

# KIC 007849879

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007849879-01	OBS	No	1.698105	132.457749	260.4	4.500	7.6	-1.0	2.86	6397	4.64	12266.71

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007849879-01	OBS	FP	0.00	1	0	0	0	<del>SWEET_NTL</del> <del>—LPP_DV</del> <del>—CENT_NOFITS</del>

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

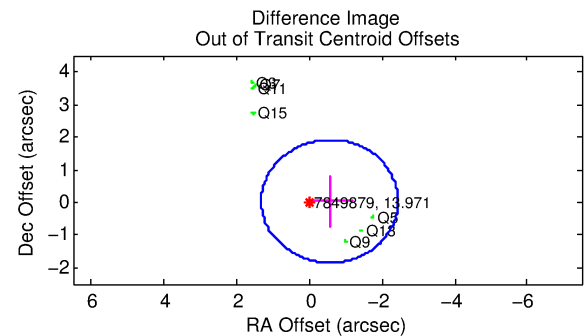
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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 007849879-01

No Significant Match Found

## KIC: 7849879    Candidate: 1 of 1    Period: 1.698 d



Centroid-sig: 0.0%

Centroid-so: 0.280 arcsec [2.84σ]

OotOffset-rm: 0.562 arcsec [0.90σ]

KicOffset-rm: 0.547 arcsec [0.88σ]

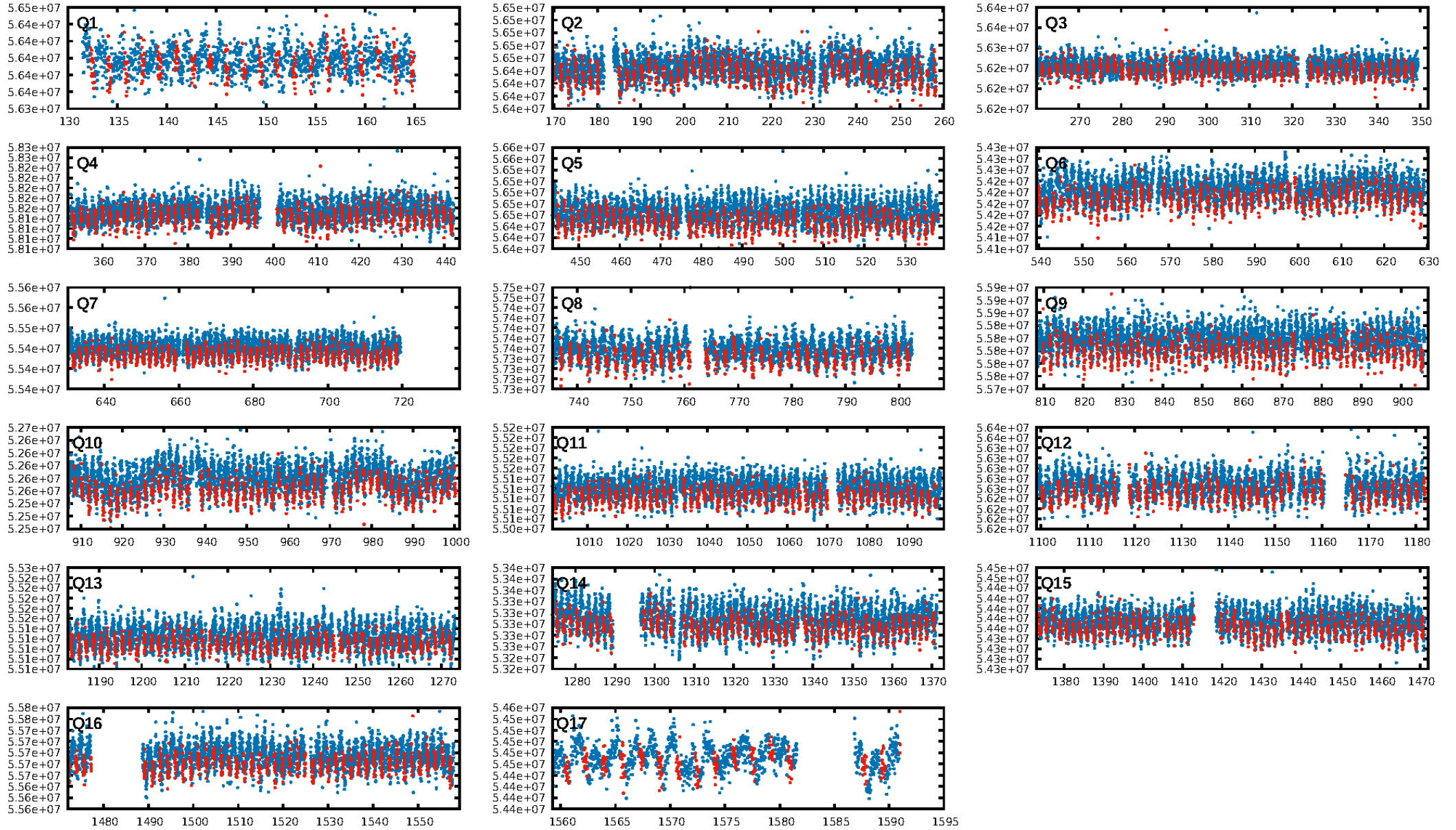
OotOffset-st: 0/4/0/3 [7]

KicOffset-st: 0/4/0/3 [7]

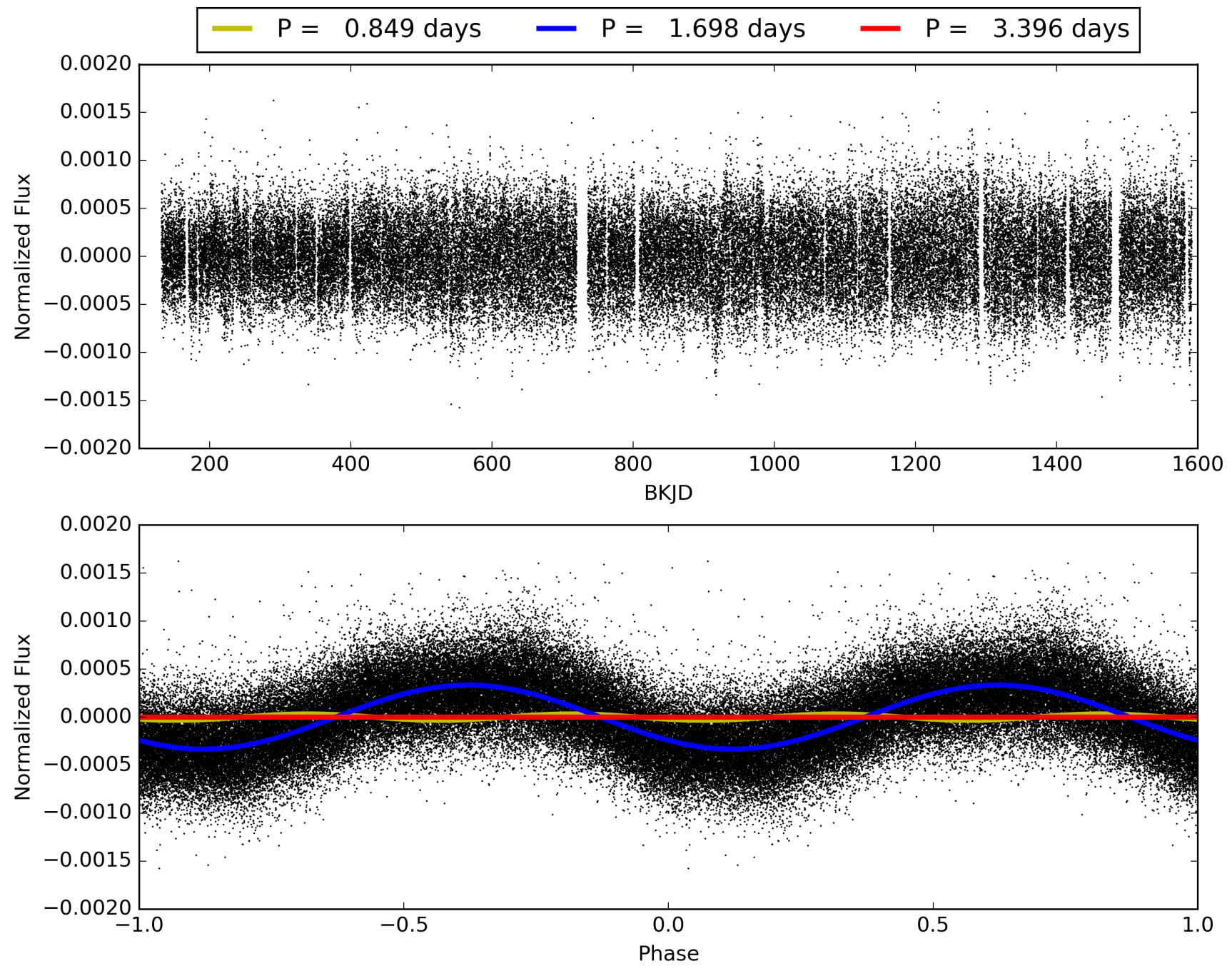
DiffImageQuality-fgm: 0.43 [3/7]

DiffImageOverlap-fno: 1.00 [17/17]

# TCE 007849879-01, PDC Light Curves



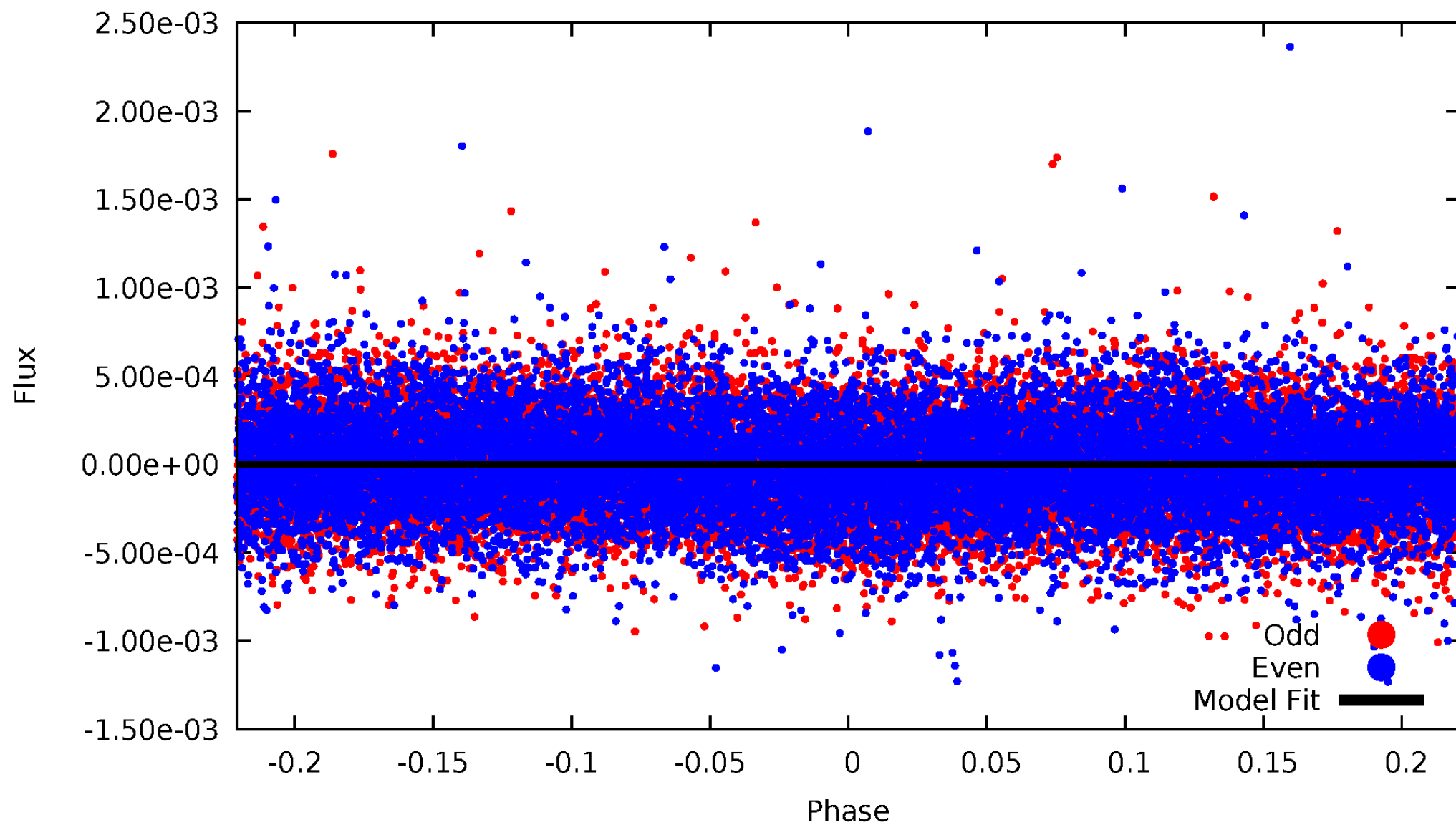
TCE 007849879-01





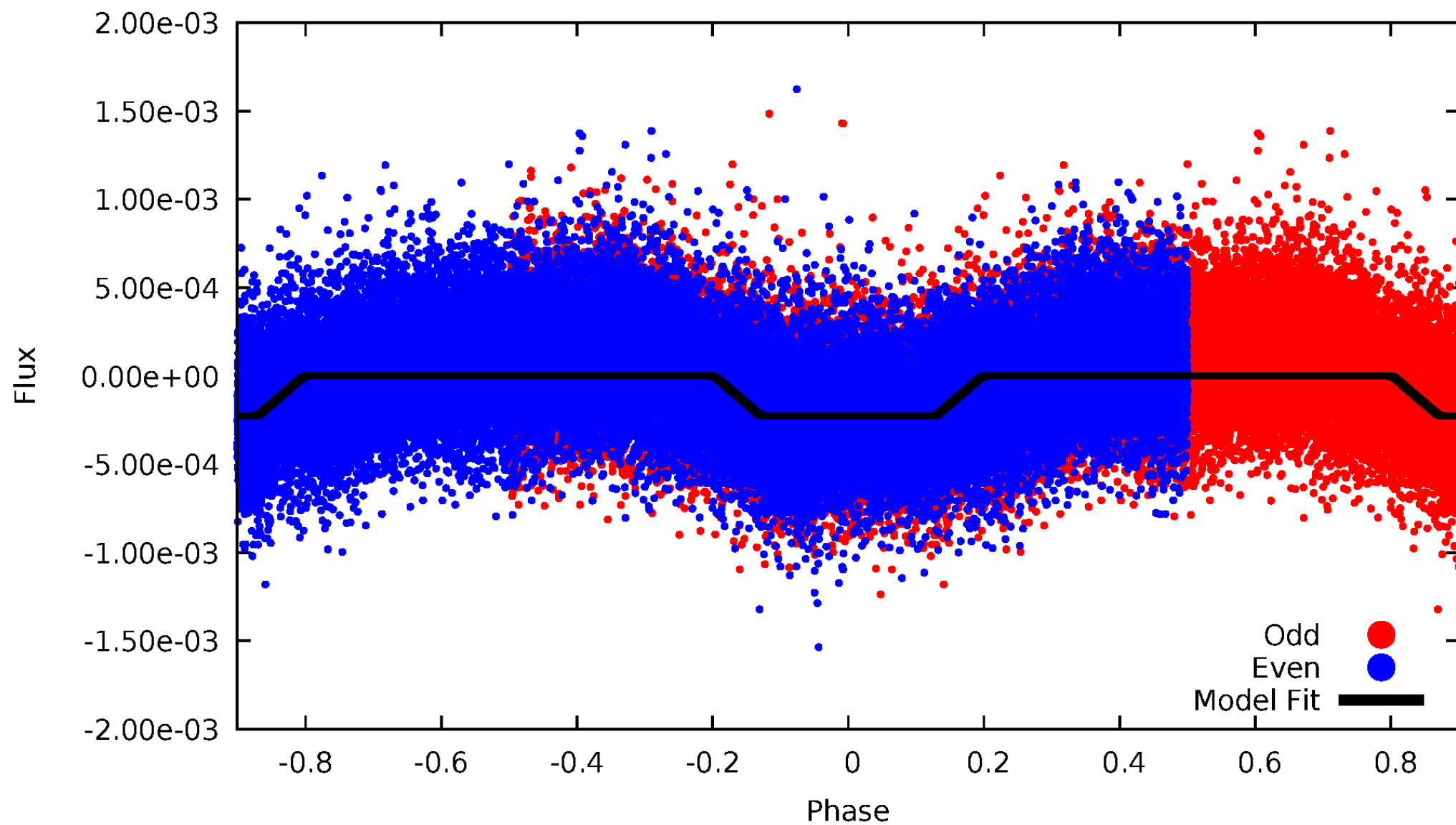
# DV Odd/Even

TCE 007849879-01

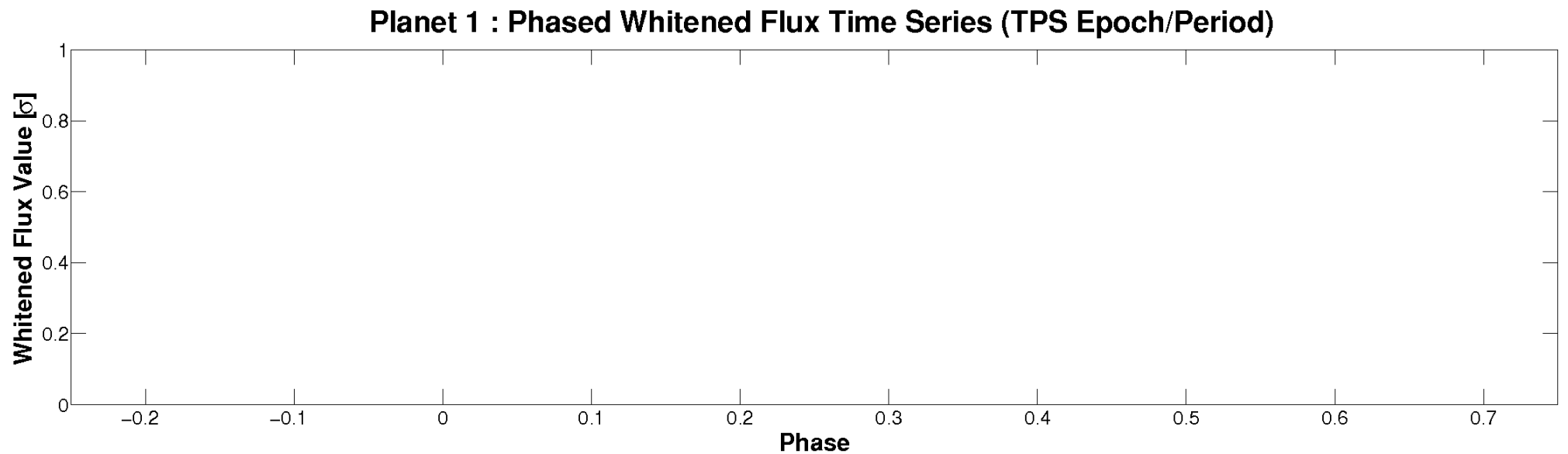
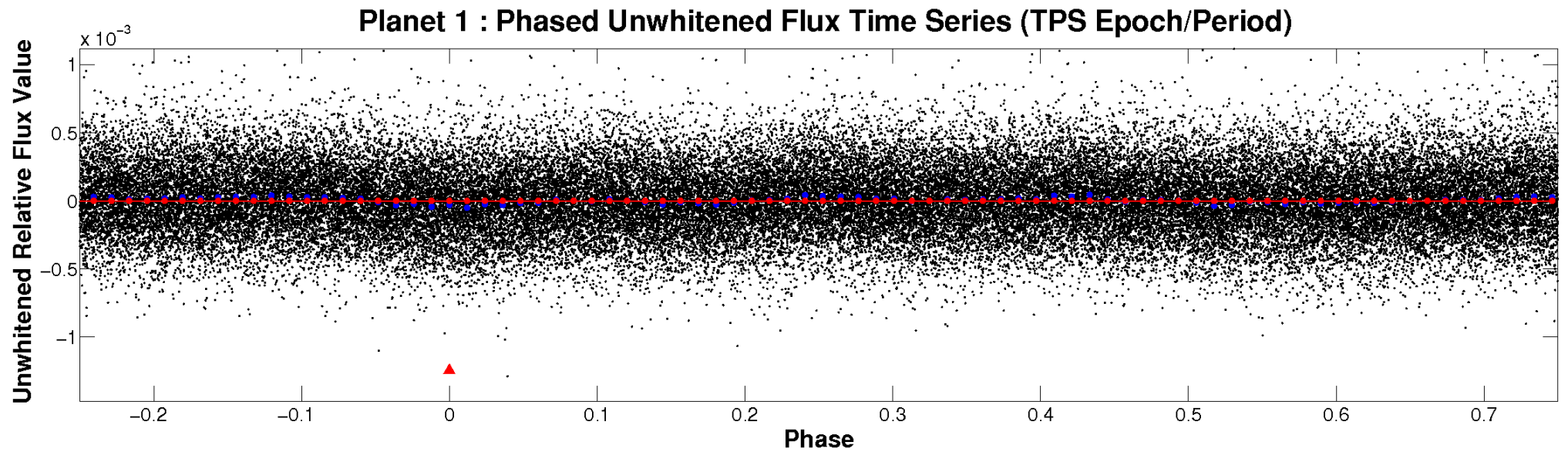


# ALT Odd/Even

TCE 007849879-01

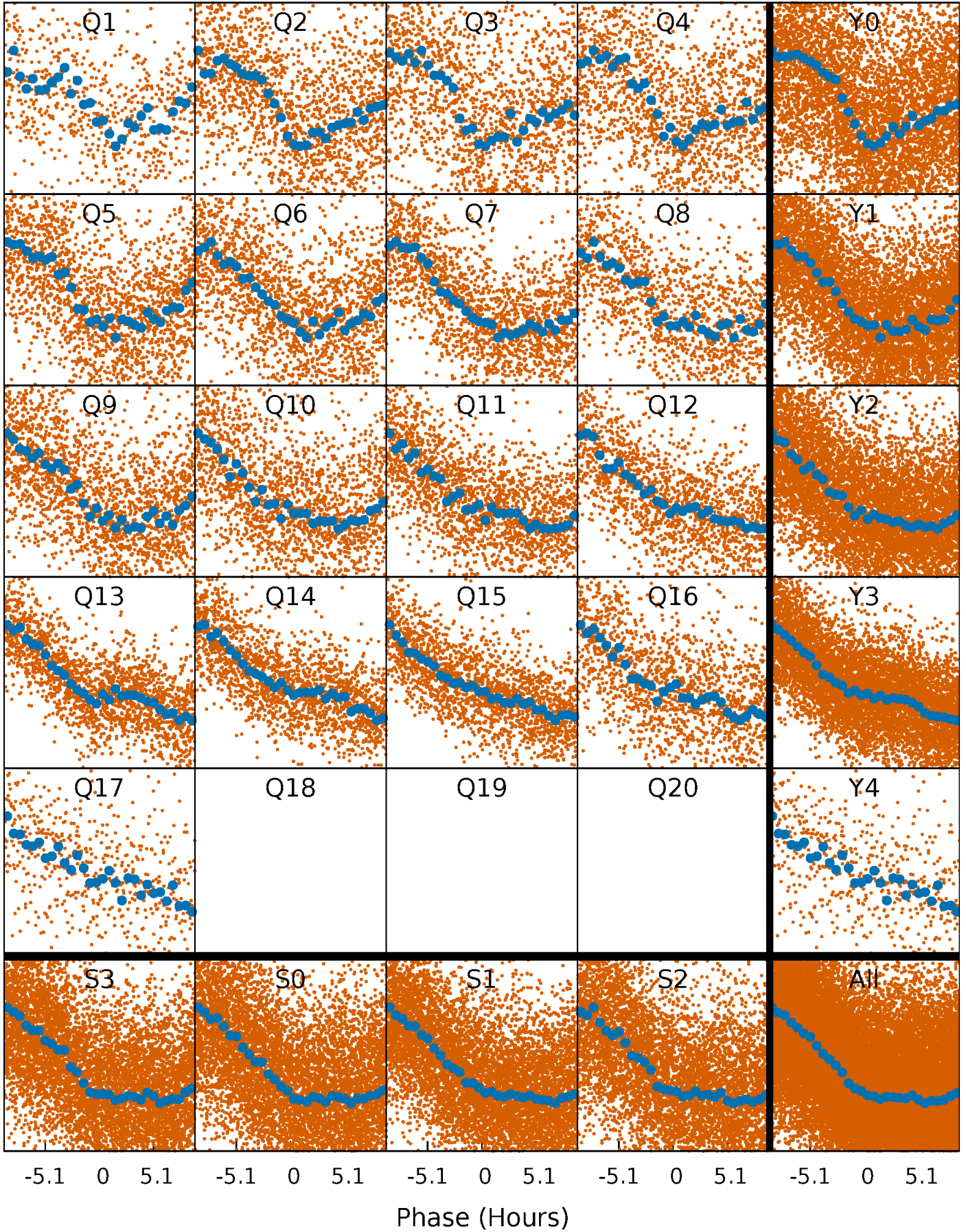


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

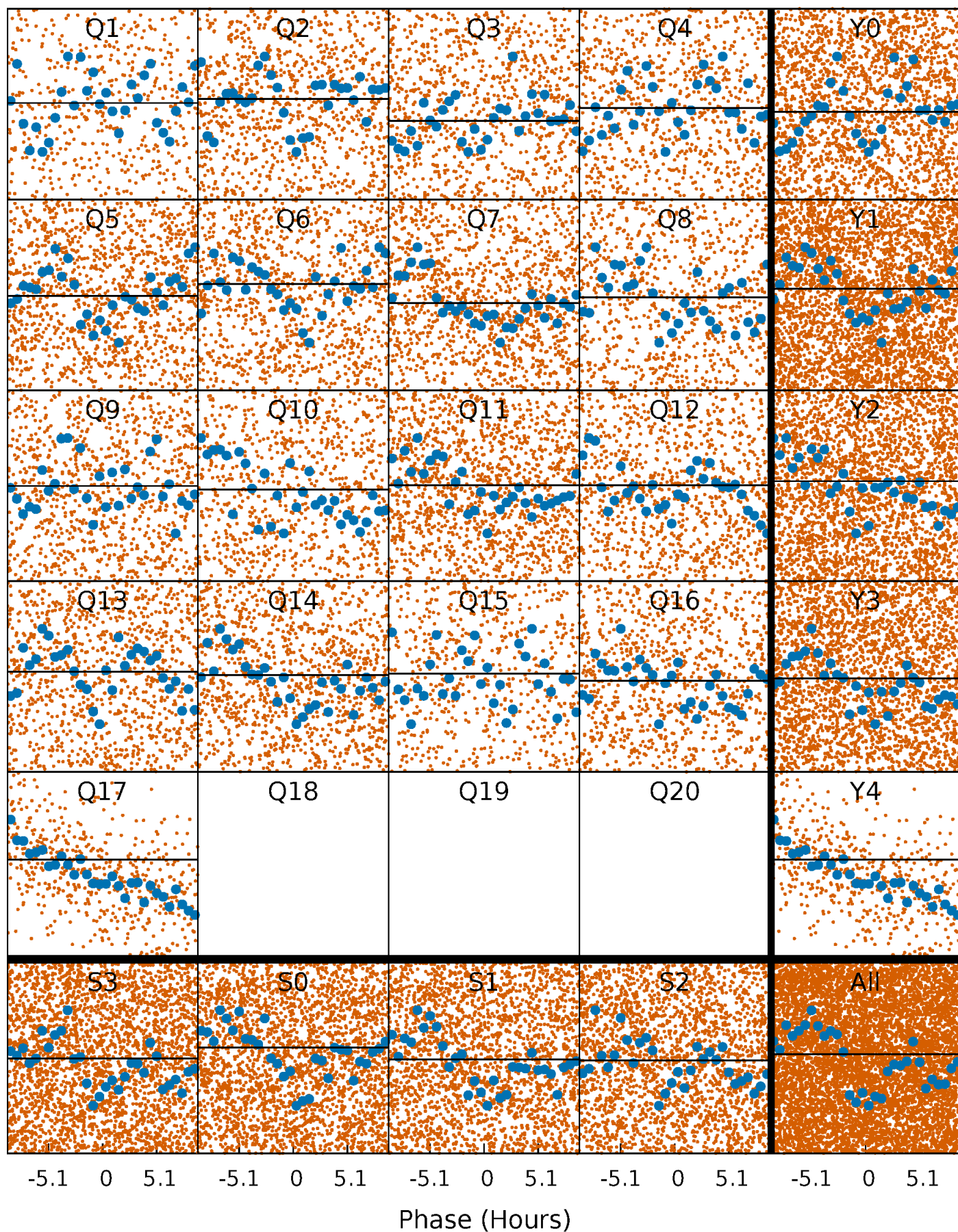
TCE 007849879-01 P= 1.698105 Days  $T_0=132.457749$  (BKJD)





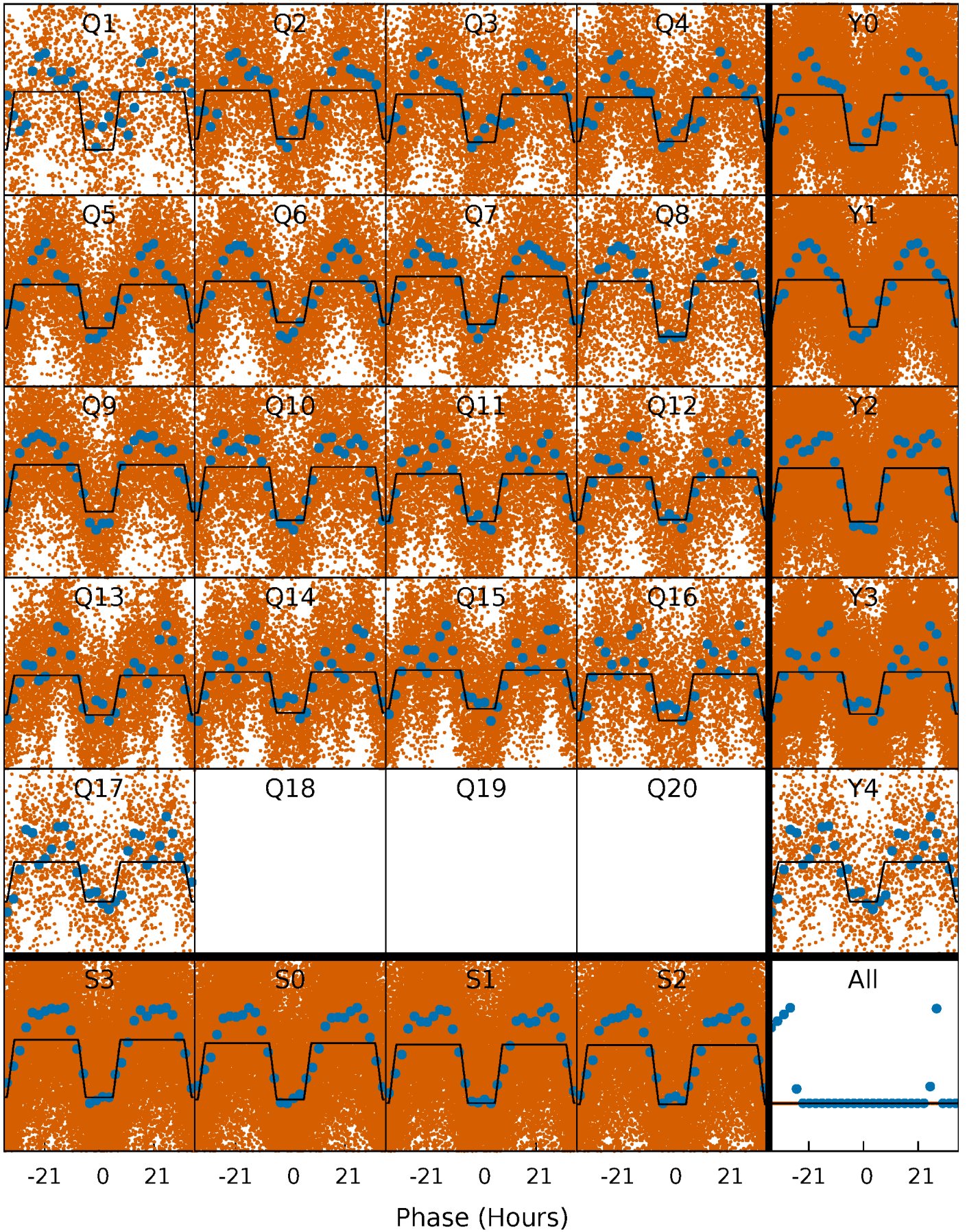
# DV Quarter-Phased Transit Curves

TCE 007849879-01 P= 1.698105 Days  $T_0=132.457749$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

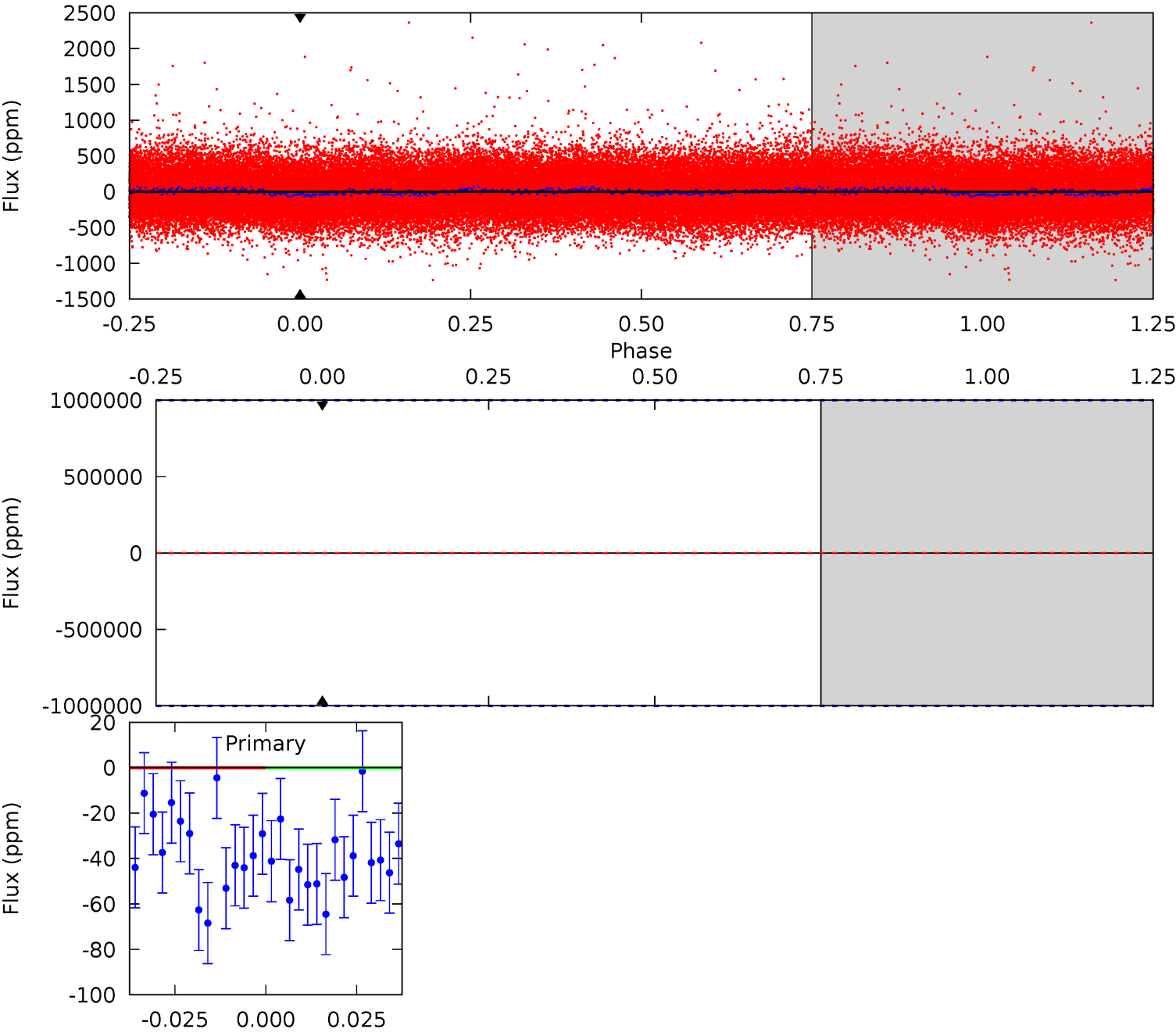
TCE 007849879-01 P= 1.698105 Days  $T_0=132.598712$  (BKJD)



DV Model-Shift Uniqueness Test

007849879-01, P = 1.698105 Days, E = 130.759644 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
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0

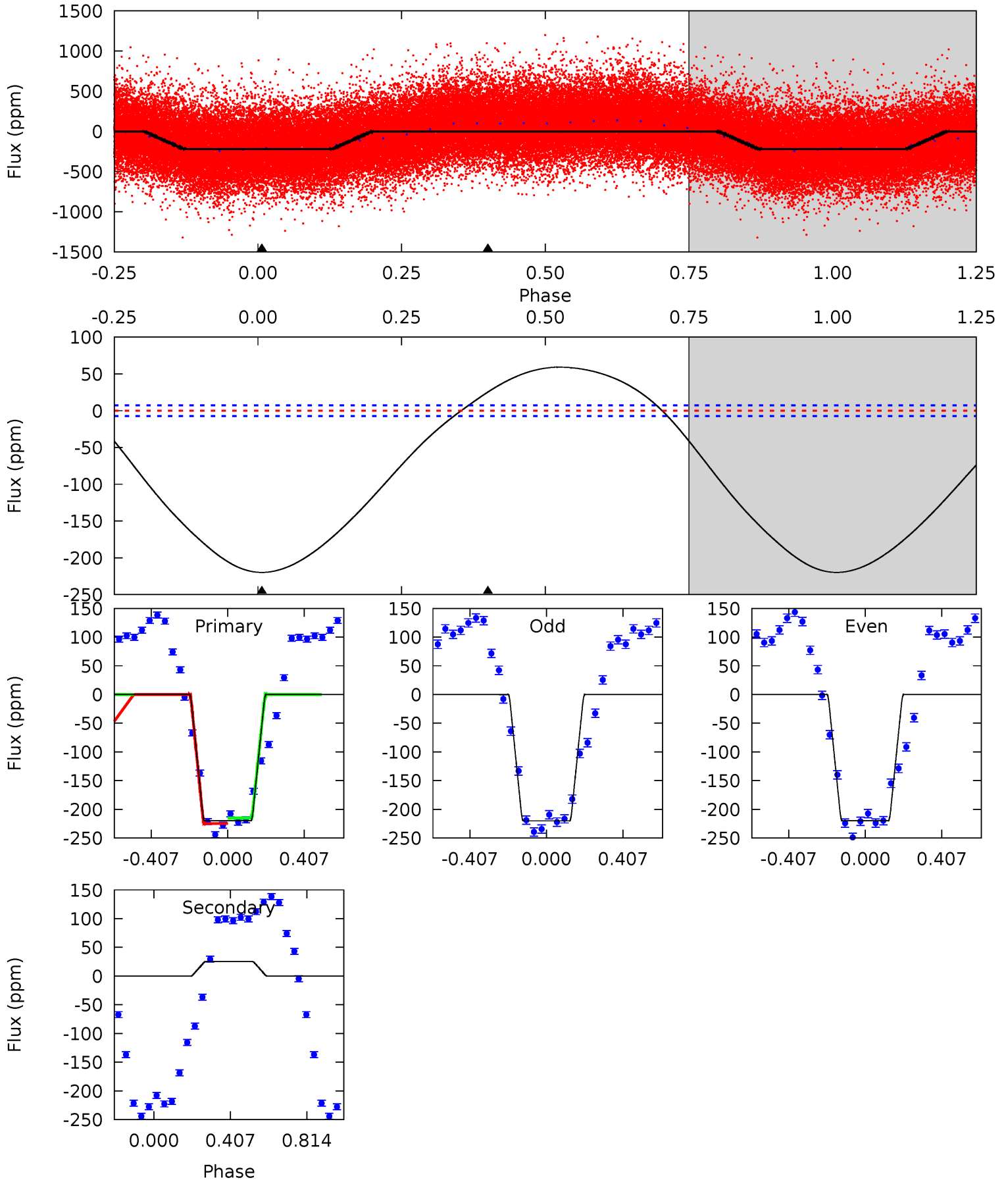




# Alt Model-Shift Uniqueness Test

007849879-01, P = 1.698105 Days, E = 130.900607 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
129.1	-14.8	0	0	4.26	0.83	13.2	129.1	129.1	-14.8	-14.8	0.09	1.04	0.21	2.96





### Stellar Parameters For KIC 007849879

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6397^{+205}_{-250}$	$3.691^{+0.561}_{-0.099}$	$-0.200^{+0.250}_{-0.300}$	$2.863^{+0.518}_{-1.553}$	$1.468^{+0.221}_{-0.411}$	$0.088^{+0.626}_{-0.027}$
	+3%/-4%	+15%/-3%	+125%/-150%	+18%/-54%	+15%/-28%	+710%/-30%
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 007849879-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$20.23^{+23.12}_{-14.00}$	$3595^{+308}_{-520}$	$3755^{+21044}_{-29511}$	$0.773^{+242.954}_{-235.864}$
Alt.	$25 \pm 2$	$17.95^{+24.51}_{-12.79}$	$3608^{+280}_{-535}$	$-3582^{+317}_{-423}$	$-0.042^{+0.034}_{-0.458}$

$T_{\text{max}}$  = 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

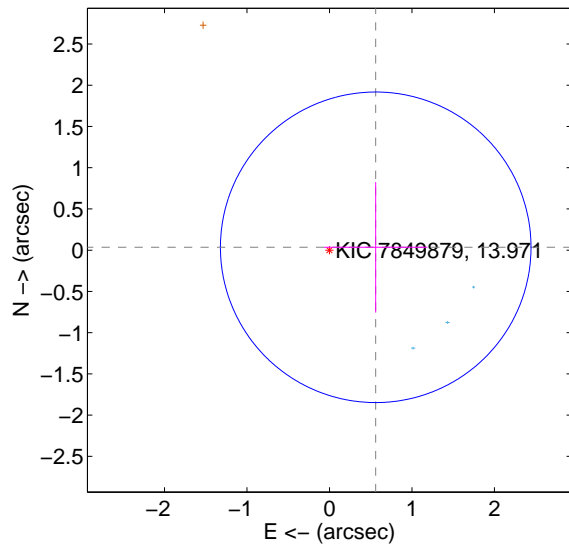
Supplemental centroid analysis for 007849879-01. Kepler magnitude: 13.97. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

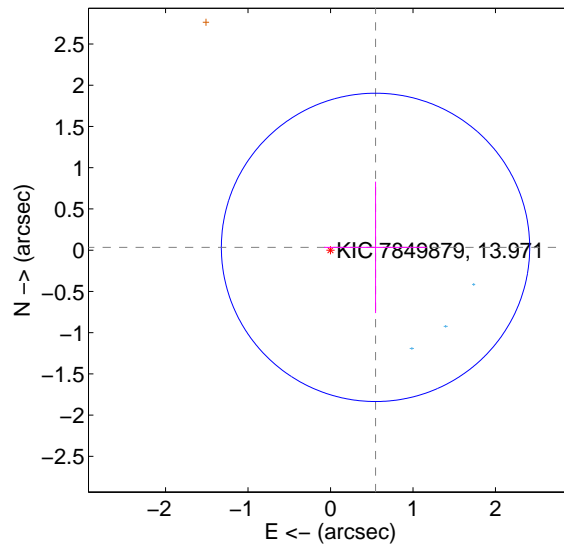
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.562 \pm 0.628$	0.90	$-0.561 \pm 0.627$	$0.035 \pm 0.791$
PRF-fit source offset from KIC position	$0.547 \pm 0.623$	0.88	$-0.546 \pm 0.622$	$0.034 \pm 0.797$
photometric centroid source offset	$0.28 \pm 0.10$	2.84	$0.18 \pm 0.10$	$0.21 \pm 0.10$

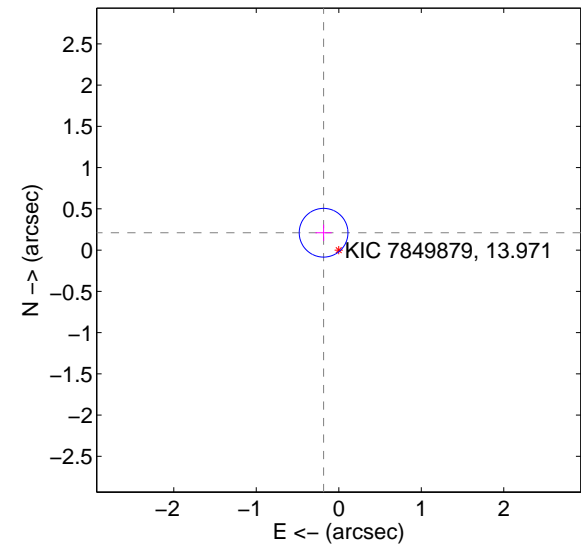
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

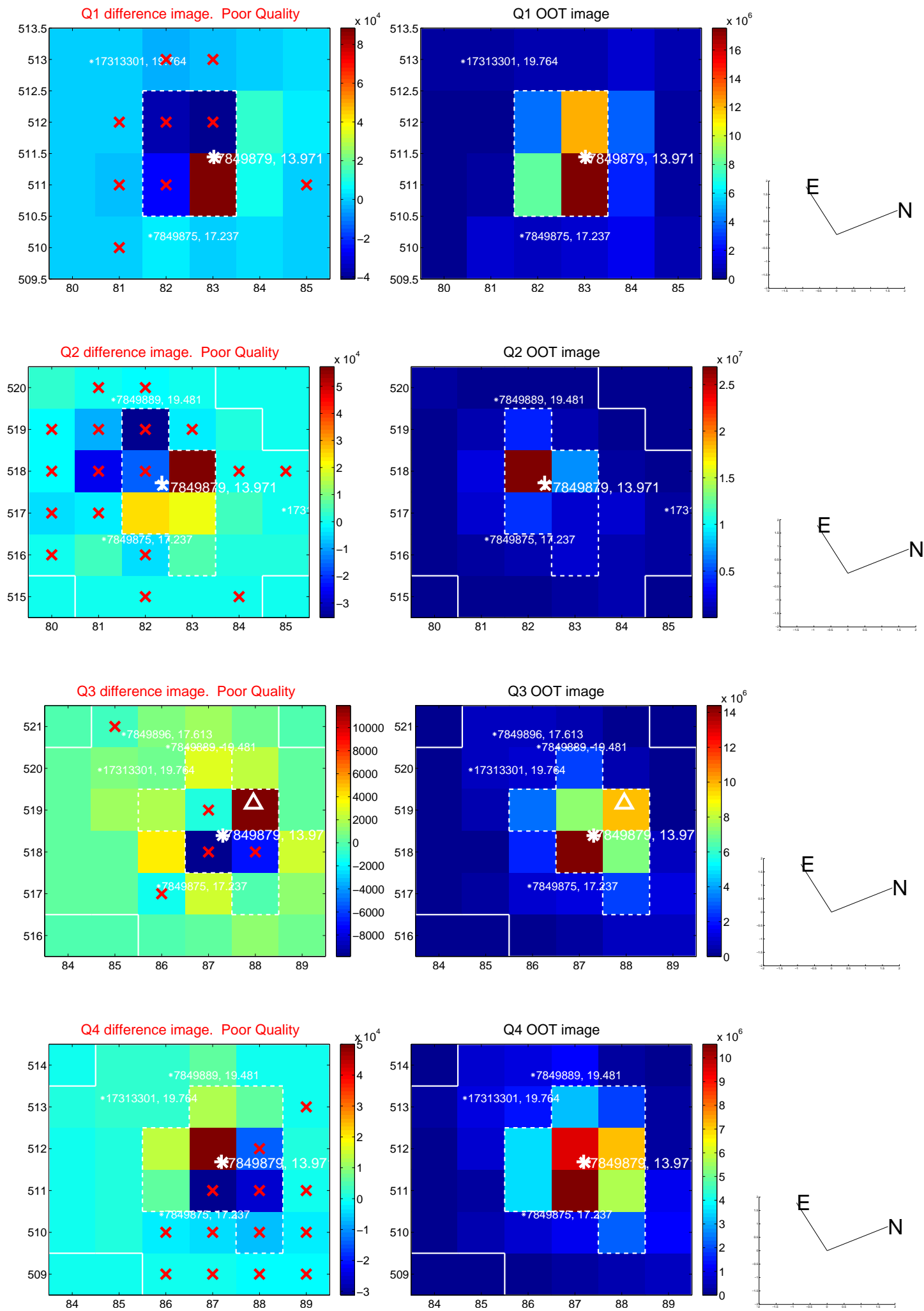


offset from photometric centroids

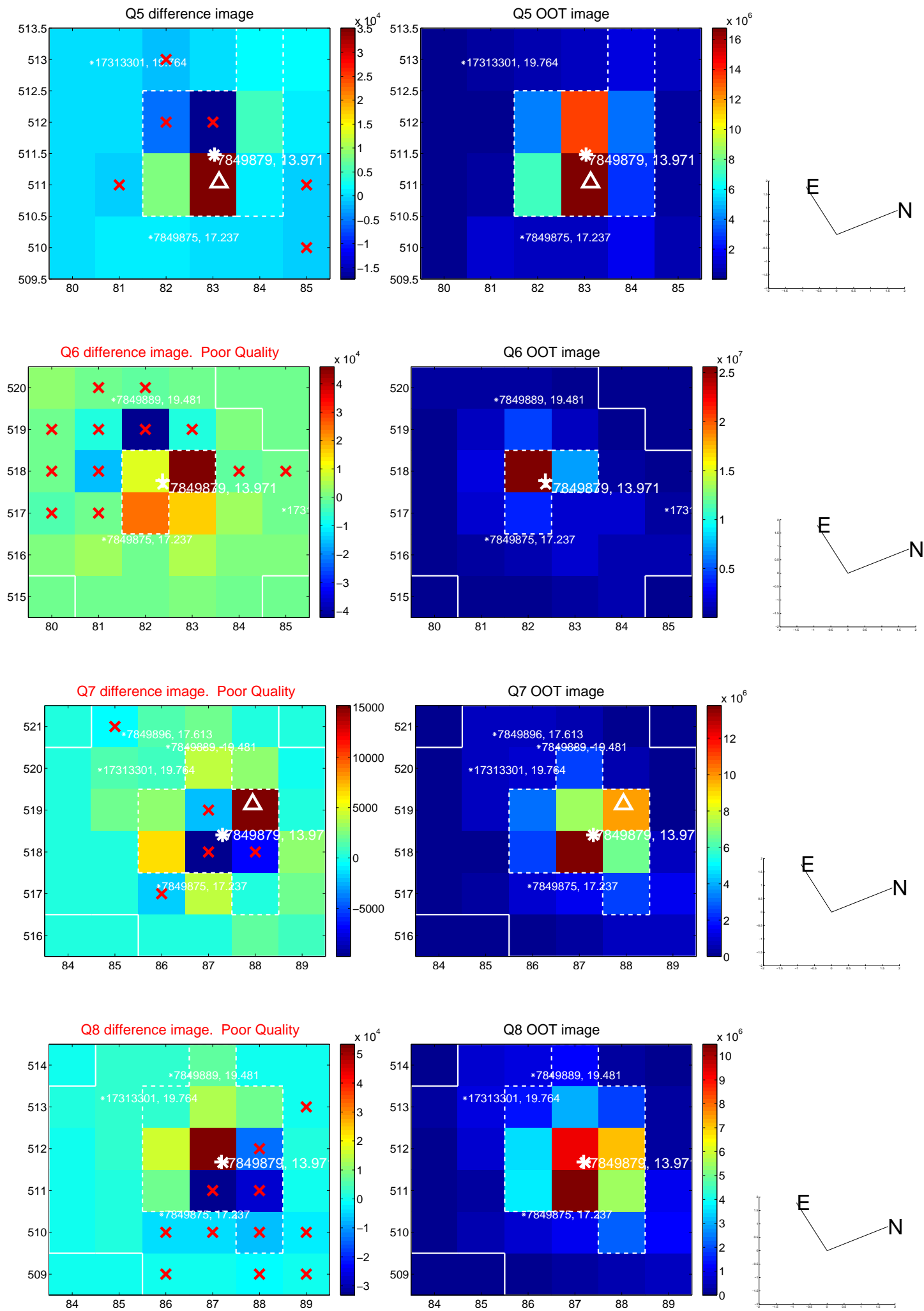


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

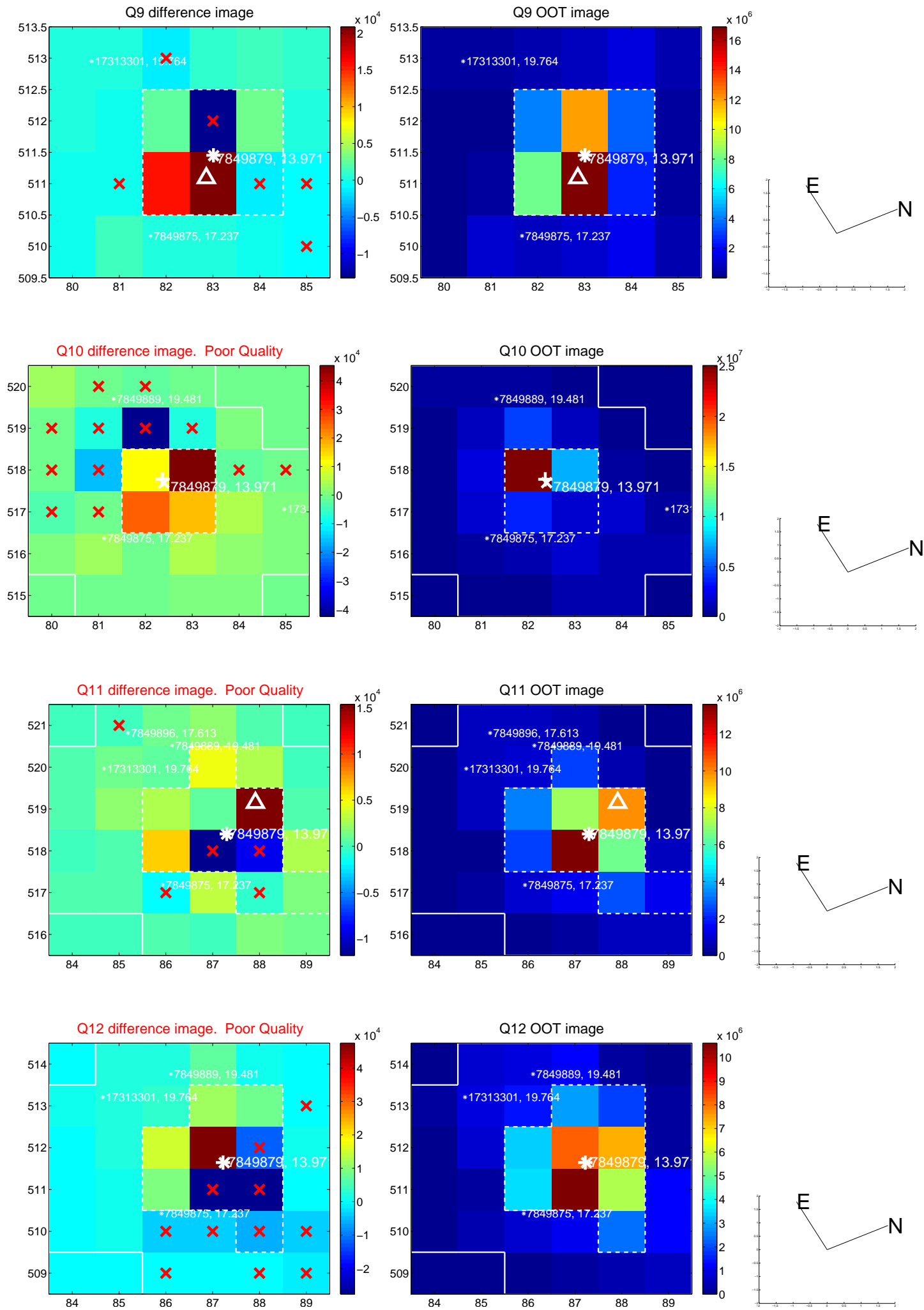


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

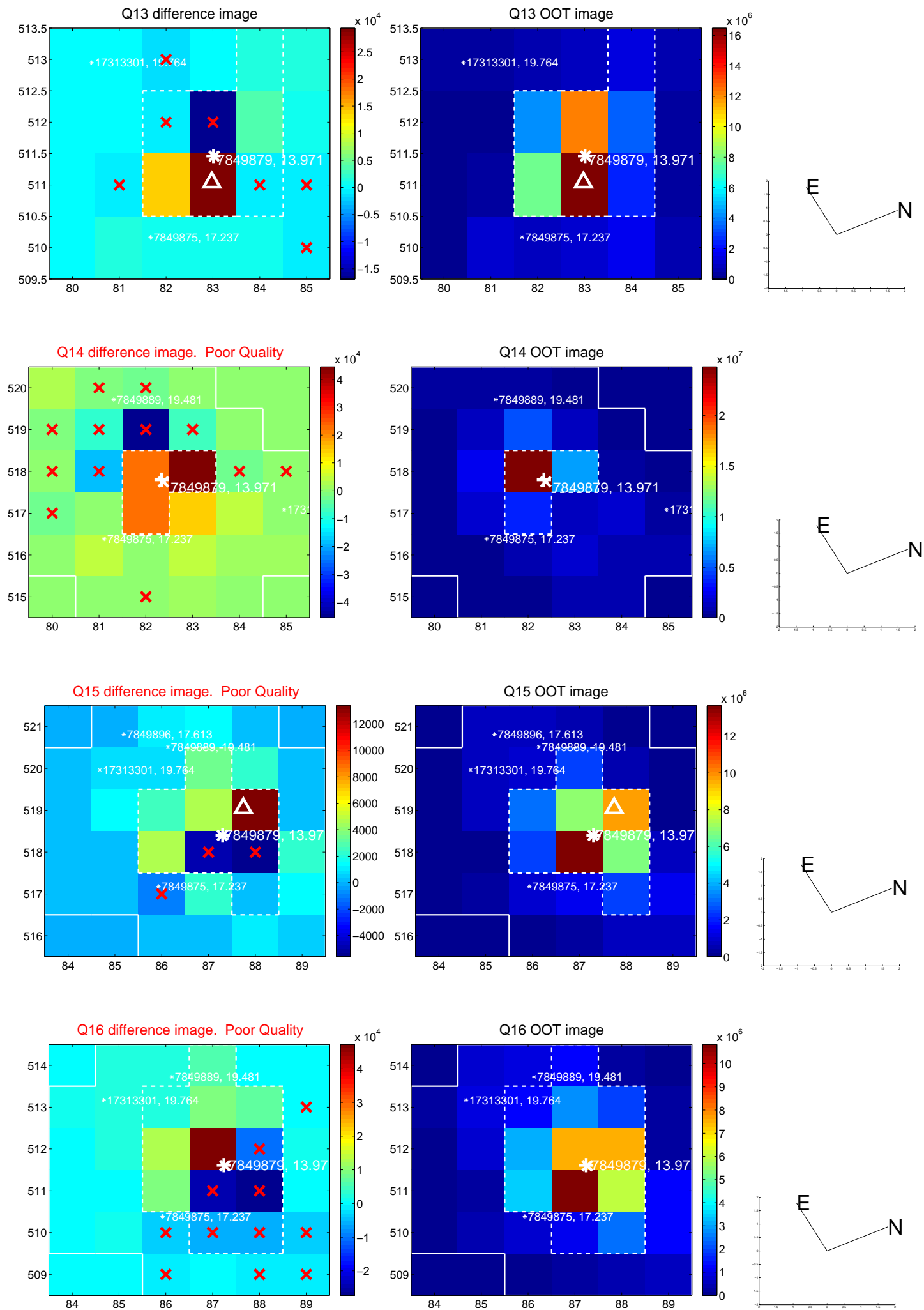




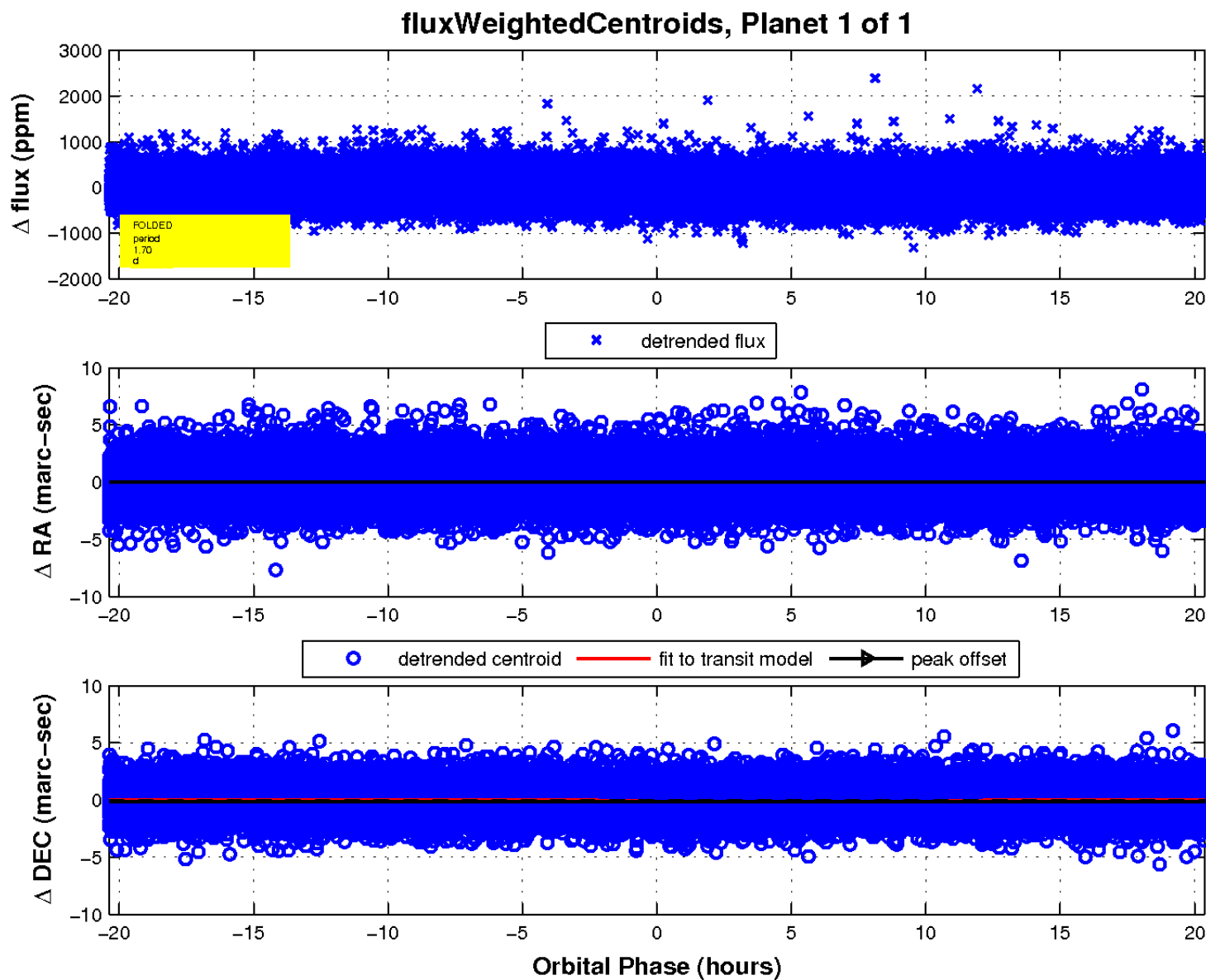
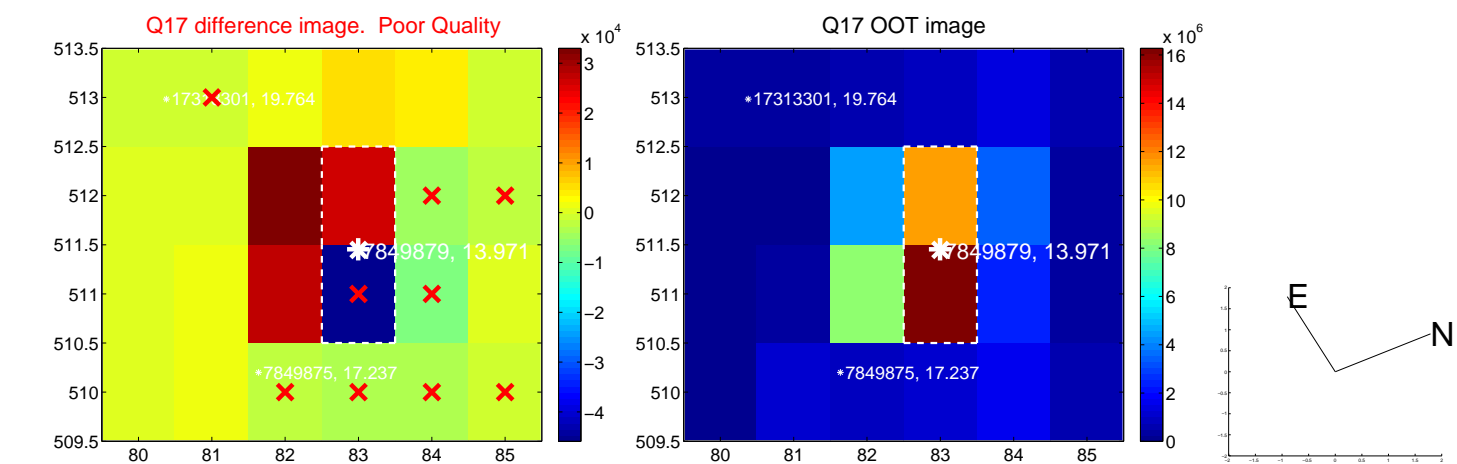
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

