

KIC 010332883

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})
010332883-01	OBS	1880.01	1.151169	132.078892	487.7	1.179	35.6	74.3	0.54	3951	1.42	198.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010332883-01	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 010332883-01

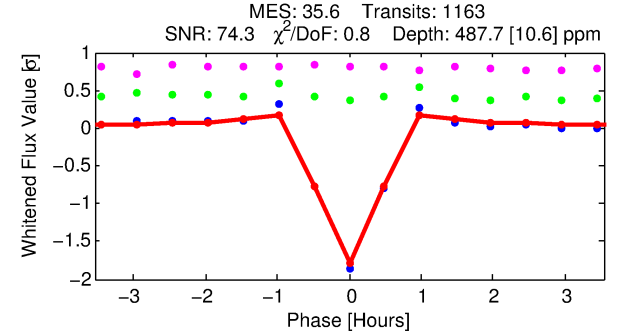
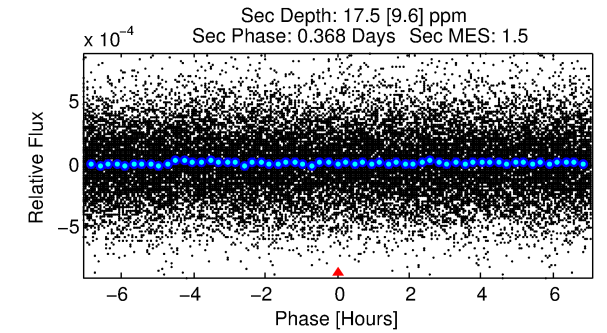
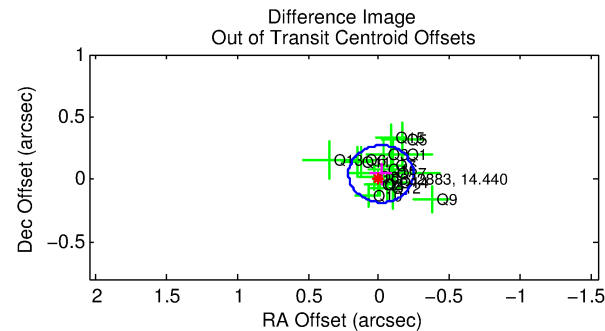
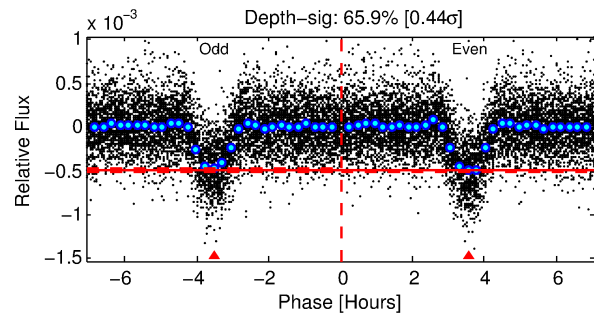
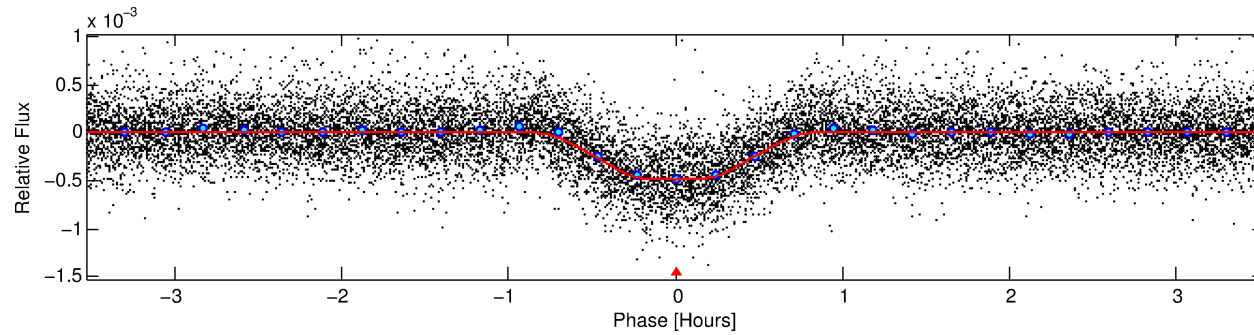
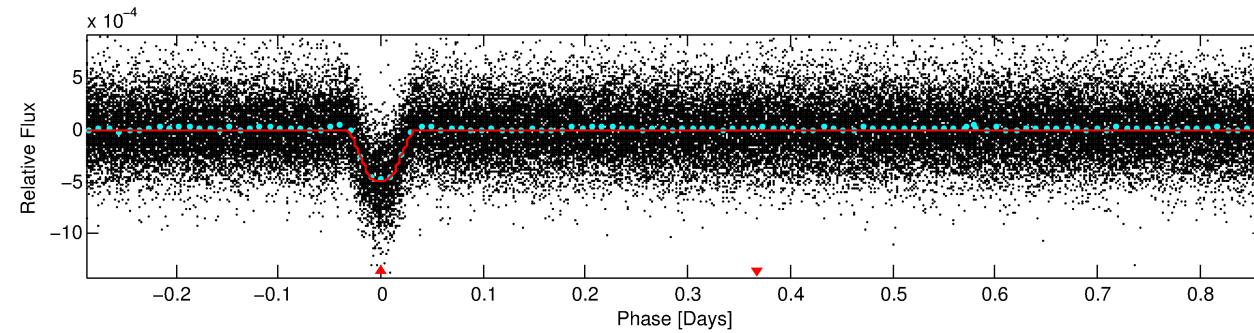
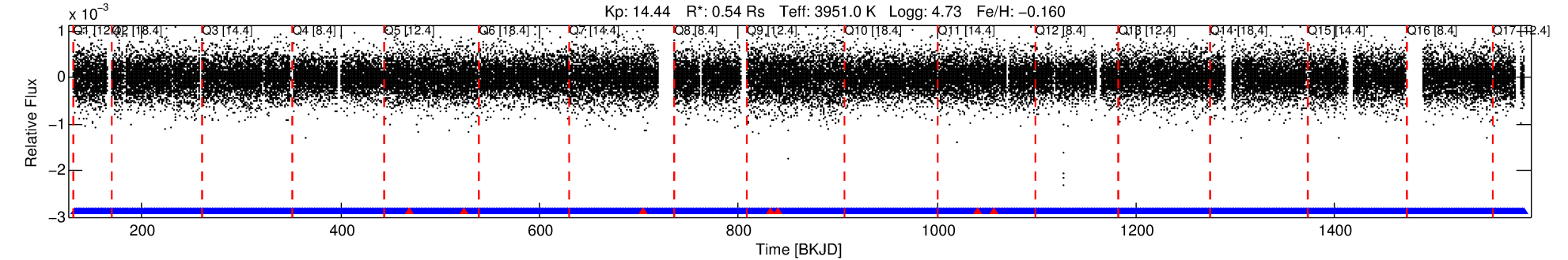
No Significant Match Found

DV One-Page Summary

KIC: 10332883 Candidate: 1 of 1 Period: 1.151 d

KOI: K01880.01 Corr: 0.982

Kp: 14.44 R*: 0.54 Rs Teff: 3951.0 K Logg: 4.73 Fe/H: -0.160



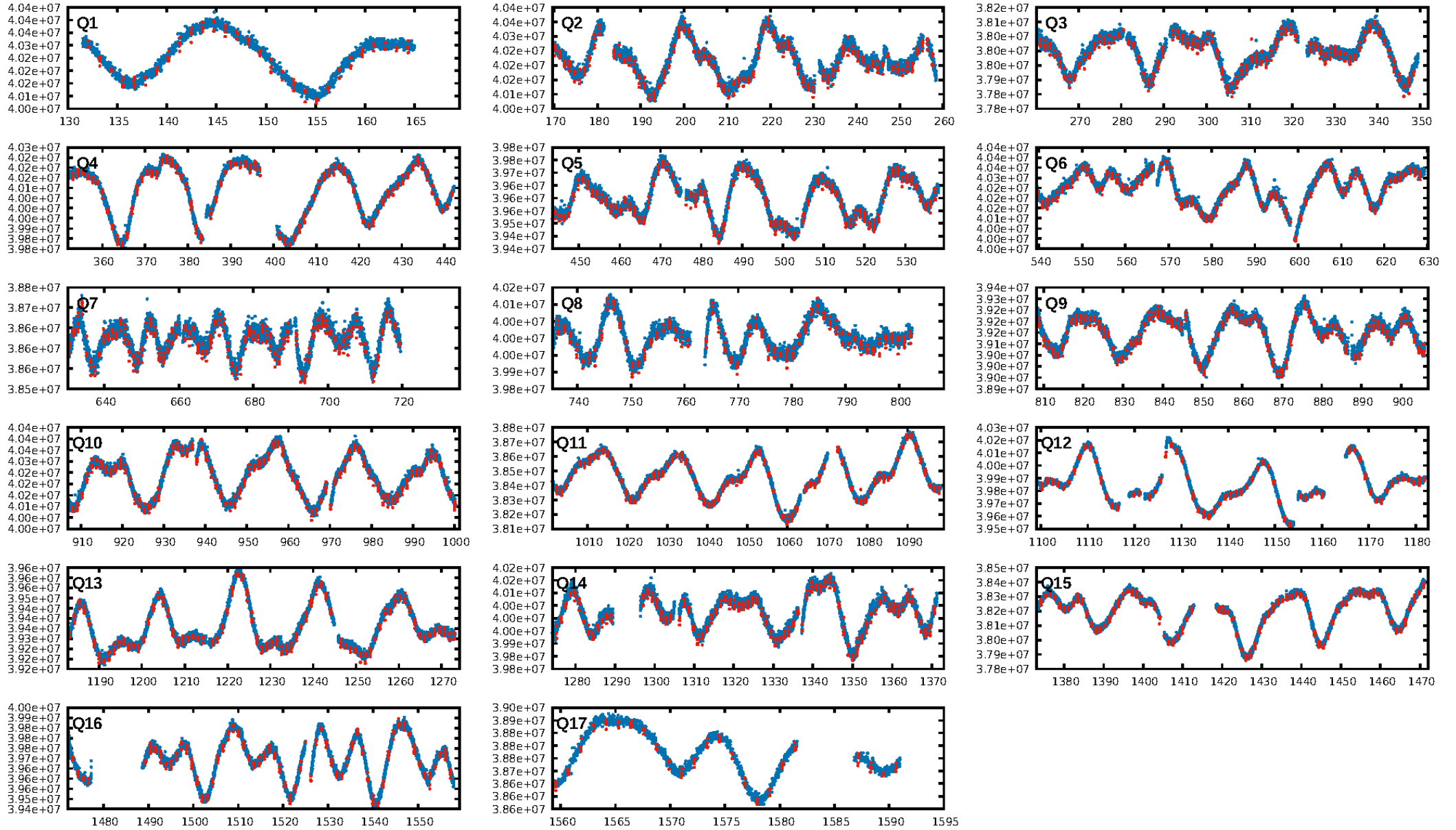
DV Fit Results:

Period = 1.15117 [0.00000] d
Epoch = 132.0789 [0.0002] BKJD
Rp/R* = 0.0243 [0.0022]
a/R* = 3.78 [1.43]
b = 0.90 [0.09]
Seff = 198.81 [22.02]
Teff = 957 [27] K
Rp = 1.42 [0.16] Re
a = 0.0177 [0.0009] AU
Ag = 1.51 [0.87] [0.58σ]
Teffp = 1640 [239] K [2.84σ]

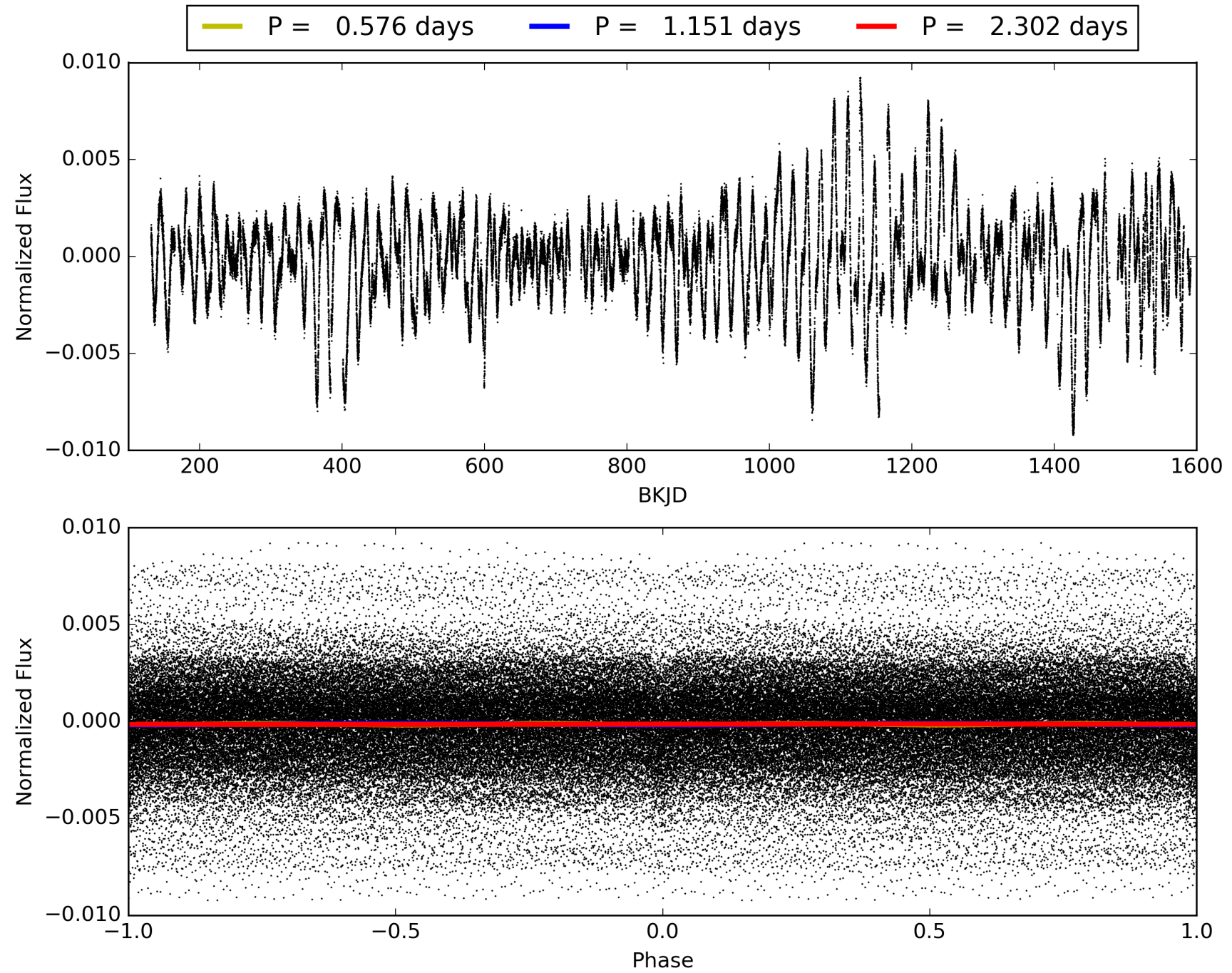
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.97e-260
RollingBand-fgt: 0.99 [1103/1110]
GhostDiagnostic-chr: 5.281
Centroid-sig: 0.1%
Centroid-so: 0.624 arcsec [3.88σ]
OotOffset-rm: 0.044 arcsec [0.57σ]
KicOffset-rm: 0.334 arcsec [4.29σ]
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 010332883-01, PDC Light Curves

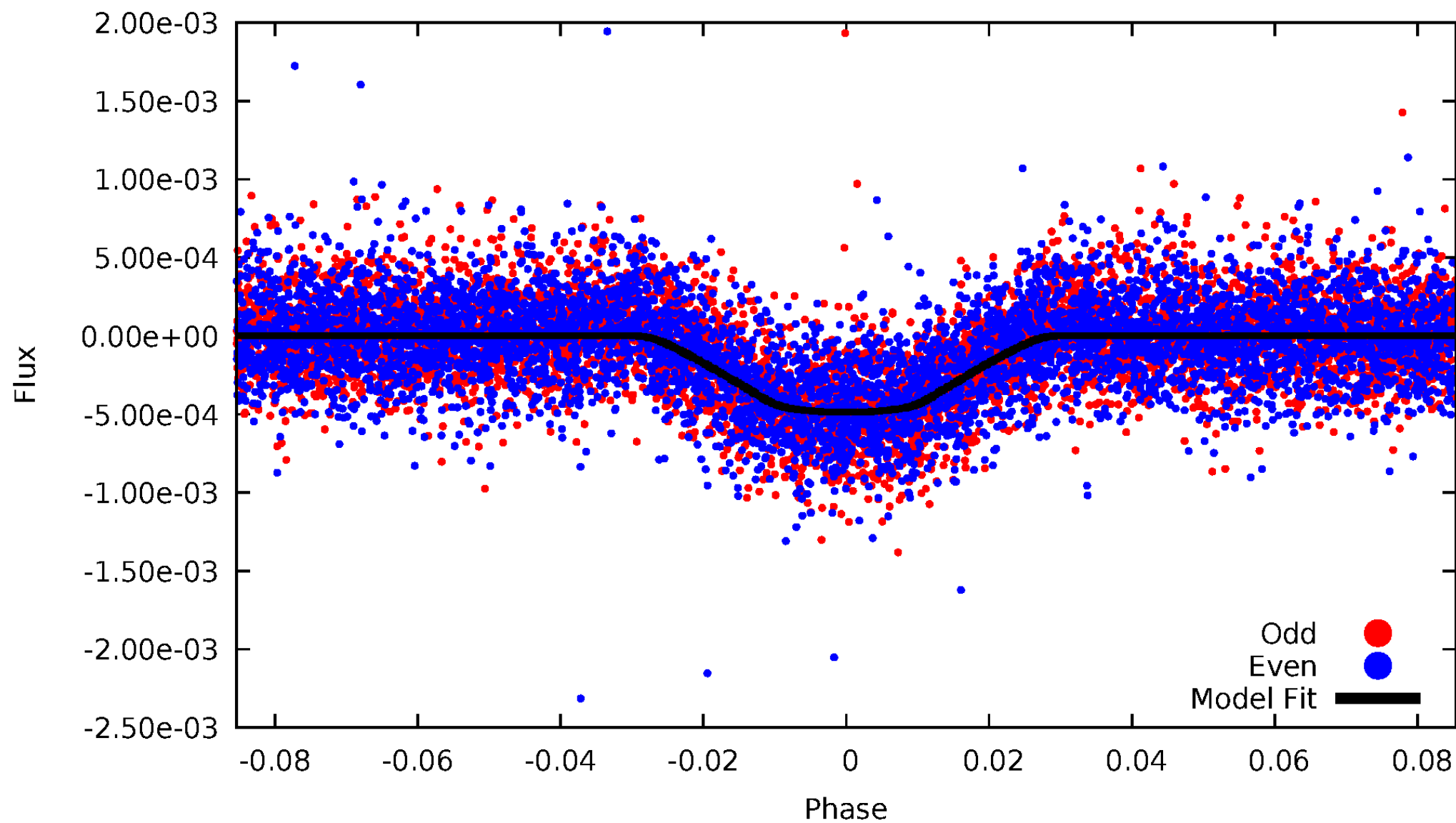


TCE 010332883-01



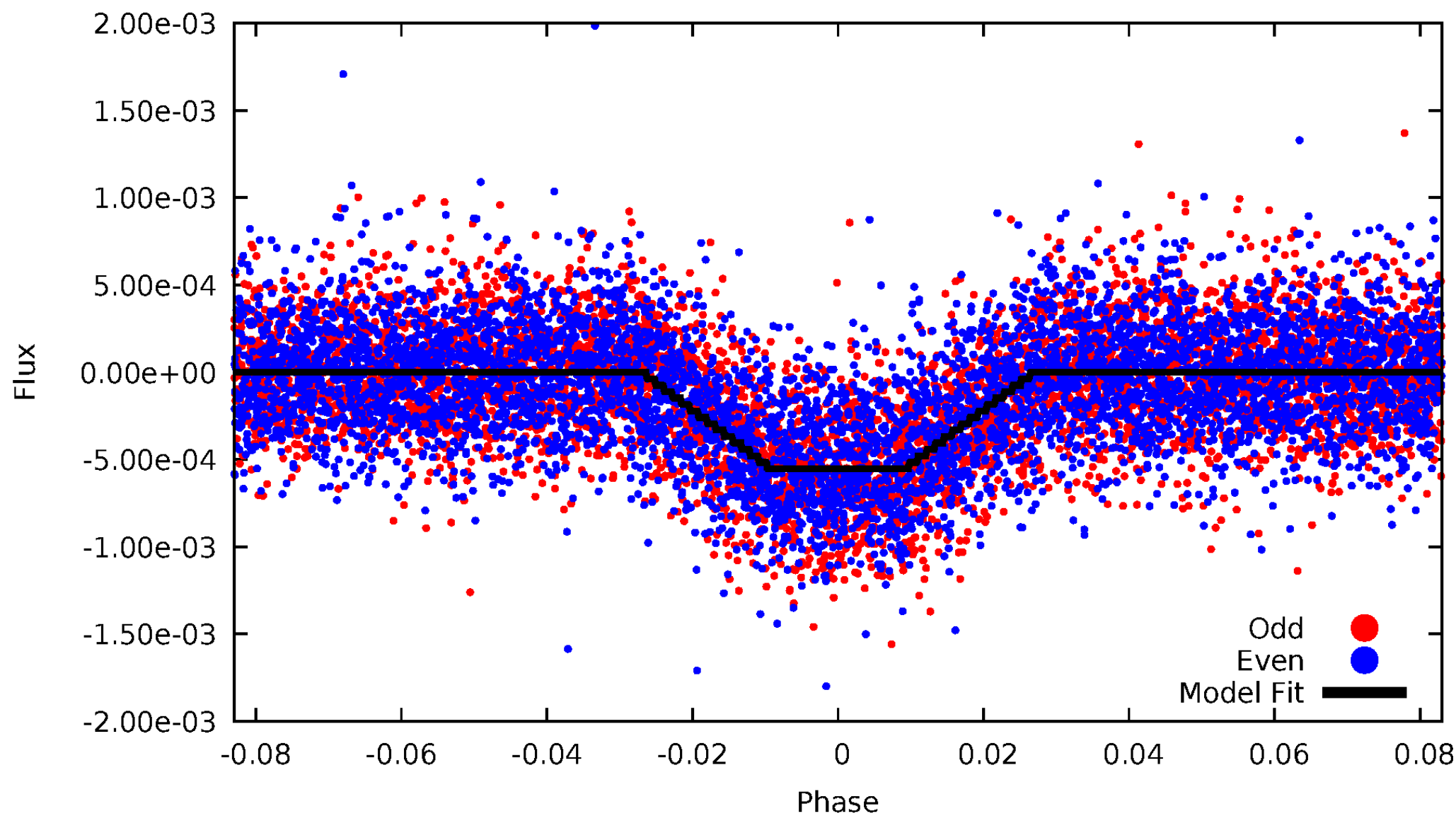
DV Odd/Even

TCE 010332883-01



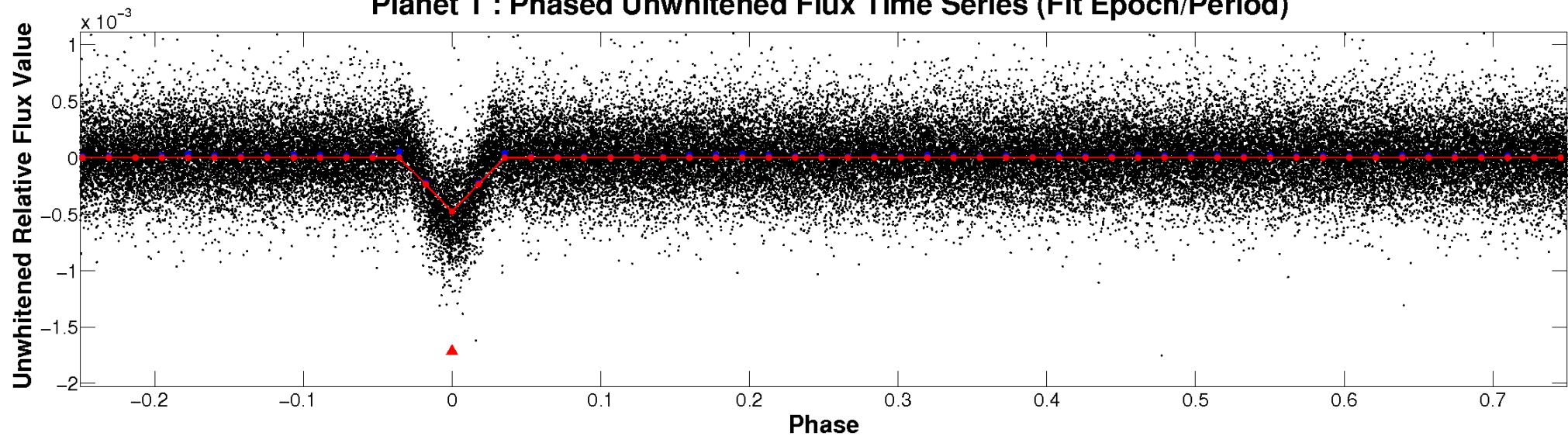
ALT Odd/Even

TCE 010332883-01

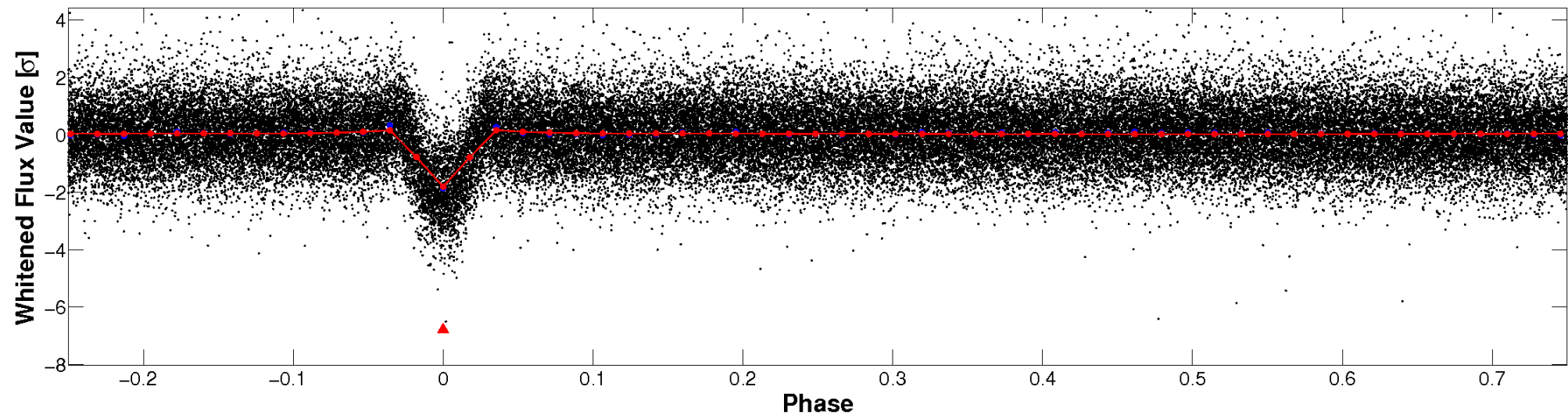


Non-Whitened Vs. Whitened Light Curve

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

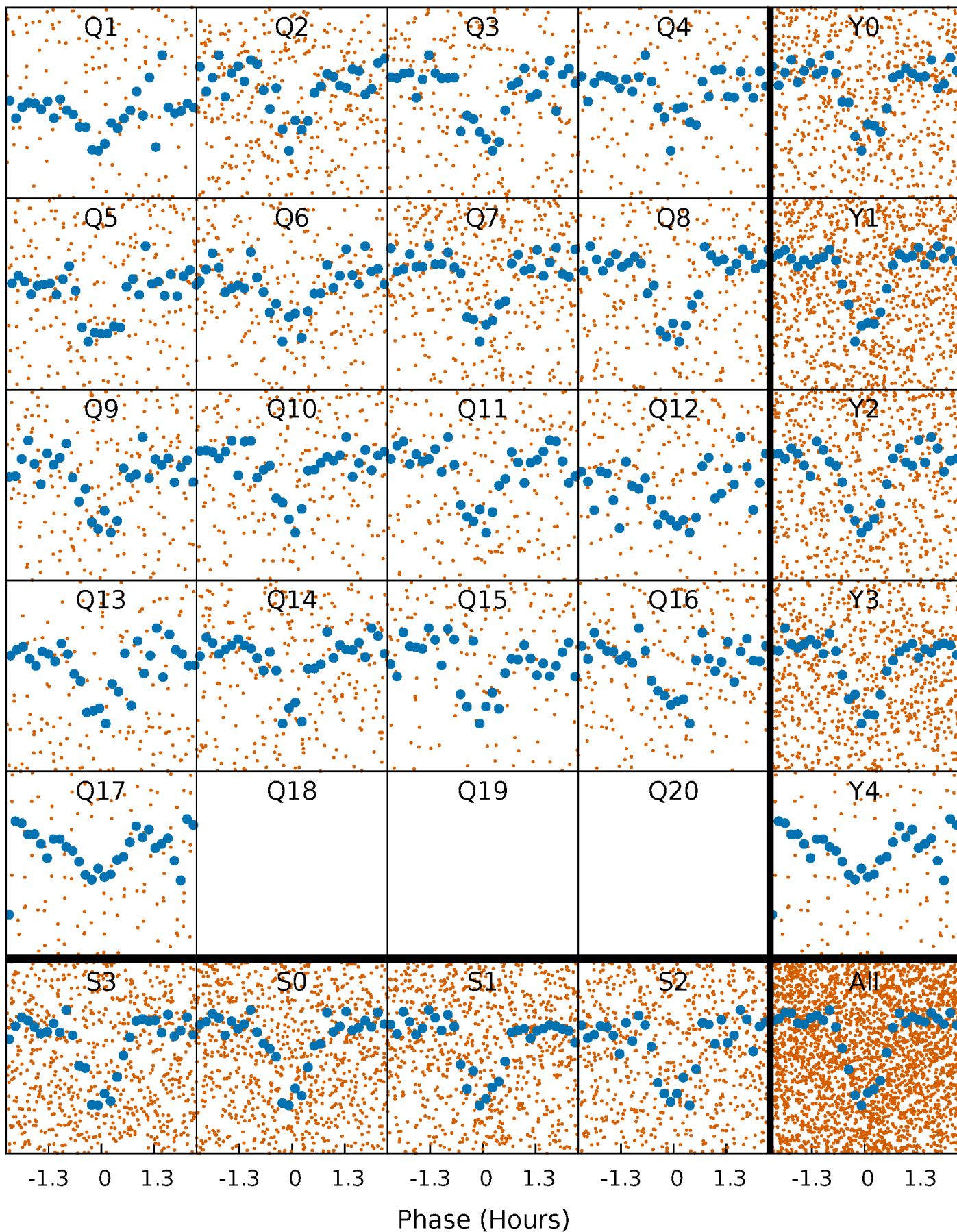


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



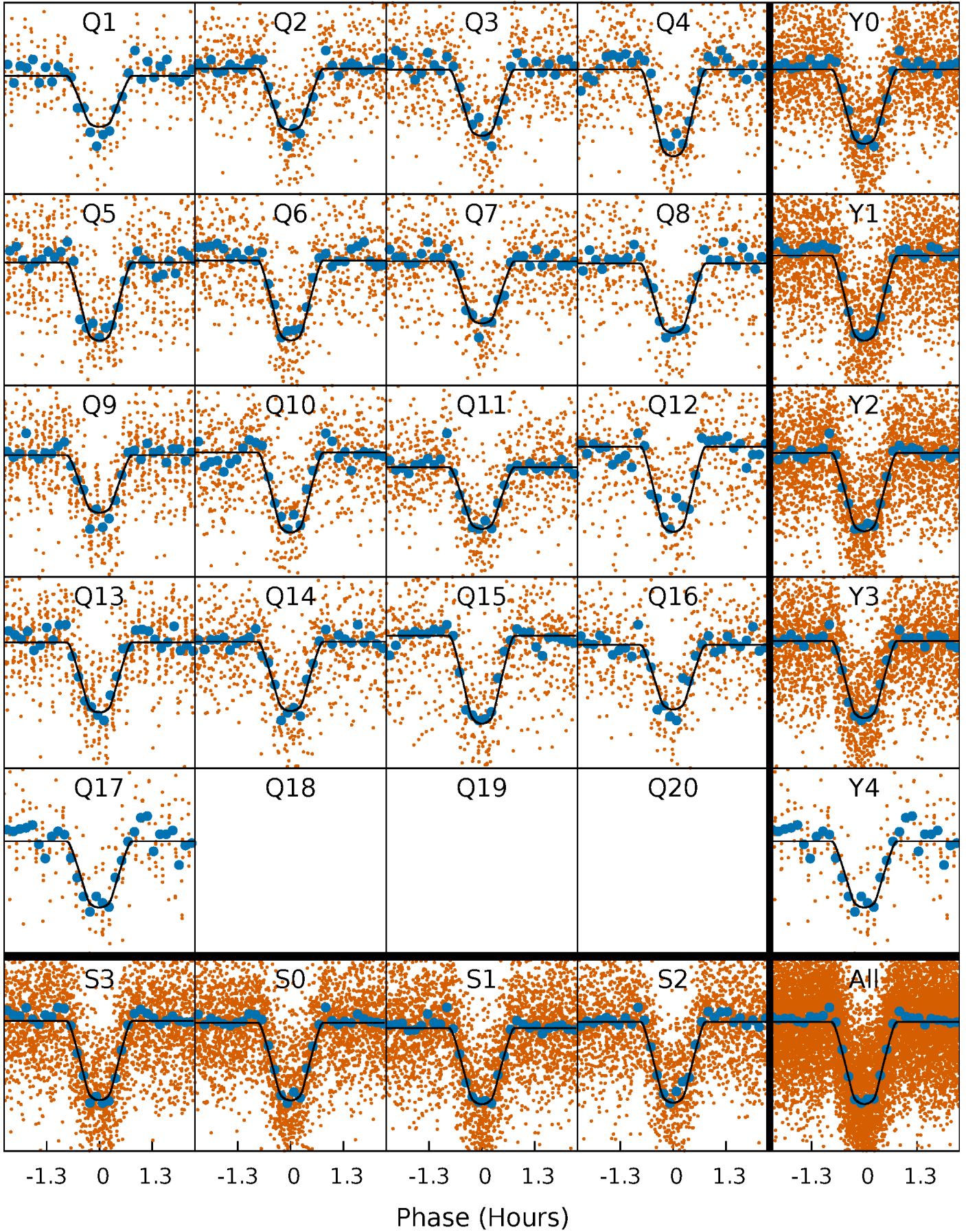
PDC Quarter-Phased Transit Curves

TCE 010332883-01 P= 1.151169 Days $T_0=132.078892$ (BKJD)



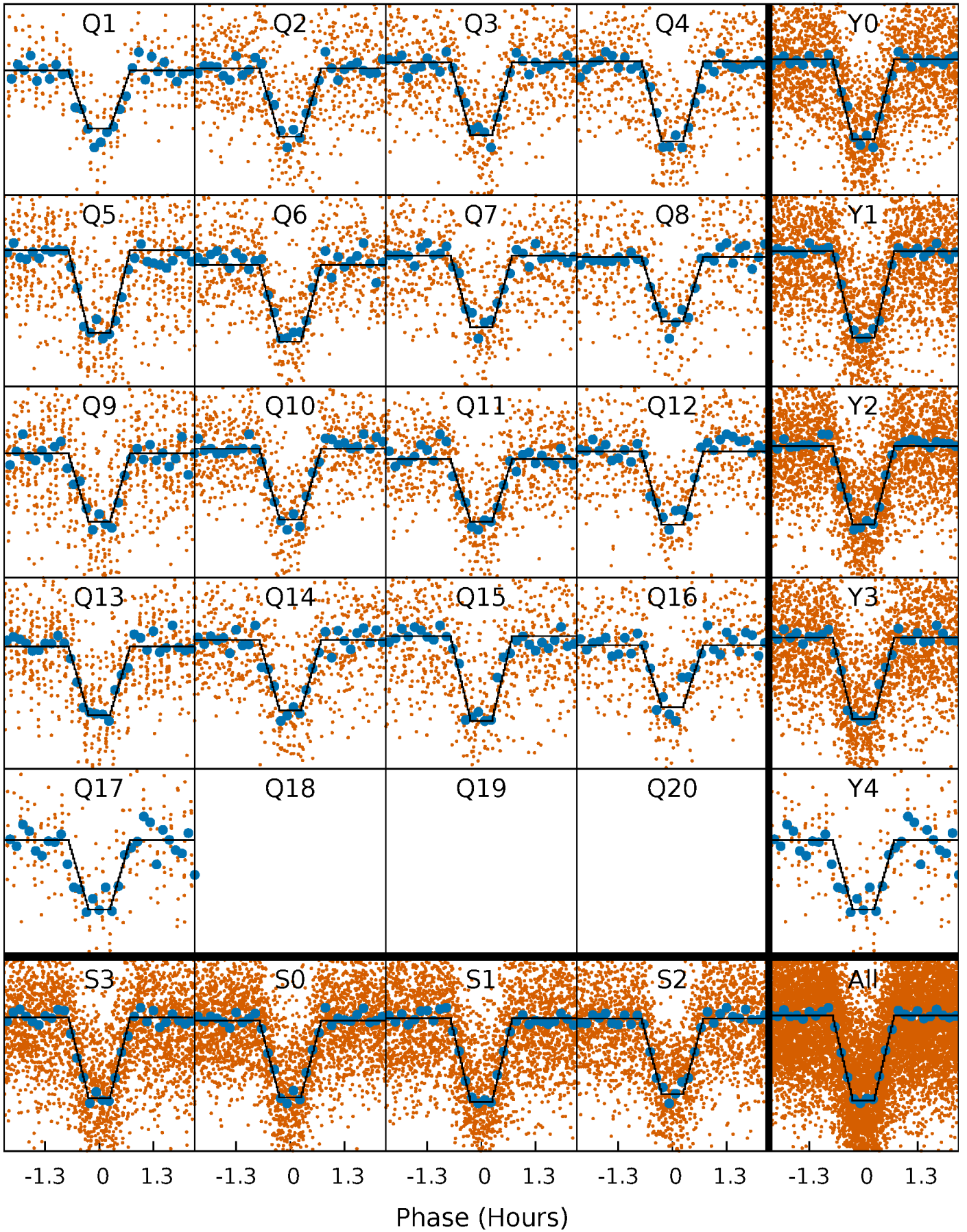
DV Quarter-Phased Transit Curves

TCE 010332883-01 P= 1.151169 Days $T_0=132.078892$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

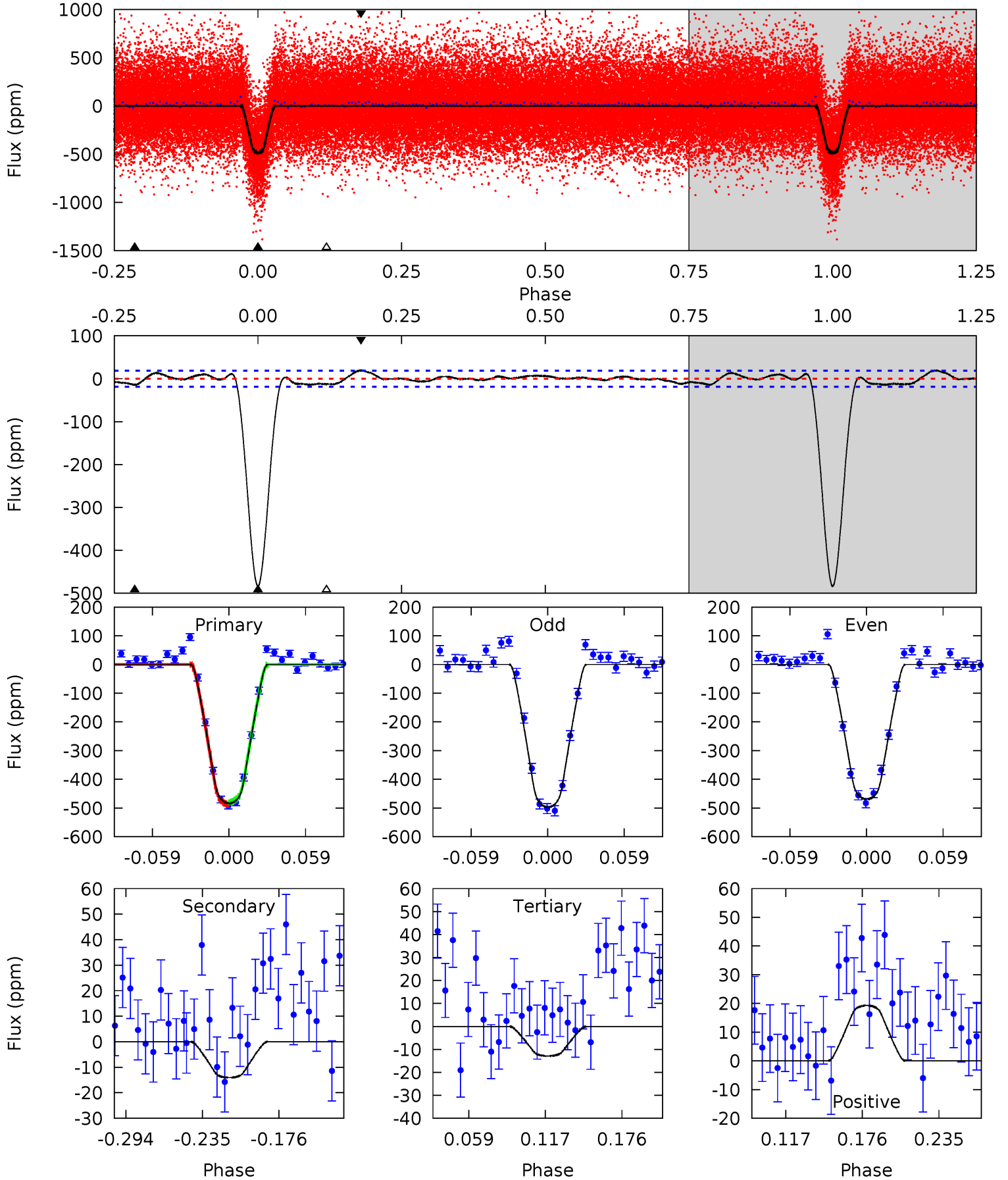
TCE 010332883-01 P= 1.151169 Days $T_0=132.078953$ (BKJD)



DV Model-Shift Uniqueness Test

010332883-01, P = 1.151169 Days, E = 130.927723 Days

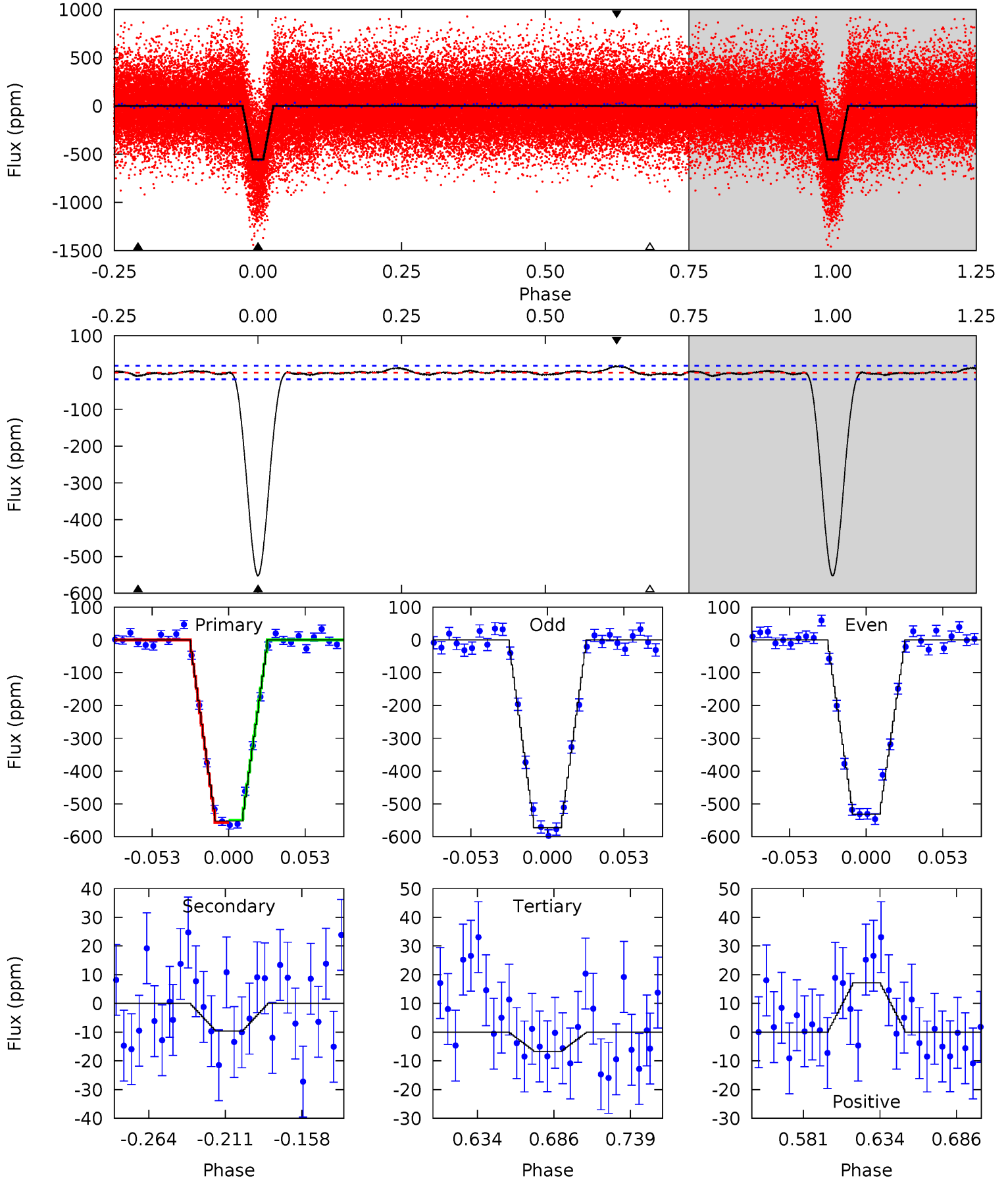
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
120.0	3.49	3.19	4.78	4.68	1.89	1.64	116.8	115.2	0.30	-1.30	3.41	1.00	0.04	1.12



Alt Model-Shift Uniqueness Test

010332883-01, P = 1.151169 Days, E = 130.927784 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
140.6	2.45	1.70	4.38	4.70	1.94	1.27	138.9	136.2	0.74	-1.94	5.28	0.99	0.03	0.90



Stellar Parameters For KIC 010332883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3951^{+70}_{-86}	$4.730^{+0.028}_{-0.035}$	$-0.160^{+0.150}_{-0.150}$	$0.535^{+0.034}_{-0.034}$	$0.561^{+0.031}_{-0.039}$	$5.150^{+0.680}_{-0.663}$
	+2%/-2%	+1%/-1%	+94%/-94%	+6%/-6%	+6%/-7%	+13%/-13%
Source	SPE70	SPE60	SPE70	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010332883-01 / KOI 1880.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 4	$1.41^{+0.14}_{-0.14}$	1339^{+31}_{-32}	2259^{+110}_{-137}	$1.201^{+0.474}_{-0.368}$
Alt.	-10 ± 4	$1.38^{+0.14}_{-0.15}$	1339^{+31}_{-33}	2152^{+141}_{-225}	$0.879^{+0.456}_{-0.372}$

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

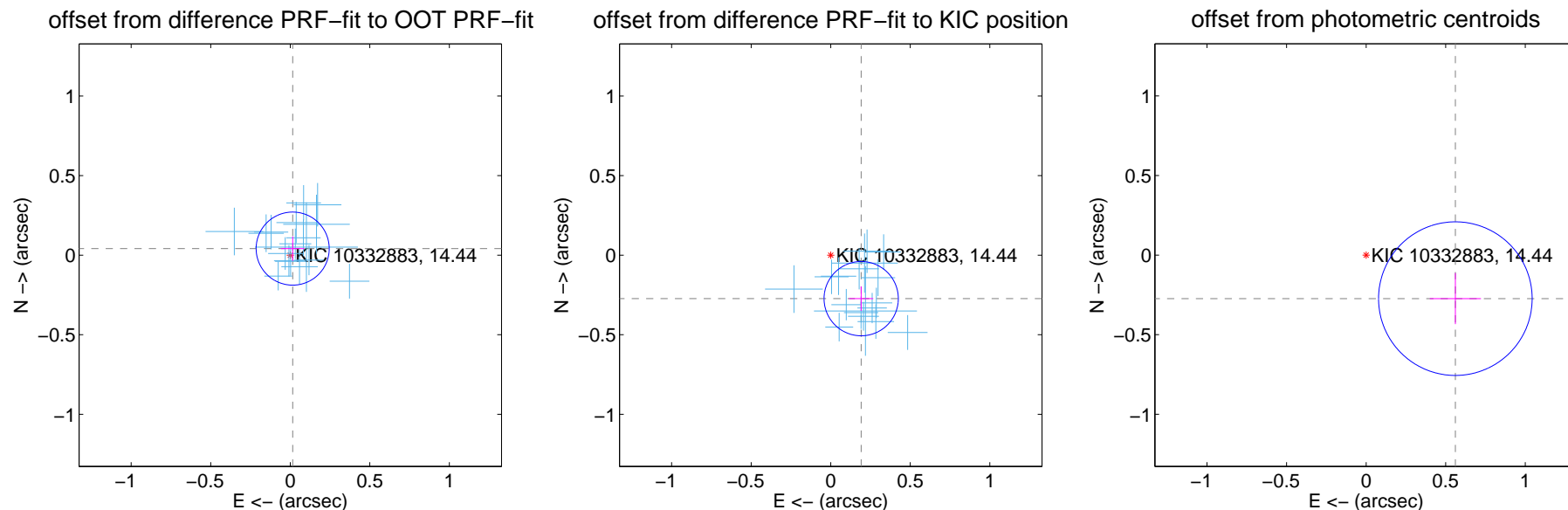
DV Centroid Data

Supplemental centroid analysis for 010332883-01. Kepler magnitude: 14.44. Transit SNR 74.28

There are 17 quarters with good PRF difference image offsets

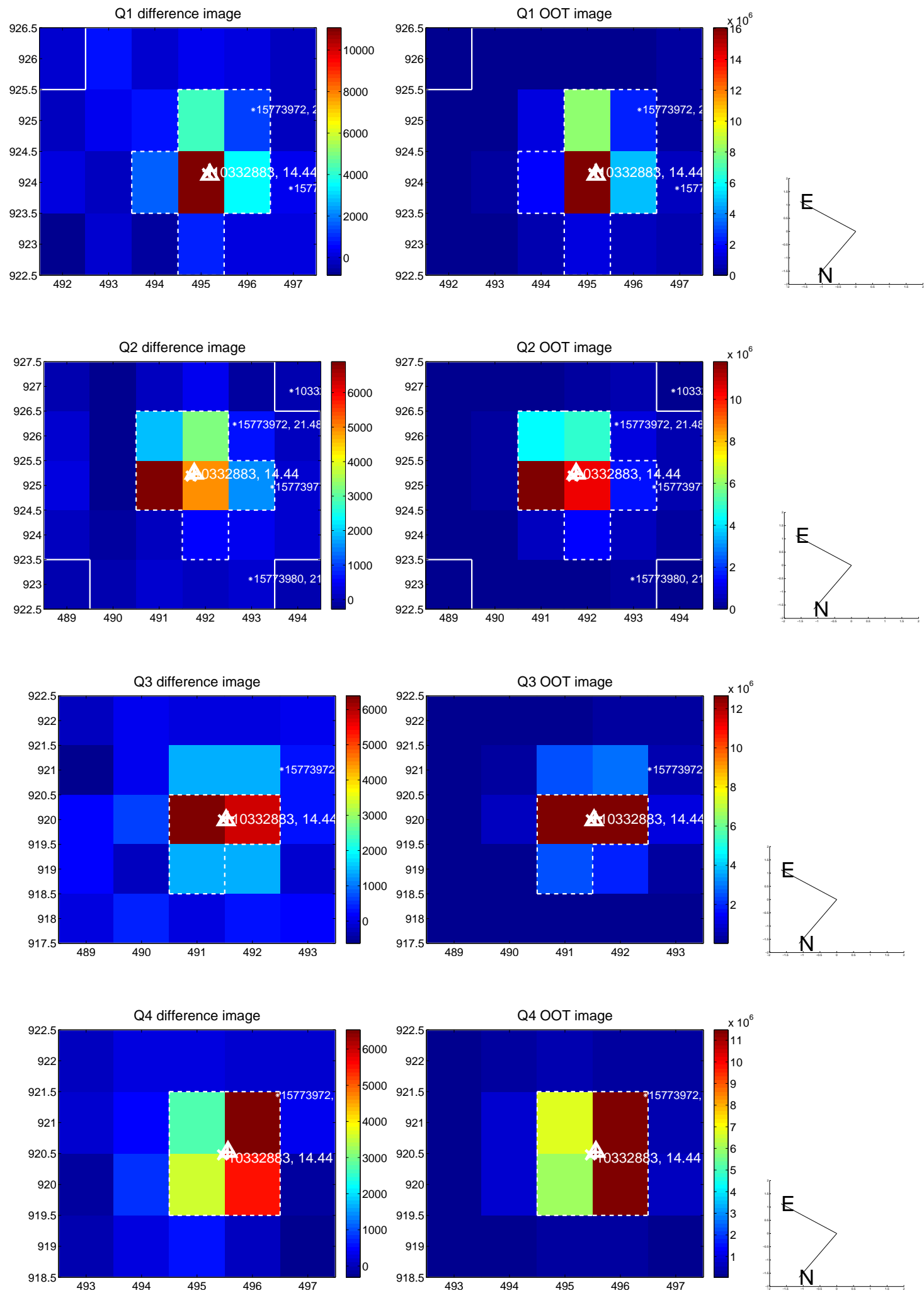
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.044 ± 0.077	0.57	-0.015 ± 0.074	0.041 ± 0.077
PRF-fit source offset from KIC position	0.334 ± 0.078	4.29	-0.191 ± 0.076	-0.273 ± 0.077
photometric centroid source offset	0.62 ± 0.16	3.88	-0.56 ± 0.16	-0.27 ± 0.16

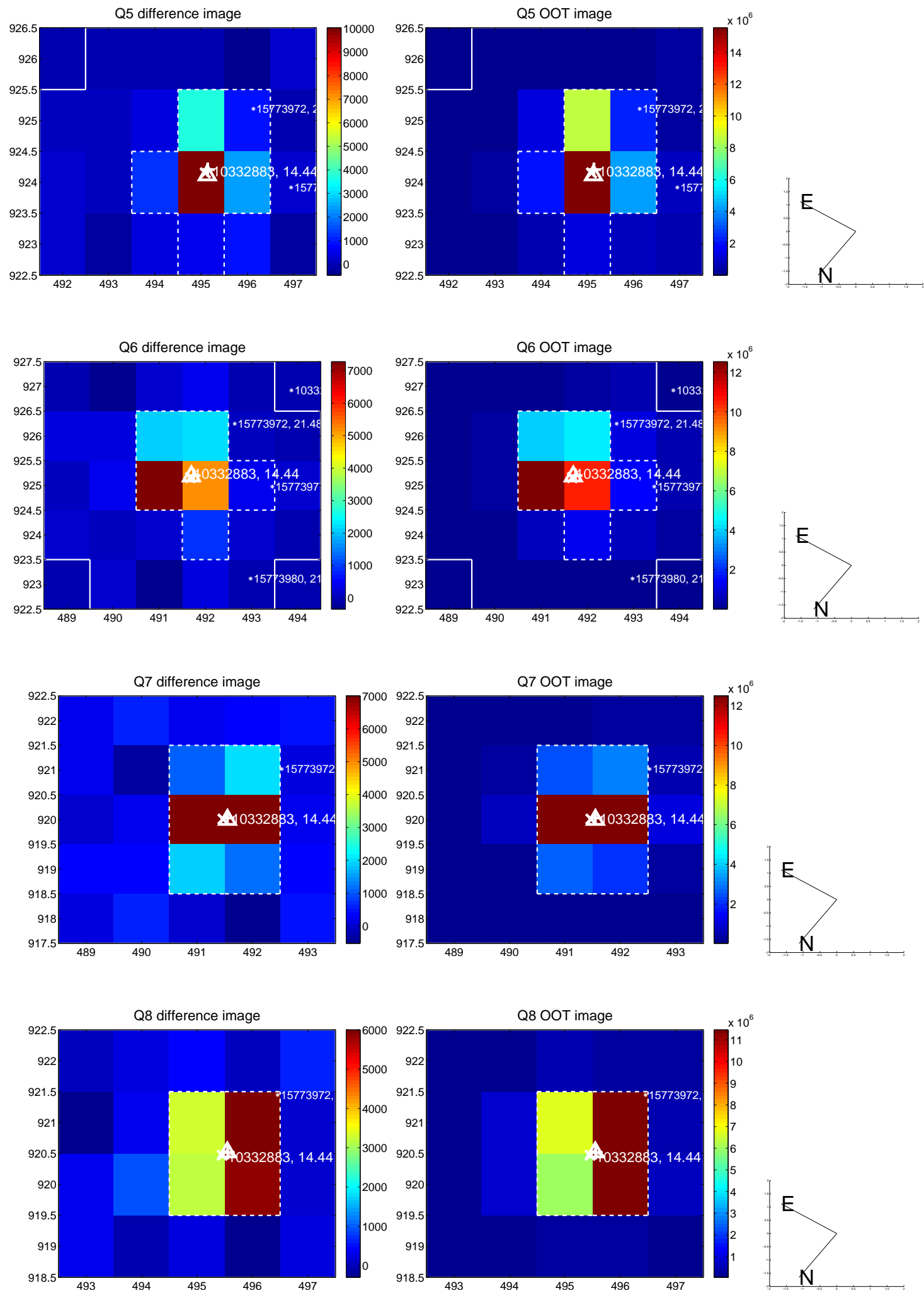


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

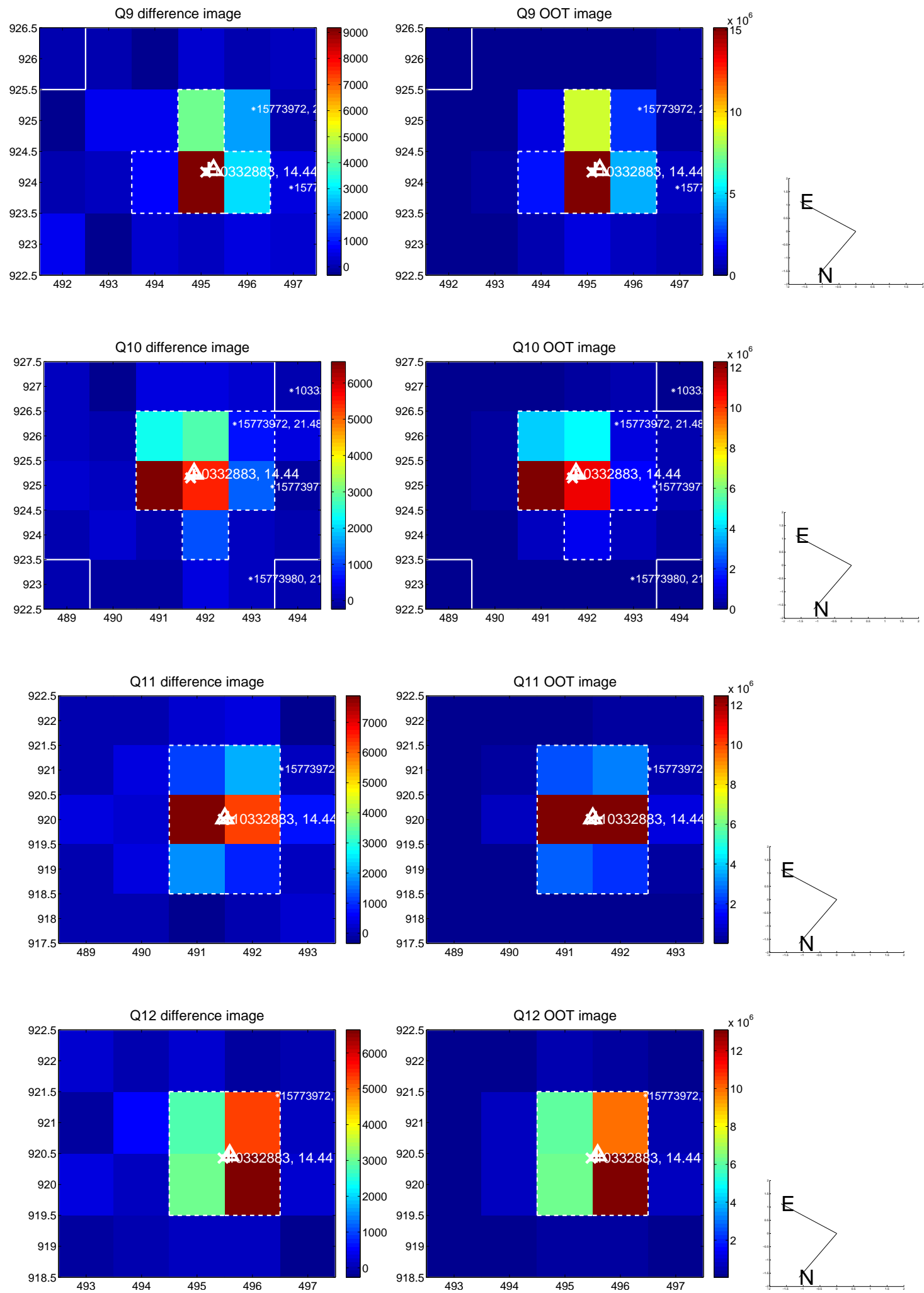
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



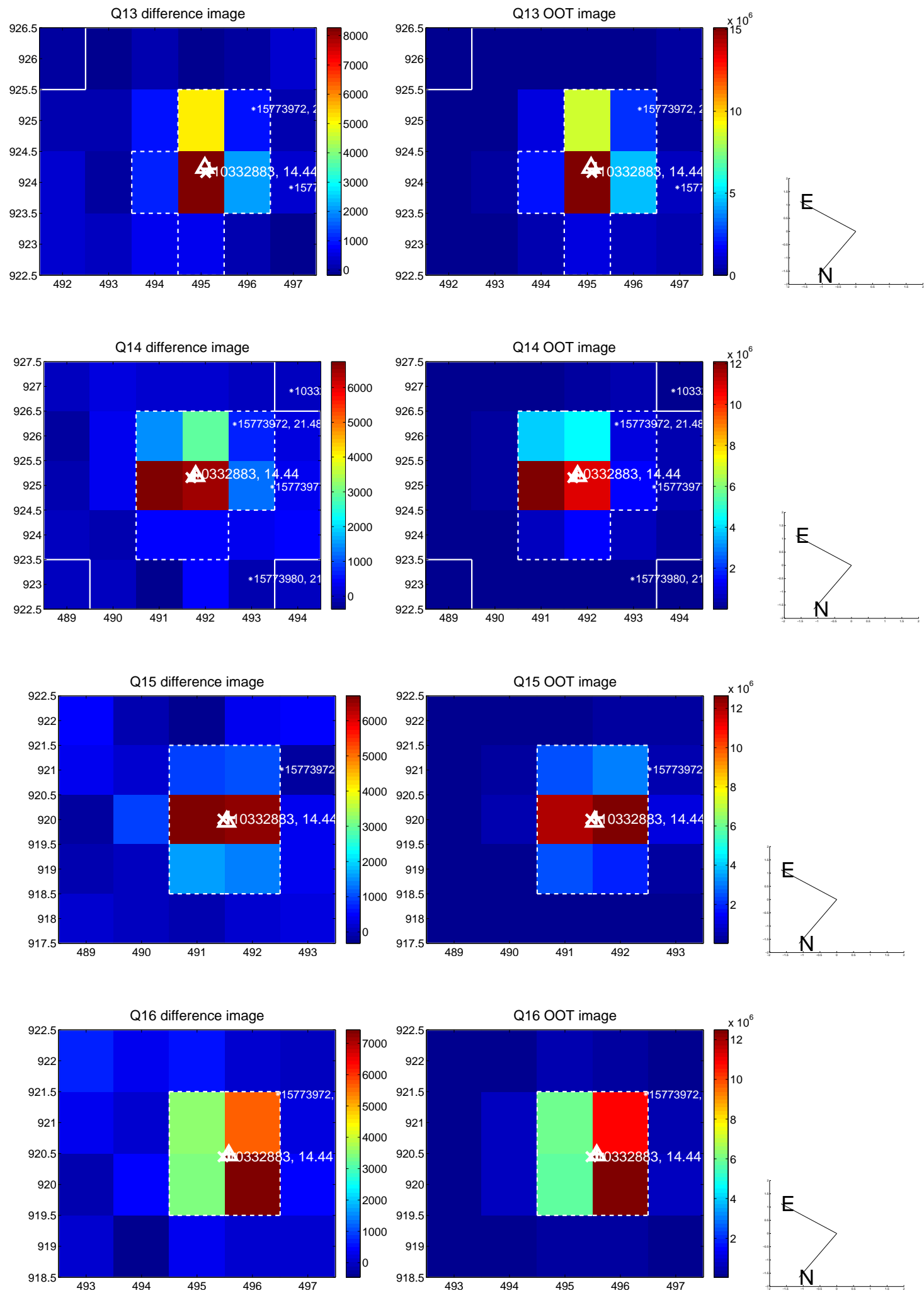
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



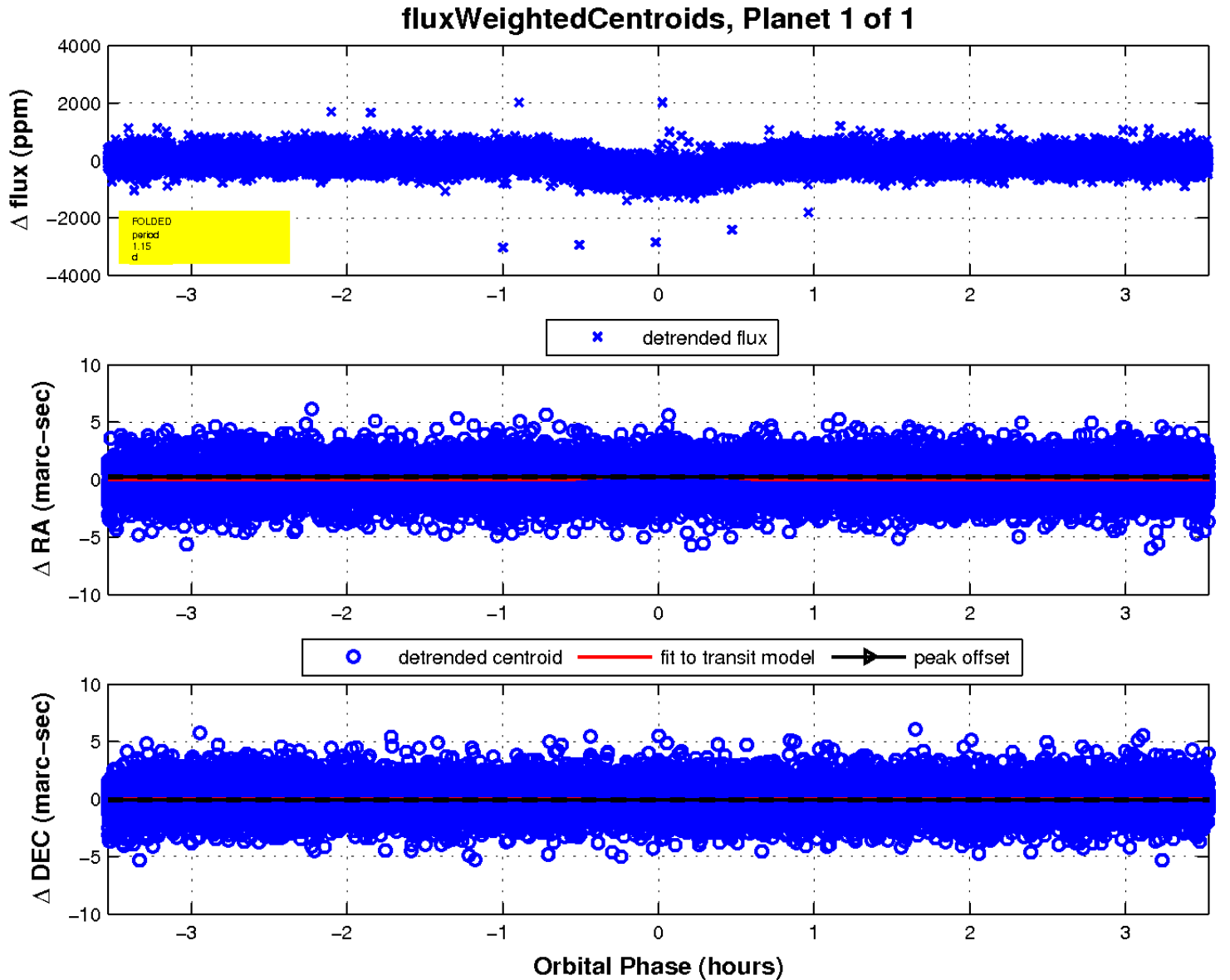
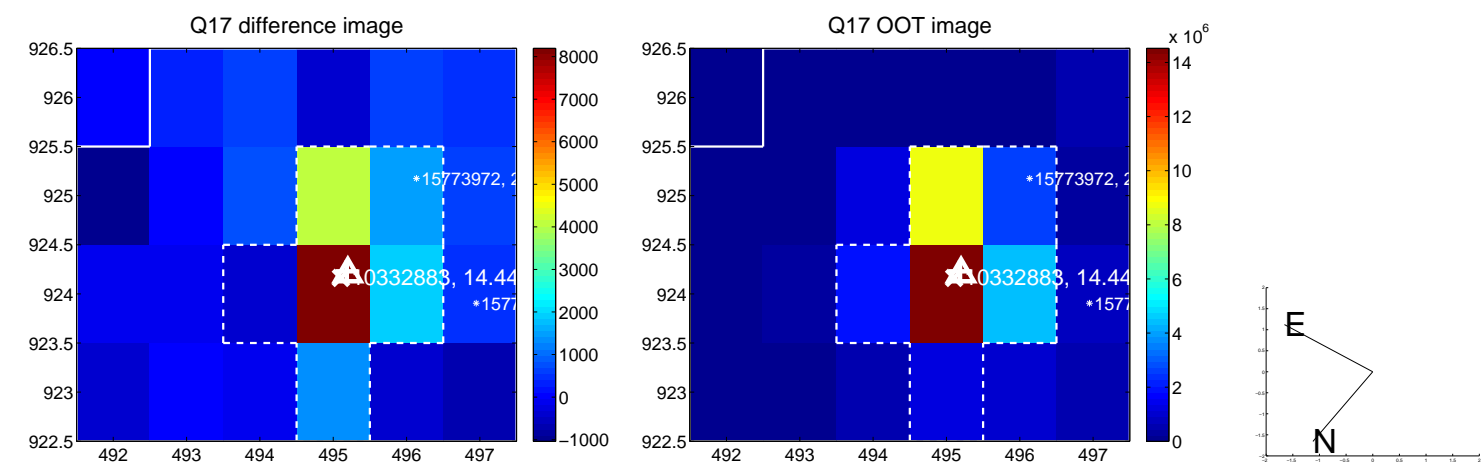
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

