

KIC 010917043

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})
010917043-01	OBS	2770.01	205.385765	284.188469	1226.0	8.737	19.2	19.6	0.62	4400	2.29	0.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010917043-01	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.

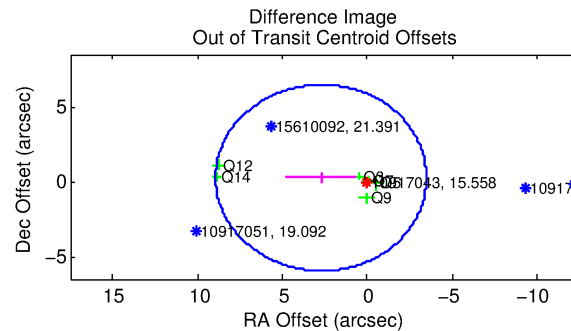
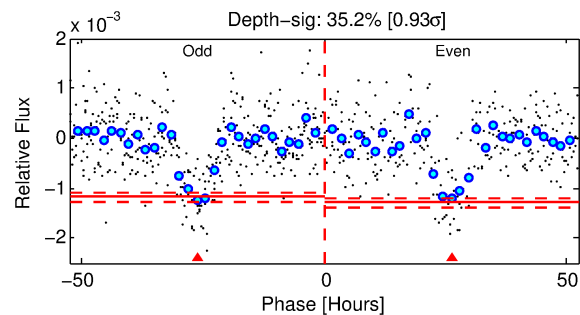
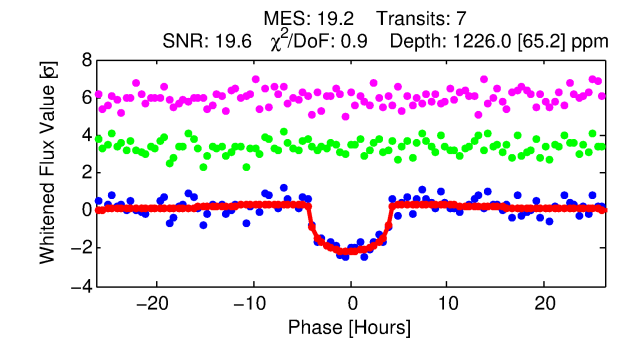
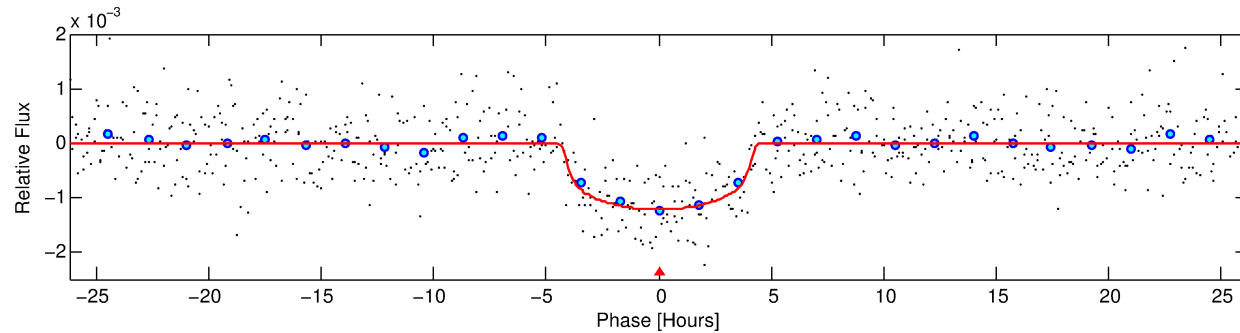
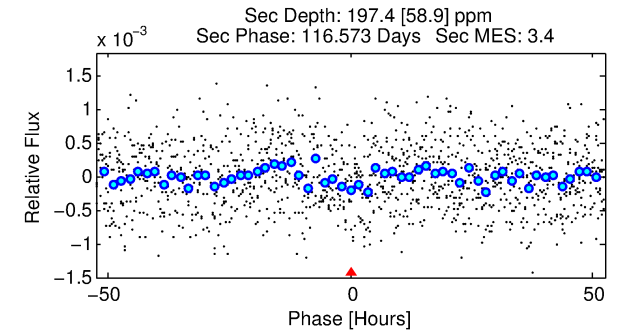
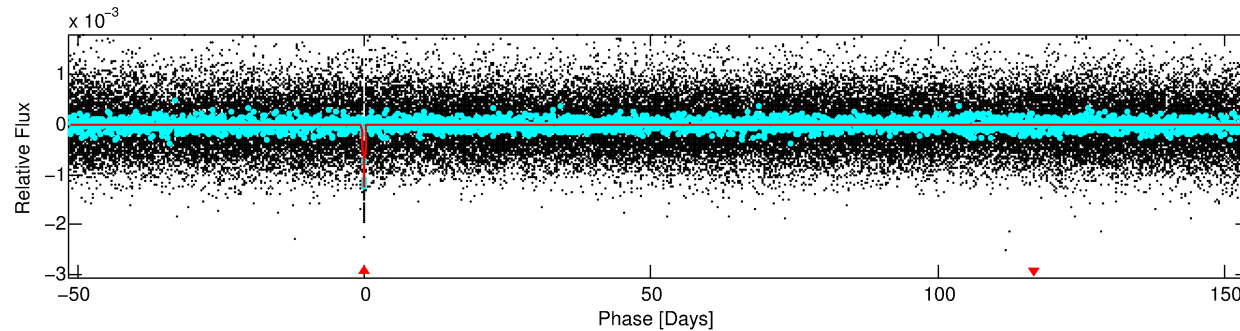
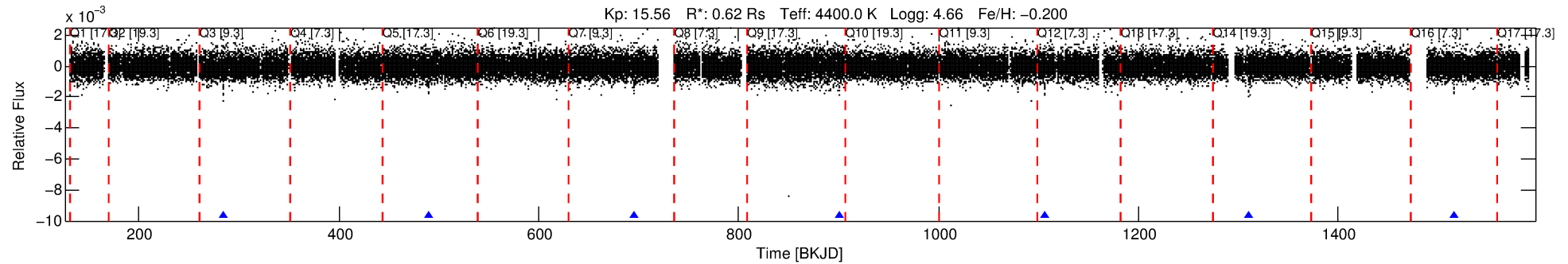
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010917043-01

No Significant Match Found

DV One-Page Summary

KIC: 10917043 Candidate: 1 of 1 Period: 205.386 d
KOI: K02770.01 Corr: 0.988



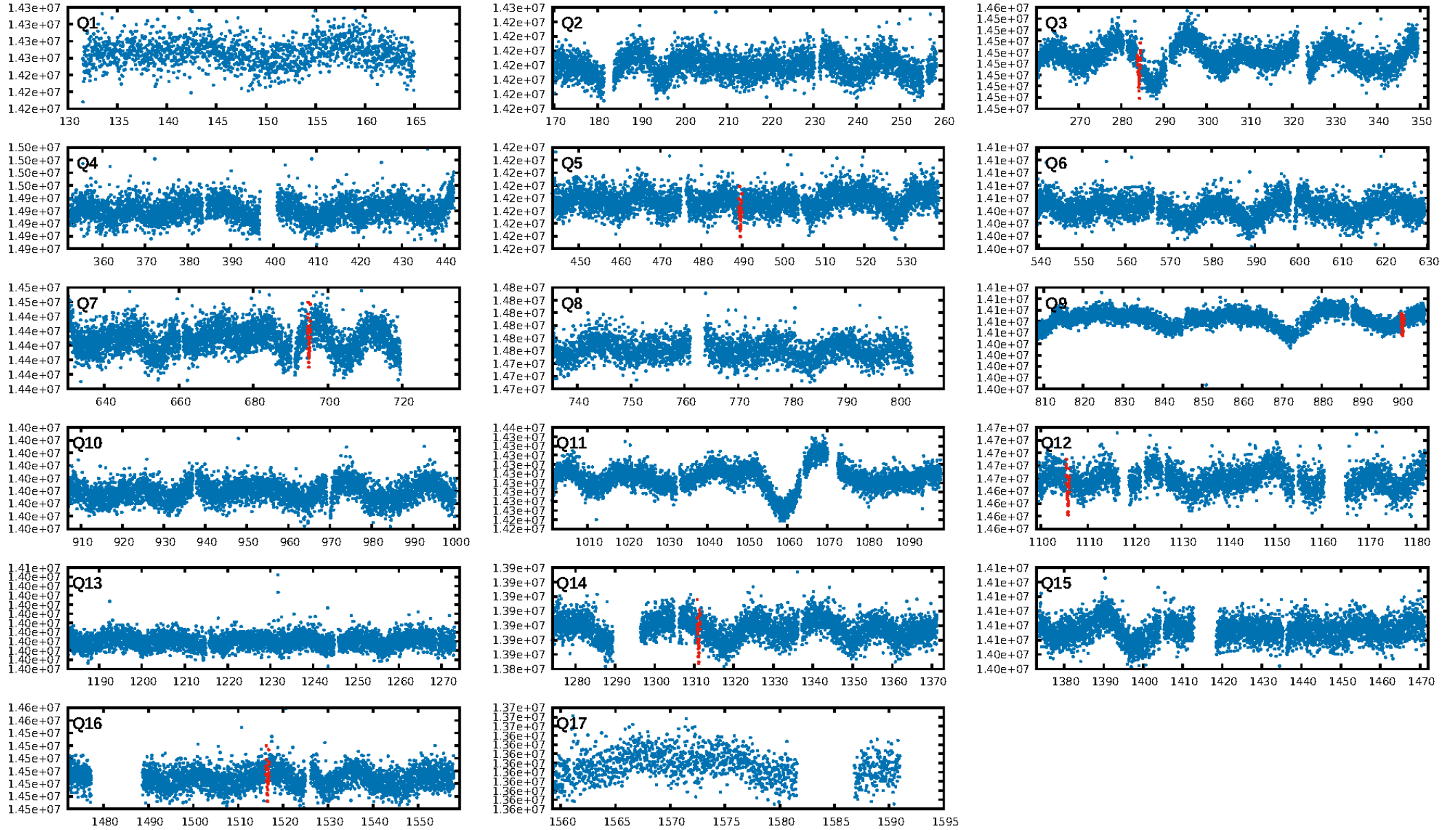
DV Fit Results:

Period = 205.38577 [0.00198] d
Epoch = 284.1885 [0.0073] BKJD
Rp/R* = 0.0337 [0.0110]
a/R* = 143.39 [148.55]
b = 0.66 [0.92]
Seff = 0.38 [0.06]
Teq = 200 [8] K
Rp = 2.29 [0.78] Re
a = 0.5896 [0.0389] AU
Ag = 7188.06 [5215.12] [1.38σ]
Teffp = 2843 [522] K [5.06σ]

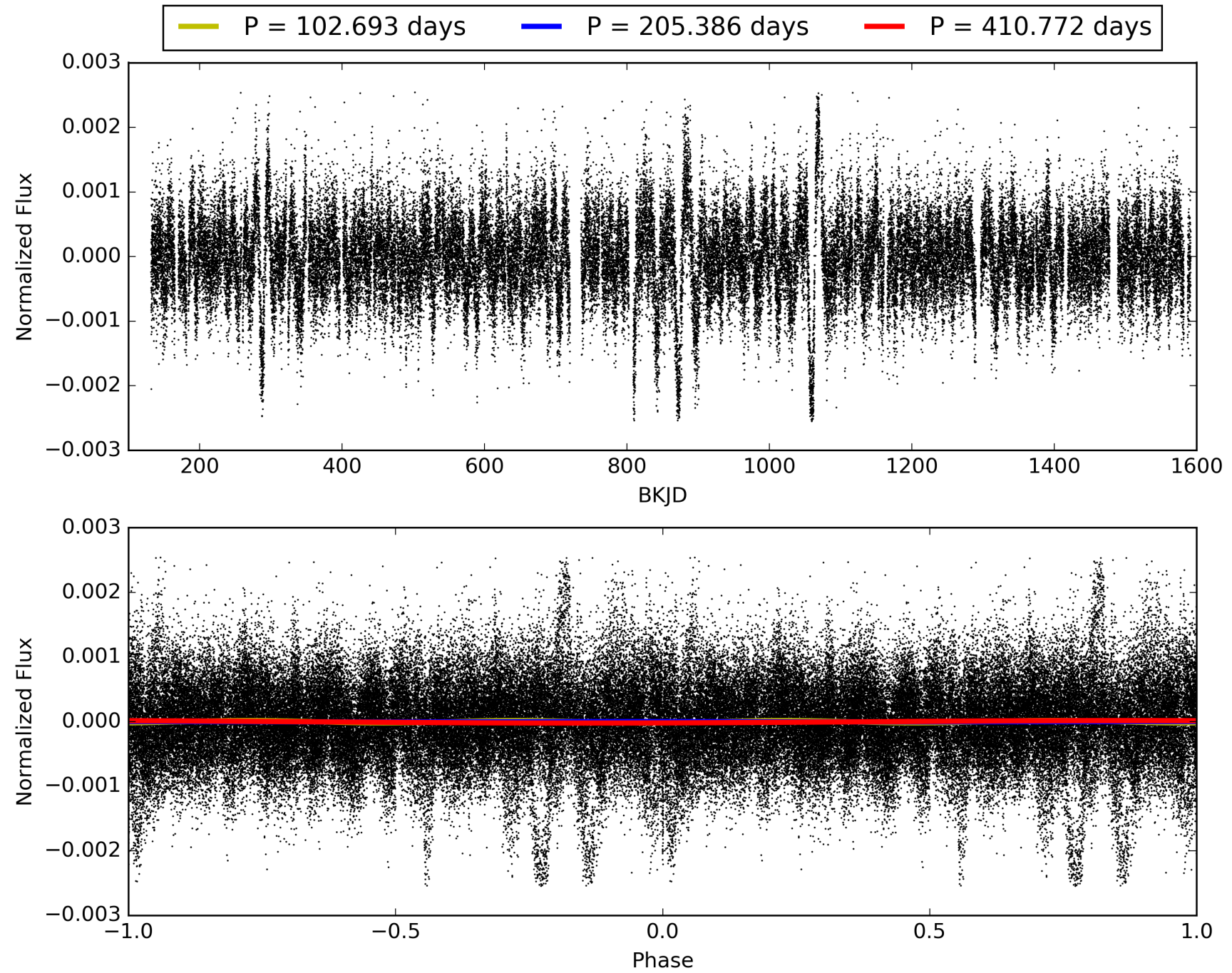
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 61.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.70e-66
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 7.893
Centroid-sig: 0.1%
Centroid-so: 1.847 arcsec [2.98σ]
OotOffset-rm: 2.723 arcsec [1.31σ]
KicOffset-rm: 0.316 arcsec [1.67σ]
OotOffset-st: 1/2/1/2 [6]
KicOffset-st: 1/2/1/2 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [6/6]

TCE 010917043-01, PDC Light Curves

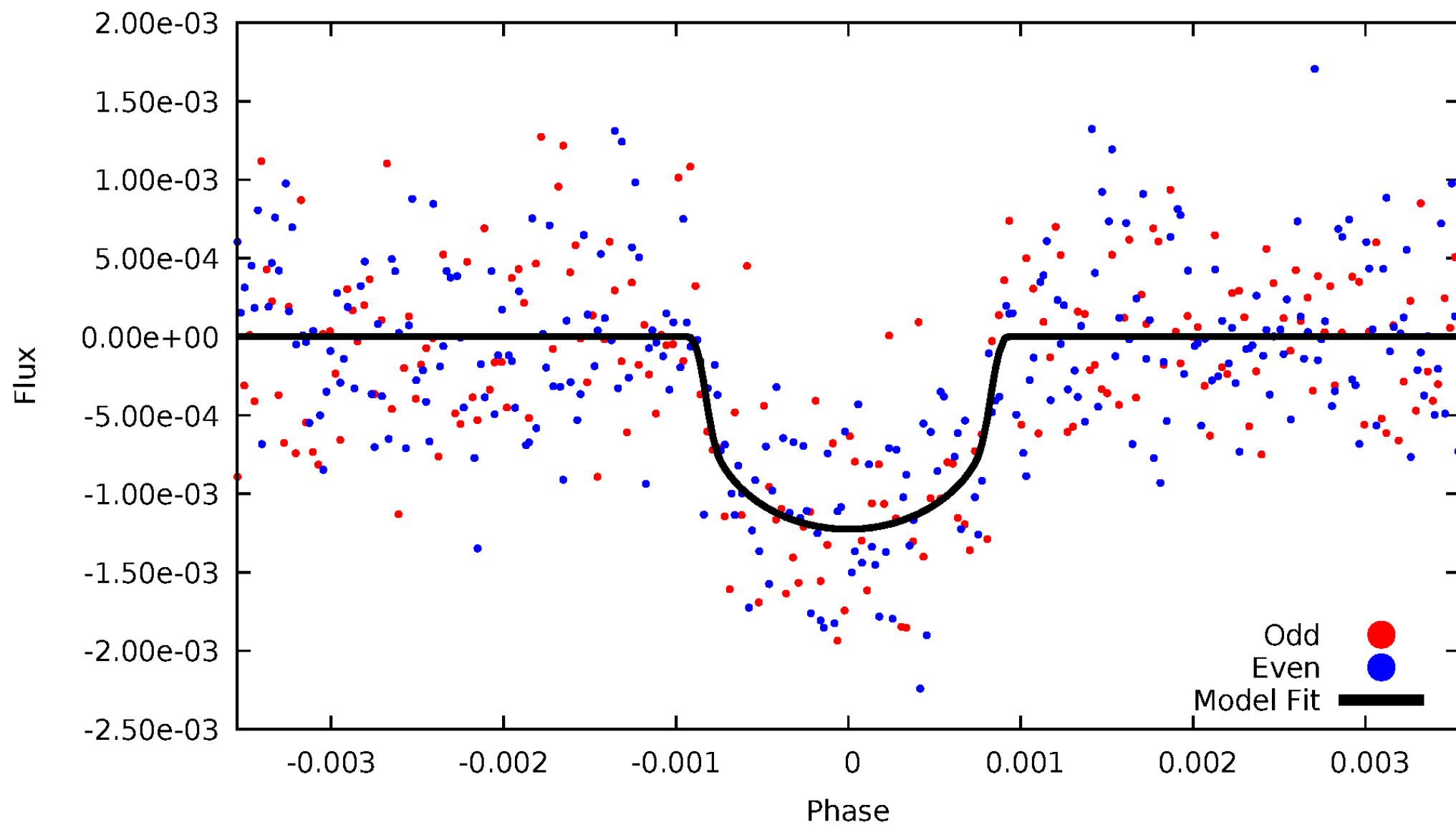


TCE 010917043-01



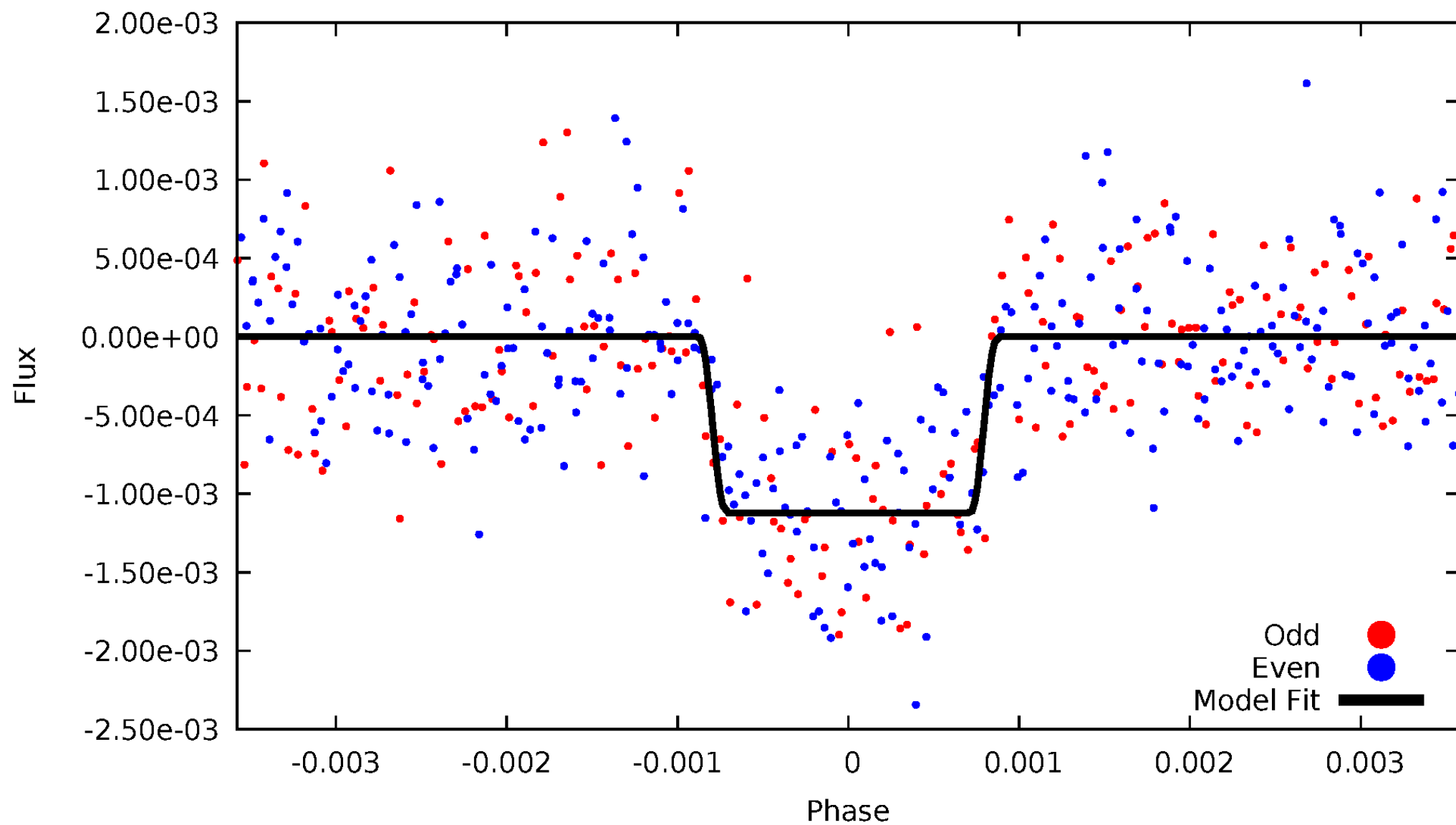
DV Odd/Even

TCE 010917043-01

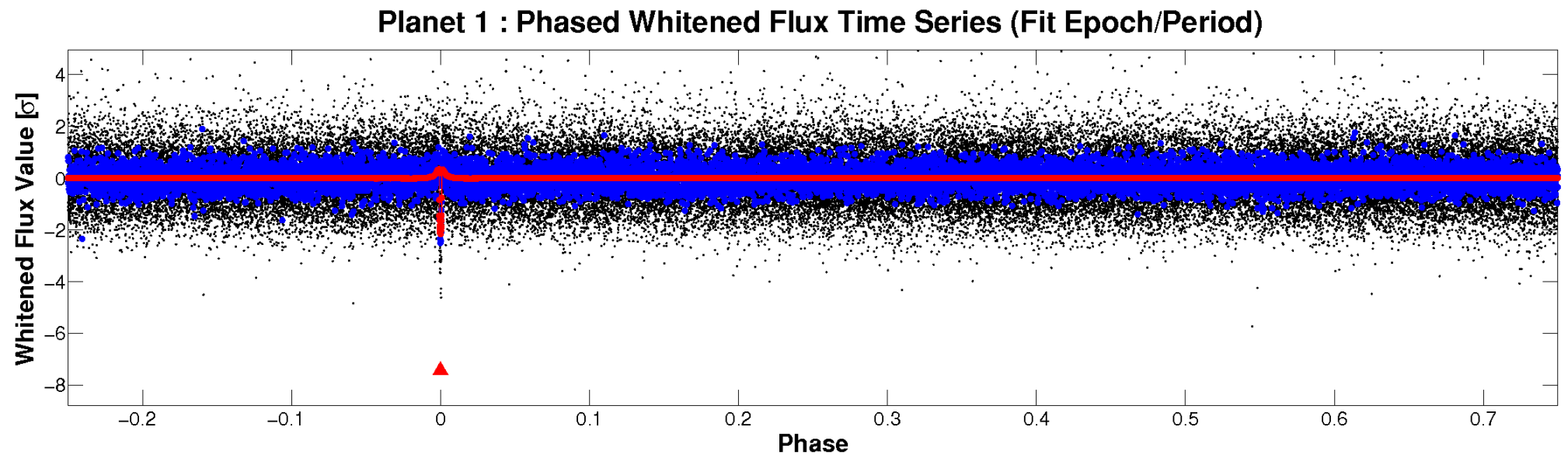
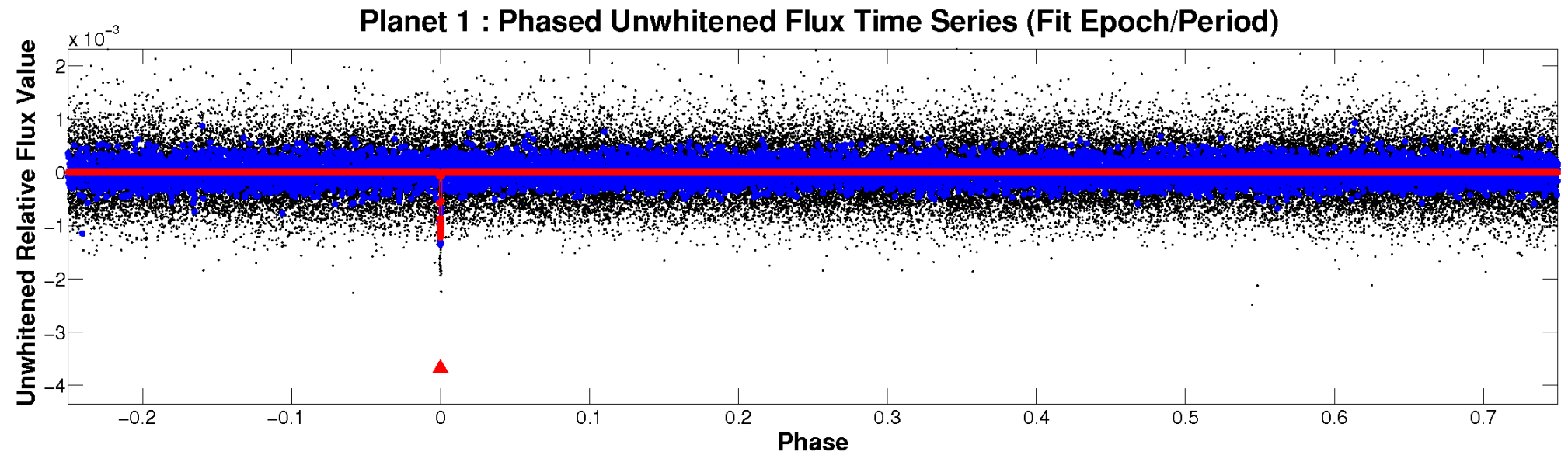


ALT Odd/Even

TCE 010917043-01

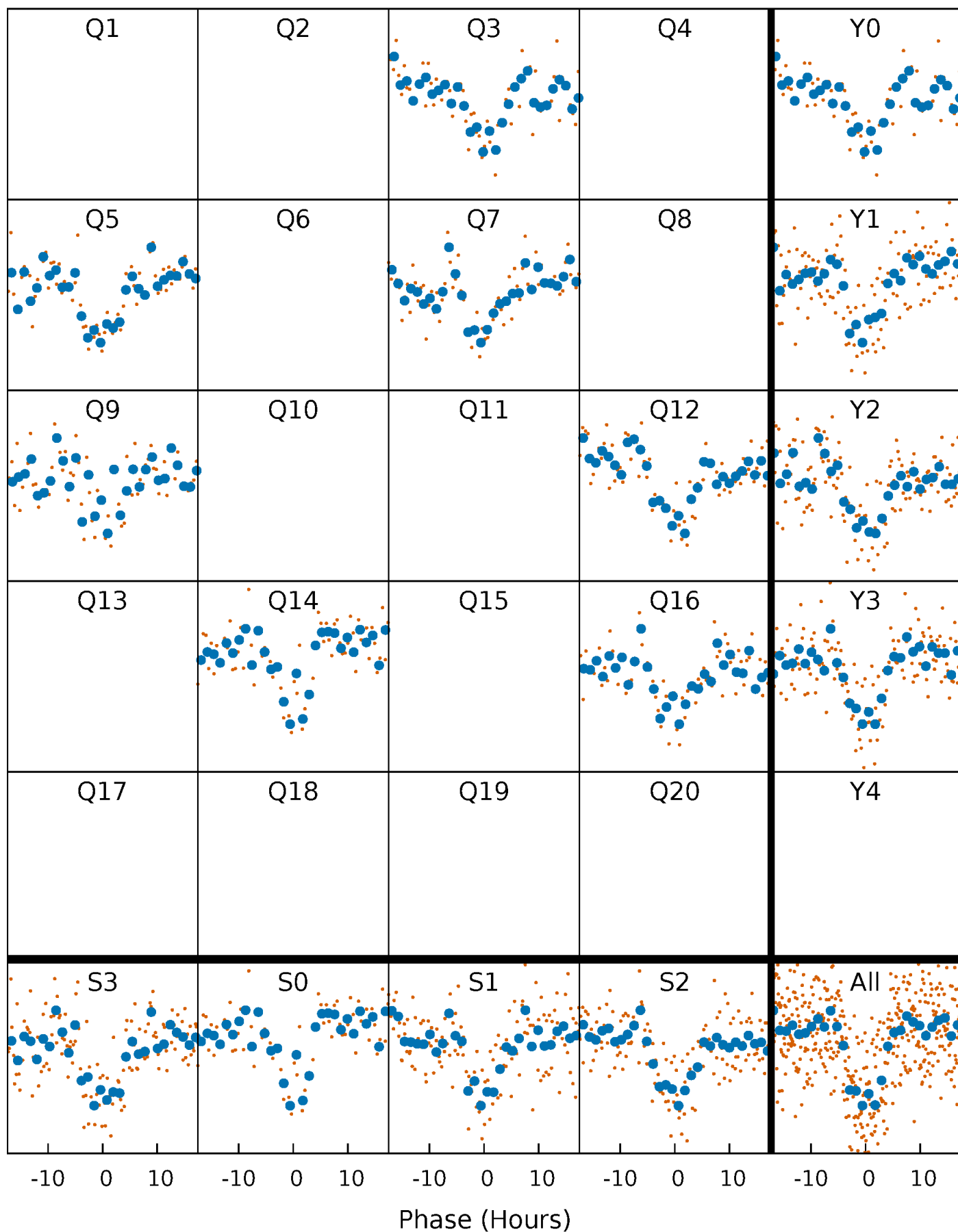


Non-Whitened Vs. Whitened Light Curve



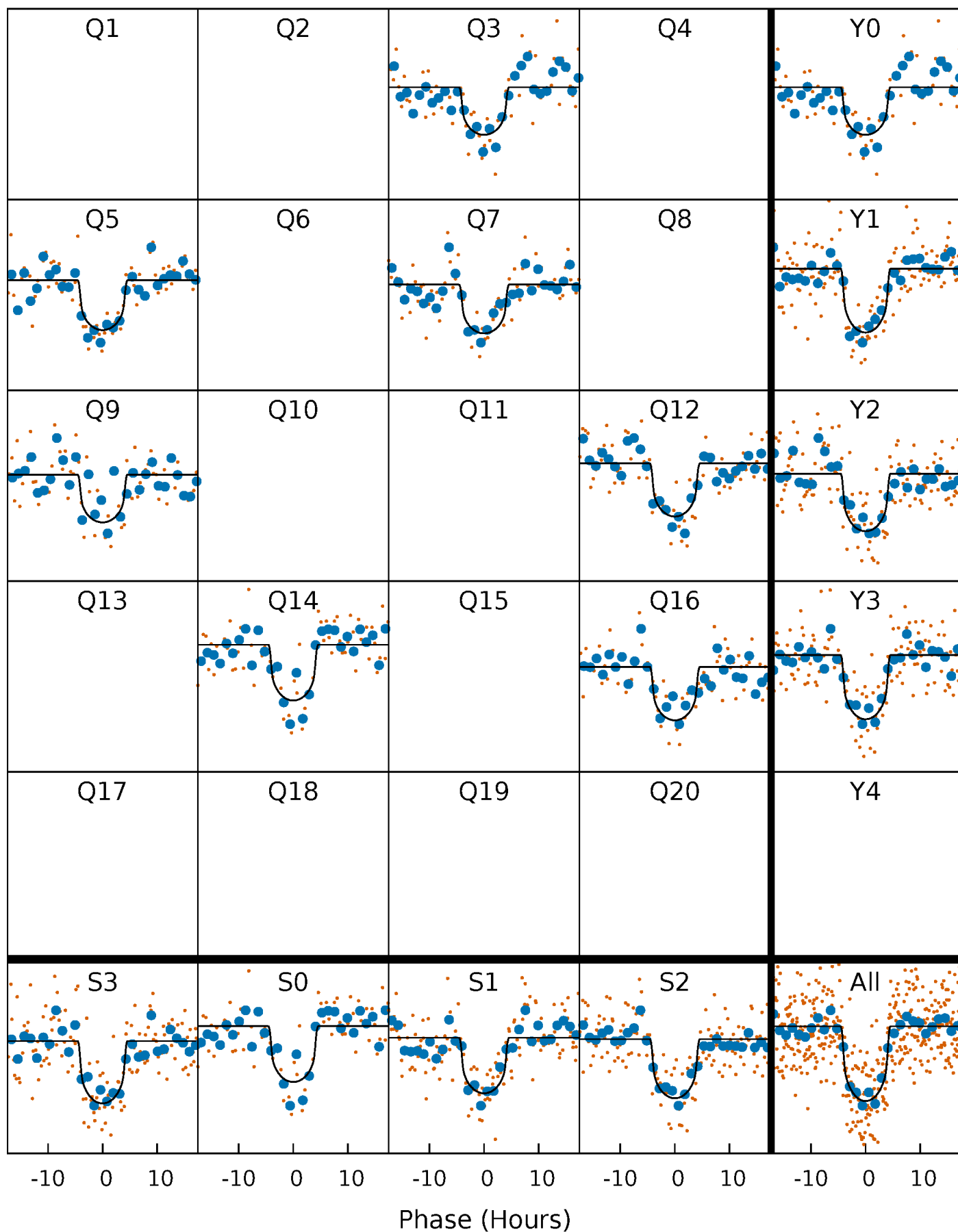
PDC Quarter-Phased Transit Curves

TCE 010917043-01 P=205.385765 Days $T_0=284.188469$ (BKJD)



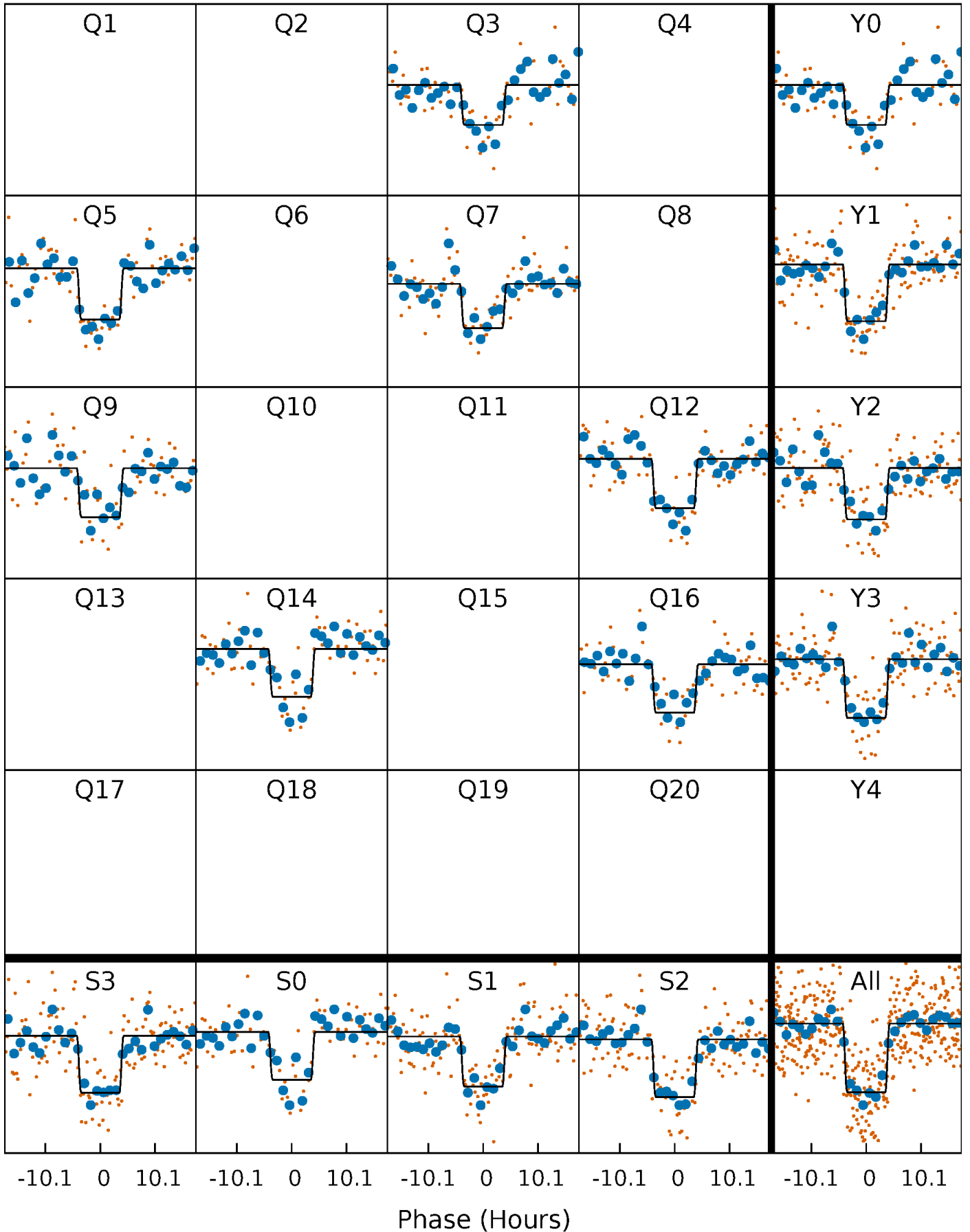
DV Quarter-Phased Transit Curves

TCE 010917043-01 P=205.385765 Days $T_0=284.188469$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

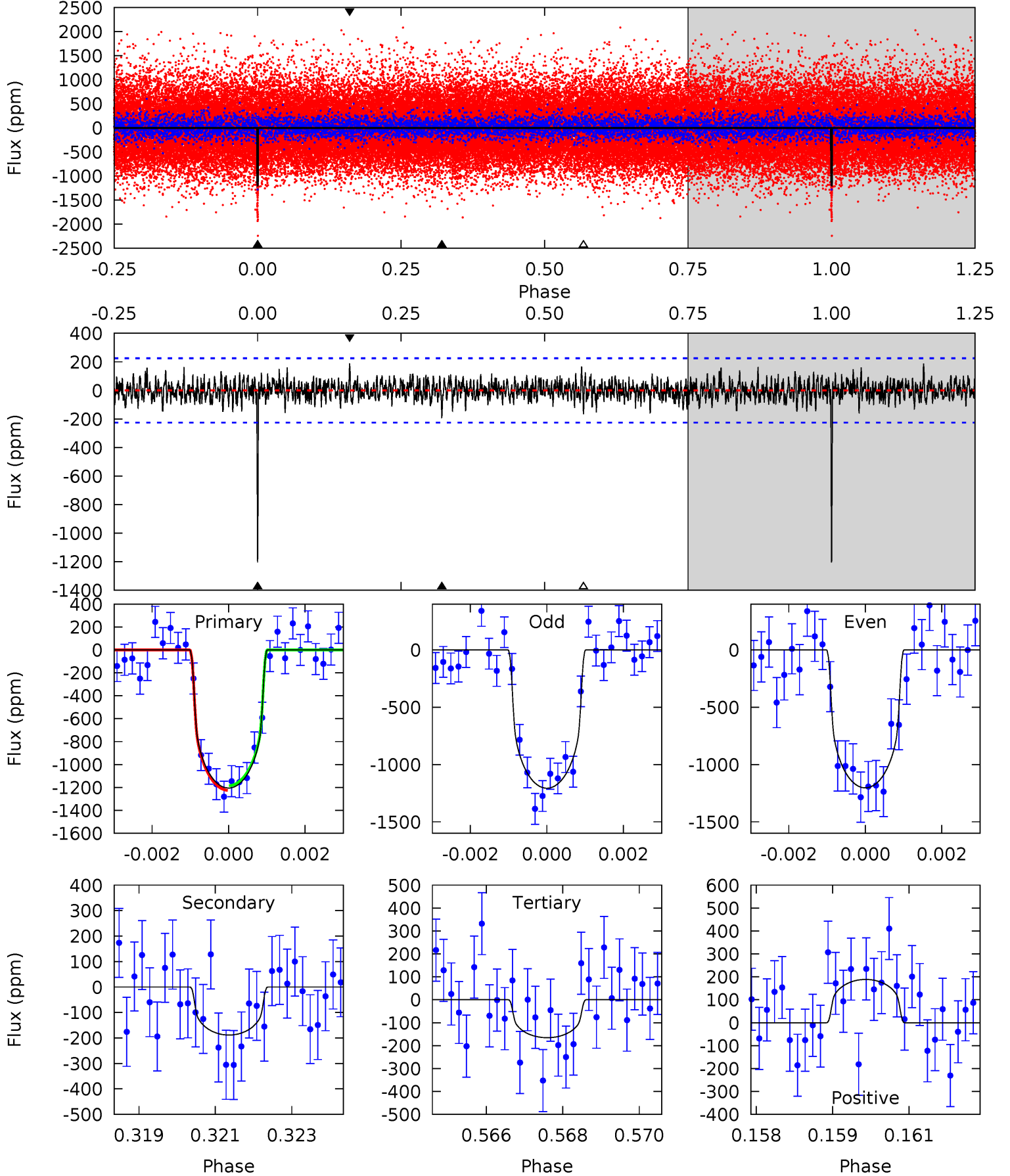
TCE 010917043-01 P=205.384523 Days $T_0=284.193114$ (BKJD)



DV Model-Shift Uniqueness Test

010917043-01, P = 205.385765 Days, E = 78.802704 Days

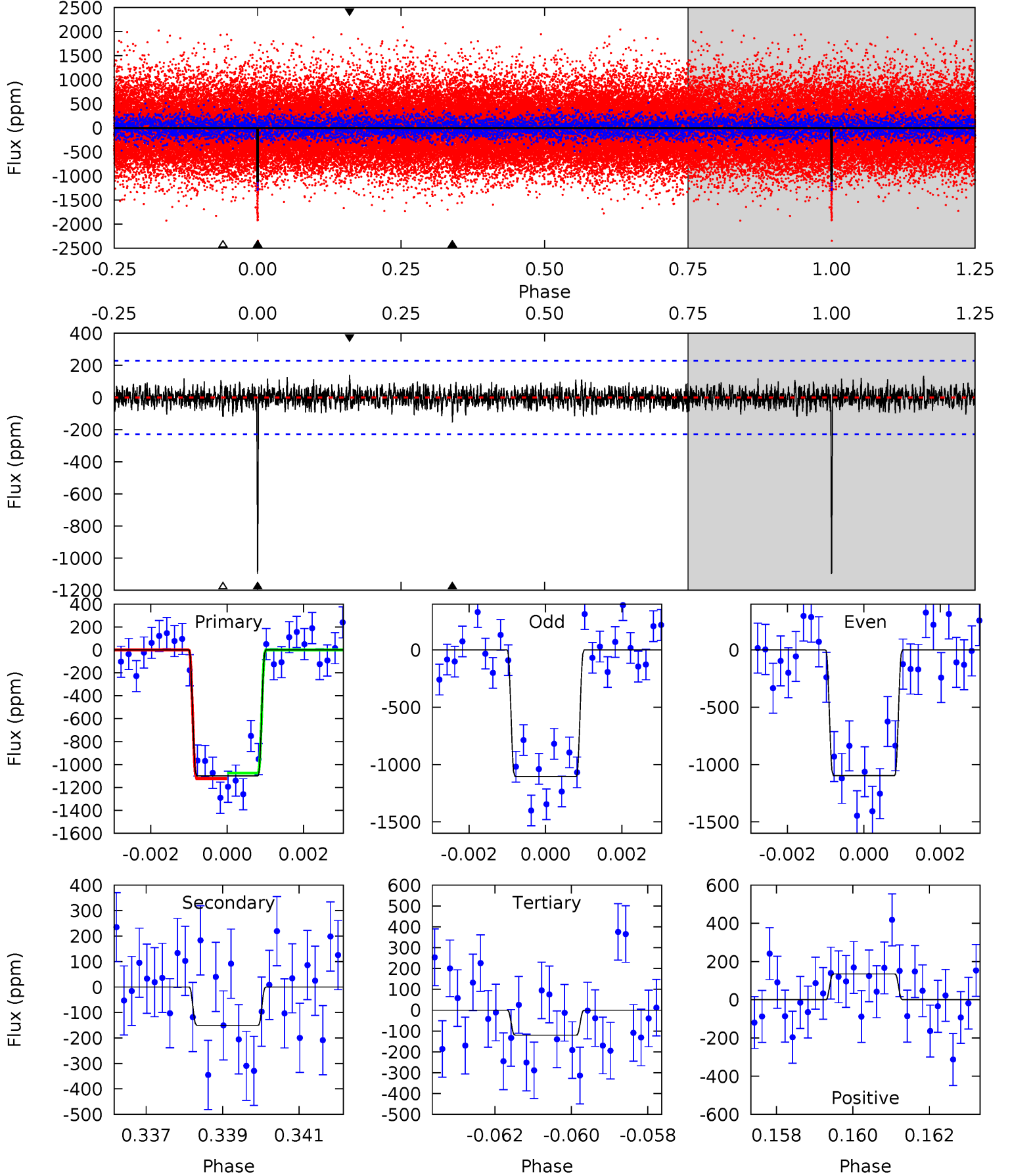
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	4.47	3.93	4.47	5.34	3.12	1.20	24.7	24.1	0.54	-0.00	0.04	0.96	0.14	0.48



Alt Model-Shift Uniqueness Test

010917043-01, P = 205.384523 Days, E = 78.808591 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	3.53	2.81	3.17	5.35	3.13	0.87	23.0	22.6	0.72	0.36	0.10	1.01	0.11	0.56



Stellar Parameters For KIC 010917043

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4400^{+157}_{-157}	$4.659^{+0.035}_{-0.039}$	$-0.200^{+0.300}_{-0.300}$	$0.624^{+0.055}_{-0.050}$	$0.646^{+0.062}_{-0.062}$	$3.755^{+0.652}_{-0.555}$
	+4%/-4%	+1%/-1%	+150%/-150%	+9%/-8%	+10%/-10%	+17%/-15%
Source	PHO16	PHO16	PHO16	DSEP		

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

Secondary Eclipse Parameters for KIC 010917043-01 / KOI 2770.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-188 ± 42	$2.27^{+0.76}_{-0.75}$	279^{+12}_{-10}	3257^{+471}_{-288}	7027^{+8702}_{-3314}
Alt.	-150 ± 43	$2.34^{+0.74}_{-0.83}$	279^{+12}_{-10}	3118^{+433}_{-284}	5070^{+7697}_{-2343}

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 $A_{obs} \gg 1.0$

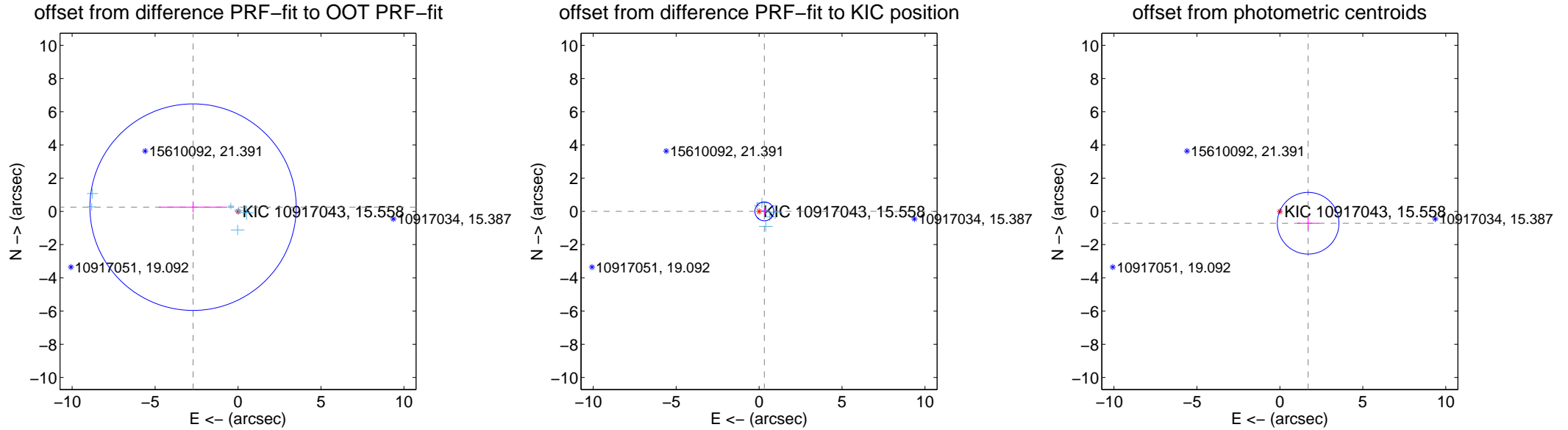
DV Centroid Data

Supplemental centroid analysis for 010917043-01. Kepler magnitude: 15.56. Transit SNR 19.59

There are 6 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 9.48 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

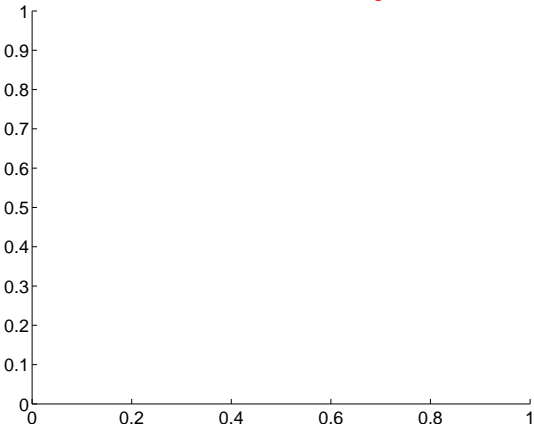
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.723 ± 2.073	1.31	2.711 ± 2.062	0.255 ± 0.317
PRF-fit source offset from KIC position	0.316 ± 0.189	1.67	-0.316 ± 0.189	0.001 ± 0.220
photometric centroid source offset	1.85 ± 0.62	2.98	-1.70 ± 0.65	-0.71 ± 0.42



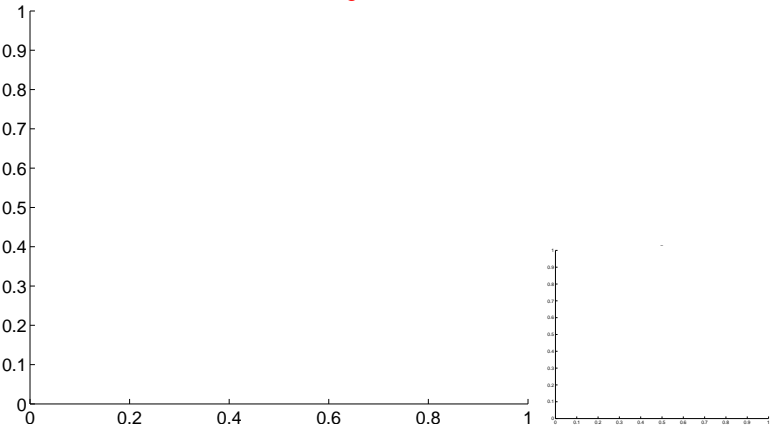
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

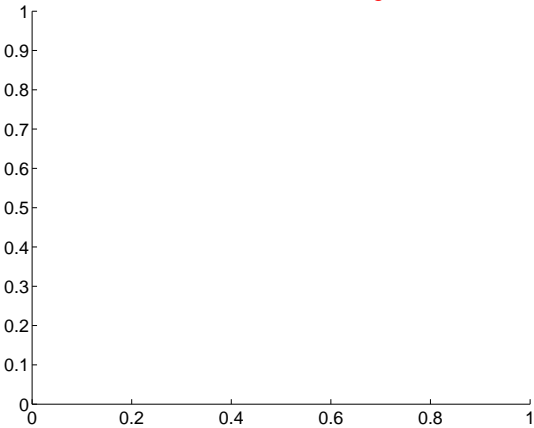
Q1 no difference image



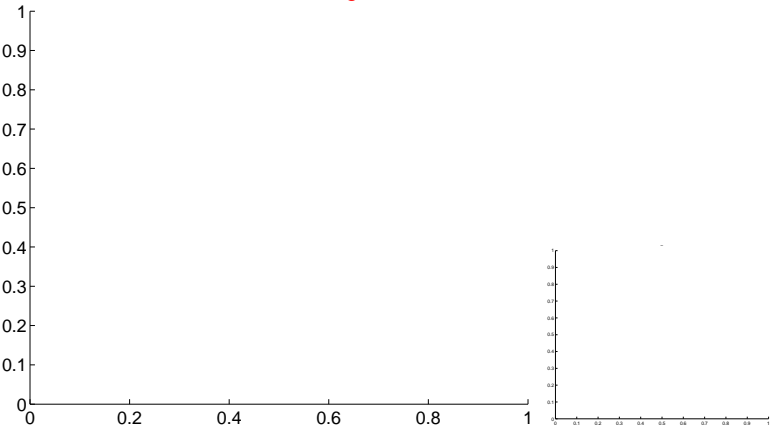
Q1 no OOT image



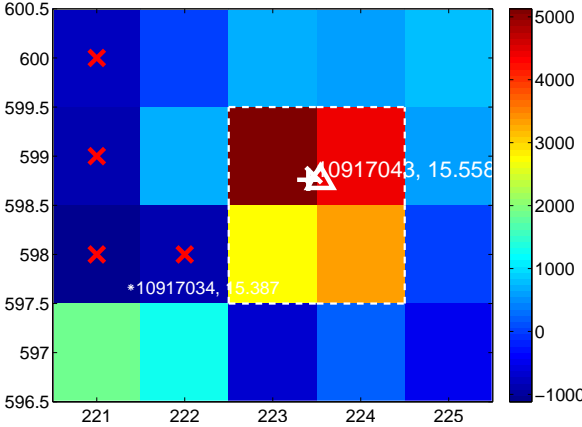
Q2 no difference image



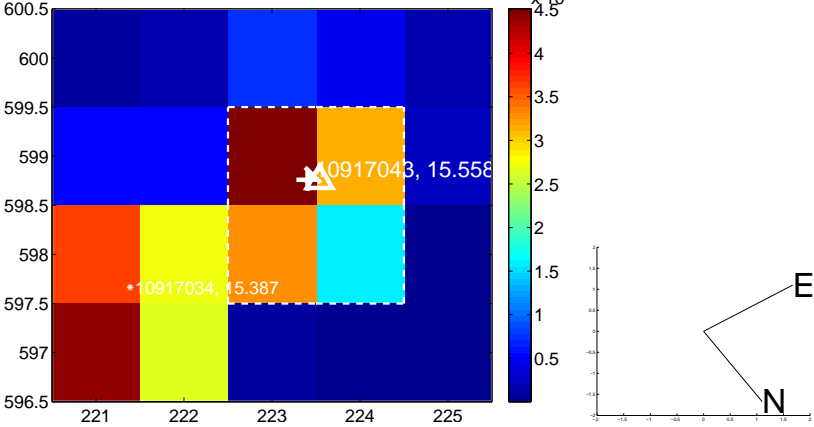
Q2 no OOT image



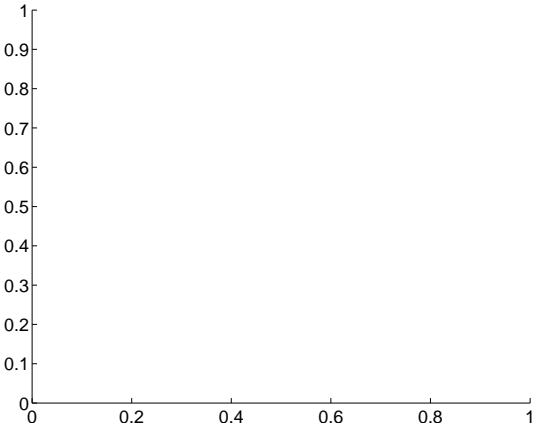
Q3 difference image



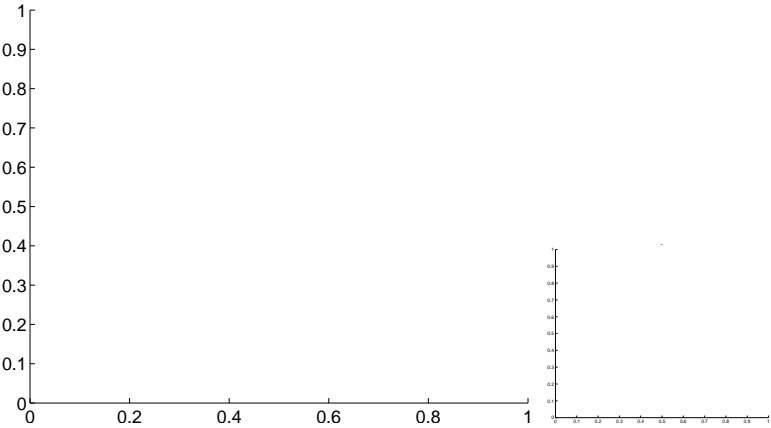
Q3 OOT image



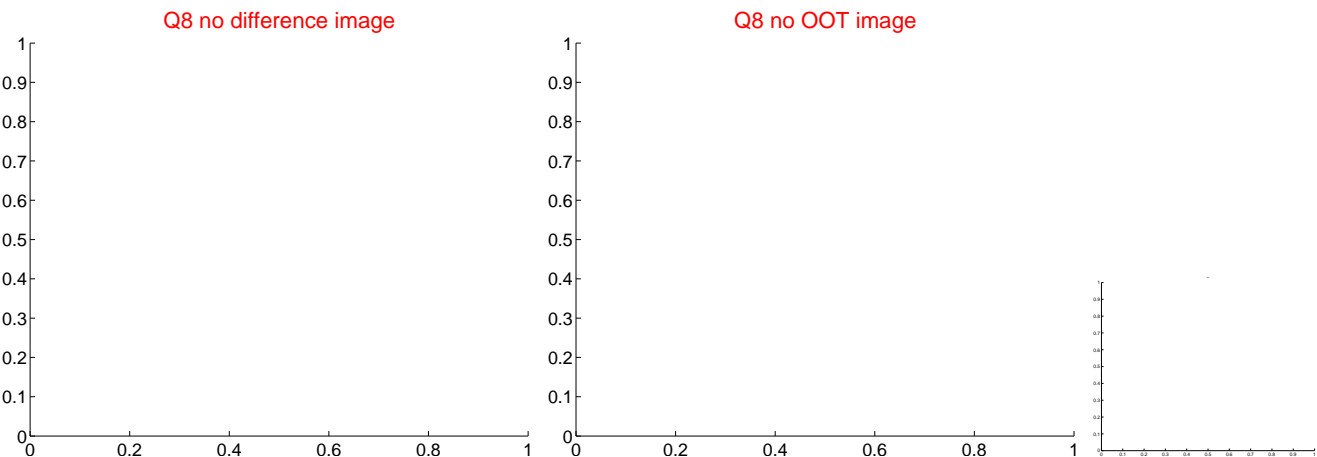
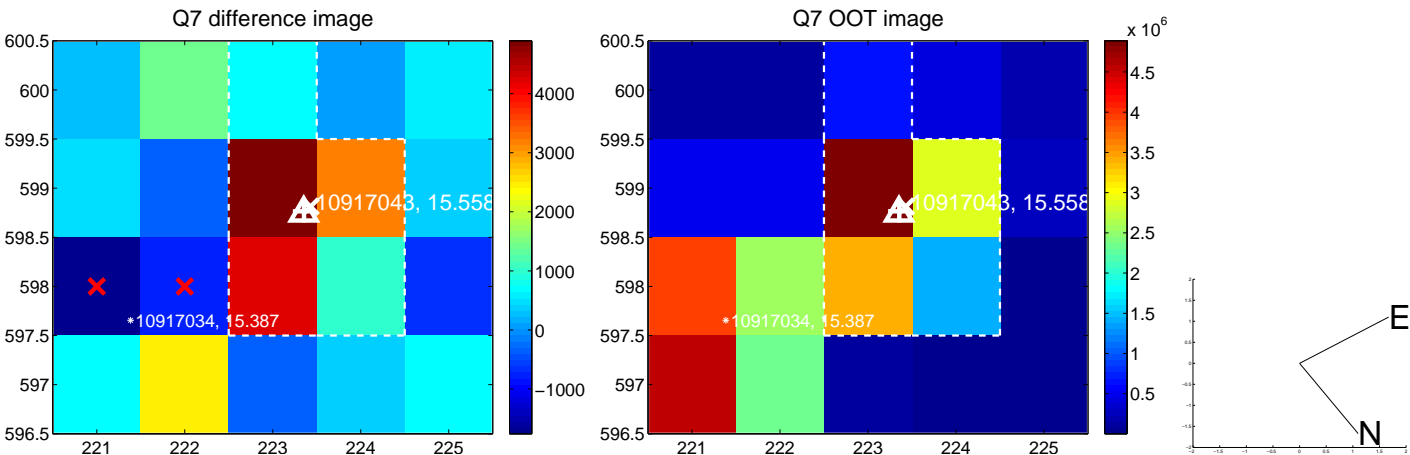
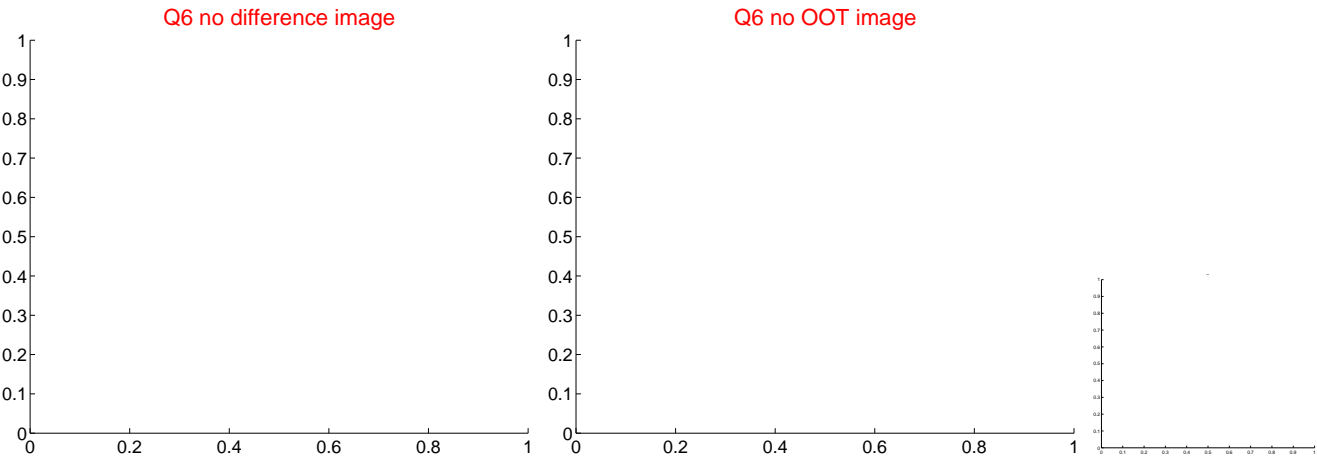
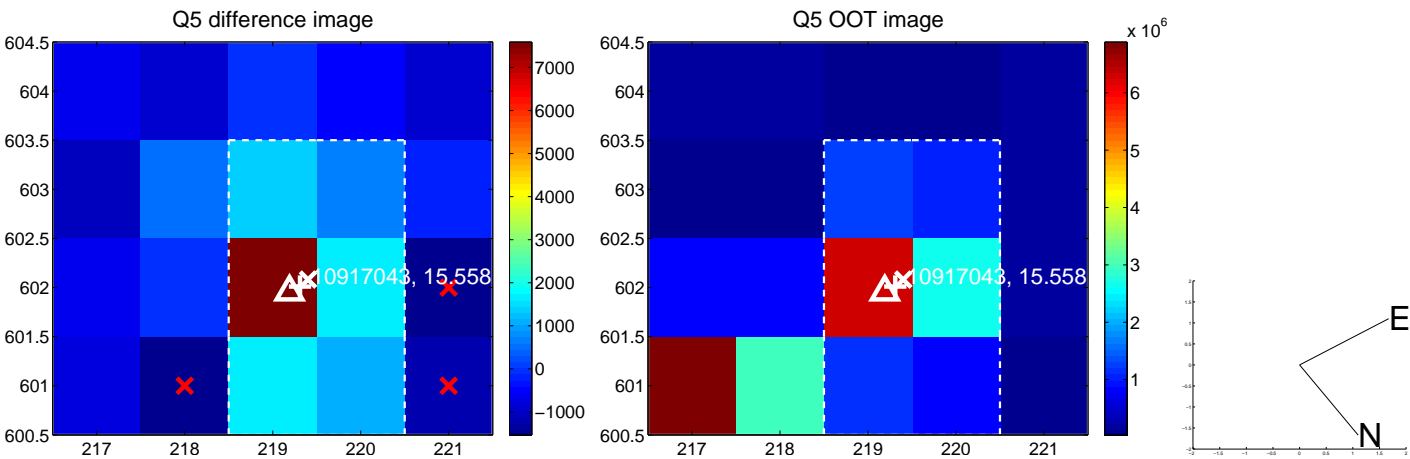
Q4 no difference image



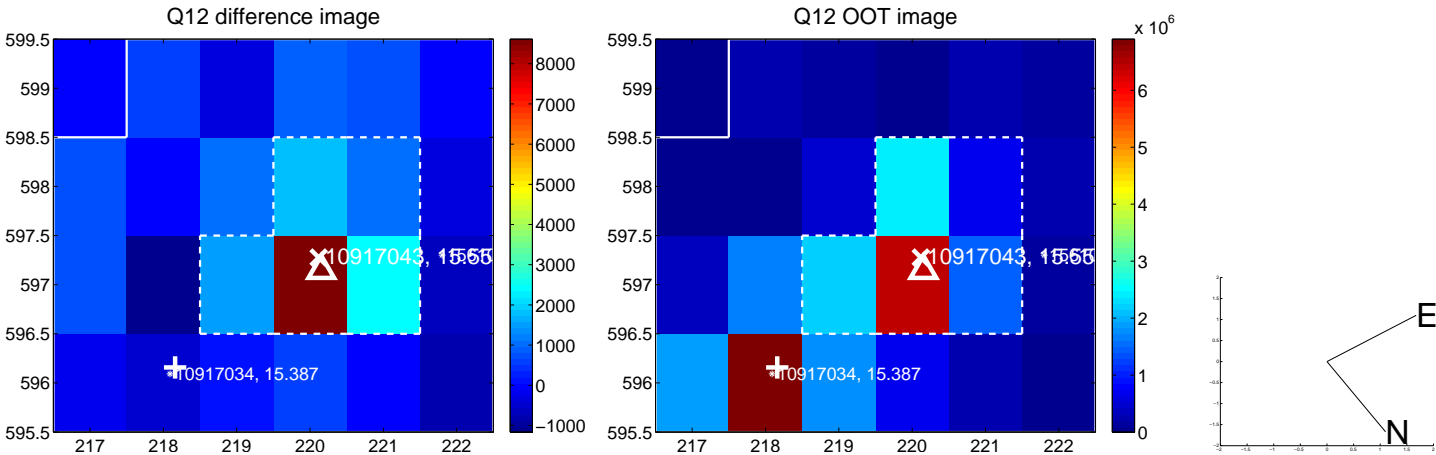
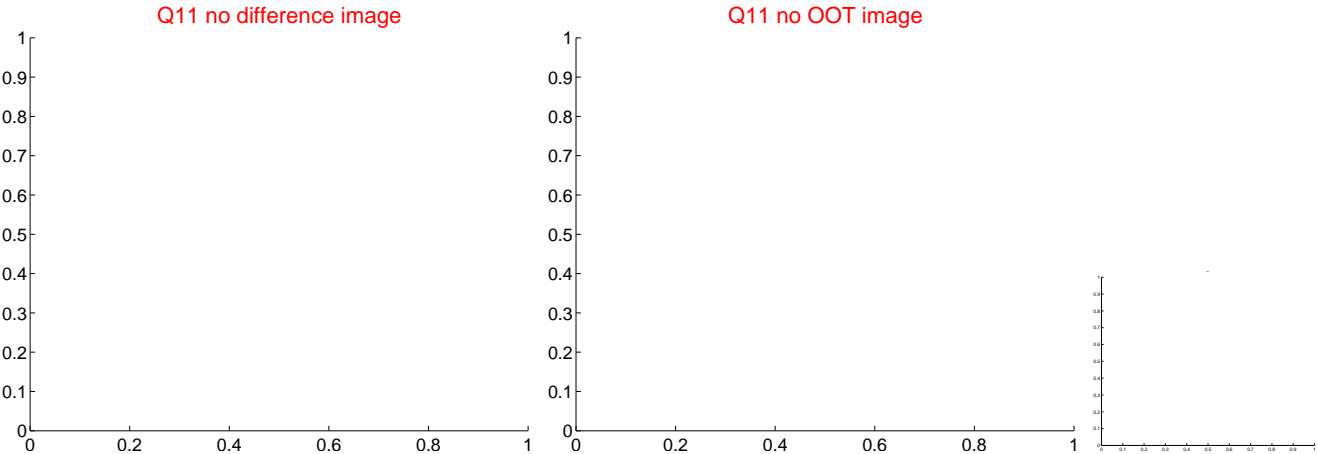
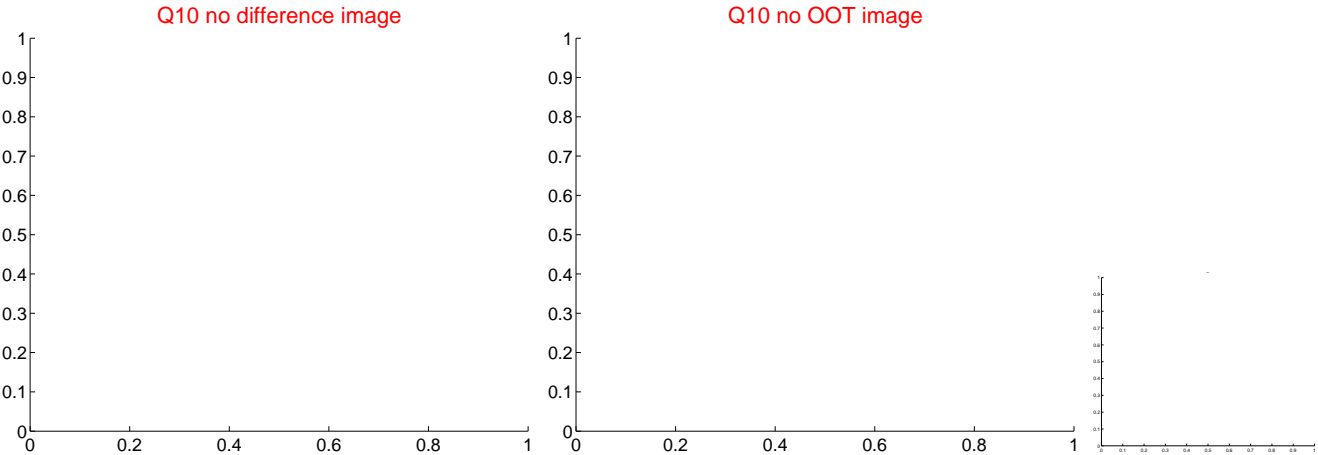
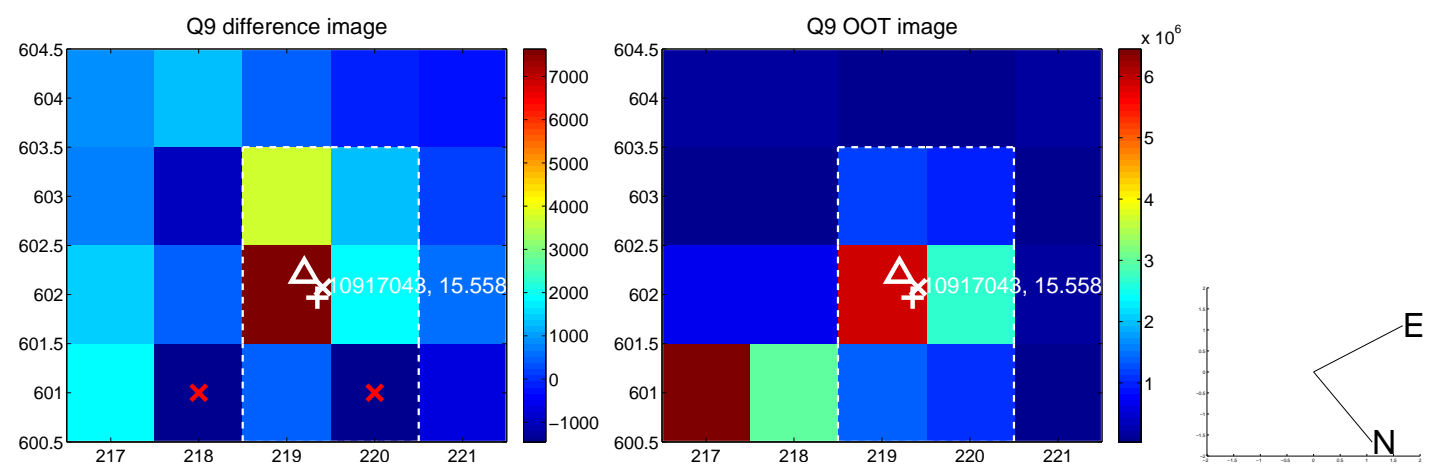
Q4 no OOT image



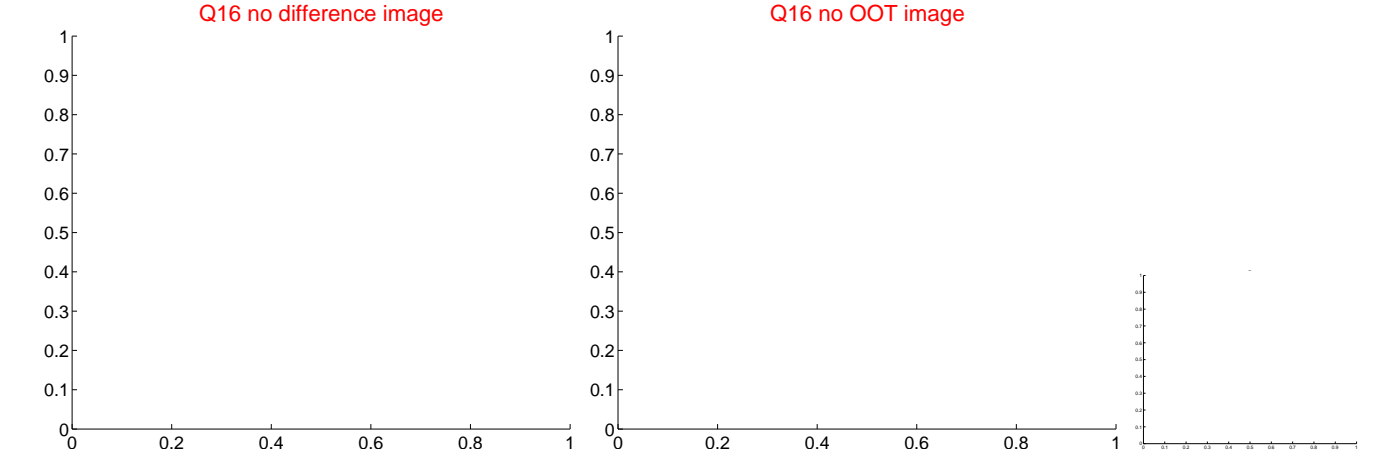
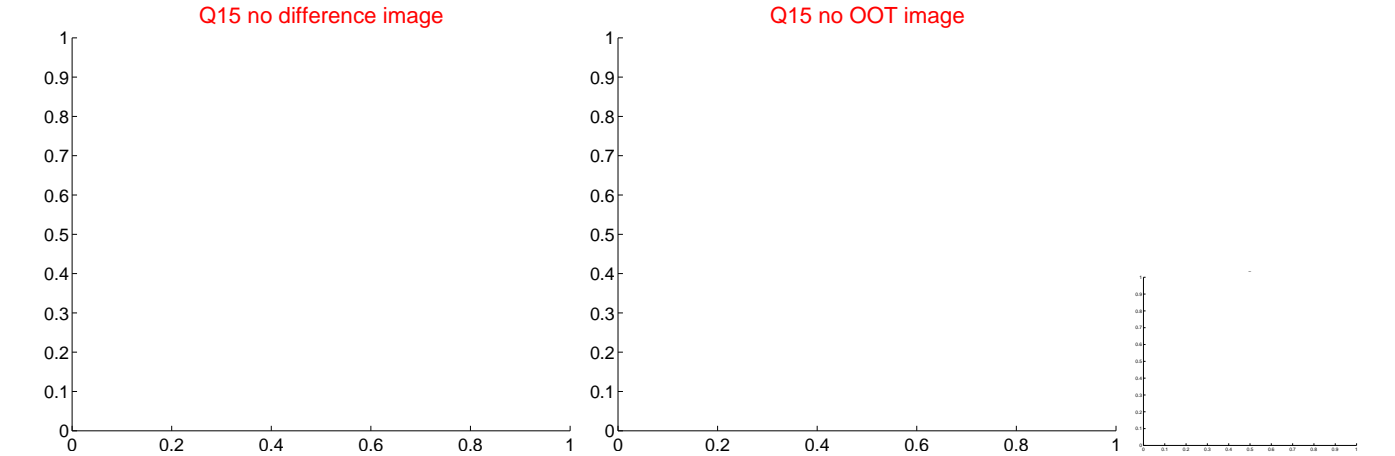
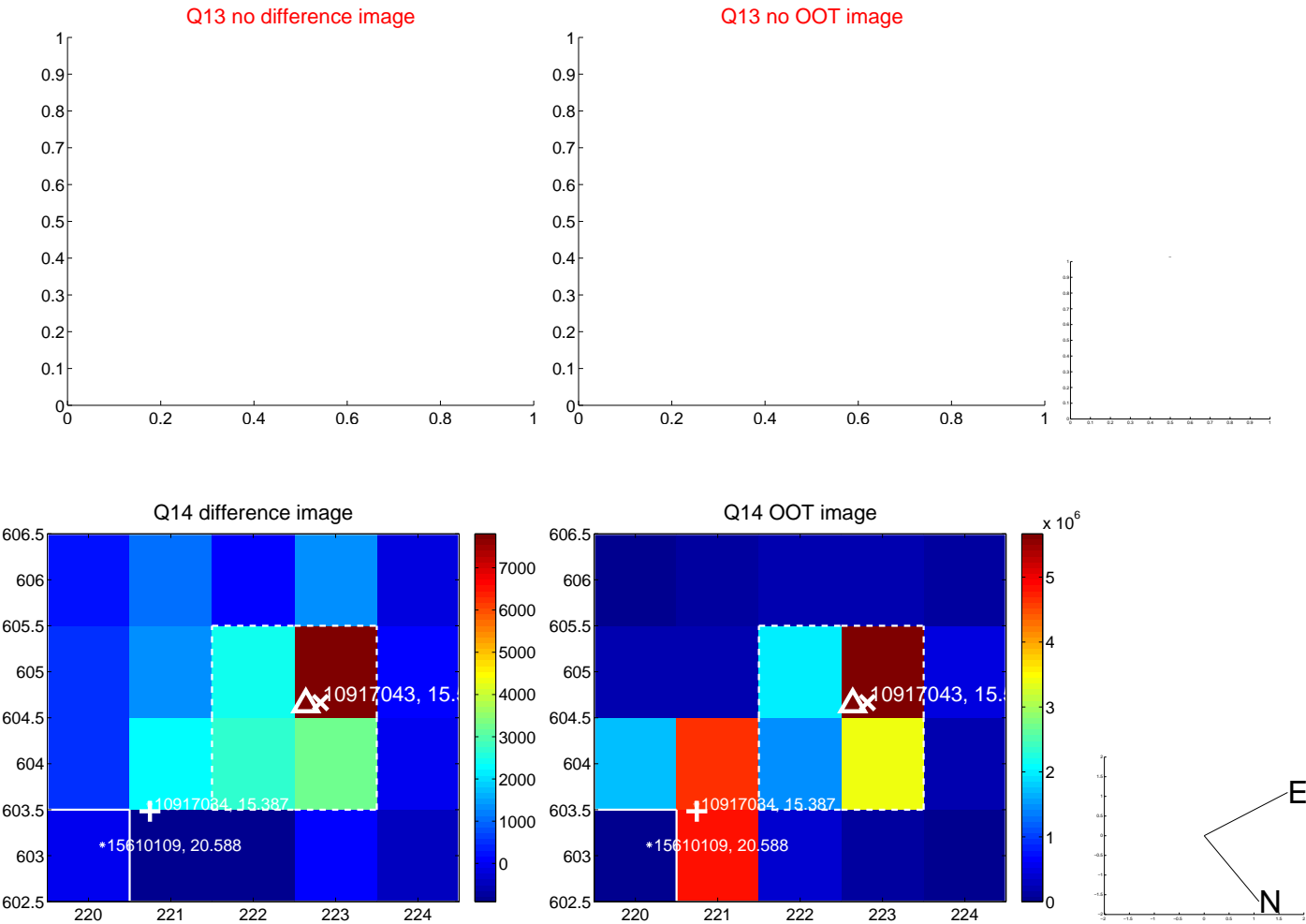
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



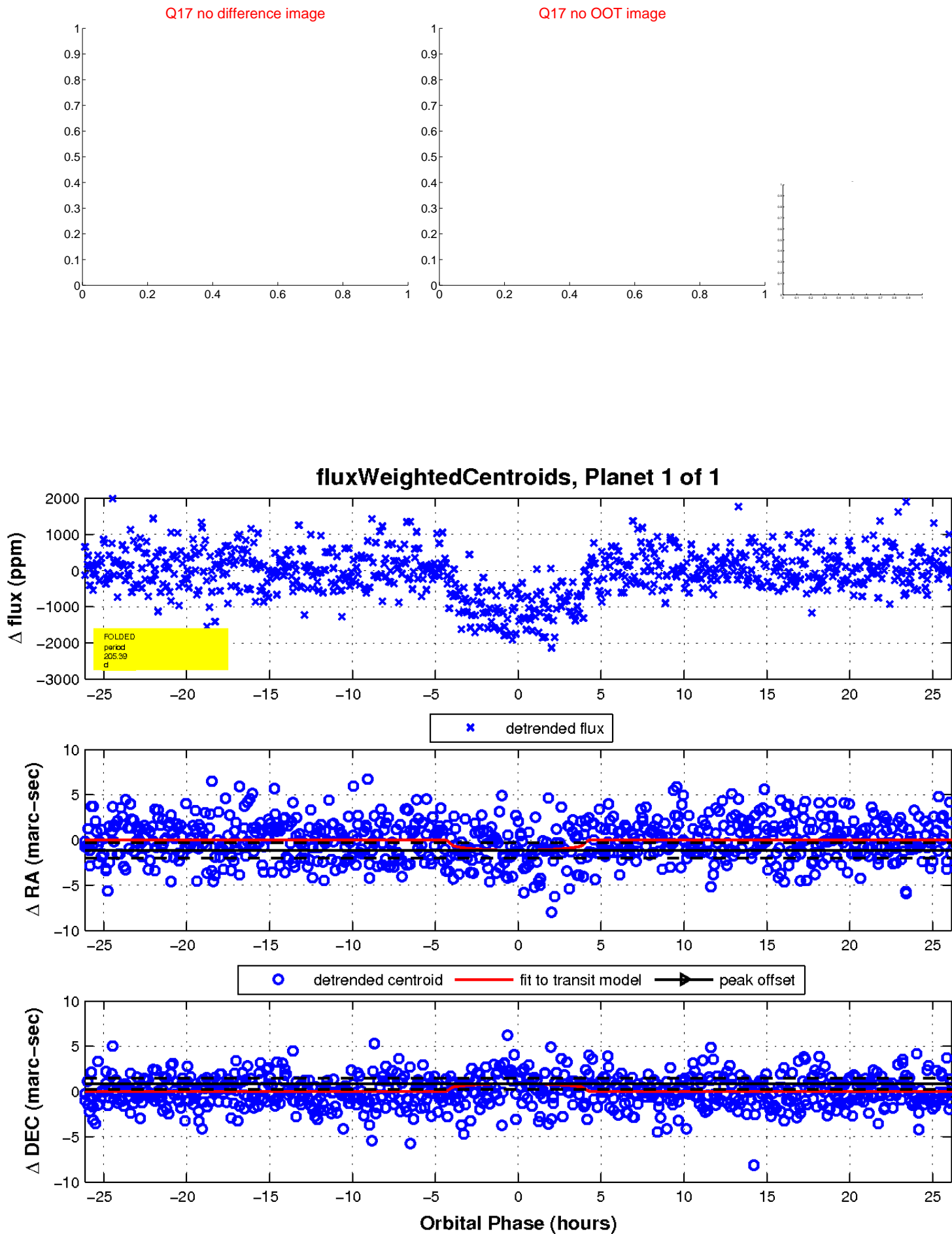
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

