

KIC 010583066

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})
010583066-01	OBS	0747.01	6.029300	135.427786	1841.7	1.659	52.4	62.8	0.67	4537	3.20	50.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010583066-01	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.

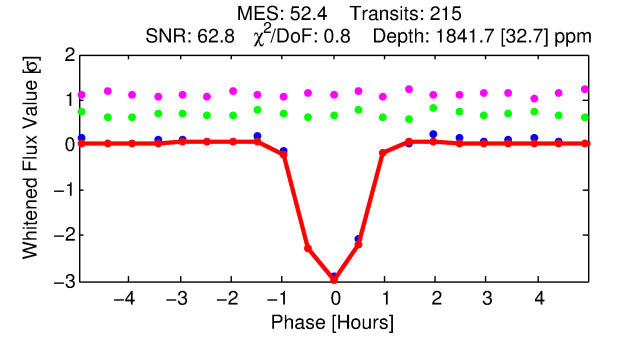
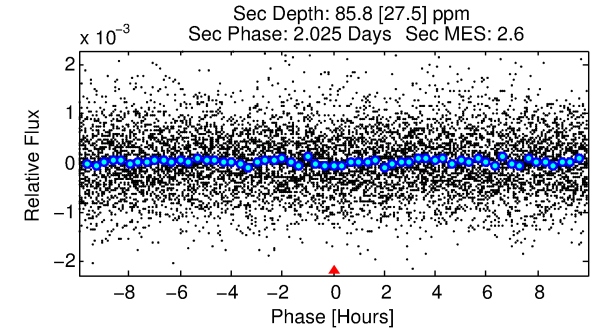
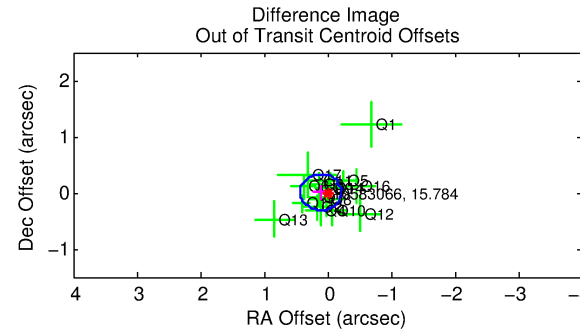
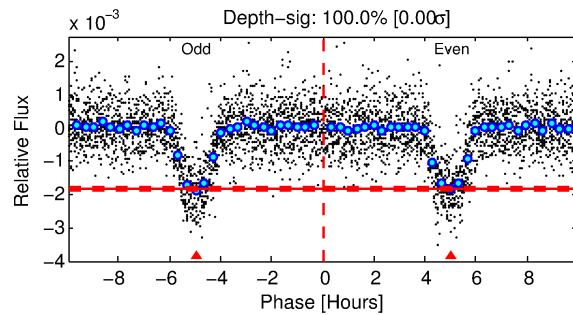
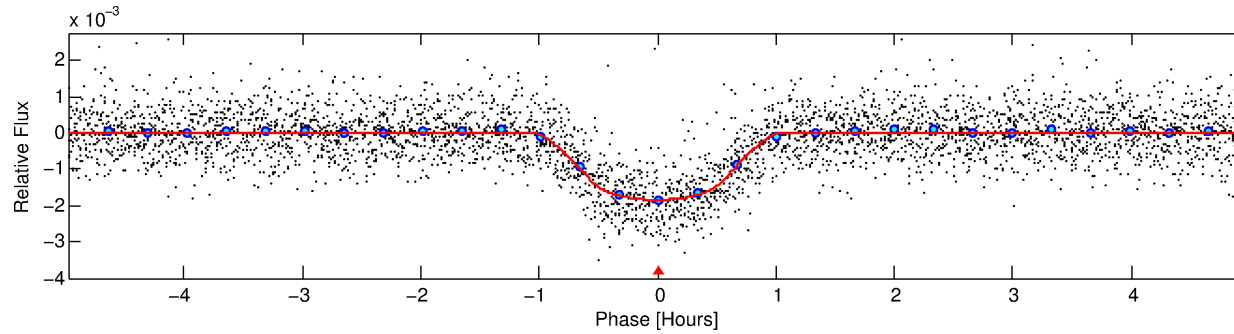
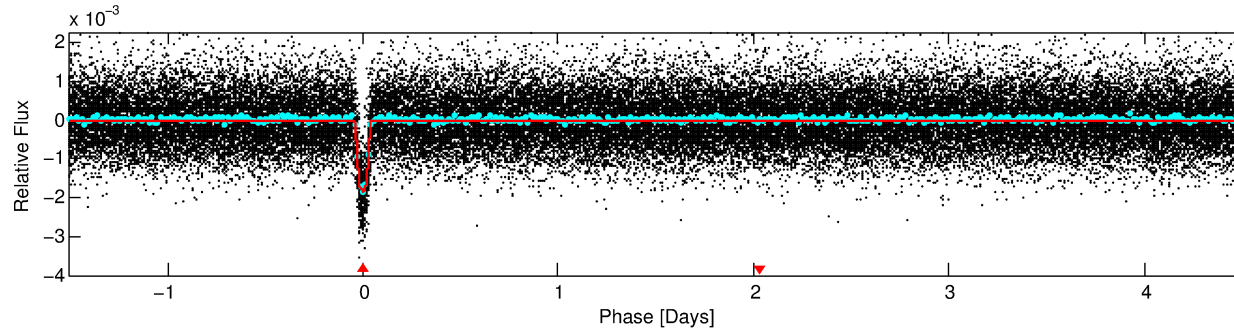
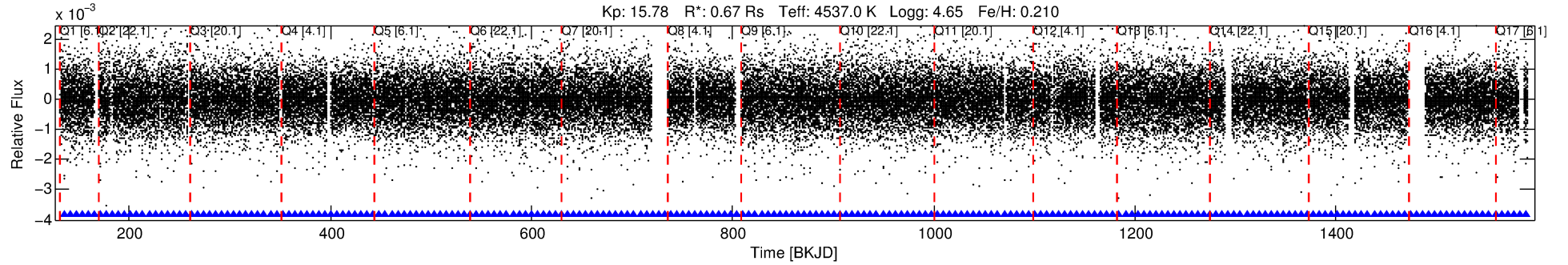
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010583066-01

No Significant Match Found

DV One-Page Summary

KIC: 10583066 Candidate: 1 of 1 Period: 6.029 d
KOI: K00747.01 Corr: 0.976



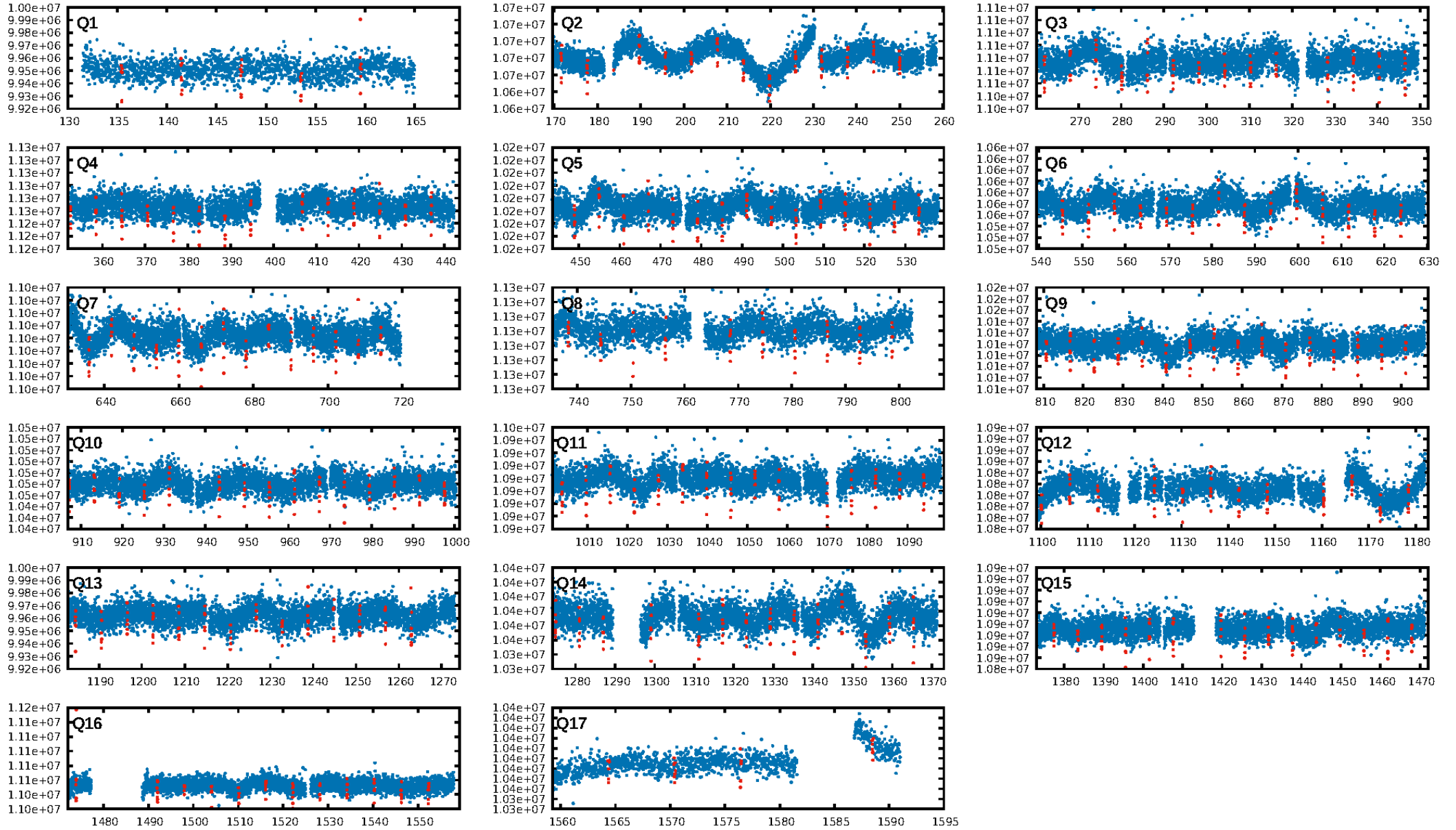
DV Fit Results:

Period = 6.02930 [0.00000] d
Epoch = 135.4278 [0.0006] BKJD
Rp/R* = 0.0436 [0.0103]
a/R* = 19.75 [14.30]
b = 0.76 [0.41]
Seff = 50.18 [7.60]
Teq = 679 [26] K
Rp = 3.20 [0.81] Re
a = 0.0585 [0.0044] AU
Ag = 15.78 [9.17] [1.61σ]
Teffp = 2091 [304] K [4.63σ]

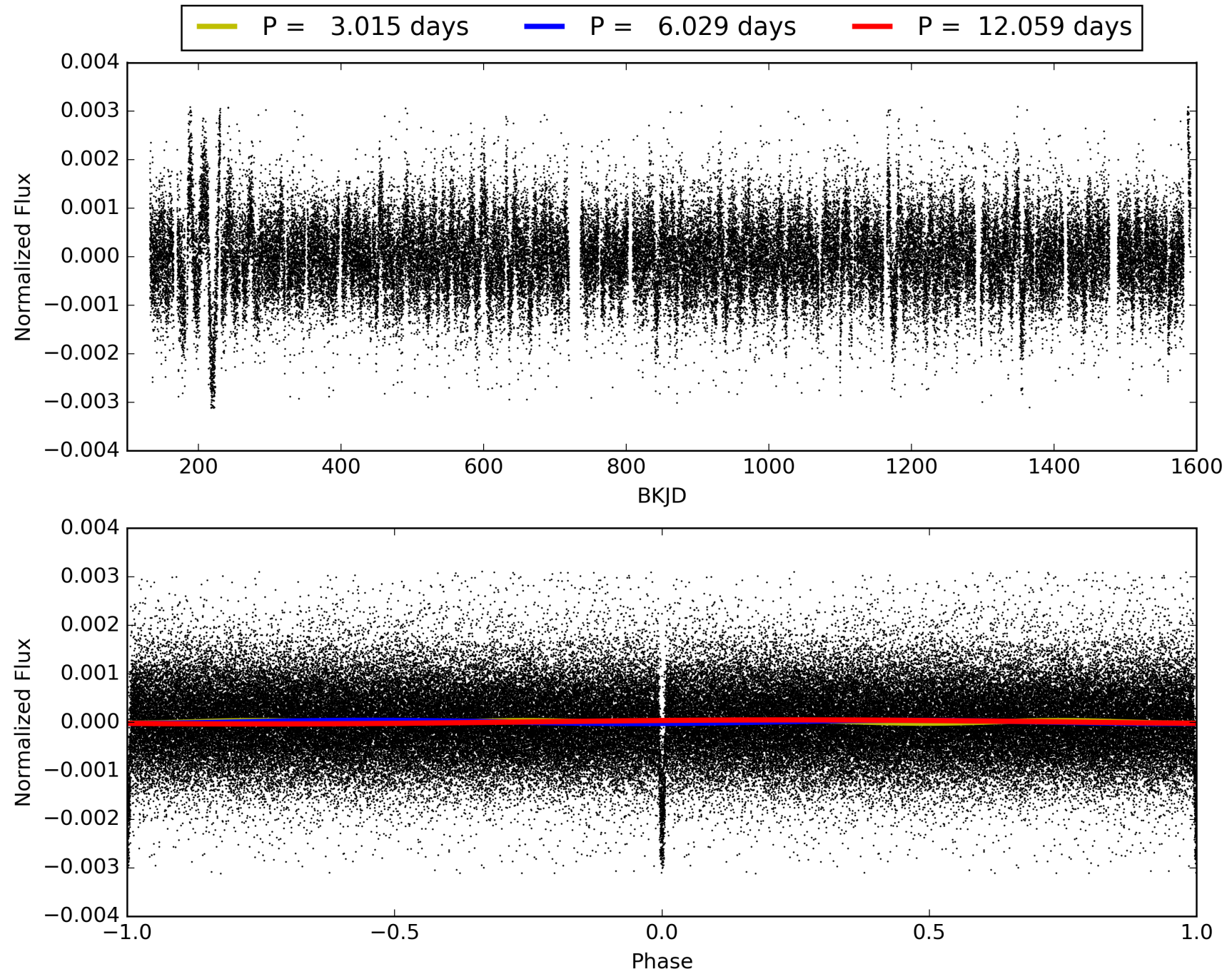
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [206/206]
GhostDiagnostic-chr: 3.336
Centroid-sig: 77.0%
Centroid-so: 0.395 arcsec [1.81σ]
OotOffset-rm: 0.111 arcsec [1.03σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: **0.303 arcsec [3.01σ]**
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010583066-01, PDC Light Curves

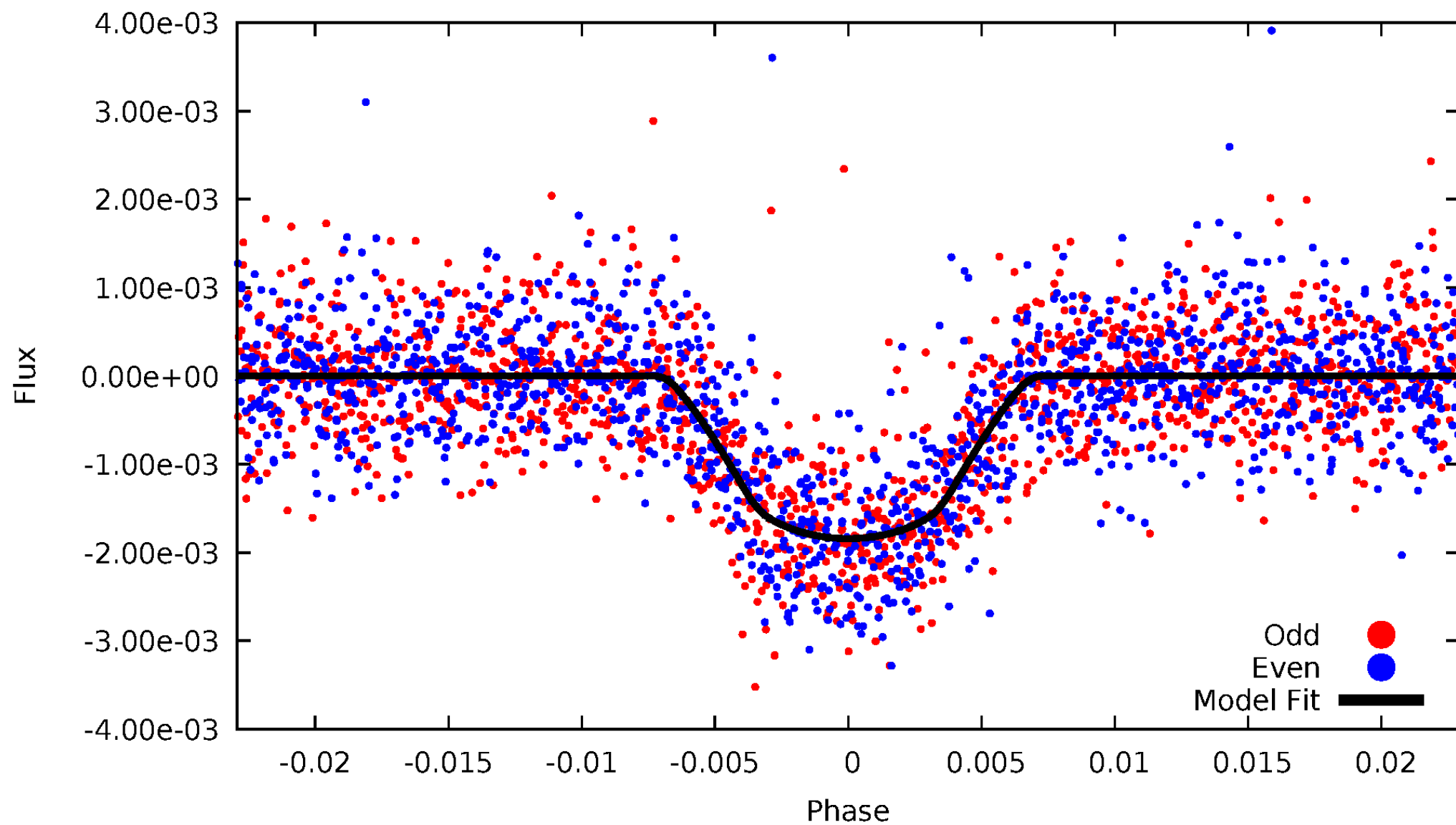


TCE 010583066-01



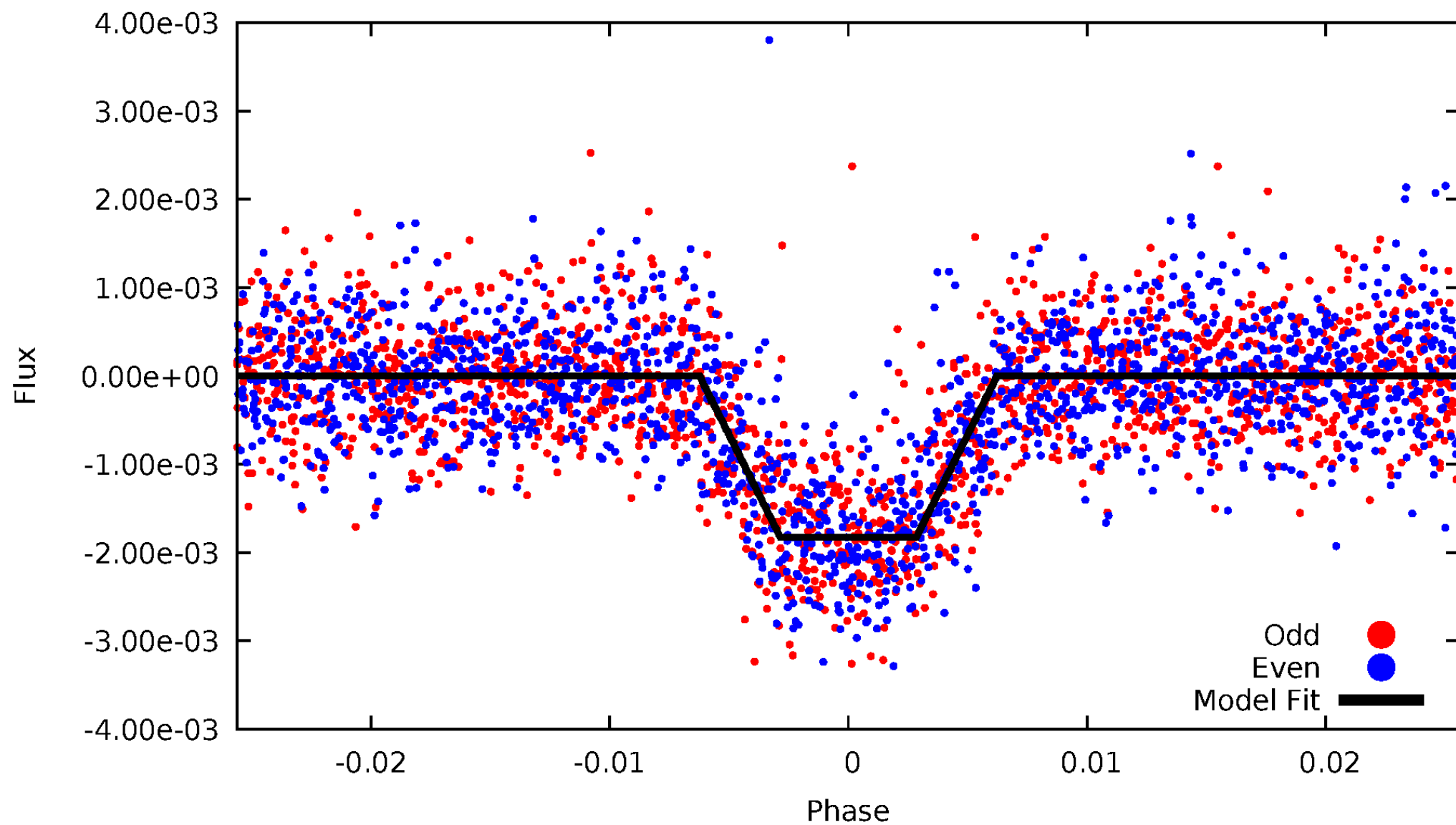
DV Odd/Even

TCE 010583066-01



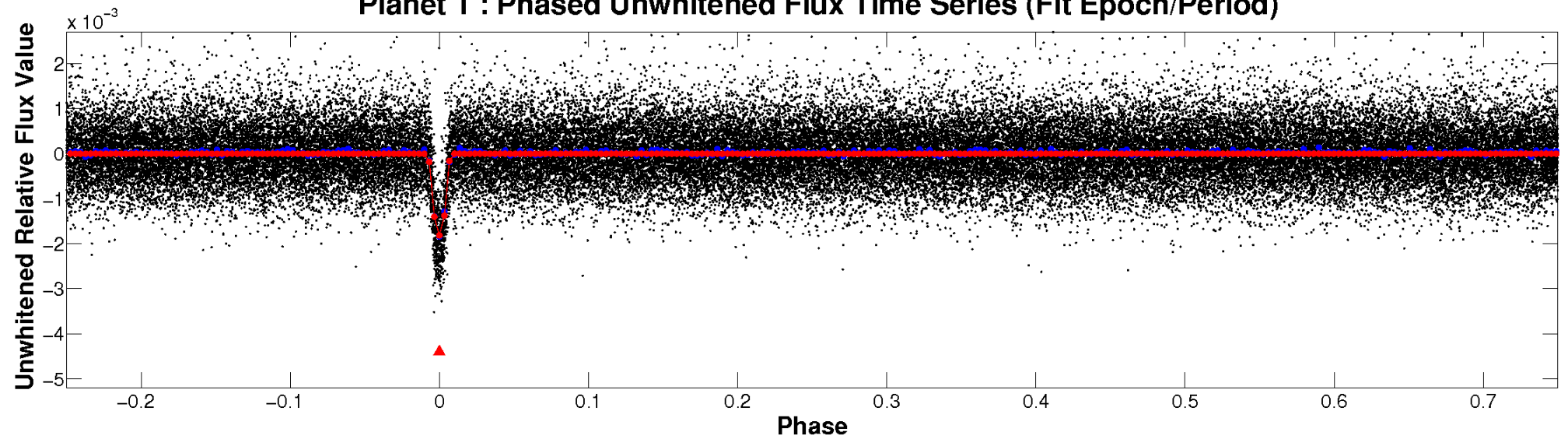
ALT Odd/Even

TCE 010583066-01

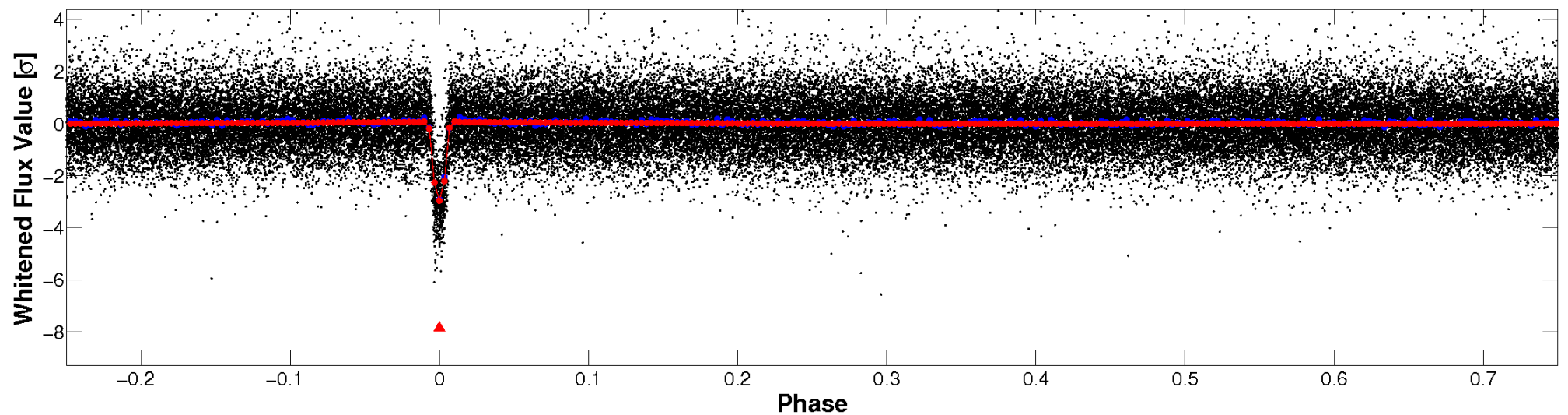


Non-Whitened Vs. Whitened Light Curve

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

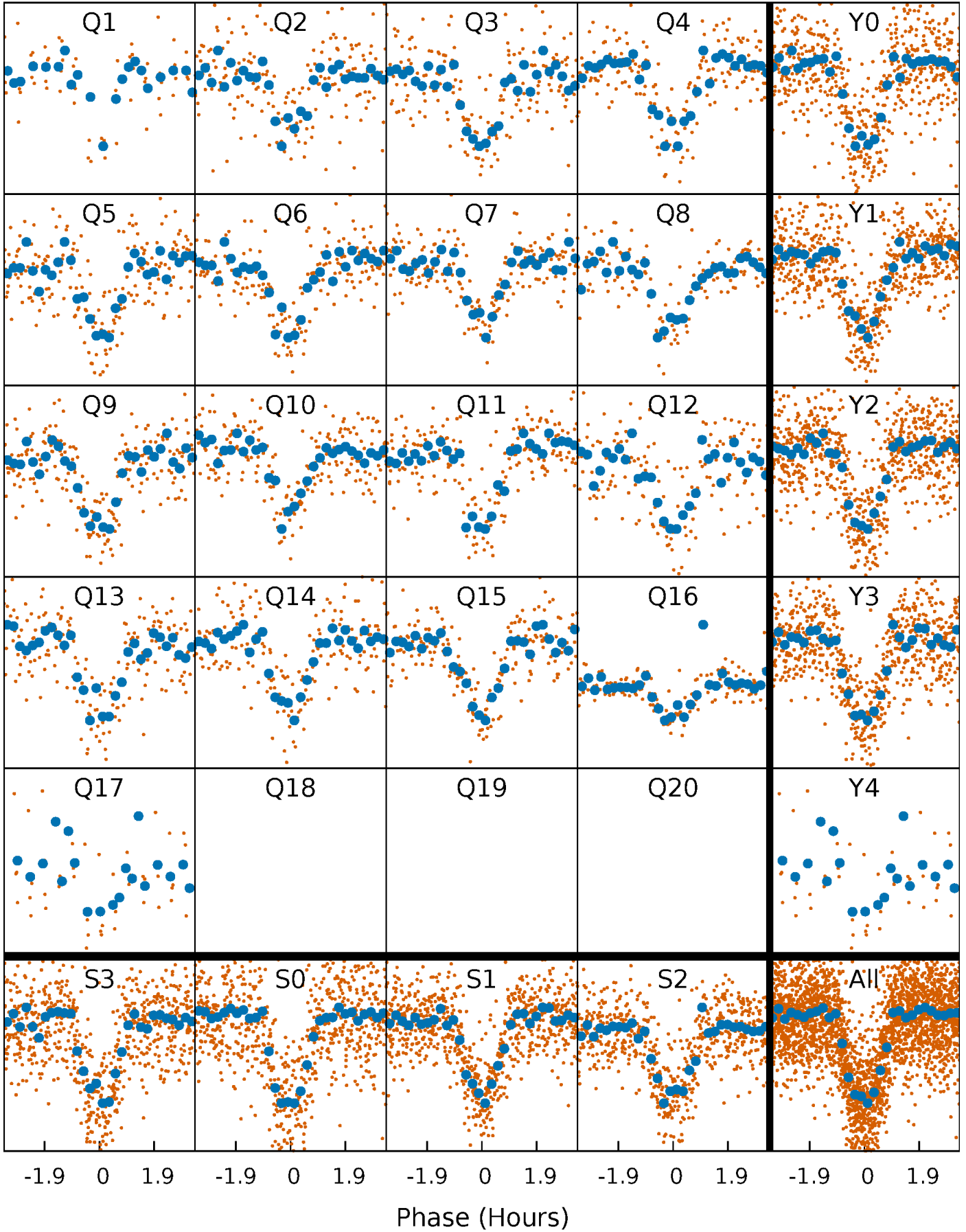


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



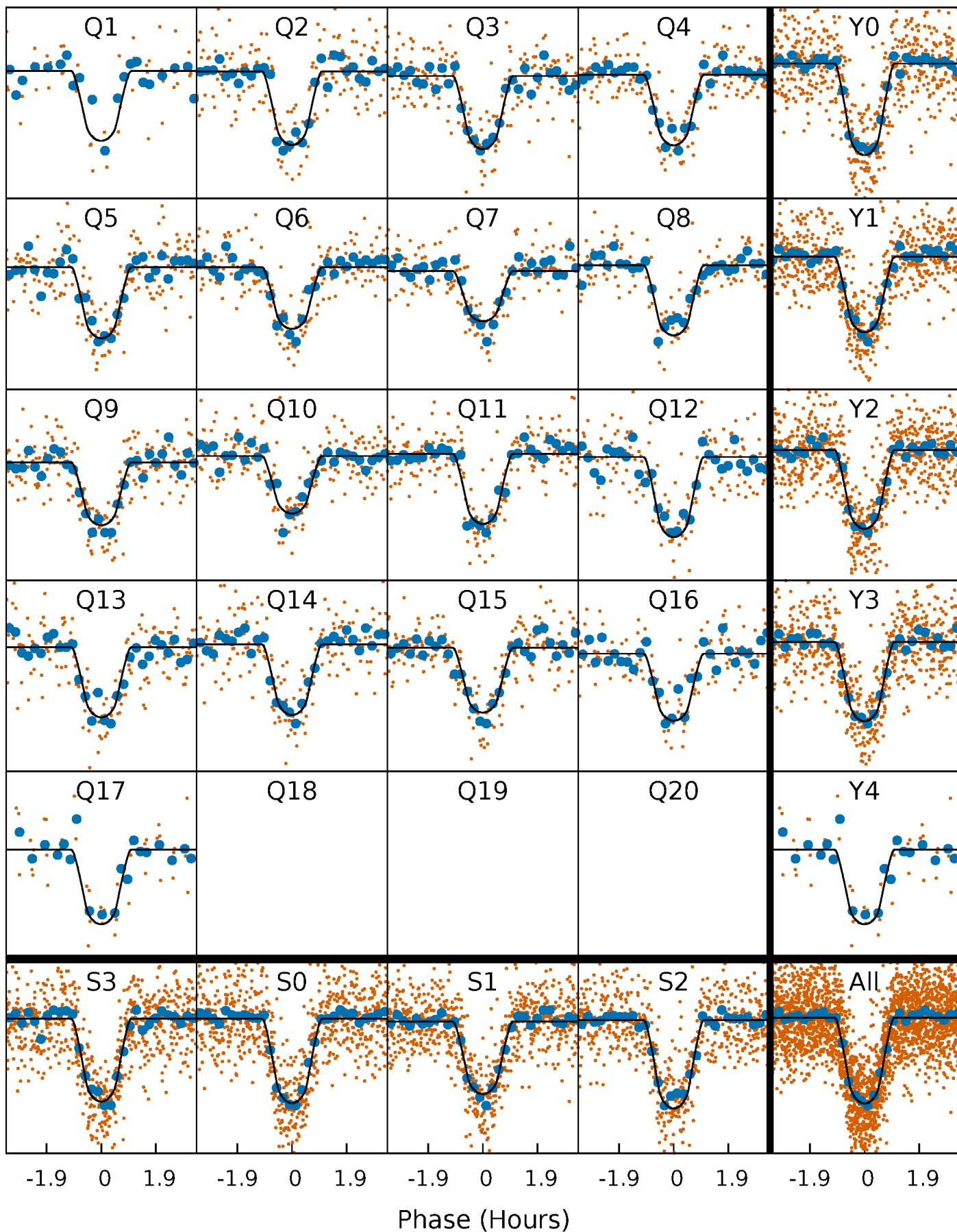
PDC Quarter-Phased Transit Curves

TCE 010583066-01 P= 6.029300 Days $T_0=135.427785$ (BKJD)



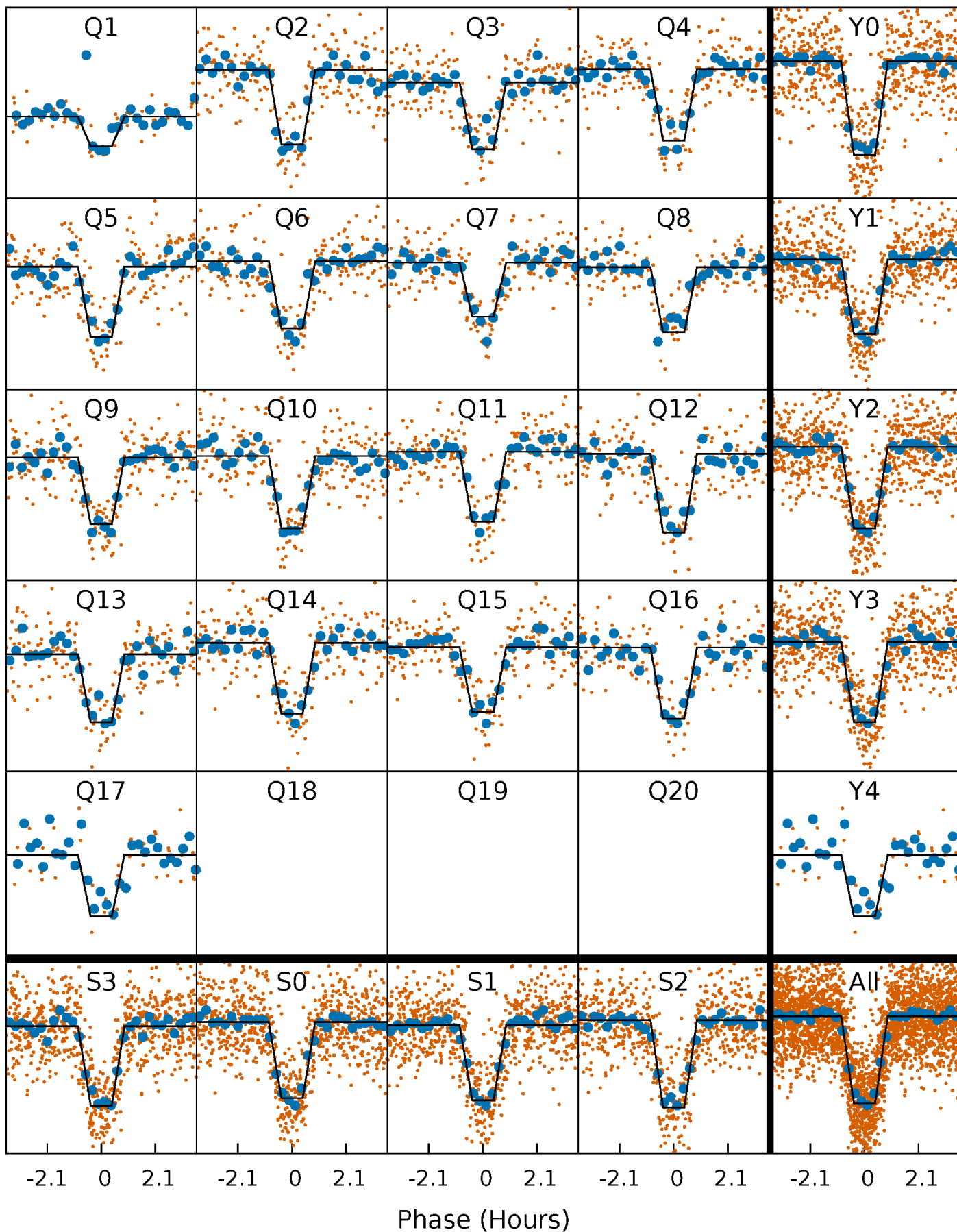
DV Quarter-Phased Transit Curves

TCE 010583066-01 P= 6.029300 Days $T_0=135.427785$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

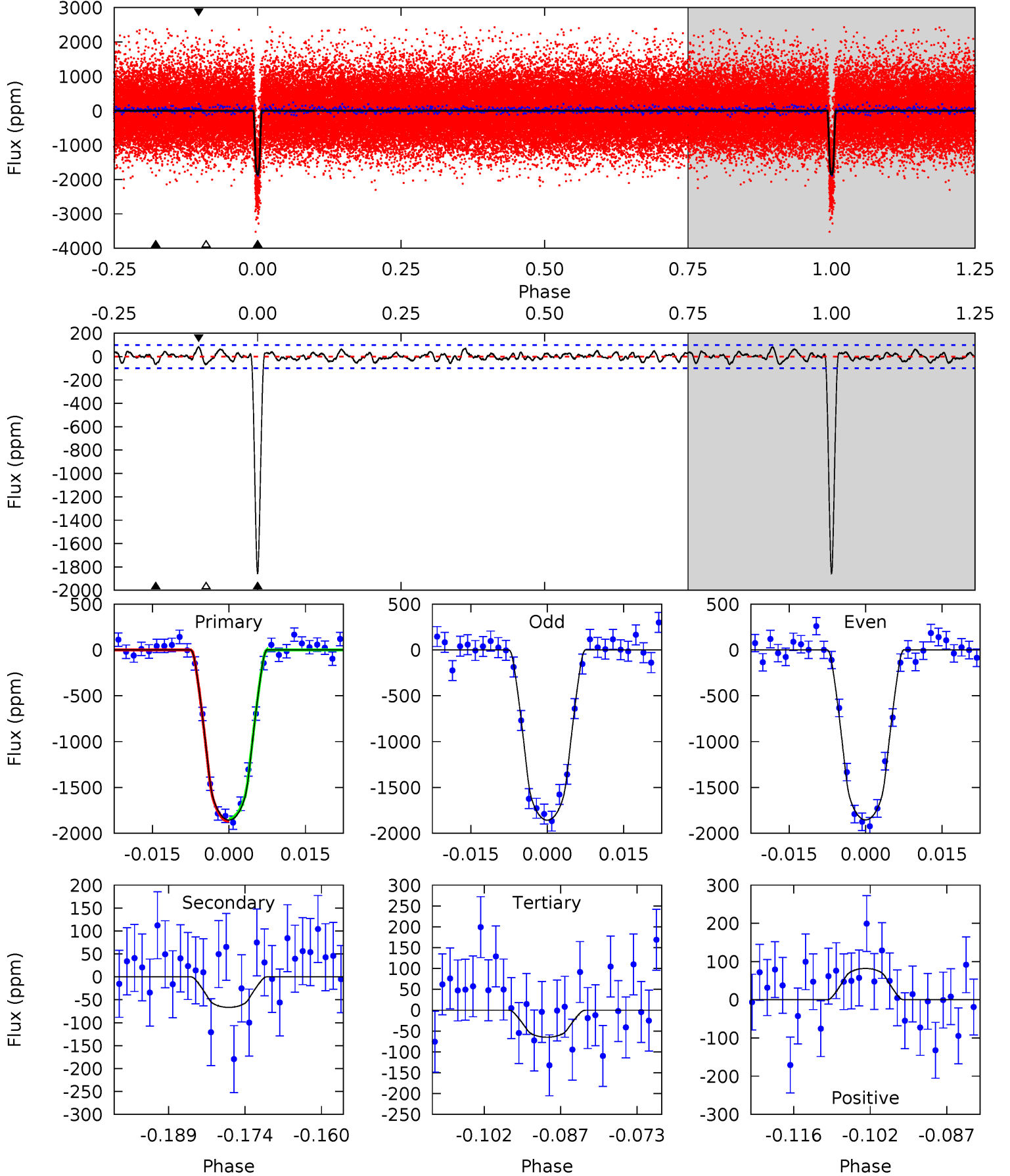
TCE 010583066-01 P= 6.029274 Days $T_0=135.430608$ (BKJD)



DV Model-Shift Uniqueness Test

010583066-01, P = 6.029300 Days, E = 129.398485 Days

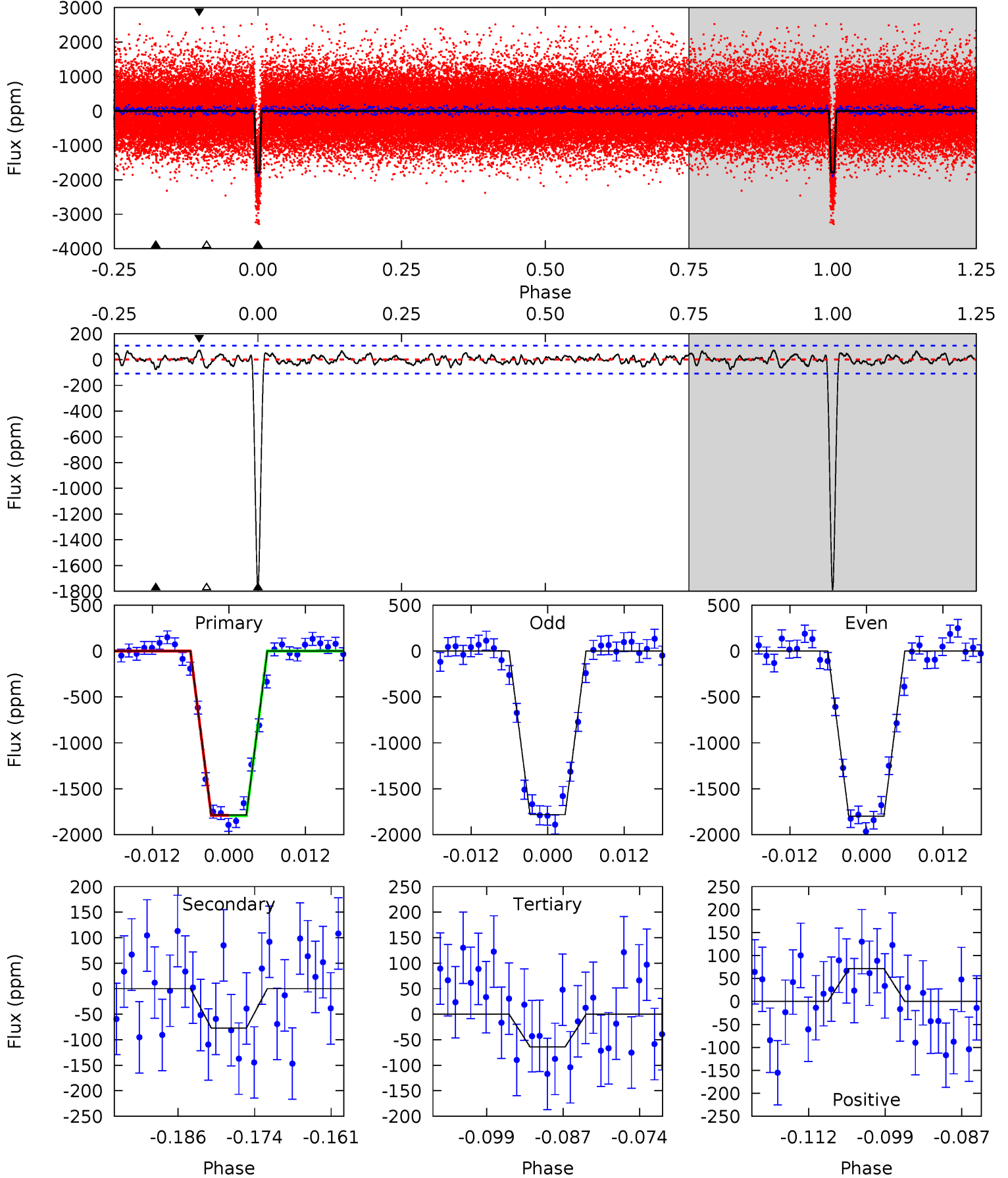
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
92.6	3.33	3.24	4.09	4.95	2.44	1.25	89.4	88.5	0.09	-0.76	0.08	1.01	0.04	0.63



Alt Model-Shift Uniqueness Test

010583066-01, P = 6.029274 Days, E = 129.401334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
81.8	3.54	2.93	3.26	4.98	2.50	1.13	78.9	78.6	0.61	0.28	0.39	0.97	0.04	0.08



Stellar Parameters For KIC 010583066

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4537^{+123}_{-123}	$4.648^{+0.020}_{-0.056}$	$0.210^{+0.200}_{-0.300}$	$0.672^{+0.062}_{-0.036}$	$0.761^{+0.033}_{-0.067}$	$3.532^{+0.321}_{-0.812}$
	+3%/-3%	+0%/-1%	+95%/-143%	+9%/-5%	+4%/-9%	+9%/-23%
Source	PHO1	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 010583066-01 / KOI 0747.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-67 ± 20	$3.25^{+0.82}_{-0.76}$	958^{+30}_{-28}	2668^{+246}_{-191}	12^{+10}_{-5}
Alt.	-77 ± 22	$3.14^{+0.79}_{-0.82}$	958^{+28}_{-30}	2749^{+259}_{-203}	15^{+13}_{-6}

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

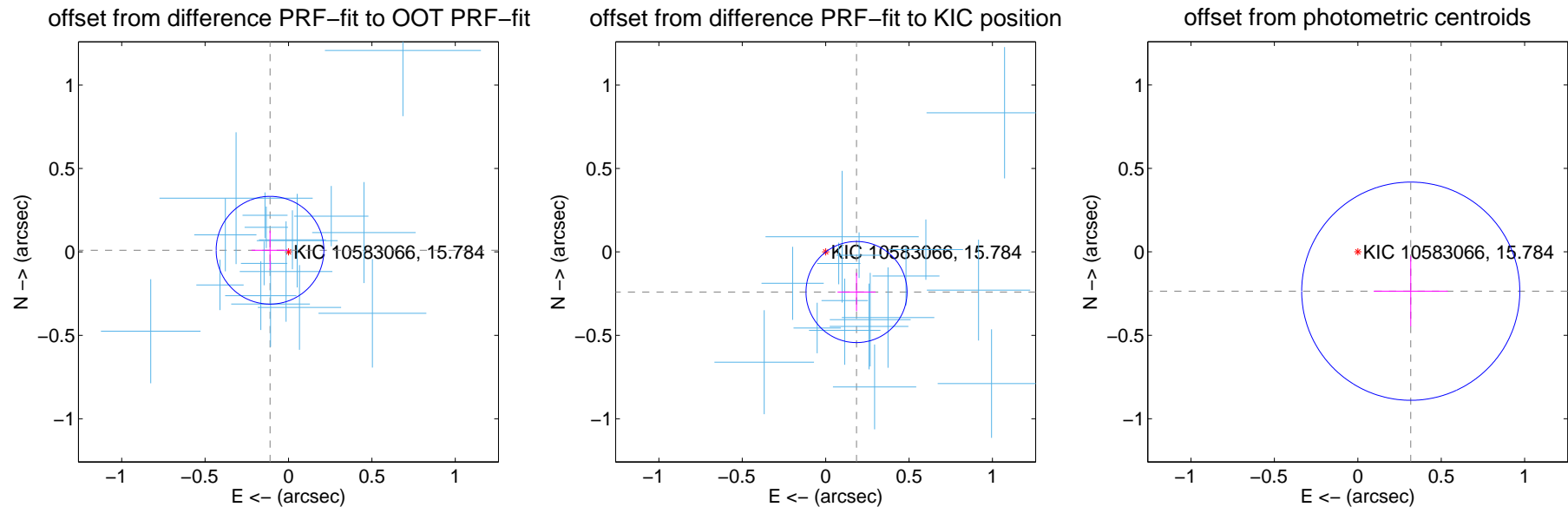
DV Centroid Data

Supplemental centroid analysis for 010583066-01. Kepler magnitude: 15.78. Transit SNR 62.79

There are 17 quarters with good PRF difference image offsets

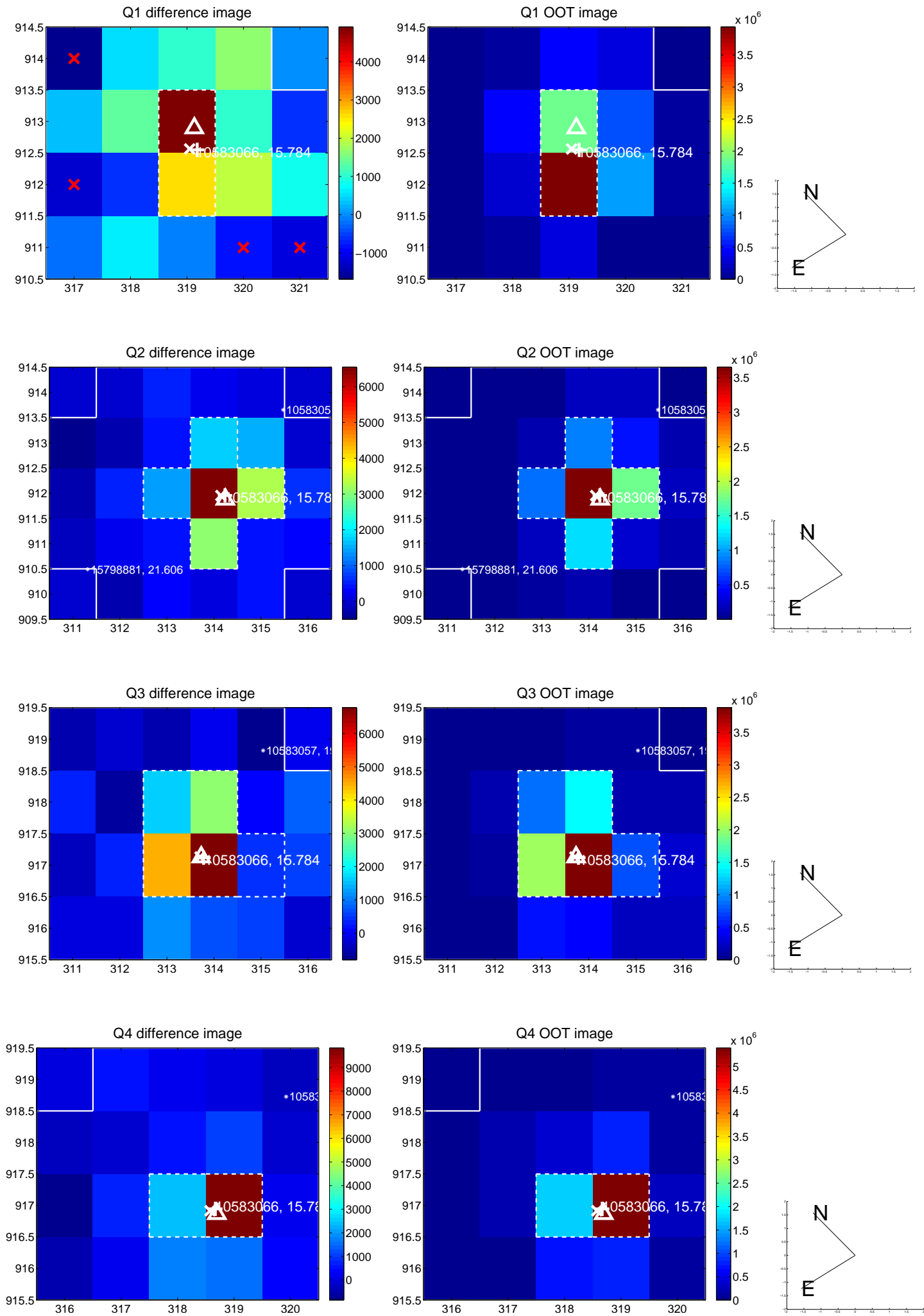
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.111 ± 0.108	1.03	0.111 ± 0.111	0.010 ± 0.117
PRF-fit source offset from KIC position	0.303 ± 0.101	3.01	-0.185 ± 0.114	-0.240 ± 0.115
photometric centroid source offset	0.40 ± 0.22	1.81	-0.32 ± 0.22	-0.24 ± 0.21

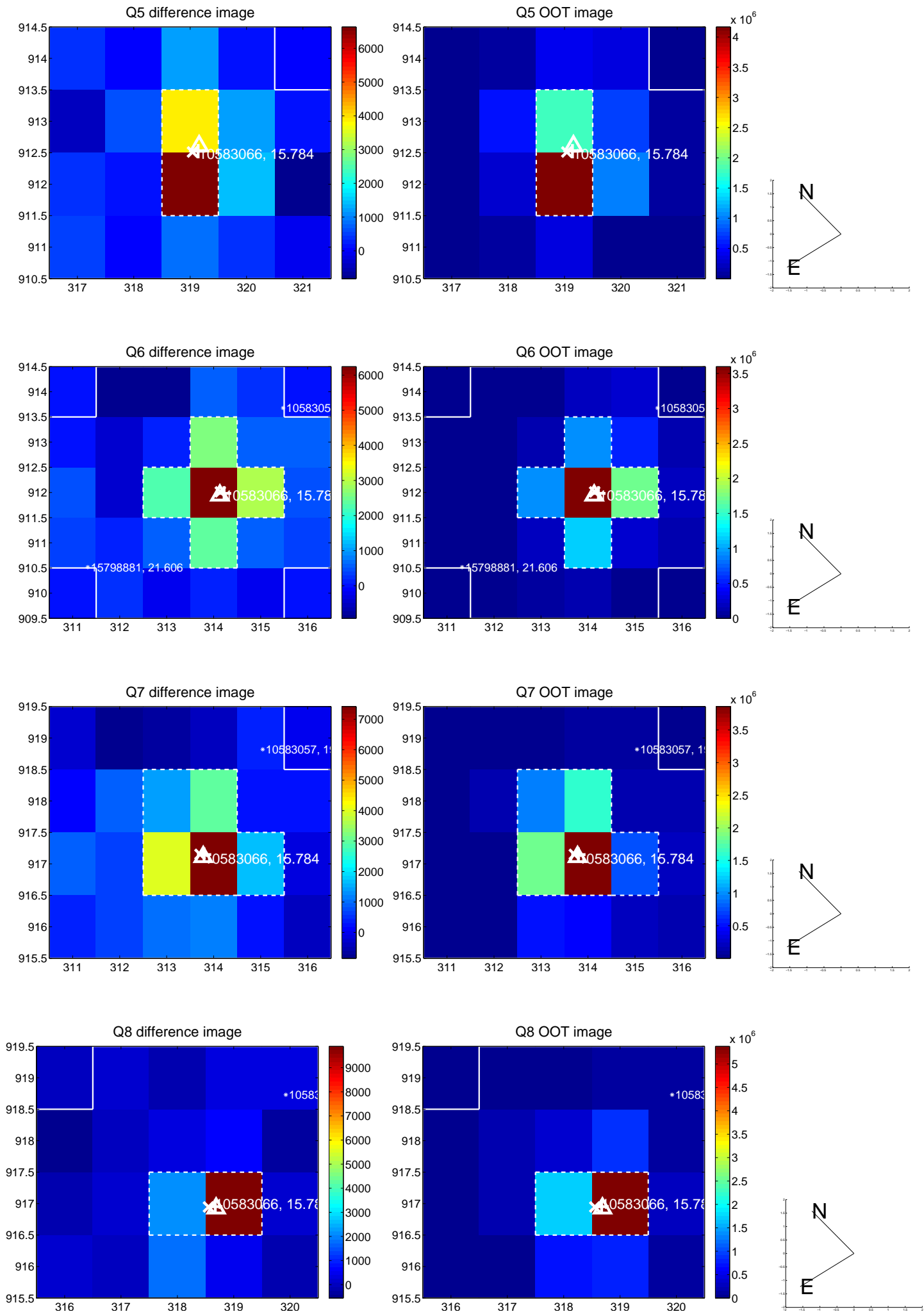


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

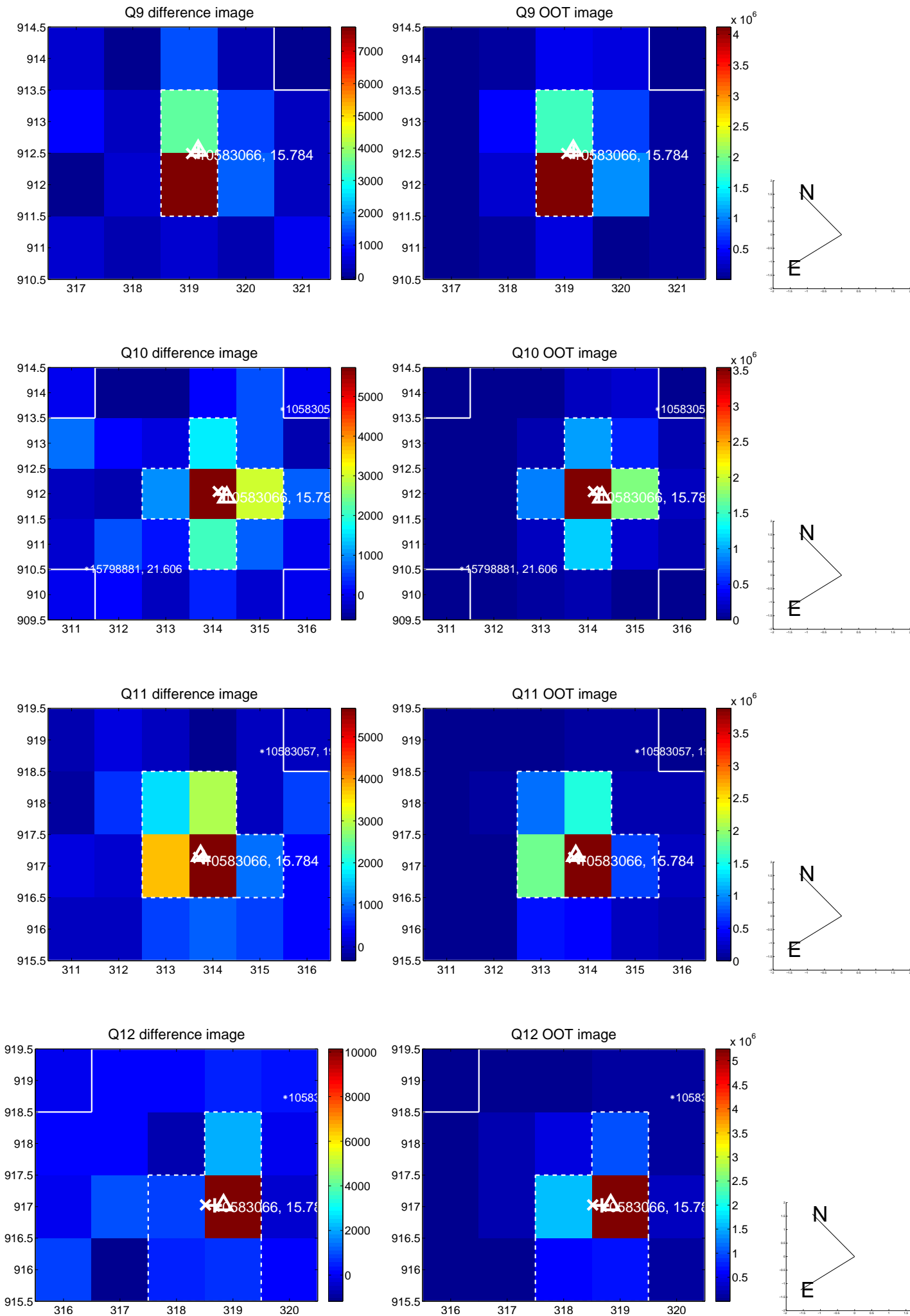
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



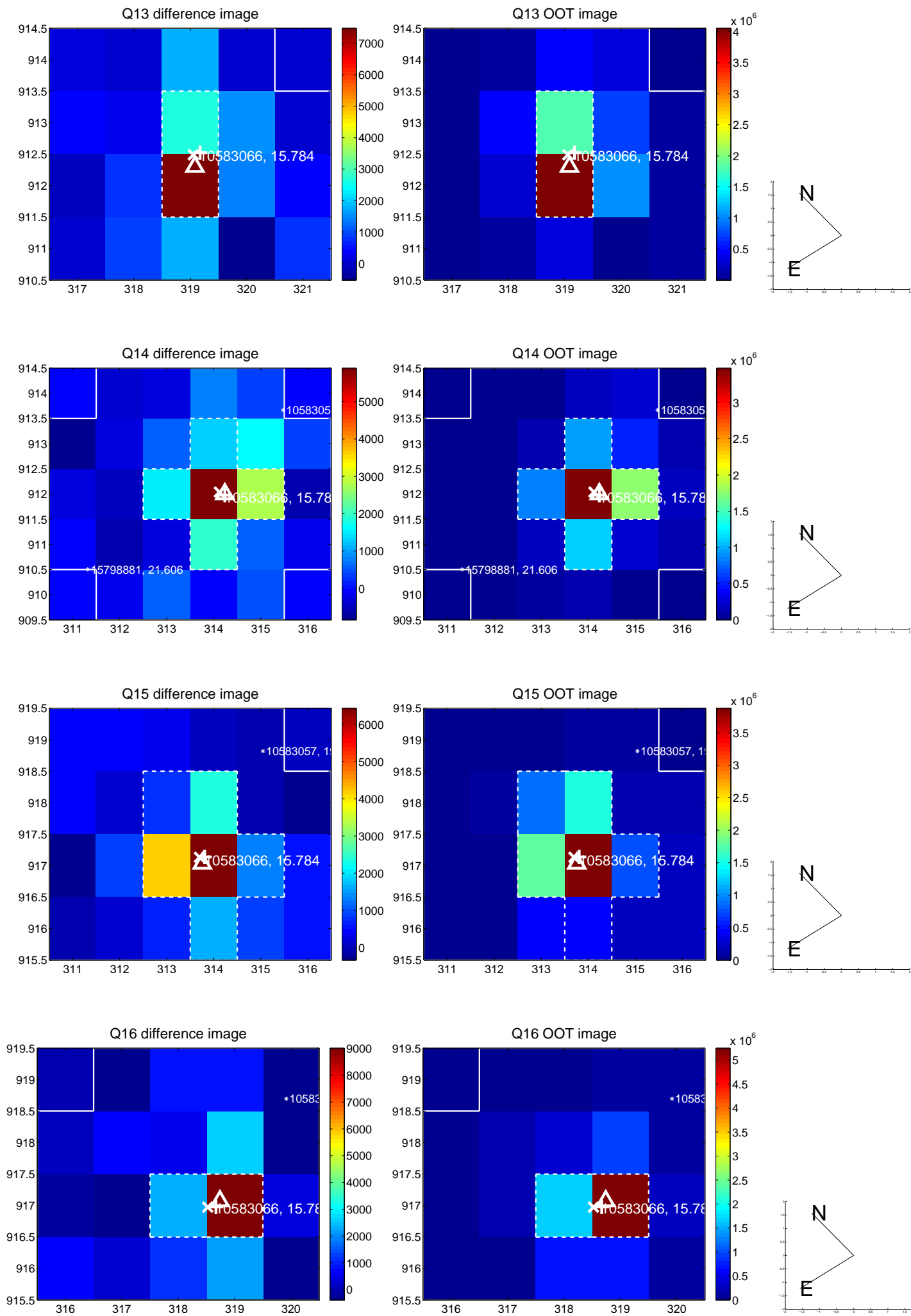
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



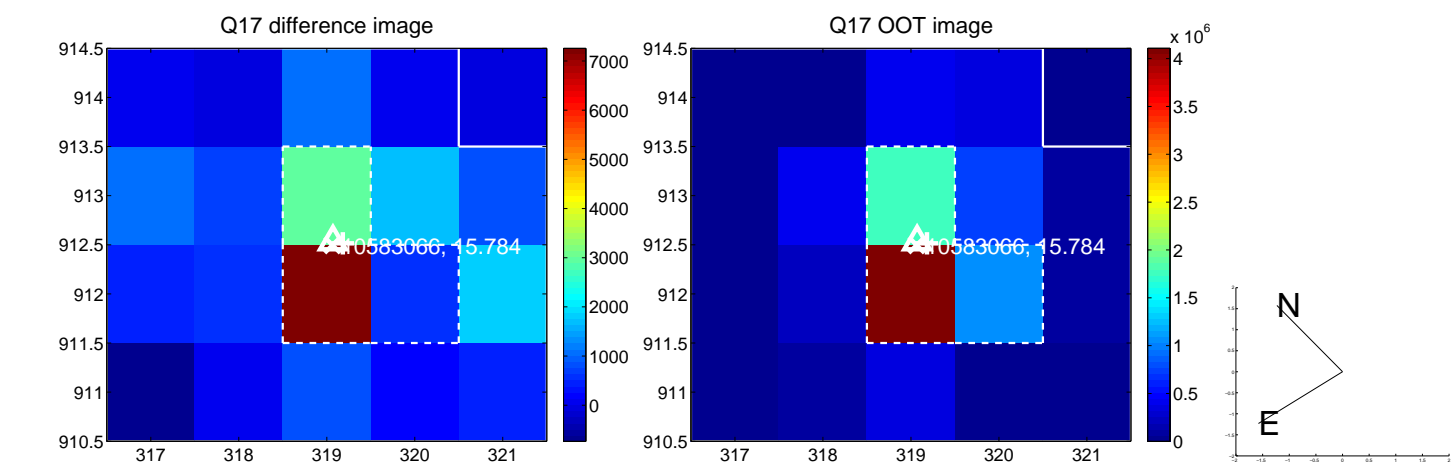
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



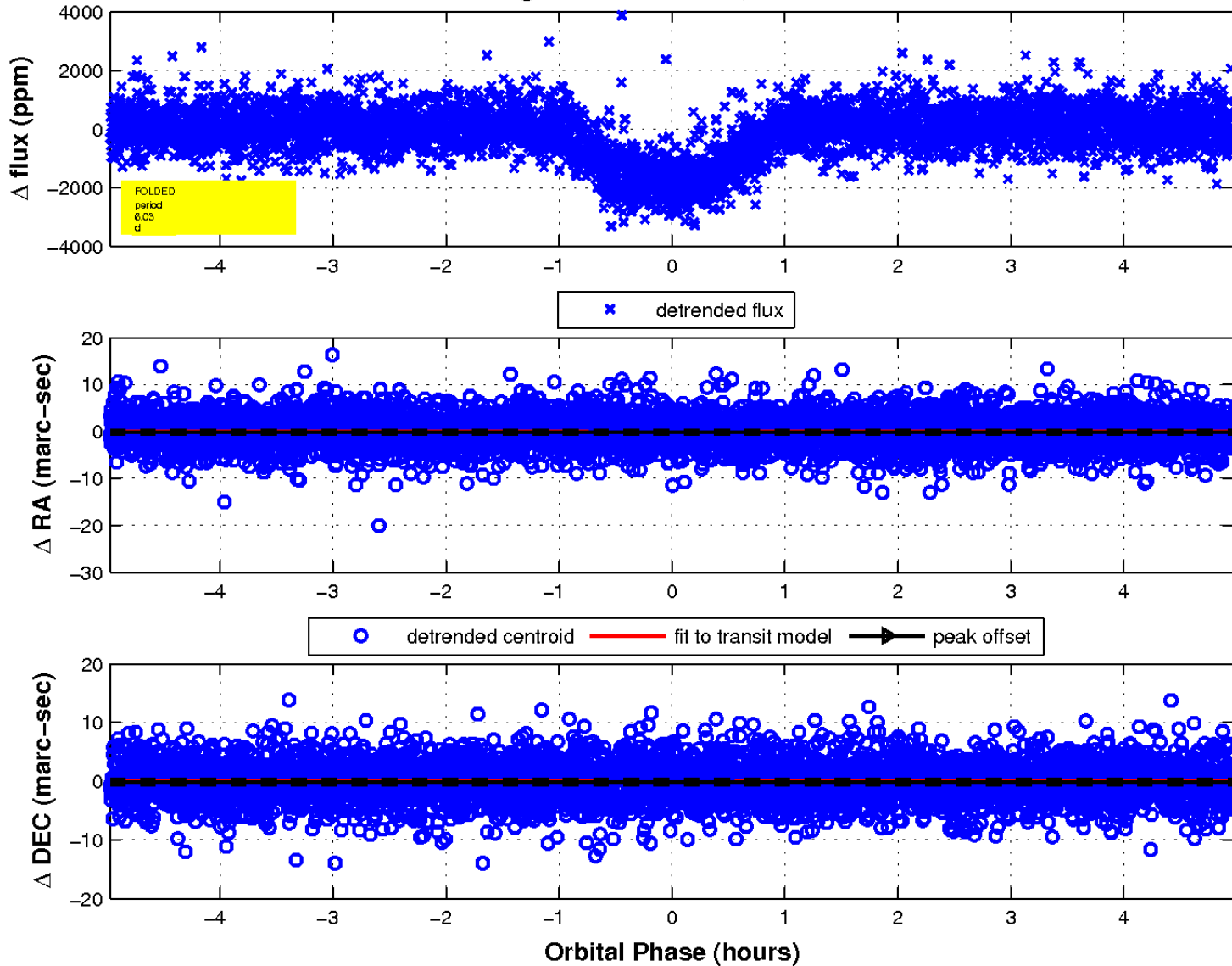
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

