

KIC 008639908

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})
008639908-01	OBS	2700.01	0.910030	131.987881	332.8	1.800	34.7	38.5	0.53	4297	1.17	382.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008639908-01	OBS	PC	1.00	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 008639908-01

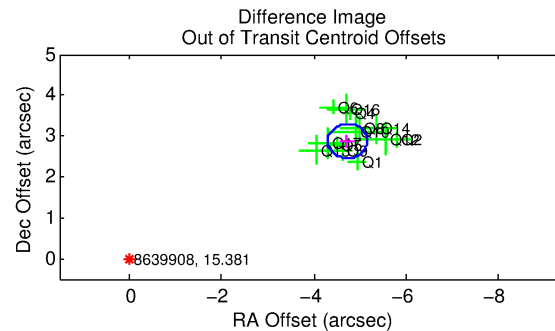
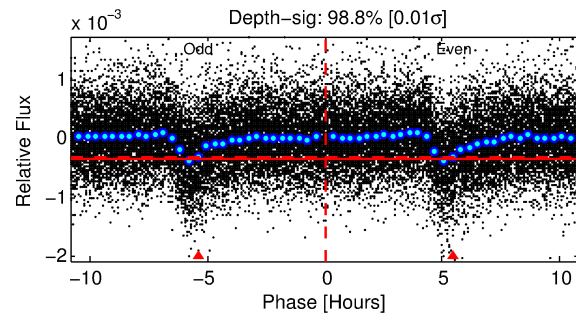
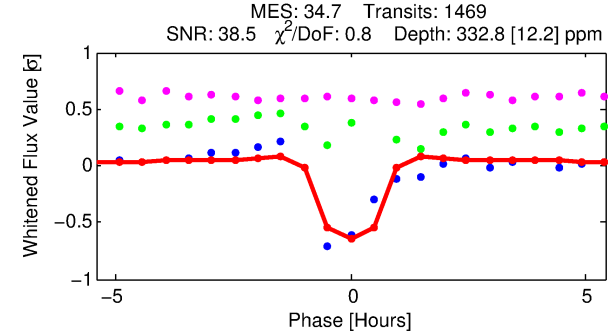
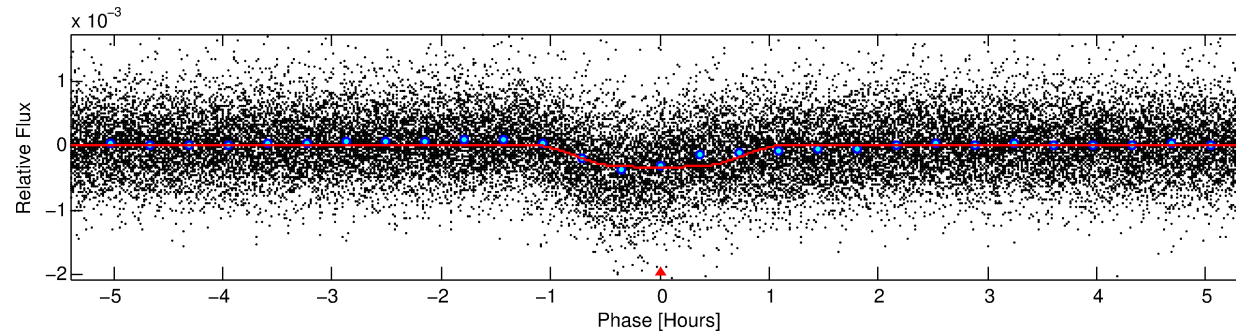
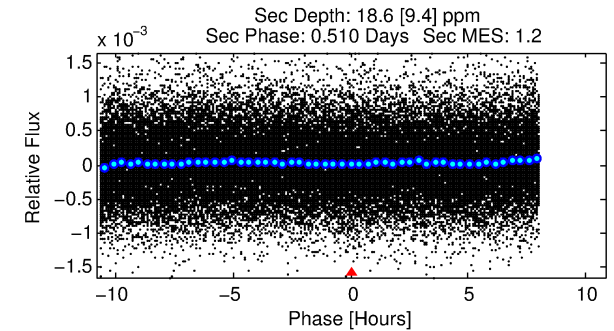
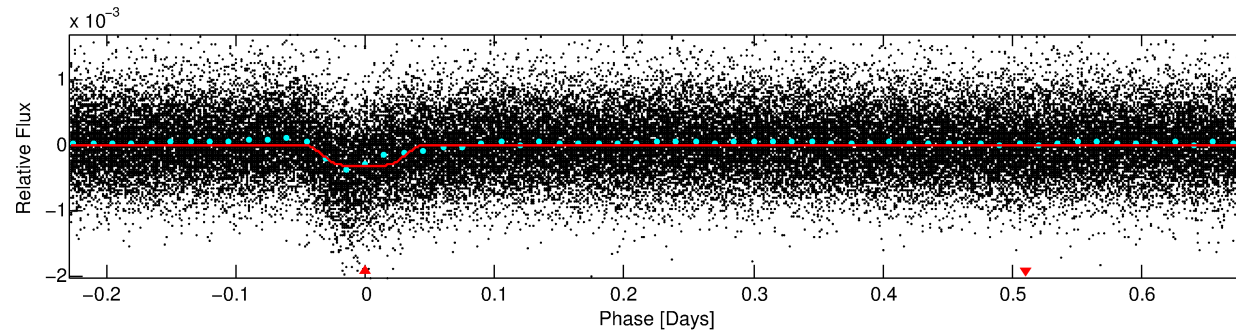
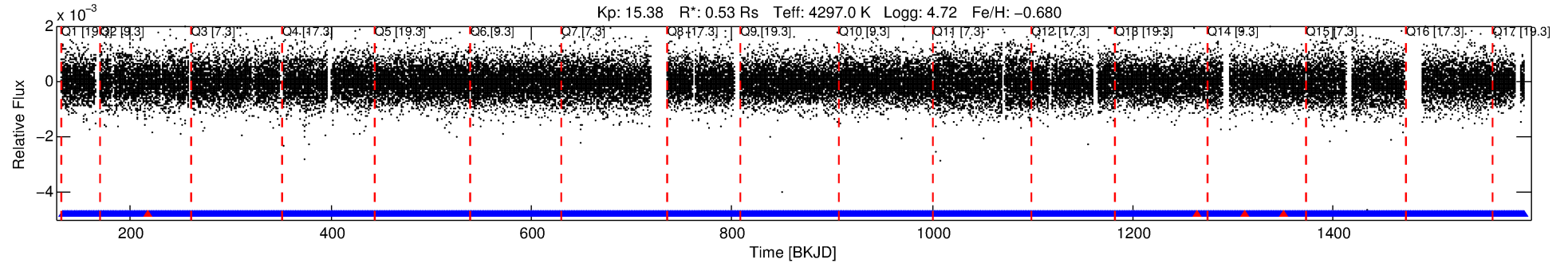
No Significant Match Found

DV One-Page Summary

KIC: 8639908 Candidate: 1 of 1 Period: 0.910 d

KOI: K02700.01 Corr: 0.843

Kp: 15.38 R*: 0.53 Rs Teff: 4297.0 K Logg: 4.72 Fe/H: -0.680



DV Fit Results:

Period = 0.91003 [0.00000] d
Epoch = 131.9879 [0.0006] BKJD
Rp/R* = 0.0201 [0.0033]
a/R* = 2.08 [1.14]
b = 0.90 [0.15]
Seff = 382.50 [64.11]
Teq = 1128 [47] K
Rp = 1.17 [0.23] Re
a = 0.0151 [0.0012] AU
Ag = 1.69 [1.03] [0.67σ]
Teffp = 1988 [306] K [2.78σ]

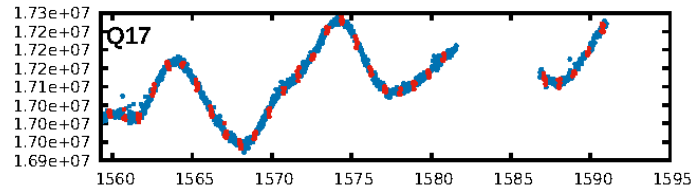
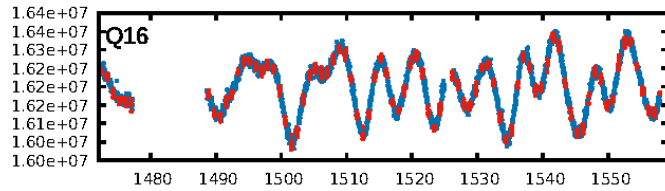
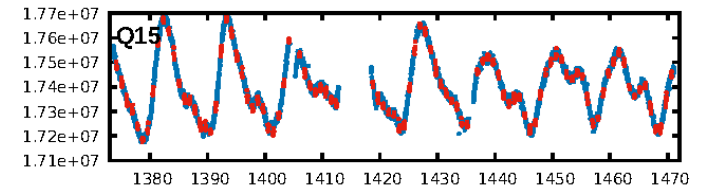
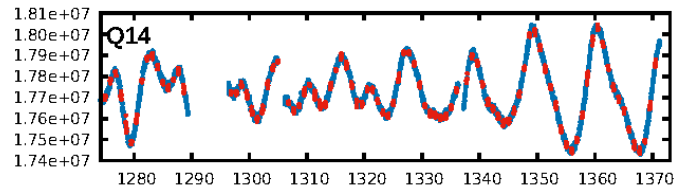
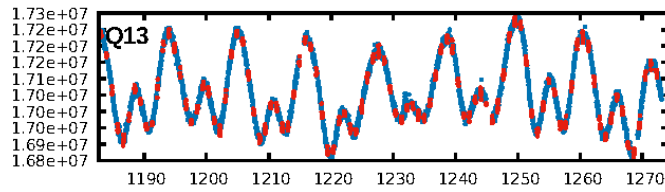
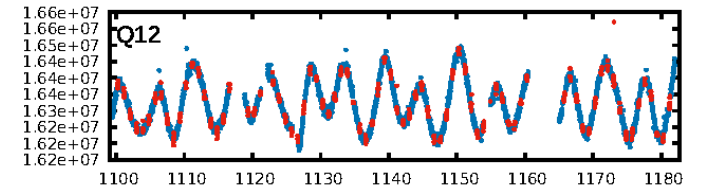
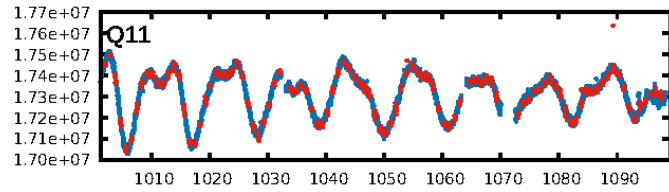
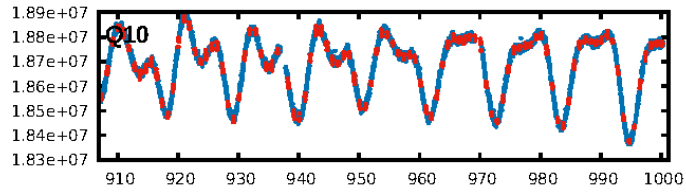
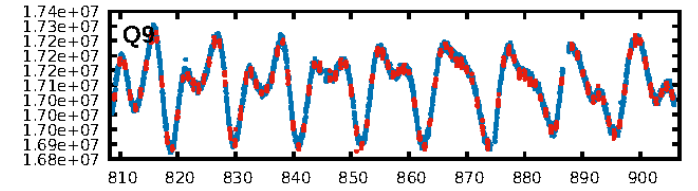
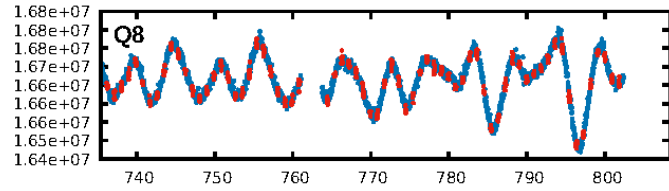
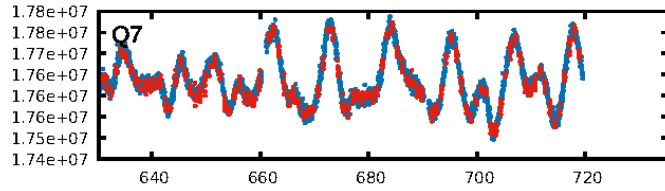
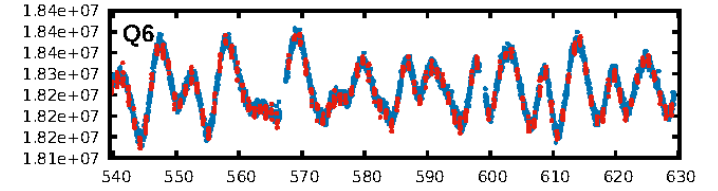
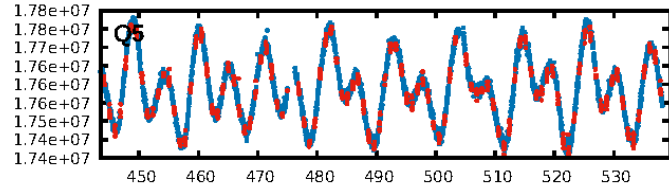
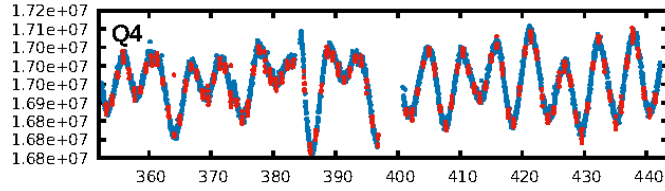
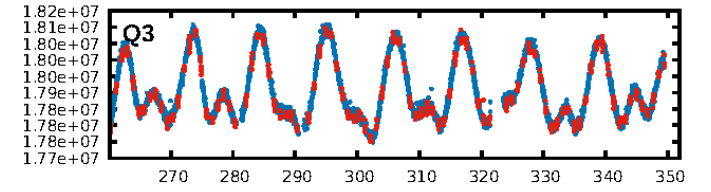
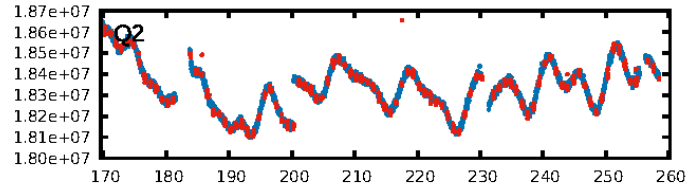
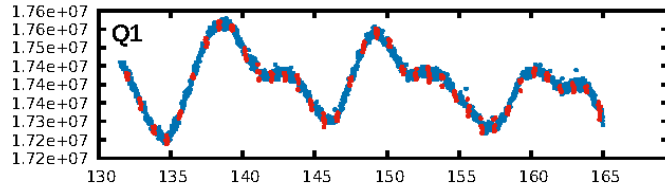
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.43e-241
RollingBand-fgt: 1.00 [1399/1403]
GhostDiagnostic-chr: 2.029
Centroid-sig: 0.0%
Centroid-so: 2.680 arcsec [17.16σ]
OotOffset-rm: 5.530 arcsec [38.96σ]
KicOffset-rm: 0.049 arcsec [0.47σ]
OotOffset-st: 4/0/4/5 [13]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

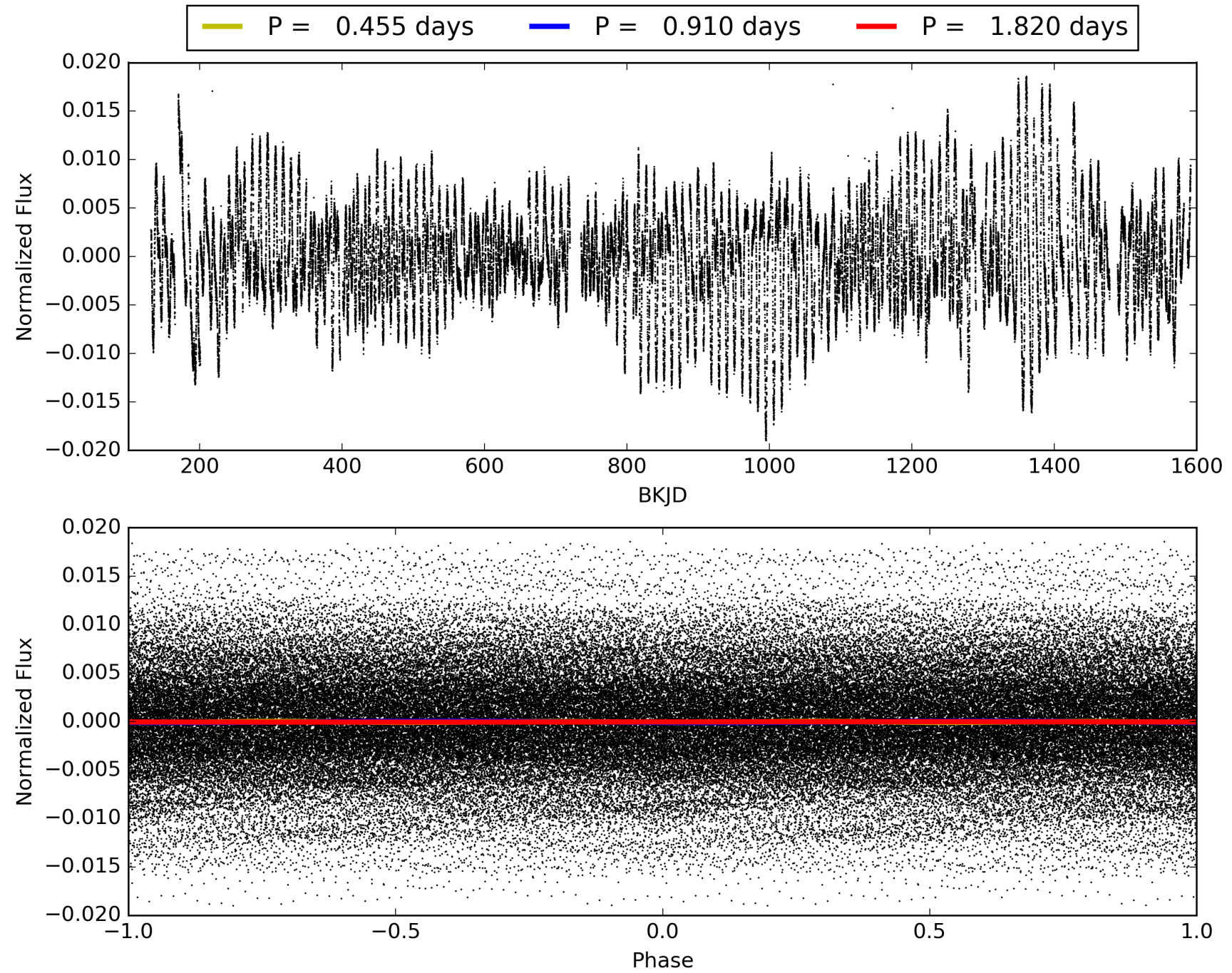
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:12:22 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008639908-01, PDC Light Curves

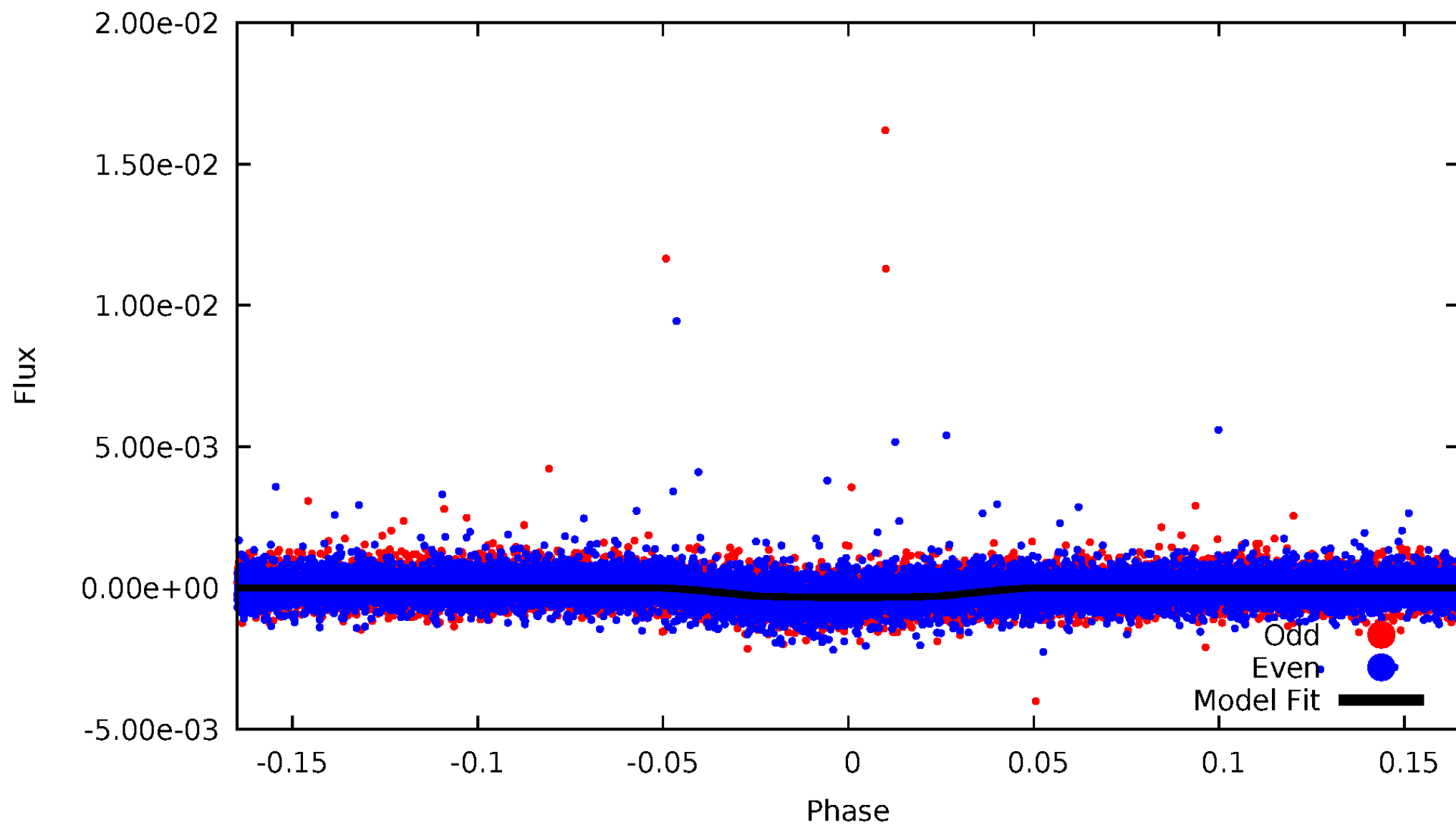


TCE 008639908-01



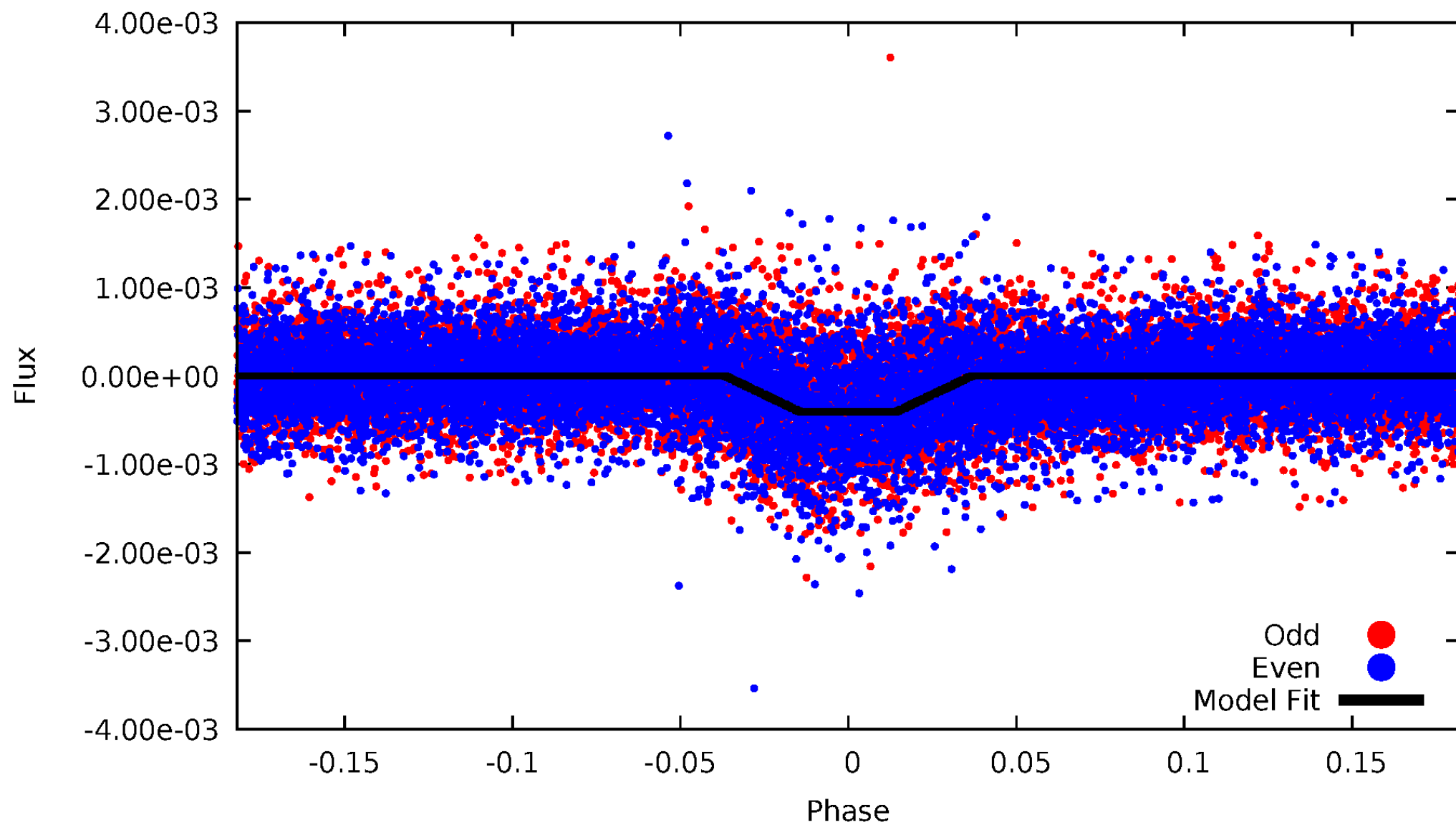
DV Odd/Even

TCE 008639908-01



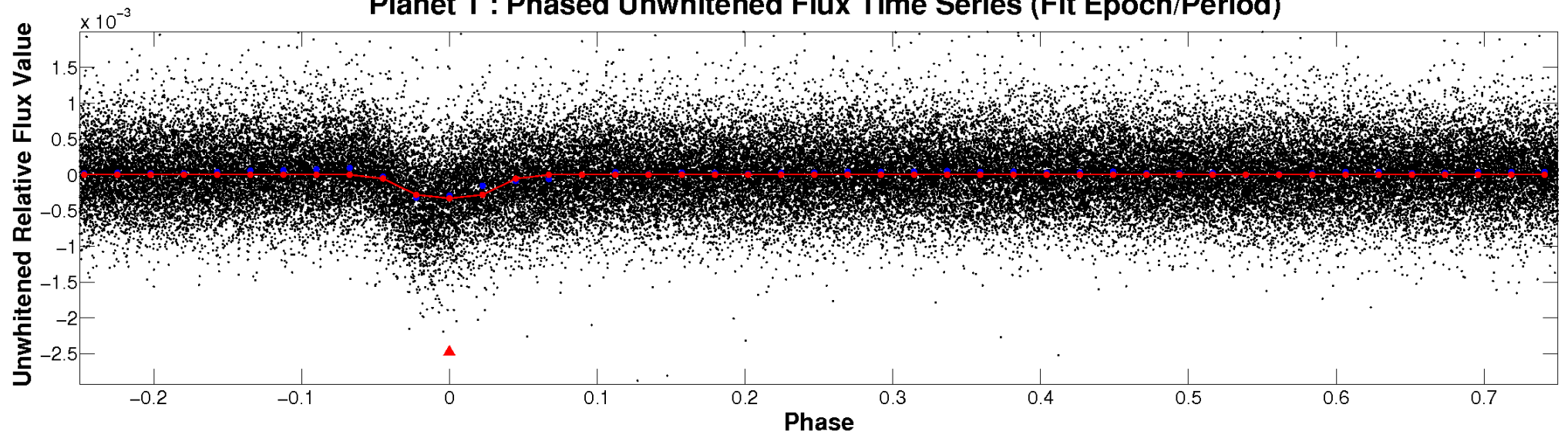
ALT Odd/Even

TCE 008639908-01

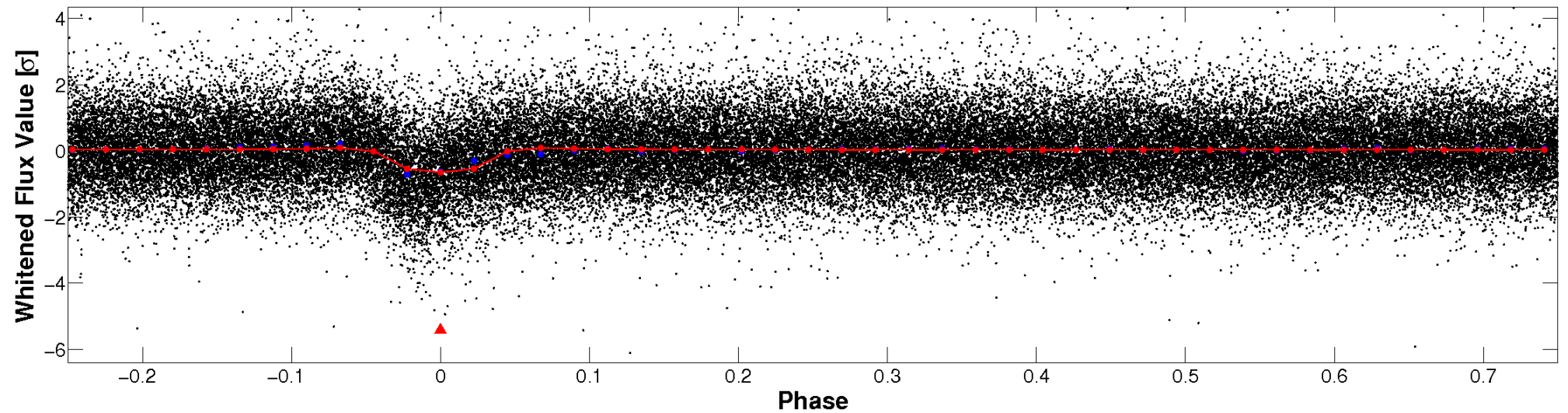


Non-Whitened Vs. Whitened Light Curve

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

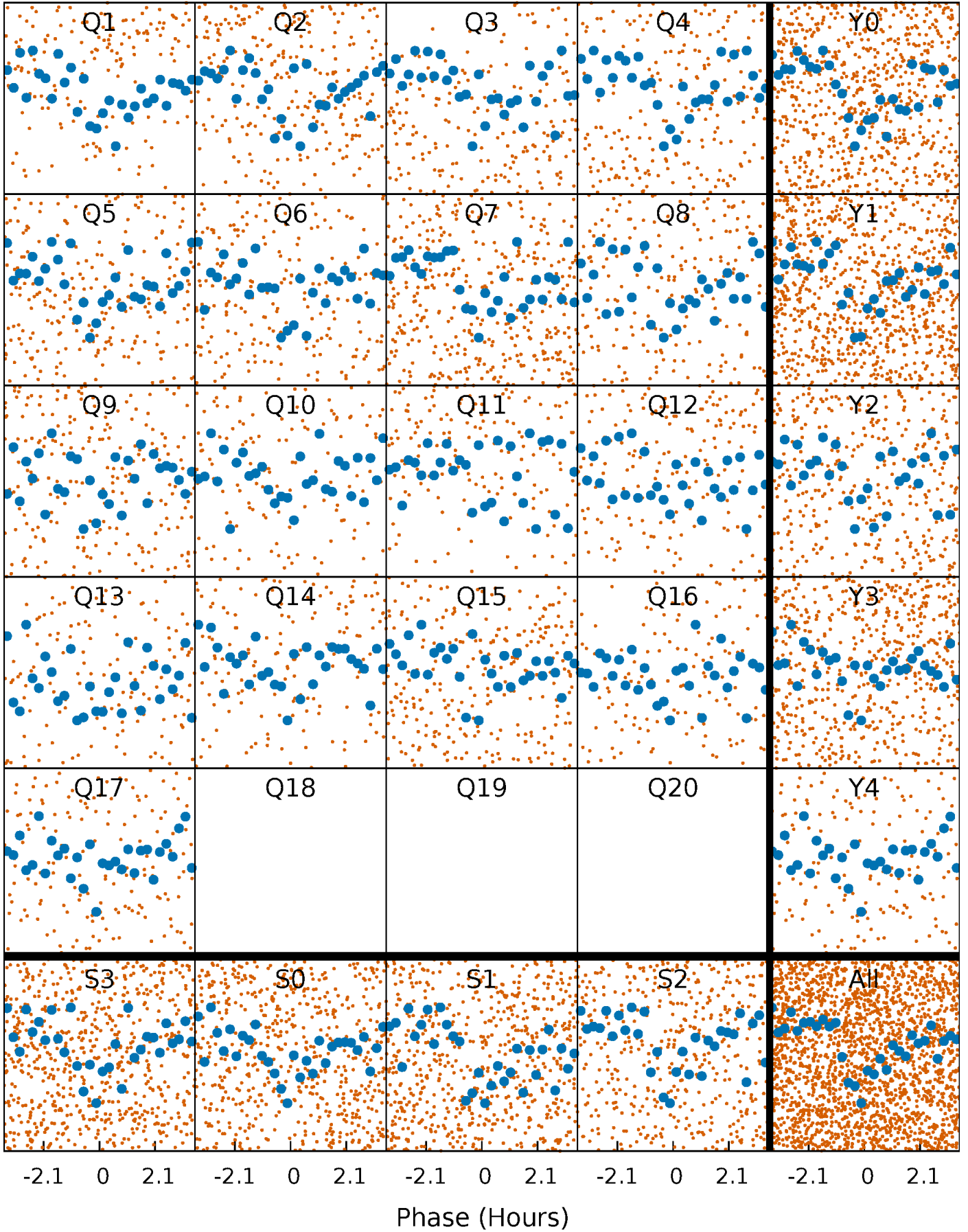


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



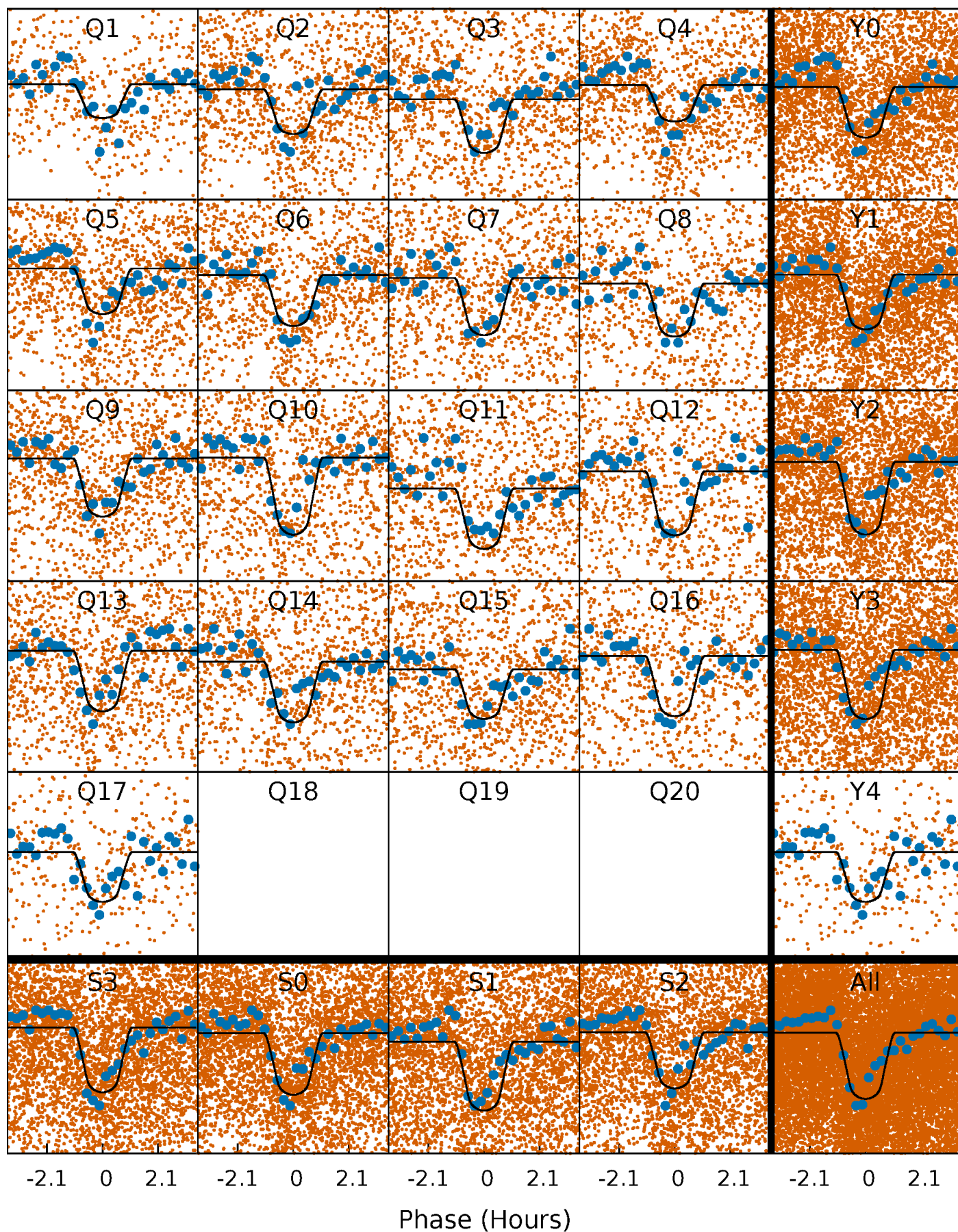
PDC Quarter-Phased Transit Curves

TCE 008639908-01 P= 0.910030 Days $T_0=131.987881$ (BKJD)



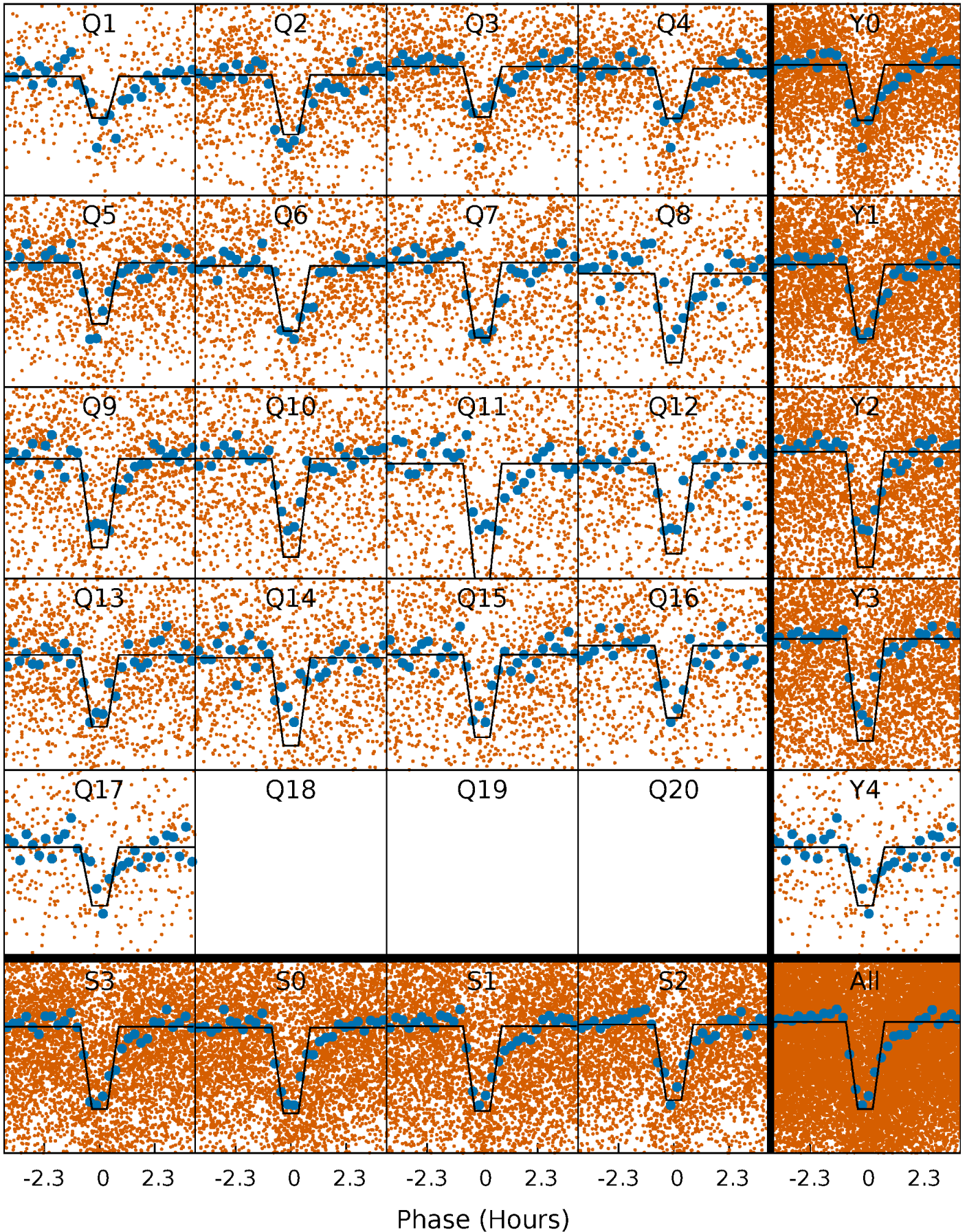
DV Quarter-Phased Transit Curves

TCE 008639908-01 P= 0.910030 Days $T_0=131.987881$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

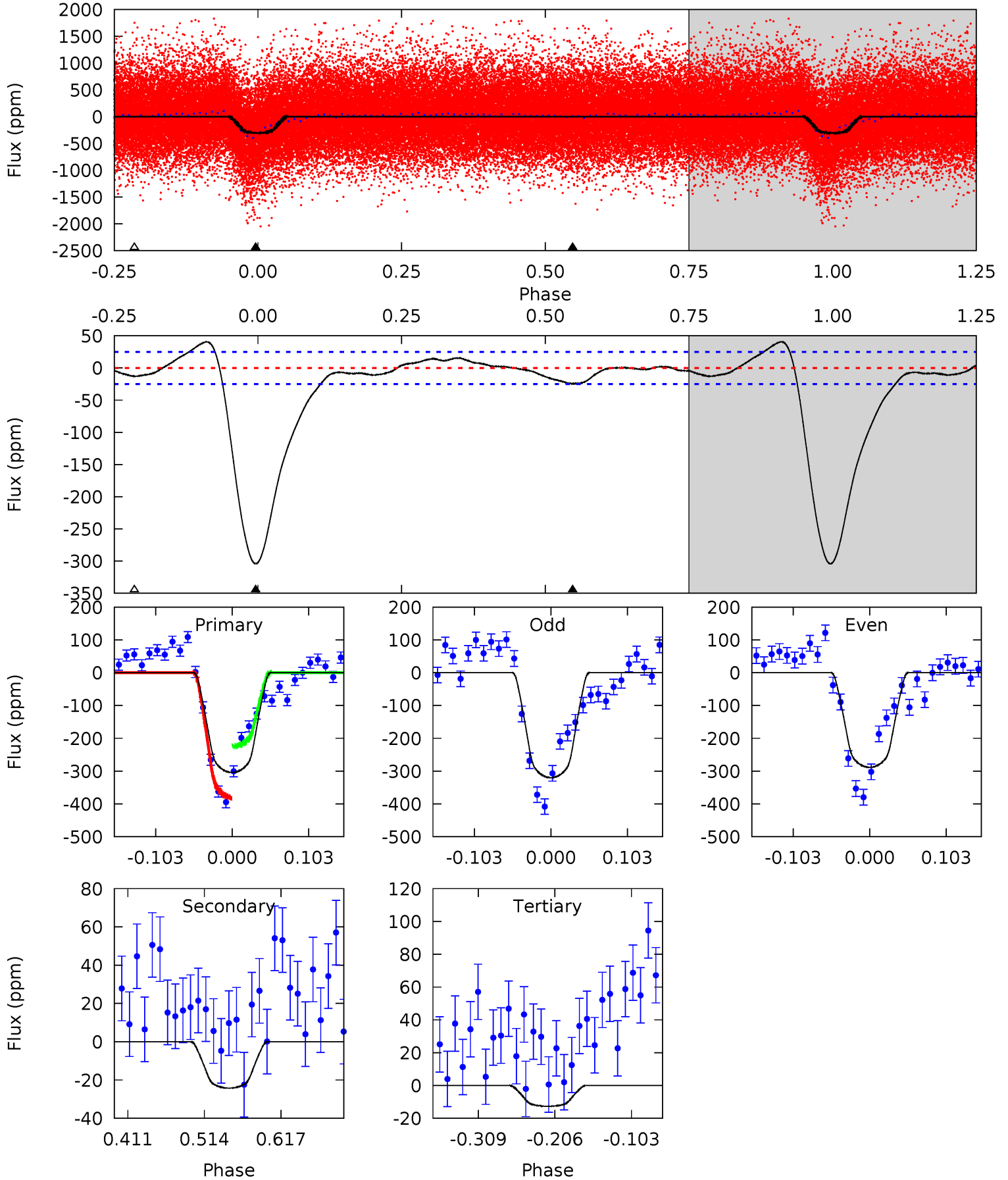
TCE 008639908-01 P= 0.910022 Days $T_0=131.985785$ (BKJD)



DV Model-Shift Uniqueness Test

008639908-01, P = 0.910030 Days, E = 131.077851 Days

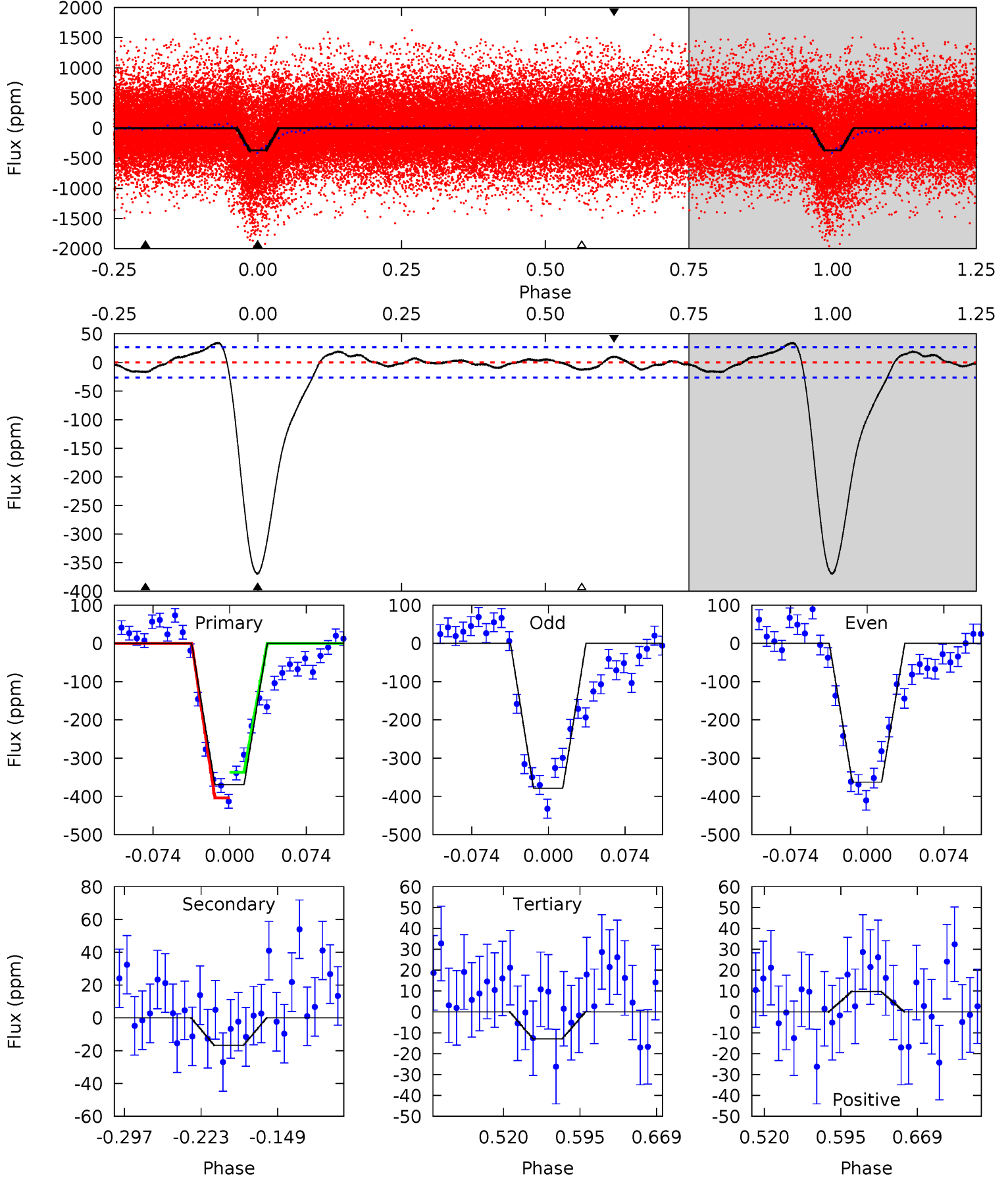
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.6	4.43	2.32	0	4.56	1.63	2.00	53.3	55.6	2.11	4.43	2.91	0.96	0.12	14.3



Alt Model-Shift Uniqueness Test

008639908-01, P = 0.910022 Days, E = 131.075763 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.6	2.93	2.25	1.71	4.63	1.78	2.13	62.4	62.9	0.68	1.22	1.37	0.99	0.08	5.85



Stellar Parameters For KIC 008639908

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4297^{+116}_{-142}	$4.725^{+0.045}_{-0.050}$	$-0.680^{+0.300}_{-0.300}$	$0.533^{+0.055}_{-0.049}$	$0.550^{+0.050}_{-0.045}$	$5.111^{+1.056}_{-0.964}$
	+3%/-3%	+1%/-1%	+44%/-44%	+10%/-9%	+9%/-8%	+21%/-19%
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 008639908-01 / KOI 2700.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-24 ± 5	$1.17^{+0.21}_{-0.21}$	1578^{+55}_{-61}	2710^{+182}_{-168}	$2.153^{+1.194}_{-0.694}$
Alt.	-17 ± 6	$1.17^{+0.22}_{-0.19}$	1579^{+59}_{-59}	2565^{+198}_{-229}	$1.526^{+0.949}_{-0.643}$

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

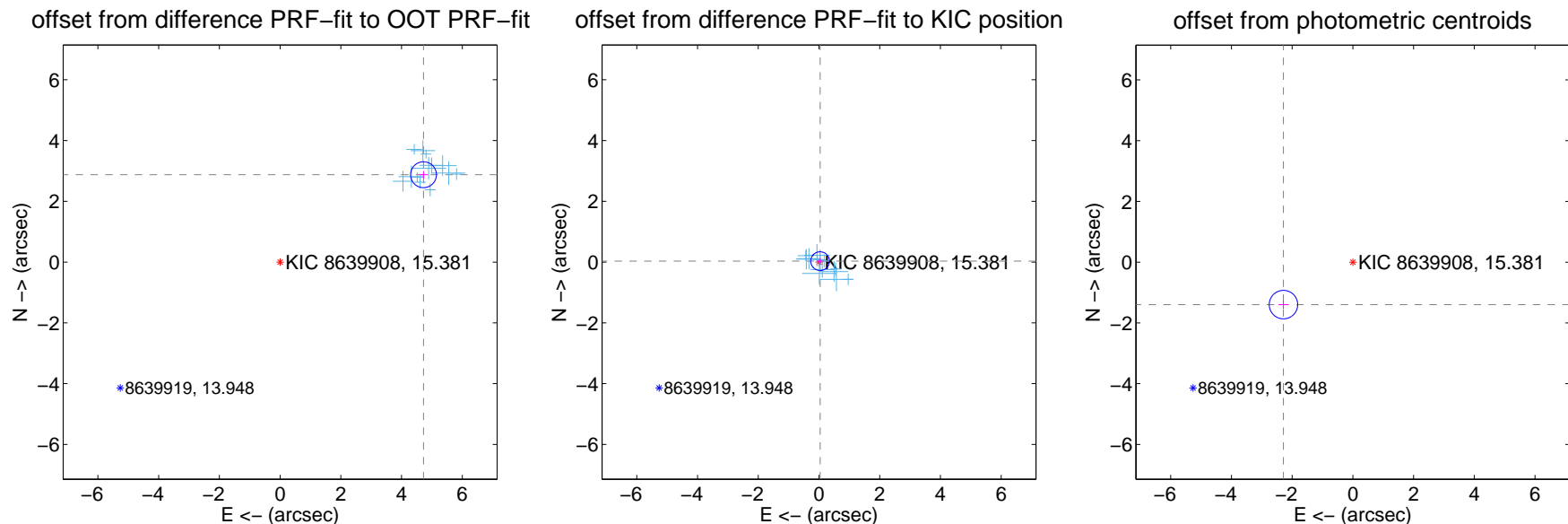
DV Centroid Data

Supplemental centroid analysis for 008639908-01. Kepler magnitude: 15.38. Transit SNR 38.49

There are 17 quarters with good PRF difference image offsets

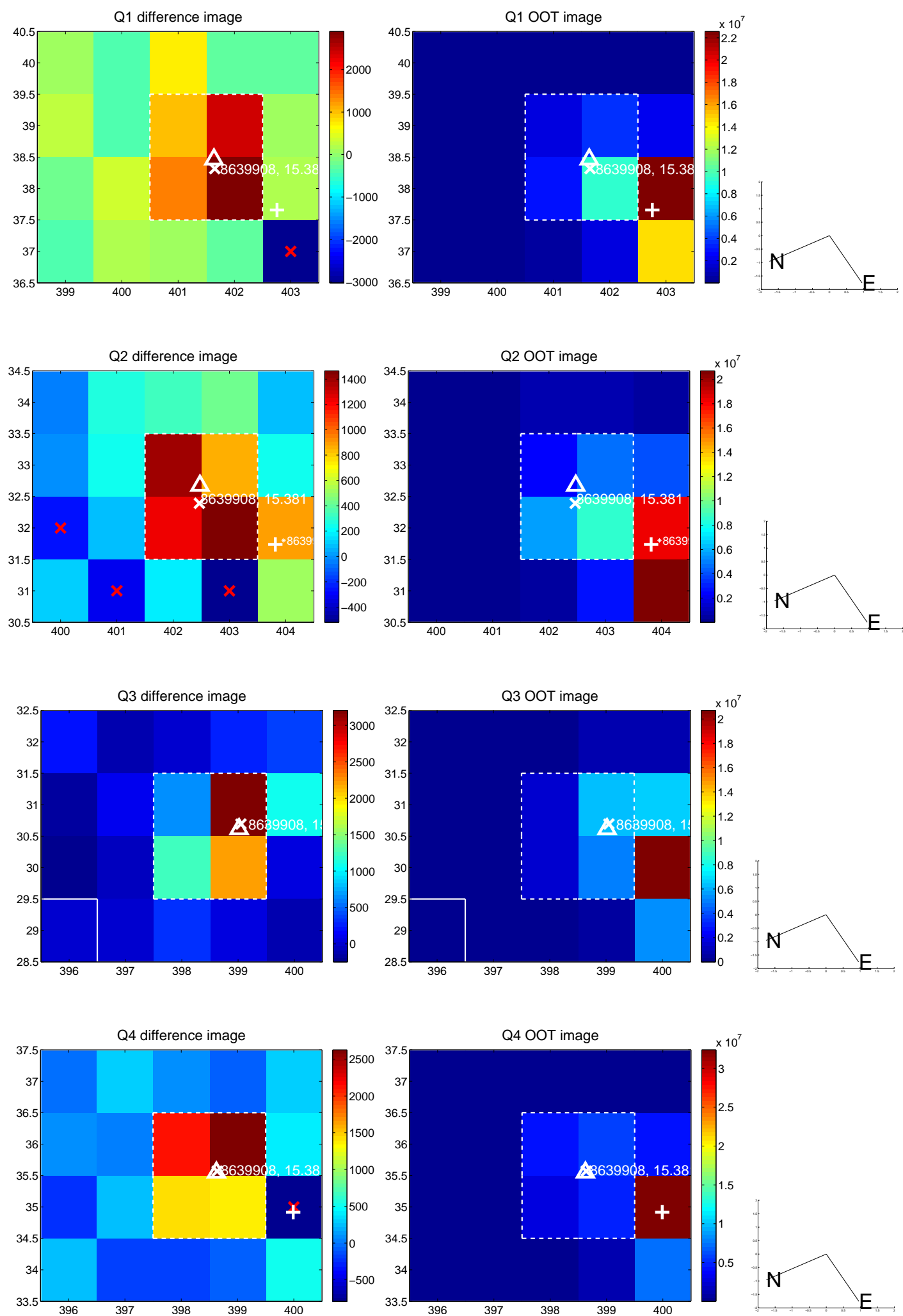
The OOT PRF centroid is offset from the target star catalog position by about 5.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.530 ± 0.142	38.96	-4.723 ± 0.149	2.876 ± 0.127
PRF-fit source offset from KIC position	0.049 ± 0.103	0.47	-0.037 ± 0.107	0.031 ± 0.097
photometric centroid source offset	2.68 ± 0.16	17.16	2.29 ± 0.16	-1.40 ± 0.13

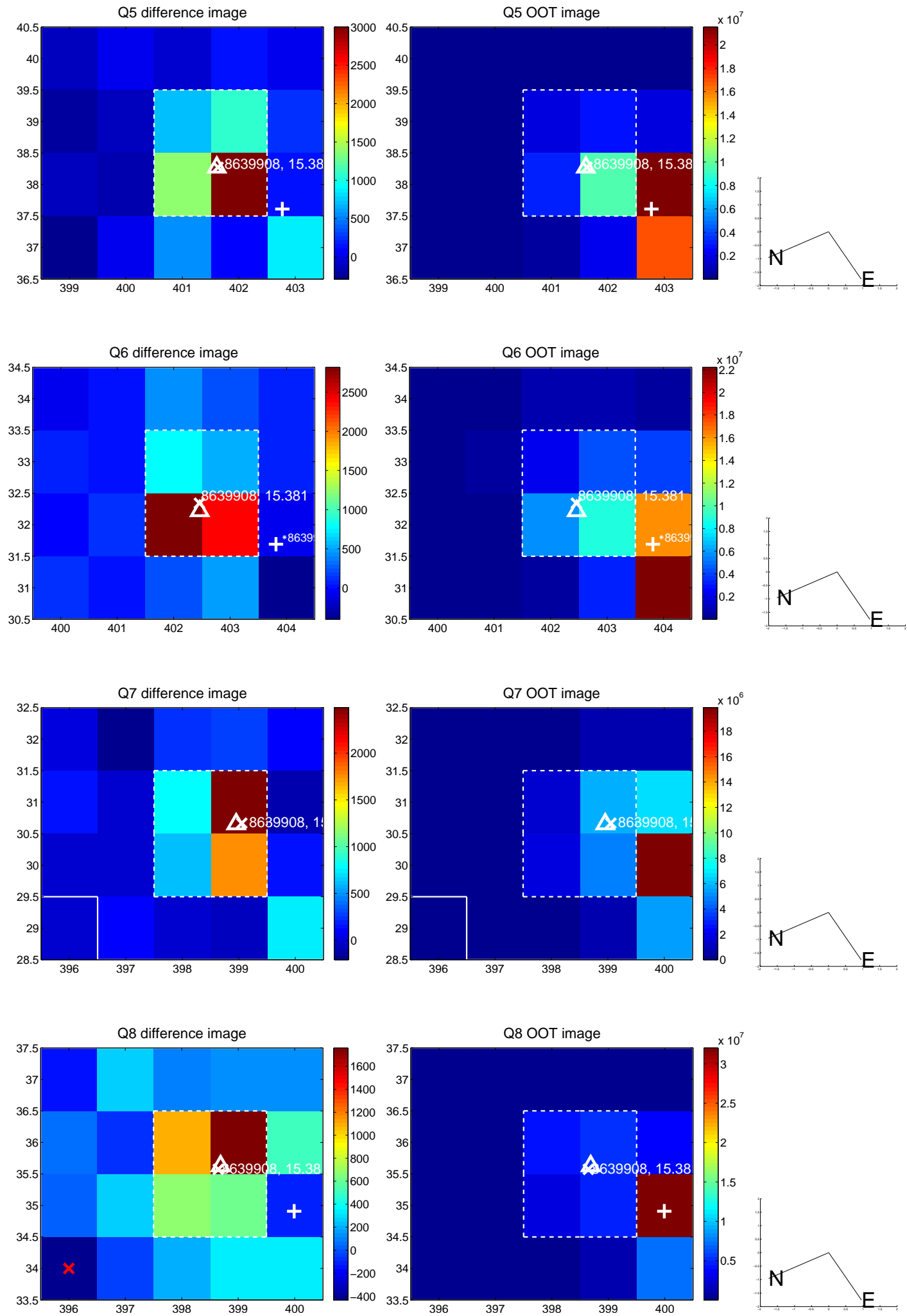


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

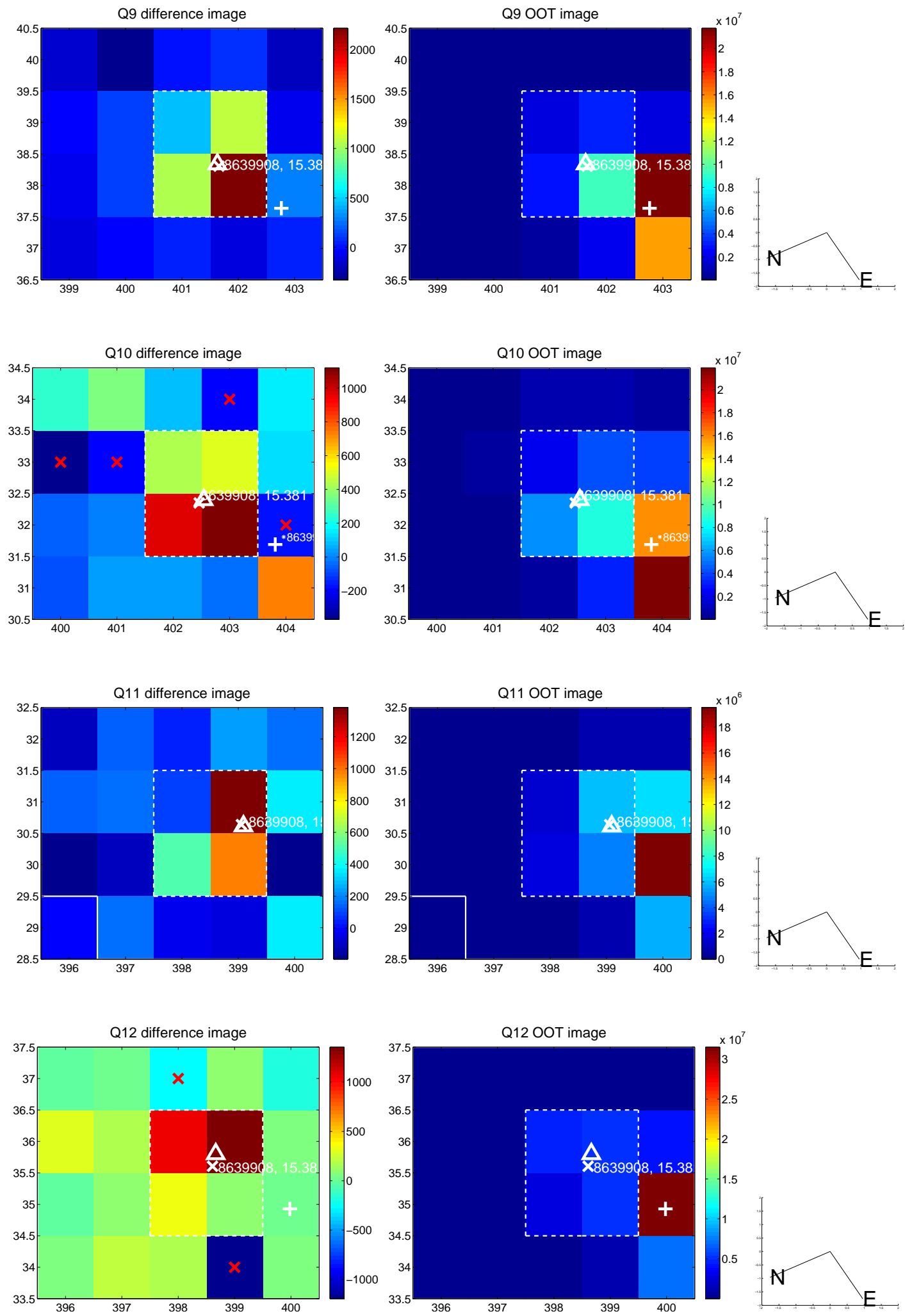
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



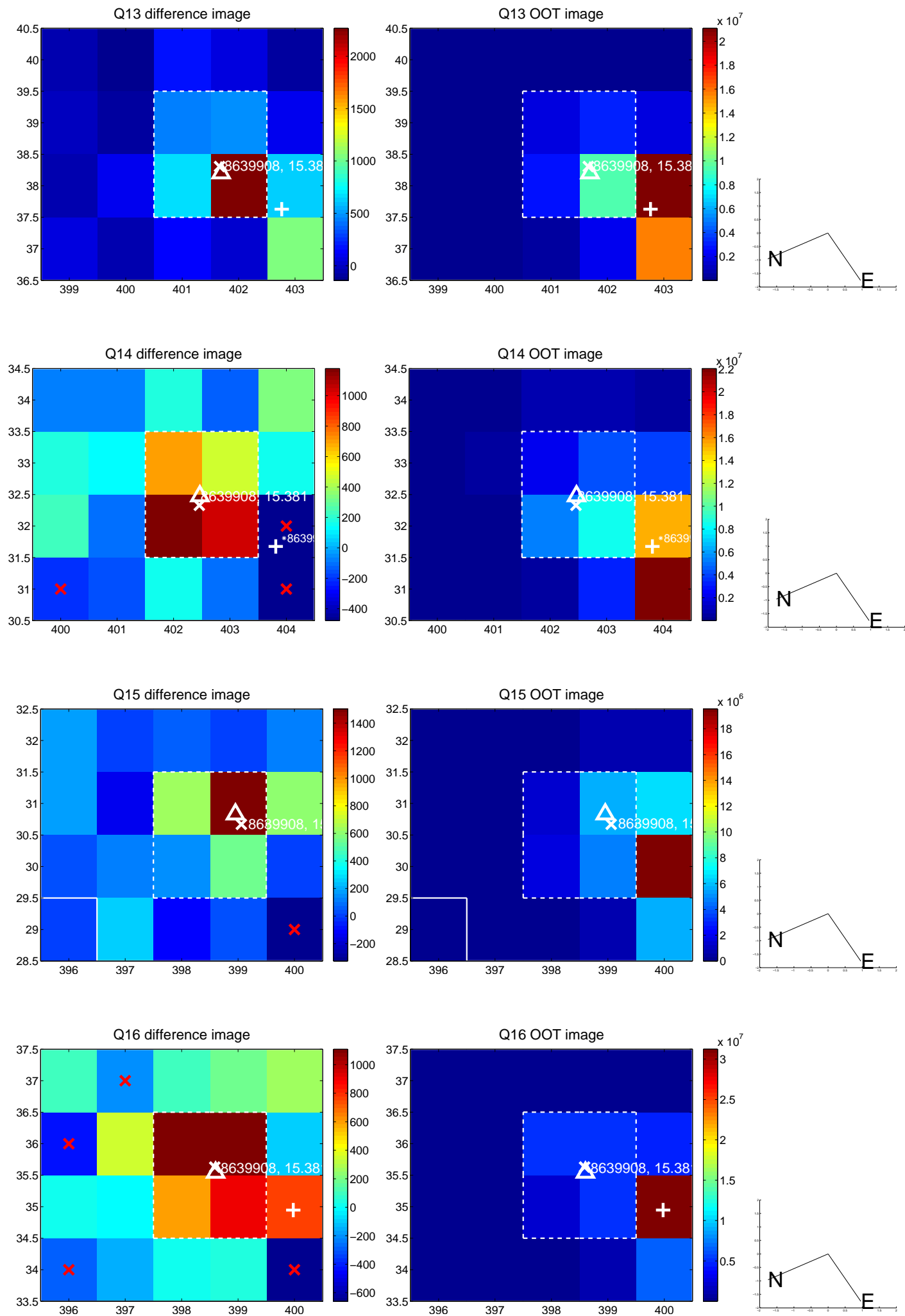
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



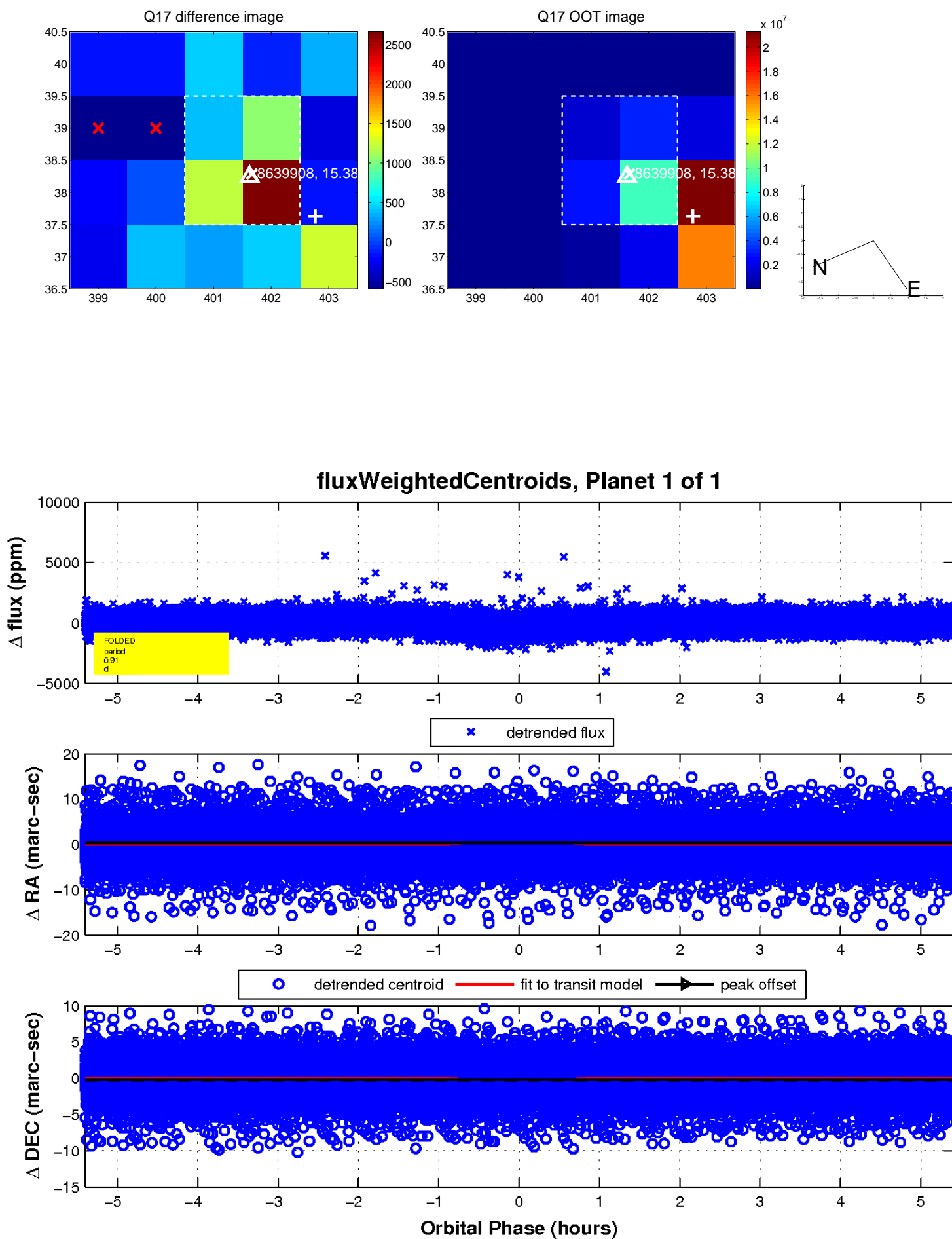
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

