

# KIC 003128814

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003128814-01	OBS	No	0.727250	131.700815	43.3	6.152	8.0	6.7	1.02	6208	0.71	5264.08

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003128814-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

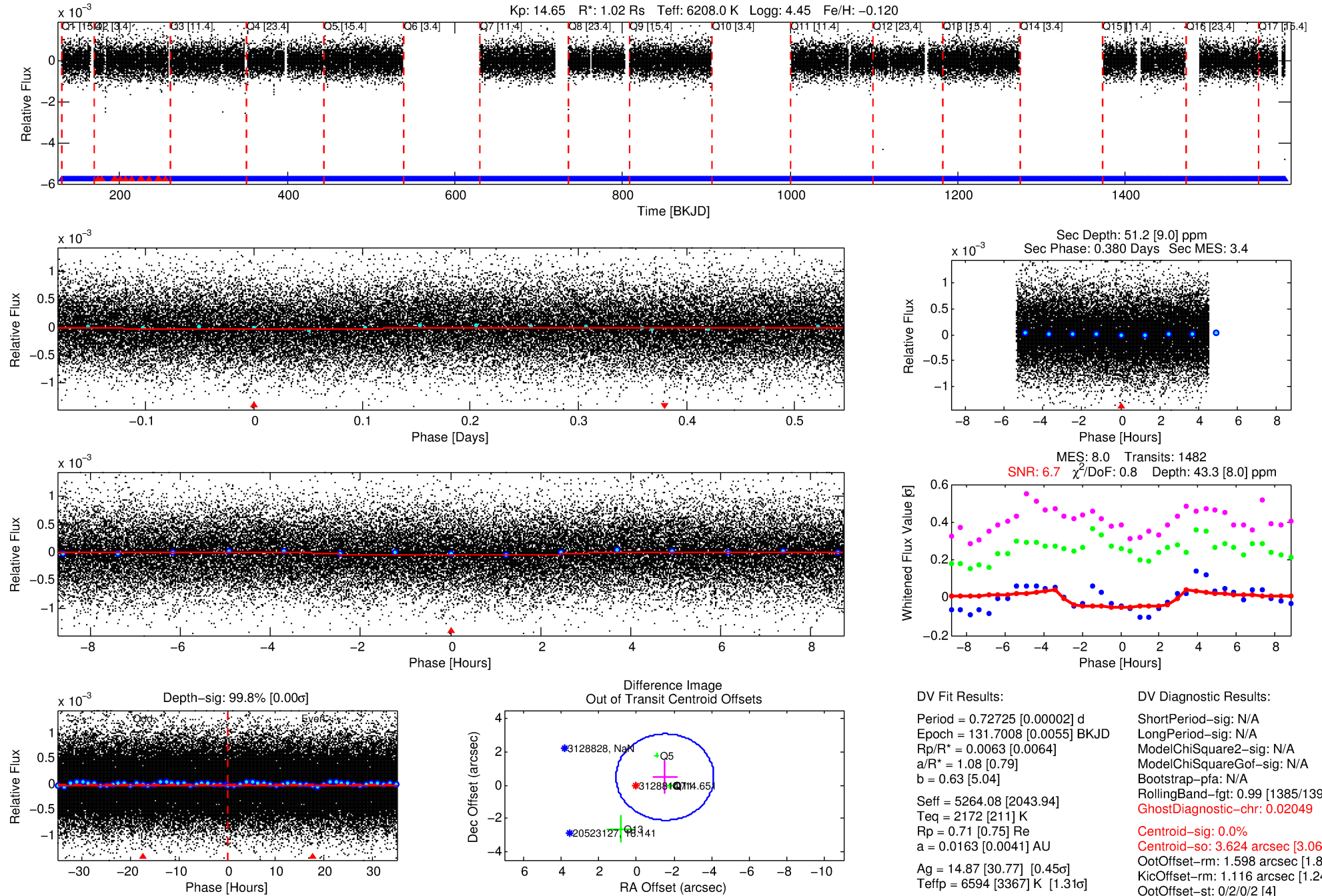
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003128814-01

No Significant Match Found

# DV One-Page Summary

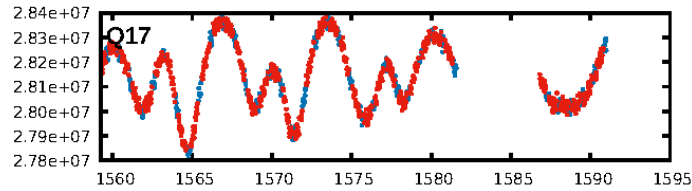
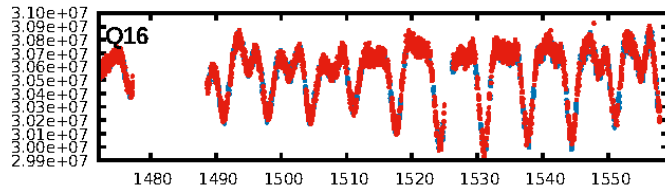
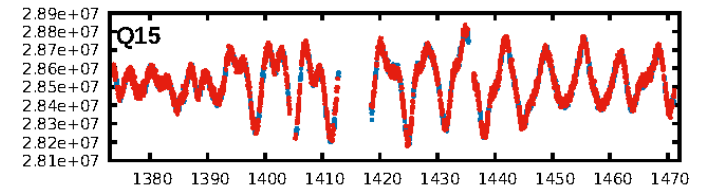
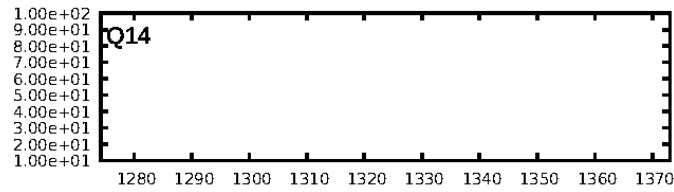
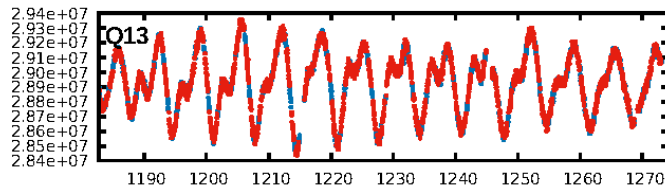
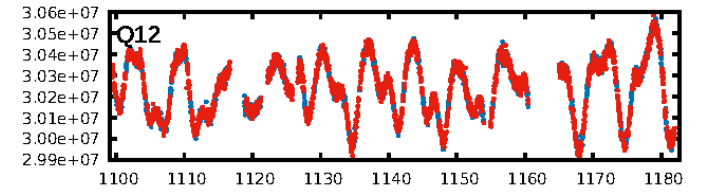
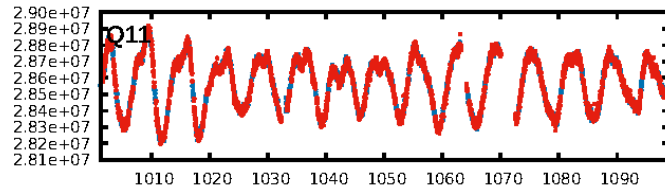
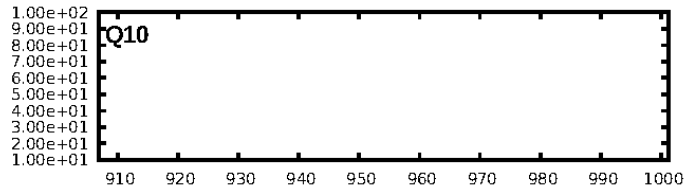
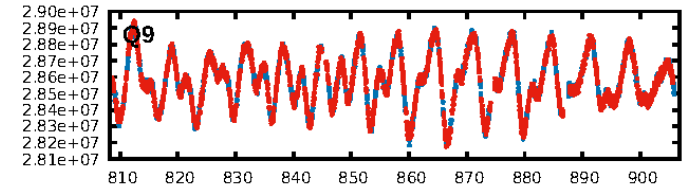
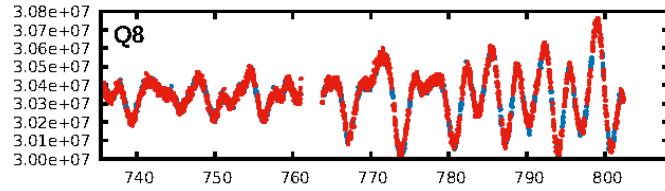
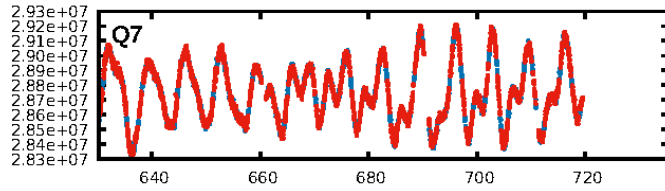
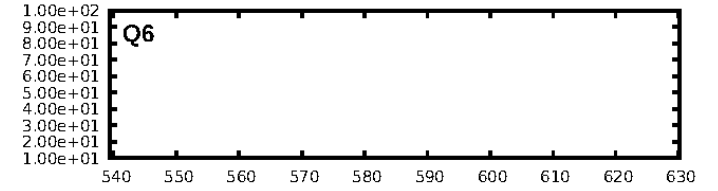
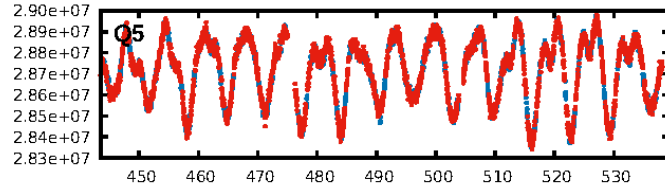
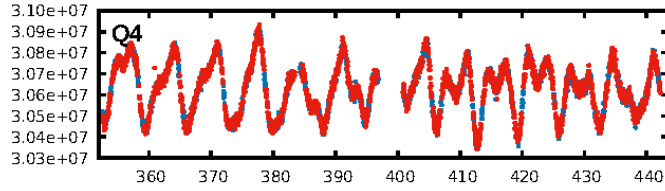
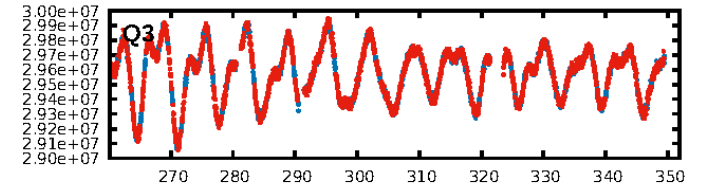
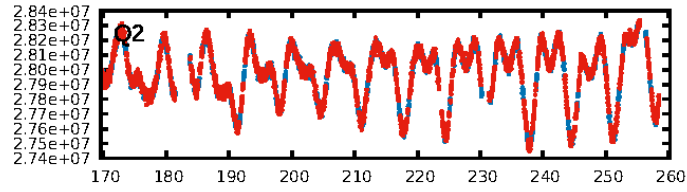
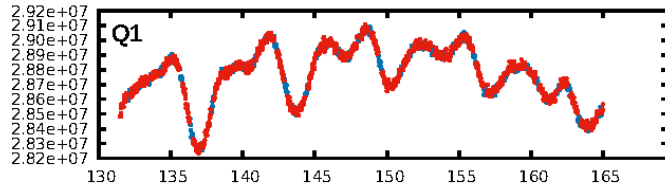
KIC: 3128814 Candidate: 1 of 1 Period: 0.727 d



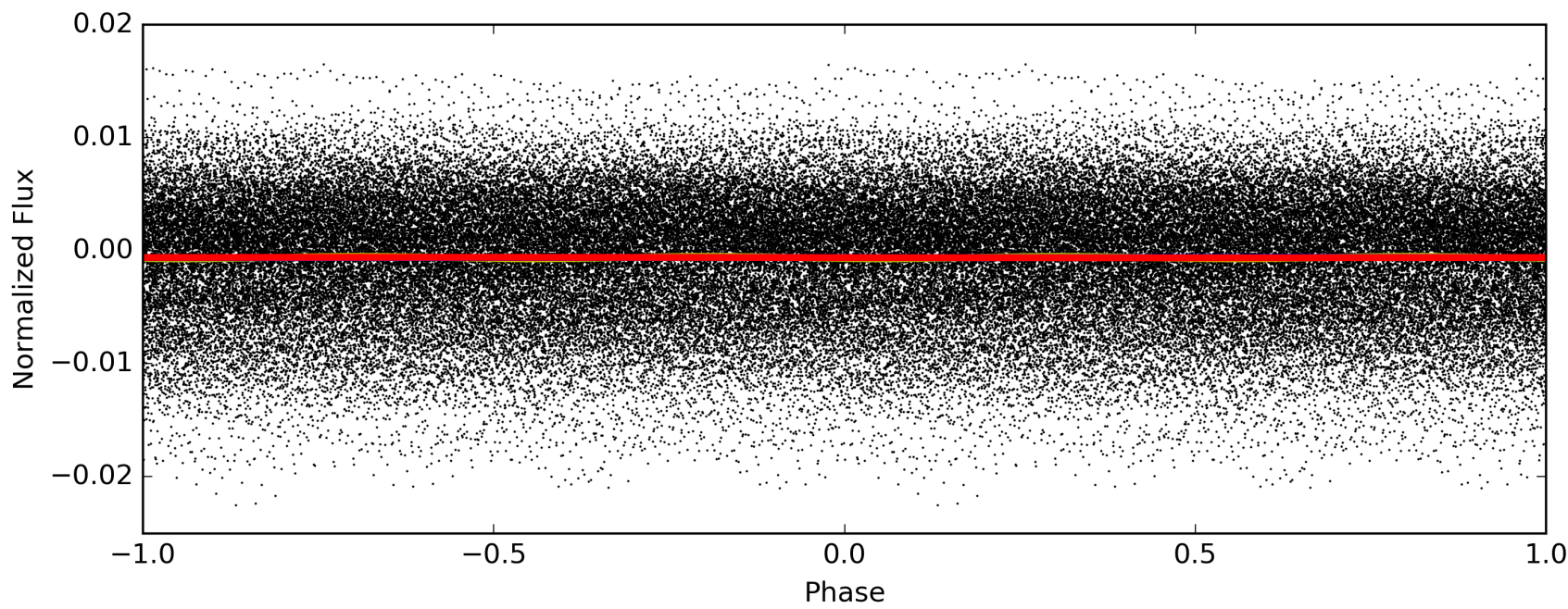
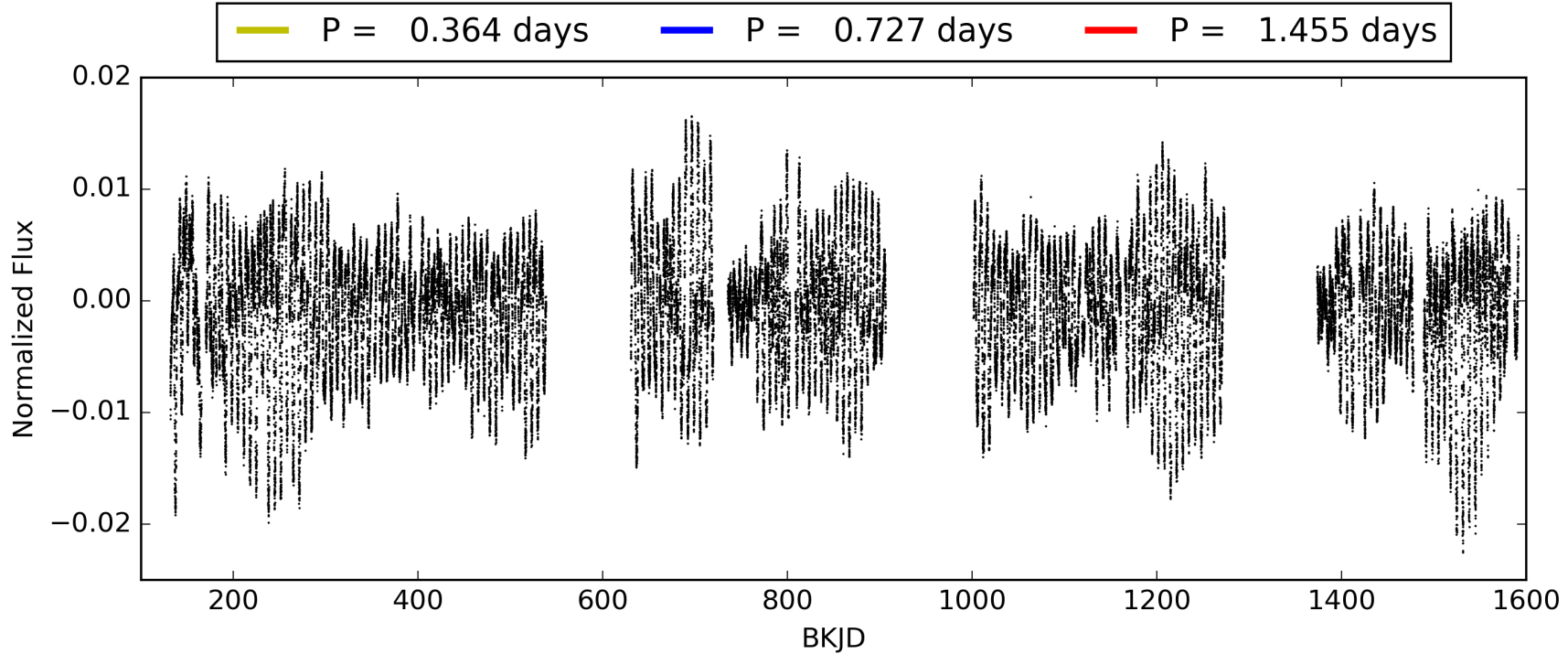
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:18:59 Z

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

# TCE 003128814-01, PDC Light Curves

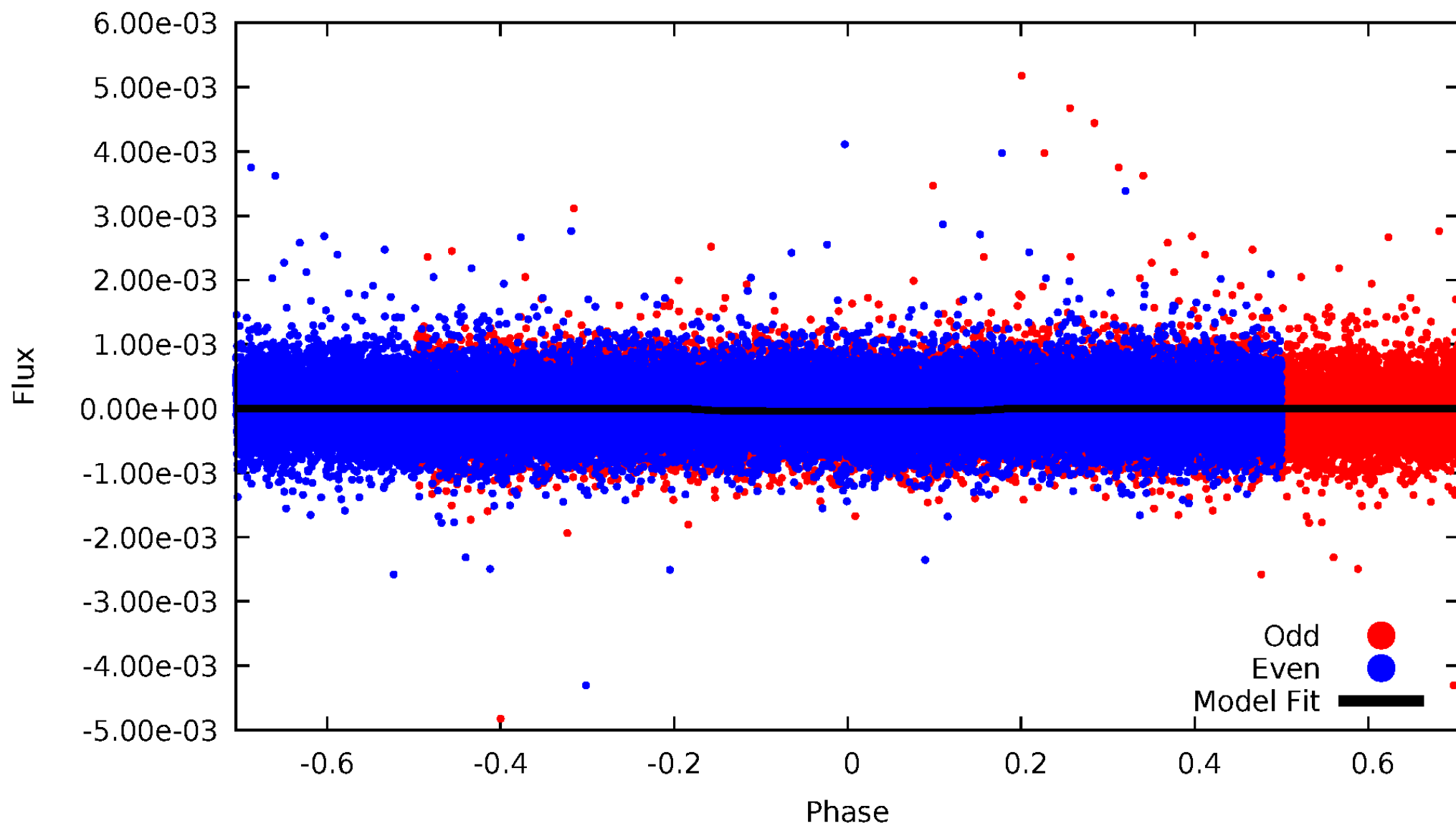


TCE 003128814-01



# DV Odd/Even

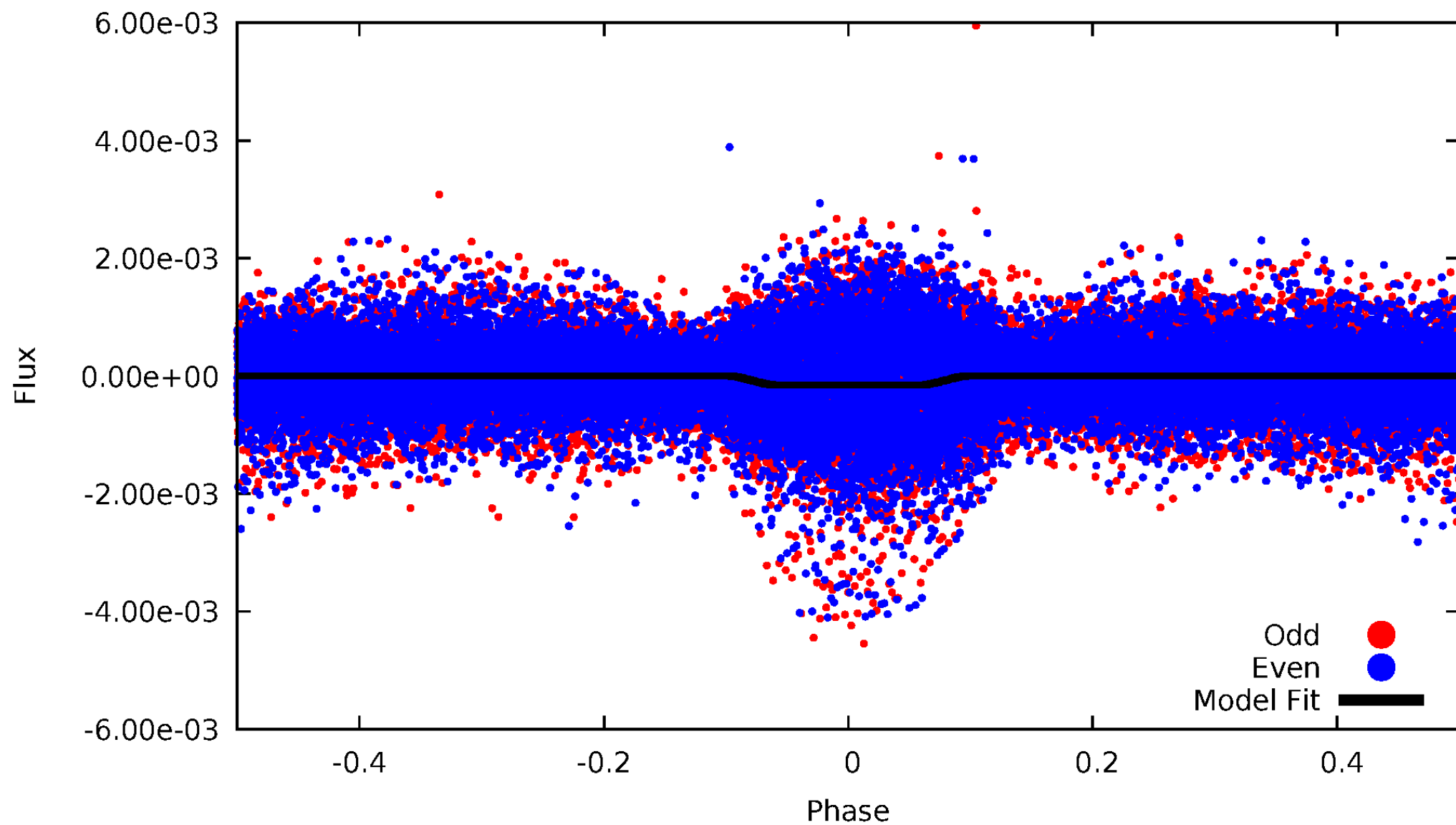
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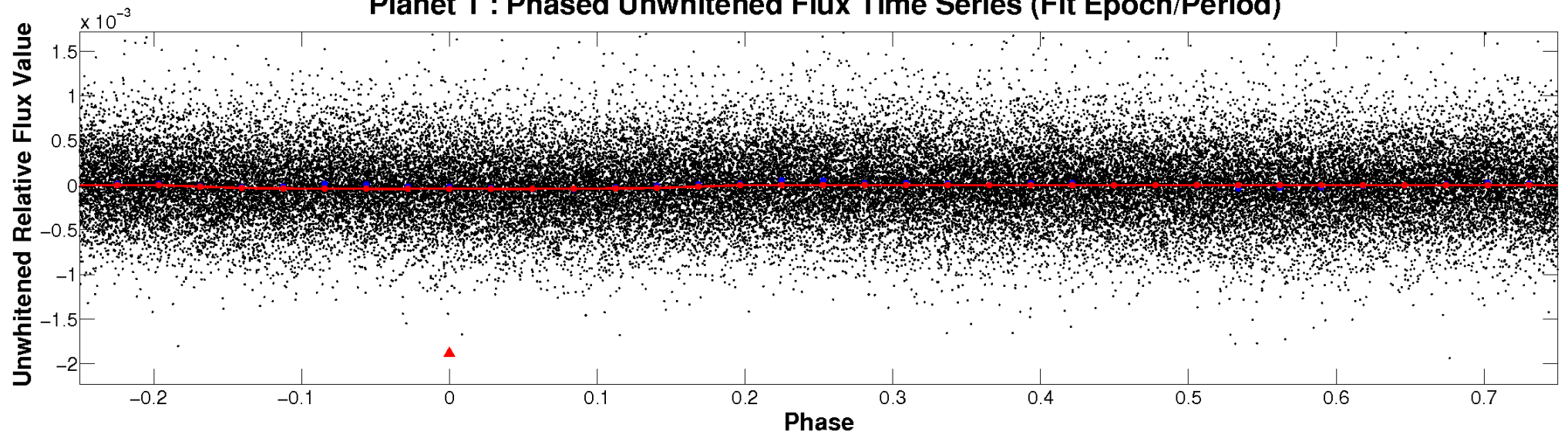
# ALT Odd/Even

TCE 003128814-01

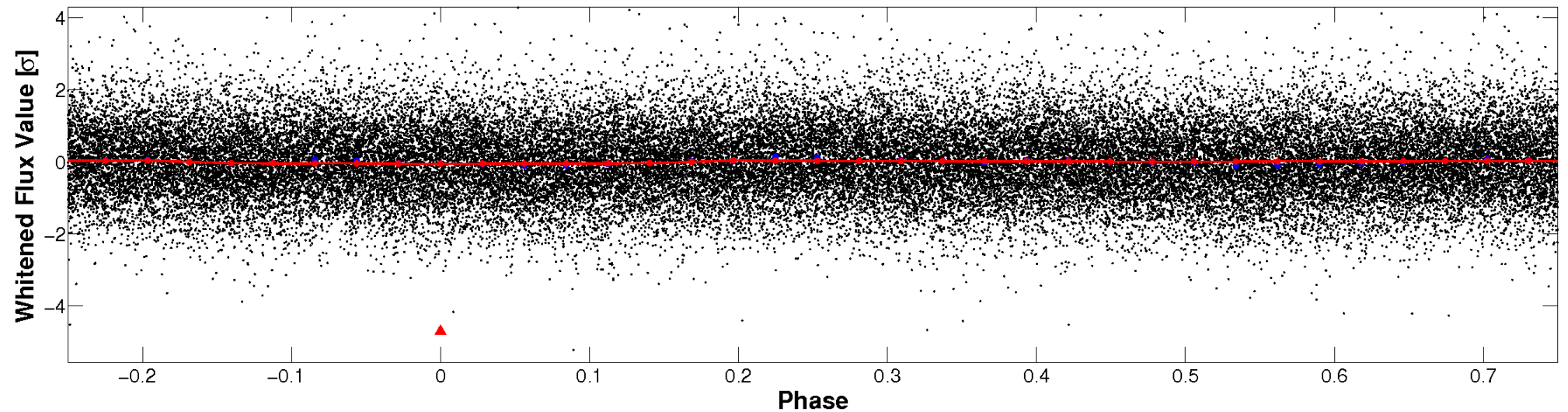


# Non-Whitened Vs. Whitened Light Curve

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

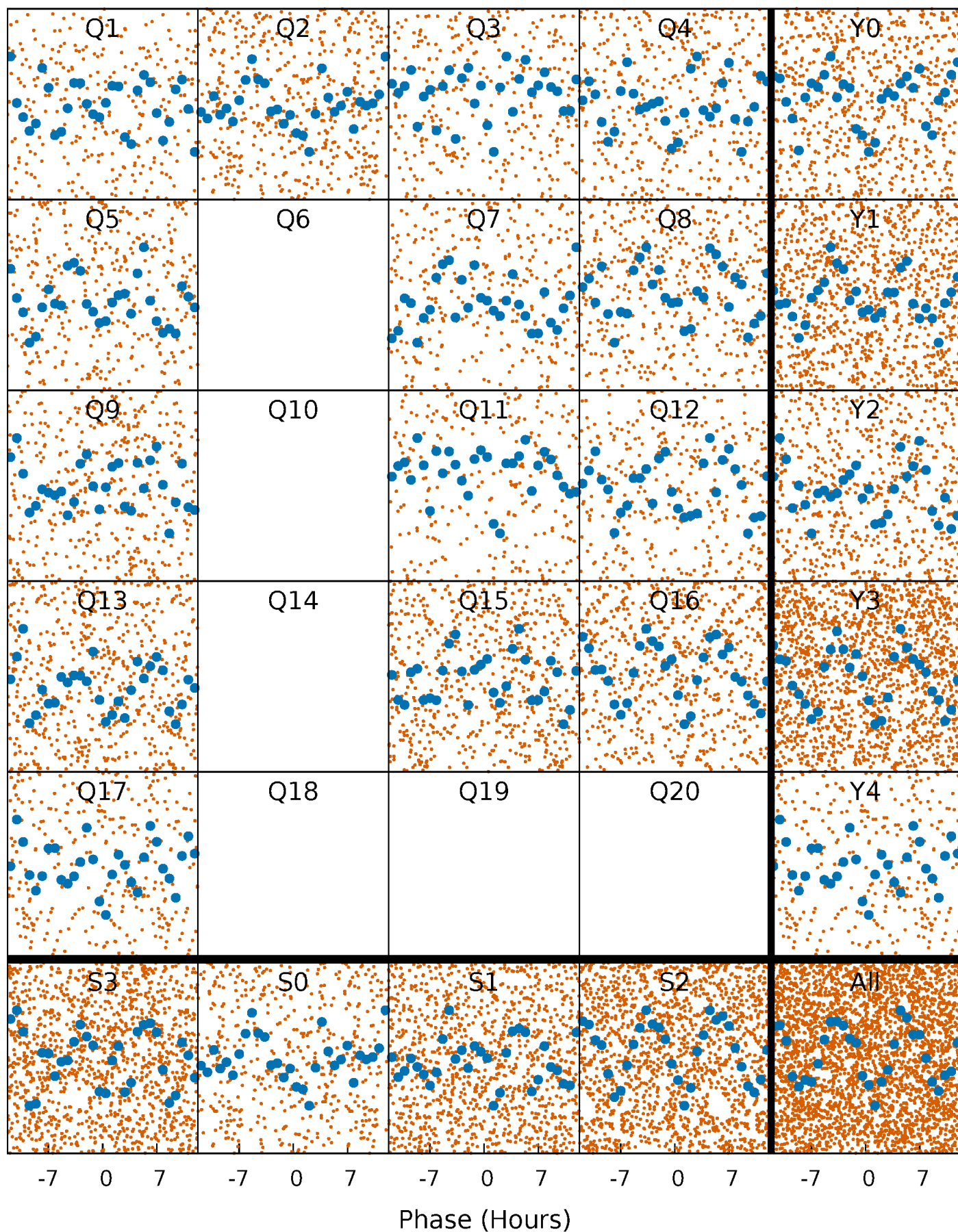


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

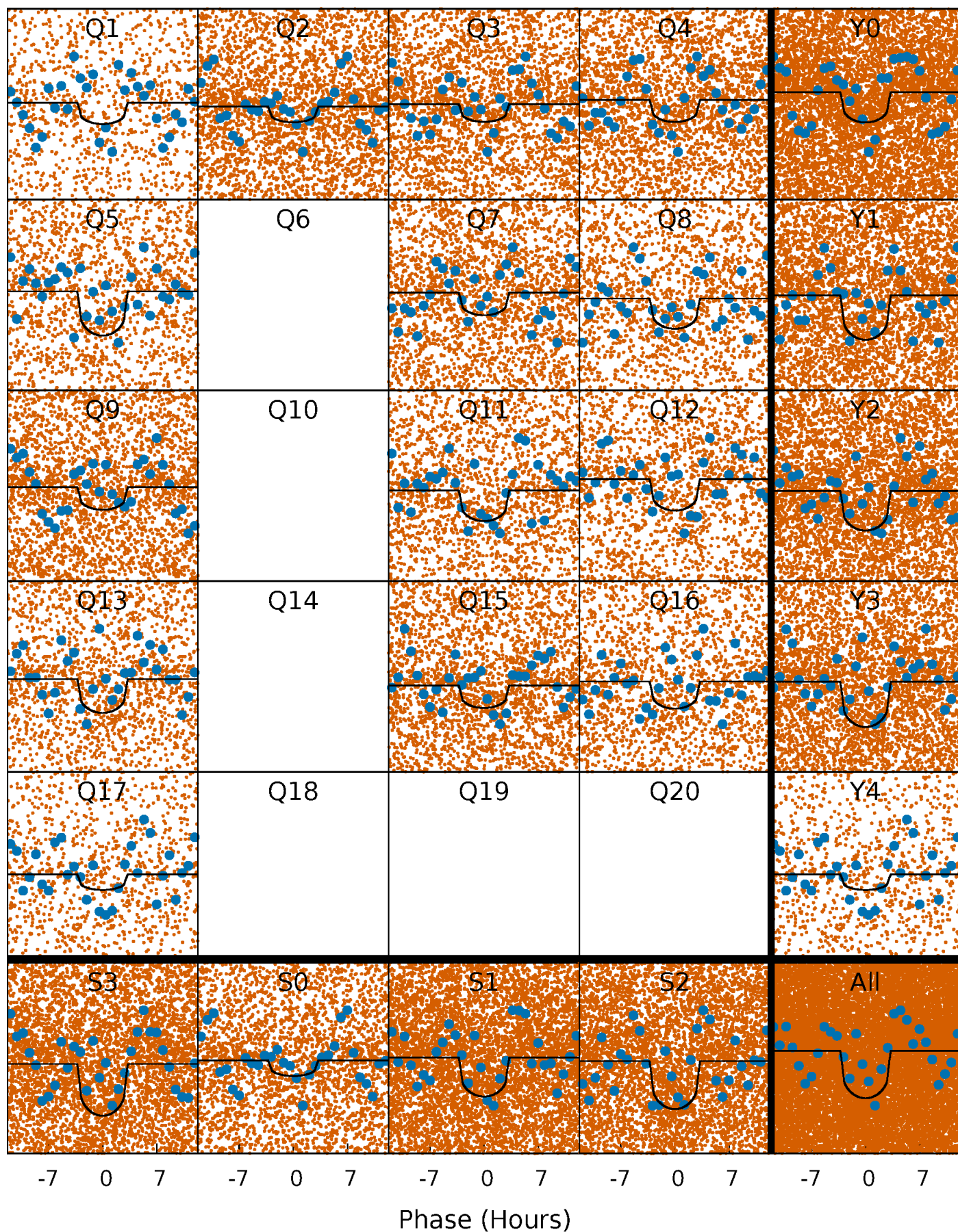
TCE 003128814-01 P= 0.727250 Days  $T_0=131.700815$  (BKJD)





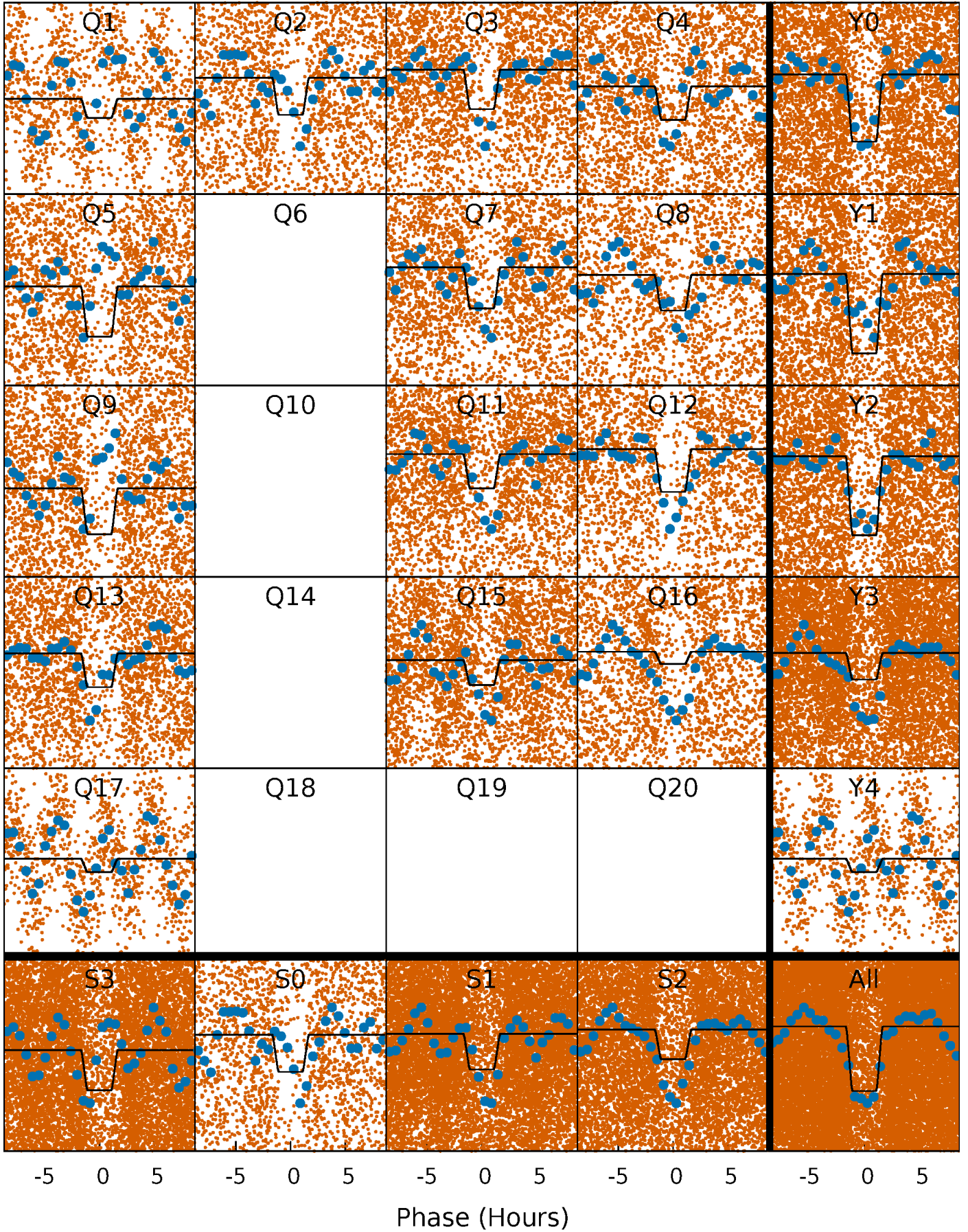
# DV Quarter-Phased Transit Curves

TCE 003128814-01 P= 0.727250 Days  $T_0=131.700815$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003128814-01 P= 0.727282 Days  $T_0=131.708150$  (BKJD)

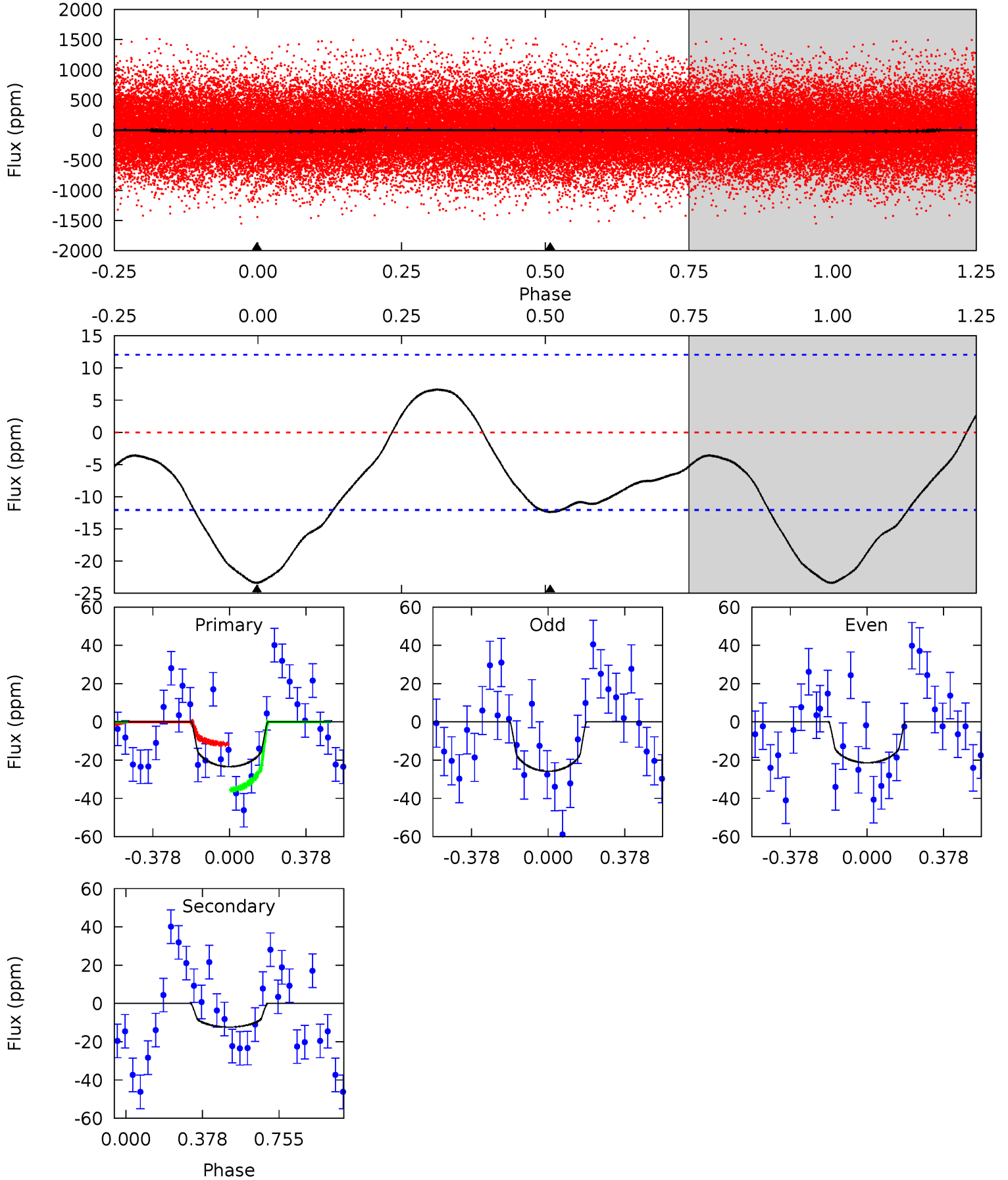




# DV Model-Shift Uniqueness Test

003128814-01, P = 0.727250 Days, E = 130.973565 Days

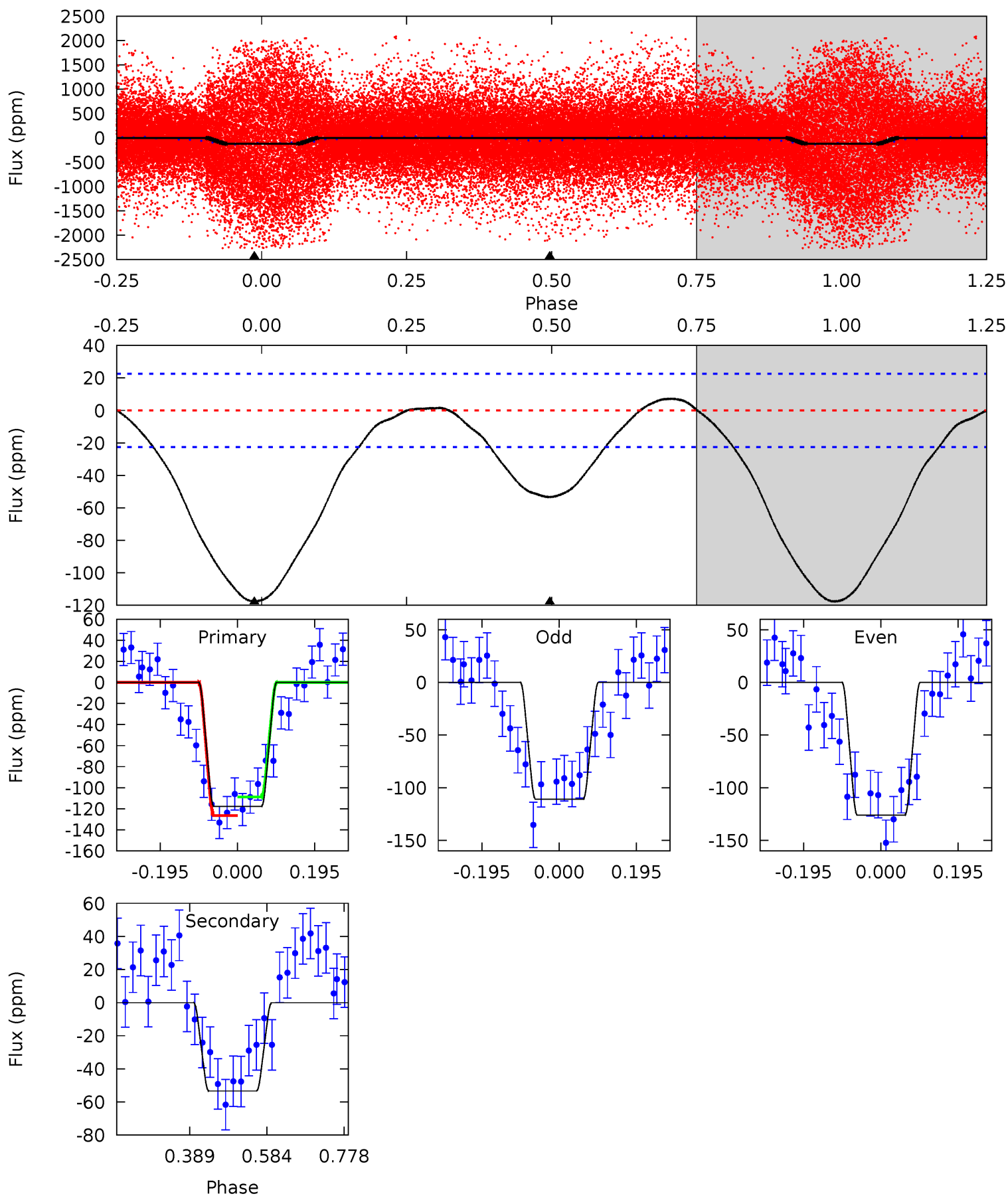
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.30	4.39	0	0	4.28	0.88	1.51	8.30	8.30	4.39	4.39	0.78	0.87	0.22	4.22



# Alt Model-Shift Uniqueness Test

003128814-01, P = 0.727282 Days, E = 130.980868 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
23.1	10.5	0	0	4.42	1.30	1.16	23.1	23.1	10.5	10.5	1.48	1.04	0.06	1.72



### Stellar Parameters For KIC 003128814

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6208^{+172}_{-216}$	$4.454^{+0.052}_{-0.195}$	$-0.120^{+0.250}_{-0.350}$	$1.024^{+0.314}_{-0.105}$	$1.086^{+0.141}_{-0.141}$	$1.423^{+0.390}_{-0.735}$
	+3%/-3%	+1%/-4%	+208%/-292%	+31%/-10%	+13%/-13%	+27%/-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 003128814-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-12 \pm 3$	$0.88^{+0.69}_{-0.54}$	$3099^{+222}_{-163}$	$4289^{+2497}_{-1006}$	$2.230^{+11.867}_{-1.544}$
Alt.	$-53 \pm 5$	$1.42^{+0.77}_{-0.68}$	$3090^{+204}_{-153}$	$4810^{+1913}_{-836}$	$3.800^{+10.333}_{-2.211}$

$T_{\text{max}}$  = 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

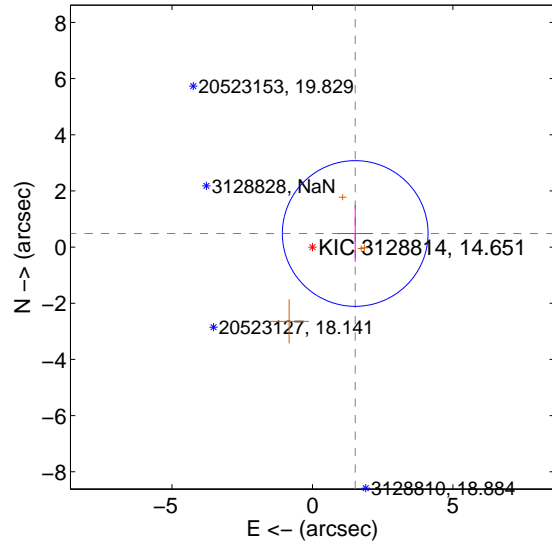
Supplemental centroid analysis for 003128814-01. Kepler magnitude: 14.65. Transit SNR 6.74

There are 0 quarters with good PRF difference image offsets

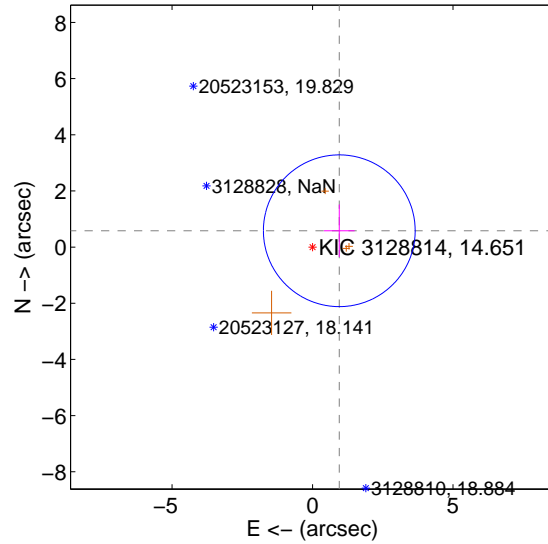
The direct PRF centroid is offset from the target star catalog position by about 0.70 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.598 \pm 0.865$	1.85	$-1.523 \pm 0.630$	$0.484 \pm 1.009$
PRF-fit source offset from KIC position	$1.116 \pm 0.901$	1.24	$-0.953 \pm 0.545$	$0.582 \pm 0.933$
photometric centroid source offset	$3.62 \pm 1.19$	3.06	$3.20 \pm 1.25$	$-1.70 \pm 0.93$

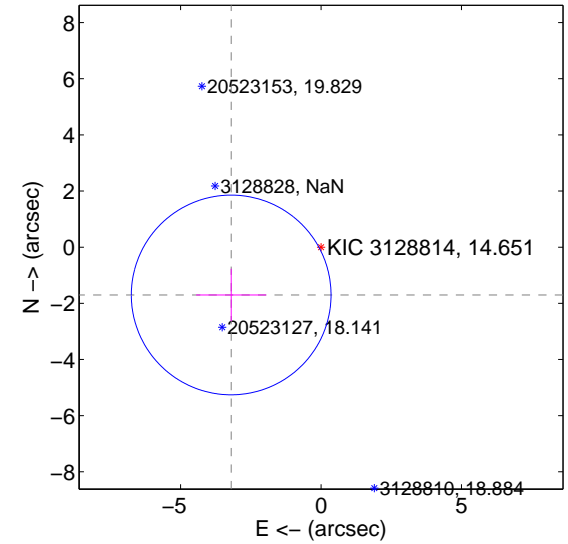
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

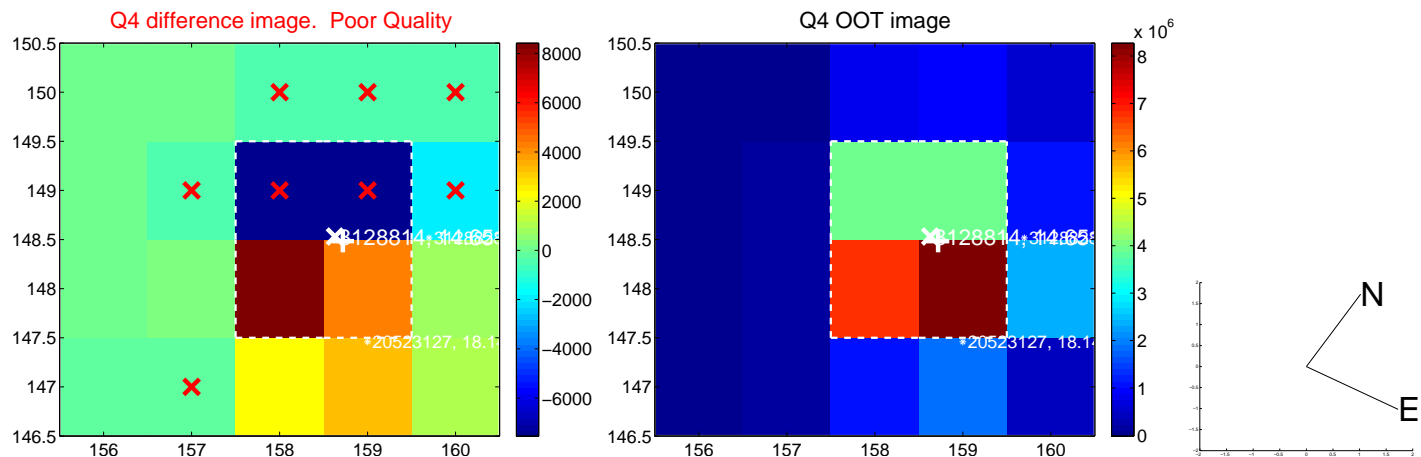
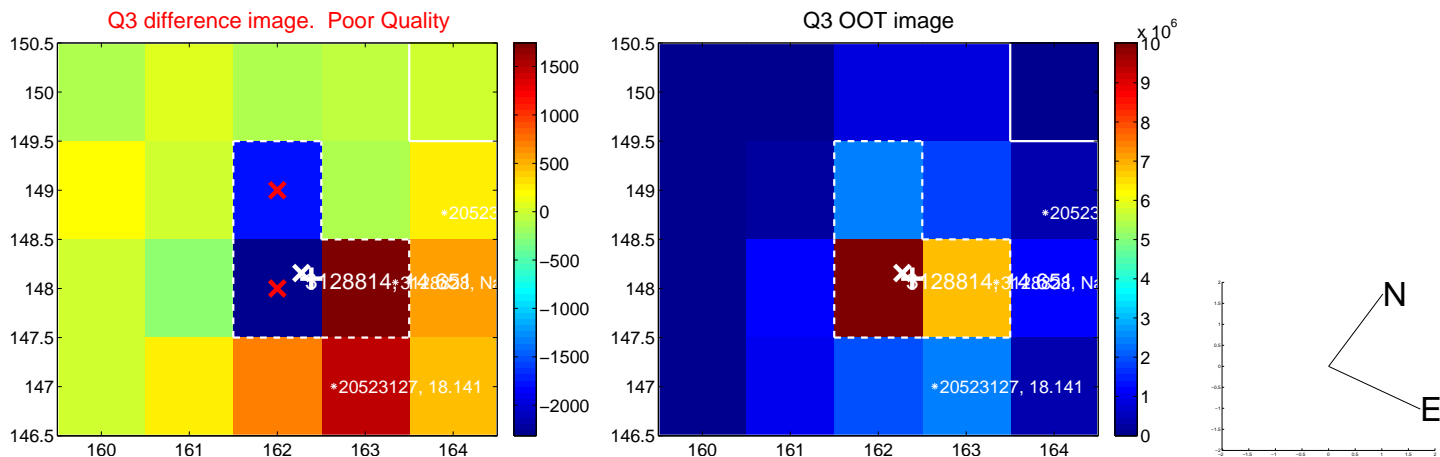
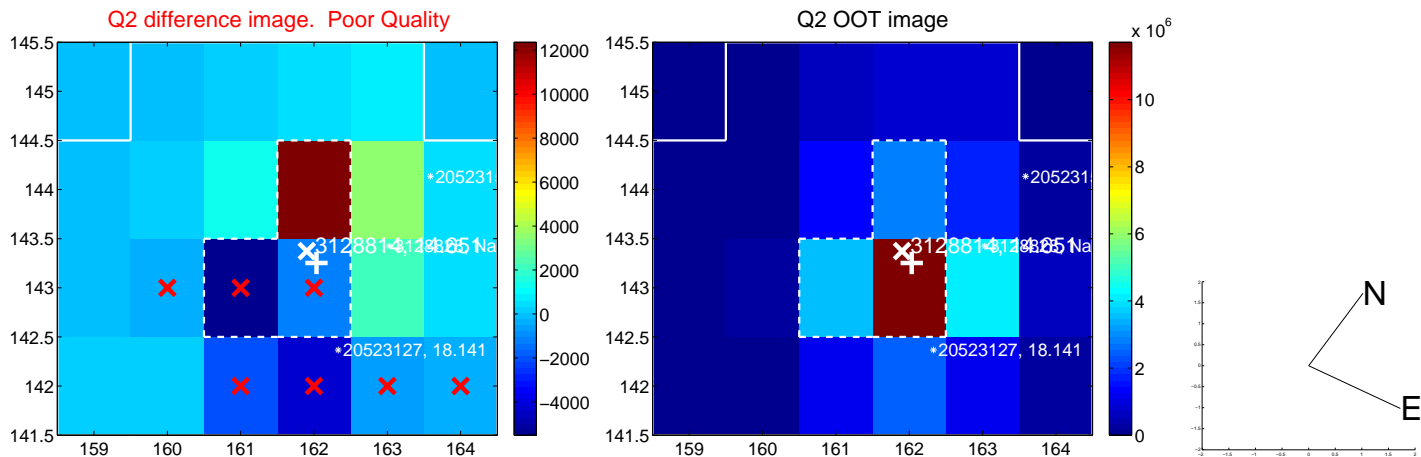
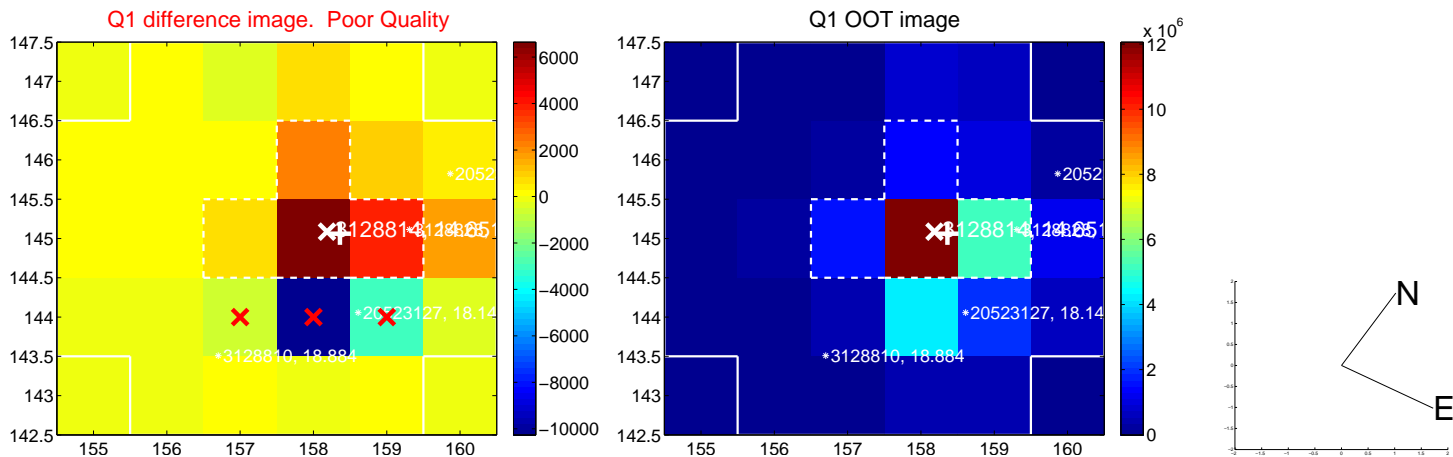


offset from photometric centroids

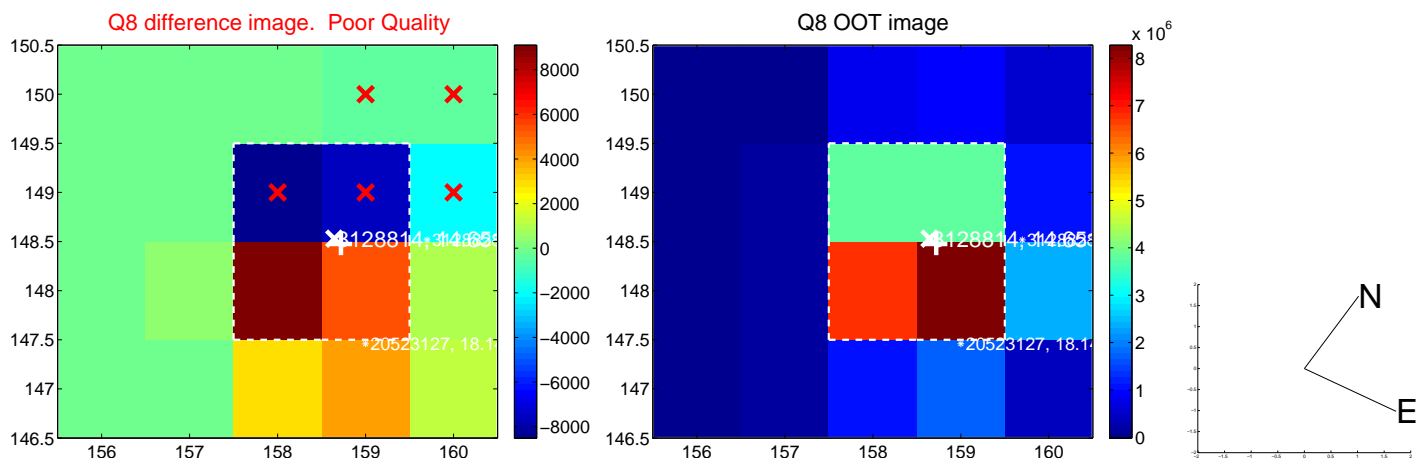
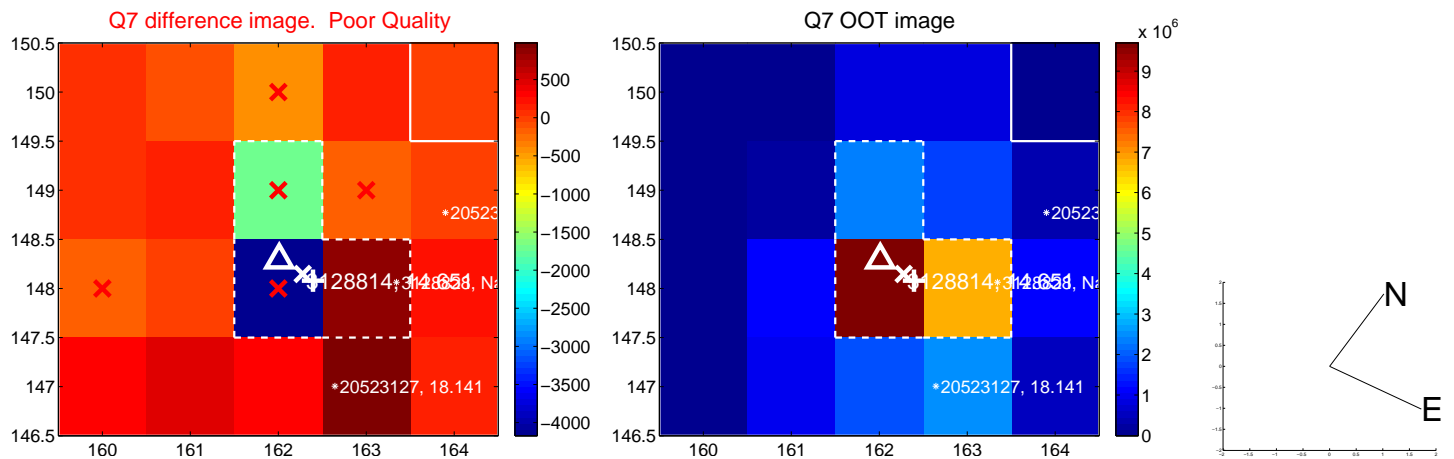
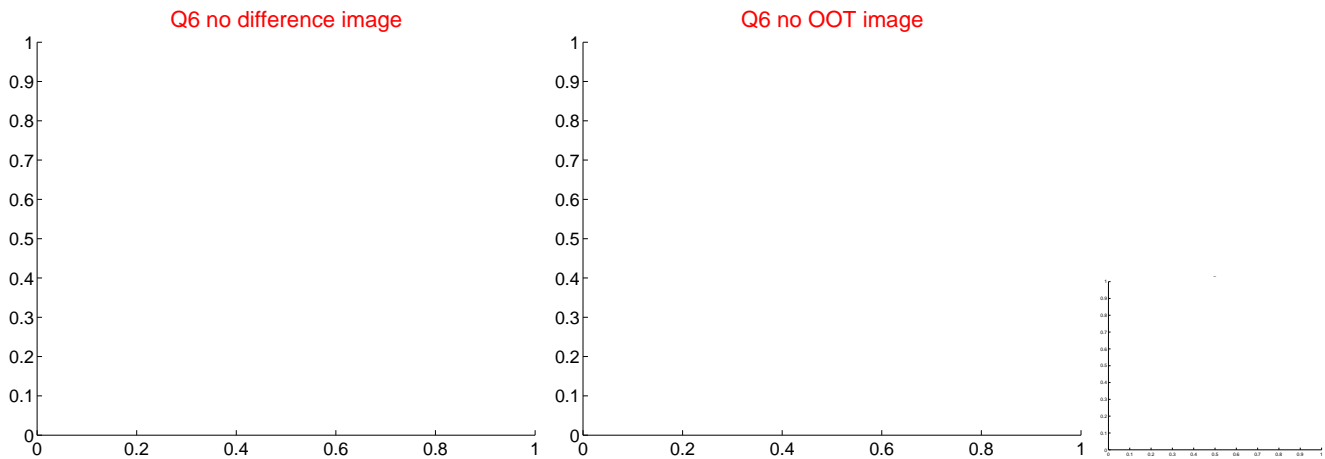
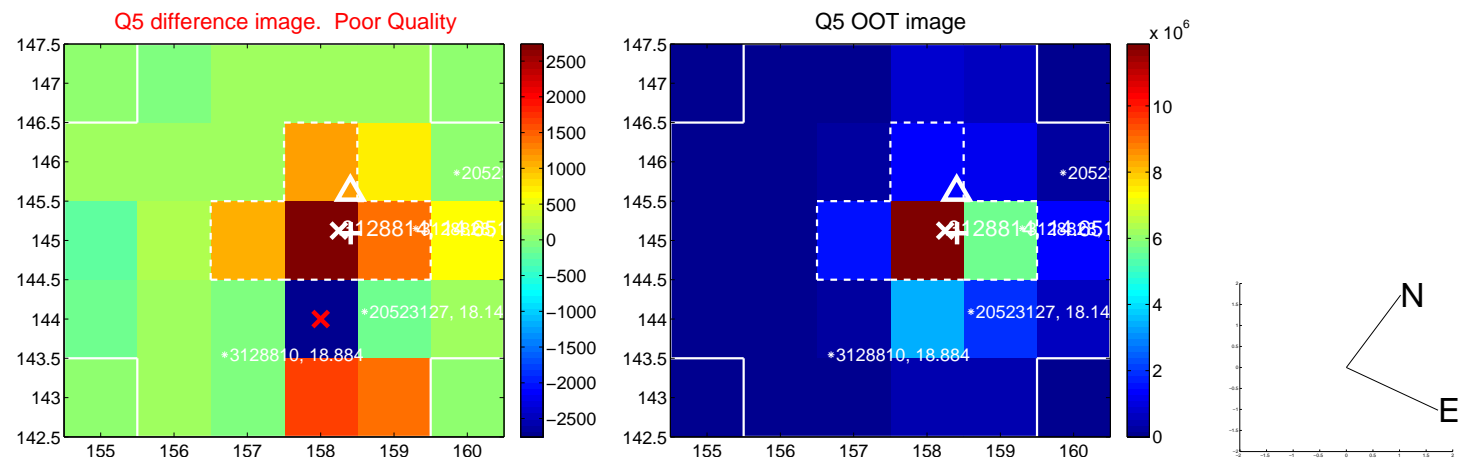


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

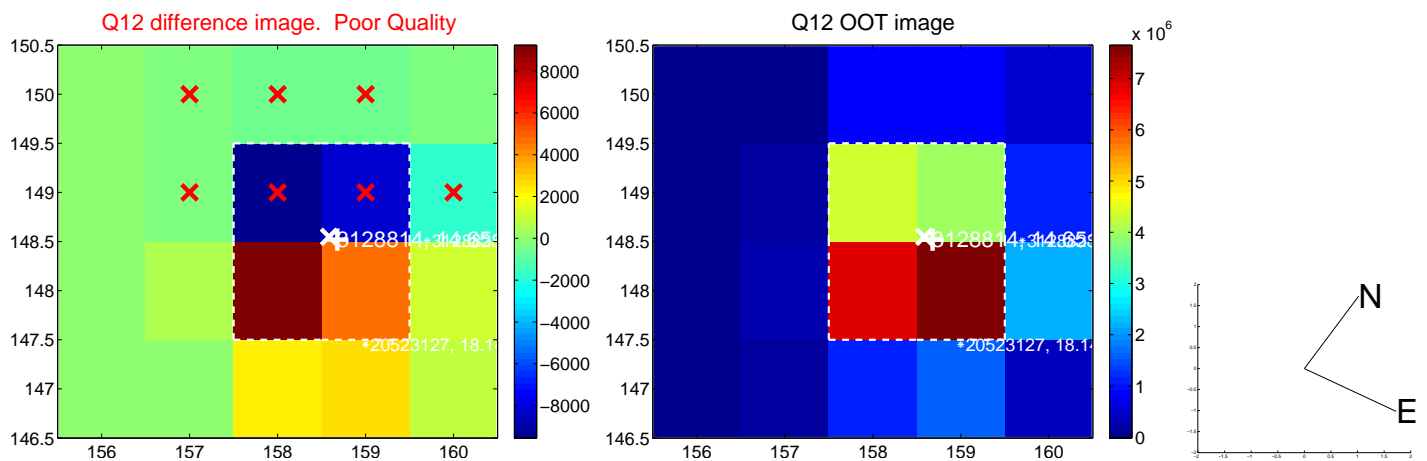
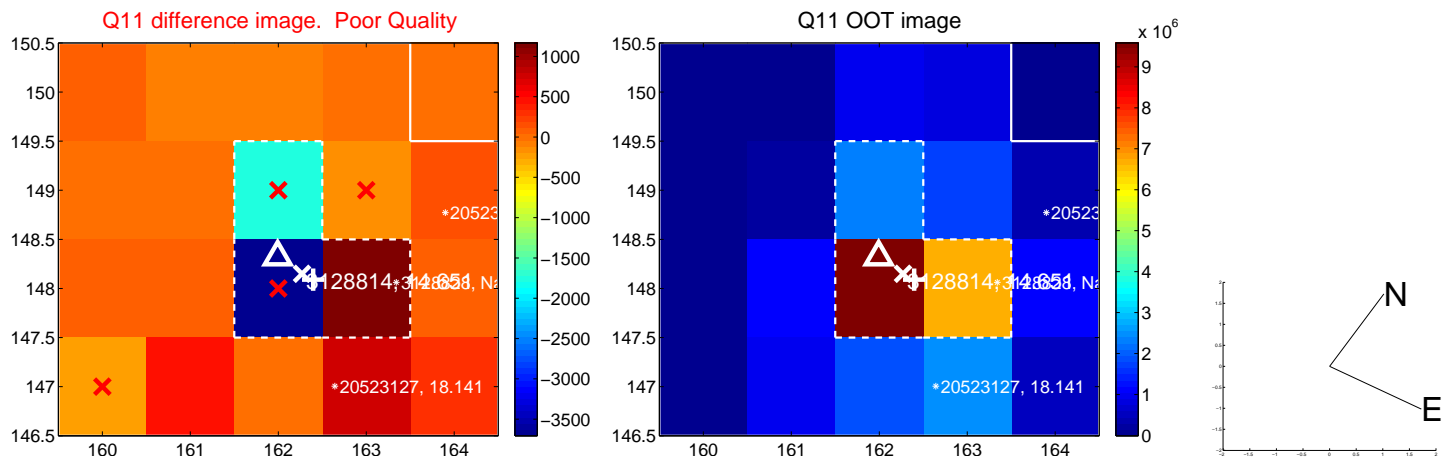
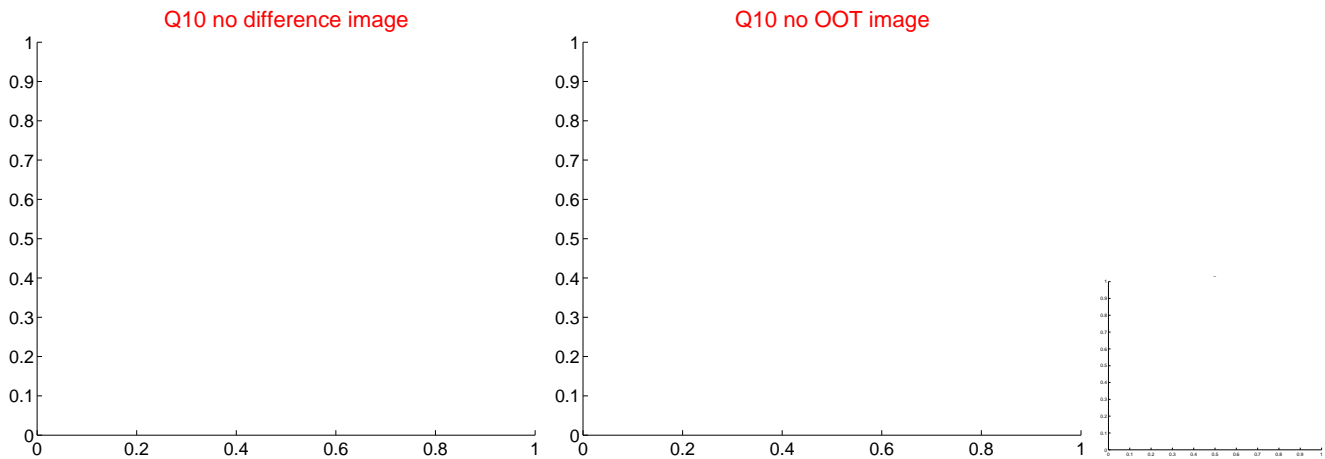
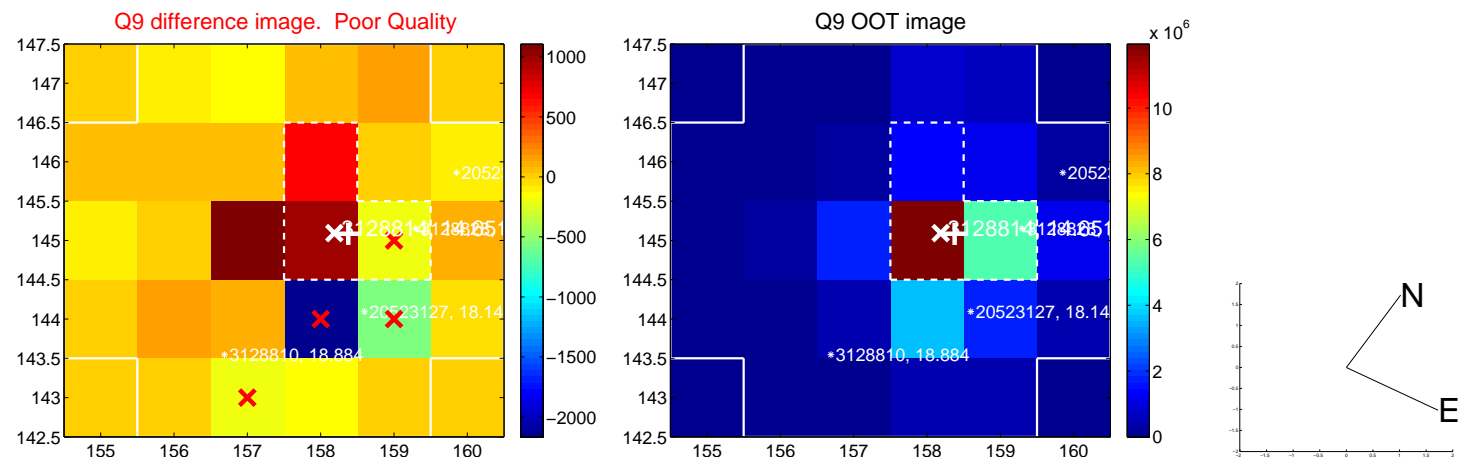
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



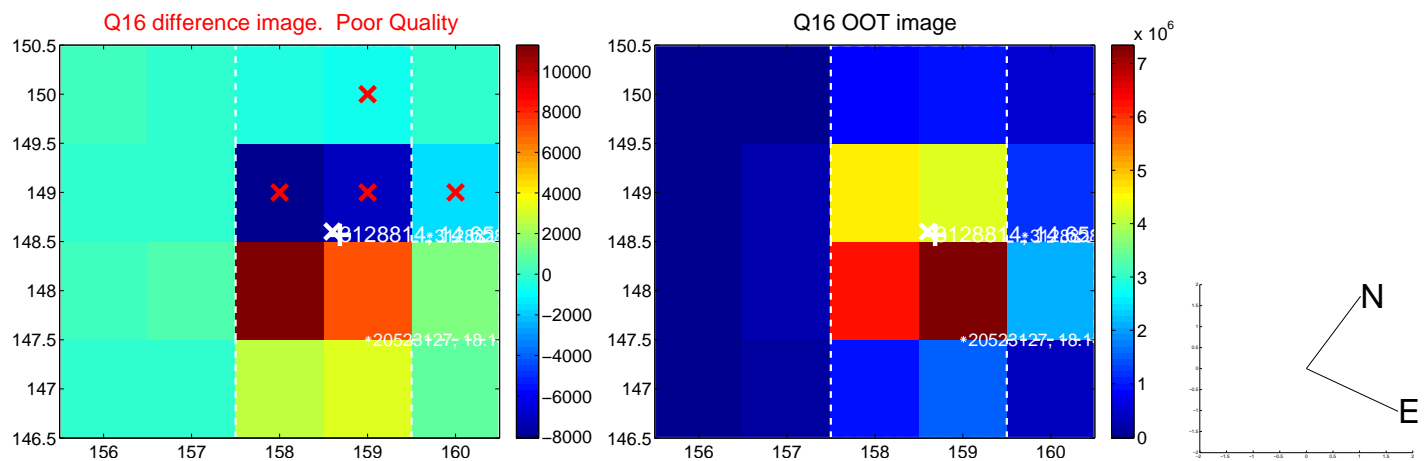
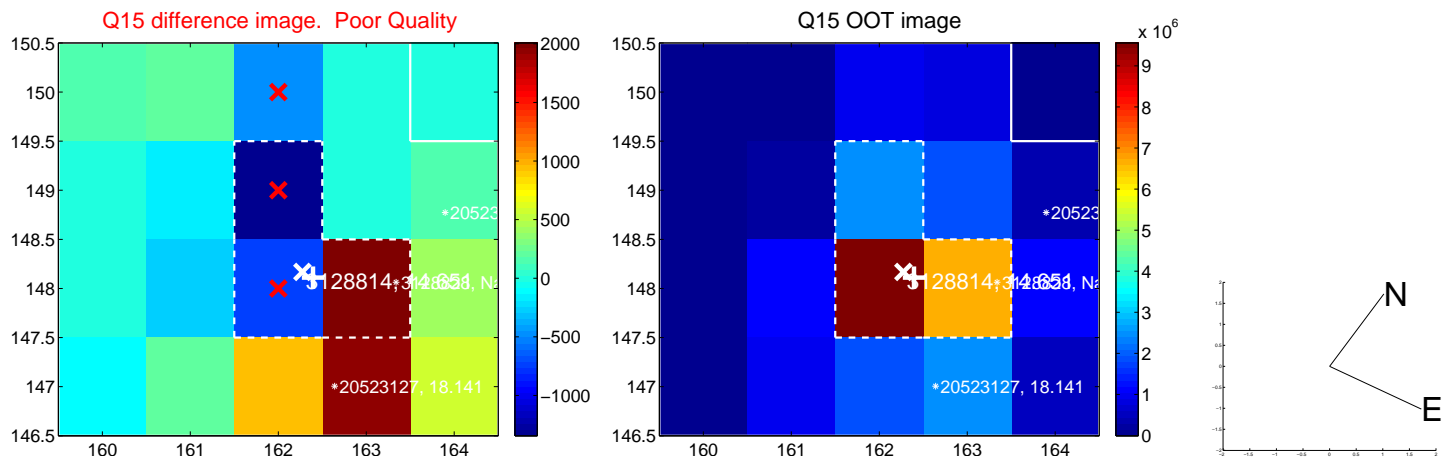
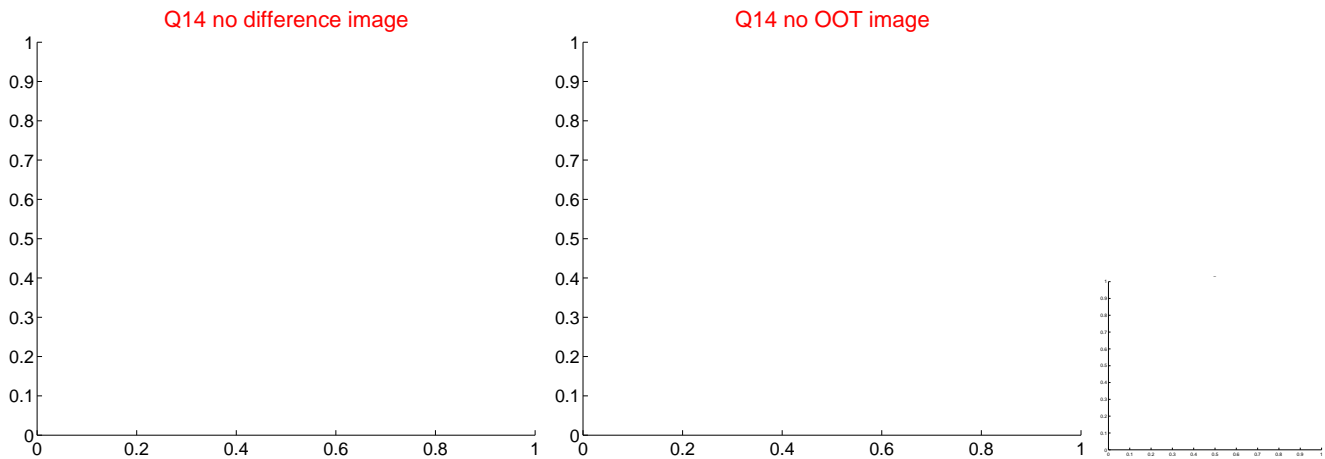
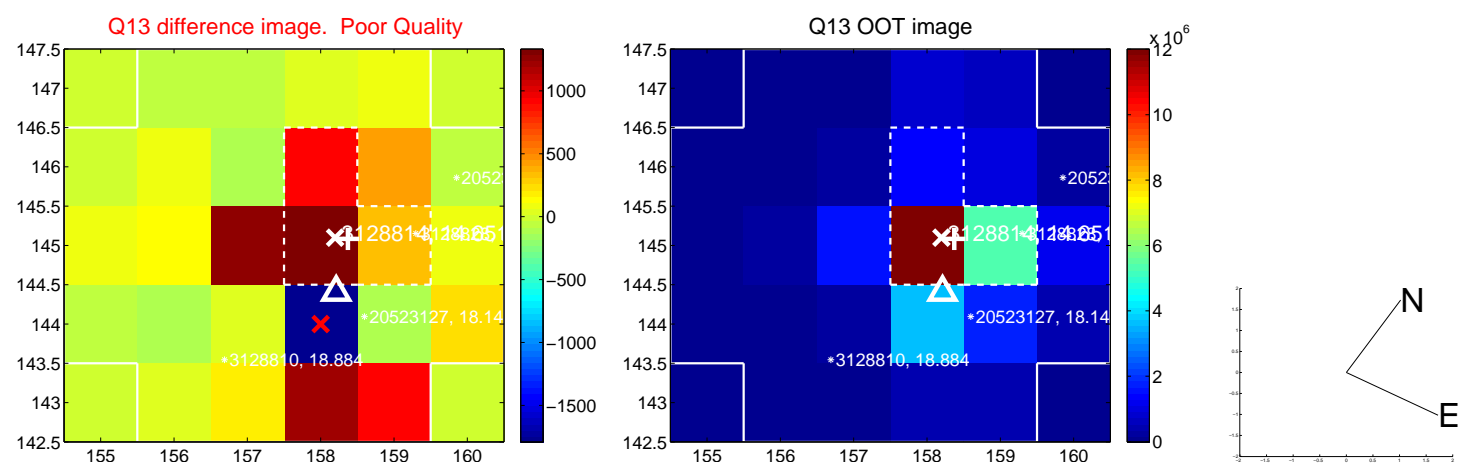
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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







UKIRT Image

