

# KIC 004907533

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
004907533-01	OBS	No	1.200096	131.620862	24.2	11.079	8.2	6.5	0.73	4983	0.35	762.29

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004907533-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_FEW_MEAS—HALO_GHOST

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

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

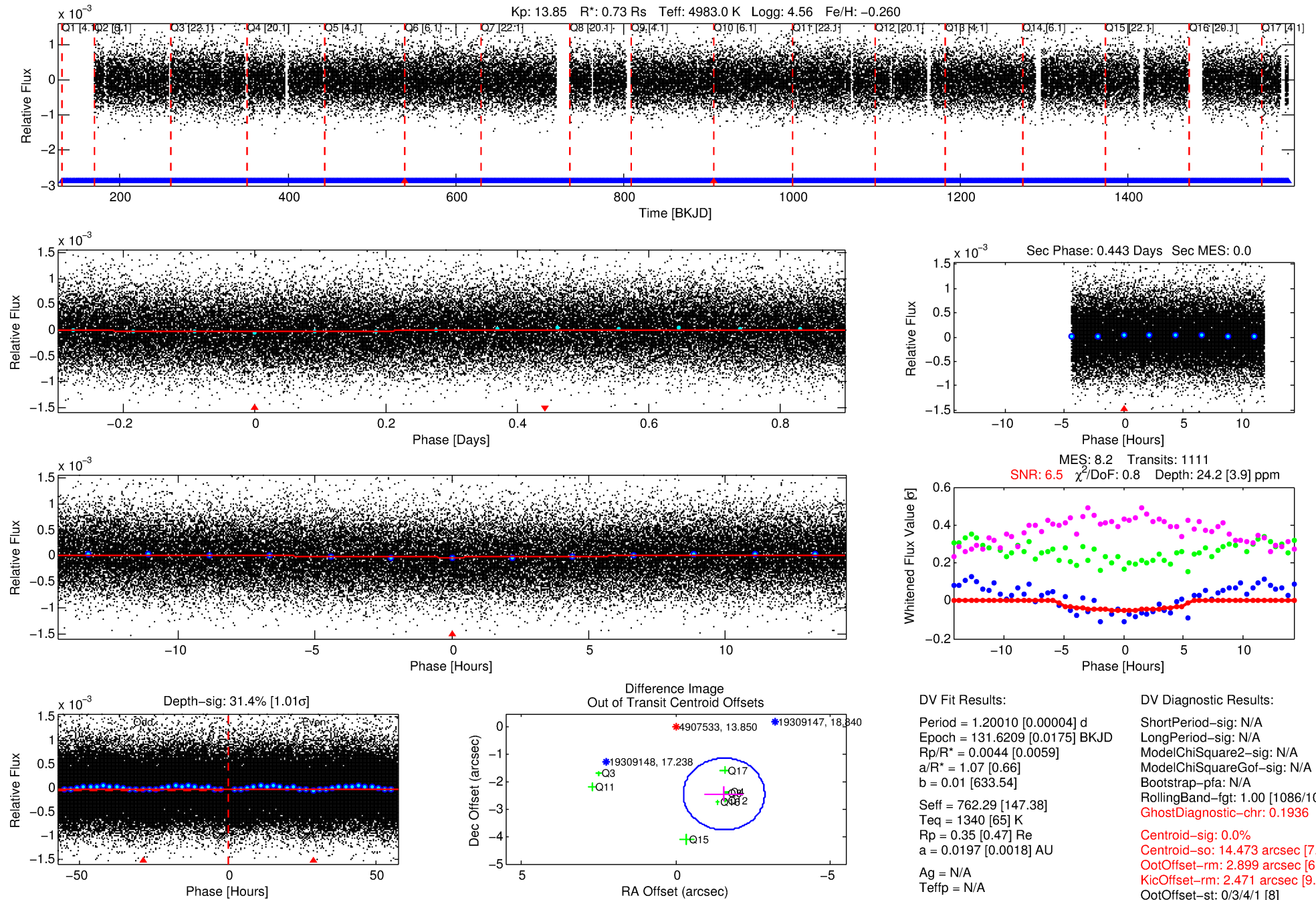
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 004907533-01

No Significant Match Found

# DV One-Page Summary

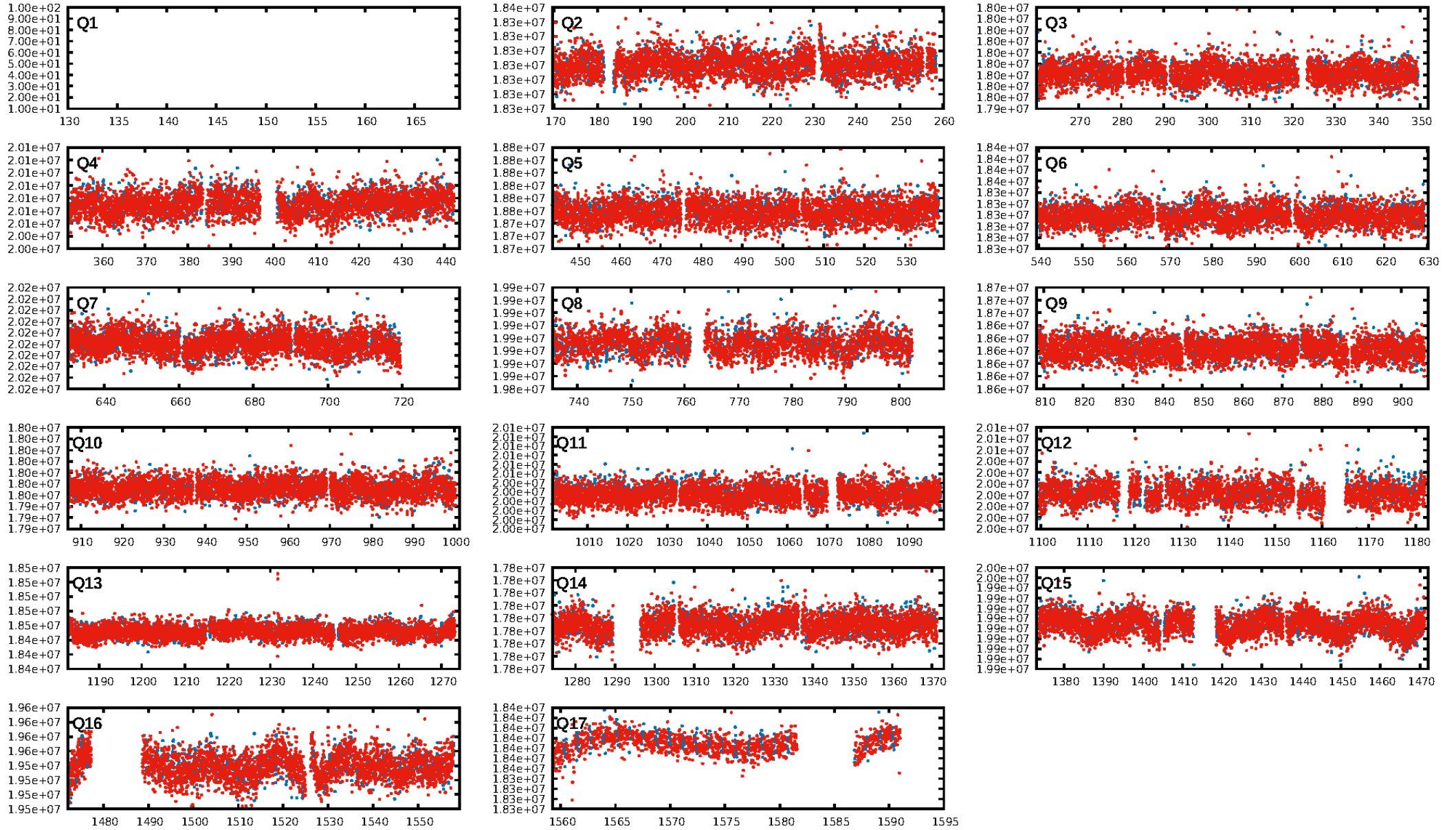
KIC: 4907533 Candidate: 1 of 1 Period: 1.200 d



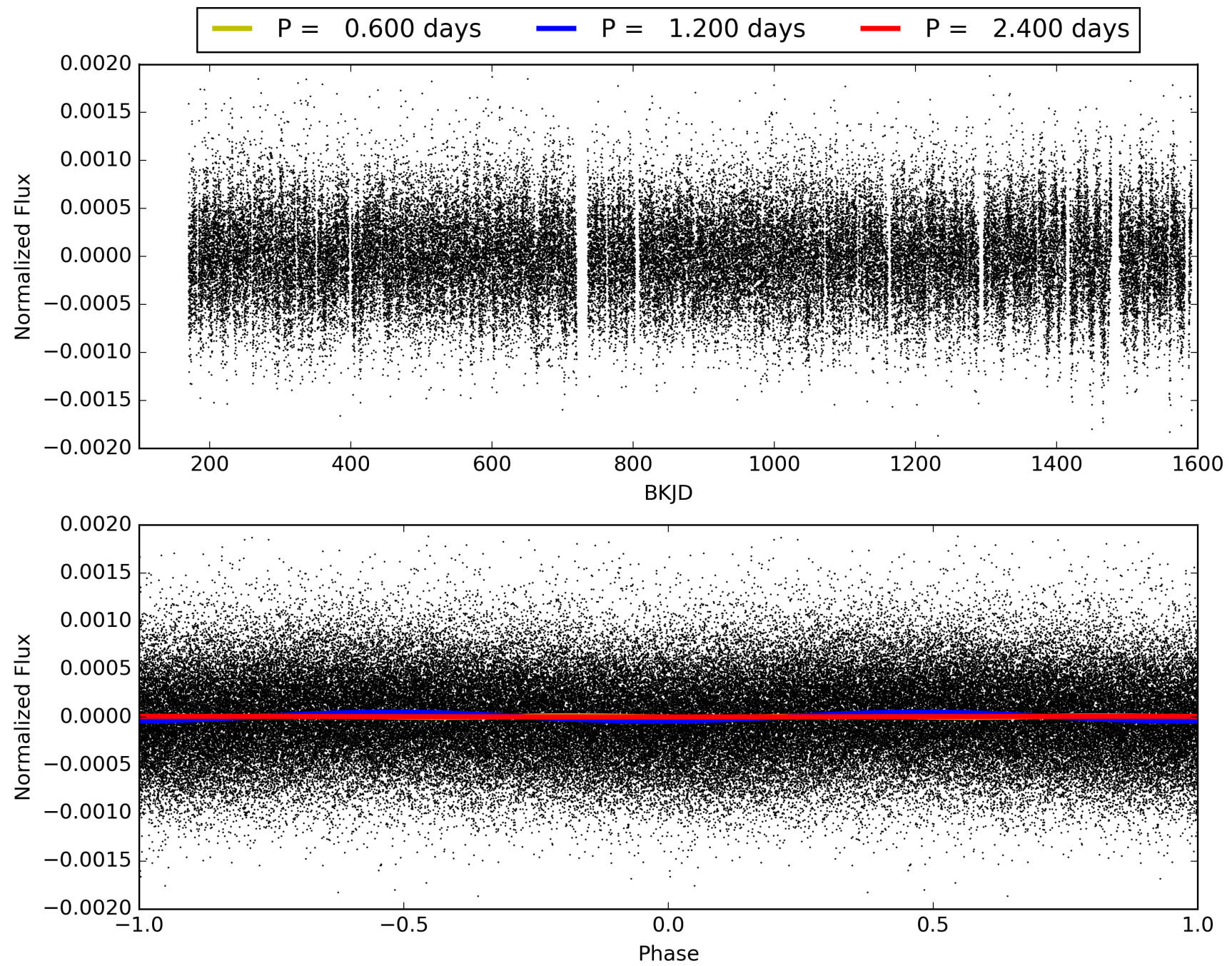
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:44:47 Z

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

# TCE 004907533-01, PDC Light Curves



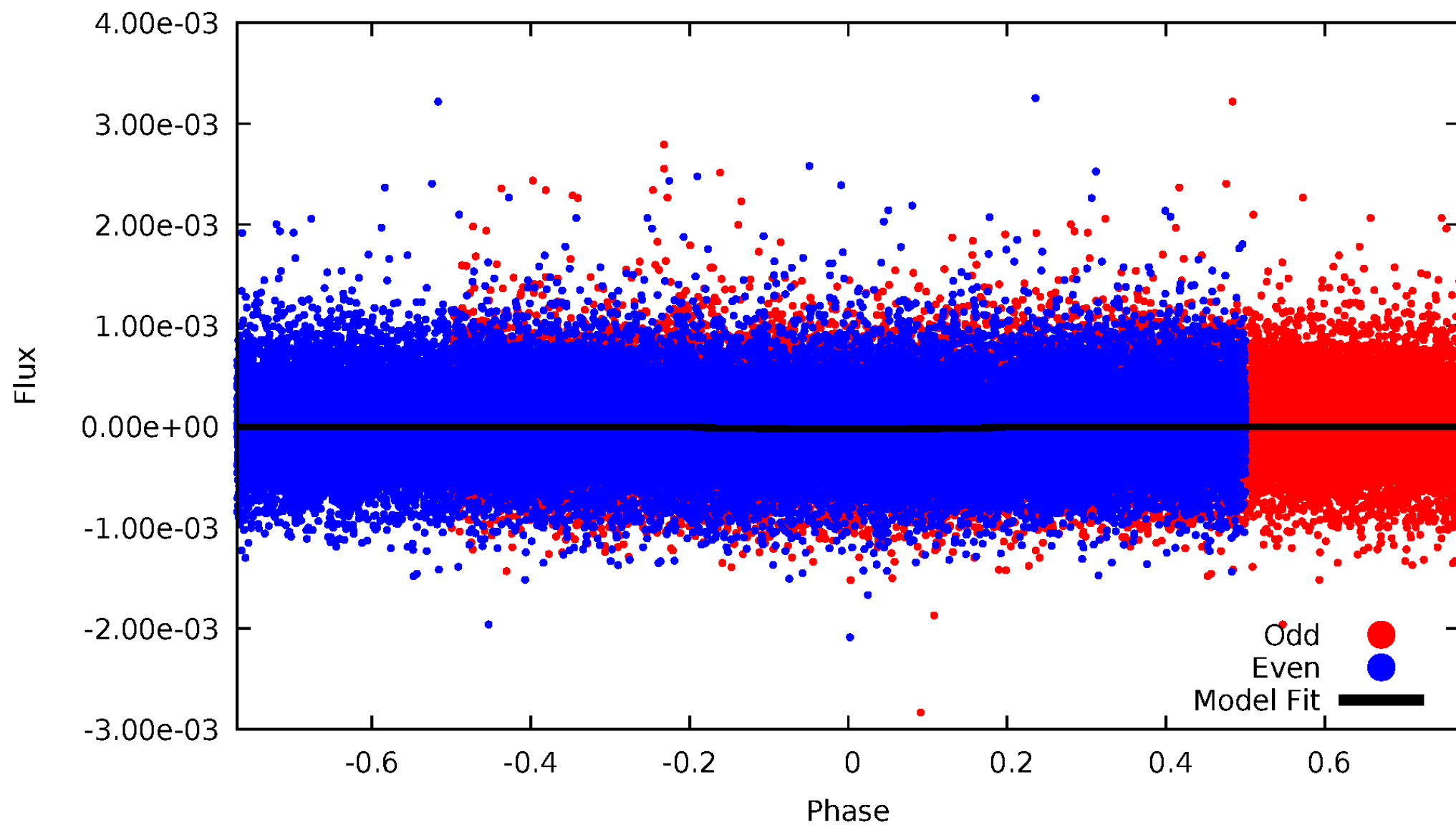
TCE 004907533-01





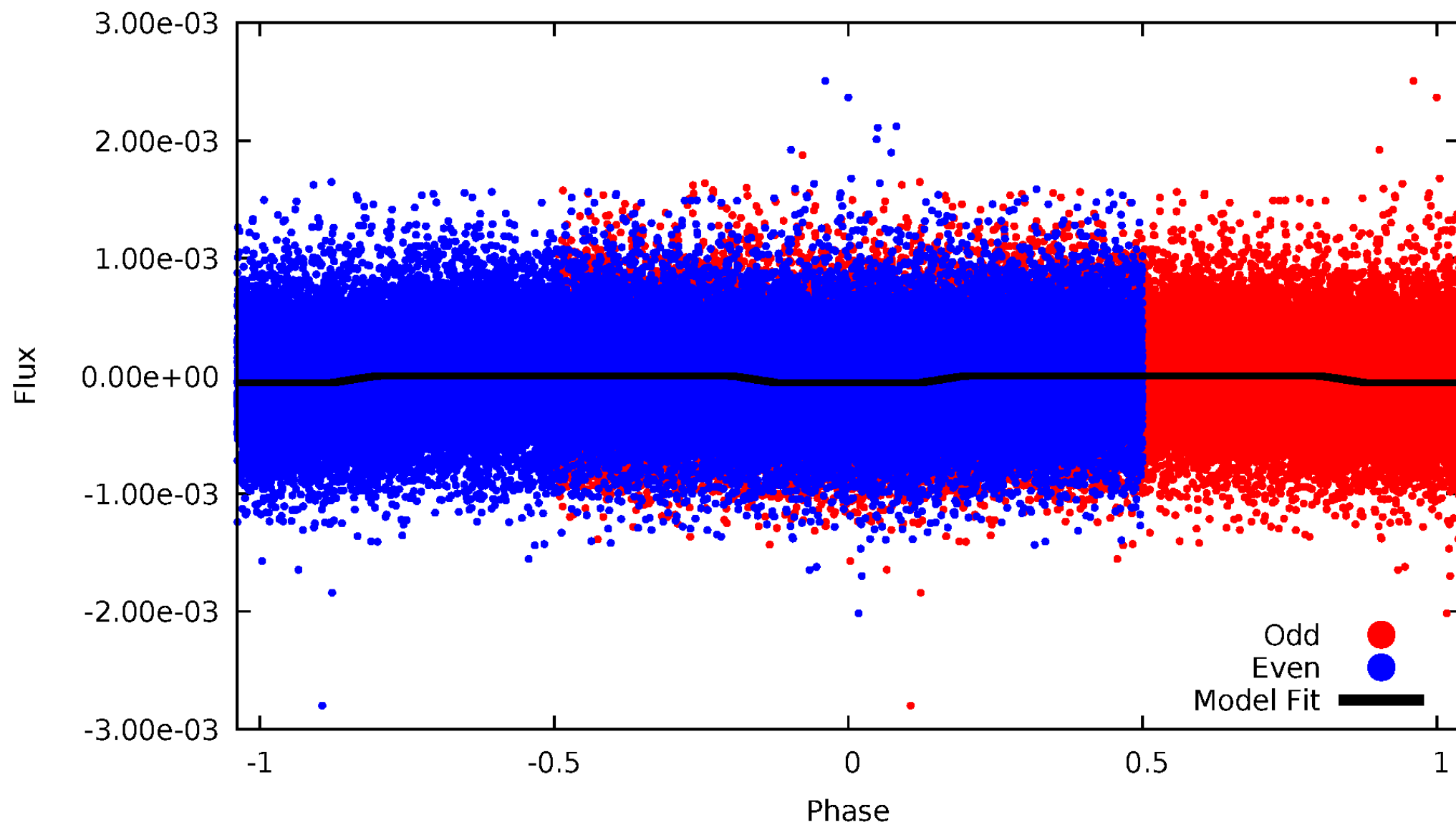
# DV Odd/Even

TCE 004907533-01



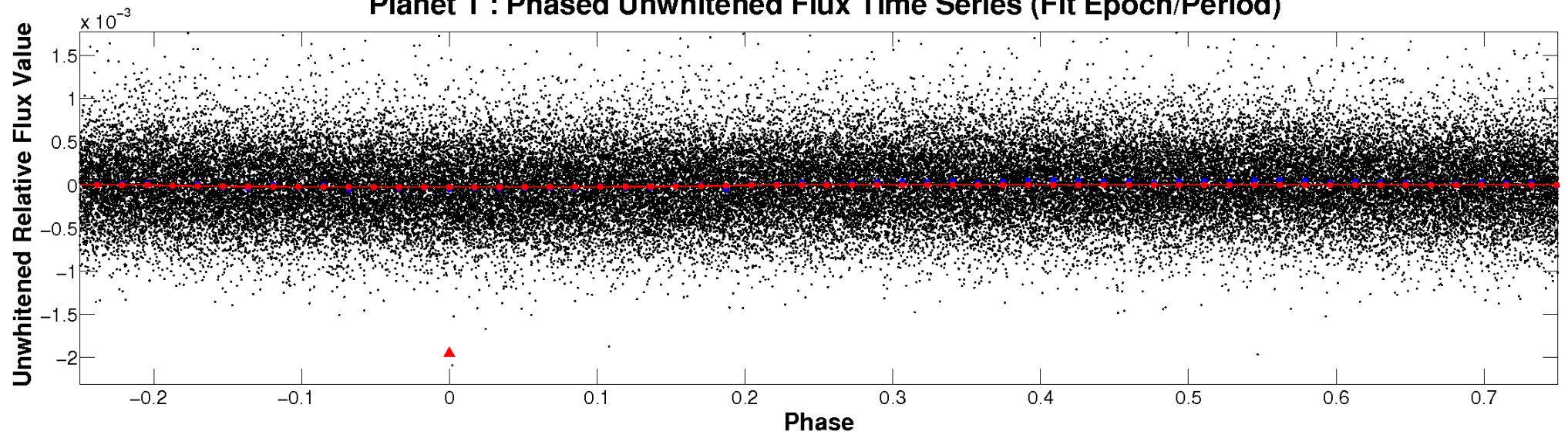
# ALT Odd/Even

TCE 004907533-01

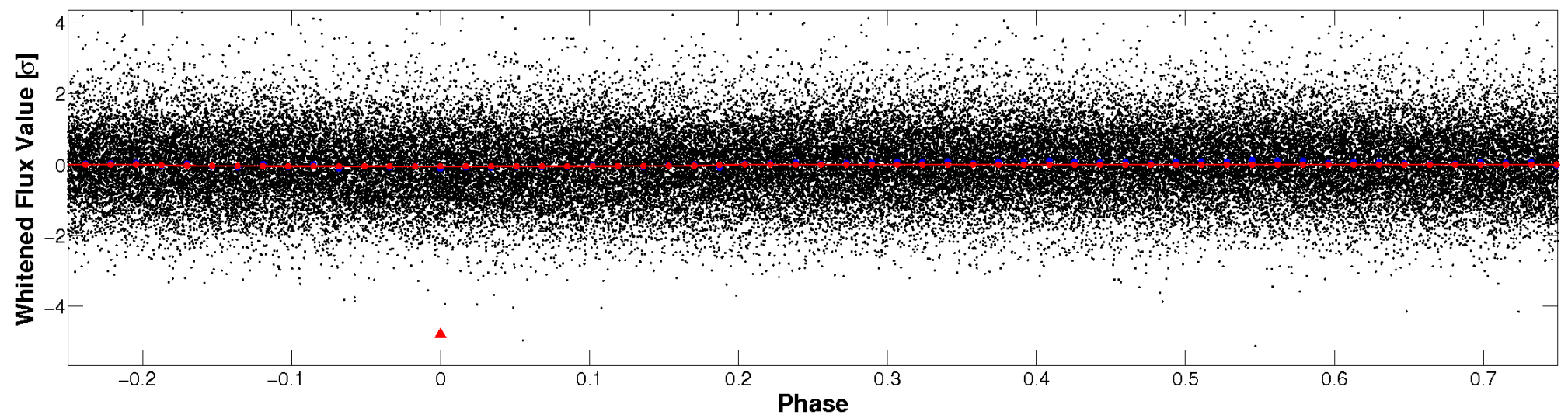


# Non-Whitened Vs. Whitened Light Curve

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

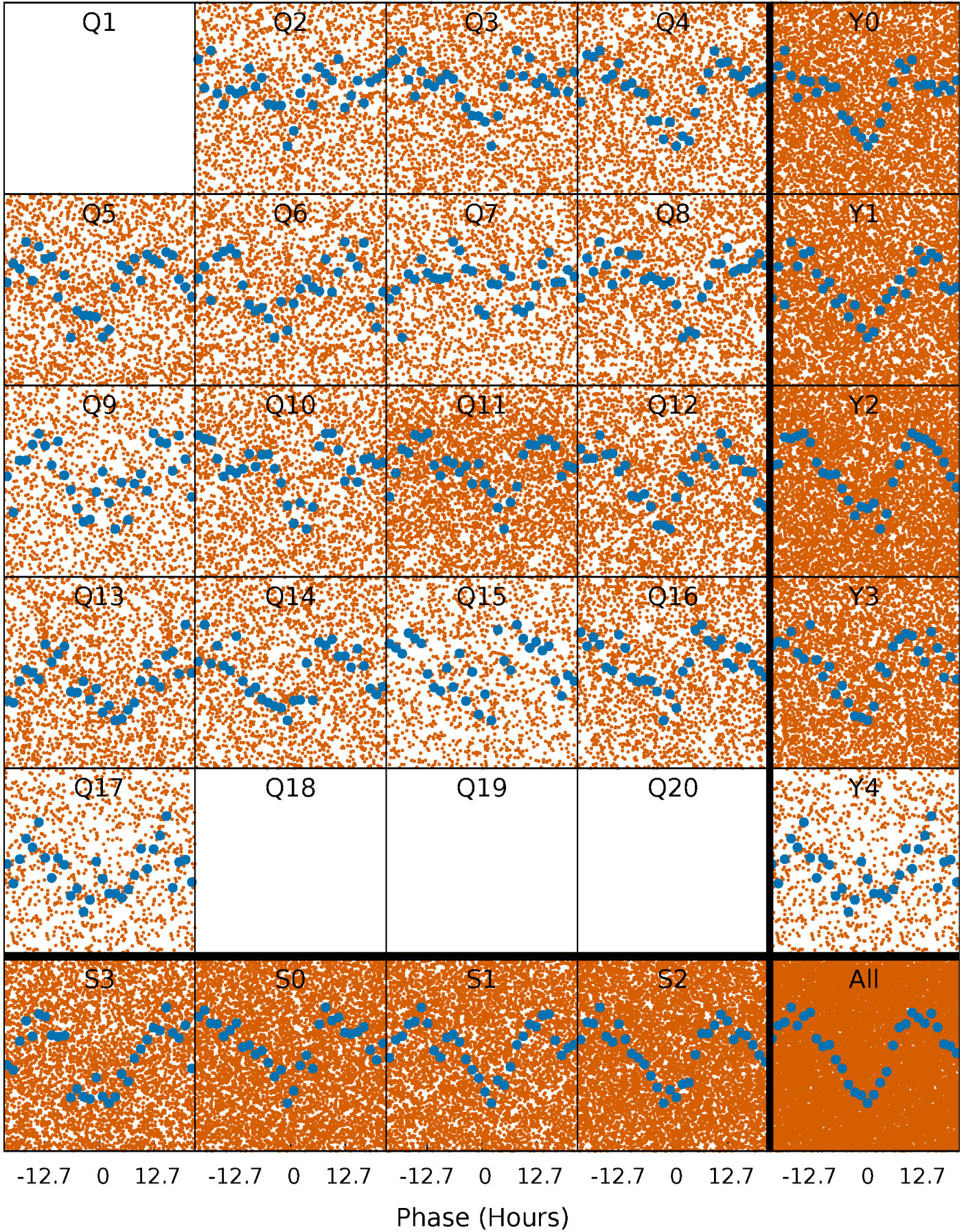


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

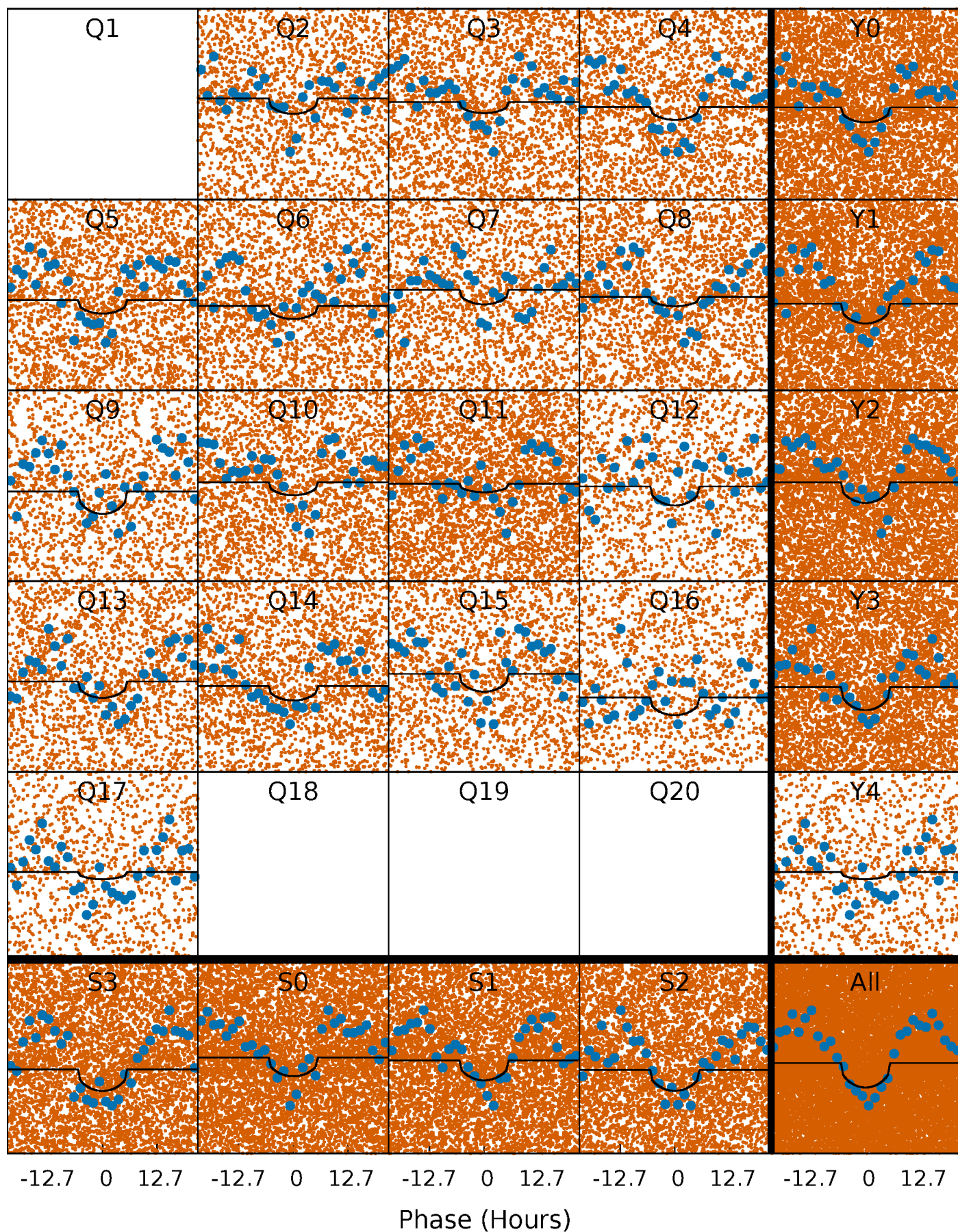
TCE 004907533-01 P= 1.200096 Days  $T_0=131.620862$  (BKJD)





# DV Quarter-Phased Transit Curves

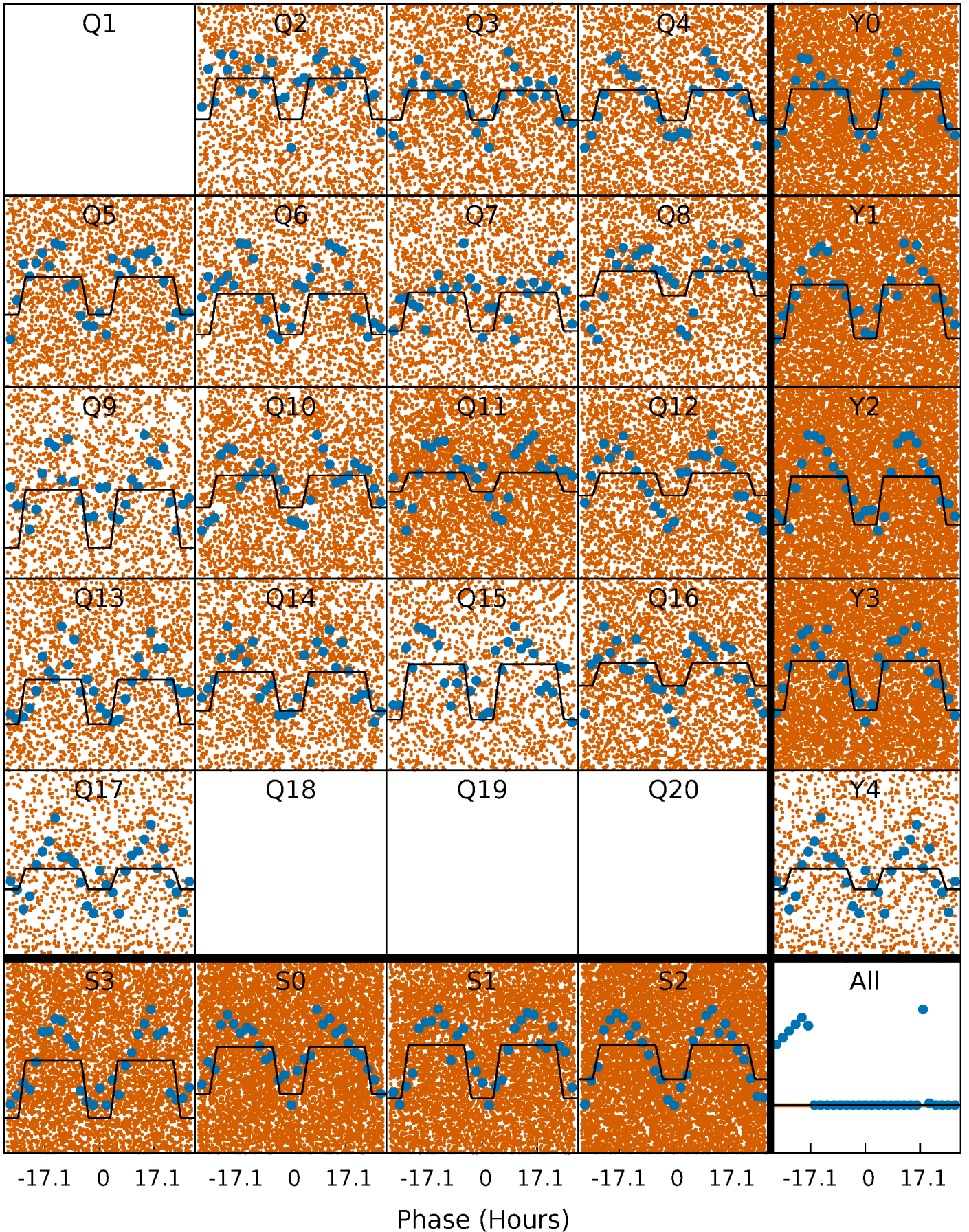
TCE 004907533-01 P= 1.200096 Days  $T_0=131.620862$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

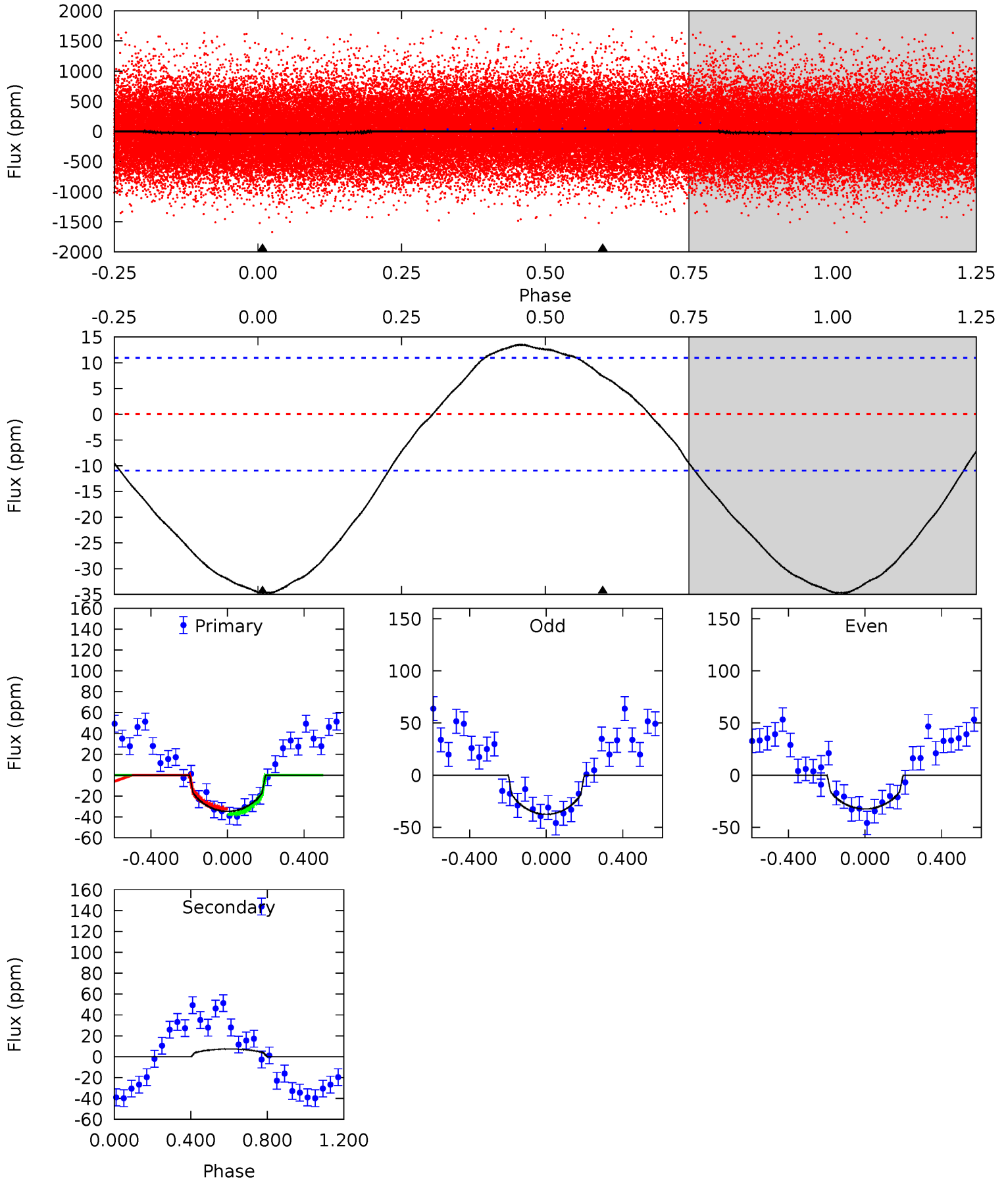
TCE 004907533-01 P= 1.200079 Days  $T_0=131.623906$  (BKJD)



# DV Model-Shift Uniqueness Test

004907533-01, P = 1.200096 Days, E = 131.620862 Days

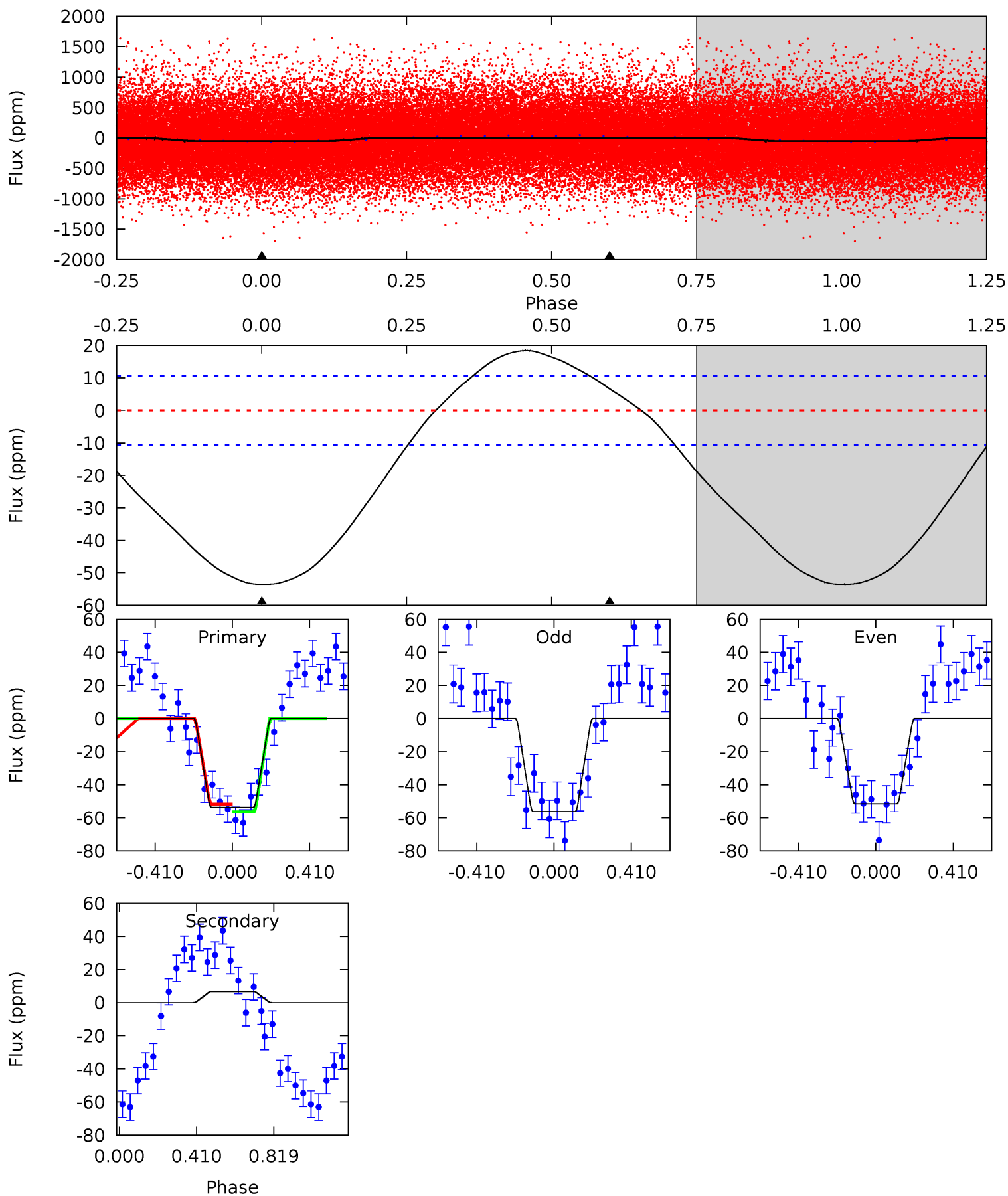
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	-2.89	0	0	4.26	0.84	1.42	13.5	13.5	-2.89	-2.89	1.01	1.01	0.28	1.05



# Alt Model-Shift Uniqueness Test

004907533-01, P = 1.200079 Days, E = 131.623906 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
21.4	-2.65	0	0	4.26	0.82	2.25	21.4	21.4	-2.65	-2.65	0.95	0.95	0.26	0.92





### Stellar Parameters For KIC 004907533

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$4983^{+176}_{-176}$	$4.558^{+0.072}_{-0.048}$	$-0.260^{+0.300}_{-0.300}$	$0.730^{+0.072}_{-0.079}$	$0.703^{+0.093}_{-0.050}$	$2.549^{+0.807}_{-0.427}$
	+4%/-4%	+2%/-1%	+115%/-115%	+10%/-11%	+13%/-7%	+32%/-17%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 004907533-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$7 \pm 3$	$0.49^{+0.43}_{-0.34}$	$1866^{+81}_{-75}$	$-3658^{+614}_{-2147}$	$-6.223^{+4.587}_{-56.517}$
Alt.	$7 \pm 3$	$0.65^{+0.46}_{-0.37}$	$1859^{+85}_{-75}$	$-3304^{+426}_{-1128}$	$-3.142^{+2.153}_{-16.021}$

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

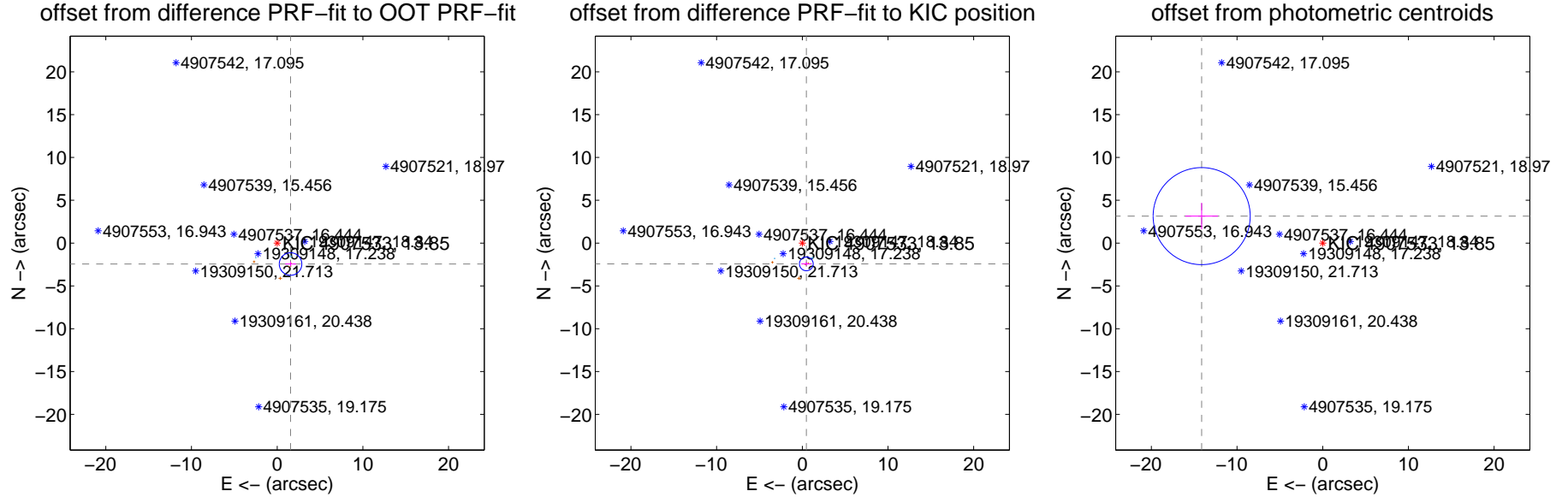
## DV Centroid Data

Supplemental centroid analysis for 004907533-01. Kepler magnitude: 13.85. Transit SNR 6.45

There are 2 quarters with good PRF difference image offsets

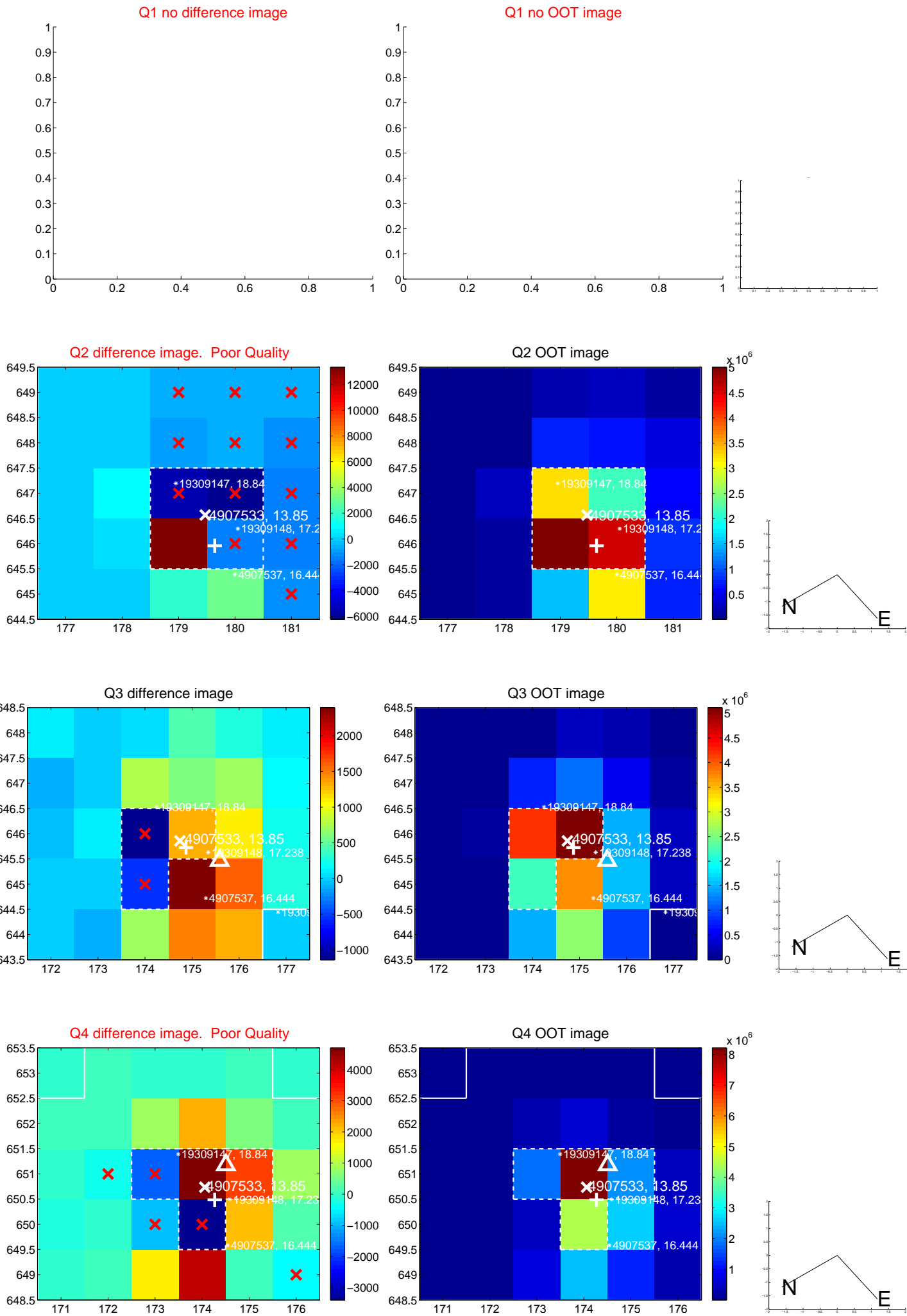
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.899 \pm 0.439$	6.61	$-1.561 \pm 0.616$	$-2.443 \pm 0.261$
PRF-fit source offset from KIC position	$2.471 \pm 0.268$	9.23	$-0.470 \pm 0.591$	$-2.426 \pm 0.233$
photometric centroid source offset	$14.47 \pm 1.89$	7.67	$14.13 \pm 1.90$	$3.15 \pm 1.55$

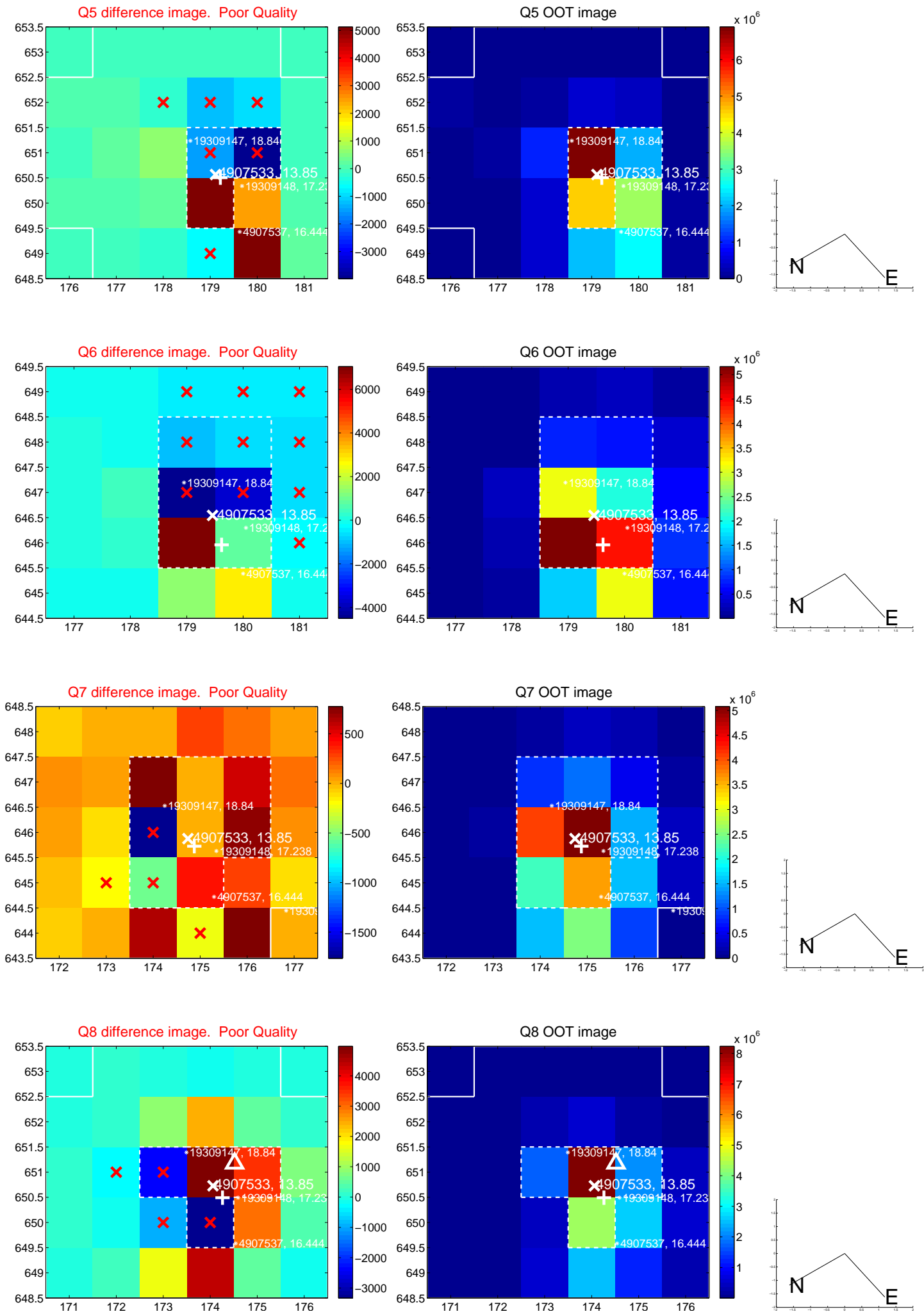


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

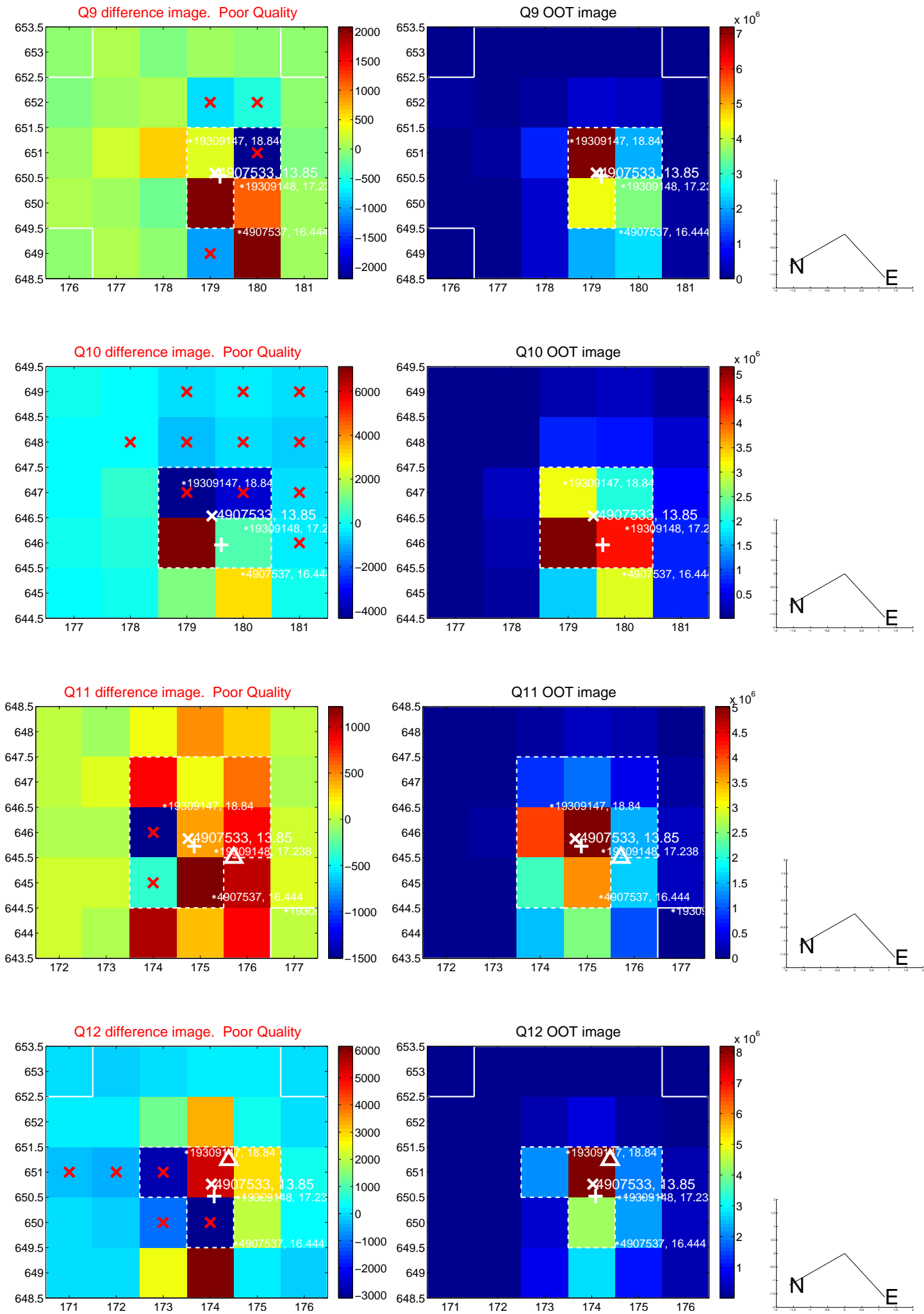


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

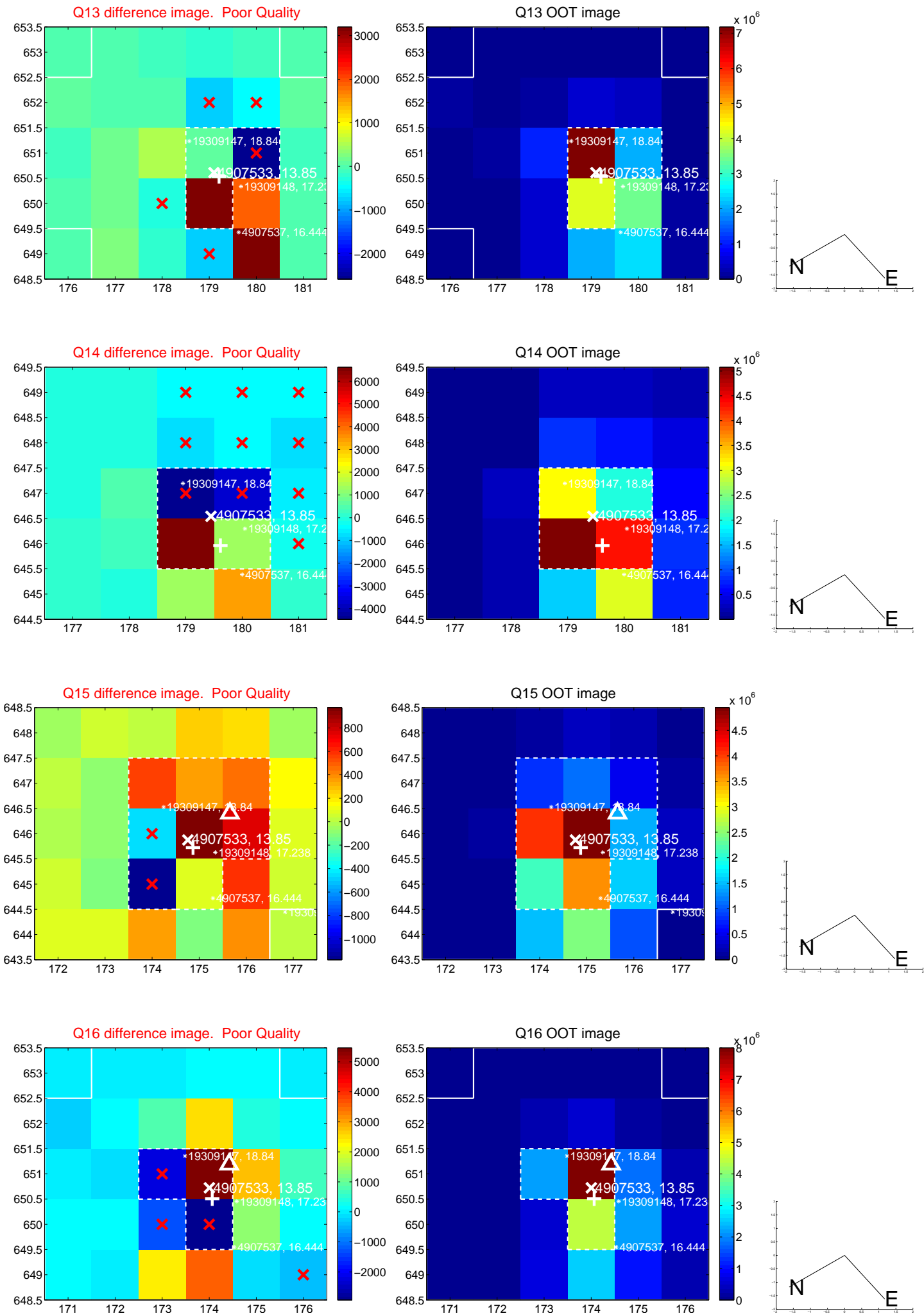




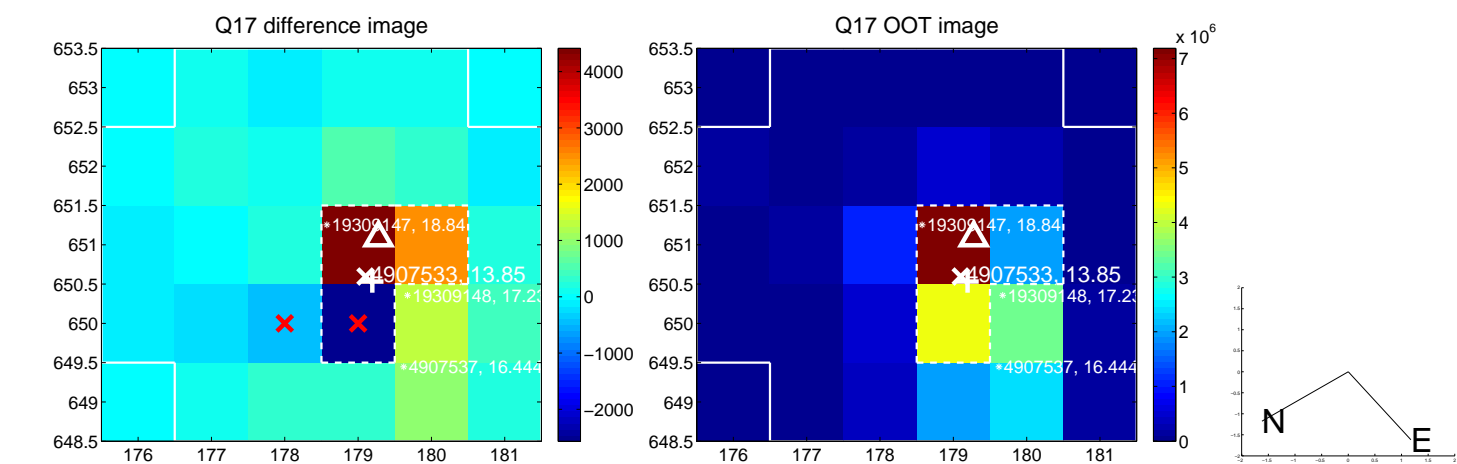
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



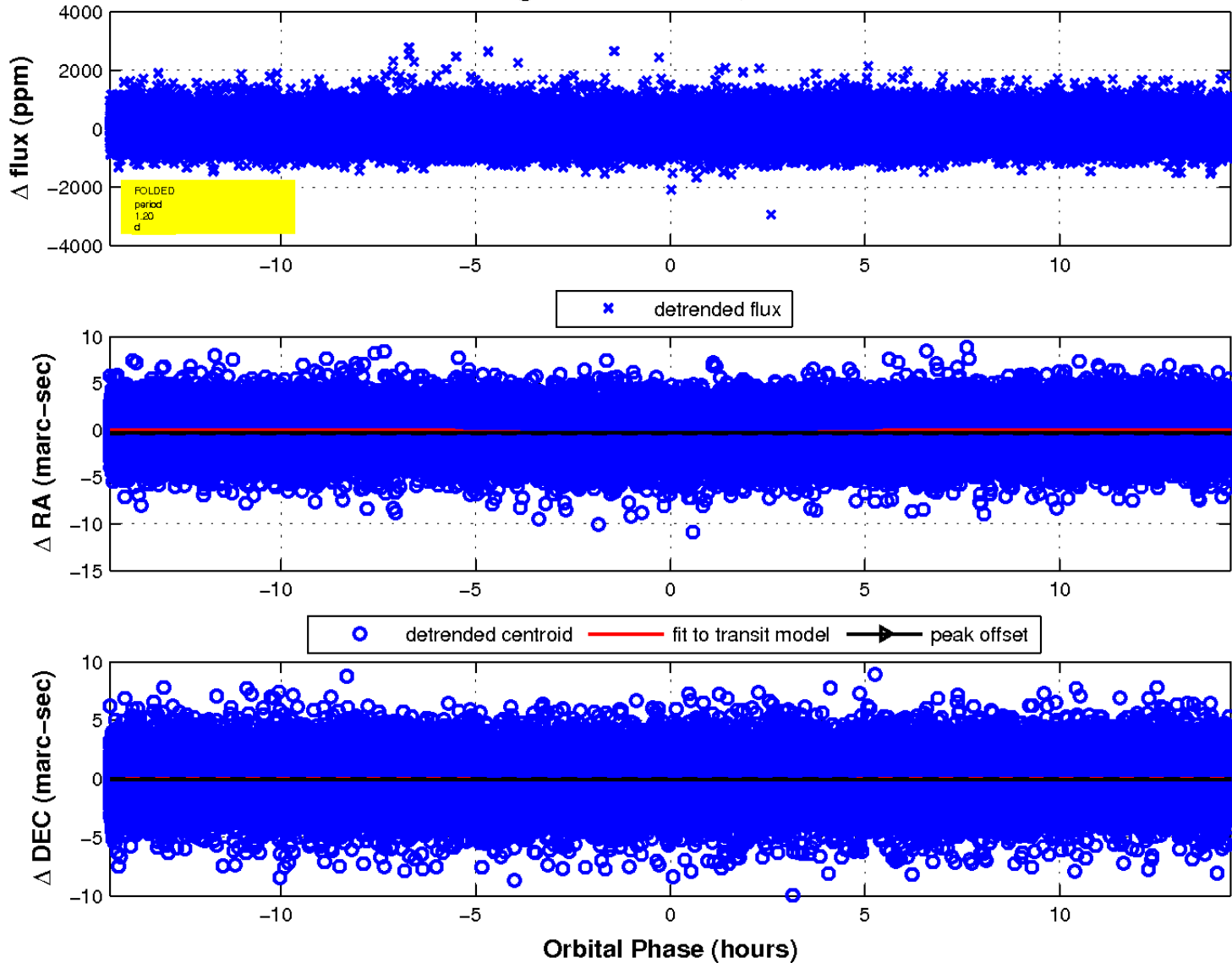
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

