

# KIC 011100670

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011100670-01	OBS	2885.01	20.233412	141.409530	183.1	4.584	10.1	11.2	0.71	5528	1.03	23.58

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011100670-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_RESOLVED_OFFSET

**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 011100670-01

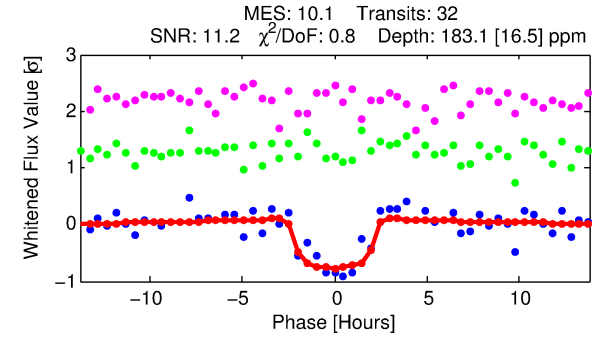
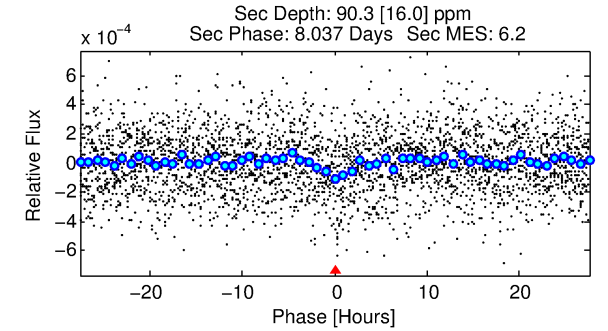
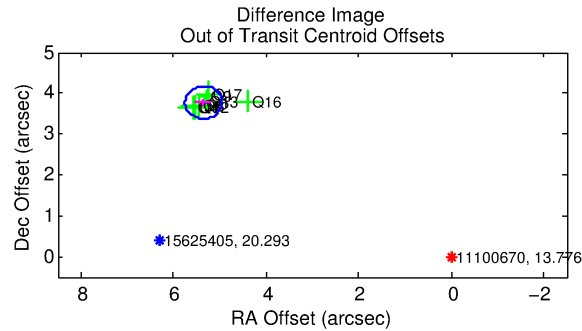
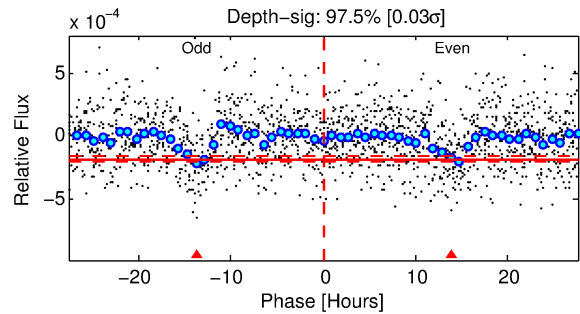
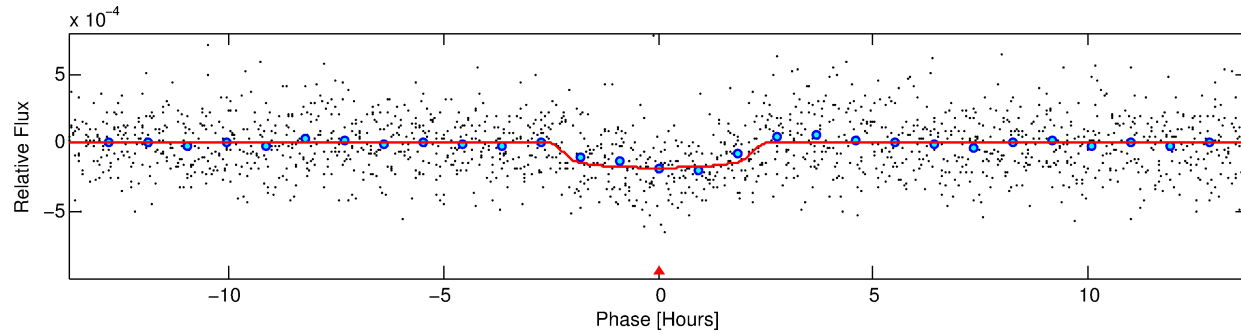
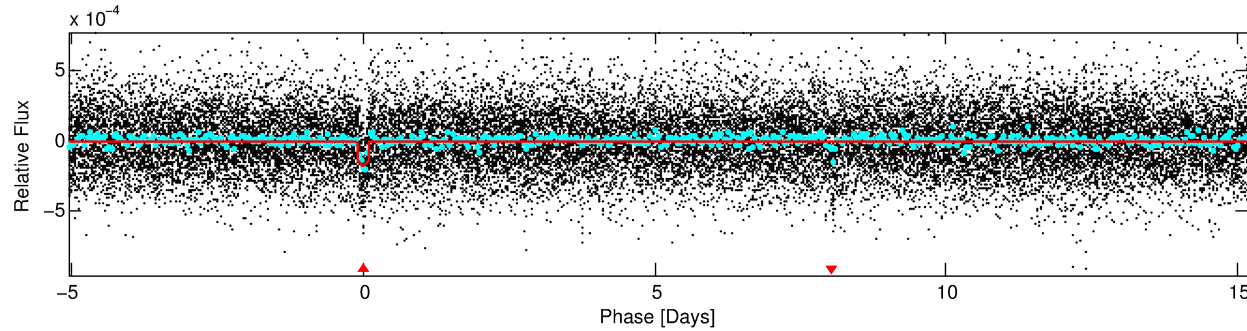
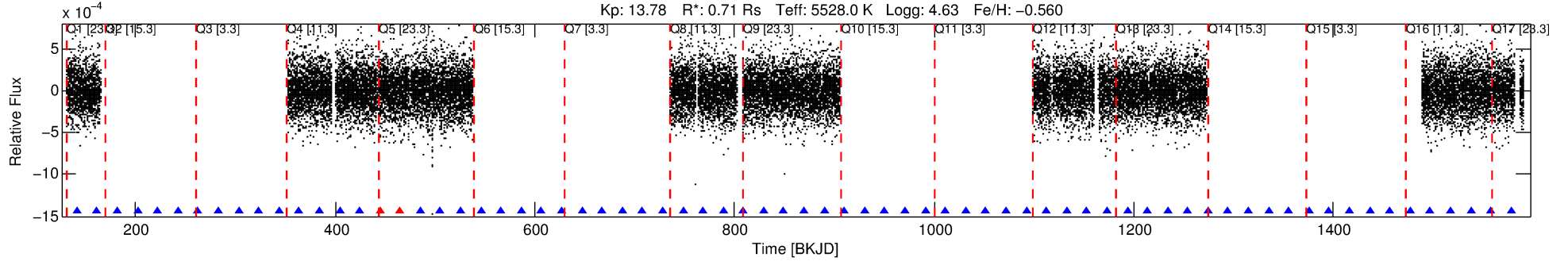
No Significant Match Found

# DV One-Page Summary

KIC: 11100670 Candidate: 1 of 1 Period: 20.233 d

KOI: K02885.01 Corr: 0.901

Kp: 13.78 R\*: 0.71 Rs Teff: 5528.0 K Logg: 4.63 Fe/H: -0.560



## DV Fit Results:

Period = 20.23341 [0.00019] d  
Epoch = 141.4095 [0.0079] BKJD  
Rp/R\* = 0.0134 [0.0093]  
a/R\* = 23.75 [75.12]  
b = 0.73 [2.06]  
Seff = 23.58 [6.40]  
Teq = 562 [38] K  
Rp = 1.04 [0.75] Re  
a = 0.1337 [0.0212] AU  
Ag = 828.69 [1181.57] [0.70σ]  
Teffp = 4661 [1650] K [2.48σ]

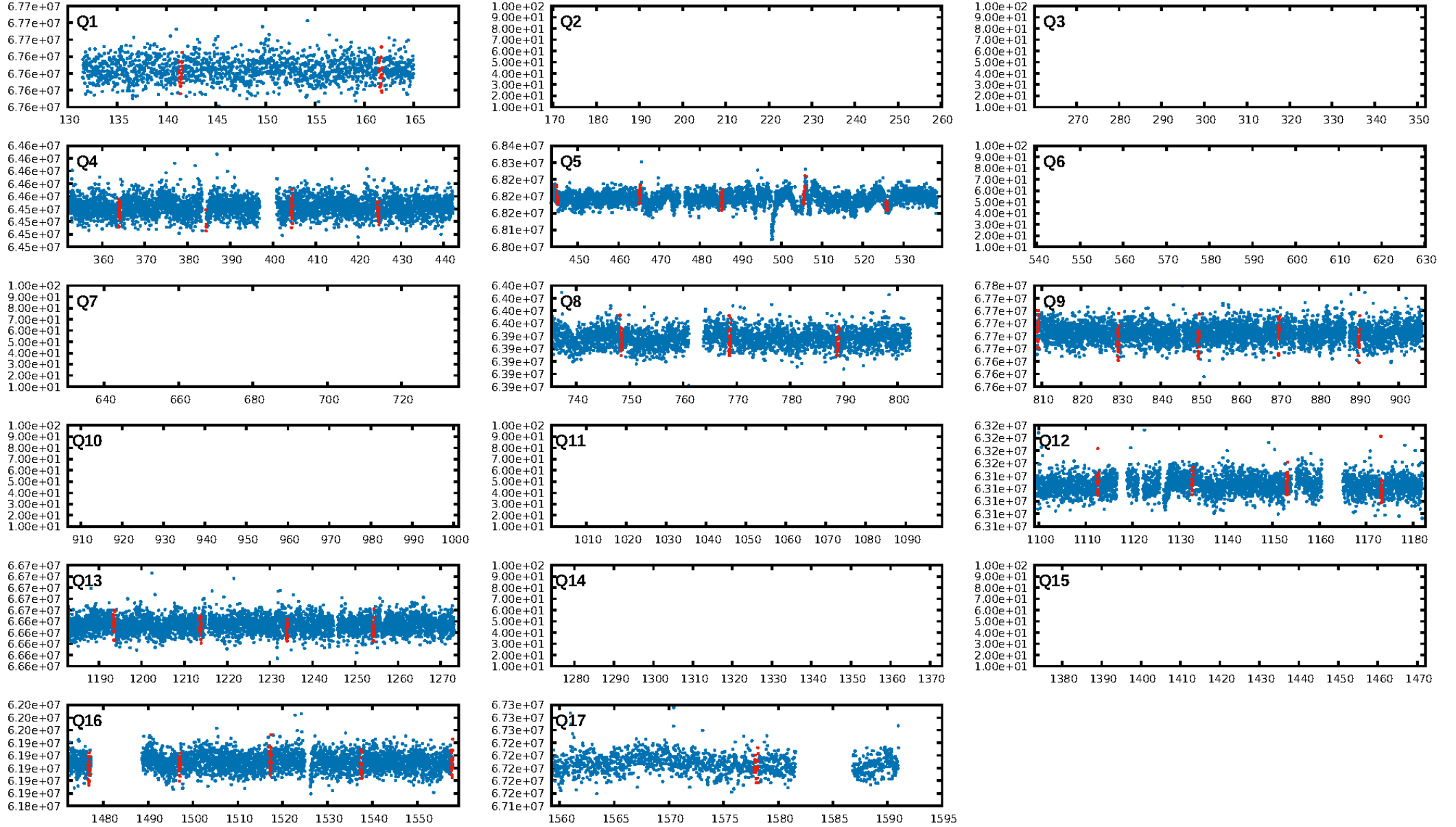
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 93.5%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 7.70e-23  
RollingBand-fgt: 0.93 [27/29]  
GhostDiagnostic-chr: 0.4147  
Centroid-sig: 0.0%  
Centroid-so: 9.684 arcsec [8.08σ]  
OotOffset-rm: 6.552 arcsec [49.38σ]  
KicOffset-rm: 6.603 arcsec [59.19σ]  
OotOffset-st: 0/0/4/4 [8]  
KicOffset-st: 0/0/4/4 [8]  
DiffImageQuality-fgm: 1.00 [8/8]  
DiffImageOverlap-fno: 1.00 [9/9]

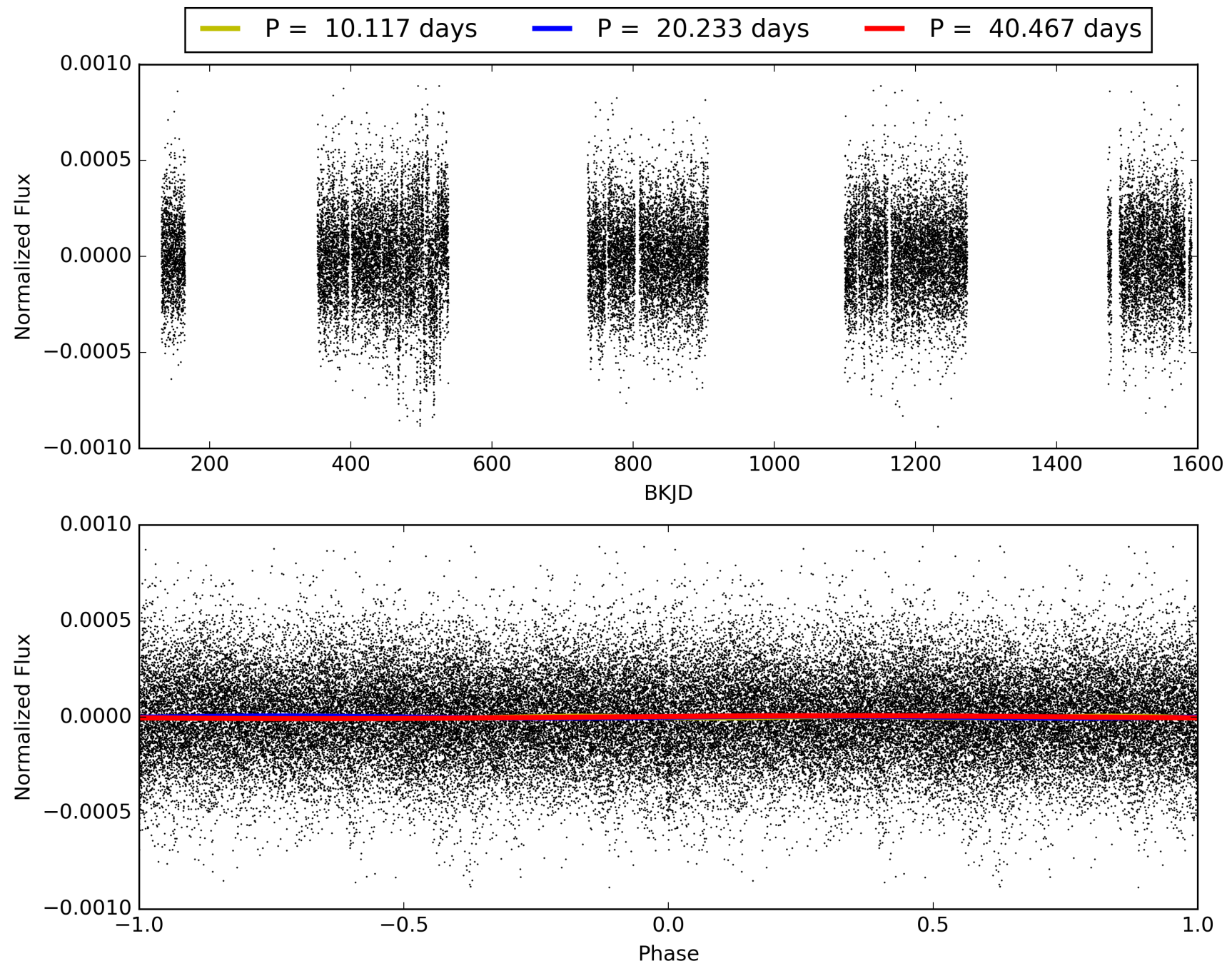
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:51:33 Z

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

# TCE 011100670-01, PDC Light Curves

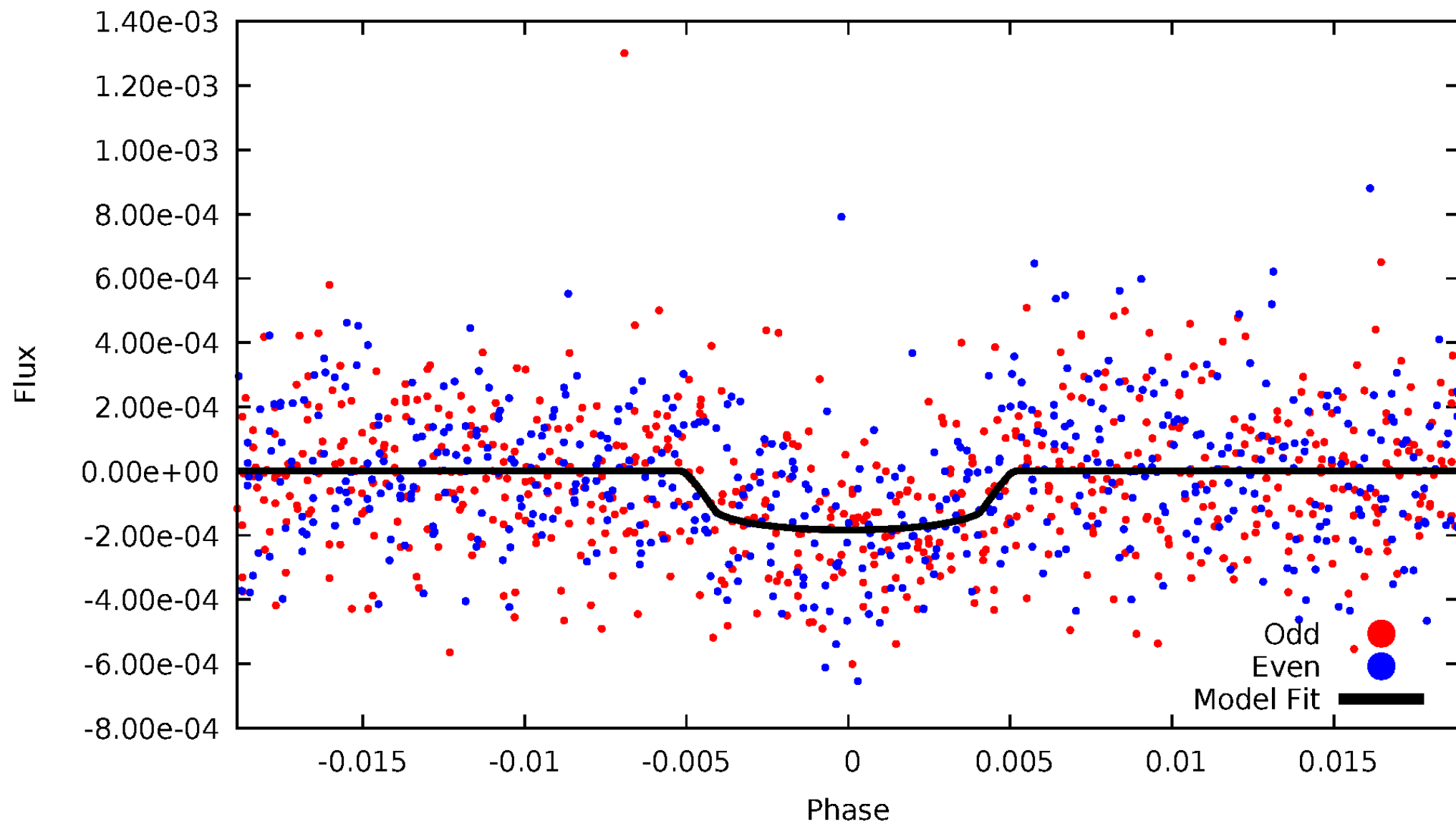


TCE 011100670-01



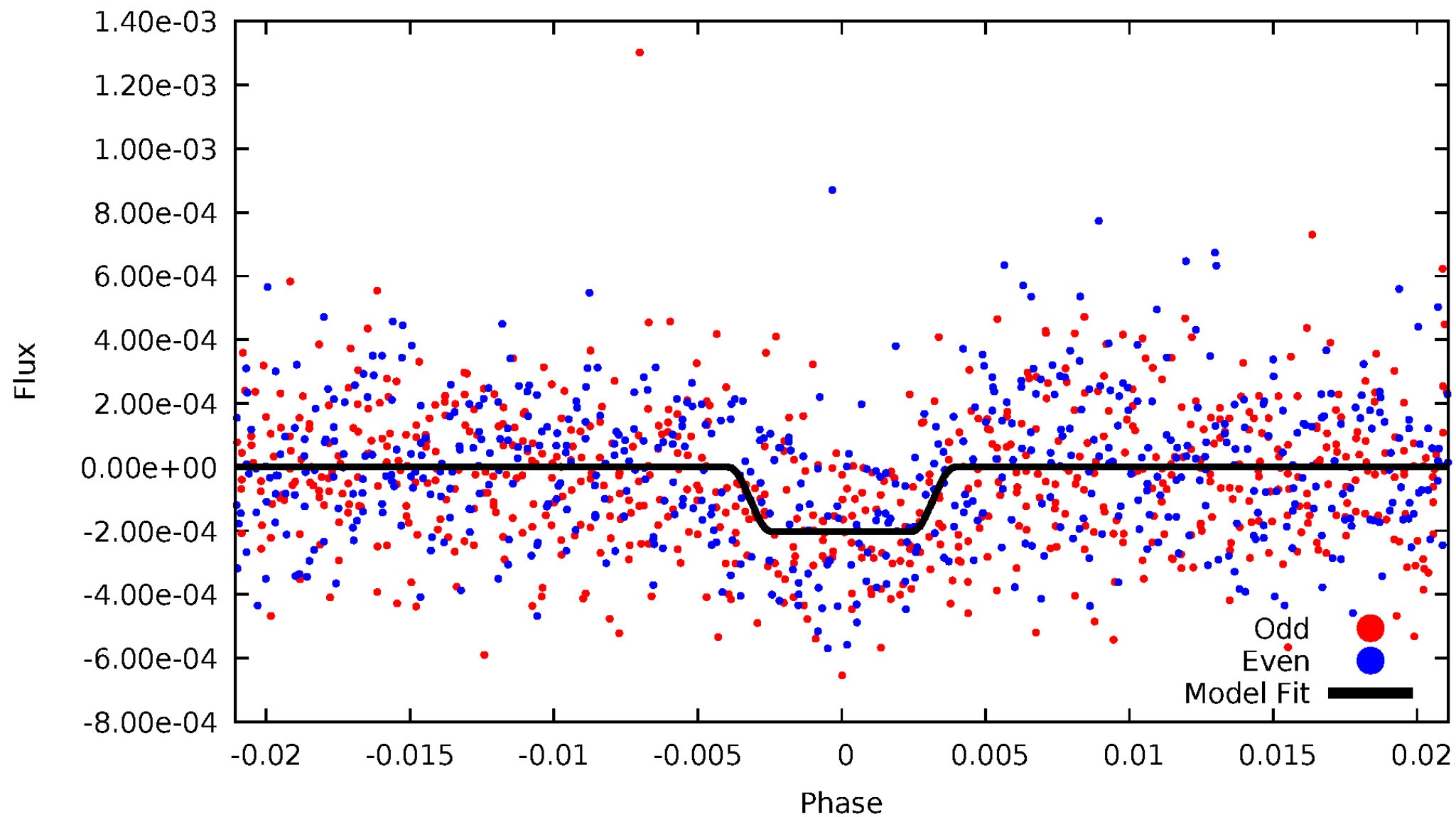
# DV Odd/Even

TCE 011100670-01



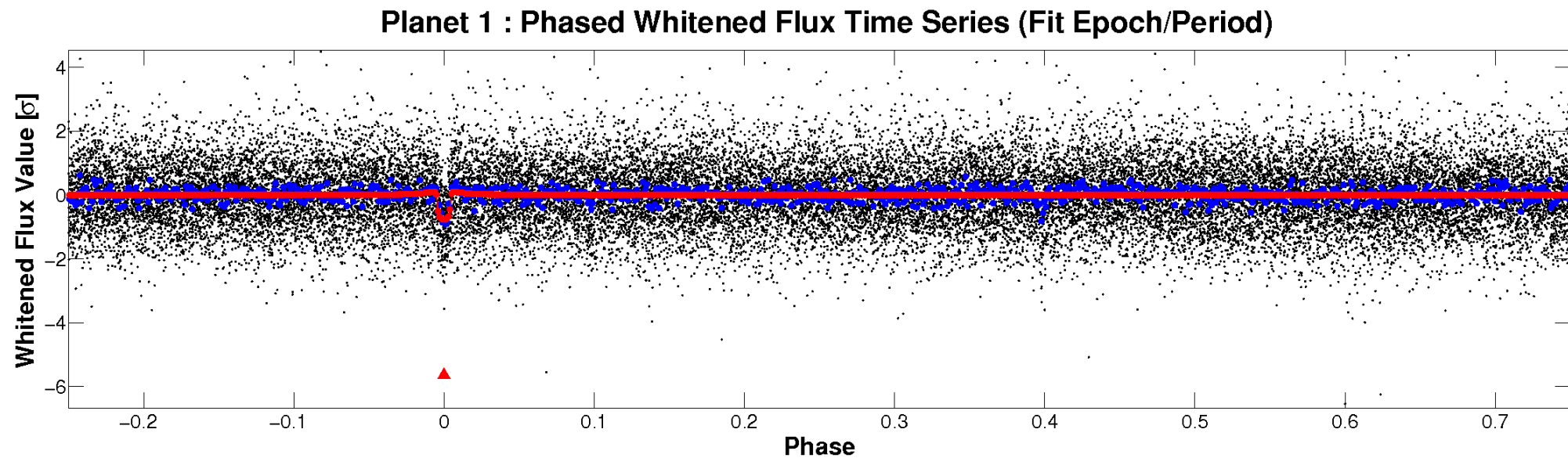
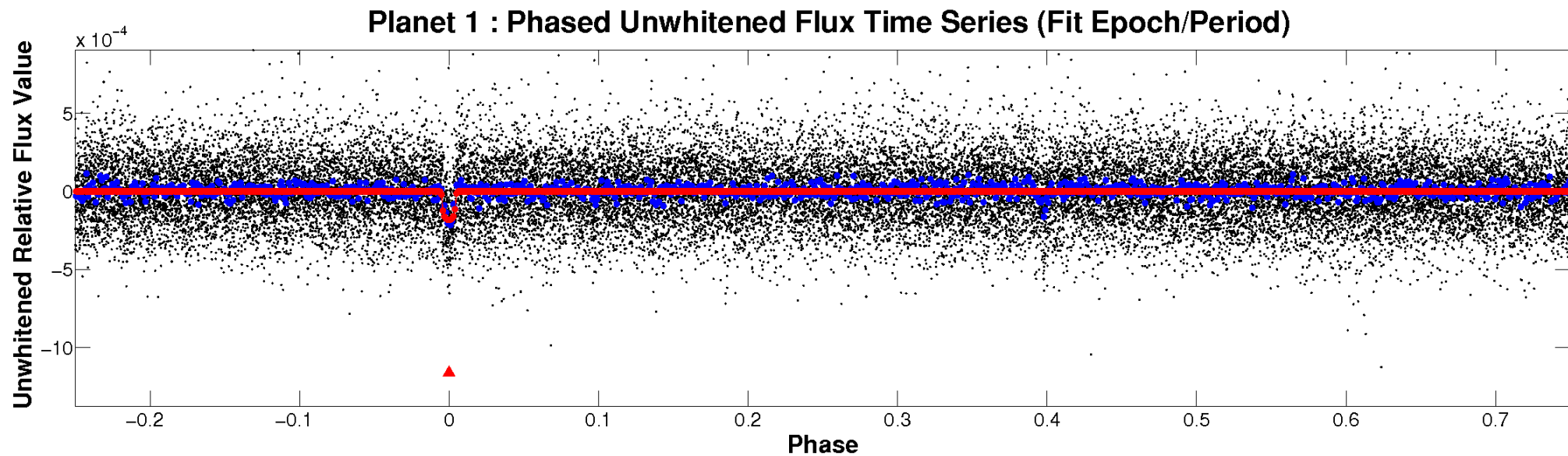
# ALT Odd/Even

TCE 011100670-01



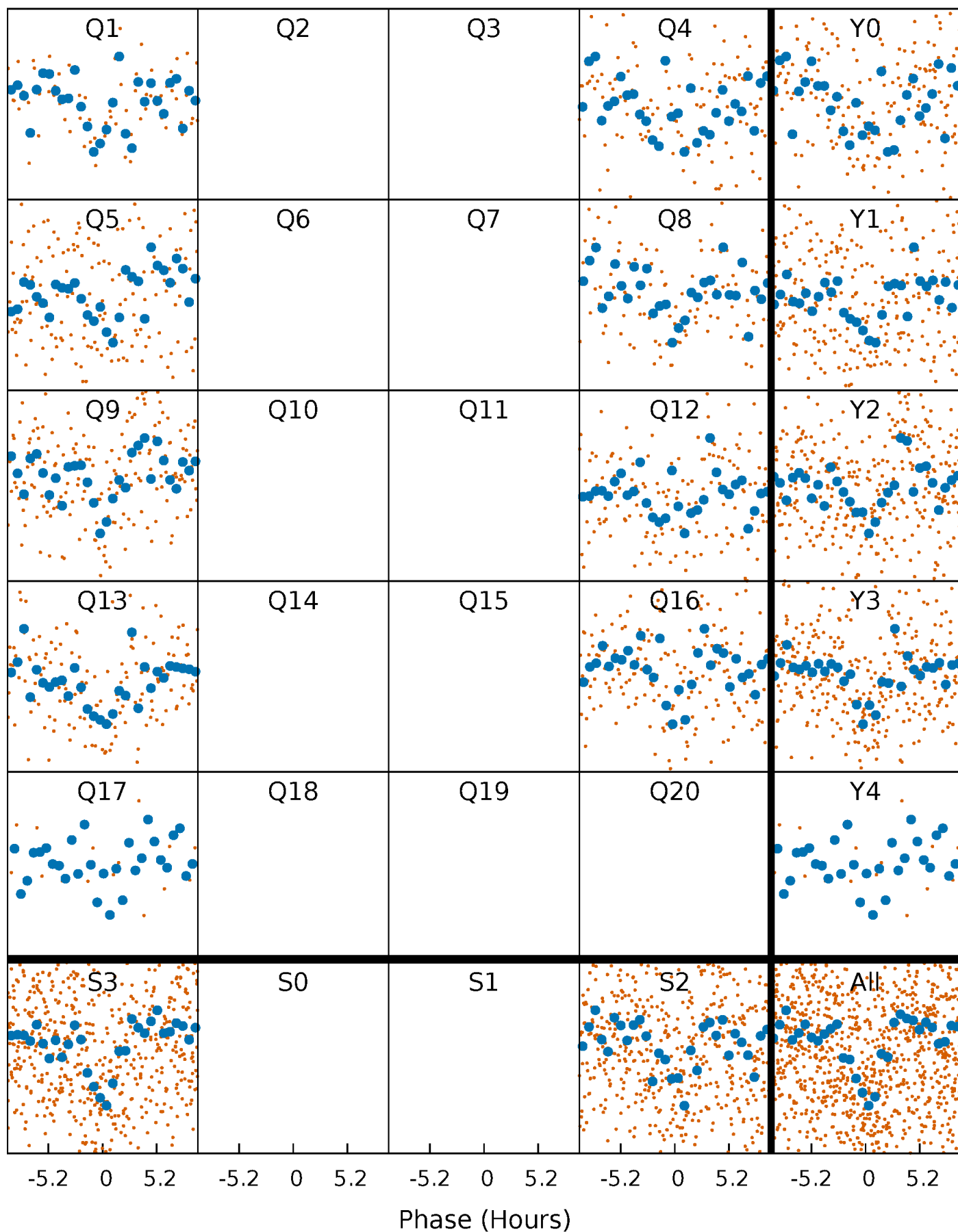


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

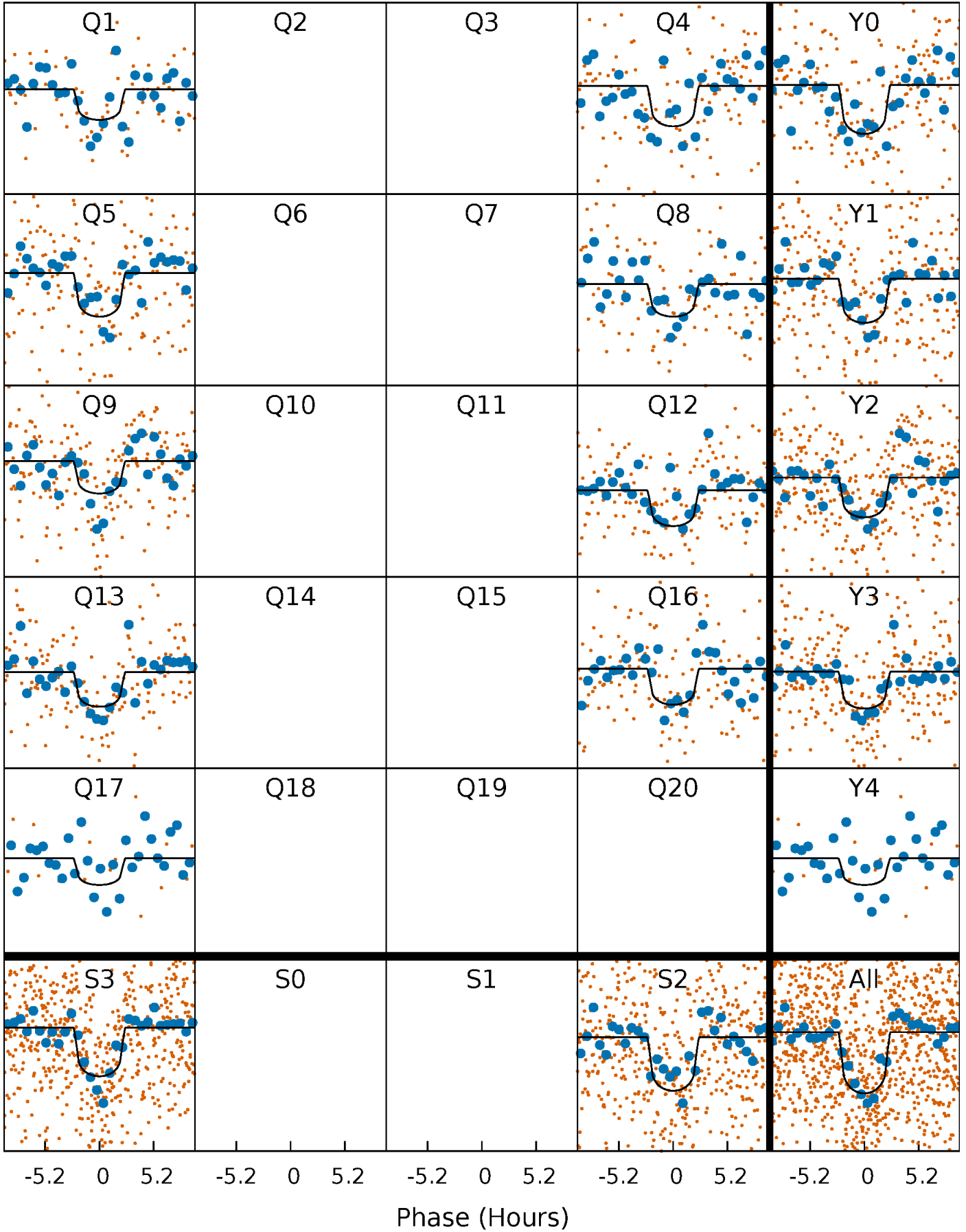
TCE 011100670-01 P= 20.233412 Days  $T_0=141.409530$  (BKJD)





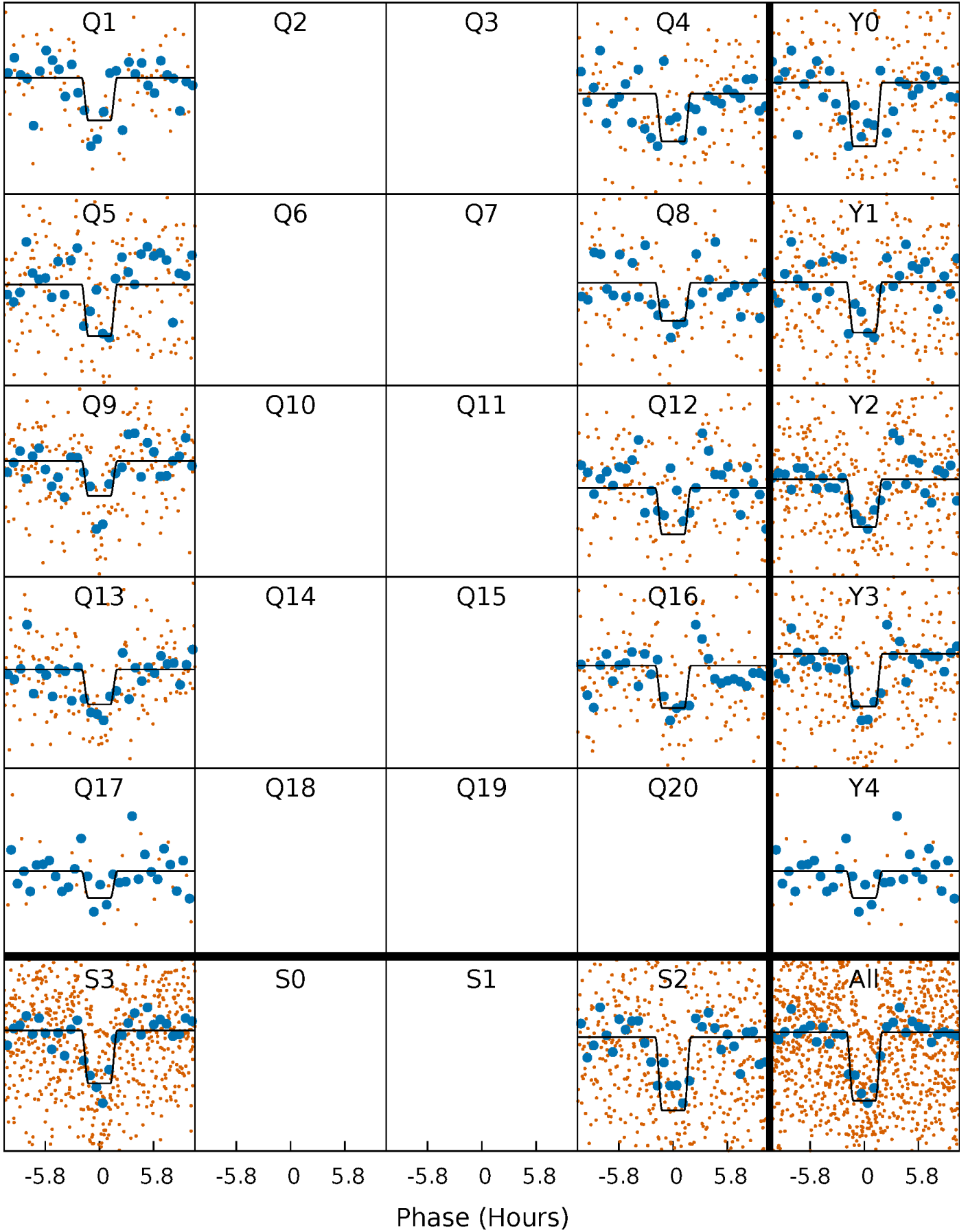
# DV Quarter-Phased Transit Curves

TCE 011100670-01 P= 20.233412 Days  $T_0=141.409530$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

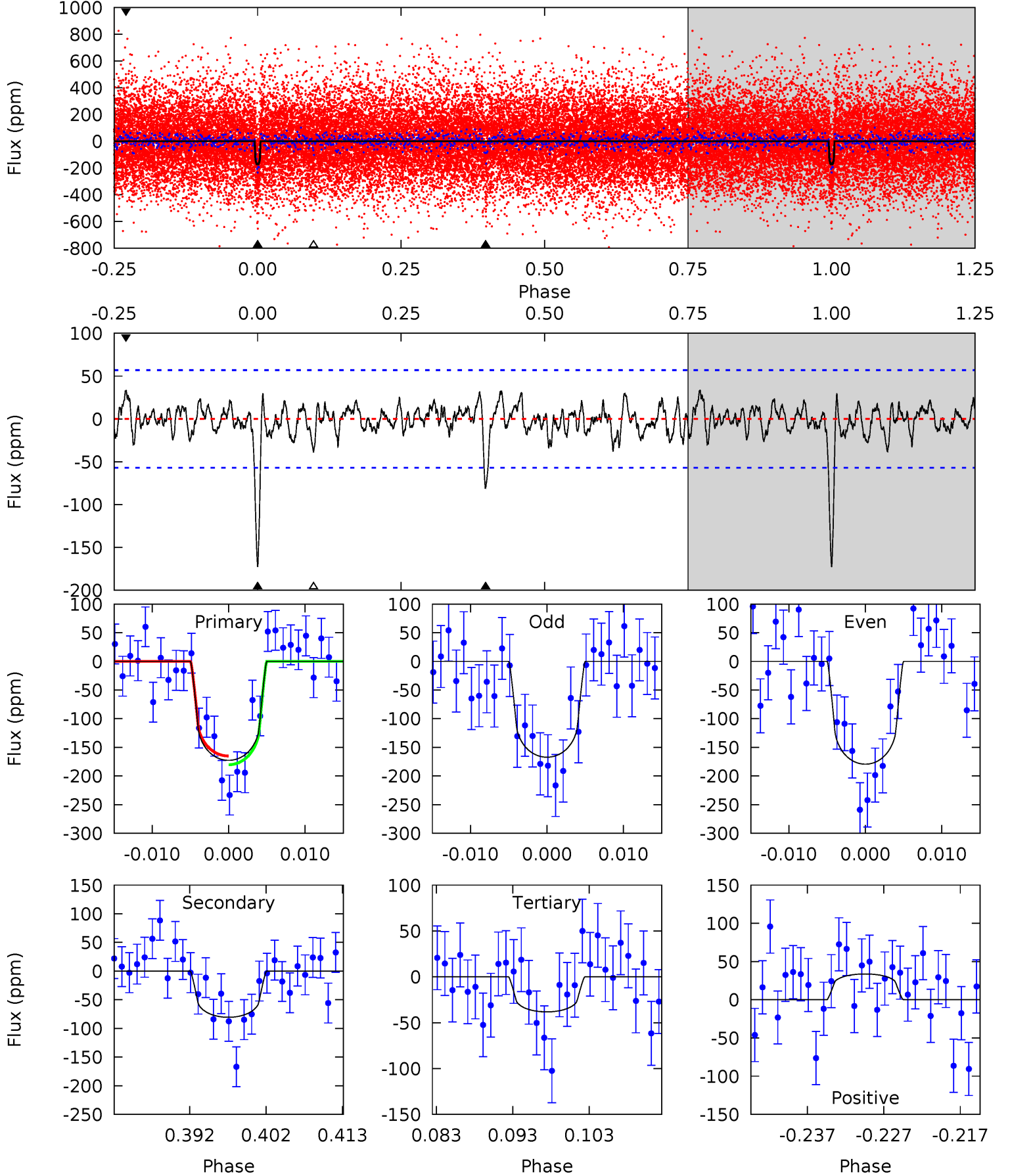
TCE 011100670-01   P= 20.233405 Days    $T_0=141.411954$  (BKJD)



# DV Model-Shift Uniqueness Test

011100670-01, P = 20.233412 Days, E = 121.176118 Days

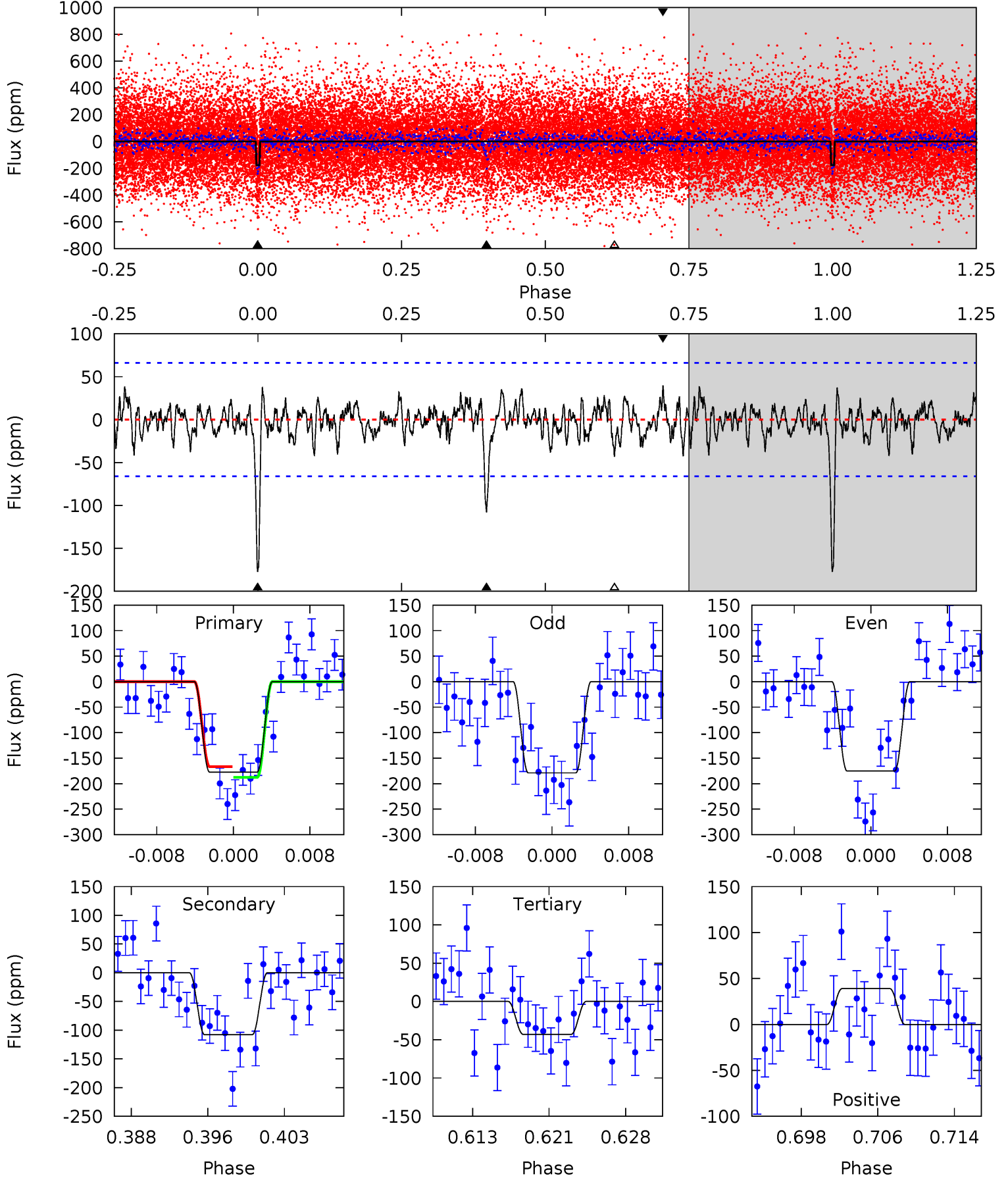
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	7.11	3.37	2.98	5.02	2.57	1.14	11.9	12.3	3.74	4.13	0.54	0.96	0.16	0.67



# Alt Model-Shift Uniqueness Test

011100670-01, P = 20.233405 Days, E = 121.178549 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
13.6	8.28	3.31	2.99	5.07	2.66	1.11	10.3	10.6	4.97	5.29	0.14	0.89	0.18	0.81



### Stellar Parameters For KIC 011100670

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5528^{+210}_{-191}$	$4.627^{+0.038}_{-0.120}$	$-0.560^{+0.300}_{-0.300}$	$0.710^{+0.137}_{-0.059}$	$0.788^{+0.081}_{-0.081}$	$3.102^{+0.506}_{-1.134}$
	+4%/-3%	+1%/-3%	+54%/-54%	+19%/-8%	+10%/-10%	+16%/-37%
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 011100670-01 / KOI 2885.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-81 \pm 11$	$1.15^{+0.70}_{-0.69}$	$800^{+40}_{-37}$	$4534^{+2353}_{-745}$	$581^{+3090}_{-351}$
Alt.	$-108 \pm 13$	$1.21^{+0.74}_{-0.64}$	$799^{+40}_{-36}$	$4752^{+1962}_{-803}$	$724^{+2554}_{-445}$

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

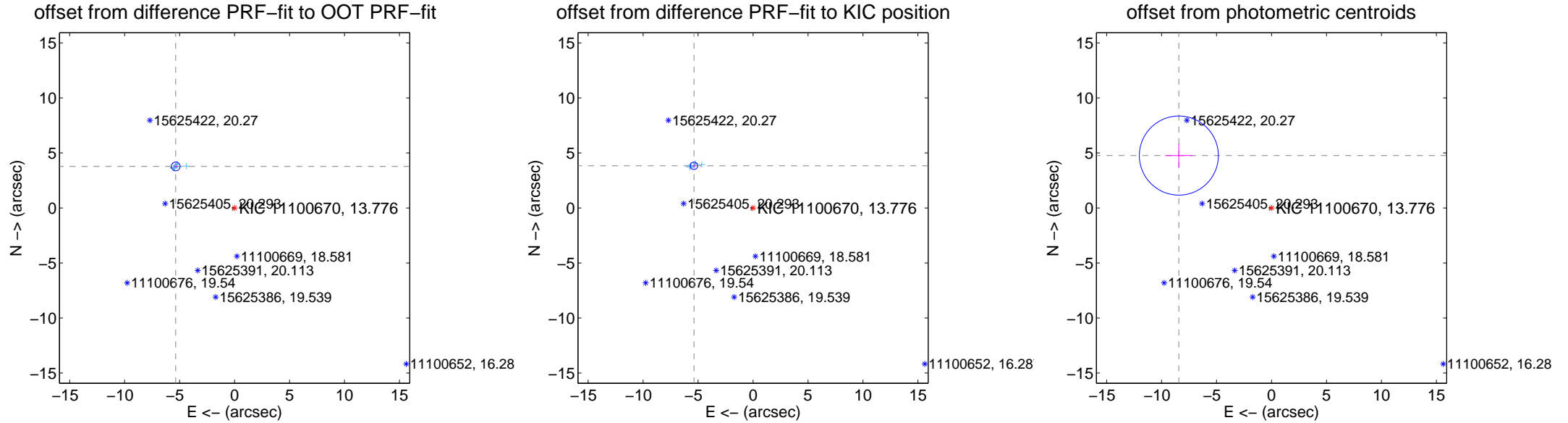
## DV Centroid Data

Supplemental centroid analysis for 011100670-01. Kepler magnitude: 13.78. Transit SNR 11.24

There are 8 quarters with good PRF difference image offsets

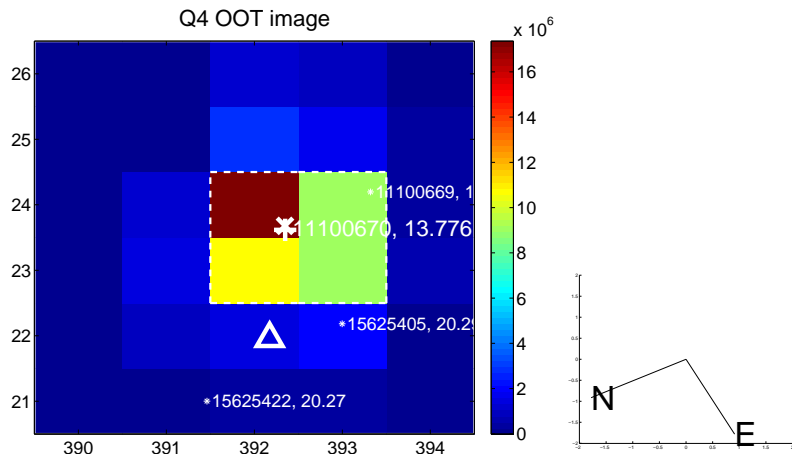
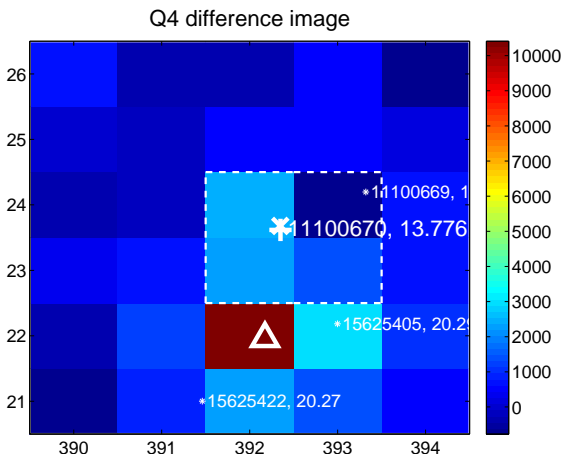
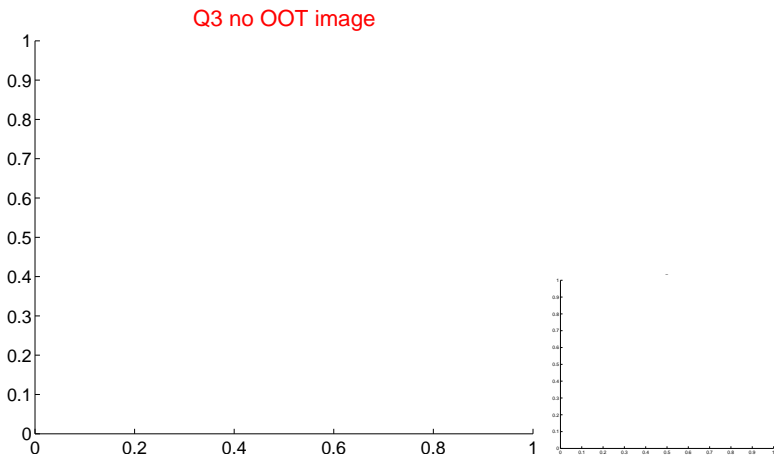
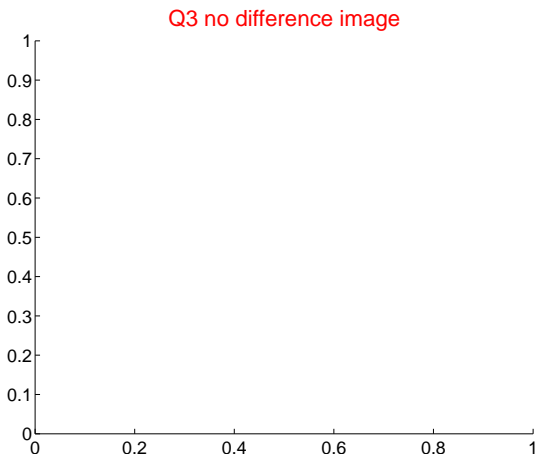
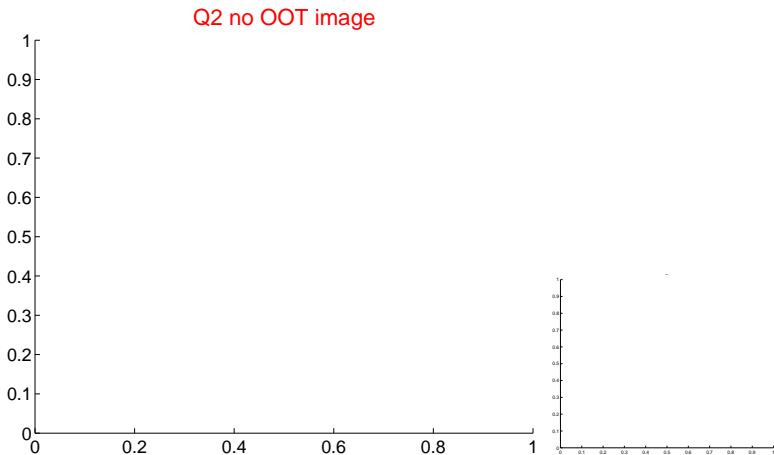
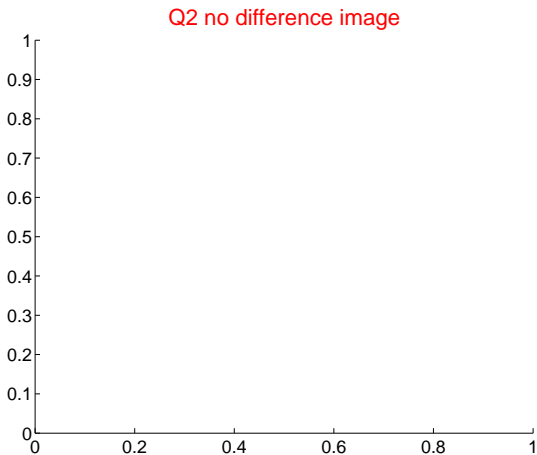
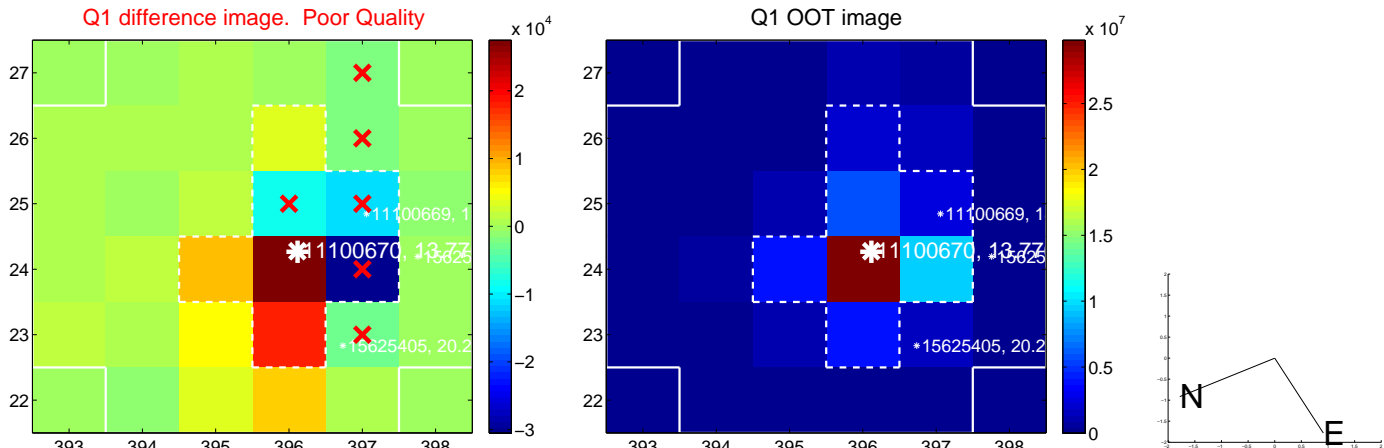
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>6.552 <math>\pm</math> 0.133</b>	<b>49.38</b>	5.356 $\pm$ 0.165	3.773 $\pm$ 0.078
PRF-fit source offset from KIC position	<b>6.603 <math>\pm</math> 0.112</b>	<b>59.19</b>	5.376 $\pm$ 0.114	3.834 $\pm$ 0.107
photometric centroid source offset	<b>9.68 <math>\pm</math> 1.20</b>	<b>8.08</b>	8.43 $\pm$ 1.24	4.76 $\pm$ 1.06

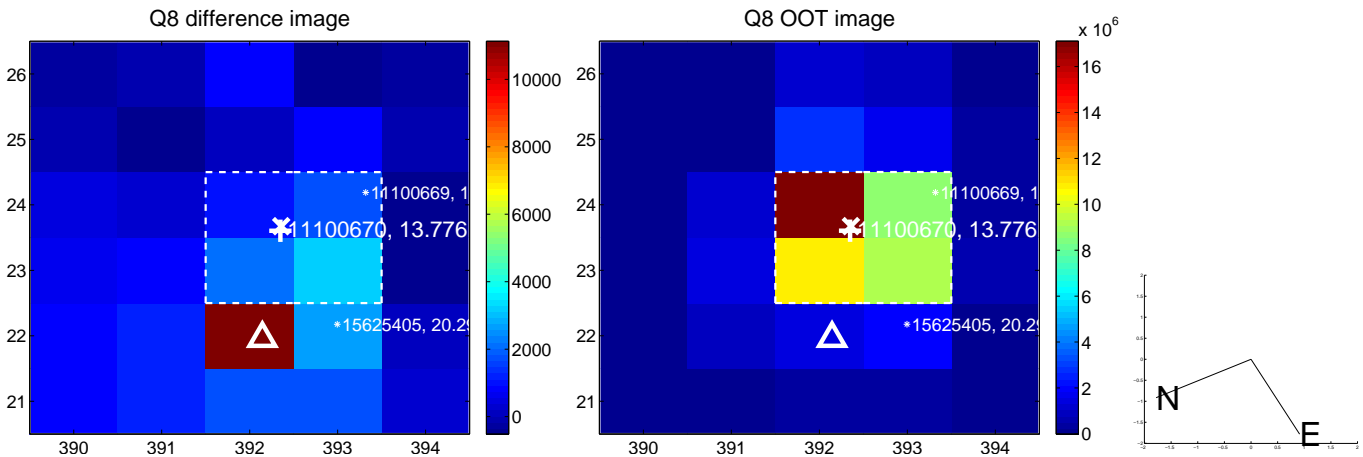
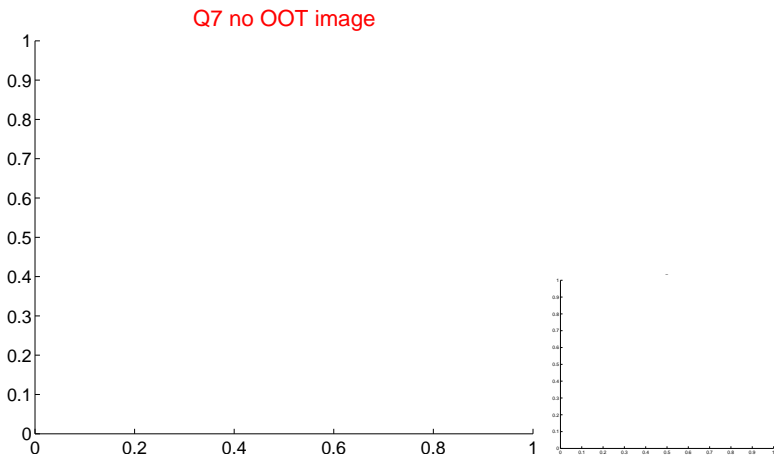
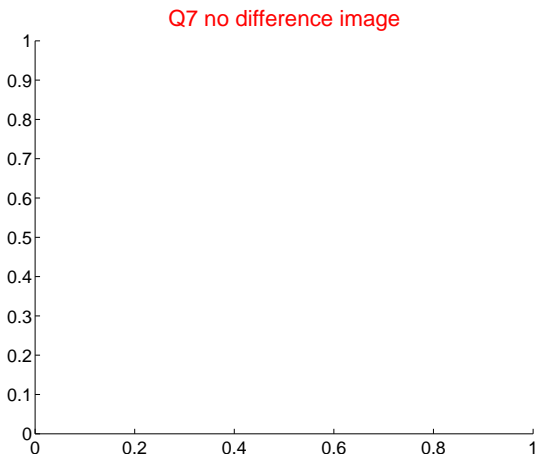
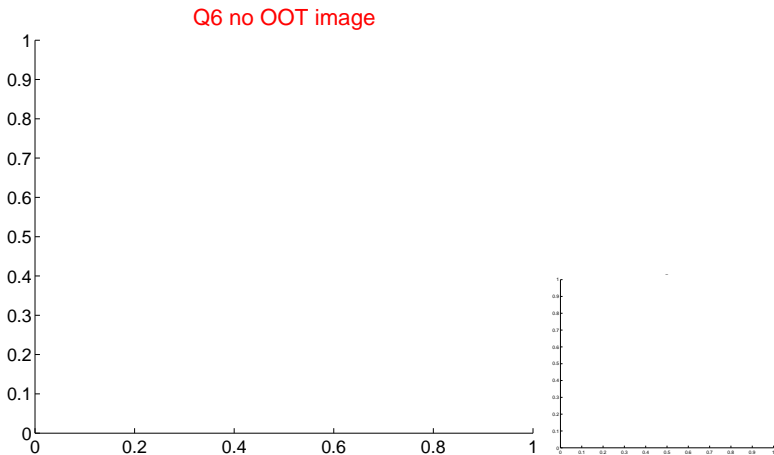
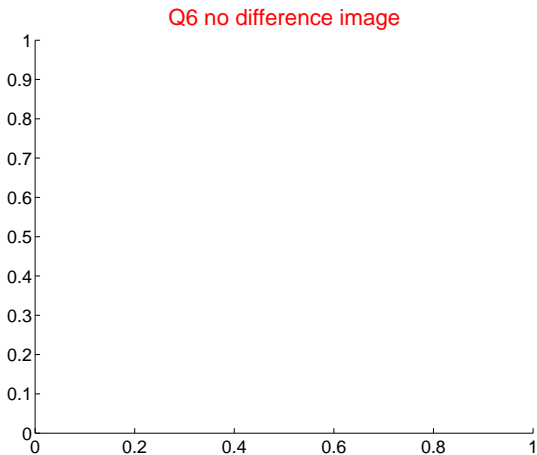
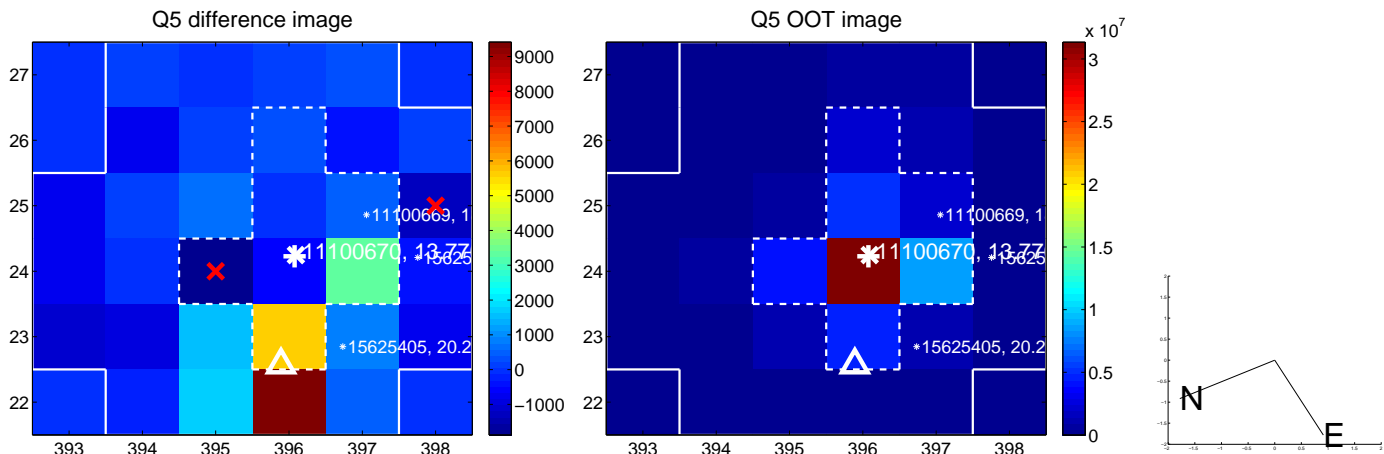




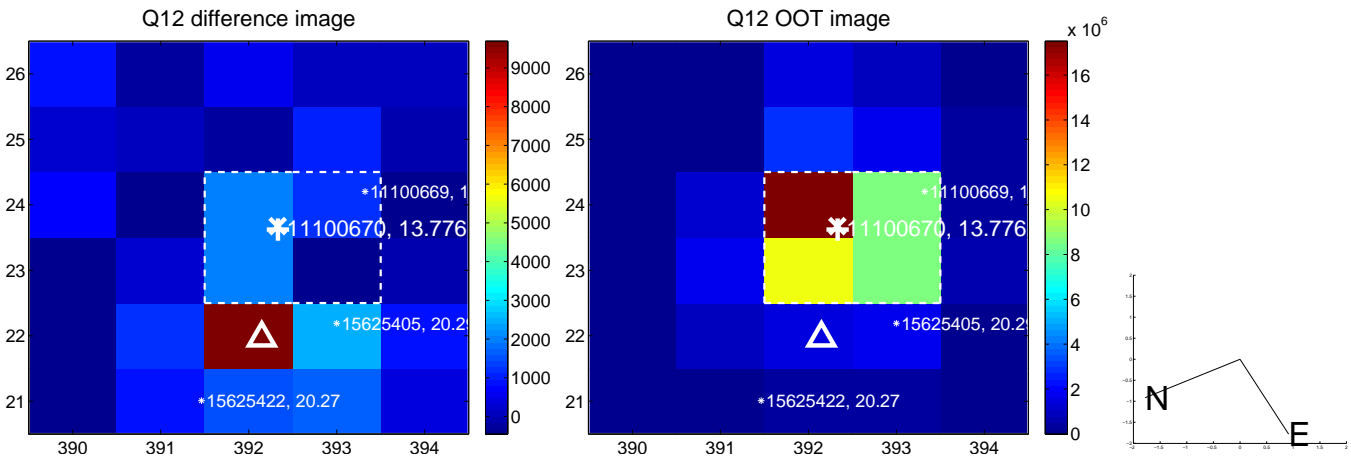
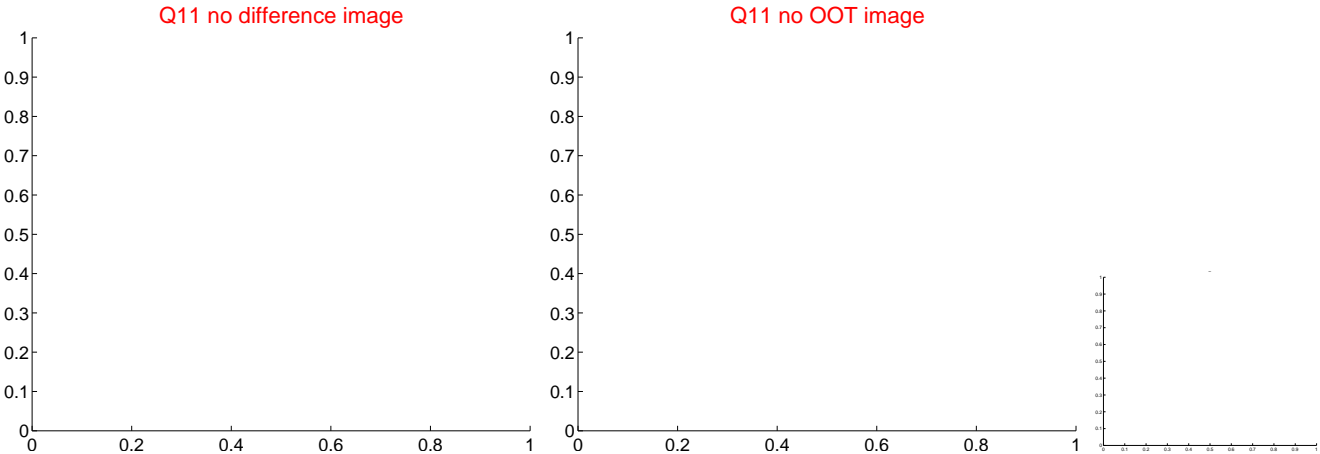
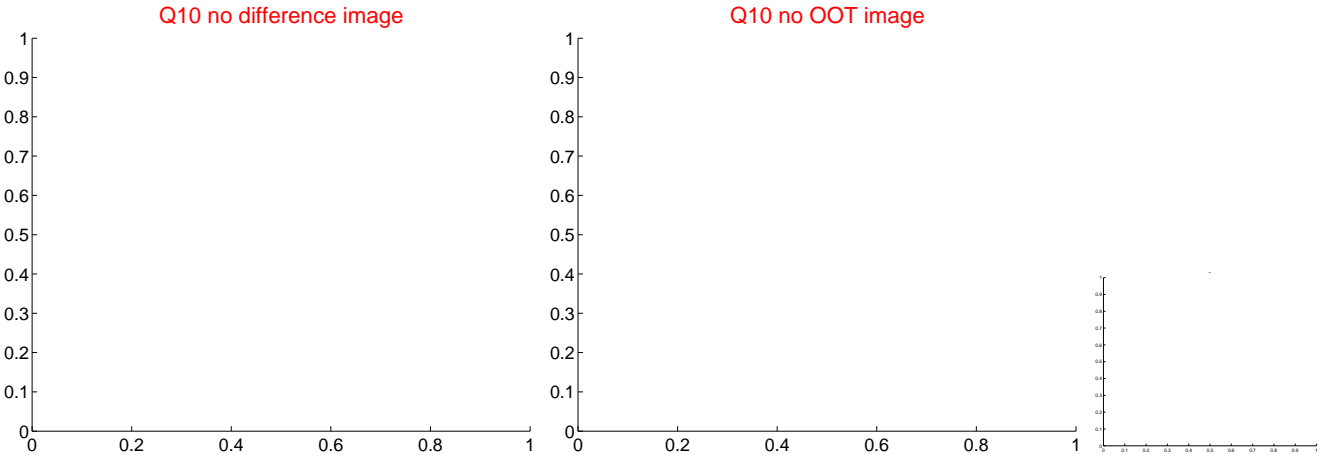
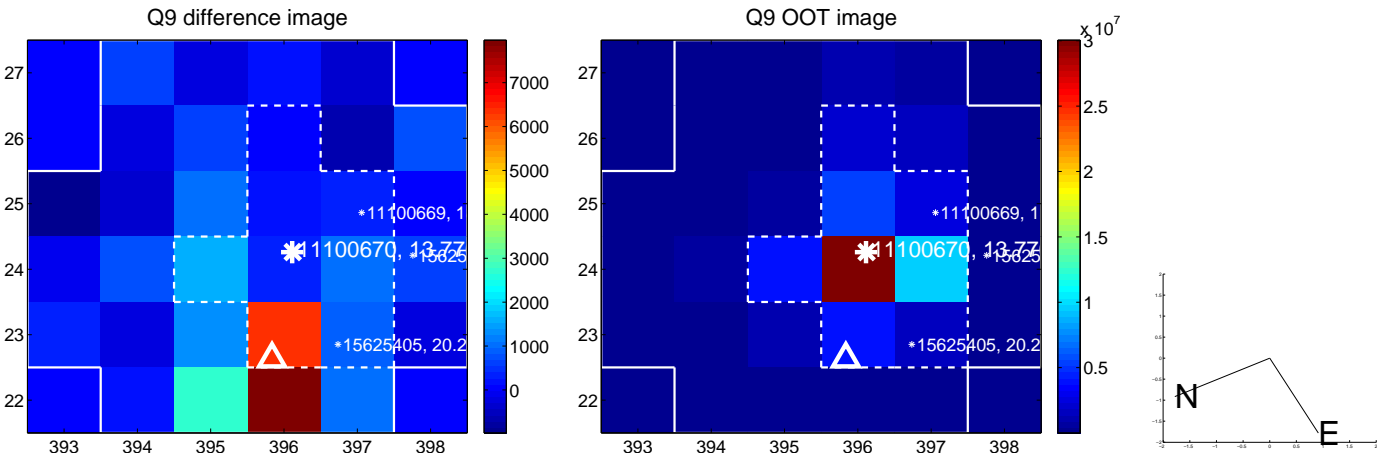
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



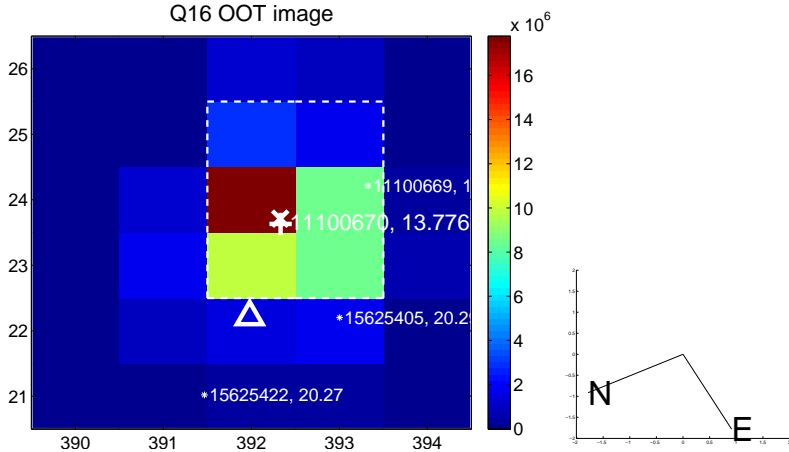
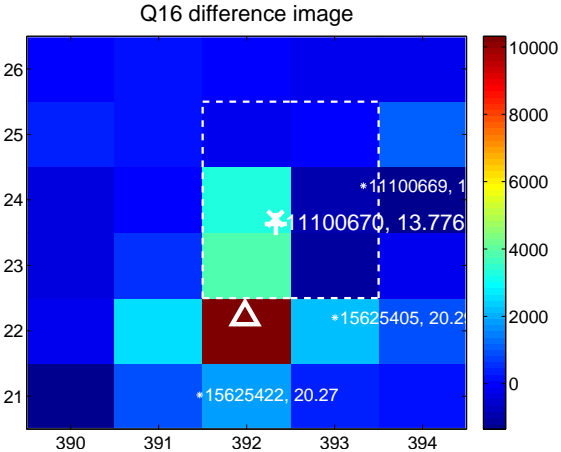
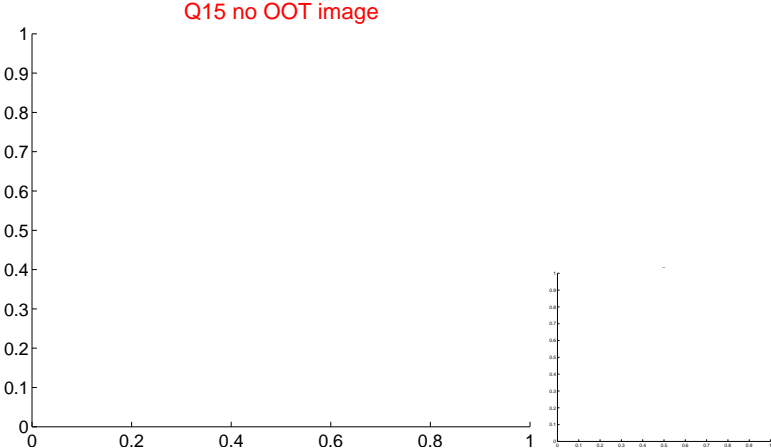
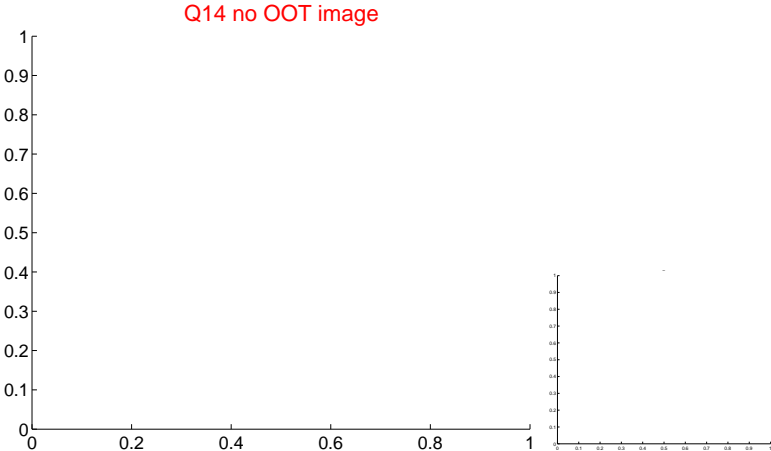
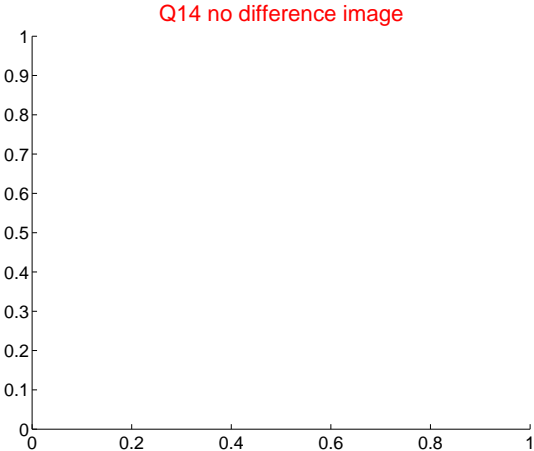
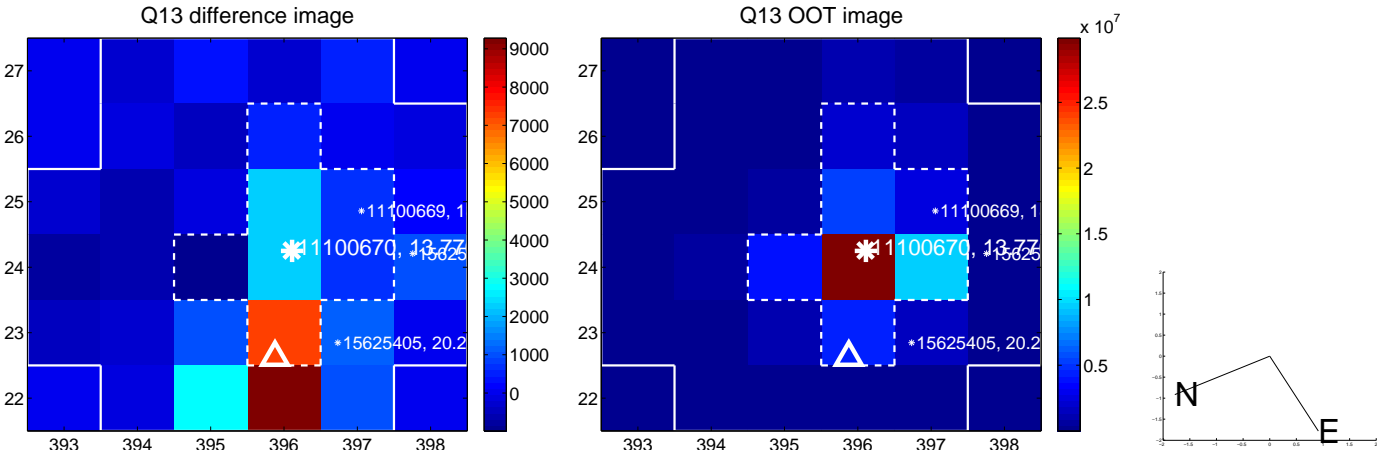
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



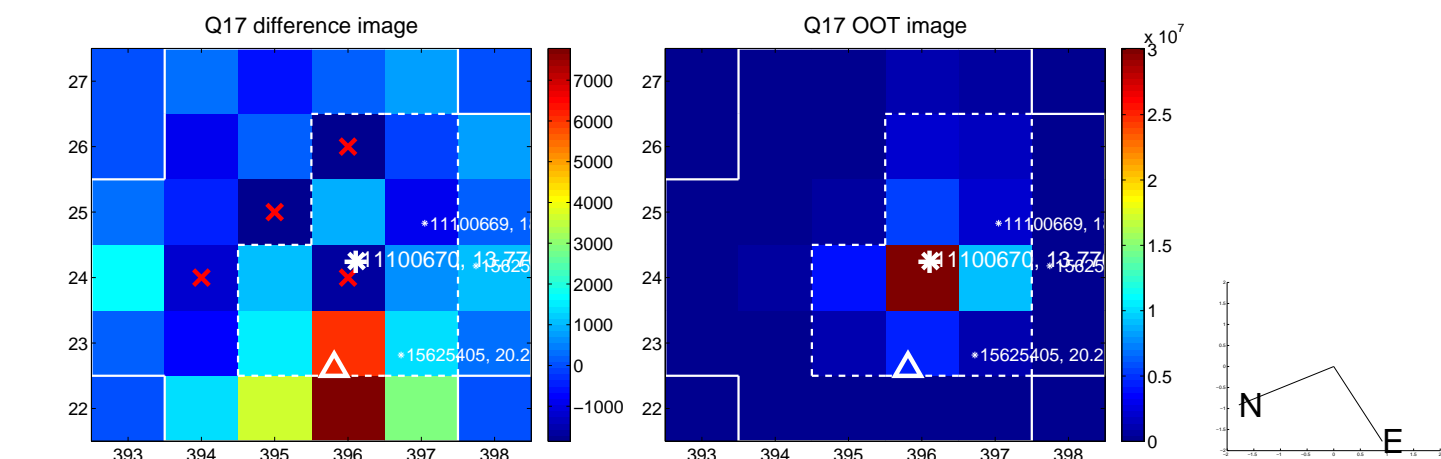
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



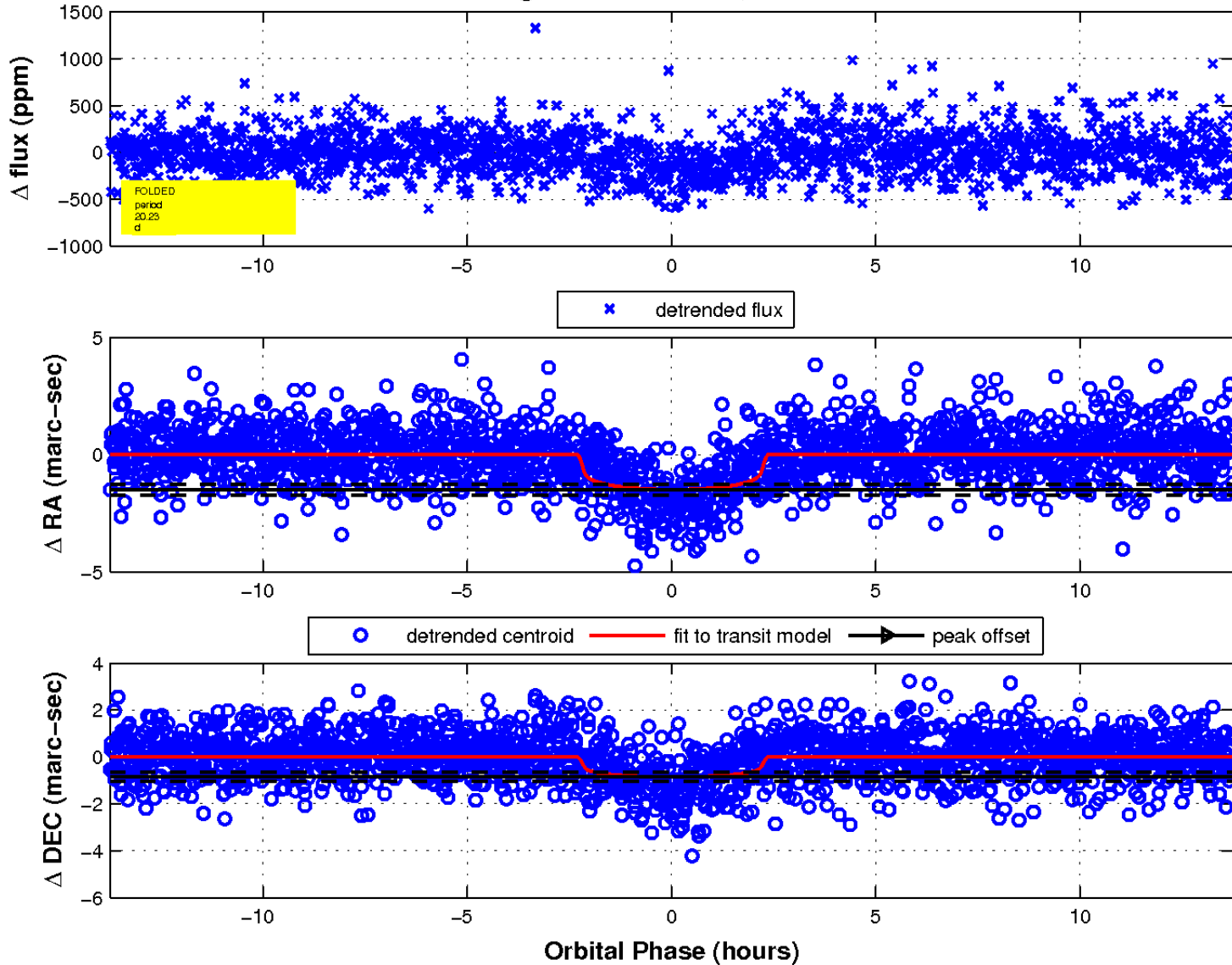
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

