

# KIC 005904928

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005904928-01	OBS	No	1.170588	132.289964	80.6	9.367	10.2	15.2	2.38	8026	2.16	28516.84

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005904928-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

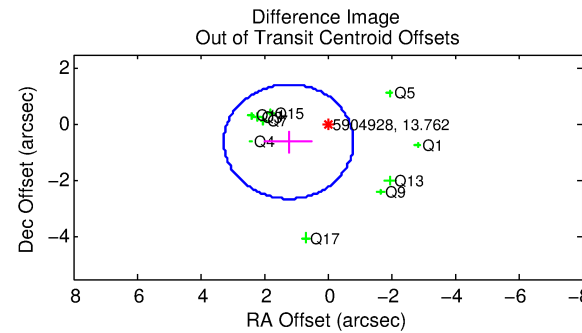
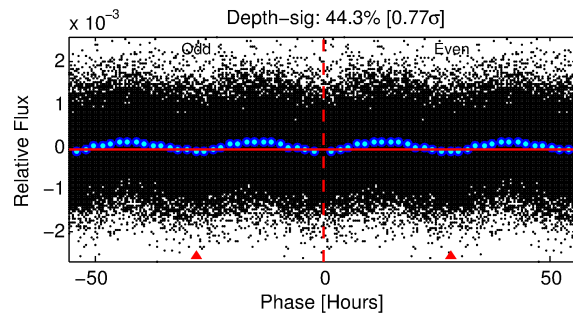
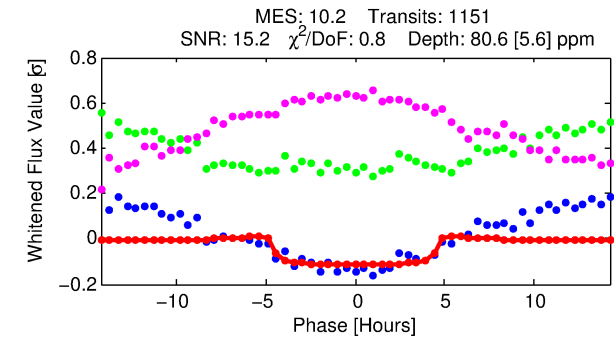
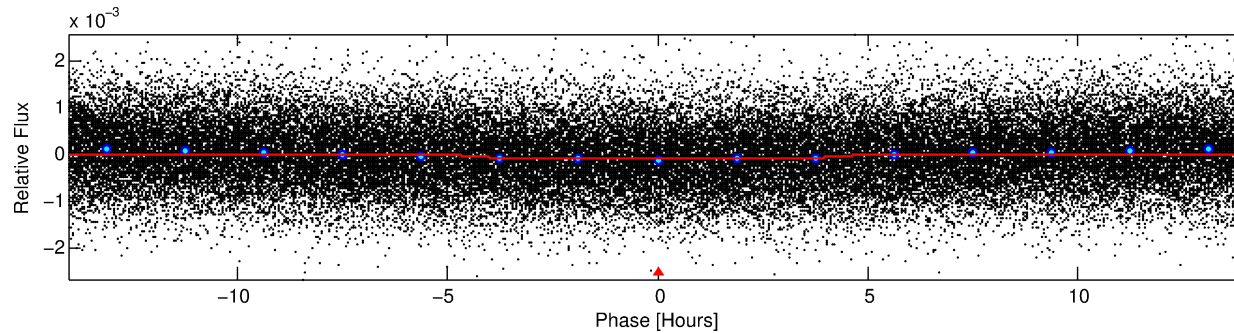
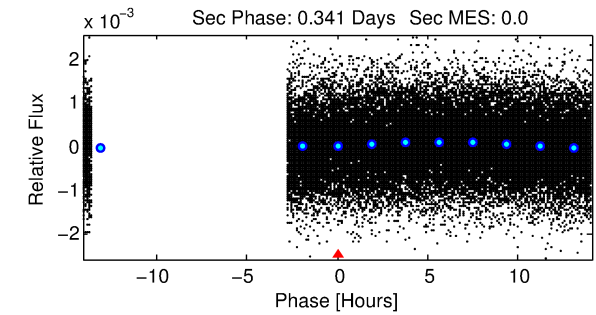
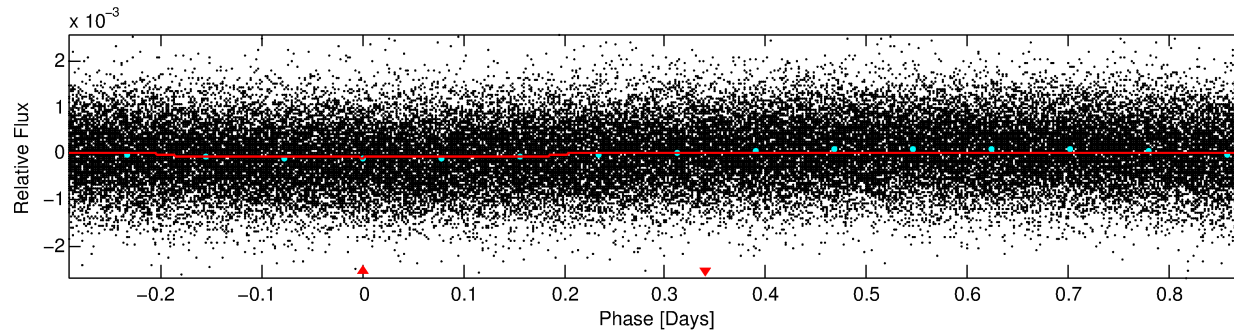
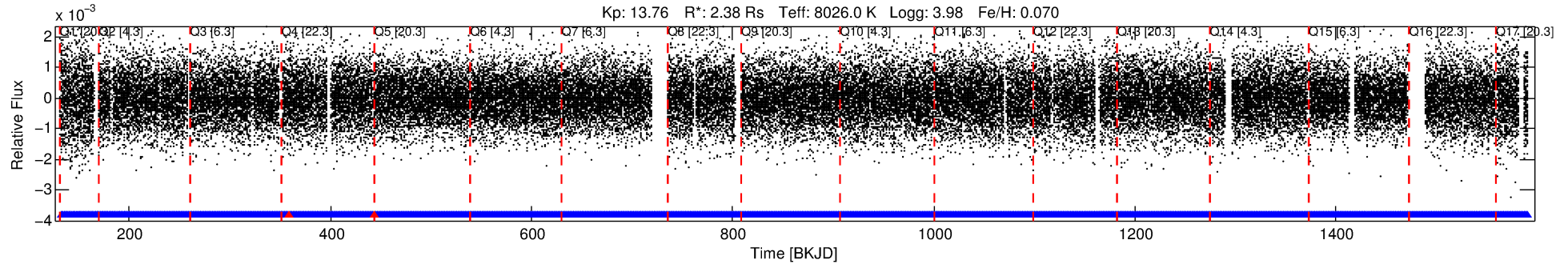
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005904928-01

No Significant Match Found

# DV One-Page Summary

KIC: 5904928 Candidate: 1 of 1 Period: 1.171 d



## DV Fit Results:

Period = 1.17059 [0.00001] d  
Epoch = 132.2900 [0.0056] BKJD  
Rp/R\* = 0.0083 [0.0090]  
a/R\* = 1.16 [1.92]  
b = 0.00 [1340.65]  
Seff = 28516.84 [12172.22]  
Teq = 3314 [354] K  
Rp = 2.16 [2.43] Re  
a = 0.0272 [0.0071] AU  
Ag = N/A  
Teffp = N/A

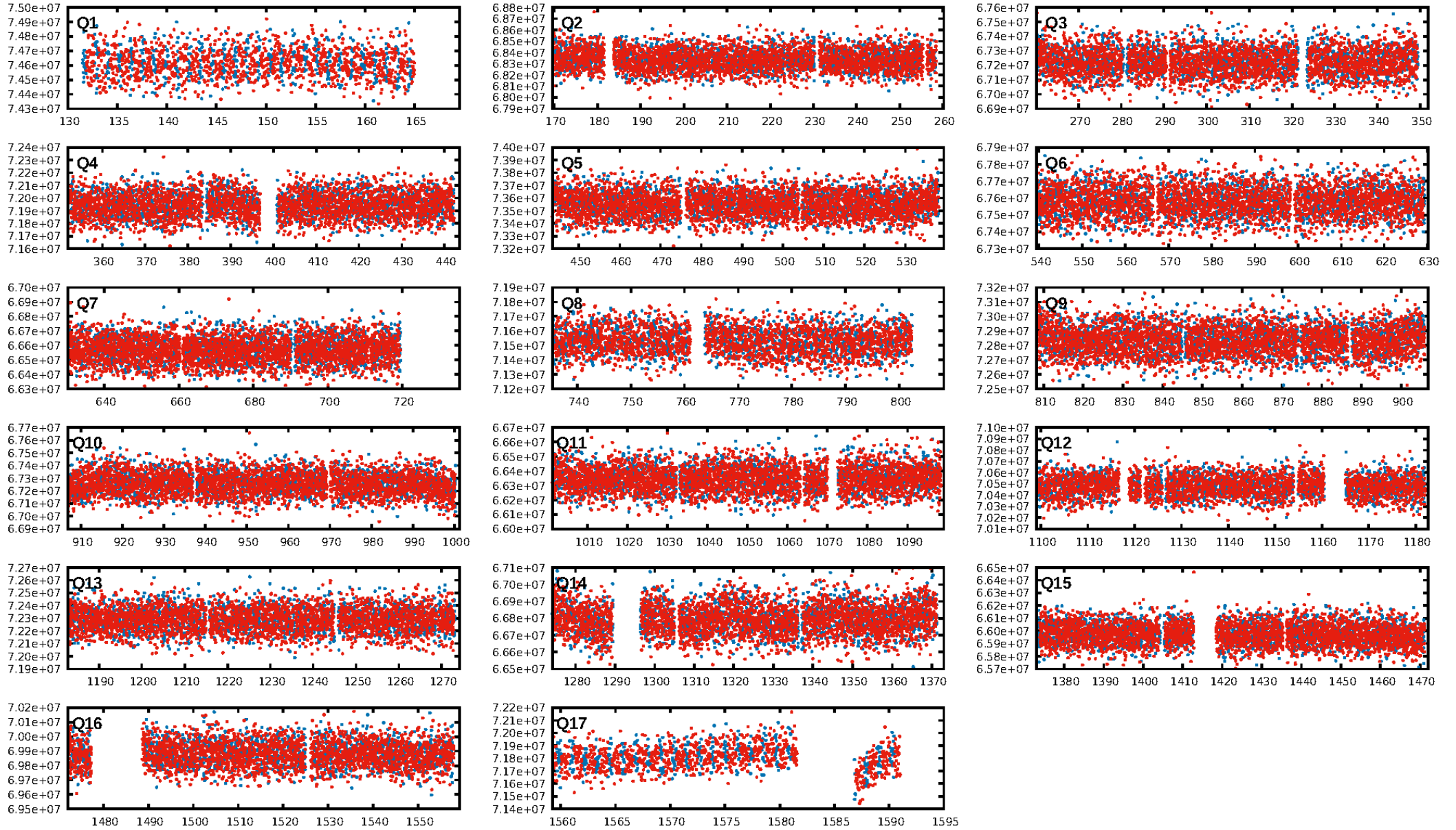
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1096/1098]  
GhostDiagnostic-chr: 2.442  
Centroid-sig: N/A  
Centroid-so: 0.745 arcsec [2.51σ]  
OotOffset-rm: 1.367 arcsec [2.02σ]  
KicOffset-rm: 1.214 arcsec [1.81σ]  
OotOffset-st: 0/4/1/5 [10]  
KicOffset-st: 0/4/1/5 [10]  
DiffImageQuality-fgm: 0.60 [6/10]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:27:44 Z

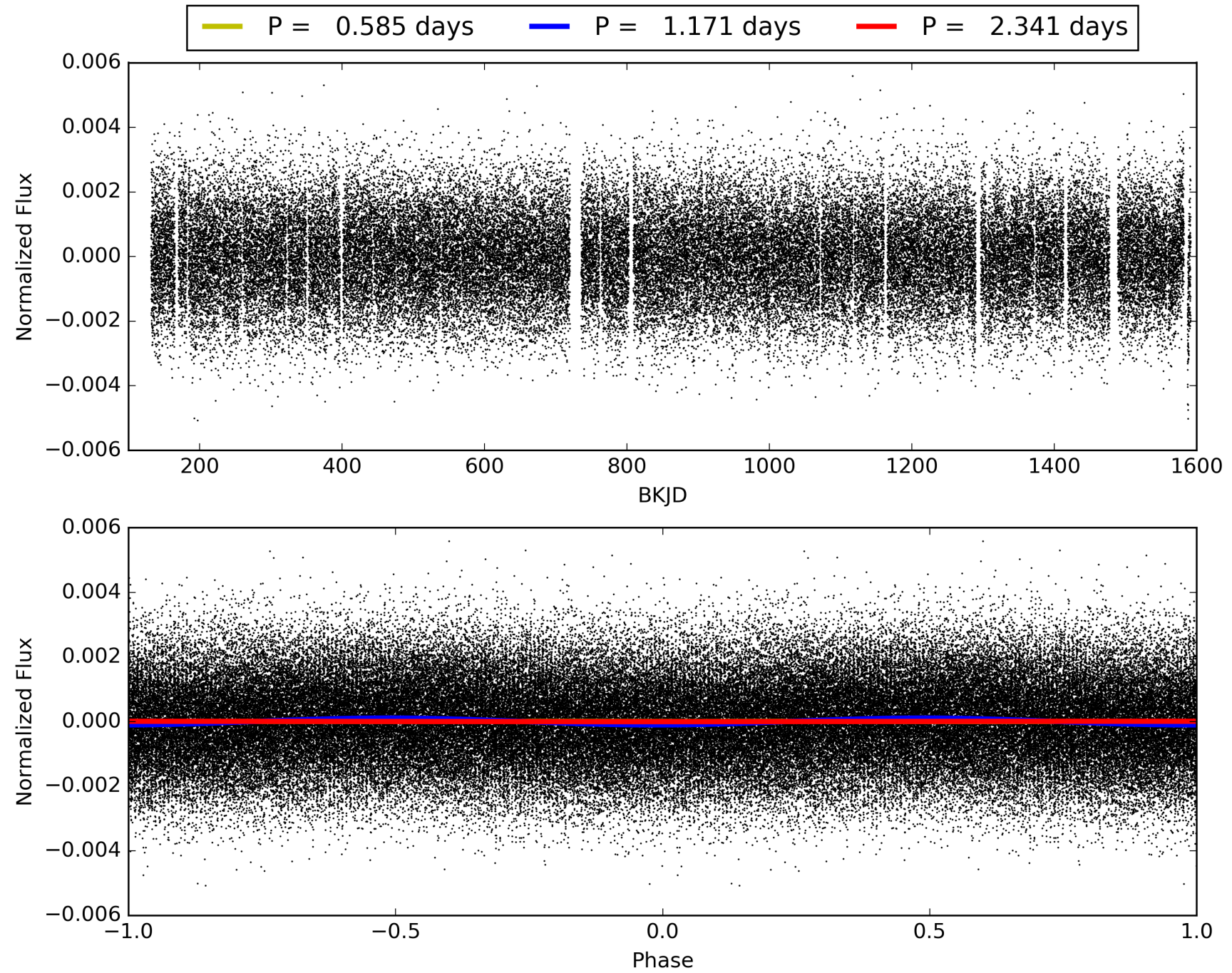
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005904928-01, PDC Light Curves



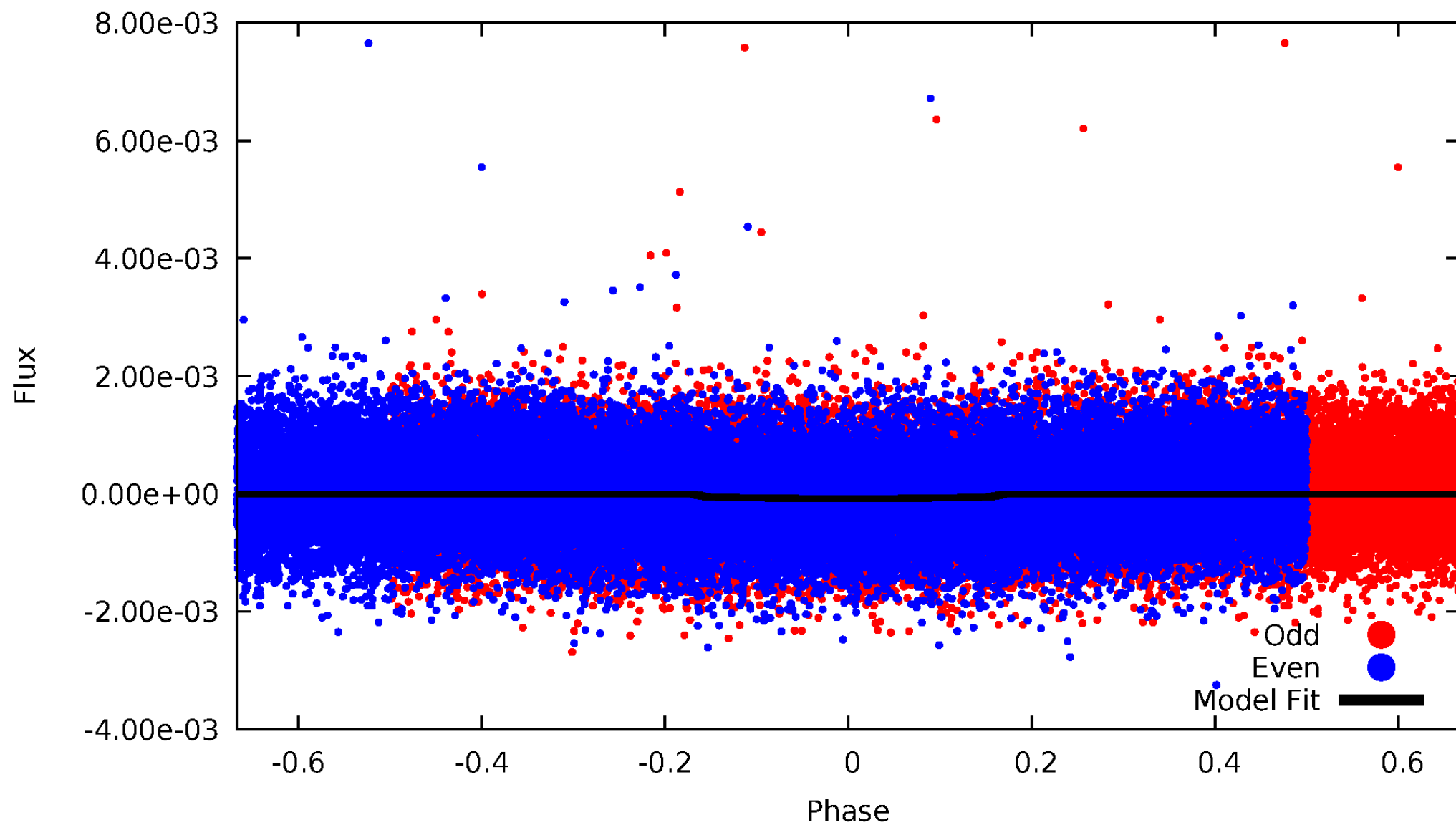


TCE 005904928-01



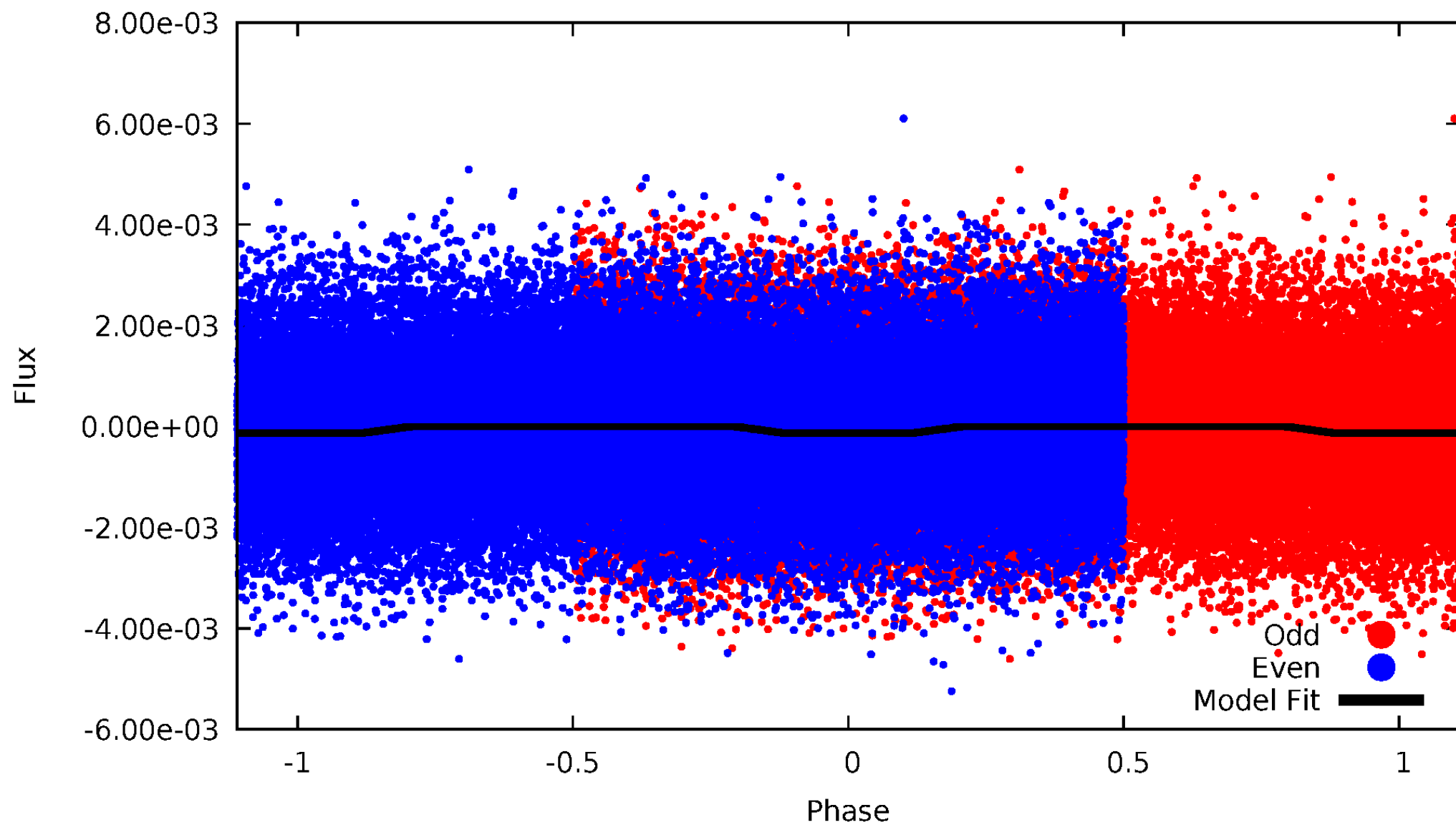
# DV Odd/Even

TCE 005904928-01

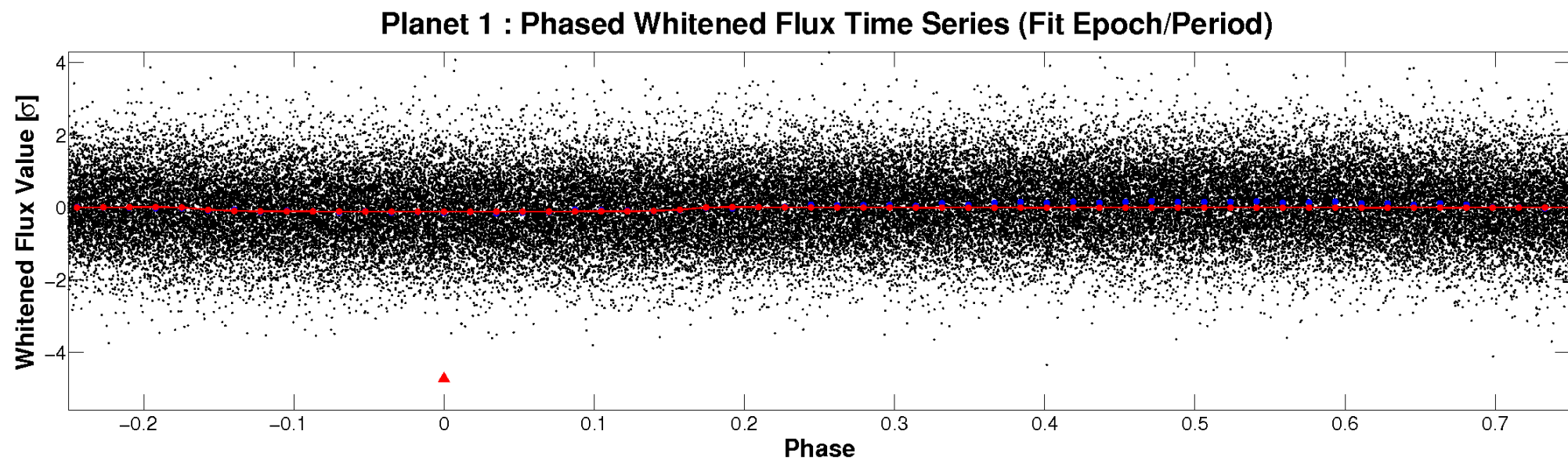
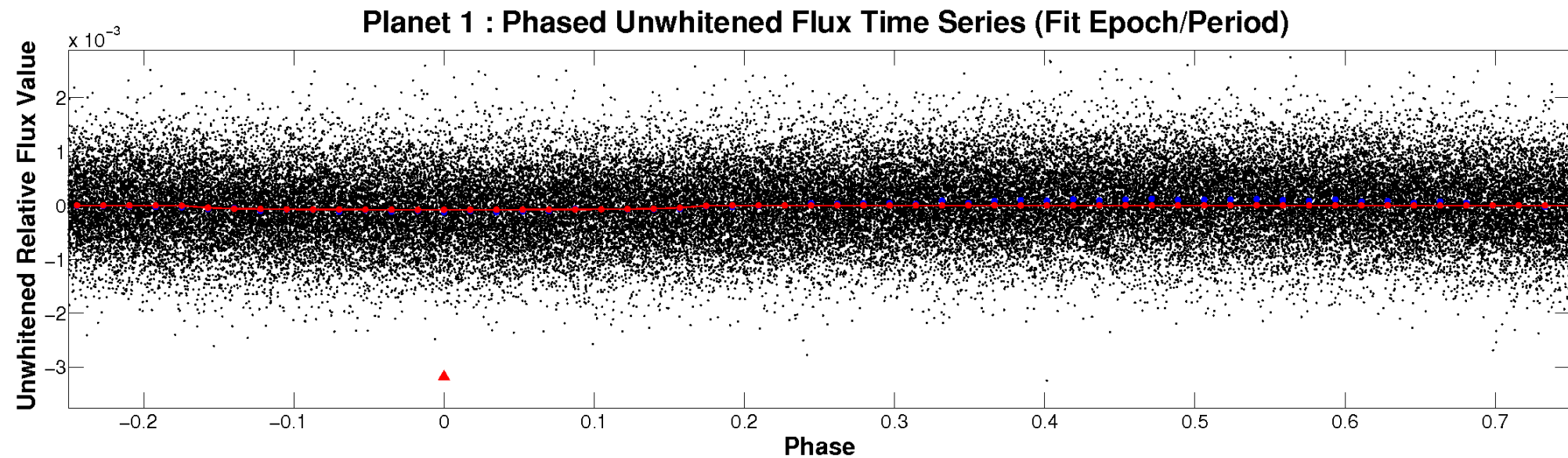


# ALT Odd/Even

TCE 005904928-01



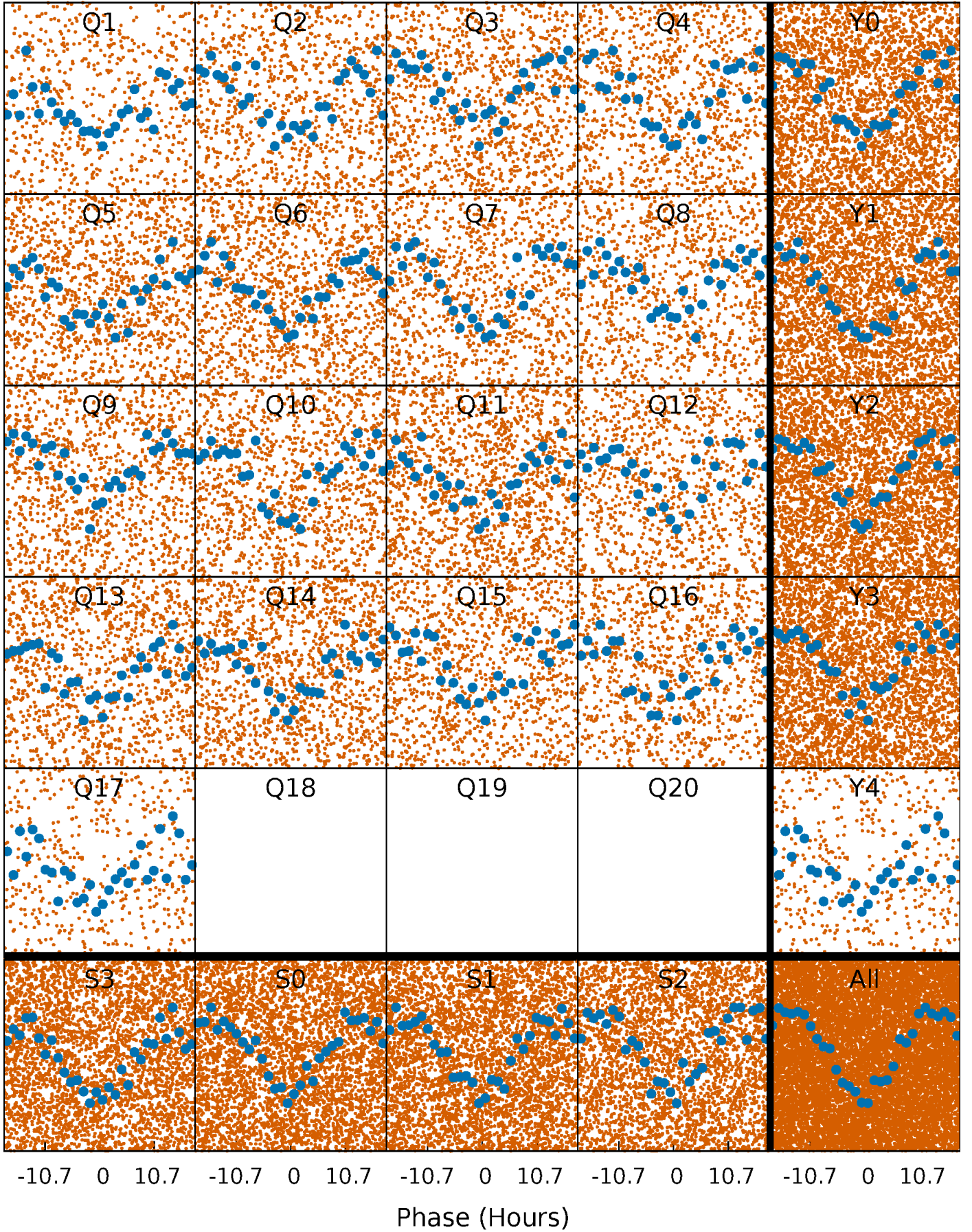
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

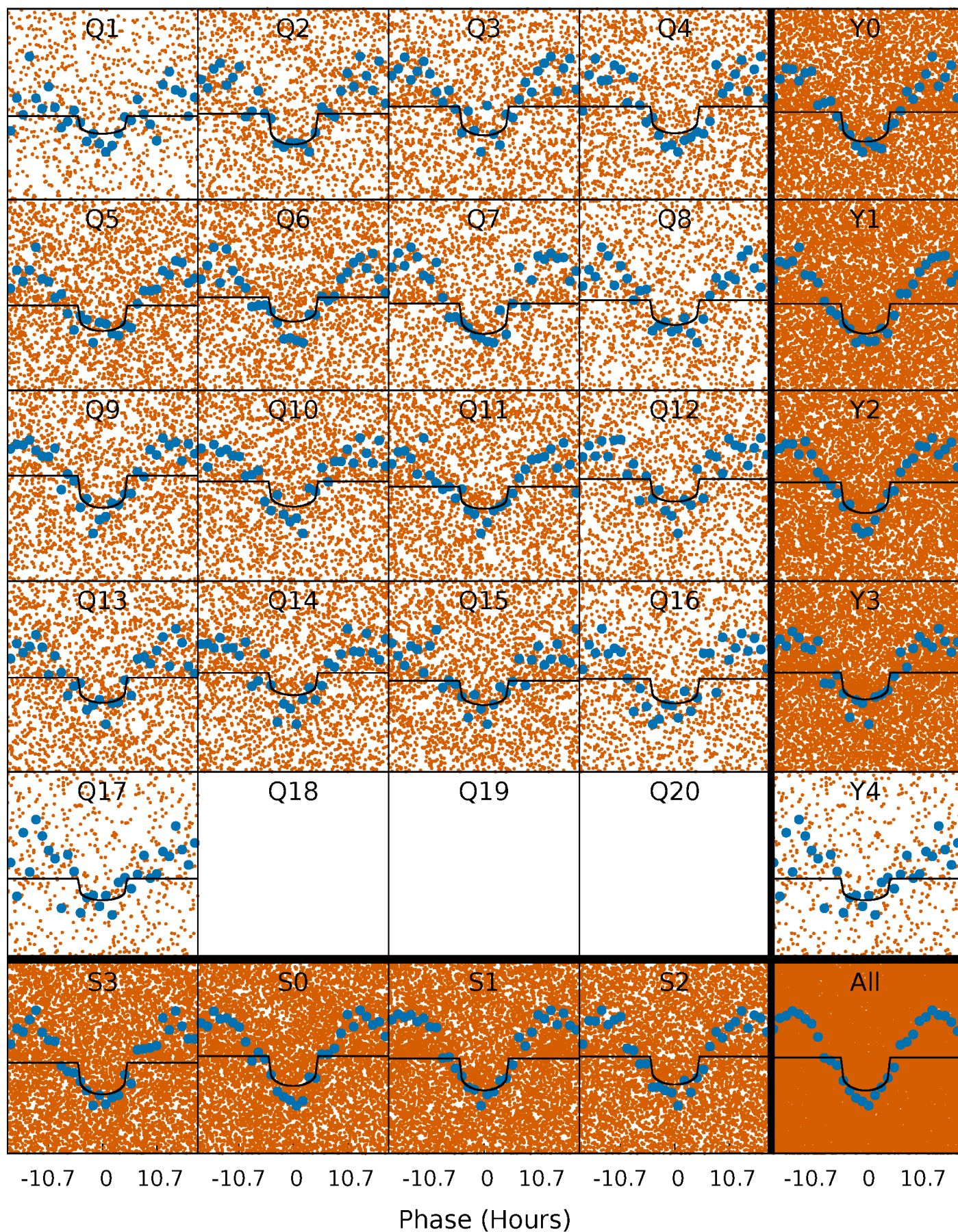
TCE 005904928-01 P= 1.170588 Days  $T_0=132.289964$  (BKJD)





# DV Quarter-Phased Transit Curves

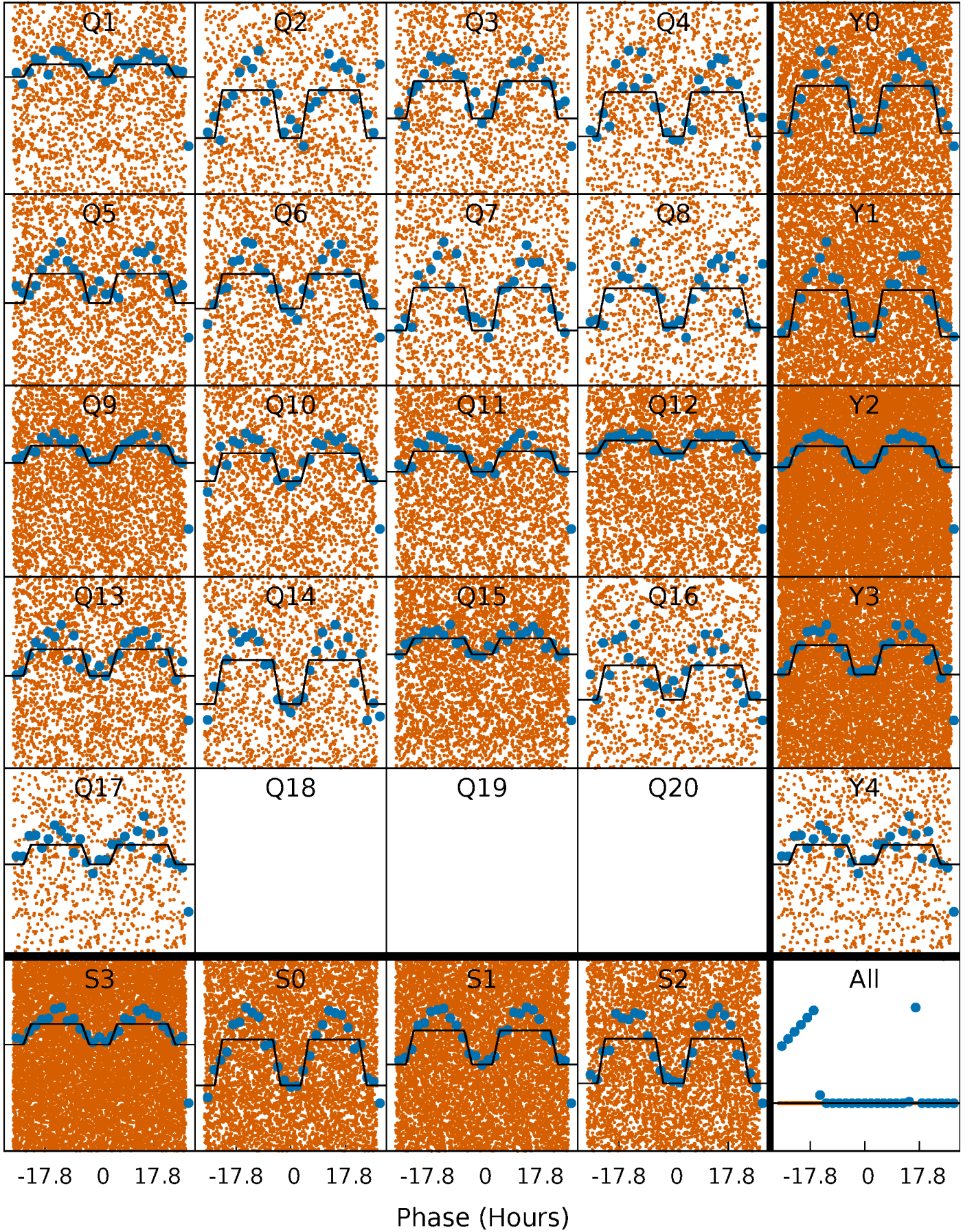
TCE 005904928-01 P= 1.170588 Days  $T_0=132.289964$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

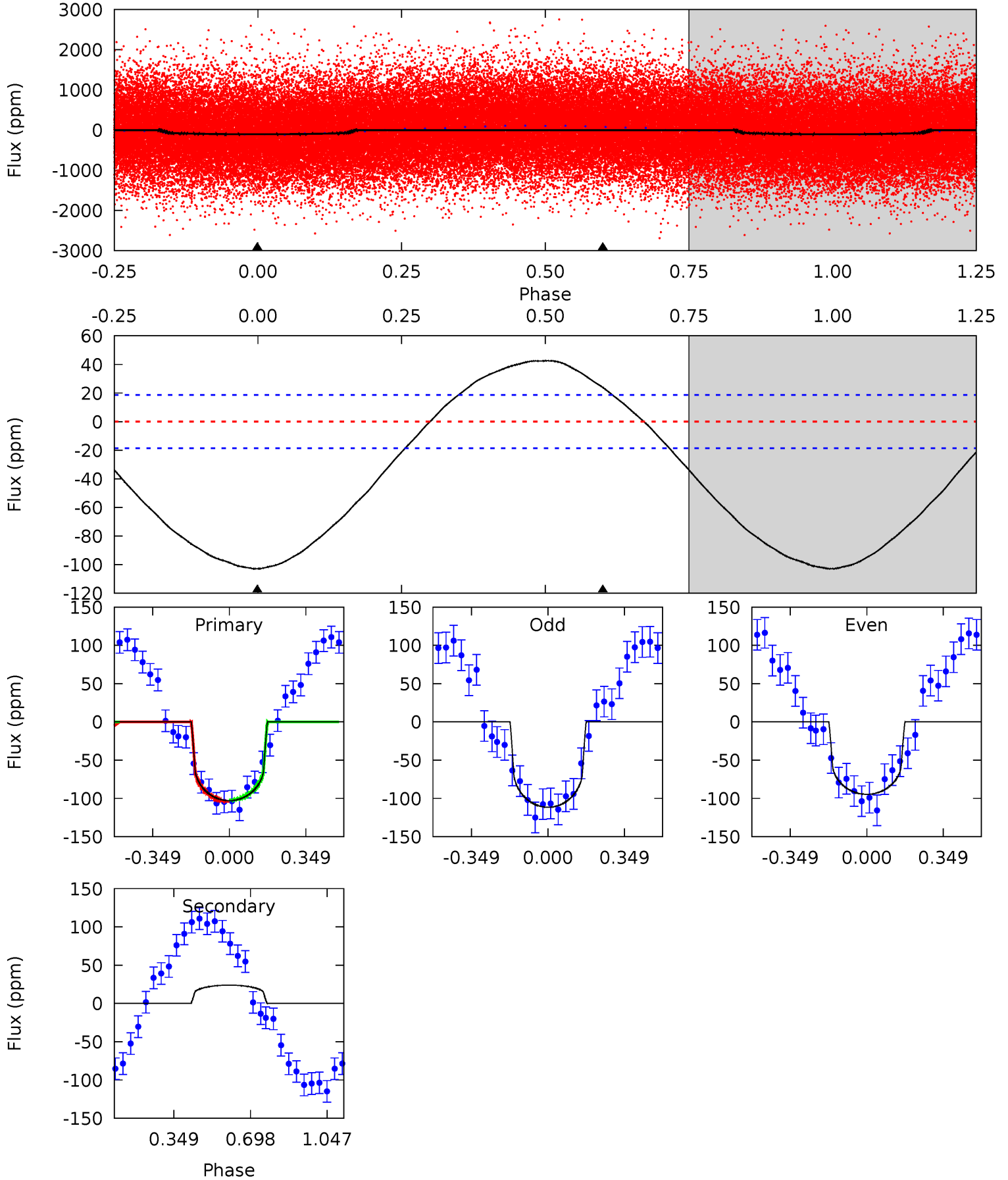
TCE 005904928-01 P= 1.170648 Days  $T_0=132.235532$  (BKJD)



# DV Model-Shift Uniqueness Test

005904928-01, P = 1.170588 Days, E = 131.119376 Days

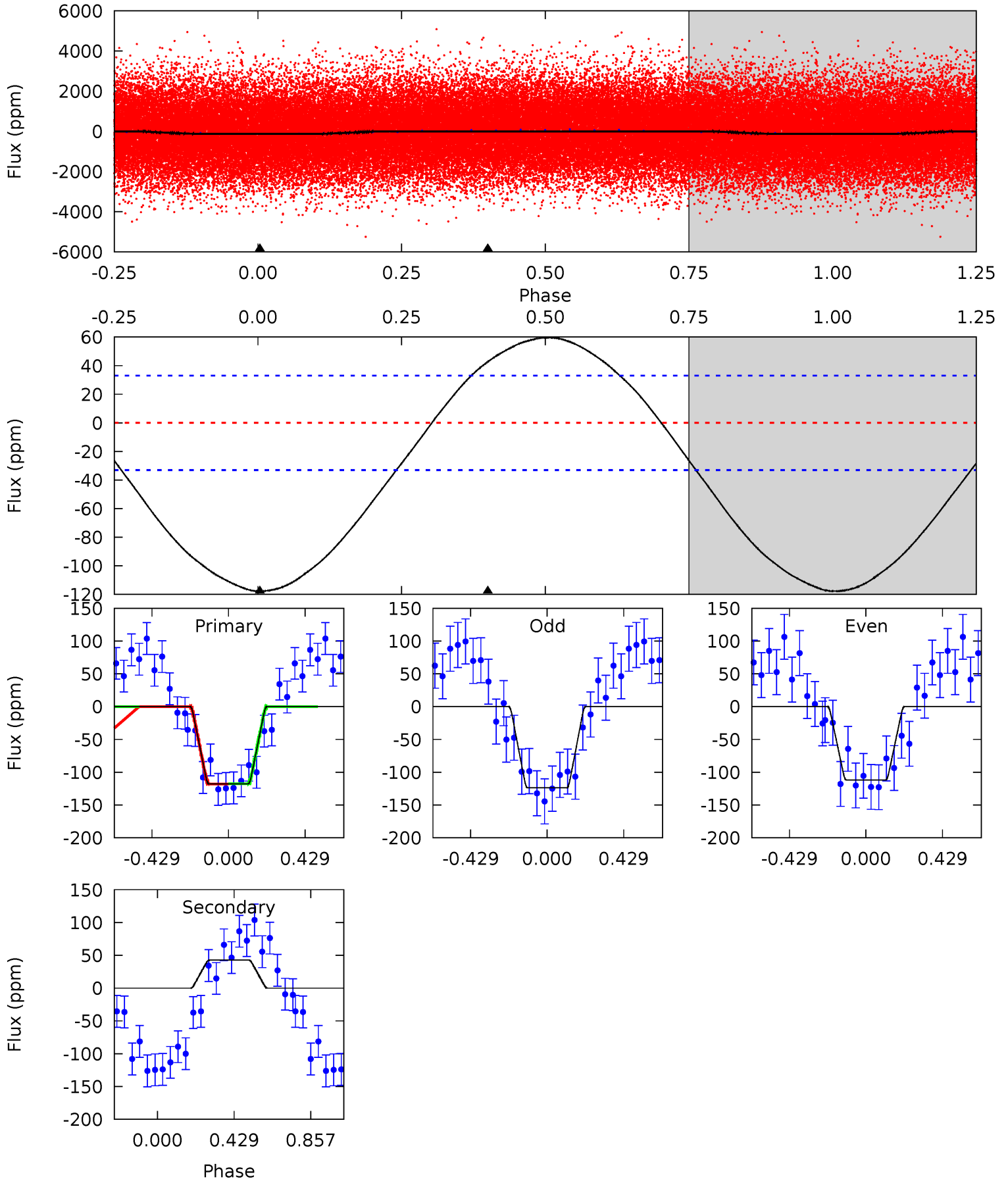
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	-5.52	0	0	4.30	0.94	2.81	23.7	23.7	-5.52	-5.52	1.95	1.01	0.29	0.20



# Alt Model-Shift Uniqueness Test

005904928-01, P = 1.170648 Days, E = 131.064884 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
15.1	-5.49	0	0	4.25	0.79	1.98	15.1	15.1	-5.49	-5.49	0.77	1.16	0.34	0.03





### Stellar Parameters For KIC 005904928

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8026^{+223}_{-335}$	$3.976^{+0.221}_{-0.136}$	$0.070^{+0.150}_{-0.450}$	$2.383^{+0.472}_{-0.708}$	$1.961^{+0.276}_{-0.380}$	$0.204^{+0.273}_{-0.075}$
	+3%/-4%	+6%/-3%	+214%/-643%	+20%/-30%	+14%/-19%	+134%/-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 005904928-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$24 \pm 4$	$2.60^{+2.19}_{-1.68}$	$4592^{+282}_{-350}$	$-5615^{+951}_{-3888}$	$-1.354^{+0.938}_{-9.803}$
Alt.	$43 \pm 8$	$3.13^{+2.32}_{-1.83}$	$4598^{+298}_{-367}$	$-5829^{+971}_{-3549}$	$-1.701^{+1.151}_{-7.935}$

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

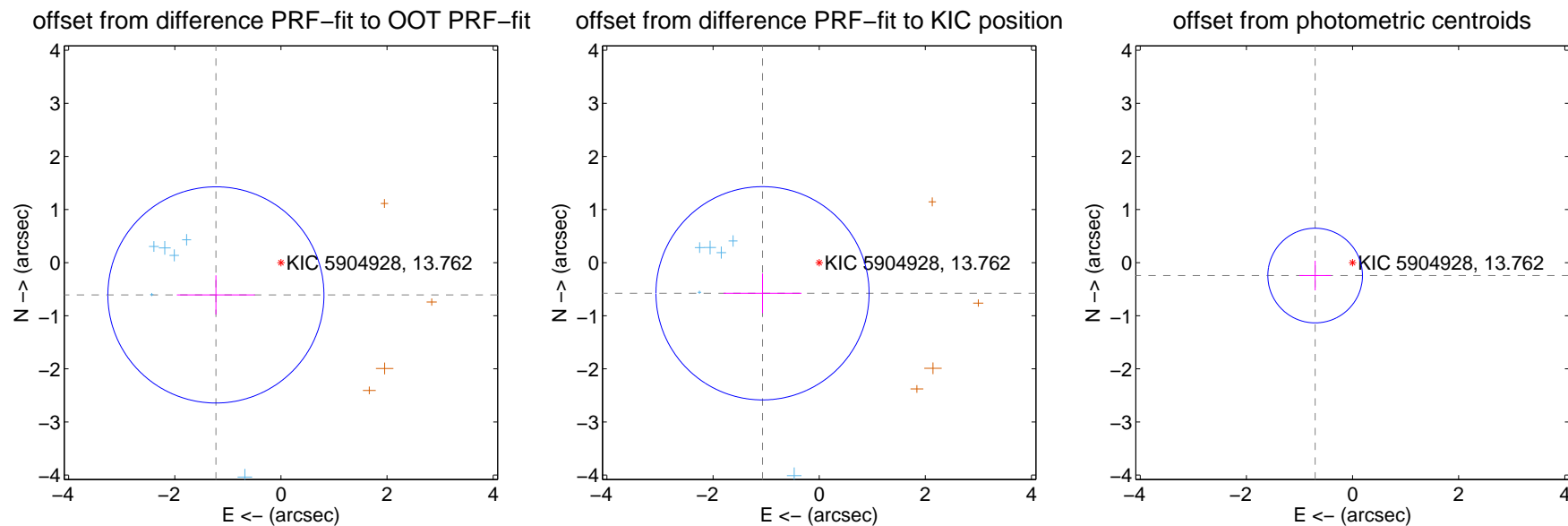
## DV Centroid Data

Supplemental centroid analysis for 005904928-01. Kepler magnitude: 13.76. Transit SNR 15.24

There are 6 quarters with good PRF difference image offsets

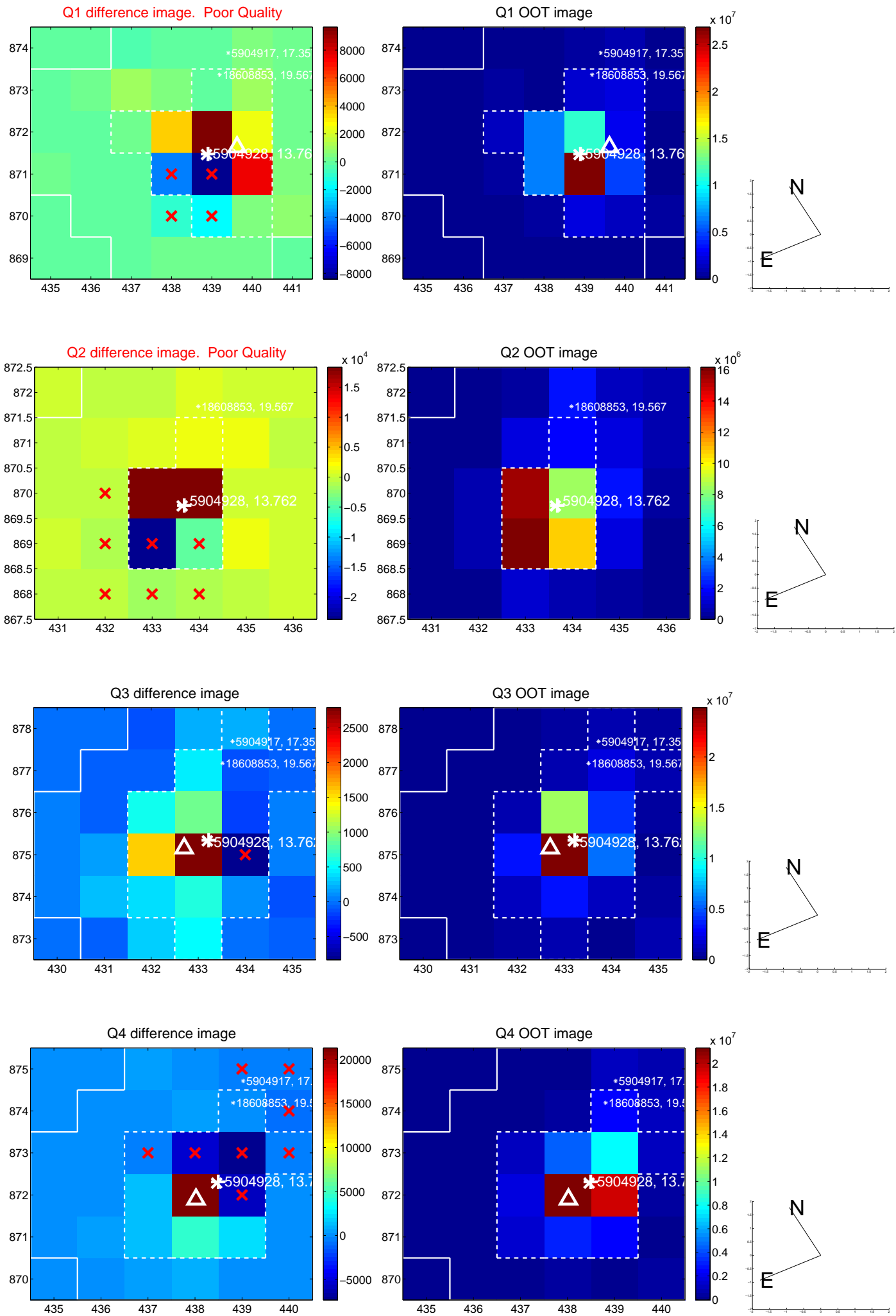
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.367 \pm 0.679$	2.02	$1.225 \pm 0.735$	$-0.608 \pm 0.369$
PRF-fit source offset from KIC position	$1.214 \pm 0.669$	1.81	$1.068 \pm 0.734$	$-0.577 \pm 0.374$
photometric centroid source offset	$0.74 \pm 0.30$	2.51	$0.70 \pm 0.30$	$-0.24 \pm 0.28$

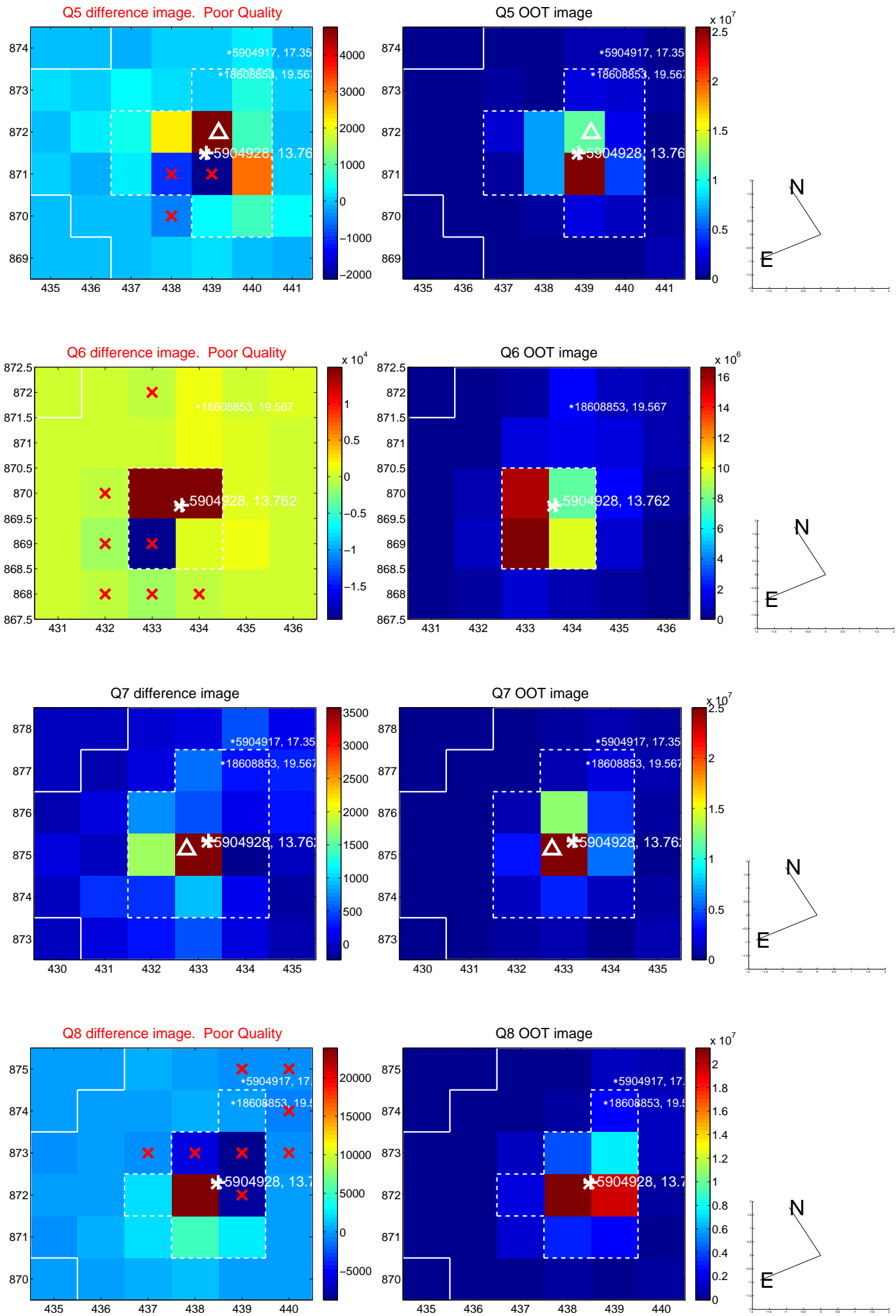


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

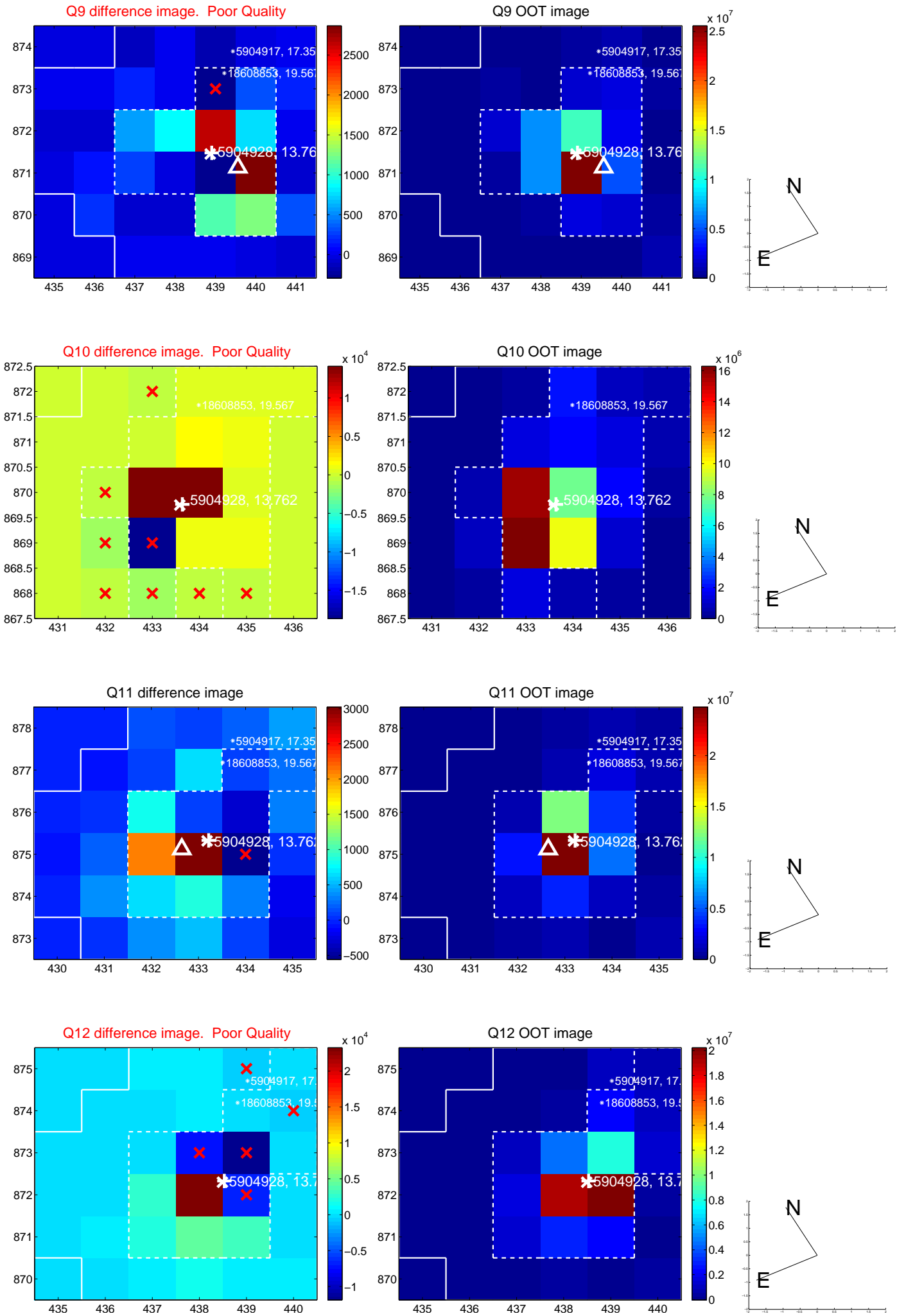


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

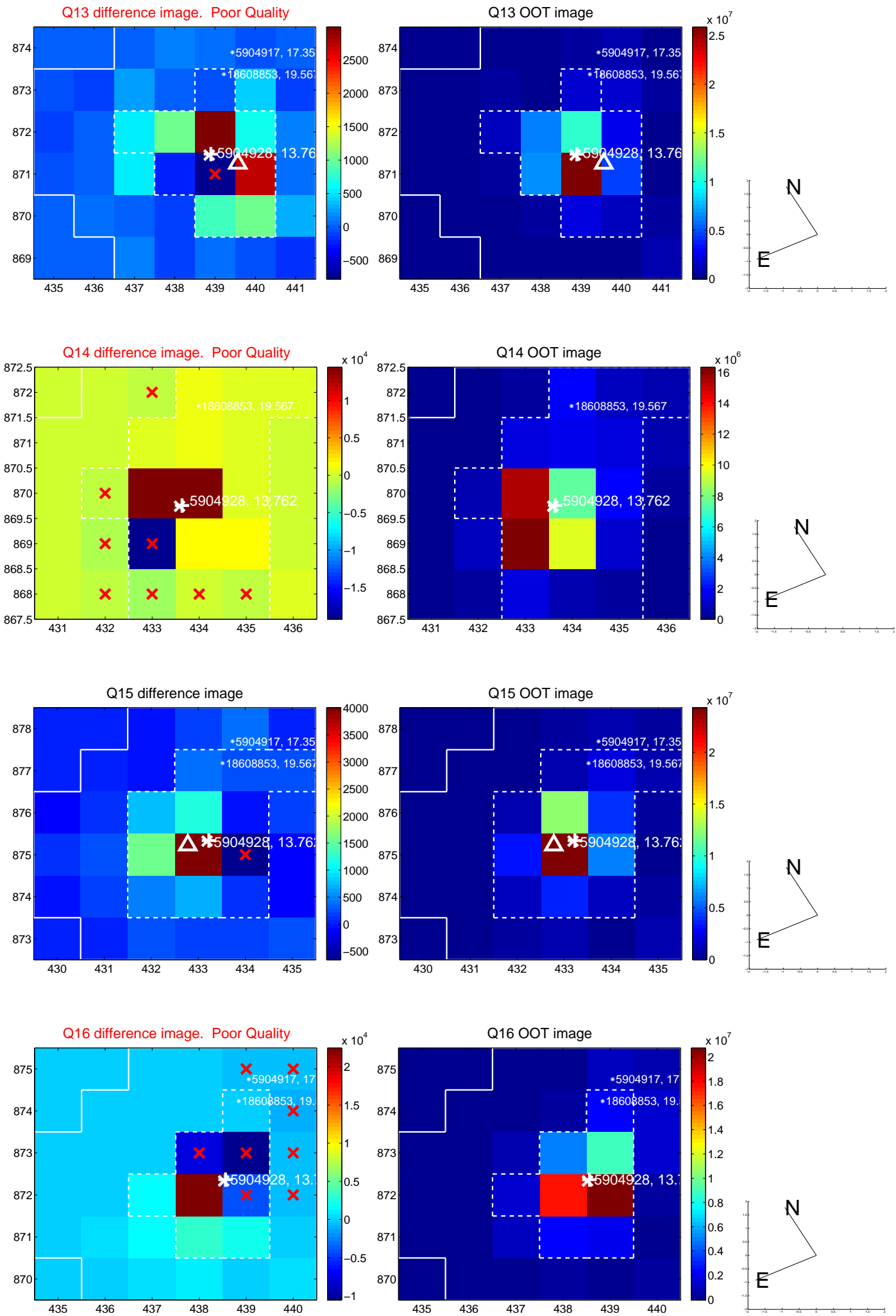




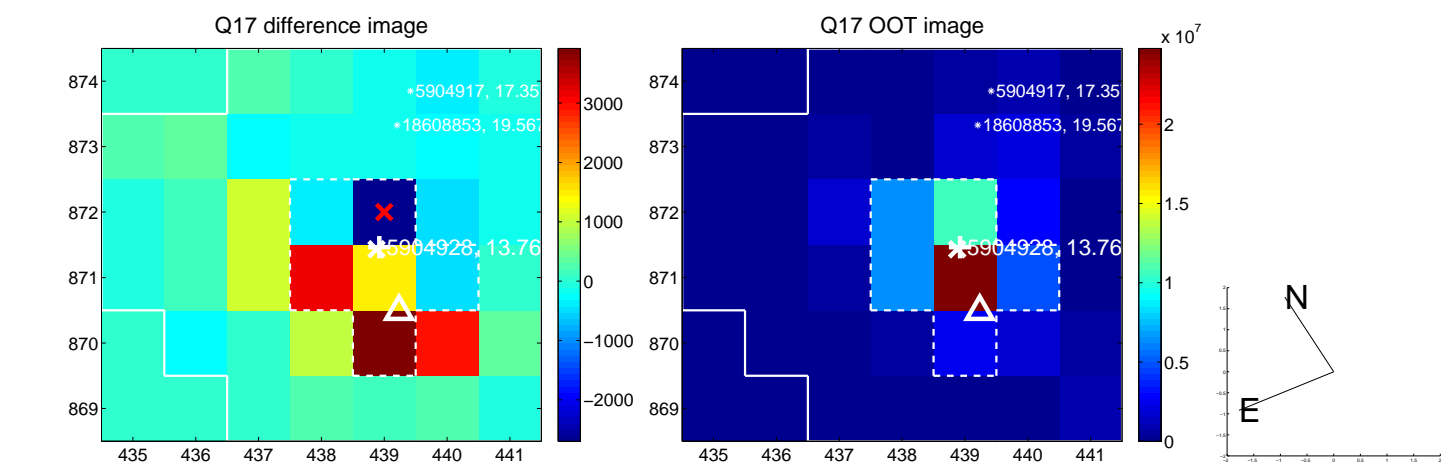
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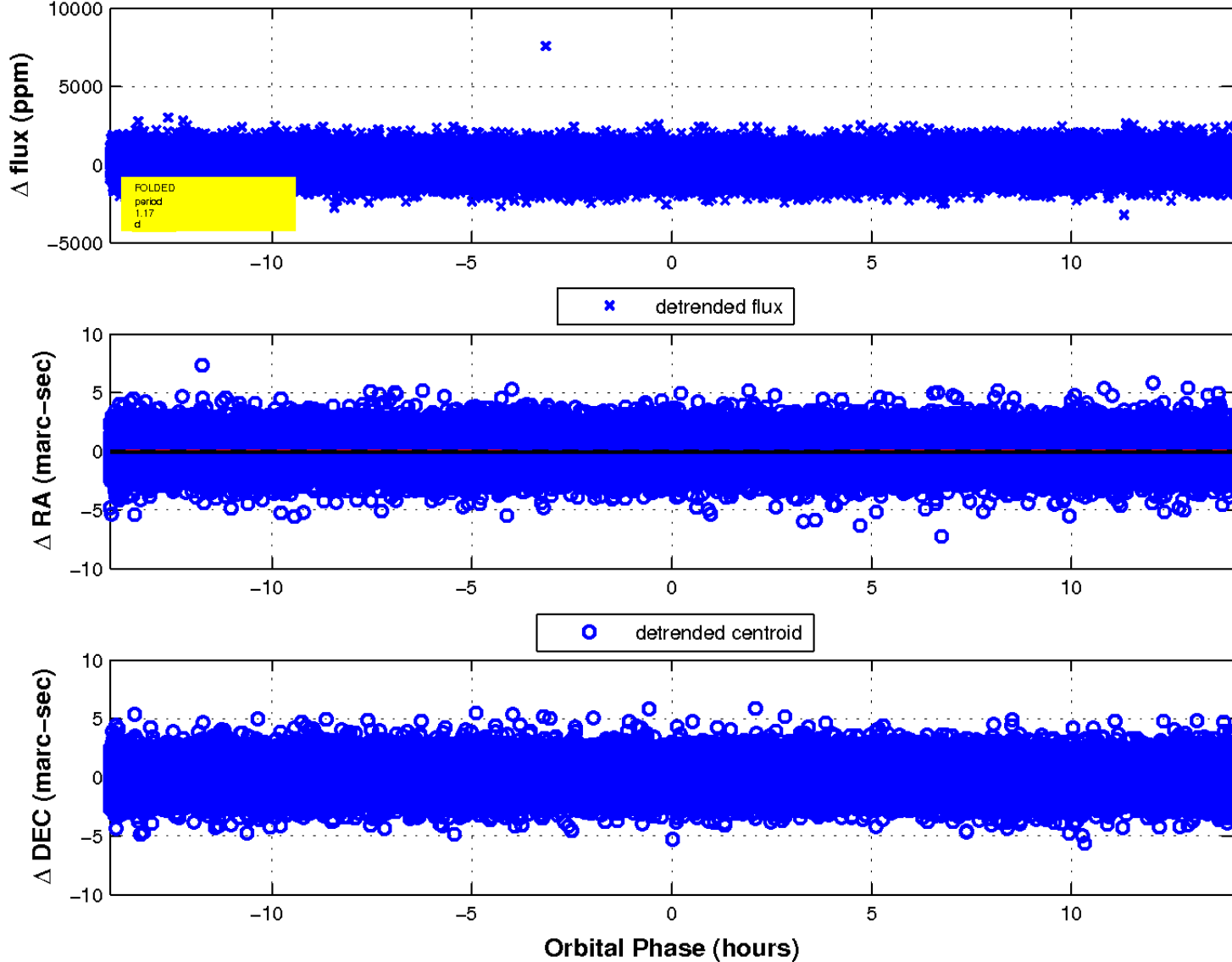
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

