

KIC 007949593

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})
007949593-01	OBS	4759.01	17.766180	146.691474	187.5	2.971	9.8	10.3	0.95	5724	1.49	47.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007949593-01	OBS	PC	0.93	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.

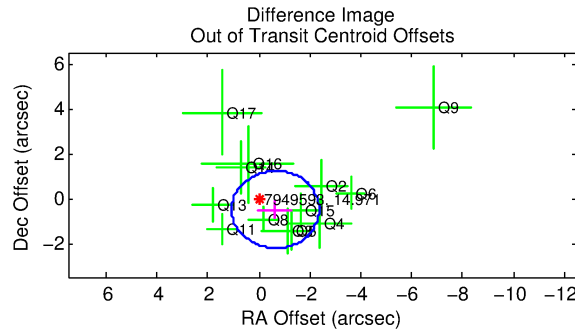
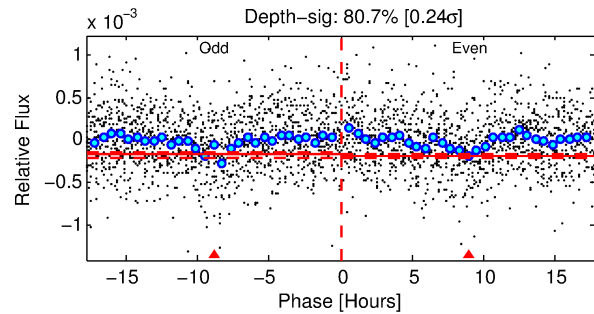
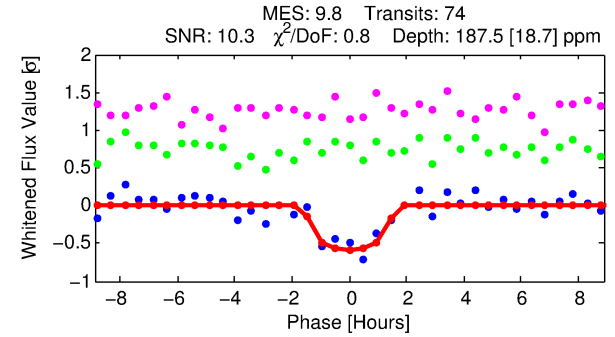
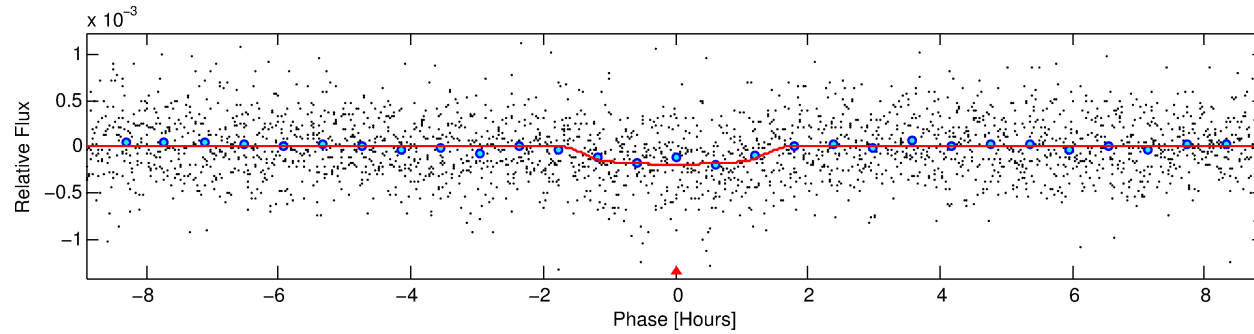
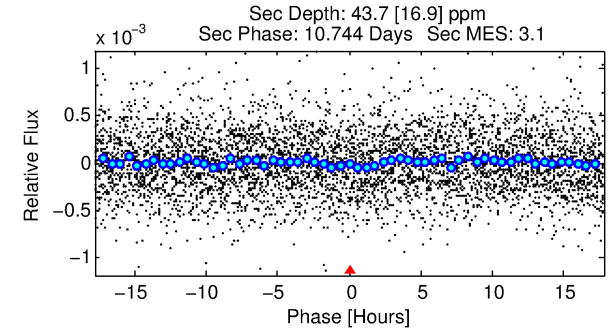
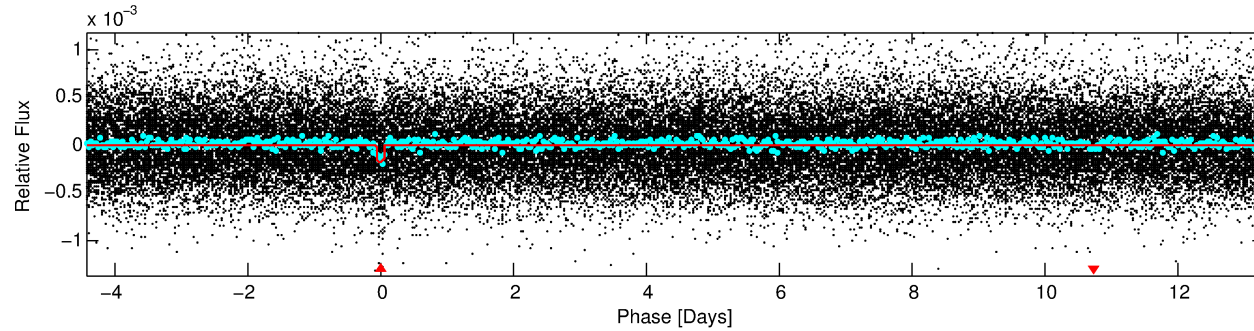
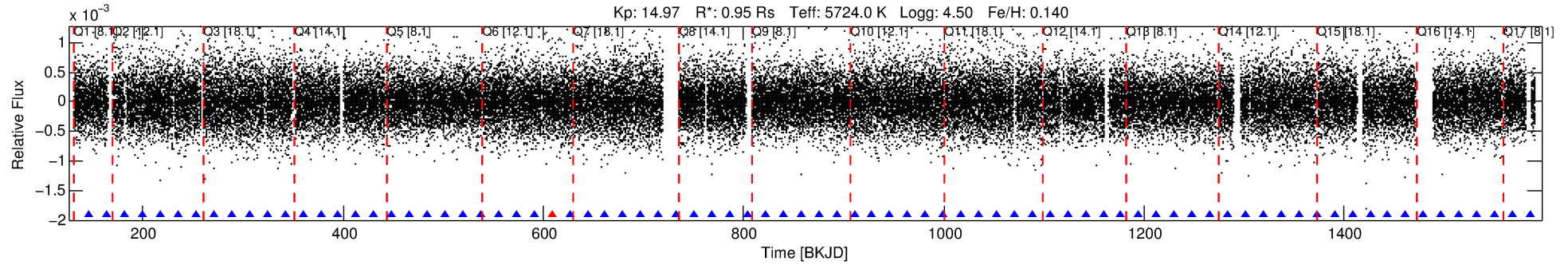
Ephemeris Match Information For 007949593-01

No Significant Match Found

DV One-Page Summary

KIC: 7949593 Candidate: 1 of 1 Period: 17.766 d

KOI: K04759.01 Corr: 0.910



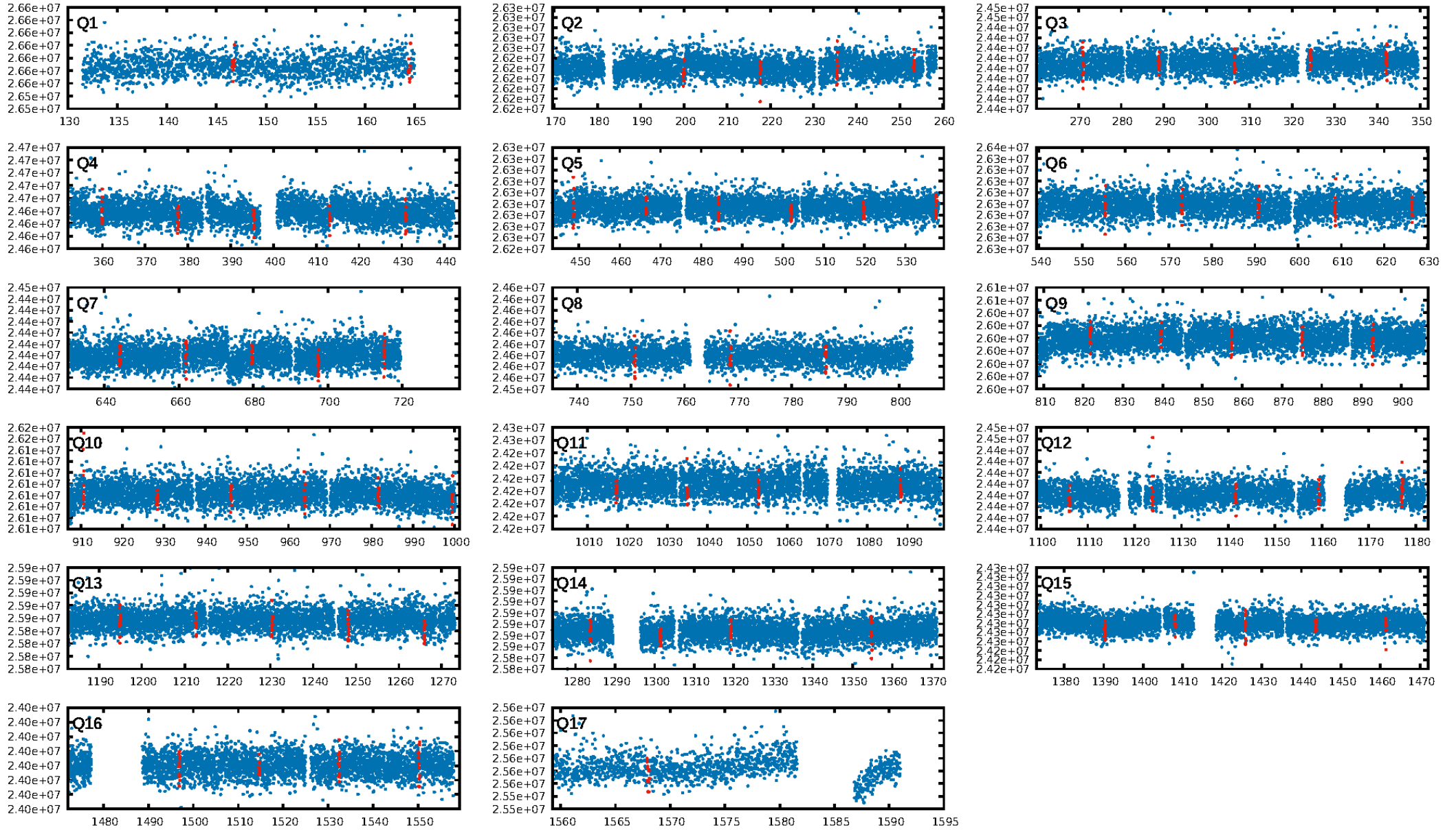
DV Fit Results:

Period = 17.76618 [0.00016] d
Epoch = 146.6915 [0.0072] BKJD
Rp/R* = 0.0144 [0.0128]
a/R* = 24.93 [99.45]
b = 0.86 [1.28]
Seff = 47.81 [10.42]
Teff = 671 [37] K
Rp = 1.49 [1.34] Re
a = 0.1342 [0.0182] AU
Ag = 195.12 [357.09] [0.54σ]
Teffp = 3875 [1762] K [1.82σ]

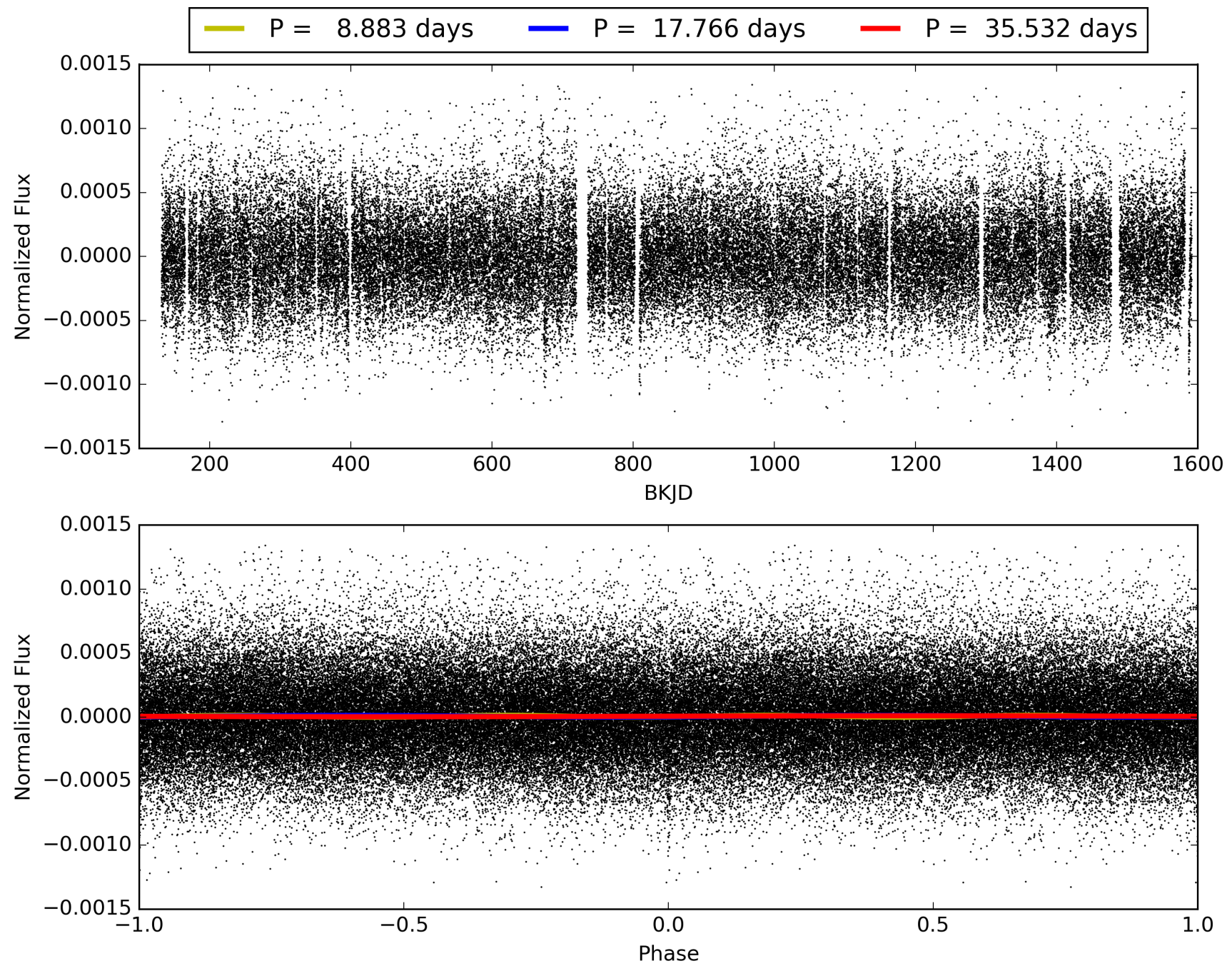
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.28e-23
RollingBand-fgt: 0.99 [70/71]
GhostDiagnostic-chr: 2.67
Centroid-sig: 81.6%
Centroid-so: 0.452 arcsec [0.32σ]
OotOffset-rm: 0.824 arcsec [1.44σ]
KicOffset-rm: 0.974 arcsec [1.80σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007949593-01, PDC Light Curves

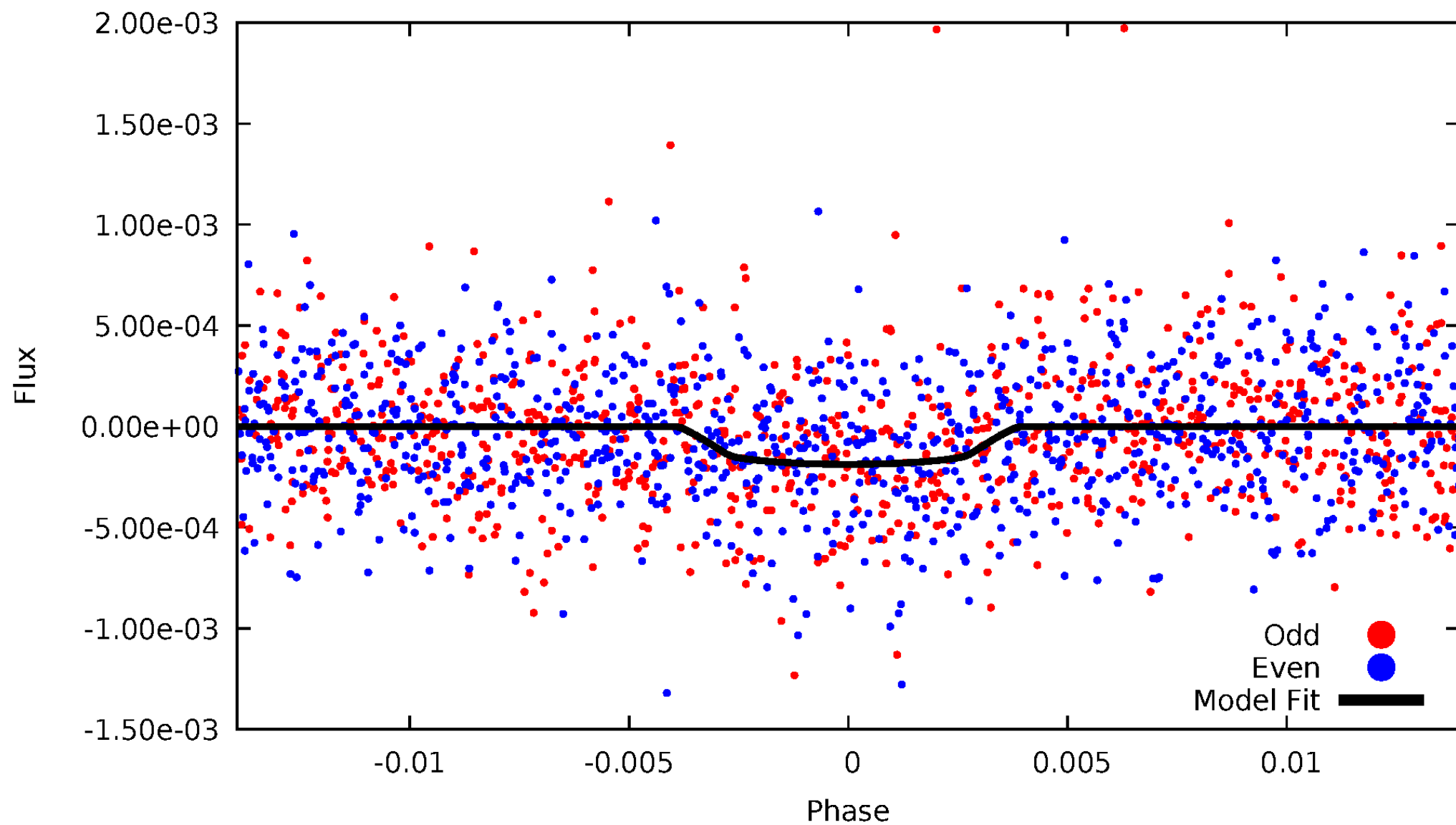


TCE 007949593-01



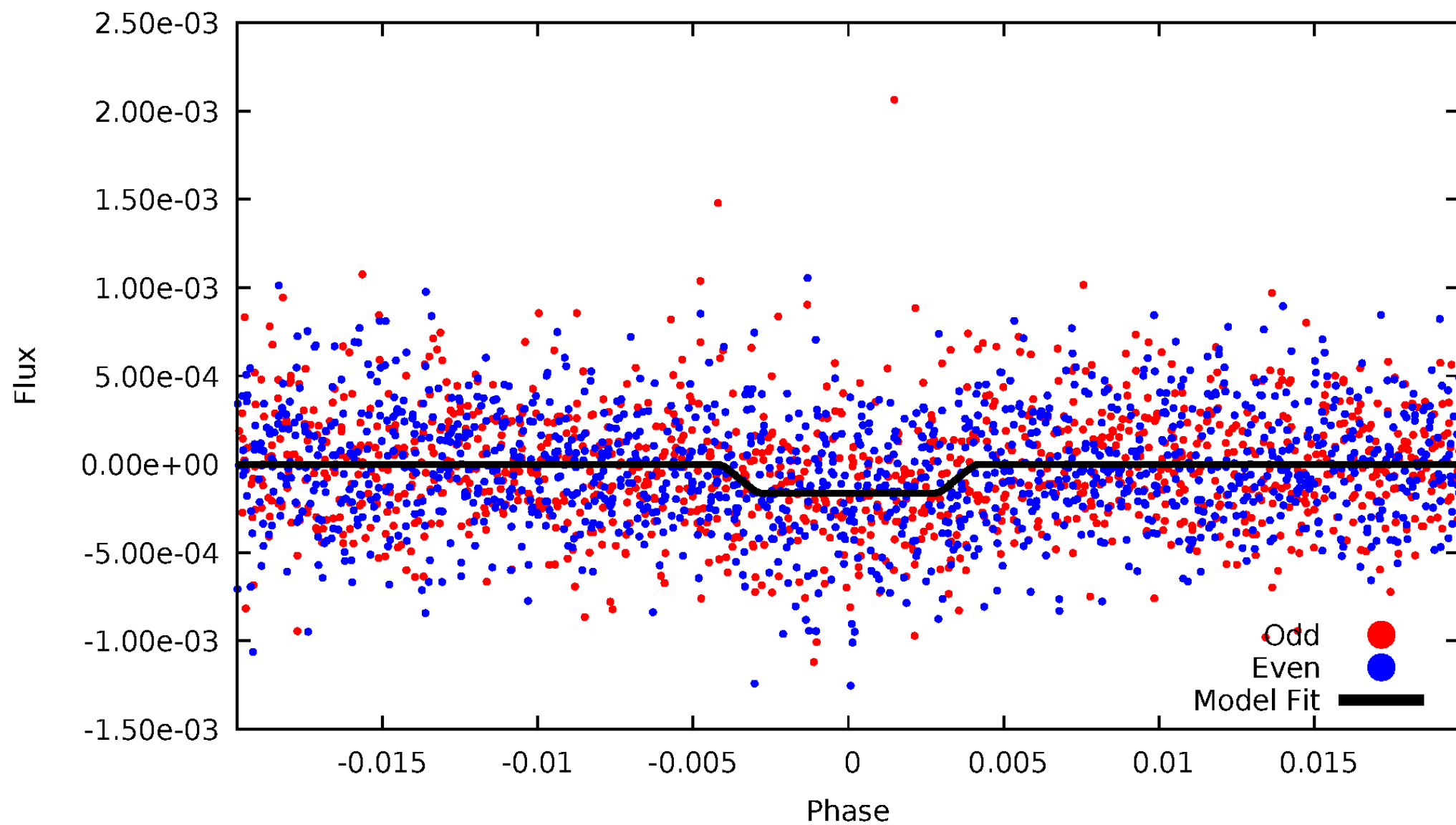
DV Odd/Even

TCE 007949593-01



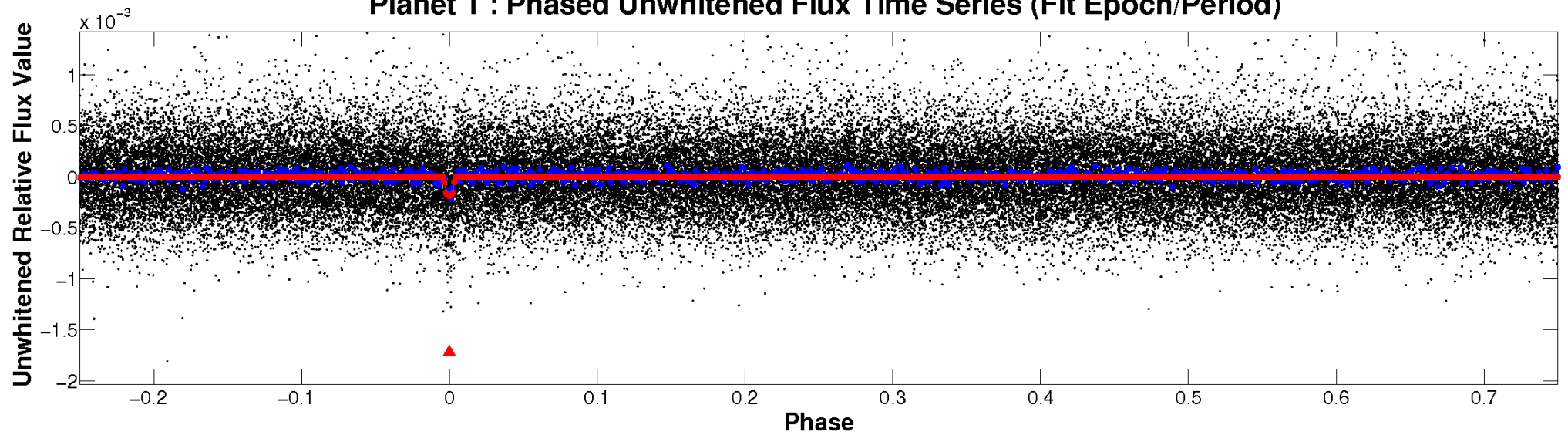
ALT Odd/Even

TCE 007949593-01

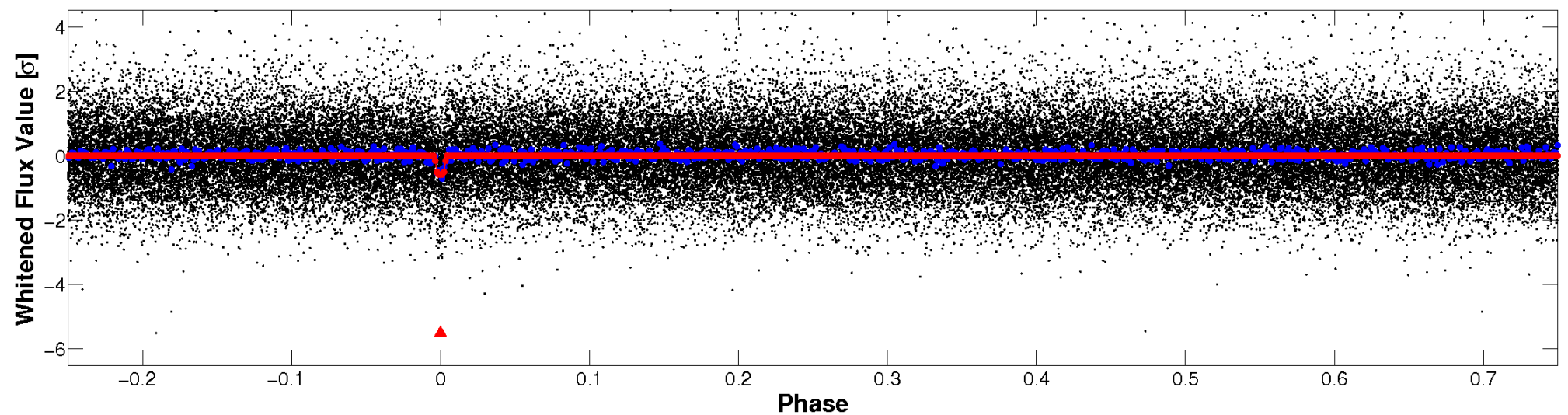


Non-Whitened Vs. Whitened Light Curve

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

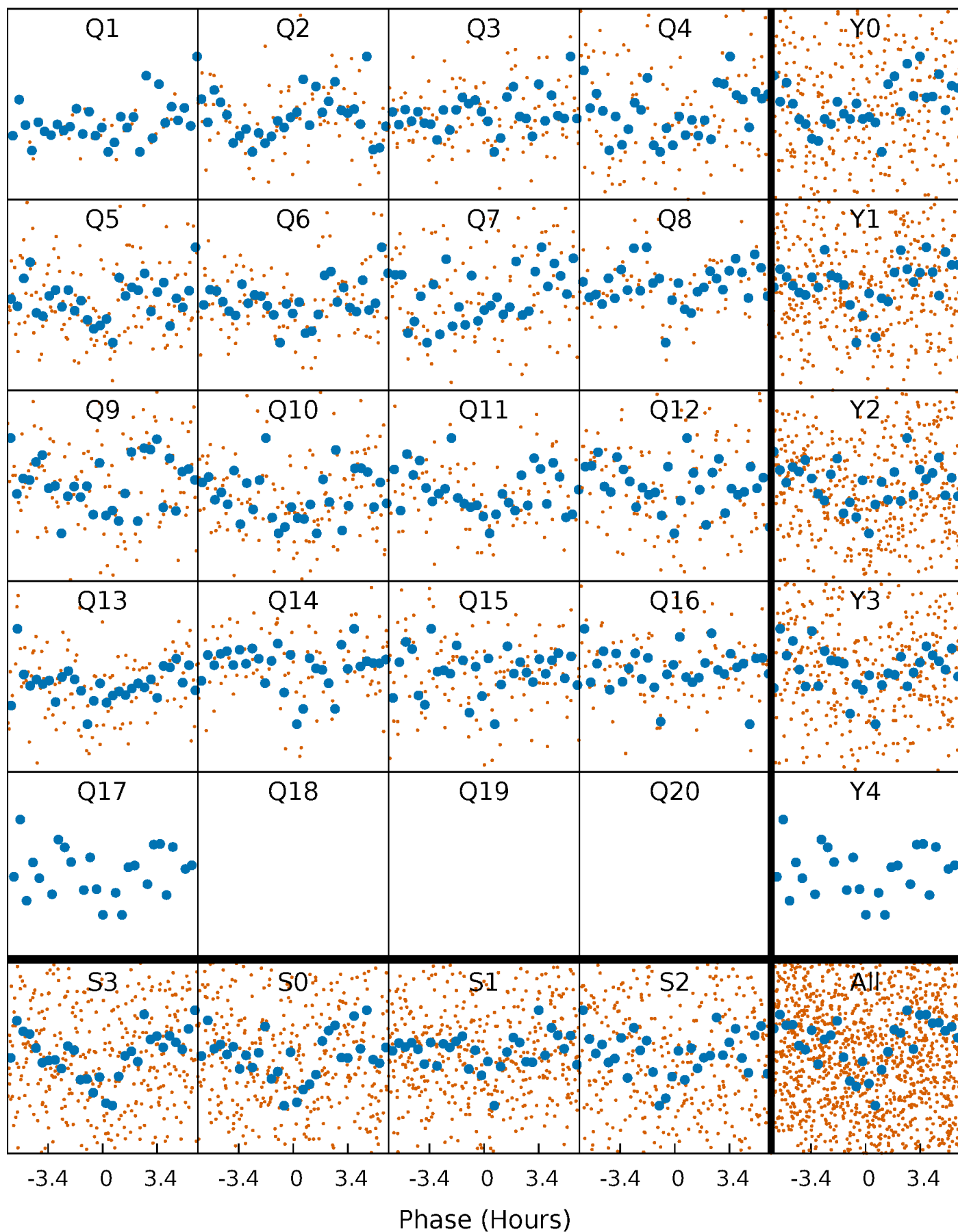


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



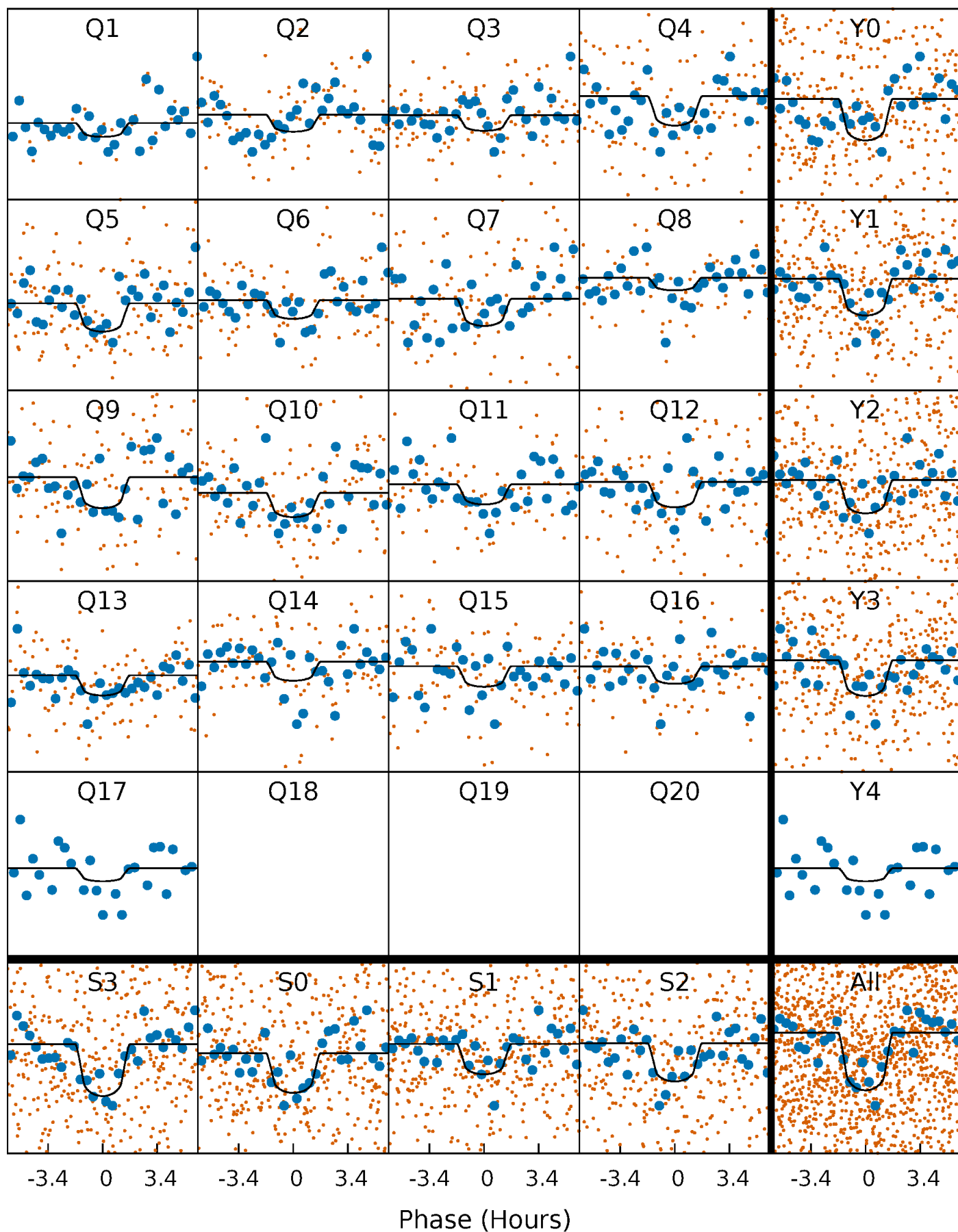
PDC Quarter-Phased Transit Curves

TCE 007949593-01 P= 17.766180 Days $T_0=146.691474$ (BKJD)



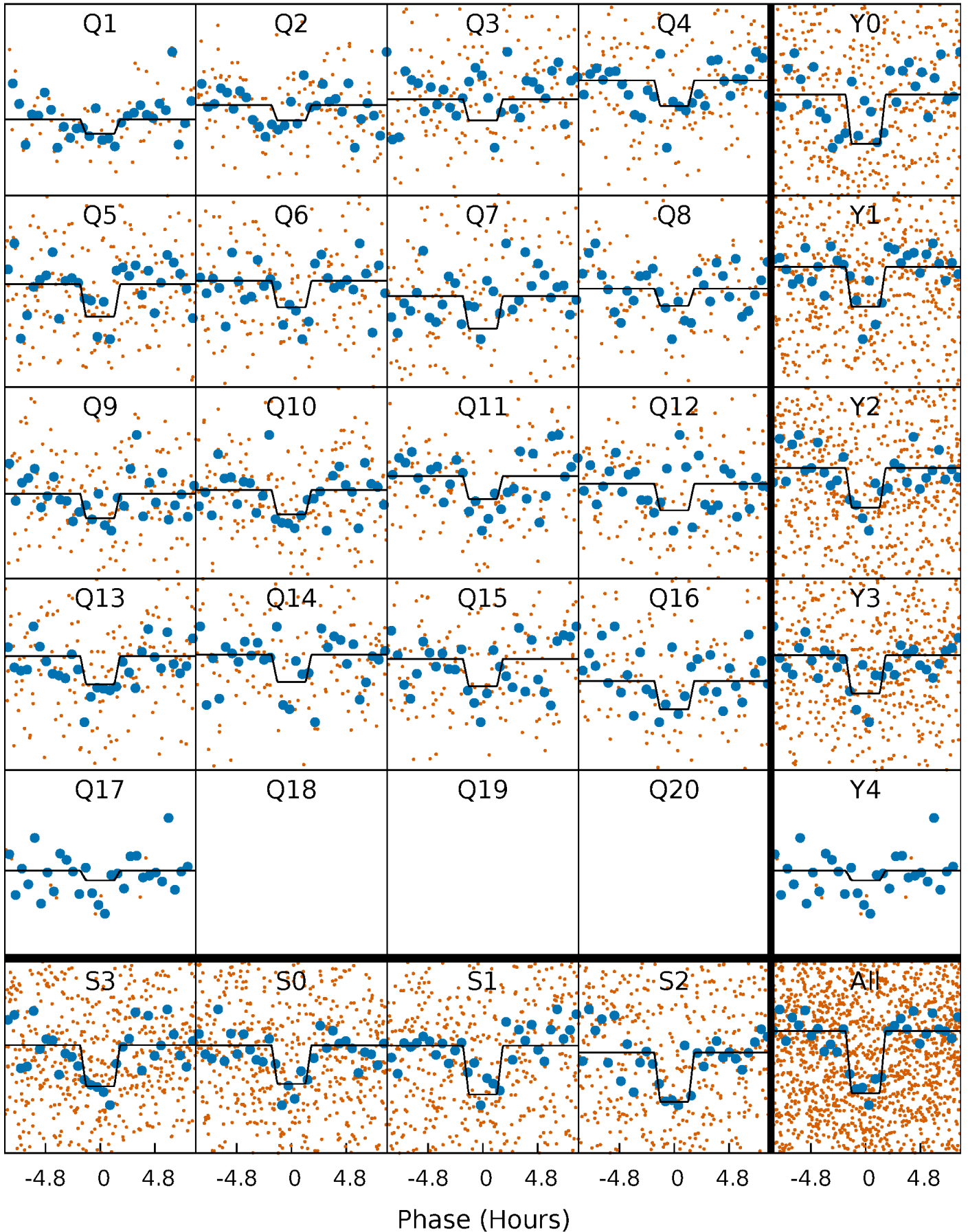
DV Quarter-Phased Transit Curves

TCE 007949593-01 P= 17.766180 Days $T_0=146.691474$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

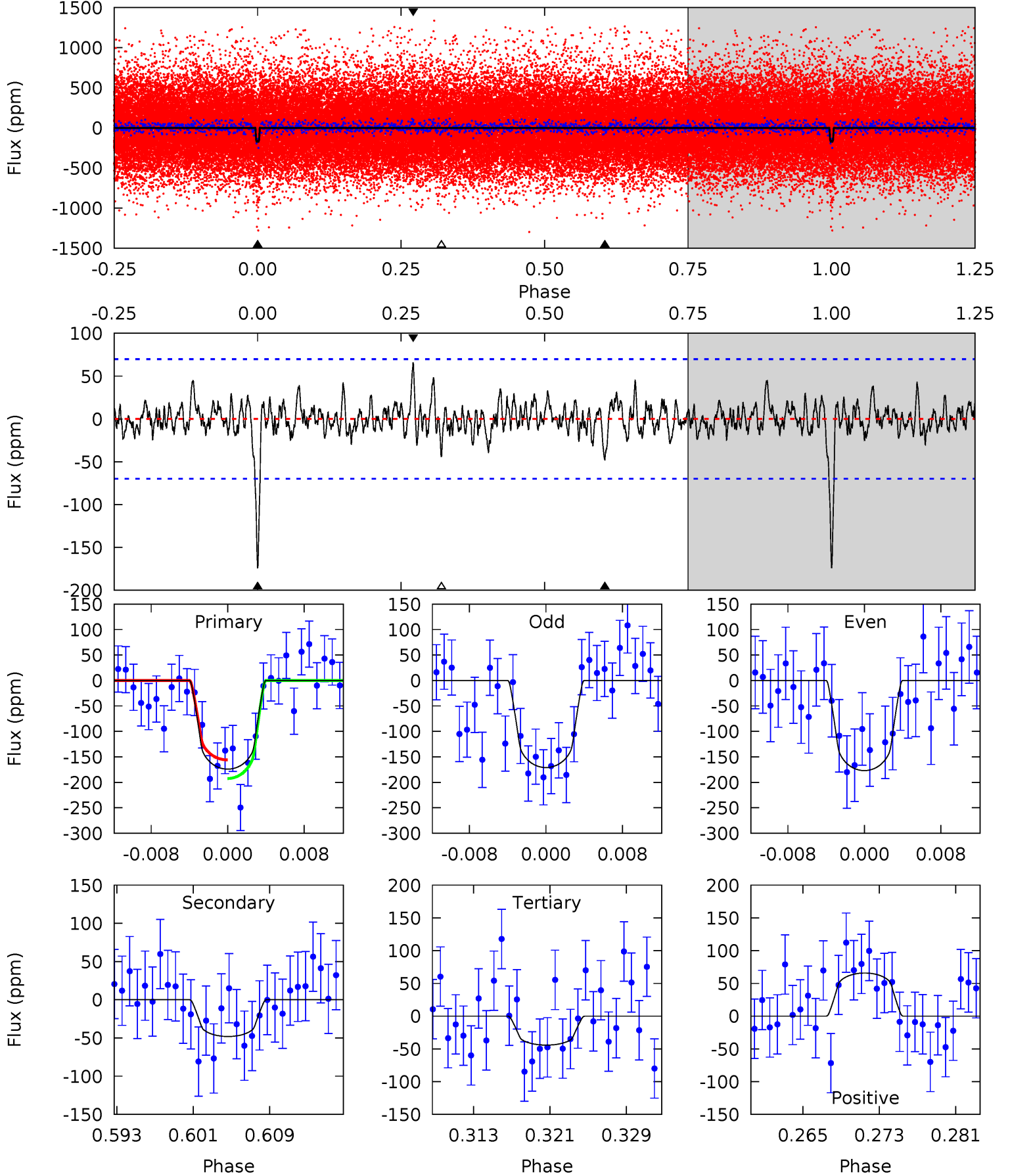
TCE 007949593-01 P= 17.766754 Days $T_0=146.669283$ (BKJD)



DV Model-Shift Uniqueness Test

007949593-01, $P = 17.766180$ Days, $E = 128.925294$ Days

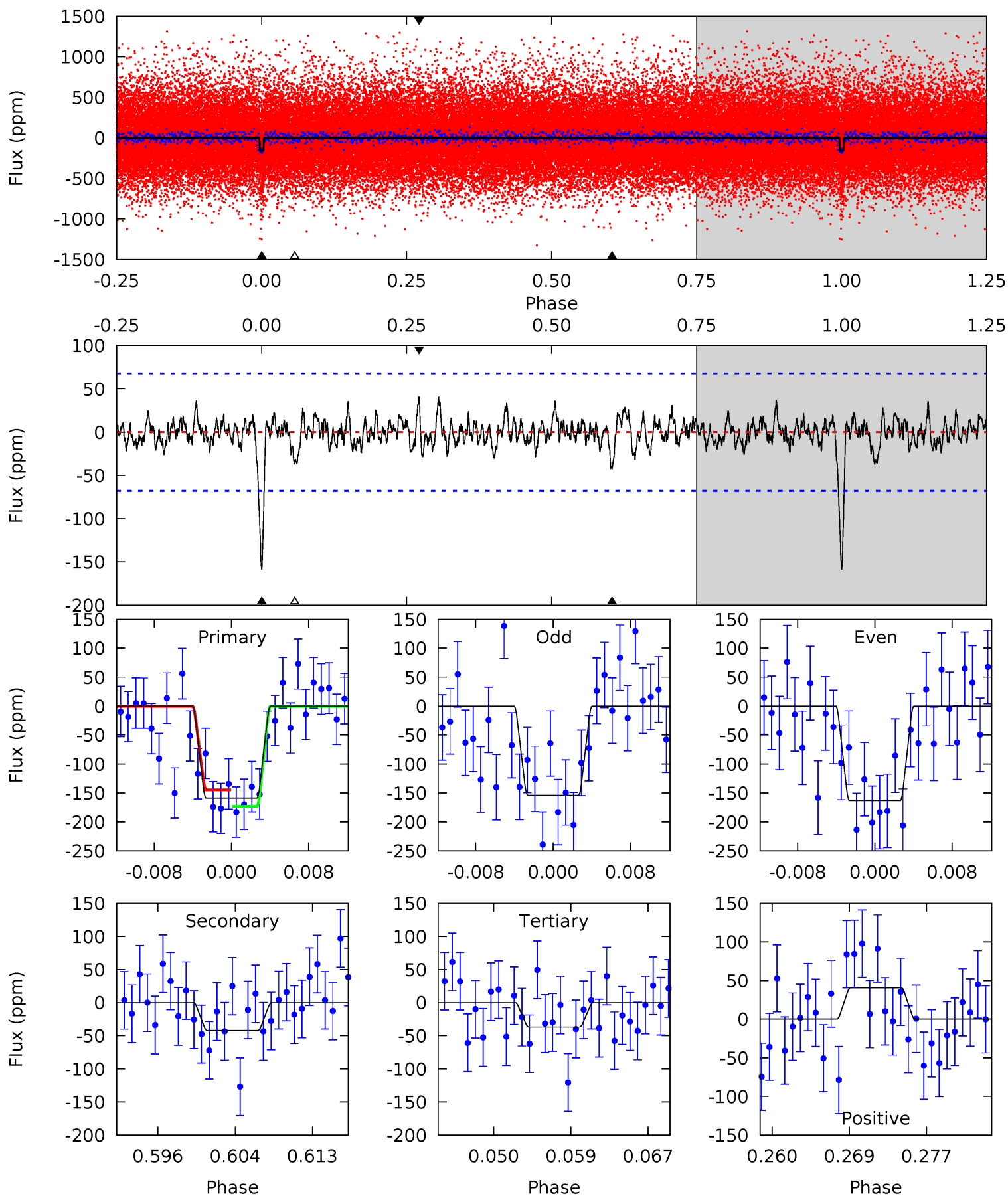
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.49	3.21	4.77	5.07	2.65	1.05	9.42	7.85	0.28	-1.29	0.22	0.96	0.27	1.33



Alt Model-Shift Uniqueness Test

007949593-01, $P = 17.766754$ Days, $E = 128.902529$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	3.14	2.75	3.04	5.06	2.64	0.94	9.09	8.80	0.39	0.10	0.34	1.02	0.20	1.08



Stellar Parameters For KIC 007949593

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5724^{+77}_{-85}	$4.495^{+0.030}_{-0.120}$	$0.140^{+0.150}_{-0.150}$	$0.946^{+0.142}_{-0.047}$	$1.022^{+0.046}_{-0.067}$	$1.699^{+0.192}_{-0.594}$
	+1%/-1%	+1%/-3%	+107%/-107%	+15%/-5%	+5%/-7%	+11%/-35%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007949593-01 / KOI 4759.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-48 ± 14	$1.79^{+1.27}_{-1.02}$	946^{+37}_{-22}	3963^{+1669}_{-661}	142^{+653}_{-95}
Alt.	-42 ± 13	$1.59^{+1.29}_{-1.01}$	945^{+37}_{-24}	4052^{+2163}_{-773}	166^{+1055}_{-122}

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 $A_{obs} \gg 1.0$

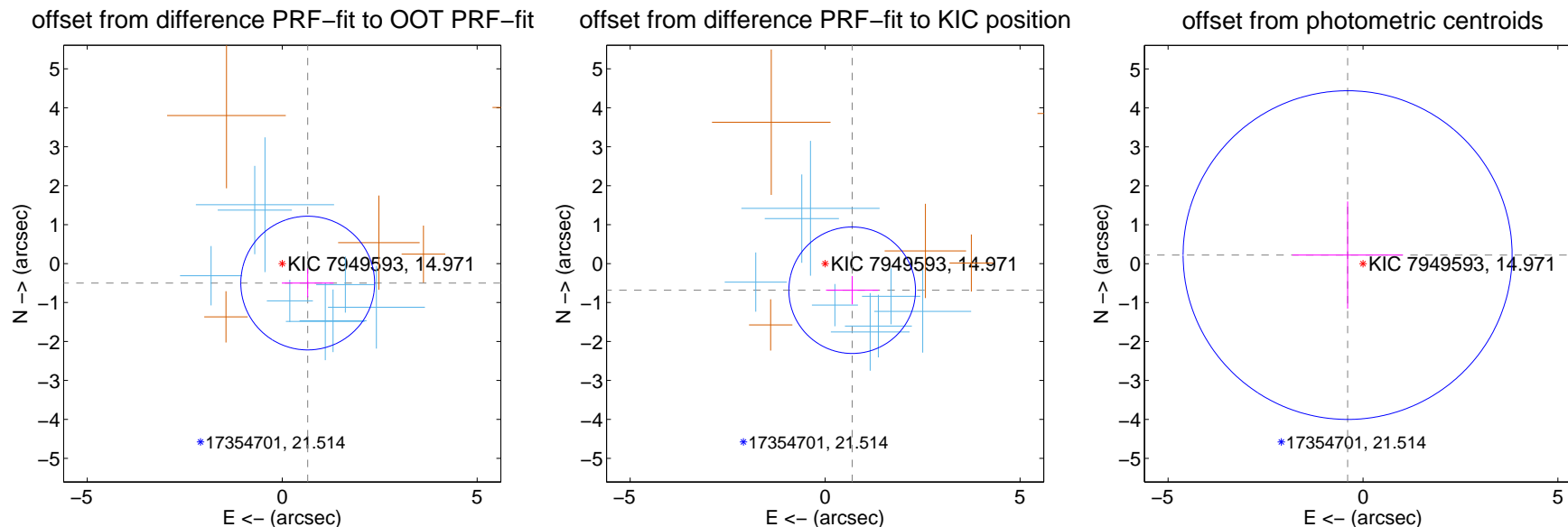
DV Centroid Data

Supplemental centroid analysis for 007949593-01. Kepler magnitude: 14.97. Transit SNR 10.31

There are 8 quarters with good PRF difference image offsets

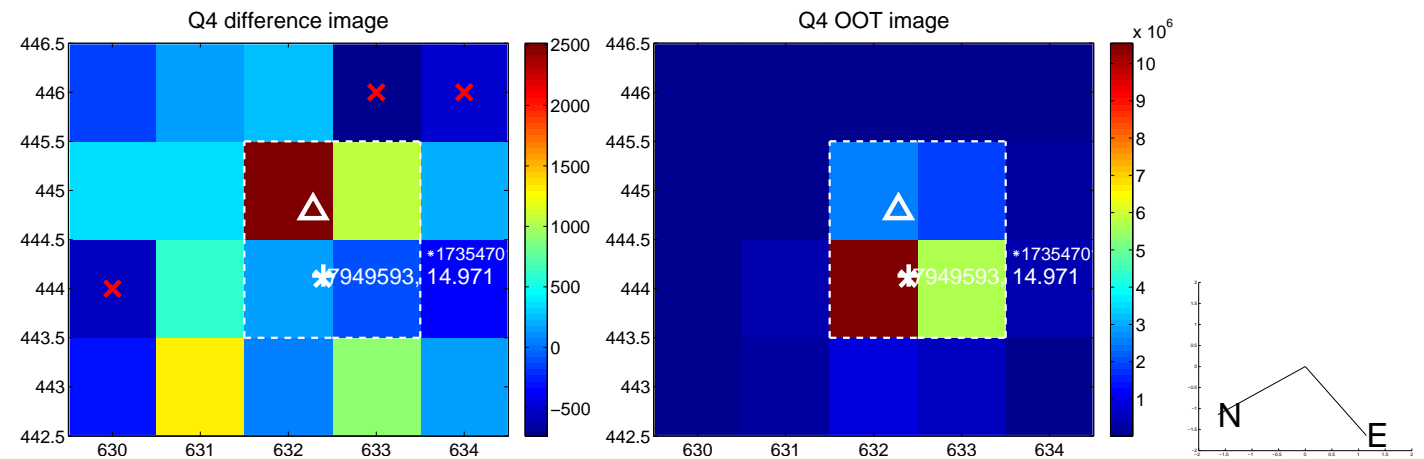
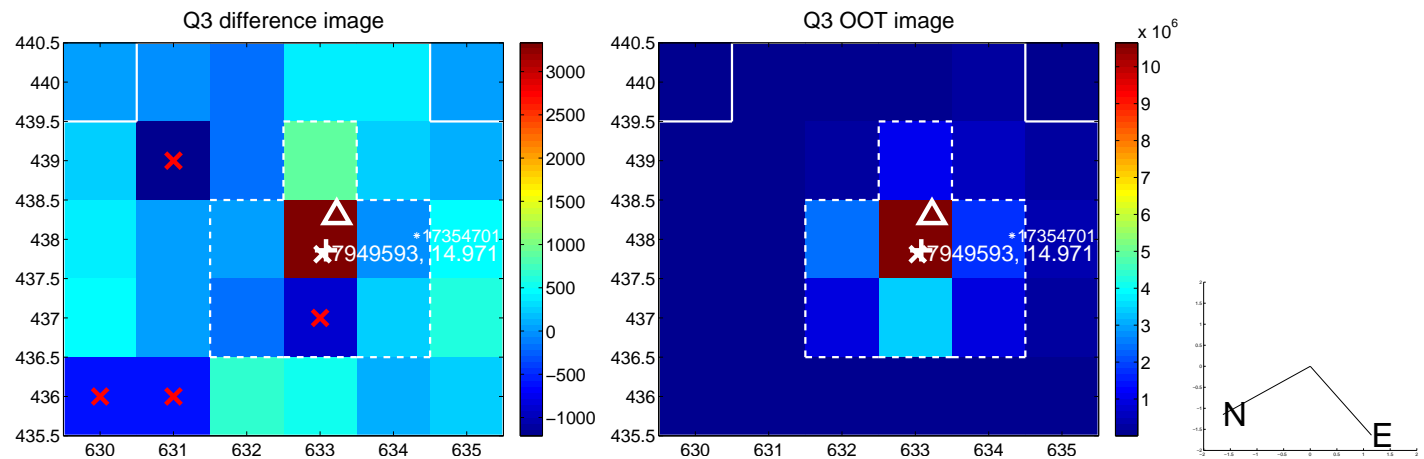
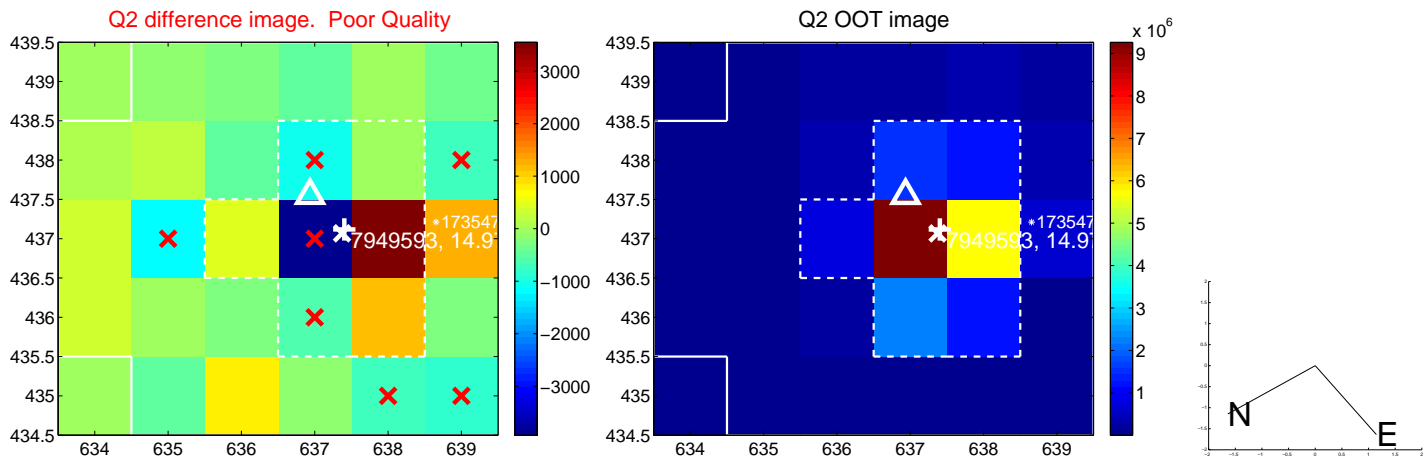
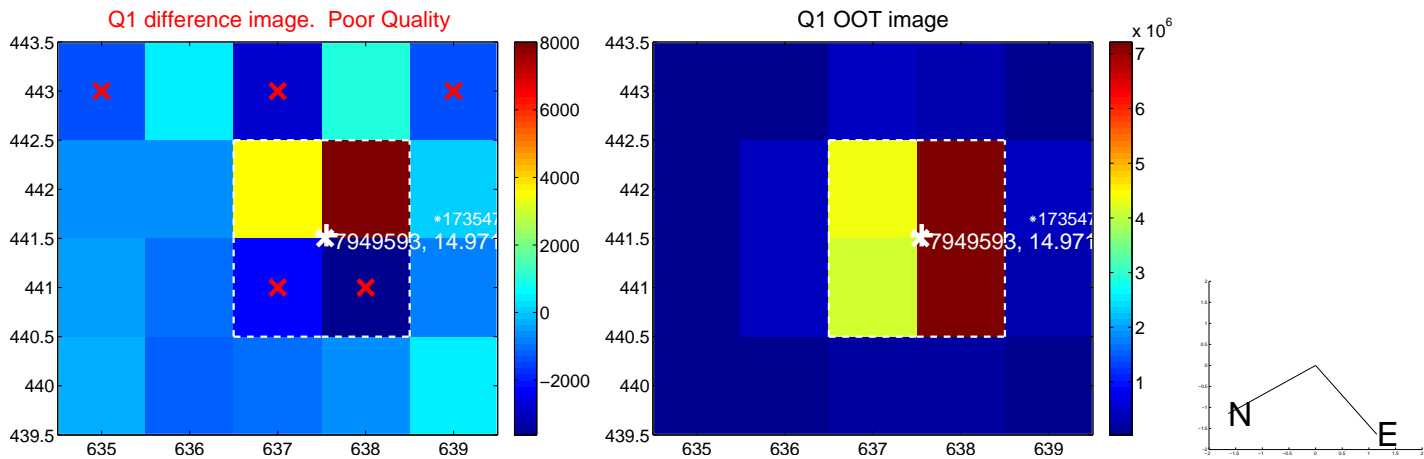
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.824 ± 0.572	1.44	-0.655 ± 0.663	-0.500 ± 0.368
PRF-fit source offset from KIC position	0.974 ± 0.541	1.80	-0.694 ± 0.670	-0.684 ± 0.363
photometric centroid source offset	0.45 ± 1.41	0.32	0.39 ± 1.42	0.22 ± 1.38

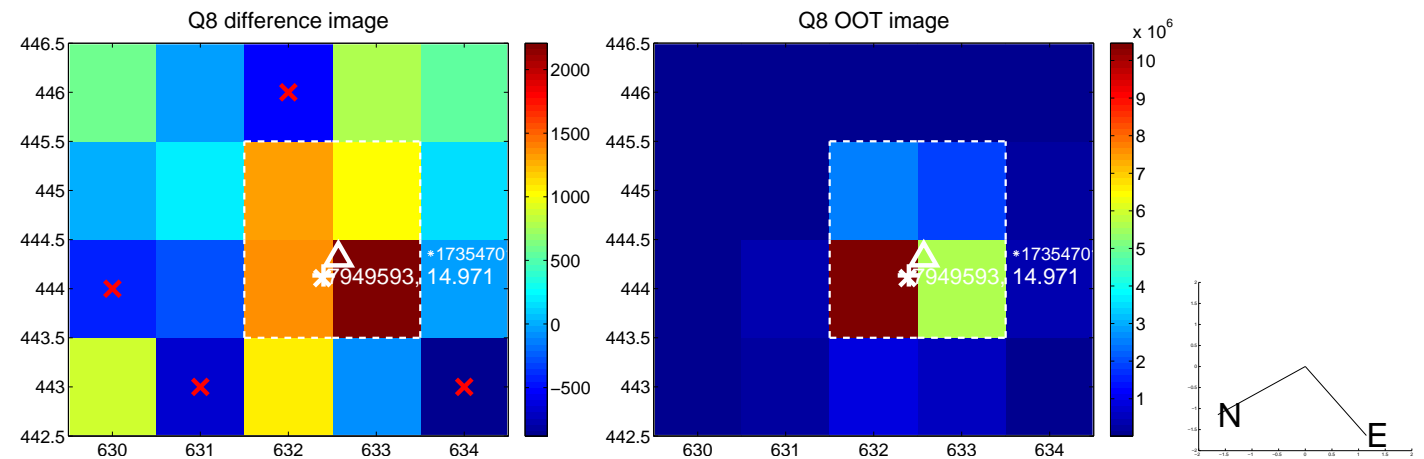
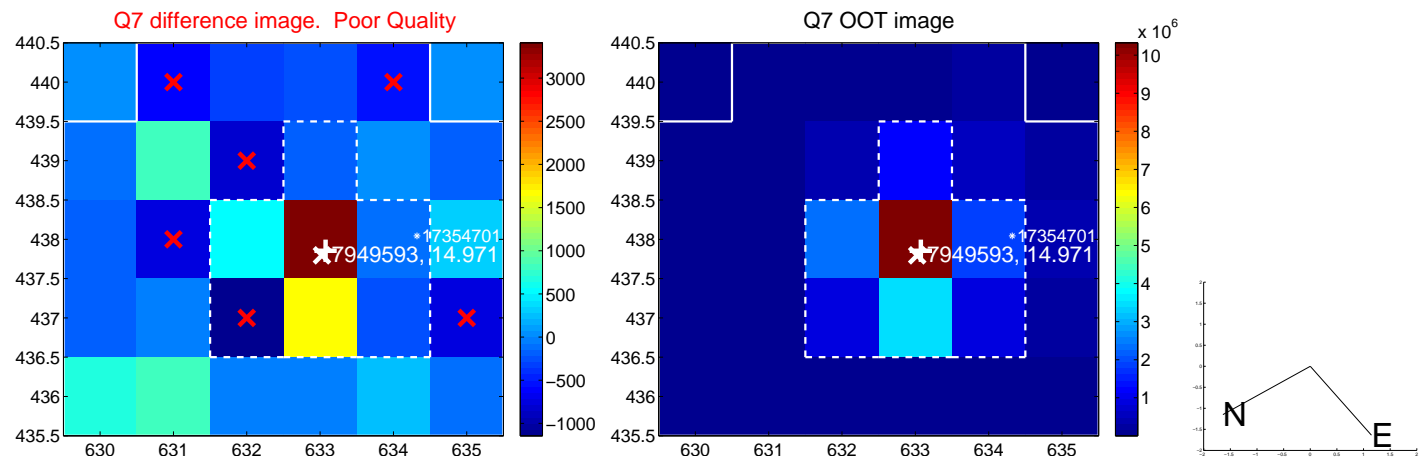
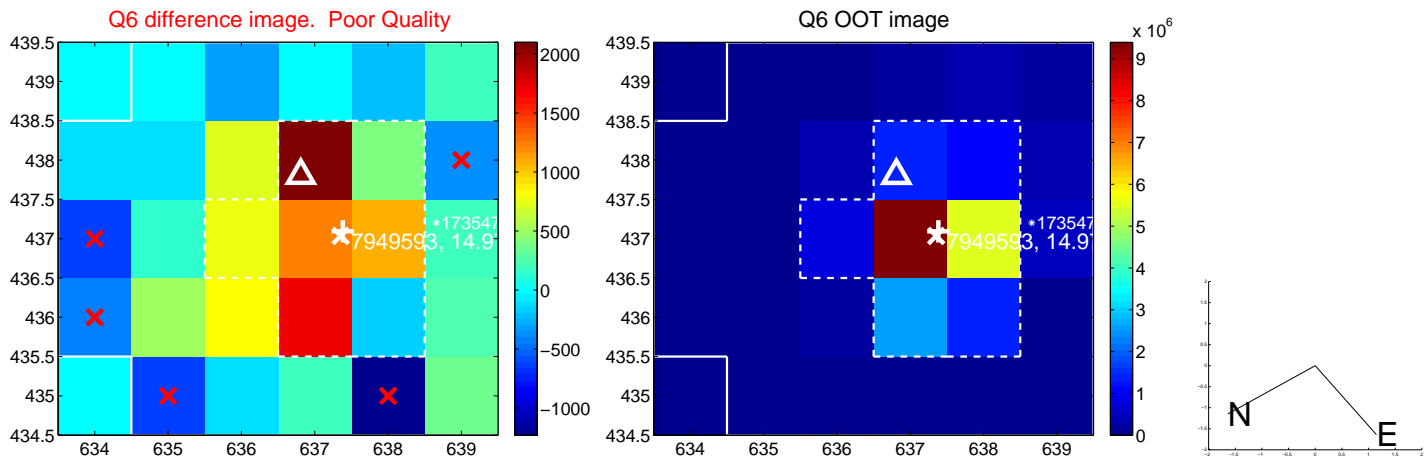
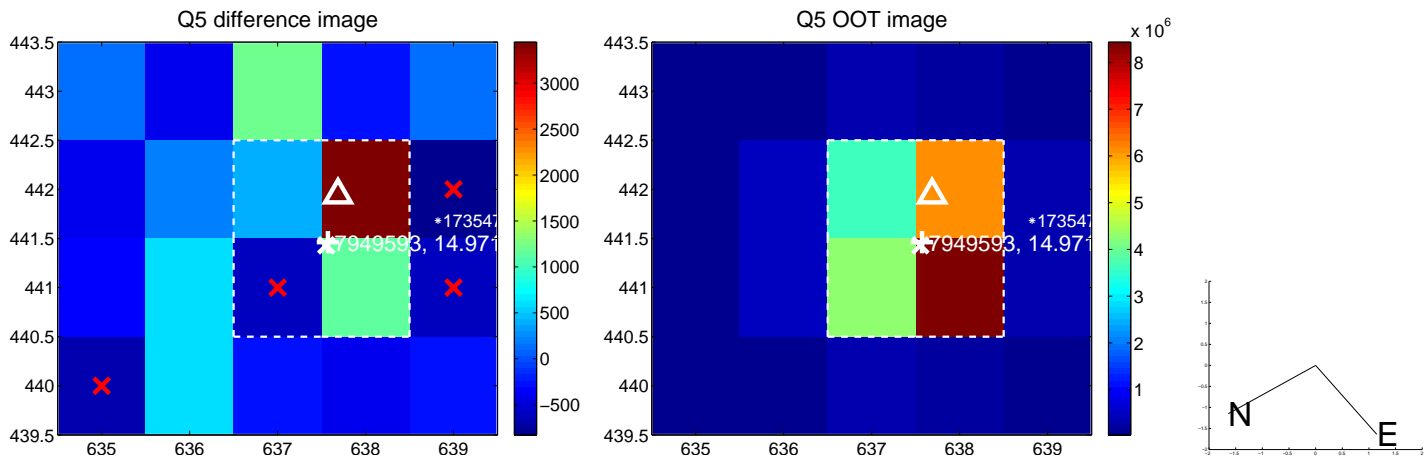


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

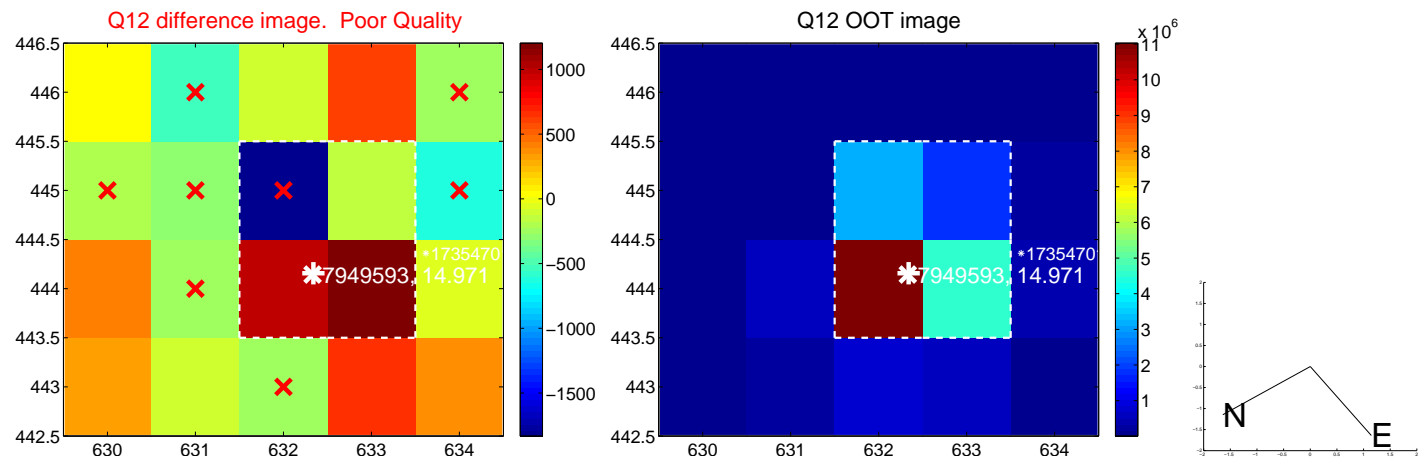
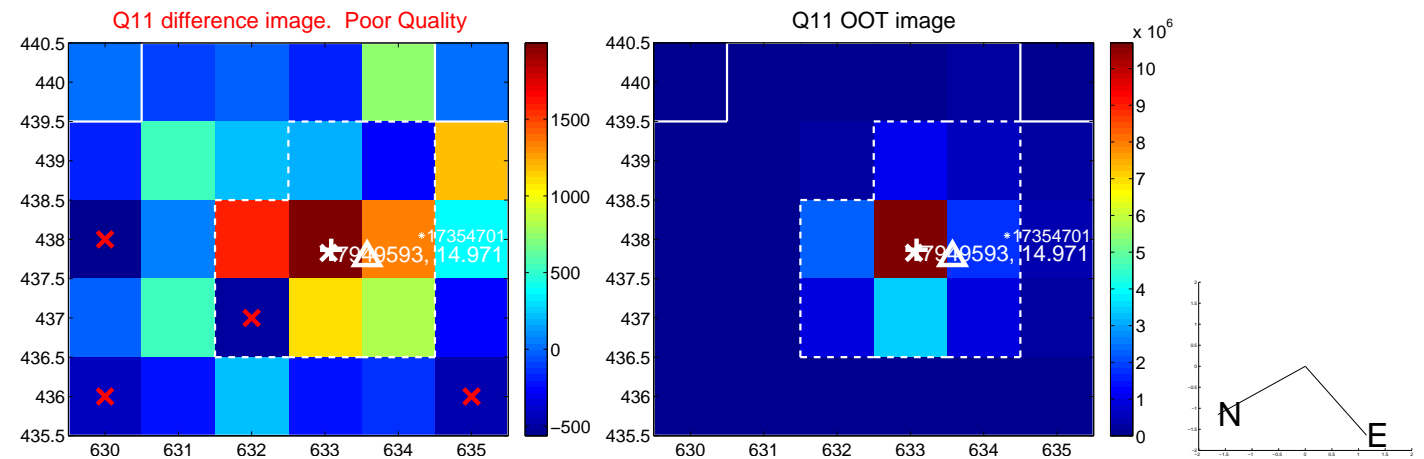
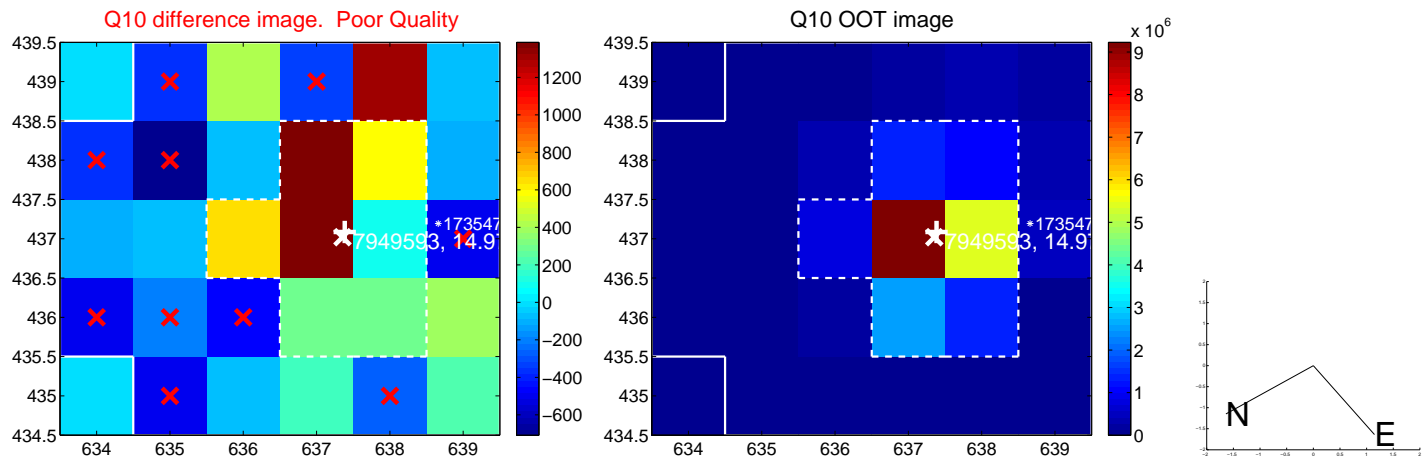
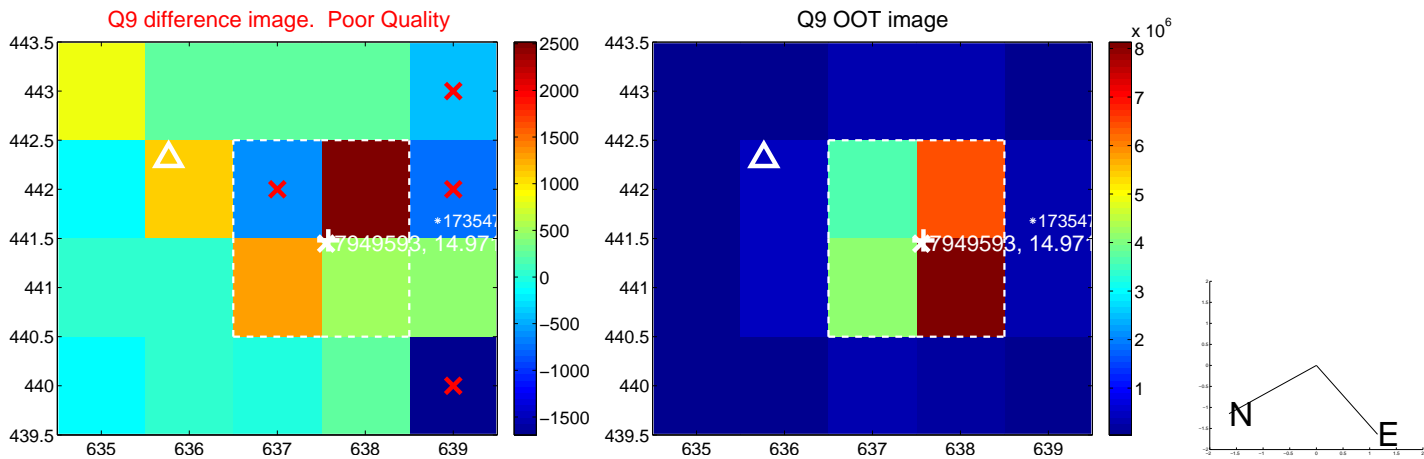
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



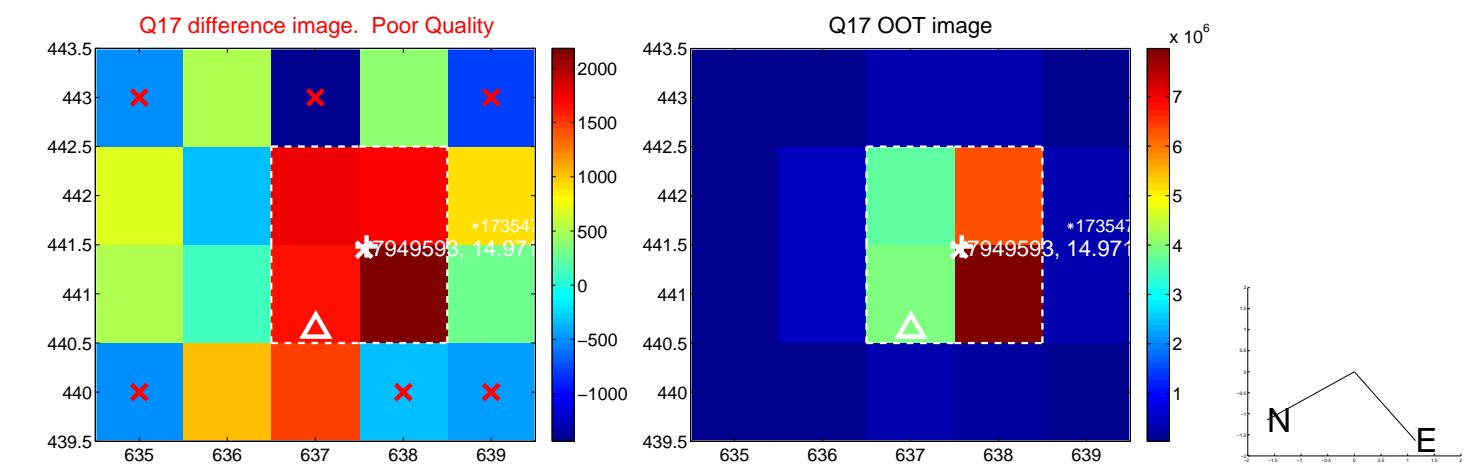
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



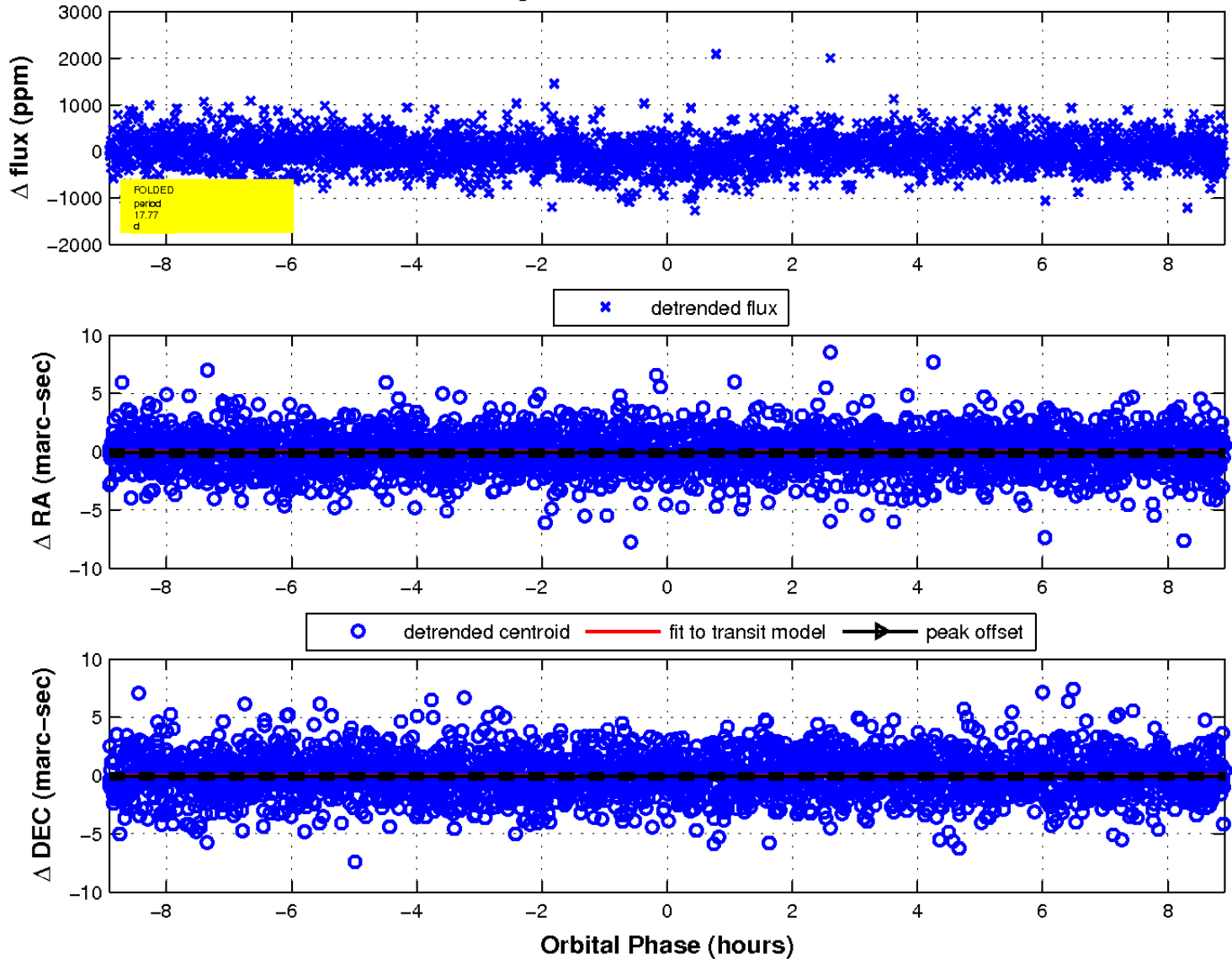
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

