

# KIC 008190872

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008190872-01	OBS	No	0.696187	132.110098	36.4	2.491	11.3	10.1	2.84	6534	2.00	44503.33

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008190872-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

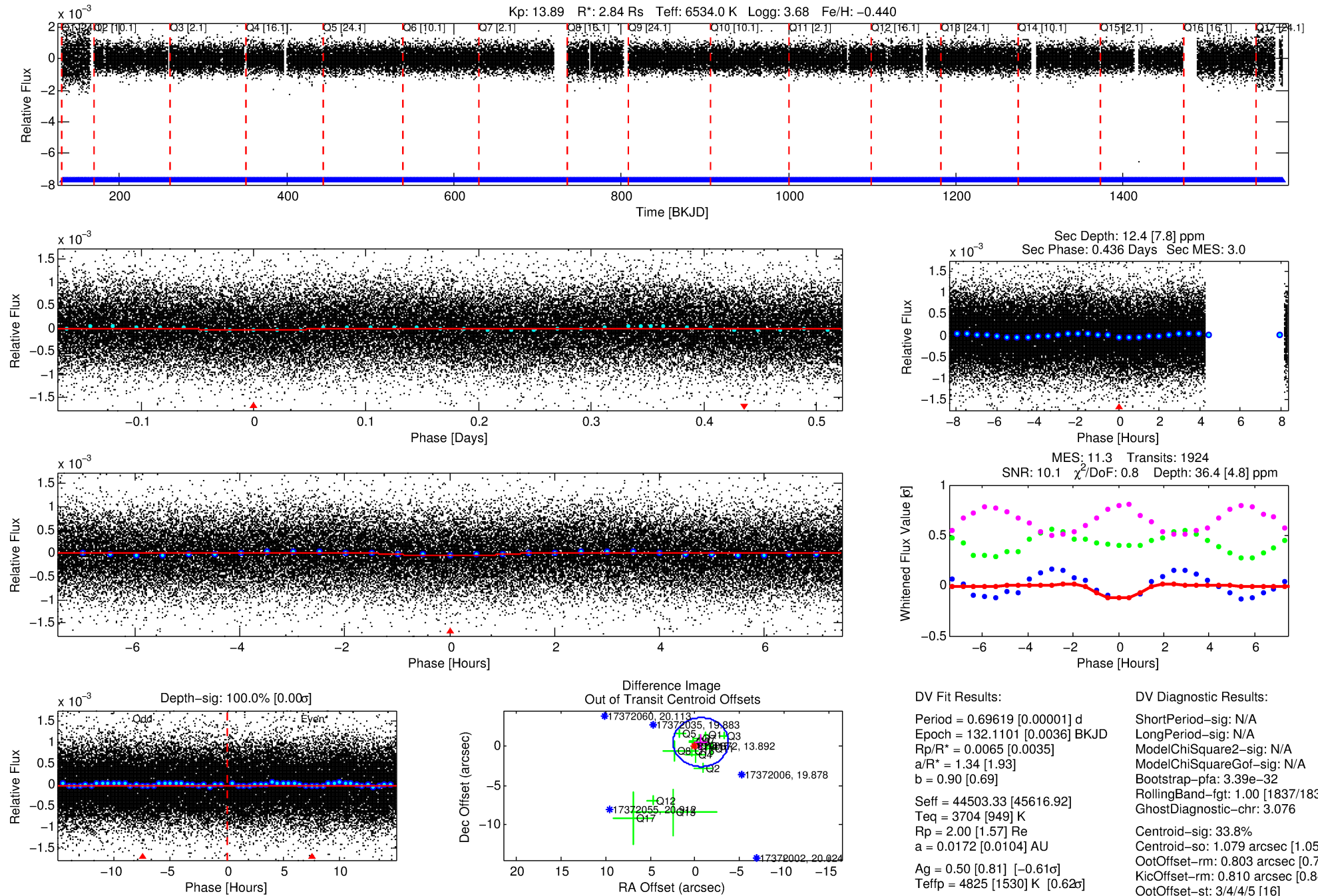
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008190872-01

No Significant Match Found

# DV One-Page Summary

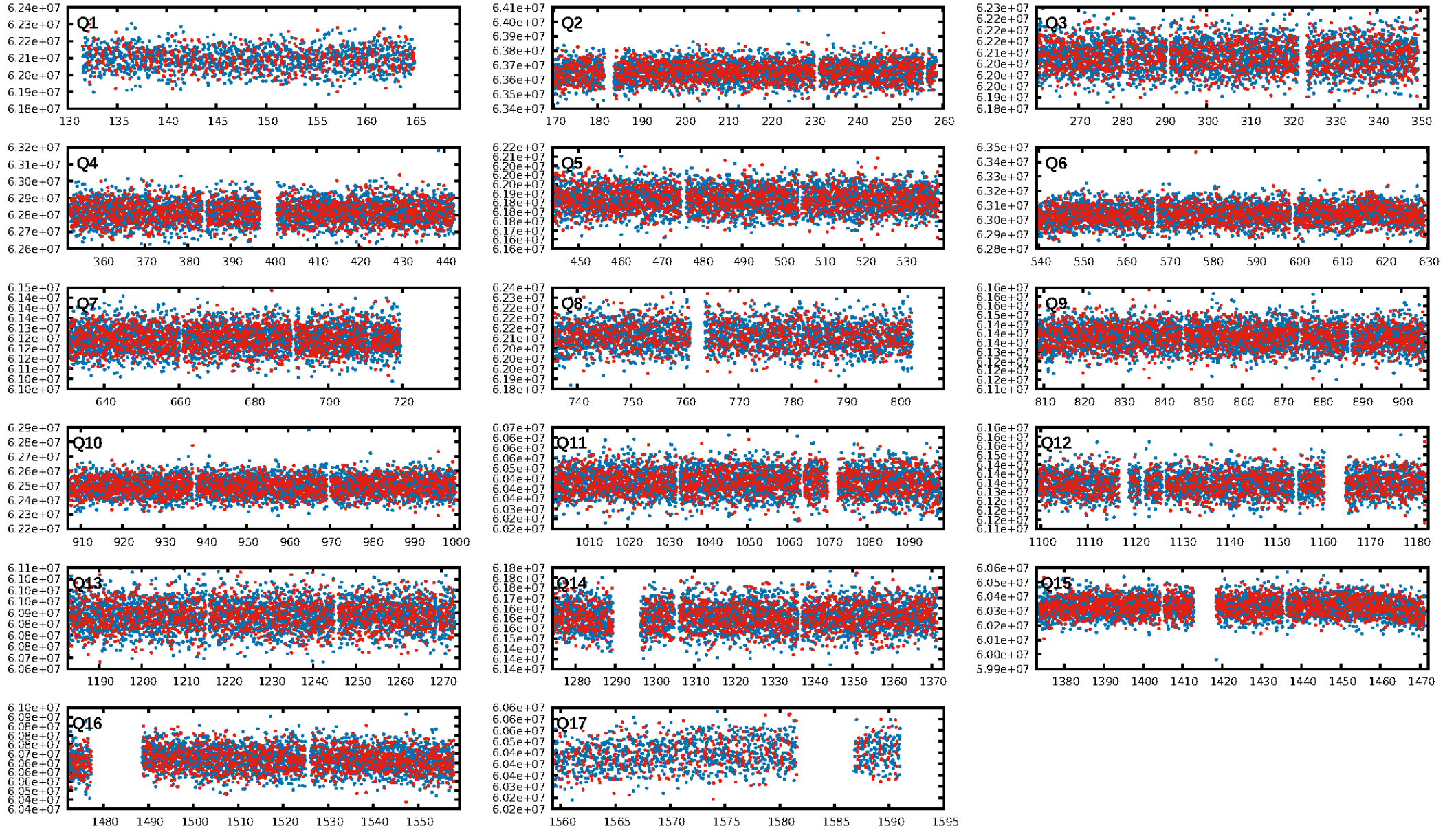
KIC: 8190872 Candidate: 1 of 1 Period: 0.696 d



Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:41:13 Z

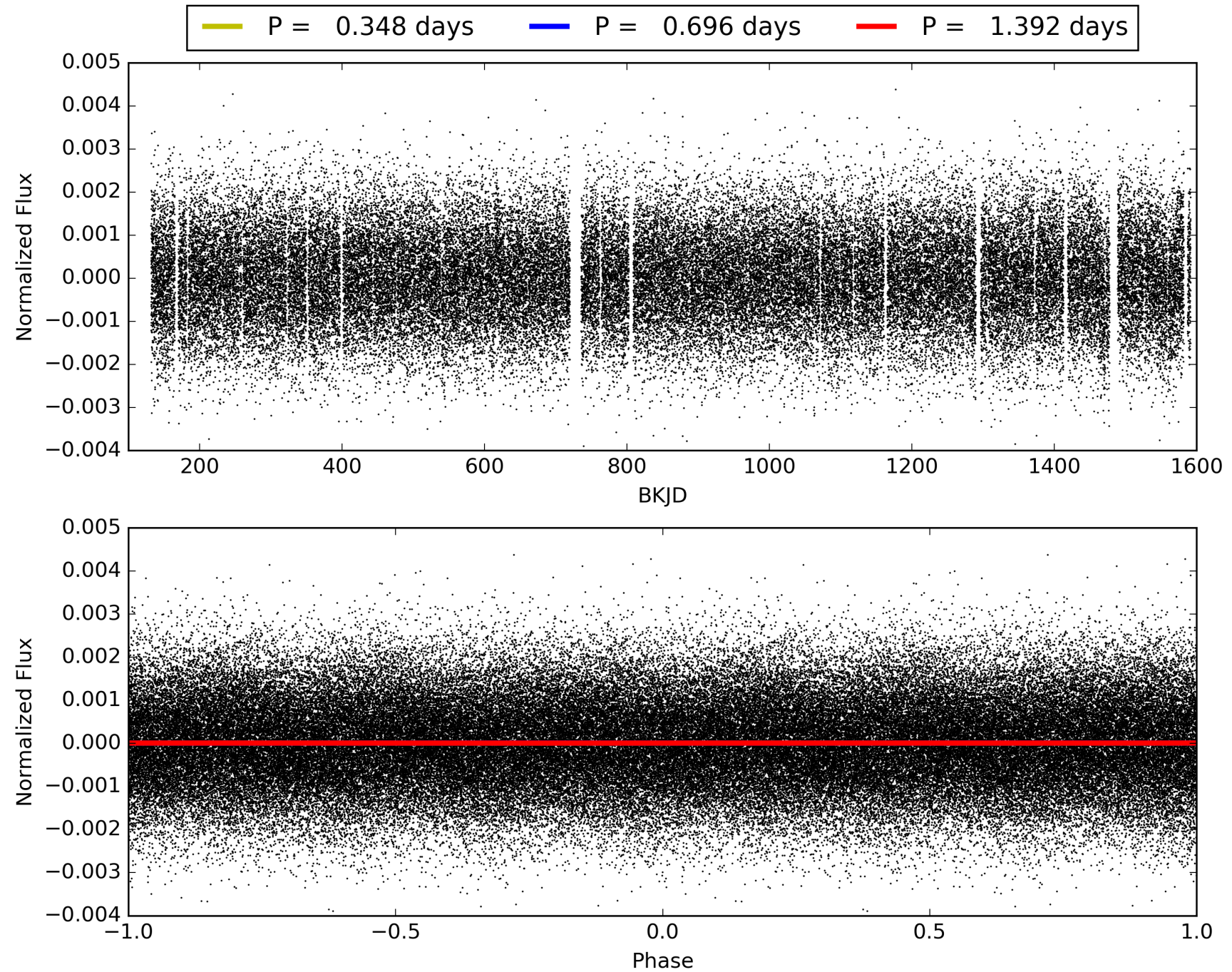
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008190872-01, PDC Light Curves



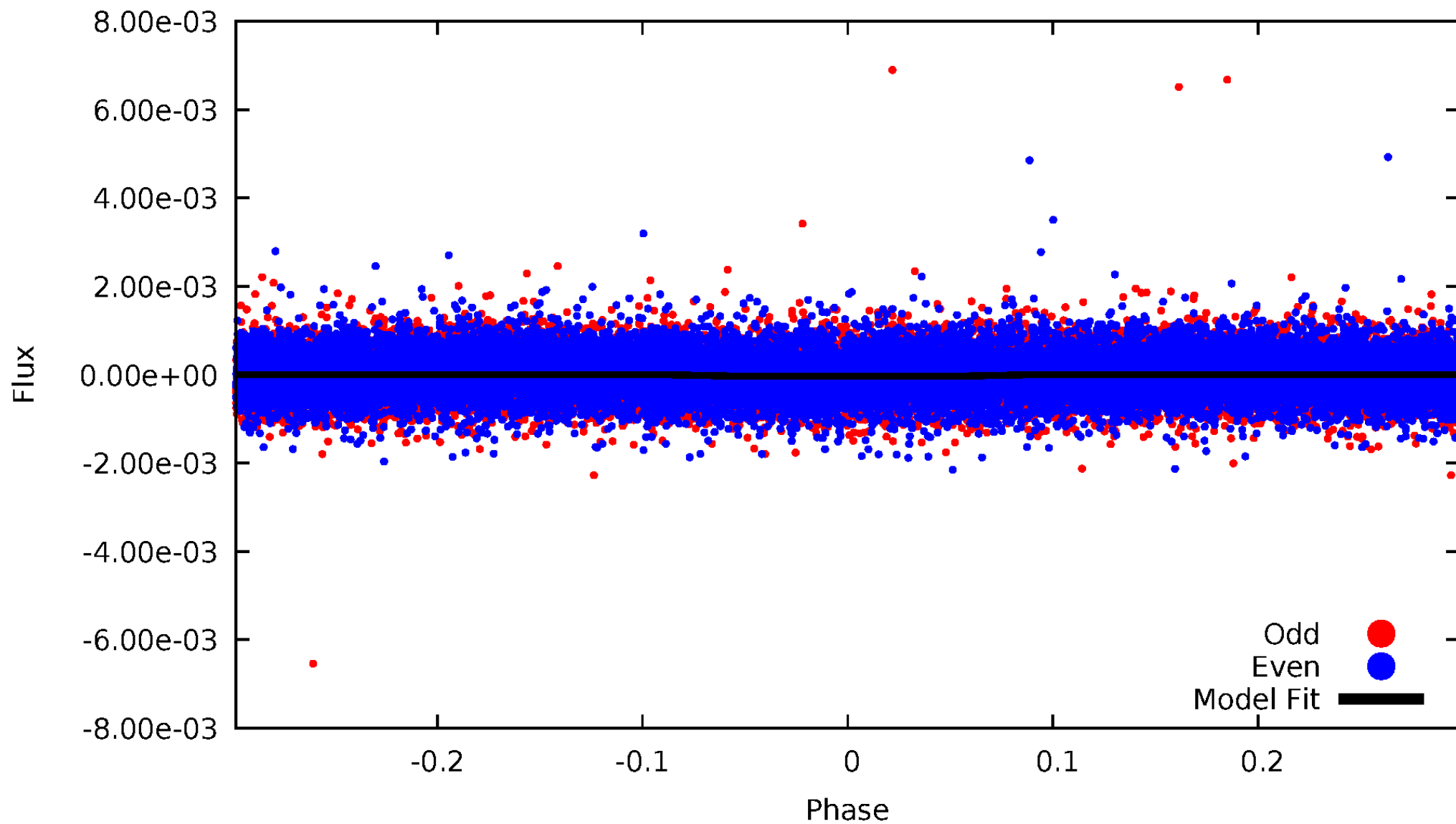


# TCE 008190872-01



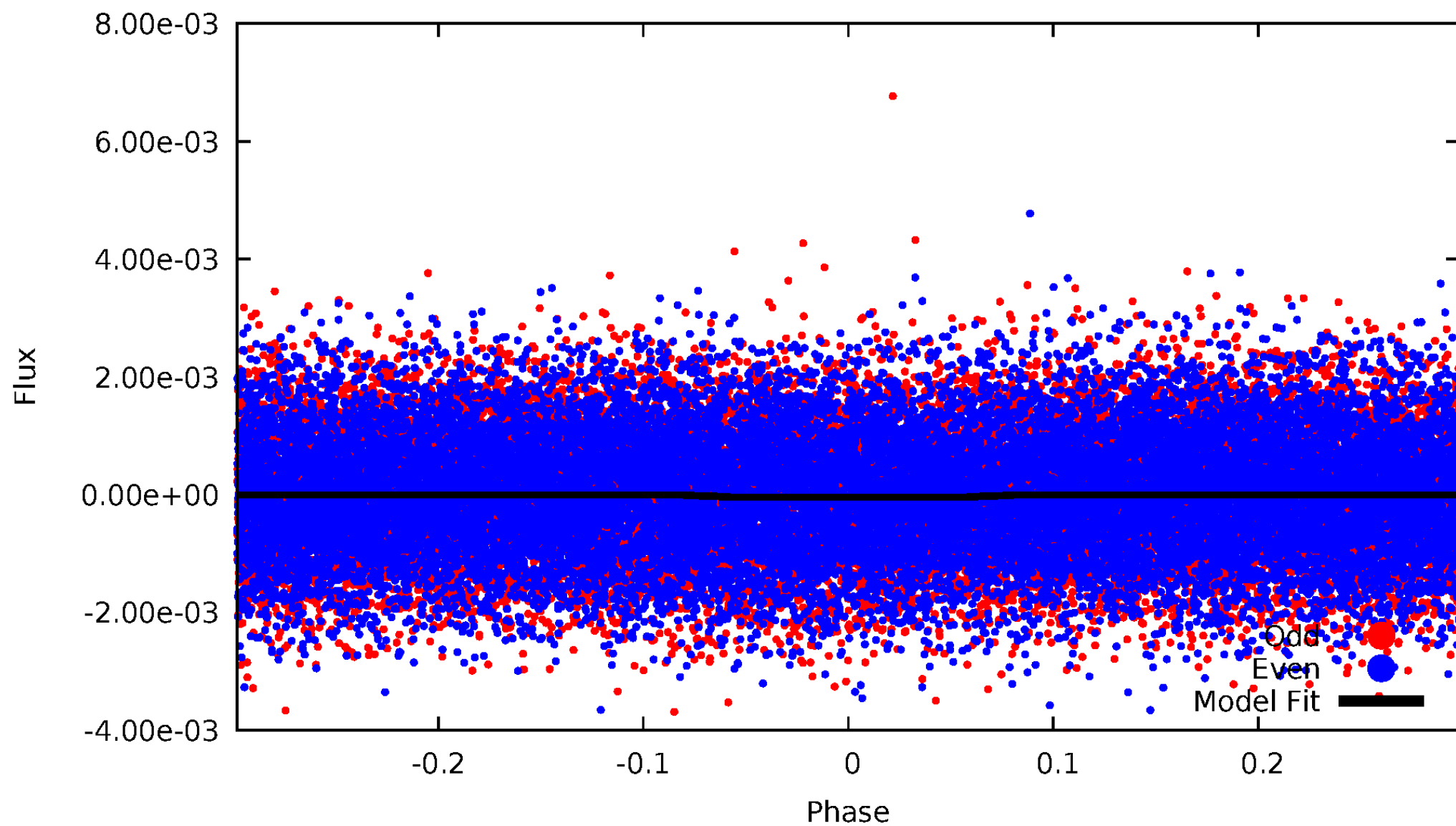
# DV Odd/Even

TCE 008190872-01



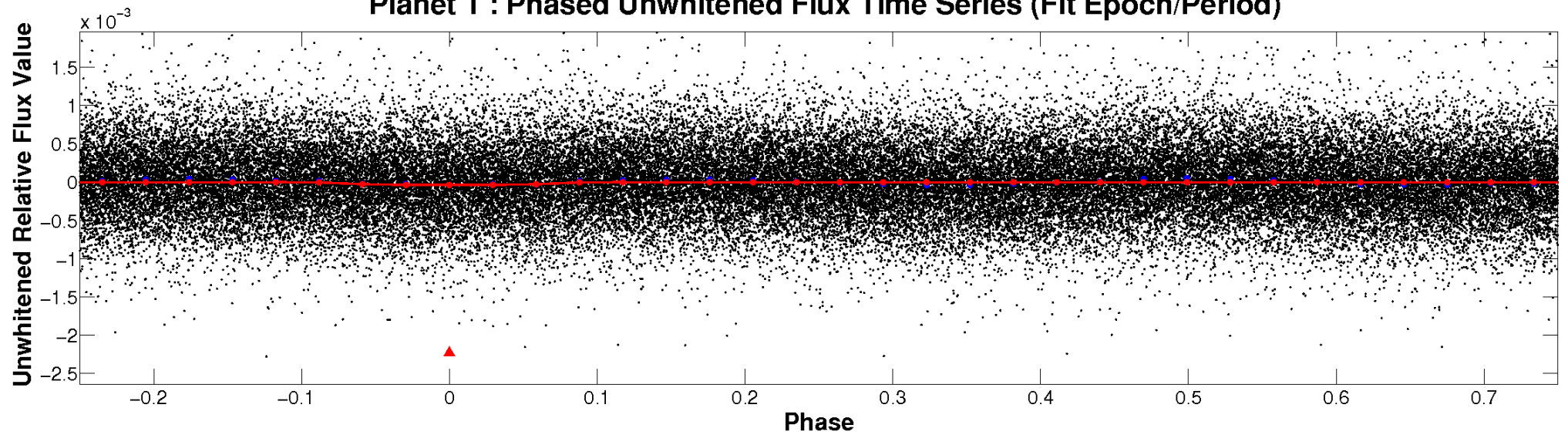
# ALT Odd/Even

TCE 008190872-01

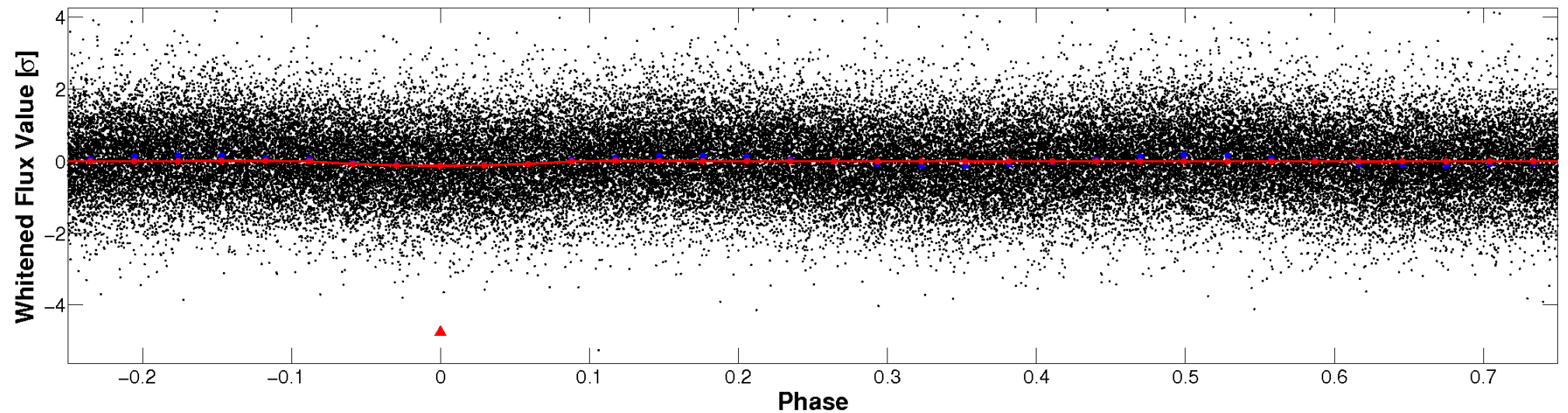


# Non-Whitened Vs. Whitened Light Curve

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



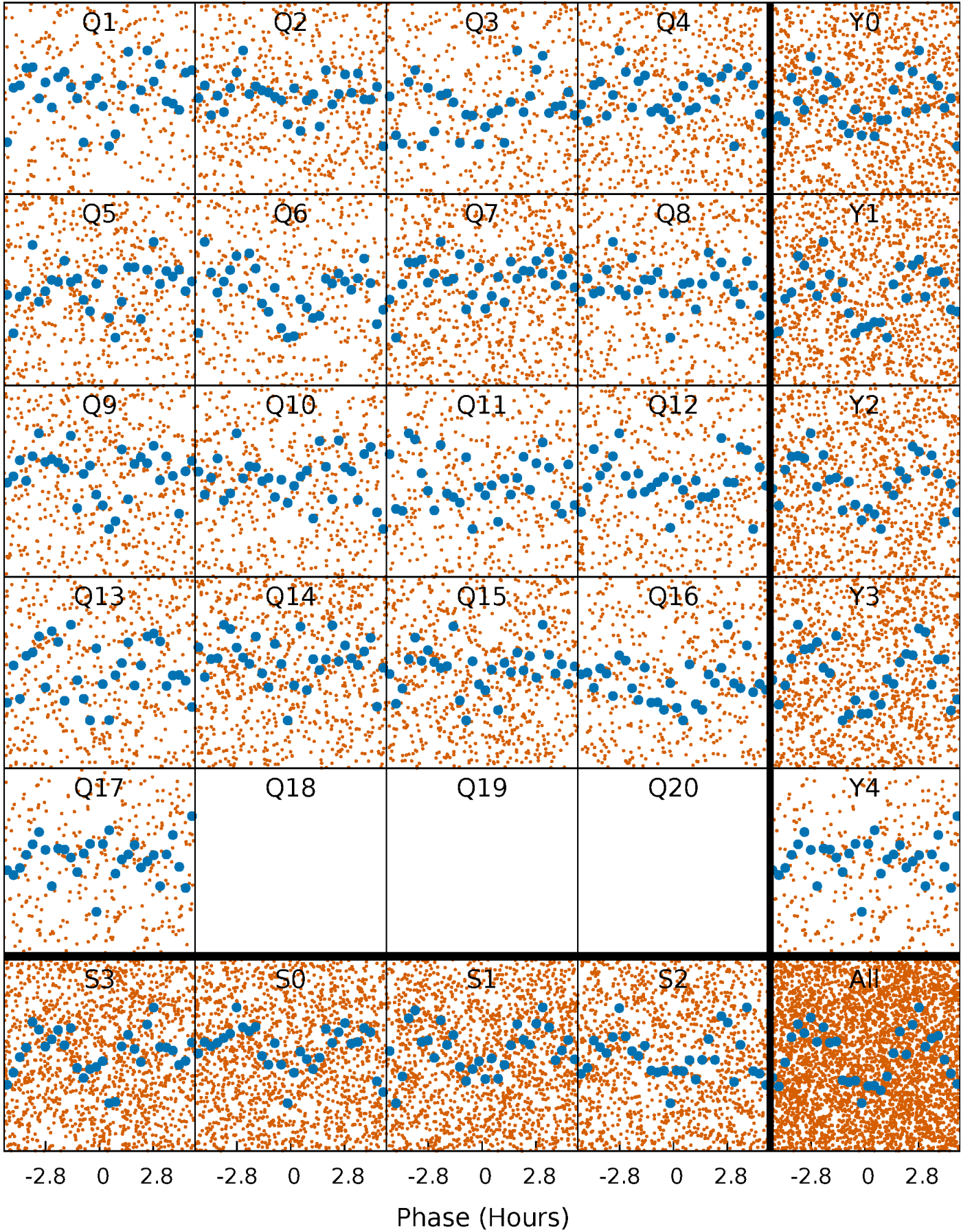
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

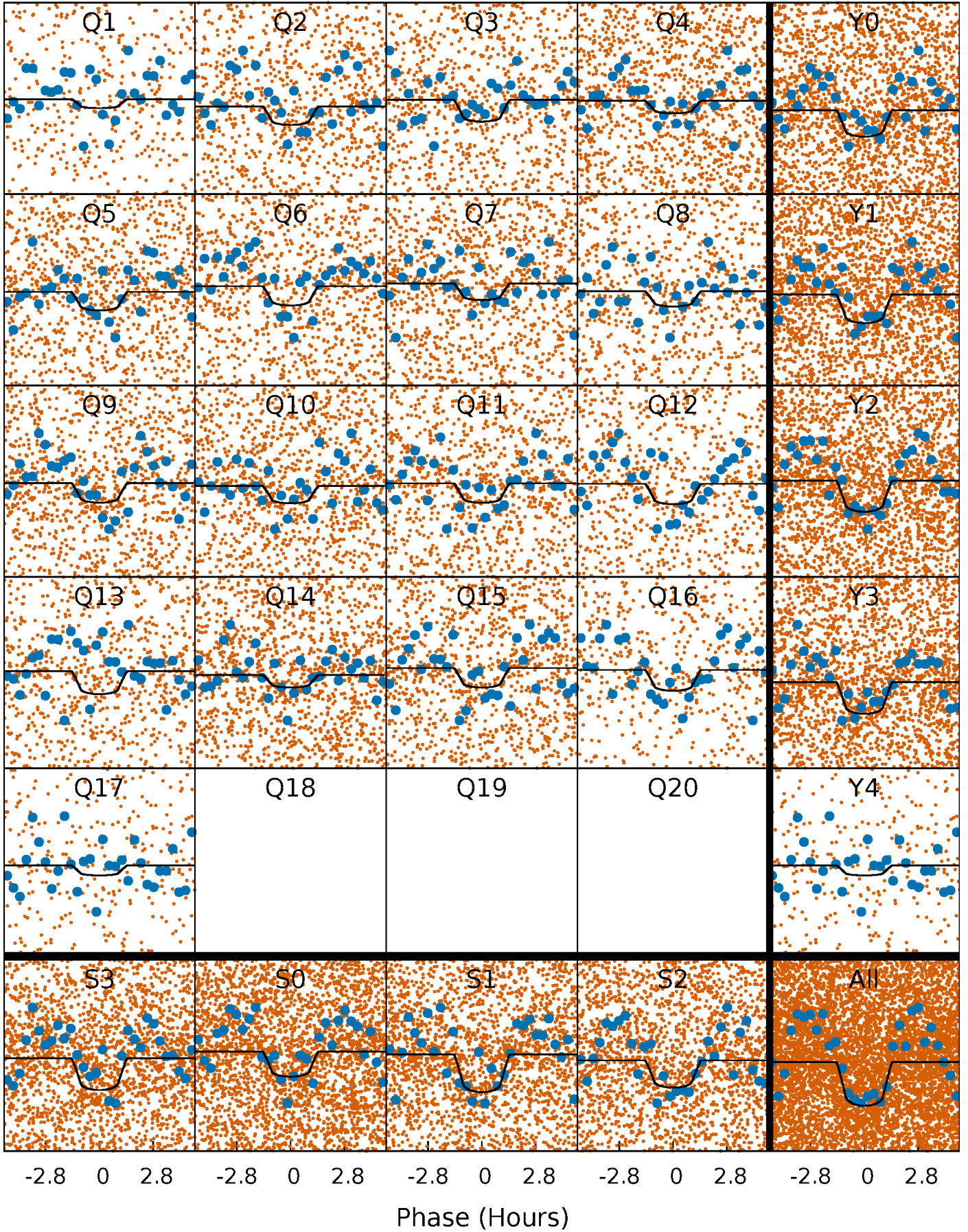
TCE 008190872-01 P= 0.696187 Days  $T_0=132.110098$  (BKJD)





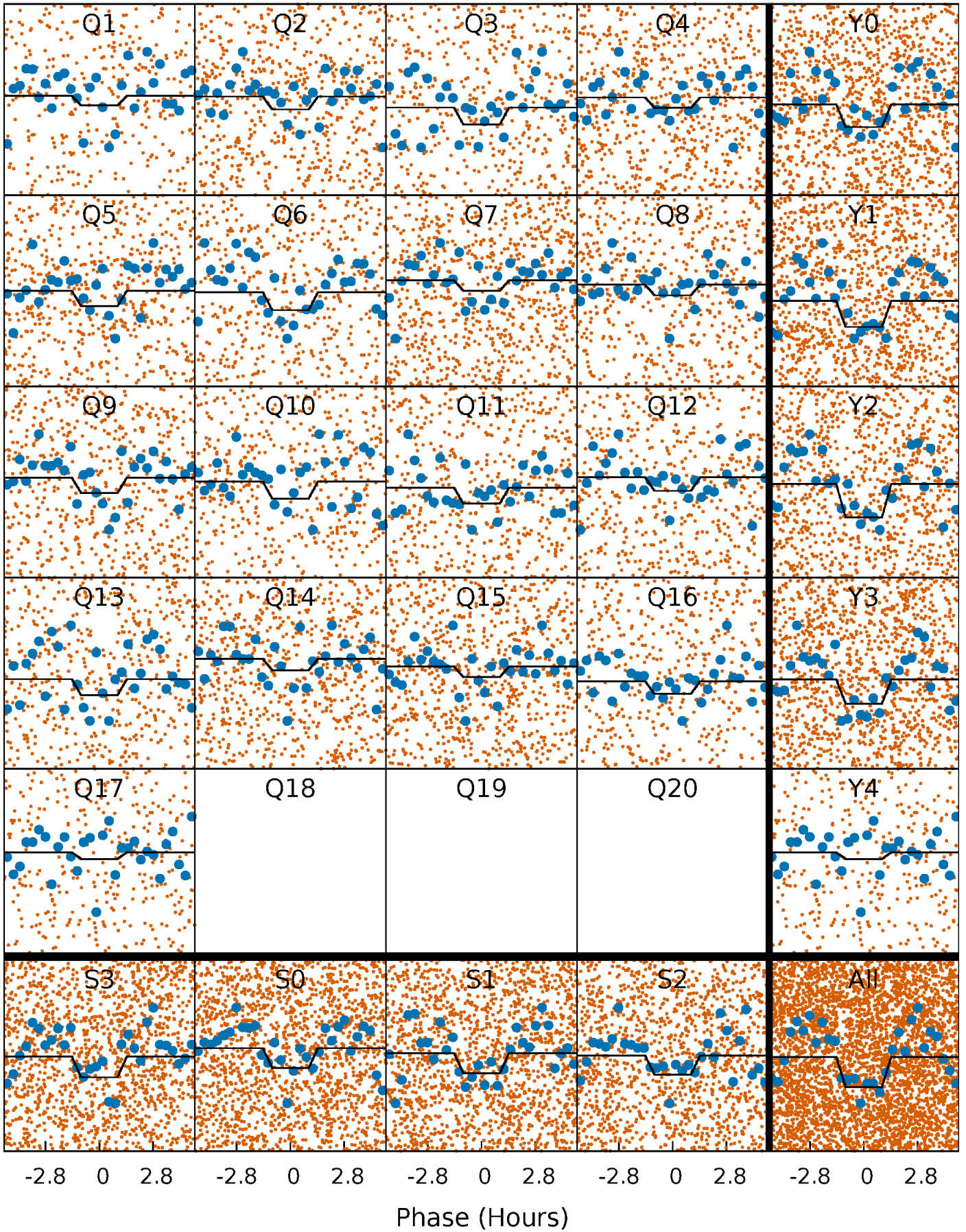
# DV Quarter-Phased Transit Curves

TCE 008190872-01   P= 0.696187 Days    $T_0=132.110098$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

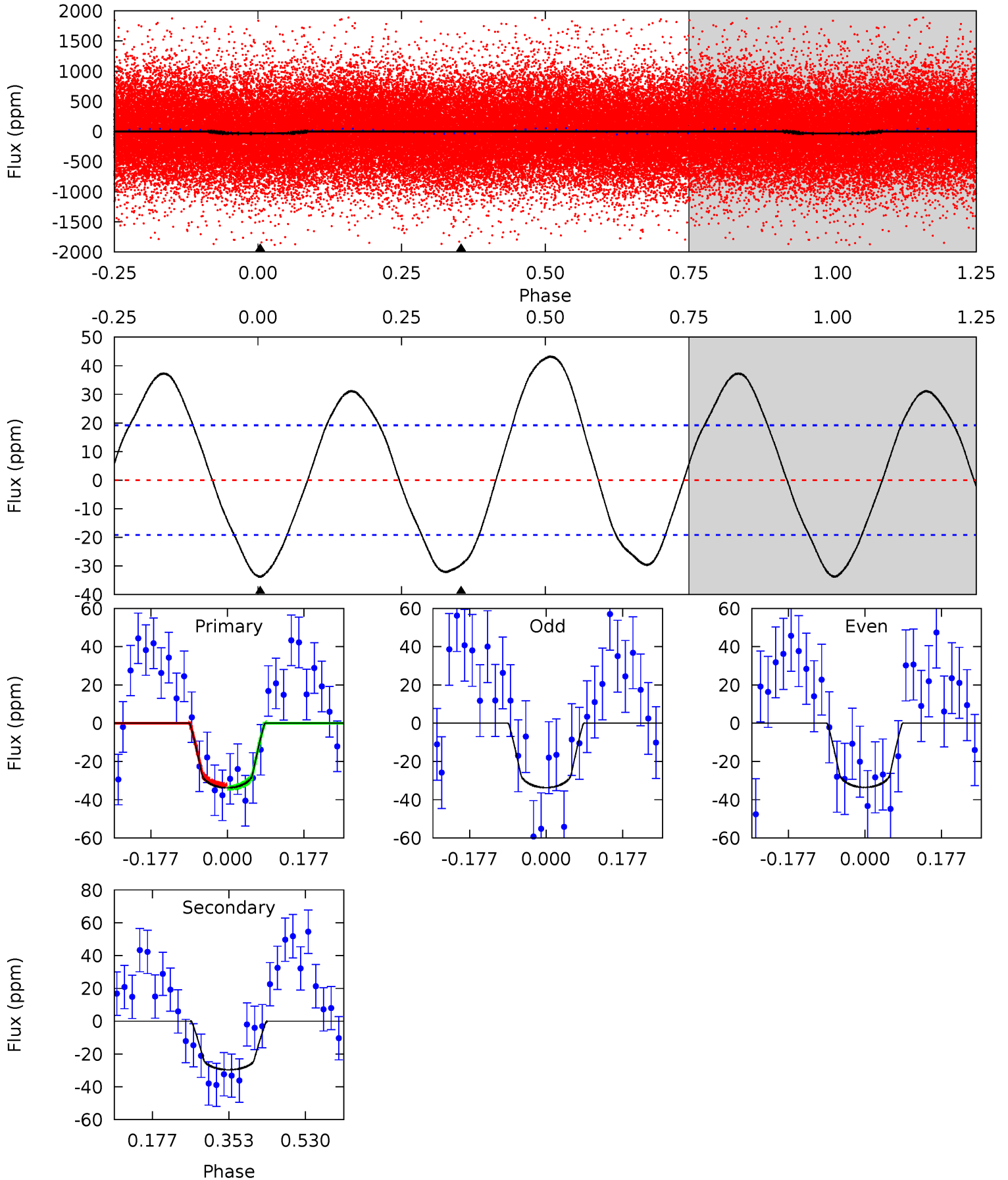
TCE 008190872-01 P= 0.696187 Days  $T_0=132.110098$  (BKJD)



# DV Model-Shift Uniqueness Test

008190872-01, P = 0.696187 Days, E = 131.413911 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
7.84	6.87	0	0	4.44	1.35	5.23	7.84	7.84	6.87	6.87	0.01	0.94	0.56	0.17

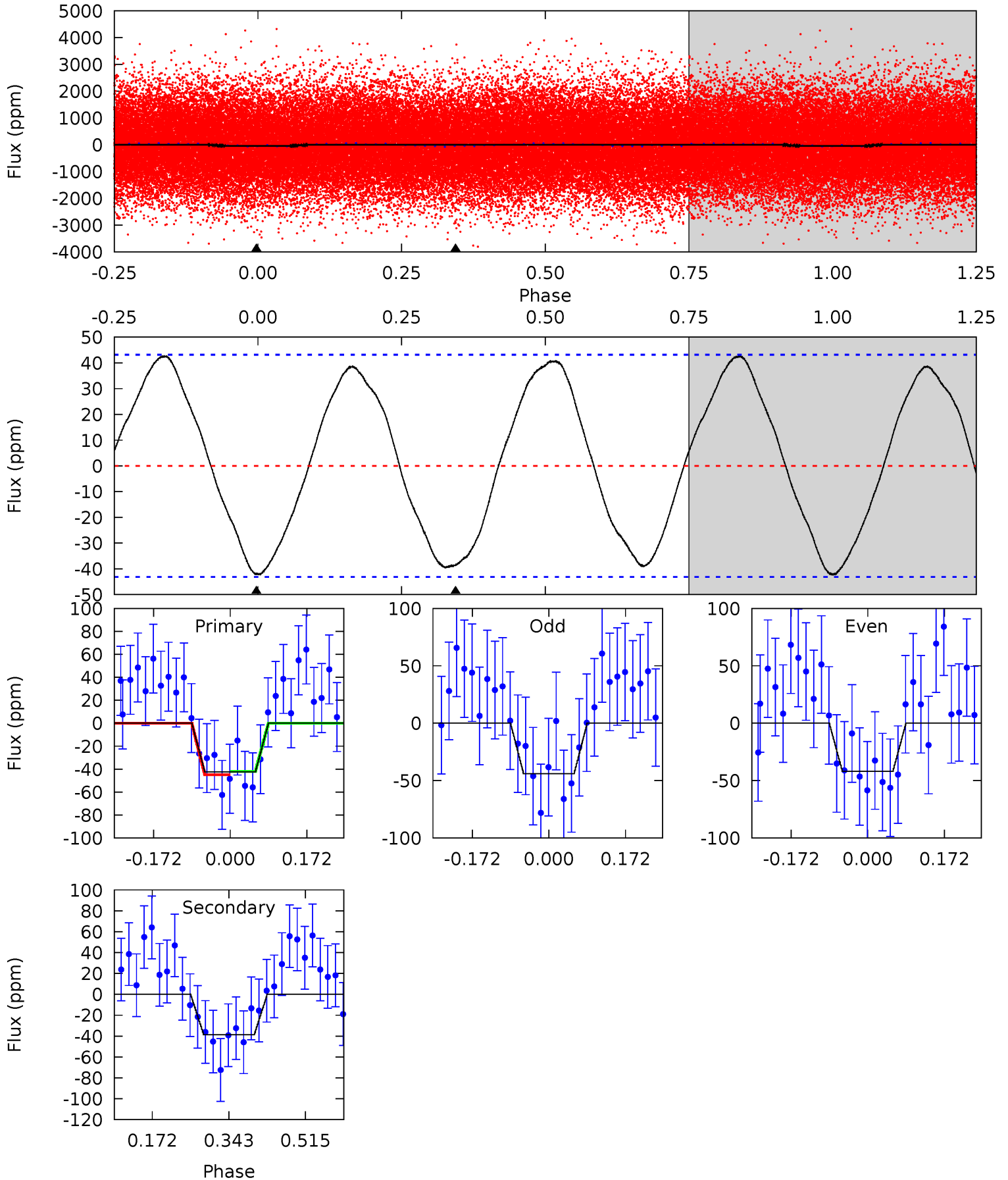




# Alt Model-Shift Uniqueness Test

008190872-01, P = 0.696187 Days, E = 131.413911 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
4.37	4.00	0	0	4.45	1.37	2.76	4.37	4.37	4.00	4.00	0.10	0.84	0.50	0.15





### Stellar Parameters For KIC 008190872

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6534^{+210}_{-257}$	$3.678^{+0.612}_{-0.108}$	$-0.440^{+0.300}_{-0.300}$	$2.842^{+0.538}_{-1.614}$	$1.401^{+0.203}_{-0.407}$	$0.086^{+0.663}_{-0.029}$
	+3%/-4%	+17%/-3%	+68%/-68%	+19%/-57%	+14%/-29%	+770%/-34%
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 008190872-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-30 \pm 4$	$1.75^{+1.12}_{-0.94}$	$4973^{+398}_{-781}$	$5614^{+2937}_{-1399}$	$1.566^{+5.422}_{-0.970}$
Alt.	$-39 \pm 10$	$1.78^{+1.19}_{-0.96}$	$5002^{+414}_{-710}$	$6018^{+3329}_{-1461}$	$1.954^{+7.269}_{-1.238}$

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

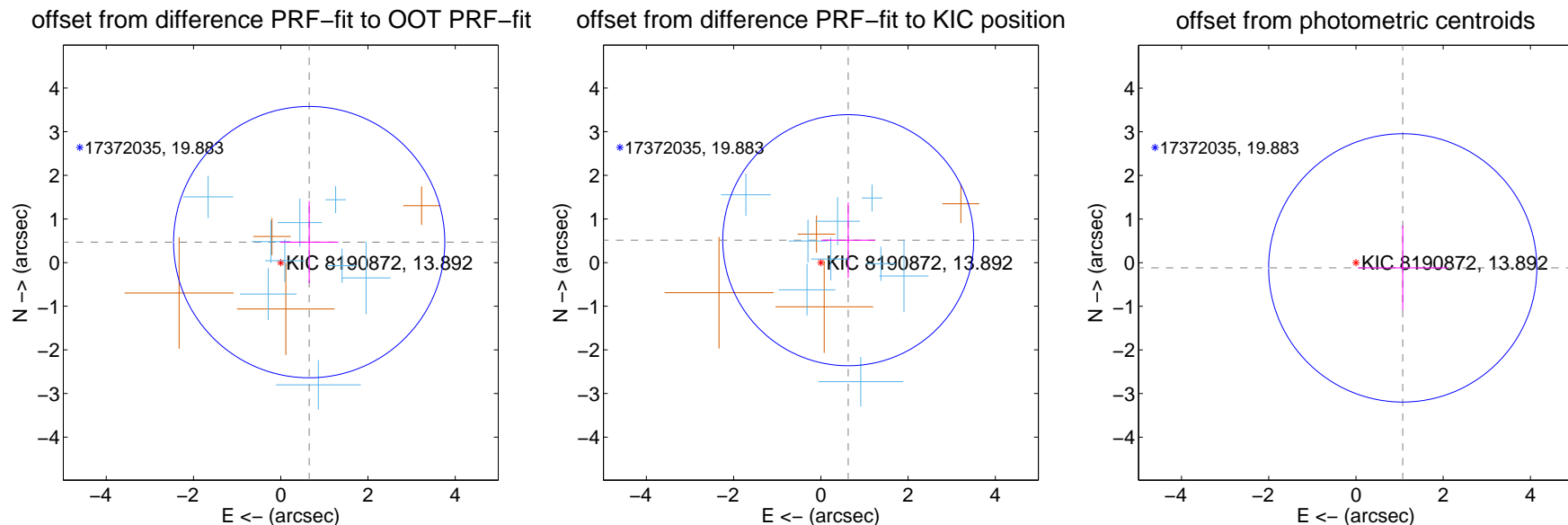
## DV Centroid Data

Supplemental centroid analysis for 008190872-01. Kepler magnitude: 13.89. Transit SNR 10.05

There are 9 quarters with good PRF difference image offsets

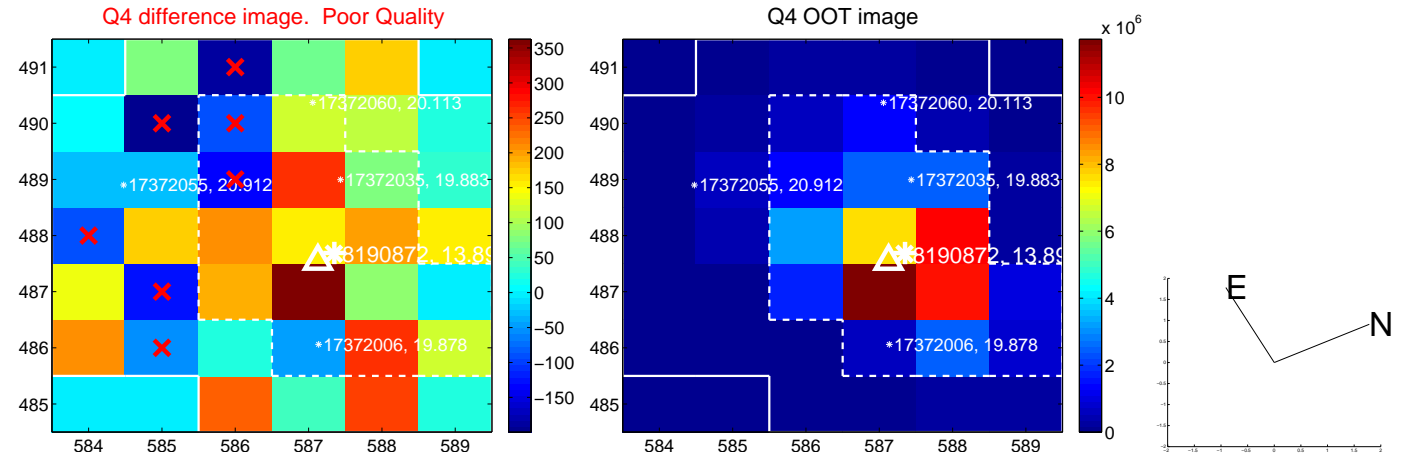
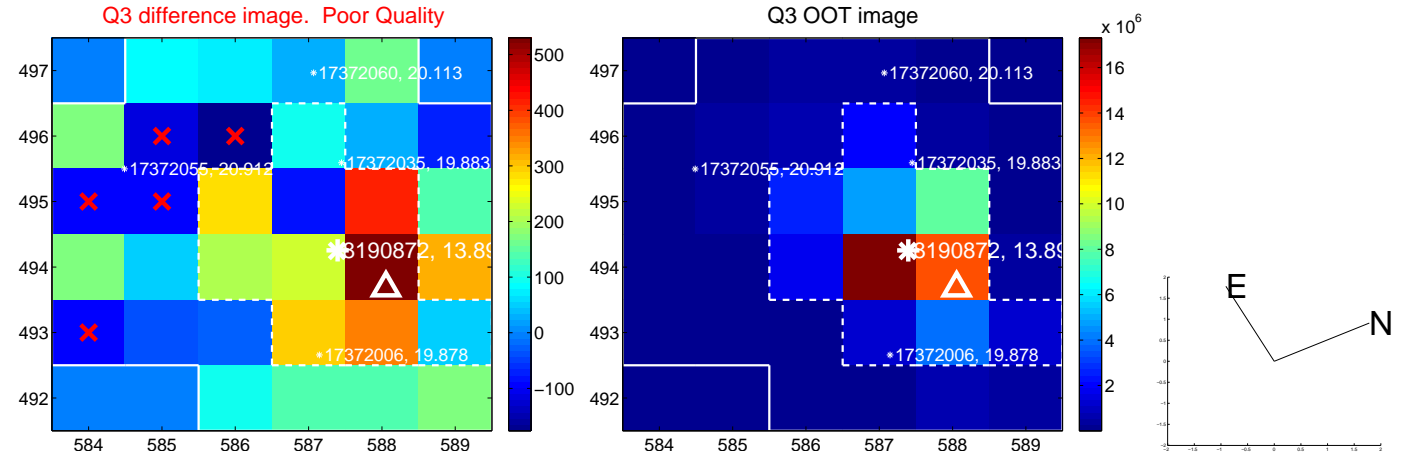
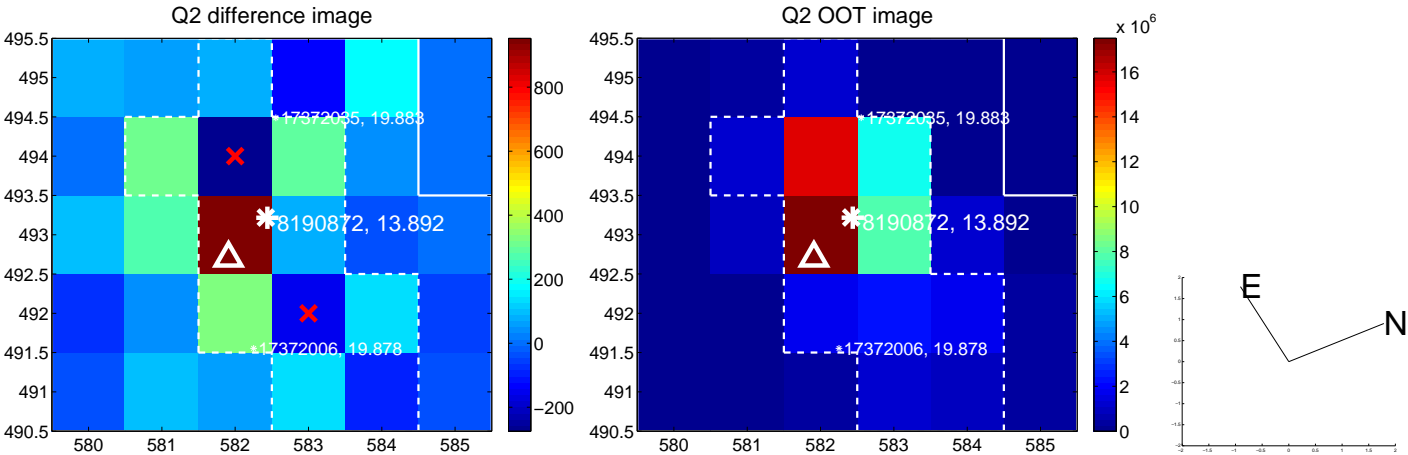
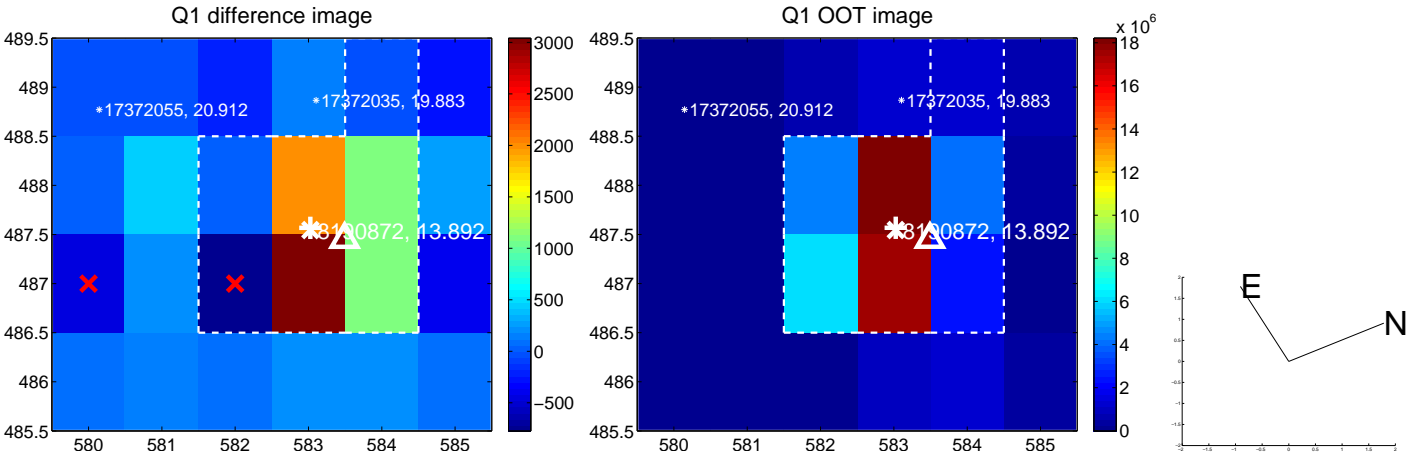
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.803 \pm 1.036$	0.77	$-0.652 \pm 0.671$	$0.469 \pm 0.938$
PRF-fit source offset from KIC position	$0.810 \pm 0.959$	0.84	$-0.627 \pm 0.618$	$0.512 \pm 0.863$
photometric centroid source offset	$1.08 \pm 1.02$	1.05	$-1.07 \pm 1.03$	$-0.12 \pm 0.97$

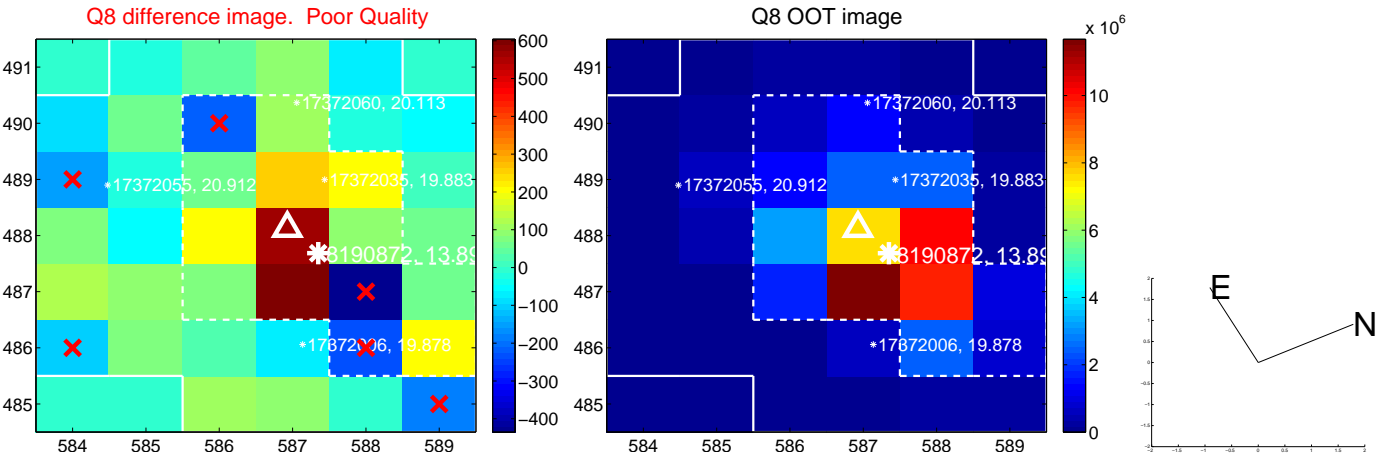
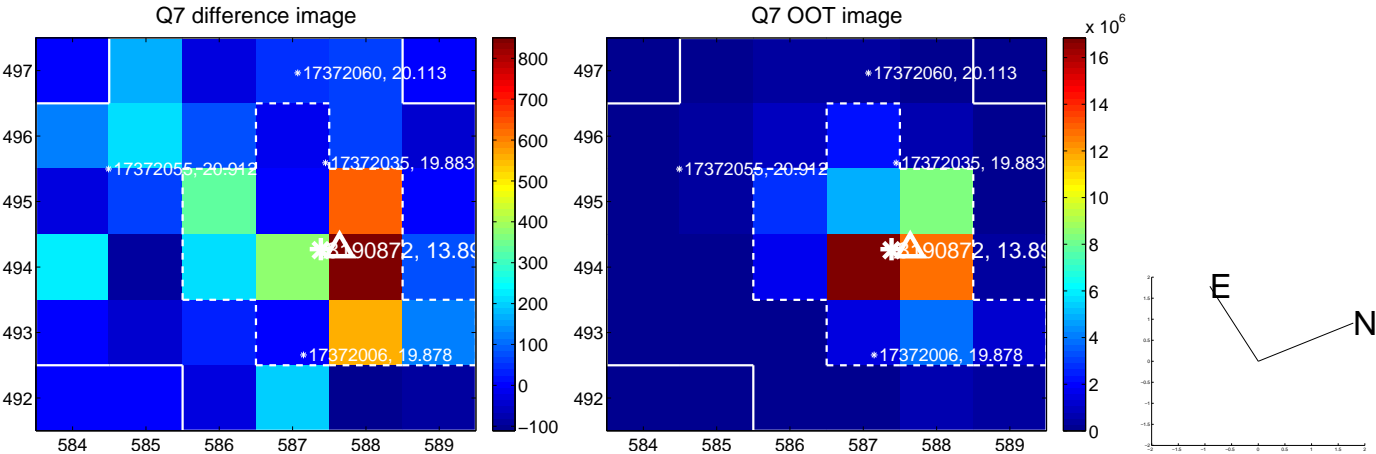
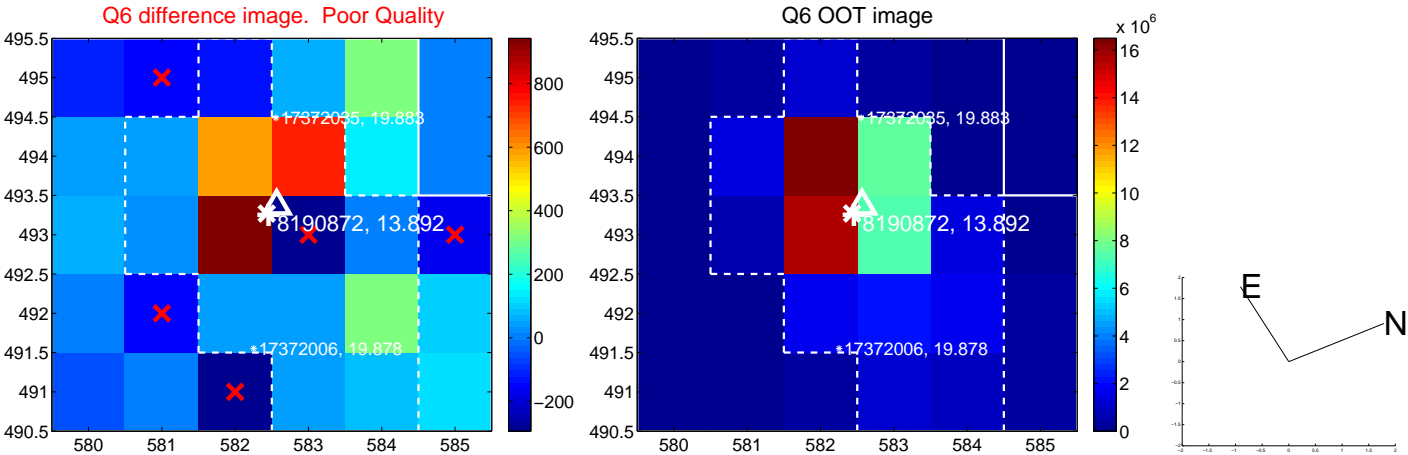
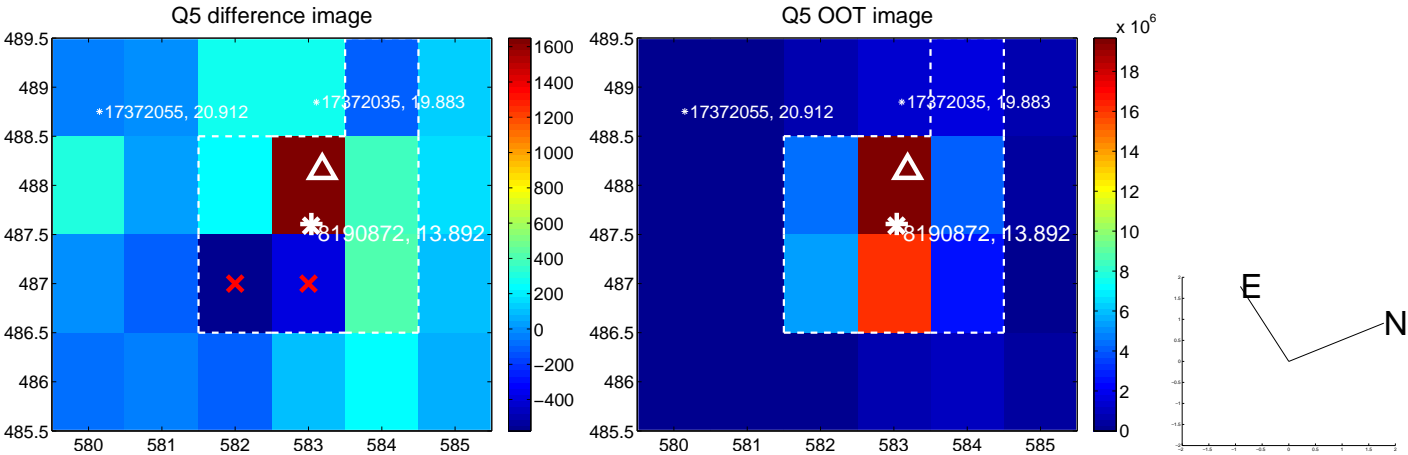


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

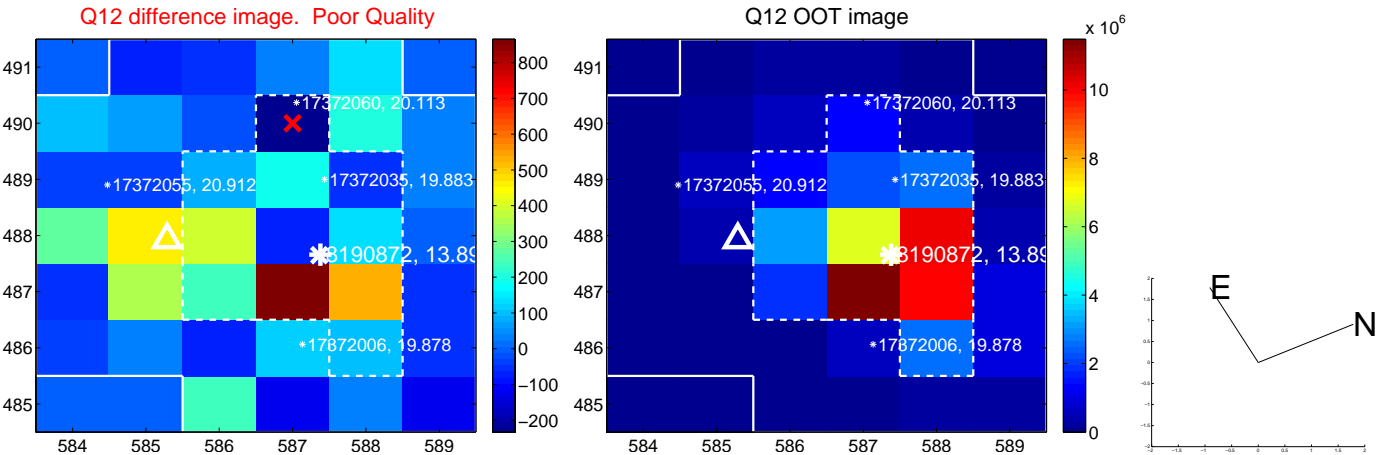
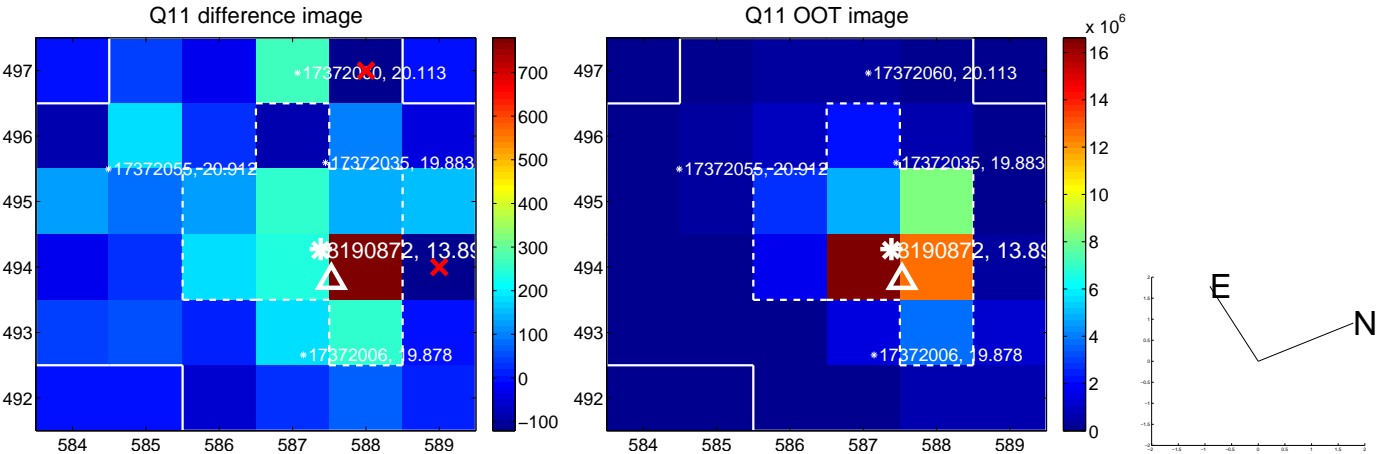
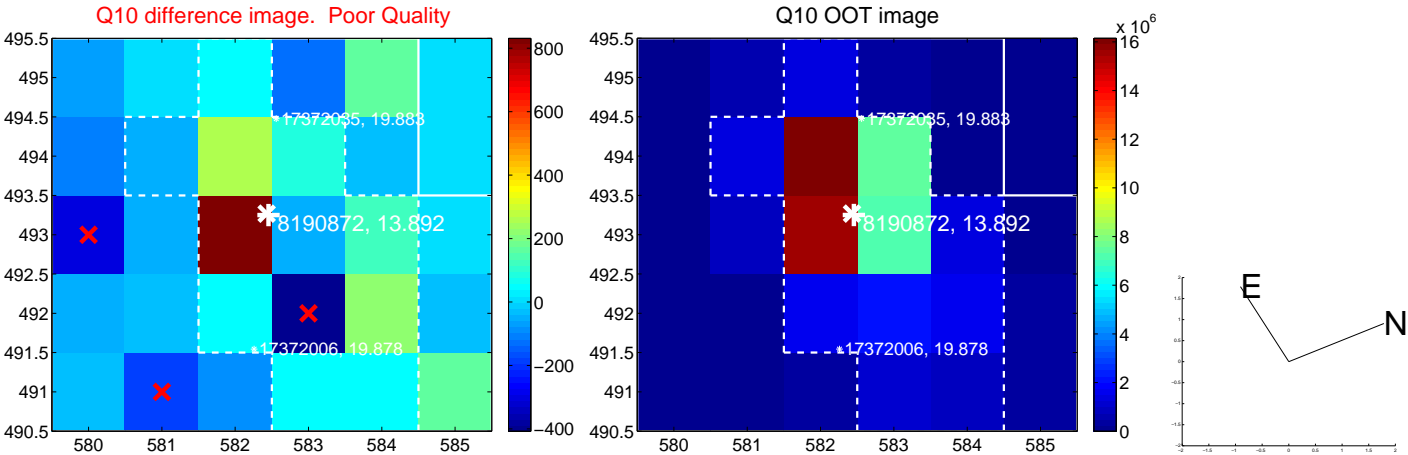
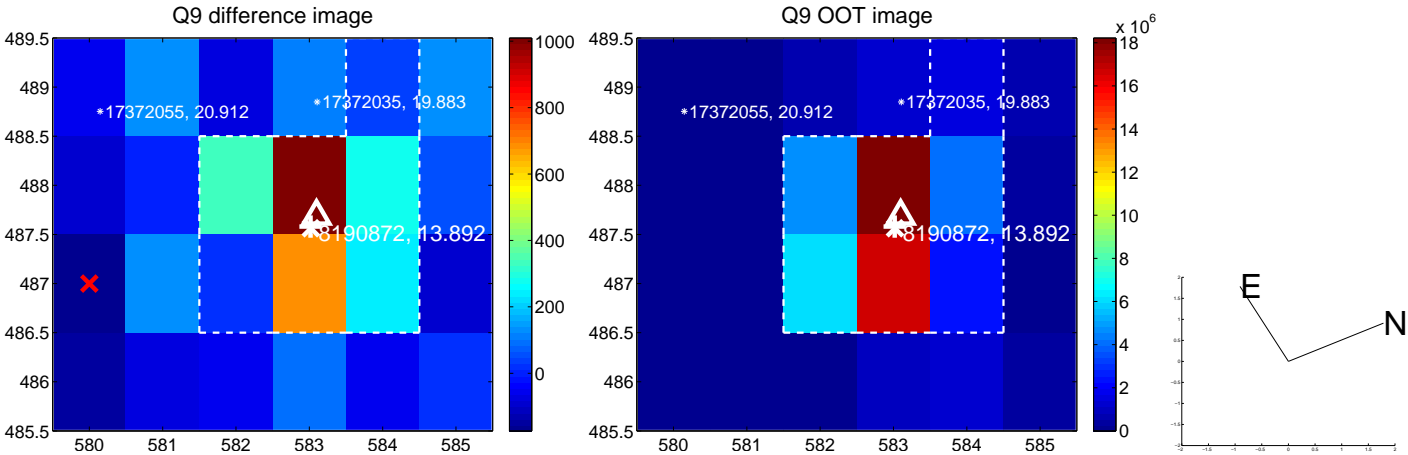


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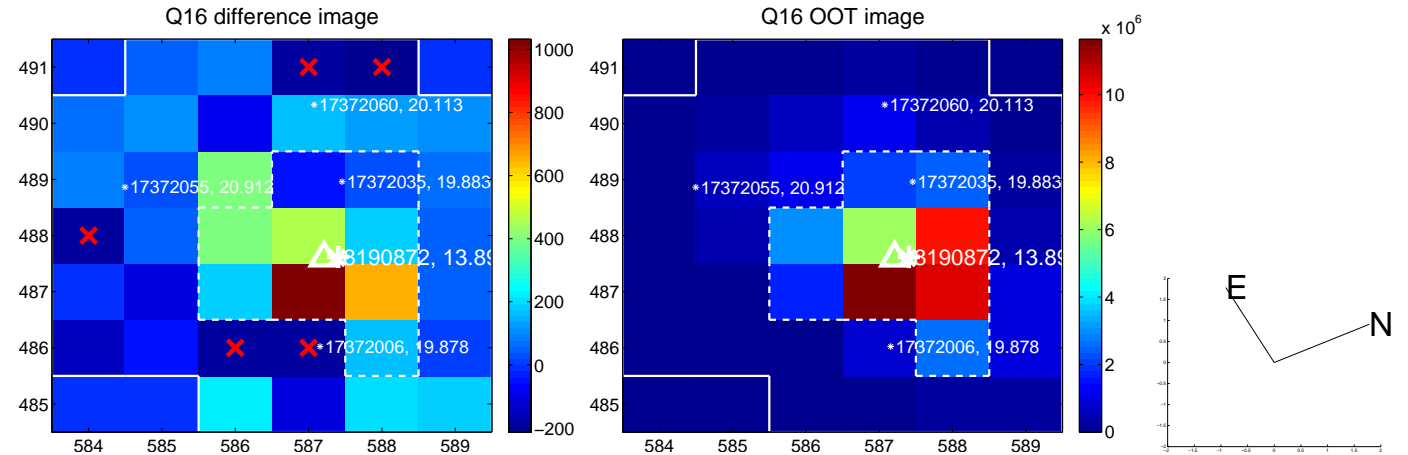
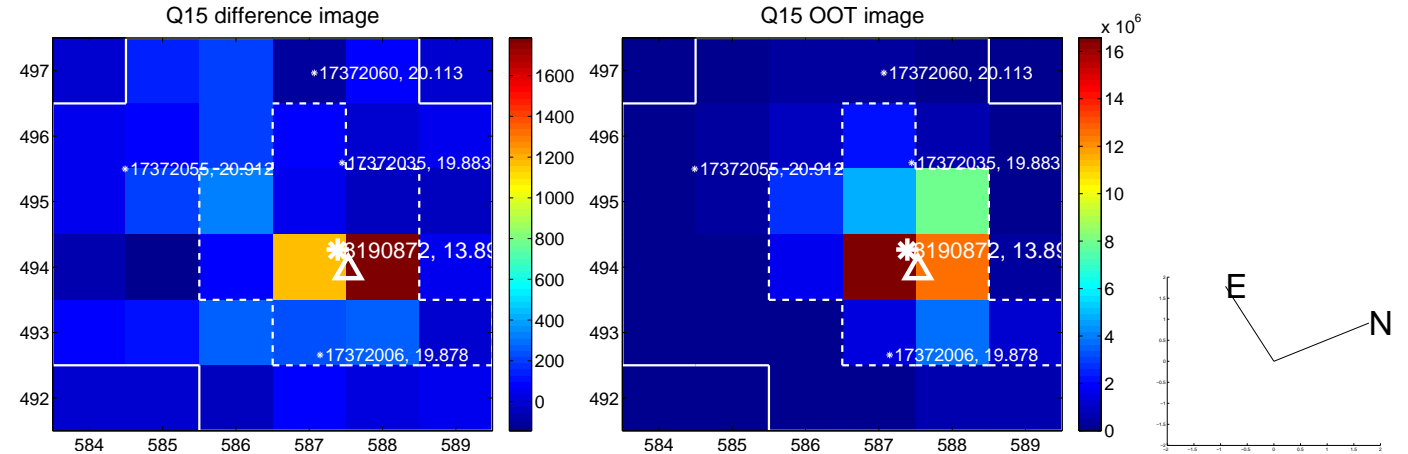
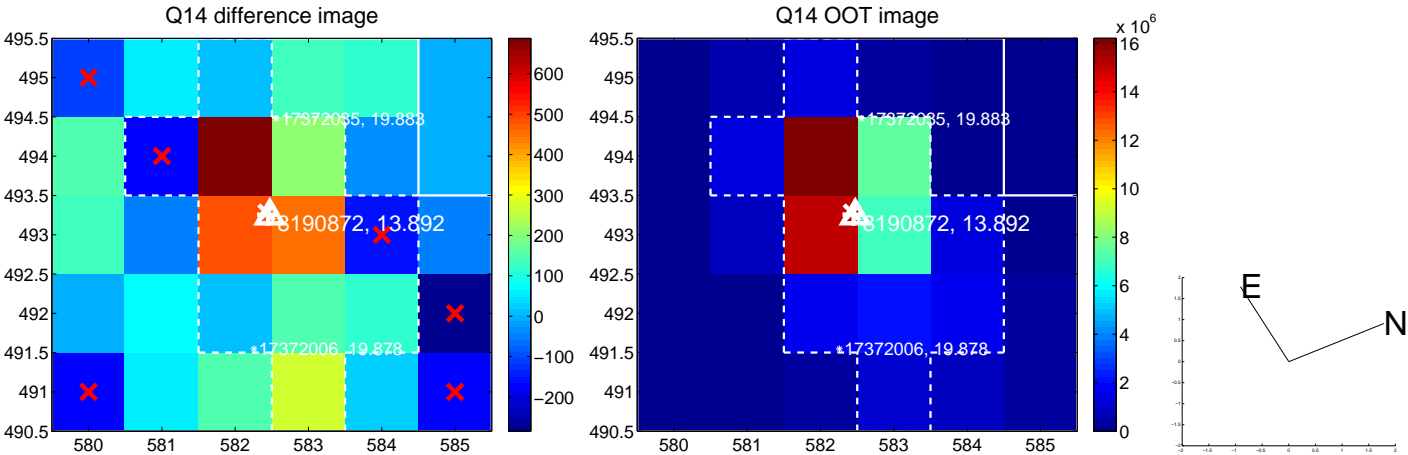
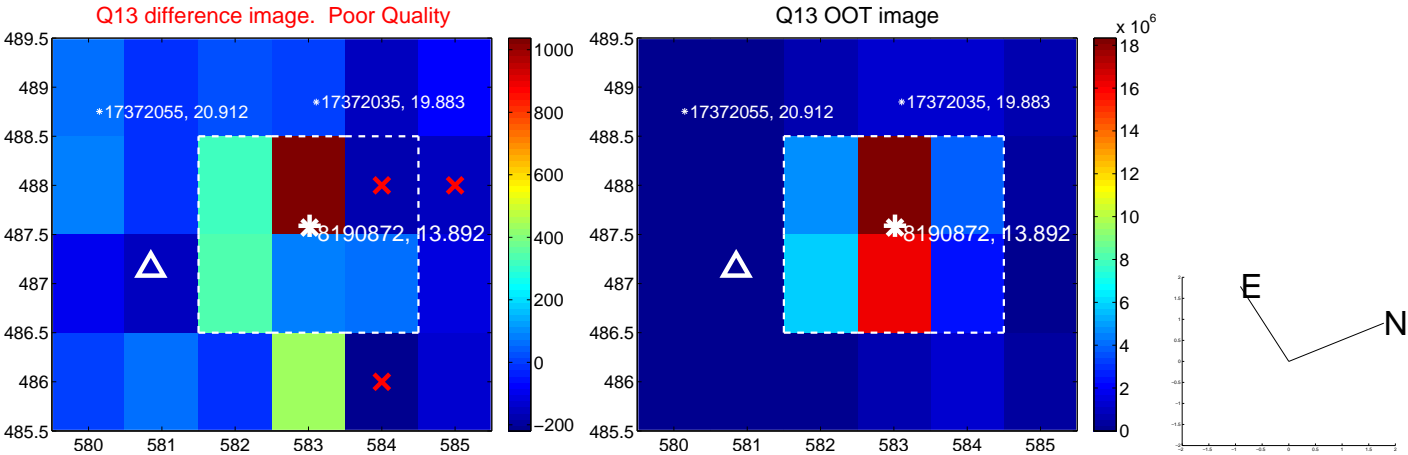




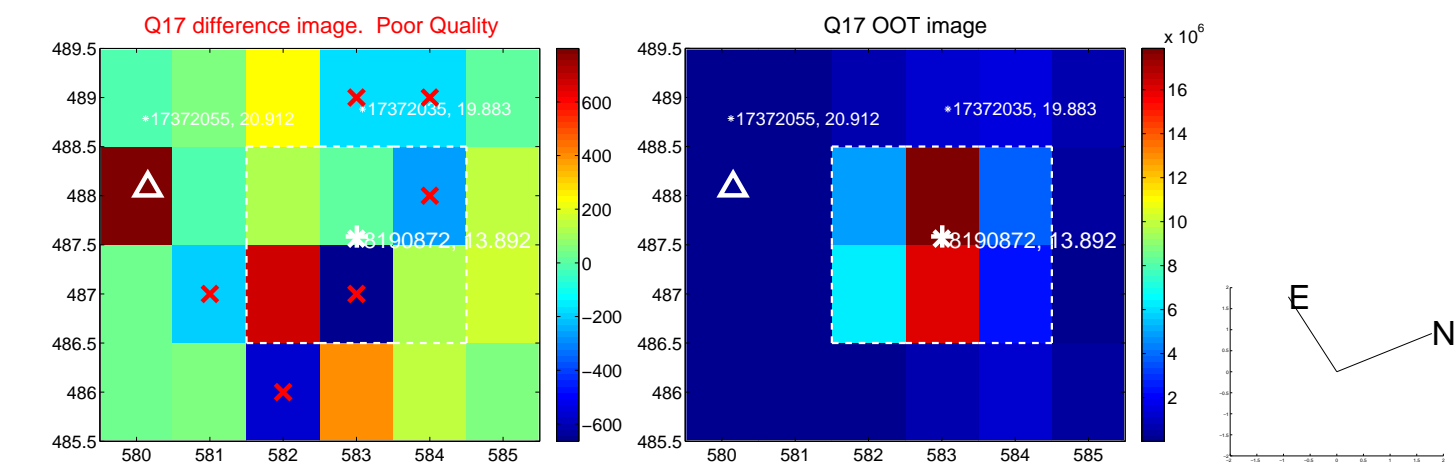
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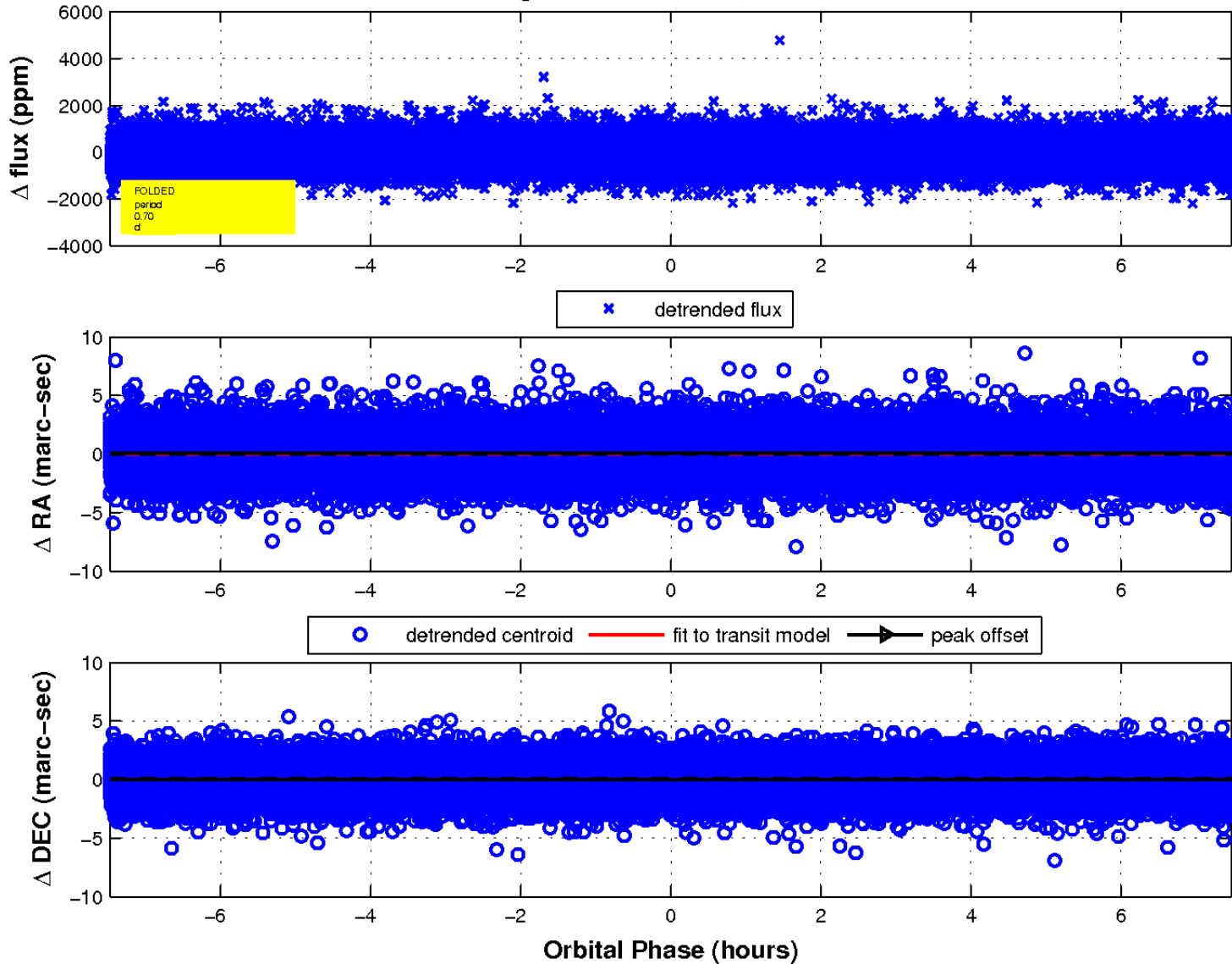
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

