

# KIC 008758136

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008758136-01	OBS	3006.01	0.998161	131.852451	67.6	2.659	13.4	10.8	0.99	6072	0.96	3009.25

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008758136-01	OBS	PC	0.26	0	0	0	0	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.

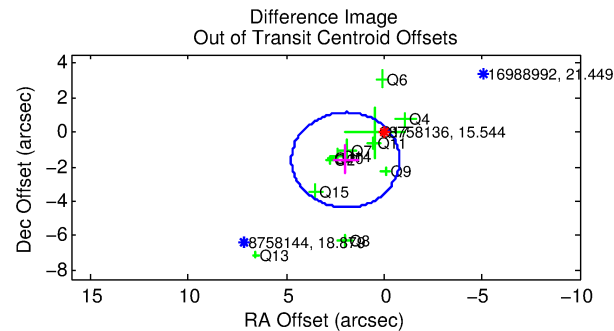
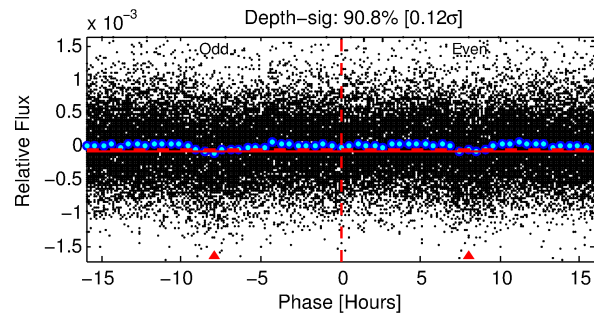
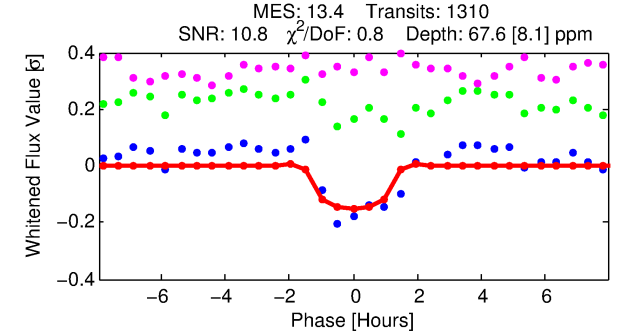
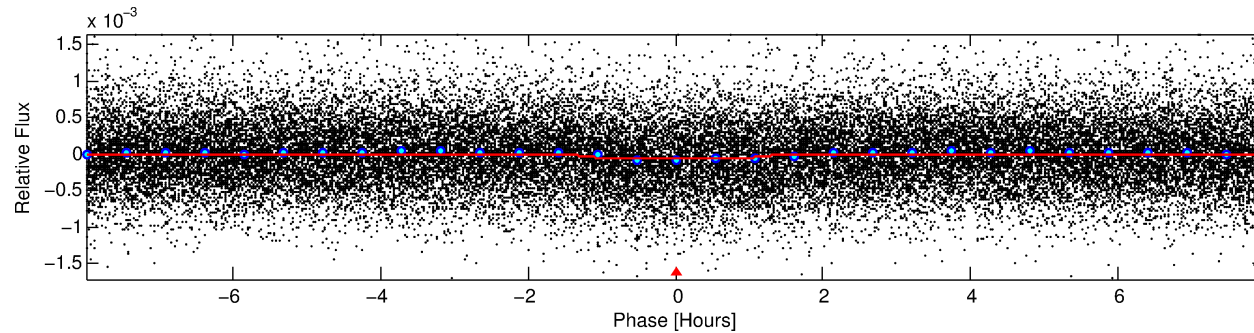
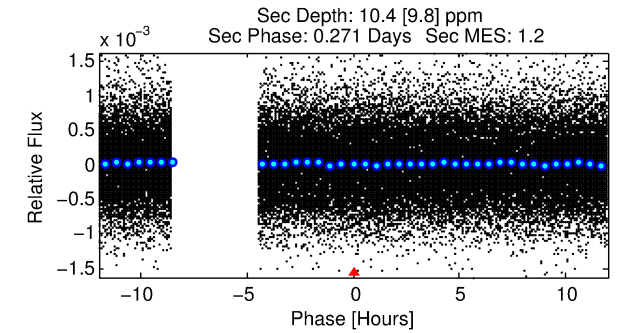
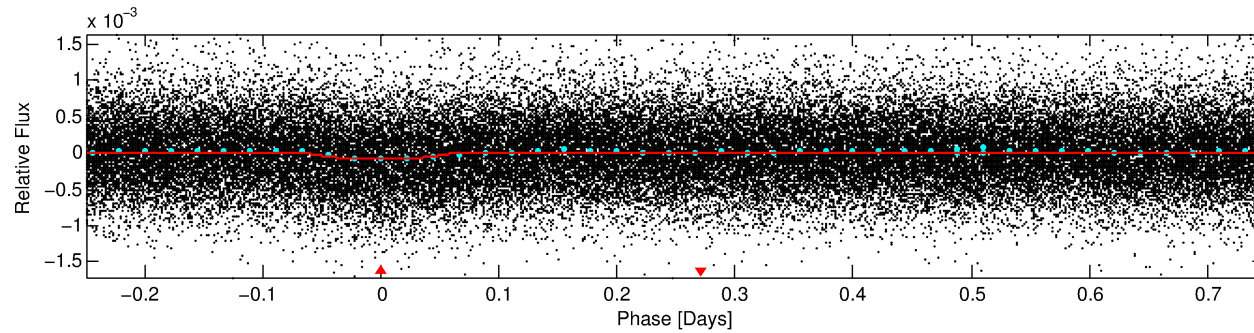
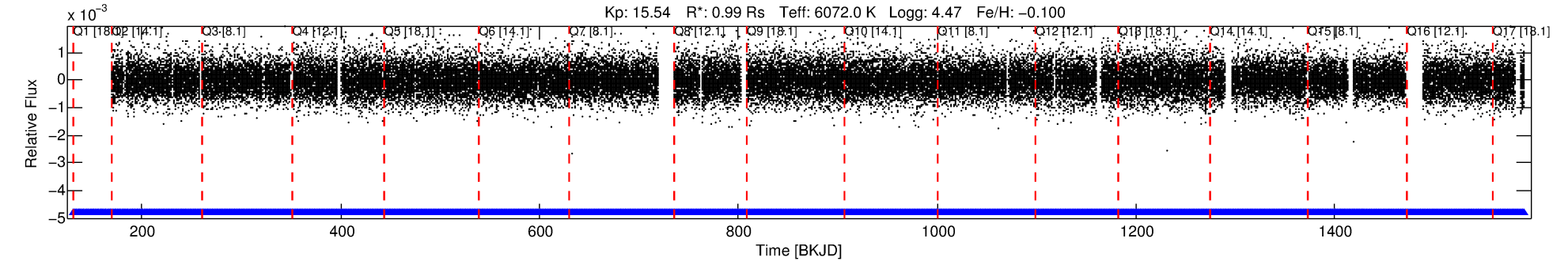
## Ephemeris Match Information For 008758136-01

No Significant Match Found

# DV One-Page Summary

KIC: 8758136 Candidate: 1 of 1 Period: 0.998 d

KOI: K03006.01 Corr: 0.834



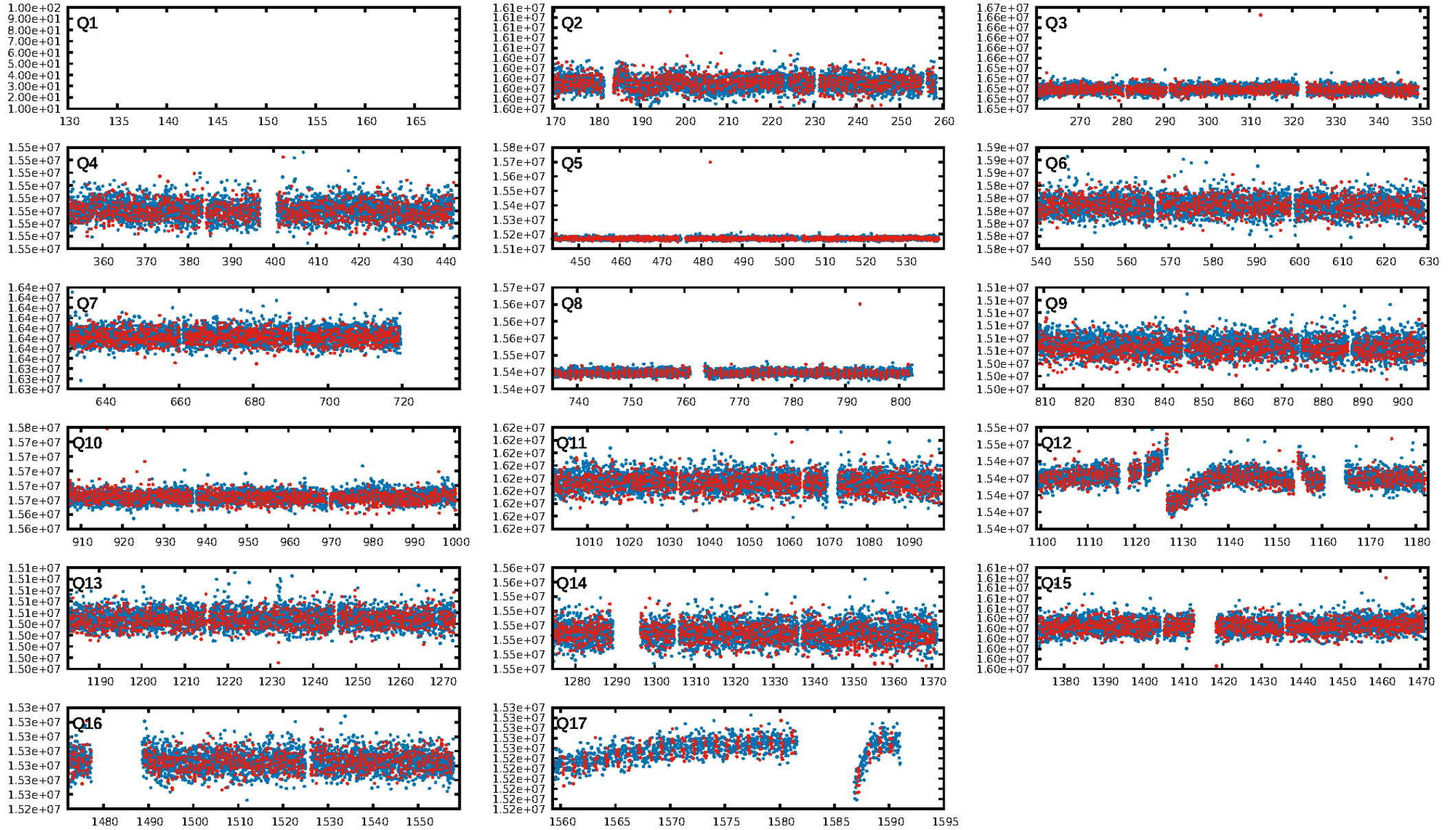
## DV Fit Results:

Period = 0.99816 [0.00001] d  
Epoch = 131.8525 [0.0033] BKJD  
Rp/R\* = 0.0089 [0.0055]  
a/R\* = 1.61 [3.20]  
b = 0.90 [0.70]  
Seff = 3009.25 [1315.75]  
Teff = 1889 [206] K  
Rp = 0.96 [0.67] Re  
a = 0.0199 [0.0056] AU  
Ag = 2.46 [3.94] [0.37σ]  
Teffp = 3657 [1422] K [1.23σ]

## DV Diagnostic Results:

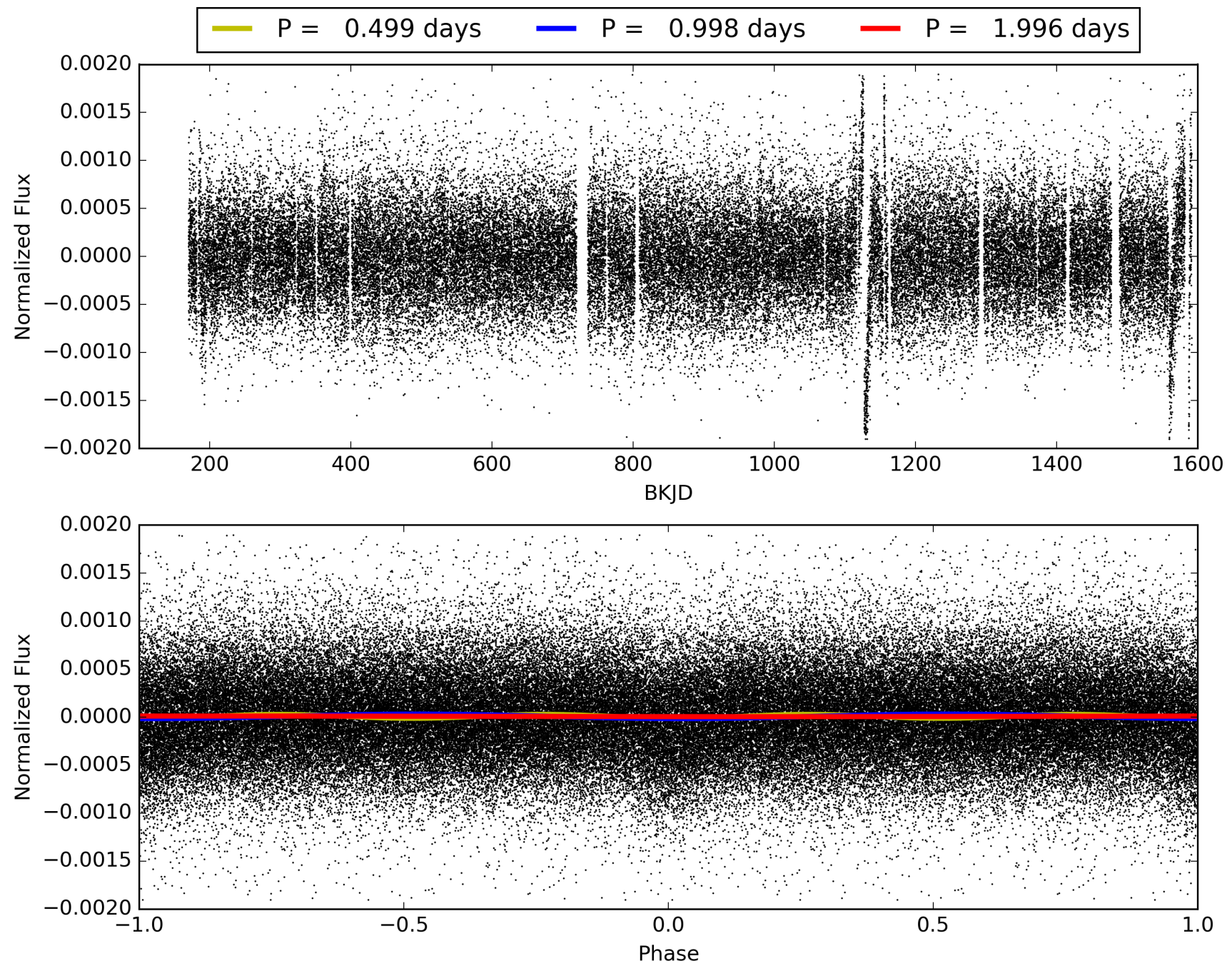
ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 5.00e-41  
RollingBand-fgt: 1.00 [1283/1283]  
GhostDiagnostic-chr: 0.3052  
Centroid-sig: 0.0%  
Centroid-so: 5.021 arcsec [4.12σ]  
OotOffset-rm: 2.550 arcsec [2.77σ]  
KicOffset-rm: 2.494 arcsec [2.91σ]  
OotOffset-st: 4/3/2/3 [12]  
KicOffset-st: 4/3/2/3 [12]  
DiffImageQuality-fgm: 0.00 [0/12]  
DiffImageOverlap-fno: 1.00 [16/16]

# TCE 008758136-01, PDC Light Curves



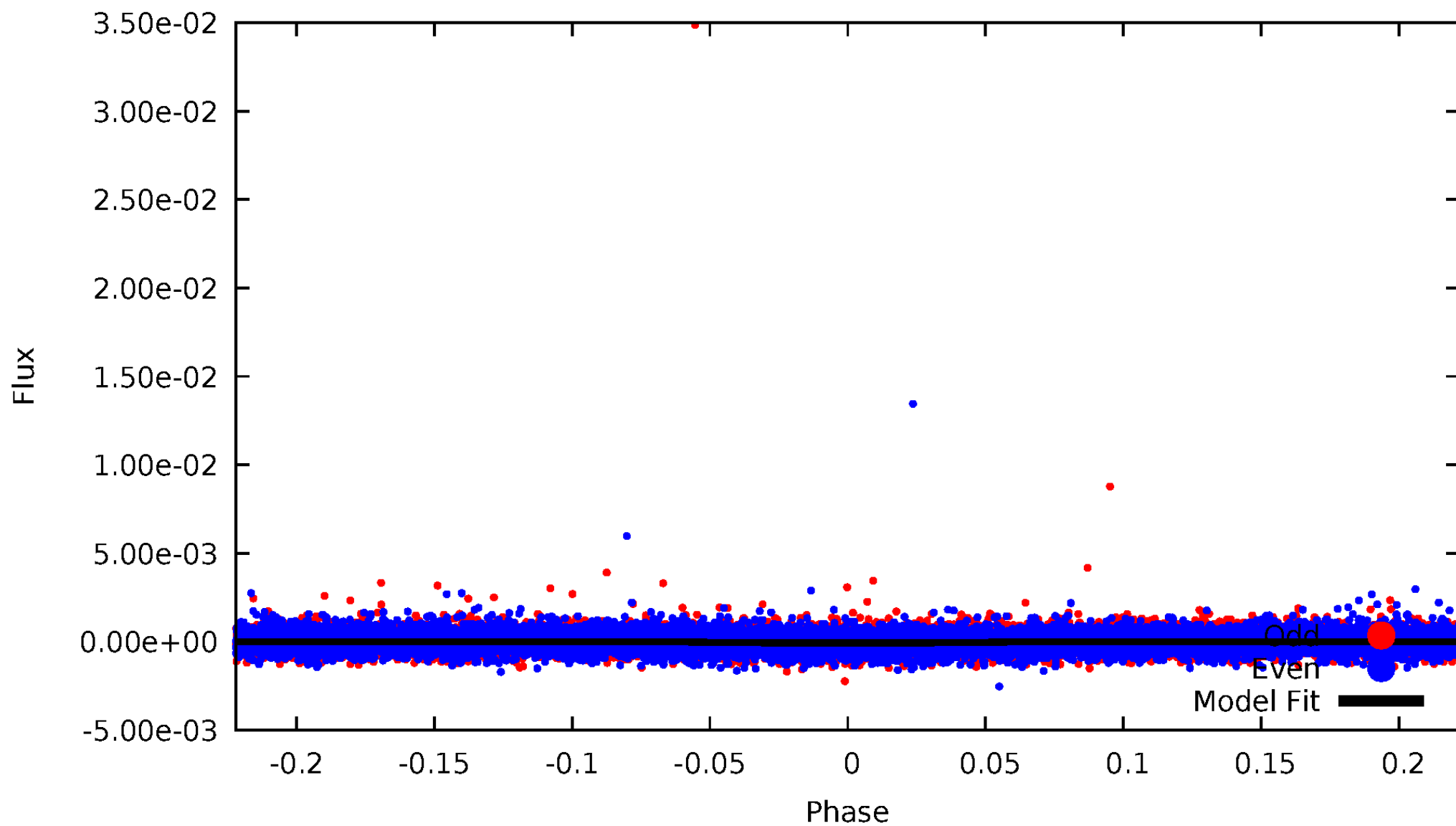


TCE 008758136-01



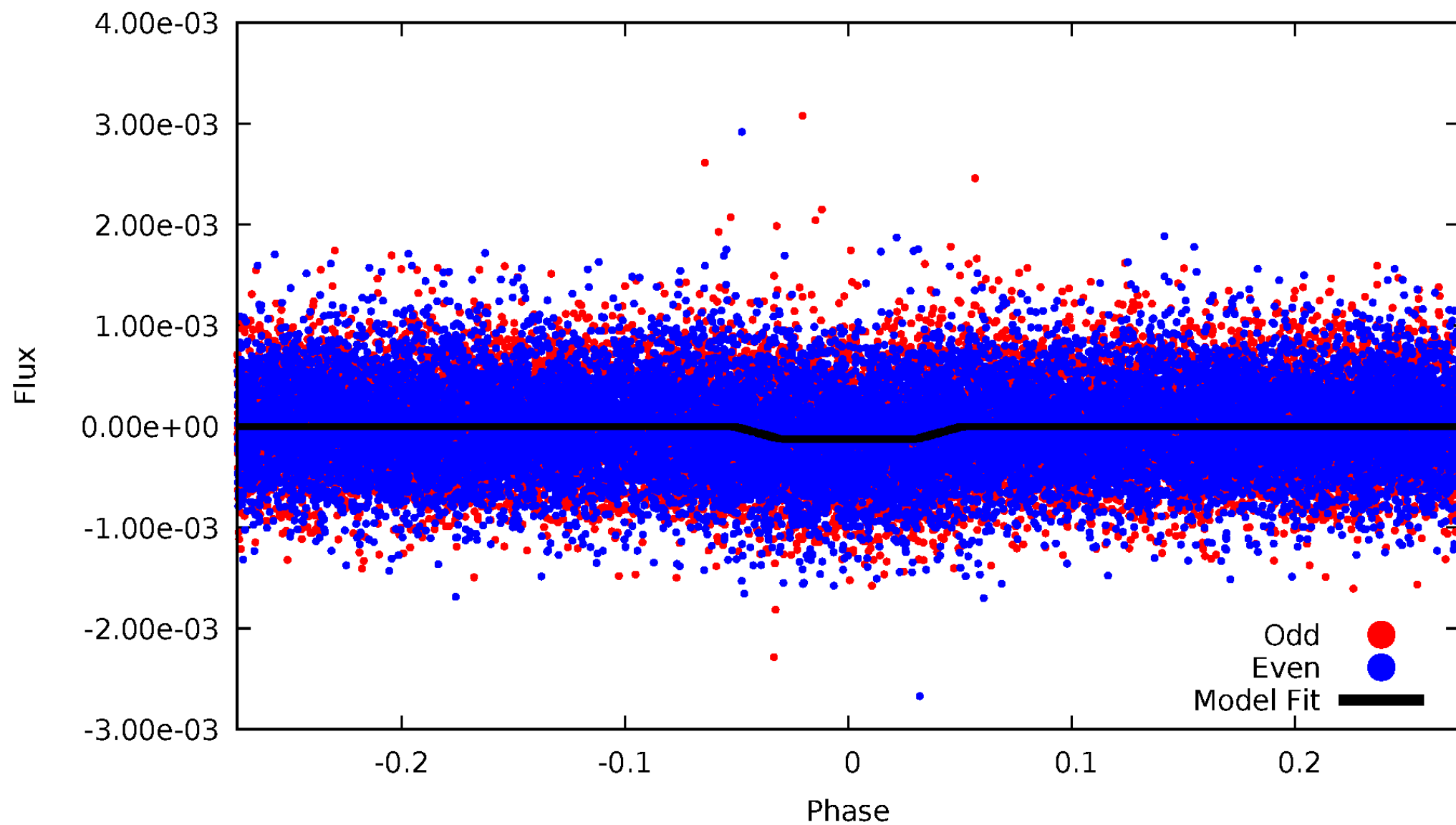
# DV Odd/Even

TCE 008758136-01

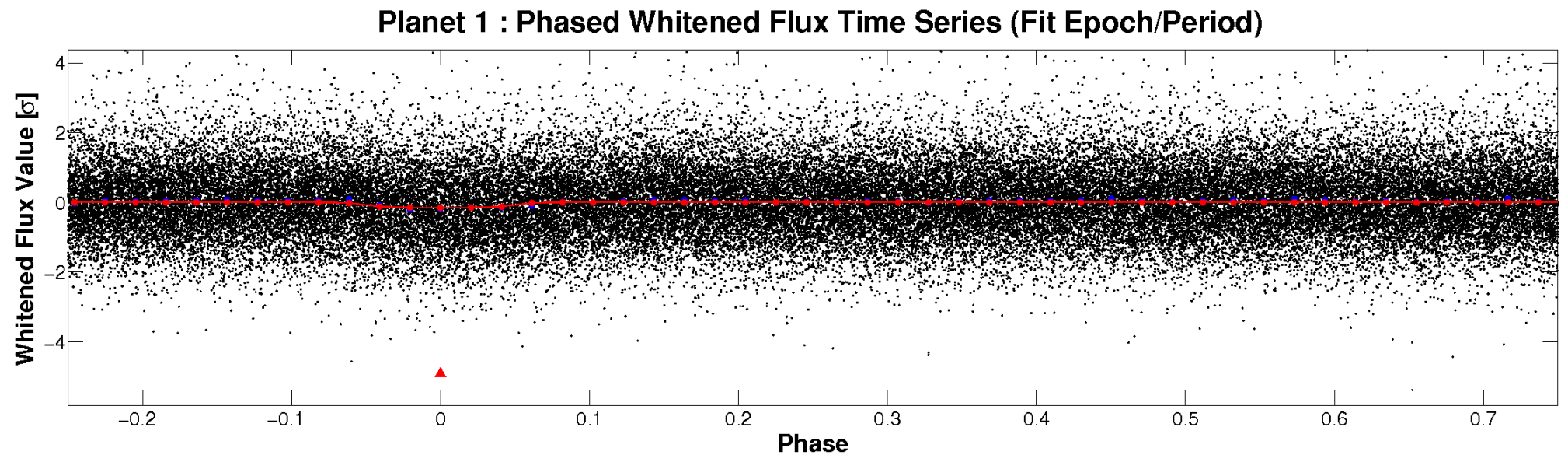
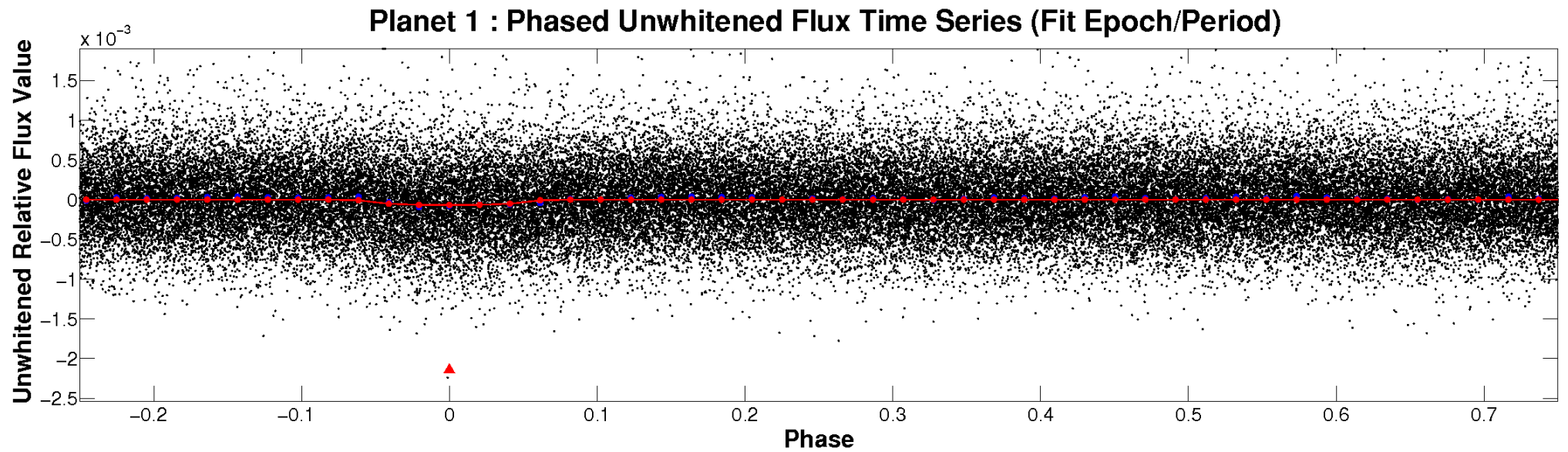


# ALT Odd/Even

TCE 008758136-01



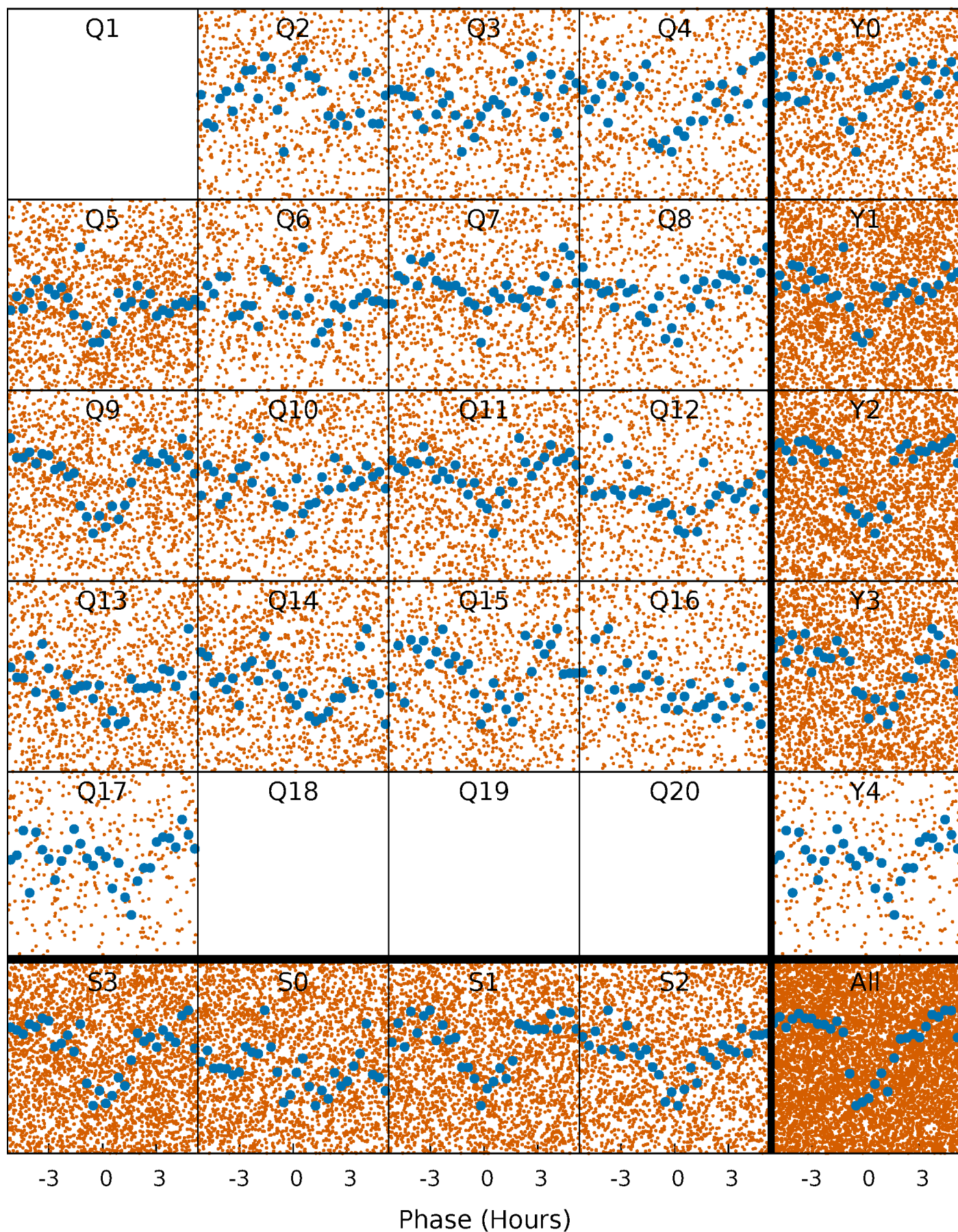
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

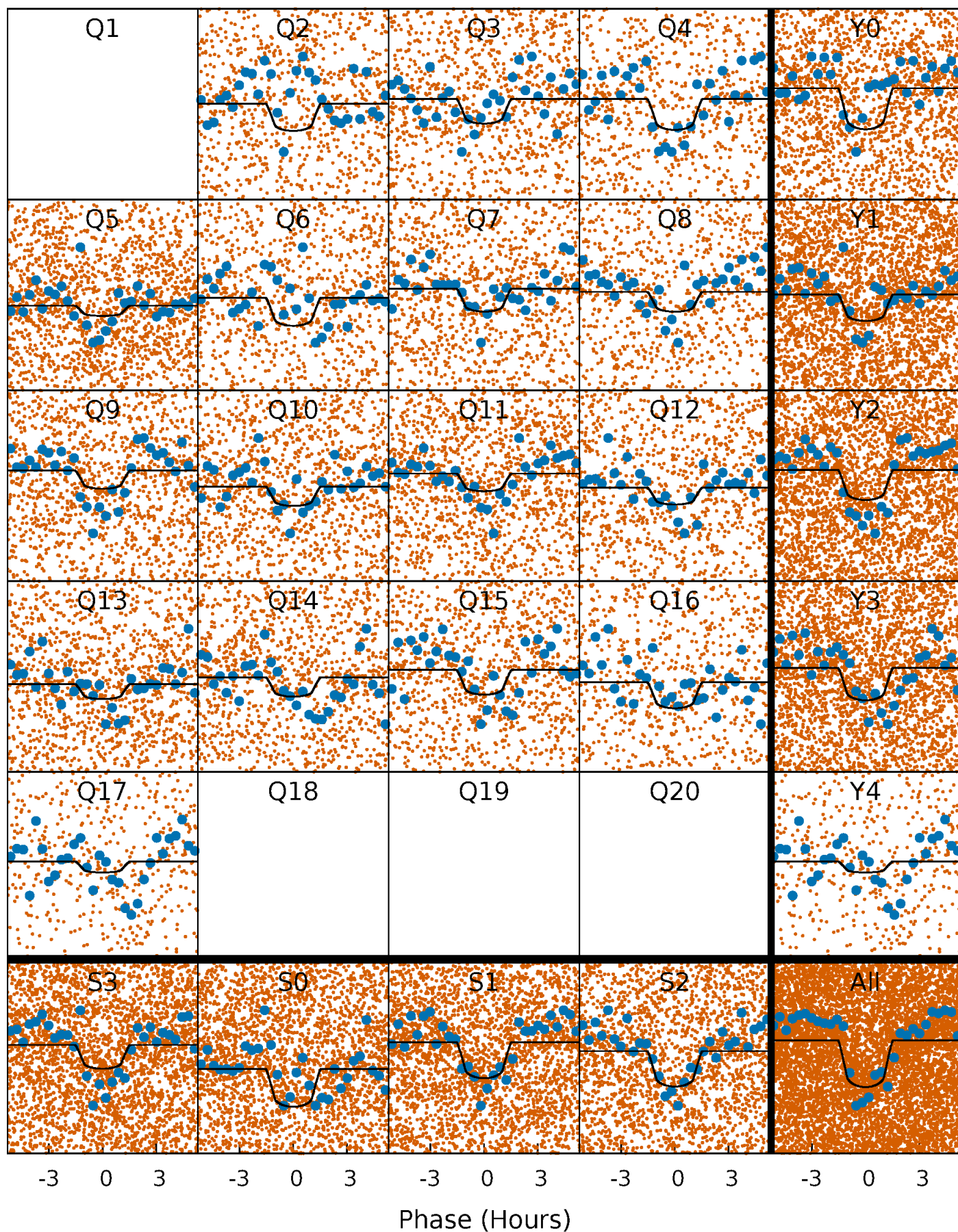
TCE 008758136-01 P= 0.998161 Days  $T_0=131.852452$  (BKJD)





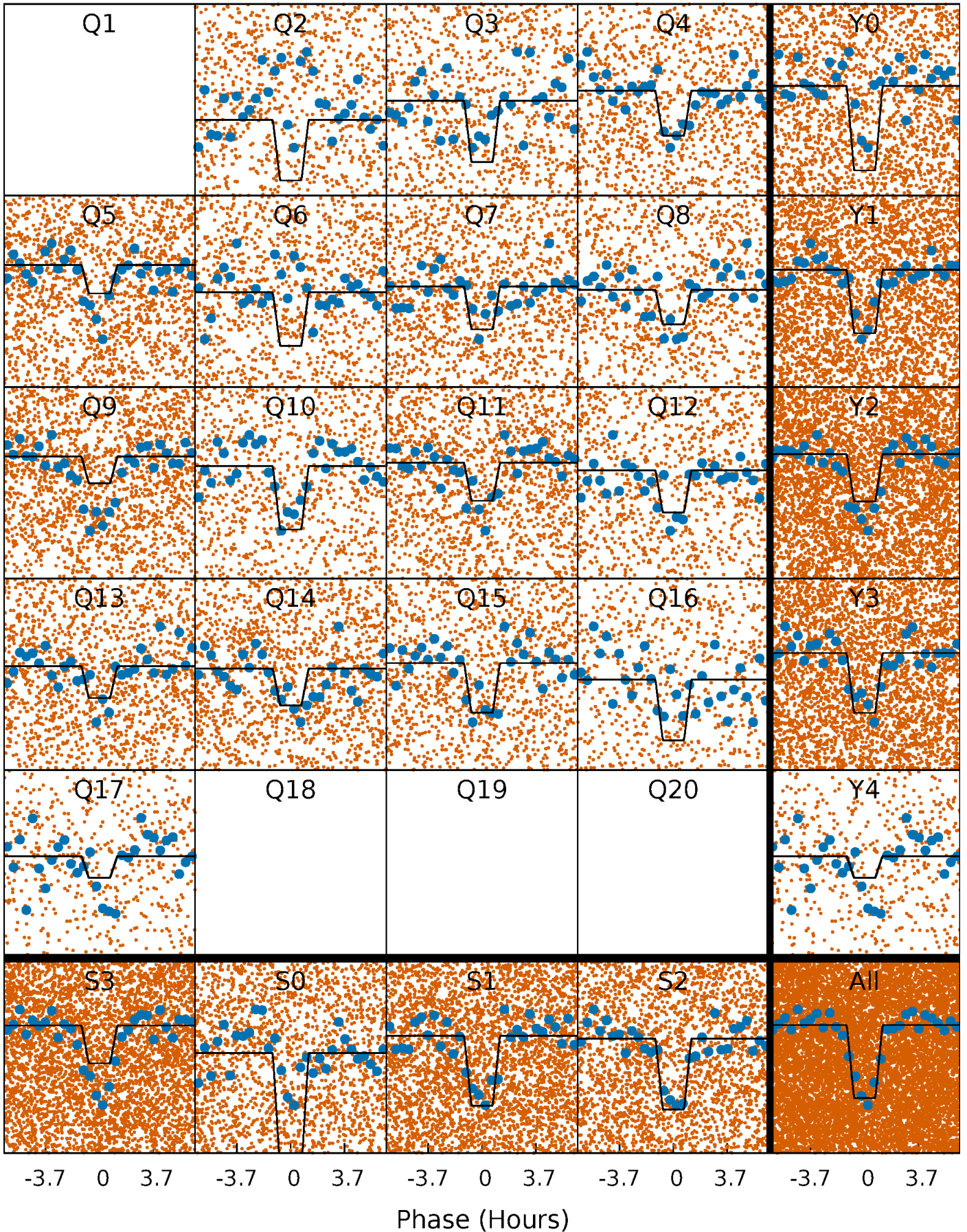
# DV Quarter-Phased Transit Curves

TCE 008758136-01 P= 0.998161 Days  $T_0=131.852452$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008758136-01 P= 0.998211 Days  $T_0=131.820857$  (BKJD)

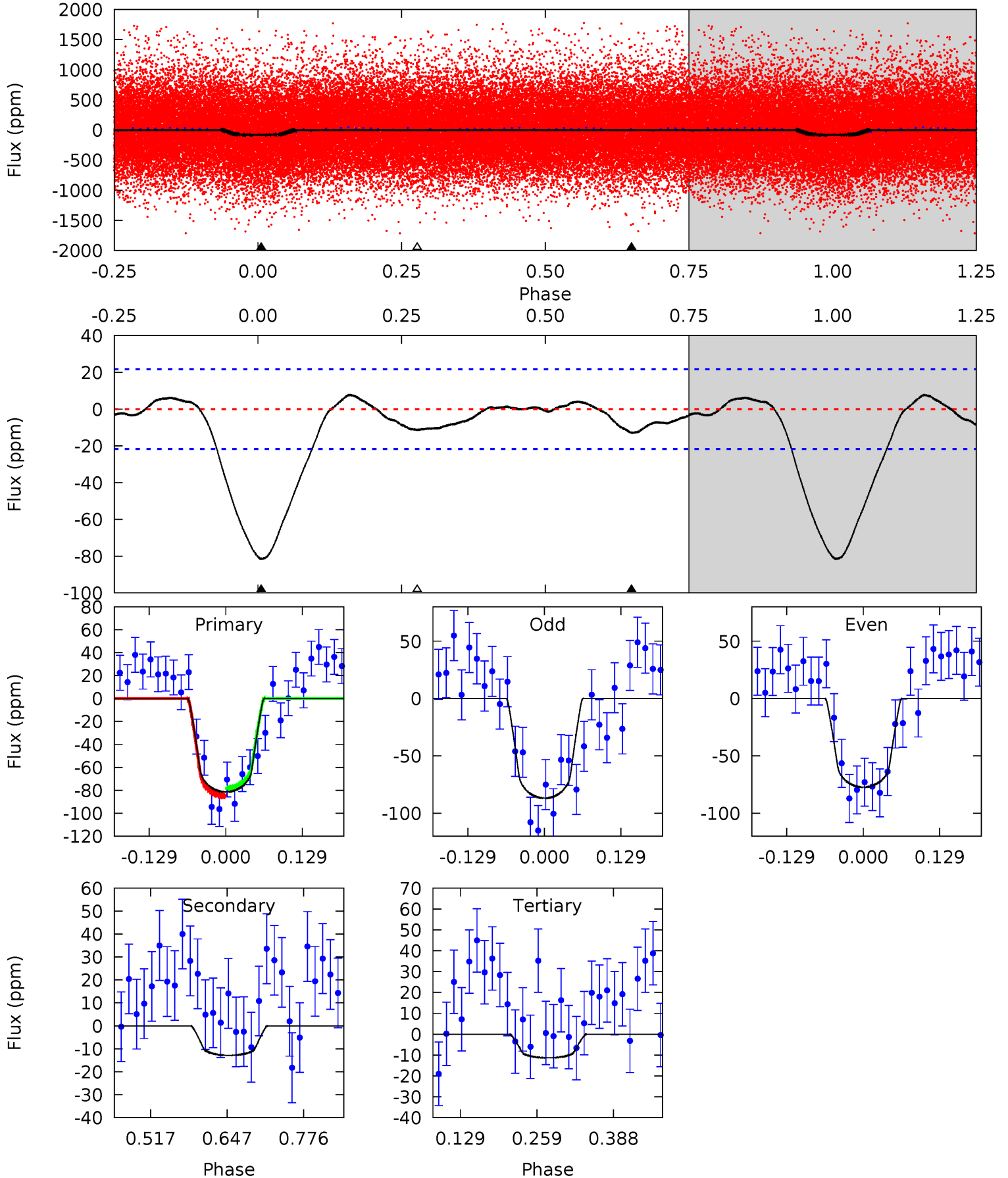




# DV Model-Shift Uniqueness Test

008758136-01, P = 0.998161 Days, E = 131.852452 Days

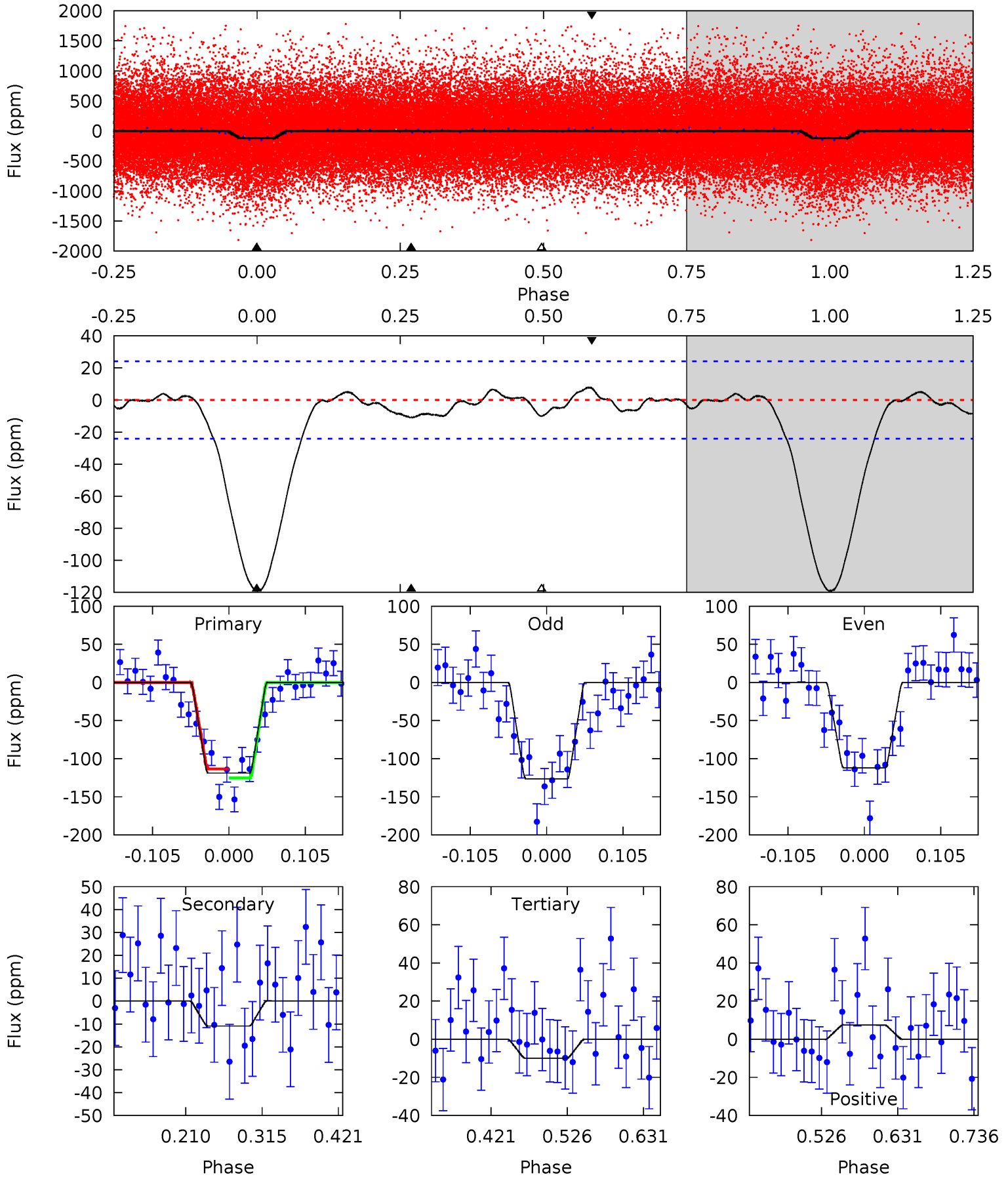
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	2.68	2.36	0	4.51	1.52	1.16	14.6	16.9	0.32	2.68	1.00	0.89	0.09	0.70



# Alt Model-Shift Uniqueness Test

008758136-01, P = 0.998211 Days, E = 131.820857 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
22.4	2.06	1.89	1.41	4.55	1.62	0.72	20.6	21.0	0.17	0.65	1.36	0.93	0.06	1.12





### Stellar Parameters For KIC 008758136

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6072^{+189}_{-232}$	$4.470^{+0.056}_{-0.224}$	$-0.100^{+0.250}_{-0.300}$	$0.988^{+0.330}_{-0.110}$	$1.050^{+0.150}_{-0.135}$	$1.536^{+0.457}_{-0.835}$
	+3%/-4%	+1%/-5%	+250%/-300%	+33%/-11%	+14%/-13%	+30%/-54%
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 008758136-01 / KOI 3006.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-13 \pm 5$	$1.06^{+0.61}_{-0.55}$	$2702^{+212}_{-149}$	$3883^{+1514}_{-737}$	$2.187^{+7.505}_{-1.385}$
Alt.	$-11 \pm 5$	$1.27^{+0.67}_{-0.60}$	$2689^{+217}_{-137}$	$3513^{+1074}_{-869}$	$1.375^{+3.312}_{-0.947}$

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

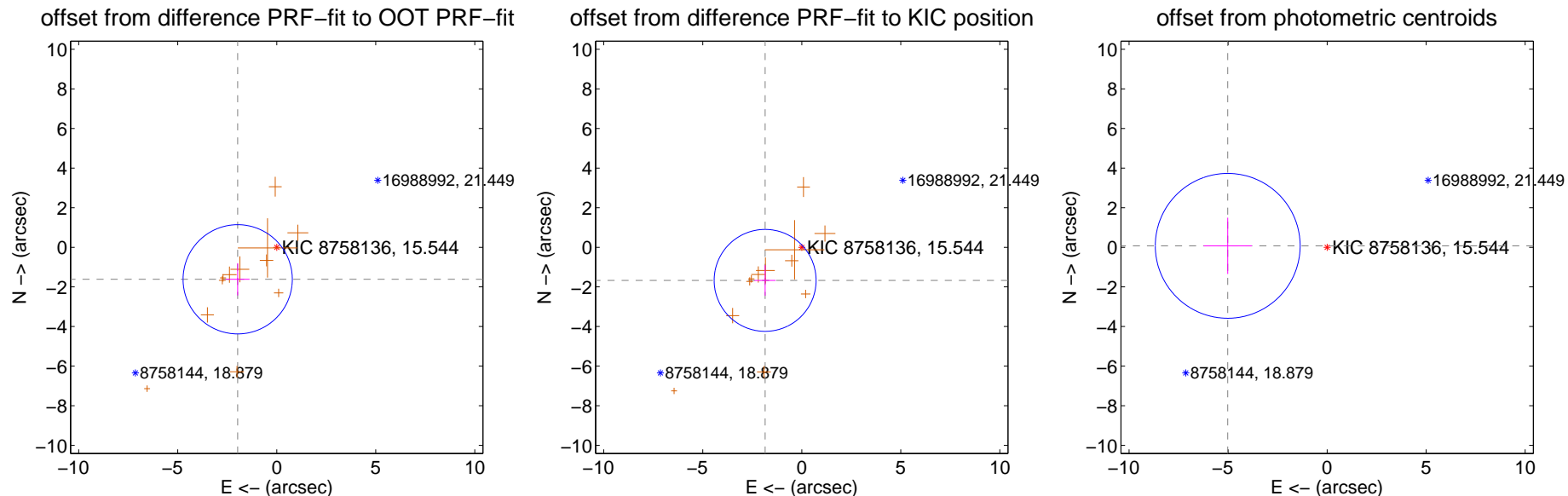
## DV Centroid Data

Supplemental centroid analysis for 008758136-01. Kepler magnitude: 15.54. Transit SNR 10.77

There are 0 quarters with good PRF difference image offsets

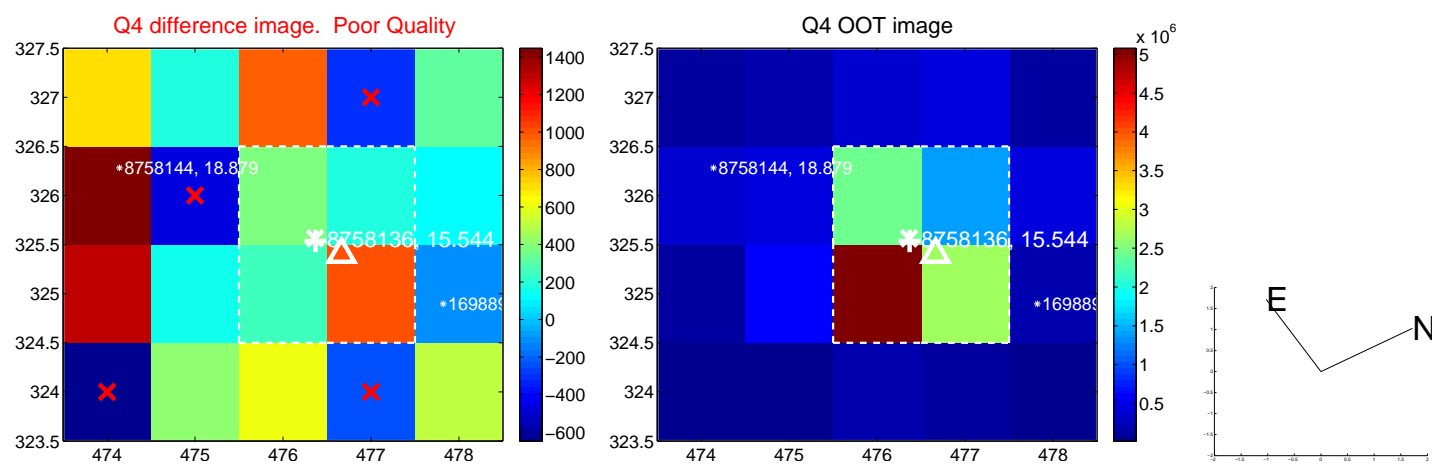
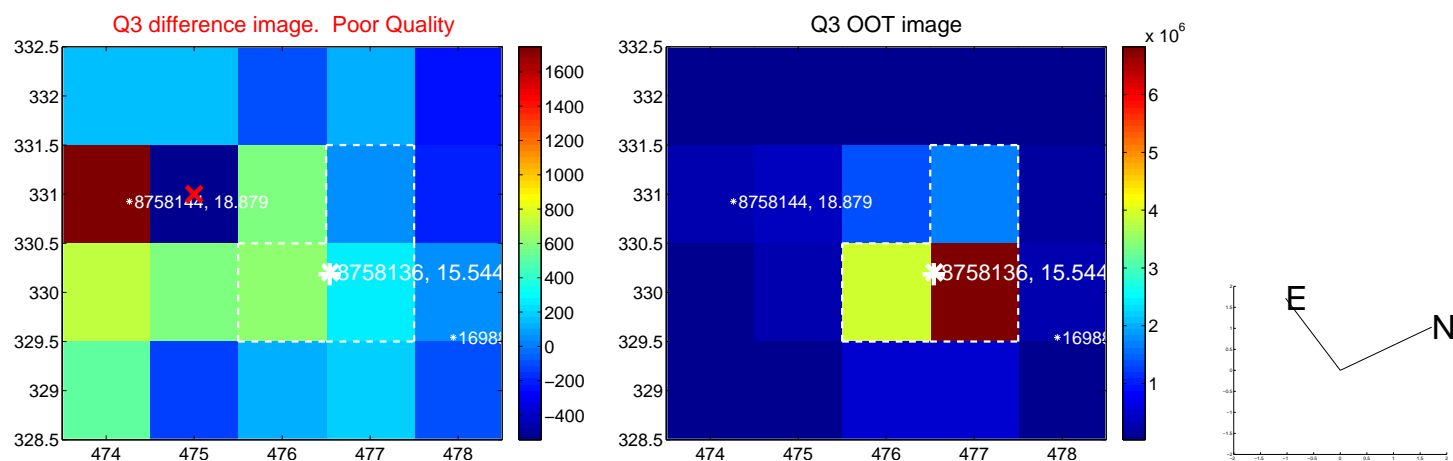
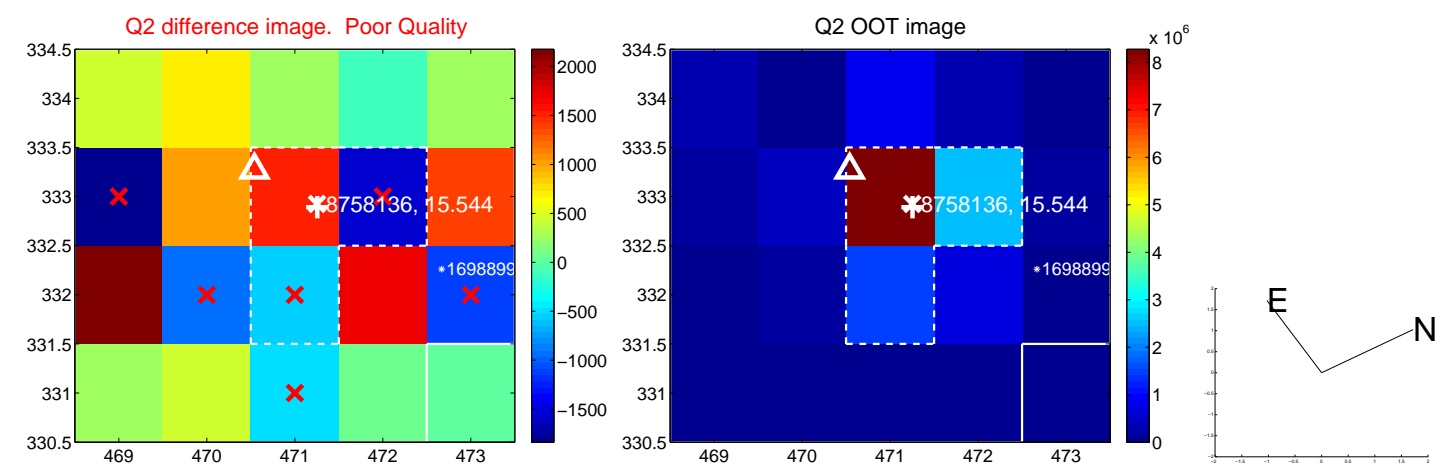
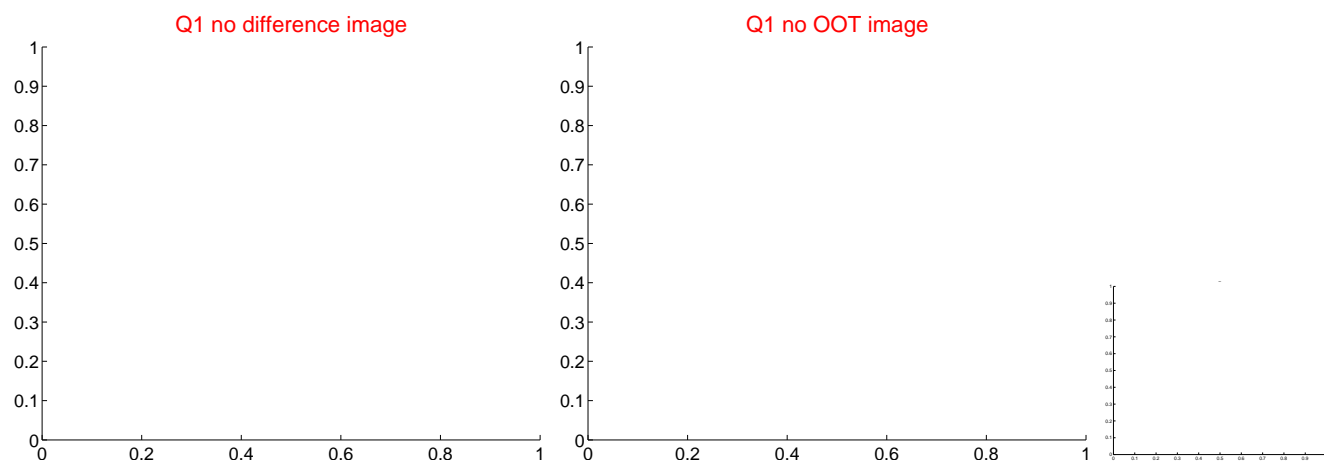
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.550 \pm 0.919$	2.77	$1.972 \pm 0.601$	$-1.616 \pm 0.816$
PRF-fit source offset from KIC position	$2.494 \pm 0.858$	2.91	$1.851 \pm 0.530$	$-1.671 \pm 0.772$
photometric centroid source offset	$5.02 \pm 1.22$	4.12	$5.02 \pm 1.22$	$0.07 \pm 1.42$

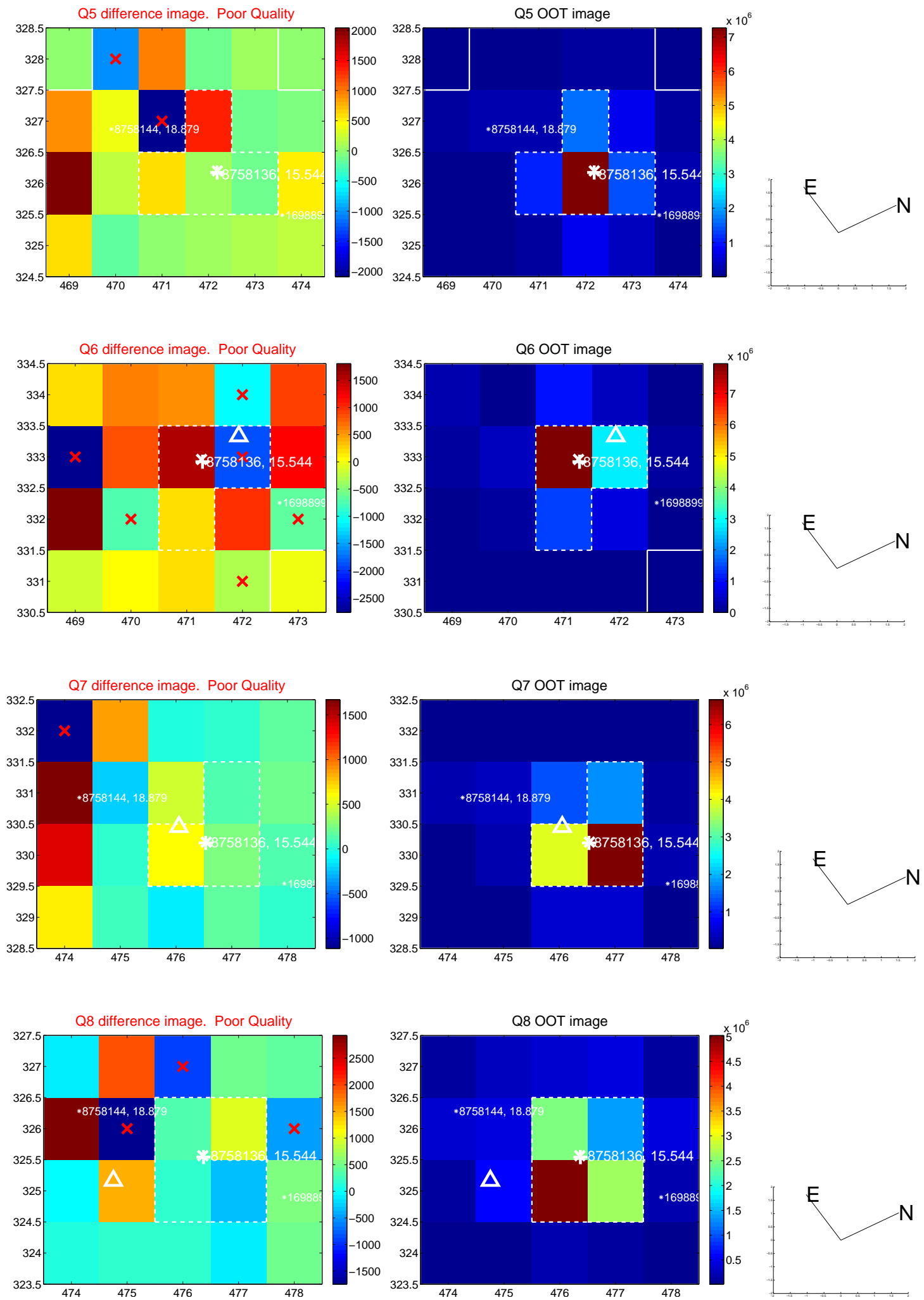


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

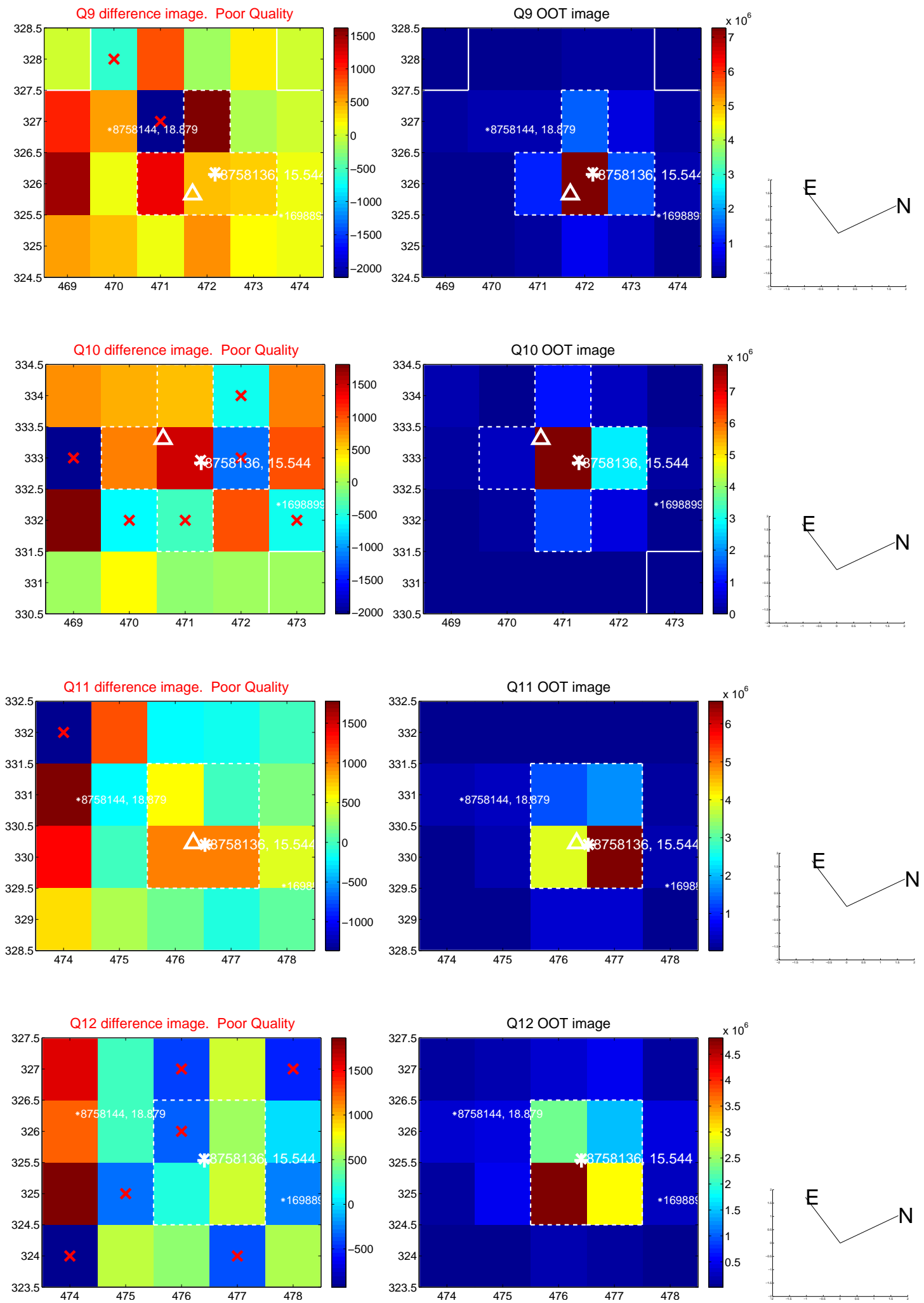


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

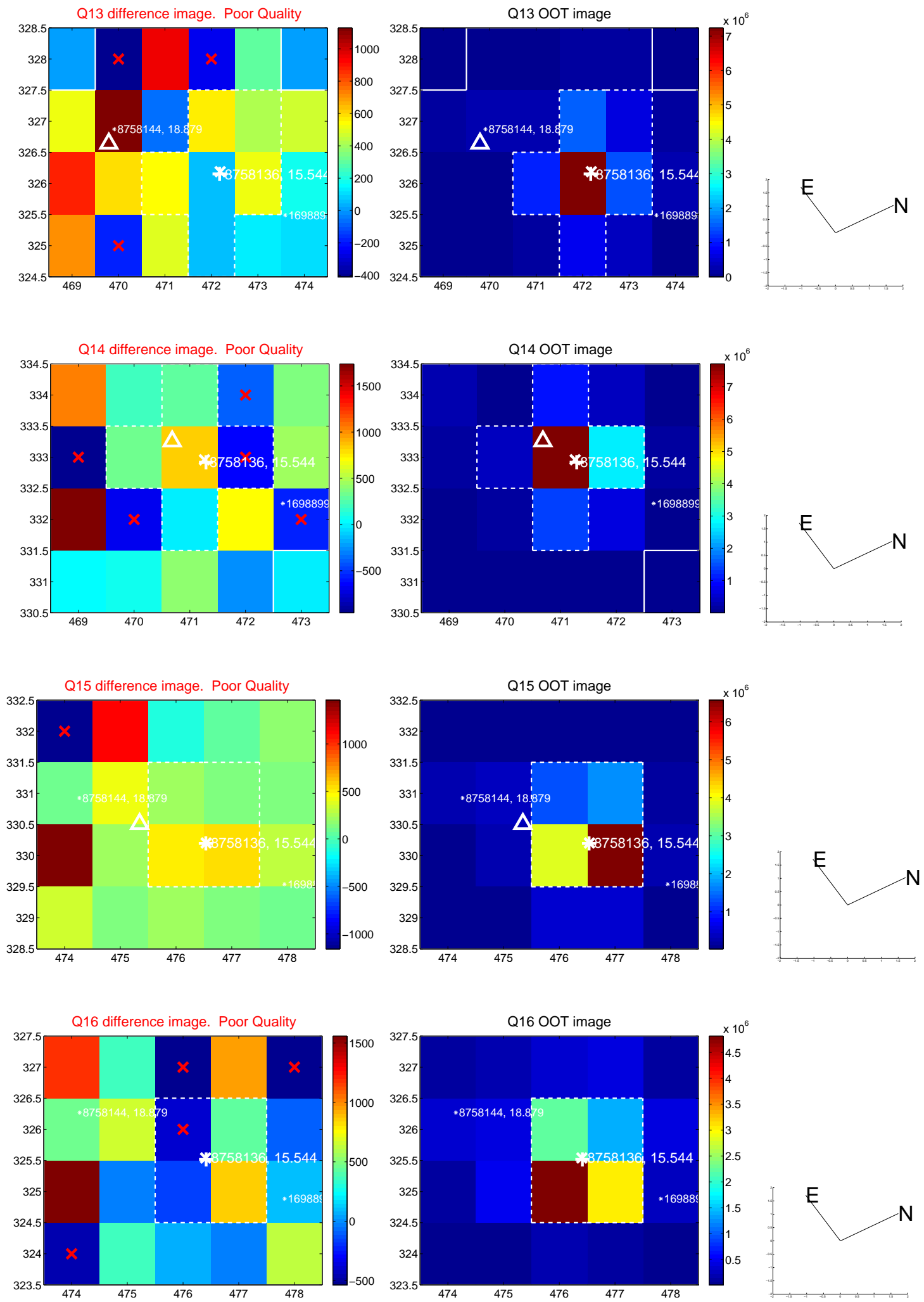




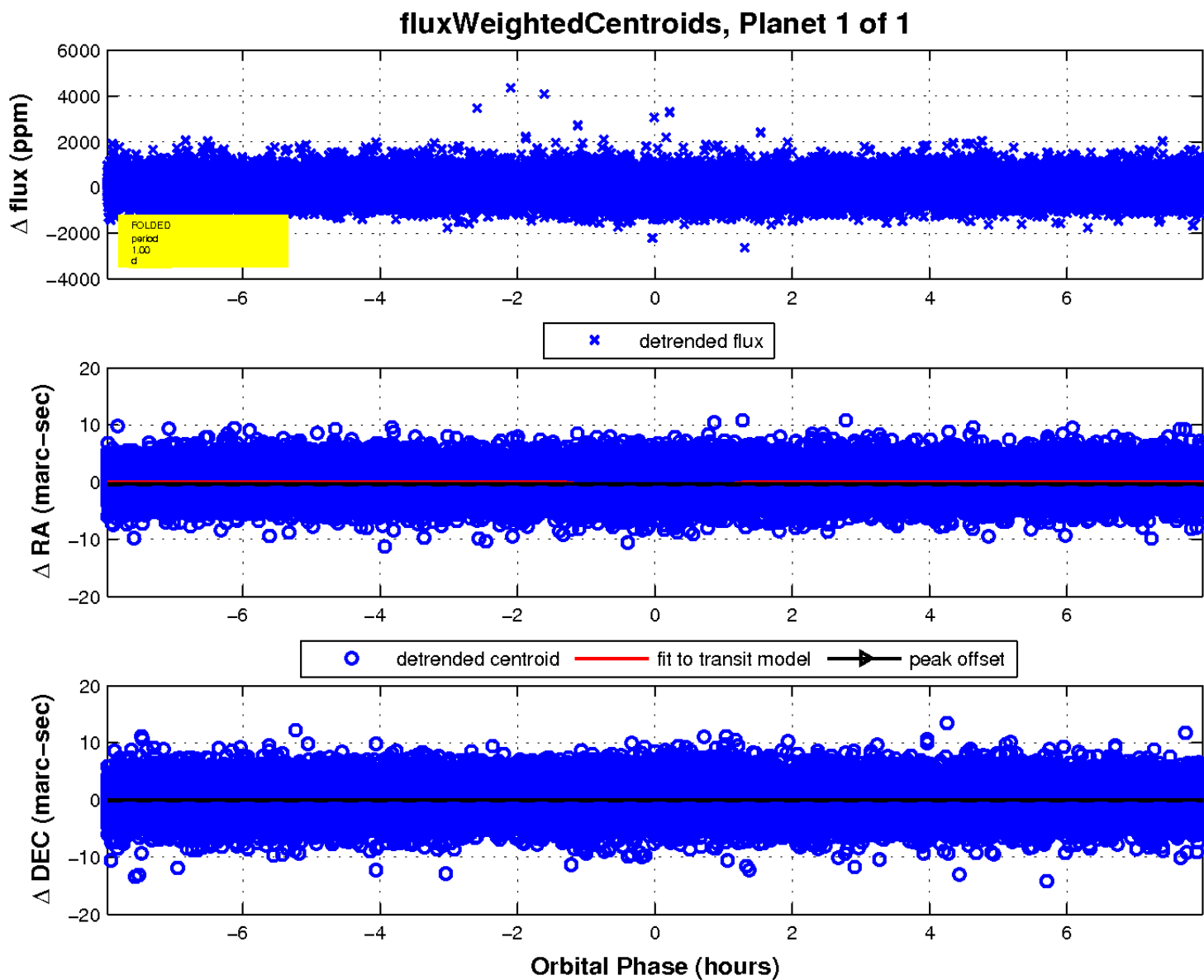
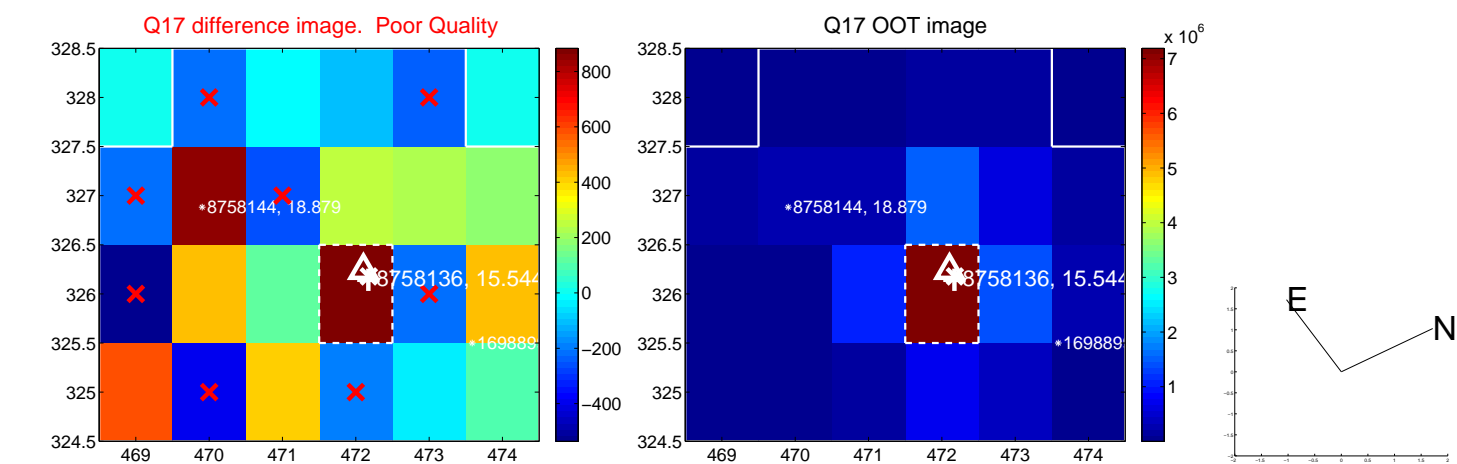
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

