

# KIC 012317342

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
012317342-01	OBS	No	1.468669	132.176228	11.4	14.628	11.5	10.8	1.82	7366	0.63	9846.29

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012317342-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

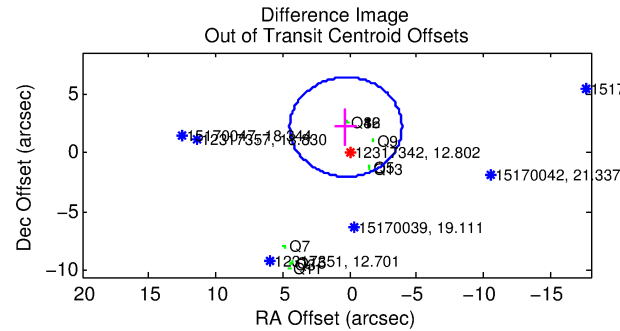
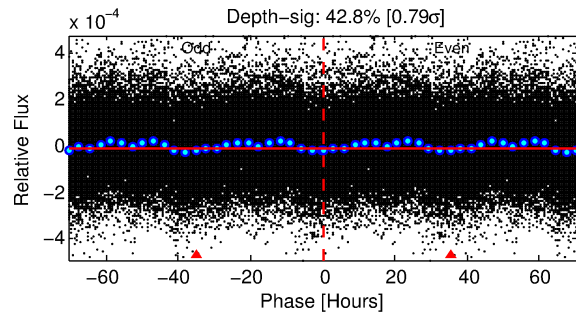
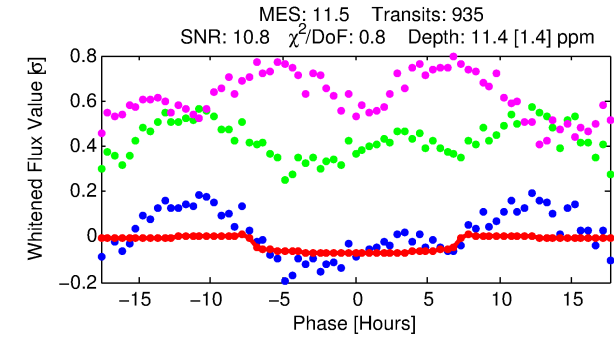
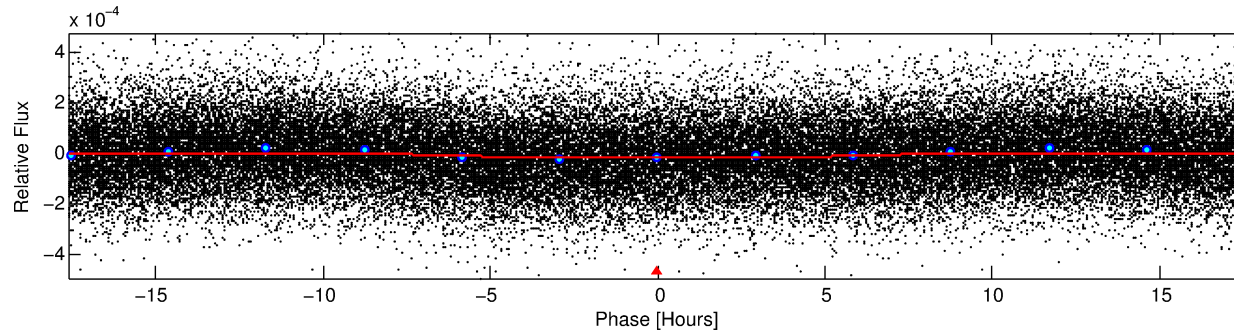
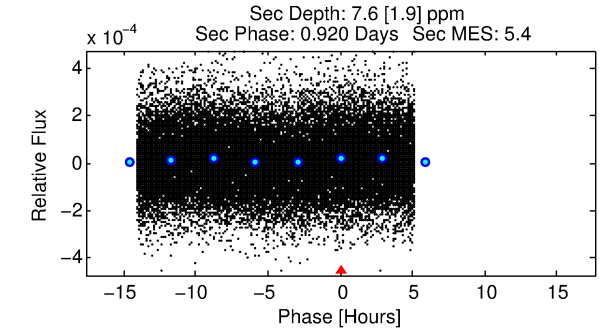
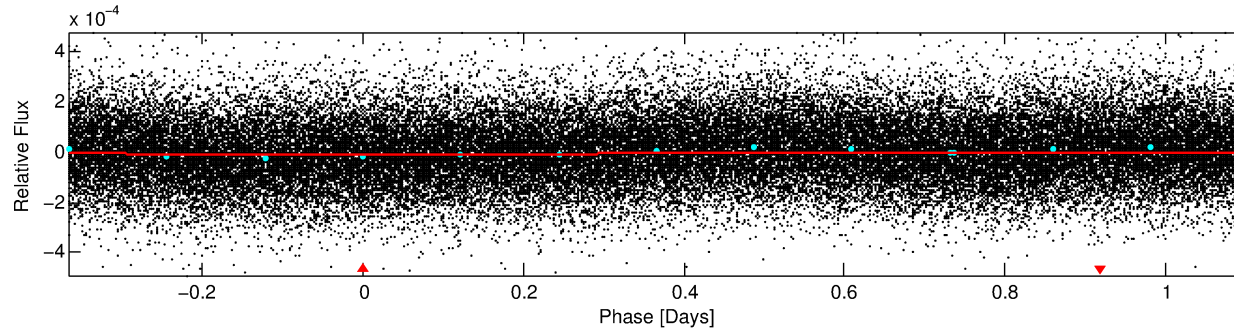
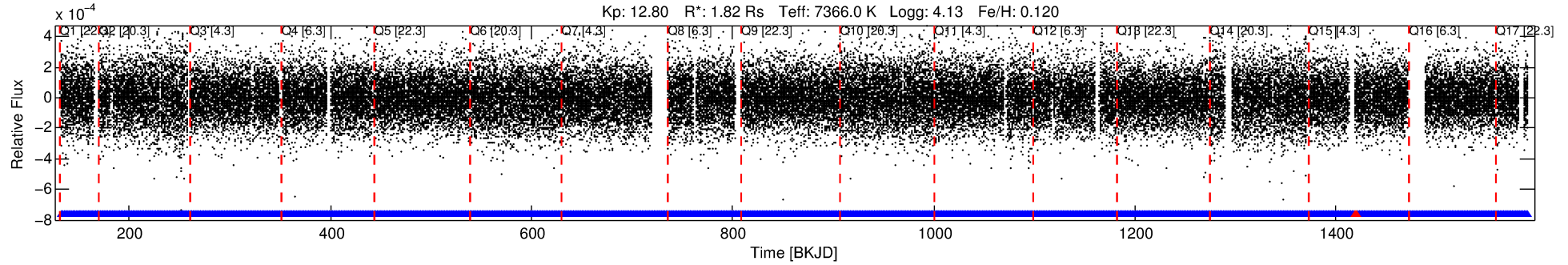
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 012317342-01

No Significant Match Found

# DV One-Page Summary

KIC: 12317342 Candidate: 1 of 1 Period: 1.469 d



## DV Fit Results:

Period = 1.46867 [0.00003] d  
Epoch = 132.1762 [0.0103] BKJD  
Rp/R\* = 0.0032 [0.0030]  
a/R\* = 1.04 [0.40]  
b = 0.32 [16.07]  
Seff = 9846.29 [4108.19]  
Teq = 2540 [265] K  
Rp = 0.63 [0.62] Re  
a = 0.0299 [0.0080] AU  
Ag = 9.40 [18.12] [0.46 $\sigma$ ]  
Teffp = 6876 [3264] K [1.32 $\sigma$ ]

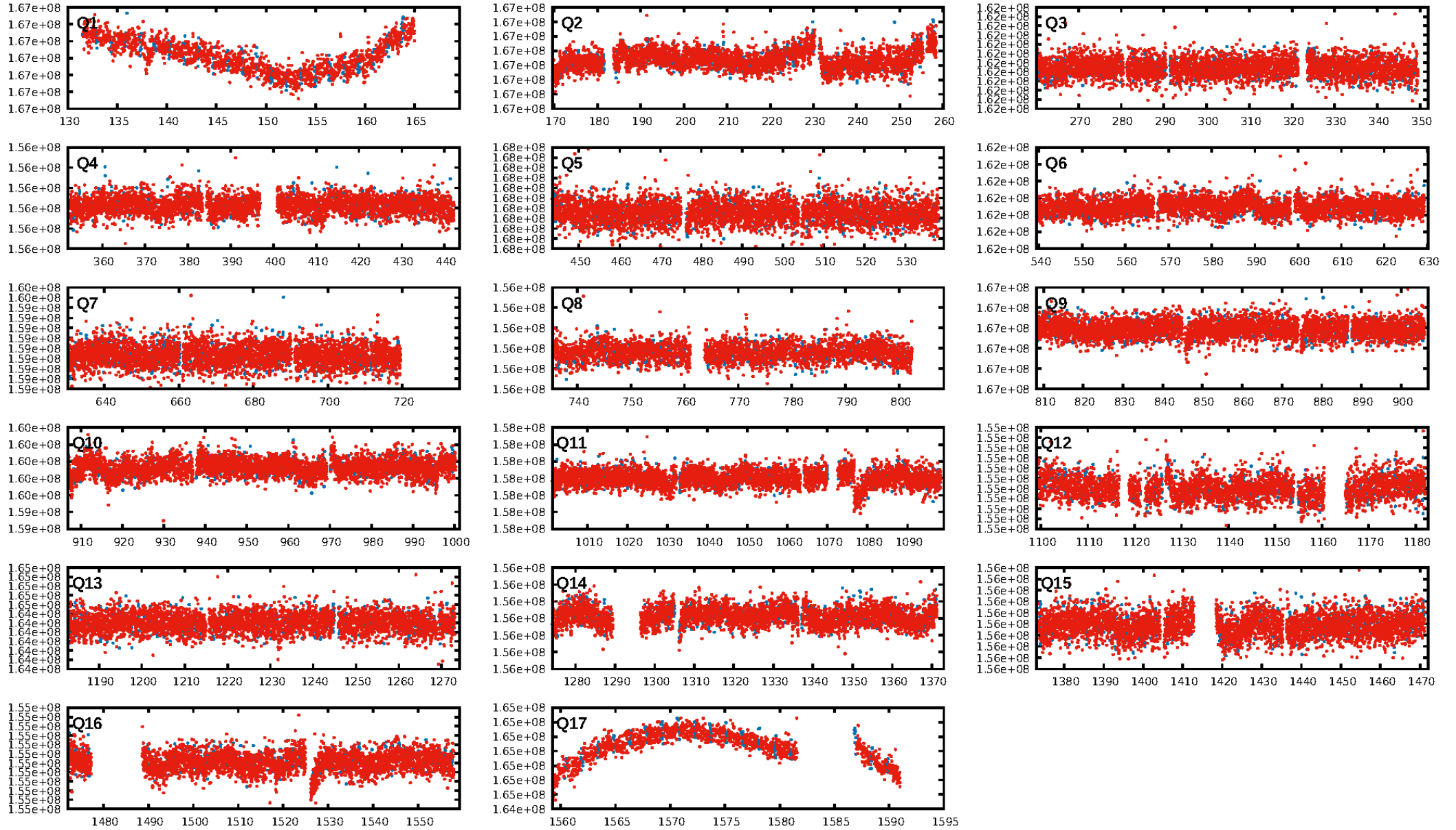
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [891/893]  
GhostDiagnostic-chr: 2.95  
Centroid-sig: 30.1%  
Centroid-so: 1.875 arcsec [0.89 $\sigma$ ]  
OotOffset-rm: 2.203 arcsec [1.58 $\sigma$ ]  
KicOffset-rm: 2.046 arcsec [1.45 $\sigma$ ]  
OotOffset-st: 0/4/4/3 [11]  
KicOffset-st: 0/4/4/3 [11]  
DiffImageQuality-fgm: 0.00 [0/11]  
DiffImageOverlap-fno: 1.00 [17/17]

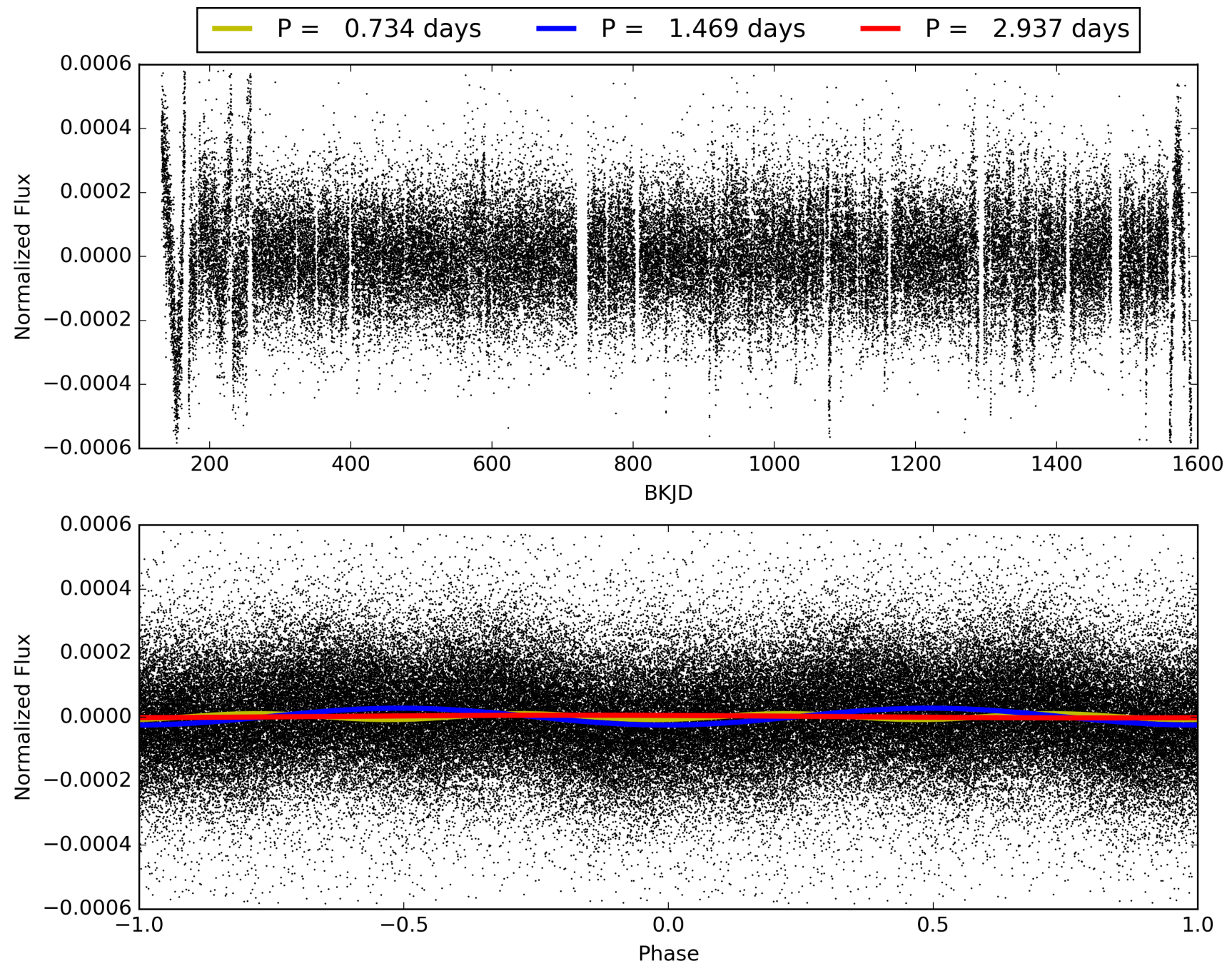
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:56:25 Z

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

# TCE 012317342-01, PDC Light Curves



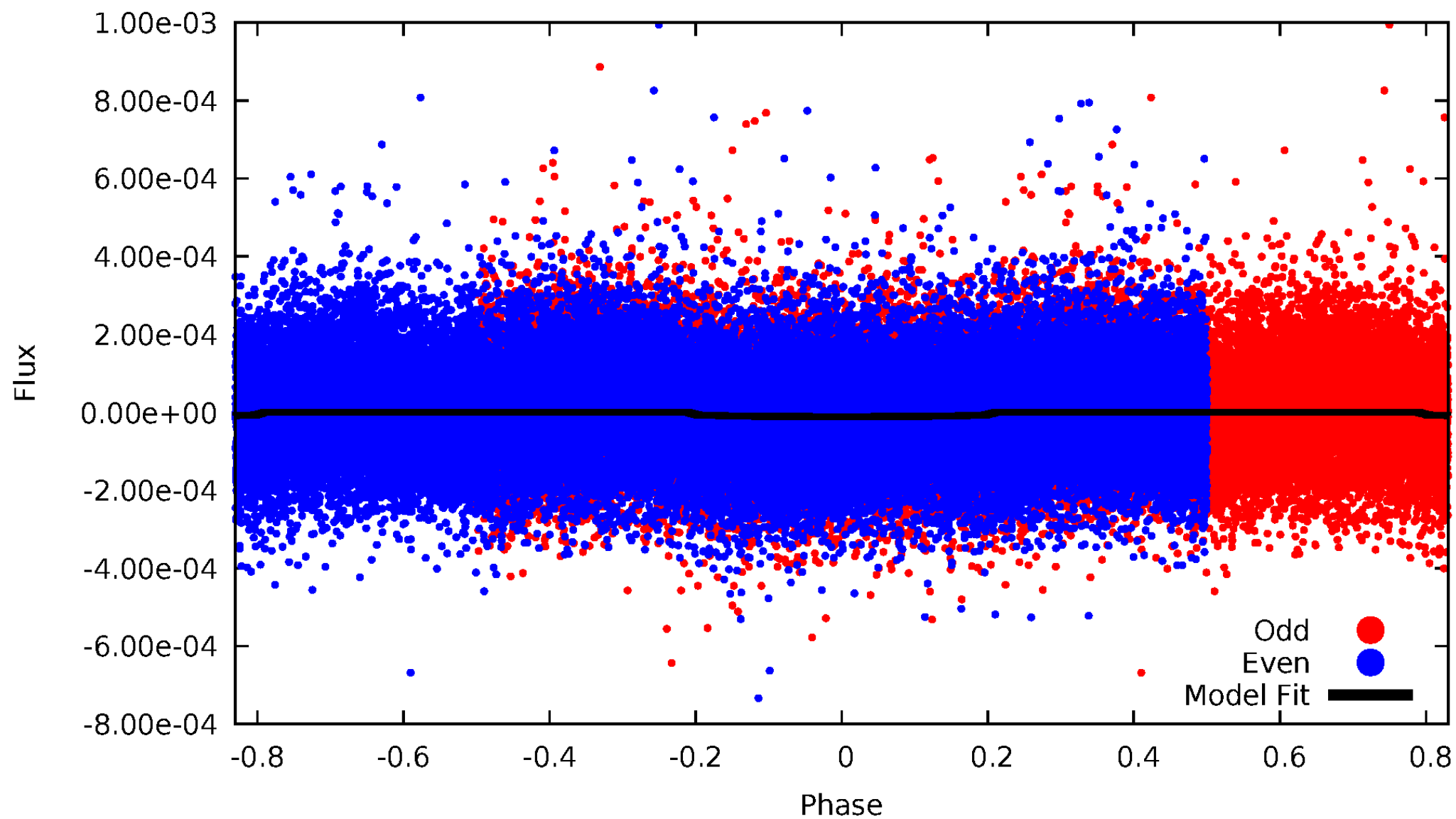
TCE 012317342-01





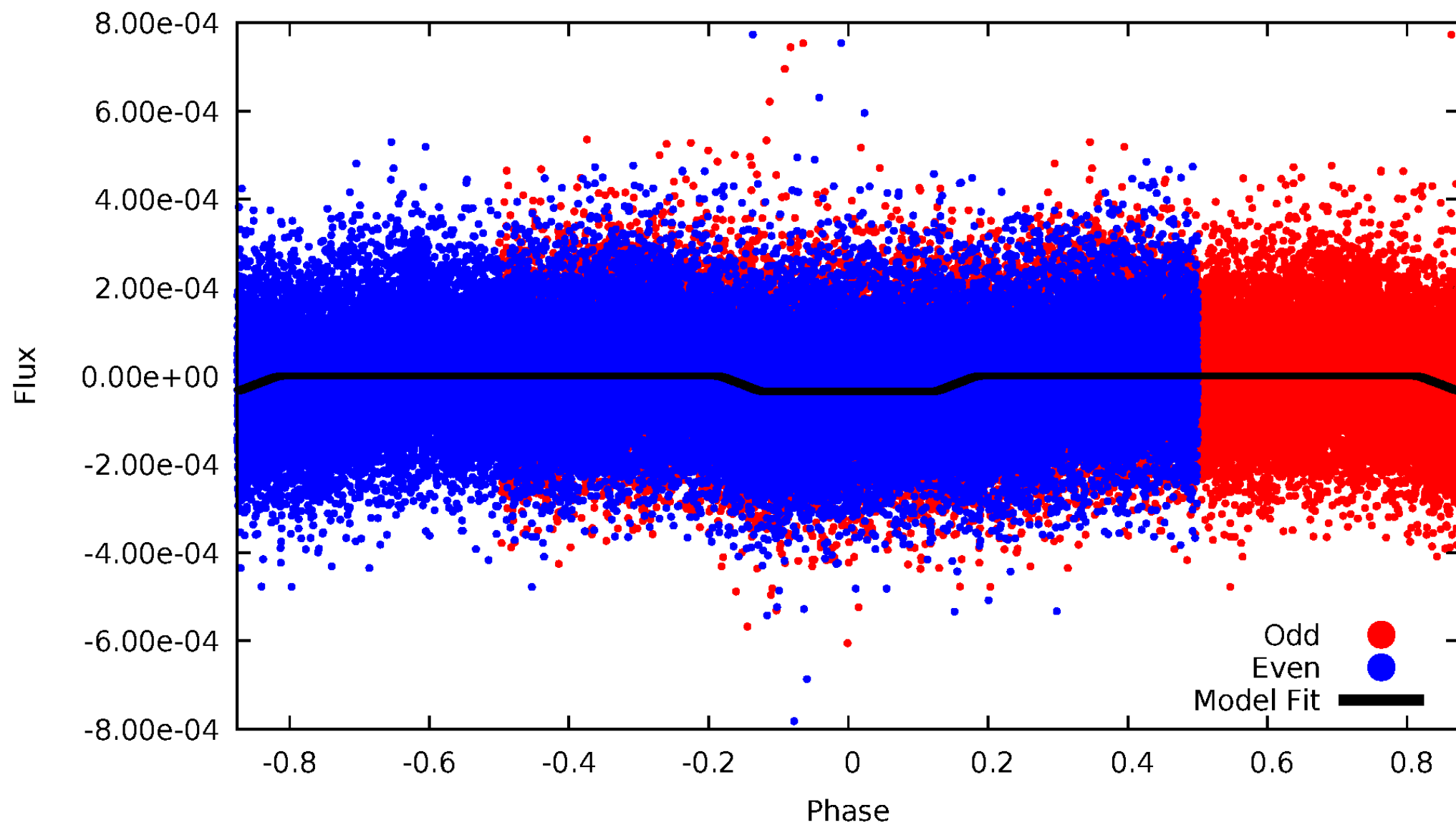
# DV Odd/Even

TCE 012317342-01



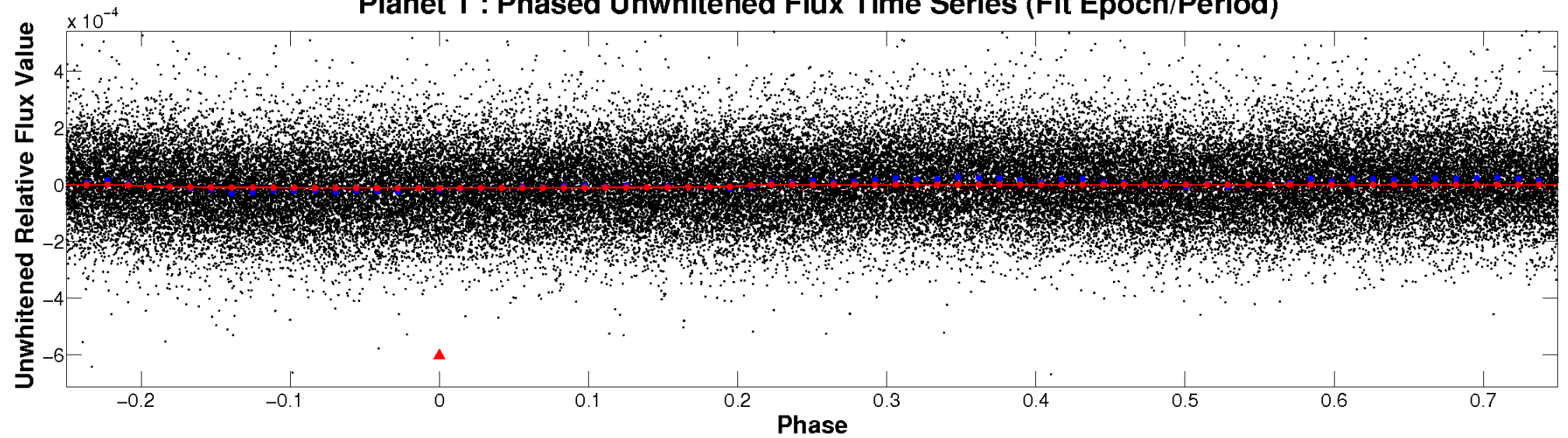
# ALT Odd/Even

TCE 012317342-01

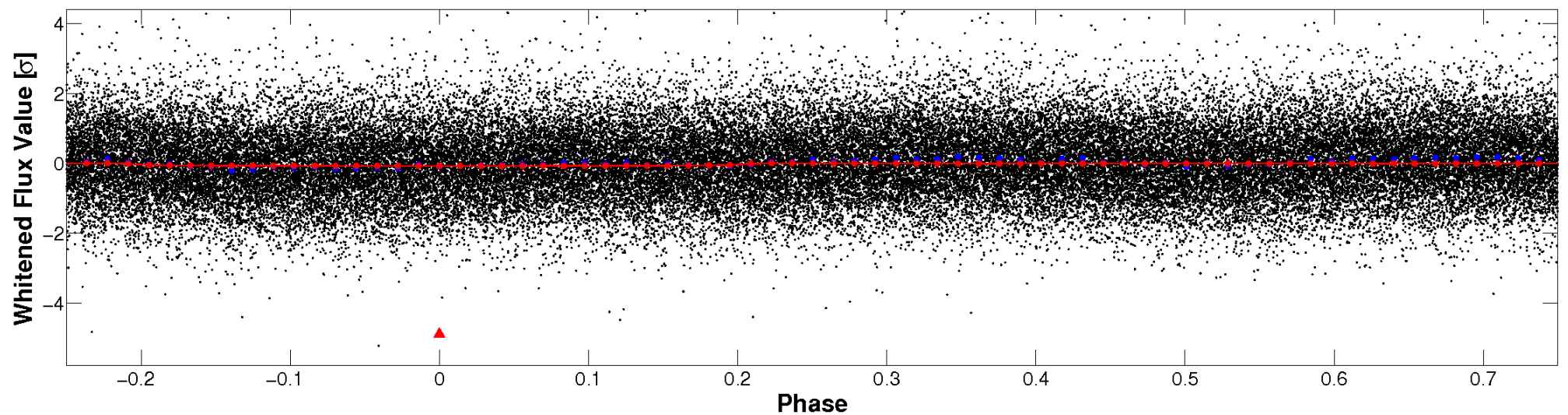


# Non-Whitened Vs. Whitened Light Curve

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

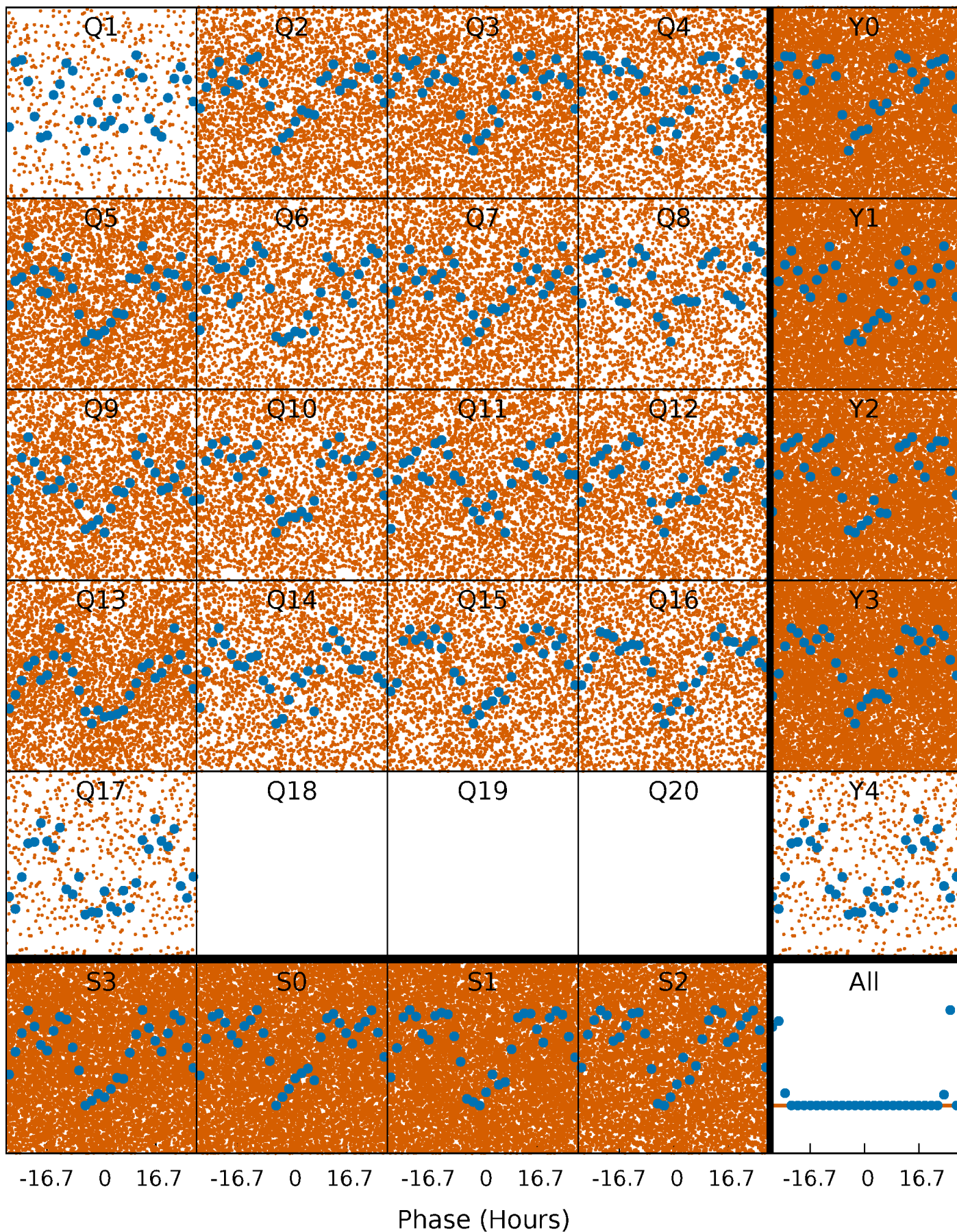


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

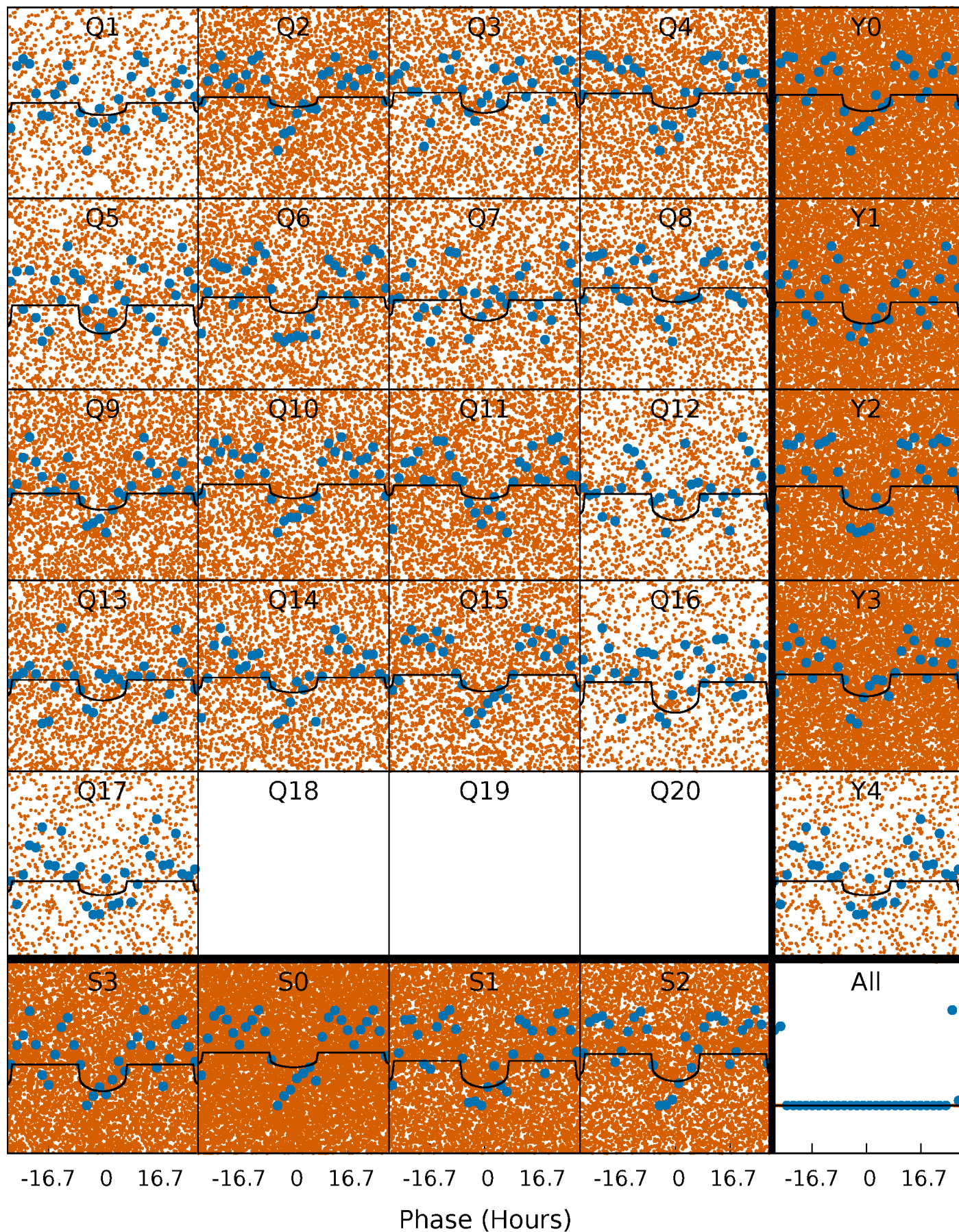
TCE 012317342-01 P= 1.468669 Days  $T_0=132.176228$  (BKJD)





# DV Quarter-Phased Transit Curves

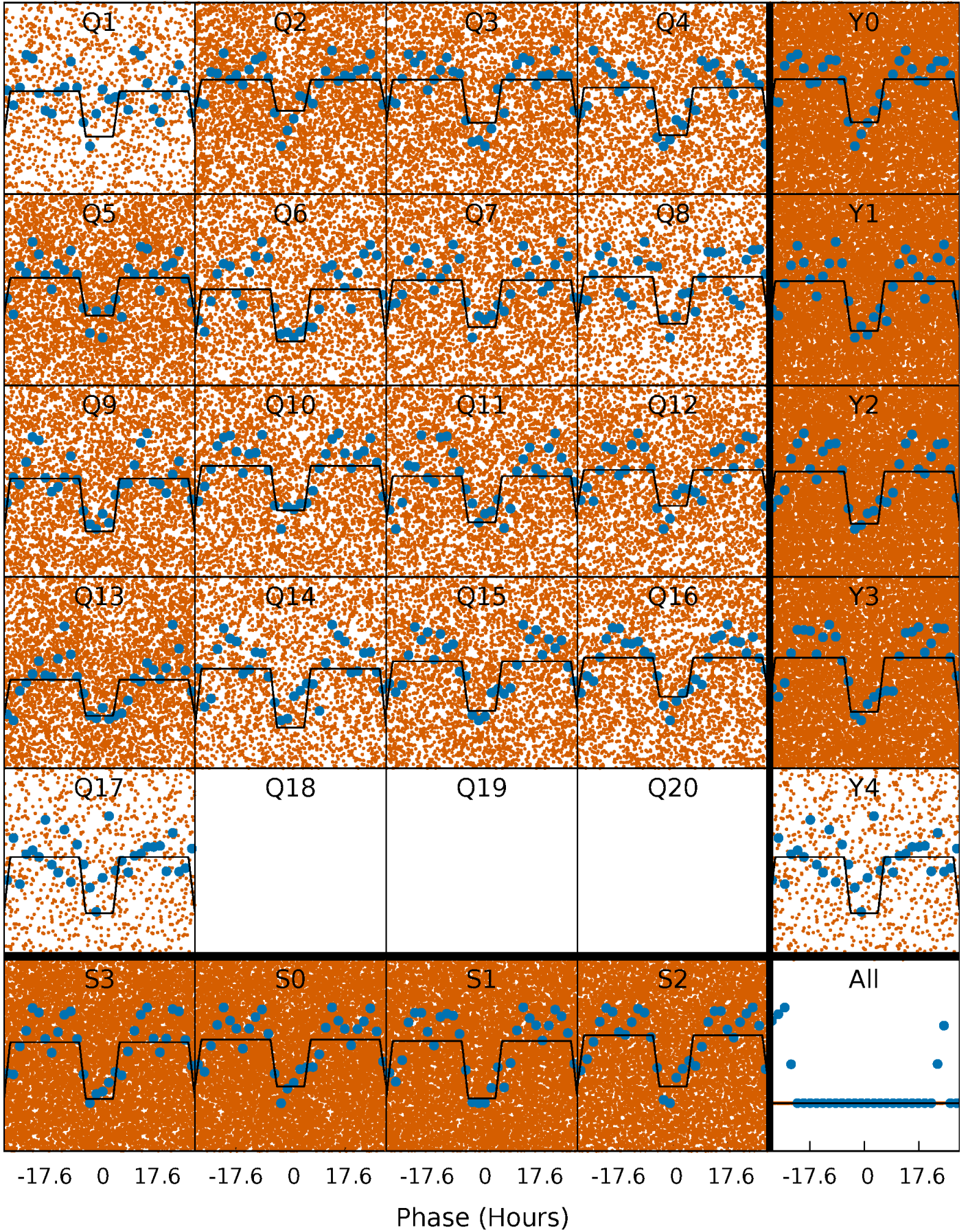
TCE 012317342-01 P= 1.468669 Days  $T_0=132.176228$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

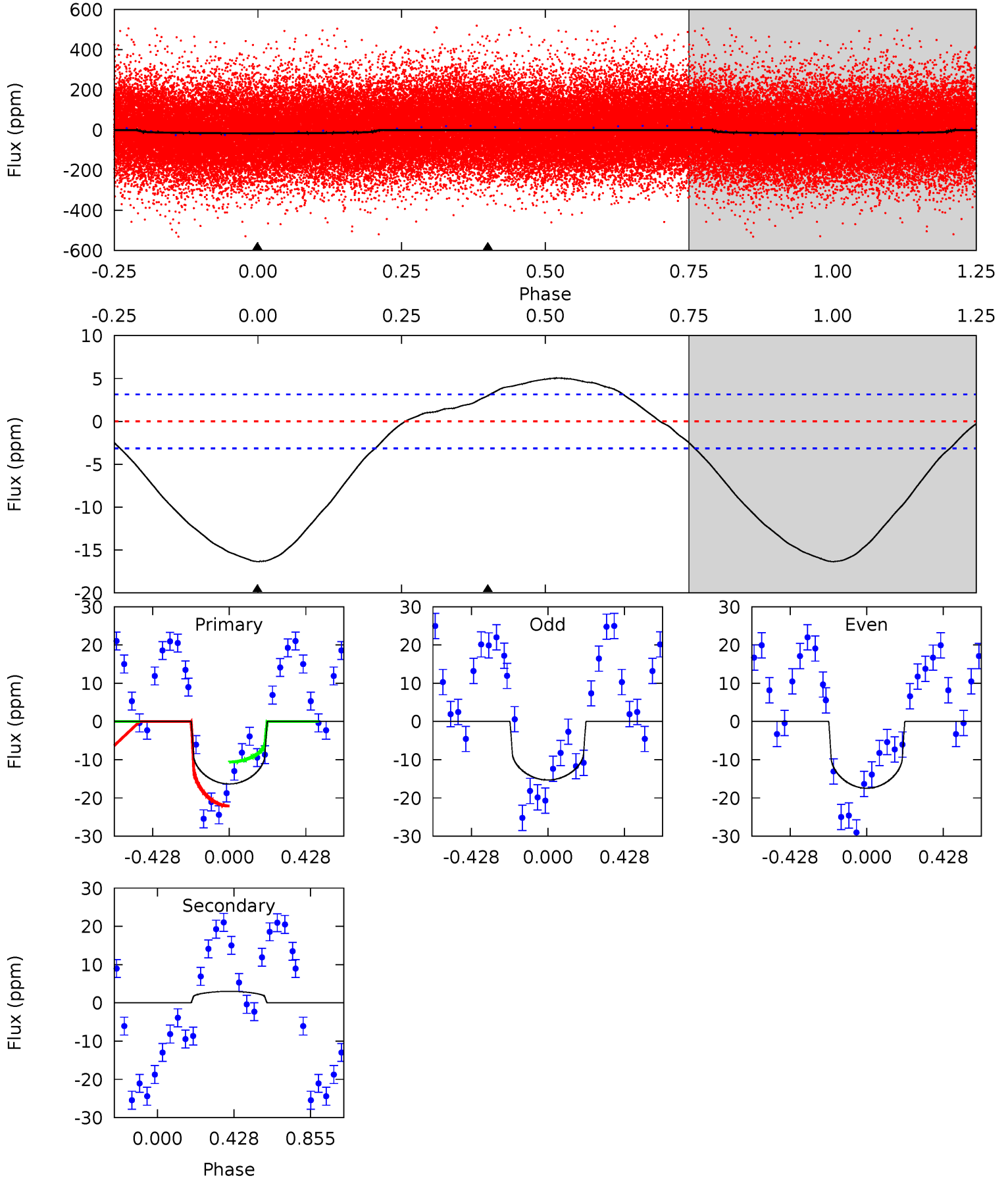
TCE 012317342-01 P= 1.468663 Days  $T_0=132.123170$  (BKJD)



# DV Model-Shift Uniqueness Test

012317342-01, P = 1.468669 Days, E = 130.707559 Days

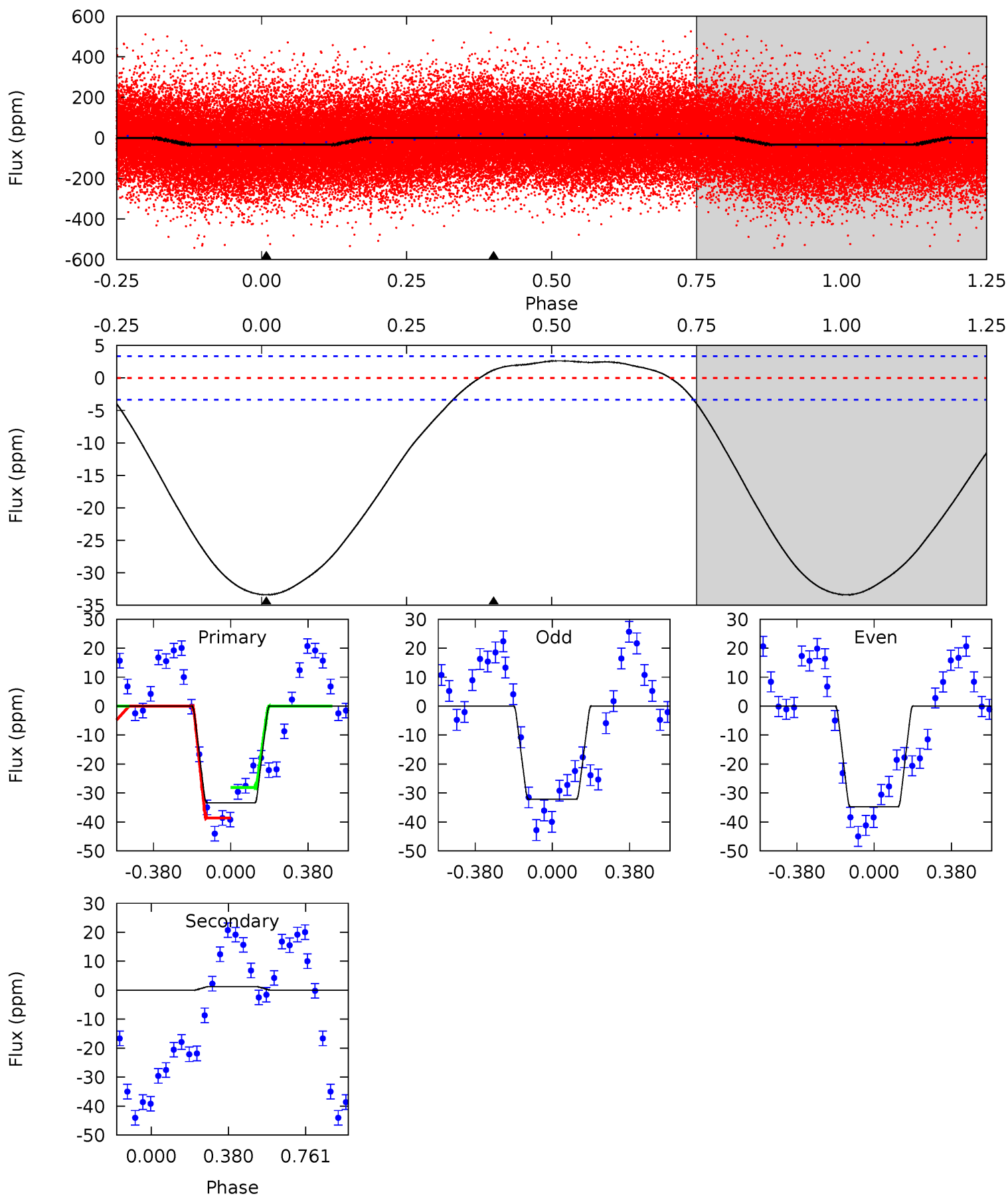
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	-4.04	0	0	4.25	0.79	1.96	22.0	22.0	-4.04	-4.04	1.46	1.09	0.24	7.91



# Alt Model-Shift Uniqueness Test

012317342-01, P = 1.468663 Days, E = 130.654507 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
42.5	-1.55	0	0	4.28	0.88	2.31	42.5	42.5	-1.55	-1.55	1.68	1.00	0.07	6.79





### Stellar Parameters For KIC 012317342

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7366^{+206}_{-324}$	$4.132^{+0.109}_{-0.202}$	$0.120^{+0.200}_{-0.350}$	$1.824^{+0.593}_{-0.319}$	$1.645^{+0.207}_{-0.253}$	$0.382^{+0.194}_{-0.206}$
	+3%/-4%	+3%/-5%	+167%/-292%	+33%/-17%	+13%/-15%	+51%/-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 012317342-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$3\pm 1$	$0.79^{+0.53}_{-0.47}$	$3582^{+268}_{-221}$	$-4997^{+762}_{-2735}$	$-2.186^{+1.433}_{-12.236}$
Alt.	$1\pm 1$	$1.20^{+0.66}_{-0.59}$	$3559^{+297}_{-215}$	$-3910^{+338}_{-837}$	$-0.364^{+0.252}_{-1.263}$

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

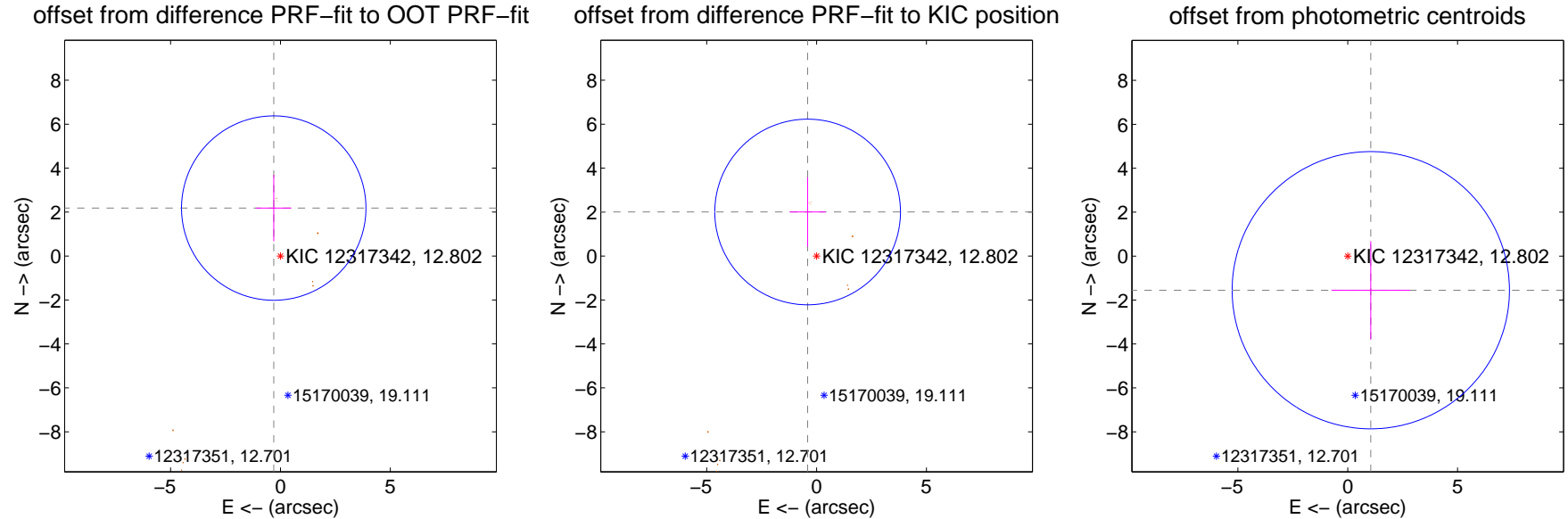
## DV Centroid Data

Supplemental centroid analysis for 012317342-01. Kepler magnitude: 12.80. Transit SNR 10.81

There are 0 quarters with good PRF difference image offsets

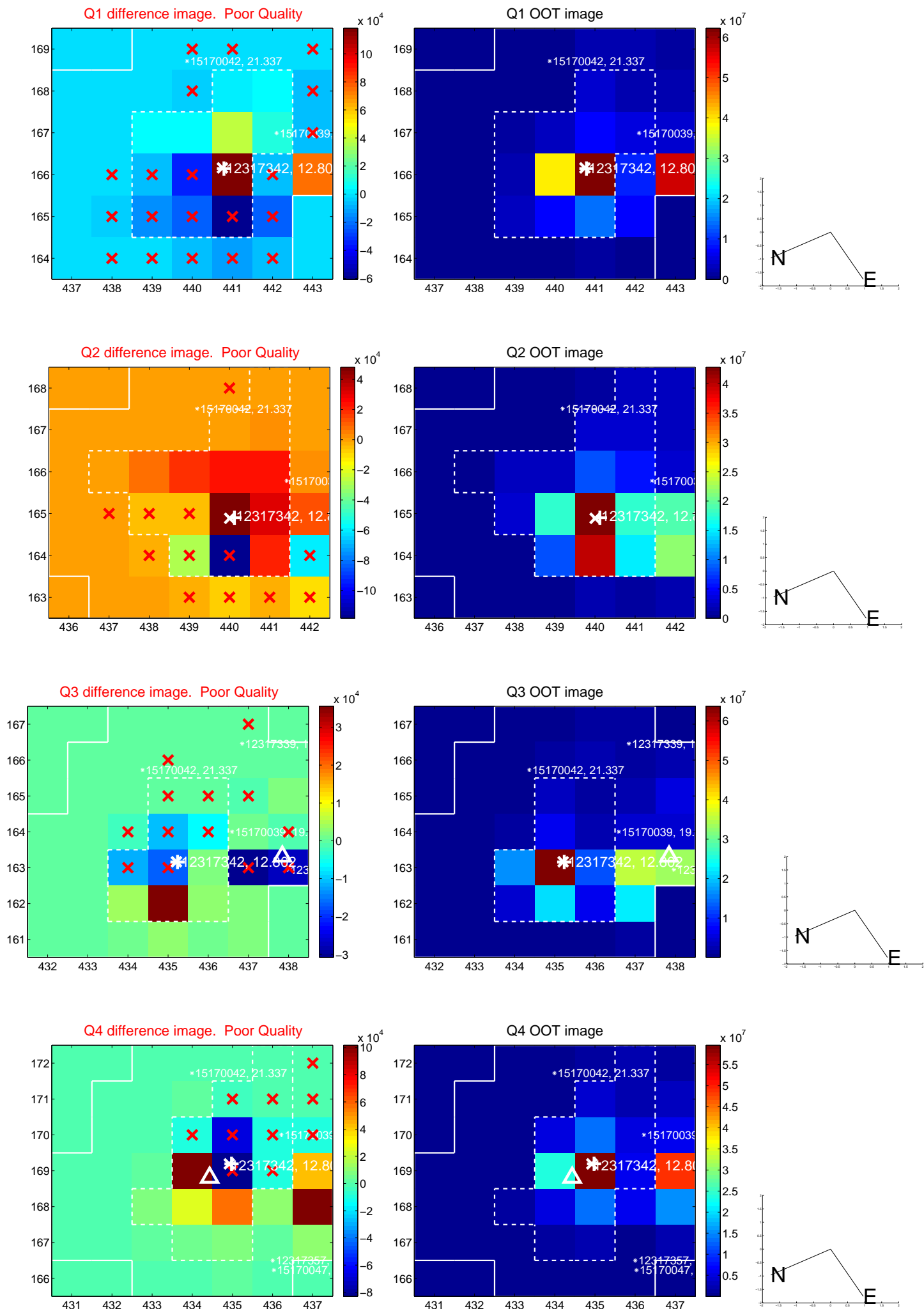
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.203 \pm 1.399$	1.58	$0.306 \pm 0.799$	$2.182 \pm 1.509$
PRF-fit source offset from KIC position	$2.046 \pm 1.408$	1.45	$0.407 \pm 0.812$	$2.005 \pm 1.579$
photometric centroid source offset	$1.87 \pm 2.10$	0.89	$-1.05 \pm 1.79$	$-1.55 \pm 2.23$

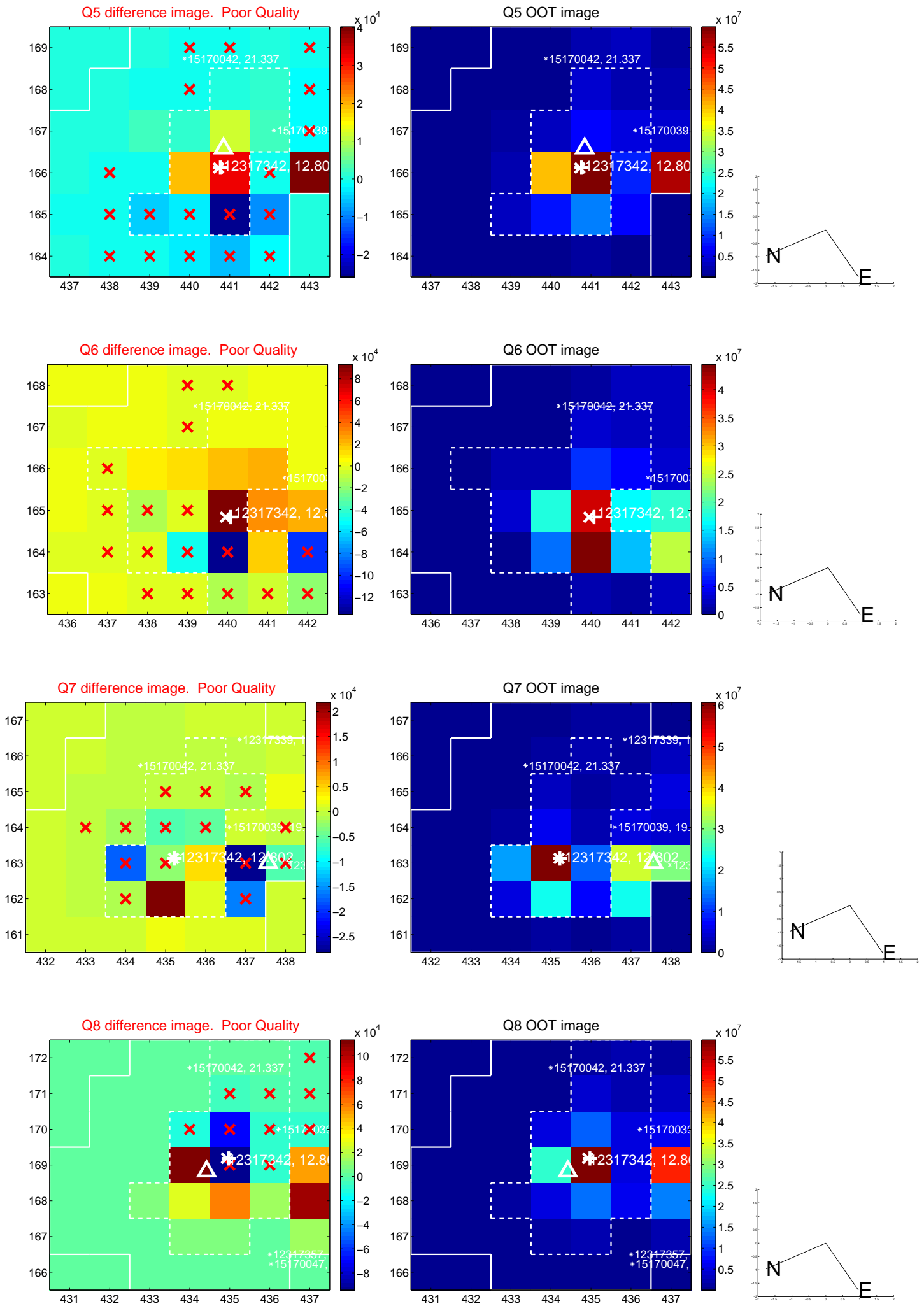


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

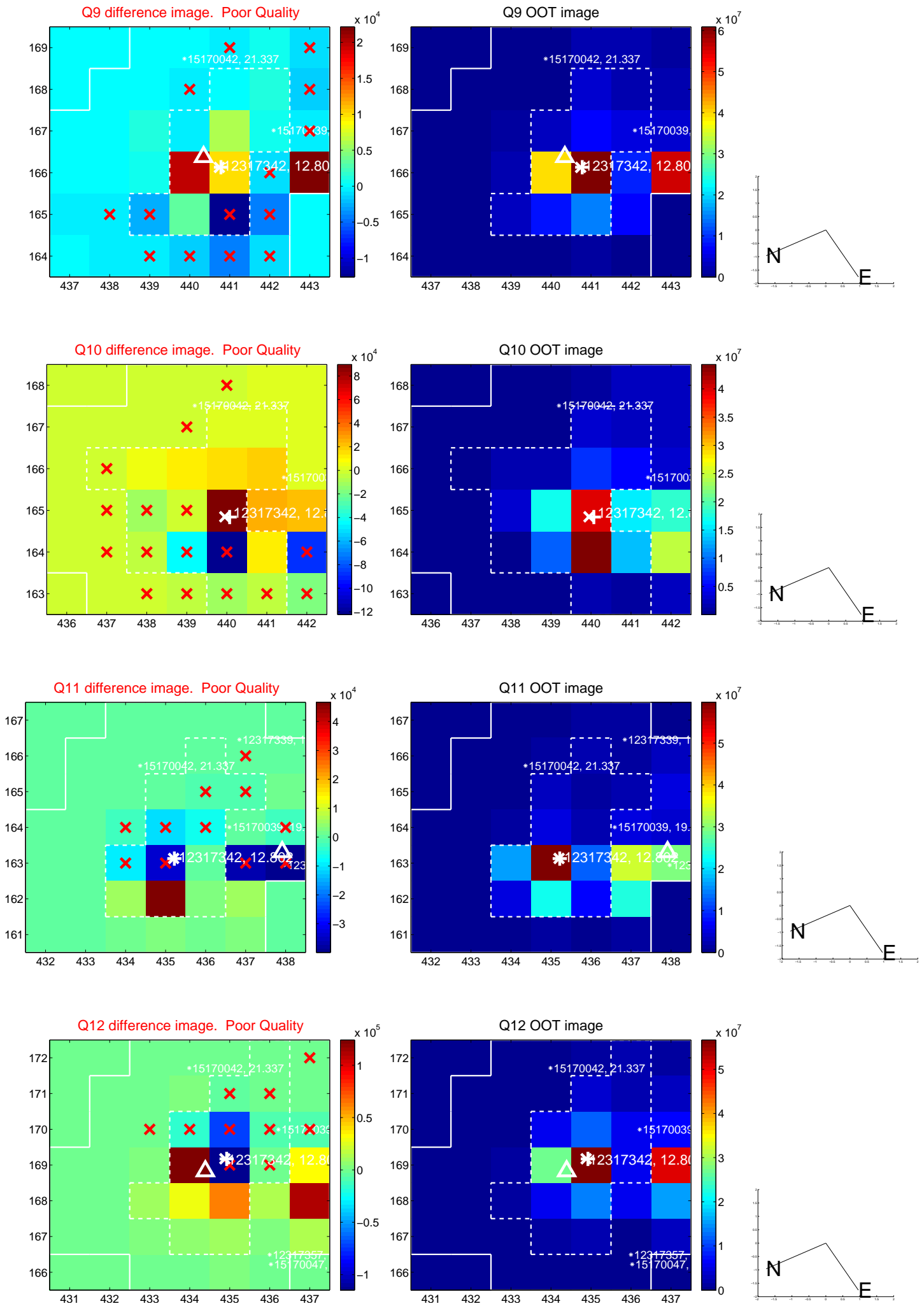


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

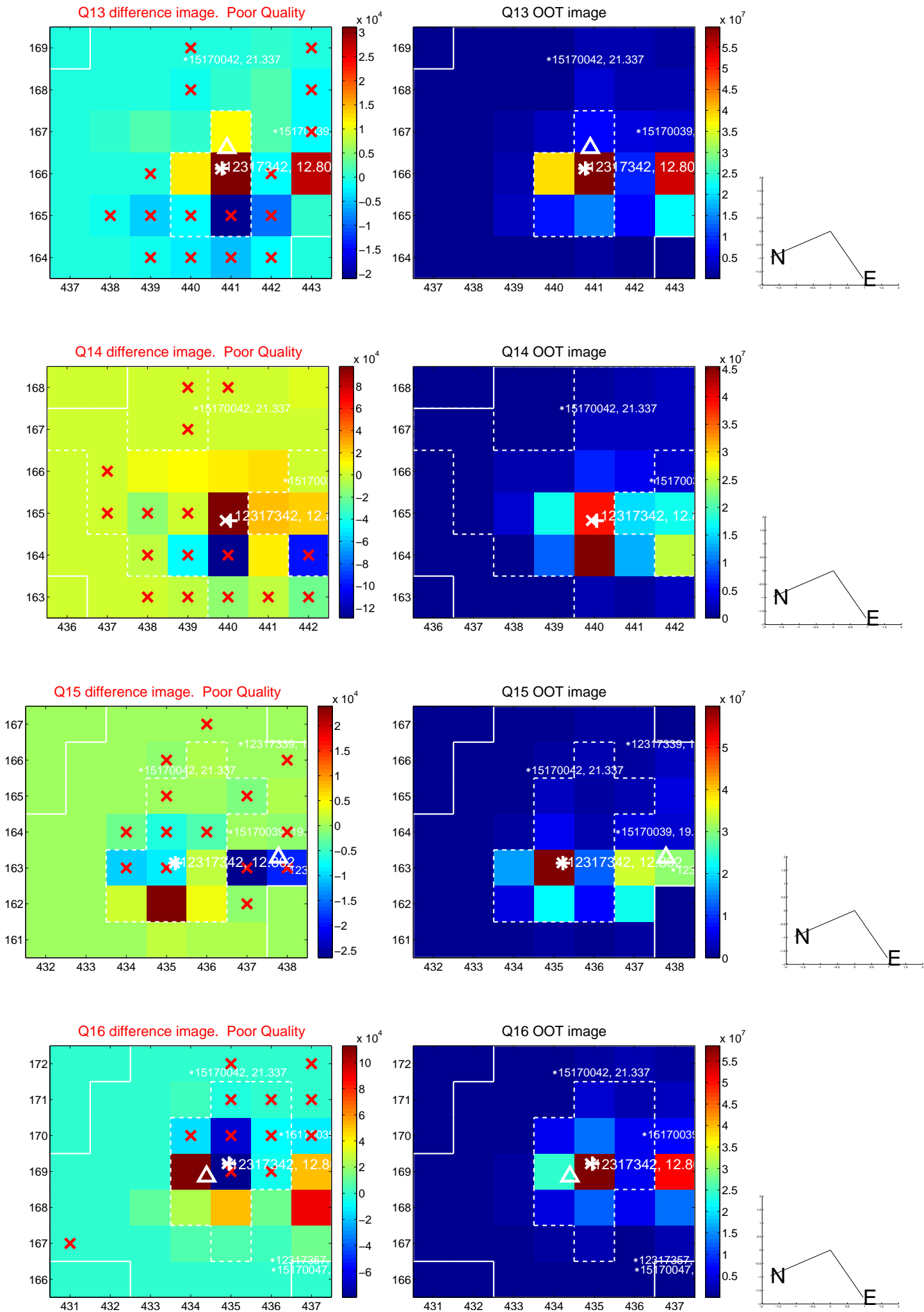




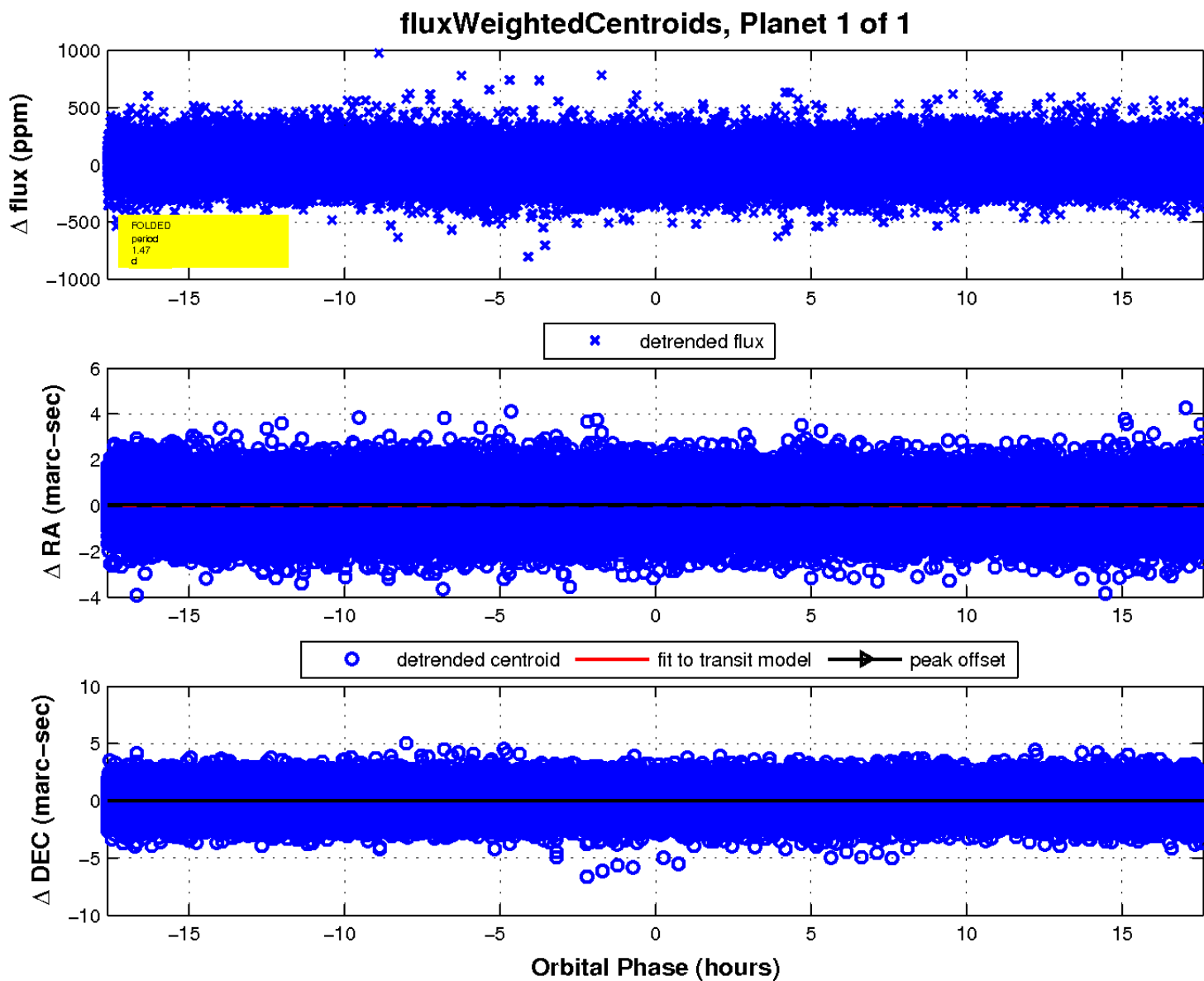
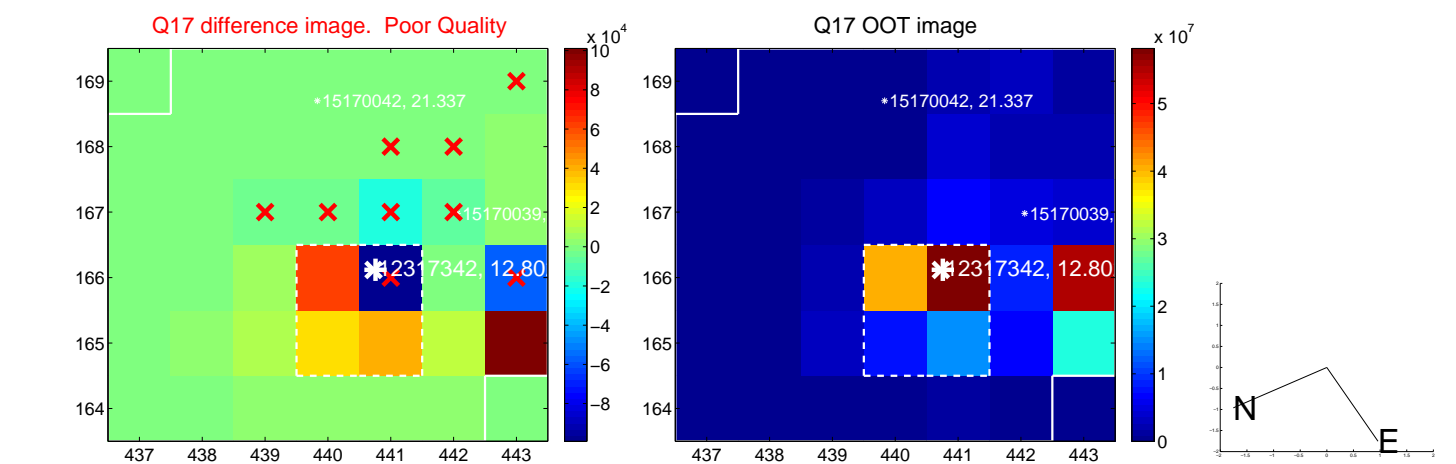
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



# UKIRT Image

Declination

