

KIC 005466109

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})
005466109-01	OBS	6582.01	2.431342	133.925607	134.5	1.428	8.2	9.6	0.95	6231	1.21	968.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005466109-01	OBS	PC	0.79	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.

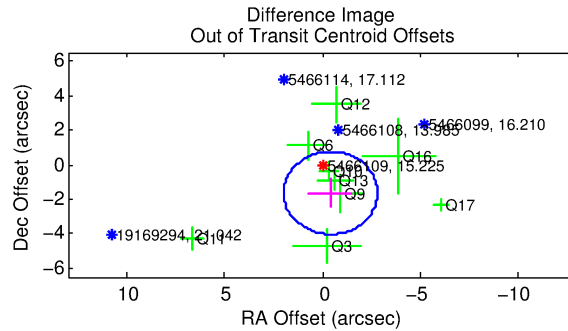
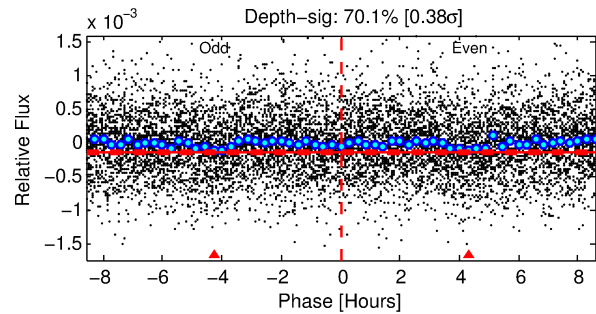
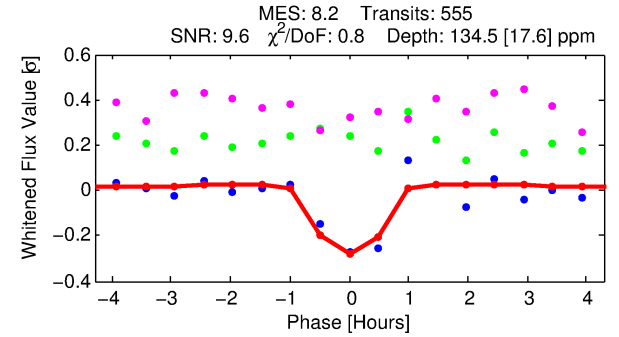
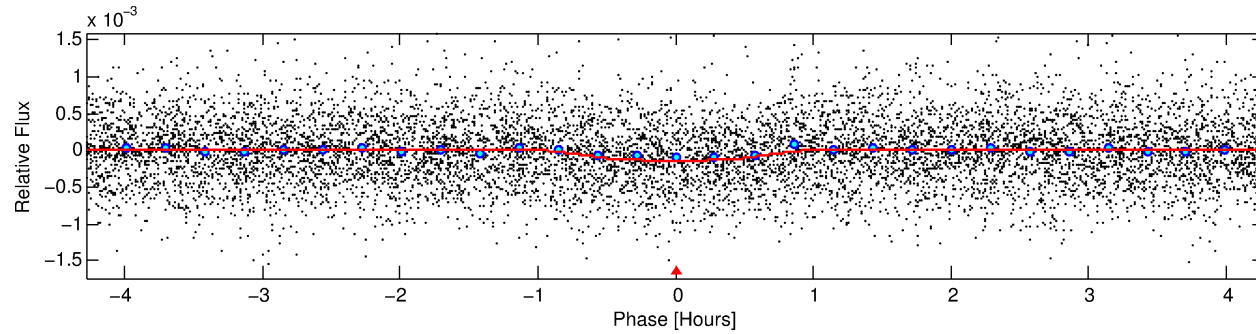
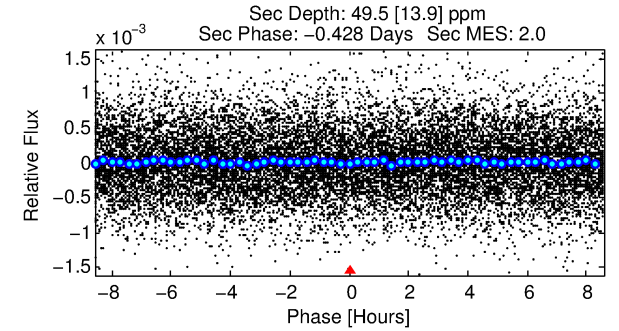
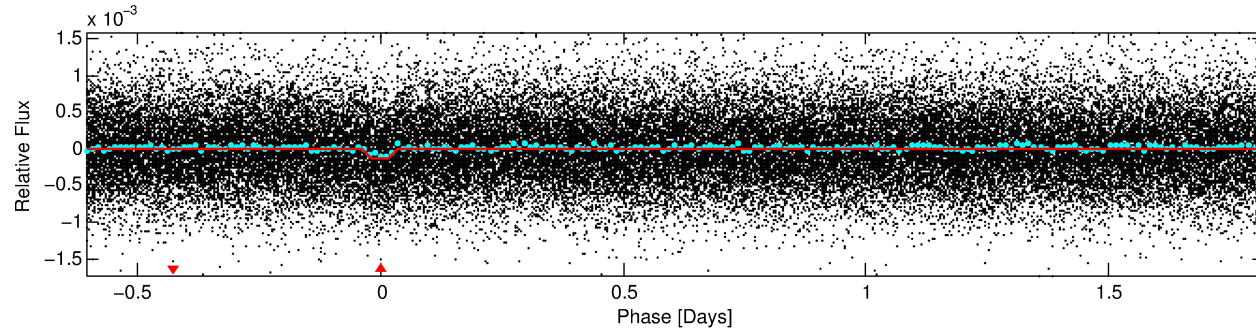
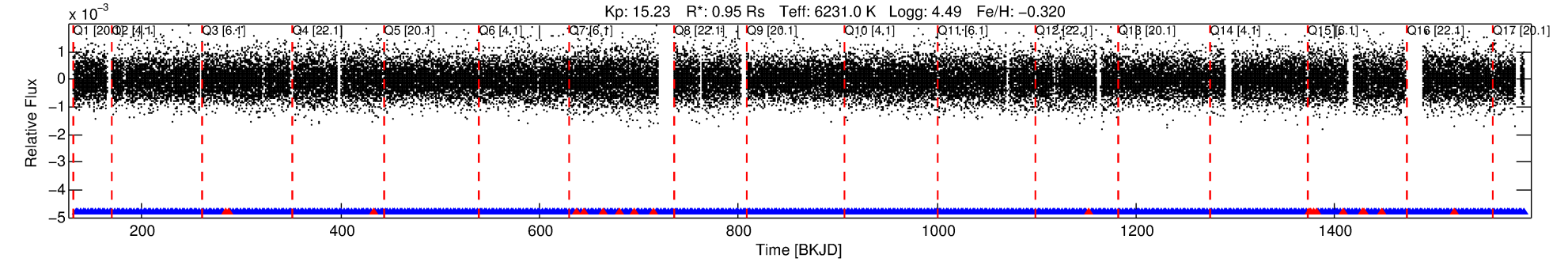
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005466109-01

No Significant Match Found

DV One-Page Summary

KIC: 5466109 Candidate: 1 of 1 Period: 2.431 d
KOI: K06582.01 Corr: 0.926



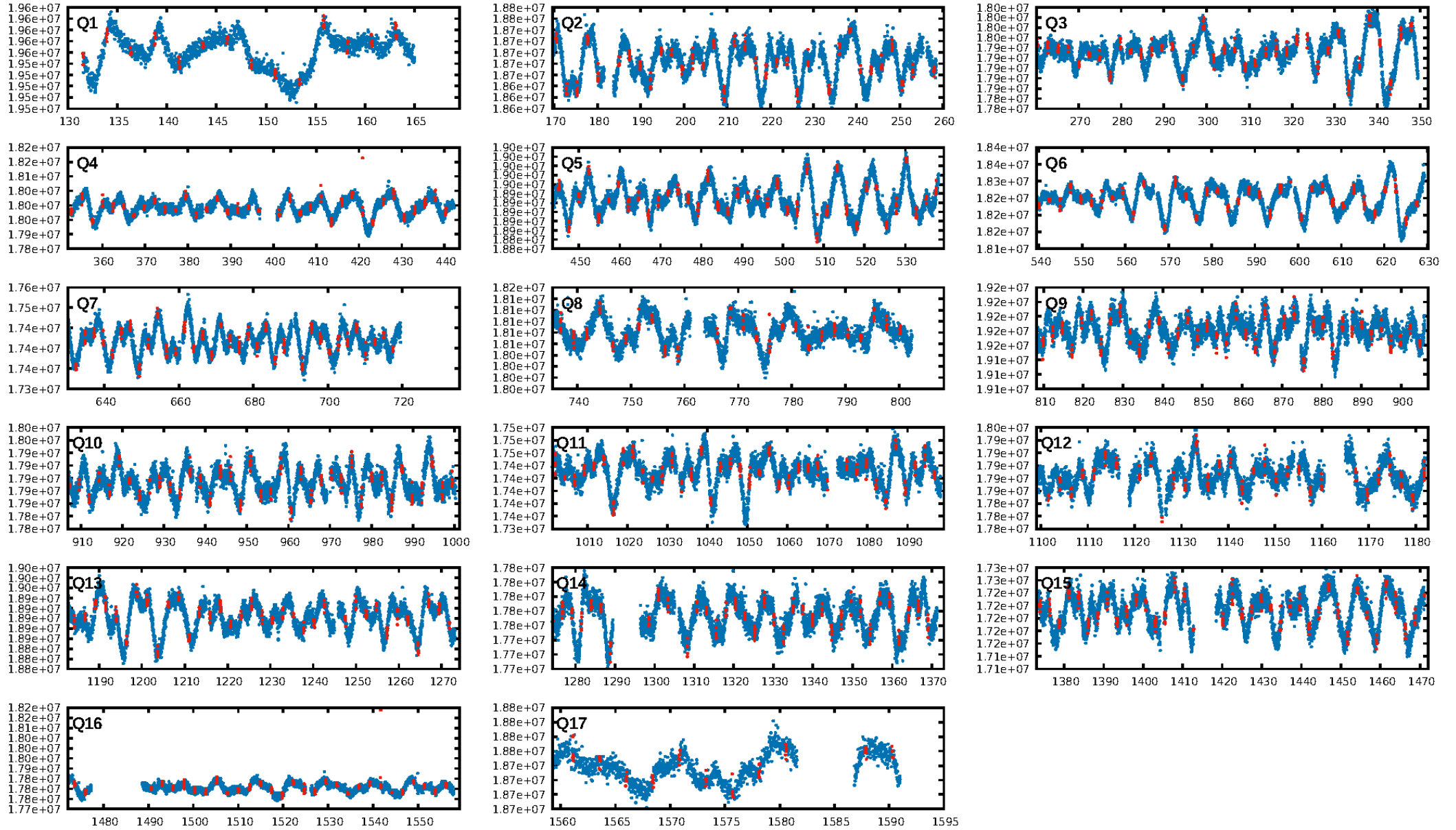
DV Fit Results:

Period = 2.43134 [0.00001] d
Epoch = 133.9256 [0.0025] BKJD
Rp/R* = 0.0116 [0.0046]
a/R* = 8.67 [17.80]
b = 0.76 [1.15]
Seff = 968.28 [392.21]
Teff = 1422 [144] K
Rp = 1.21 [0.61] Re
a = 0.0357 [0.0092] AU
Ag = 23.59 [21.81] [1.04σ]
Teffp = 4847 [1037] K [3.27σ]

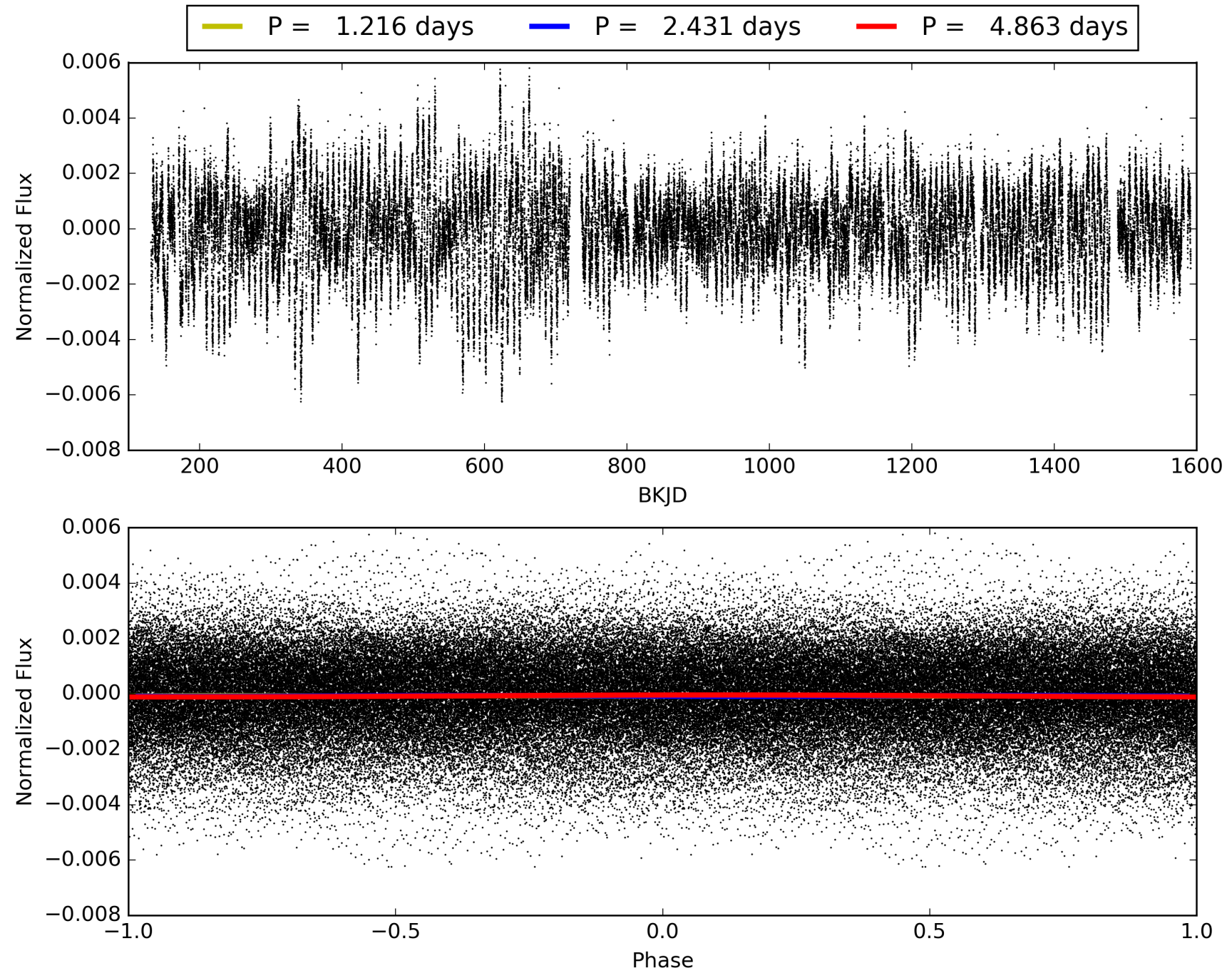
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.24e-16
RollingBand-fgt: 0.96 [511/530]
GhostDiagnostic-chr: 1.852
Centroid-sig: 3.5%
Centroid-so: 1.460 arcsec [1.50σ]
OotOffset-rm: 1.689 arcsec [2.12σ]
KicOffset-rm: 1.373 arcsec [1.87σ]
OotOffset-st: 2/2/2/3 [9]
KicOffset-st: 2/2/2/3 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005466109-01, PDC Light Curves

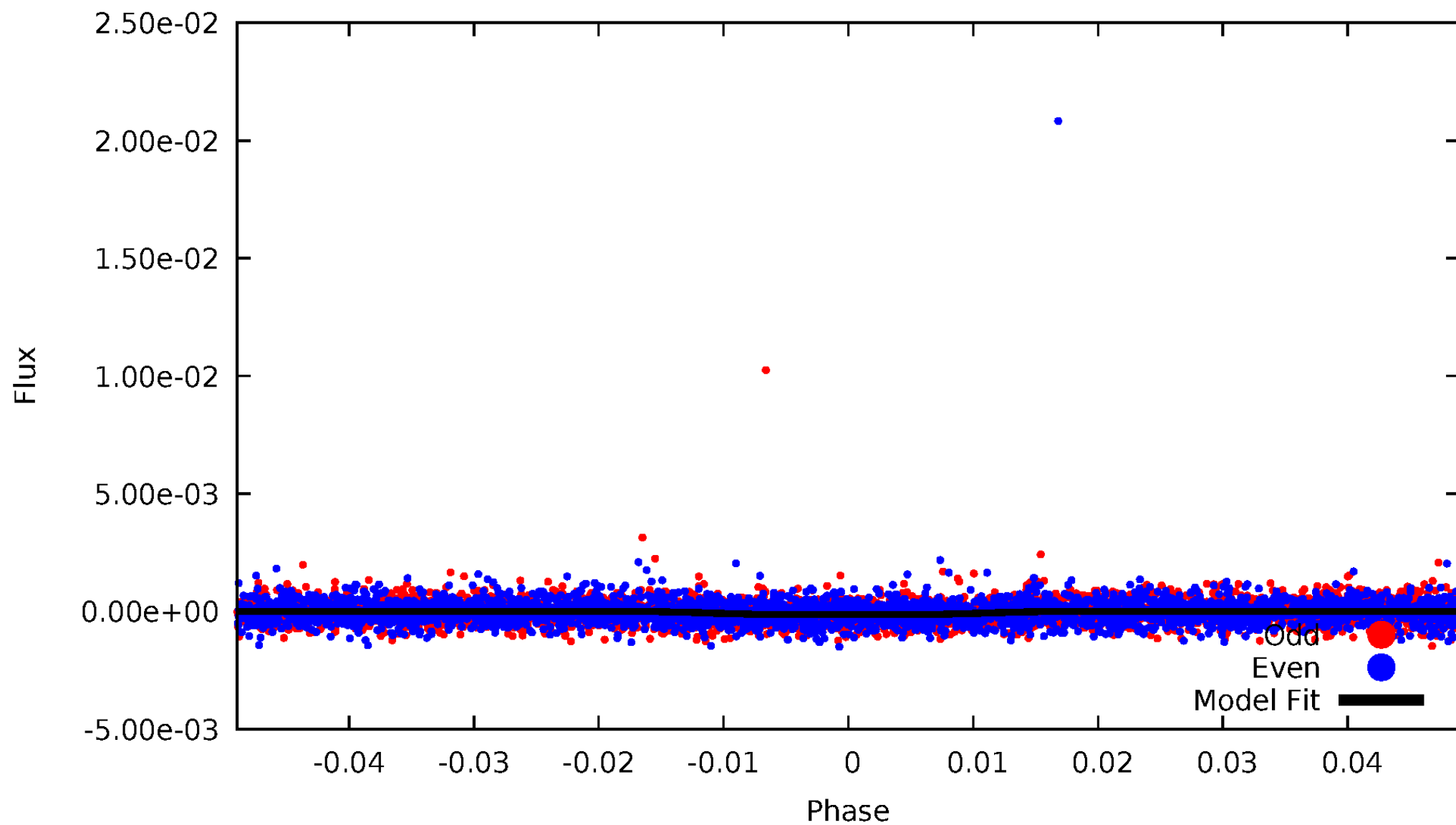


TCE 005466109-01



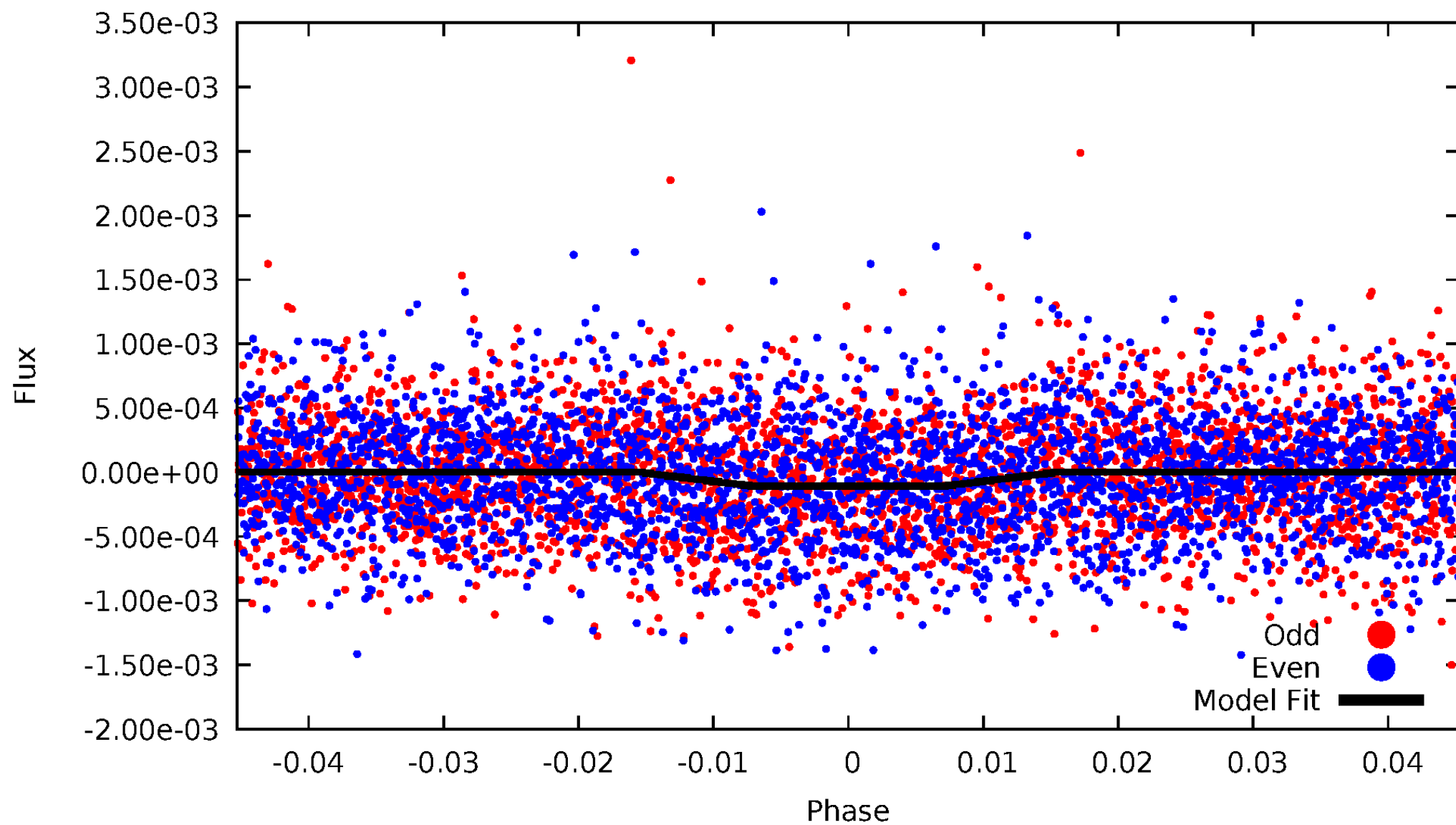
DV Odd/Even

TCE 005466109-01

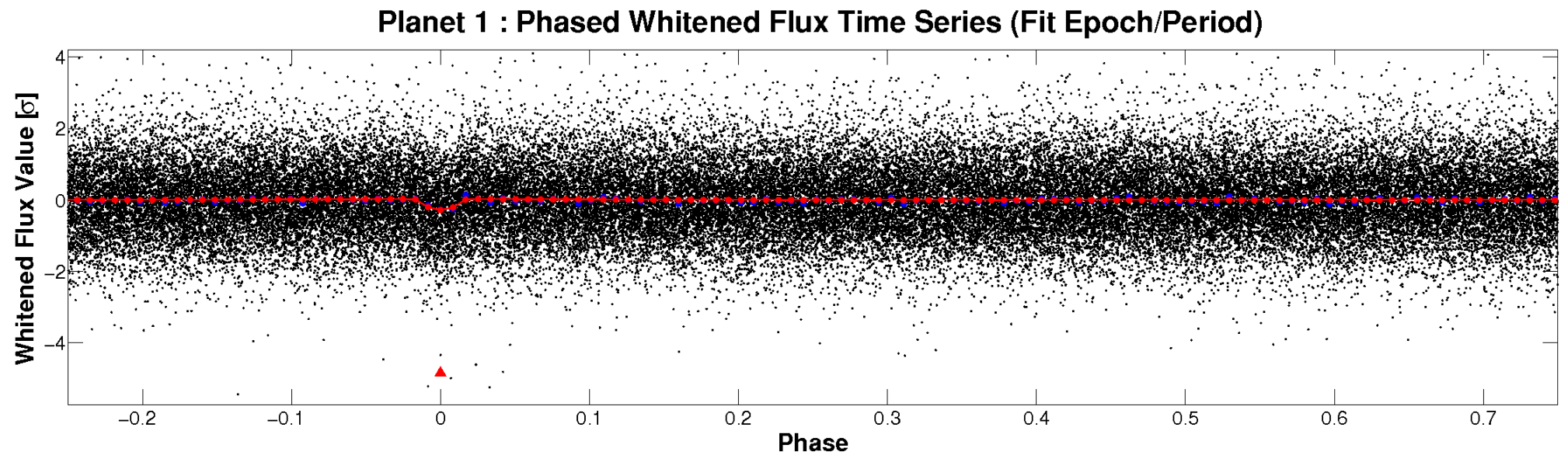
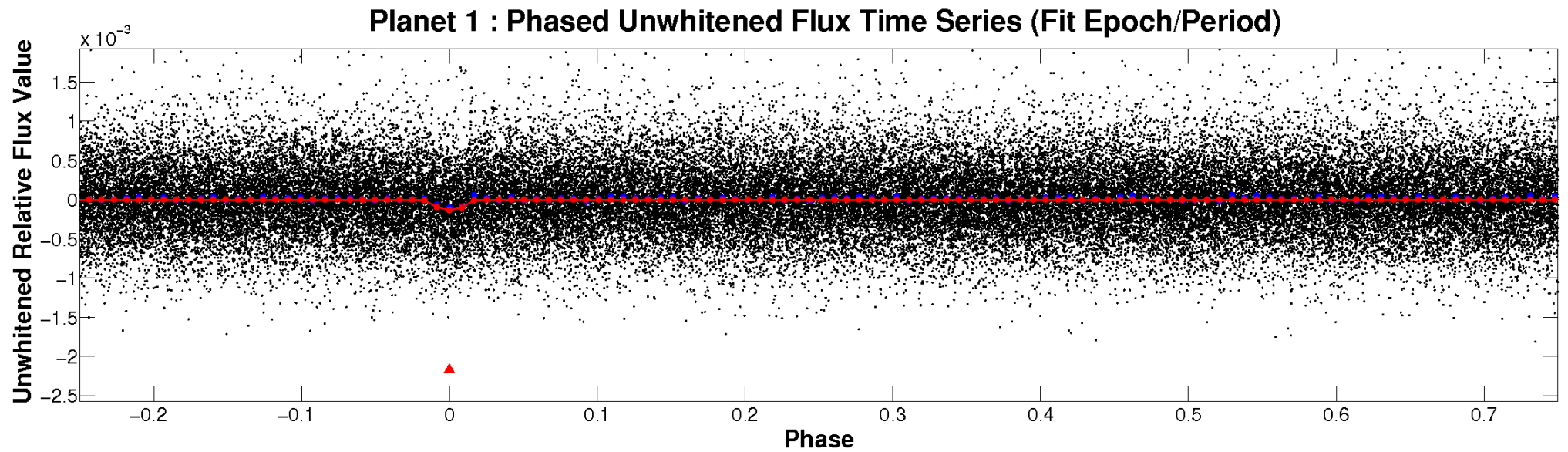


ALT Odd/Even

TCE 005466109-01

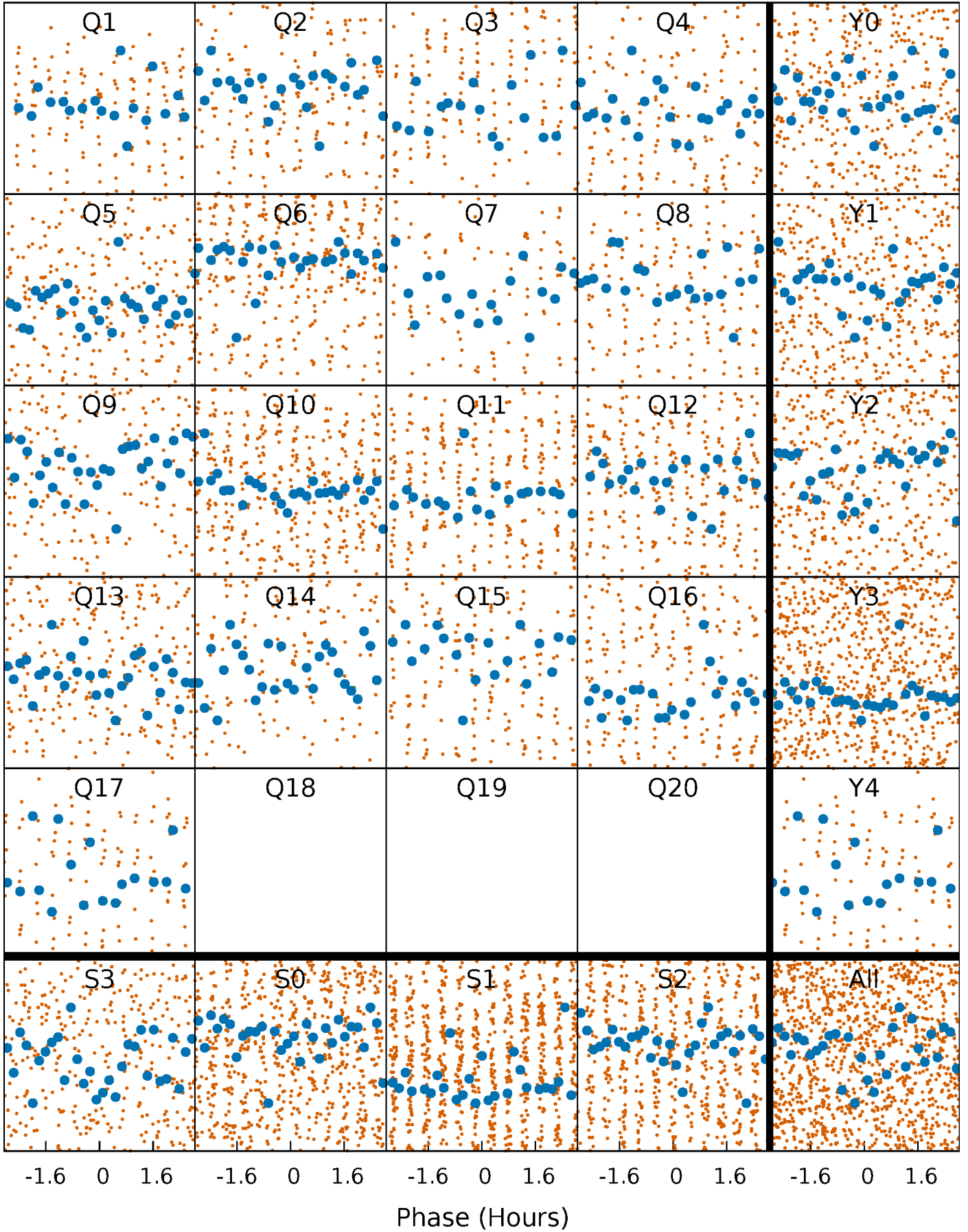


Non-Whitened Vs. Whitened Light Curve



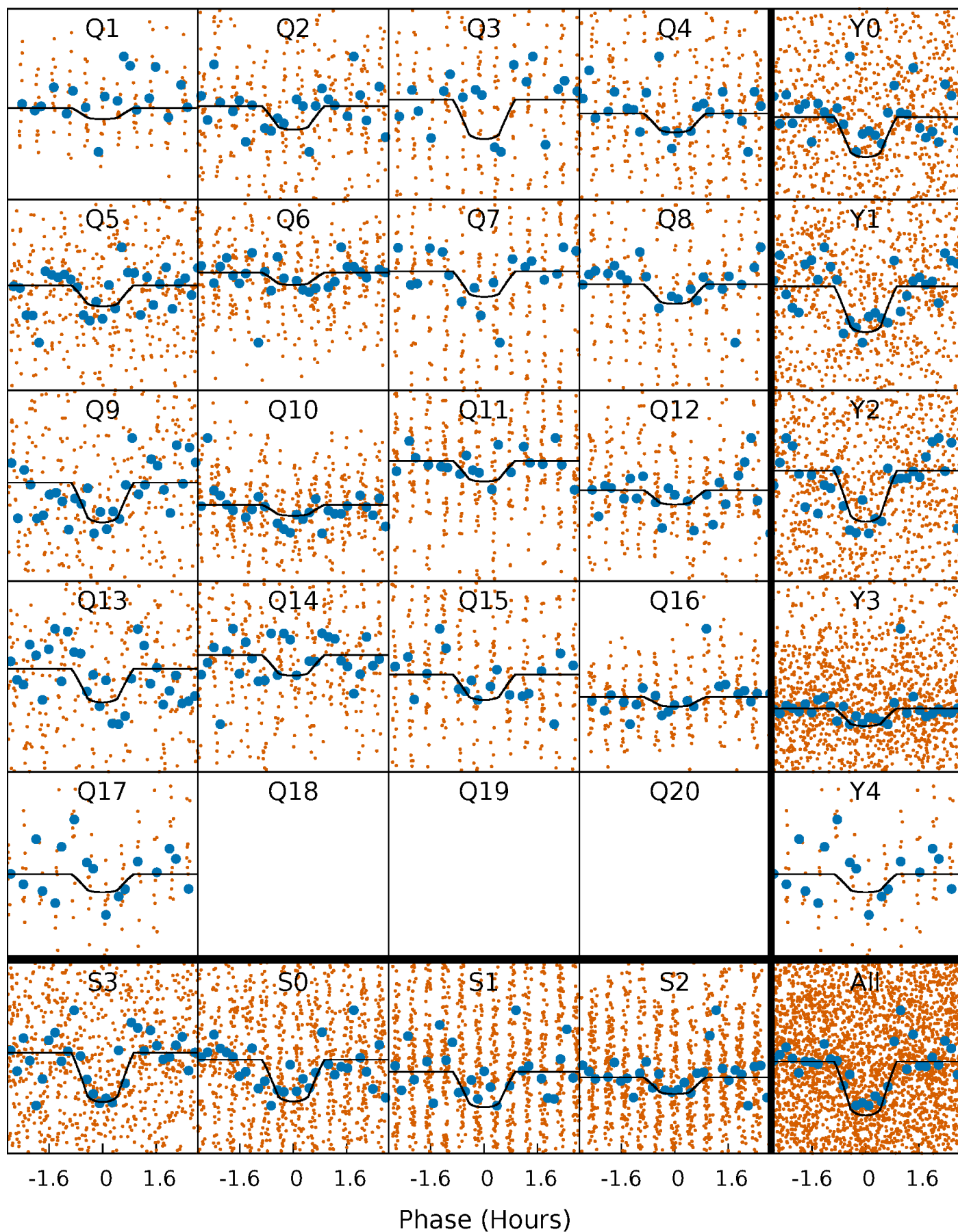
PDC Quarter-Phased Transit Curves

TCE 005466109-01 P= 2.431342 Days $T_0=133.925607$ (BKJD)



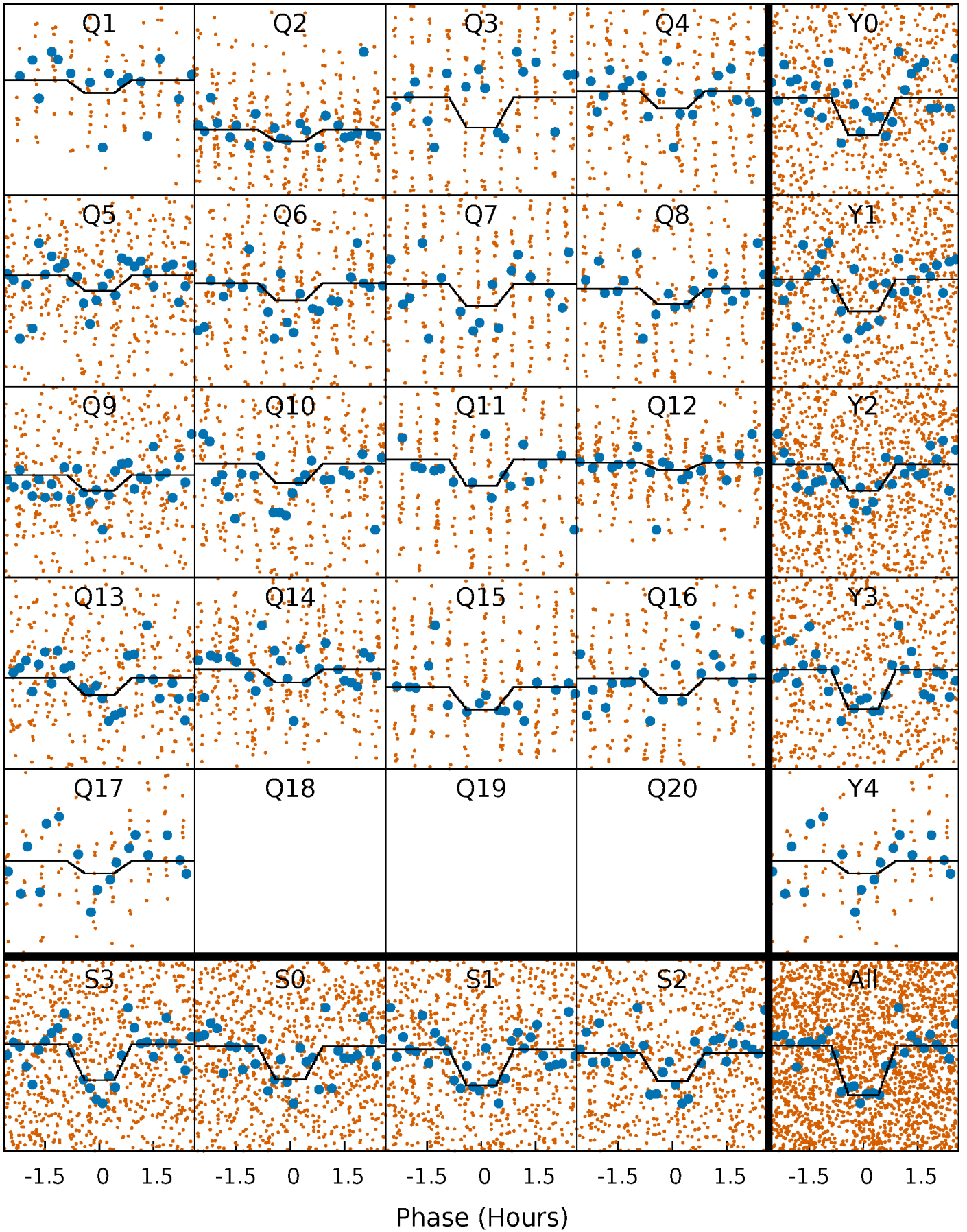
DV Quarter-Phased Transit Curves

TCE 005466109-01 P= 2.431342 Days $T_0=133.925607$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

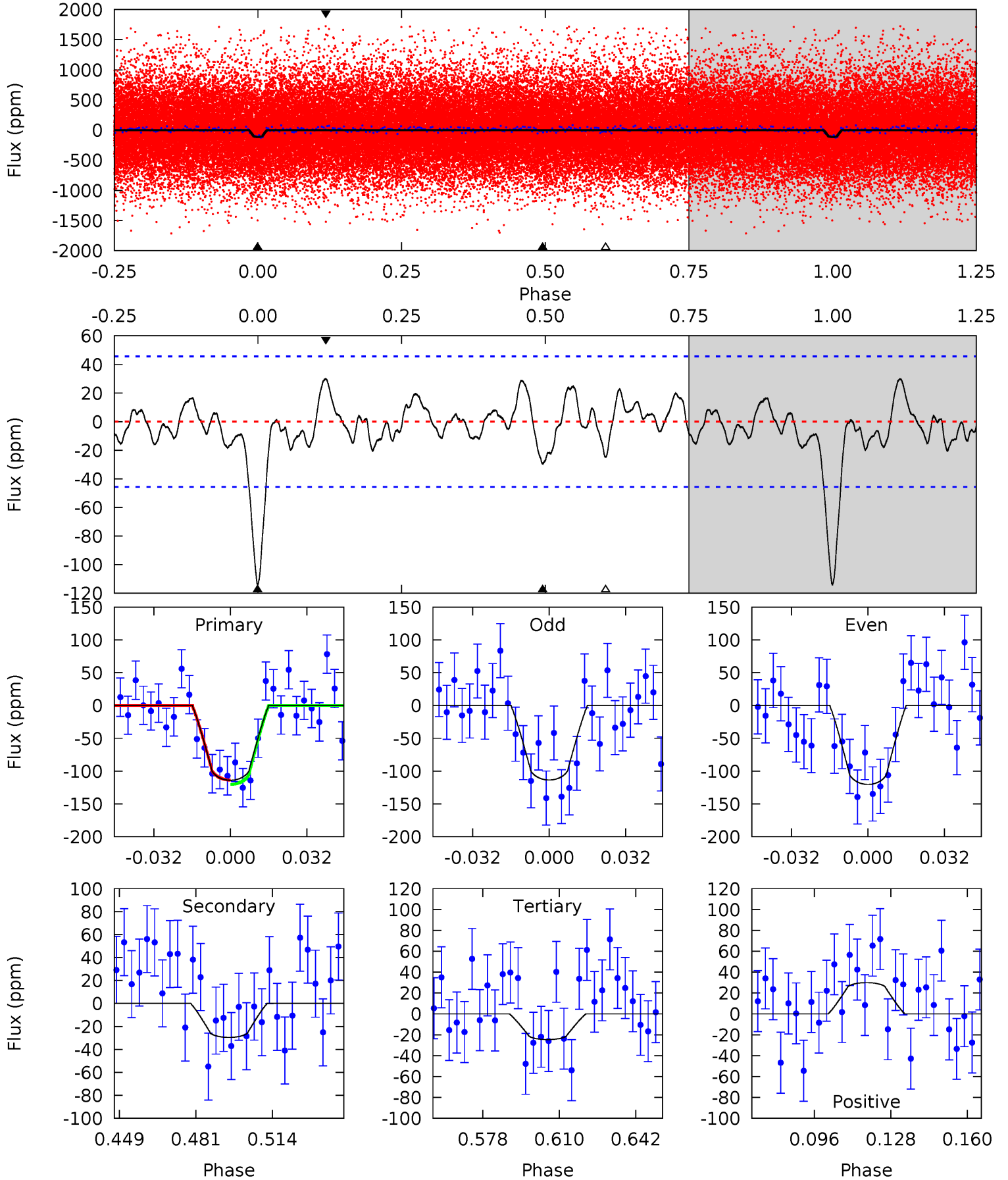
TCE 005466109-01 P= 2.431373 Days $T_0=133.916485$ (BKJD)



DV Model-Shift Uniqueness Test

005466109-01, P = 2.431342 Days, E = 131.494265 Days

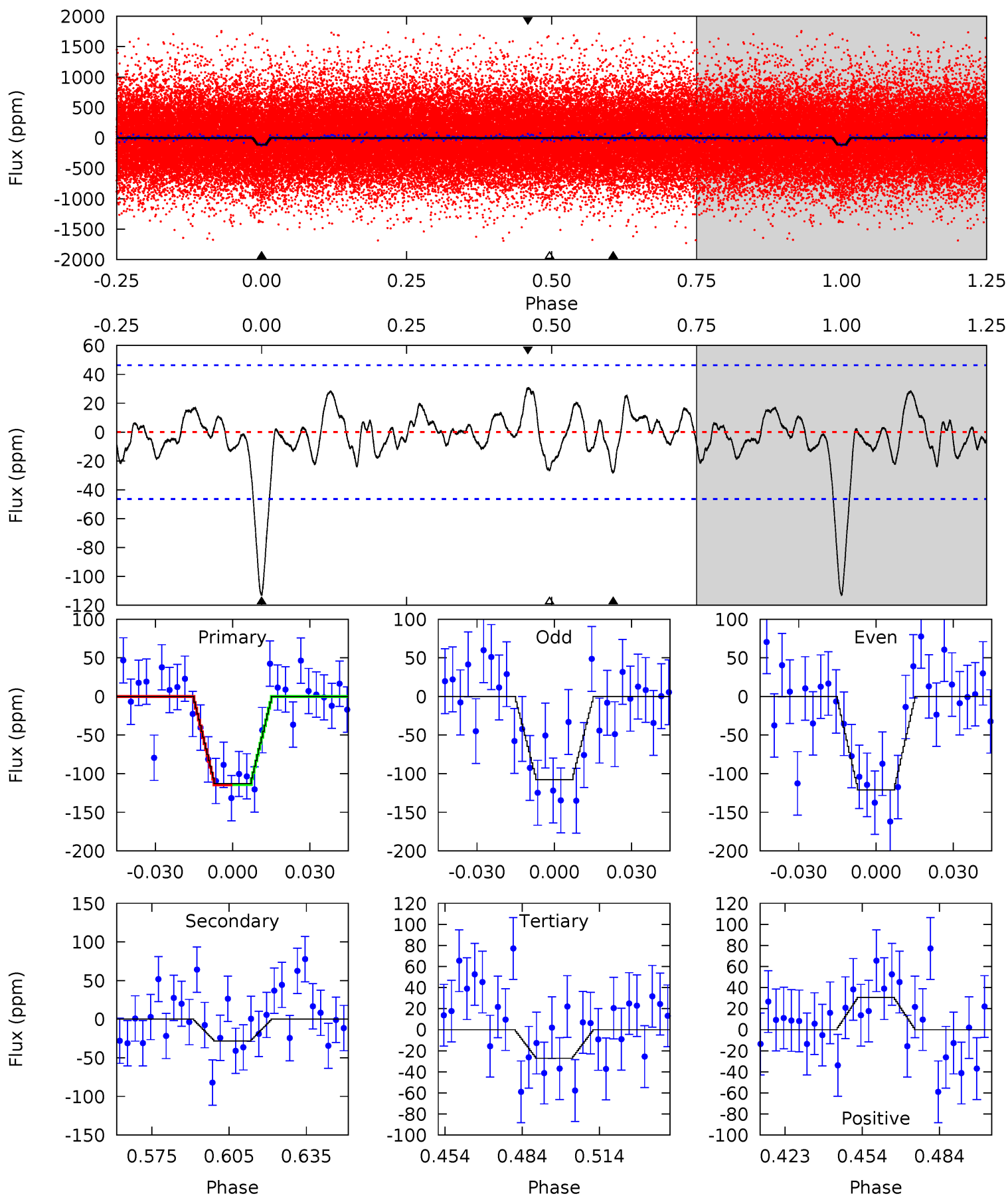
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	3.11	2.59	3.15	4.80	2.14	1.19	9.41	8.84	0.53	-0.04	0.36	0.84	0.21	0.35



Alt Model-Shift Uniqueness Test

005466109-01, P = 2.431373 Days, E = 131.485112 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	2.93	2.81	3.19	4.81	2.17	1.17	8.92	8.54	0.13	-0.25	0.70	0.91	0.21	0.04



Stellar Parameters For KIC 005466109

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6231^{+169}_{-225}	$4.488^{+0.052}_{-0.208}$	$-0.320^{+0.300}_{-0.300}$	$0.955^{+0.291}_{-0.097}$	$1.025^{+0.134}_{-0.134}$	$1.655^{+0.451}_{-0.851}$
	+3%/-4%	+1%/-5%	+94%/-94%	+30%/-10%	+13%/-13%	+27%/-51%
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 005466109-01 / KOI 6582.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 10	$1.26^{+0.53}_{-0.50}$	2027^{+140}_{-94}	4442^{+1067}_{-637}	13^{+23}_{-7}
Alt.	-28 ± 10	$1.14^{+0.53}_{-0.49}$	2026^{+140}_{-100}	4559^{+1302}_{-651}	15^{+30}_{-8}

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 $A_{\text{obs}} \gg 1.0$

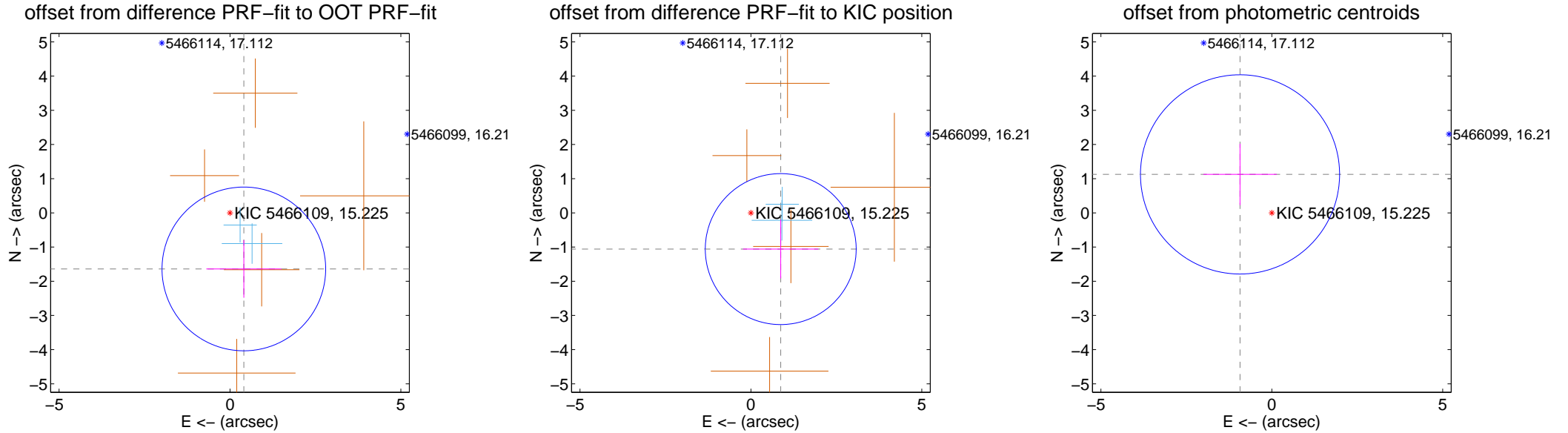
DV Centroid Data

Supplemental centroid analysis for 005466109-01. Kepler magnitude: 15.22. Transit SNR 9.62

There are 3 quarters with good PRF difference image offsets

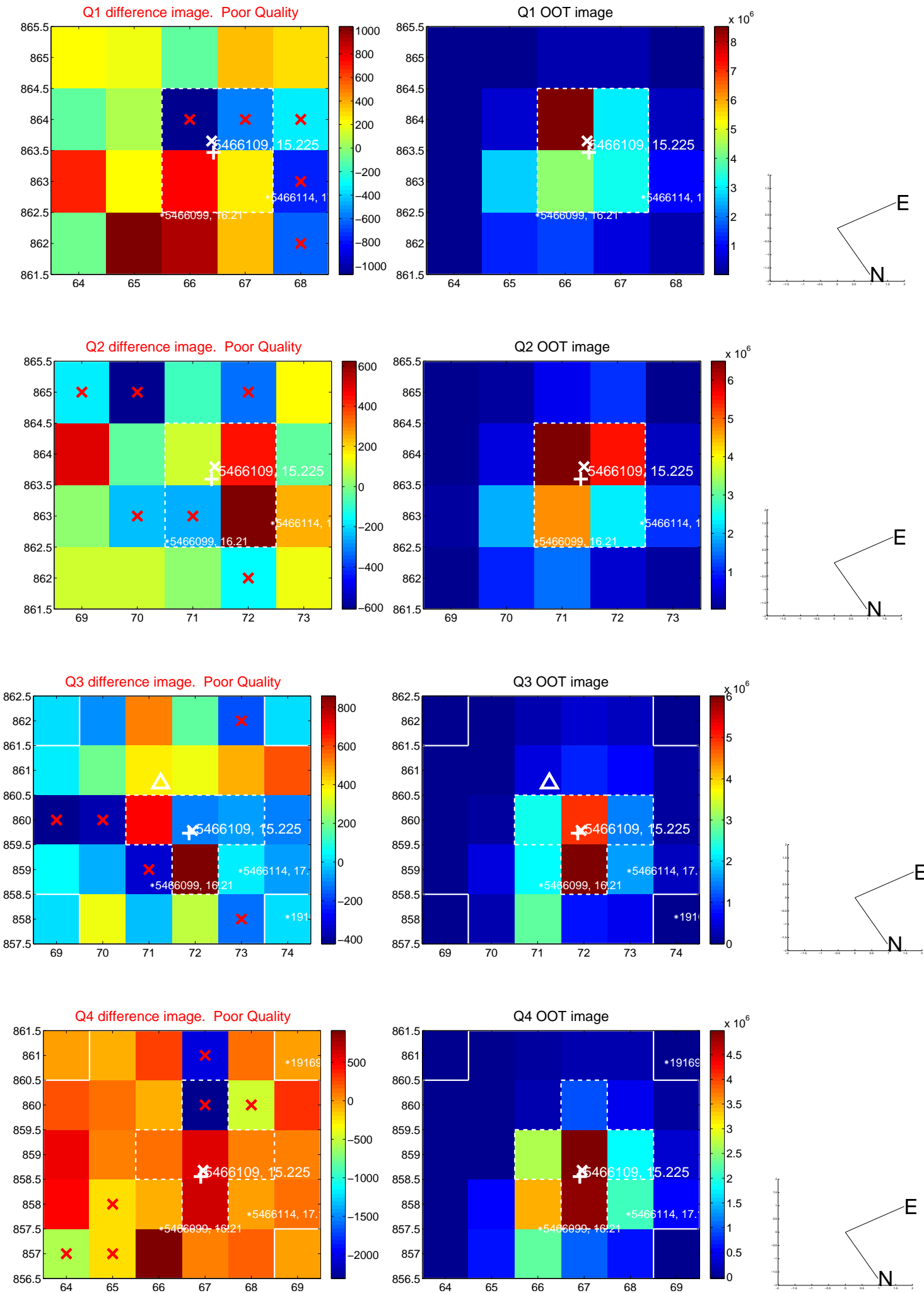
The direct PRF centroid is offset from the target star catalog position by about 0.72 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.689 ± 0.798	2.12	-0.406 ± 1.098	-1.640 ± 0.841
PRF-fit source offset from KIC position	1.373 ± 0.736	1.87	-0.873 ± 1.102	-1.060 ± 0.858
photometric centroid source offset	1.46 ± 0.97	1.50	0.93 ± 1.07	1.13 ± 0.89

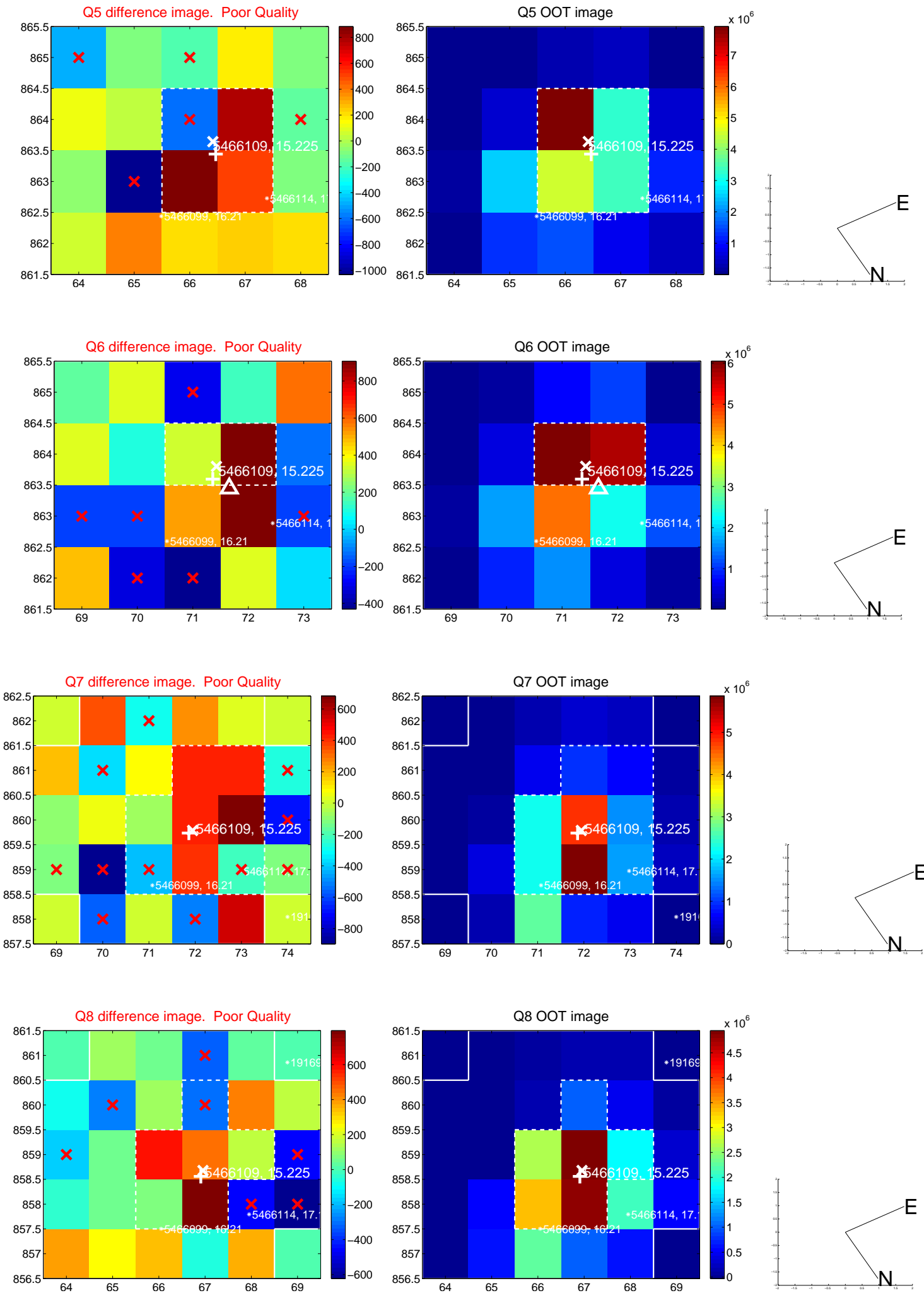


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

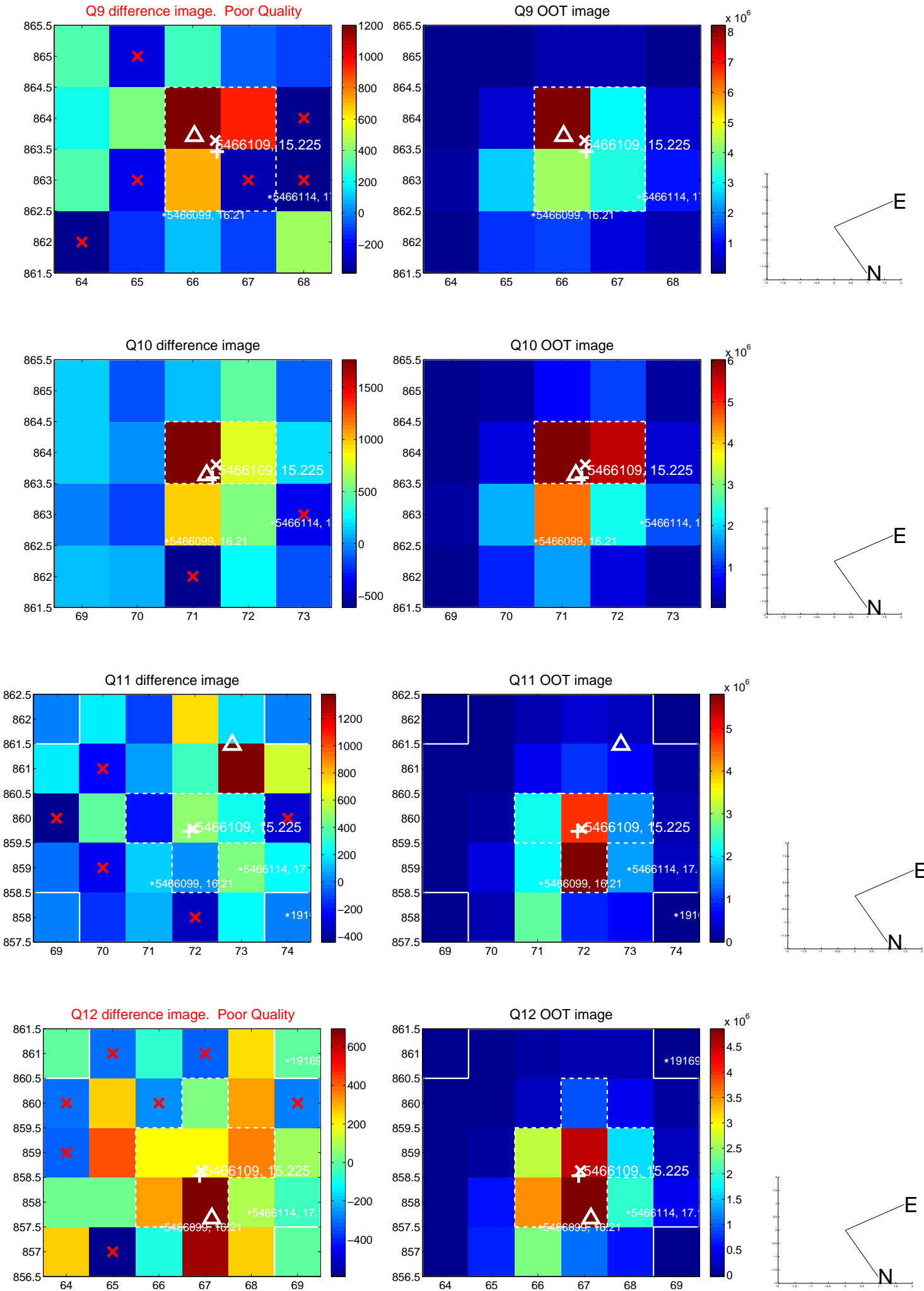
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



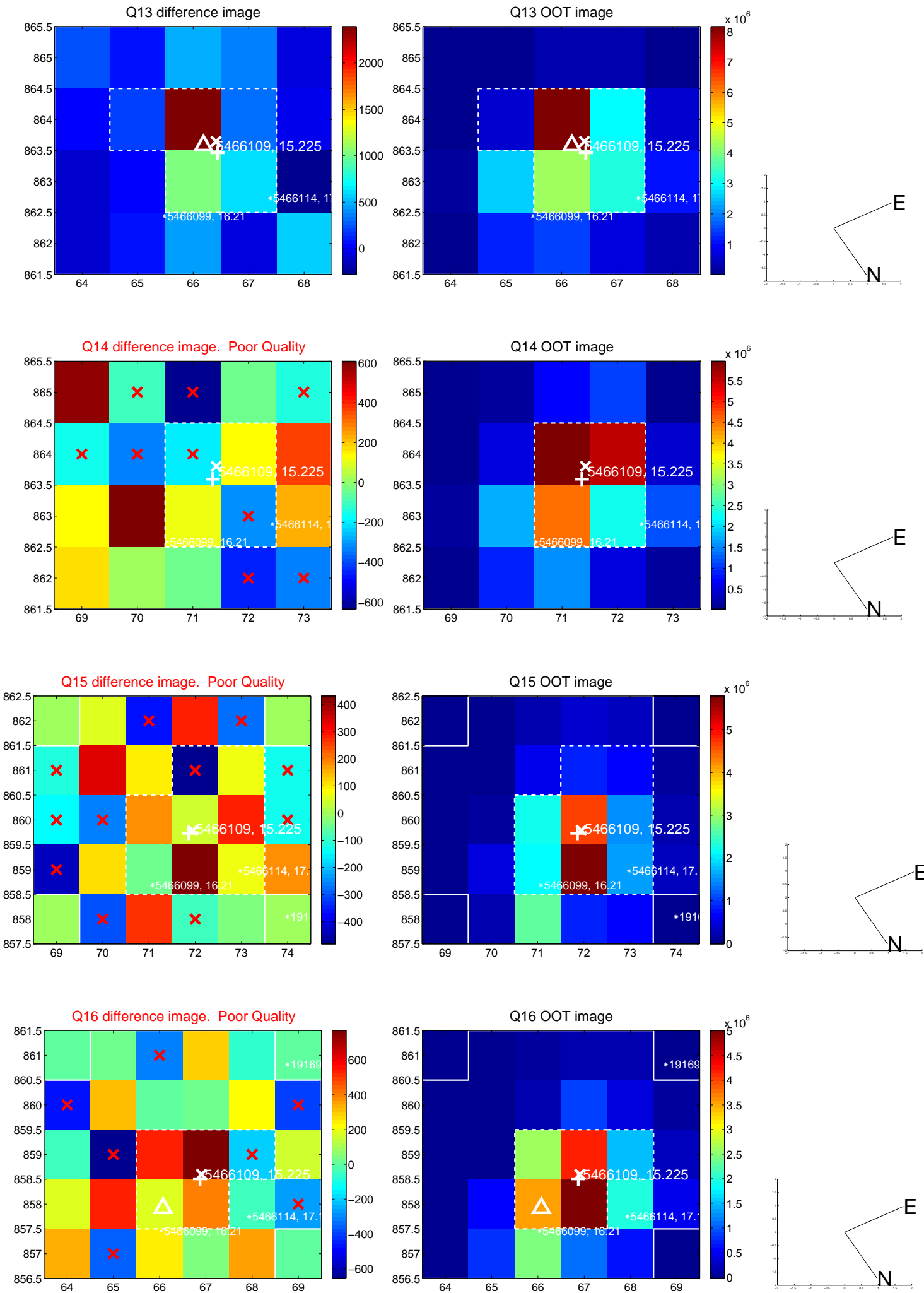
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



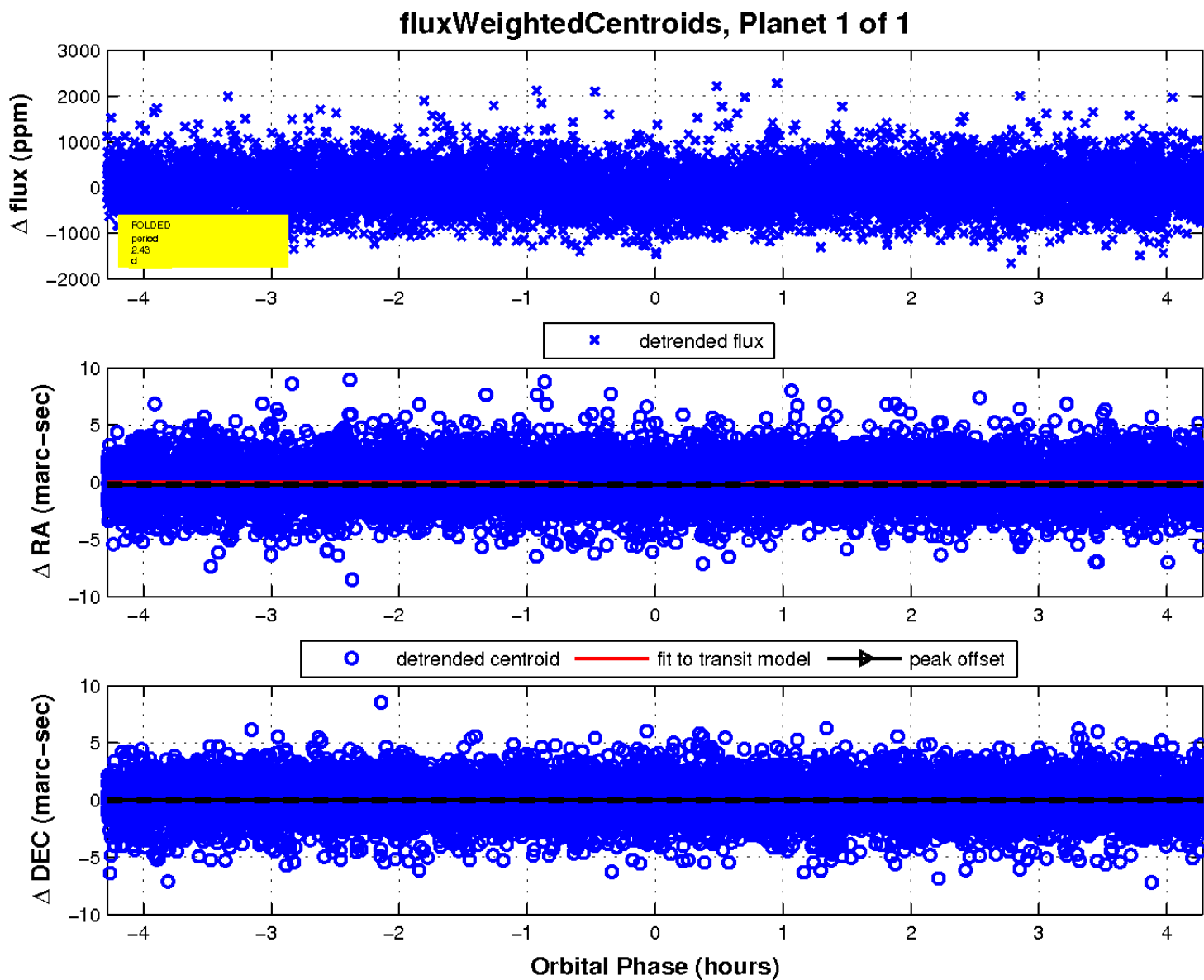
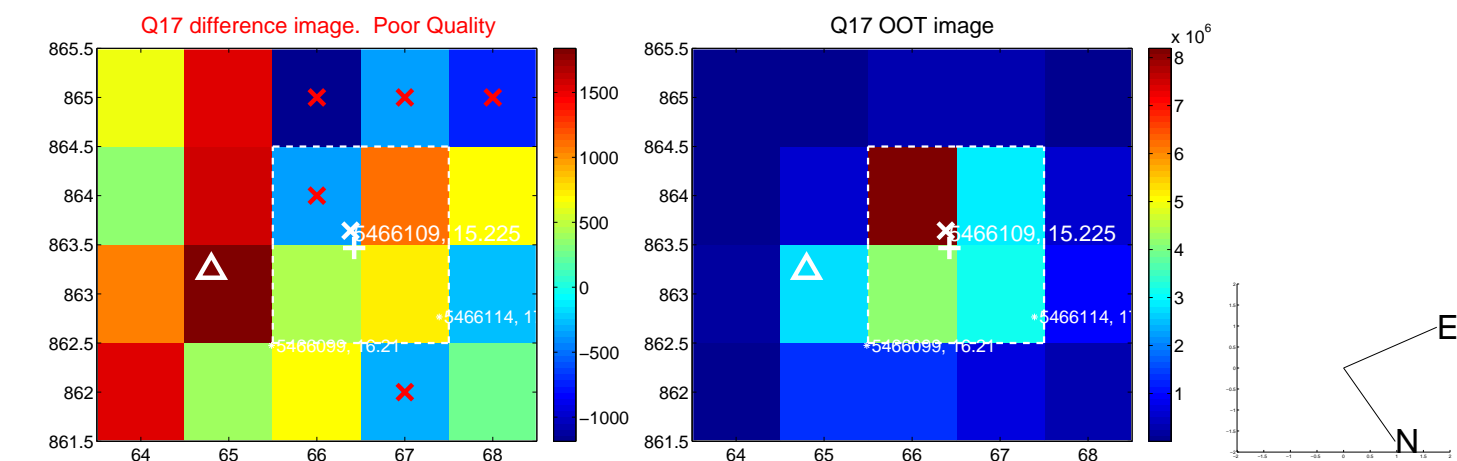
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

