

KIC 005387843

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})
005387843-01	OBS	1762.01	0.870688	132.085737	354.4	1.398	42.3	47.3	0.88	5985	1.97	2932.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005387843-01	OBS	FP	0.41	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

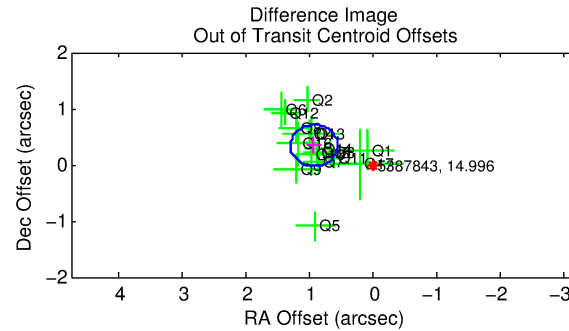
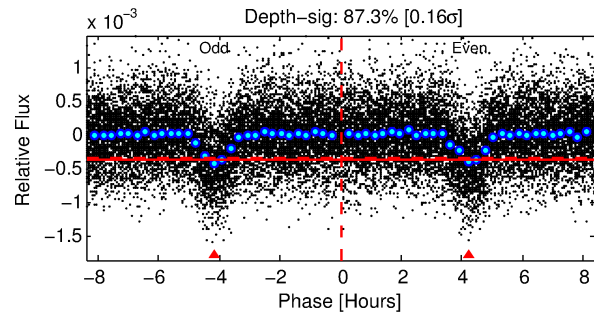
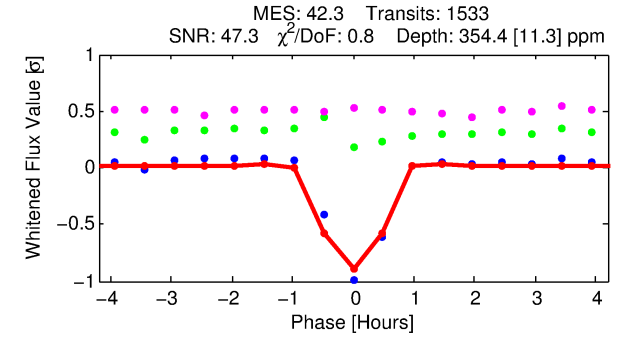
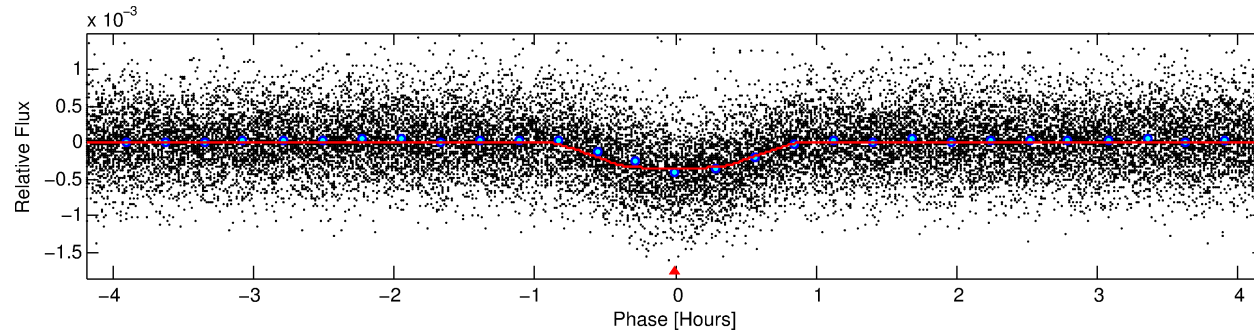
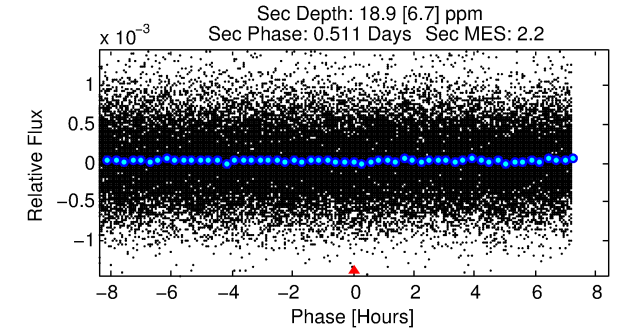
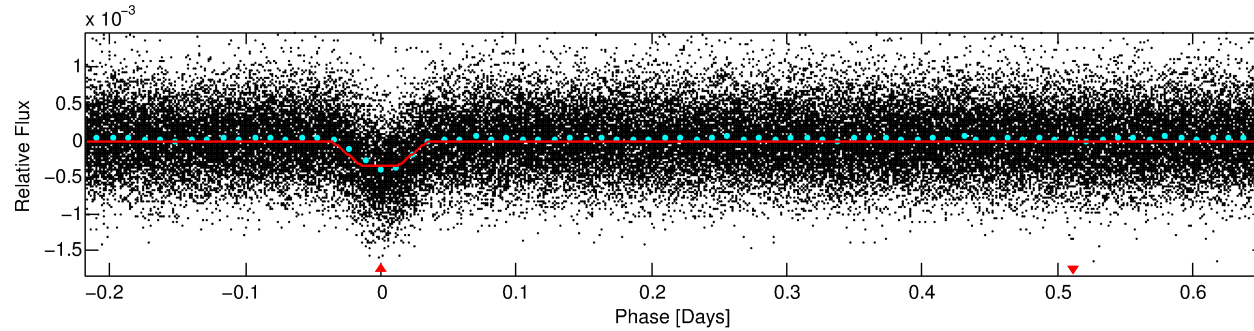
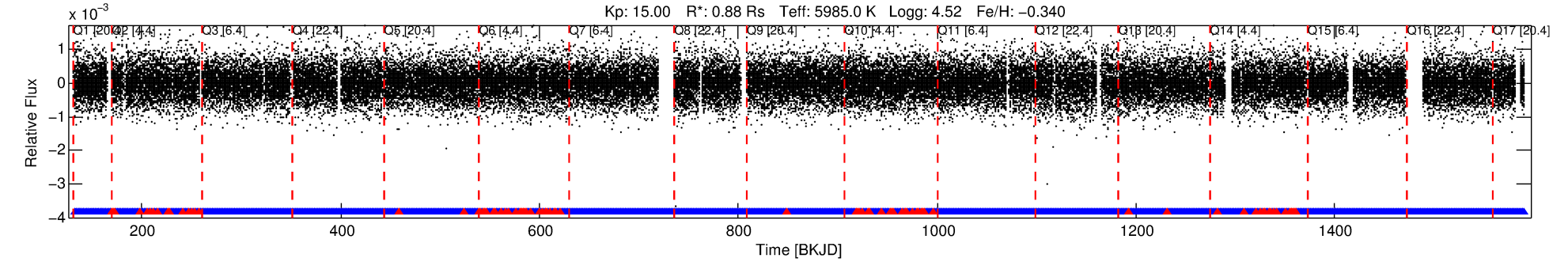
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005387843-01

No Significant Match Found

DV One-Page Summary

KIC: 5387843 Candidate: 1 of 1 Period: 0.871 d
KOI: K01762.01 Corr: 0.921



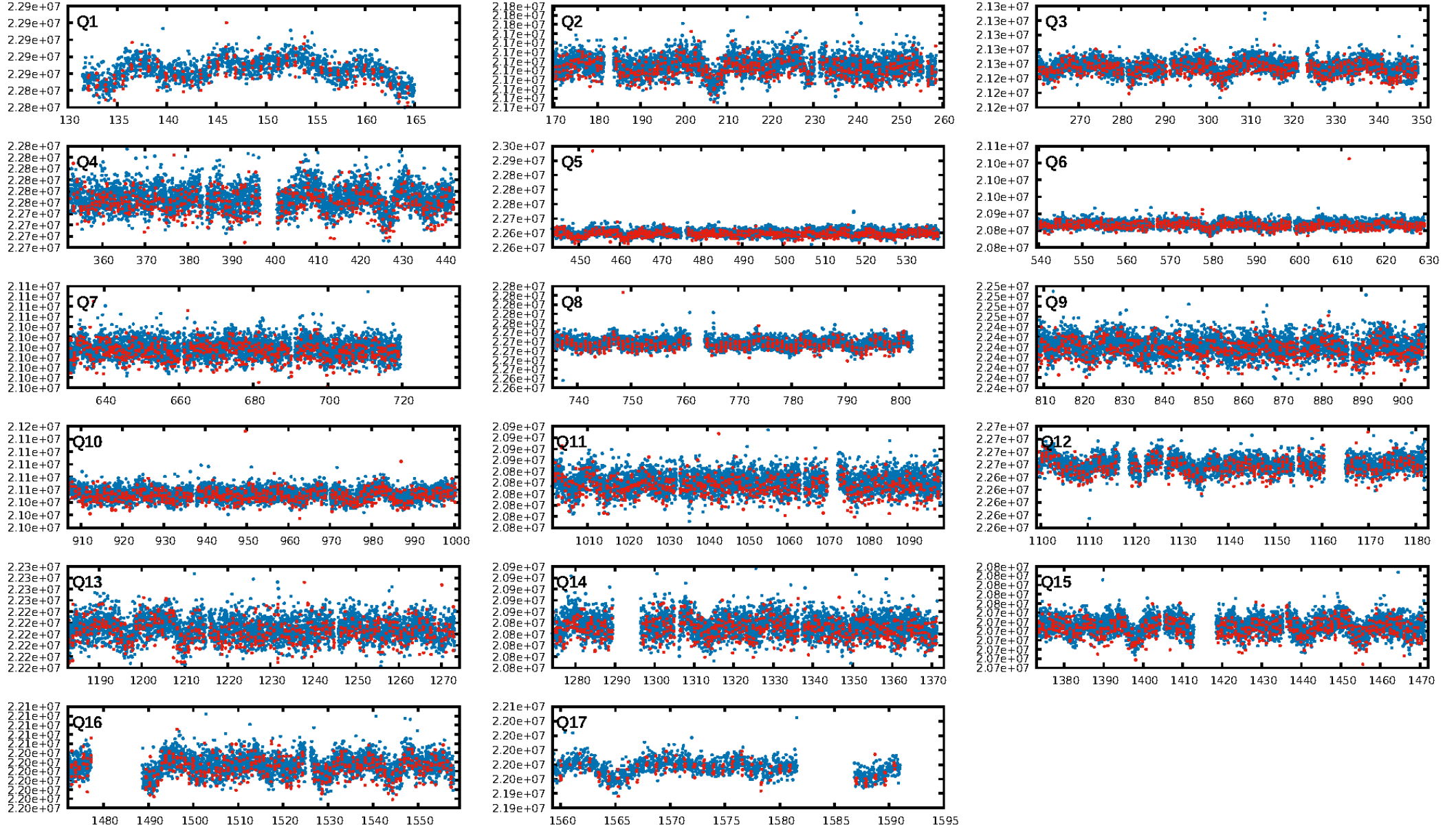
DV Fit Results:

Period = 0.87069 [0.00000] d
Epoch = 132.0857 [0.0004] BKJD
Rp/R* = 0.0204 [0.0027]
a/R* = 2.47 [1.41]
b = 0.90 [0.15]
Seff = 2932.97 [1166.06]
Teq = 1877 [187] K
Rp = 1.97 [0.64] Re
a = 0.0175 [0.0044] AU
Ag = 0.82 [0.48] [-0.38σ]
Teffp = 2761 [320] K [2.39σ]

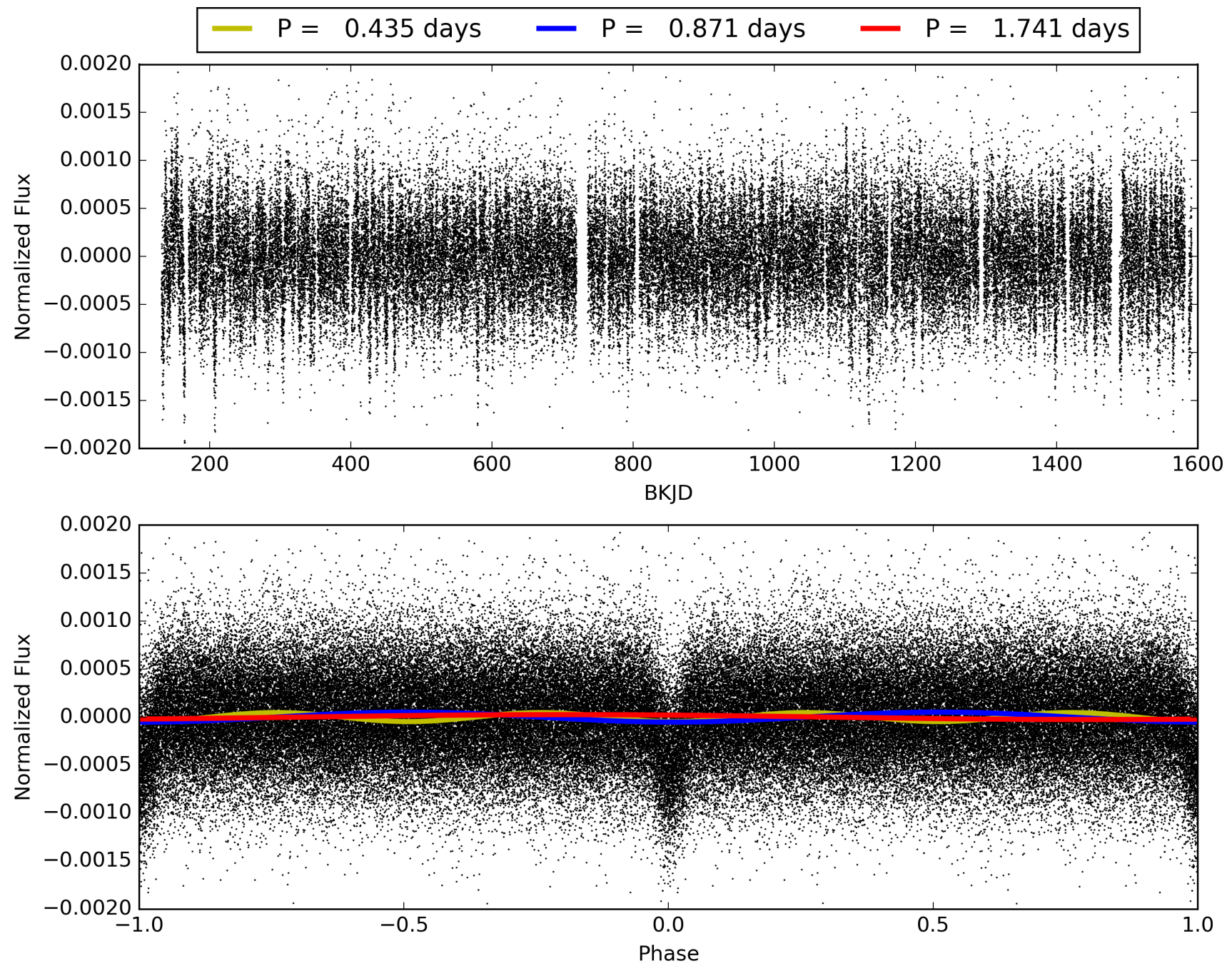
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.94 [1378/1466]
GhostDiagnostic-chr: 2.598
Centroid-sig: 0.0%
Centroid-so: 1.494 arcsec [4.75σ]
OotOffset-rm: 0.990 arcsec [8.02σ]
KicOffset-rm: 0.957 arcsec [7.55σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005387843-01, PDC Light Curves

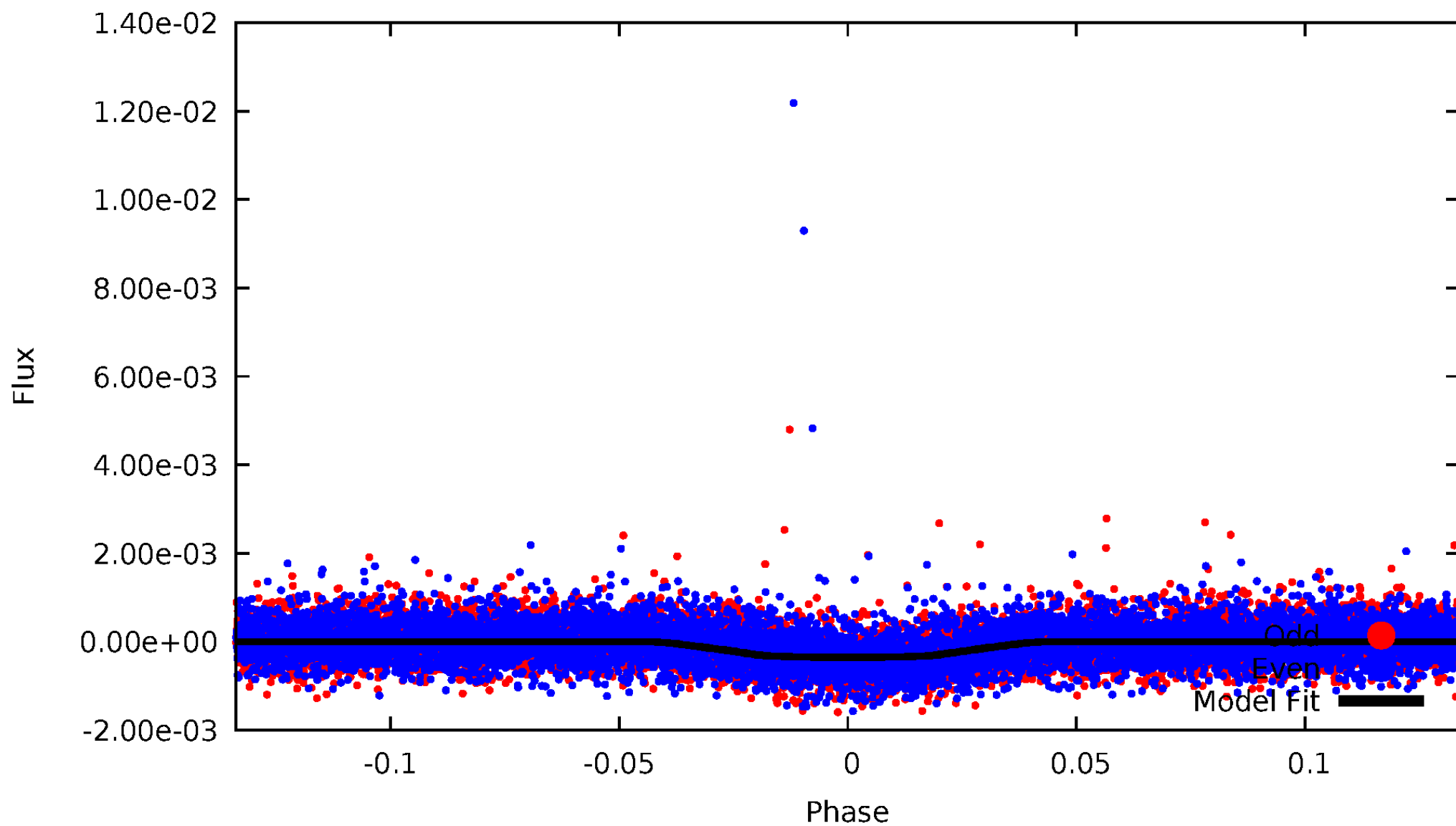


TCE 005387843-01



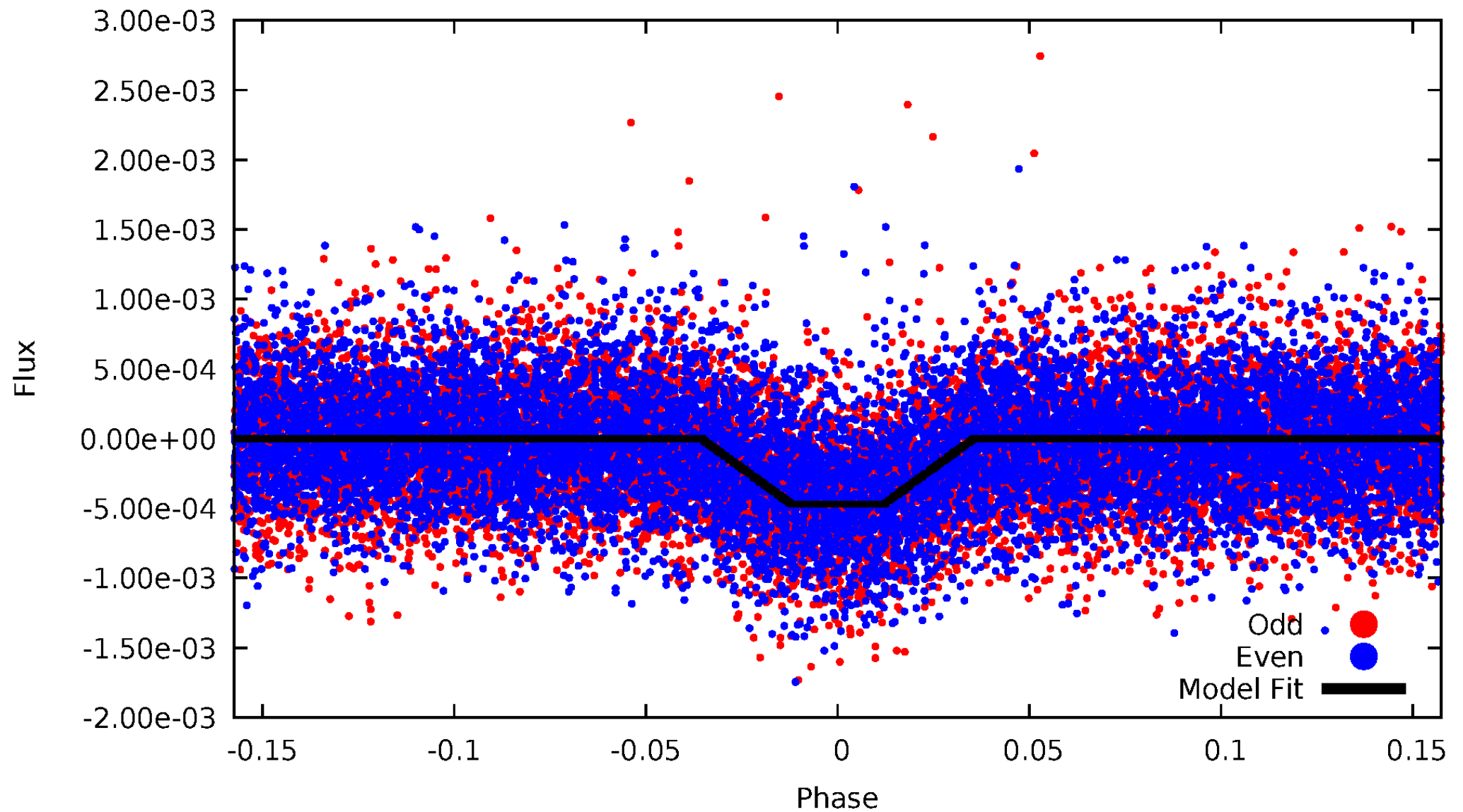
DV Odd/Even

TCE 005387843-01

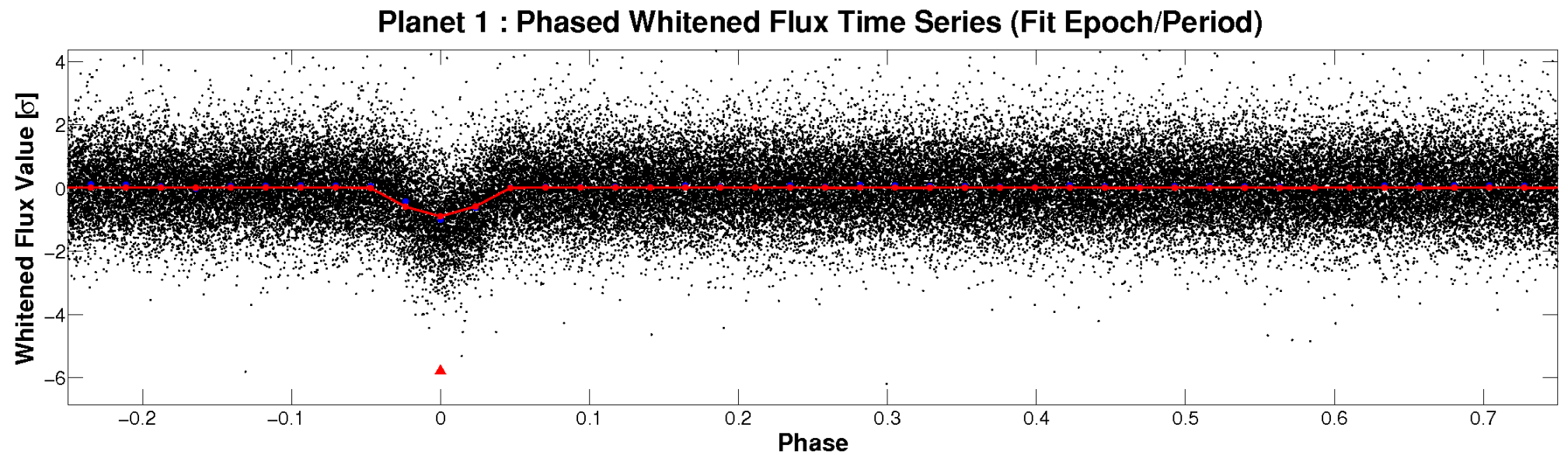
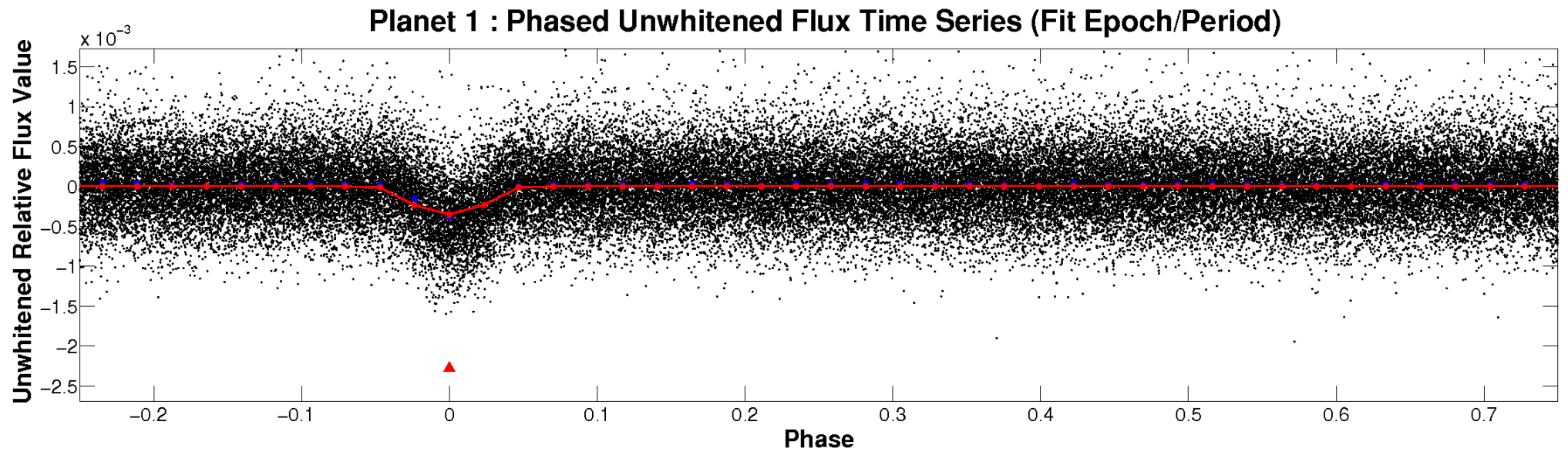


ALT Odd/Even

TCE 005387843-01

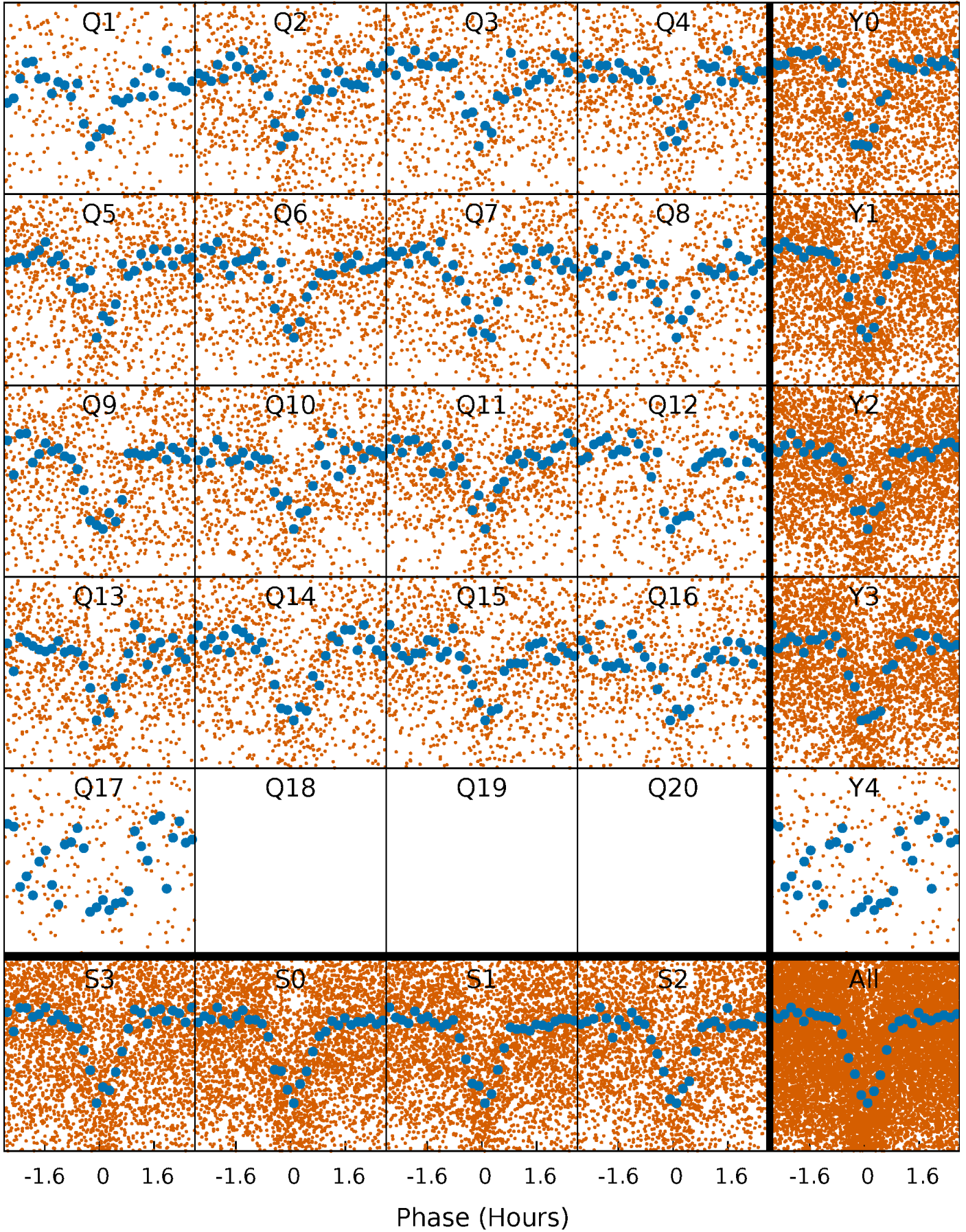


Non-Whitened Vs. Whitened Light Curve



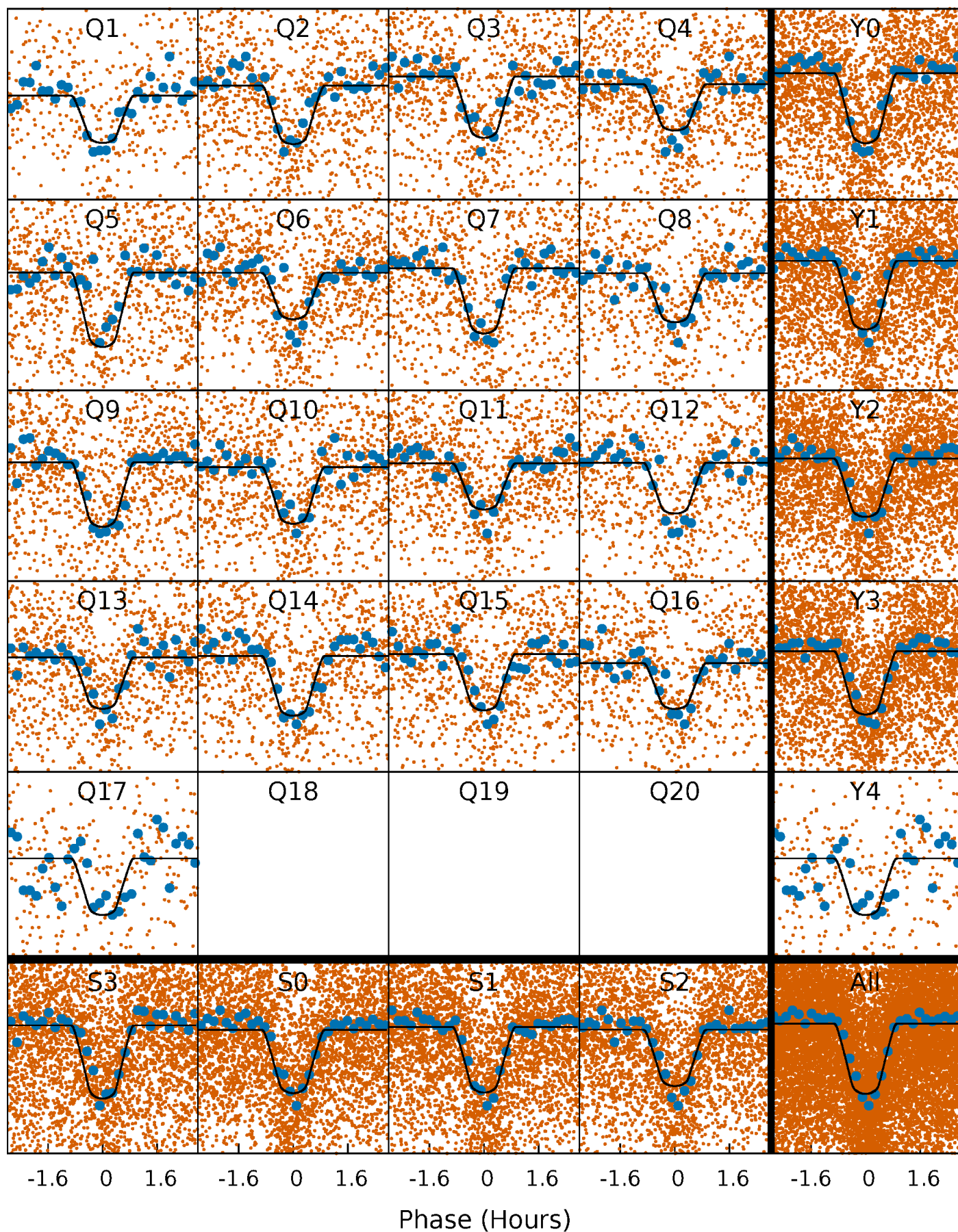
PDC Quarter-Phased Transit Curves

TCE 005387843-01 P= 0.870688 Days $T_0=132.085737$ (BKJD)



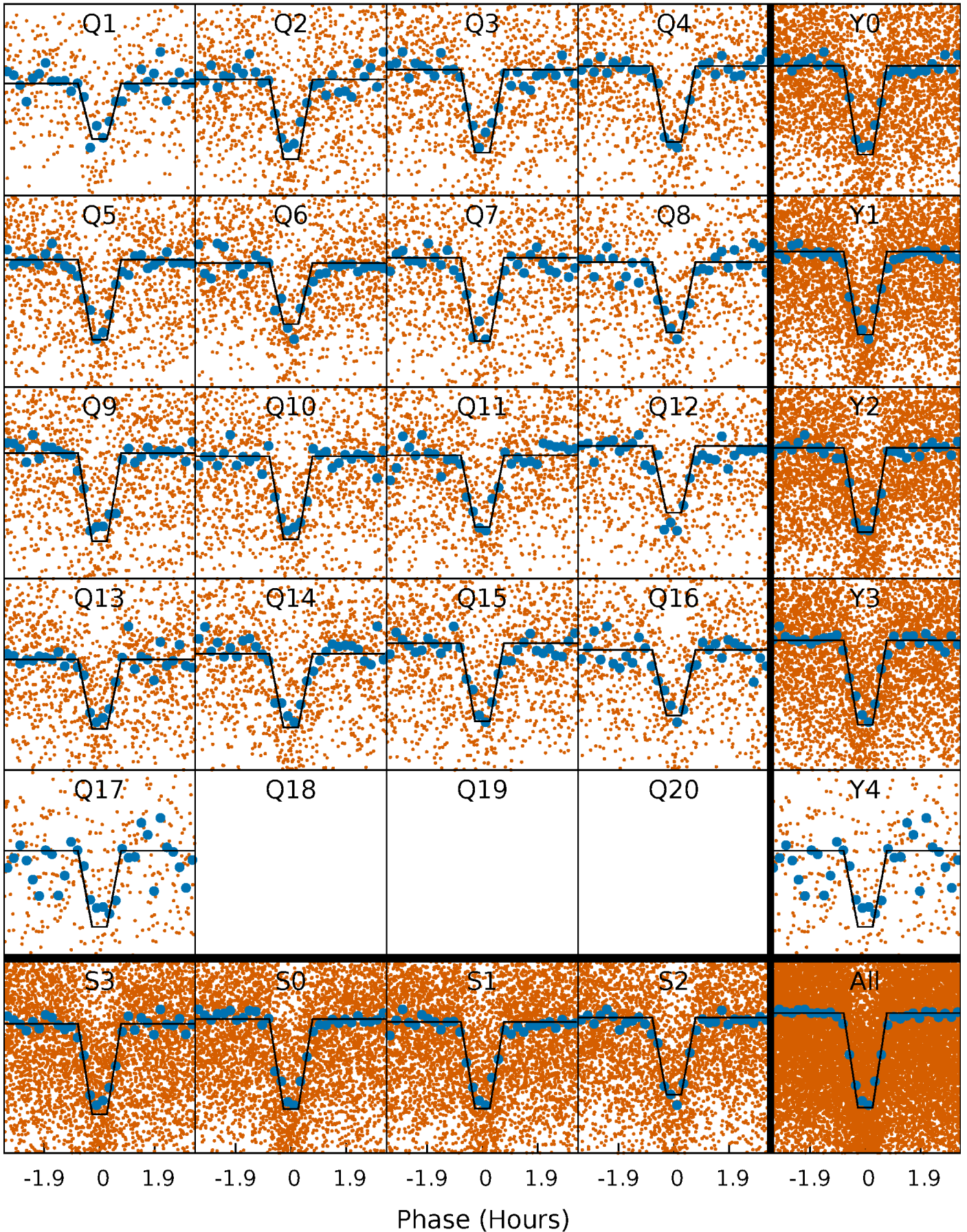
DV Quarter-Phased Transit Curves

TCE 005387843-01 P= 0.870688 Days $T_0=132.085737$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

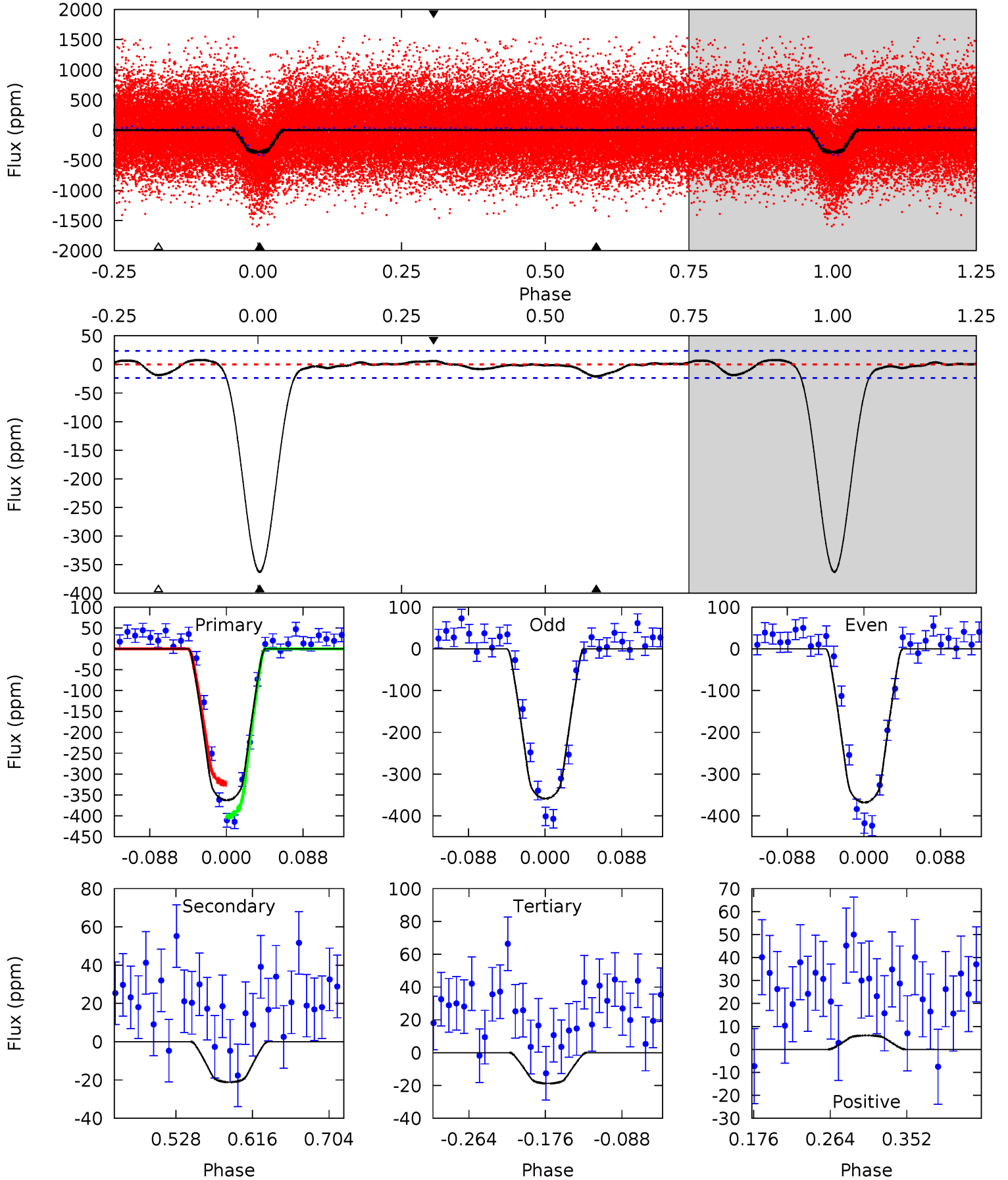
TCE 005387843-01 P= 0.870693 Days $T_0=132.084751$ (BKJD)



DV Model-Shift Uniqueness Test

005387843-01, P = 0.870688 Days, E = 131.215049 Days

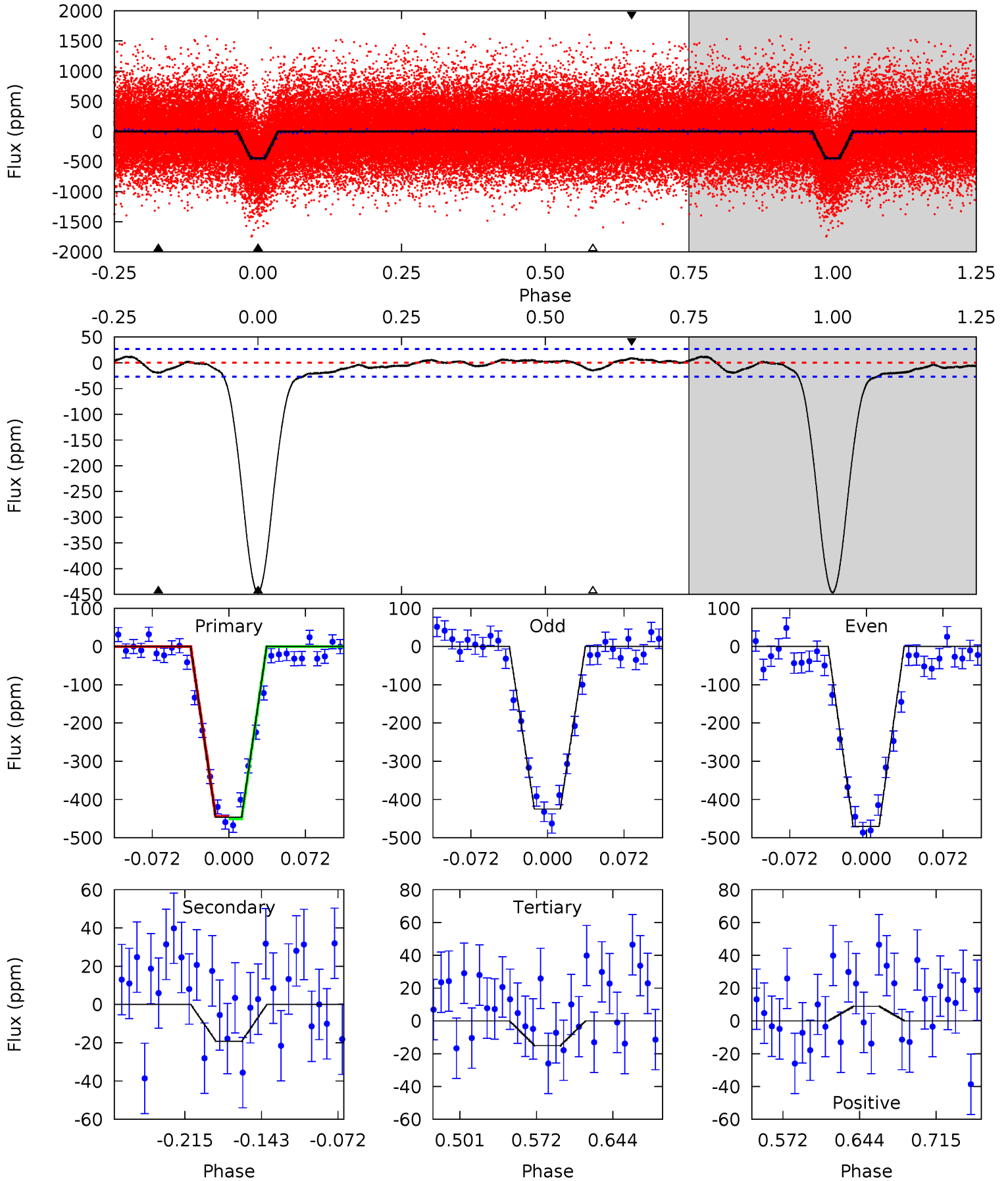
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
70.2	4.09	3.64	1.17	4.59	1.71	1.11	66.6	69.0	0.45	2.92	0.87	0.97	0.02	7.69



Alt Model-Shift Uniqueness Test

005387843-01, P = 0.870693 Days, E = 131.214058 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.0	3.31	2.59	1.53	4.63	1.80	1.38	74.4	75.5	0.72	1.78	3.92	1.00	0.03	0.52



Stellar Parameters For KIC 005387843

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+160}_{-195}	$4.519^{+0.052}_{-0.208}$	$-0.340^{+0.300}_{-0.300}$	$0.883^{+0.262}_{-0.087}$	$0.940^{+0.109}_{-0.109}$	$1.920^{+0.507}_{-0.967}$
	+3%/-3%	+1%/-5%	+88%/-88%	+30%/-10%	+12%/-12%	+26%/-50%
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 005387843-01 / KOI 1762.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-21 ± 5	$2.07^{+0.37}_{-0.35}$	2685^{+183}_{-125}	3143^{+276}_{-328}	$0.826^{+0.387}_{-0.302}$
Alt.	-19 ± 6	$2.16^{+0.48}_{-0.31}$	2668^{+206}_{-118}	2951^{+325}_{-450}	$0.641^{+0.384}_{-0.258}$

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

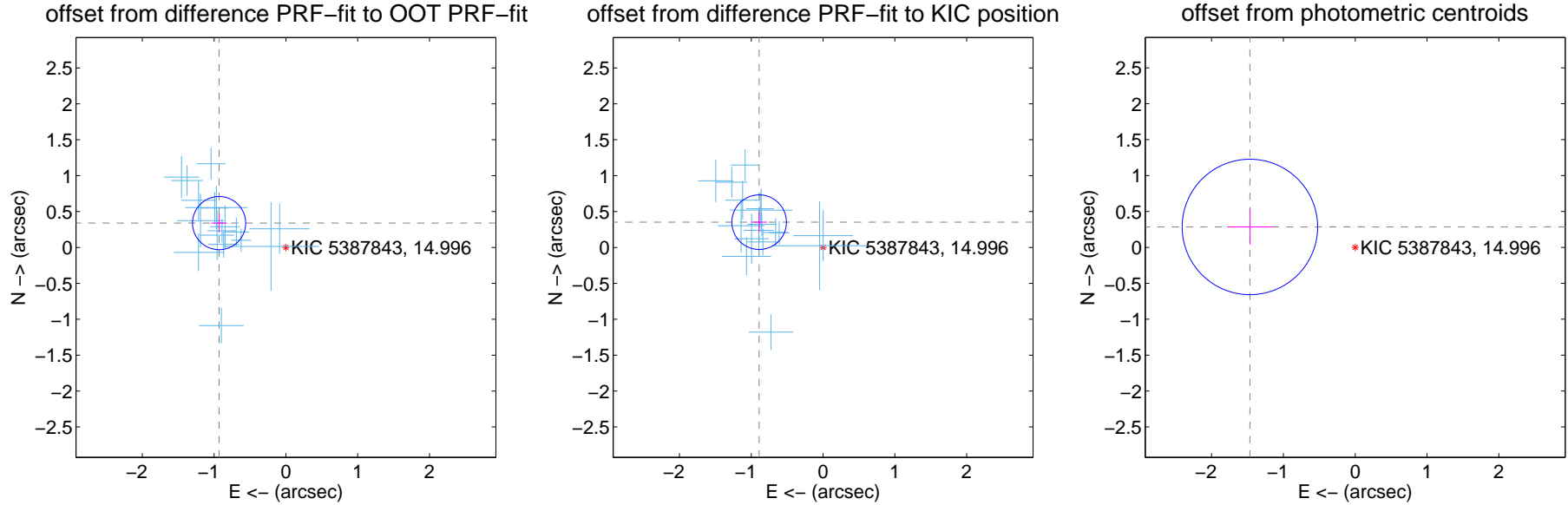
DV Centroid Data

Supplemental centroid analysis for 005387843-01. Kepler magnitude: 15.00. Transit SNR 47.28

There are 17 quarters with good PRF difference image offsets

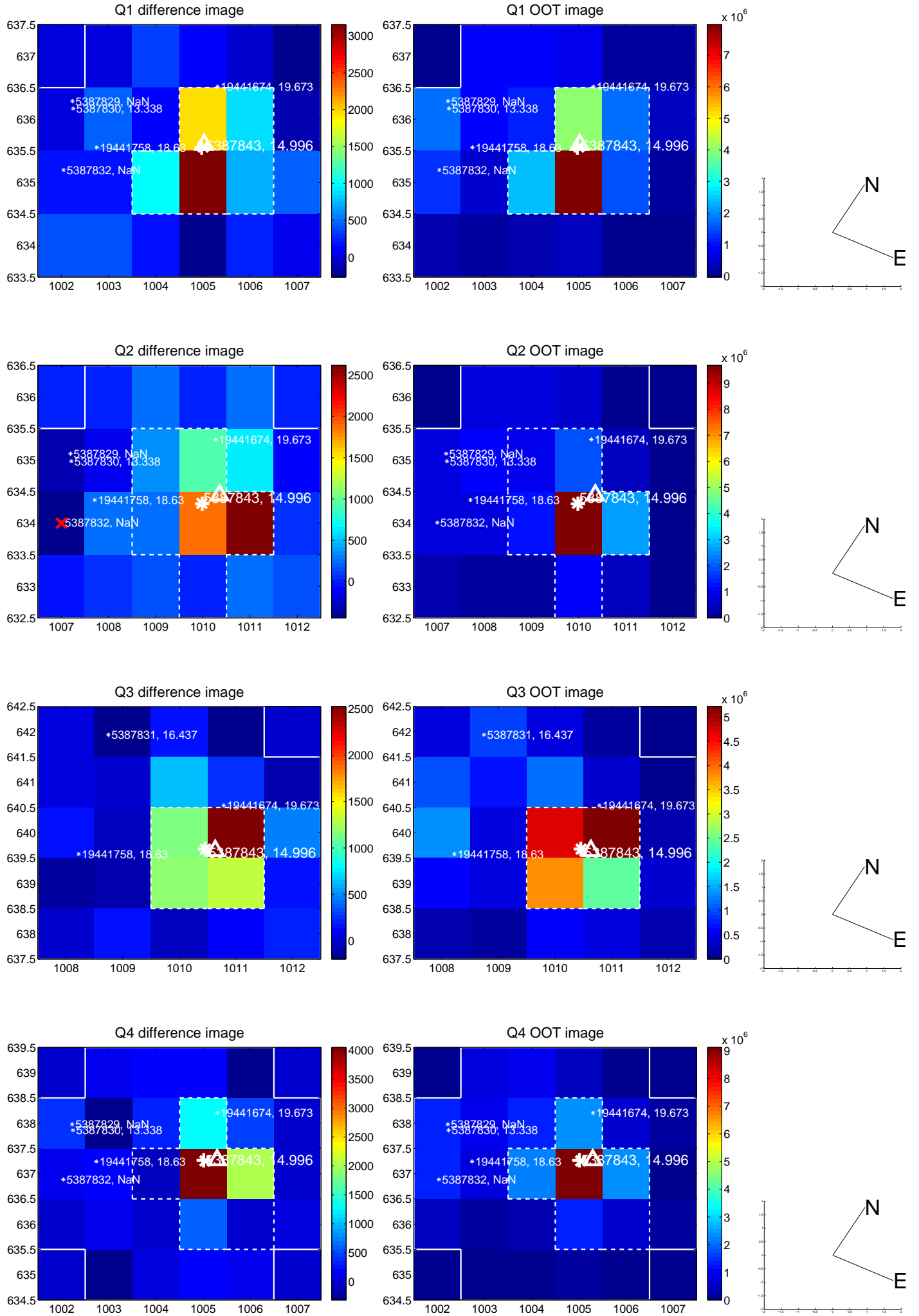
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.990 \pm 0.123	8.02	0.930 \pm 0.110	0.339 \pm 0.132
PRF-fit source offset from KIC position	0.957 \pm 0.127	7.55	0.890 \pm 0.109	0.352 \pm 0.140
photometric centroid source offset	1.49 \pm 0.31	4.75	1.47 \pm 0.32	0.28 \pm 0.25

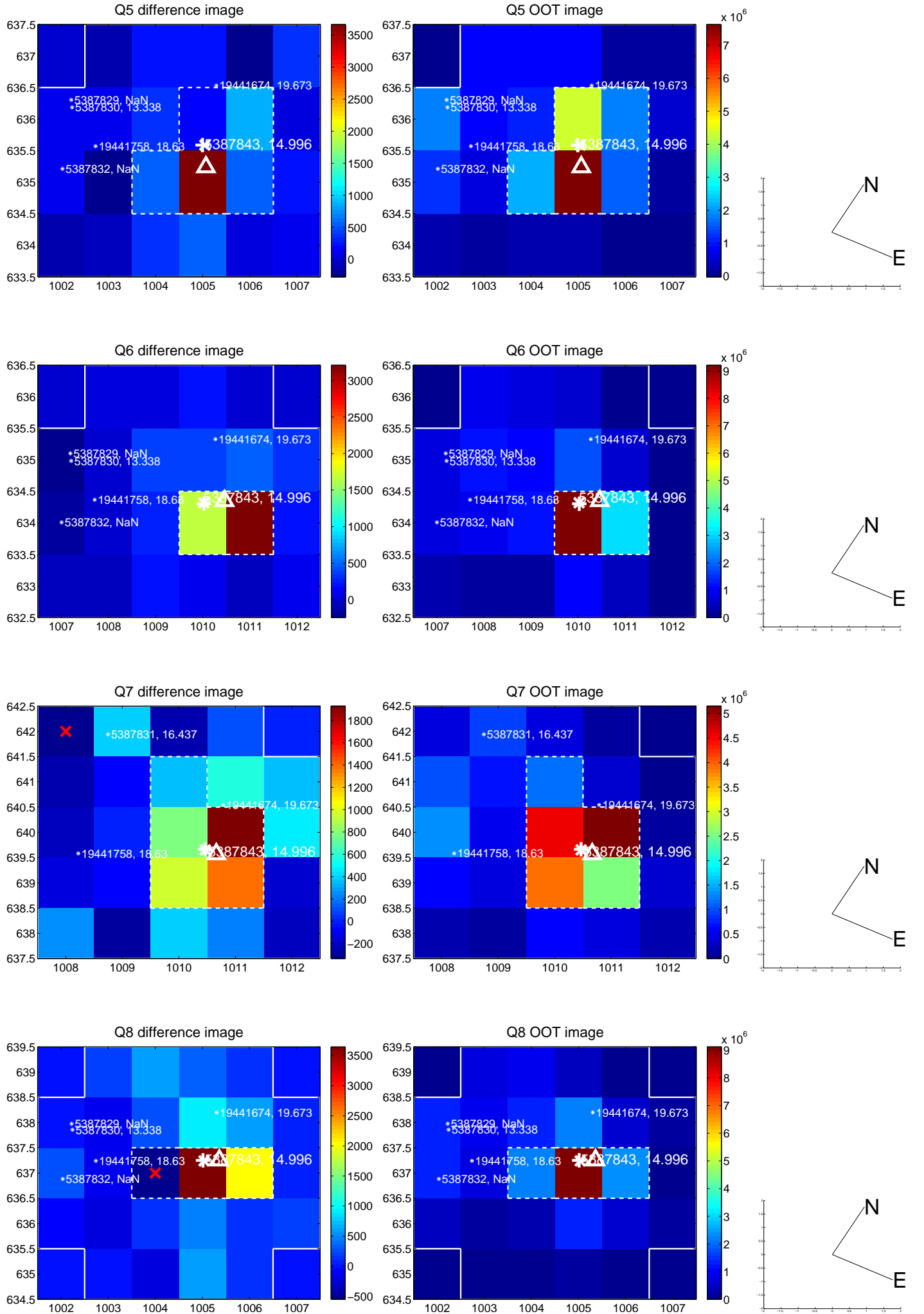


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

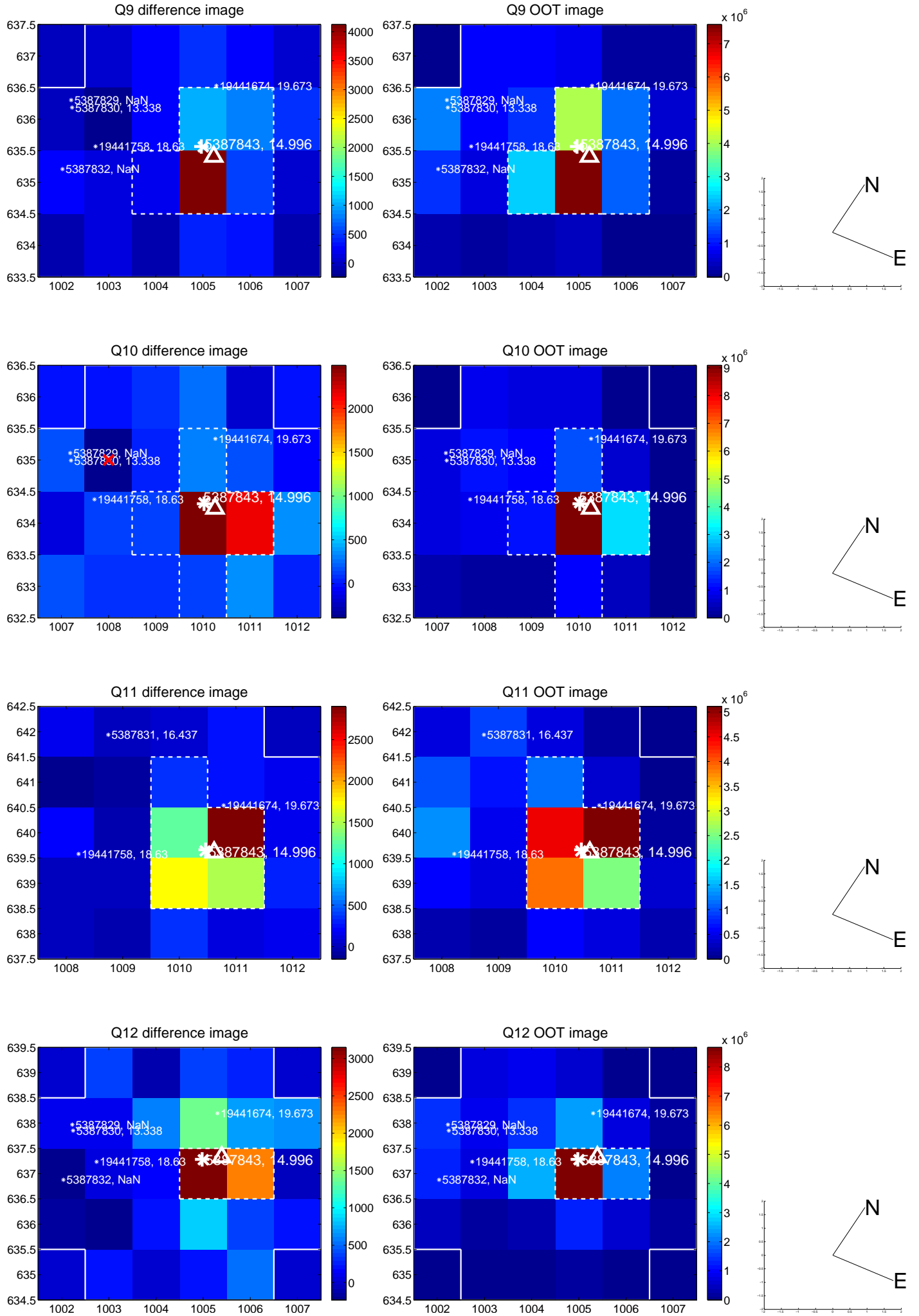
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



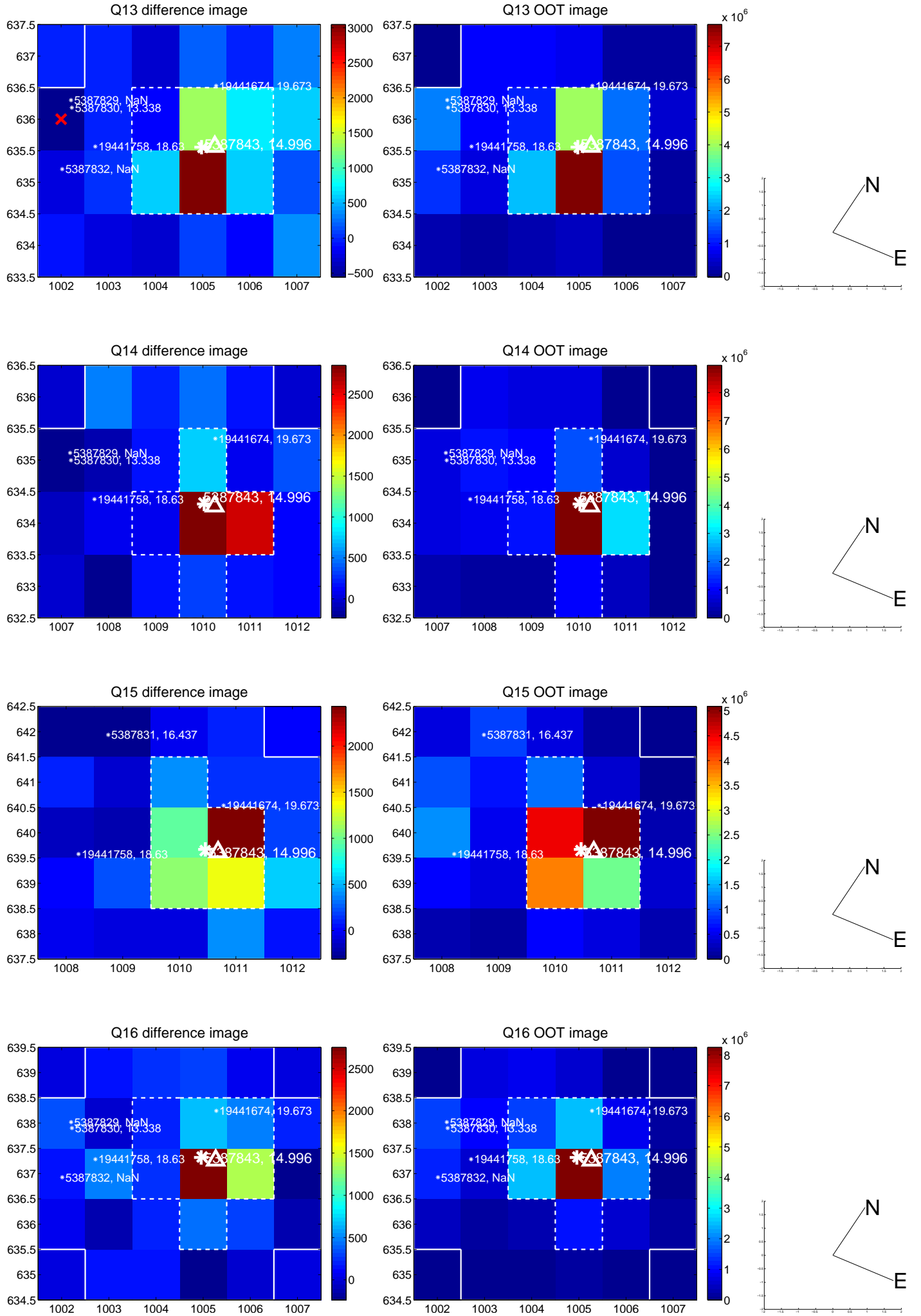
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



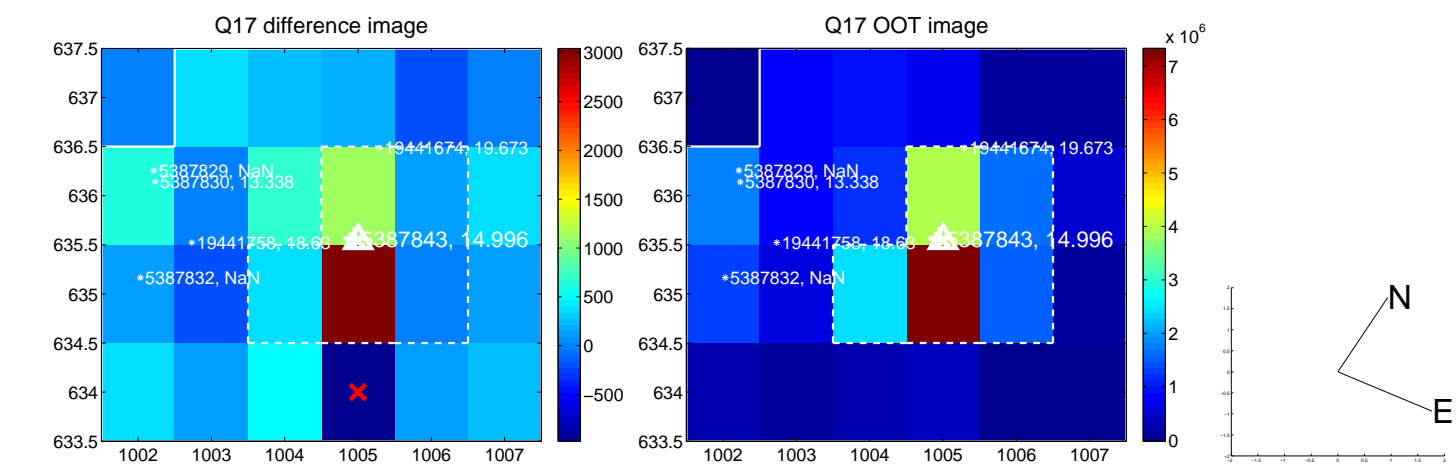
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



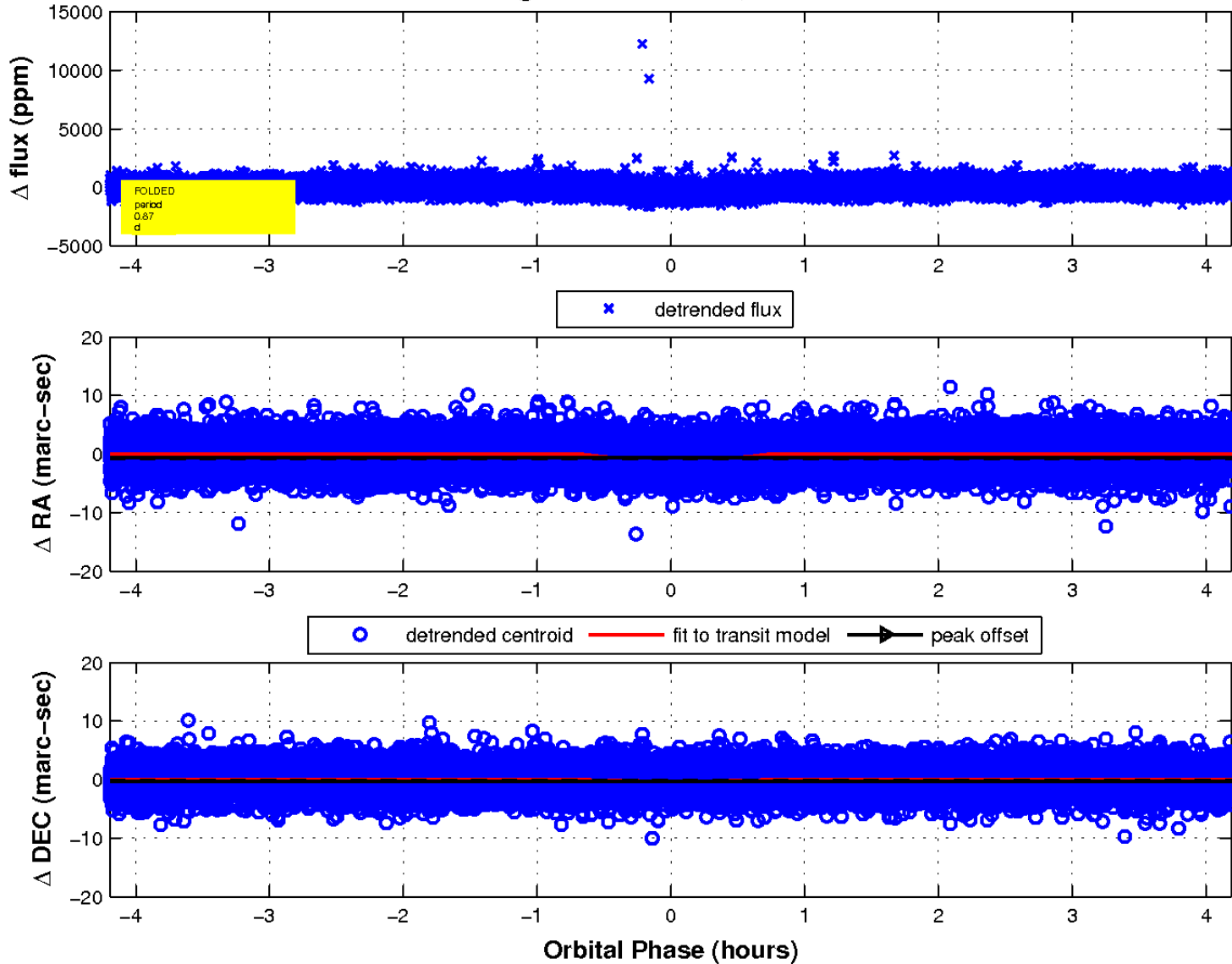
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

