

# KIC 011769689

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011769689-01	OBS	4551.01	14.717904	135.649604	118.0	5.889	10.8	10.3	1.02	6102	1.26	89.43

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011769689-01	OBS	PC	0.99	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.

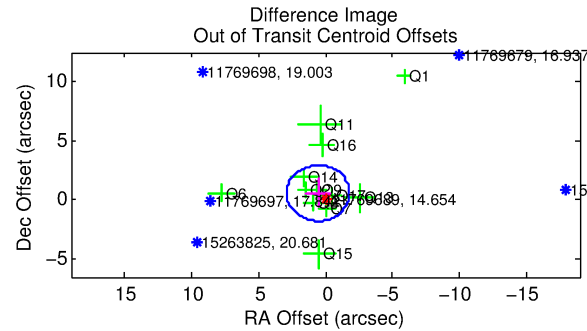
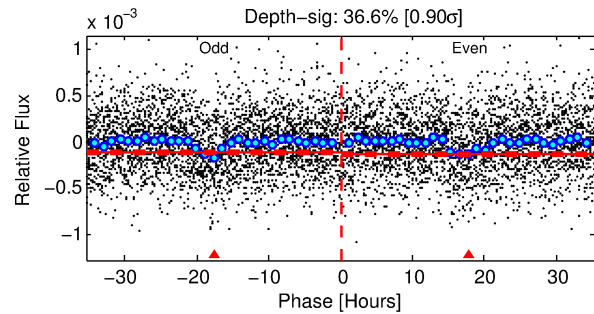
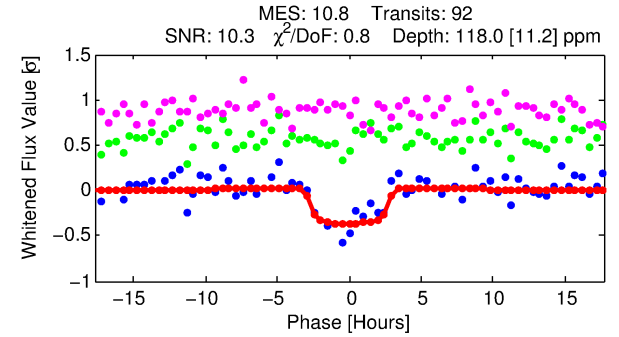
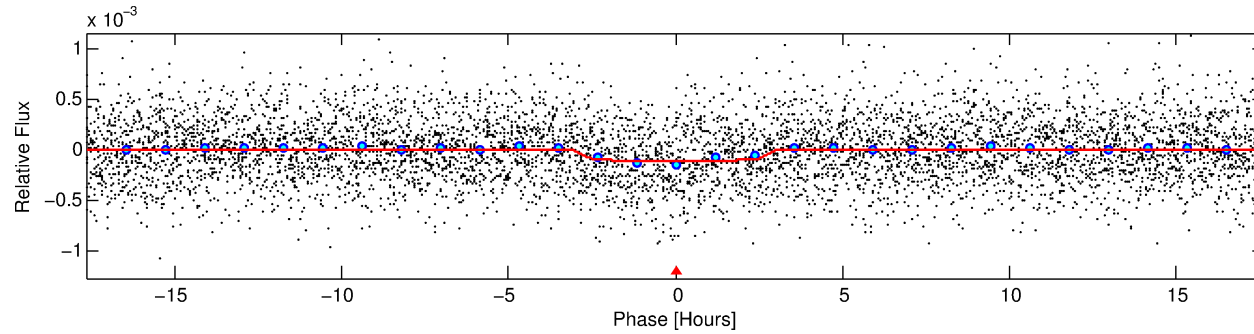
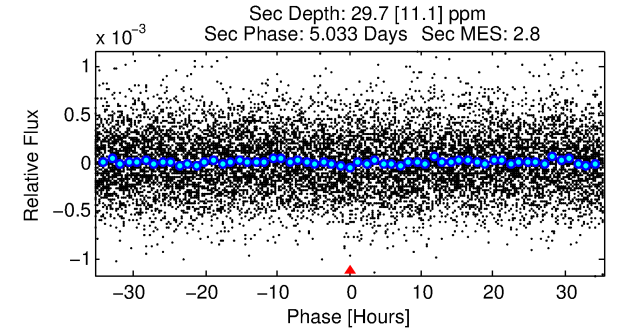
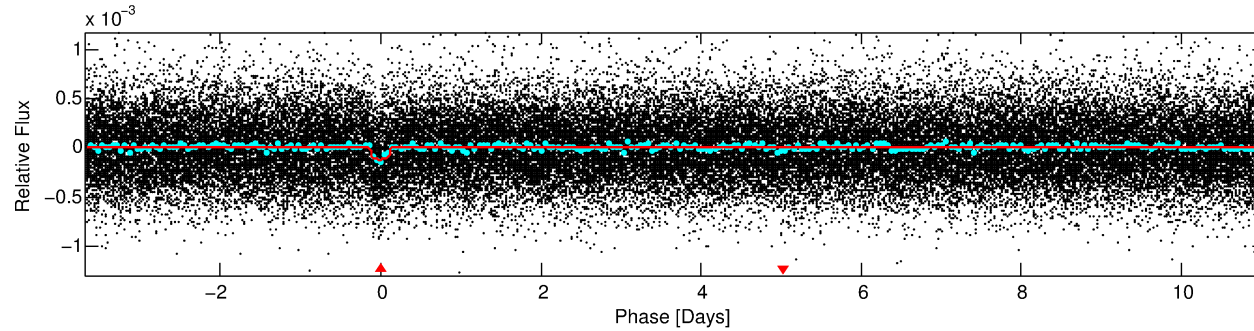
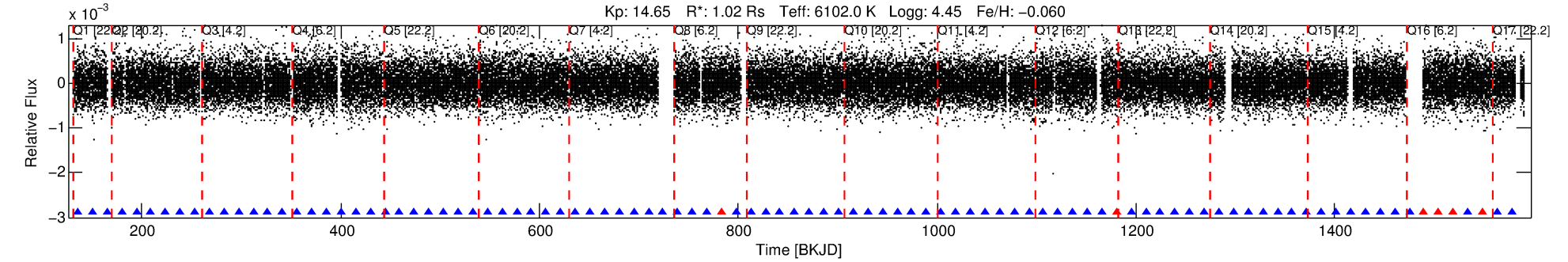
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011769689-01

No Significant Match Found

# DV One-Page Summary

KIC: 11769689 Candidate: 1 of 1 Period: 14.718 d  
KOI: K04551.01 Corr: 0.924



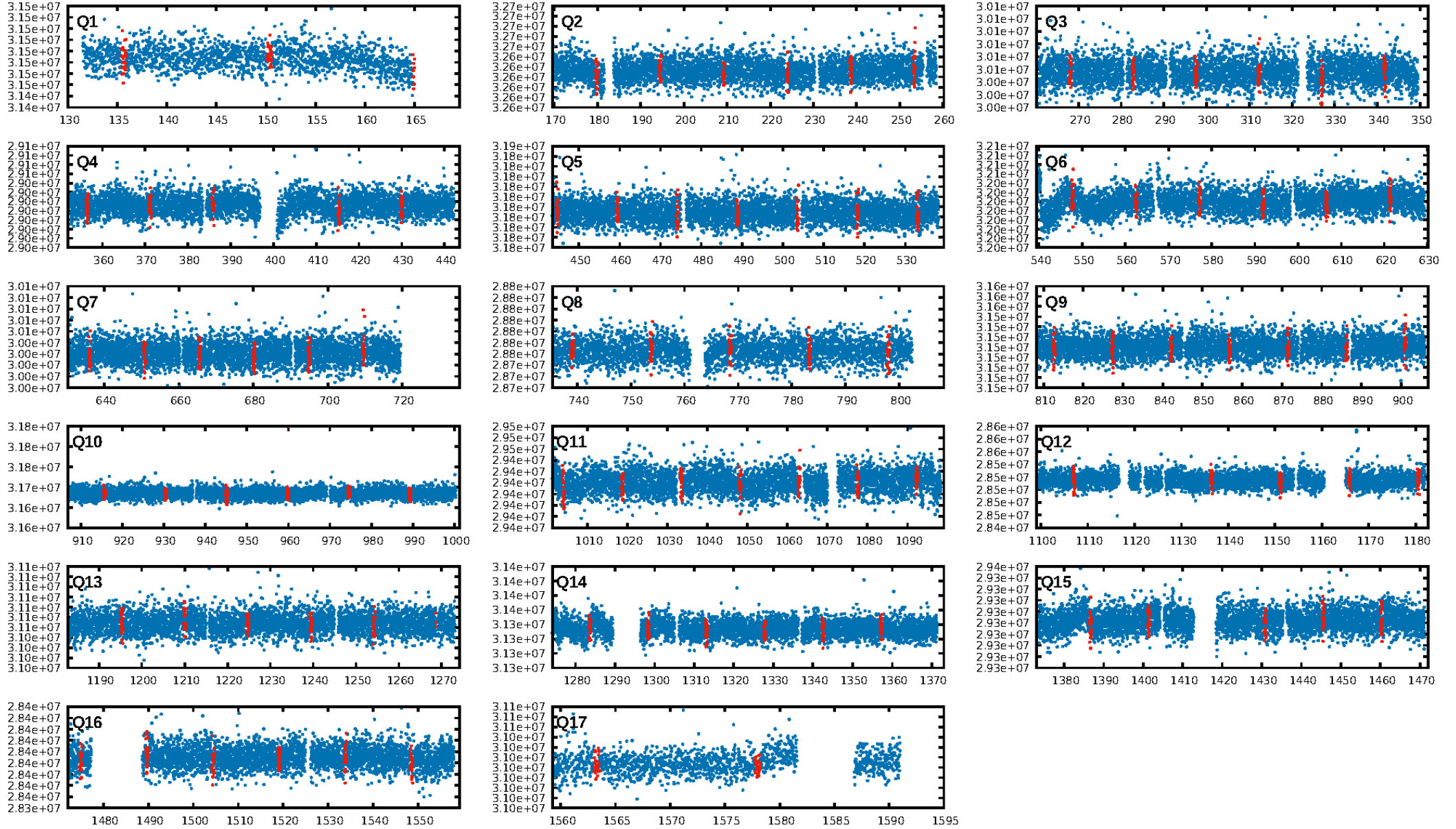
## DV Fit Results:

Period = 14.71790 [0.00019] d  
Epoch = 135.6496 [0.0104] BKJD  
Rp/R\* = 0.0113 [0.0053]  
a/R\* = 10.32 [24.42]  
b = 0.86 [0.75]  
Sef = 89.43 [38.53]  
Teff = 784 [84] K  
Rp = 1.26 [0.72] Re  
a = 0.1200 [0.0338] AU  
Ag = 148.04 [160.63] [0.92σ]  
Teffp = 4229 [1071] K [3.21σ]

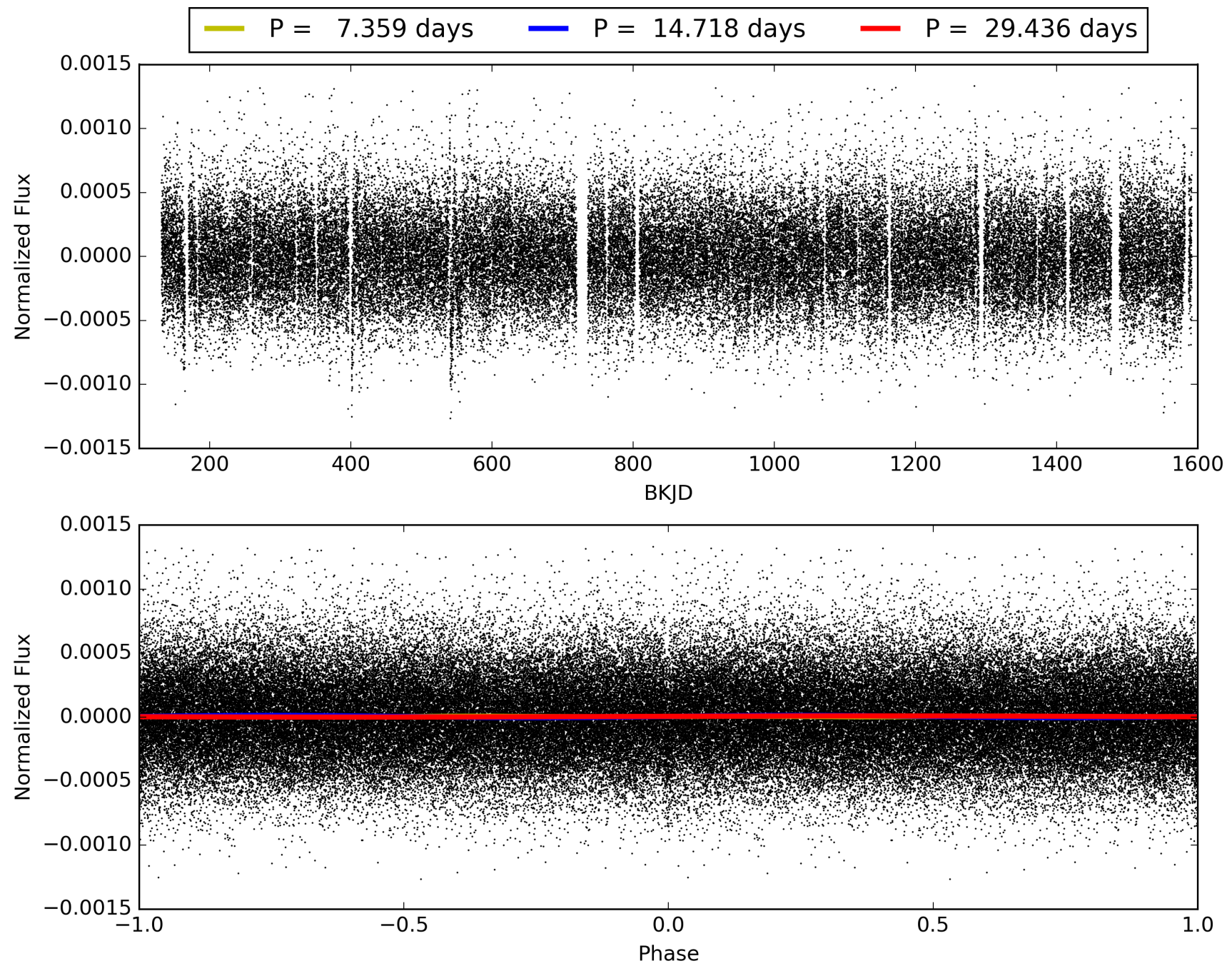
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 100.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 3.14e-26  
RollingBand-fgt: 0.93 [81/87]  
GhostDiagnostic-chr: 1.789  
Centroid-sig: 19.9%  
Centroid-so: 1.649 arcsec [1.11σ]  
OotOffset-rm: 0.808 arcsec [1.03σ]  
KicOffset-rm: 0.718 arcsec [1.04σ]  
OotOffset-st: 3/3/2/4 [12]  
KicOffset-st: 3/3/2/4 [12]  
DiffImageQuality-fgm: 0.25 [3/12]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 011769689-01, PDC Light Curves

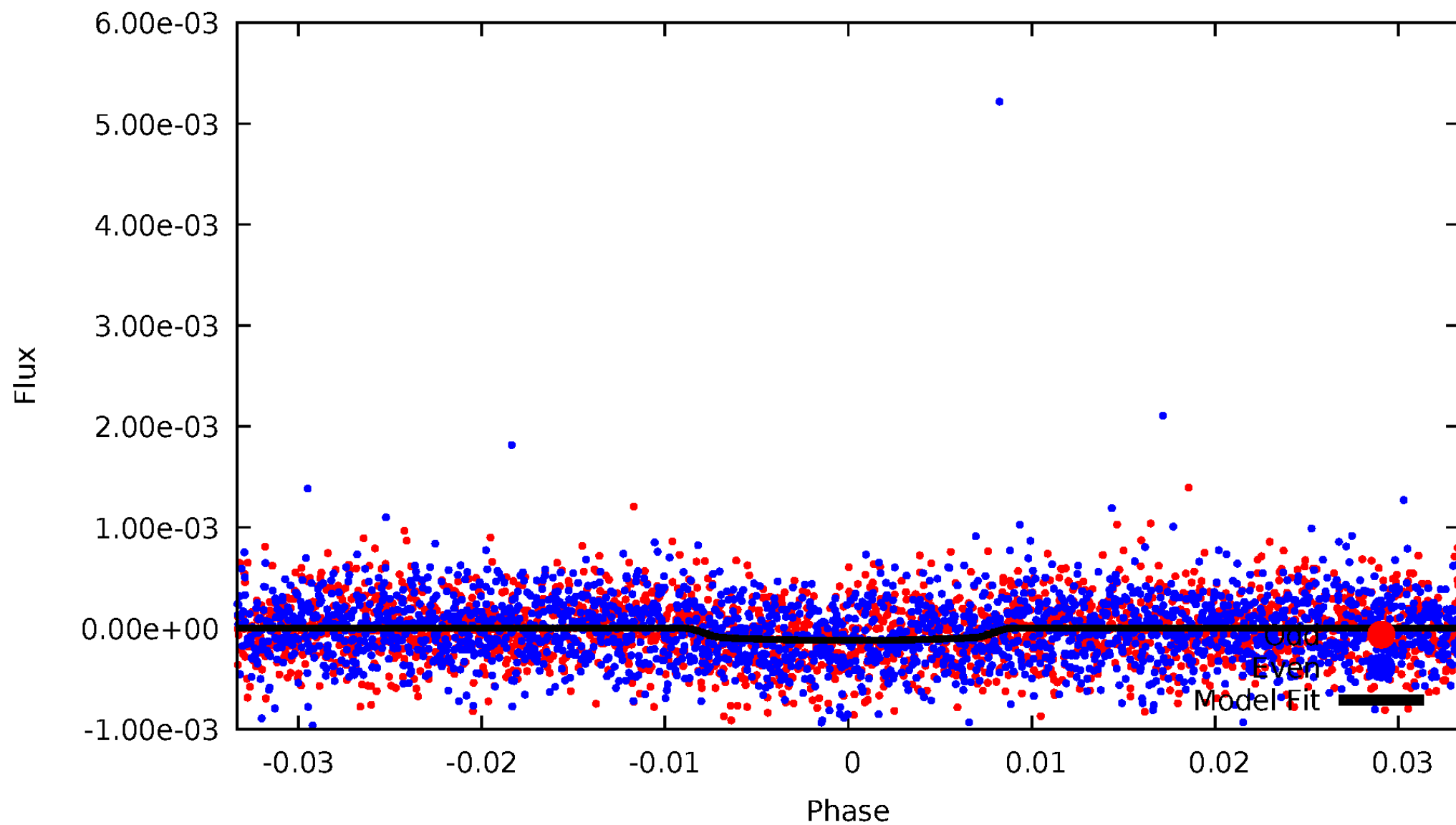


# TCE 011769689-01



# DV Odd/Even

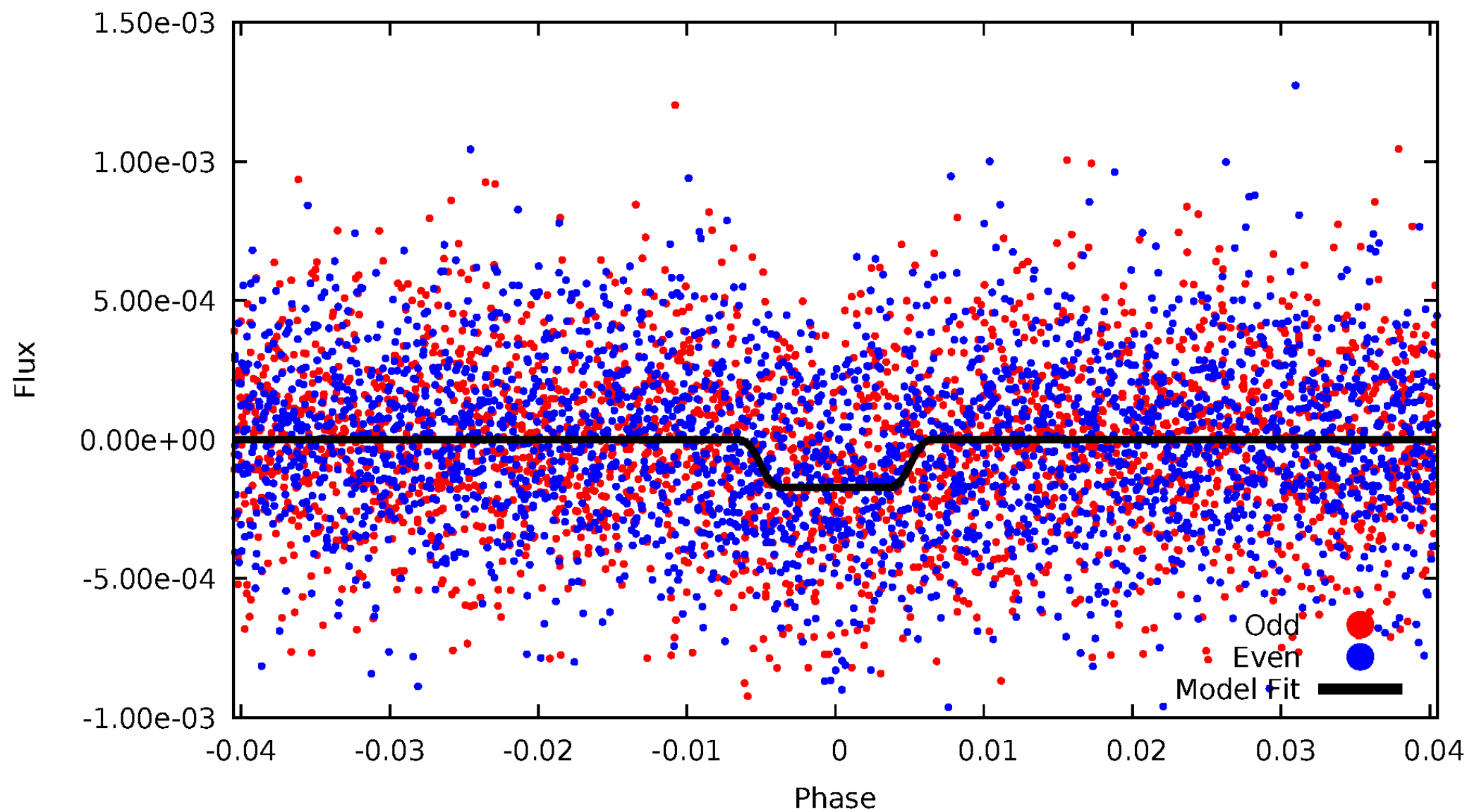
TCE 011769689-01



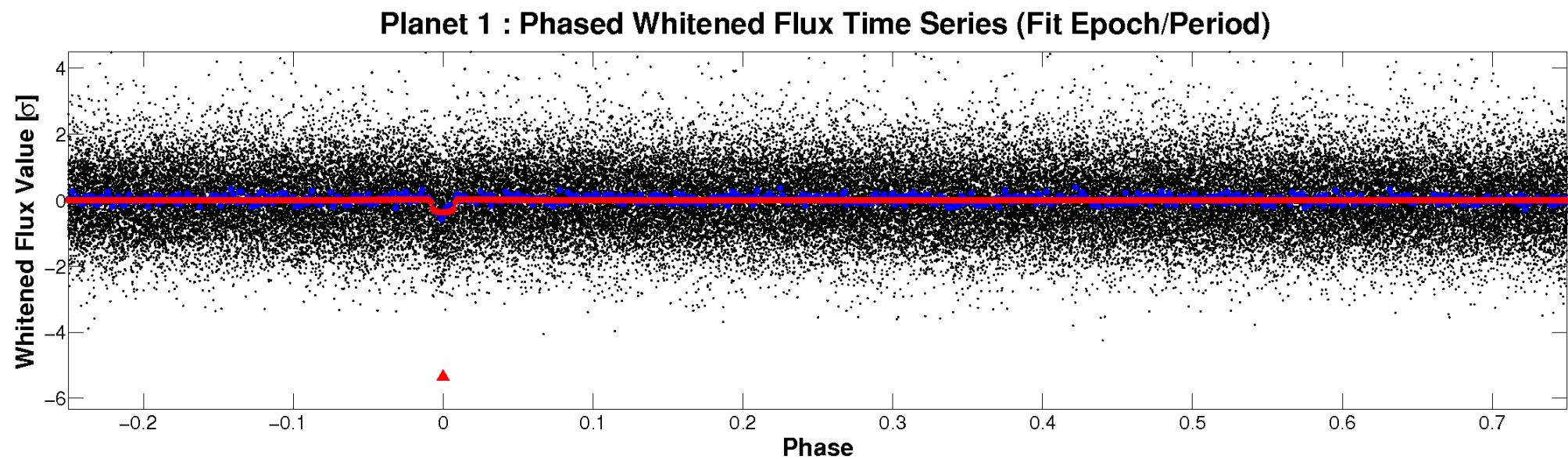
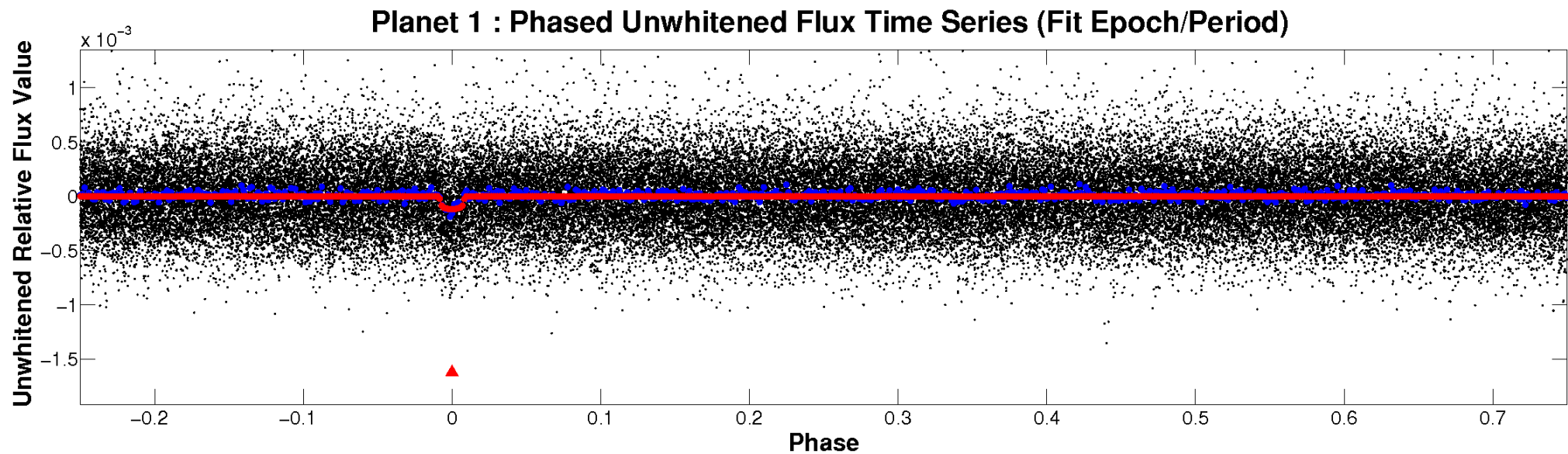


# ALT Odd/Even

TCE 011769689-01

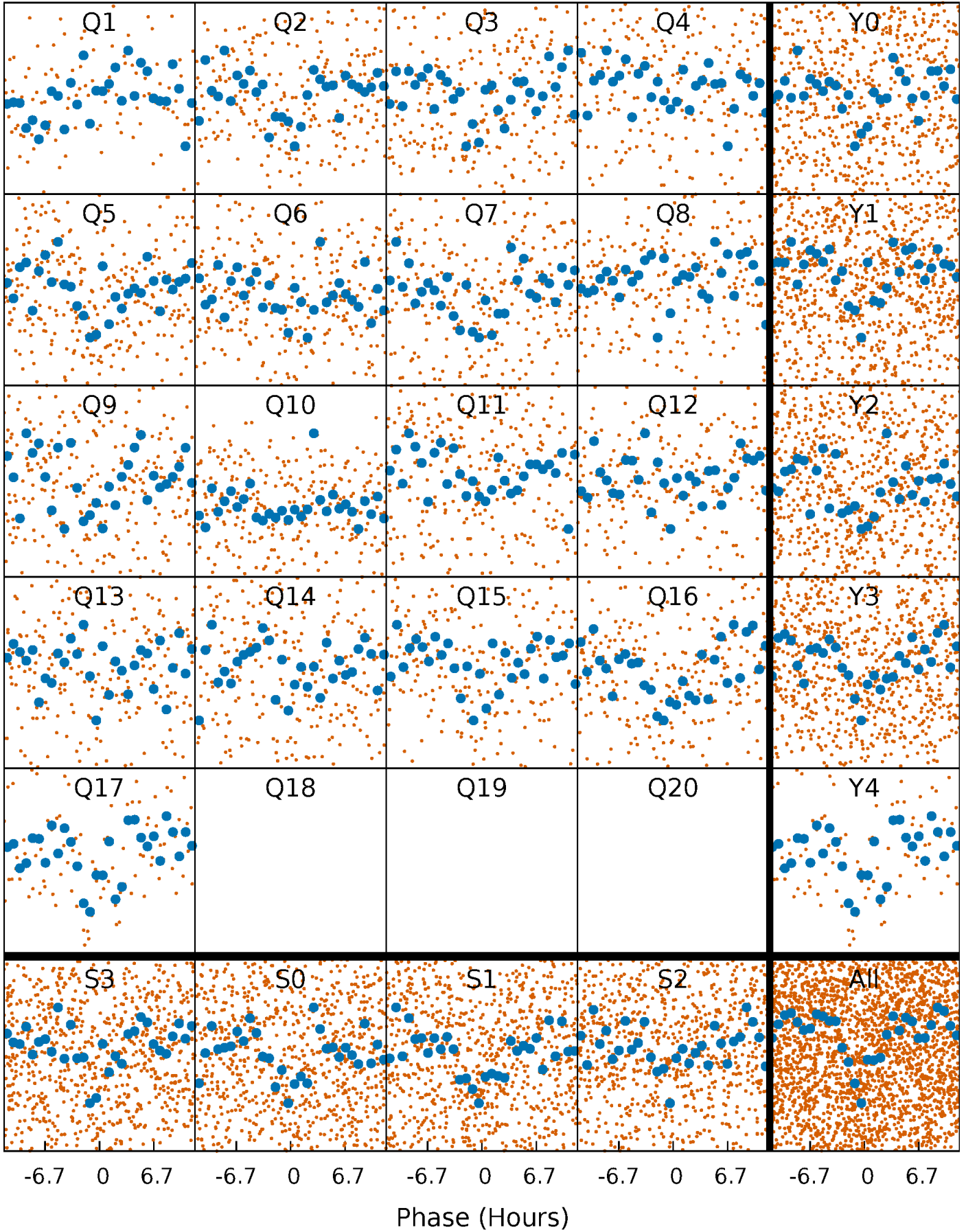


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

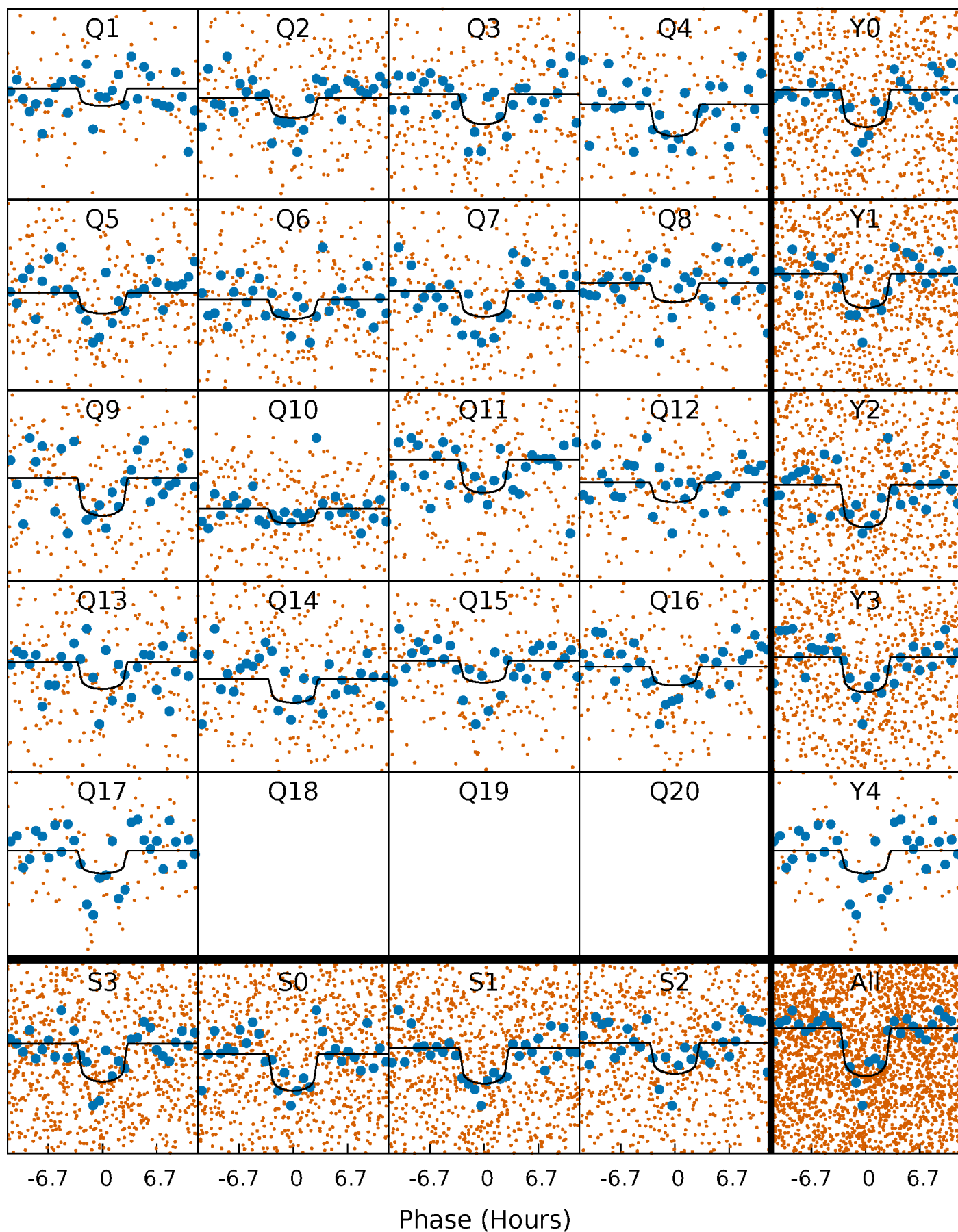
TCE 011769689-01 P= 14.717904 Days  $T_0=135.649604$  (BKJD)





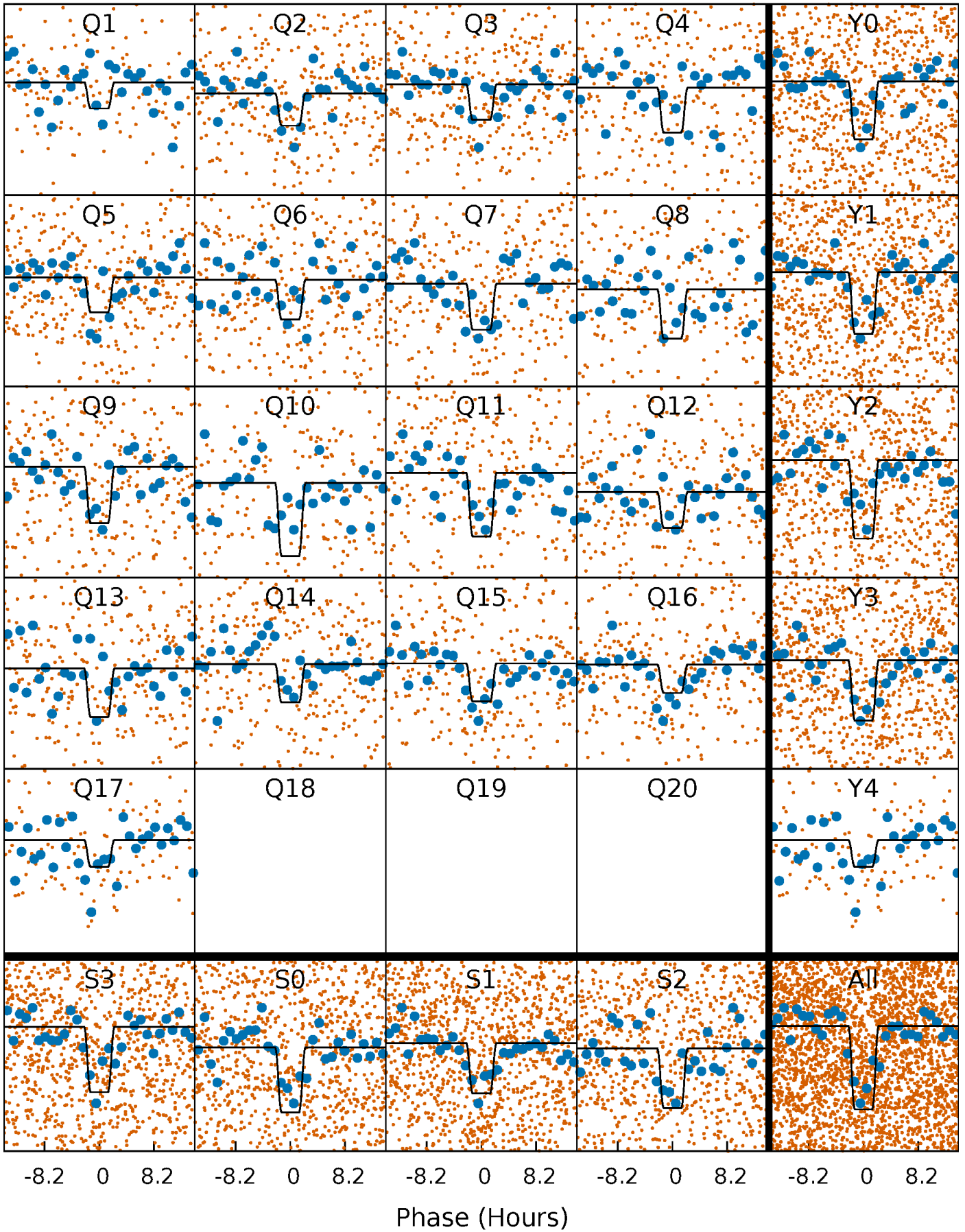
# DV Quarter-Phased Transit Curves

TCE 011769689-01 P= 14.717904 Days  $T_0=135.649604$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

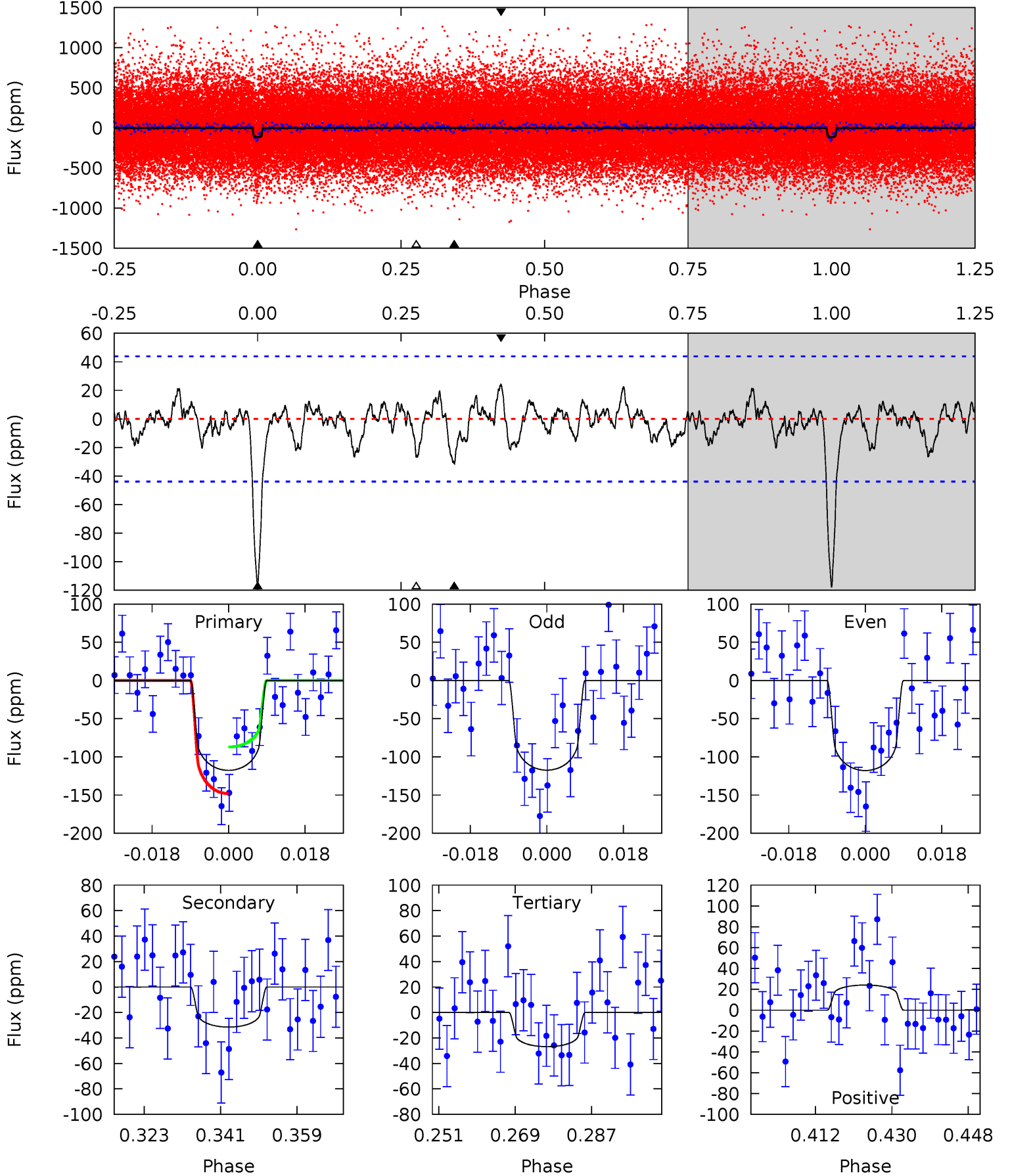
TCE 011769689-01 P= 14.718029 Days  $T_0=135.630980$  (BKJD)



# DV Model-Shift Uniqueness Test

011769689-01,  $P = 14.717904$  Days,  $E = 120.931700$  Days

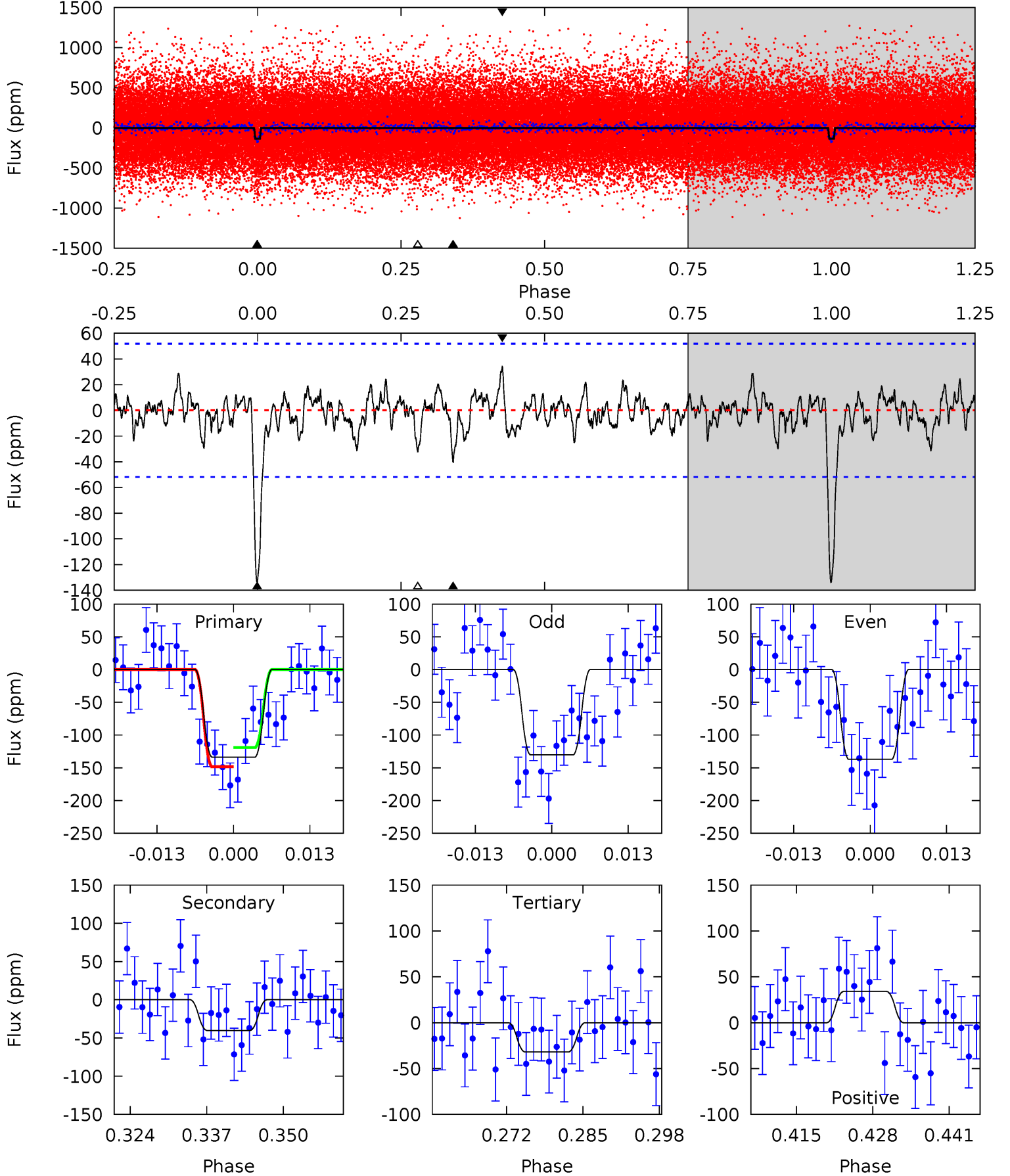
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	3.53	3.01	2.70	4.91	2.37	1.03	10.2	10.5	0.52	0.82	0.03	0.98	0.17	3.43



# Alt Model-Shift Uniqueness Test

011769689-01,  $P = 14.718029$  Days,  $E = 120.912951$  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
12.8	3.85	3.07	3.27	4.98	2.48	1.02	9.76	9.56	0.78	0.58	0.34	1.04	0.20	1.41





### Stellar Parameters For KIC 011769689

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6102^{+184}_{-202}$	$4.449^{+0.056}_{-0.224}$	$-0.060^{+0.250}_{-0.300}$	$1.018^{+0.341}_{-0.114}$	$1.058^{+0.151}_{-0.135}$	$1.413^{+0.426}_{-0.778}$
	+3%/-3%	+1%/-5%	+417%/-500%	+33%/-11%	+14%/-13%	+30%/-55%
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 011769689-01 / KOI 4551.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-31 \pm 9$	$1.38^{+0.65}_{-0.70}$	$1126^{+80}_{-56}$	$4453^{+1436}_{-654}$	$127^{+387}_{-72}$
Alt.	$-40 \pm 10$	$1.54^{+0.68}_{-0.62}$	$1119^{+96}_{-55}$	$4430^{+1144}_{-596}$	$133^{+256}_{-74}$

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

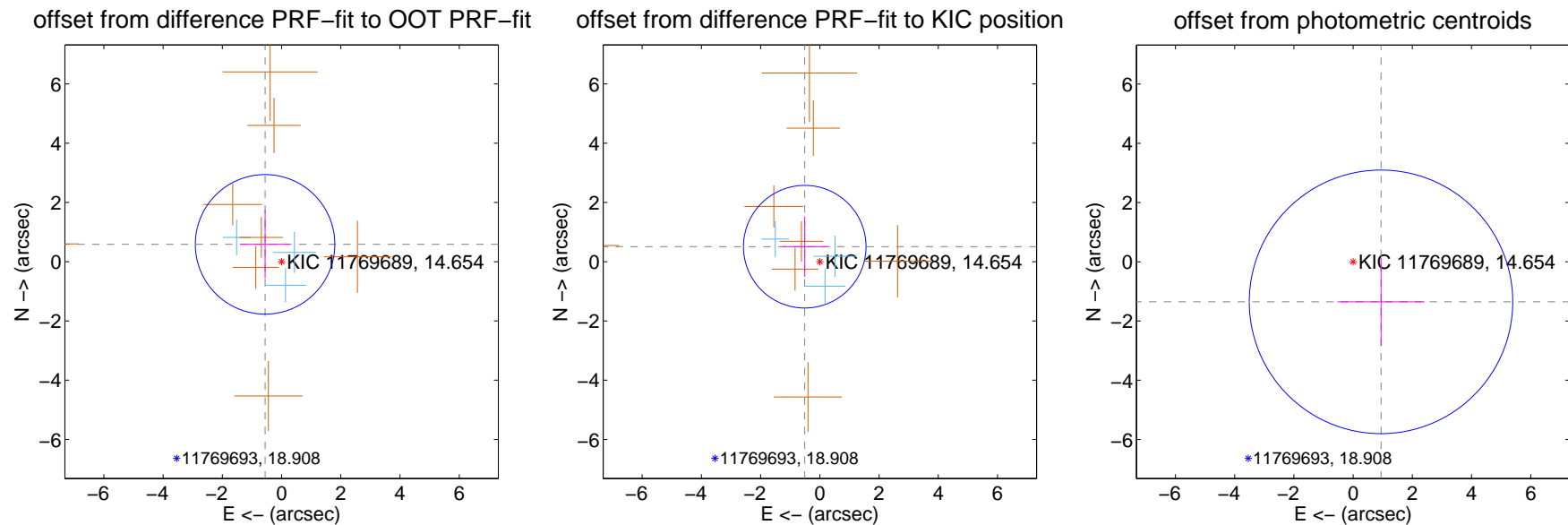
## DV Centroid Data

Supplemental centroid analysis for 011769689-01. Kepler magnitude: 14.65. Transit SNR 10.27

There are 3 quarters with good PRF difference image offsets

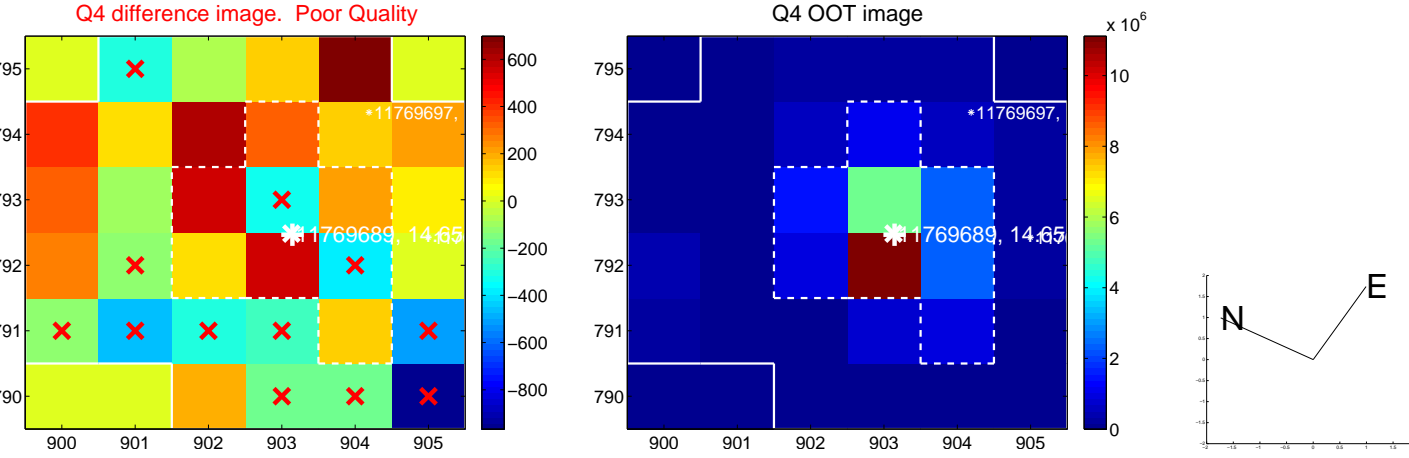
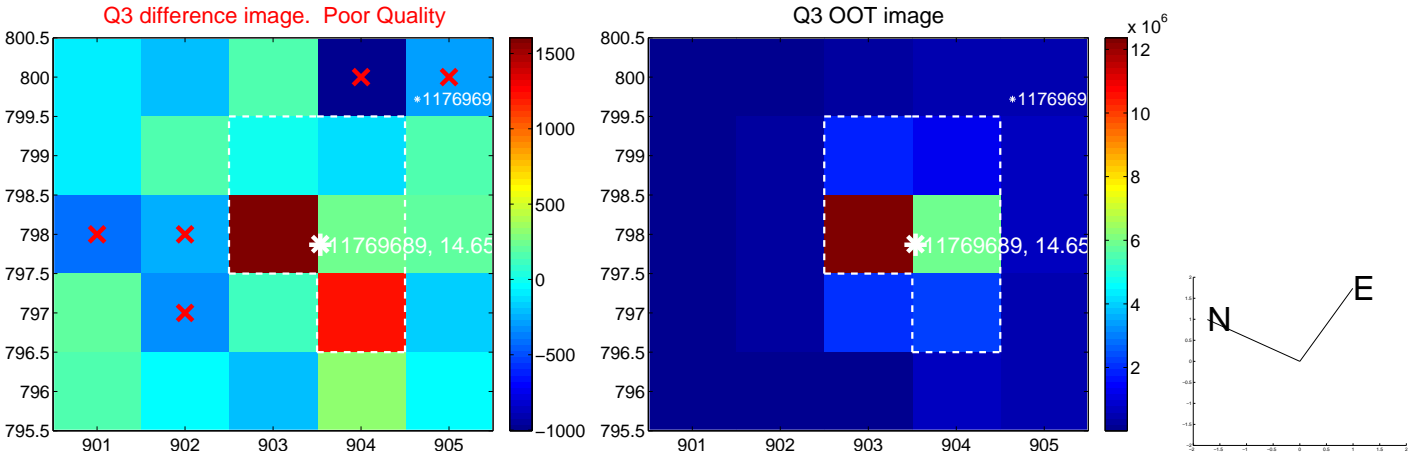
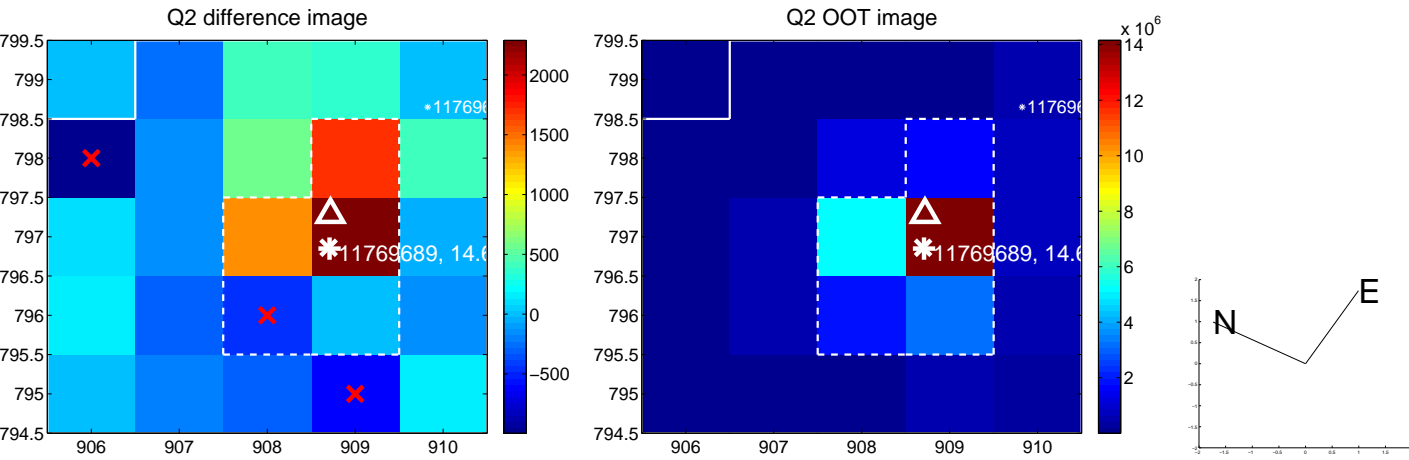
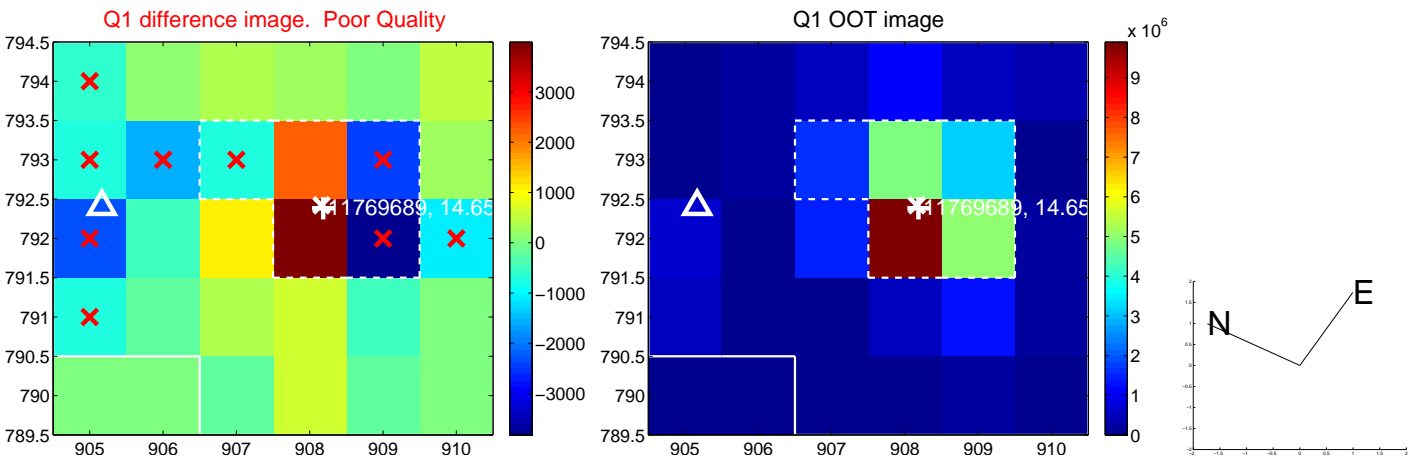
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.808 \pm 0.785$	1.03	$0.557 \pm 0.844$	$0.585 \pm 1.151$
PRF-fit source offset from KIC position	$0.718 \pm 0.690$	1.04	$0.510 \pm 0.779$	$0.506 \pm 1.020$
photometric centroid source offset	$1.65 \pm 1.48$	1.11	$-0.94 \pm 1.47$	$-1.35 \pm 1.49$

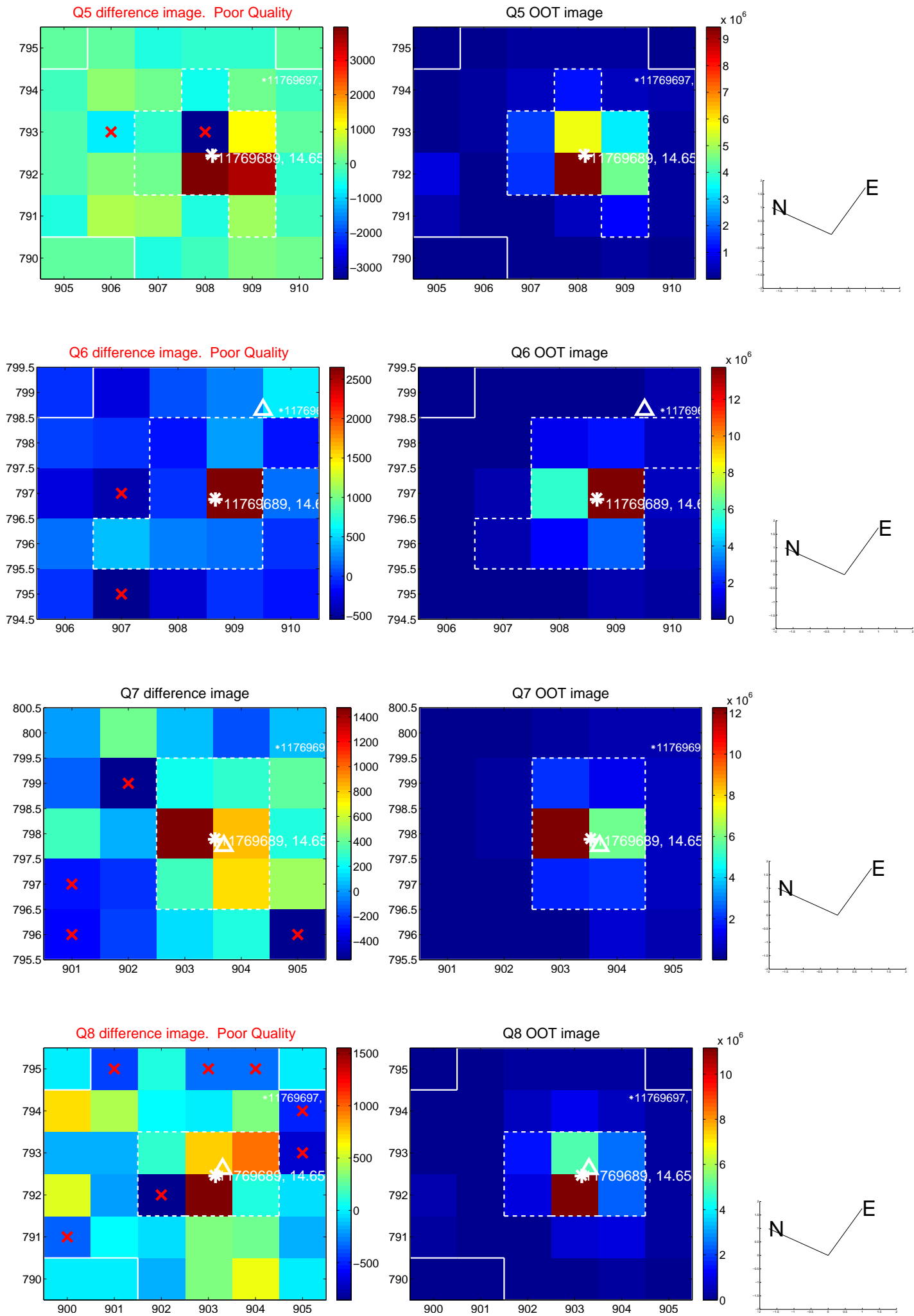


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

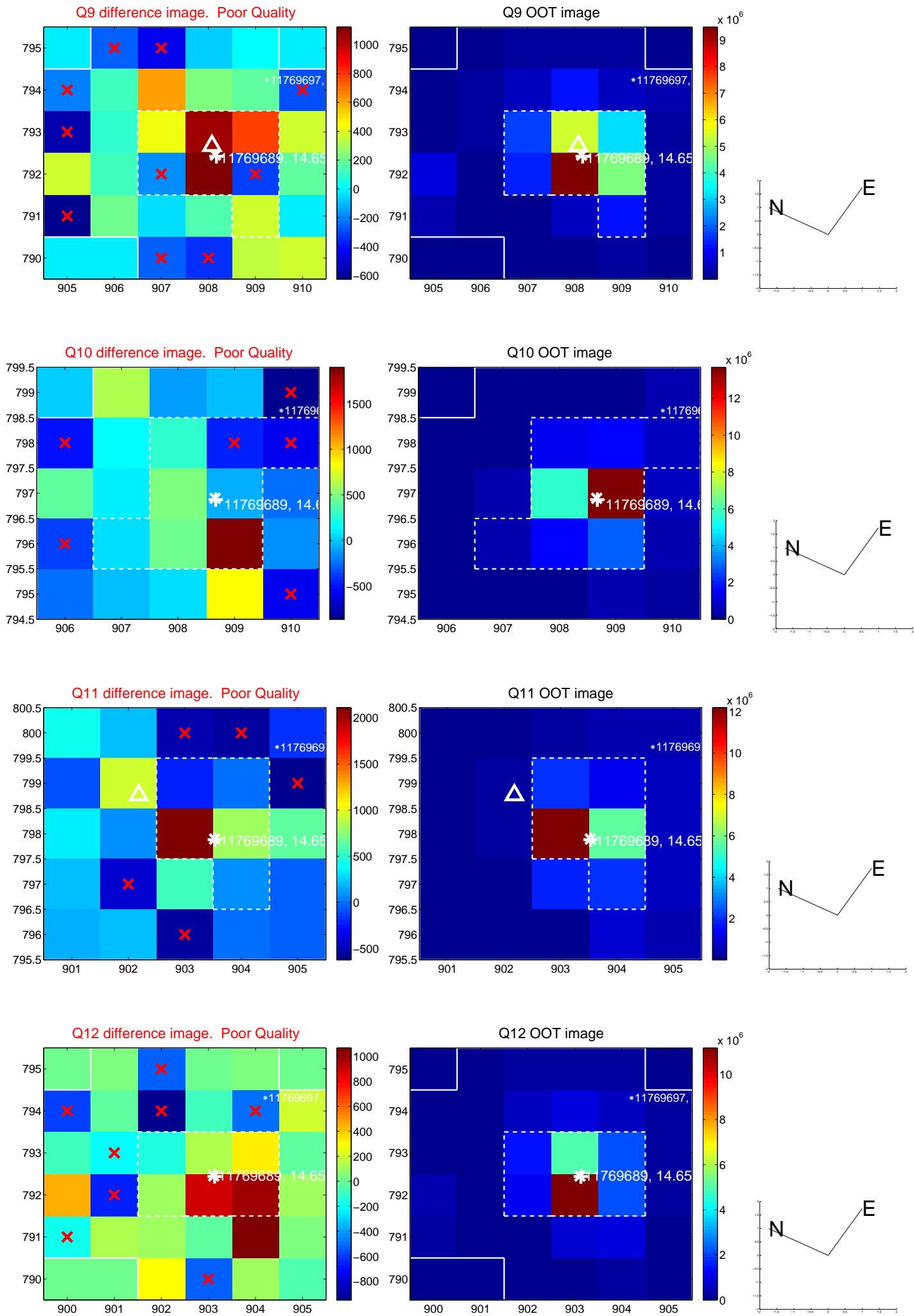


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

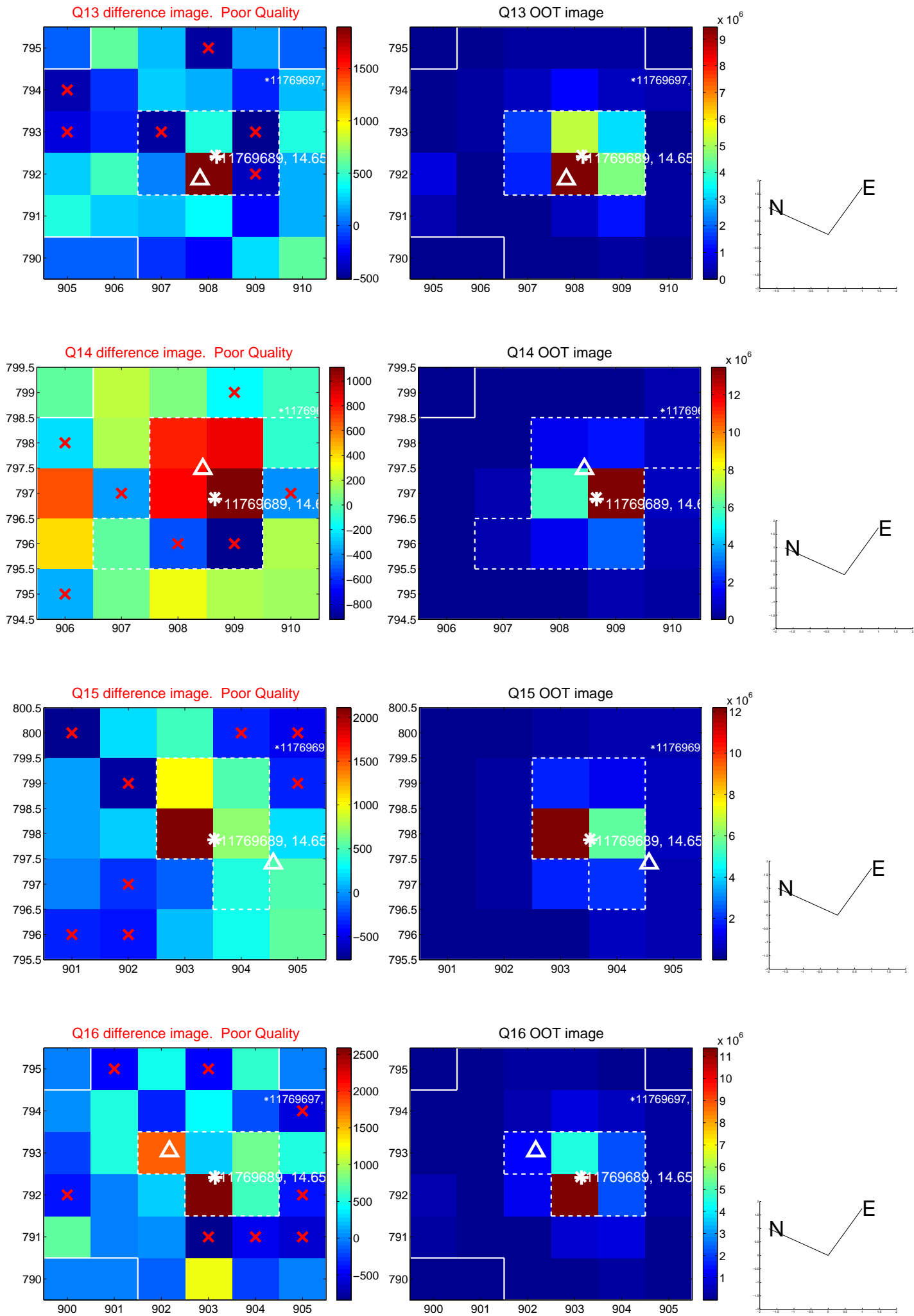




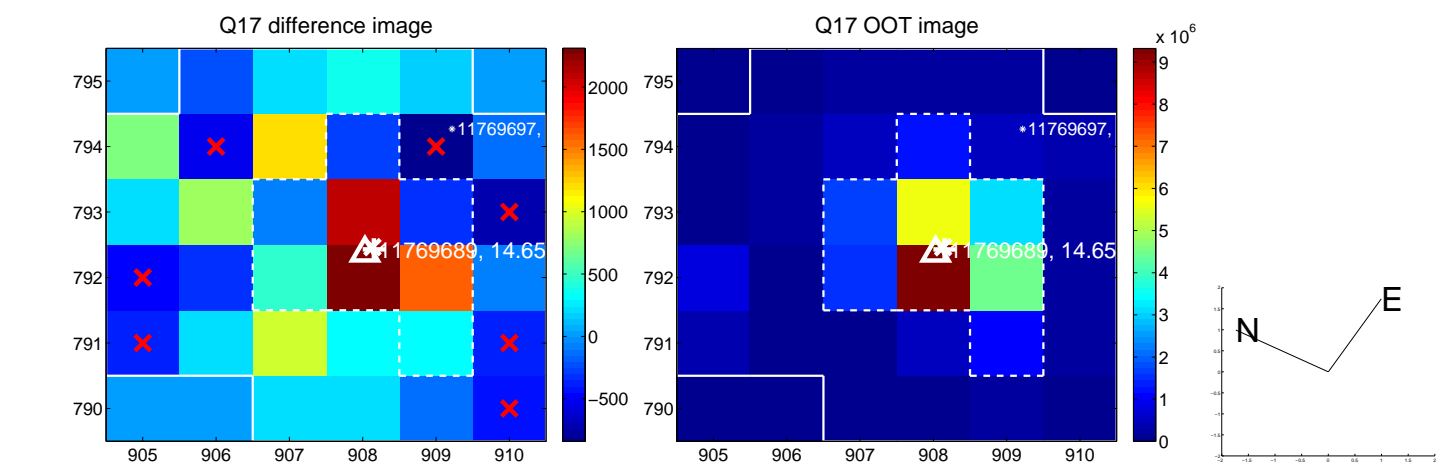
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



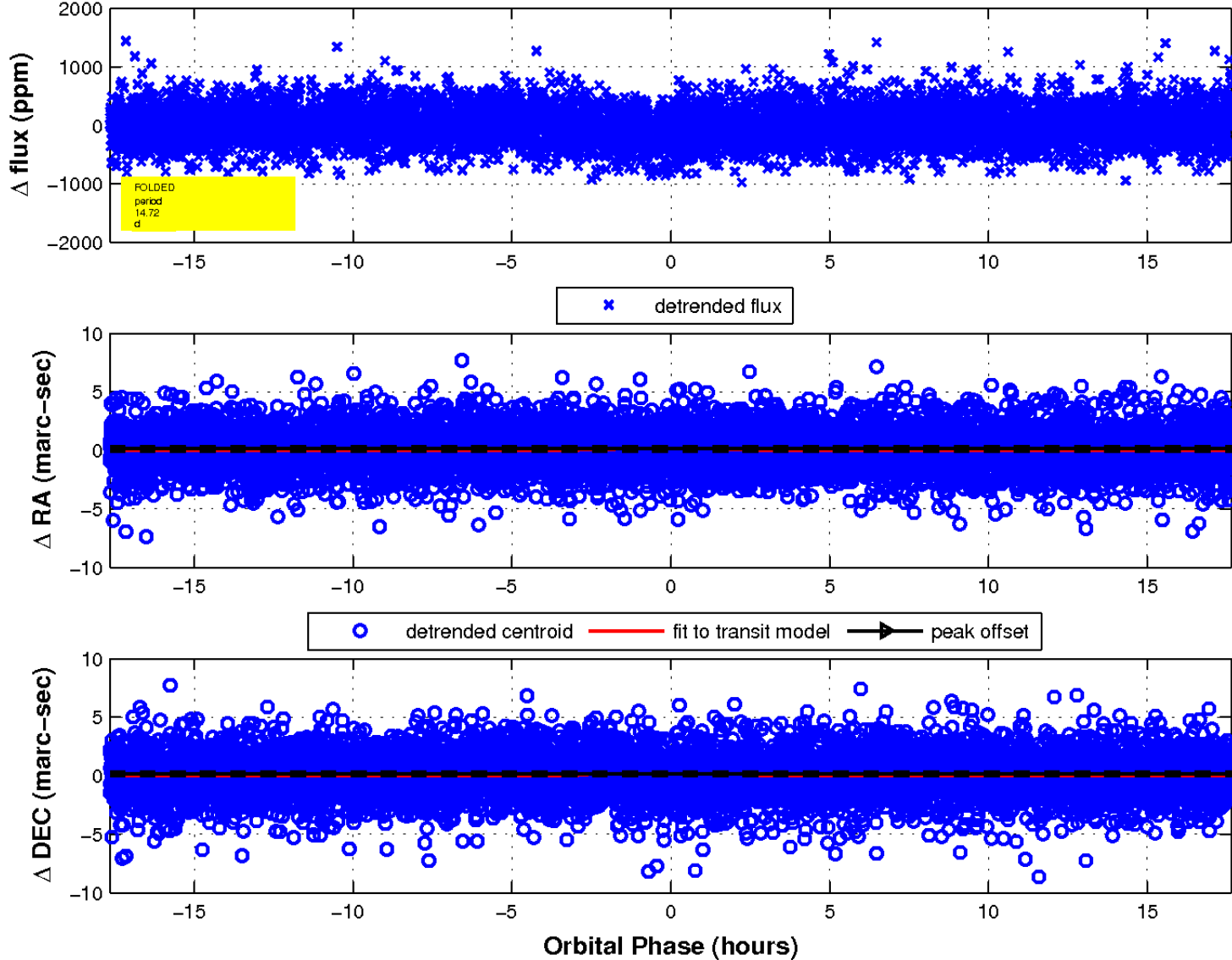
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



# UKIRT Image

Declination

