

KIC 009411943

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})
009411943-01	OBS	7170.01	1.922006	132.164895	4580.8	3.132	912.4	482.7	1.09	5880	8.54	1537.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009411943-01	OBS	FP	0.00	0	1	1	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_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 009411943-01

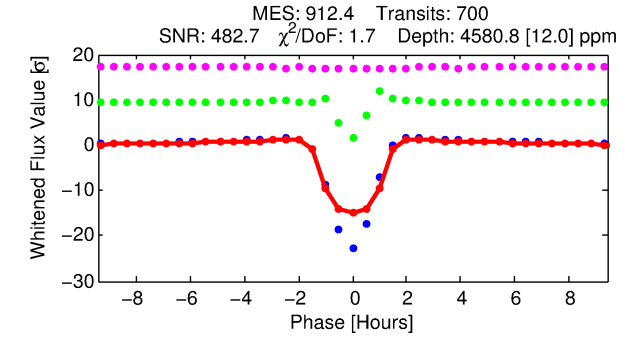
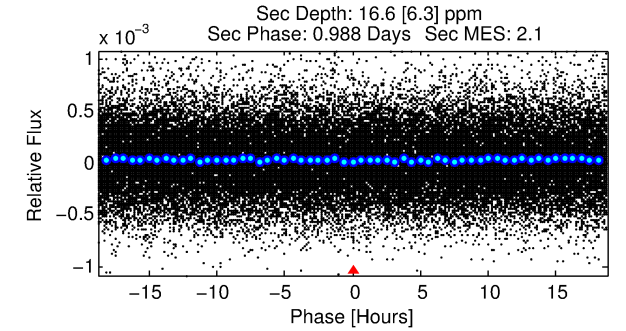
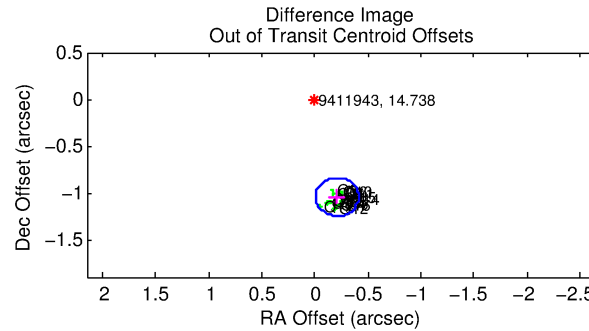
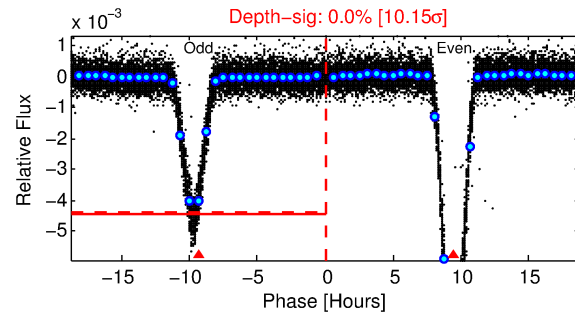
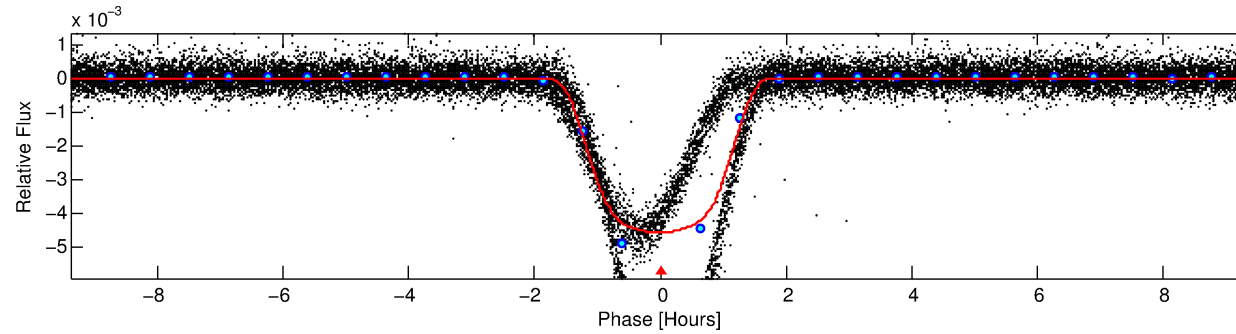
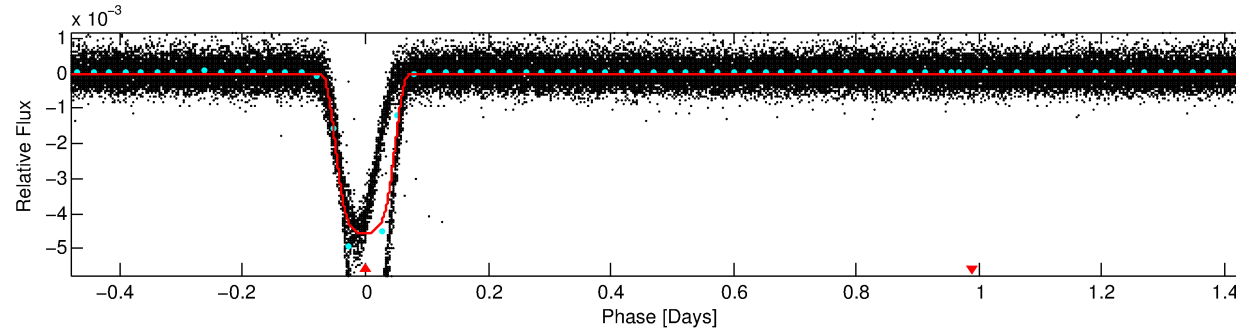
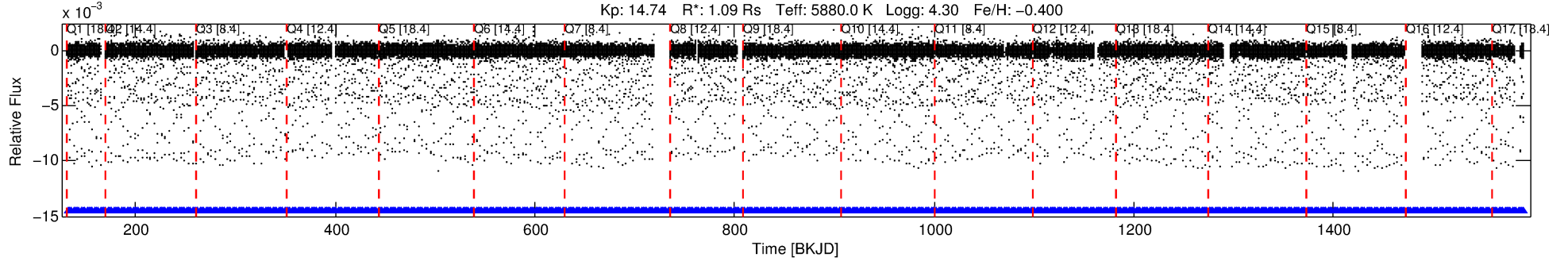
No Significant Match Found

DV One-Page Summary

KIC: 9411943 Candidate: 1 of 1 Period: 1.922 d

KOI: K07170.01 Corr: 0.987

Kp: 14.74 R*: 1.09 Rs Teff: 5880.0 K Logg: 4.30 Fe/H: -0.400



DV Fit Results:

Period = 1.92201 [0.00000] d
Epoch = 132.1649 [0.0001] BKJD
Rp/R* = 0.0720 [0.0002]
a/R* = 3.06 [0.02]
b = 0.87 [0.00]
Seff = 1537.74 [632.87]
Teq = 1597 [164] K
Rp = 8.54 [2.43] Re
a = 0.0287 [0.0074] AU
Ag = 0.10 [0.06] [-15.87σ]
Teffp = 1400 [139] K [-0.91σ]

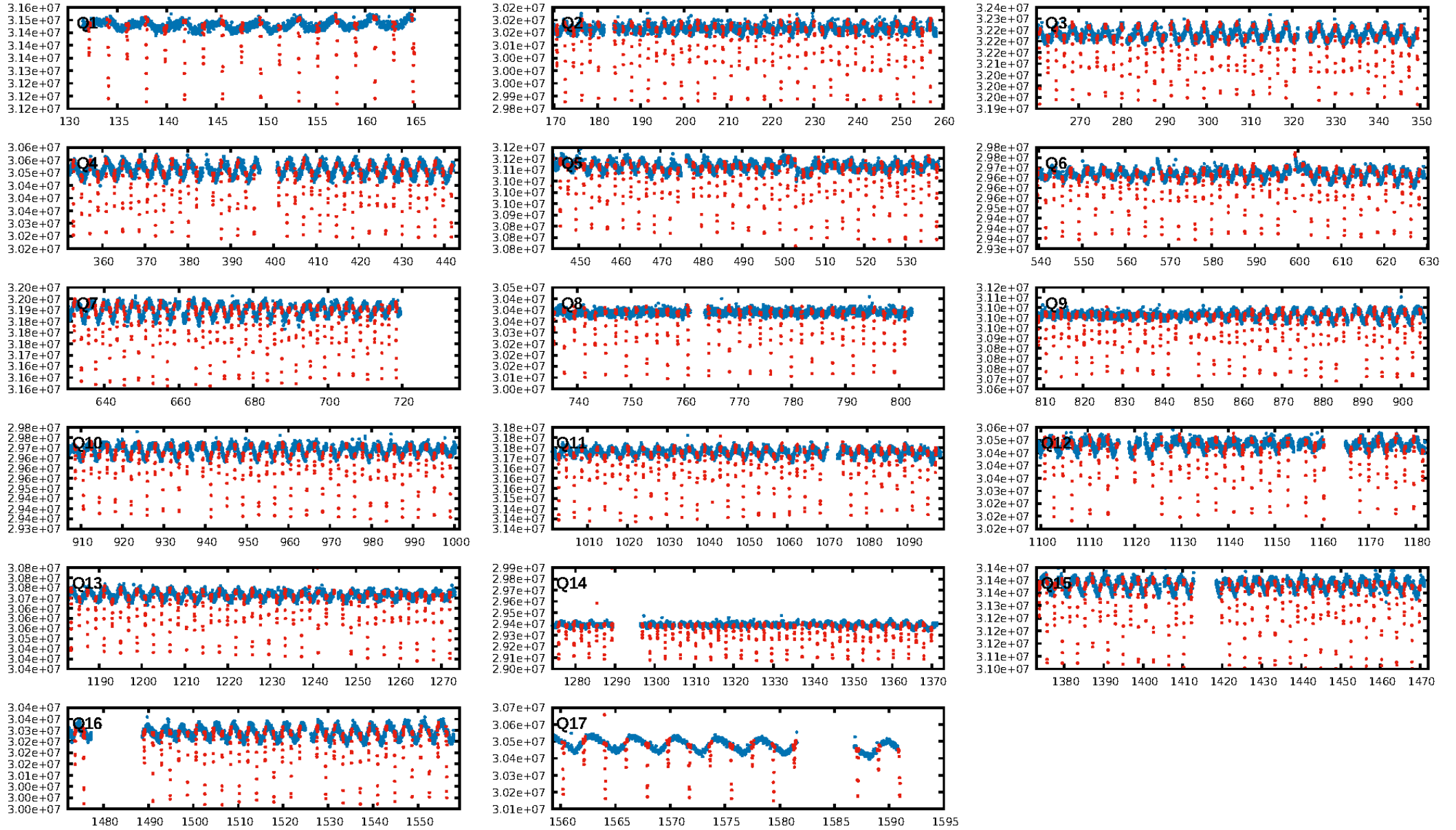
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [667/667]
GhostDiagnostic-chr: 3.542
Centroid-sig: 0.0%
Centroid-so: 0.885 arcsec [44.34σ]
OotOffset-rm: 1.066 arcsec [15.63σ]
KicOffset-rm: 0.949 arcsec [13.78σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

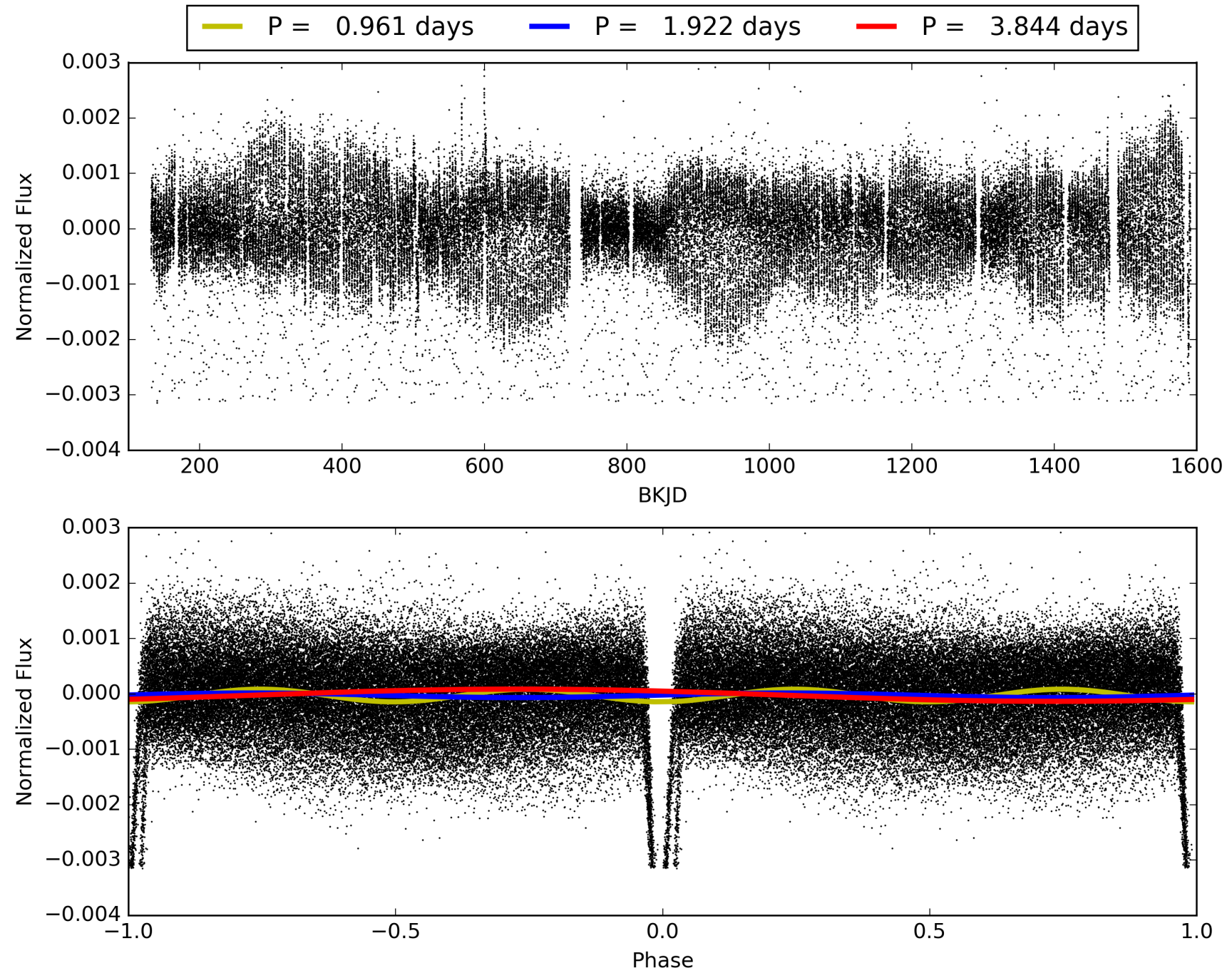
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:14:32 Z

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

TCE 009411943-01, PDC Light Curves

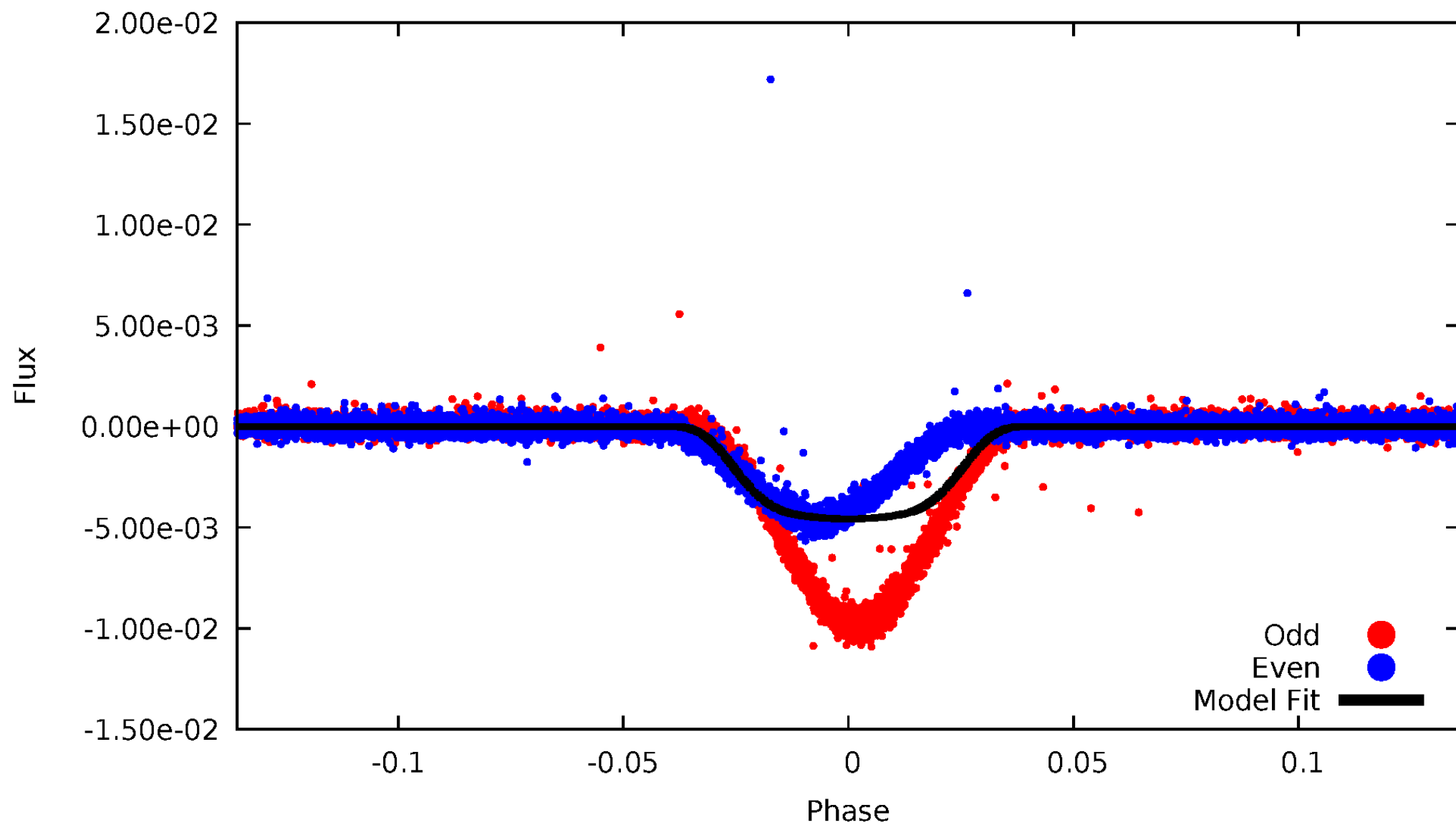


TCE 009411943-01



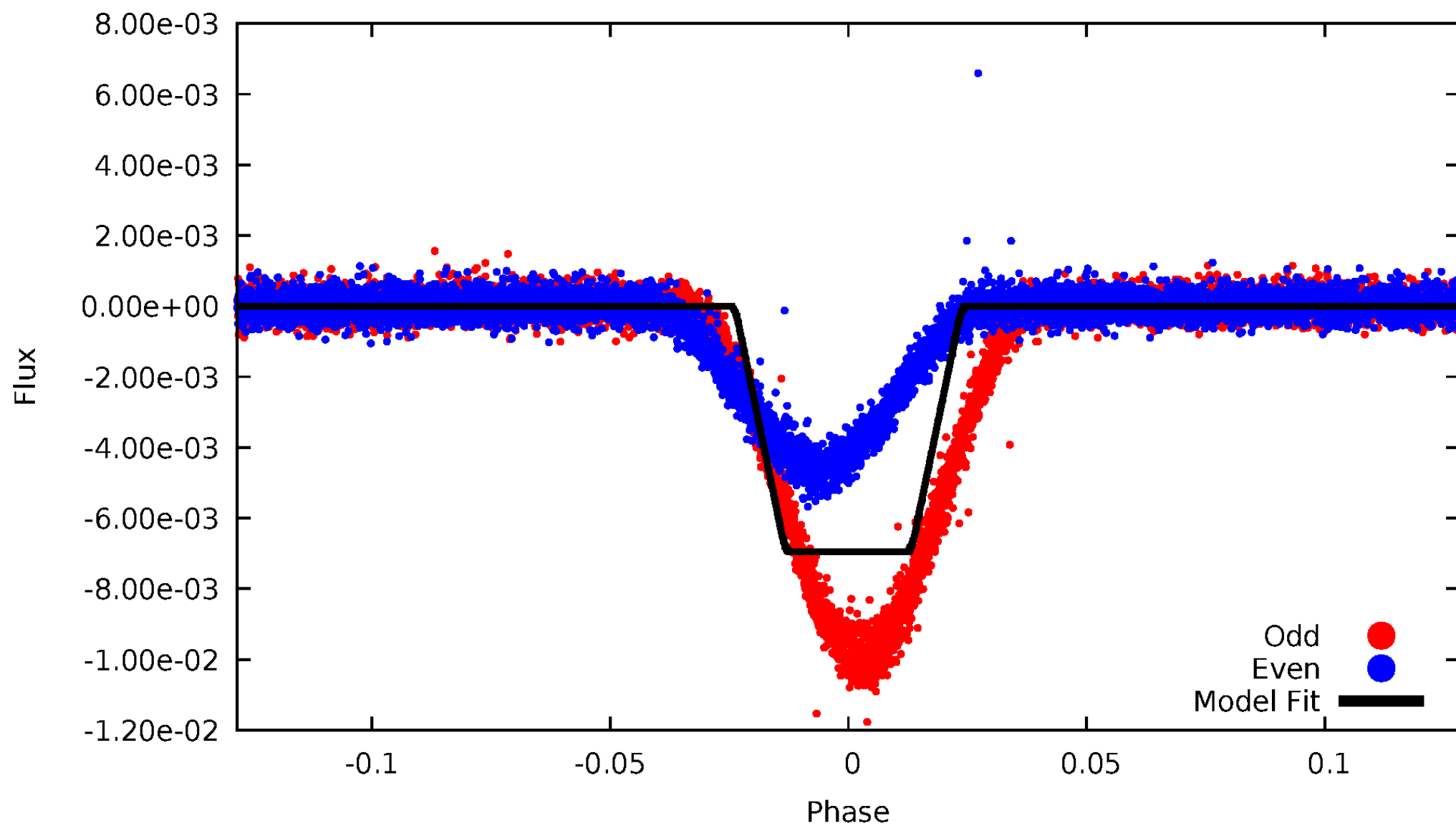
DV Odd/Even

TCE 009411943-01



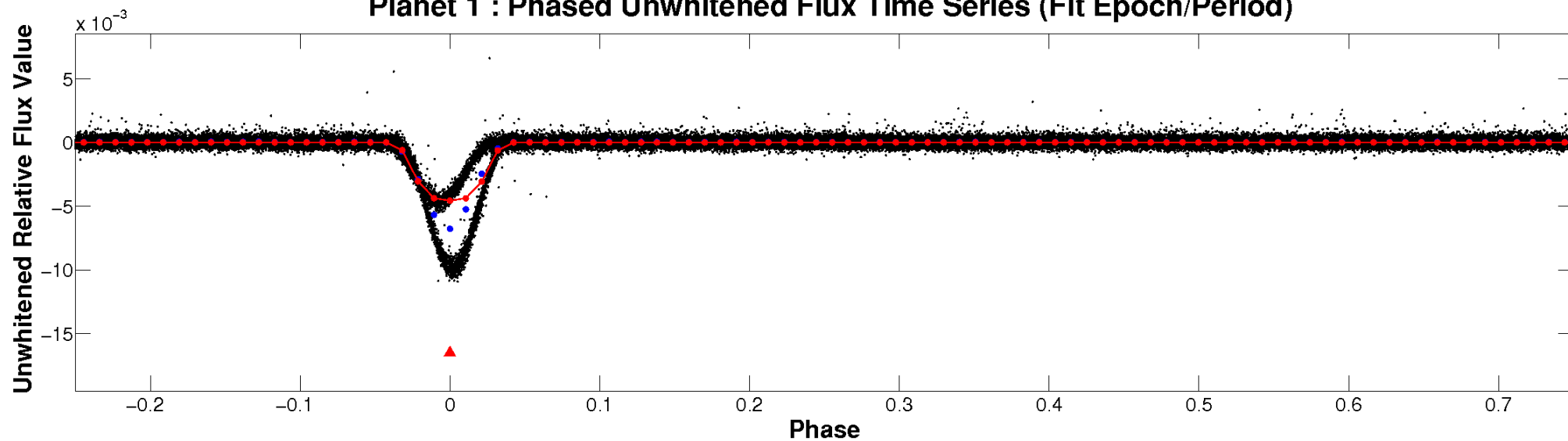
ALT Odd/Even

TCE 009411943-01

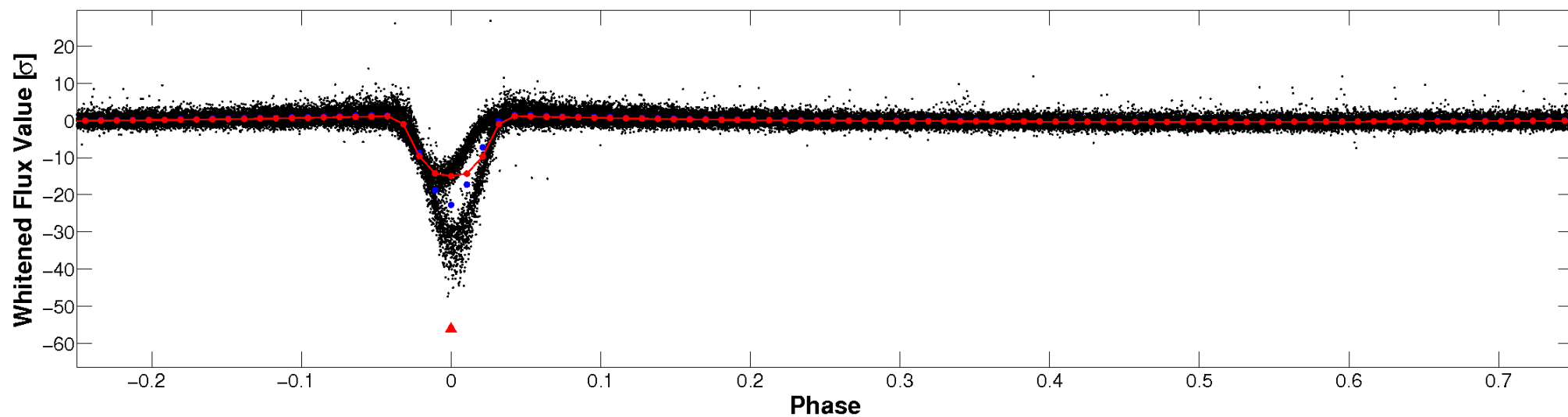


Non-Whitened Vs. Whitened Light Curve

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

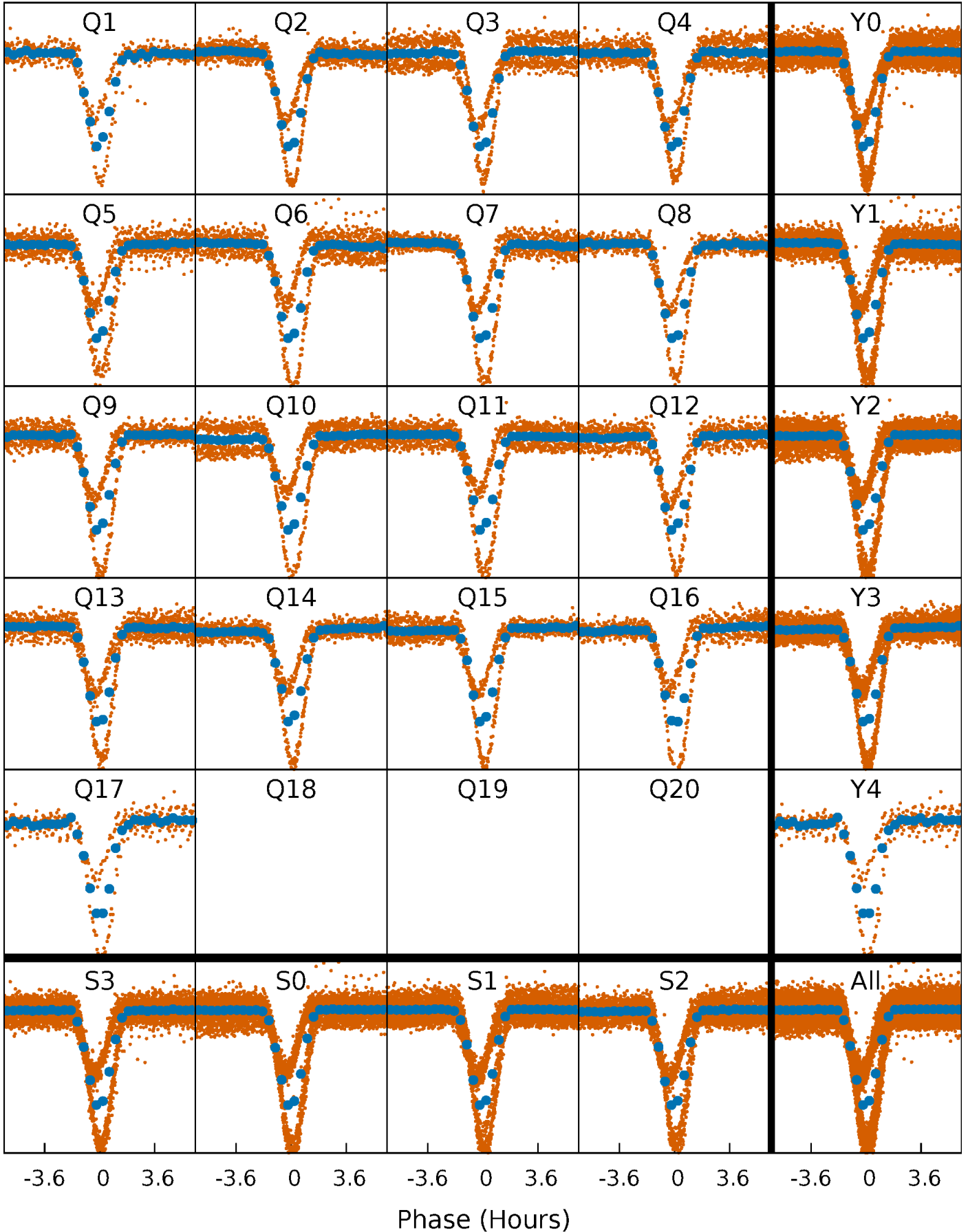


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



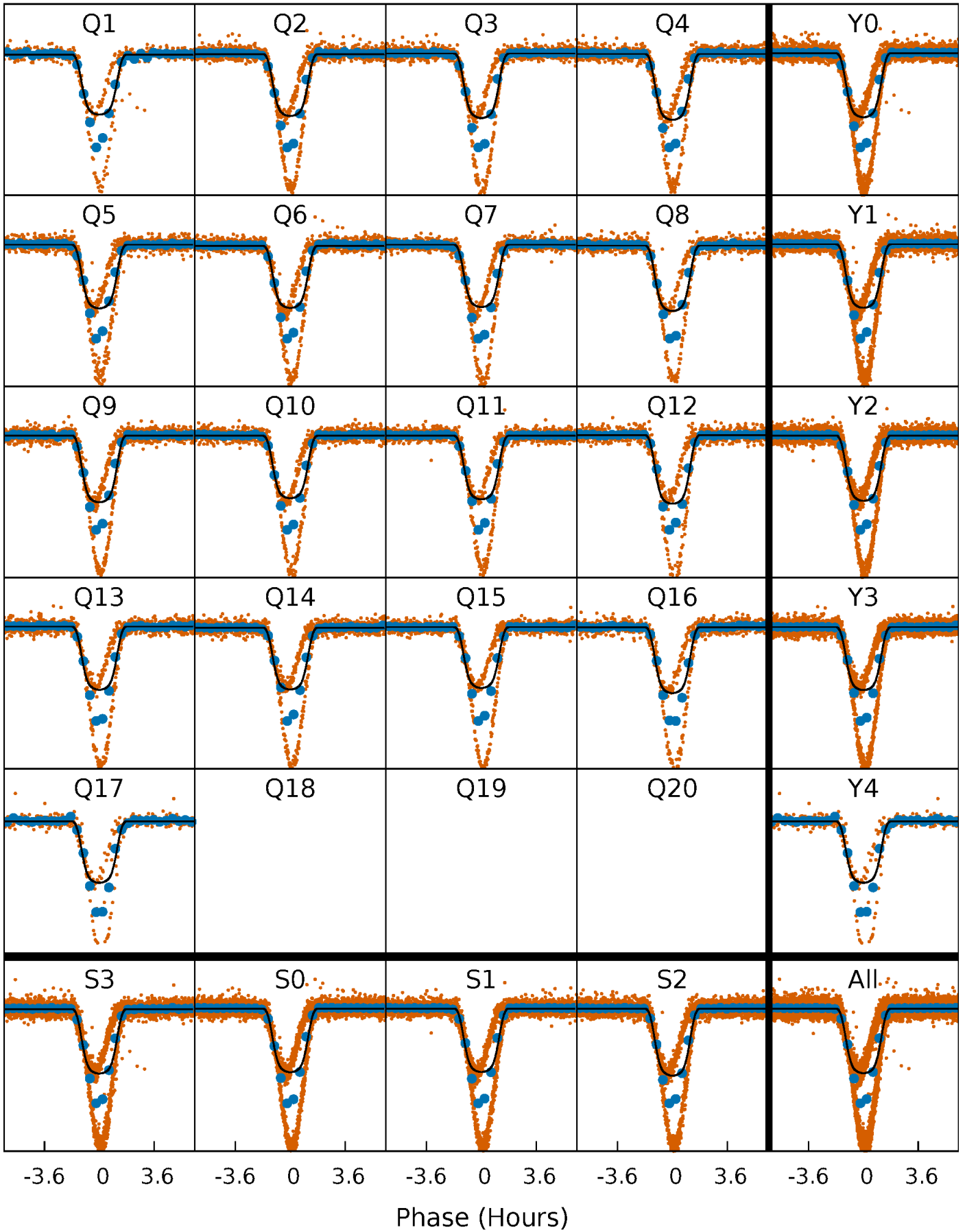
PDC Quarter-Phased Transit Curves

TCE 009411943-01 P= 1.922006 Days $T_0=132.164895$ (BKJD)



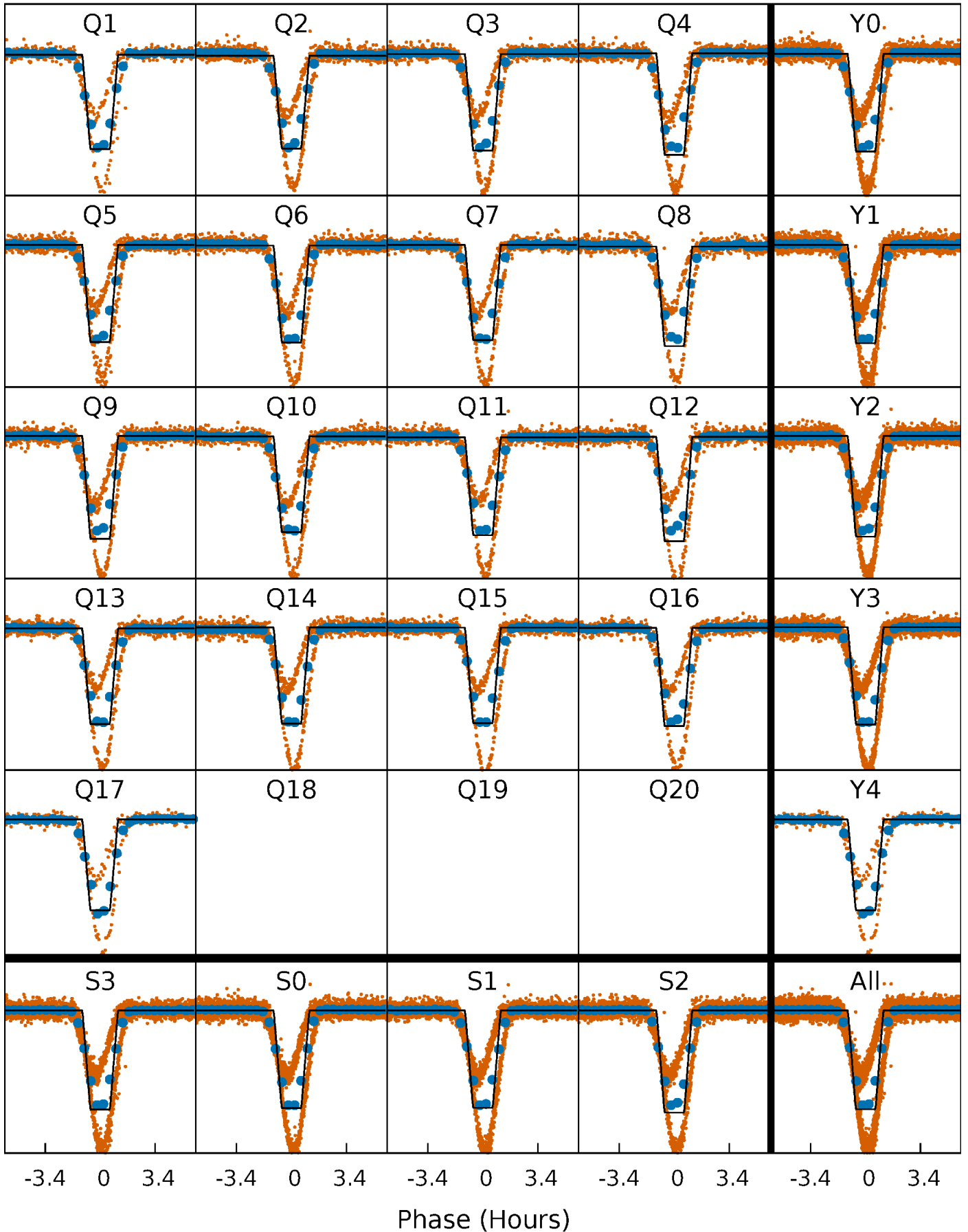
DV Quarter-Phased Transit Curves

TCE 009411943-01 P= 1.922006 Days $T_0=132.164895$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

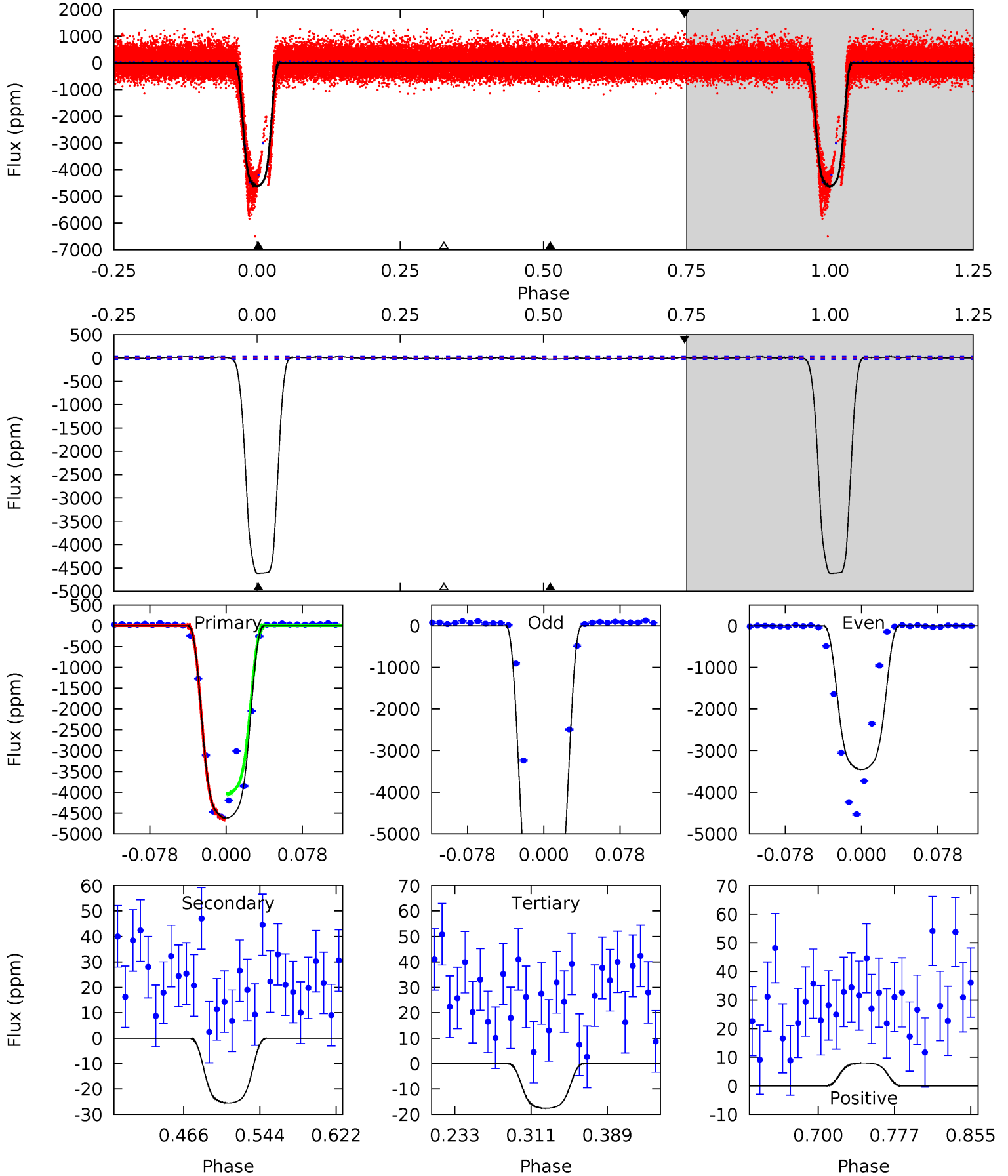
TCE 009411943-01 P= 1.922007 Days $T_0=132.162475$ (BKJD)



DV Model-Shift Uniqueness Test

009411943-01, P = 1.922006 Days, E = 130.242889 Days

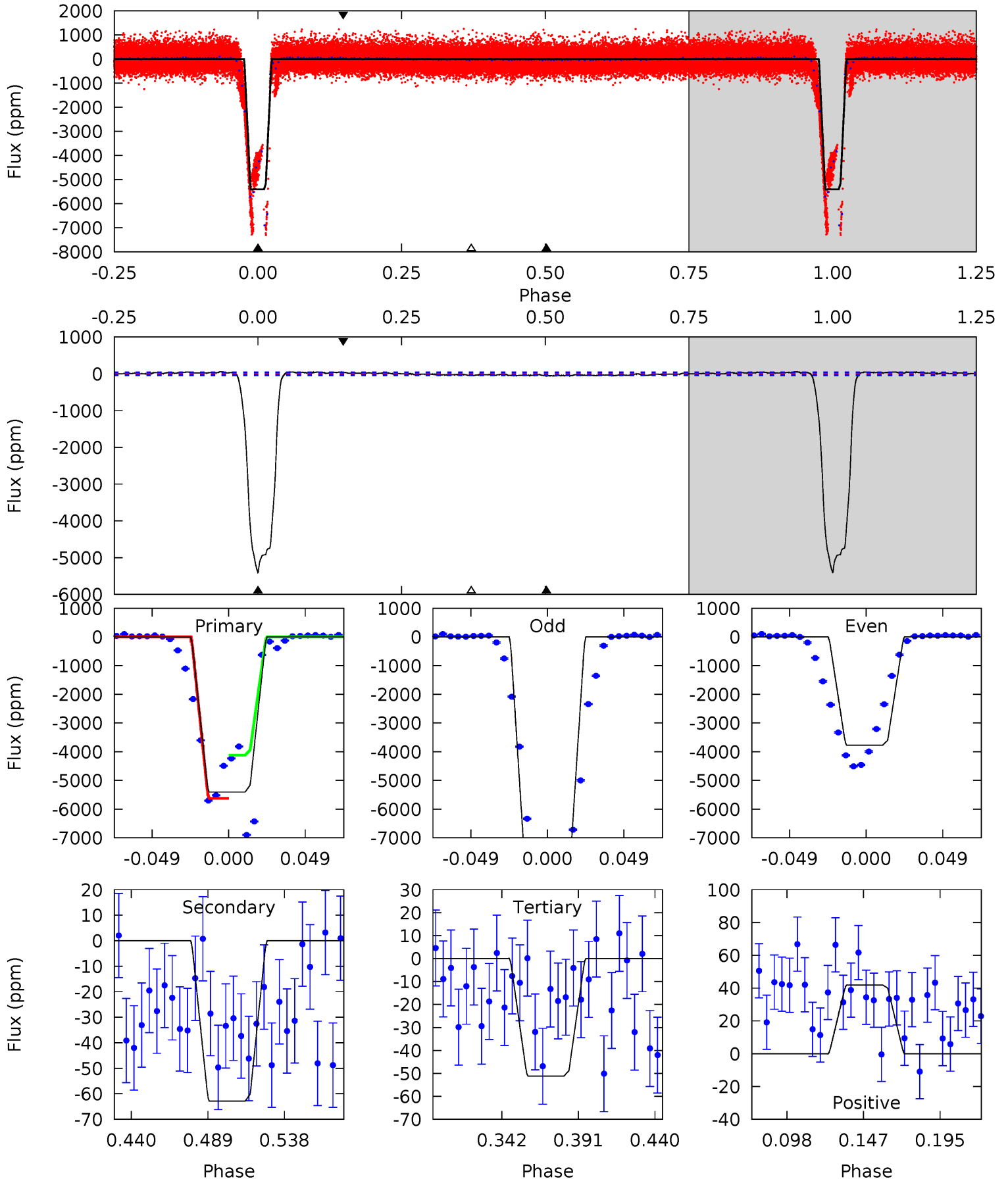
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
887.0	4.90	3.37	1.54	4.62	1.76	1.95	883.6	885.4	1.52	3.36	535.4	1.40	0.01	0



Alt Model-Shift Uniqueness Test

009411943-01, P = 1.922007 Days, E = 130.240468 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
652.2	7.59	6.17	5.05	4.71	1.97	3.43	646.0	647.1	1.41	2.54	471.2	1.40	0.01	0



Stellar Parameters For KIC 009411943

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5880^{+158}_{-175}	$4.296^{+0.225}_{-0.184}$	$-0.400^{+0.300}_{-0.300}$	$1.087^{+0.309}_{-0.225}$	$0.854^{+0.128}_{-0.069}$	$0.935^{+1.085}_{-0.464}$
	+3%/-3%	+5%/-4%	+75%/-75%	+28%/-21%	+15%/-8%	+116%/-50%
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 009411943-01 / KOI 7170.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 5	$8.48^{+1.37}_{-1.01}$	2214^{+177}_{-149}	-2388^{+213}_{-179}	$0.159^{+0.065}_{-0.047}$
Alt.	-63 ± 8	$9.81^{+1.63}_{-1.25}$	2215^{+175}_{-150}	-1673^{+3914}_{-662}	$0.296^{+0.108}_{-0.080}$

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

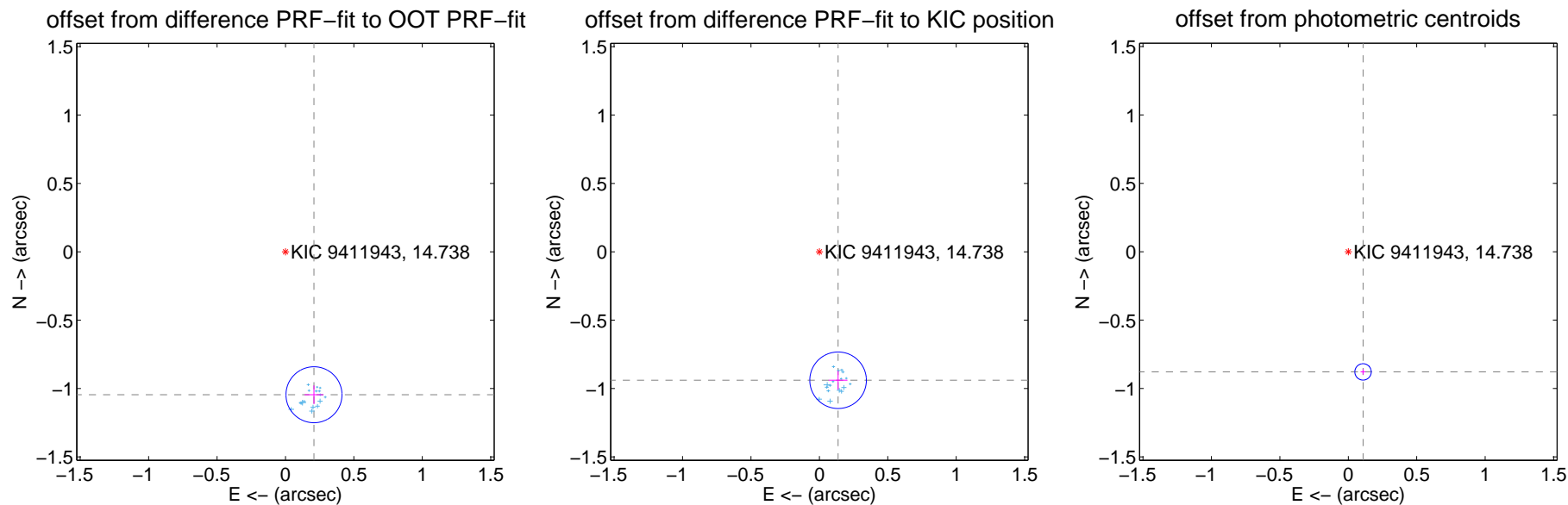
DV Centroid Data

Supplemental centroid analysis for 009411943-01. Kepler magnitude: 14.74. Transit SNR 482.68

There are 17 quarters with good PRF difference image offsets

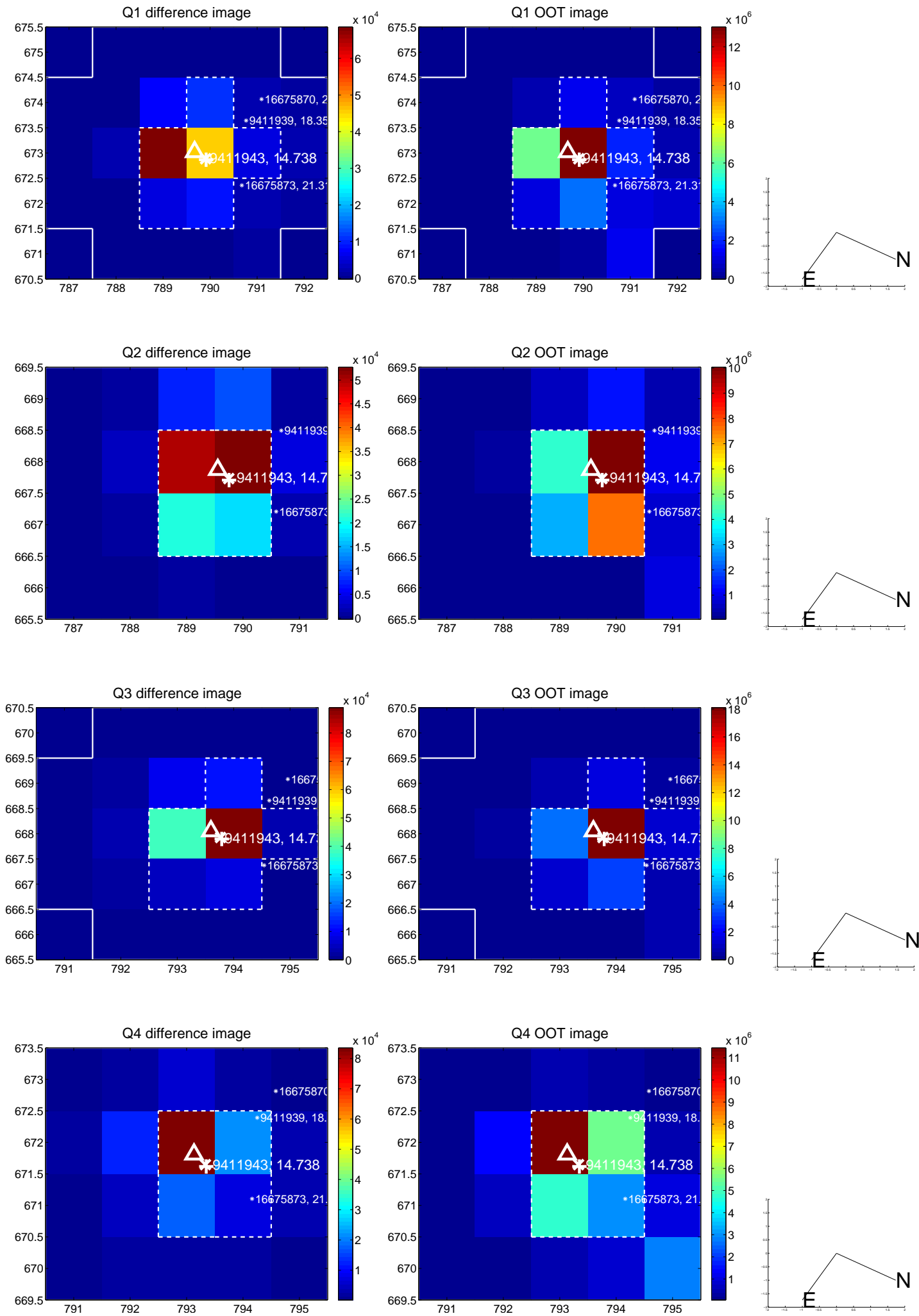
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.066 ± 0.068	15.63	-0.208 ± 0.069	-1.046 ± 0.068
PRF-fit source offset from KIC position	0.949 ± 0.069	13.78	-0.137 ± 0.068	-0.939 ± 0.069
photometric centroid source offset	0.89 ± 0.02	44.34	-0.11 ± 0.02	-0.88 ± 0.02

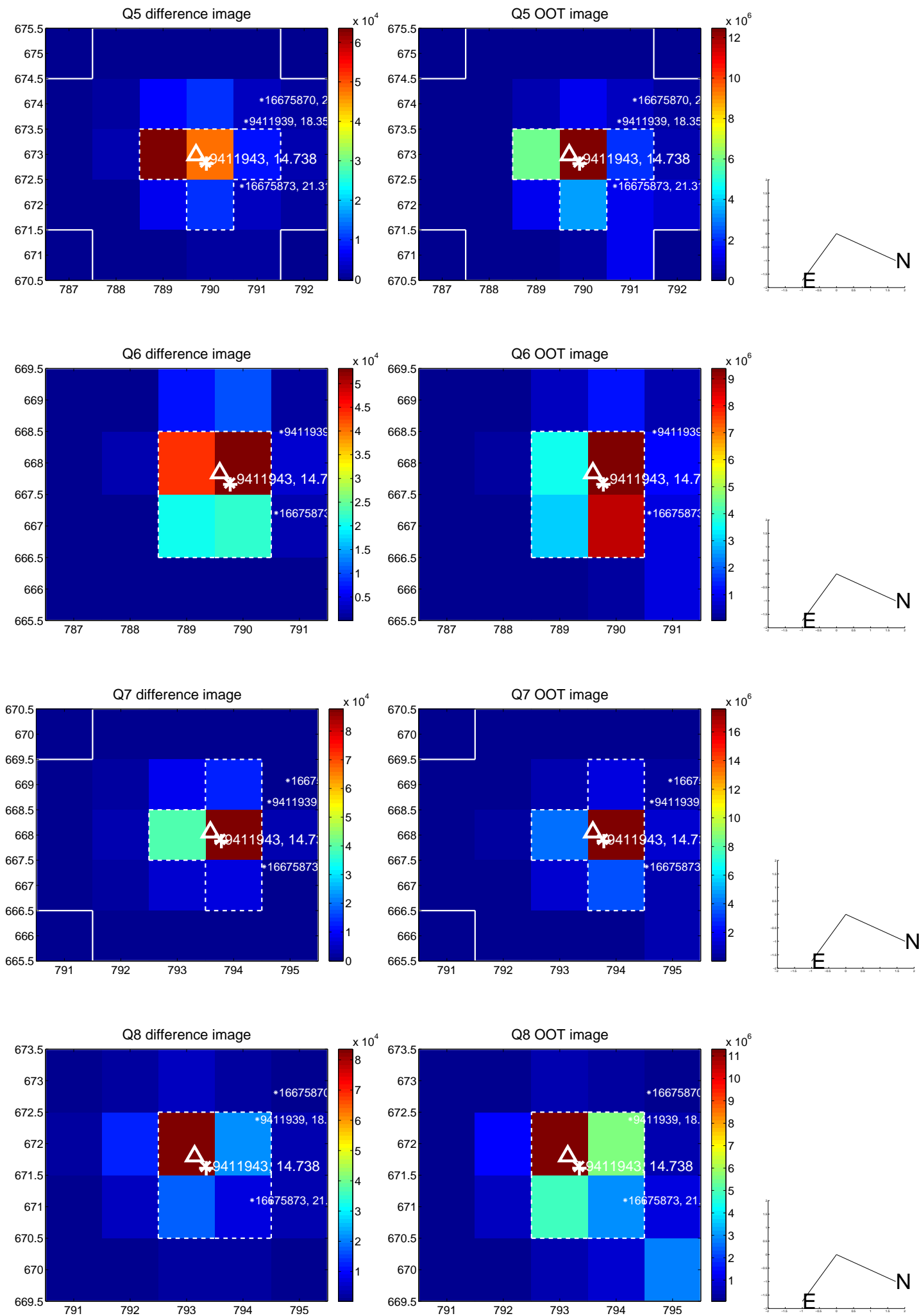


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

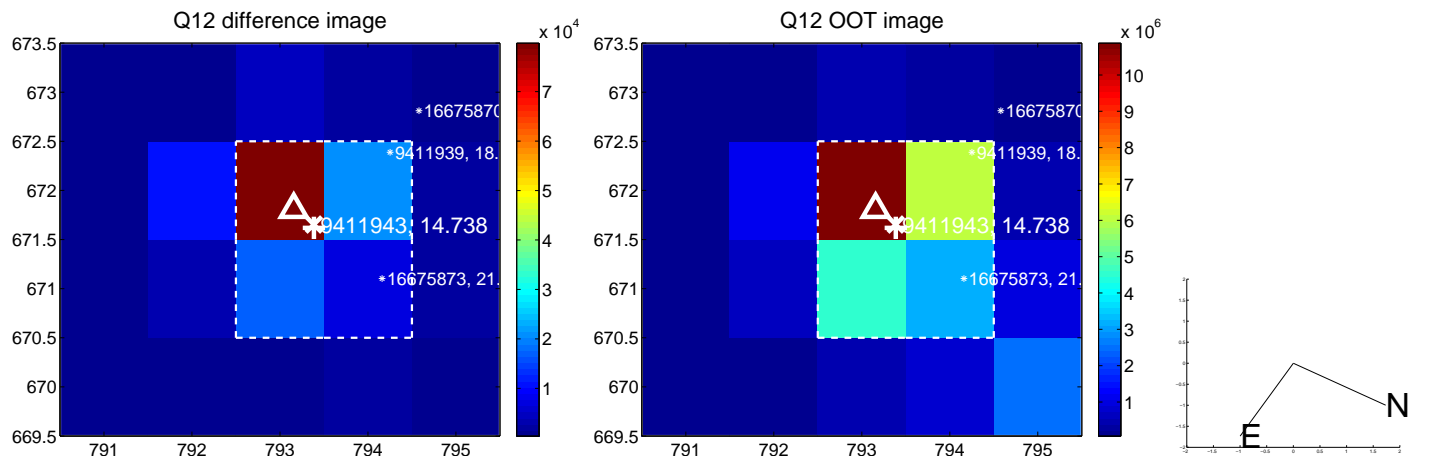
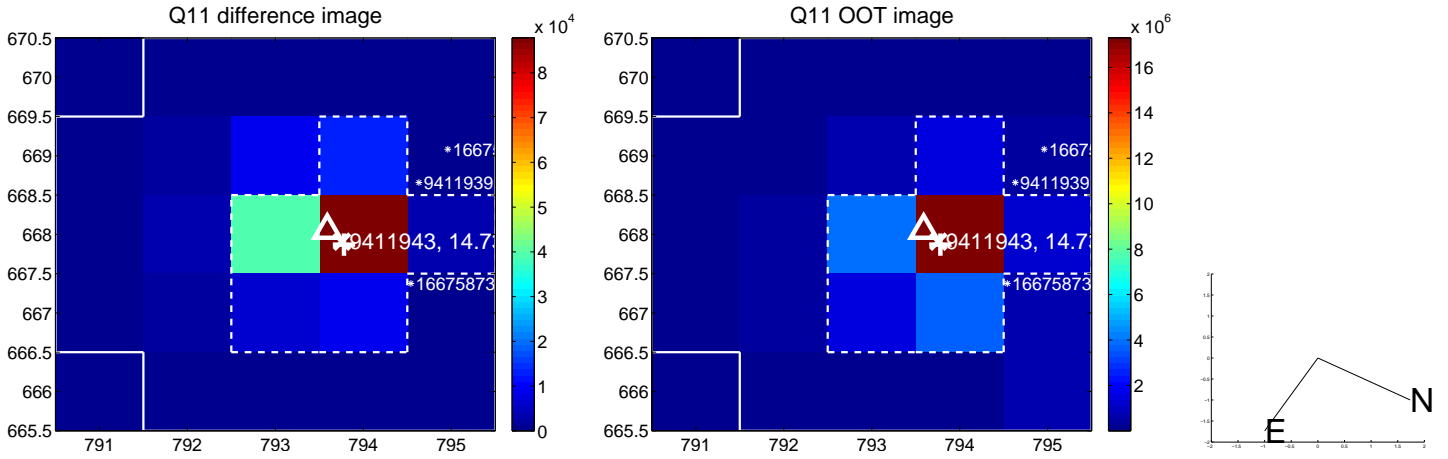
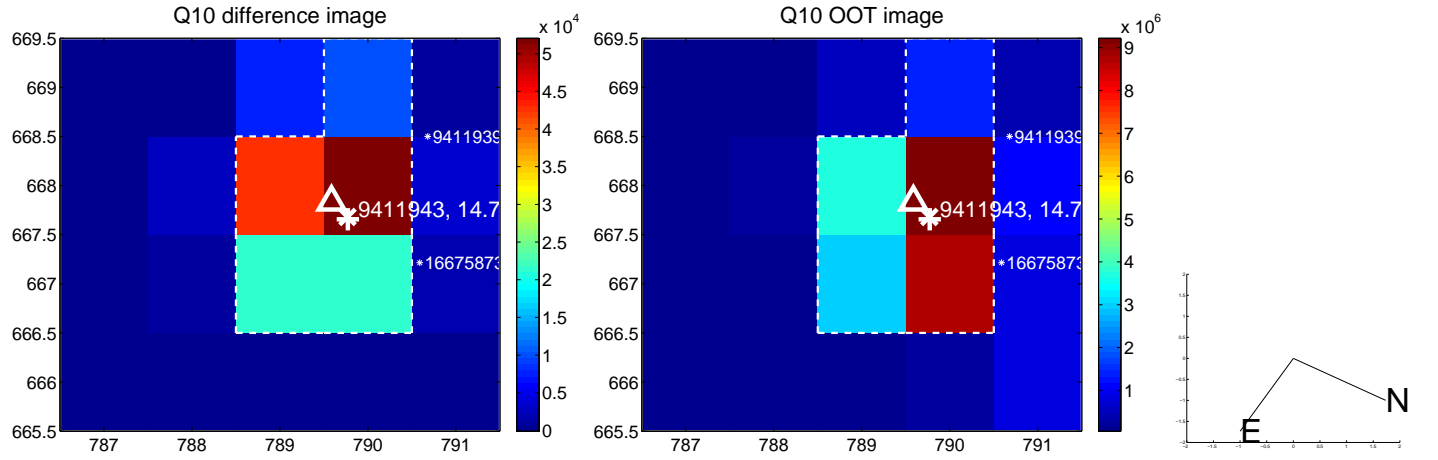
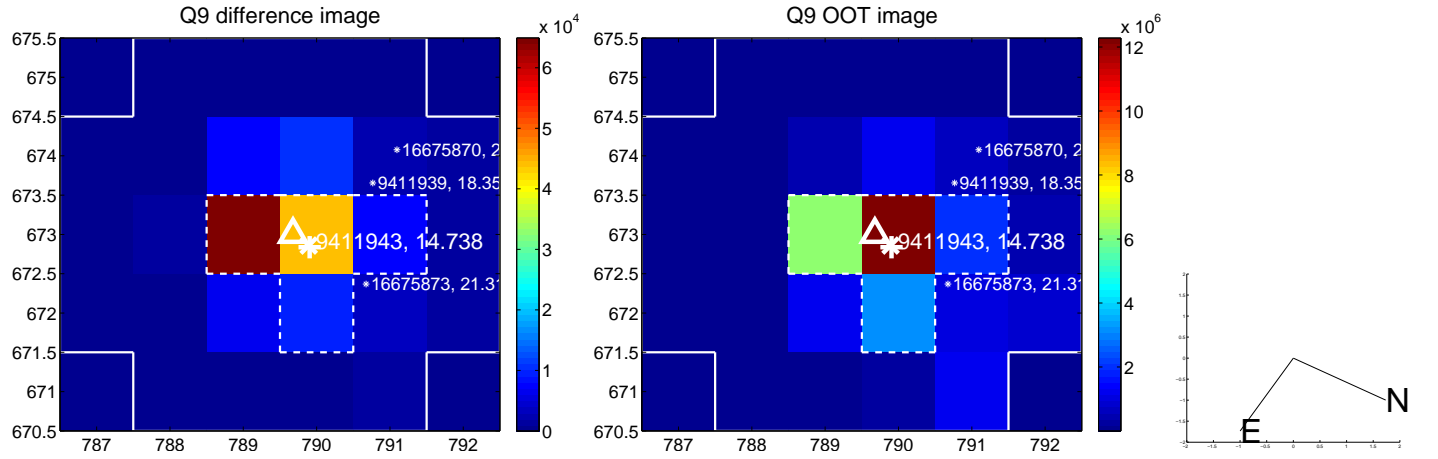
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



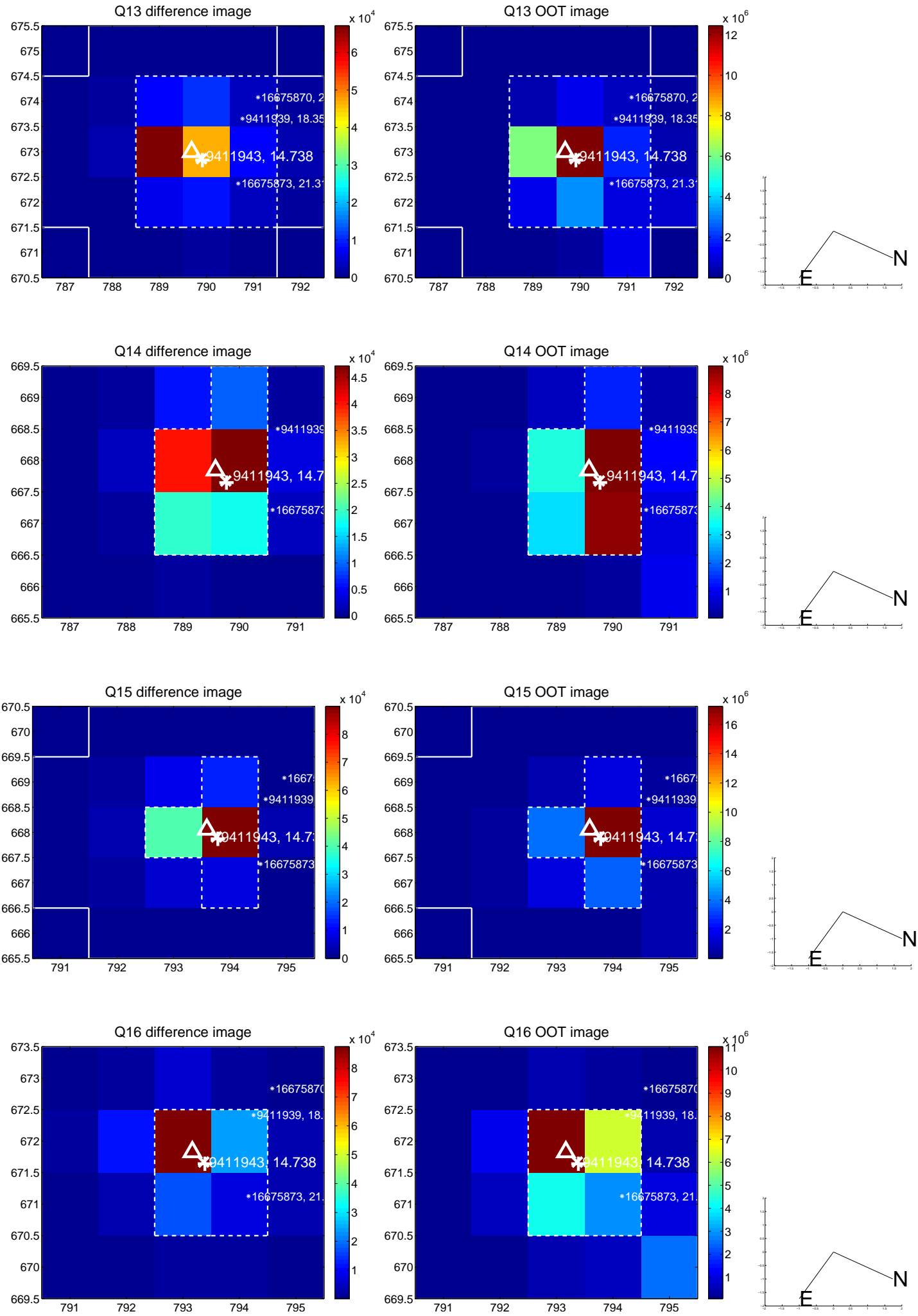
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



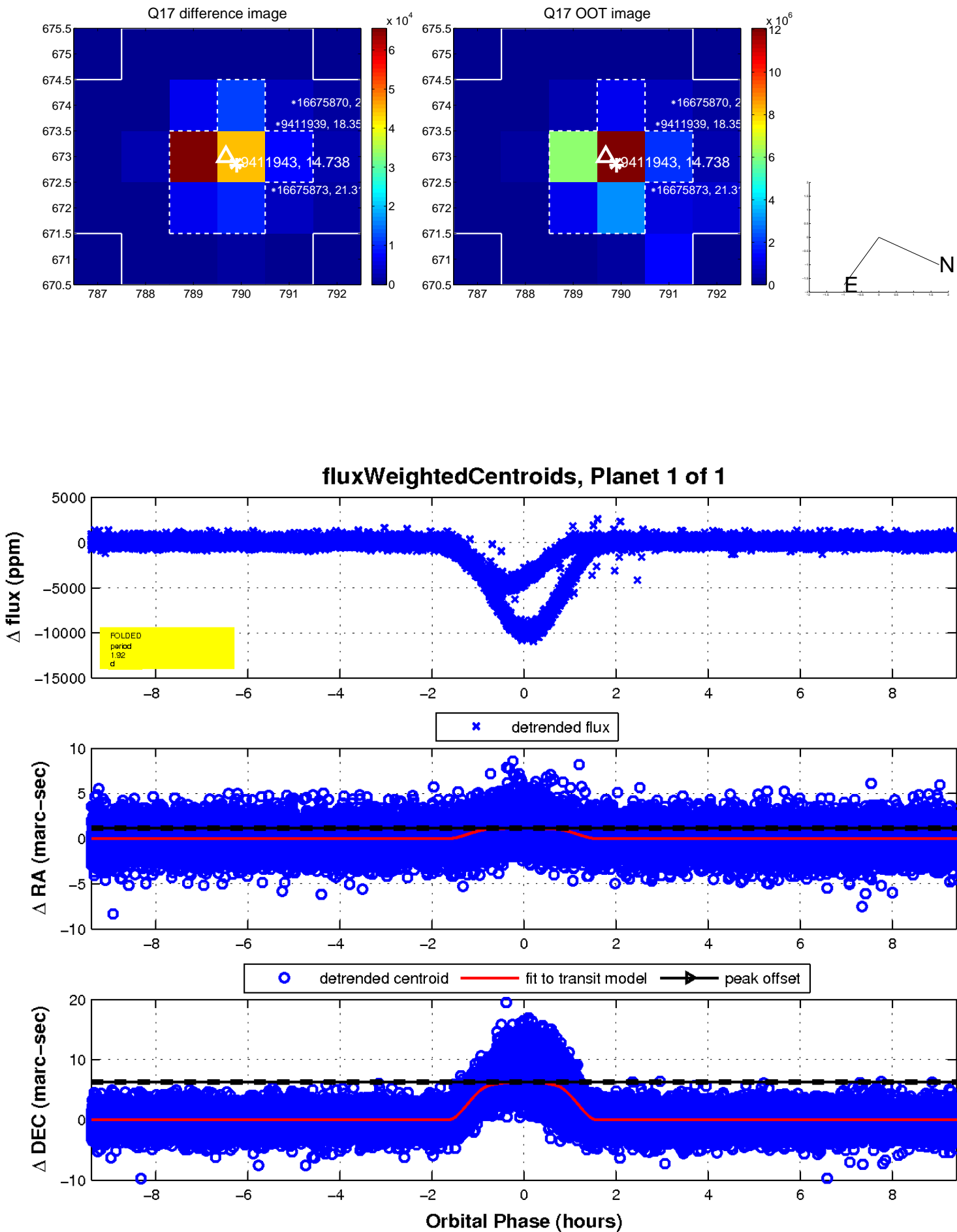
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



This panel shows a deep-field astronomical image of a star field. A blue grid is overlaid on the image, with green numerical labels indicating coordinates. The labels include '48.0', '47.0', '19:39:46.0', '45.0', '44.0', '56:00.0', '10.0', '50.0', '45.0', '40.0', '30.0', and '20.0'. The image is oriented with North at the top.

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