

KIC 009349226

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})
009349226-01	OBS	No	4.776913	136.117745	5.3	23.869	8.4	6.5	2.02	7082	0.55	2499.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009349226-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

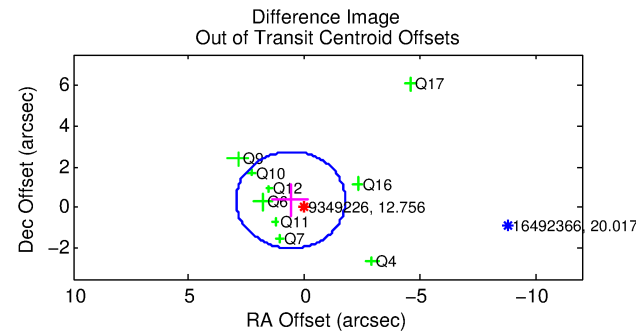
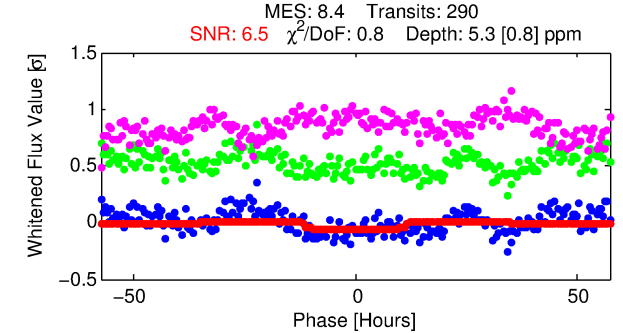
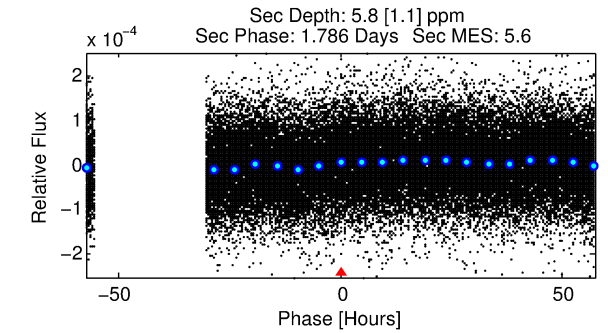
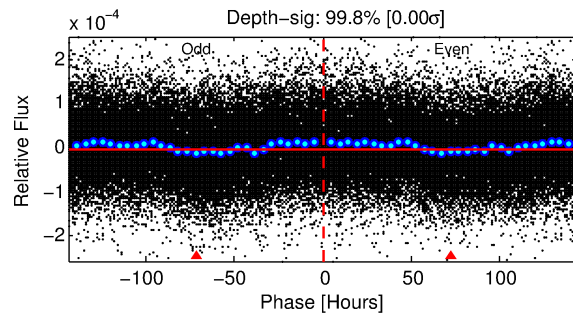
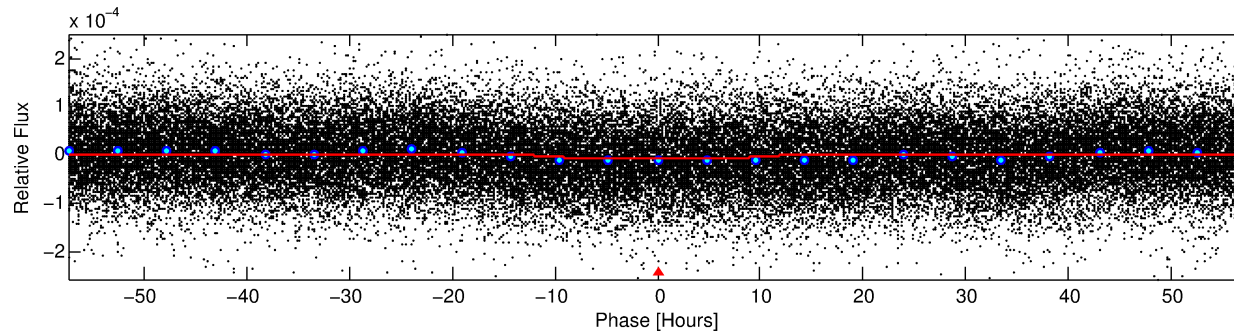
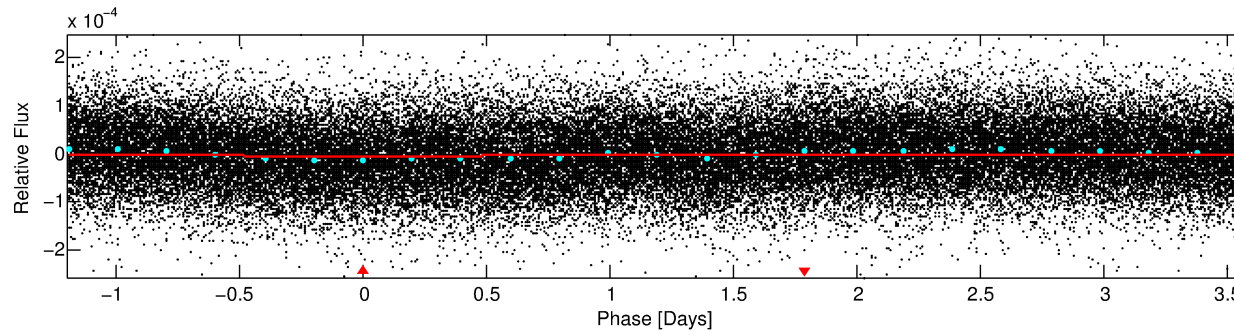
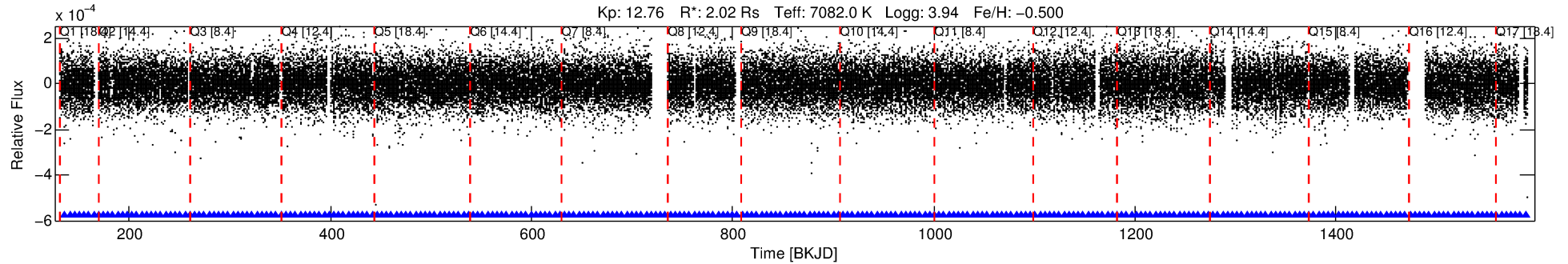
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009349226-01

No Significant Match Found

DV One-Page Summary

KIC: 9349226 Candidate: 1 of 1 Period: 4.777 d



DV Fit Results:

Period = 4.77691 [0.00019] d
Epoch = 136.1177 [0.0275] BKJD
Rp/R* = 0.0025 [0.0004]
a/R* = 1.12 [0.24]
b = 0.92 [0.17]
Seff = 2499.15 [1574.07]
Teq = 1803 [284] K
Rp = 0.55 [0.23] Re
a = 0.0606 [0.0226] AU
Ag = 38.85 [28.21] [1.34σ]
Teffp = 6959 [754] K [6.40σ]

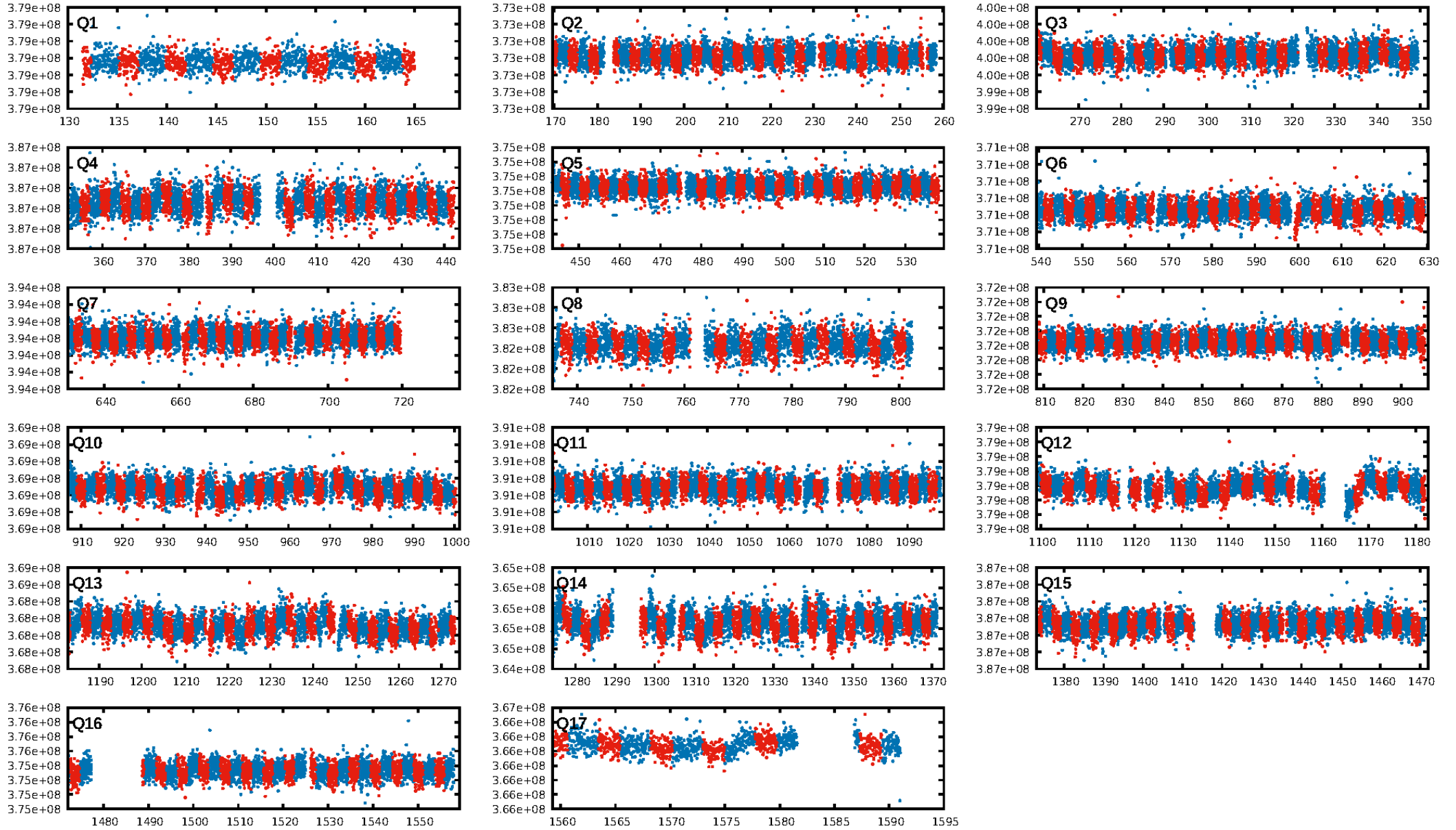
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.26e-13
RollingBand-fgt: 1.00 [276/276]
GhostDiagnostic-chr: 1.999
Centroid-sig: 32.7%
Centroid-so: 1.788 arcsec [1.03σ]
OotOffset-rm: 0.697 arcsec [0.88σ]
KicOffset-rm: 0.712 arcsec [0.90σ]
OotOffset-st: 2/2/3/2 [9]
KicOffset-st: 2/2/3/2 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

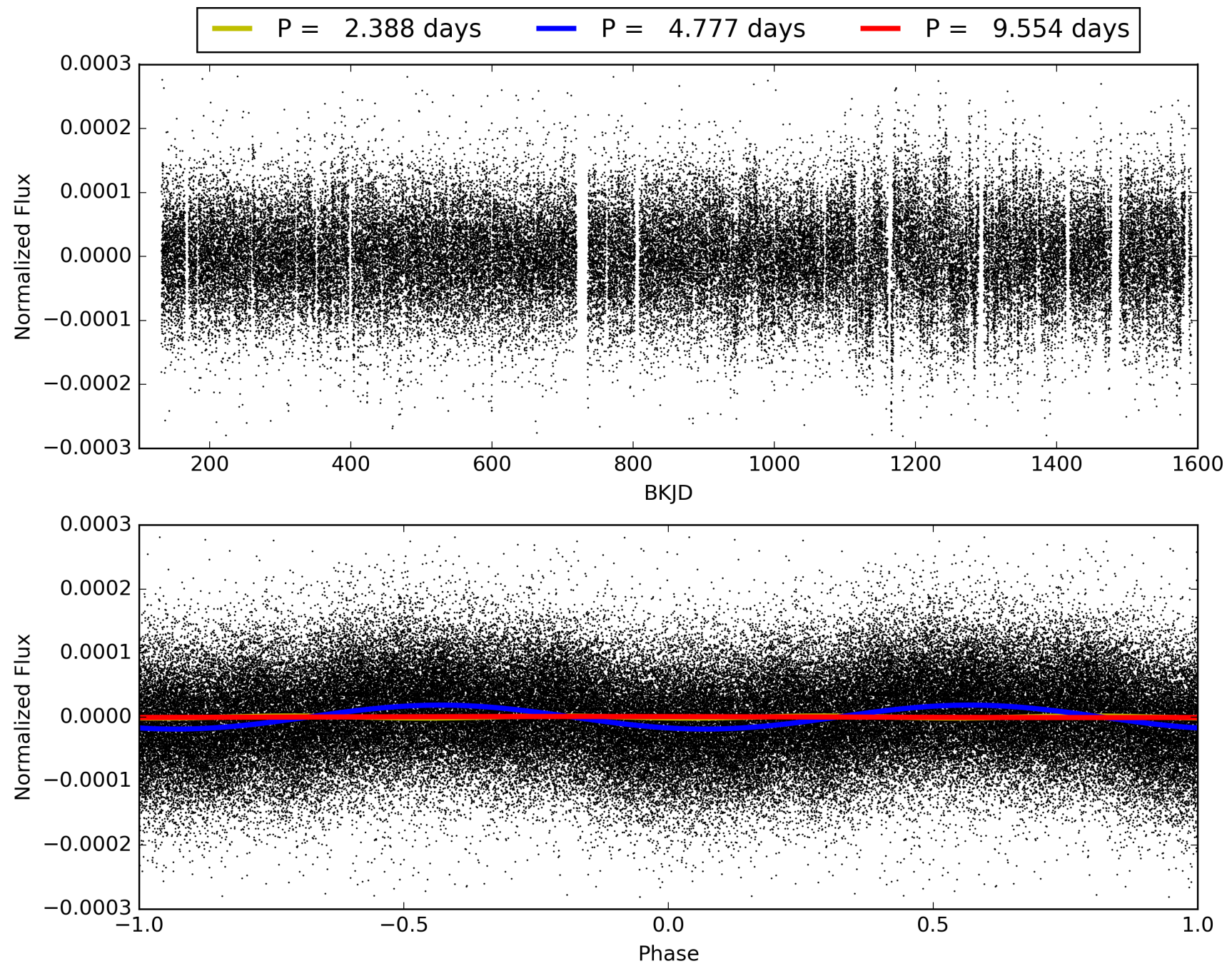
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:57:40 Z

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

TCE 009349226-01, PDC Light Curves

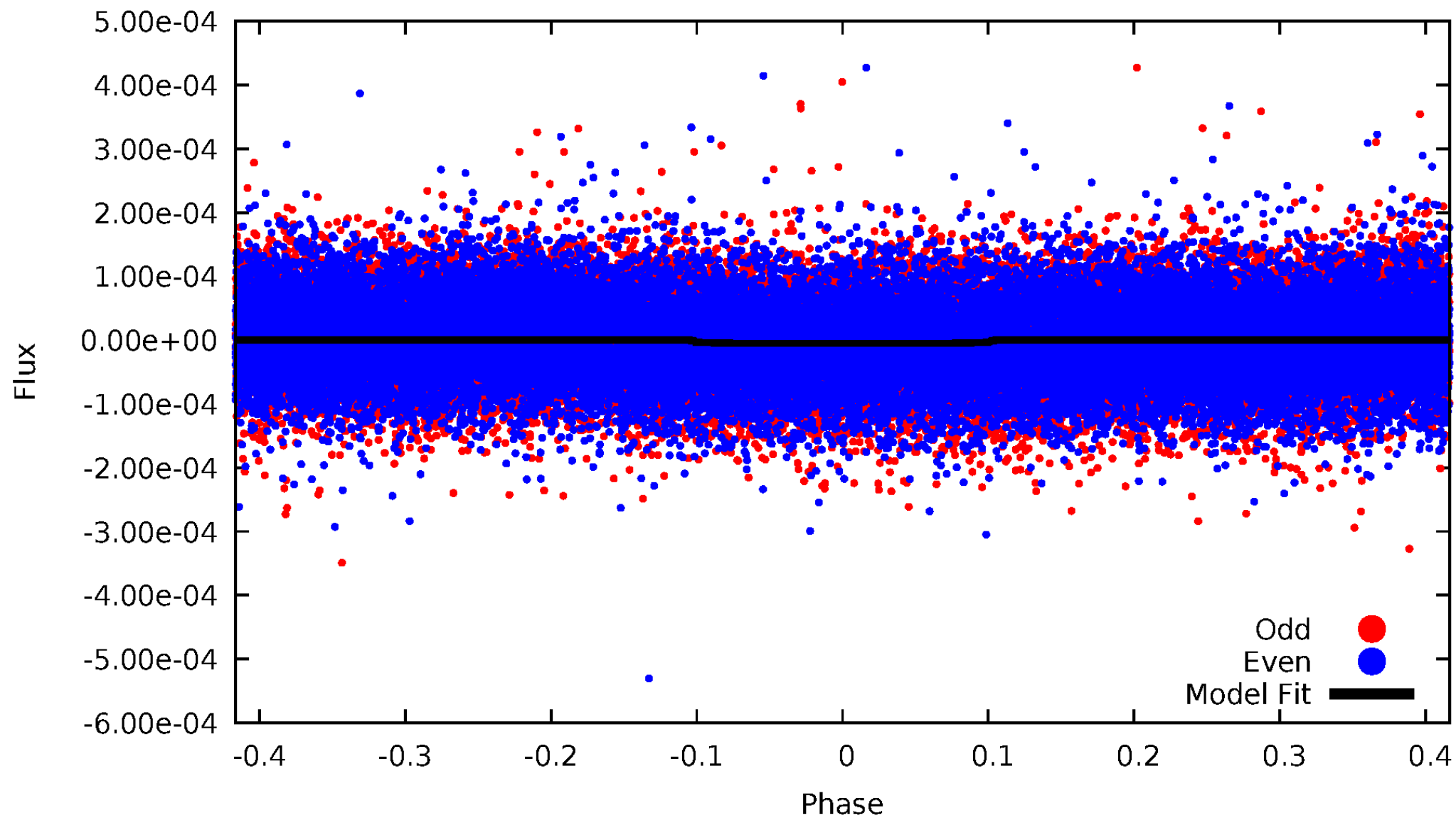


TCE 009349226-01



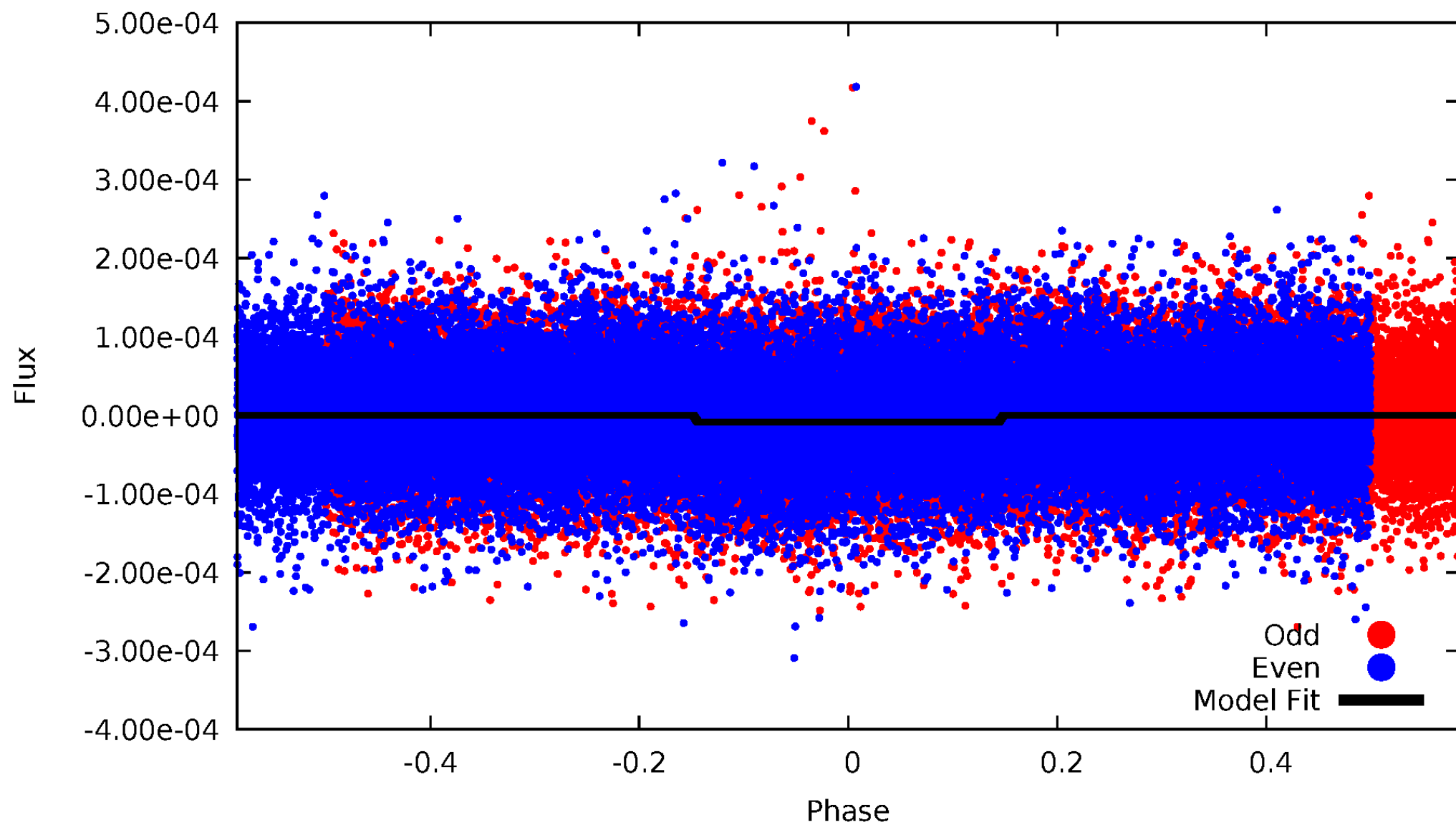
DV Odd/Even

TCE 009349226-01



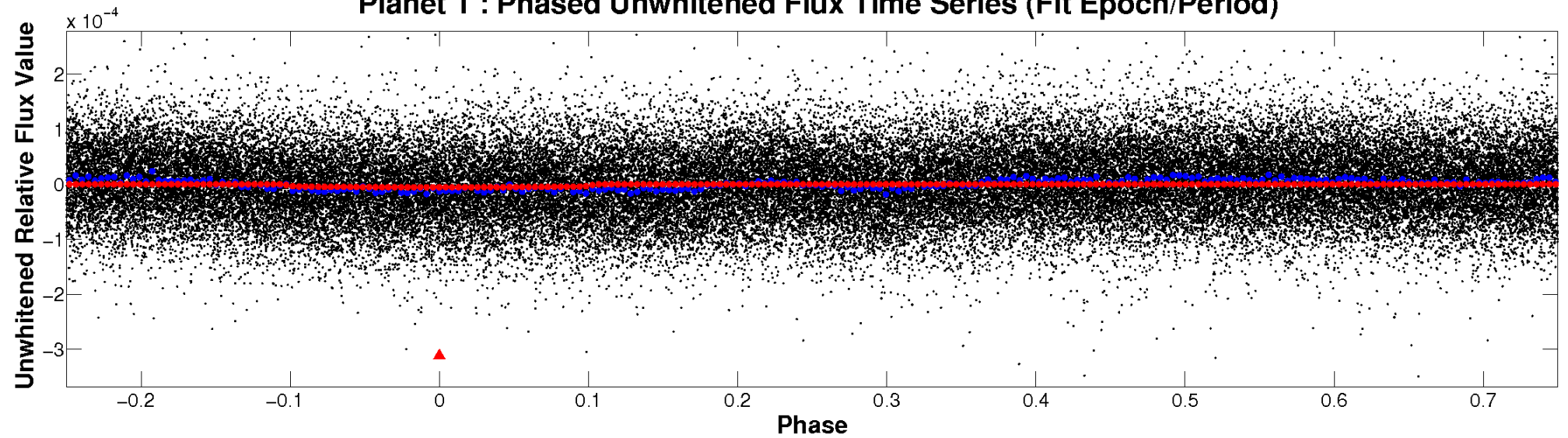
ALT Odd/Even

TCE 009349226-01

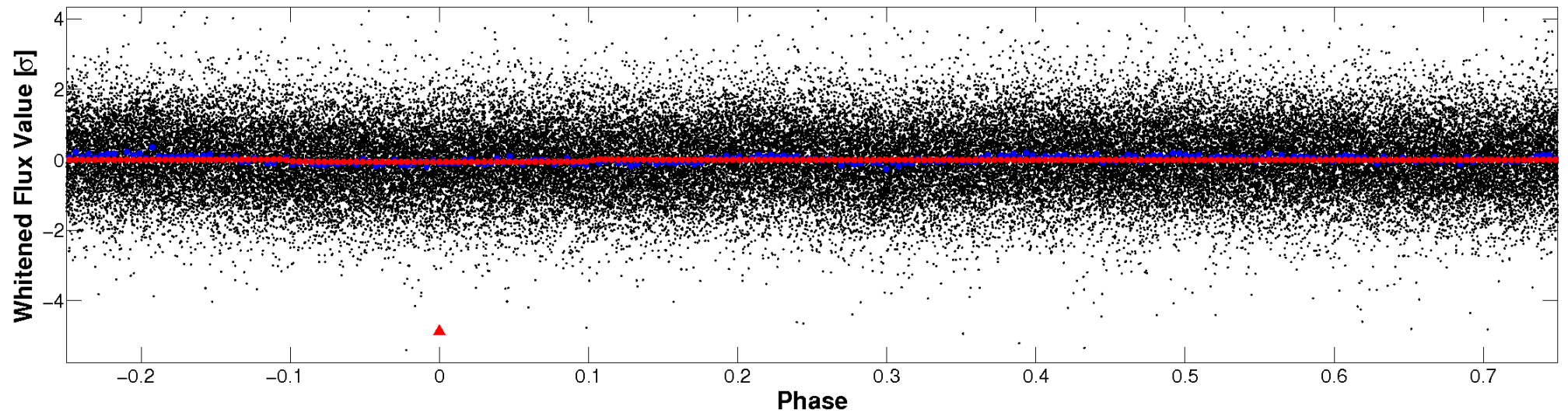


Non-Whitened Vs. Whitened Light Curve

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

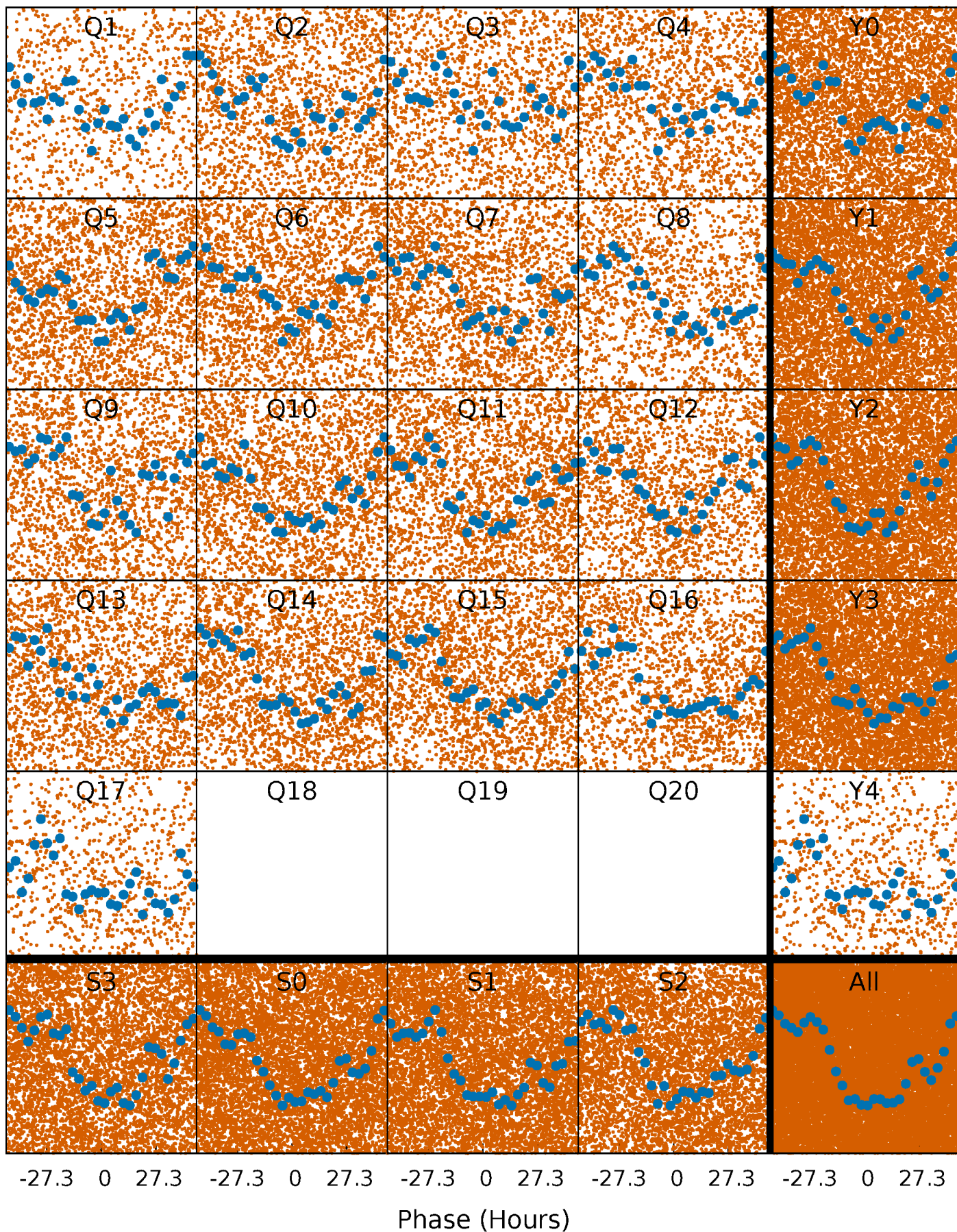


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



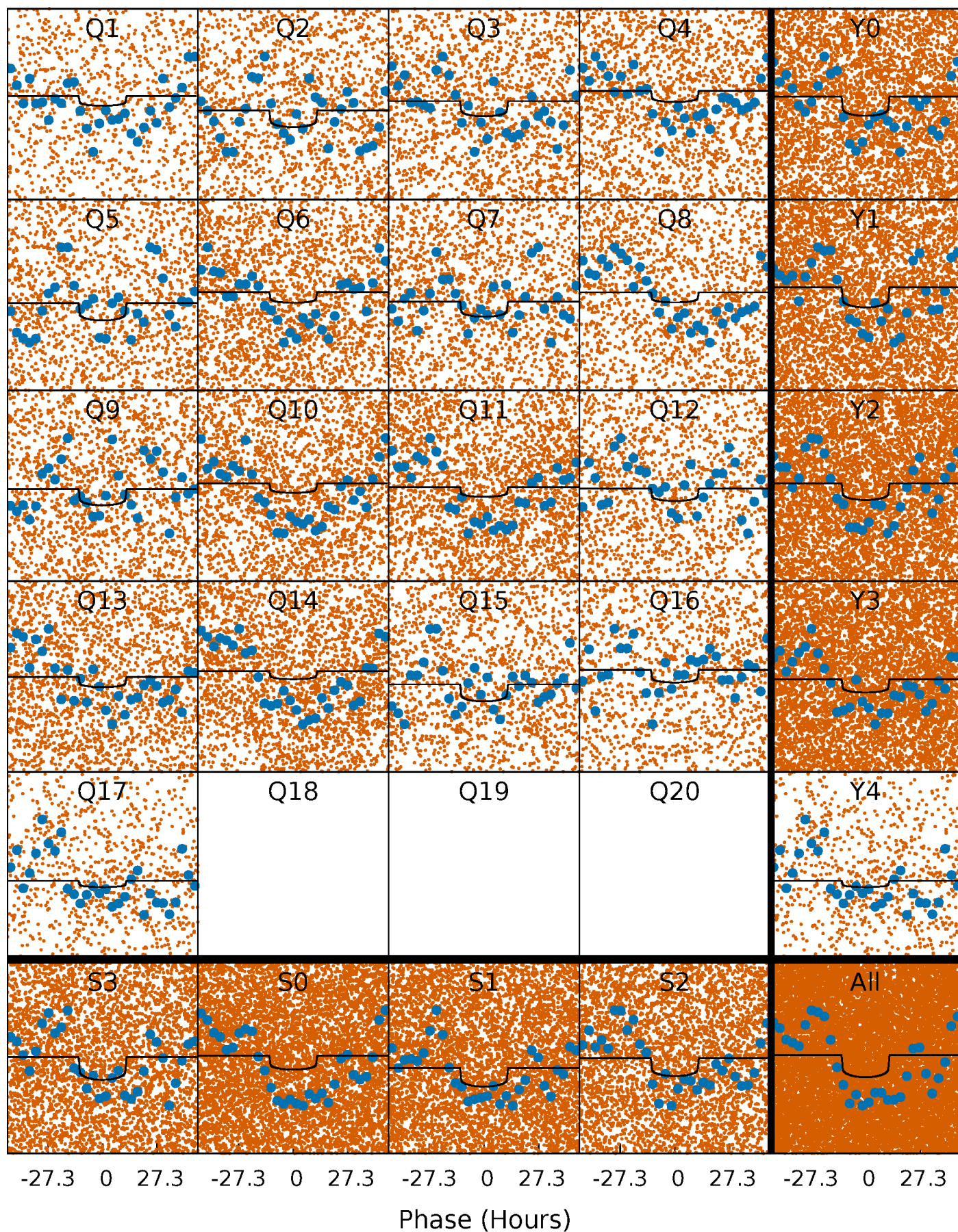
PDC Quarter-Phased Transit Curves

TCE 009349226-01 P= 4.776913 Days $T_0=136.117745$ (BKJD)



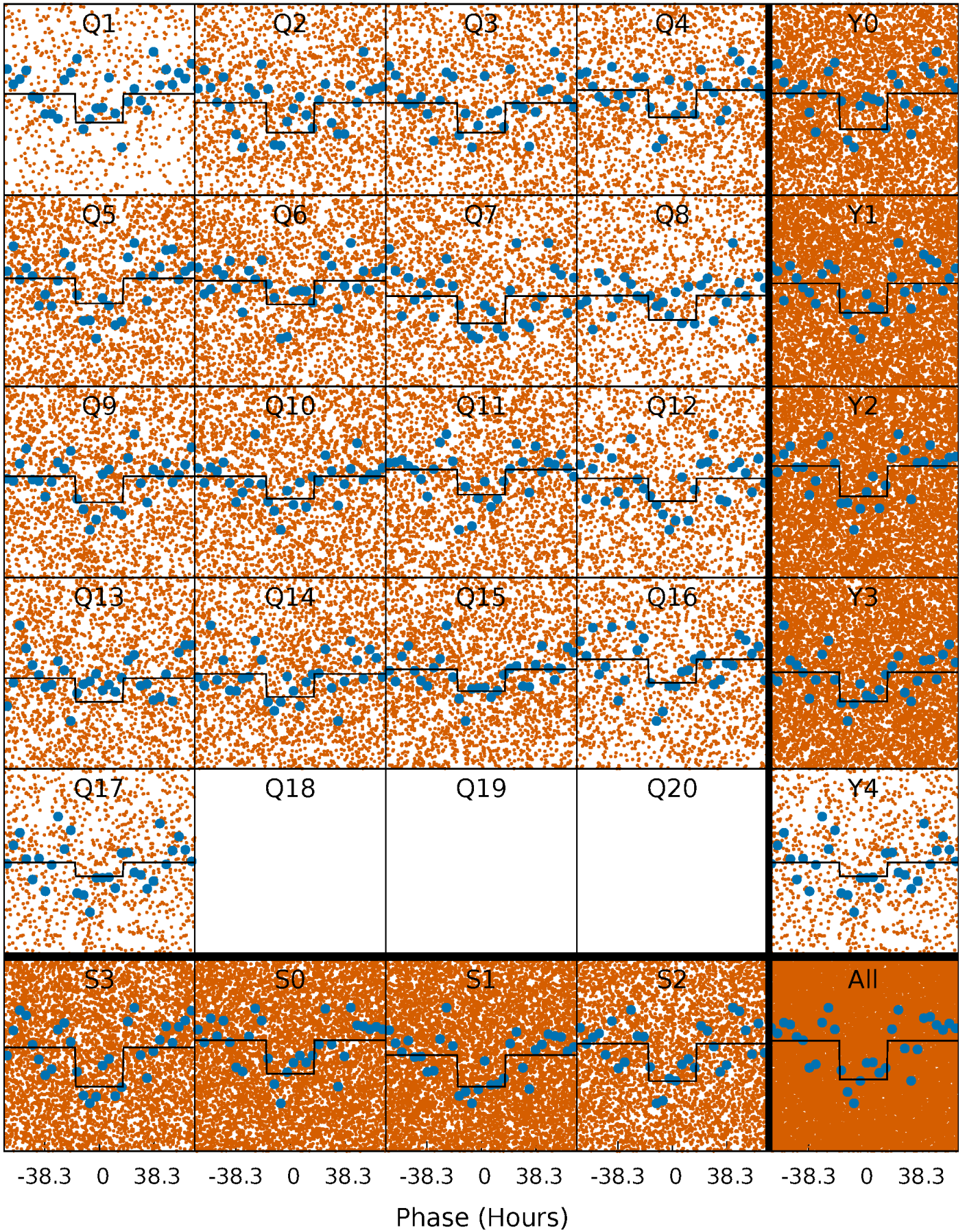
DV Quarter-Phased Transit Curves

TCE 009349226-01 P= 4.776913 Days $T_0=136.117745$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

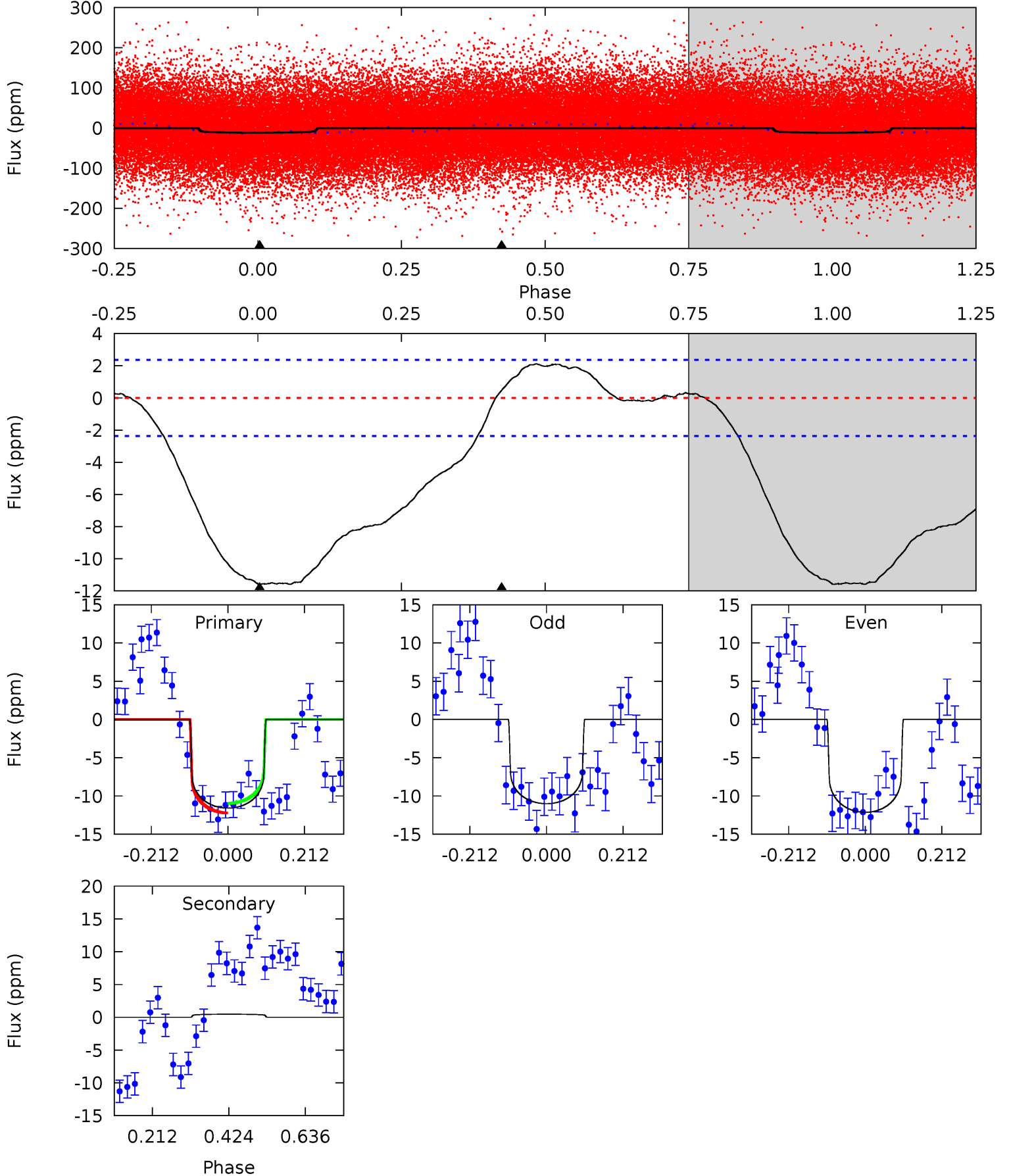
TCE 009349226-01 P= 4.776091 Days $T_0=136.278932$ (BKJD)



DV Model-Shift Uniqueness Test

009349226-01, P = 4.776913 Days, E = 131.340832 Days

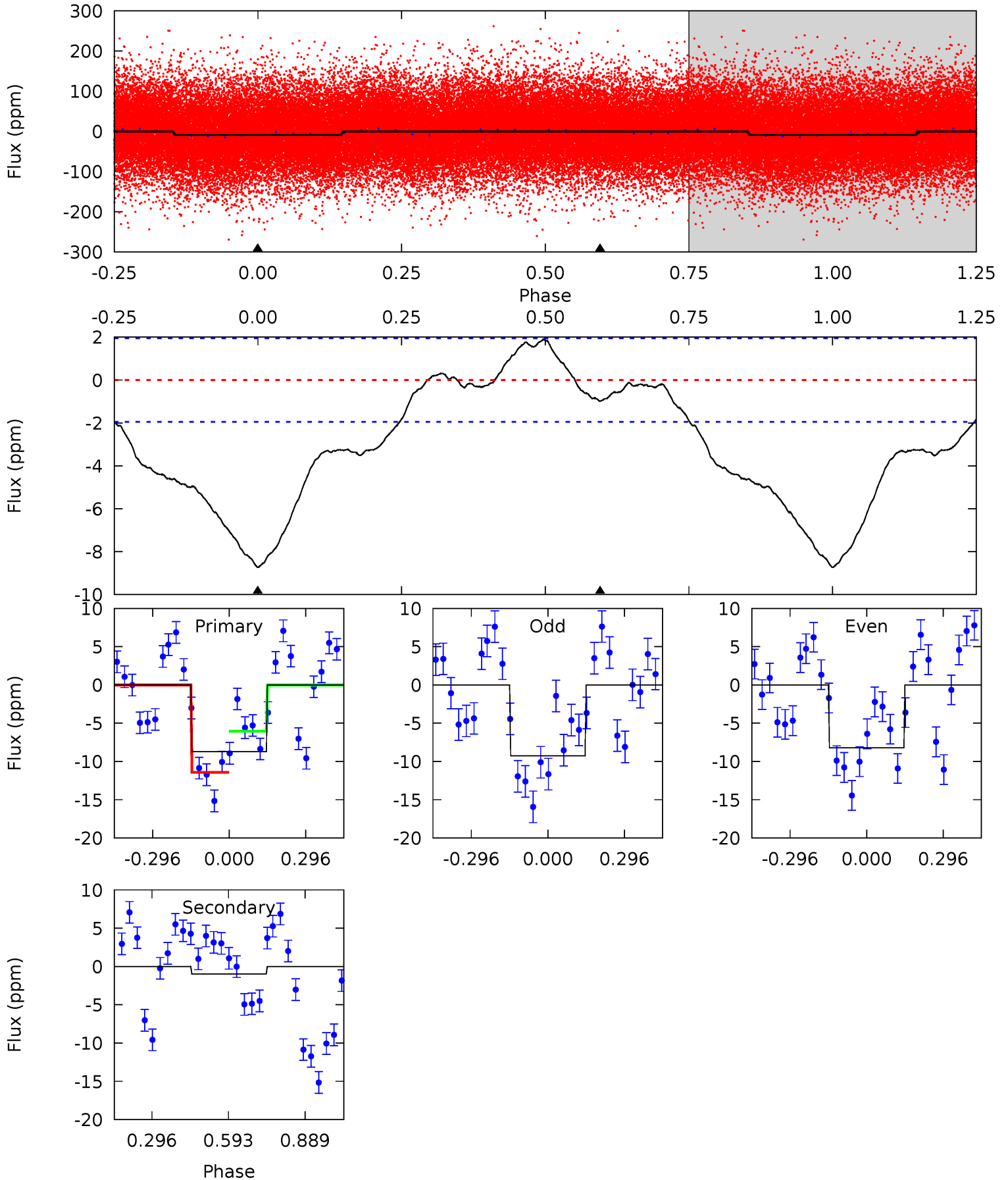
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	-0.88	0	0	4.40	1.25	0.33	21.5	21.5	-0.88	-0.88	1.05	1.05	0.15	1.15



Alt Model-Shift Uniqueness Test

009349226-01, P = 4.776091 Days, E = 131.502841 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.4	2.20	0	0	4.33	1.04	1.45	19.4	19.4	2.20	2.20	1.16	1.13	0.18	5.93



Stellar Parameters For KIC 009349226

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7082^{+225}_{-300}	$3.942^{+0.360}_{-0.120}$	$-0.500^{+0.250}_{-0.300}$	$2.017^{+0.505}_{-0.757}$	$1.298^{+0.201}_{-0.221}$	$0.223^{+0.567}_{-0.093}$
	+3%/-4%	+9%/-3%	+50%/-60%	+25%/-38%	+15%/-17%	+254%/-42%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 009349226-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1	$0.53^{+0.14}_{-0.13}$	2464^{+196}_{-254}	-4060^{+6415}_{-714}	$-3.582^{+3.960}_{-5.769}$
Alt.	-1 ± 0	$0.59^{+0.16}_{-0.14}$	2448^{+189}_{-262}	4259^{+474}_{-491}	$5.427^{+5.095}_{-2.832}$

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 $A_{obs} \gg 1.0$

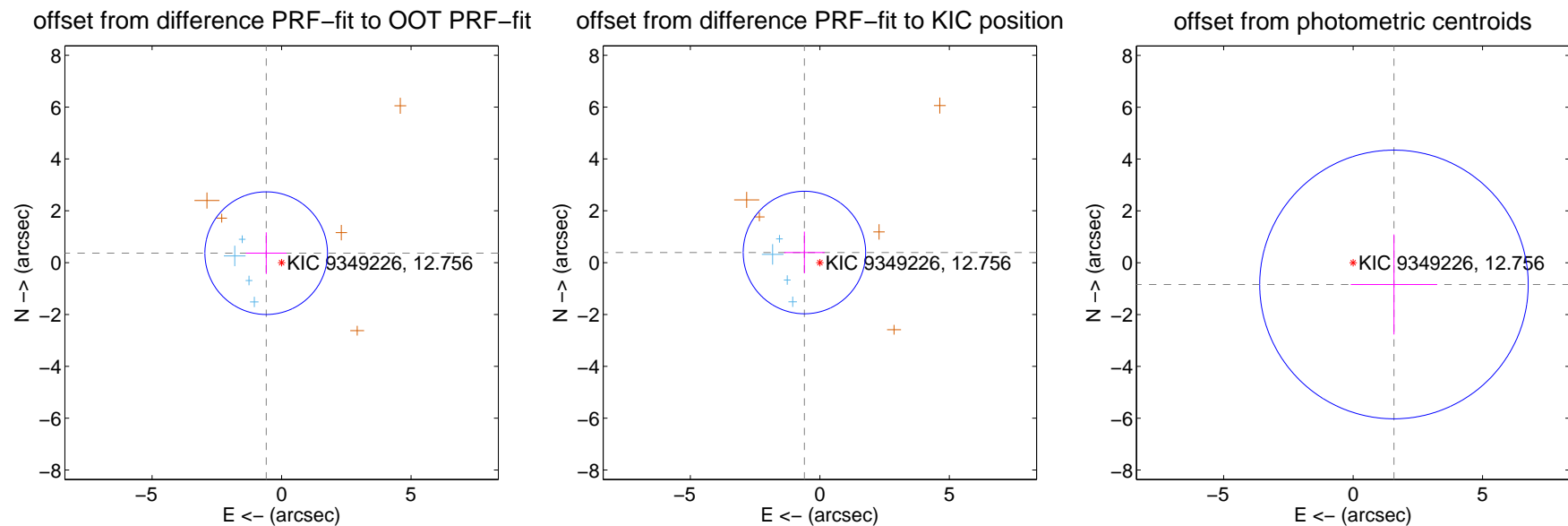
DV Centroid Data

Supplemental centroid analysis for 009349226-01. Kepler magnitude: 12.76. Transit SNR 6.53

There are 4 quarters with good PRF difference image offsets

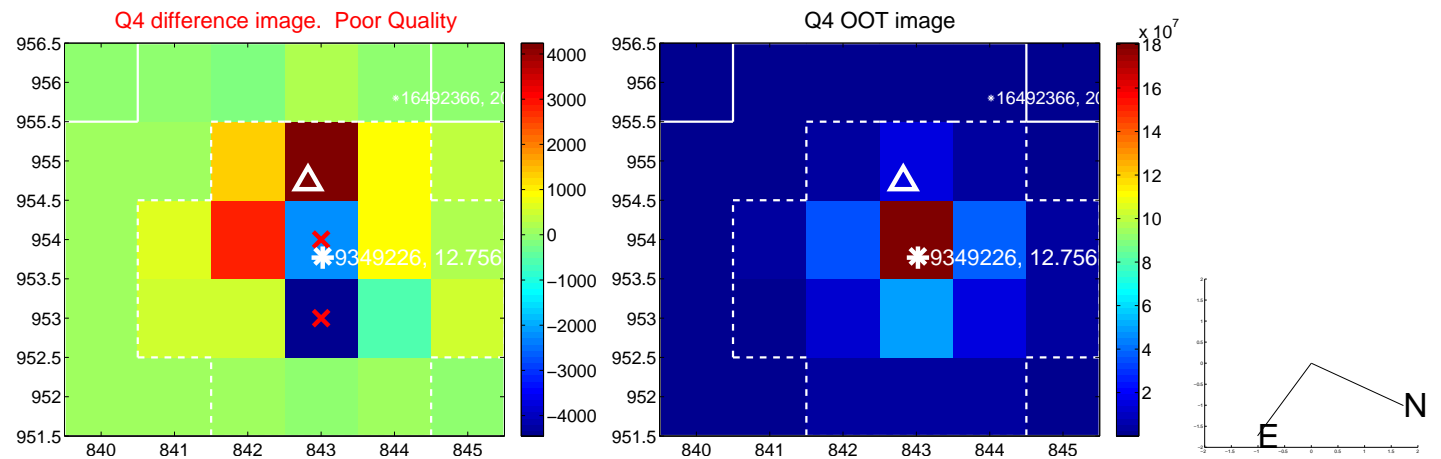
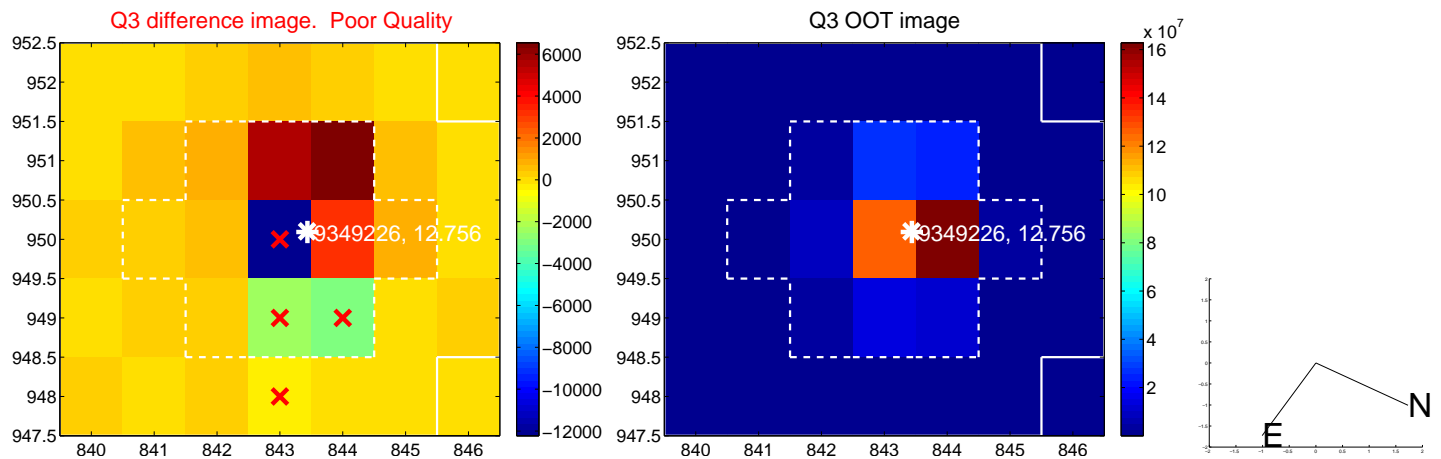
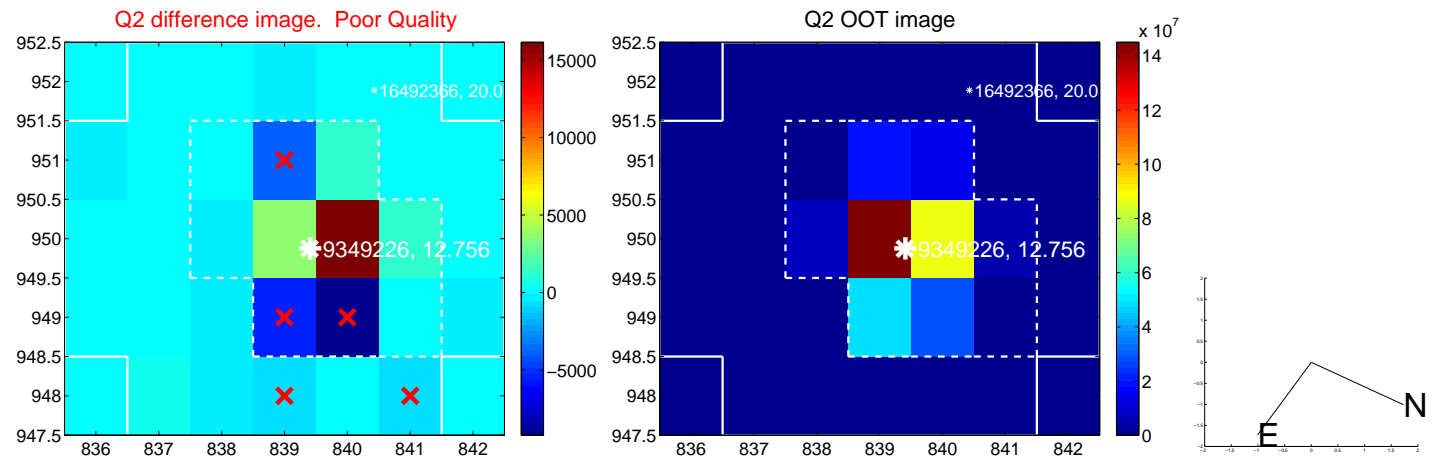
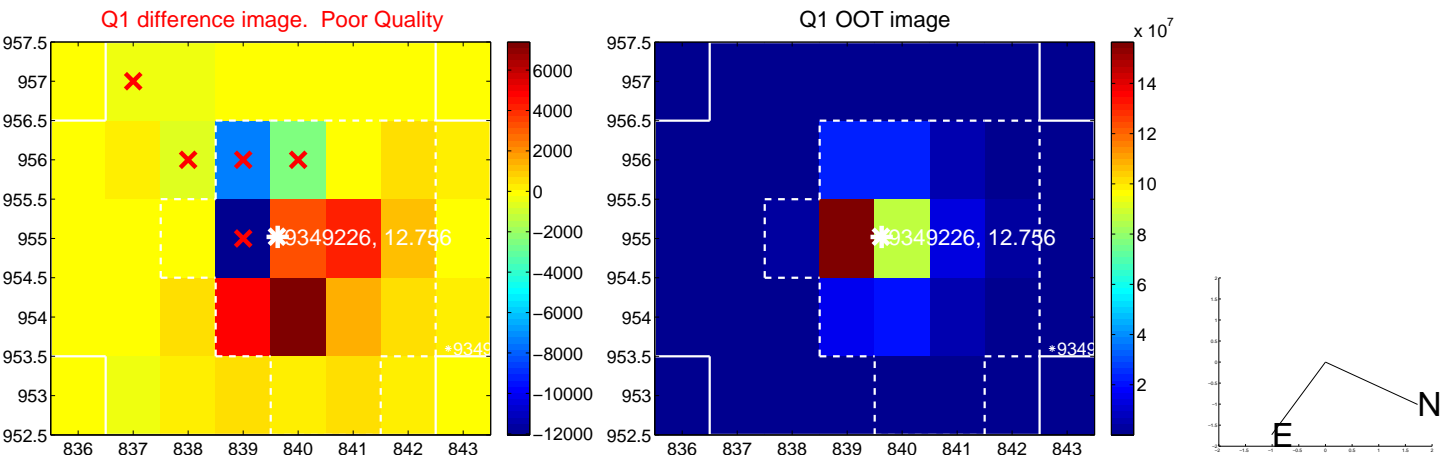
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.697 ± 0.789	0.88	0.594 ± 0.783	0.366 ± 0.804
PRF-fit source offset from KIC position	0.712 ± 0.788	0.90	0.595 ± 0.780	0.391 ± 0.806
photometric centroid source offset	1.79 ± 1.73	1.03	-1.58 ± 1.67	-0.84 ± 1.93

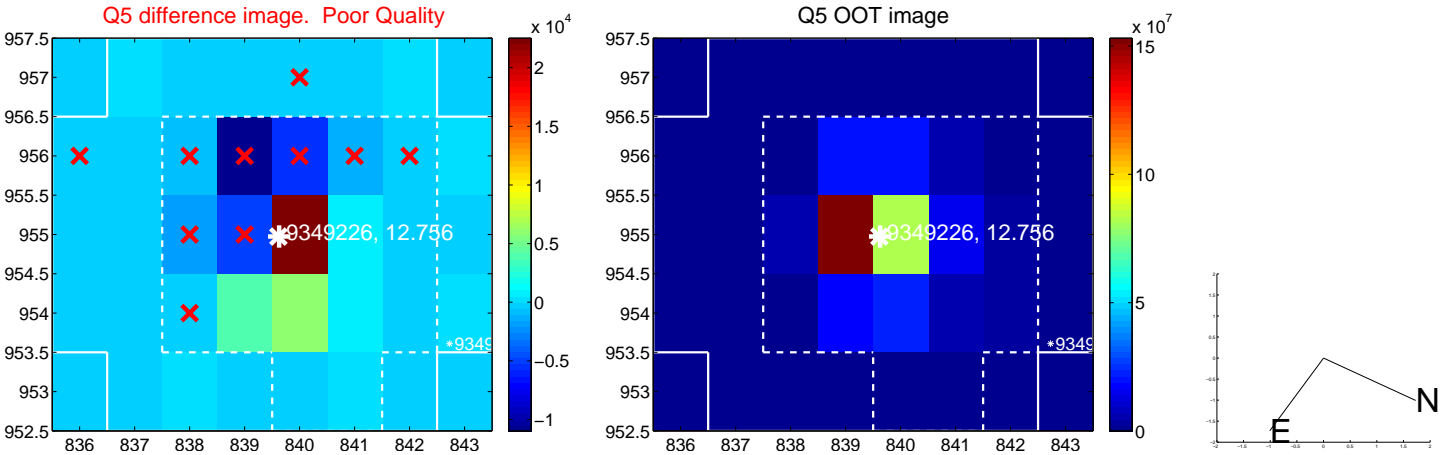


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

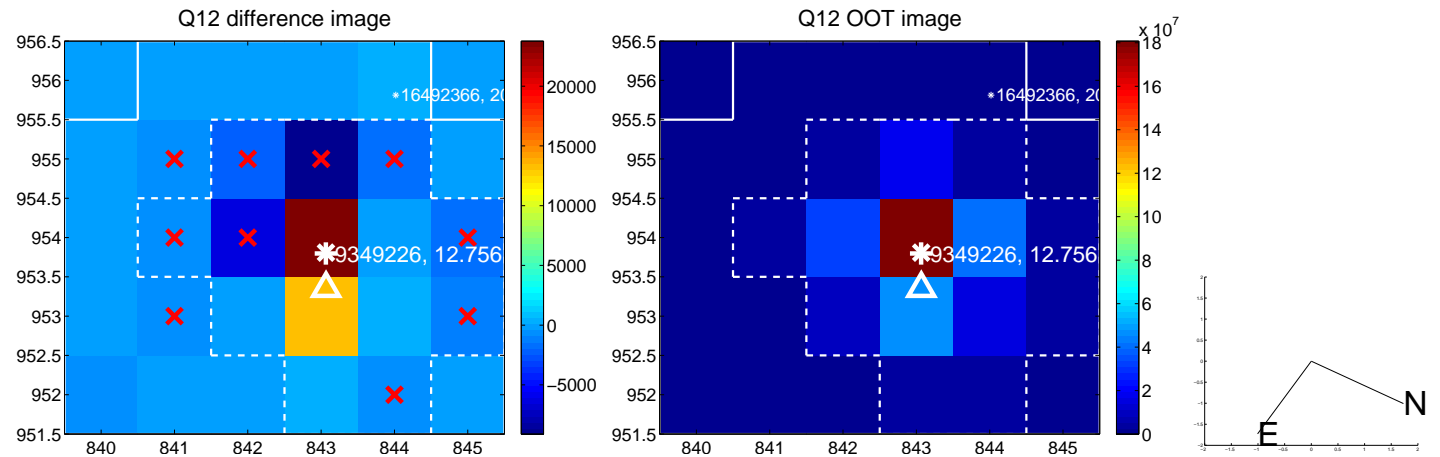
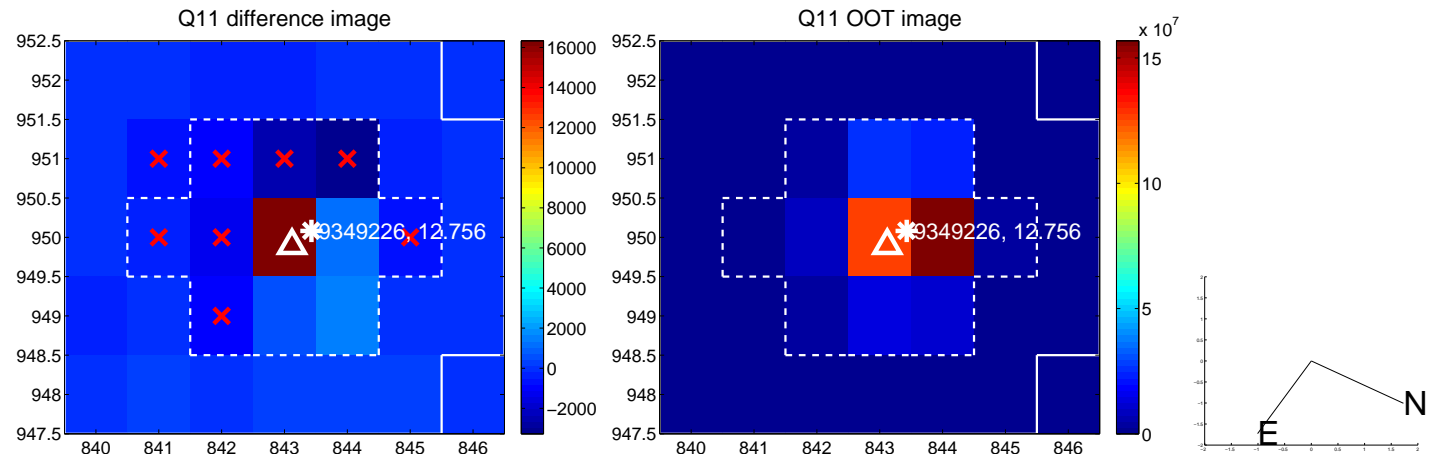
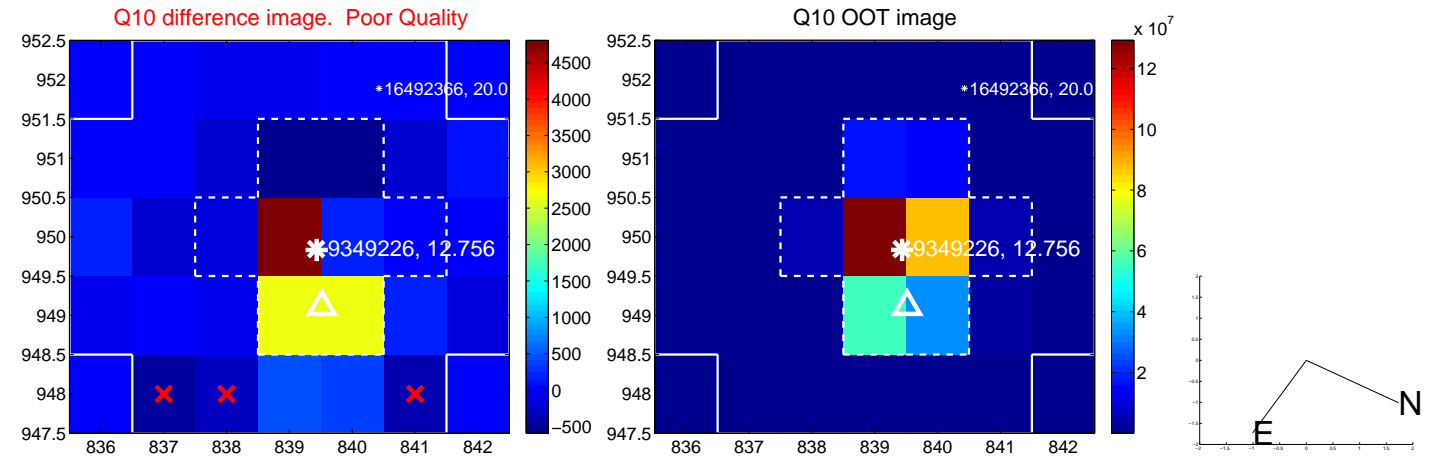
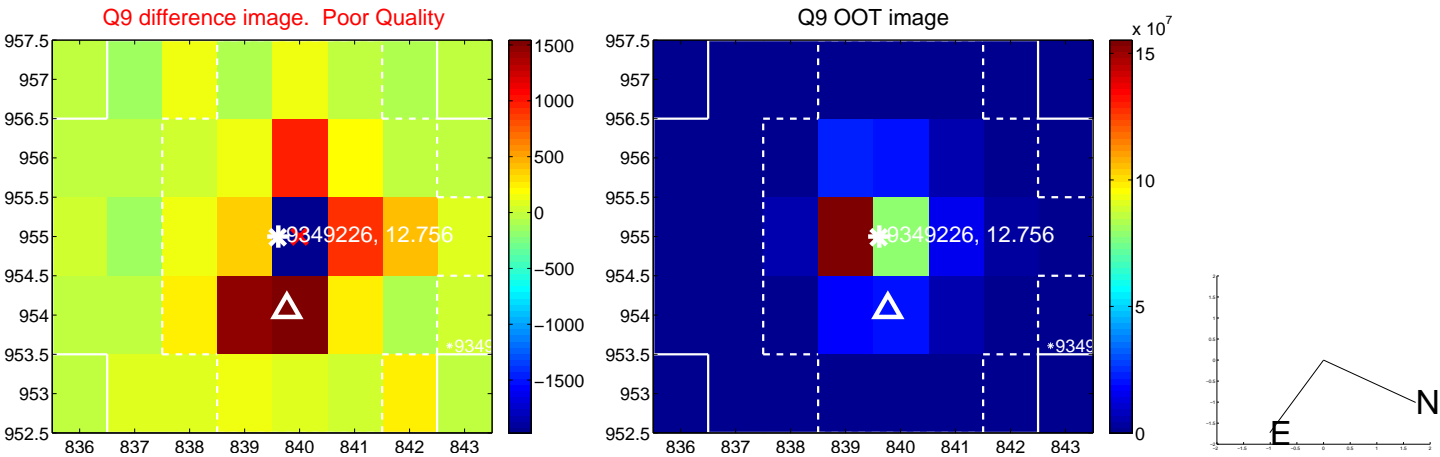
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



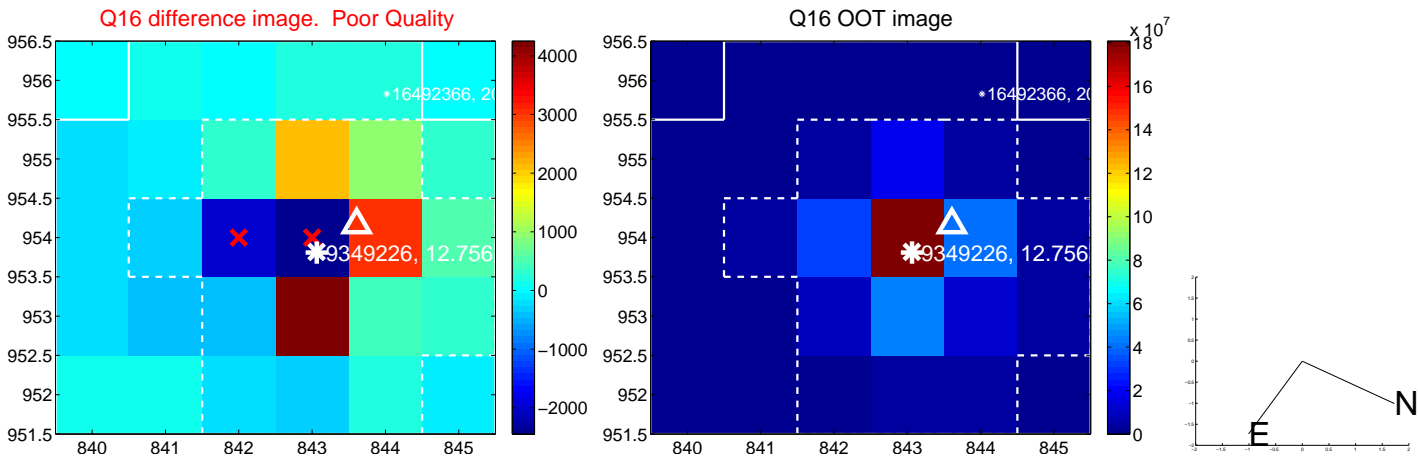
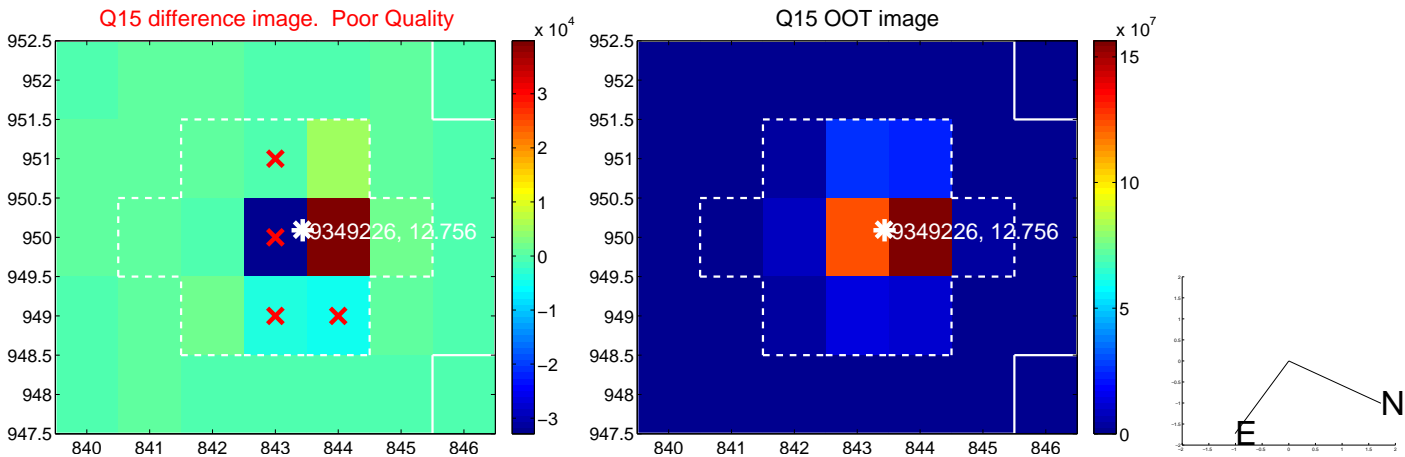
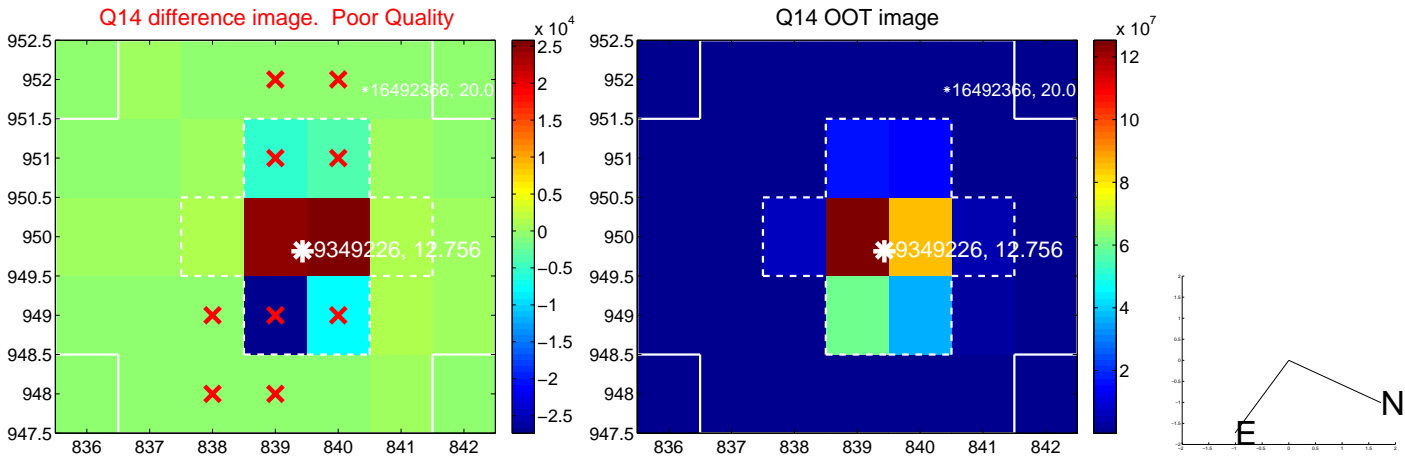
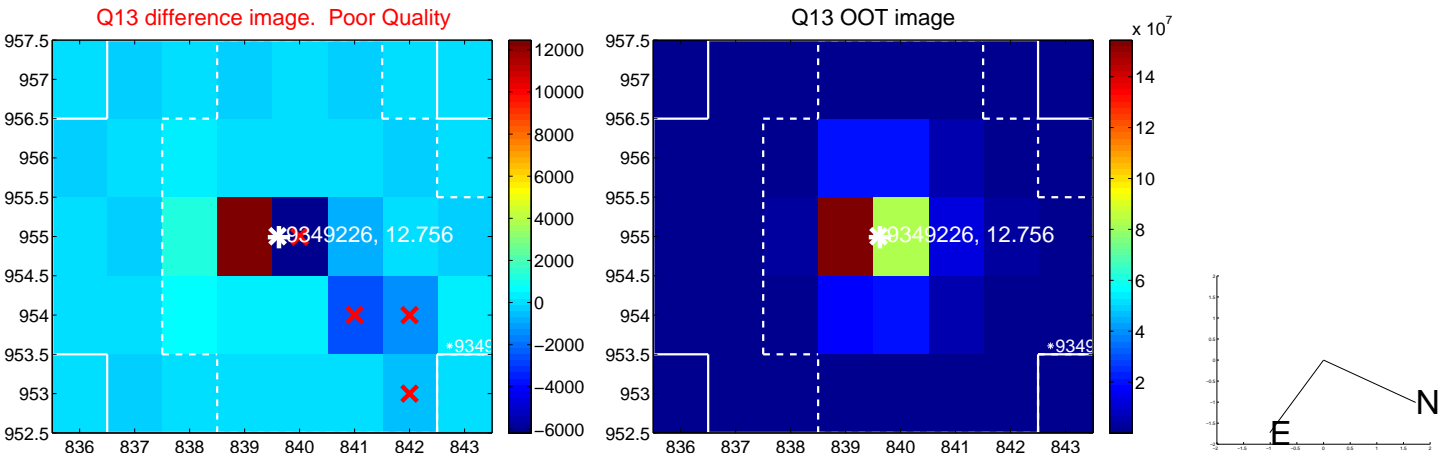
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



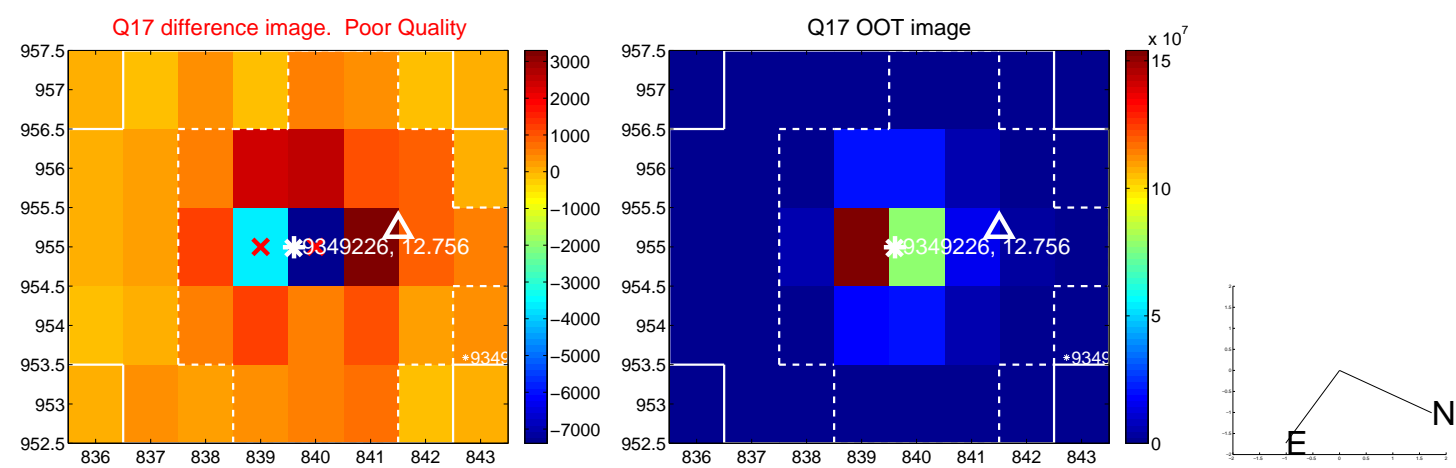
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



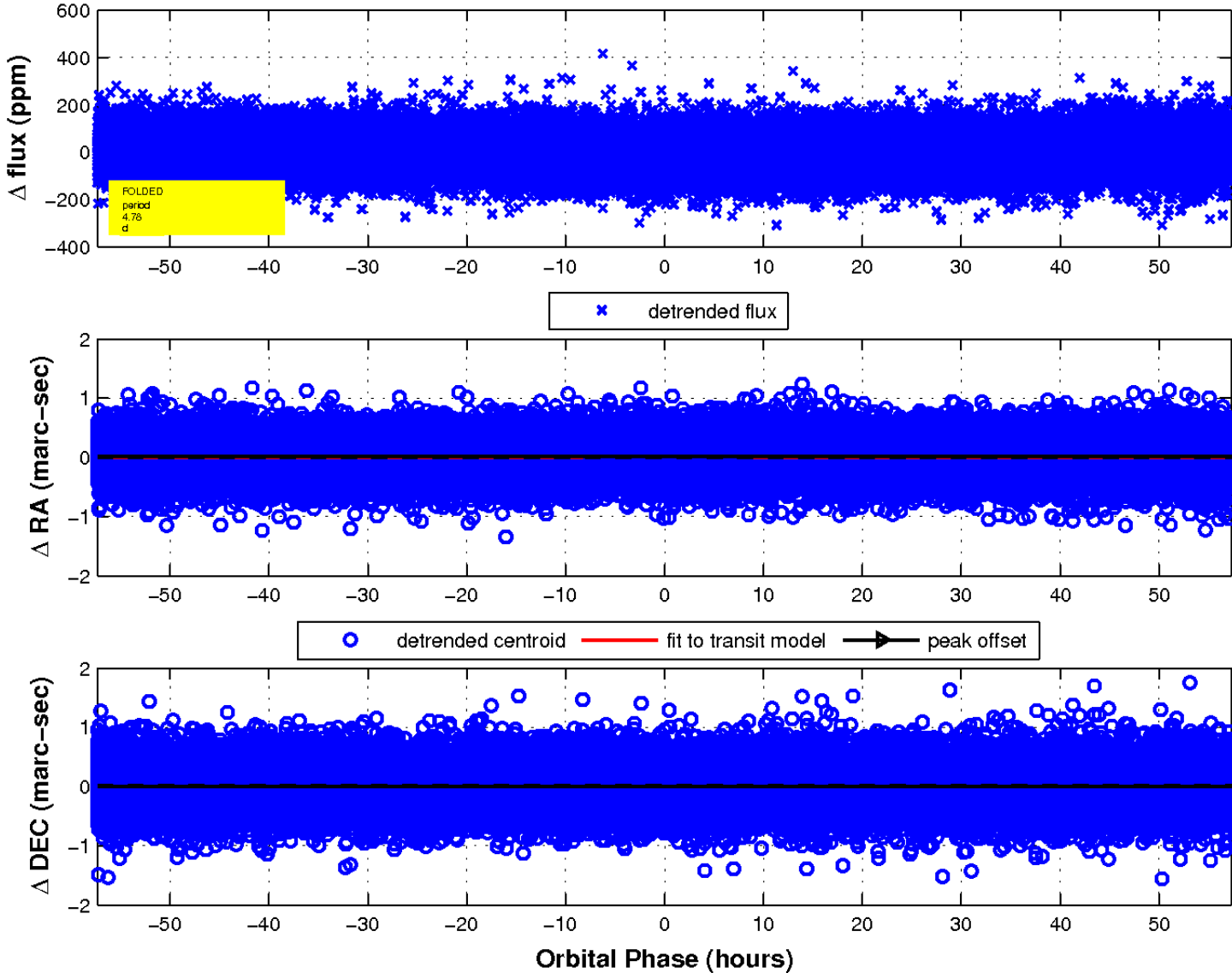
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

