

# KIC 007918992

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007918992-01	OBS	2095.01	1.434750	132.624821	203.6	1.890	20.2	27.4	1.06	5806	1.62	1814.10

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007918992-01	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.

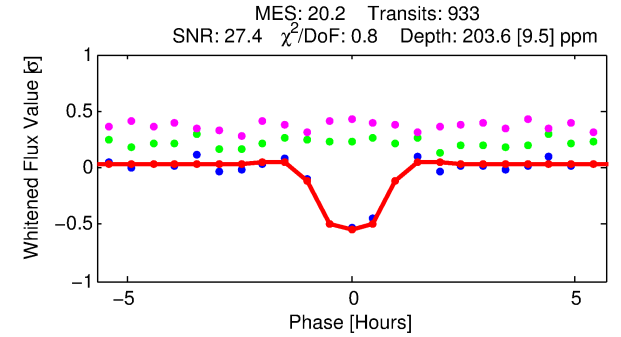
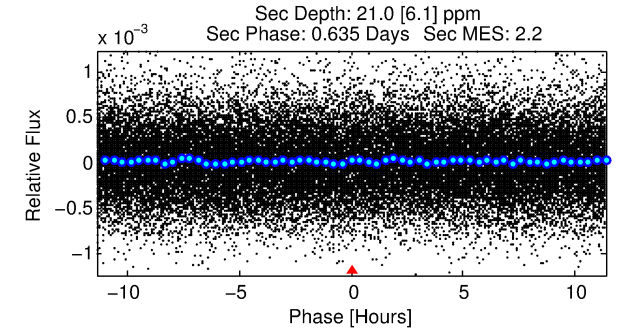
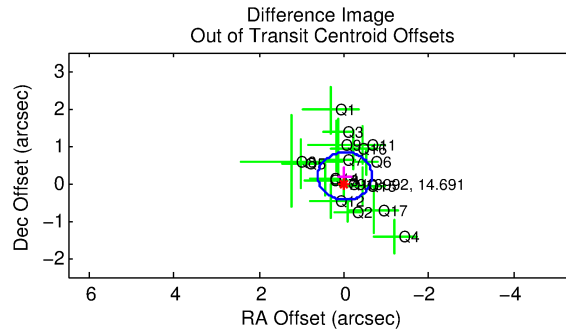
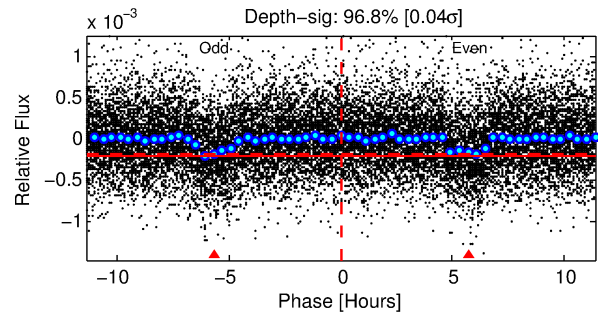
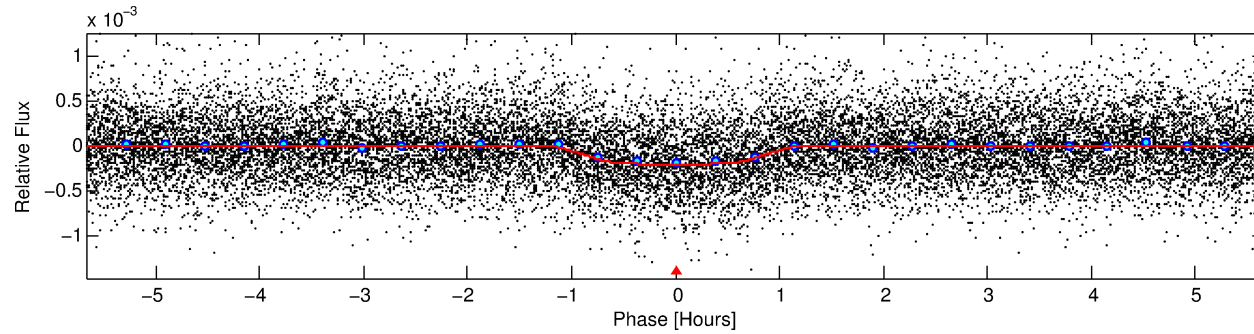
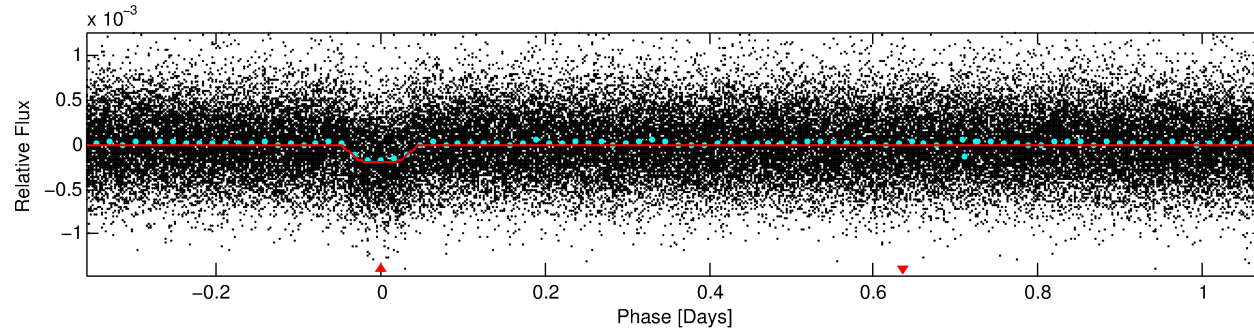
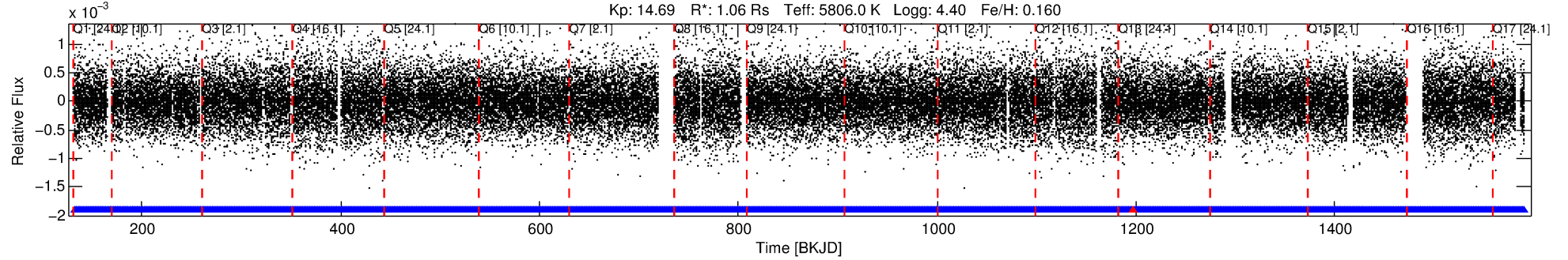
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007918992-01

No Significant Match Found

# DV One-Page Summary

KIC: 7918992 Candidate: 1 of 1 Period: 1.435 d  
KOI: K02095.01 Corr: 0.972



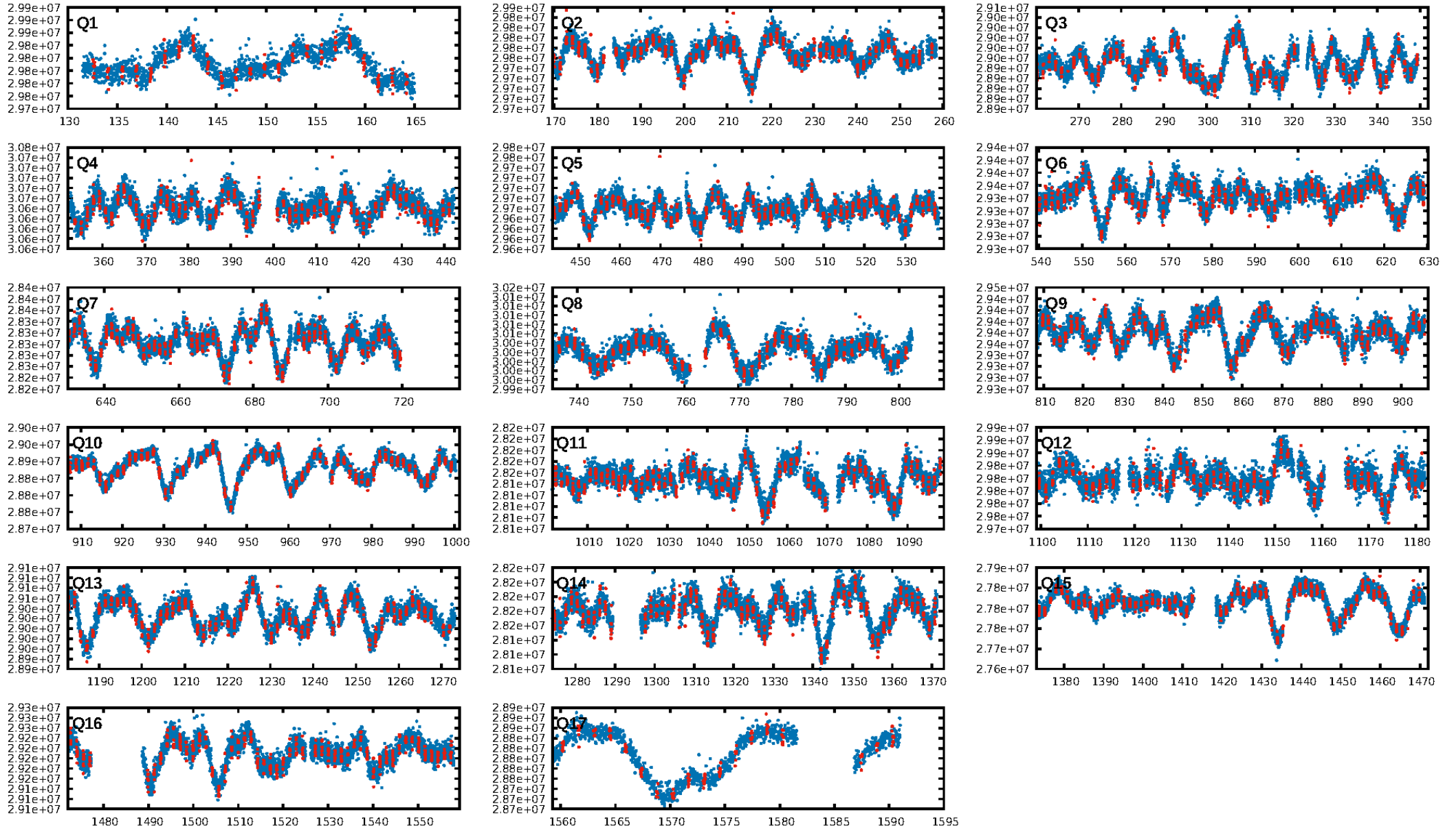
## DV Fit Results:

Period = 1.43475 [0.00000] d  
Epoch = 132.6248 [0.0010] BKJD  
Rp/R\* = 0.0139 [0.0042]  
a/R\* = 4.41 [5.46]  
b = 0.69 [1.03]  
Seff = 1814.10 [406.42]  
Teff = 1664 [93] K  
Rp = 1.62 [0.55] Re  
a = 0.0252 [0.0036] AU  
Ag = 2.81 [1.98] [0.91 $\sigma$ ]  
Teffp = 3331 [561] K [2.93 $\sigma$ ]

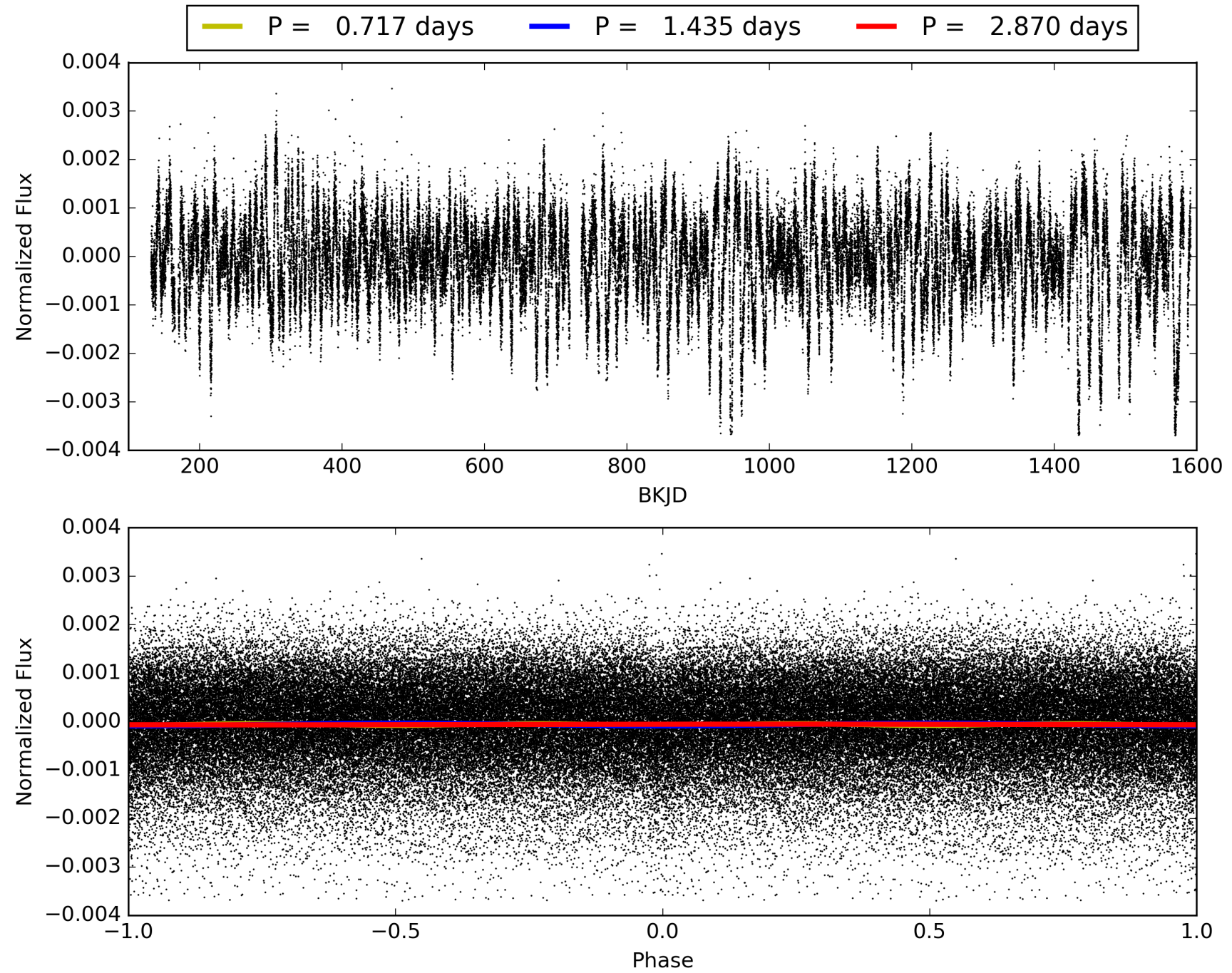
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.78e-87  
RollingBand-fgt: 1.00 [891/892]  
GhostDiagnostic-chr: 2.059  
Centroid-sig: 1.1%  
Centroid-so: 1.090 arcsec [2.01 $\sigma$ ]  
OotOffset-rm: 0.196 arcsec [0.92 $\sigma$ ]  
KicOffset-rm: 0.069 arcsec [0.32 $\sigma$ ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.94 [16/17]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 007918992-01, PDC Light Curves



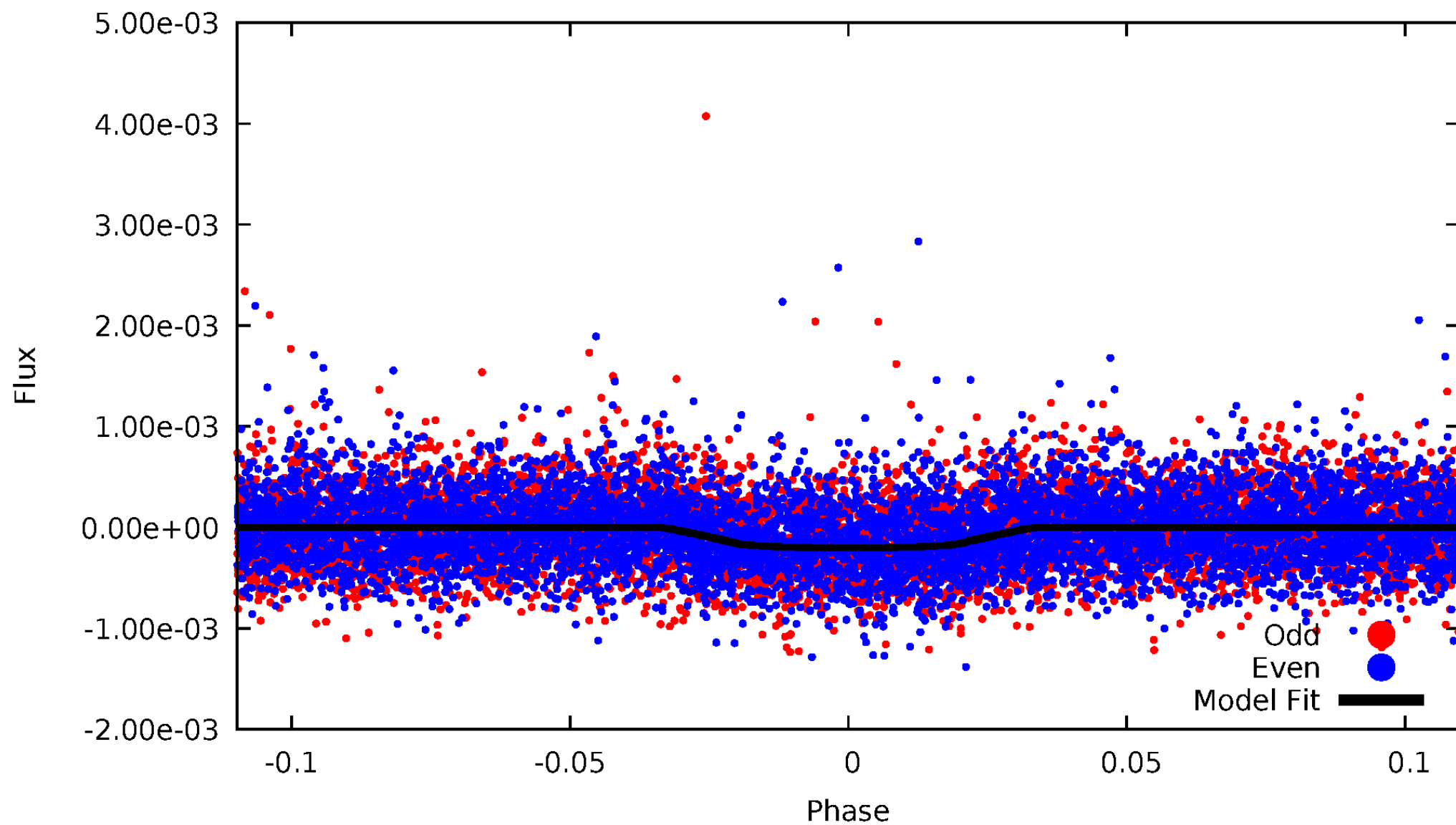
TCE 007918992-01





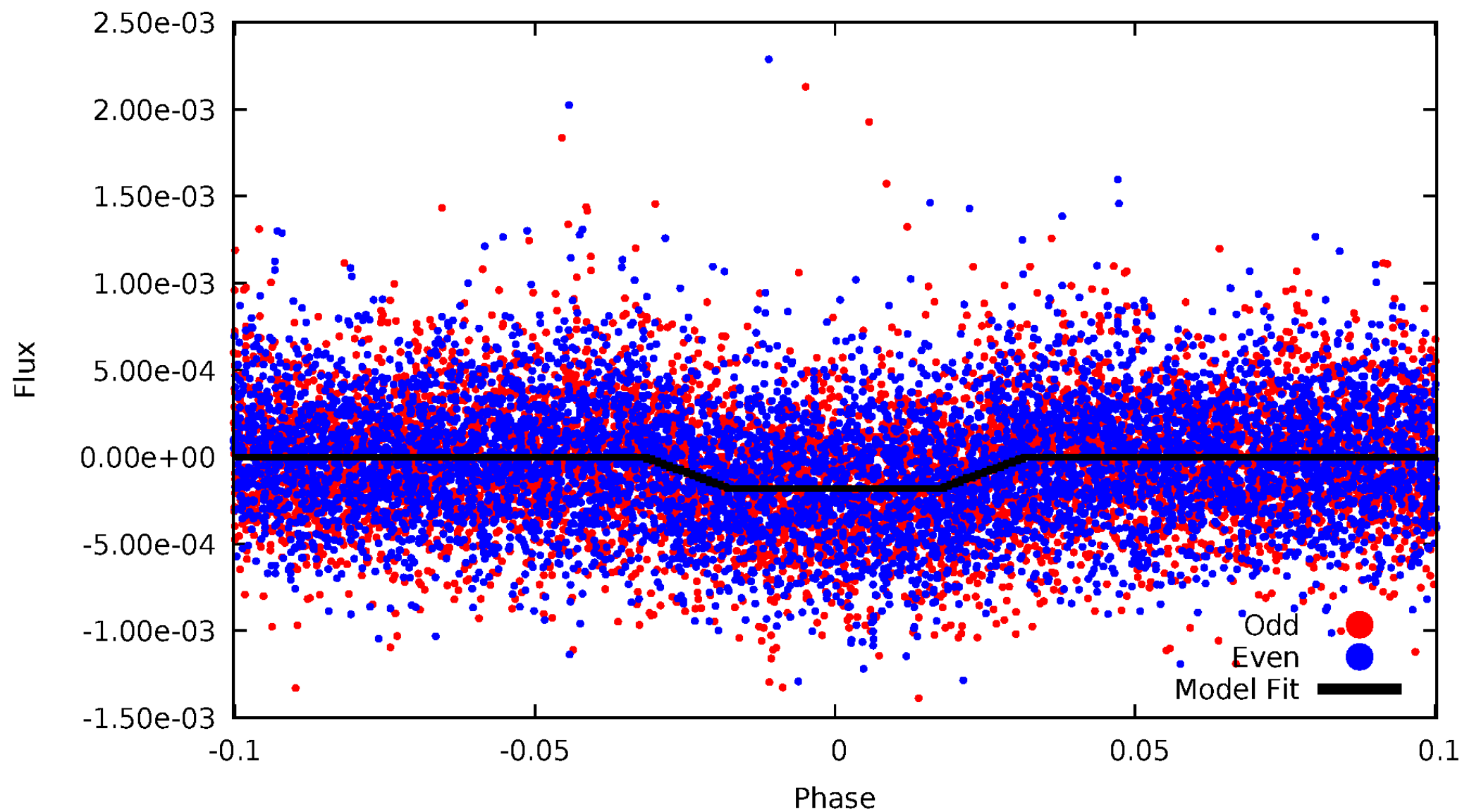
# DV Odd/Even

TCE 007918992-01



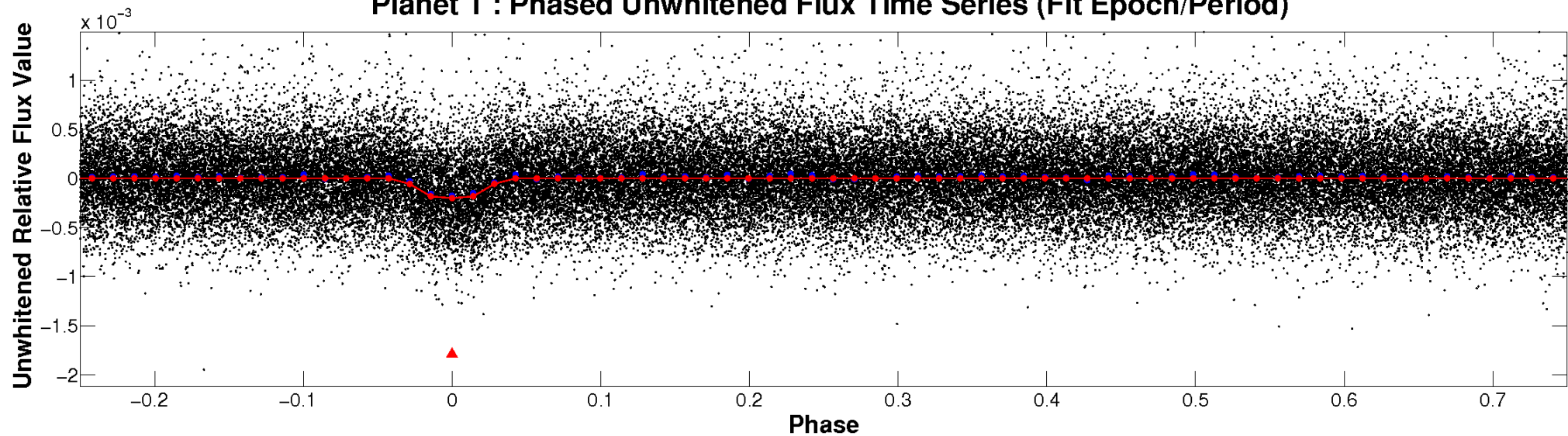
# ALT Odd/Even

TCE 007918992-01

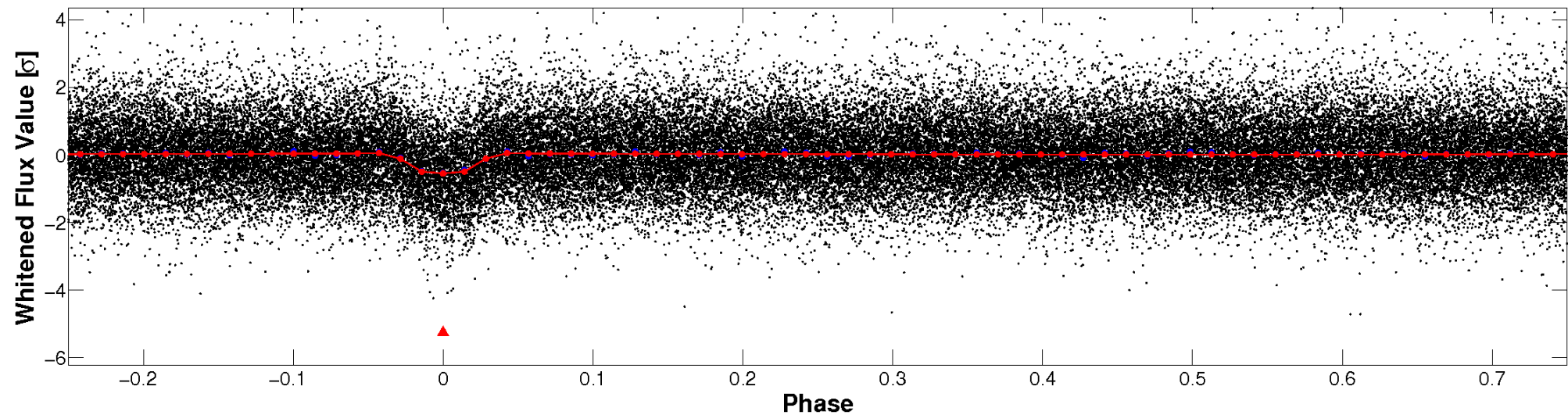


# Non-Whitened Vs. Whitened Light Curve

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

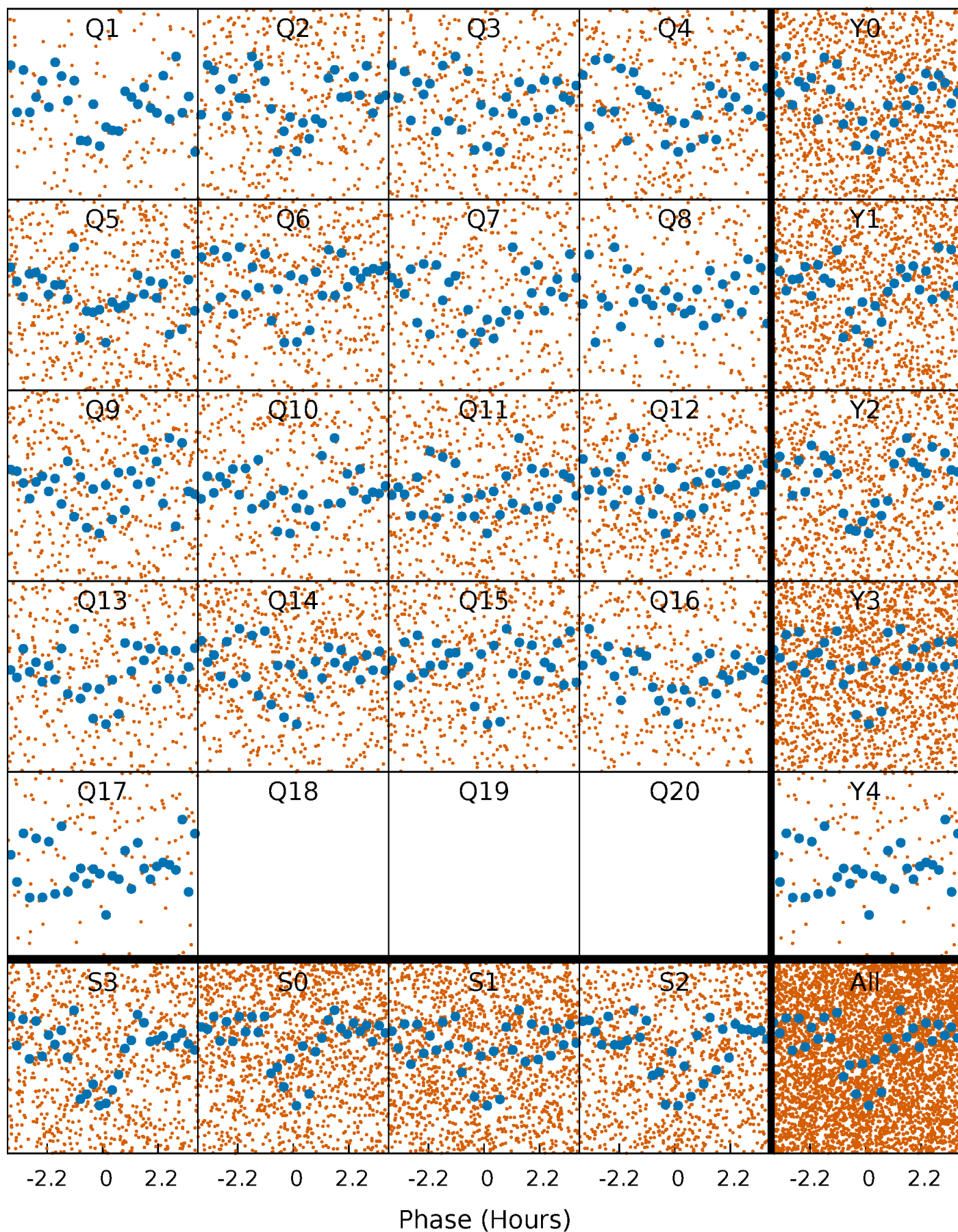


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

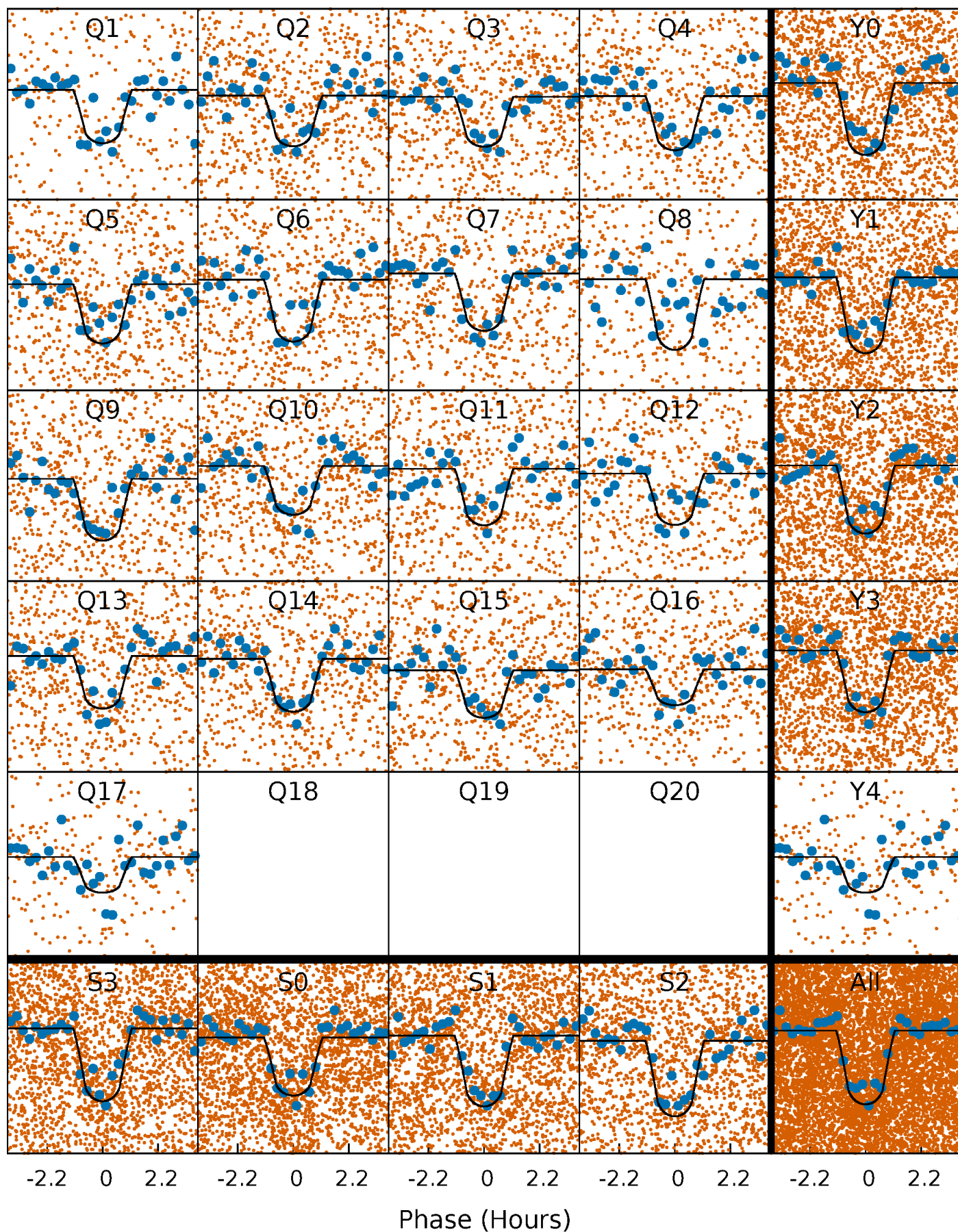
TCE 007918992-01 P= 1.434750 Days  $T_0=132.624821$  (BKJD)





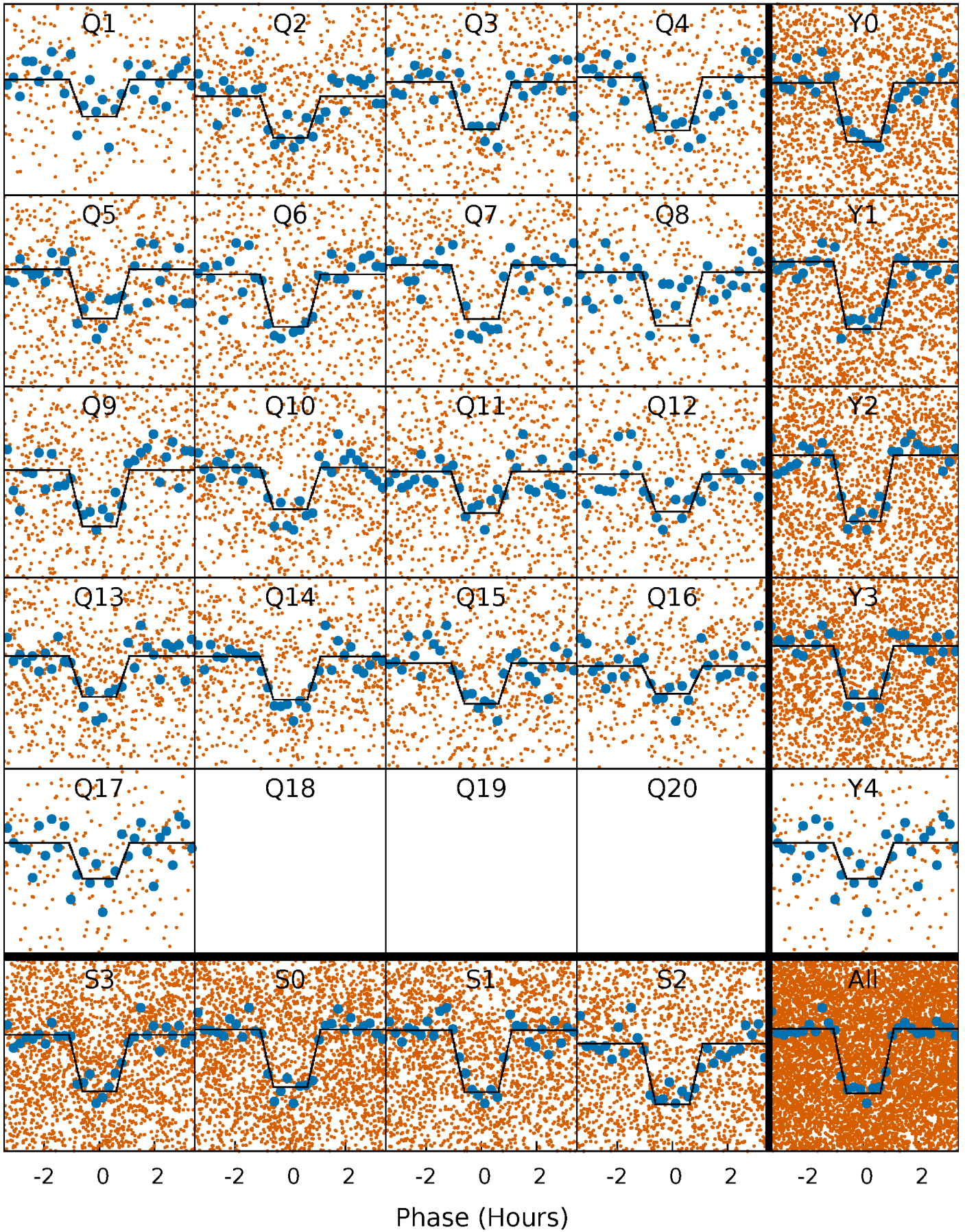
# DV Quarter-Phased Transit Curves

TCE 007918992-01 P= 1.434750 Days  $T_0=132.624821$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

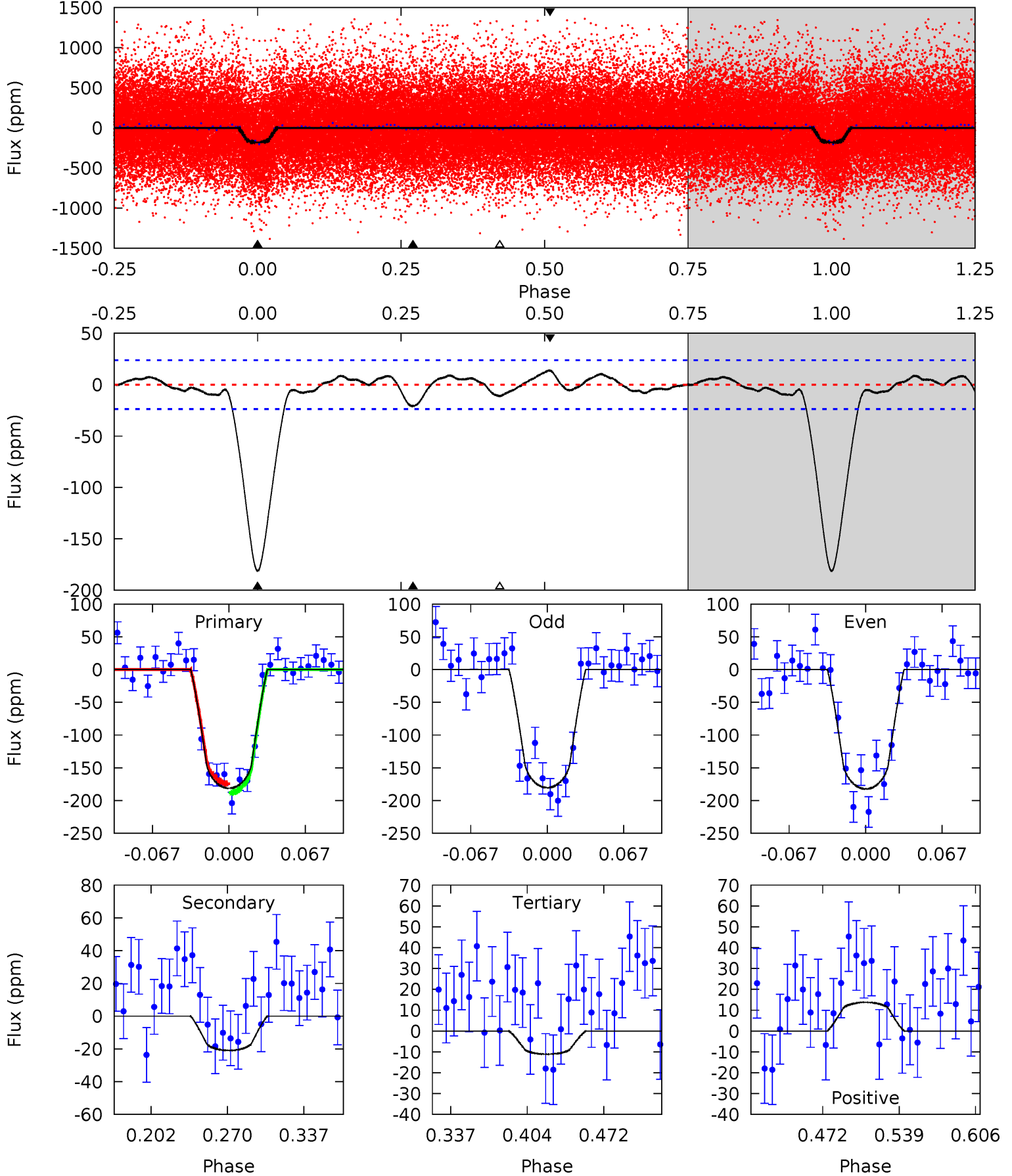
TCE 007918992-01 P= 1.434753 Days  $T_0=132.623260$  (BKJD)



# DV Model-Shift Uniqueness Test

007918992-01, P = 1.434750 Days, E = 131.190071 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
35.4	4.10	2.17	2.68	4.65	1.83	1.15	33.2	32.7	1.93	1.42	0.19	0.93	0.07	1.34

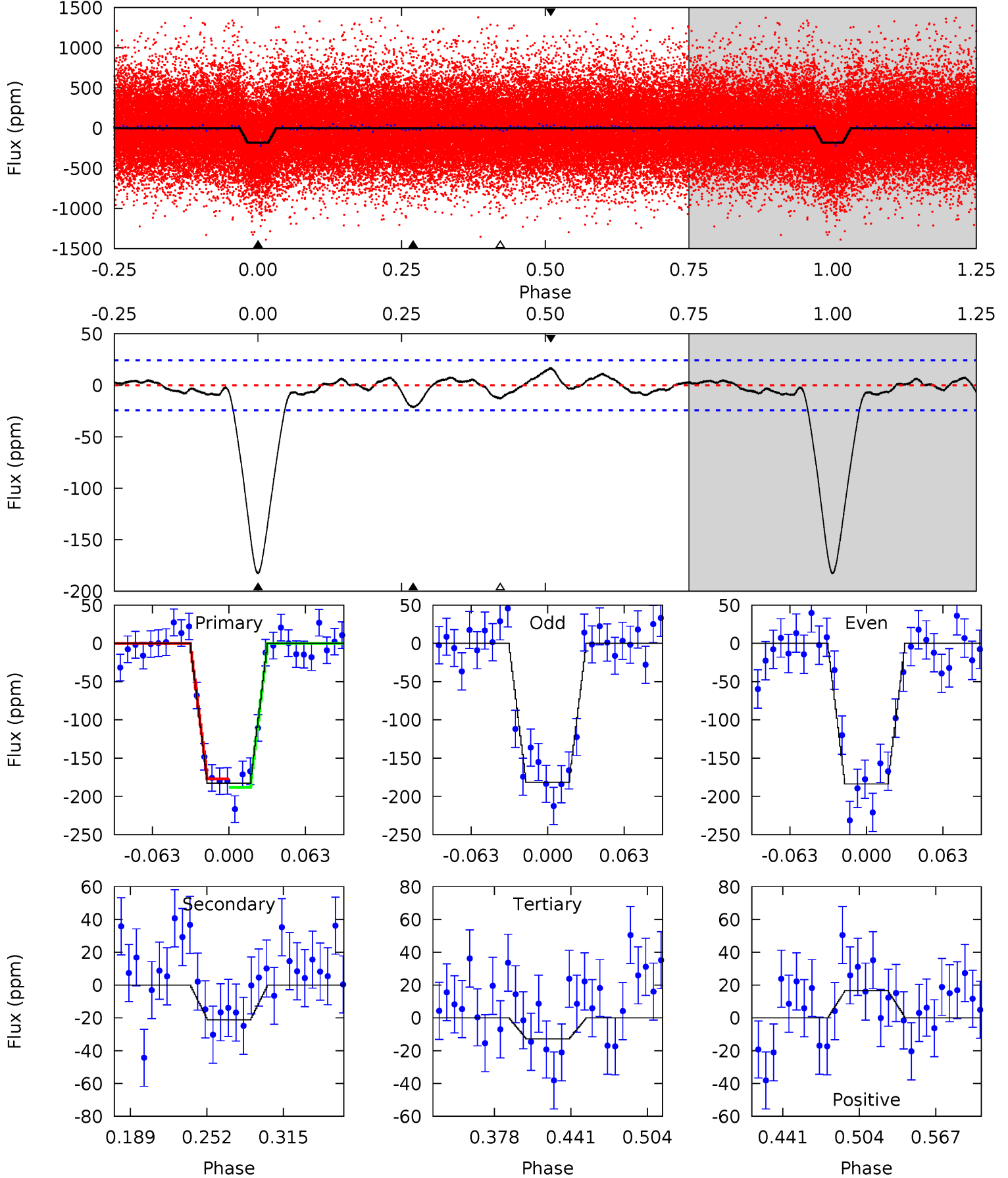




# Alt Model-Shift Uniqueness Test

007918992-01, P = 1.434753 Days, E = 131.188507 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
35.1	4.07	2.45	3.18	4.66	1.86	1.17	32.6	31.9	1.61	0.89	0.21	0.98	0.08	1.08





### Stellar Parameters For KIC 007918992

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5806^{+69}_{-87}$	$4.400^{+0.066}_{-0.123}$	$0.160^{+0.150}_{-0.150}$	$1.064^{+0.167}_{-0.090}$	$1.037^{+0.069}_{-0.063}$	$1.213^{+0.369}_{-0.398}$
	+1%/-1%	+2%/-3%	+94%/-94%	+16%/-8%	+7%/-6%	+30%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

### Secondary Eclipse Parameters for KIC 007918992-01 / KOI 2095.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-21 \pm 5$	$1.63^{+0.56}_{-0.50}$	$2336^{+97}_{-67}$	$3632^{+589}_{-393}$	$2.642^{+3.118}_{-1.253}$
Alt.	$-21 \pm 5$	$1.55^{+0.52}_{-0.49}$	$2331^{+103}_{-69}$	$3717^{+623}_{-384}$	$3.037^{+3.676}_{-1.431}$

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

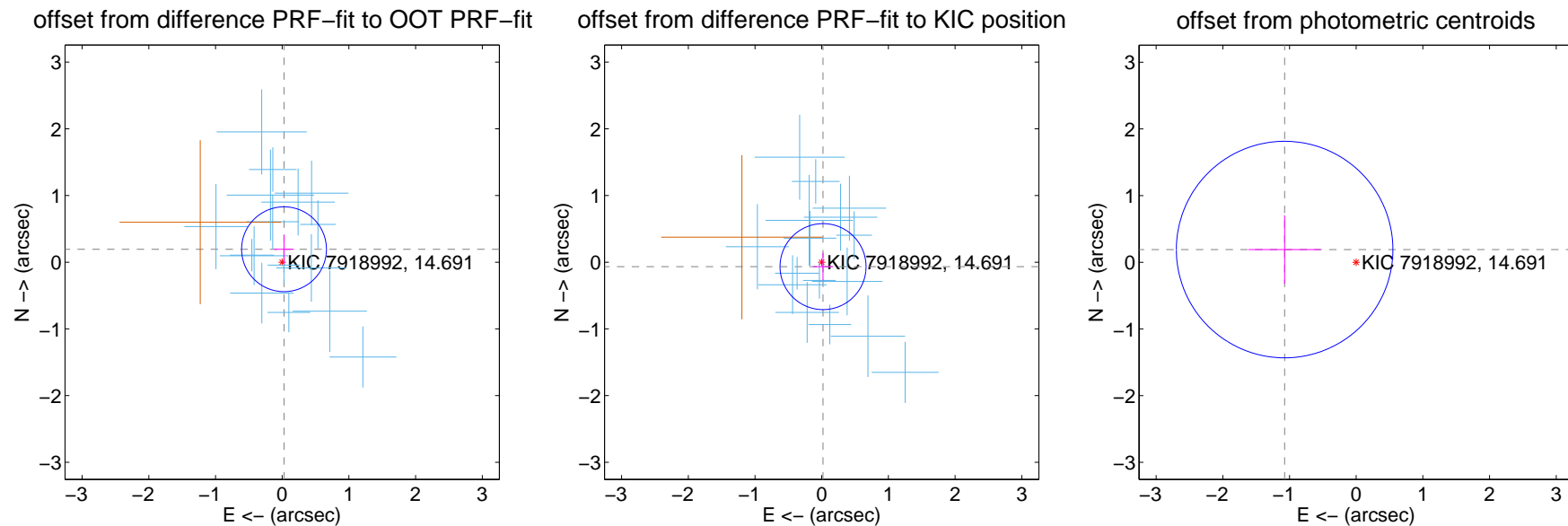
## DV Centroid Data

Supplemental centroid analysis for 007918992-01. Kepler magnitude: 14.69. Transit SNR 27.43

There are 16 quarters with good PRF difference image offsets

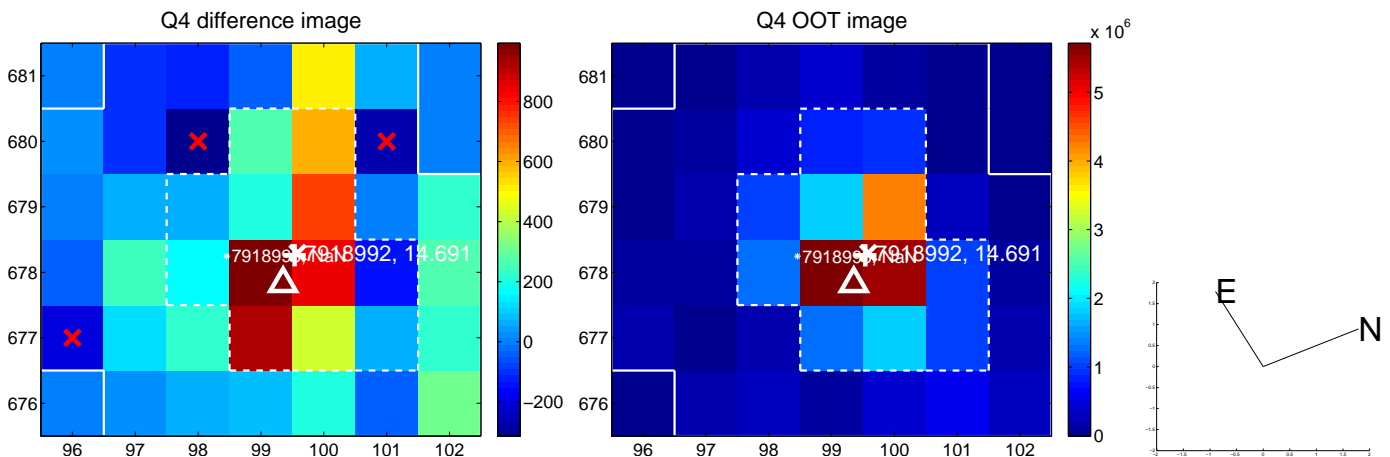
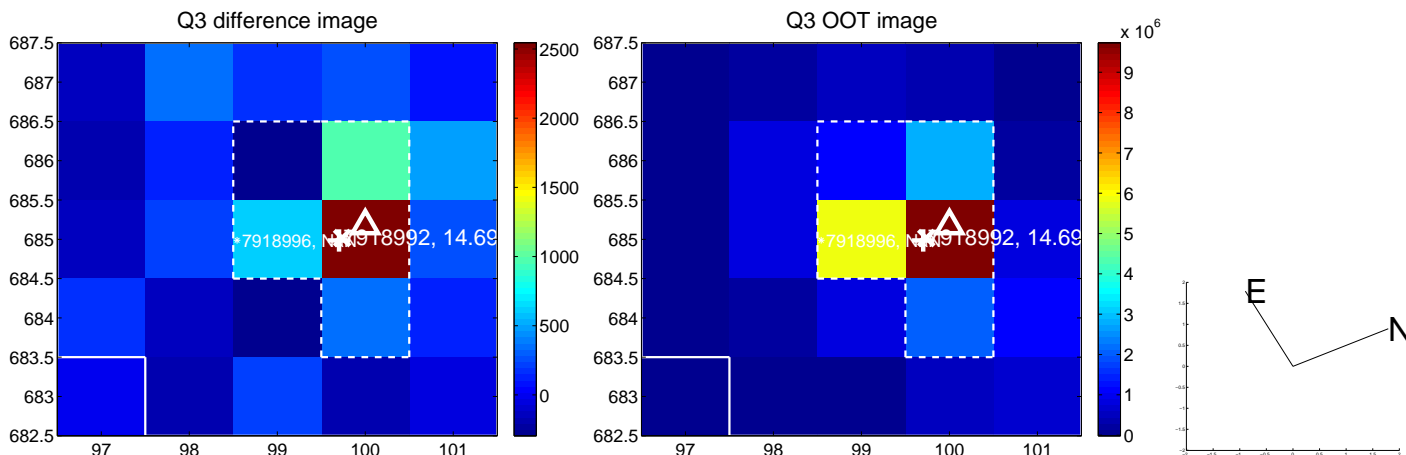
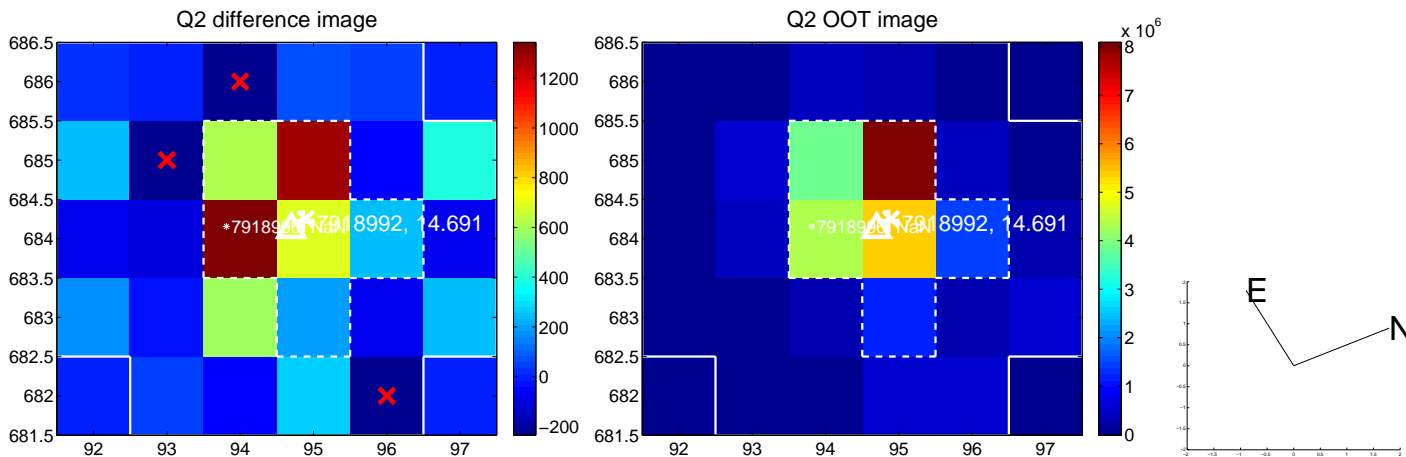
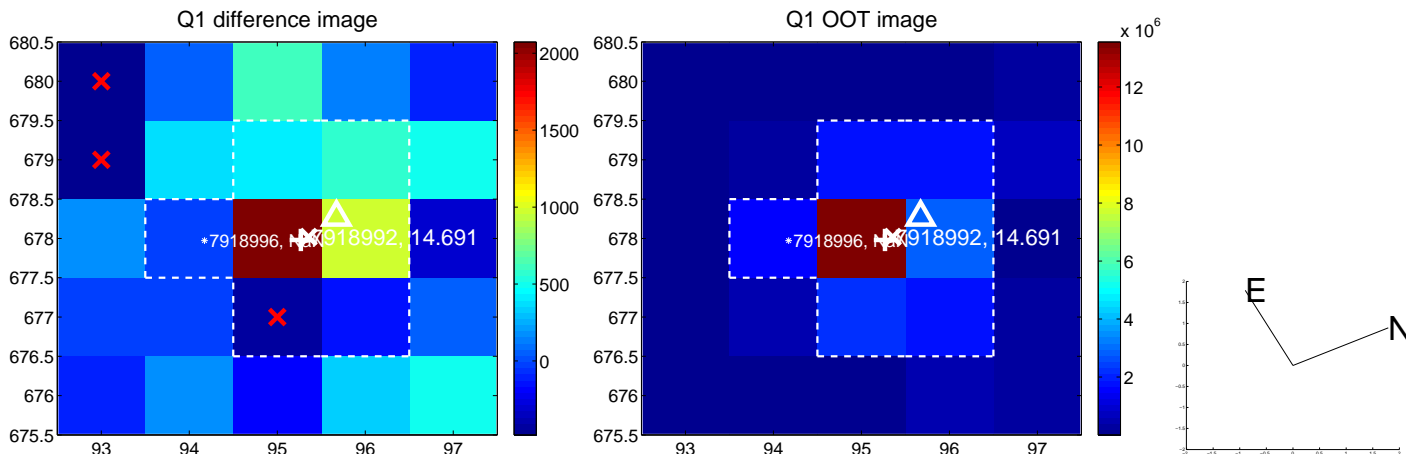
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.196 \pm 0.212$	0.92	$-0.027 \pm 0.150$	$0.194 \pm 0.221$
PRF-fit source offset from KIC position	$0.069 \pm 0.215$	0.32	$-0.020 \pm 0.150$	$-0.066 \pm 0.206$
photometric centroid source offset	$1.09 \pm 0.54$	2.01	$1.07 \pm 0.54$	$0.19 \pm 0.51$

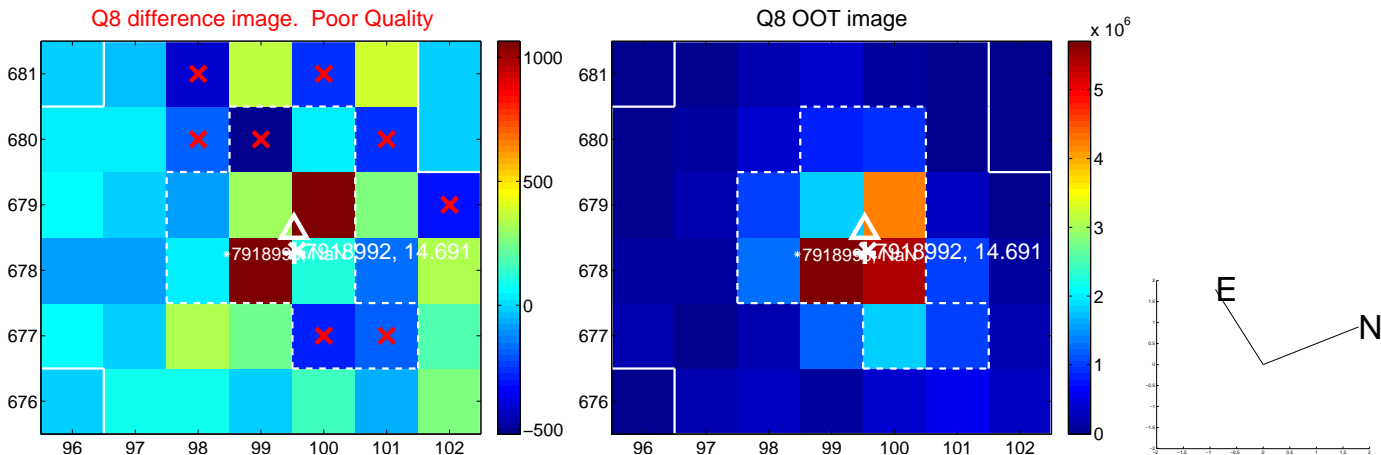
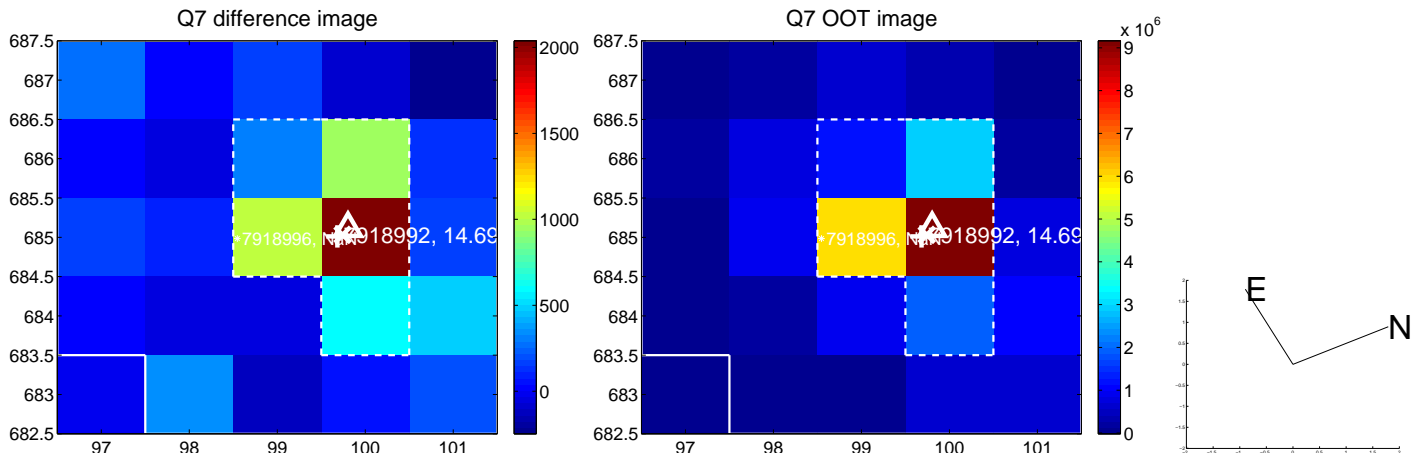
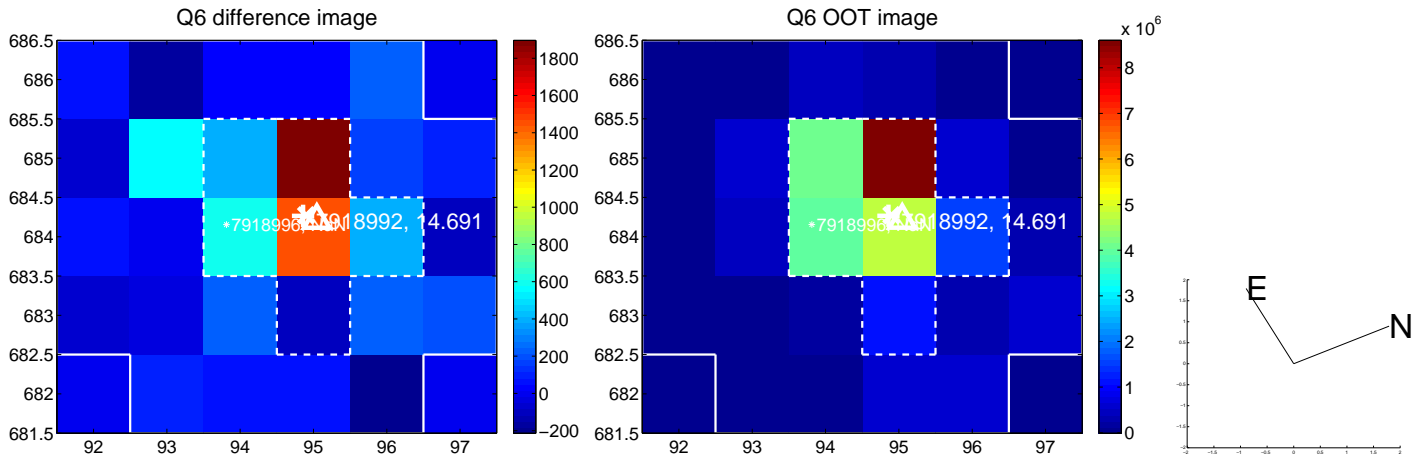
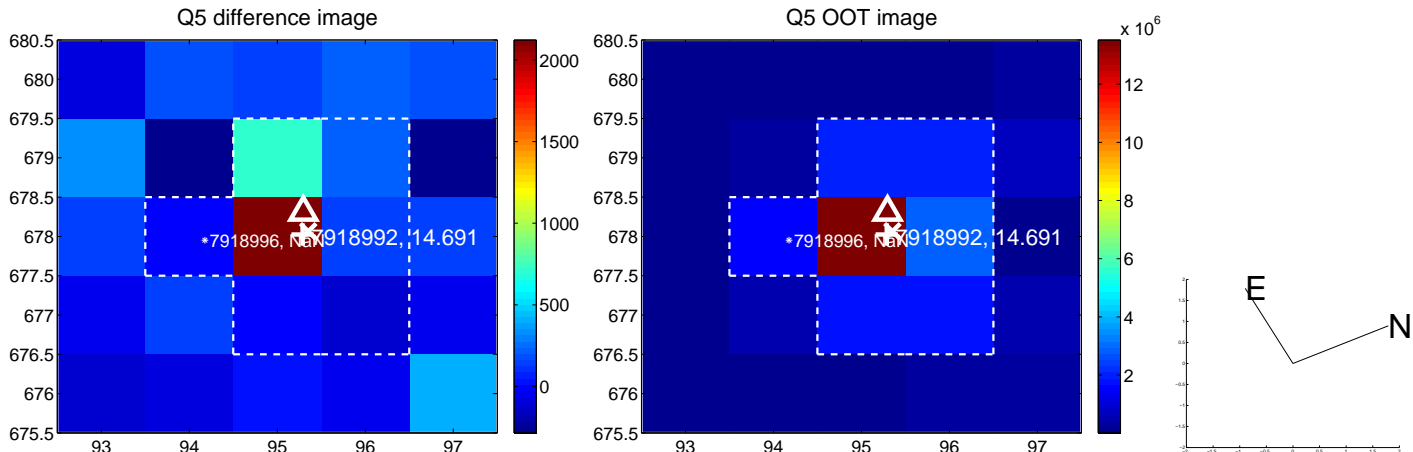


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

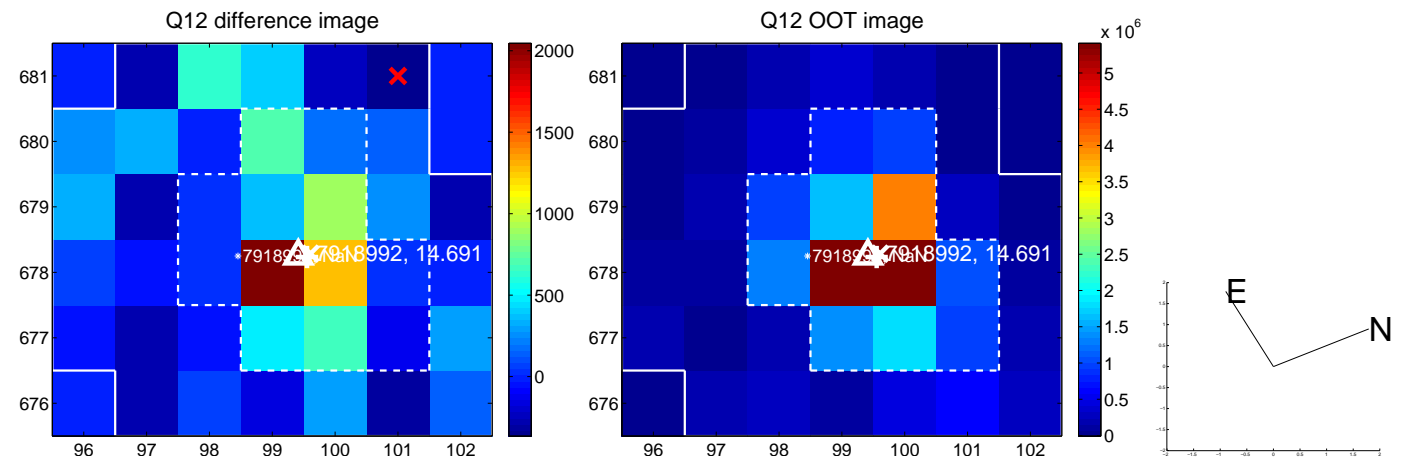
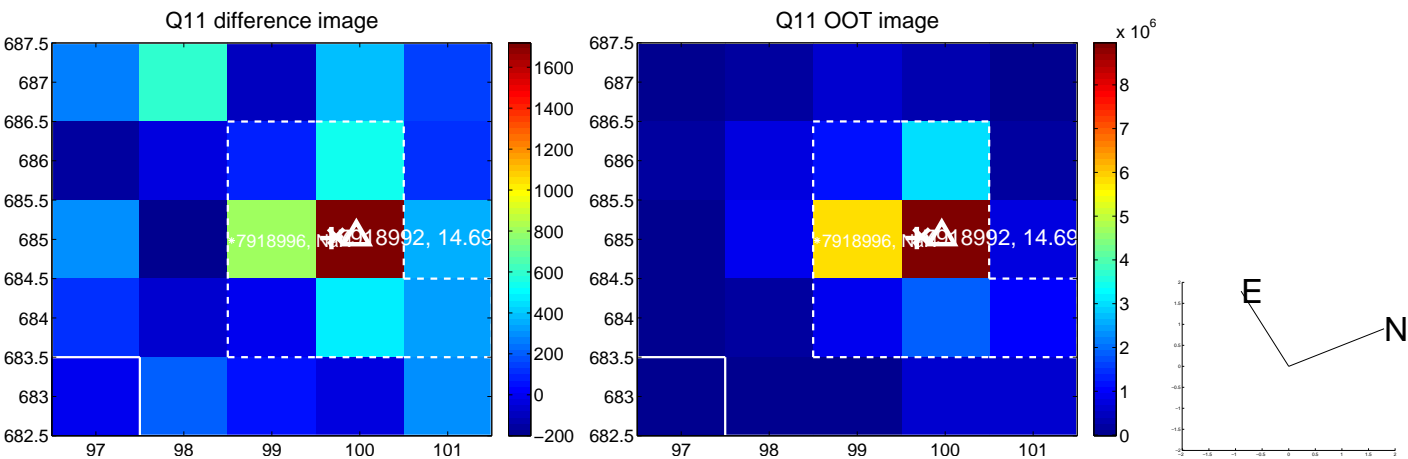
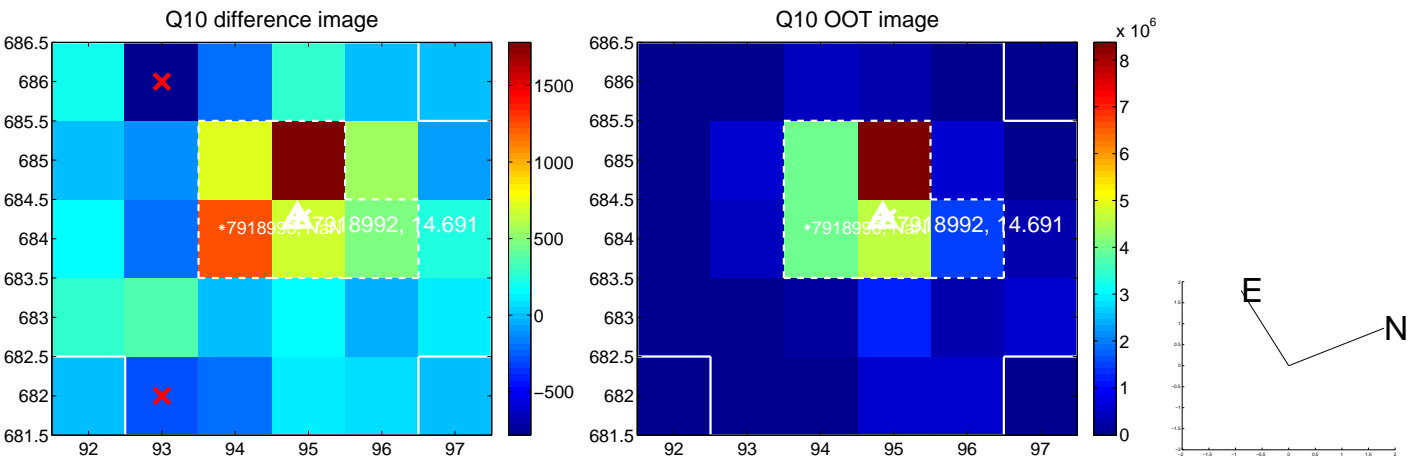
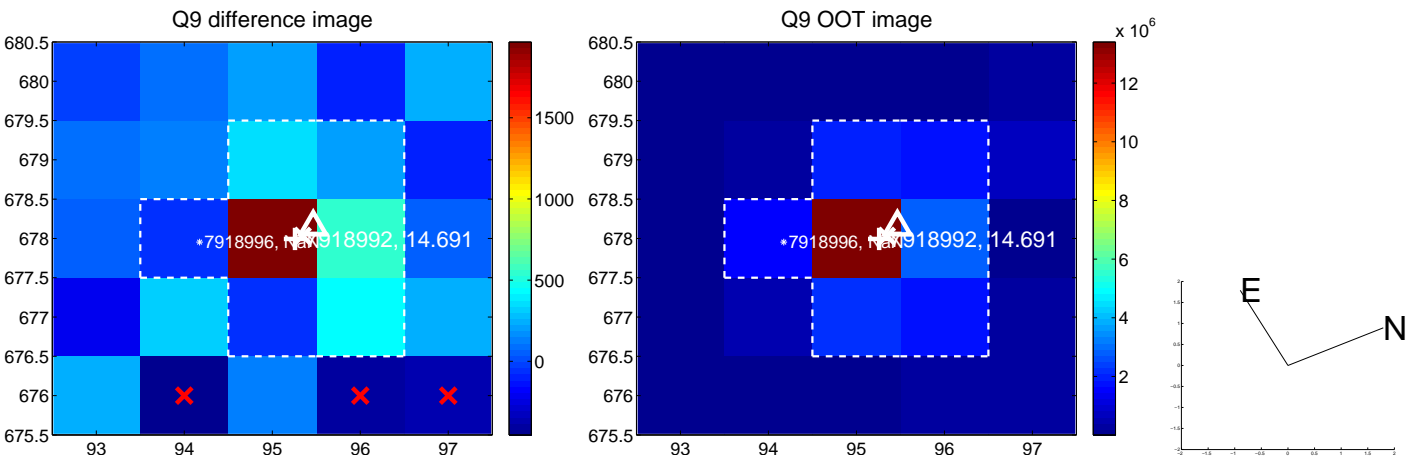


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

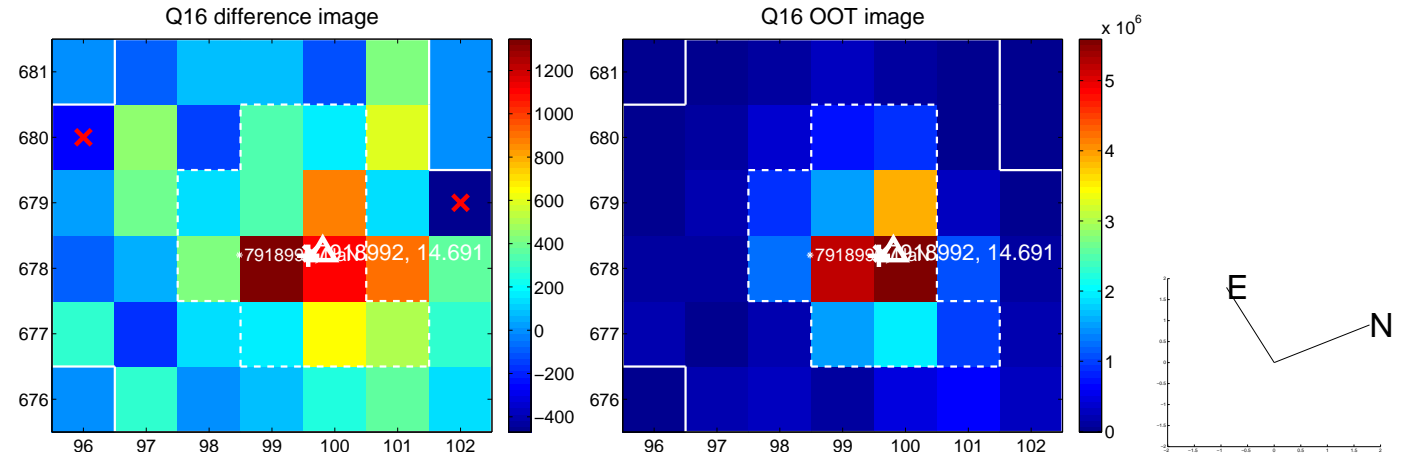
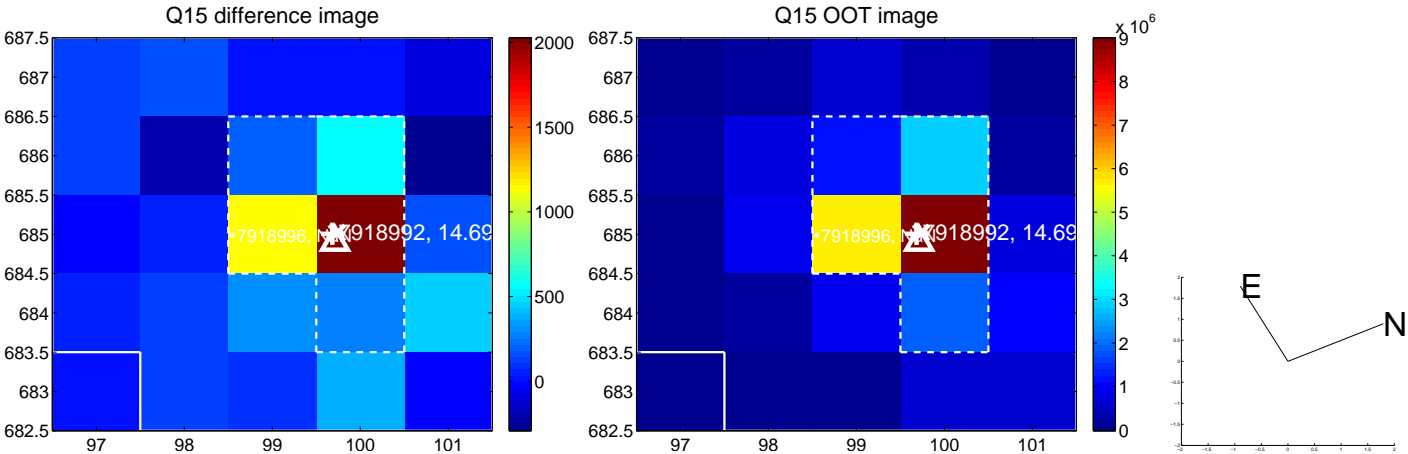
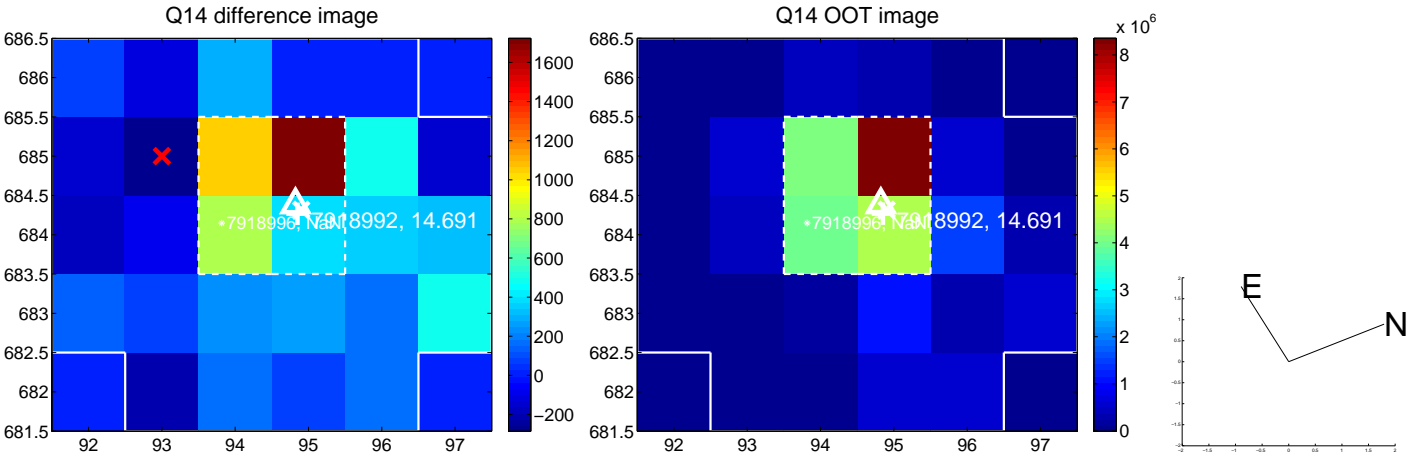
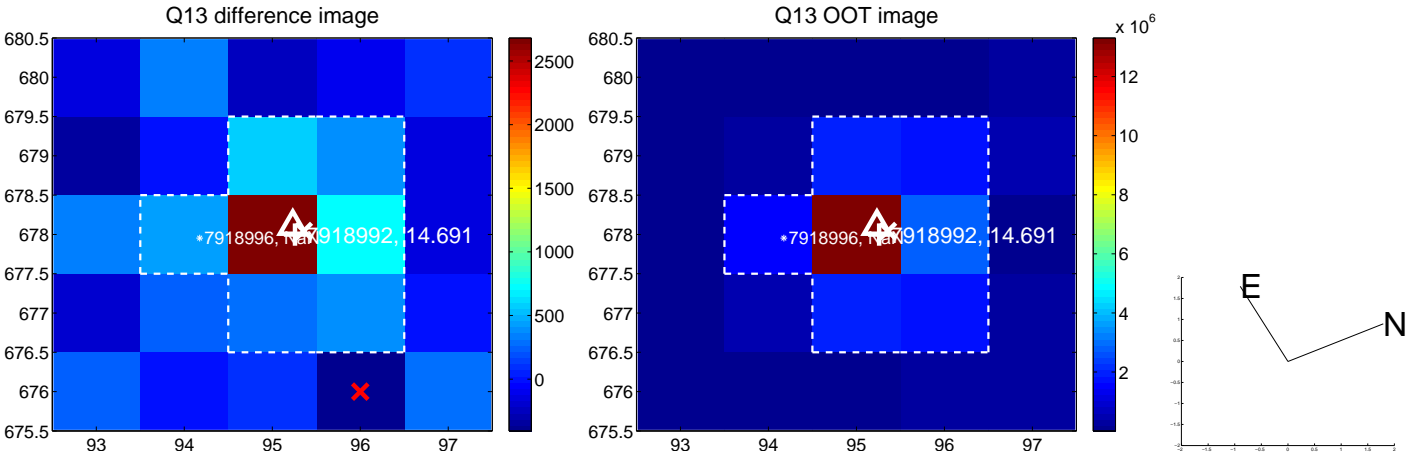




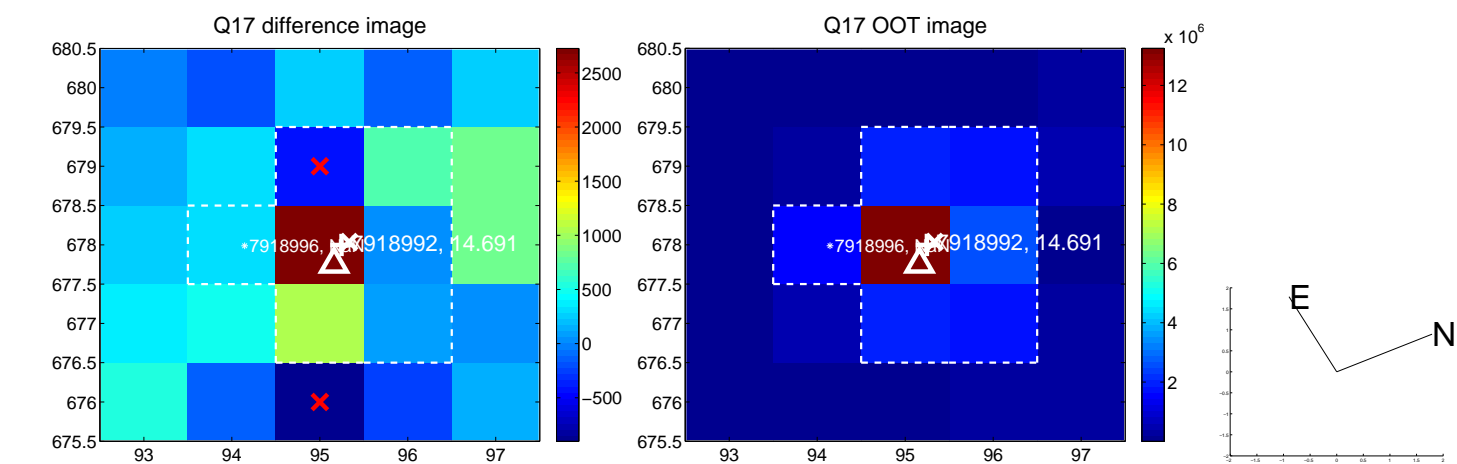
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



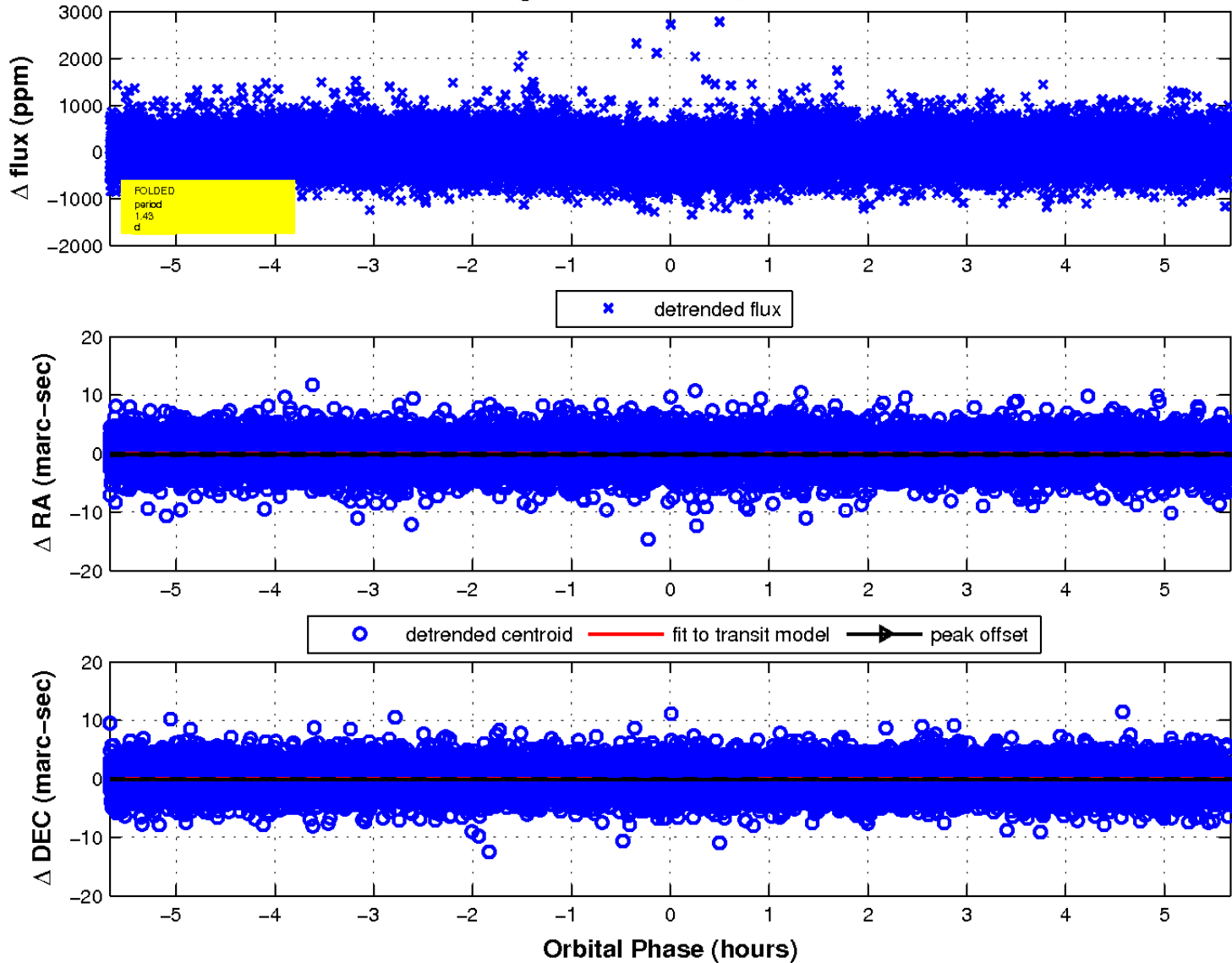
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

