

# KIC 011152950

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011152950-01	OBS	8045.01	4.173650	134.197646	51.2	2.916	8.1	9.1	3.41	6619	2.84	5519.23

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011152950-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

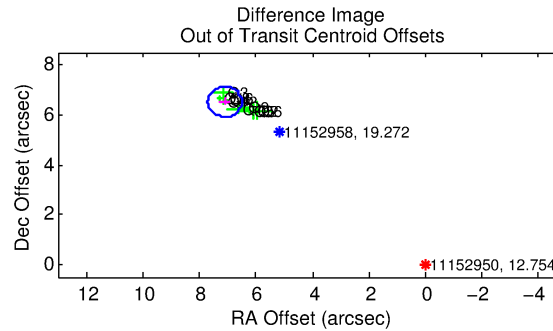
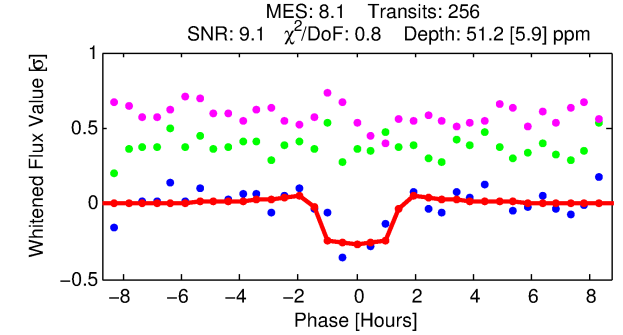
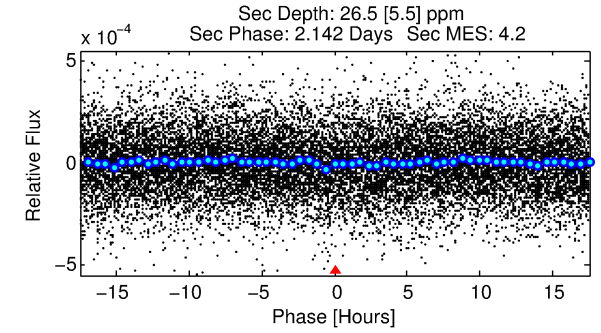
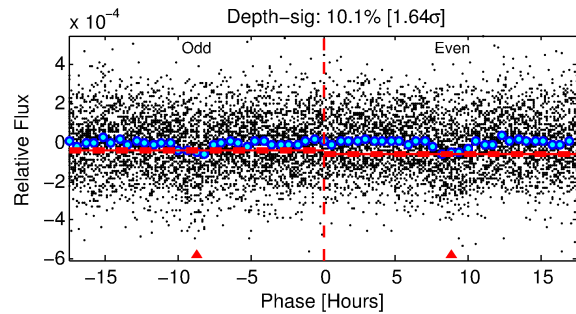
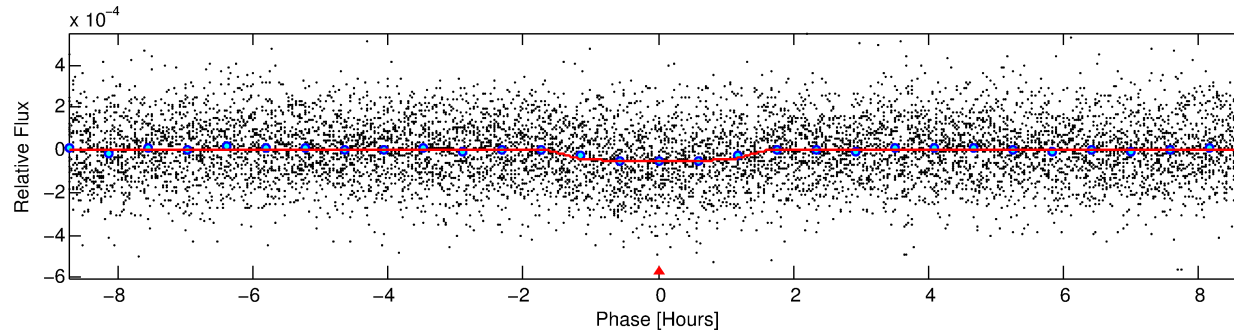
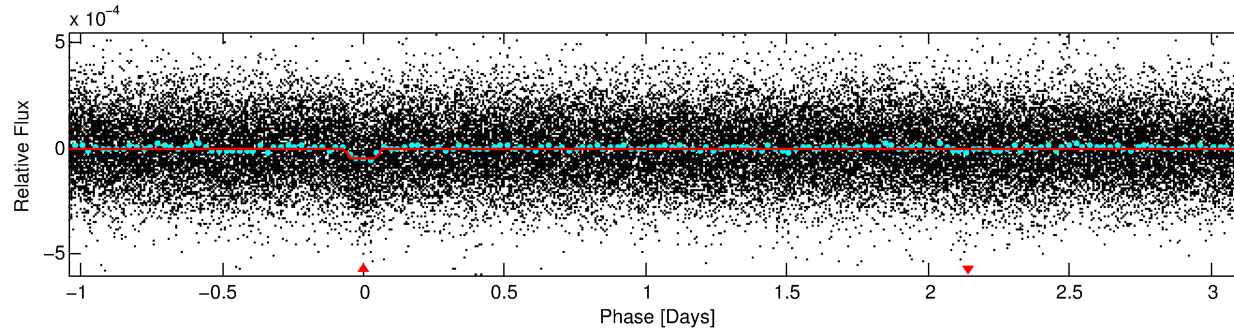
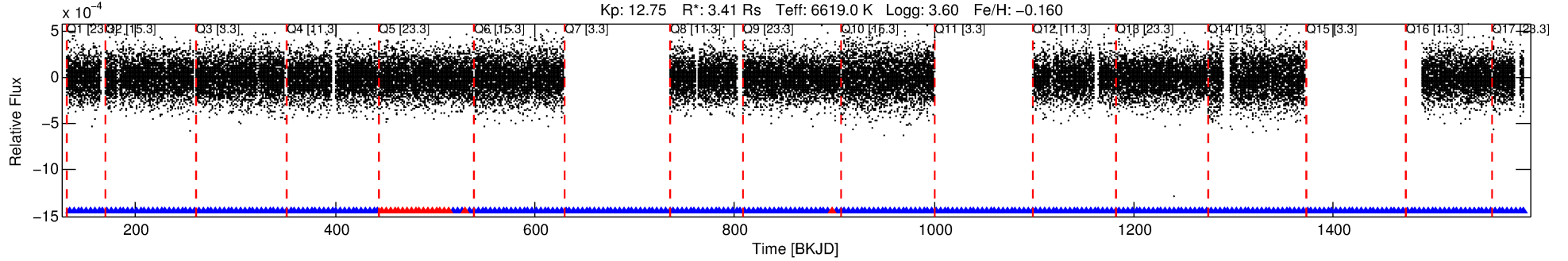
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011152950-01

No Significant Match Found

# DV One-Page Summary

KIC: 11152950 Candidate: 1 of 1 Period: 4.174 d



## DV Fit Results:

Period = 4.17365 [0.00003] d  
Epoch = 134.1976 [0.0041] BKJD  
Rp/R\* = 0.0076 [0.0030]  
a/R\* = 5.09 [11.33]  
b = 0.90 [0.51]  
Seff = 5519.23 [3138.05]  
Teq = 2198 [312] K  
Rp = 2.84 [1.55] Re  
a = 0.0602 [0.0212] AU  
Ag = 6.55 [6.47] [0.86 $\sigma$ ]  
Teffp = 5437 [1122] K [2.78 $\sigma$ ]

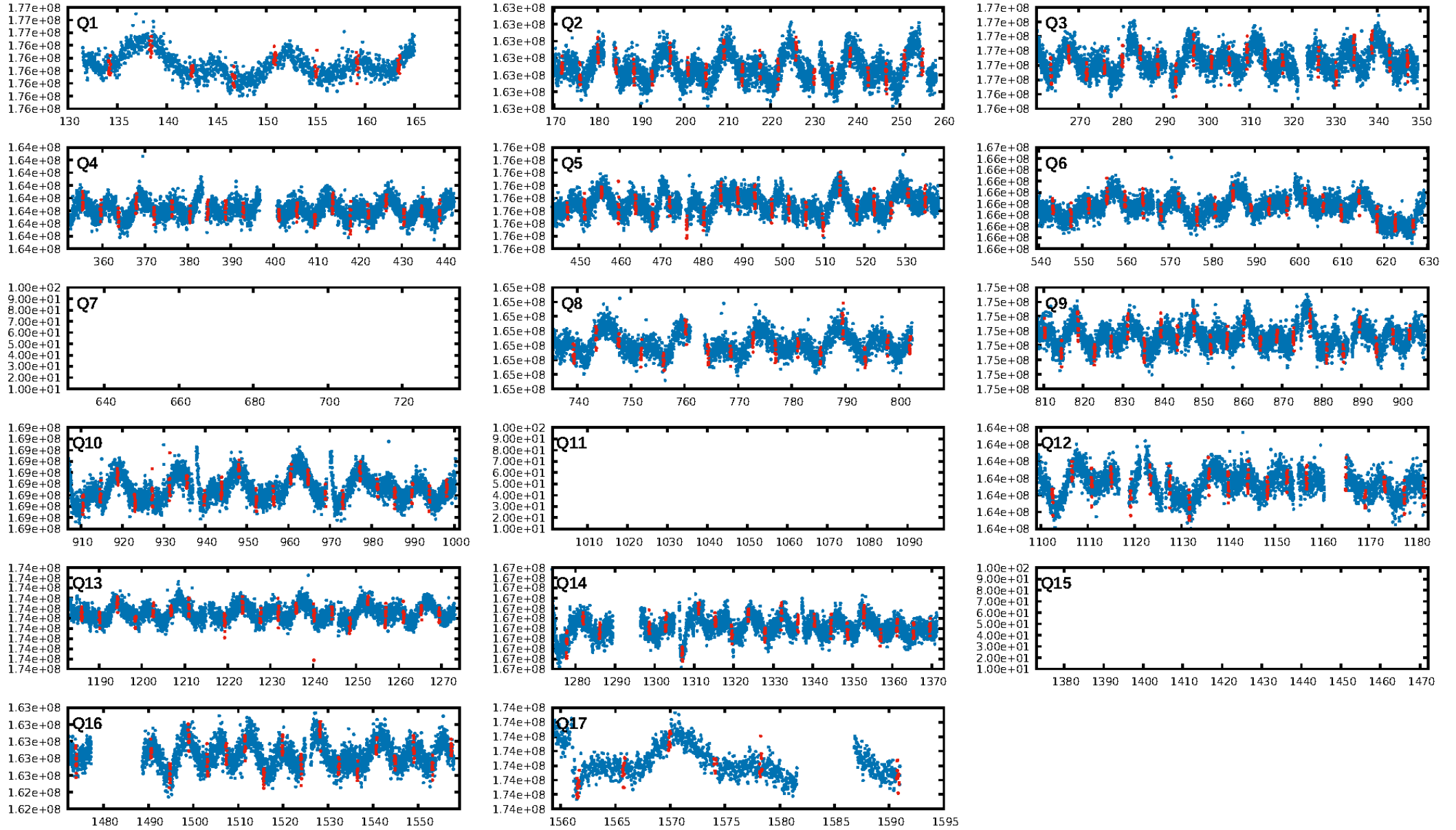
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.56e-15  
RollingBand-fgt: 0.92 [223/242]  
GhostDiagnostic-chr: -0.08528  
Centroid-sig: 0.0%  
Centroid-so: 16.079 arcsec [19.29 $\sigma$ ]  
OotOffset-rm: 9.642 arcsec [47.56 $\sigma$ ]  
KicOffset-rm: 9.667 arcsec [51.35 $\sigma$ ]  
OotOffset-st: 2/1/4/3 [10]  
KicOffset-st: 2/1/4/3 [10]  
DiffImageQuality-fgm: 1.00 [10/10]  
DiffImageOverlap-fno: 1.00 [14/14]

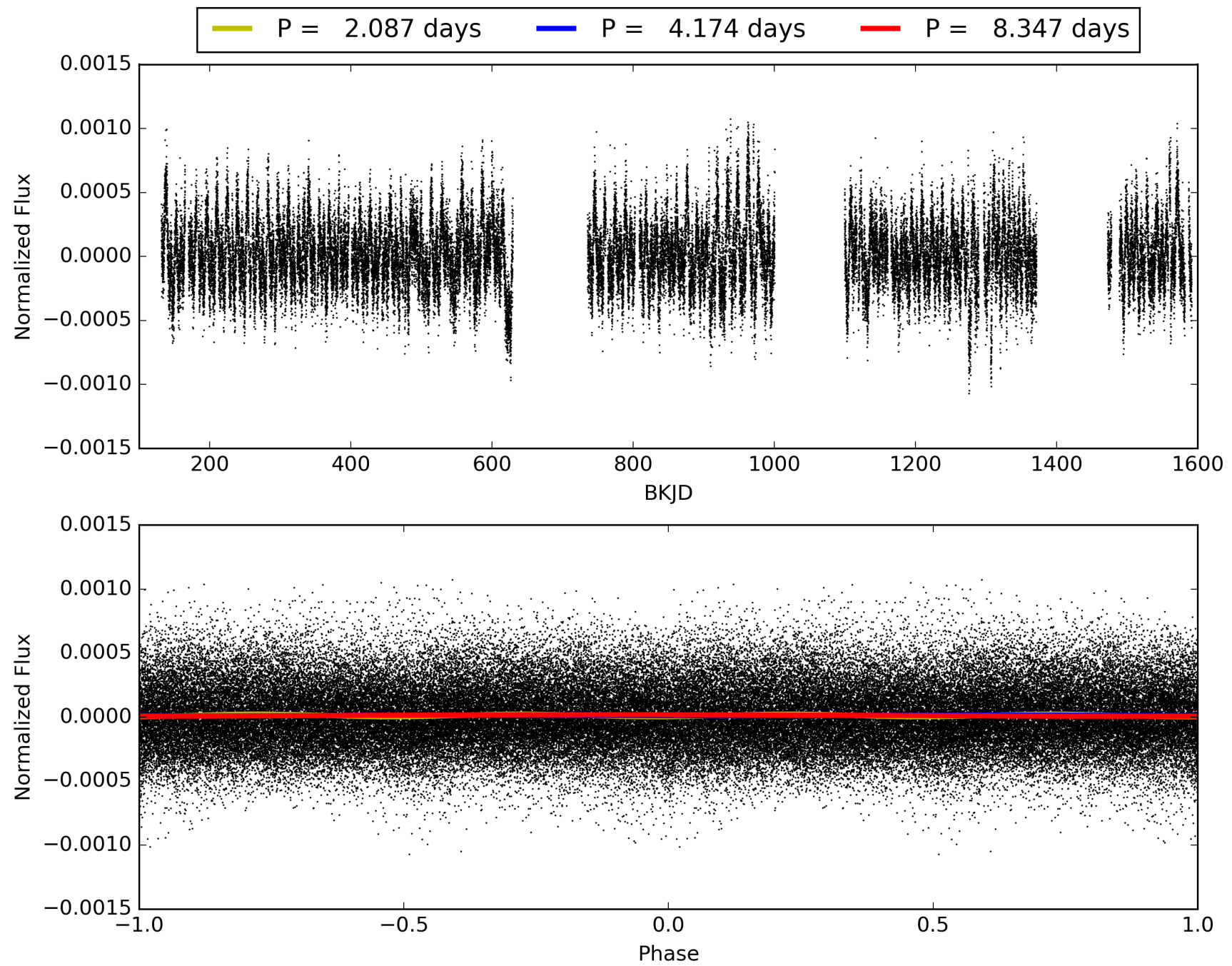
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:20:05 Z

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

# TCE 011152950-01, PDC Light Curves

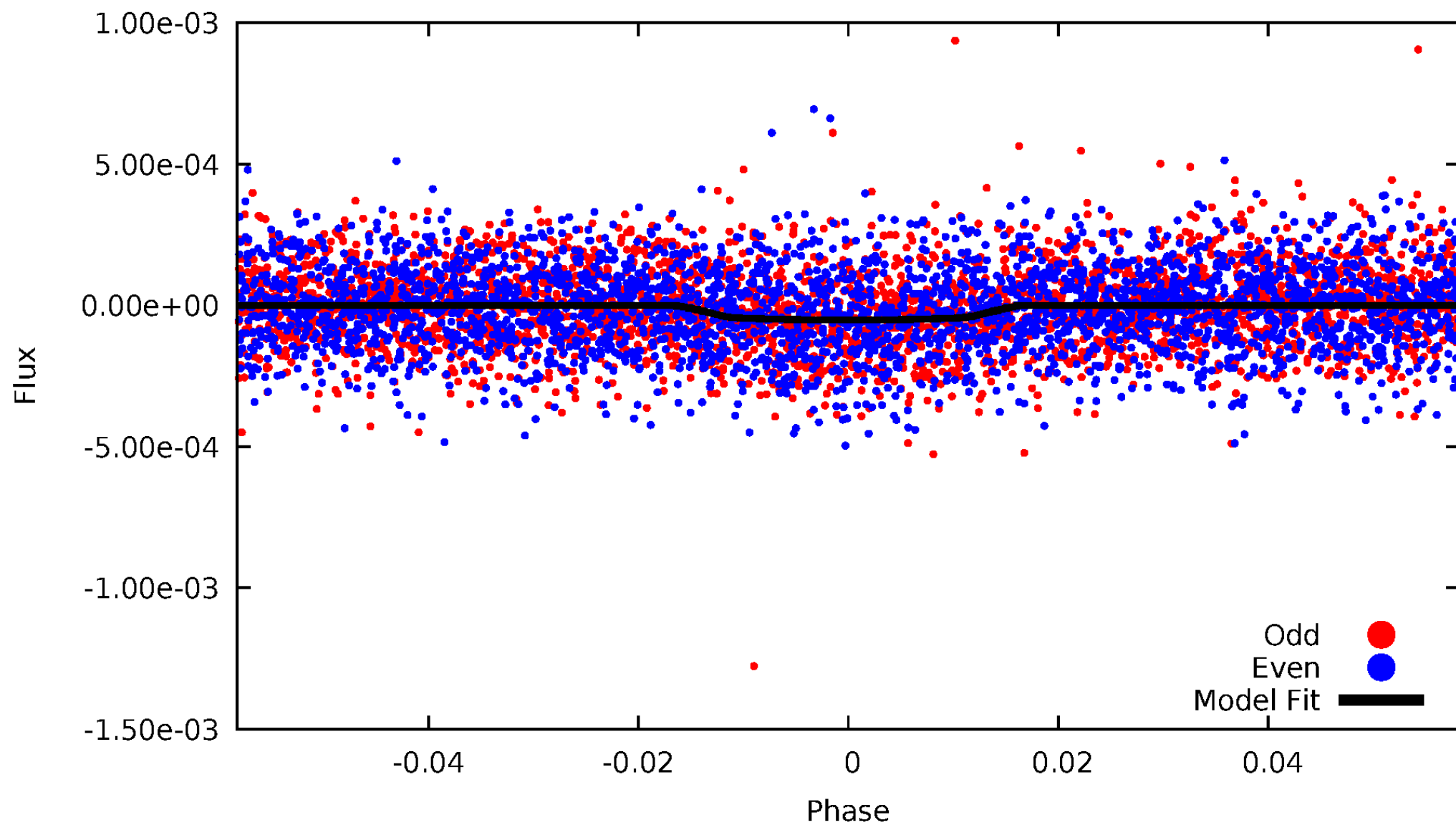


TCE 011152950-01



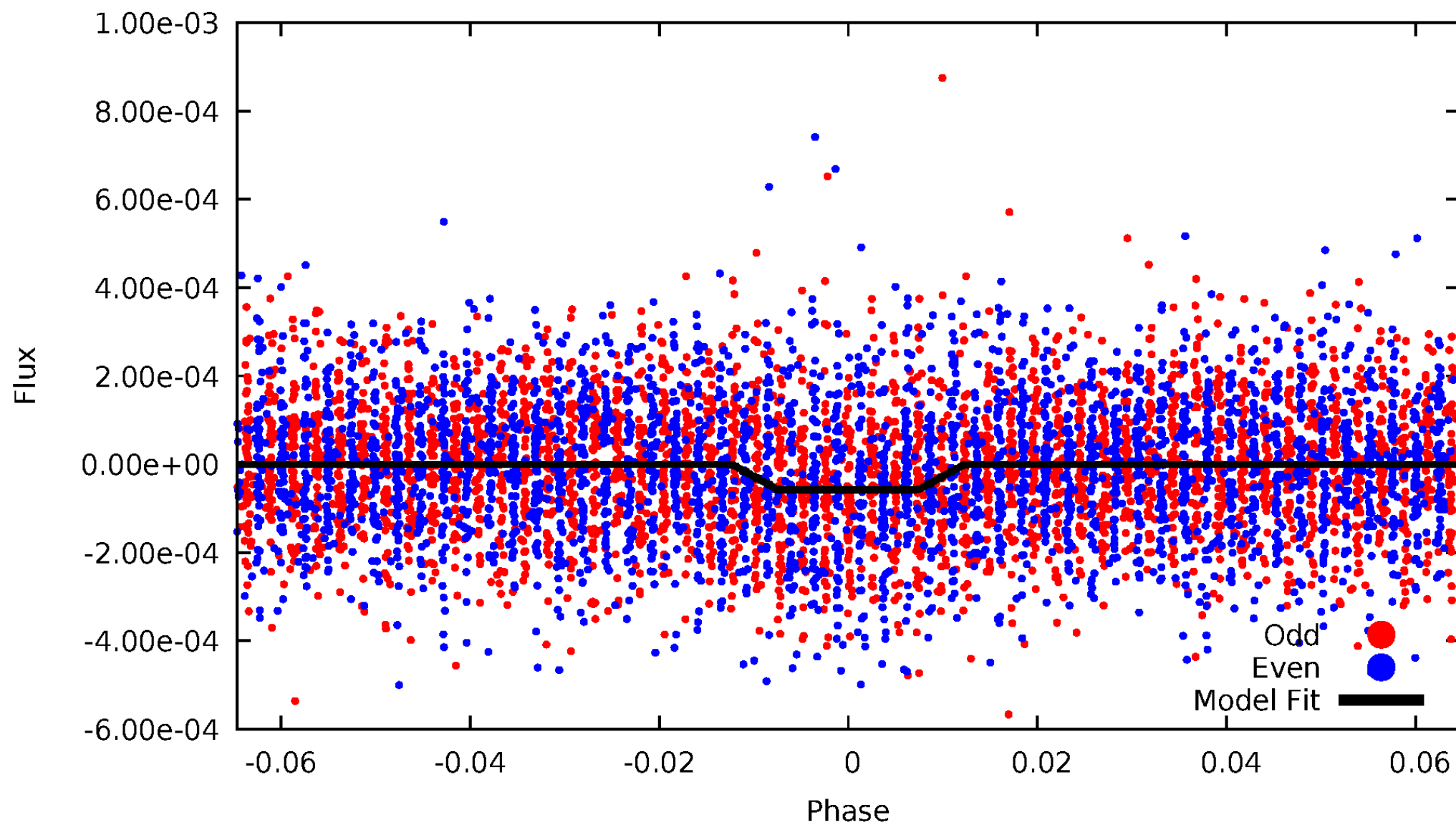
# DV Odd/Even

TCE 011152950-01



# ALT Odd/Even

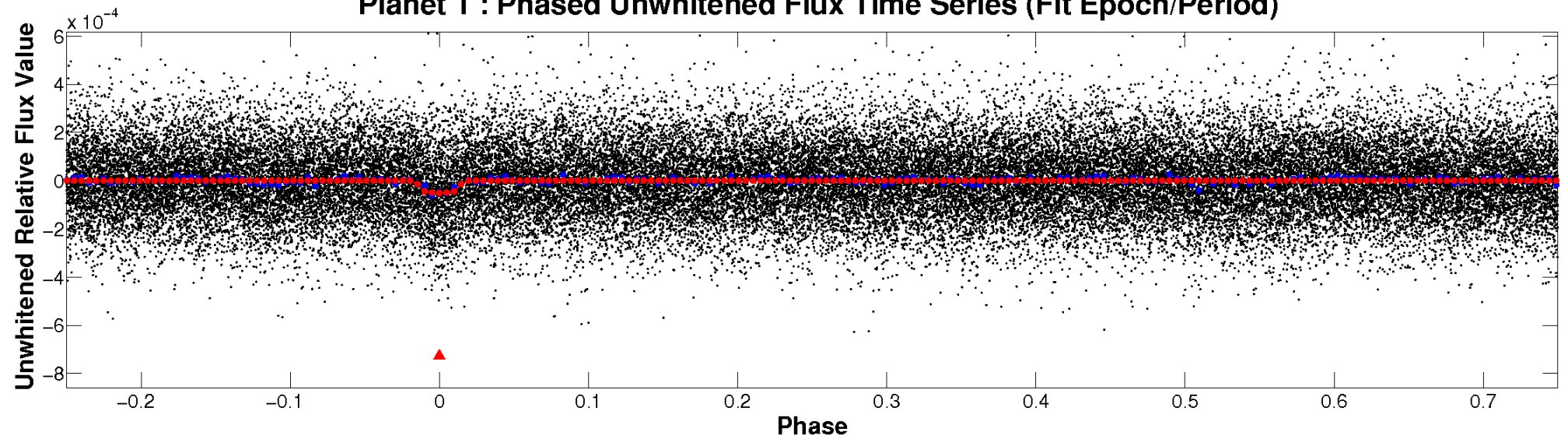
TCE 011152950-01



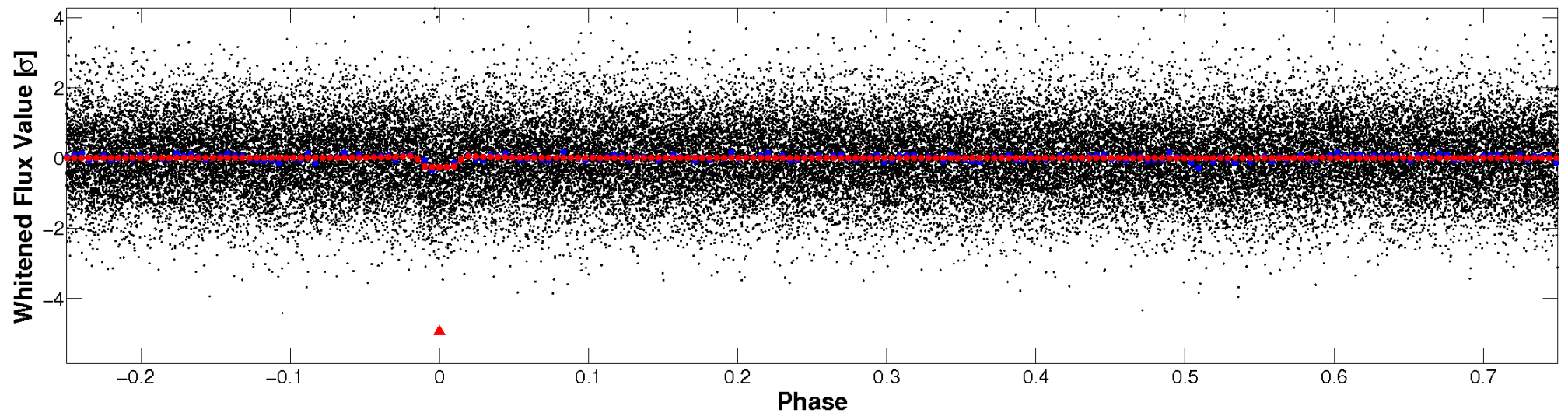


# Non-Whitened Vs. Whitened Light Curve

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

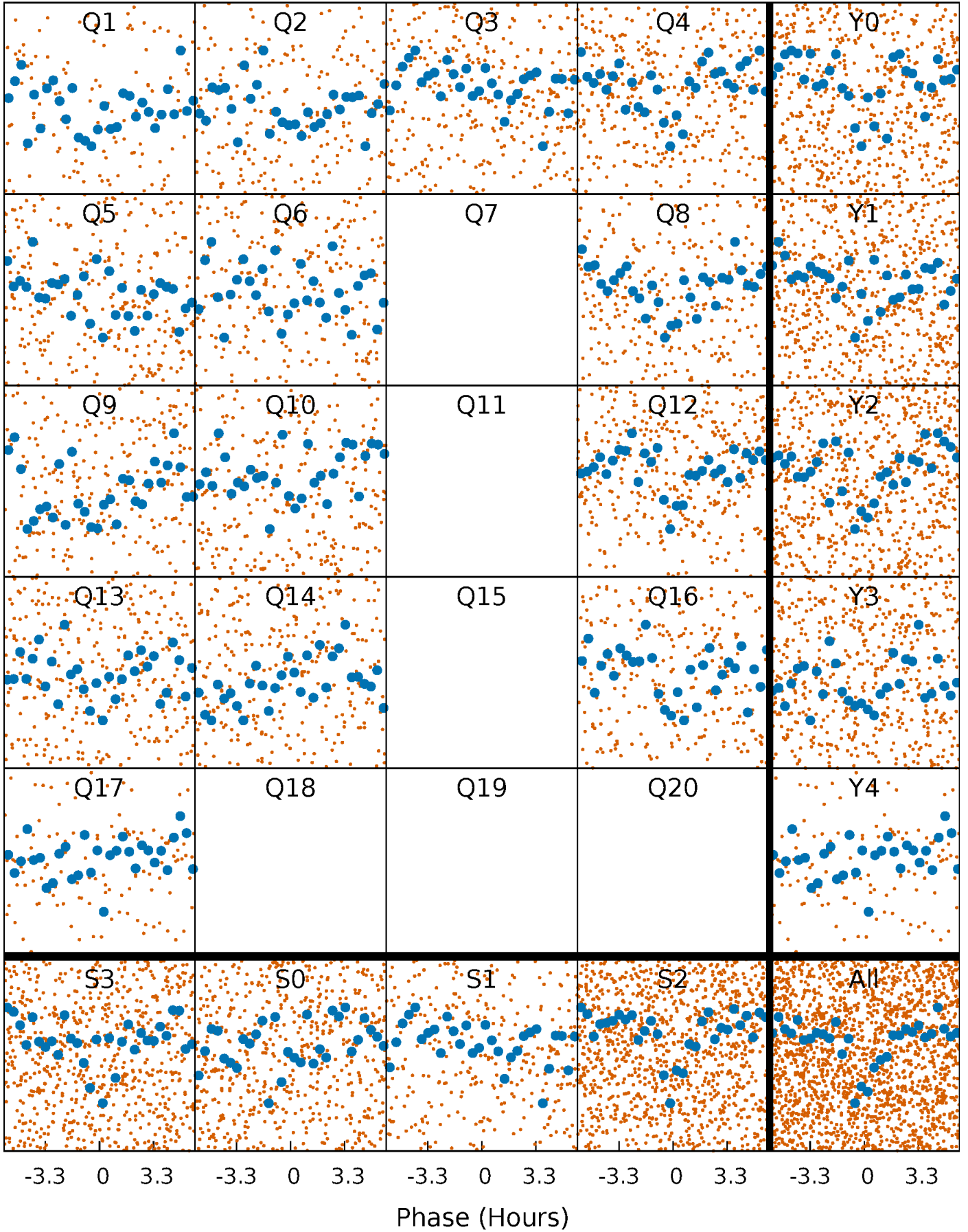


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

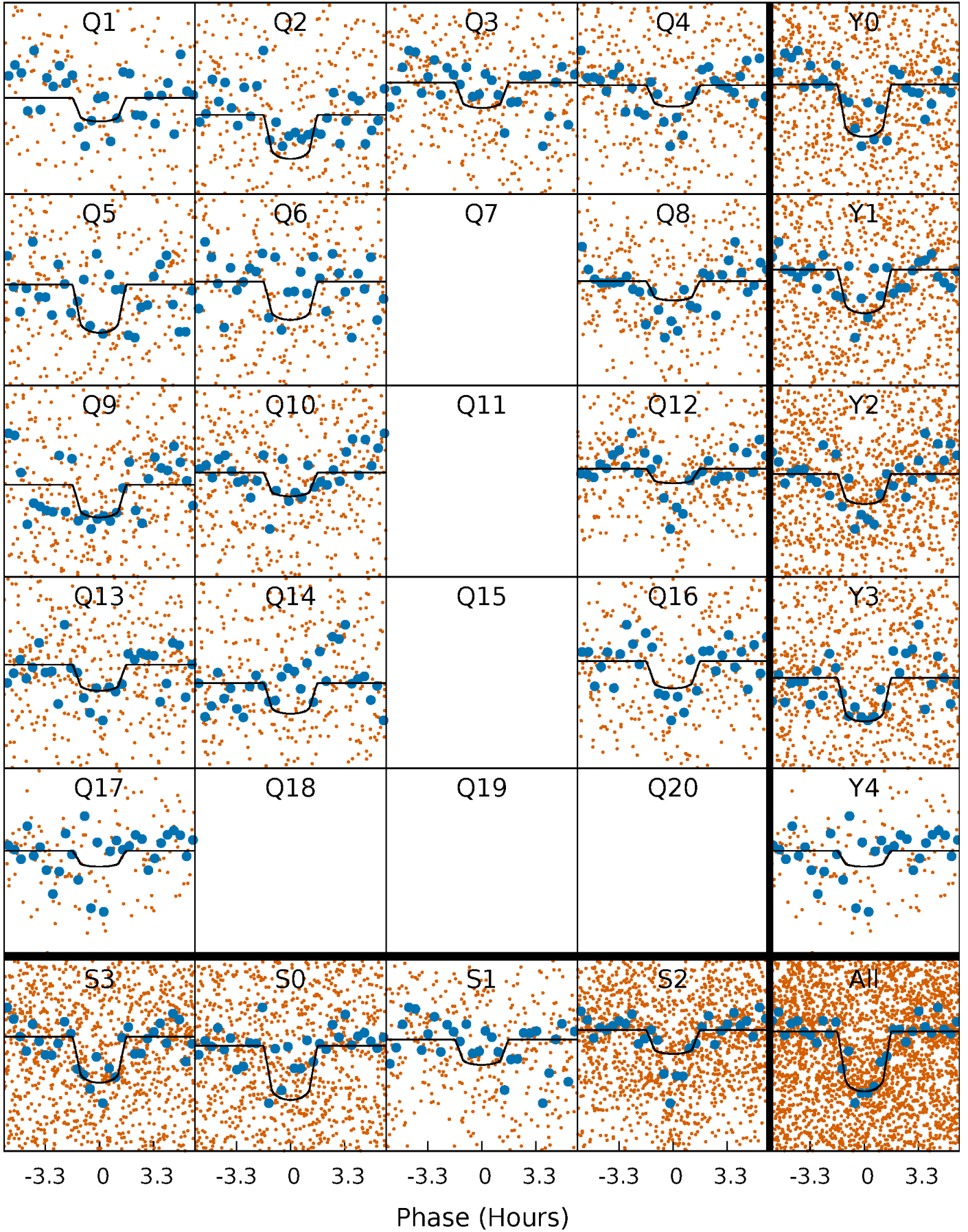
TCE 011152950-01   P= 4.173650 Days    $T_0=134.197646$  (BKJD)





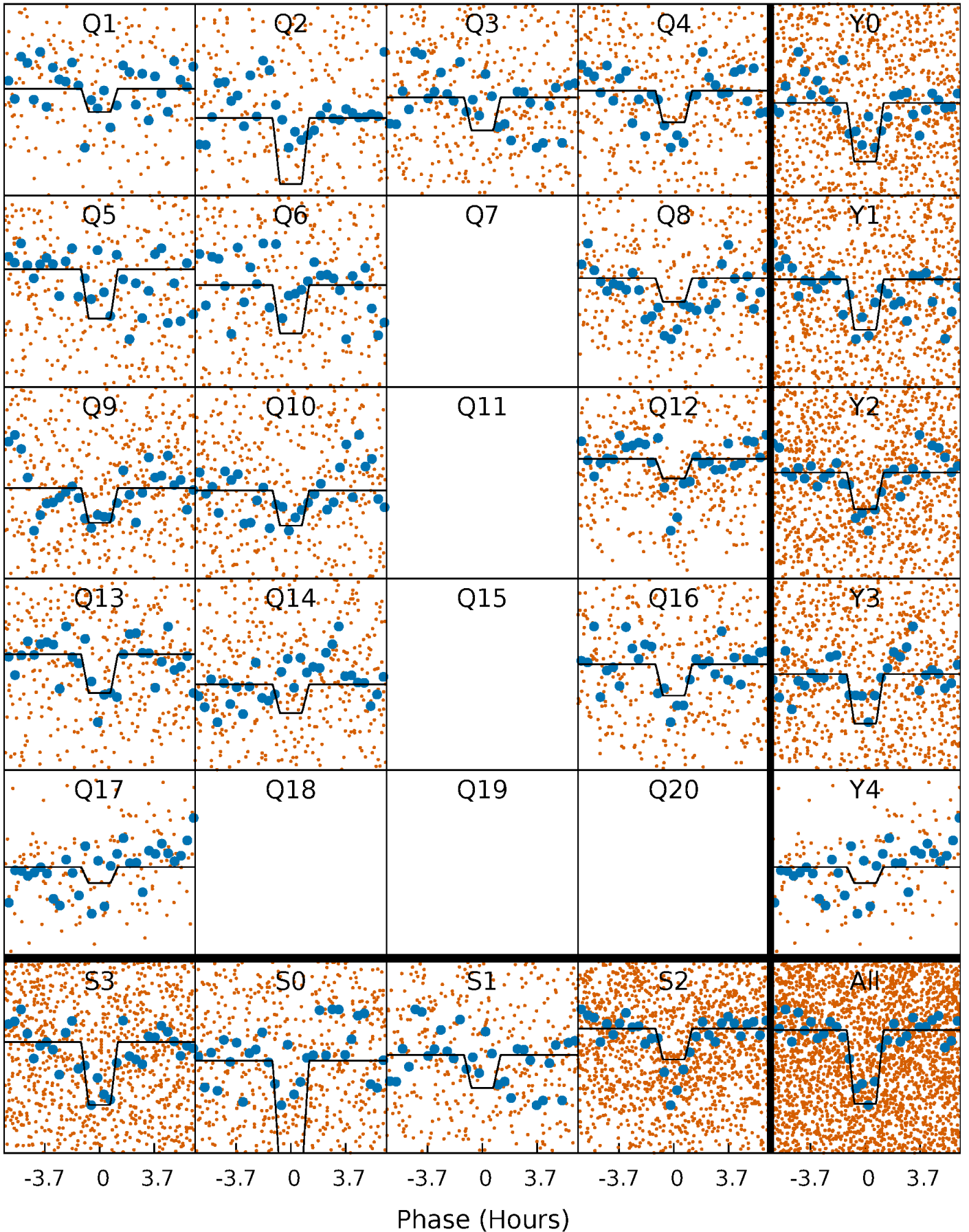
# DV Quarter-Phased Transit Curves

TCE 011152950-01 P= 4.173650 Days  $T_0=134.197646$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

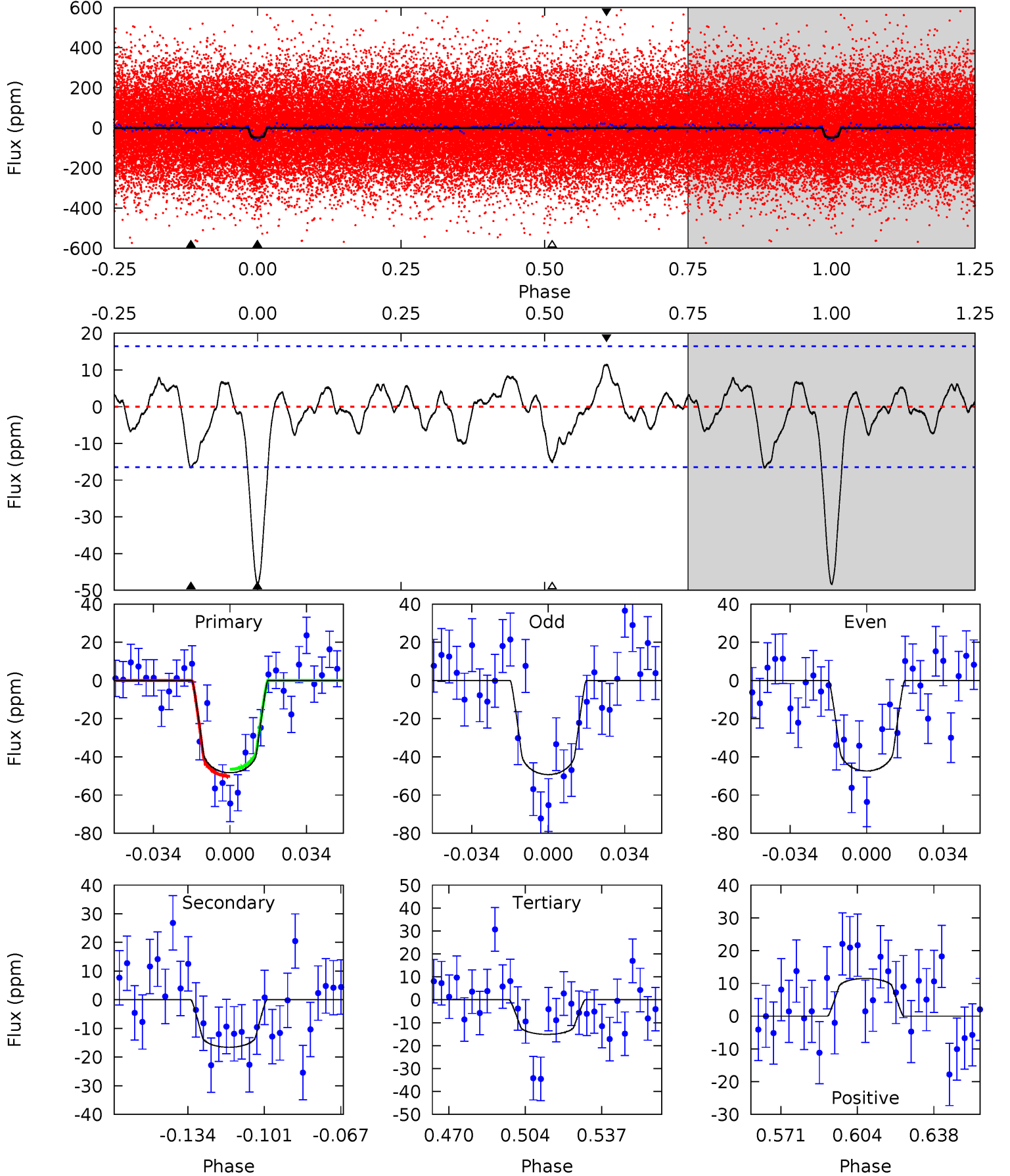
TCE 011152950-01 P= 4.173672 Days  $T_0=134.194310$  (BKJD)



# DV Model-Shift Uniqueness Test

011152950-01, P = 4.173650 Days, E = 130.023996 Days

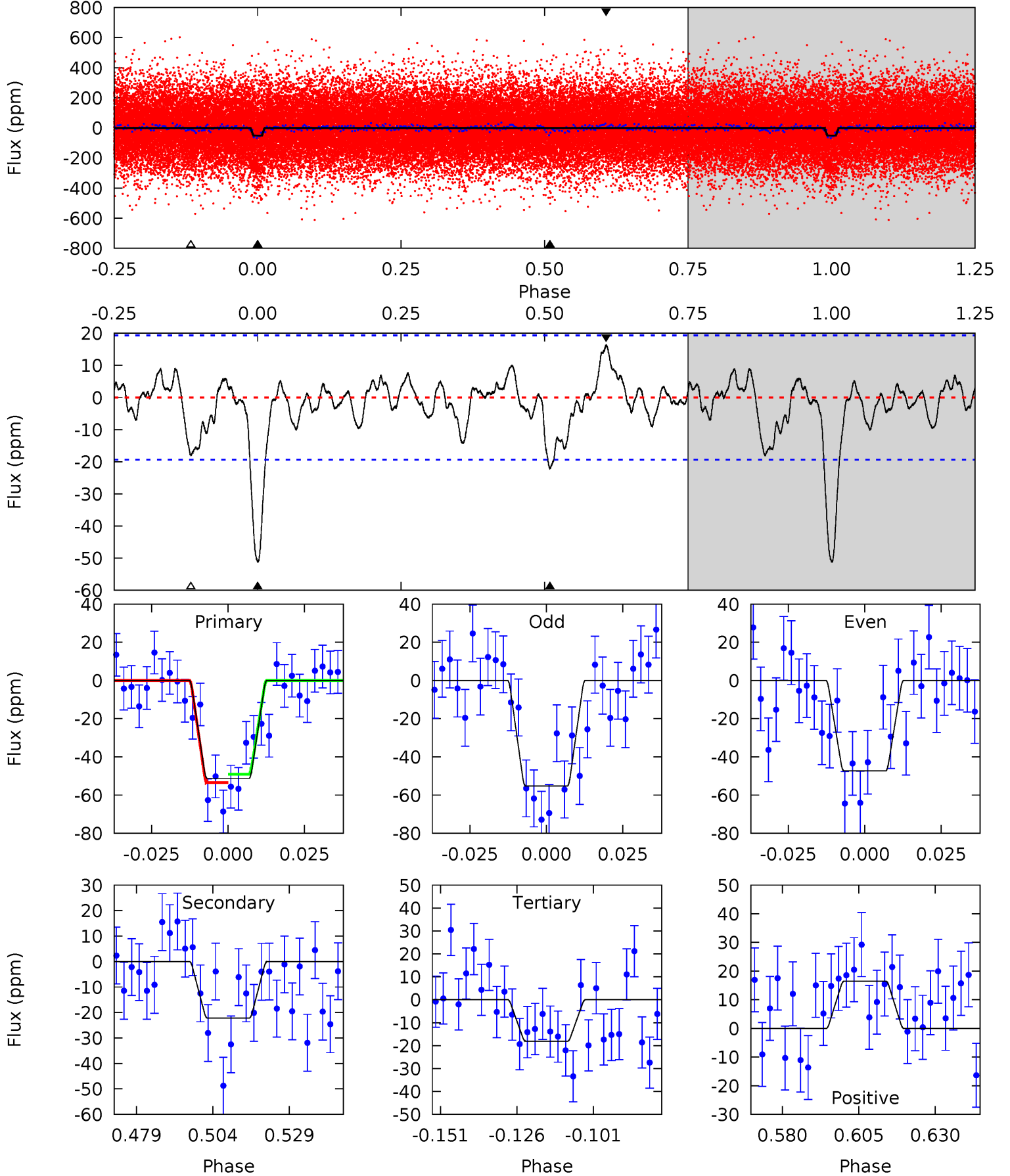
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	4.82	4.39	3.34	4.79	2.13	1.41	9.66	10.7	0.43	1.48	0.28	0.98	0.19	0.54



# Alt Model-Shift Uniqueness Test

011152950-01, P = 4.173672 Days, E = 130.020638 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
12.8	5.56	4.53	4.13	4.85	2.24	1.44	8.31	8.71	1.03	1.43	0.99	1.12	0.24	0.56



### Stellar Parameters For KIC 011152950

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6619^{+180}_{-200}$	$3.595^{+0.323}_{-0.057}$	$-0.160^{+0.300}_{-0.250}$	$3.410^{+0.401}_{-1.282}$	$1.670^{+0.229}_{-0.343}$	$0.059^{+0.148}_{-0.012}$
	+3%/-3%	+9%/-2%	+188%/-156%	+12%/-38%	+14%/-21%	+249%/-20%
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 011152950-01 / KOI 8045.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-17 \pm 3$	$2.51^{+1.22}_{-1.03}$	$2980^{+166}_{-269}$	$4922^{+1288}_{-711}$	$5.291^{+10.025}_{-2.898}$
Alt.	$-22 \pm 4$	$2.64^{+1.17}_{-1.11}$	$2987^{+160}_{-262}$	$5173^{+1500}_{-747}$	$6.427^{+12.851}_{-3.328}$

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



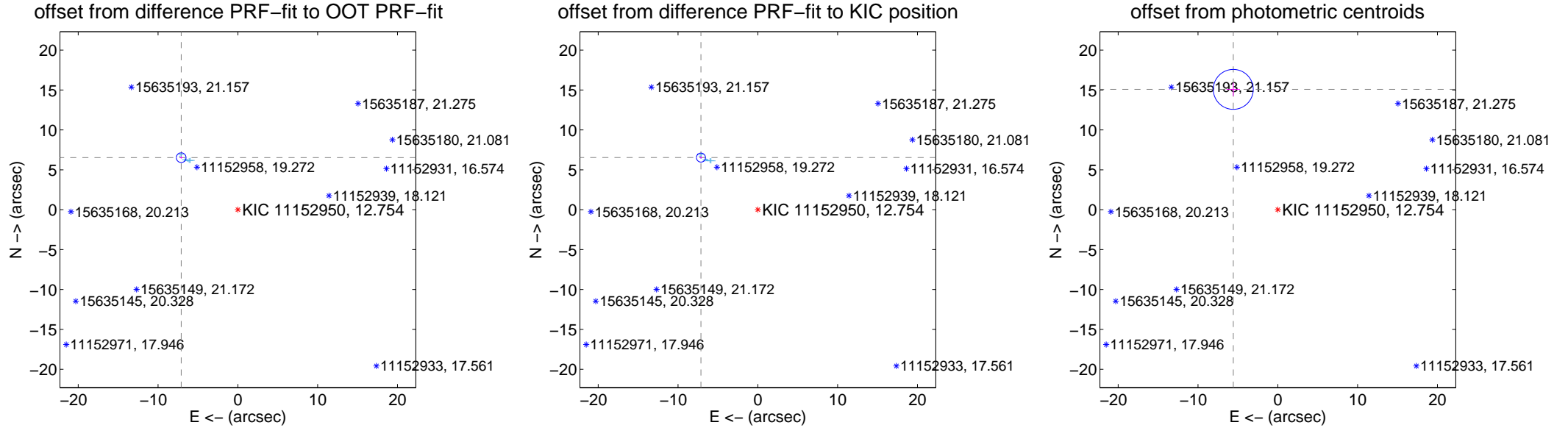
## DV Centroid Data

Supplemental centroid analysis for 011152950-01. Kepler magnitude: 12.75. Transit SNR 9.14

There are 10 quarters with good PRF difference image offsets

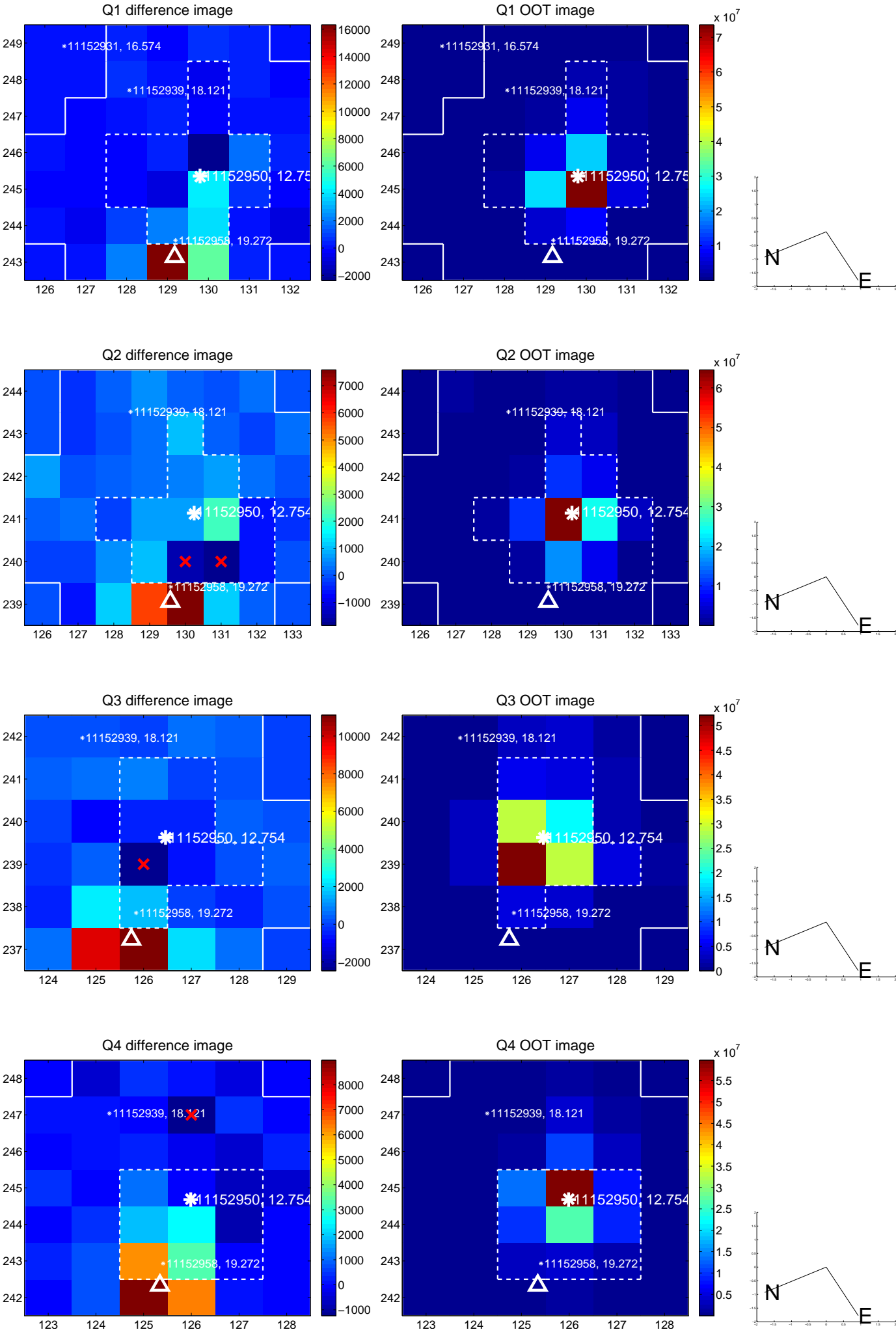
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>9.642 <math>\pm</math> 0.203</b>	<b>47.56</b>	7.101 $\pm$ 0.188	6.523 $\pm$ 0.116
PRF-fit source offset from KIC position	<b>9.667 <math>\pm</math> 0.188</b>	<b>51.35</b>	7.127 $\pm$ 0.179	6.532 $\pm$ 0.109
photometric centroid source offset	<b>16.08 <math>\pm</math> 0.83</b>	<b>19.29</b>	5.58 $\pm$ 0.84	15.08 $\pm$ 0.83

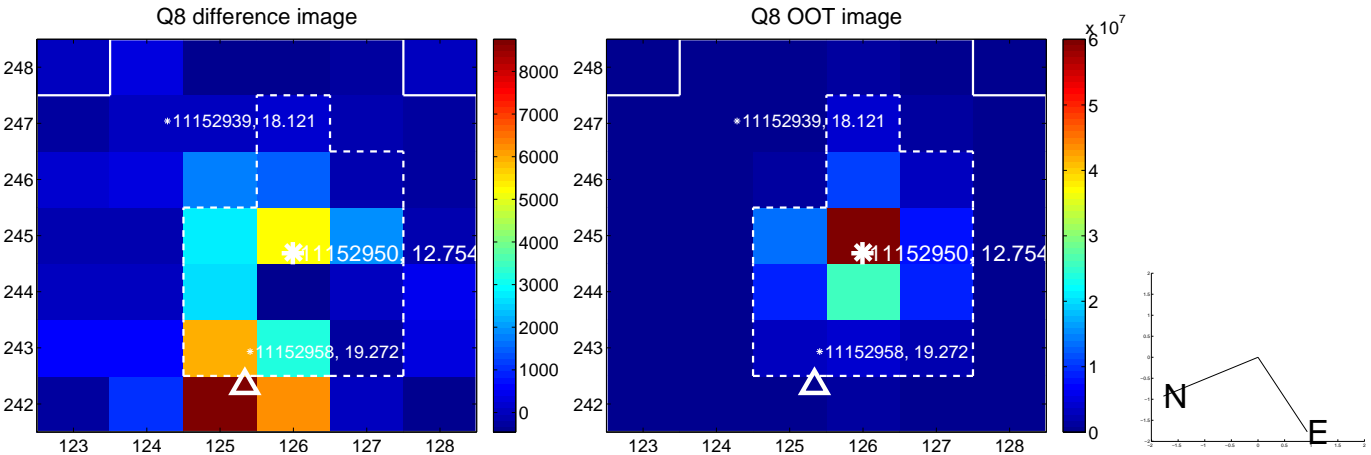
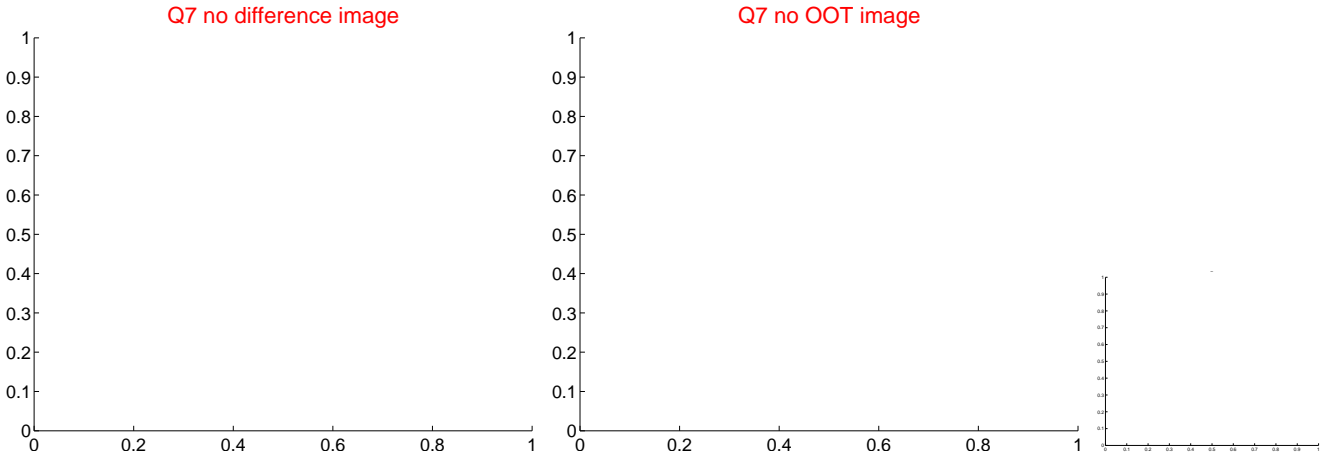
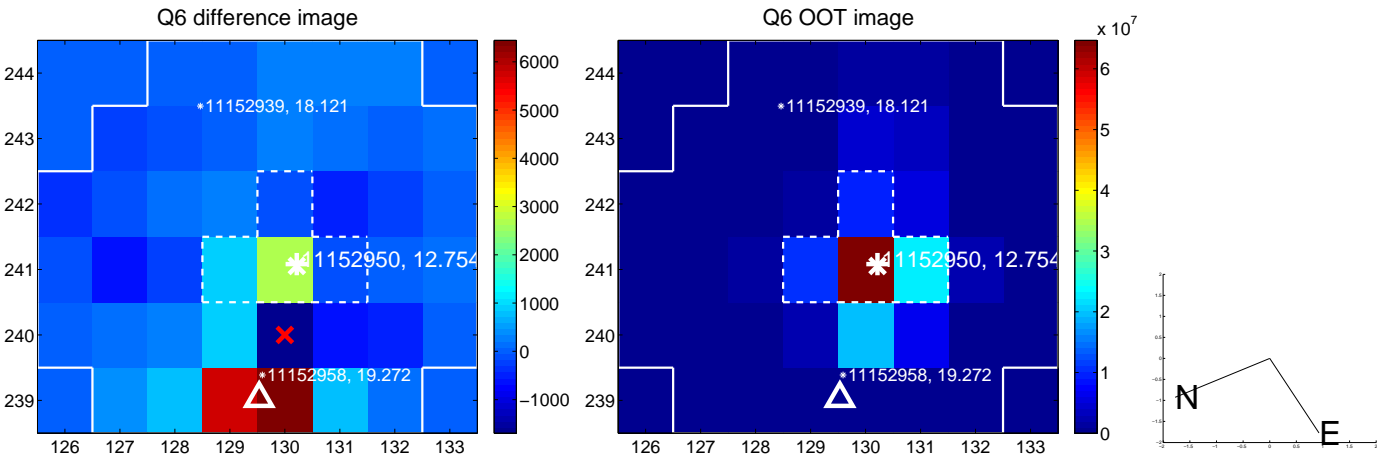
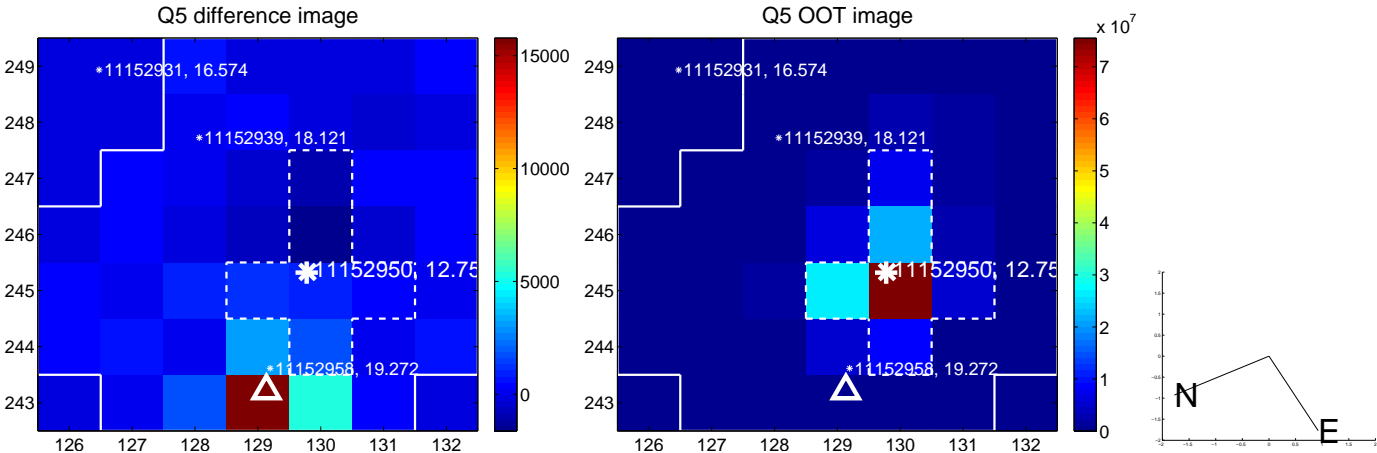


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

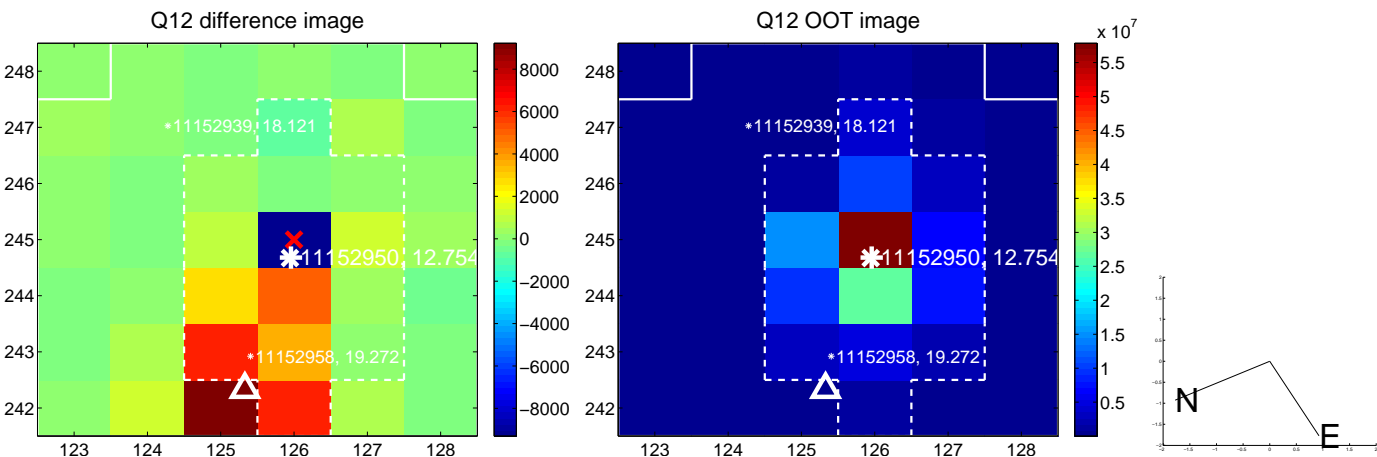
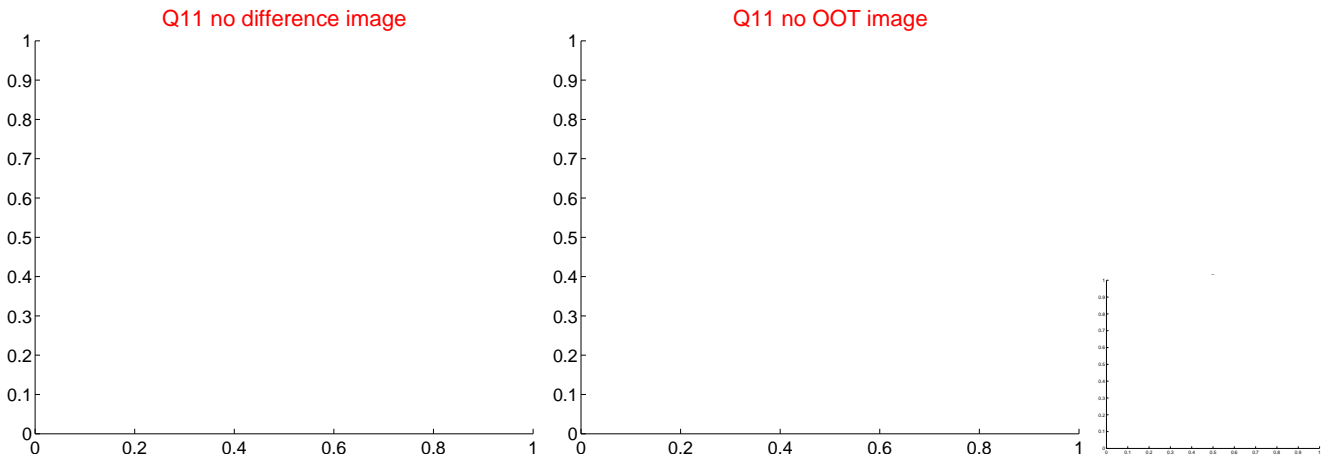
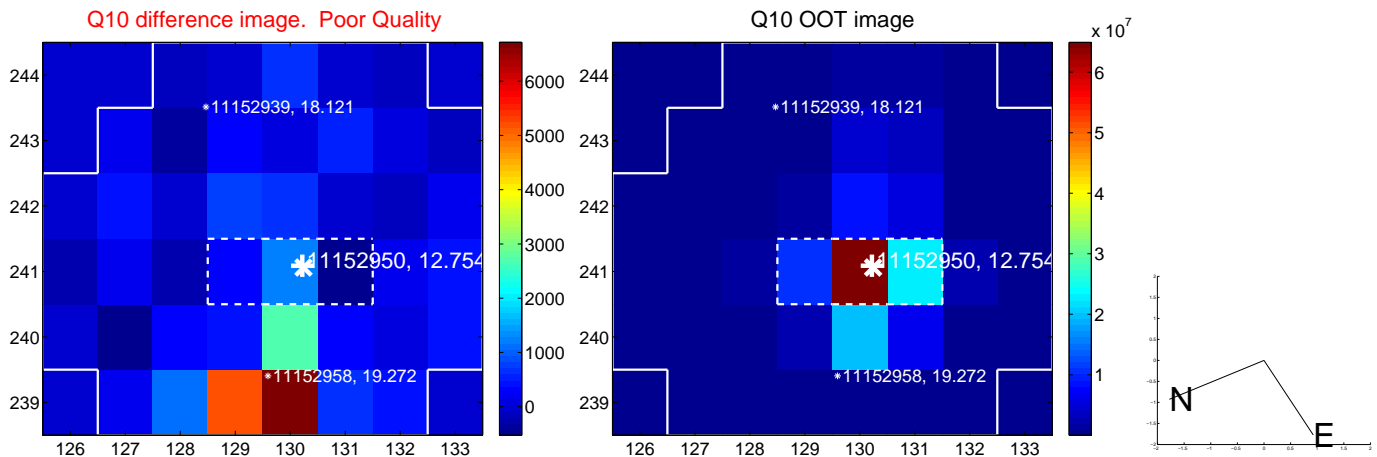
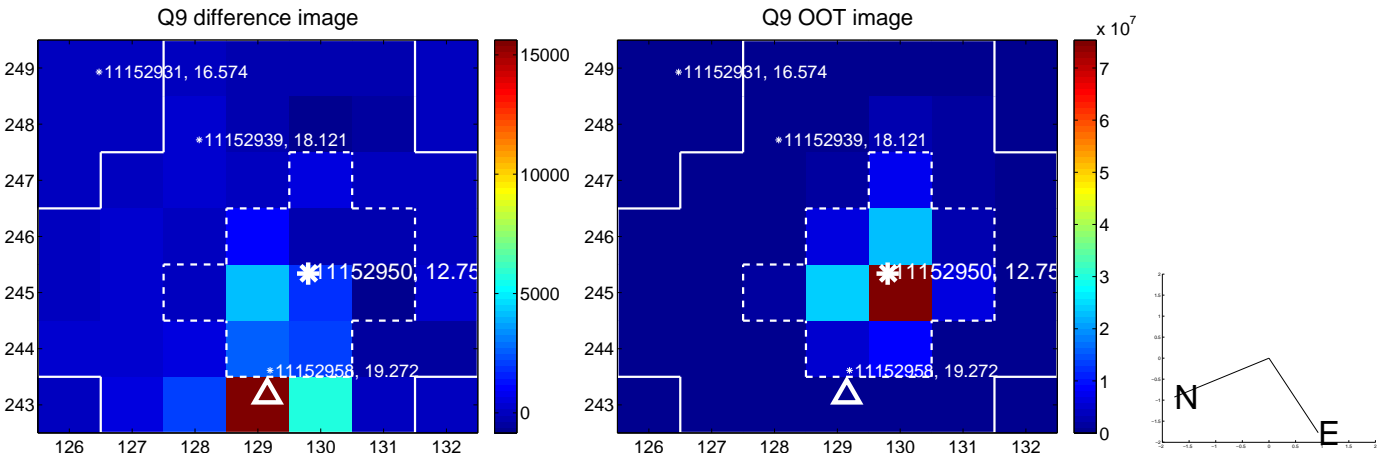
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



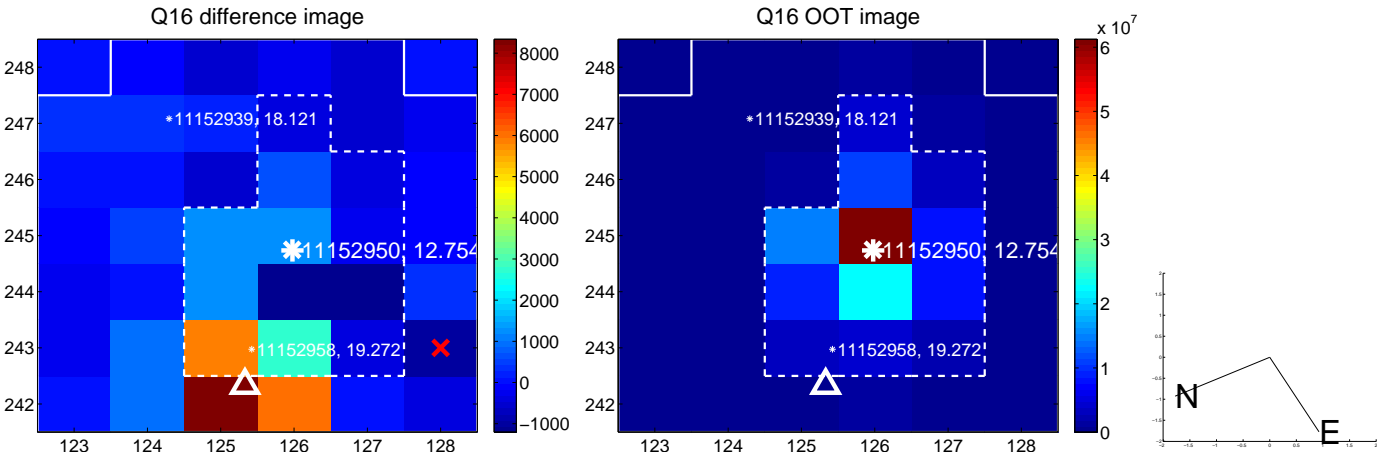
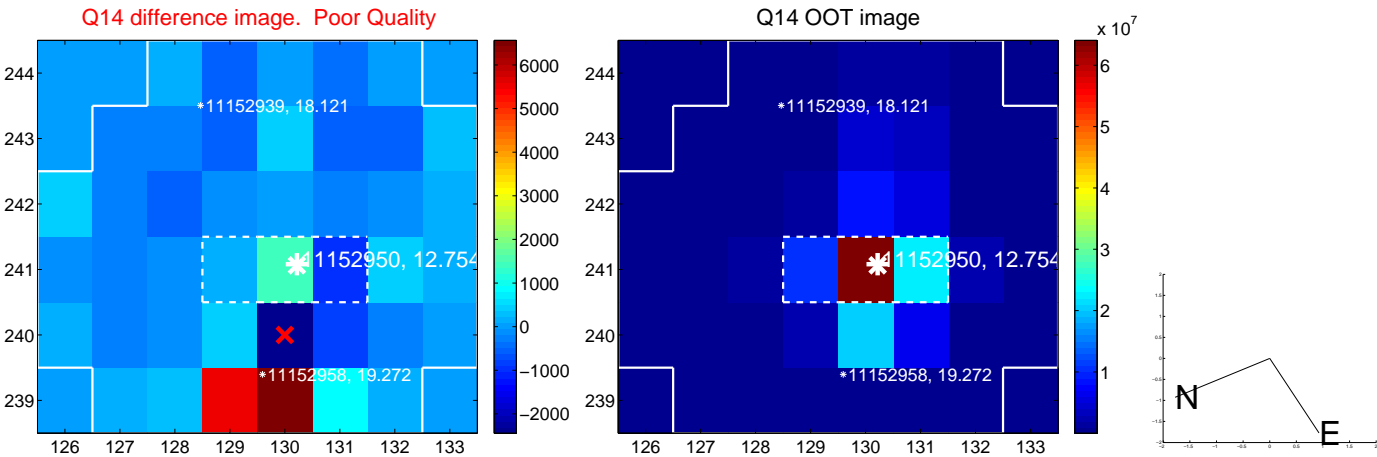
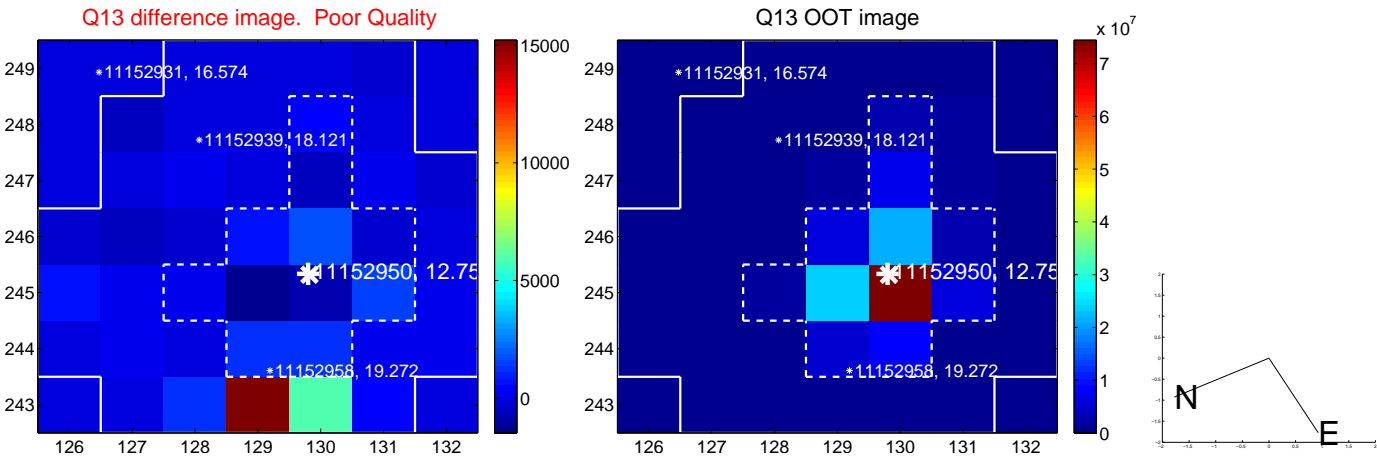
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



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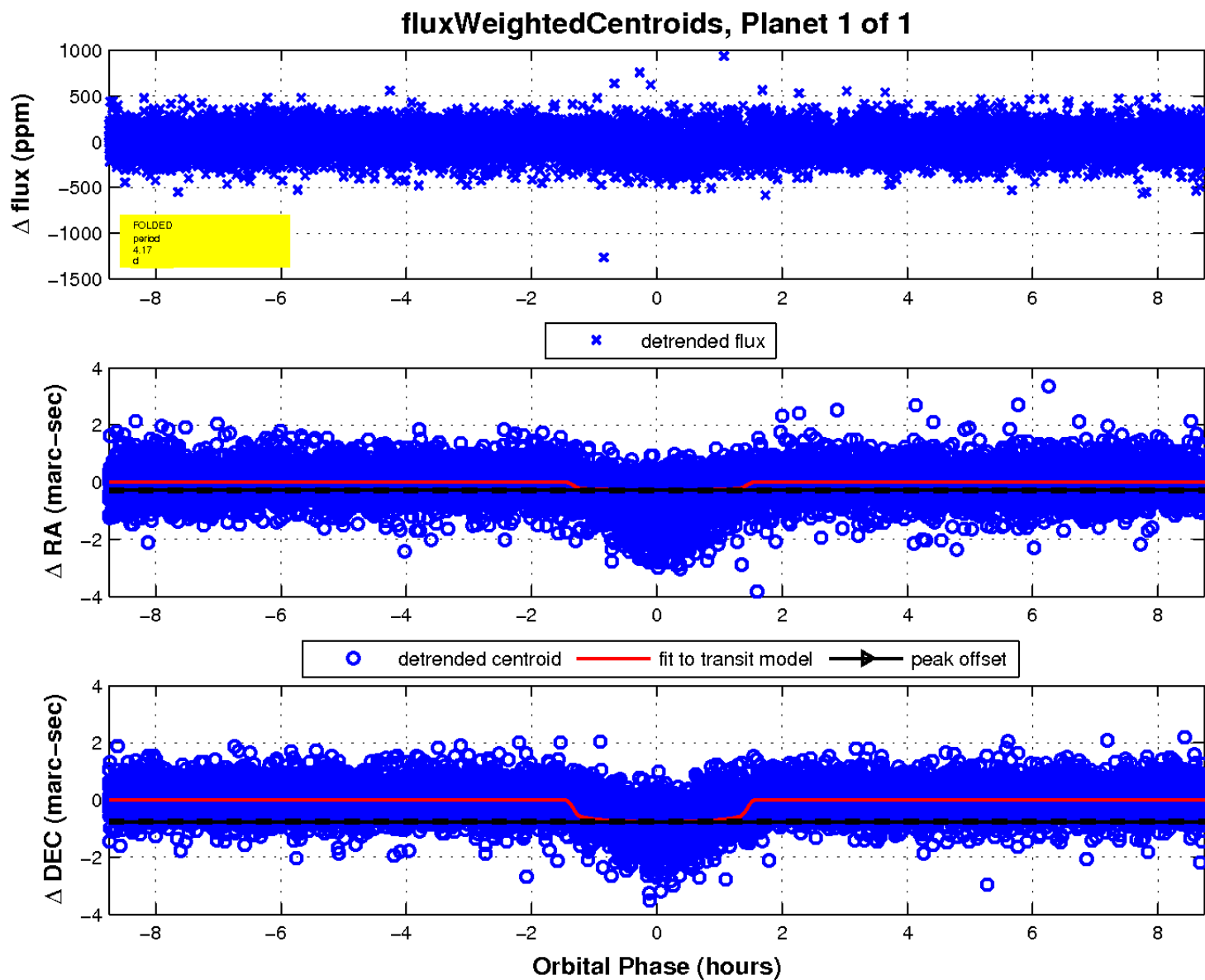
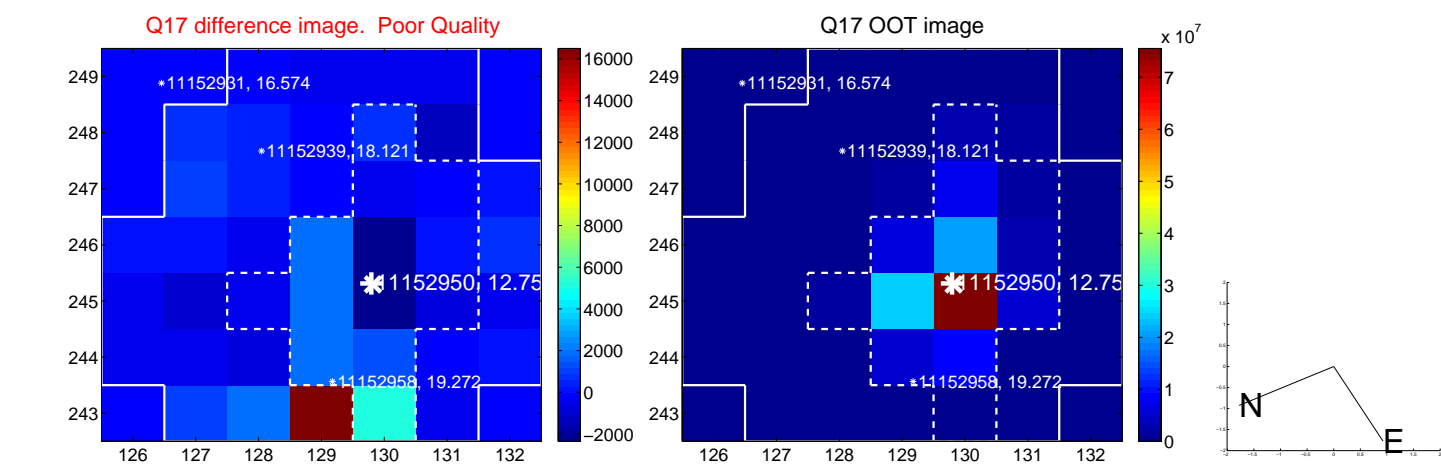


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

