

KIC 000757099

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})
000757099-01	OBS	No	0.723930	131.691088	72.9	6.241	9.5	4.8	2.11	5519	1.78	14129.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000757099-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

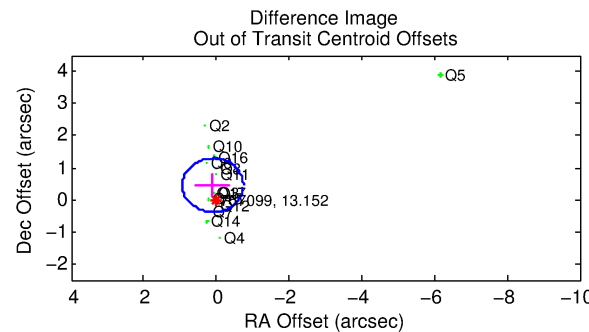
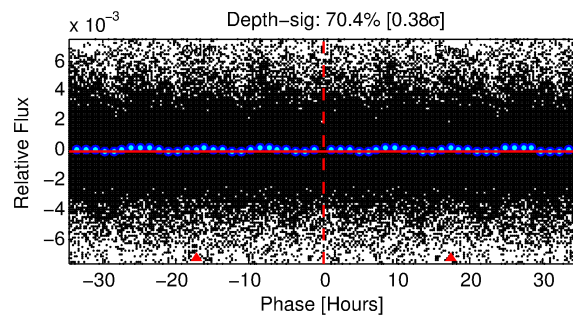
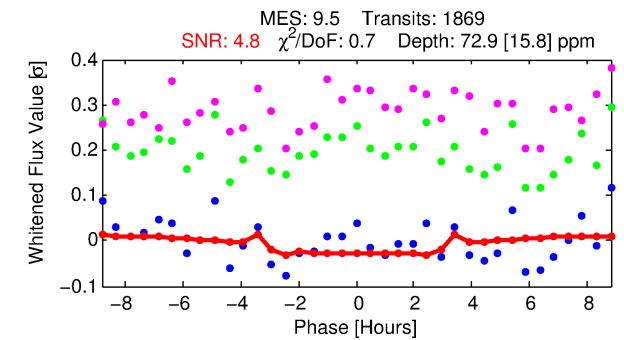
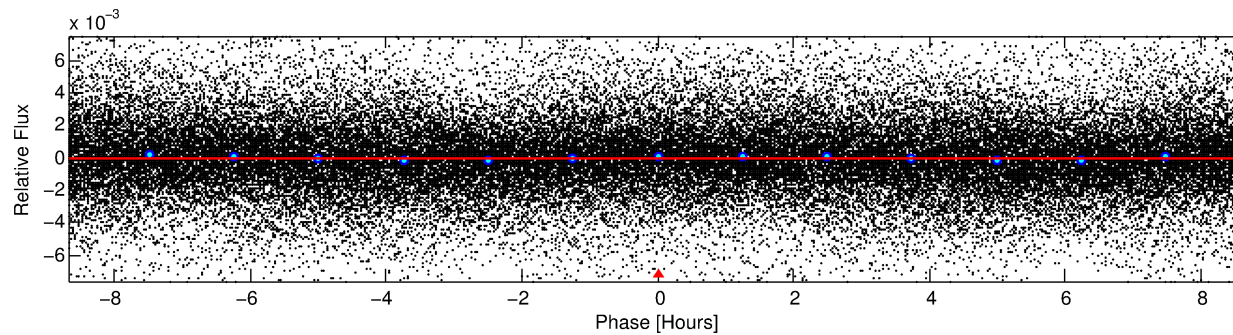
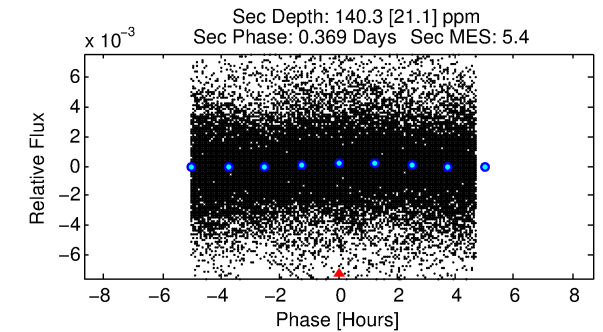
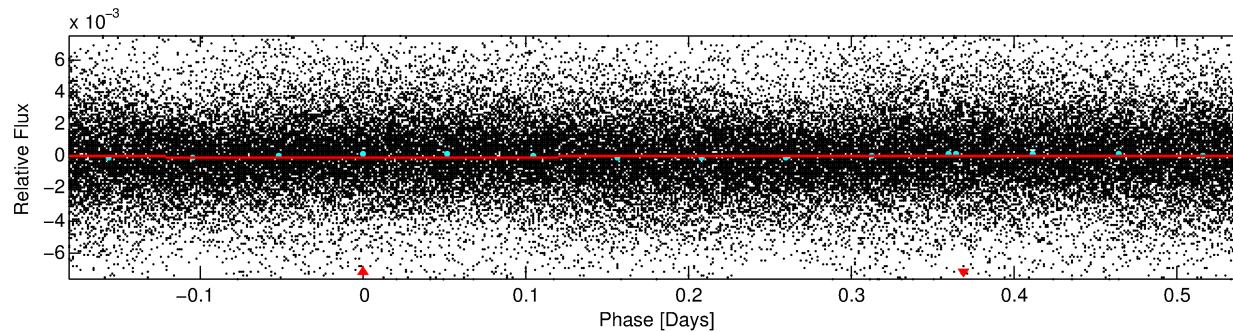
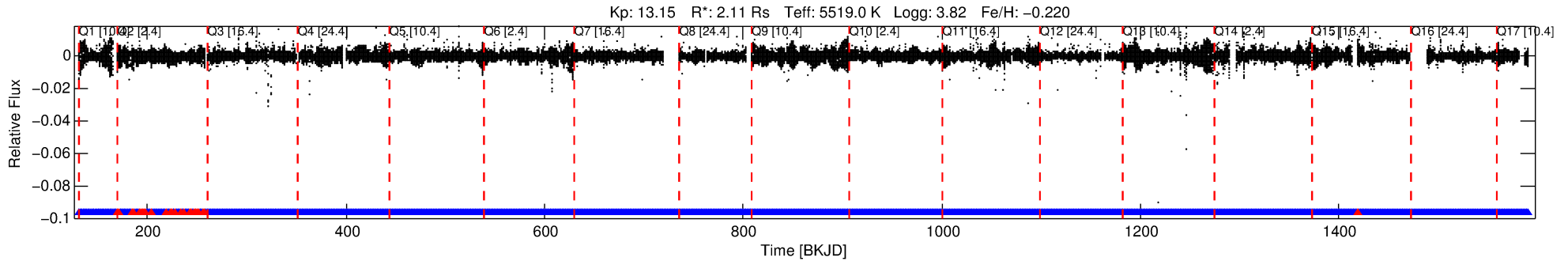
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000757099-01

No Significant Match Found

DV One-Page Summary

KIC: 757099 Candidate: 1 of 1 Period: 0.724 d



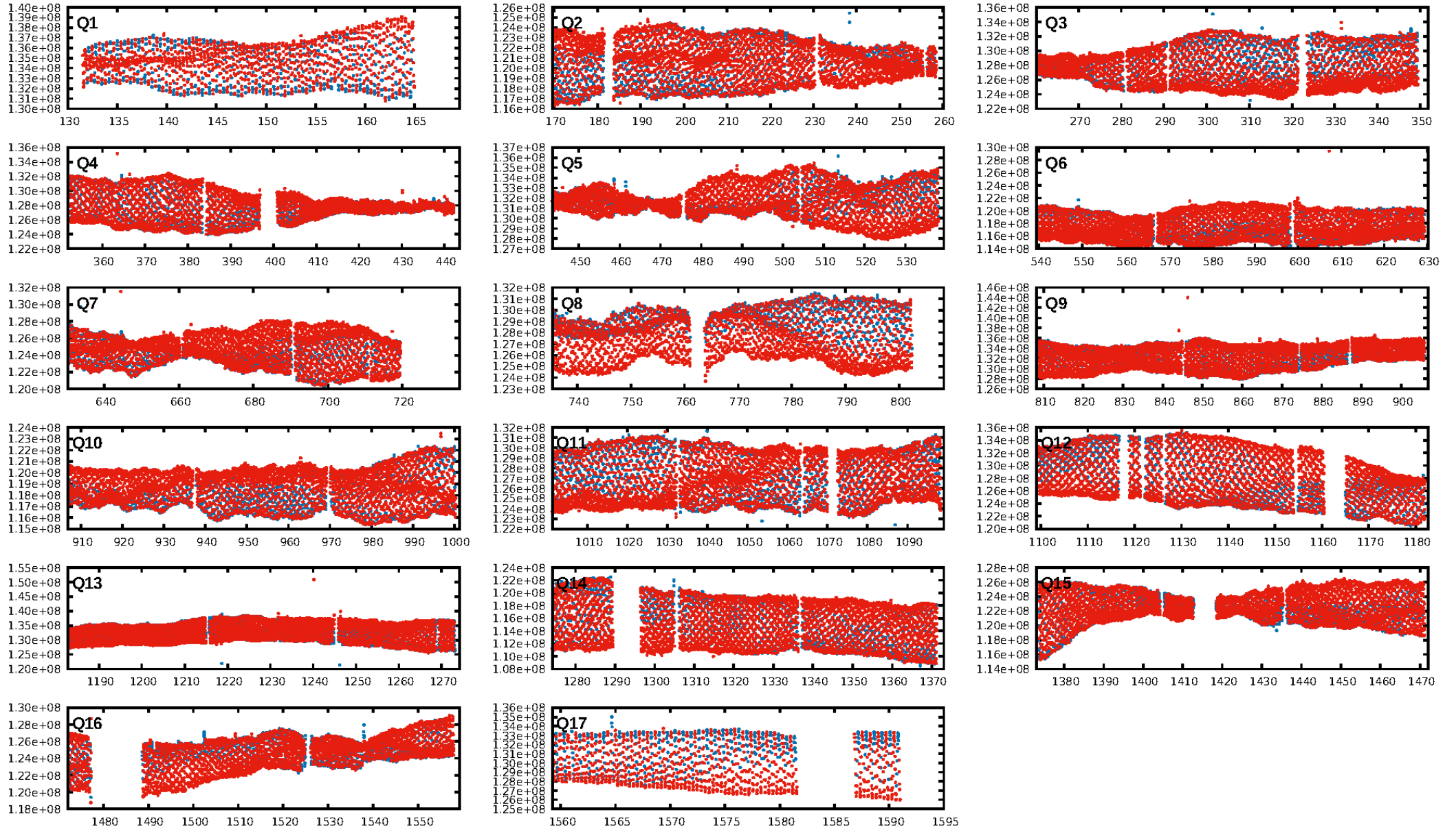
DV Fit Results:

Period = 0.72393 [0.00002] d
Epoch = 131.6911 [0.0044] BKJD
Rp/R* = 0.0077 [0.0079]
a/R* = 1.11 [0.92]
b = 0.20 [21.55]
Seff = 14129.44 [15039.31]
Teff = 2780 [740] K
Rp = 1.78 [2.10] Re
a = 0.0162 [0.0102] AU
Ag = 6.35 [14.61] [0.37σ]
Teffp = 6824 [3493] K [1.13σ]

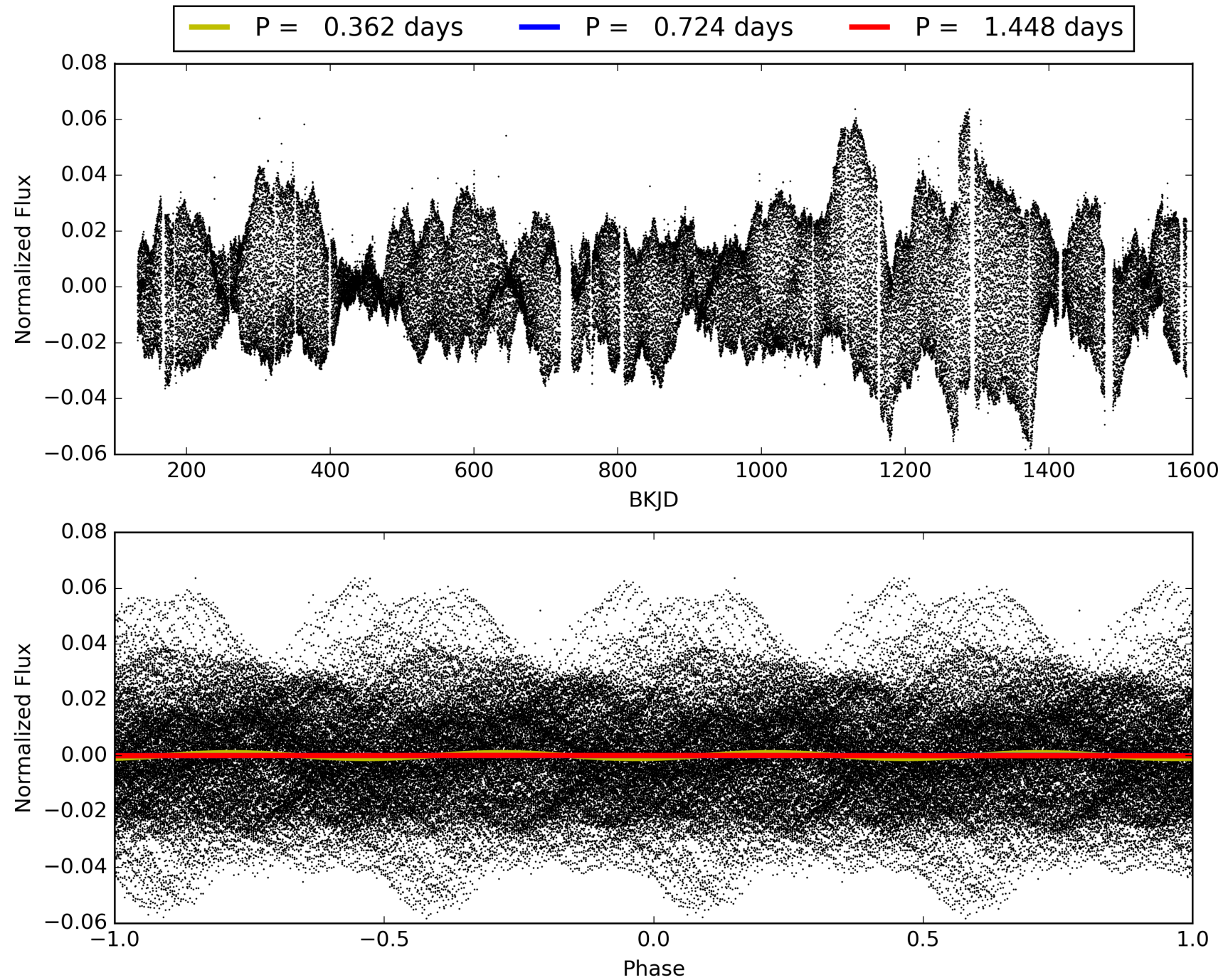
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1757/1784]
GhostDiagnostic-chr: 0.5789
Centroid-sig: N/A
Centroid-so: 0.787 arcsec [1.61σ]
OotOffset-rm: 0.465 arcsec [1.66σ]
KicOffset-rm: 0.200 arcsec [0.82σ]
OotOffset-st: 4/4/4/2 [14]
KicOffset-st: 4/4/4/2 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 000757099-01, PDC Light Curves

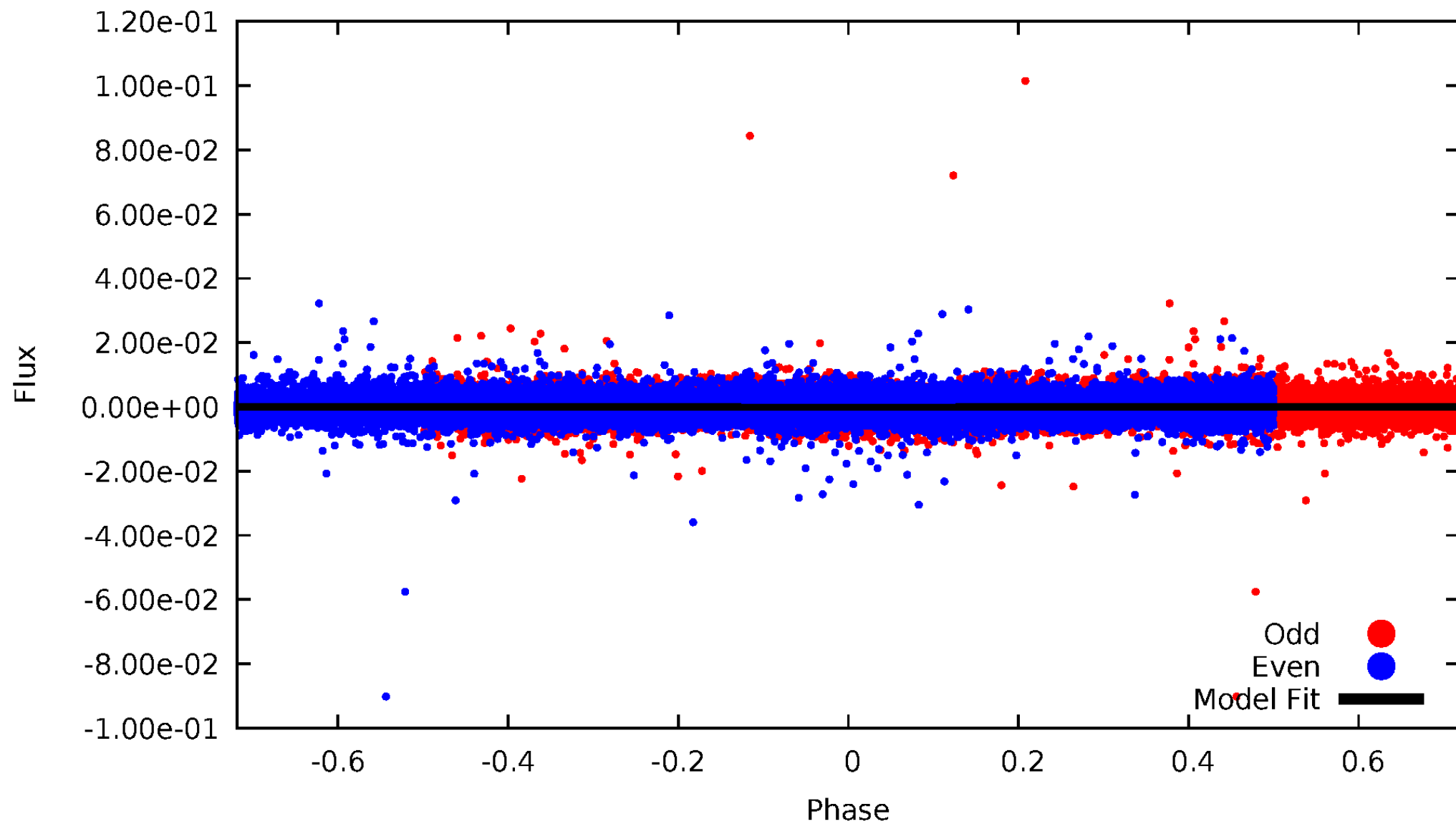


TCE 000757099-01



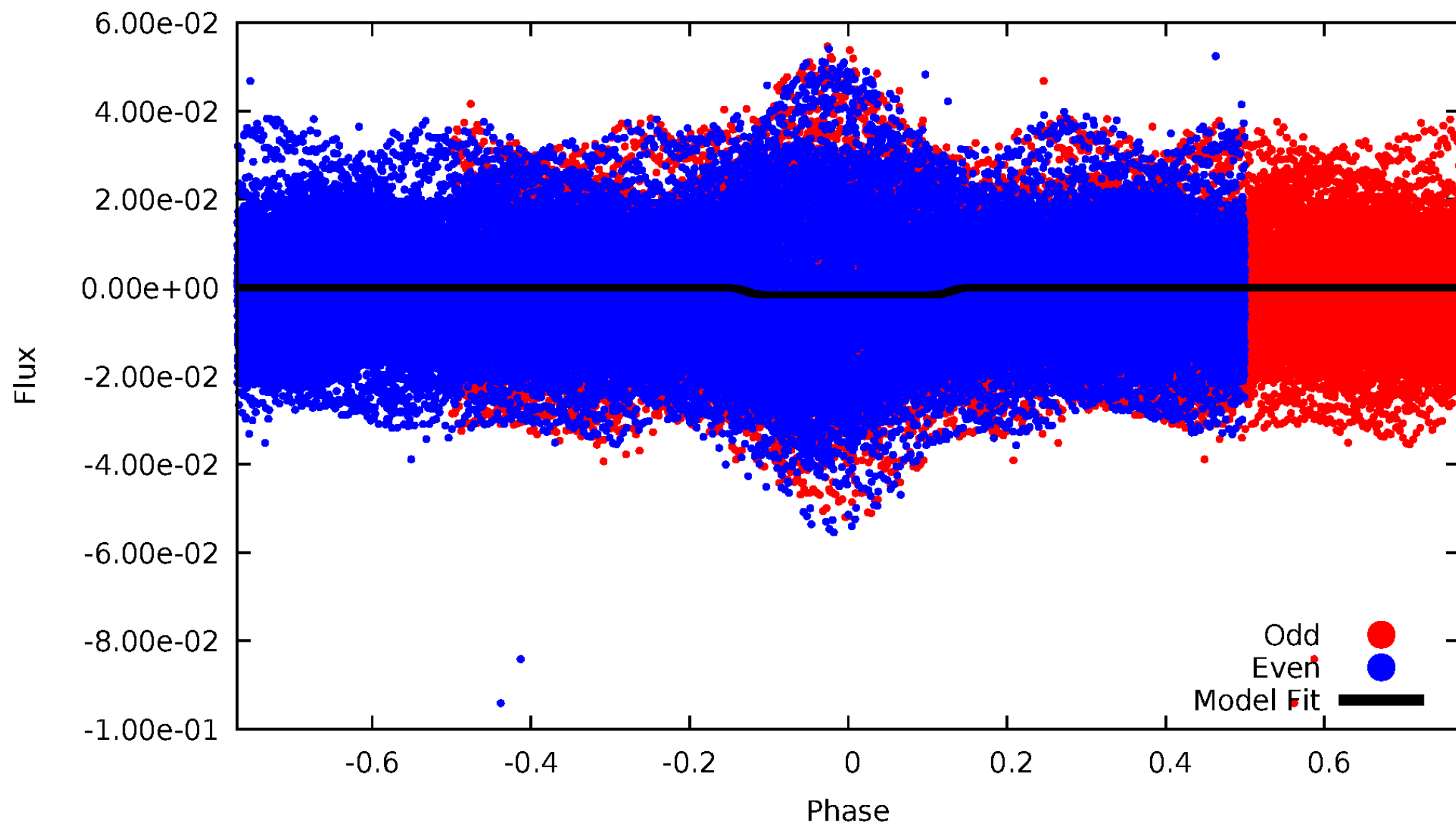
DV Odd/Even

TCE 000757099-01



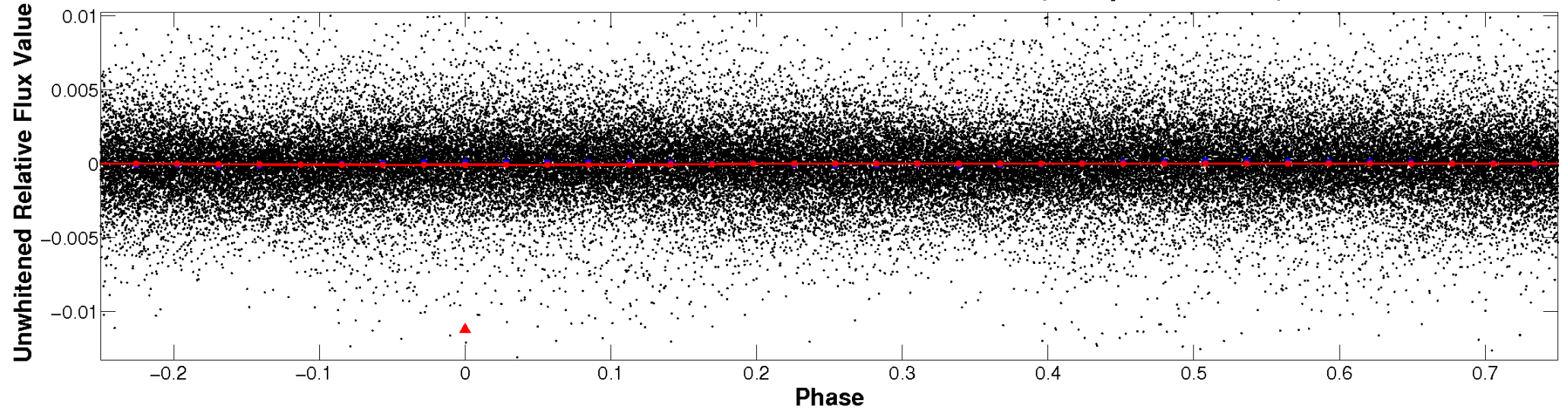
ALT Odd/Even

TCE 000757099-01

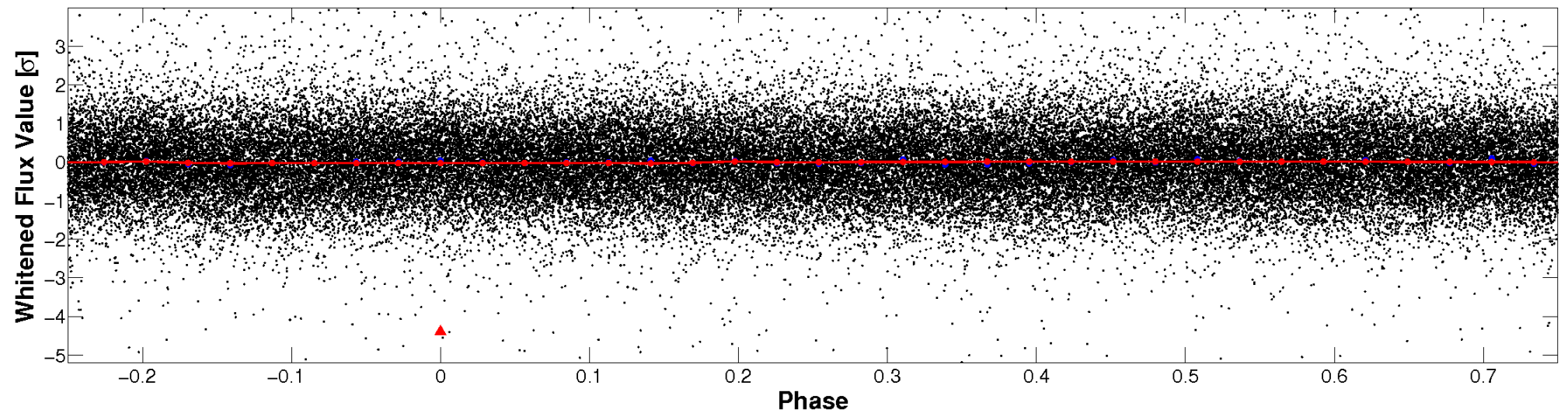


Non-Whitened Vs. Whitened Light Curve

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

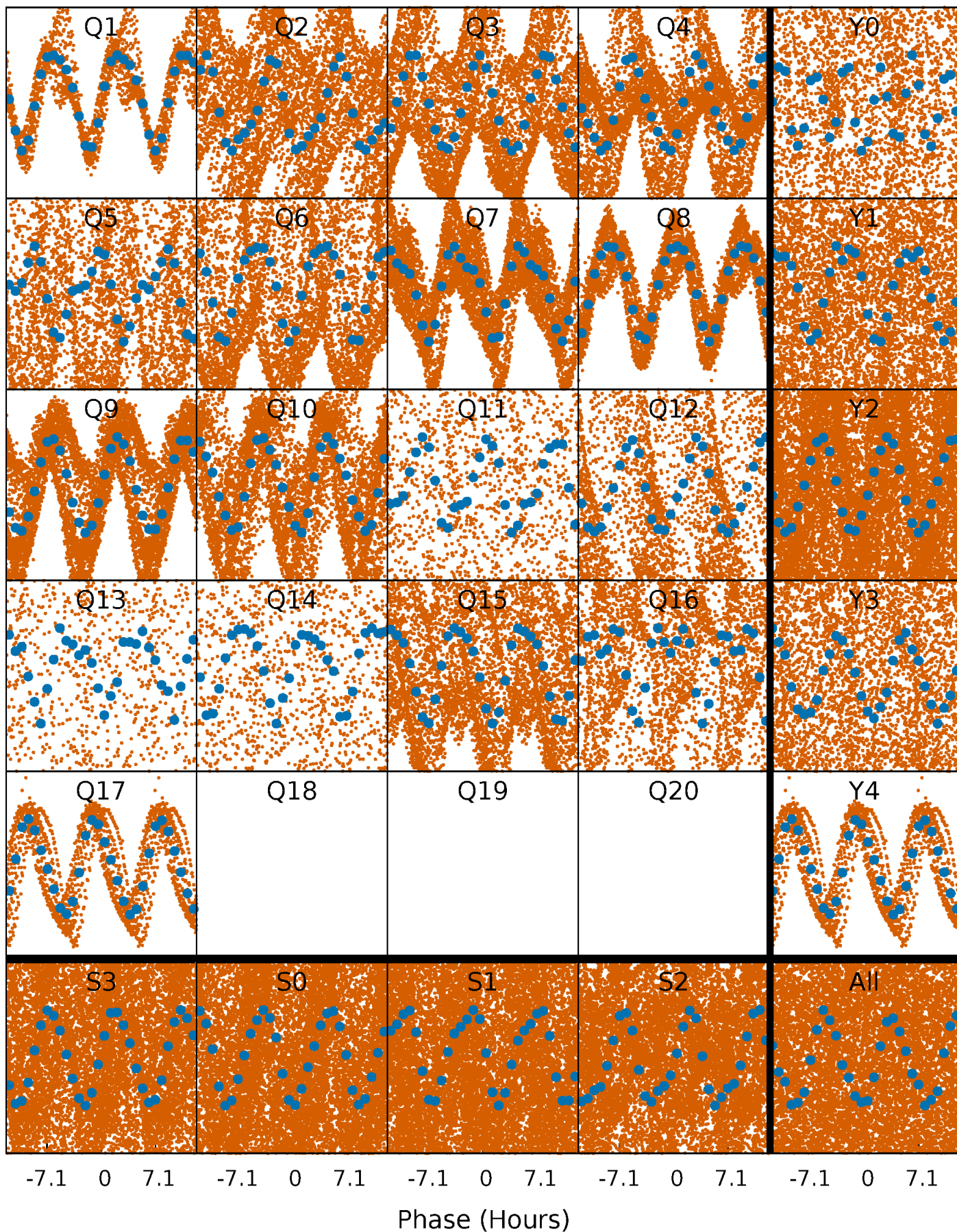


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



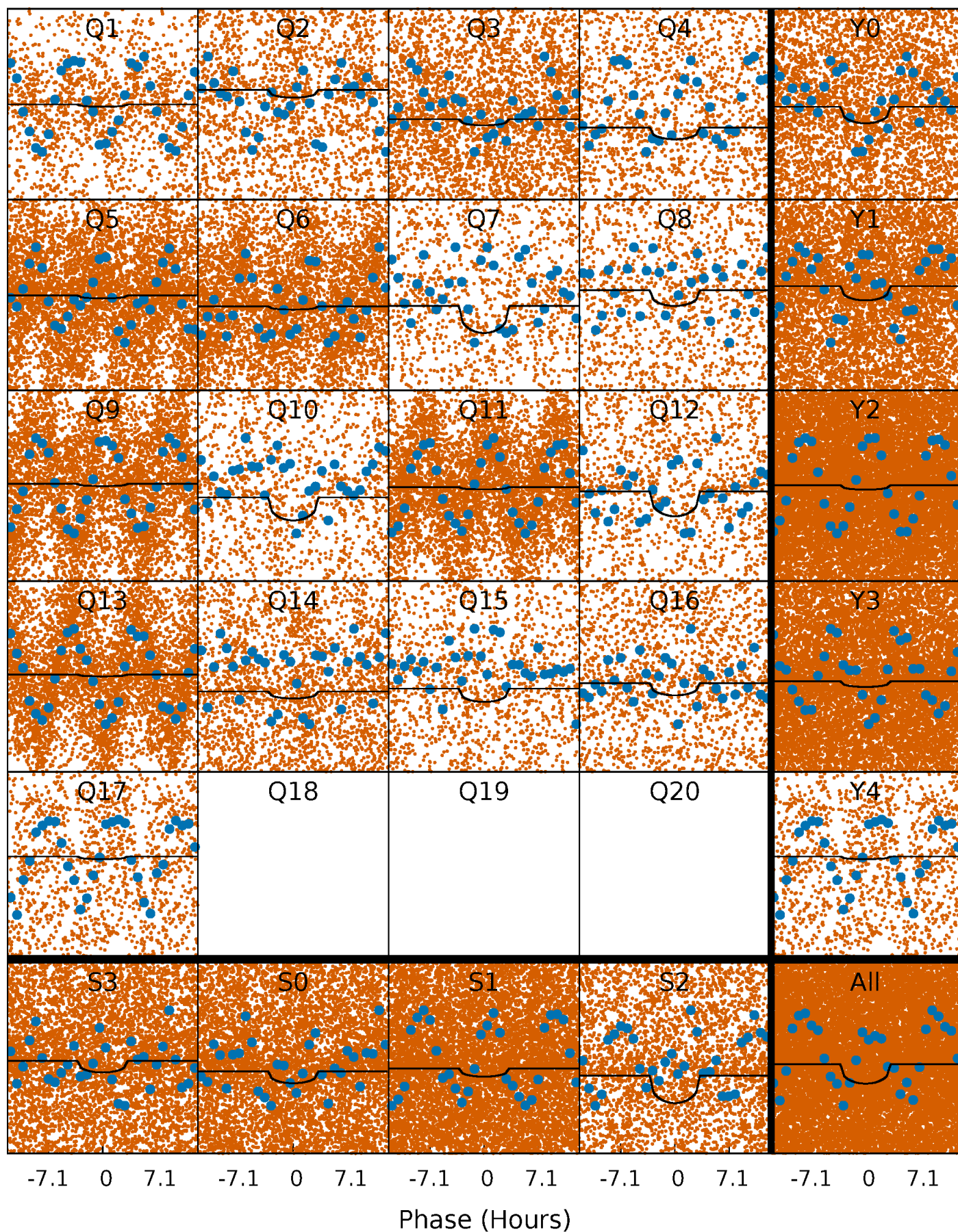
PDC Quarter-Phased Transit Curves

TCE 000757099-01 P= 0.723930 Days $T_0=131.691088$ (BKJD)



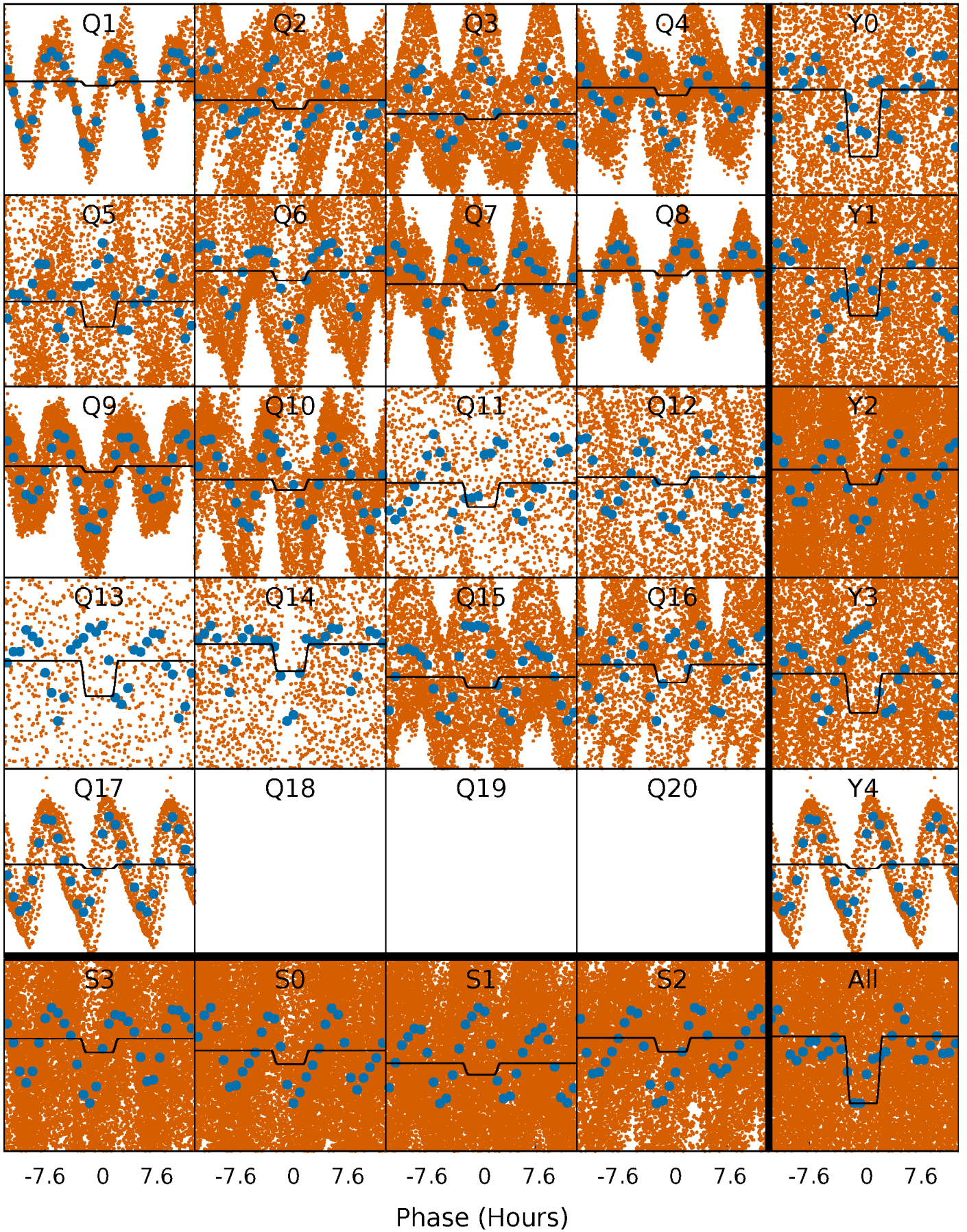
DV Quarter-Phased Transit Curves

TCE 000757099-01 P= 0.723930 Days $T_0=131.691088$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

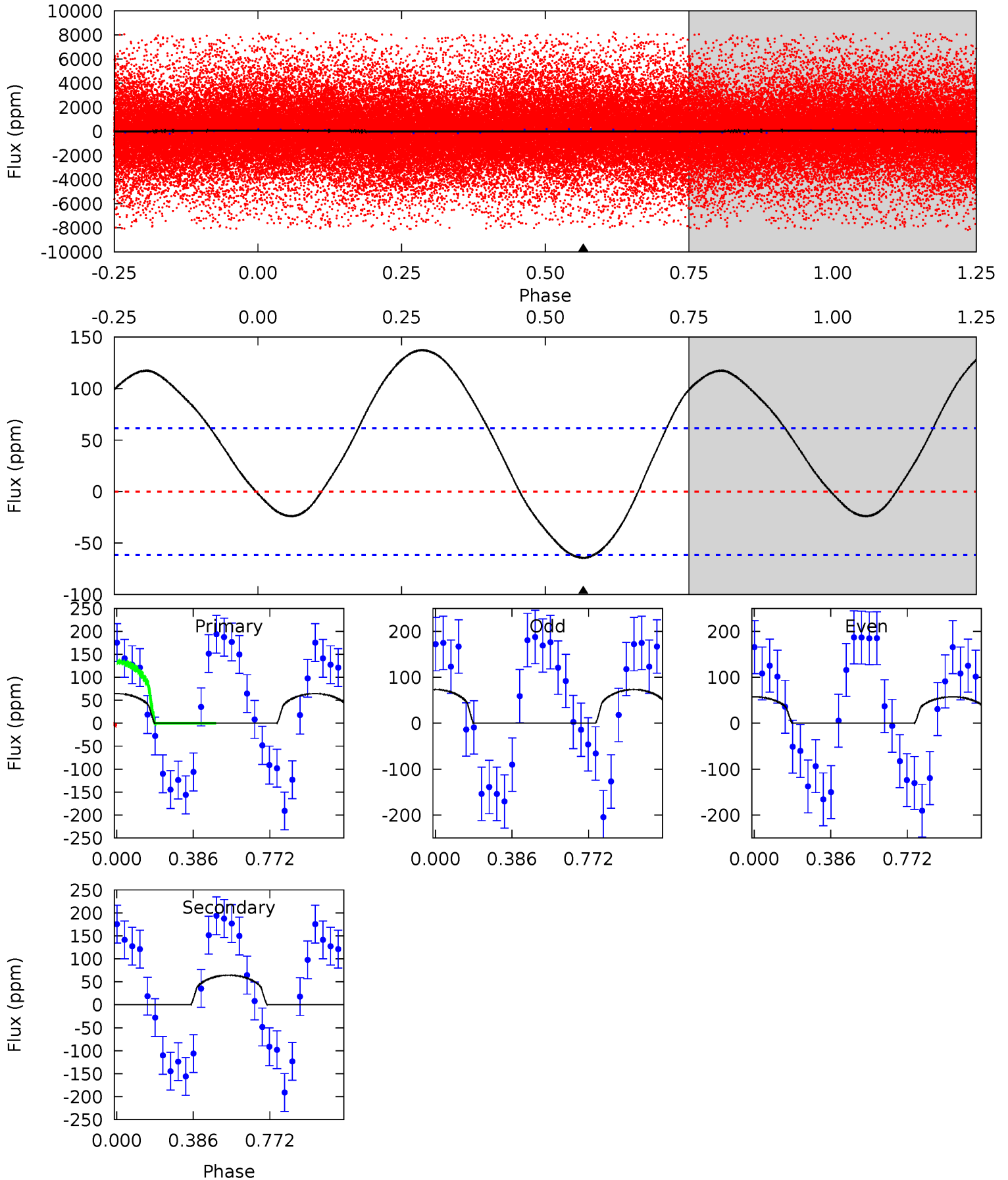
TCE 000757099-01 P= 0.723876 Days $T_0=131.695030$ (BKJD)



DV Model-Shift Uniqueness Test

000757099-01, P = 0.723930 Days, E = 130.967158 Days

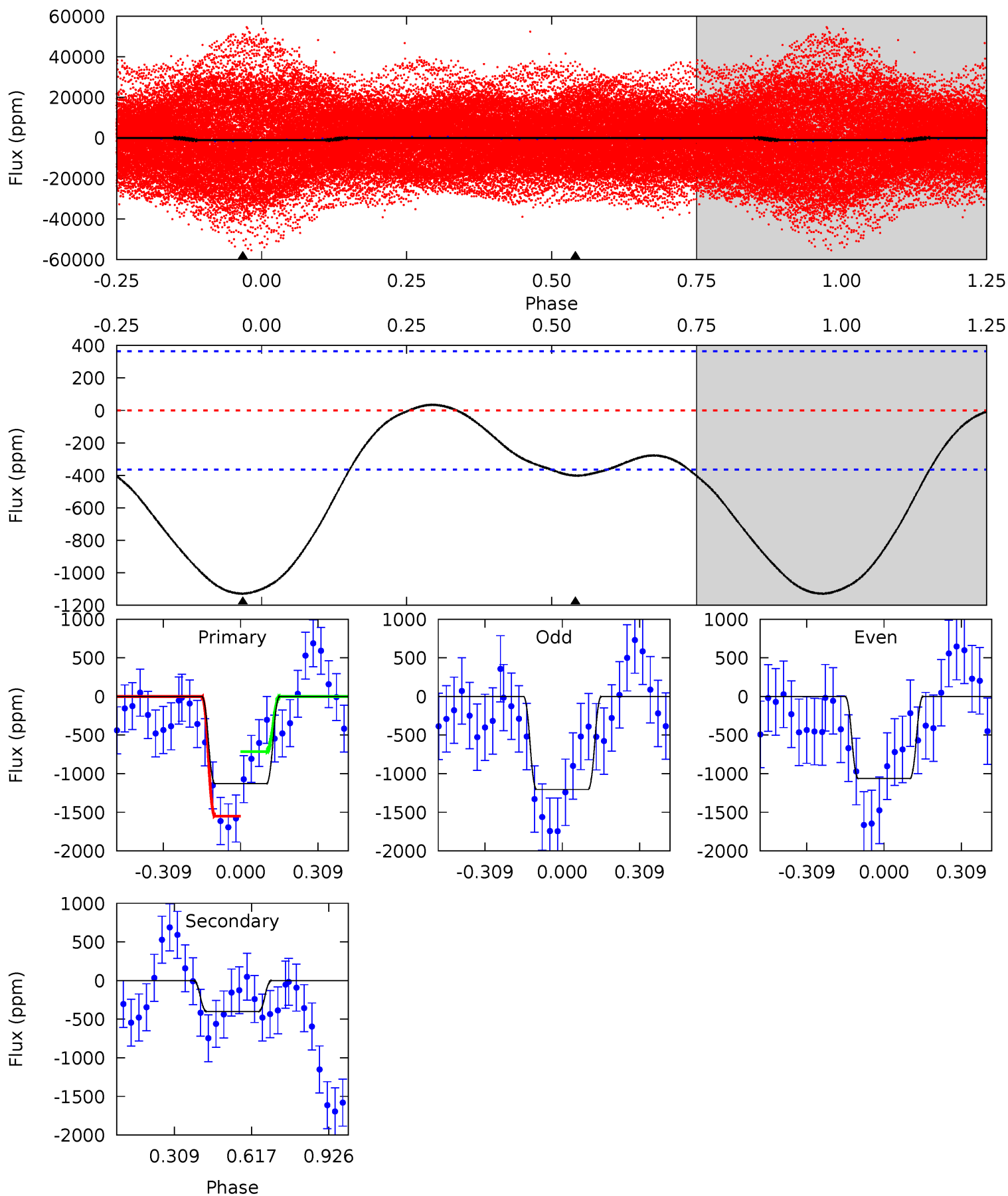
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.47	4.47	0	0	4.27	0.87	1.72	4.47	4.47	4.47	4.47	0.56	1.45	0.68	4.46



Alt Model-Shift Uniqueness Test

000757099-01, P = 0.723876 Days, E = 130.971154 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	4.78	0	0	4.32	1.02	0.50	13.4	13.4	4.78	4.78	0.84	0.55	0.03	3.48



Stellar Parameters For KIC 000757099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5519^{+182}_{-149}	$3.822^{+0.638}_{-0.213}$	$-0.220^{+0.350}_{-0.250}$	$2.109^{+0.673}_{-1.251}$	$1.077^{+0.175}_{-0.233}$	$0.162^{+1.704}_{-0.084}$
	+3%/-3%	+17%/-6%	+159%/-114%	+32%/-59%	+16%/-22%	+1053%/-52%
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 000757099-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-64 ± 14	$1.96^{+1.77}_{-1.26}$	3847^{+395}_{-640}	4912^{+3572}_{-1225}	$2.251^{+14.757}_{-1.575}$
Alt.	-402 ± 84	$8.48^{+3.10}_{-2.81}$	3834^{+396}_{-608}	3827^{+510}_{-649}	$0.795^{+0.941}_{-0.384}$

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 $A_{obs} \gg 1.0$

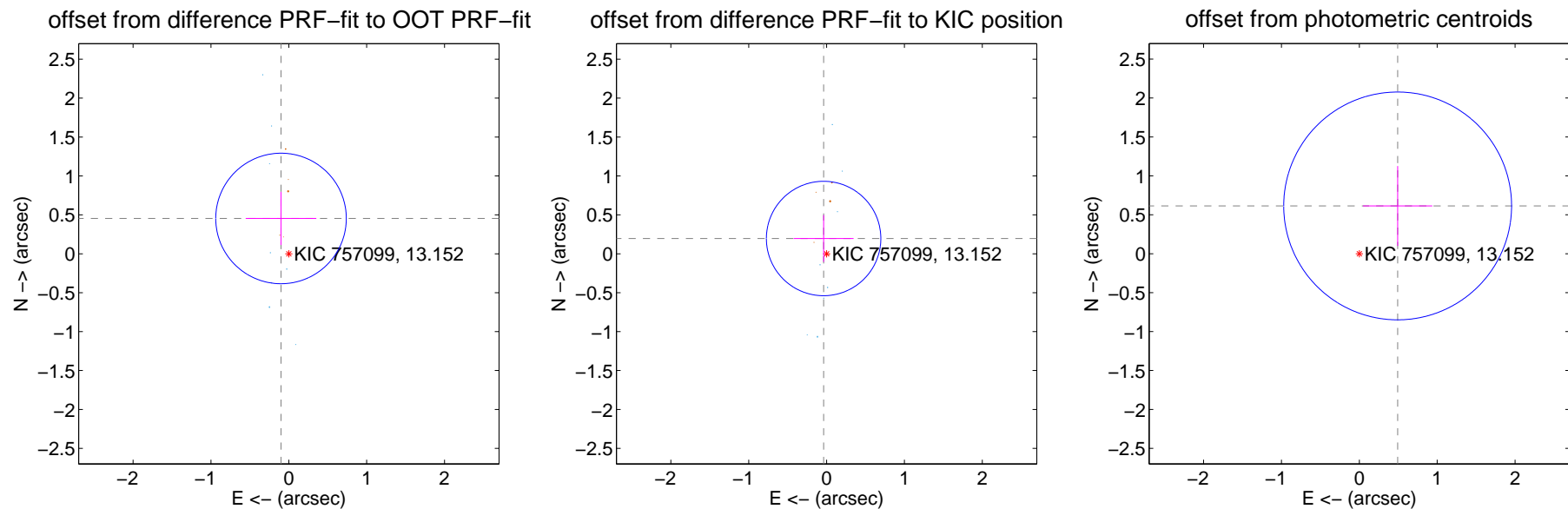
DV Centroid Data

Supplemental centroid analysis for 000757099-01. Kepler magnitude: 13.15. Transit SNR 4.84

There are 8 quarters with good PRF difference image offsets

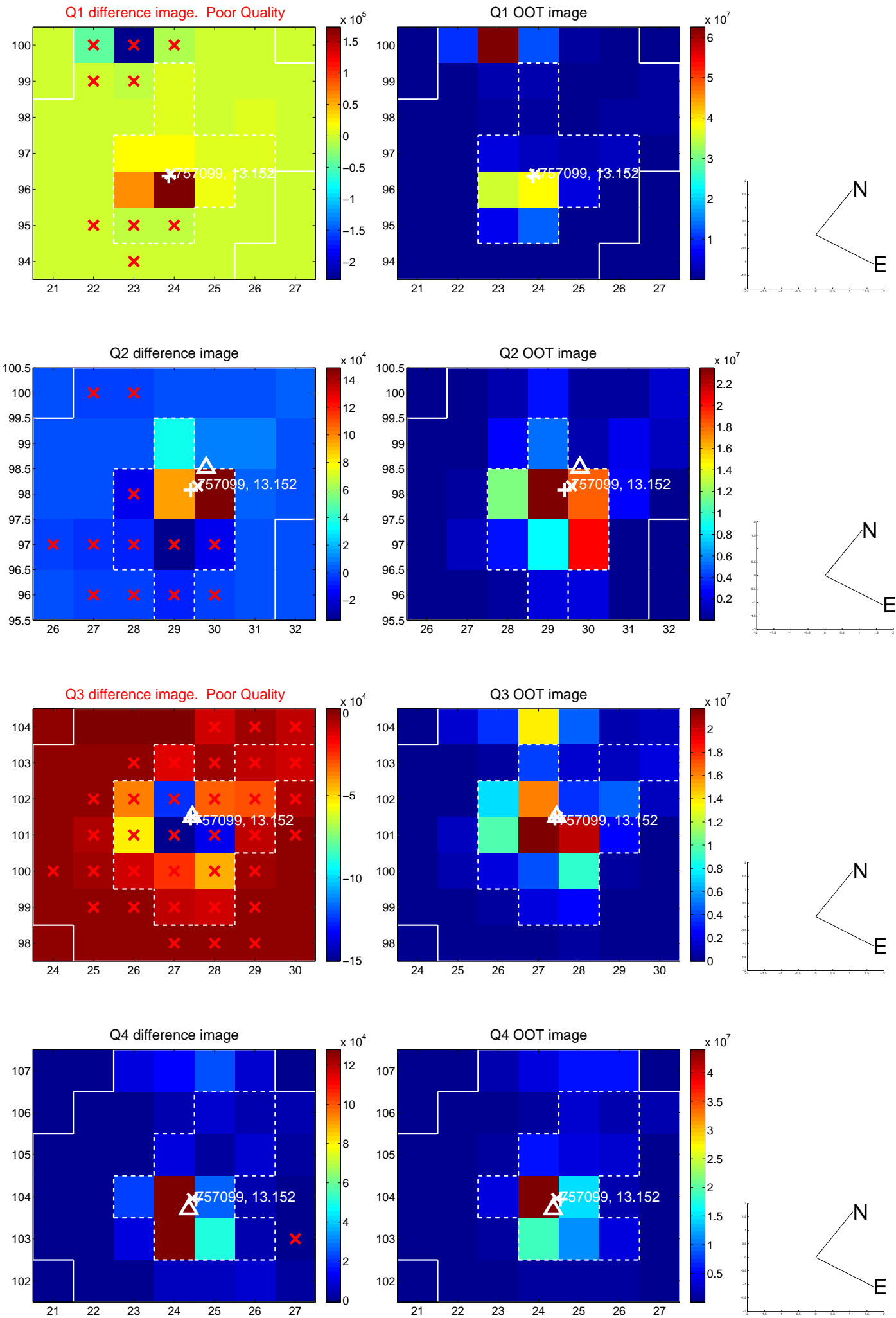
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.465 ± 0.280	1.66	0.100 ± 0.453	0.454 ± 0.341
PRF-fit source offset from KIC position	0.200 ± 0.245	0.82	0.038 ± 0.385	0.196 ± 0.301
photometric centroid source offset	0.79 ± 0.49	1.61	-0.49 ± 0.45	0.61 ± 0.51

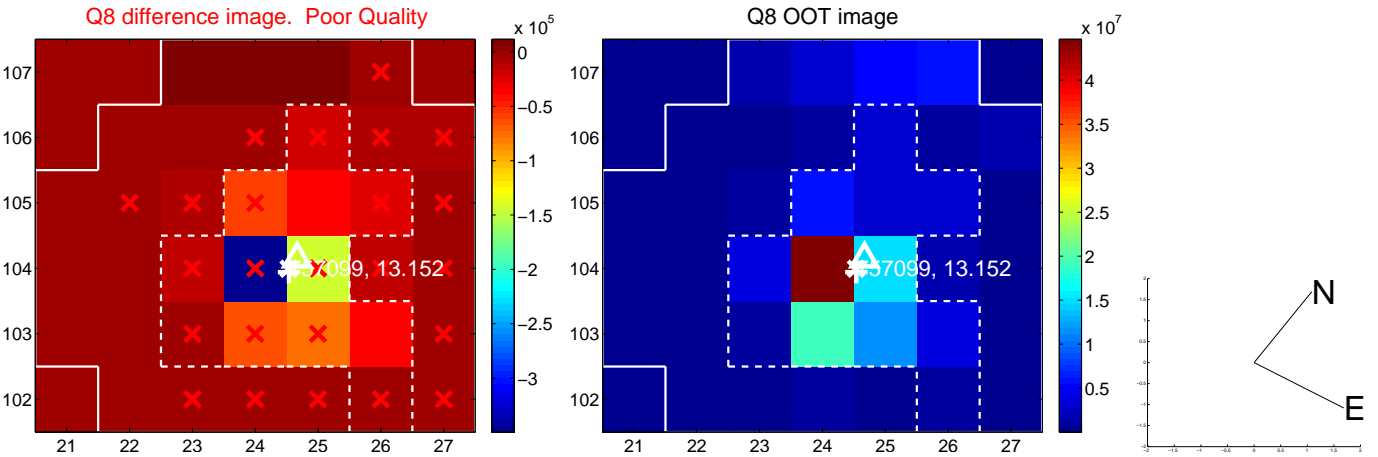
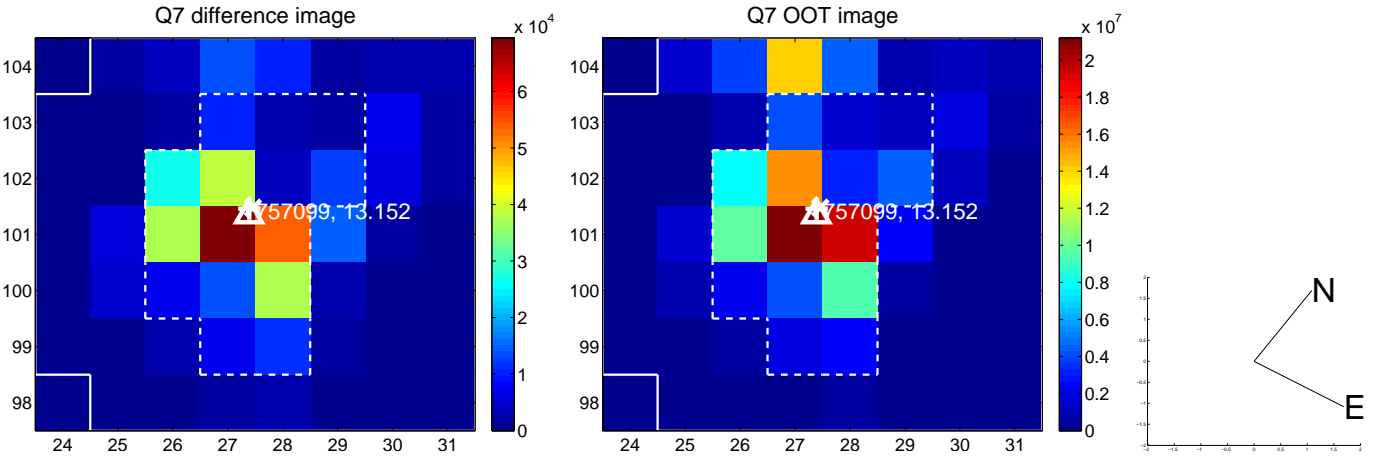
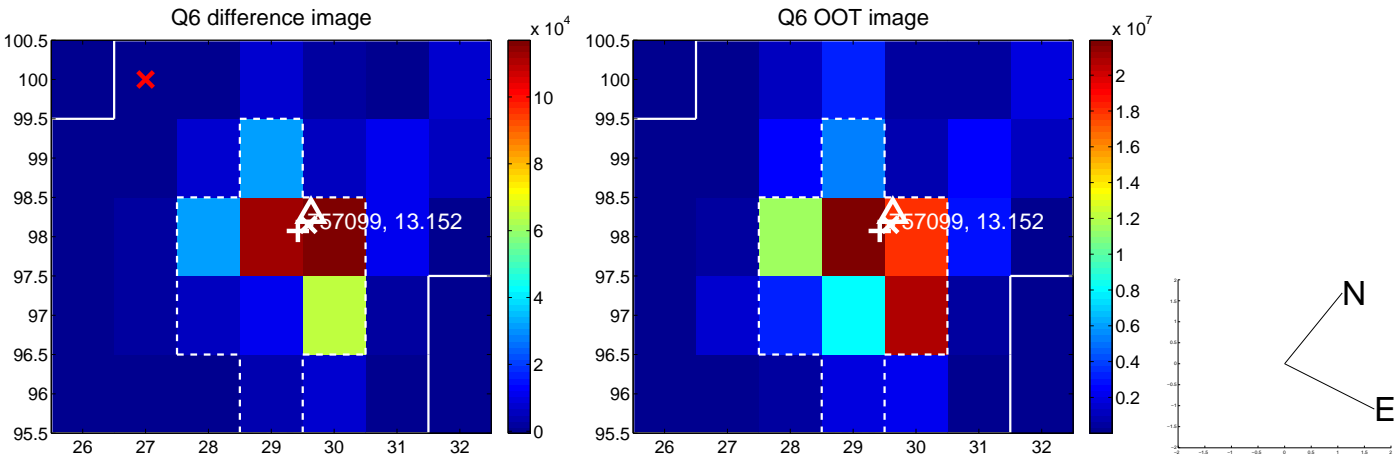
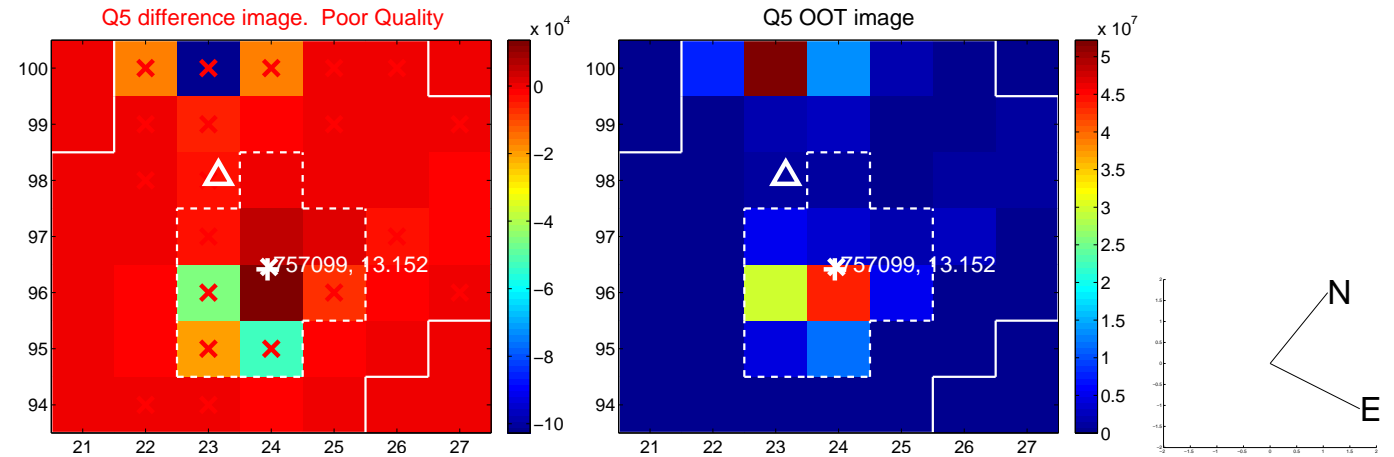


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

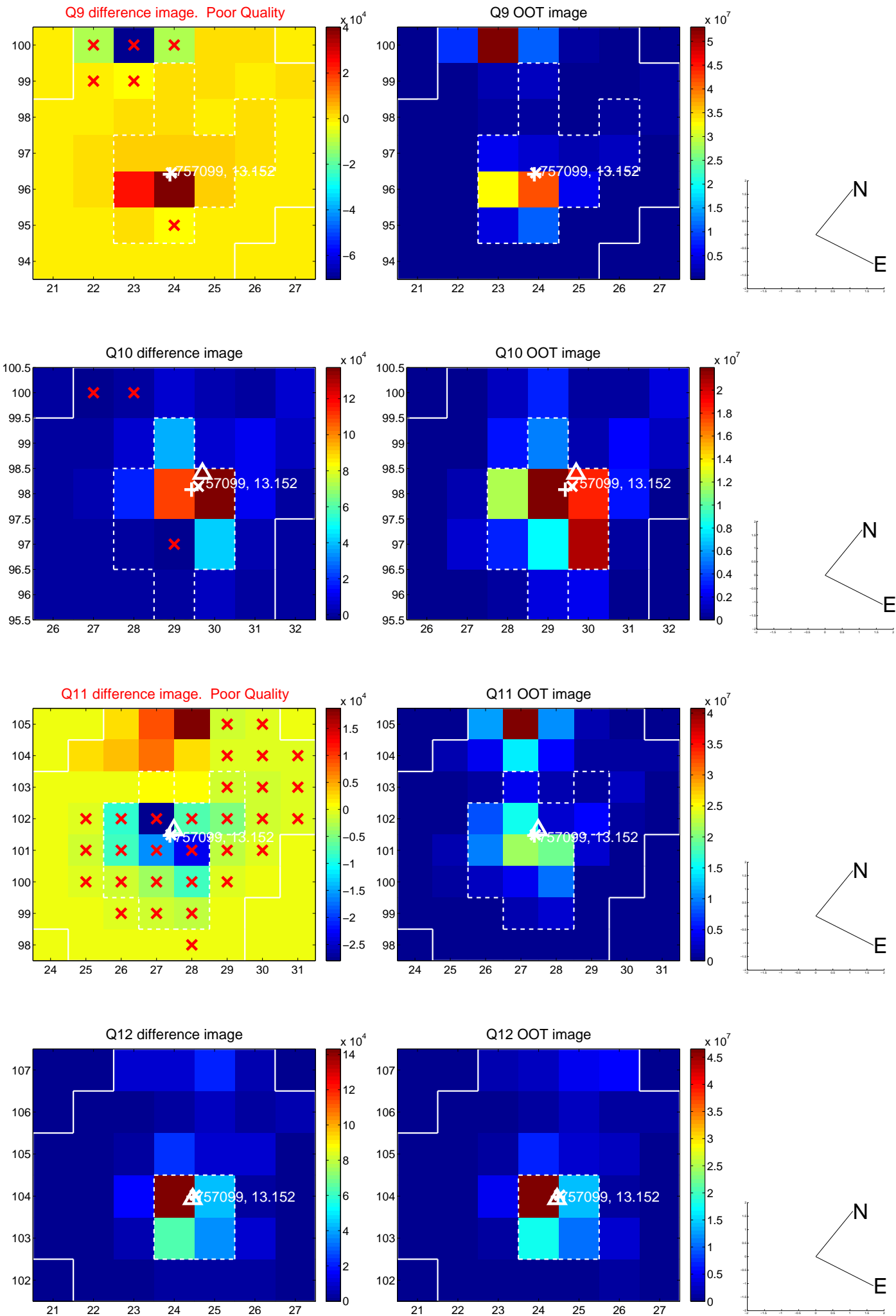
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



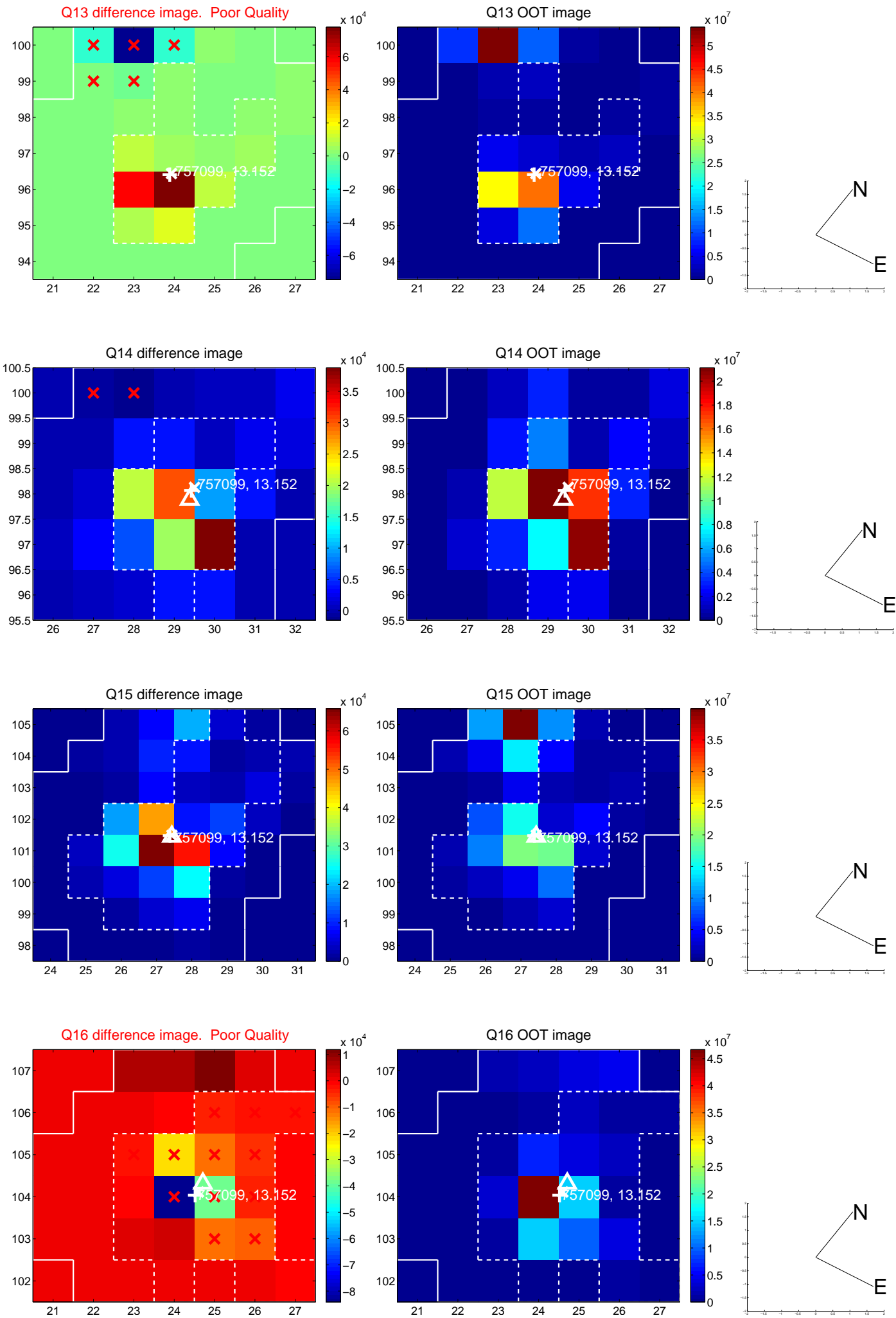
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



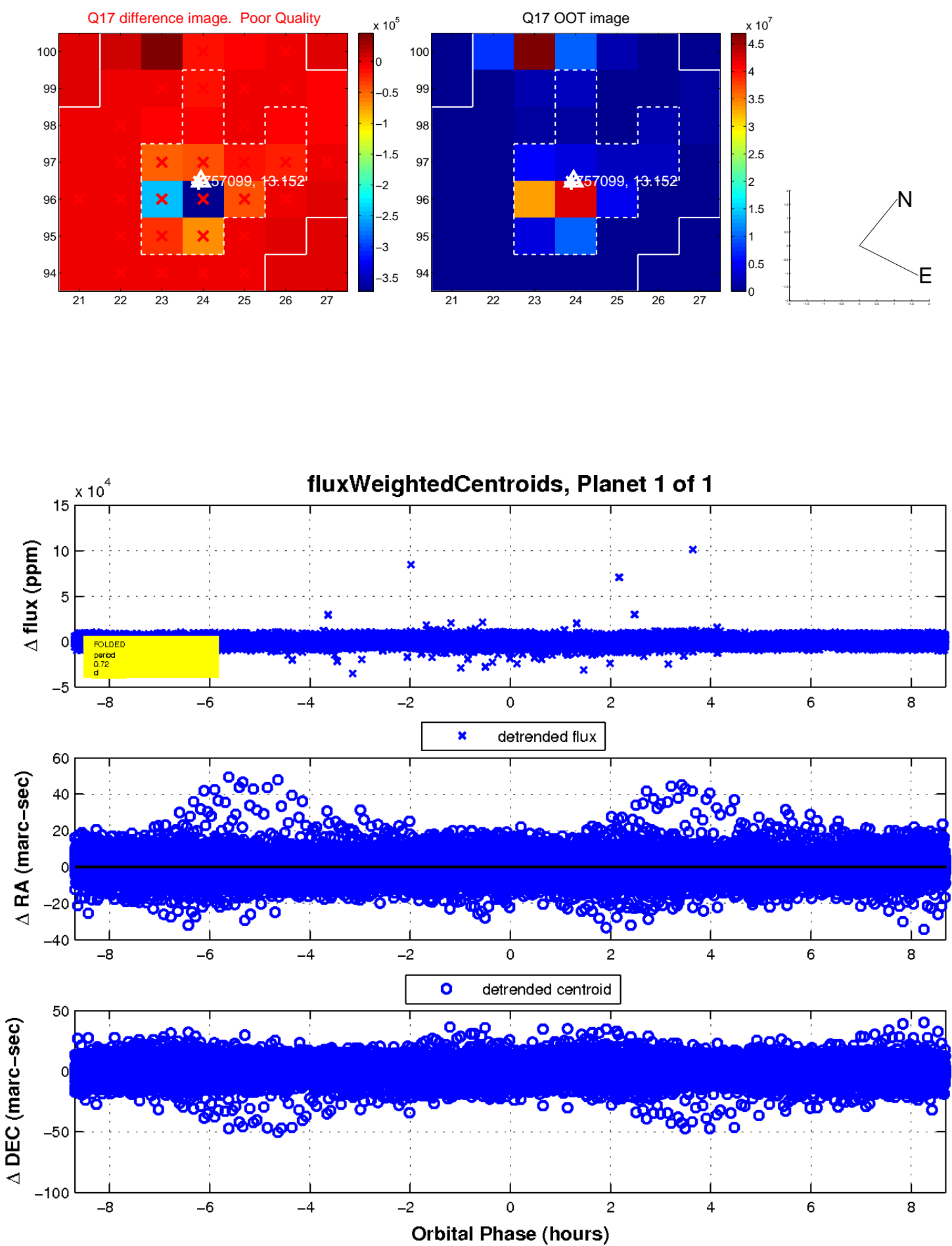
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

