

# KIC 011672354

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011672354-01	OBS	7471.01	5.296507	131.875689	139.6	4.082	7.4	8.7	1.10	6268	1.51	422.36

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011672354-01	OBS	PC	0.95	0	0	0	0	NO_COMMENT

**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 011672354-01

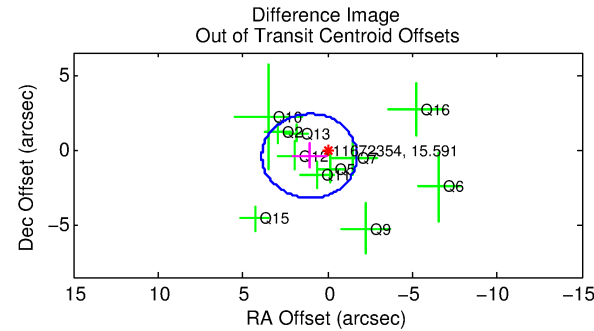
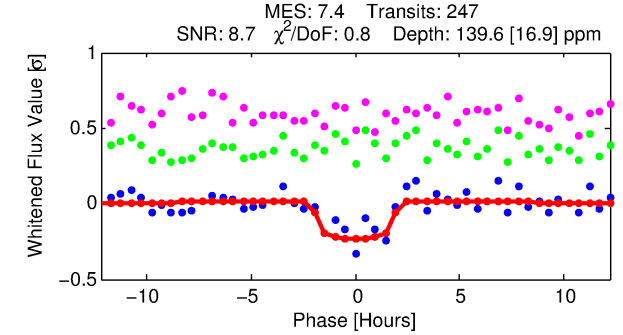
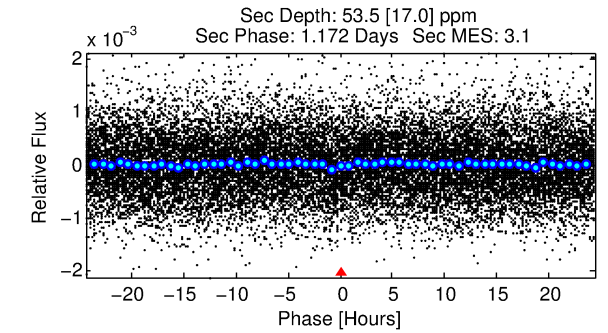
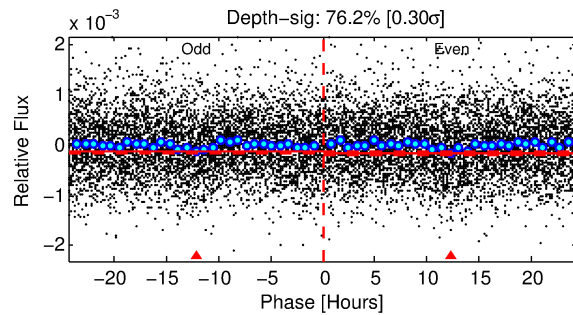
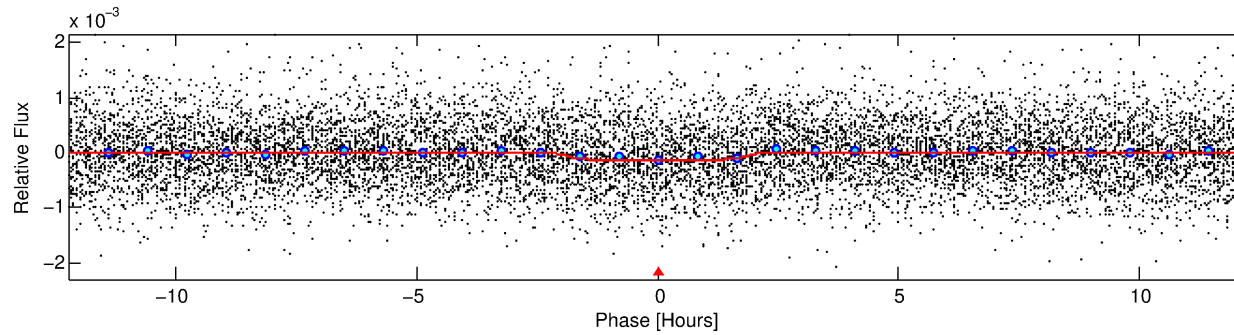
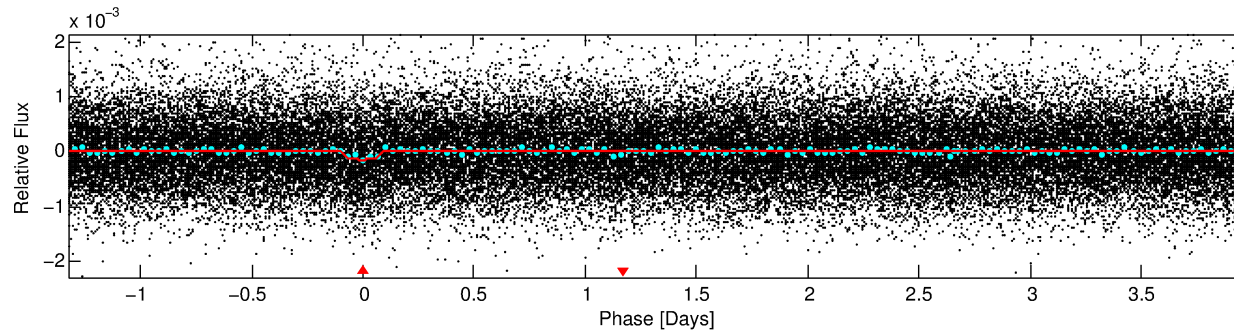
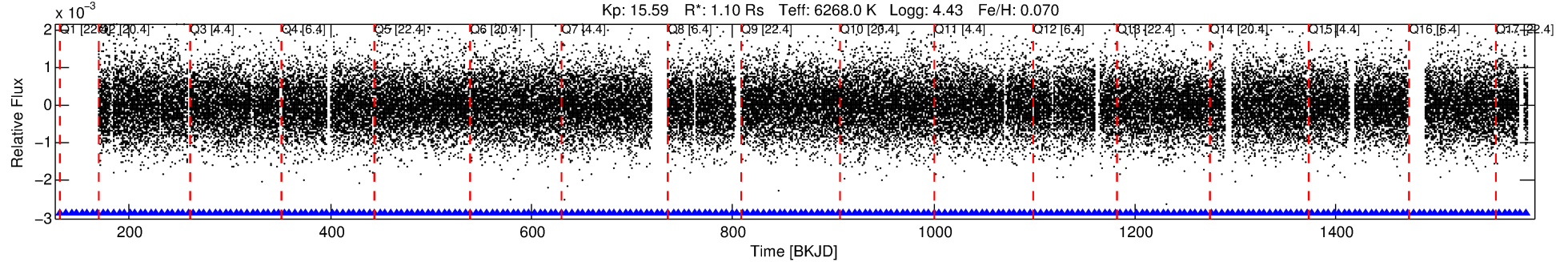
No Significant Match Found

# DV One-Page Summary

KIC: 11672354 Candidate: 1 of 1 Period: 5.297 d

KOI: K07471.01 Corr: 0.971

Kp: 15.59 R\*: 1.10 Rs Teff: 6268.0 K Logg: 4.43 Fe/H: 0.070



## DV Fit Results:

Period = 5.29651 [0.00006] d  
Epoch = 131.8757 [0.0078] BKJD  
Rp/R\* = 0.0126 [0.0068]  
a/R\* = 4.89 [13.42]  
b = 0.89 [0.68]  
Seff = 422.36 [182.35]  
Teq = 1156 [125] K  
Rp = 1.51 [0.96] Re  
a = 0.0629 [0.0174] AU  
Ag = 50.85 [60.65] [0.82σ]  
Teffp = 4773 [1356] K [2.66σ]

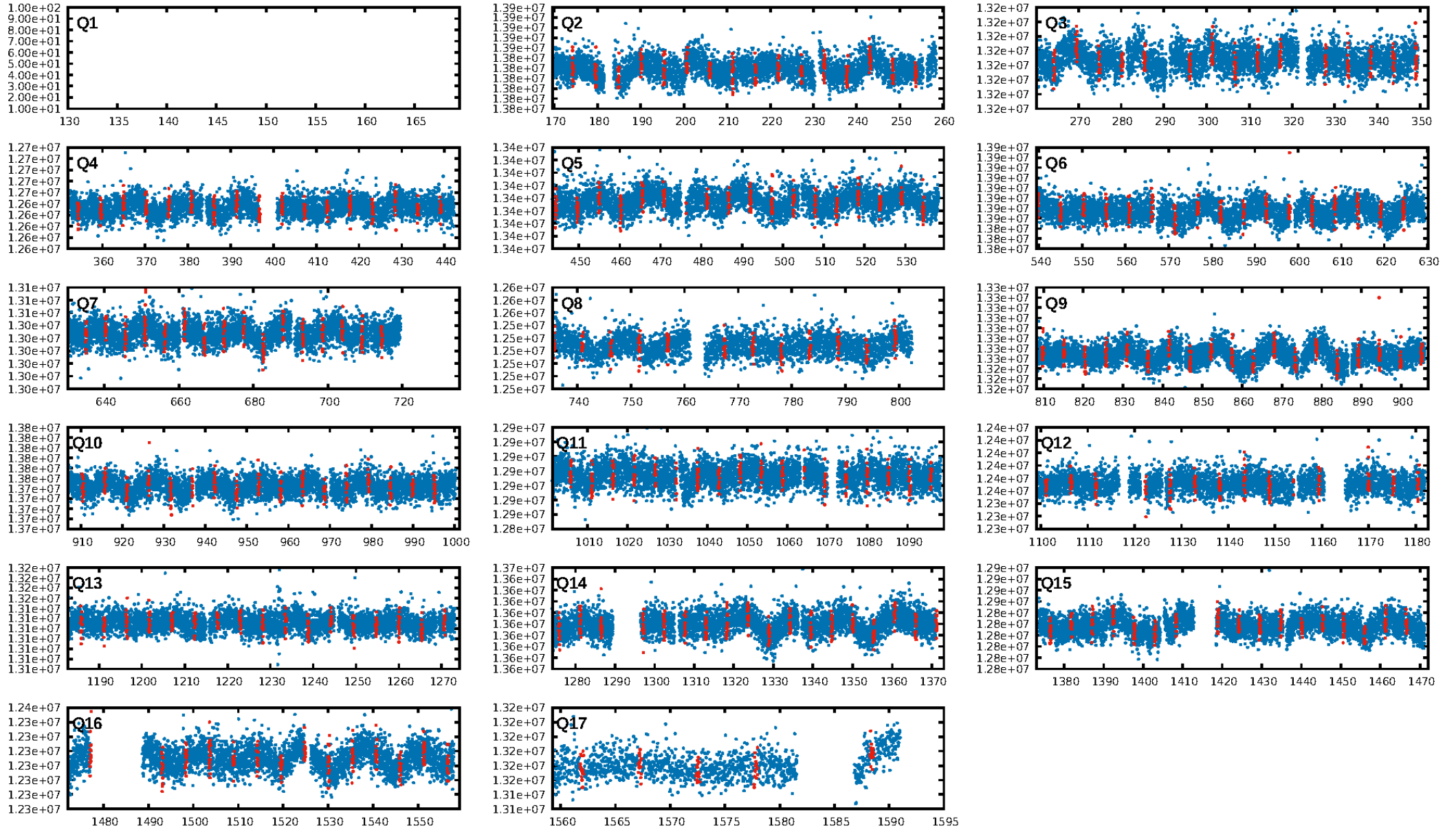
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.58e-13  
RollingBand-fgt: 1.00 [242/242]  
GhostDiagnostic-chr: 1.766  
Centroid-sig: 14.0%  
Centroid-so: 1.270 arcsec [0.82σ]  
OotOffset-rm: 1.145 arcsec [1.22σ]  
KicOffset-rm: 1.085 arcsec [1.15σ]  
OotOffset-st: 3/3/2/3 [11]  
KicOffset-st: 3/3/2/3 [11]  
DiffImageQuality-fgm: 0.18 [2/11]  
DiffImageOverlap-fno: 1.00 [16/16]

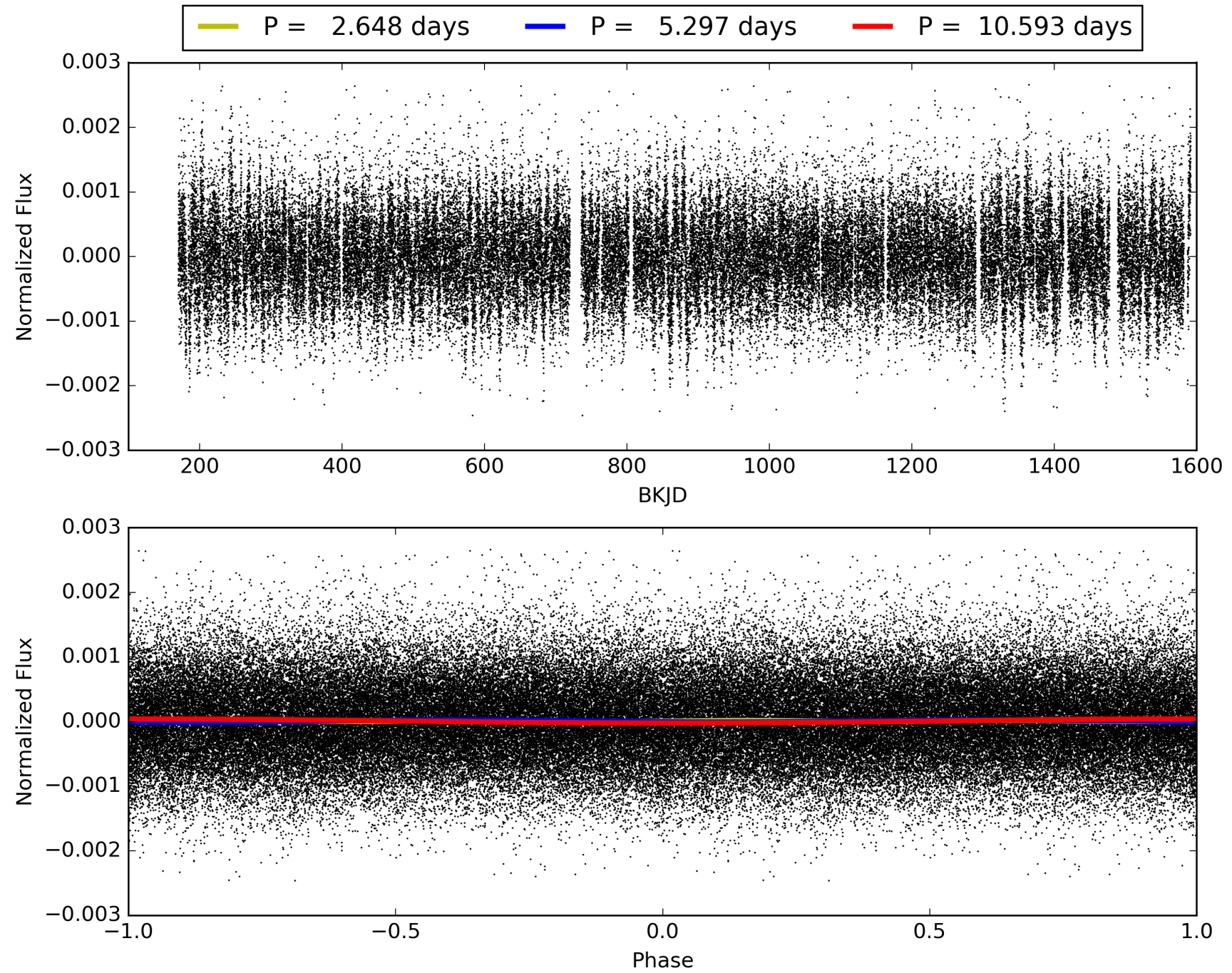
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:40:33 Z

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

# TCE 011672354-01, PDC Light Curves



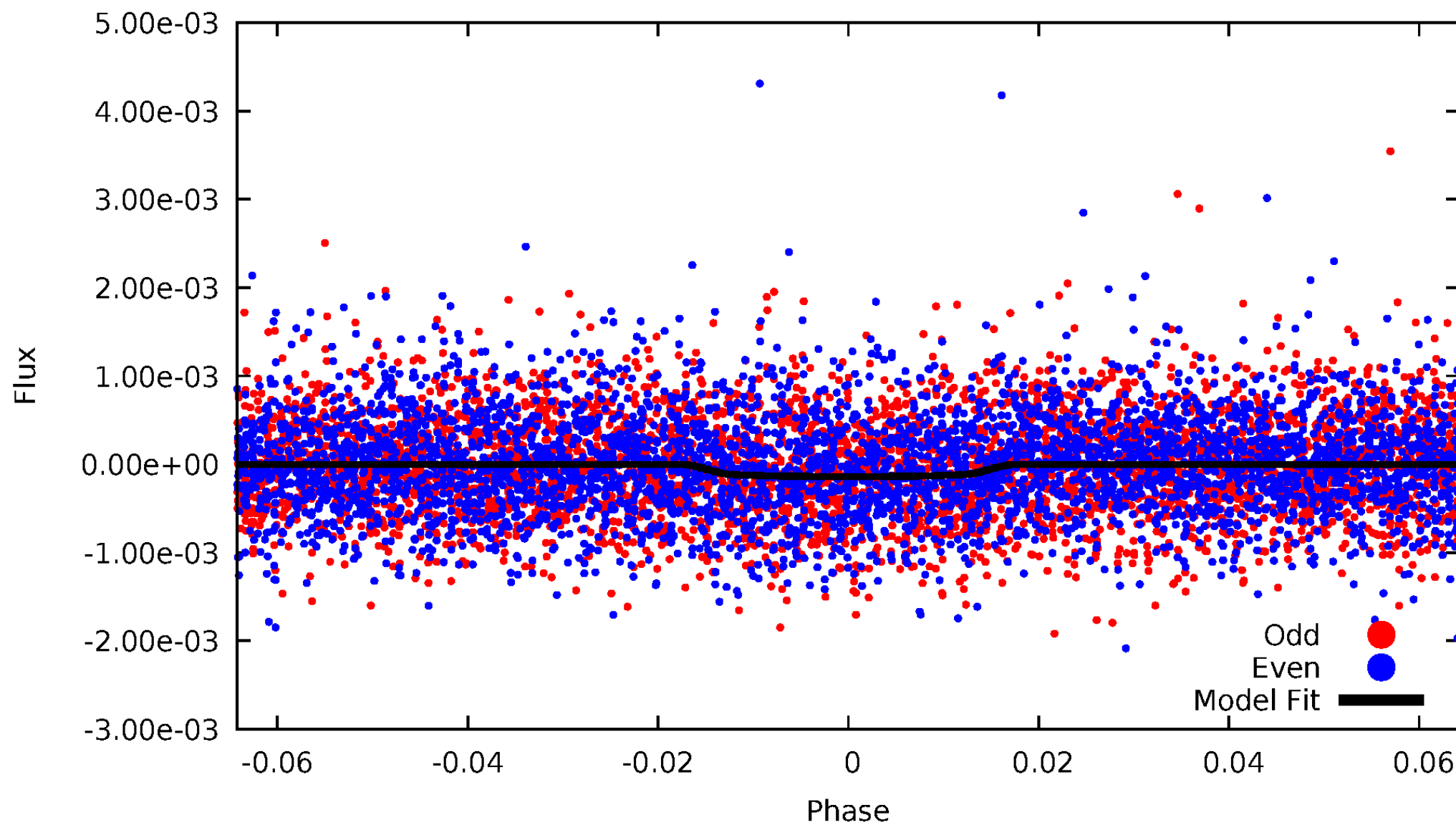
TCE 011672354-01





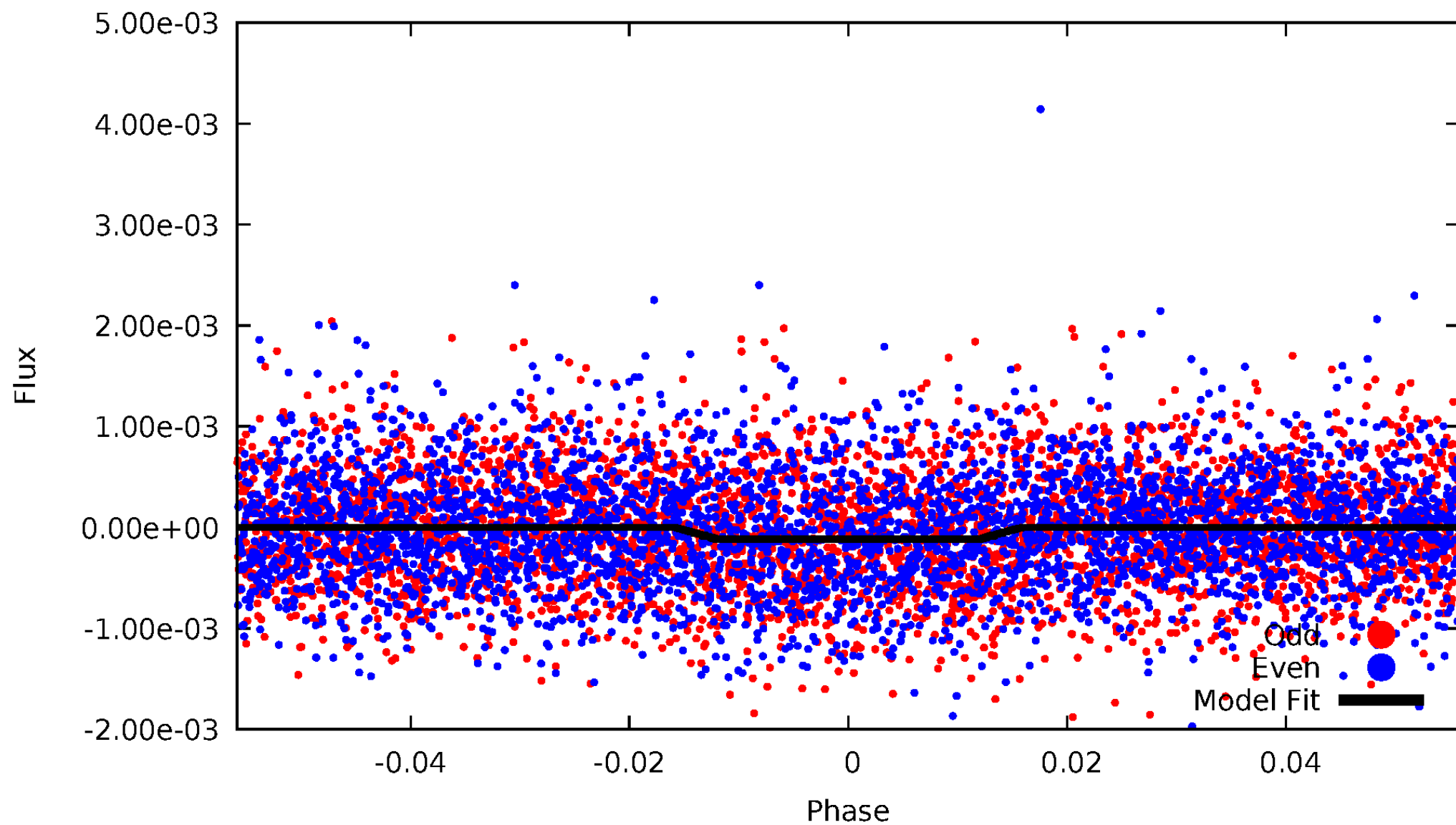
# DV Odd/Even

TCE 011672354-01



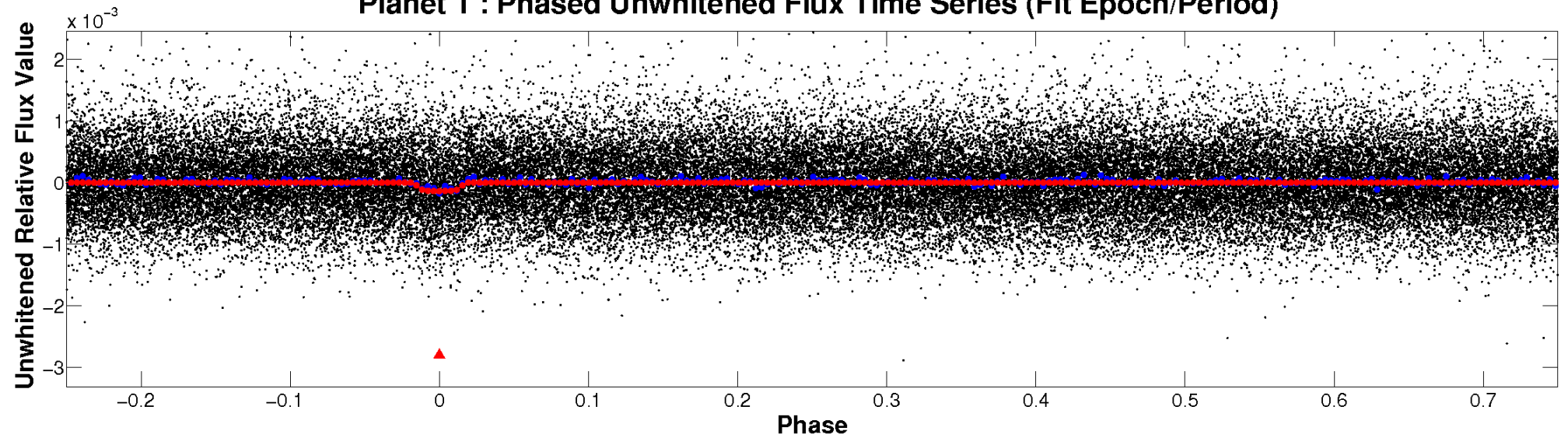
# ALT Odd/Even

TCE 011672354-01

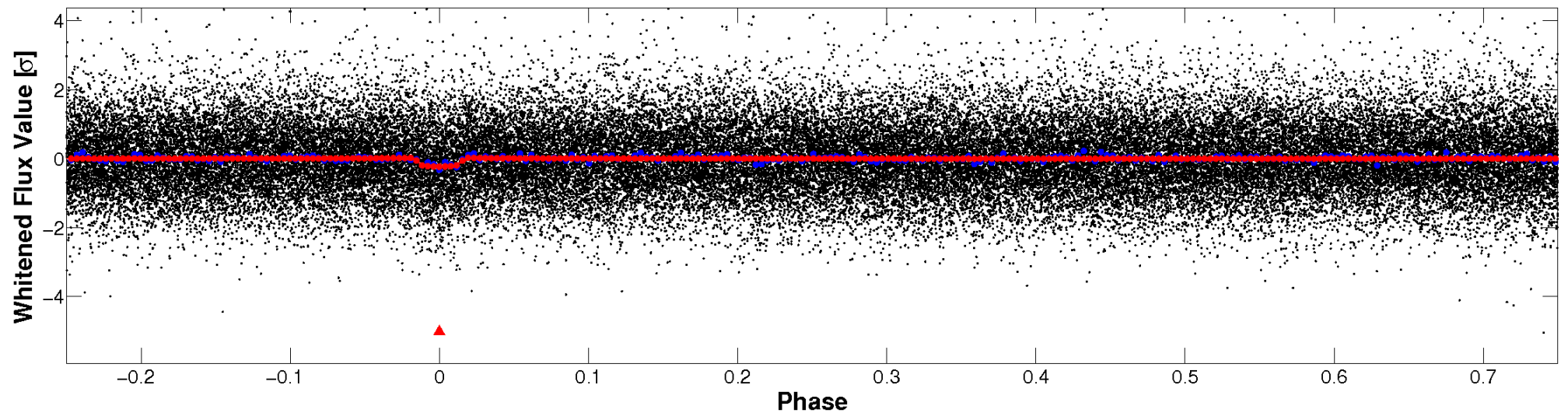


# Non-Whitened Vs. Whitened Light Curve

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

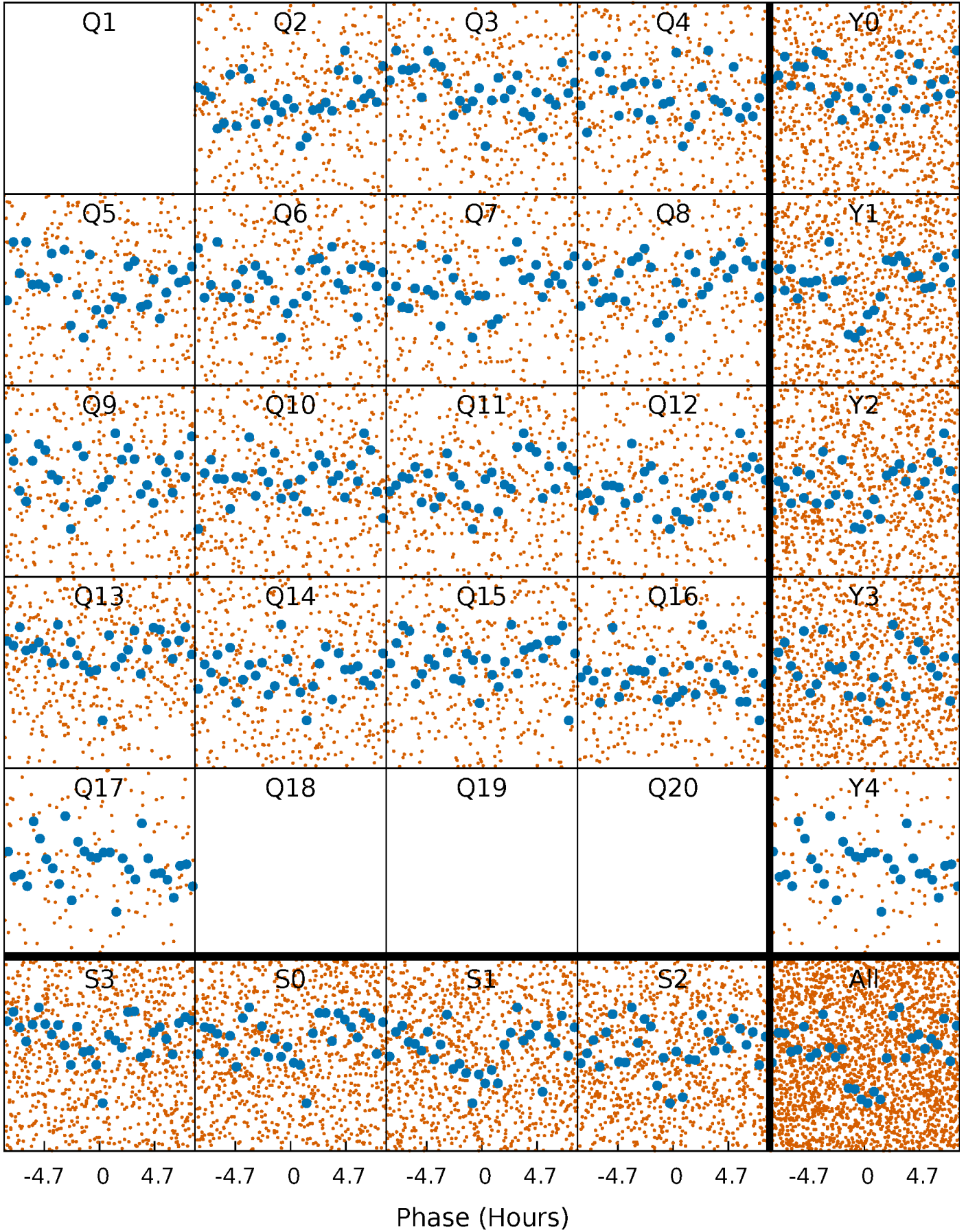


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

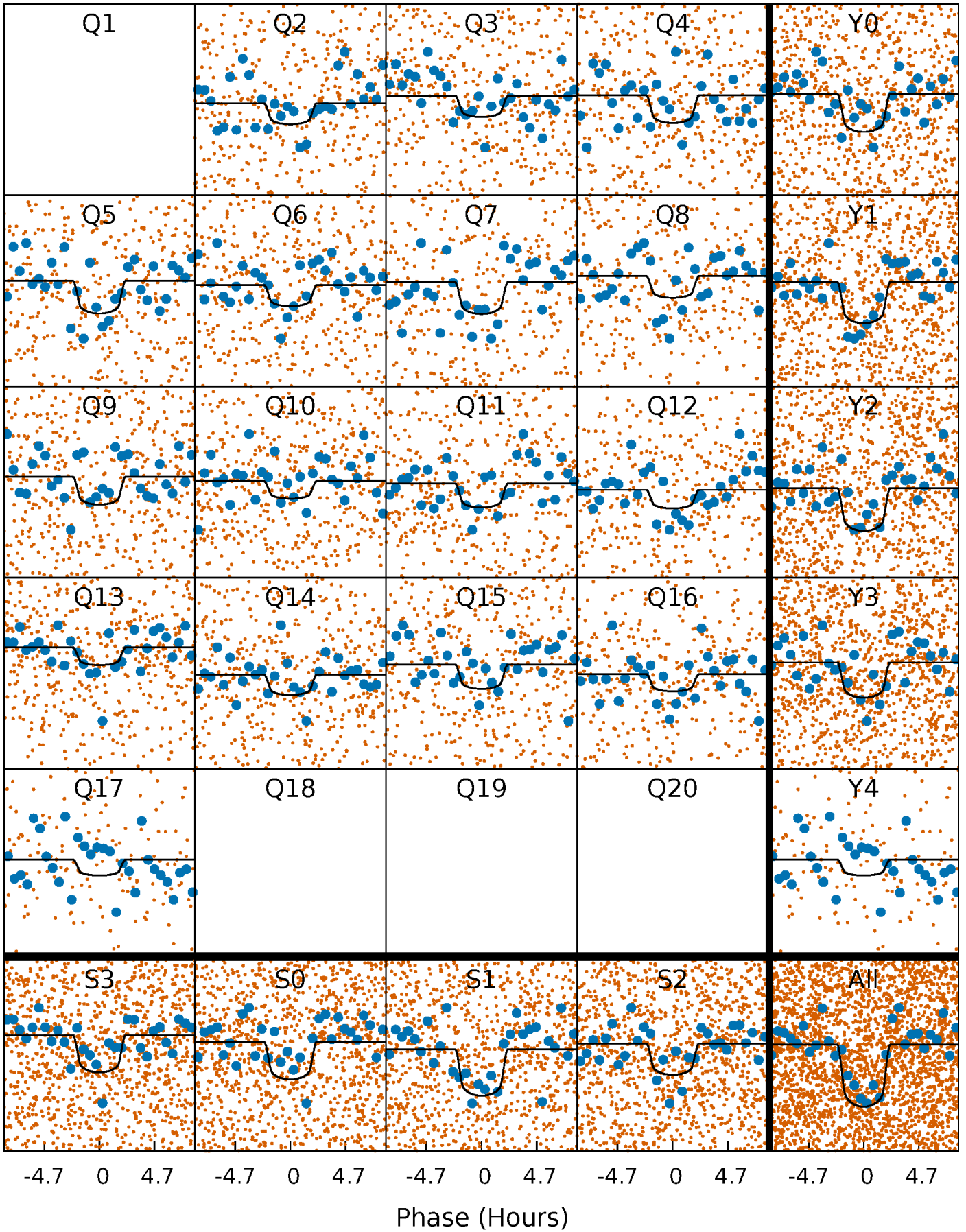
TCE 011672354-01 P= 5.296507 Days  $T_0=131.875689$  (BKJD)





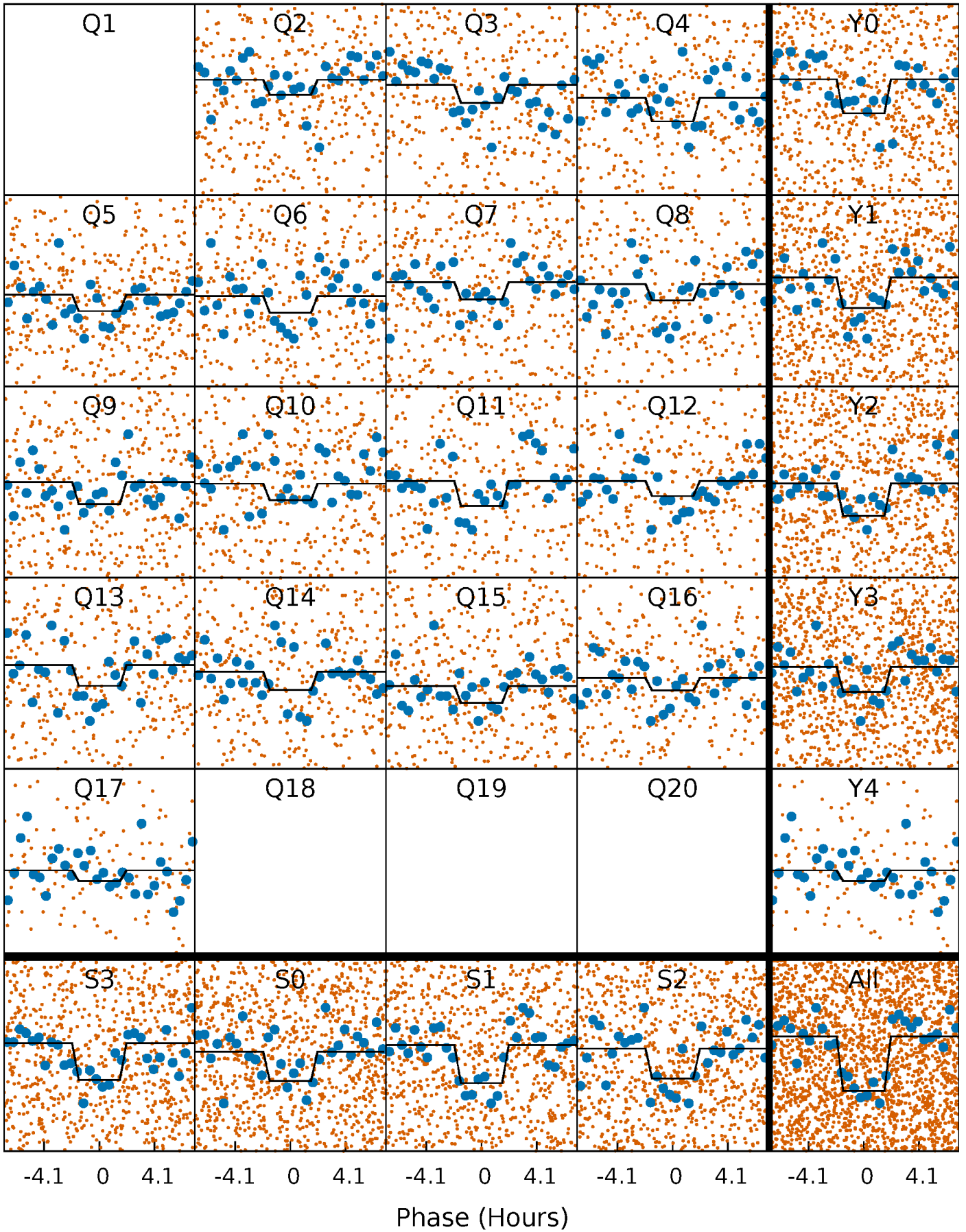
# DV Quarter-Phased Transit Curves

TCE 011672354-01 P= 5.296507 Days  $T_0=131.875689$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

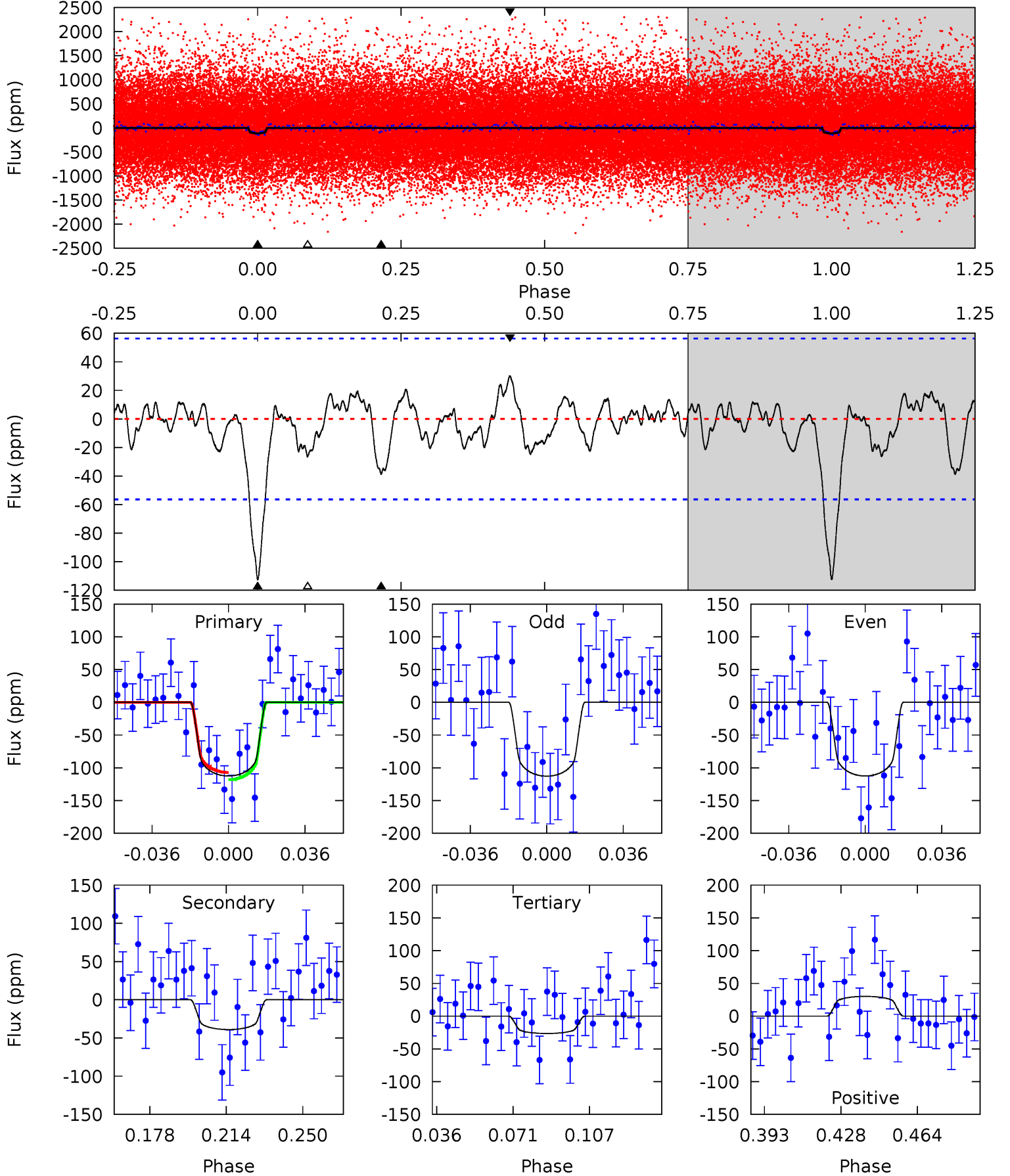
TCE 011672354-01 P= 5.296644 Days  $T_0=131.856174$  (BKJD)



# DV Model-Shift Uniqueness Test

011672354-01, P = 5.296507 Days, E = 131.875689 Days

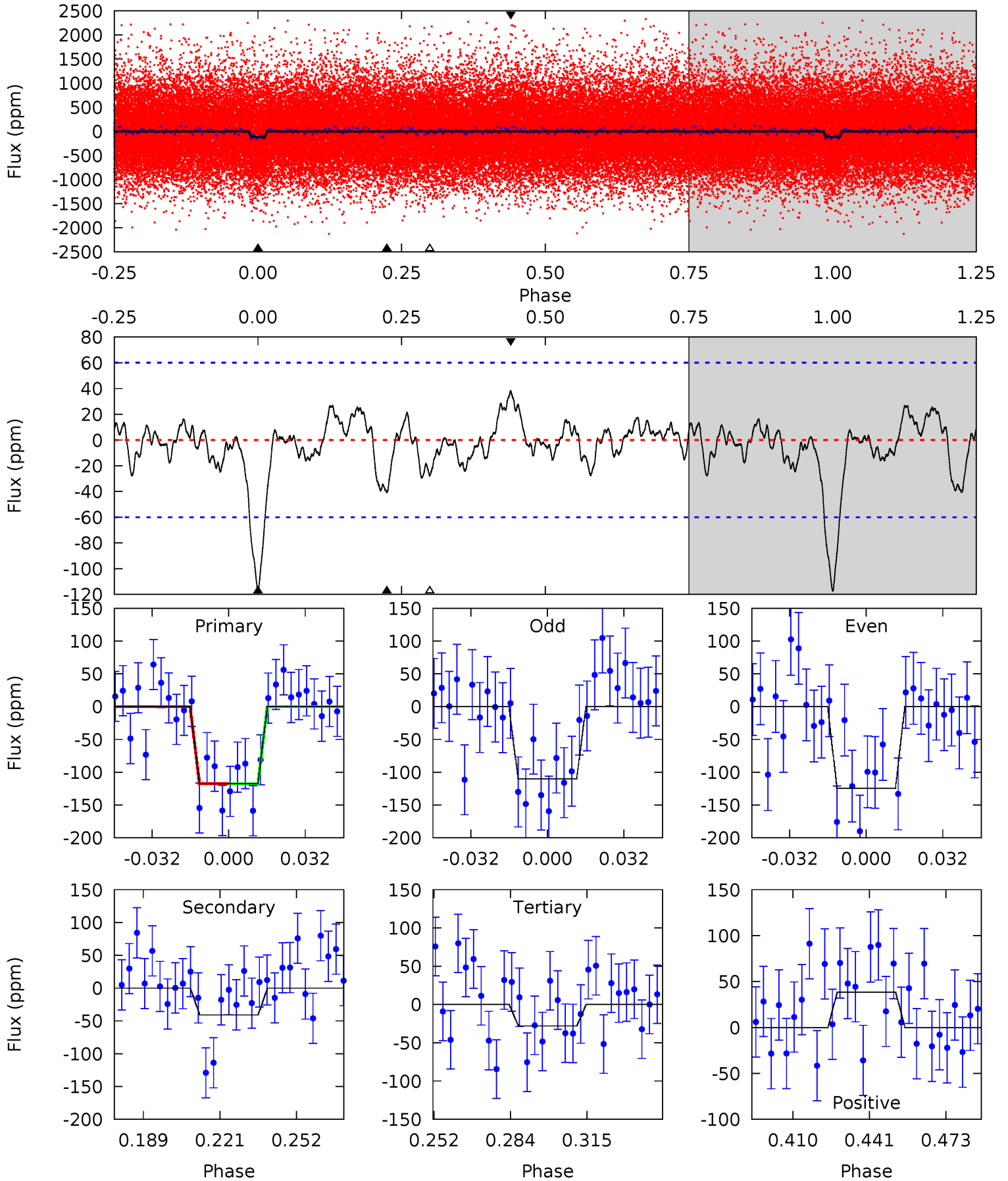
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.53	3.30	2.25	2.55	4.78	2.10	0.98	7.28	6.98	1.06	0.75	0.01	1.15	0.21	0.47



# Alt Model-Shift Uniqueness Test

011672354-01, P = 5.296644 Days, E = 131.856174 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
9.40	3.27	2.24	3.07	4.80	2.15	1.03	7.15	6.33	1.02	0.20	0.59	1.05	0.25	0.01





### Stellar Parameters For KIC 011672354

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6268^{+173}_{-260}$	$4.429^{+0.054}_{-0.216}$	$0.070^{+0.250}_{-0.300}$	$1.100^{+0.365}_{-0.122}$	$1.188^{+0.158}_{-0.158}$	$1.257^{+0.357}_{-0.659}$
	+3%/-4%	+1%/-5%	+357%/-429%	+33%/-11%	+13%/-13%	+28%/-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 011672354-01 / KOI 7471.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-39 \pm 12$	$1.65^{+0.98}_{-0.79}$	$1655^{+126}_{-92}$	$4424^{+1439}_{-653}$	$28^{+79}_{-17}$
Alt.	$-41 \pm 13$	$1.42^{+0.87}_{-0.76}$	$1645^{+131}_{-93}$	$4802^{+2155}_{-849}$	$41^{+163}_{-26}$

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

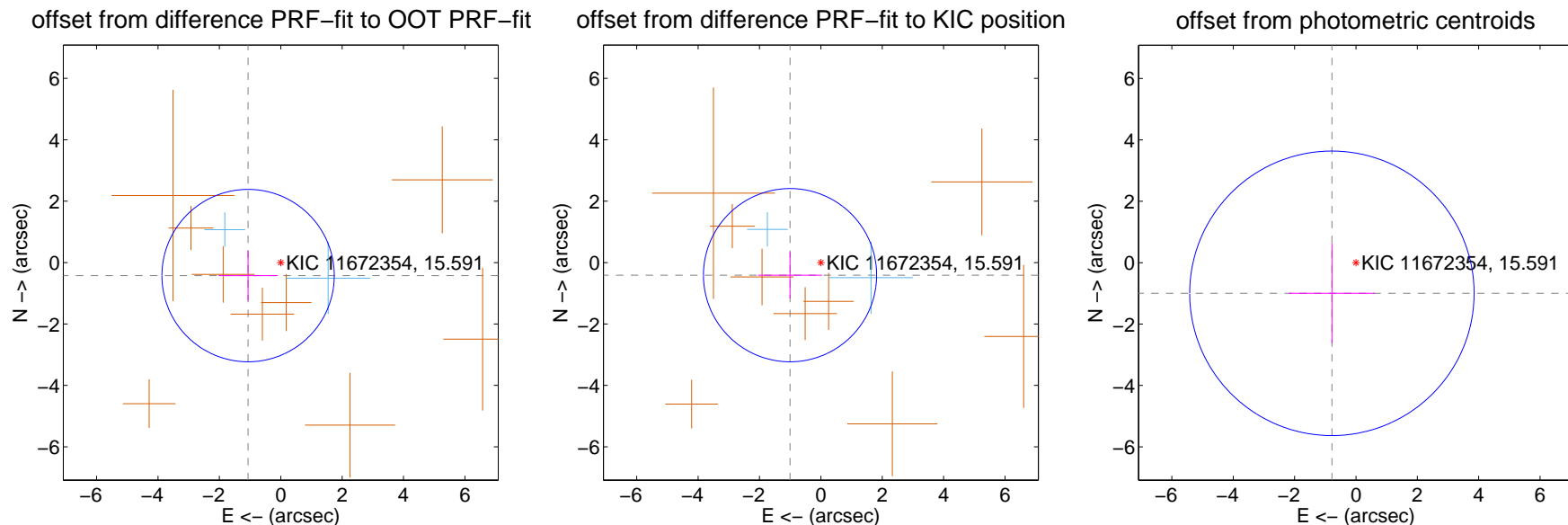
## DV Centroid Data

Supplemental centroid analysis for 011672354-01. Kepler magnitude: 15.59. Transit SNR 8.73

There are 2 quarters with good PRF difference image offsets

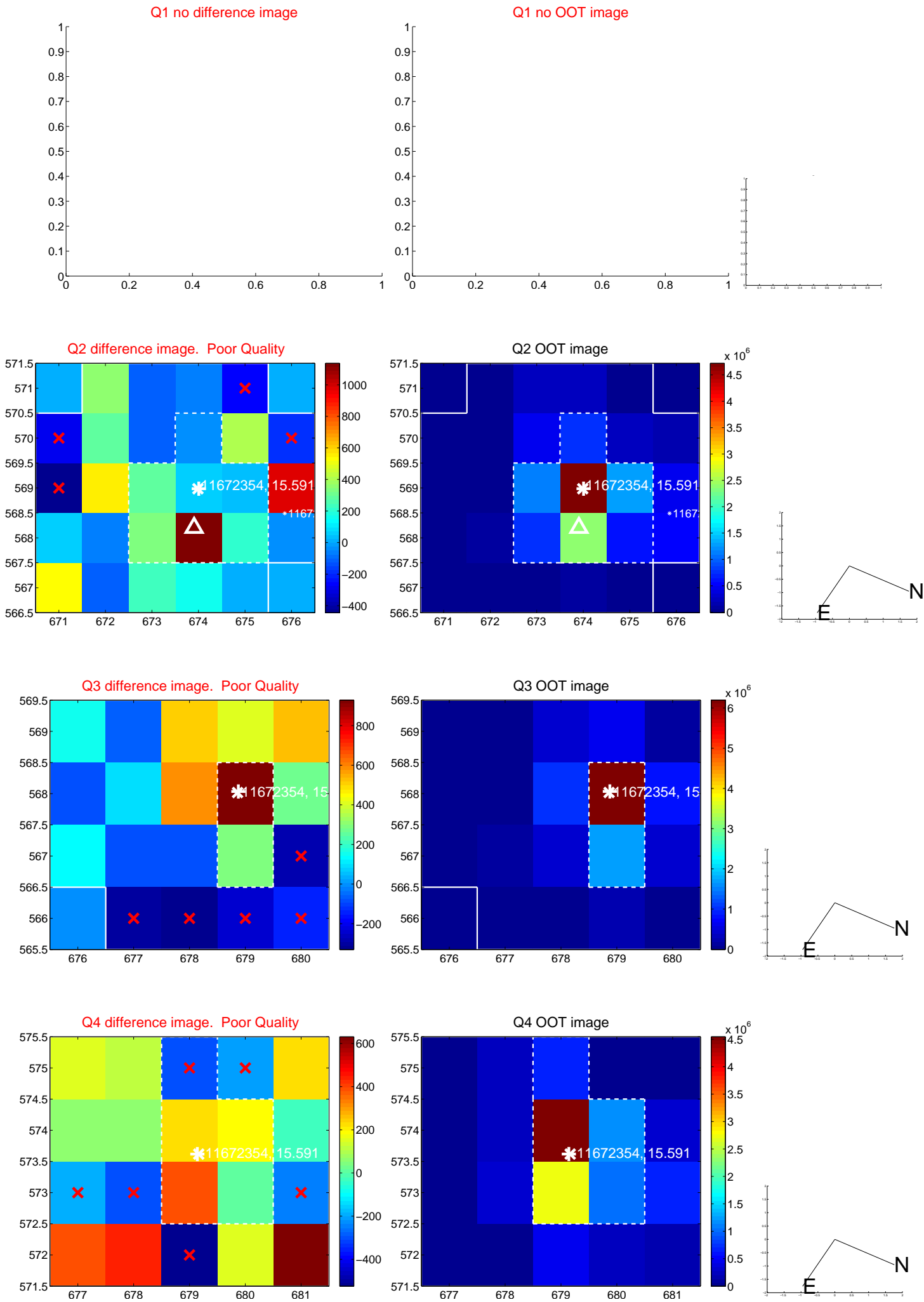
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.145 \pm 0.936$	1.22	$1.064 \pm 0.965$	$-0.423 \pm 0.817$
PRF-fit source offset from KIC position	$1.085 \pm 0.941$	1.15	$1.004 \pm 1.040$	$-0.410 \pm 0.756$
photometric centroid source offset	$1.27 \pm 1.55$	0.82	$0.78 \pm 1.40$	$-1.00 \pm 1.63$

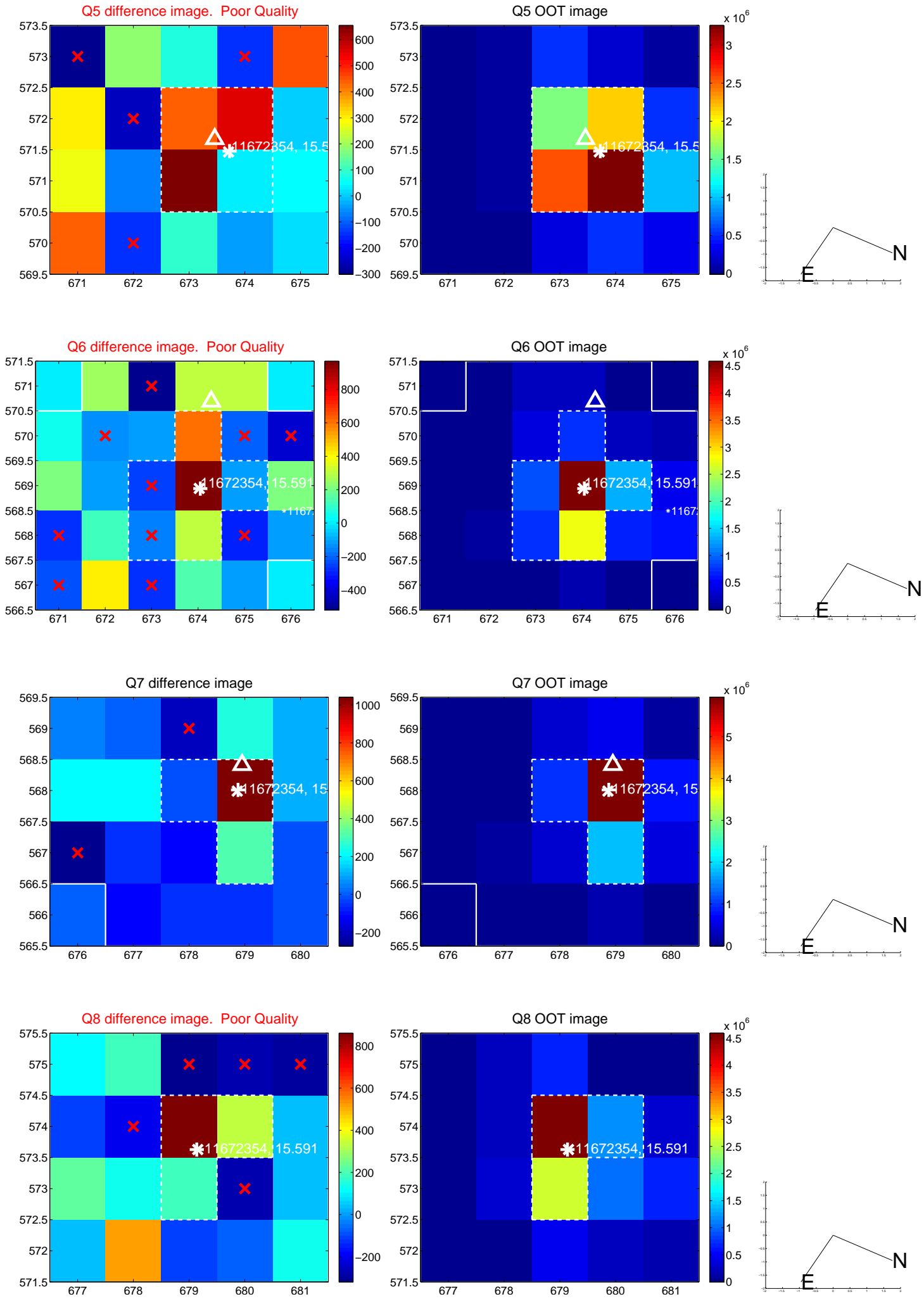


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

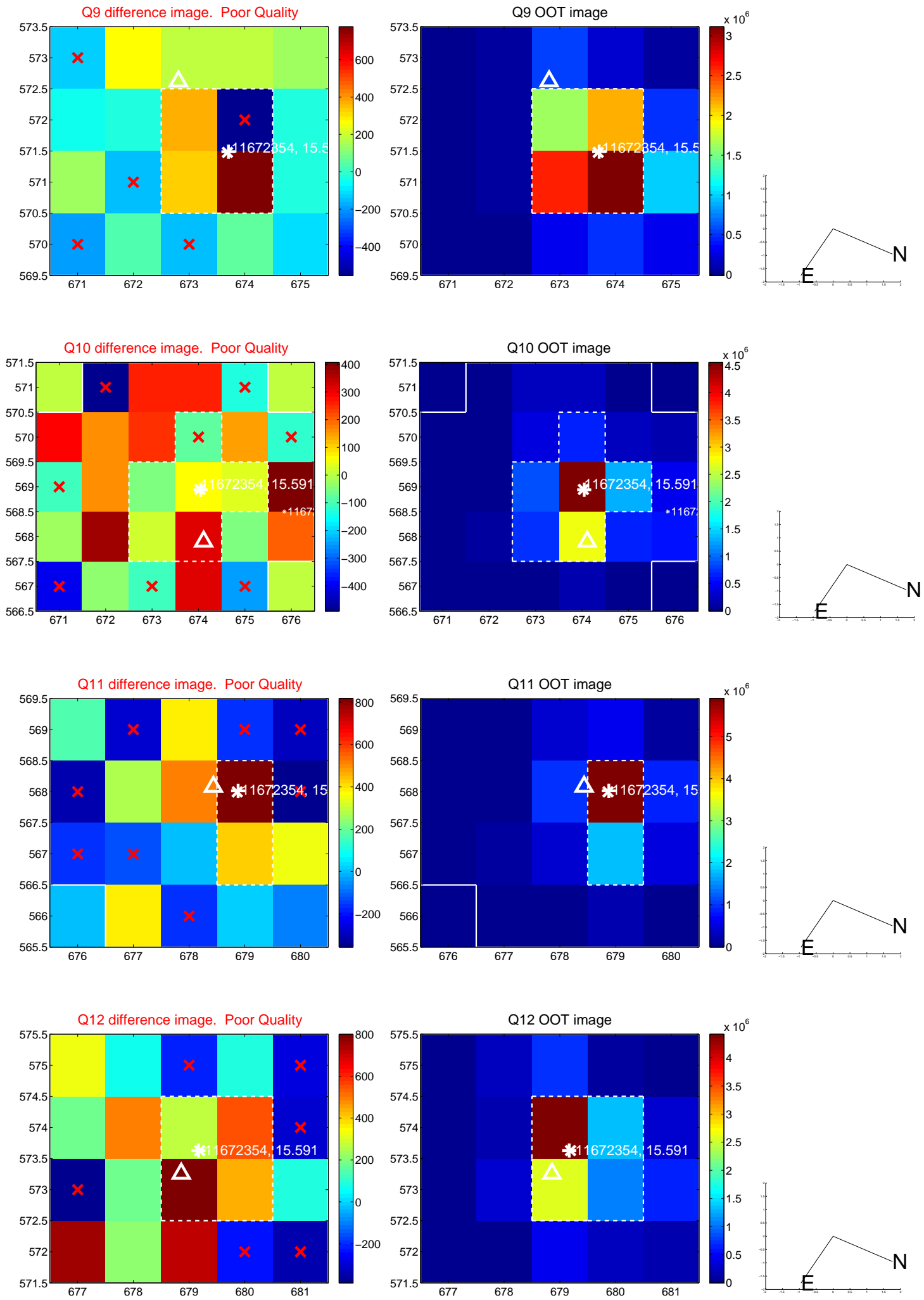


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

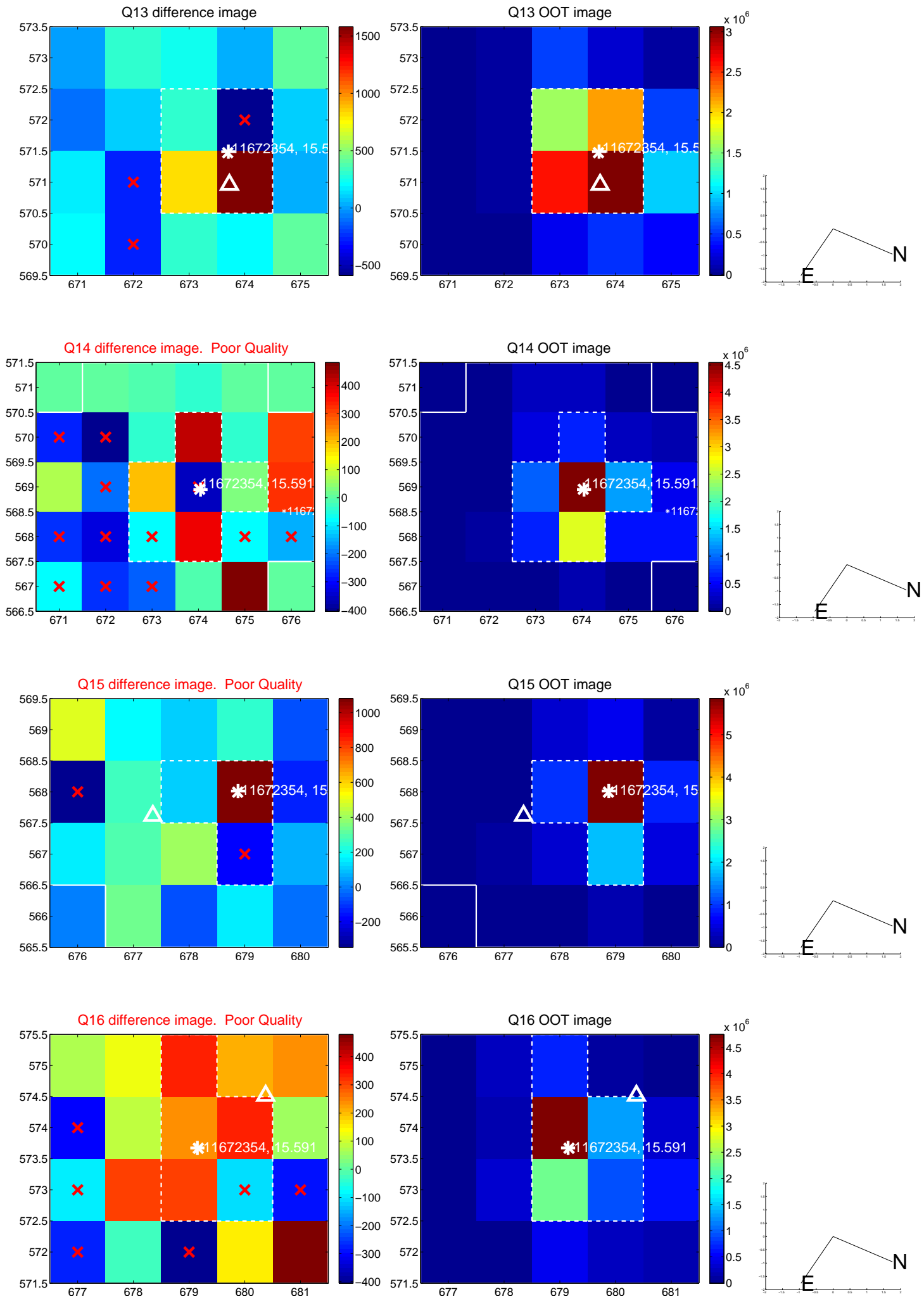




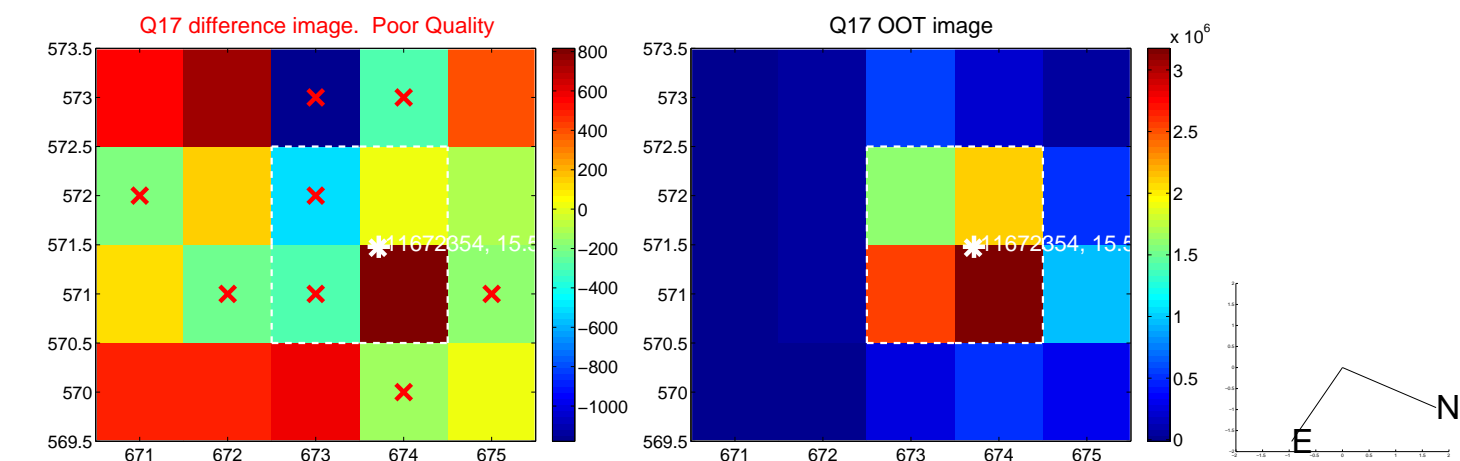
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



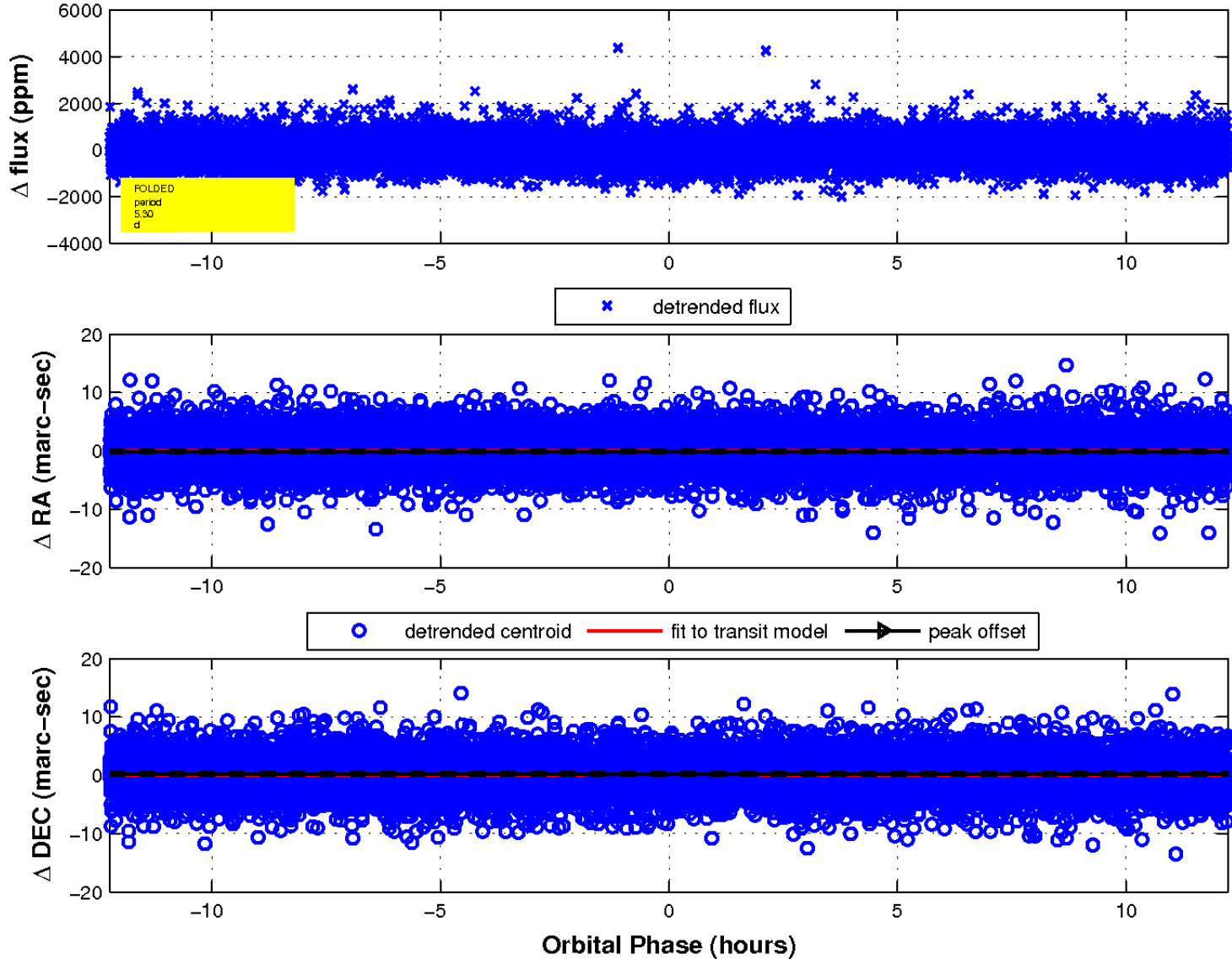
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

