

KIC 011038312

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})
011038312-01	OBS	No	0.545396	131.728443	8.5	0.616	8.8	4.2	2.23	7345	0.76	59533.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011038312-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

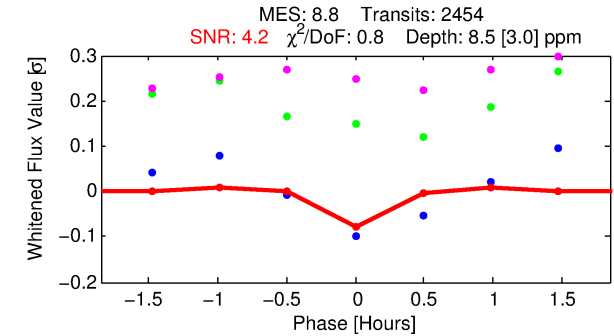
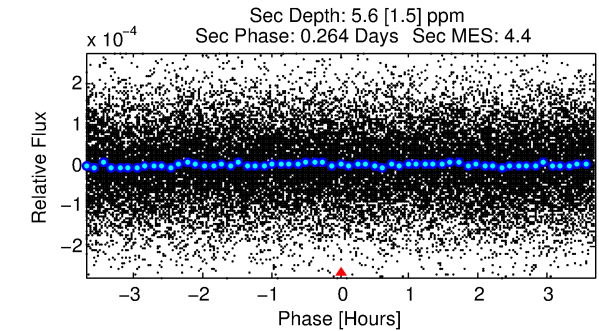
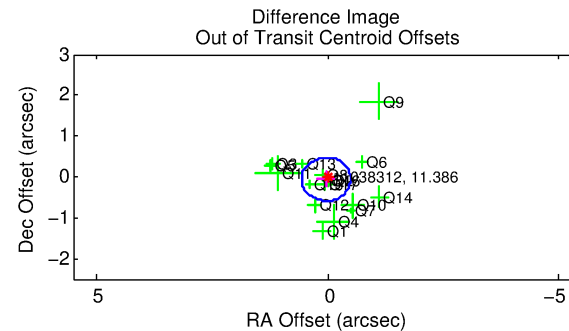
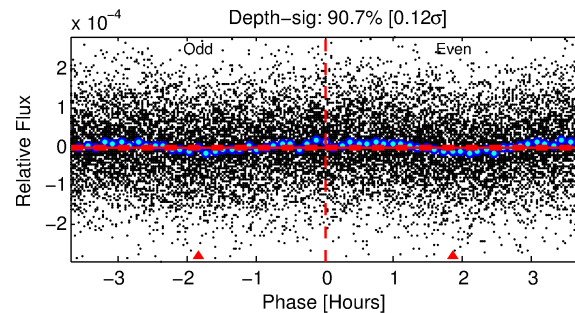
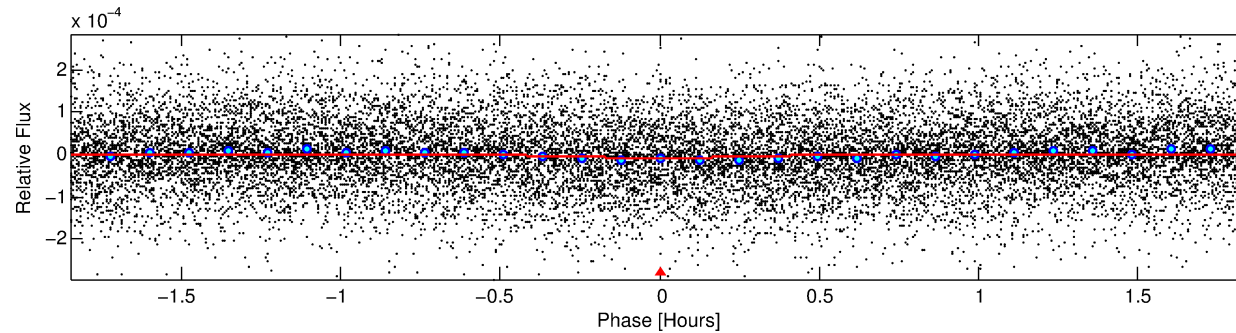
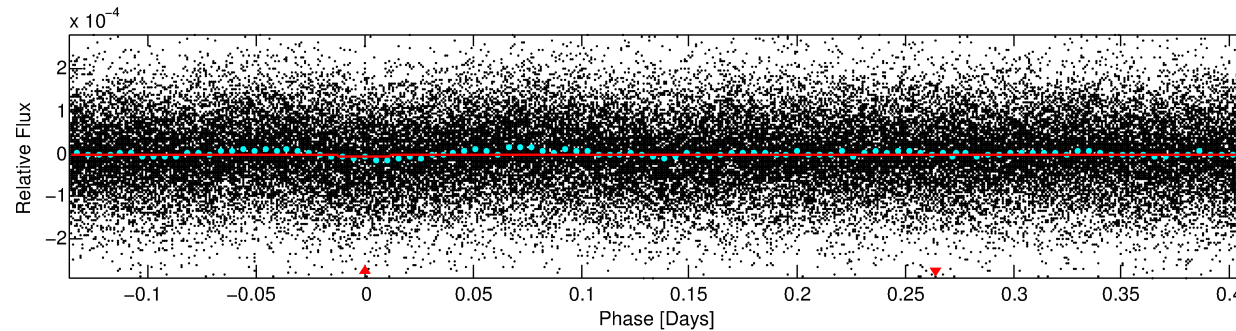
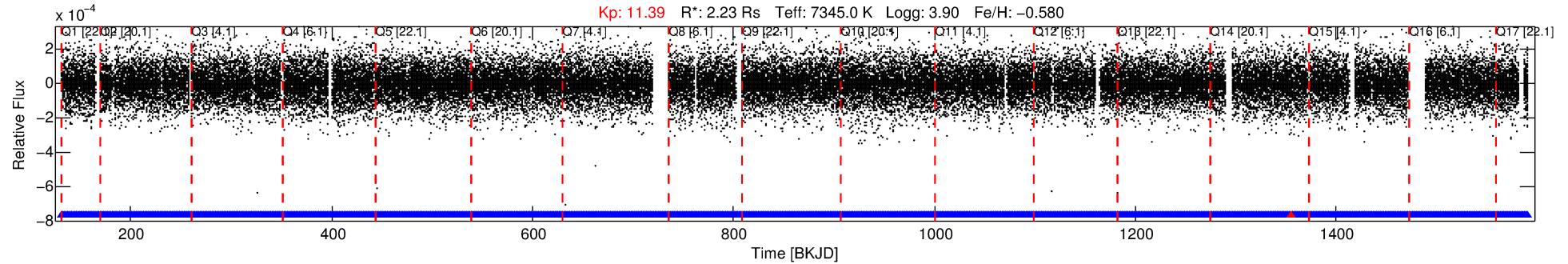
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011038312-01

No Significant Match Found

DV One-Page Summary

KIC: 11038312 Candidate: 1 of 1 Period: 0.545 d



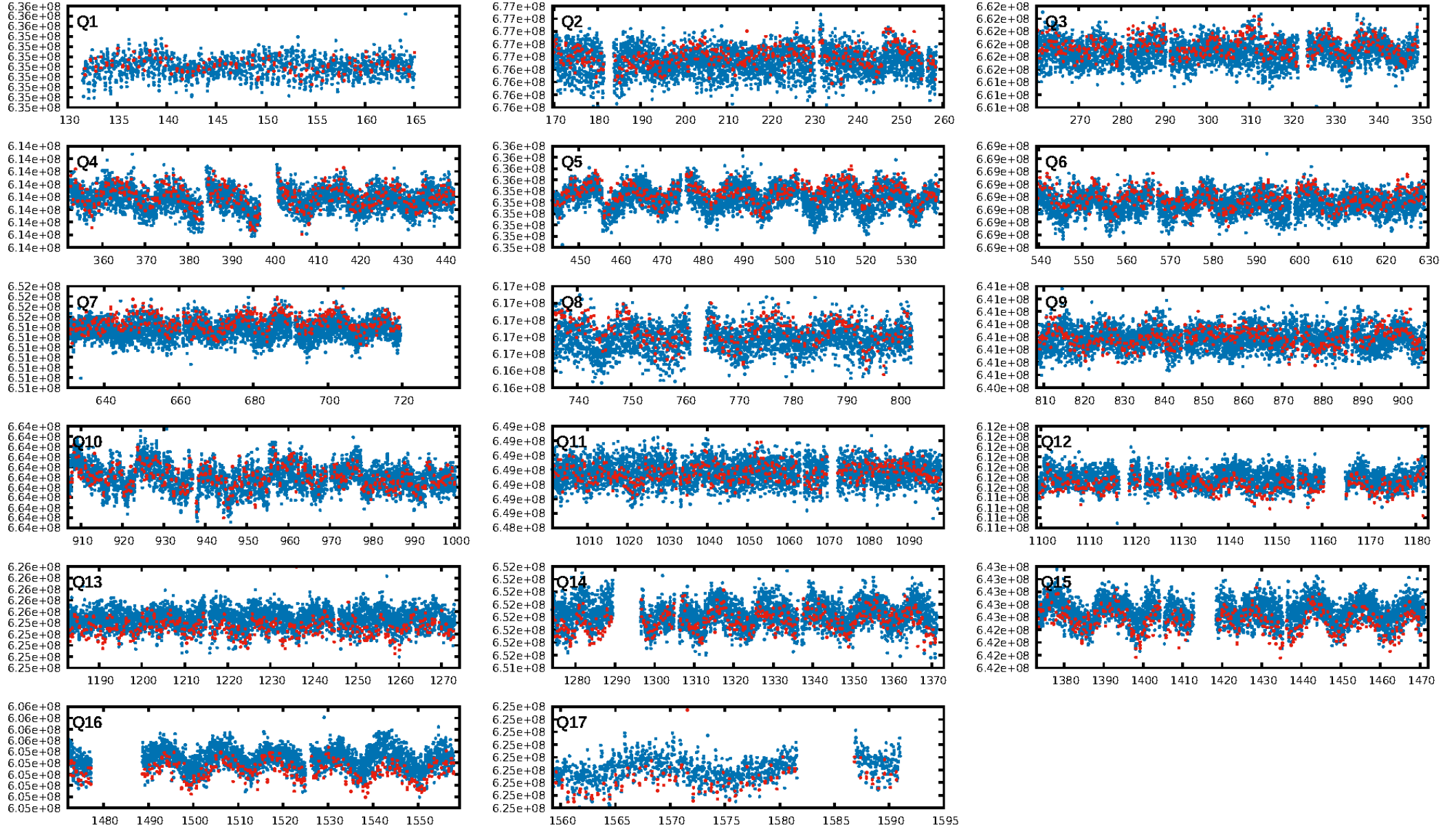
DV Fit Results:

Period = 0.54540 [0.00003] d
Epoch = 131.7284 [0.0025] BKJD
 $R_p/R^* = 0.0031$ [0.0008]
 $a/R^* = 3.51$ [3.87]
 $b = 0.87$ [0.34]
 $\text{Seff} = 59533.83$ [41339.24]
 $T_{\text{eq}} = 3983$ [691] K
 $R_p = 0.76$ [0.37] R_{e}
 $a = 0.0148$ [0.0061] AU
 $A_g = 1.17$ [1.05] [0.17 σ]
 $T_{\text{eff}} = 6412$ [972] K [2.04 σ]

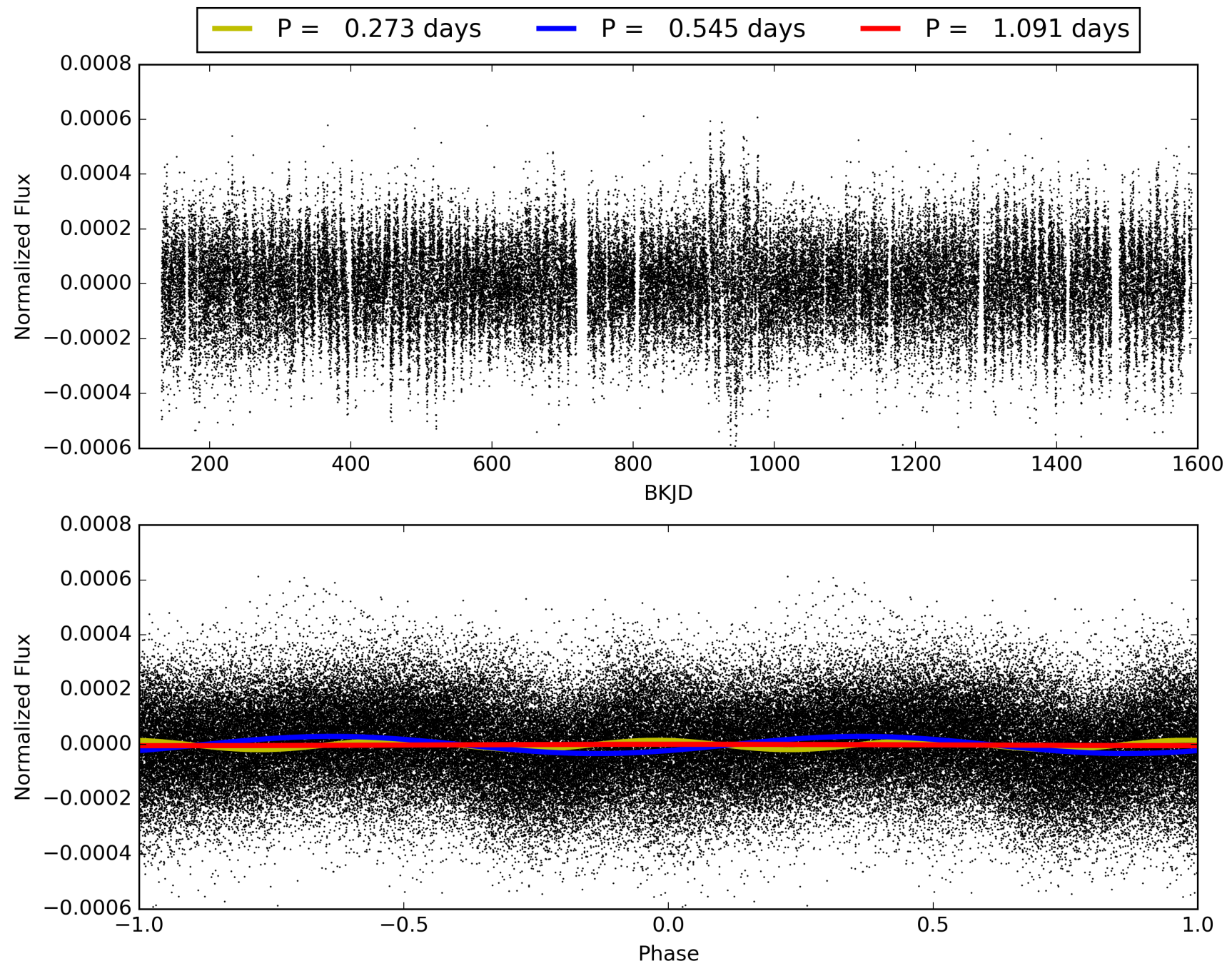
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.87e-16
RollingBand-fgt: 1.00 [2342/2343]
GhostDiagnostic-chr: -1.054
Centroid-sig: N/A
Centroid-so: 6.374 arcsec [4.60 σ]
OotOffset-rm: 0.067 arcsec [0.38 σ]
KicOffset-rm: 0.074 arcsec [0.42 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011038312-01, PDC Light Curves

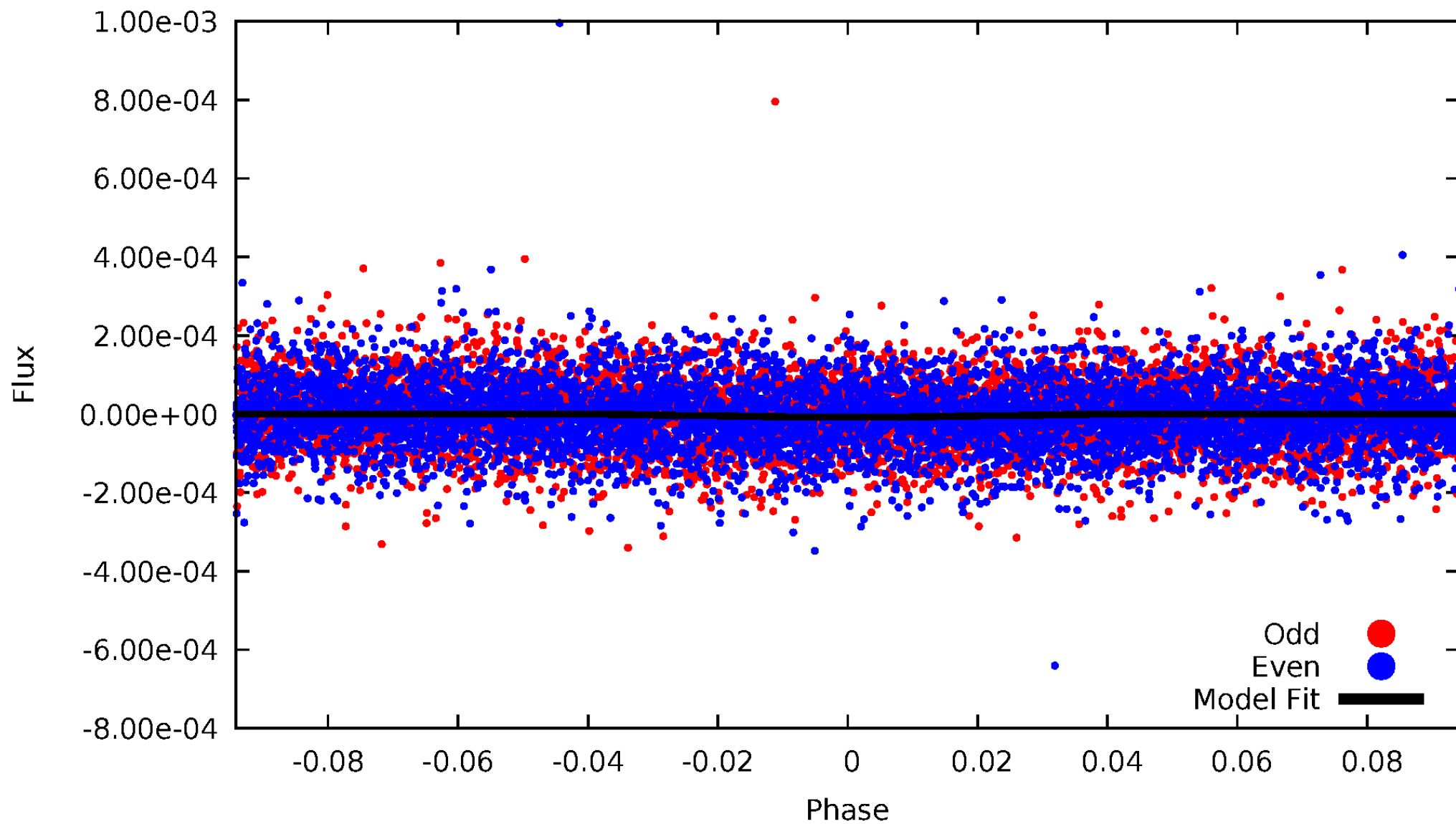


TCE 011038312-01



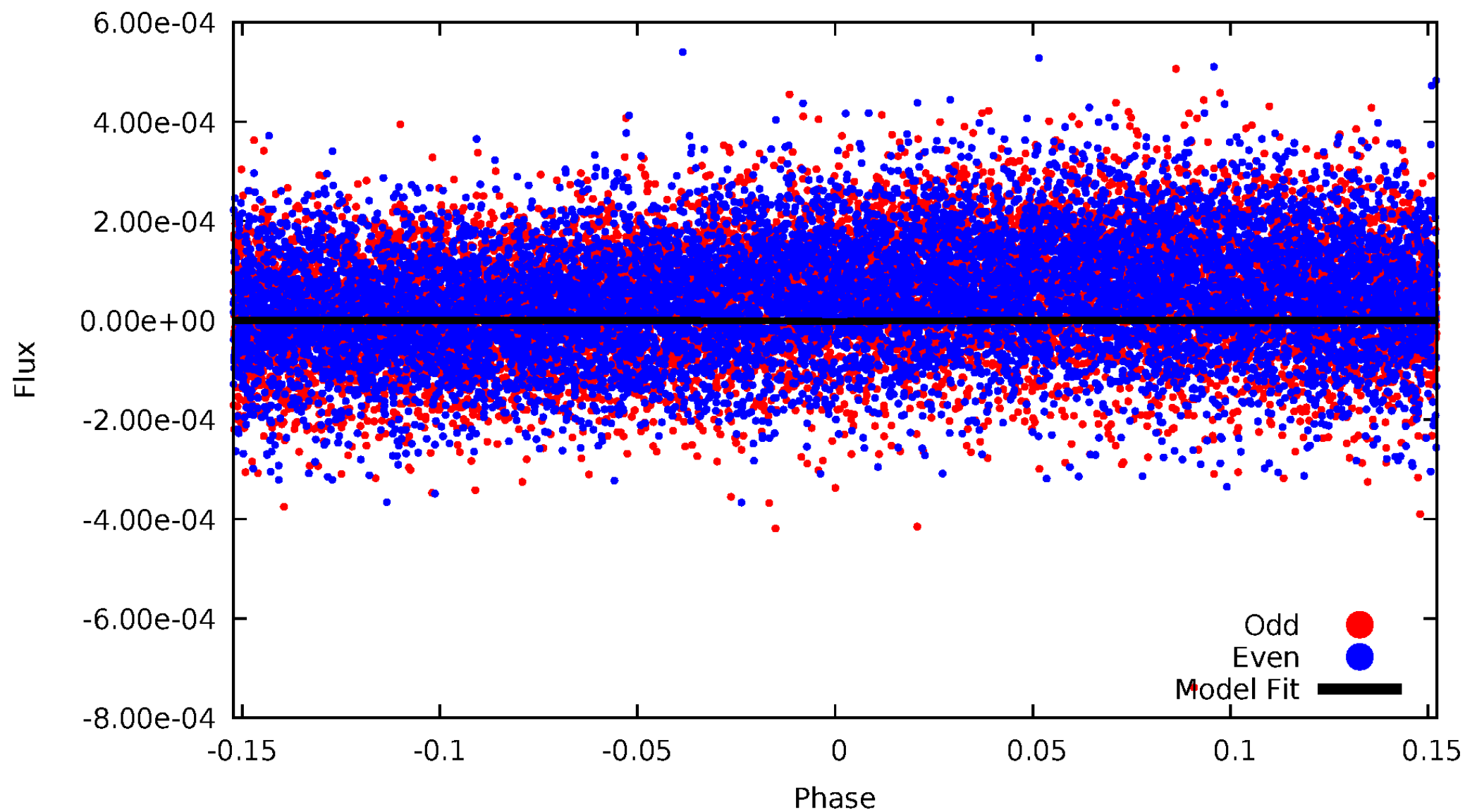
DV Odd/Even

TCE 011038312-01



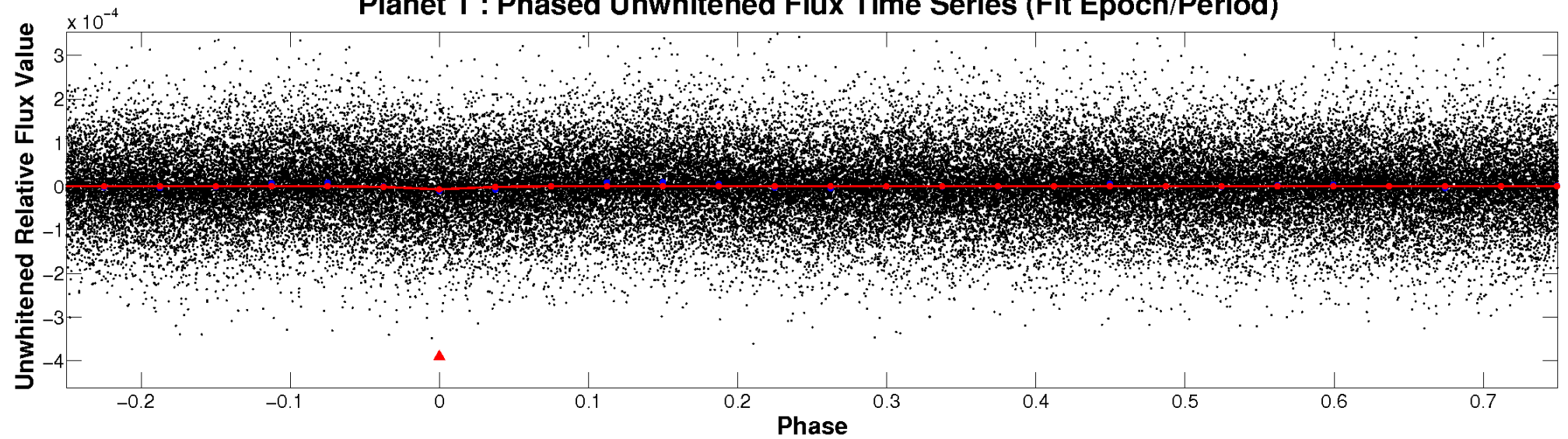
ALT Odd/Even

TCE 011038312-01

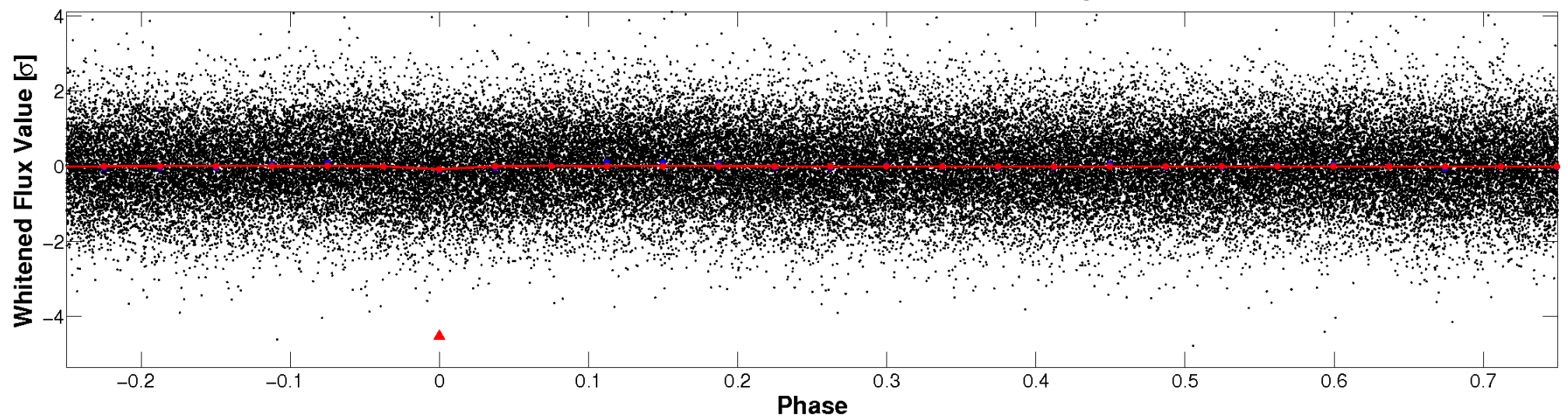


Non-Whitened Vs. Whitened Light Curve

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

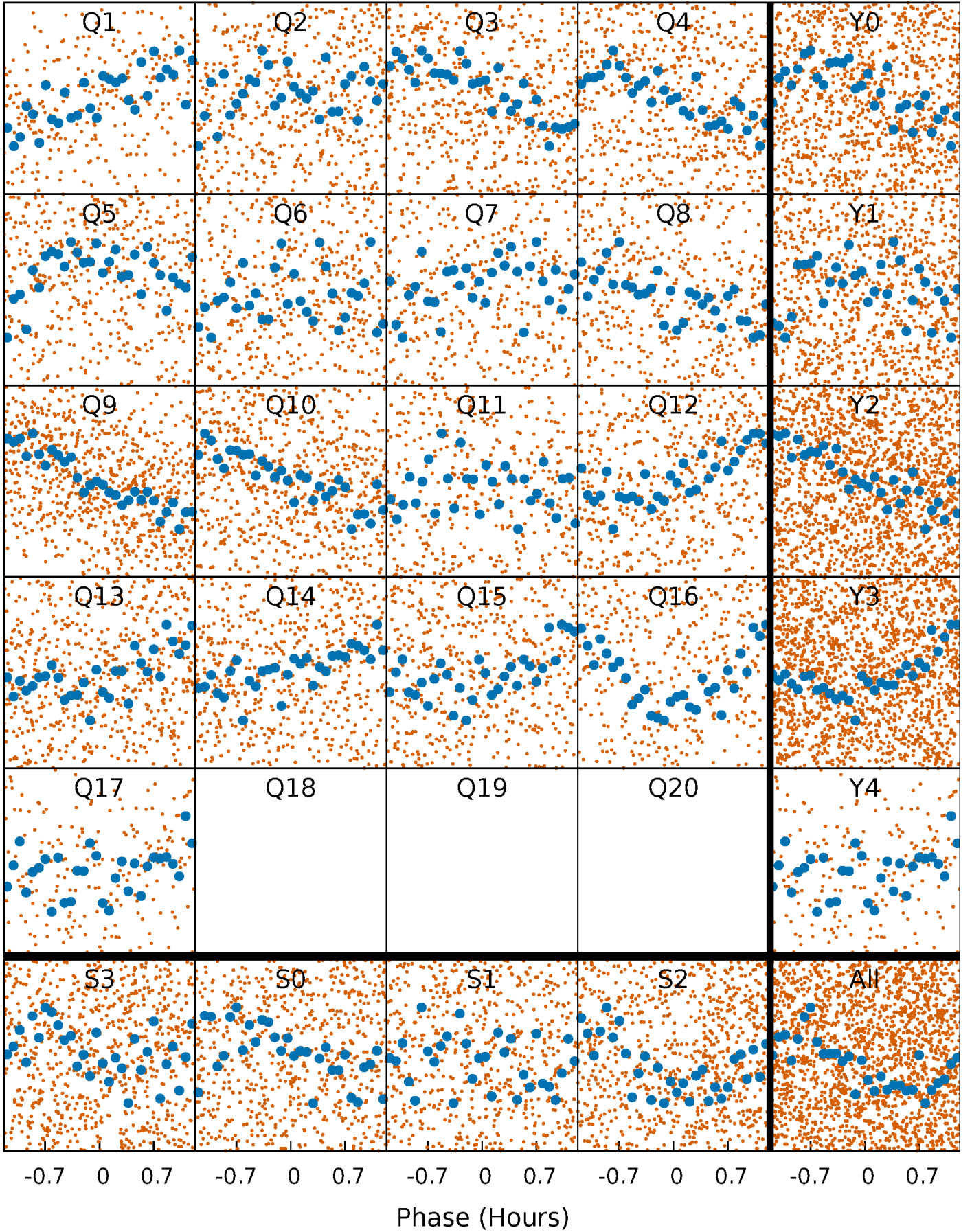


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



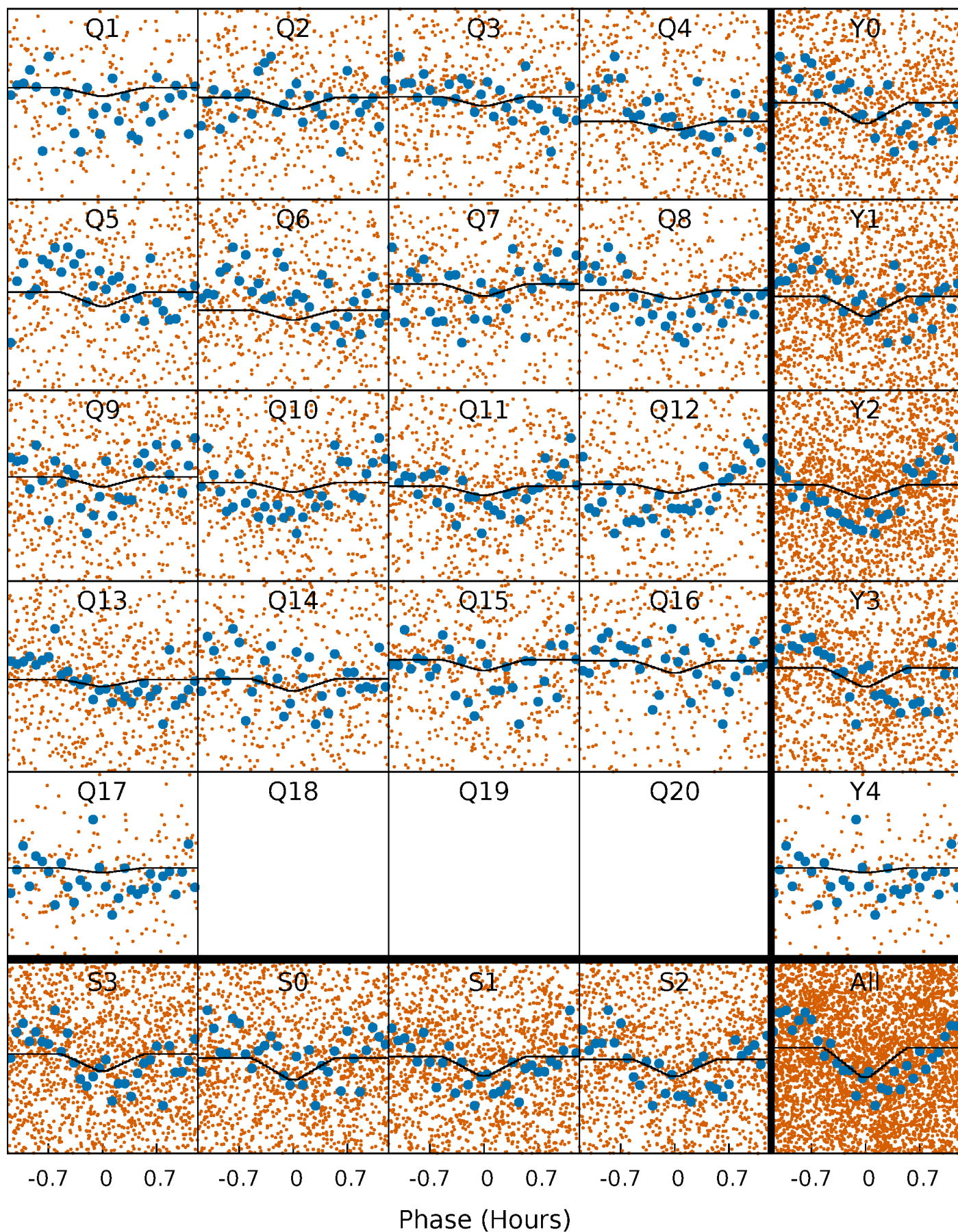
PDC Quarter-Phased Transit Curves

TCE 011038312-01 P= 0.545396 Days $T_0=131.728443$ (BKJD)



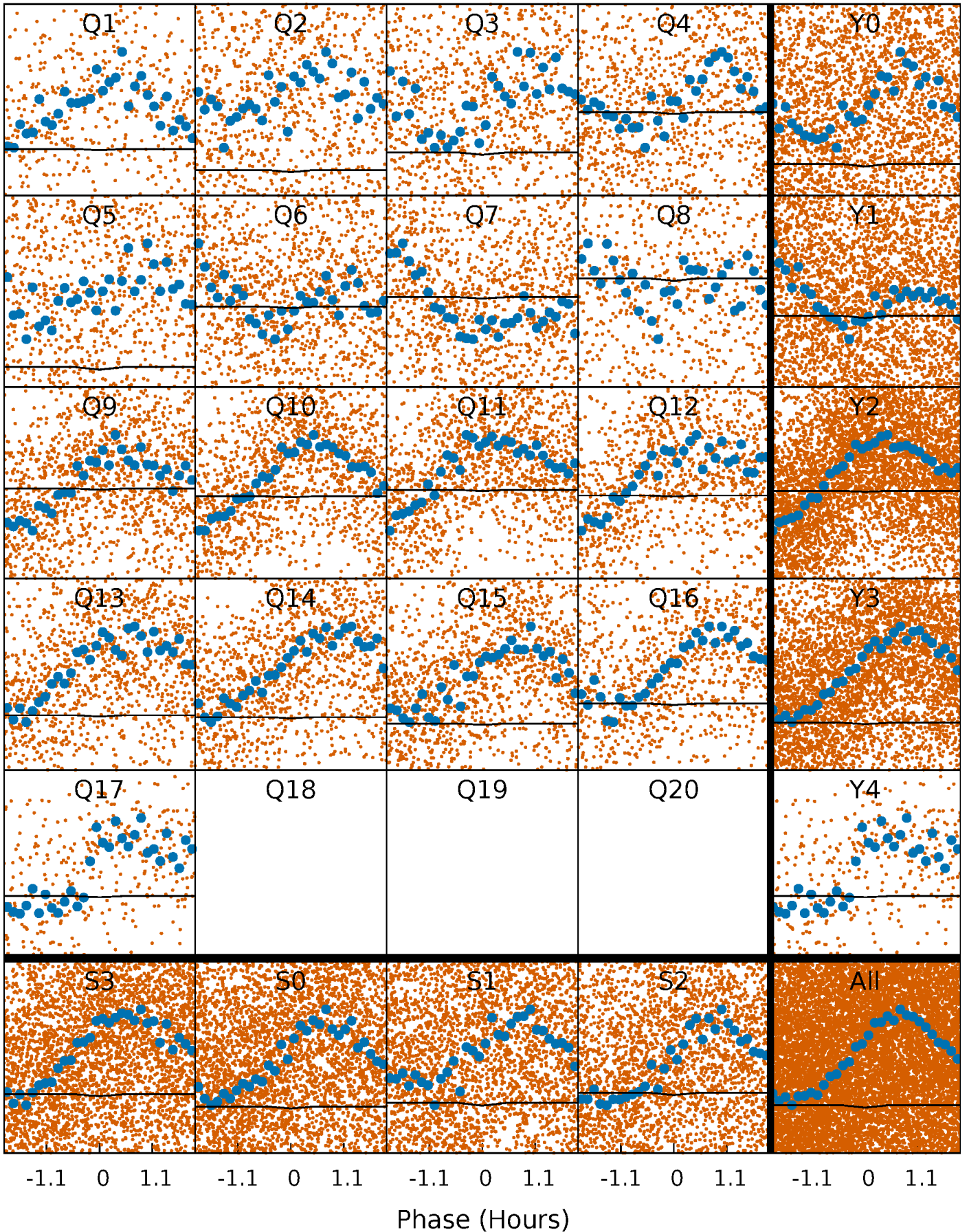
DV Quarter-Phased Transit Curves

TCE 011038312-01 P= 0.545396 Days $T_0=131.728443$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

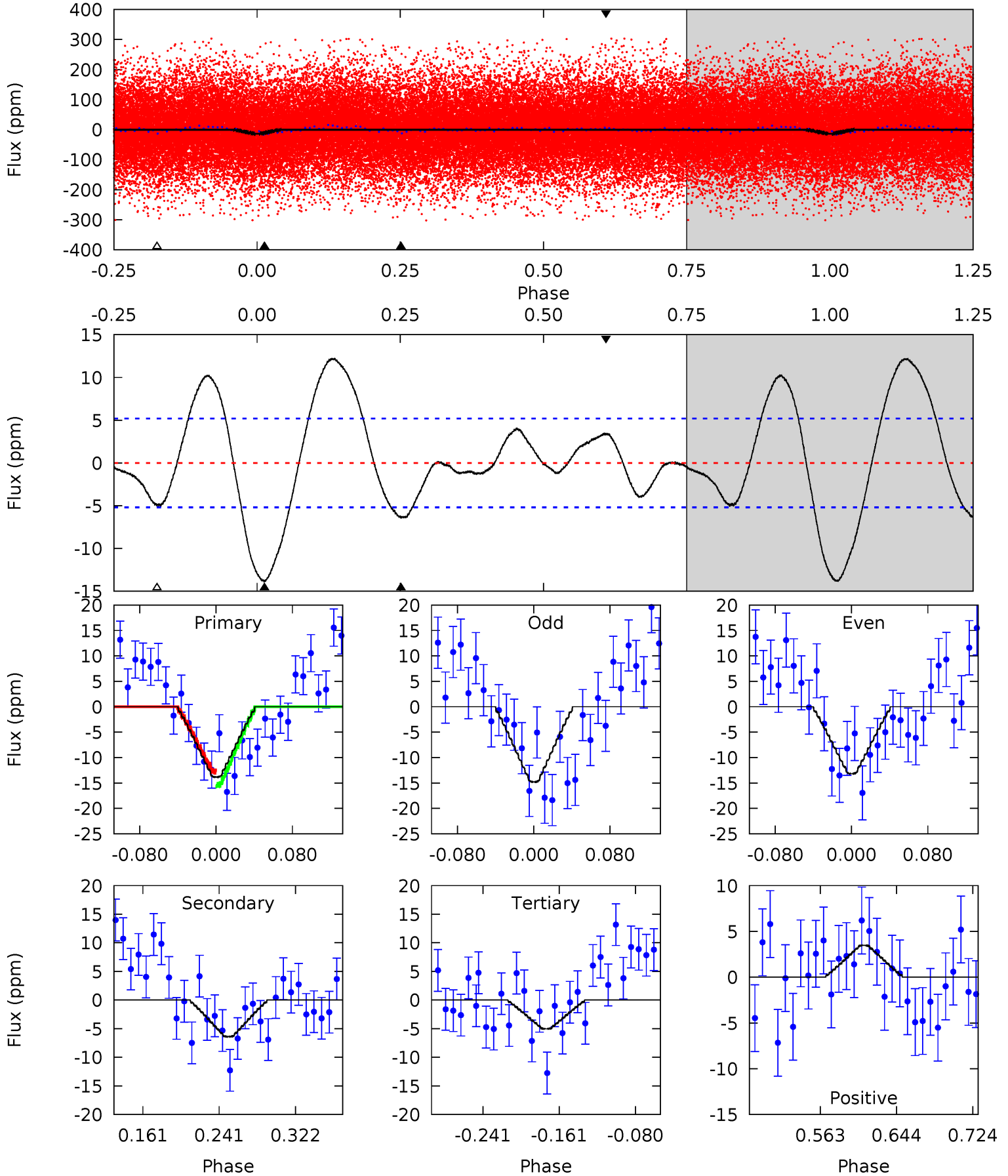
TCE 011038312-01 P= 0.545472 Days $T_0=131.785893$ (BKJD)



DV Model-Shift Uniqueness Test

011038312-01, P = 0.545396 Days, E = 131.183047 Days

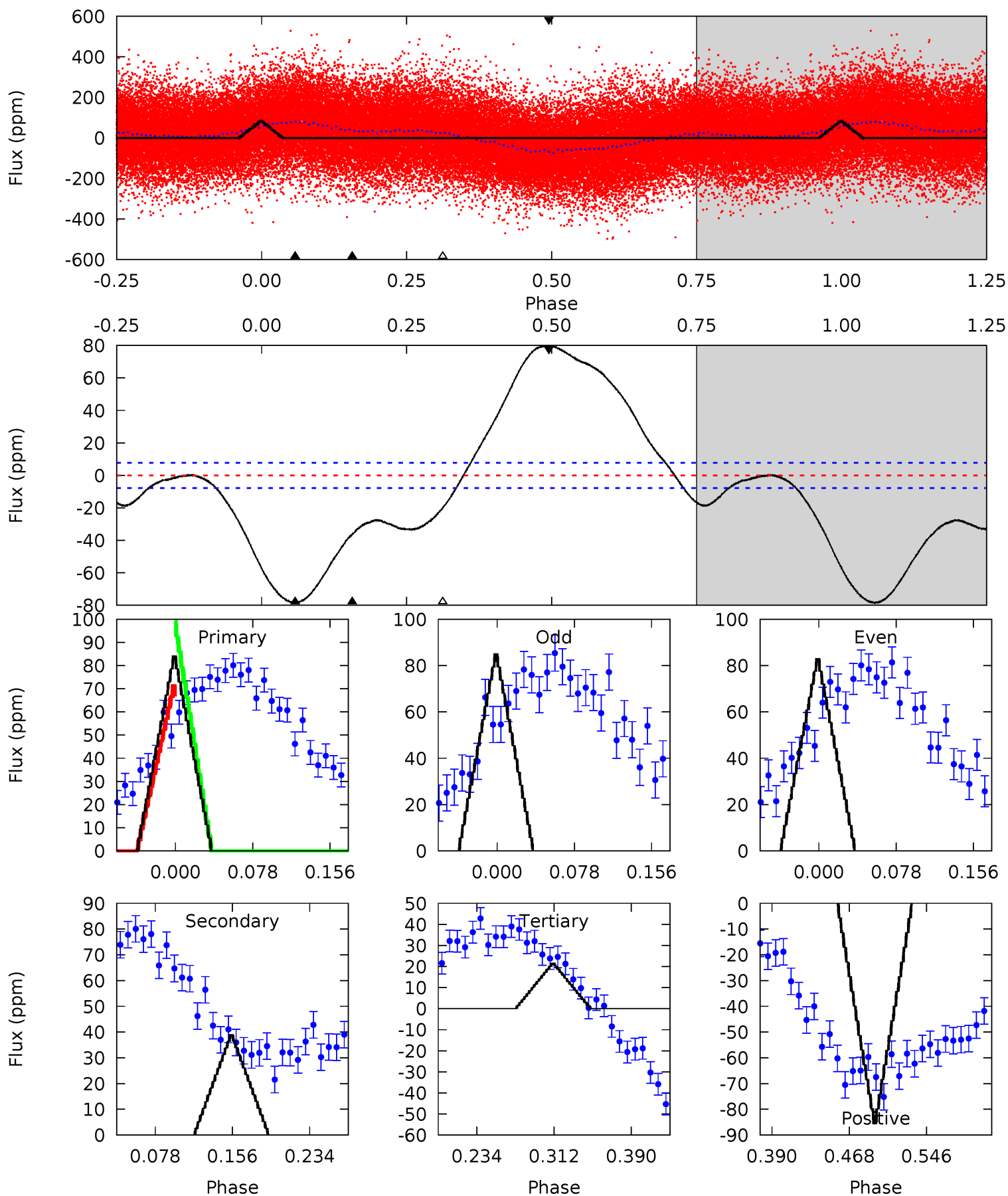
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	5.69	4.48	3.08	4.61	1.75	3.98	7.83	9.22	1.21	2.60	0.72	1.23	0.47	1.19



Alt Model-Shift Uniqueness Test

011038312-01, P = 0.545472 Days, E = 131.240421 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.7	21.7	12.0	47.4	4.62	1.76	21.9	34.7	-0.76	9.70	-25.8	0.56	1.03	0.50	7.74



Stellar Parameters For KIC 011038312

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7345^{+207}_{-311}	$3.901^{+0.400}_{-0.125}$	$-0.580^{+0.250}_{-0.300}$	$2.235^{+0.499}_{-0.927}$	$1.452^{+0.183}_{-0.313}$	$0.183^{+0.577}_{-0.071}$
	+3%/-4%	+10%/-3%	+43%/-52%	+22%/-41%	+13%/-22%	+315%/-39%
Source	KIC0	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 011038312-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 1	$0.71^{+0.23}_{-0.24}$	5414^{+406}_{-559}	6127^{+1287}_{-909}	$1.520^{+1.811}_{-0.691}$
Alt.	-37 ± 2	$0.32^{+0.20}_{-0.18}$	5431^{+438}_{-604}	25065^{+49826}_{-9755}	42^{+160}_{-26}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

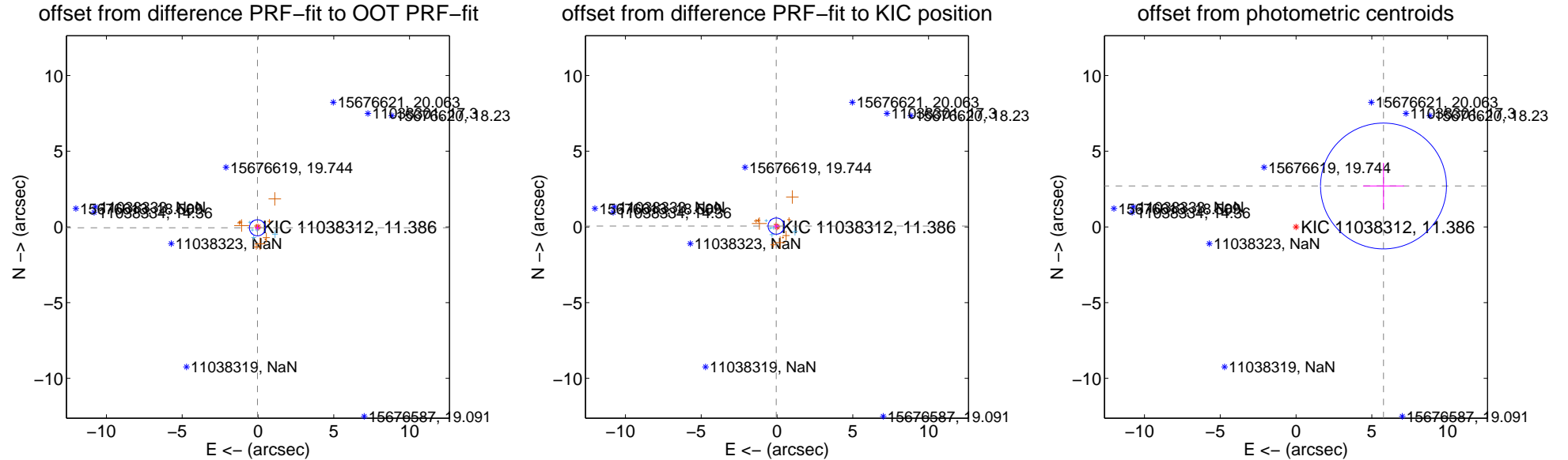
DV Centroid Data

Supplemental centroid analysis for 011038312-01. **Kepler magnitude: 11.39.** Transit SNR 4.25

There are 6 quarters with good PRF difference image offsets

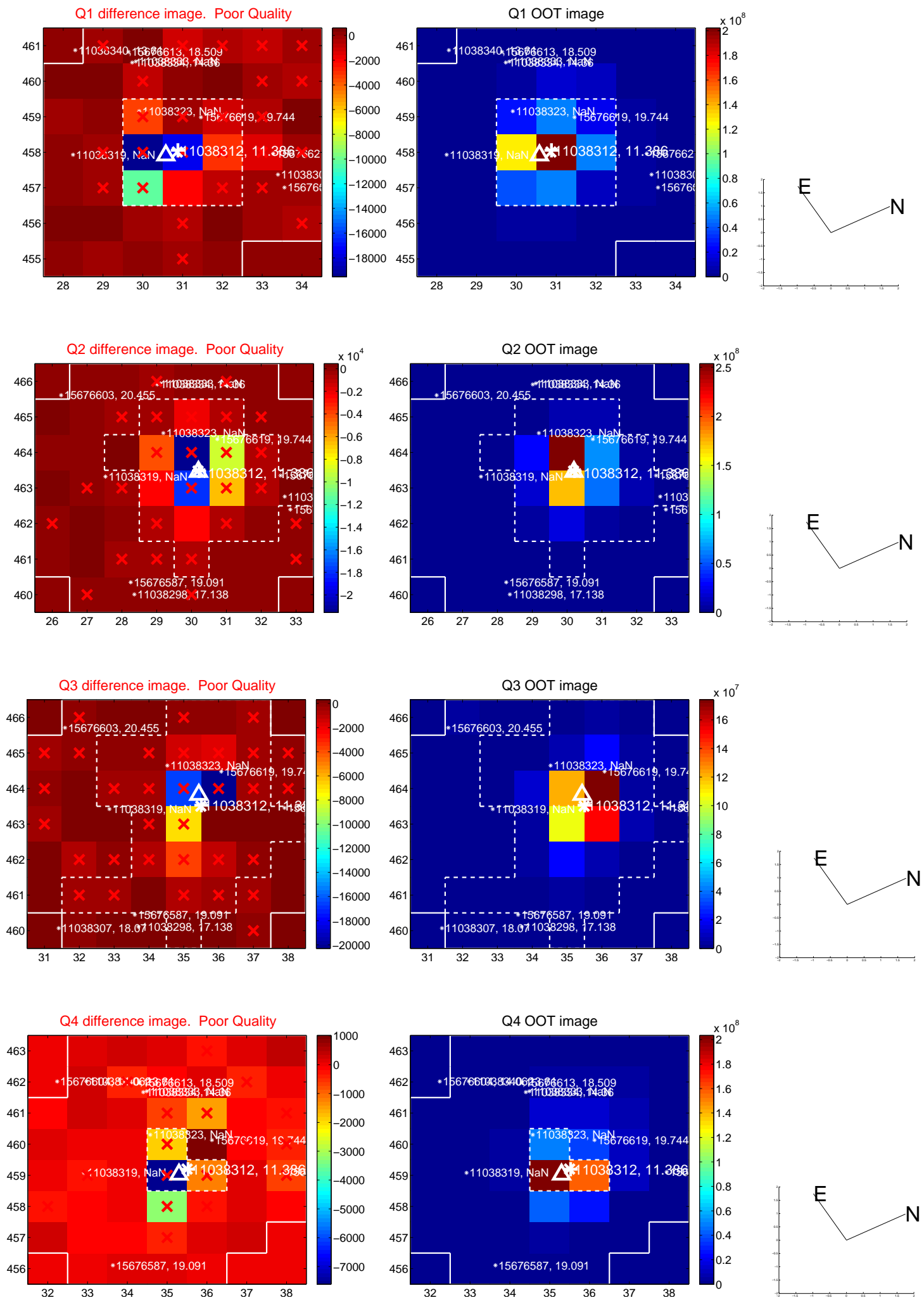
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.067 ± 0.177	0.38	0.034 ± 0.187	-0.058 ± 0.181
PRF-fit source offset from KIC position	0.074 ± 0.179	0.42	0.051 ± 0.196	0.054 ± 0.178
photometric centroid source offset	6.37 ± 1.39	4.60	-5.77 ± 1.35	2.70 ± 1.54

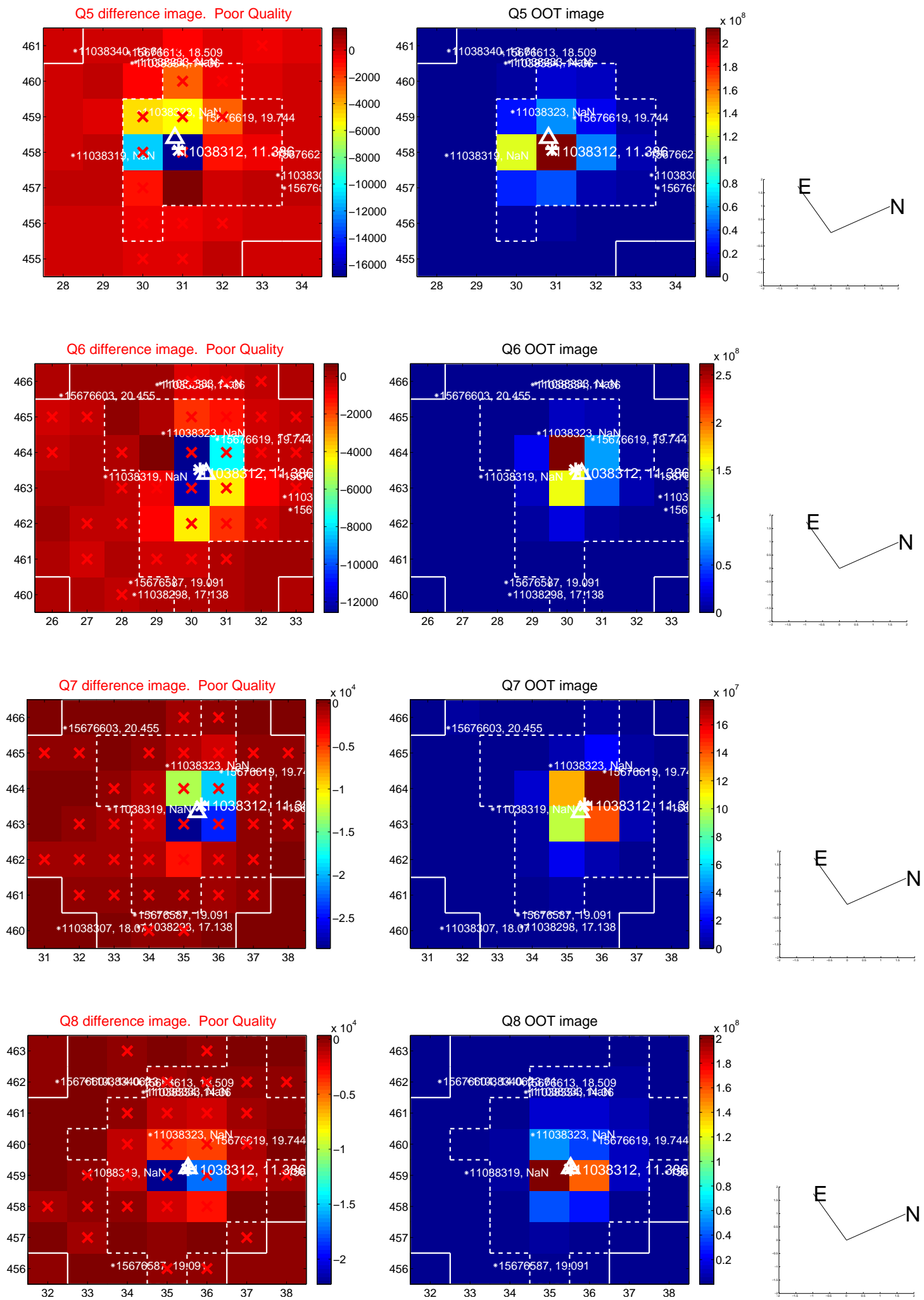


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

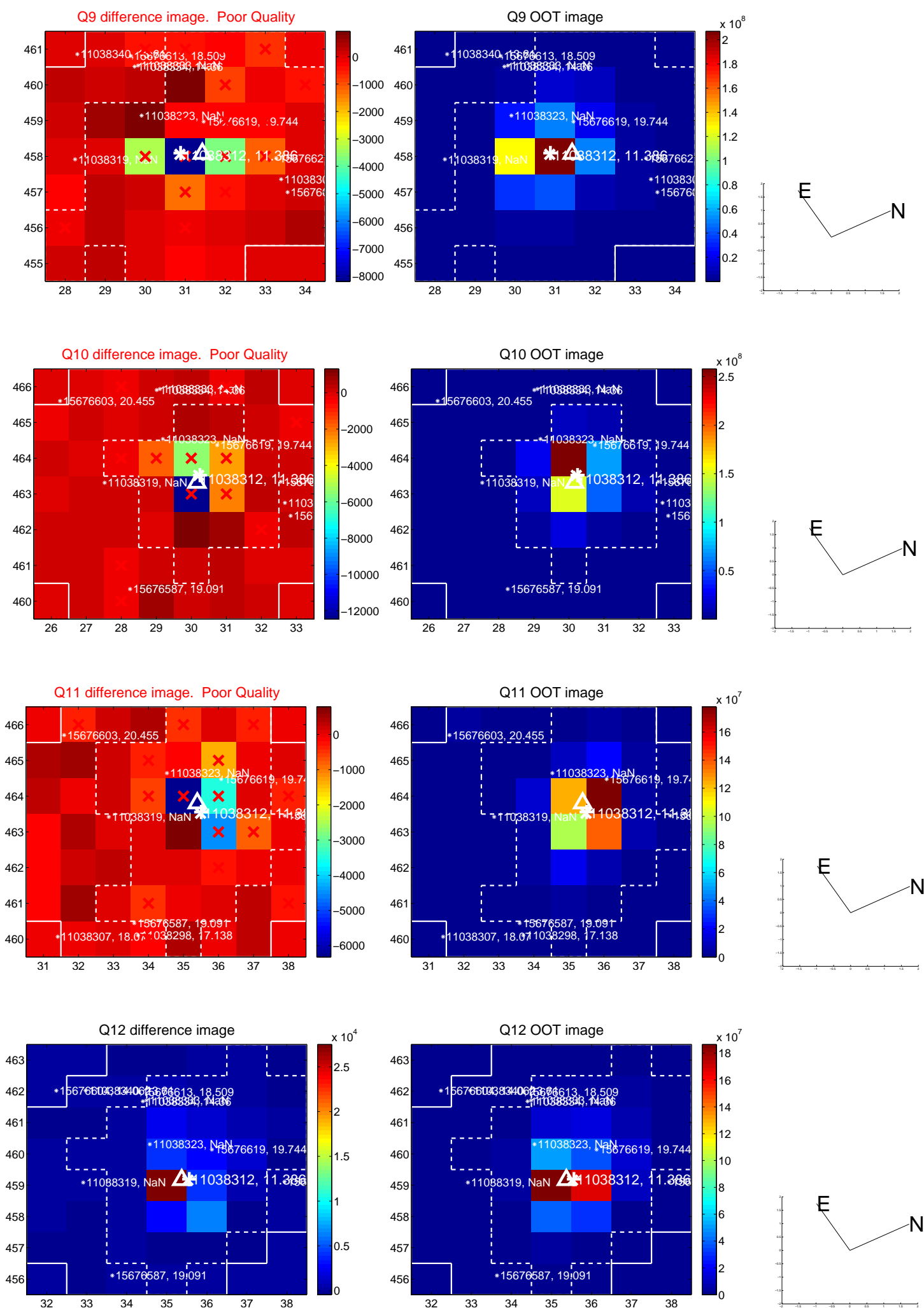
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



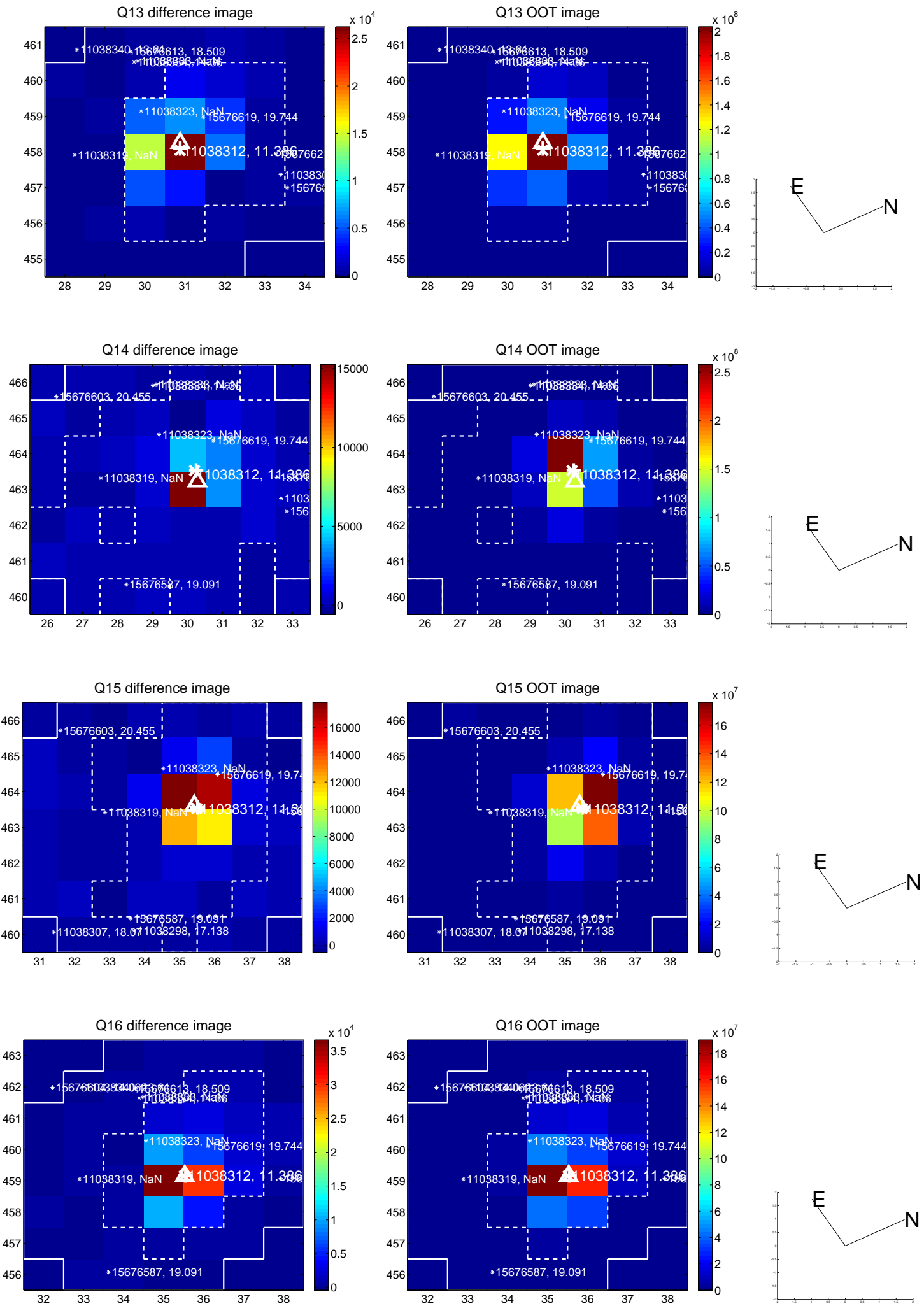
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



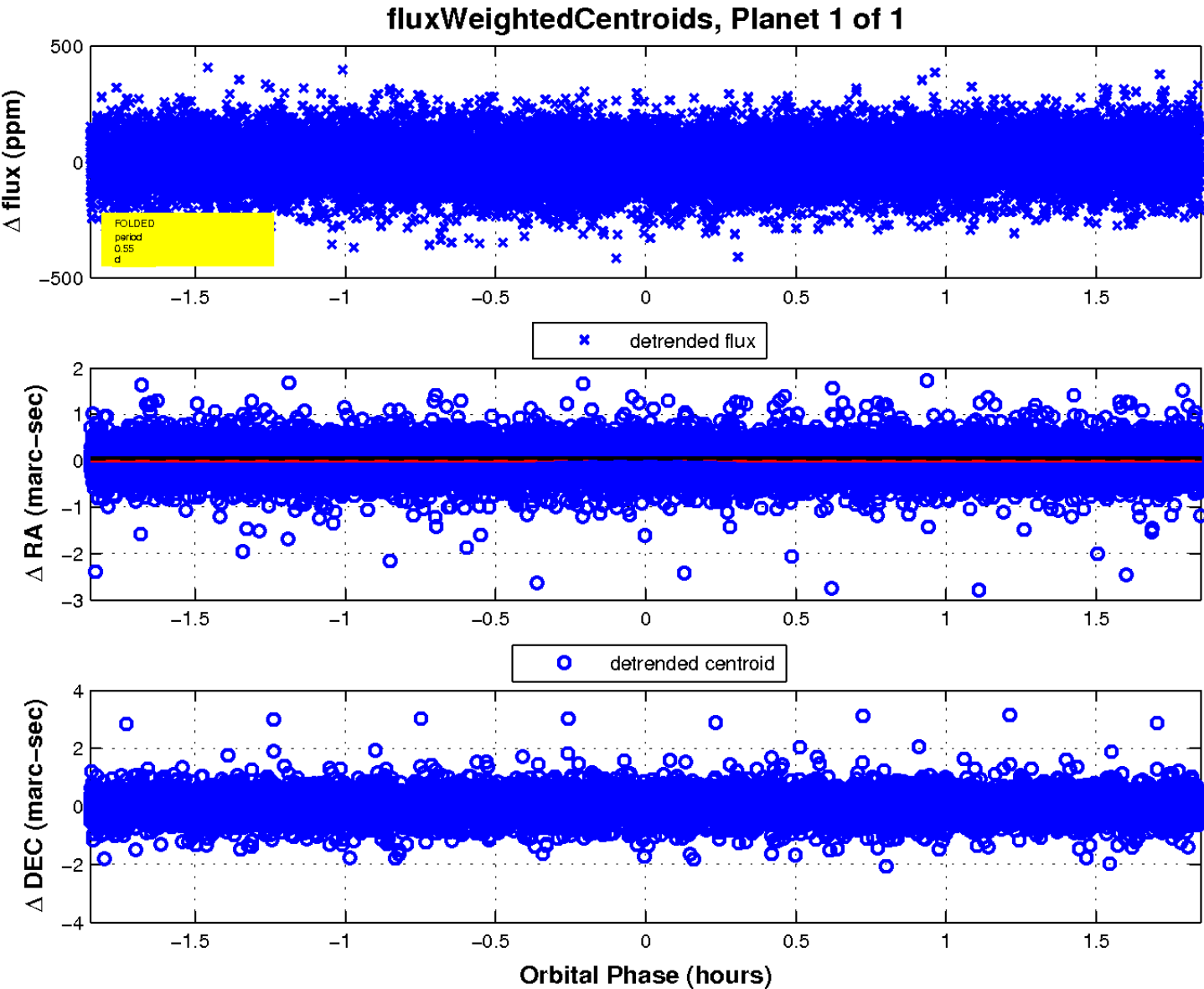
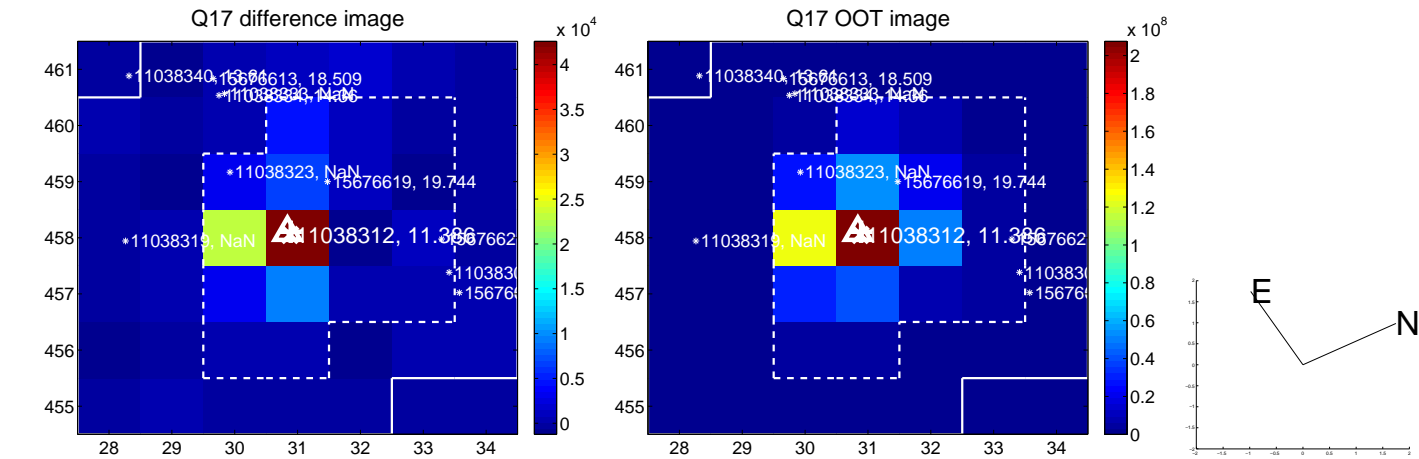
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

