

# KIC 005294945

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005294945-01	OBS	3463.01	32.547419	133.674866	165.8	7.232	8.4	9.9	1.06	6068	1.54	34.48

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005294945-01	OBS	PC	0.85	0	0	0	0	NO_COMMENT

**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.

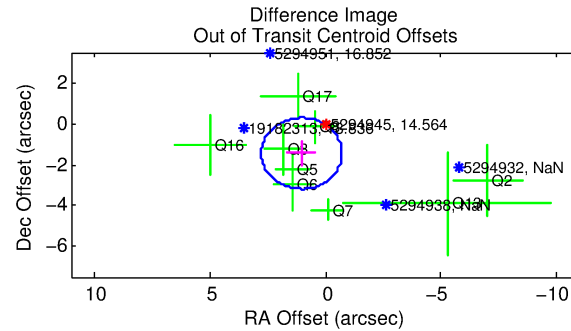
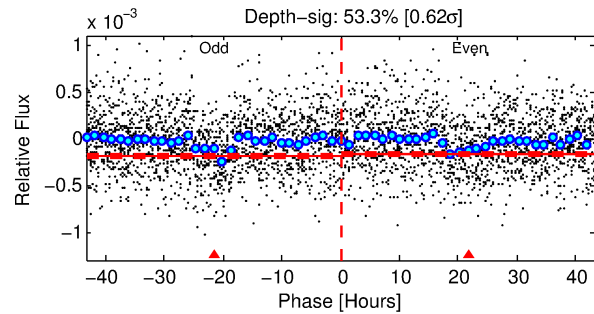
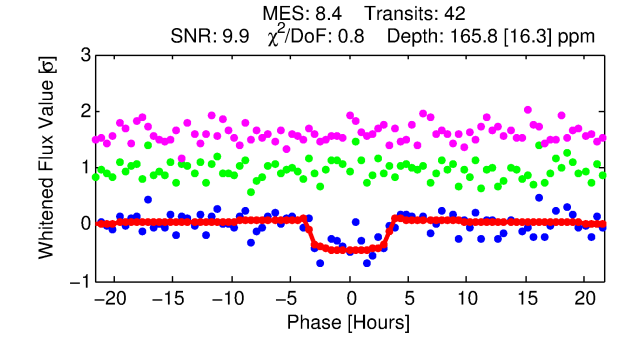
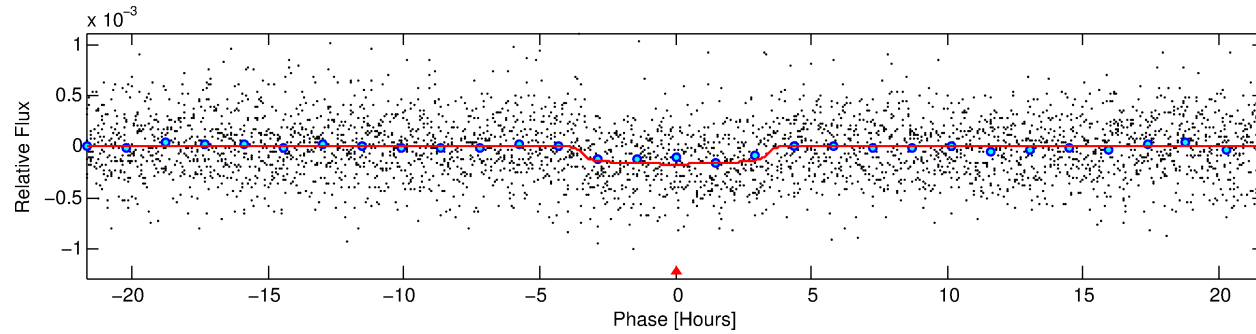
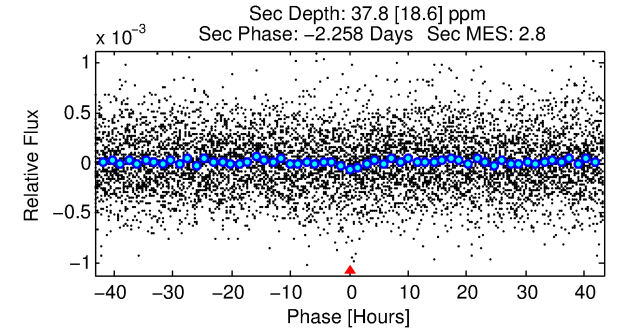
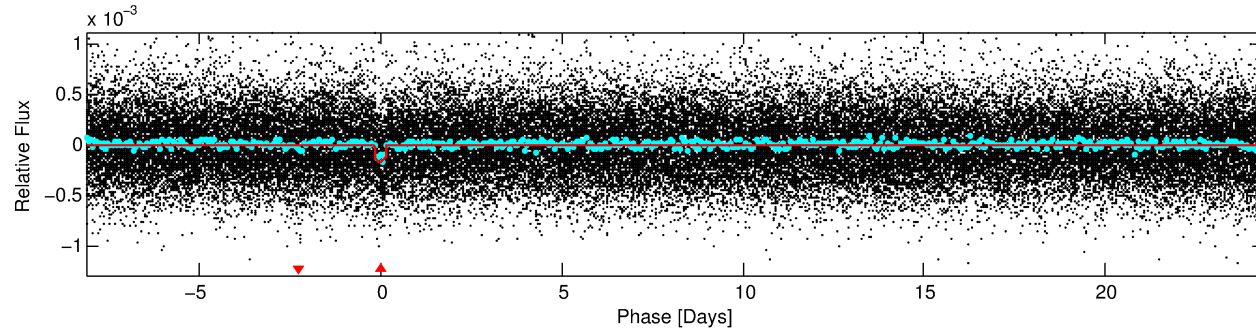
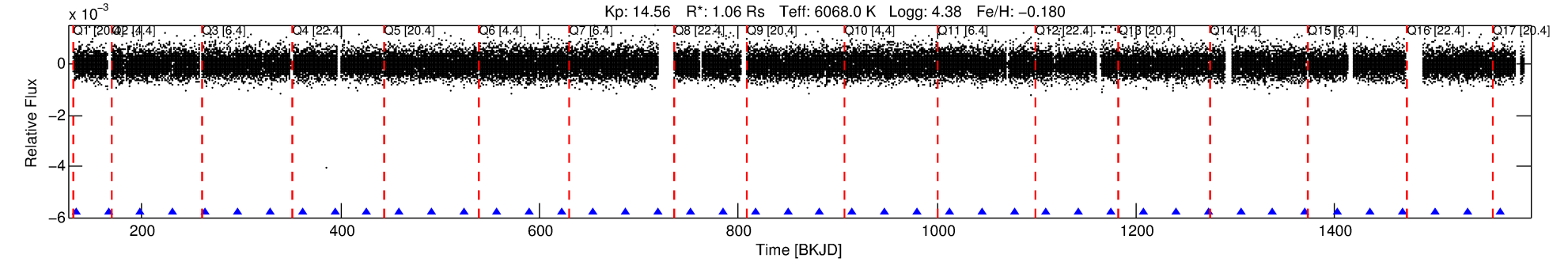
## Ephemeris Match Information For 005294945-01

No Significant Match Found

# DV One-Page Summary

KIC: 5294945 Candidate: 1 of 1 Period: 32.547 d

KOI: K03463.01 Corr: 0.968



## DV Fit Results:

Period = 32.54742 [0.00046] d  
Epoch = 133.6749 [0.0119] BKJD  
Rp/R\* = 0.0133 [0.0053]  
a/R\* = 19.37 [38.97]  
b = 0.84 [0.70]  
Seff = 34.48 [13.62]  
Teq = 618 [61] K  
Rp = 1.54 [0.77] Re  
a = 0.1992 [0.0509] AU  
Ag = 345.99 [347.35] [0.99 $\sigma$ ]  
Teffp = 4120 [972] K [3.60 $\sigma$ ]

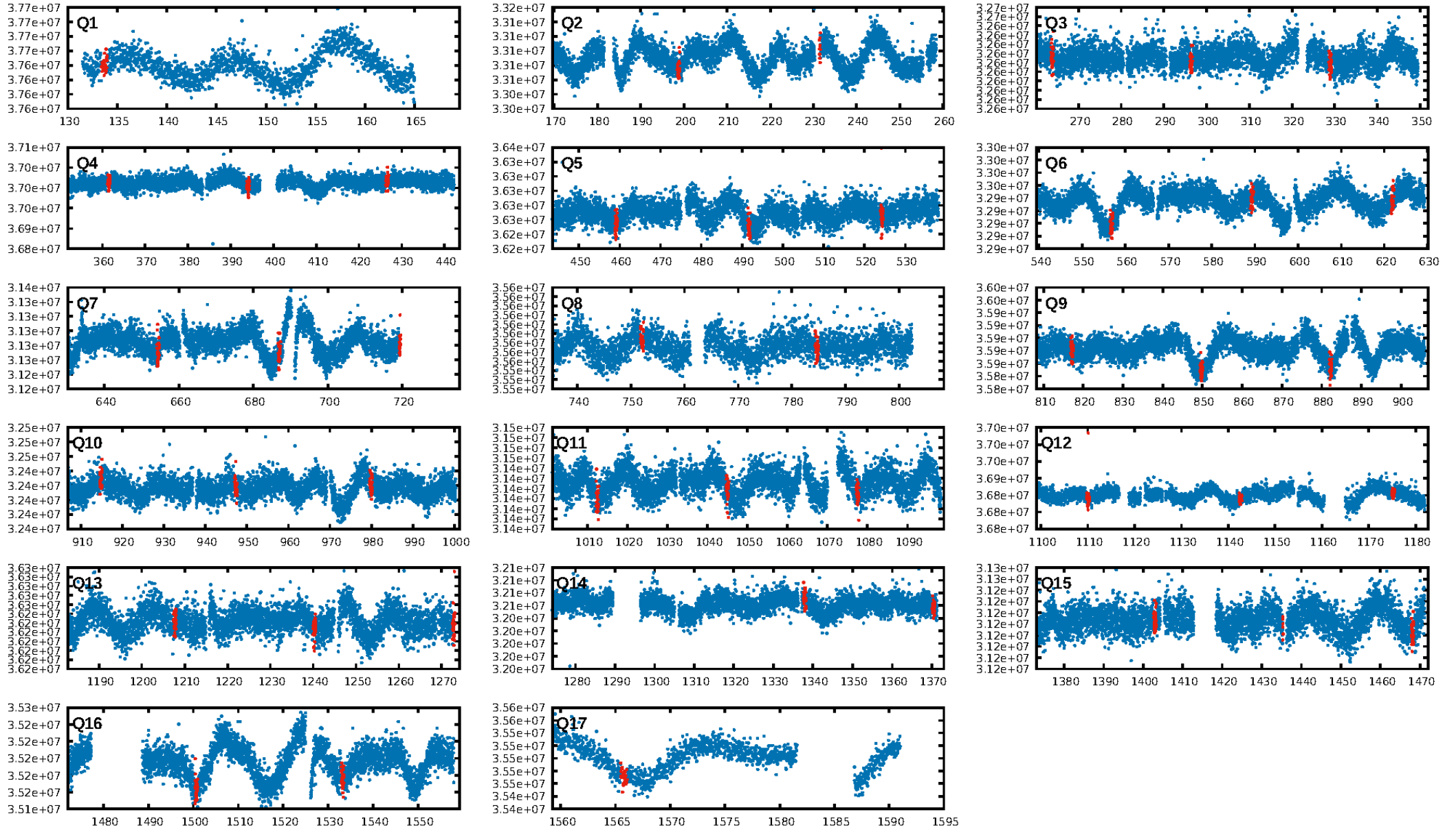
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 77.9%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.72e-16  
RollingBand-fgt: 1.00 [40/40]  
GhostDiagnostic-chr: 1.764  
Centroid-sig: 85.5%  
Centroid-so: 0.463 arcsec [0.37 $\sigma$ ]  
OotOffset-rm: 1.780 arcsec [3.06 $\sigma$ ]  
KicOffset-rm: 1.730 arcsec [2.83 $\sigma$ ]  
OotOffset-st: 2/2/2/3 [9]  
KicOffset-st: 2/2/2/3 [9]  
DiffImageQuality-fgm: 0.56 [5/9]  
DiffImageOverlap-fno: 1.00 [16/16]

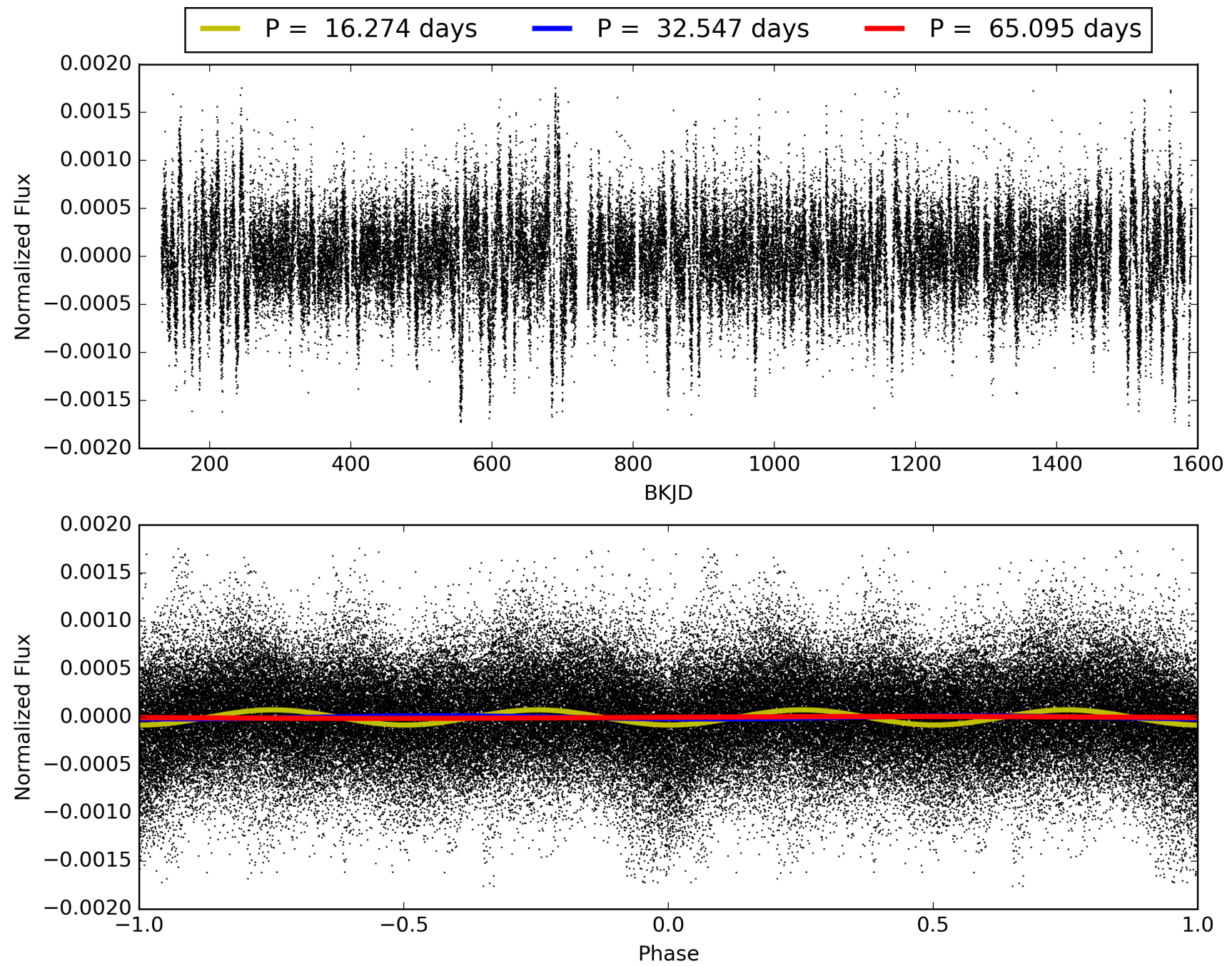
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:44:08 Z

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

# TCE 005294945-01, PDC Light Curves

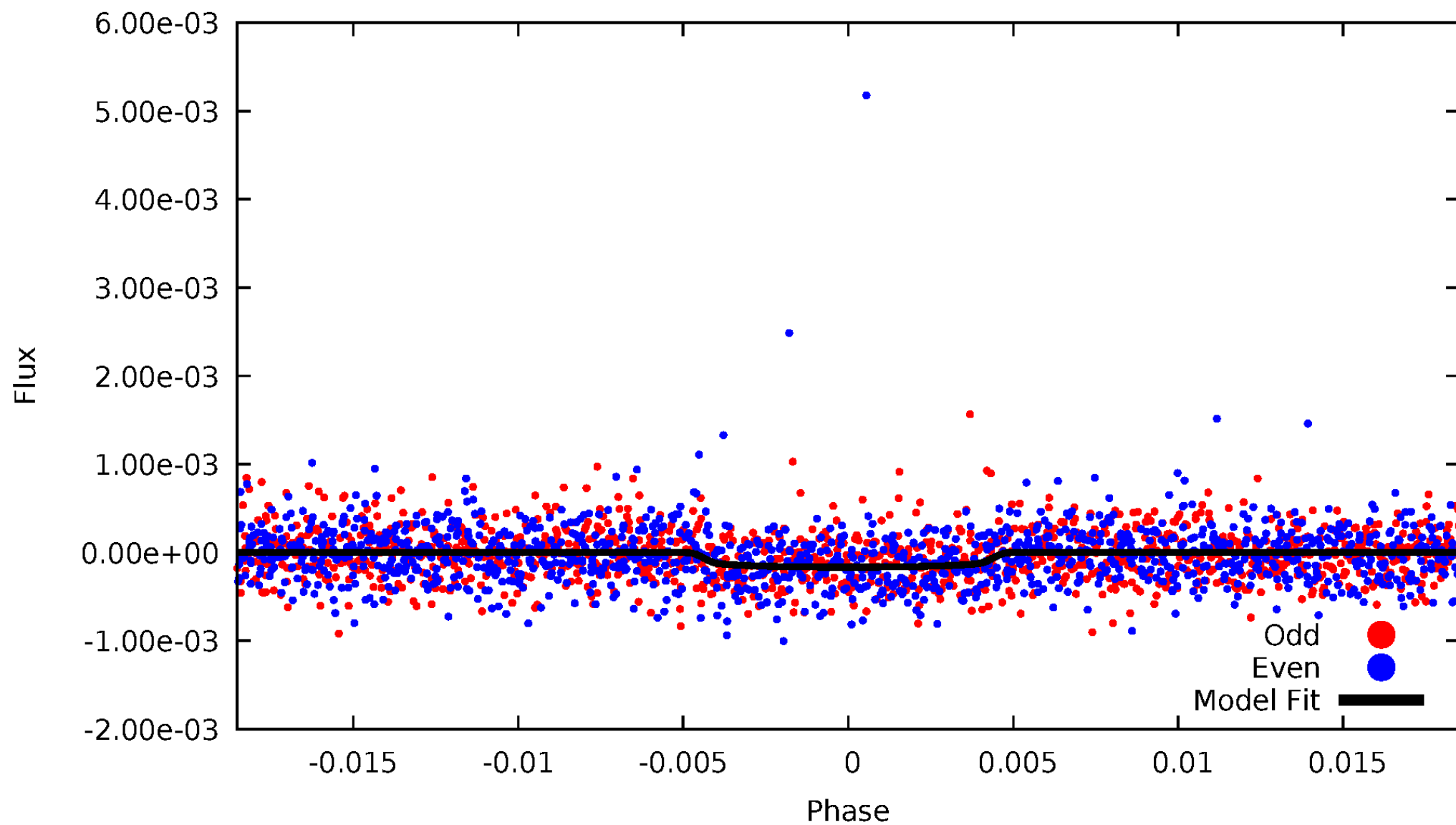


TCE 005294945-01



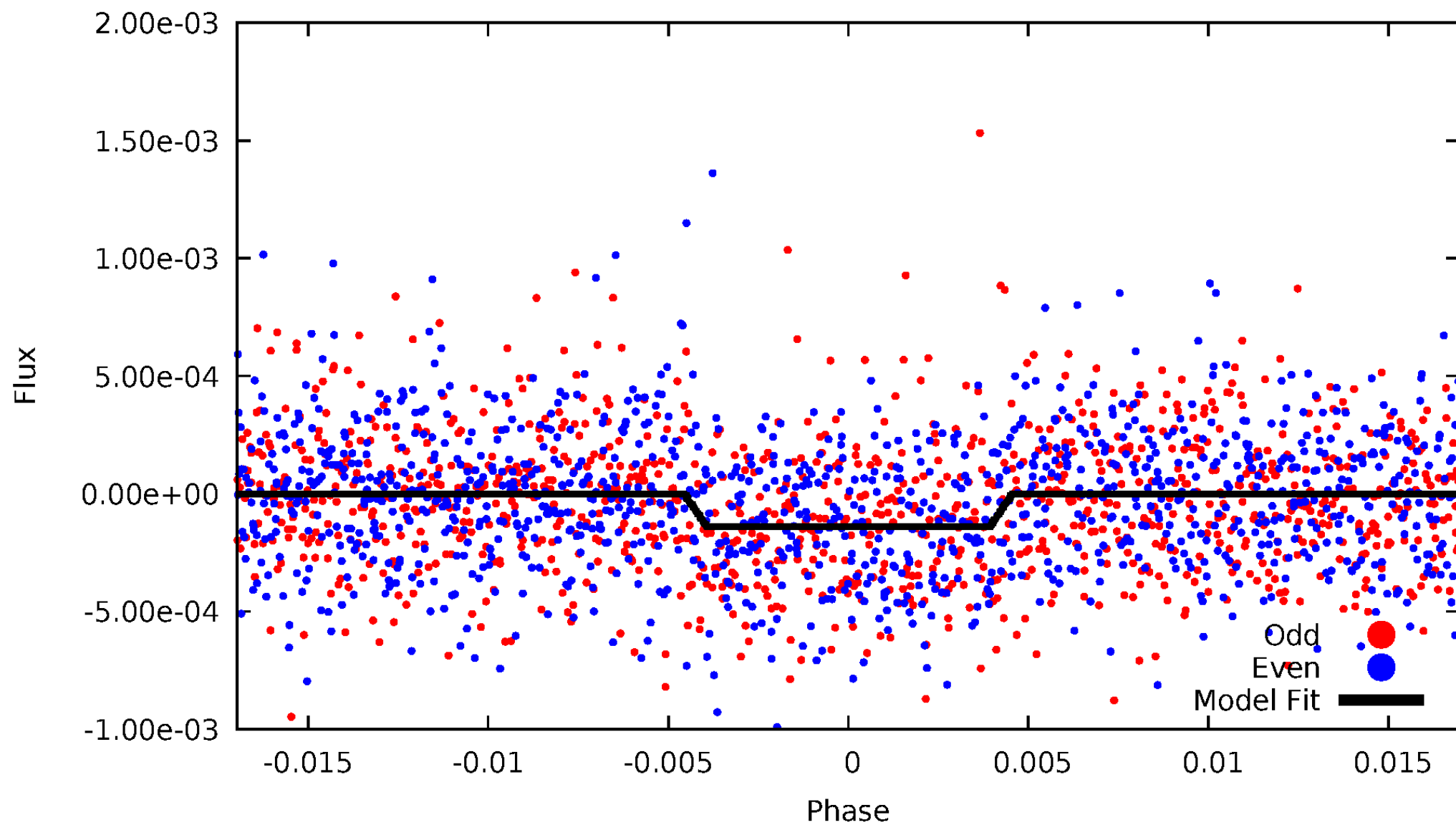
# DV Odd/Even

TCE 005294945-01



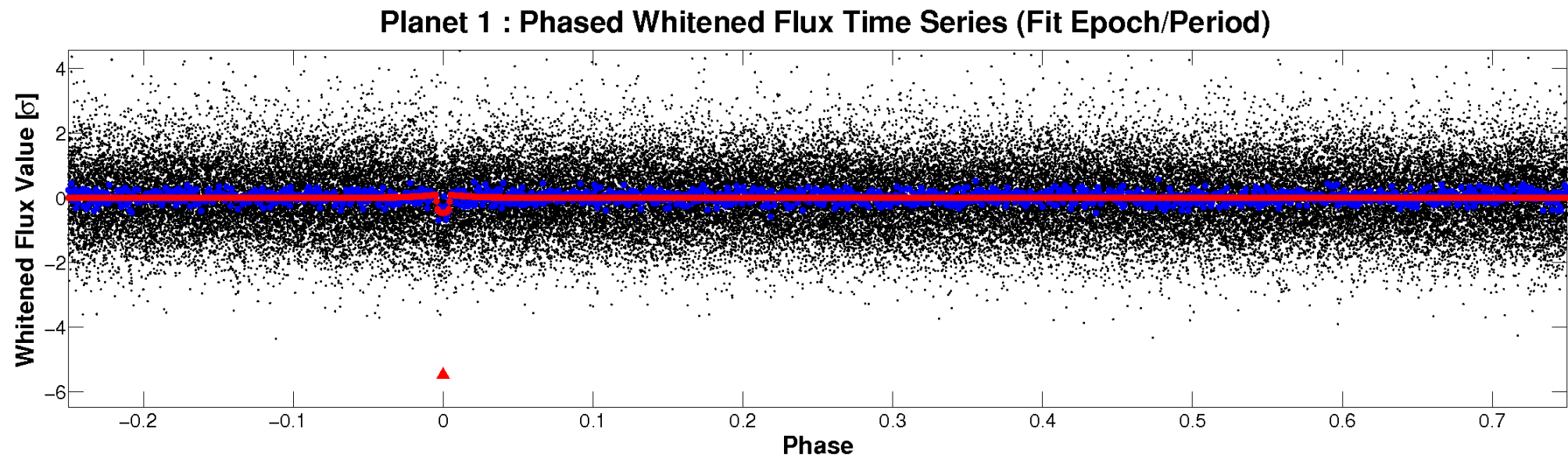
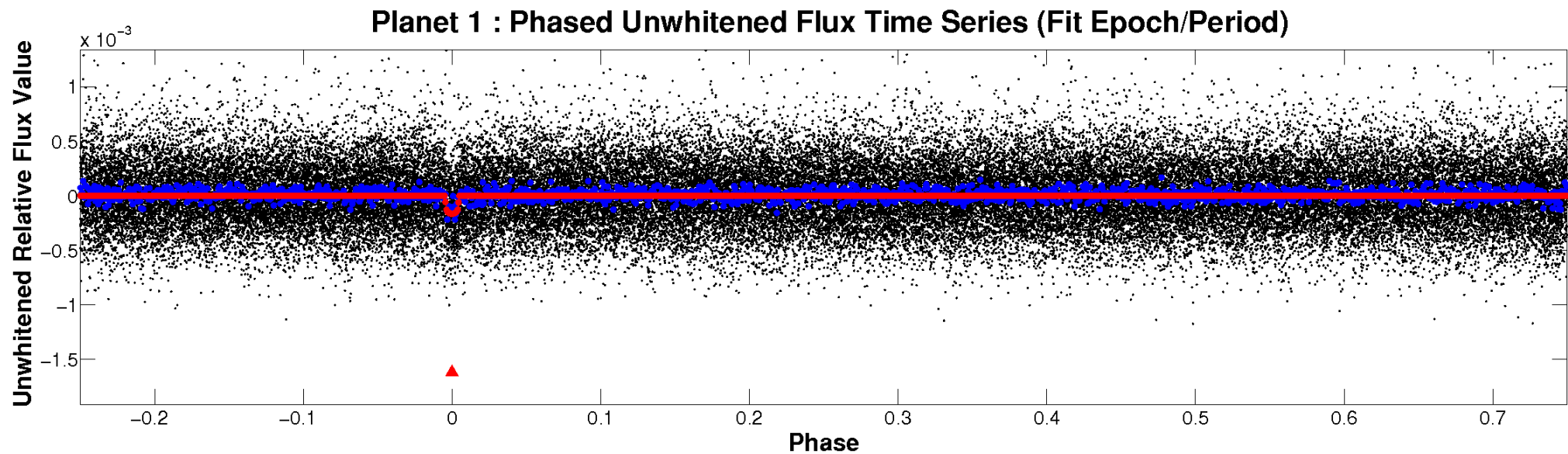
# ALT Odd/Even

TCE 005294945-01



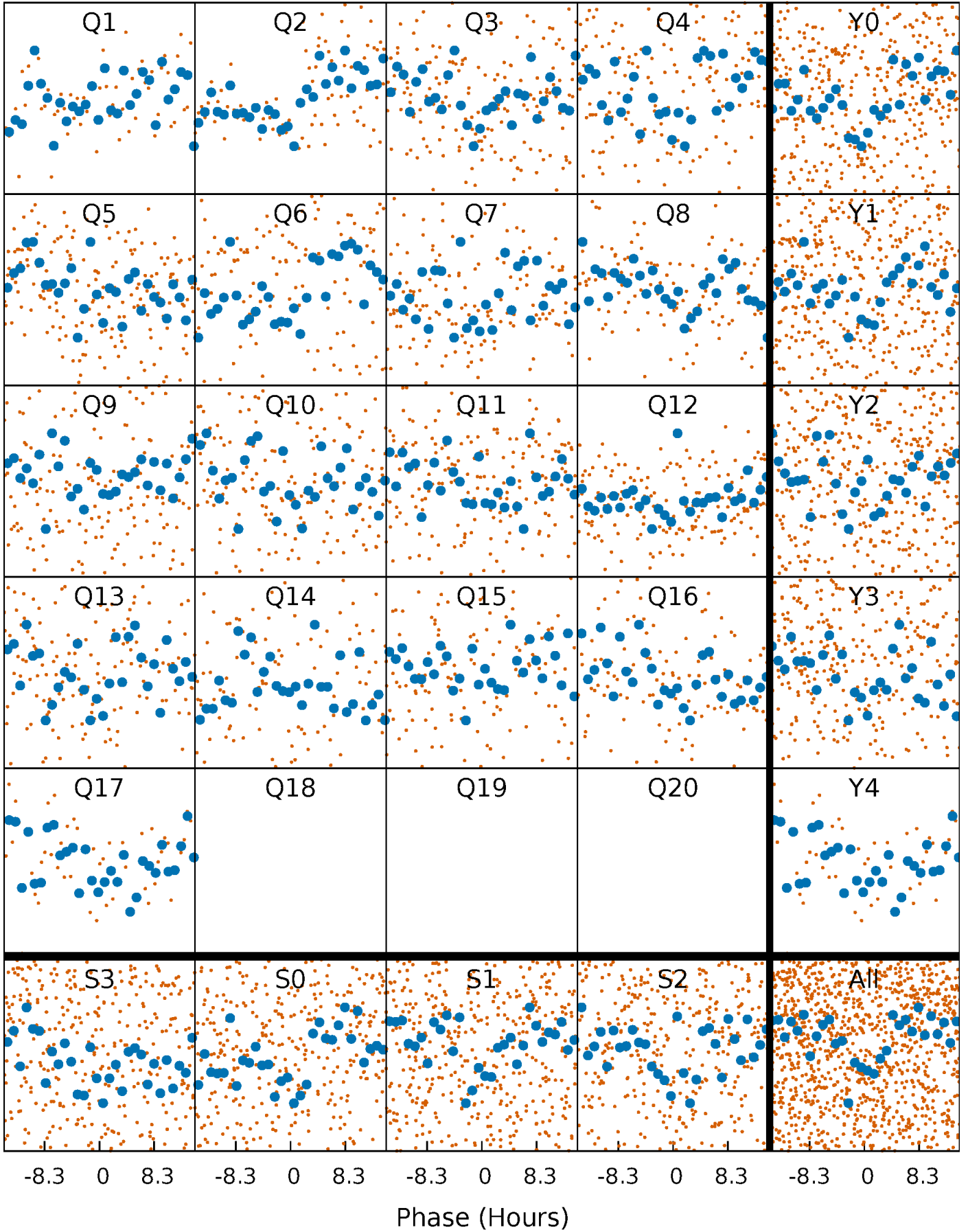


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

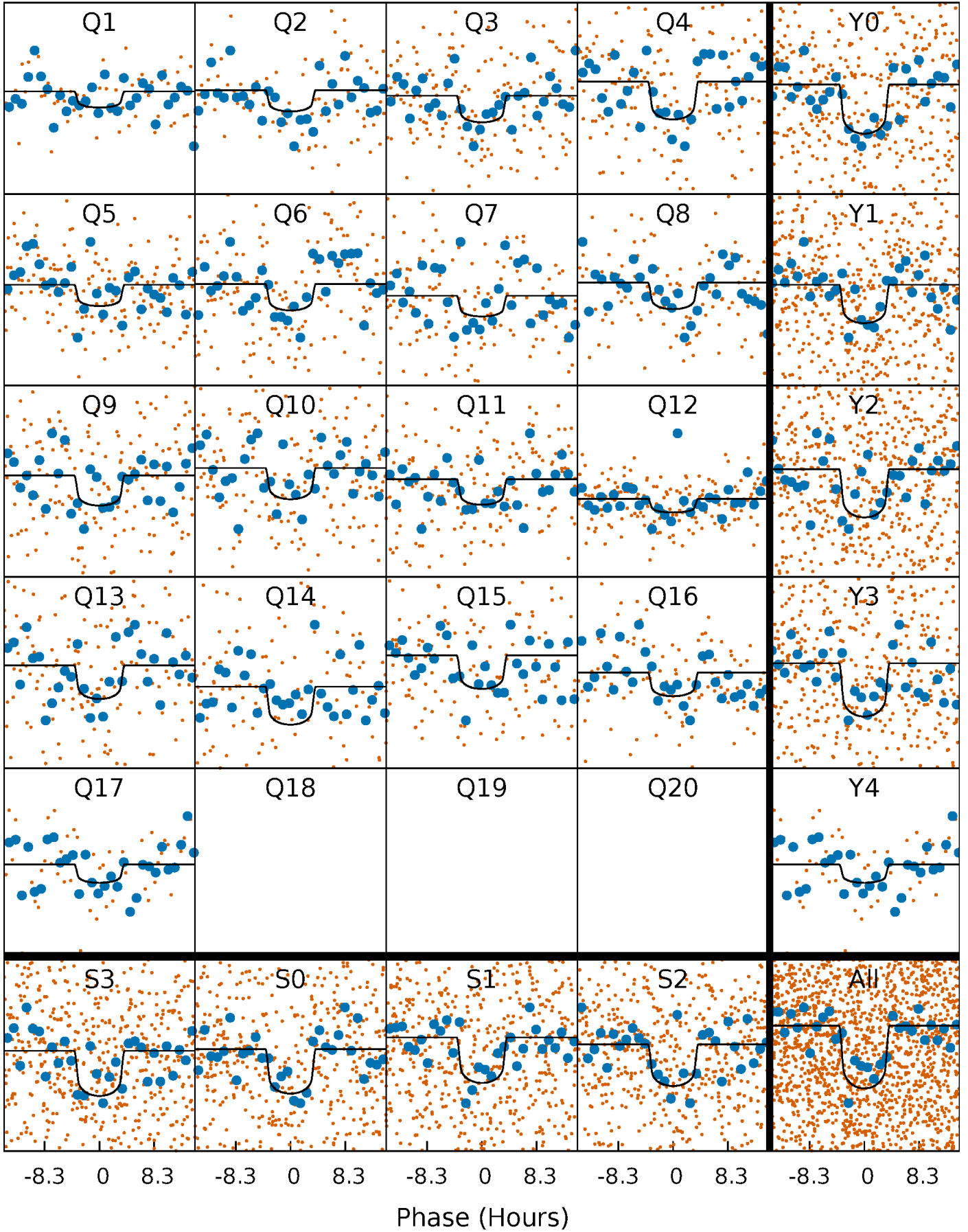
TCE 005294945-01 P= 32.547419 Days  $T_0=133.674866$  (BKJD)





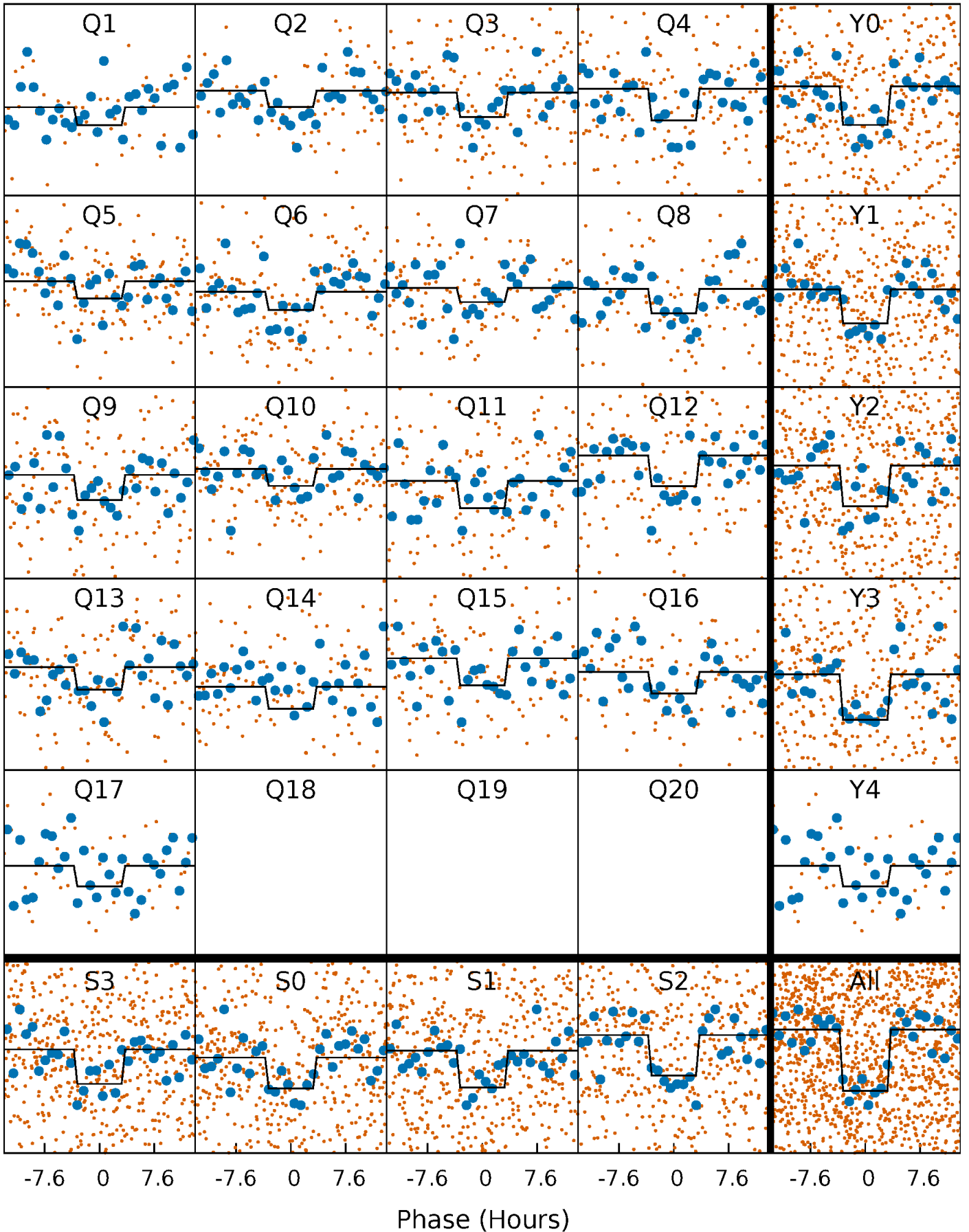
# DV Quarter-Phased Transit Curves

TCE 005294945-01   P= 32.547419 Days    $T_0=133.674866$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

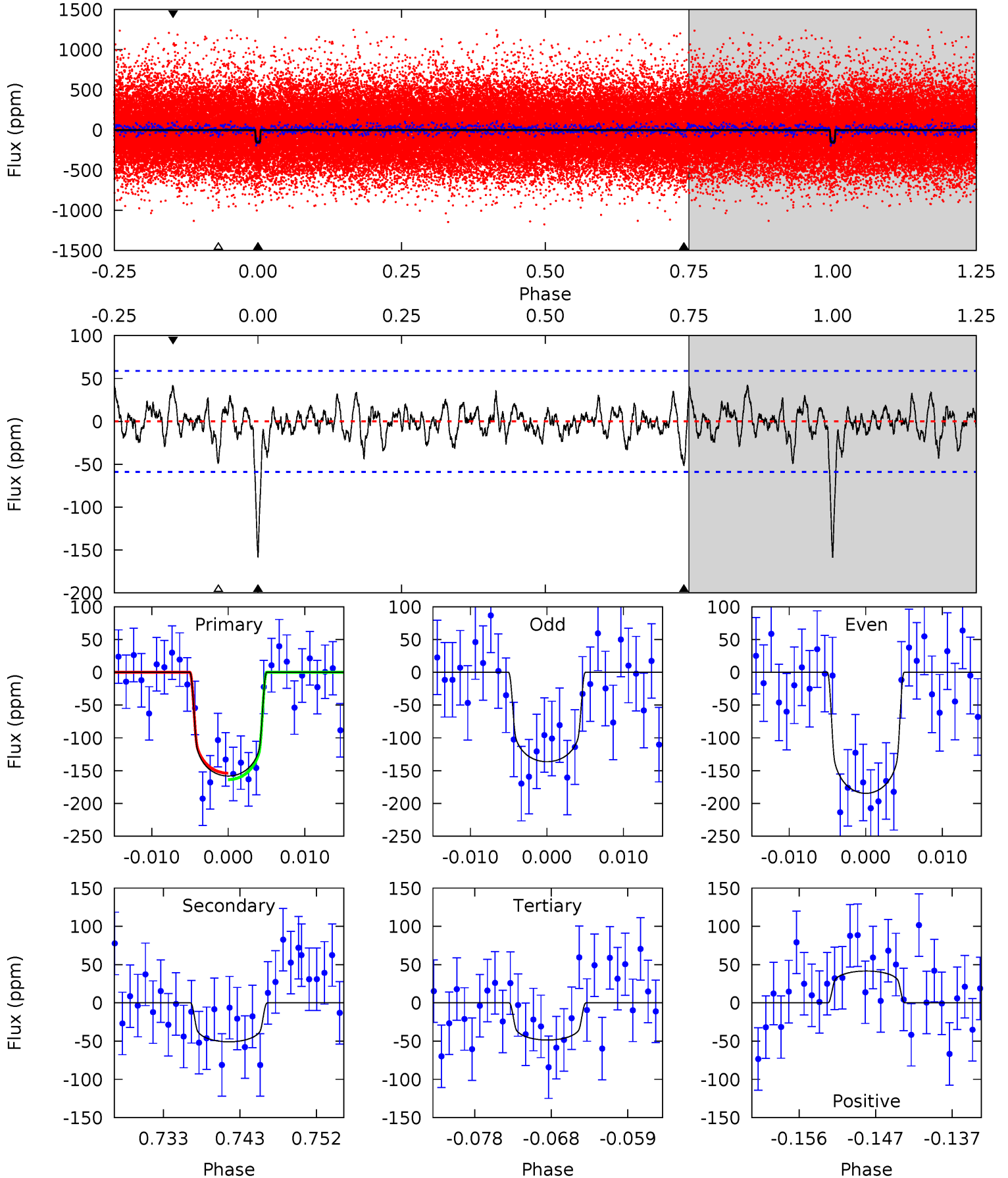
TCE 005294945-01 P= 32.547519 Days  $T_0=133.672401$  (BKJD)



# DV Model-Shift Uniqueness Test

005294945-01, P = 32.547419 Days, E = 101.127447 Days

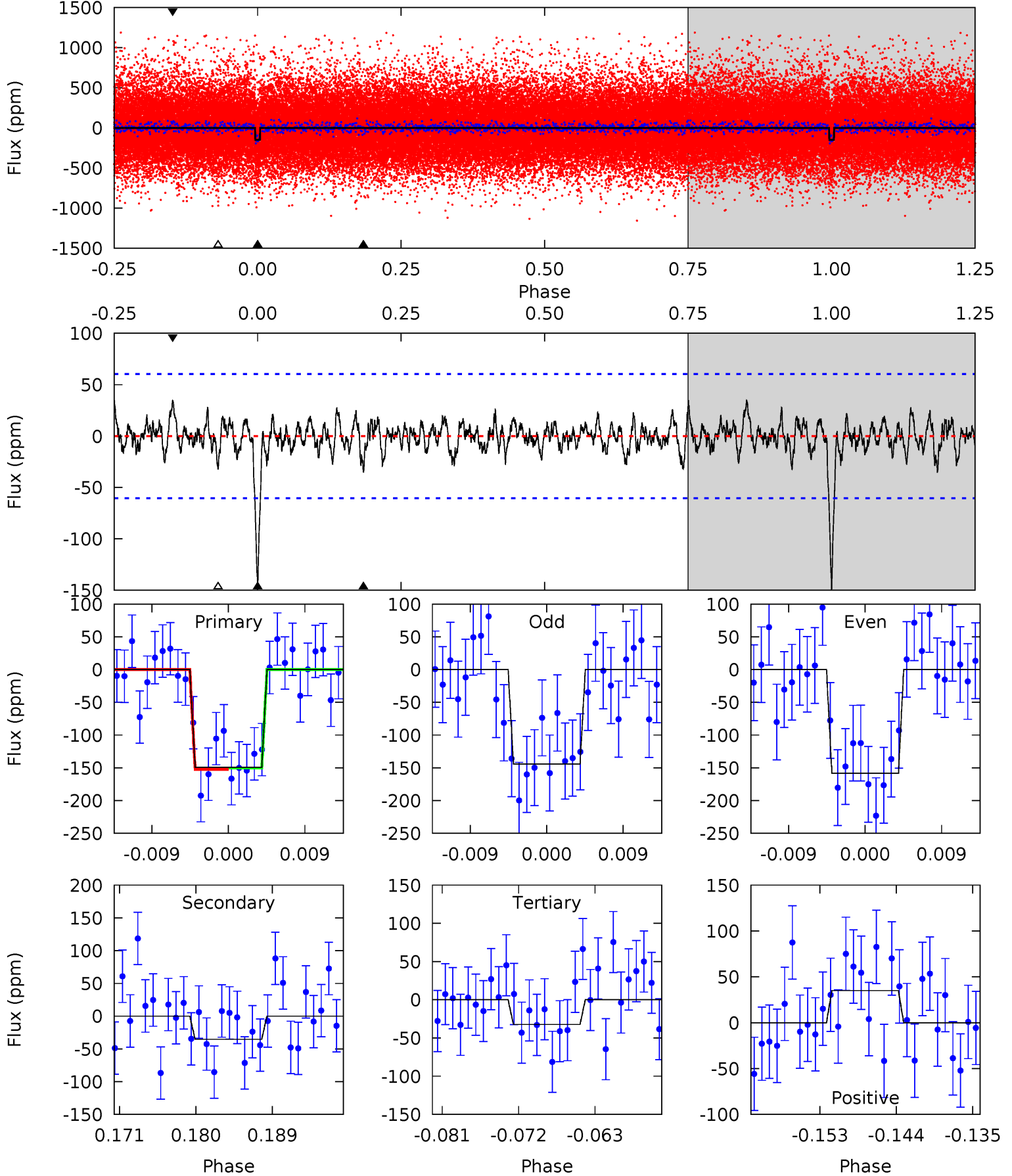
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	4.35	4.15	3.56	5.03	2.58	1.19	9.38	9.97	0.20	0.79	2.07	1.00	0.21	0.42



# Alt Model-Shift Uniqueness Test

005294945-01, P = 32.547519 Days, E = 101.124882 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
12.4	2.95	2.70	2.92	5.05	2.61	0.91	9.75	9.53	0.25	0.03	0.59	1.00	0.19	0.08



### Stellar Parameters For KIC 005294945

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6068^{+190}_{-211}$	$4.384^{+0.108}_{-0.201}$	$-0.180^{+0.300}_{-0.300}$	$1.061^{+0.324}_{-0.174}$	$0.995^{+0.154}_{-0.126}$	$1.172^{+0.582}_{-0.624}$
	+3%/-3%	+2%/-5%	+167%/-167%	+31%/-16%	+15%/-13%	+50%/-53%
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 005294945-01 / KOI 3463.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-51 \pm 12$	$1.60^{+0.69}_{-0.62}$	$873^{+68}_{-47}$	$4561^{+1139}_{-573}$	$427^{+770}_{-227}$
Alt.	$-35 \pm 12$	$1.42^{+0.70}_{-0.65}$	$869^{+66}_{-50}$	$4460^{+1260}_{-661}$	$374^{+857}_{-223}$

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



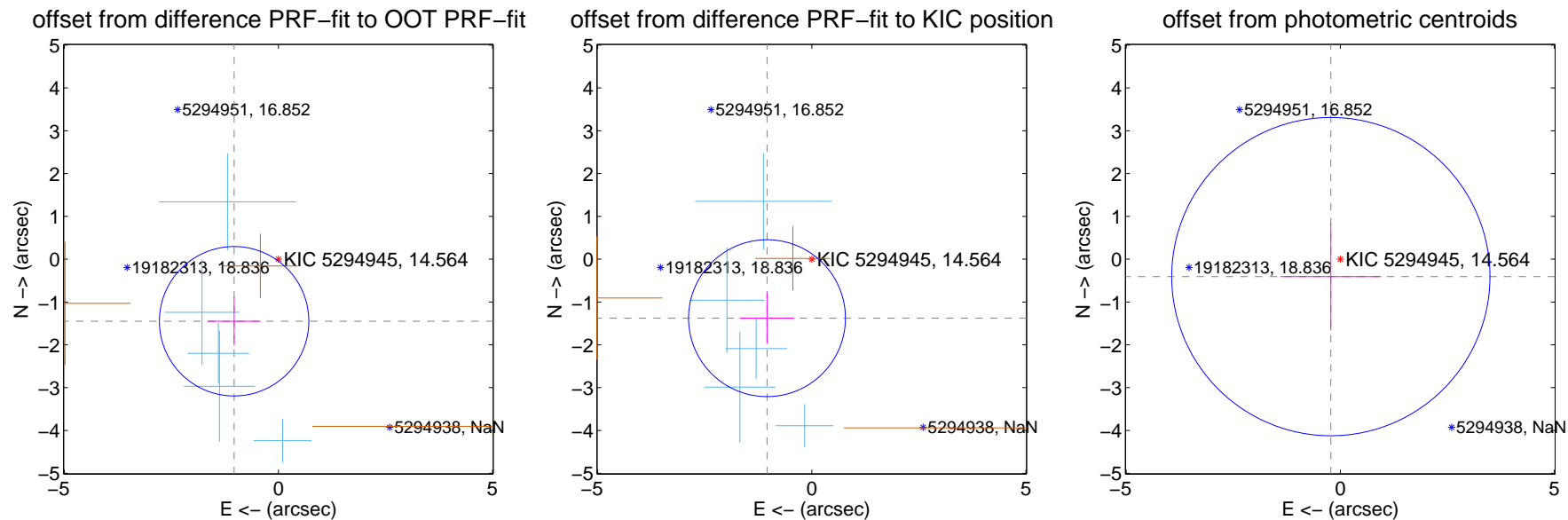
## DV Centroid Data

Supplemental centroid analysis for 005294945-01. Kepler magnitude: 14.56. Transit SNR 9.89

There are 5 quarters with good PRF difference image offsets

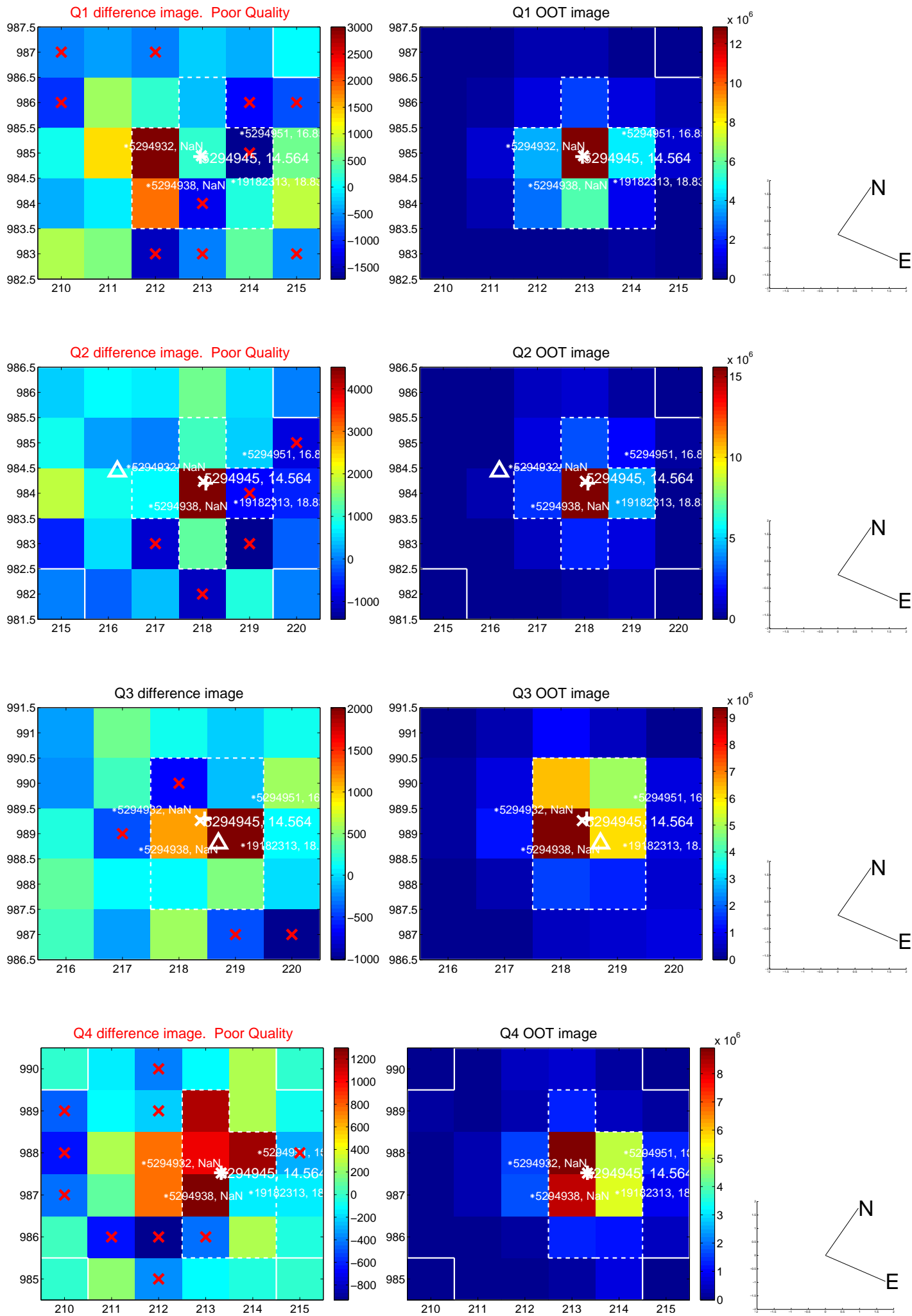
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>1.780 \pm 0.582</math></b>	<b>3.06</b>	$1.034 \pm 0.616$	$-1.449 \pm 0.563$
PRF-fit source offset from KIC position	$1.730 \pm 0.611$	2.83	$1.046 \pm 0.637$	$-1.377 \pm 0.595$
photometric centroid source offset	$0.46 \pm 1.24$	0.37	$0.22 \pm 1.18$	$-0.41 \pm 1.26$

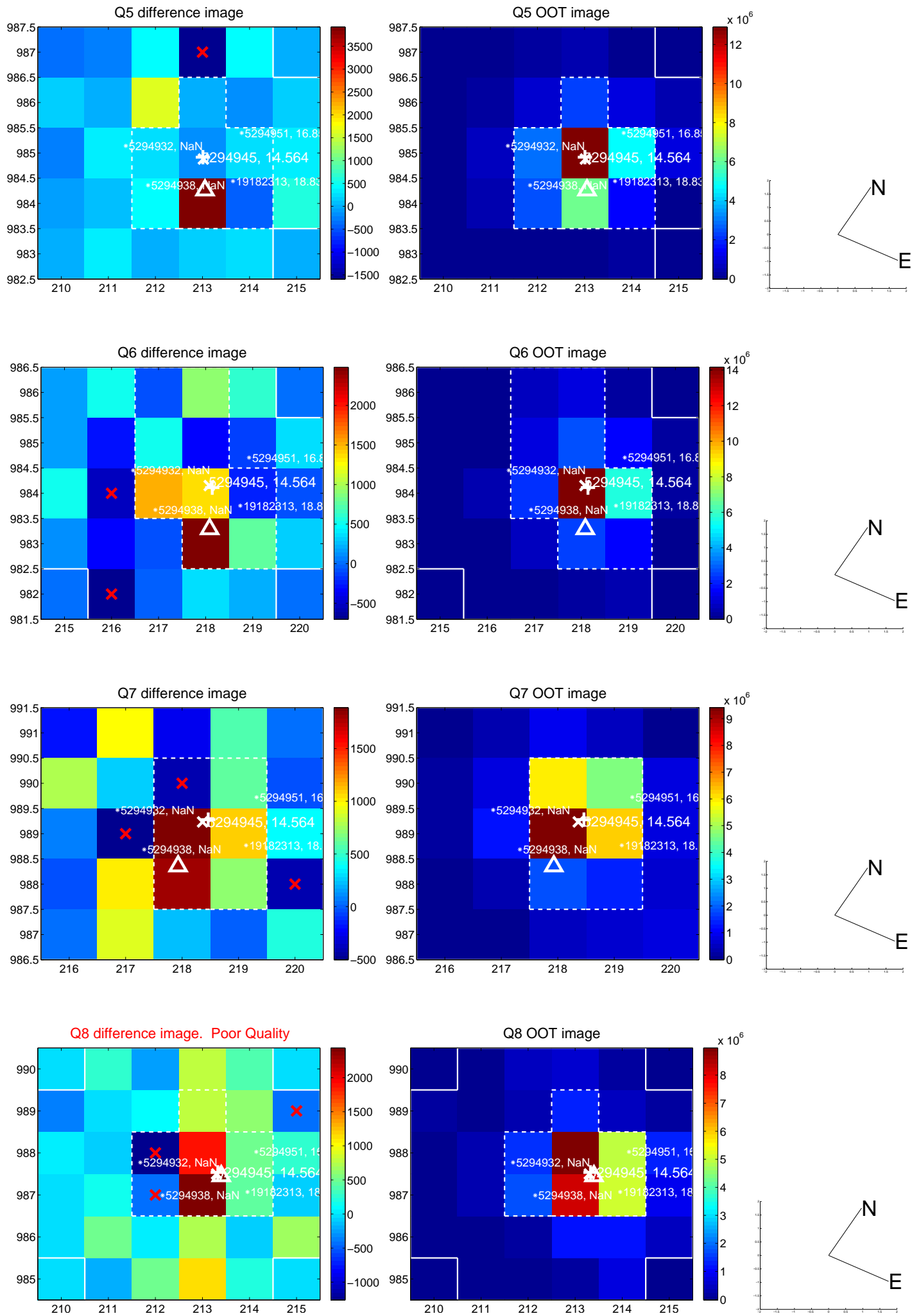


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

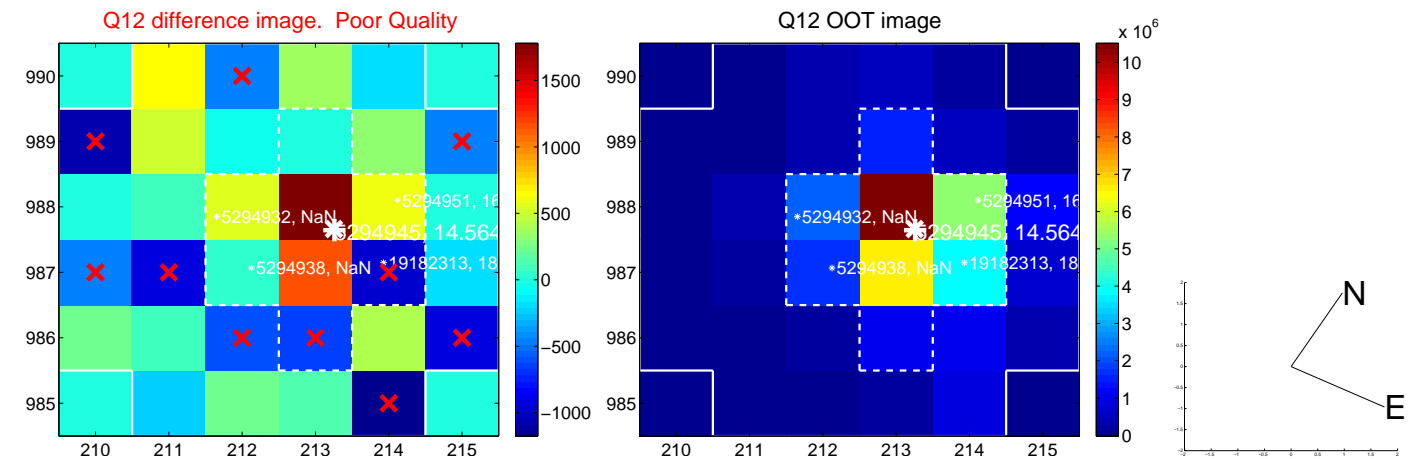
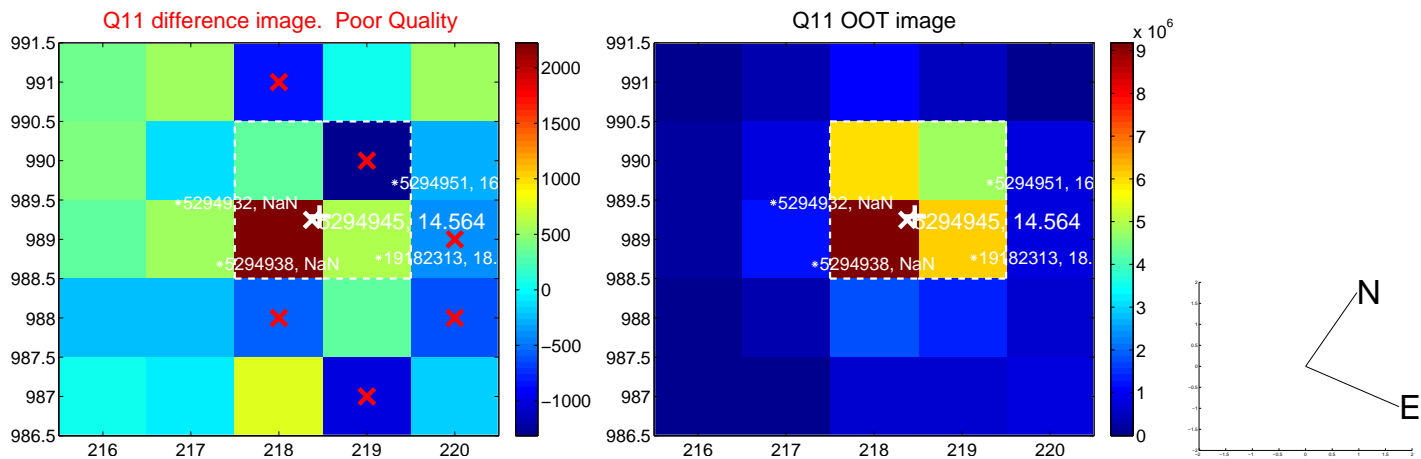
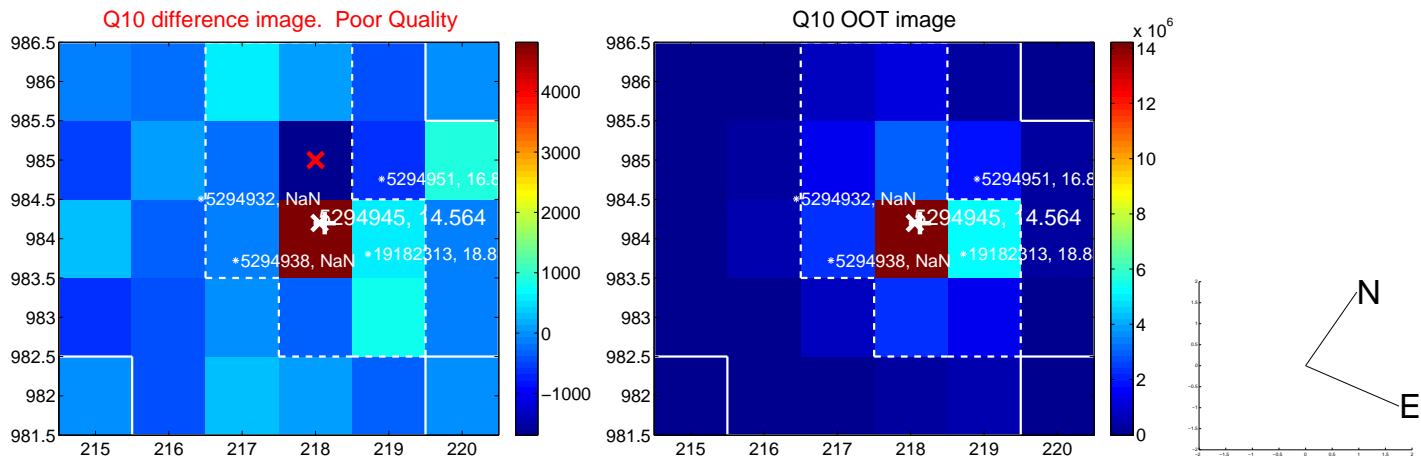
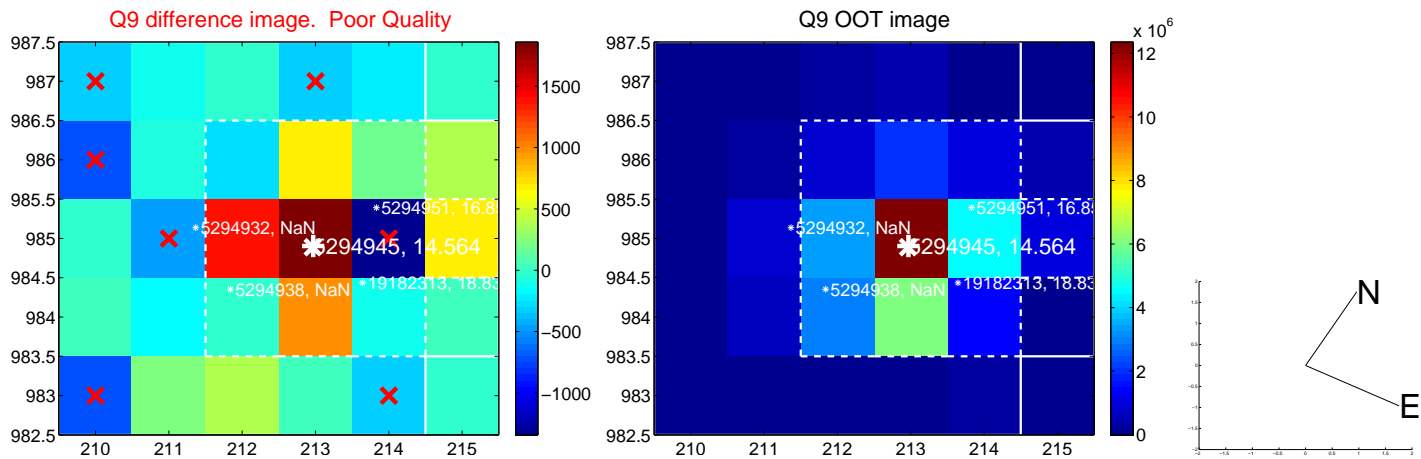
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



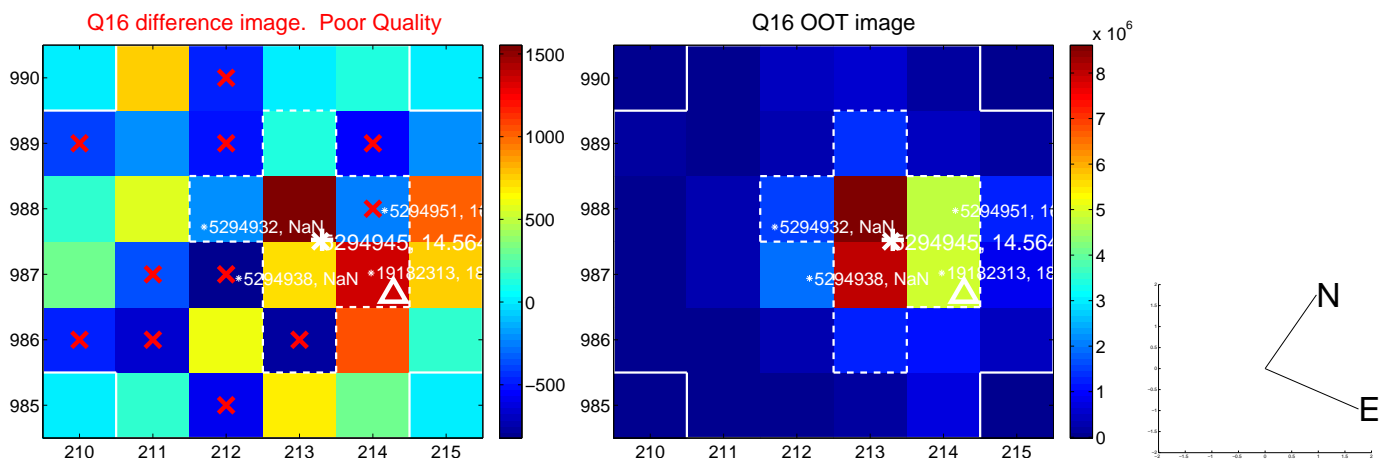
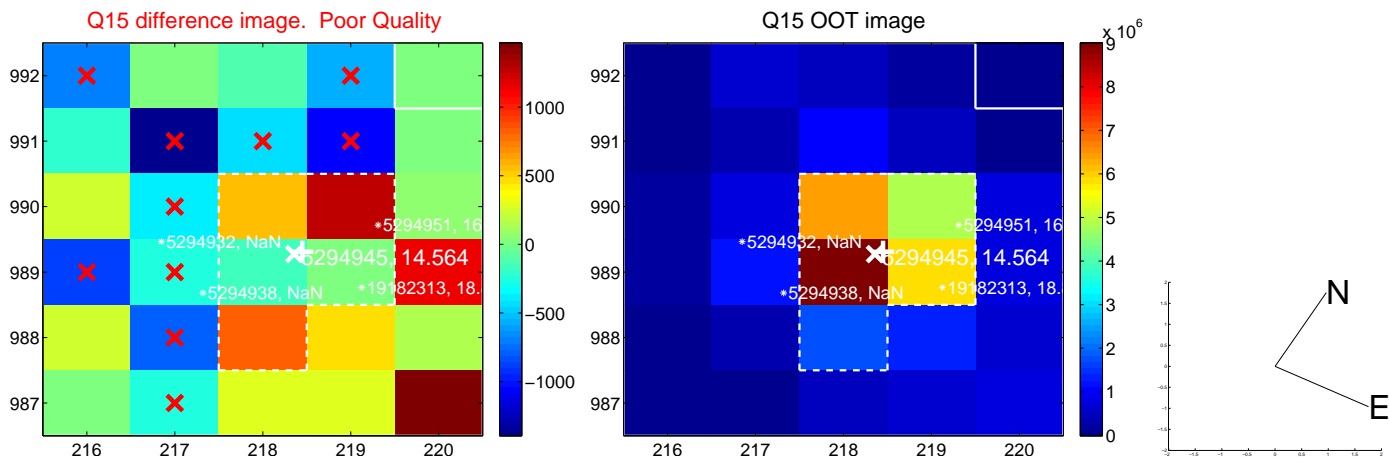
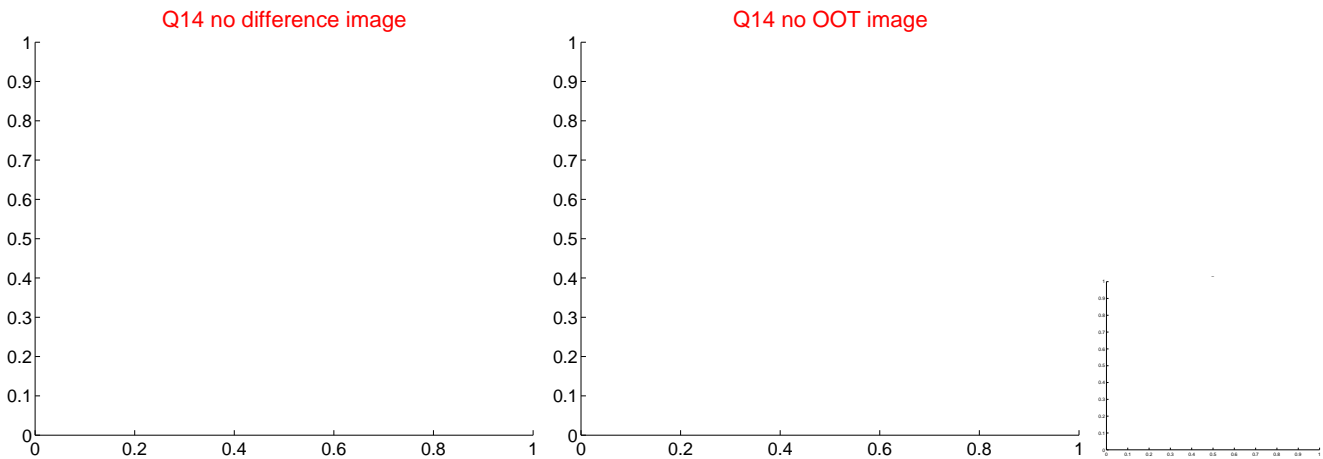
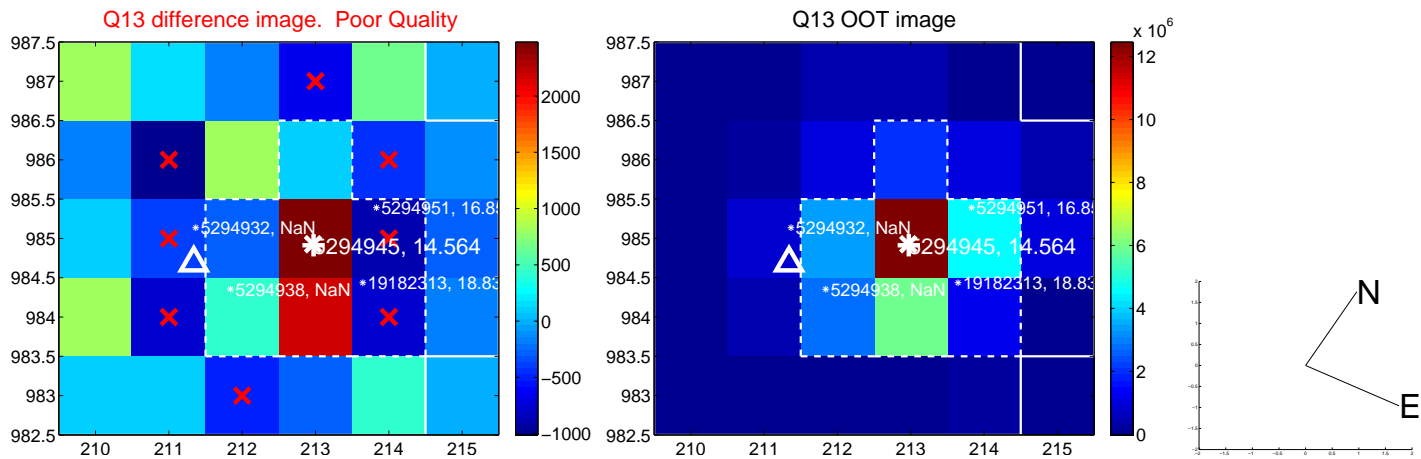
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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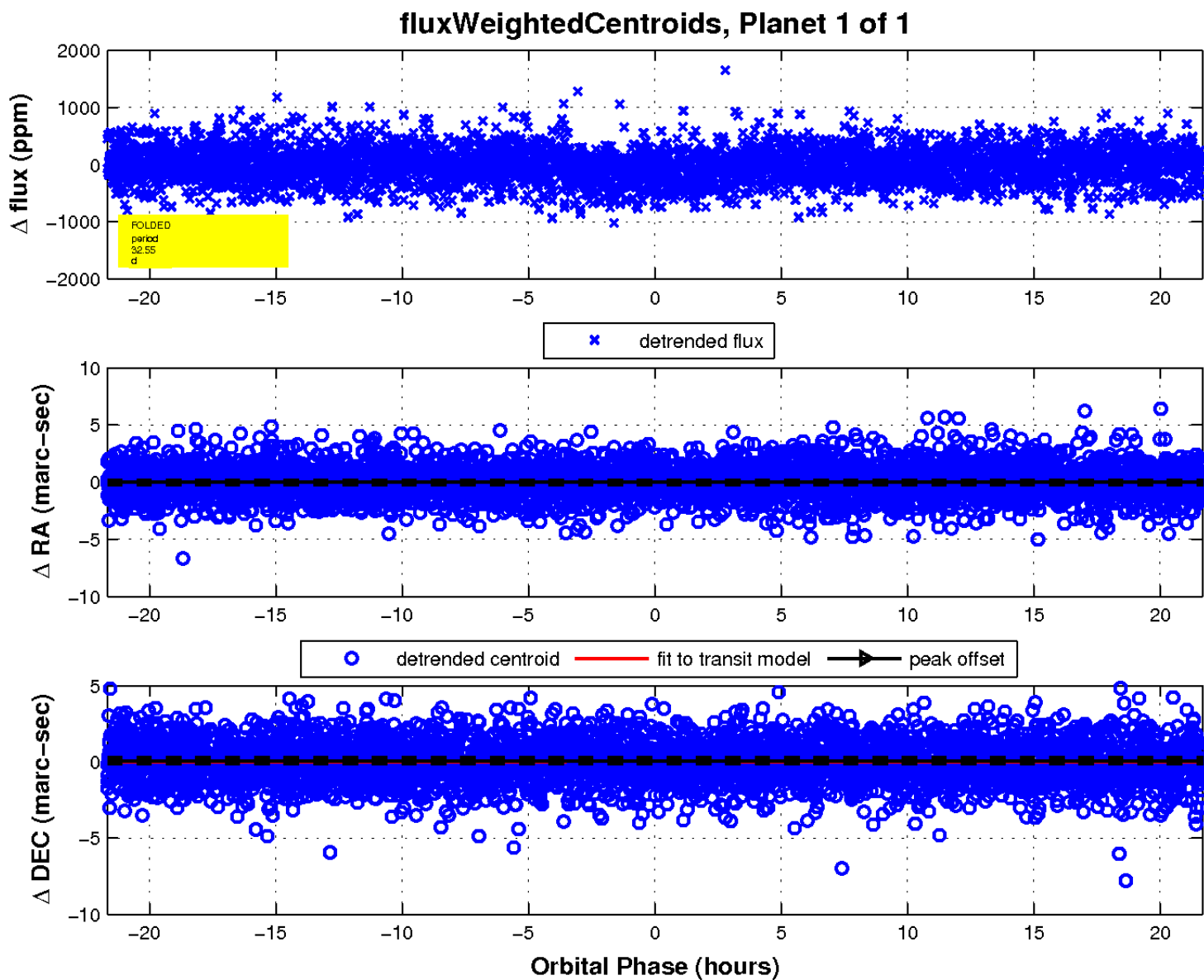
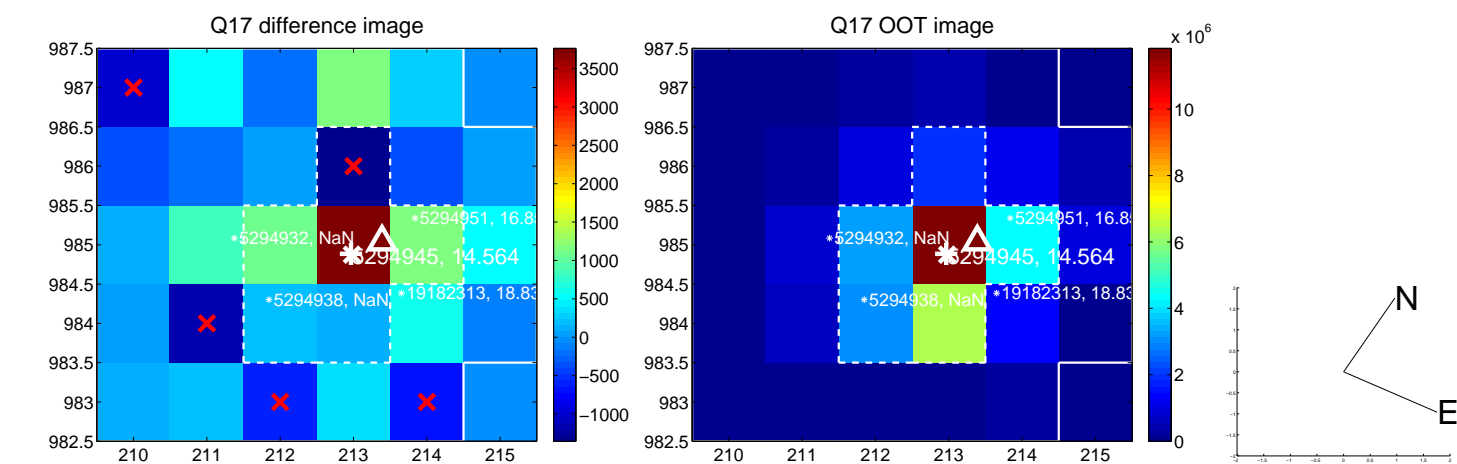


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

