

# KIC 011186240

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011186240-01	OBS	No	1.720209	132.961408	24.7	1.435	7.8	6.5	3.01	6804	1.61	16531.69

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011186240-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT

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

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

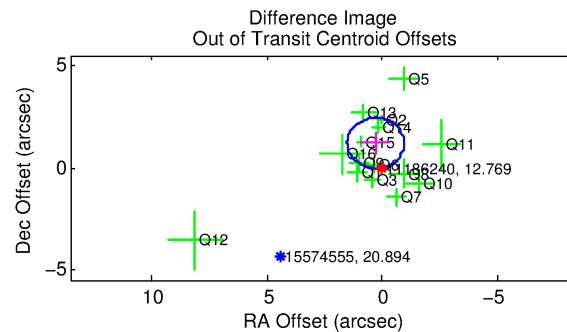
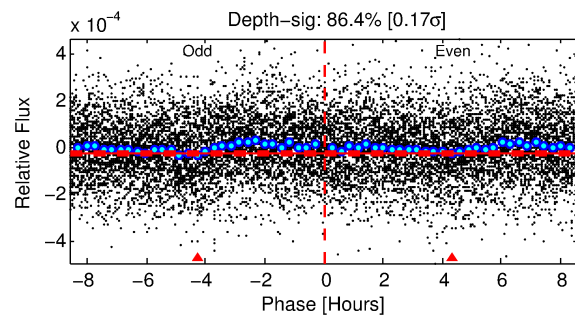
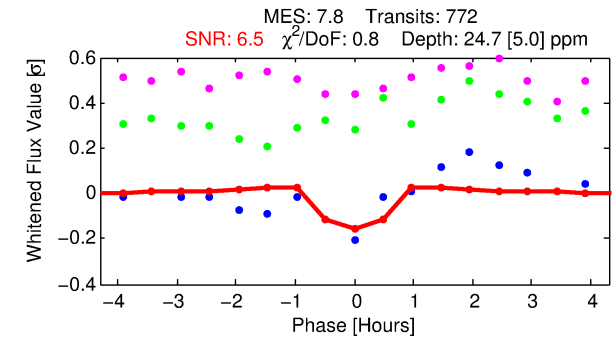
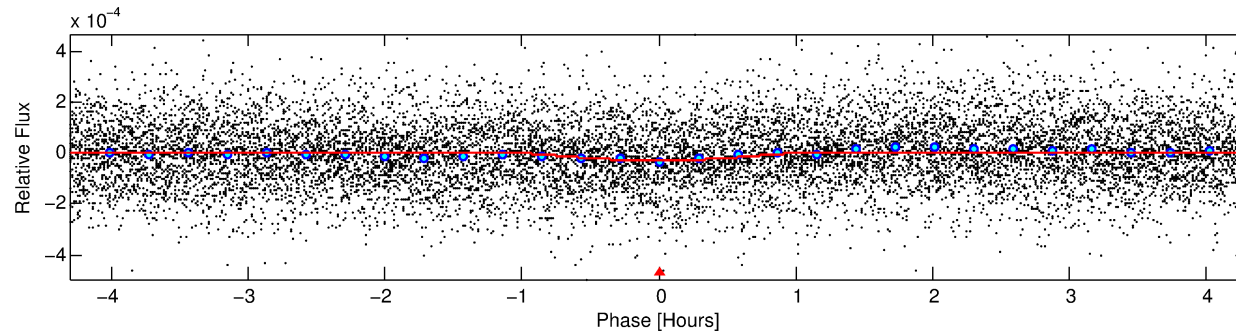
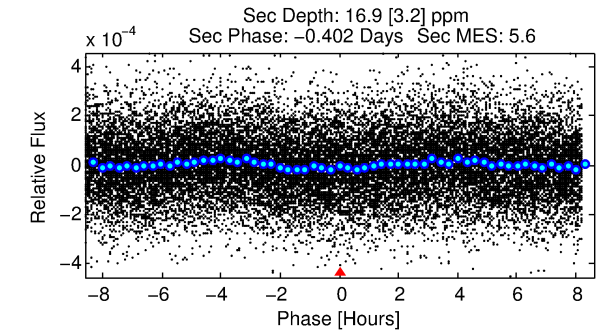
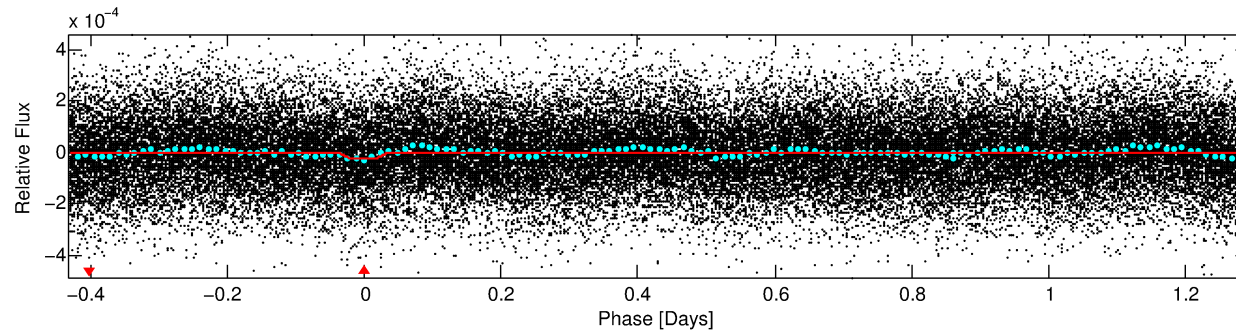
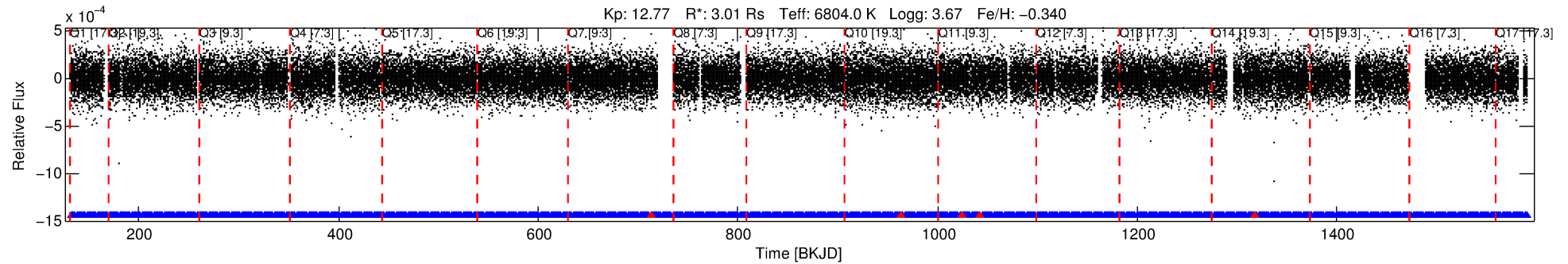
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011186240-01

No Significant Match Found

# DV One-Page Summary

KIC: 11186240 Candidate: 1 of 1 Period: 1.720 d



## DV Fit Results:

Period = 1.72021 [0.00002] d  
Epoch = 132.9614 [0.0031] BKJD  
Rp/R\* = 0.0049 [0.0012]  
a/R\* = 6.65 [8.30]  
b = 0.70 [0.93]  
Seff = 16531.69 [9614.62]  
Teff = 2891 [420] K  
Rp = 1.61 [0.72] Re  
a = 0.0325 [0.0117] AU  
Ag = 3.79 [2.91] [0.96σ]  
Teffp = 6237 [824] K [3.62σ]

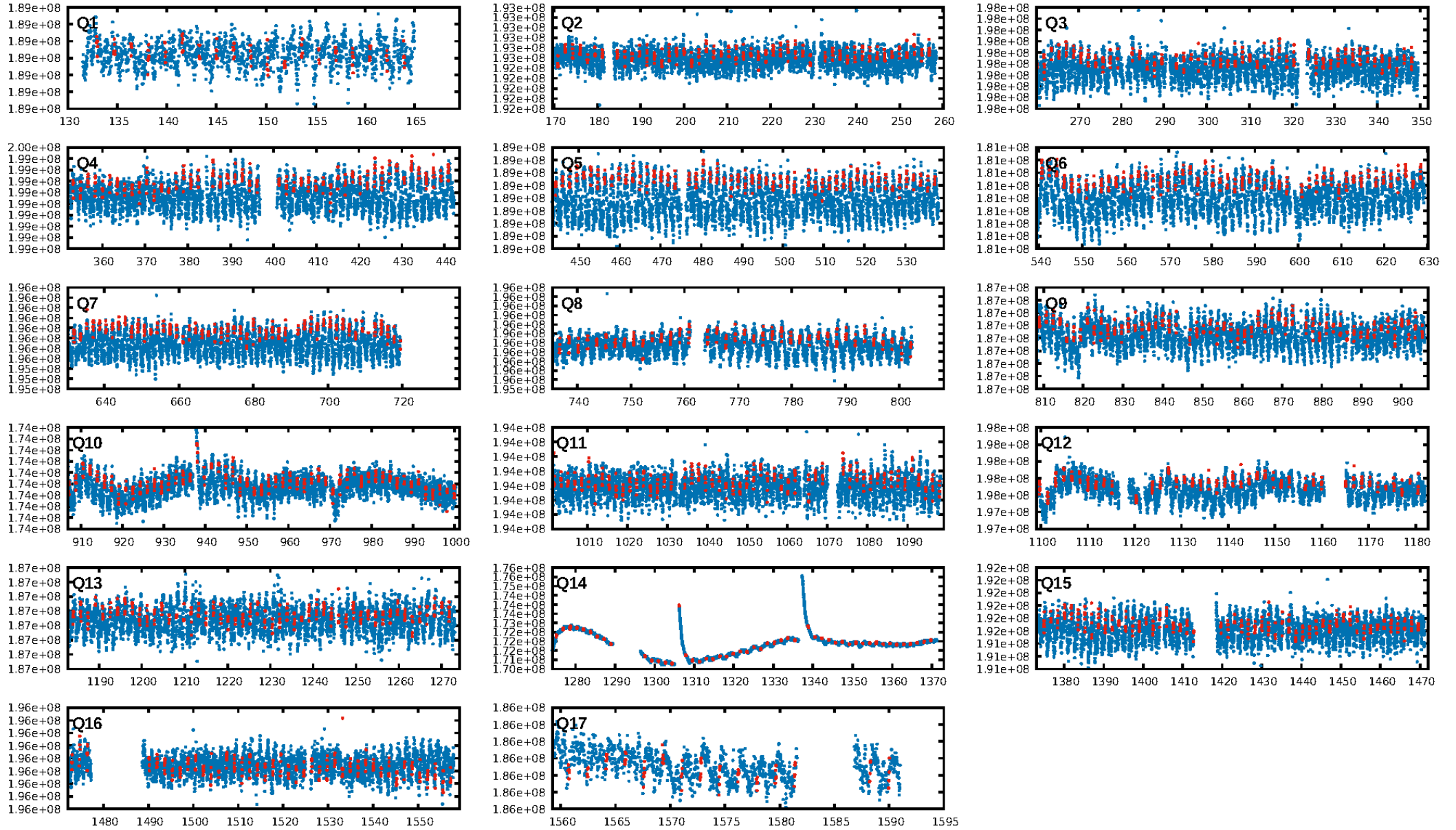
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 5.14e-14  
RollingBand-fgt: 0.99 [733/738]  
GhostDiagnostic-chr: 15.76  
Centroid-sig: 31.4%  
Centroid-so: 0.742 arcsec [0.76σ]  
OotOffset-rm: 1.238 arcsec [3.01σ]  
KicOffset-rm: 1.348 arcsec [2.97σ]  
OotOffset-st: 4/4/3/4 [15]  
KicOffset-st: 4/4/3/4 [15]  
DiffImageQuality-fgm: 0.40 [6/15]  
DiffImageOverlap-fno: 1.00 [17/17]

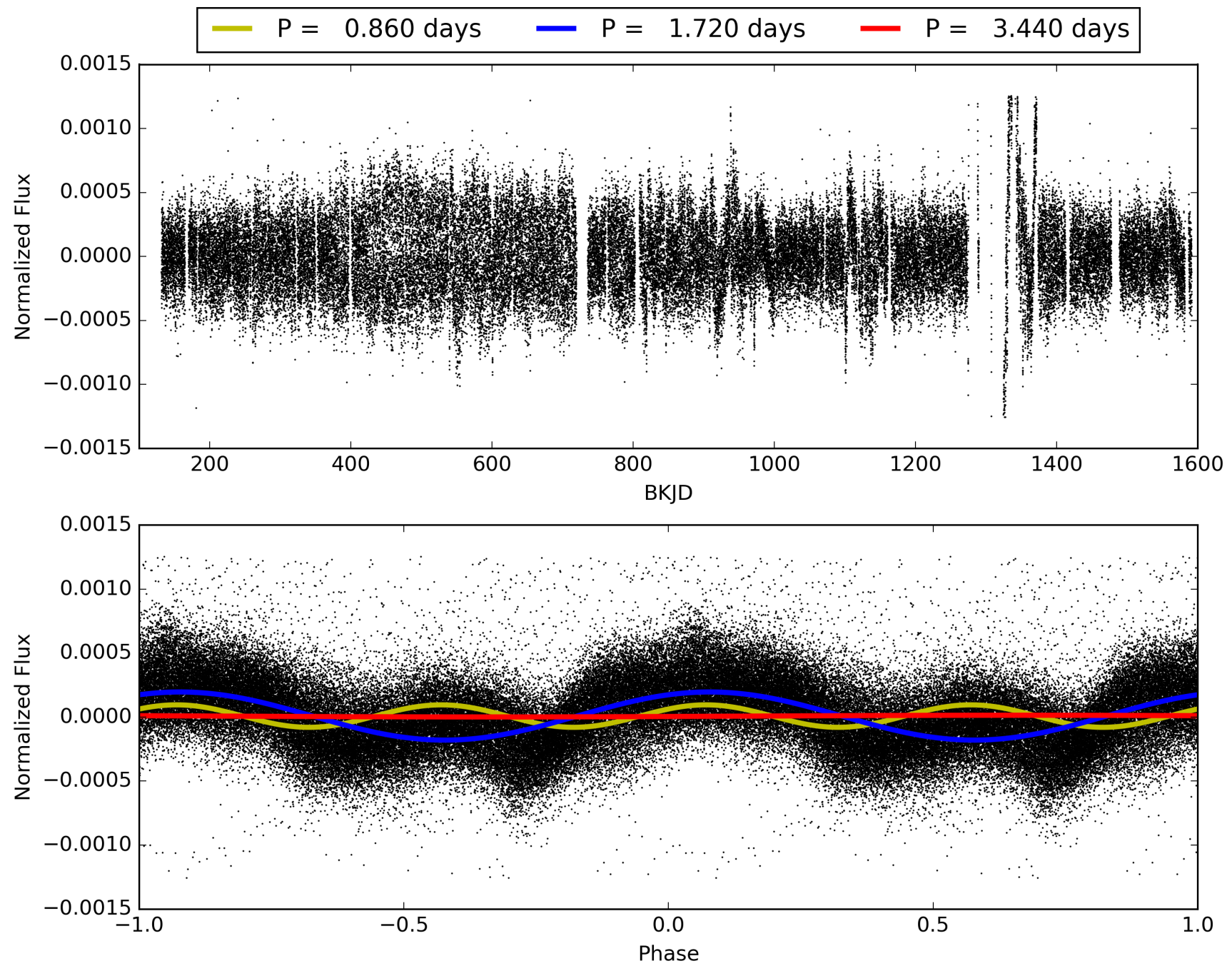
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:05:10 Z

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

# TCE 011186240-01, PDC Light Curves

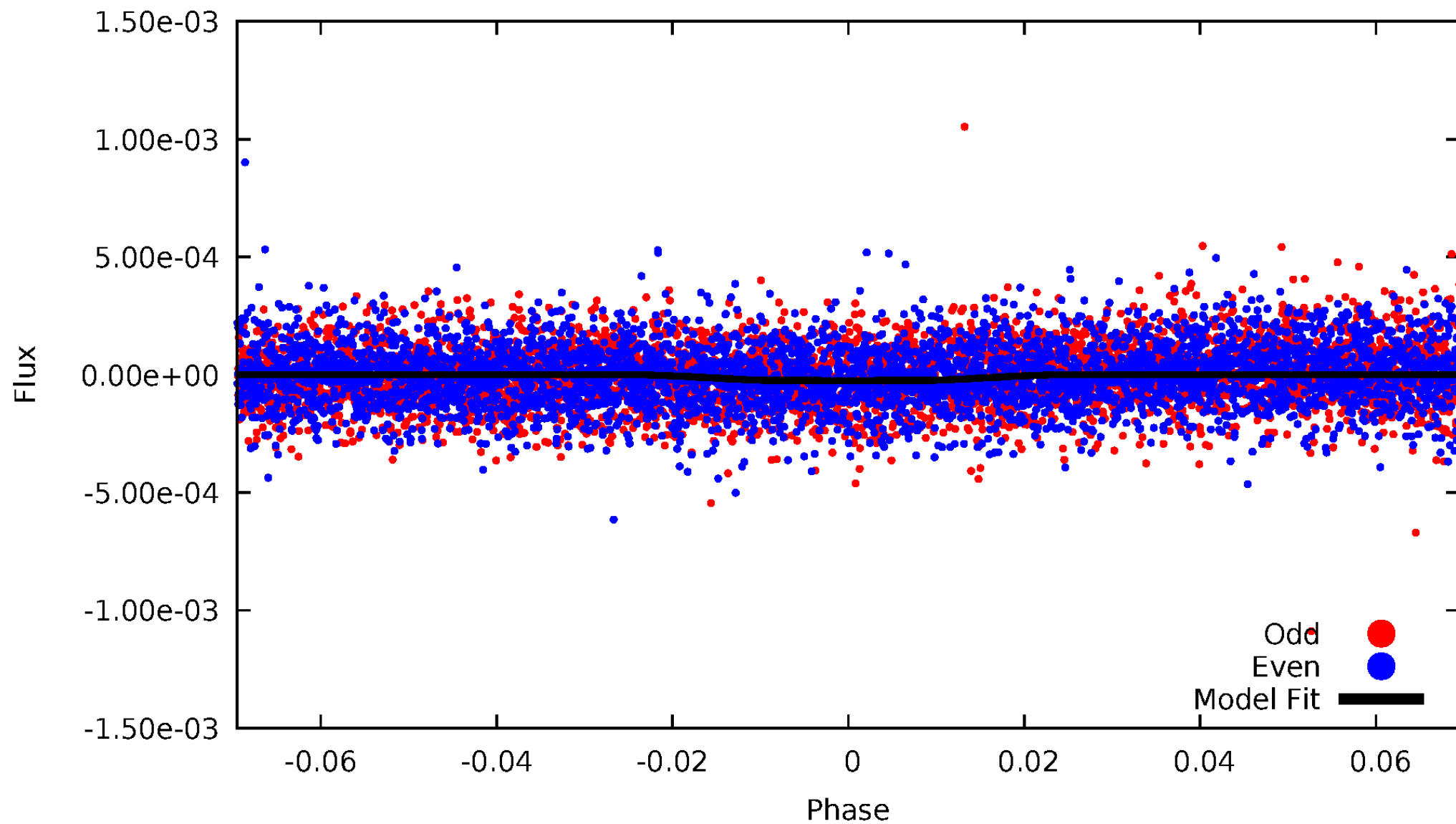


# TCE 011186240-01



# DV Odd/Even

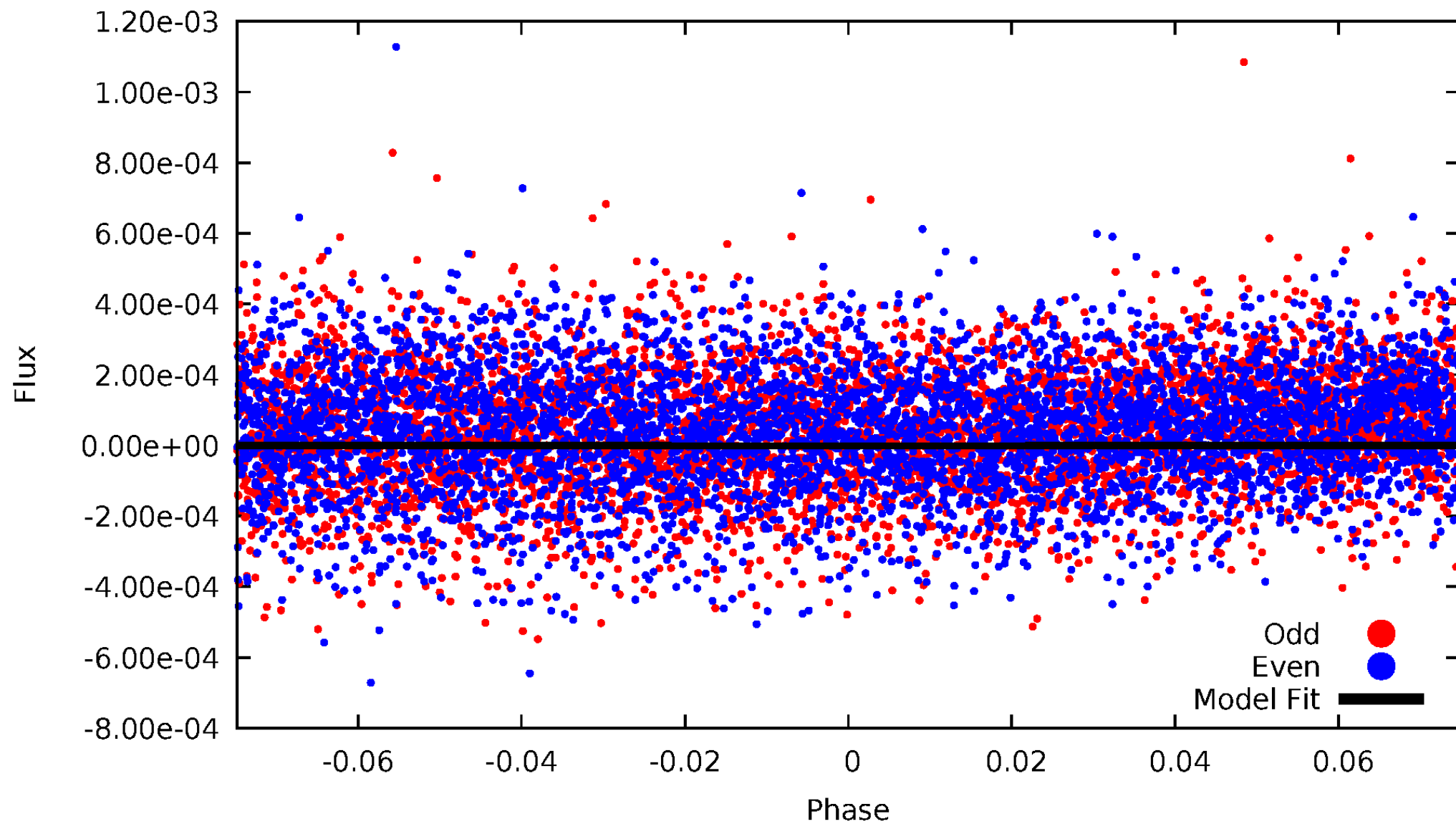
TCE 011186240-01



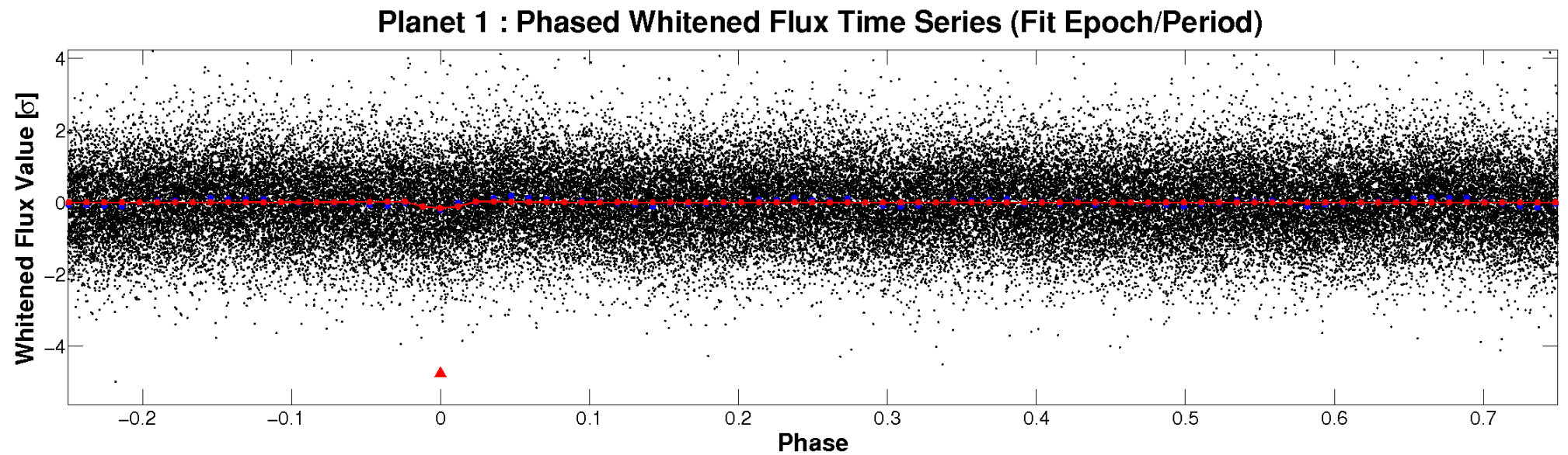
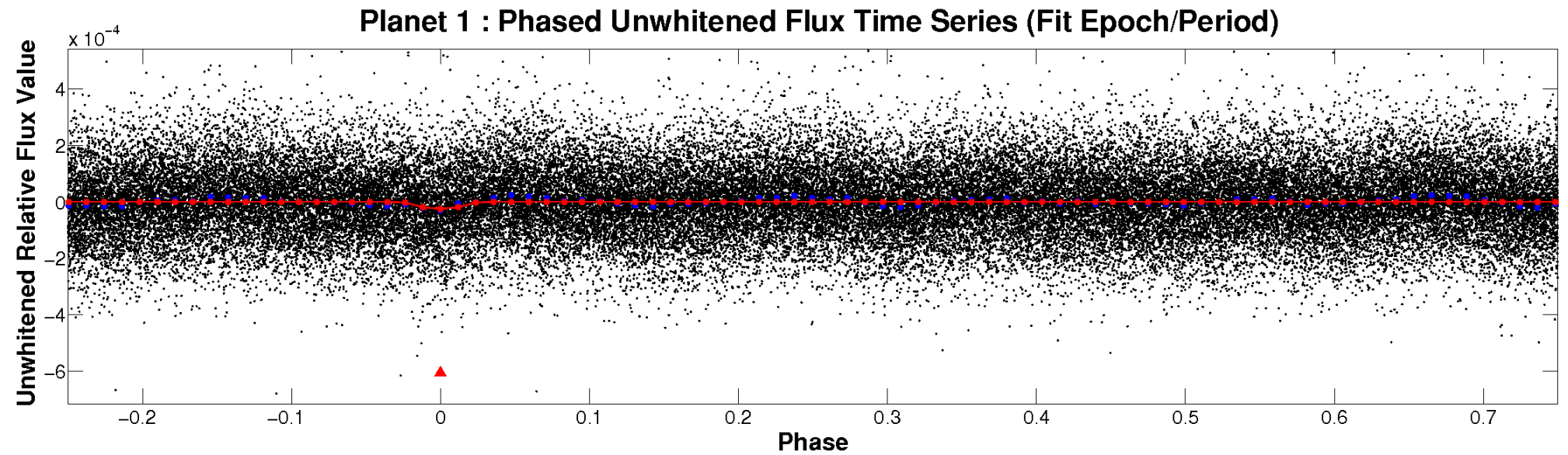


# ALT Odd/Even

TCE 011186240-01

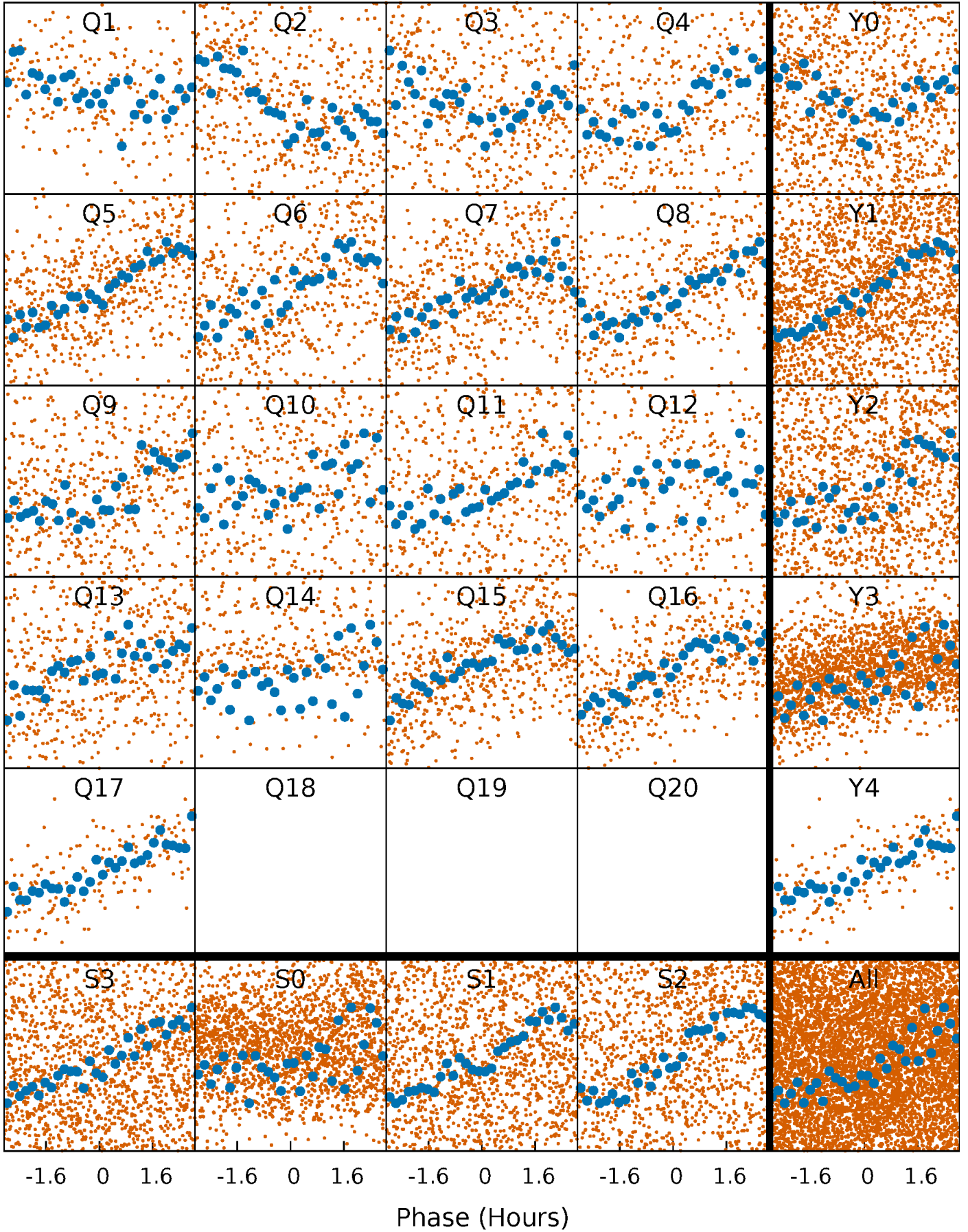


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

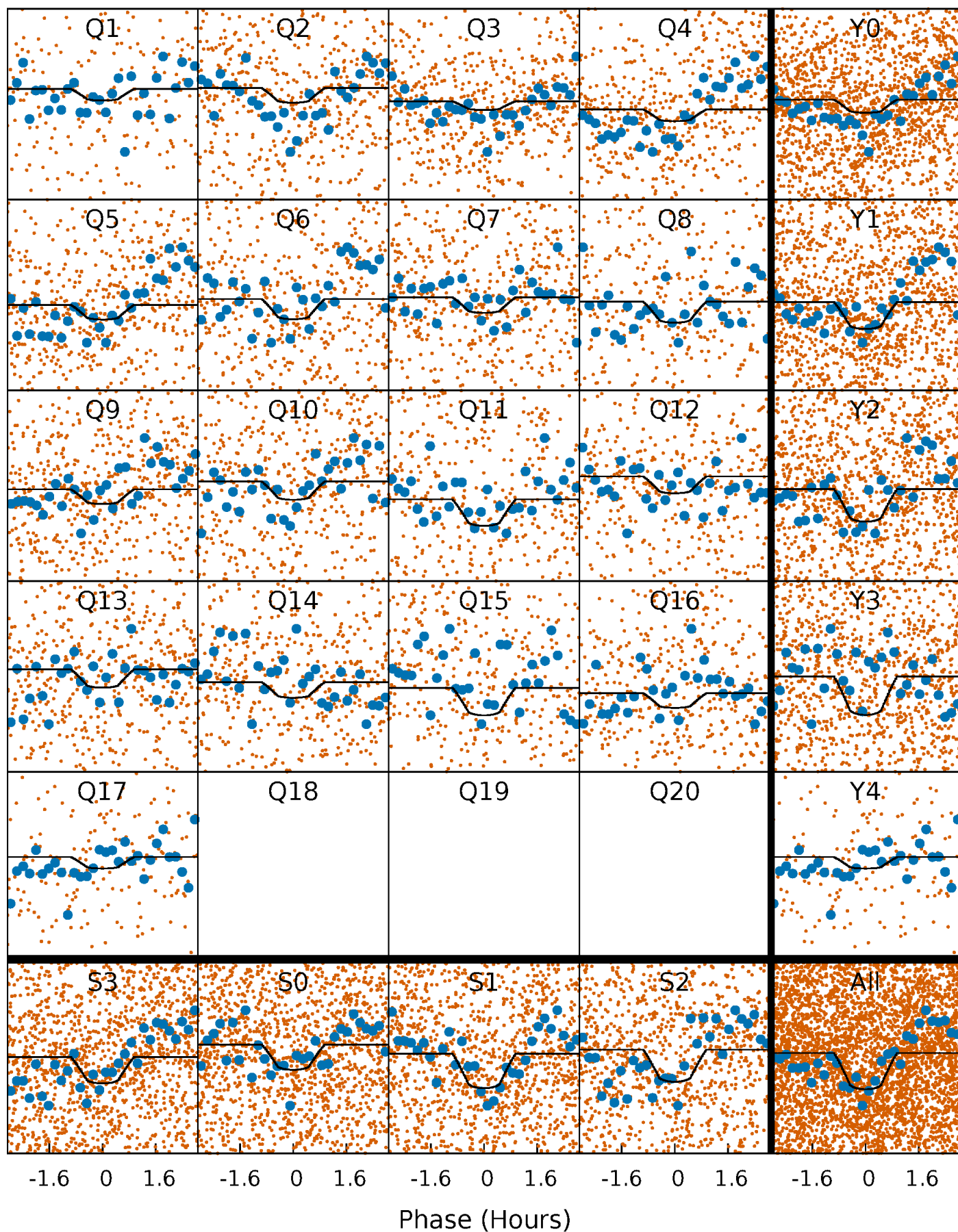
TCE 011186240-01   P= 1.720209 Days    $T_0=132.961408$  (BKJD)





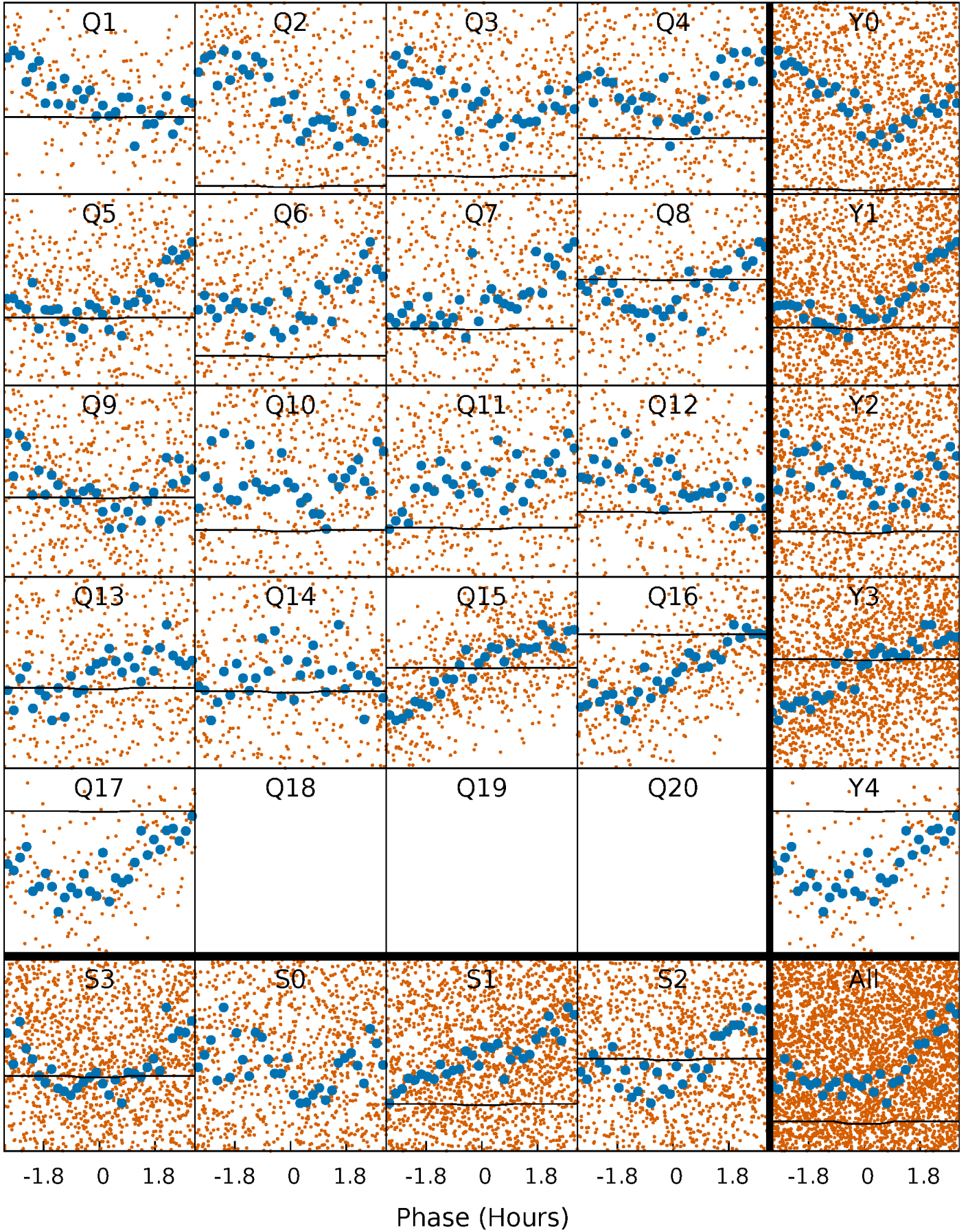
# DV Quarter-Phased Transit Curves

TCE 011186240-01 P= 1.720209 Days  $T_0=132.961408$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

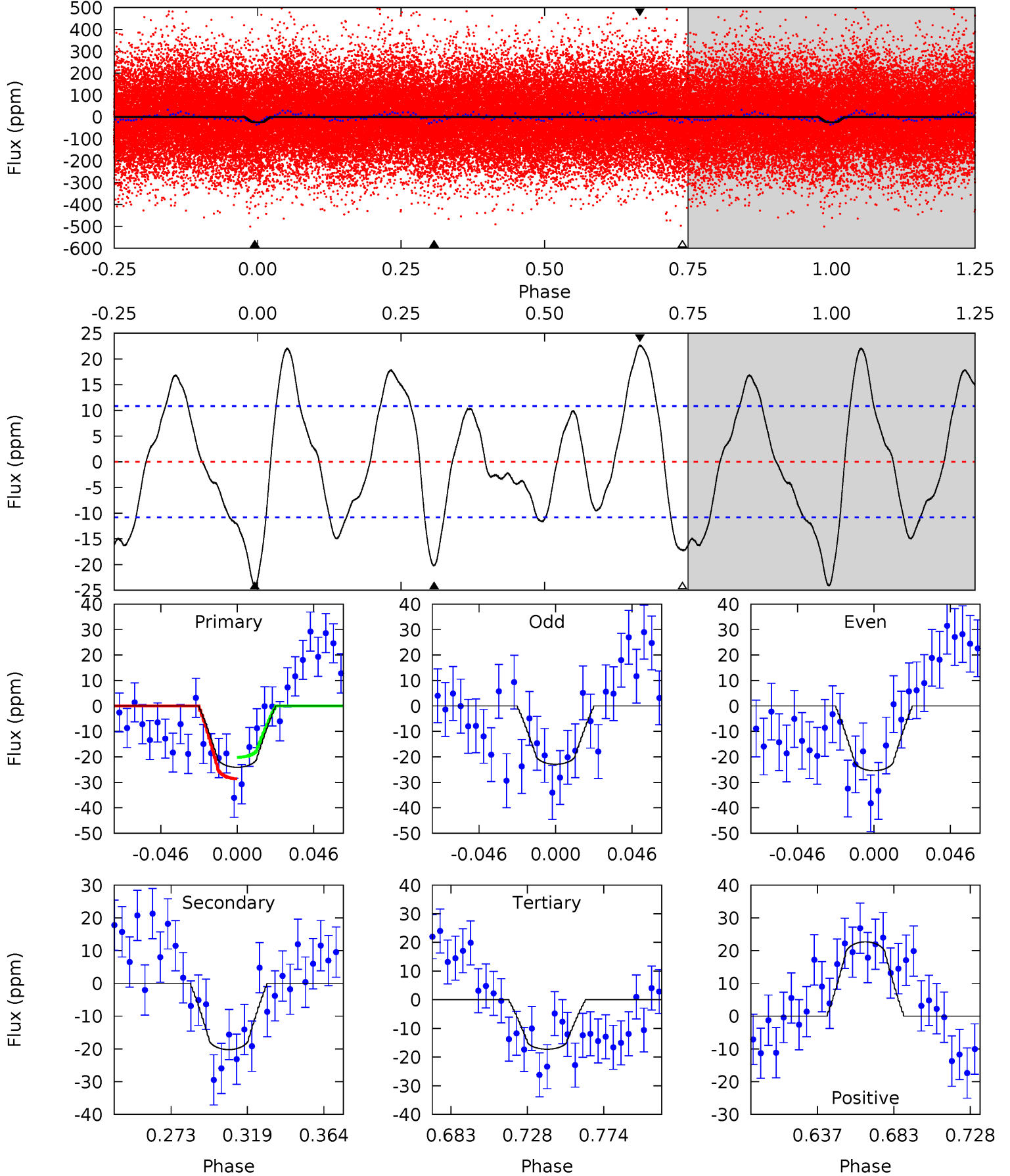
TCE 011186240-01 P= 1.720157 Days  $T_0=132.943279$  (BKJD)



# DV Model-Shift Uniqueness Test

011186240-01, P = 1.720209 Days, E = 131.241199 Days

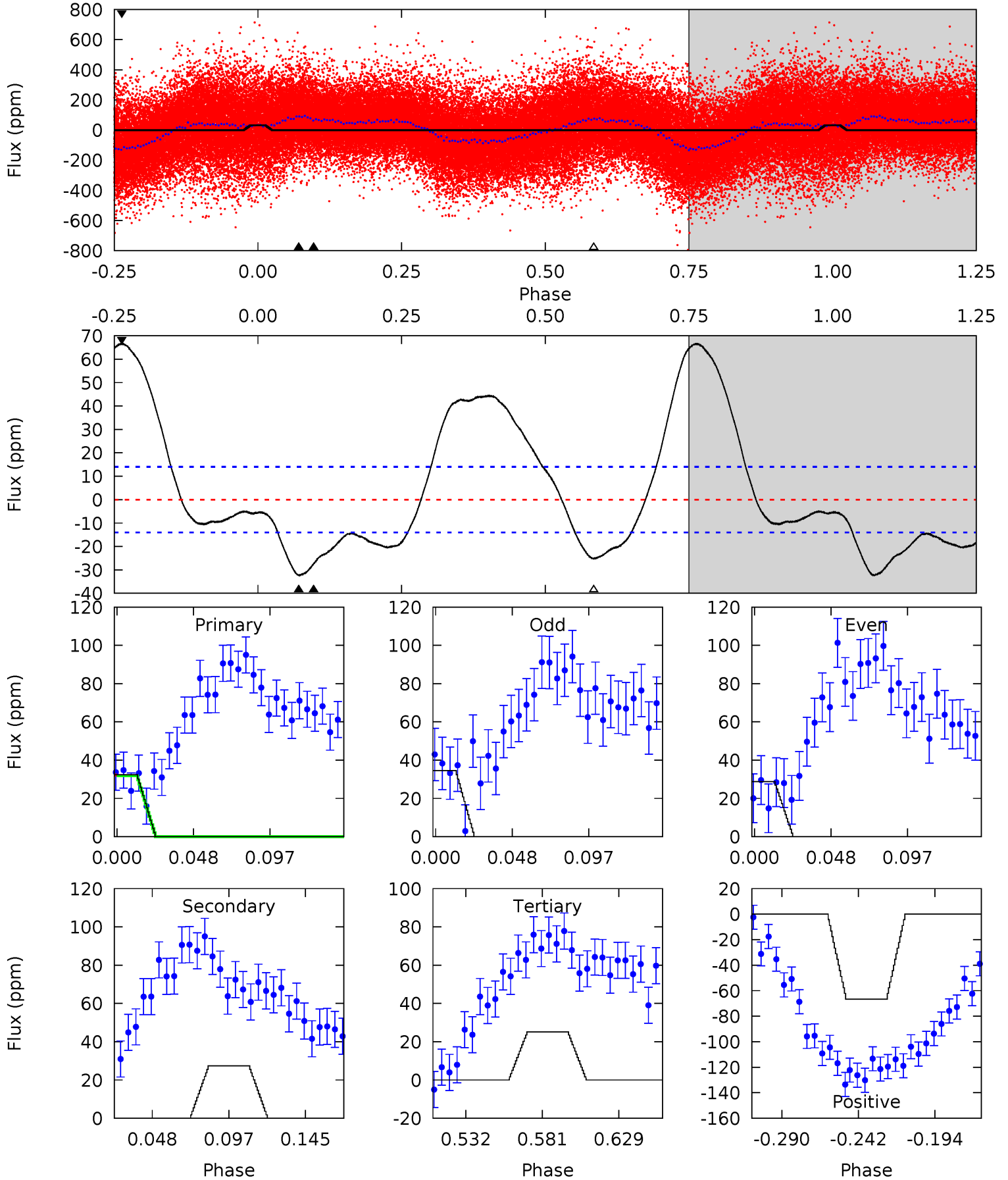
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	8.84	7.54	9.91	4.73	2.00	4.66	2.99	0.62	1.29	-1.08	0.55	1.03	0.48	1.85



# Alt Model-Shift Uniqueness Test

011186240-01, P = 1.720157 Days, E = 131.223122 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
10.9	9.22	8.48	22.4	4.71	1.97	9.17	2.41	-11.5	0.74	-13.2	0.98	0.89	0.67	0.07





### Stellar Parameters For KIC 011186240

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6804^{+183}_{-203}$	$3.668^{+0.332}_{-0.078}$	$-0.340^{+0.350}_{-0.250}$	$3.011^{+0.458}_{-1.145}$	$1.542^{+0.232}_{-0.310}$	$0.080^{+0.184}_{-0.020}$
	+3%/-3%	+9%/-2%	+103%/-74%	+15%/-38%	+15%/-20%	+232%/-26%
Source	PHO1	FLK73	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 011186240-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-20 \pm 2$	$1.49^{+0.42}_{-0.41}$	$3942^{+224}_{-362}$	$6400^{+1008}_{-741}$	$5.300^{+4.506}_{-2.141}$
Alt.	$-27 \pm 3$	$0.47^{+0.37}_{-0.29}$	$3943^{+229}_{-353}$	$16683^{+39811}_{-6442}$	$73^{+424}_{-51}$

$T_{max}$  = 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

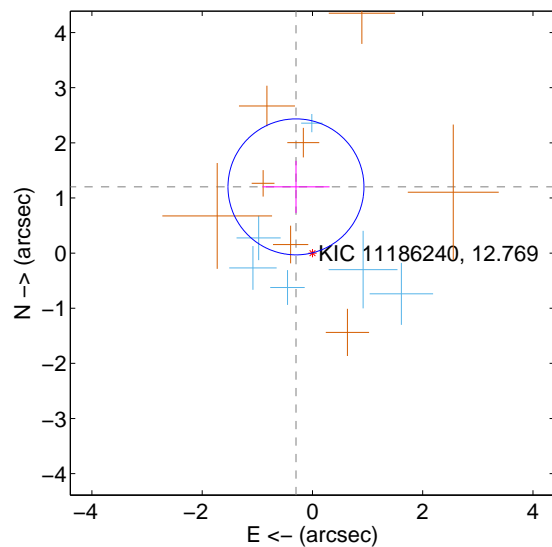
Supplemental centroid analysis for 011186240-01. Kepler magnitude: 12.77. Transit SNR 6.46

There are 6 quarters with good PRF difference image offsets

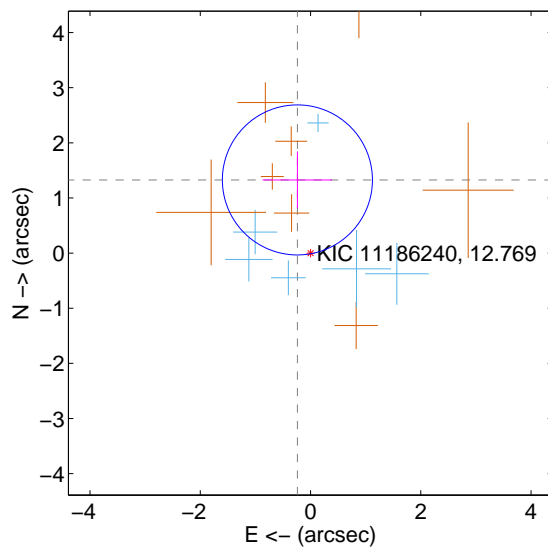
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>1.238 <math>\pm</math> 0.411</b>	<b>3.01</b>	0.299 $\pm$ 0.610	1.201 $\pm$ 0.472
PRF-fit source offset from KIC position	1.348 $\pm$ 0.454	2.97	0.238 $\pm$ 0.631	1.327 $\pm$ 0.516
photometric centroid source offset	0.74 $\pm$ 0.97	0.76	0.24 $\pm$ 1.00	-0.70 $\pm$ 0.97

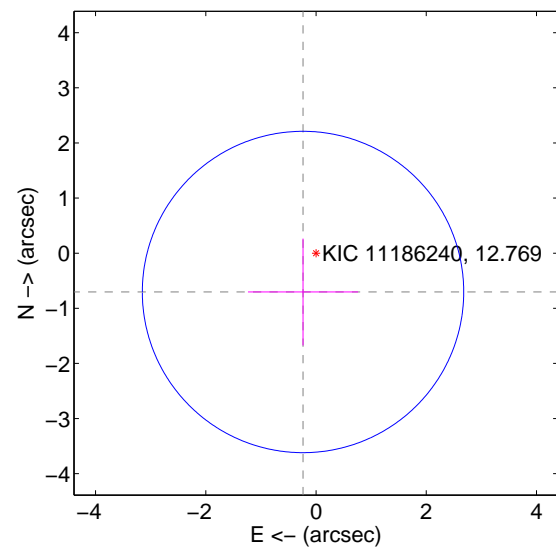
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

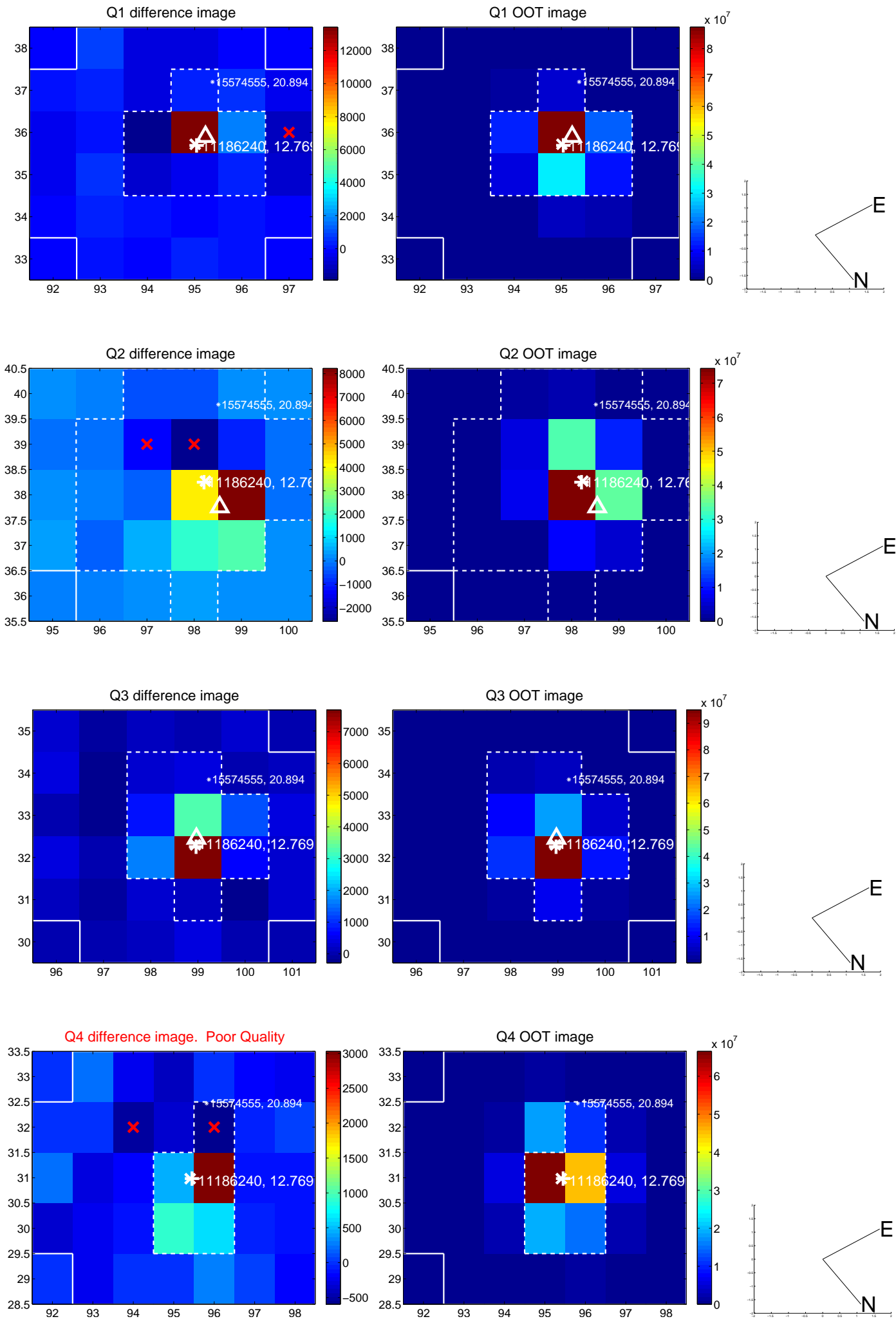


offset from photometric centroids

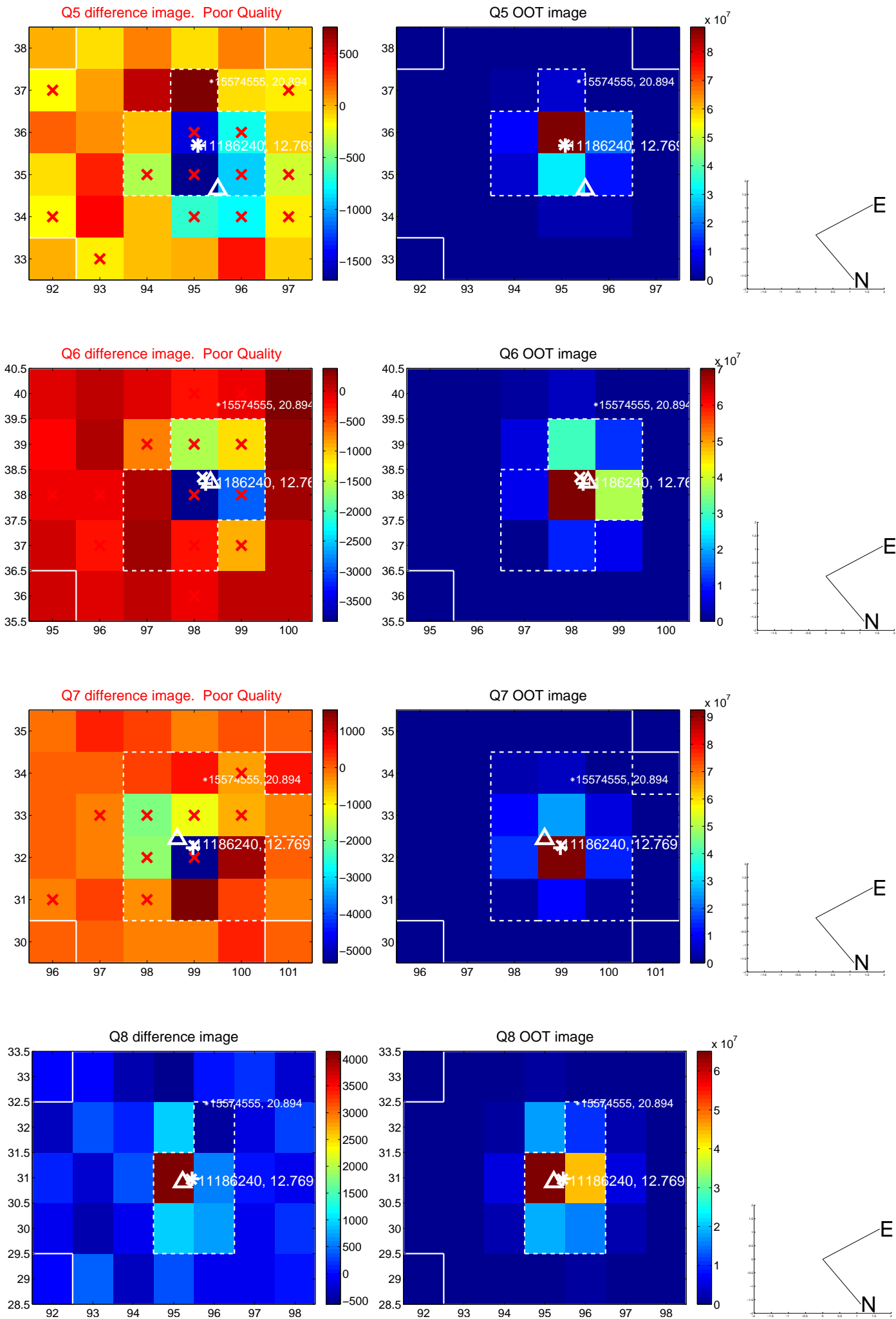


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

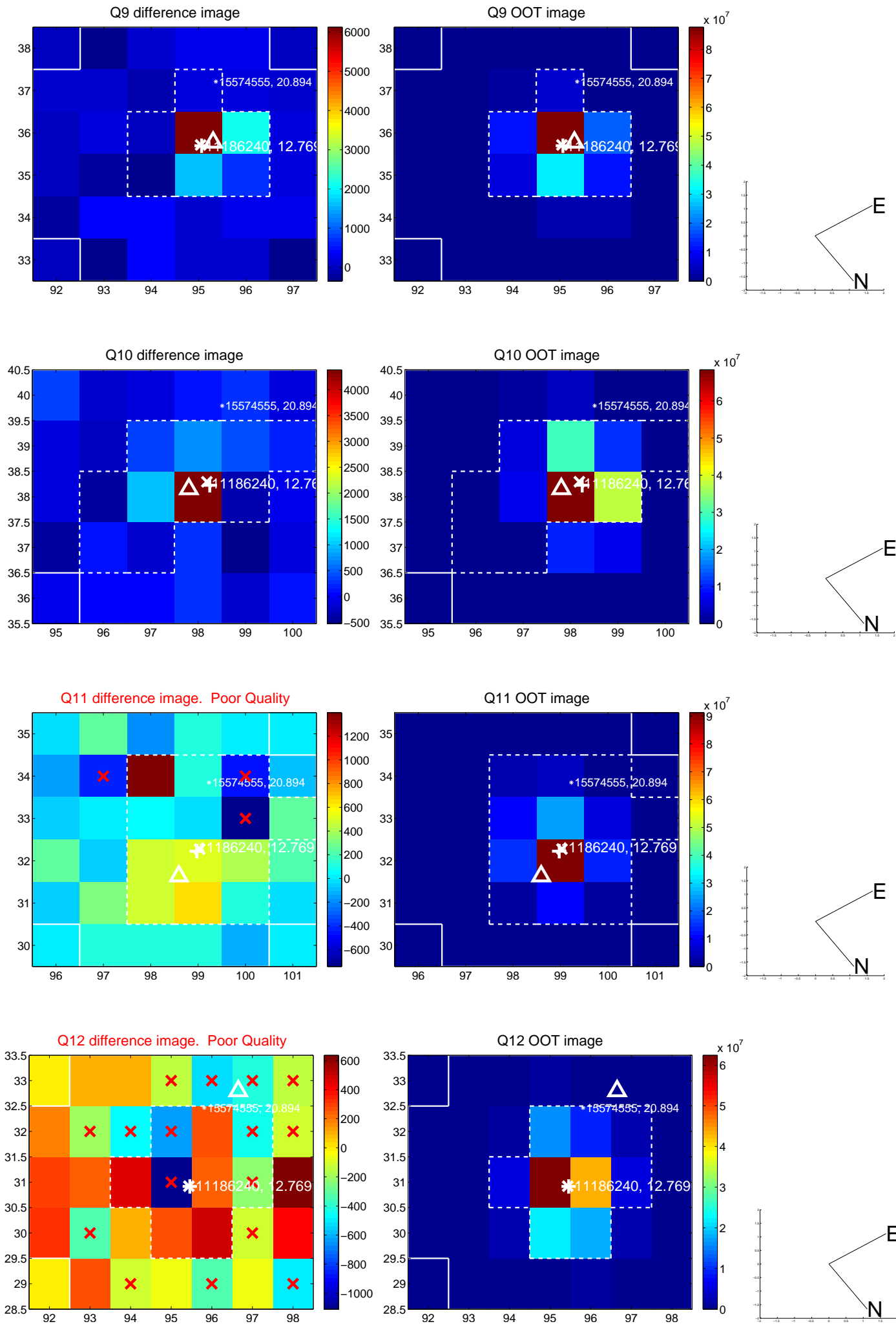


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

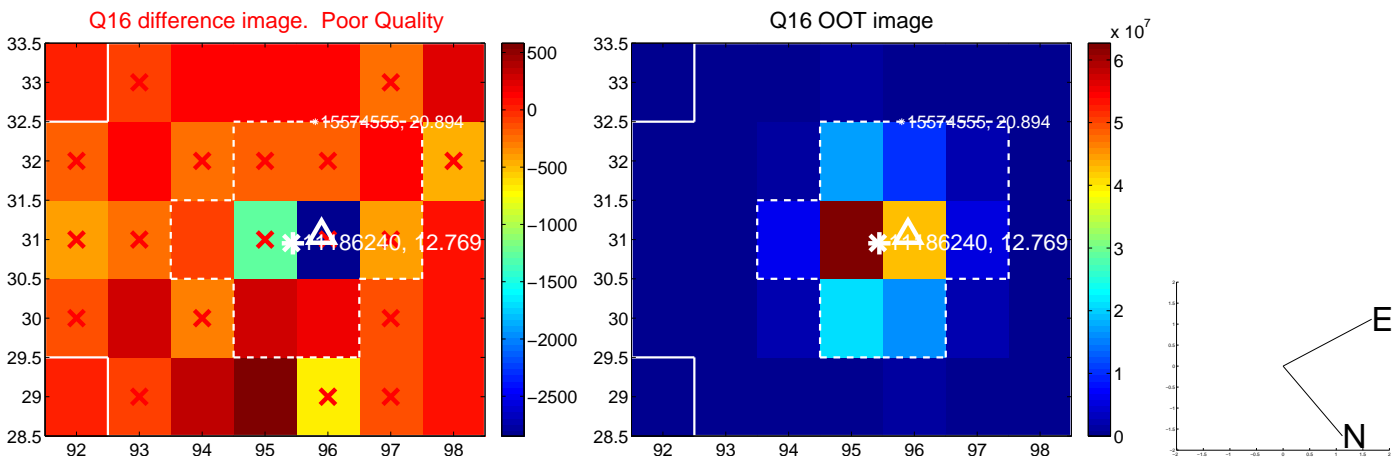
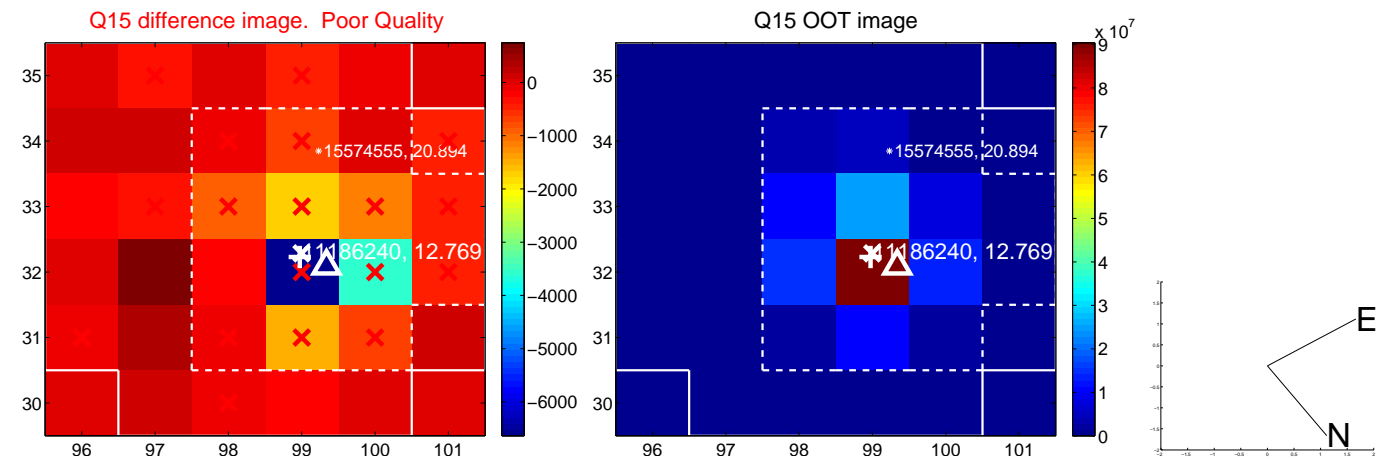
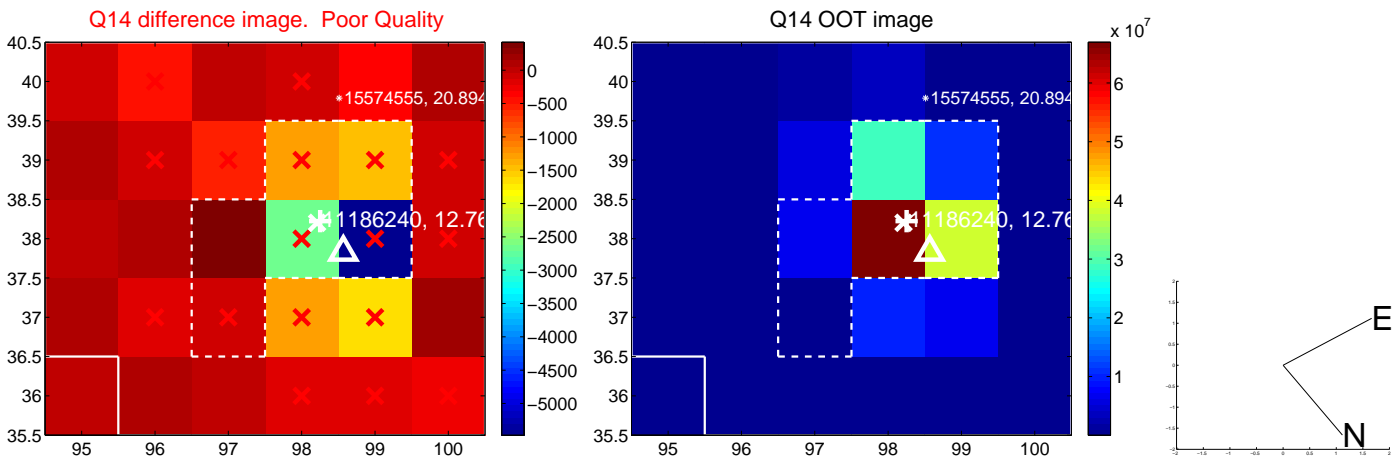
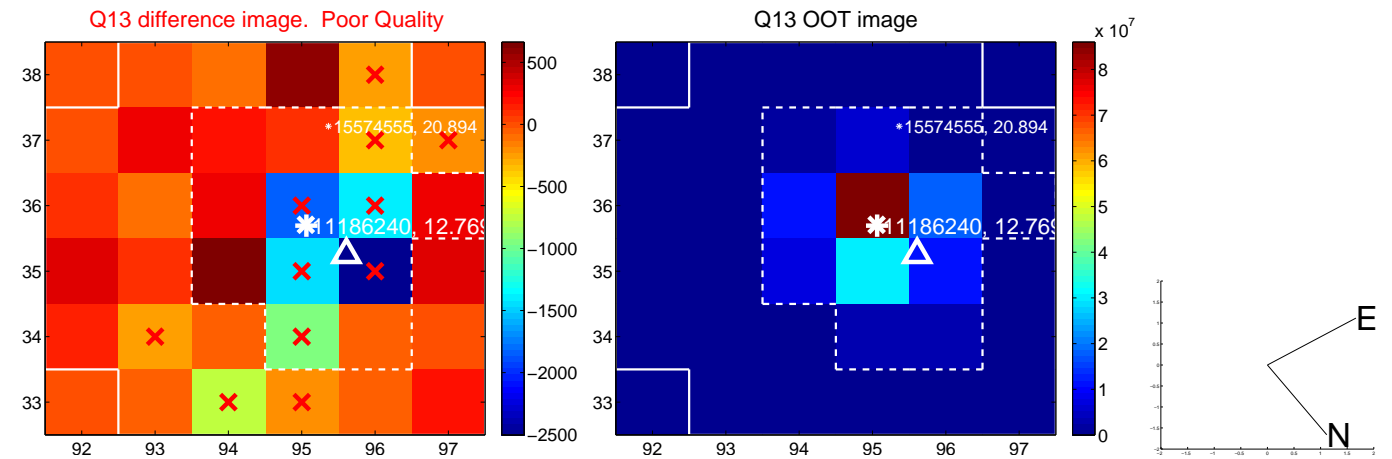




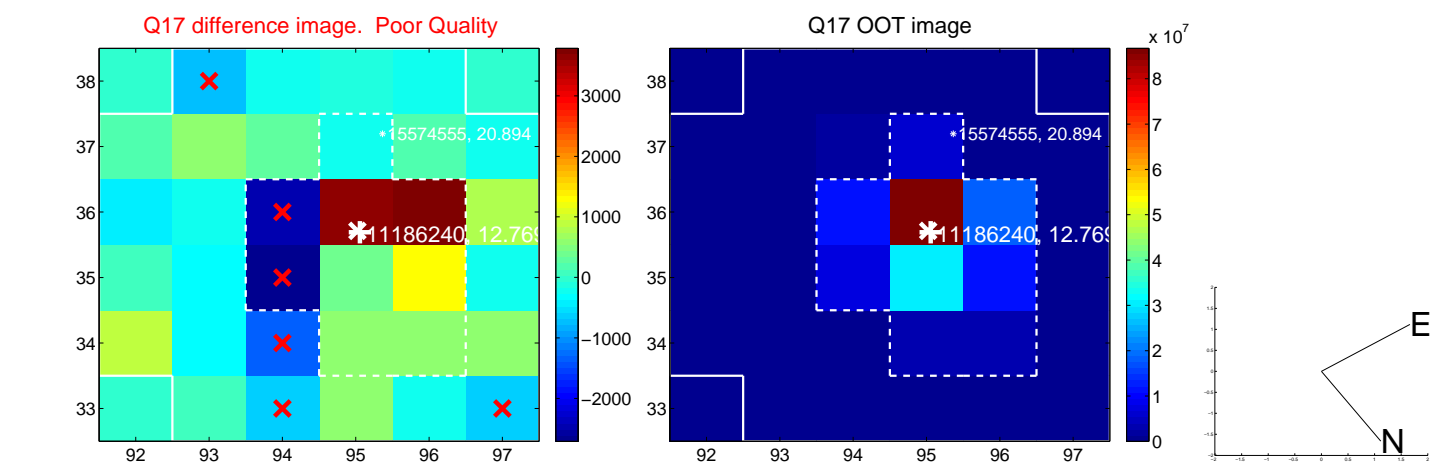
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



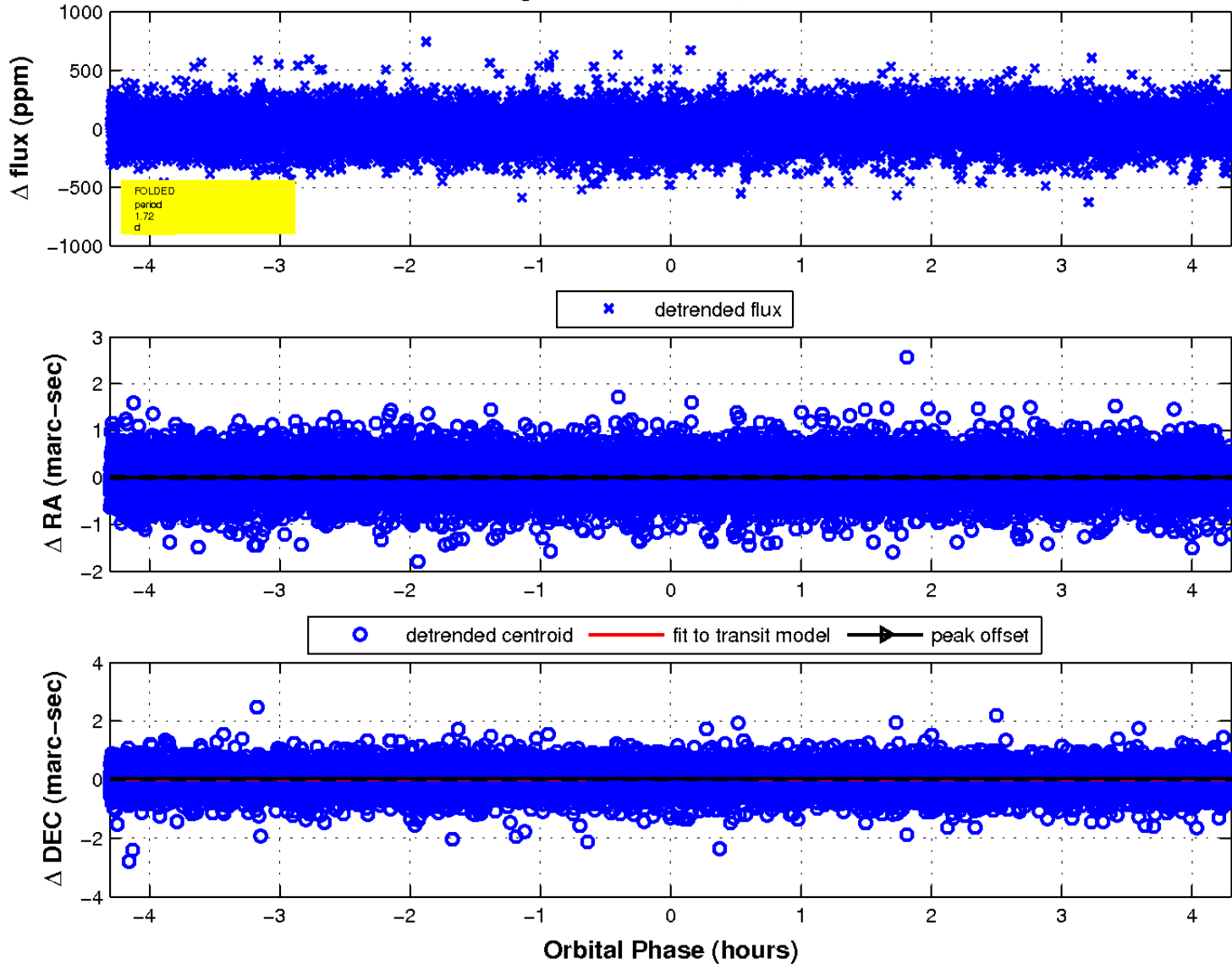
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

