

# KIC 003351945

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003351945-01	OBS	No	1.080542	132.325777	13041.8	2.000	119.9	-1.0	0.72	4919	8.01	815.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003351945-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

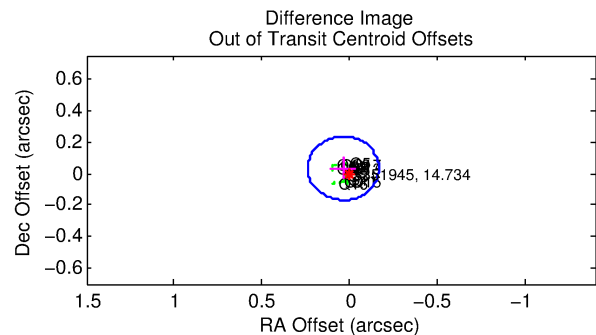
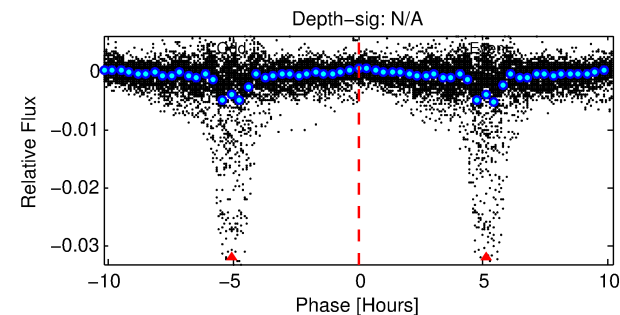
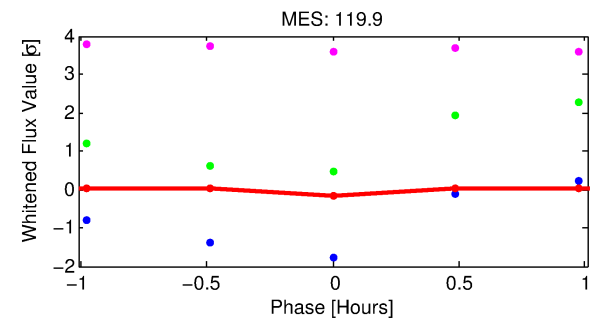
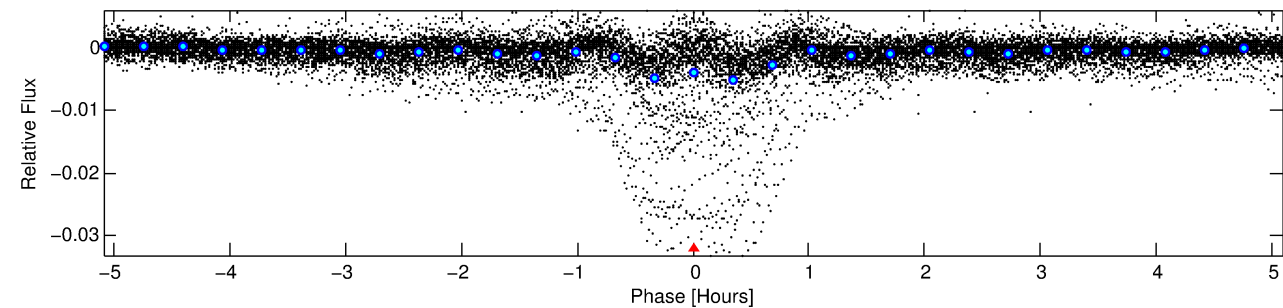
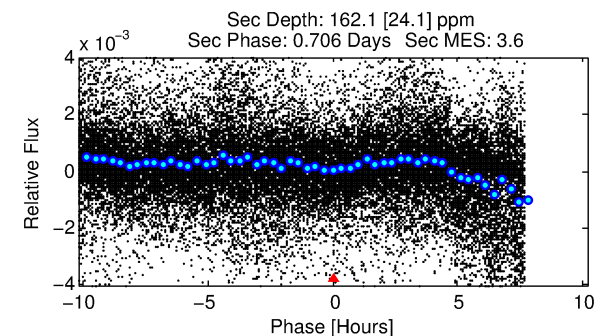
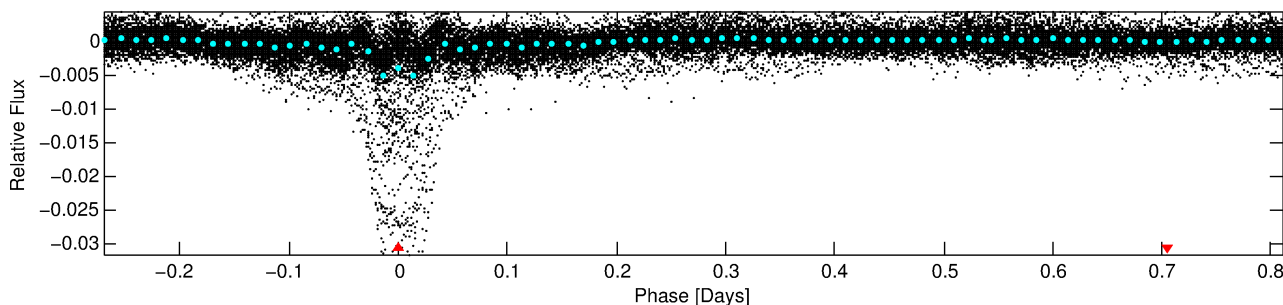
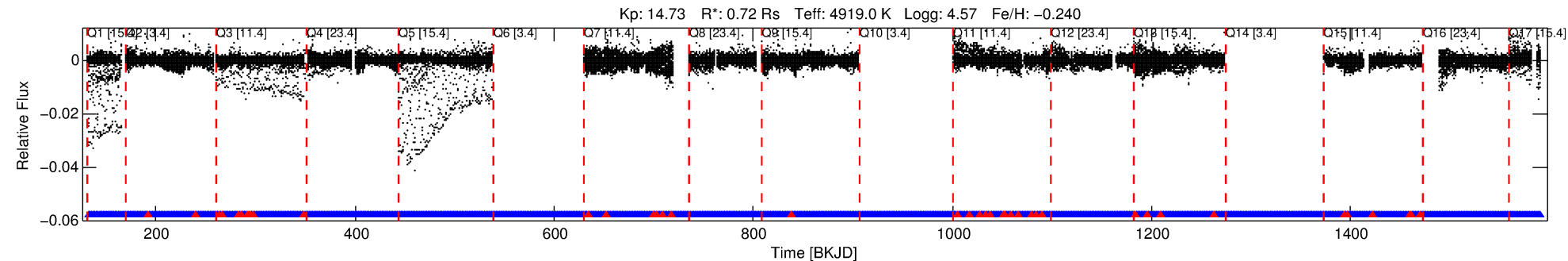
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003351945-01

No Significant Match Found

# DV One-Page Summary

KIC: 3351945 Candidate: 1 of 1 Period: 1.081 d



## TPS TCE Results:

Period = 1.08054 d  
Epoch = 132.3258 BKJD

DV fit results are unavailable

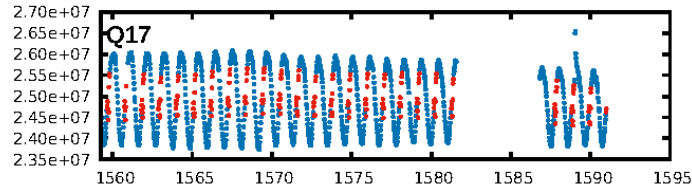
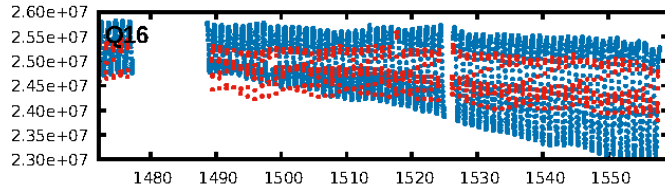
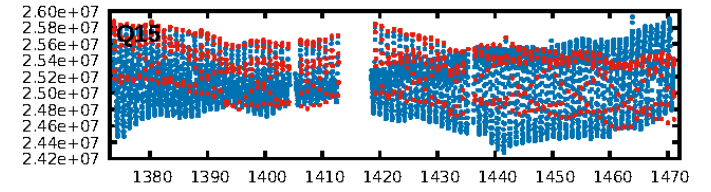
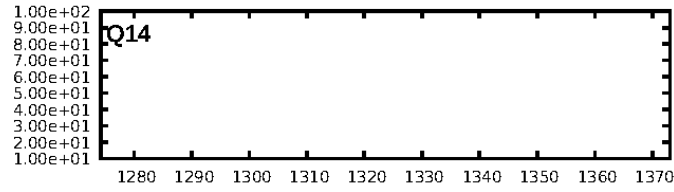
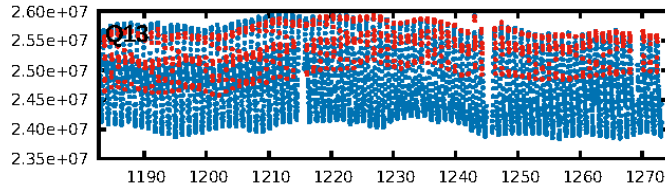
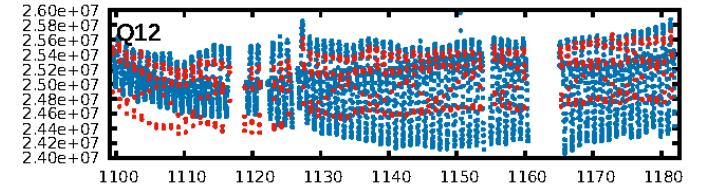
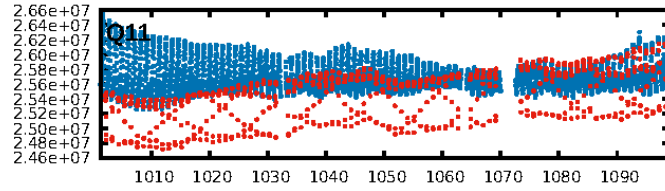
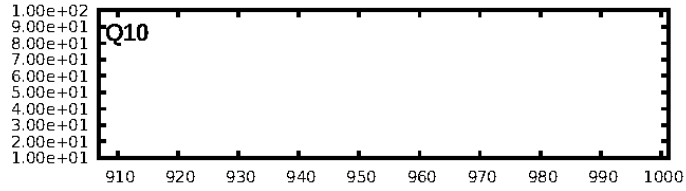
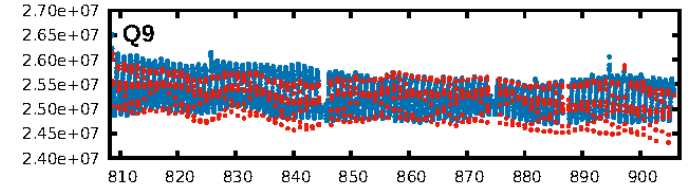
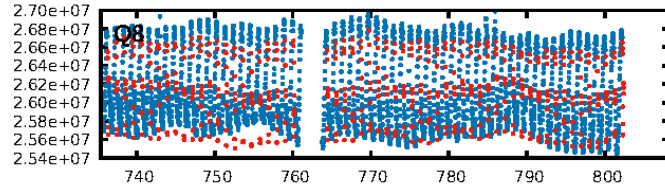
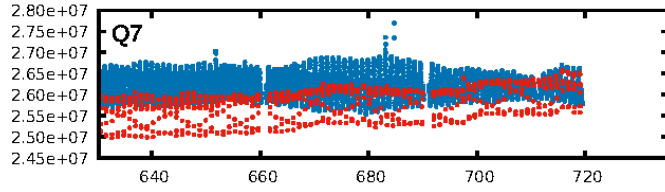
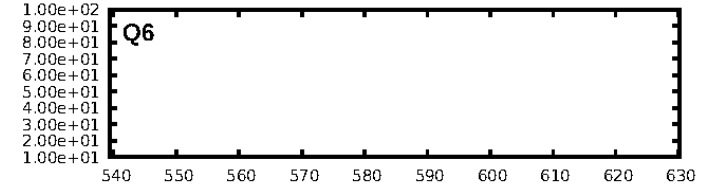
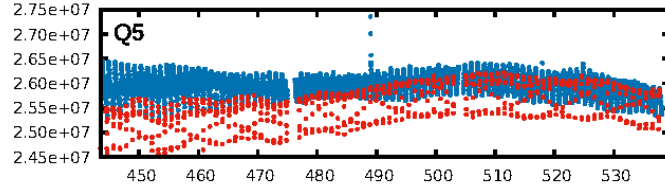
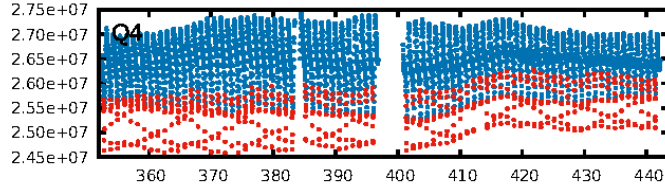
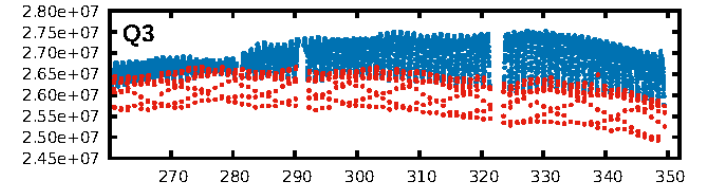
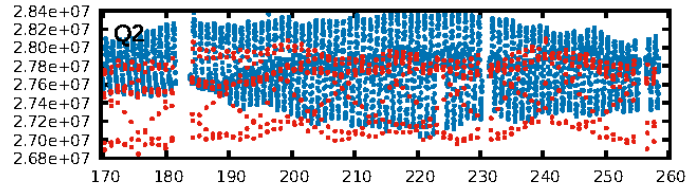
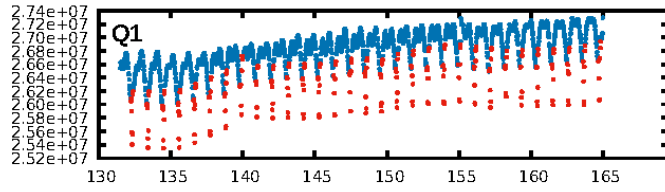
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.95 [890/932]  
GhostDiagnostic-chr: 0.9257  
Centroid-sig: 0.0%  
Centroid-so: 0.791 arcsec [134.49σ]  
OotOffset-rm: 0.051 arcsec [0.75σ]  
KicOffset-rm: 0.241 arcsec [3.24σ]  
OotOffset-st: 1/4/4/5 [14]  
KicOffset-st: 1/4/4/5 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

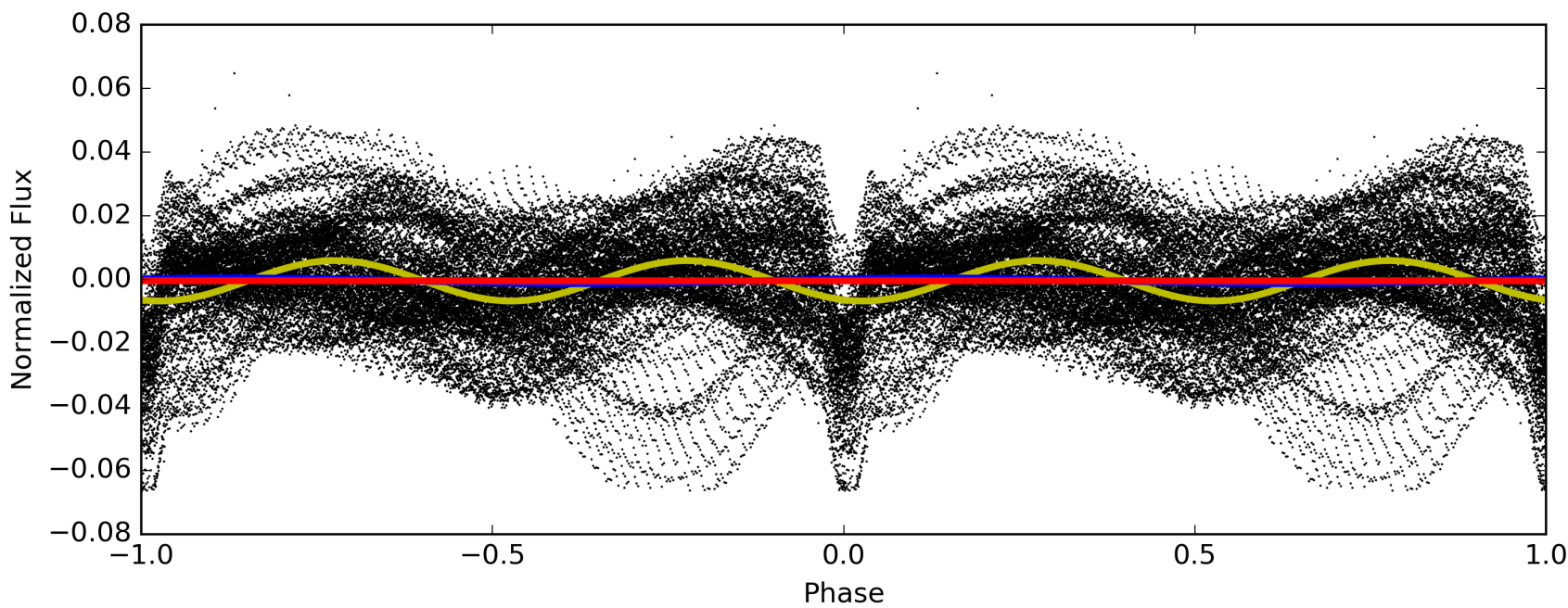
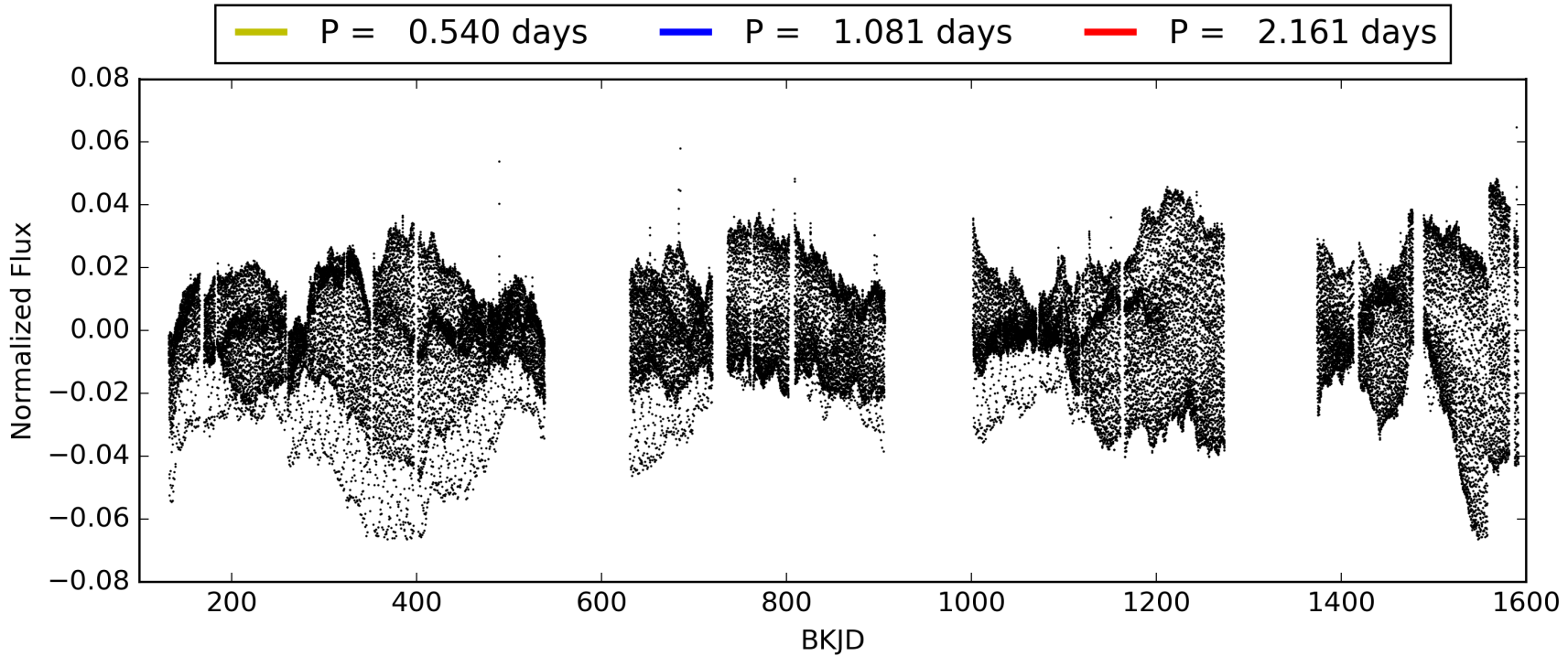
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:44:55 Z

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

# TCE 003351945-01, PDC Light Curves

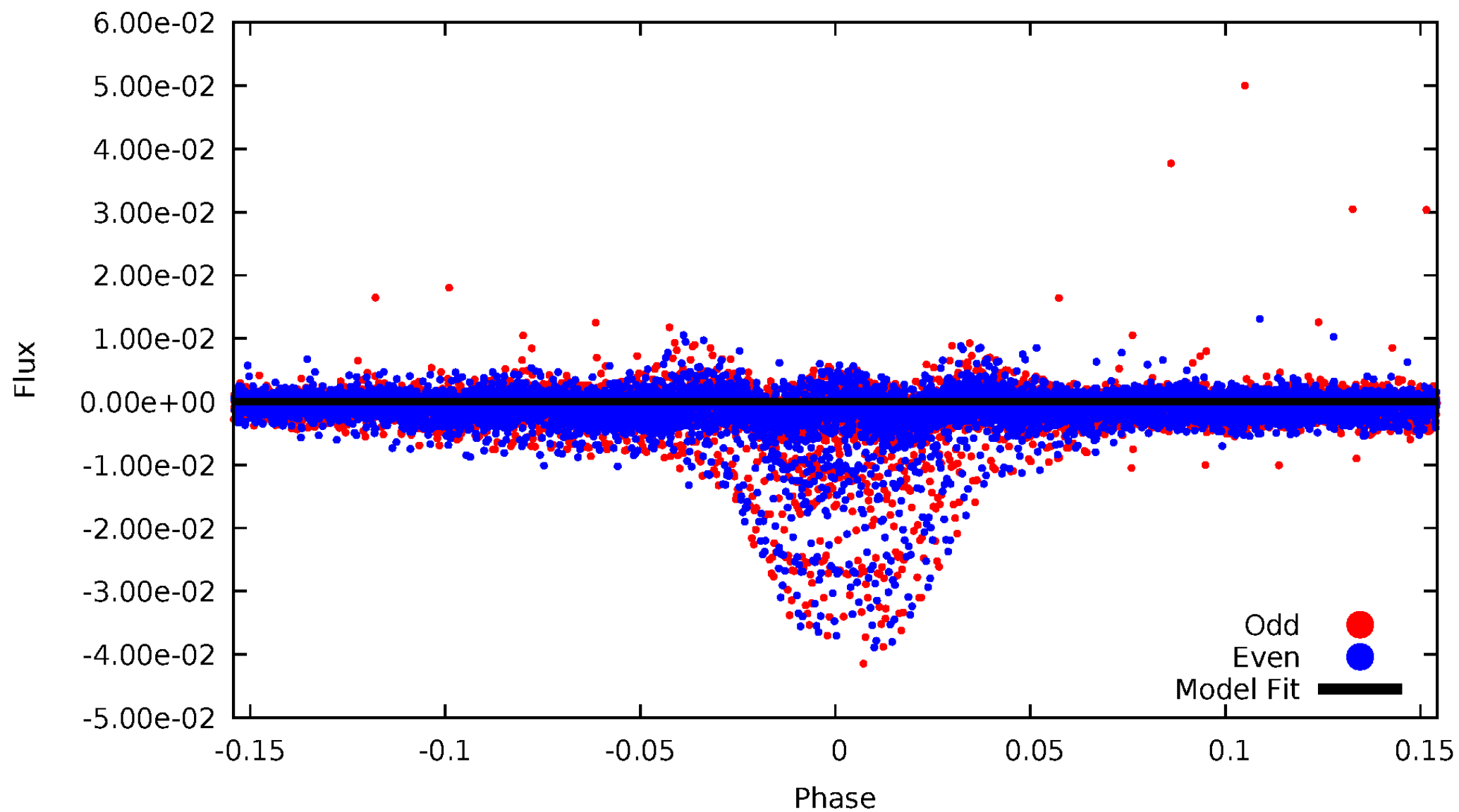


TCE 003351945-01



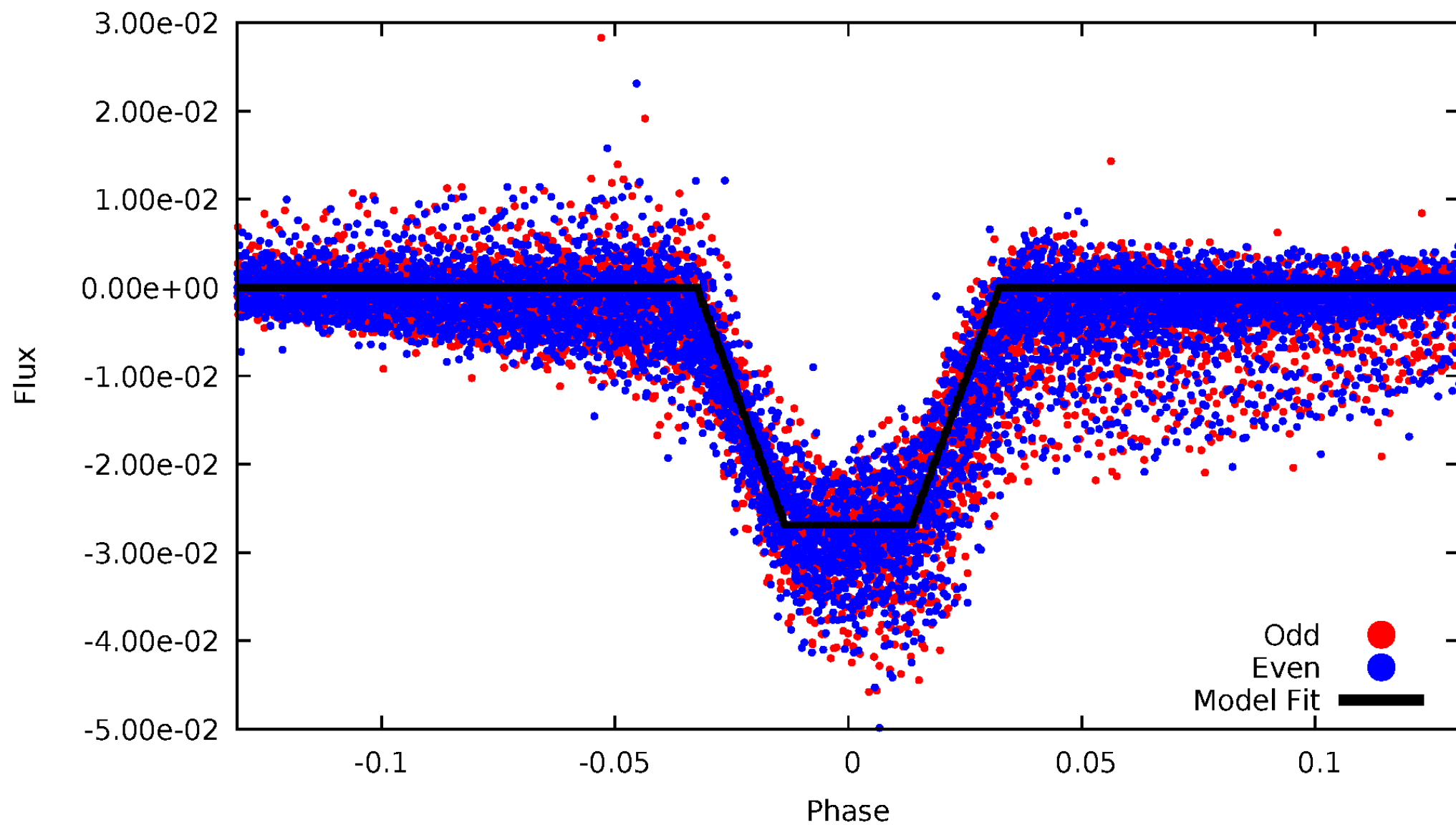
# DV Odd/Even

TCE 003351945-01



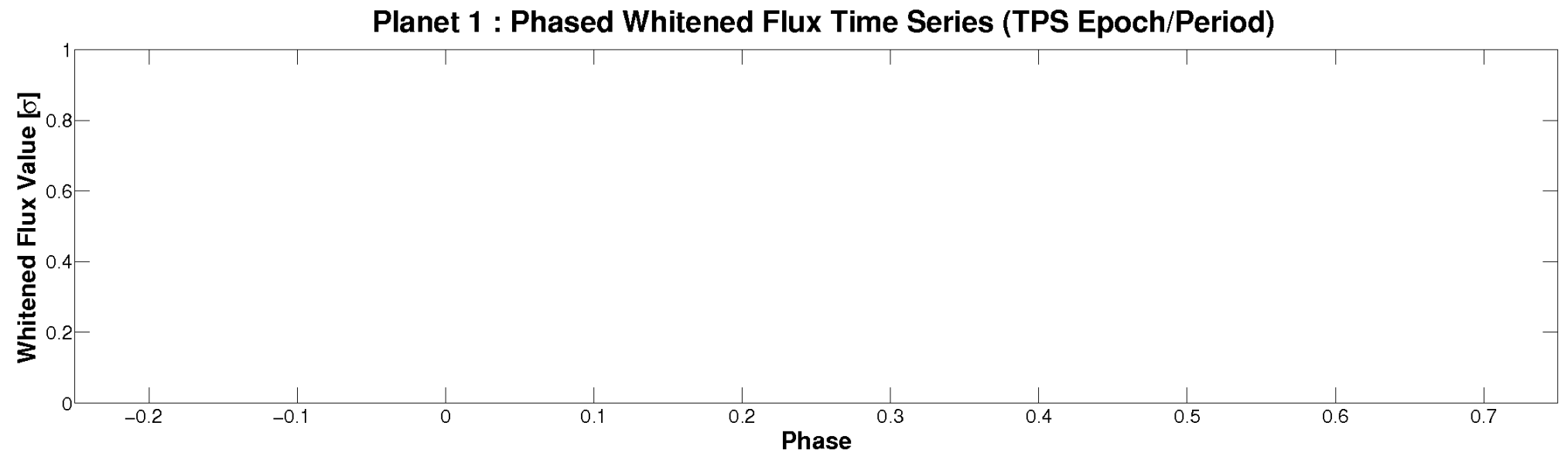
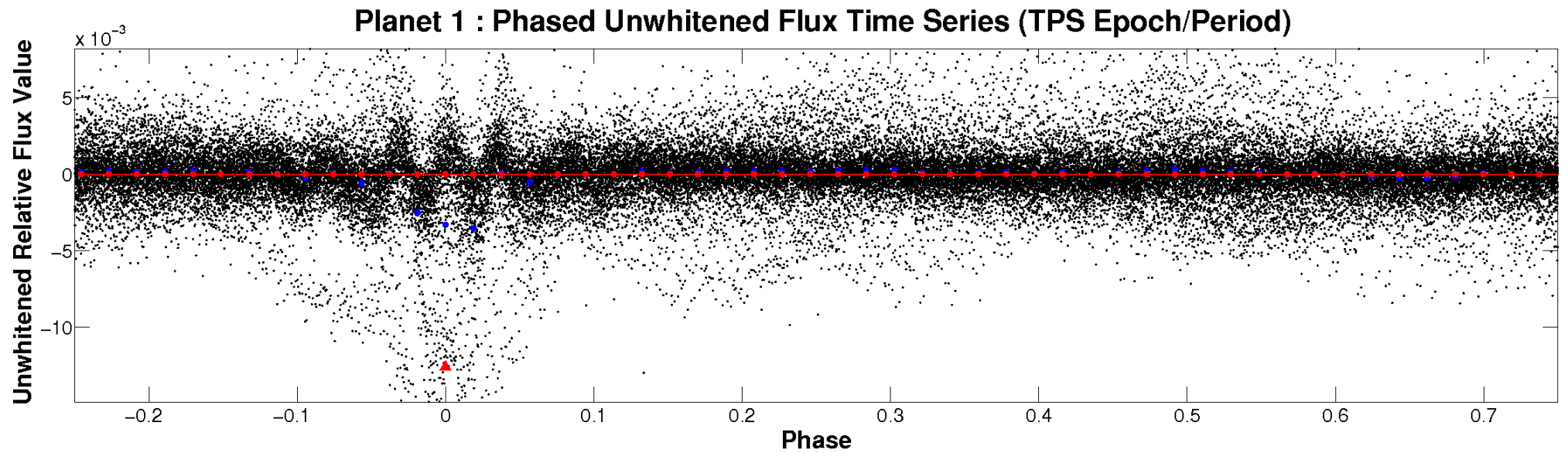
# ALT Odd/Even

TCE 003351945-01



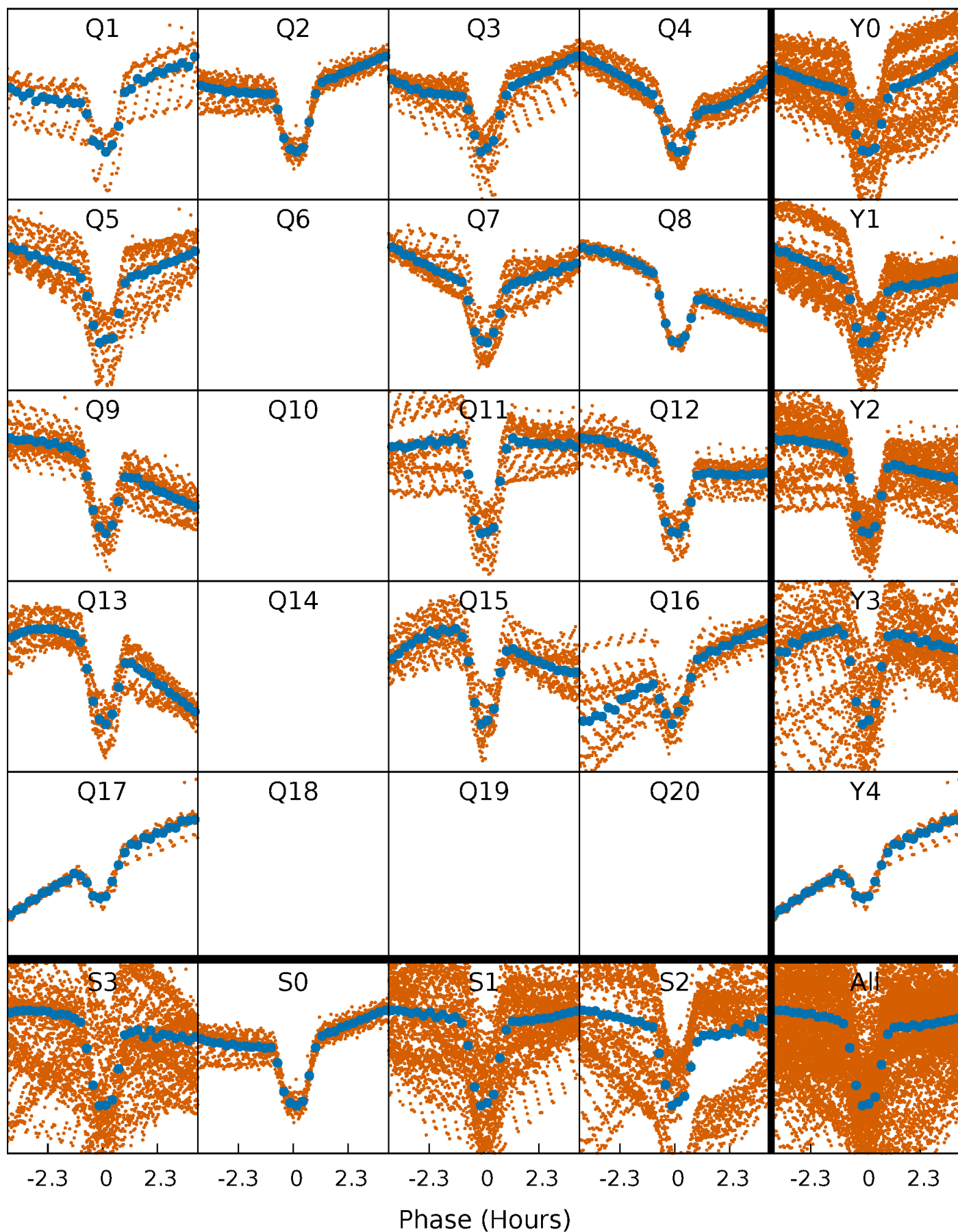


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

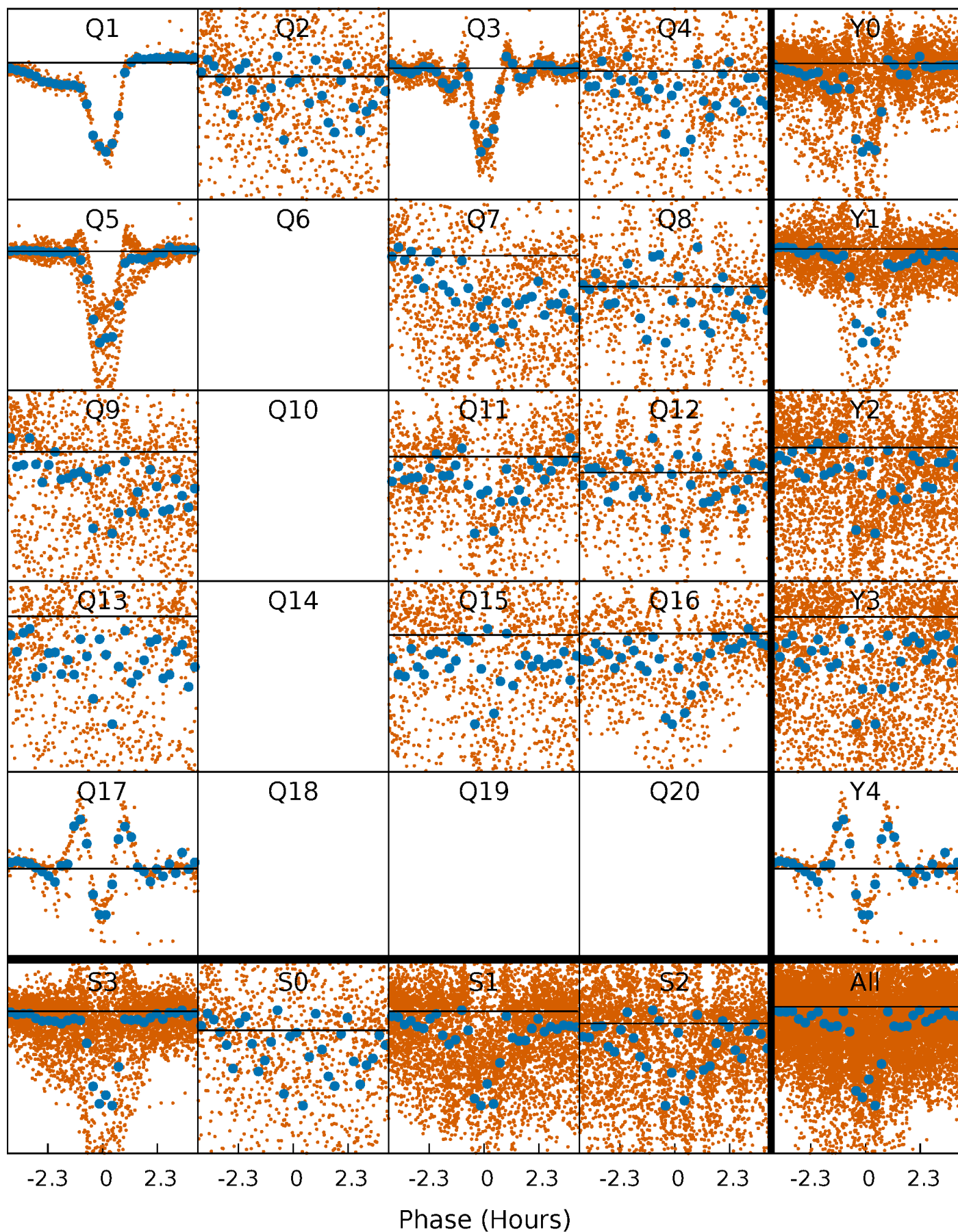
TCE 003351945-01   P= 1.080542 Days    $T_0=132.325777$  (BKJD)





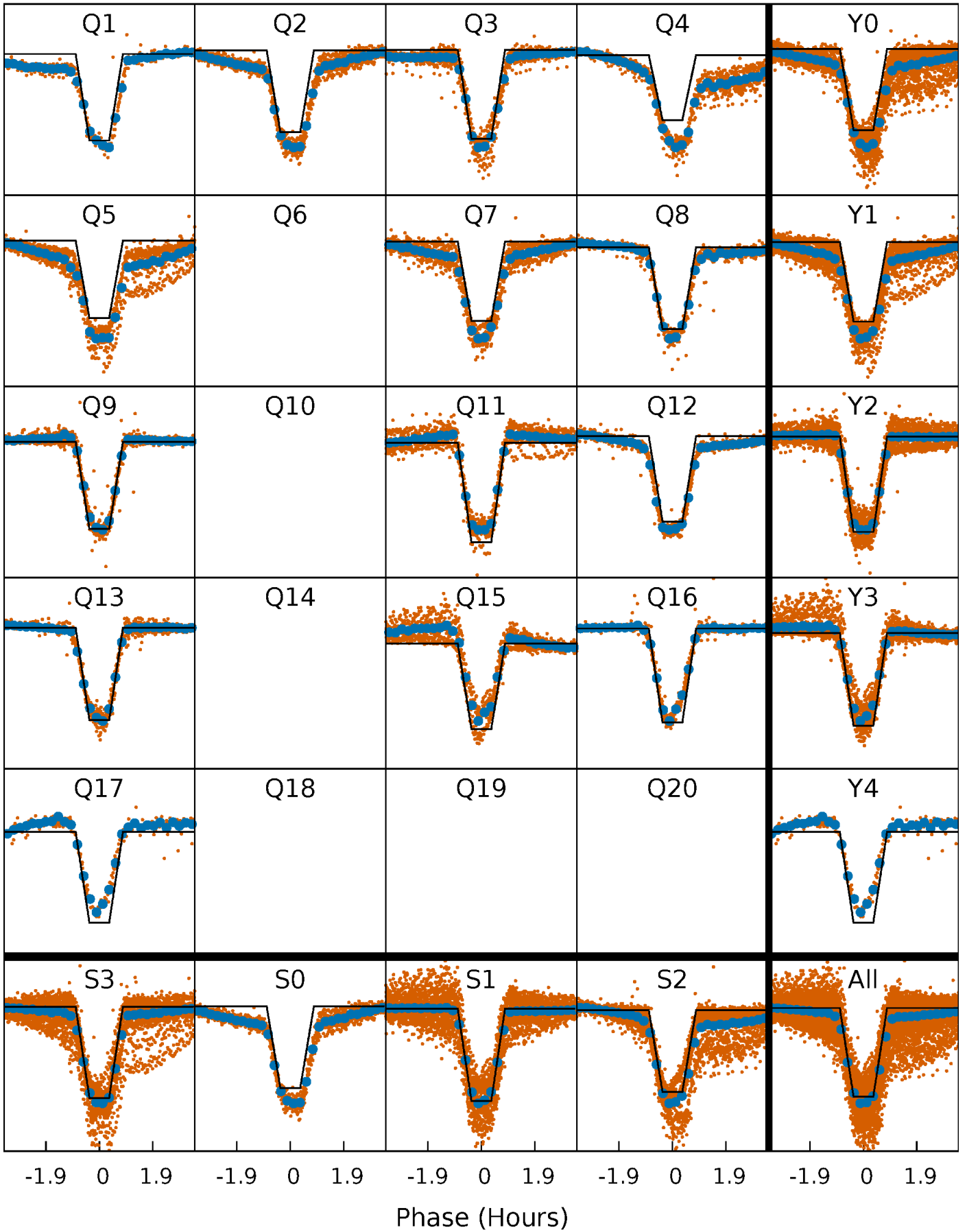
# DV Quarter-Phased Transit Curves

TCE 003351945-01 P= 1.080542 Days  $T_0=132.325777$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

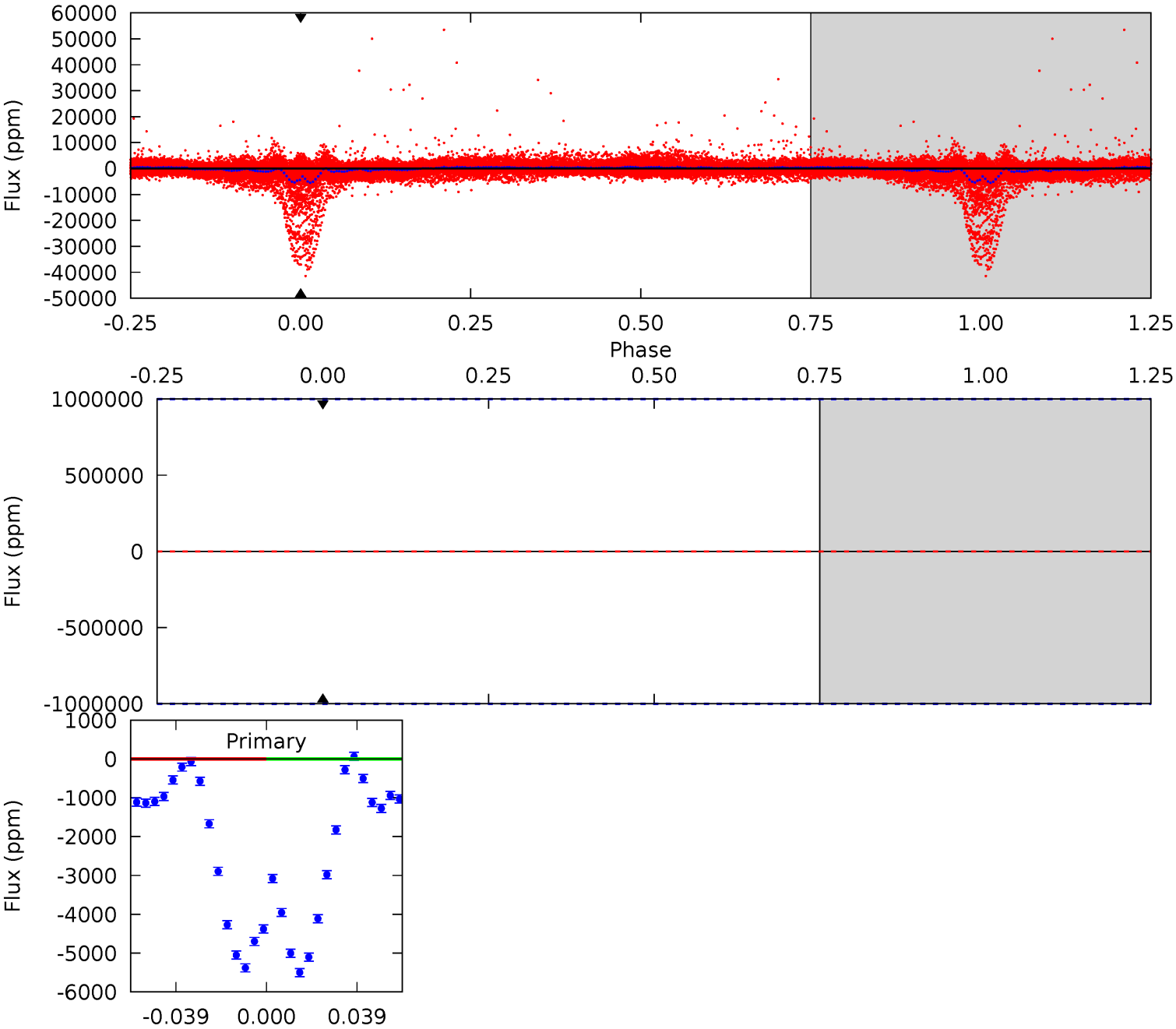
TCE 003351945-01 P= 1.080542 Days  $T_0=132.326914$  (BKJD)



# DV Model-Shift Uniqueness Test

003351945-01, P = 1.080542 Days, E = 131.245235 Days

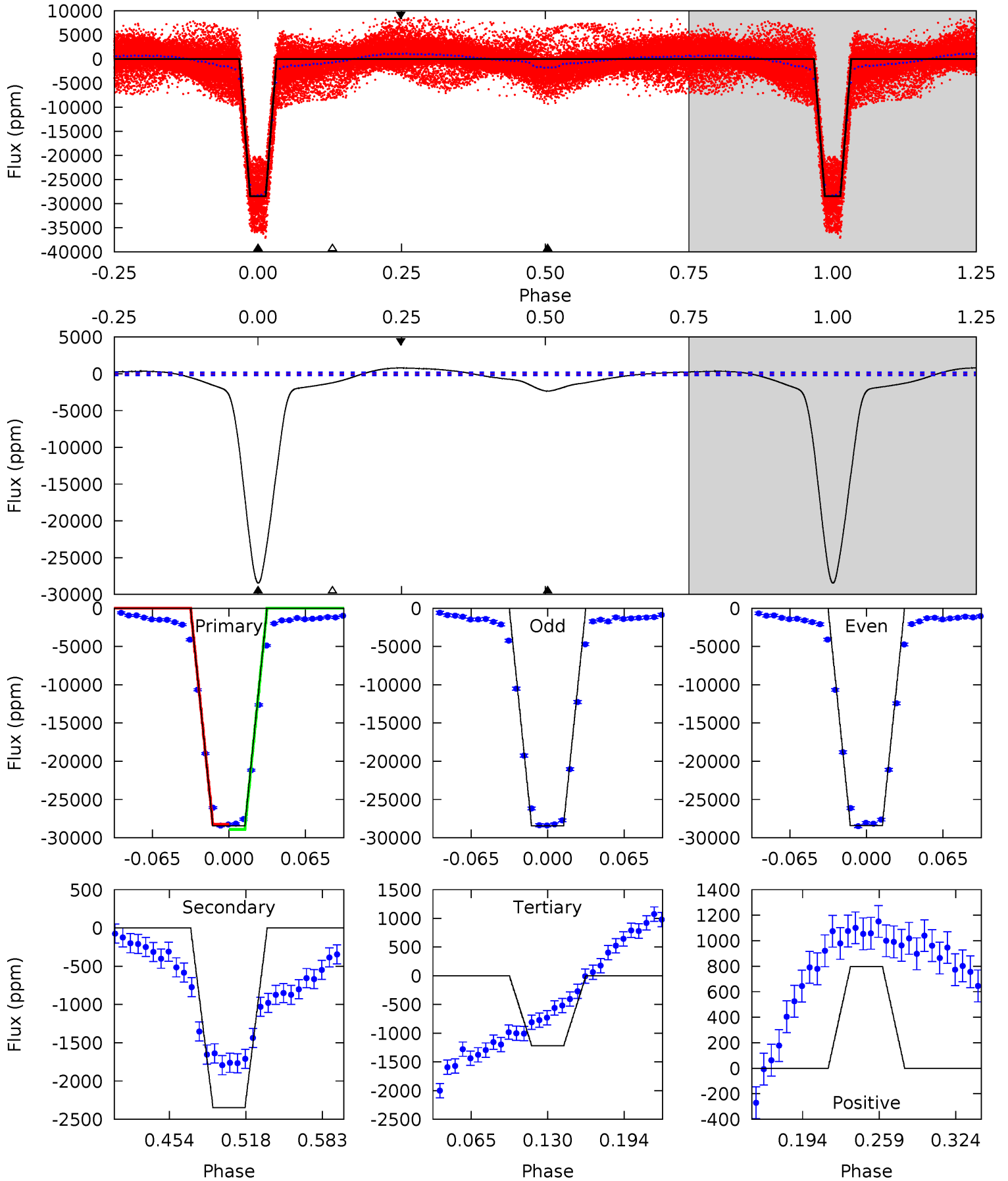
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

003351945-01, P = 1.080542 Days, E = 131.246372 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
726.4	60.0	31.1	20.4	4.66	1.85	18.4	695.3	706.0	28.8	39.6	0.56	1.02	0.03	8.71



### Stellar Parameters For KIC 003351945

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4919^{+146}_{-146}$	$4.566^{+0.065}_{-0.052}$	$-0.240^{+0.300}_{-0.300}$	$0.721^{+0.075}_{-0.069}$	$0.697^{+0.098}_{-0.053}$	$2.622^{+0.762}_{-0.495}$
	+3%/-3%	+1%/-1%	+125%/-125%	+10%/-10%	+14%/-8%	+29%/-19%
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 003351945-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$9.87^{+7.16}_{-6.16}$	$1902^{+74}_{-74}$	$2289^{+6997}_{-10651}$	$0.456^{+319.522}_{-251.828}$
Alt.	$-2348 \pm 39$	$13.70^{+7.95}_{-7.55}$	$1902^{+72}_{-75}$	$3115^{+967}_{-480}$	$2.364^{+9.210}_{-1.437}$

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

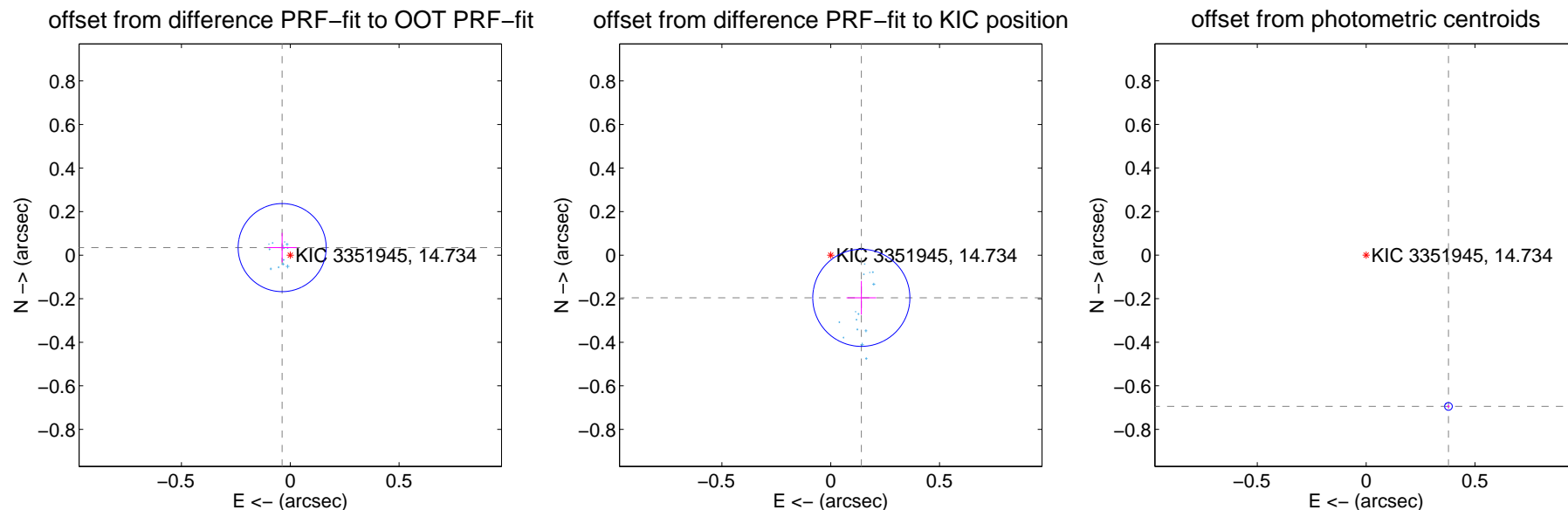
## DV Centroid Data

Supplemental centroid analysis for 003351945-01. Kepler magnitude: 14.73. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

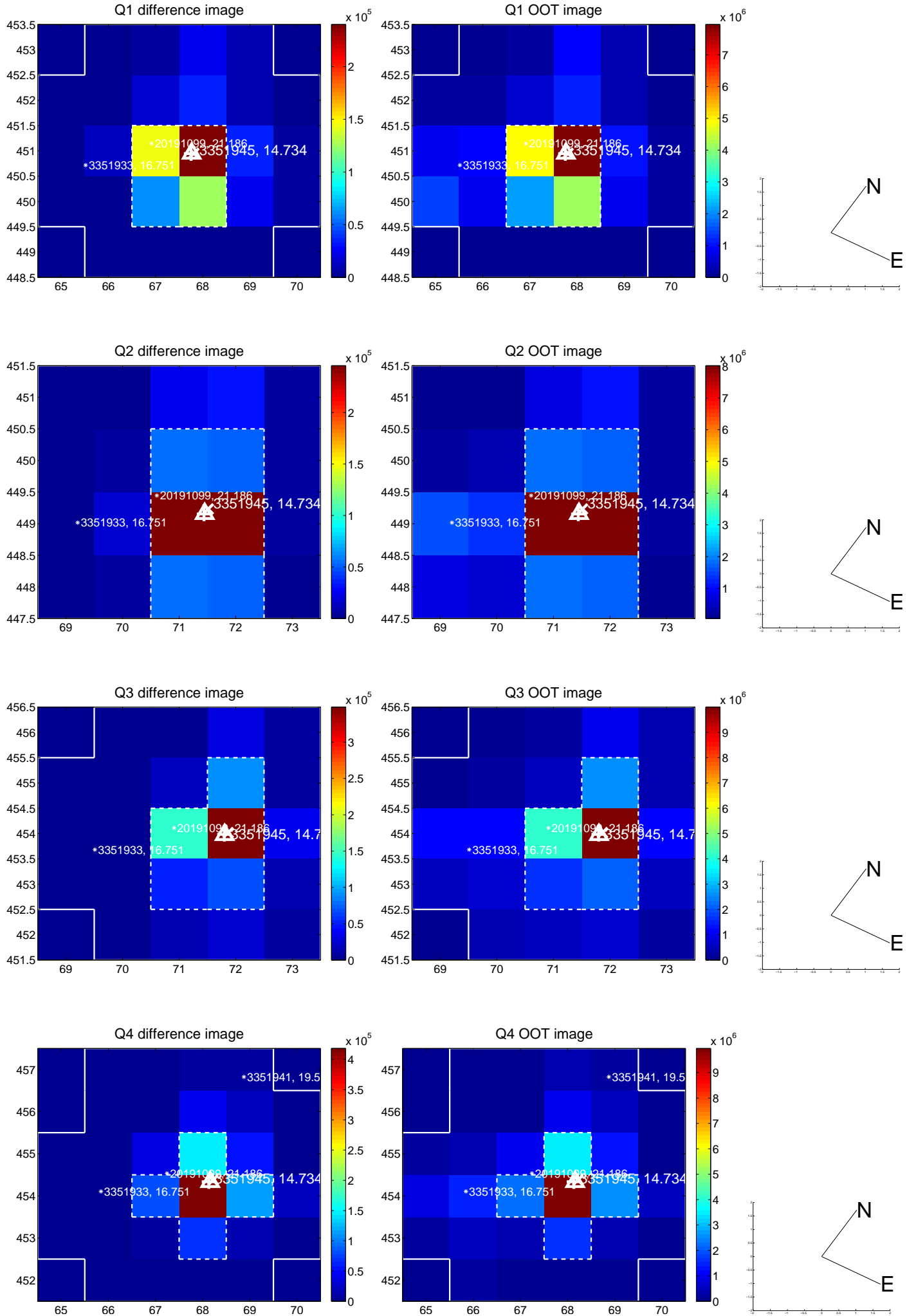
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.051 \pm 0.067$	0.75	$0.037 \pm 0.067$	$0.035 \pm 0.068$
PRF-fit source offset from KIC position	$0.241 \pm 0.074$	3.24	$-0.141 \pm 0.068$	$-0.196 \pm 0.077$
photometric centroid source offset	$0.79 \pm 0.01$	134.49	$-0.38 \pm 0.01$	$-0.69 \pm 0.01$



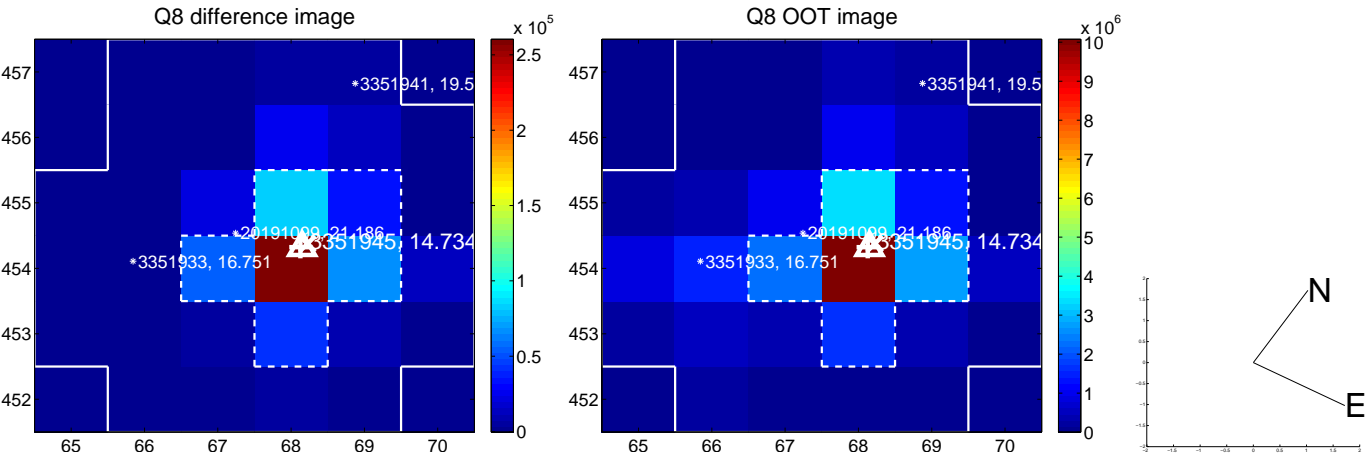
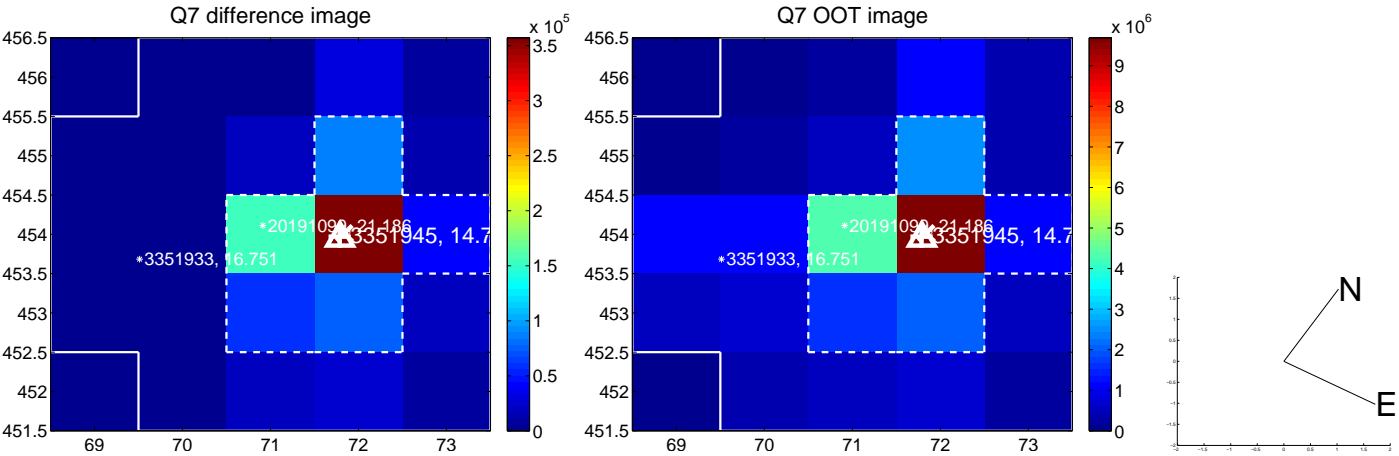
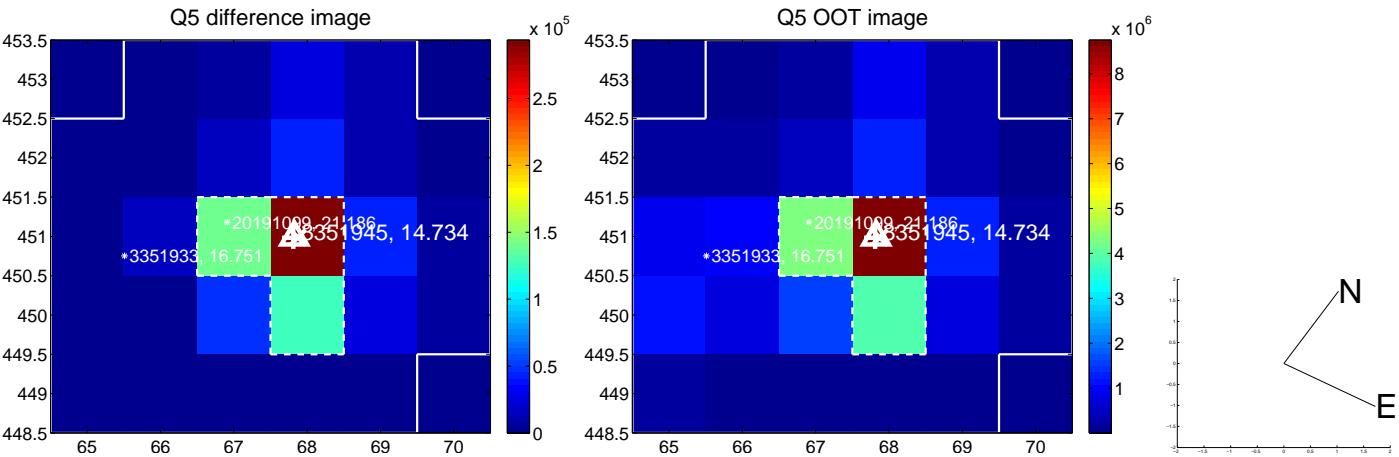
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



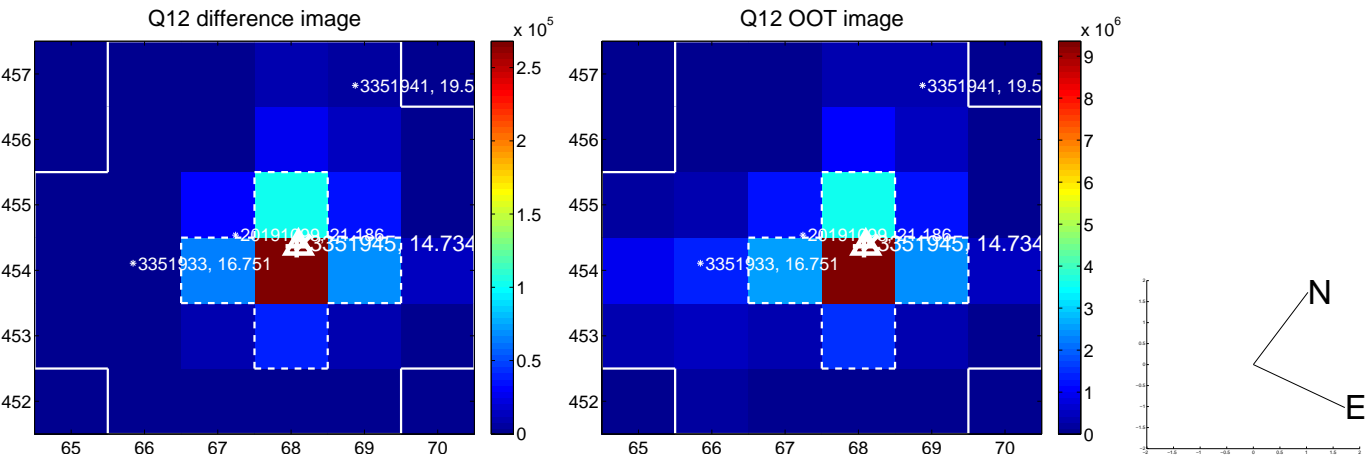
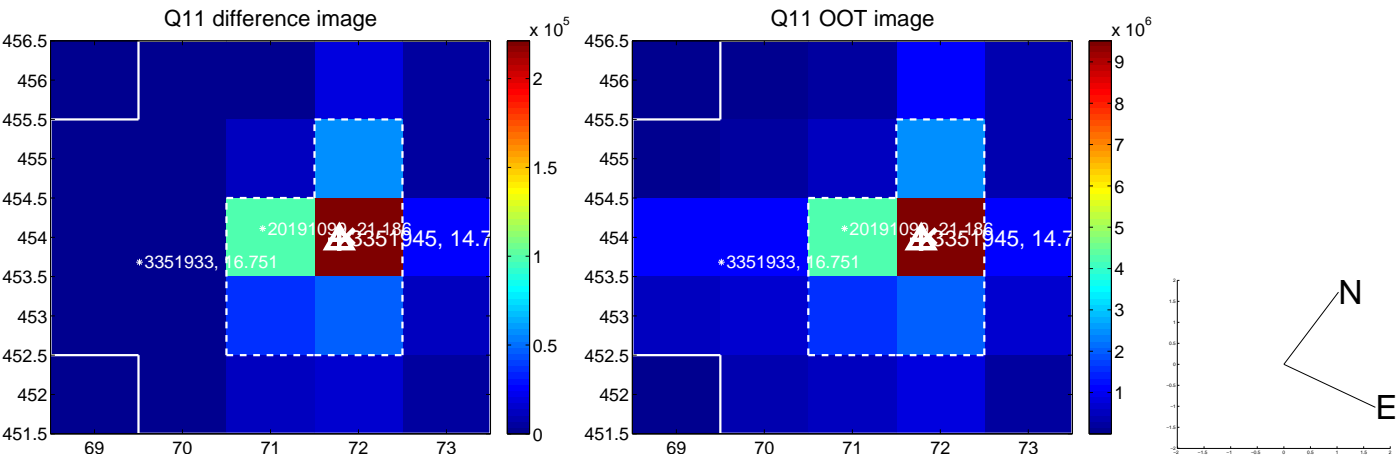
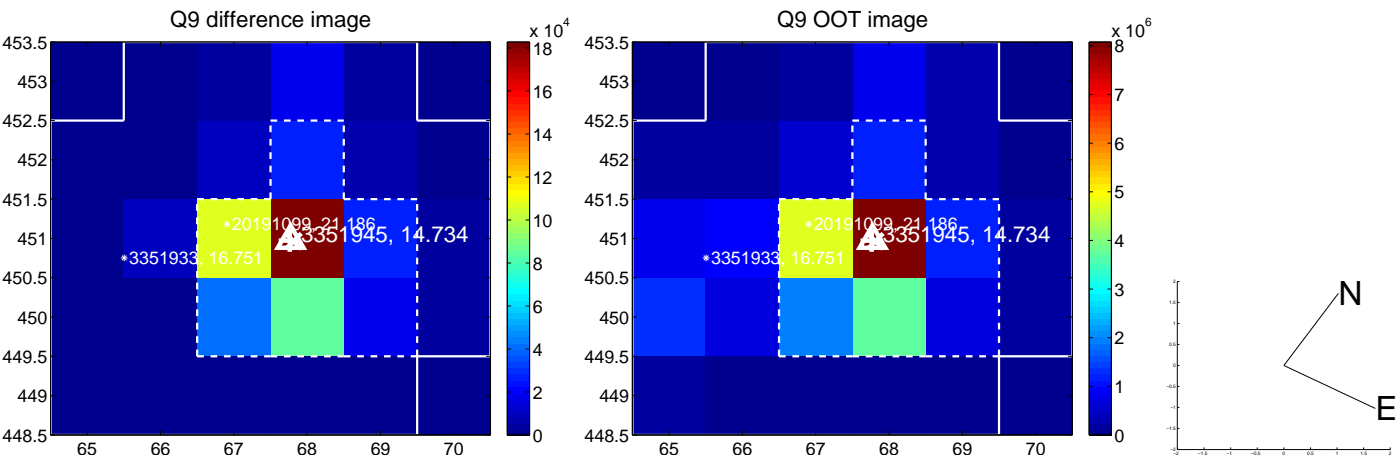
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



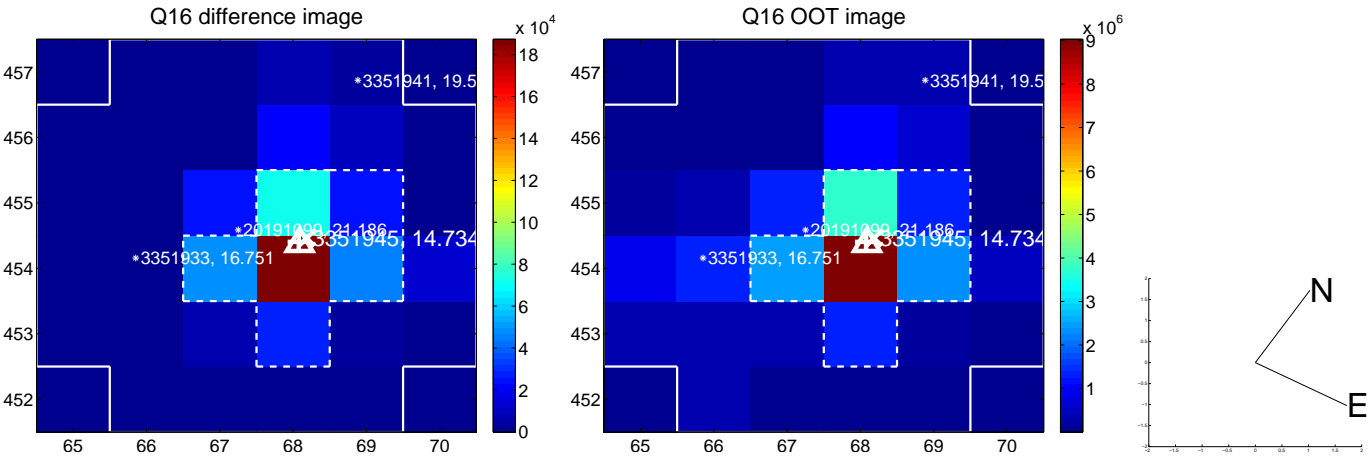
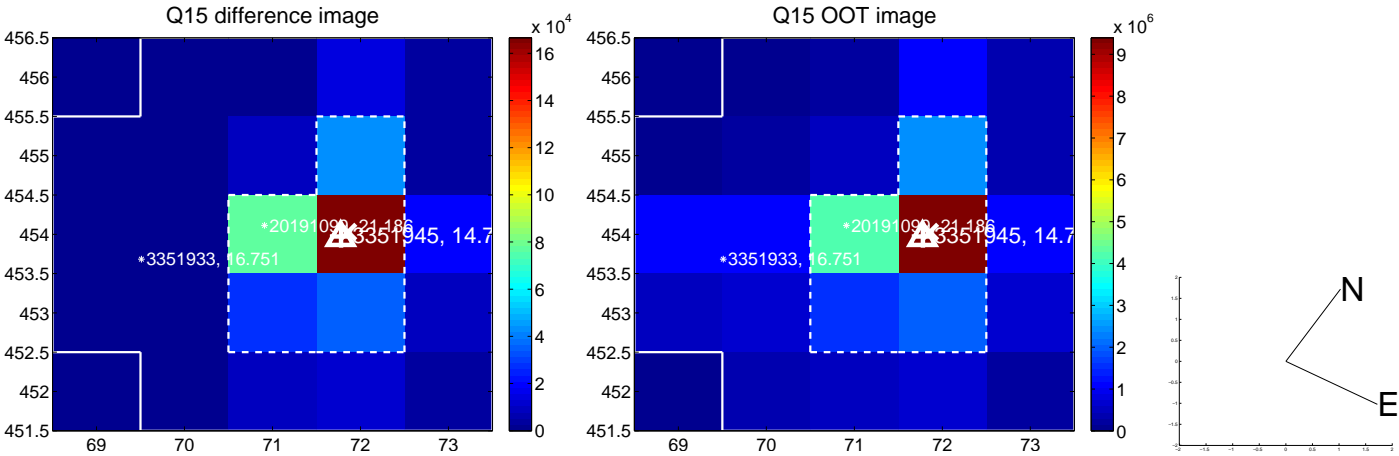
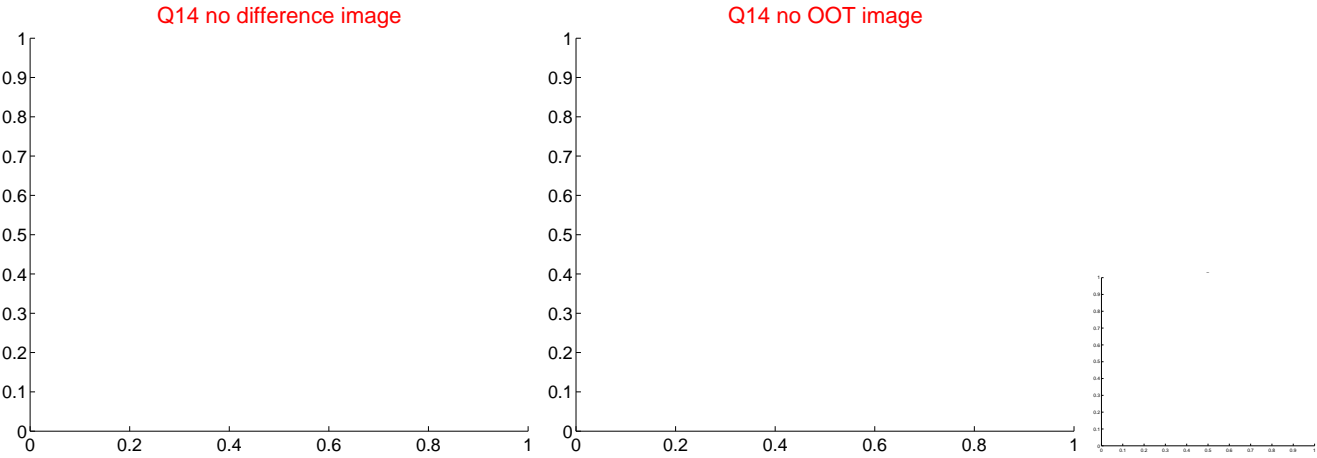
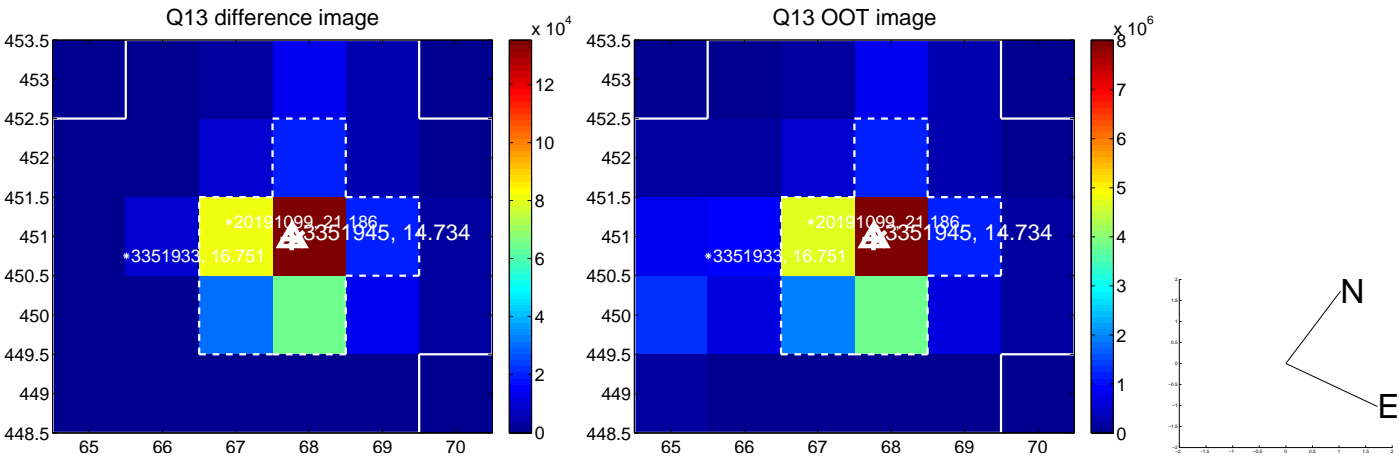
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



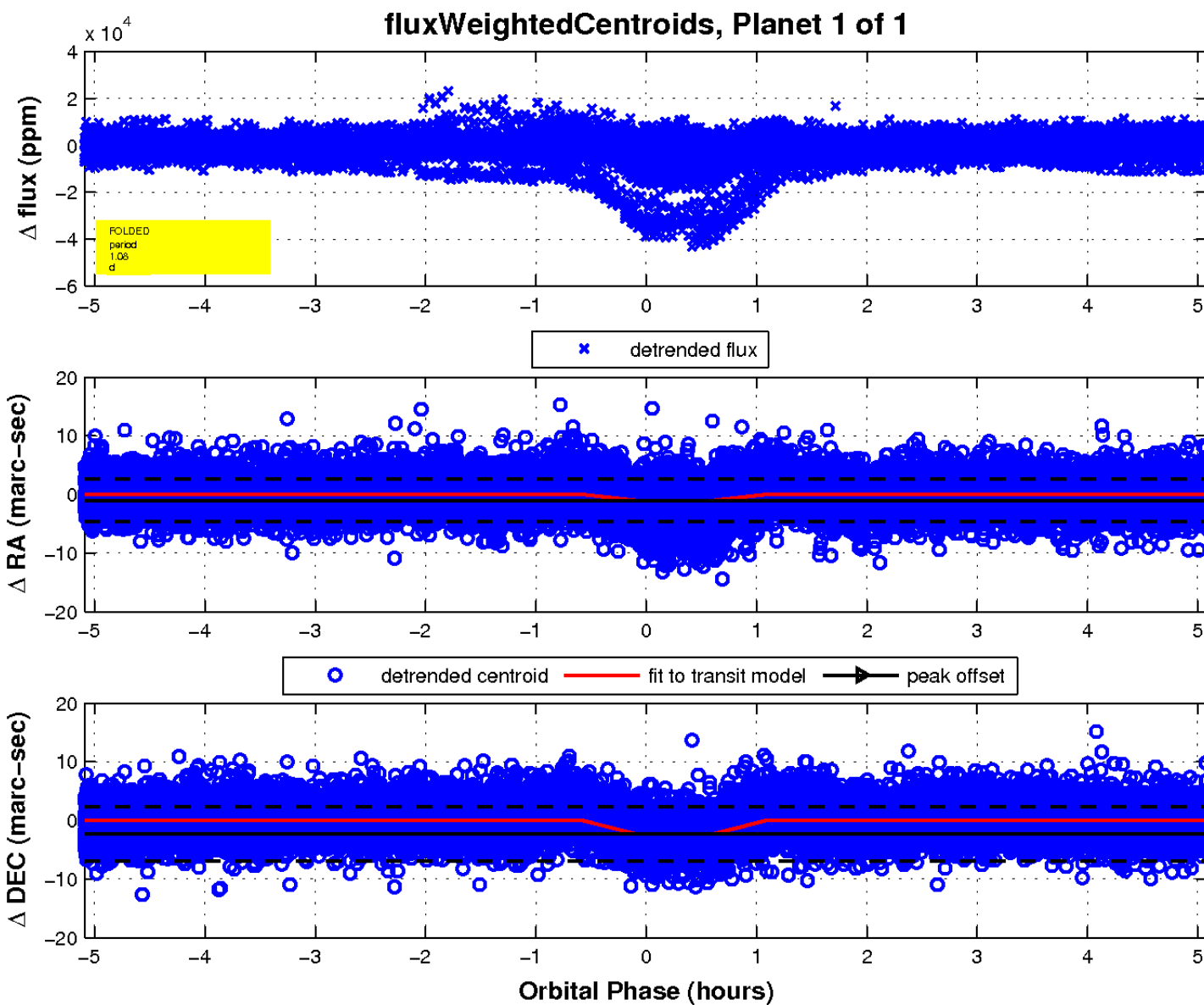
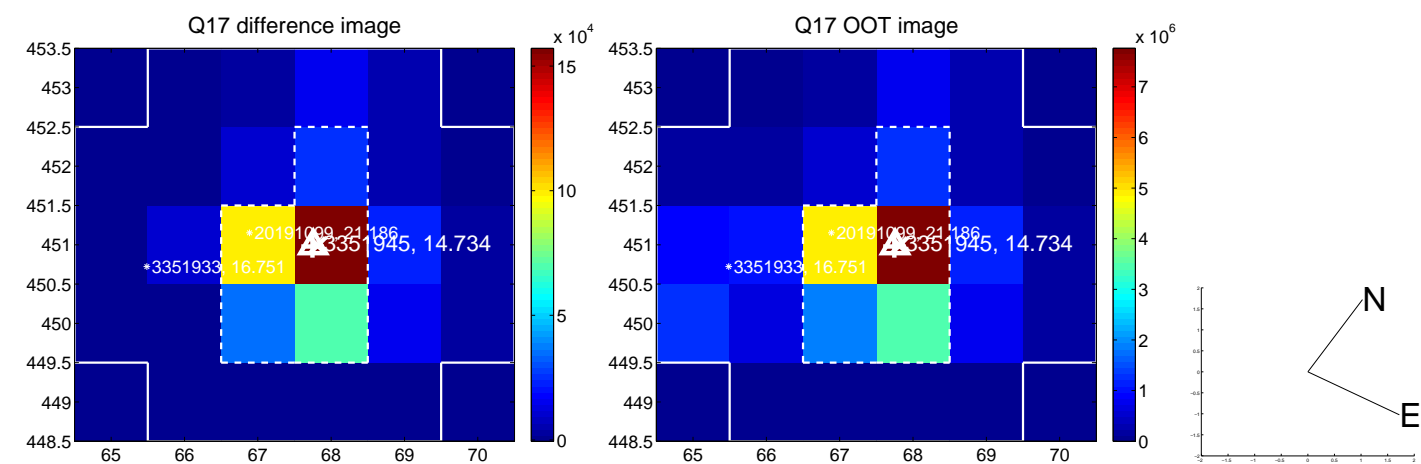
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

