

# KIC 003244792

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003244792-01	OBS	4347.01	3.057084	134.504227	148.4	3.775	13.7	15.0	0.82	6021	1.13	495.09

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003244792-01	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.

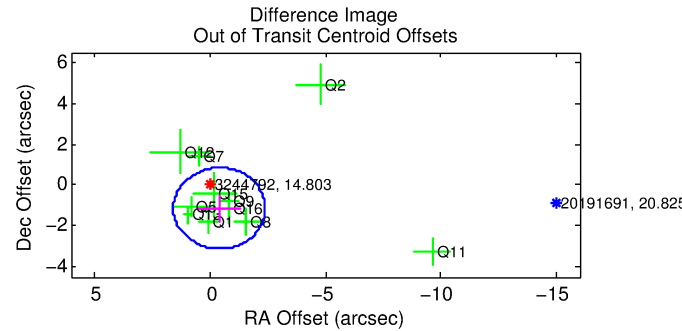
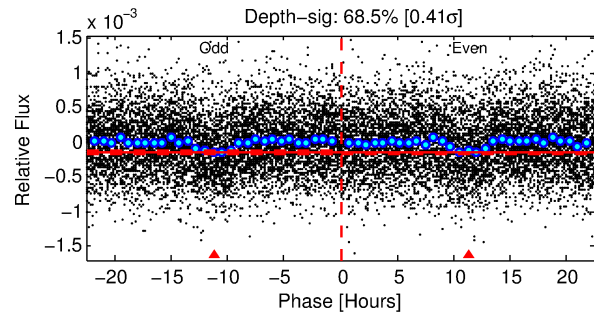
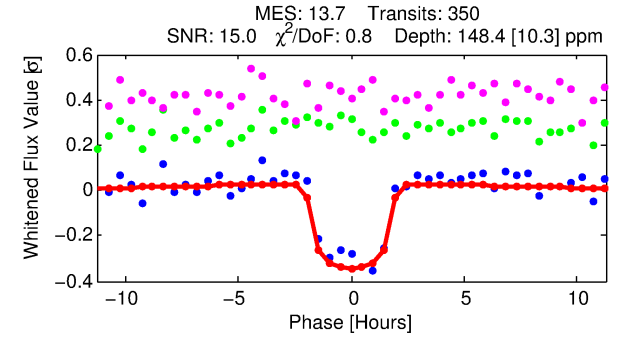
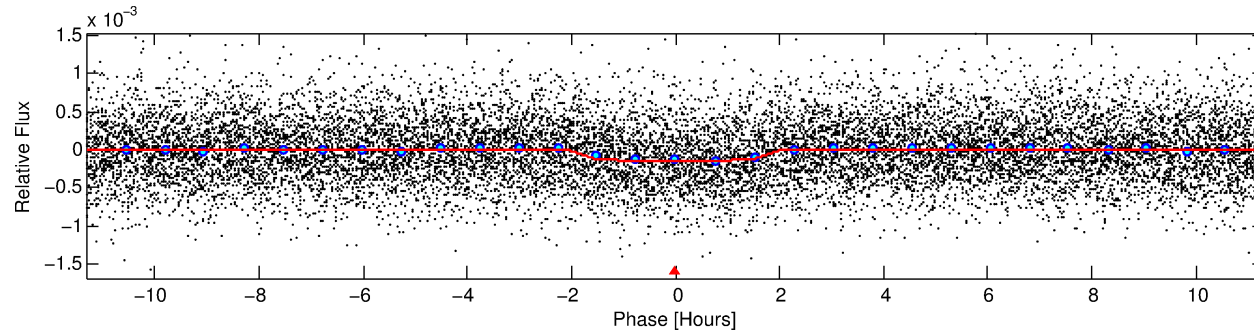
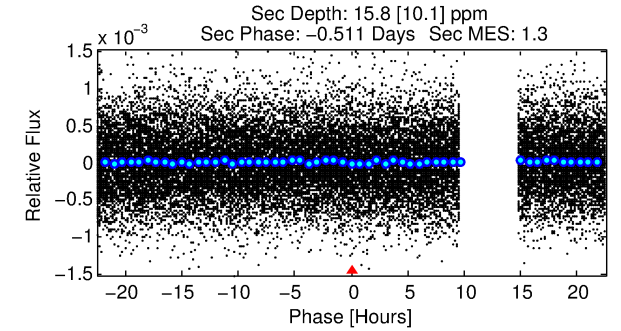
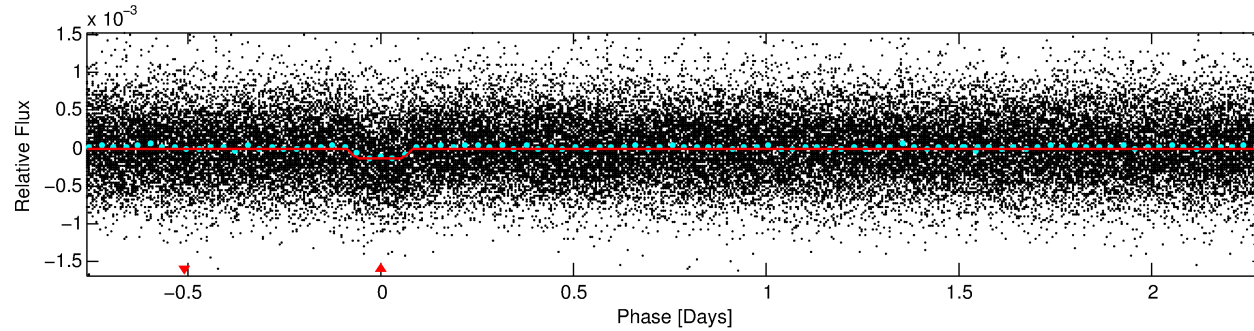
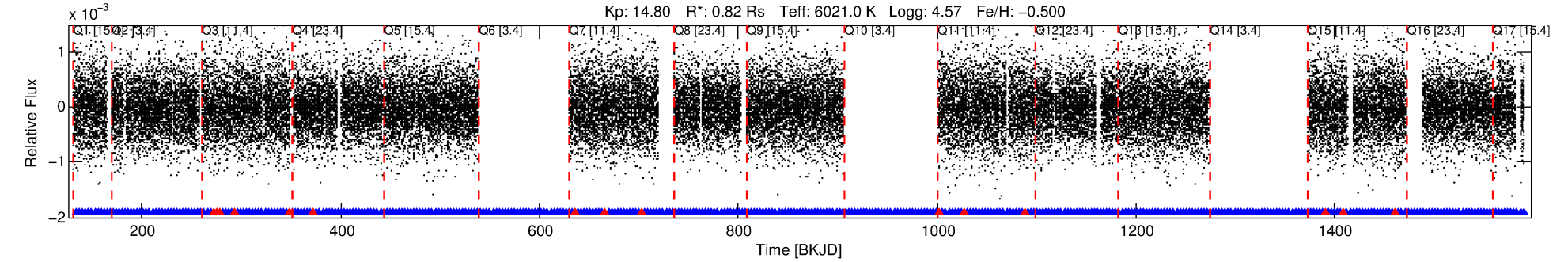
## Ephemeris Match Information For 003244792-01

No Significant Match Found

# DV One-Page Summary

KIC: 3244792 Candidate: 1 of 1 Period: 3.057 d

KOI: K04347.01 Corr: 0.966



## DV Fit Results:

Period = 3.05708 [0.00002] d  
Epoch = 134.5042 [0.0035] BKJD  
Rp/R\* = 0.0126 [0.0058]  
a/R\* = 3.60 [8.03]  
b = 0.84 [0.85]  
Seff = 495.09 [176.61]  
Teff = 1203 [107] K  
Rp = 1.13 [0.59] Re  
a = 0.0399 [0.0089] AU  
Ag = 10.95 [12.77] [0.78σ]  
Teffp = 3383 [950] K [2.28σ]

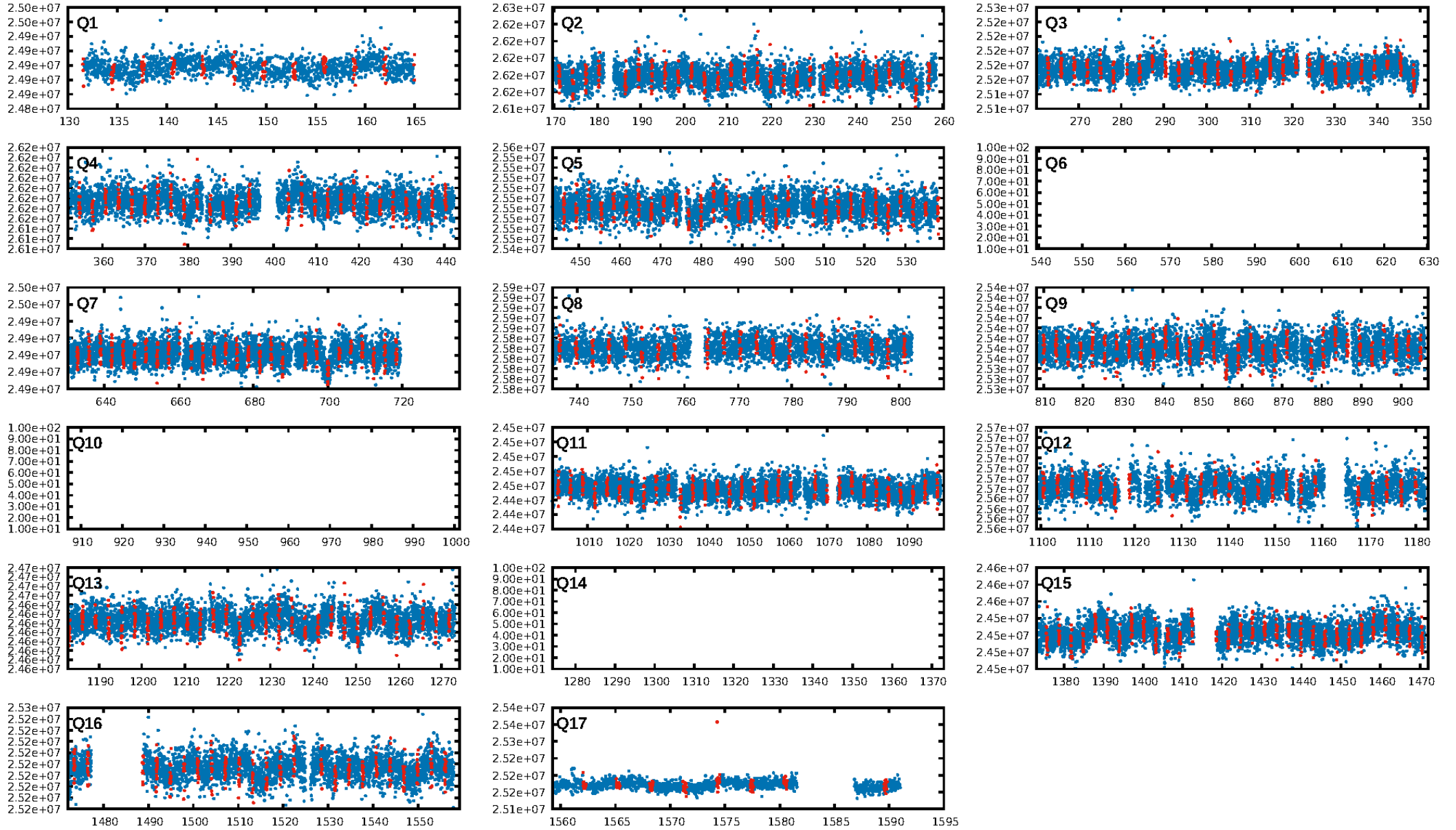
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.86e-42  
RollingBand-fgt: 0.95 [316/331]  
GhostDiagnostic-chr: 1.507  
Centroid-sig: 24.4%  
Centroid-so: 1.174 arcsec [1.11σ]  
OotOffset-rm: 1.208 arcsec [1.83σ]  
KicOffset-rm: 0.871 arcsec [1.27σ]  
OotOffset-st: 1/3/3/4 [11]  
KicOffset-st: 1/3/3/4 [11]  
DiffImageQuality-fgm: 0.73 [8/11]  
DiffImageOverlap-fno: 1.00 [14/14]

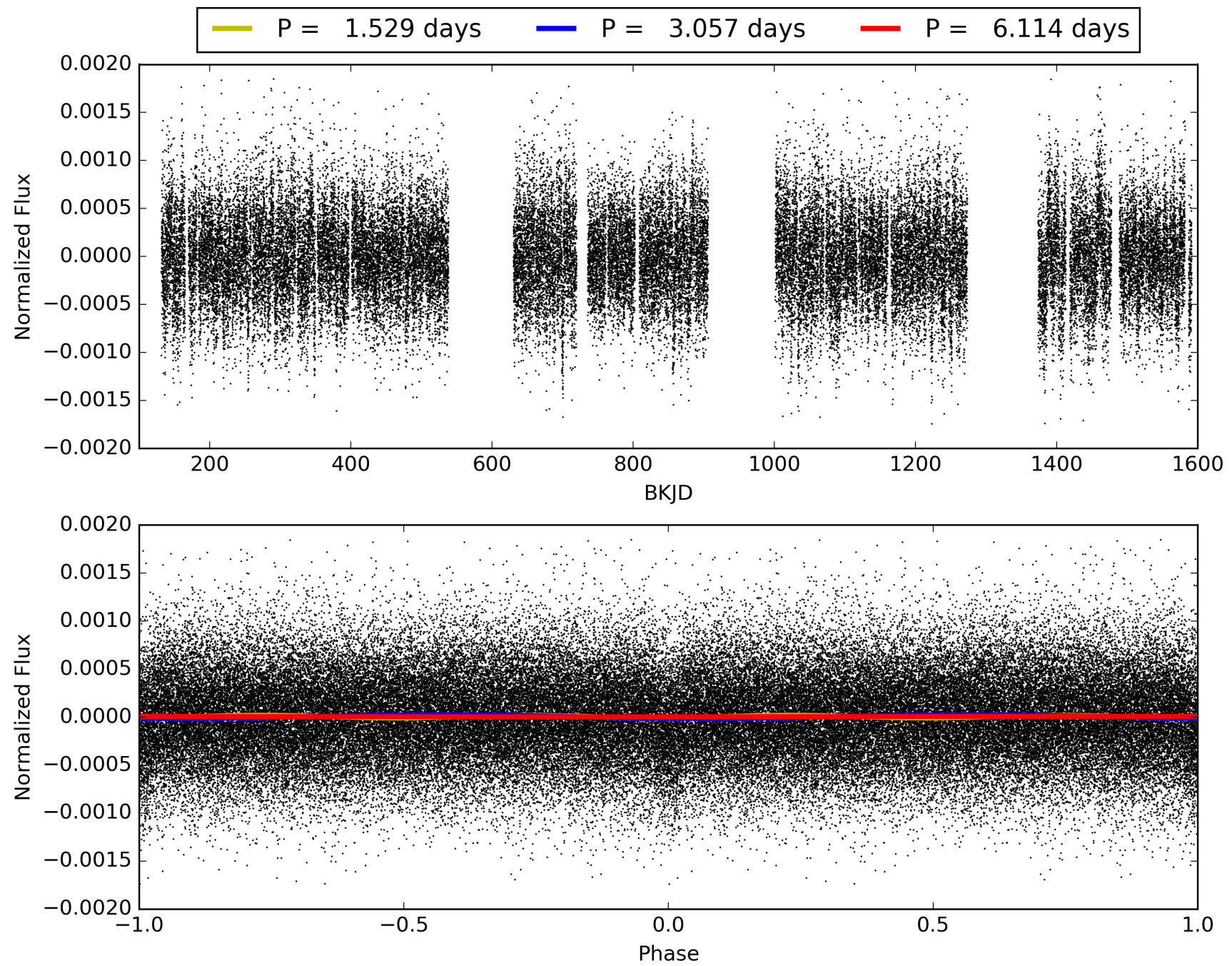
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:03:03 Z

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

# TCE 003244792-01, PDC Light Curves



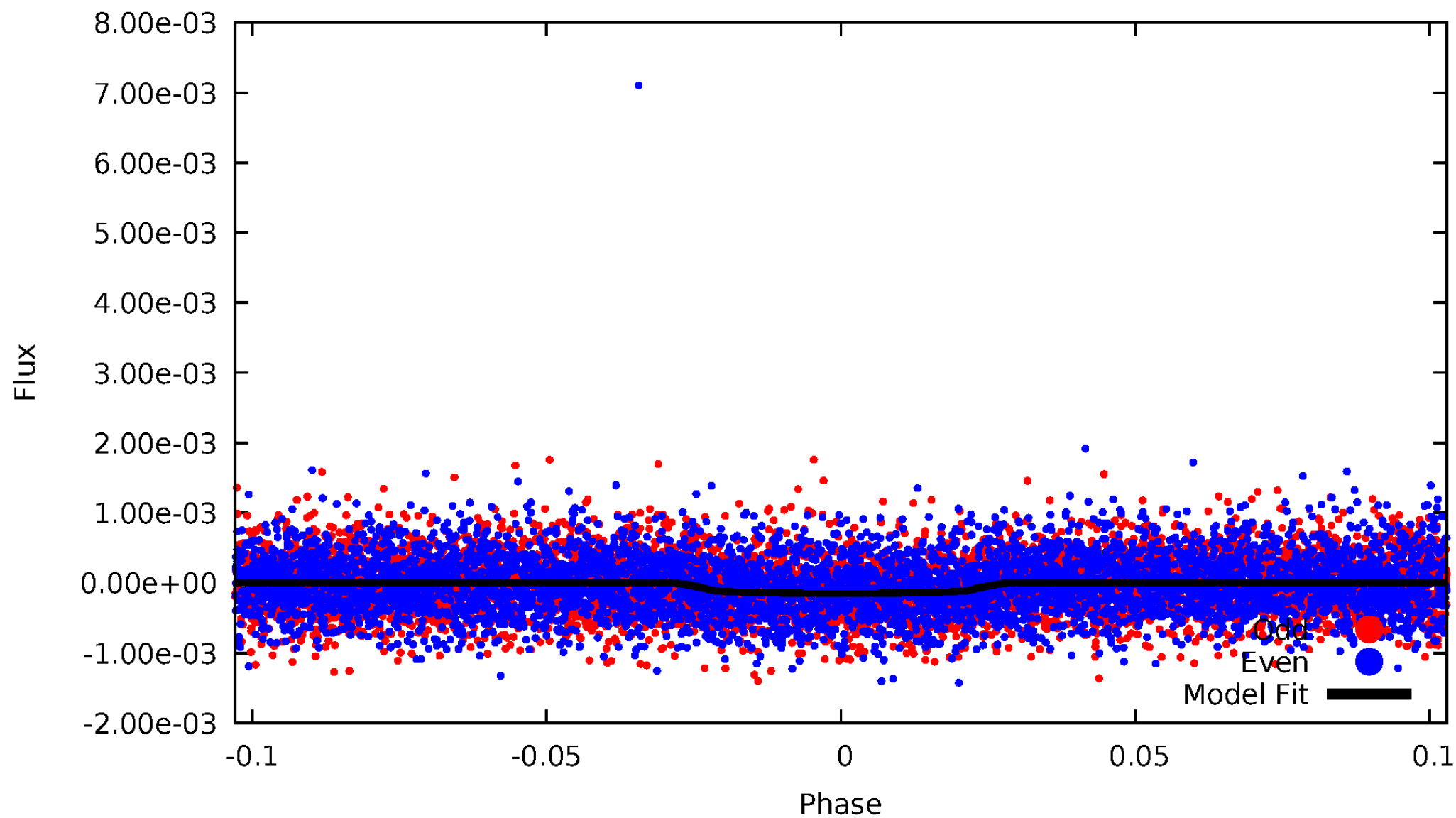
TCE 003244792-01





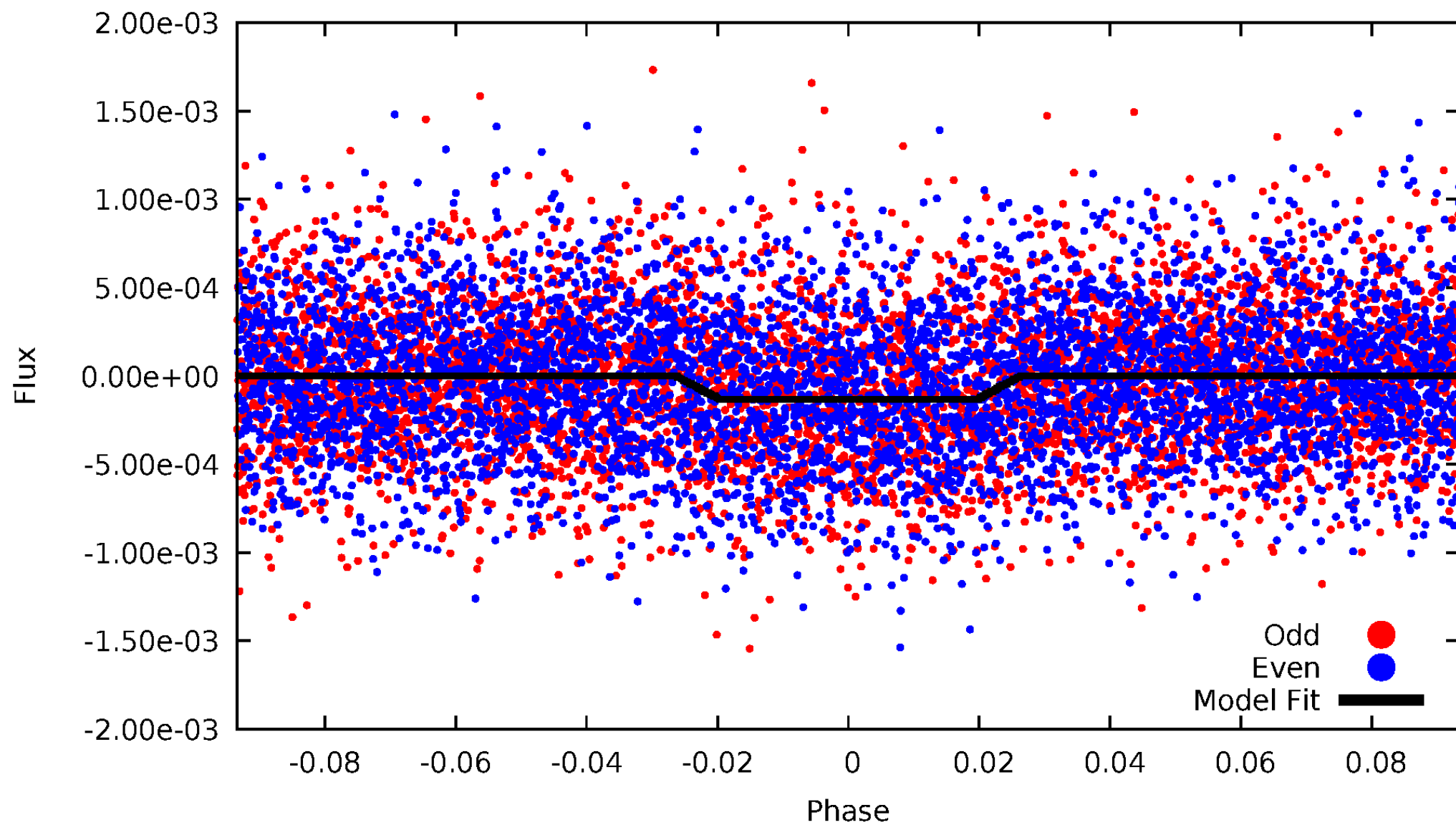
# DV Odd/Even

TCE 003244792-01



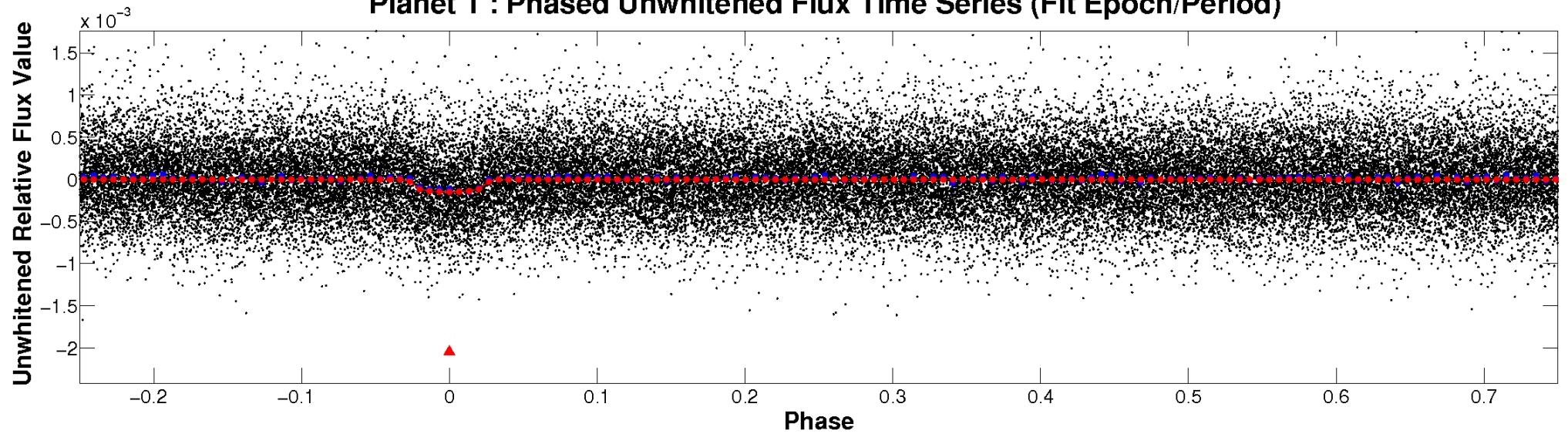
# ALT Odd/Even

TCE 003244792-01

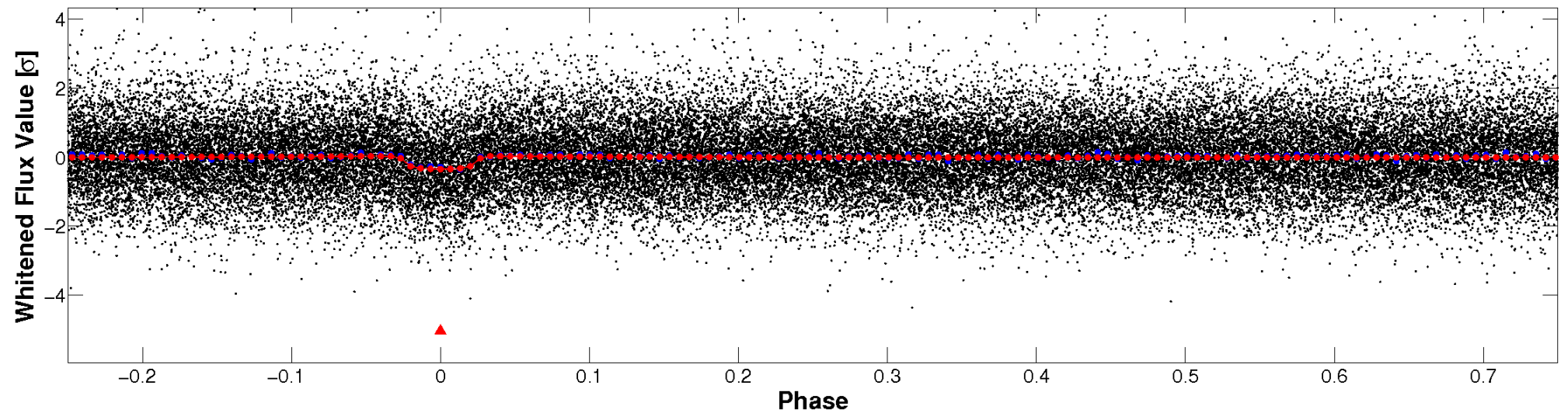


# Non-Whitened Vs. Whitened Light Curve

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

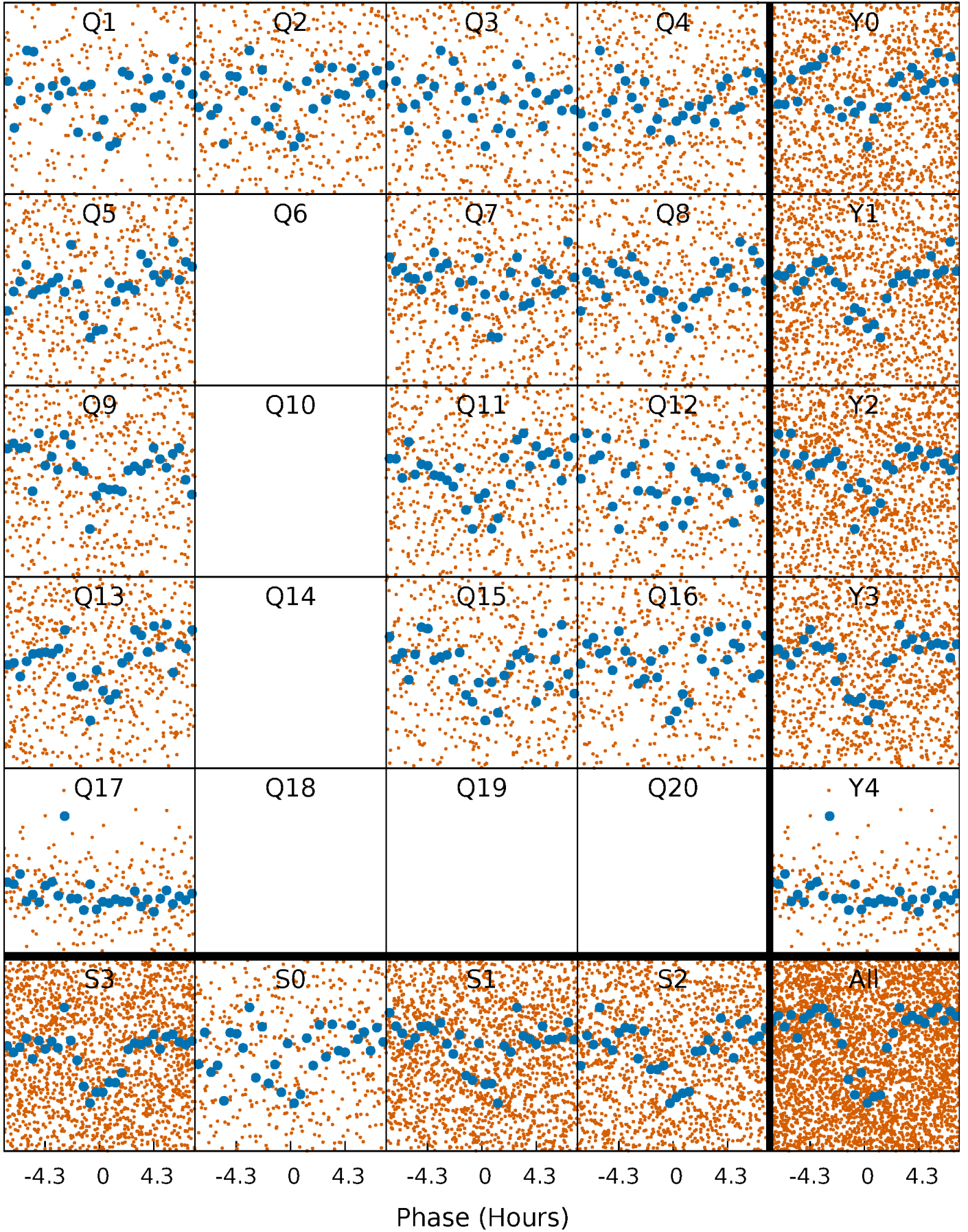


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

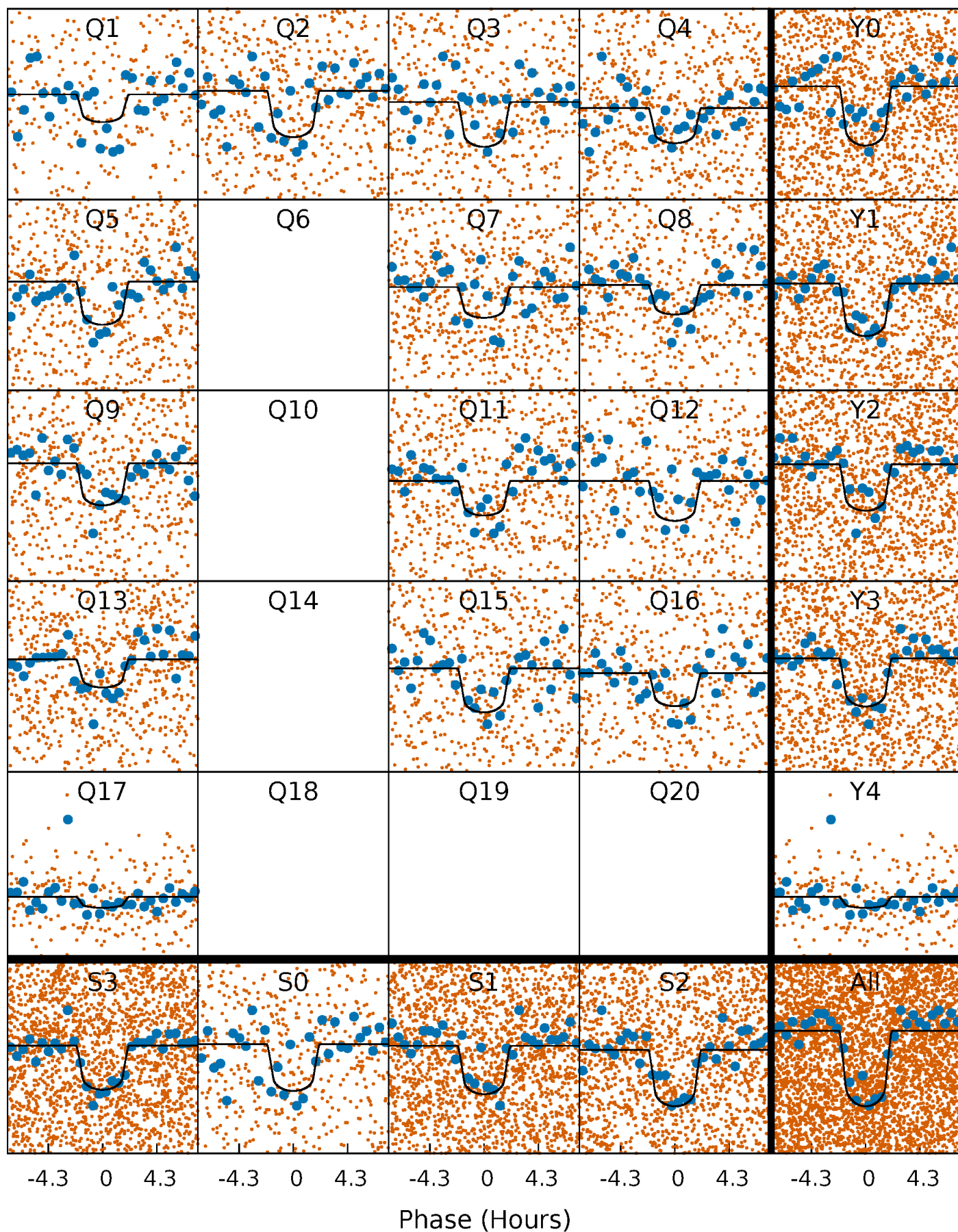
TCE 003244792-01 P= 3.057084 Days  $T_0=134.504227$  (BKJD)





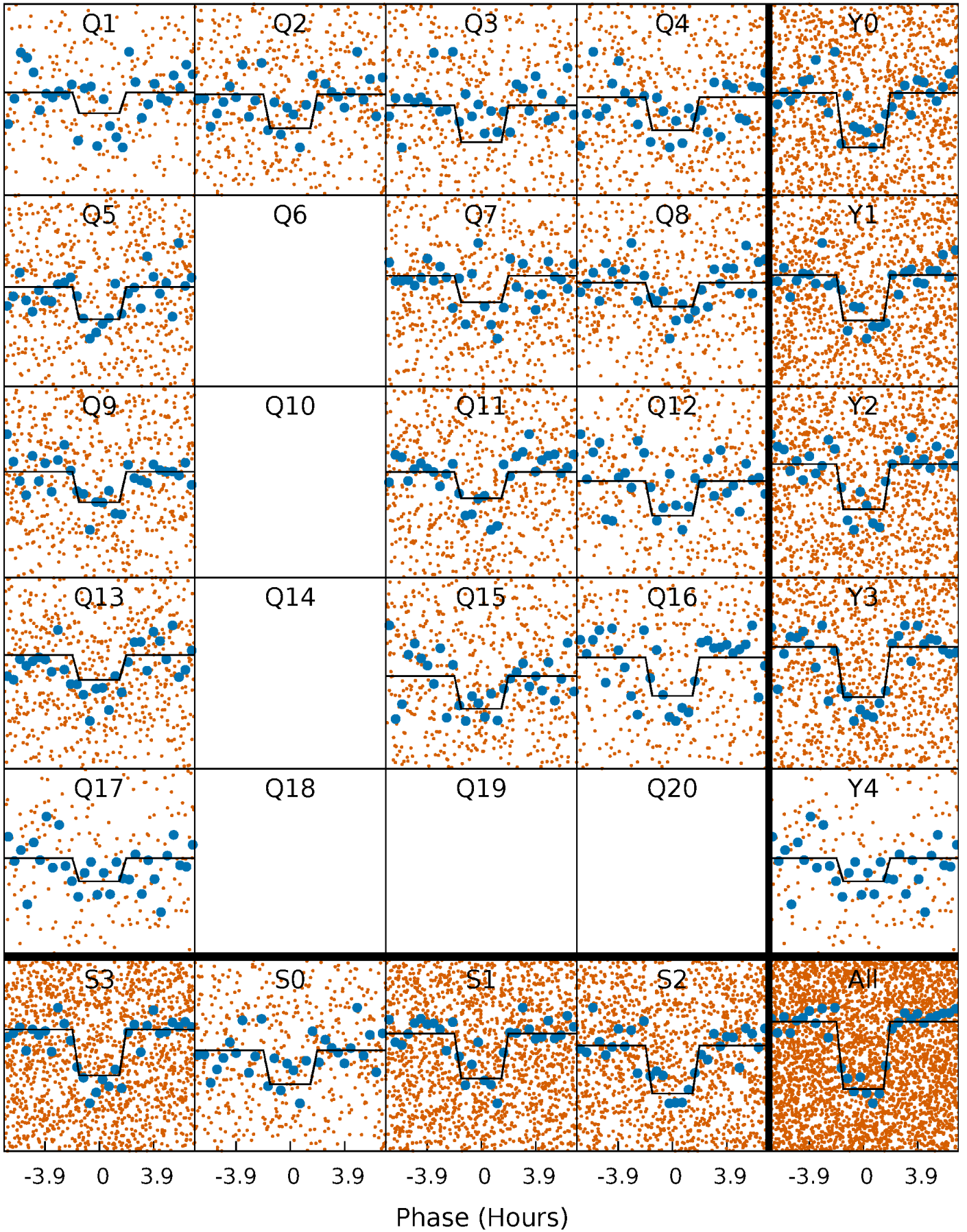
# DV Quarter-Phased Transit Curves

TCE 003244792-01 P= 3.057084 Days  $T_0=134.504227$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

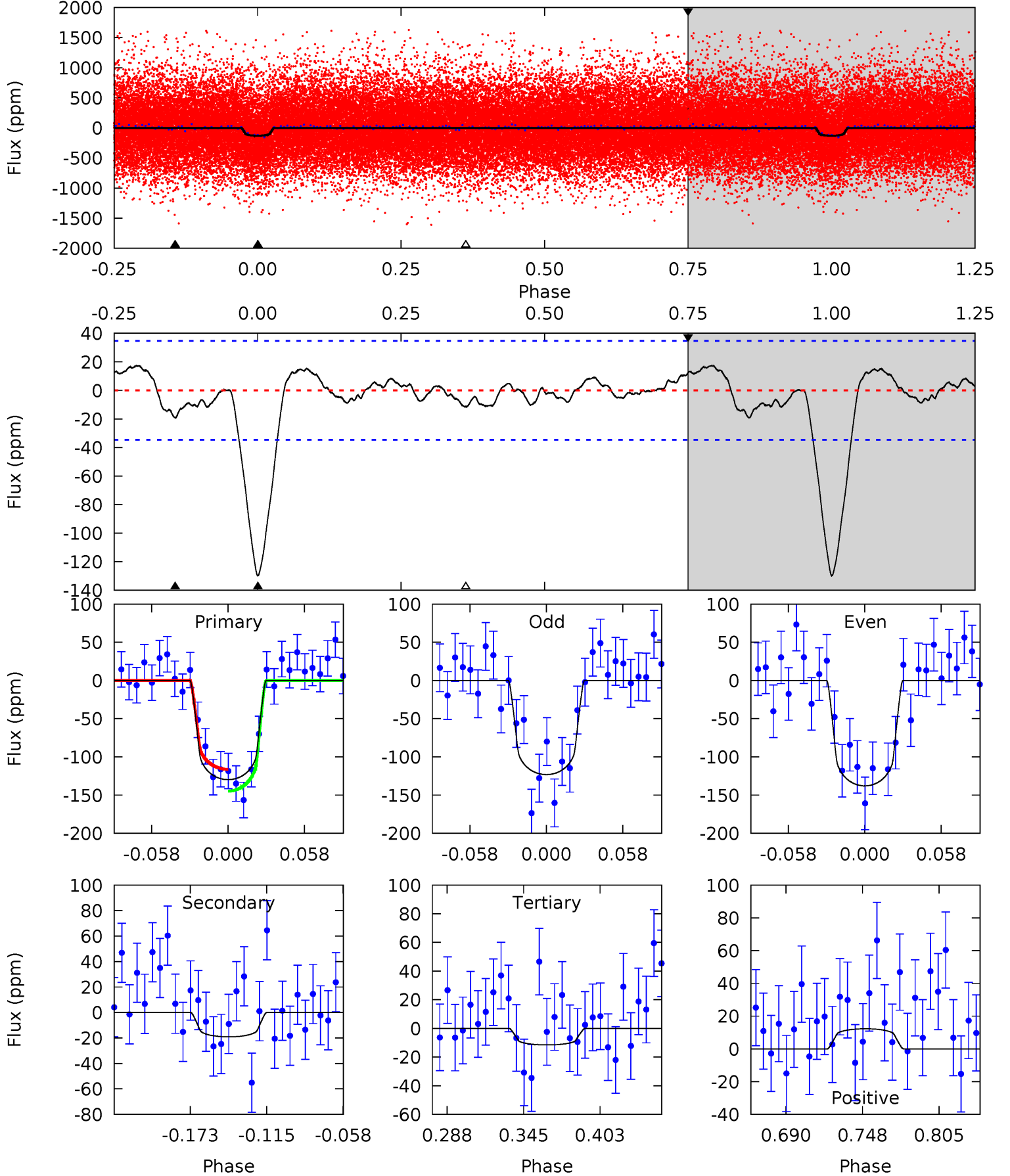
TCE 003244792-01 P= 3.057105 Days  $T_0=134.499527$  (BKJD)



# DV Model-Shift Uniqueness Test

003244792-01, P = 3.057084 Days, E = 131.447143 Days

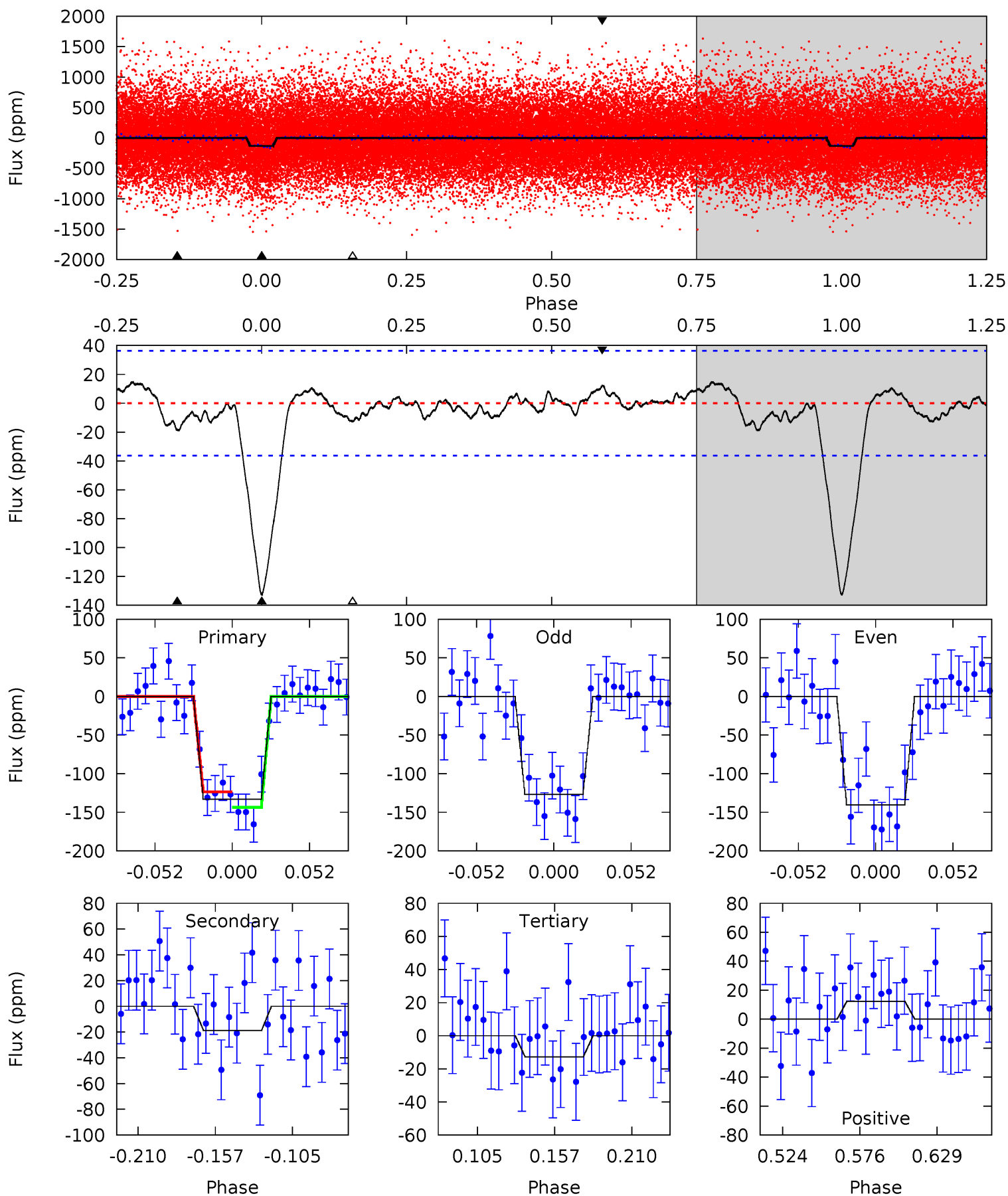
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	2.59	1.56	1.66	4.68	1.90	0.96	16.0	15.9	1.03	0.93	1.00	0.92	0.12	1.93



# Alt Model-Shift Uniqueness Test

003244792-01, P = 3.057105 Days, E = 131.442422 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
17.2	2.43	1.66	1.59	4.70	1.94	0.81	15.5	15.6	0.77	0.84	0.89	0.94	0.10	1.30





### Stellar Parameters For KIC 003244792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6021^{+161}_{-179}$	$4.570^{+0.032}_{-0.189}$	$-0.500^{+0.300}_{-0.300}$	$0.819^{+0.209}_{-0.070}$	$0.922^{+0.089}_{-0.108}$	$2.361^{+0.418}_{-1.123}$
	+3%/-3%	+1%/-4%	+60%/-60%	+26%/-9%	+10%/-12%	+18%/-48%
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 003244792-01 / KOI 4347.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-19 \pm 7$	$1.20^{+0.56}_{-0.54}$	$1723^{+108}_{-73}$	$3830^{+973}_{-532}$	$11^{+25}_{-6}$
Alt.	$-19 \pm 8$	$1.09^{+0.52}_{-0.53}$	$1721^{+110}_{-70}$	$3961^{+1294}_{-581}$	$13^{+39}_{-8}$

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

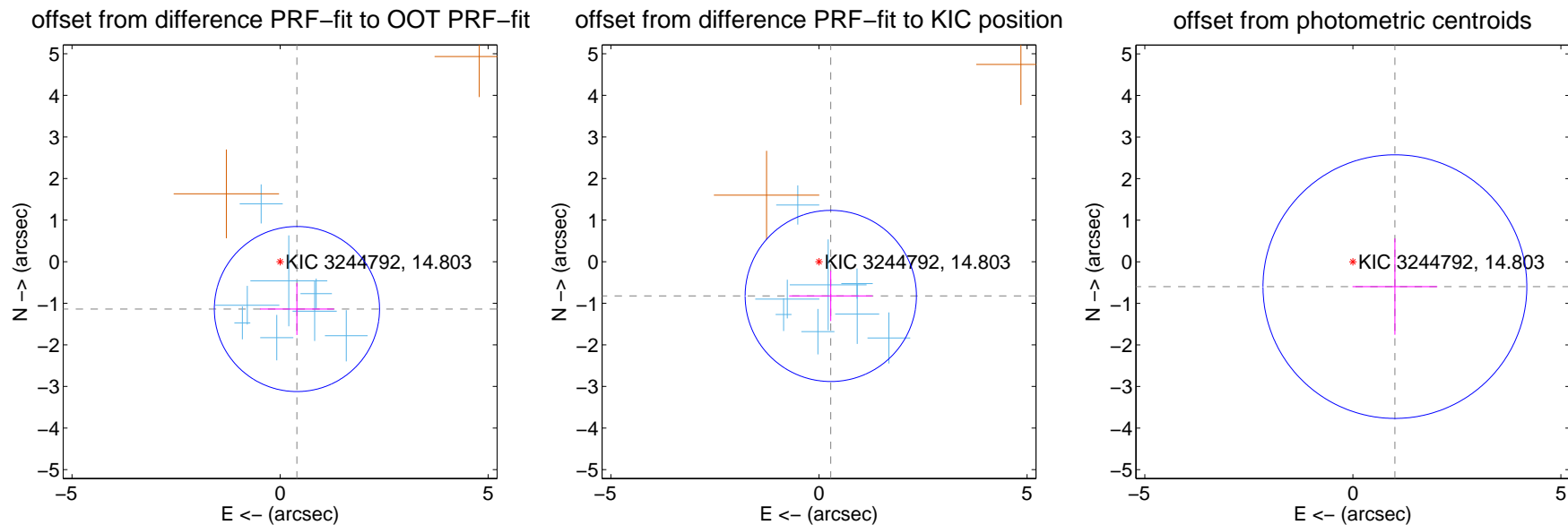
## DV Centroid Data

Supplemental centroid analysis for 003244792-01. Kepler magnitude: 14.80. Transit SNR 15.03

There are 8 quarters with good PRF difference image offsets

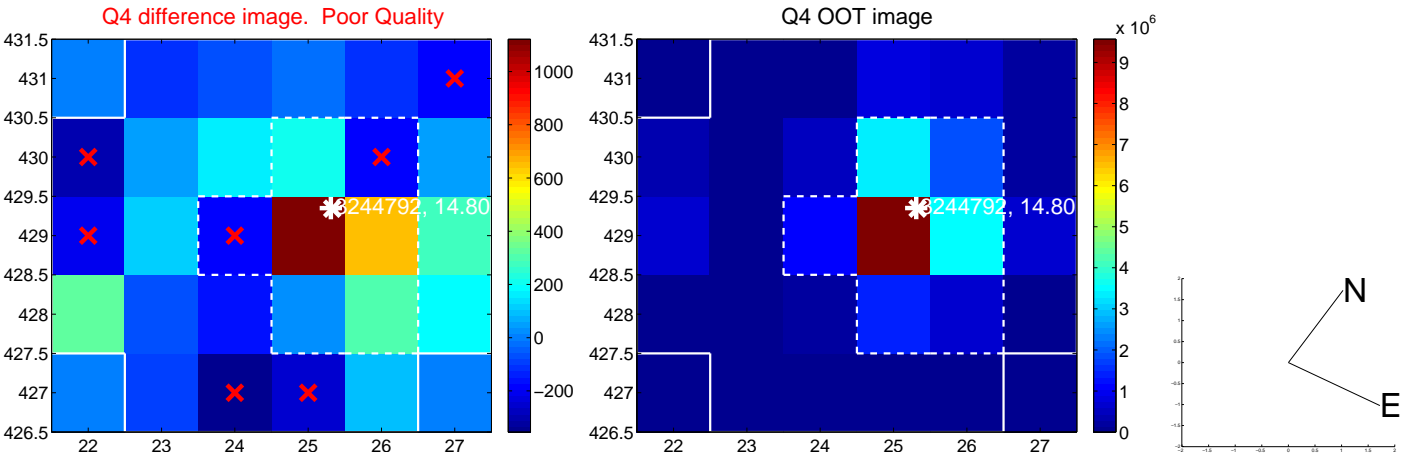
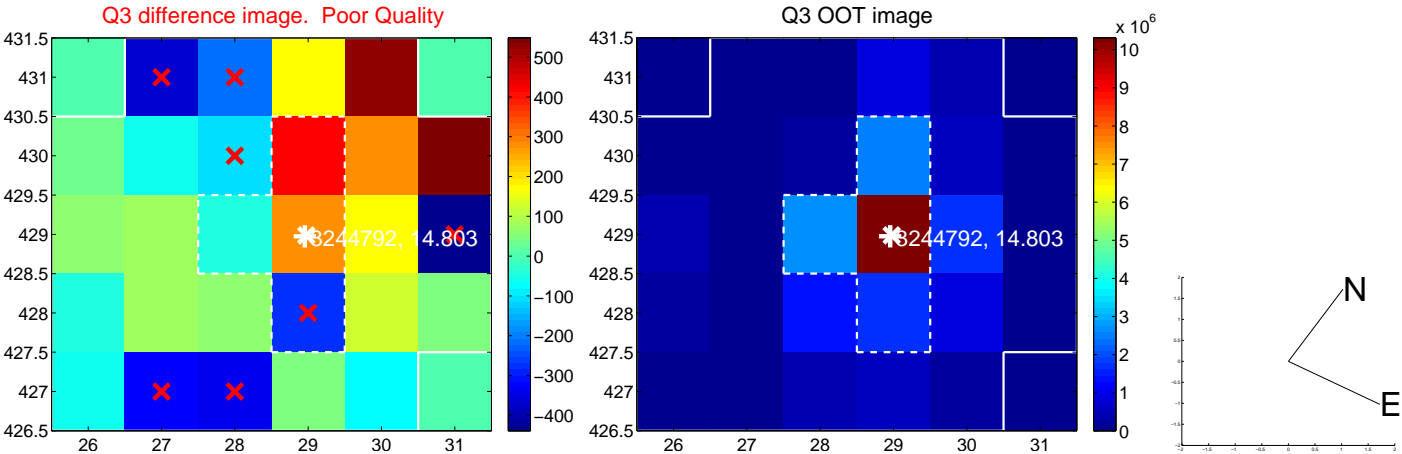
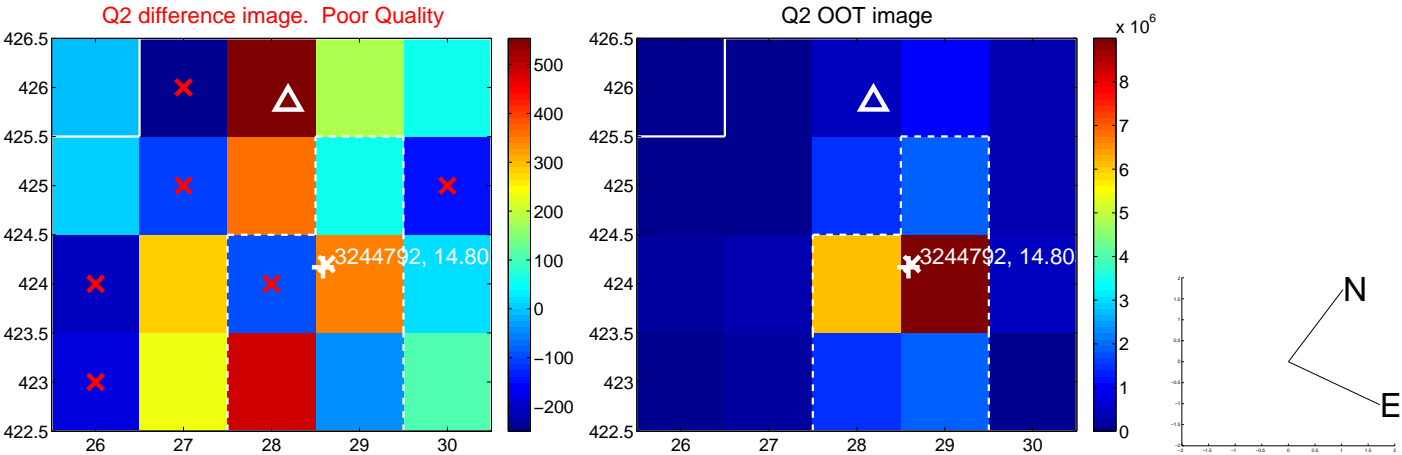
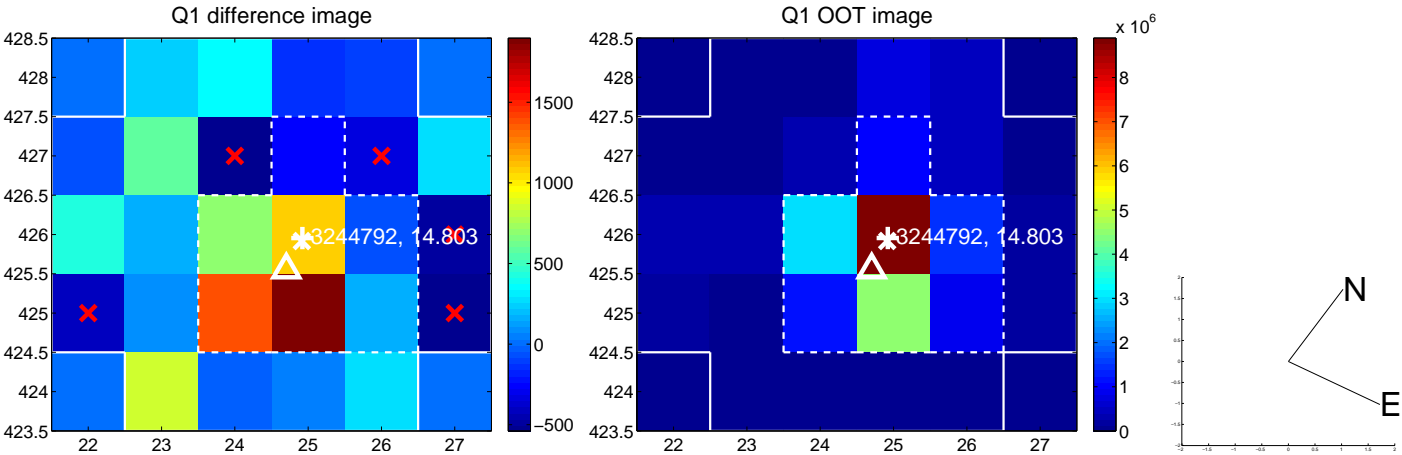
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.208 \pm 0.662$	1.83	$-0.404 \pm 0.890$	$-1.138 \pm 0.624$
PRF-fit source offset from KIC position	$0.871 \pm 0.686$	1.27	$-0.283 \pm 1.000$	$-0.824 \pm 0.604$
photometric centroid source offset	$1.17 \pm 1.06$	1.11	$-1.01 \pm 1.02$	$-0.60 \pm 1.16$

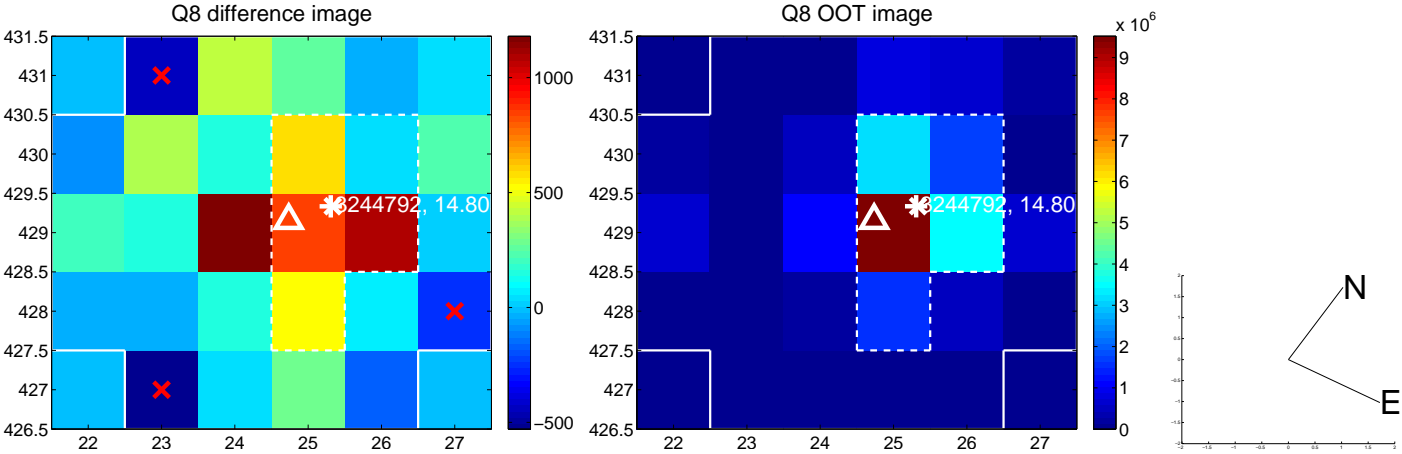
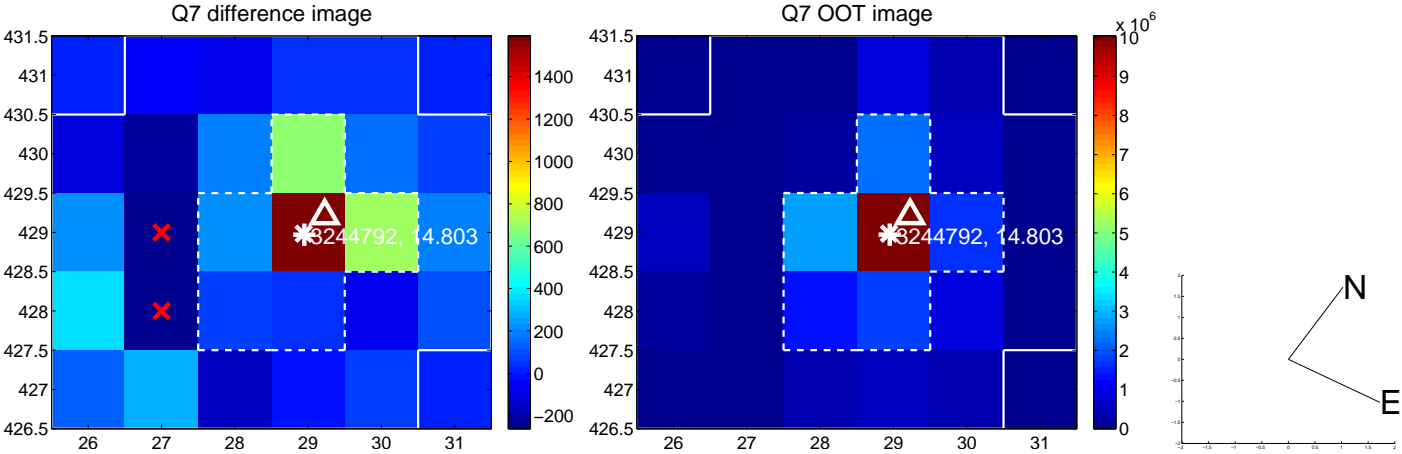
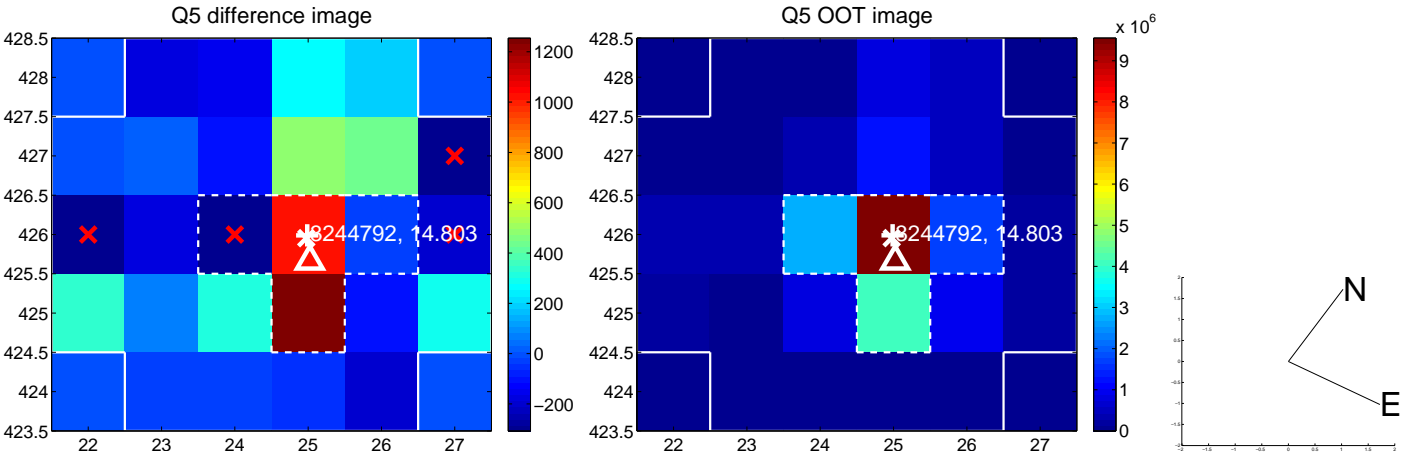


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

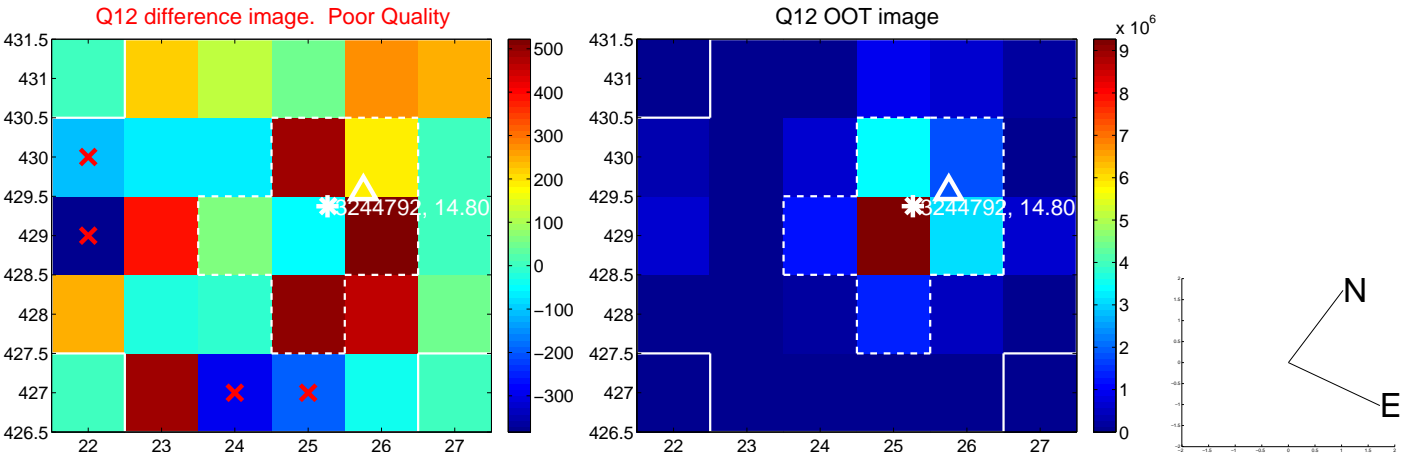
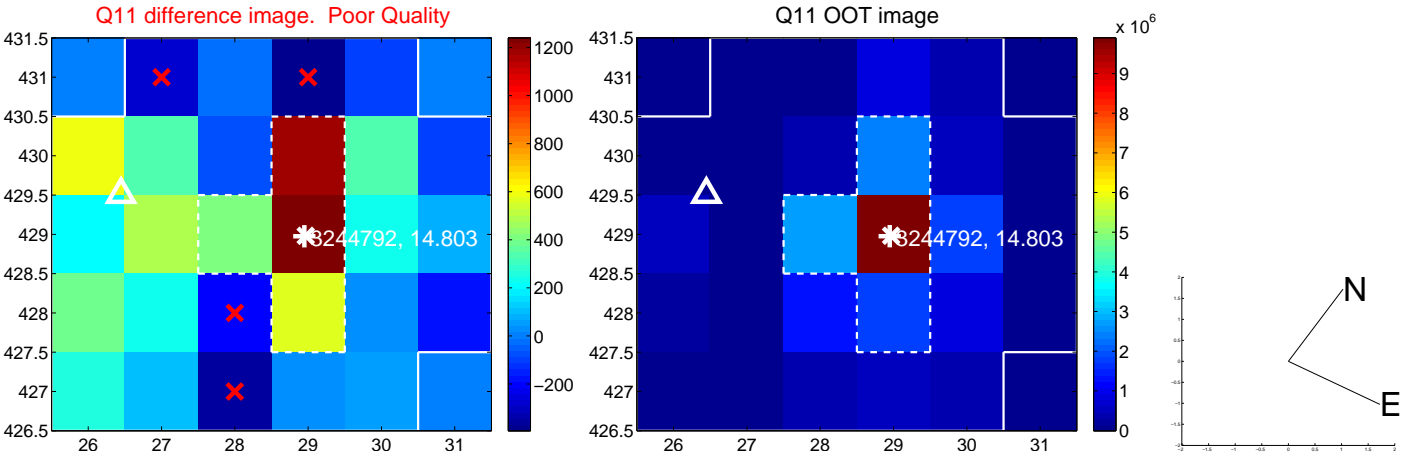
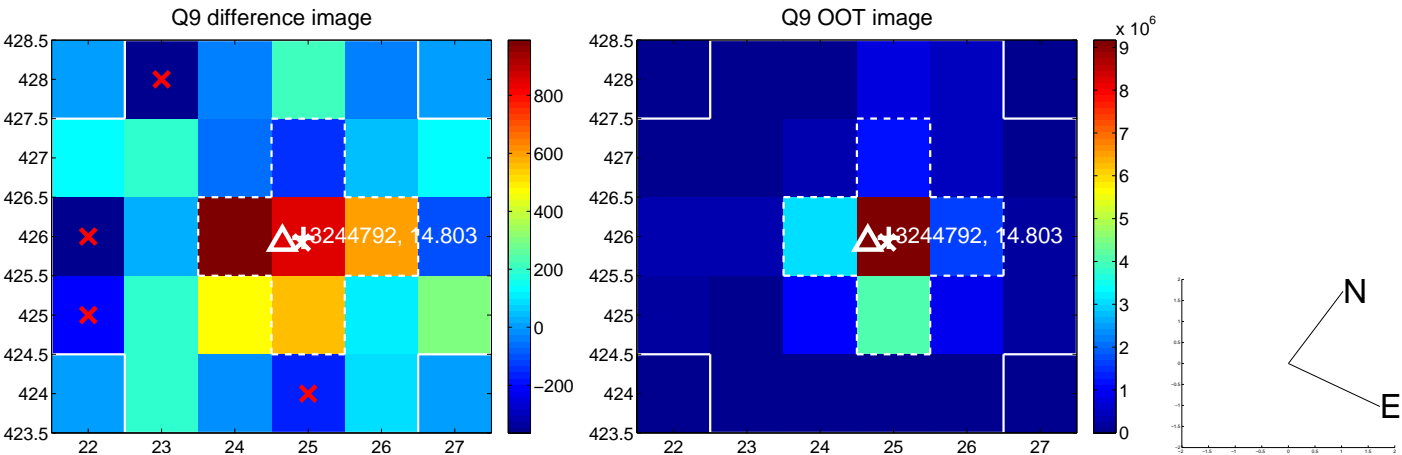


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

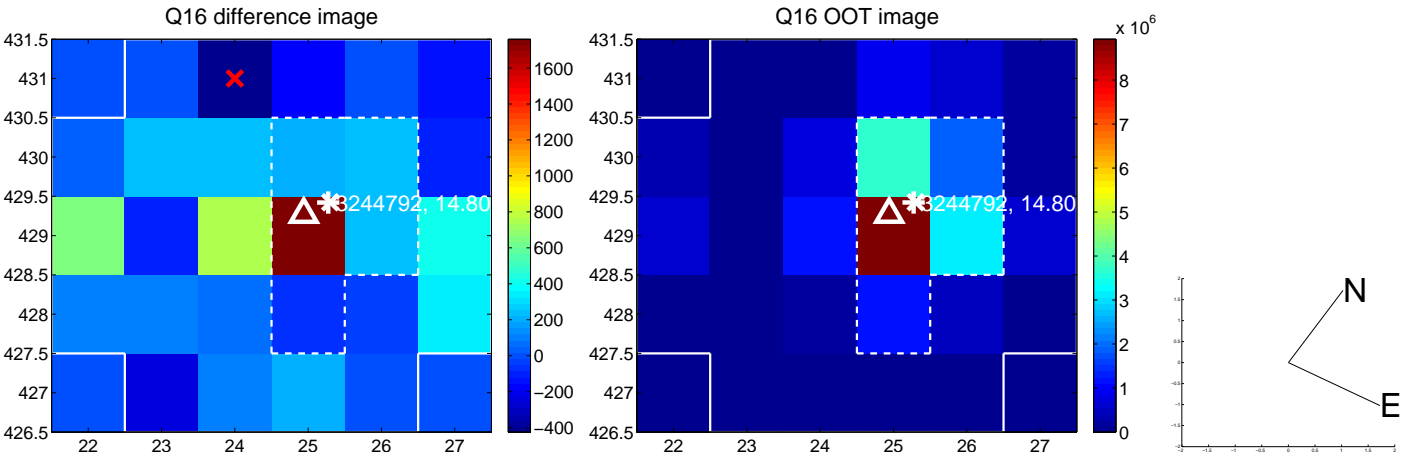
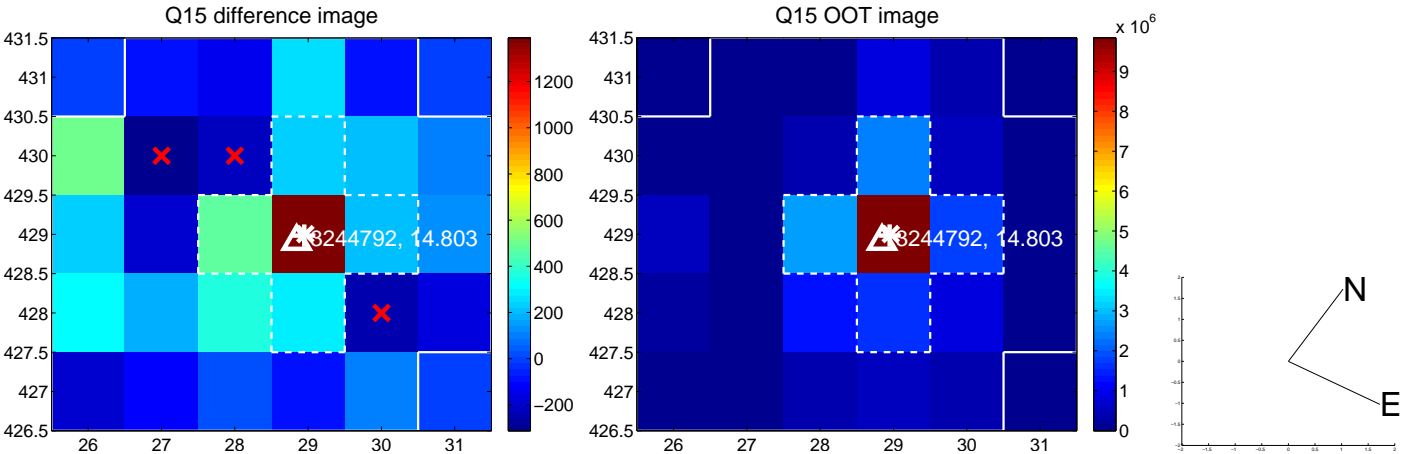
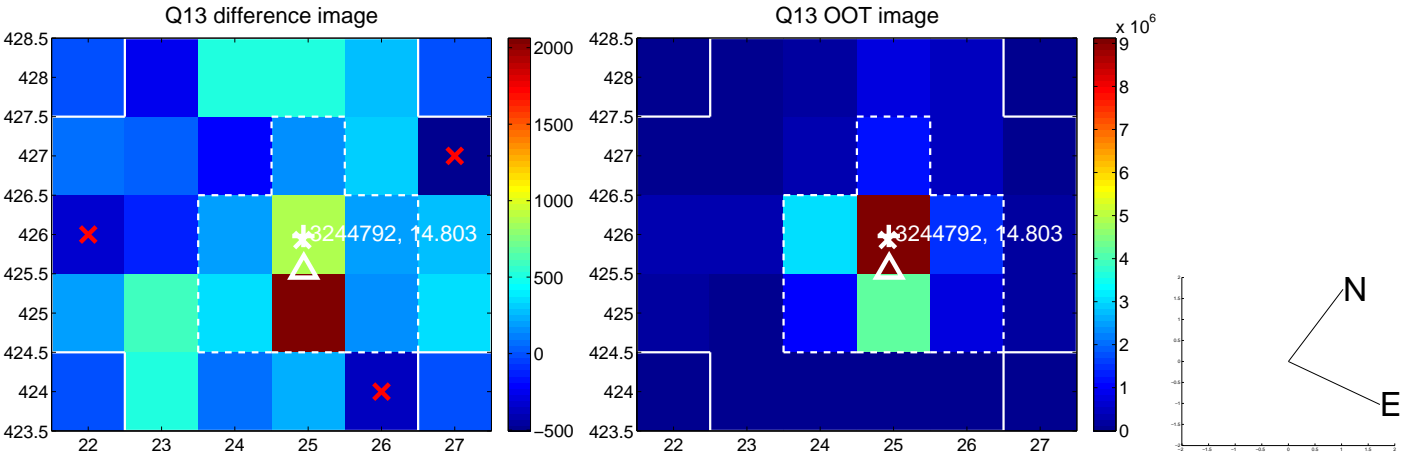




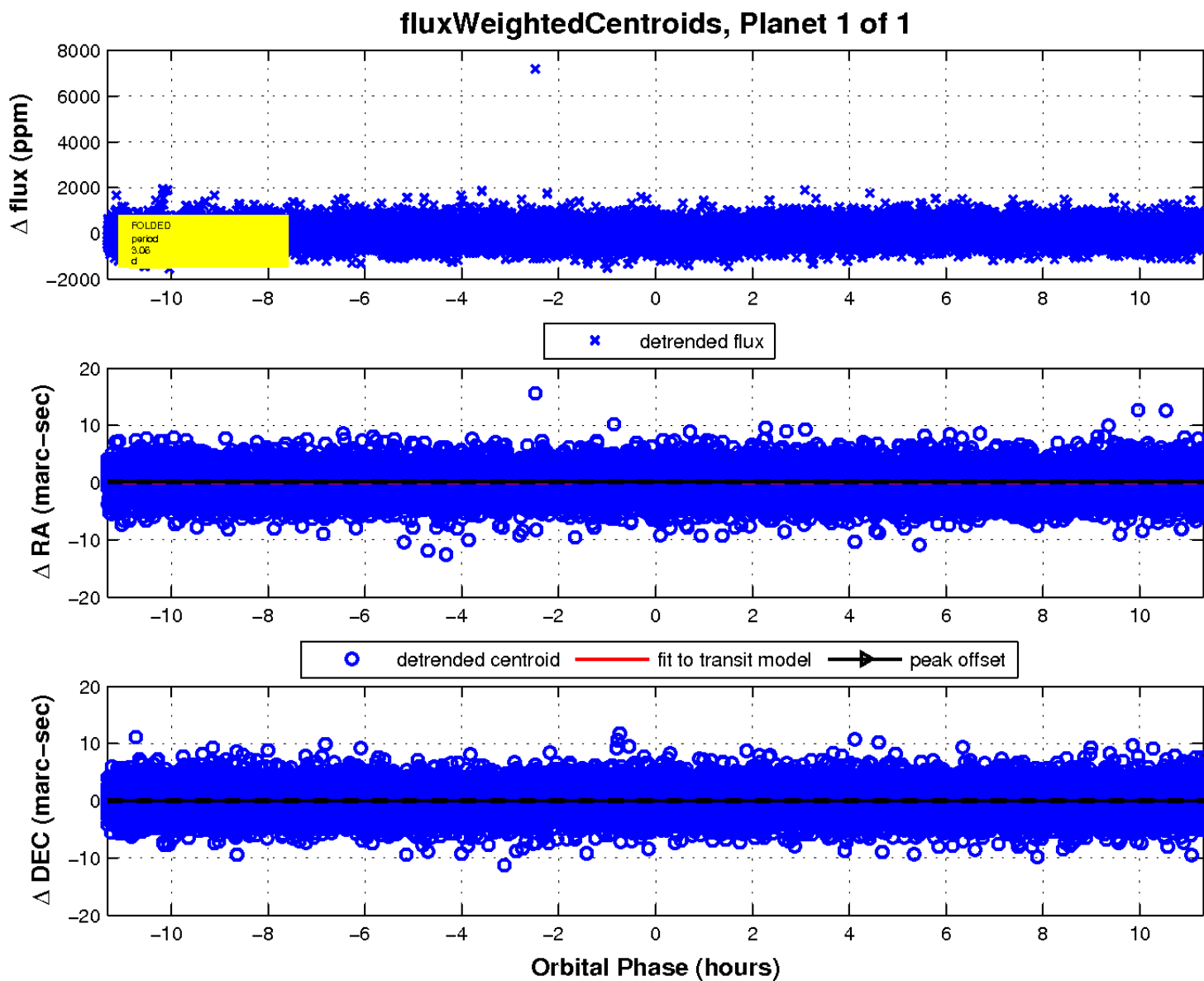
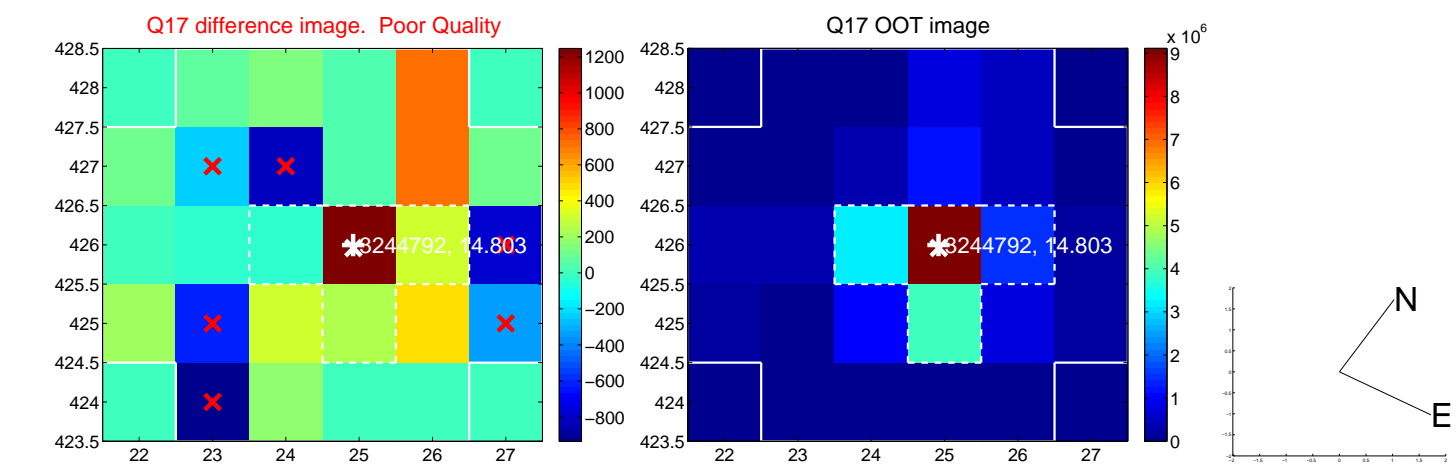
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



UKIRT Image

Declination

