

# KIC 003239926

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003239926-01	OBS	No	0.969784	132.210750	22.0	8.073	10.0	10.2	4.56	6334	2.48	53427.23

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003239926-01	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.

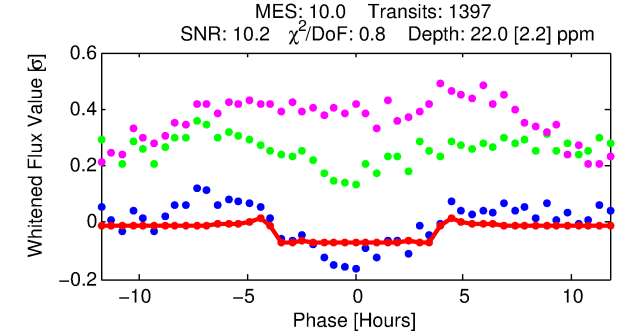
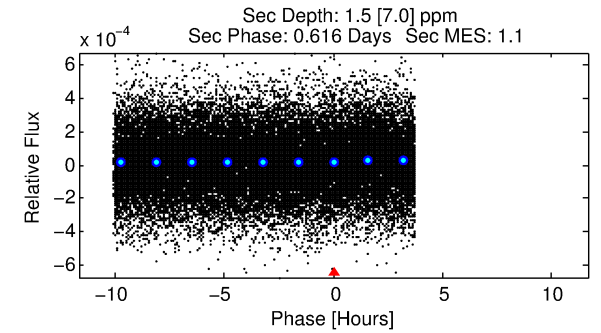
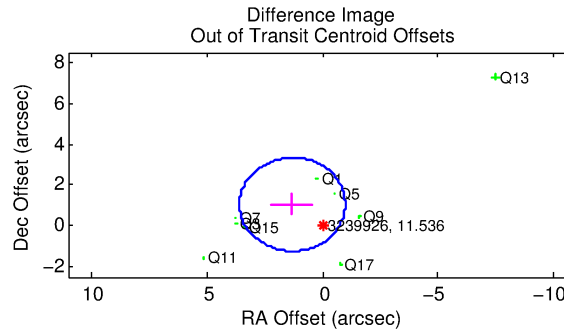
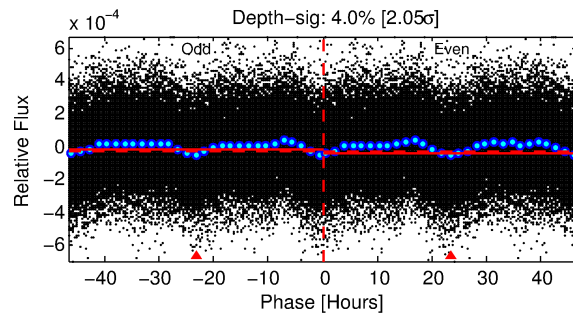
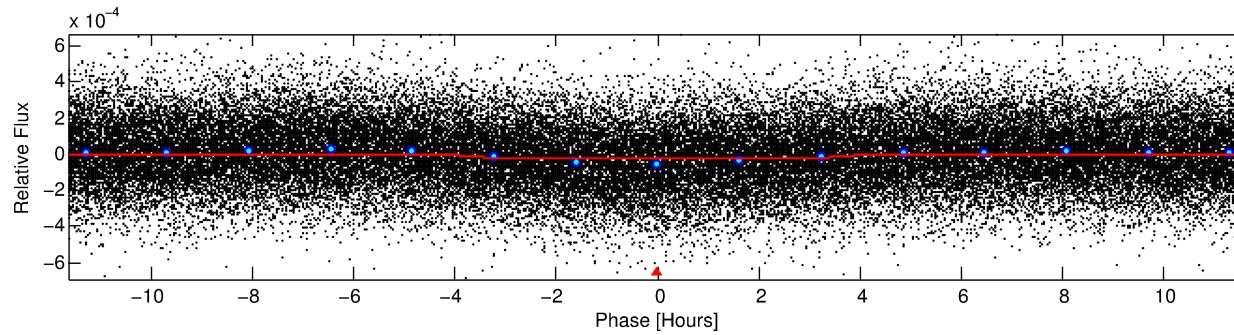
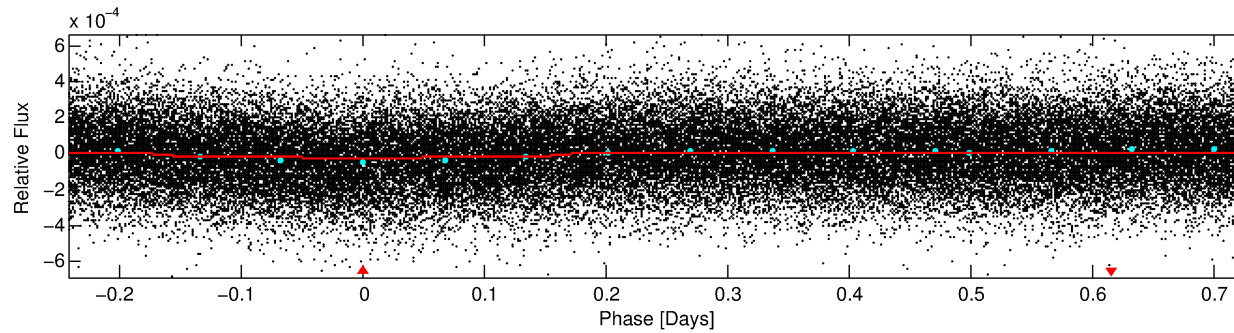
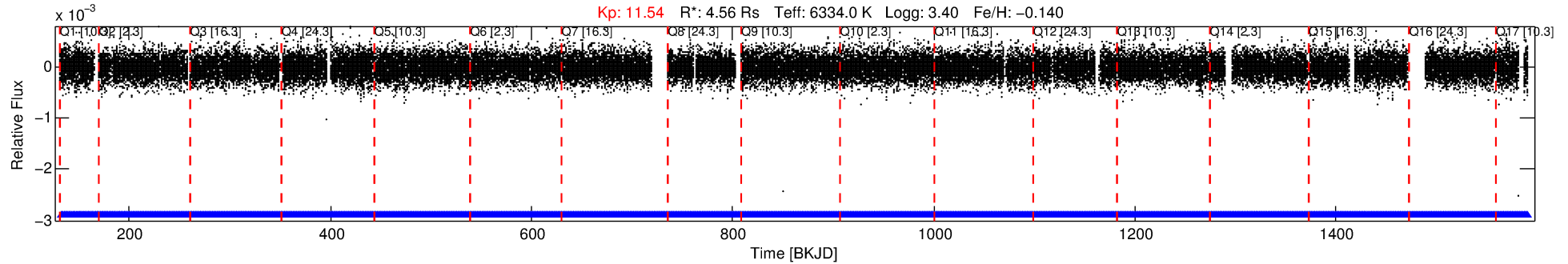
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003239926-01

No Significant Match Found

# DV One-Page Summary

KIC: 3239926 Candidate: 1 of 1 Period: 0.970 d



## DV Fit Results:

Period = 0.96978 [0.00002] d  
Epoch = 132.2107 [0.0043] BKJD  
Rp/R\* = 0.0050 [0.0013]  
a/R\* = 1.03 [0.10]  
b = 0.89 [0.34]  
Seff = 53427.23 [36471.38]  
Teq = 3877 [662] K  
Rp = 2.48 [1.23] Re  
a = 0.0237 [0.0098] AU  
Ag = 0.07 [0.36] [-2.59 $\sigma$ ]  
Teffp = 3114 [3784] K [-0.20 $\sigma$ ]

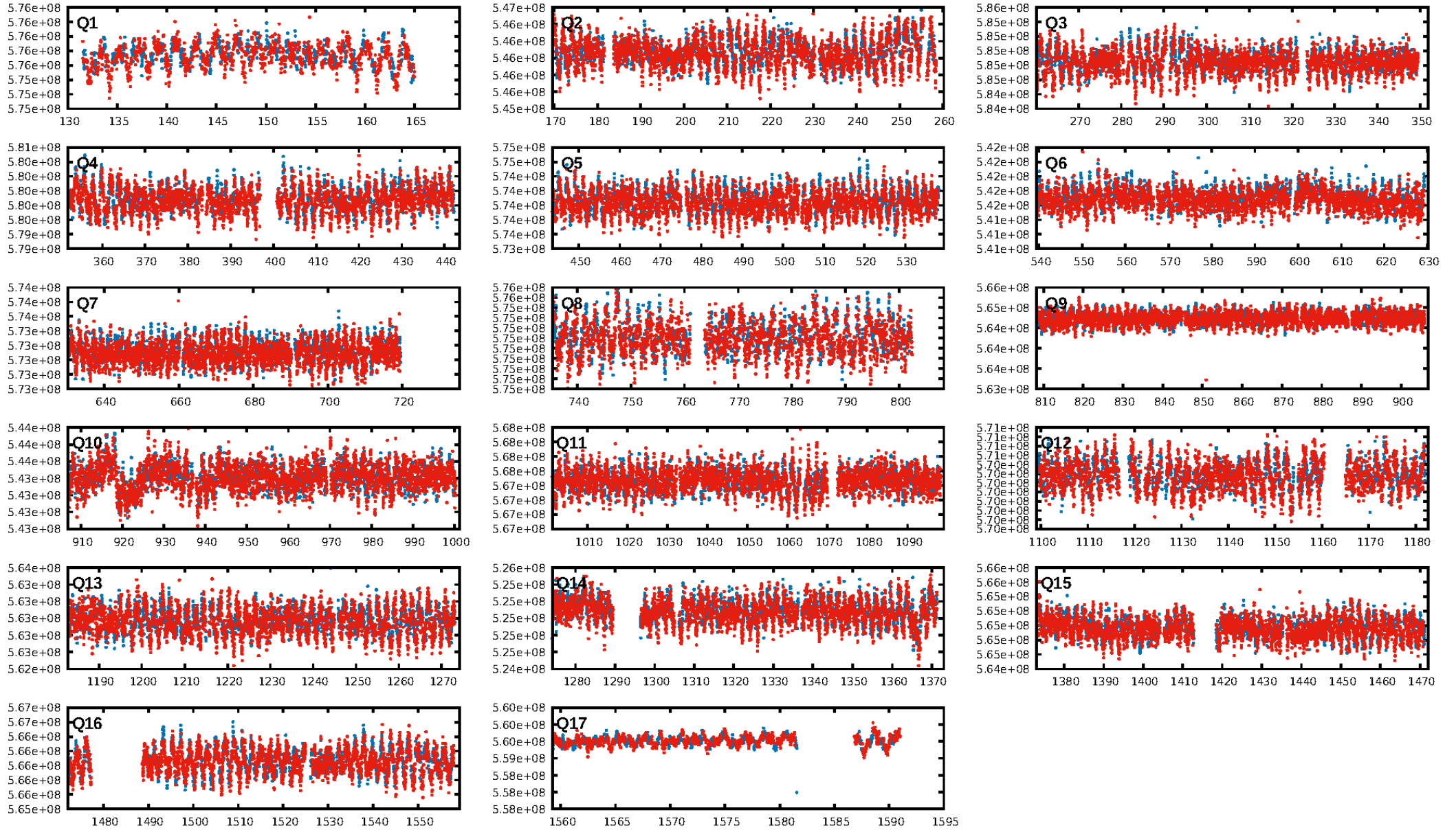
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1335/1335]  
GhostDiagnostic-chr: 1.159  
Centroid-sig: 40.5%  
Centroid-so: 0.399 arcsec [1.02 $\sigma$ ]  
OotOffset-rm: 1.675 arcsec [2.20 $\sigma$ ]  
OotOffset-st: 0/4/0/5 [9]  
KicOffset-rm: 1.730 arcsec [2.28 $\sigma$ ]  
KicOffset-st: 0/4/0/5 [9]  
DiffImageQuality-fgm: 0.44 [4/9]  
DiffImageOverlap-fno: 1.00 [17/17]

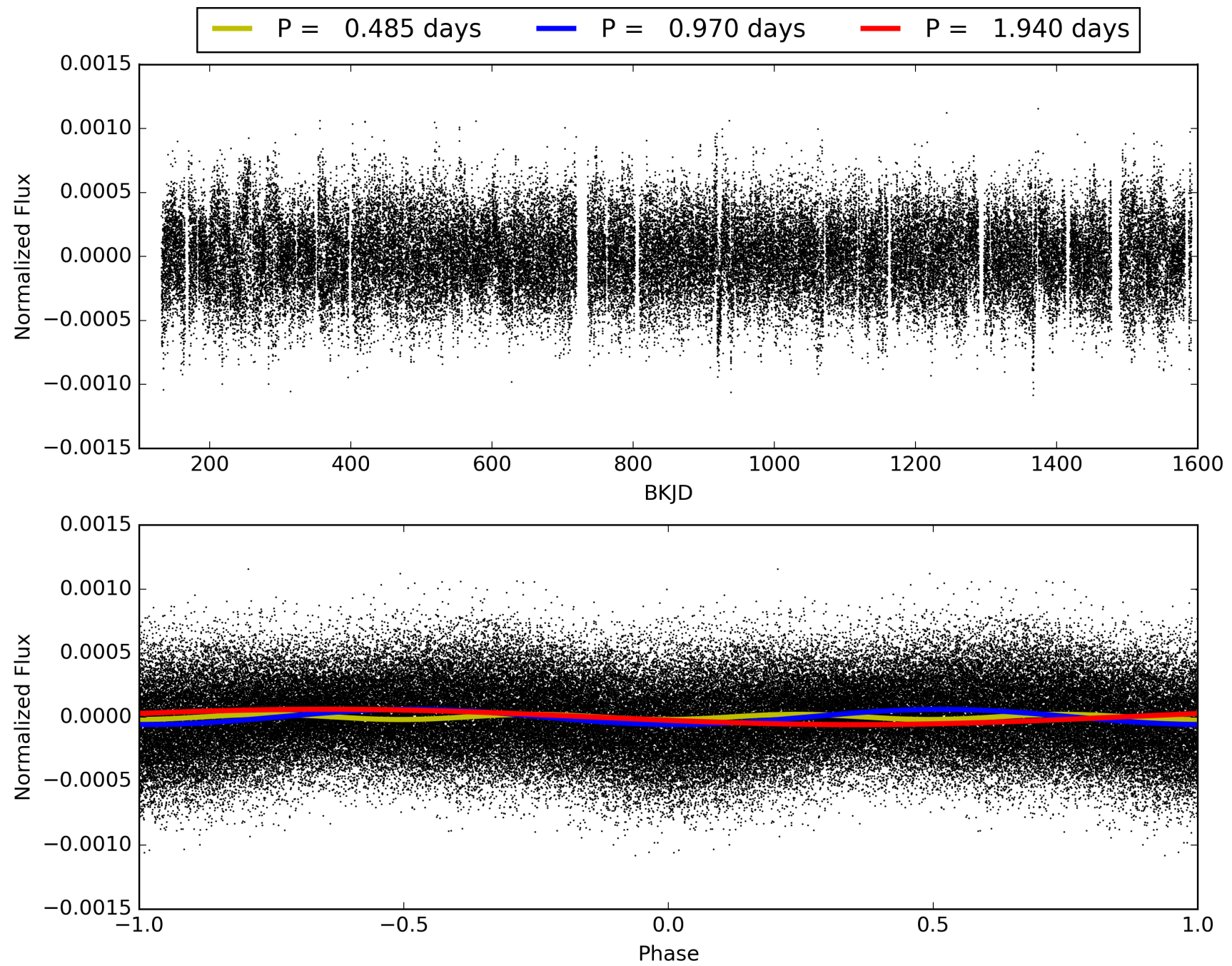
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:21:22 Z

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

# TCE 003239926-01, PDC Light Curves

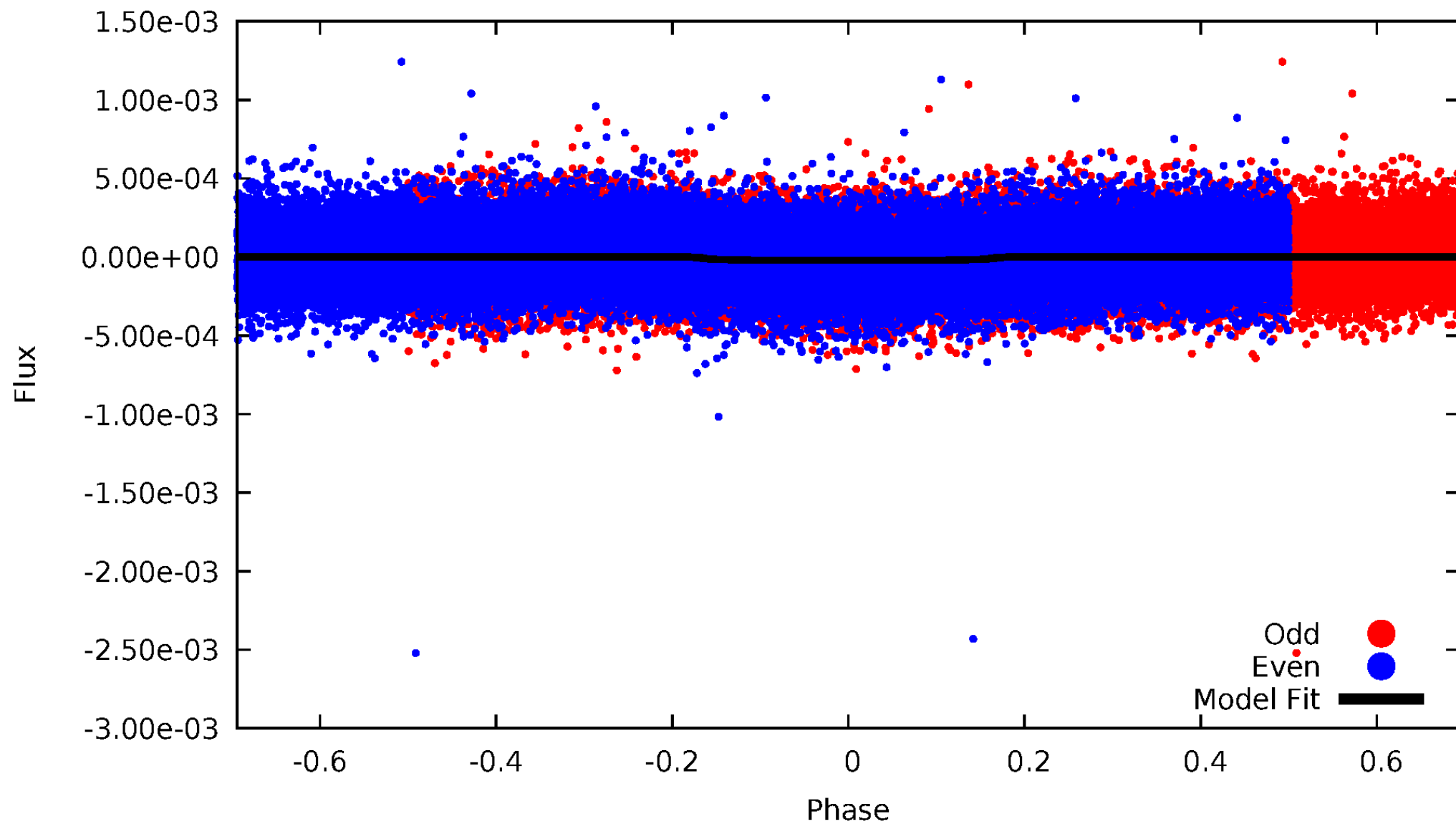


TCE 003239926-01



# DV Odd/Even

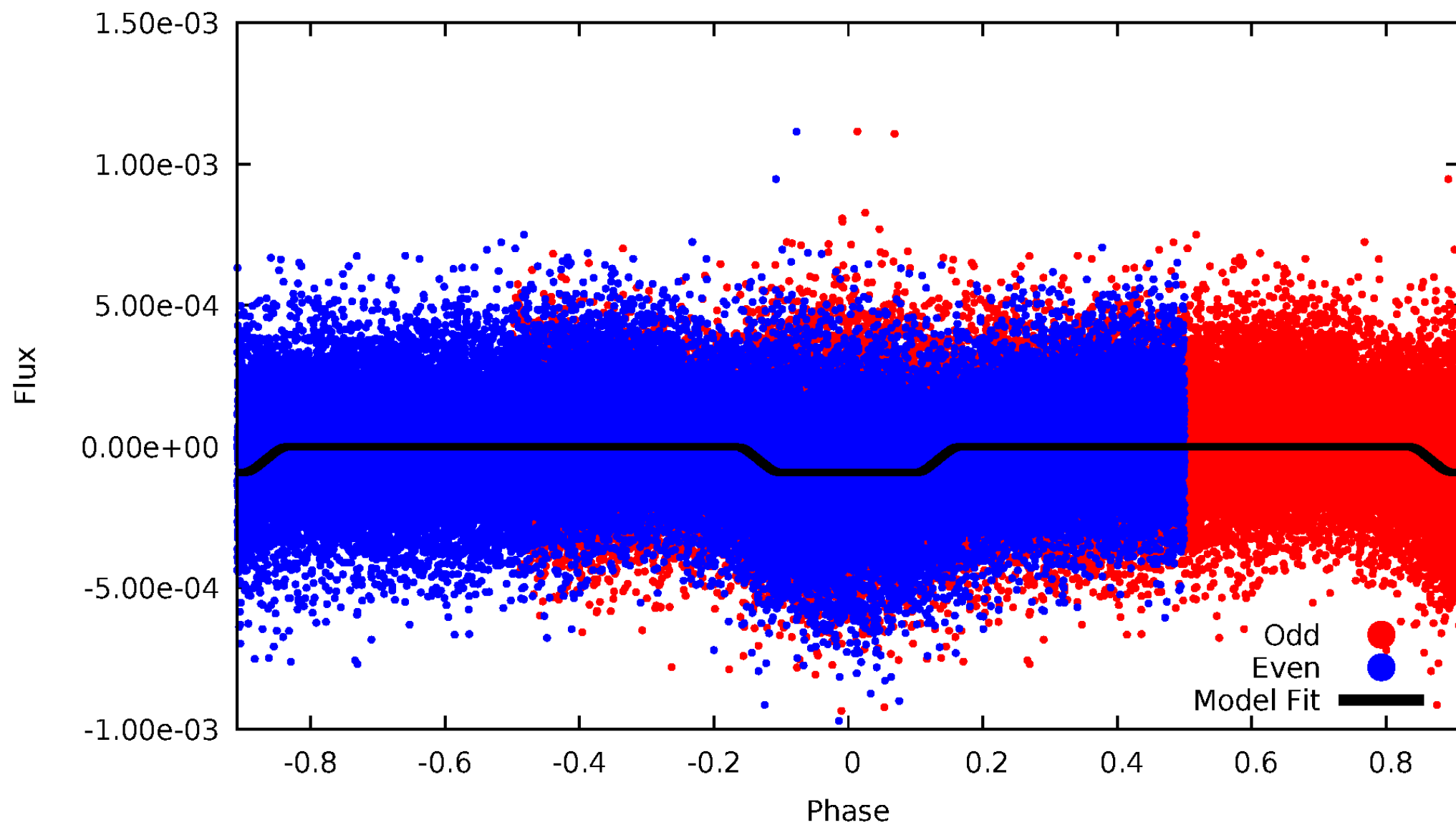
TCE 003239926-01





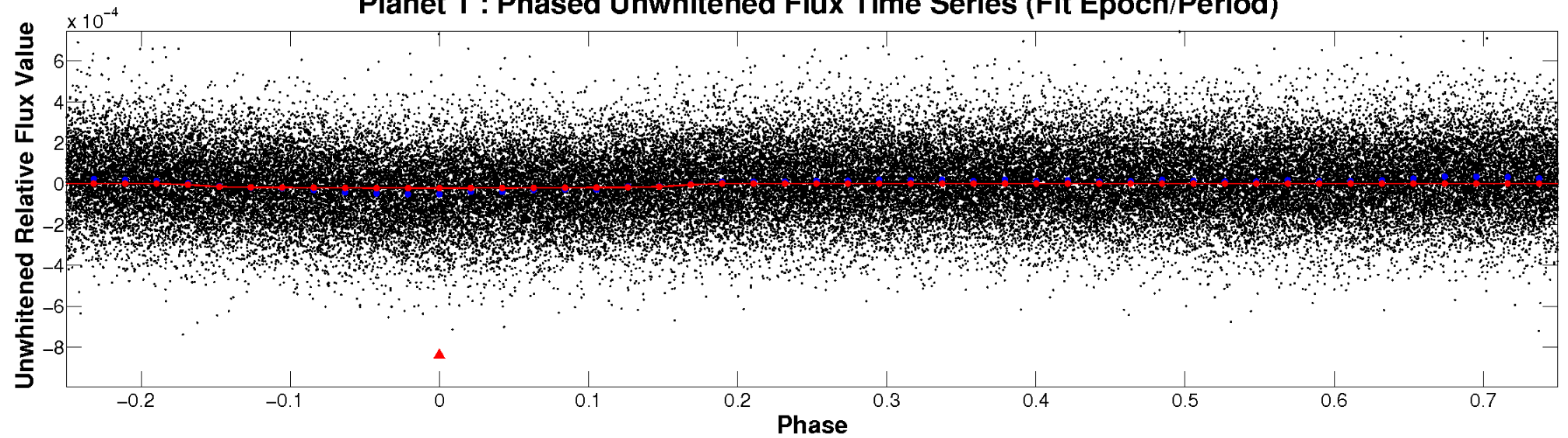
# ALT Odd/Even

TCE 003239926-01

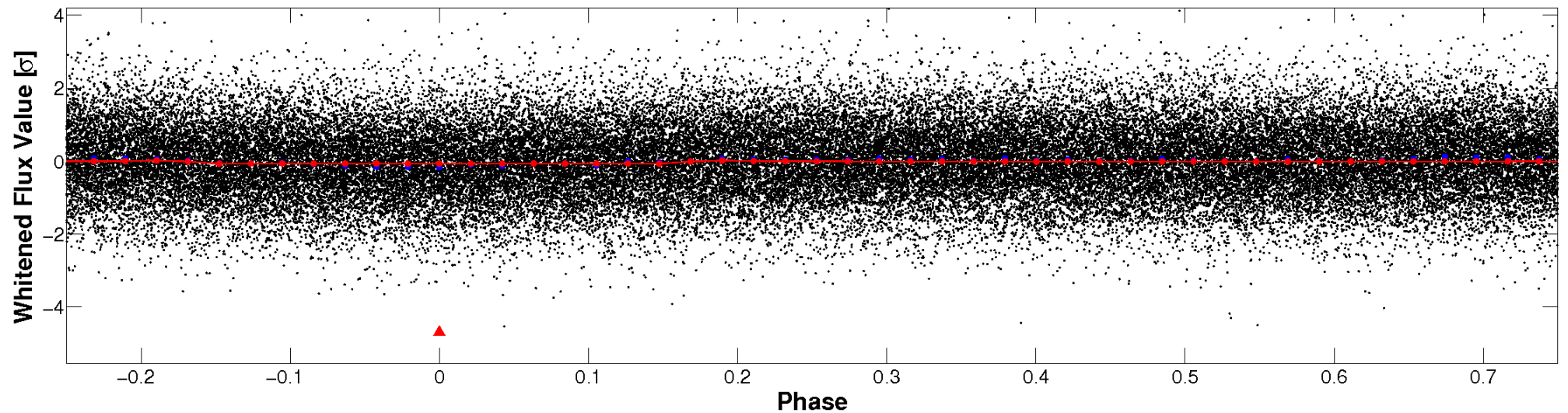


# Non-Whitened Vs. Whitened Light Curve

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

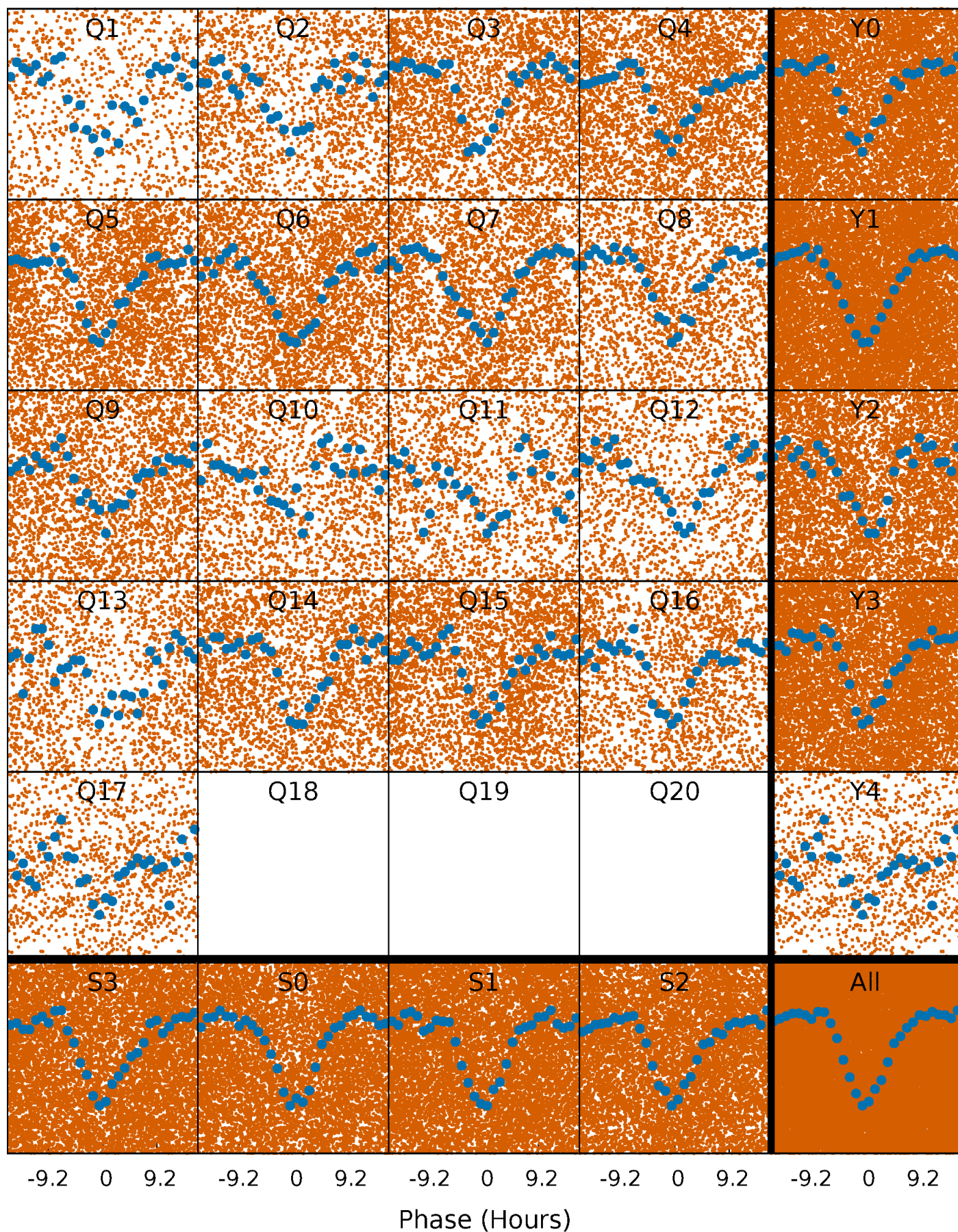


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

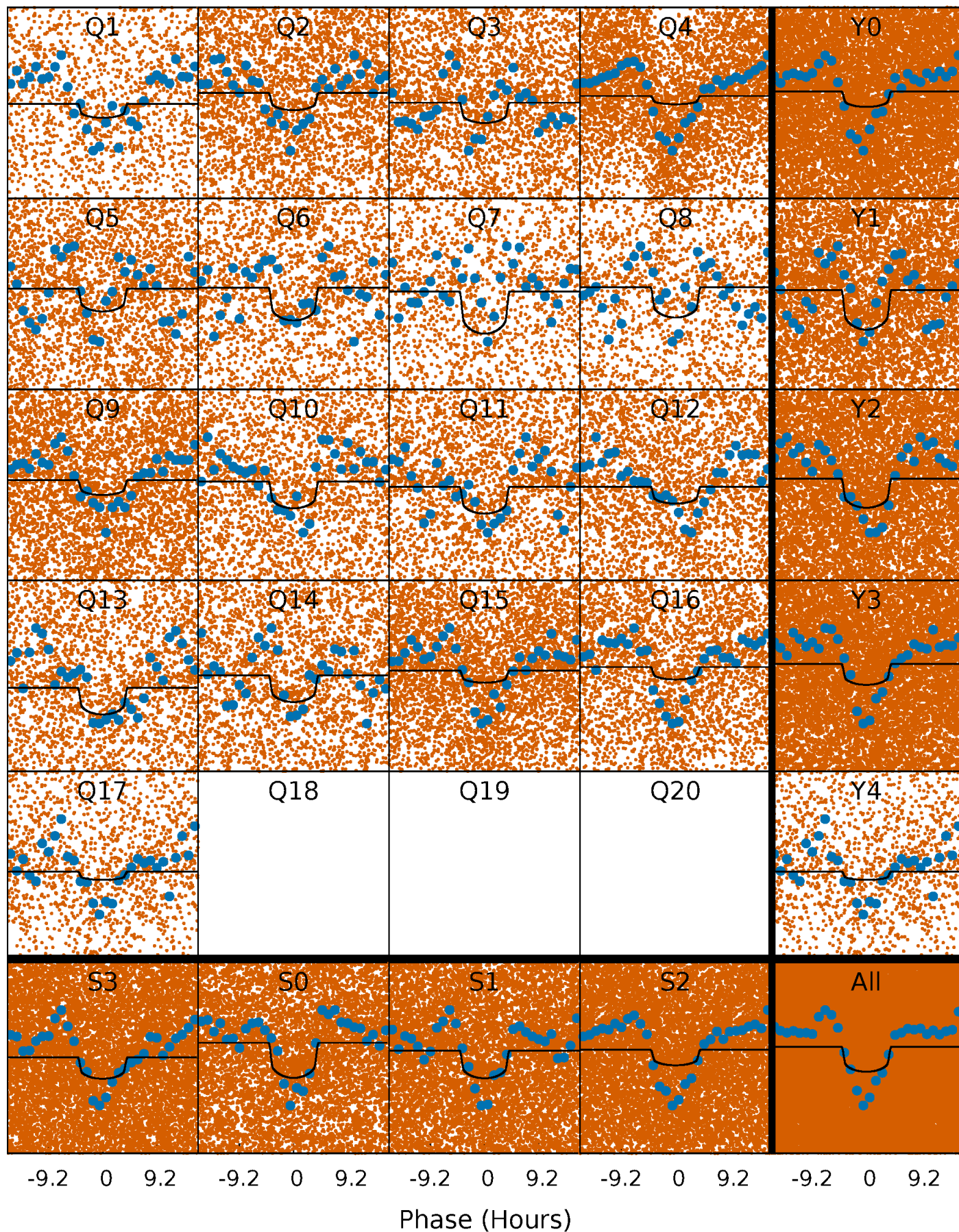
TCE 003239926-01 P= 0.969784 Days  $T_0=132.210750$  (BKJD)





# DV Quarter-Phased Transit Curves

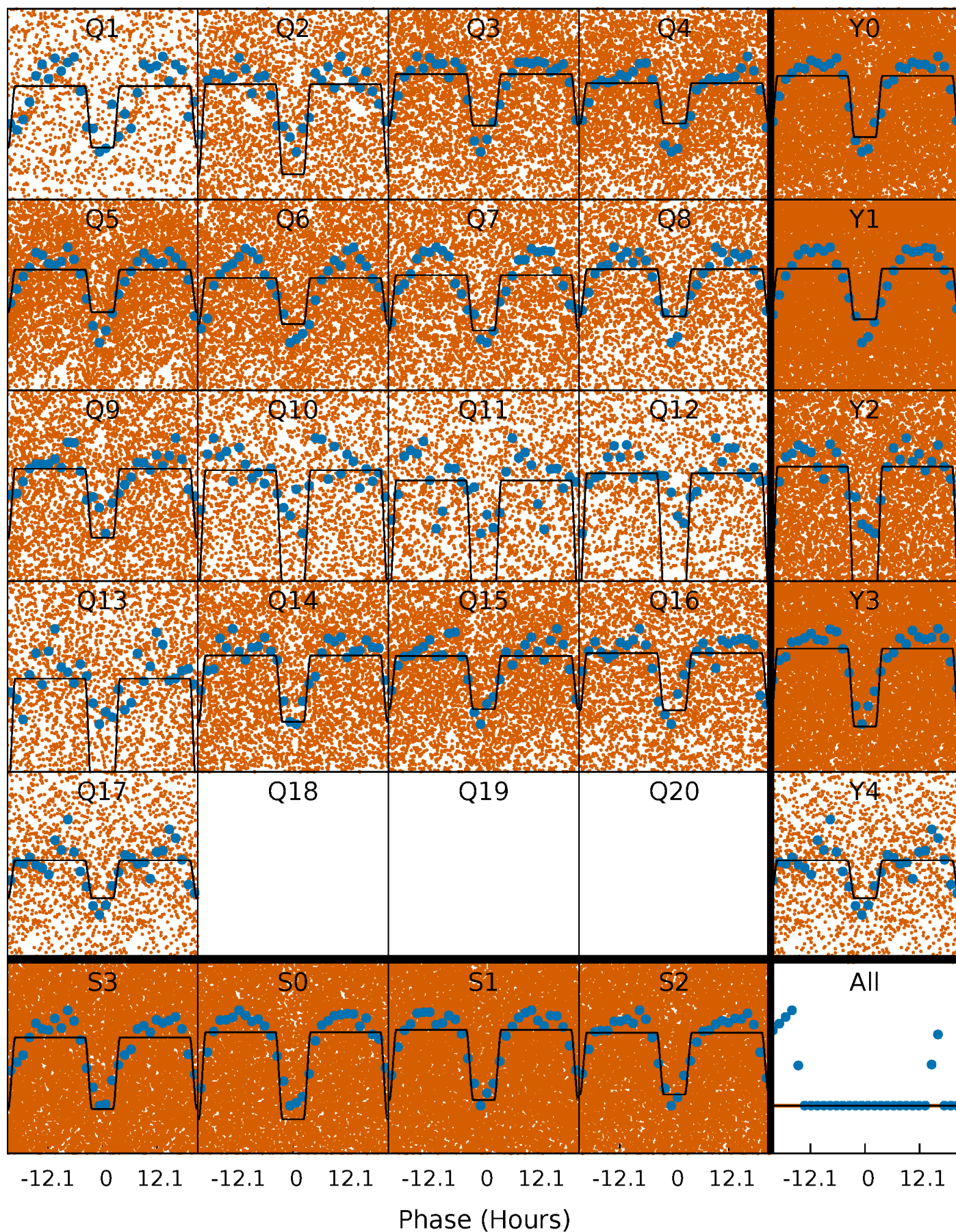
TCE 003239926-01 P= 0.969784 Days  $T_0=132.210750$  (BKJD)





### Alt. Detrend Quarter-Phased Transit Curves

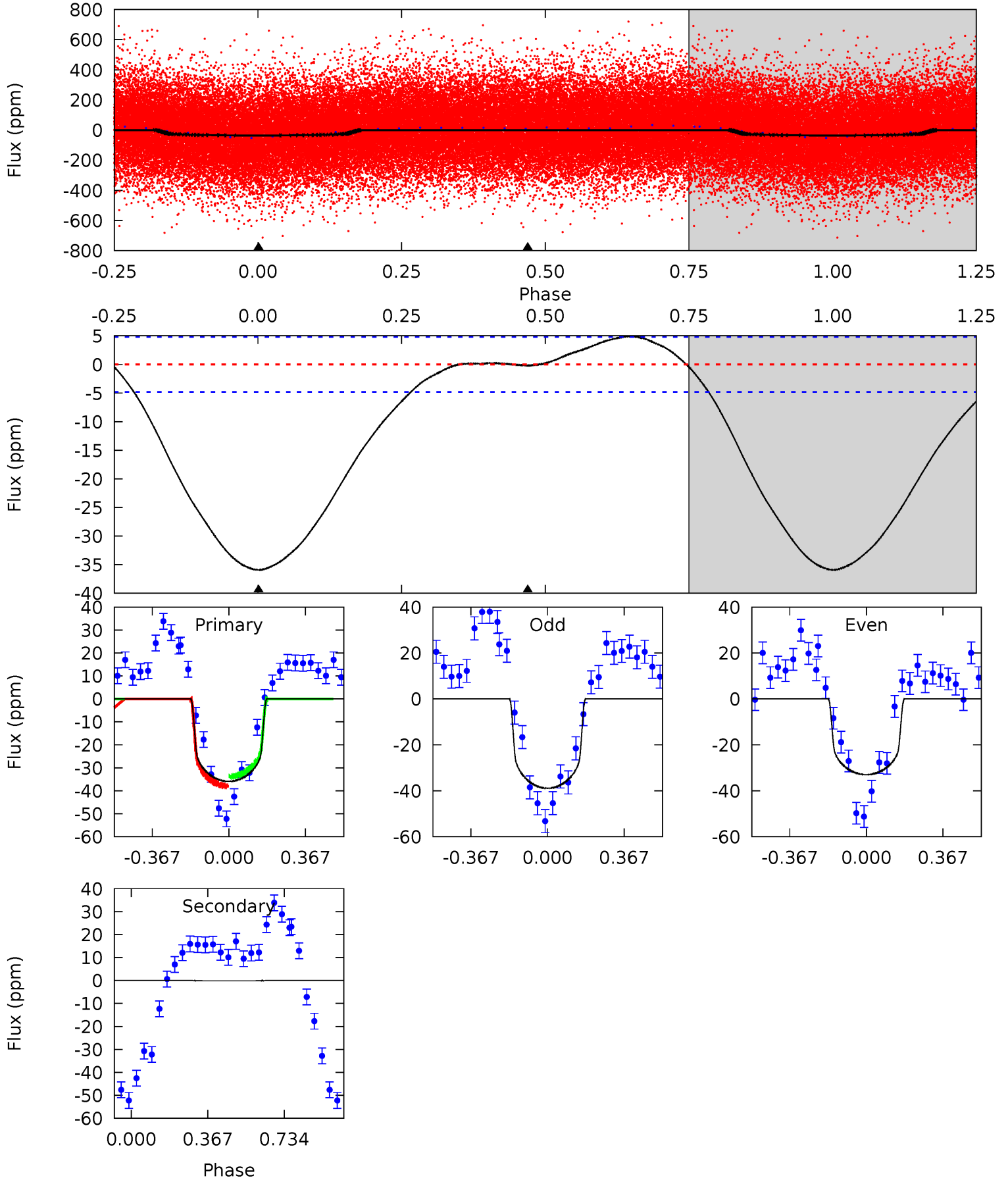
TCE 003239926-01    P= 0.969825 Days     $T_0=132.177165$  (BKJD)



# DV Model-Shift Uniqueness Test

003239926-01, P = 0.969784 Days, E = 131.240966 Days

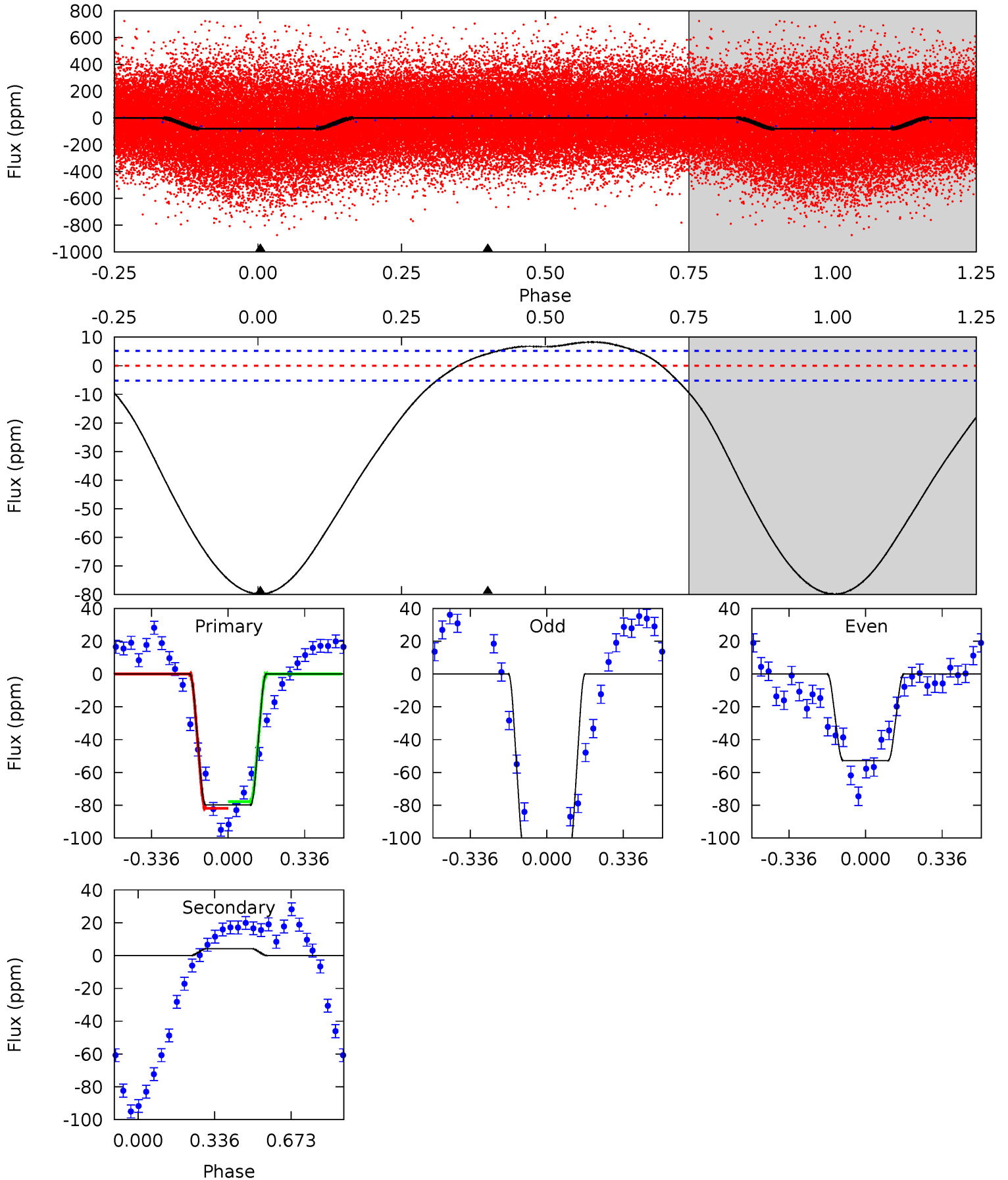
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	0.17	0	0	4.28	0.90	3.52	31.9	31.9	0.17	0.17	2.59	1.06	0.12	1.88



# Alt Model-Shift Uniqueness Test

003239926-01, P = 0.969825 Days, E = 131.207340 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
66.1	-3.47	0	0	4.30	0.96	3.81	66.1	66.1	-3.47	-3.47	21.8	0.96	0.09	1.75





### Stellar Parameters For KIC 003239926

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6334^{+177}_{-161}$	$3.395^{+0.399}_{-0.070}$	$-0.140^{+0.350}_{-0.300}$	$4.556^{+0.638}_{-1.913}$	$1.881^{+0.110}_{-0.414}$	$0.028^{+0.088}_{-0.008}$
	+3%/-3%	+12%/-2%	+250%/-214%	+14%/-42%	+6%/-22%	+313%/-30%
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 003239926-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-0 \pm 1$	$2.18^{+0.76}_{-0.68}$	$5252^{+301}_{-580}$	$-4407^{+434}_{-332}$	$0.012^{+0.081}_{-0.073}$
Alt.	$4 \pm 1$	$4.37^{+0.97}_{-1.09}$	$5289^{+315}_{-633}$	$-4684^{+340}_{-216}$	$-0.066^{+0.026}_{-0.050}$

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

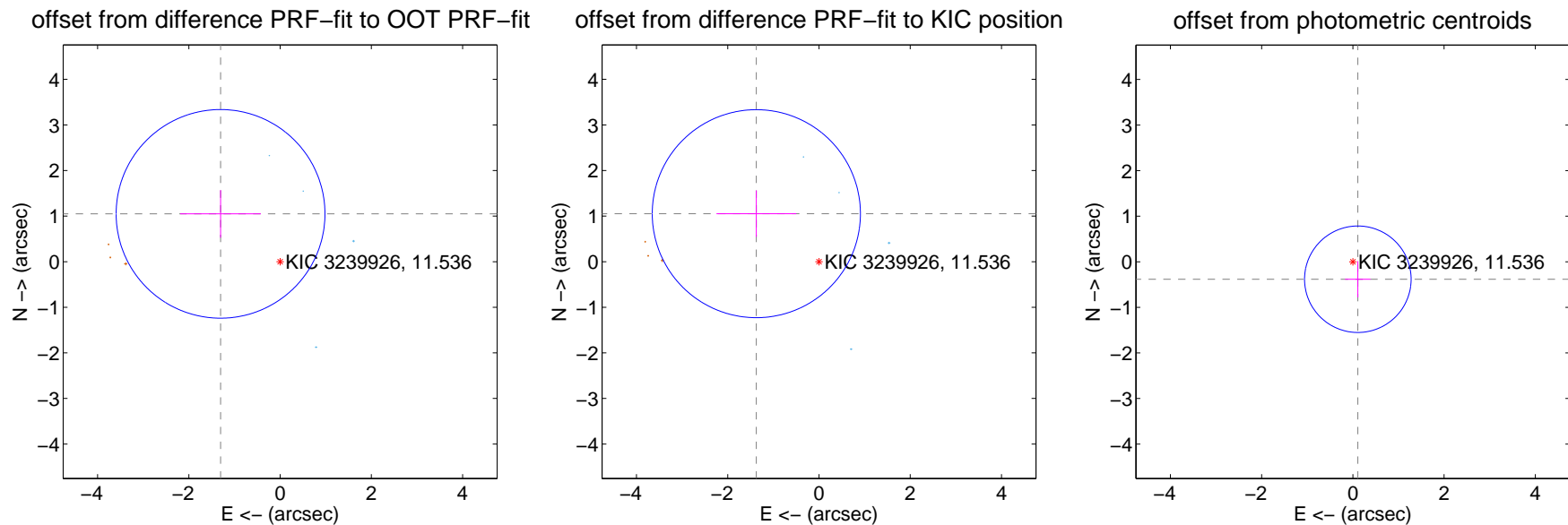
## DV Centroid Data

Supplemental centroid analysis for 003239926-01. **Kepler magnitude: 11.54.** Transit SNR 10.24

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

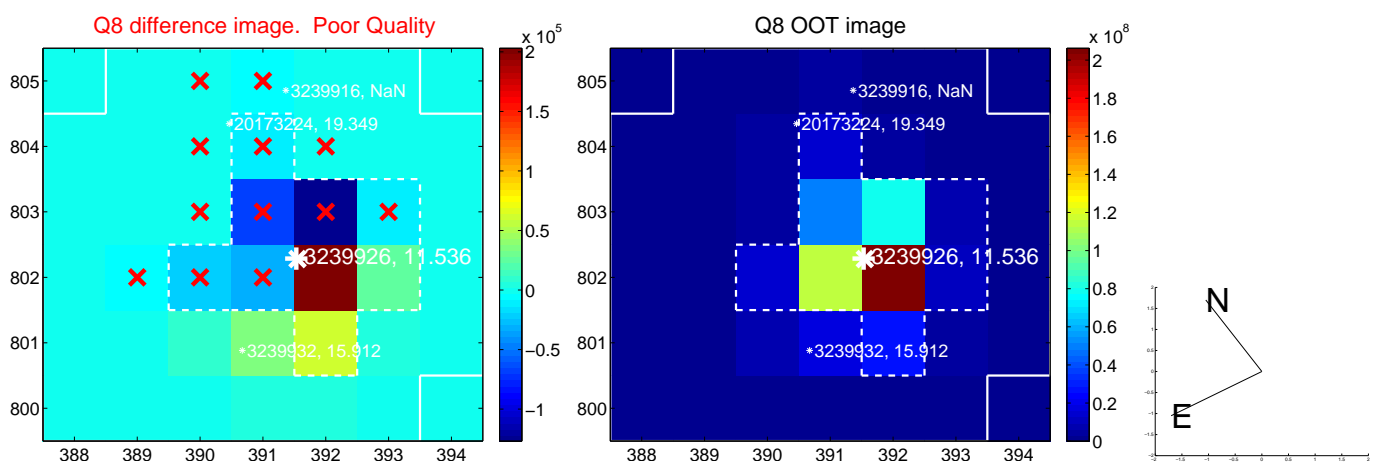
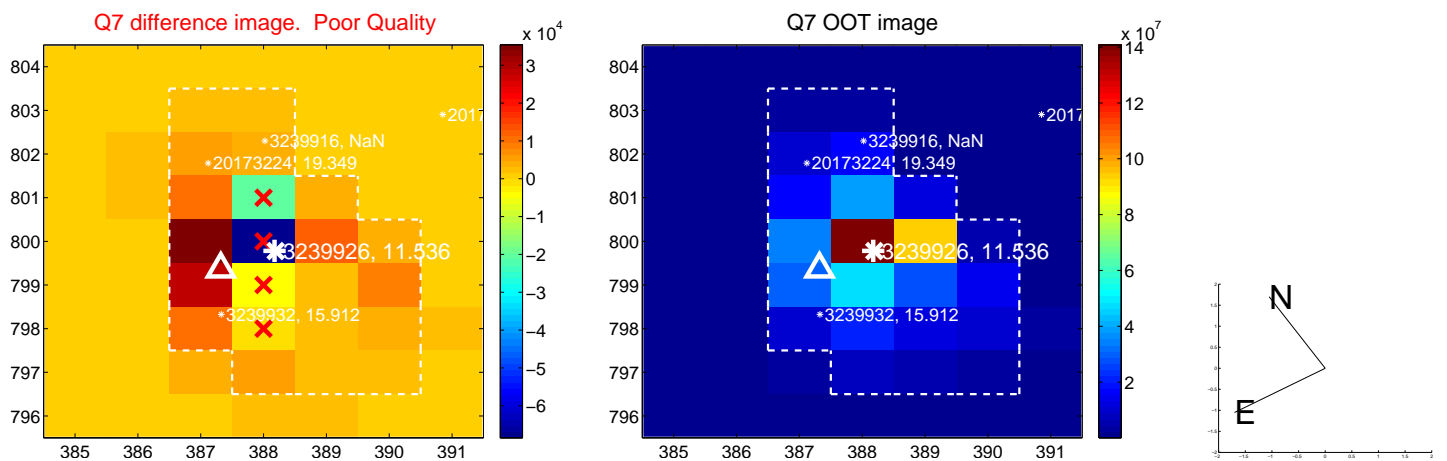
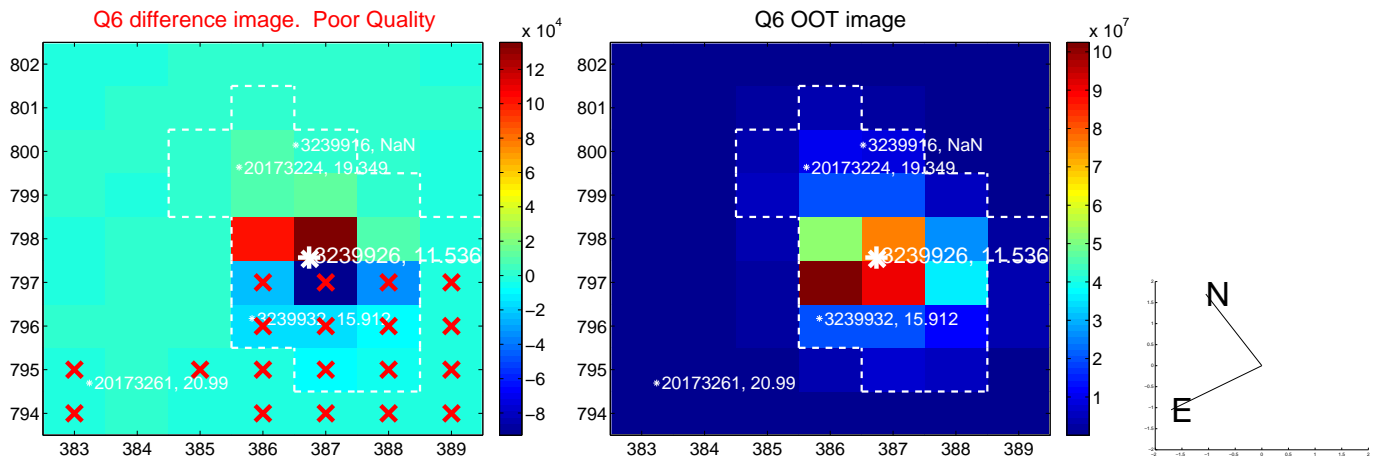
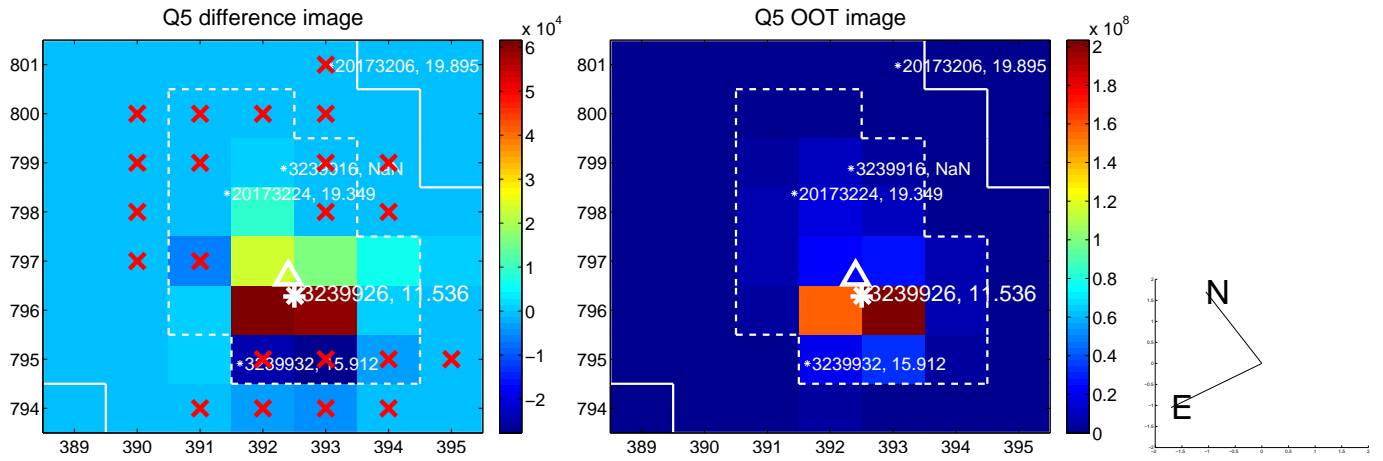
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.675 \pm 0.763$	2.20	$1.305 \pm 0.884$	$1.049 \pm 0.522$
PRF-fit source offset from KIC position	$1.730 \pm 0.760$	2.28	$1.373 \pm 0.875$	$1.053 \pm 0.510$
photometric centroid source offset	$0.40 \pm 0.39$	1.02	$-0.11 \pm 0.28$	$-0.38 \pm 0.40$



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.

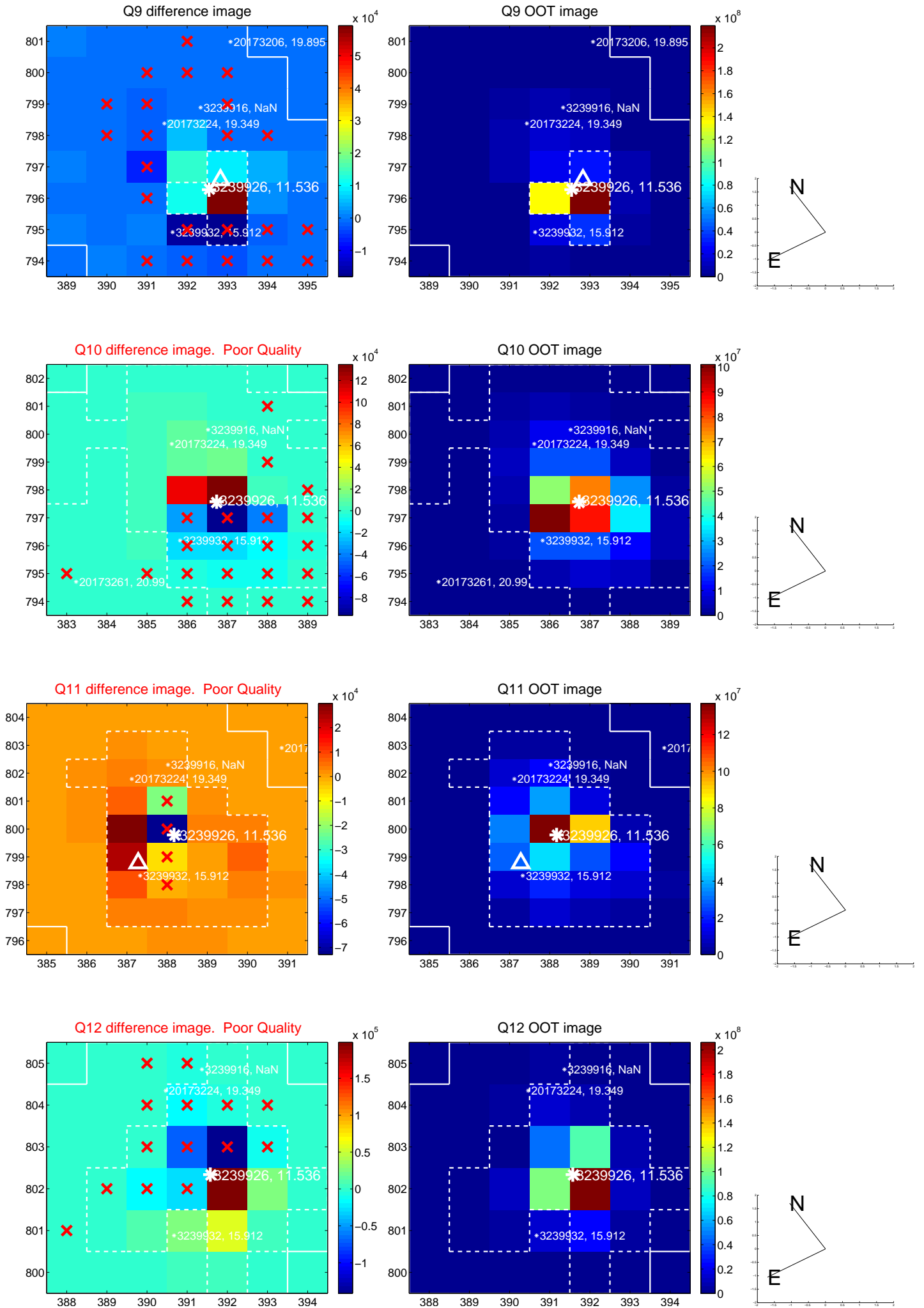


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

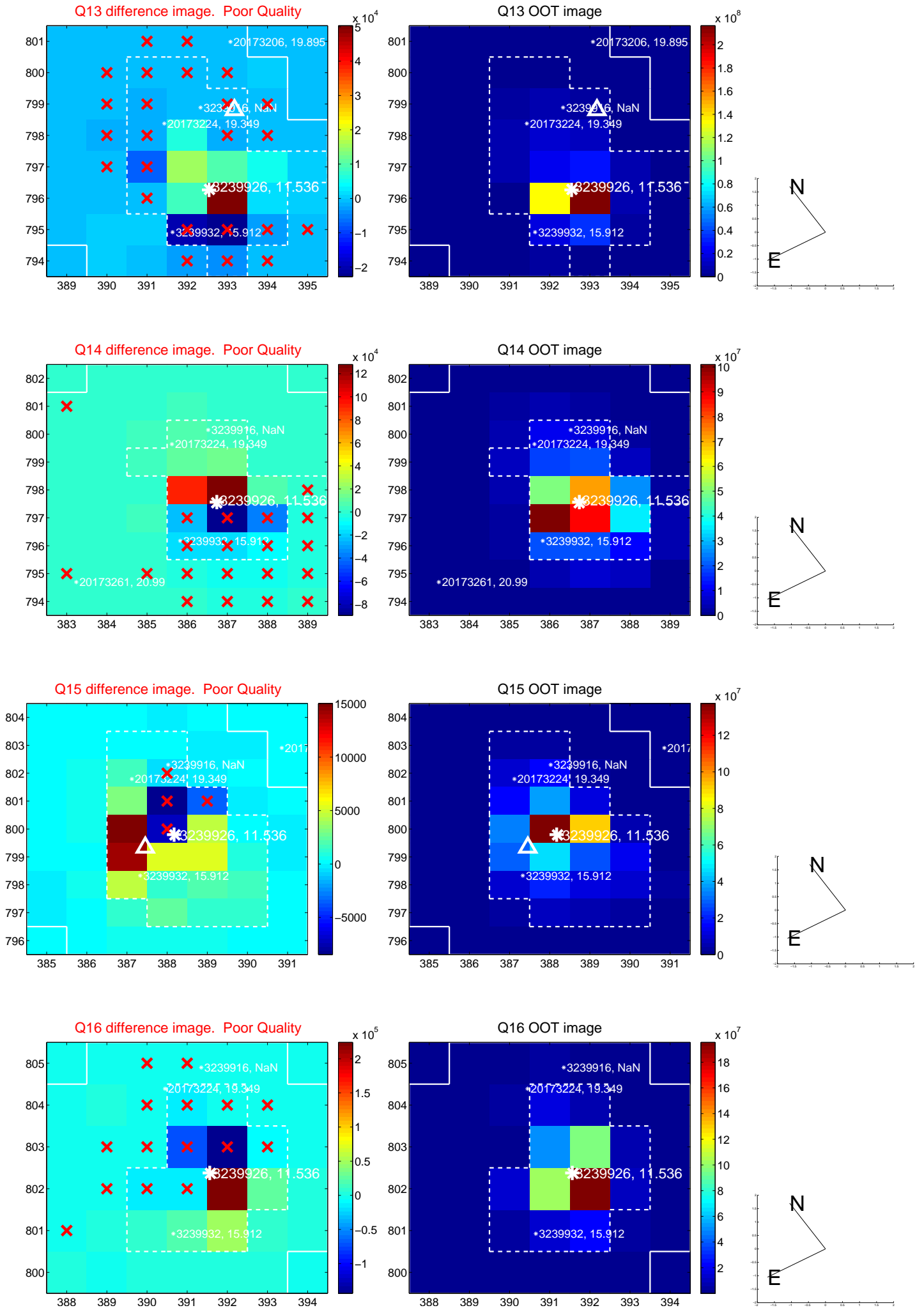




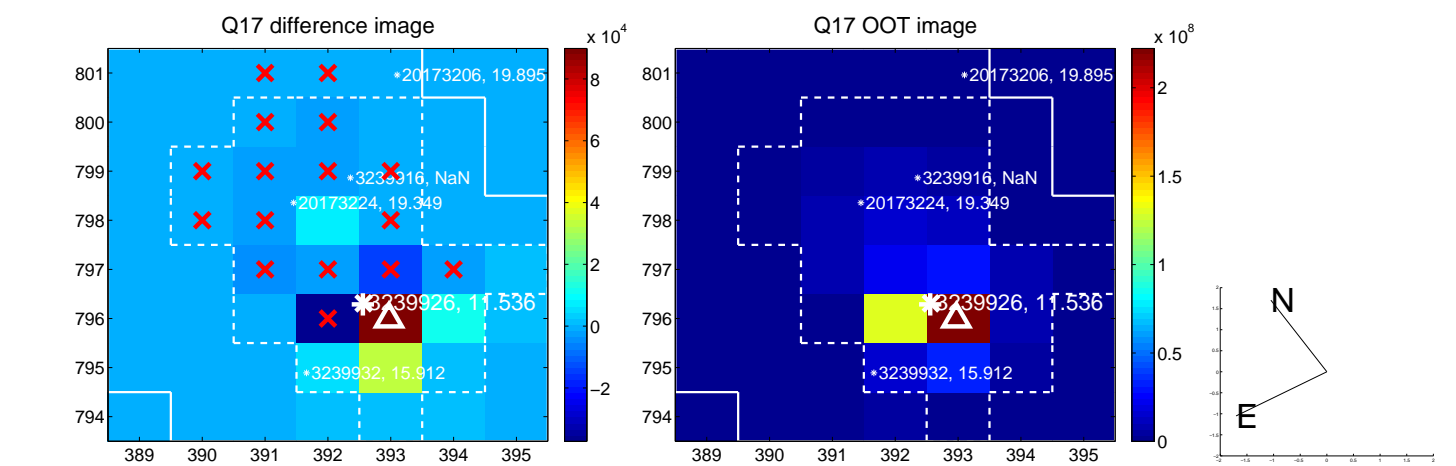
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



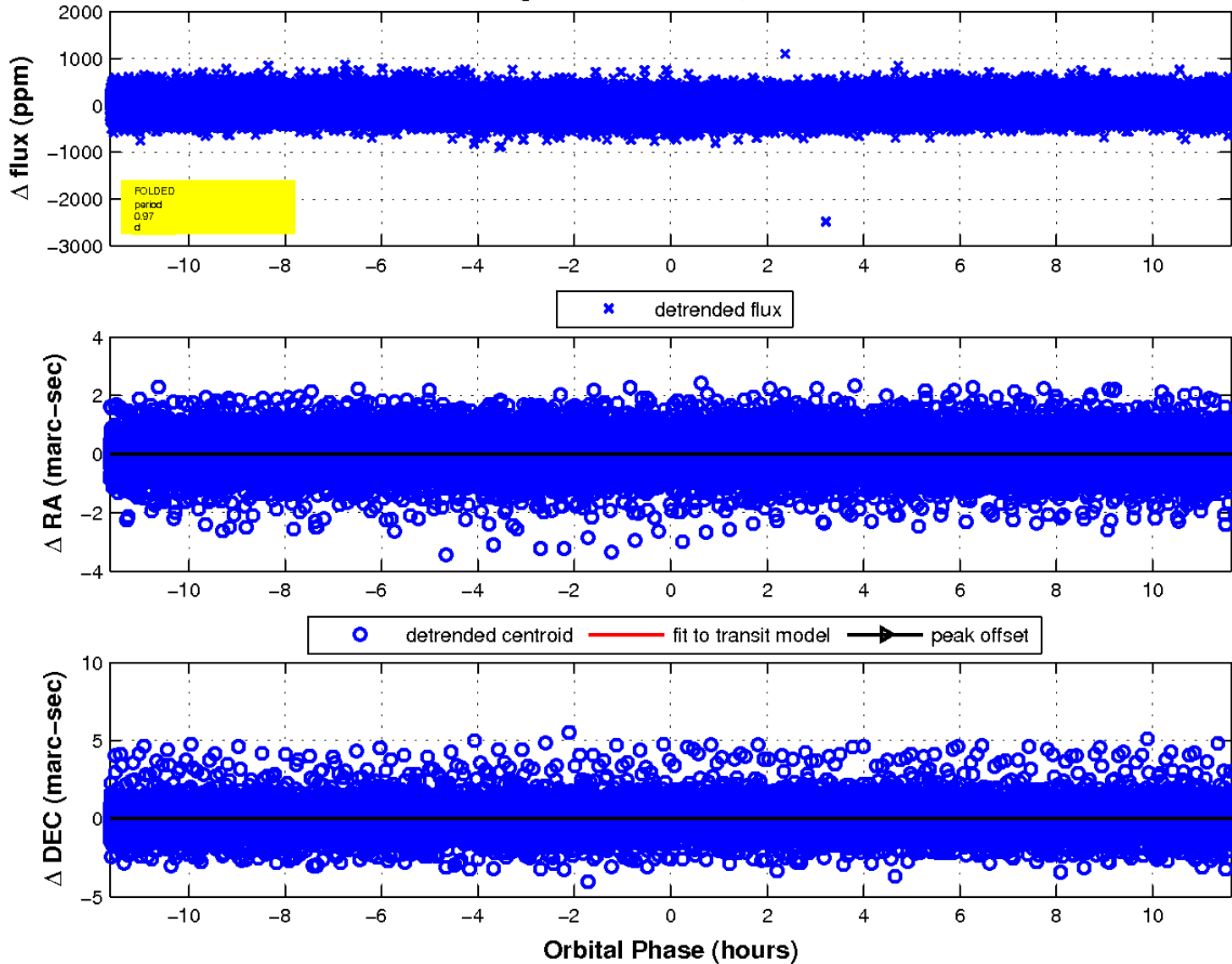
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

