

KIC 009717943

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})
009717943-01	OBS	2273.01	6.110094	136.913019	59.1	2.531	14.3	15.2	1.20	6213	1.11	379.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009717943-01	OBS	PC	1.00	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.

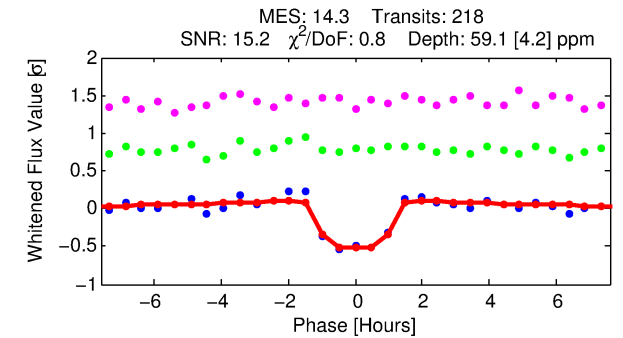
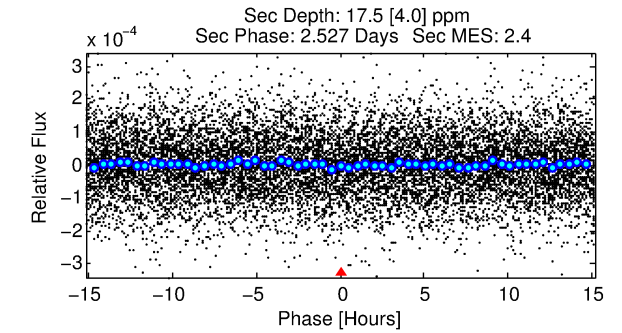
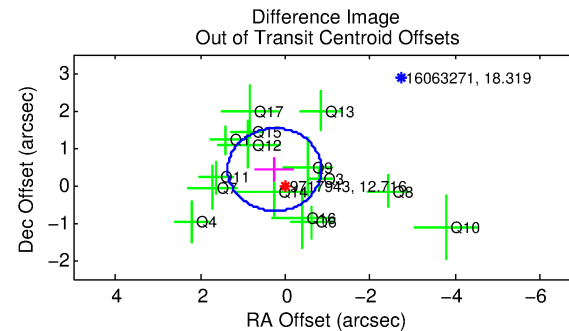
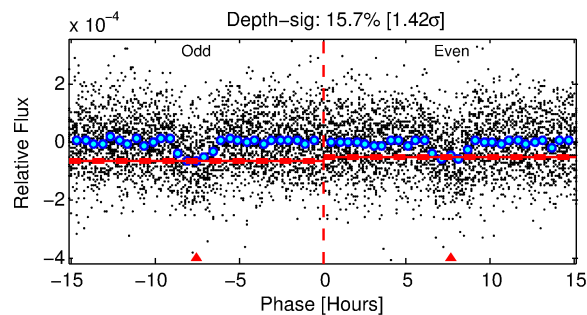
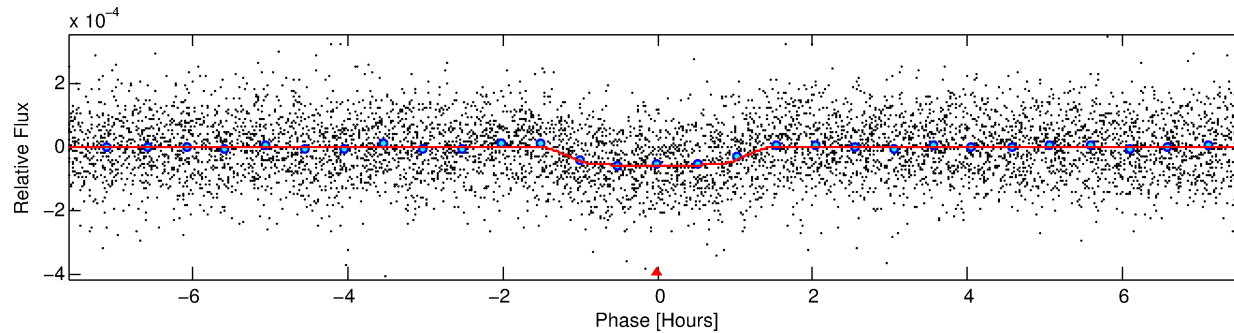
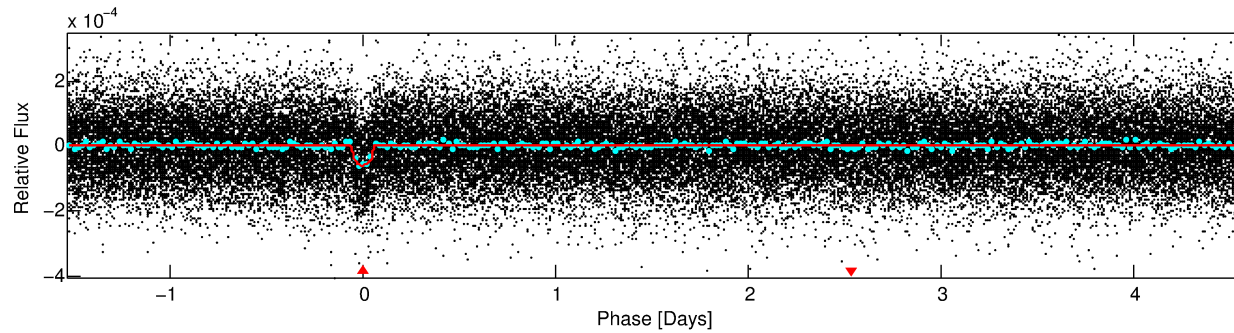
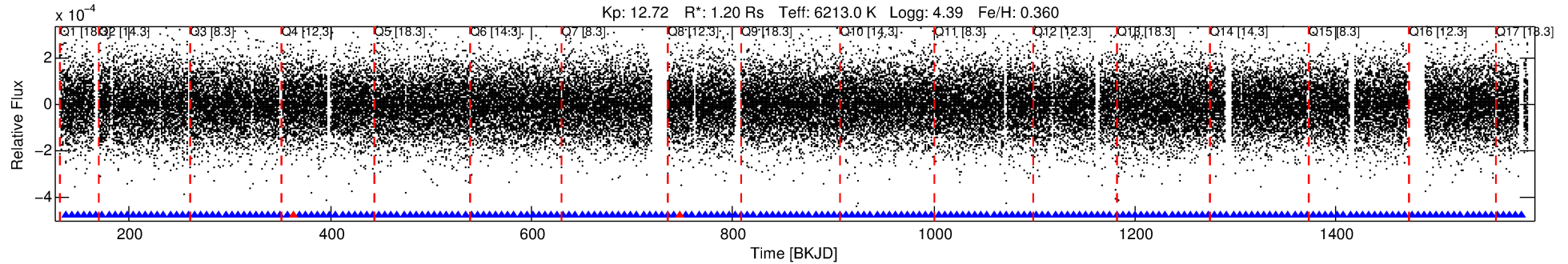
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009717943-01

No Significant Match Found

DV One-Page Summary

KIC: 9717943 Candidate: 1 of 1 Period: 6.110 d
KOI: K02273.01 Corr: 0.983



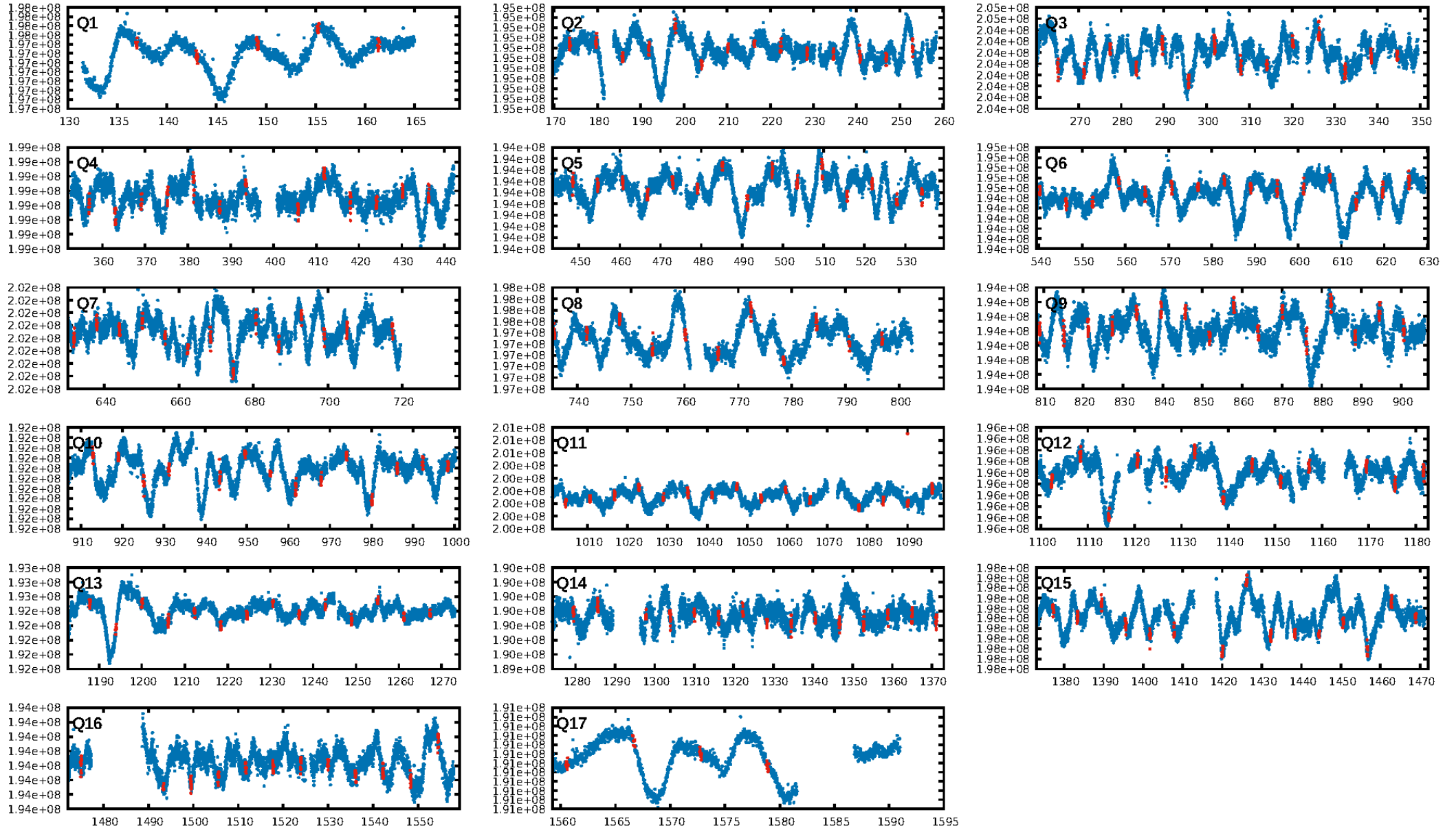
DV Fit Results:

Period = 6.11009 [0.00002] d
Epoch = 136.9130 [0.0029] BKJD
Rp/R* = 0.0085 [0.0030]
a/R* = 7.57 [13.82]
b = 0.92 [0.30]
Seff = 379.85 [84.27]
Teq = 1126 [62] K
Rp = 1.11 [0.43] Re
a = 0.0708 [0.0097] AU
Ag = 39.05 [30.15] [1.26 σ]
Teffp = 4351 [816] K [3.94 σ]

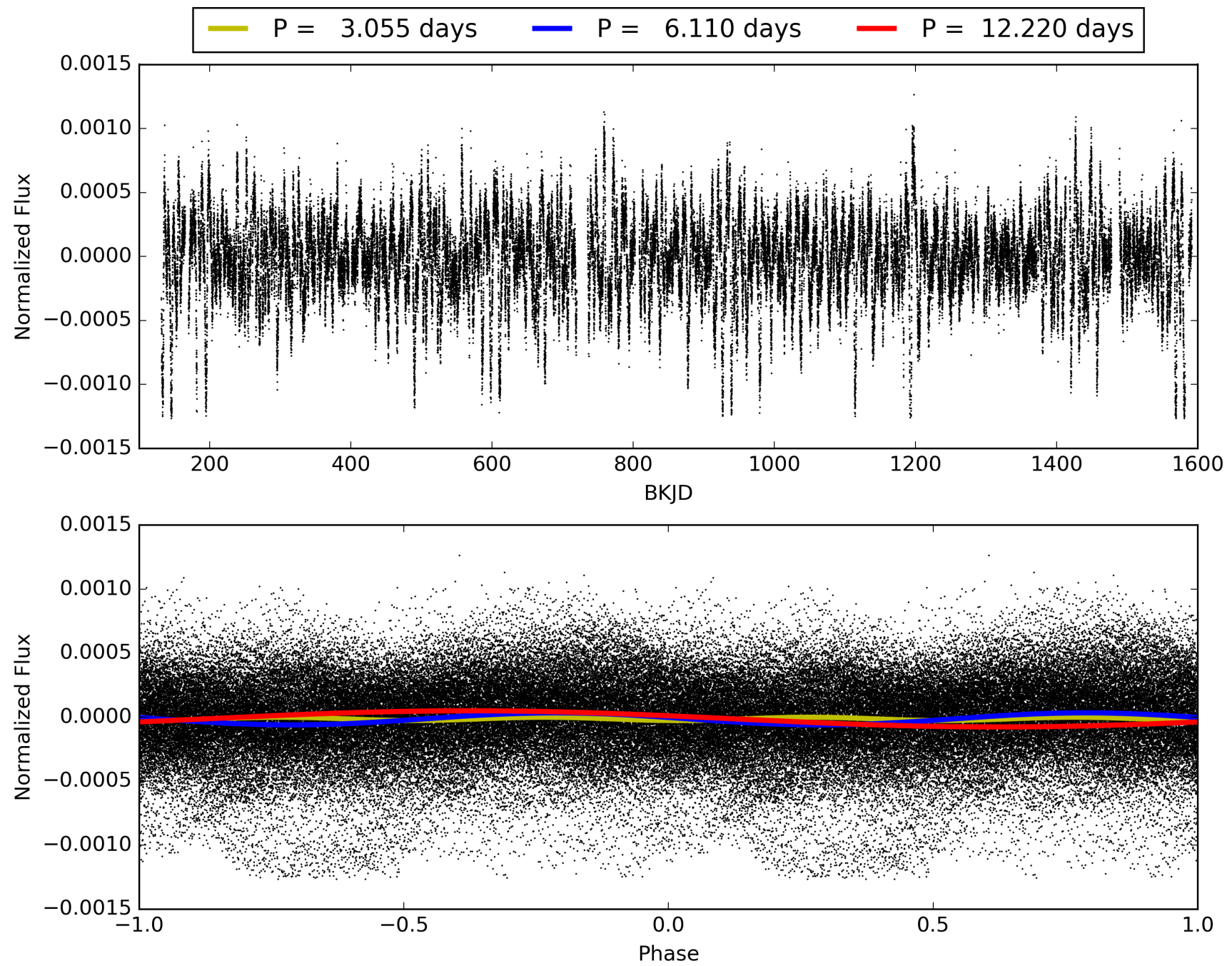
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.94e-45
RollingBand-fgt: 0.99 [207/209]
GhostDiagnostic-chr: 7.317
Centroid-sig: 1.1%
Centroid-so: 1.537 arcsec [2.44 σ]
OotOffset-rm: 0.491 arcsec [1.33 σ]
KicOffset-rm: 0.582 arcsec [1.55 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009717943-01, PDC Light Curves

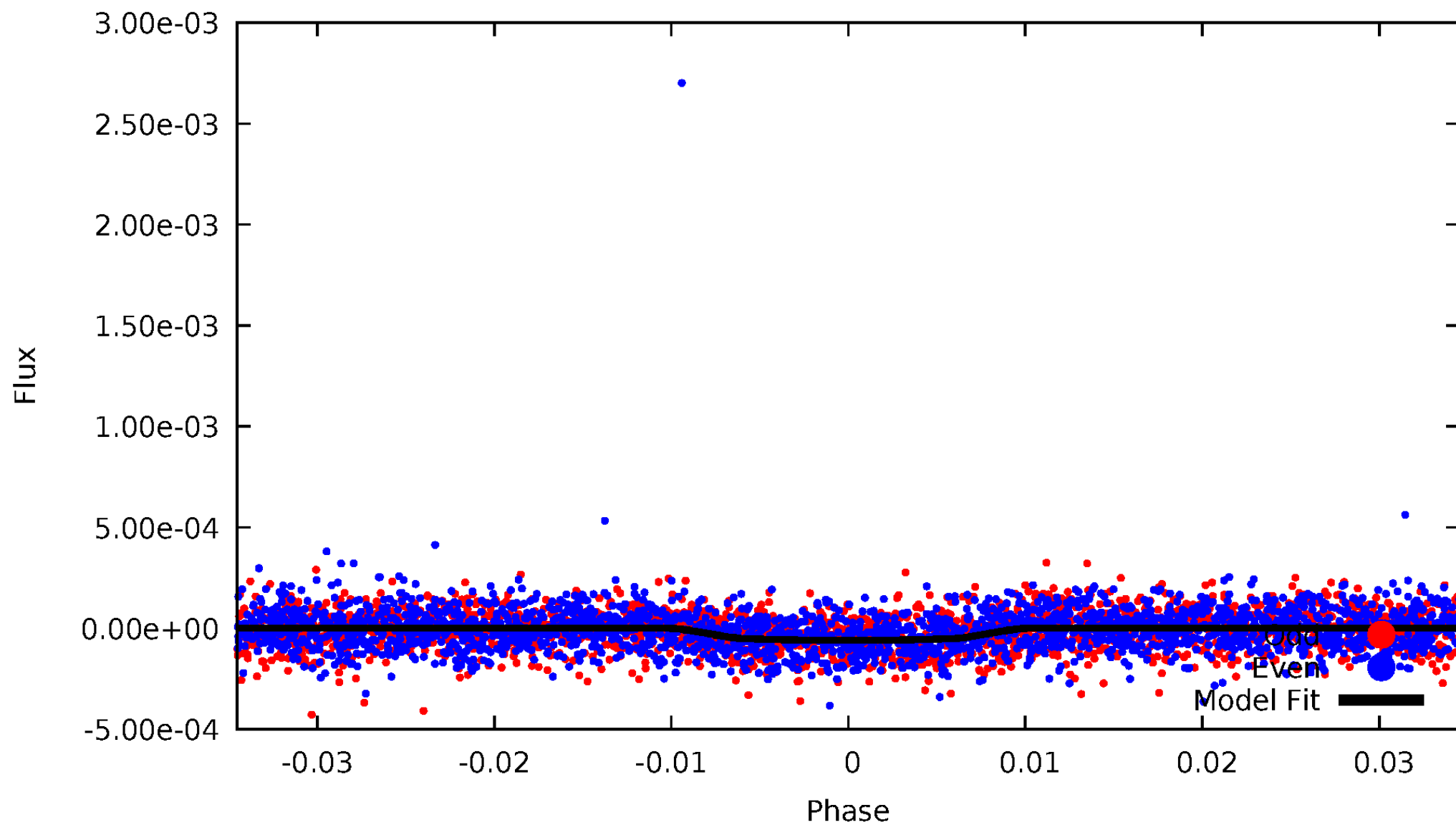


TCE 009717943-01



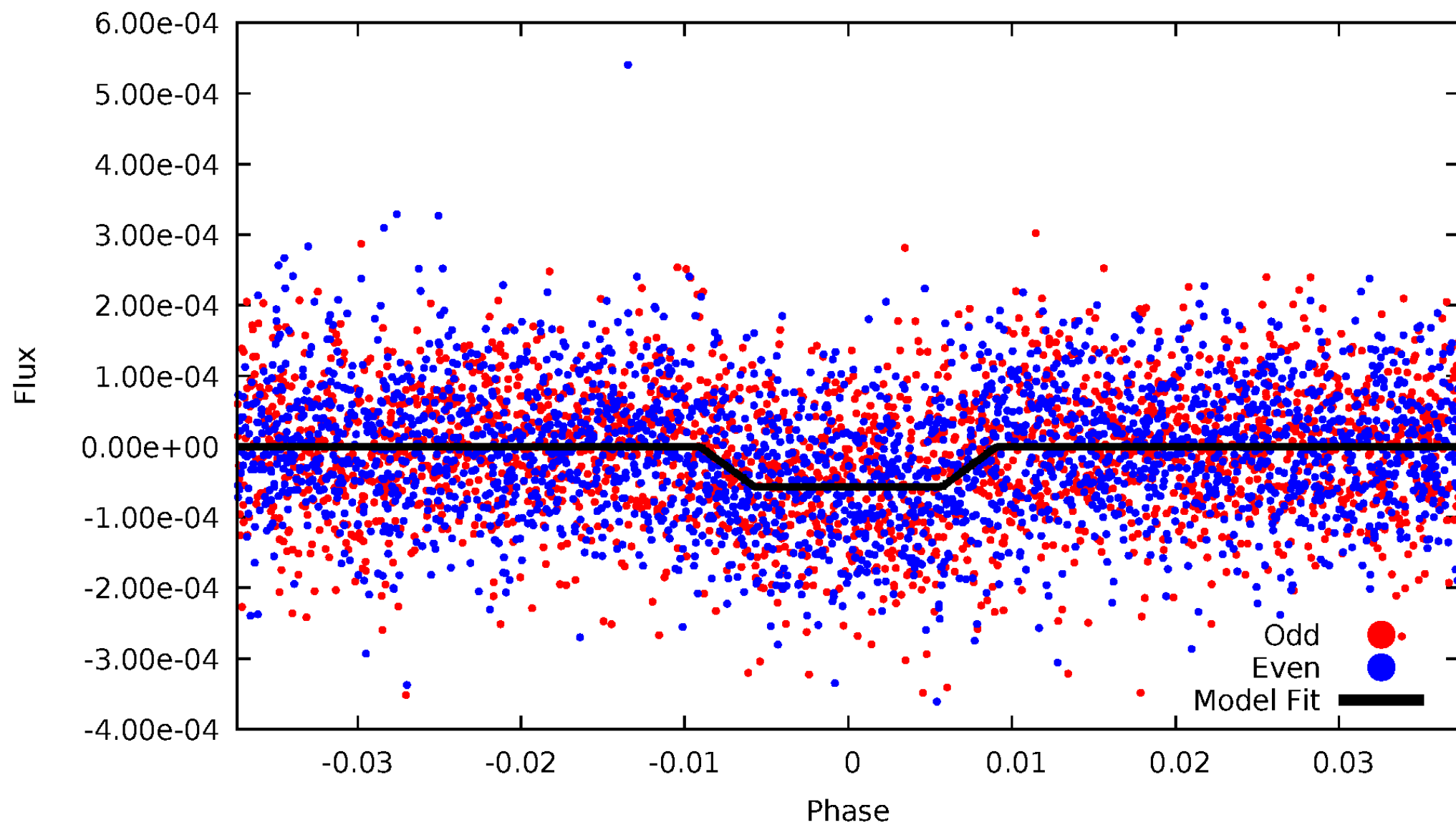
DV Odd/Even

TCE 009717943-01

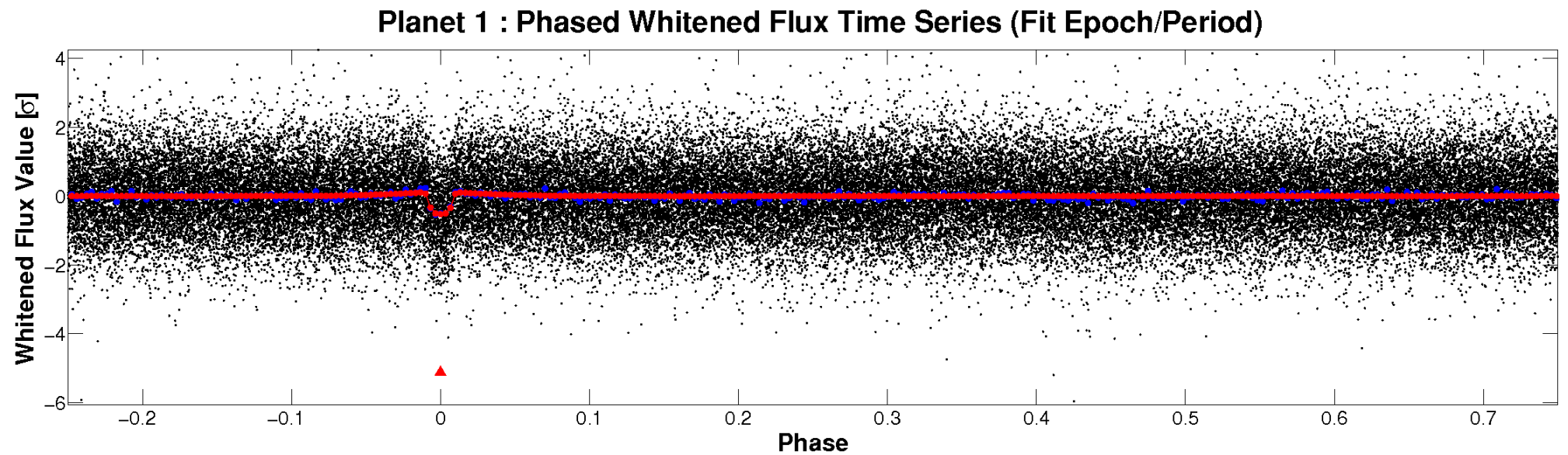
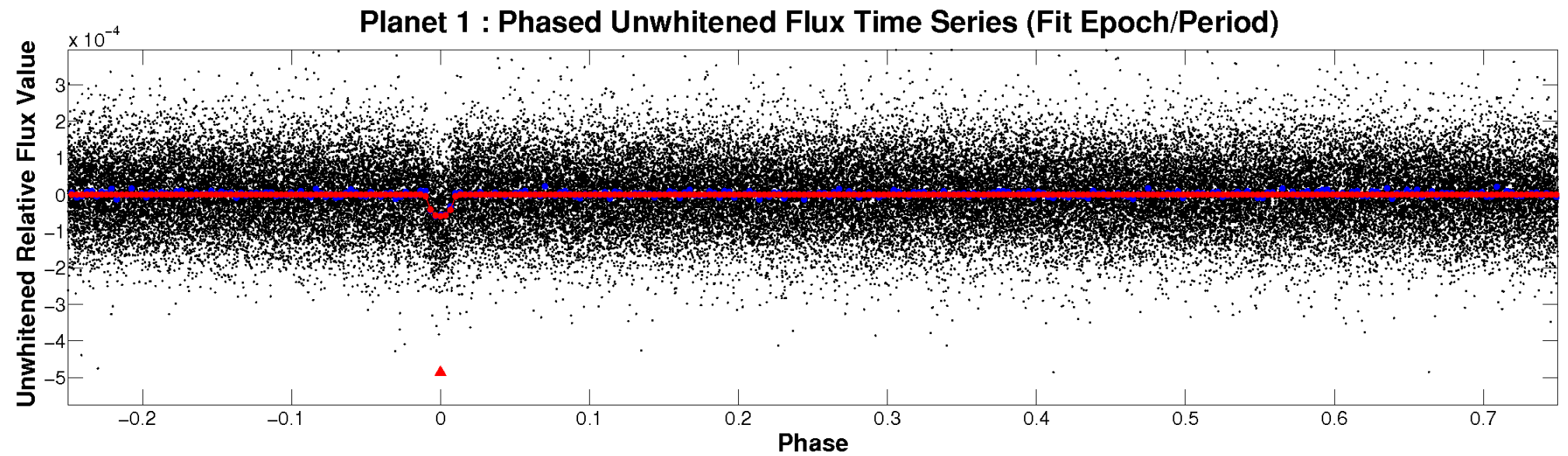


ALT Odd/Even

TCE 009717943-01

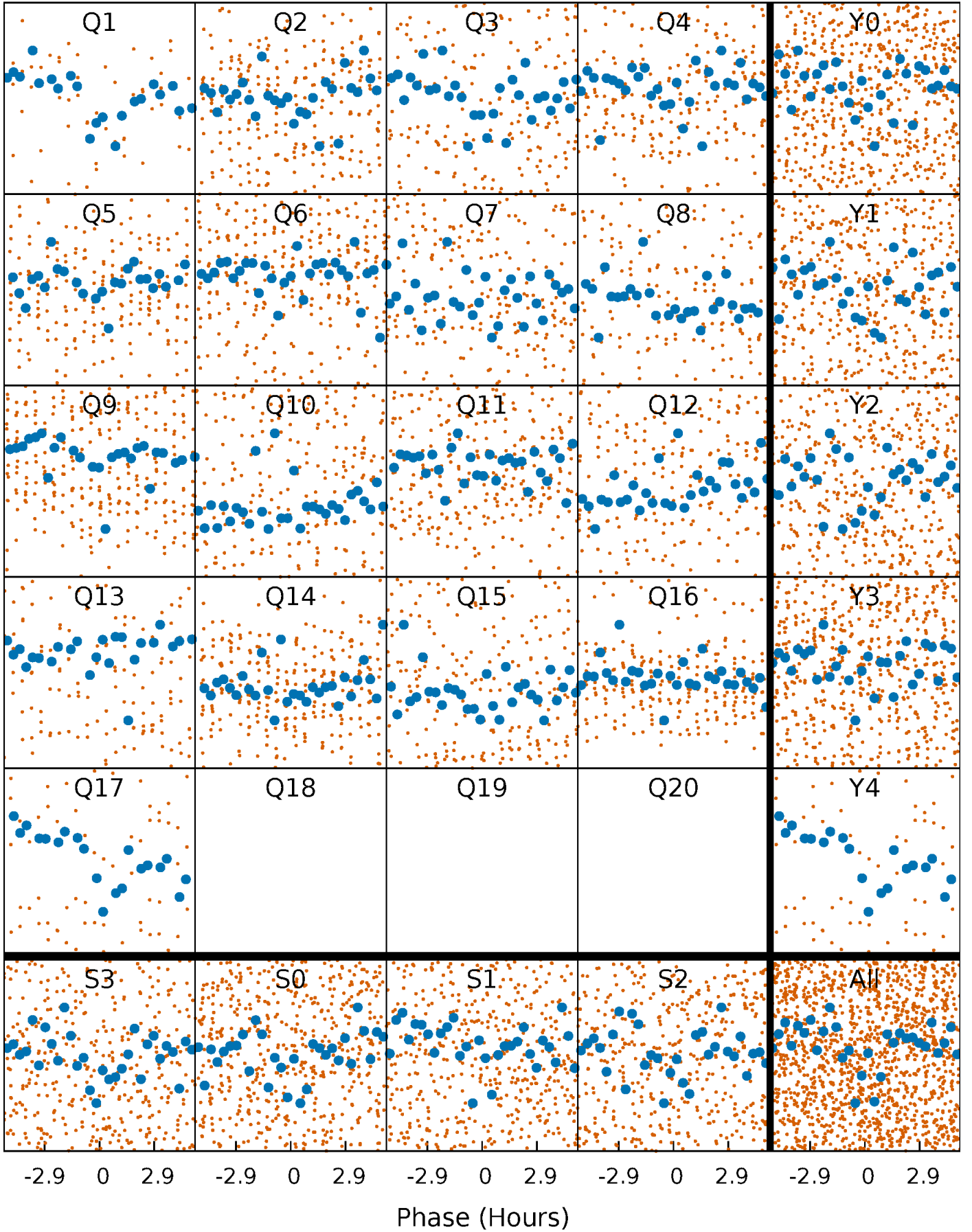


Non-Whitened Vs. Whitened Light Curve



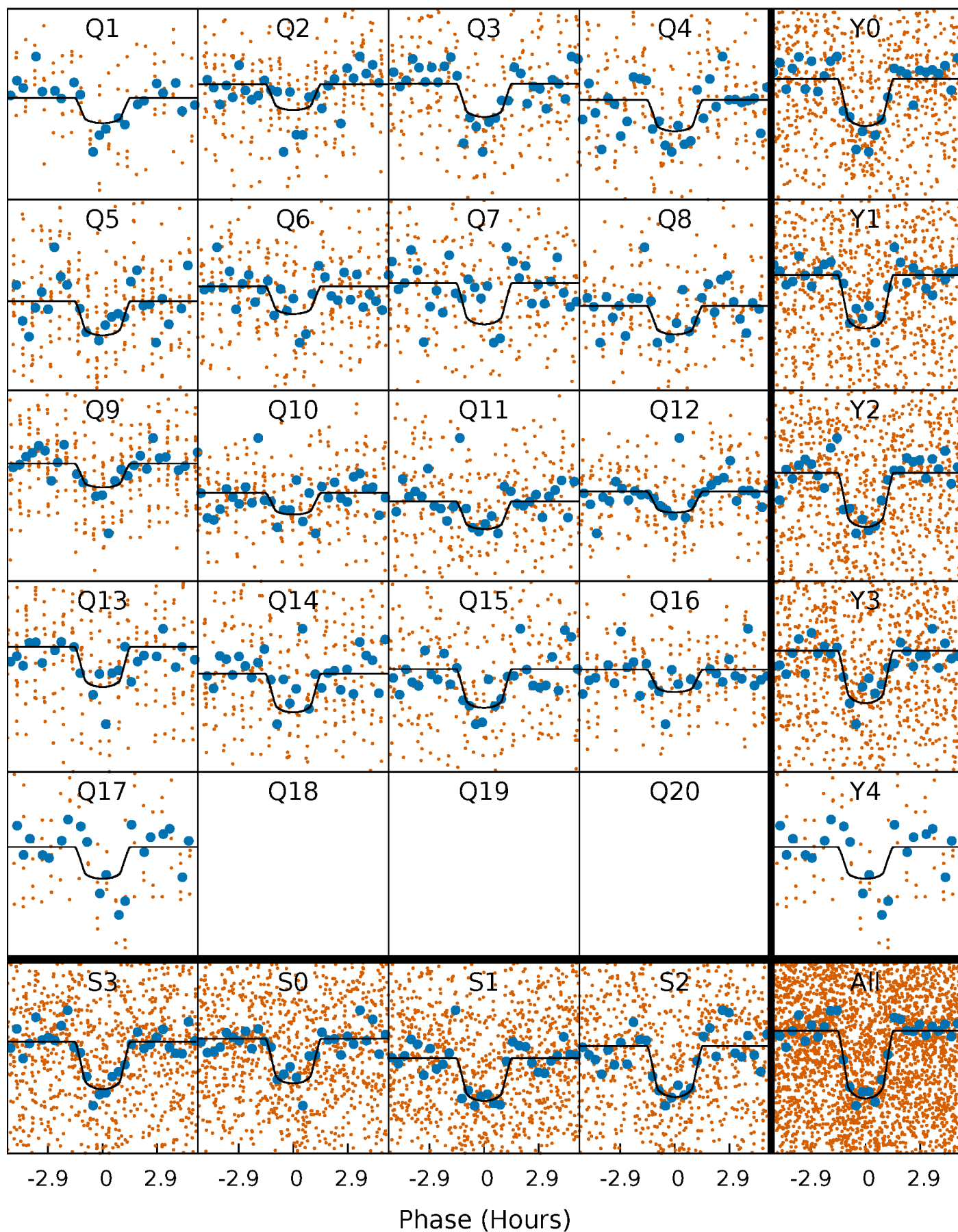
PDC Quarter-Phased Transit Curves

TCE 009717943-01 P= 6.110094 Days $T_0=136.913019$ (BKJD)



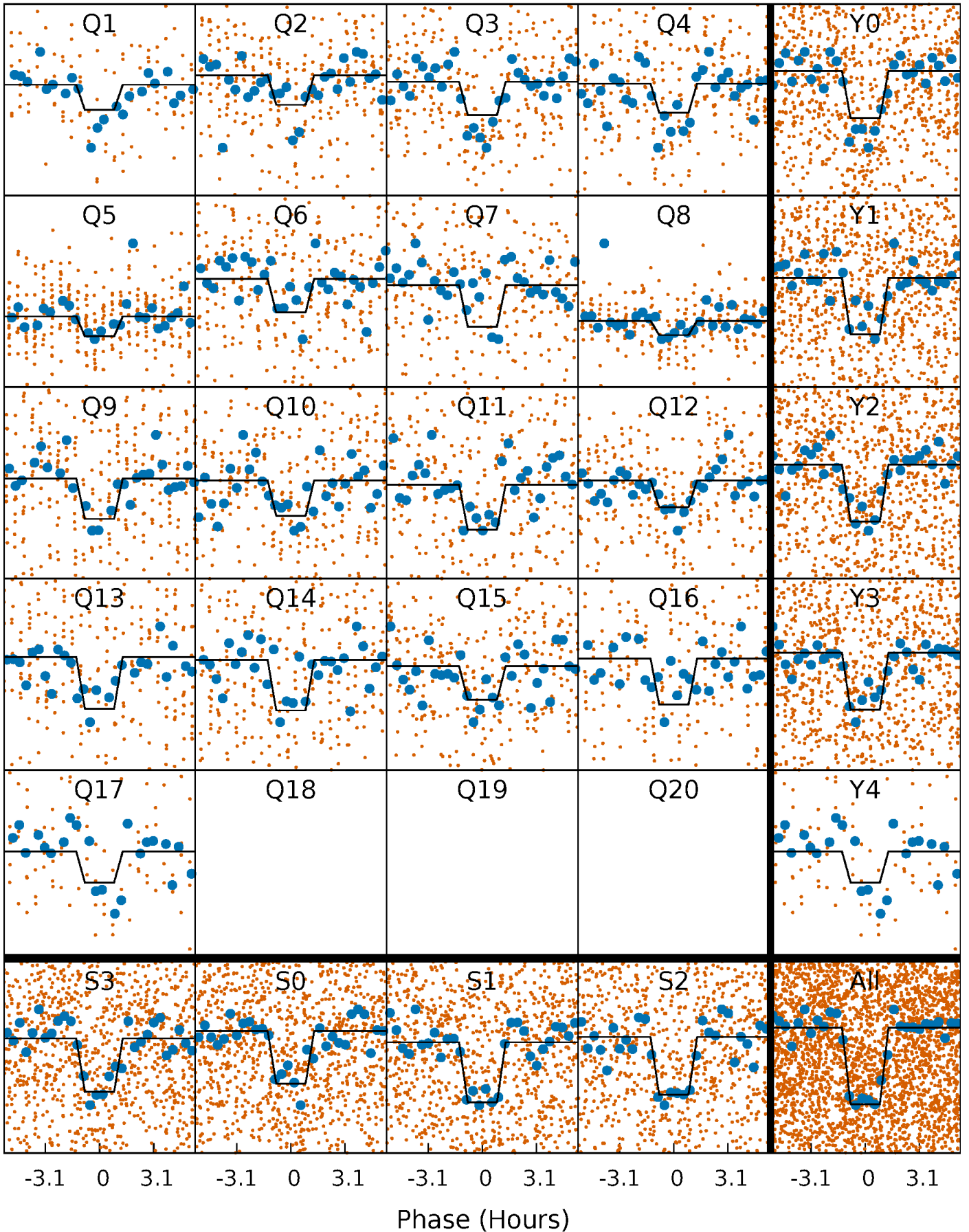
DV Quarter-Phased Transit Curves

TCE 009717943-01 P= 6.110094 Days $T_0=136.913019$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

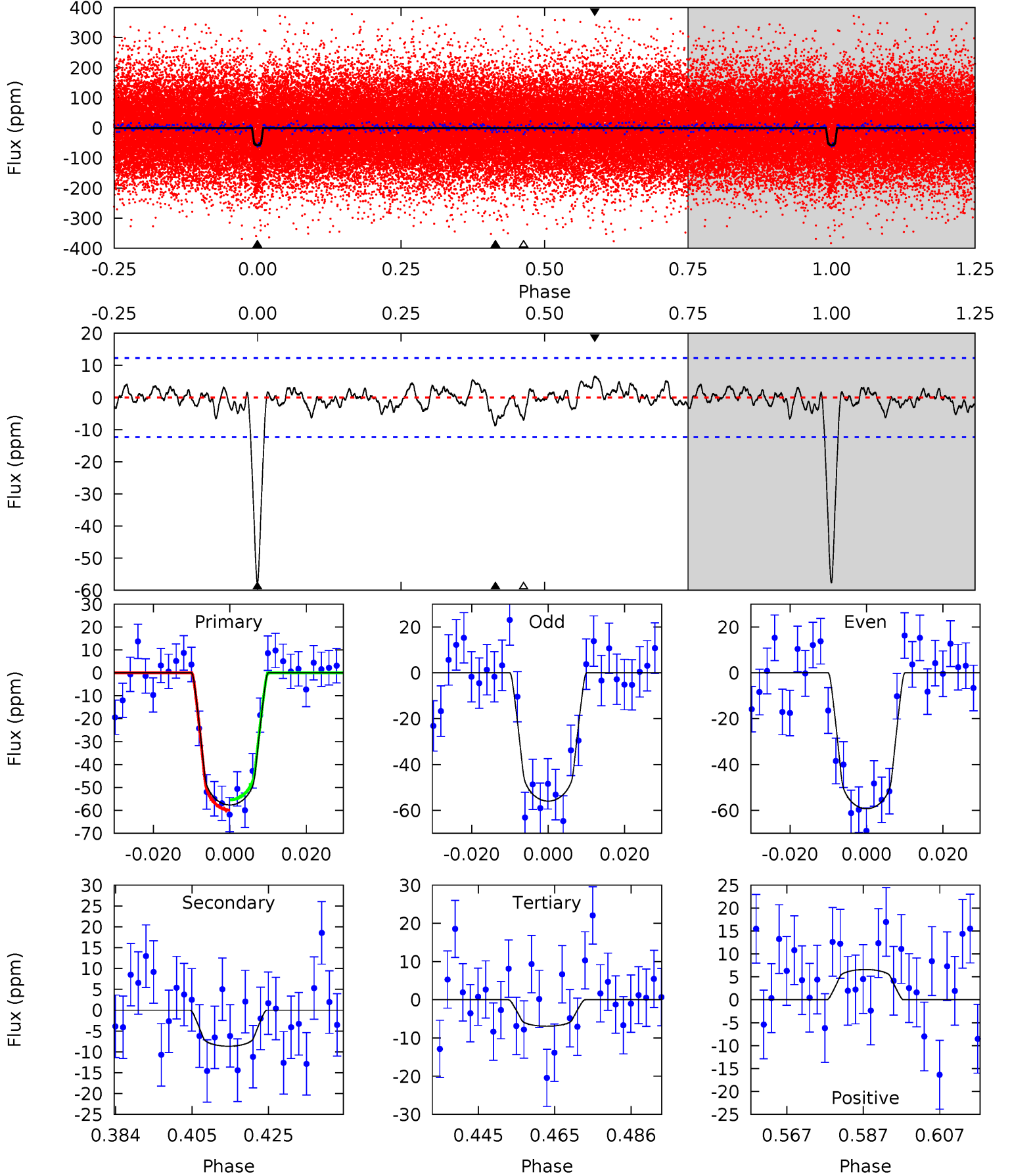
TCE 009717943-01 P= 6.110091 Days $T_0=136.911667$ (BKJD)



DV Model-Shift Uniqueness Test

009717943-01, P = 6.110094 Days, E = 130.802925 Days

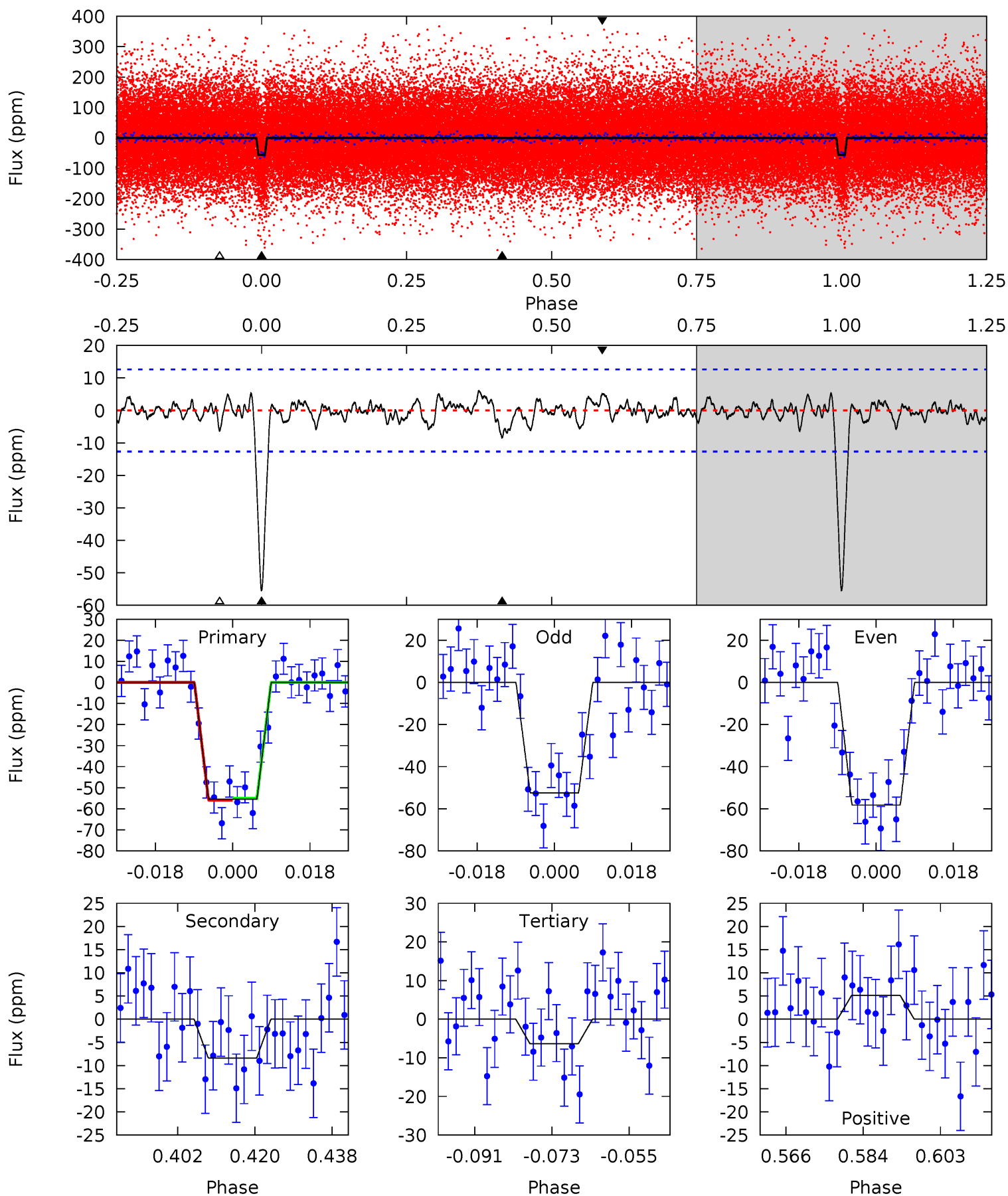
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	3.43	2.75	2.61	4.89	2.32	0.96	20.1	20.3	0.69	0.82	0.66	0.97	0.10	0.89



Alt Model-Shift Uniqueness Test

009717943-01, P = 6.110091 Days, E = 130.801576 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	3.26	2.46	2.00	4.91	2.36	0.88	19.1	19.5	0.79	1.25	1.11	1.00	0.10	0.17



Stellar Parameters For KIC 009717943

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6213^{+112}_{-137}	$4.387^{+0.030}_{-0.113}$	$0.360^{+0.100}_{-0.200}$	$1.195^{+0.191}_{-0.068}$	$1.270^{+0.060}_{-0.090}$	$1.049^{+0.157}_{-0.360}$
	+2%/-2%	+1%/-3%	+28%/-56%	+16%/-6%	+5%/-7%	+15%/-34%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 009717943-01 / KOI 2273.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 3	$1.14^{+0.41}_{-0.43}$	1591^{+64}_{-48}	3940^{+806}_{-432}	18^{+29}_{-9}
Alt.	-8 ± 3	$1.03^{+0.42}_{-0.41}$	1590^{+66}_{-45}	4090^{+919}_{-503}	22^{+40}_{-12}

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

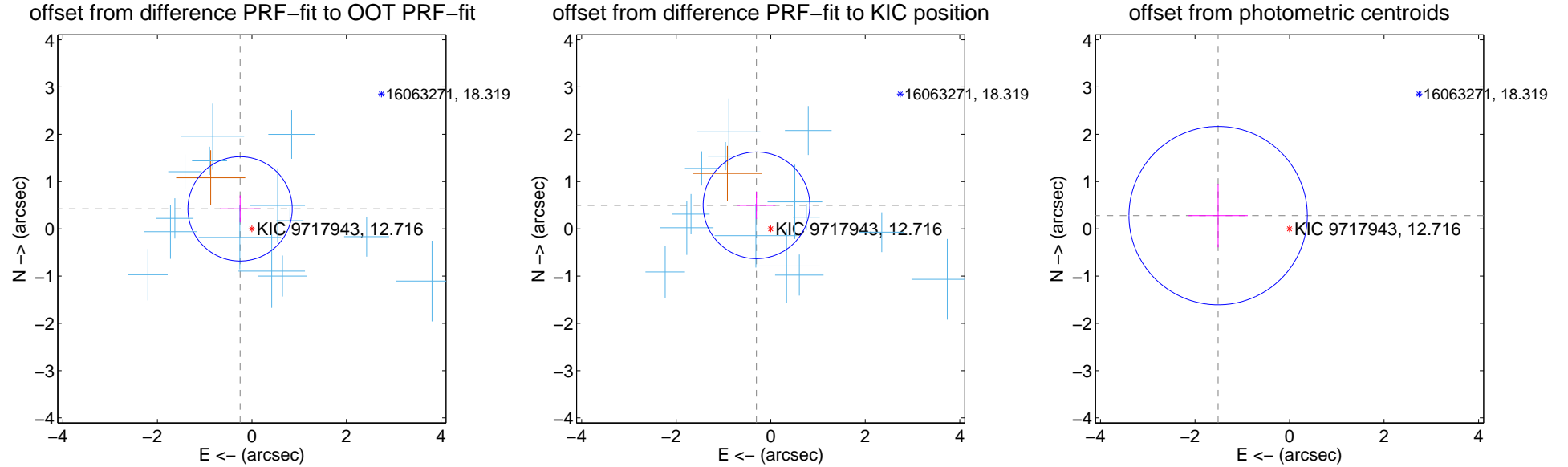
DV Centroid Data

Supplemental centroid analysis for 009717943-01. Kepler magnitude: 12.72. Transit SNR 15.17

There are 14 quarters with good PRF difference image offsets

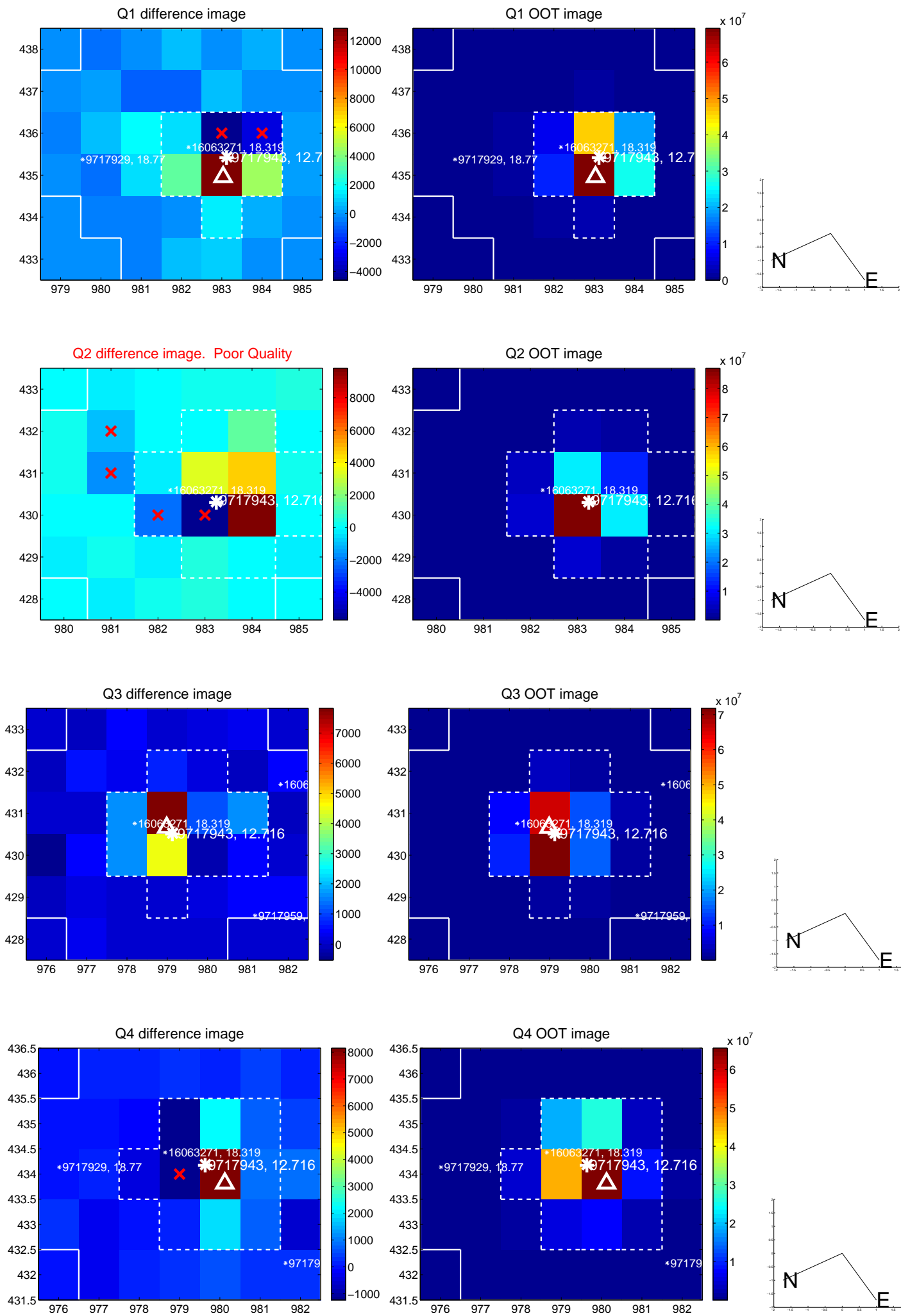
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.491 ± 0.368	1.33	0.250 ± 0.426	0.422 ± 0.286
PRF-fit source offset from KIC position	0.582 ± 0.376	1.55	0.302 ± 0.402	0.498 ± 0.288
photometric centroid source offset	1.54 ± 0.63	2.44	1.51 ± 0.63	0.28 ± 0.67

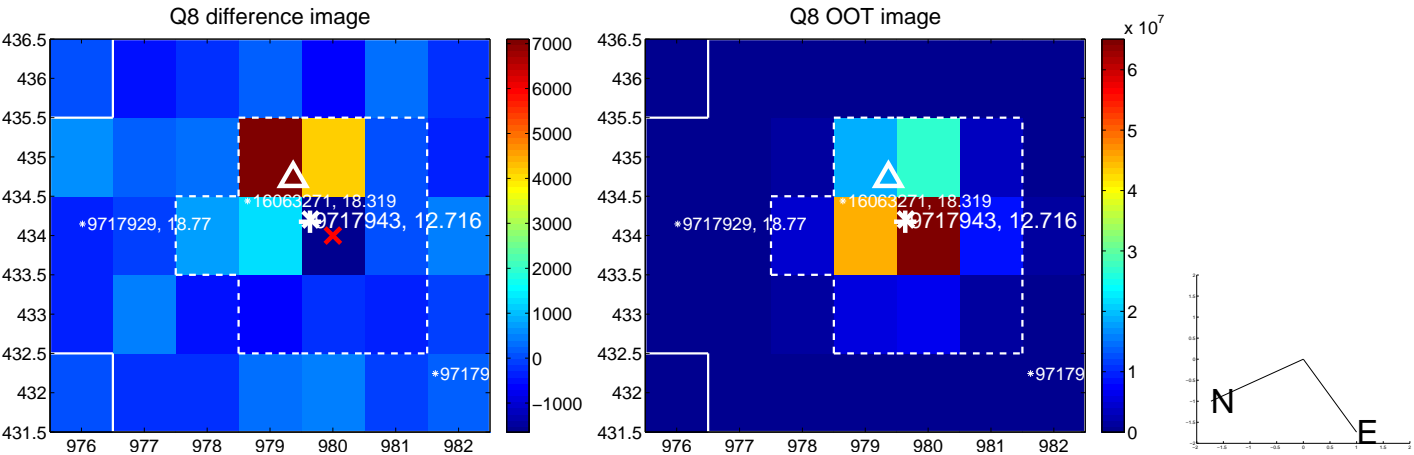
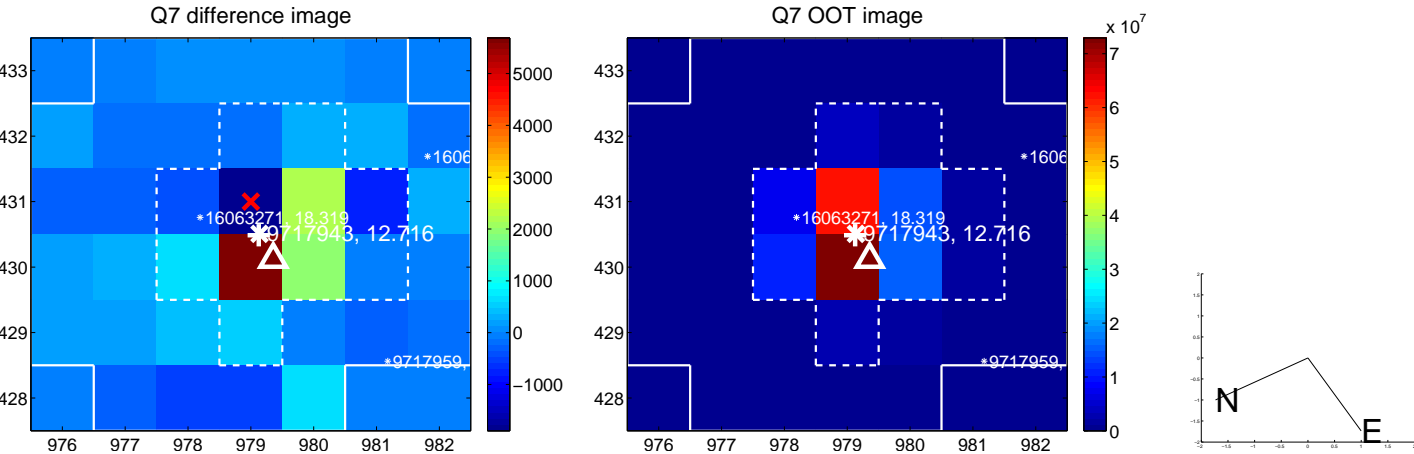
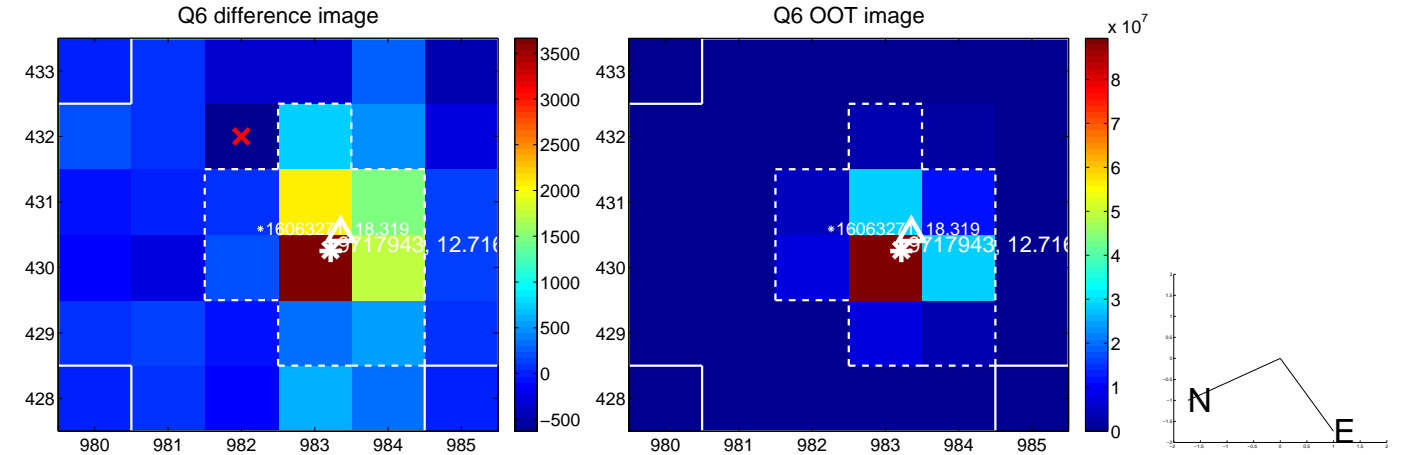
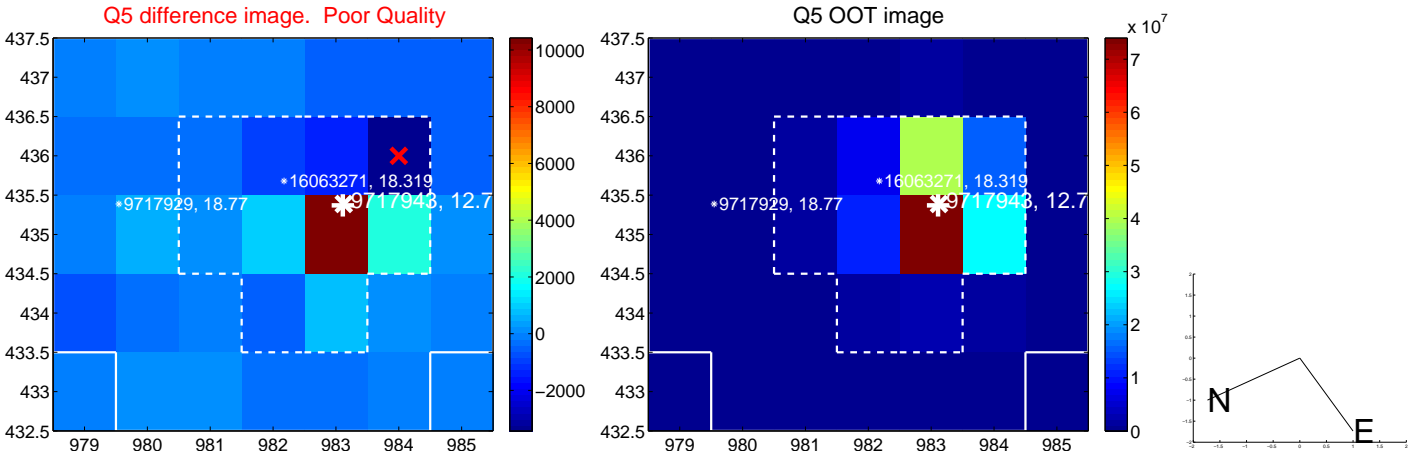


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

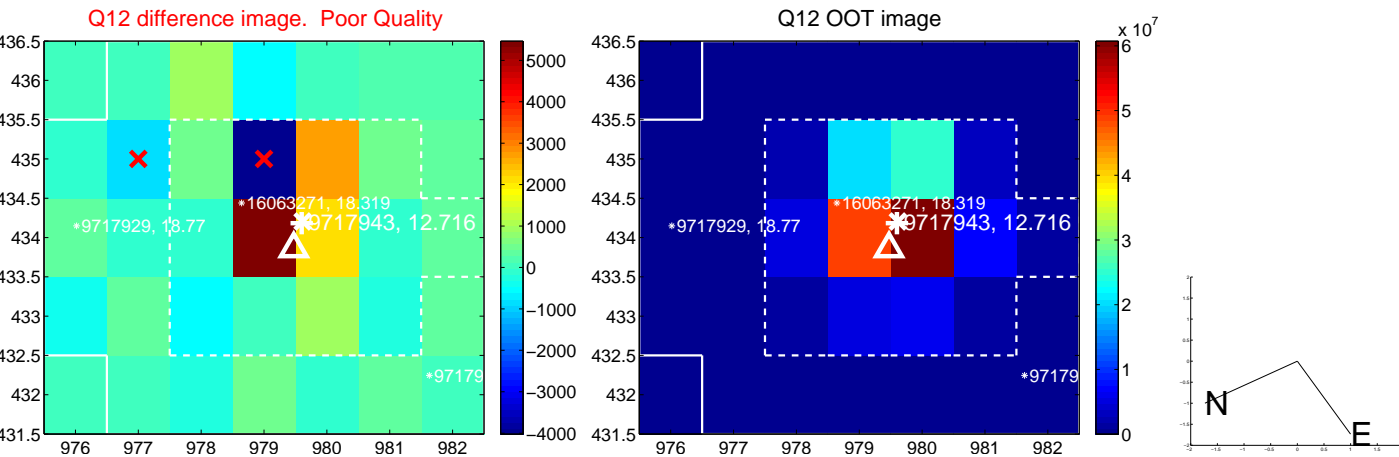
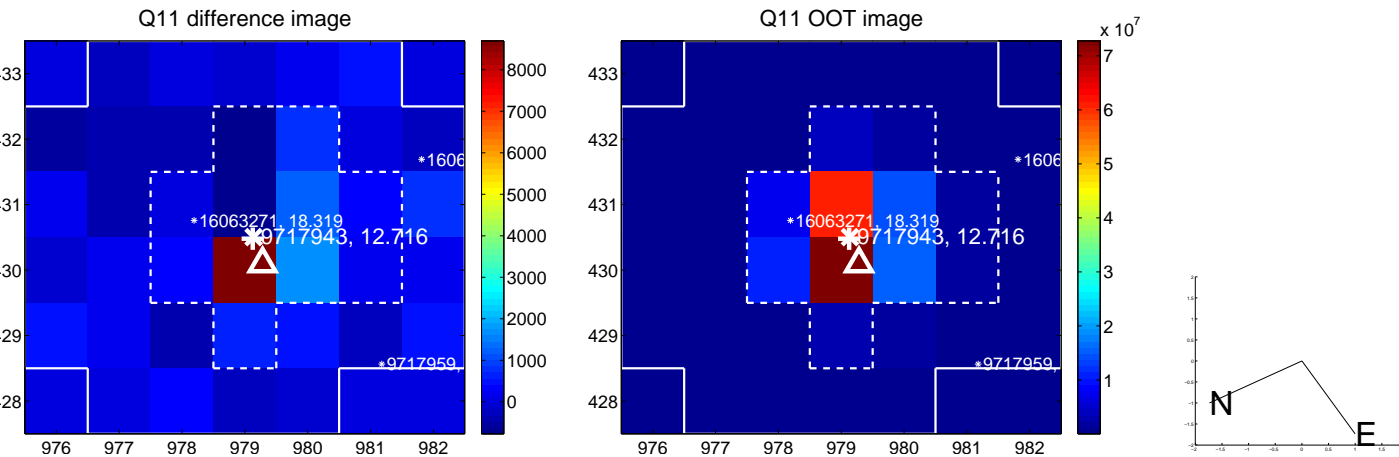
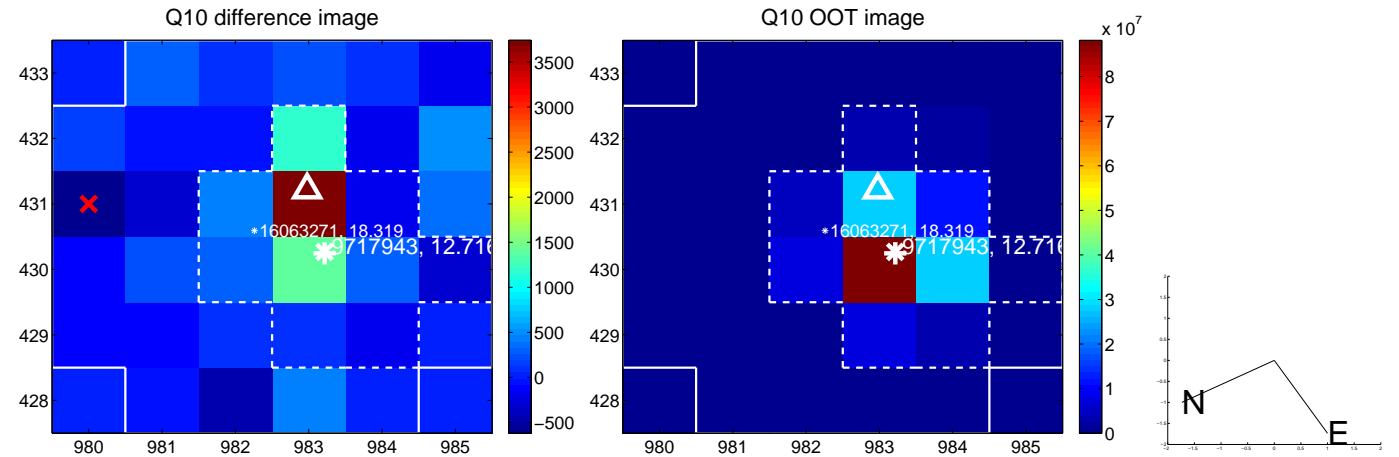
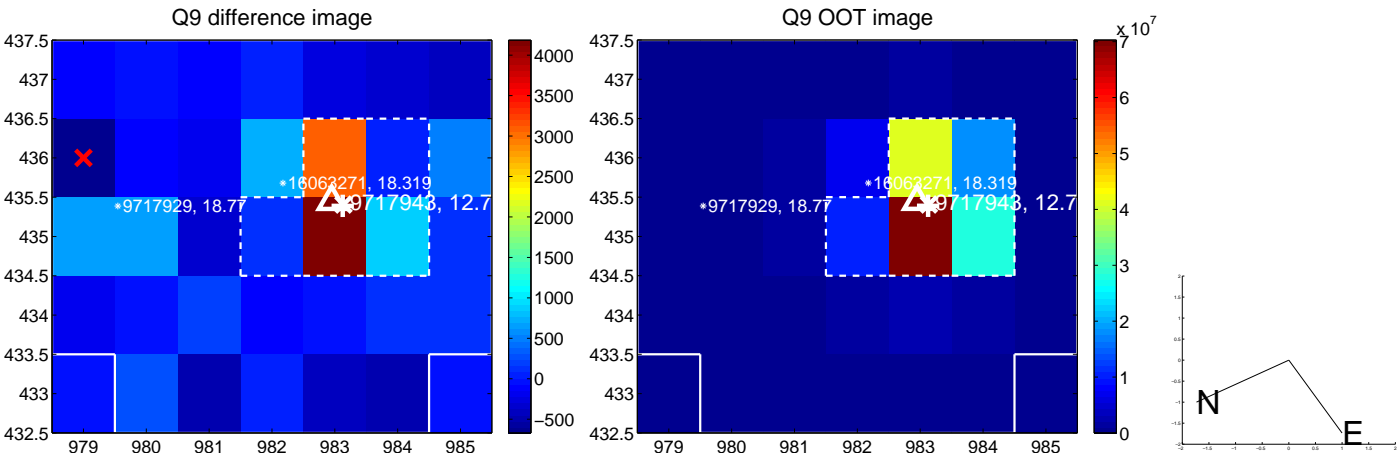
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



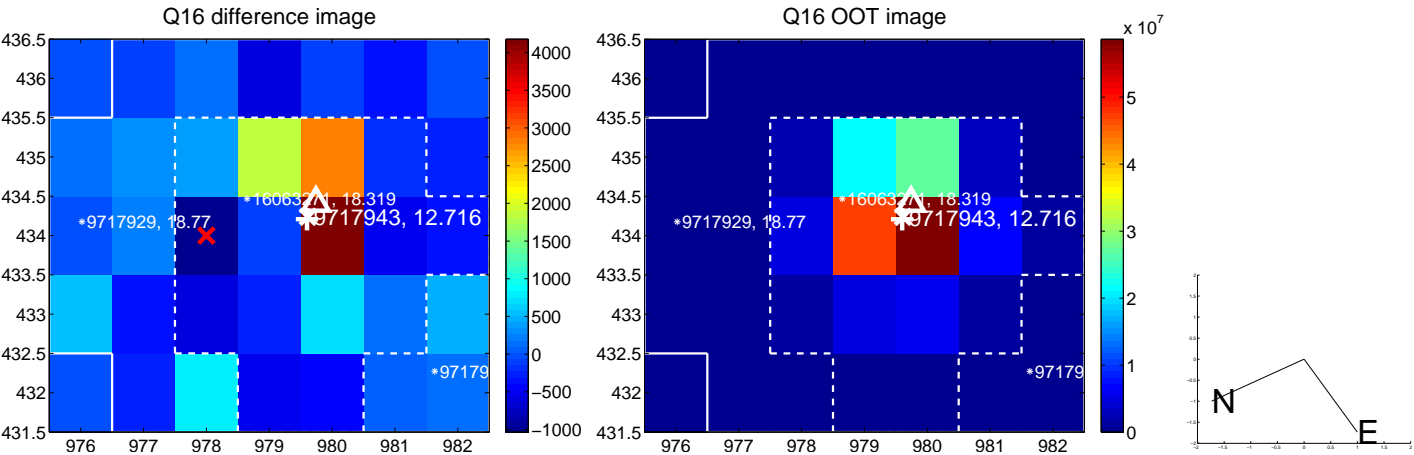
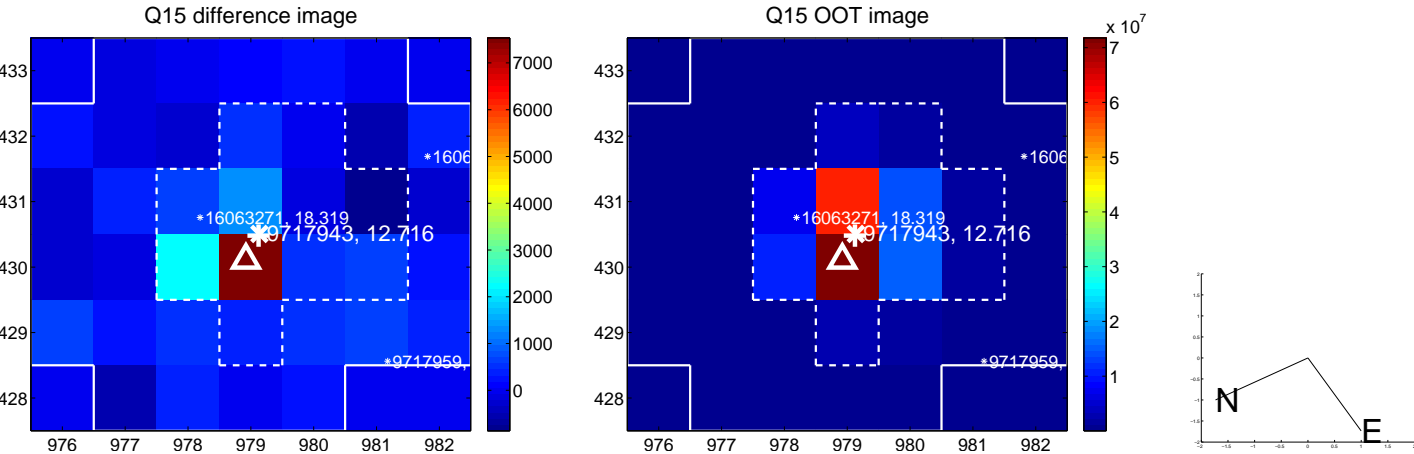
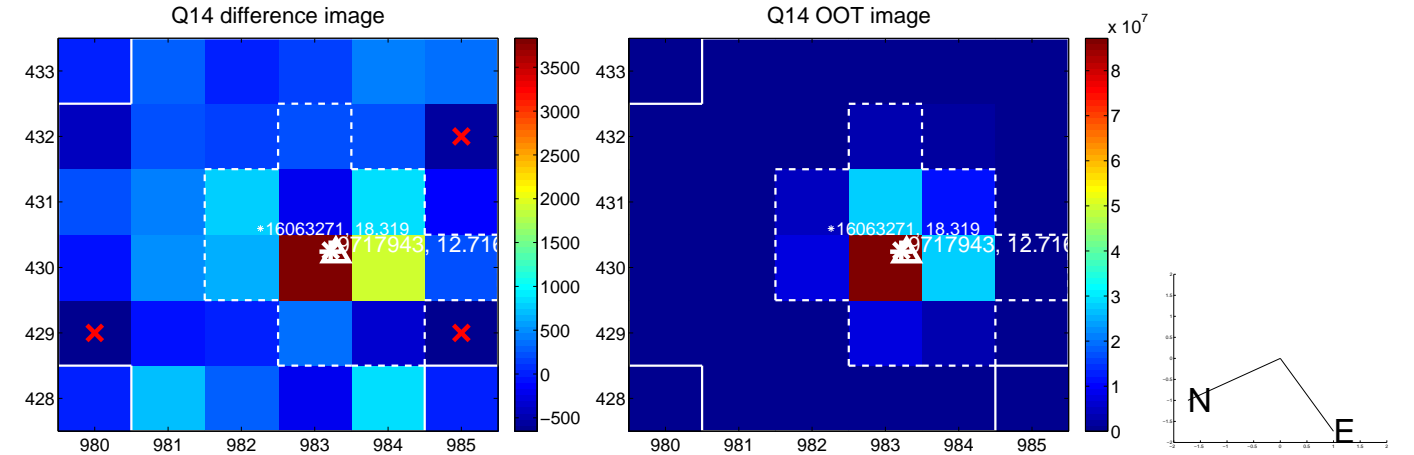
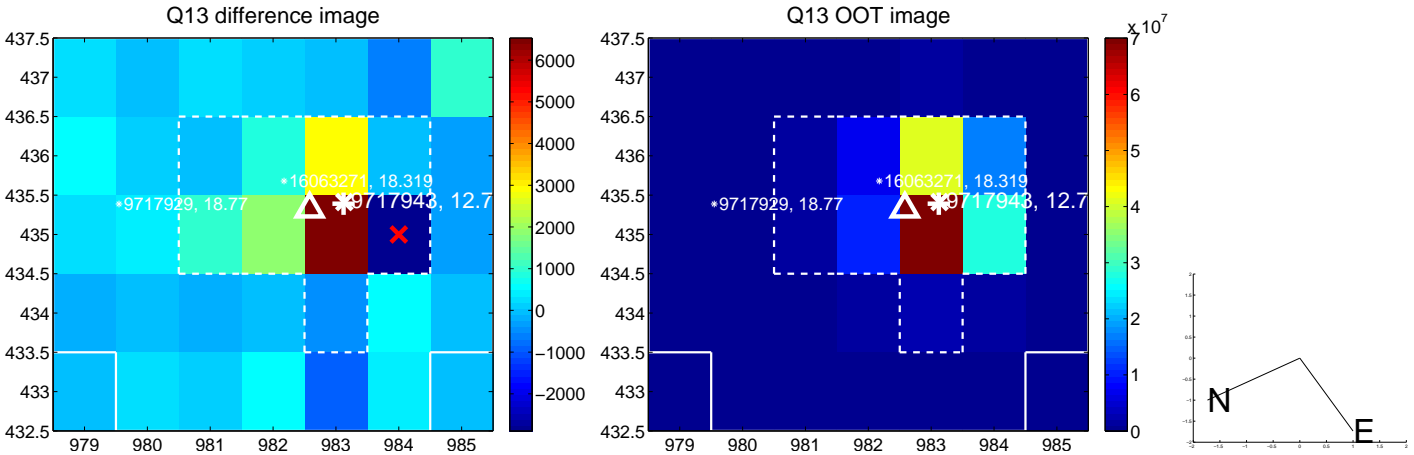
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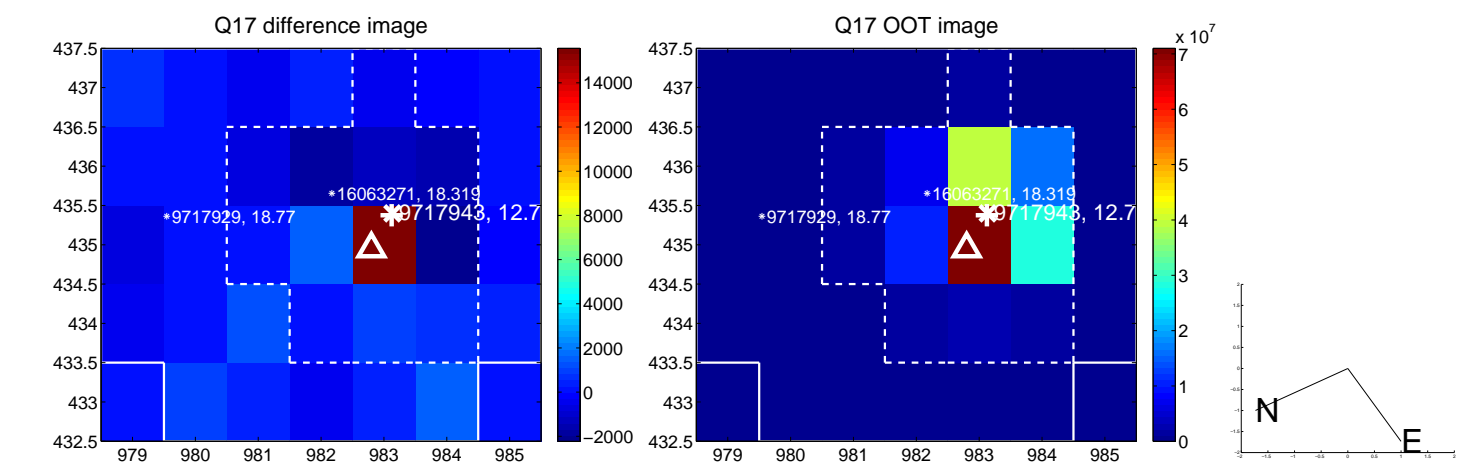
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



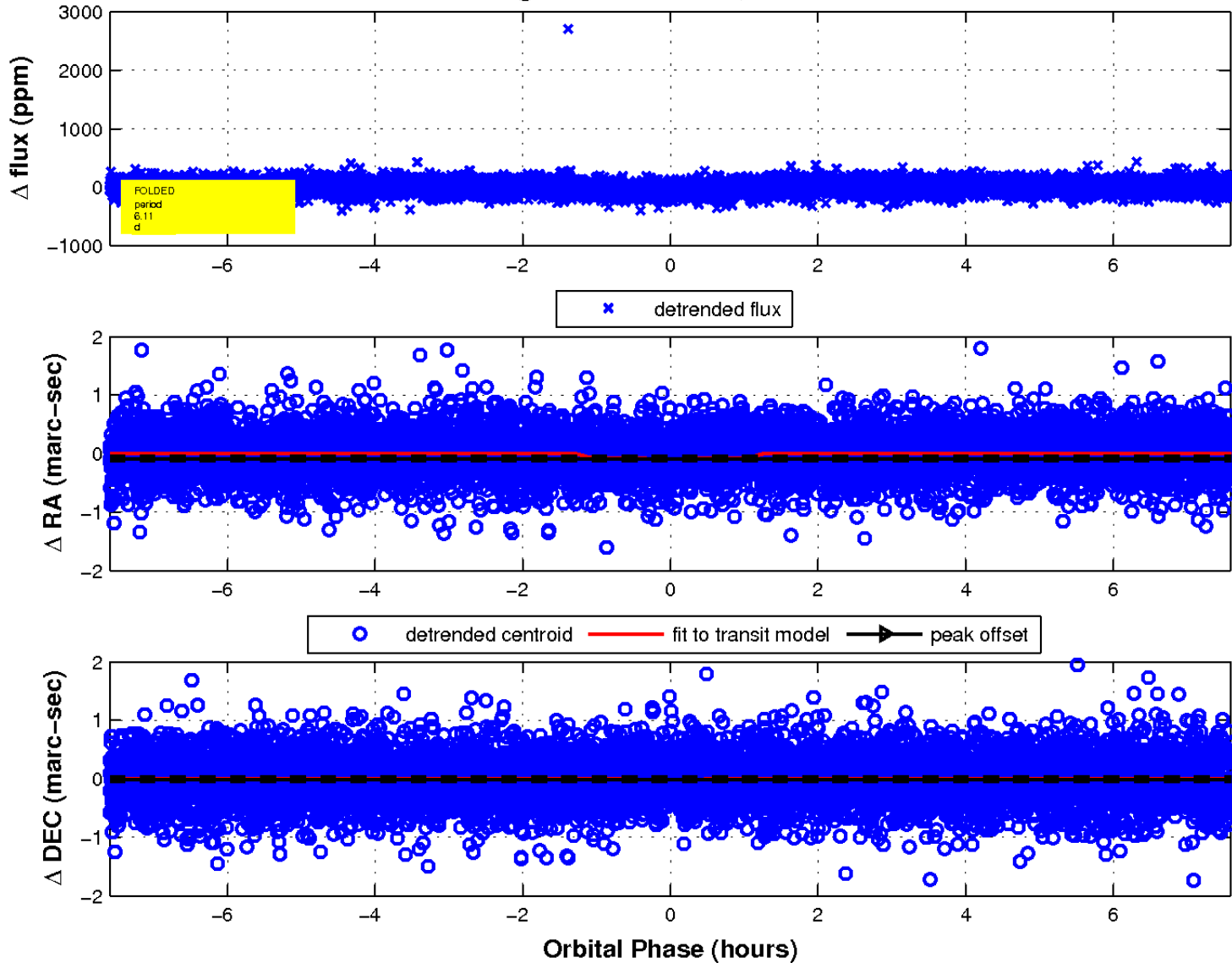
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

