

# KIC 006592832

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006592832-01	OBS	4082.01	0.924792	132.101271	66.4	2.958	17.0	13.8	0.97	6135	0.93	3519.38

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006592832-01	OBS	FP	0.02	0	1	1	0	MOD_SEC_DV—CENT_UNRESOLVED_OFFSET

**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.

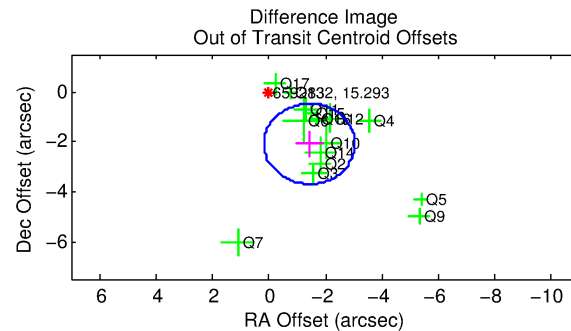
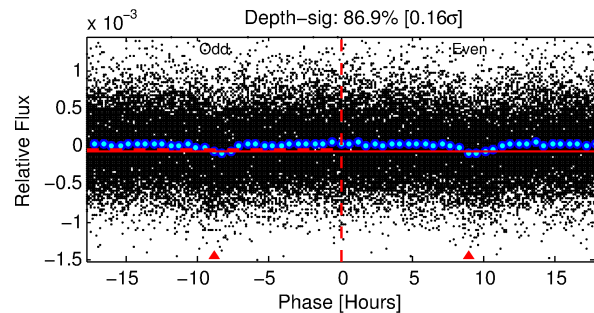
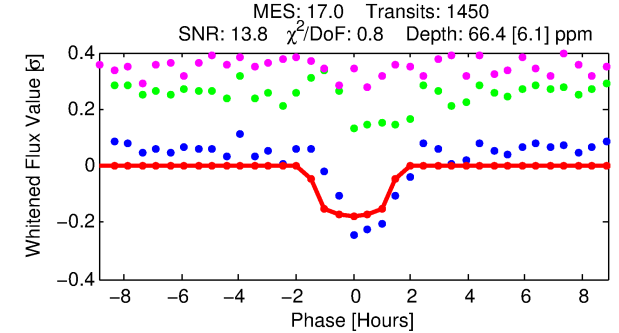
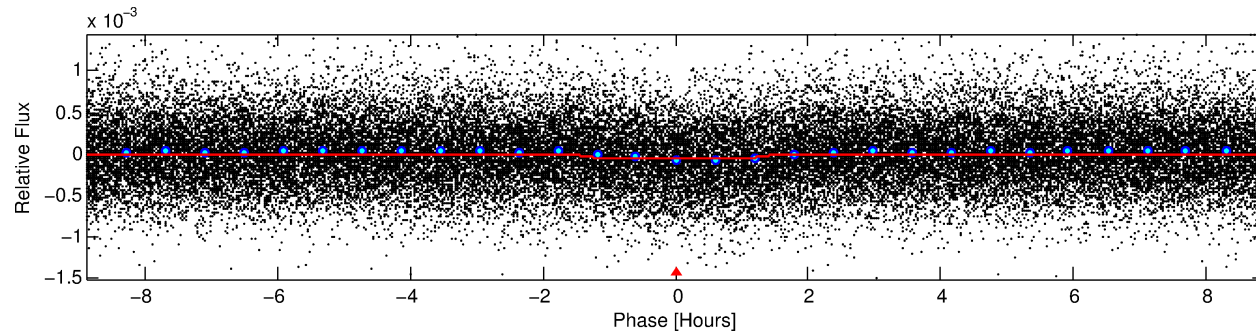
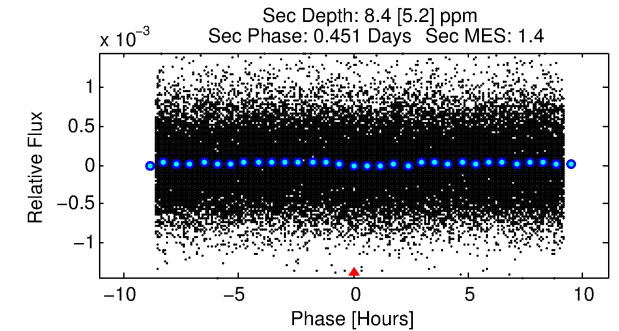
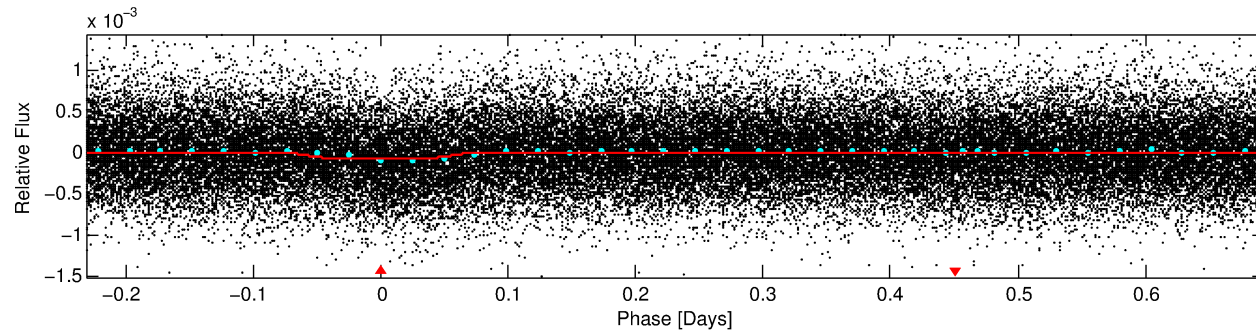
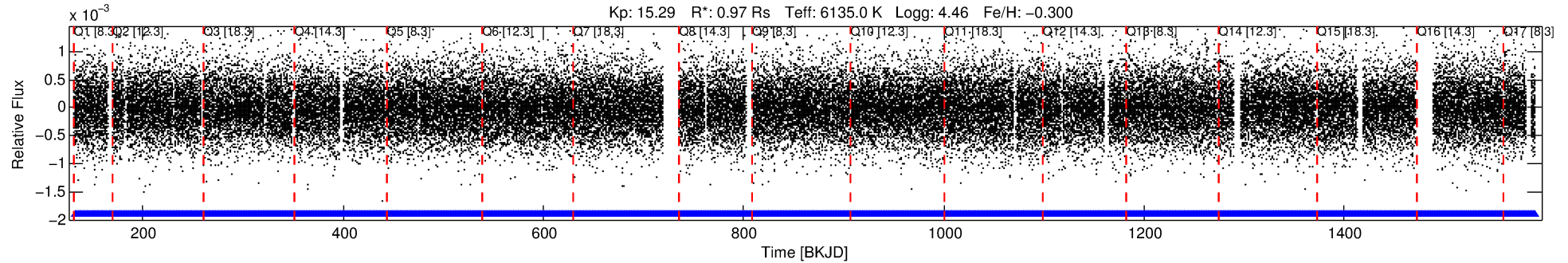
## Ephemeris Match Information For 006592832-01

No Significant Match Found

# DV One-Page Summary

KIC: 6592832 Candidate: 1 of 1 Period: 0.925 d

KOI: K04082.01 Corr: 0.862



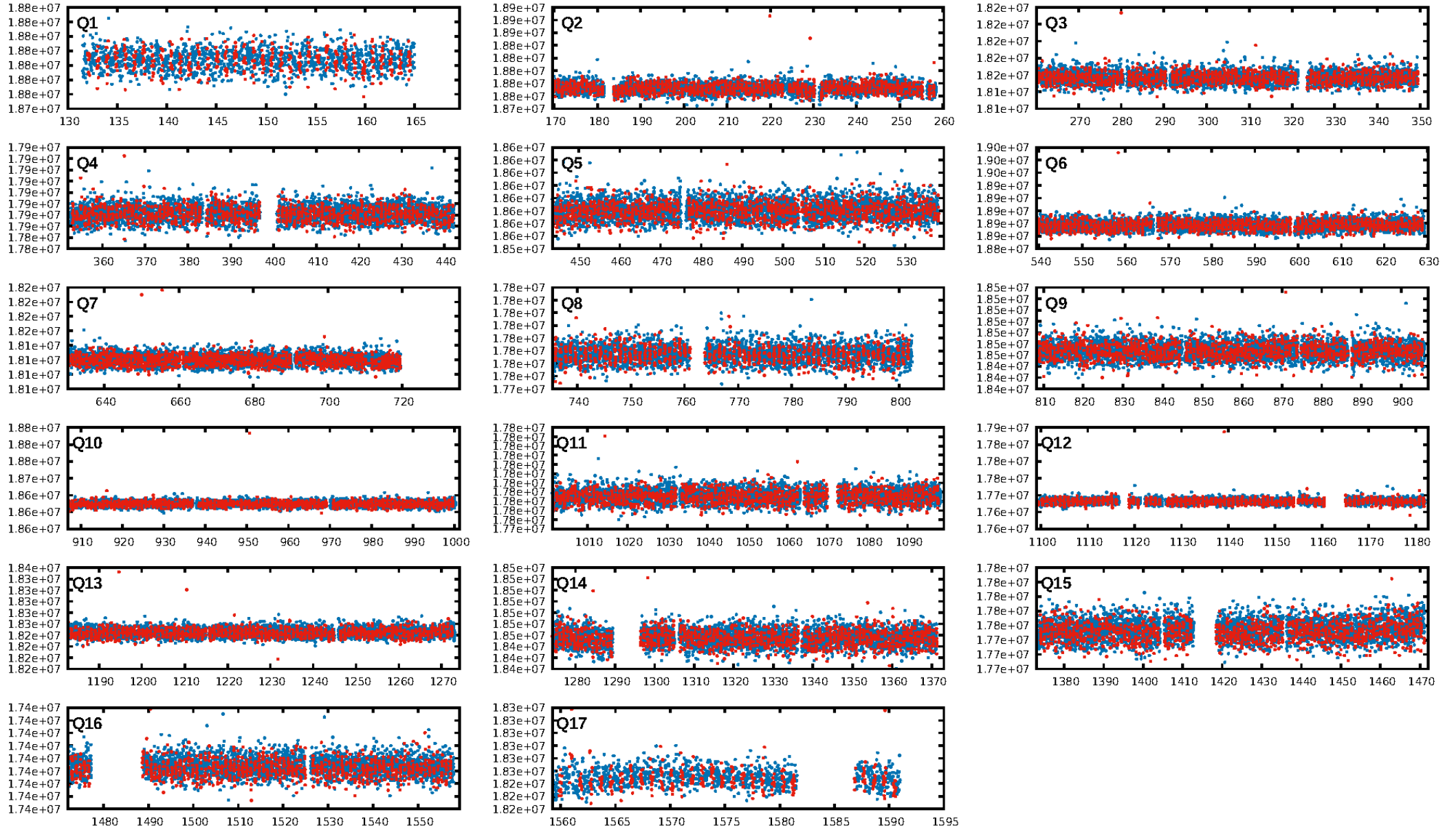
## DV Fit Results:

Period = 0.92479 [0.00001] d  
Epoch = 132.1013 [0.0028] BKJD  
Rp/R\* = 0.0088 [0.0042]  
a/R\* = 1.43 [1.93]  
b = 0.90 [0.56]  
Seff = 3519.38 [1413.51]  
Teq = 1964 [197] K  
Rp = 0.93 [0.53] Re  
a = 0.0185 [0.0048] AU  
Ag = 1.81 [2.19] [0.37σ]  
Teffp = 3524 [1018] K [1.50σ]

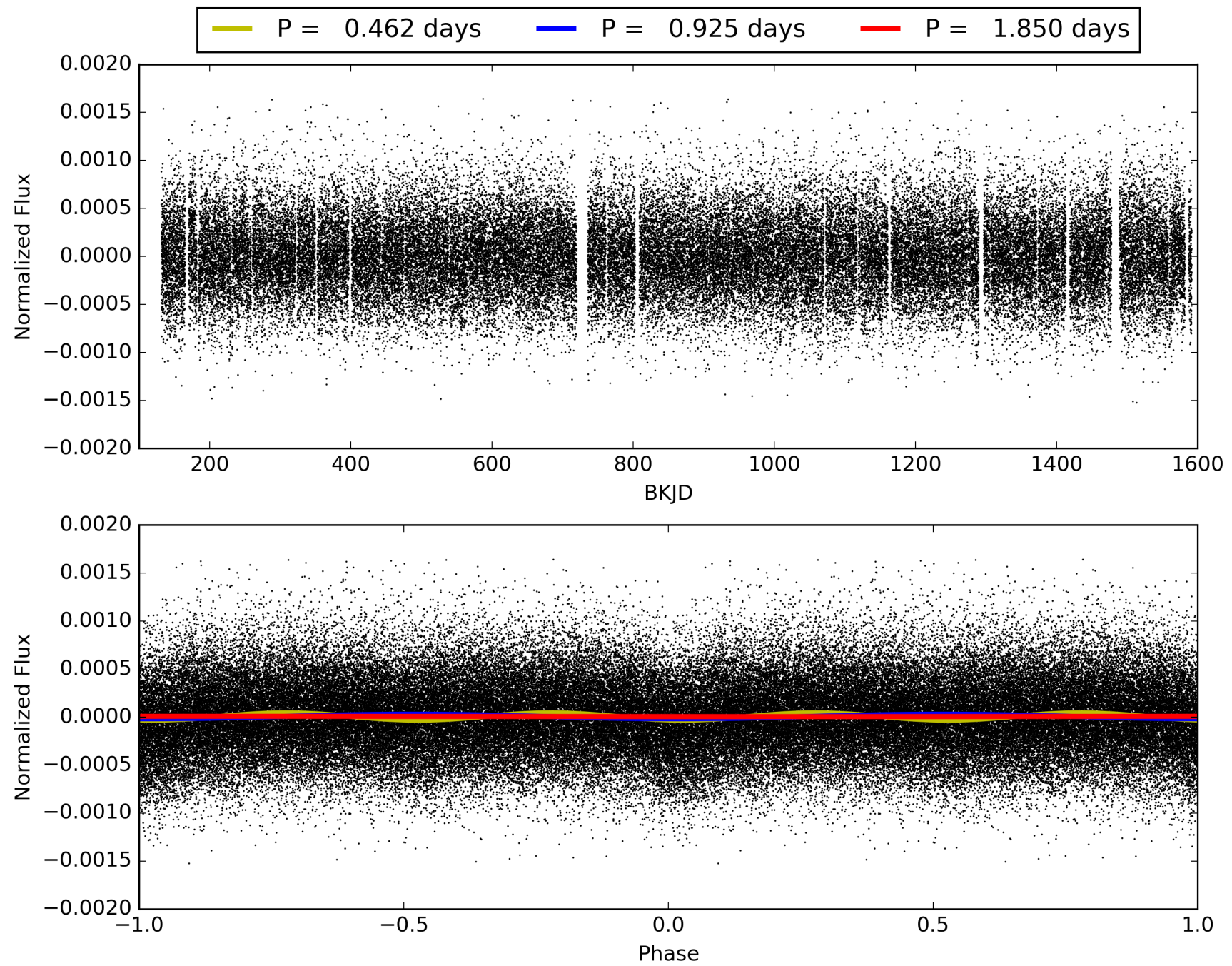
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 9.89e-63  
RollingBand-fgt: 1.00 [1385/1385]  
GhostDiagnostic-chr: 0.4871  
Centroid-sig: 0.0%  
Centroid-so: 4.540 arcsec [4.39σ]  
OotOffset-rm: 2.532 arcsec [4.72σ]  
KicOffset-rm: 2.718 arcsec [5.23σ]  
OotOffset-st: 4/4/3/4 [15]  
KicOffset-st: 4/4/3/4 [15]  
DiffImageQuality-fgm: 0.80 [12/15]  
DiffImageOverlap-fno: 1.00 [17/17]

# TCE 006592832-01, PDC Light Curves



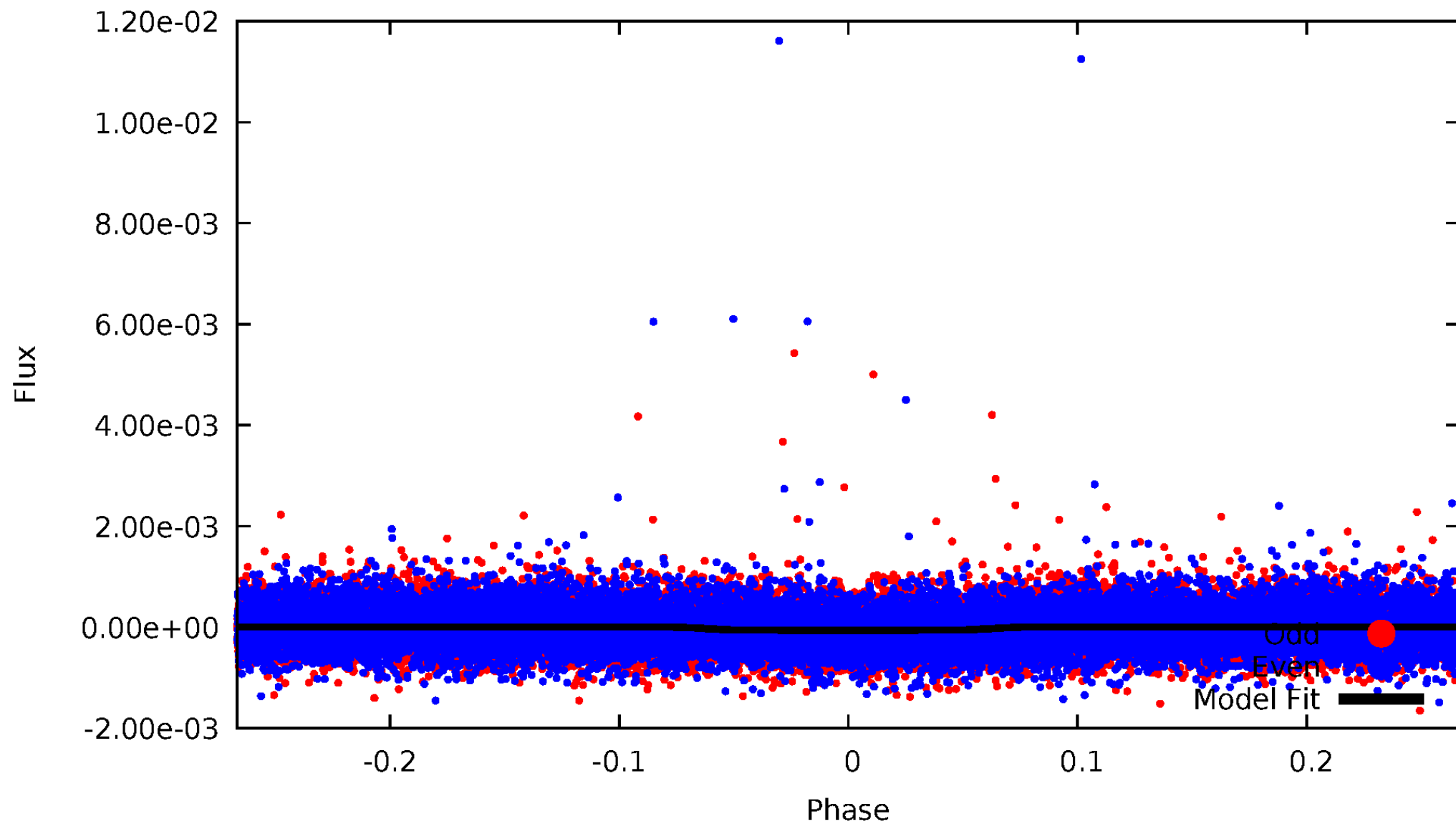
TCE 006592832-01





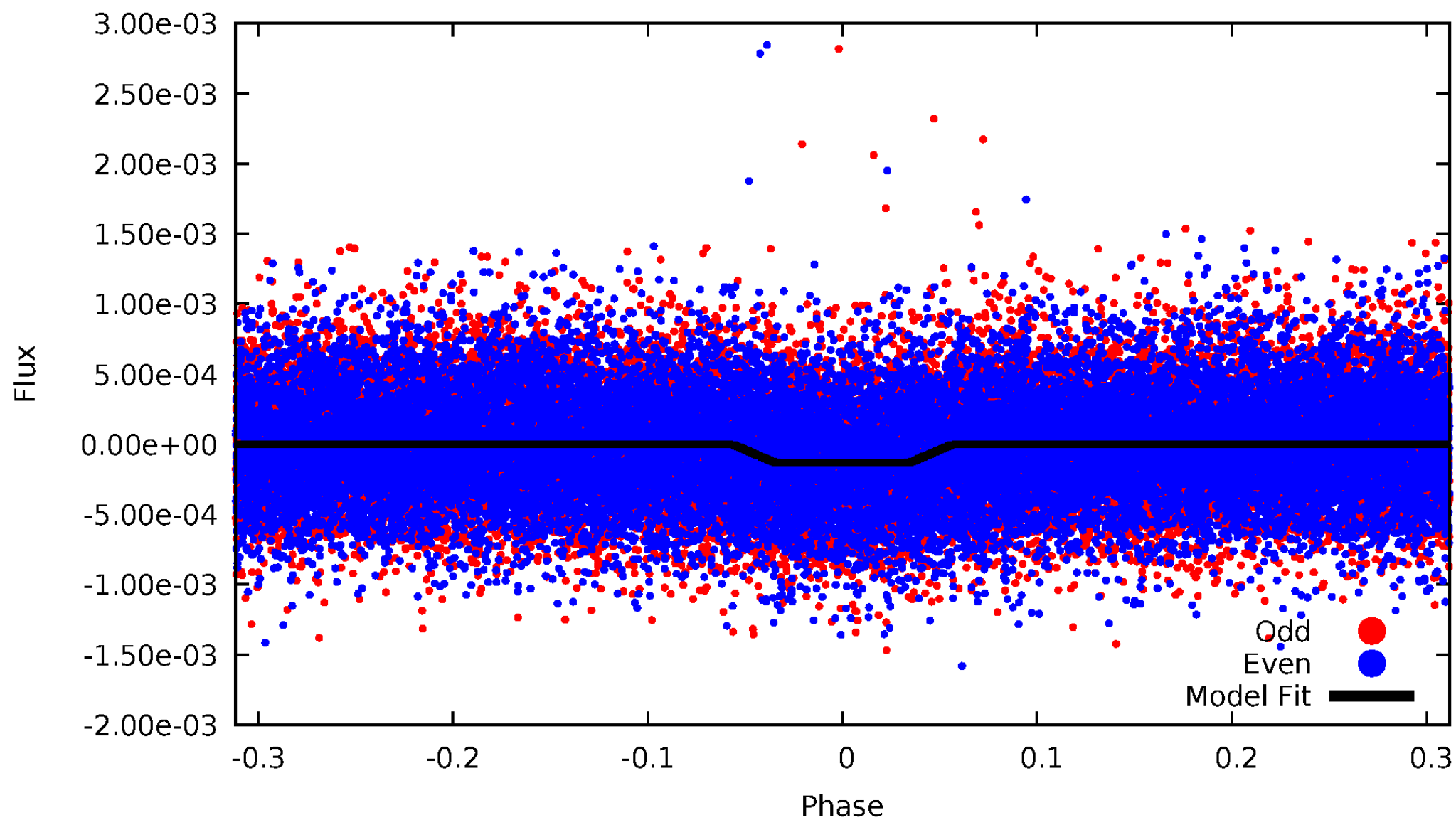
# DV Odd/Even

TCE 006592832-01



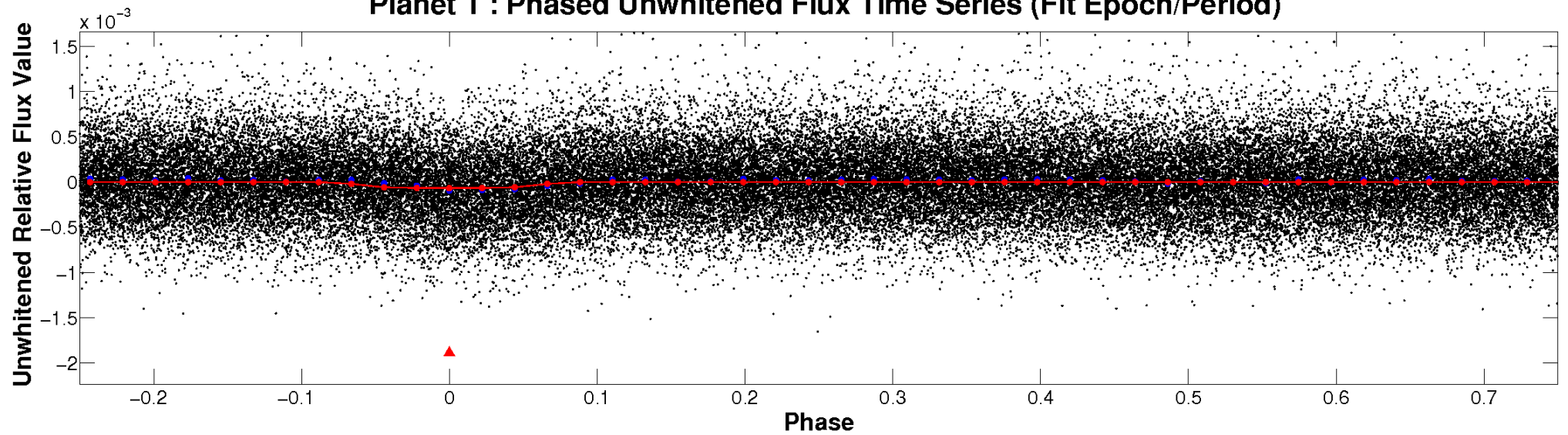
# ALT Odd/Even

TCE 006592832-01

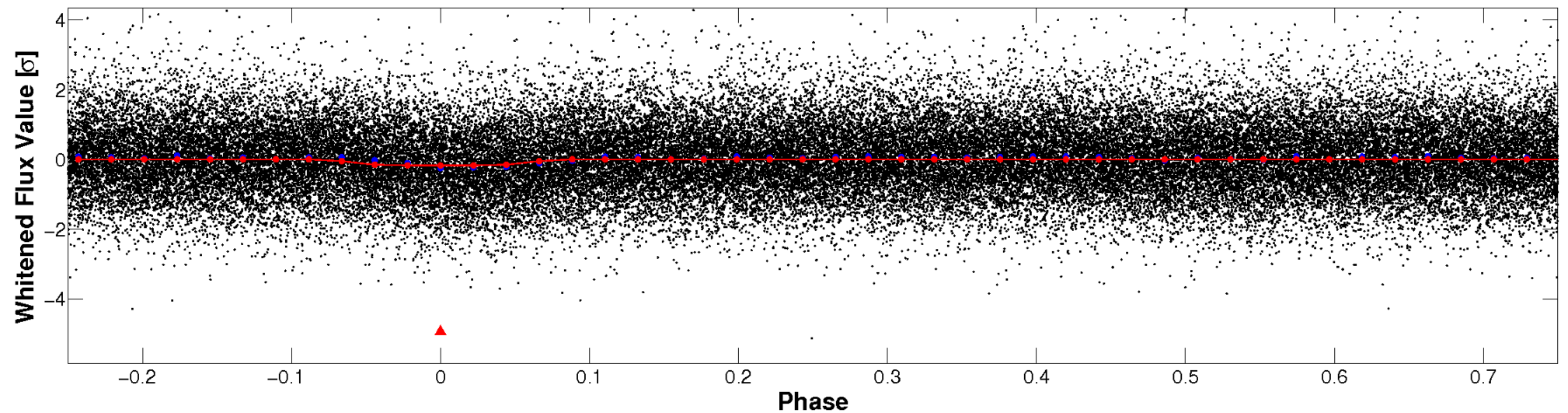


# Non-Whitened Vs. Whitened Light Curve

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

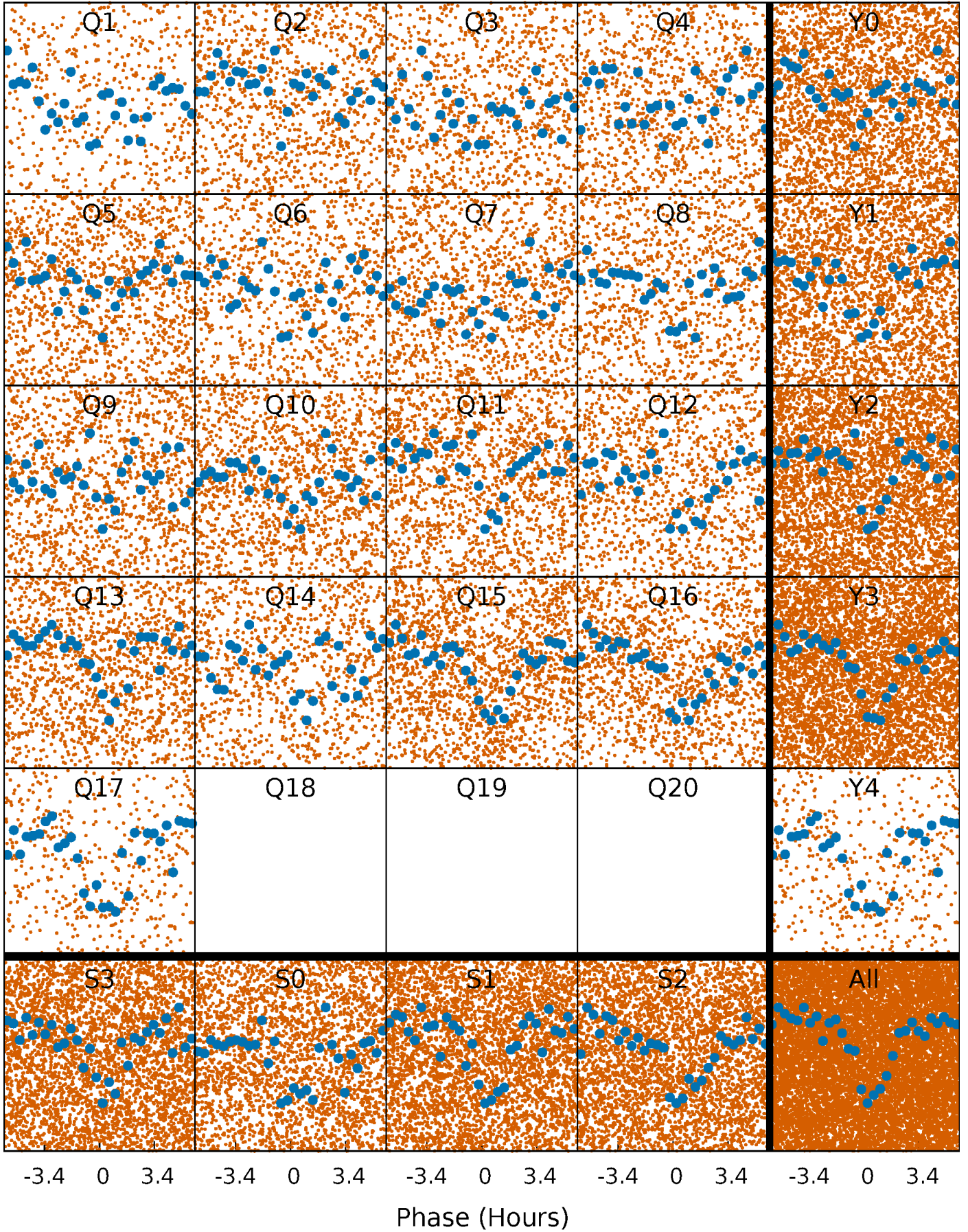


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

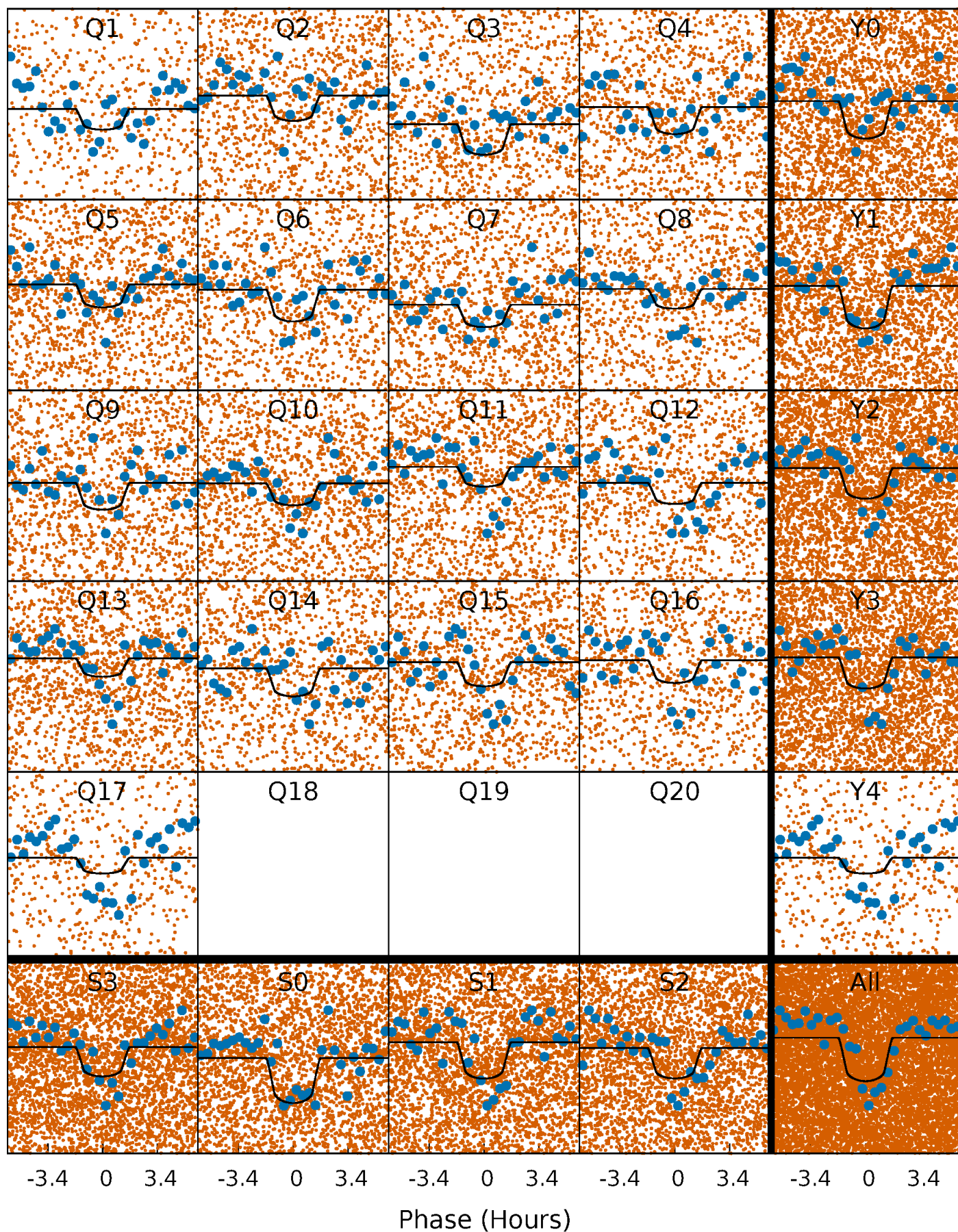
TCE 006592832-01 P= 0.924792 Days  $T_0=132.101271$  (BKJD)





# DV Quarter-Phased Transit Curves

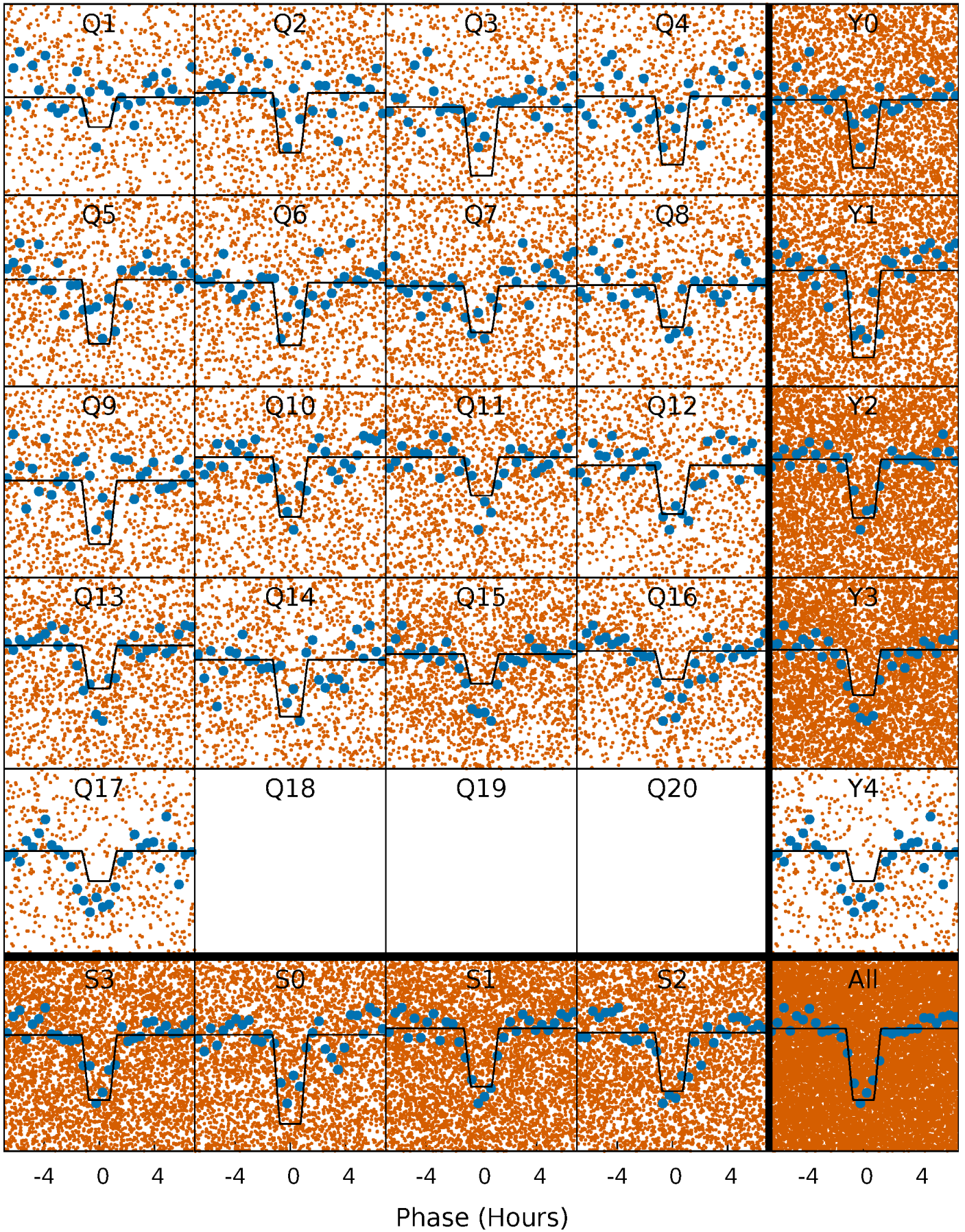
TCE 006592832-01   P= 0.924792 Days    $T_0=132.101271$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

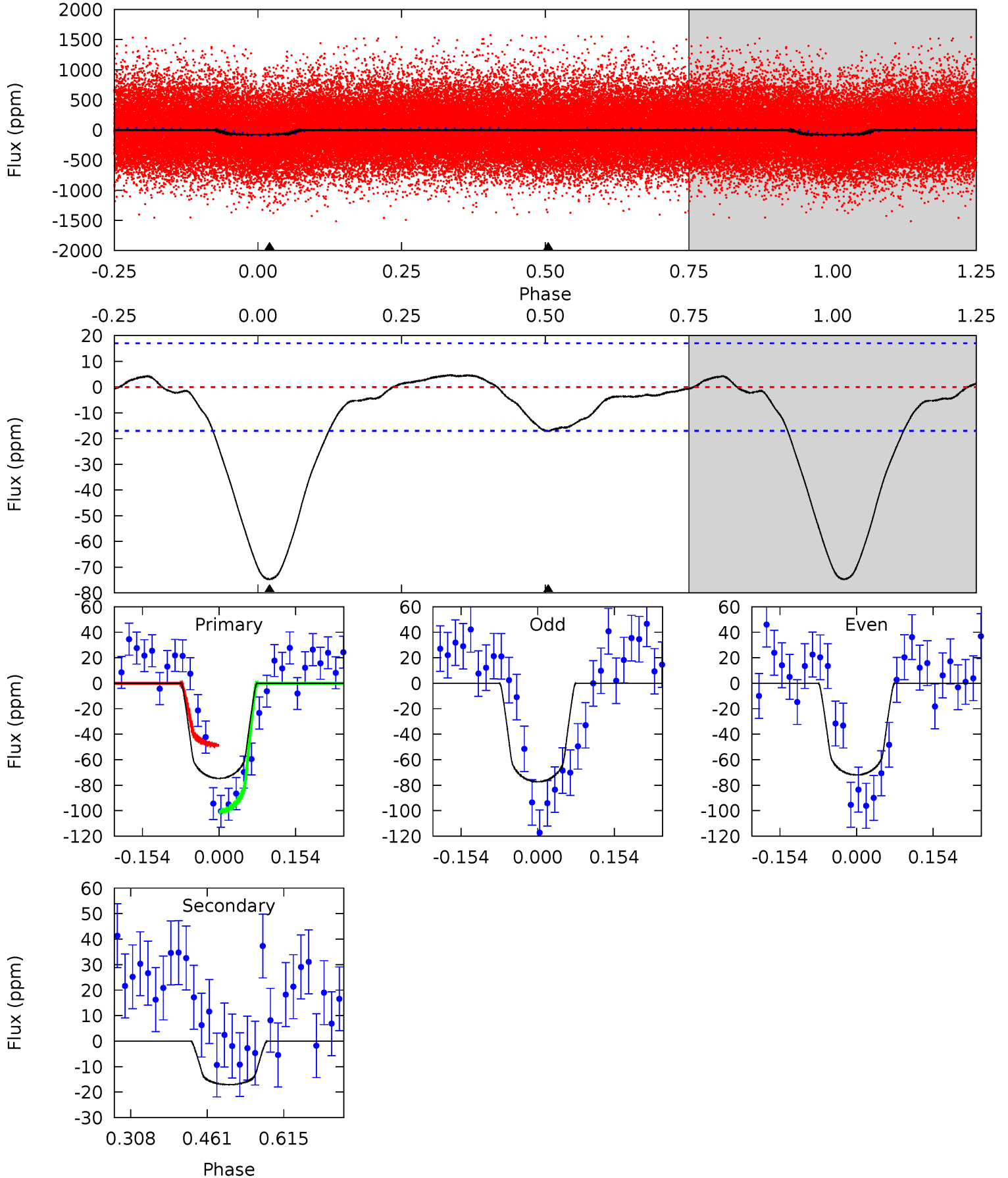
TCE 006592832-01 P= 0.924816 Days  $T_0=132.095302$  (BKJD)



# DV Model-Shift Uniqueness Test

006592832-01, P = 0.924792 Days, E = 131.176479 Days

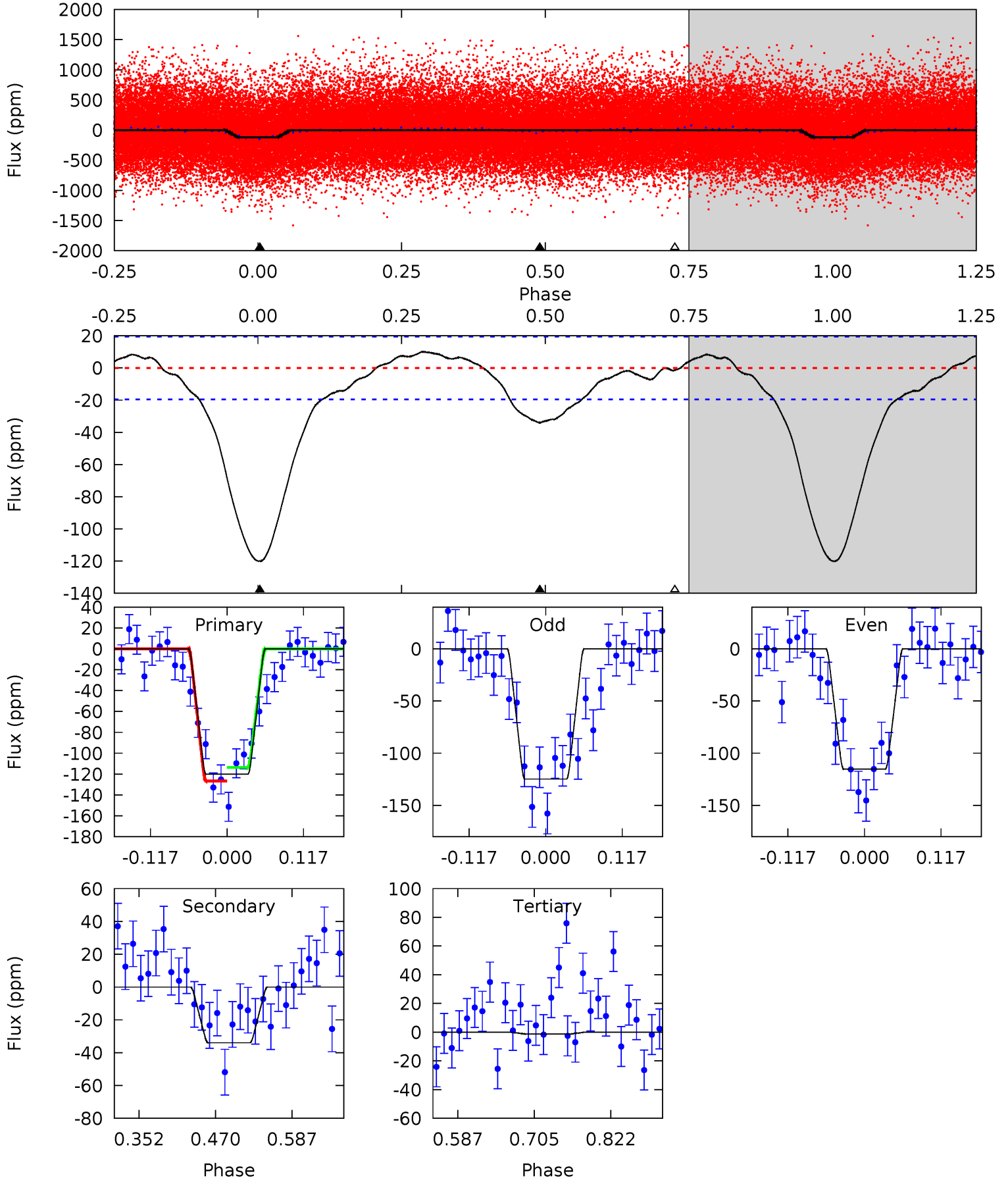
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	4.49	0	0	4.47	1.43	0.79	19.6	19.6	4.49	4.49	0.70	0.91	0.06	6.82



# Alt Model-Shift Uniqueness Test

006592832-01, P = 0.924816 Days, E = 131.170486 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
27.9	7.88	0.31	0	4.53	1.57	1.66	27.6	27.9	7.57	7.88	1.10	1.01	0.08	1.50





### Stellar Parameters For KIC 006592832

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6135^{+183}_{-201}$	$4.455^{+0.070}_{-0.210}$	$-0.300^{+0.300}_{-0.300}$	$0.974^{+0.293}_{-0.104}$	$0.987^{+0.140}_{-0.115}$	$1.503^{+0.522}_{-0.747}$
	+3%/-3%	+2%/-5%	+100%/-100%	+30%/-11%	+14%/-12%	+35%/-50%
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 006592832-01 / KOI 4082.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-17 \pm 4$	$0.98^{+0.52}_{-0.44}$	$2795^{+200}_{-146}$	$4304^{+1231}_{-647}$	$3.257^{+6.836}_{-1.843}$
Alt.	$-34 \pm 4$	$1.23^{+0.55}_{-0.46}$	$2779^{+190}_{-132}$	$4468^{+1115}_{-575}$	$4.038^{+6.811}_{-2.099}$

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

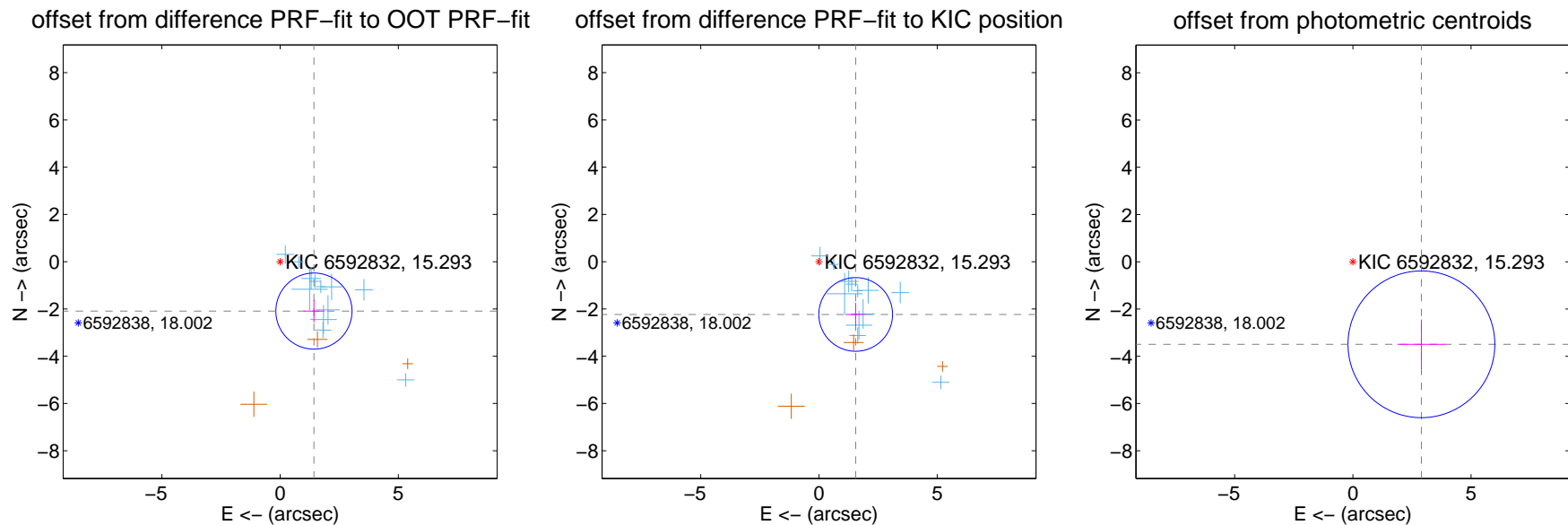
## DV Centroid Data

Supplemental centroid analysis for 006592832-01. Kepler magnitude: 15.29. Transit SNR 13.77

There are 12 quarters with good PRF difference image offsets

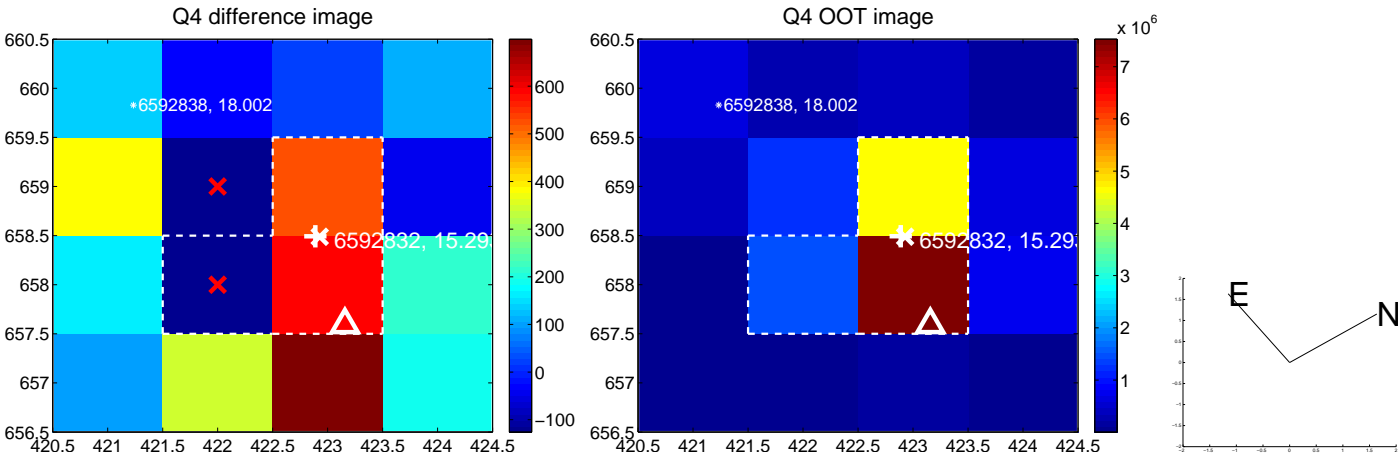
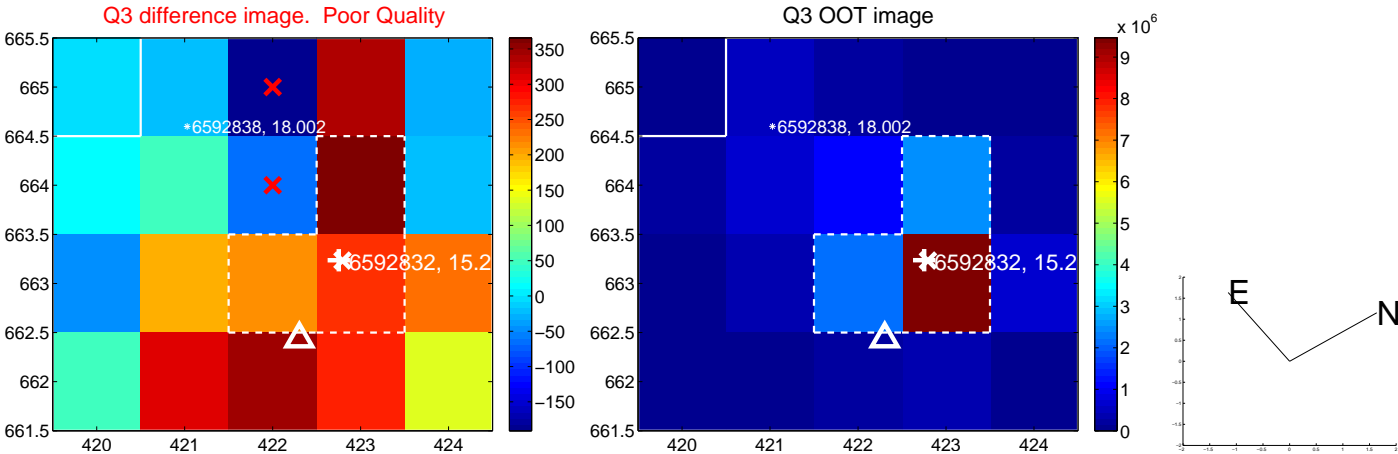
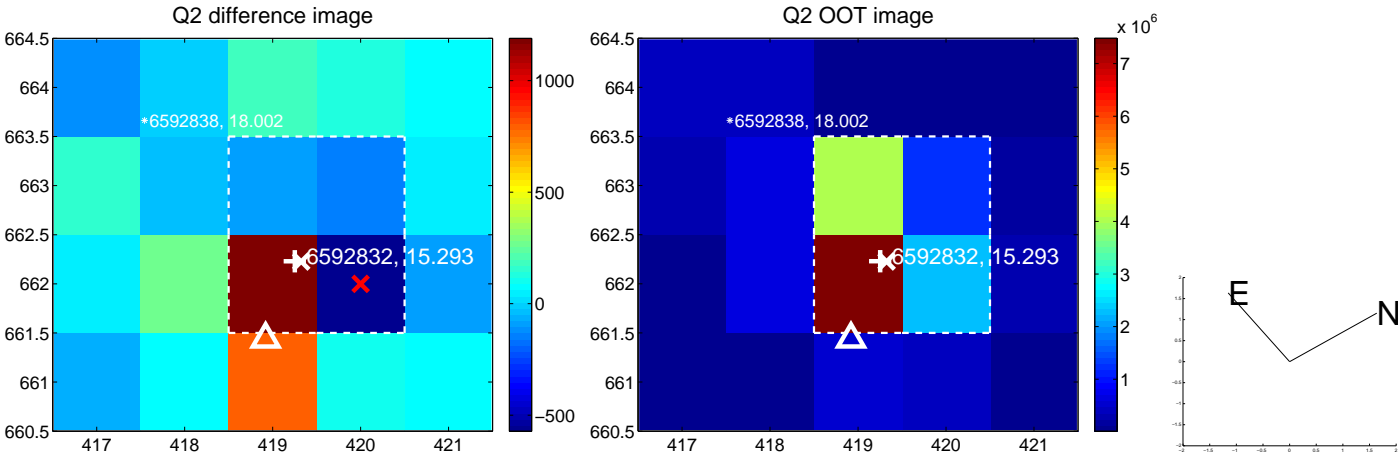
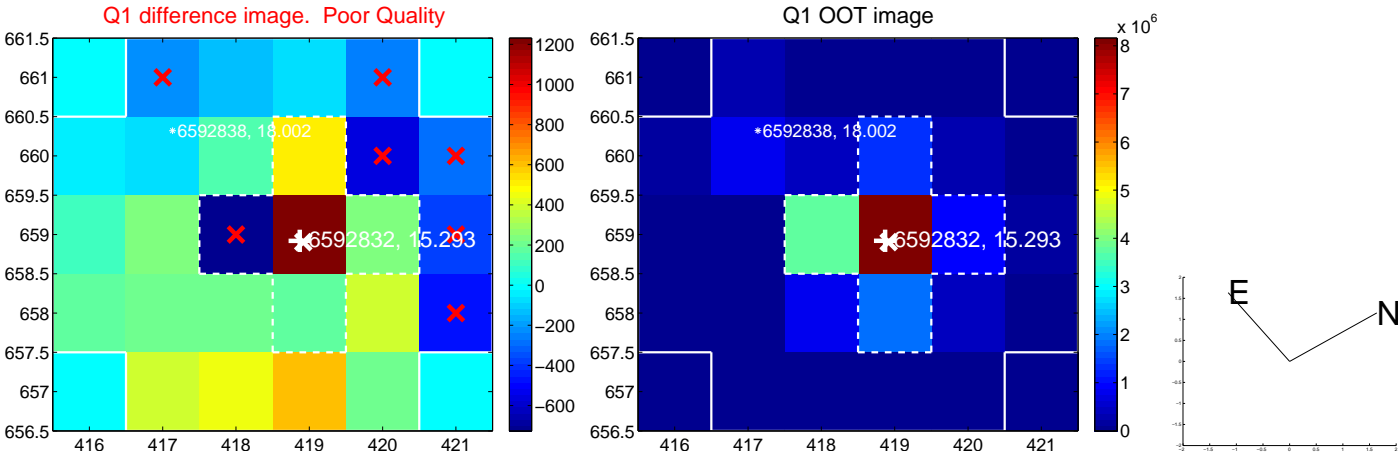
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.532 \pm 0.537$	$4.72$	$-1.430 \pm 0.443$	$-2.090 \pm 0.477$
PRF-fit source offset from KIC position	$2.718 \pm 0.520$	$5.23$	$-1.552 \pm 0.423$	$-2.232 \pm 0.490$
photometric centroid source offset	$4.54 \pm 1.04$	$4.39$	$-2.90 \pm 1.01$	$-3.49 \pm 1.05$

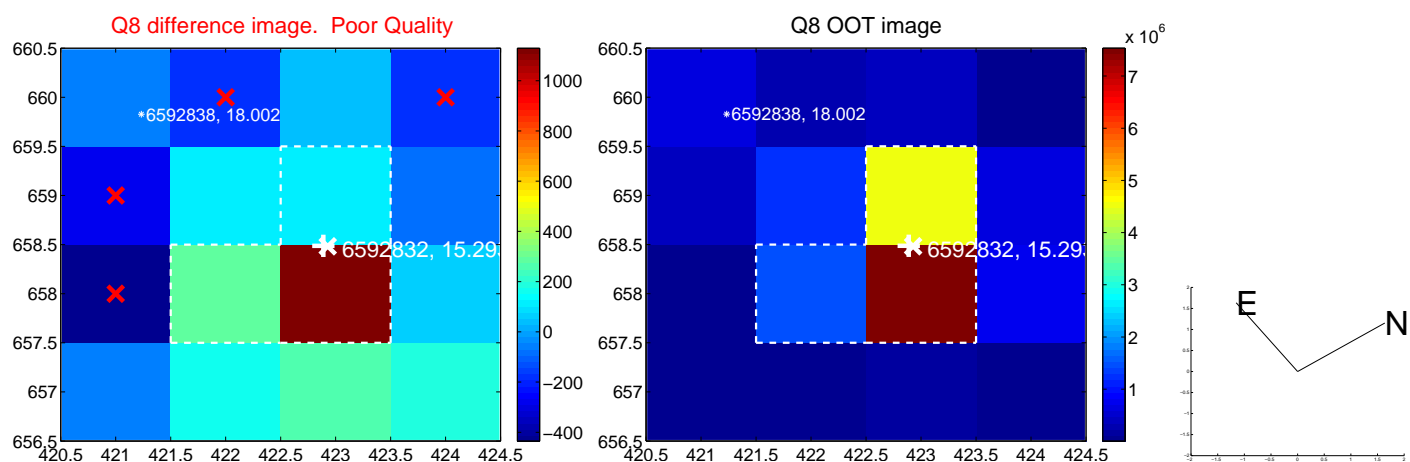
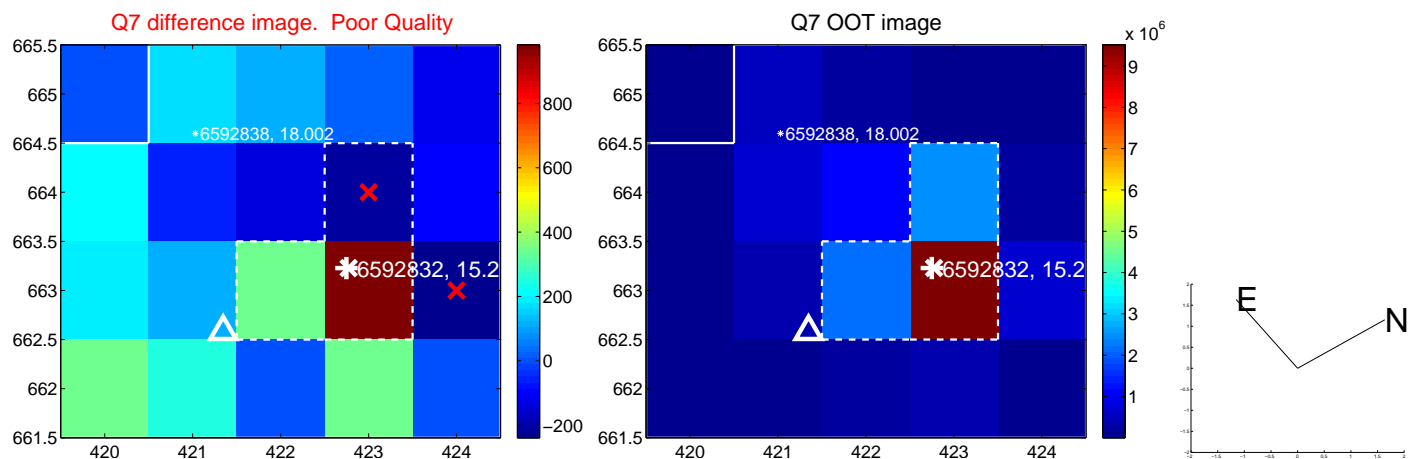
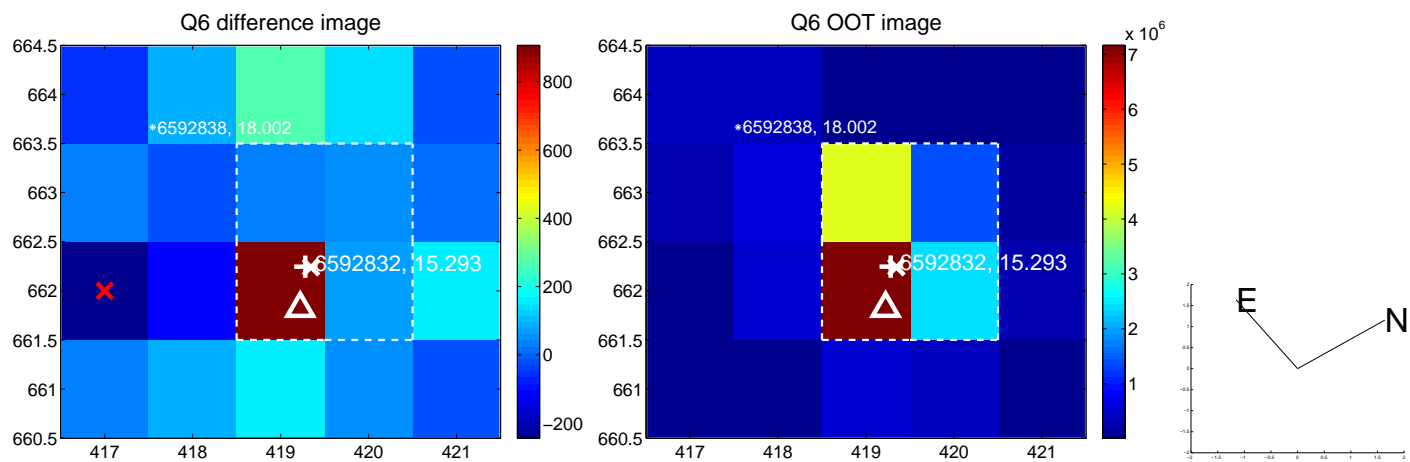
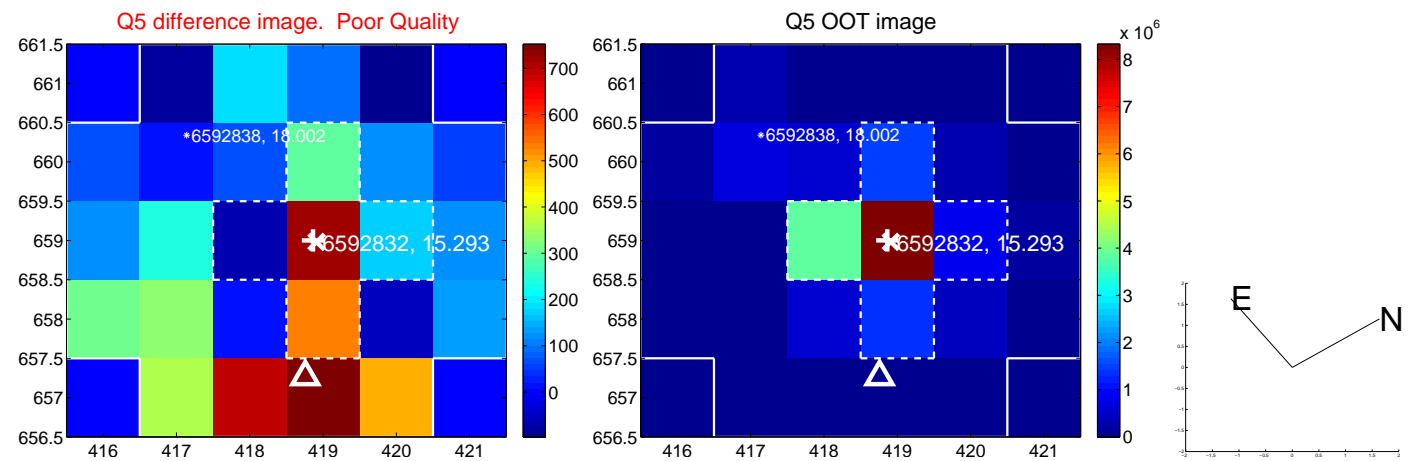


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

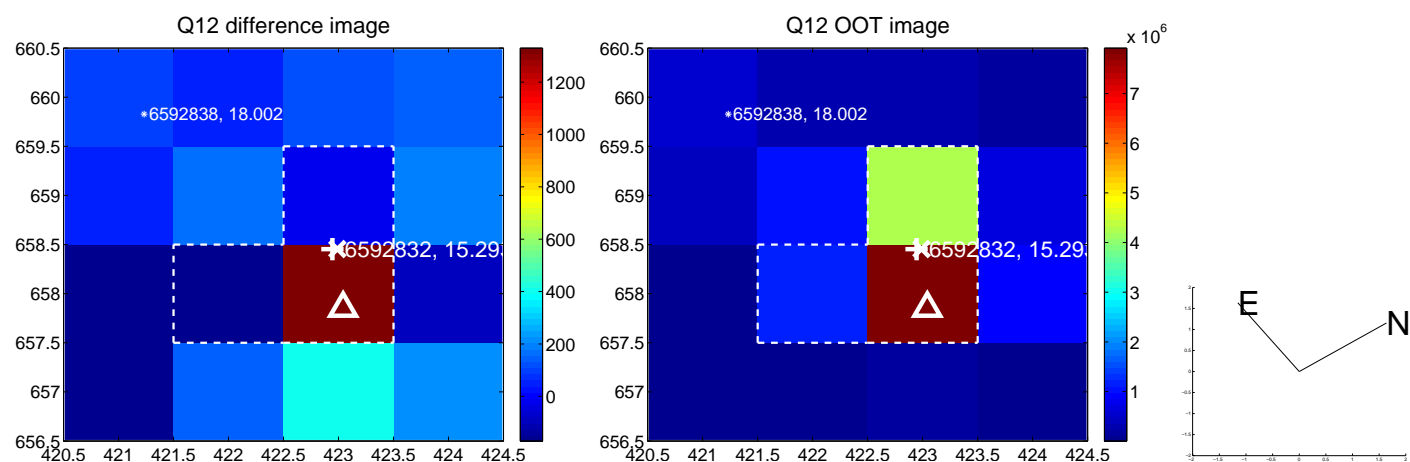
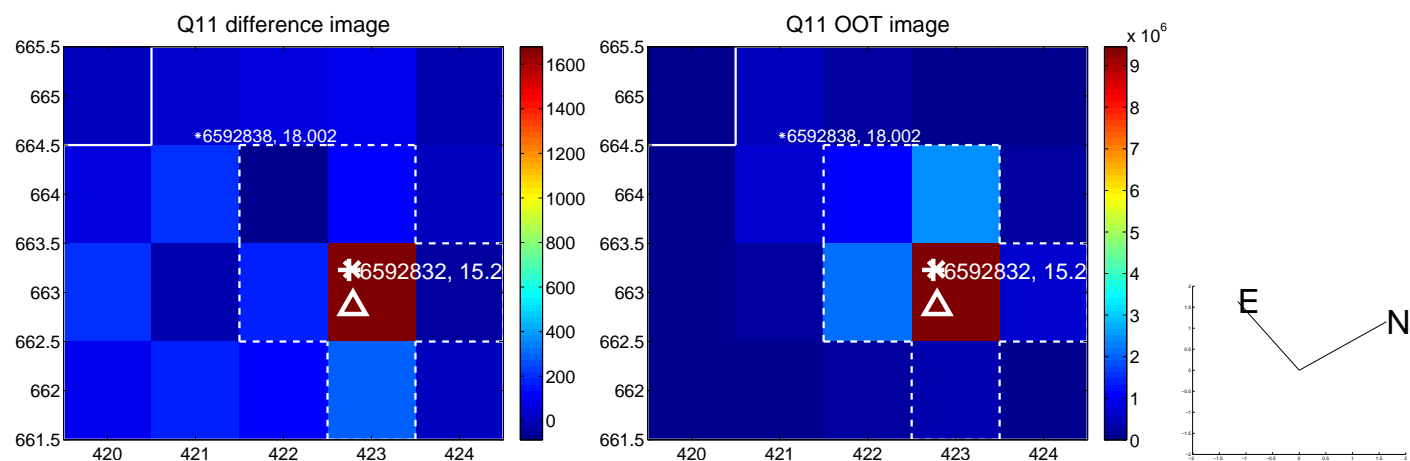
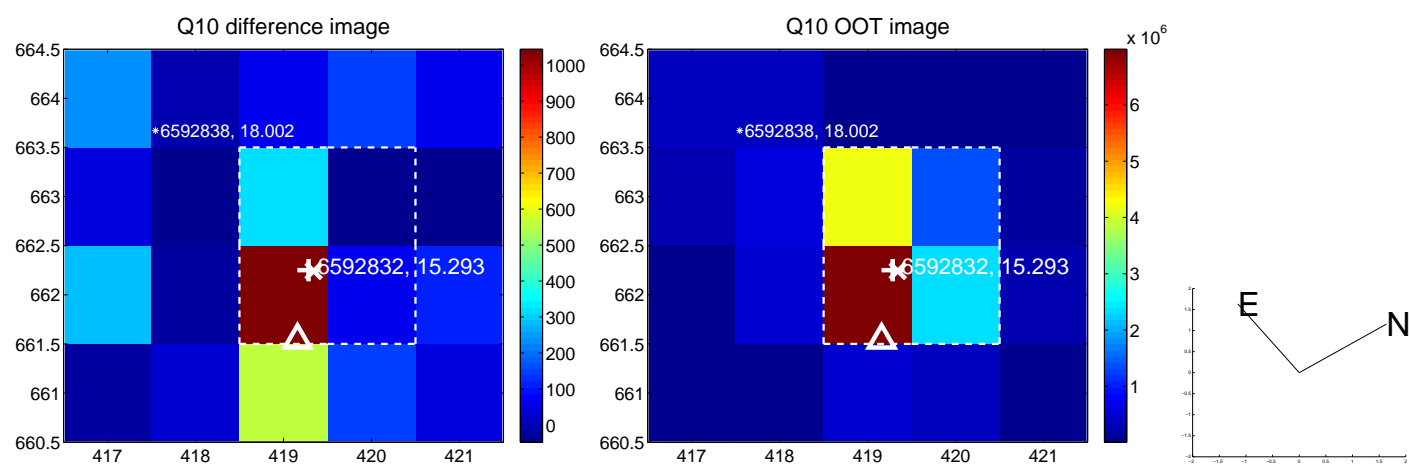
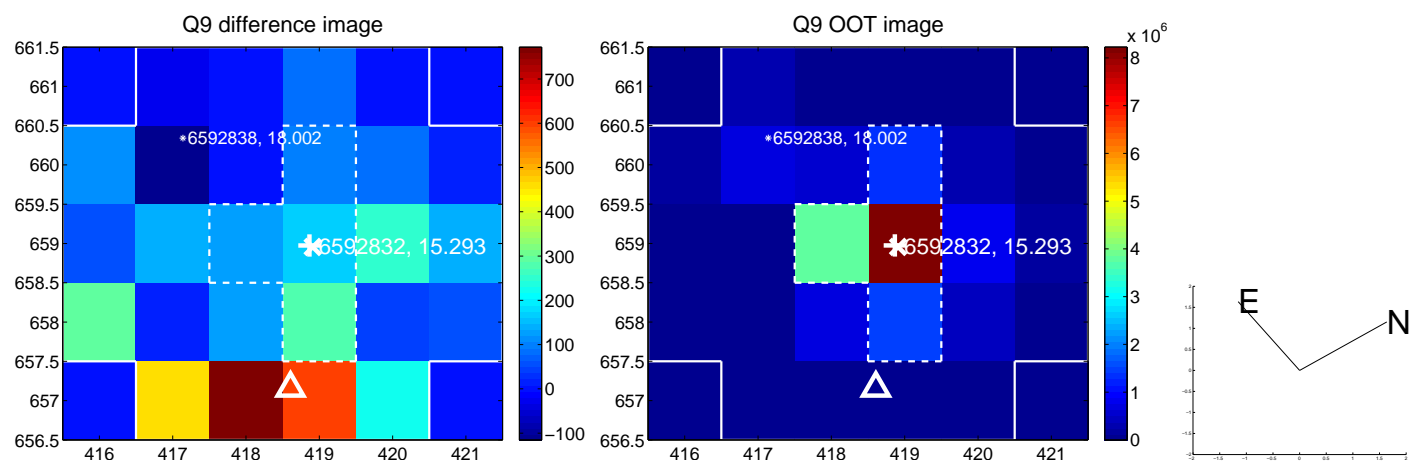


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

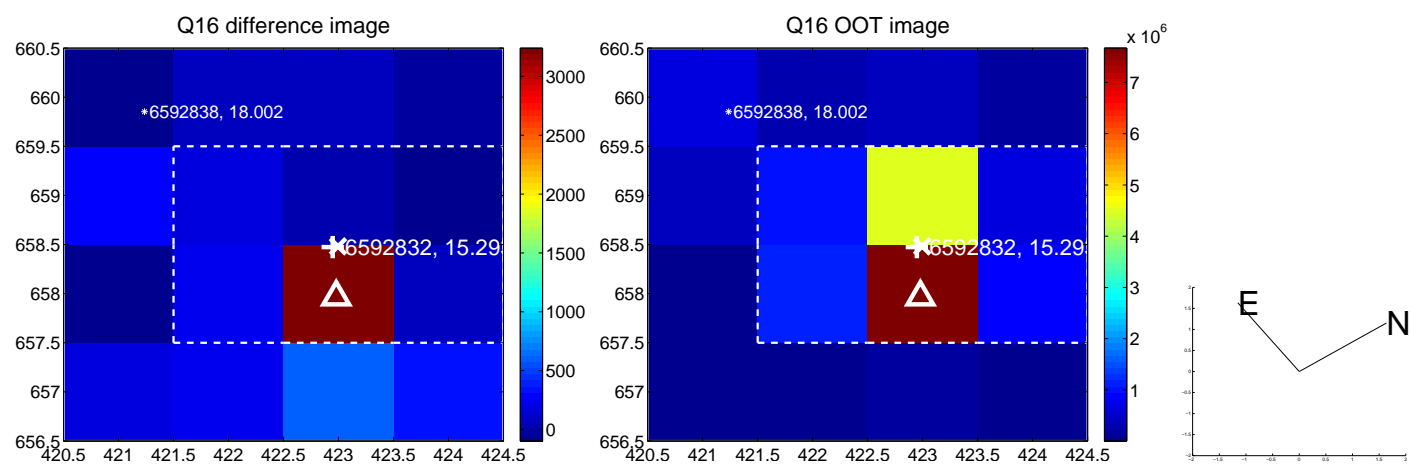
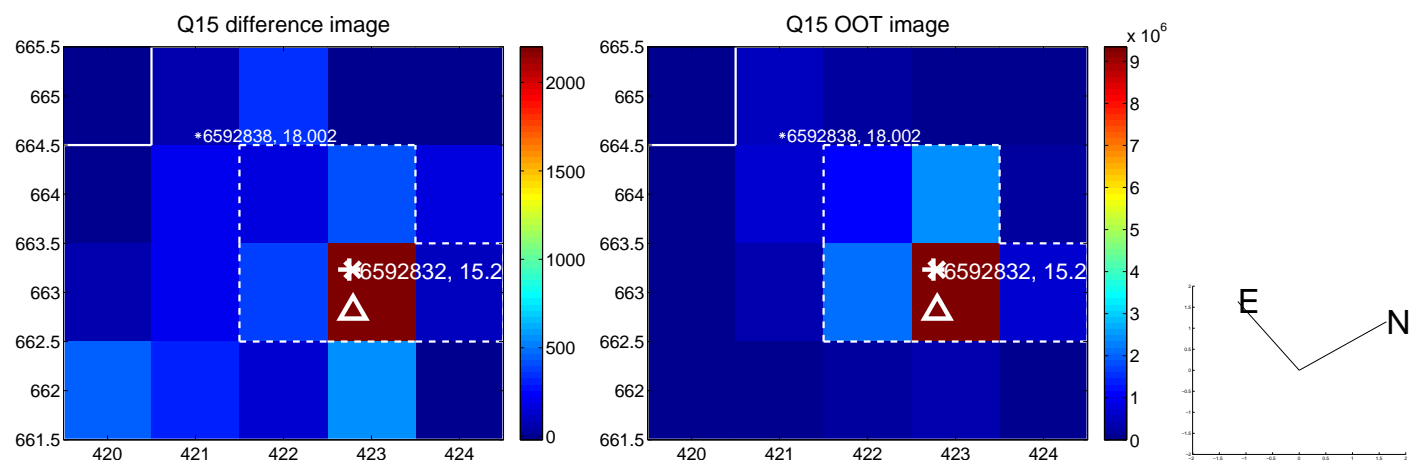
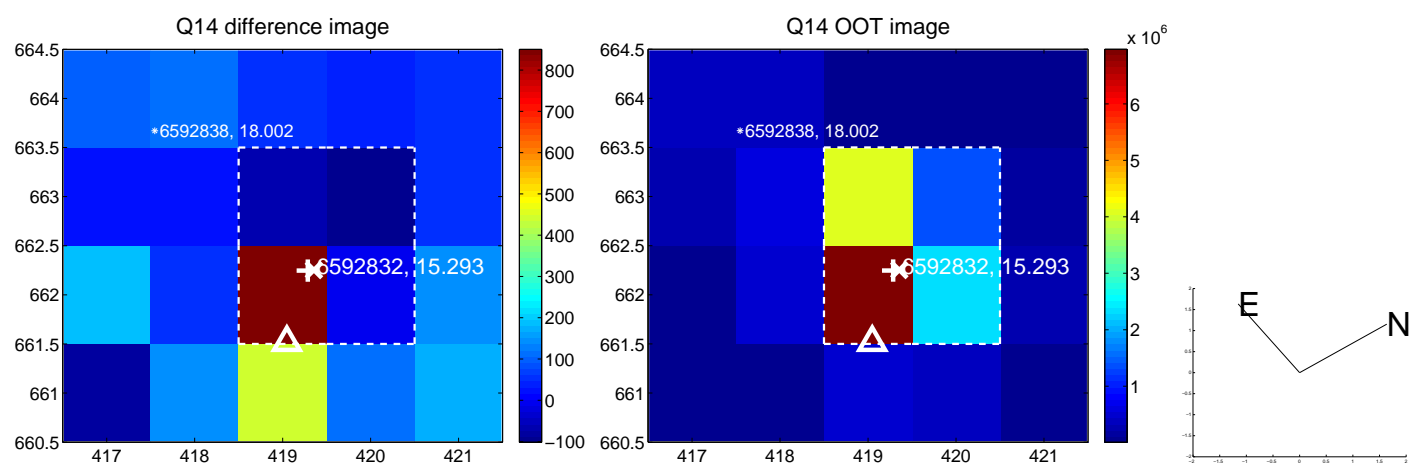
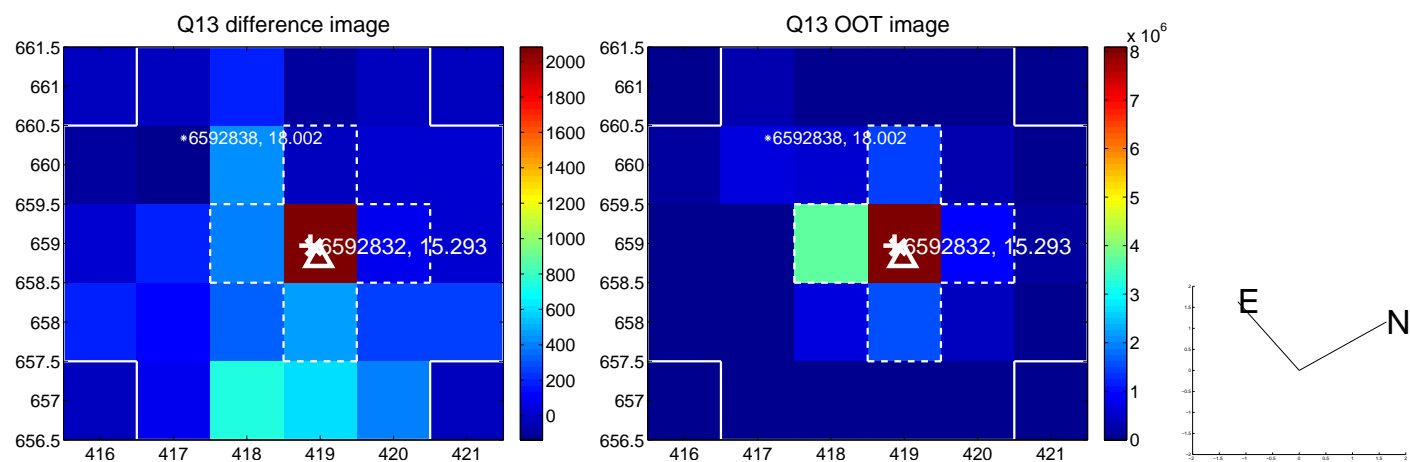




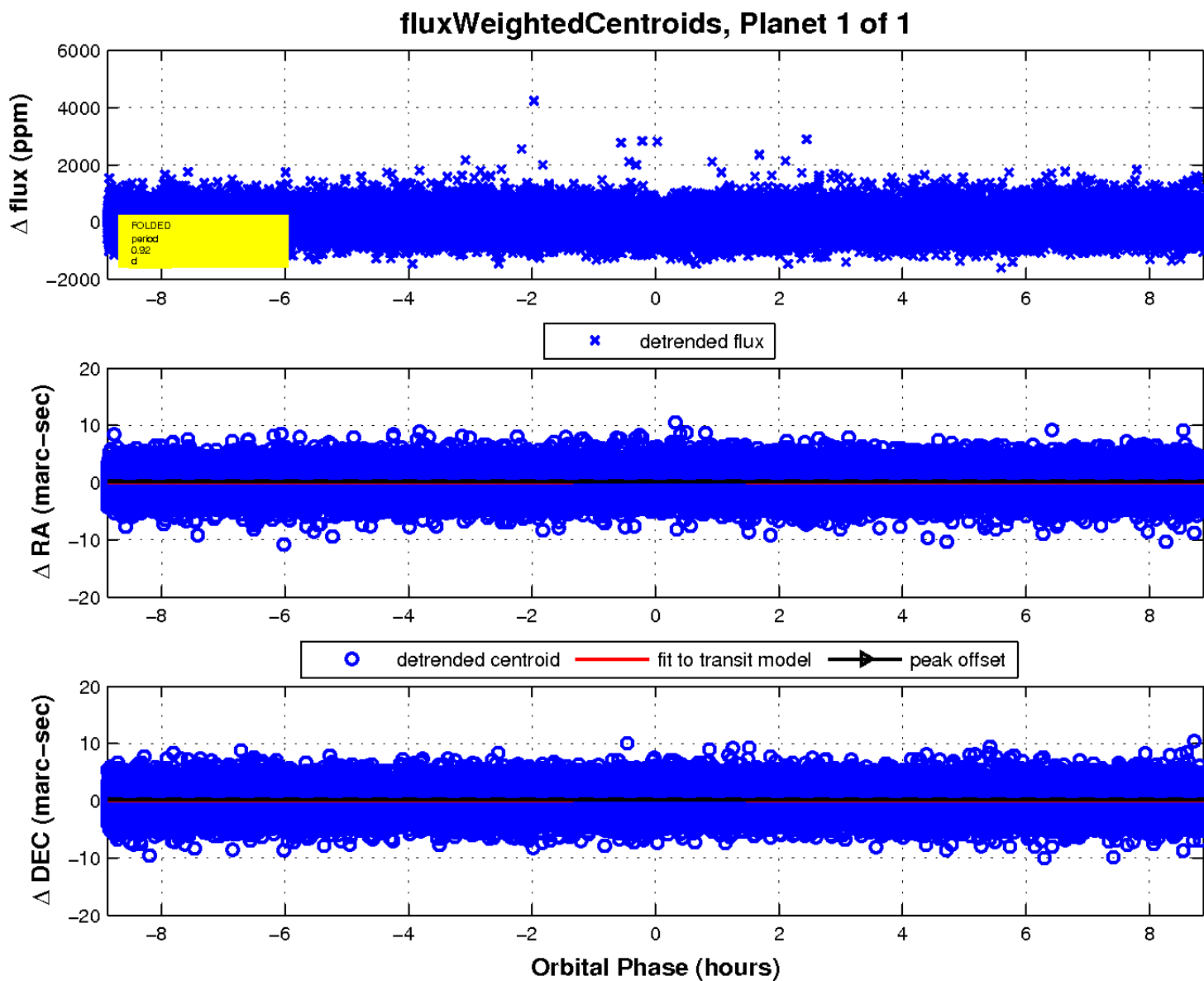
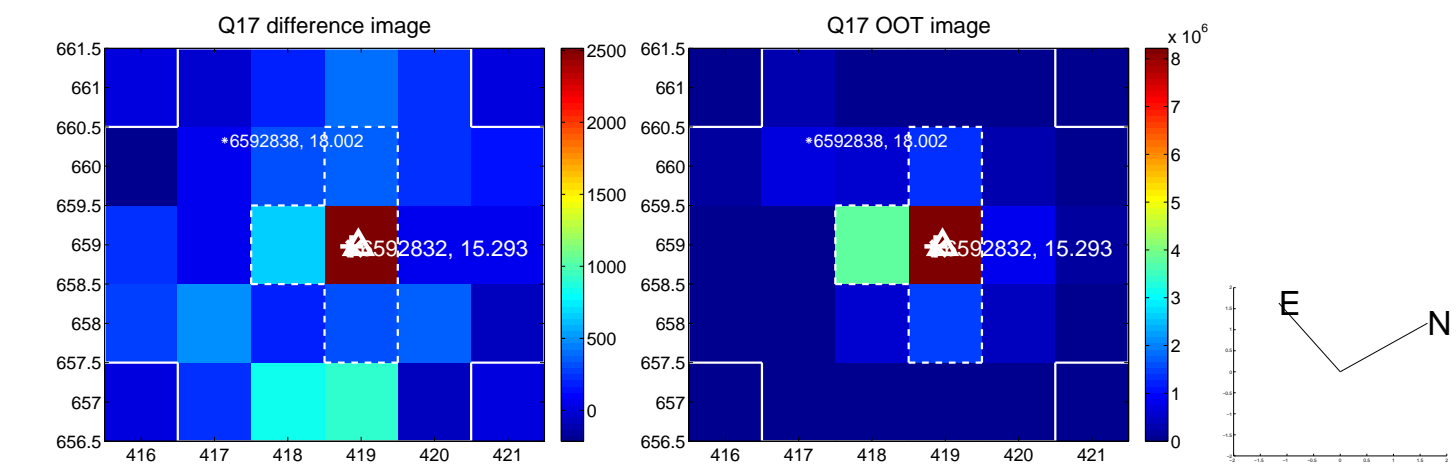
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

