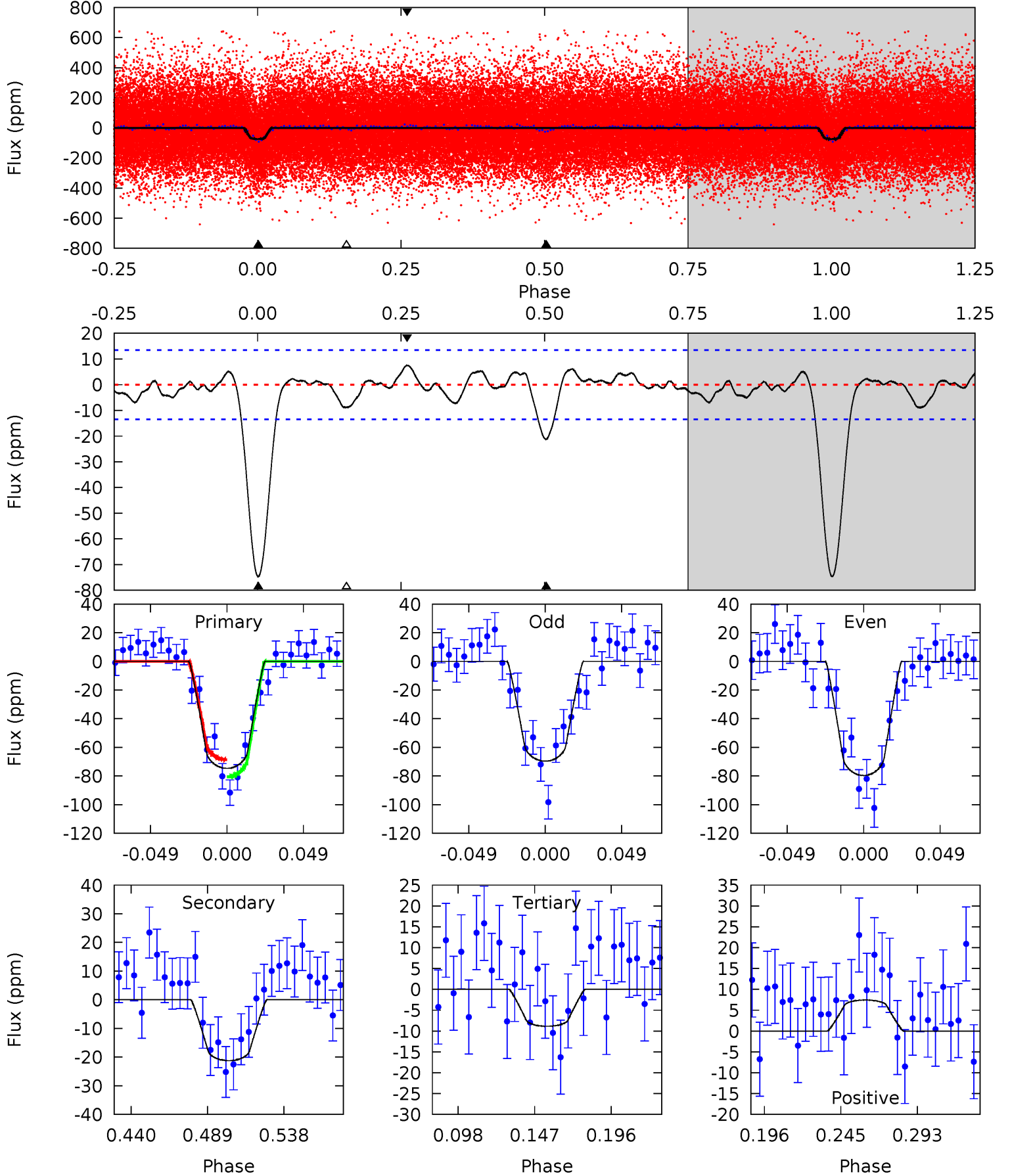
TCE 003336765-01 P= 1.844856 Days  $T_0=132.162666$  (BKJD)



# DV Model-Shift Uniqueness Test

003336765-01, P = 1.844841 Days, E = 130.321617 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
26.1	7.44	3.10	2.60	4.71	1.97	1.15	23.0	23.5	4.34	4.84	1.76	0.91	0.09	2.10

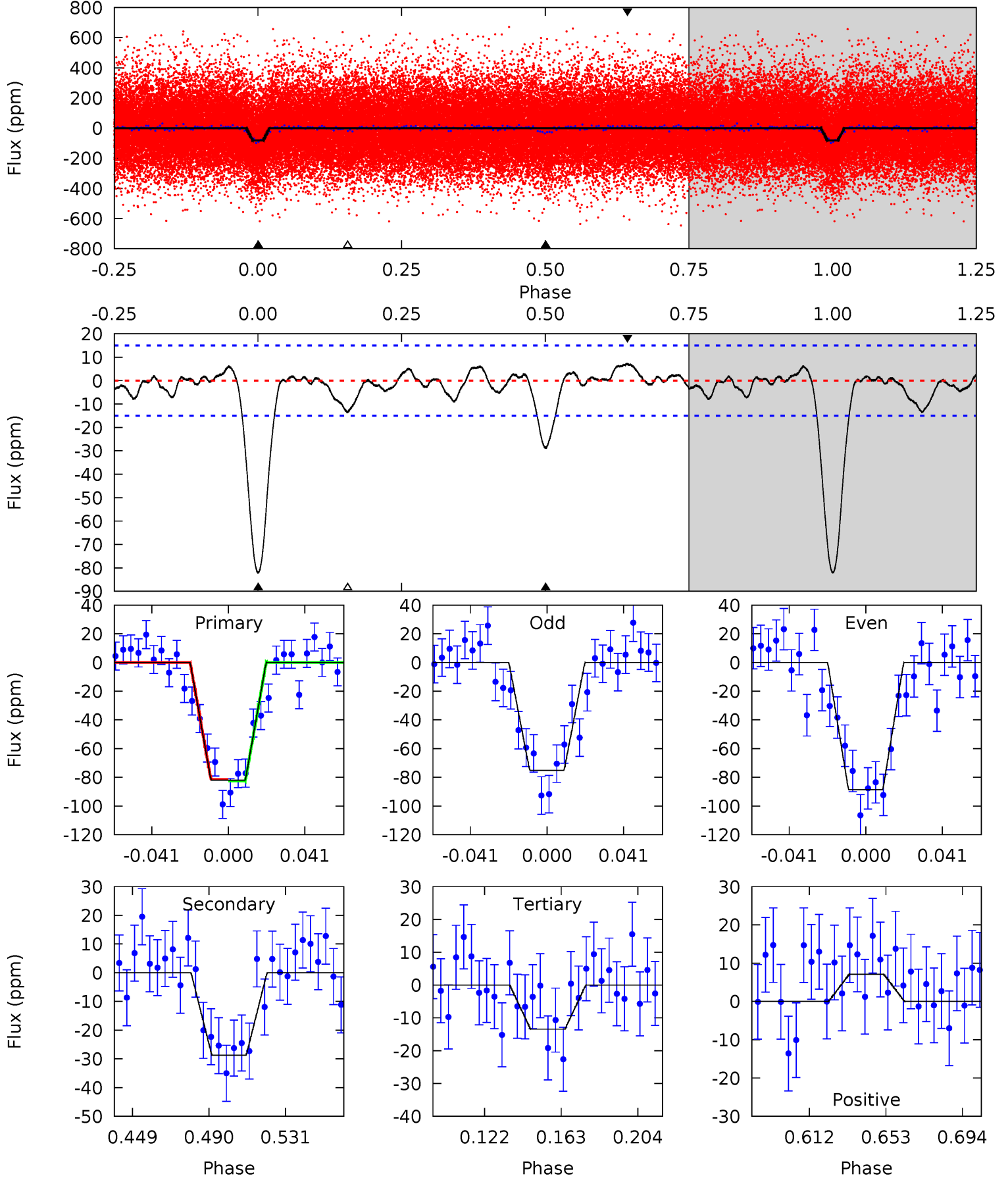




# Alt Model-Shift Uniqueness Test

003336765-01, P = 1.844856 Days, E = 130.317810 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
25.9	9.09	4.25	2.25	4.75	2.05	1.23	21.7	23.7	4.83	6.83	2.13	0.95	0.08	0.15





### Stellar Parameters For KIC 003336765

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6143^{+166}_{-184}$	$4.403^{+0.105}_{-0.195}$	$-0.440^{+0.300}_{-0.300}$	$1.004^{+0.280}_{-0.151}$	$0.931^{+0.128}_{-0.093}$	$1.296^{+0.598}_{-0.656}$
	+3%/-3%	+2%/-4%	+68%/-68%	+28%/-15%	+14%/-10%	+46%/-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 003336765-01 / KOI 2740.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-21 \pm 3$	$1.09^{+0.33}_{-0.28}$	$2270^{+166}_{-118}$	$4396^{+597}_{-391}$	$7.885^{+7.080}_{-3.148}$
Alt.	$-29 \pm 3$	$1.08^{+0.32}_{-0.30}$	$2264^{+169}_{-134}$	$4696^{+710}_{-441}$	$11^{+10}_{-5}$

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

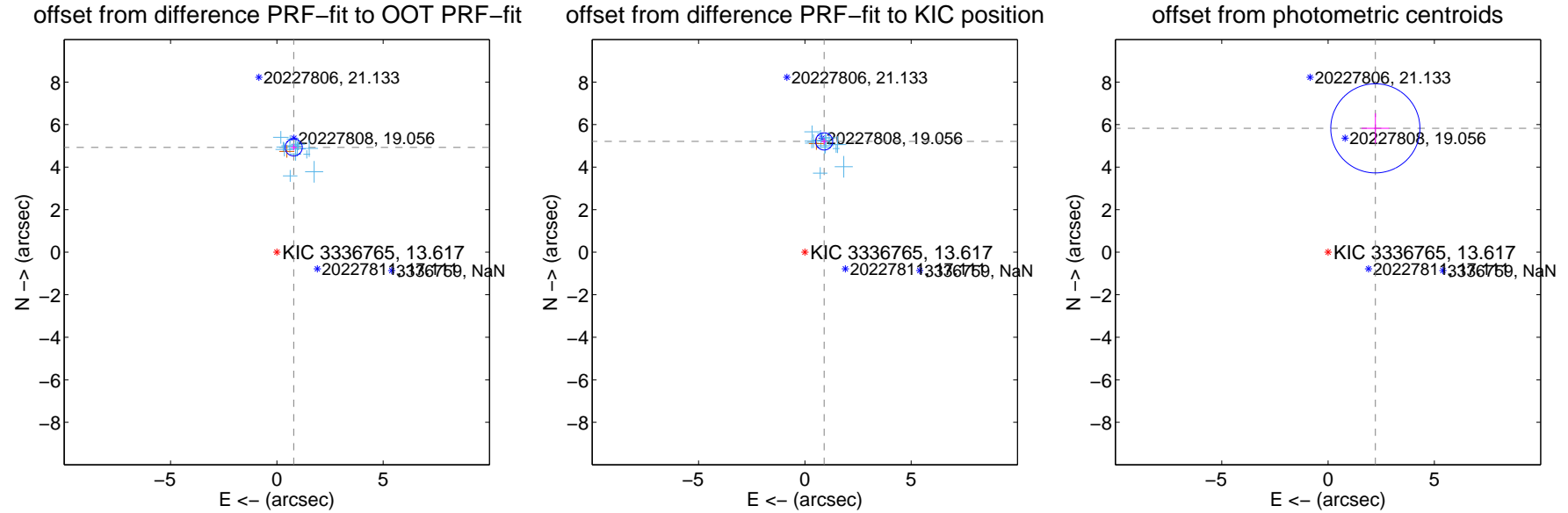
## DV Centroid Data

Supplemental centroid analysis for 003336765-01. Kepler magnitude: 13.62. Transit SNR 19.67

There are 14 quarters with good PRF difference image offsets

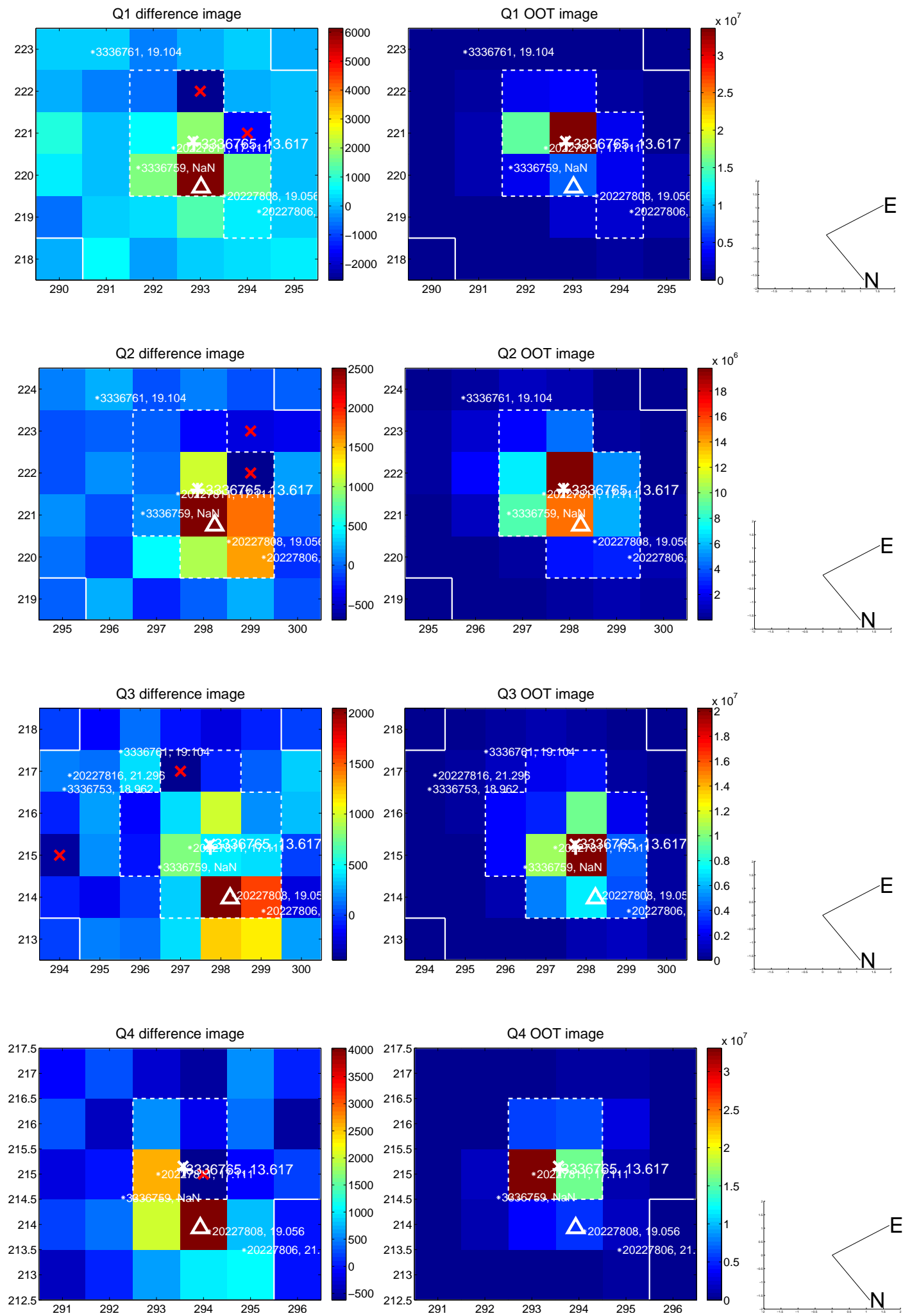
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.991 \pm 0.134$	37.20	$-0.792 \pm 0.134$	$4.928 \pm 0.142$
PRF-fit source offset from KIC position	$5.289 \pm 0.135$	39.24	$-0.907 \pm 0.127$	$5.211 \pm 0.142$
photometric centroid source offset	$6.24 \pm 0.70$	8.92	$-2.22 \pm 0.65$	$5.83 \pm 0.71$

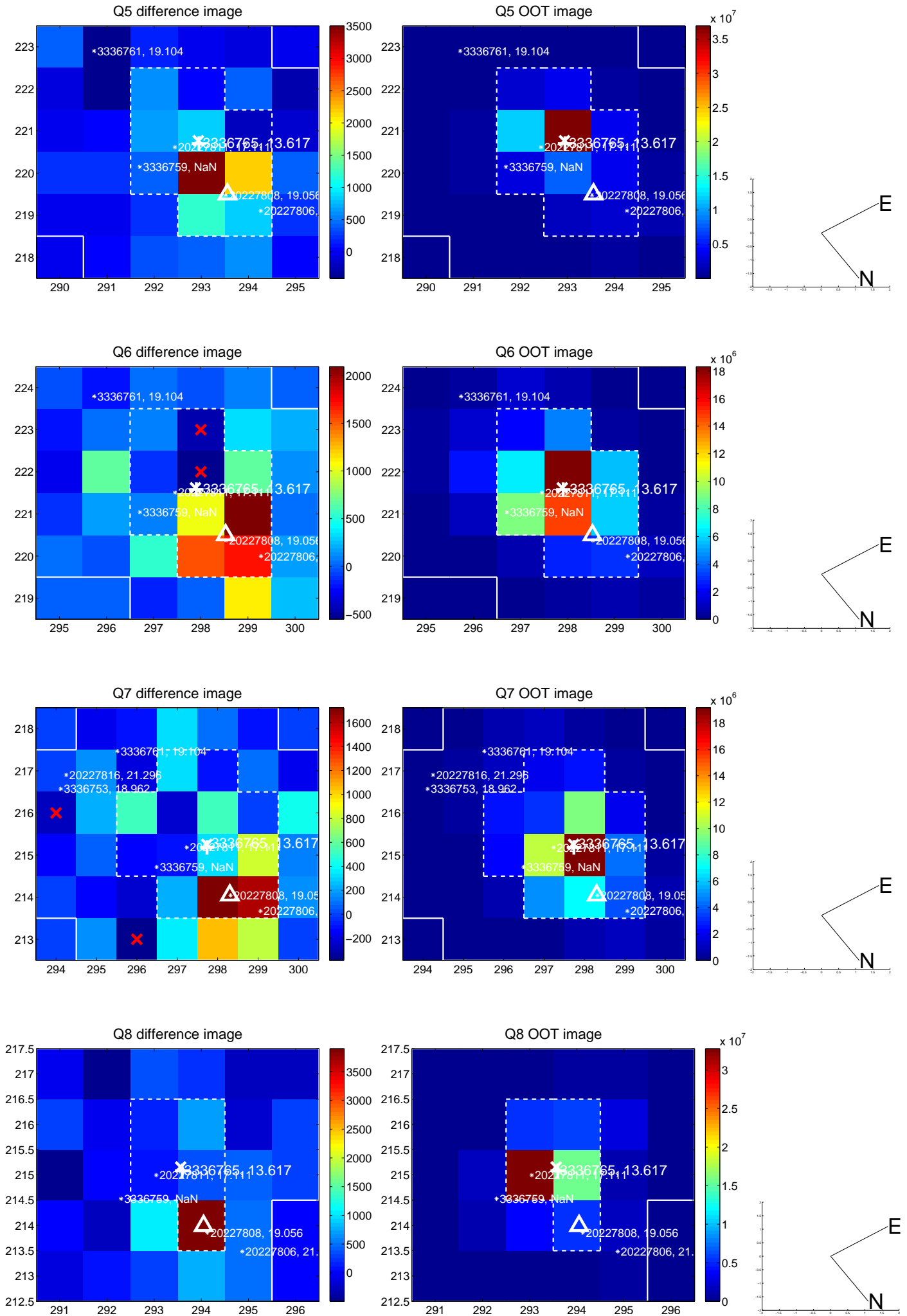


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

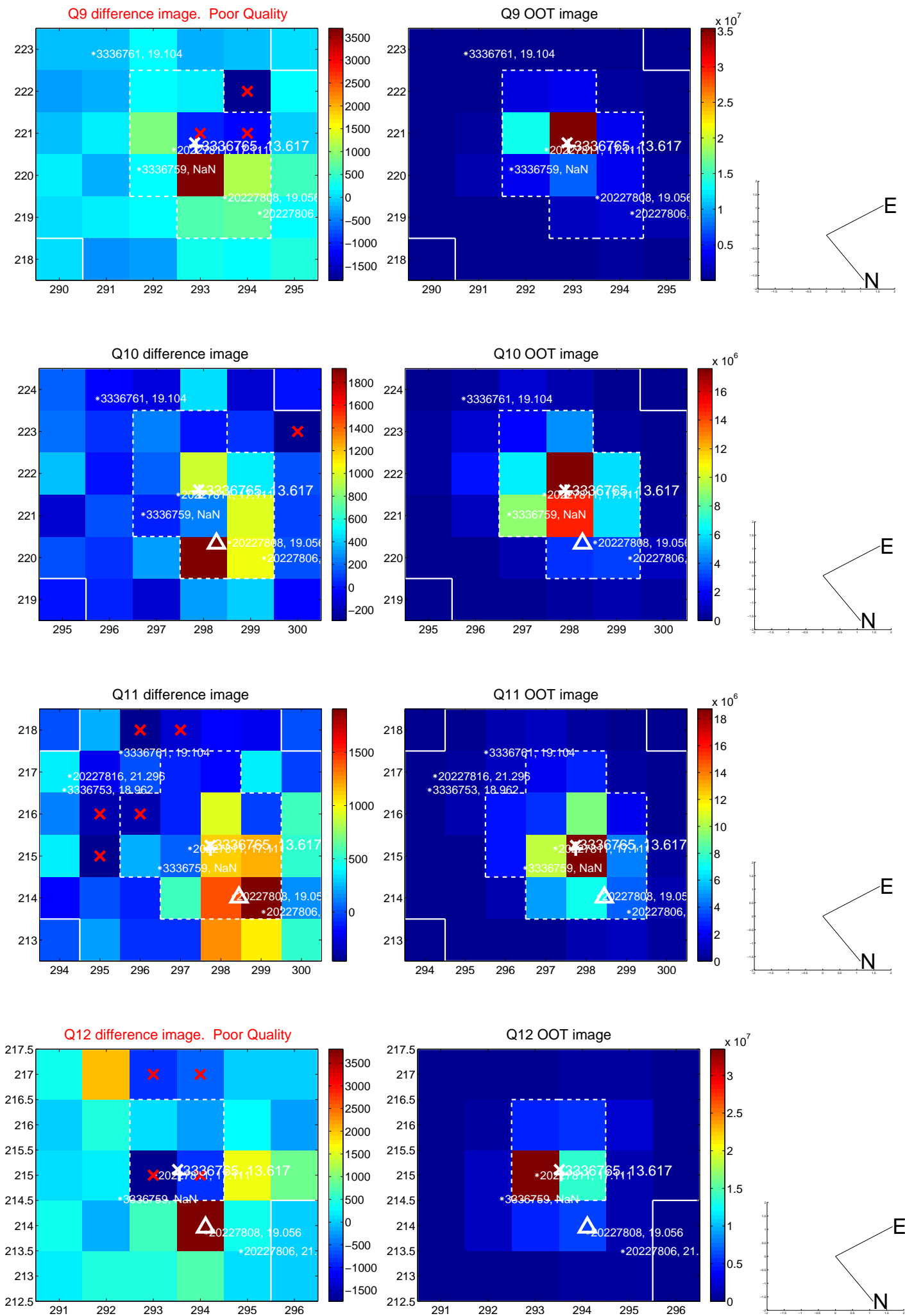


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

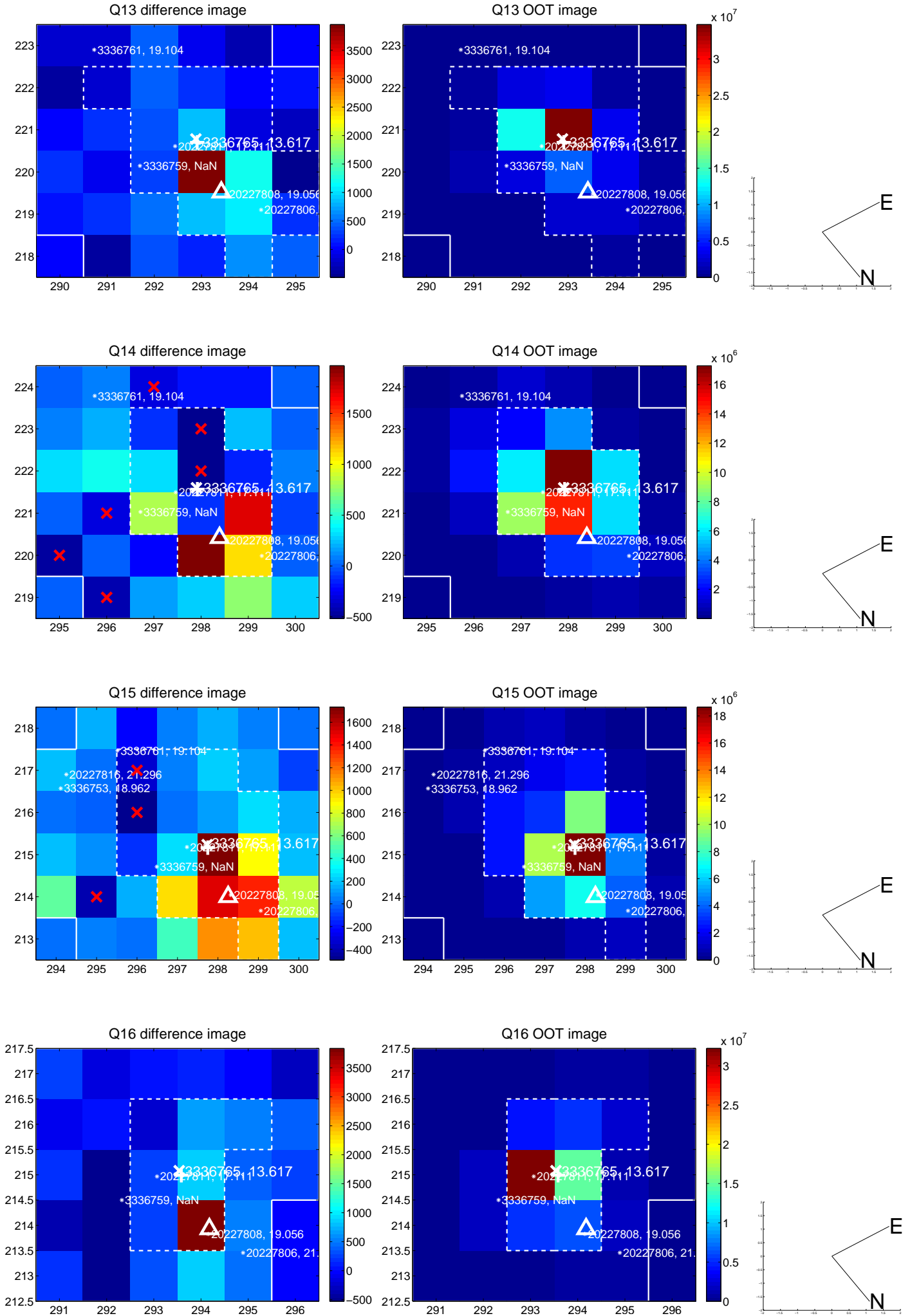




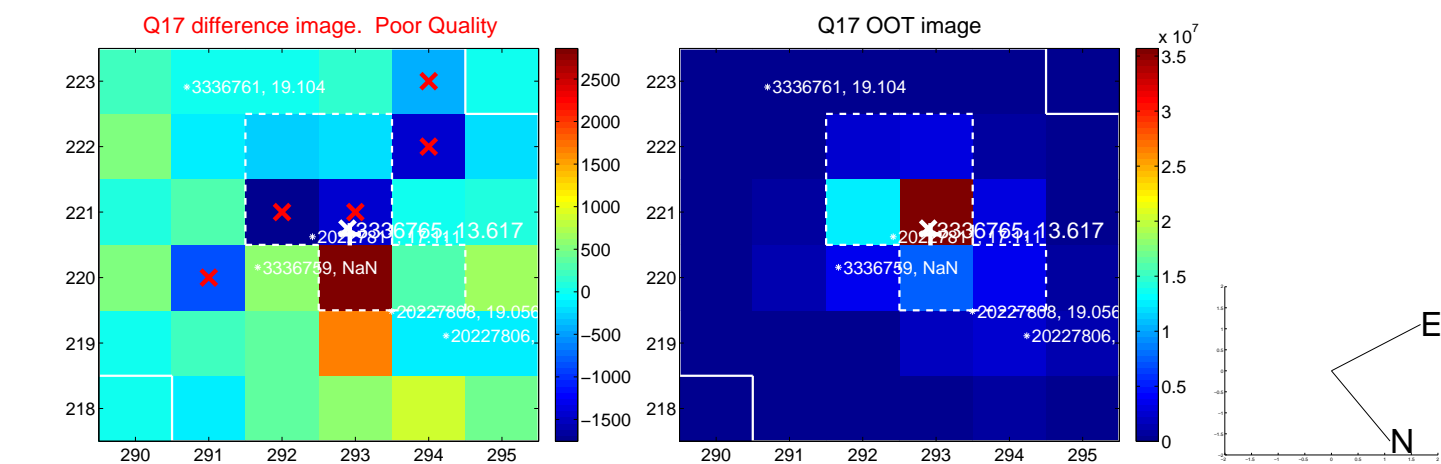
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



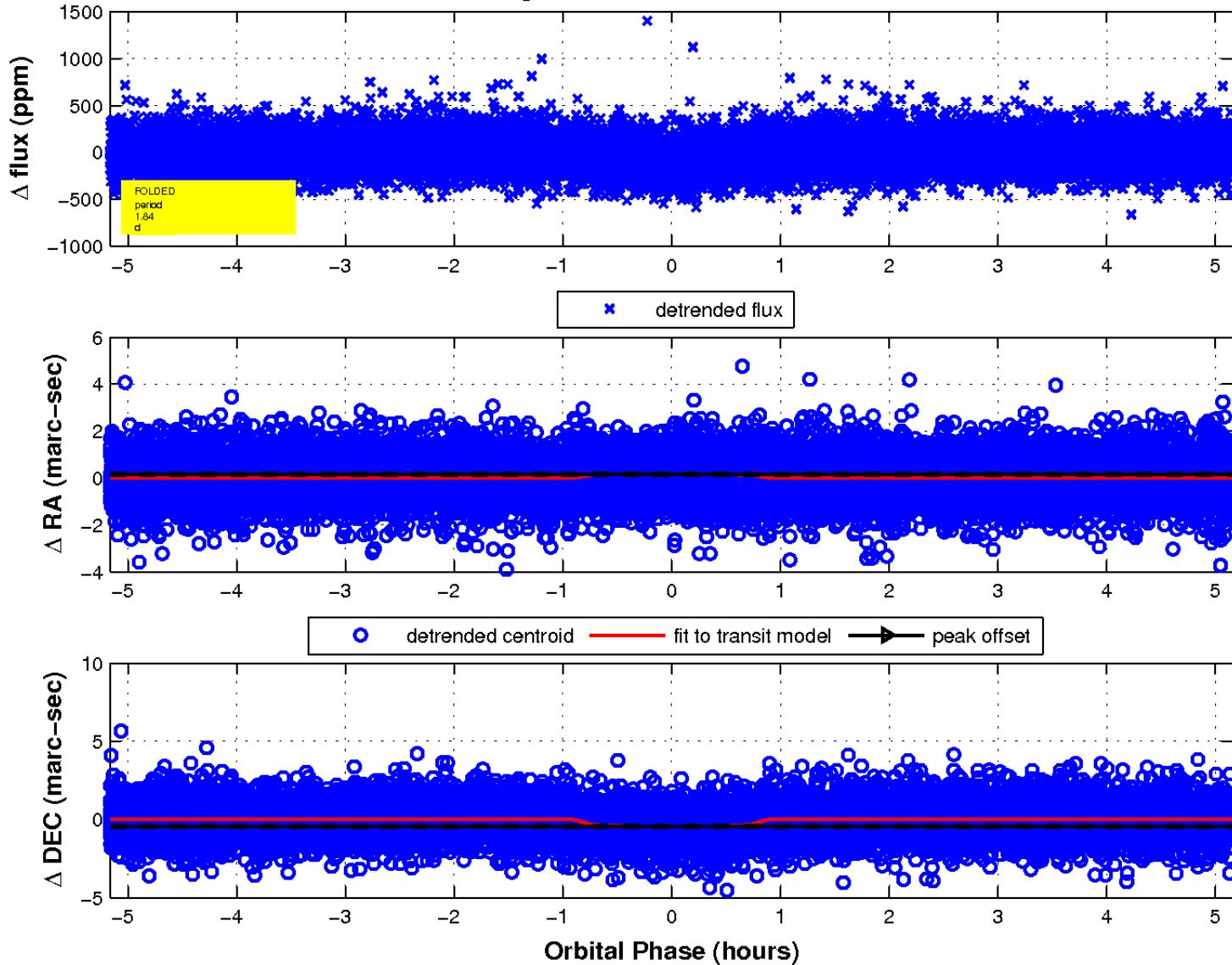
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

