

# KIC 005652893

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005652893-01	OBS	2790.01	14.009545	132.965663	167.7	3.447	19.3	20.7	0.77	5153	1.20	34.39

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005652893-01	OBS	PC	1.00	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 005652893-01

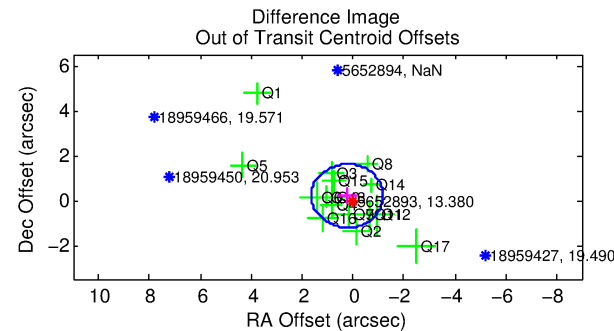
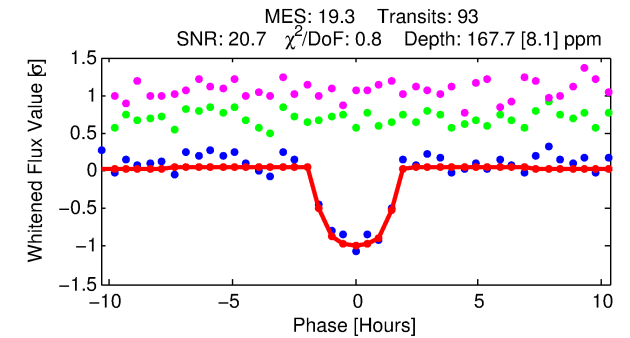
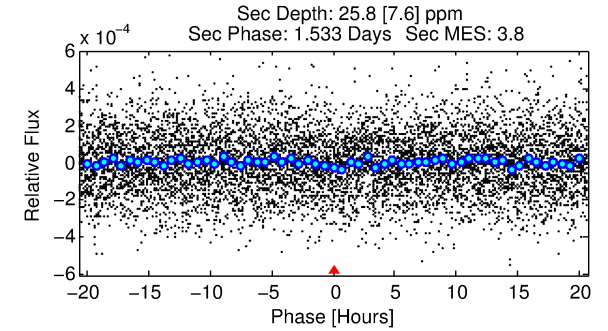
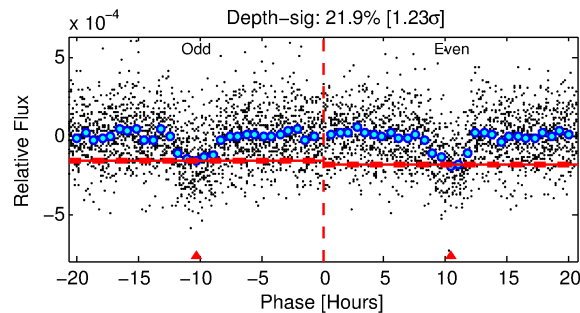
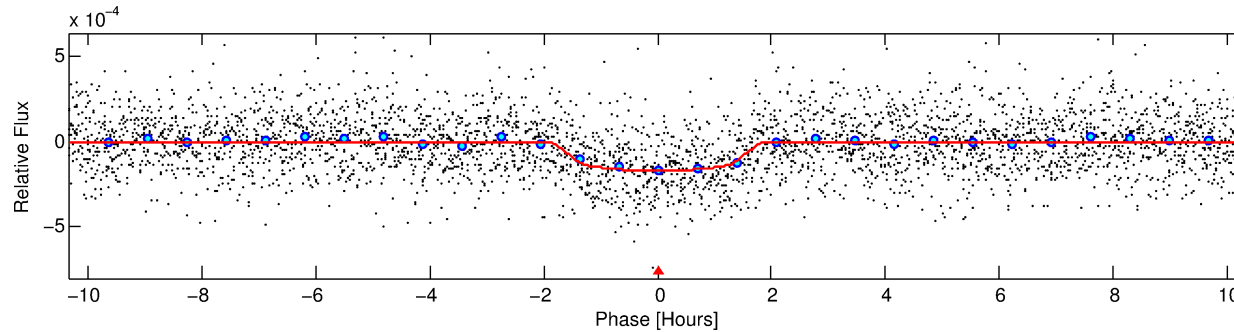
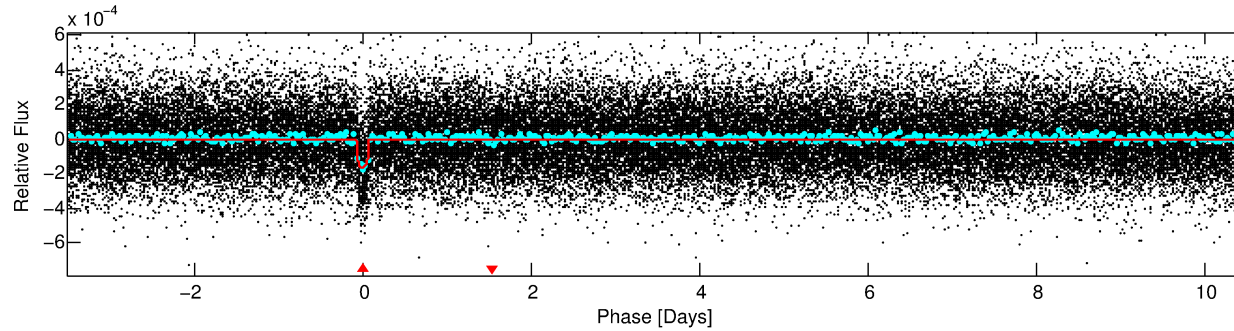
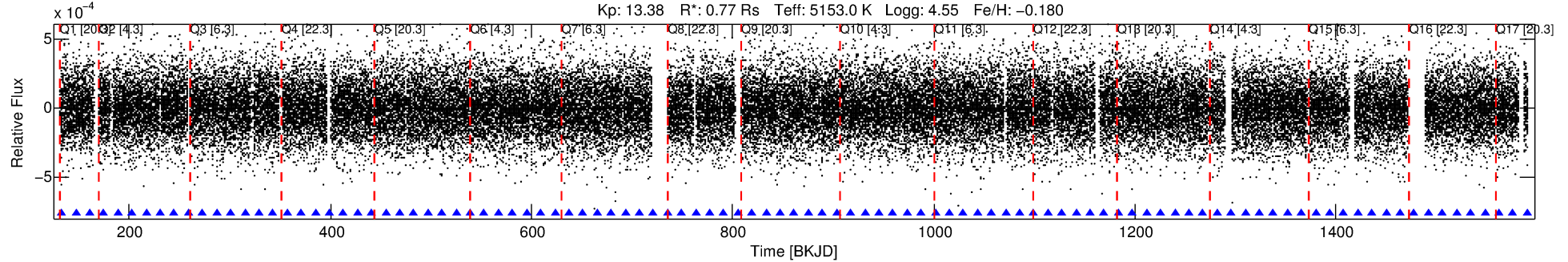
No Significant Match Found

# DV One-Page Summary

KIC: 5652893 Candidate: 1 of 1 Period: 14.010 d

KOI: K02790.01 Corr: 0.979

Kp: 13.38 R\*: 0.77 Rs Teff: 5153.0 K Logg: 4.55 Fe/H: -0.180



## DV Fit Results:

Period = 14.00954 [0.00006] d  
Epoch = 132.9657 [0.0037] BKJD  
Rp/R\* = 0.0144 [0.0042]  
a/R\* = 14.48 [17.90]  
b = 0.90 [0.27]  
Seff = 34.39 [4.00]  
Teq = 617 [18] K  
Rp = 1.20 [0.36] Re  
a = 0.1040 [0.0057] AU  
Ag = 106.15 [70.57] [1.49σ]  
Teffp = 3065 [509] K [4.81σ]

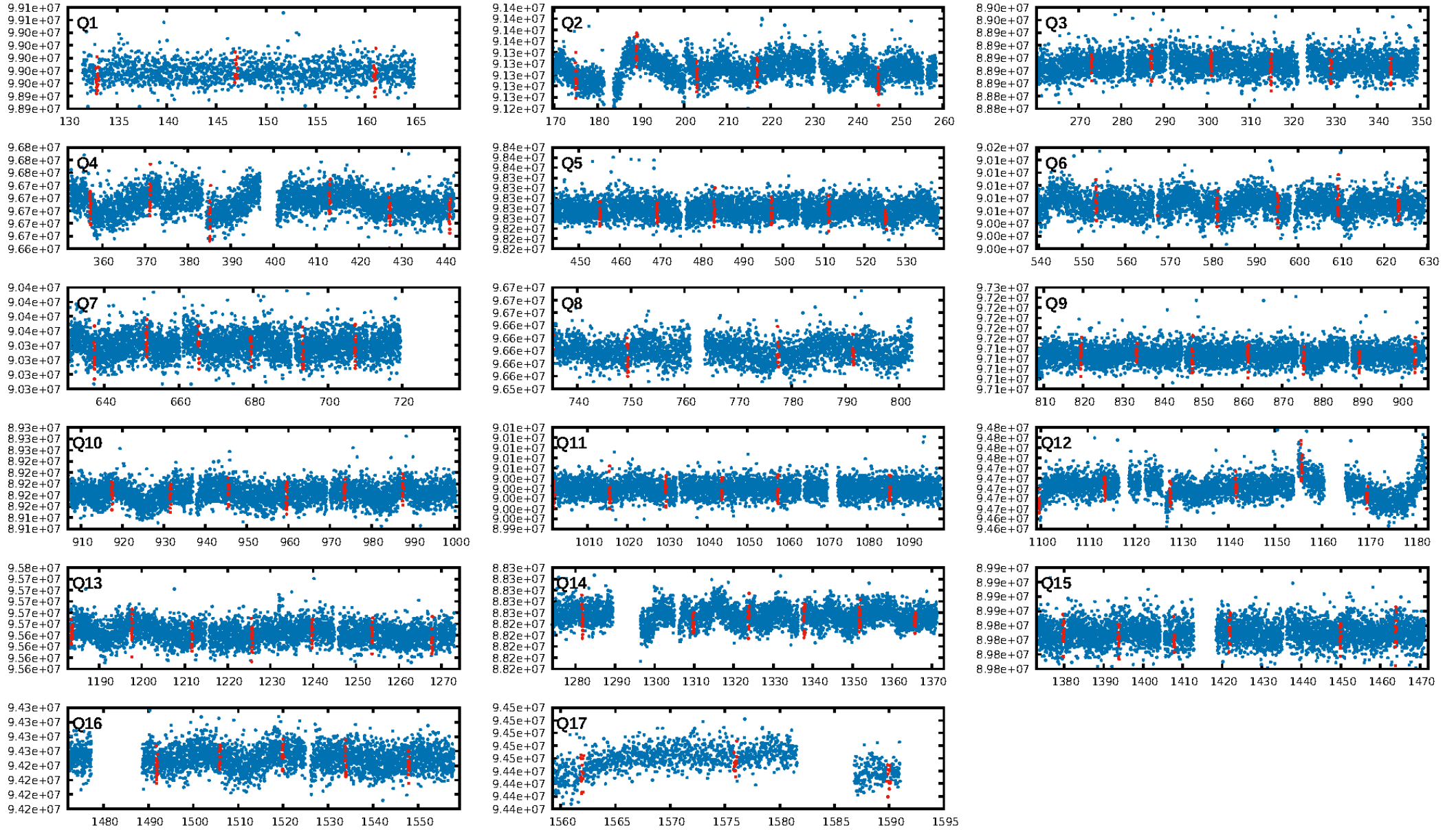
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 100.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.90e-81  
RollingBand-fgt: 1.00 [87/87]  
GhostDiagnostic-chr: 18.57  
Centroid-sig: 0.1%  
Centroid-so: 1.424 arcsec [1.92σ]  
OotOffset-rm: 0.305 arcsec [0.65σ]  
KicOffset-rm: 0.338 arcsec [0.66σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.82 [14/17]  
DiffImageOverlap-fno: 1.00 [17/17]

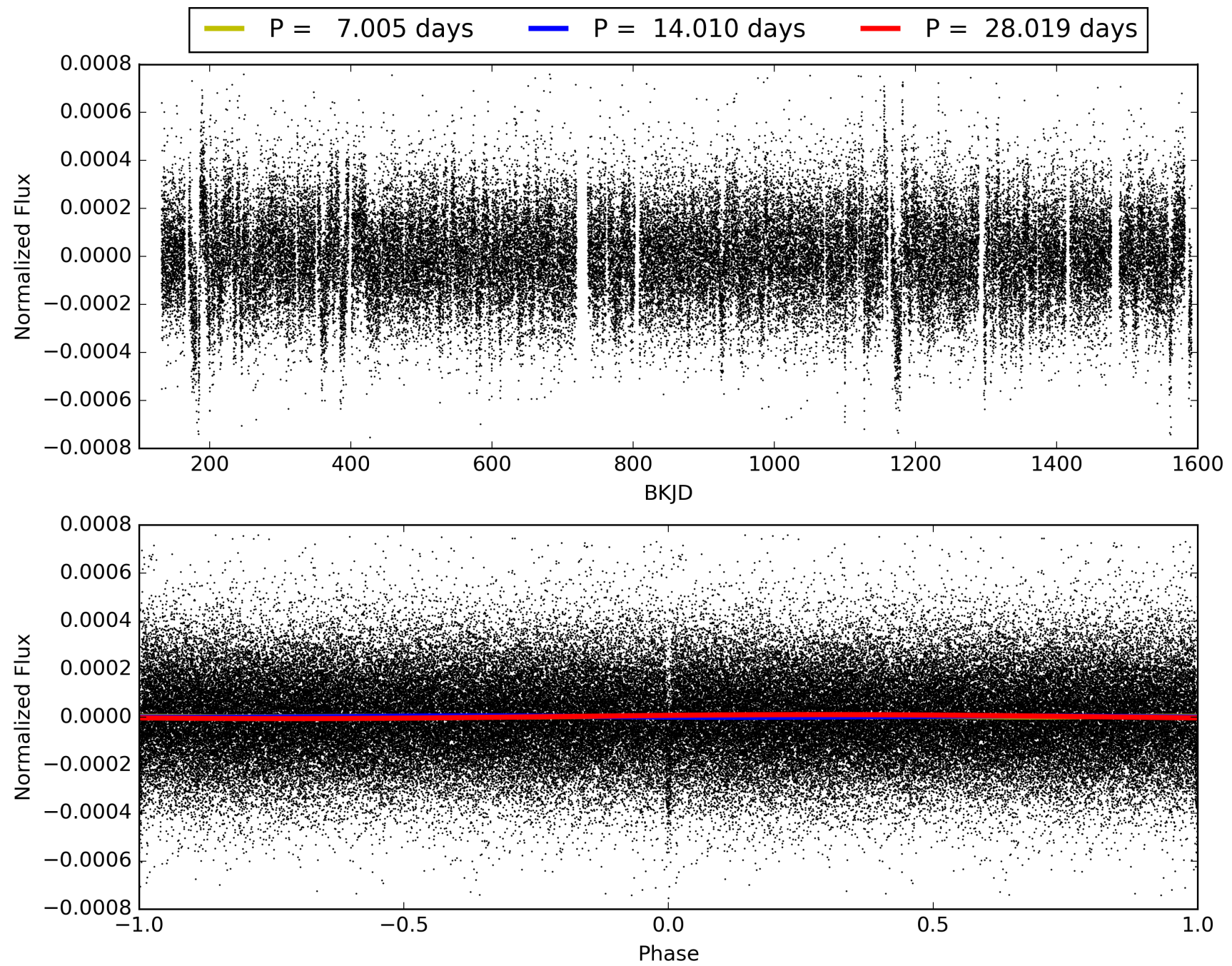
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:59:11 Z

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

# TCE 005652893-01, PDC Light Curves



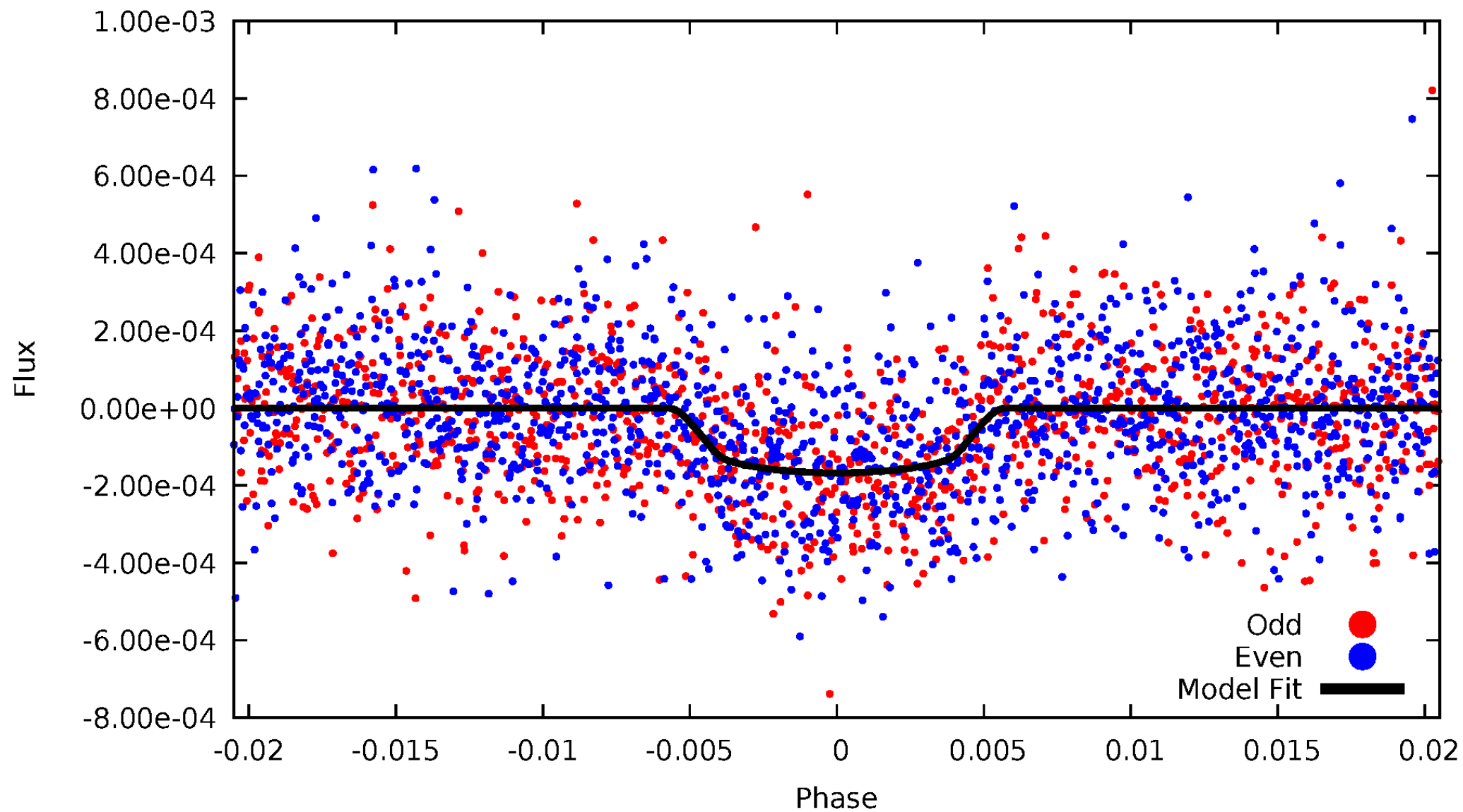
TCE 005652893-01





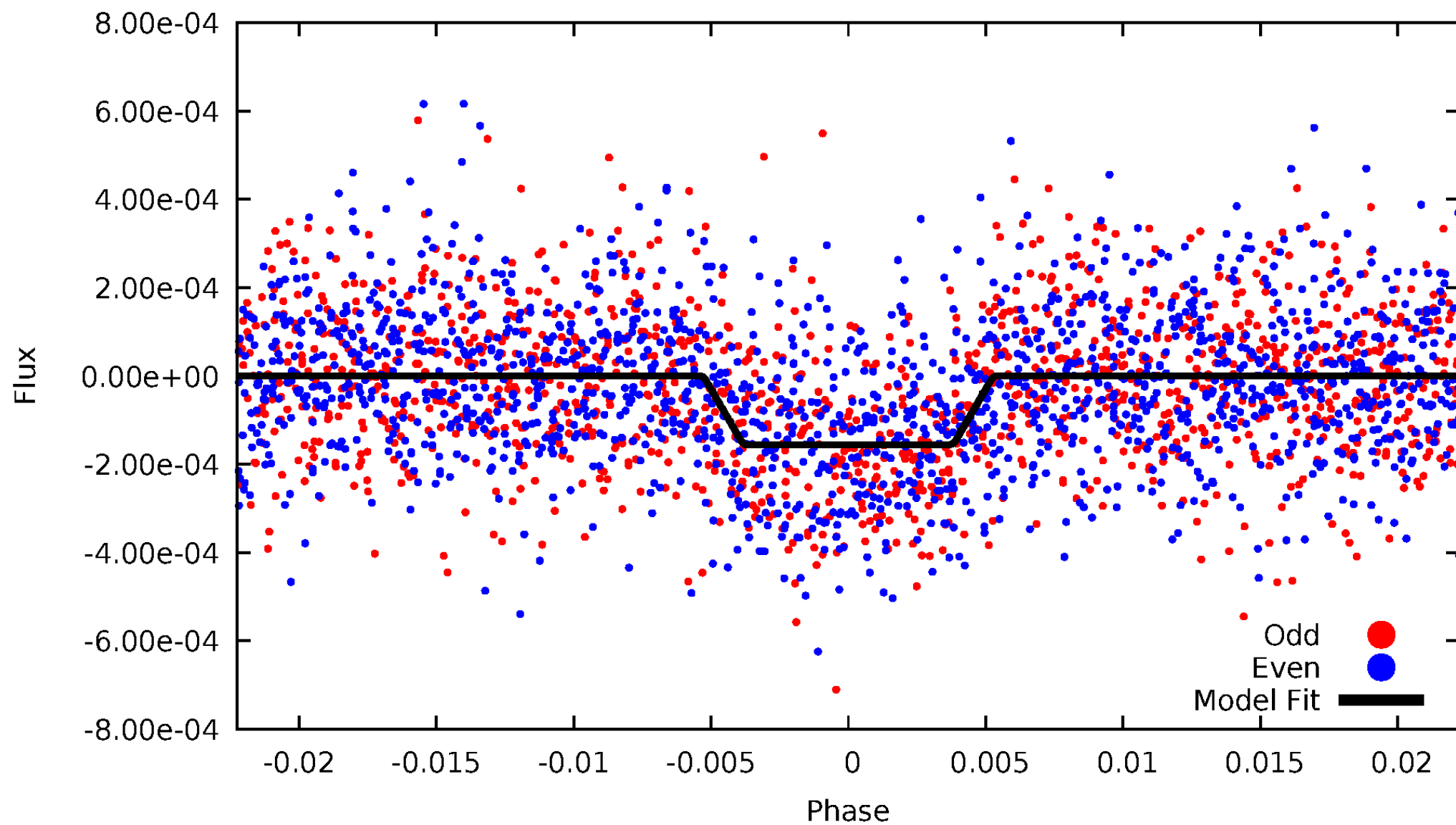
# DV Odd/Even

TCE 005652893-01



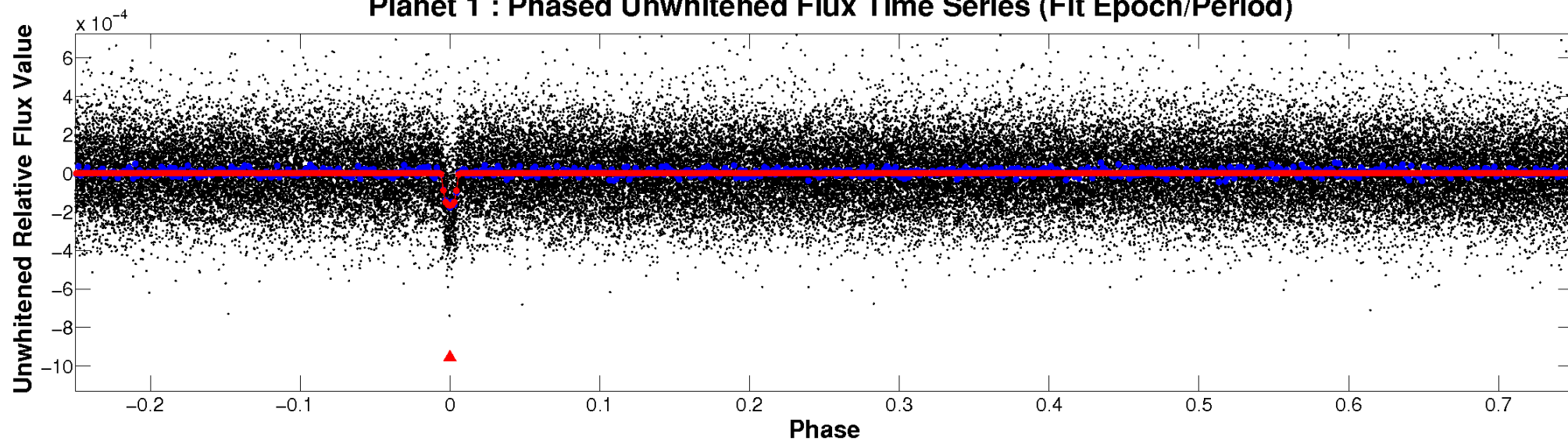
# ALT Odd/Even

TCE 005652893-01

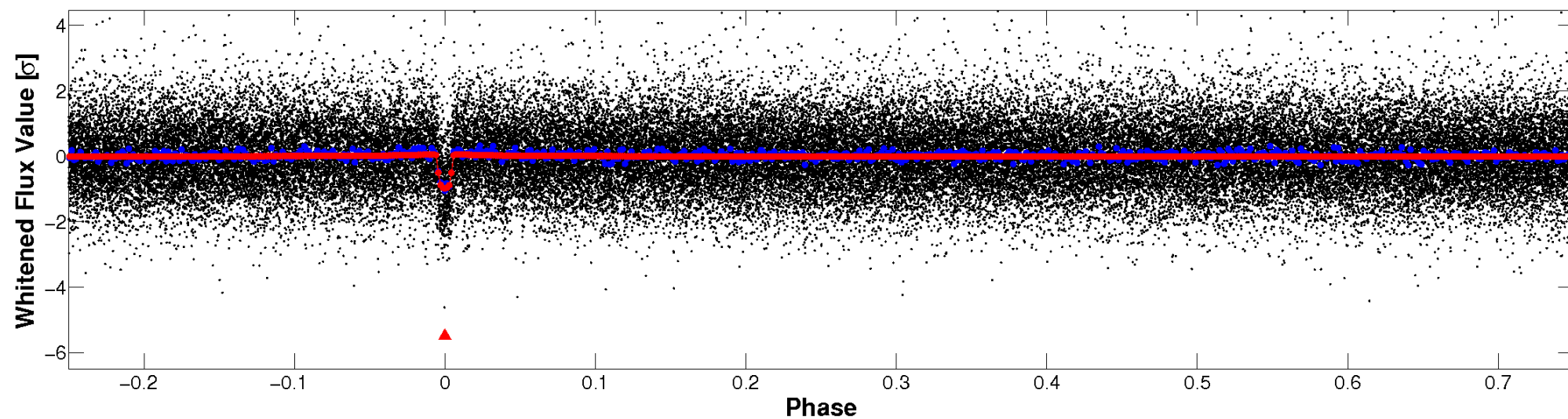


# Non-Whitened Vs. Whitened Light Curve

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

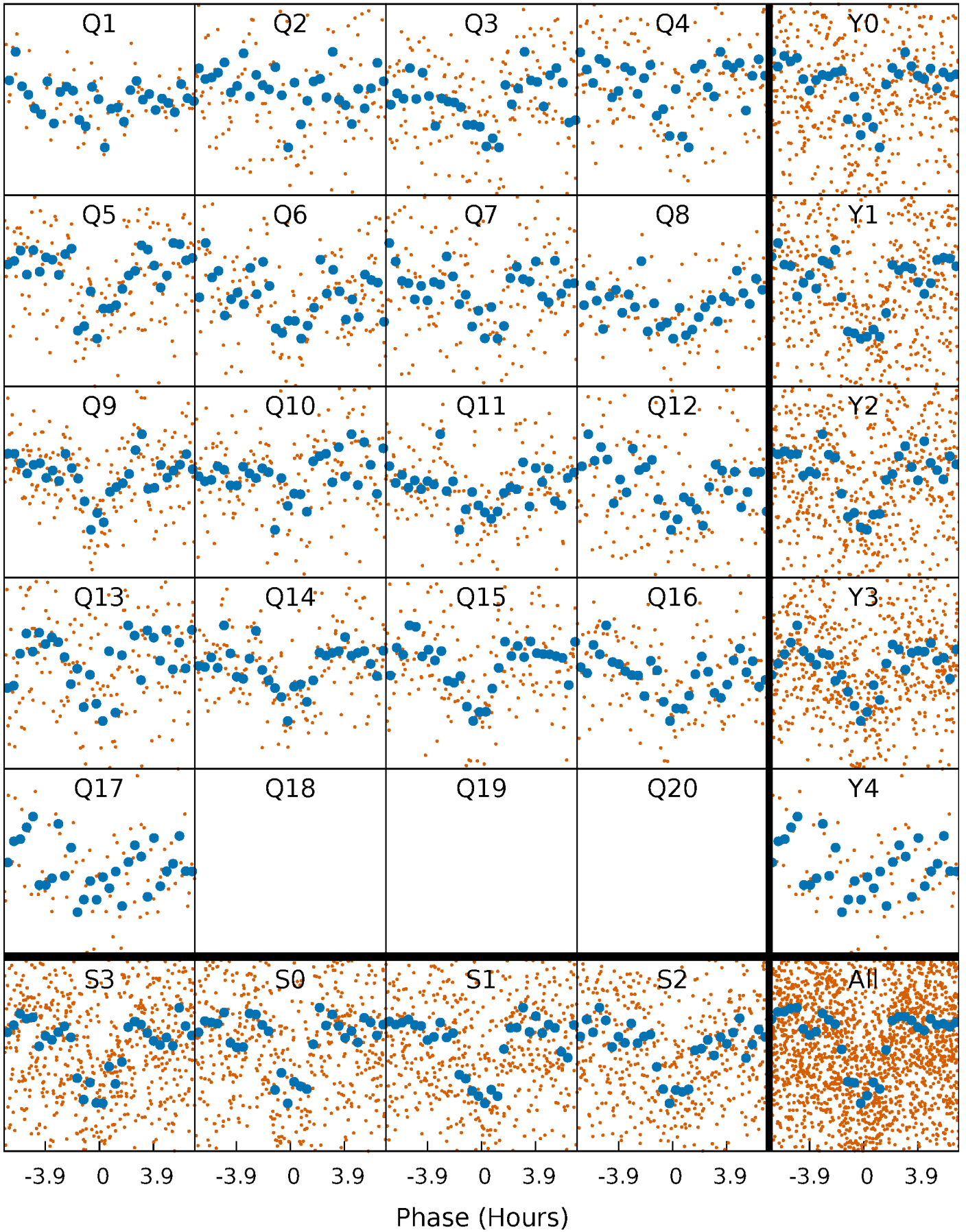


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

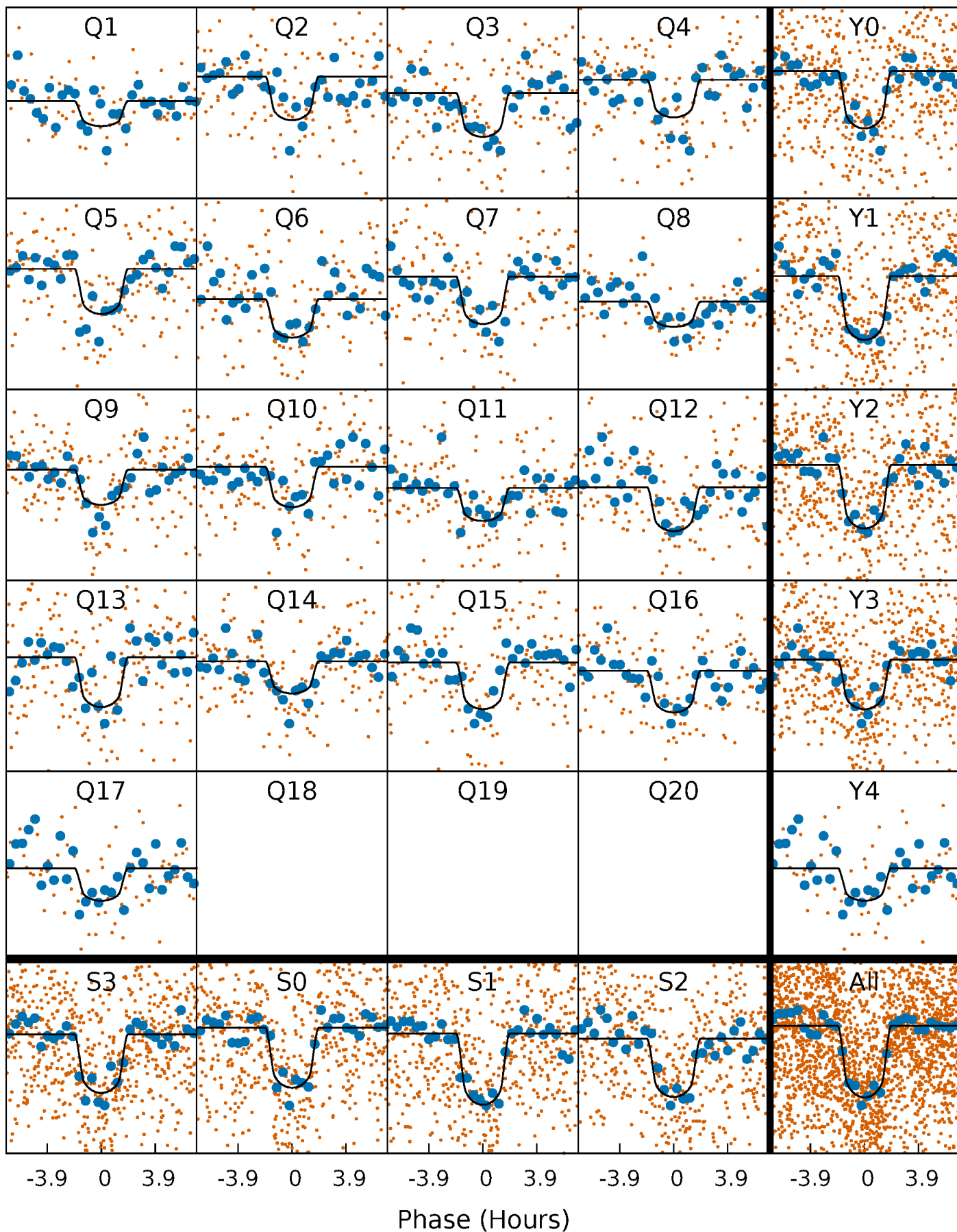
TCE 005652893-01 P= 14.009545 Days  $T_0=132.965663$  (BKJD)





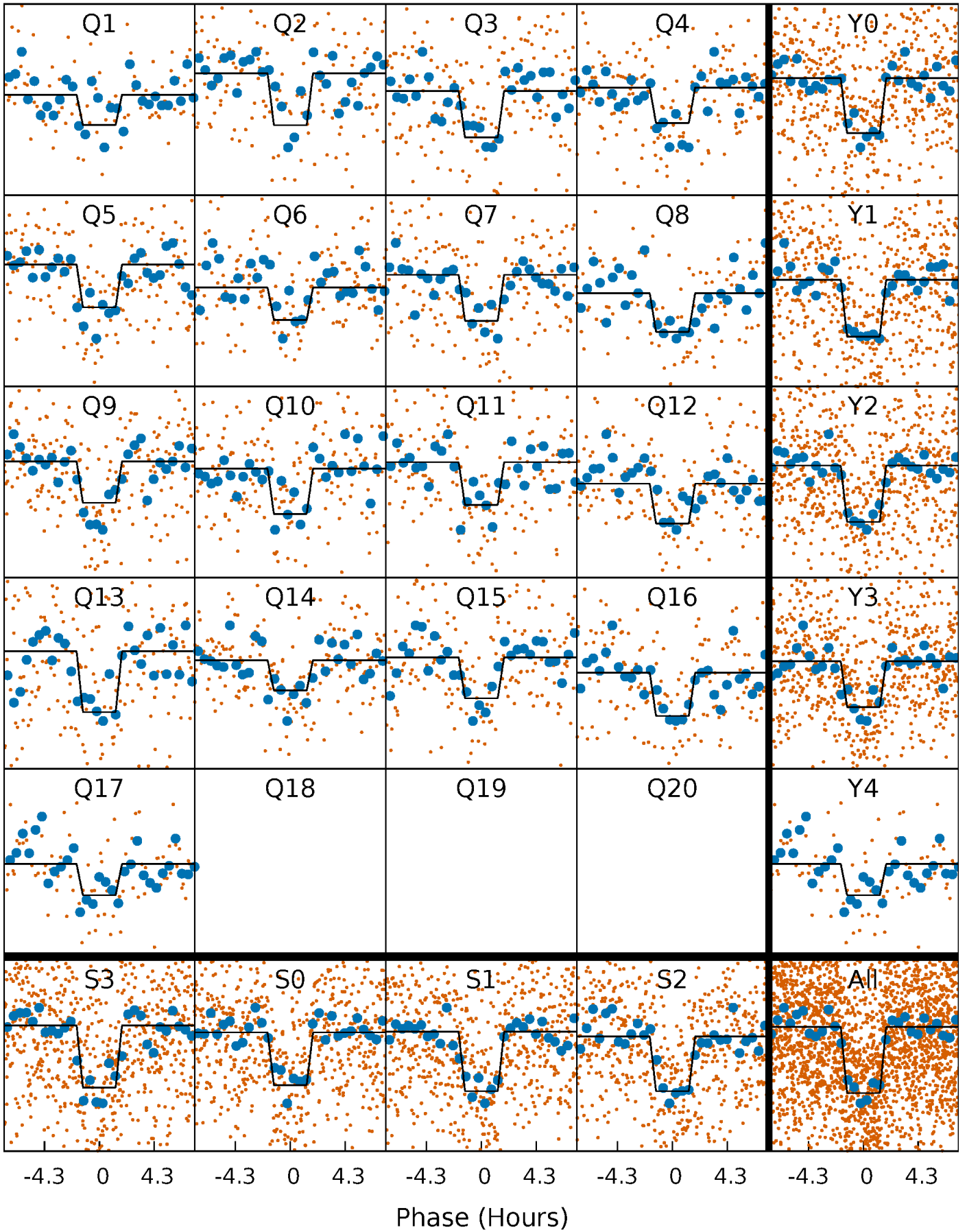
# DV Quarter-Phased Transit Curves

TCE 005652893-01 P= 14.009545 Days  $T_0=132.965663$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

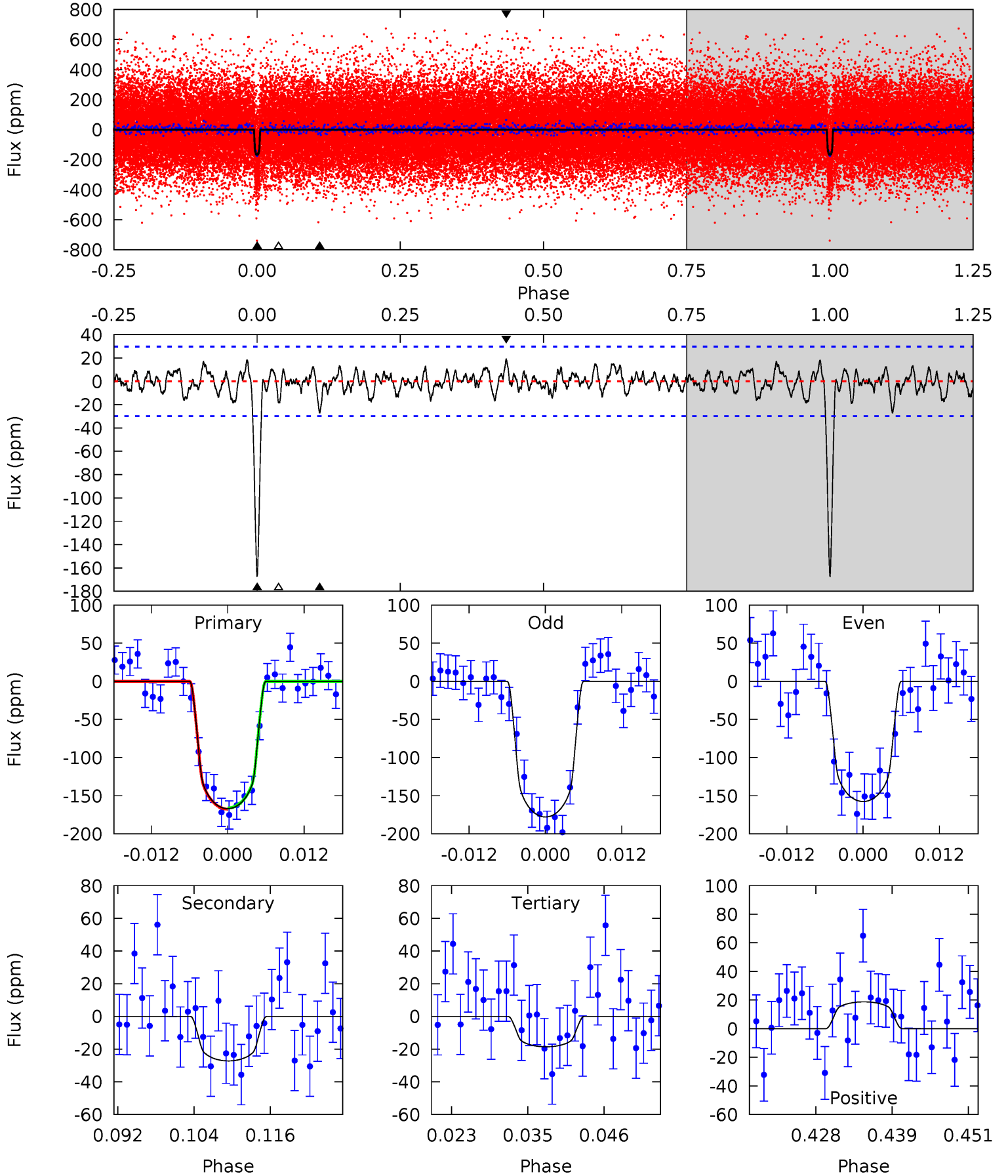
TCE 005652893-01 P= 14.009457 Days  $T_0=132.970363$  (BKJD)



# DV Model-Shift Uniqueness Test

005652893-01,  $P = 14.009545$  Days,  $E = 118.956118$  Days

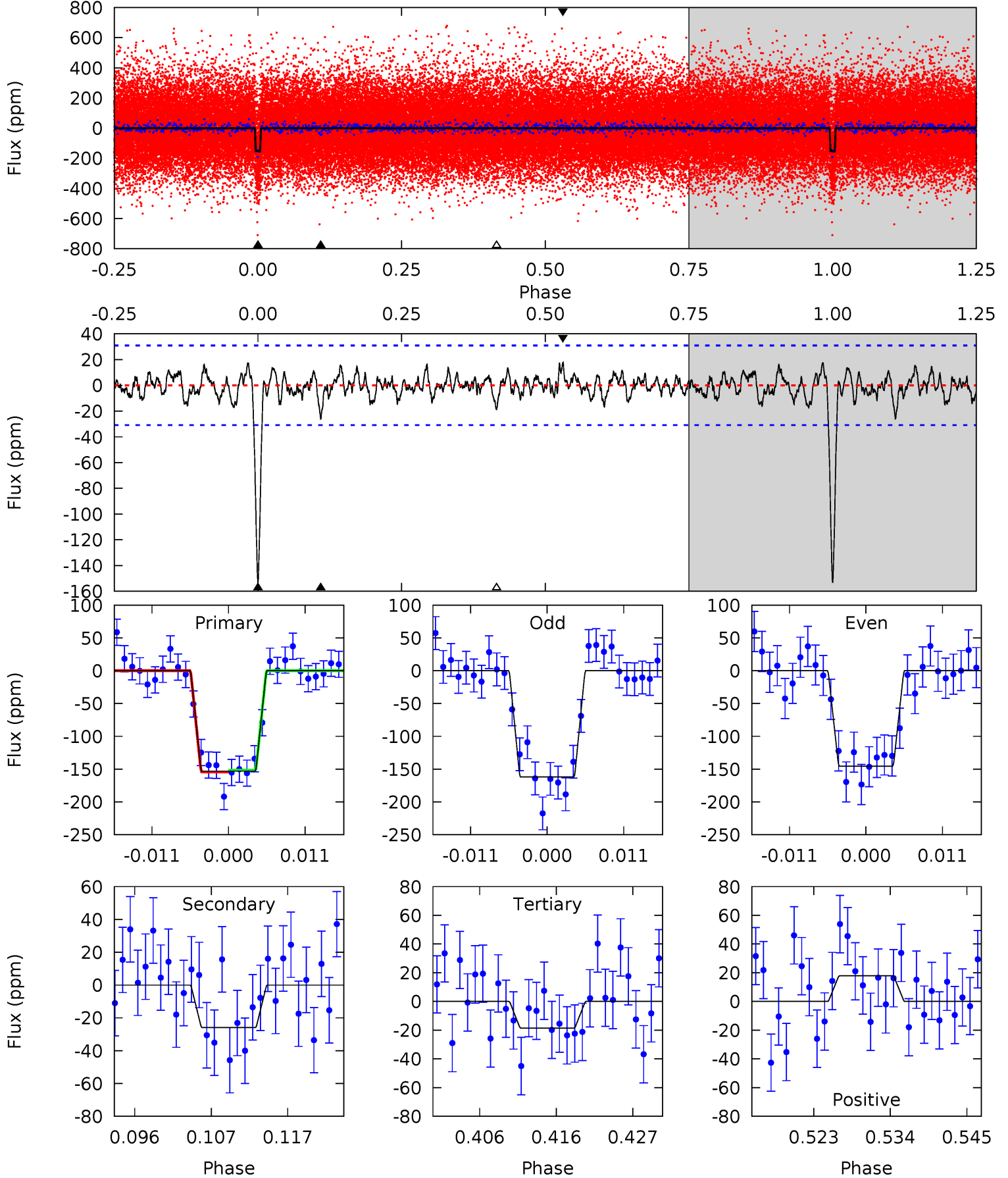
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.0	4.57	3.12	3.15	5.00	2.53	1.15	24.9	24.9	1.45	1.42	1.70	0.99	0.10	0.12



# Alt Model-Shift Uniqueness Test

005652893-01, P = 14.009457 Days, E = 118.960906 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
24.8	4.20	3.01	2.90	5.01	2.55	1.06	21.8	21.9	1.19	1.30	1.34	0.97	0.10	0.20



### Stellar Parameters For KIC 005652893

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5153^{+102}_{-102}$	$4.551^{+0.049}_{-0.036}$	$-0.180^{+0.150}_{-0.150}$	$0.767^{+0.041}_{-0.046}$	$0.763^{+0.053}_{-0.037}$	$2.385^{+0.465}_{-0.324}$
	+2%/-2%	+1%/-1%	+83%/-83%	+5%/-6%	+7%/-5%	+19%/-14%
Source	SPE12	SPE12	SPE12	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 005652893-01 / KOI 2790.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-27 \pm 6$	$1.20^{+0.35}_{-0.34}$	$860^{+23}_{-21}$	$3510^{+474}_{-272}$	$109^{+113}_{-46}$
Alt.	$-26 \pm 6$	$1.05^{+0.37}_{-0.36}$	$862^{+23}_{-21}$	$3663^{+553}_{-374}$	$138^{+175}_{-66}$

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



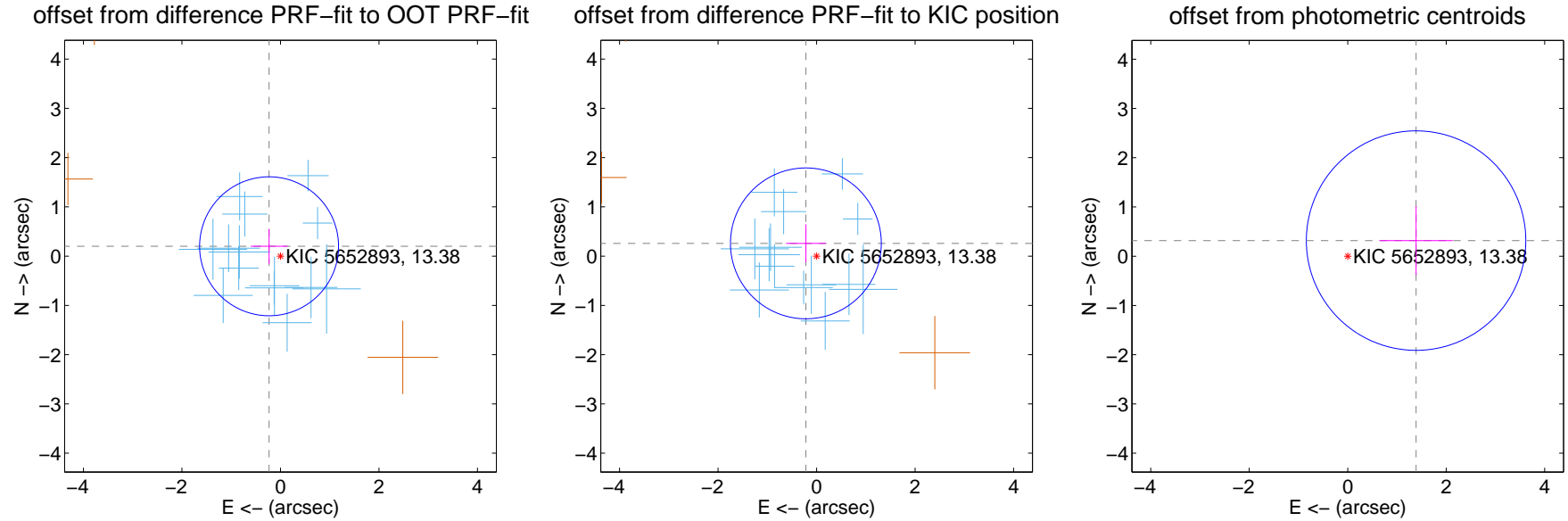
## DV Centroid Data

Supplemental centroid analysis for 005652893-01. Kepler magnitude: 13.38. Transit SNR 20.66

There are 14 quarters with good PRF difference image offsets

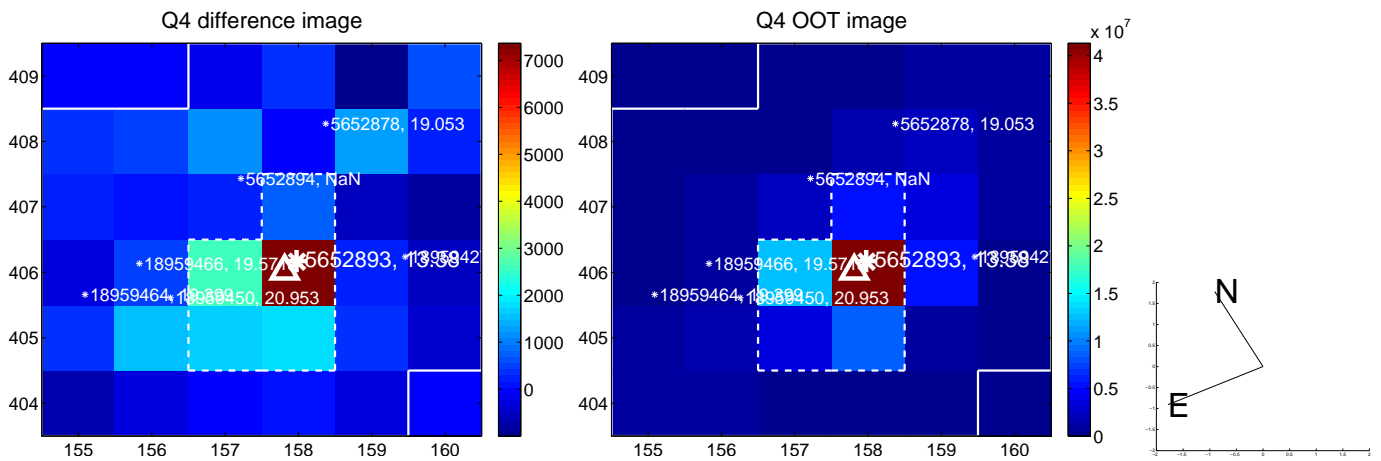
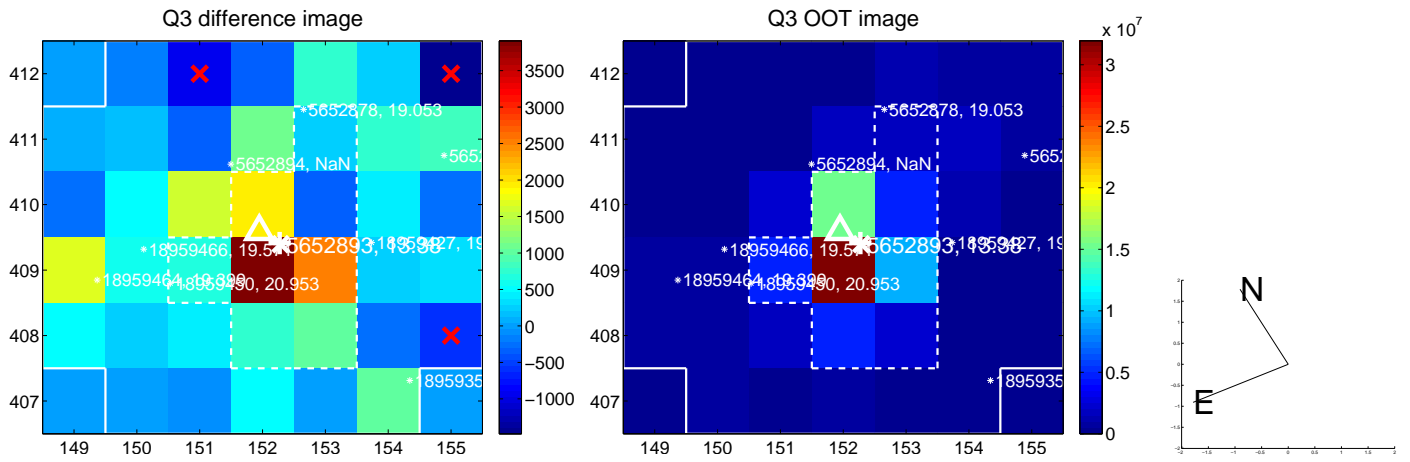
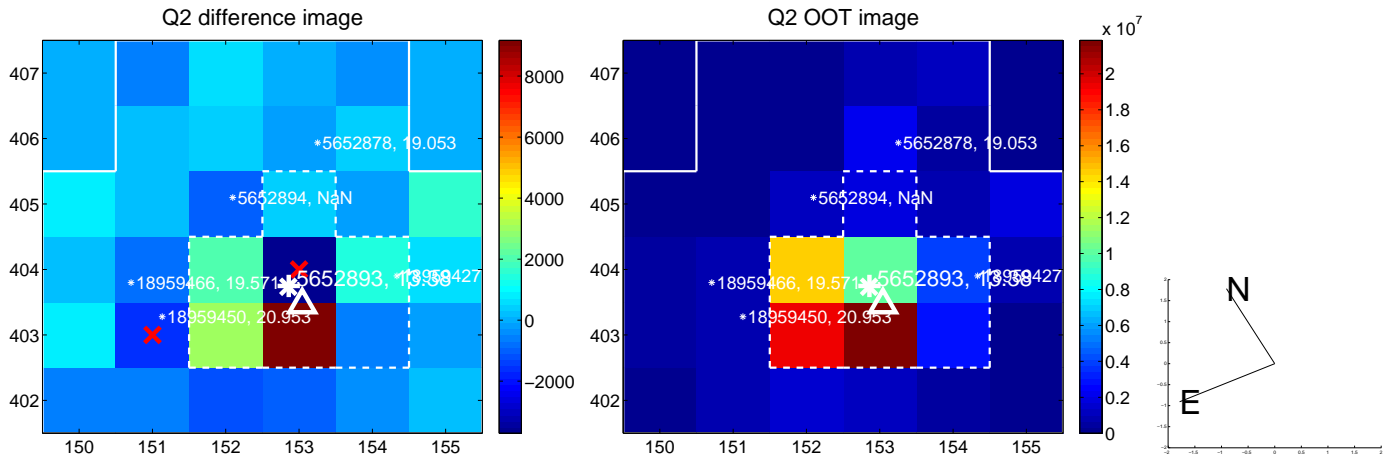
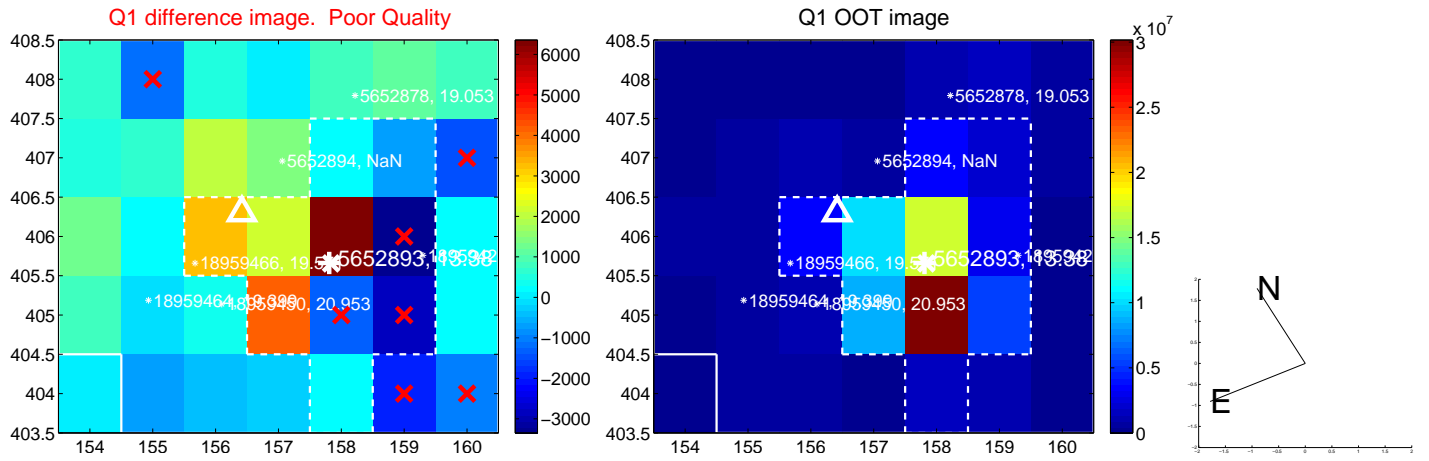
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.305 \pm 0.470$	0.65	$0.231 \pm 0.373$	$0.200 \pm 0.354$
PRF-fit source offset from KIC position	$0.338 \pm 0.510$	0.66	$0.217 \pm 0.404$	$0.259 \pm 0.386$
photometric centroid source offset	$1.42 \pm 0.74$	1.92	$-1.39 \pm 0.74$	$0.32 \pm 0.70$

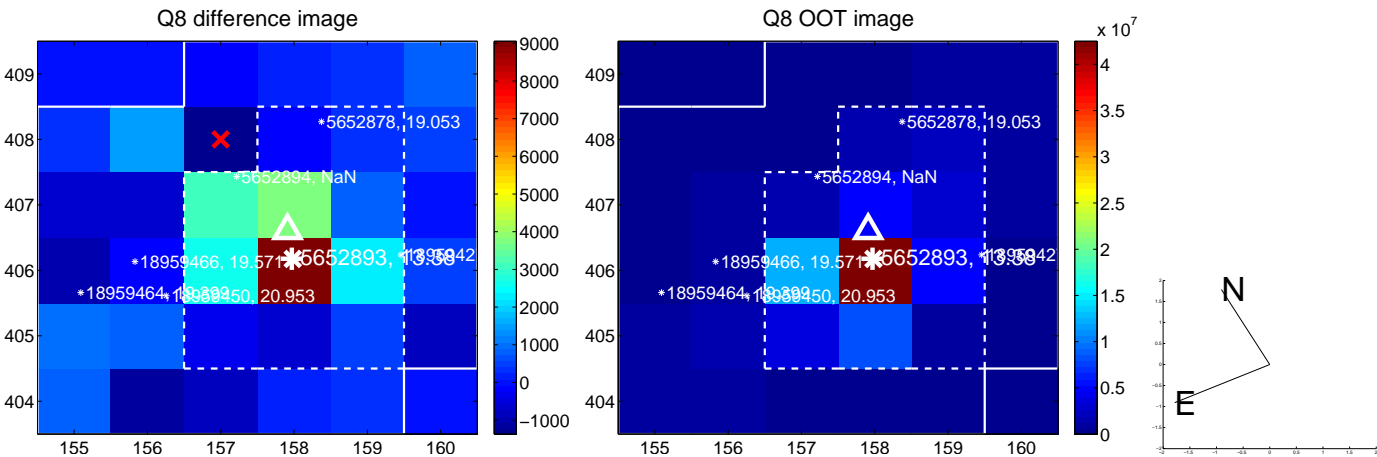
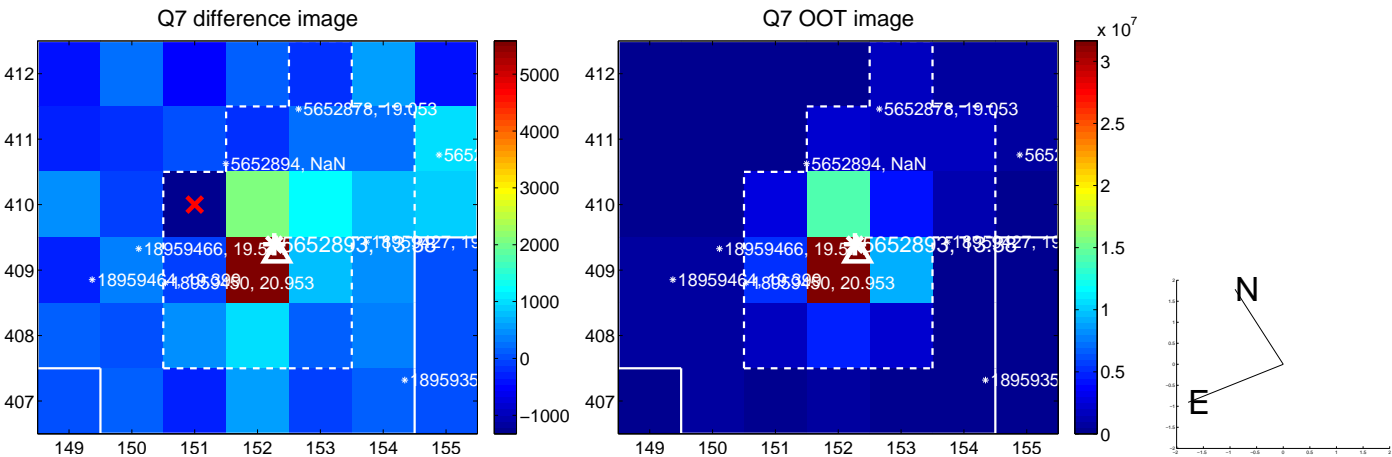
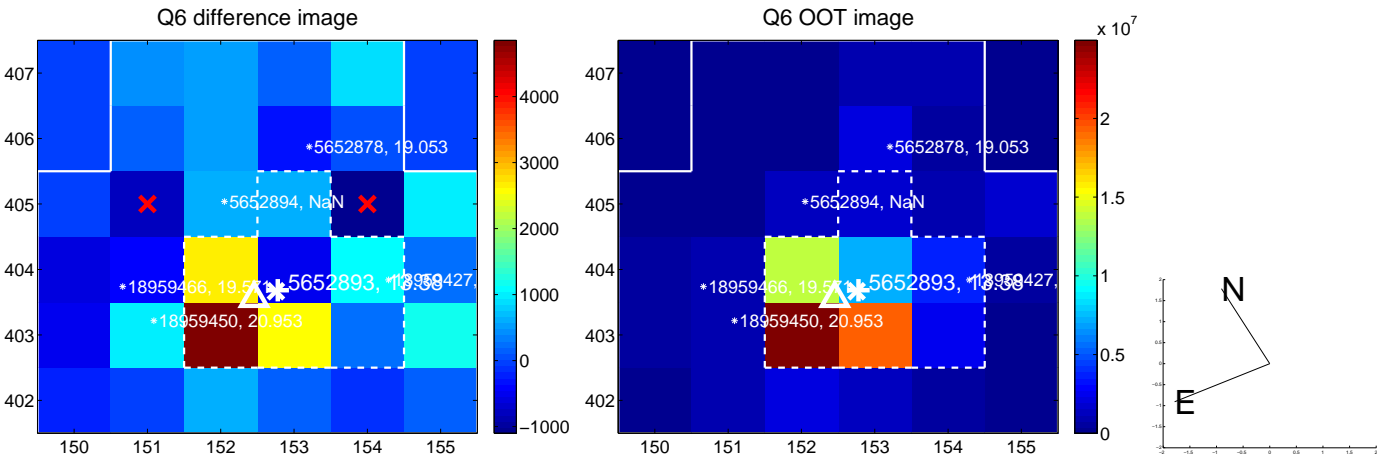
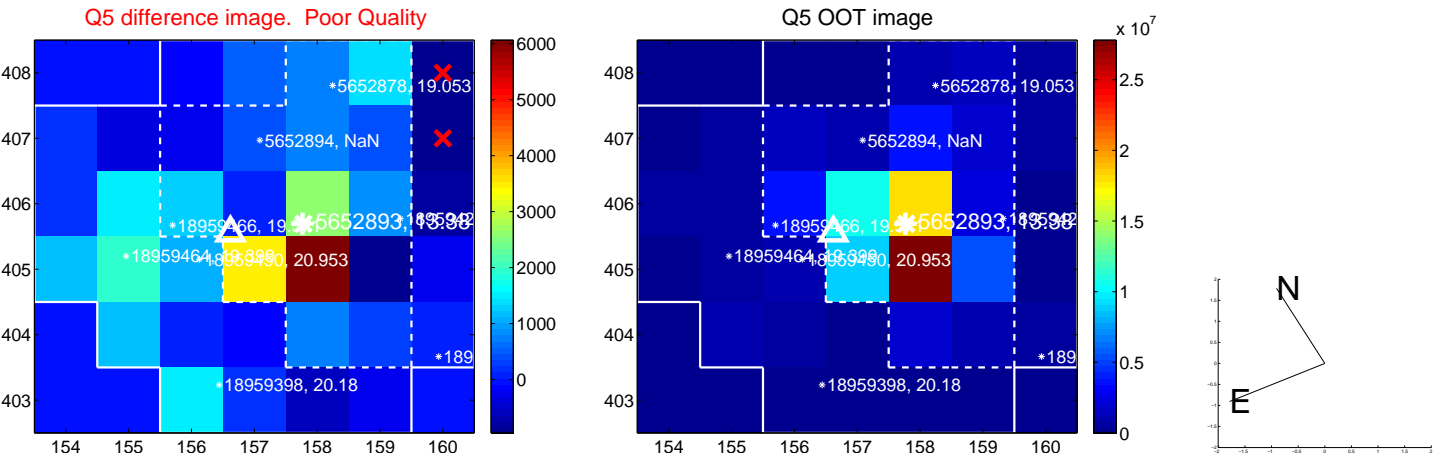


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

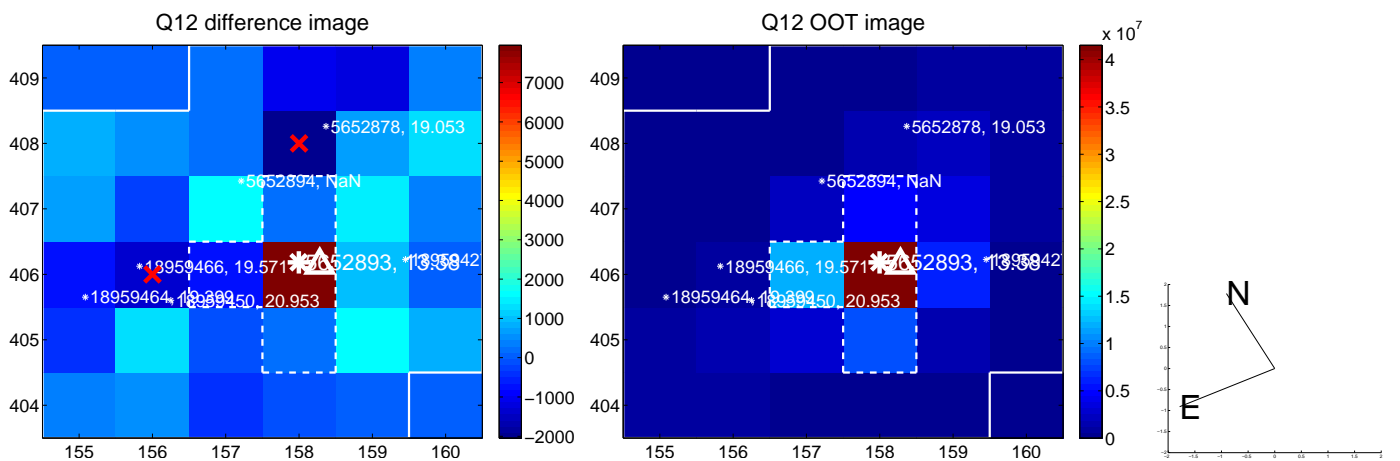
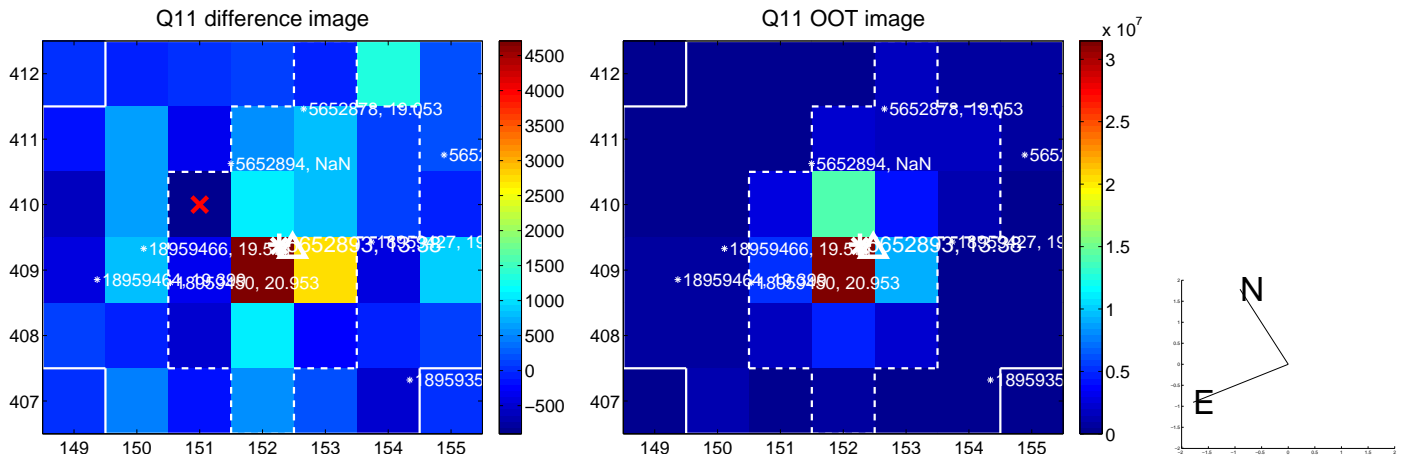
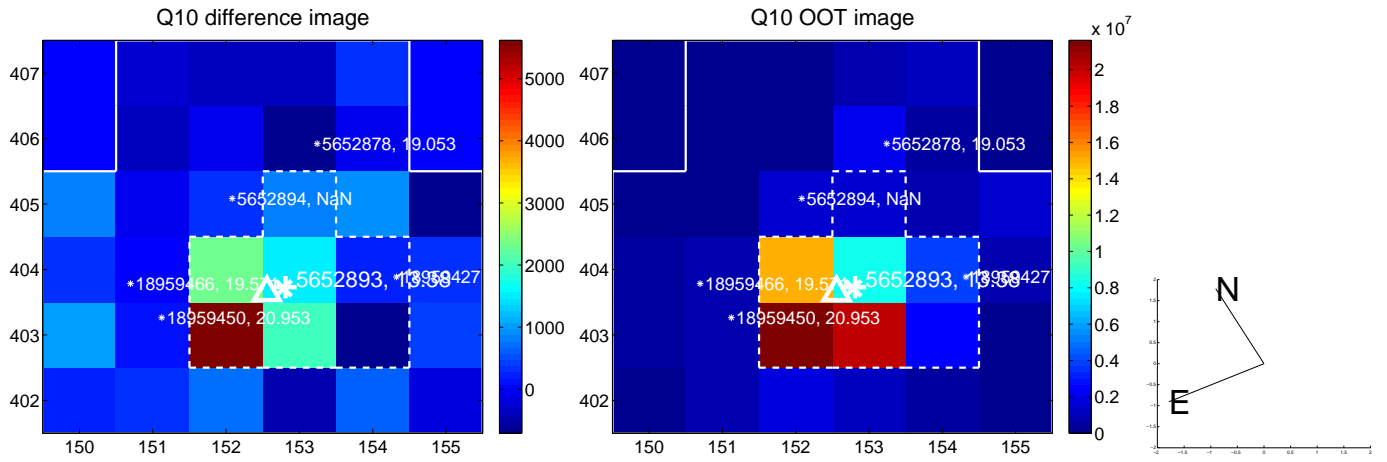
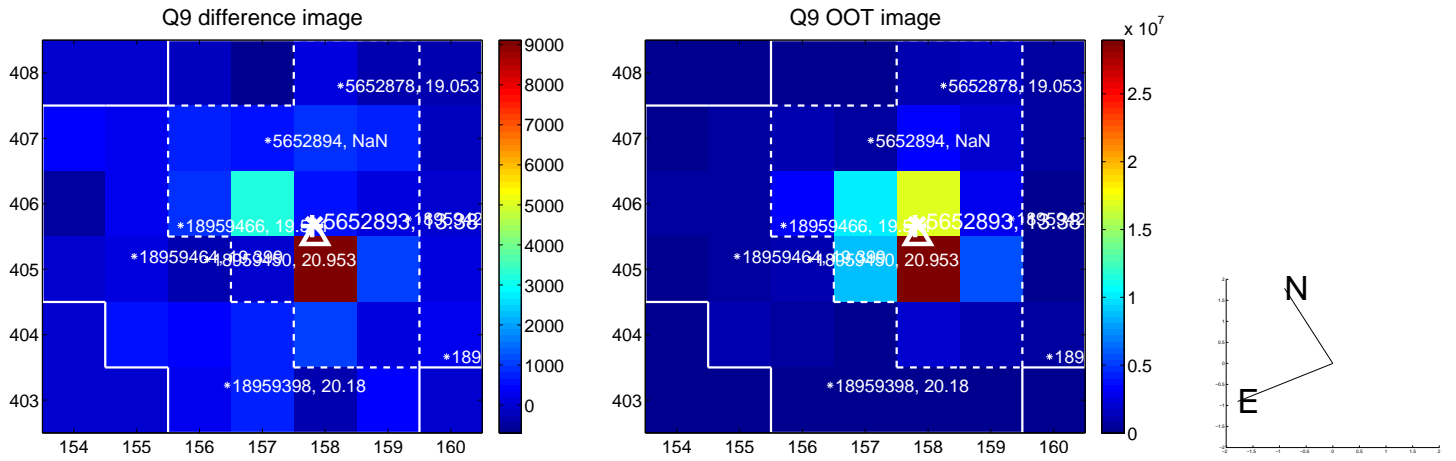
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



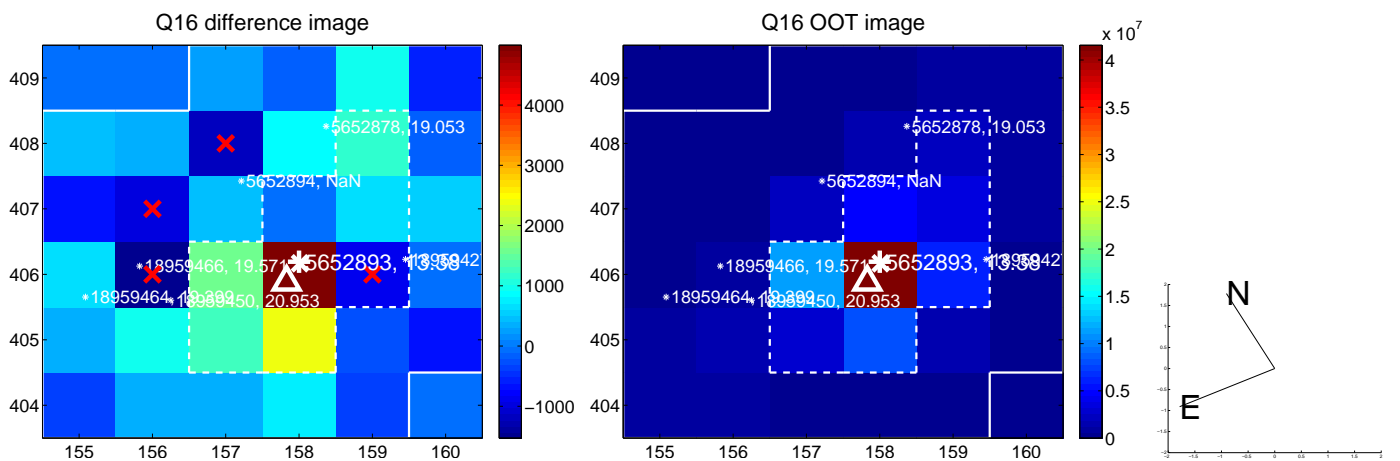
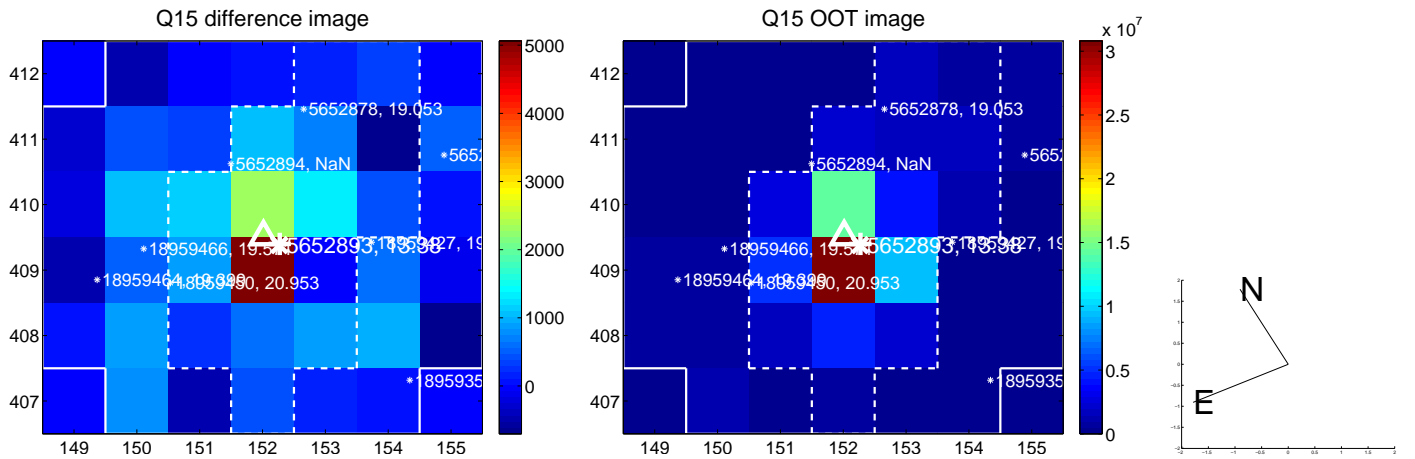
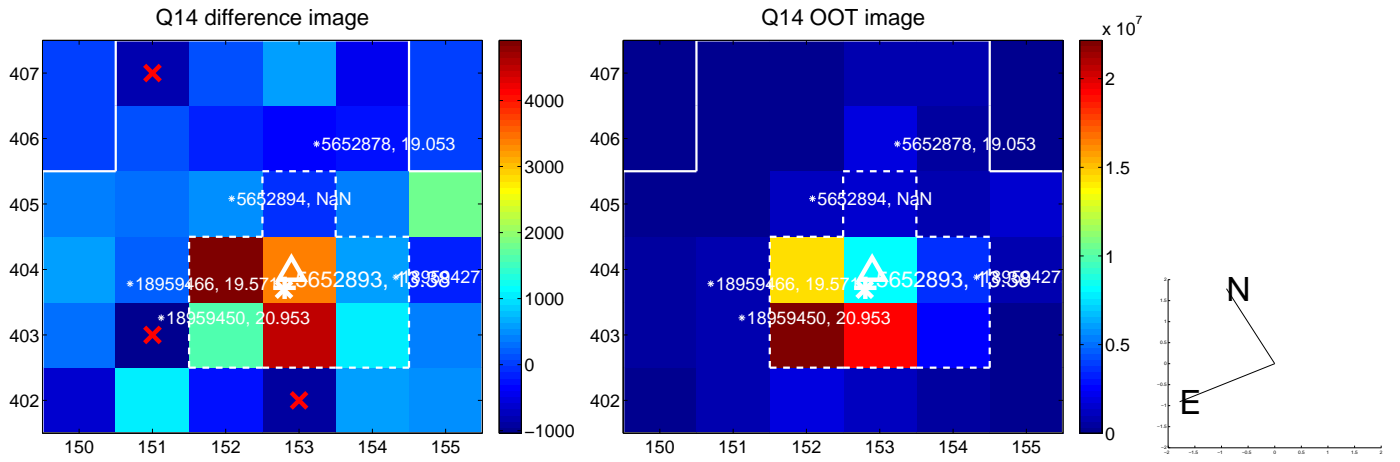
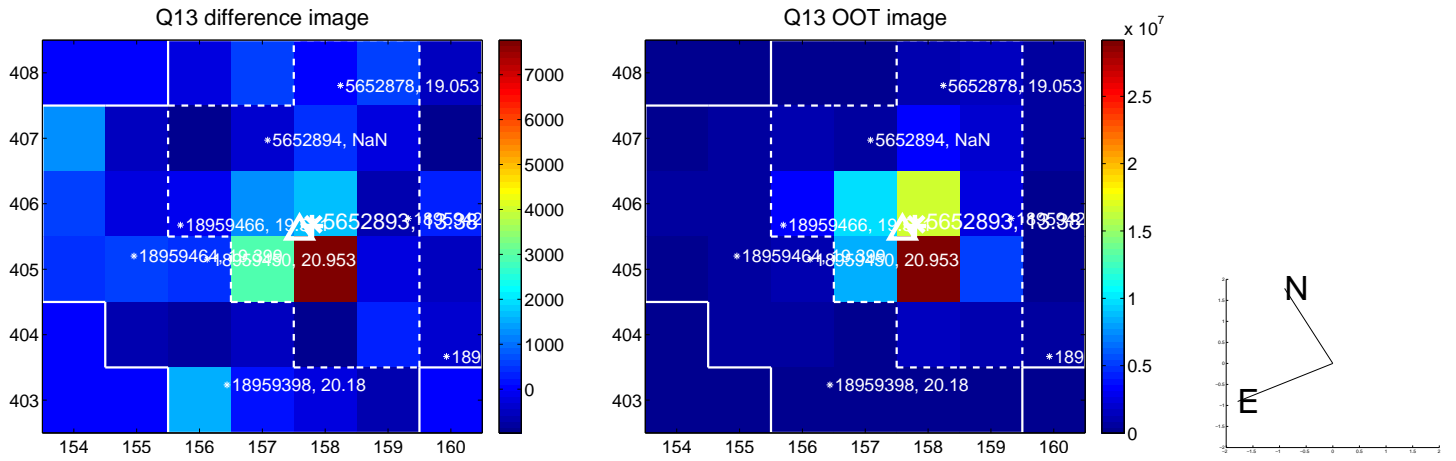
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

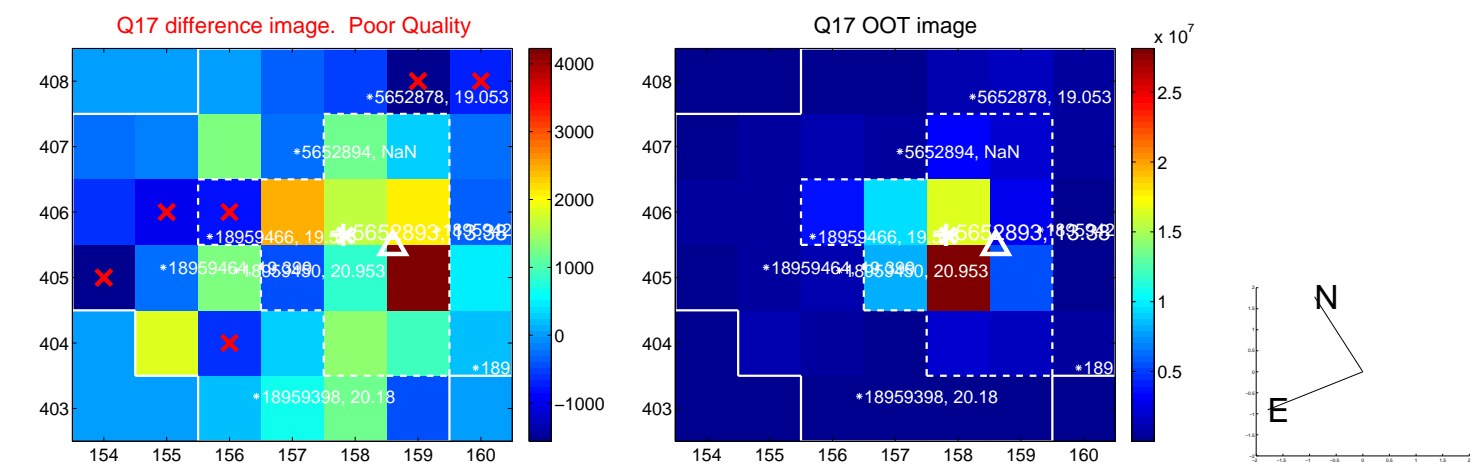


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

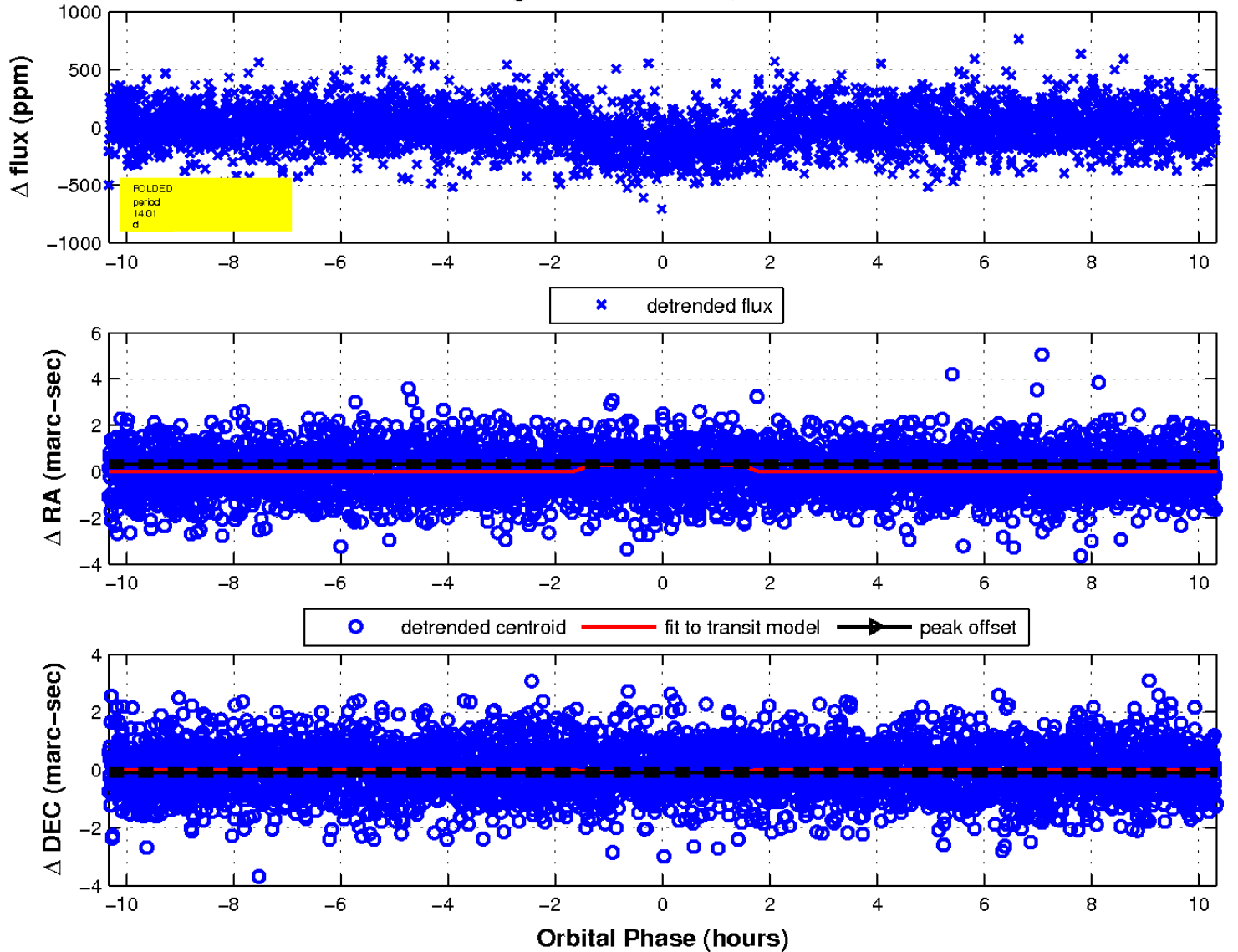




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

