

# KIC 003128325

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003128325-01	OBS	No	0.979426	132.430207	43.1	5.305	8.4	5.3	1.29	6674	0.85	6505.85

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003128325-01	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.

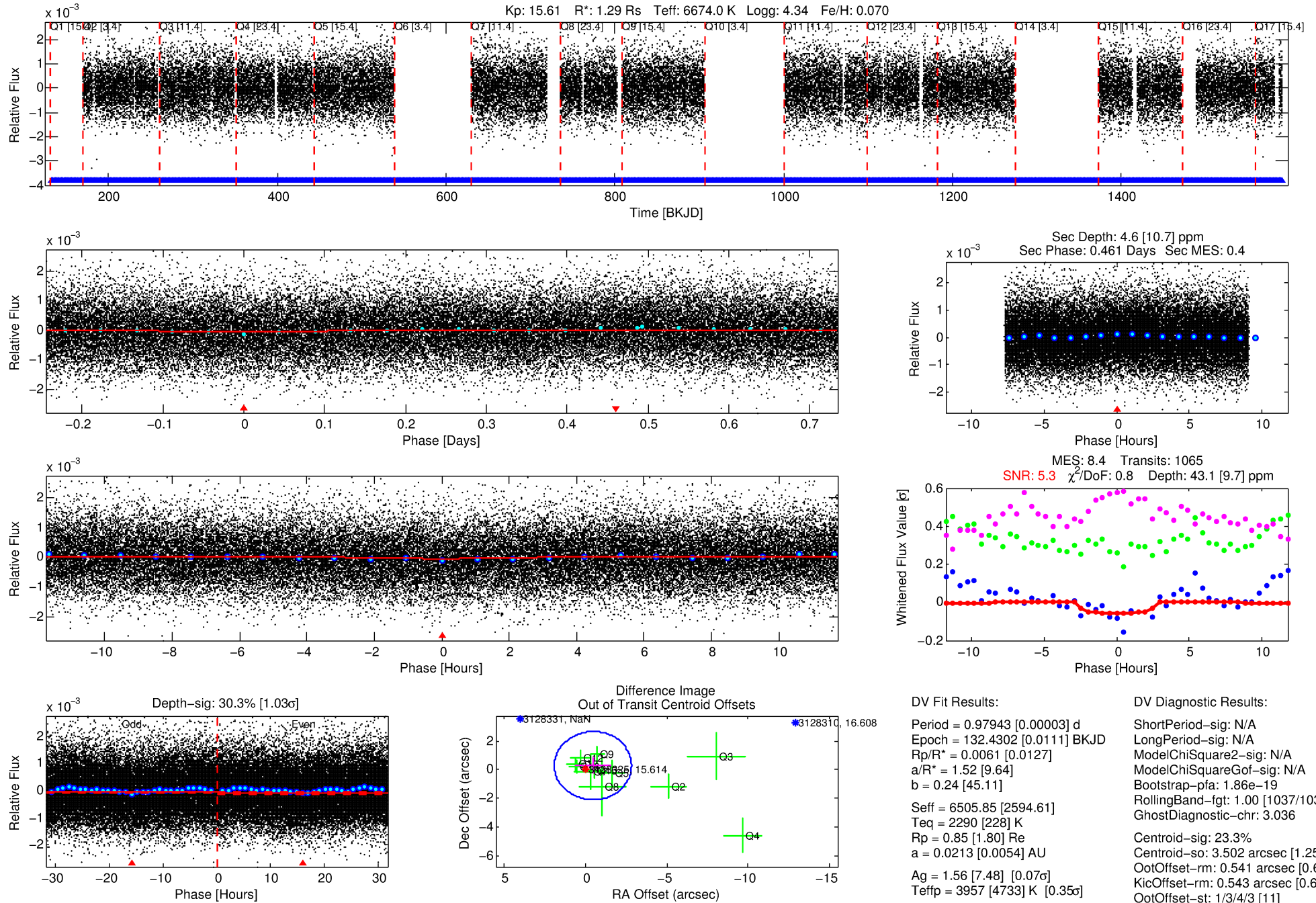
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003128325-01

No Significant Match Found

# DV One-Page Summary

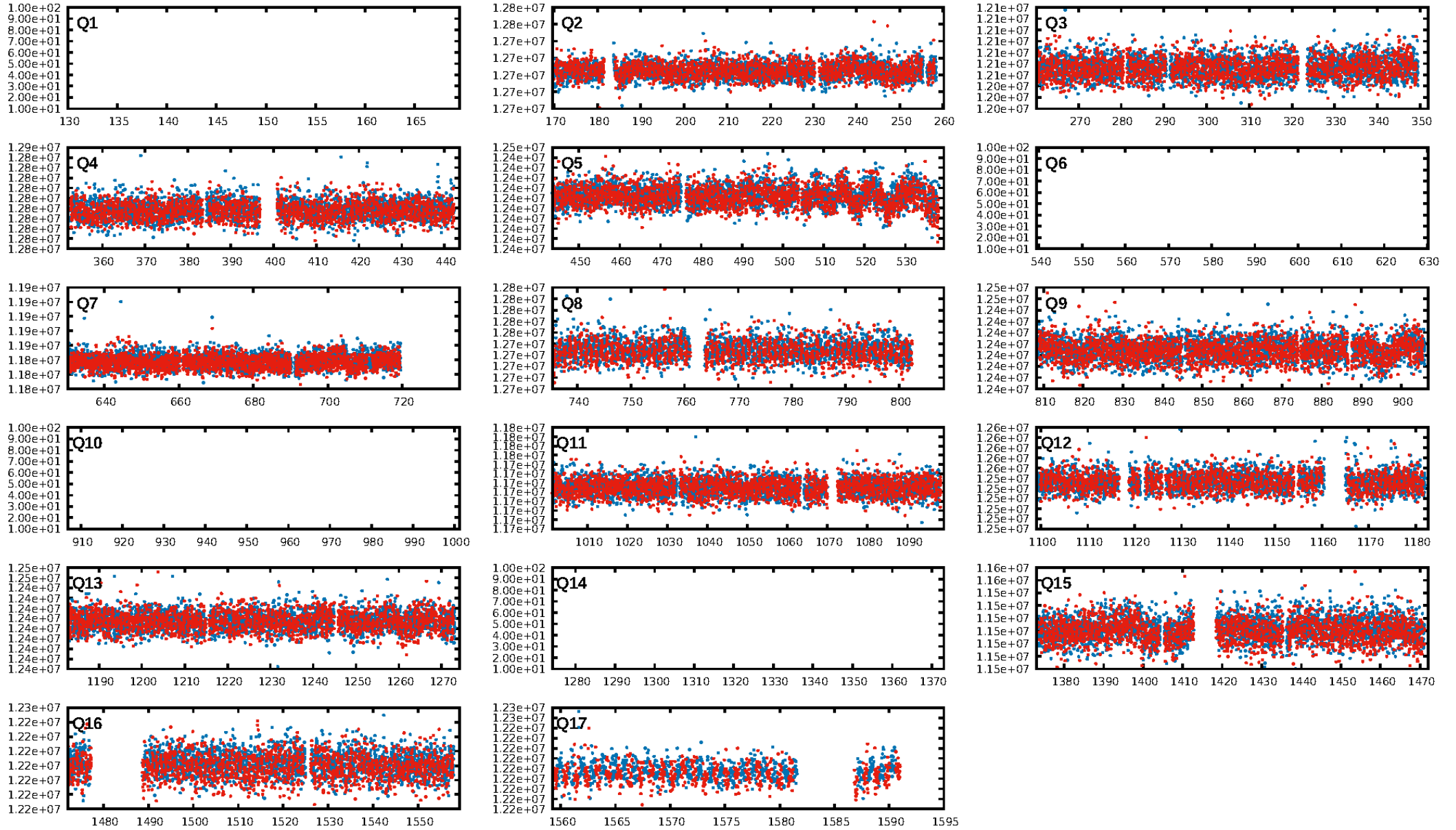
KIC: 3128325 Candidate: 1 of 1 Period: 0.979 d



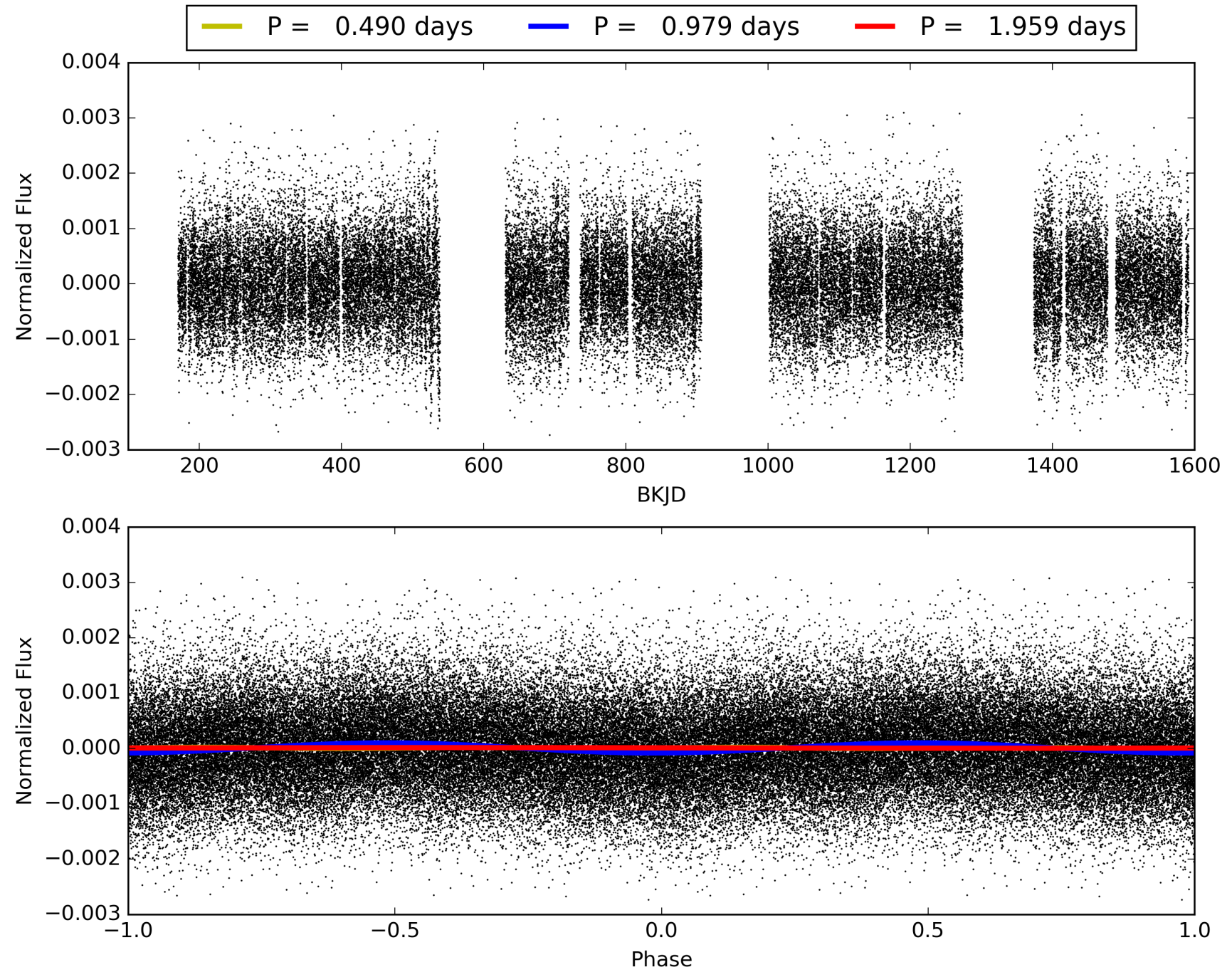
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:55:57 Z

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

# TCE 003128325-01, PDC Light Curves



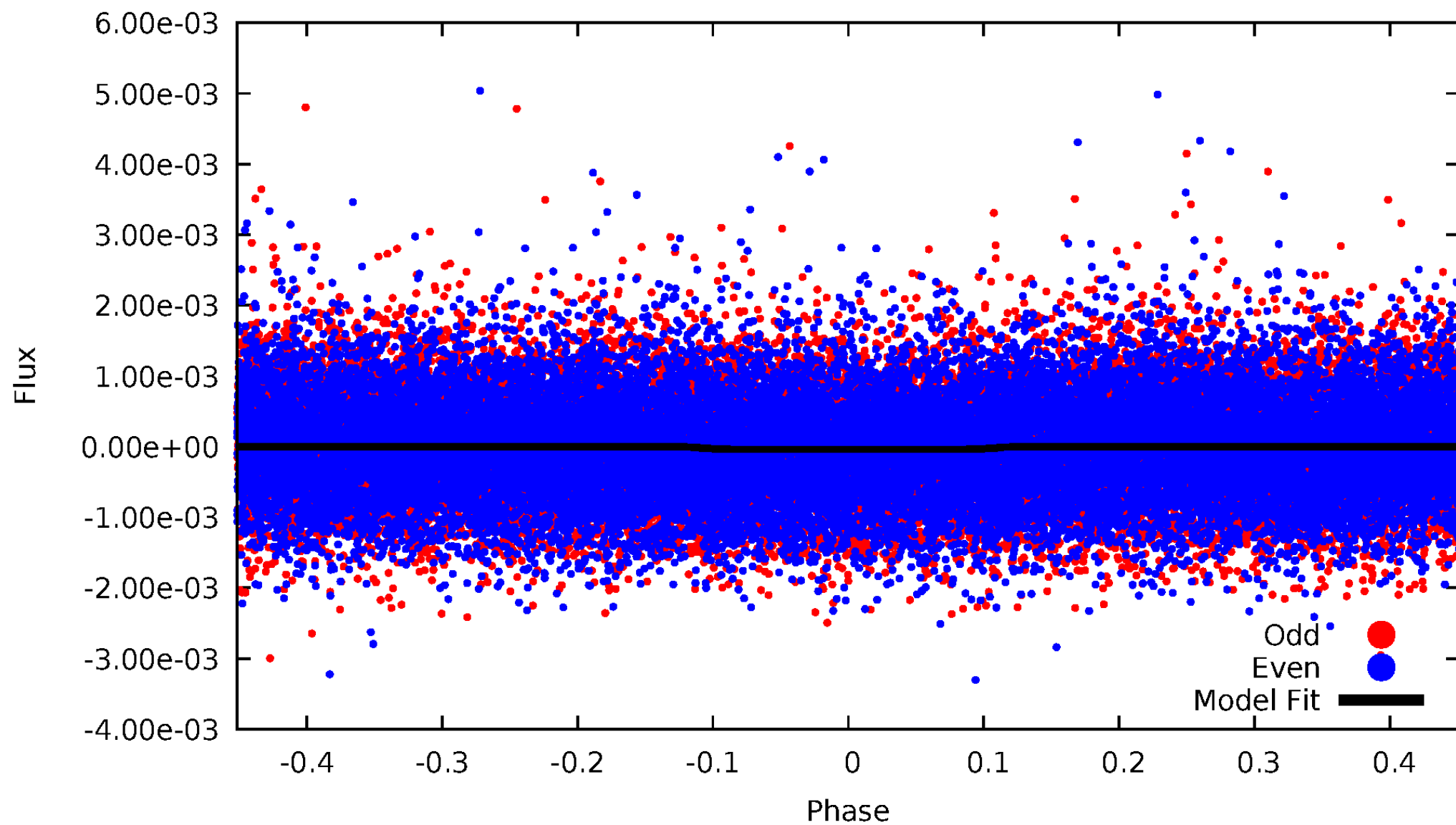
# TCE 003128325-01





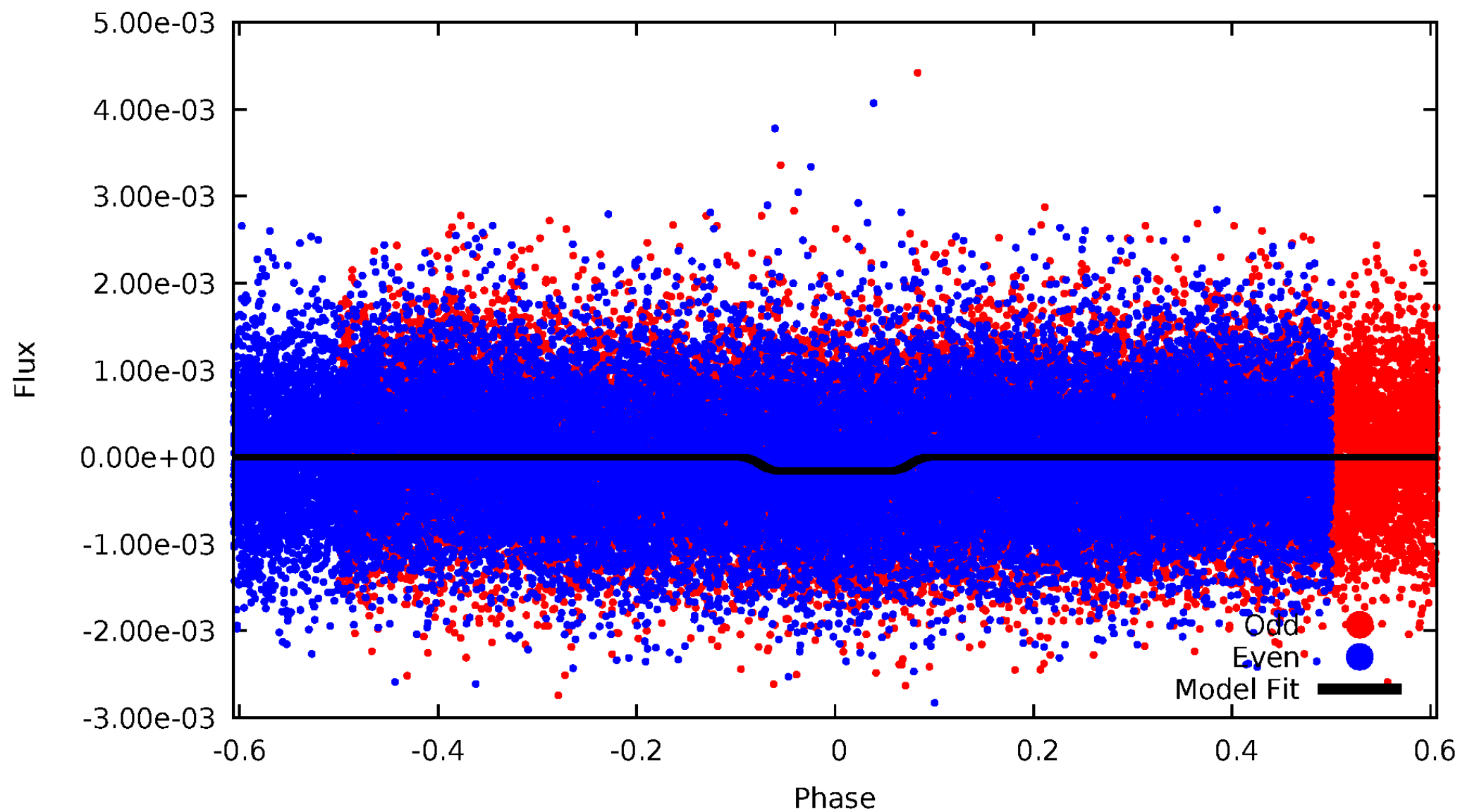
# DV Odd/Even

TCE 003128325-01



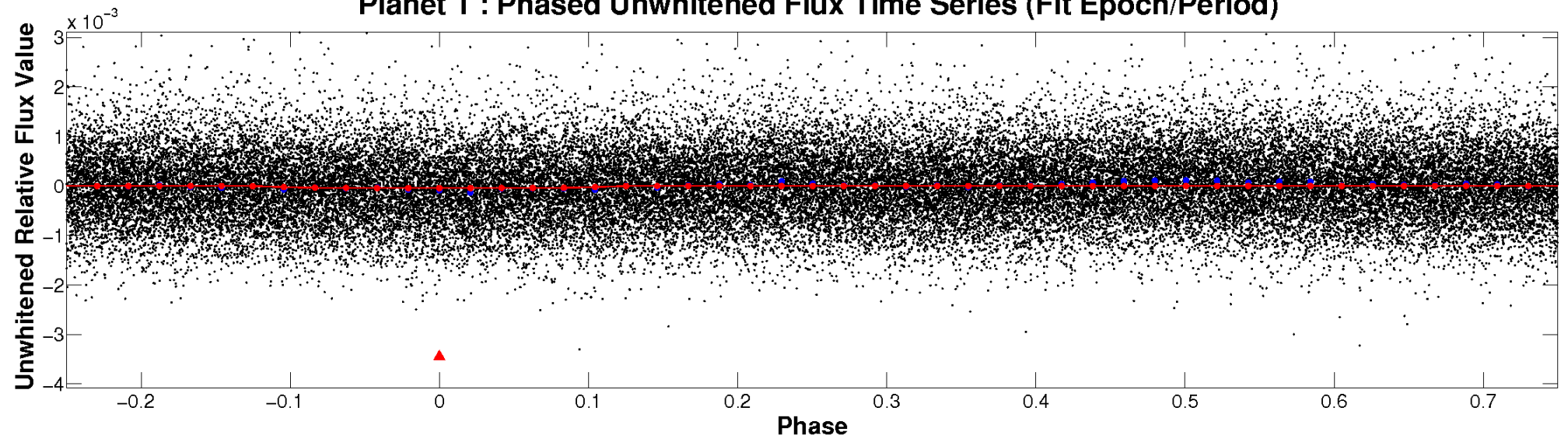
# ALT Odd/Even

TCE 003128325-01

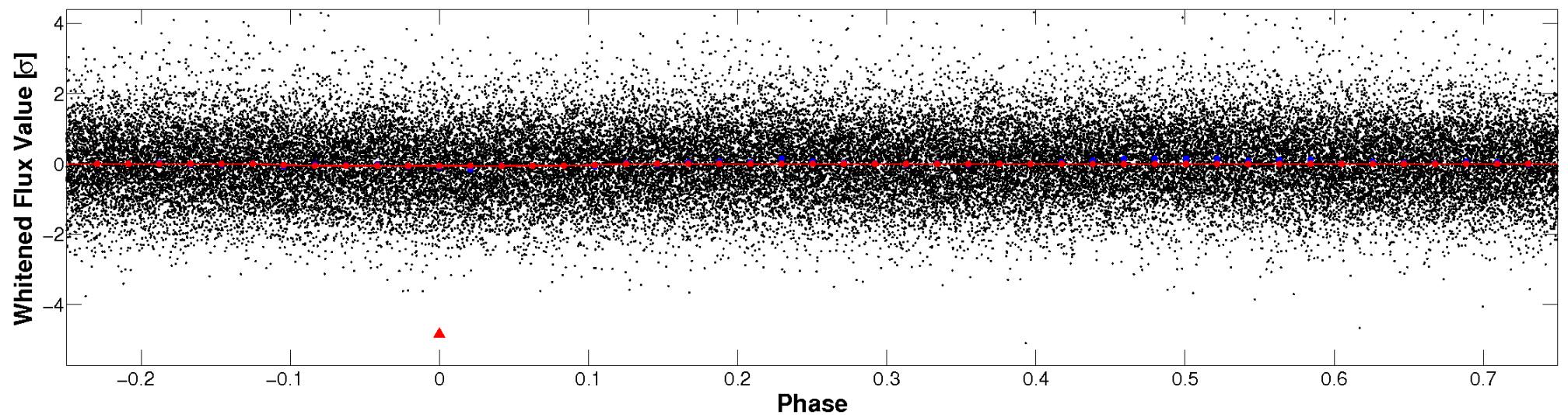


# Non-Whitened Vs. Whitened Light Curve

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

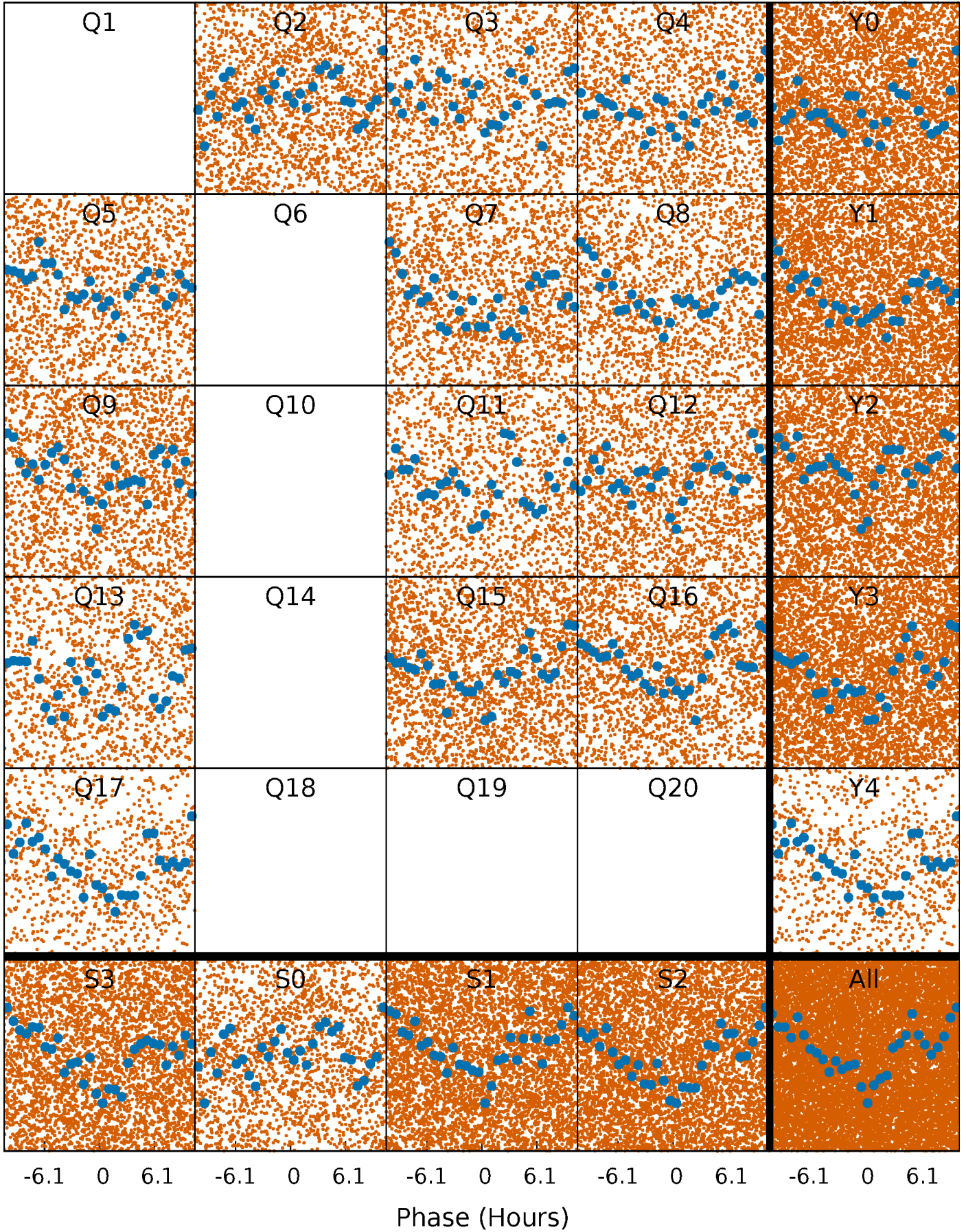


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

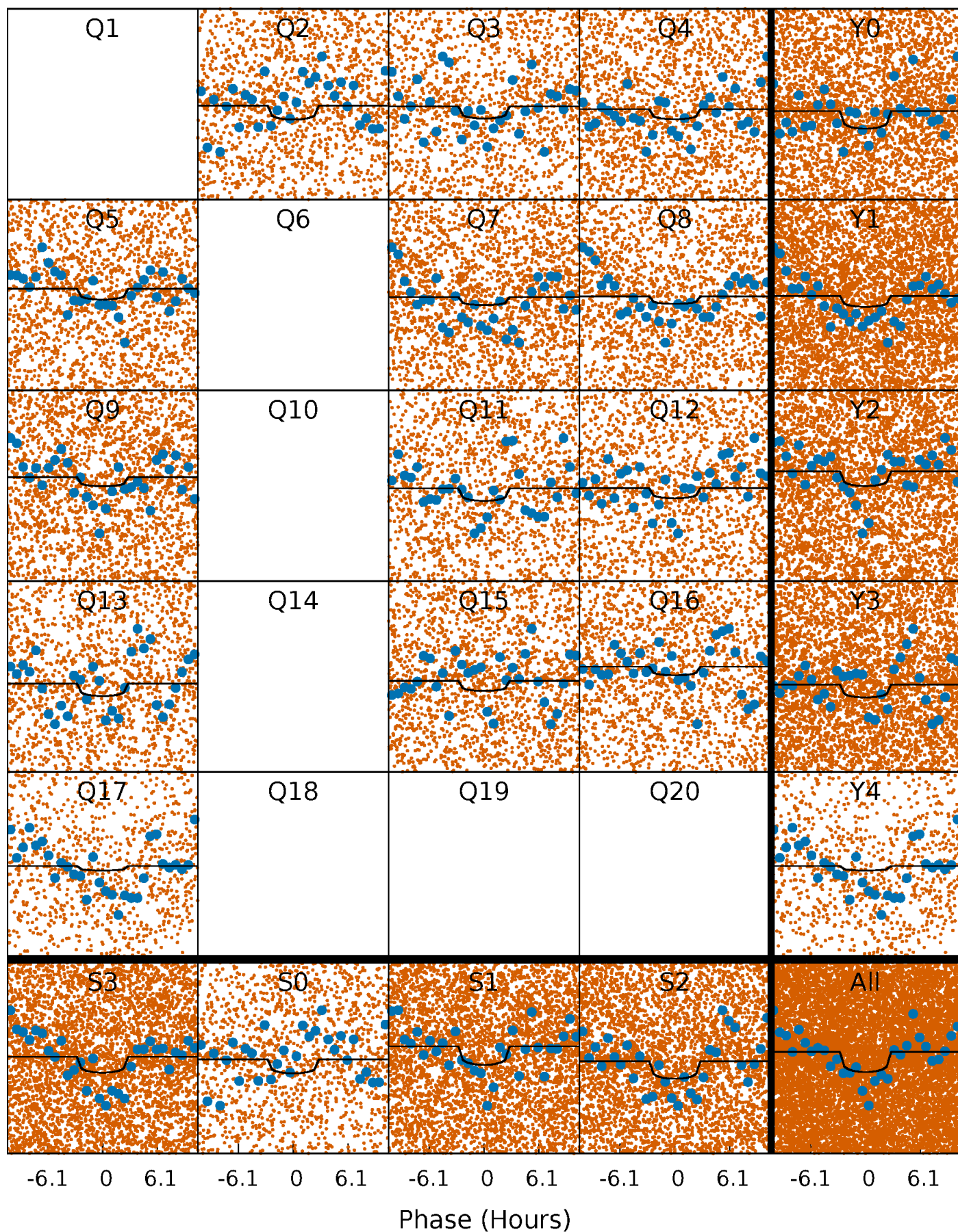
TCE 003128325-01 P= 0.979426 Days  $T_0=132.430207$  (BKJD)





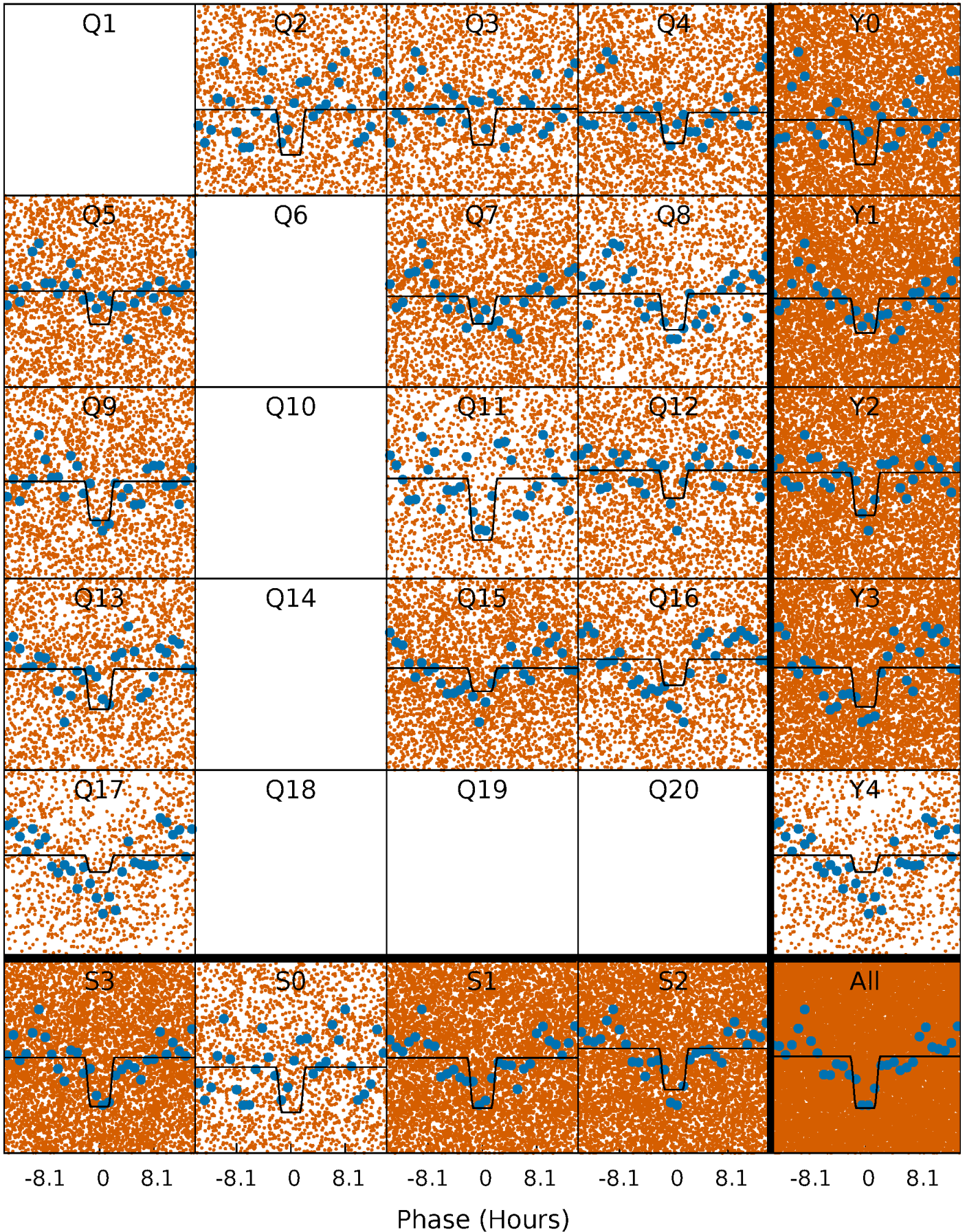
# DV Quarter-Phased Transit Curves

TCE 003128325-01 P= 0.979426 Days  $T_0=132.430207$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003128325-01 P= 0.979557 Days  $T_0=132.291246$  (BKJD)

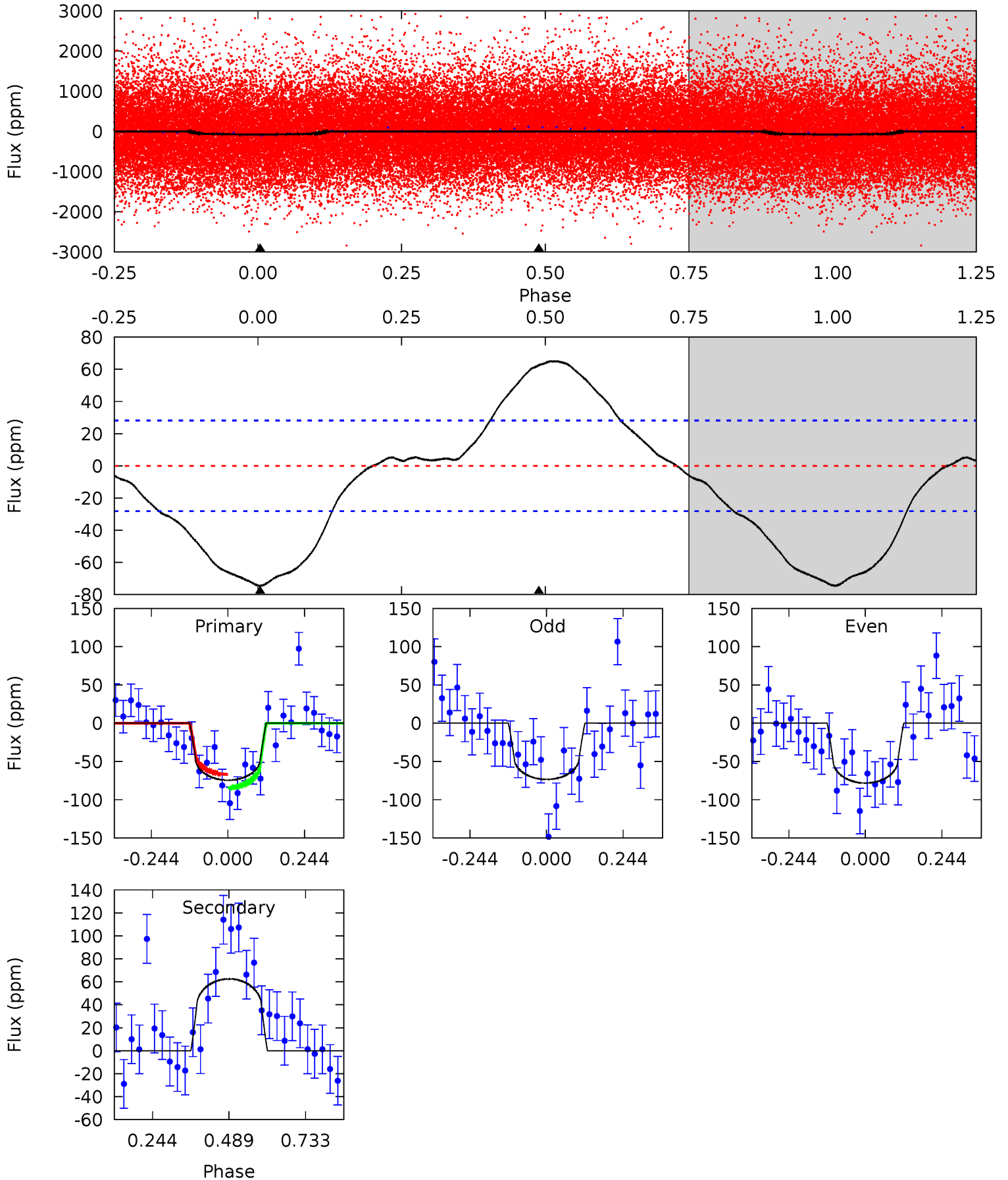




# DV Model-Shift Uniqueness Test

003128325-01, P = 0.979426 Days, E = 132.430207 Days

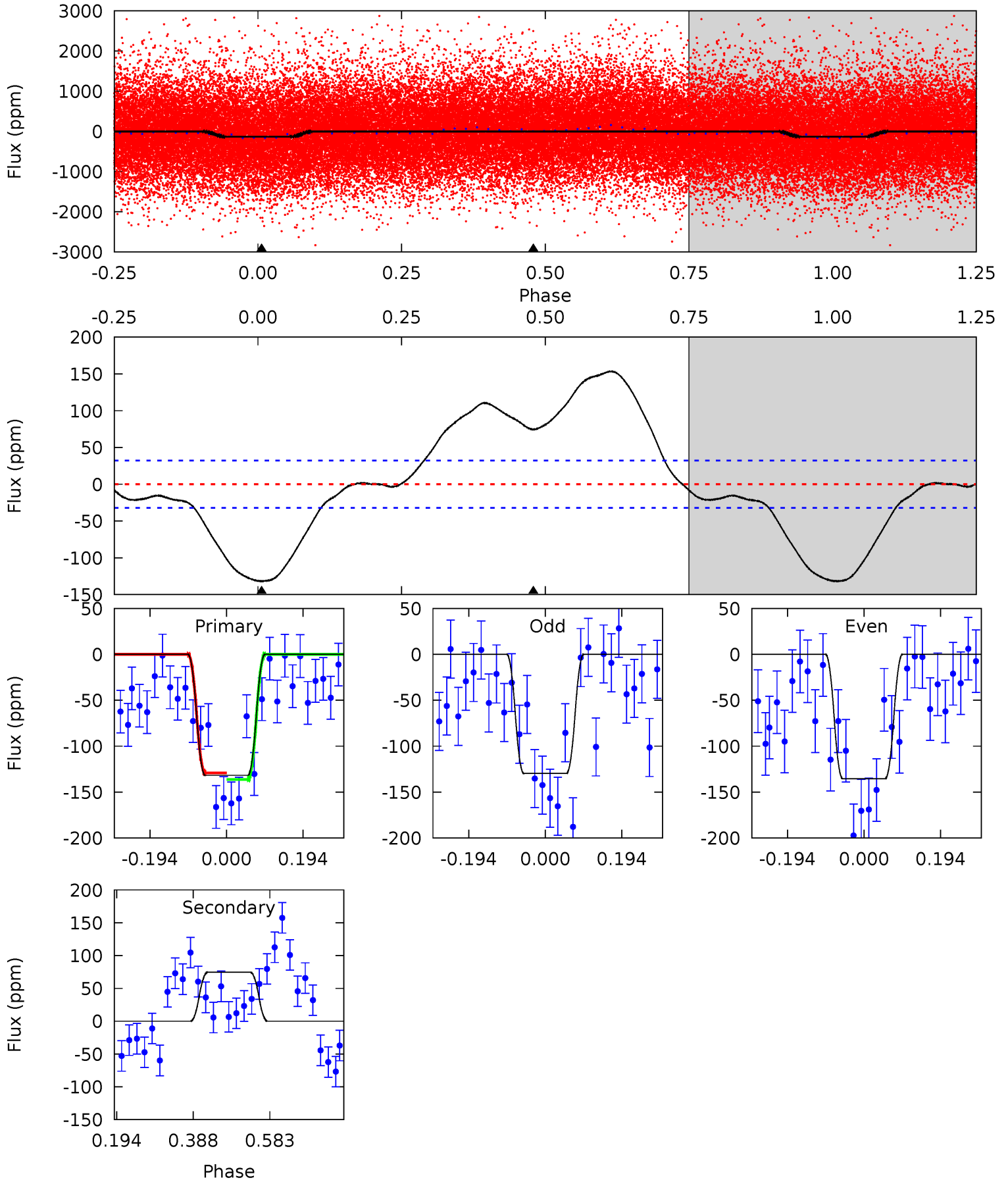
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	-9.71	0	0	4.37	1.16	0.83	11.6	11.6	-9.71	-9.71	0.37	1.08	0.47	1.34



# Alt Model-Shift Uniqueness Test

003128325-01, P = 0.979557 Days, E = 132.291246 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
18.1	-10.2	0	0	4.42	1.30	3.78	18.1	18.1	-10.2	-10.2	0.39	1.06	0.54	0.50





### Stellar Parameters For KIC 003128325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6674^{+187}_{-281}$	$4.345^{+0.065}_{-0.195}$	$0.070^{+0.250}_{-0.300}$	$1.286^{+0.391}_{-0.168}$	$1.335^{+0.174}_{-0.208}$	$0.885^{+0.244}_{-0.461}$
	+3%/-4%	+1%/-4%	+357%/-429%	+30%/-13%	+13%/-16%	+28%/-52%
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 003128325-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$63 \pm 6$	$1.63^{+1.71}_{-1.13}$	$3253^{+235}_{-191}$	$-5709^{+1335}_{-5610}$	$-5.533^{+4.113}_{-54.044}$
Alt.	$74 \pm 7$	$2.31^{+1.71}_{-1.46}$	$3251^{+241}_{-182}$	$-5087^{+891}_{-3079}$	$-3.448^{+2.332}_{-20.023}$

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

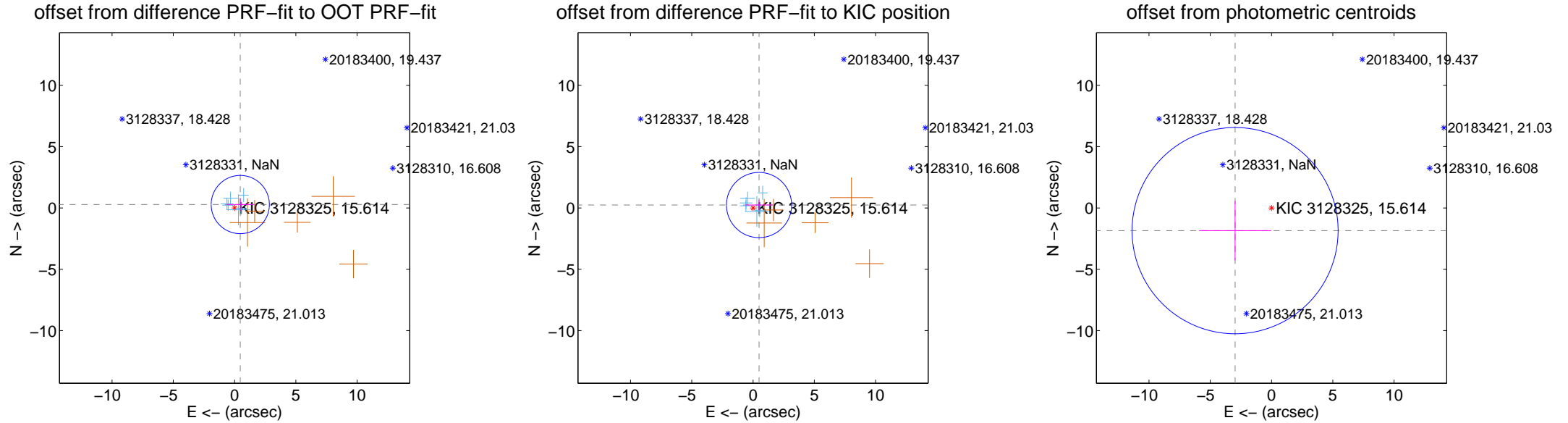
## DV Centroid Data

Supplemental centroid analysis for 003128325-01. Kepler magnitude: 15.61. Transit SNR 5.29

There are 6 quarters with good PRF difference image offsets

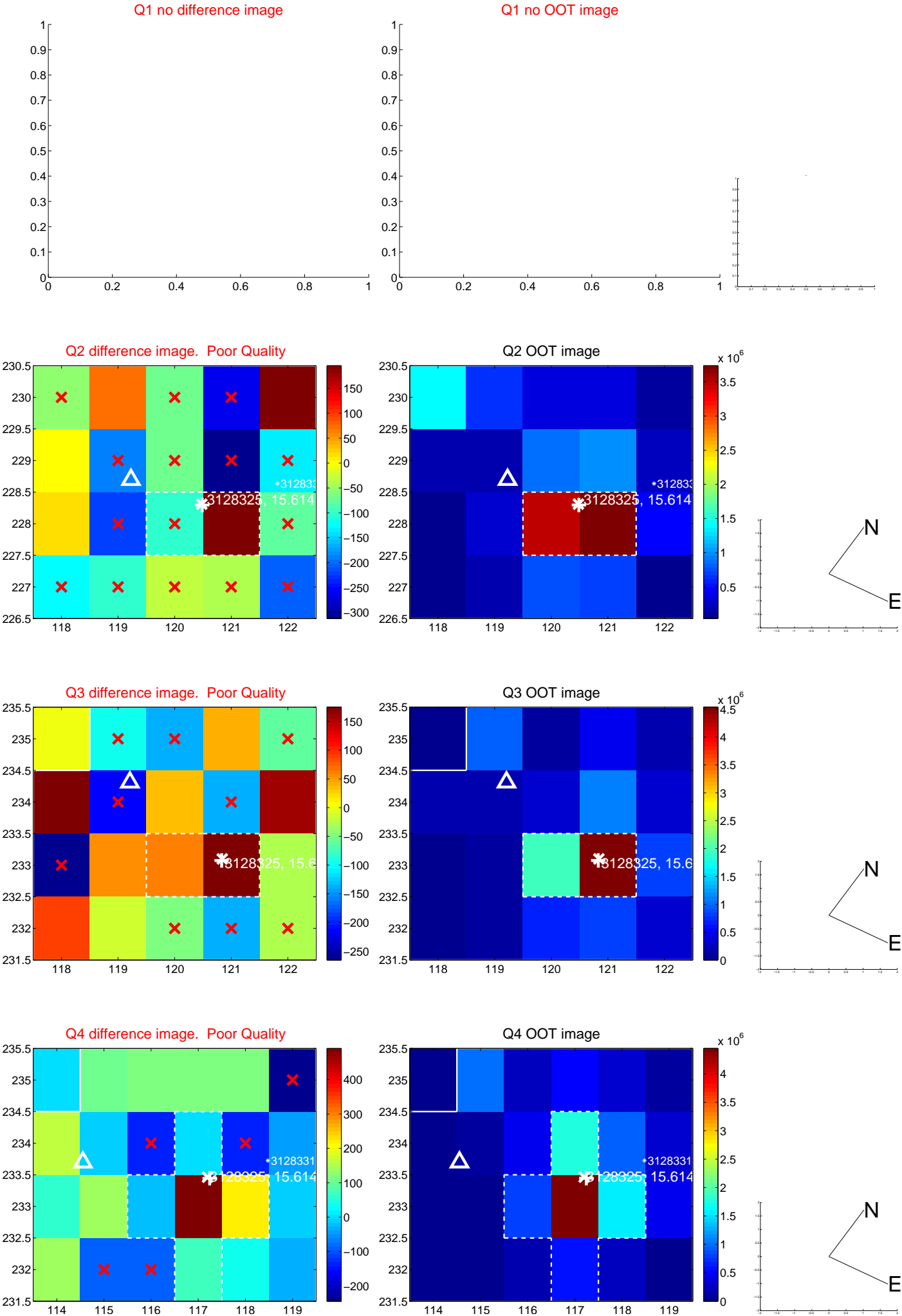
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.541 \pm 0.792$	0.68	$-0.464 \pm 1.080$	$0.278 \pm 0.508$
PRF-fit source offset from KIC position	$0.543 \pm 0.886$	0.61	$-0.488 \pm 1.100$	$0.238 \pm 0.429$
photometric centroid source offset	$3.50 \pm 2.80$	1.25	$2.97 \pm 2.94$	$-1.85 \pm 2.41$

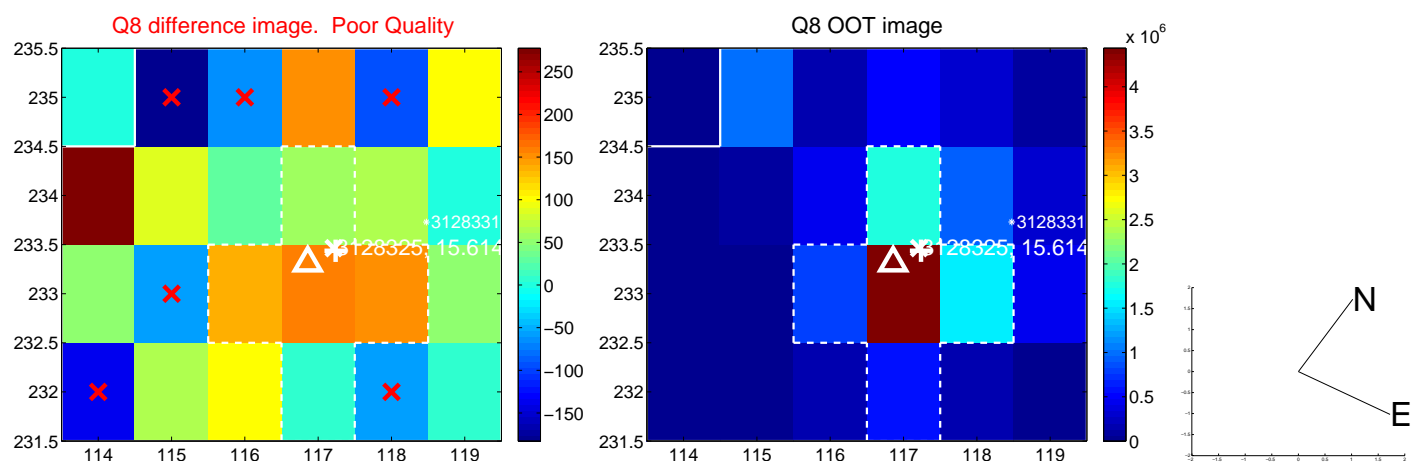
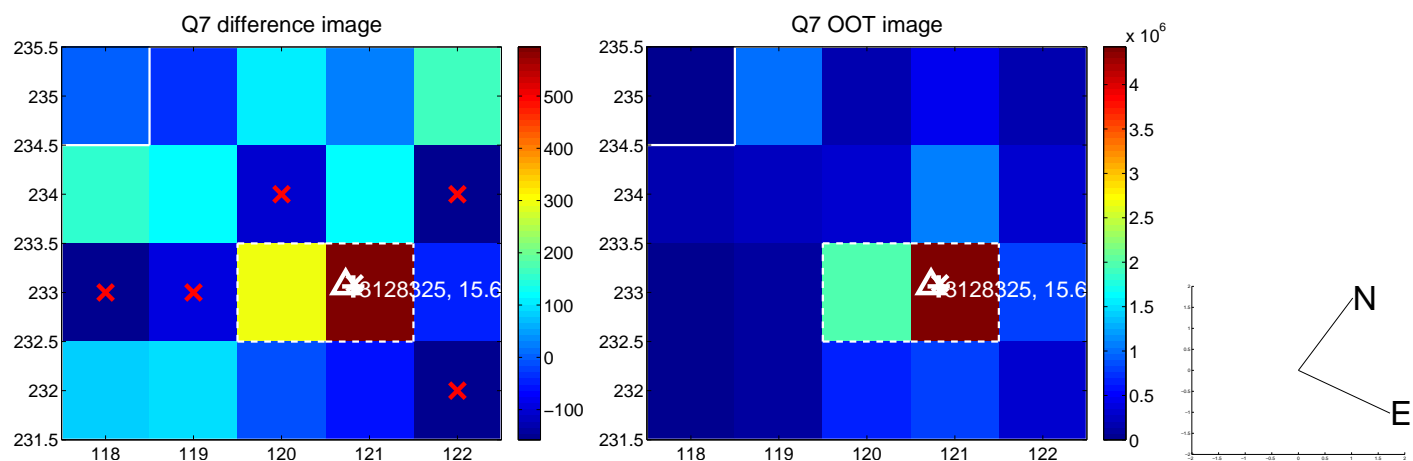
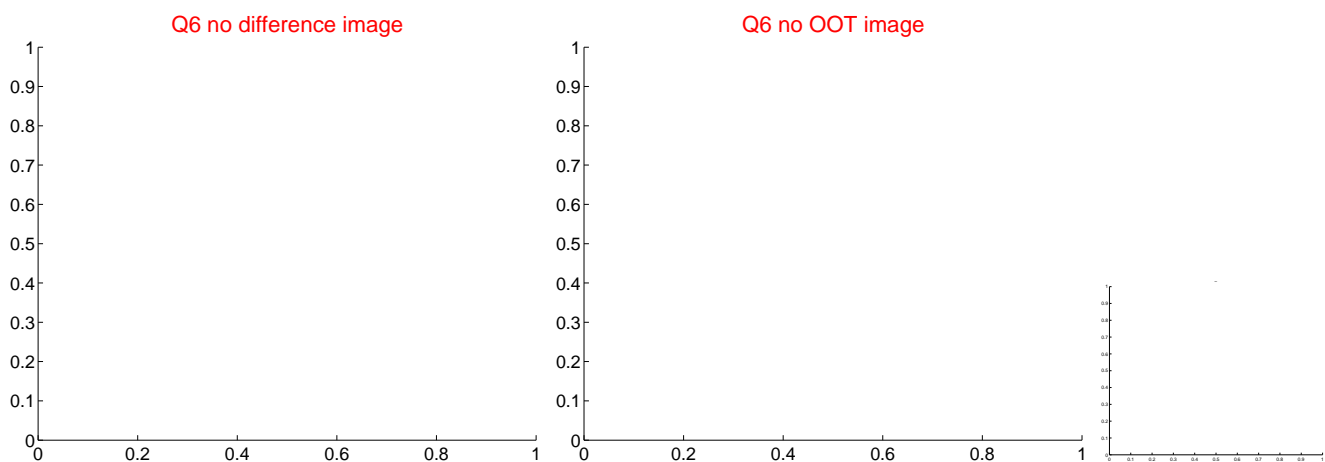
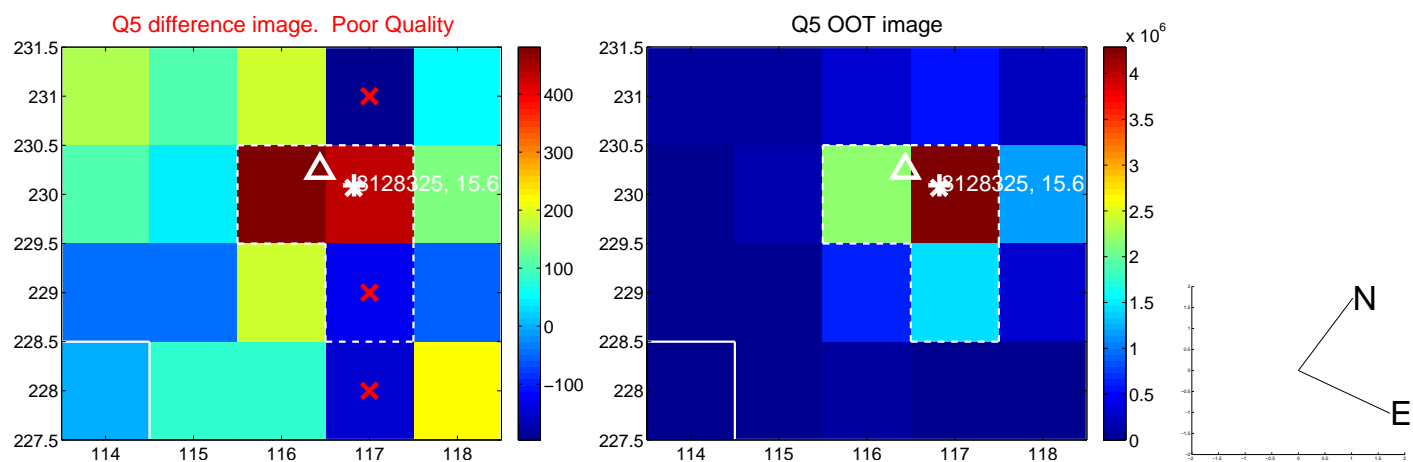


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

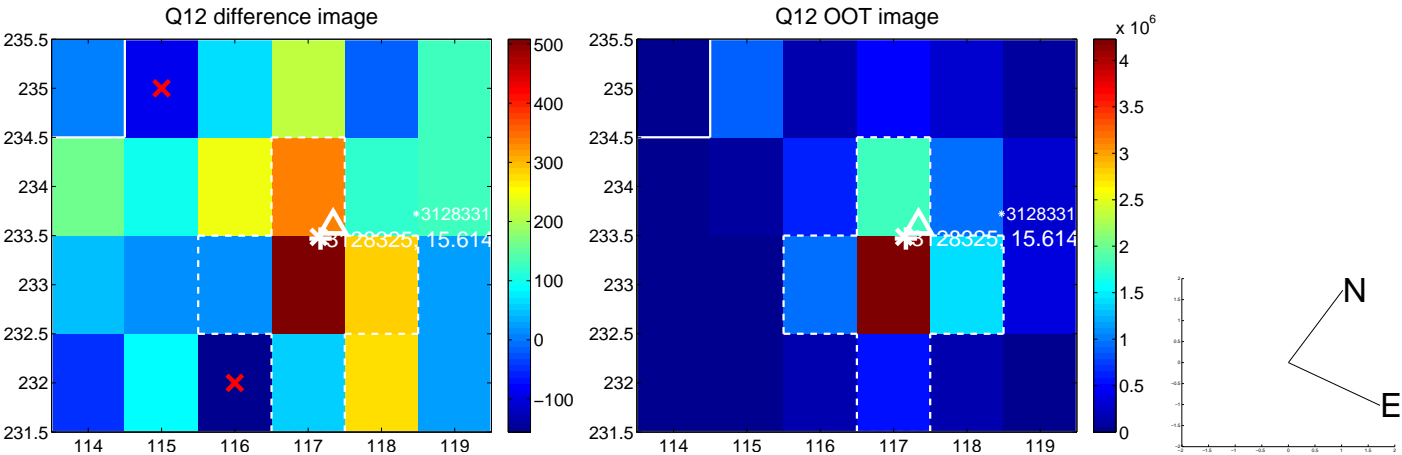
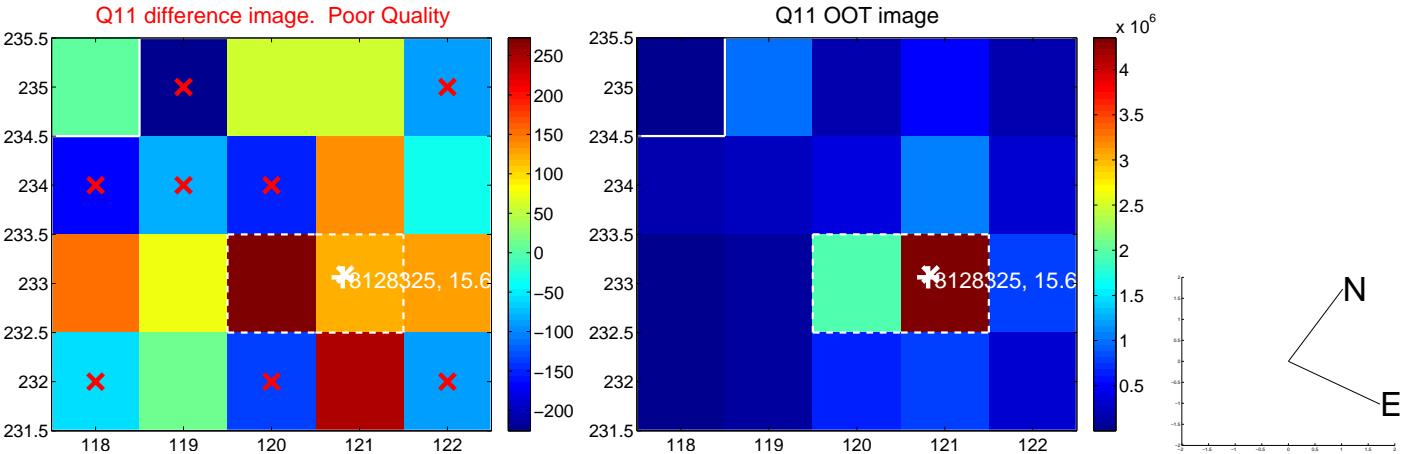
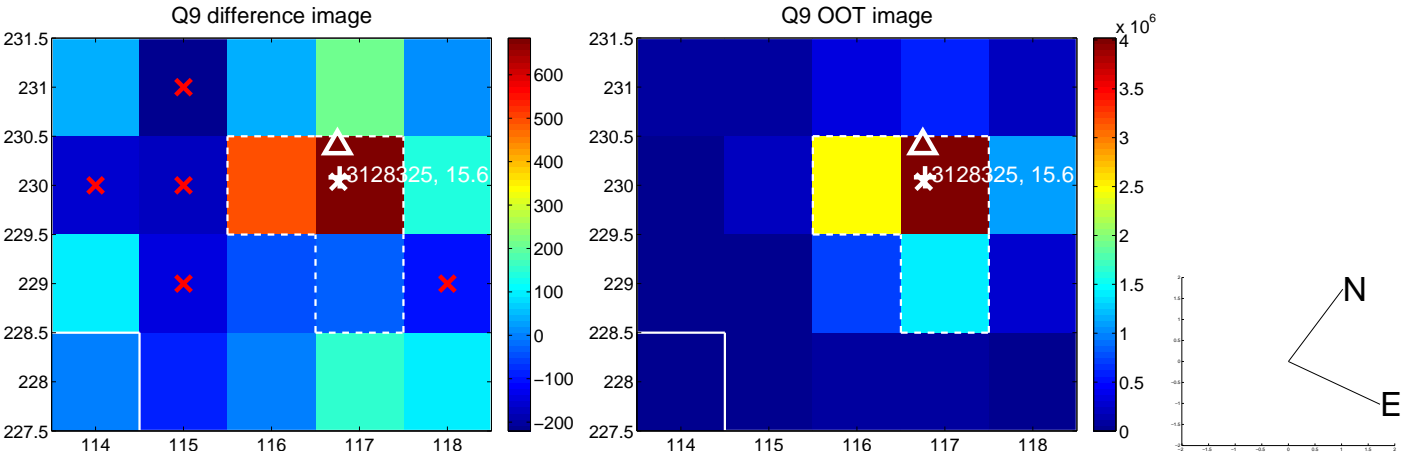


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value

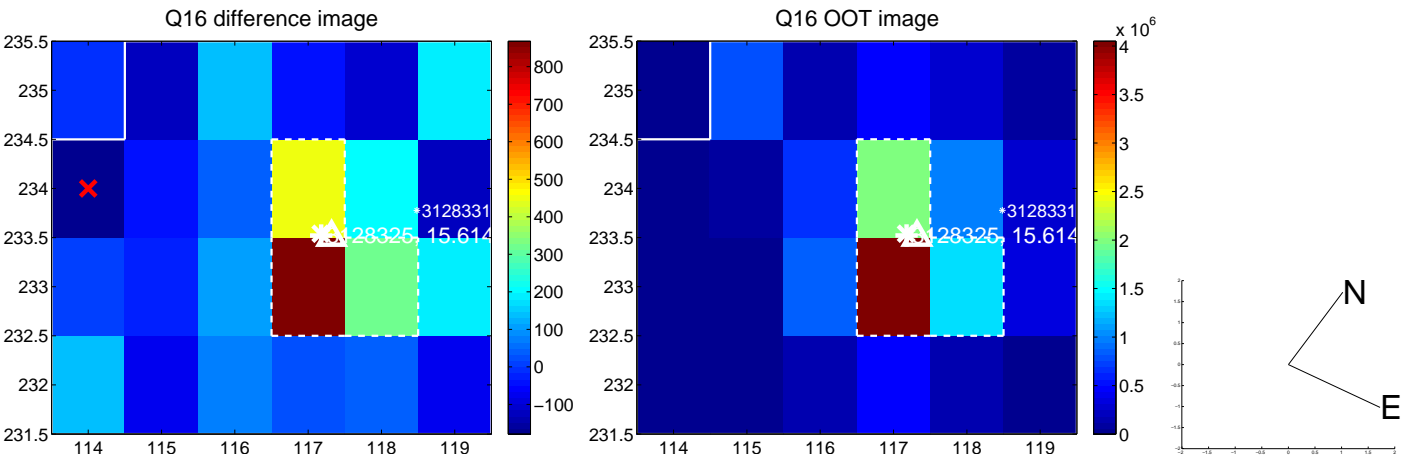
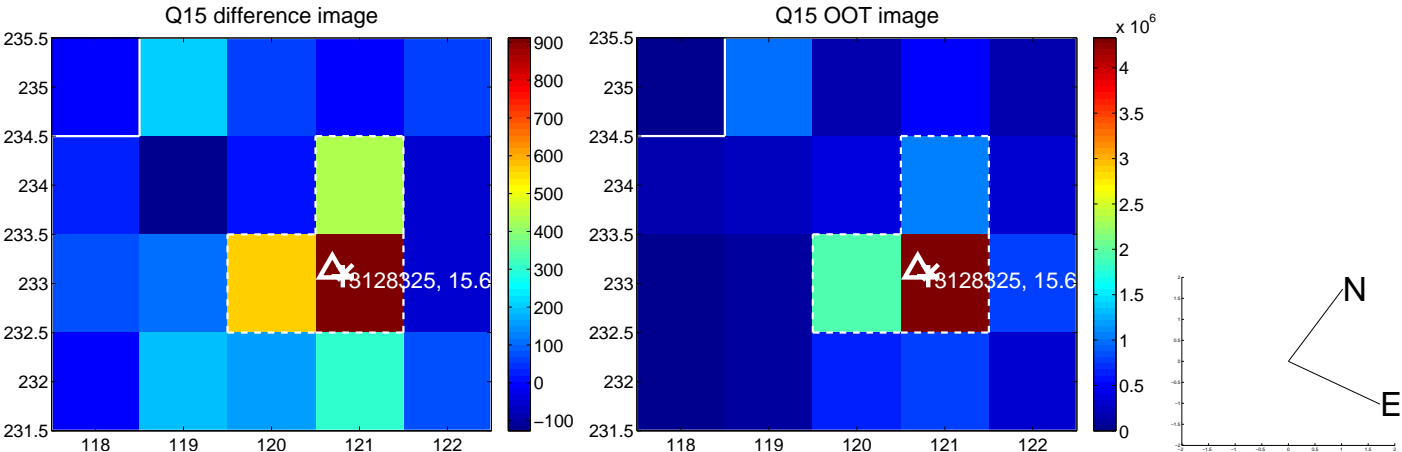
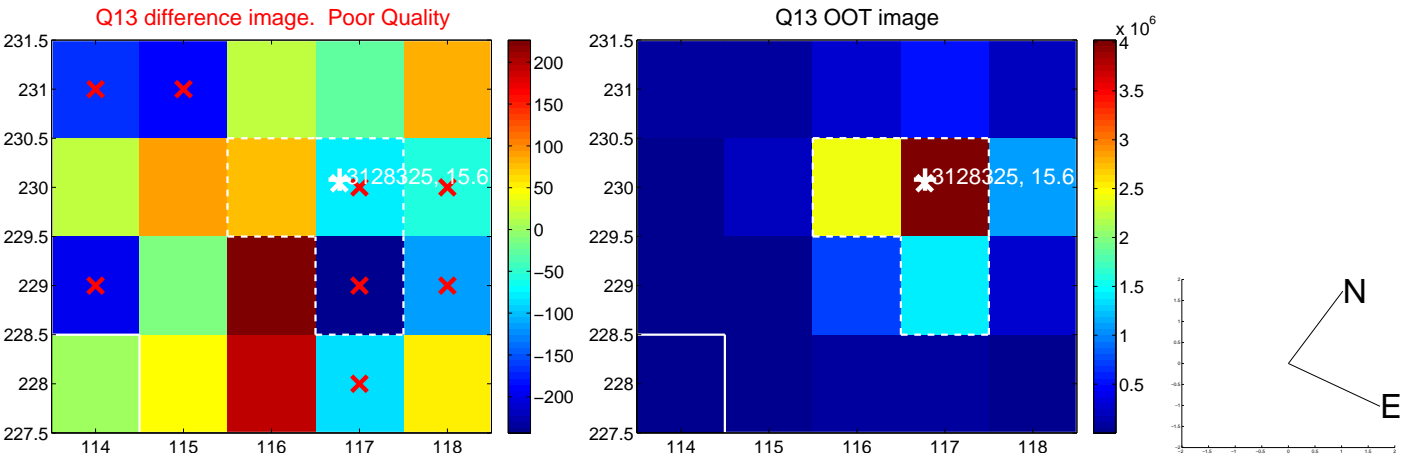




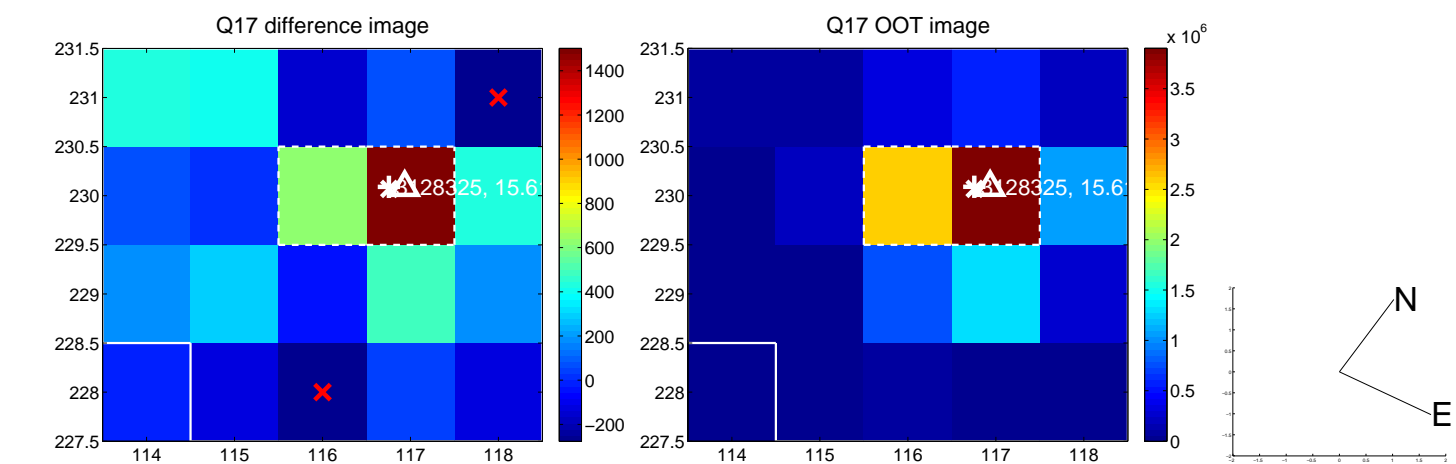
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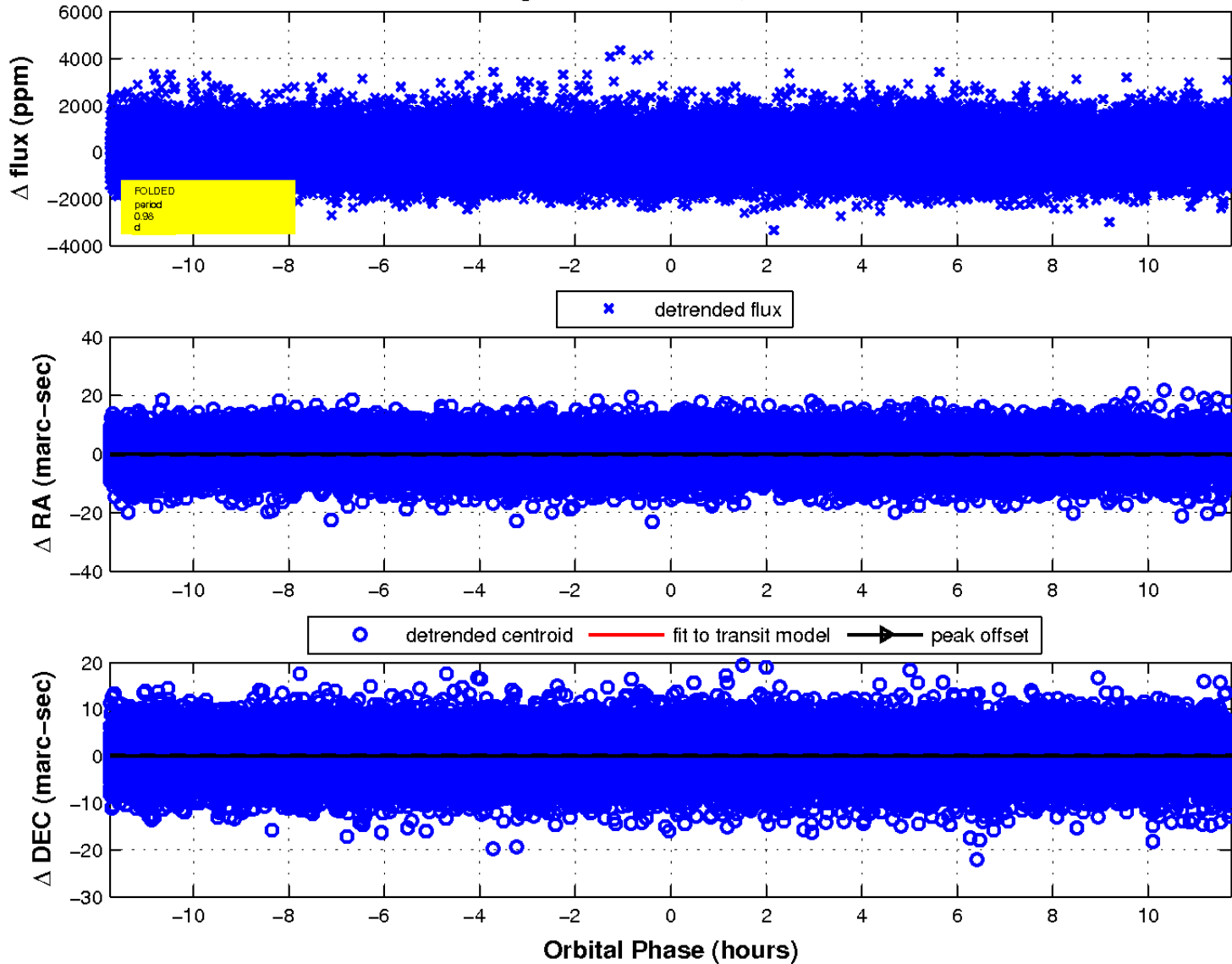
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

