

KIC 005683743

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})
005683743-01	OBS	0412.01	4.147019	133.003046	3675.7	2.998	399.8	395.3	1.21	5818	7.71	592.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005683743-01	OBS	PC	0.92	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.

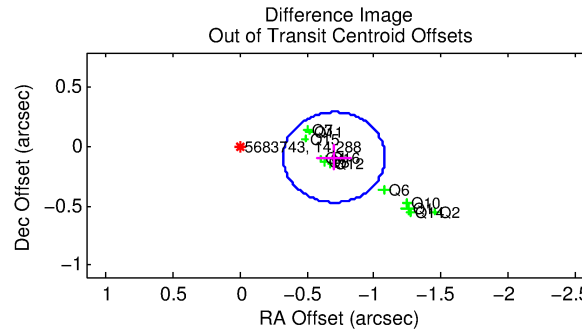
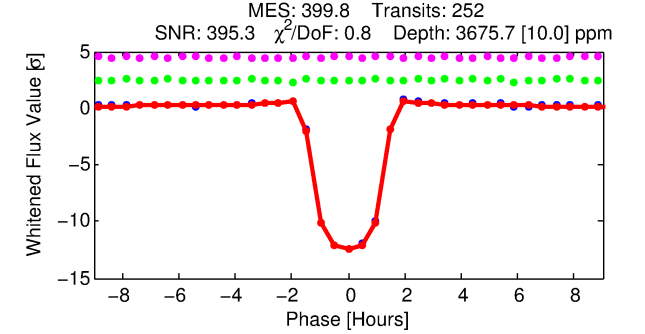
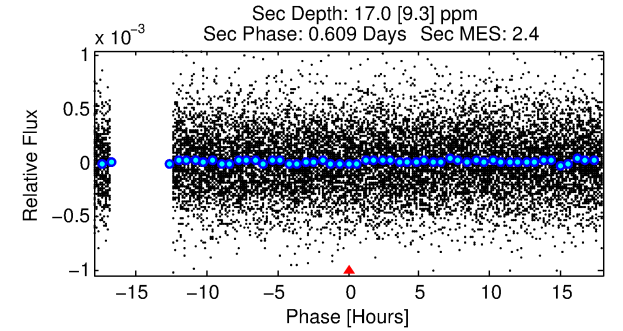
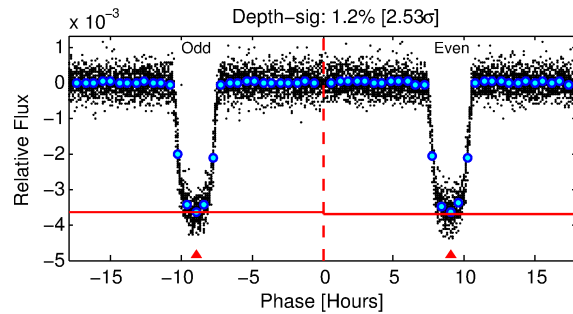
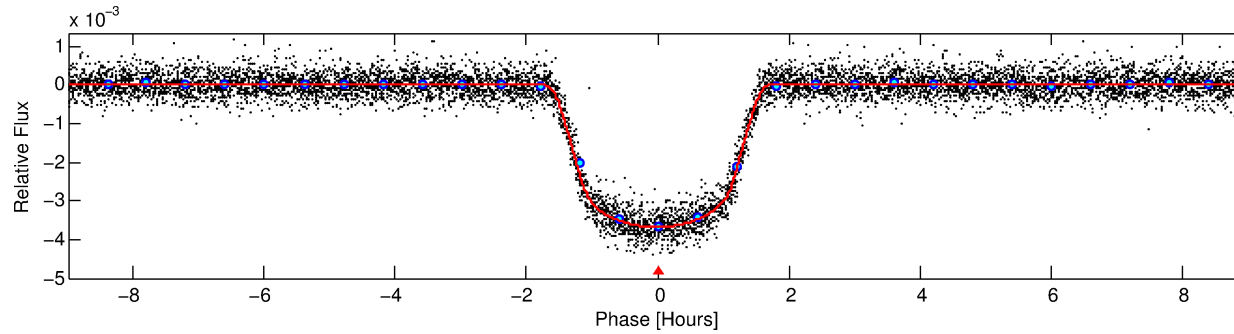
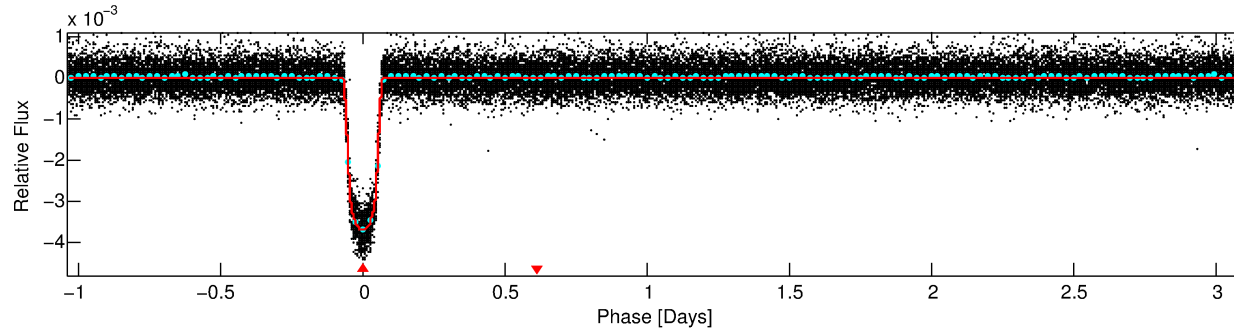
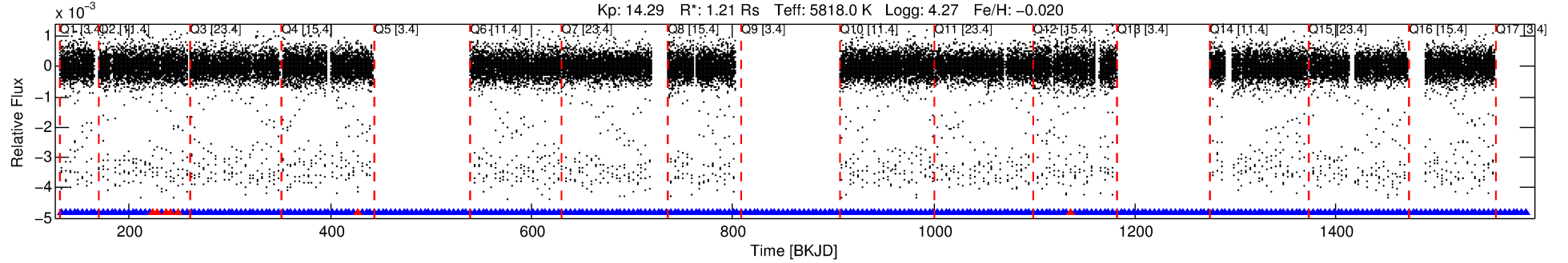
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005683743-01

No Significant Match Found

DV One-Page Summary

KIC: 5683743 Candidate: 1 of 1 Period: 4.147 d
KOI: K00412.01 Corr: 0.983



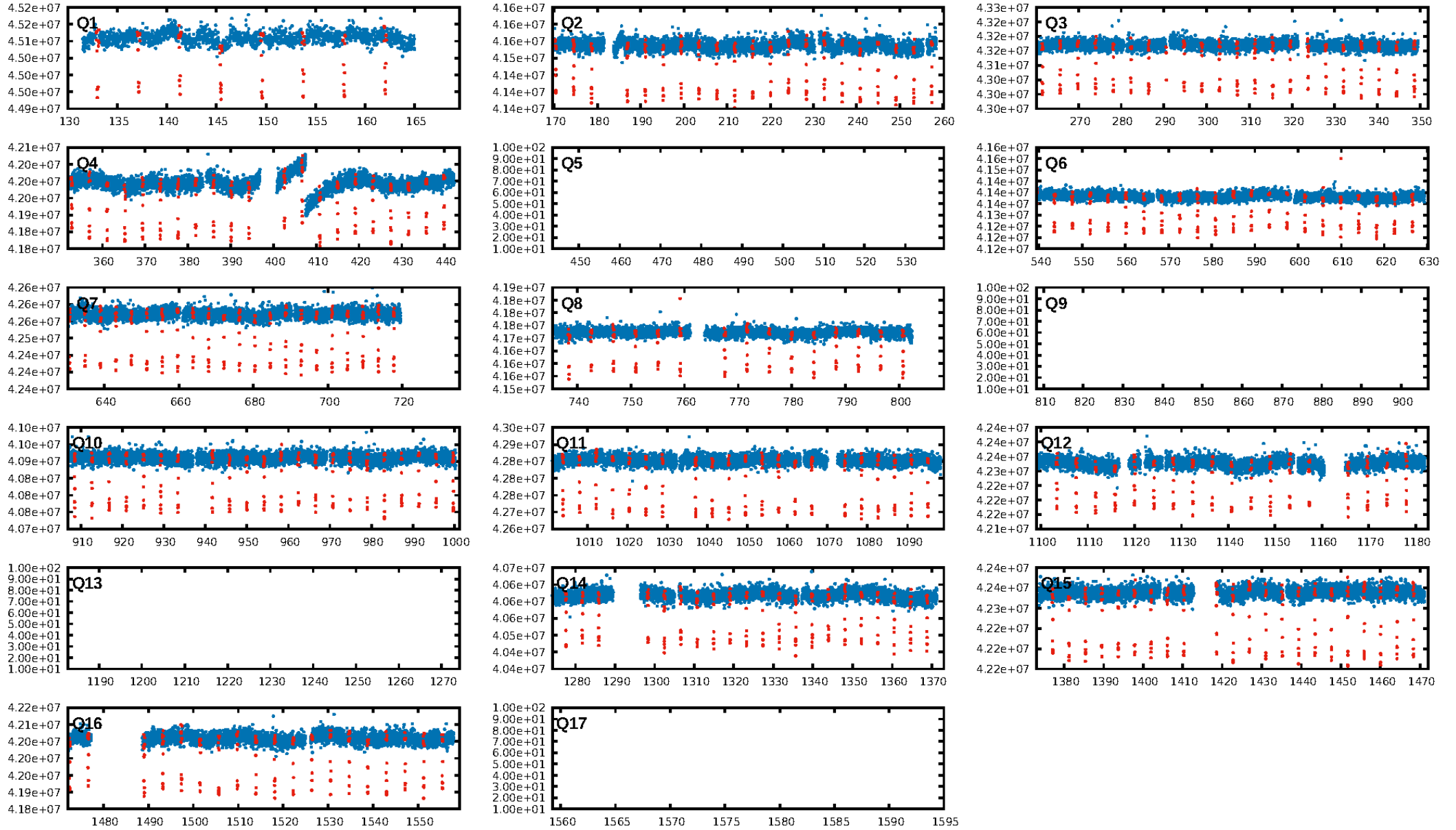
DV Fit Results:

Period = 4.14702 [0.00000] d
Epoch = 133.0030 [0.0001] BKJD
Rp/R* = 0.0586 [0.0008]
a/R* = 8.86 [0.50]
b = 0.65 [0.05]
Seff = 592.92 [215.78]
Teq = 1258 [114] K
Rp = 7.71 [2.09] Re
a = 0.0501 [0.0117] AU
Ag = 0.40 [0.26] [-2.35 σ]
Teffp = 1544 [217] K [1.16 σ]

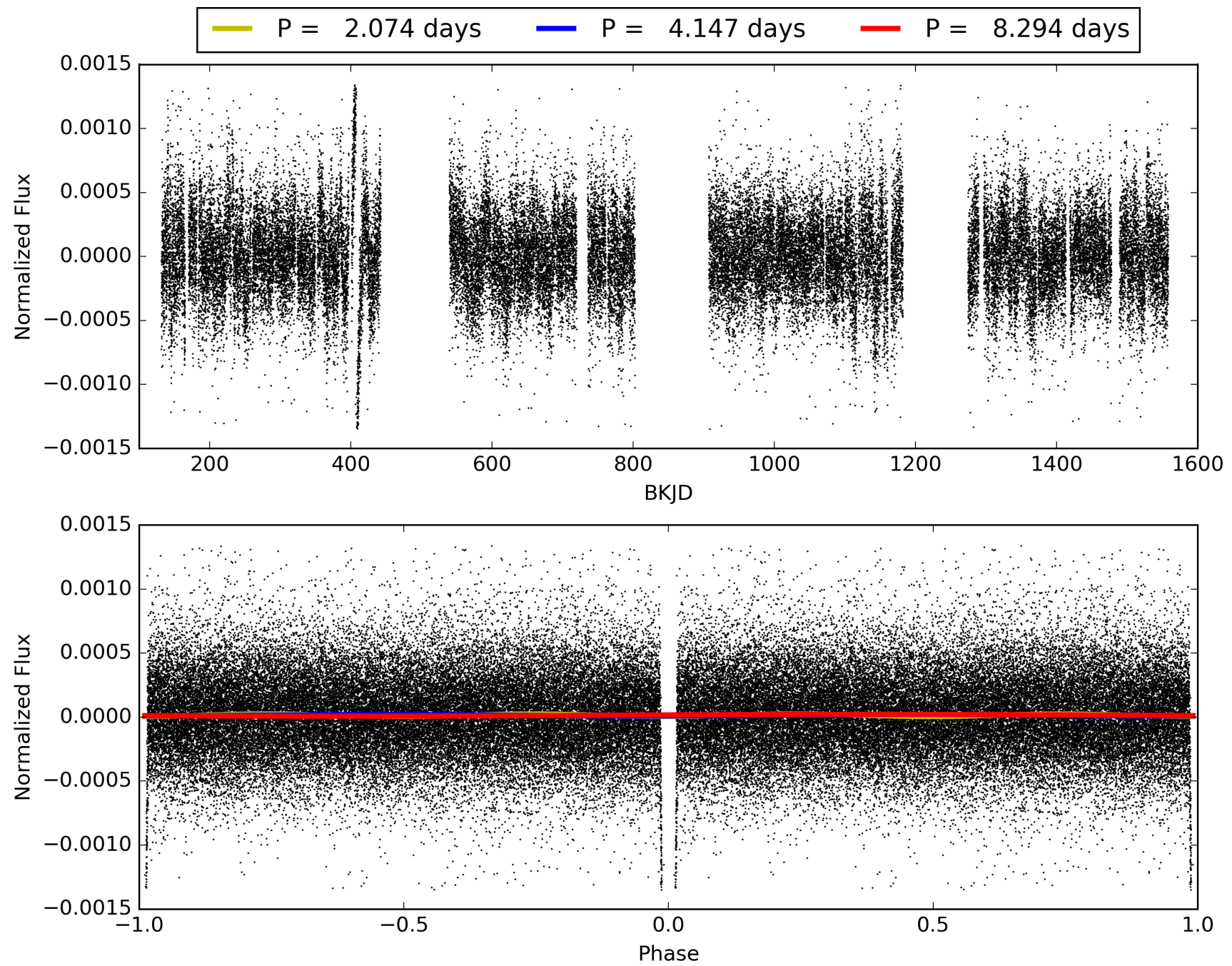
DV Diagnostic Results:

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 [237/244]
GhostDiagnostic-chr: 4.758
Centroid-sig: 0.0%
Centroid-so: 0.361 arcsec [13.74 σ]
OotOffset-rm: 0.707 arcsec [5.55 σ]
KicOffset-rm: 0.195 arcsec [2.62 σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005683743-01, PDC Light Curves

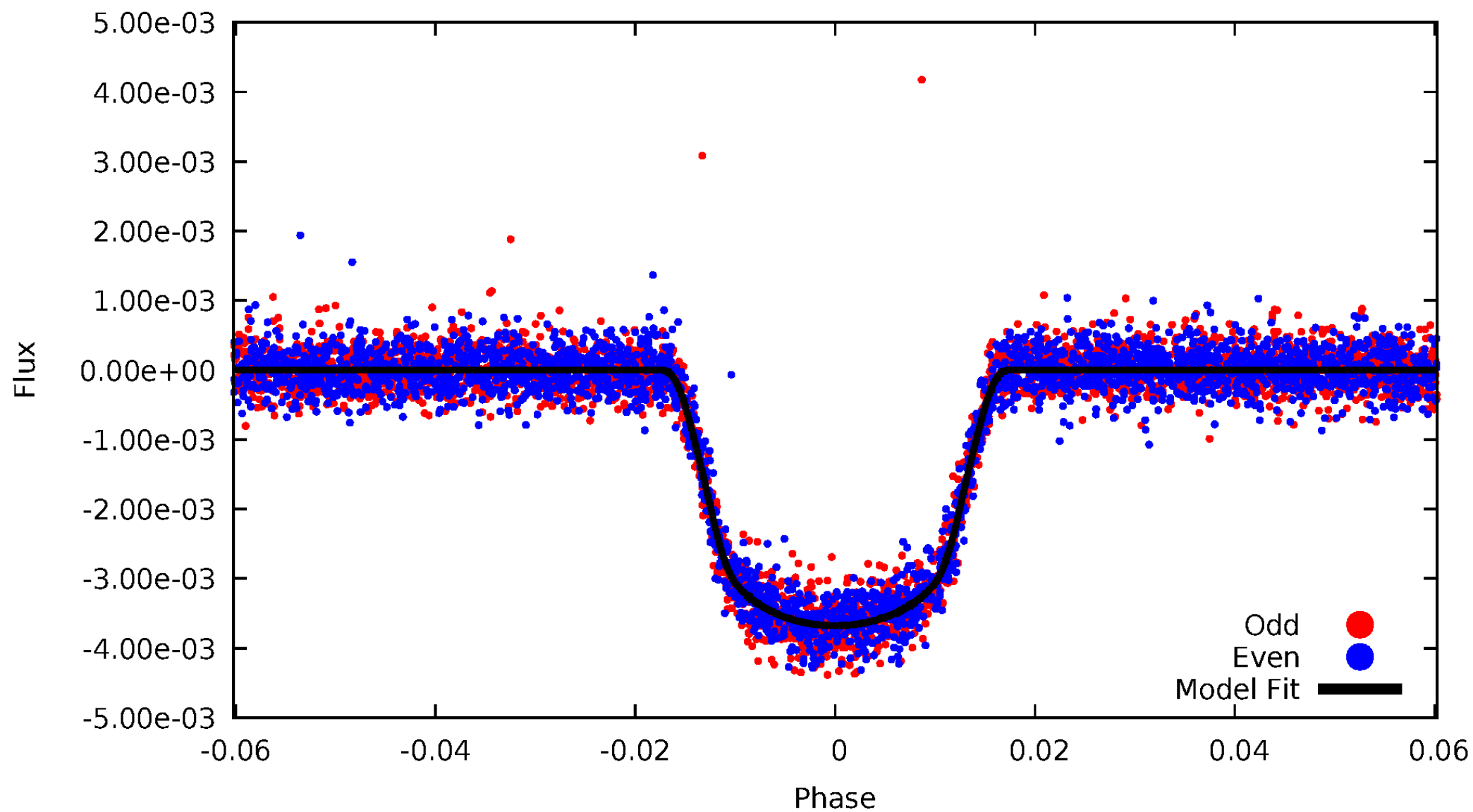


TCE 005683743-01



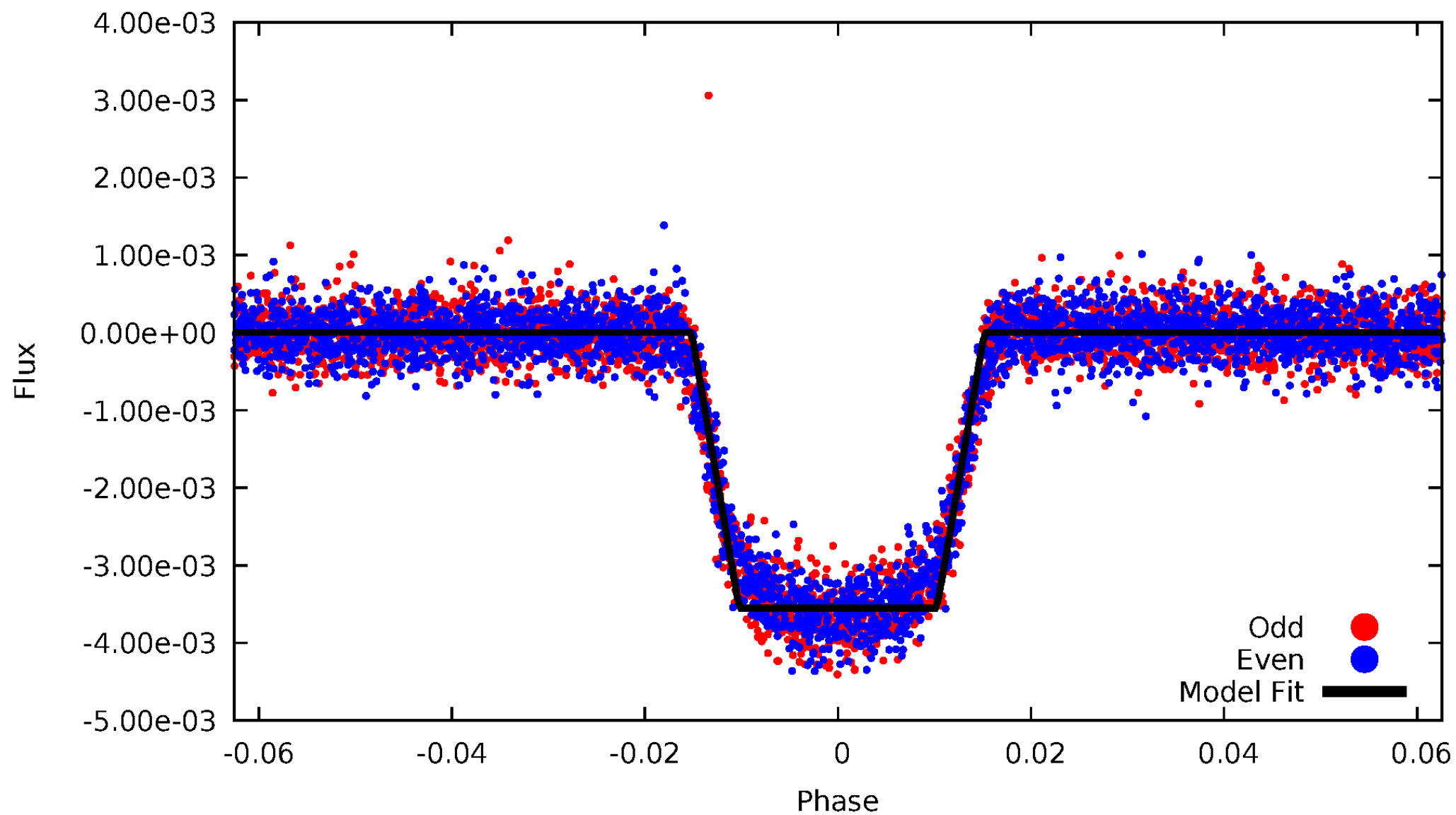
DV Odd/Even

TCE 005683743-01



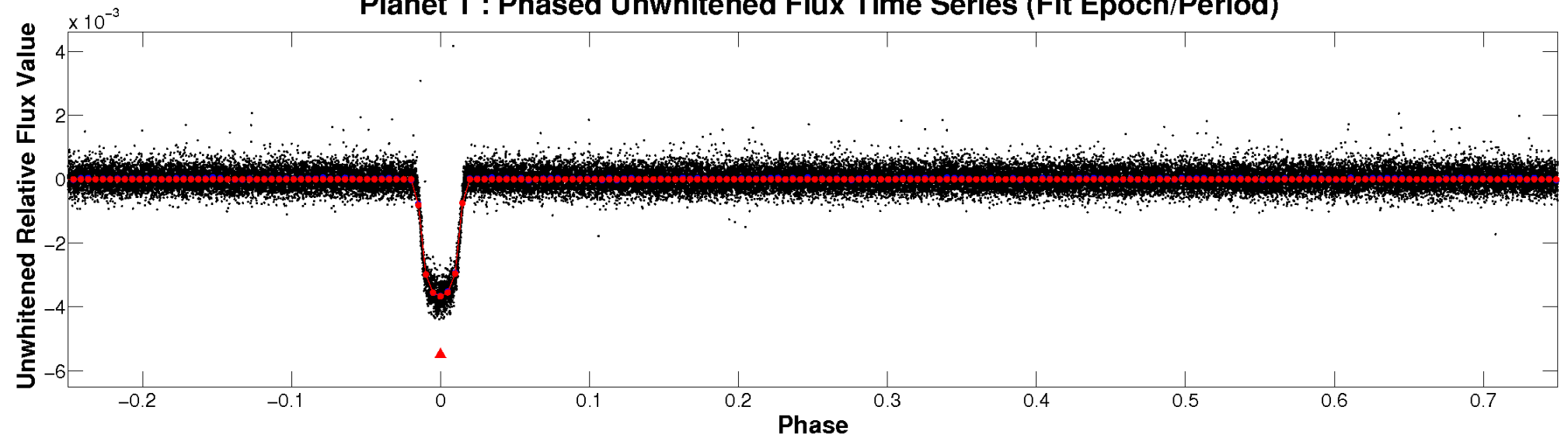
ALT Odd/Even

TCE 005683743-01

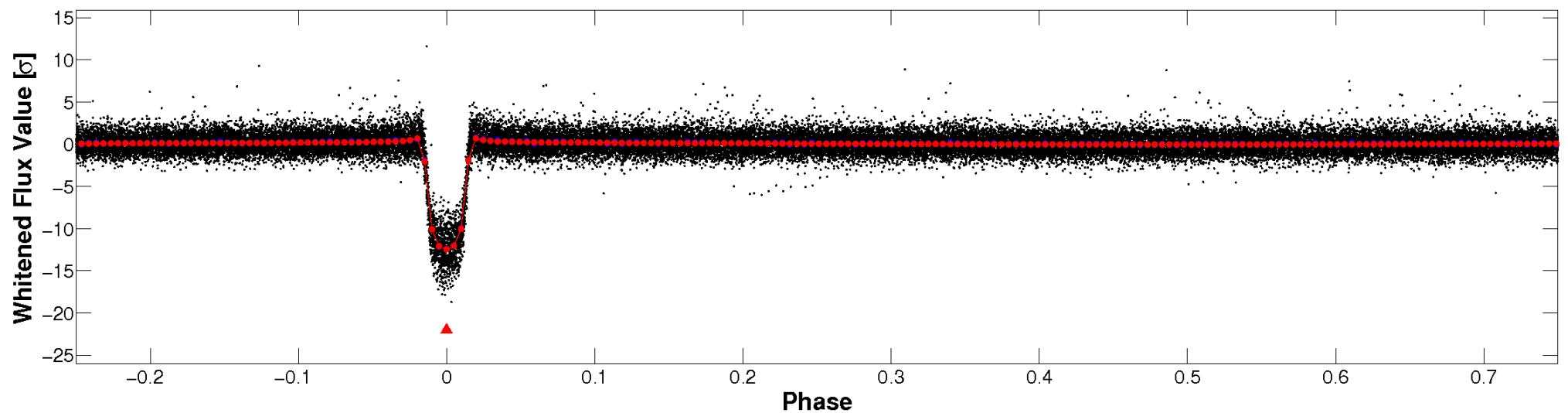


Non-Whitened Vs. Whitened Light Curve

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

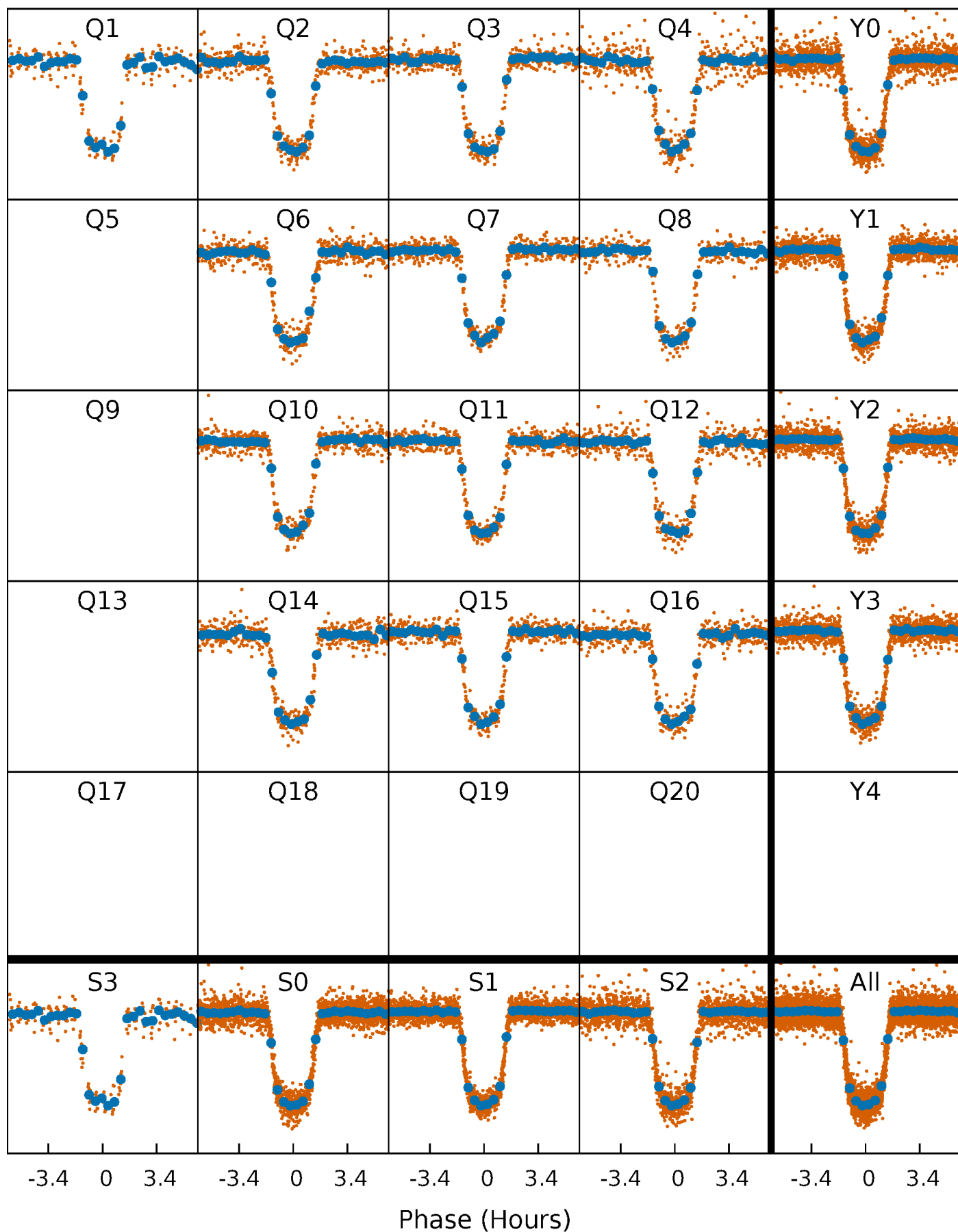


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



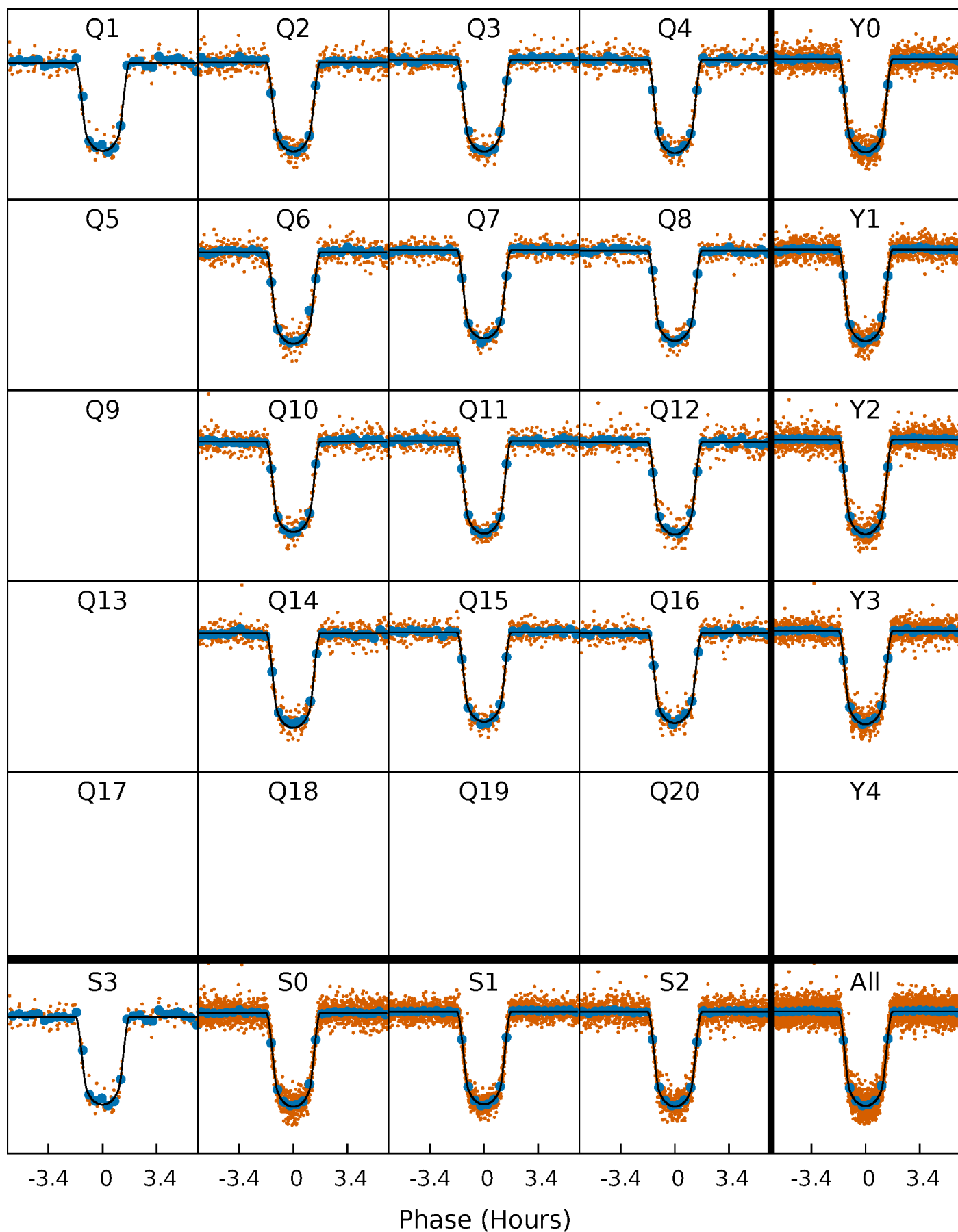
PDC Quarter-Phased Transit Curves

TCE 005683743-01 P= 4.147019 Days $T_0=133.003046$ (BKJD)



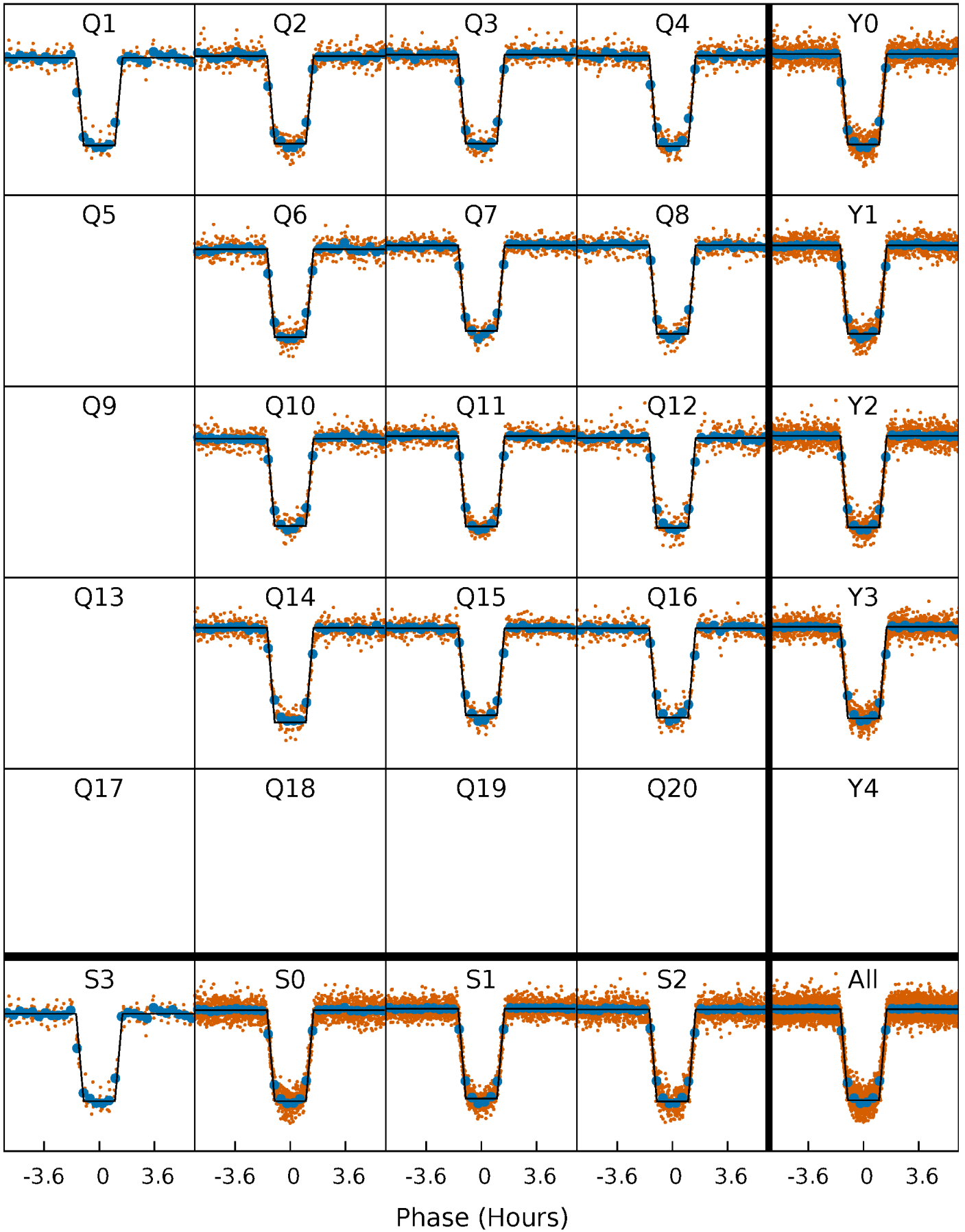
DV Quarter-Phased Transit Curves

TCE 005683743-01 P= 4.147019 Days $T_0=133.003046$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

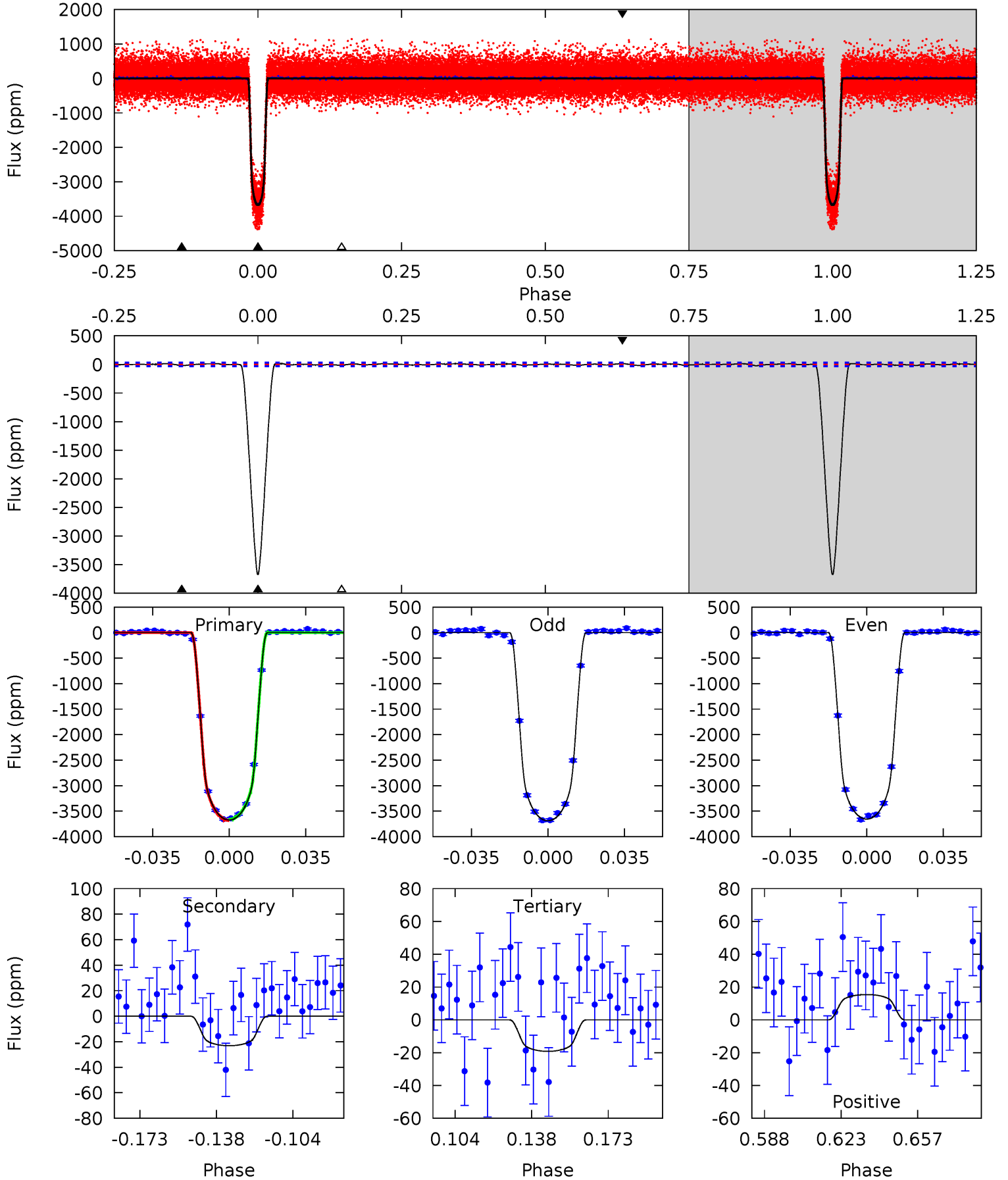
TCE 005683743-01 P= 4.147007 Days $T_0=133.005134$ (BKJD)



DV Model-Shift Uniqueness Test

005683743-01, P = 4.147019 Days, E = 128.856027 Days

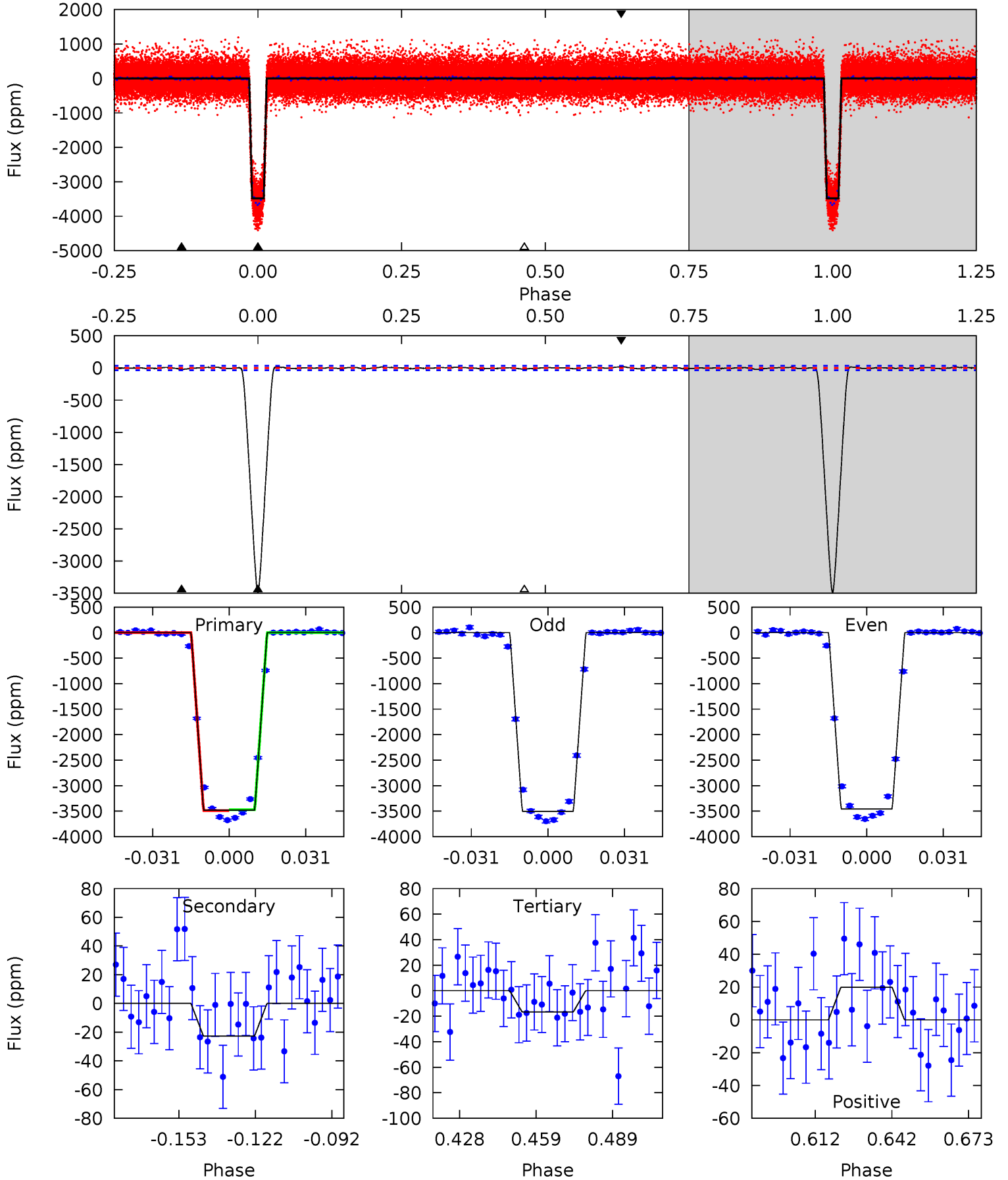
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
552.3	3.48	2.89	2.32	4.78	2.11	1.09	549.4	550.0	0.59	1.16	2.45	1.00	0.00	1.71



Alt Model-Shift Uniqueness Test

005683743-01, P = 4.147007 Days, E = 128.858127 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
490.1	3.19	2.34	2.81	4.81	2.16	0.98	487.8	487.3	0.85	0.38	3.08	1.00	0.01	1.29



Stellar Parameters For KIC 005683743

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5818^{+158}_{-176}	$4.266^{+0.190}_{-0.171}$	$-0.020^{+0.250}_{-0.300}$	$1.205^{+0.327}_{-0.268}$	$0.977^{+0.140}_{-0.105}$	$0.787^{+0.770}_{-0.391}$
	+3%/-3%	+4%/-4%	+1250%/-1500%	+27%/-22%	+14%/-11%	+98%/-50%
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 005683743-01 / KOI 0412.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 7	$7.72^{+1.12}_{-0.89}$	1756^{+125}_{-115}	2267^{+162}_{-345}	$0.526^{+0.232}_{-0.181}$
Alt.	-23 ± 7	$7.86^{+1.16}_{-0.98}$	1757^{+123}_{-126}	2241^{+167}_{-392}	$0.501^{+0.238}_{-0.176}$

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

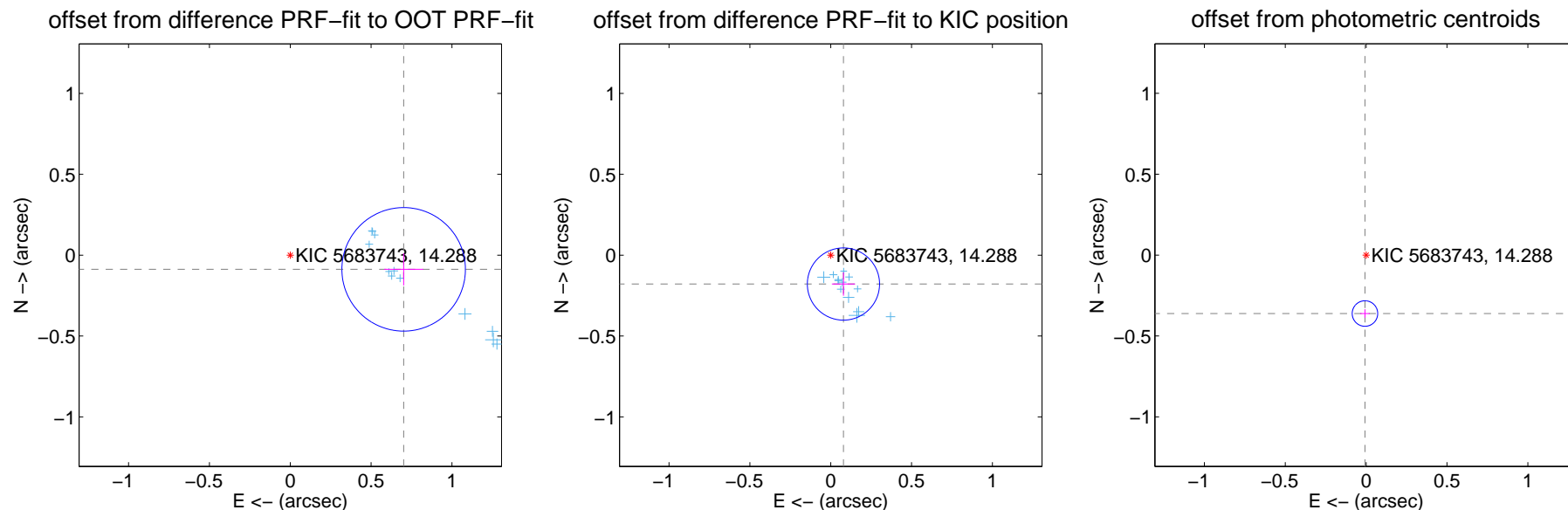
DV Centroid Data

Supplemental centroid analysis for 005683743-01. Kepler magnitude: 14.29. Transit SNR 395.35

There are 13 quarters with good PRF difference image offsets

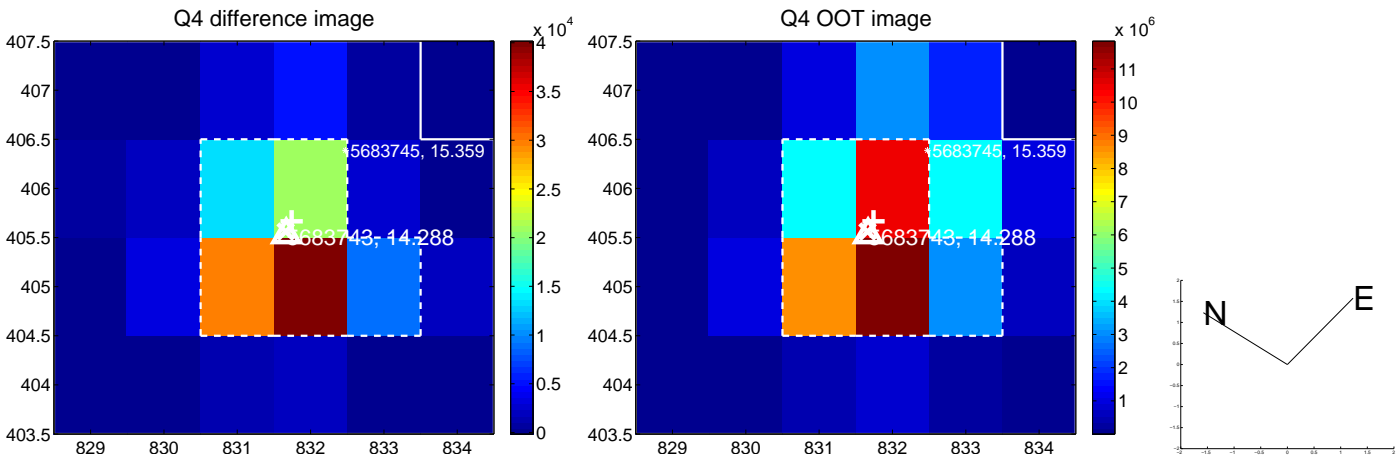
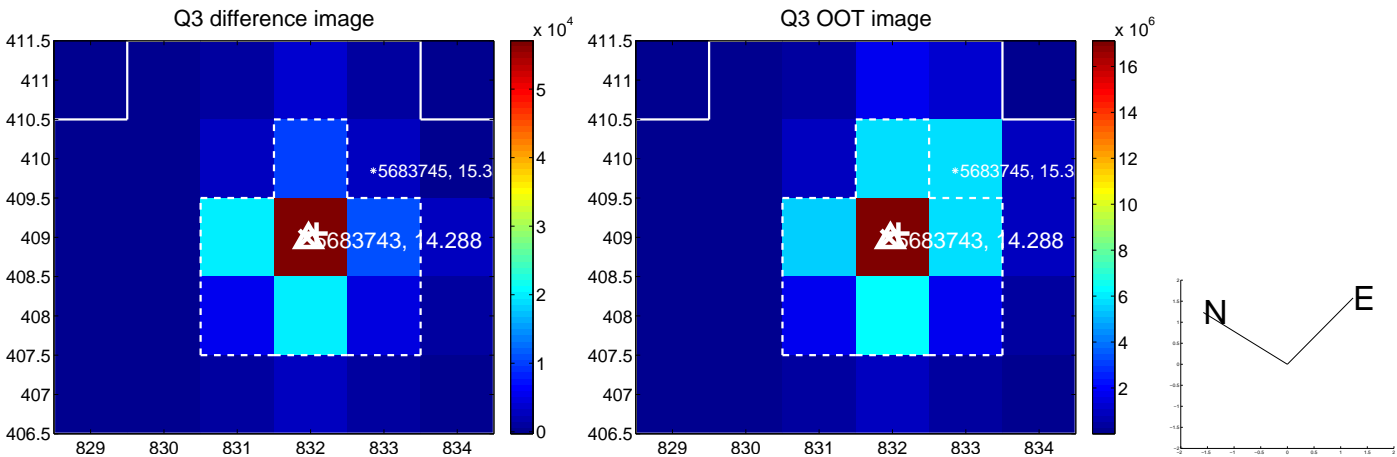
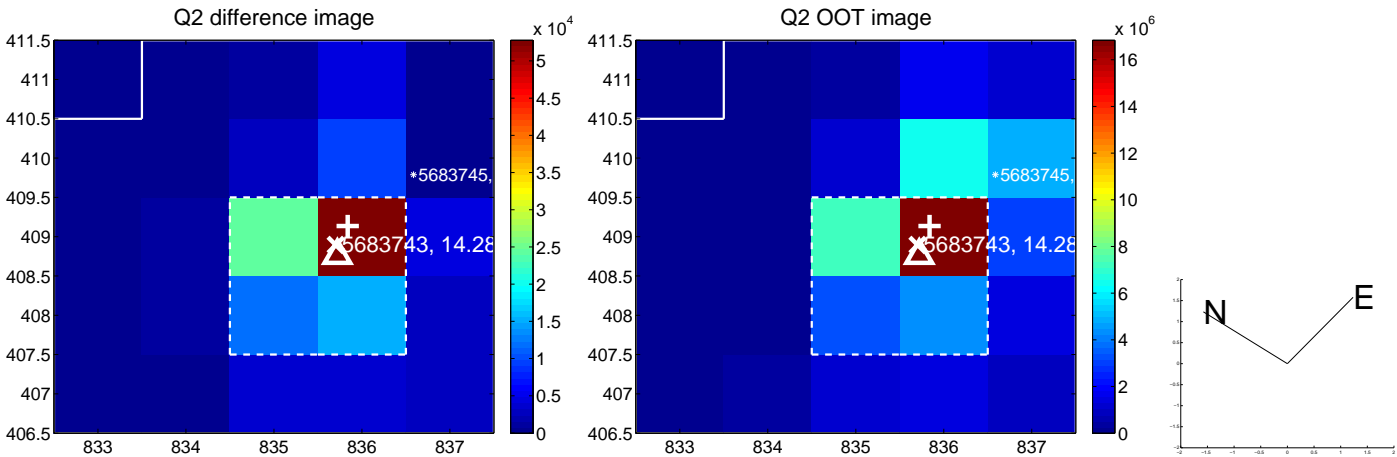
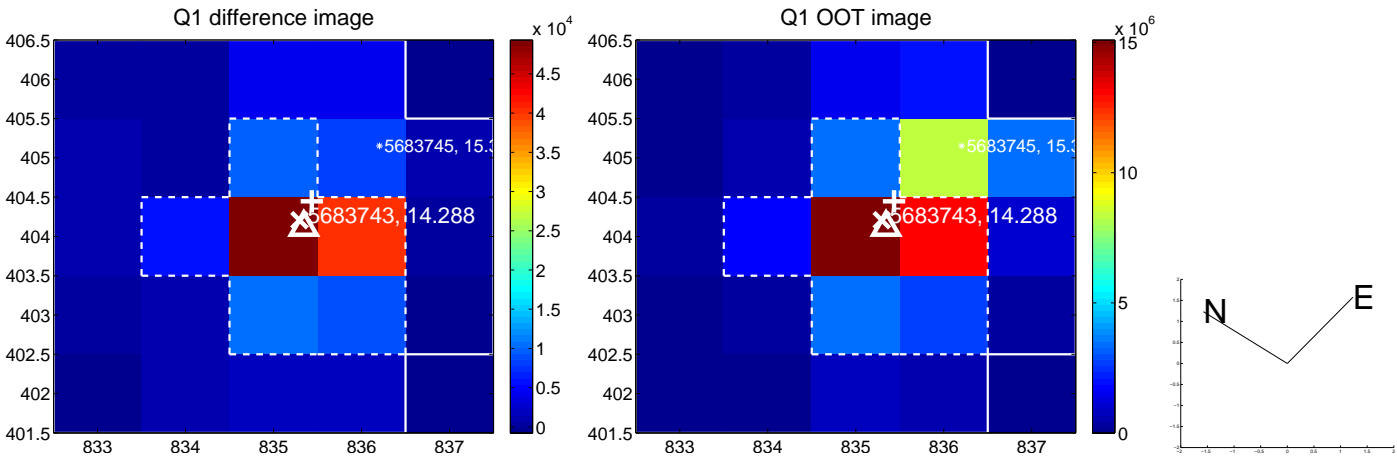
The direct PRF centroid is offset from the target star catalog position by about 0.57 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.707 ± 0.127	5.55	-0.701 ± 0.120	-0.088 ± 0.099
PRF-fit source offset from KIC position	0.195 ± 0.074	2.62	-0.079 ± 0.071	-0.178 ± 0.072
photometric centroid source offset	0.36 ± 0.03	13.74	0.01 ± 0.03	-0.36 ± 0.03

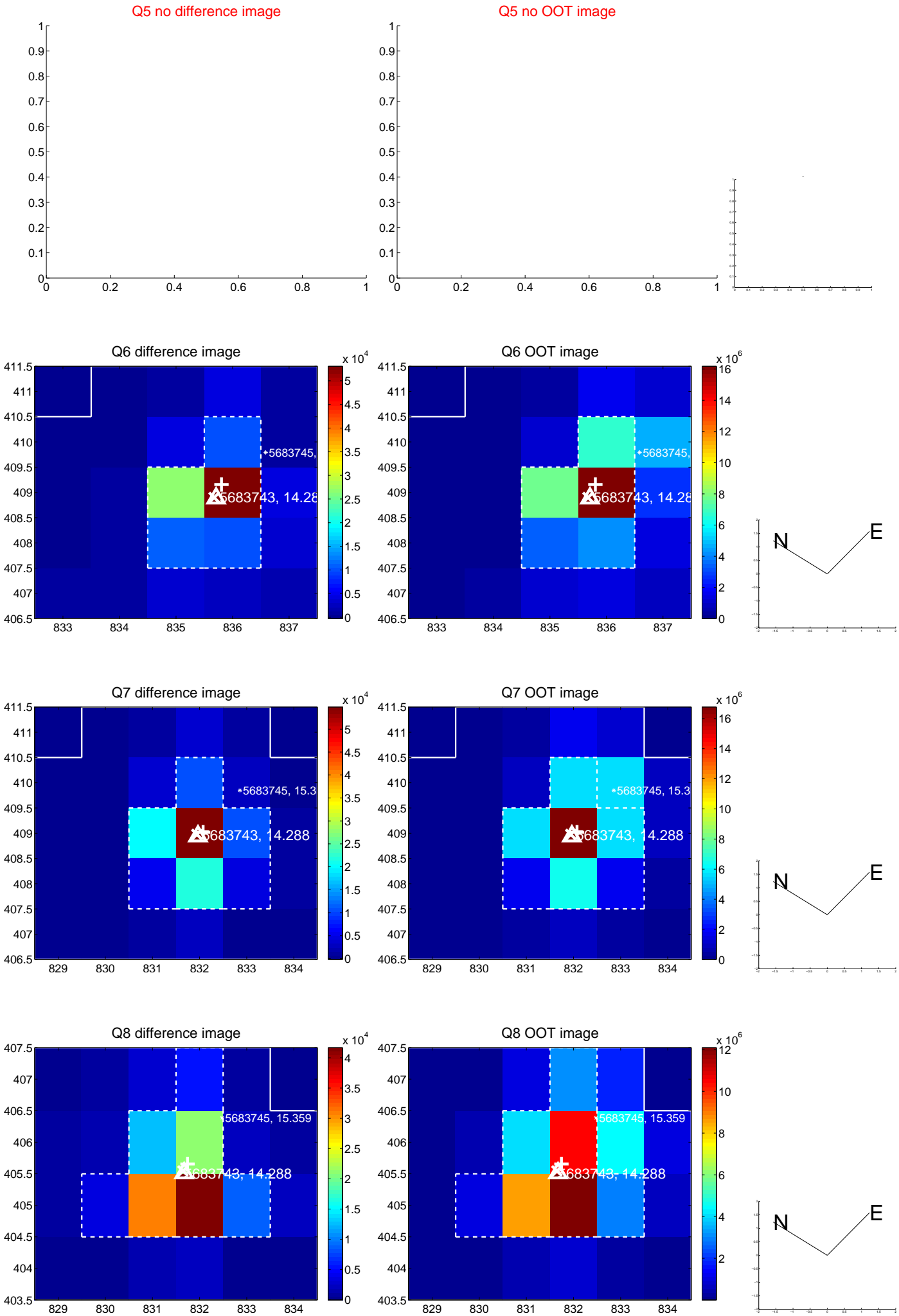


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

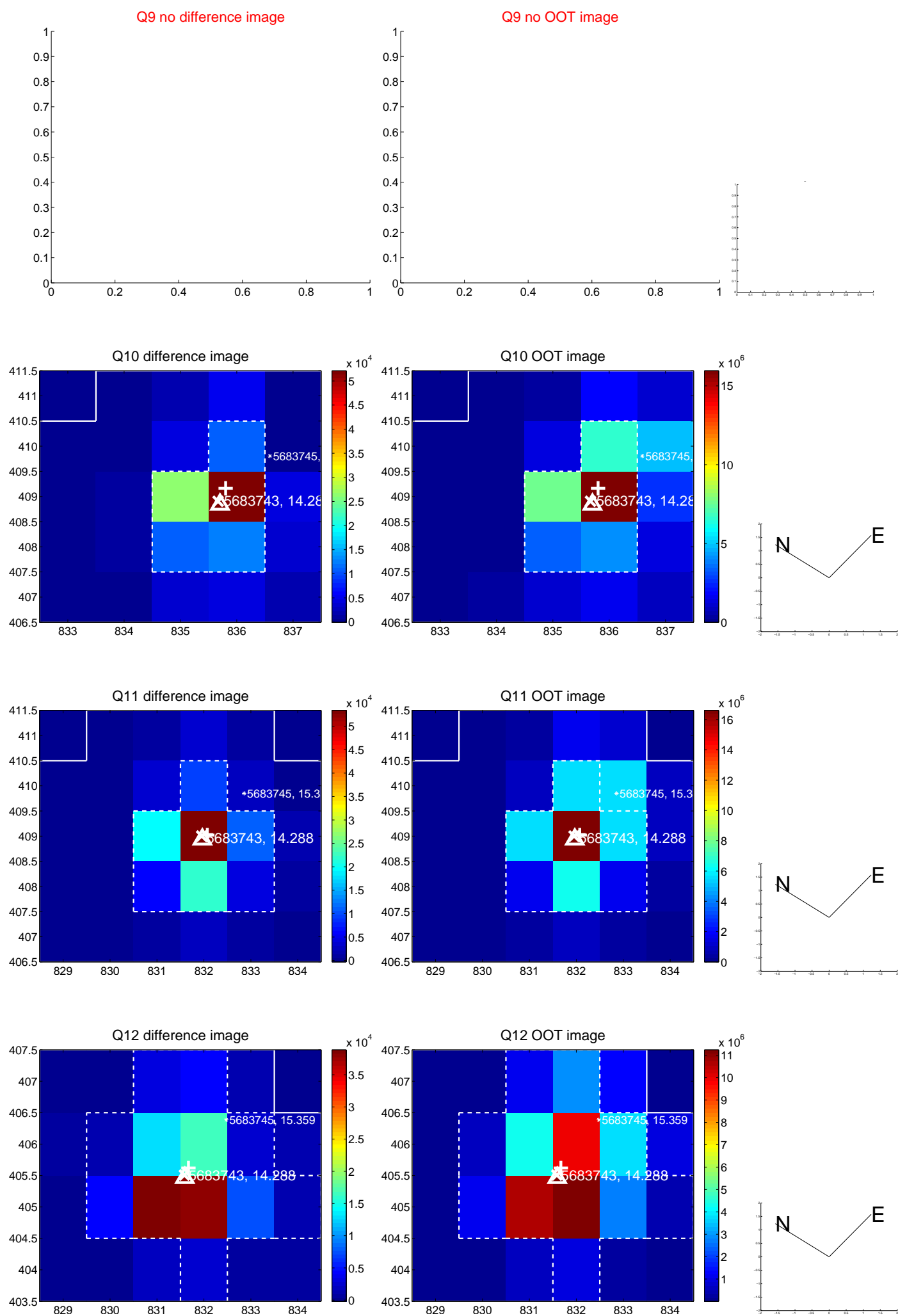
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



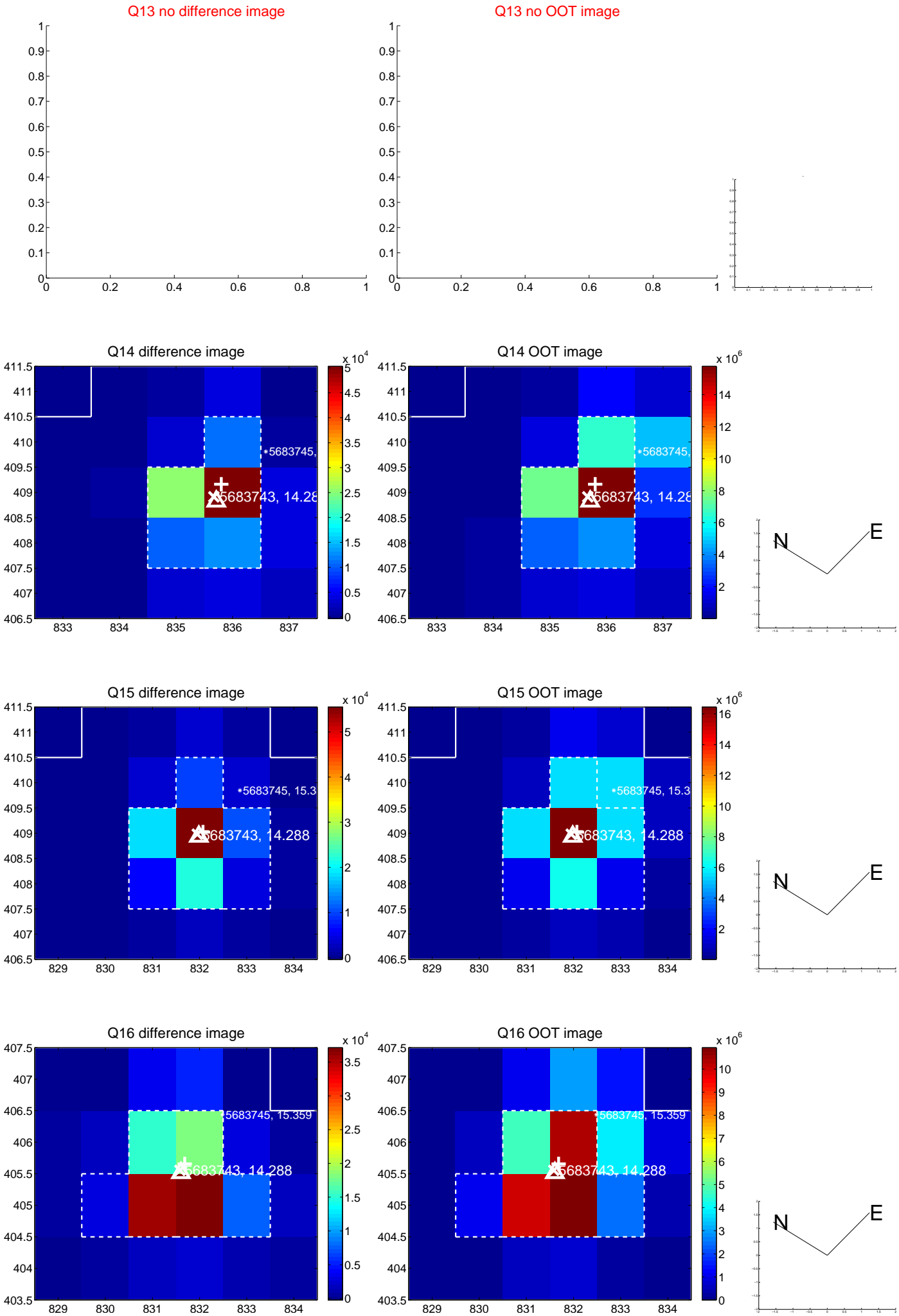
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



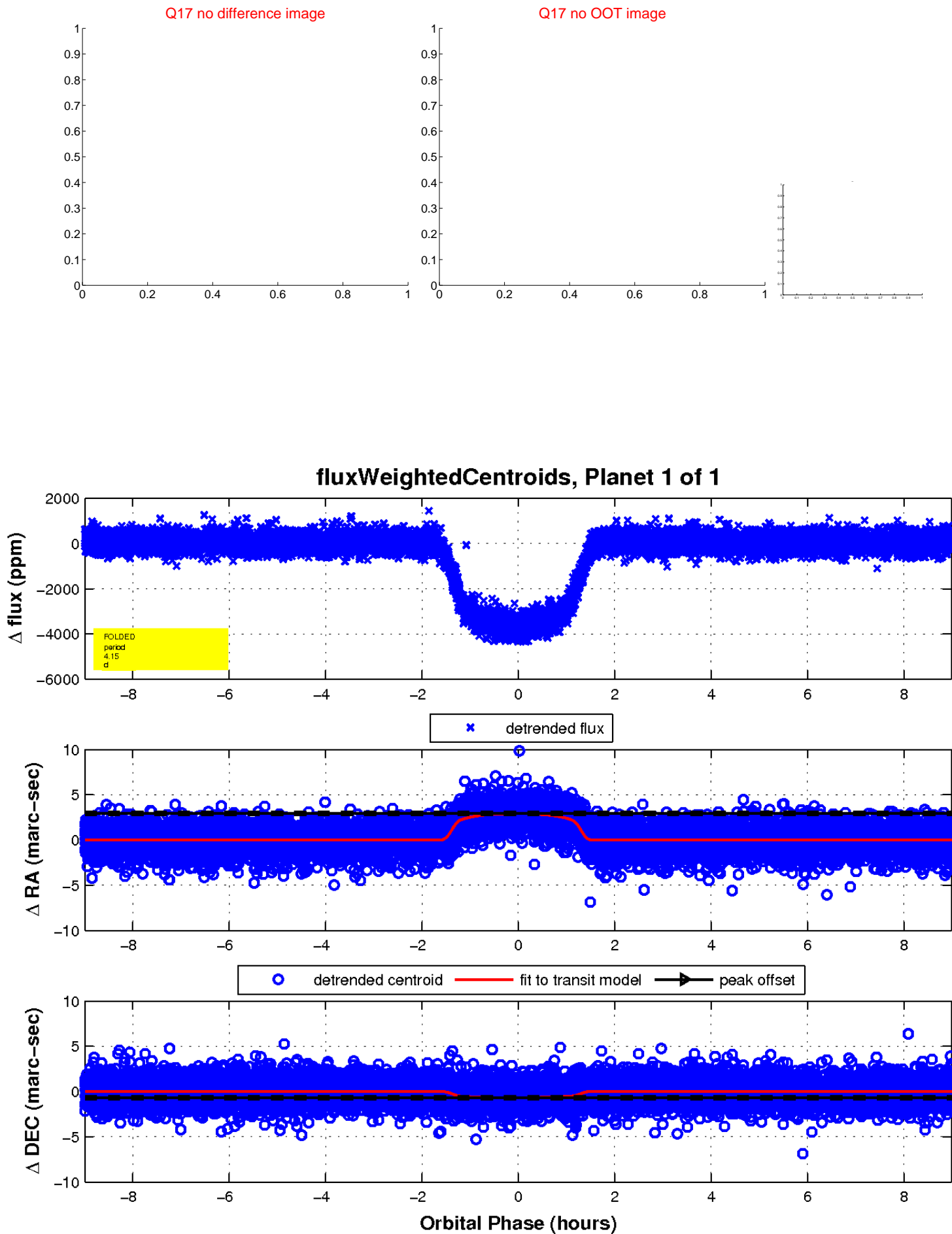
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

