

# KIC 003858926

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003858926-01	OBS	No	0.574187	132.080085	15.2	4.827	8.8	6.8	1.68	7351	0.71	30495.97

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003858926-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

**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 003858926-01

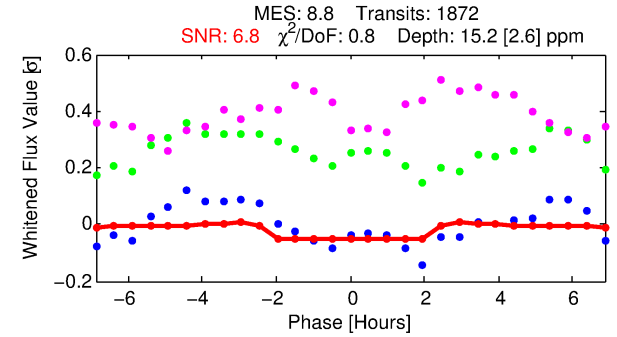
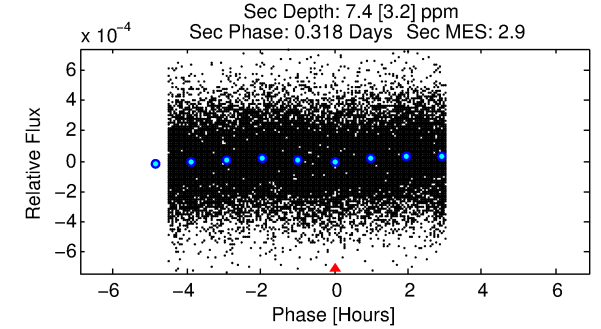
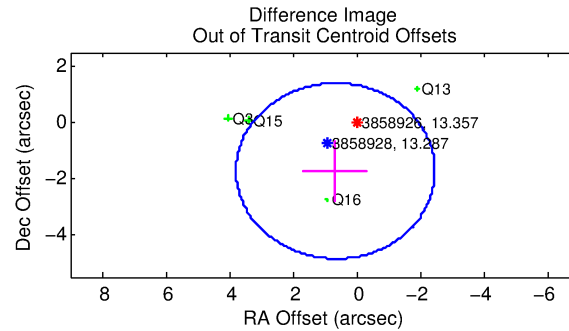
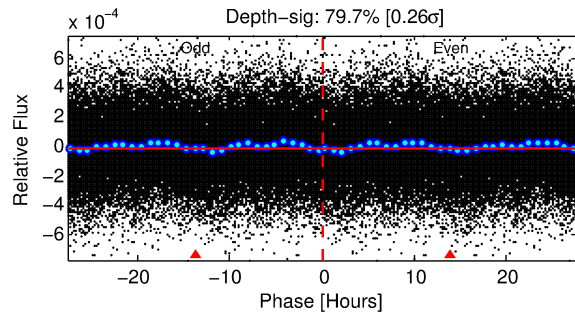
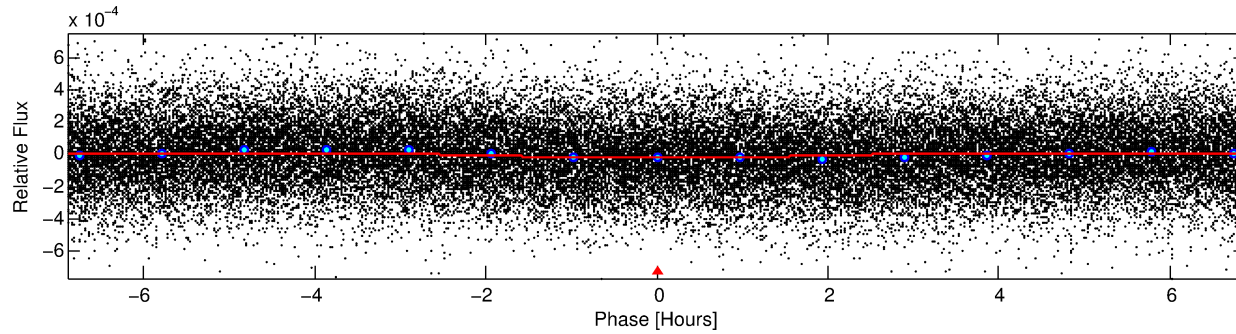
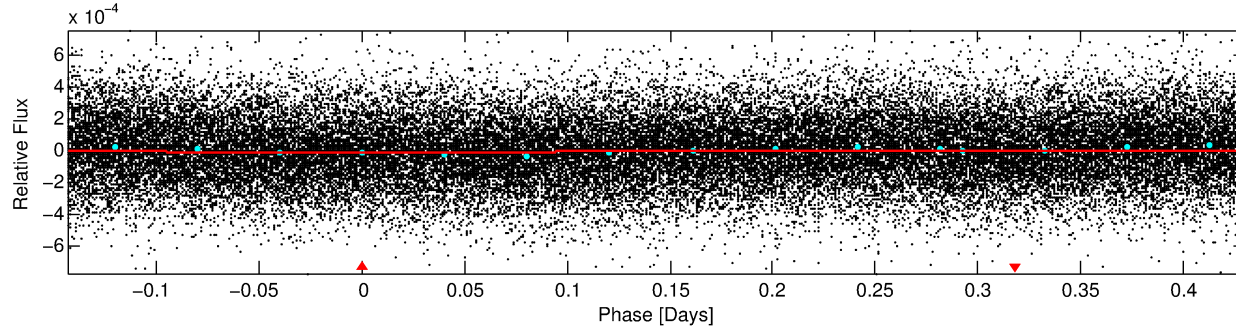
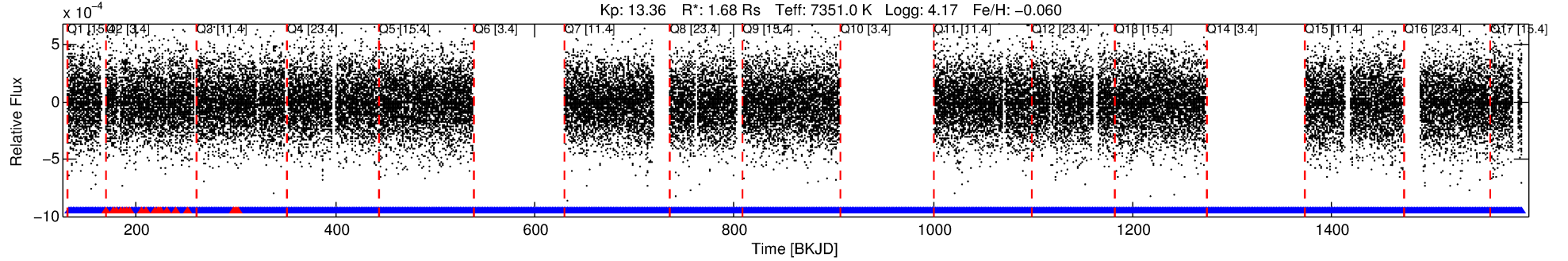
No Significant Match Found

# DV One-Page Summary

KIC: 3858926 Candidate: 1 of 1 Period: 0.574 d

KOI: K05019 Corr: No Ephemeris Match

Kp: 13.36 R\*: 1.68 Rs Teff: 7351.0 K Logg: 4.17 Fe/H: -0.060



## DV Fit Results:

Period = 0.57419 [0.00002] d  
Epoch = 132.0801 [0.0054] BKJD  
Rp/R\* = 0.0039 [0.0050]  
a/R\* = 1.06 [0.99]  
b = 0.73 [5.19]  
Seff = 30495.97 [12429.73]  
Teq = 3370 [343] K  
Rp = 0.71 [0.94] Re  
a = 0.0156 [0.0041] AU  
Ag = 1.96 [5.19] [0.18σ]  
Teffp = 6161 [4057] K [0.69σ]

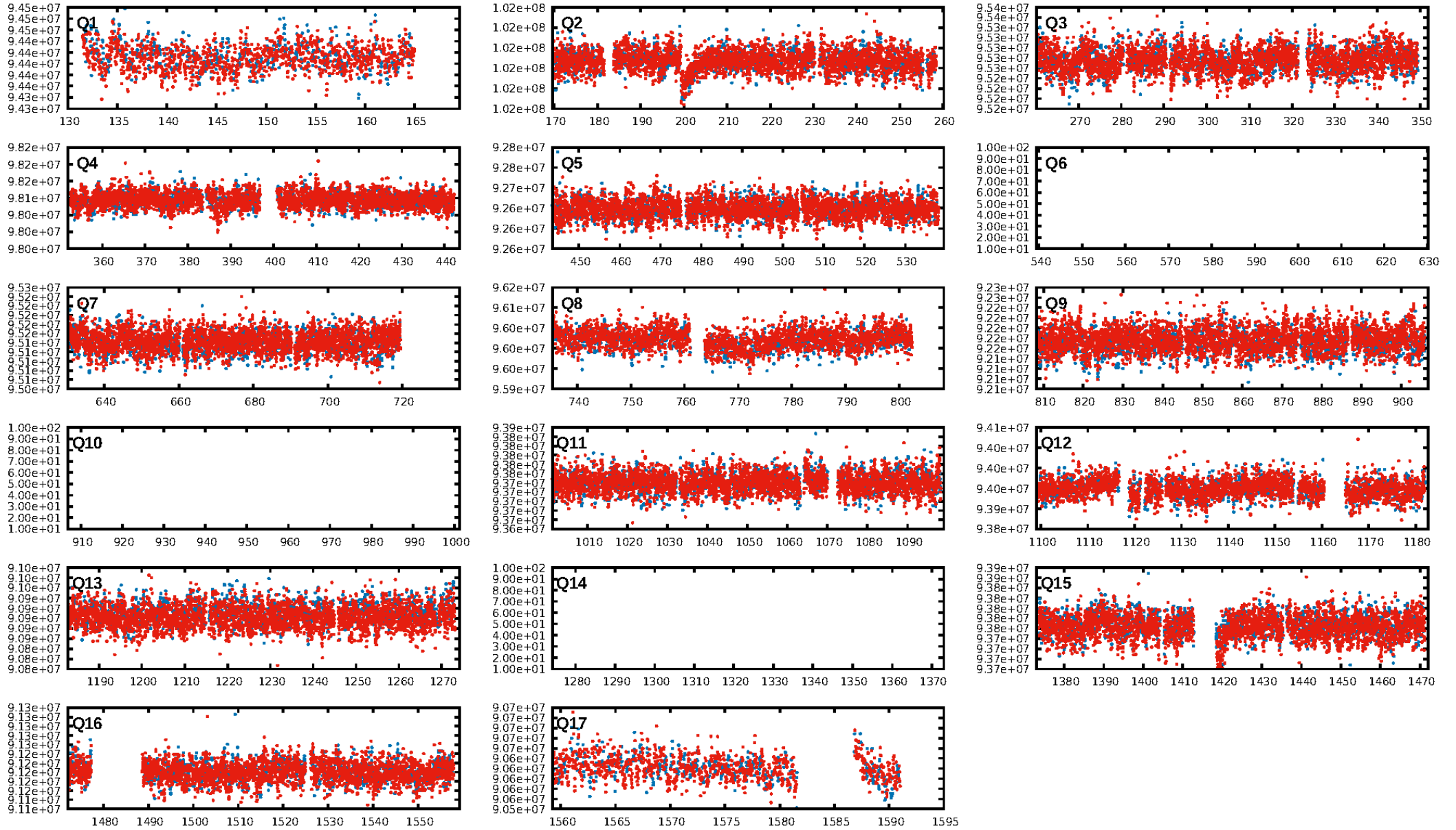
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [1744/1766]  
GhostDiagnostic-chr: 1.63  
Centroid-sig: 6.8%  
Centroid-so: 0.882 arcsec [0.71σ]  
OotOffset-rm: 1.846 arcsec [1.77σ]  
KicOffset-rm: 1.755 arcsec [1.75σ]  
OotOffset-st: 0/2/1/1 [4]  
KicOffset-st: 0/2/1/1 [4]  
DiffImageQuality-fgm: 0.50 [2/4]  
DiffImageOverlap-fno: 1.00 [14/14]

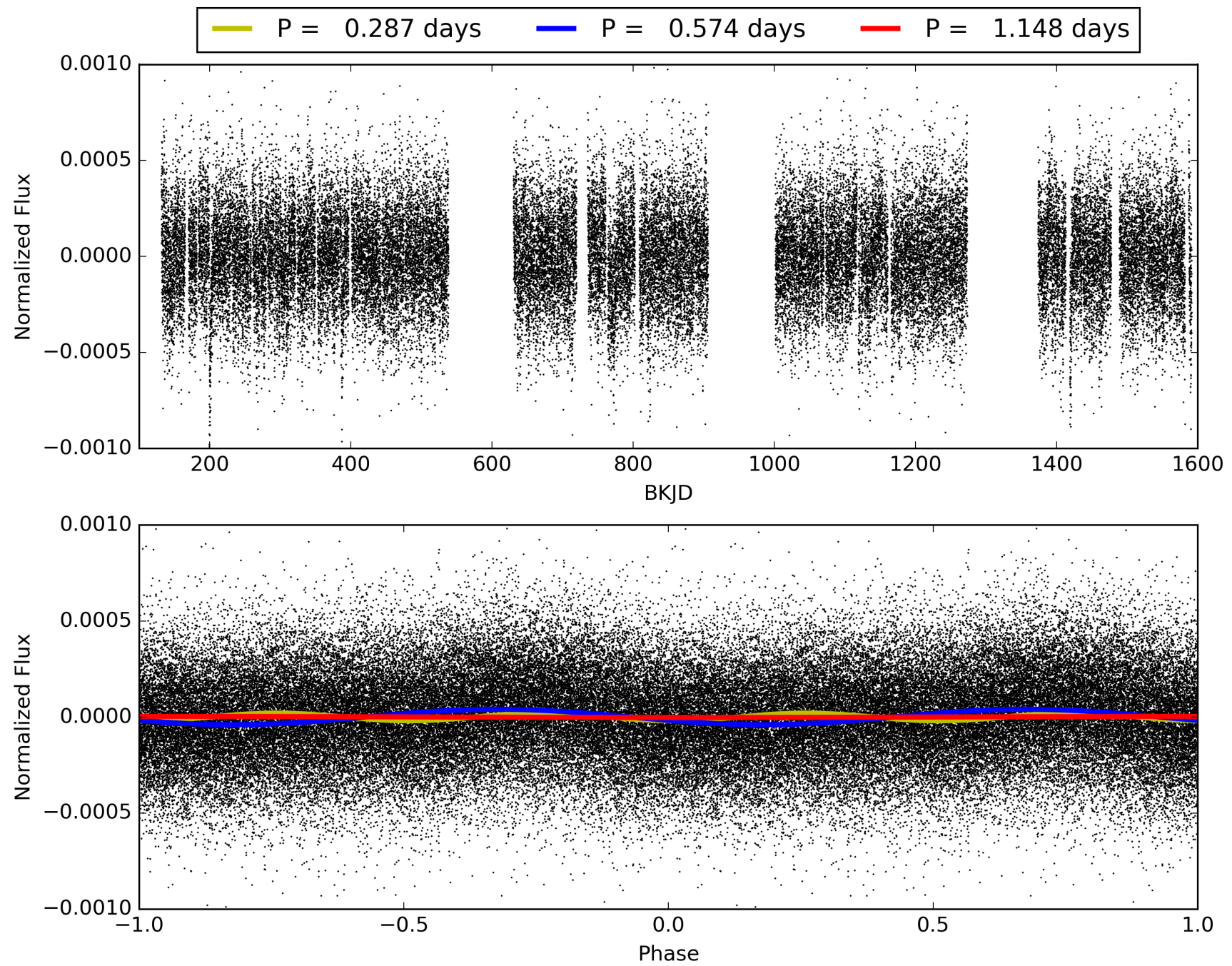
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:45:06 Z

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

# TCE 003858926-01, PDC Light Curves



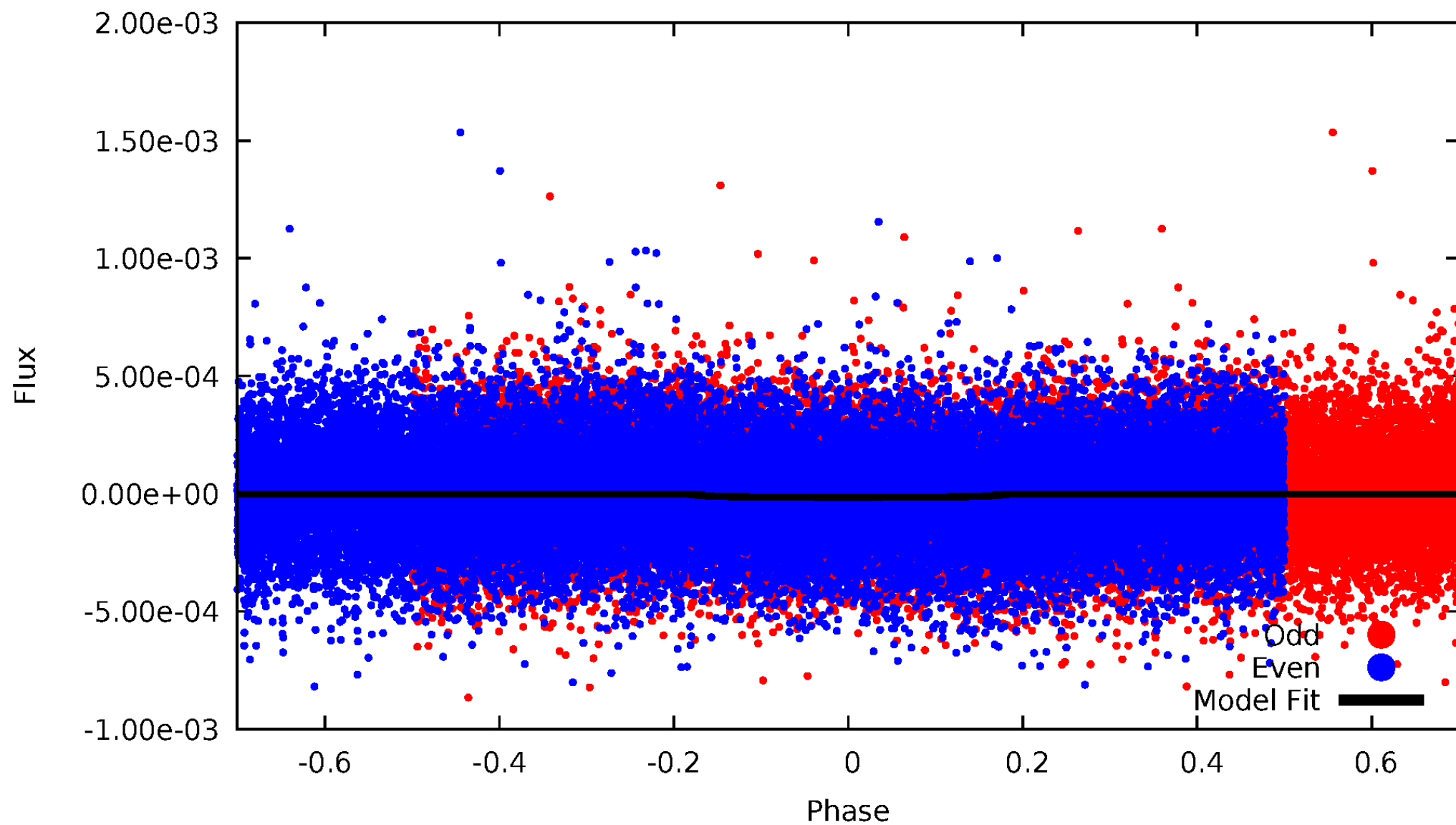
TCE 003858926-01





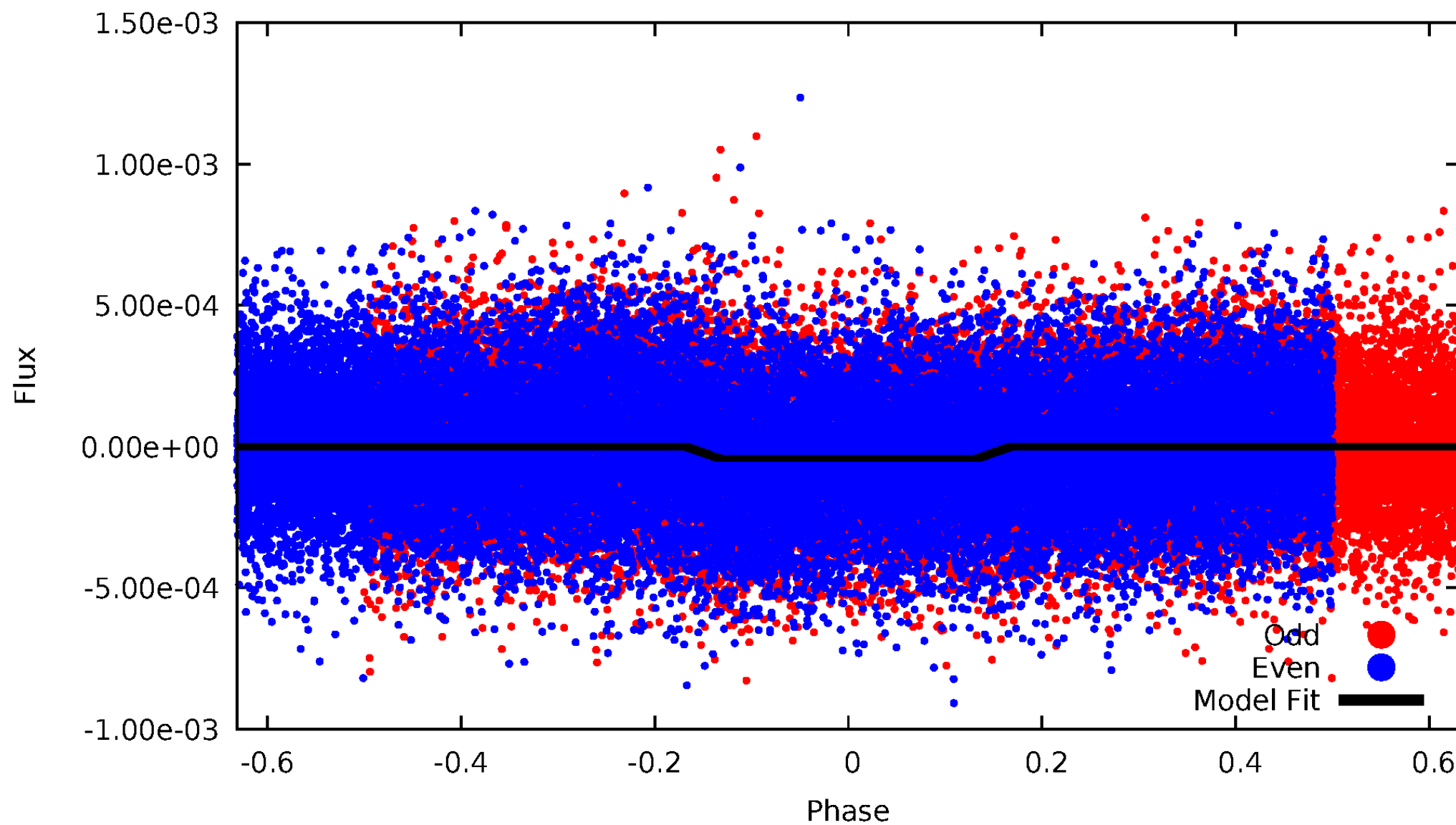
# DV Odd/Even

TCE 003858926-01

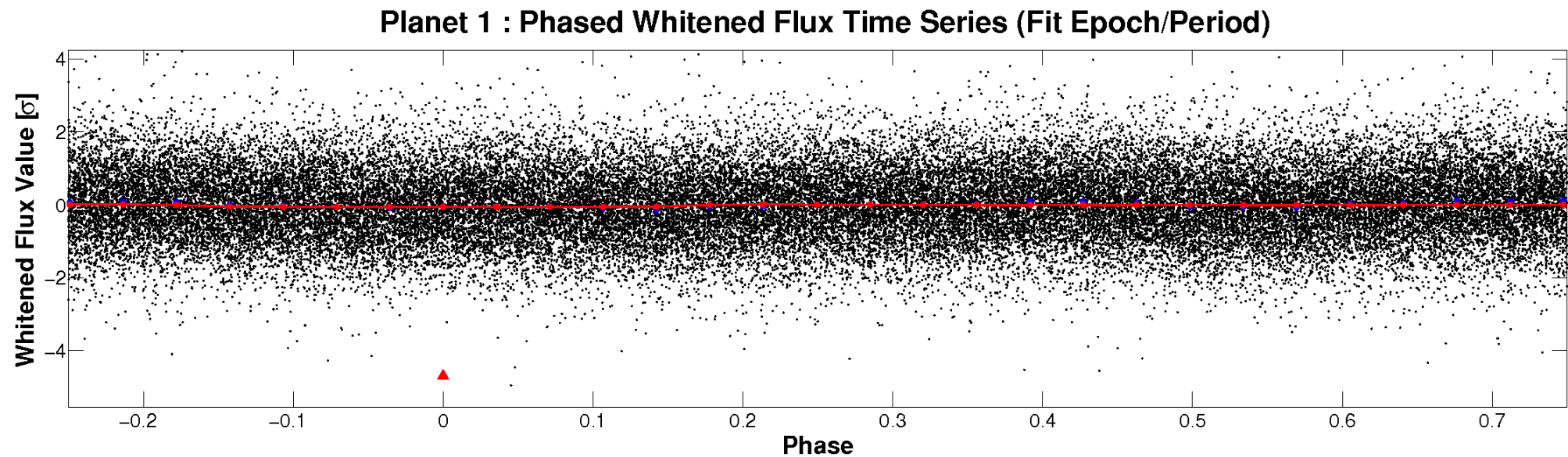
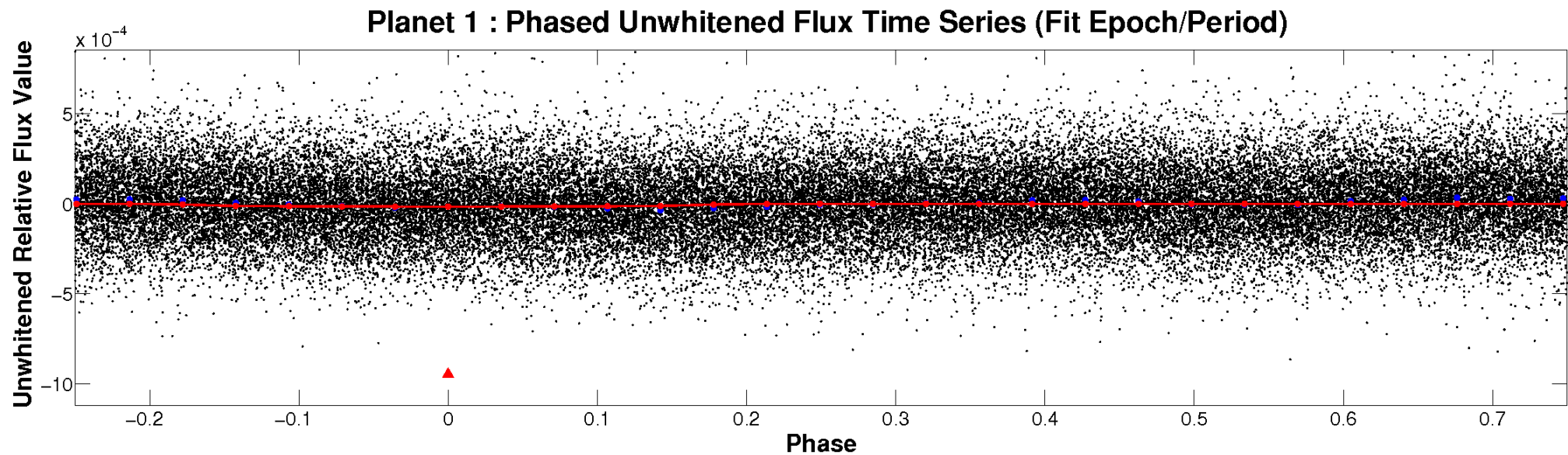


# ALT Odd/Even

TCE 003858926-01

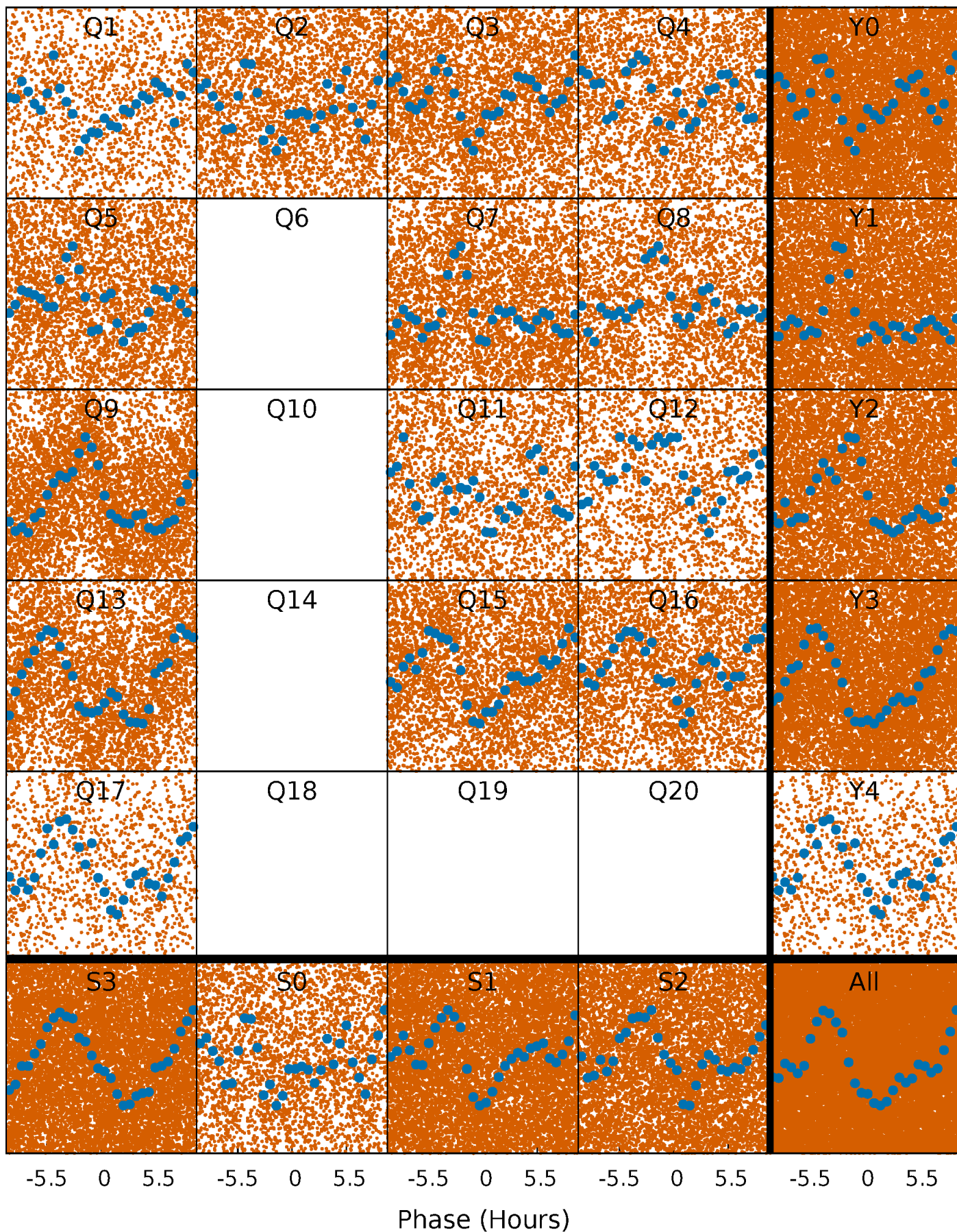


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

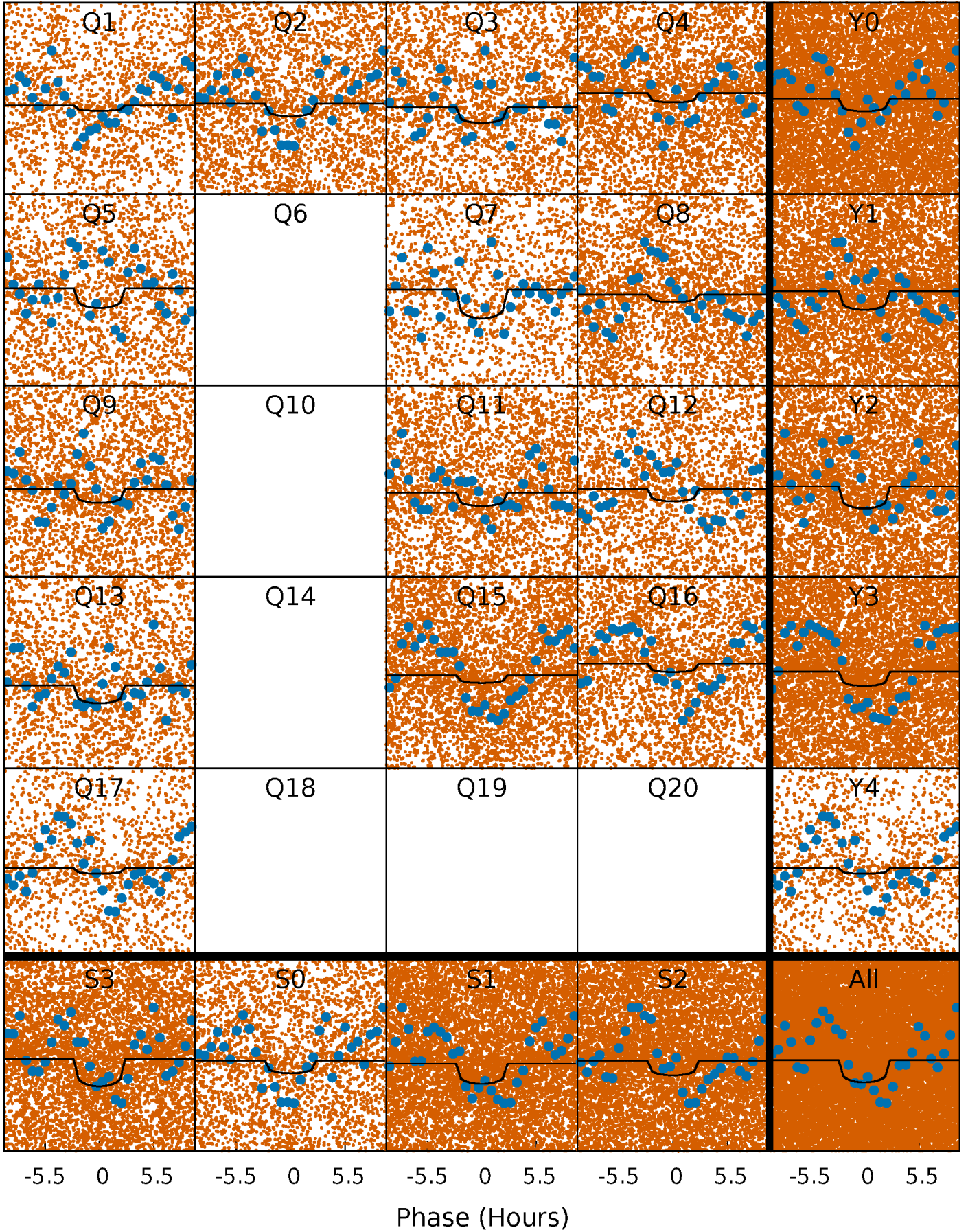
TCE 003858926-01   P= 0.574187 Days    $T_0=132.080085$  (BKJD)





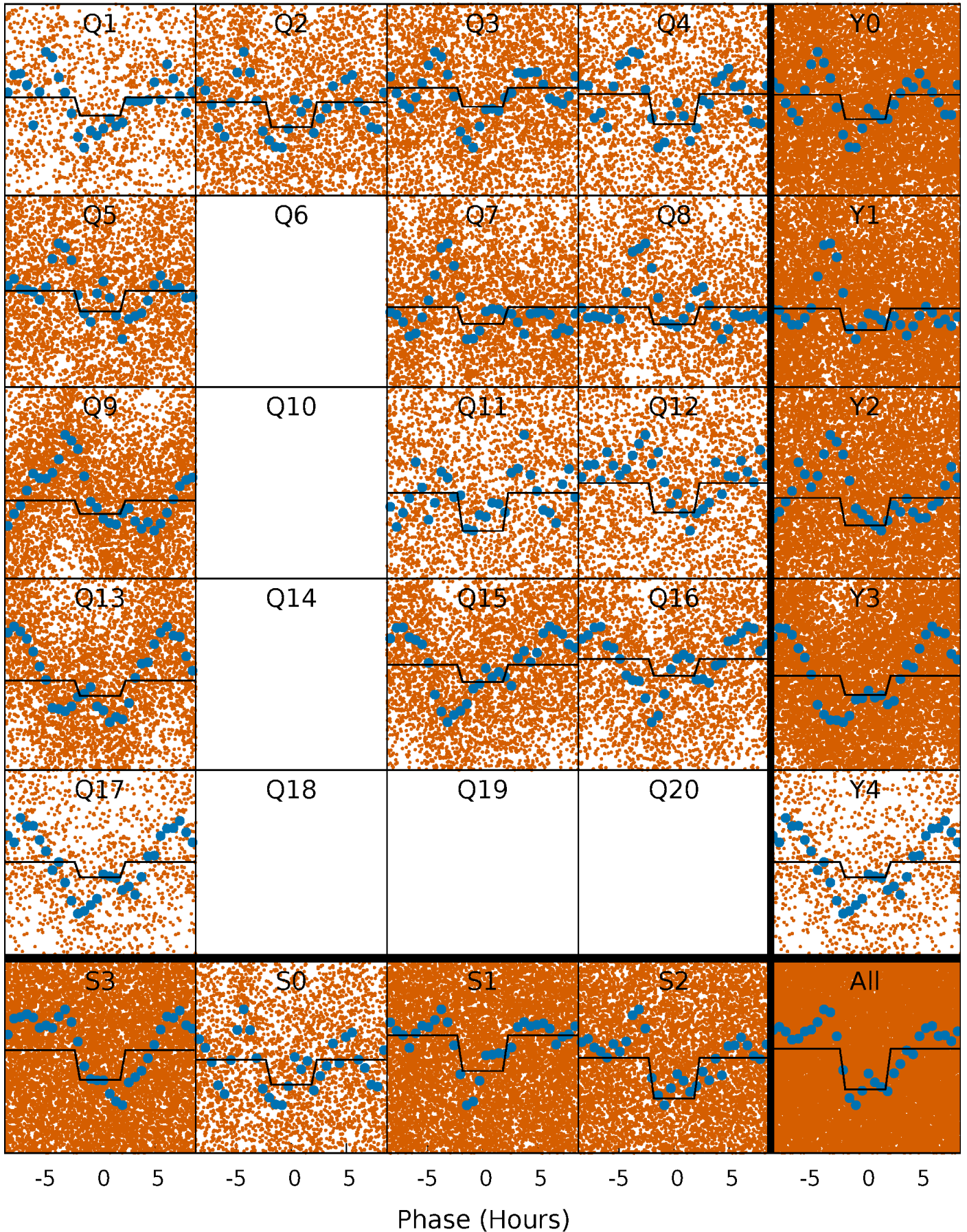
# DV Quarter-Phased Transit Curves

TCE 003858926-01 P= 0.574187 Days  $T_0=132.080085$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 003858926-01   P= 0.574243 Days    $T_0=132.064379$  (BKJD)

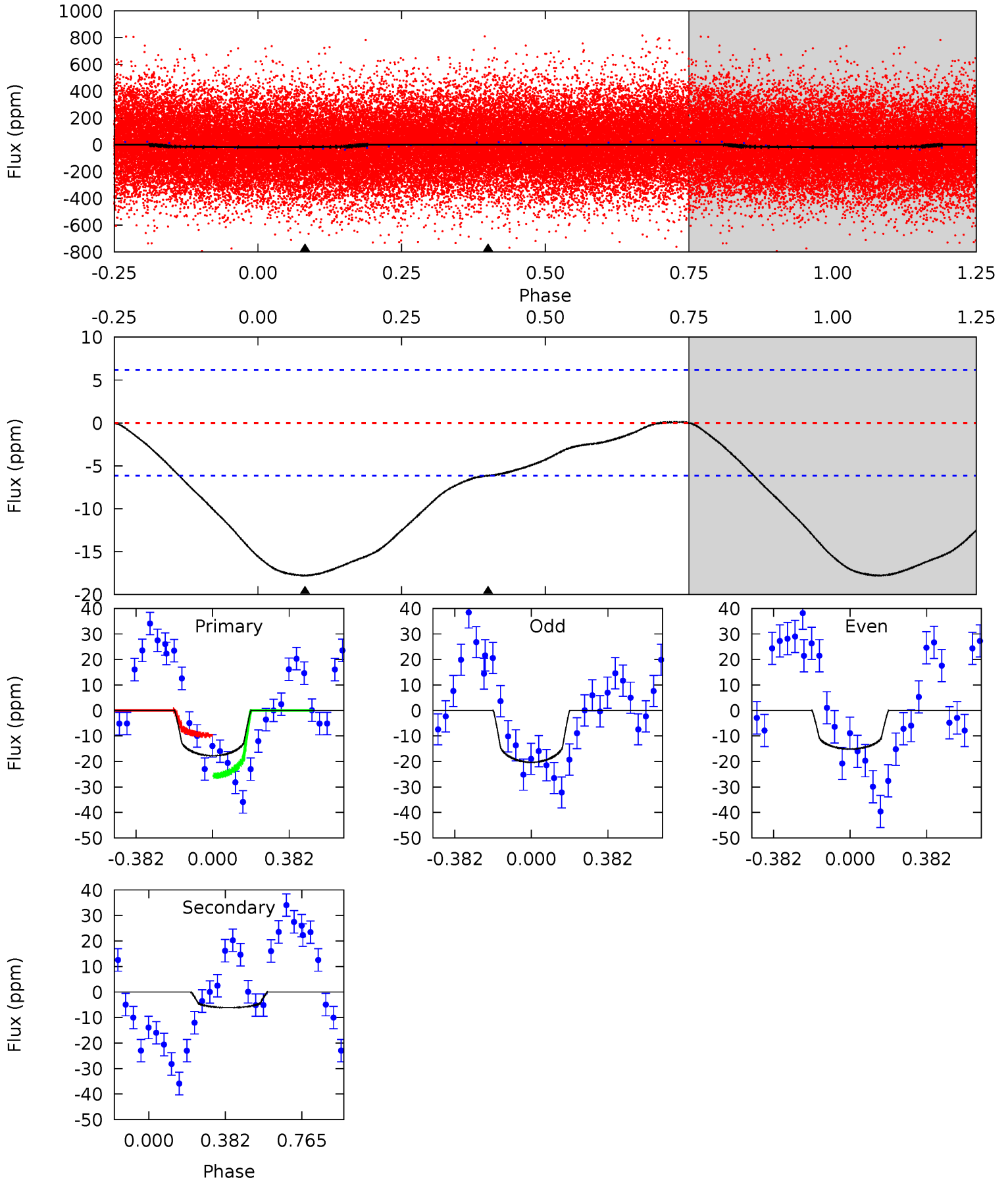




# DV Model-Shift Uniqueness Test

003858926-01, P = 0.574187 Days, E = 131.505898 Days

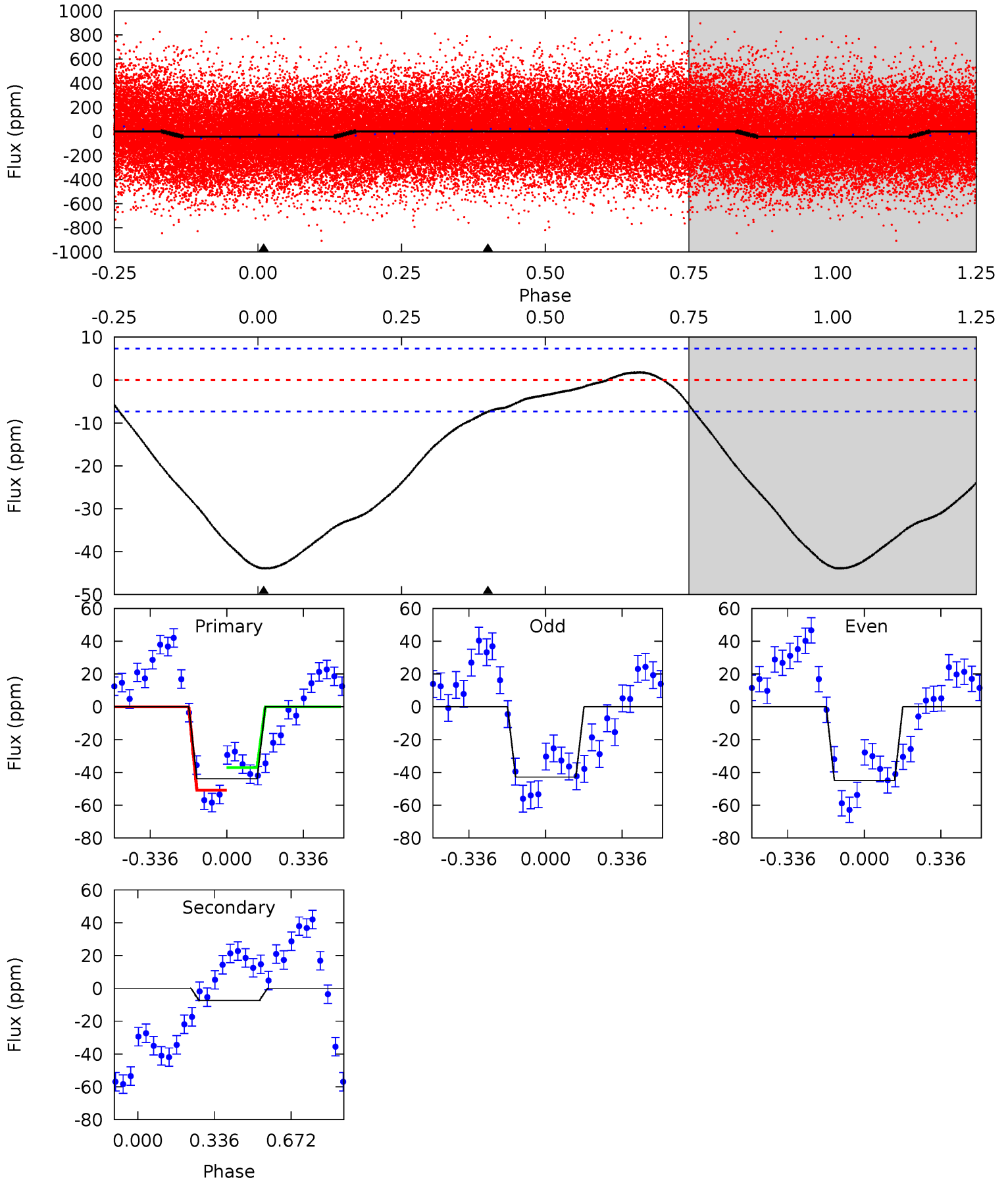
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	4.27	0	0	4.28	0.87	0.36	12.3	12.3	4.27	4.27	1.82	1.31	0.01	5.85



# Alt Model-Shift Uniqueness Test

003858926-01, P = 0.574243 Days, E = 131.490136 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
25.8	4.35	0	0	4.30	0.96	1.52	25.8	25.8	4.35	4.35	0.63	1.10	0.04	4.05





### Stellar Parameters For KIC 003858926

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7351^{+205}_{-323}$	$4.170^{+0.105}_{-0.195}$	$-0.060^{+0.200}_{-0.350}$	$1.679^{+0.538}_{-0.290}$	$1.517^{+0.234}_{-0.234}$	$0.452^{+0.272}_{-0.245}$
	+3%/-4%	+3%/-5%	+333%/-583%	+32%/-17%	+15%/-15%	+60%/-54%
Source	KIC0	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 003858926-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-6 \pm 1$	$1.05^{+0.75}_{-0.70}$	$4745^{+368}_{-287}$	$4376^{+4194}_{-7560}$	$0.686^{+5.555}_{-0.448}$
Alt.	$-7 \pm 2$	$1.36^{+0.93}_{-0.80}$	$4752^{+358}_{-303}$	$3887^{+2737}_{-7442}$	$0.529^{+2.245}_{-0.352}$

$T_{max}$  = 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

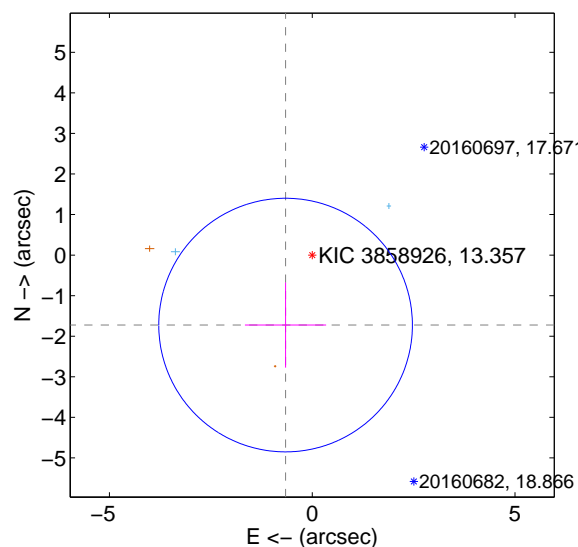
Supplemental centroid analysis for 003858926-01. Kepler magnitude: 13.36. Transit SNR 6.76

There are 2 quarters with good PRF difference image offsets

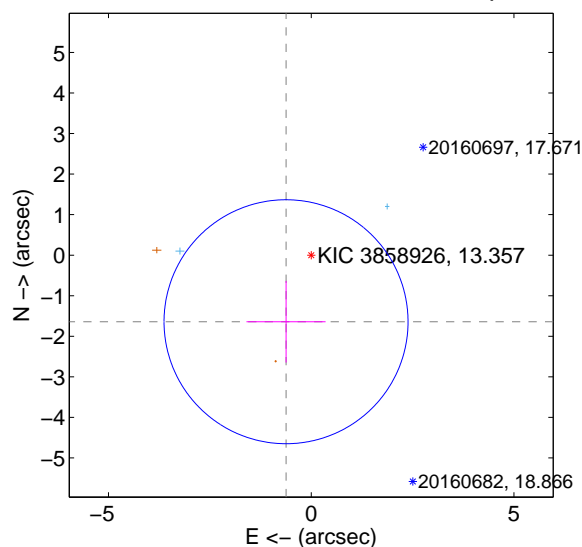
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.846 \pm 1.042$	1.77	$0.657 \pm 1.001$	$-1.725 \pm 1.048$
PRF-fit source offset from KIC position	$1.755 \pm 1.003$	1.75	$0.621 \pm 0.975$	$-1.641 \pm 1.007$
photometric centroid source offset	$0.88 \pm 1.24$	0.71	$0.06 \pm 1.21$	$-0.88 \pm 1.24$

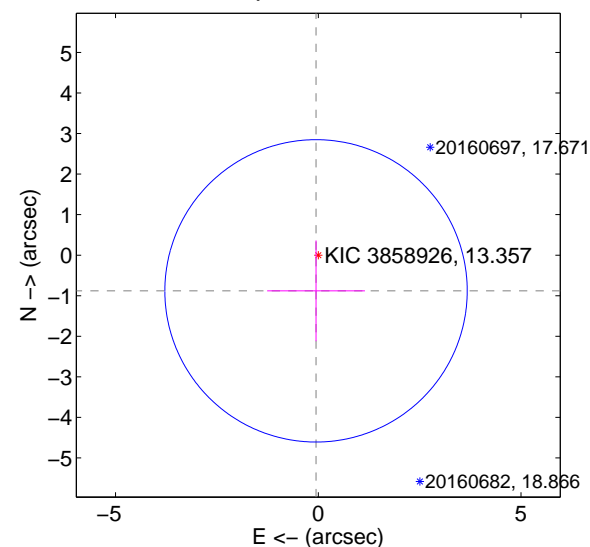
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

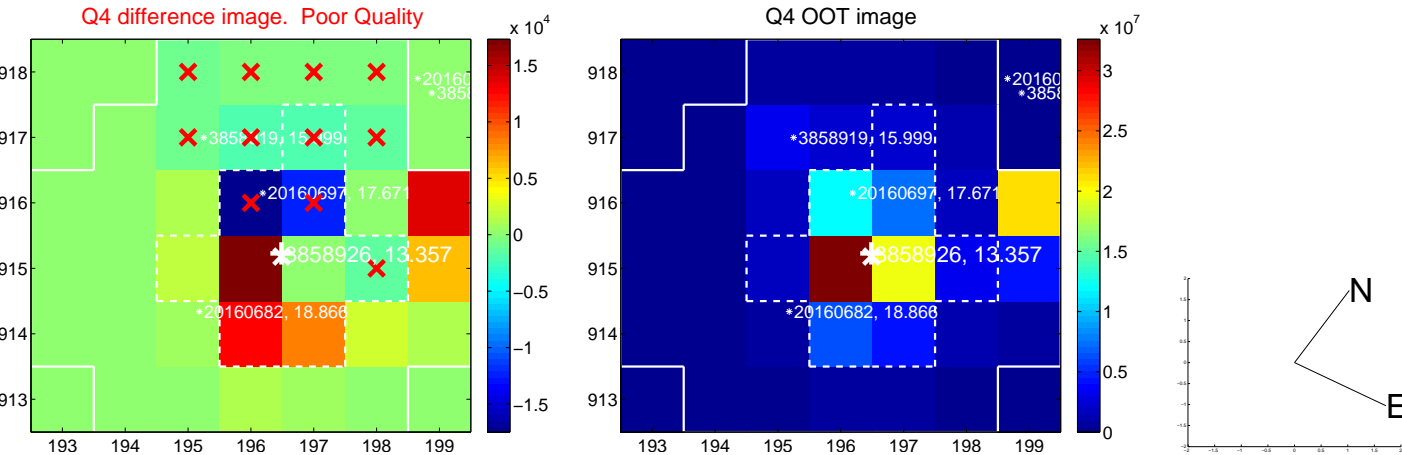
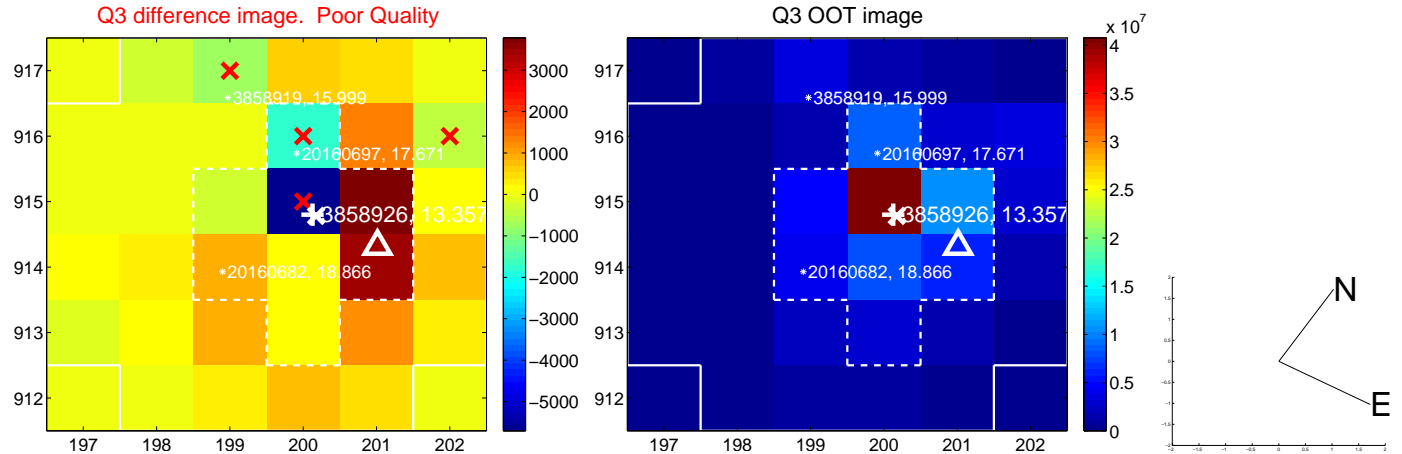
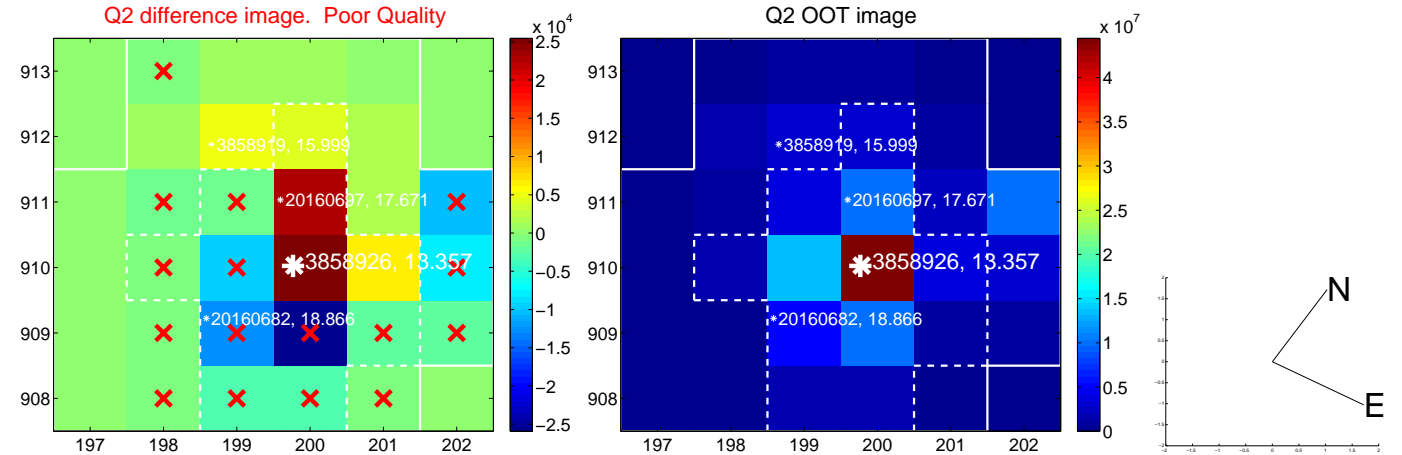
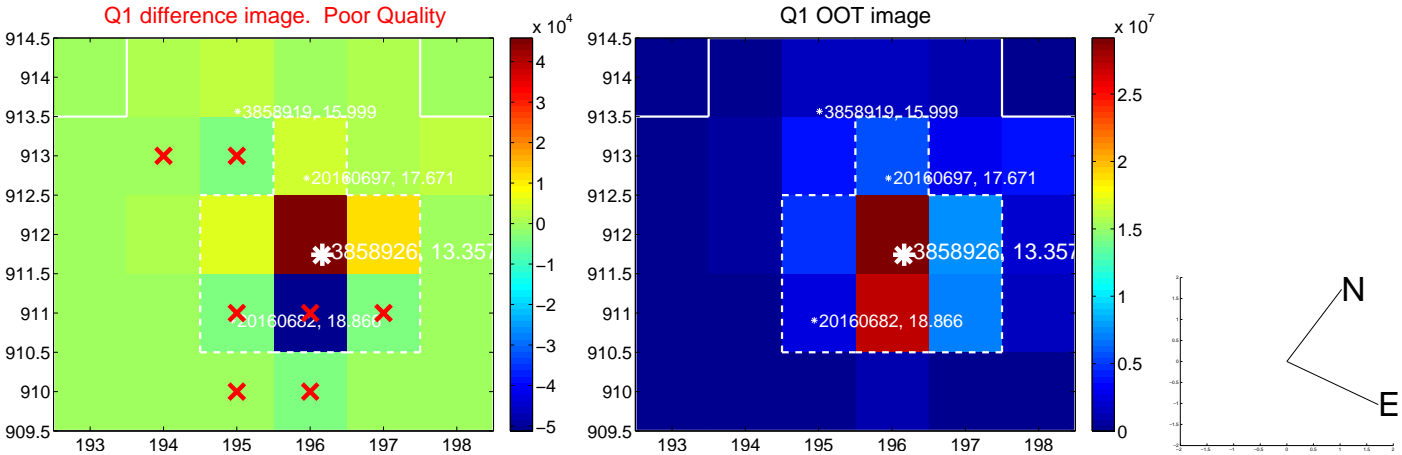


offset from photometric centroids

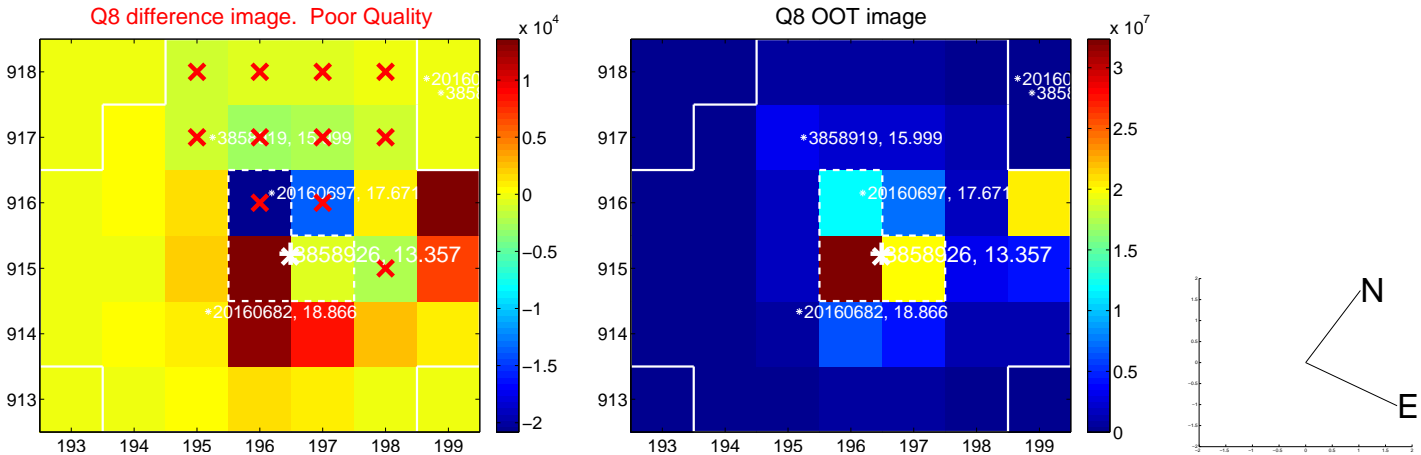
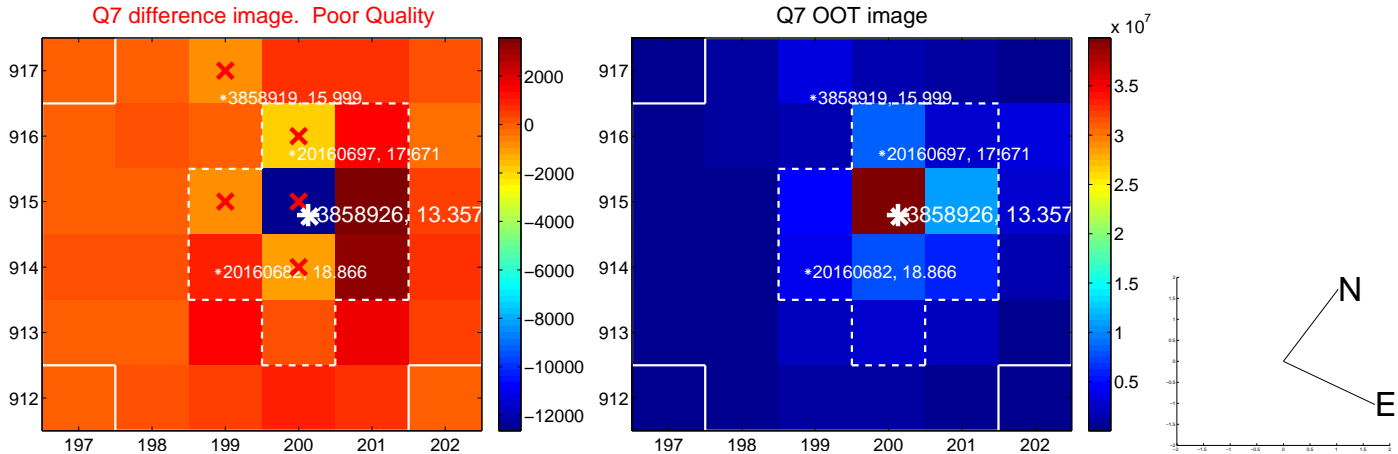
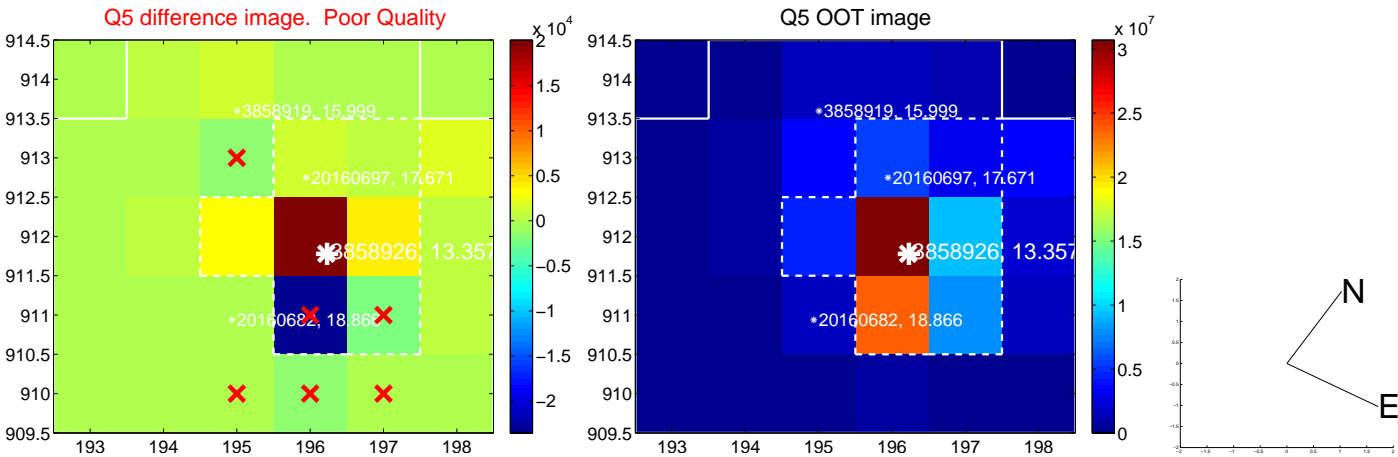


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

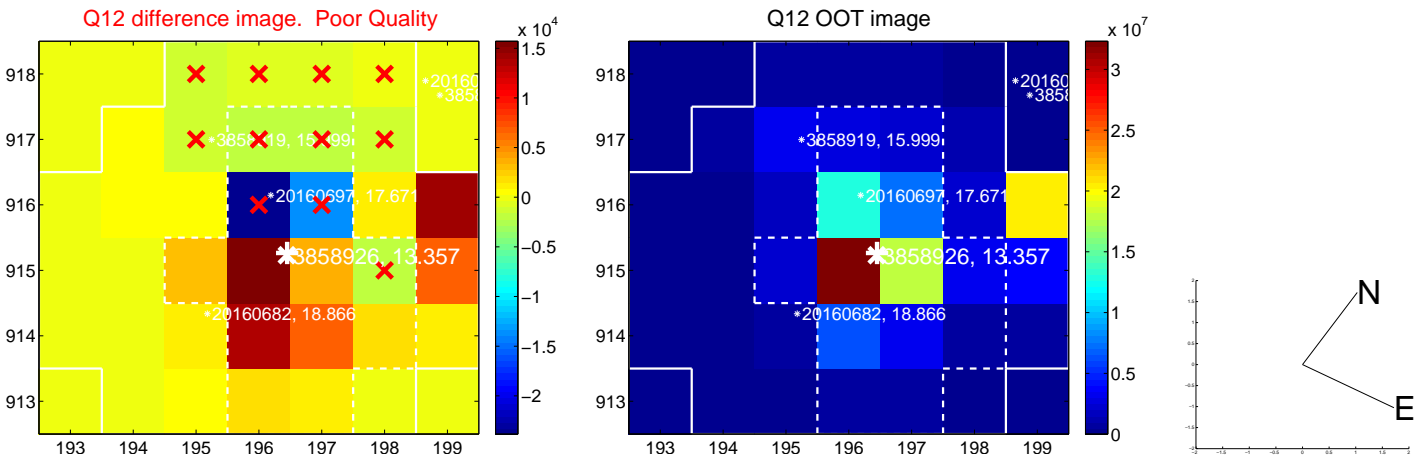
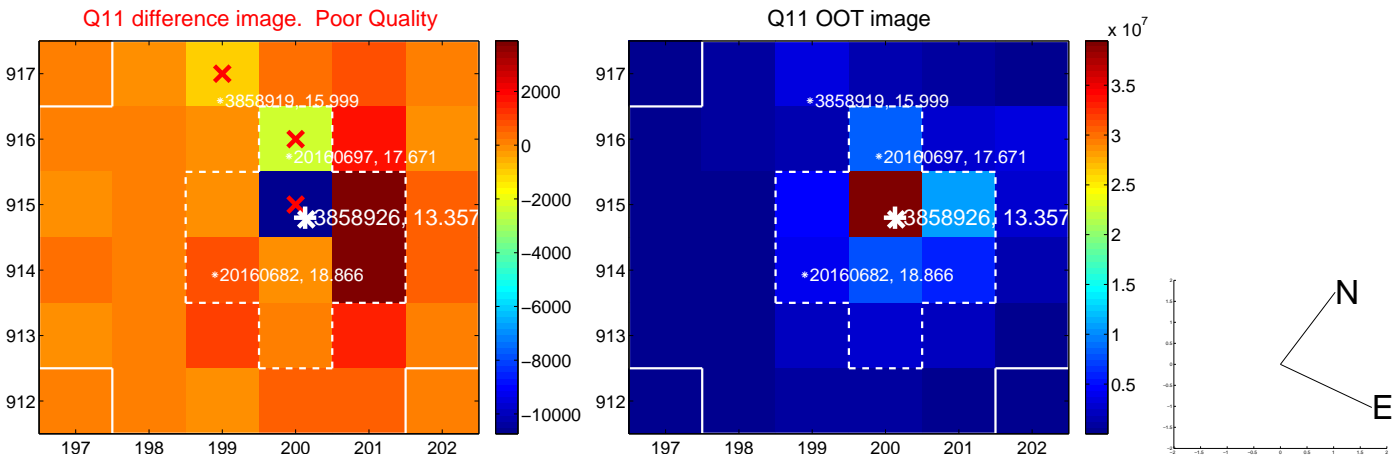
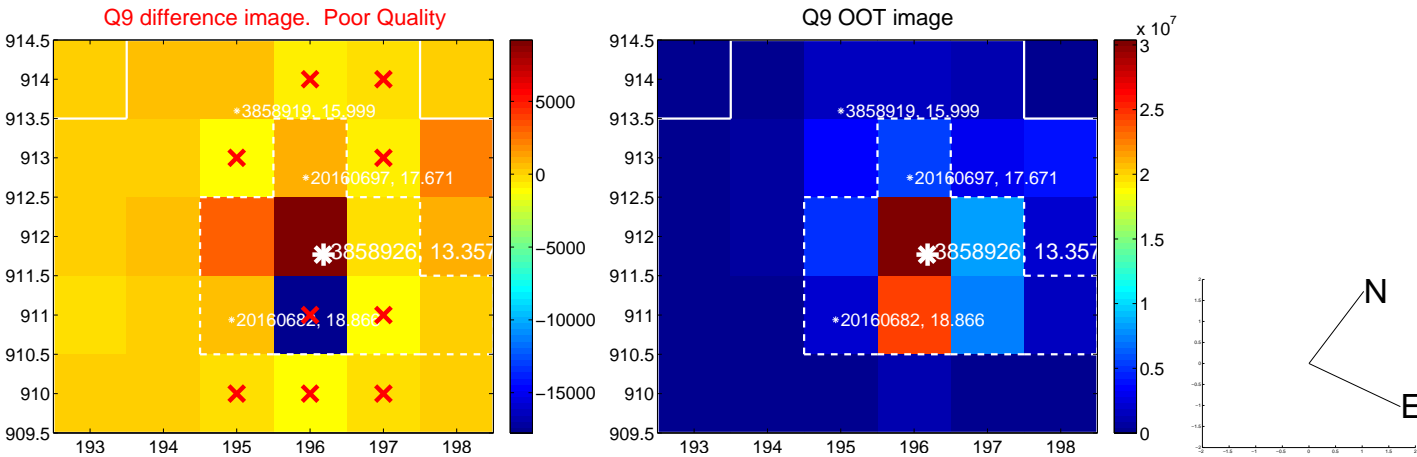


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

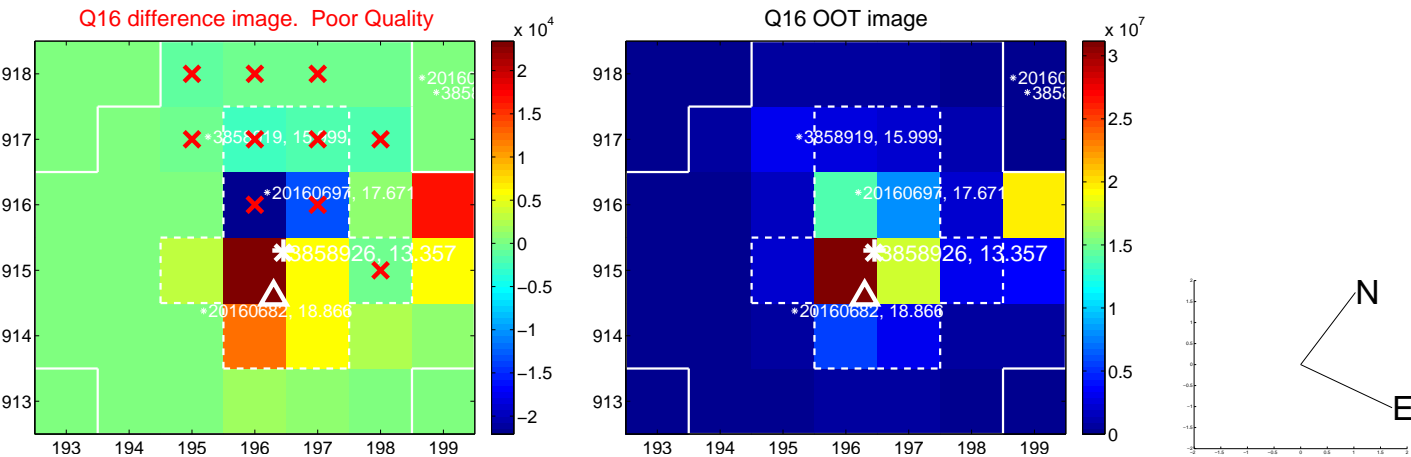
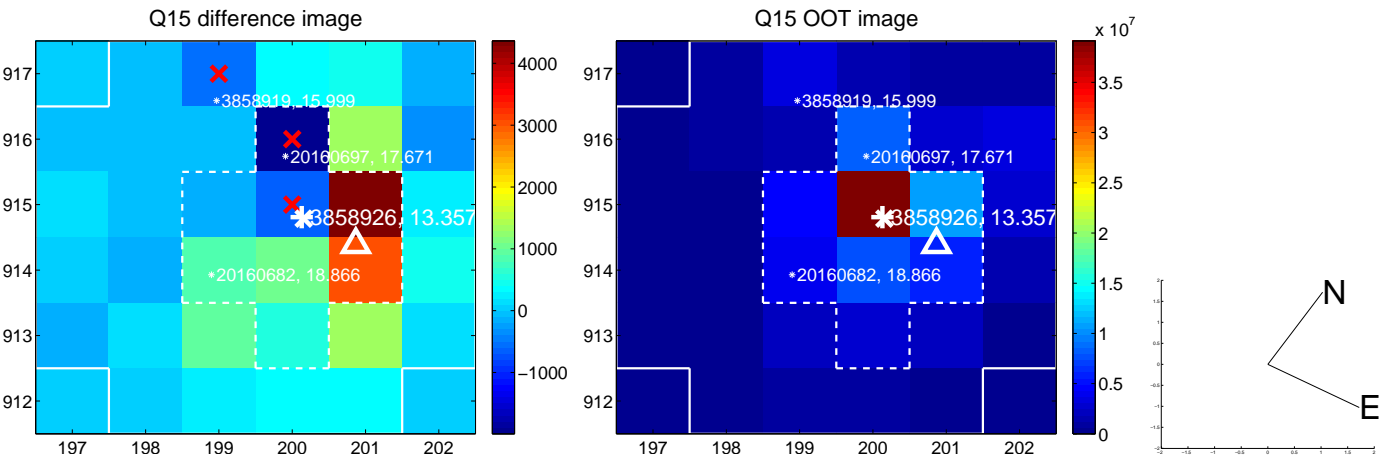
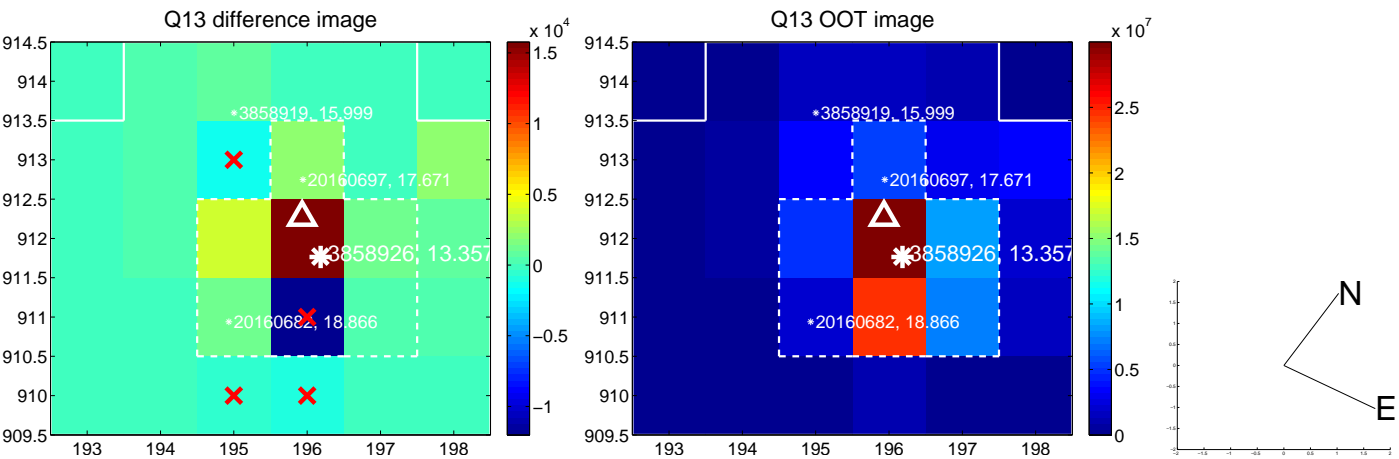




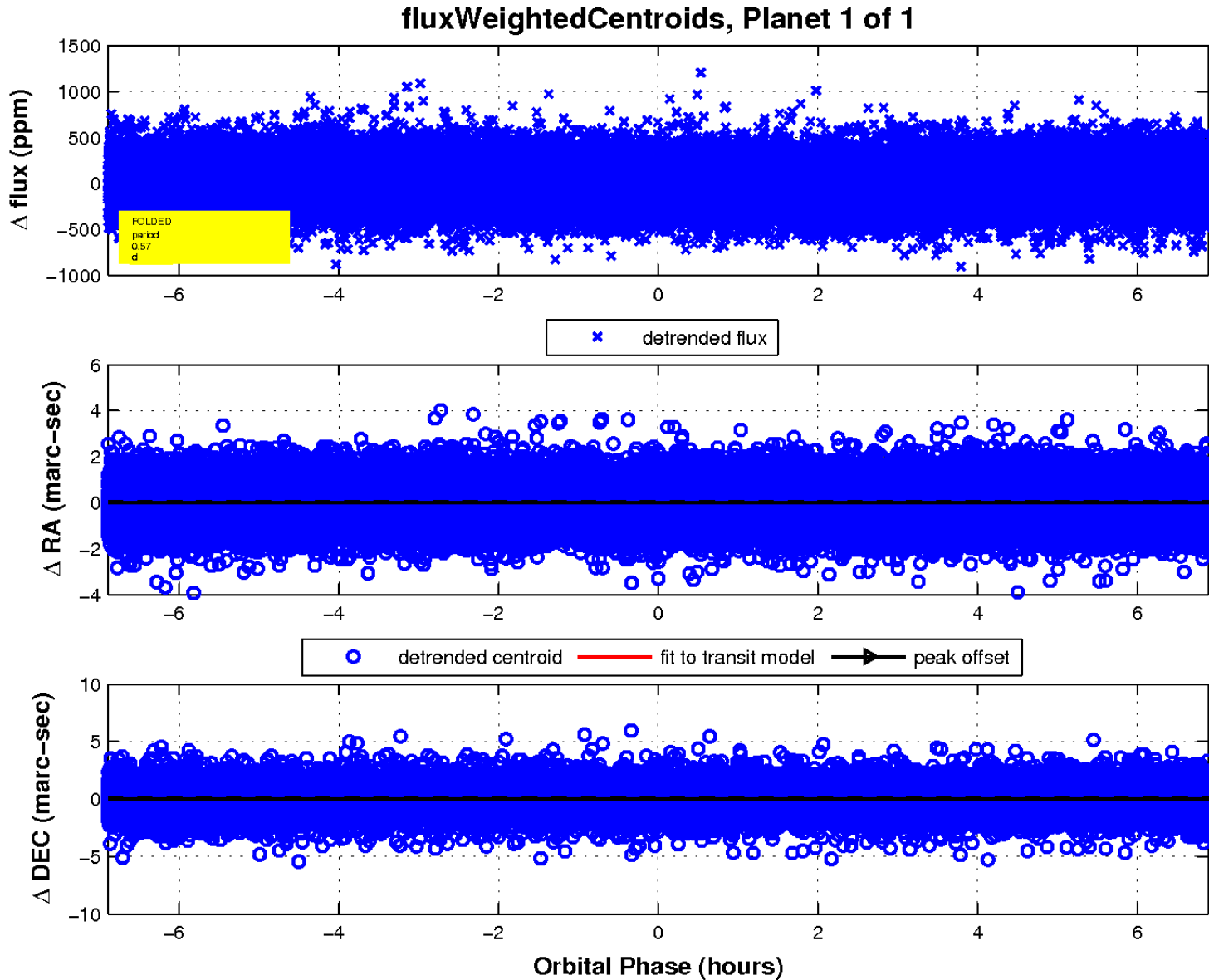
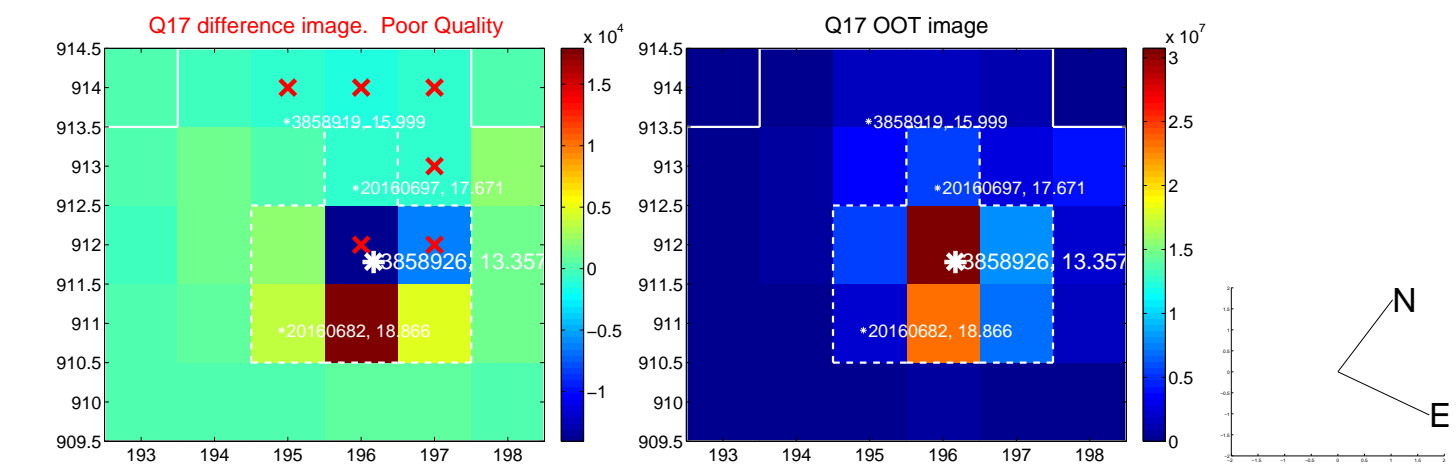
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

