

# KIC 010667773

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010667773-01	OBS	No	0.624957	132.094696	64.6	2.257	8.3	8.4	0.60	4410	0.59	851.69

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010667773-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

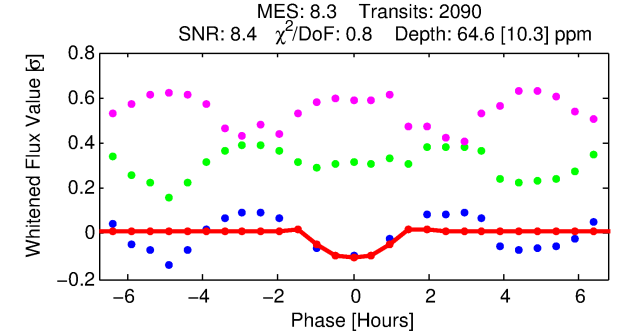
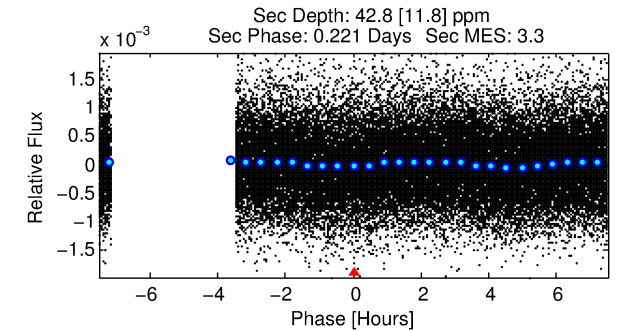
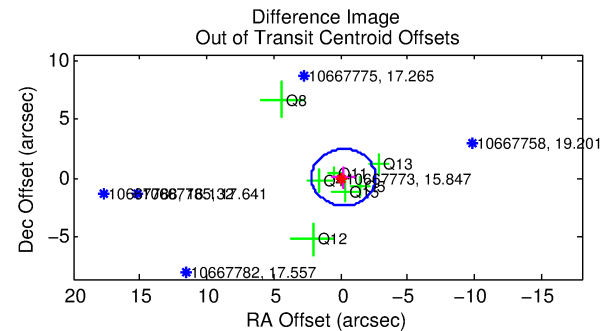
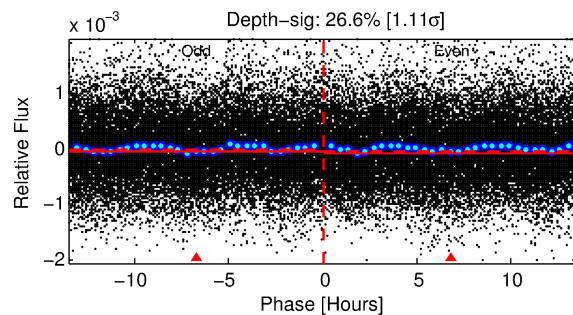
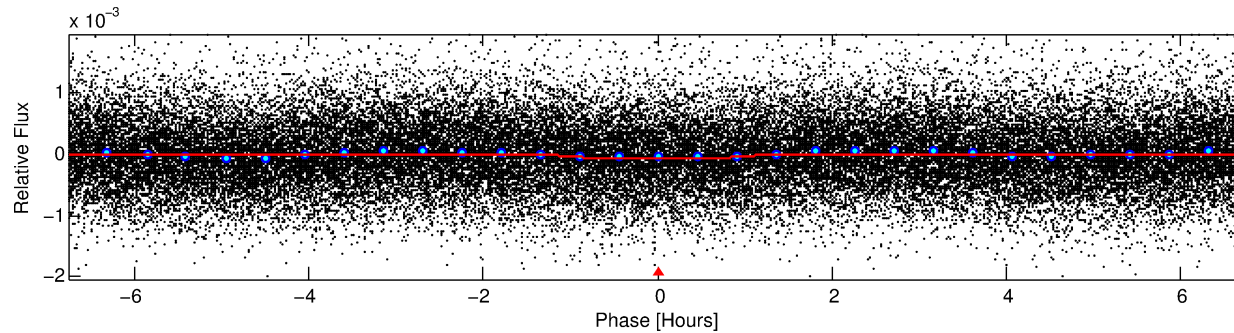
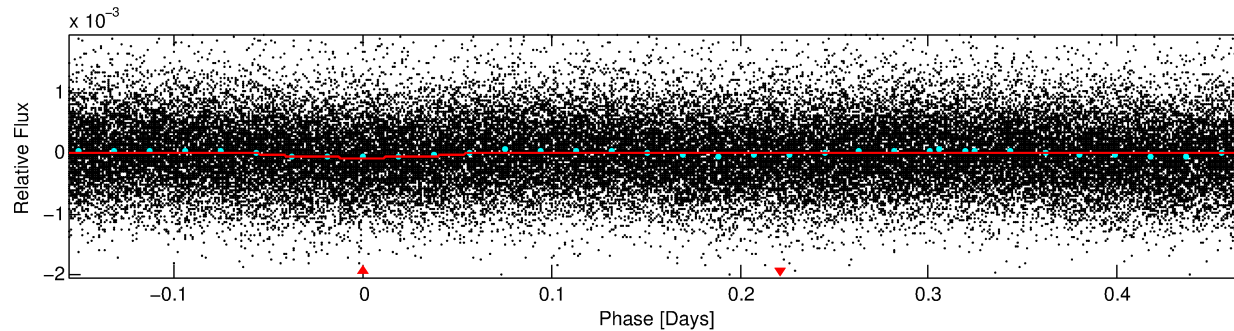
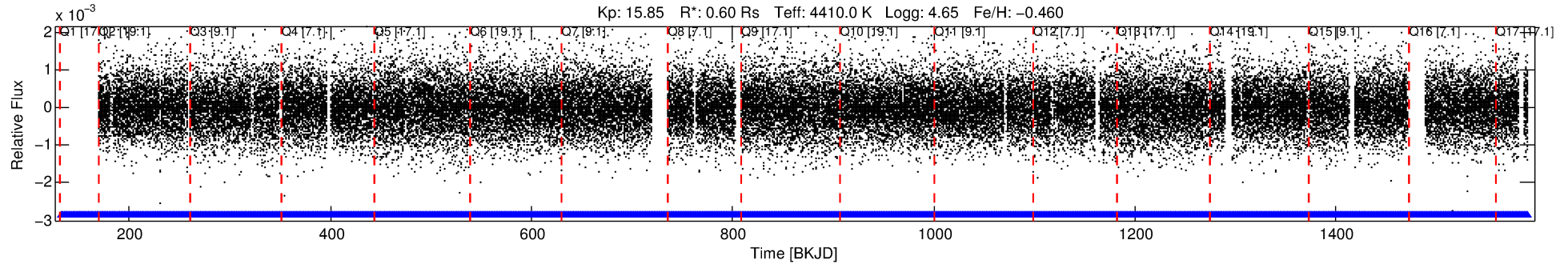
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010667773-01

No Significant Match Found

# DV One-Page Summary

KIC: 10667773 Candidate: 1 of 1 Period: 0.625 d



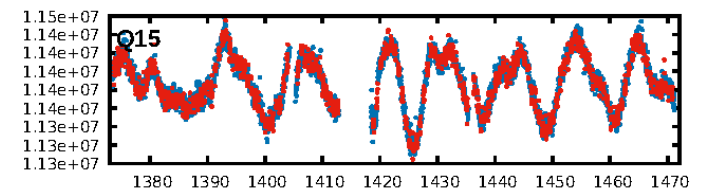
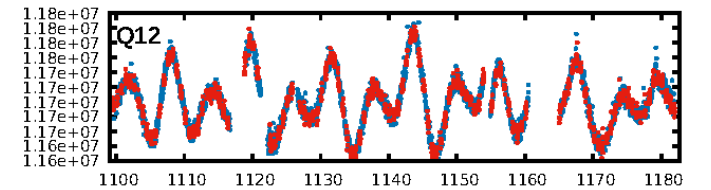
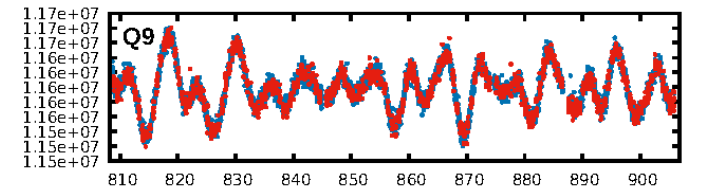
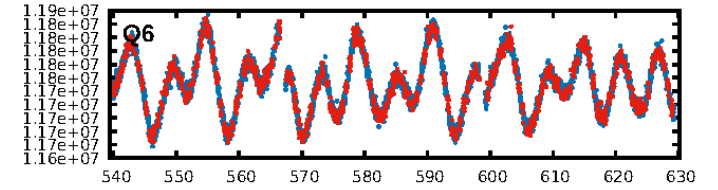
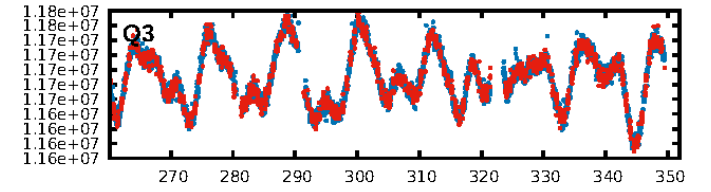
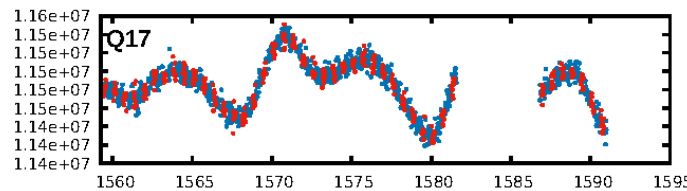
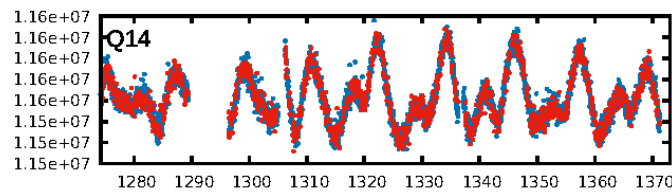
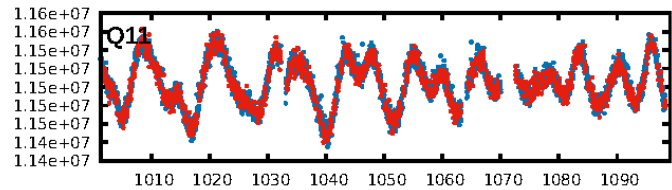
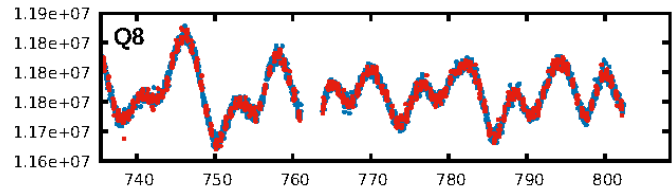
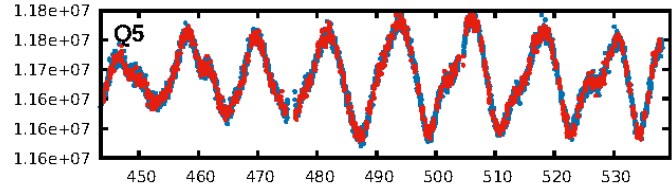
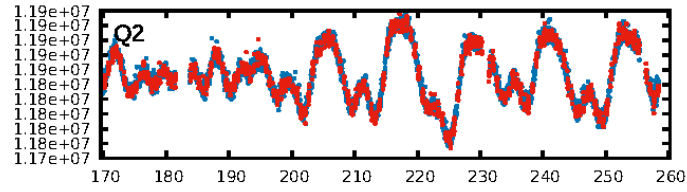
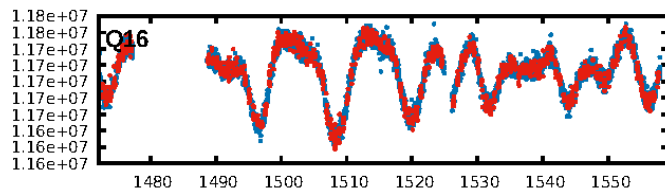
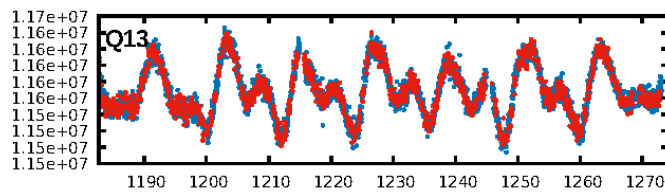
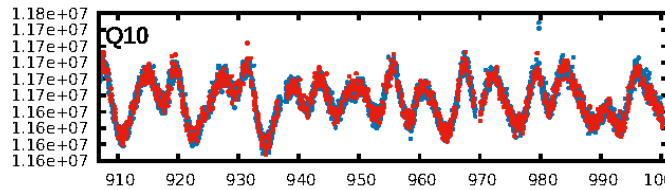
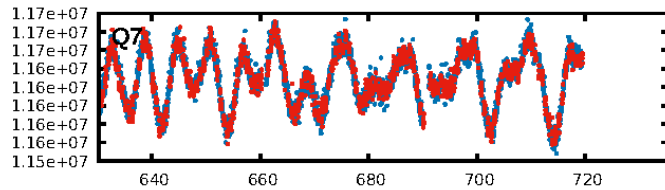
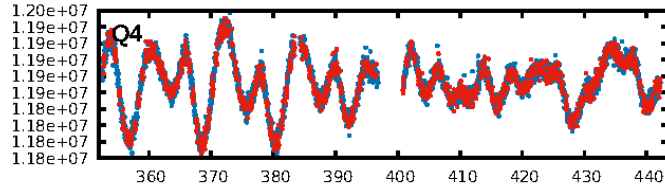
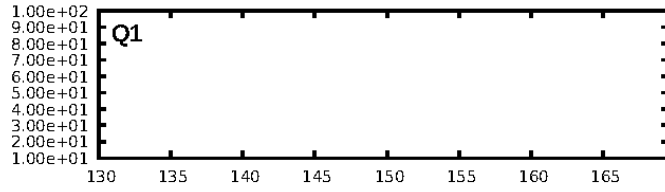
## DV Fit Results:

Period = 0.62496 [0.00001] d  
Epoch = 132.0947 [0.0032] BKJD  
Rp/R\* = 0.0090 [0.0089]  
a/R\* = 1.34 [2.39]  
b = 0.90 [0.86]  
Seff = 851.69 [134.29]  
Teff = 1378 [54] K  
Rp = 0.59 [0.58] Re  
a = 0.0120 [0.0009] AU  
Ag = 9.71 [19.39] [0.45 $\sigma$ ]  
Teffp = 3759 [1878] K [1.27 $\sigma$ ]

## DV Diagnostic Results:

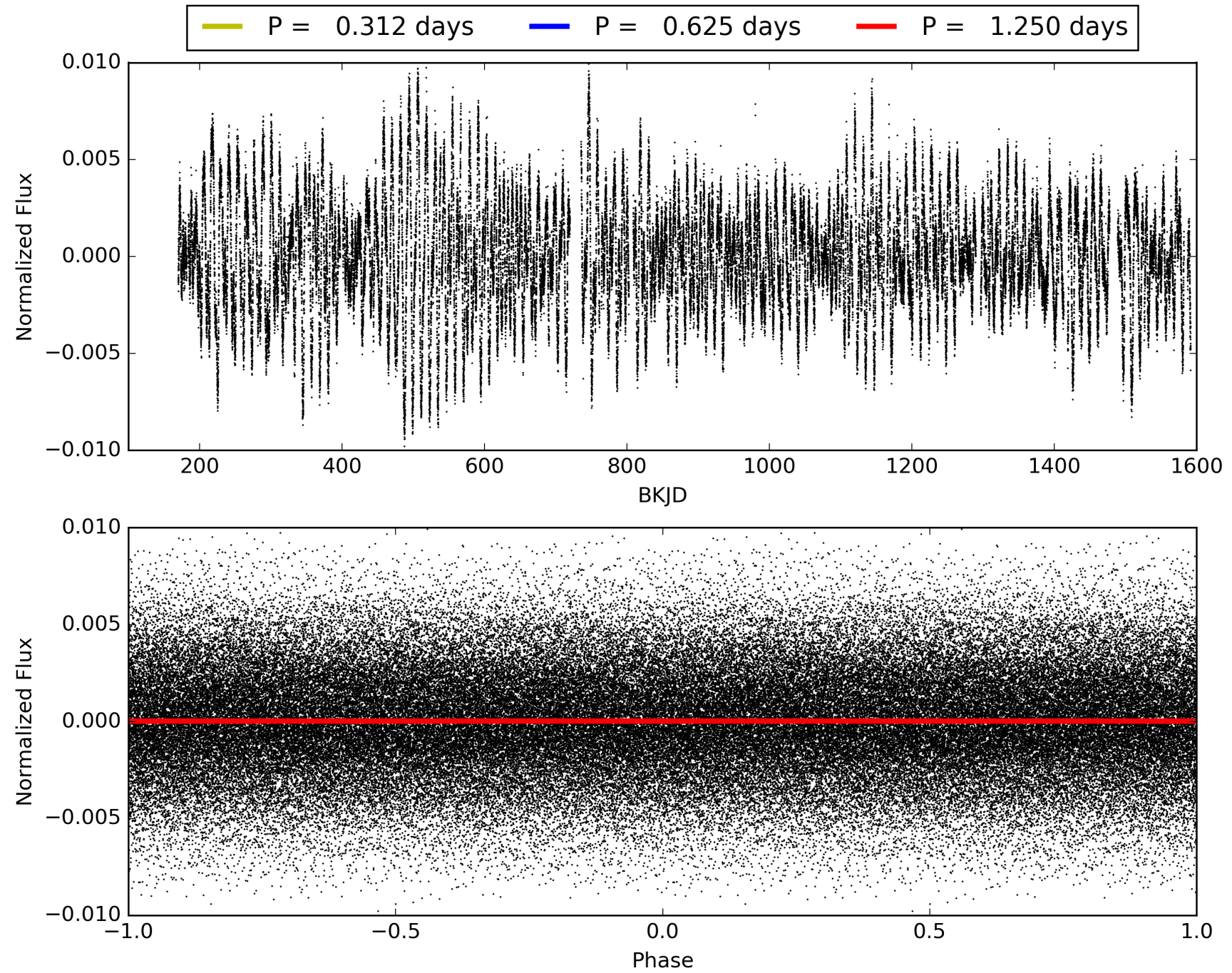
ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 7.62e-17  
RollingBand-fgt: 1.00 [2047/2047]  
**GhostDiagnostic-chr: 0.9741**  
Centroid-sig: 91.4%  
Centroid-so: 1.014 arcsec [0.70 $\sigma$ ]  
OotOffset-rm: 0.207 arcsec [0.26 $\sigma$ ]  
KicOffset-rm: 0.278 arcsec [0.32 $\sigma$ ]  
OotOffset-st: 0/2/3/2 [7]  
KicOffset-st: 0/2/3/2 [7]  
DiffImageQuality-fgm: 0.29 [2/7]  
DiffImageOverlap-fno: 1.00 [16/16]

# TCE 010667773-01, PDC Light Curves



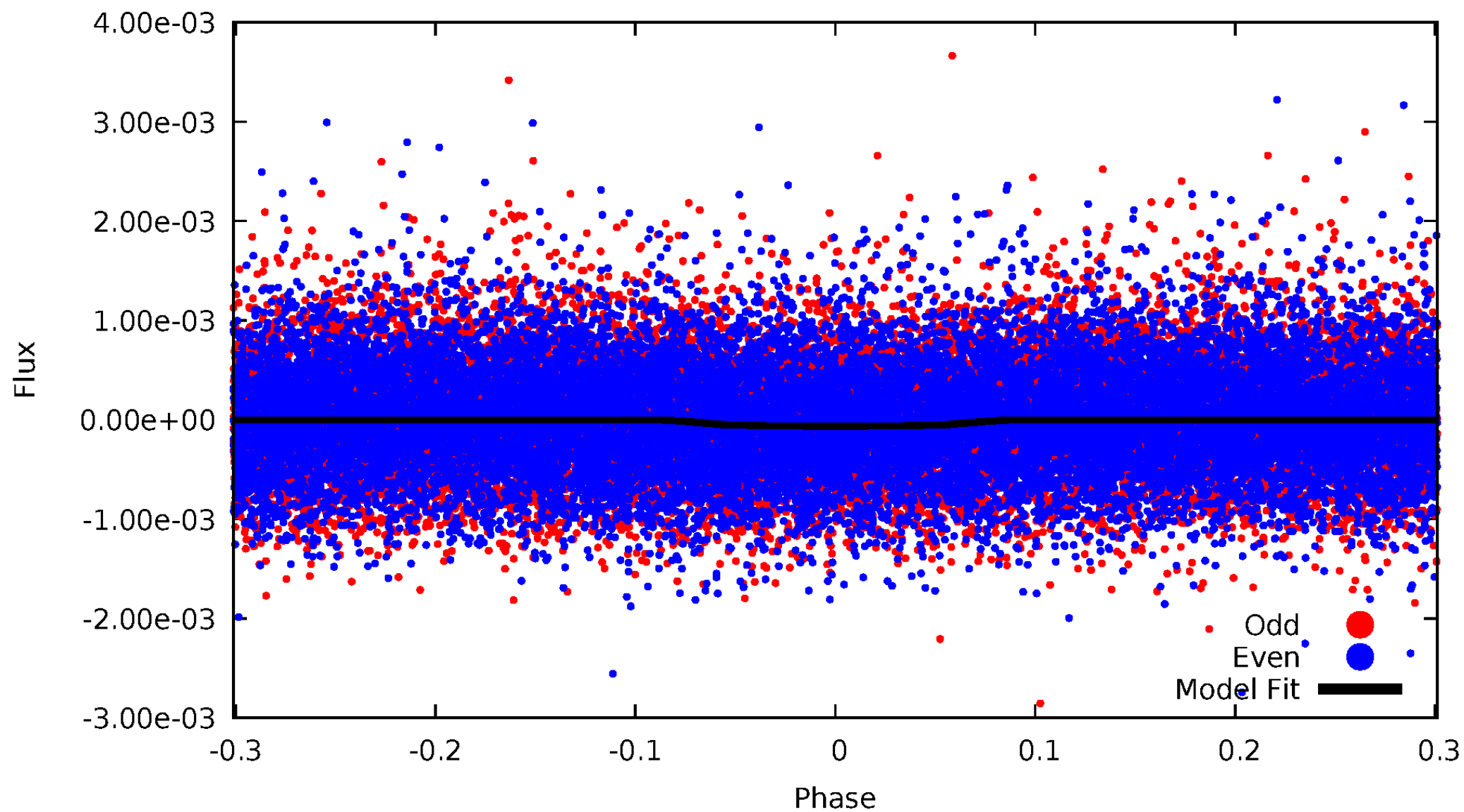


TCE 010667773-01



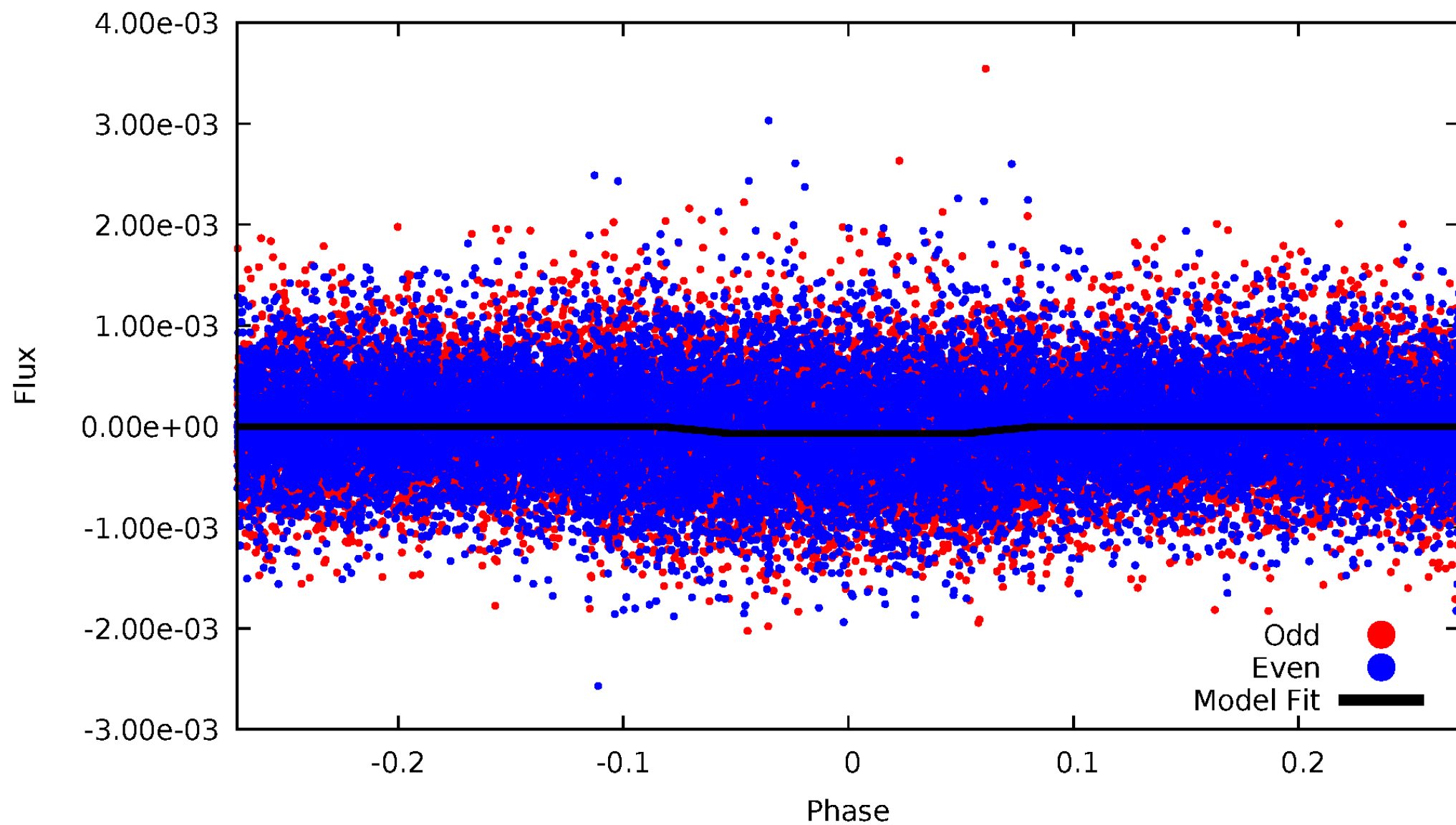
# DV Odd/Even

TCE 010667773-01

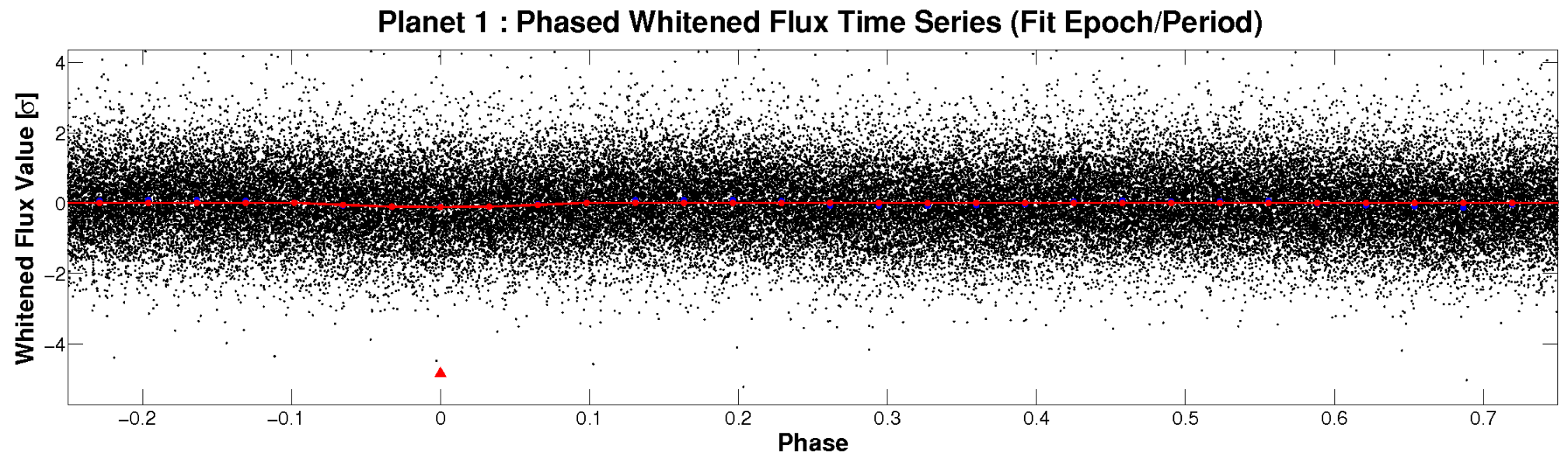
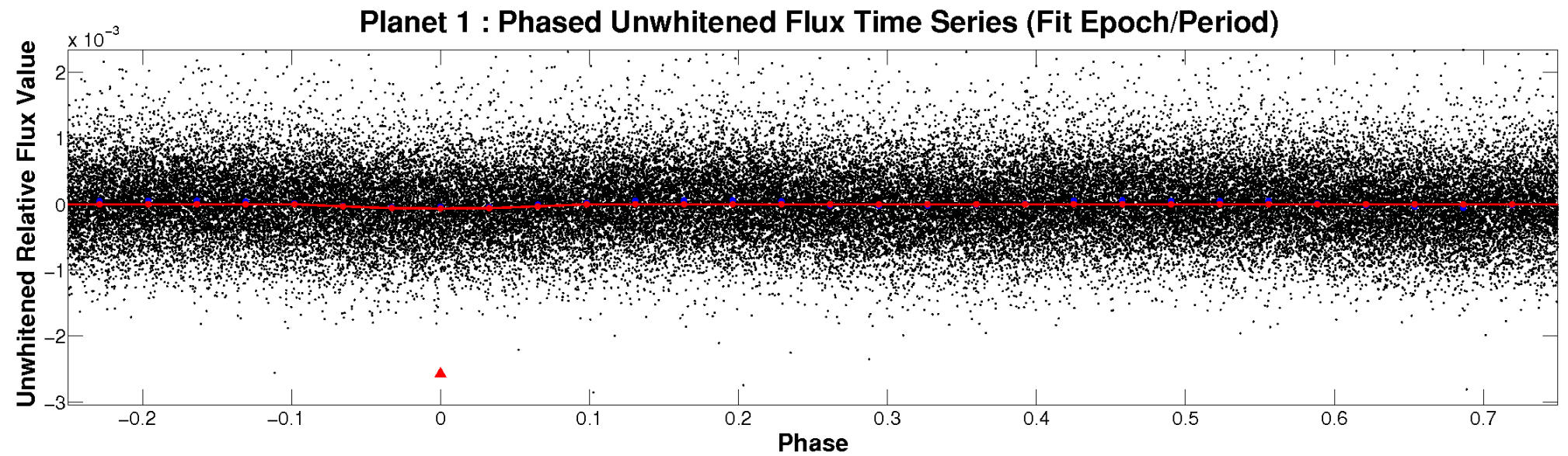


# ALT Odd/Even

TCE 010667773-01



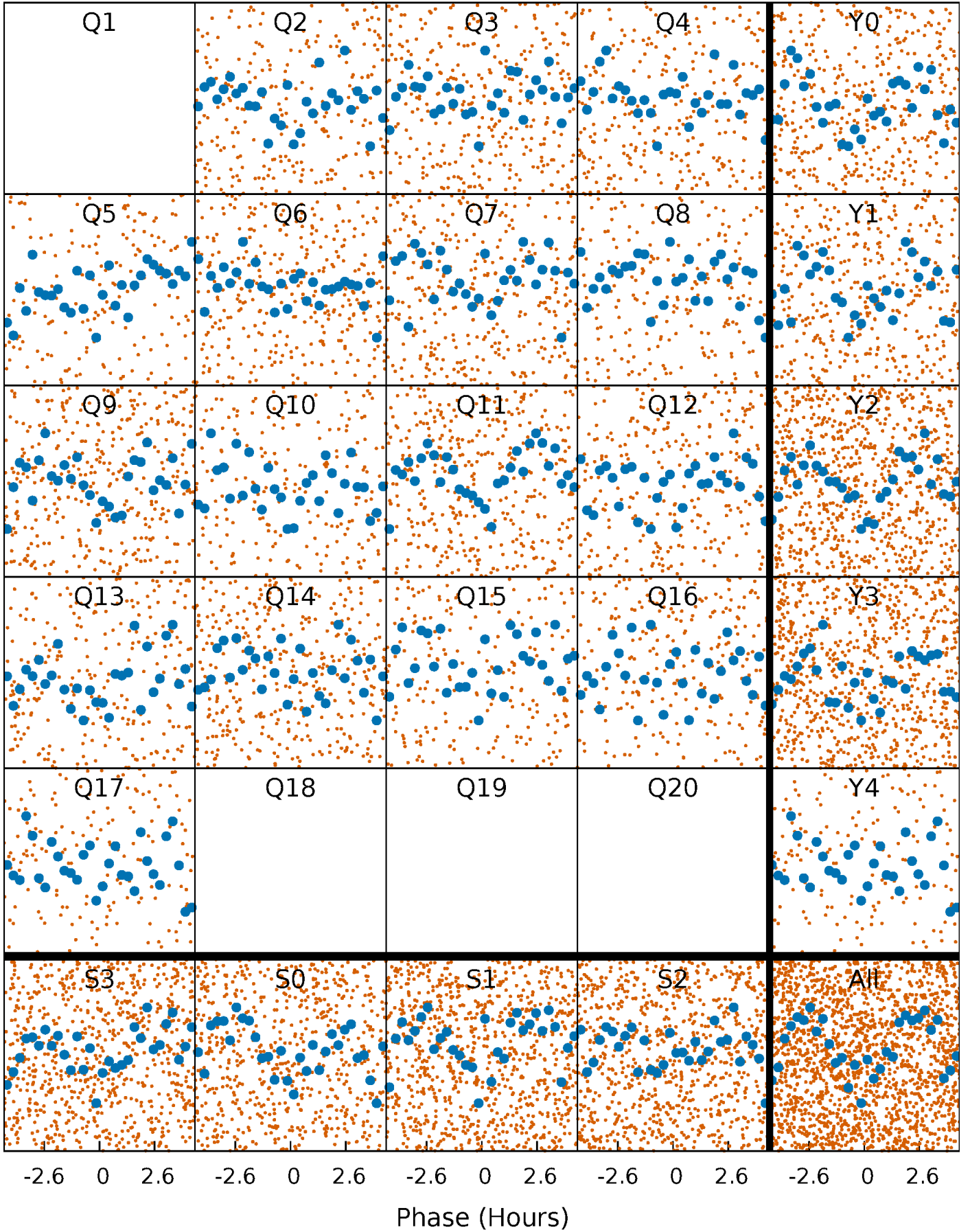
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

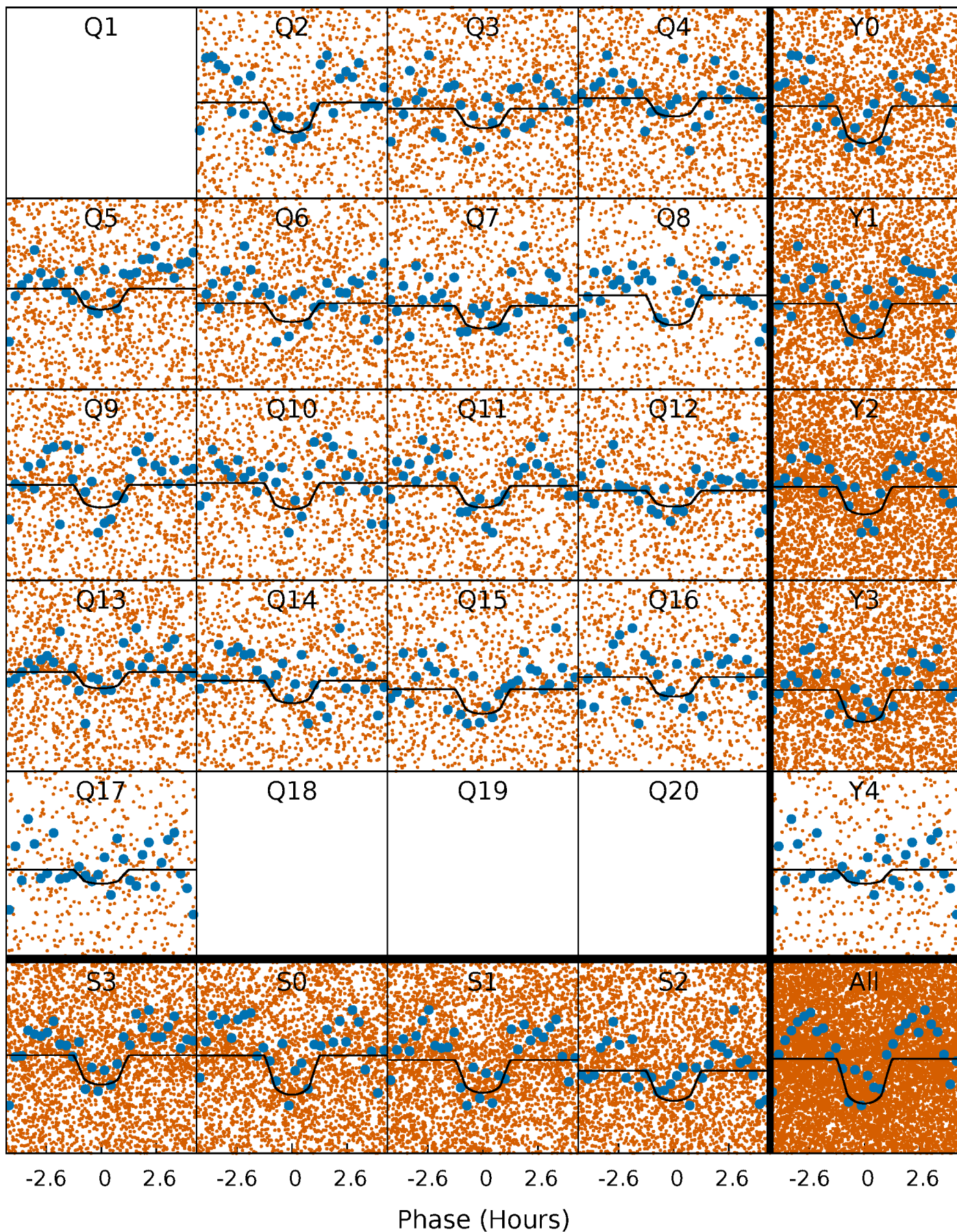
TCE 010667773-01 P= 0.624957 Days  $T_0=132.094696$  (BKJD)





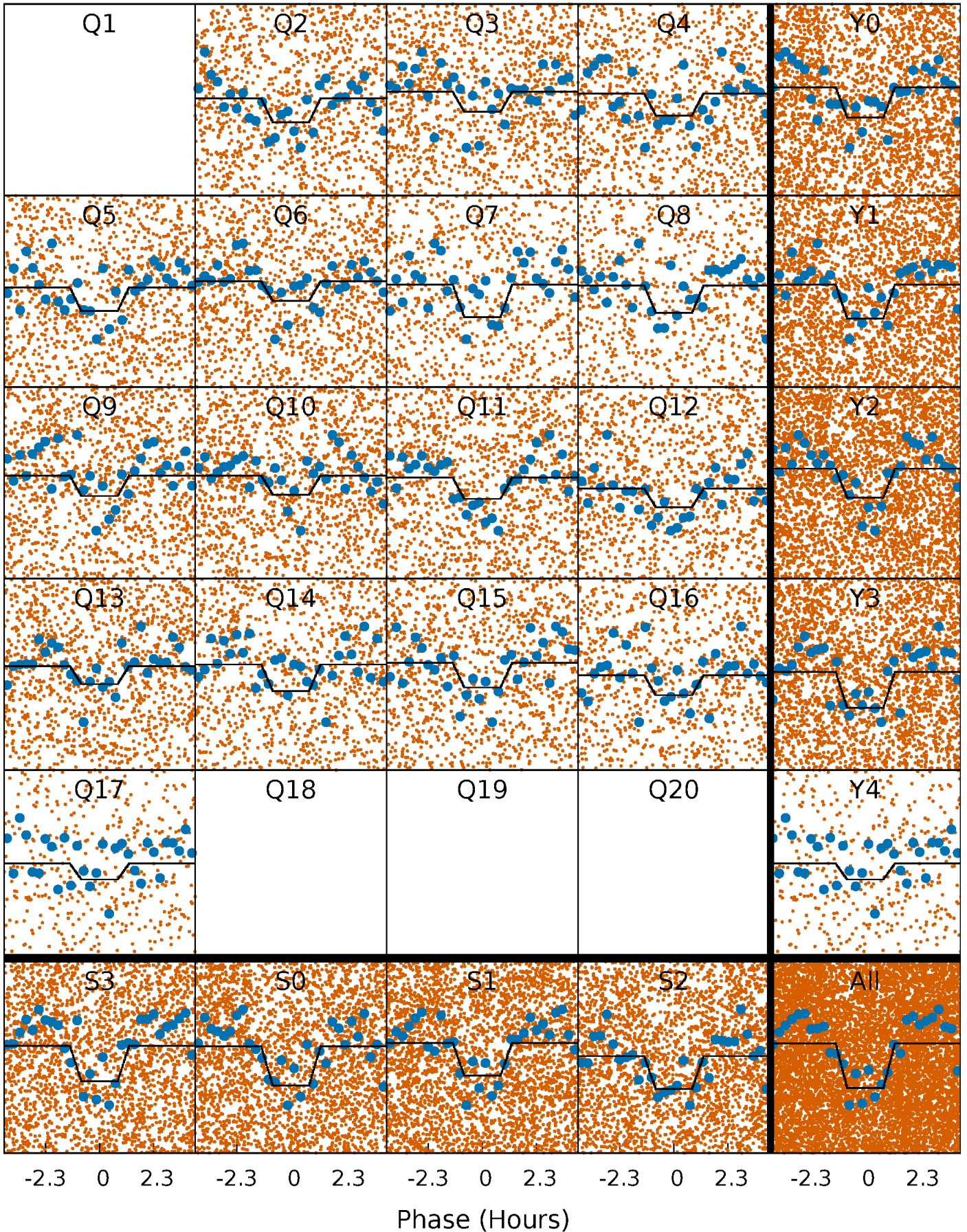
# DV Quarter-Phased Transit Curves

TCE 010667773-01 P= 0.624957 Days  $T_0=132.094696$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 010667773-01 P= 0.624956 Days  $T_0=132.094856$  (BKJD)

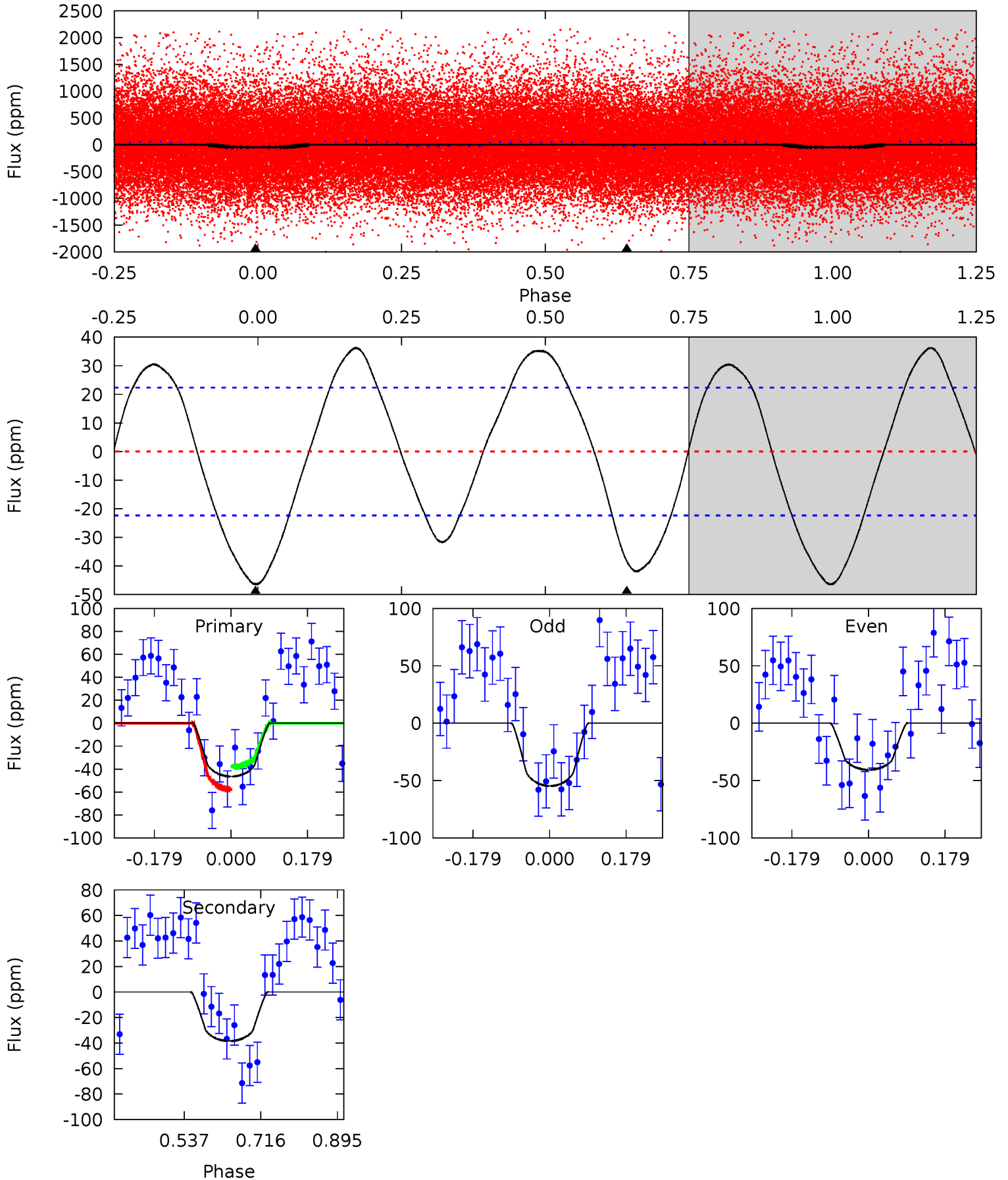




# DV Model-Shift Uniqueness Test

010667773-01, P = 0.624957 Days, E = 132.094696 Days

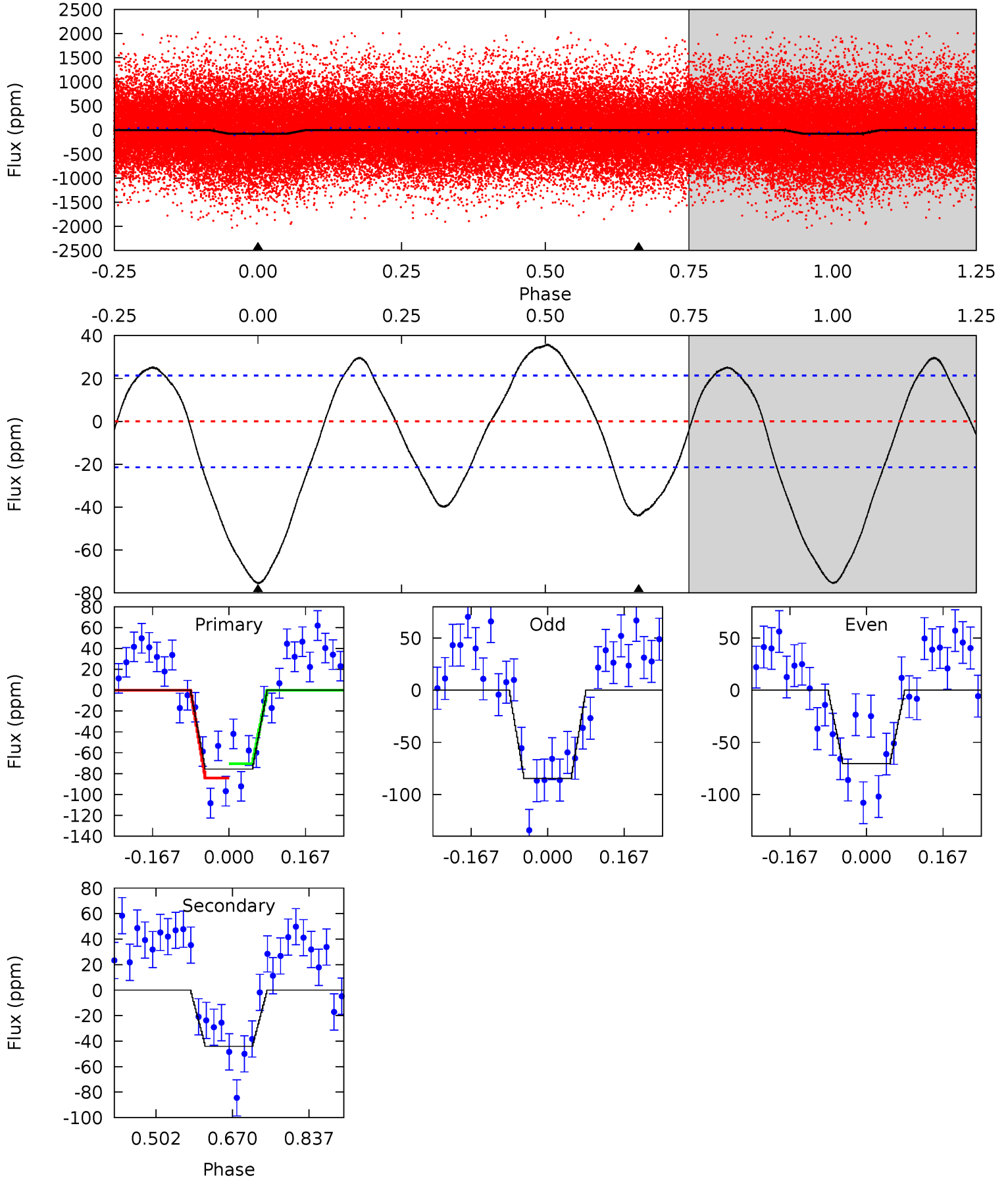
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.22	7.64	0	0	4.44	1.34	4.19	9.22	9.22	7.64	7.64	1.41	0.95	0.44	1.93



# Alt Model-Shift Uniqueness Test

010667773-01, P = 0.624956 Days, E = 132.094856 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
15.8	9.17	0	0	4.46	1.38	5.01	15.8	15.8	9.17	9.17	1.49	0.89	0.32	1.44





### Stellar Parameters For KIC 010667773

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$4410^{+131}_{-131}$	$4.649^{+0.054}_{-0.027}$	$-0.460^{+0.300}_{-0.300}$	$0.600^{+0.045}_{-0.056}$	$0.585^{+0.065}_{-0.041}$	$3.819^{+0.944}_{-0.462}$
	+3%/-3%	+1%/-1%	+65%/-65%	+8%/-9%	+11%/-7%	+25%/-12%
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 010667773-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-38 \pm 5$	$0.68^{+0.52}_{-0.41}$	$1910^{+65}_{-61}$	$3643^{+1546}_{-645}$	$6.763^{+34.602}_{-4.714}$
Alt.	$-44 \pm 5$	$0.69^{+0.52}_{-0.44}$	$1915^{+65}_{-68}$	$3677^{+1871}_{-615}$	$7.145^{+49.003}_{-4.765}$

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

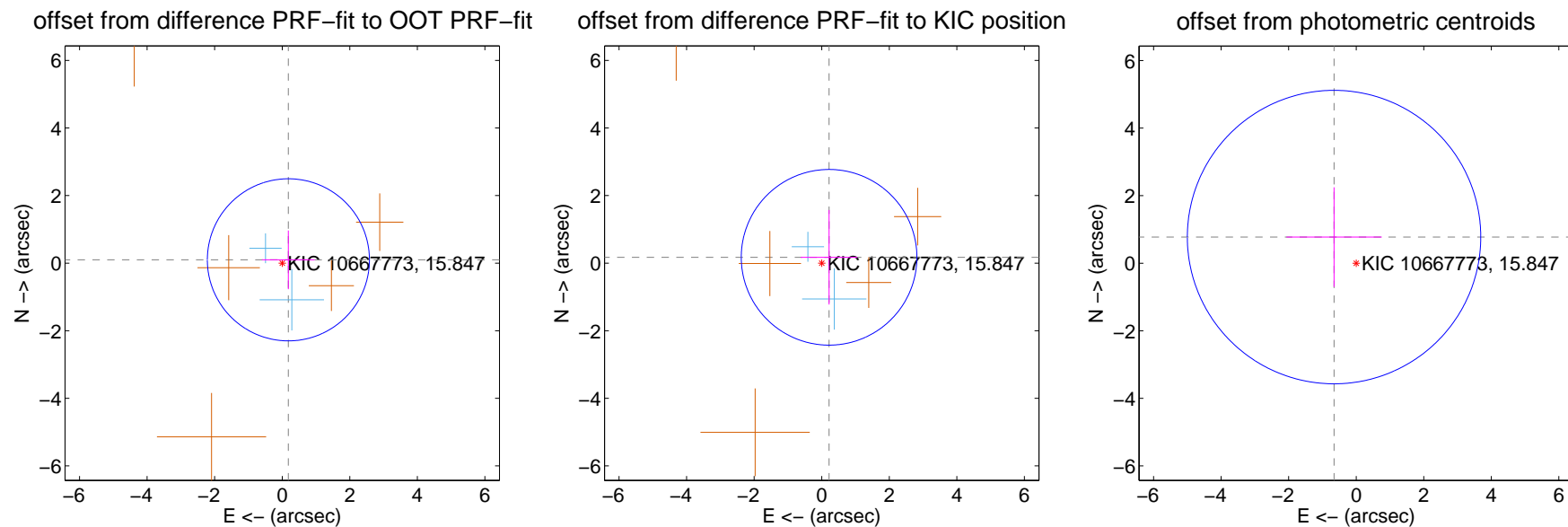
## DV Centroid Data

Supplemental centroid analysis for 010667773-01. Kepler magnitude: 15.85. Transit SNR 8.39

There are 2 quarters with good PRF difference image offsets

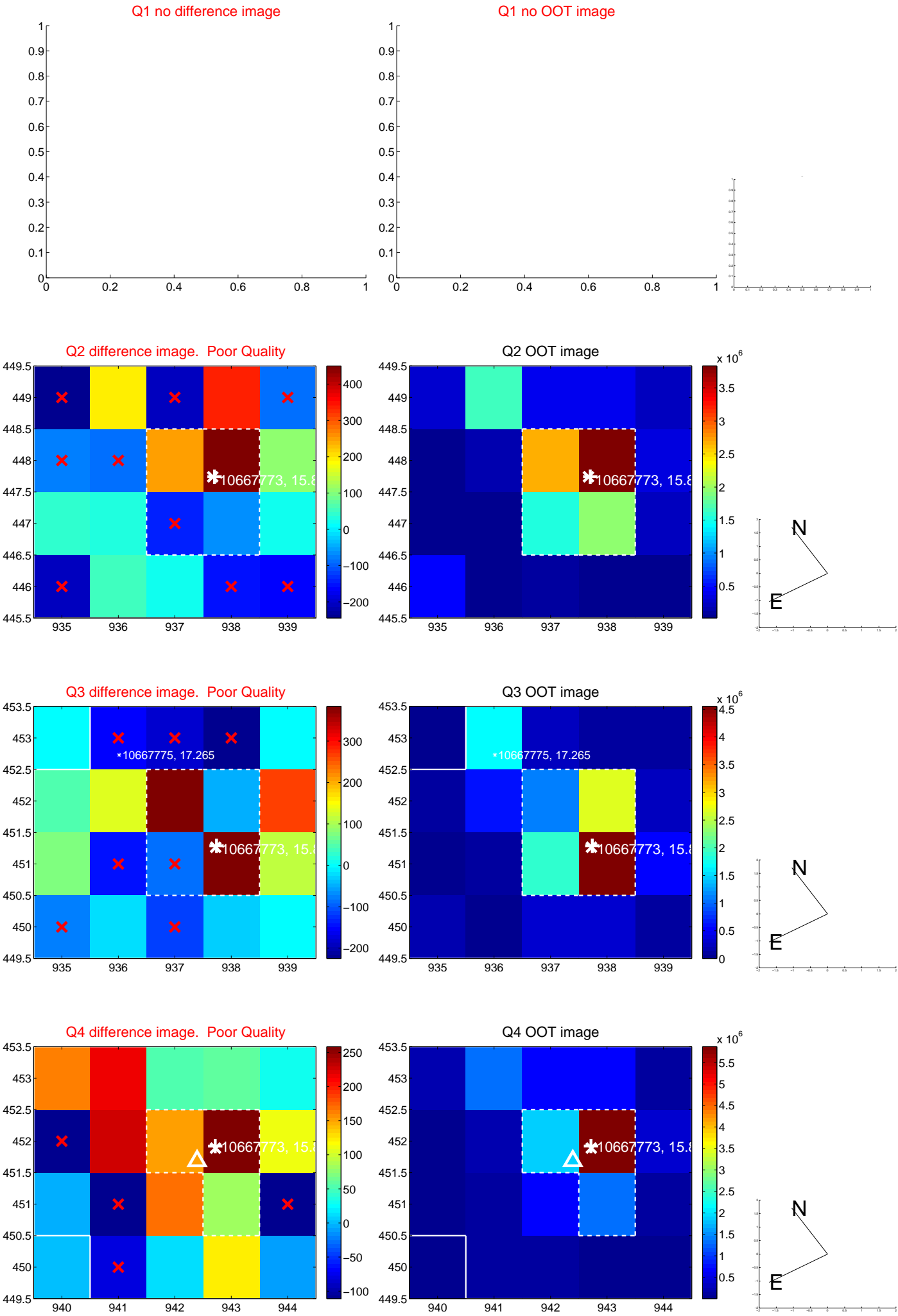
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.207 \pm 0.800$	0.26	$-0.183 \pm 0.778$	$0.098 \pm 0.869$
PRF-fit source offset from KIC position	$0.278 \pm 0.866$	0.32	$-0.218 \pm 0.838$	$0.173 \pm 1.399$
photometric centroid source offset	$1.01 \pm 1.45$	0.70	$0.66 \pm 1.41$	$0.77 \pm 1.47$

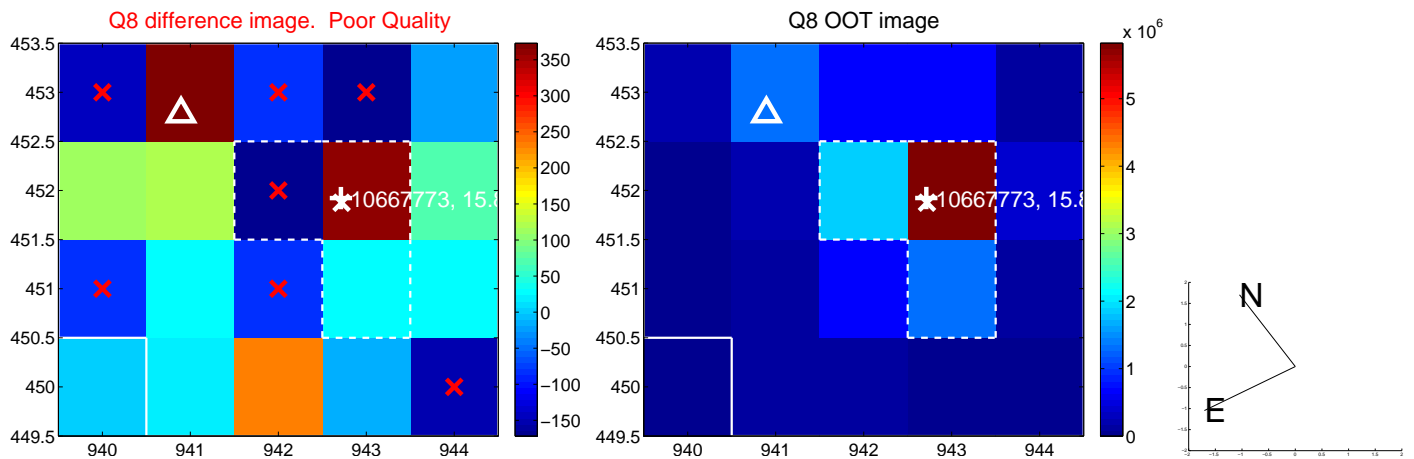
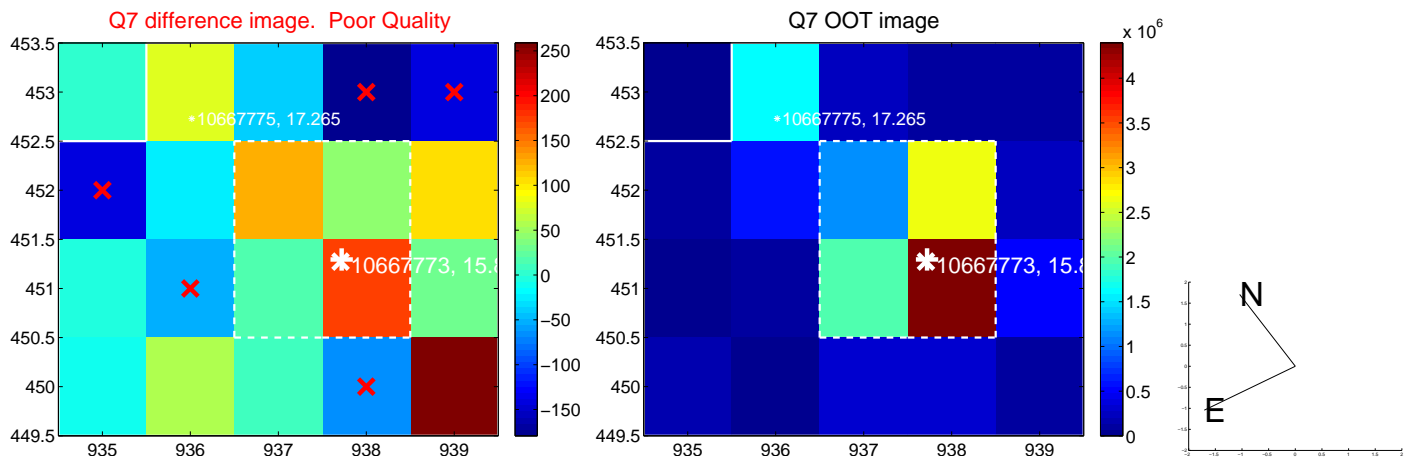
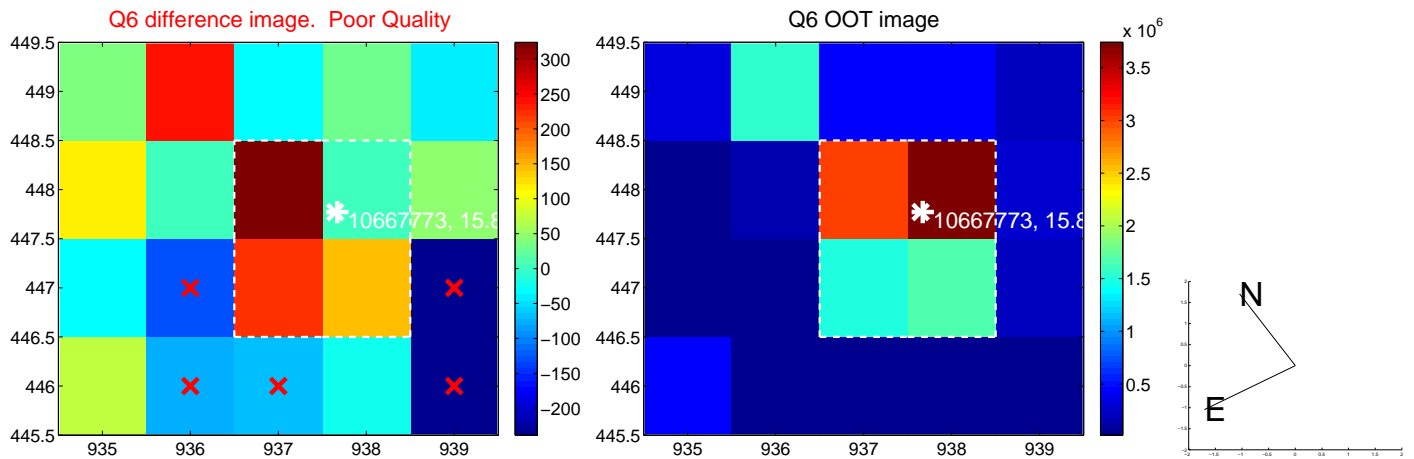
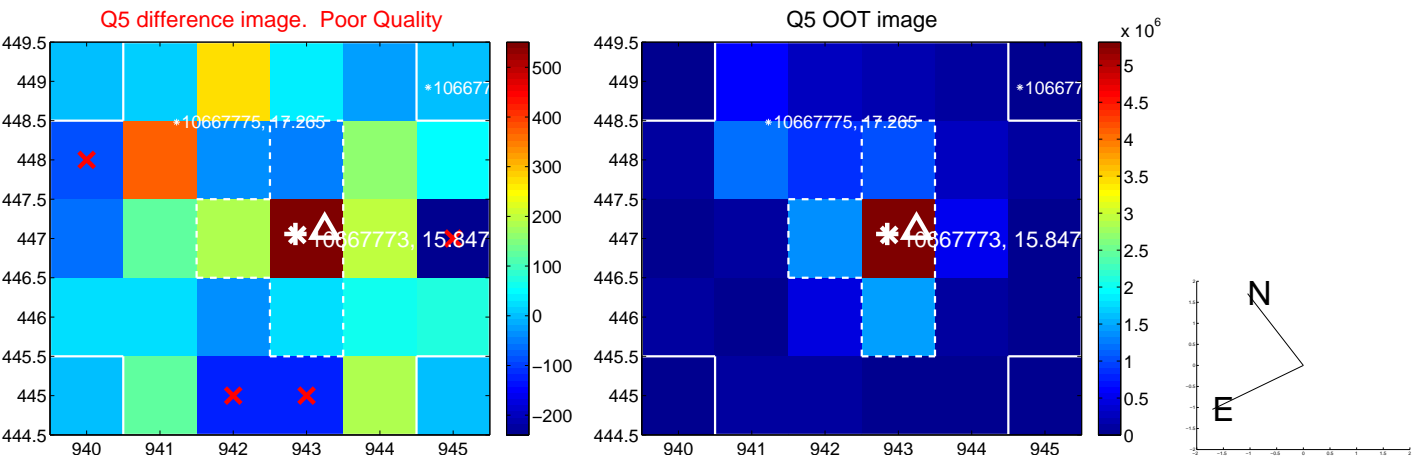


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

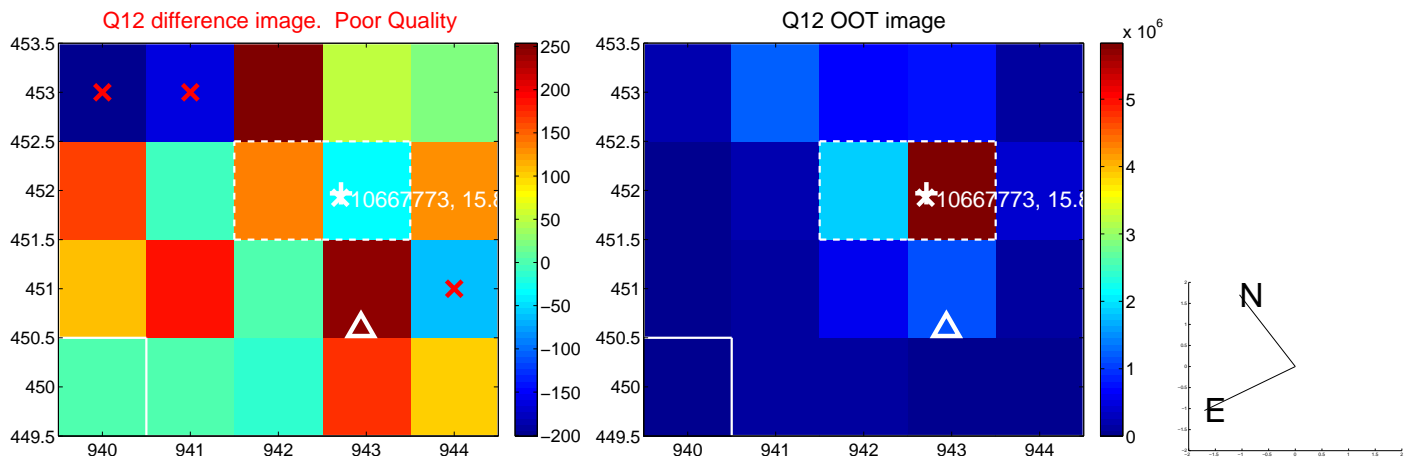
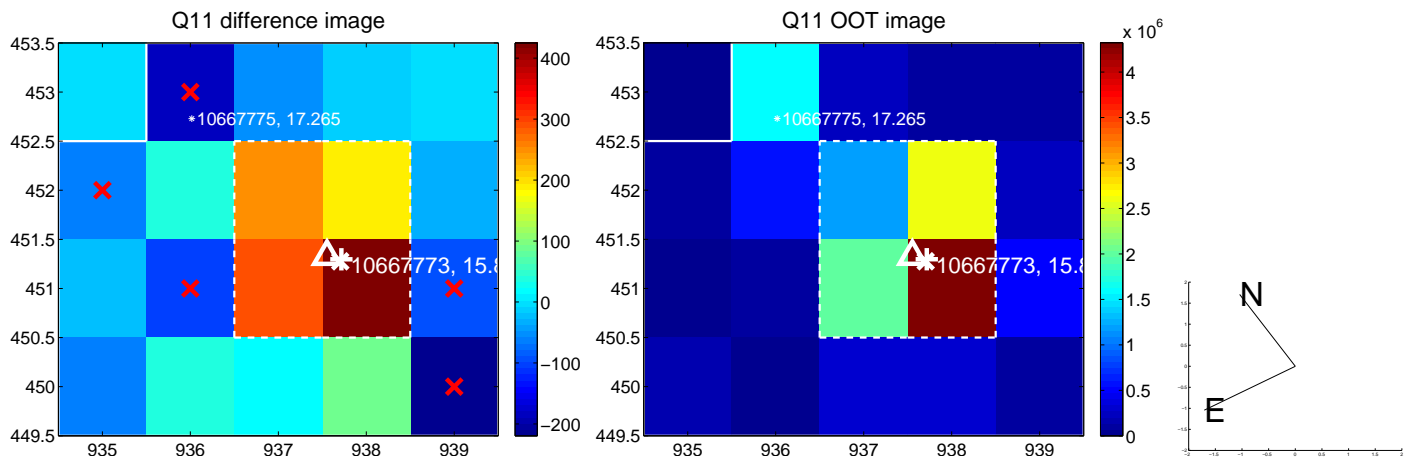
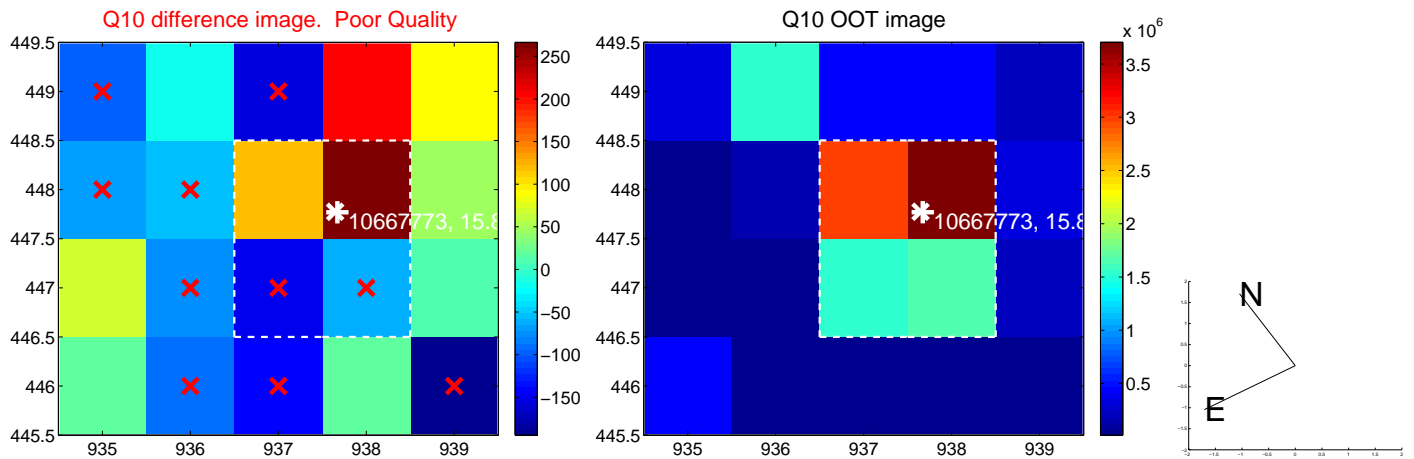
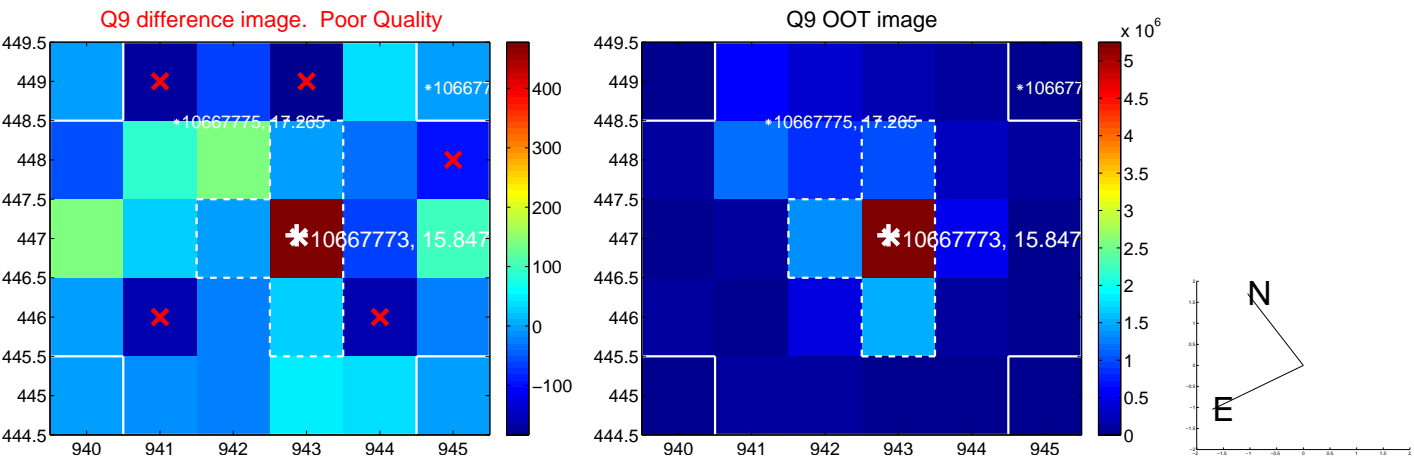


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

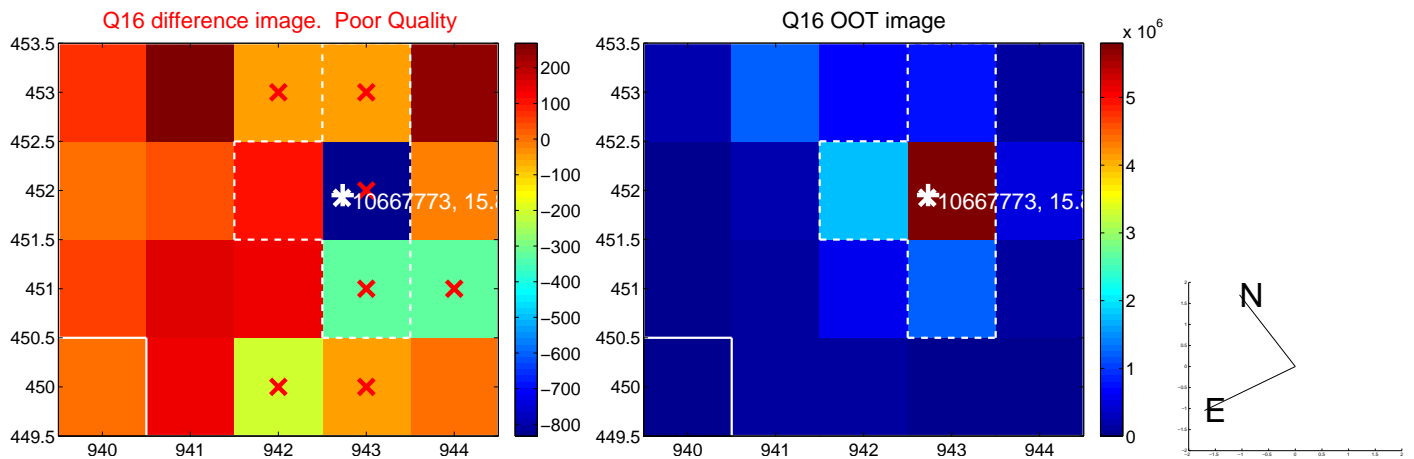
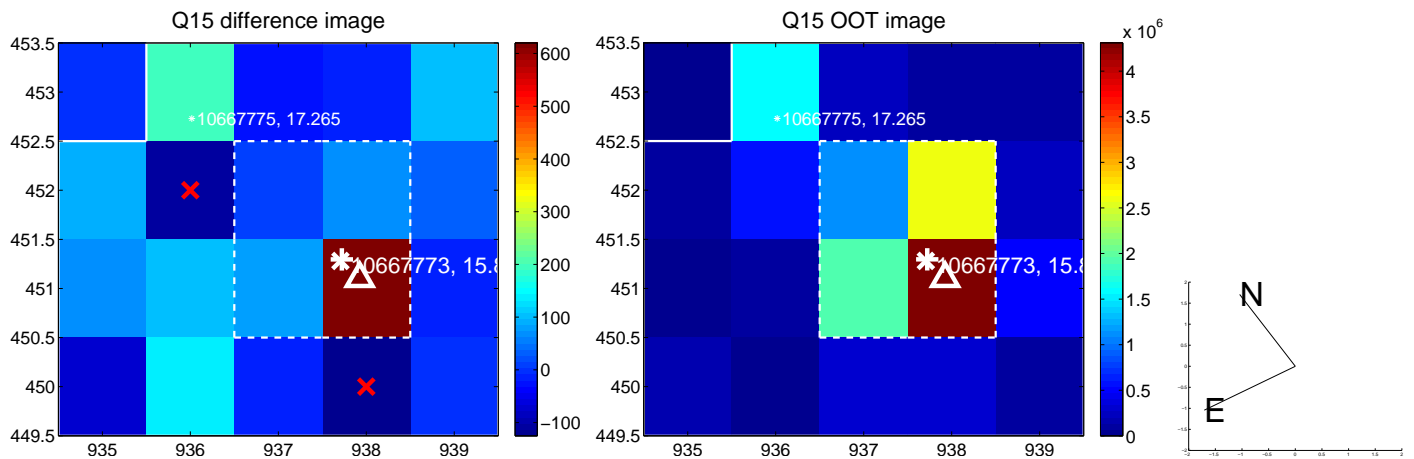
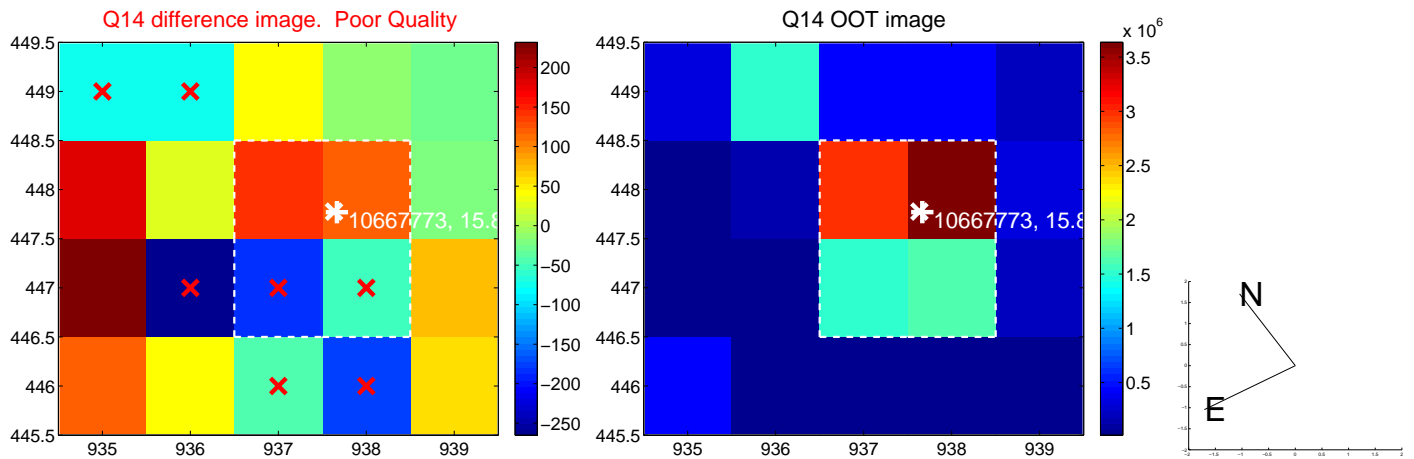
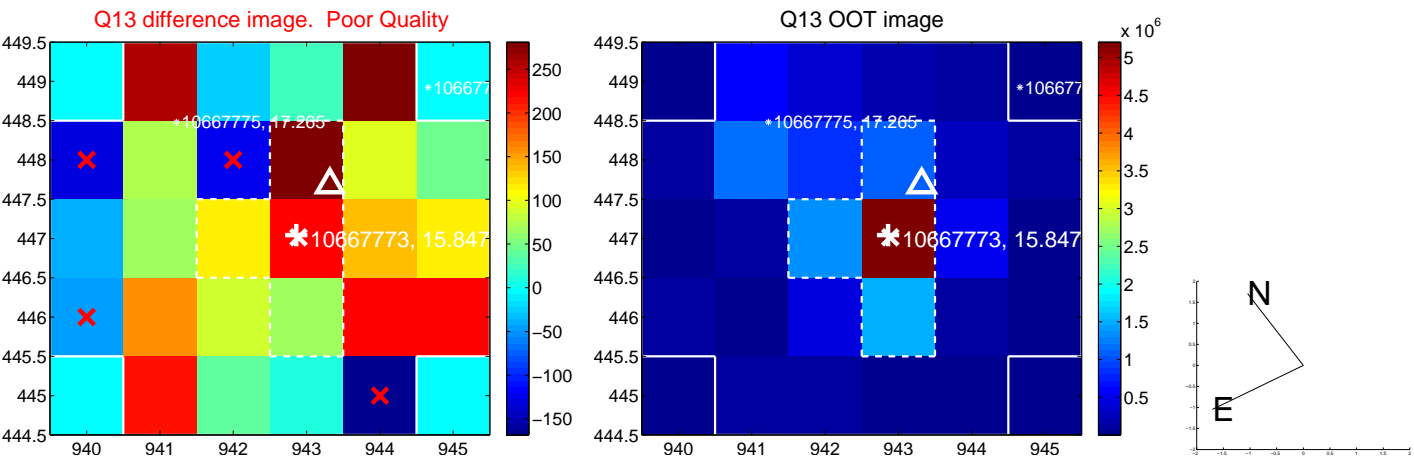




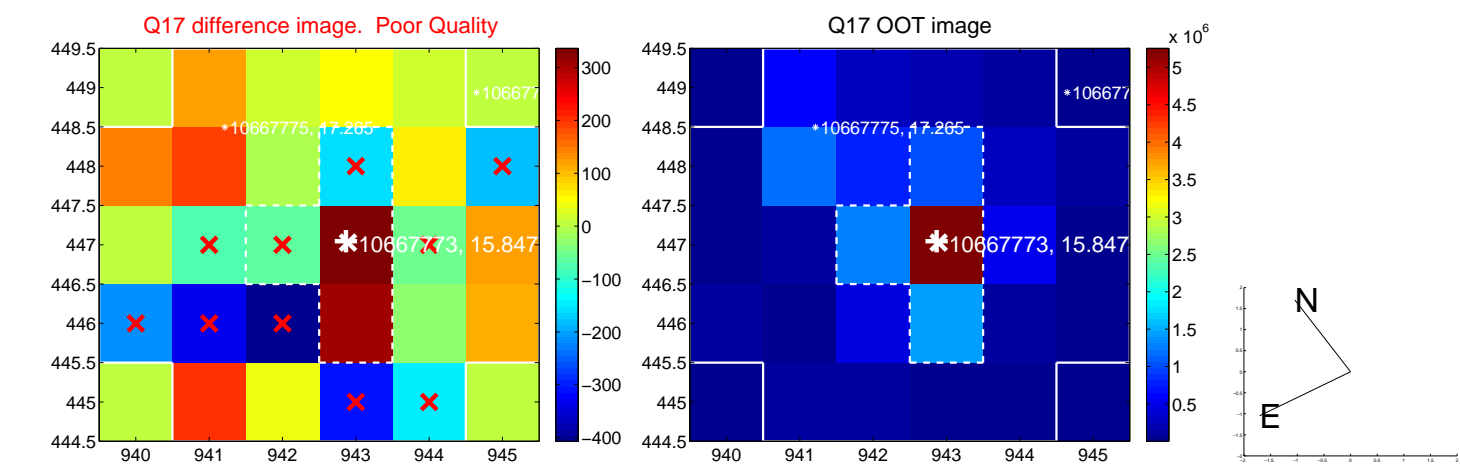
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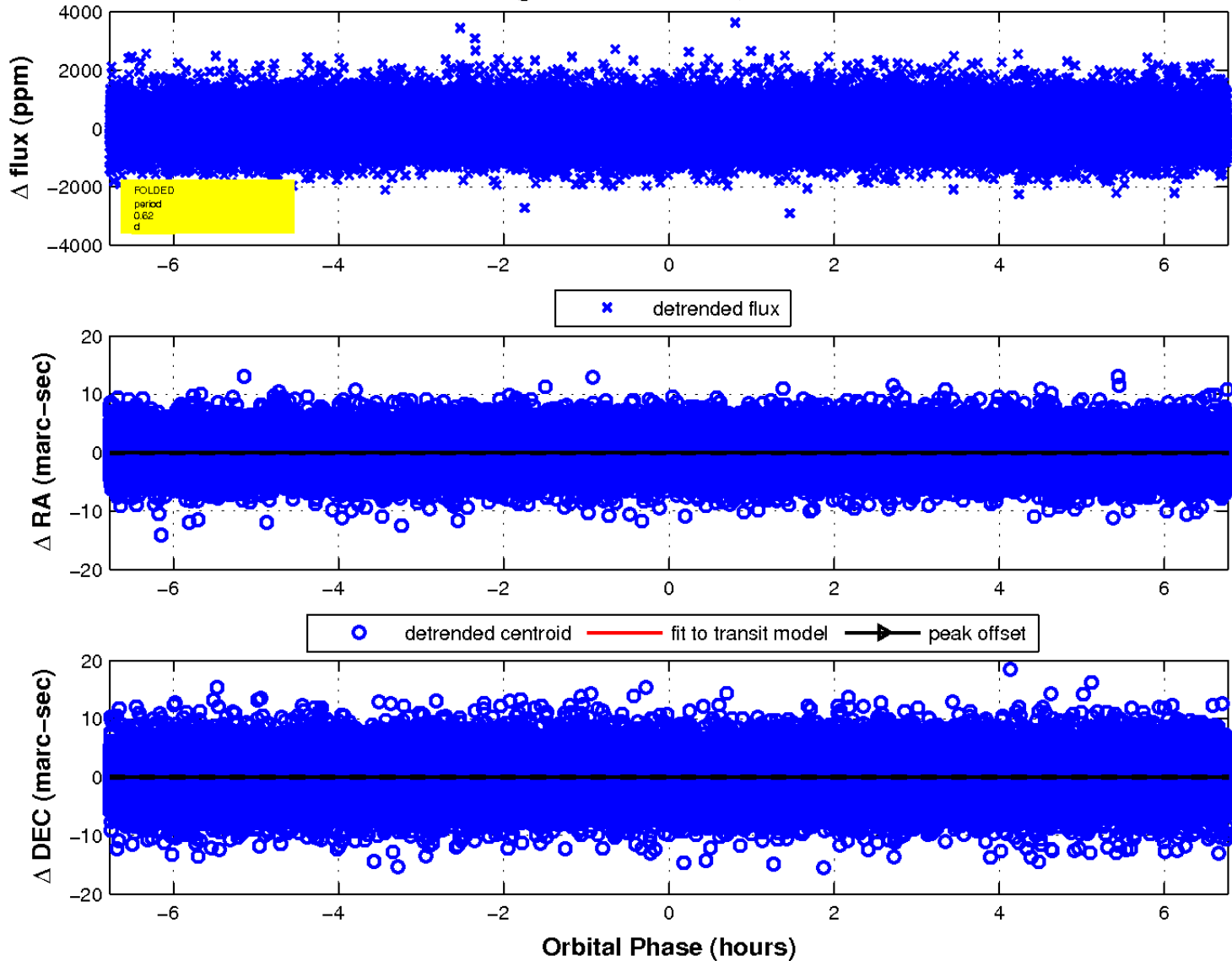
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

