

KIC 003440985

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})
003440985-01	OBS	No	1.869977	133.271149	45.0	8.928	9.6	8.7	3.88	7537	3.05	30893.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003440985-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

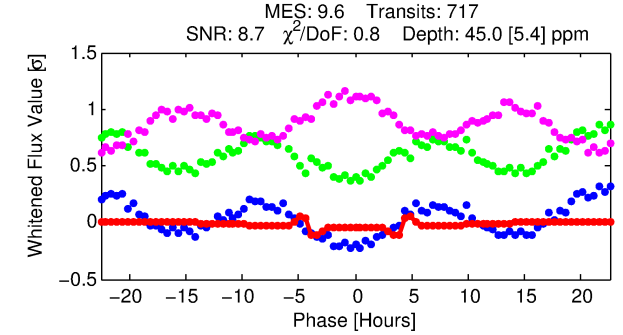
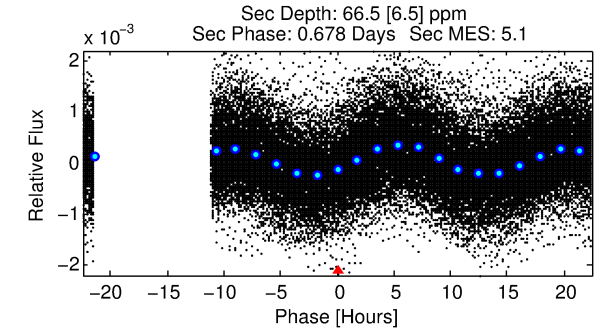
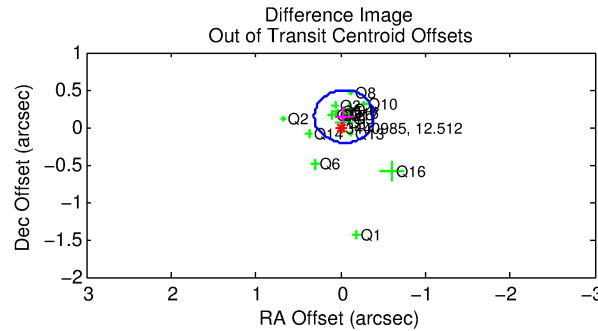
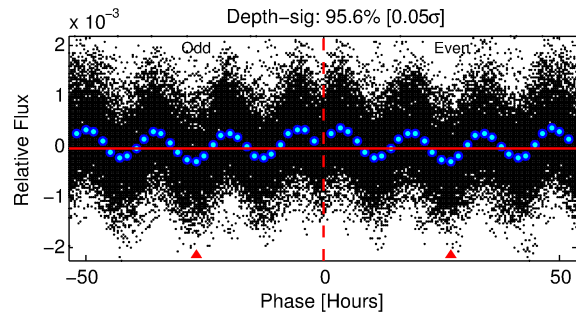
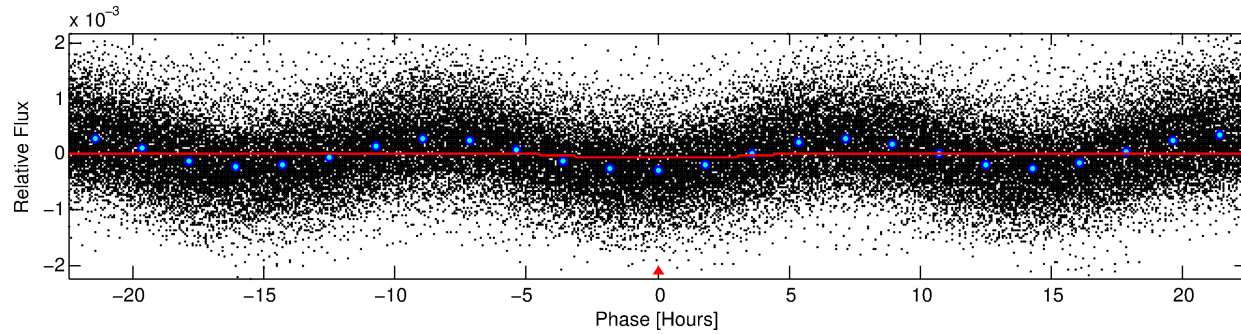
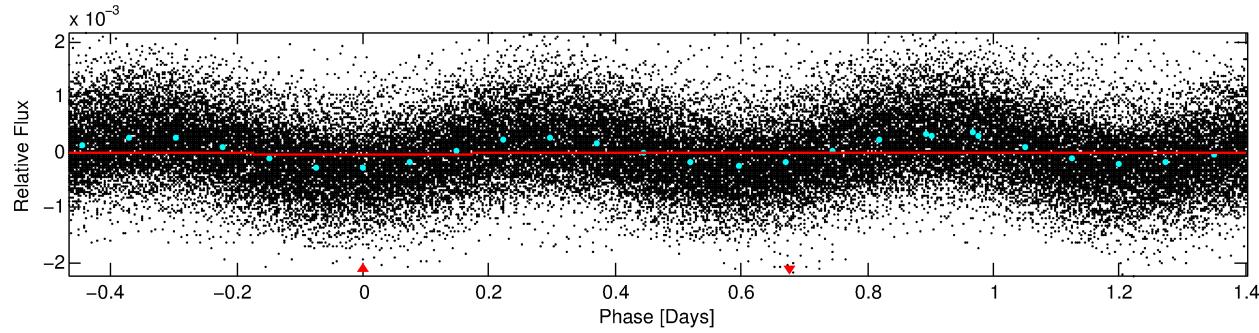
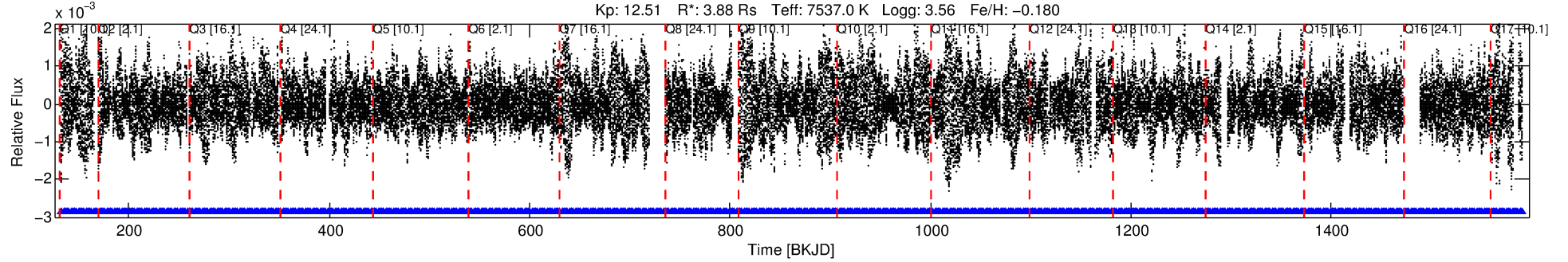
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003440985-01

No Significant Match Found

DV One-Page Summary

KIC: 3440985 Candidate: 1 of 1 Period: 1.870 d



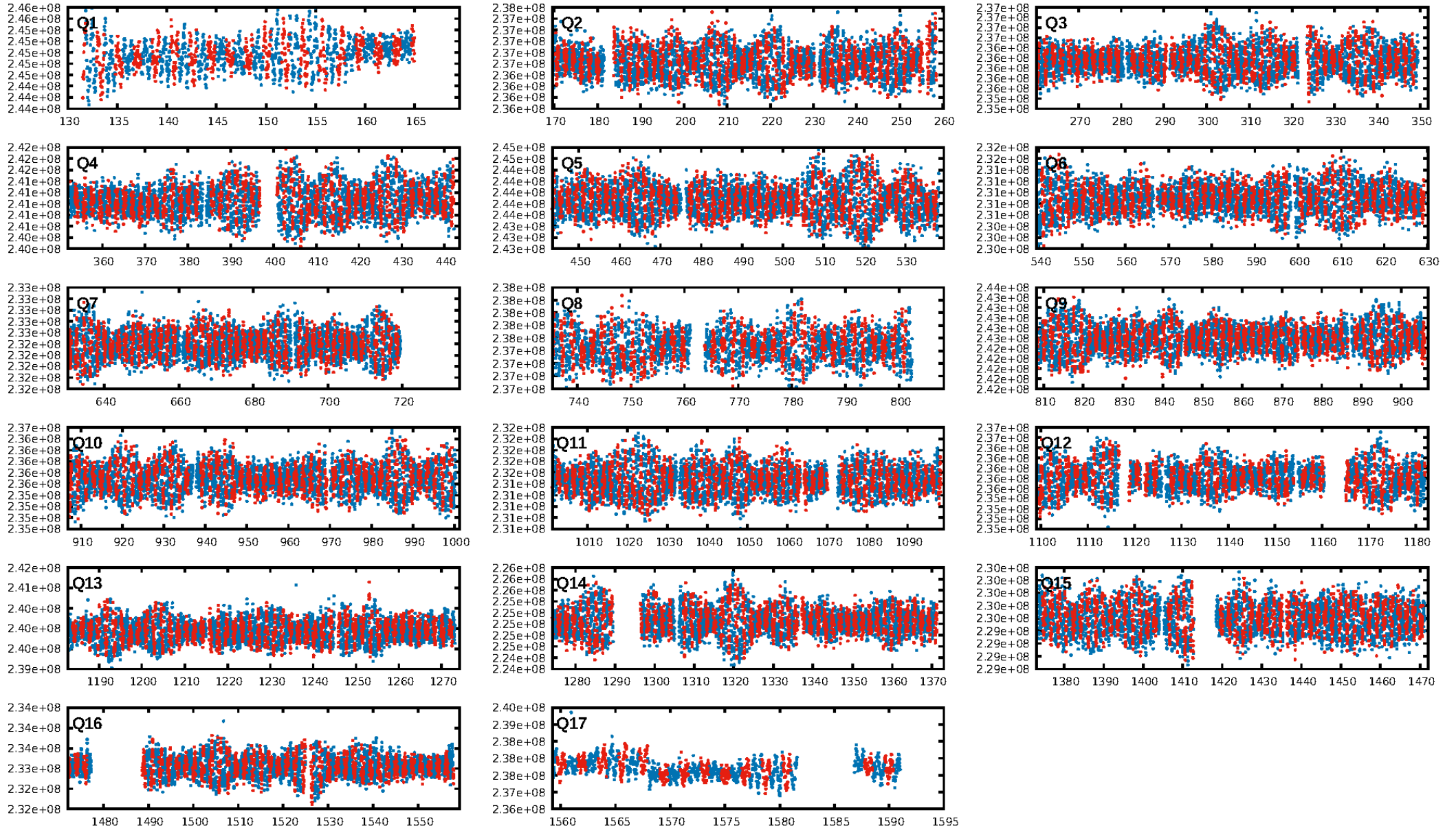
DV Fit Results:

Period = 1.86998 [0.00001] d
Epoch = 133.2711 [0.0025] BKJD
Rp/R* = 0.0072 [0.0008]
a/R* = 1.19 [0.17]
b = 0.90 [0.10]
Seff = 30893.65 [29832.12]
Teq = 3381 [816] K
Rp = 3.05 [1.79] Re
a = 0.0375 [0.0218] AU
Ag = 5.54 [5.43] [0.84 σ]
Teffp = 8017 [580] K [4.63 σ]

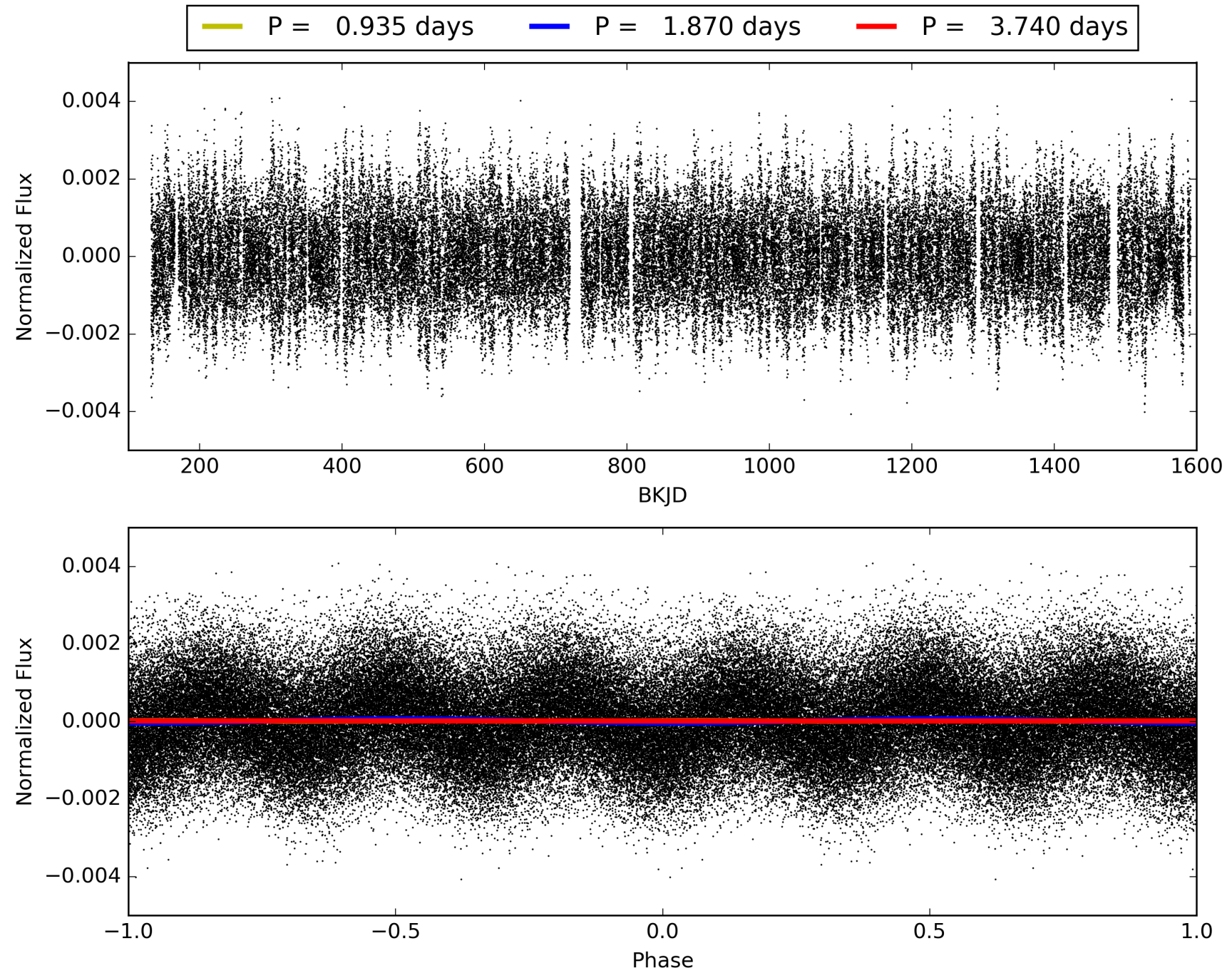
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.69e-37
RollingBand-fgt: 1.00 [684/684]
GhostDiagnostic-chr: 1.035
Centroid-sig: 0.0%
Centroid-so: 0.783 arcsec [1.99 σ]
OotOffset-rm: 0.151 arcsec [1.29 σ]
KicOffset-rm: 0.125 arcsec [0.98 σ]
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 003440985-01, PDC Light Curves

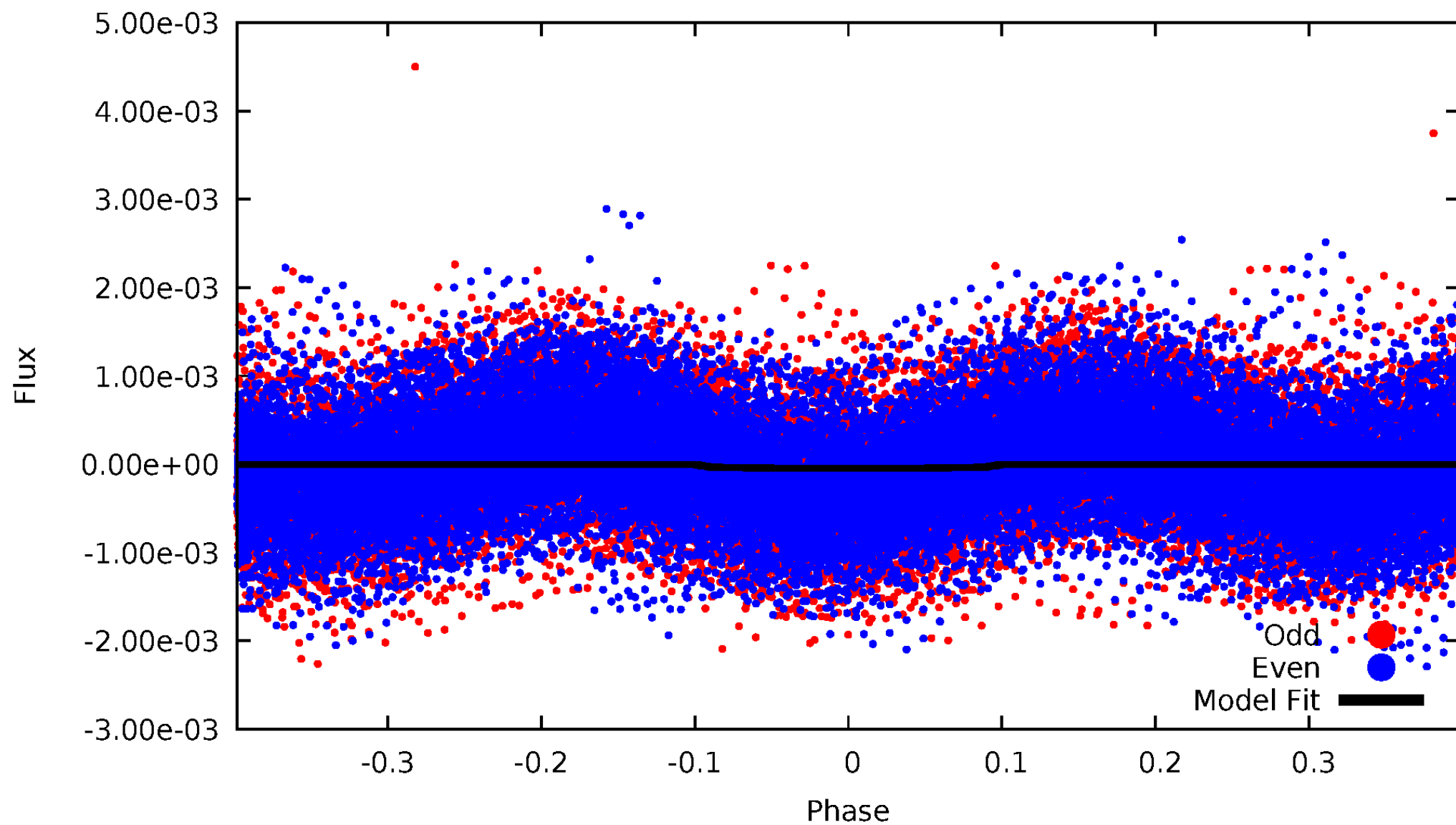


TCE 003440985-01



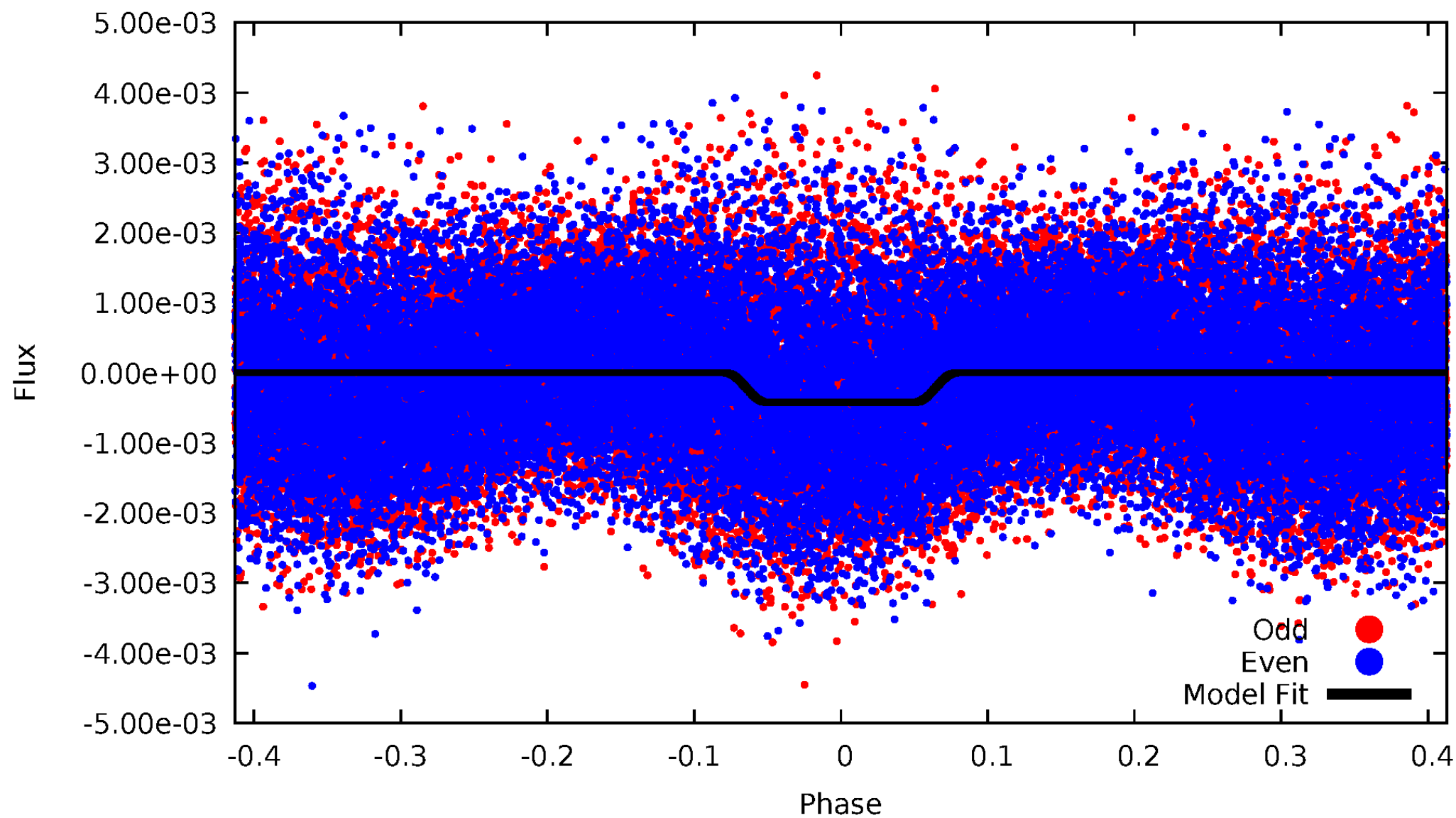
DV Odd/Even

TCE 003440985-01



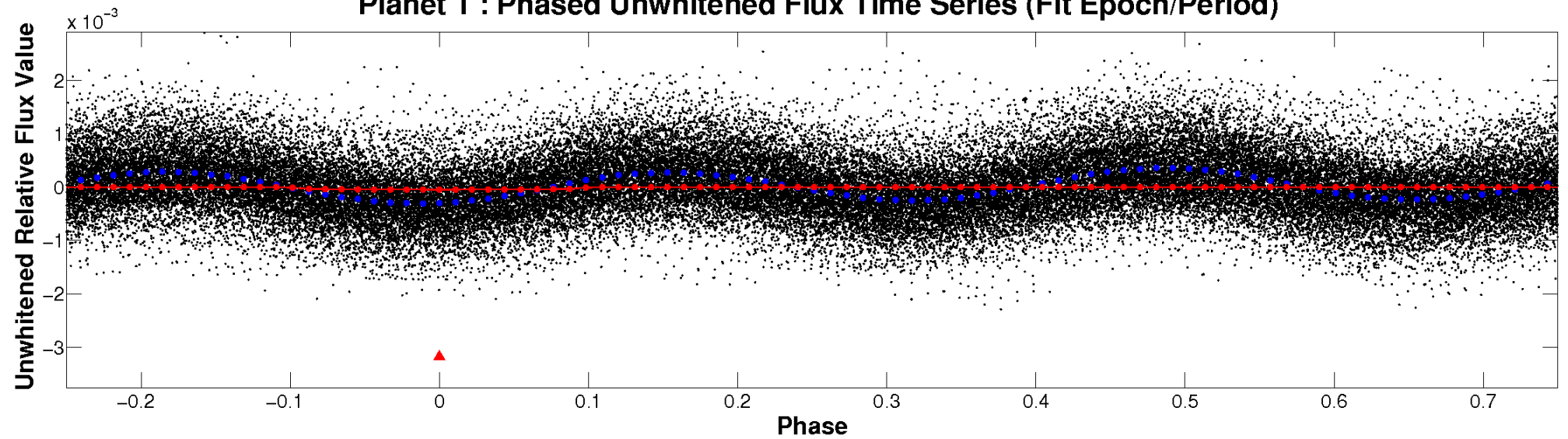
ALT Odd/Even

TCE 003440985-01

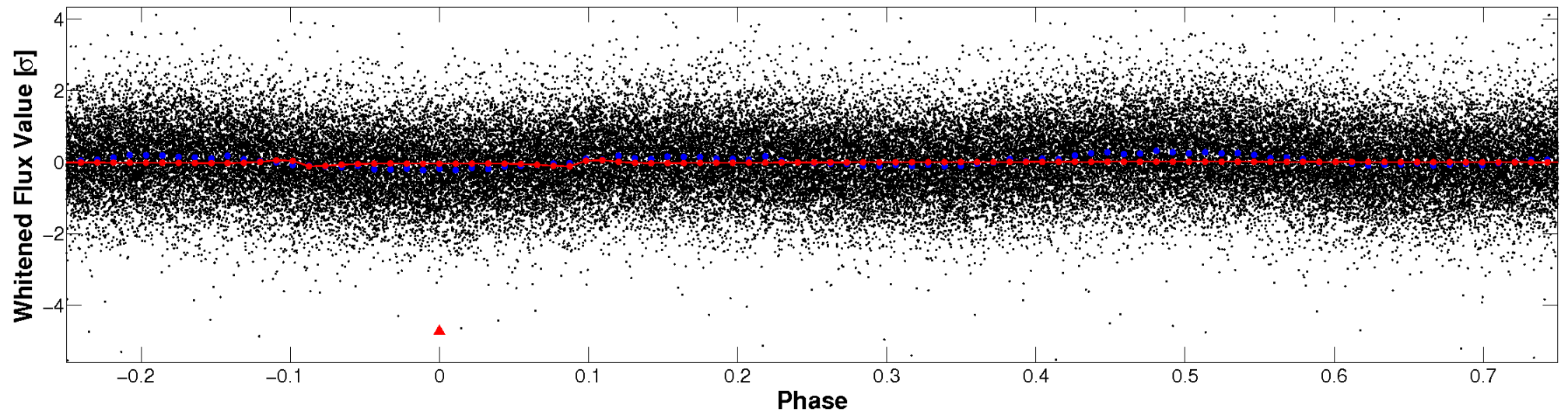


Non-Whitened Vs. Whitened Light Curve

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

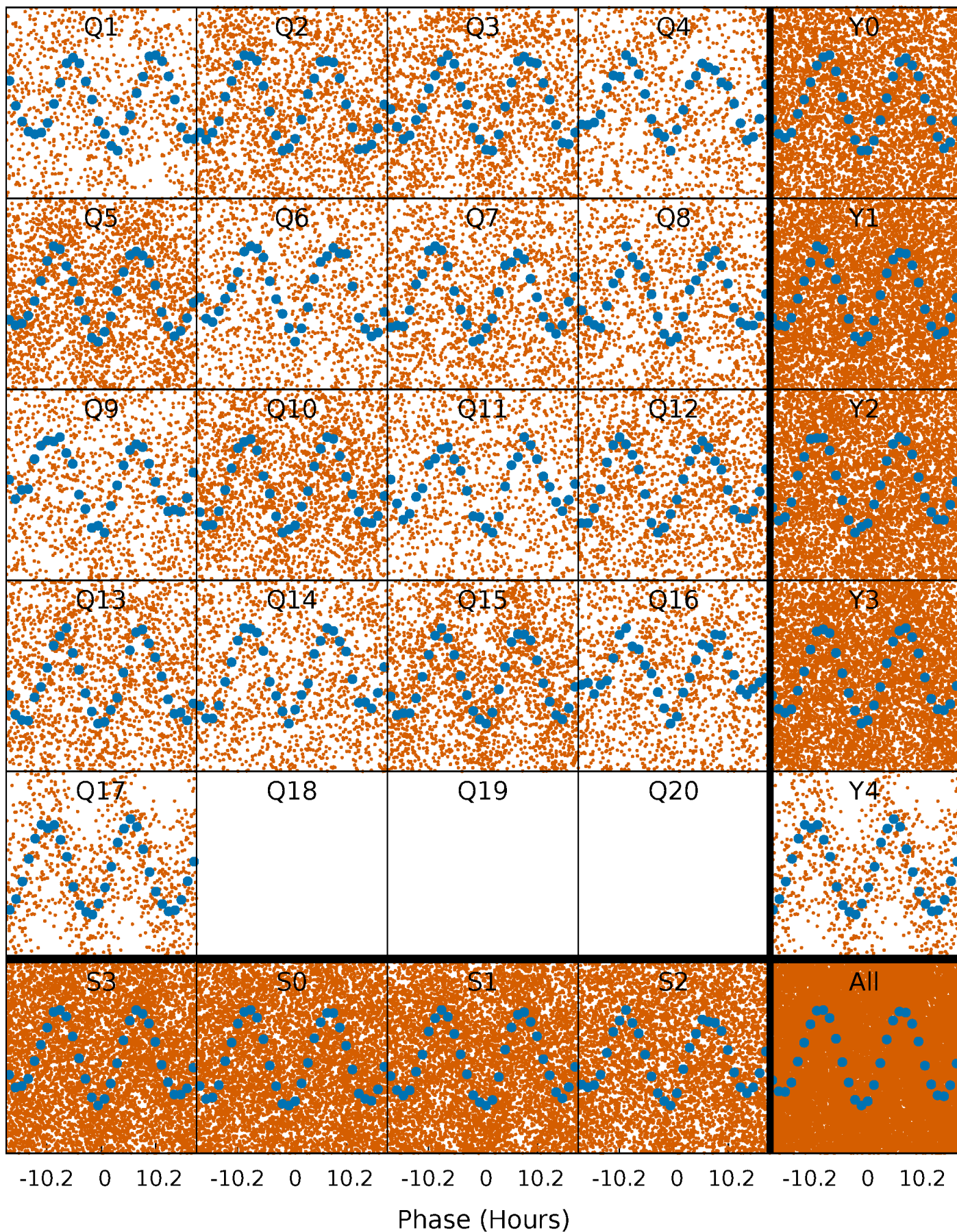


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



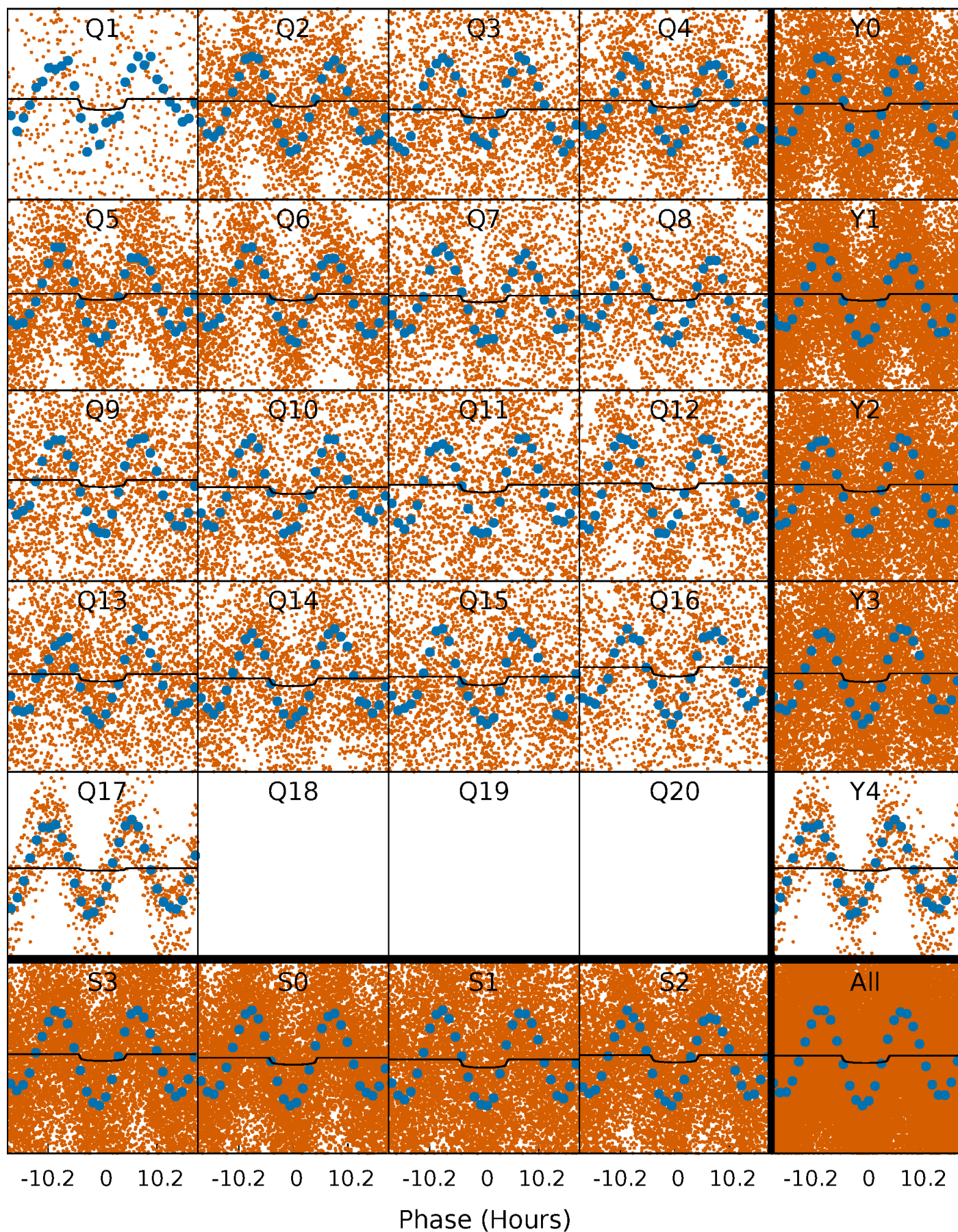
PDC Quarter-Phased Transit Curves

TCE 003440985-01 P= 1.869977 Days $T_0=133.271149$ (BKJD)



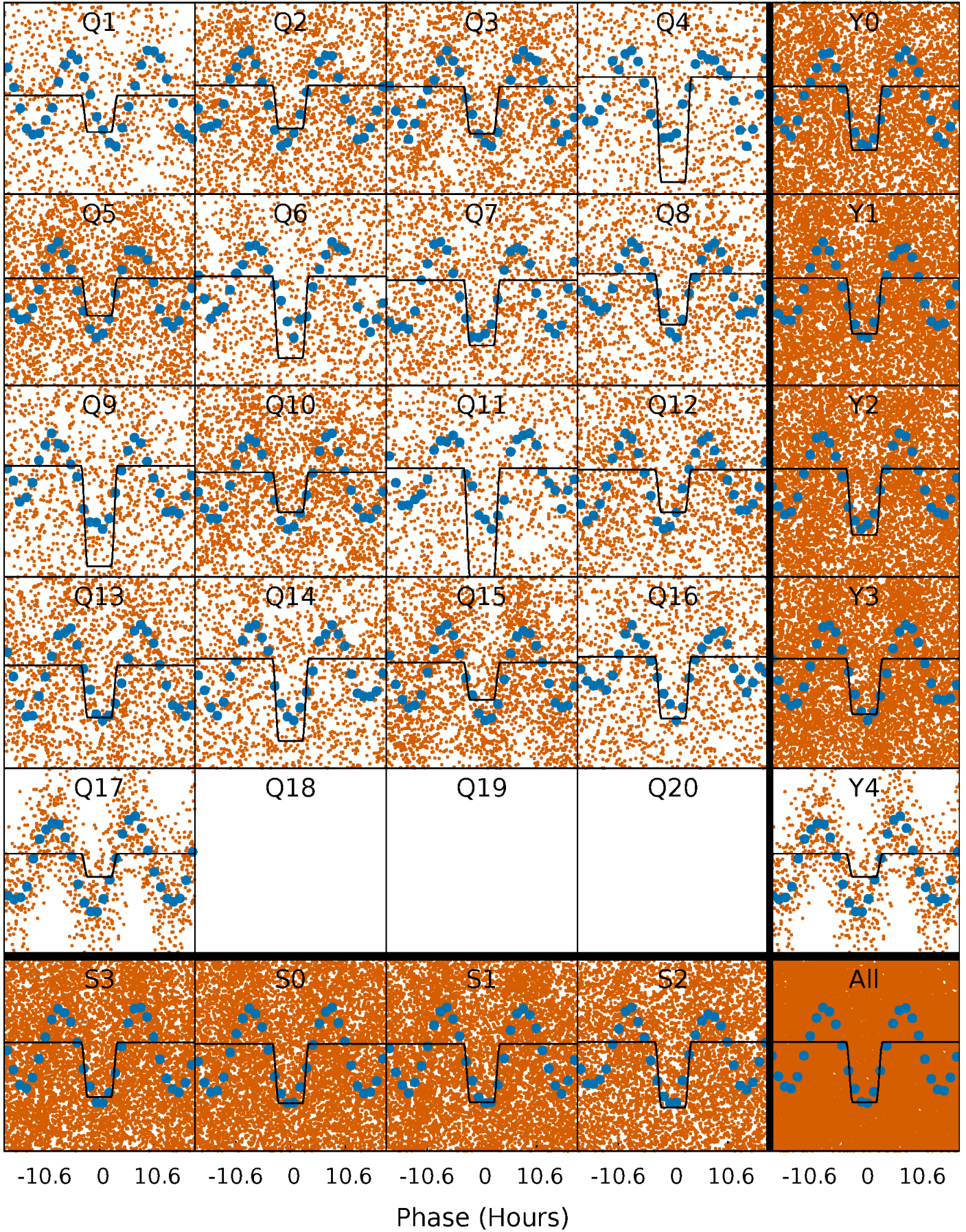
DV Quarter-Phased Transit Curves

TCE 003440985-01 P= 1.869977 Days $T_0=133.271149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

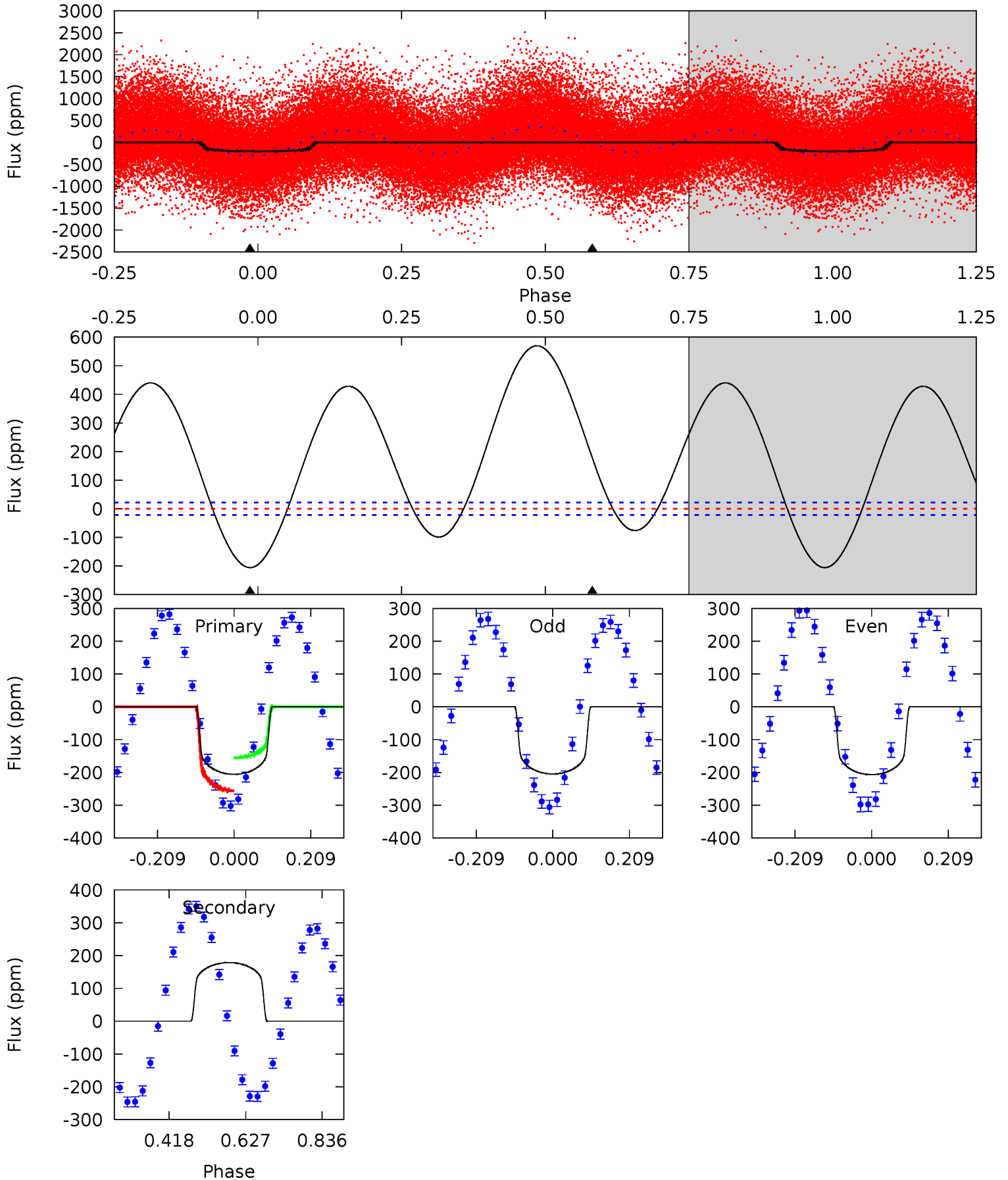
TCE 003440985-01 P= 1.869922 Days $T_0=133.268494$ (BKJD)



DV Model-Shift Uniqueness Test

003440985-01, P = 1.869977 Days, E = 131.401172 Days

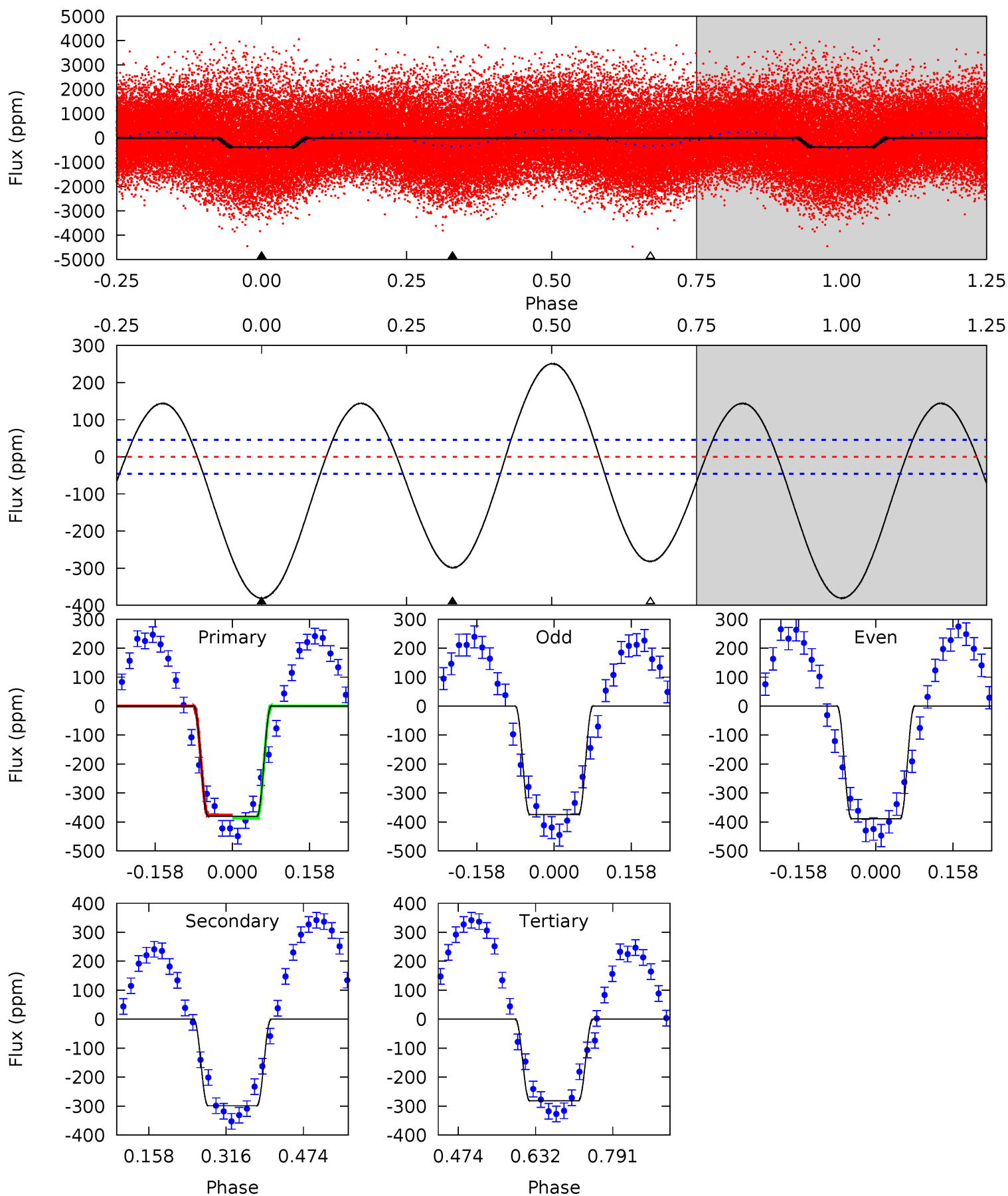
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.9	-36.4	0	0	4.41	1.26	28.0	41.9	41.9	-36.4	-36.4	0.21	1.05	0.73	10.5



Alt Model-Shift Uniqueness Test

003440985-01, P = 1.869922 Days, E = 131.398572 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.2	29.2	27.5	0	4.47	1.41	17.4	9.70	37.2	1.65	29.2	0.69	0.92	0.40	0.55



Stellar Parameters For KIC 003440985

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7537^{+209}_{-314}	$3.565^{+0.567}_{-0.063}$	$-0.180^{+0.250}_{-0.300}$	$3.881^{+0.394}_{-2.233}$	$2.018^{+0.138}_{-0.588}$	$0.049^{+0.350}_{-0.010}$
	+3%/-4%	+16%/-2%	+139%/-167%	+10%/-58%	+7%/-29%	+720%/-21%
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 003440985-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	178 ± 5	$2.79^{+0.55}_{-0.78}$	4531^{+314}_{-604}	-11499^{+1010}_{-1285}	$-17.699^{+5.102}_{-14.185}$
Alt.	-299 ± 10	$8.24^{+0.94}_{-2.54}$	4556^{+285}_{-672}	6657^{+295}_{-283}	$3.383^{+3.317}_{-0.598}$

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

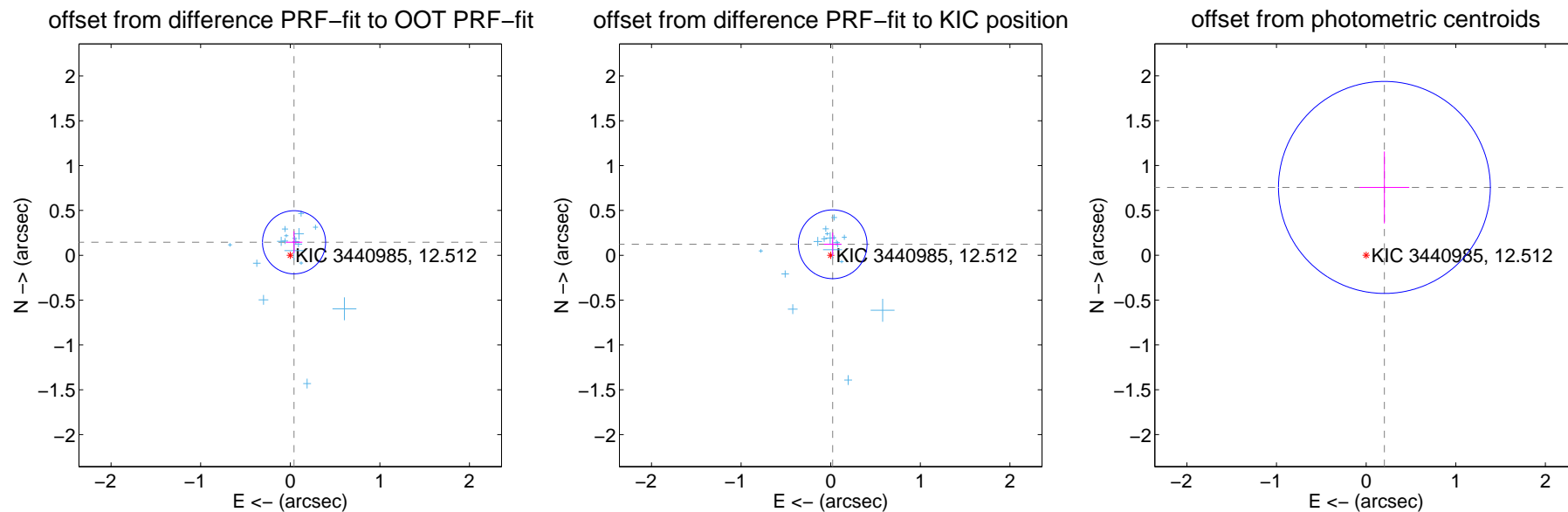
DV Centroid Data

Supplemental centroid analysis for 003440985-01. Kepler magnitude: 12.51. Transit SNR 8.70

There are 17 quarters with good PRF difference image offsets

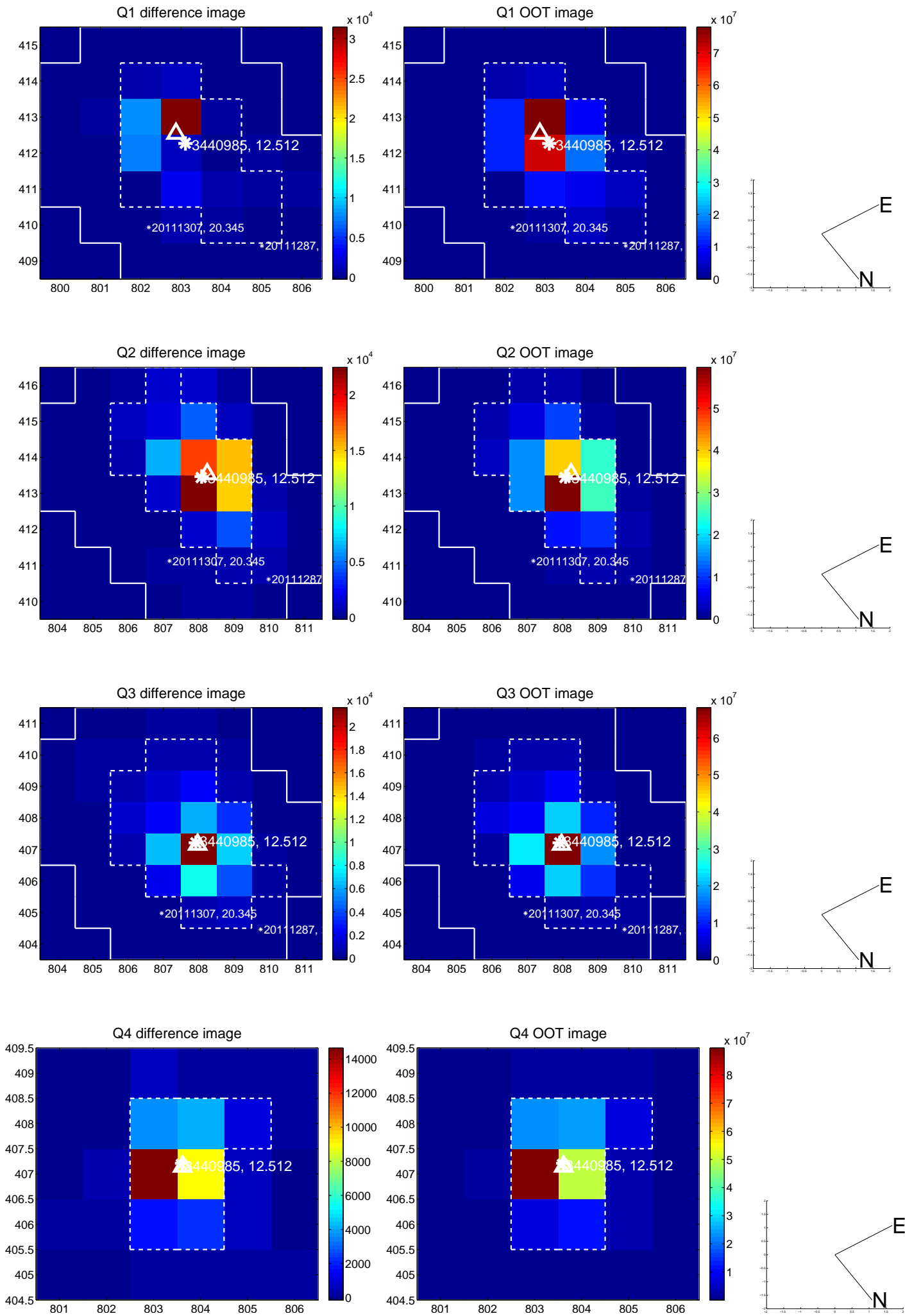
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.151 ± 0.117	1.29	-0.042 ± 0.092	0.145 ± 0.122
PRF-fit source offset from KIC position	0.125 ± 0.128	0.98	-0.022 ± 0.098	0.123 ± 0.130
photometric centroid source offset	0.78 ± 0.39	1.99	-0.20 ± 0.28	0.76 ± 0.40

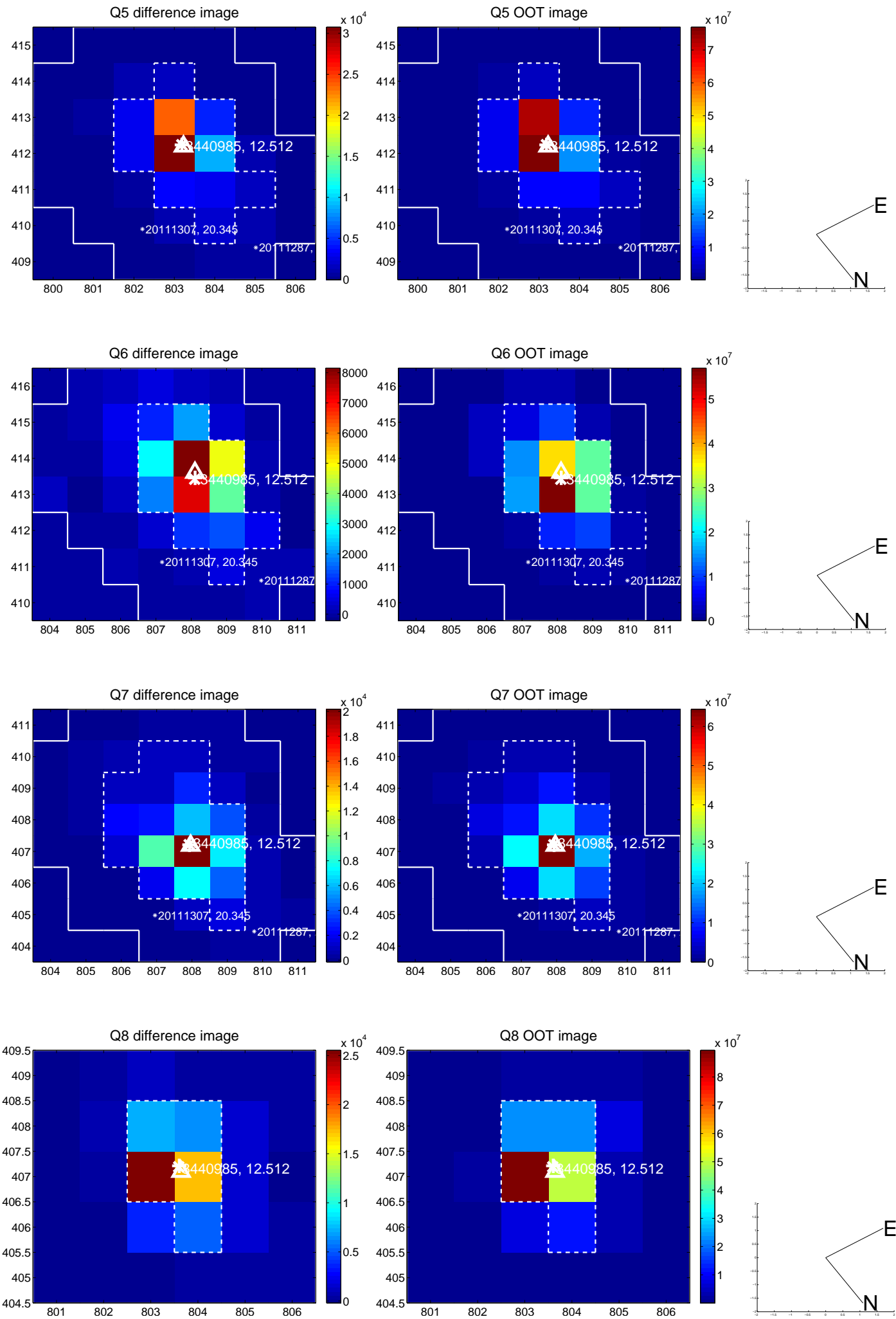


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

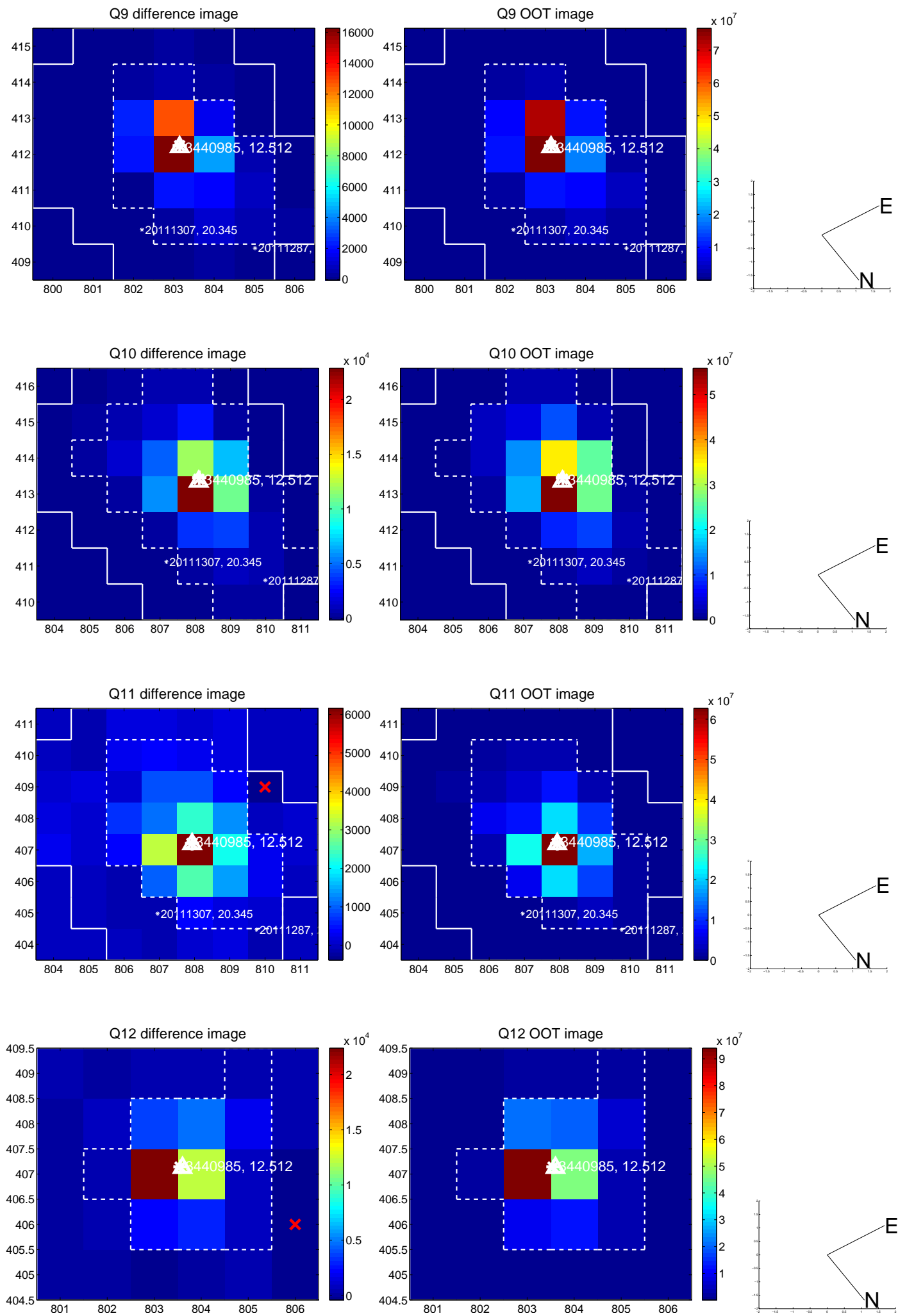
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



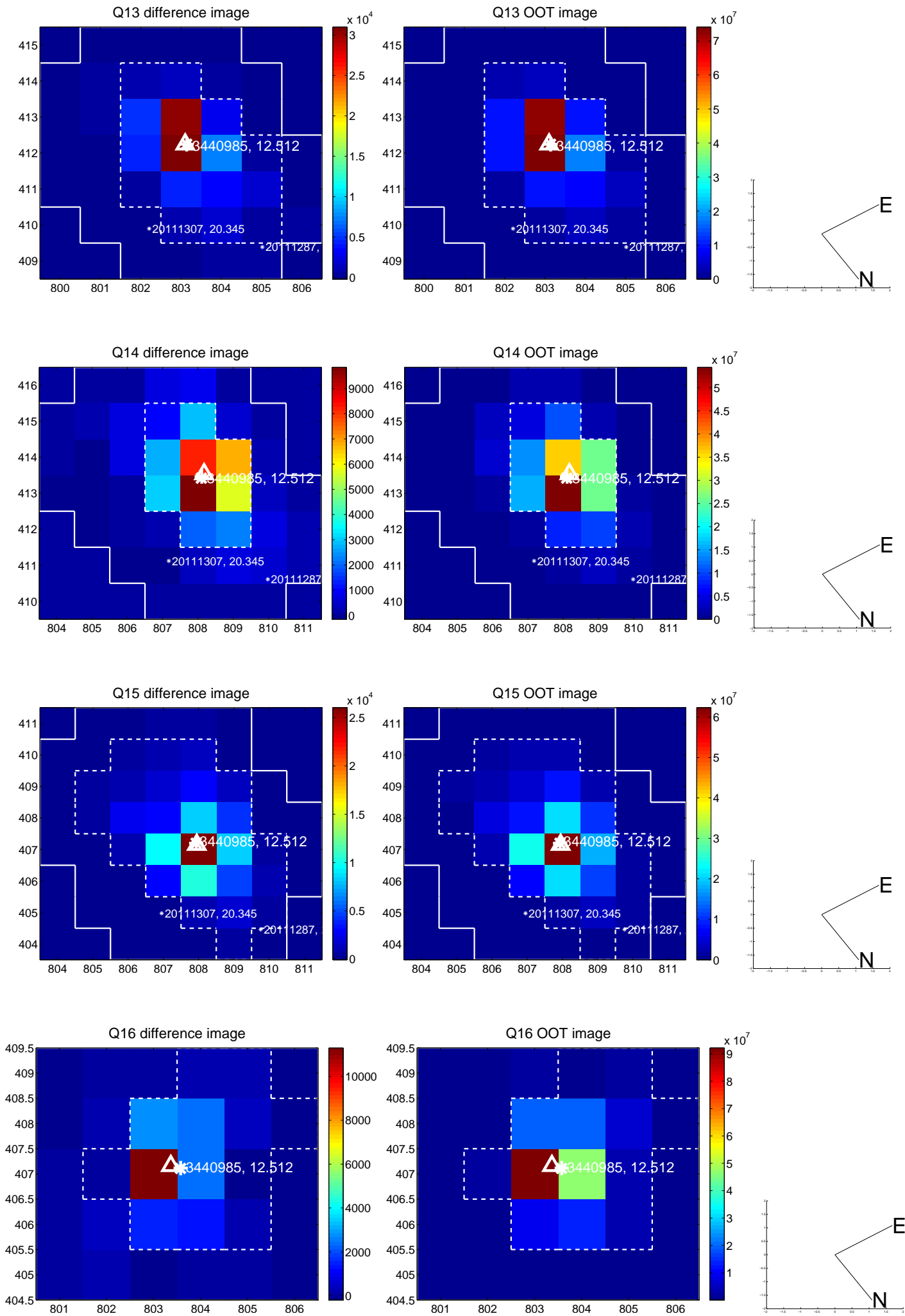
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



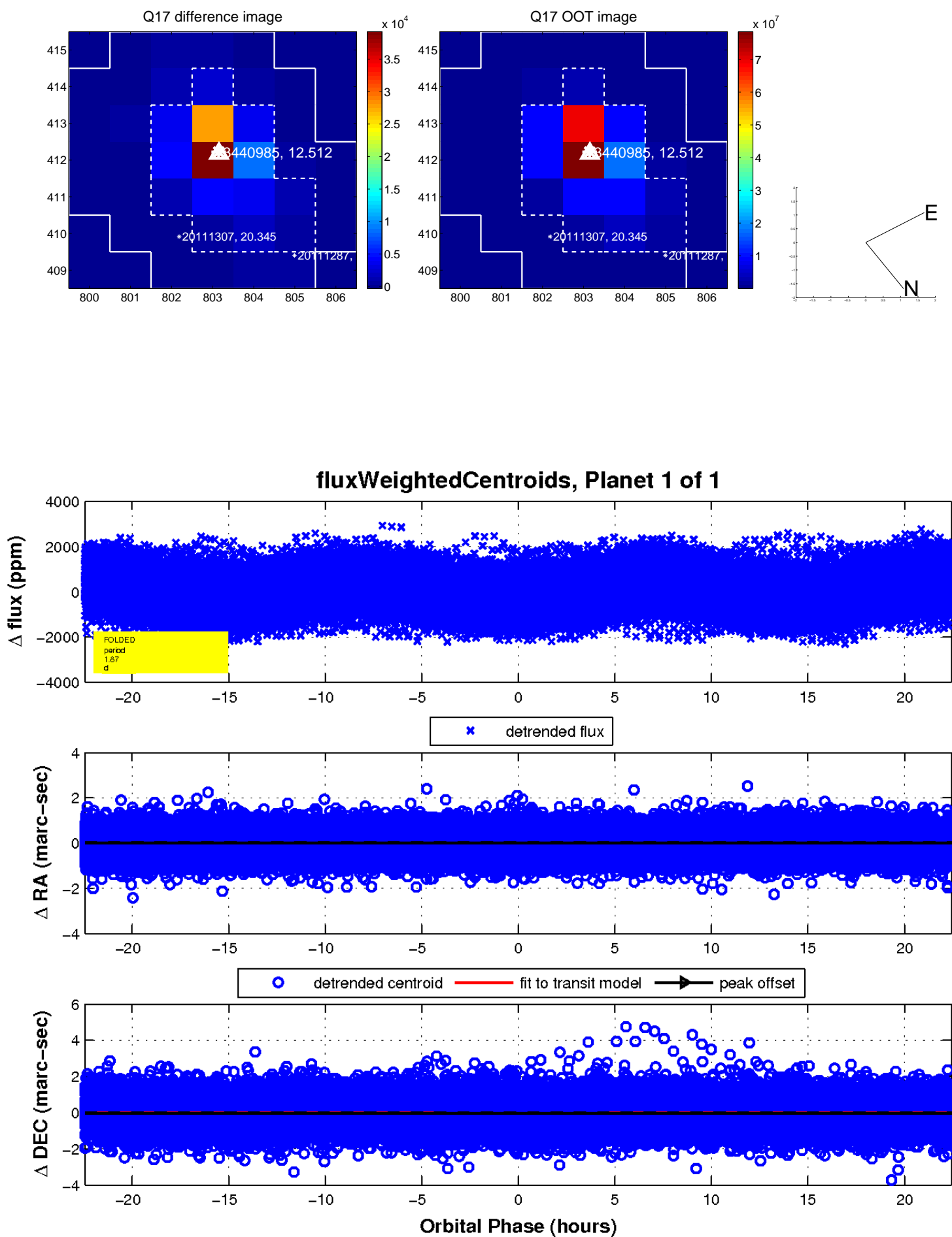
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

