

KIC 008617363

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})
008617363-01	OBS	2945.01	19.947501	144.247079	890.7	1.715	14.4	16.2	0.86	5749	2.83	36.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008617363-01	OBS	PC	0.99	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.

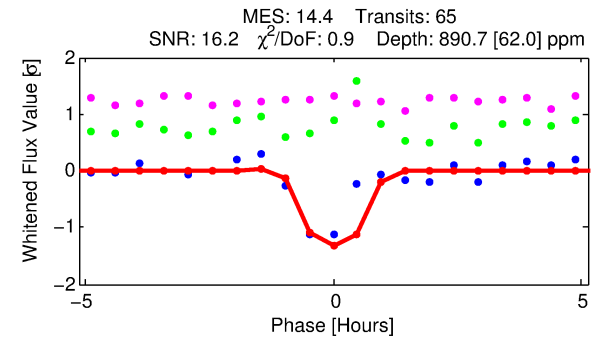
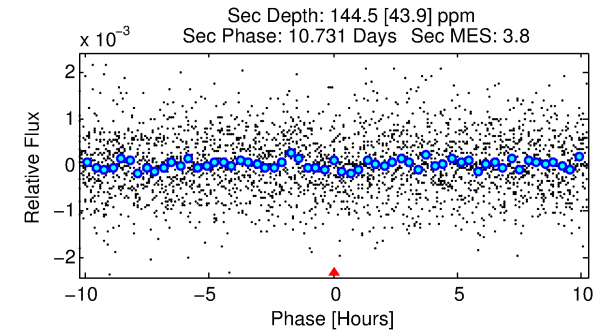
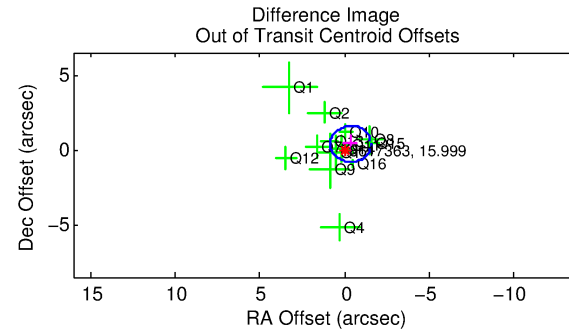
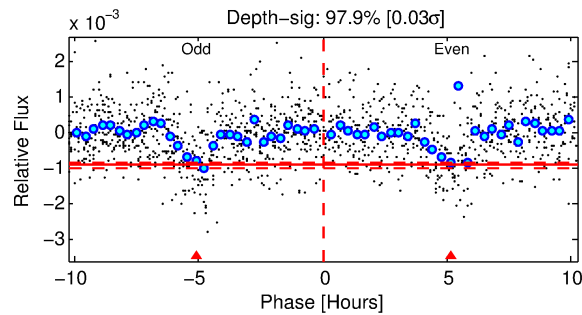
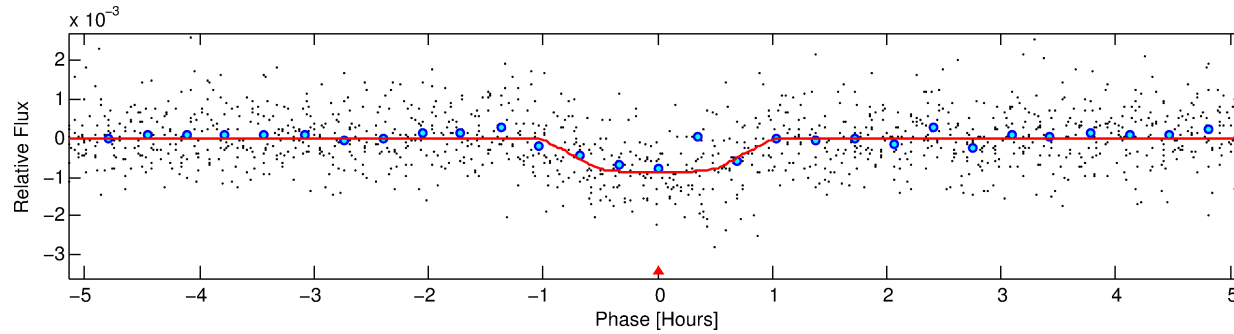
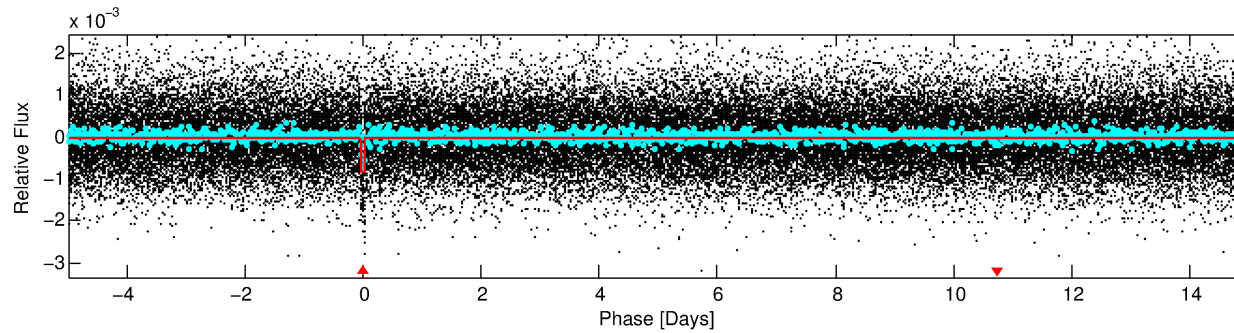
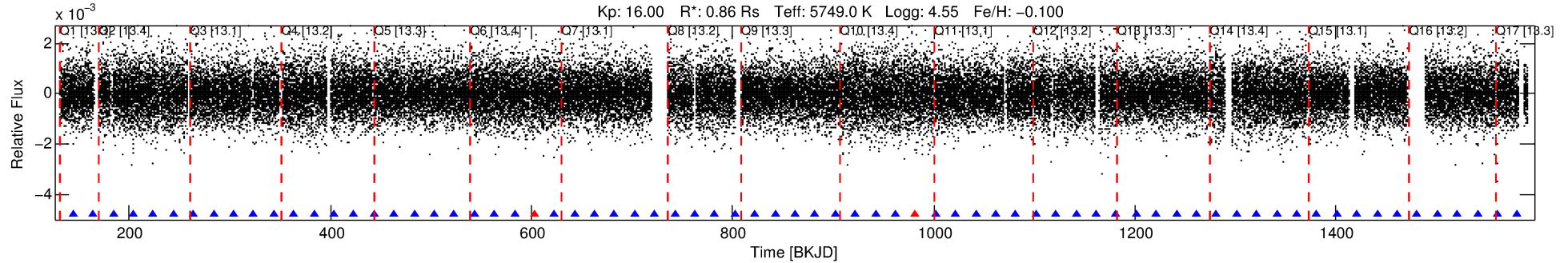
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008617363-01

No Significant Match Found

DV One-Page Summary

KIC: 8617363 Candidate: 1 of 1 Period: 19.948 d
KOI: K02945.01 Corr: 0.972



DV Fit Results:

Period = 19.94750 [0.00008] d
Epoch = 144.2471 [0.0032] BKJD
Rp/R* = 0.0300 [0.0291]
a/R* = 60.88 [262.29]
b = 0.77 [2.33]
Seff = 36.23 [11.27]
Teq = 626 [49] K
Rp = 2.83 [2.81] Re
a = 0.1420 [0.0275] AU
Ag = 199.94 [396.09] [0.50σ]
Teffp = 3637 [1785] K [1.69σ]

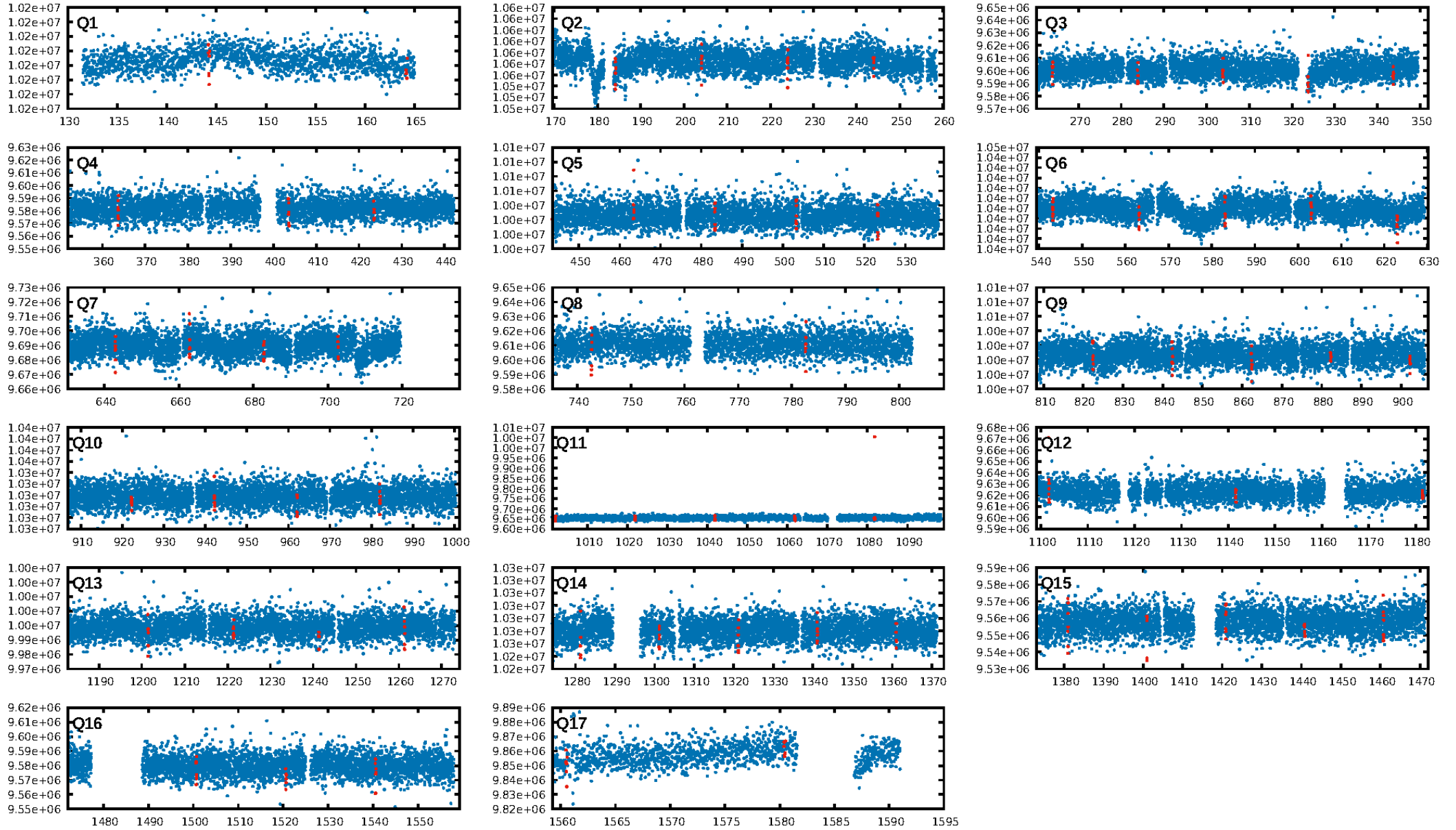
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.92e-47
RollingBand-fgt: 0.97 [59/61]
GhostDiagnostic-chr: 4.479
Centroid-sig: N/A
Centroid-so: 1.323 arcsec [1.42σ]
OotOffset-rm: 0.519 arcsec [1.30σ]
KicOffset-rm: 0.536 arcsec [1.18σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [17/17]

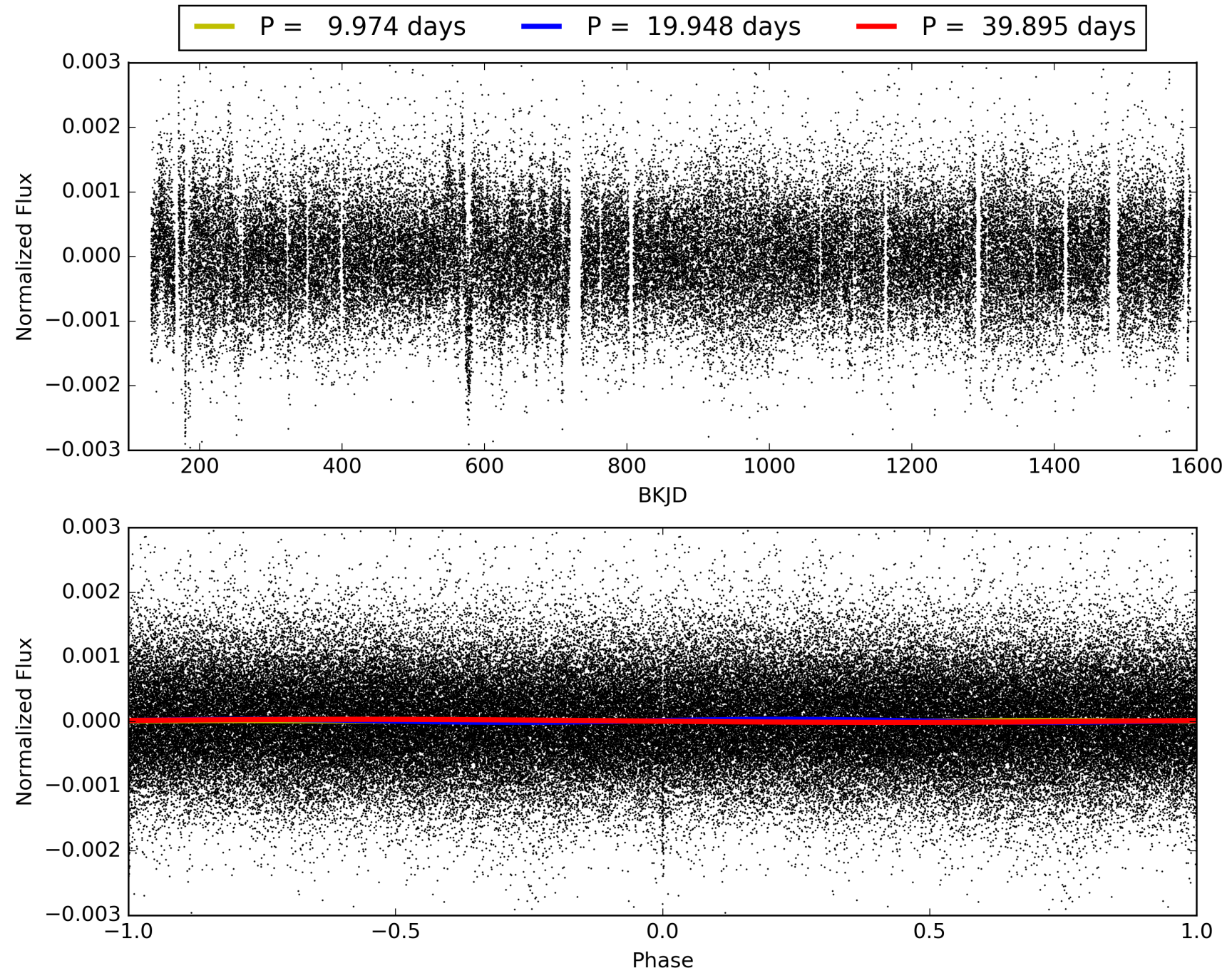
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:27:57 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008617363-01, PDC Light Curves

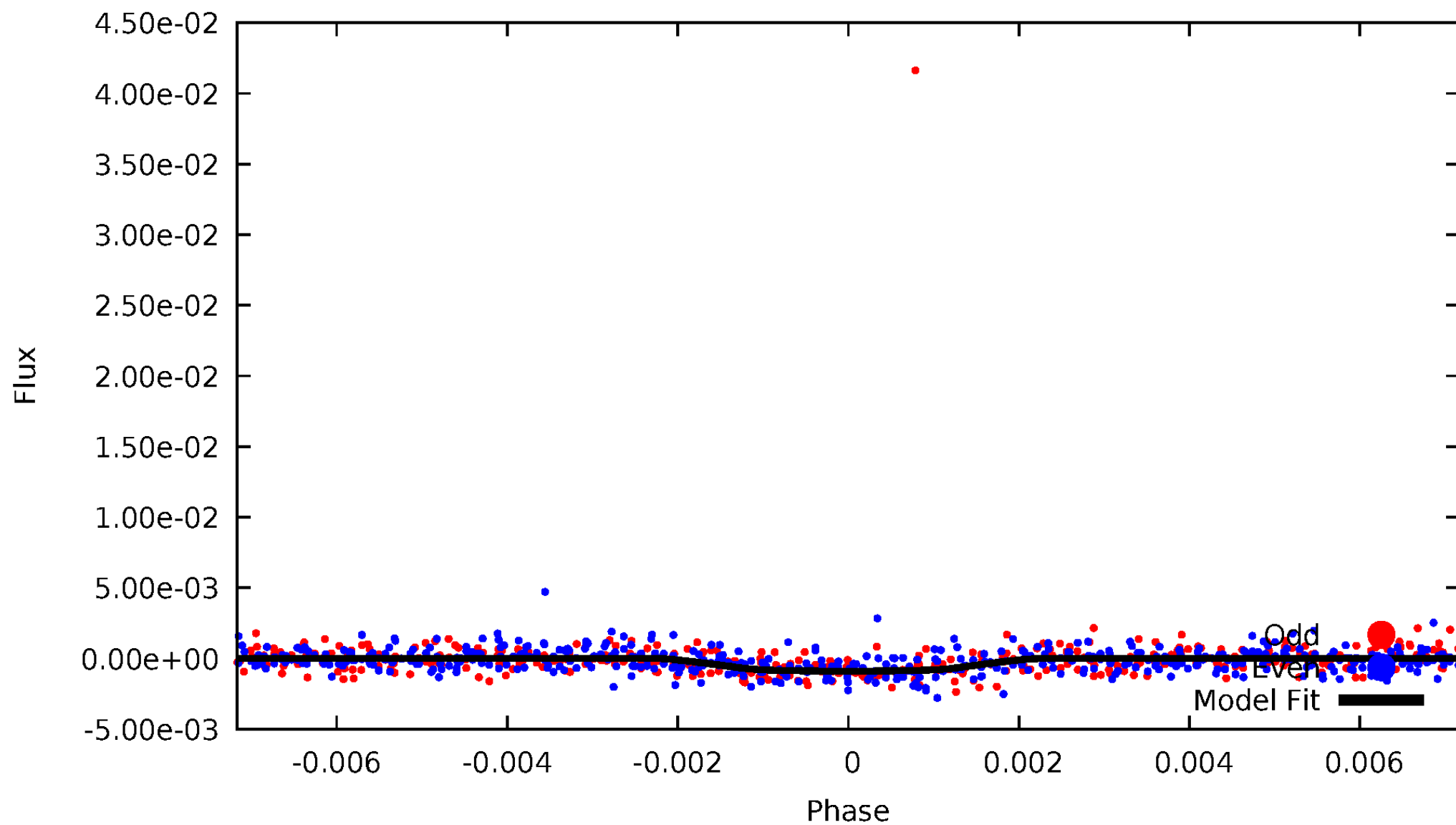


TCE 008617363-01



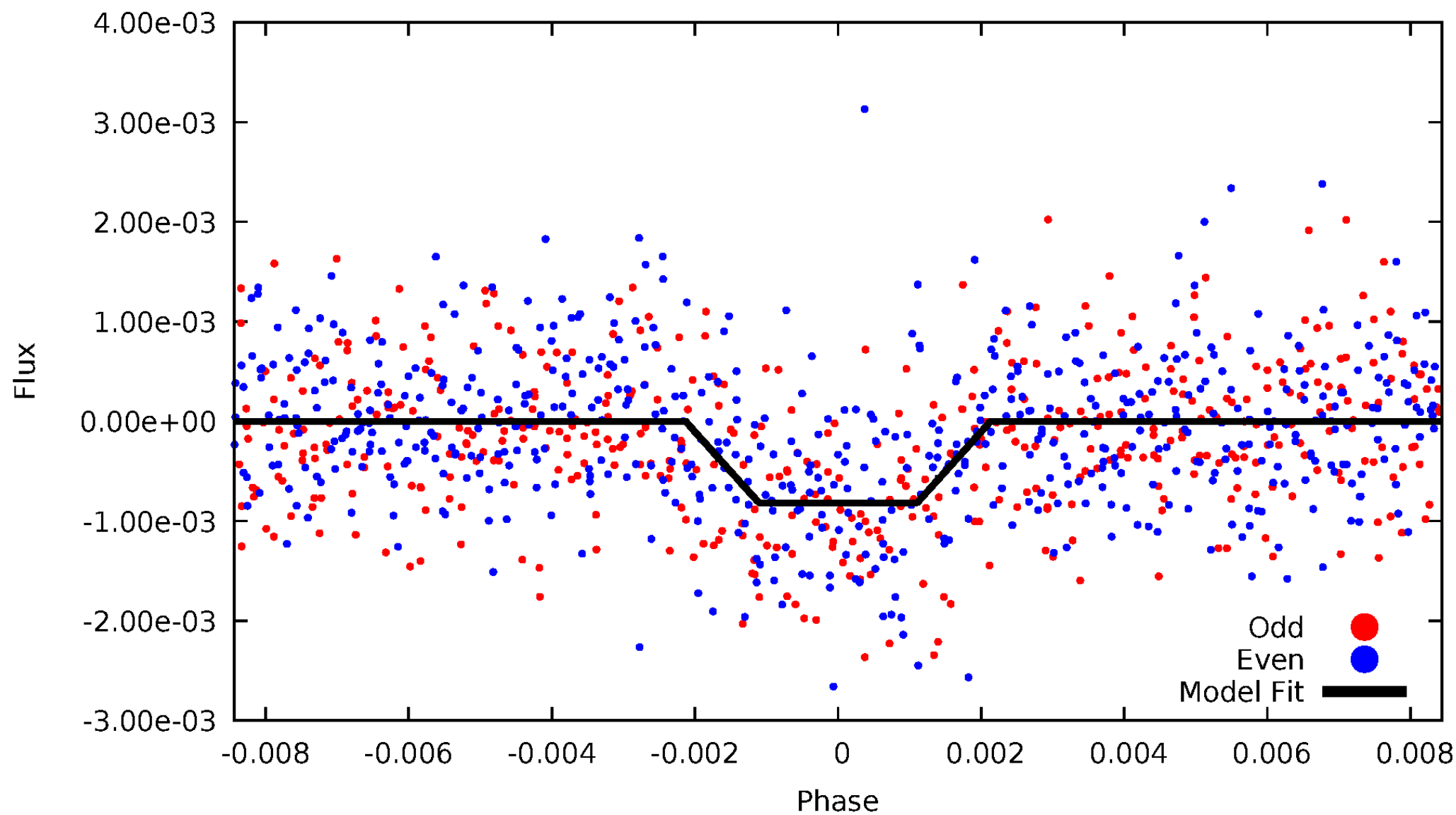
DV Odd/Even

TCE 008617363-01



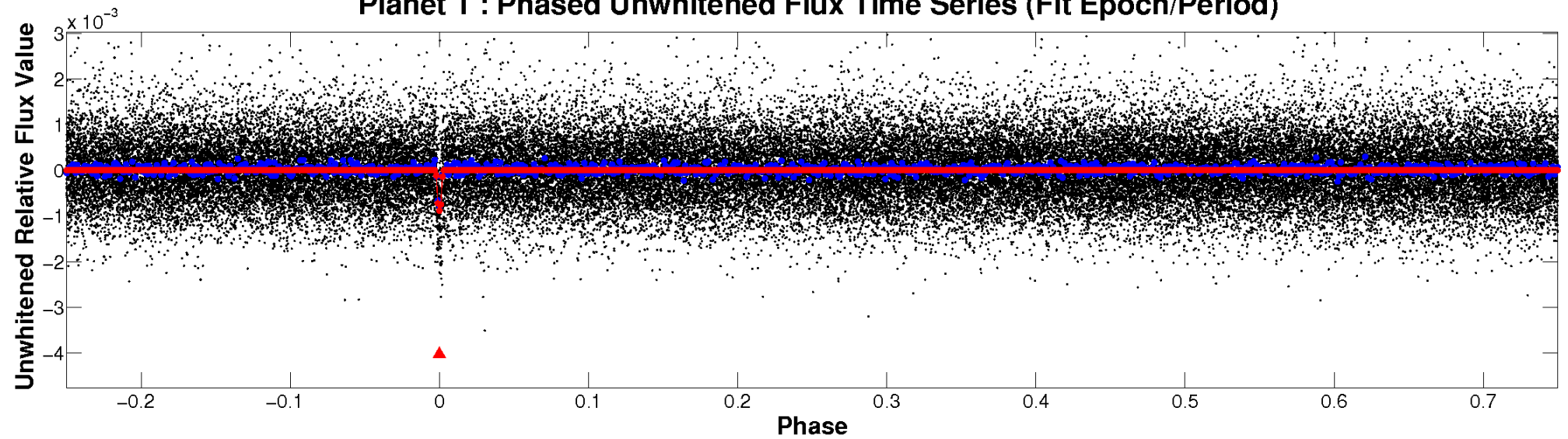
ALT Odd/Even

TCE 008617363-01

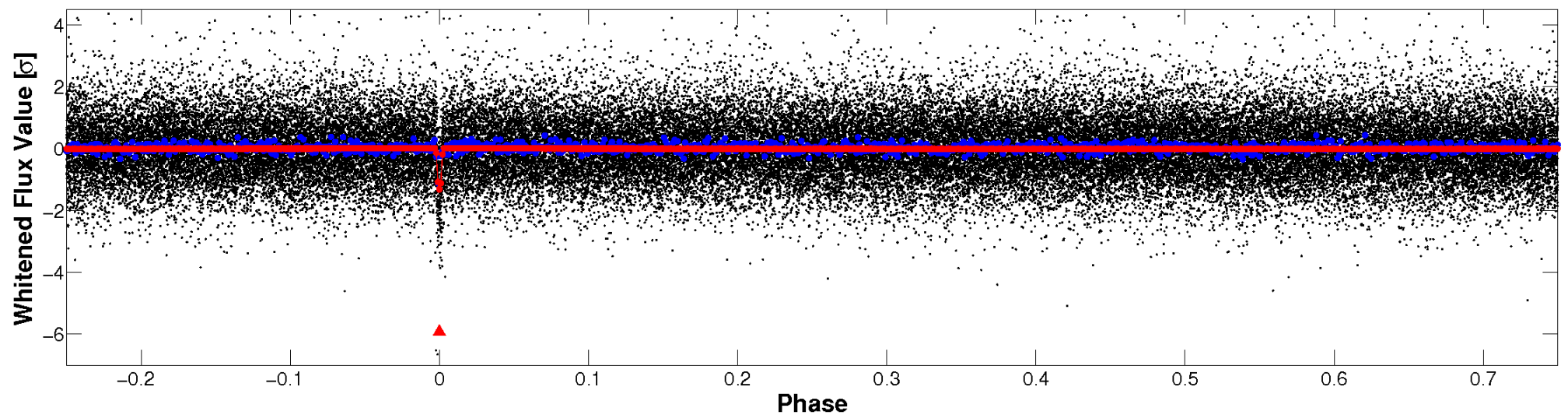


Non-Whitened Vs. Whitened Light Curve

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

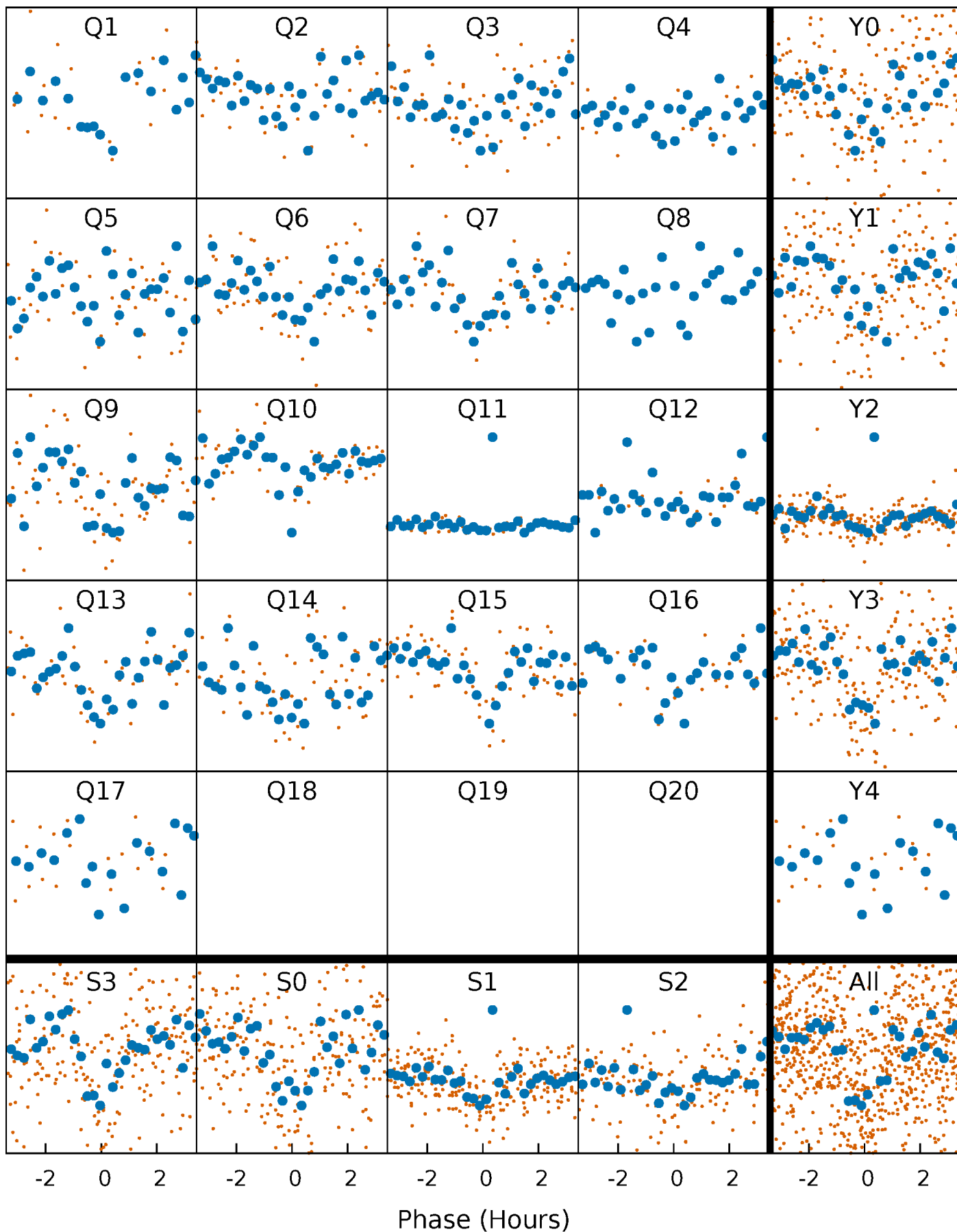


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



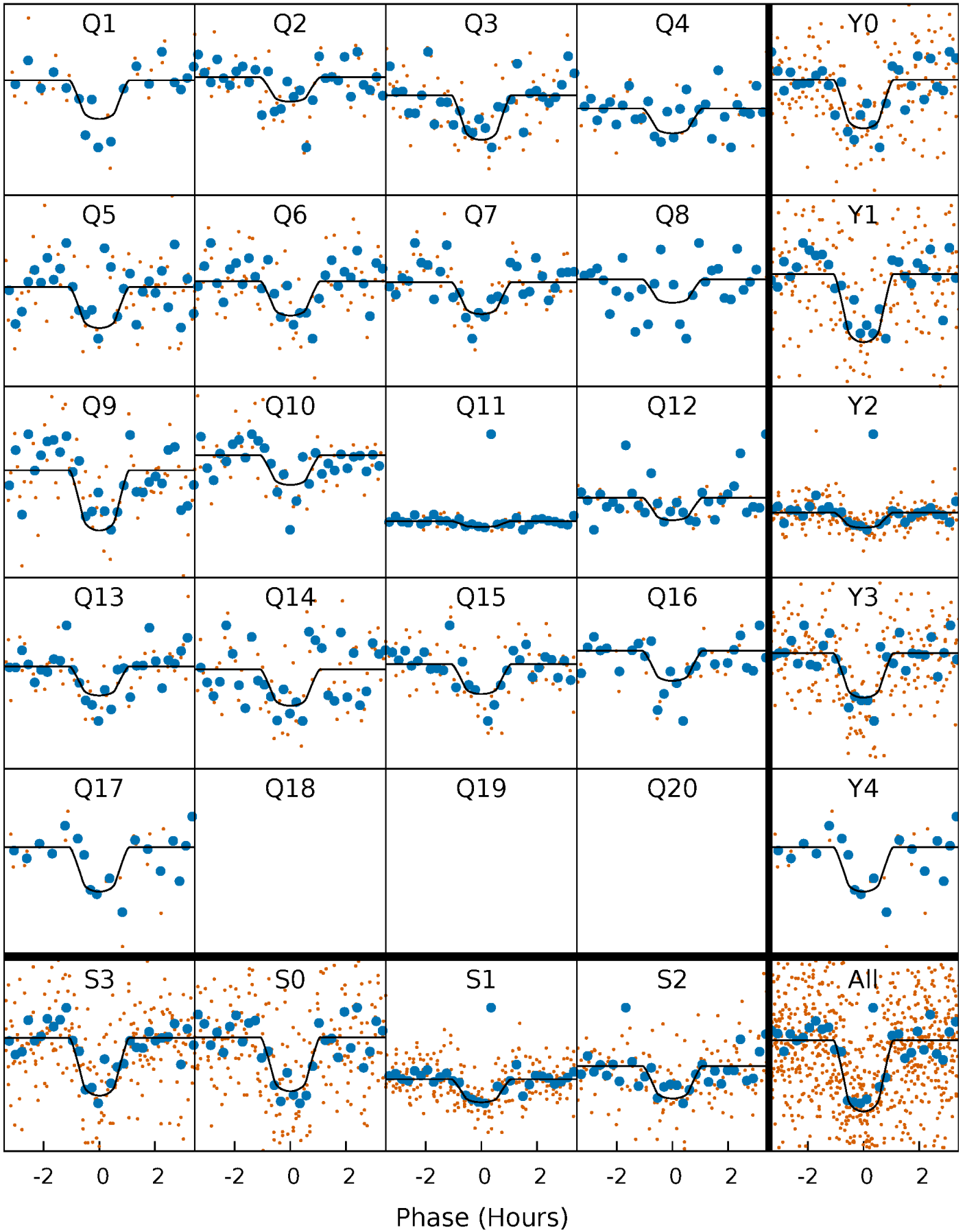
PDC Quarter-Phased Transit Curves

TCE 008617363-01 P= 19.947501 Days $T_0=144.247079$ (BKJD)



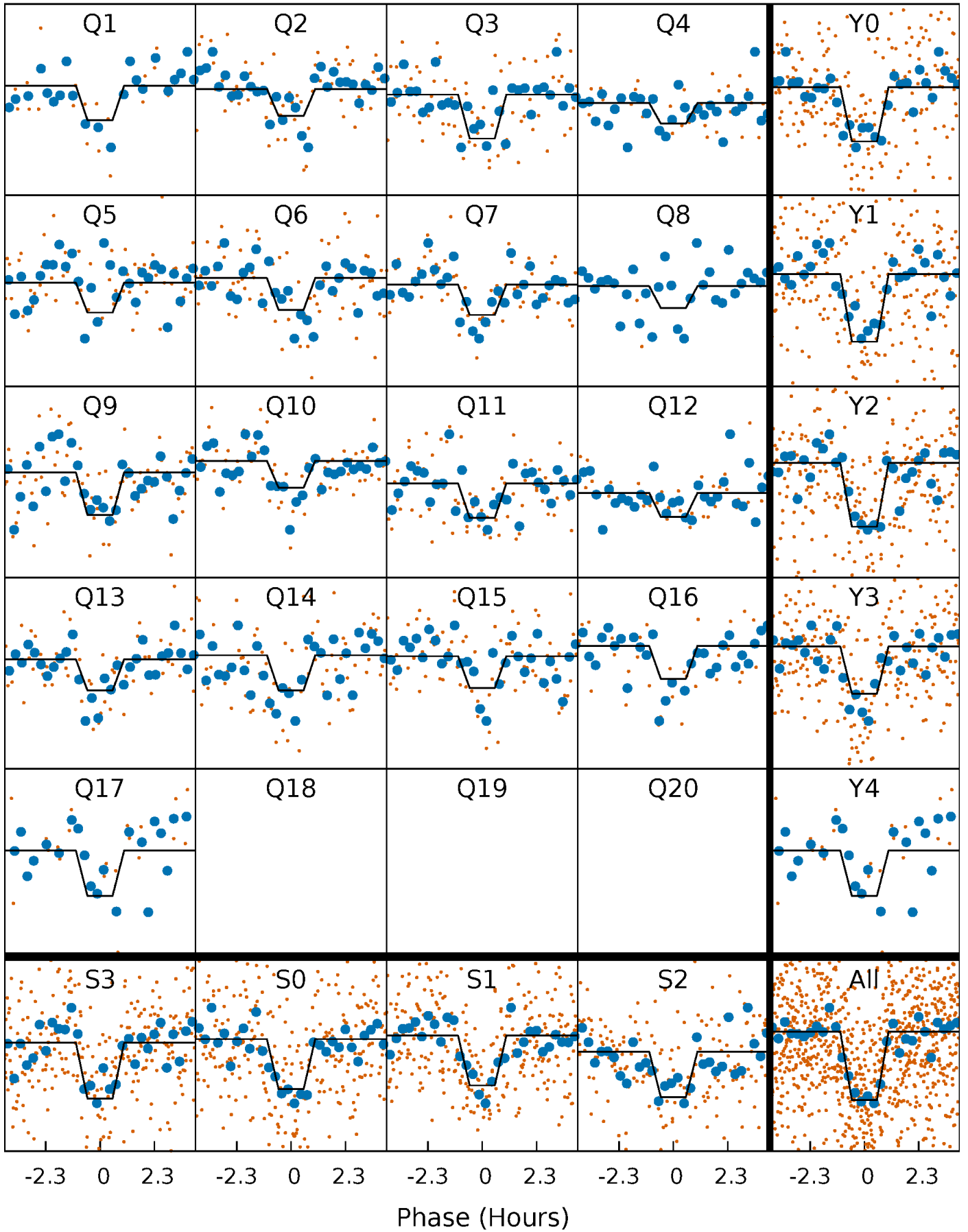
DV Quarter-Phased Transit Curves

TCE 008617363-01 P= 19.947501 Days $T_0=144.247079$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

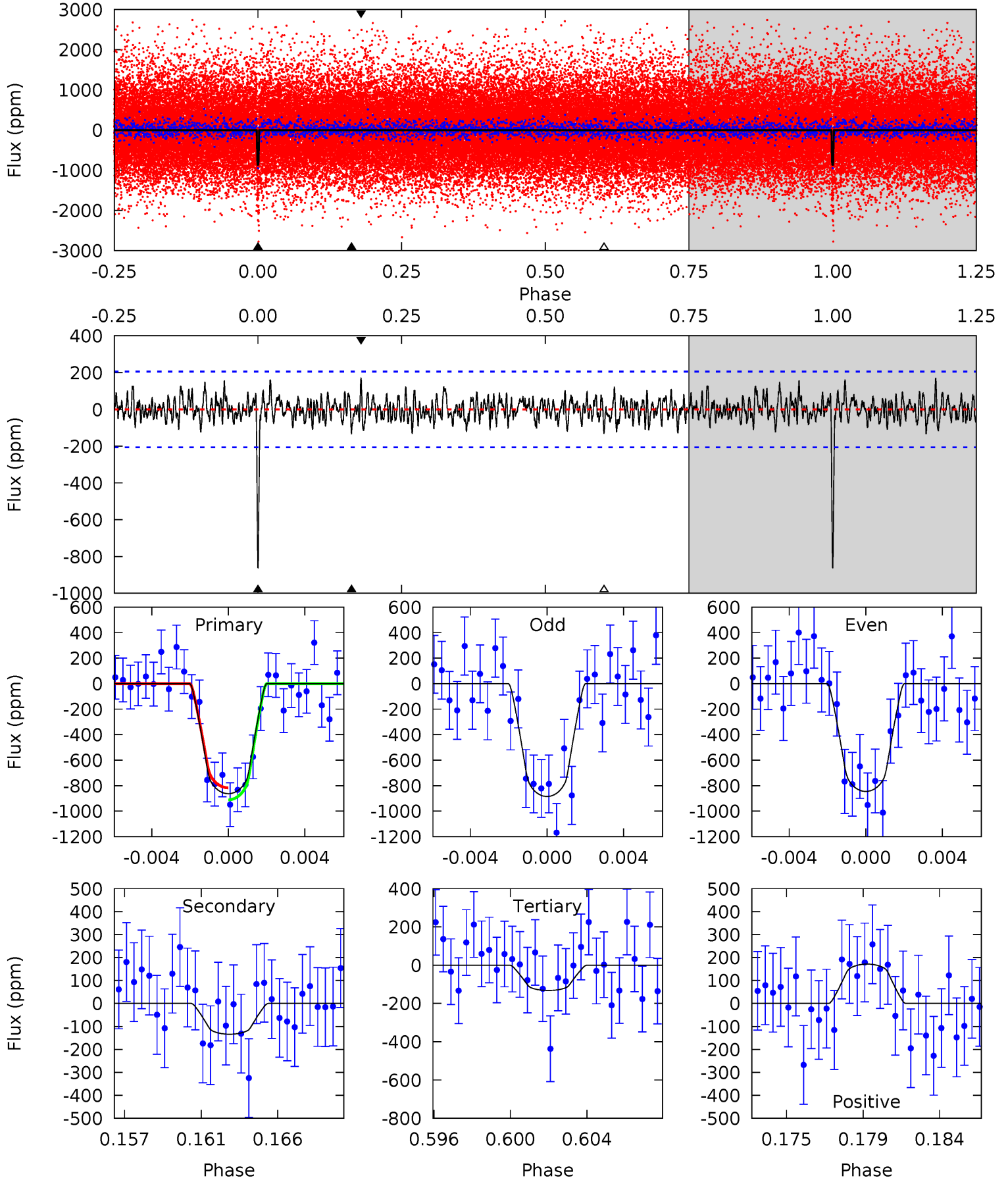
TCE 008617363-01 P= 19.947573 Days $T_0=144.245273$ (BKJD)



DV Model-Shift Uniqueness Test

008617363-01, $P = 19.947501$ Days, $E = 124.299578$ Days

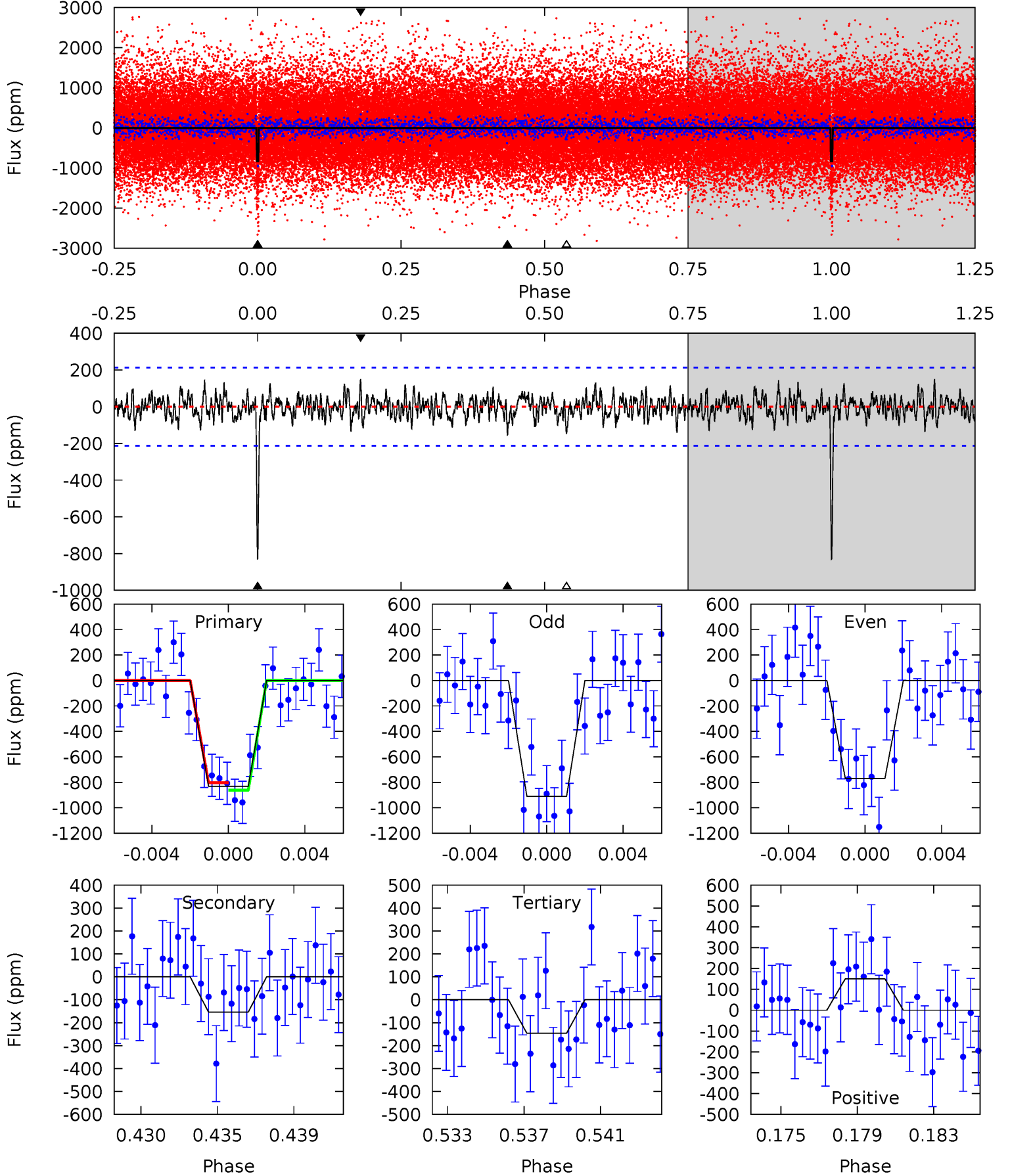
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	3.37	3.33	4.31	5.18	2.84	1.22	18.4	17.4	0.04	-0.94	0.50	0.71	0.17	1.19



Alt Model-Shift Uniqueness Test

008617363-01, $P = 19.947573$ Days, $E = 124.297700$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	3.74	3.56	3.66	5.19	2.86	1.16	16.7	16.6	0.19	0.09	1.71	1.04	0.15	0.71



Stellar Parameters For KIC 008617363

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5749^{+153}_{-170}	$4.547^{+0.040}_{-0.160}$	$-0.100^{+0.250}_{-0.300}$	$0.864^{+0.194}_{-0.069}$	$0.961^{+0.092}_{-0.127}$	$2.097^{+0.417}_{-0.876}$
	+3%/-3%	+1%/-4%	+250%/-300%	+22%/-8%	+10%/-13%	+20%/-42%
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 008617363-01 / KOI 2945.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-134 ± 40	$3.38^{+2.58}_{-2.11}$	893^{+48}_{-39}	3683^{+1683}_{-581}	118^{+757}_{-79}
Alt.	-154 ± 41	$3.38^{+2.67}_{-2.07}$	890^{+51}_{-35}	3785^{+1673}_{-637}	143^{+800}_{-99}

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 $A_{obs} \gg 1.0$

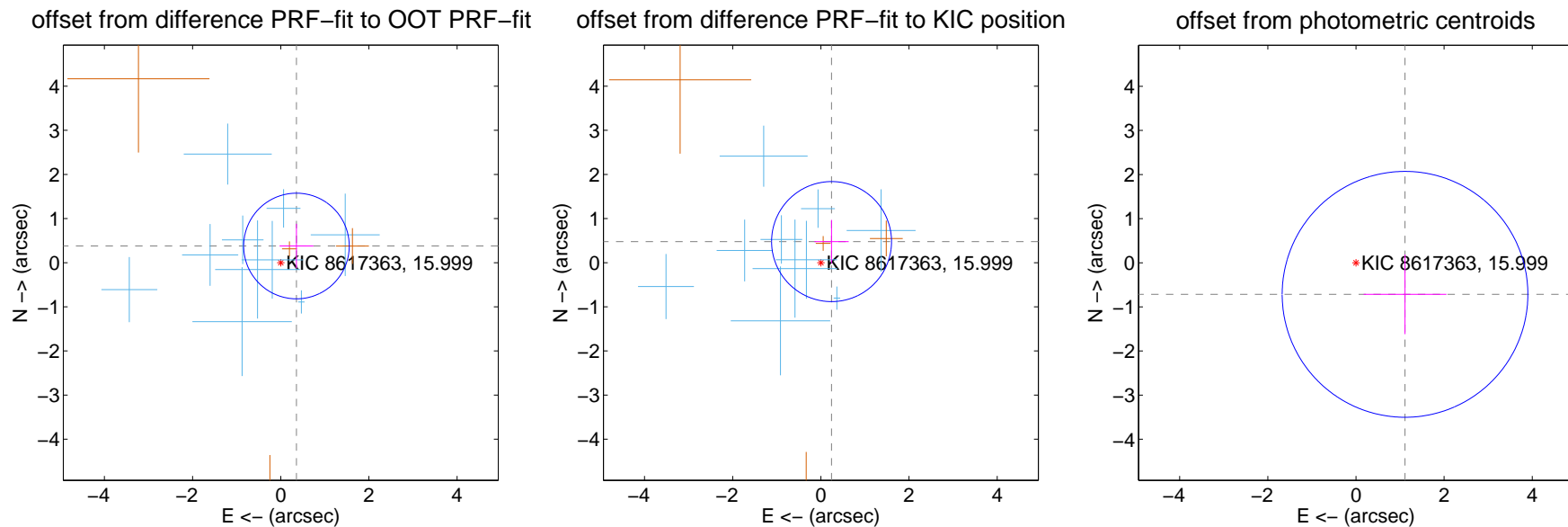
DV Centroid Data

Supplemental centroid analysis for 008617363-01. Kepler magnitude: 16.00. Transit SNR 16.17

There are 10 quarters with good PRF difference image offsets

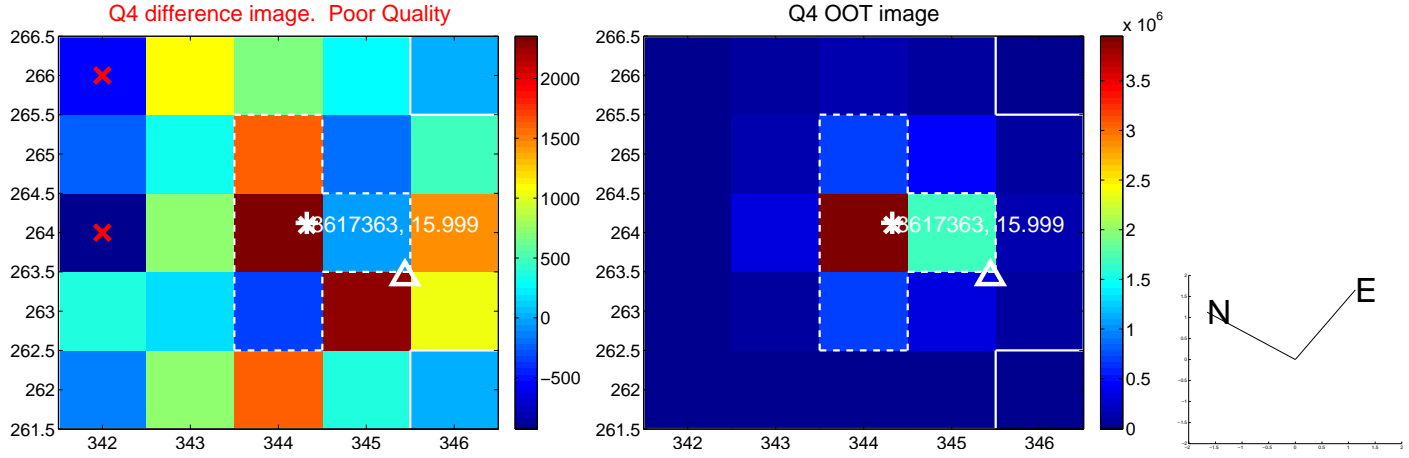
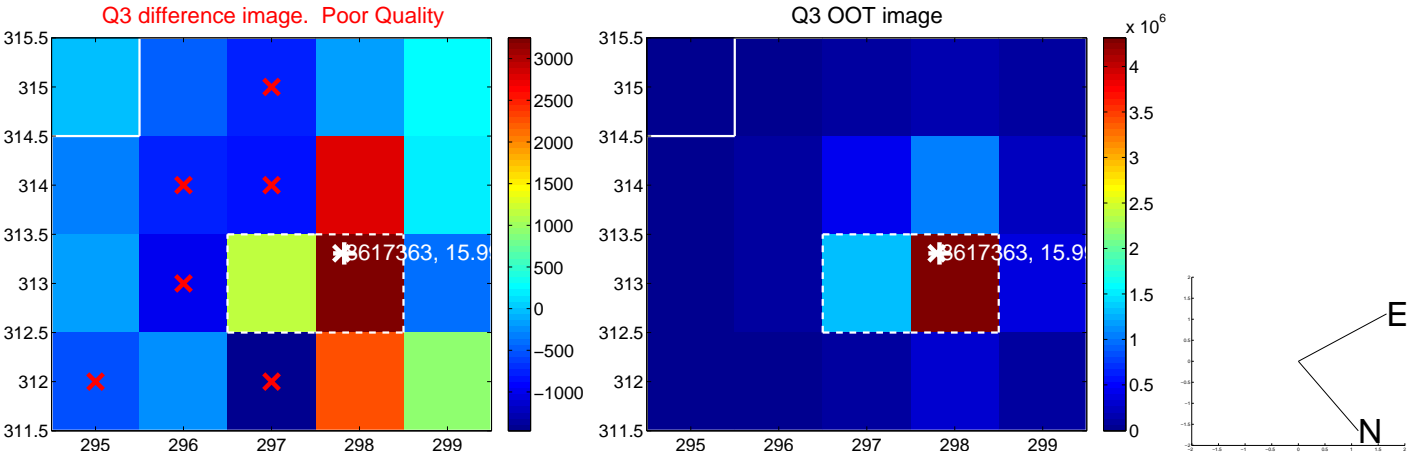
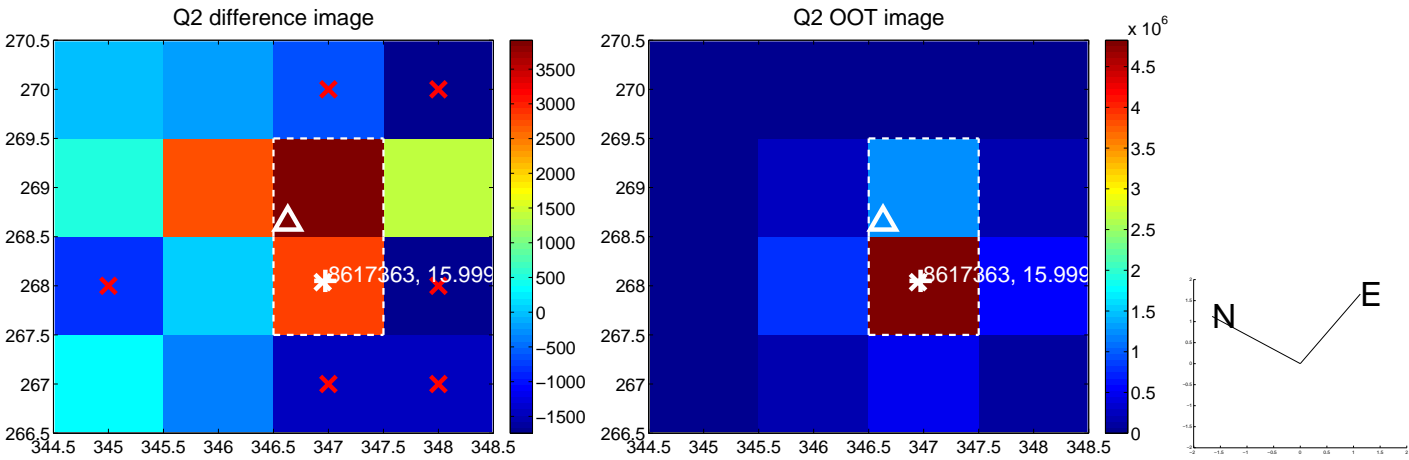
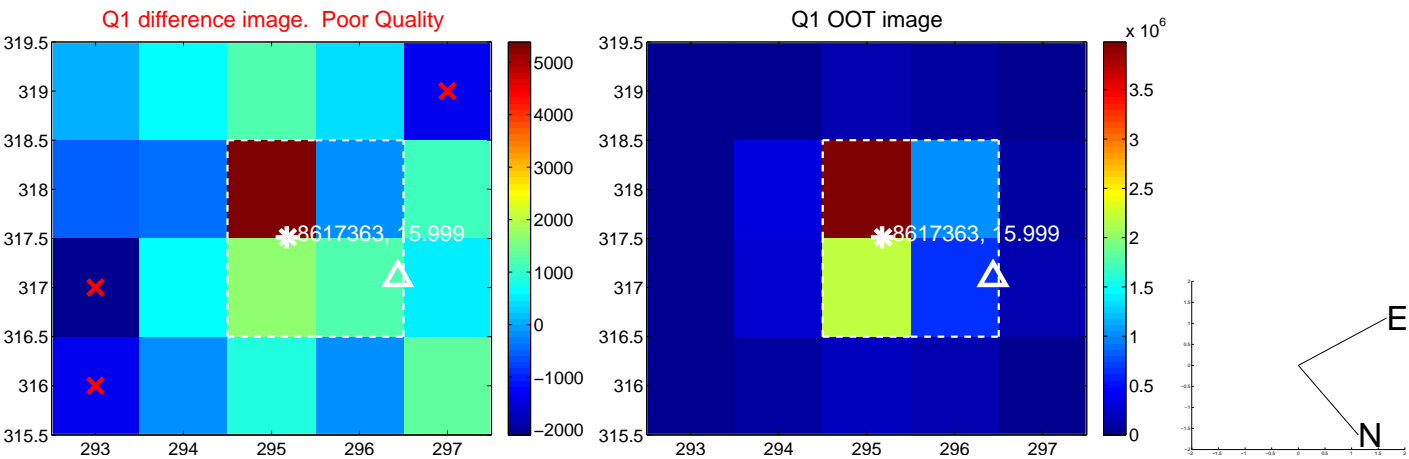
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.519 ± 0.399	1.30	-0.356 ± 0.383	0.378 ± 0.503
PRF-fit source offset from KIC position	0.536 ± 0.453	1.18	-0.243 ± 0.389	0.478 ± 0.492
photometric centroid source offset	1.32 ± 0.93	1.42	-1.11 ± 0.94	-0.72 ± 0.90

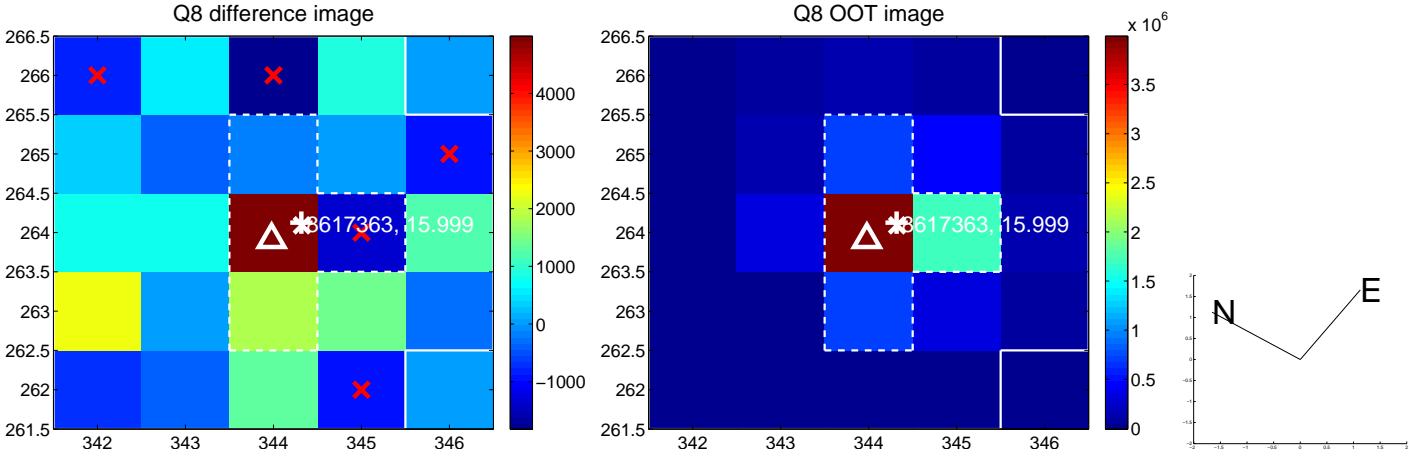
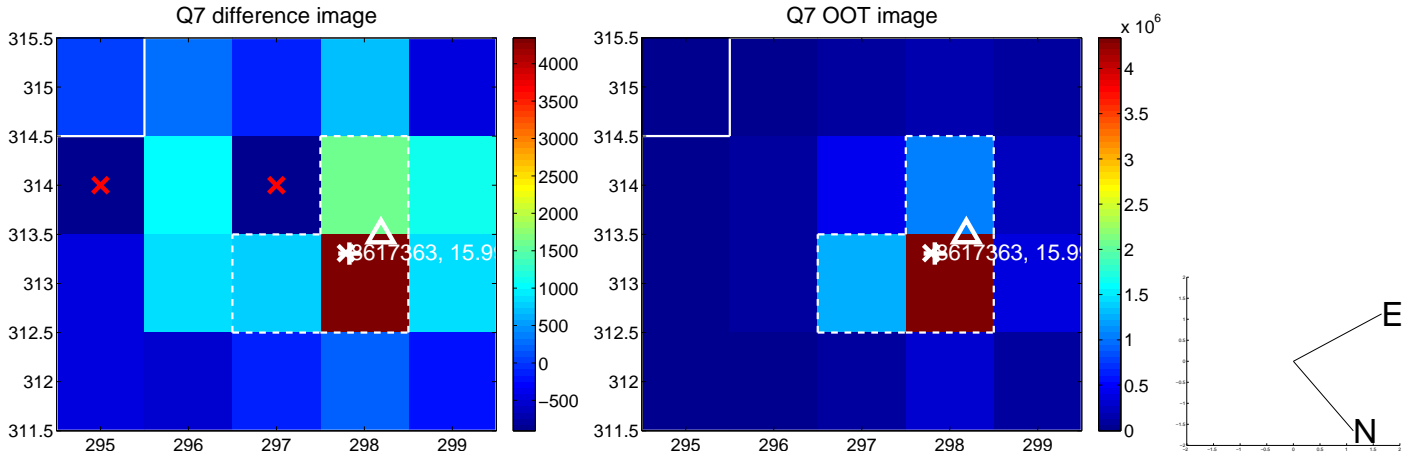
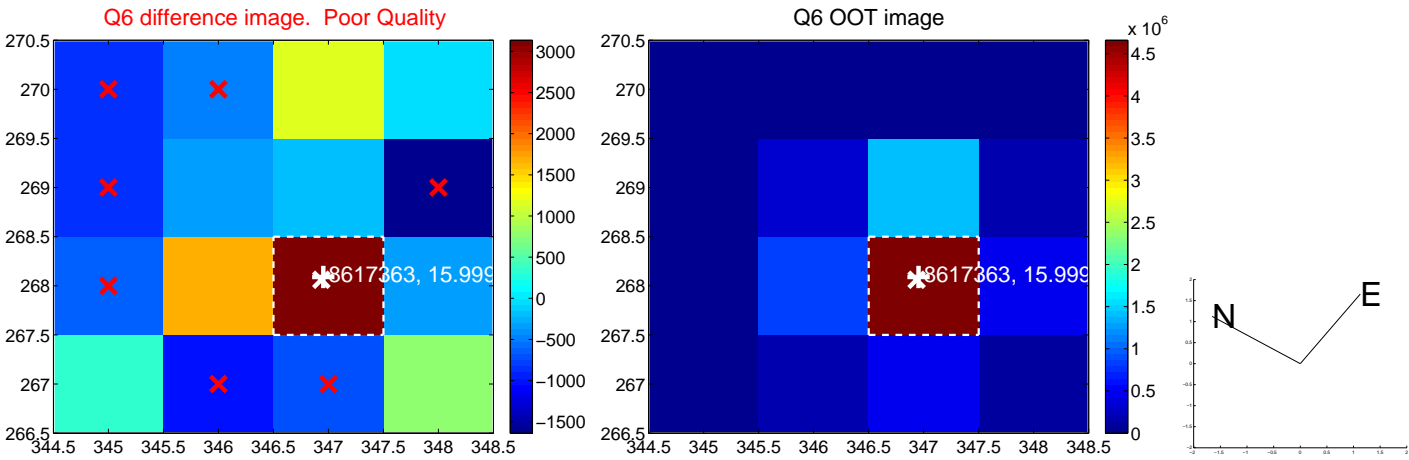
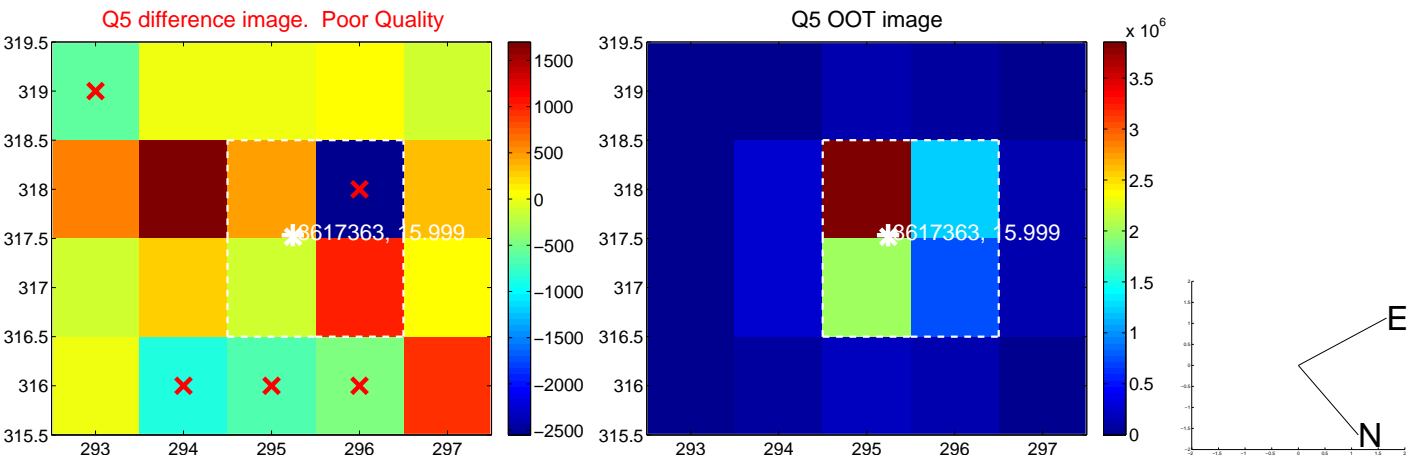


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

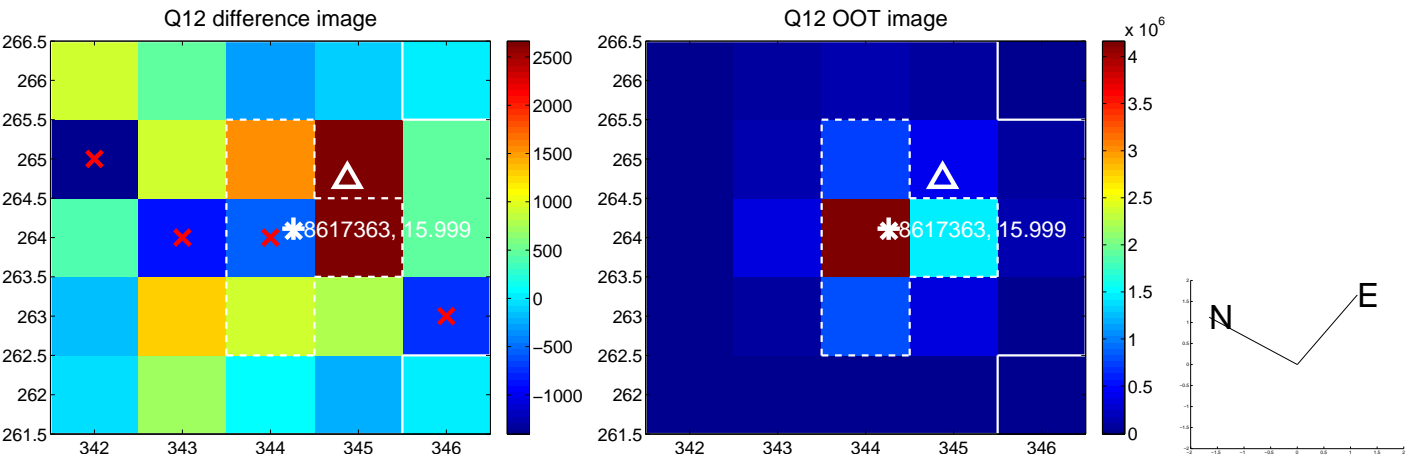
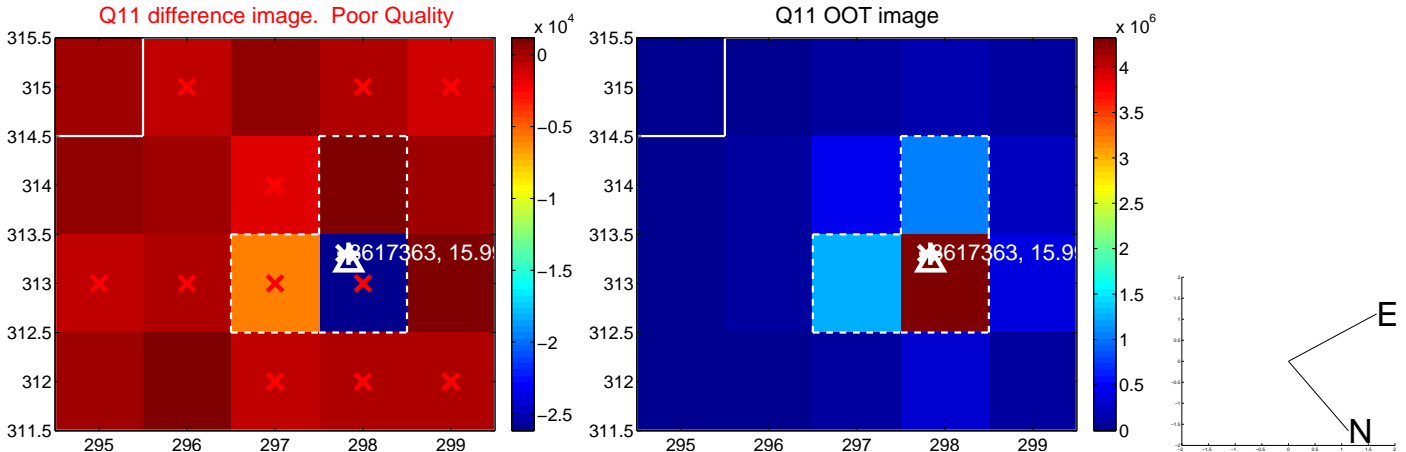
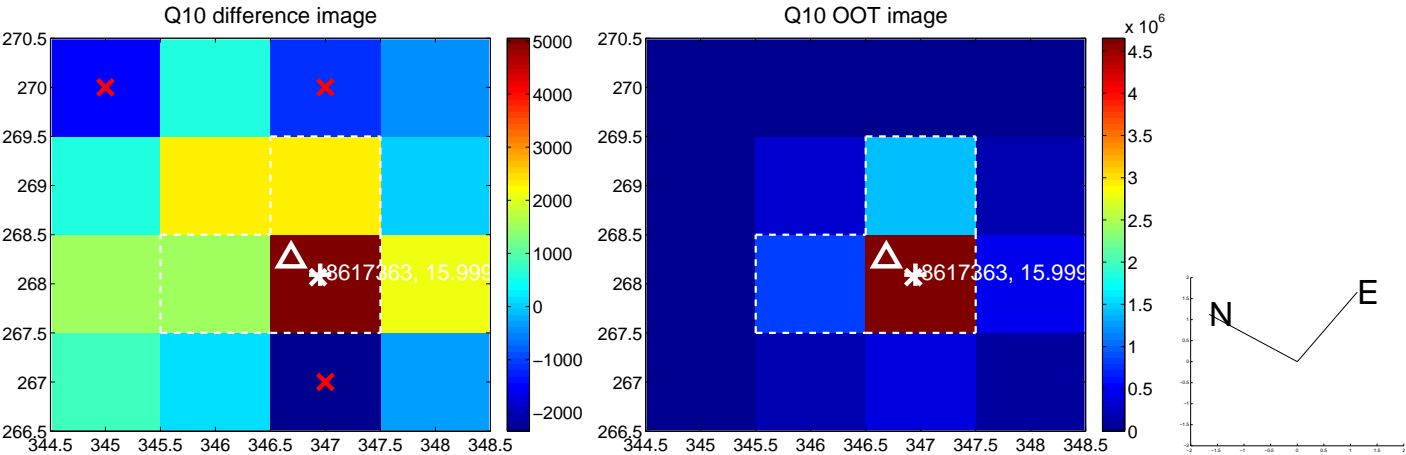
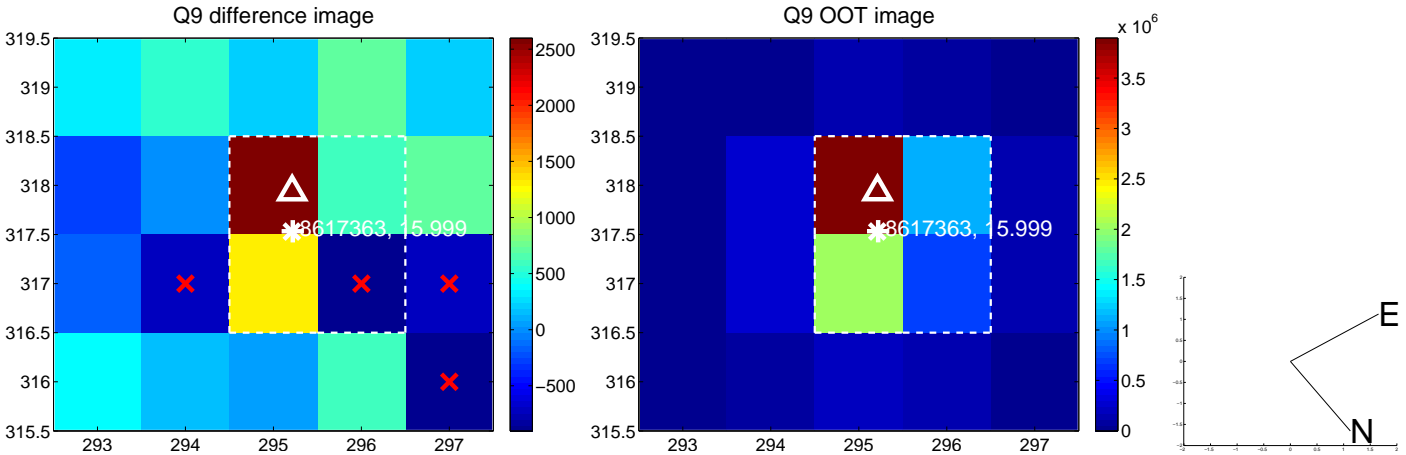
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



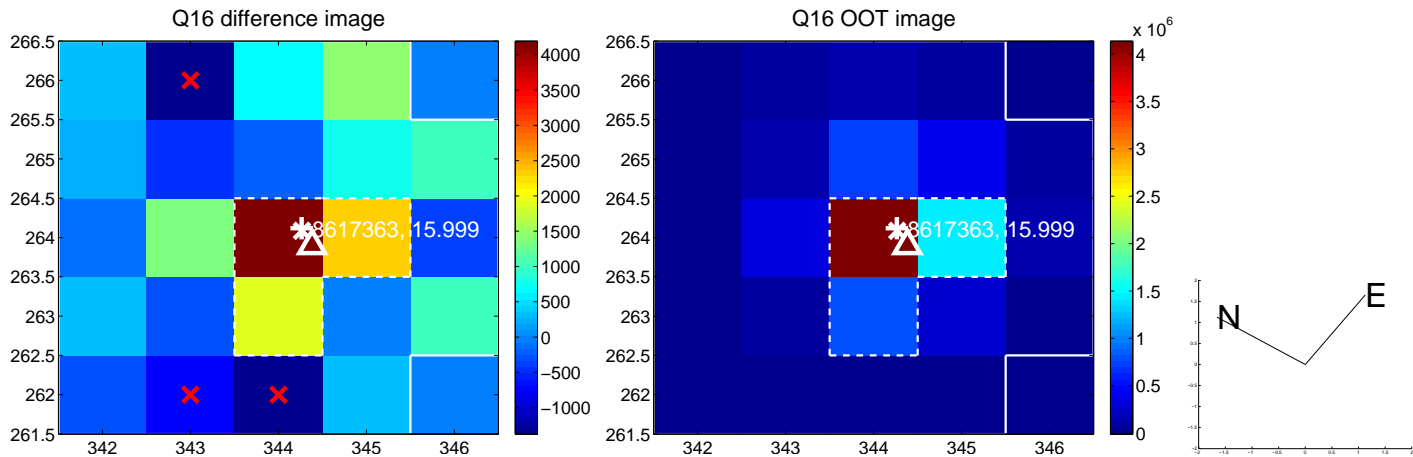
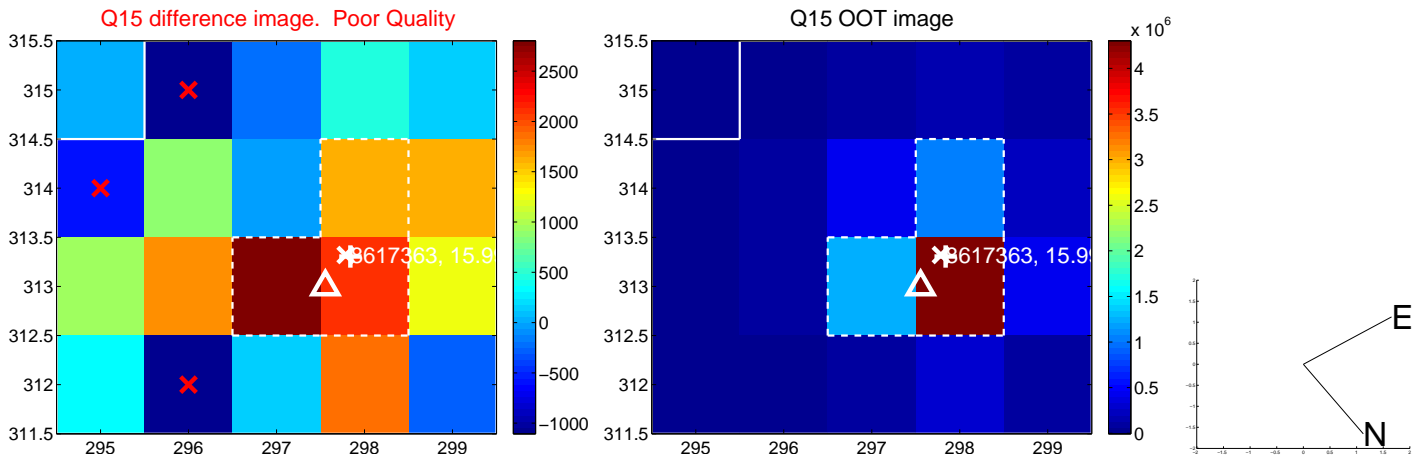
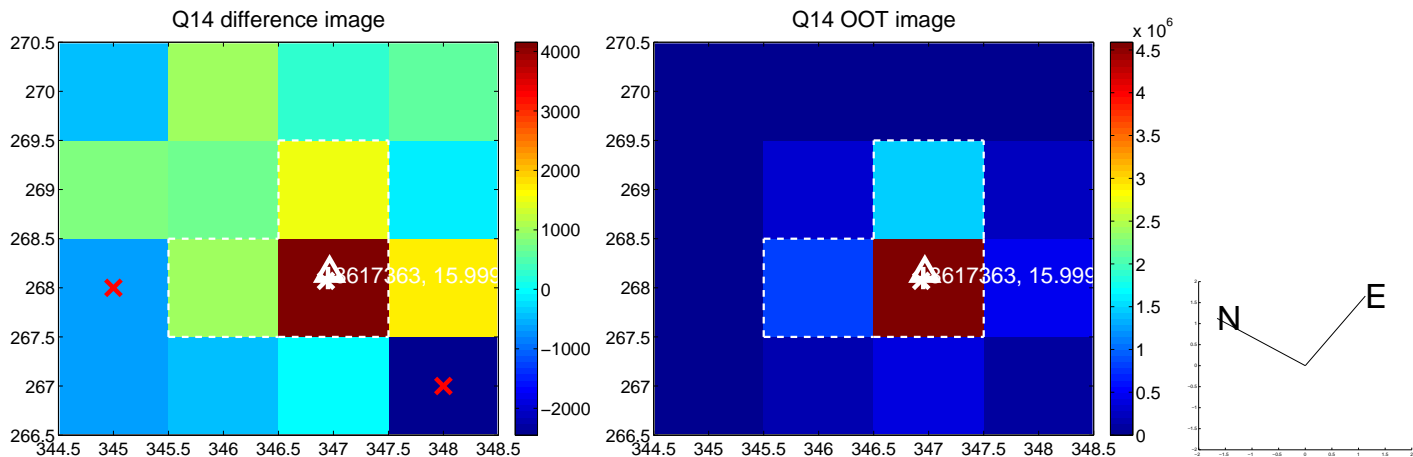
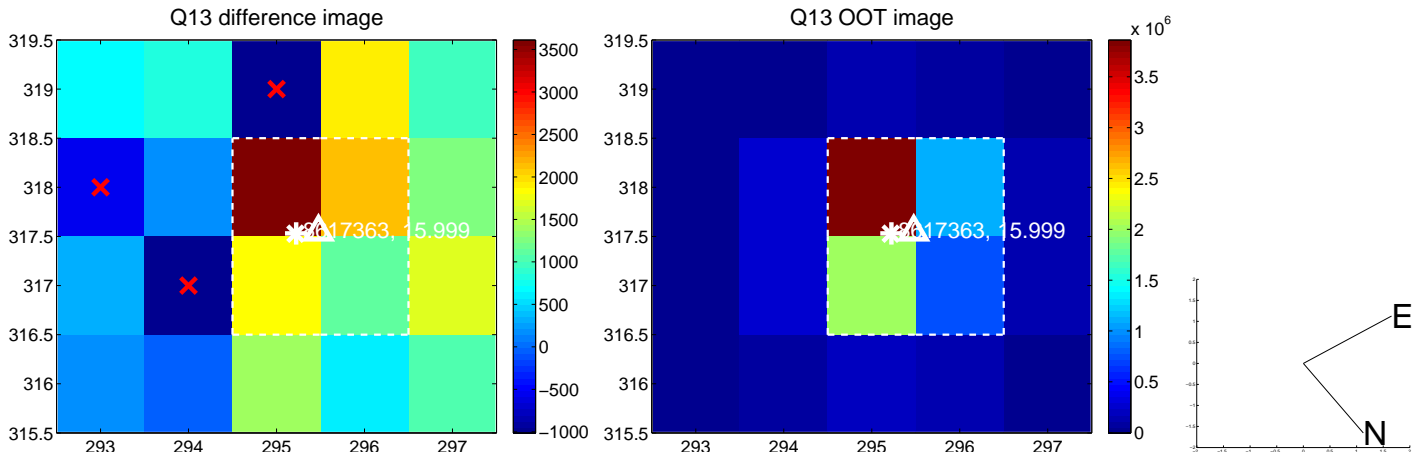
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



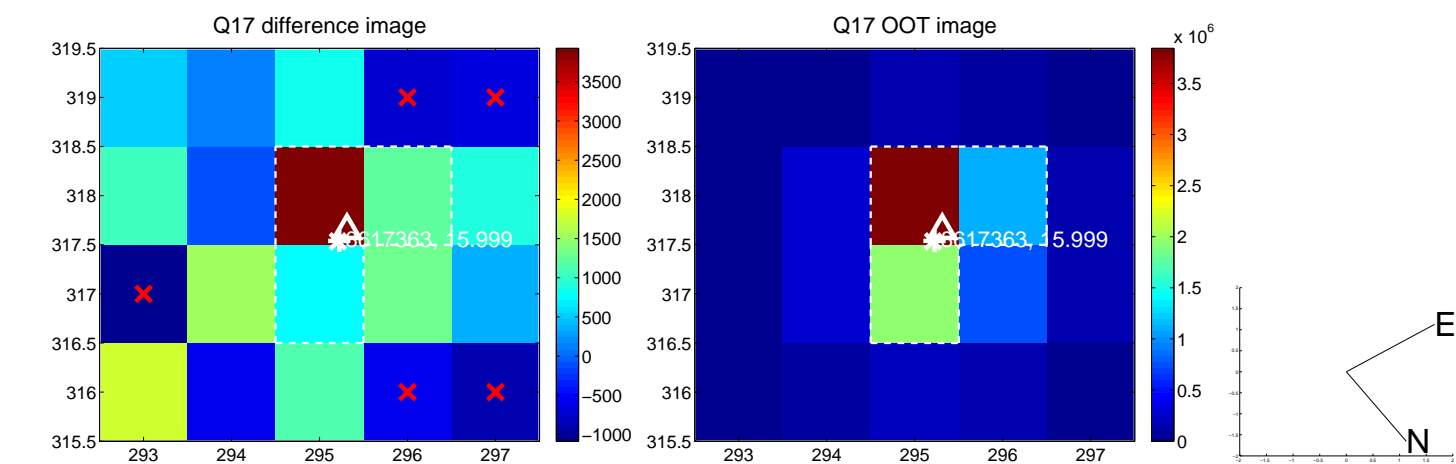
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



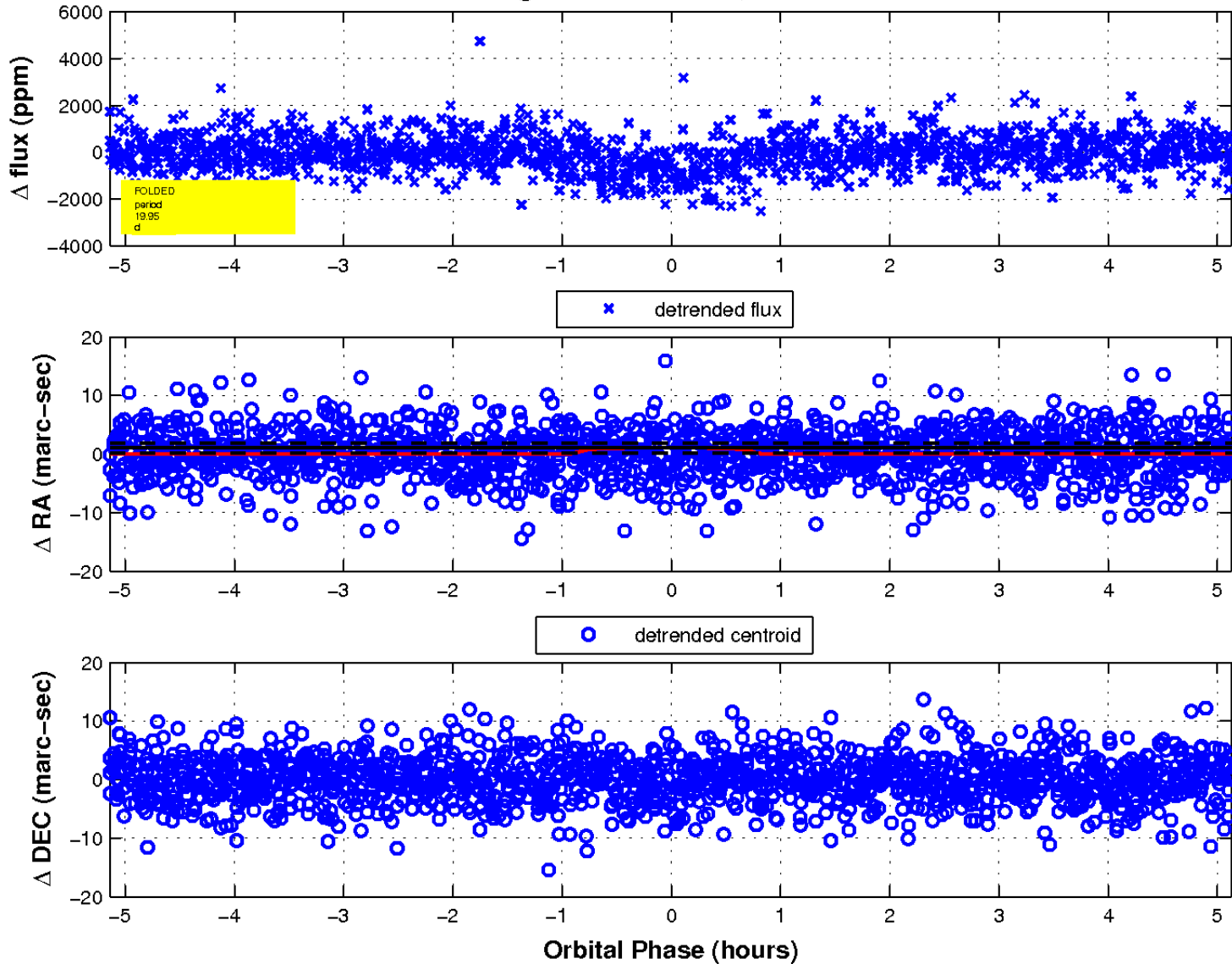
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

