

# KIC 003128585

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003128585-01	OBS	No	0.942187	132.343594	15.1	3.738	7.6	4.5	1.84	6745	0.77	14206.27

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003128585-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

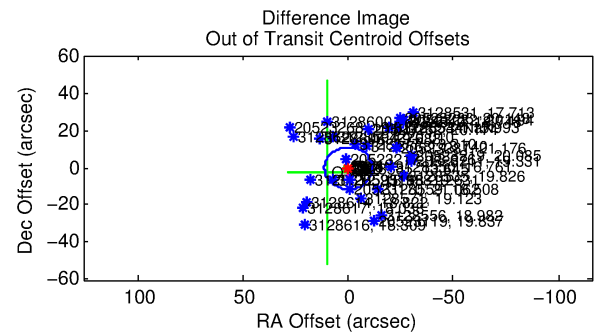
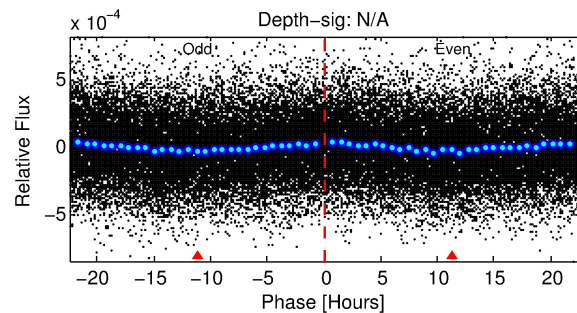
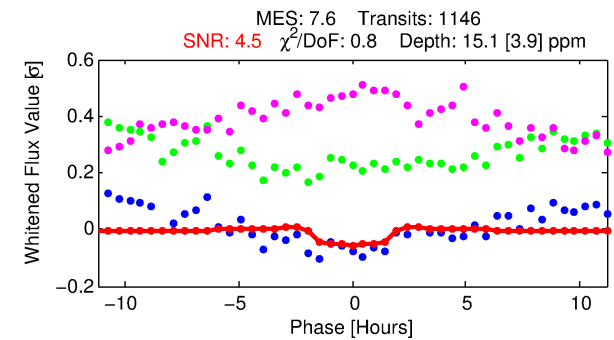
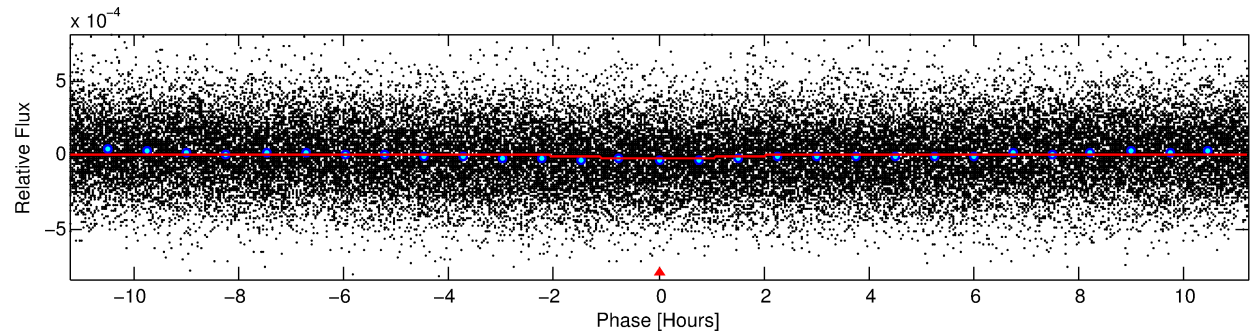
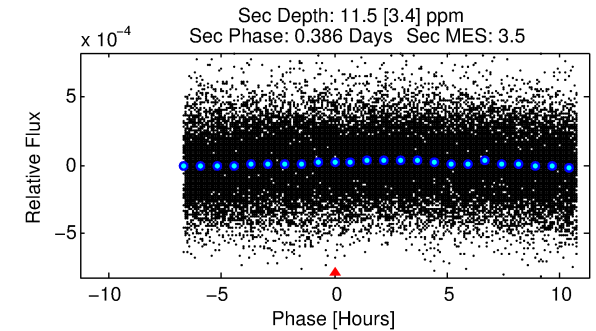
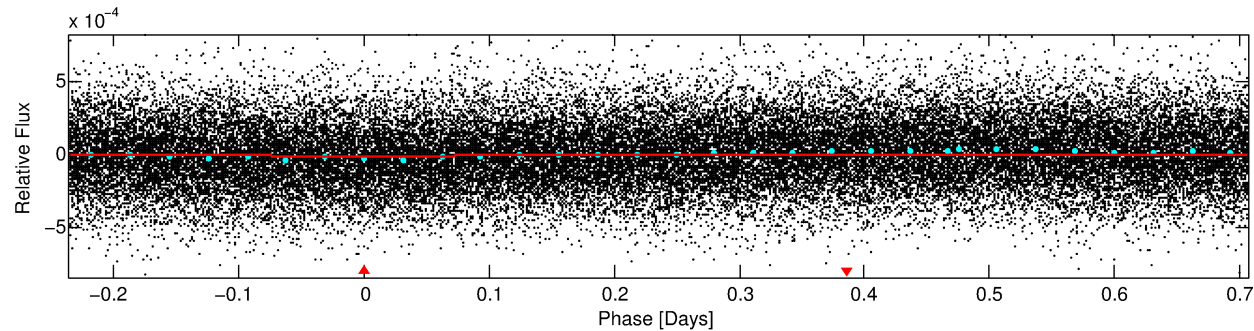
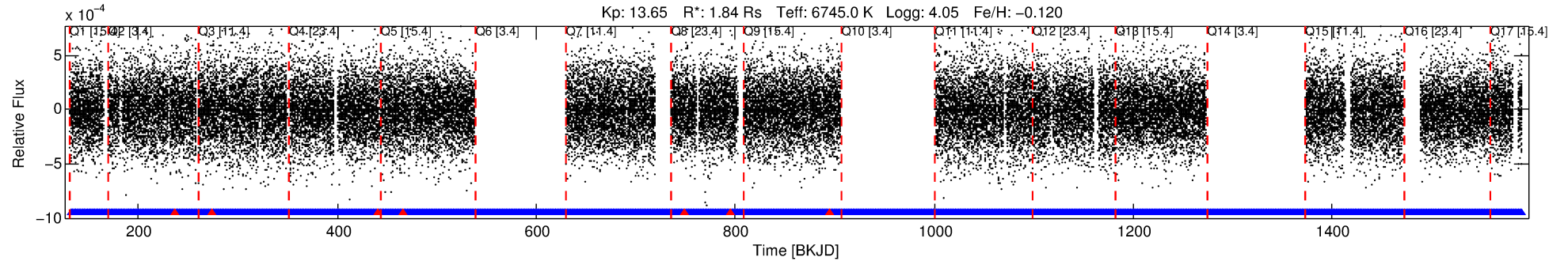
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003128585-01

No Significant Match Found

# DV One-Page Summary

KIC: 3128585 Candidate: 1 of 1 Period: 0.942 d



## DV Fit Results:

Period = 0.94219 [0.00002] d  
Epoch = 132.3436 [0.0082] BKJD  
Rp/R\* = 0.0038 [0.0015]  
a/R\* = 1.60 [2.13]  
b = 0.70 [1.57]  
Seff = 14206.27 [4194.94]  
Teff = 2784 [206] K  
Rp = 0.77 [0.34] Re  
a = 0.0211 [0.0039] AU  
Ag = 4.77 [4.30] [0.88σ]  
Teffp = 6360 [1358] K [2.60σ]

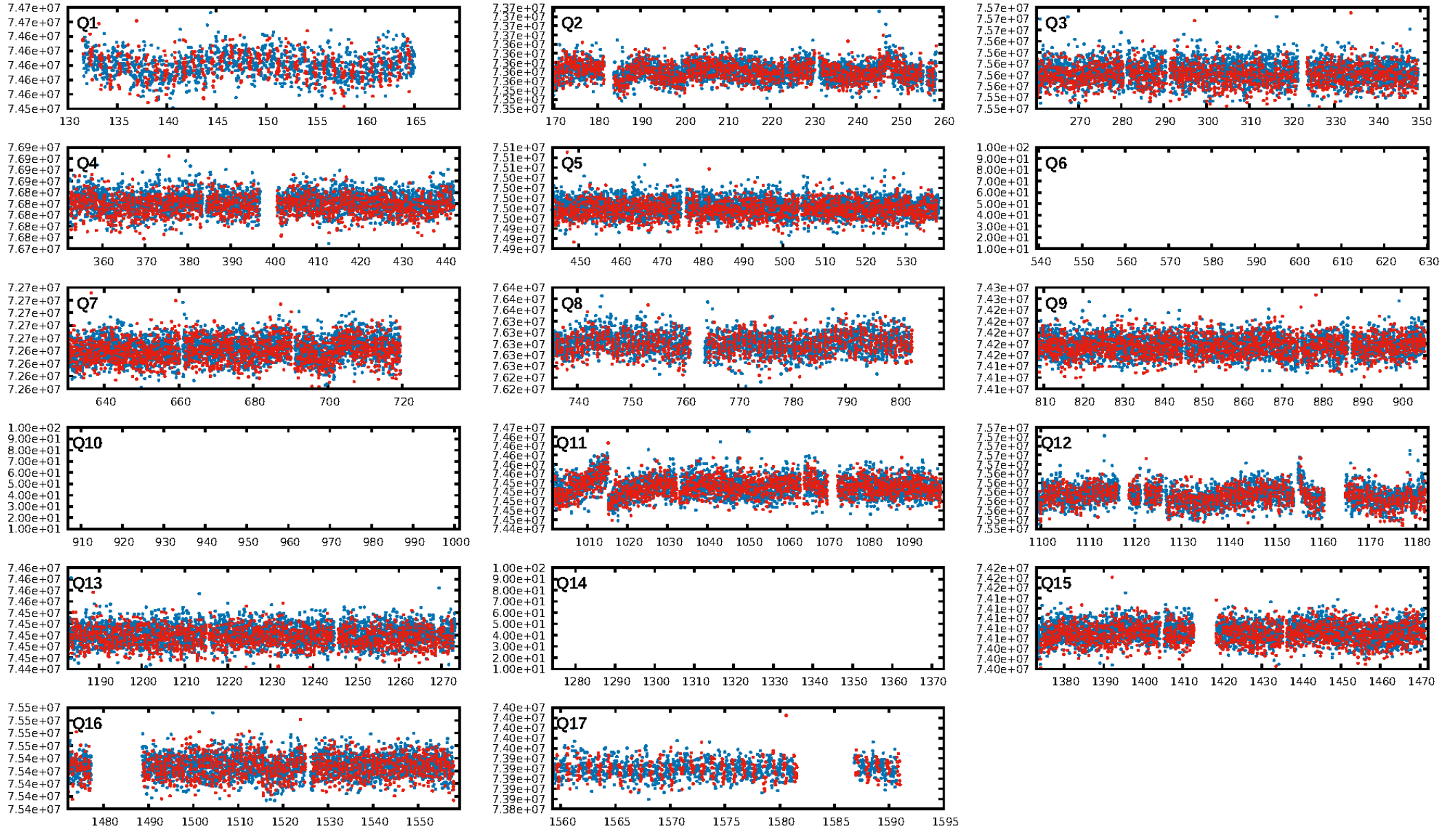
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 4.48e-14  
RollingBand-fgt: 0.99 [1074/1082]  
GhostDiagnostic-chr: 1.34  
Centroid-sig: 16.4%  
Centroid-so: 2.881 arcsec [1.37σ]  
OotOffset-rm: 0.314 arcsec [0.08σ]  
KicOffset-rm: 0.145 arcsec [0.04σ]  
OotOffset-st: 1/4/4/4 [13]  
KicOffset-st: 1/4/4/4 [13]  
DiffImageQuality-fgm: 0.54 [7/13]  
DiffImageOverlap-fno: 1.00 [14/14]

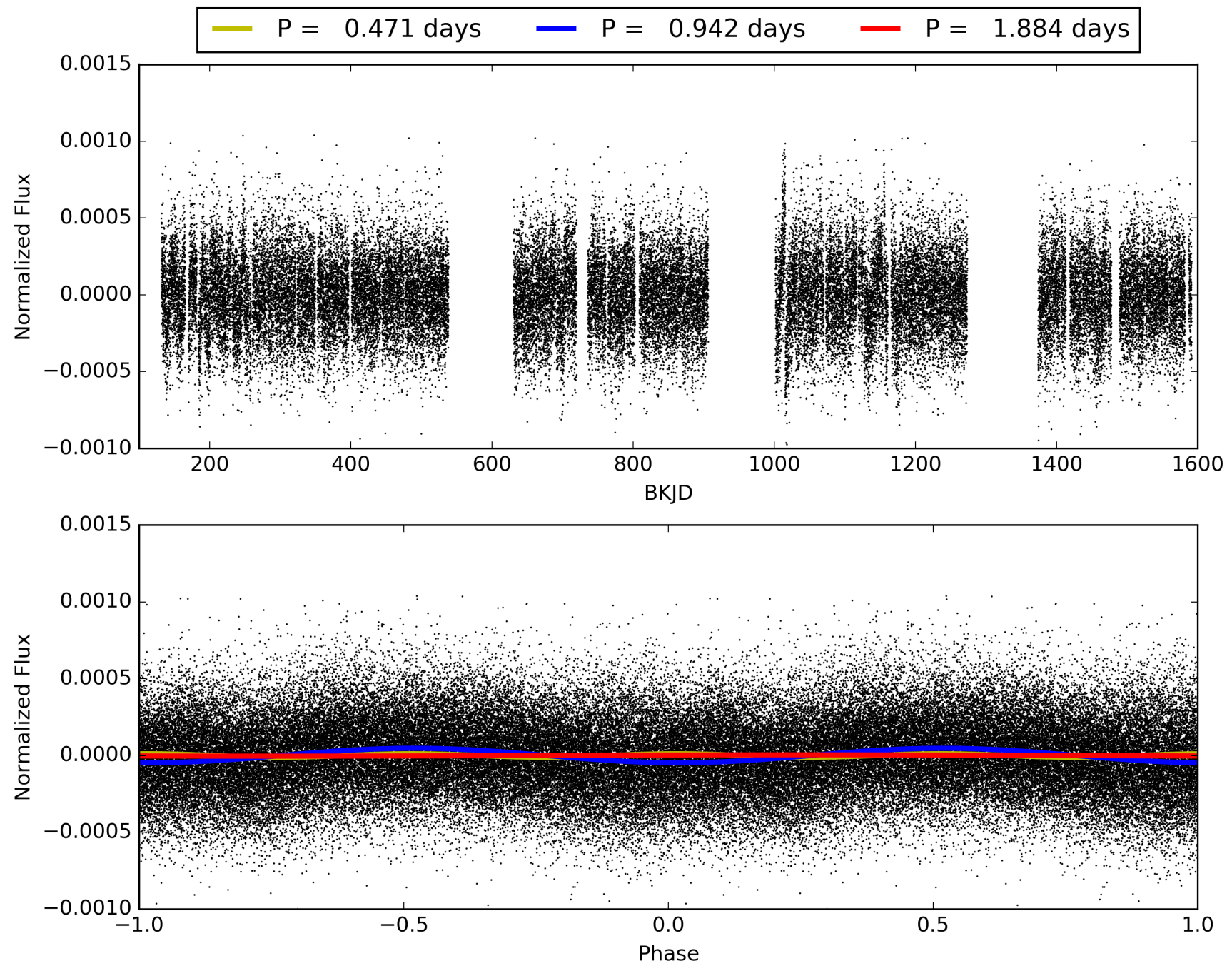
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:18:28 Z

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

# TCE 003128585-01, PDC Light Curves



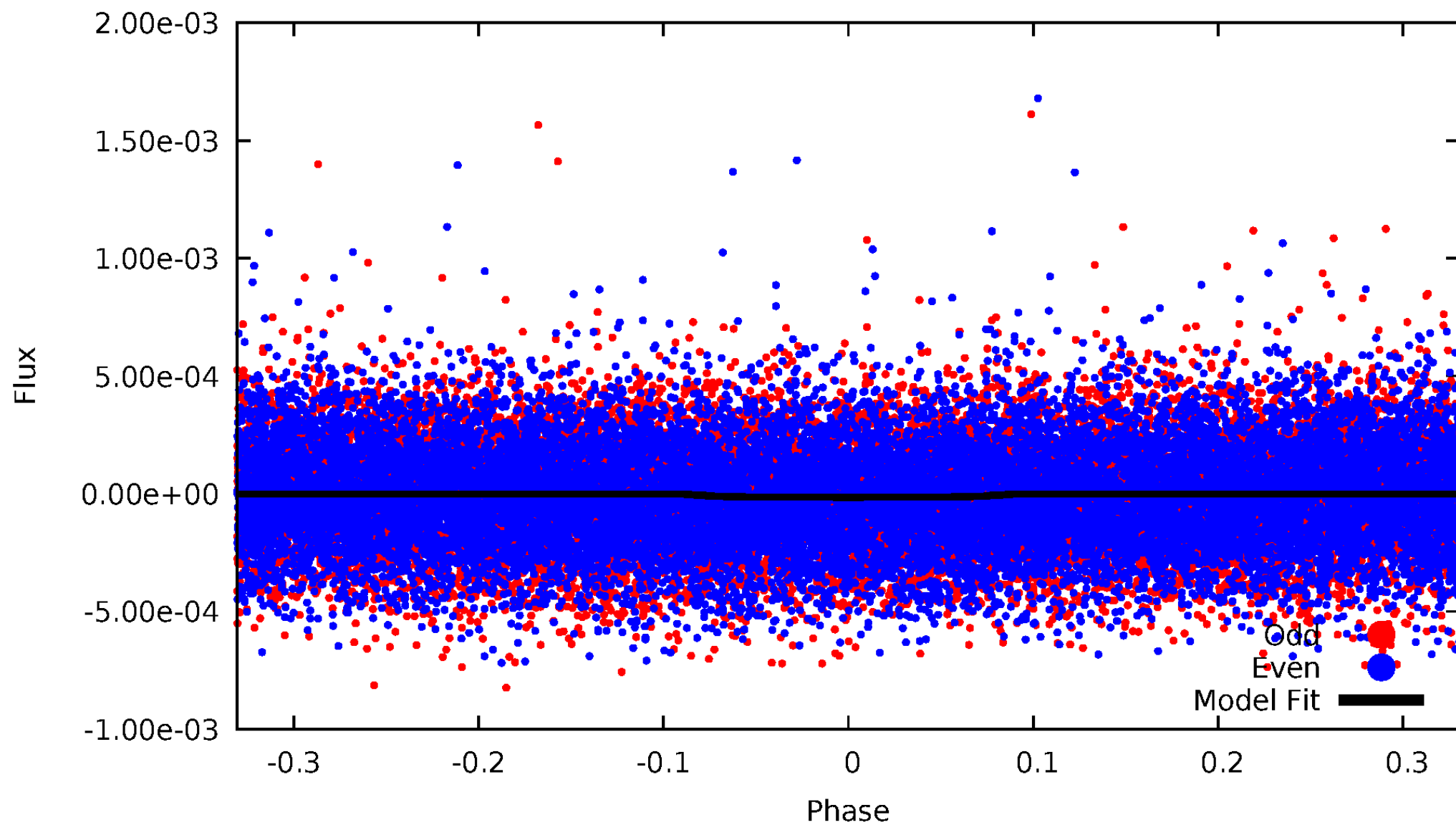
TCE 003128585-01





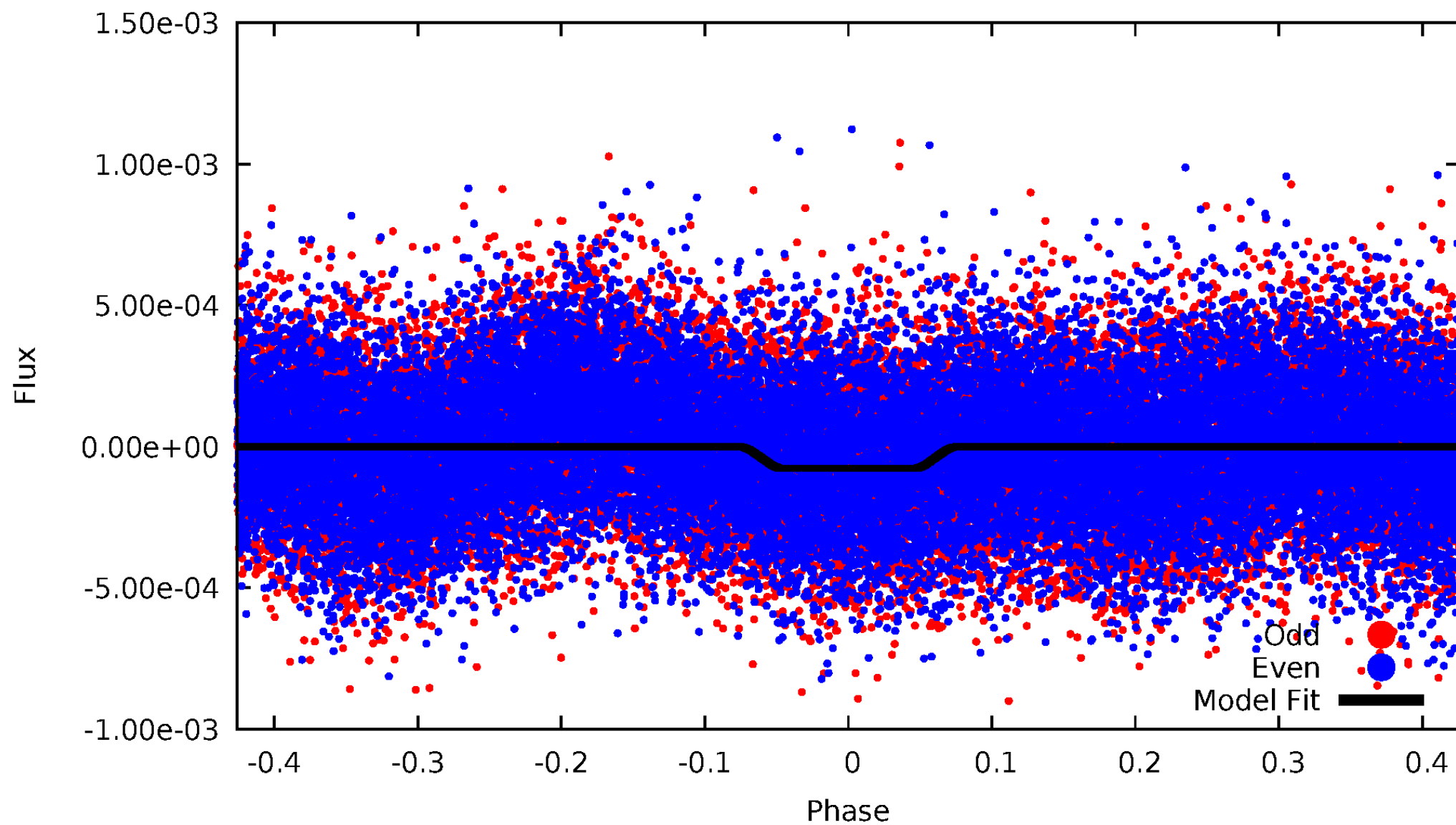
# DV Odd/Even

TCE 003128585-01



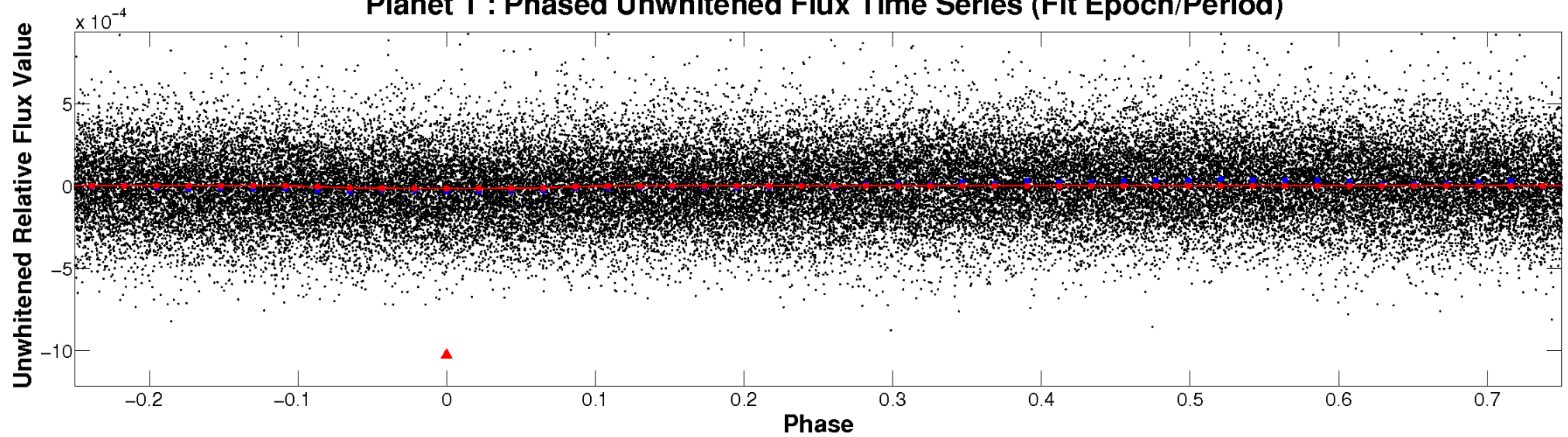
# ALT Odd/Even

TCE 003128585-01

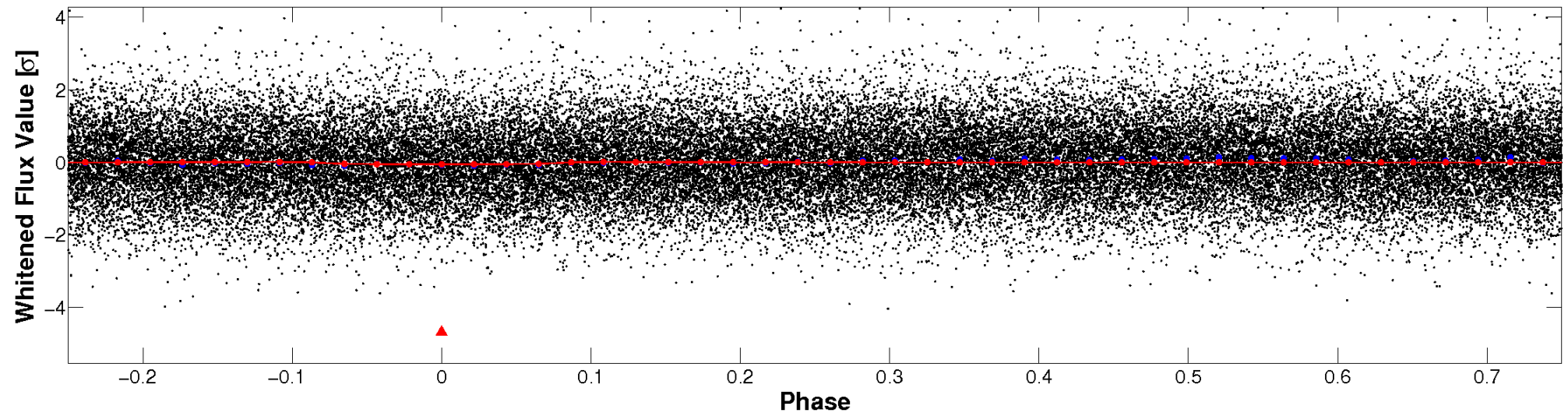


# Non-Whitened Vs. Whitened Light Curve

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

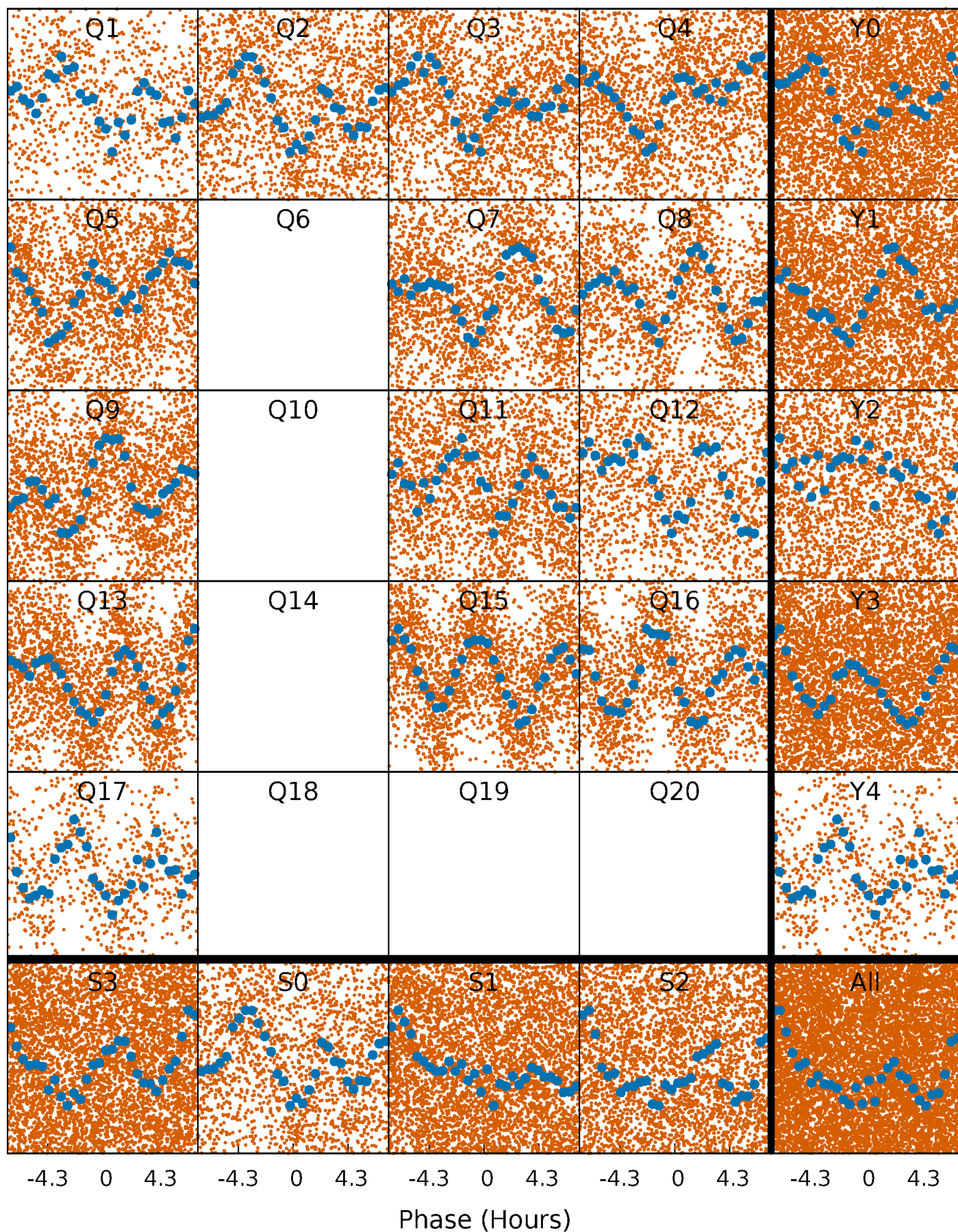


## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

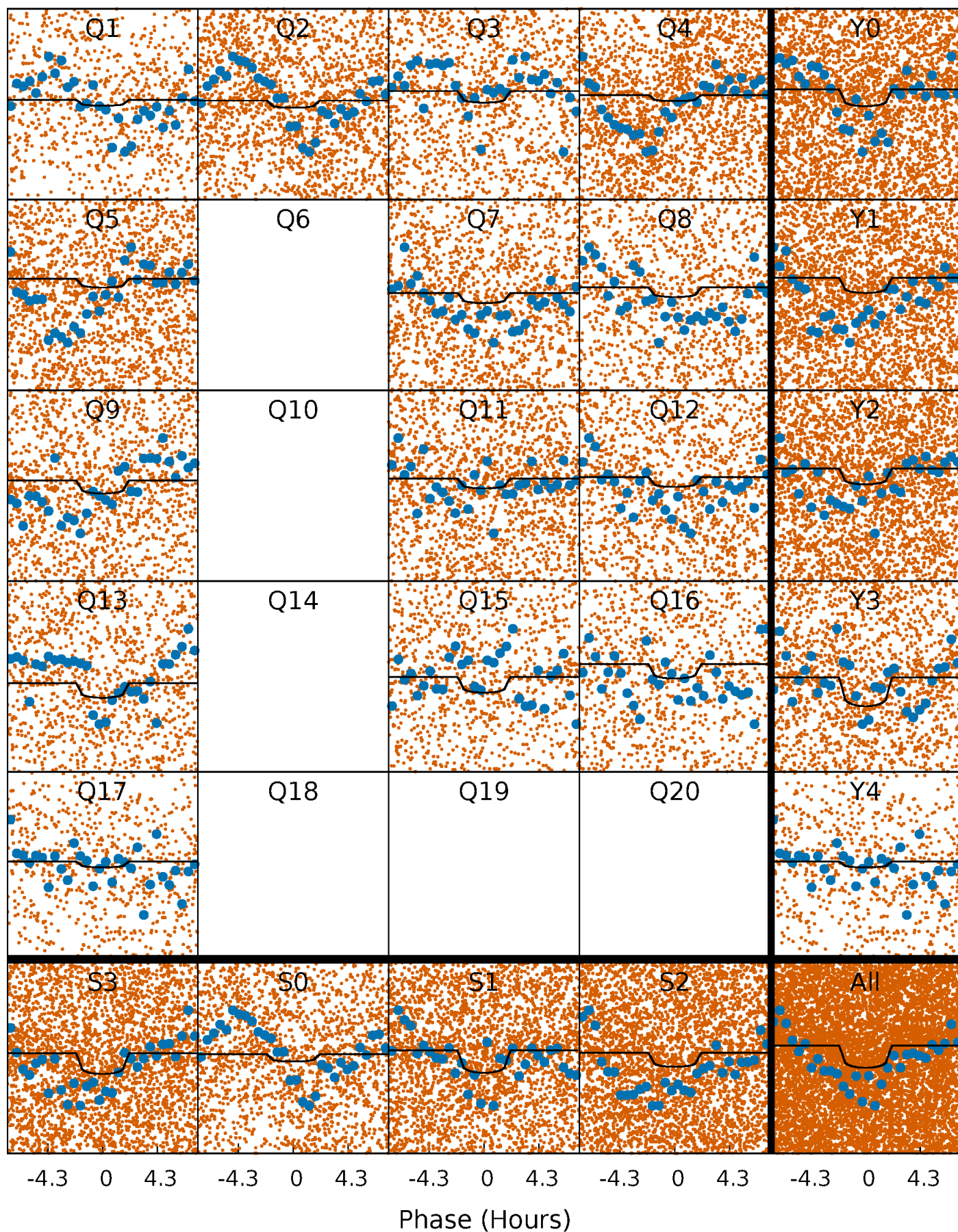
TCE 003128585-01 P= 0.942187 Days  $T_0=132.343594$  (BKJD)





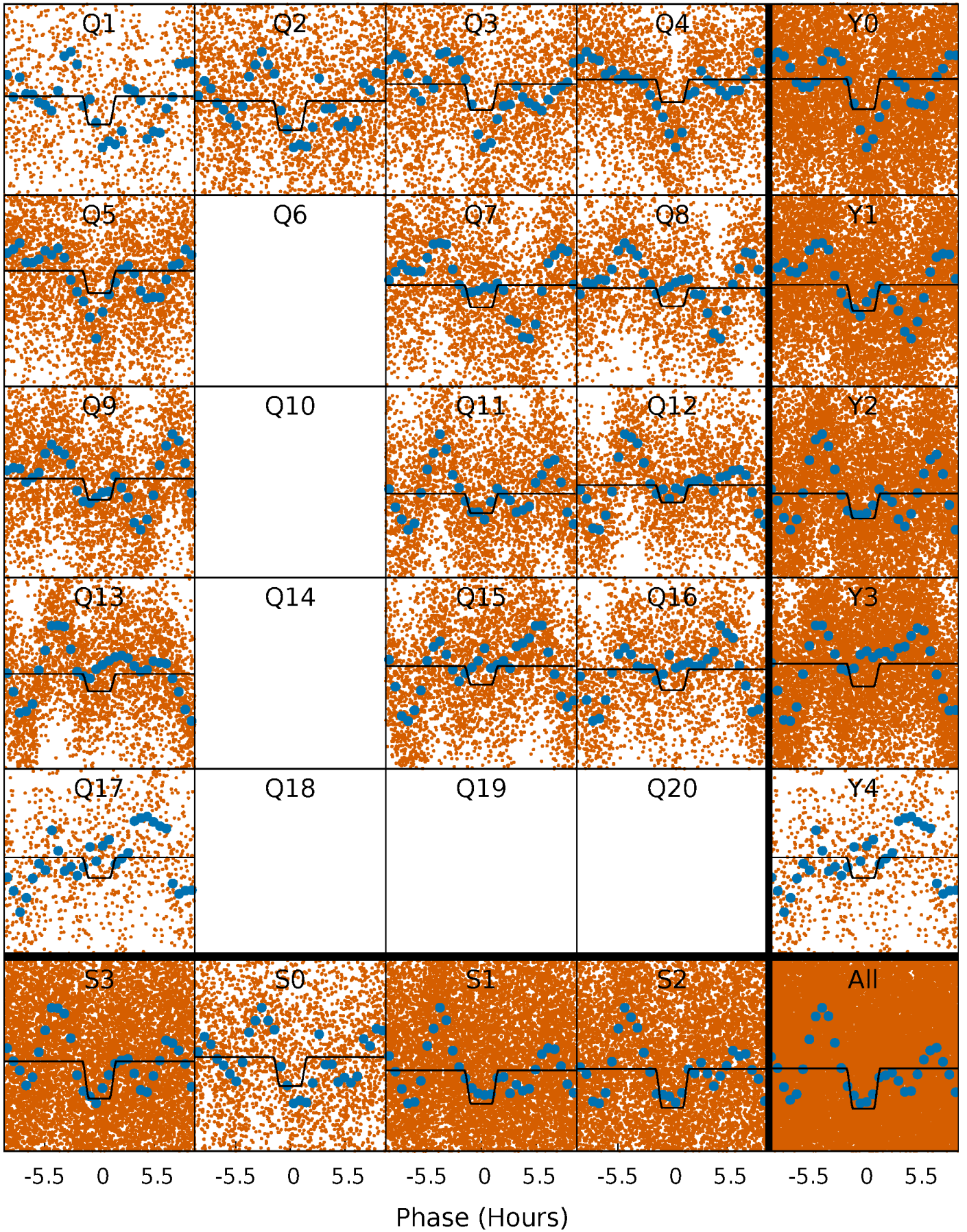
# DV Quarter-Phased Transit Curves

TCE 003128585-01 P= 0.942187 Days  $T_0=132.343594$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003128585-01 P= 0.941809 Days  $T_0=132.348629$  (BKJD)

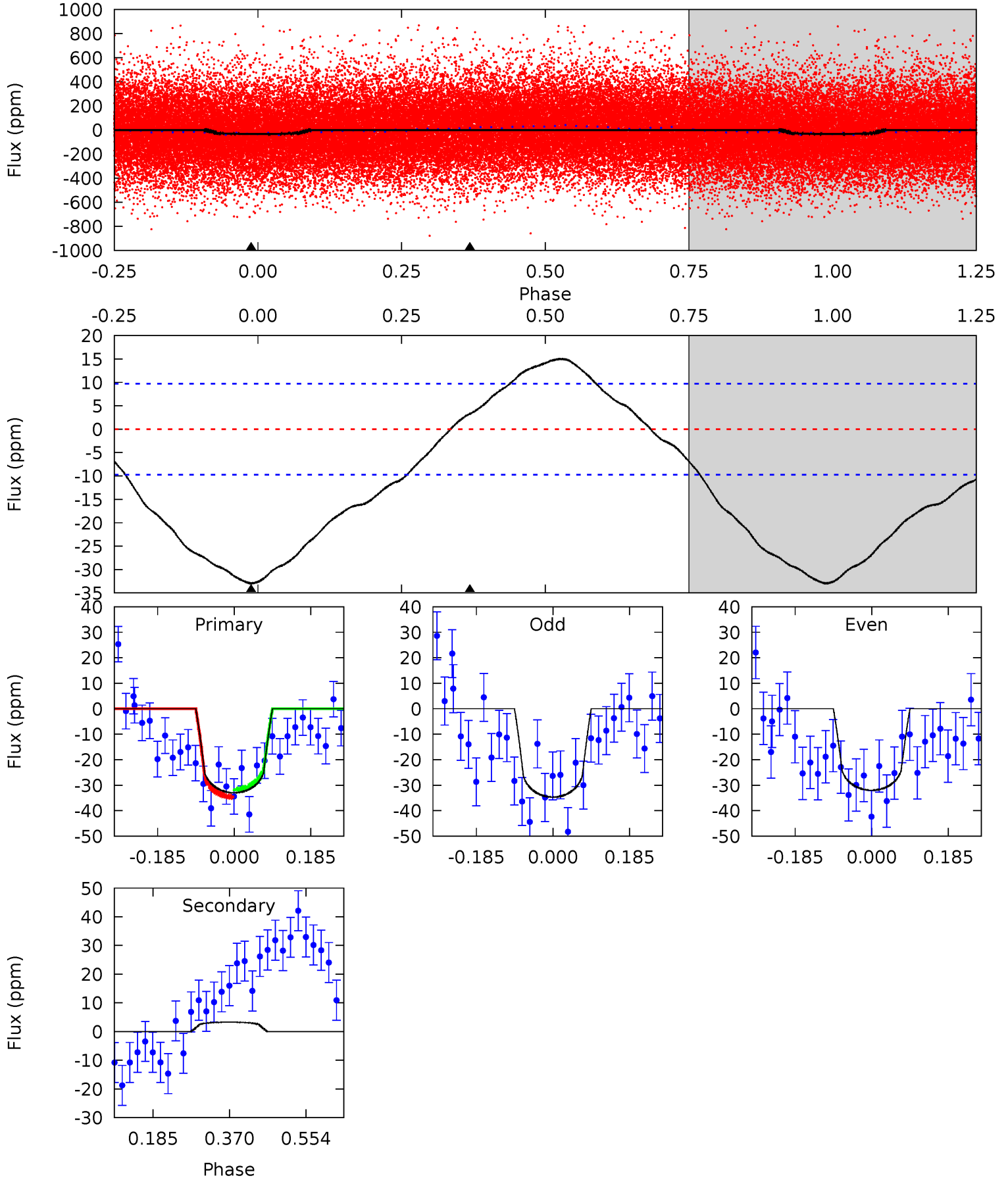




# DV Model-Shift Uniqueness Test

003128585-01, P = 0.942187 Days, E = 131.401407 Days

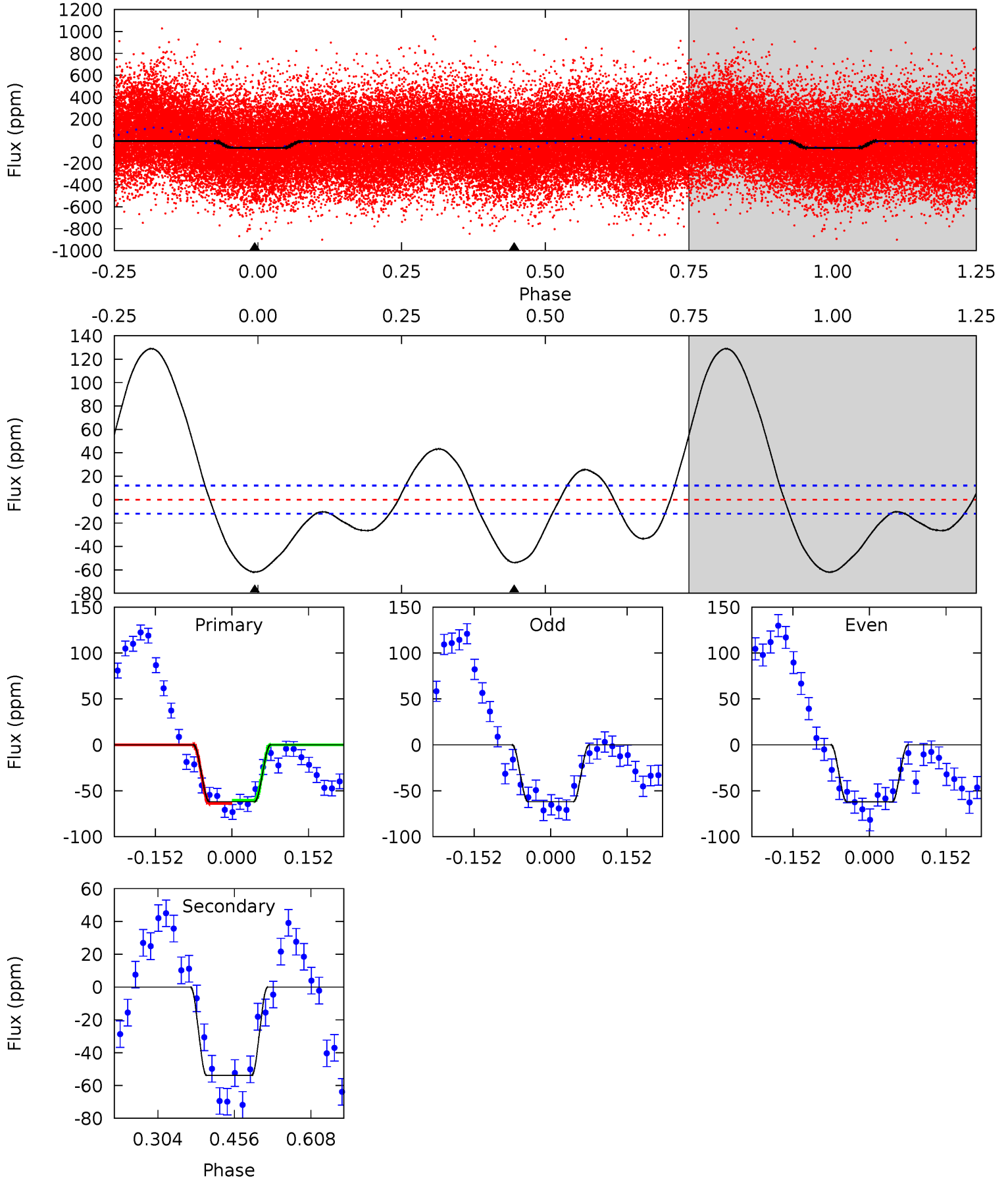
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	-1.50	0	0	4.43	1.33	3.87	15.0	15.0	-1.50	-1.50	0.61	0.97	0.31	0.65



# Alt Model-Shift Uniqueness Test

003128585-01, P = 0.941809 Days, E = 131.406820 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
23.0	20.0	0	0	4.48	1.43	20.1	23.0	23.0	20.0	20.0	0.02	1.01	0.68	0.62





### Stellar Parameters For KIC 003128585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6745^{+81}_{-81}$	$4.054^{+0.168}_{-0.112}$	$-0.120^{+0.200}_{-0.150}$	$1.844^{+0.341}_{-0.375}$	$1.408^{+0.116}_{-0.129}$	$0.316^{+0.267}_{-0.105}$
	+1%/-1%	+4%/-3%	+167%/-125%	+18%/-20%	+8%/-9%	+84%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 003128585-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$3\pm 2$	$0.75^{+0.34}_{-0.30}$	$3887^{+174}_{-214}$	$-4889^{+813}_{-1301}$	$-1.261^{+0.970}_{-2.972}$
Alt.	$-54\pm 3$	$1.74^{+0.37}_{-0.34}$	$3871^{+201}_{-231}$	$6020^{+682}_{-486}$	$4.350^{+2.389}_{-1.411}$

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

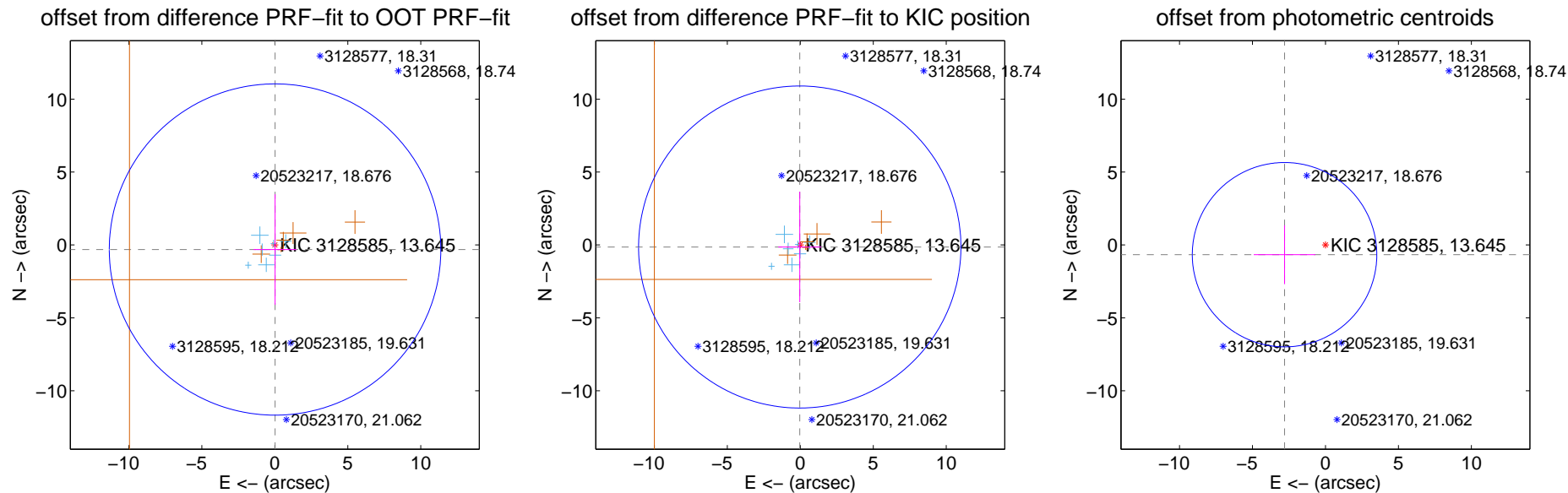
## DV Centroid Data

Supplemental centroid analysis for 003128585-01. Kepler magnitude: 13.64. Transit SNR 4.51

There are 7 quarters with good PRF difference image offsets

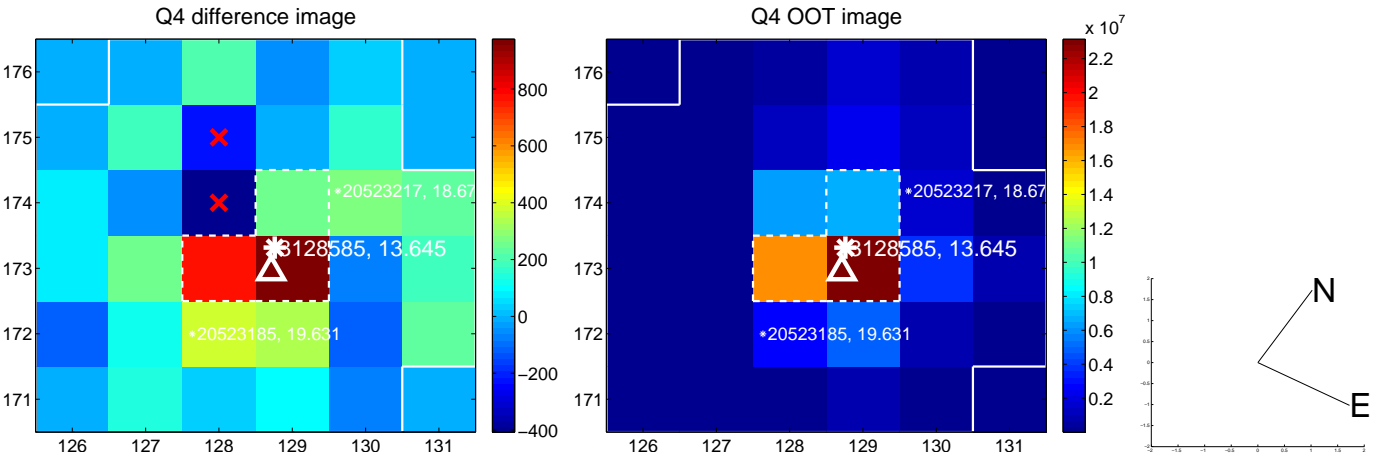
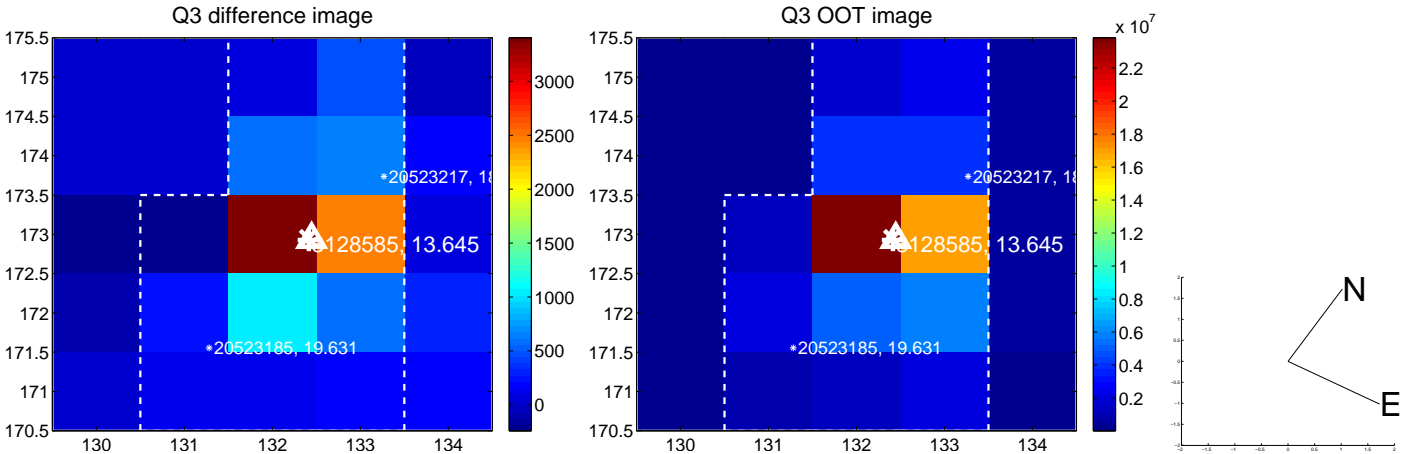
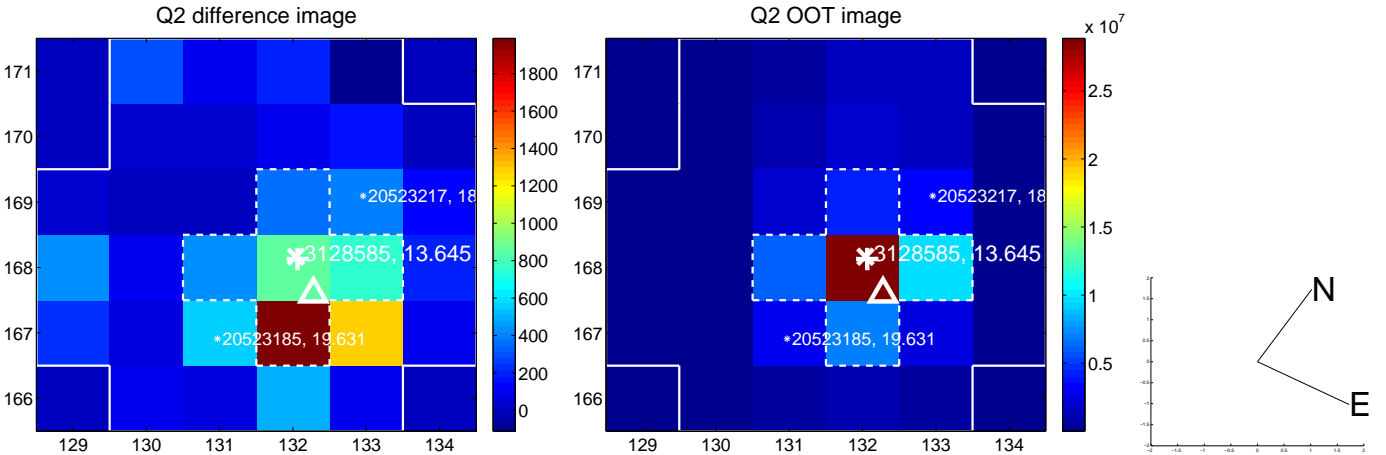
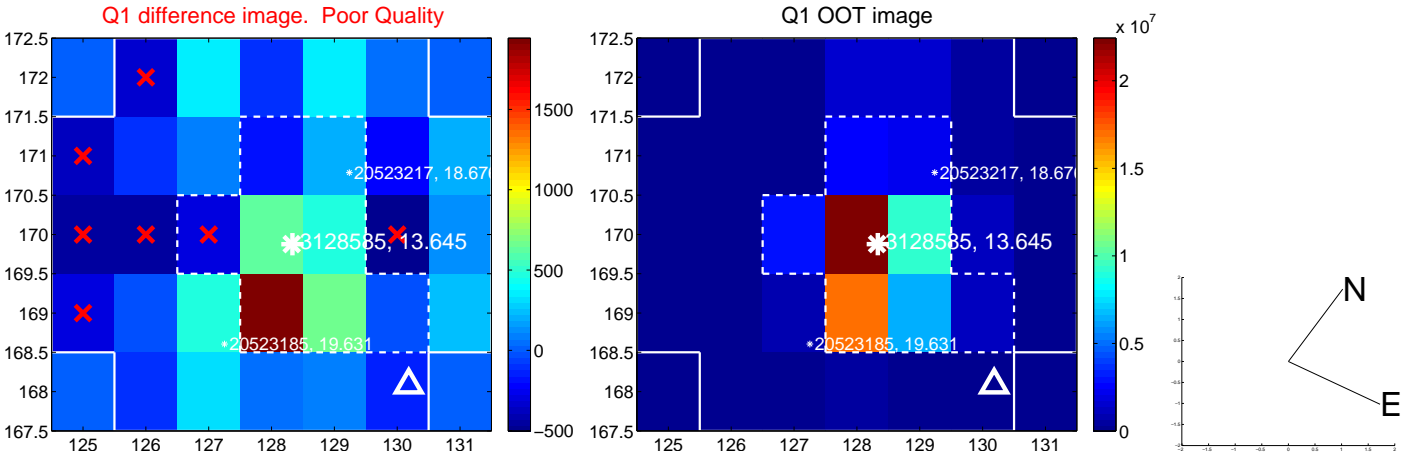
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.314 \pm 3.786$	0.08	$-0.015 \pm 1.471$	$-0.313 \pm 3.790$
PRF-fit source offset from KIC position	$0.145 \pm 3.681$	0.04	$0.037 \pm 1.471$	$-0.140 \pm 3.790$
photometric centroid source offset	$2.88 \pm 2.11$	1.37	$2.80 \pm 2.11$	$-0.67 \pm 2.02$

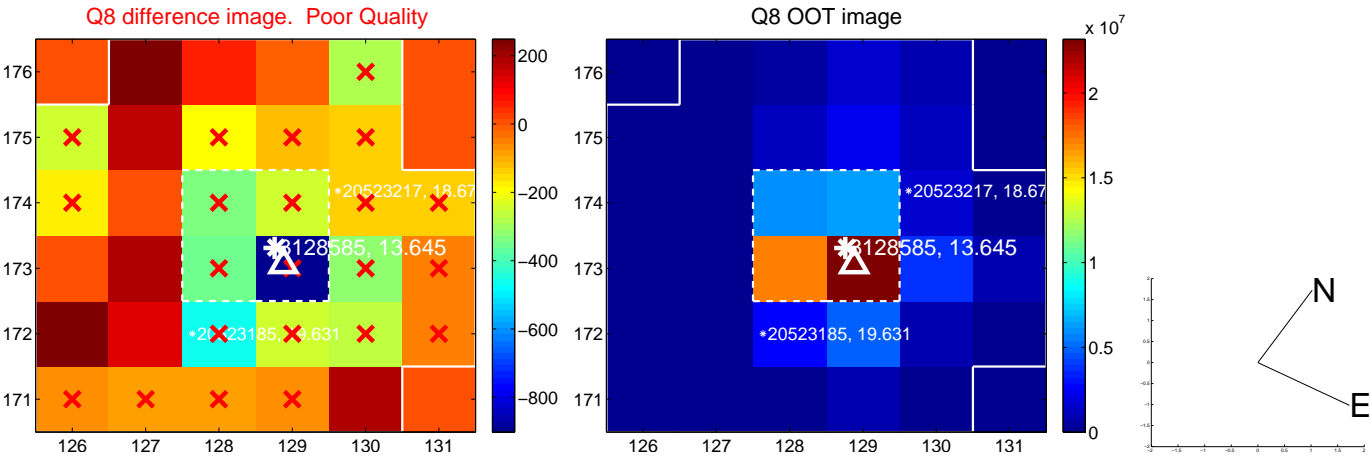
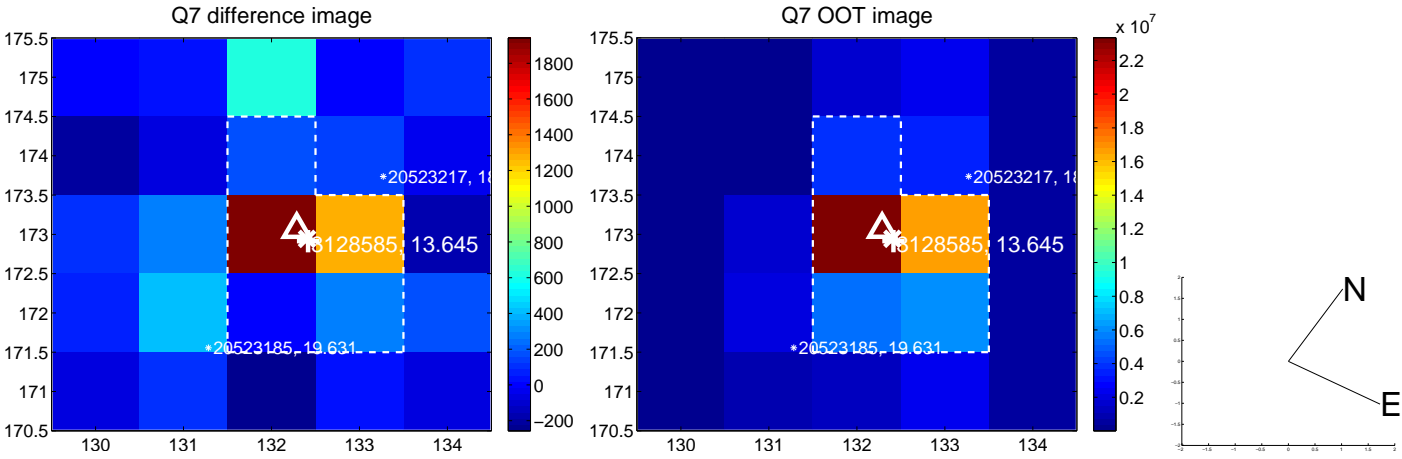
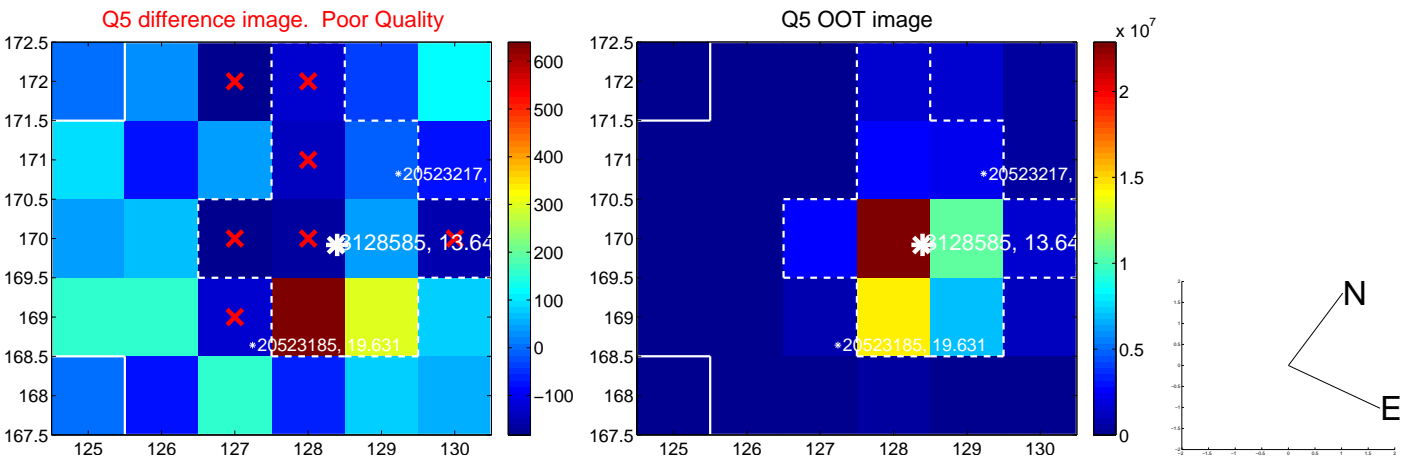


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

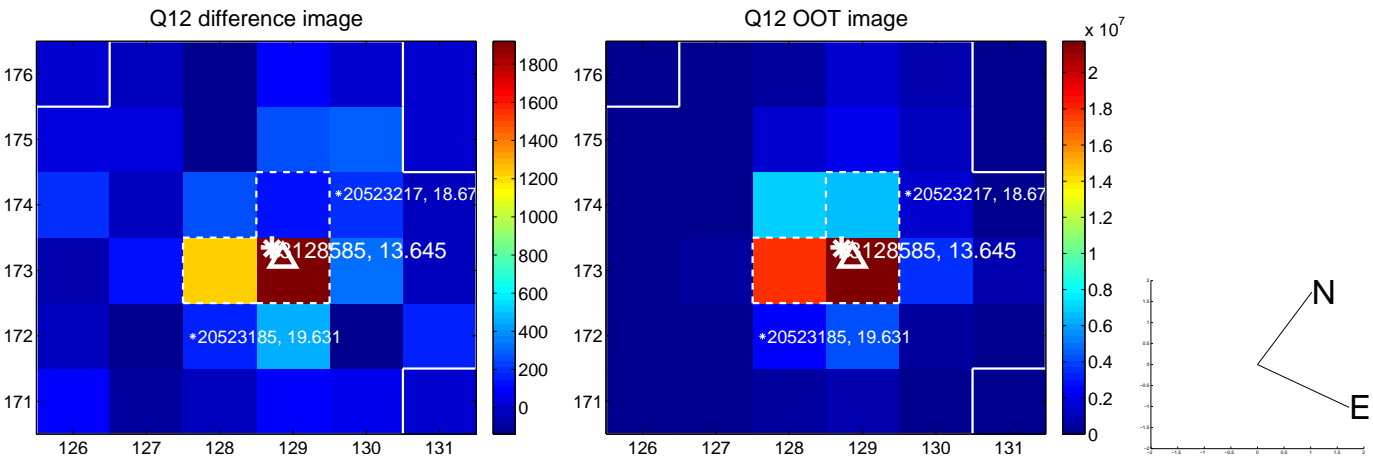
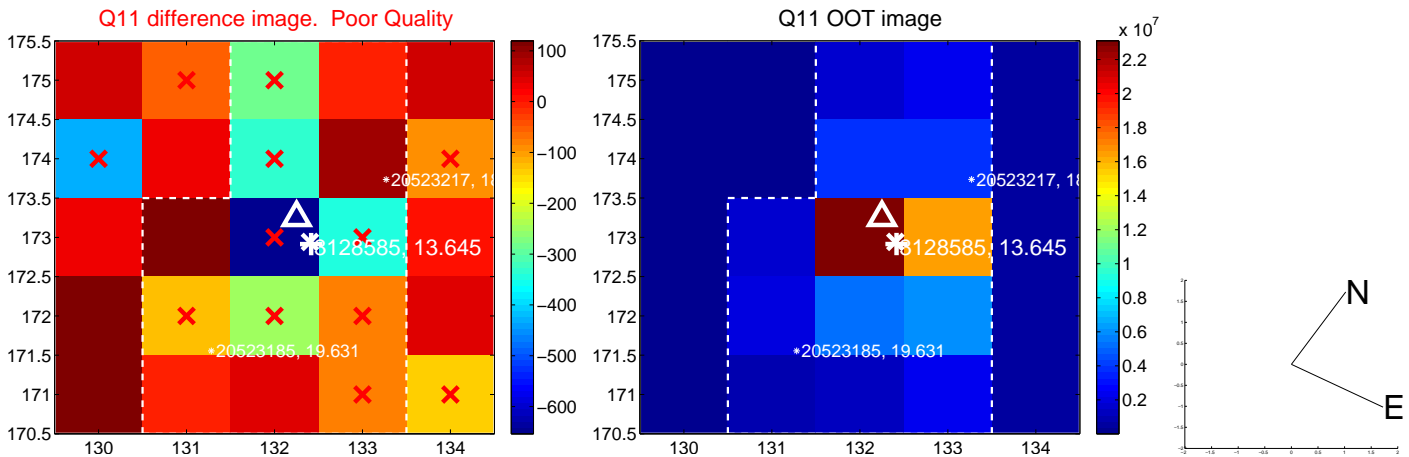
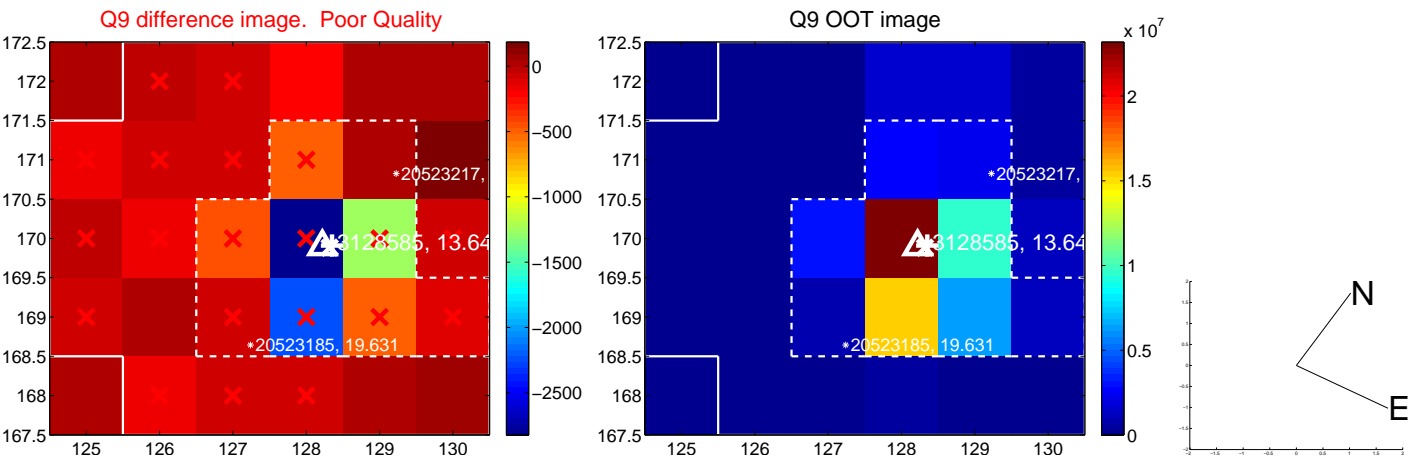


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

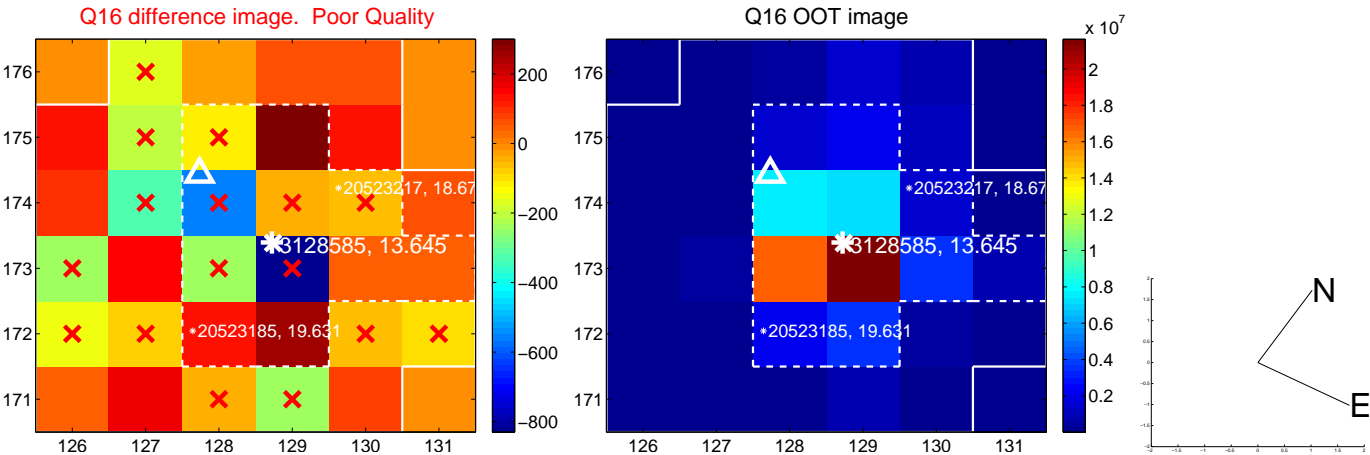
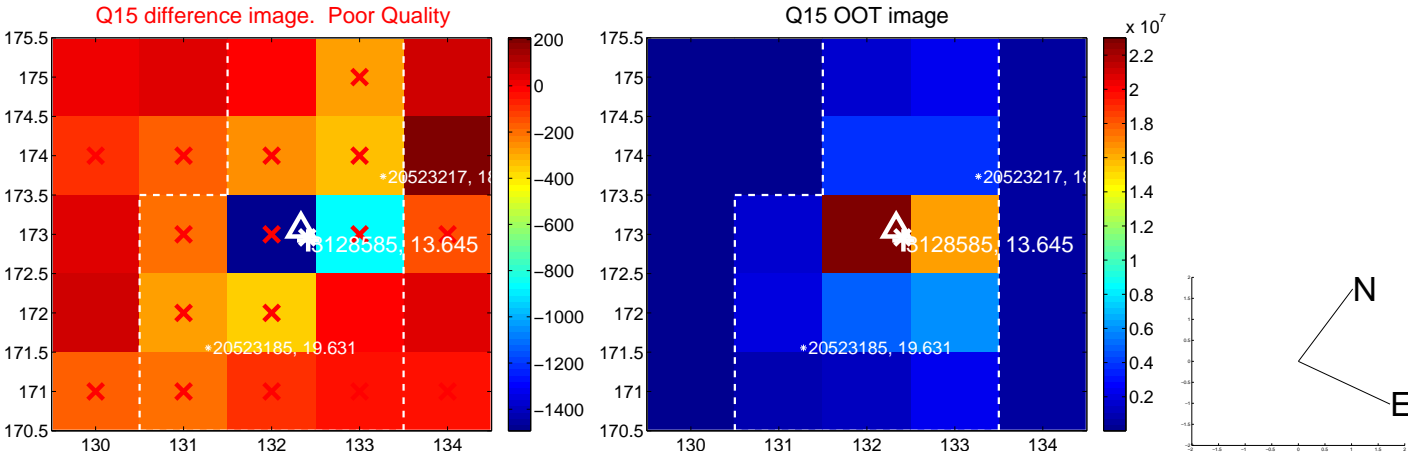
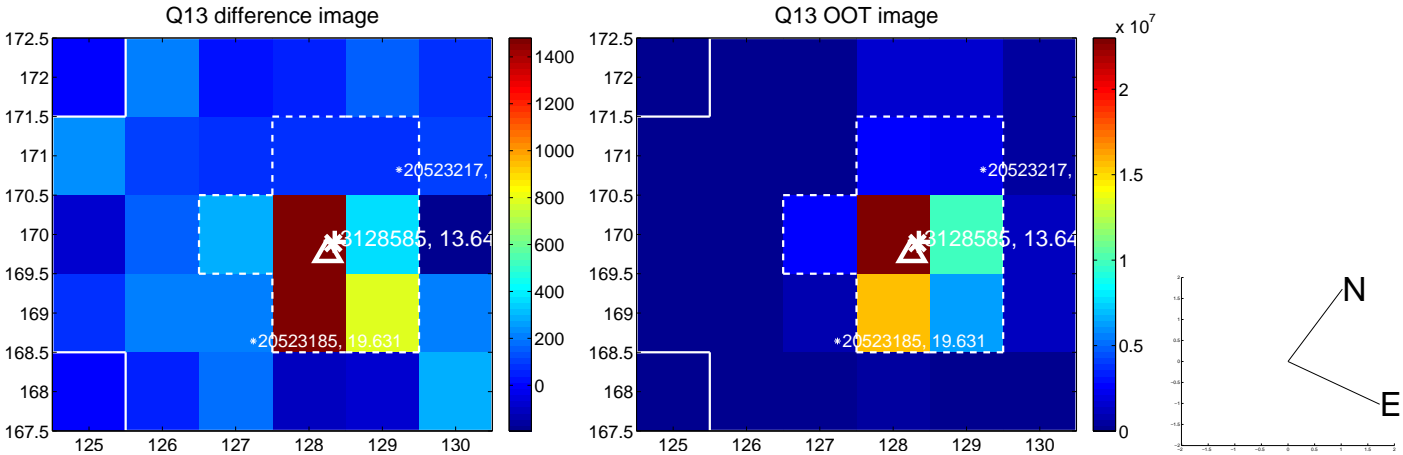




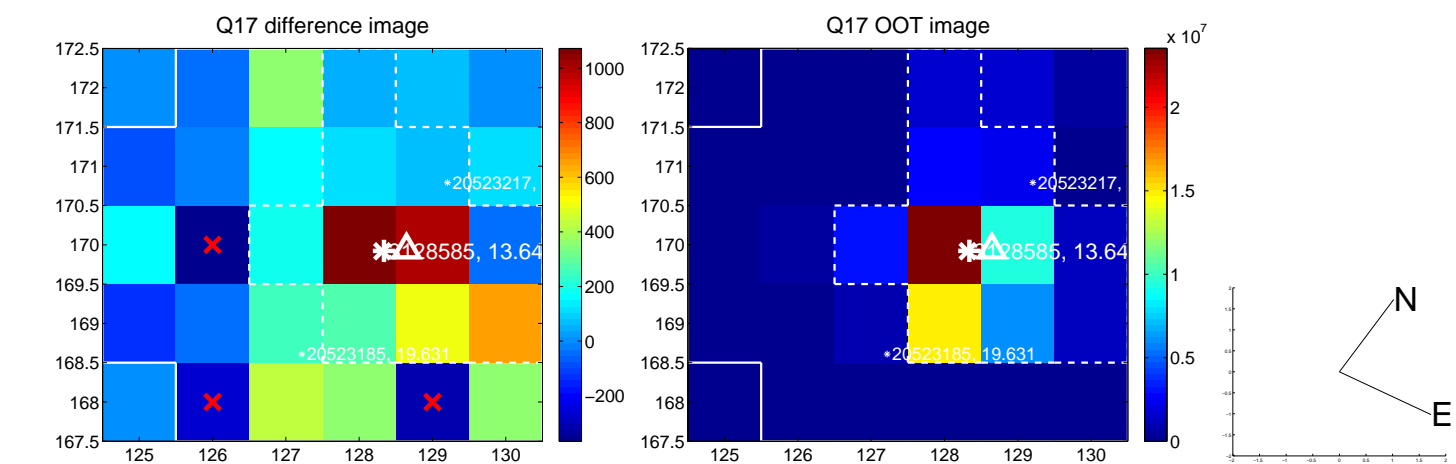
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



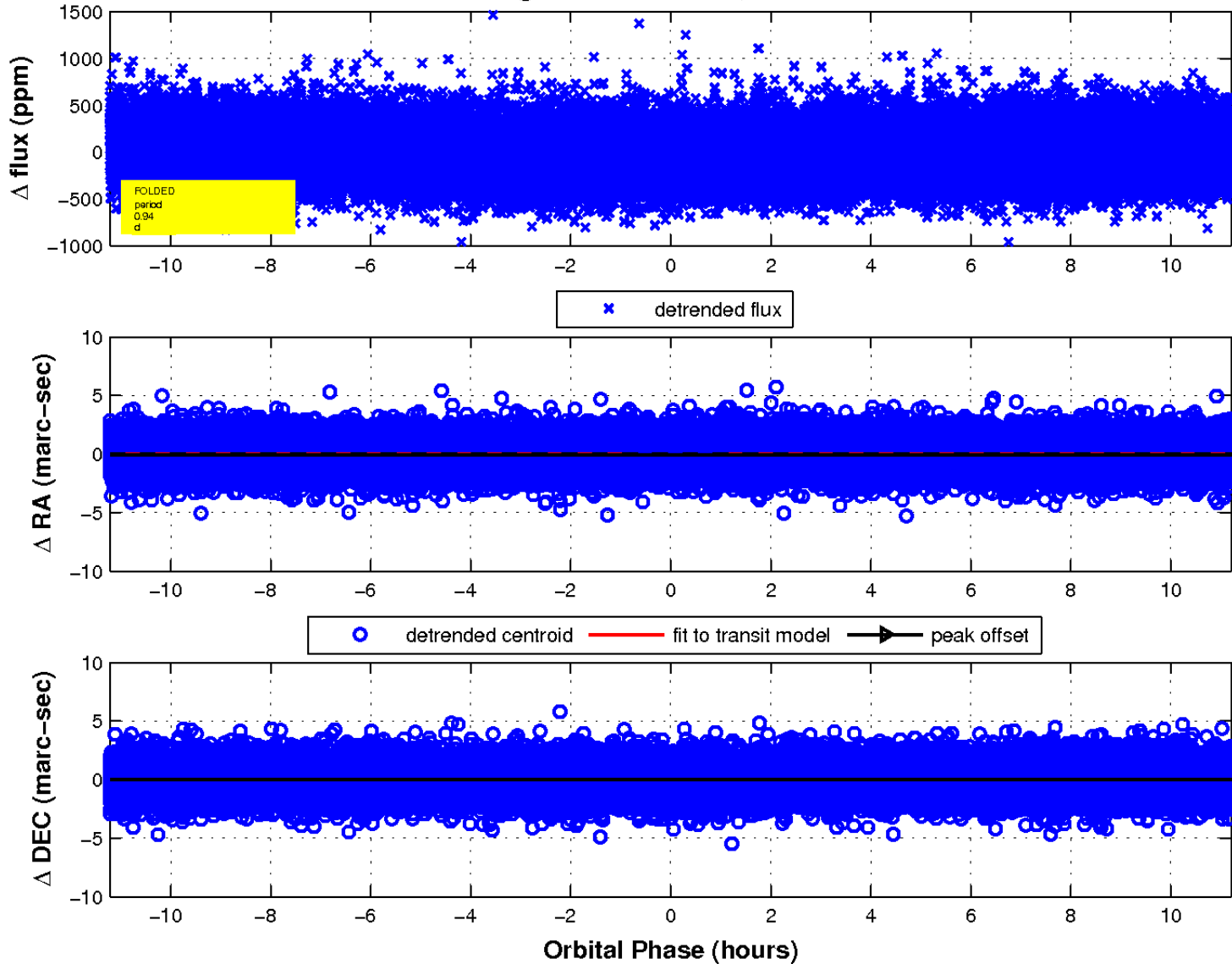
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

