

# KIC 003239508

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003239508-01	OBS	No	0.523438	132.021611	311.8	2.000	7.7	-1.0	2.36	8209	4.21	92855.49

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003239508-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS

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

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

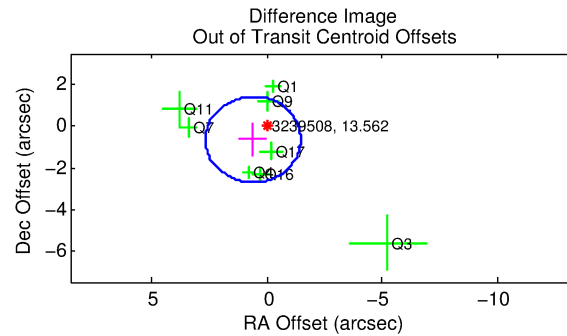
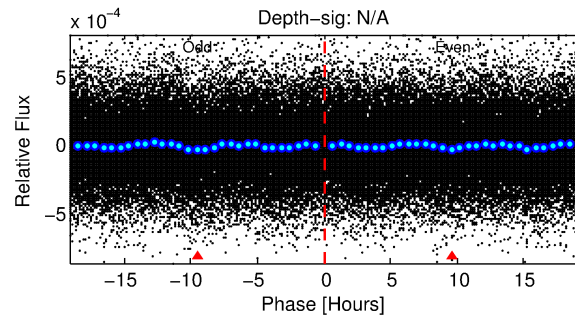
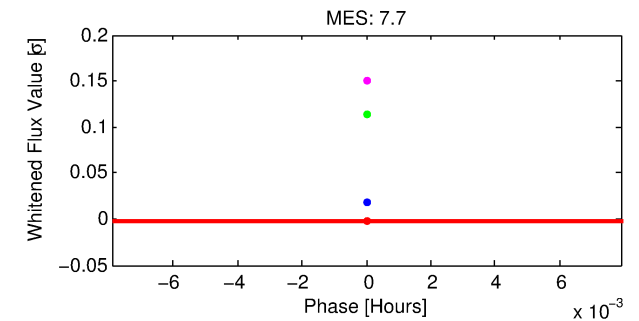
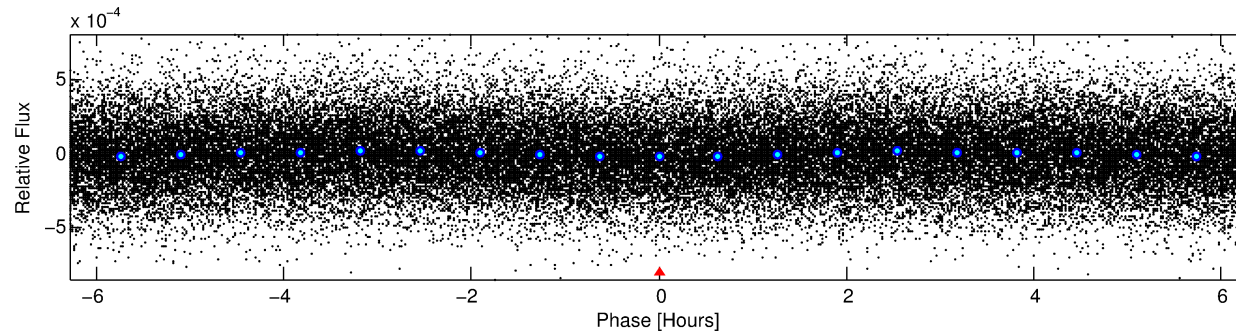
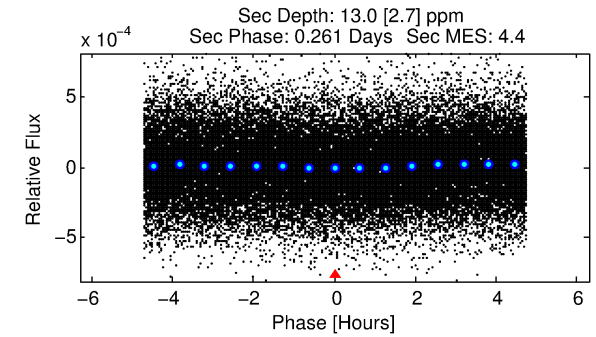
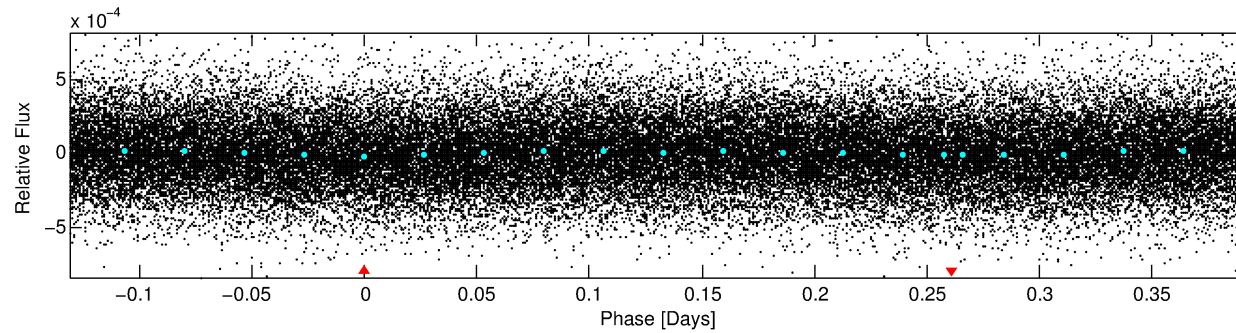
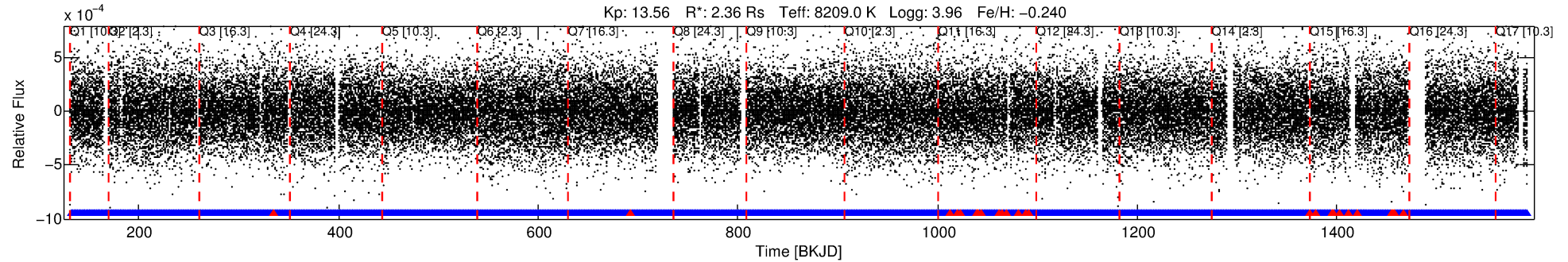
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003239508-01

No Significant Match Found

# DV One-Page Summary

KIC: 3239508 Candidate: 1 of 1 Period: 0.523 d



## TPS TCE Results:

Period = 0.52344 d  
Epoch = 132.0216 BKJD

DV fit results are unavailable

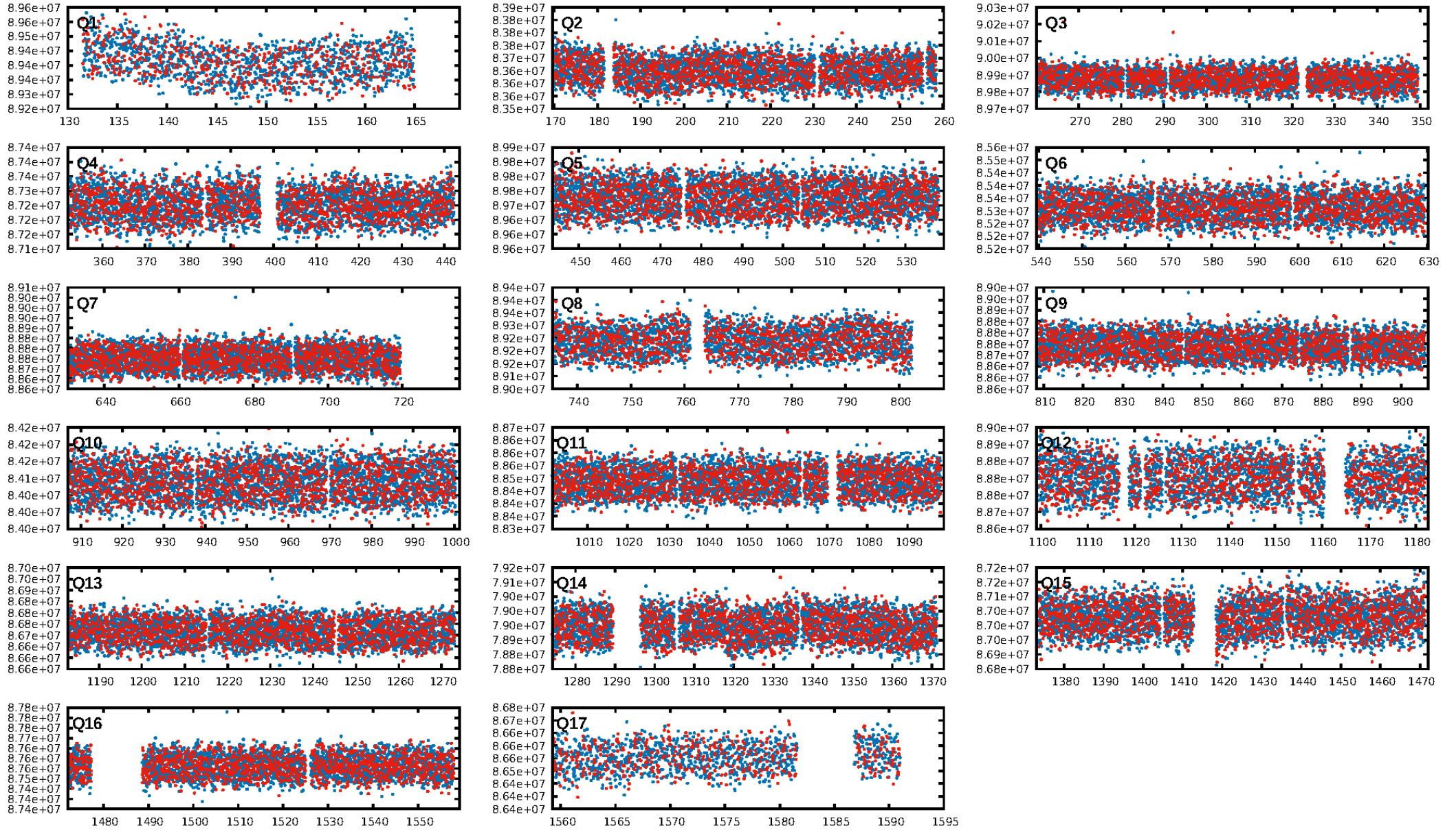
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.47e-11  
RollingBand-fgt: 0.99 [2422/2447]  
GhostDiagnostic-chr: 4.592  
Centroid-sig: 3.7%  
Centroid-so: 1.614 arcsec [1.68σ]  
OotOffset-rm: 0.876 arcsec [1.27σ]  
KicOffset-rm: 0.839 arcsec [1.21σ]  
OotOffset-st: 0/3/2/3 [8]  
KicOffset-st: 0/3/2/3 [8]  
DiffImageQuality-fgm: 0.38 [3/8]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:14:33 Z

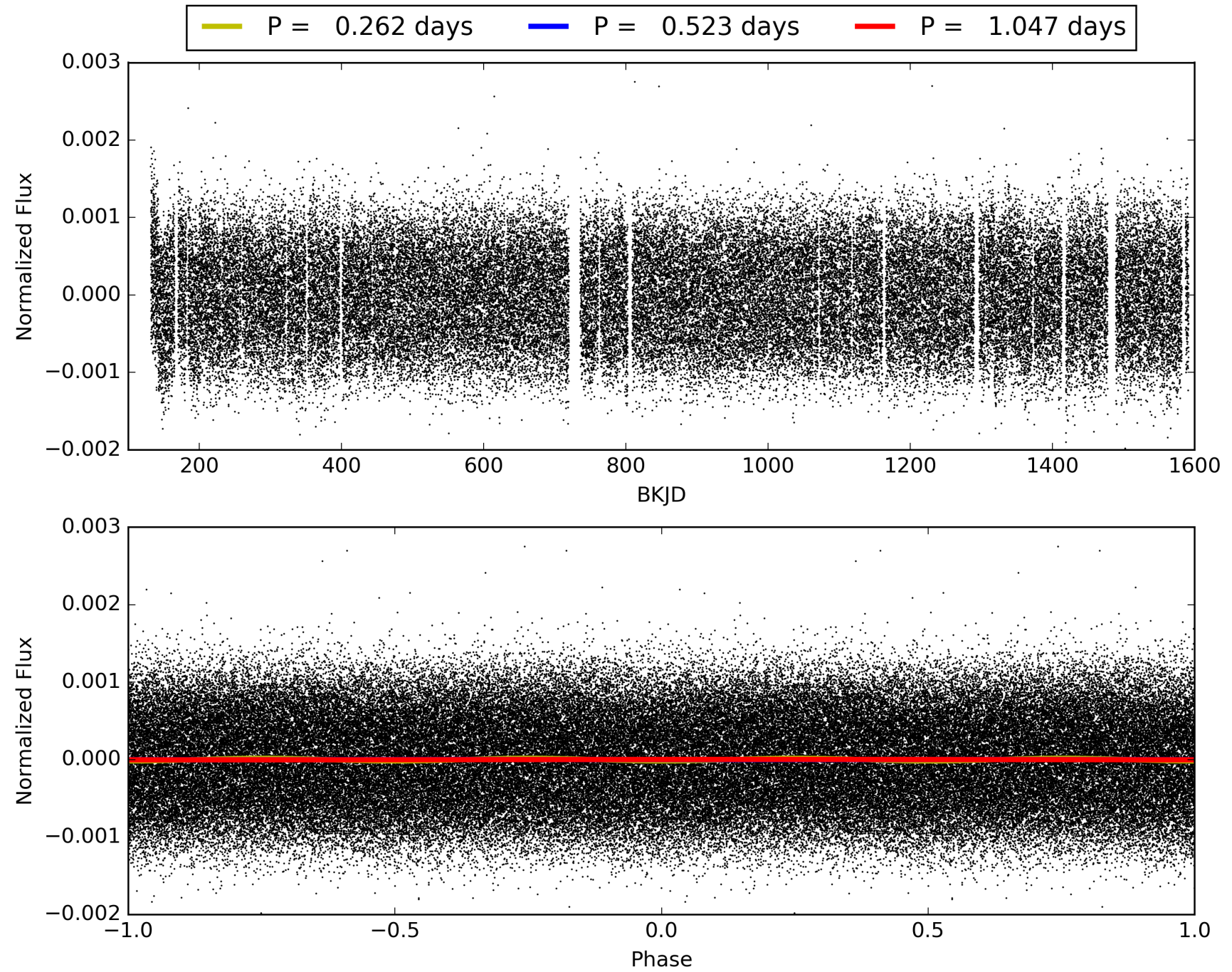
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 003239508-01, PDC Light Curves



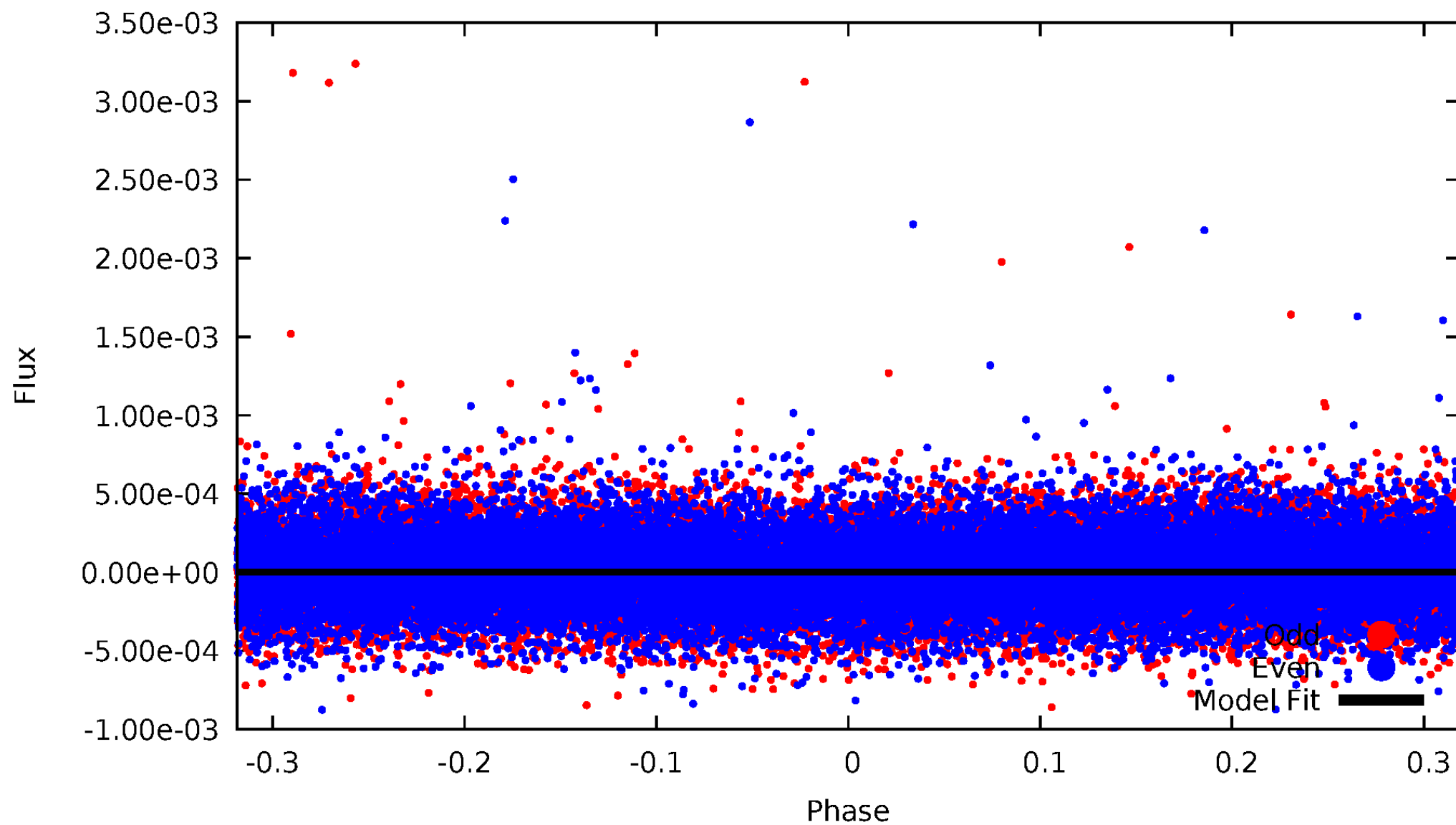


TCE 003239508-01



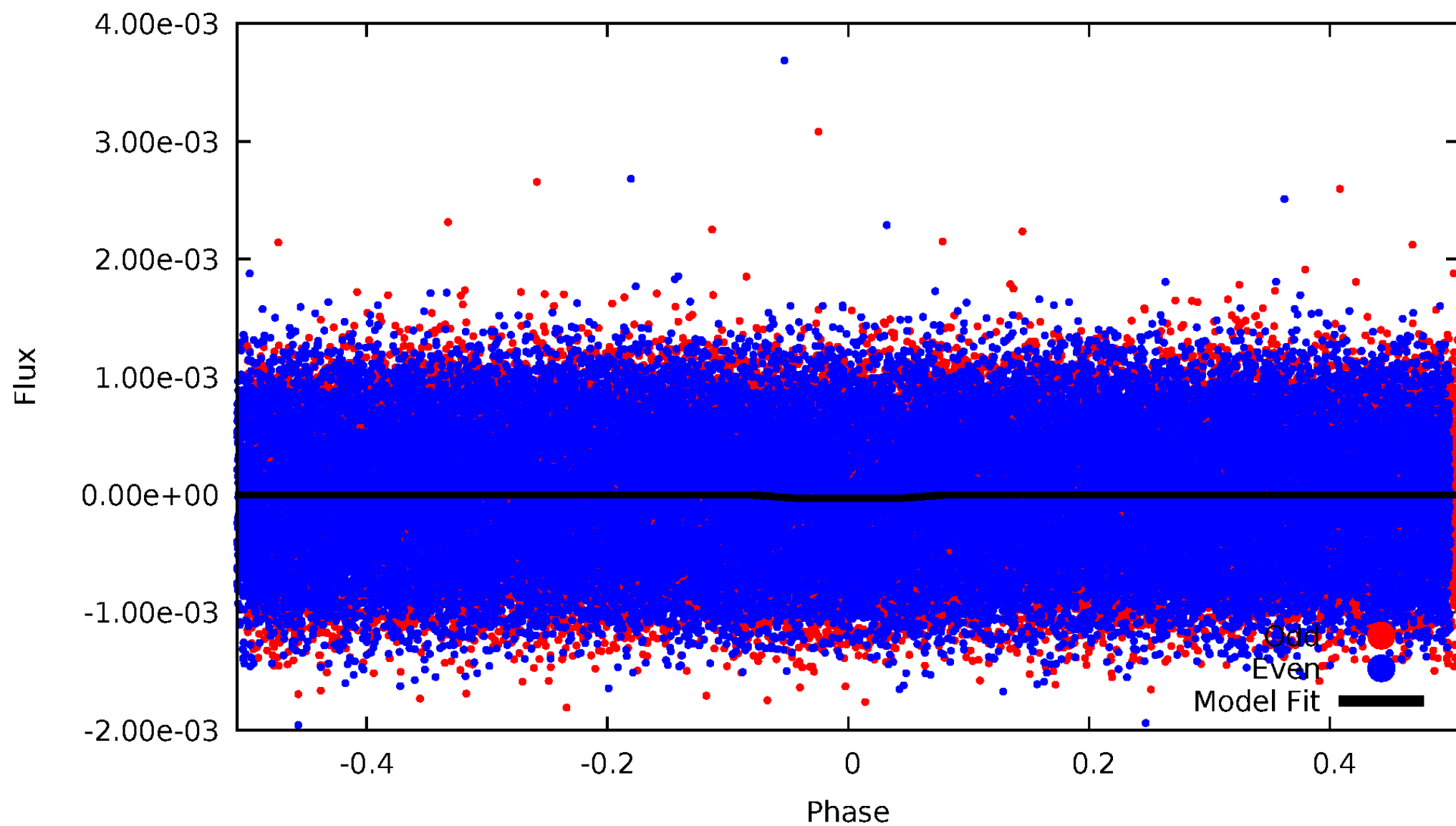
# DV Odd/Even

TCE 003239508-01

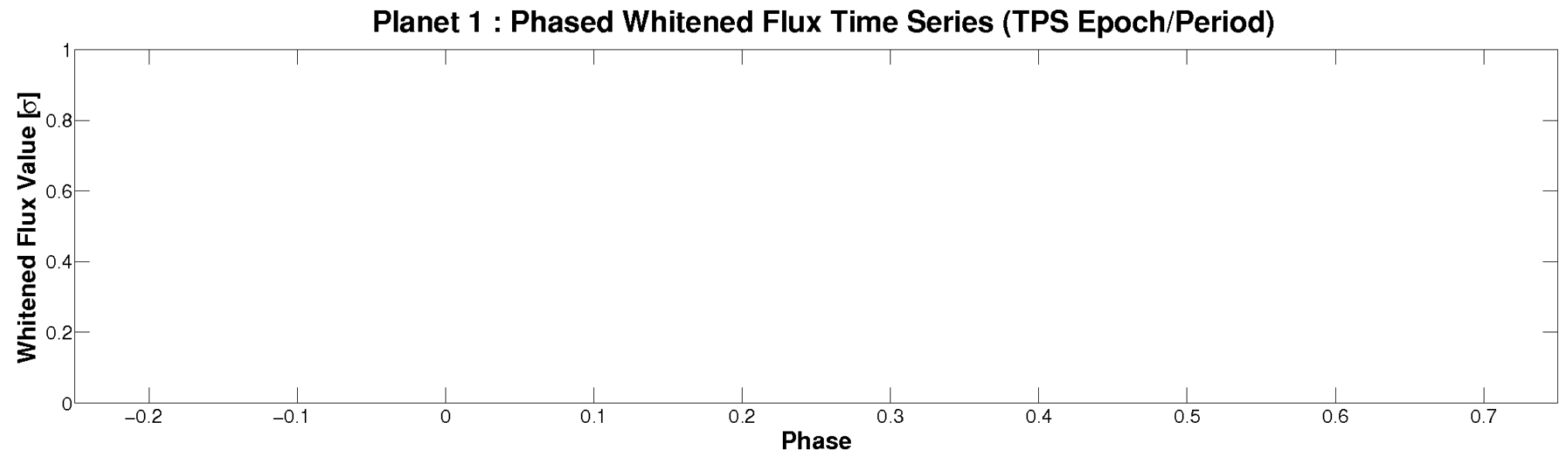
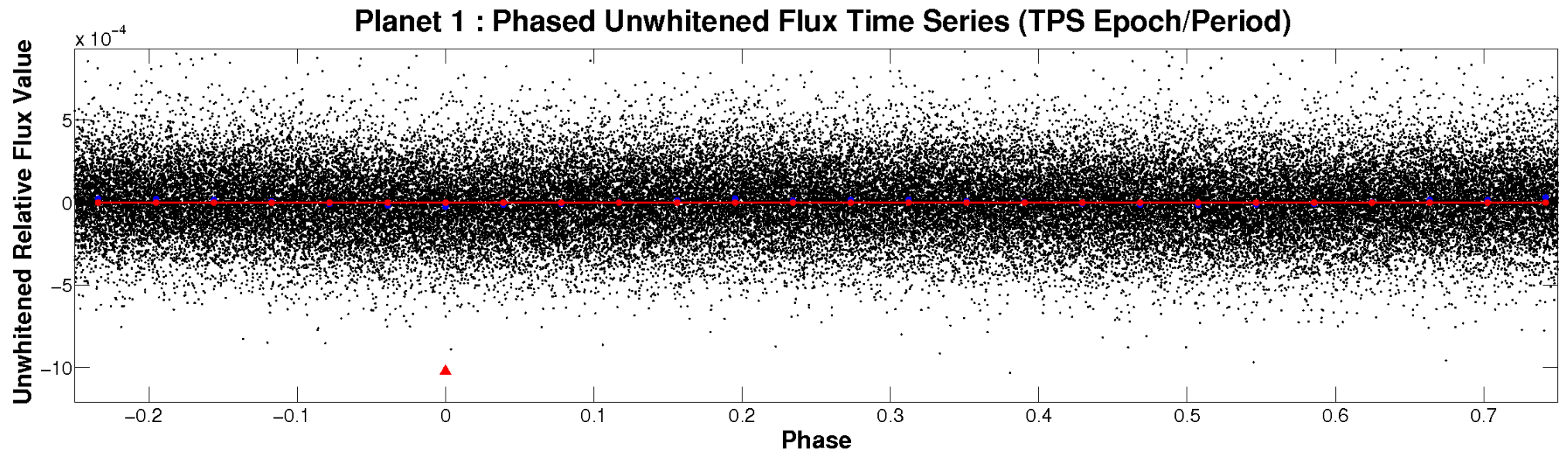


# ALT Odd/Even

TCE 003239508-01

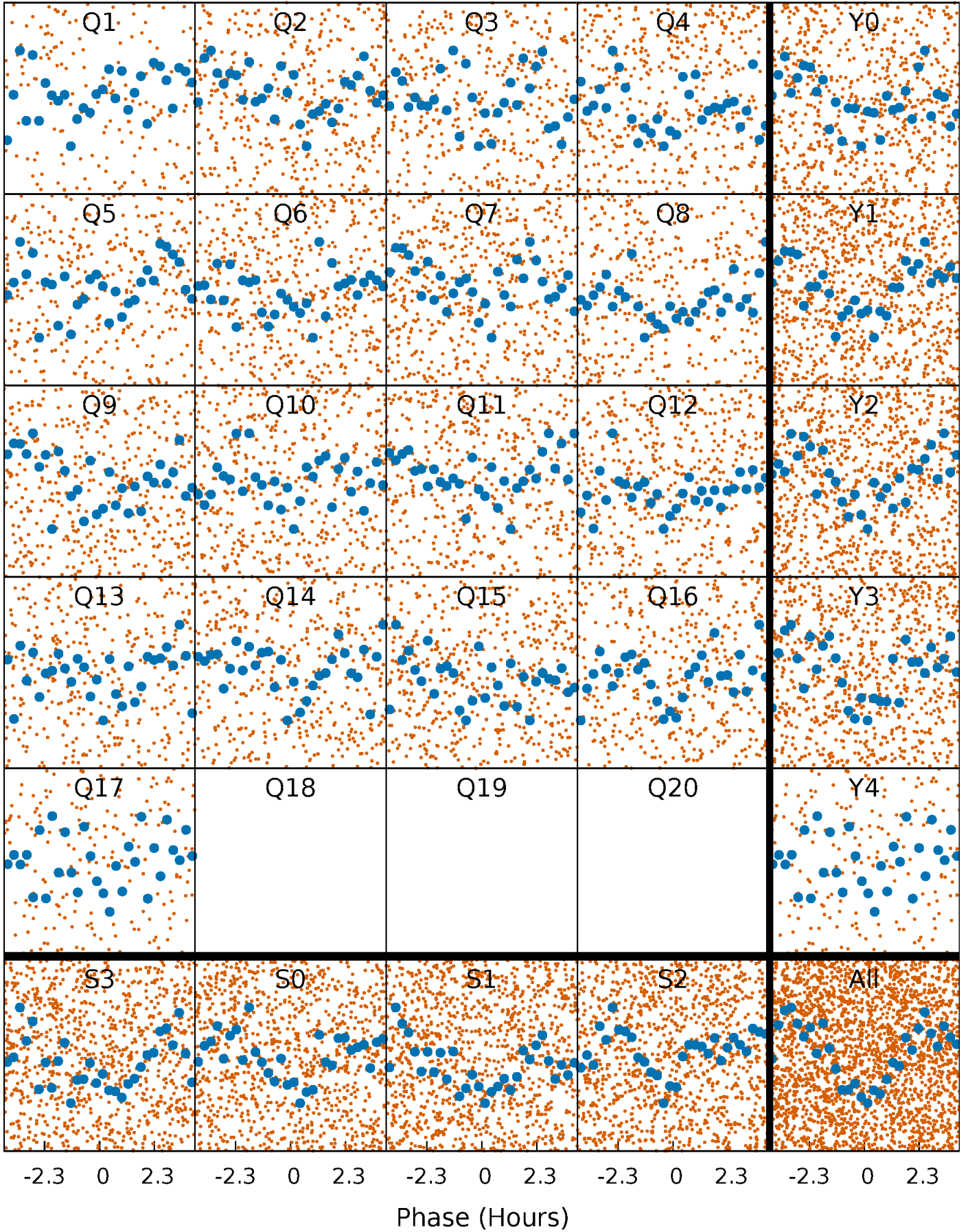


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

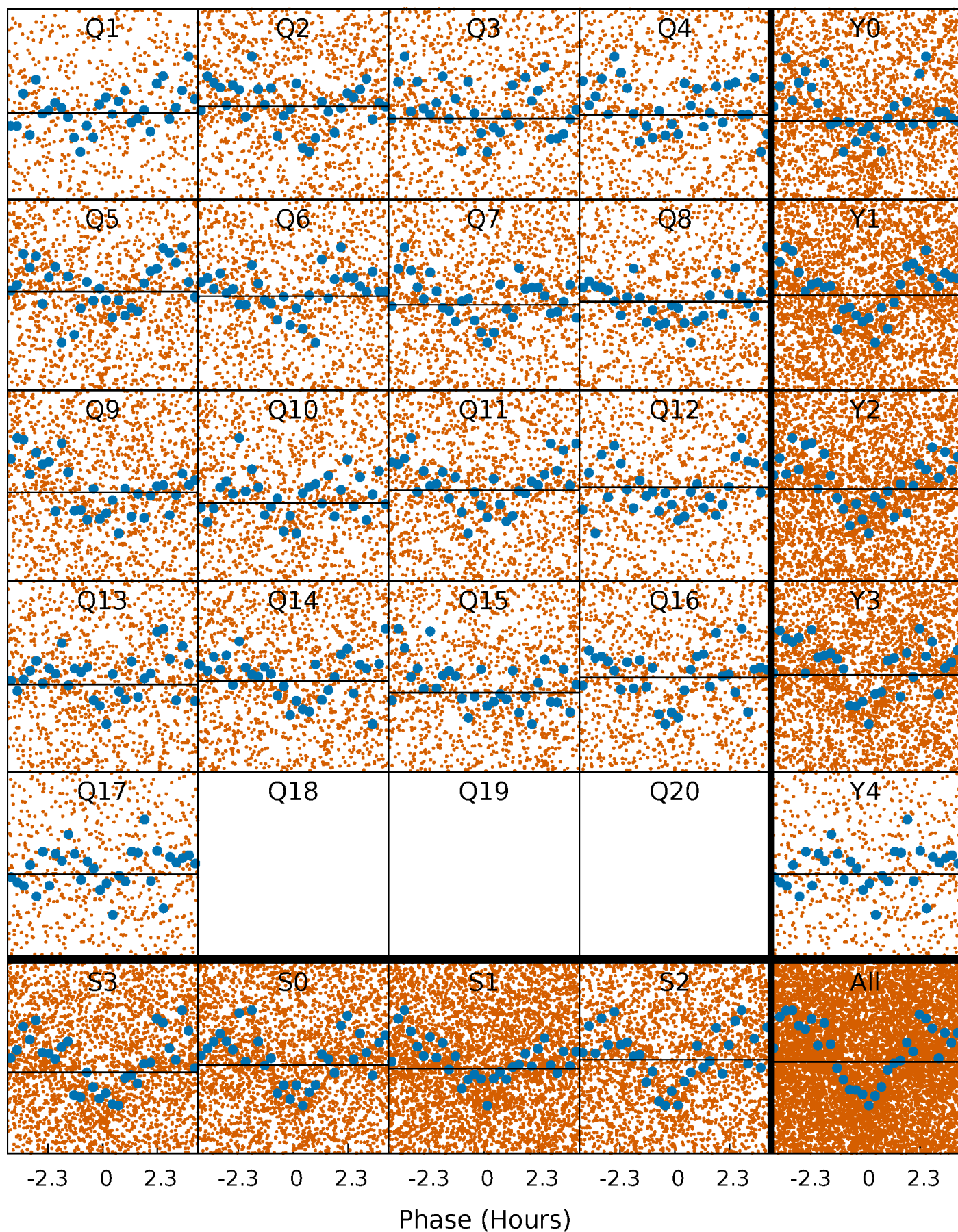
TCE 003239508-01 P= 0.523438 Days  $T_0=132.021611$  (BKJD)





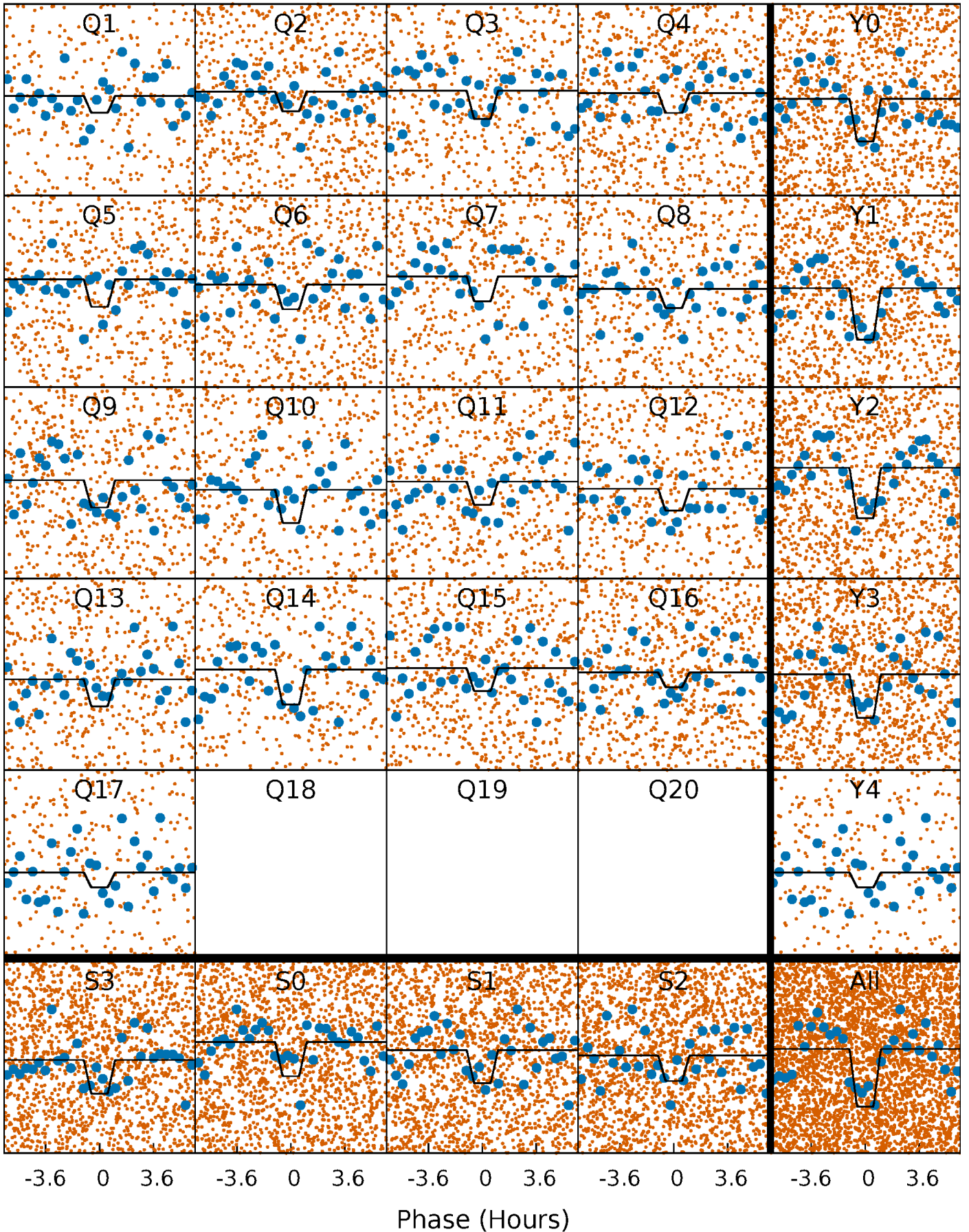
# DV Quarter-Phased Transit Curves

TCE 003239508-01 P= 0.523438 Days  $T_0=132.021611$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

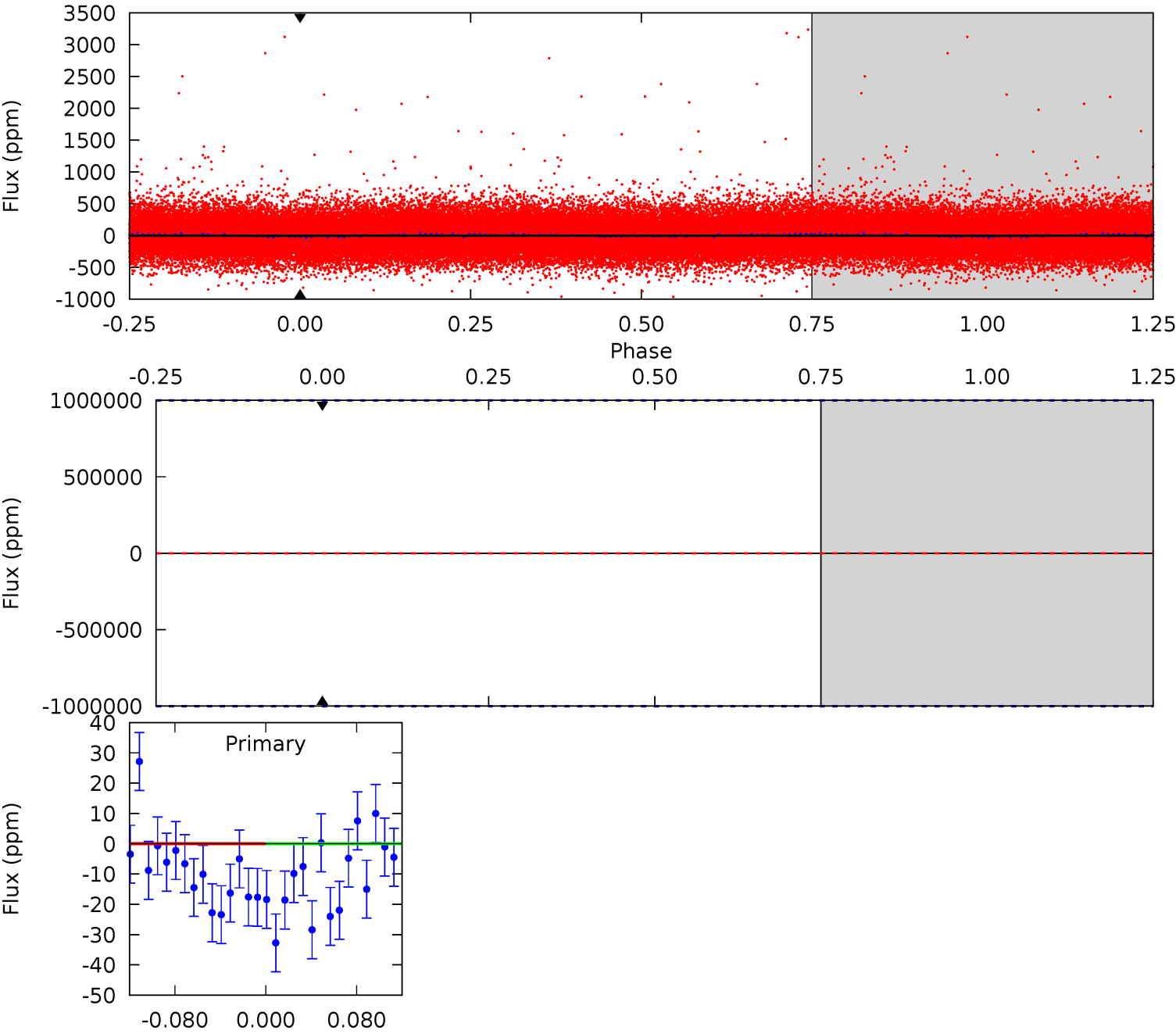
TCE 003239508-01 P= 0.523438 Days  $T_0=132.022563$  (BKJD)



DV Model-Shift Uniqueness Test

003239508-01, P = 0.523438 Days, E = 131.498173 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

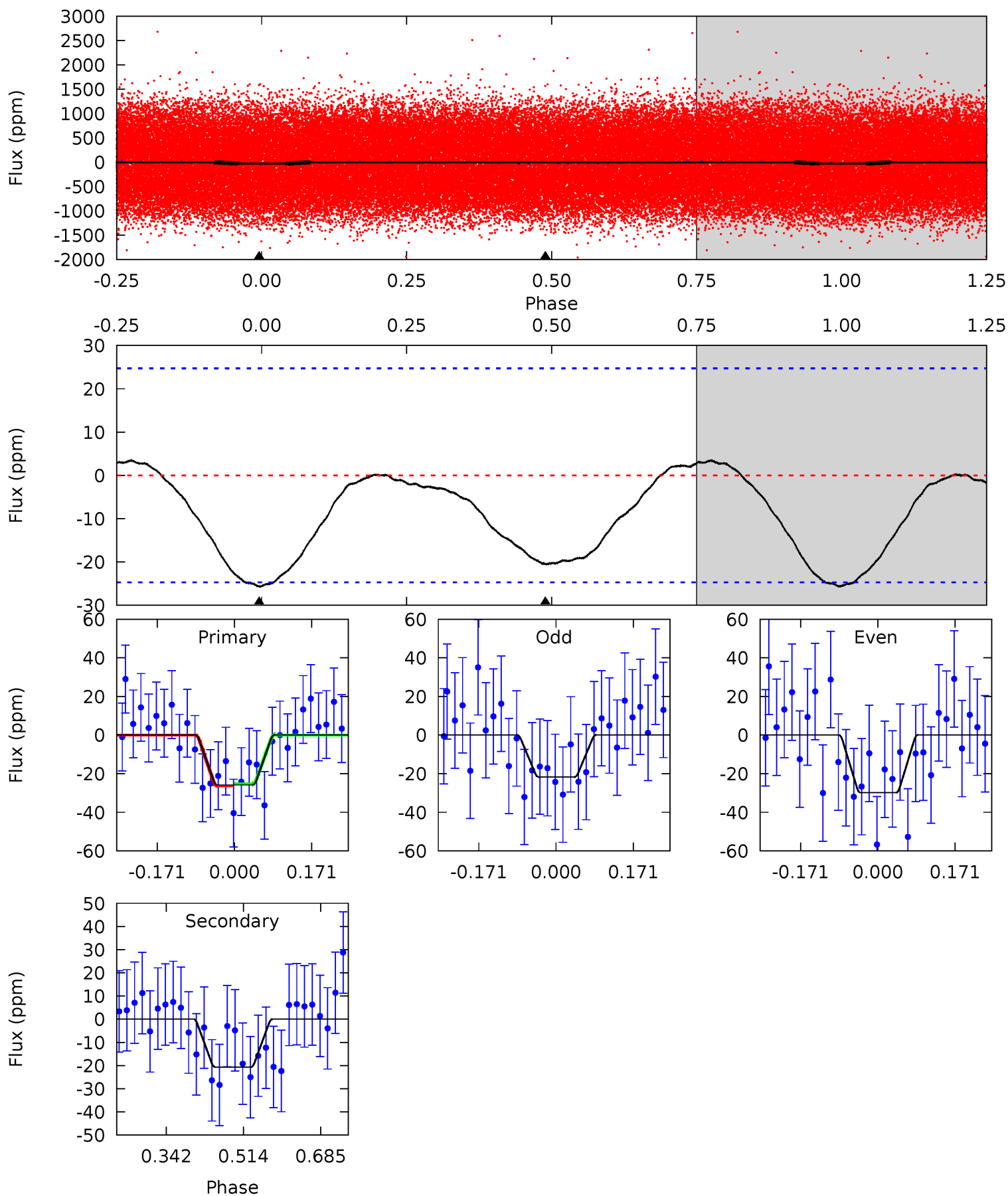




# Alt Model-Shift Uniqueness Test

003239508-01, P = 0.523438 Days, E = 131.499125 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
4.65	3.72	0	0	4.45	1.37	0.38	4.65	4.65	3.72	3.72	0.73	0.81	0.12	0.09





### Stellar Parameters For KIC 003239508

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$8209^{+226}_{-340}$	$3.960^{+0.259}_{-0.111}$	$-0.240^{+0.200}_{-0.300}$	$2.357^{+0.405}_{-0.751}$	$1.849^{+0.090}_{-0.359}$	$0.199^{+0.308}_{-0.065}$
	+3%/-4%	+7%/-3%	+83%/-125%	+17%/-32%	+5%/-19%	+155%/-33%
Source	KIC0	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 003239508-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$0 \pm 1000000$	$17.72^{+20.16}_{-11.88}$	$6095^{+425}_{-472}$	$-6409^{+50811}_{-46286}$	$-0.619^{+66.419}_{-74.273}$
Alt.	$-21 \pm 6$	$16.57^{+19.57}_{-11.48}$	$6122^{+406}_{-520}$	$-4832^{+638}_{-328}$	$0.009^{+0.096}_{-0.007}$

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

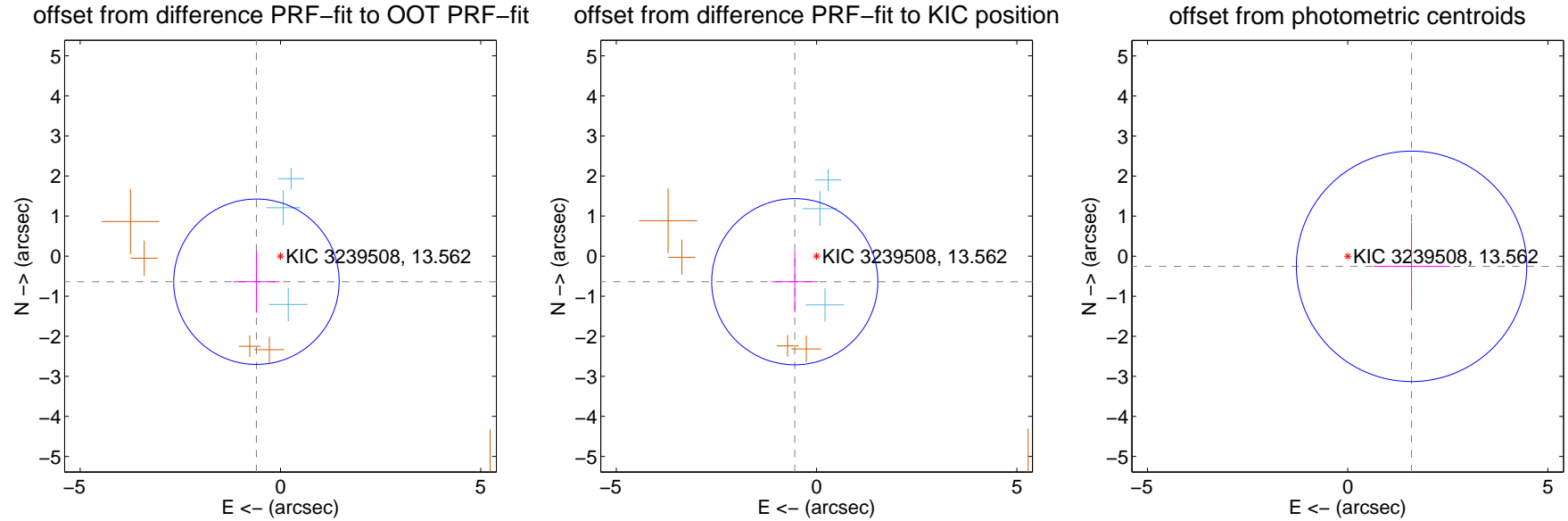
## DV Centroid Data

Supplemental centroid analysis for 003239508-01. Kepler magnitude: 13.56. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

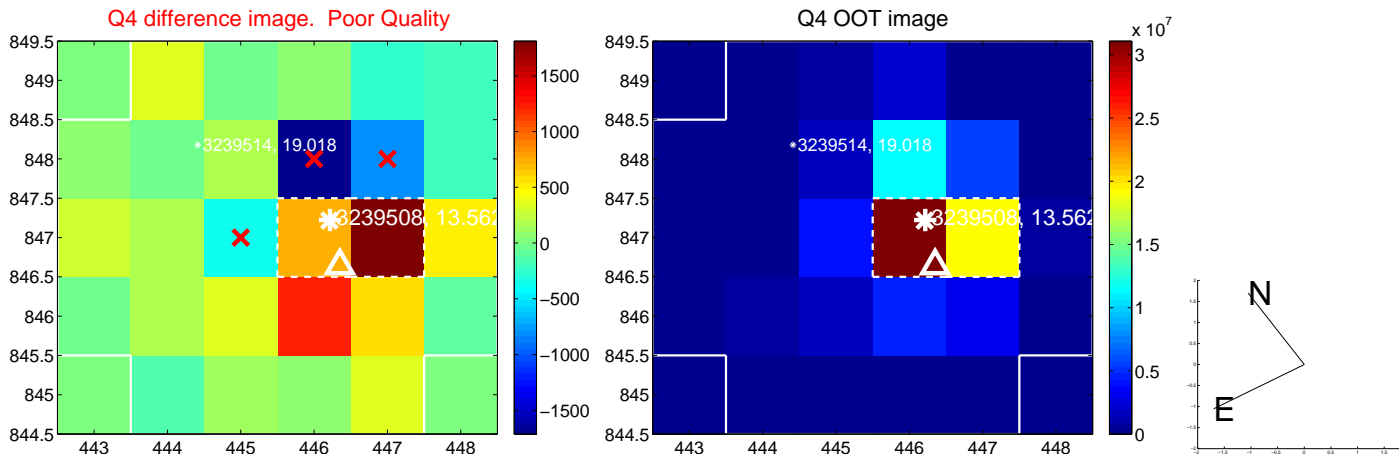
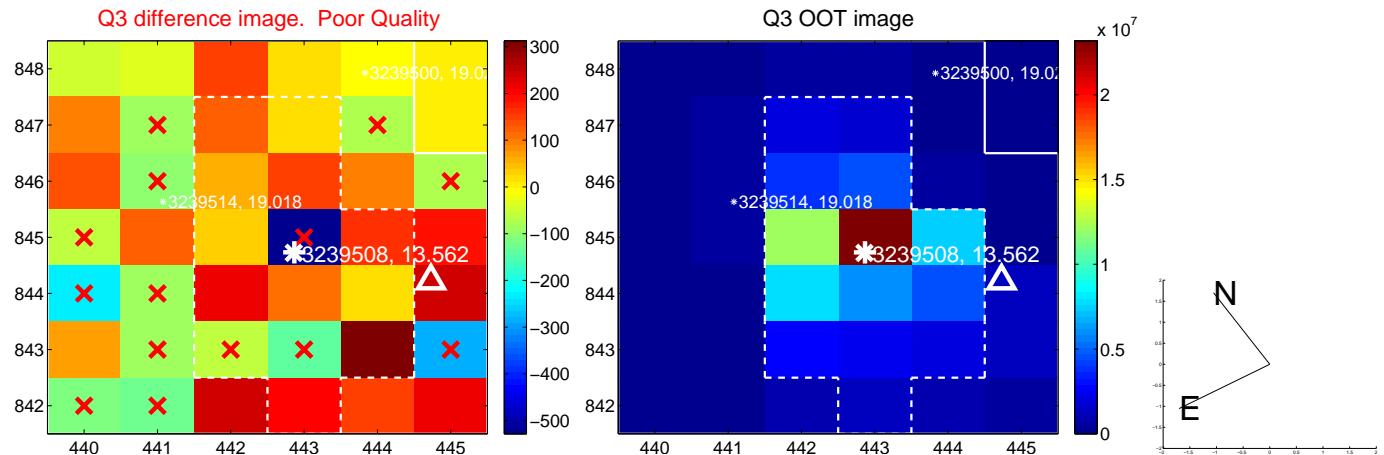
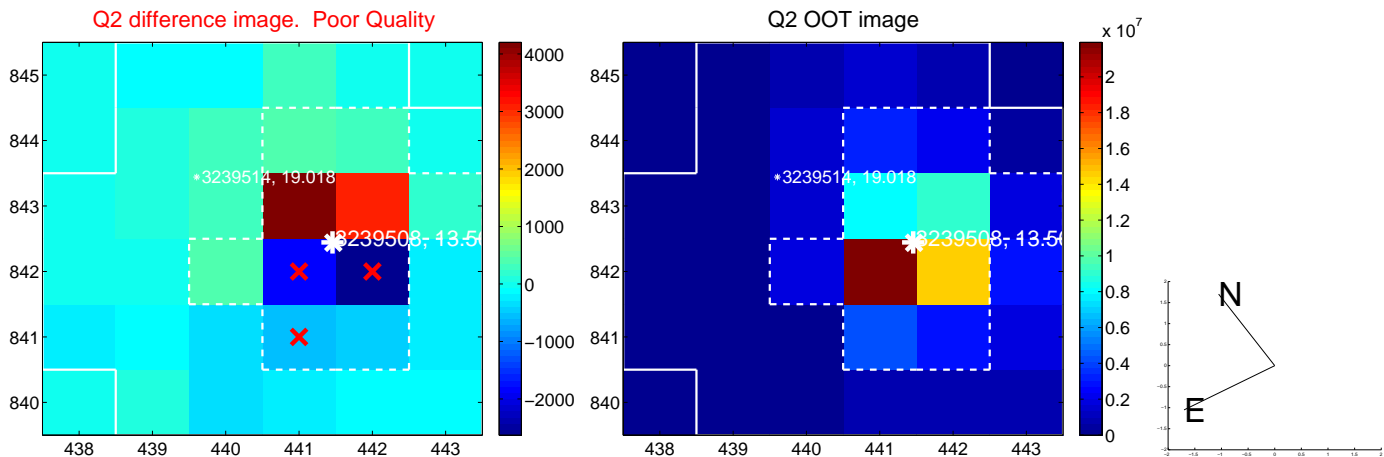
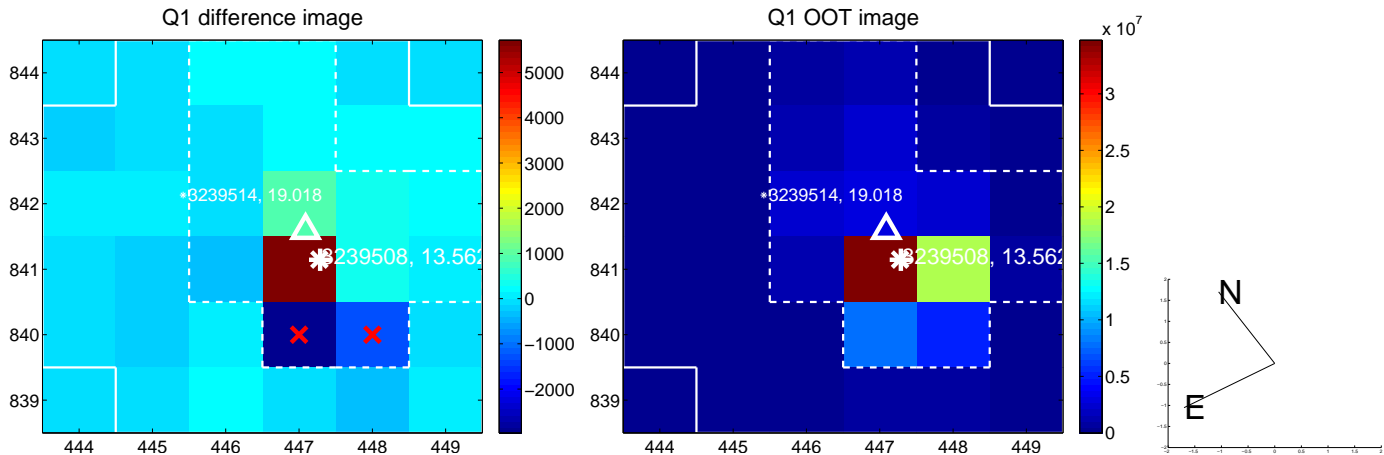
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.876 \pm 0.688$	1.27	$0.600 \pm 0.579$	$-0.639 \pm 0.771$
PRF-fit source offset from KIC position	$0.839 \pm 0.691$	1.21	$0.545 \pm 0.573$	$-0.638 \pm 0.766$
photometric centroid source offset	$1.61 \pm 0.96$	1.68	$-1.59 \pm 0.96$	$-0.25 \pm 1.09$

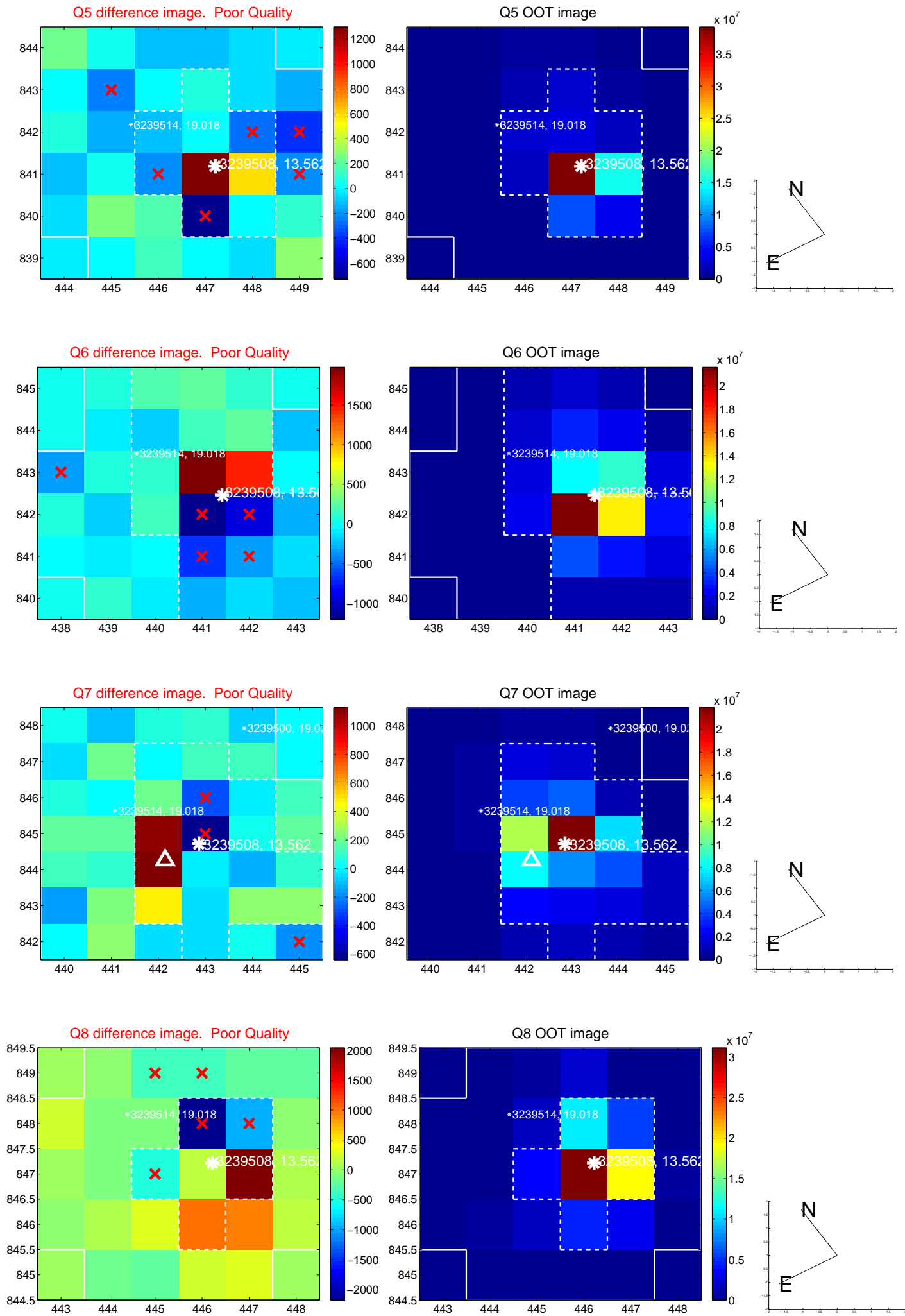


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

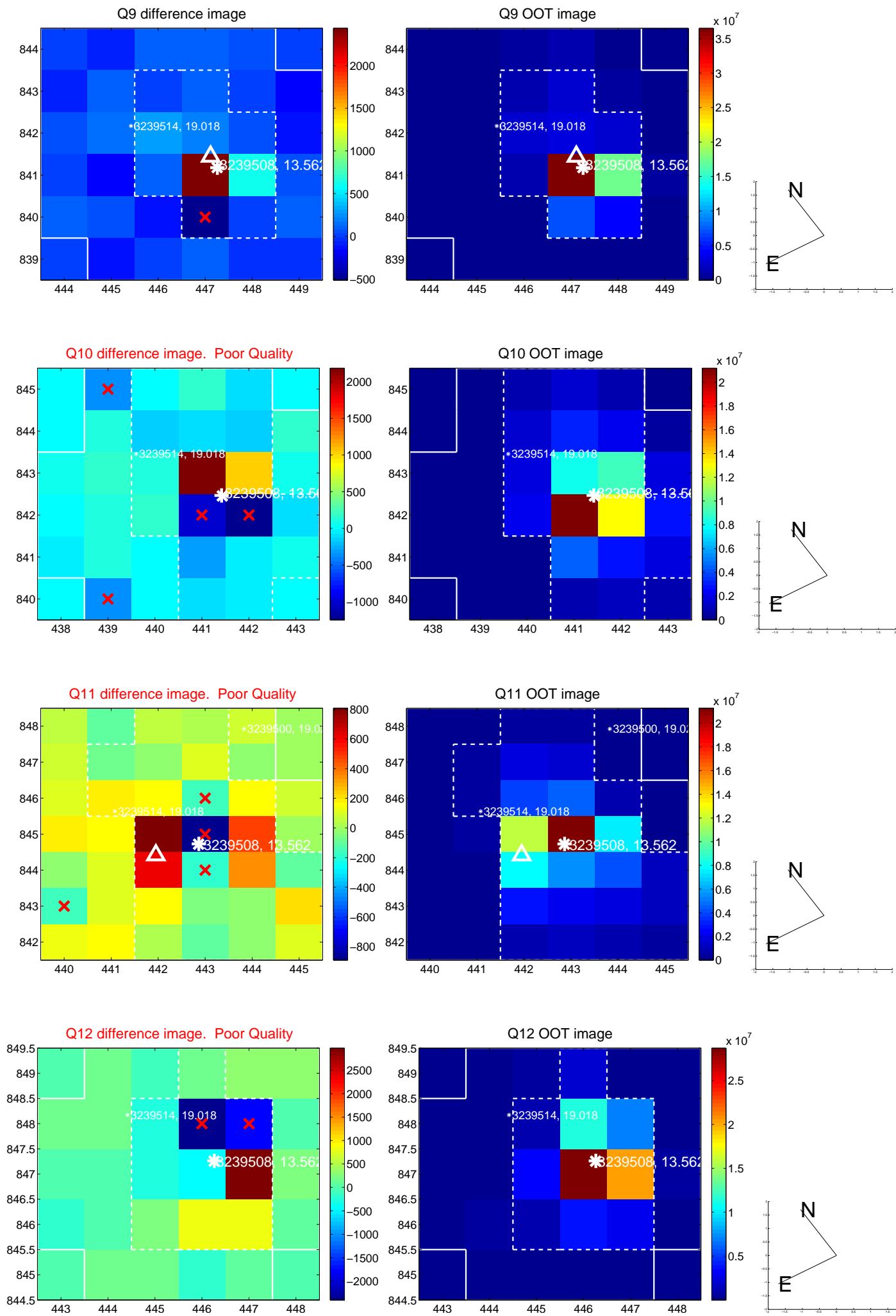


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

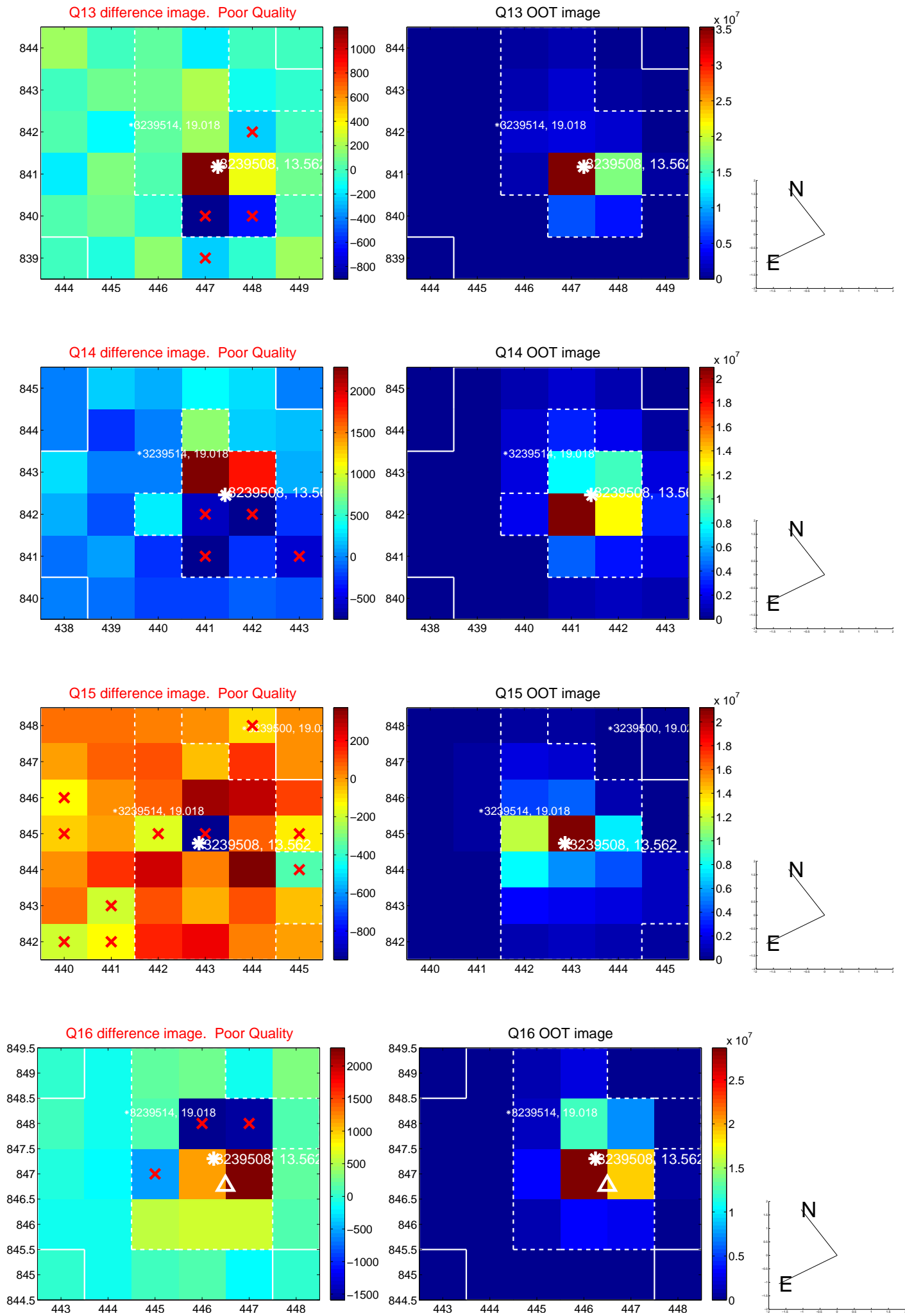




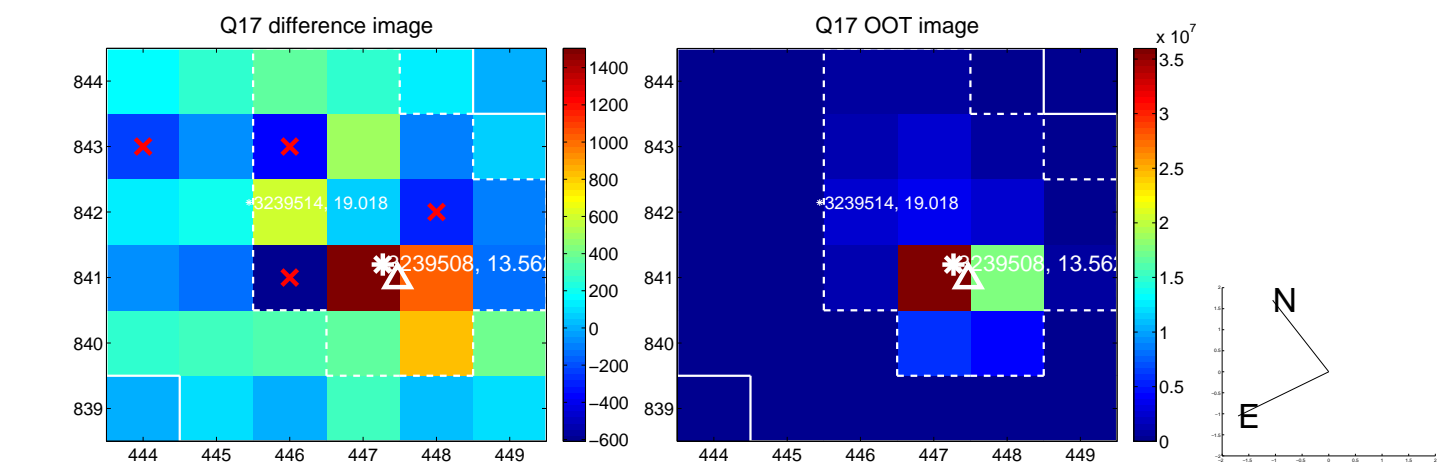
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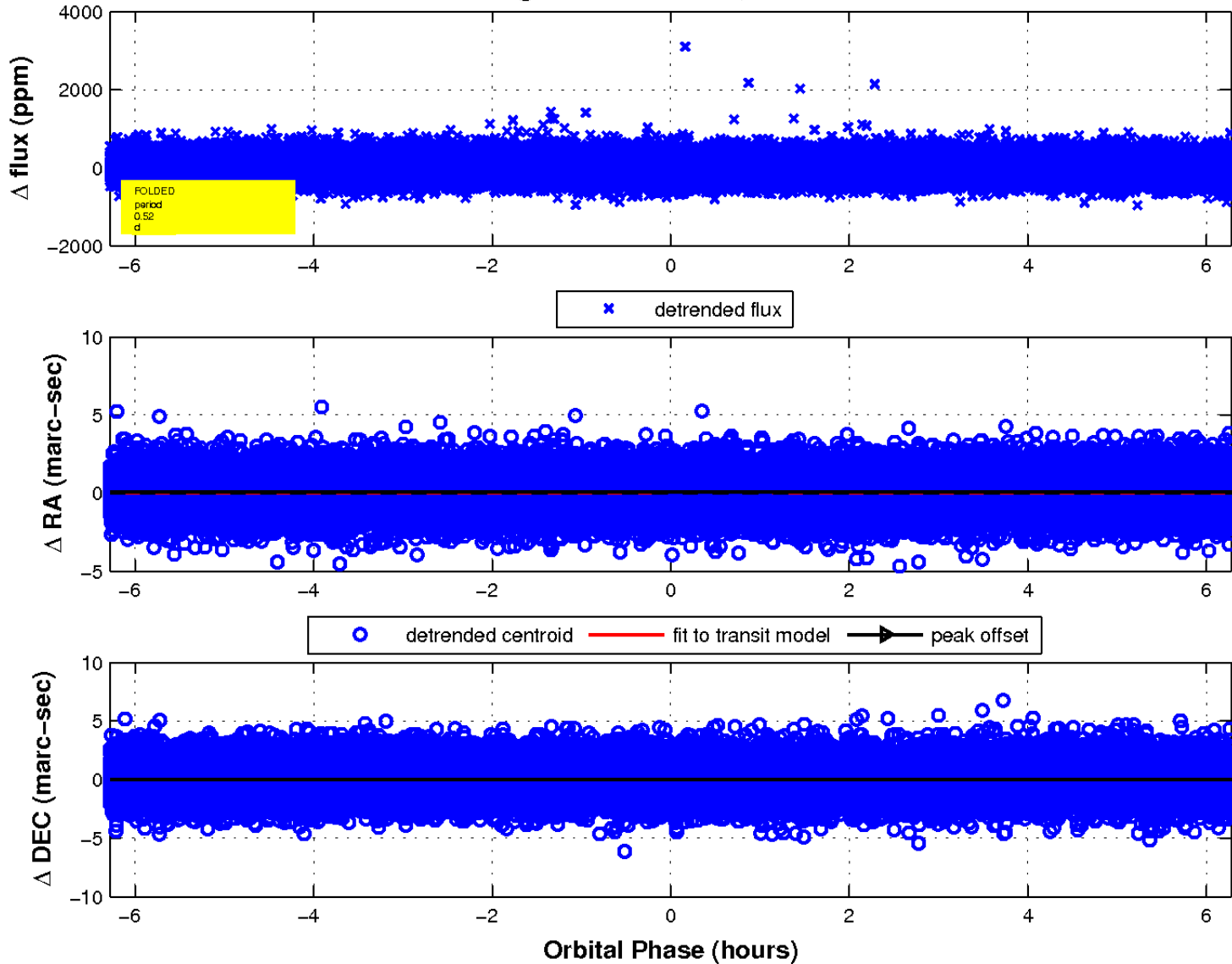
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



# UKIRT Image

Declination

