

KIC 011650401

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})
011650401-01	OBS	4566.01	3.946624	132.248840	314.9	3.292	10.5	11.6	0.81	5376	1.99	219.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011650401-01	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.

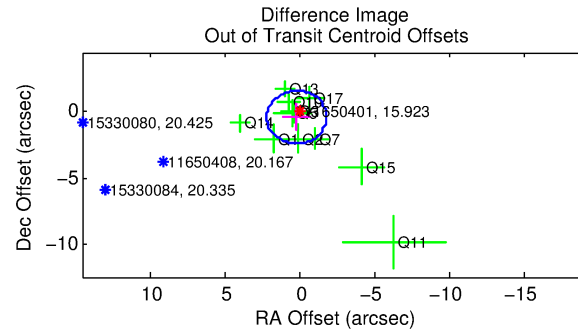
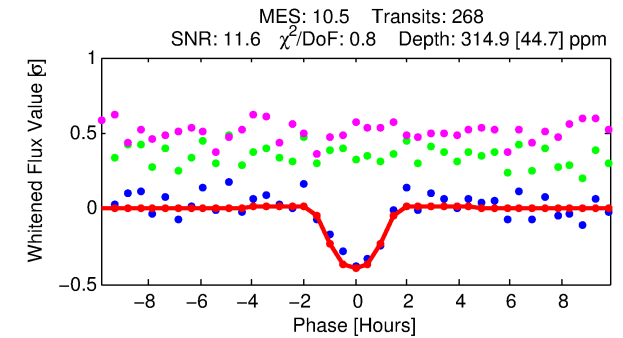
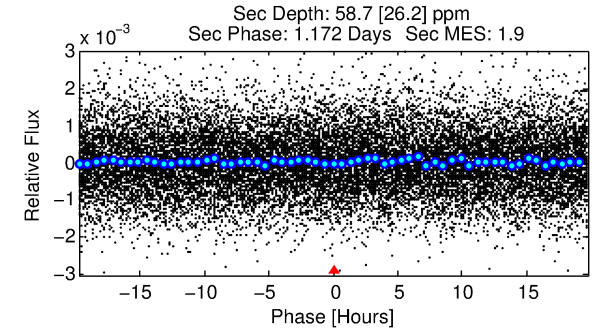
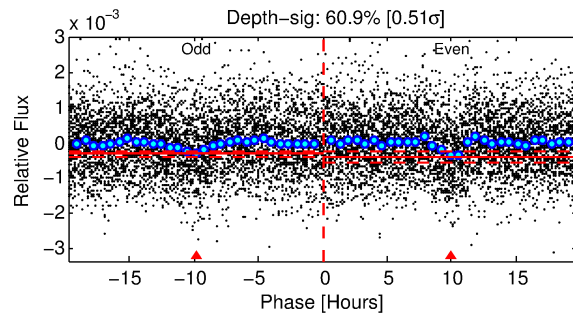
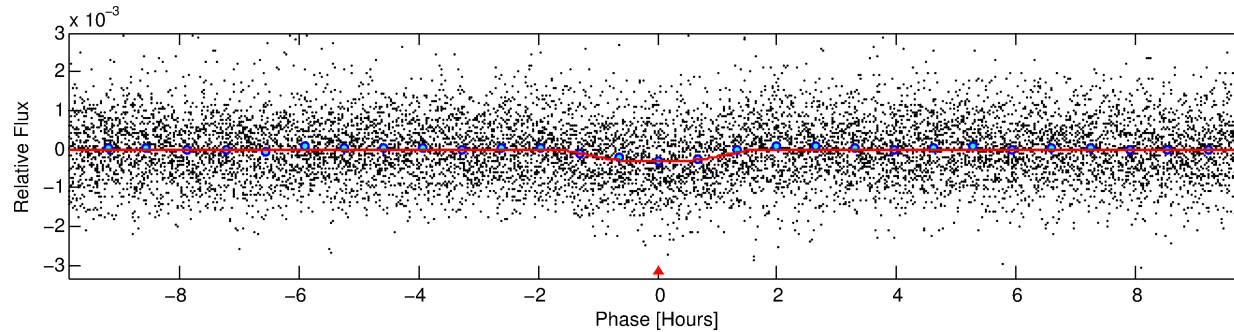
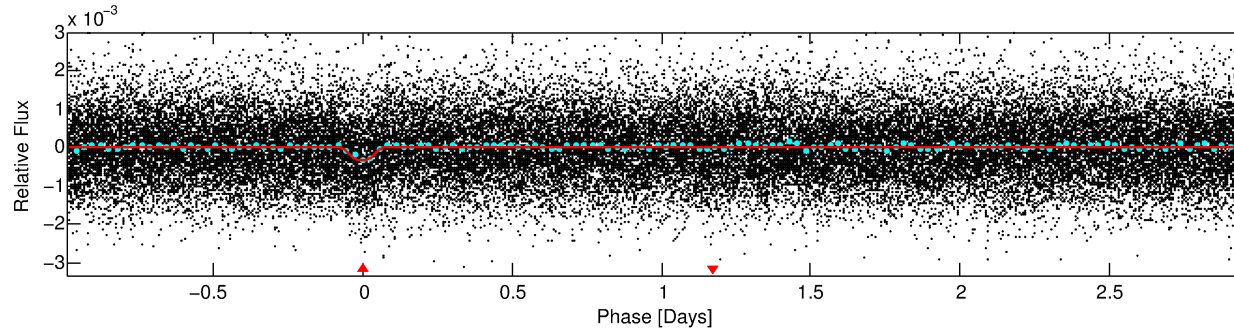
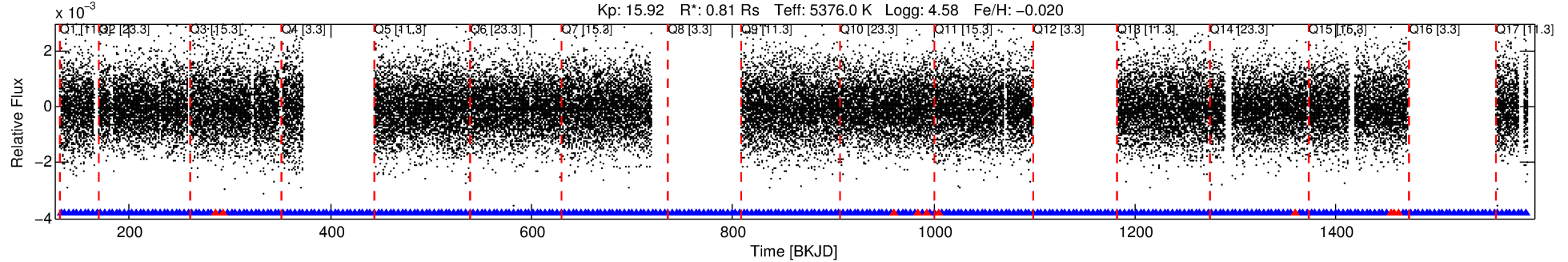
Ephemeris Match Information For 011650401-01

No Significant Match Found

DV One-Page Summary

KIC: 11650401 Candidate: 1 of 1 Period: 3.947 d
KOI: K04566.01 Corr: 0.928

Kp: 15.92 R*: 0.81 Rs Teff: 5376.0 K Logg: 4.58 Fe/H: -0.020



DV Fit Results:

Period = 3.94662 [0.00003] d
Epoch = 132.2488 [0.0059] BKJD
Rp/R* = 0.0226 [0.0026]
a/R* = 2.99 [0.62]
b = 0.98 [0.01]
Seff = 219.44 [55.03]
Teq = 981 [62] K
Rp = 1.99 [0.43] Re
a = 0.0471 [0.0072] AU
Ag = 18.14 [9.92] [1.73σ]
Teffp = 3131 [403] K [5.28σ]

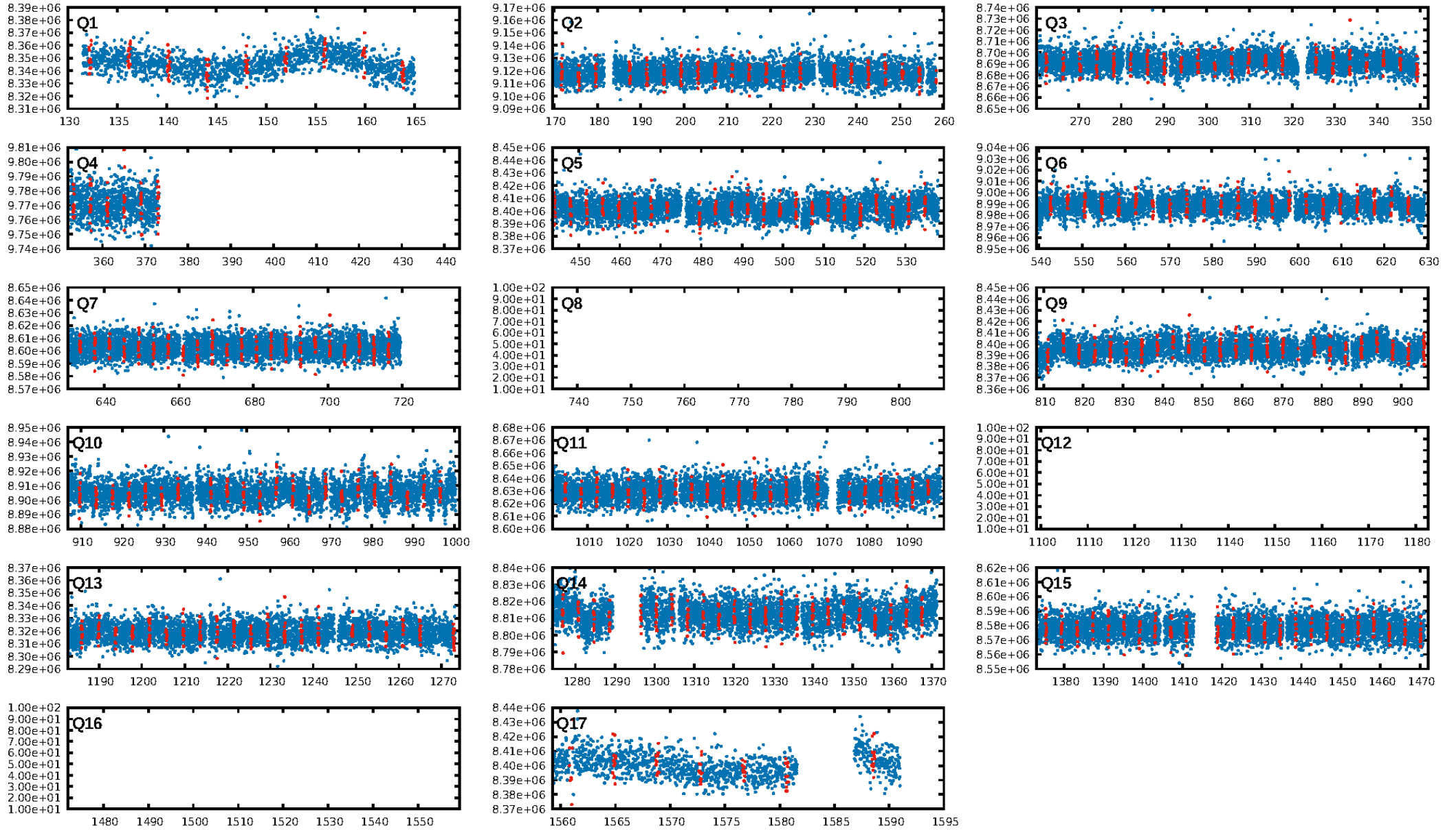
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.33e-25
RollingBand-fgt: 0.96 [236/246]
GhostDiagnostic-chr: 11.15
Centroid-sig: 1.2%
Centroid-so: 2.694 arcsec [1.87σ]
OotOffset-rm: 0.444 arcsec [0.67σ]
KicOffset-rm: 0.546 arcsec [0.87σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [14/14]

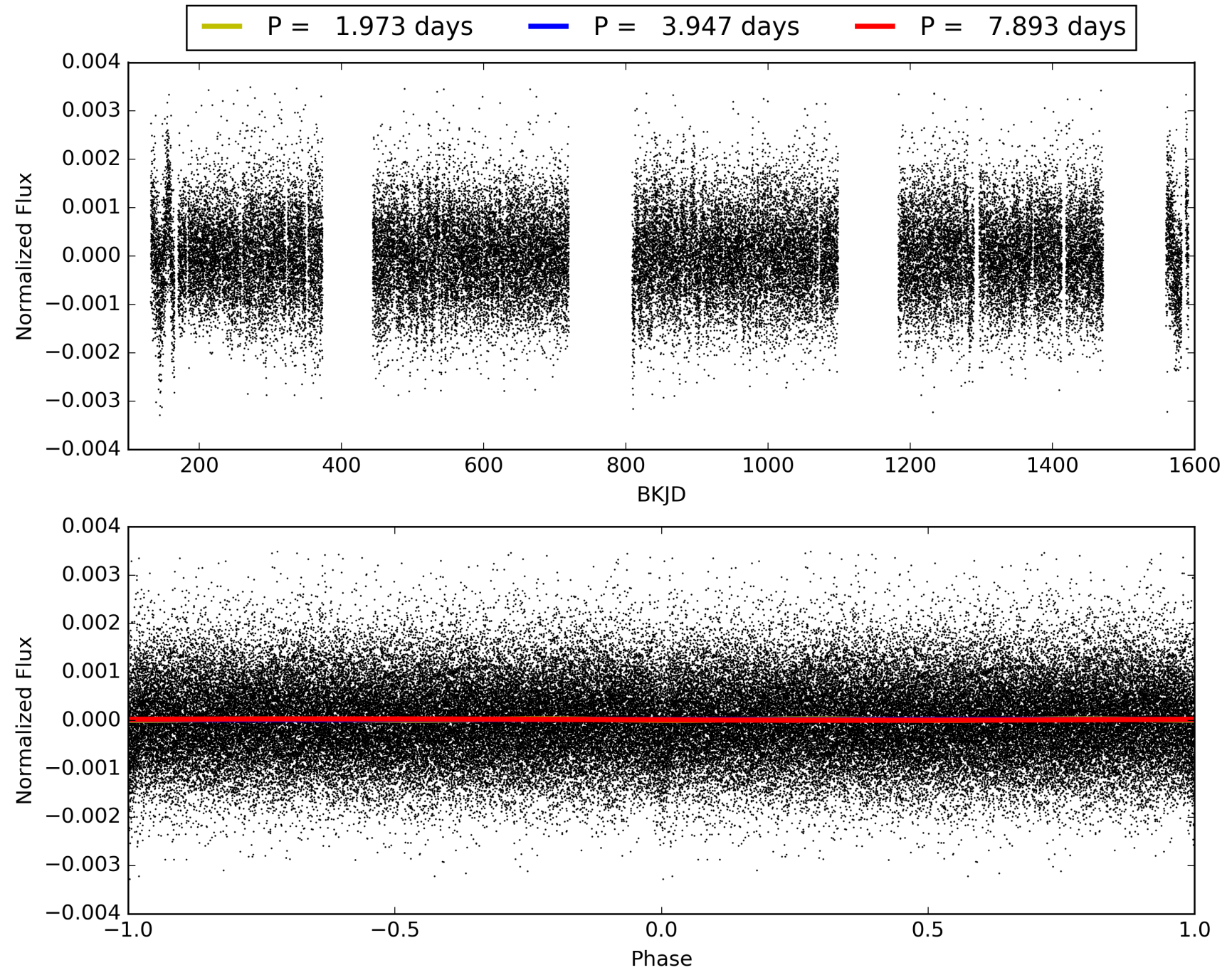
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:09:45 Z

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

TCE 011650401-01, PDC Light Curves

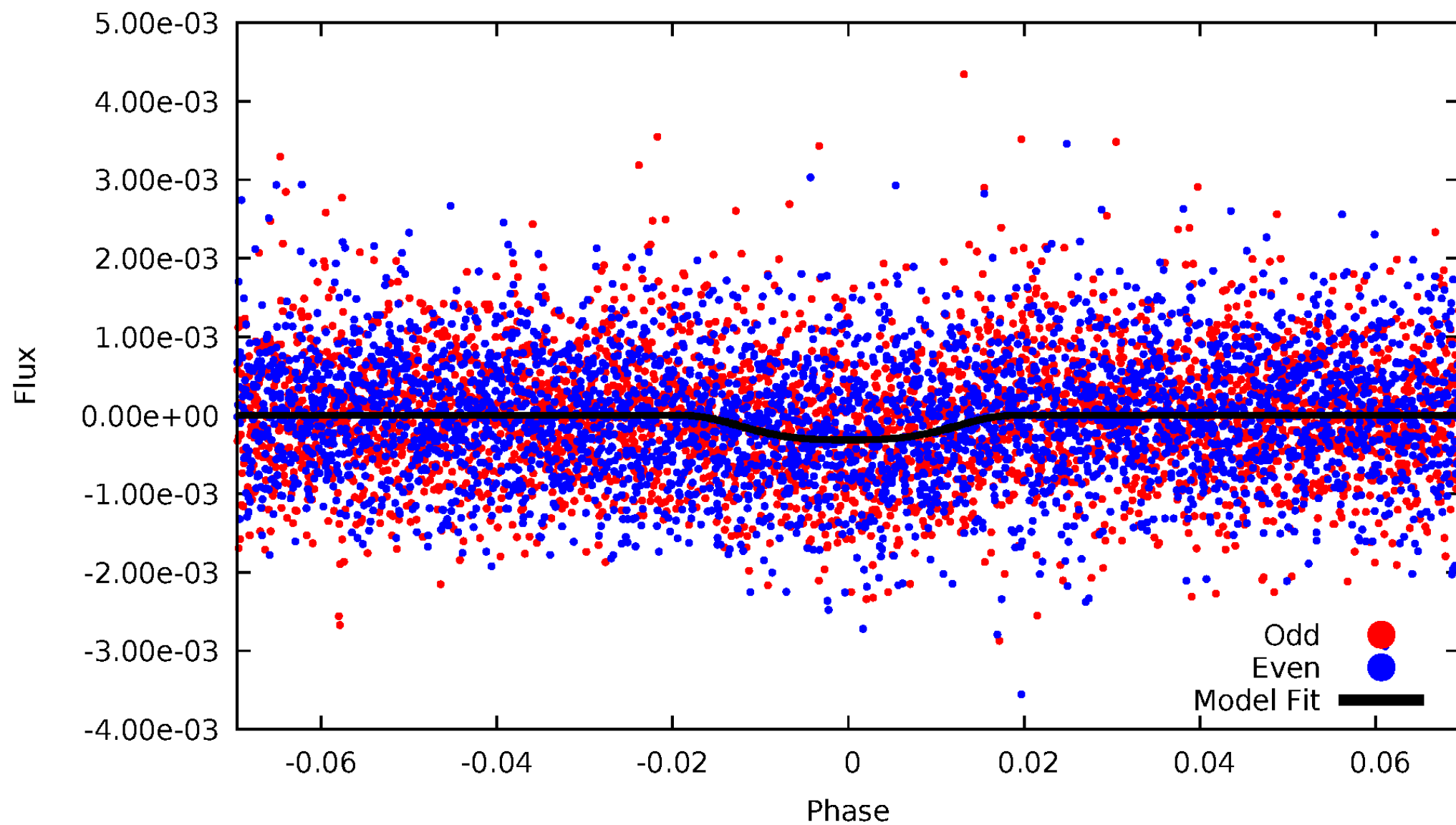


TCE 011650401-01



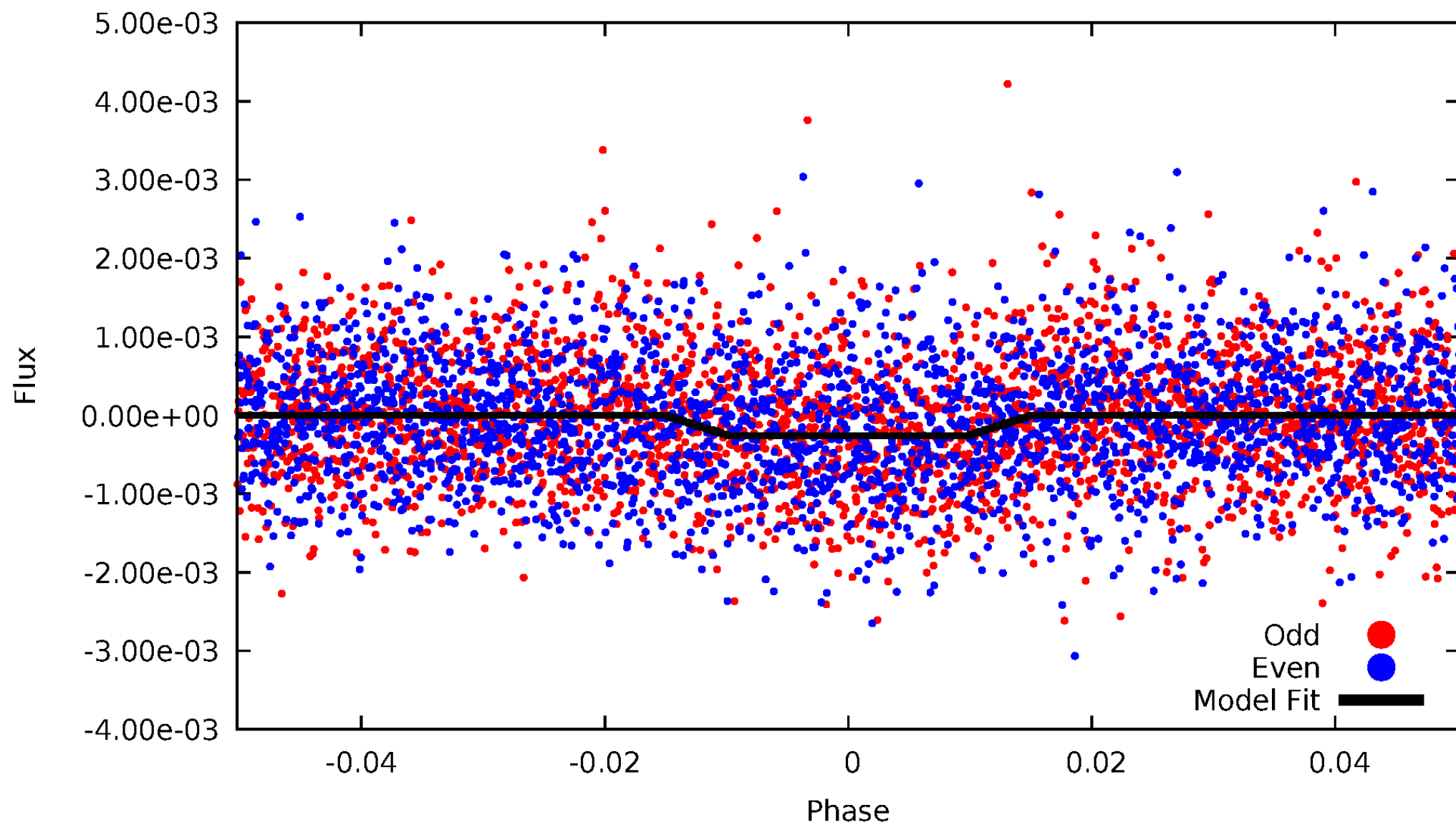
DV Odd/Even

TCE 011650401-01



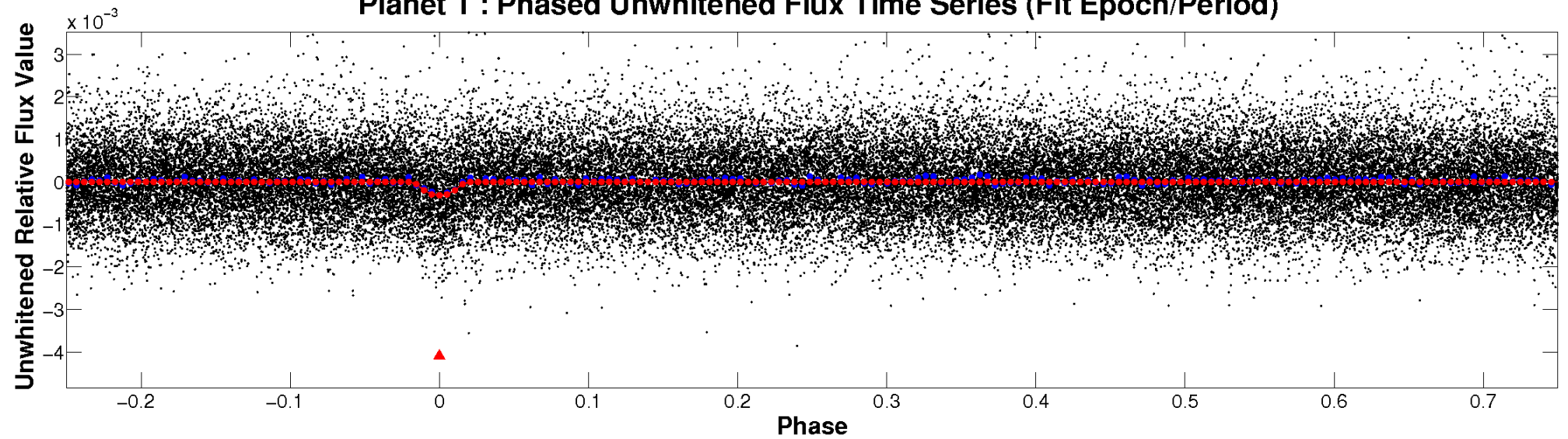
ALT Odd/Even

TCE 011650401-01

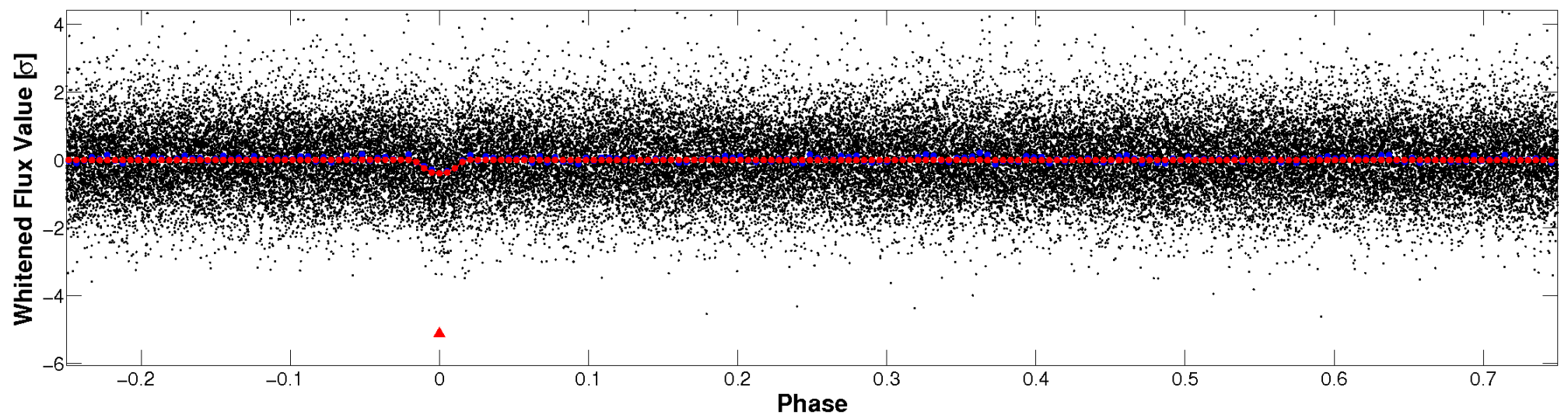


Non-Whitened Vs. Whitened Light Curve

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

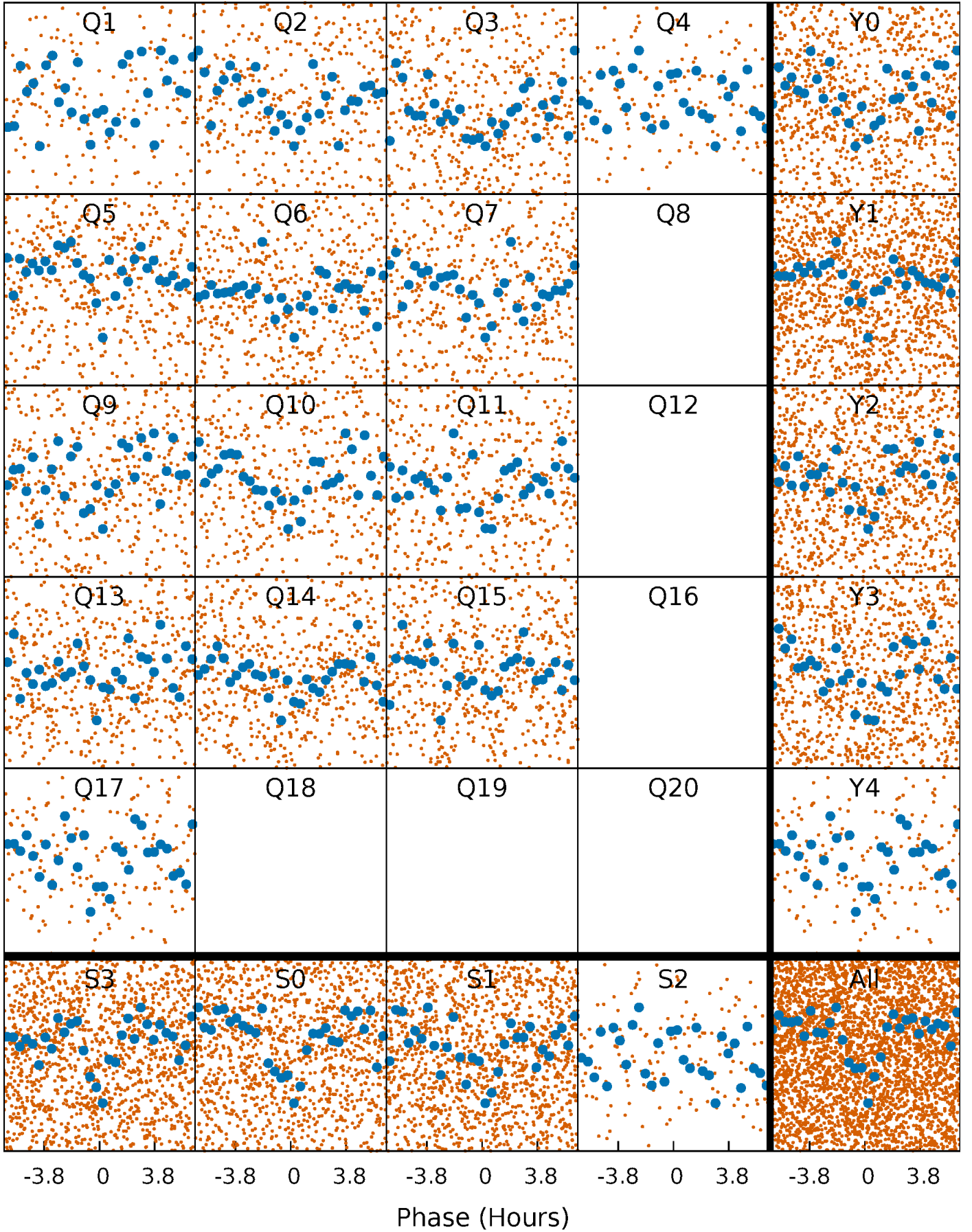


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



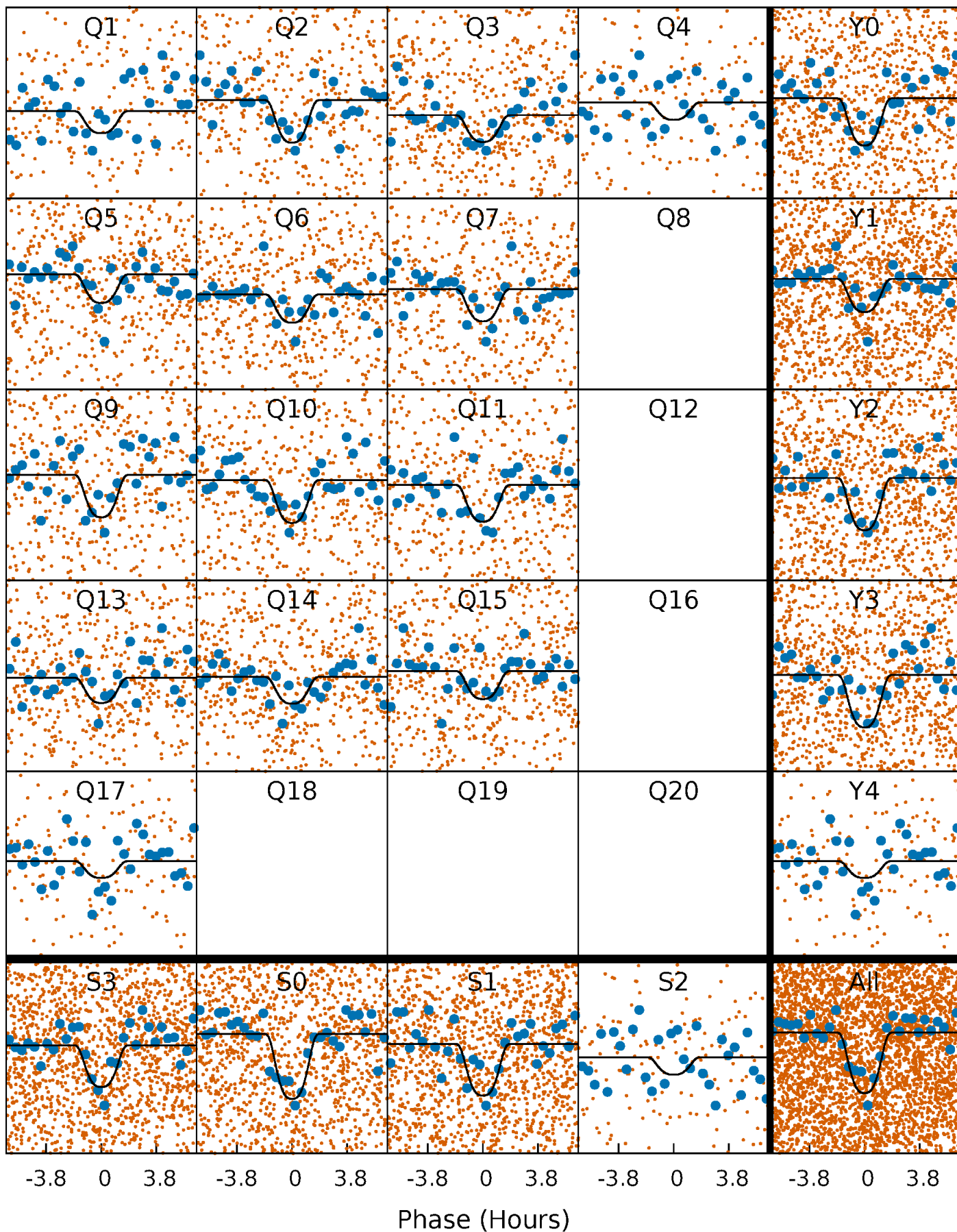
PDC Quarter-Phased Transit Curves

TCE 011650401-01 P= 3.946624 Days $T_0=132.248840$ (BKJD)



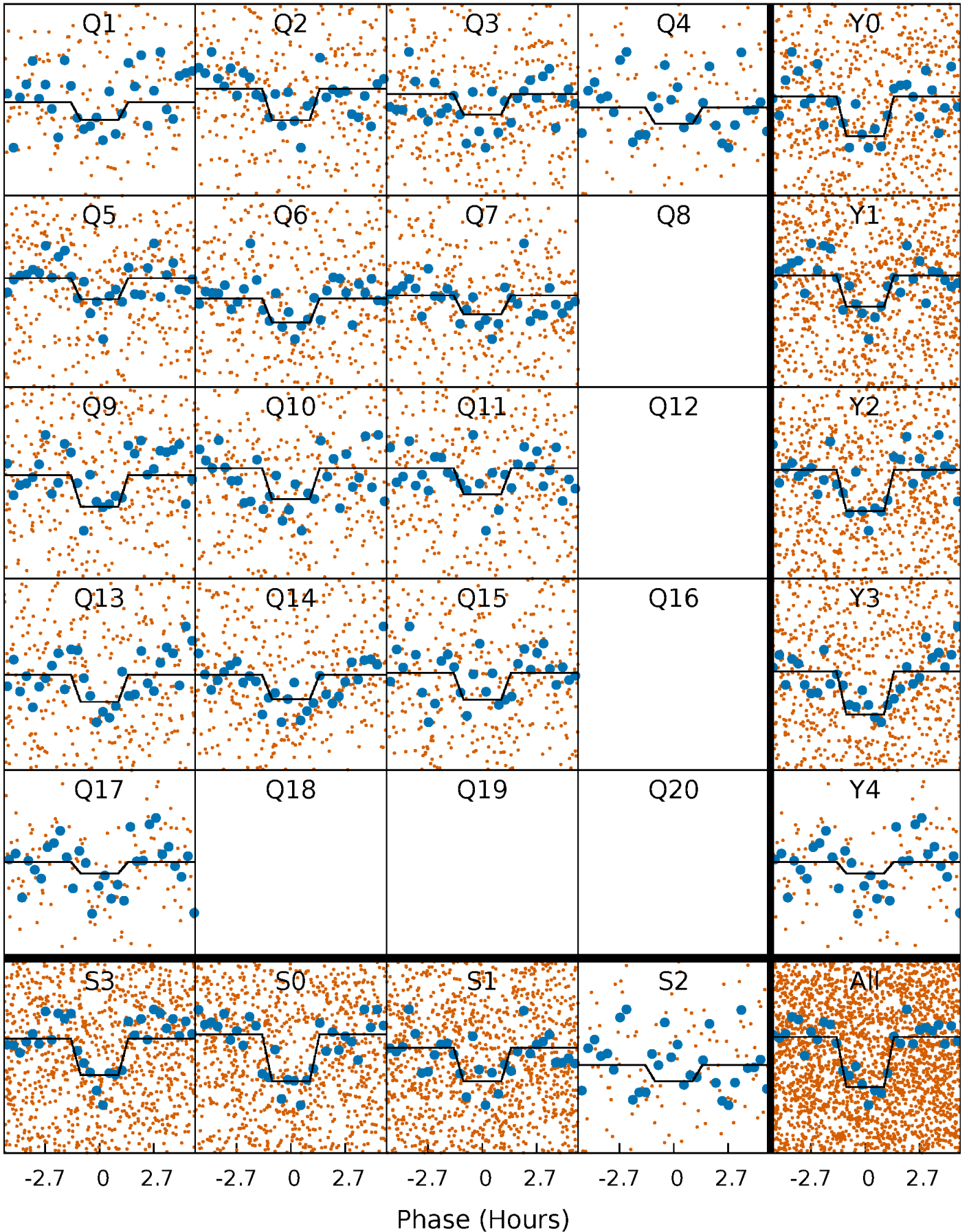
DV Quarter-Phased Transit Curves

TCE 011650401-01 P= 3.946624 Days $T_0=132.248840$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

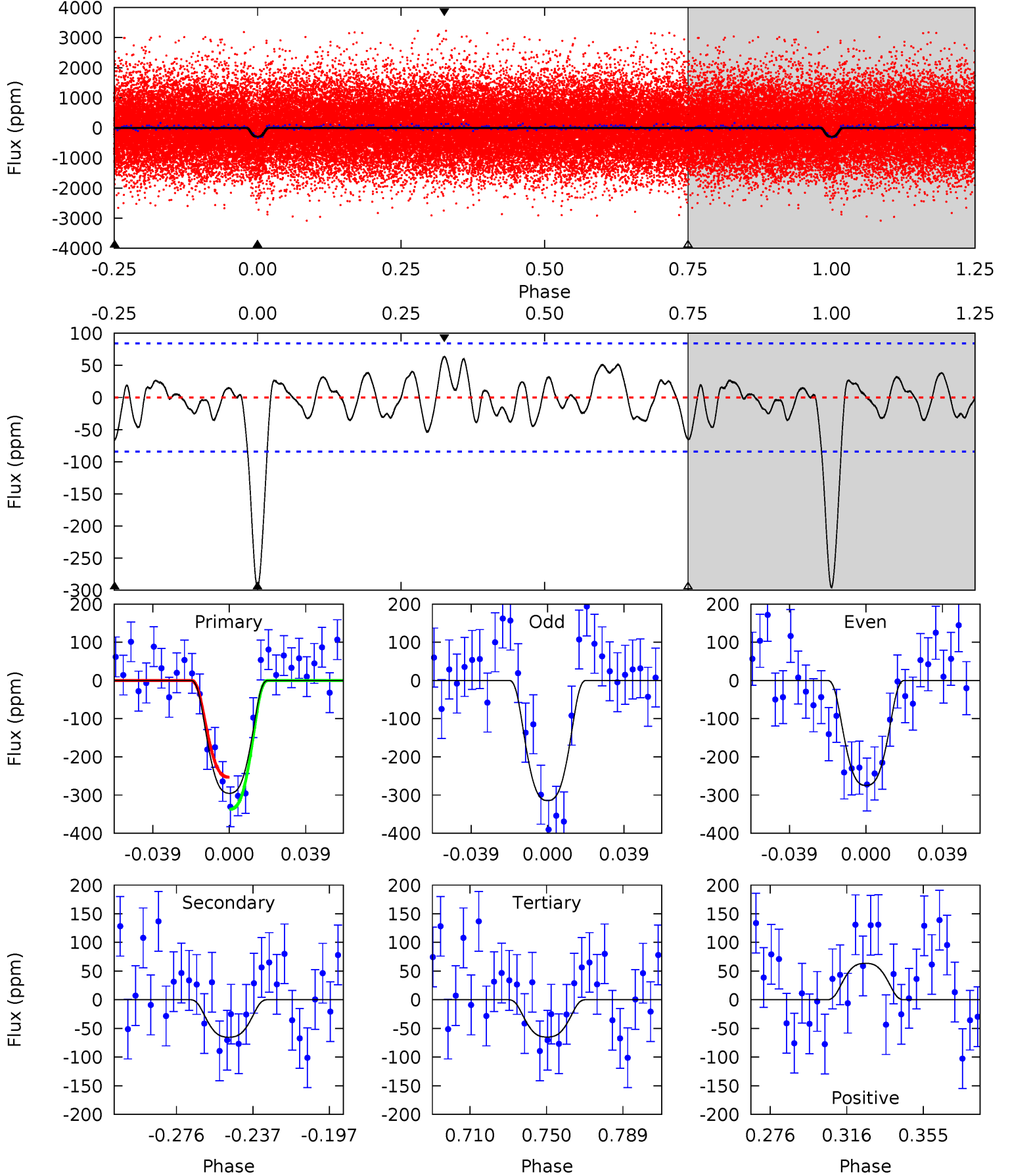
TCE 011650401-01 $P = 3.946596$ Days $T_0 = 132.250629$ (BKJD)



DV Model-Shift Uniqueness Test

011650401-01, P = 3.946624 Days, E = 128.302216 Days

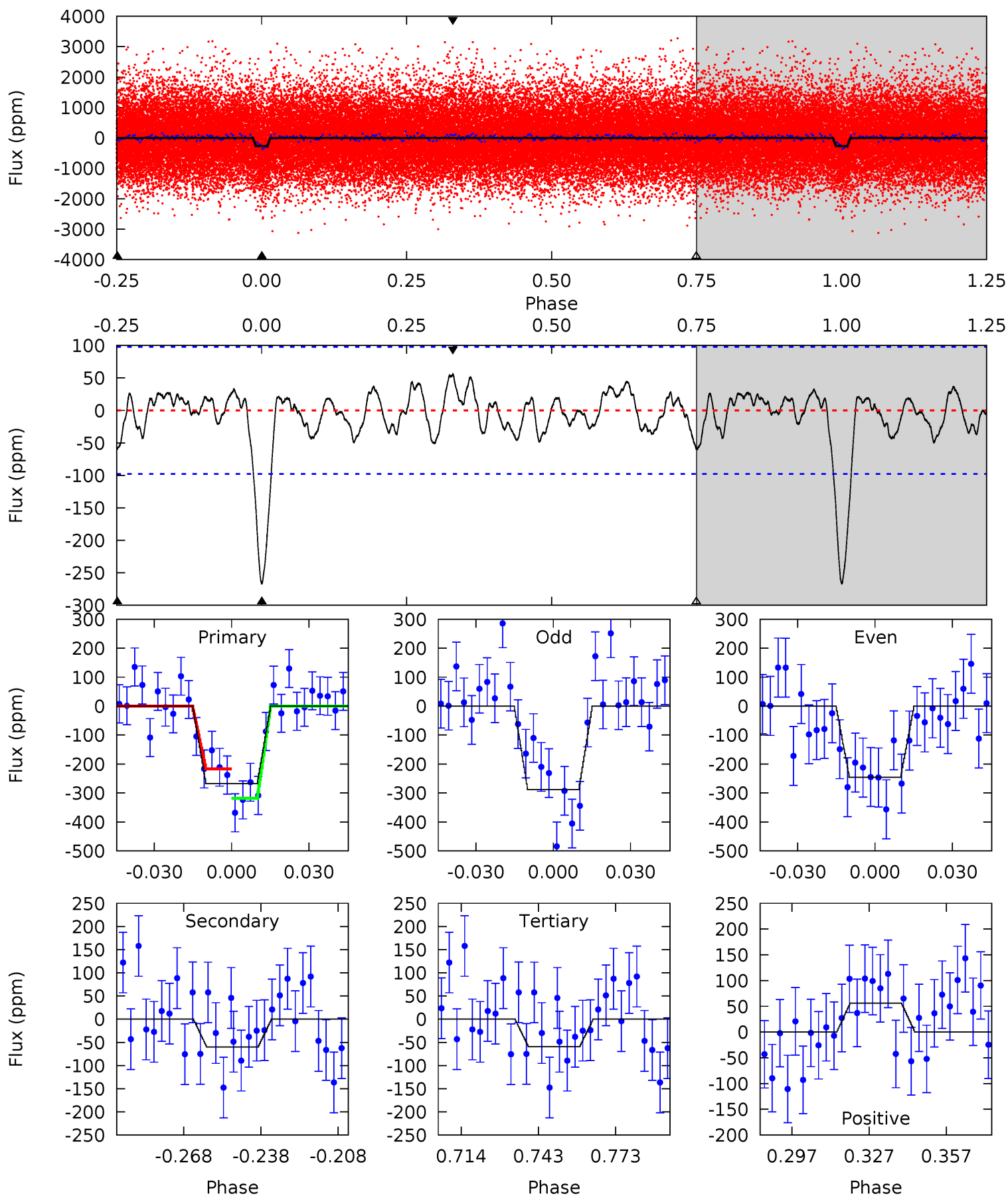
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	3.69	3.68	3.60	4.76	2.06	1.48	13.0	13.1	0.01	0.10	1.12	1.06	0.18	2.39



Alt Model-Shift Uniqueness Test

011650401-01, P = 3.946596 Days, E = 128.304033 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	2.95	2.91	2.76	4.81	2.17	1.20	10.3	10.4	0.04	0.19	1.04	1.00	0.17	2.51



Stellar Parameters For KIC 011650401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5376^{+160}_{-160}	$4.576^{+0.030}_{-0.120}$	$-0.020^{+0.300}_{-0.300}$	$0.806^{+0.147}_{-0.063}$	$0.897^{+0.073}_{-0.097}$	$2.413^{+0.392}_{-0.879}$
	+3%/-3%	+1%/-3%	+1500%/-1500%	+18%/-8%	+8%/-11%	+16%/-36%
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 011650401-01 / KOI 4566.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-65 ± 18	$2.04^{+0.30}_{-0.26}$	1394^{+64}_{-53}	3608^{+254}_{-216}	18^{+8}_{-6}
Alt.	-60 ± 20	$1.45^{+0.28}_{-0.25}$	1388^{+68}_{-50}	4009^{+379}_{-360}	34^{+22}_{-14}

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

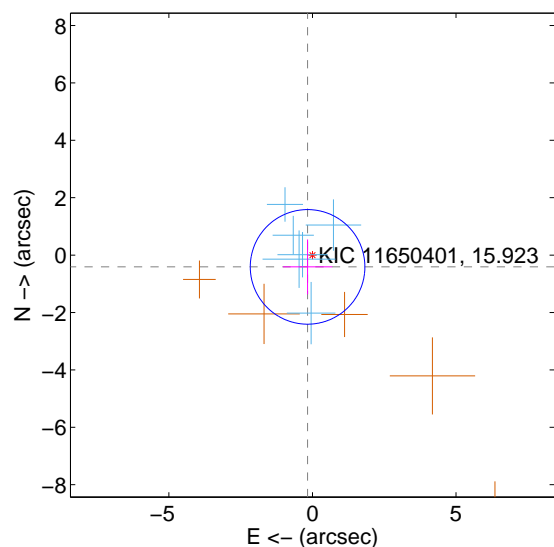
Supplemental centroid analysis for 011650401-01. Kepler magnitude: 15.92. Transit SNR 11.55

There are 6 quarters with good PRF difference image offsets

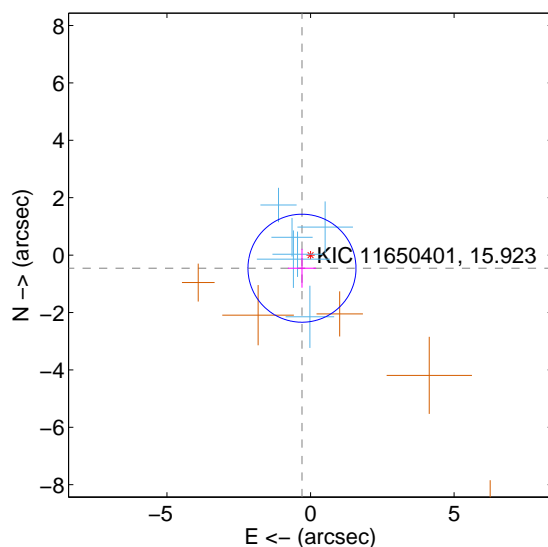
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.444 ± 0.665	0.67	0.169 ± 0.857	-0.411 ± 0.955
PRF-fit source offset from KIC position	0.546 ± 0.627	0.87	0.298 ± 0.492	-0.457 ± 0.676
photometric centroid source offset	2.69 ± 1.44	1.87	-0.94 ± 1.39	2.52 ± 1.45

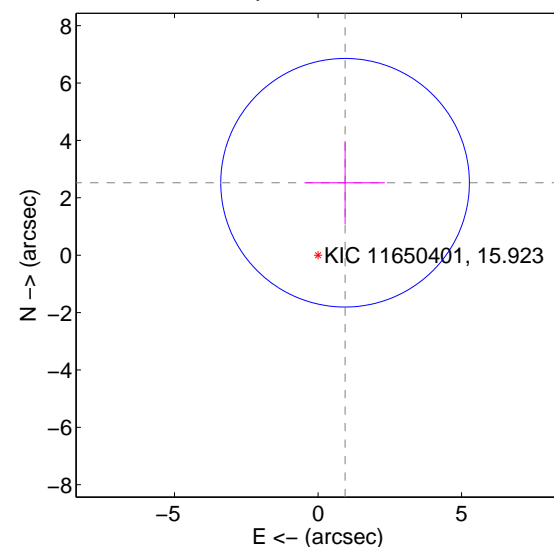
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

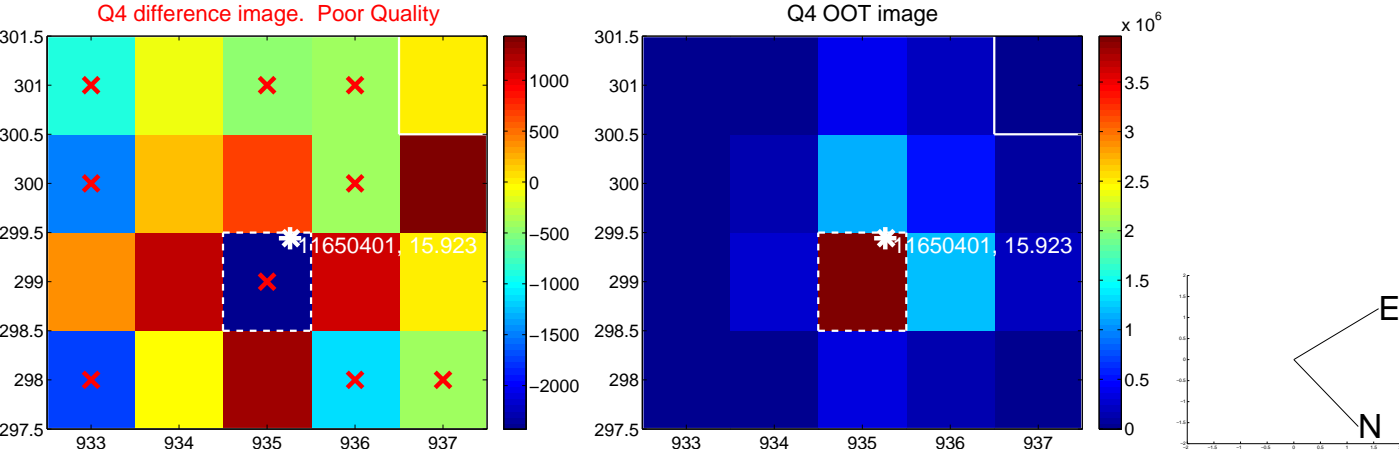
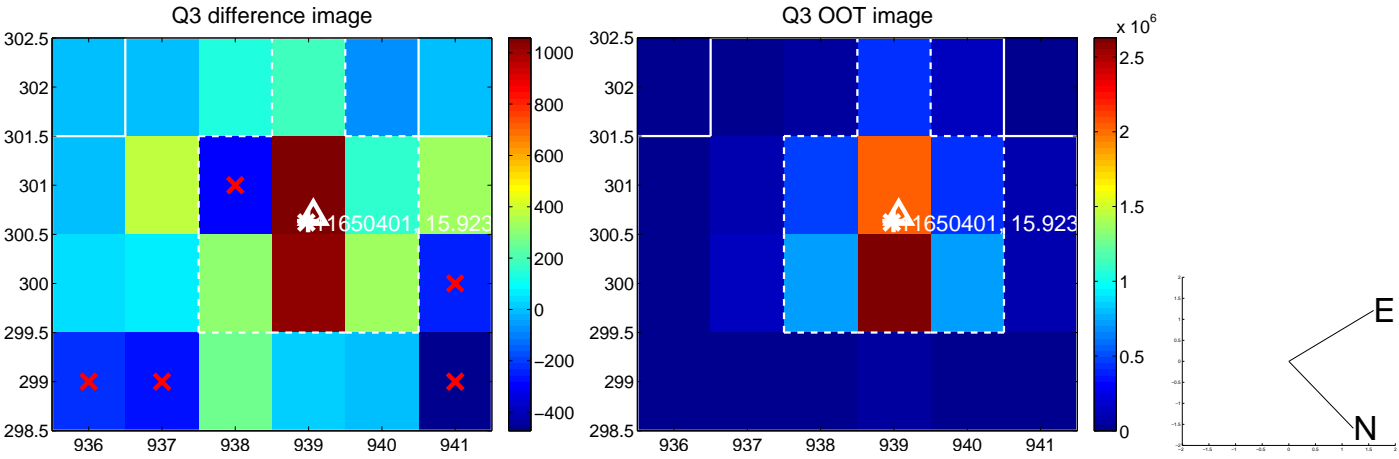
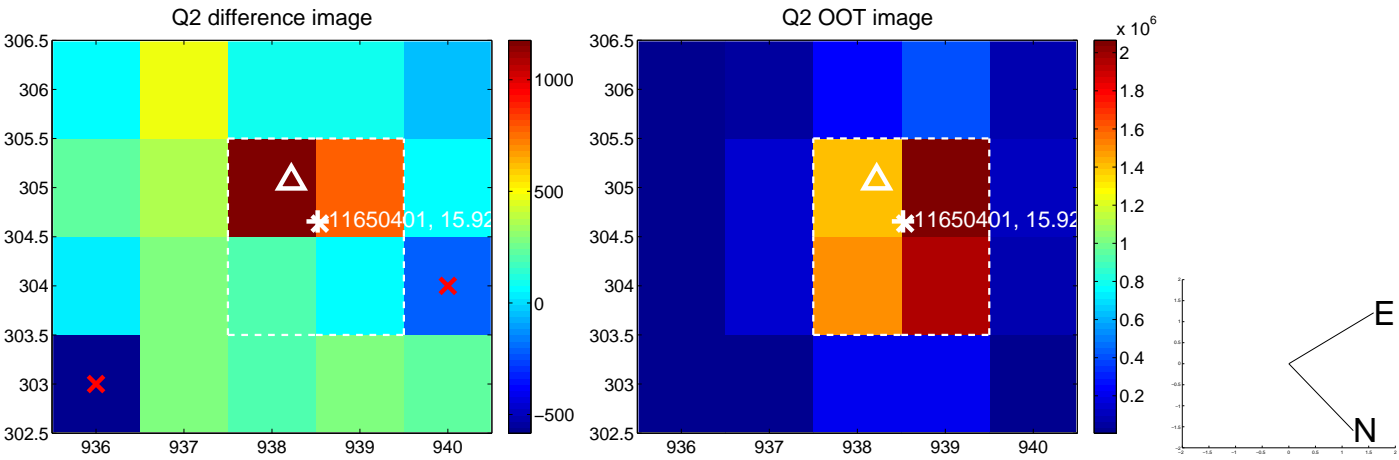
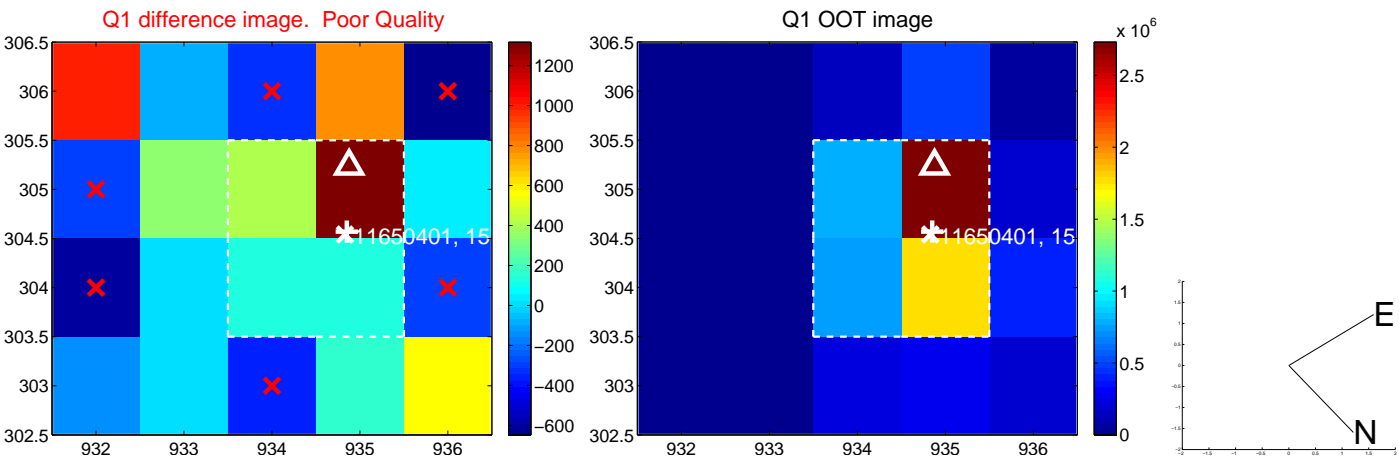


offset from photometric centroids

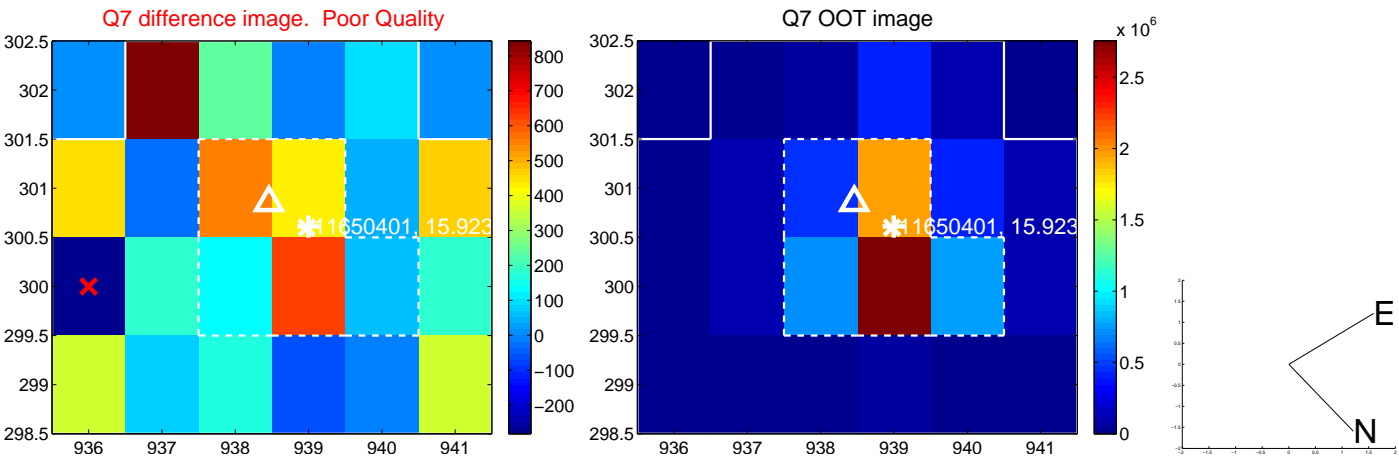
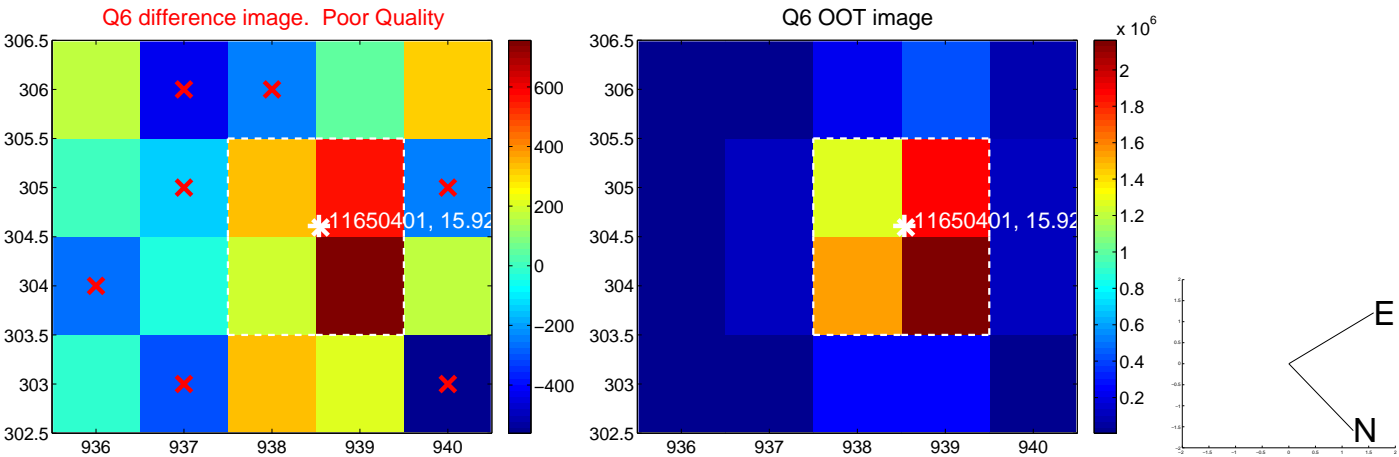
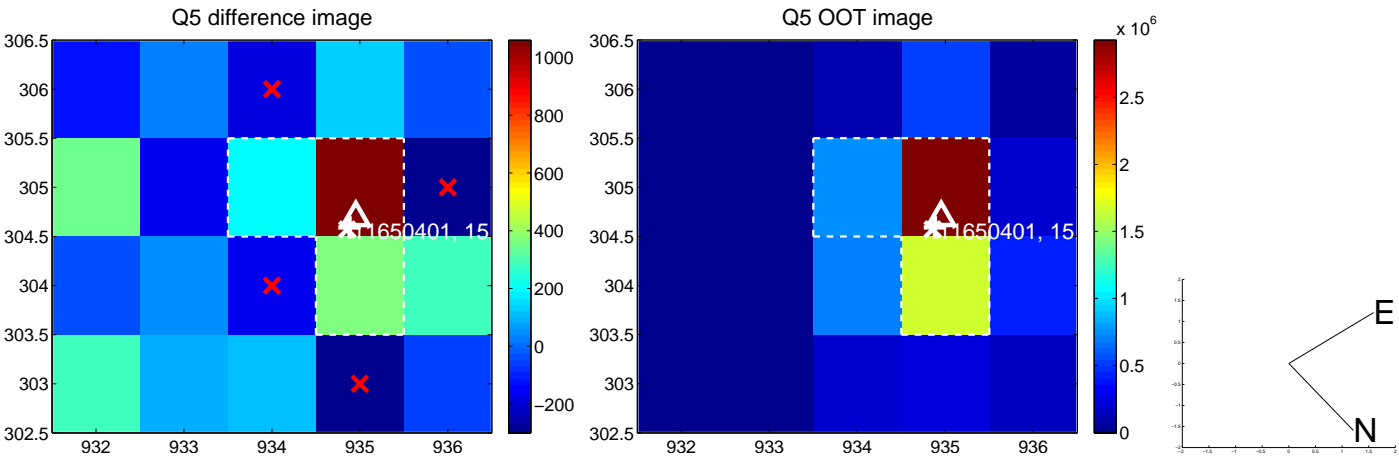


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

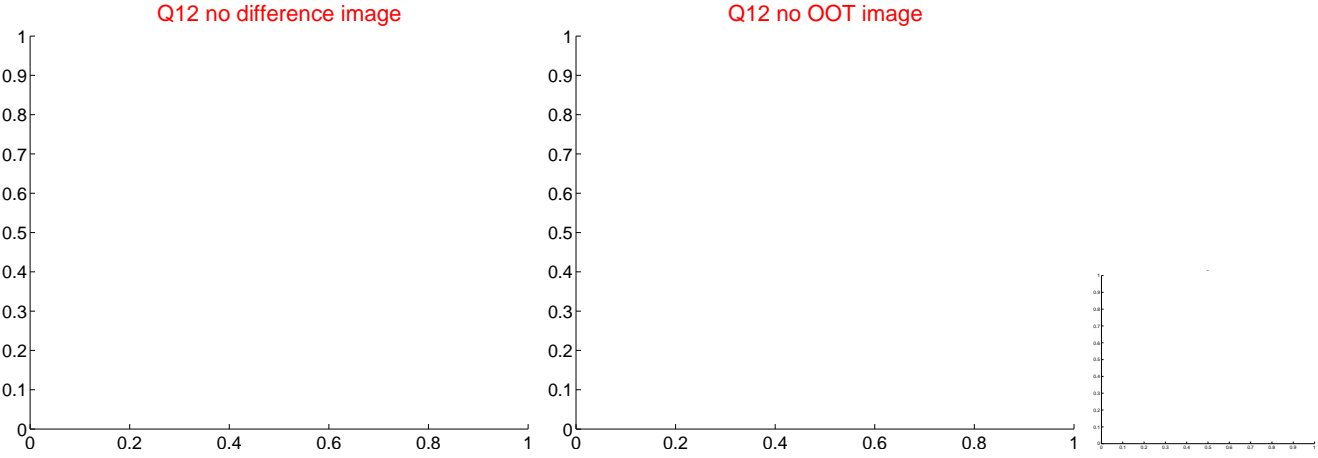
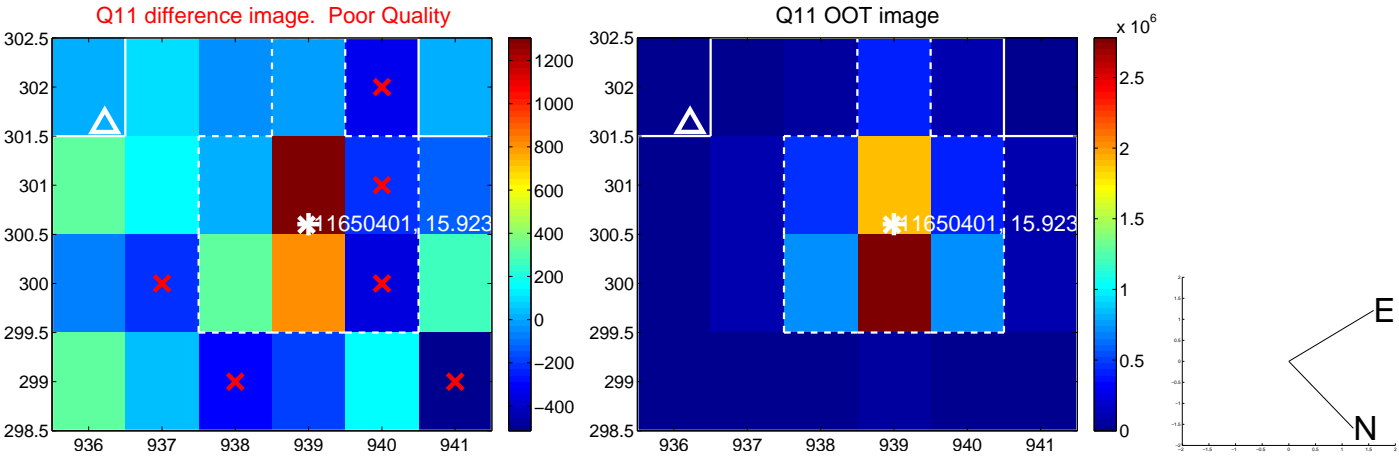
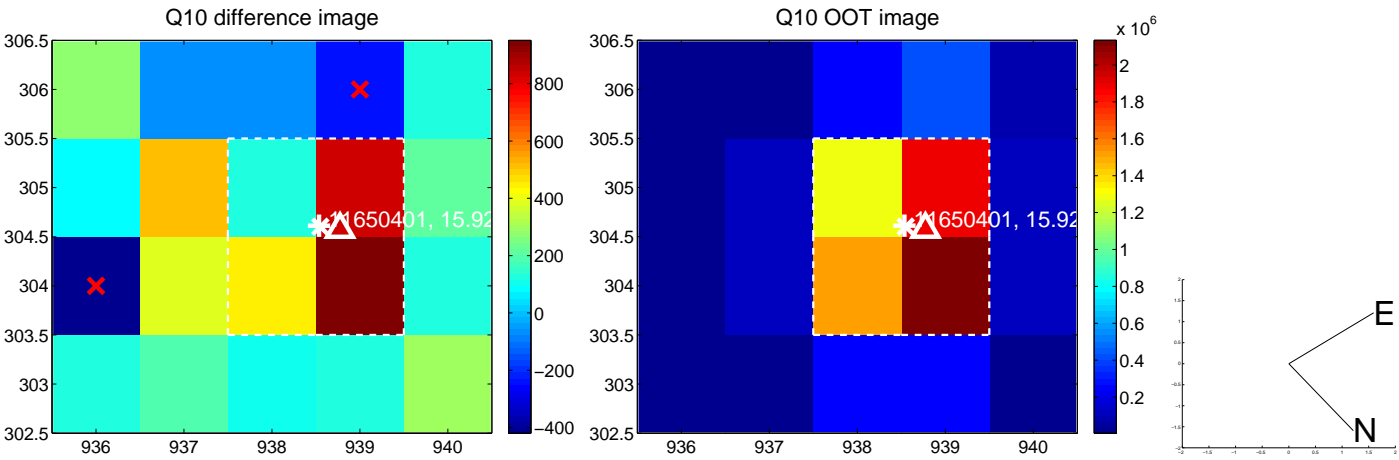
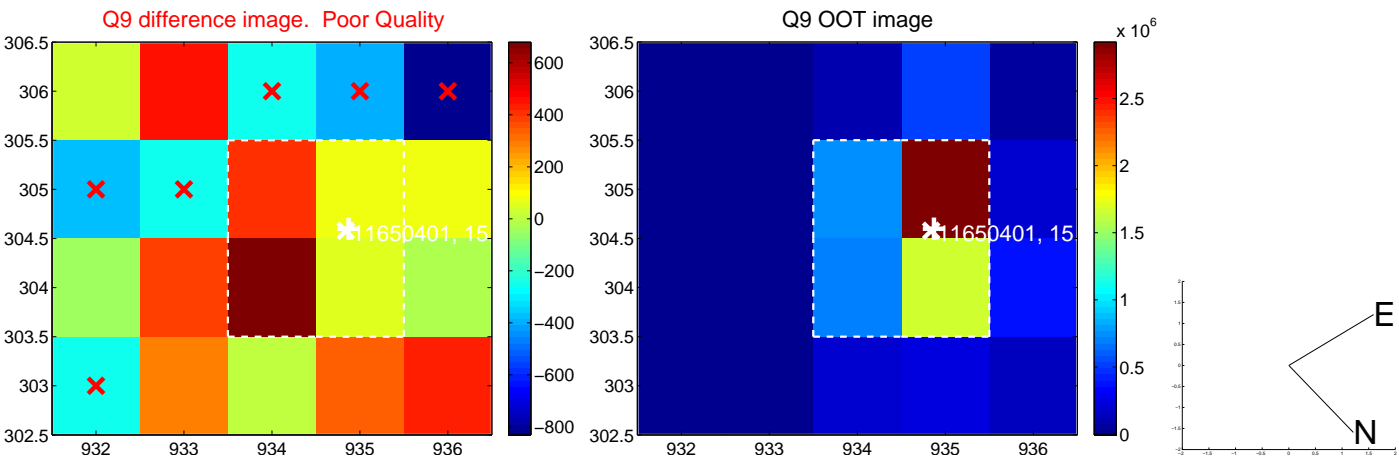
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



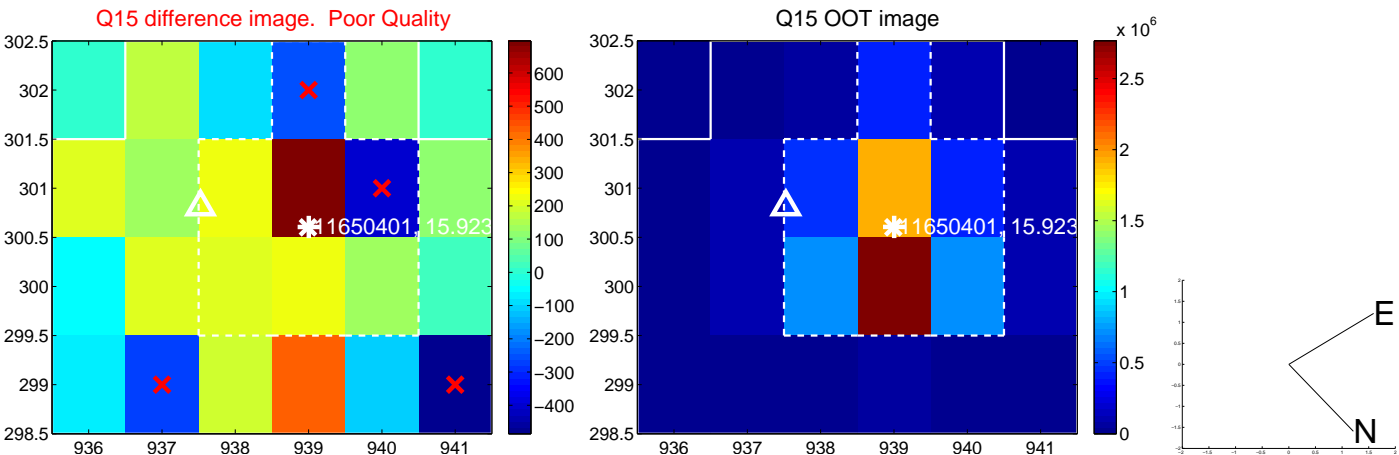
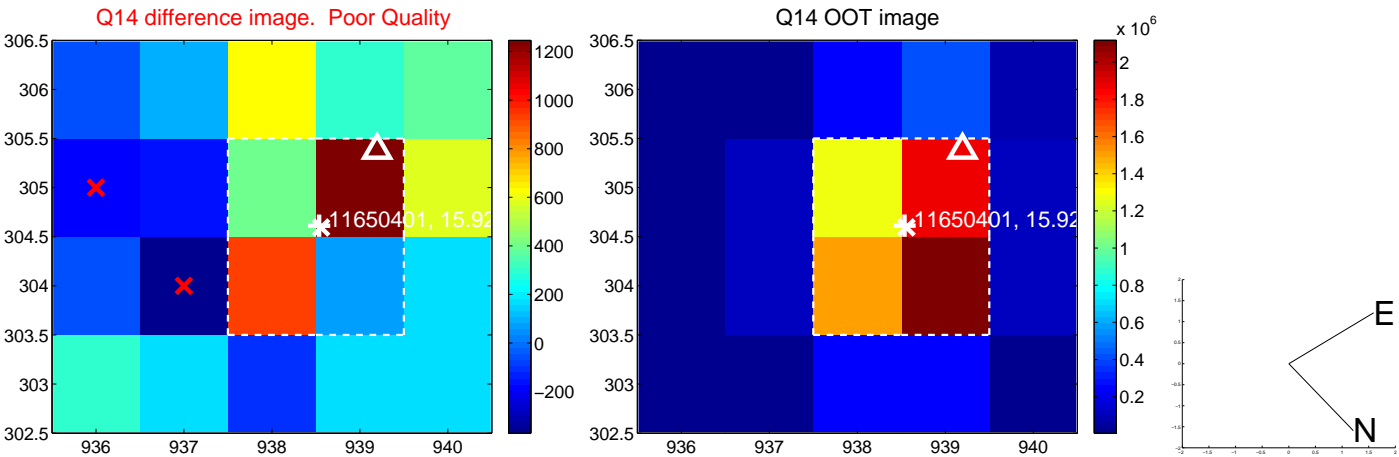
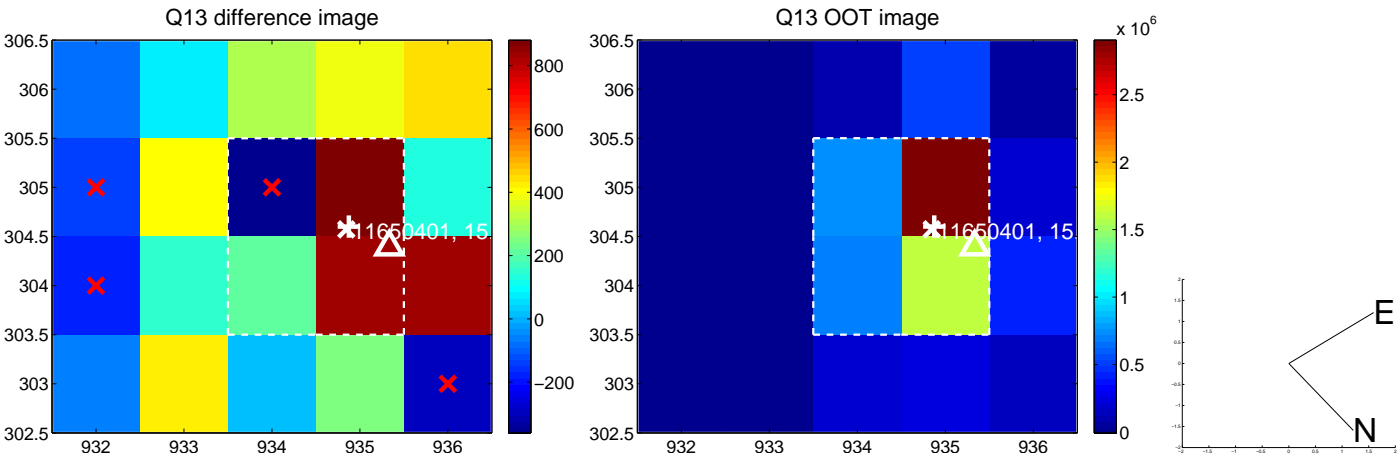
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



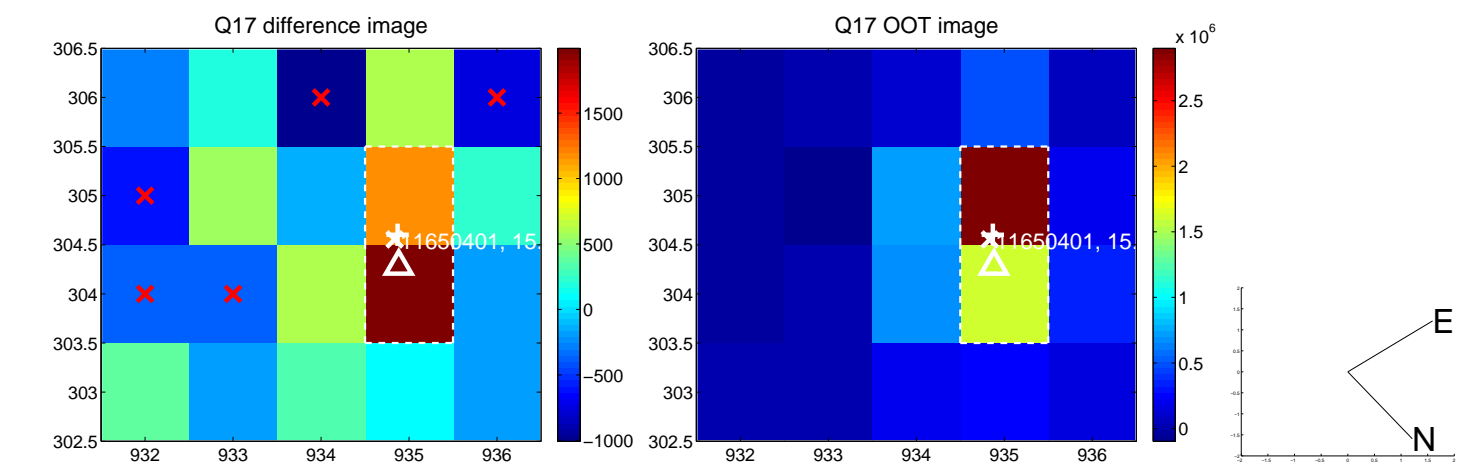
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



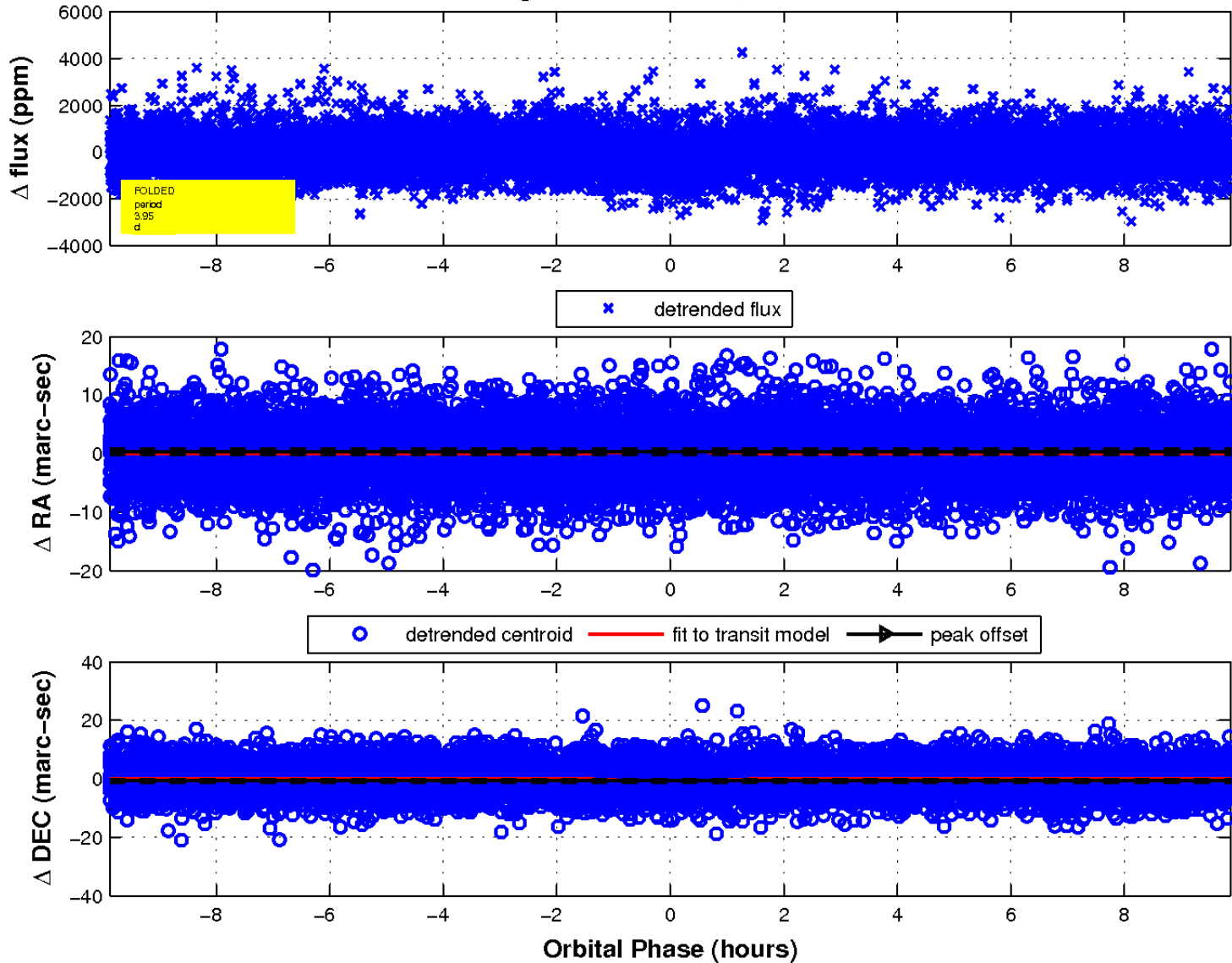
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

