

KIC 008196180

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})
008196180-01	OBS	6990.01	3.671661	132.090841	127610.5	4.277	14969.1	10899.3	1.94	7343	101.41	3546.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008196180-01	OBS	FP	0.00	1	0	0	0	LPP_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.

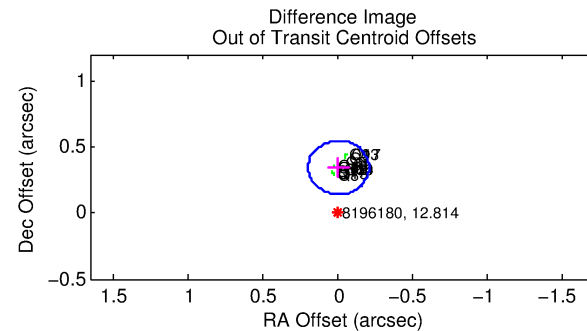
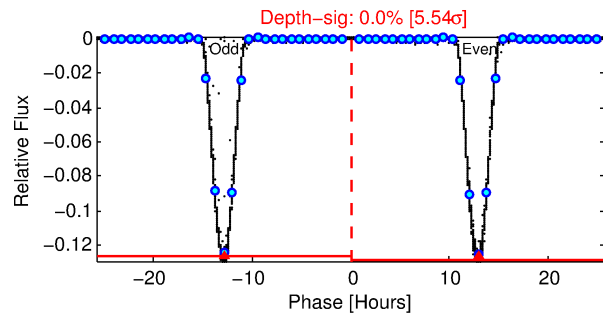
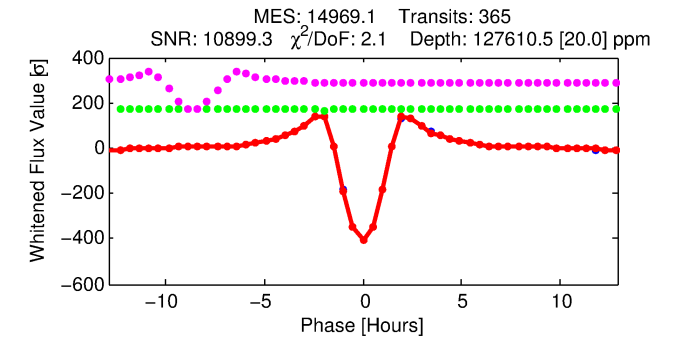
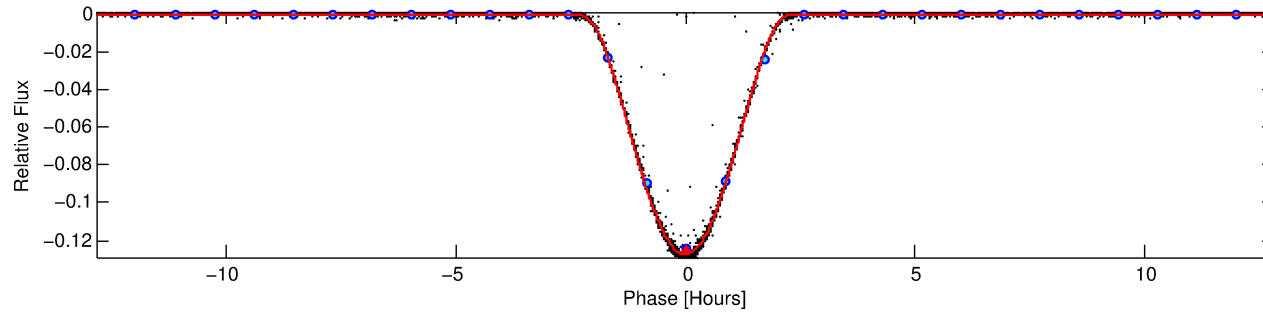
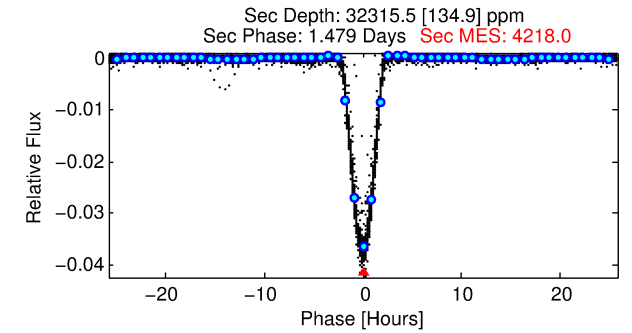
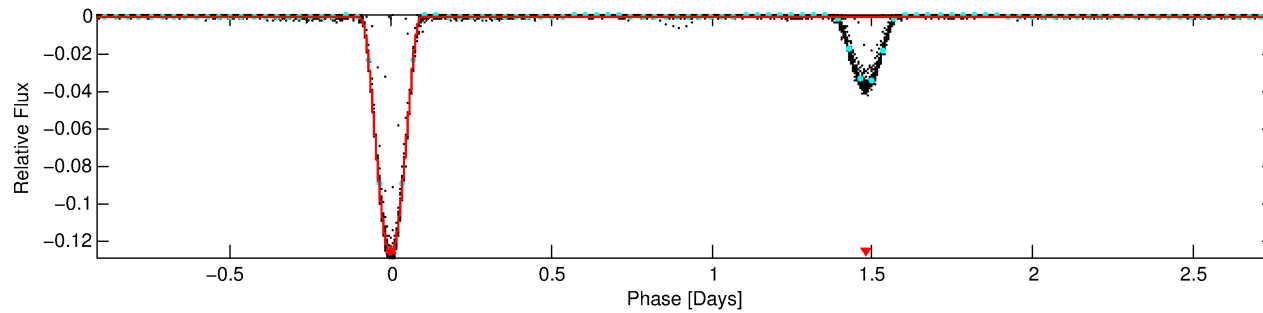
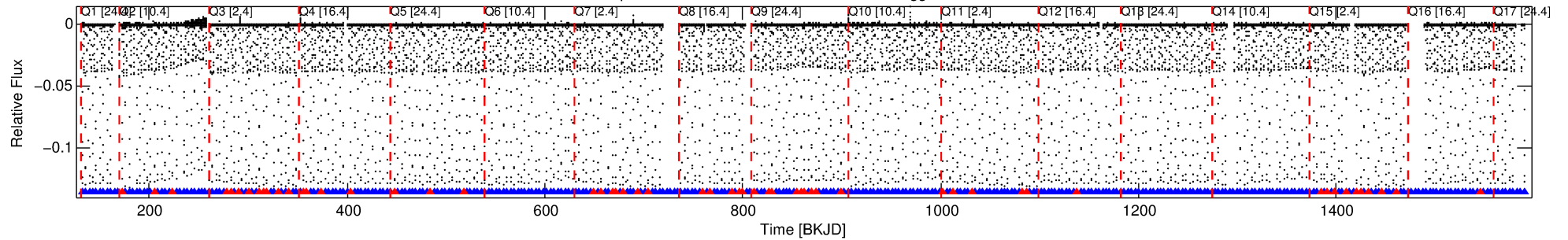
Ephemeris Match Information For 008196180-01

No Significant Match Found

DV One-Page Summary

KIC: 8196180 Candidate: 1 of 1 Period: 3.672 d
KOI: K06990.01 Corr: 0.996

Kp: 12.81 R*: 1.94 Rs Teff: 7343.0 K Logg: 4.02 Fe/H: -0.420



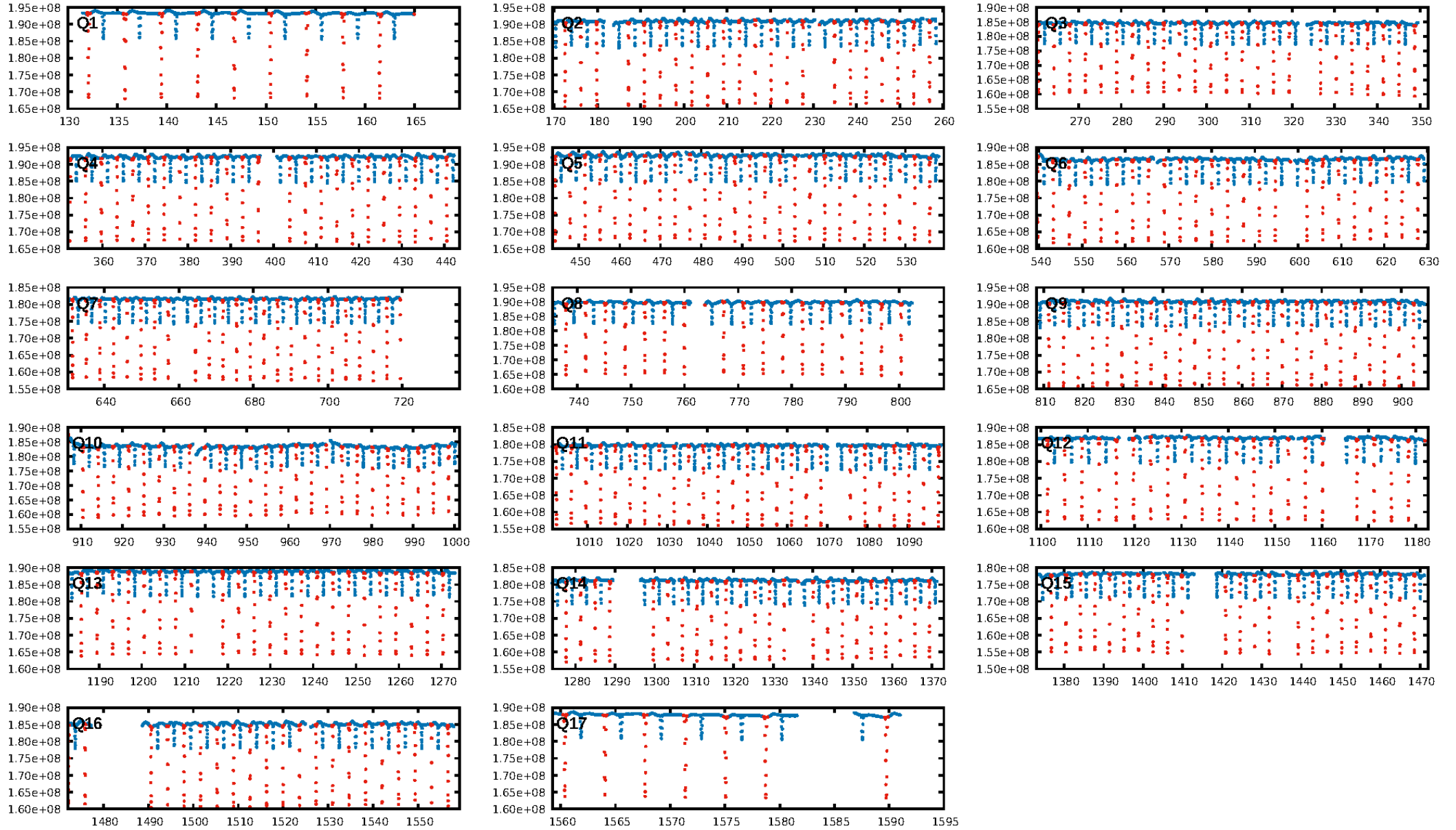
DV Fit Results:

Period = 3.67166 [0.00000] d
Epoch = 132.0908 [0.0000] BKJD
Rp/R* = 0.4790 [0.0069]
a/R* = 7.79 [0.01]
b = 0.90 [0.01]
Seff = 3546.28 [1780.00]
Teq = 1968 [247] K
Rp = 101.41 [33.22] Re
a = 0.0526 [0.0159] AU
Ag = 4.78 [2.26] [1.67σ]
Teffp = 4498 [193] K [8.07σ]

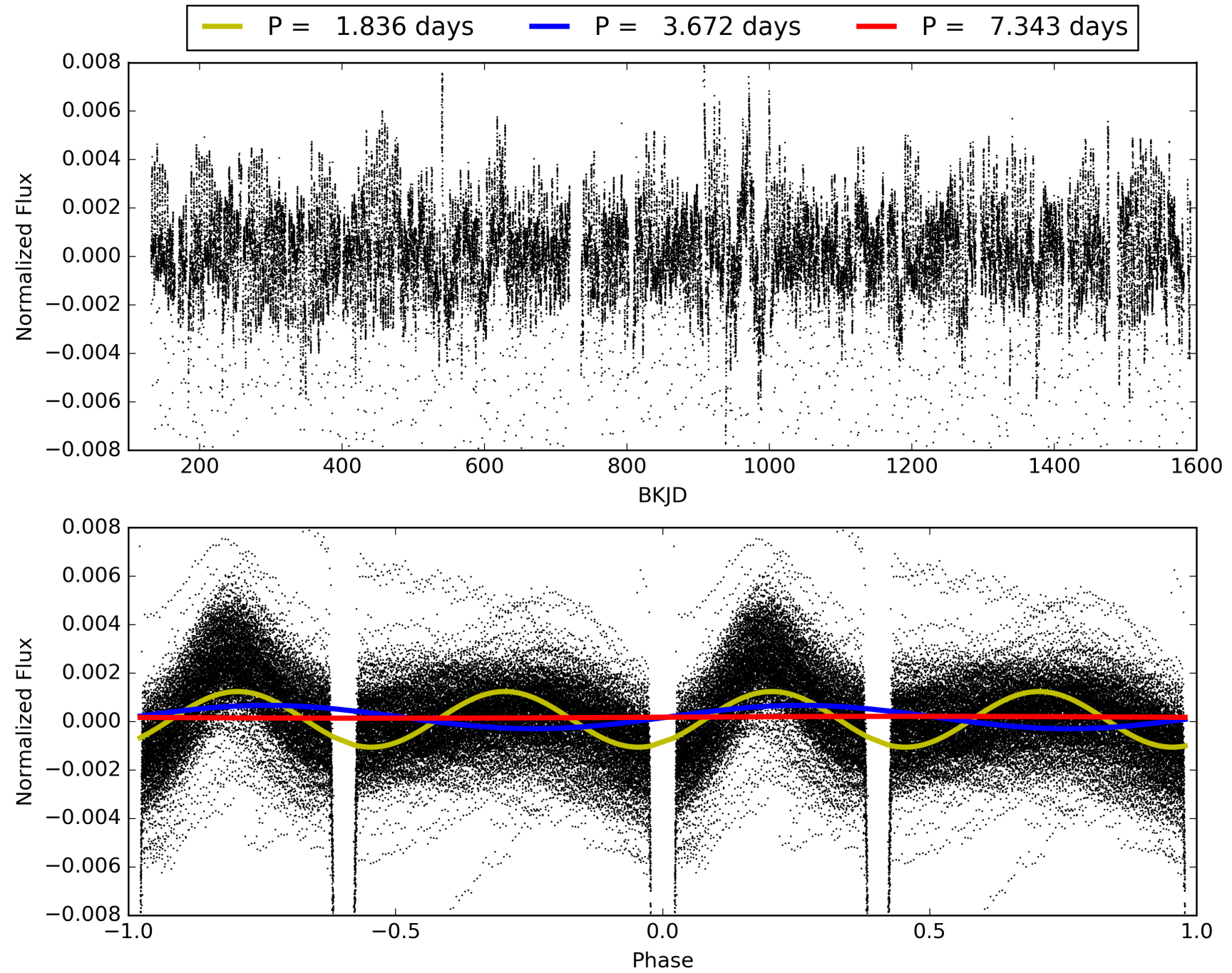
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.84 [293/349]
GhostDiagnostic-chr: 3.13
Centroid-sig: 0.0%
Centroid-so: 0.476 arcsec [844.68σ]
OotOffset-rm: 0.343 arcsec [5.07σ]
KicOffset-rm: 0.144 arcsec [1.99σ]
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 008196180-01, PDC Light Curves

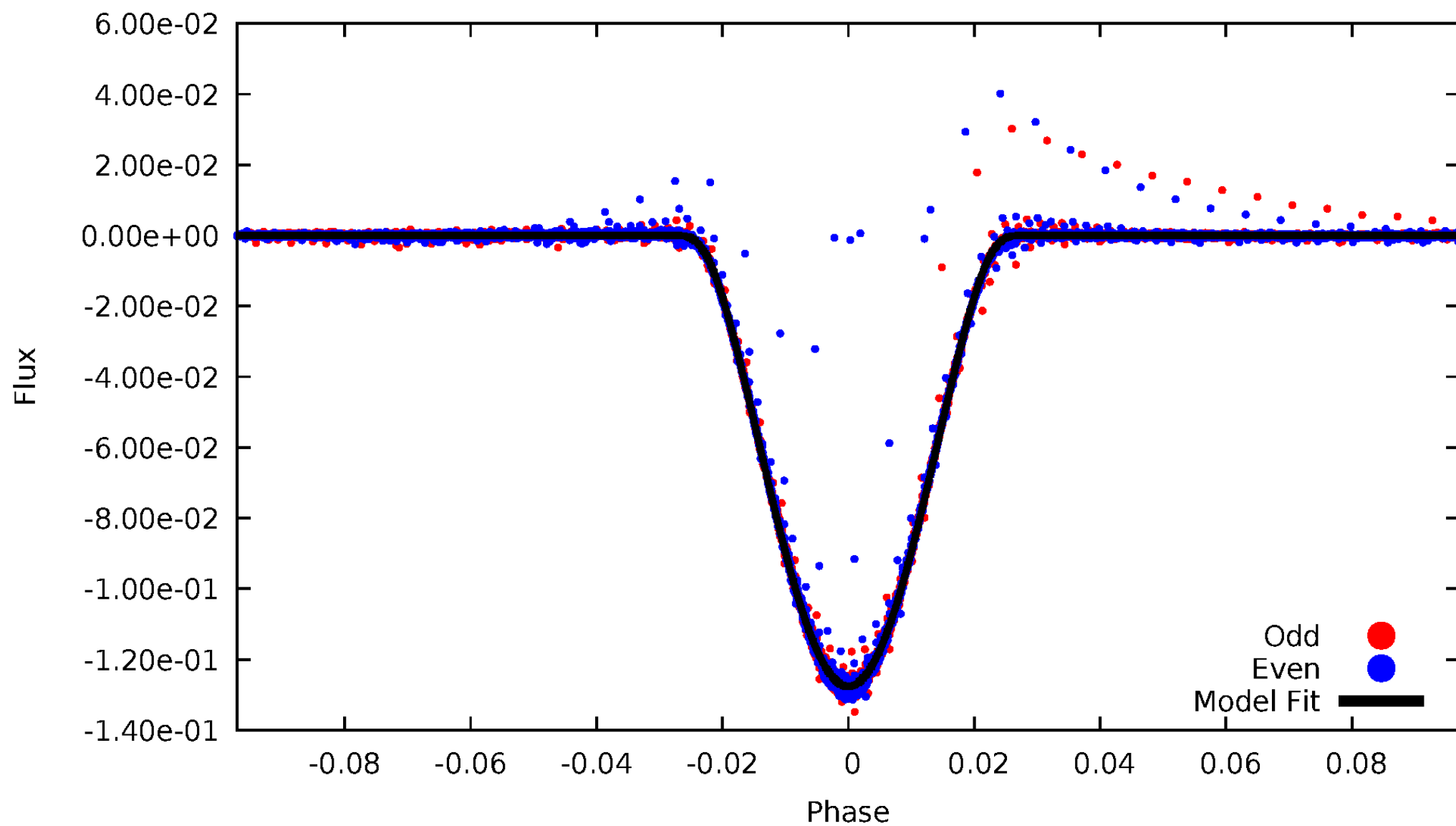


TCE 008196180-01



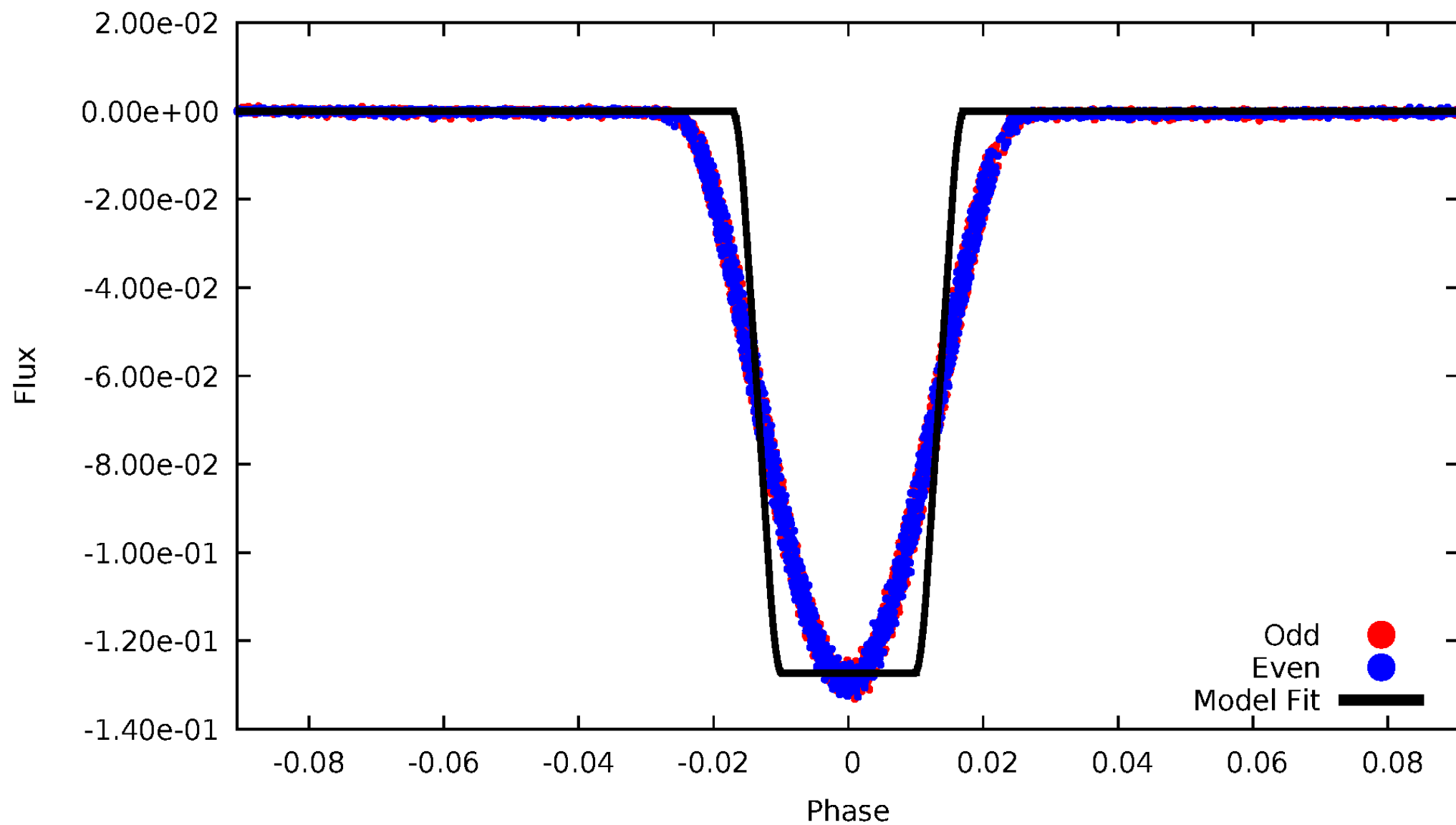
DV Odd/Even

TCE 008196180-01



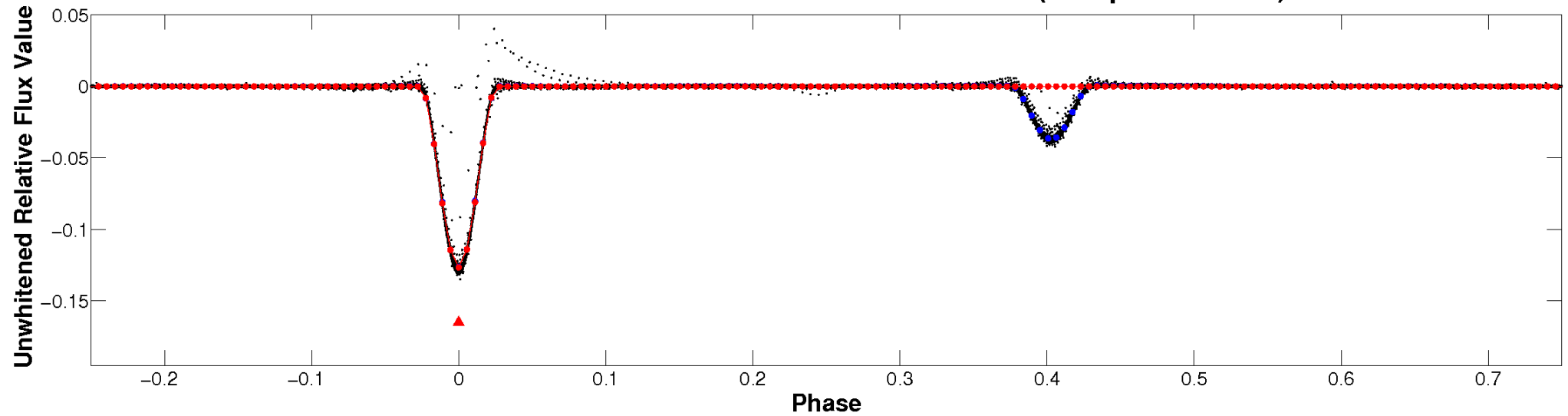
ALT Odd/Even

TCE 008196180-01

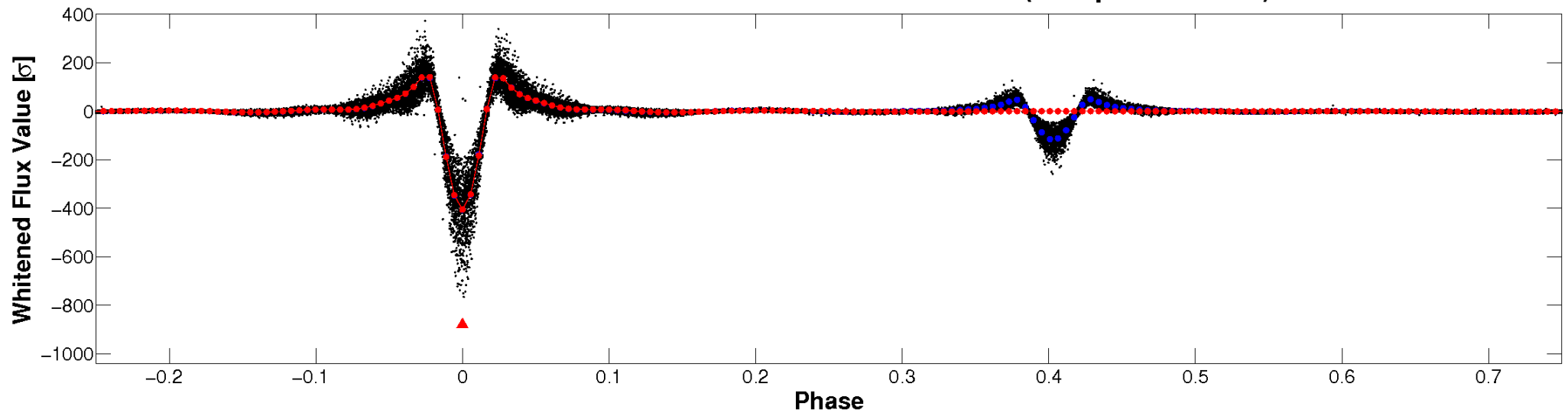


Non-Whitened Vs. Whitened Light Curve

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

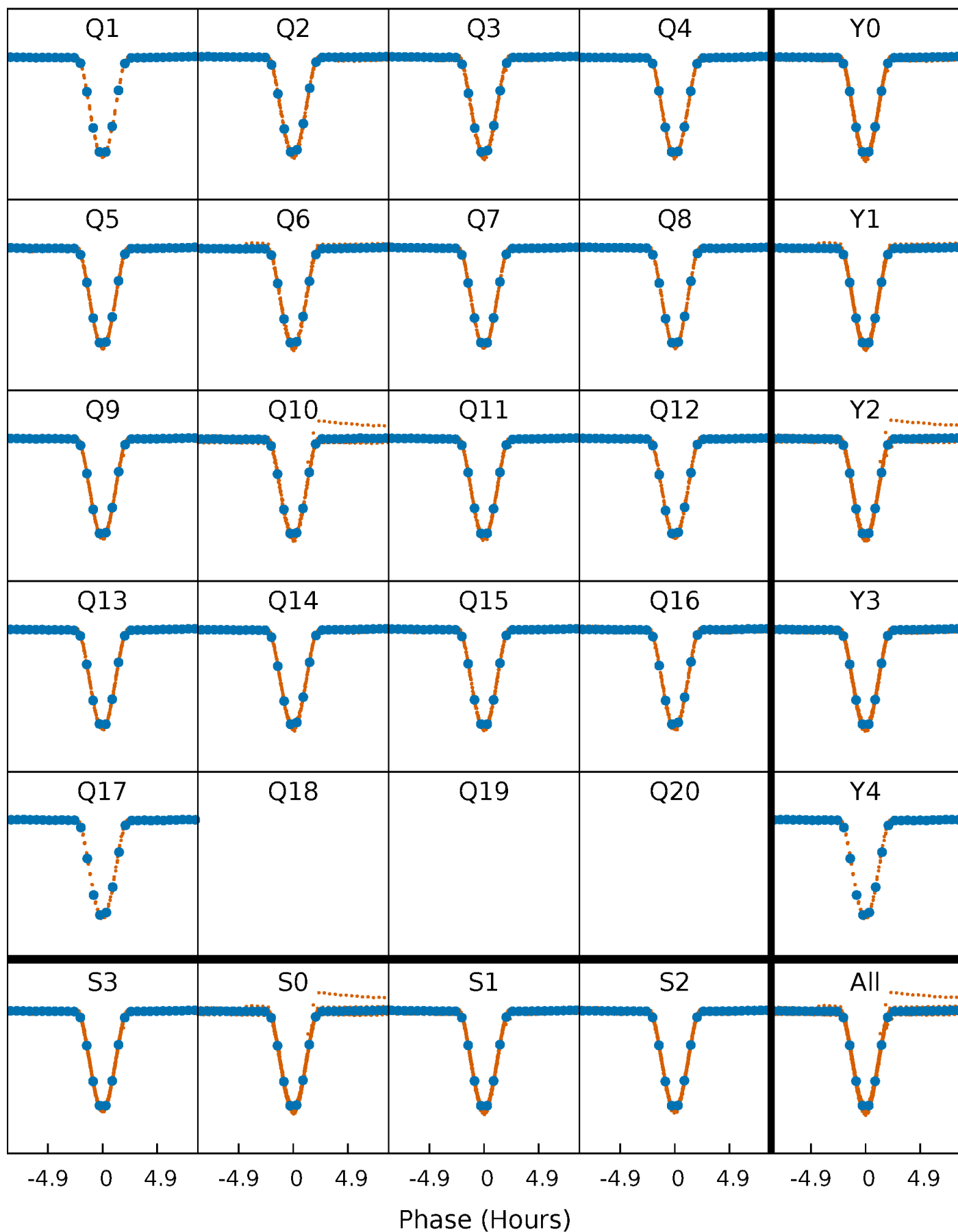


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



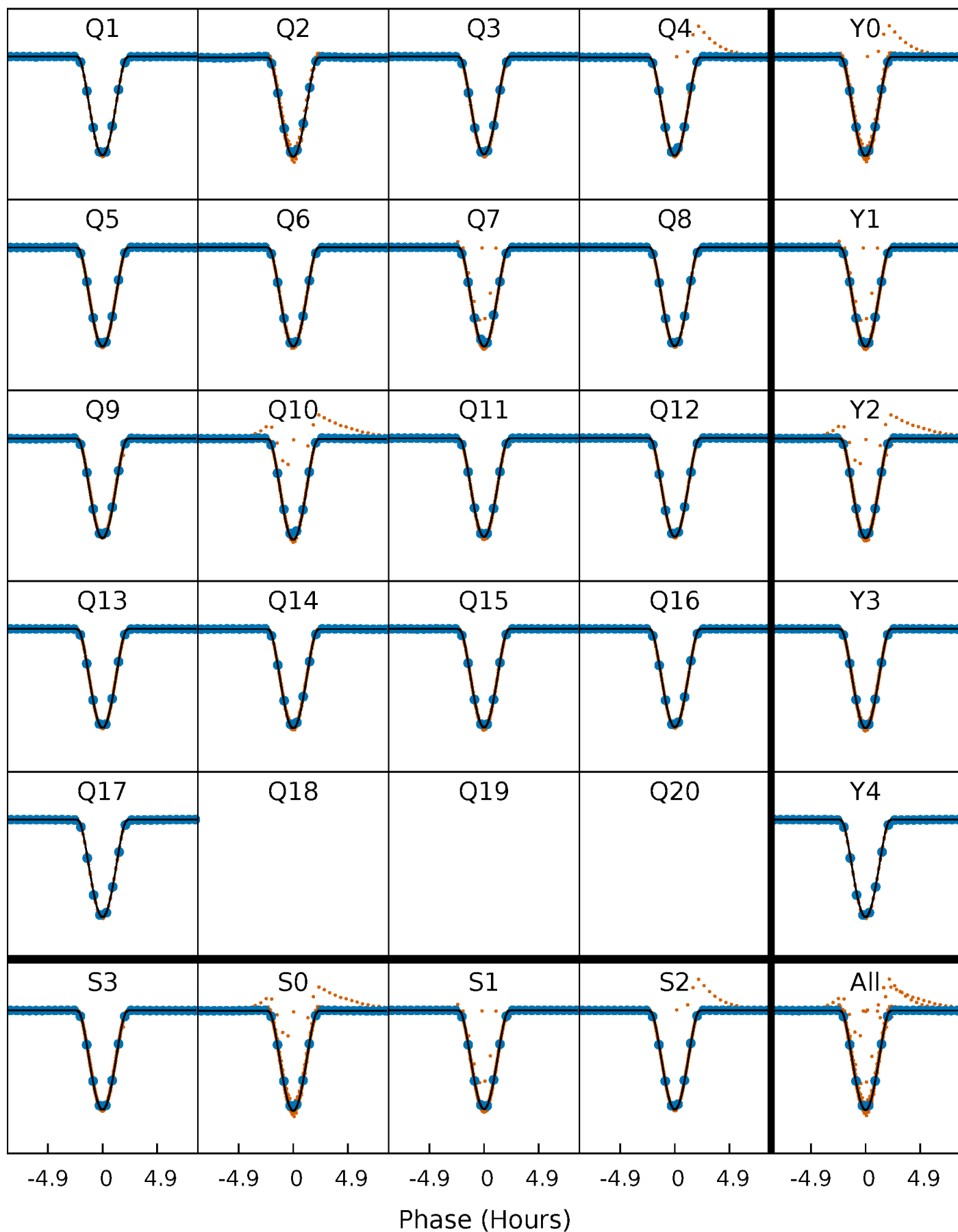
PDC Quarter-Phased Transit Curves

TCE 008196180-01 P= 3.671661 Days $T_0=132.090841$ (BKJD)



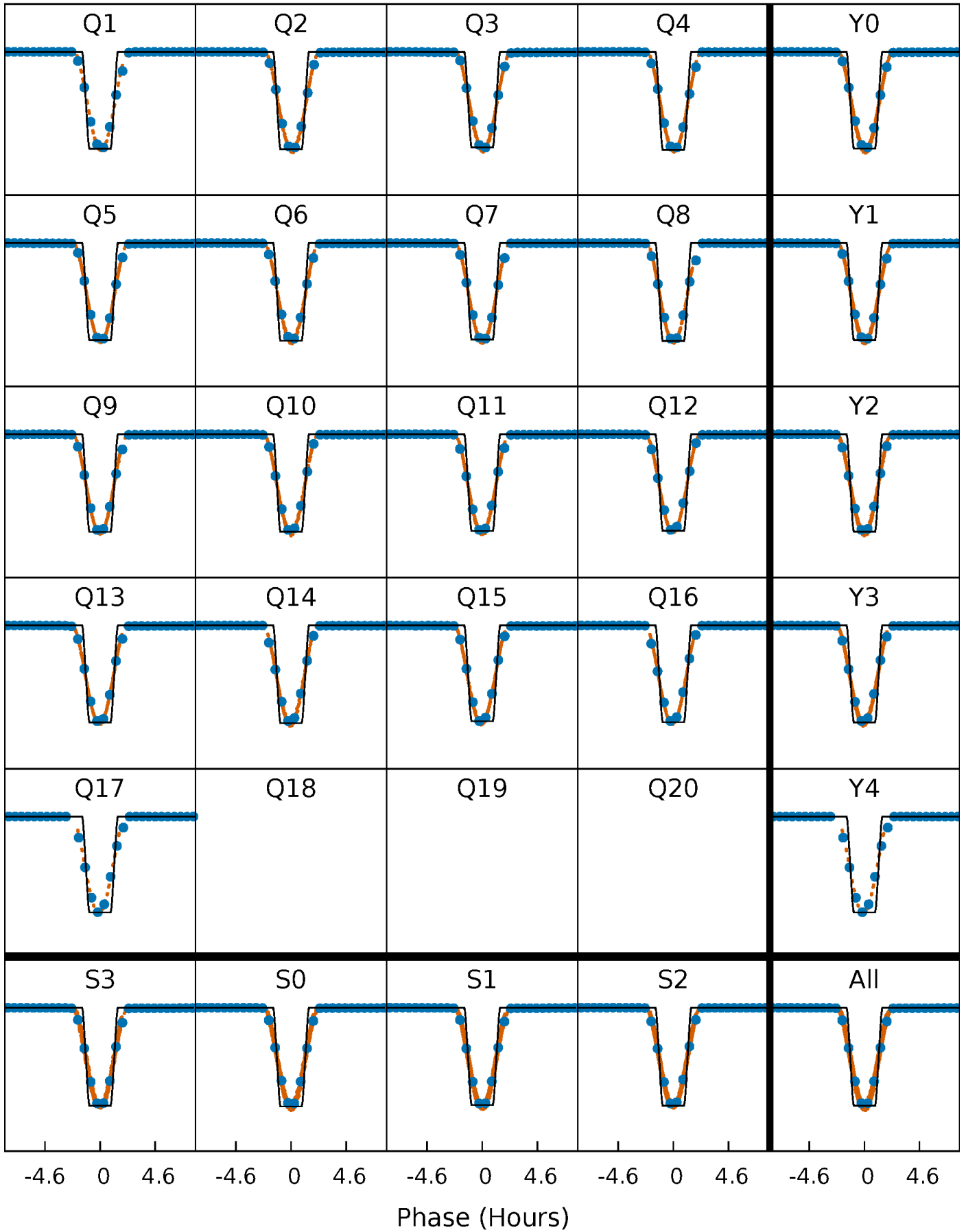
DV Quarter-Phased Transit Curves

TCE 008196180-01 P= 3.671661 Days $T_0=132.090841$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

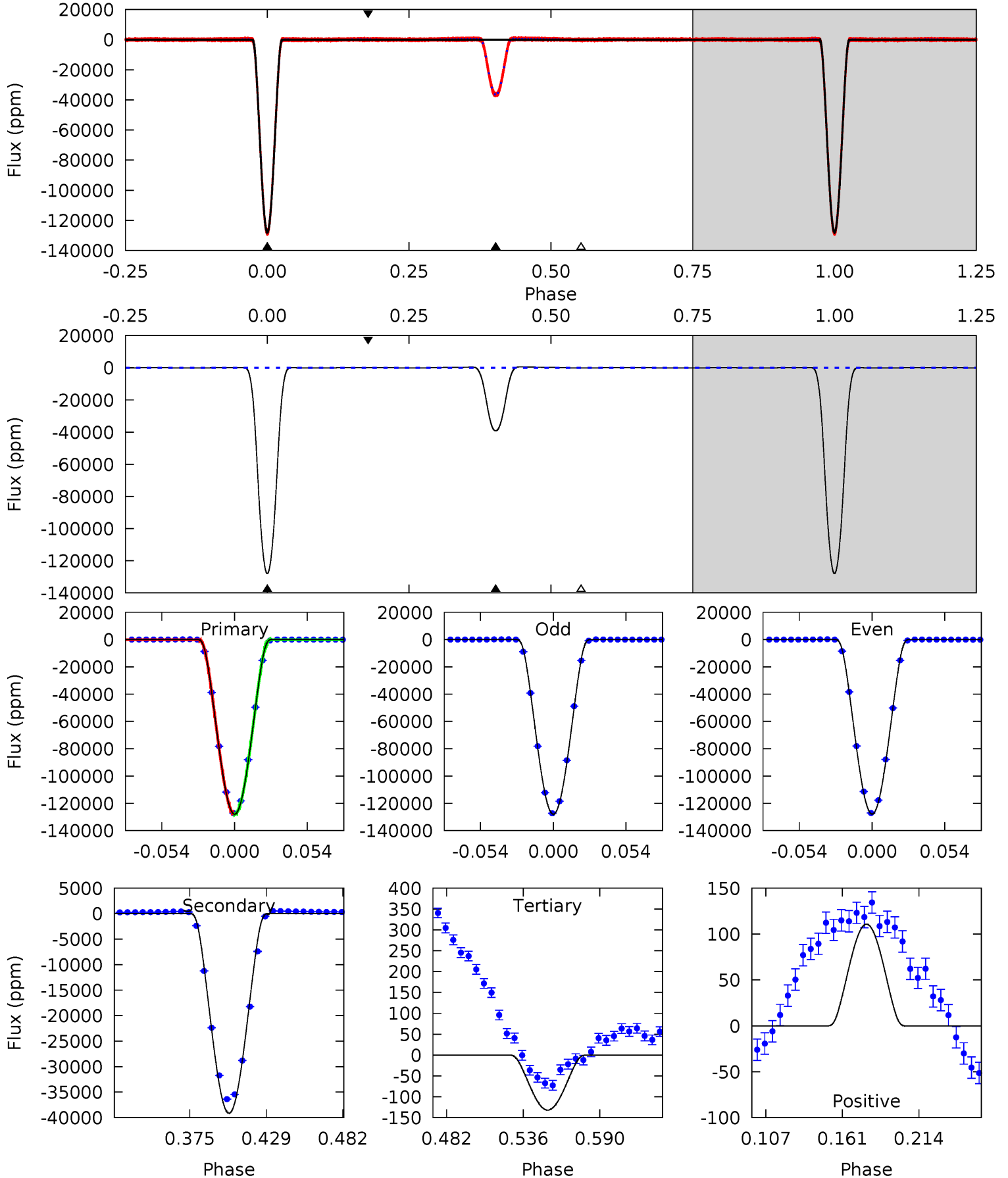
TCE 008196180-01 P= 3.671681 Days $T_0=132.087072$ (BKJD)



DV Model-Shift Uniqueness Test

008196180-01, P = 3.671661 Days, E = 128.419180 Days

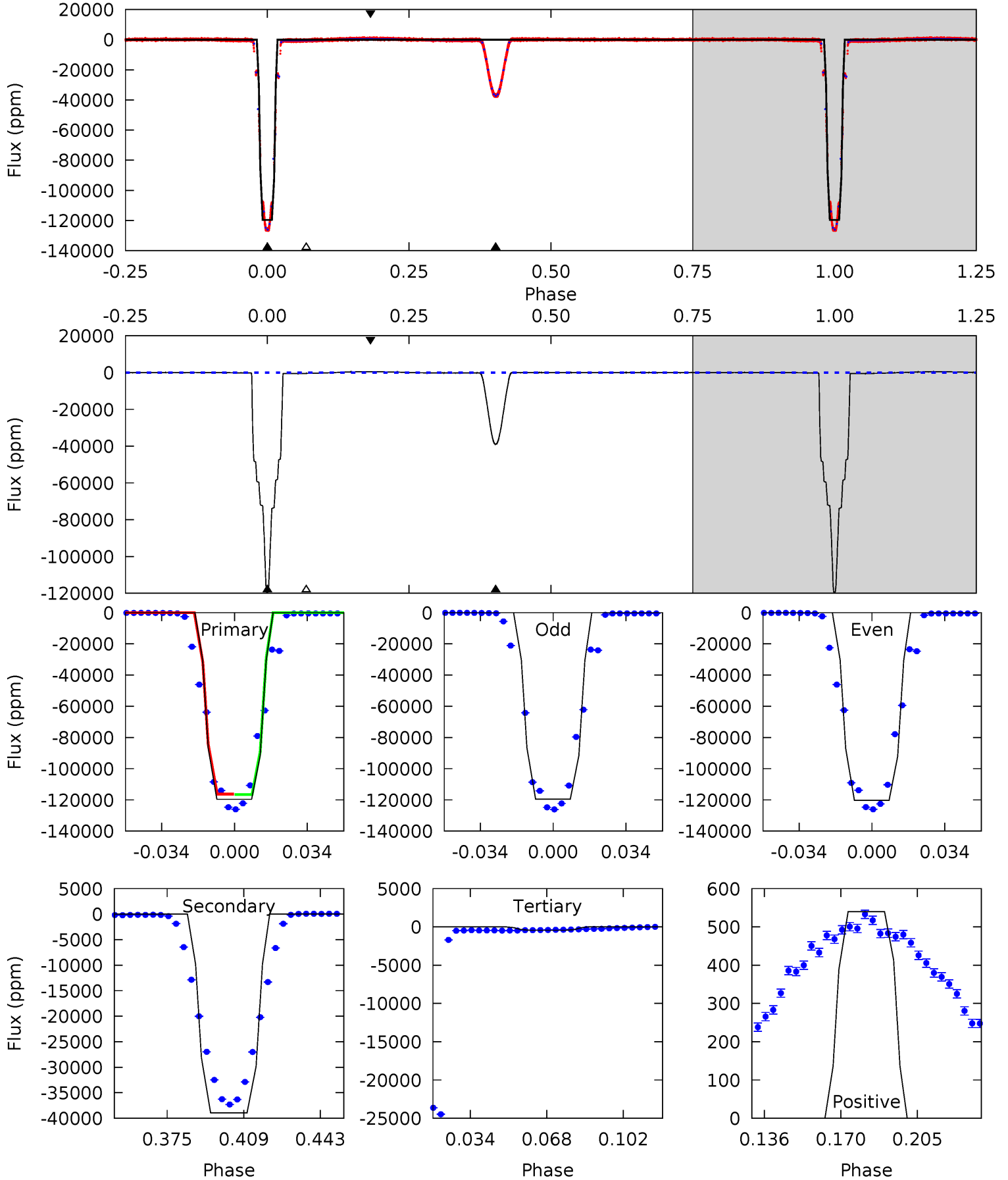
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23374	7151	24.1	20.2	4.69	1.93	22.6	23350	23353	7127	7131	8.82	0.99	0.00	0



Alt Model-Shift Uniqueness Test

008196180-01, P = 3.671681 Days, E = 128.415391 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6801	2212	25.3	30.7	4.79	2.12	11.6	6775	6770	2187	2181	21.1	1.00	0.00	0



Stellar Parameters For KIC 008196180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7343^{+207}_{-311}	$4.020^{+0.273}_{-0.147}$	$-0.420^{+0.250}_{-0.300}$	$1.940^{+0.520}_{-0.635}$	$1.436^{+0.210}_{-0.257}$	$0.277^{+0.471}_{-0.113}$
	+3%/-4%	+7%/-4%	+60%/-71%	+27%/-33%	+15%/-18%	+170%/-41%
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 008196180-01 / KOI 6990.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-39142 ± 5	$99.28^{+14.86}_{-16.98}$	2698^{+218}_{-242}	4776^{+102}_{-147}	$6.279^{+2.564}_{-1.468}$
Alt.	-38919 ± 18	$74.57^{+10.73}_{-13.16}$	2704^{+206}_{-234}	5440^{+150}_{-192}	11^{+4}_{-2}

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 $A_{obs} \gg 1.0$

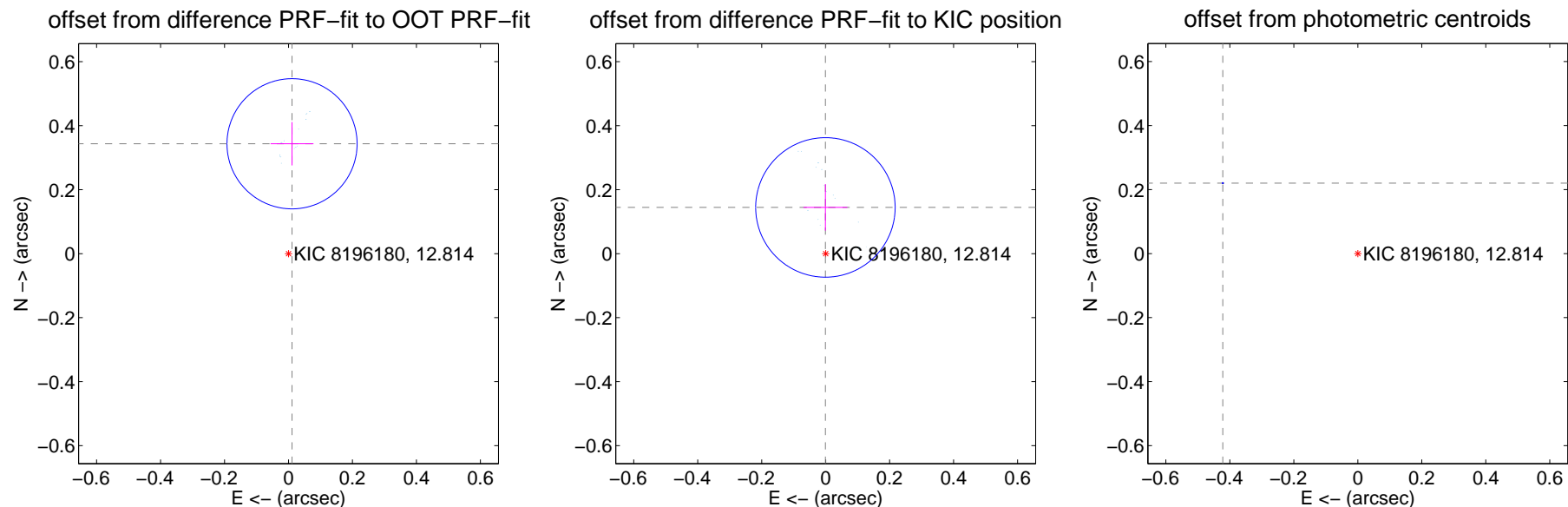
DV Centroid Data

Supplemental centroid analysis for 008196180-01. Kepler magnitude: 12.81. Transit SNR 10899.27

There are 17 quarters with good PRF difference image offsets

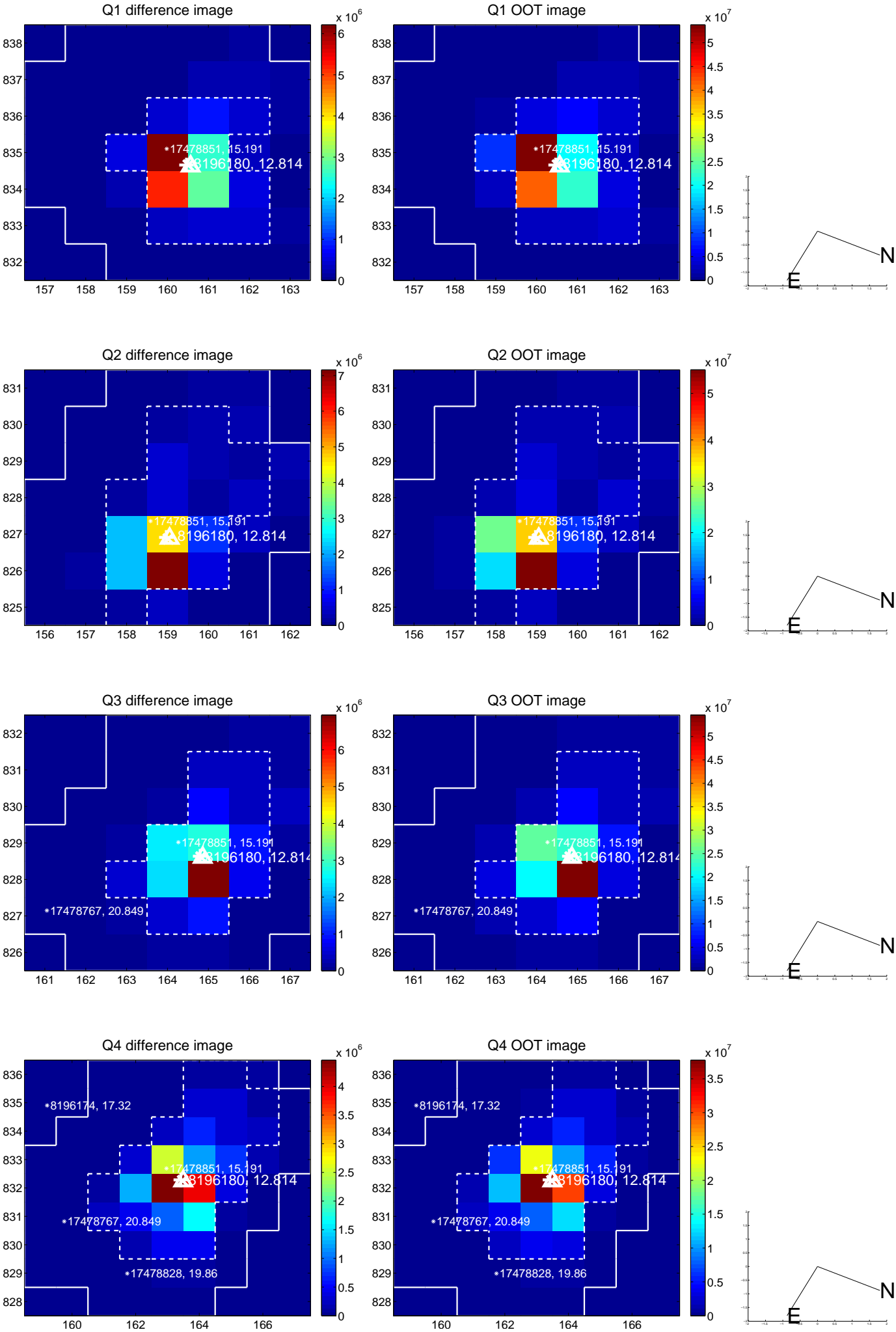
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.343 ± 0.068	5.07	-0.011 ± 0.067	0.343 ± 0.068
PRF-fit source offset from KIC position	0.144 ± 0.073	1.99	0.001 ± 0.069	0.144 ± 0.073
photometric centroid source offset	0.48 ± 0.00	844.68	0.42 ± 0.00	0.22 ± 0.00

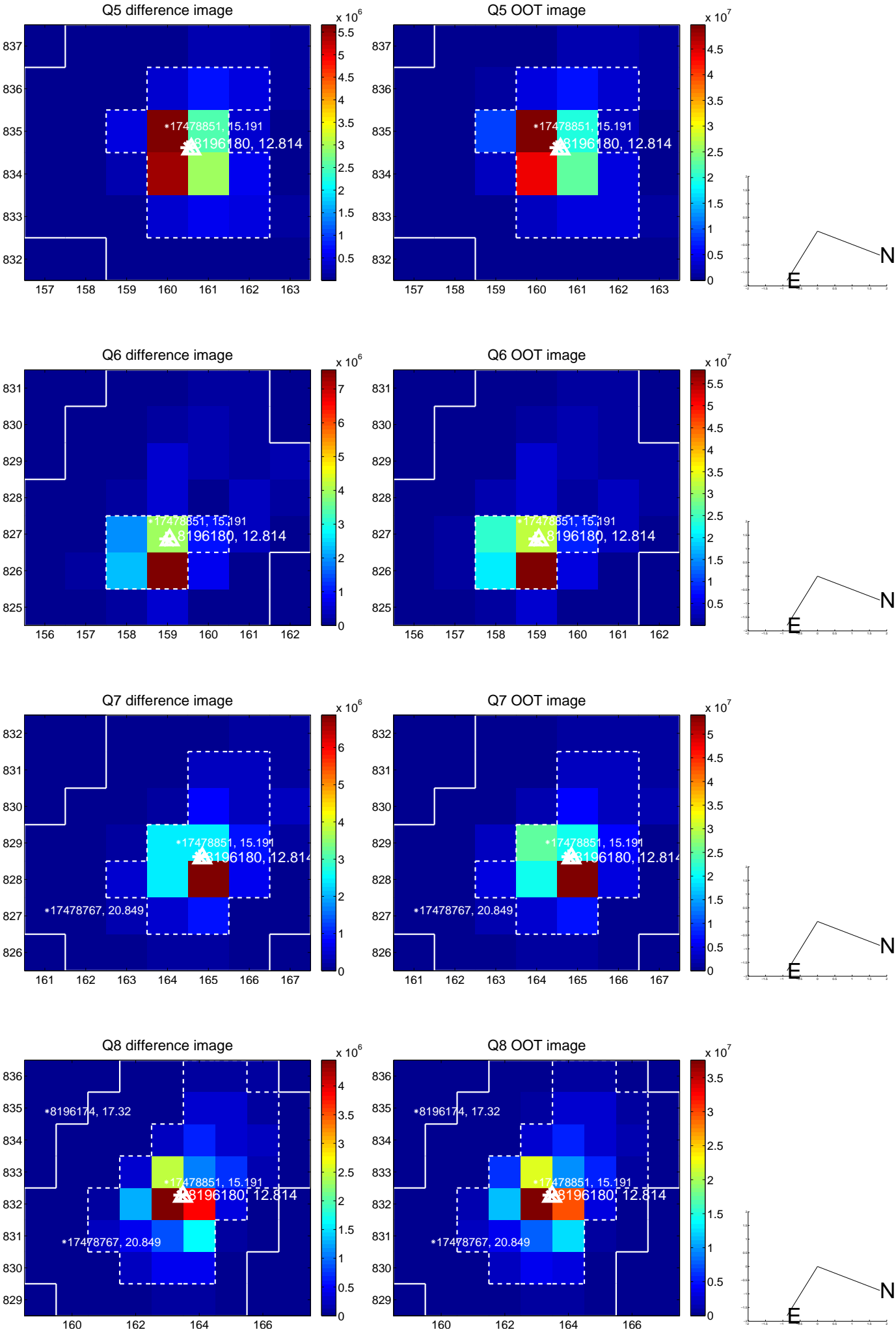


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

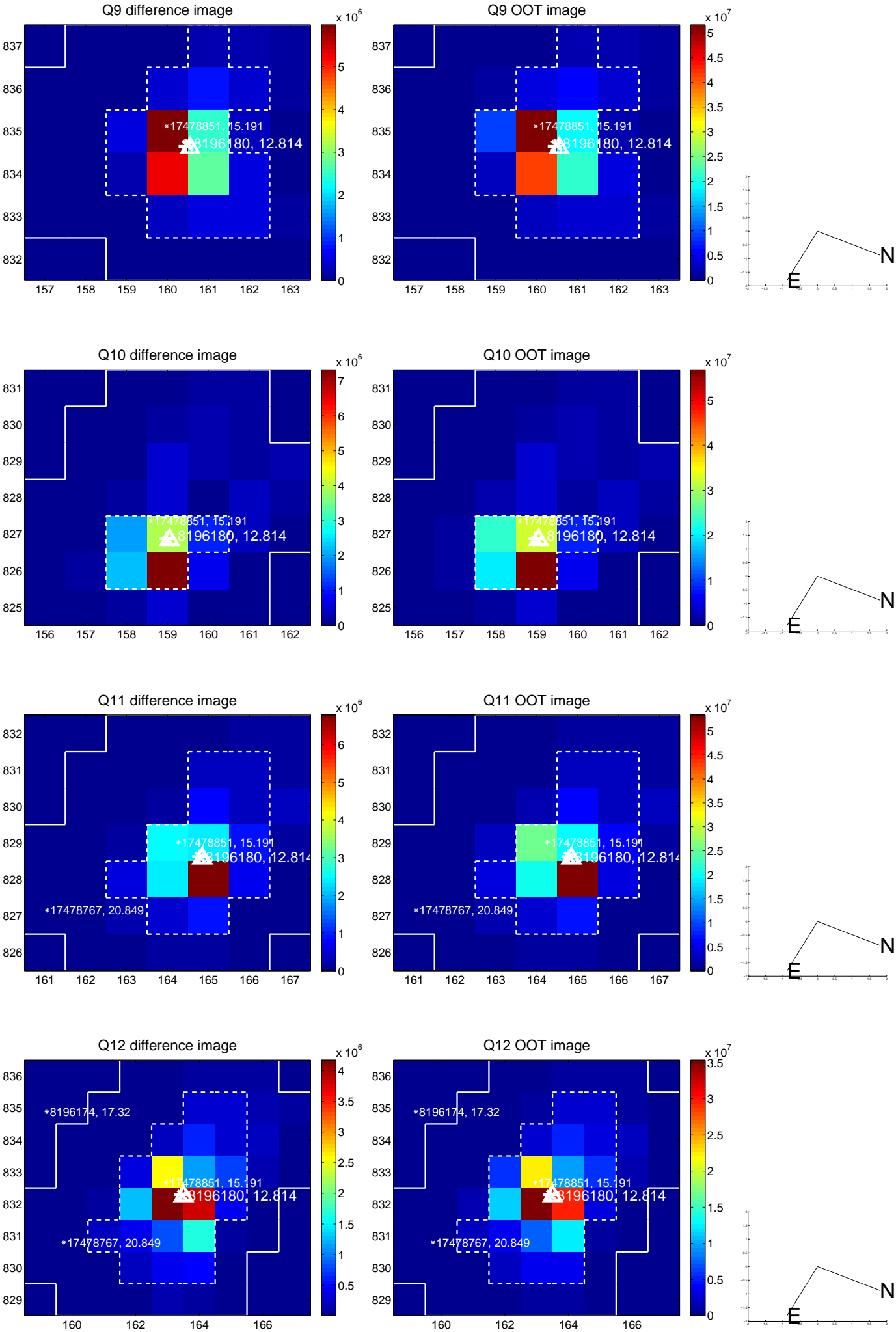
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



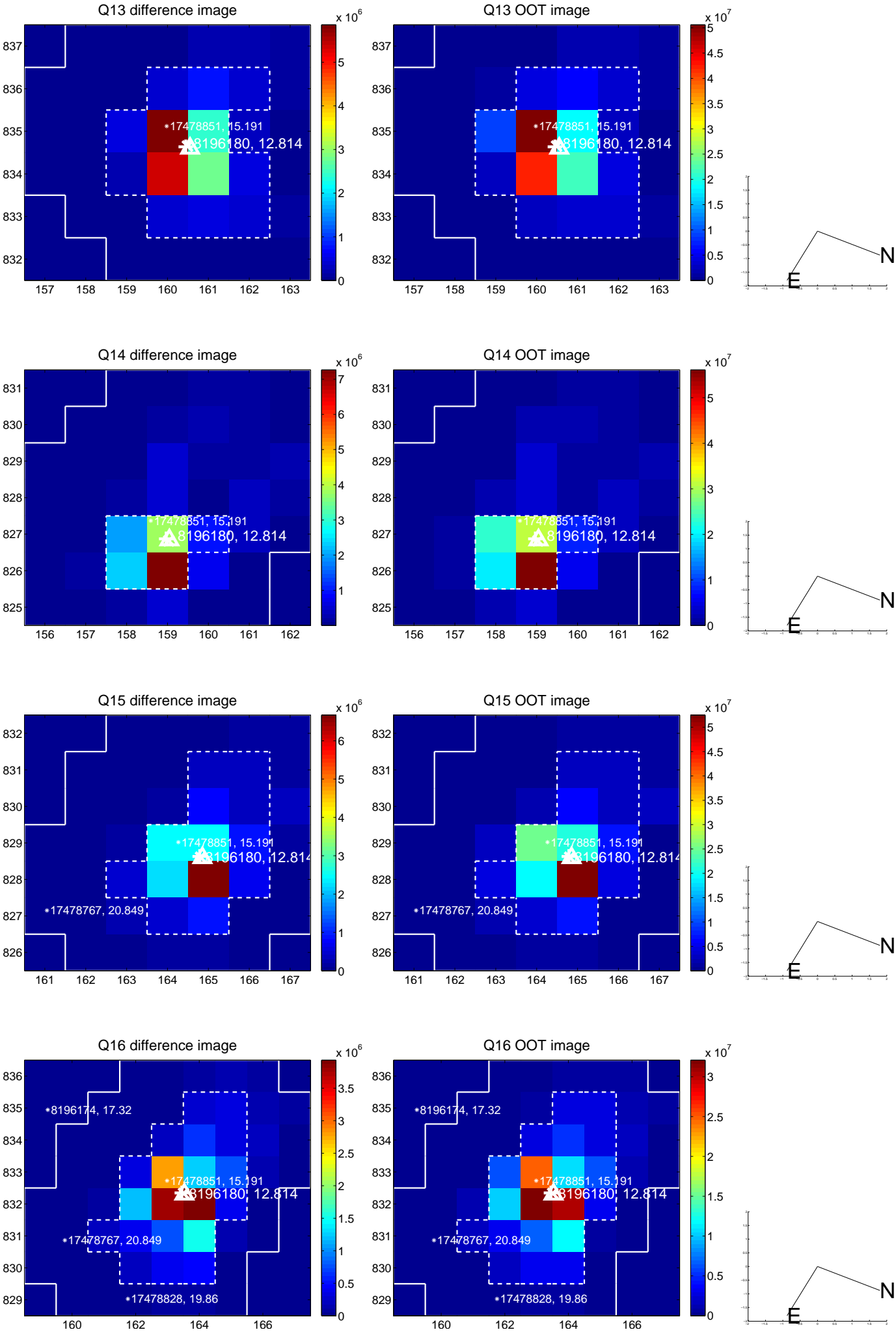
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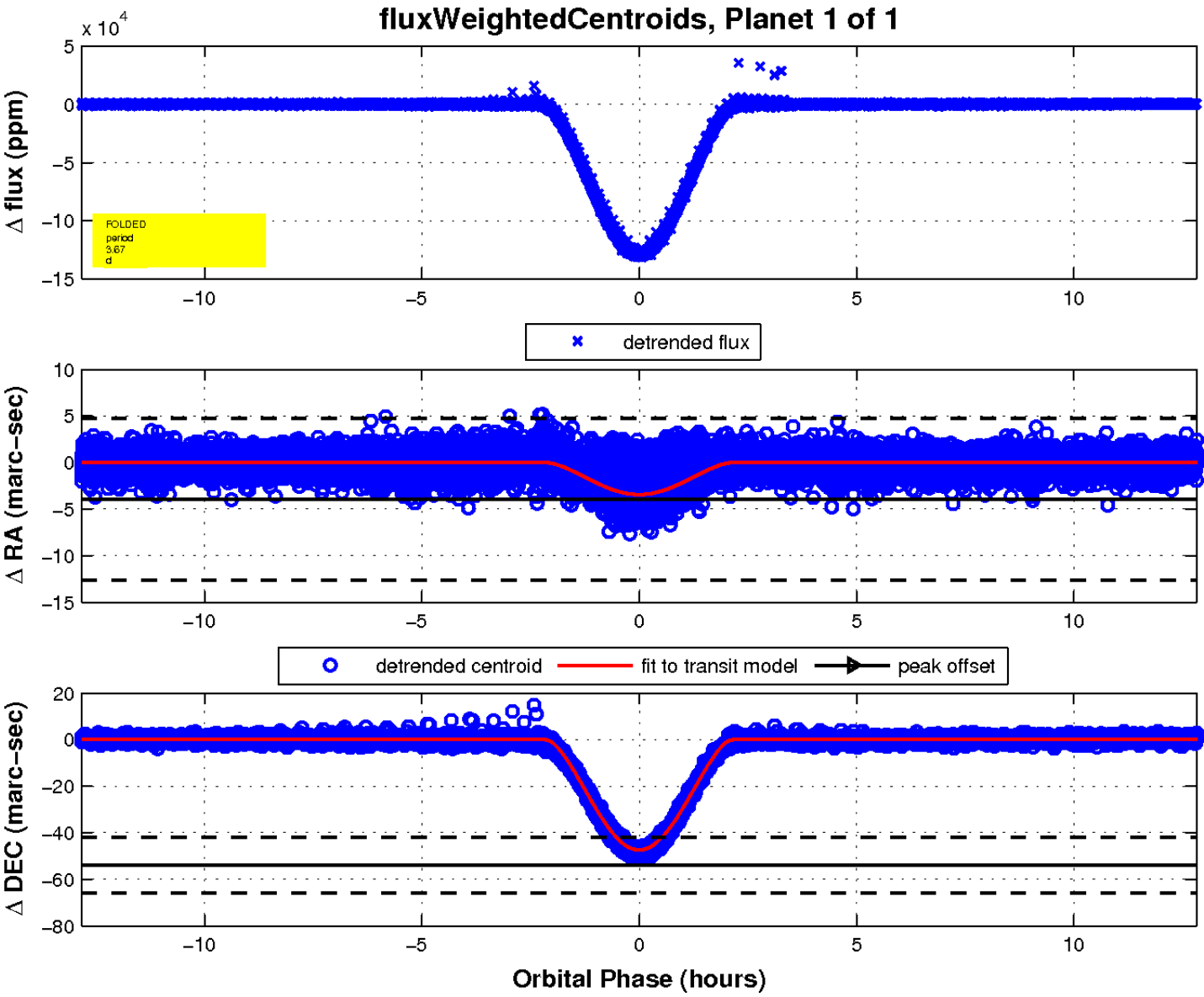
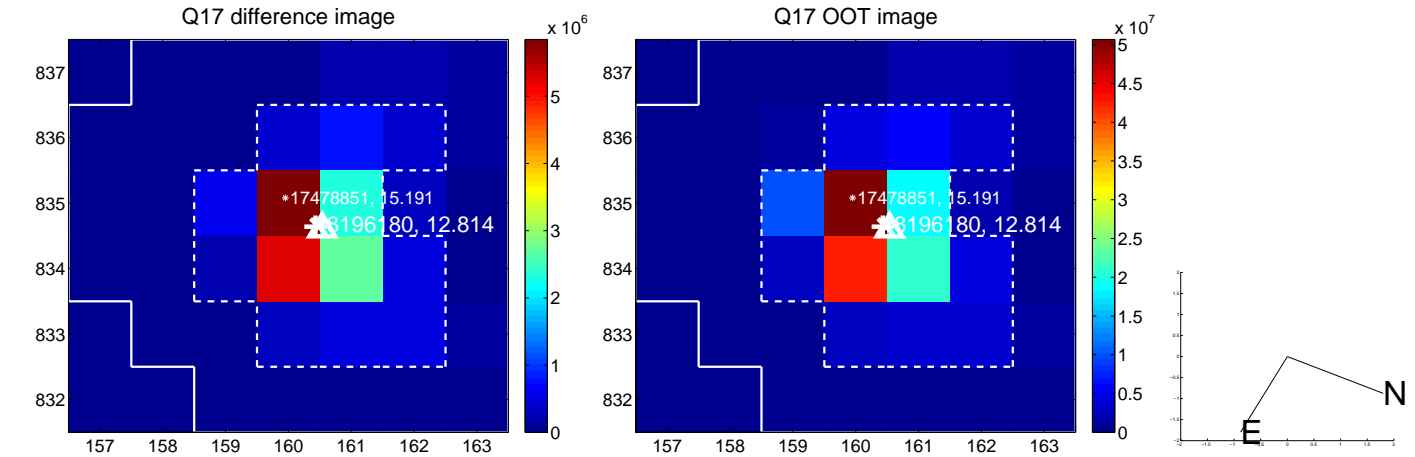
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

