

KIC 008953296

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})
008953296-01	OBS	7916.01	0.784278	132.238531	194916.0	3.716	7178.4	1845.0	1.46	6576	93.00	11695.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008953296-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED

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

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

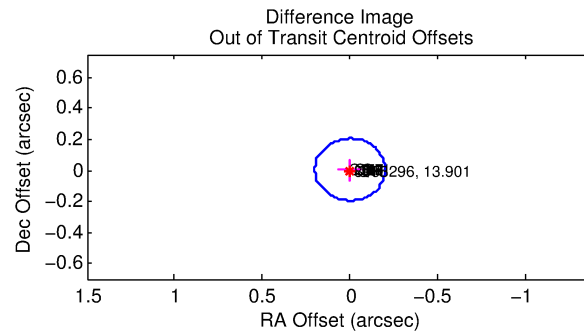
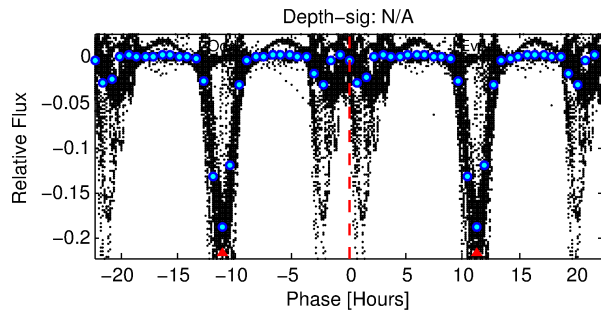
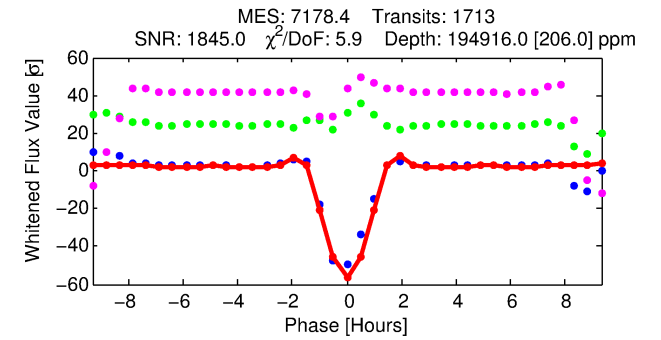
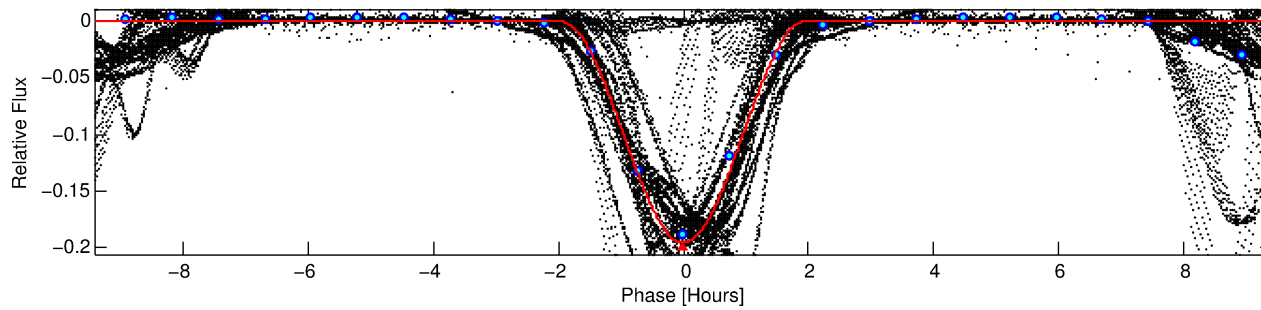
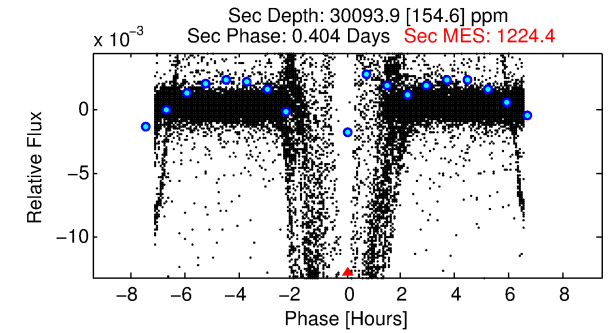
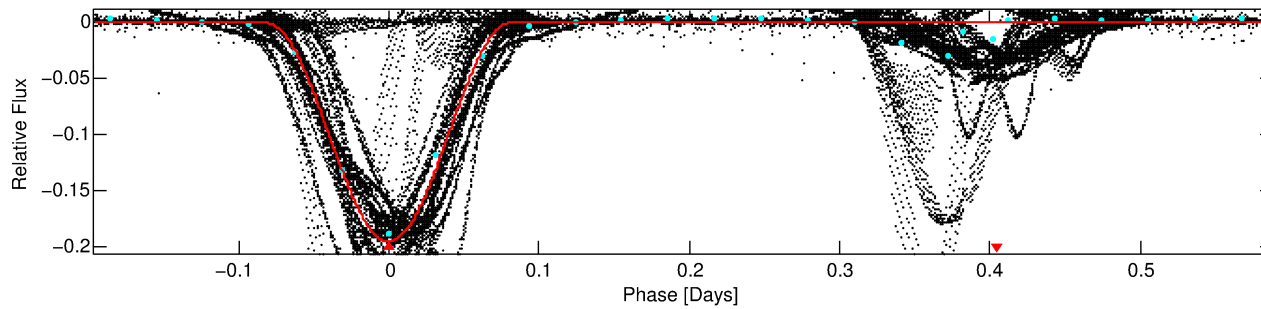
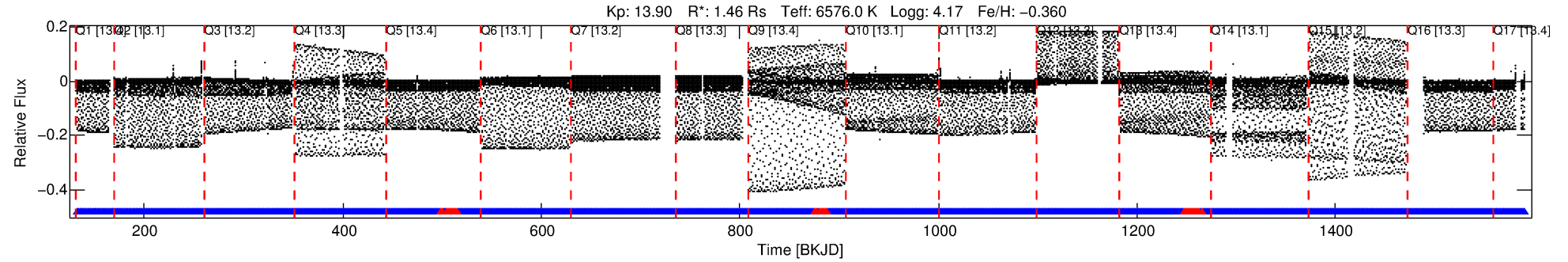
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008953296-01

No Significant Match Found

DV One-Page Summary

KIC: 8953296 Candidate: 1 of 1 Period: 0.784 d



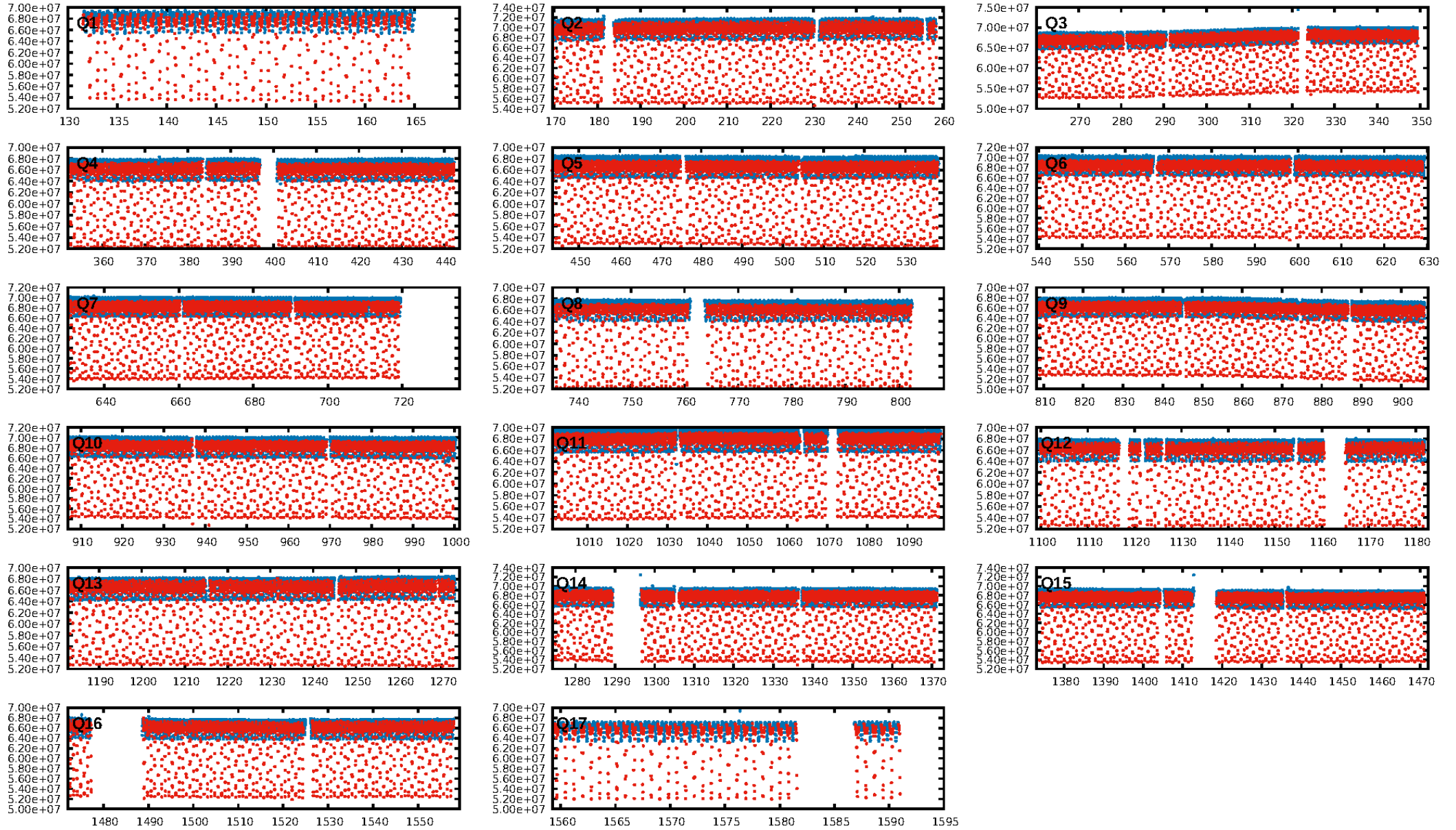
DV Fit Results:

Period = 0.78428 [0.00000] d
Epoch = 132.2385 [0.0000] BKJD
Rp/R* = 0.5858 [0.0275]
a/R* = 2.45 [0.03]
b = 0.86 [0.04]
Seff = 11695.62 [4731.42]
Teff = 2652 [268] K
Rp = 93.00 [27.14] Re
a = 0.0174 [0.0044] AU
Ag = 0.58 [0.22] [-1.87σ]
Teffp = 3579 [162] K [2.96σ]

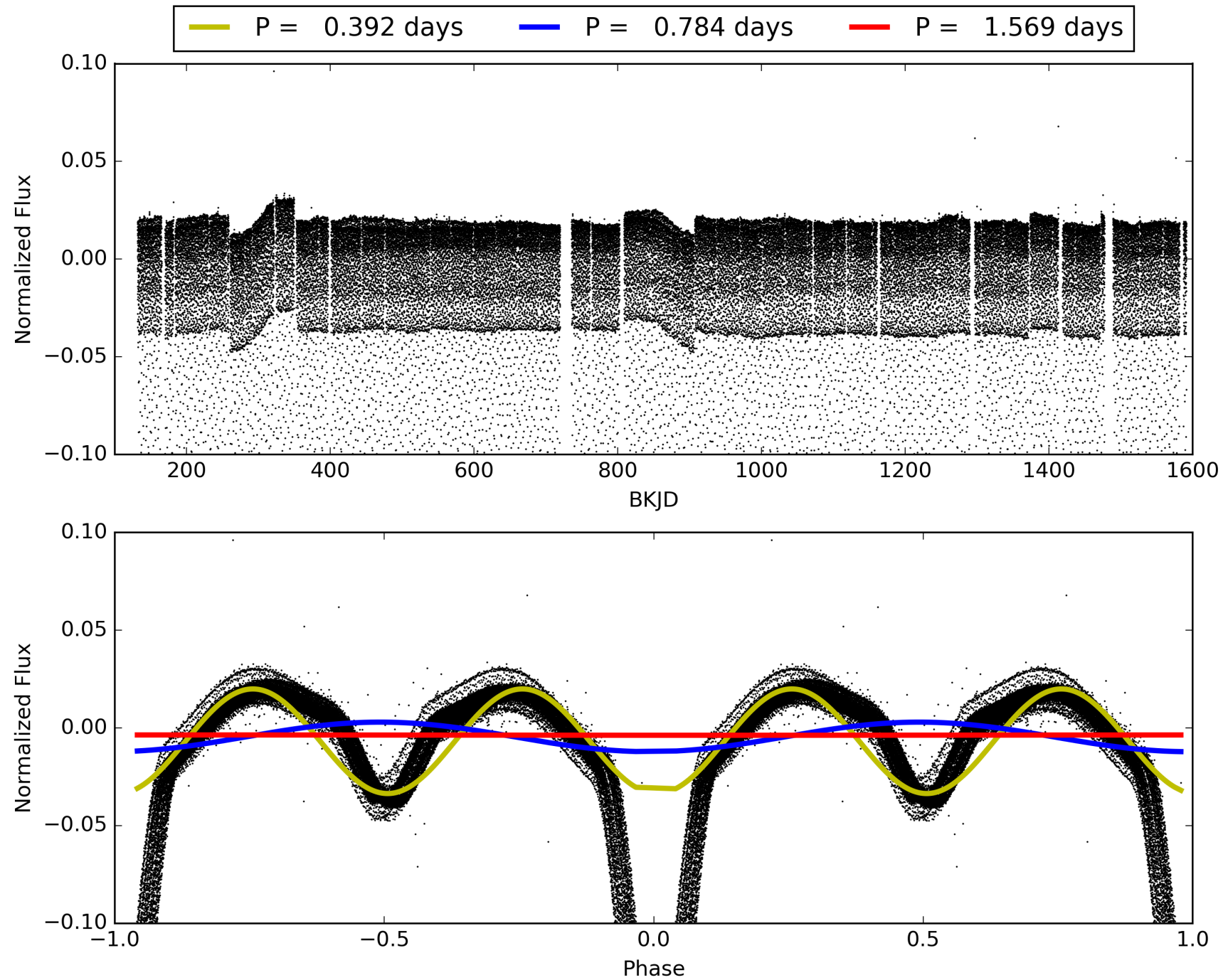
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [1592/1635]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.080 arcsec [195.19σ]
OotOffset-rm: 0.007 arcsec [0.10σ]
KicOffset-rm: 0.169 arcsec [2.44σ]
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 008953296-01, PDC Light Curves

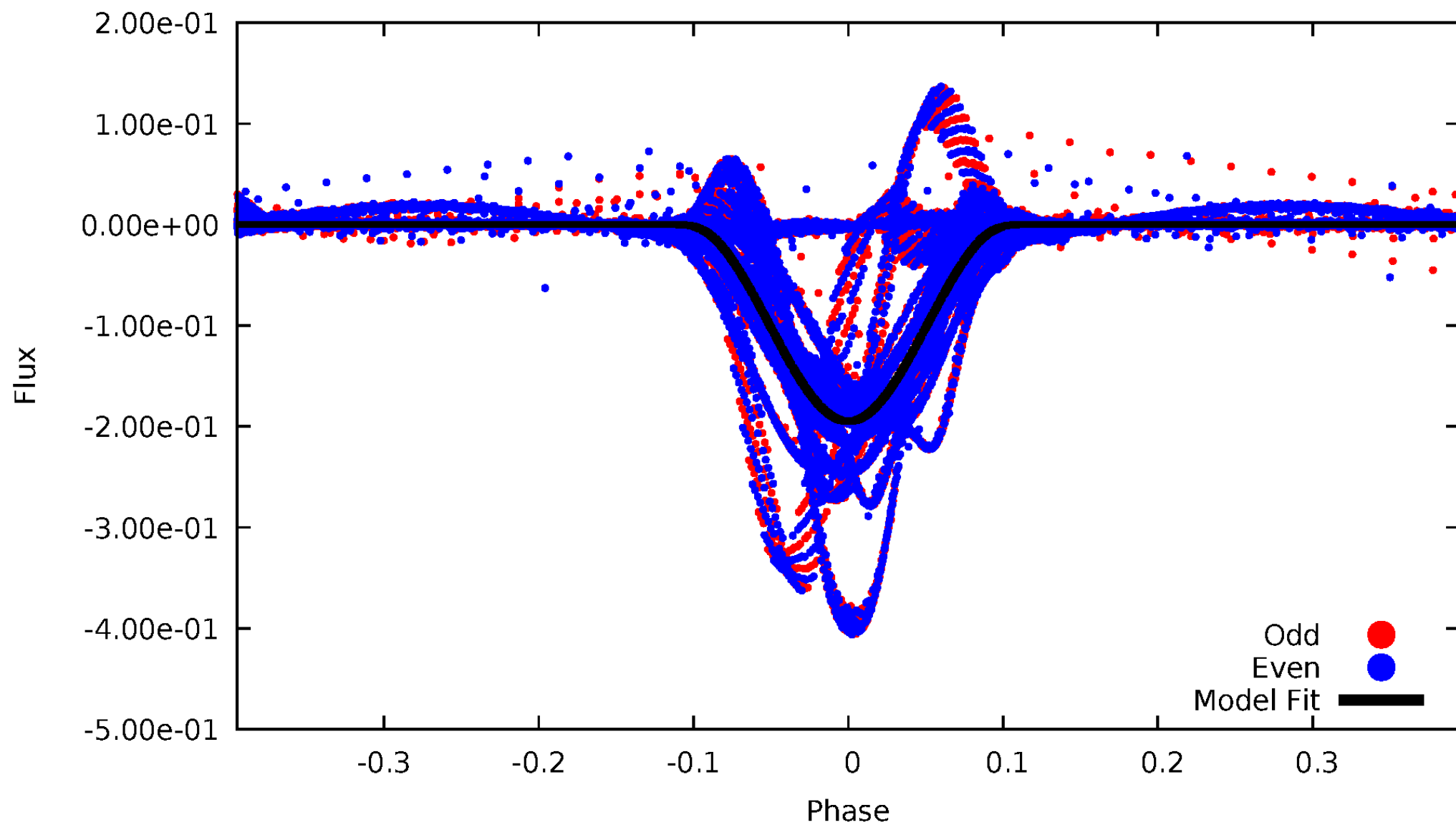


TCE 008953296-01



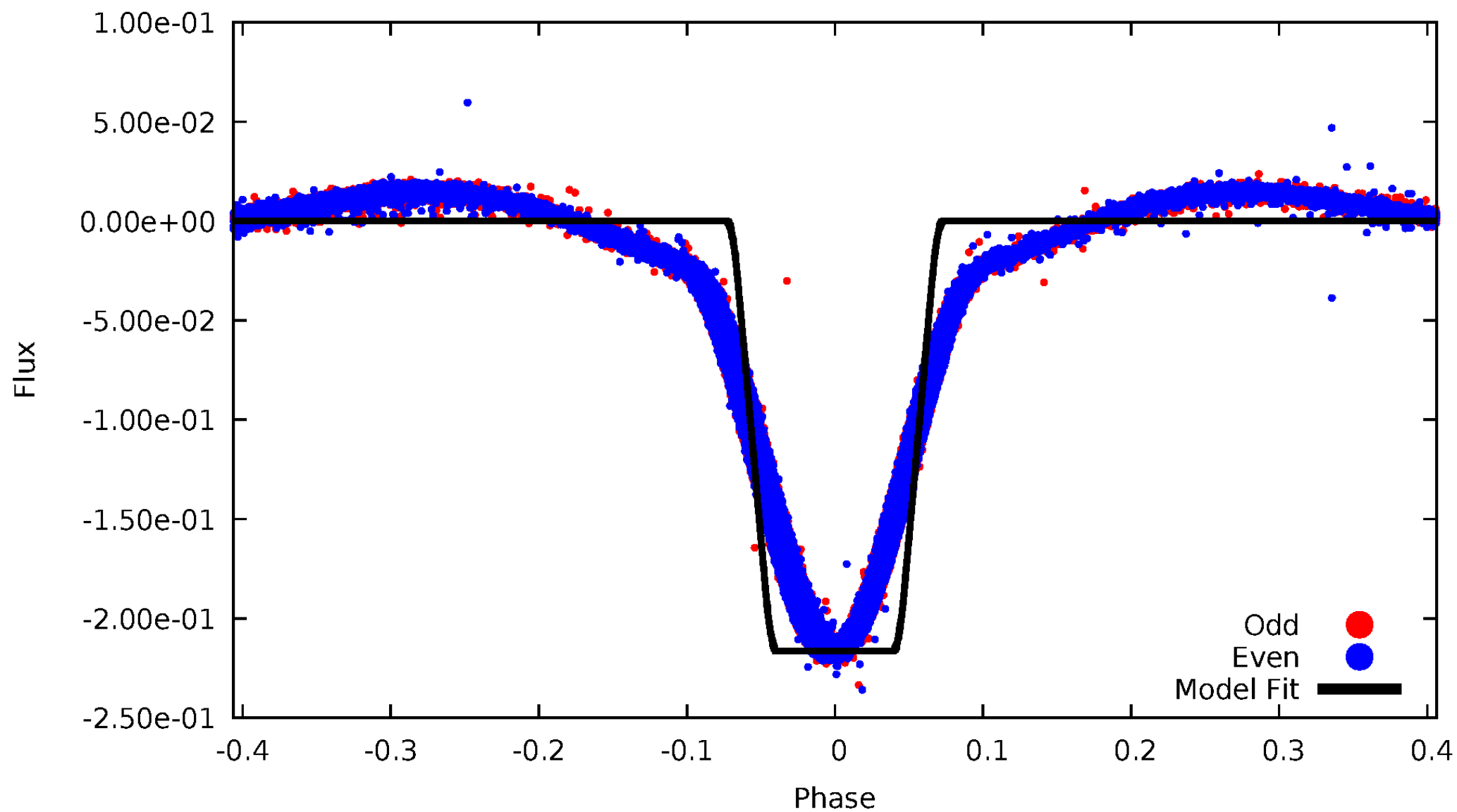
DV Odd/Even

TCE 008953296-01



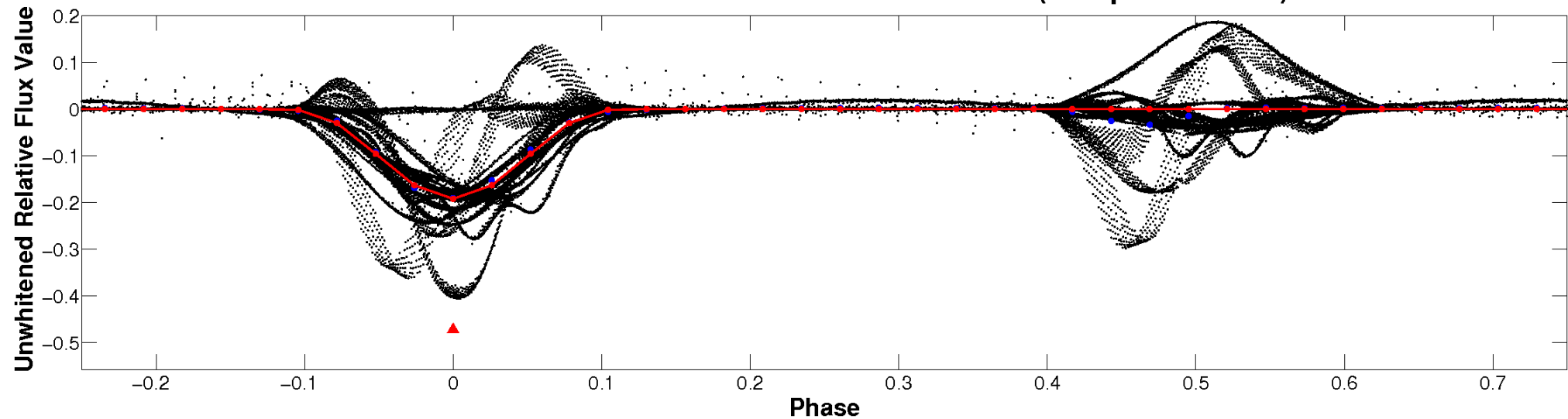
ALT Odd/Even

TCE 008953296-01

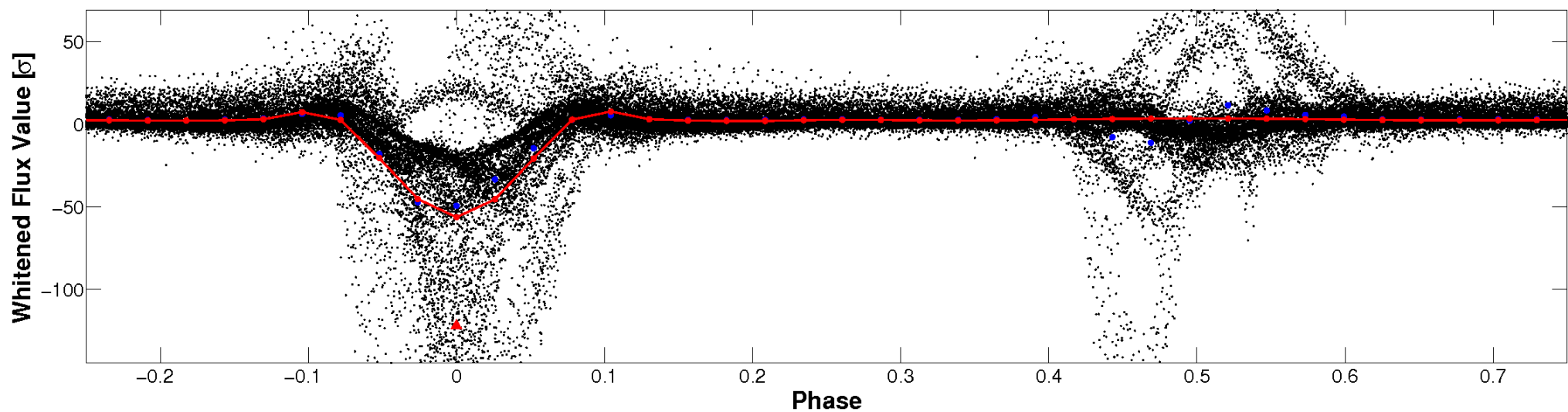


Non-Whitened Vs. Whitened Light Curve

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

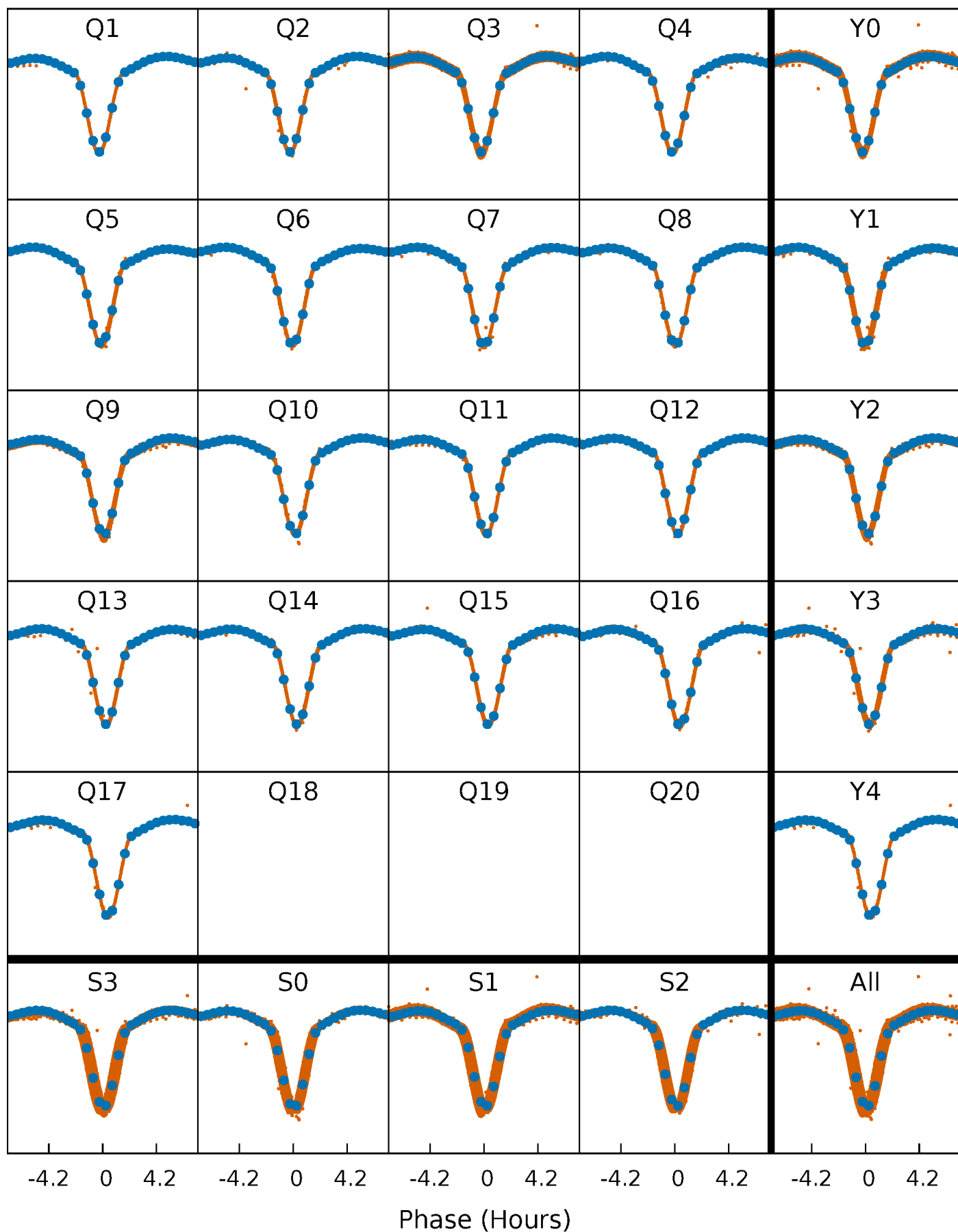


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



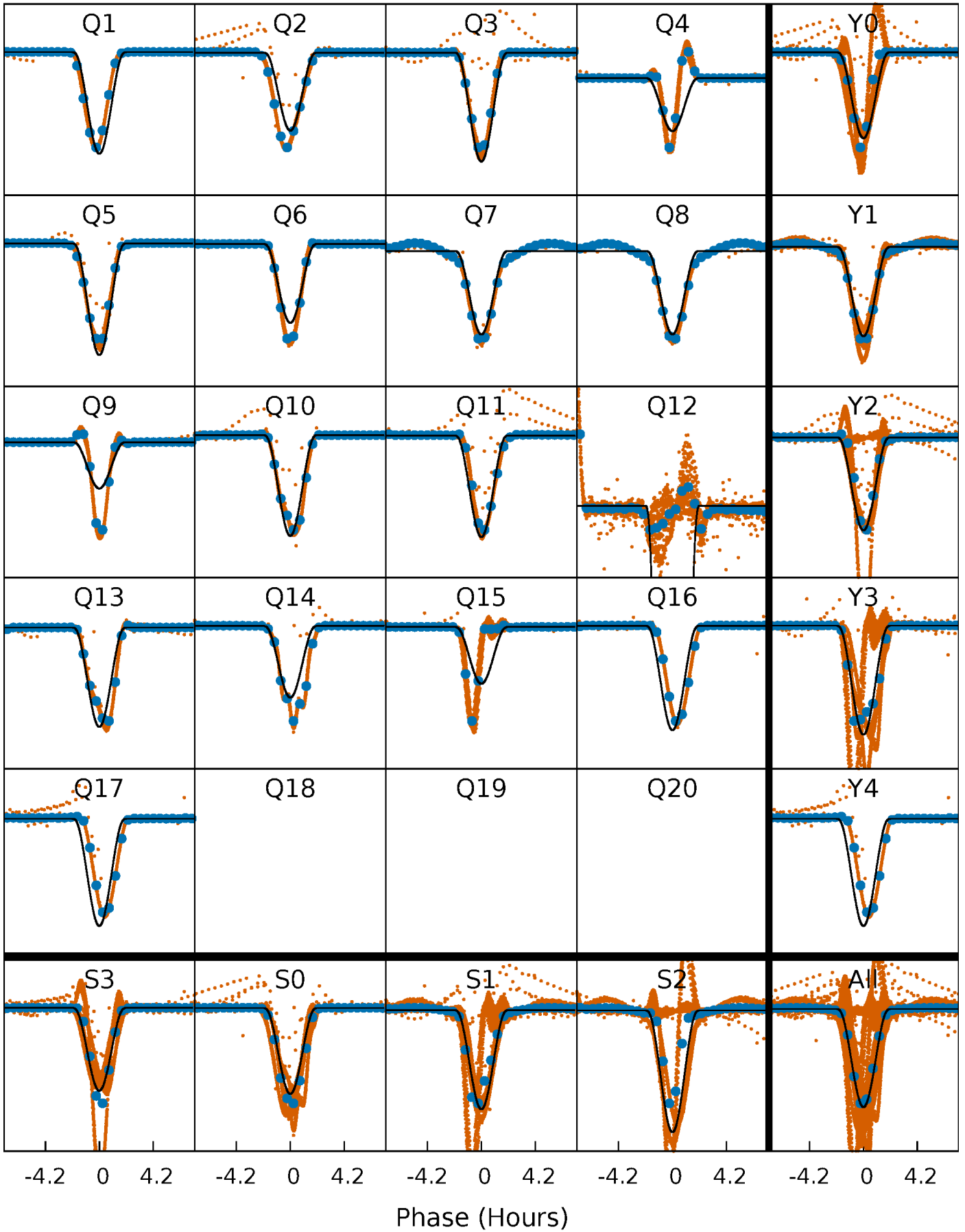
PDC Quarter-Phased Transit Curves

TCE 008953296-01 P= 0.784278 Days $T_0=132.238531$ (BKJD)



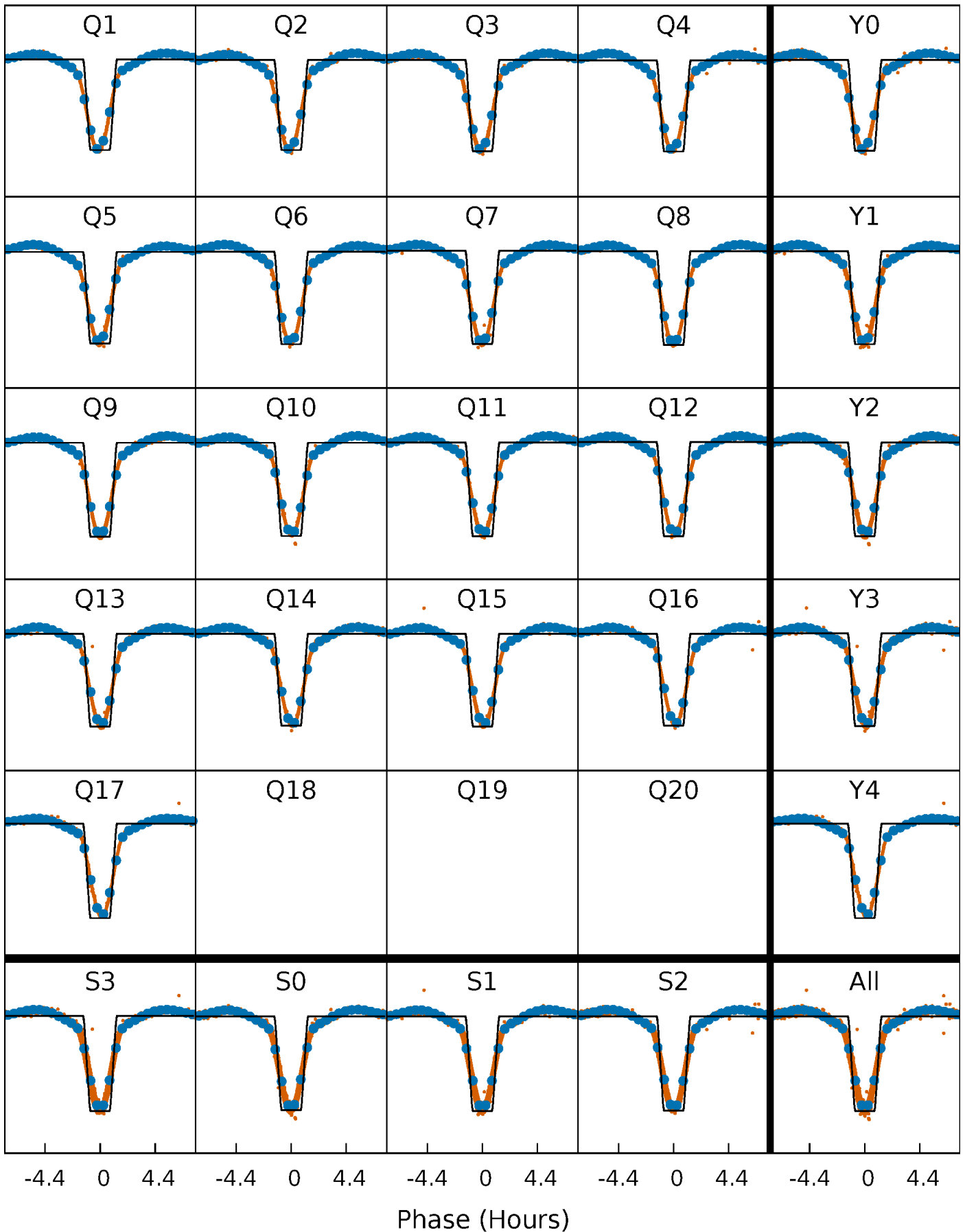
DV Quarter-Phased Transit Curves

TCE 008953296-01 P= 0.784278 Days $T_0=132.238531$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

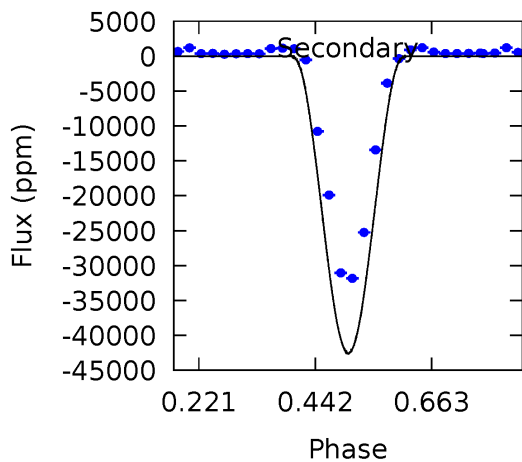
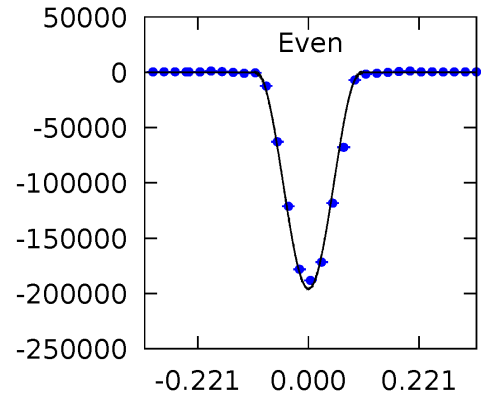
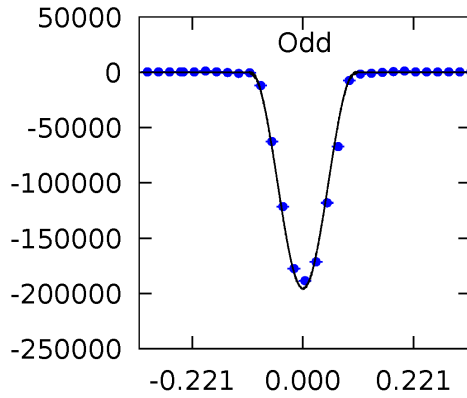
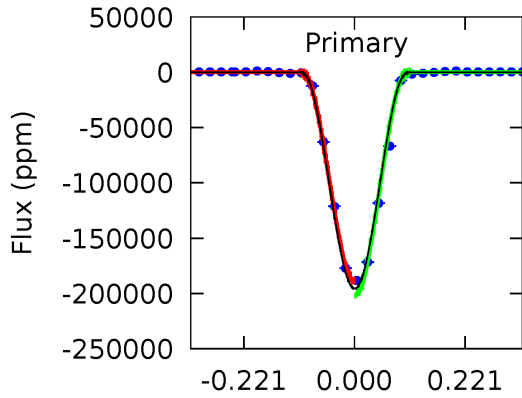
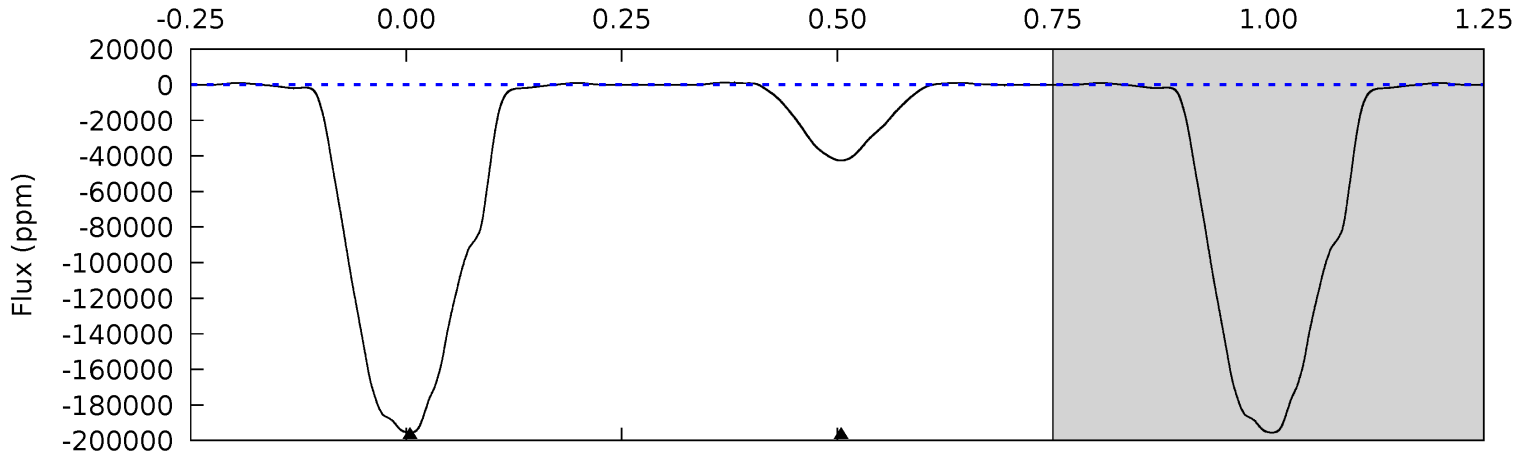
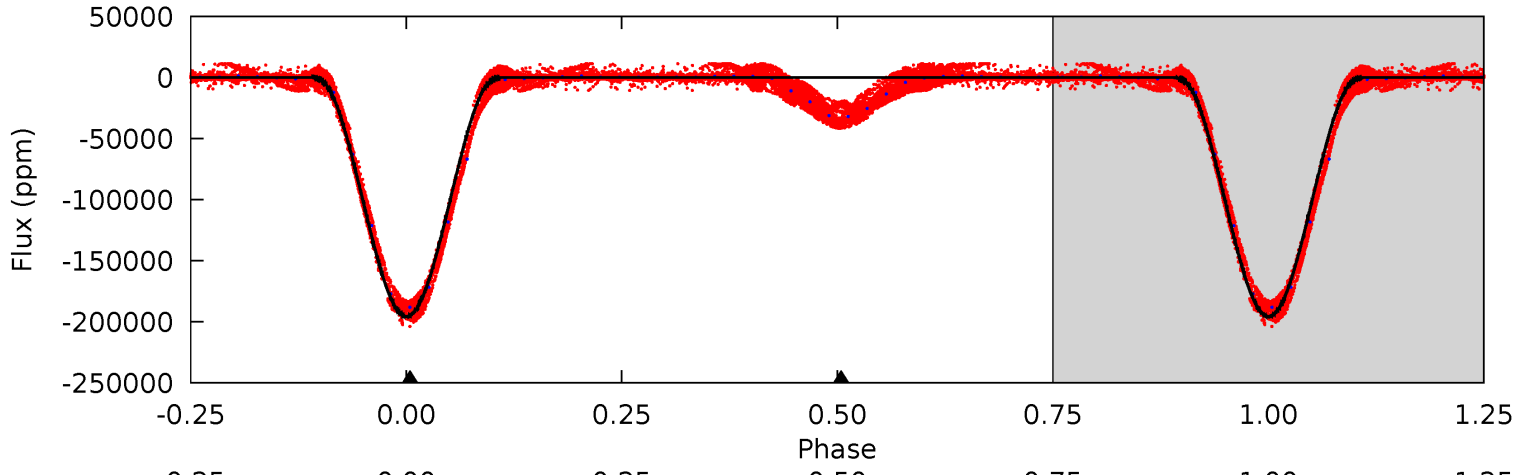
TCE 008953296-01 P= 0.784288 Days $T_0=132.232278$ (BKJD)



DV Model-Shift Uniqueness Test

008953296-01, P = 0.784278 Days, E = 131.454253 Days

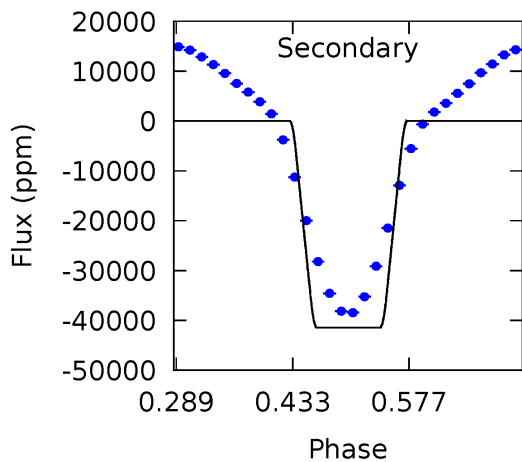
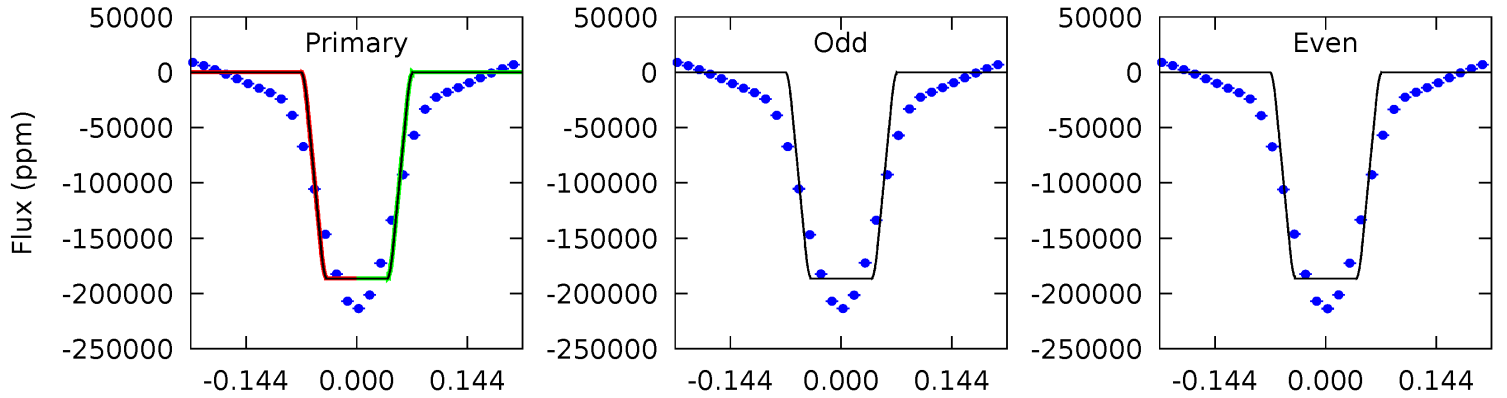
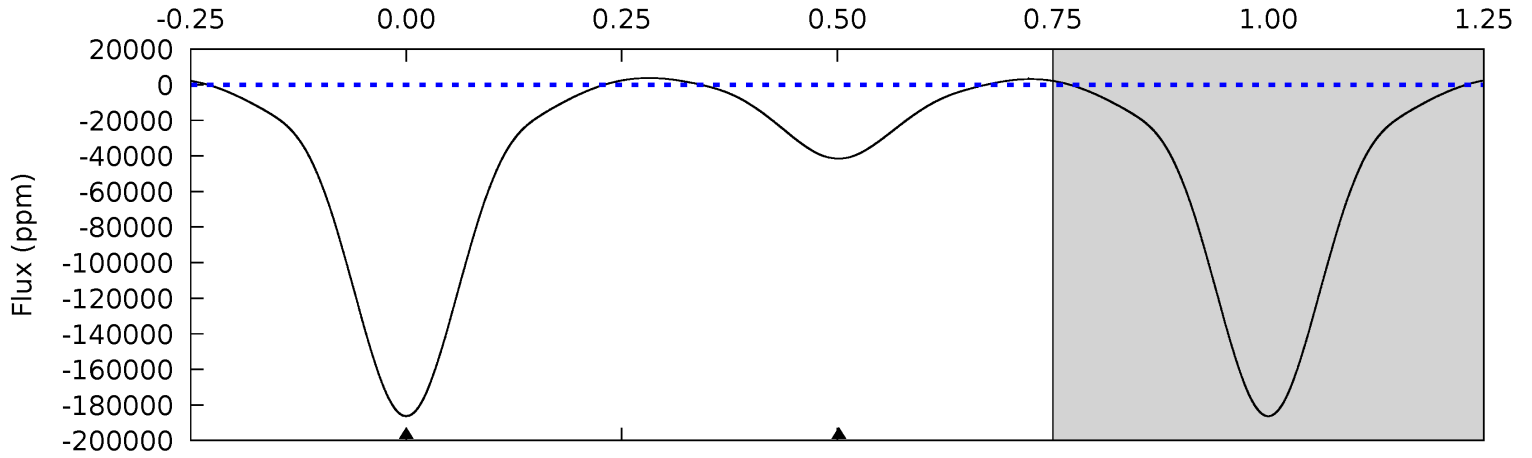
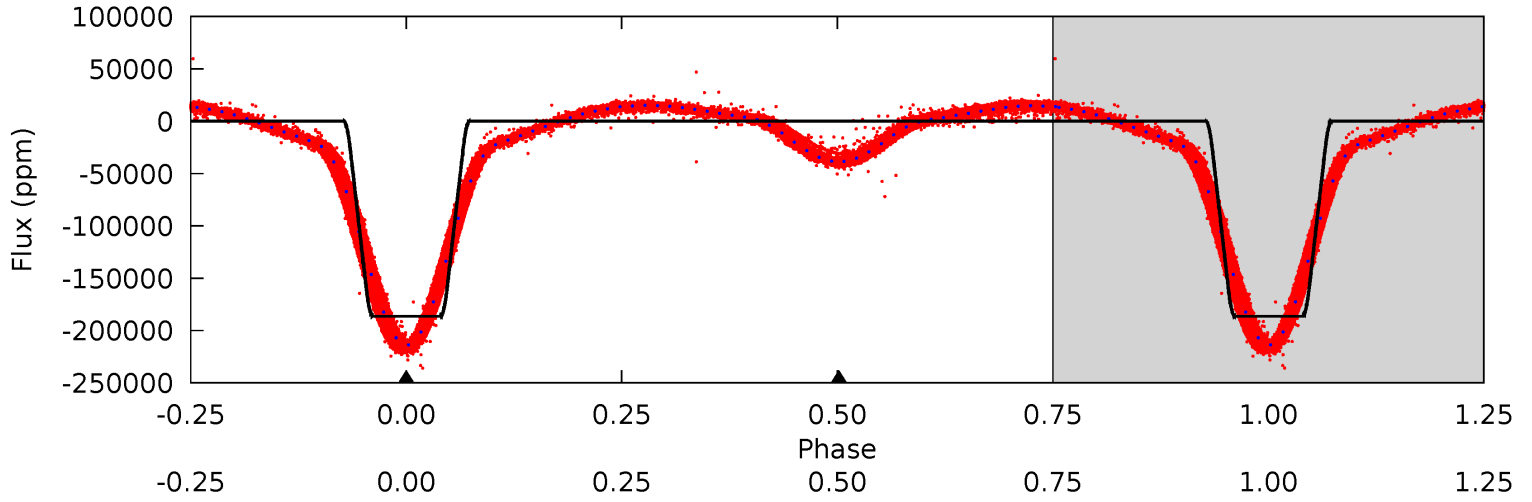
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12382	2695	0	0	4.40	1.22	3.82	12382	12382	2695	2695	7.47	1.00	0.01	410.7



Alt Model-Shift Uniqueness Test

008953296-01, P = 0.784288 Days, E = 131.447990 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1629	362.1	0	0	4.49	1.46	58.3	1629	1629	362.1	362.1	0.52	1.00	0.02	0.03



Stellar Parameters For KIC 008953296

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6576^{+185}_{-254}	$4.171^{+0.209}_{-0.171}$	$-0.360^{+0.250}_{-0.300}$	$1.455^{+0.419}_{-0.381}$	$1.147^{+0.185}_{-0.167}$	$0.525^{+0.603}_{-0.242}$
	+3%/-4%	+5%/-4%	+69%/-83%	+29%/-26%	+16%/-15%	+115%/-46%
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 008953296-01 / KOI 7916.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-42566 ± 16	$92.94^{+14.88}_{-14.26}$	3690^{+276}_{-296}	3883^{+156}_{-191}	$0.865^{+0.318}_{-0.210}$
Alt.	-41443 ± 114	$73.65^{+12.31}_{-10.73}$	3673^{+297}_{-292}	4319^{+182}_{-190}	$1.339^{+0.497}_{-0.338}$

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 $A_{obs} \gg 1.0$

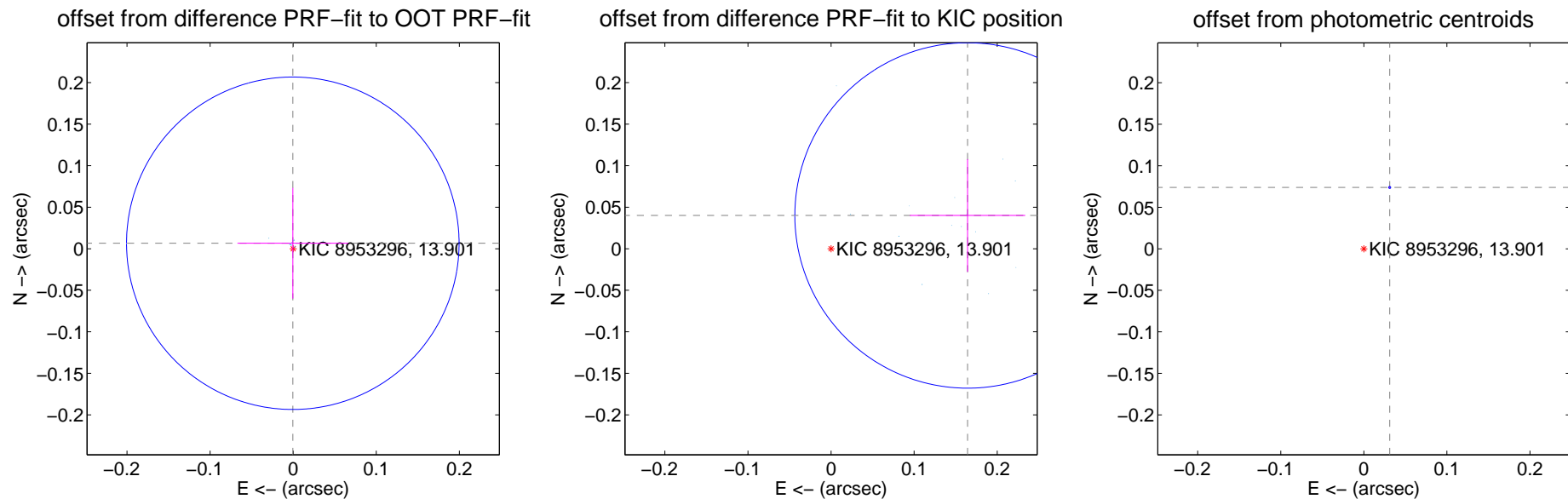
DV Centroid Data

Supplemental centroid analysis for 008953296-01. Kepler magnitude: 13.90. Transit SNR 1845.02

There are 17 quarters with good PRF difference image offsets

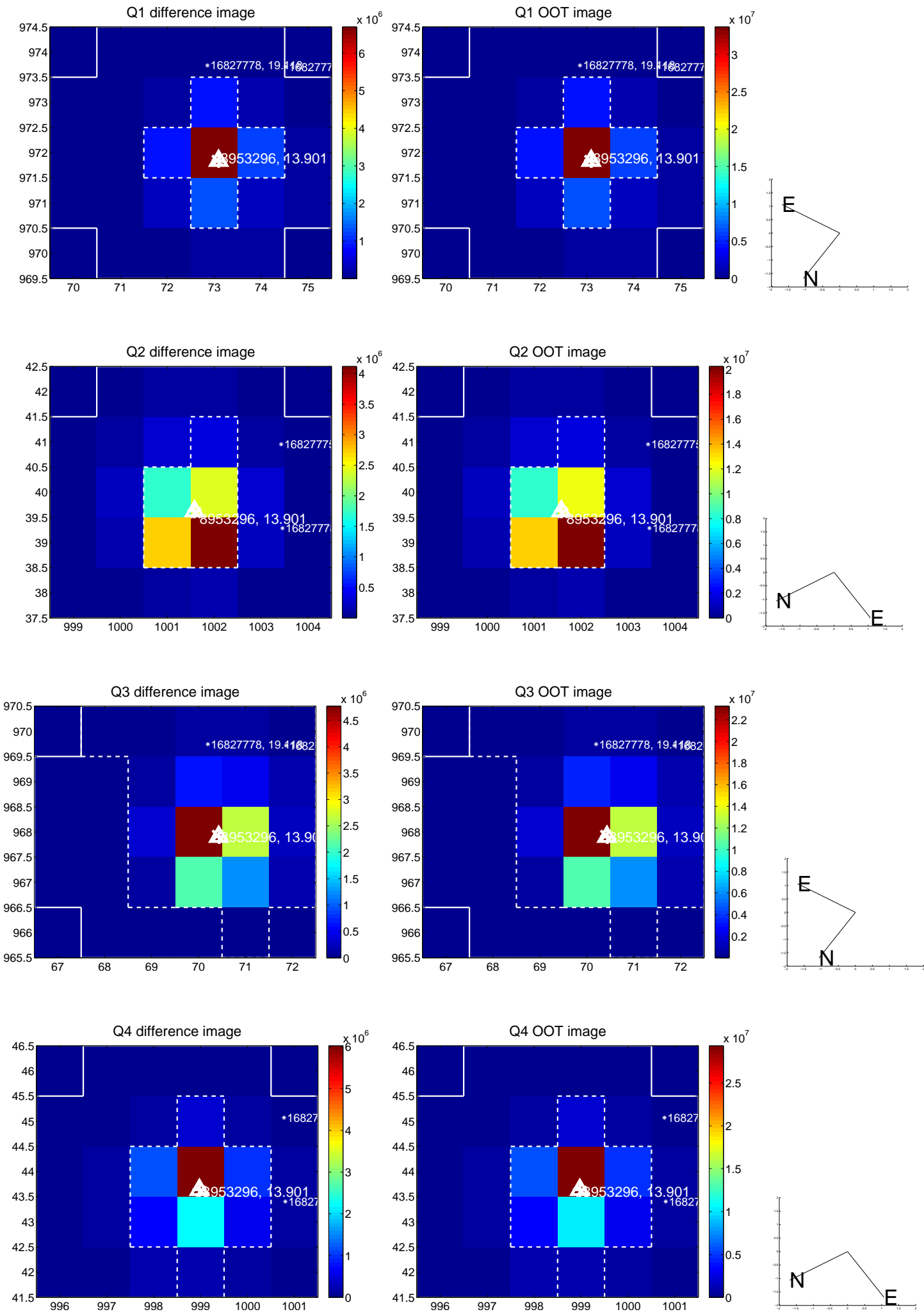
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.007 ± 0.067	0.10	0.000 ± 0.067	0.007 ± 0.067
PRF-fit source offset from KIC position	0.169 ± 0.069	2.44	-0.164 ± 0.069	0.040 ± 0.068
photometric centroid source offset	0.08 ± 0.00	195.19	-0.03 ± 0.00	0.07 ± 0.00

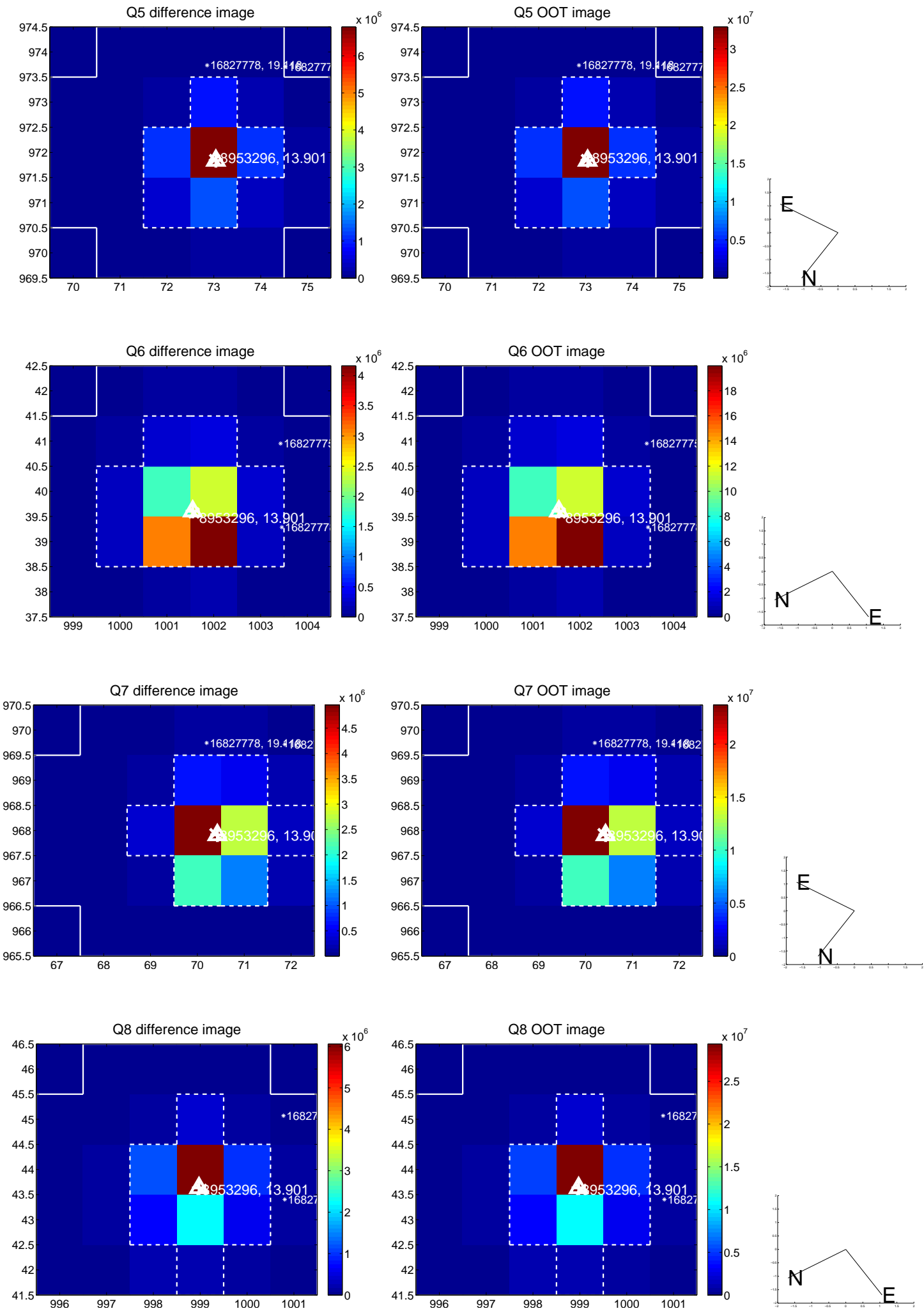


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

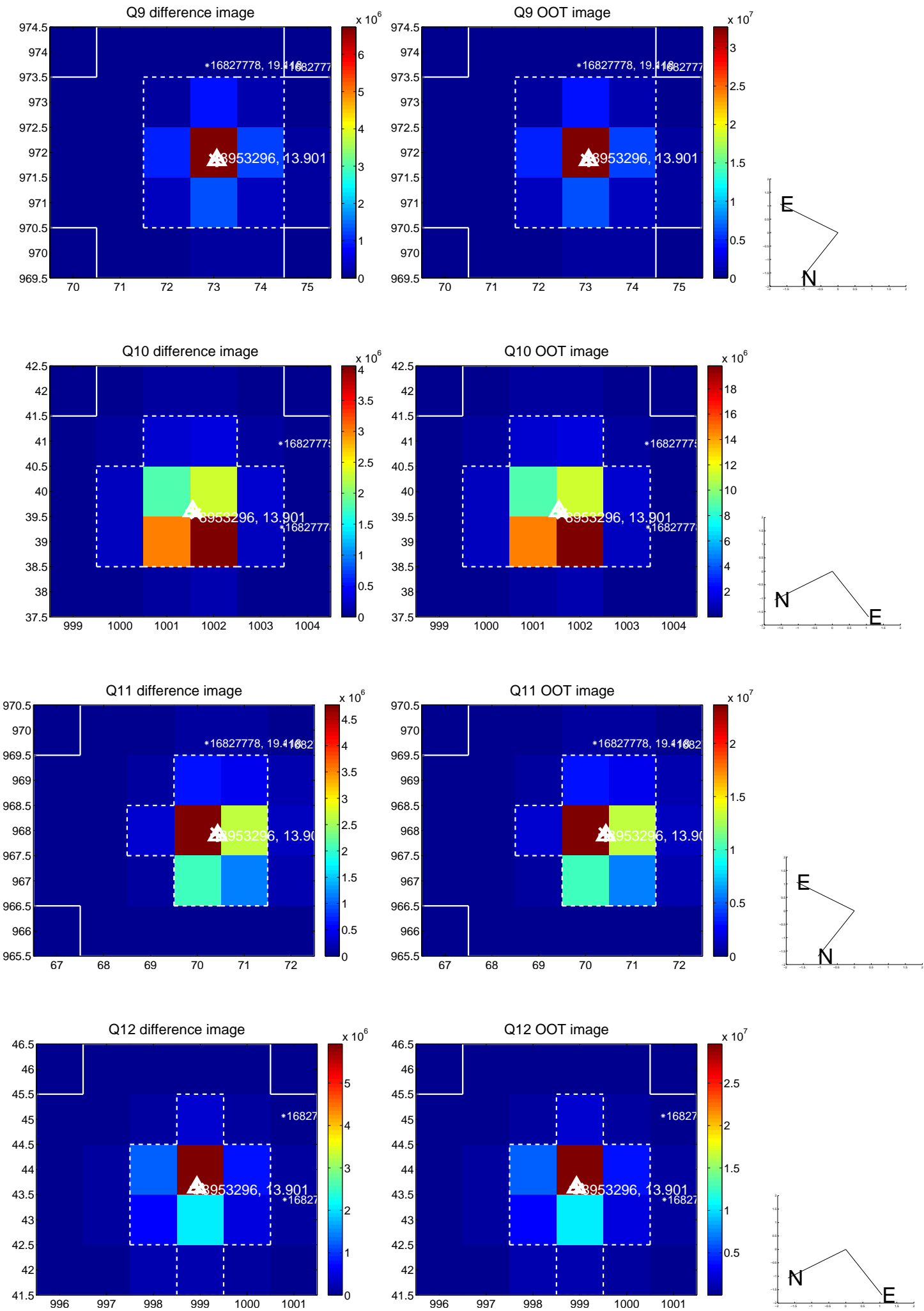
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



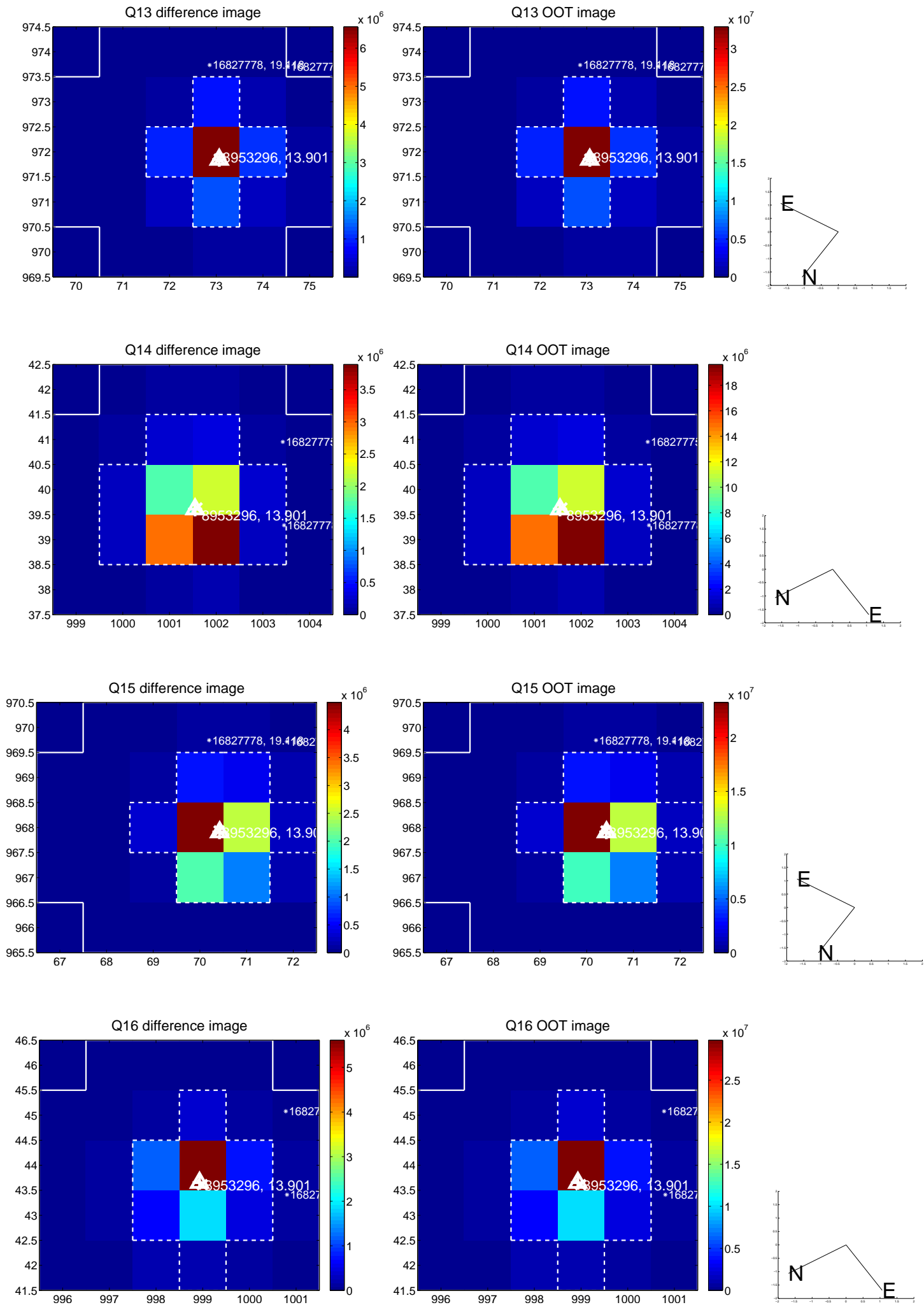
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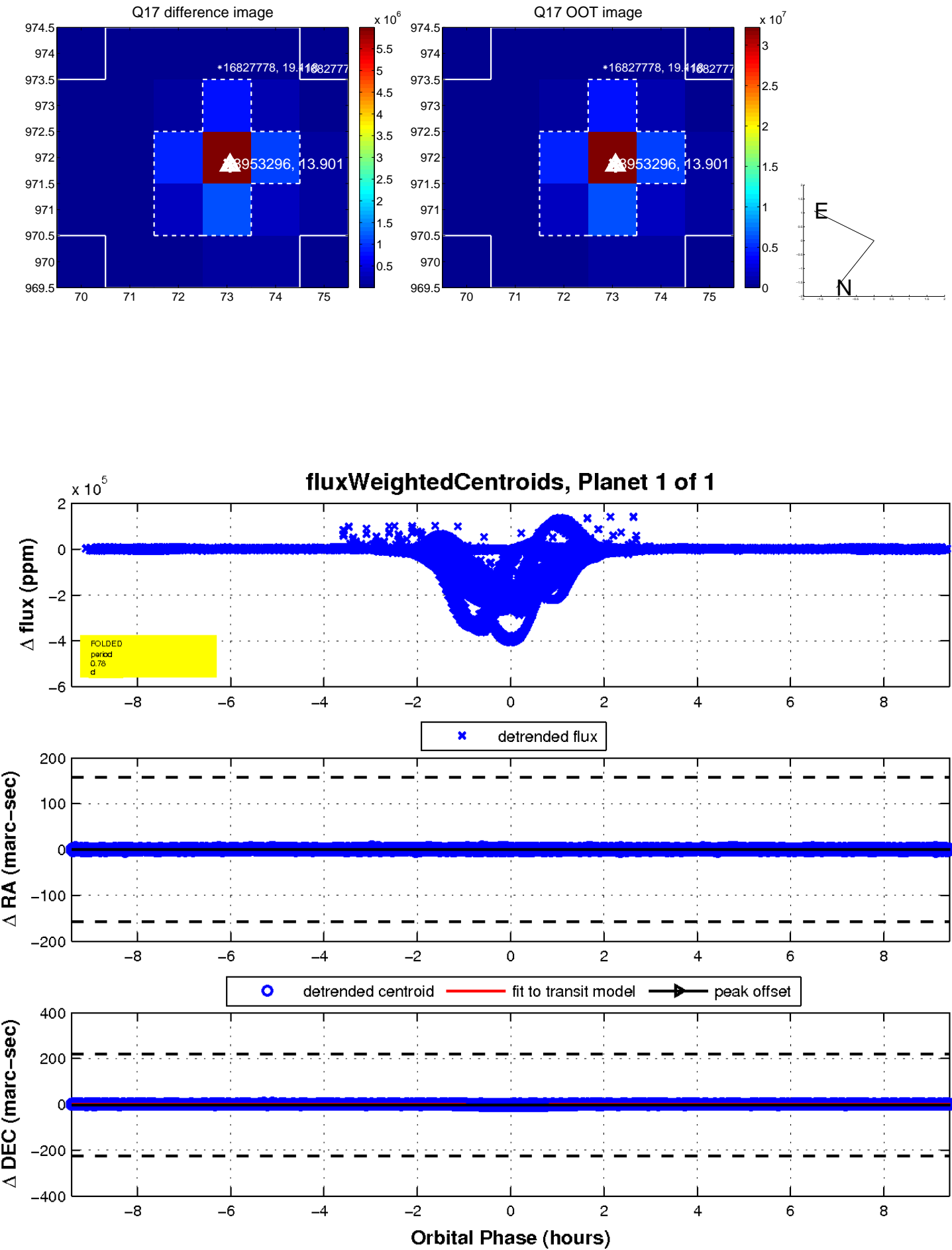
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

