

# KIC 003232249

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003232249-01	OBS	7648.01	1.183500	131.751267	98.9	1.211	7.7	8.3	0.75	4832	0.92	661.21

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003232249-01	OBS	PC	0.97	0	0	0	0	CENT_KIC_POS

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

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

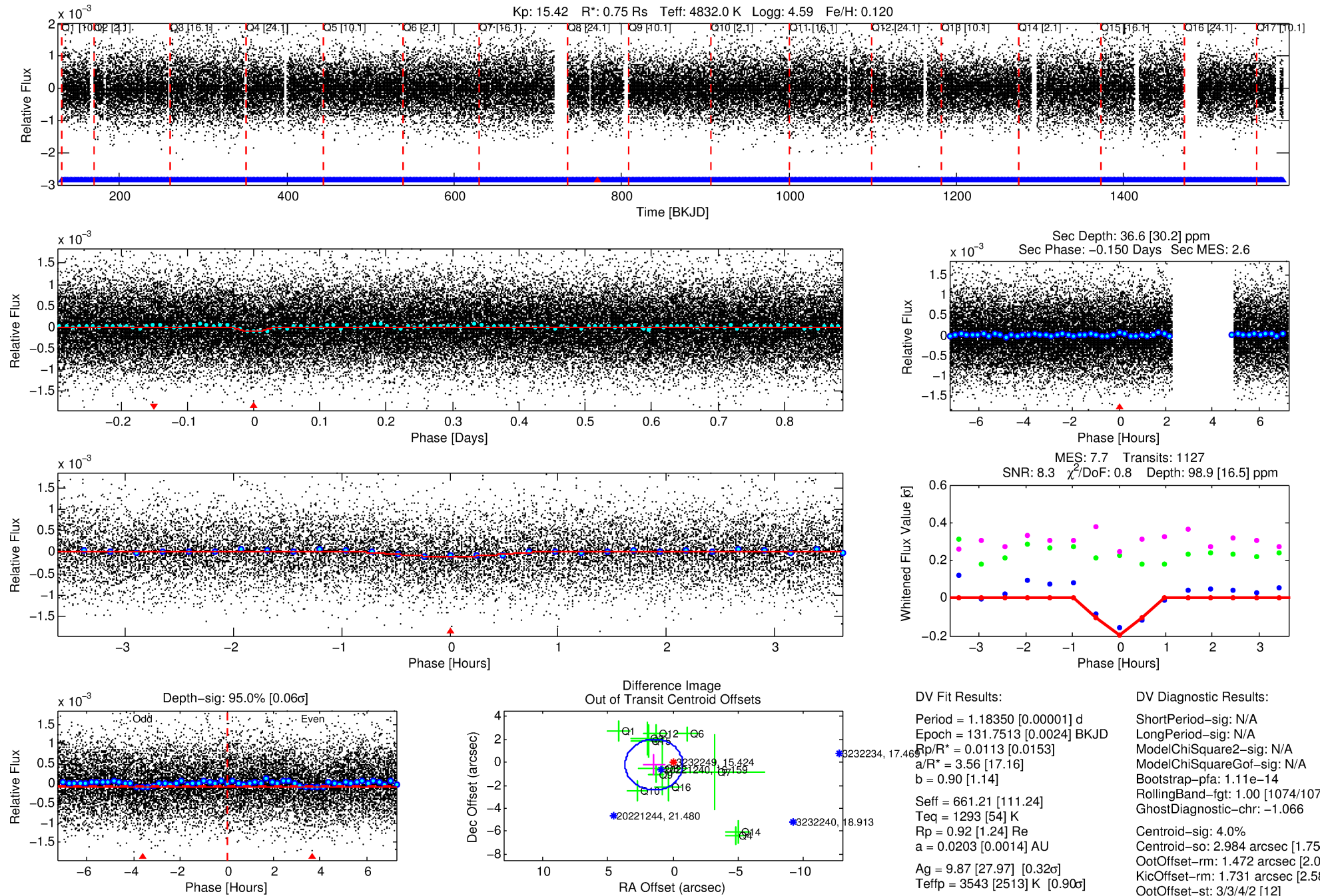
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003232249-01

No Significant Match Found

# DV One-Page Summary

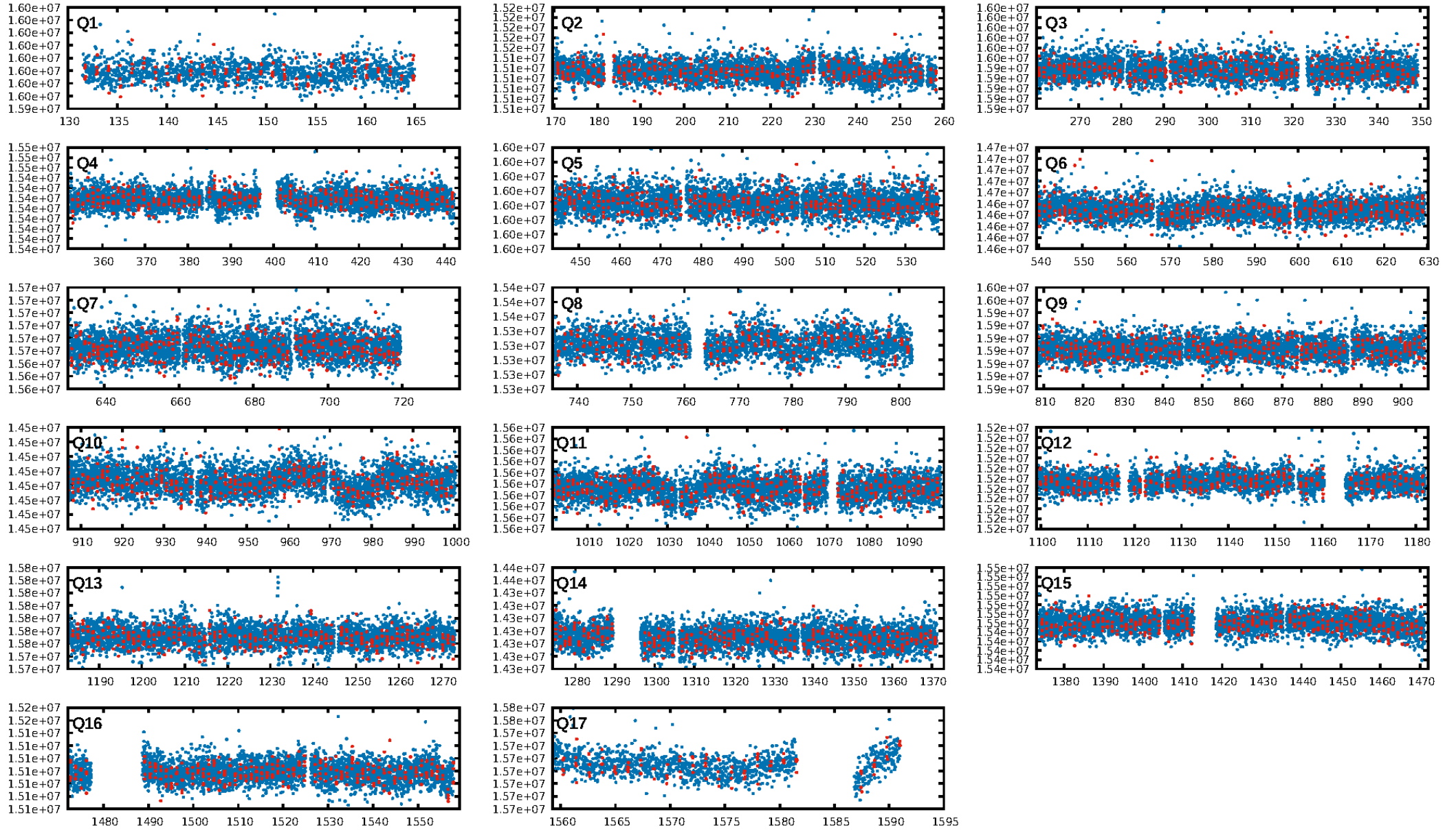
KIC: 3232249 Candidate: 1 of 1 Period: 1.184 d



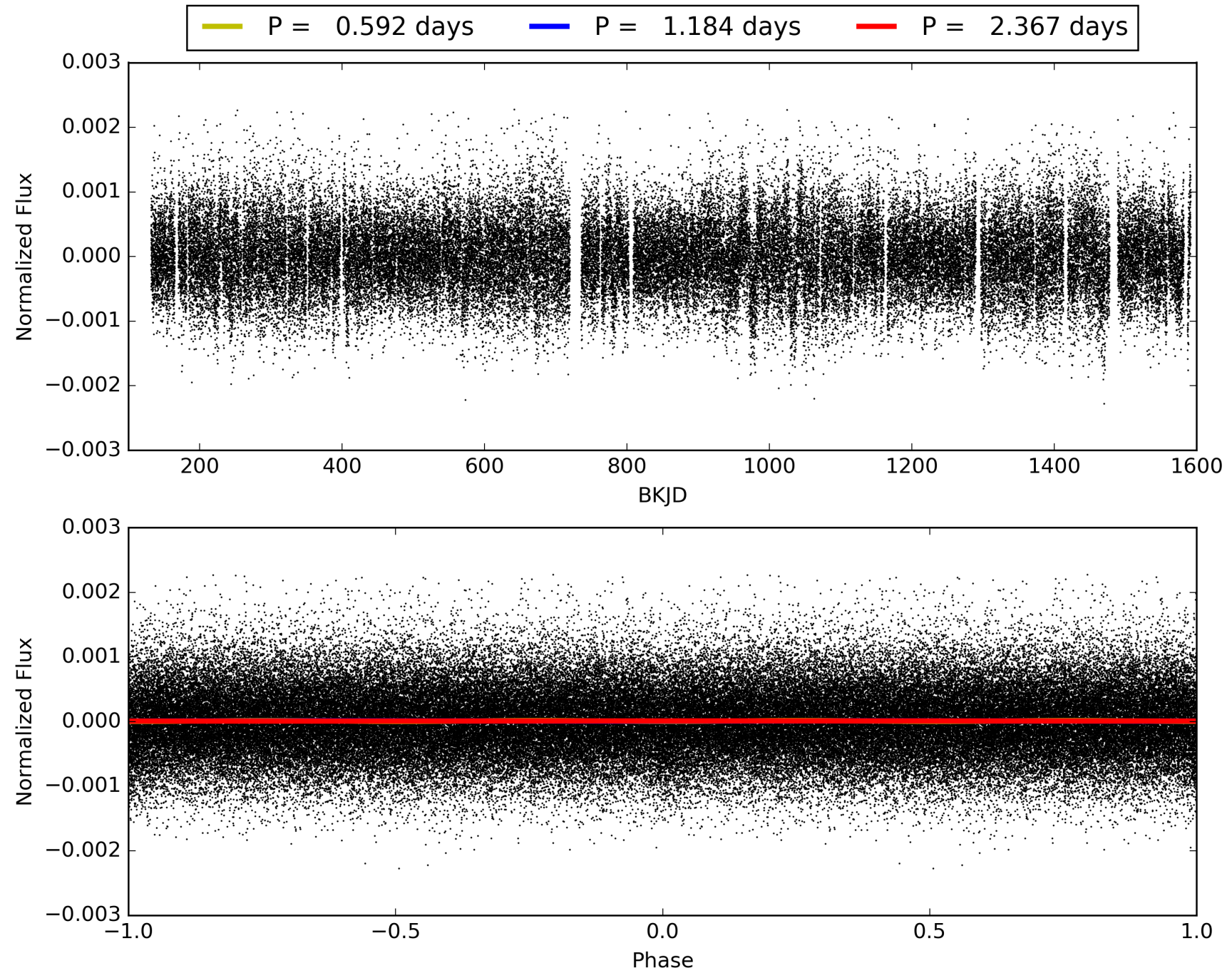
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:04:09 Z

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

# TCE 003232249-01, PDC Light Curves



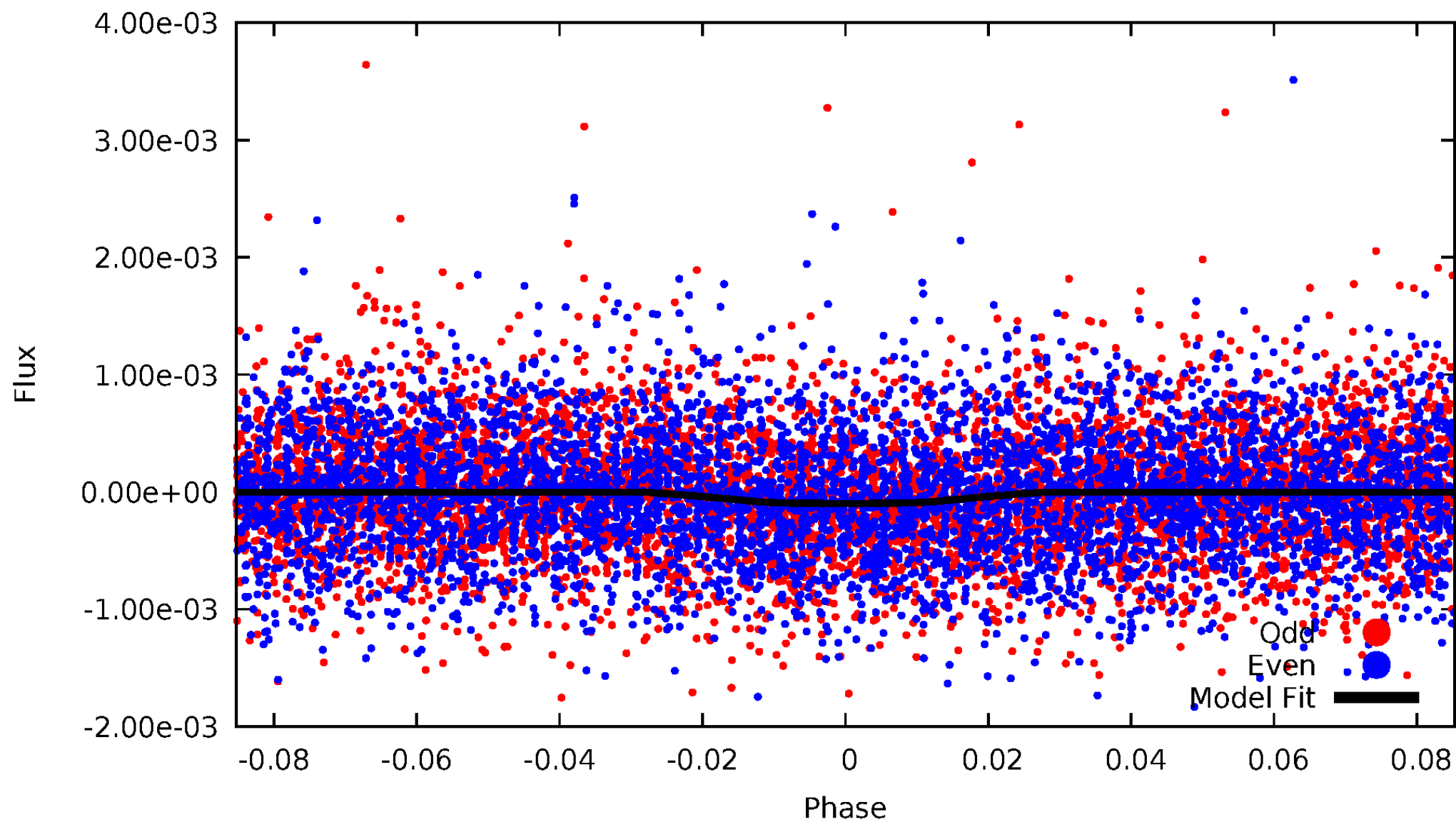
TCE 003232249-01





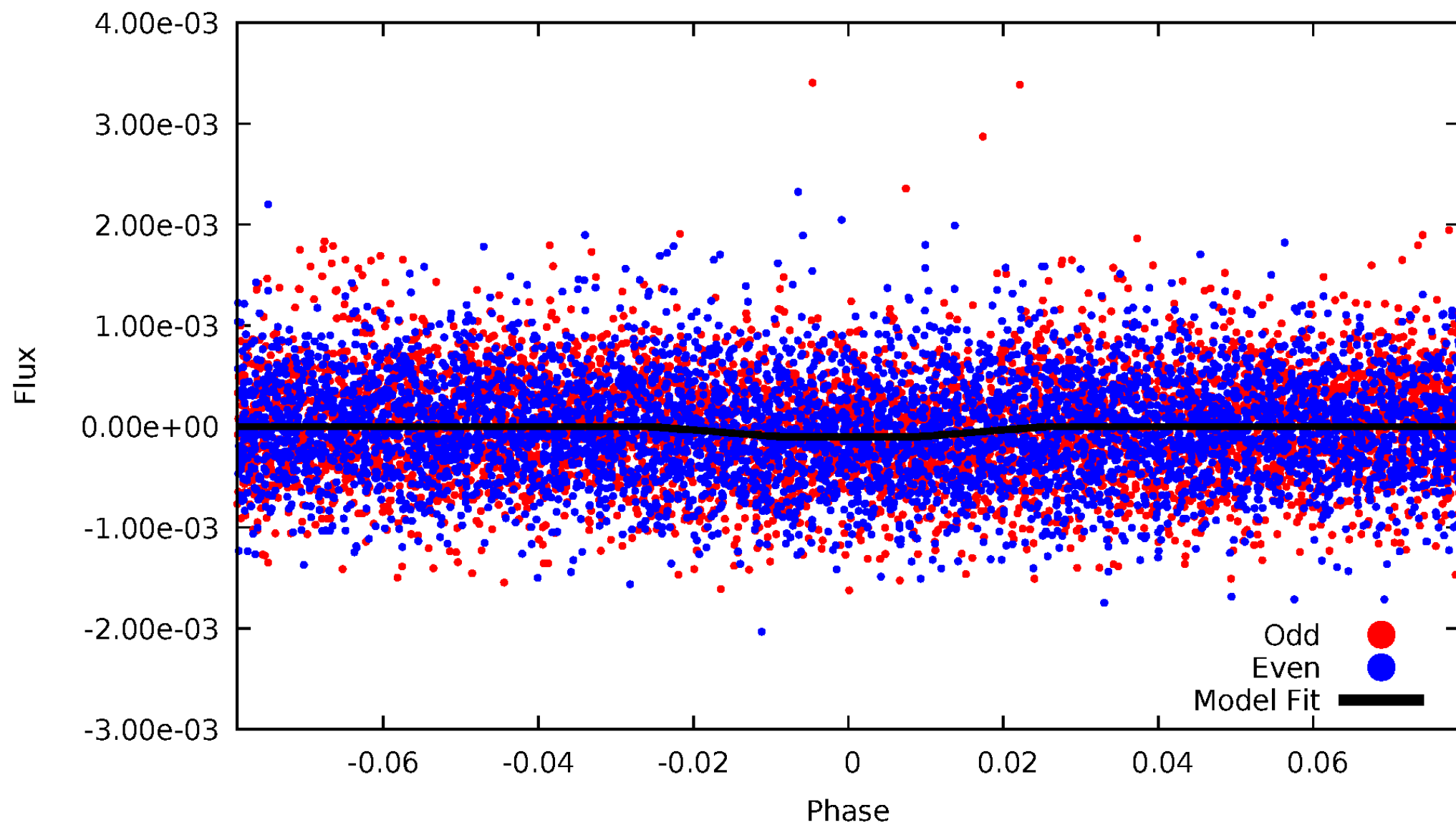
# DV Odd/Even

TCE 003232249-01



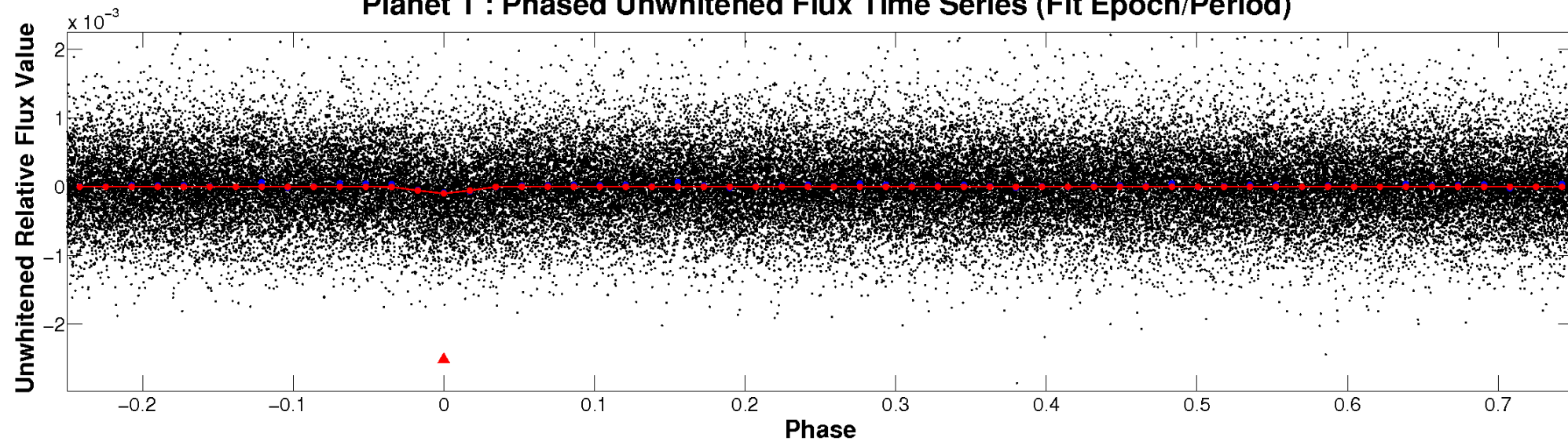
# ALT Odd/Even

TCE 003232249-01

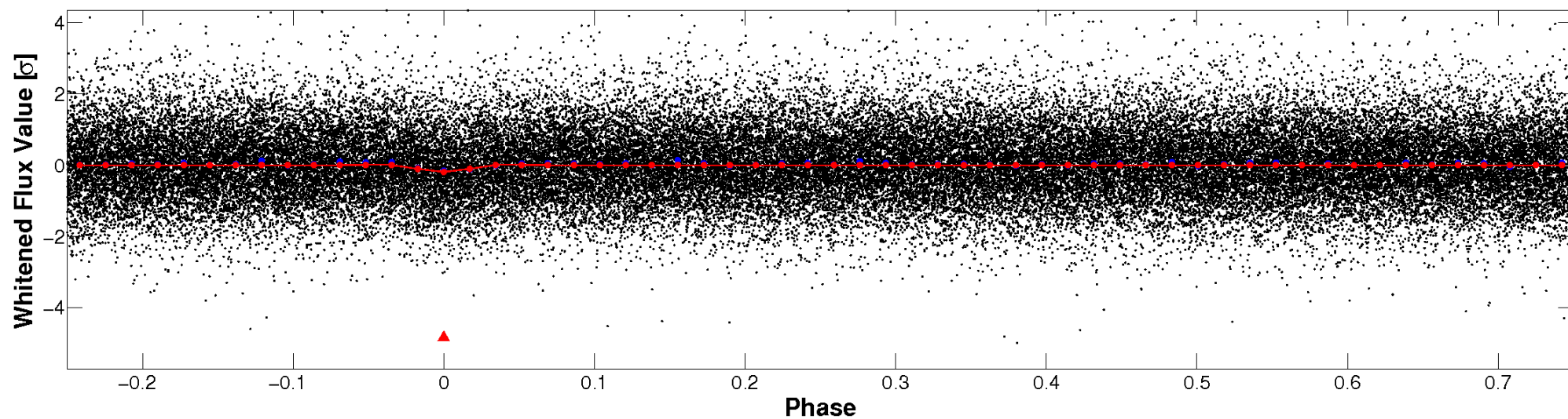


# Non-Whitened Vs. Whitened Light Curve

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

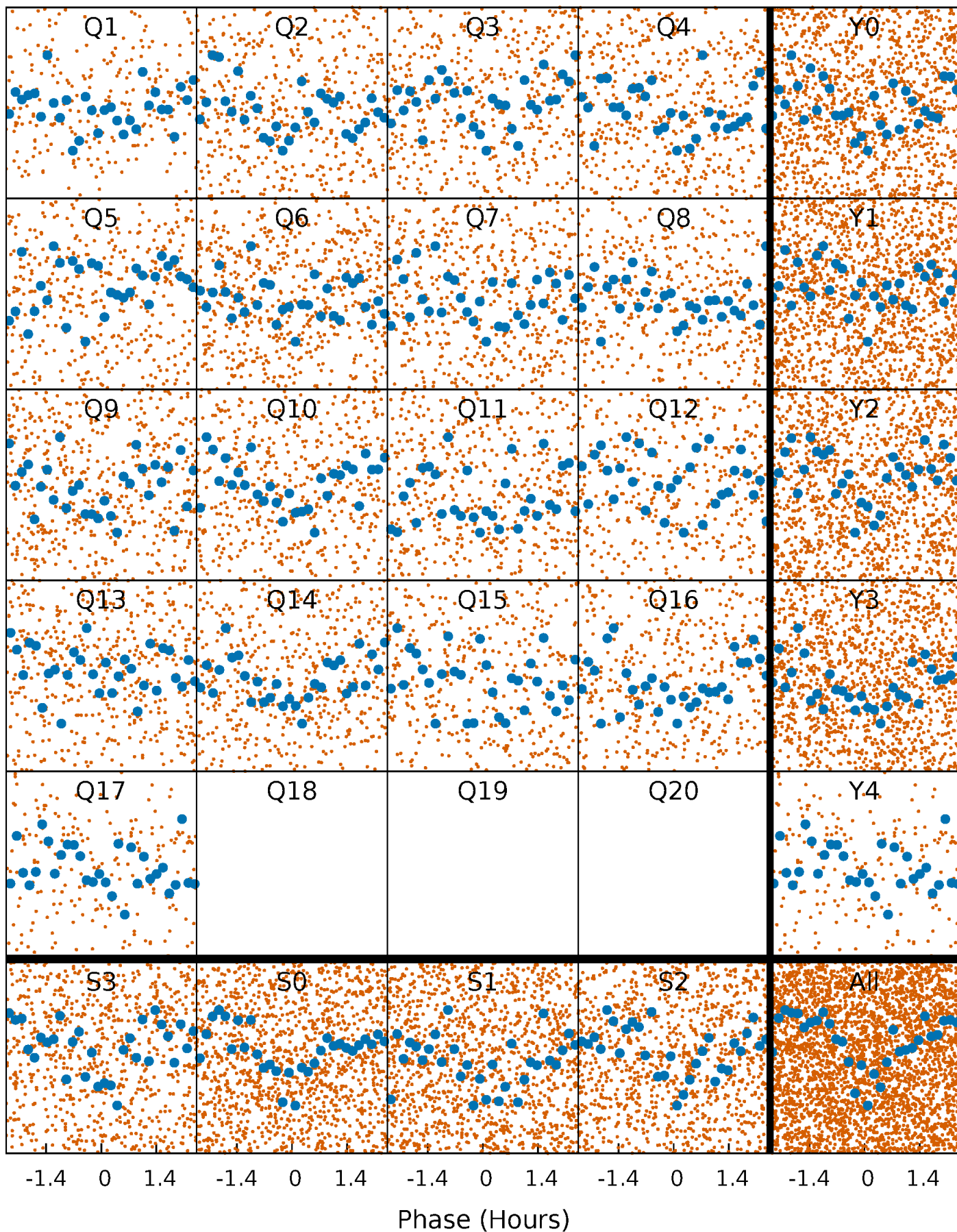


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

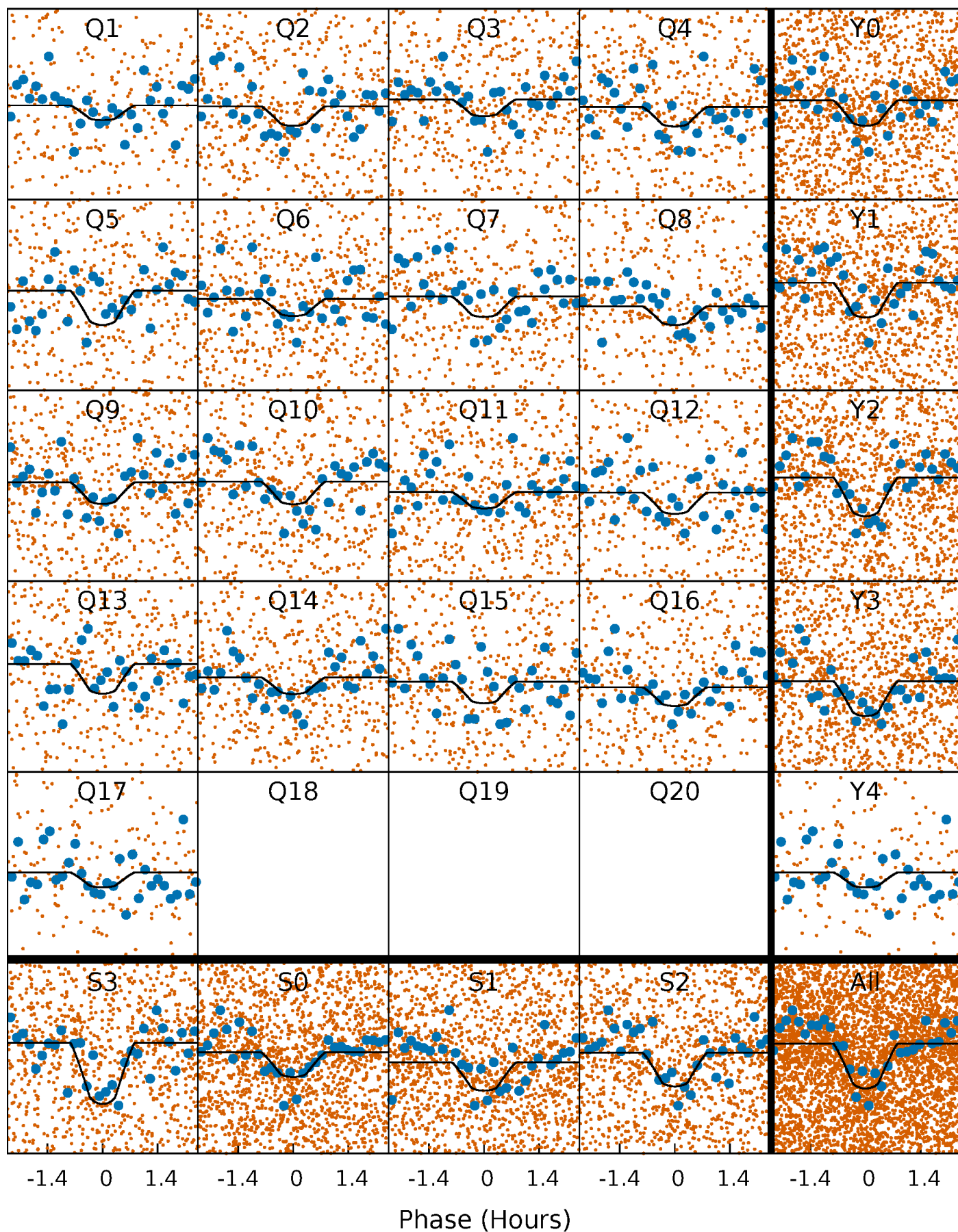
TCE 003232249-01 P= 1.183500 Days  $T_0=131.751267$  (BKJD)





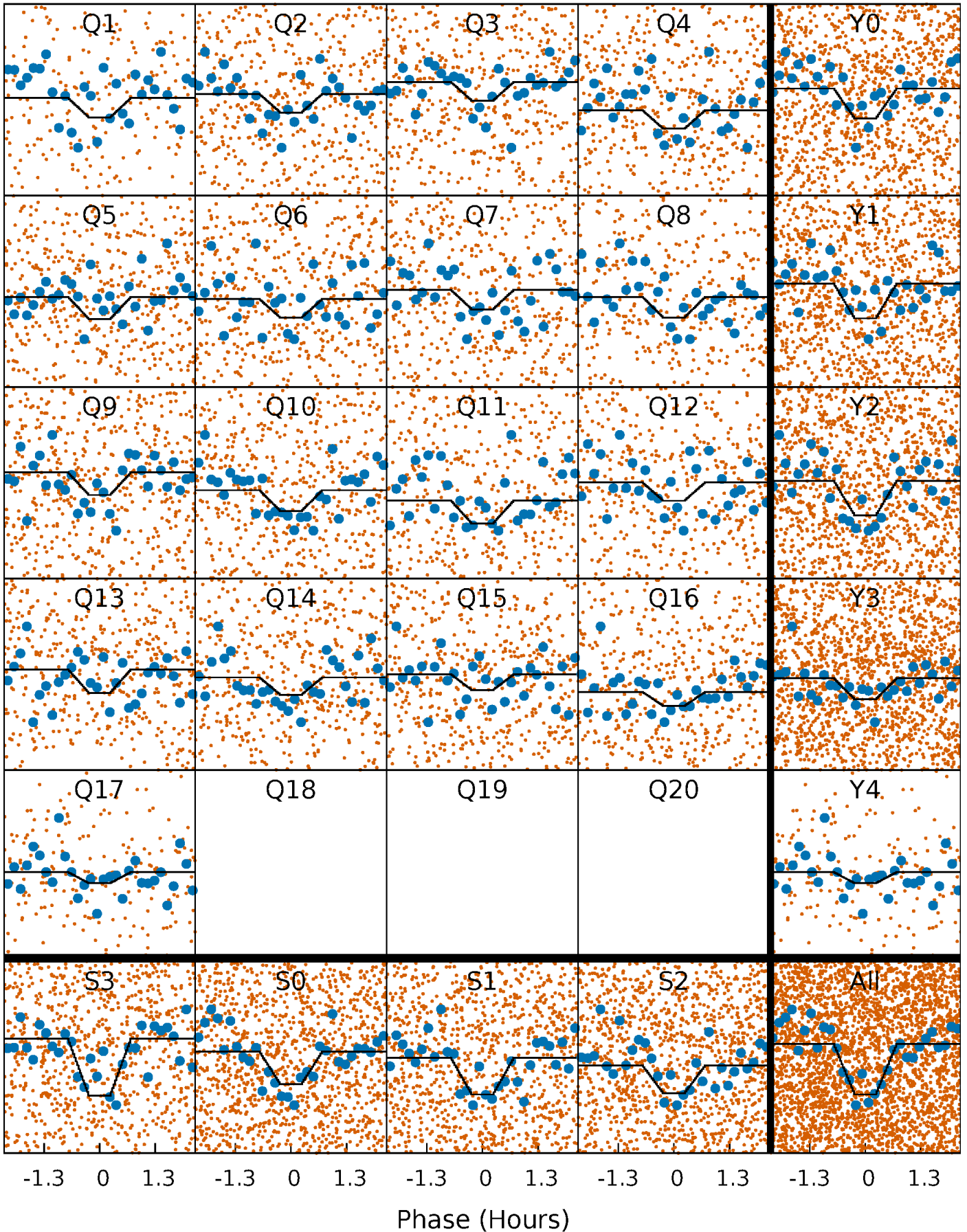
# DV Quarter-Phased Transit Curves

TCE 003232249-01 P= 1.183500 Days  $T_0=131.751267$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

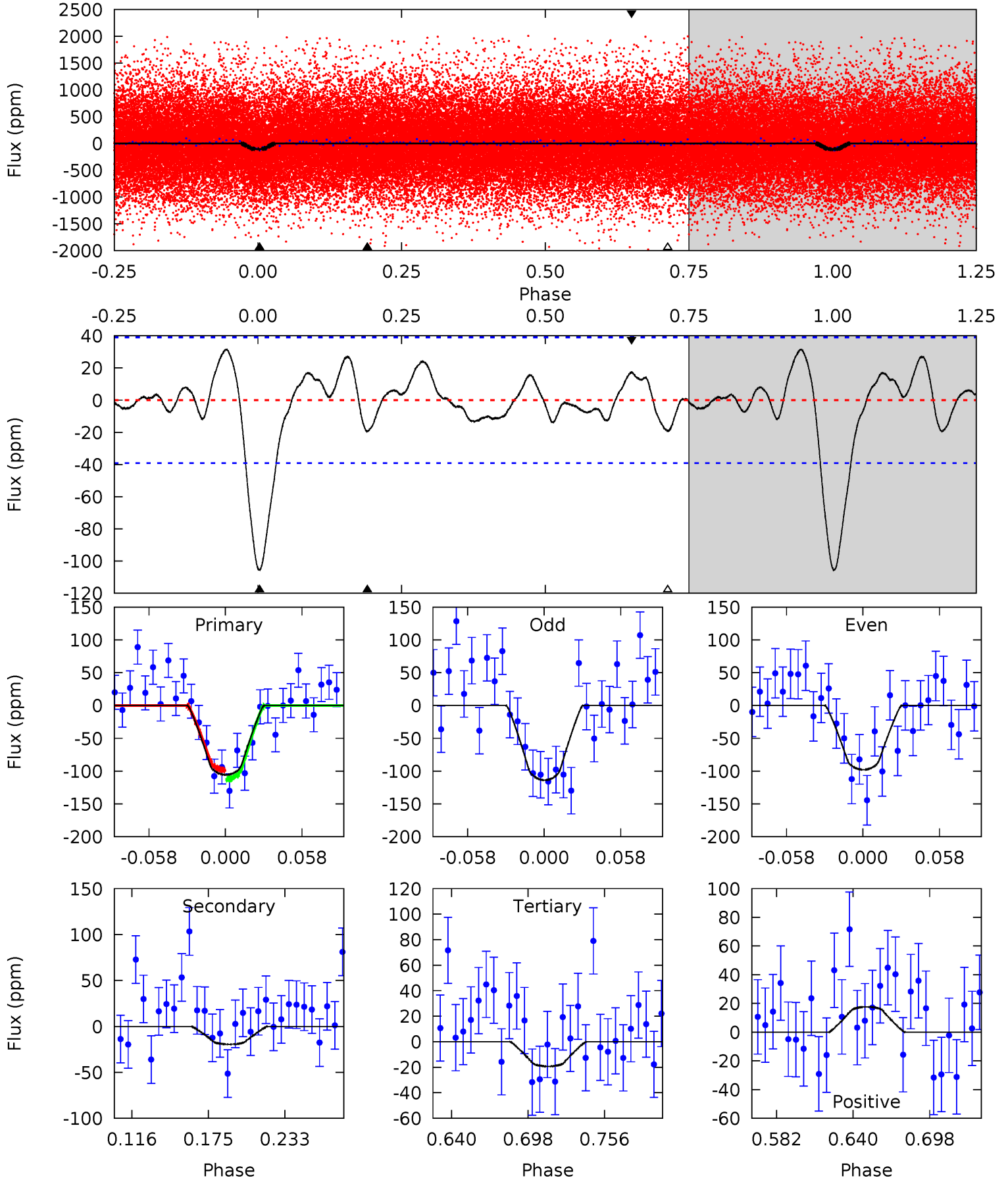
TCE 003232249-01 P= 1.183506 Days  $T_0=131.749755$  (BKJD)



# DV Model-Shift Uniqueness Test

003232249-01, P = 1.183500 Days, E = 130.567767 Days

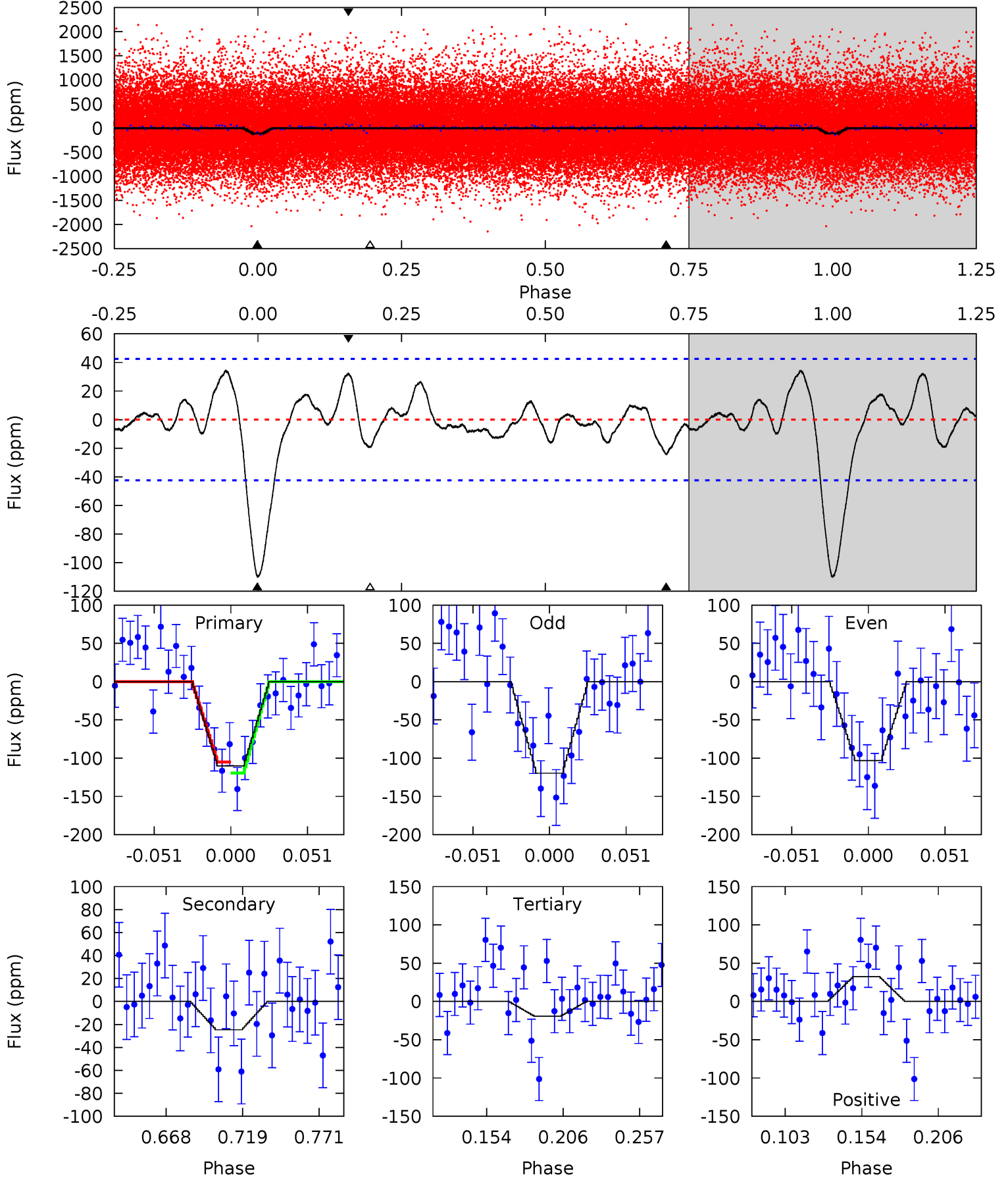
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	2.34	2.31	2.11	4.68	1.89	1.24	10.3	10.5	0.02	0.23	0.95	0.81	0.23	0.85



# Alt Model-Shift Uniqueness Test

003232249-01, P = 1.183506 Days, E = 130.566249 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
12.2	2.73	2.16	3.60	4.70	1.95	1.23	10.1	8.61	0.57	-0.87	0.92	0.93	0.24	0.80





### Stellar Parameters For KIC 003232249

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$4832^{+168}_{-168}$	$4.592^{+0.032}_{-0.050}$	$0.120^{+0.250}_{-0.300}$	$0.746^{+0.062}_{-0.056}$	$0.791^{+0.054}_{-0.072}$	$2.686^{+0.455}_{-0.469}$
	+3%/-3%	+1%/-1%	+208%/-250%	+8%/-8%	+7%/-9%	+17%/-17%
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 003232249-01 / KOI 7648.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-20 \pm 8$	$1.36^{+1.13}_{-0.91}$	$1813^{+78}_{-64}$	$2969^{+1407}_{-633}$	$2.178^{+18.298}_{-1.596}$
Alt.	$-25 \pm 9$	$1.22^{+1.14}_{-0.82}$	$1819^{+68}_{-71}$	$3201^{+1750}_{-642}$	$3.383^{+32.700}_{-2.476}$

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

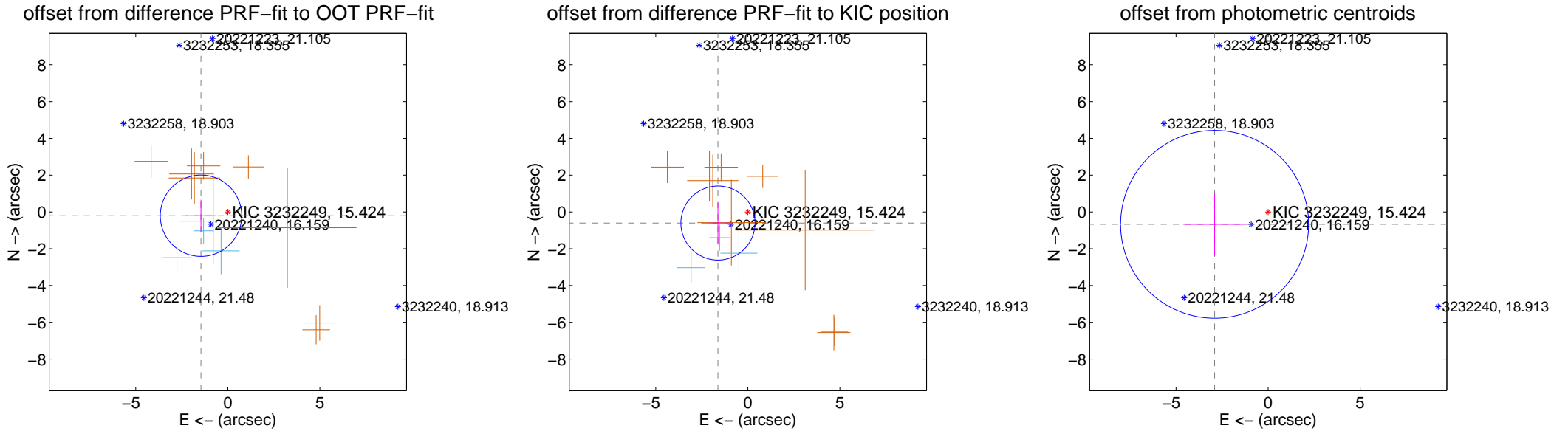
## DV Centroid Data

Supplemental centroid analysis for 003232249-01. Kepler magnitude: 15.42. Transit SNR 8.33

There are 3 quarters with good PRF difference image offsets

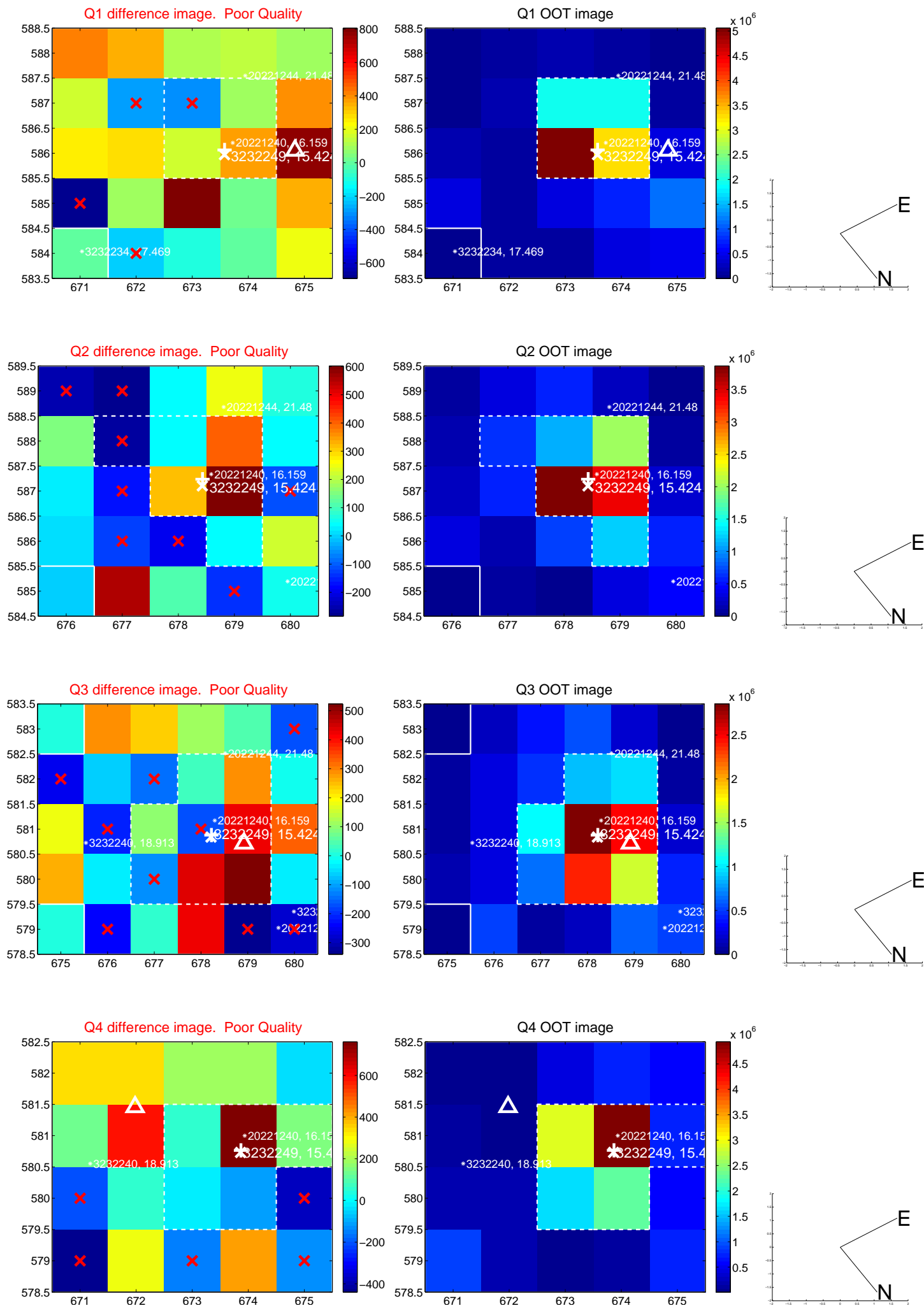
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.472 \pm 0.737$	2.00	$1.457 \pm 0.823$	$-0.205 \pm 0.867$
PRF-fit source offset from KIC position	$1.731 \pm 0.671$	2.58	$1.623 \pm 0.586$	$-0.603 \pm 1.107$
photometric centroid source offset	$2.98 \pm 1.70$	1.75	$2.91 \pm 1.70$	$-0.67 \pm 1.66$

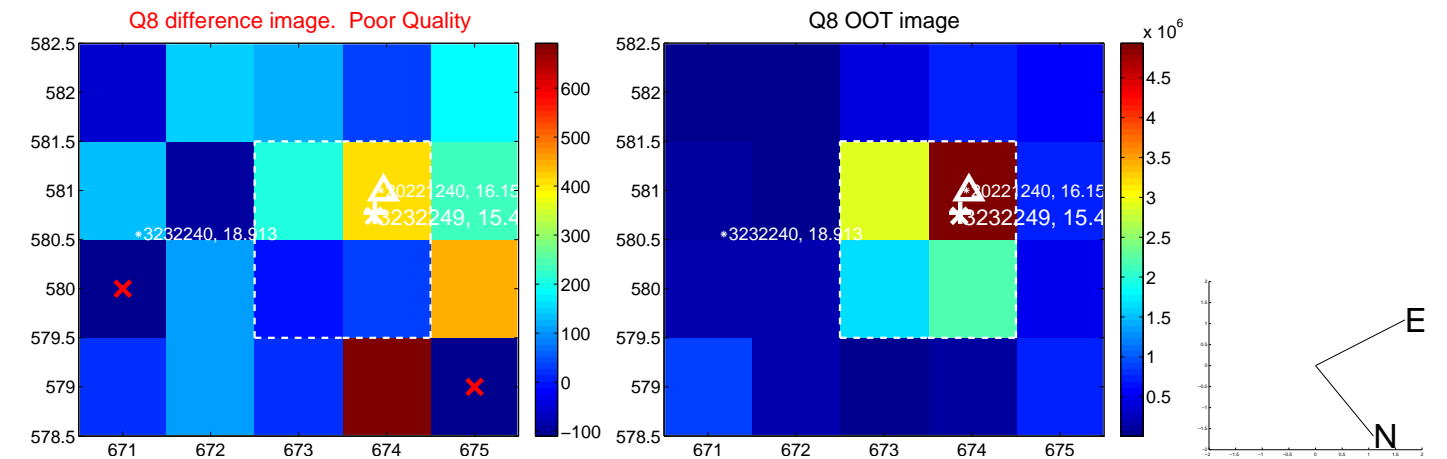
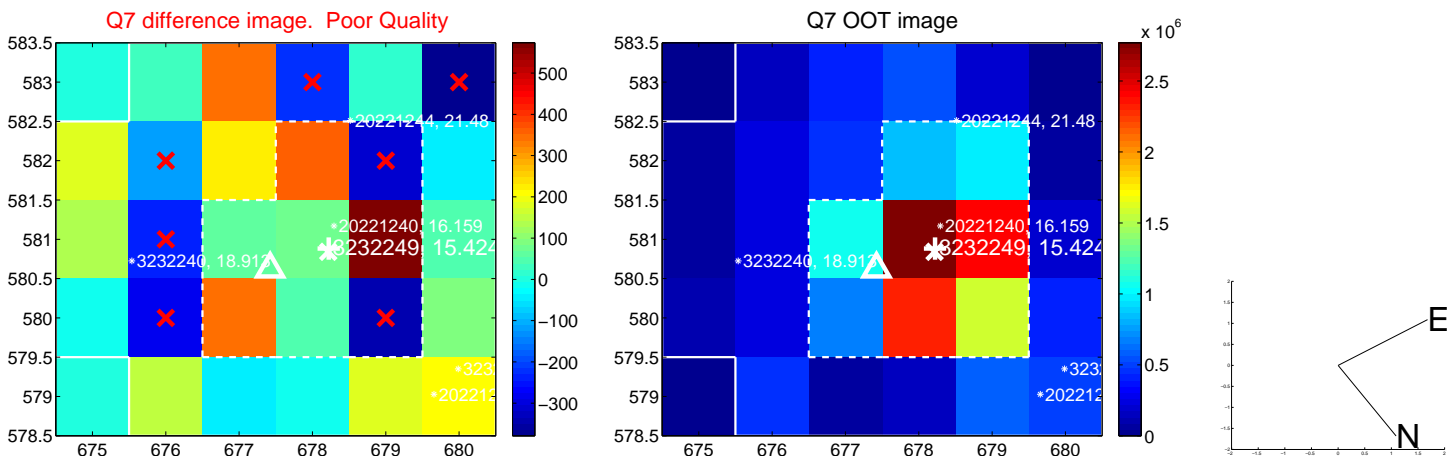
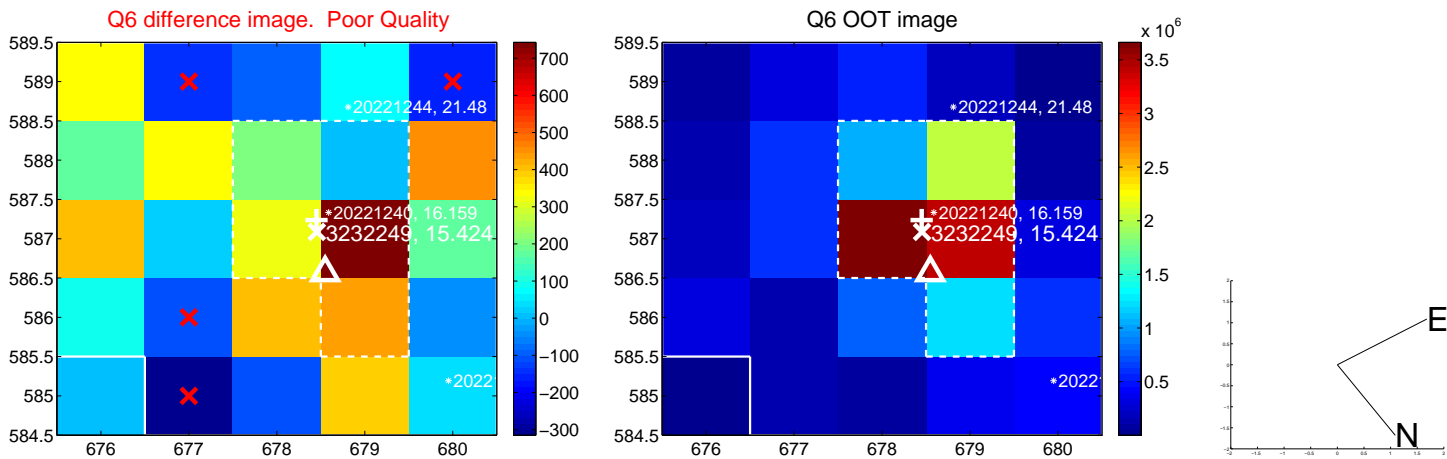
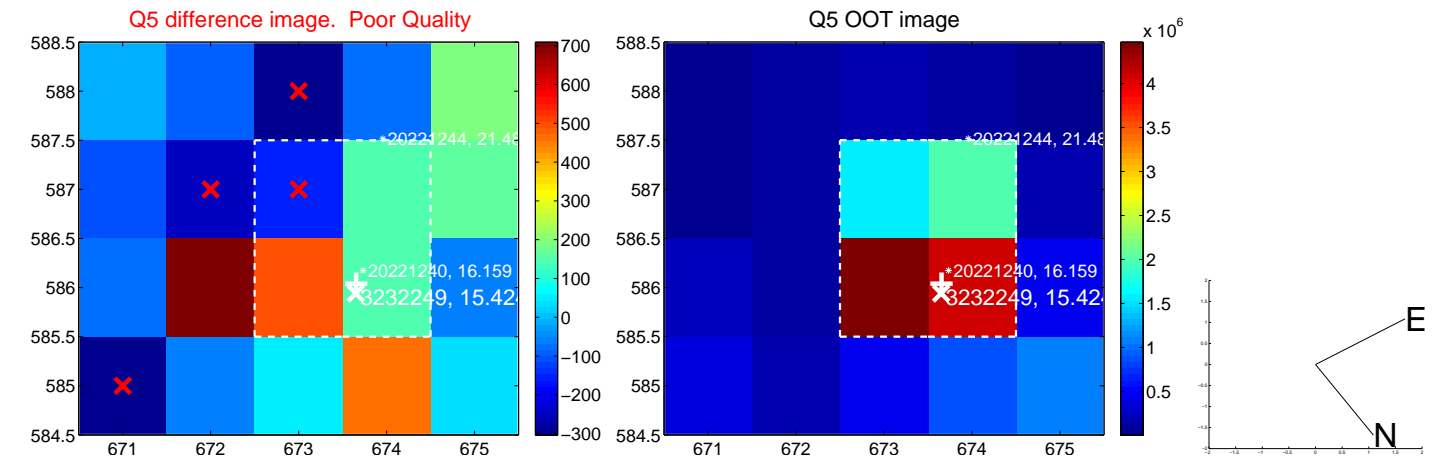


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

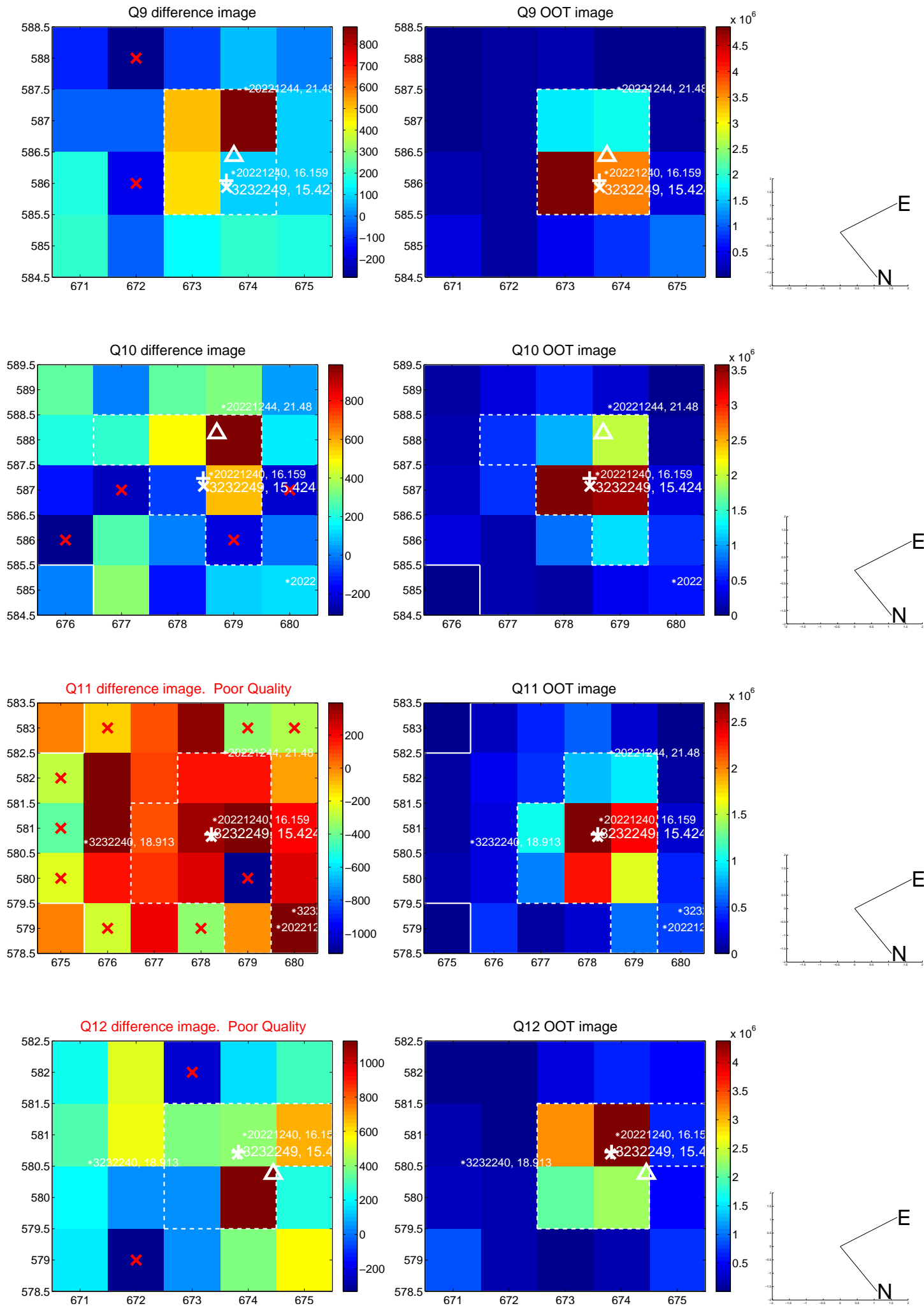


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

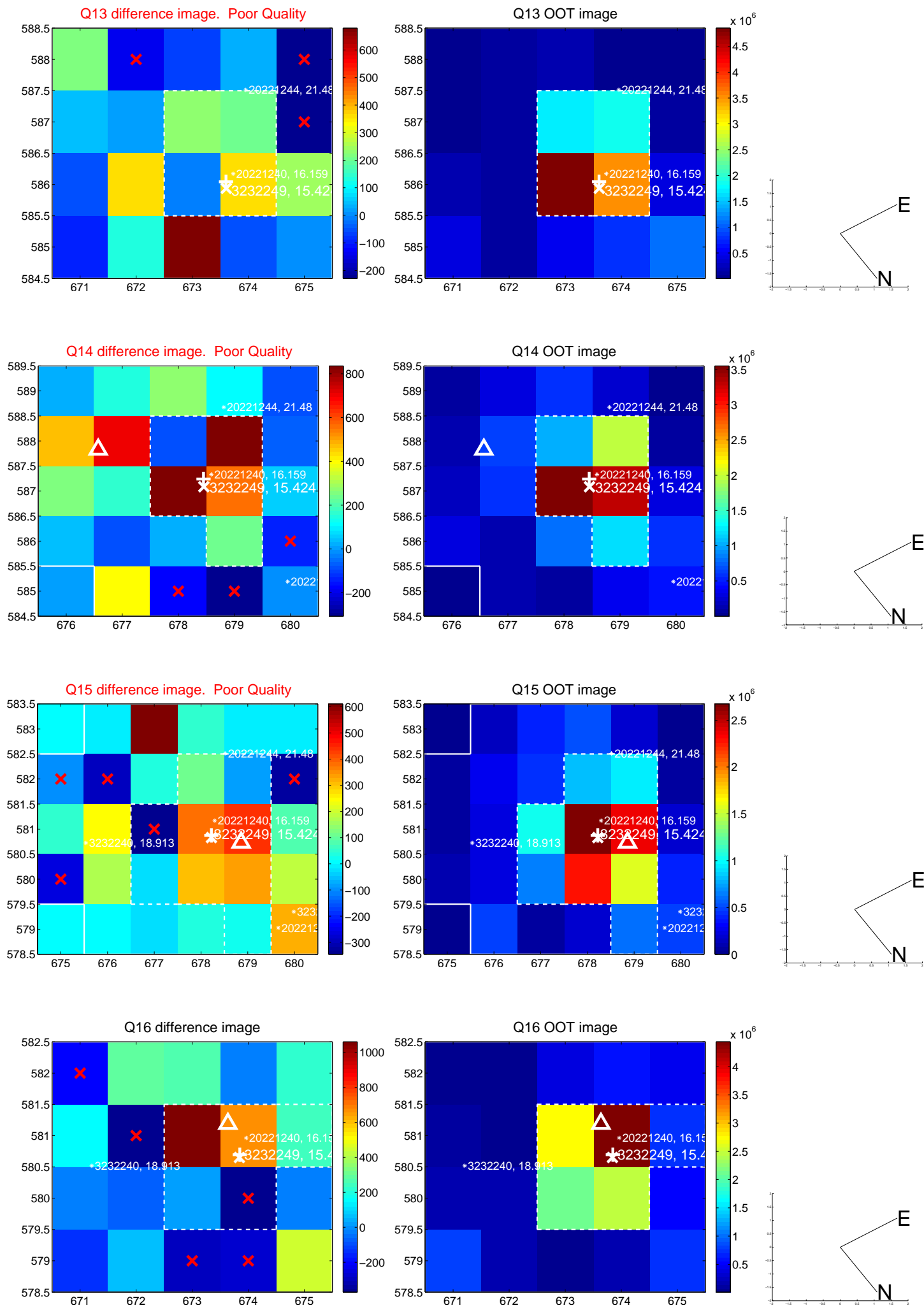




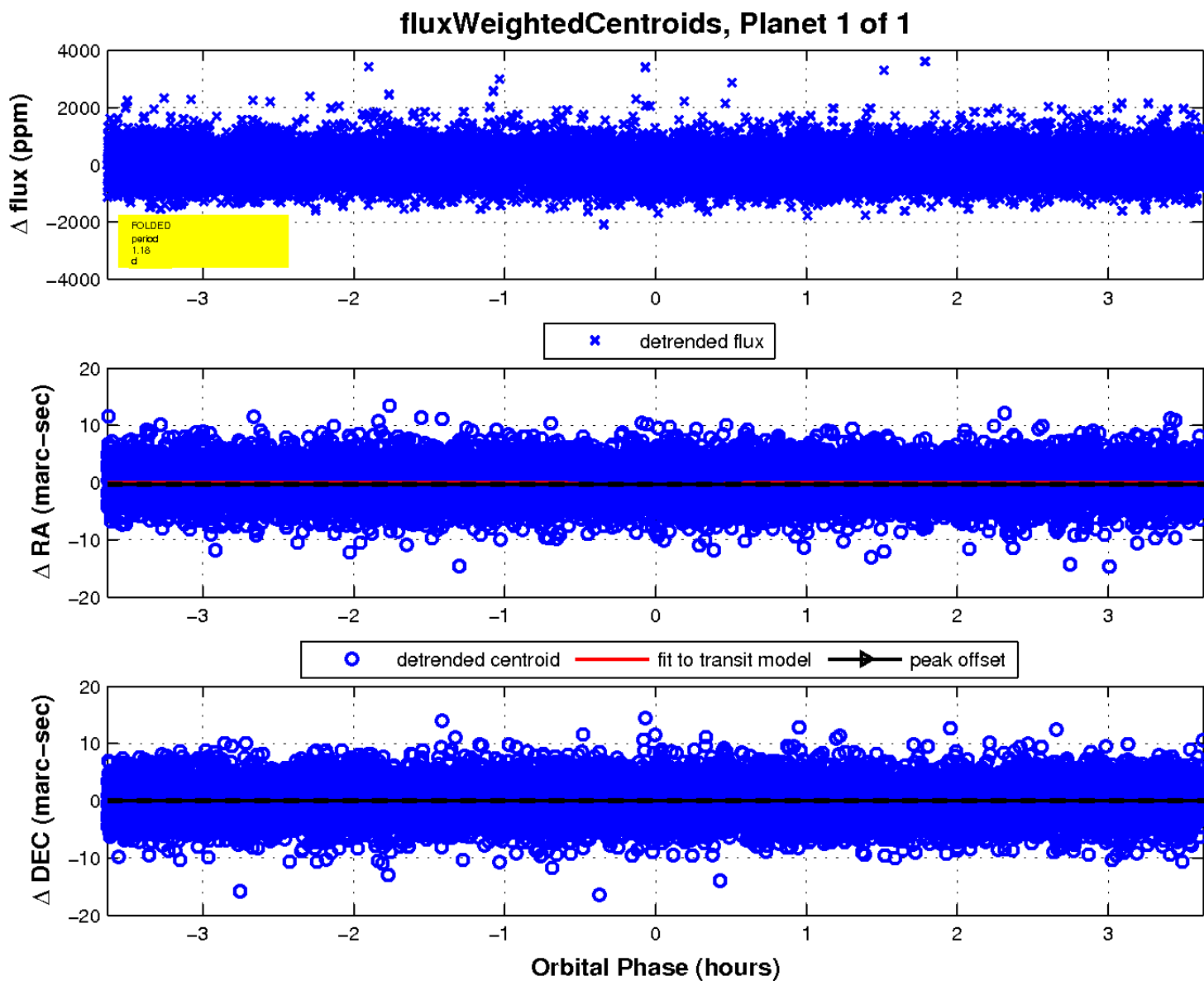
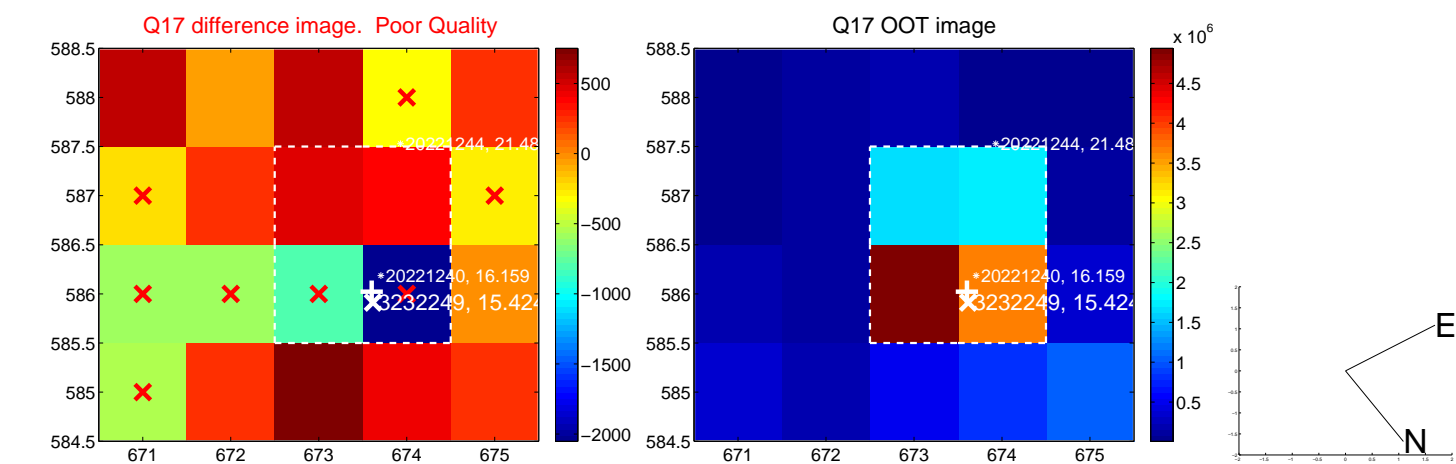
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UKIRT Image

Declination

