

KIC 008197406

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})
008197406-01	OBS	5486.01	4.154701	132.614055	1113.9	1.213	66.9	98.5	3.36	6996	13.13	6532.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008197406-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

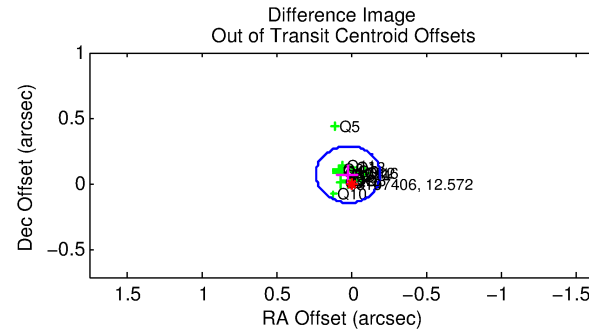
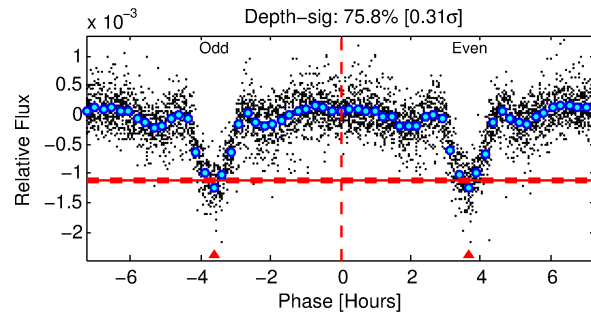
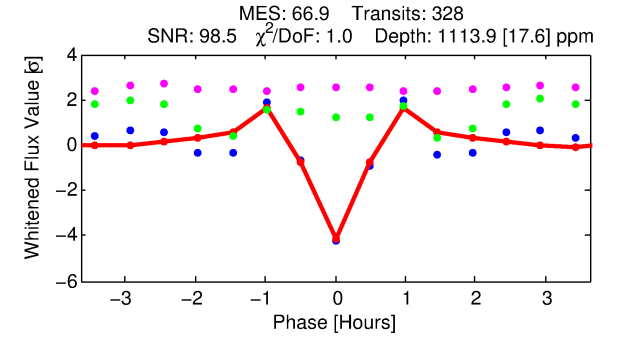
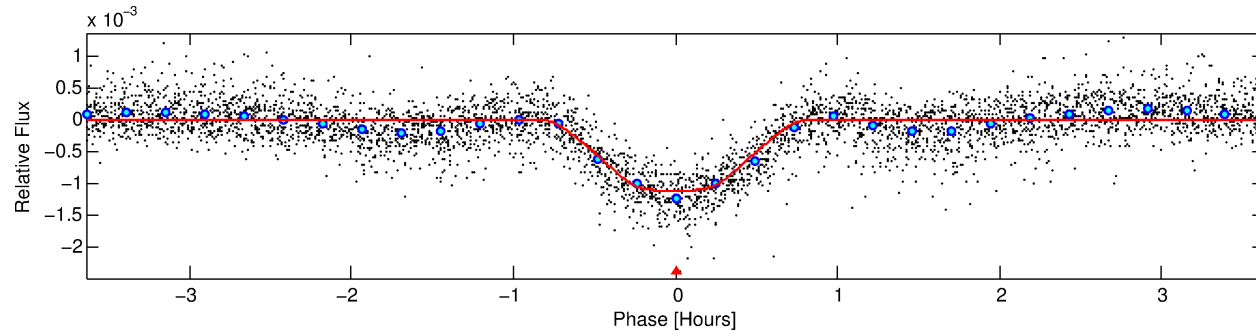
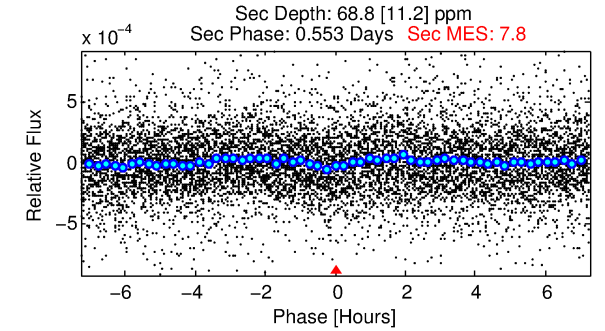
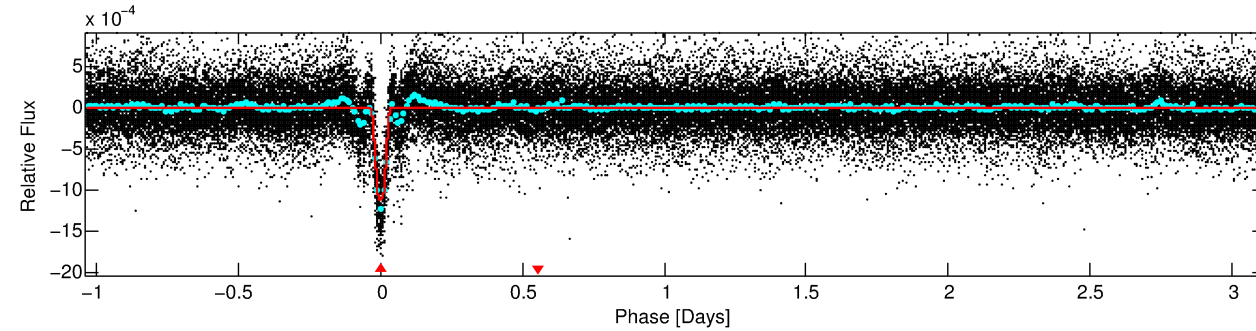
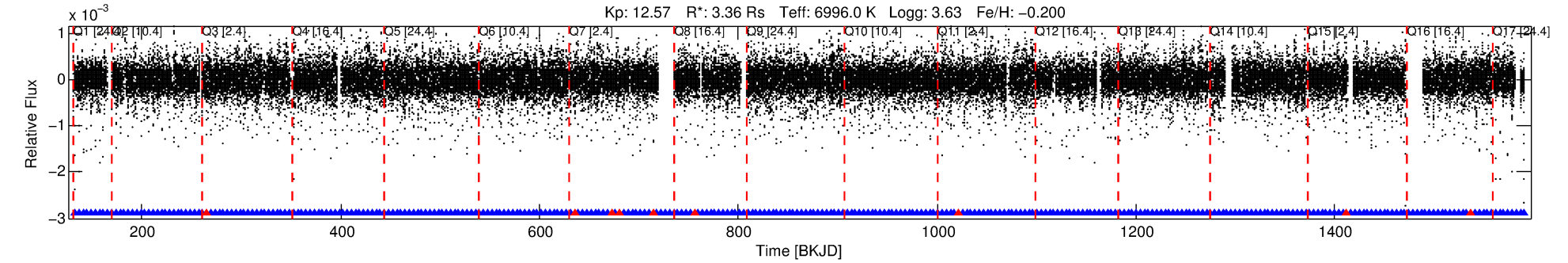
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008197406-01

No Significant Match Found

DV One-Page Summary

KIC: 8197406 Candidate: 1 of 1 Period: 4.155 d
KOI: K05486.01 Corr: 0.937



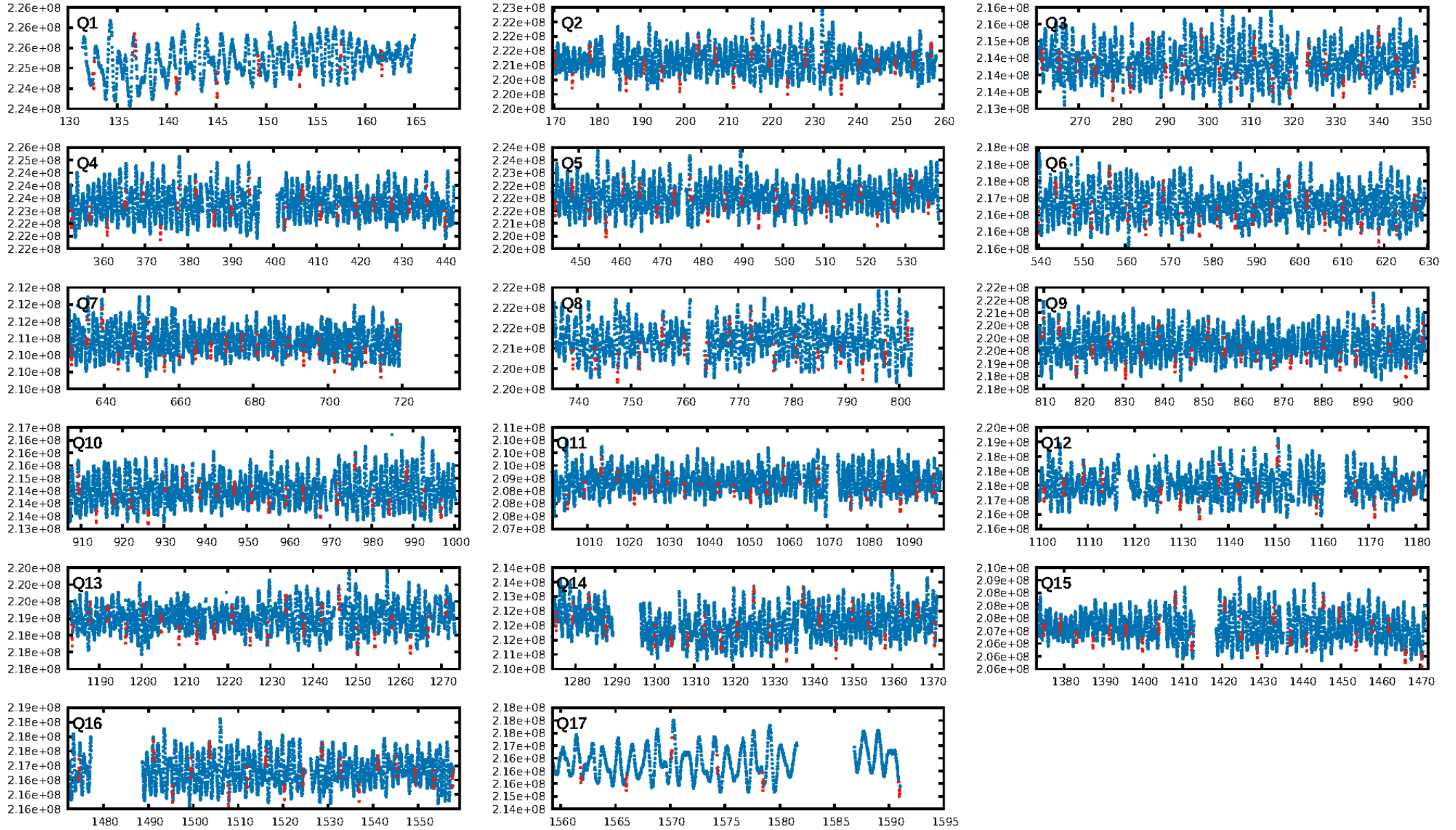
DV Fit Results:

Period = 4.15470 [0.00000] d
Epoch = 132.6141 [0.0002] BKJD
Rp/R* = 0.0358 [0.0010]
a/R* = 13.37 [1.86]
b = 0.90 [0.03]
Seff = 6532.02 [3453.11]
Teq = 2292 [303] K
Rp = 13.13 [4.55] Re
a = 0.0609 [0.0198] AU
Ag = 0.81 [0.44] [-0.42σ]
Teff = 3366 [181] K [3.04σ]

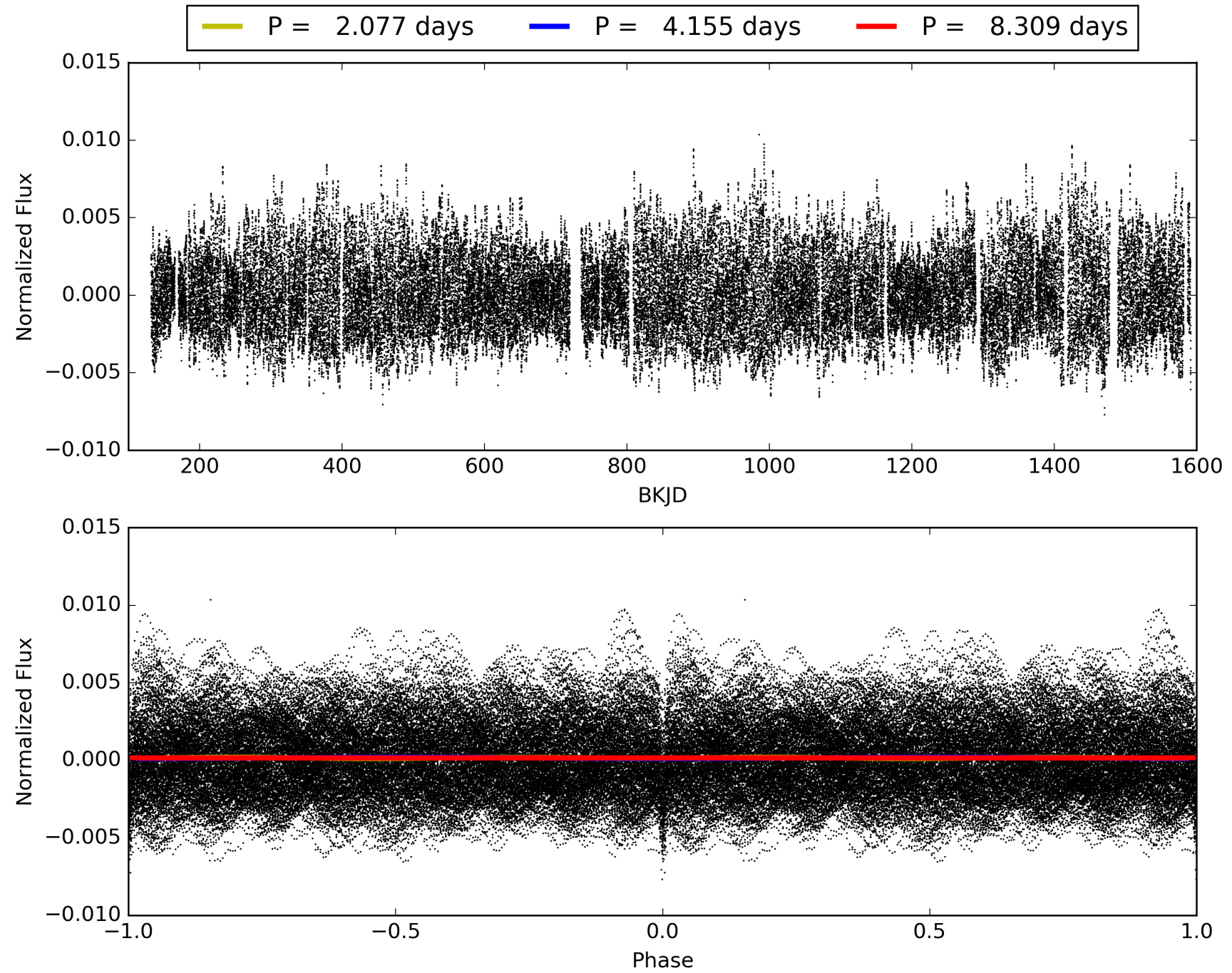
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.97 [305/314]
GhostDiagnostic-chr: 2.074
Centroid-sig: 0.0%
Centroid-so: 0.037 arcsec [0.55σ]
OotOffset-rm: 0.079 arcsec [1.10σ]
KicOffset-rm: 0.032 arcsec [0.46σ]
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 008197406-01, PDC Light Curves

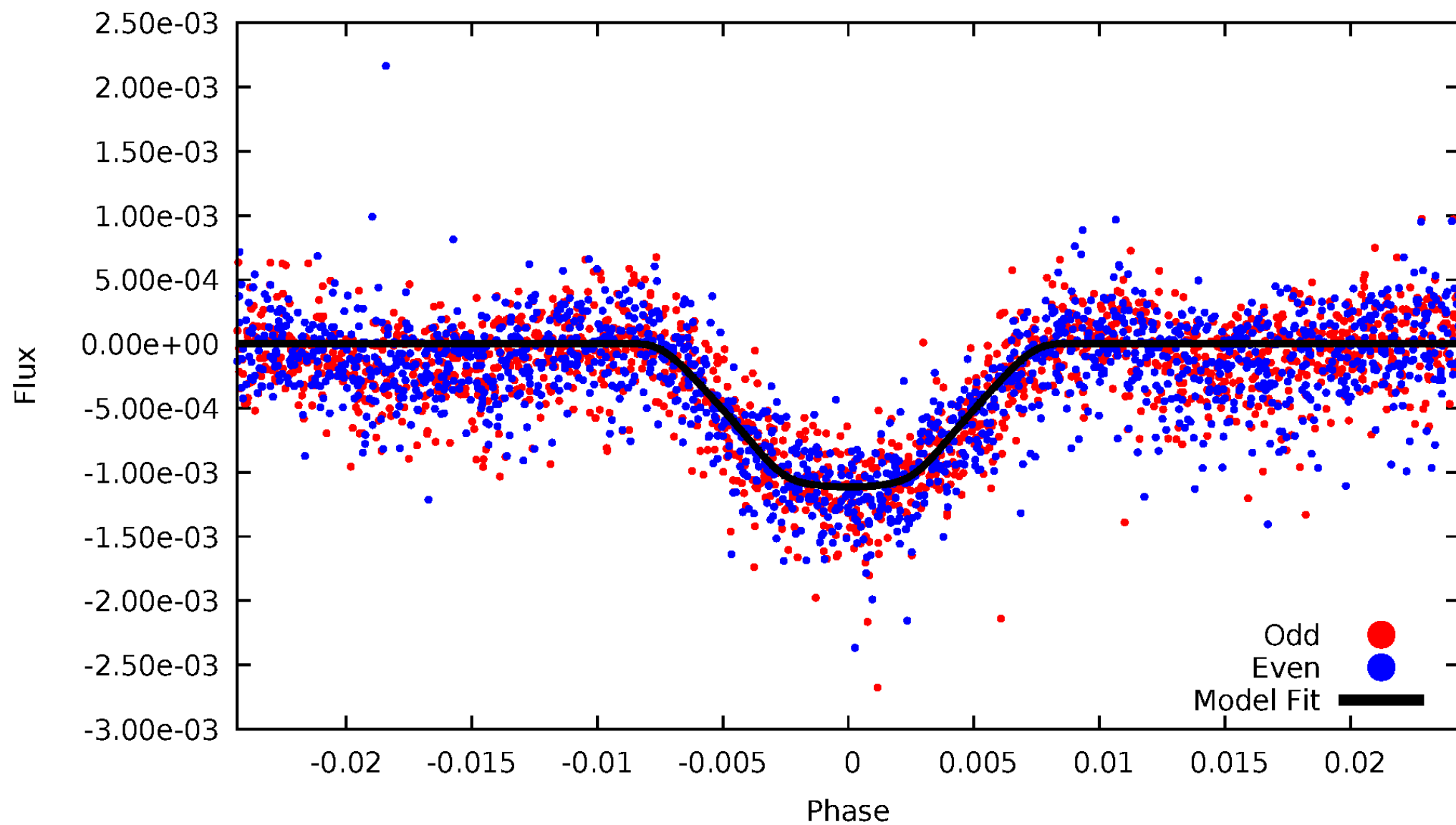


TCE 008197406-01



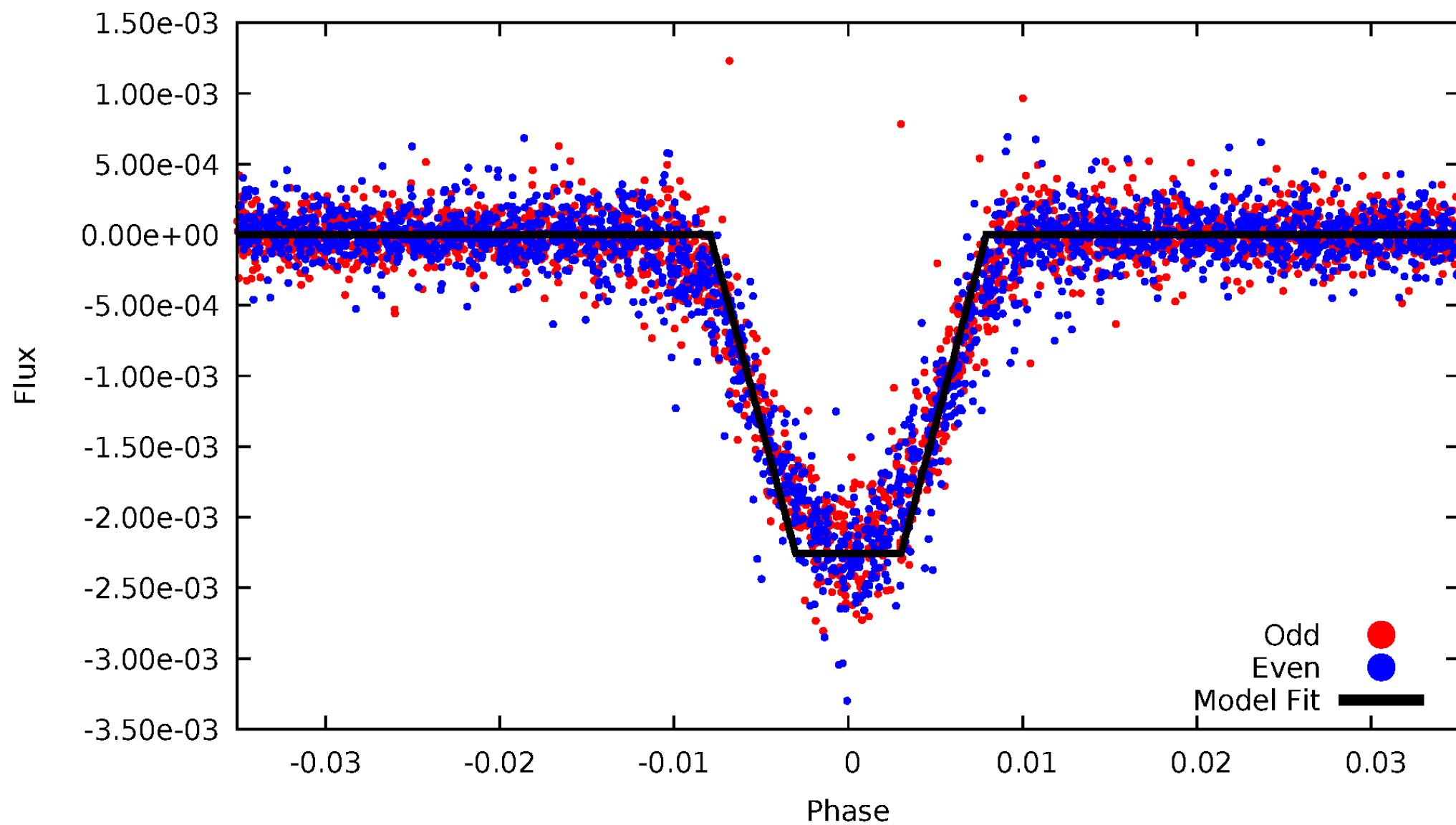
DV Odd/Even

TCE 008197406-01



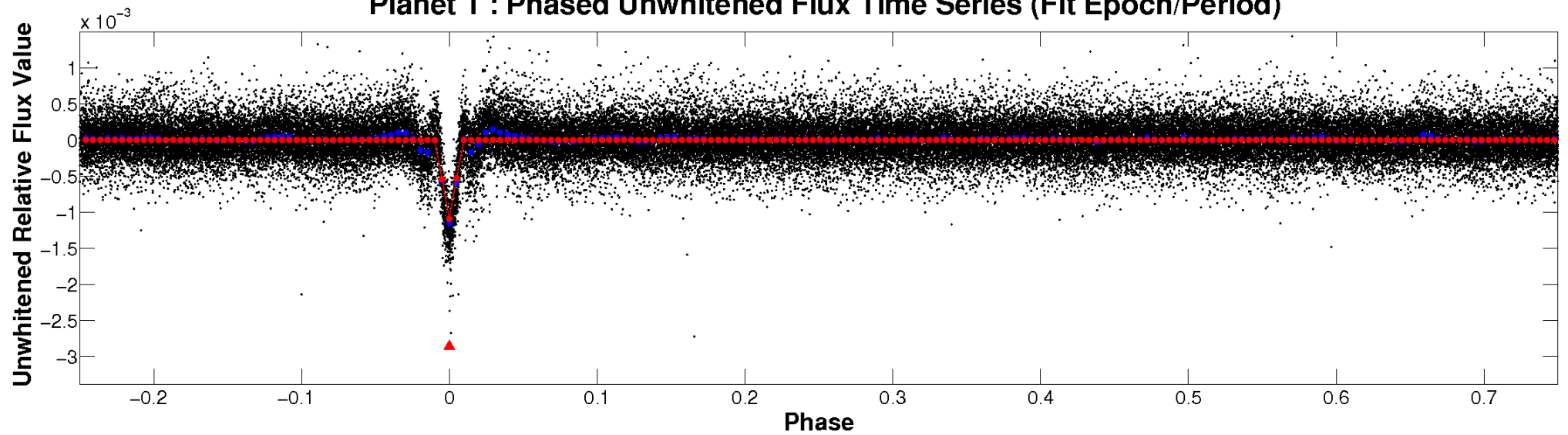
ALT Odd/Even

TCE 008197406-01

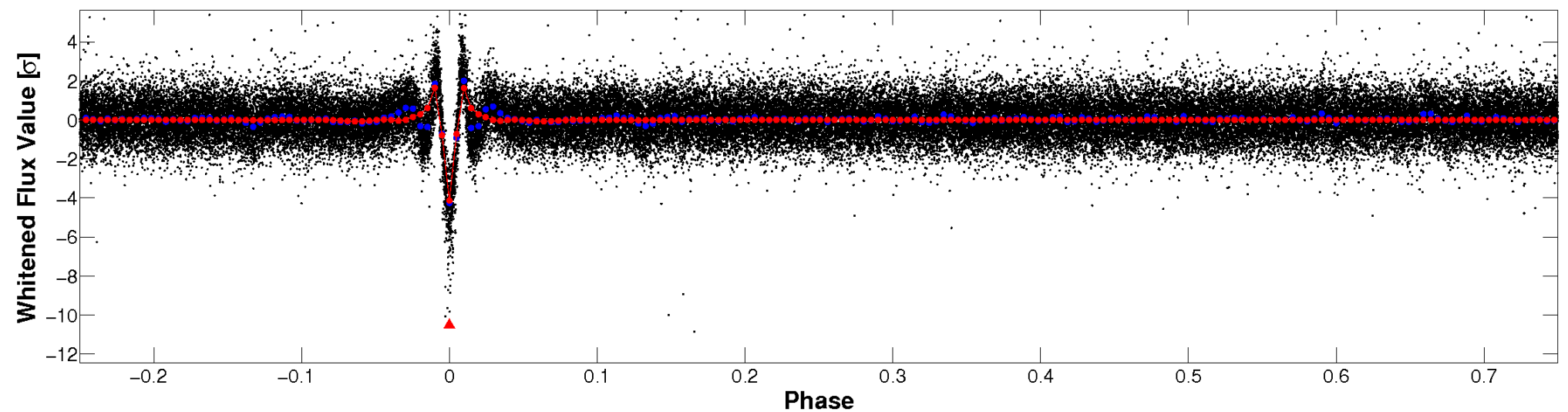


Non-Whitened Vs. Whitened Light Curve

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

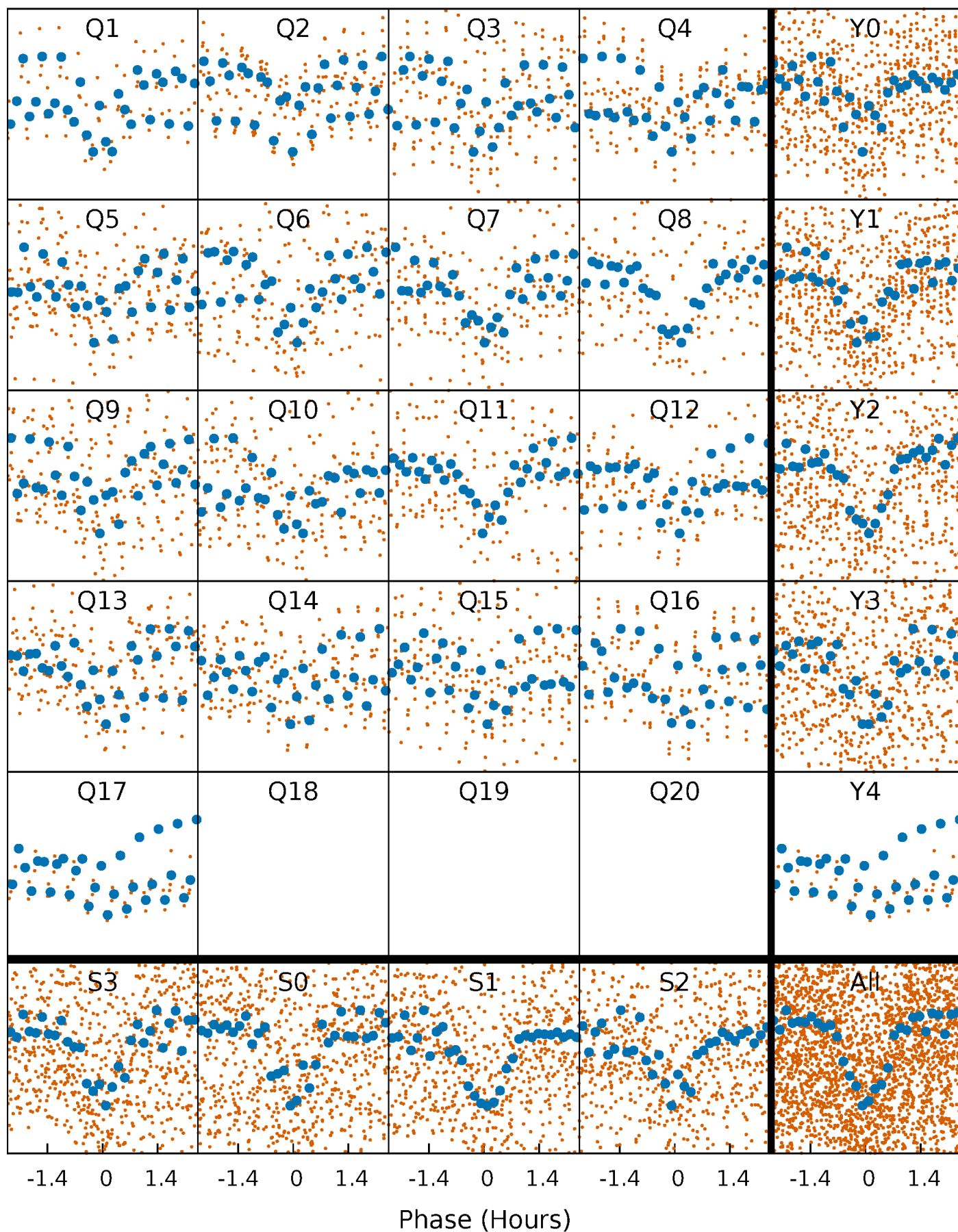


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



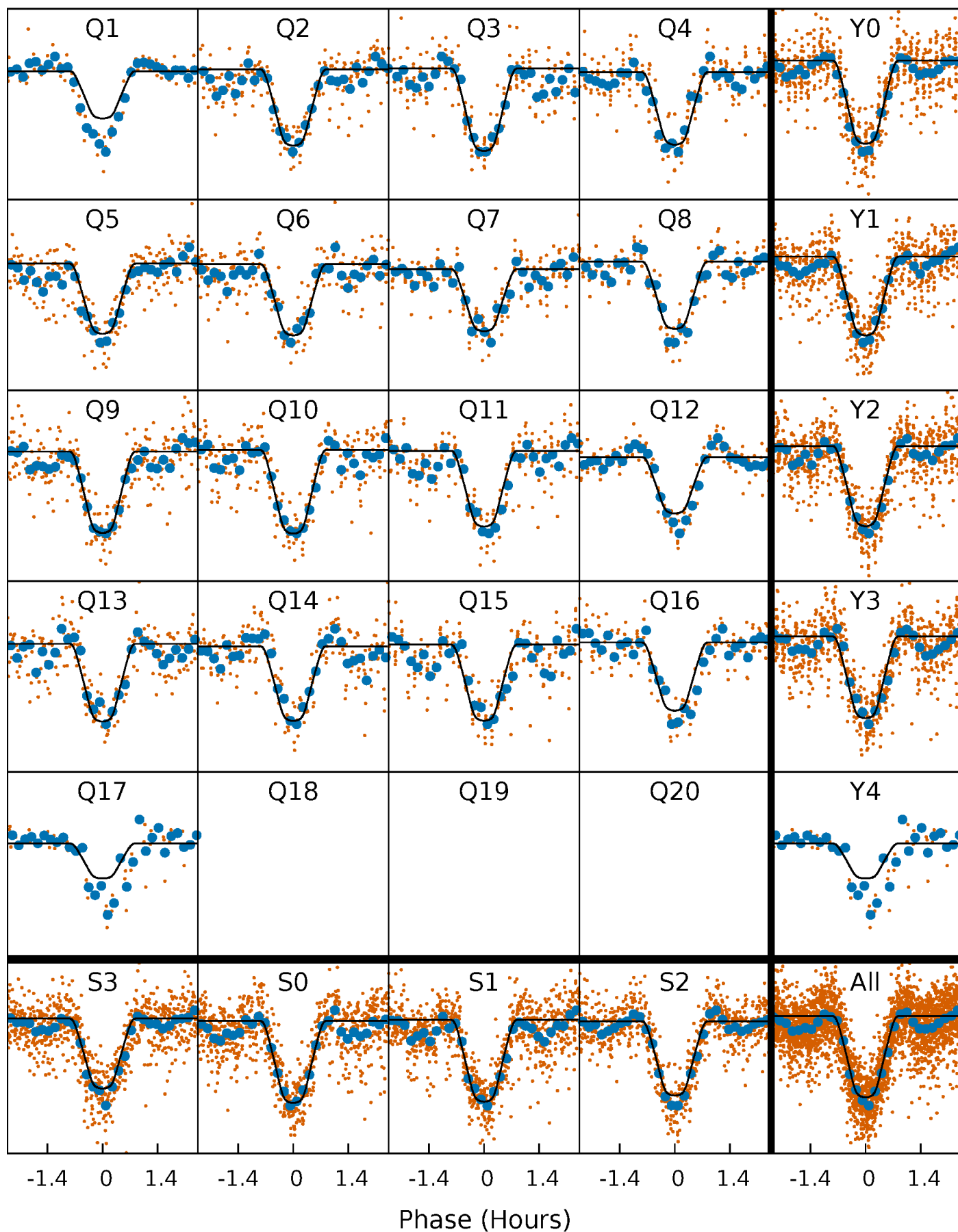
PDC Quarter-Phased Transit Curves

TCE 008197406-01 P= 4.154701 Days $T_0=132.614055$ (BKJD)



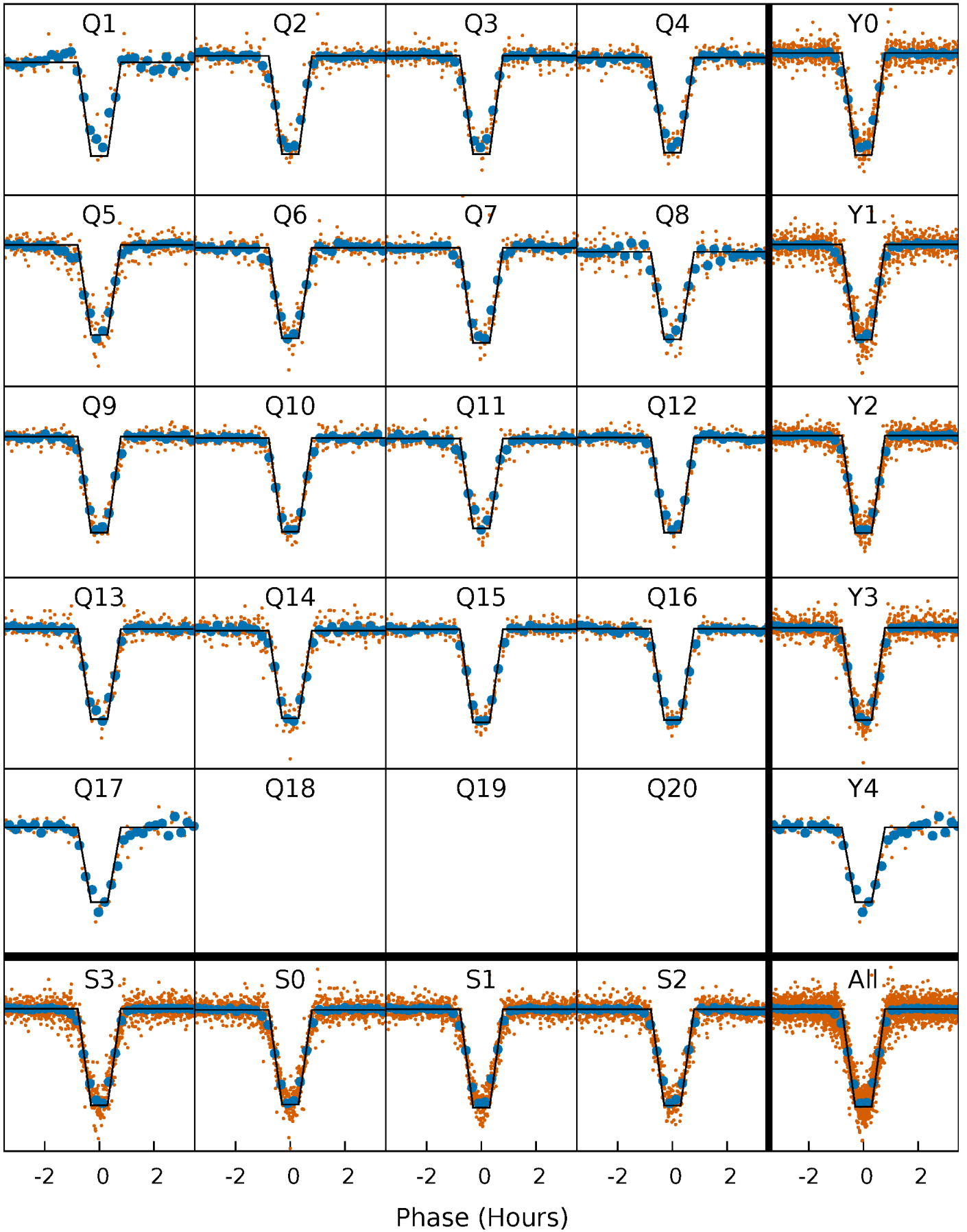
DV Quarter-Phased Transit Curves

TCE 008197406-01 P= 4.154701 Days $T_0=132.614055$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

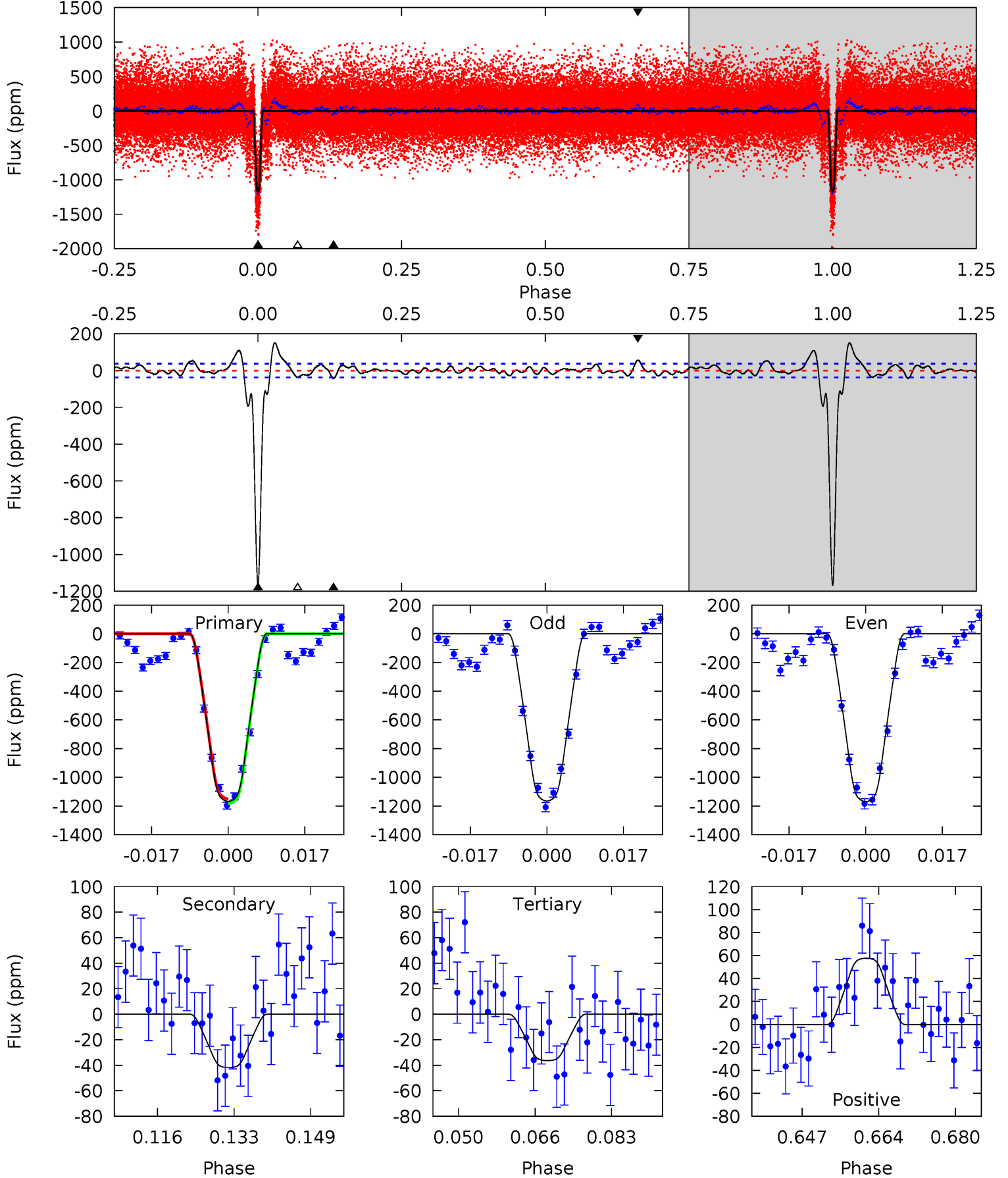
TCE 008197406-01 P= 4.154712 Days $T_0=132.612490$ (BKJD)



DV Model-Shift Uniqueness Test

008197406-01, P = 4.154701 Days, E = 128.459354 Days

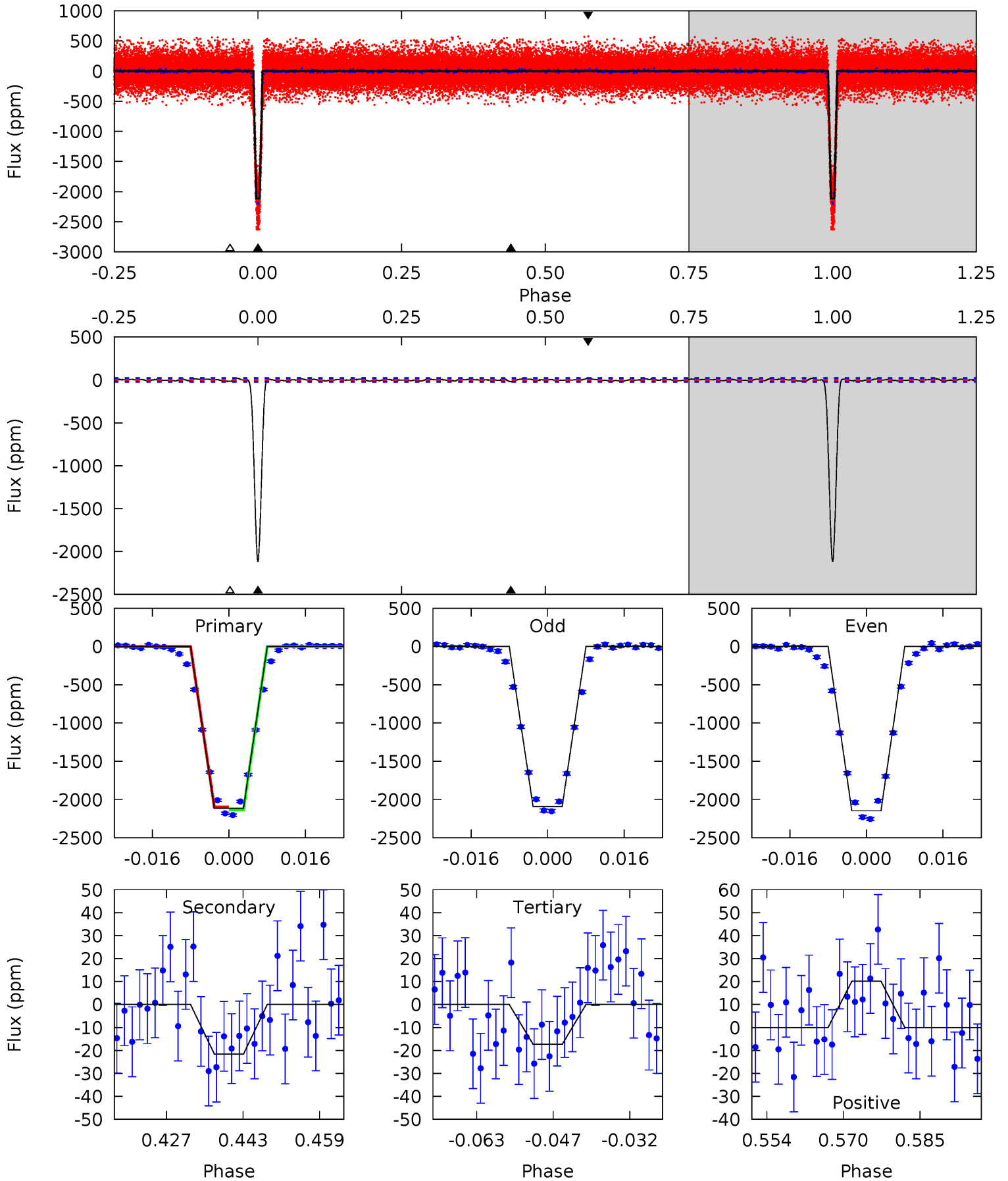
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
153.1	5.49	4.78	7.57	4.93	2.40	3.91	148.3	145.5	0.71	-2.08	0.28	0.99	0.11	2.14



Alt Model-Shift Uniqueness Test

008197406-01, P = 4.154712 Days, E = 128.457778 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
460.4	4.70	3.78	4.38	4.94	2.41	1.45	456.6	456.0	0.92	0.32	6.22	1.00	0.01	4.07



Stellar Parameters For KIC 008197406

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6996^{+188}_{-230}	$3.627^{+0.298}_{-0.053}$	$-0.200^{+0.300}_{-0.250}$	$3.359^{+0.386}_{-1.159}$	$1.742^{+0.207}_{-0.285}$	$0.065^{+0.130}_{-0.011}$
	+3%/-3%	+8%/-1%	+150%/-125%	+11%/-35%	+12%/-16%	+201%/-18%
Source	PHO1	FLK73	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 008197406-01 / KOI 5486.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-42 ± 8	$12.69^{+1.24}_{-2.39}$	3101^{+177}_{-273}	3075^{+200}_{-259}	$0.554^{+0.261}_{-0.128}$
Alt.	-22 ± 5	$16.83^{+1.61}_{-3.09}$	3109^{+180}_{-278}	-2825^{+401}_{-167}	$0.163^{+0.076}_{-0.042}$

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

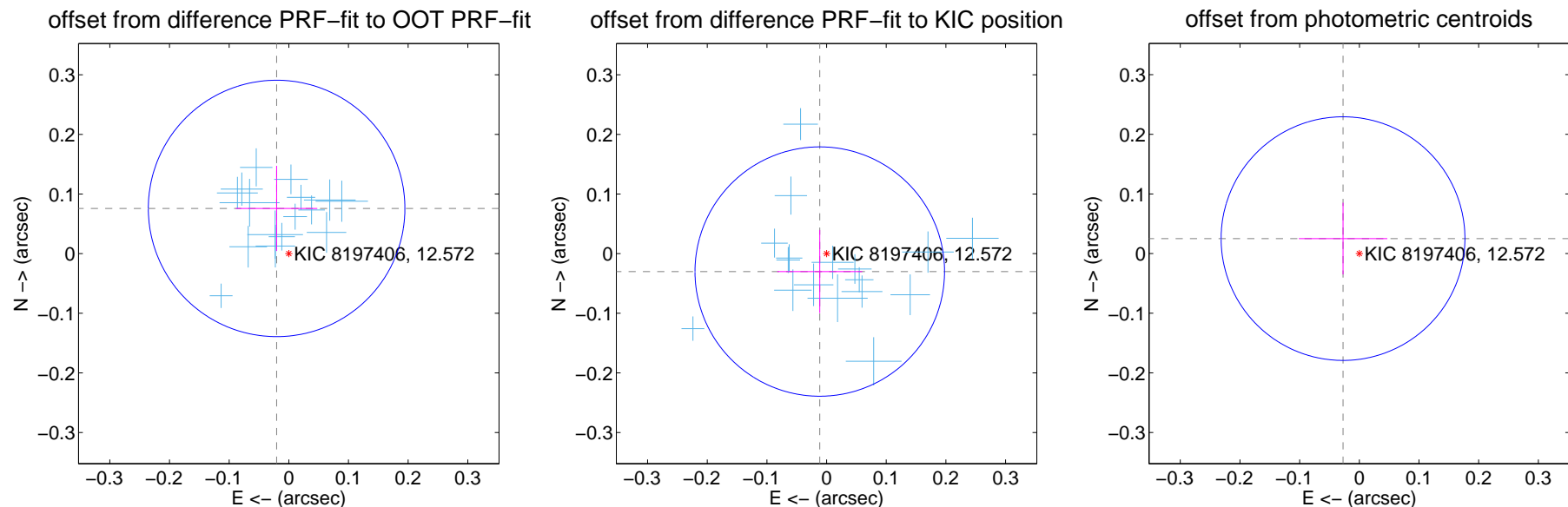
DV Centroid Data

Supplemental centroid analysis for 008197406-01. Kepler magnitude: 12.57. Transit SNR 98.54

There are 17 quarters with good PRF difference image offsets

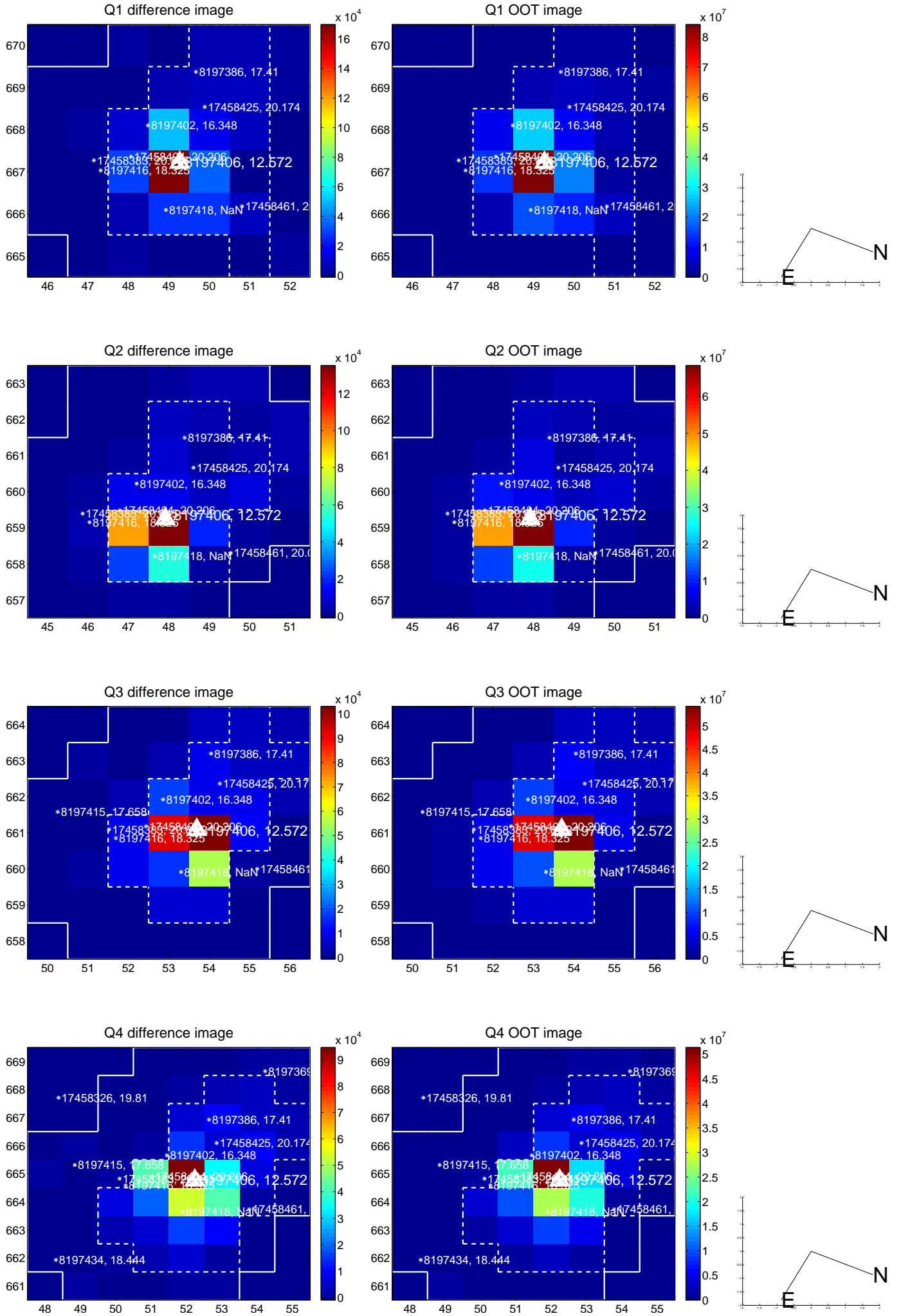
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.079 ± 0.072	1.10	0.020 ± 0.068	0.076 ± 0.071
PRF-fit source offset from KIC position	0.032 ± 0.070	0.46	0.011 ± 0.071	-0.030 ± 0.070
photometric centroid source offset	0.04 ± 0.07	0.55	0.03 ± 0.07	0.03 ± 0.06

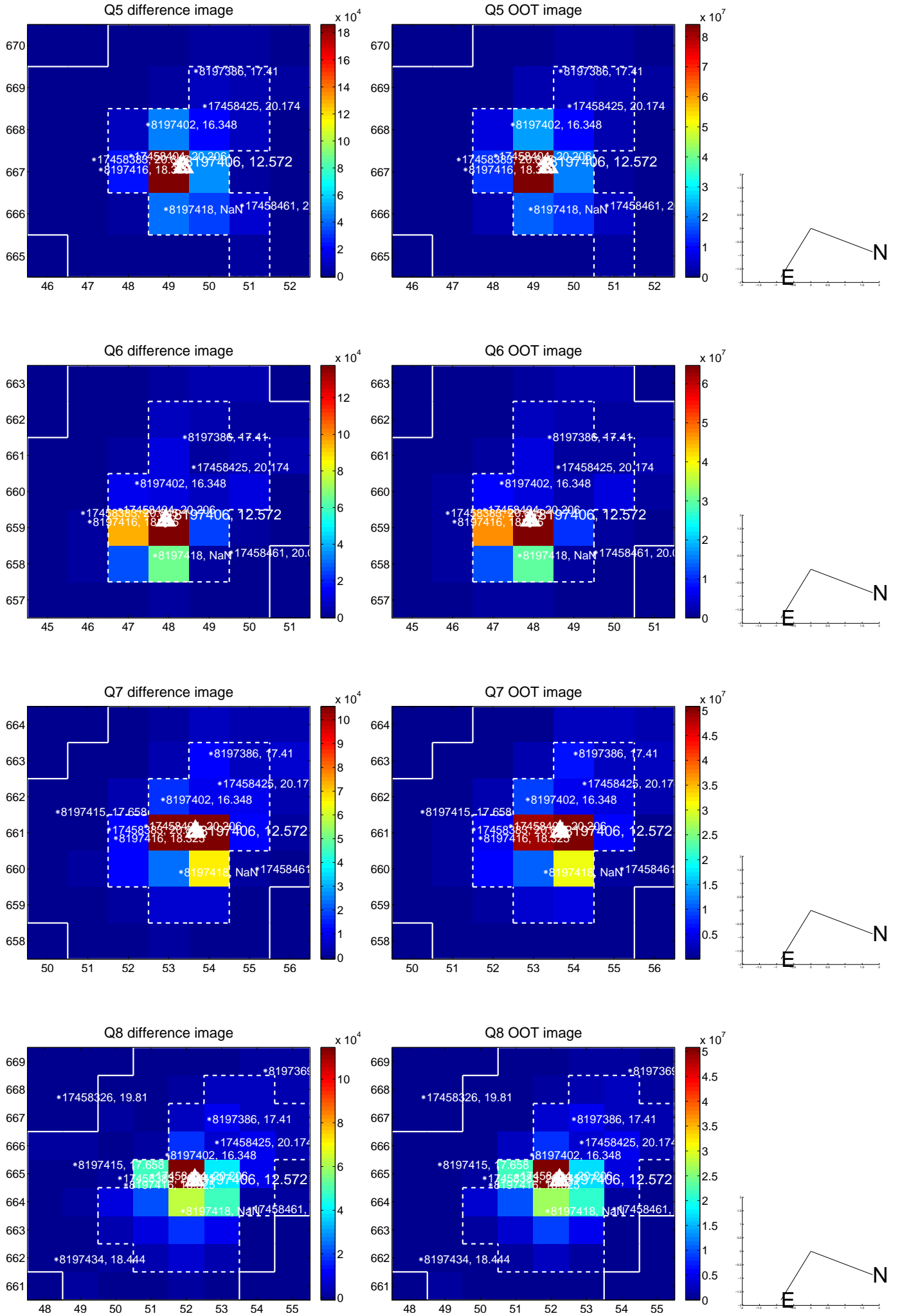


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

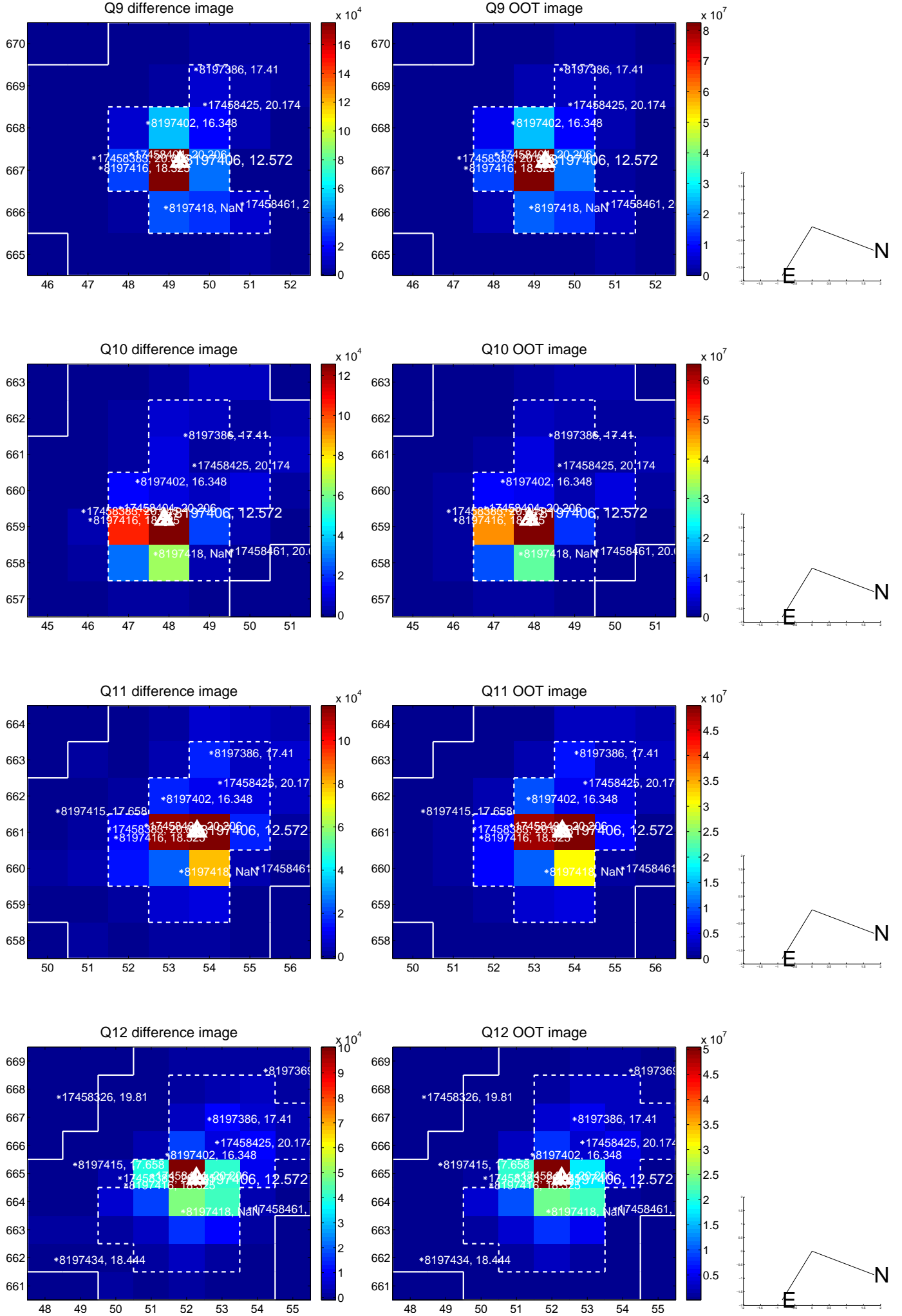
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



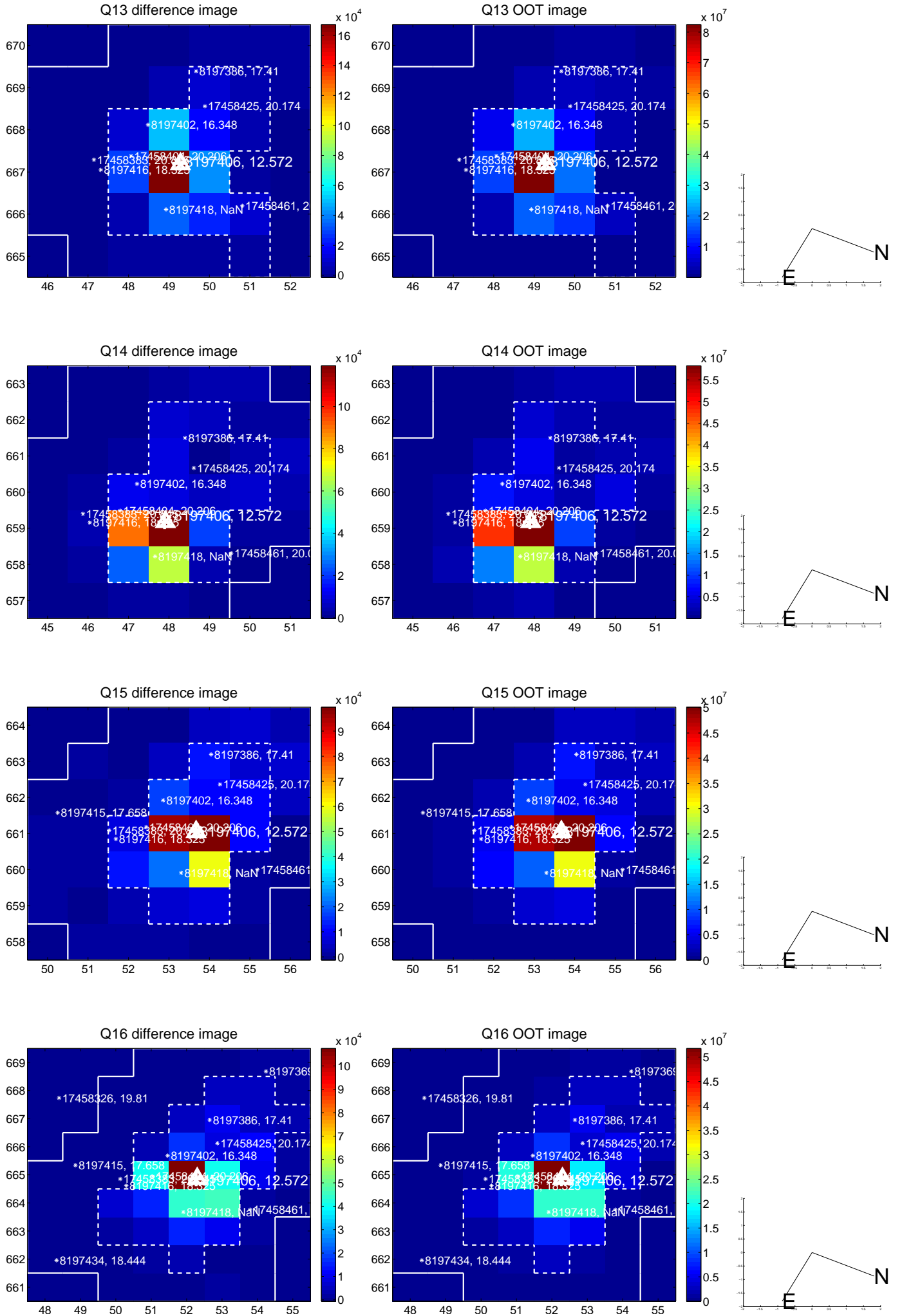
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



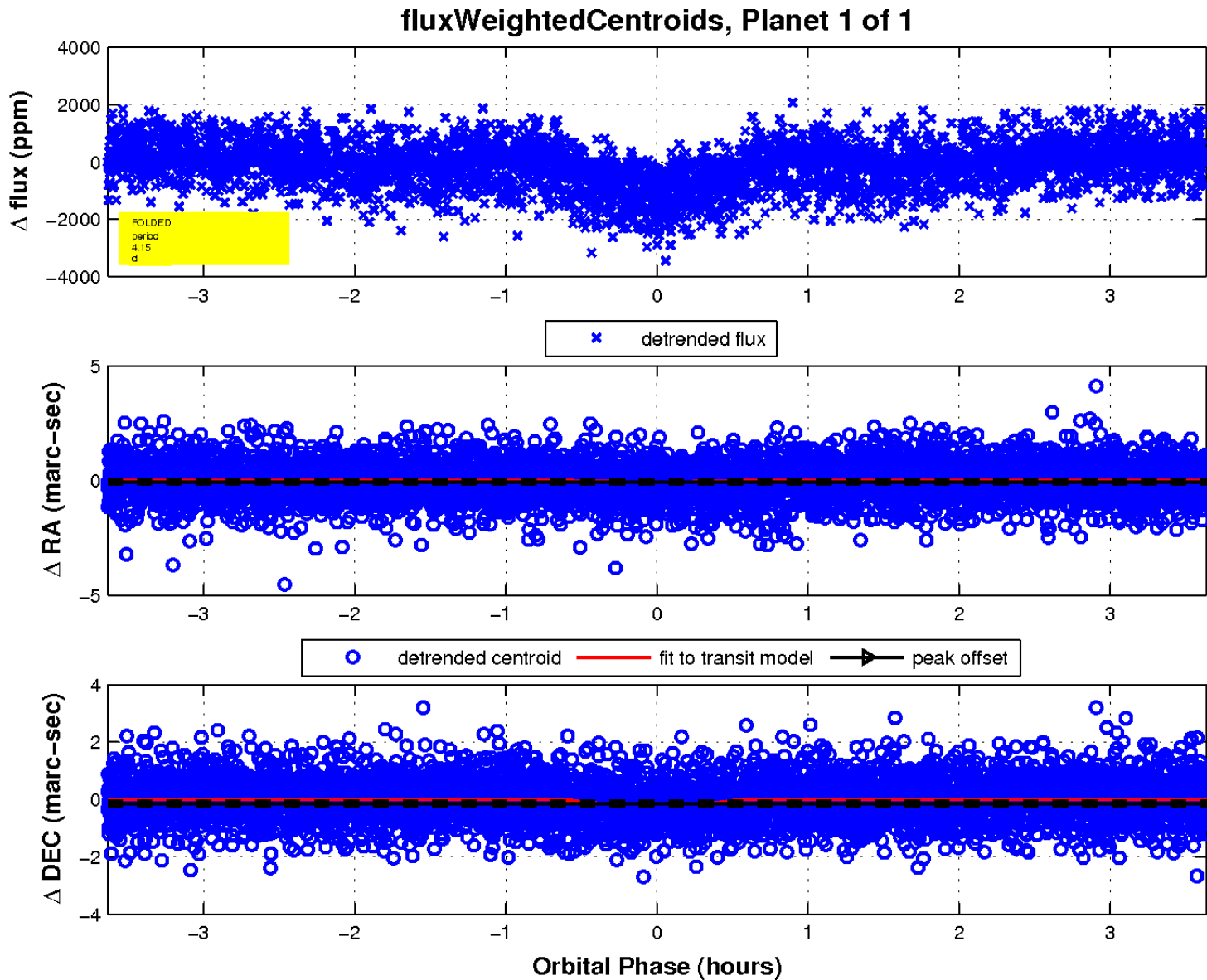
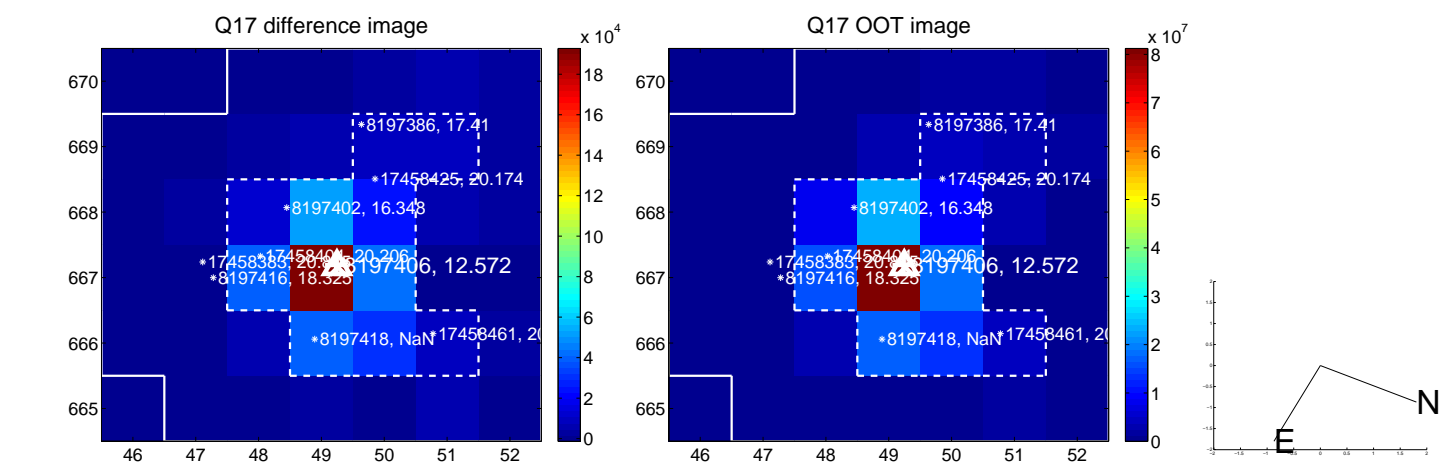
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

