

KIC 010213902

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})
010213902-01	OBS	1723.01	59.622465	138.135787	971.5	6.808	29.1	30.2	1.00	6108	3.51	13.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010213902-01	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 010213902-01

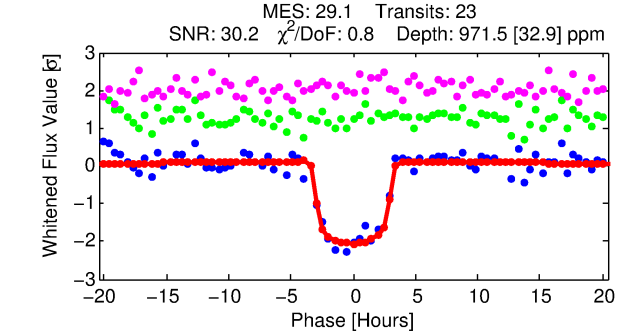
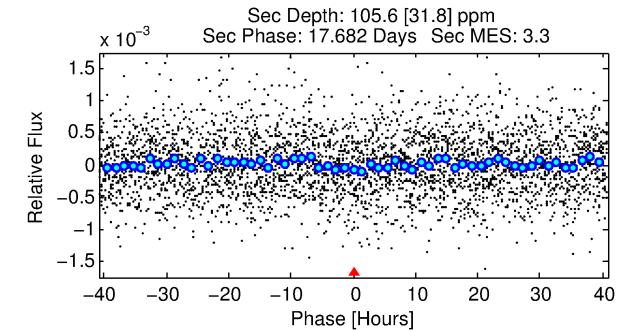
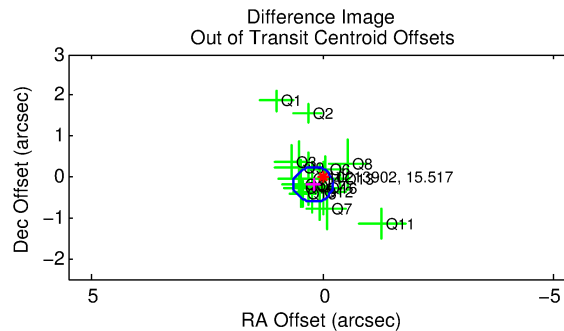
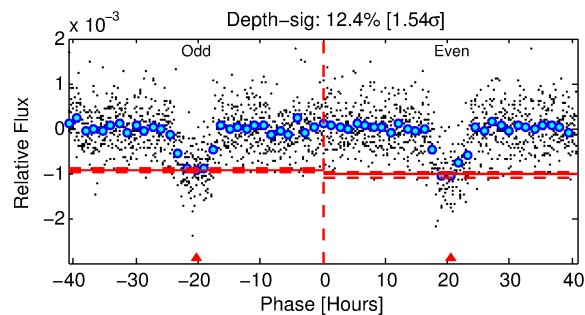
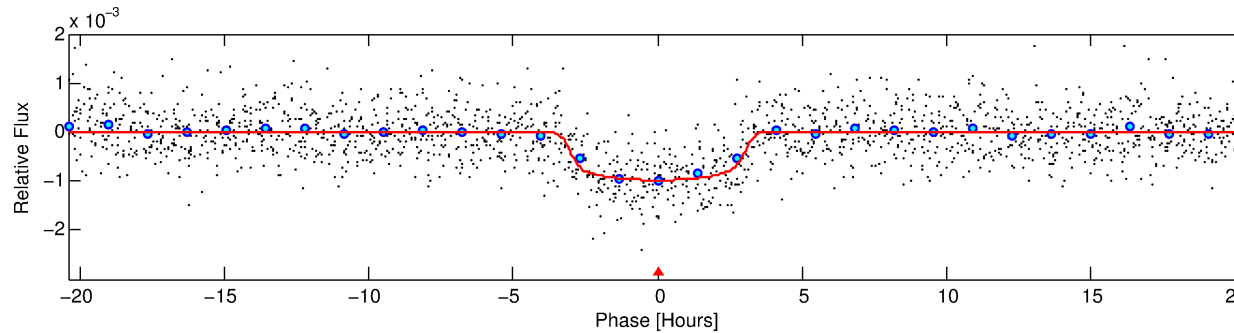
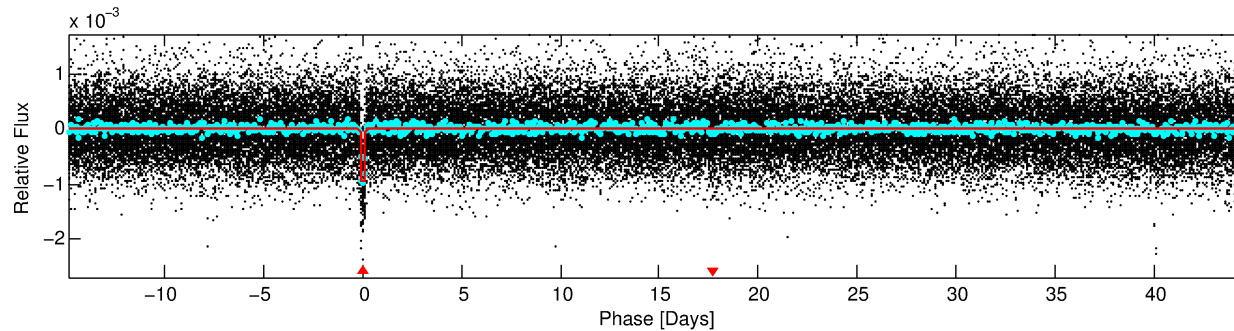
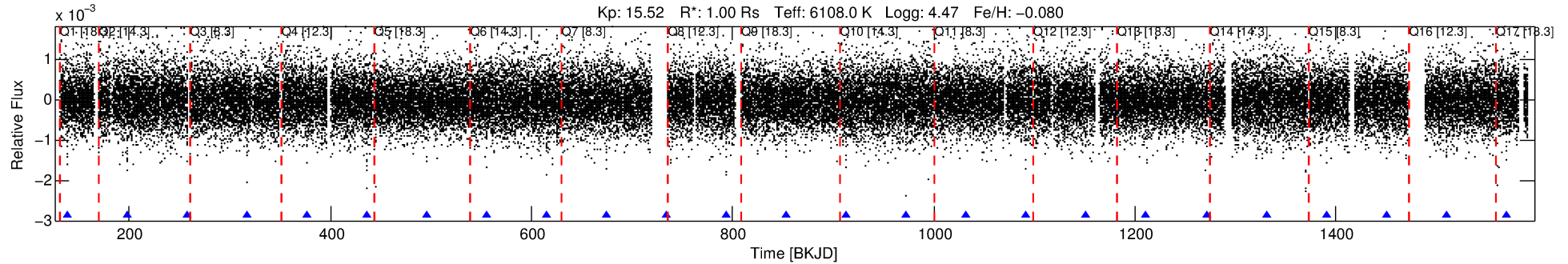
No Significant Match Found

DV One-Page Summary

KIC: 10213902 Candidate: 1 of 1 Period: 59.622 d

KOI: K01723.01 Corr: 0.971

Kp: 15.52 R*: 1.00 Rs Teff: 6108.0 K Logg: 4.47 Fe/H: -0.080



DV Fit Results:

Period = 59.62246 [0.00031] d
Epoch = 138.1358 [0.0045] BKJD
Rp/R* = 0.0323 [0.0021]
a/R* = 40.05 [12.52]
b = 0.84 [0.11]
Seff = 13.26 [4.61]
Teq = 487 [42] K
Rp = 3.51 [0.97] Re
a = 0.3058 [0.0679] AU
Ag = 440.64 [201.92] [2.18σ]
Teffp = 3447 [307] K [9.56σ]

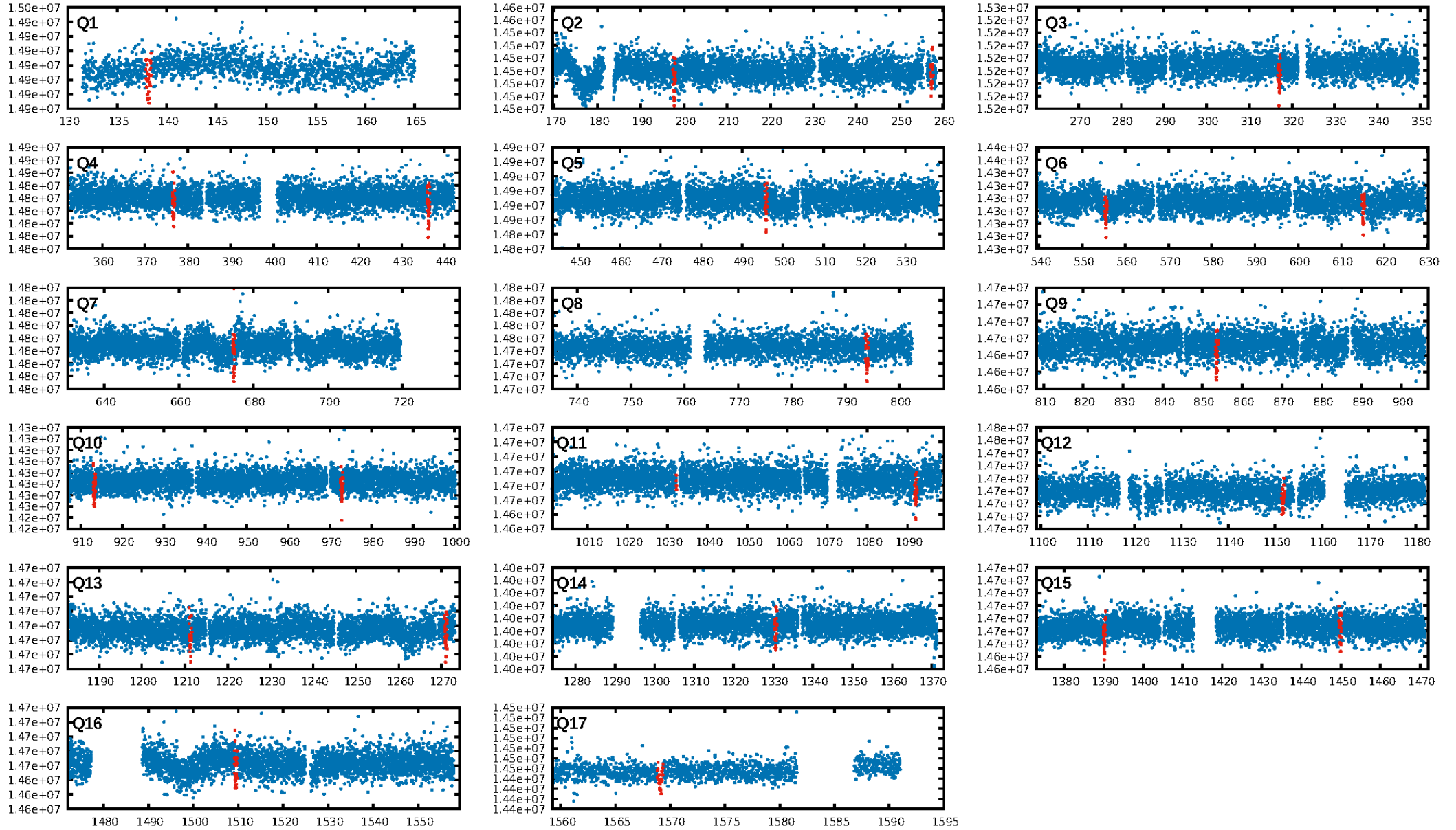
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.73e-147
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: -248.7
Centroid-sig: 7.8%
Centroid-so: 0.520 arcsec [1.18σ]
OotOffset-rm: 0.271 arcsec [1.91σ]
KicOffset-rm: 0.343 arcsec [2.47σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

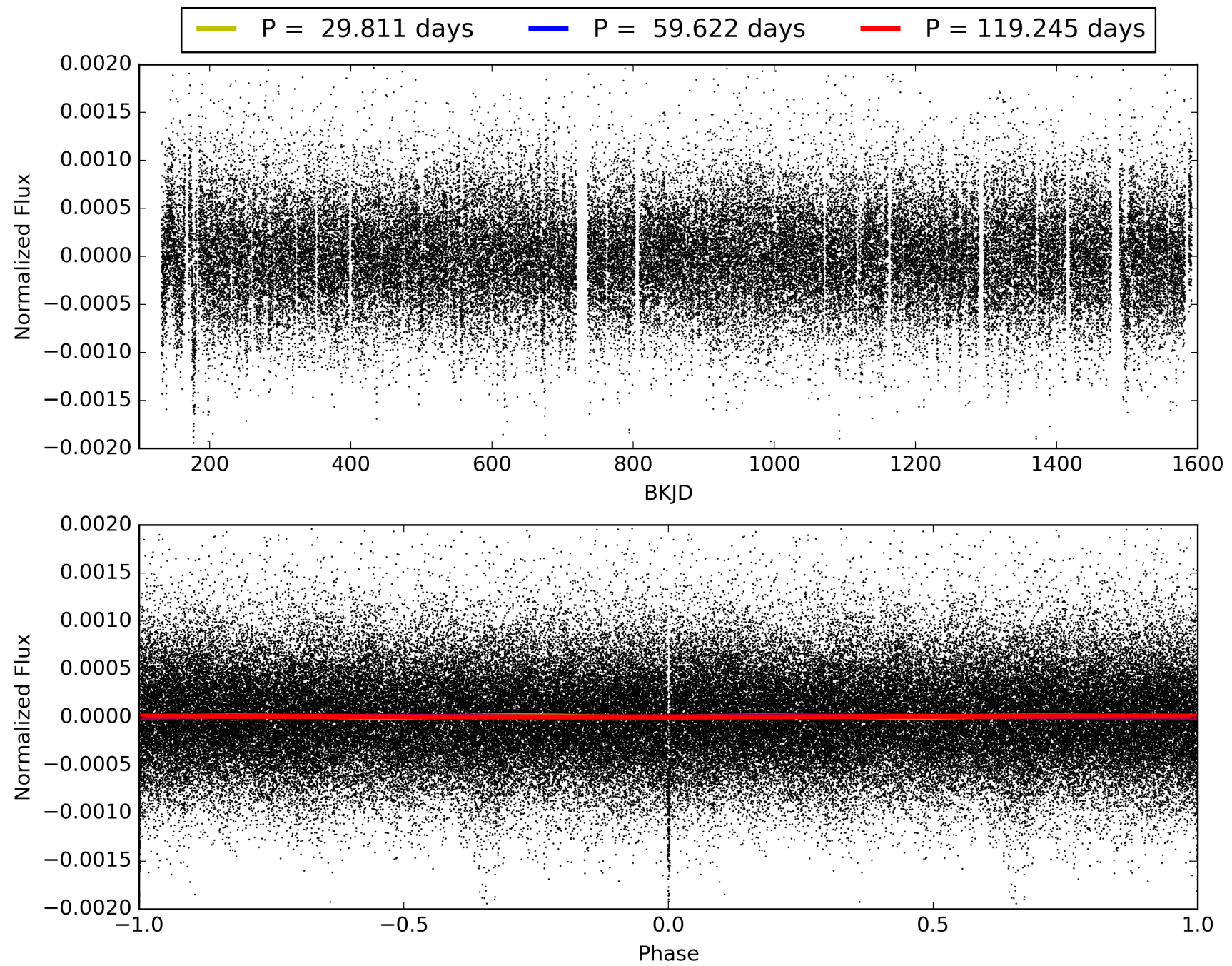
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:24:38 Z

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

TCE 010213902-01, PDC Light Curves

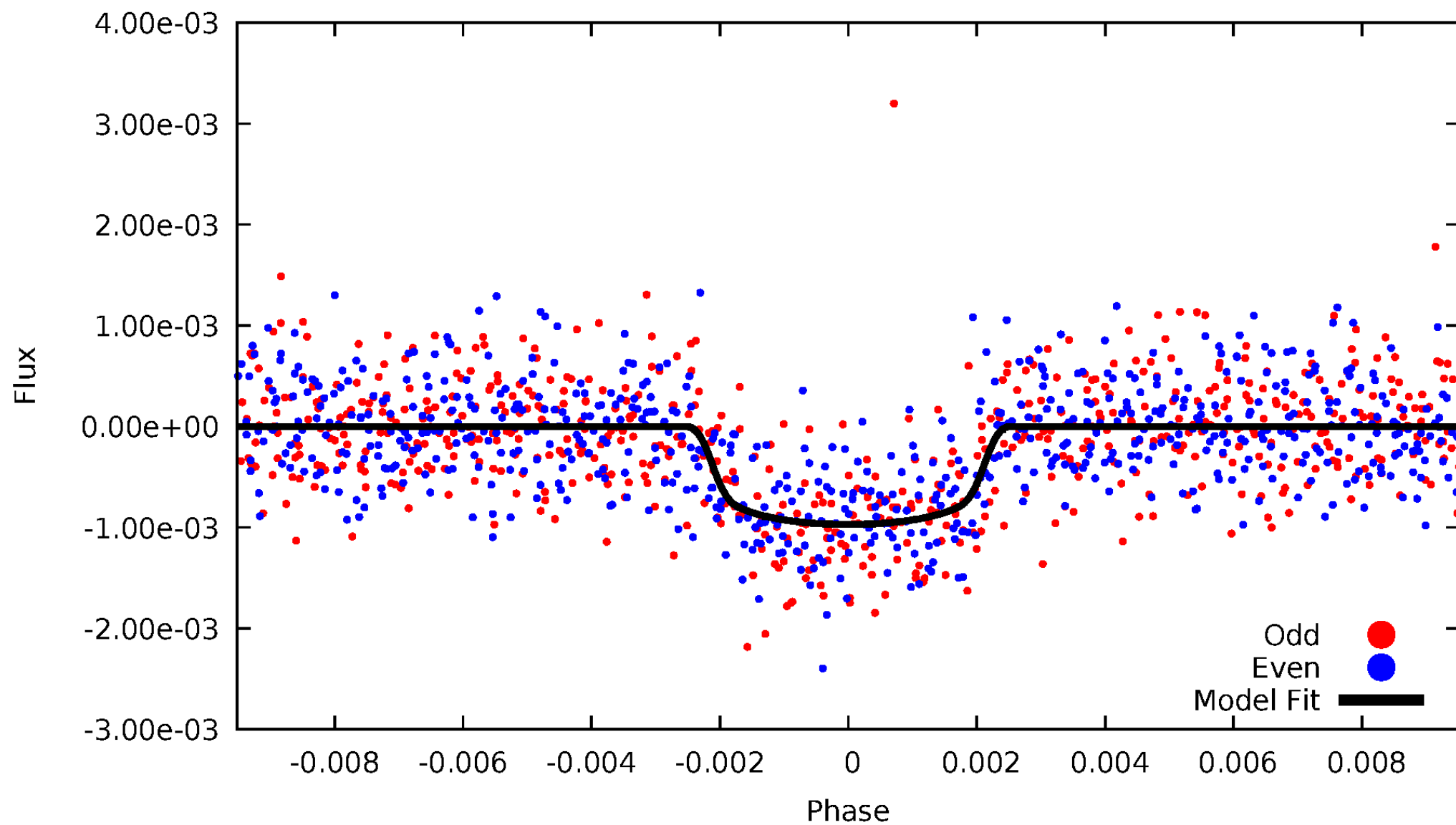


TCE 010213902-01



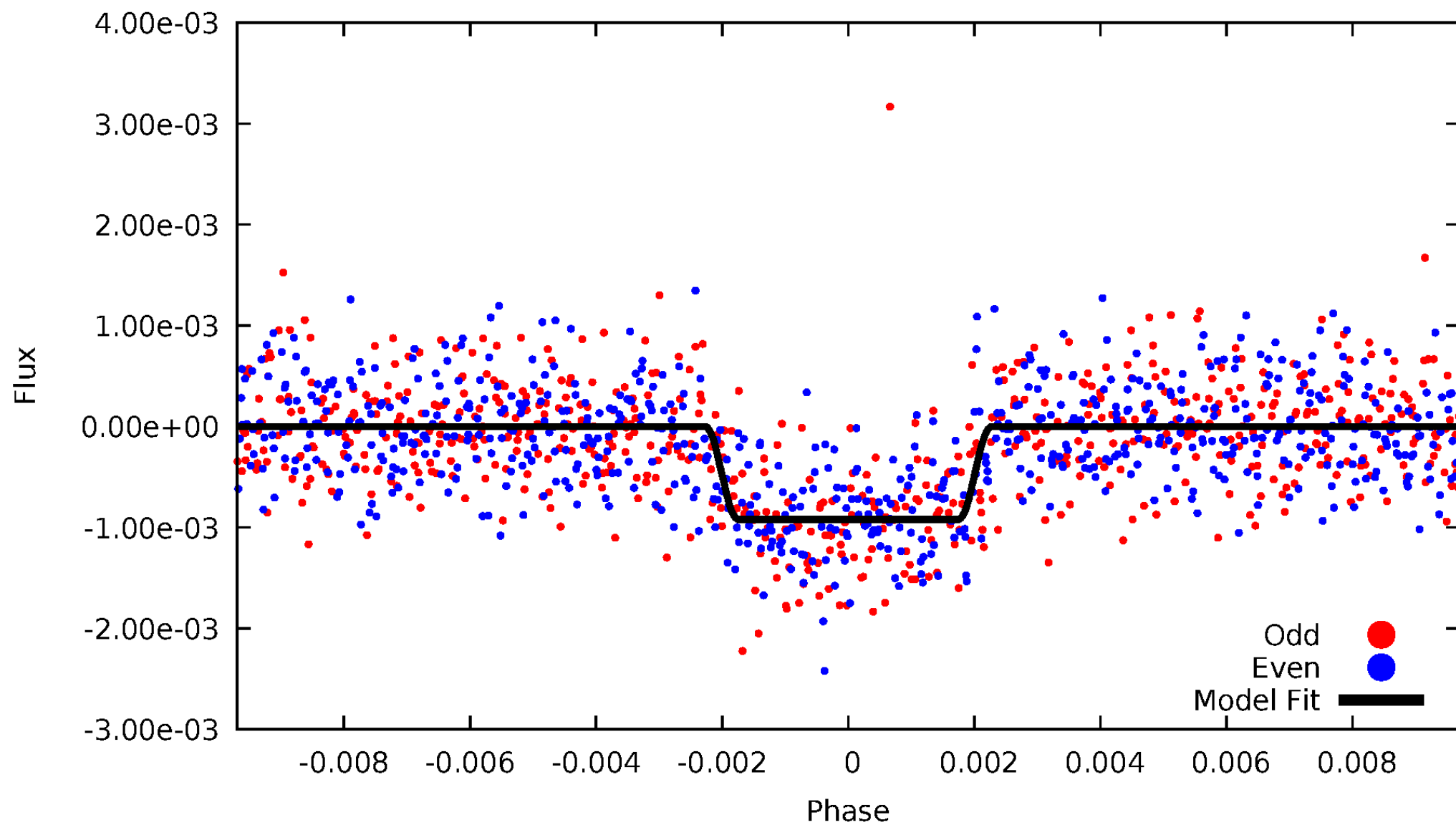
DV Odd/Even

TCE 010213902-01



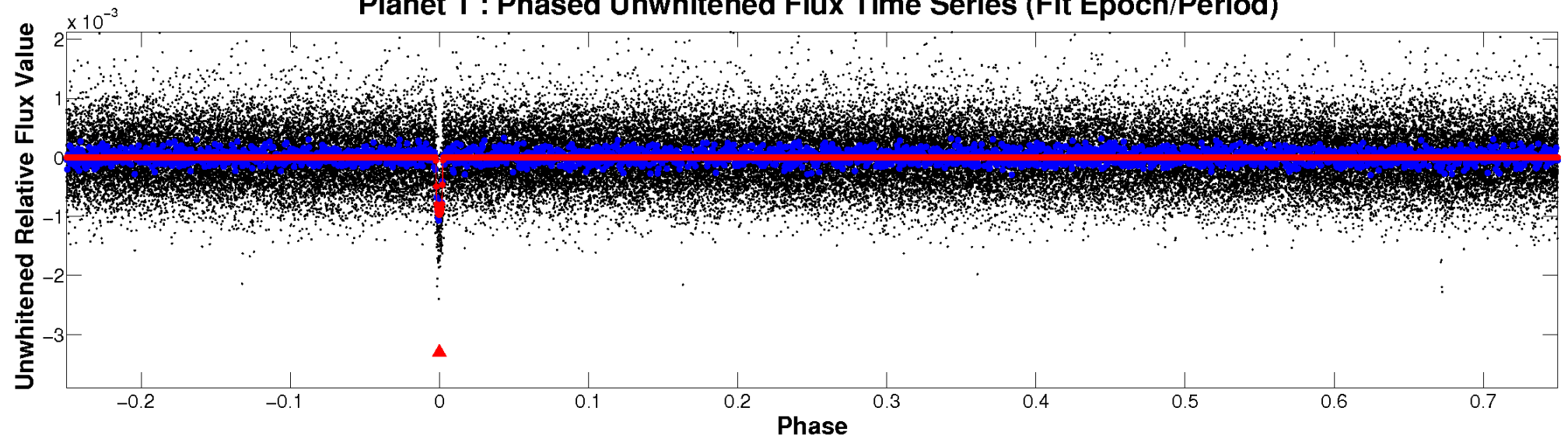
ALT Odd/Even

TCE 010213902-01

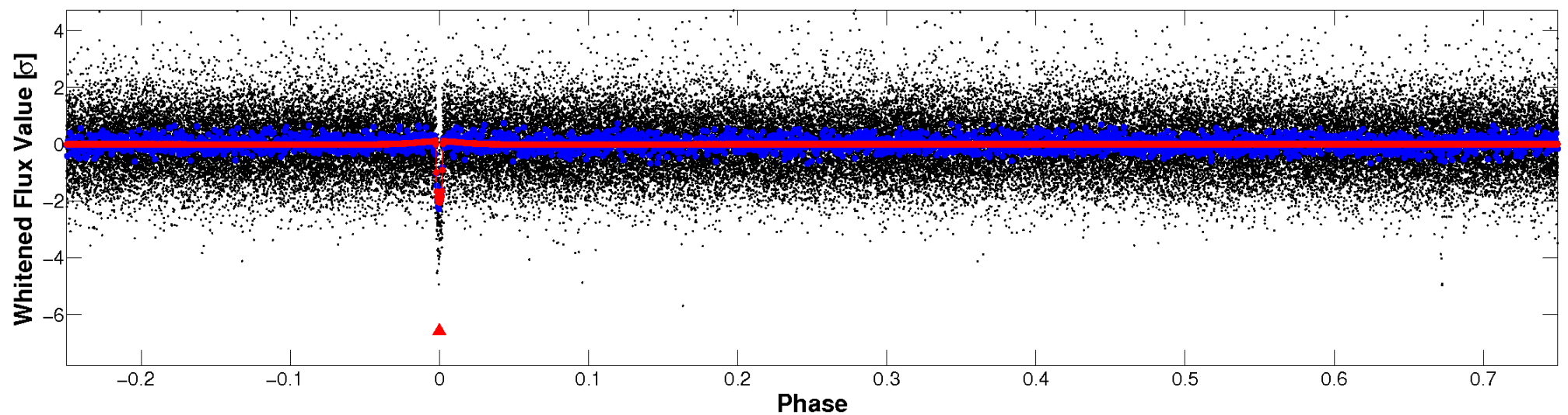


Non-Whitened Vs. Whitened Light Curve

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

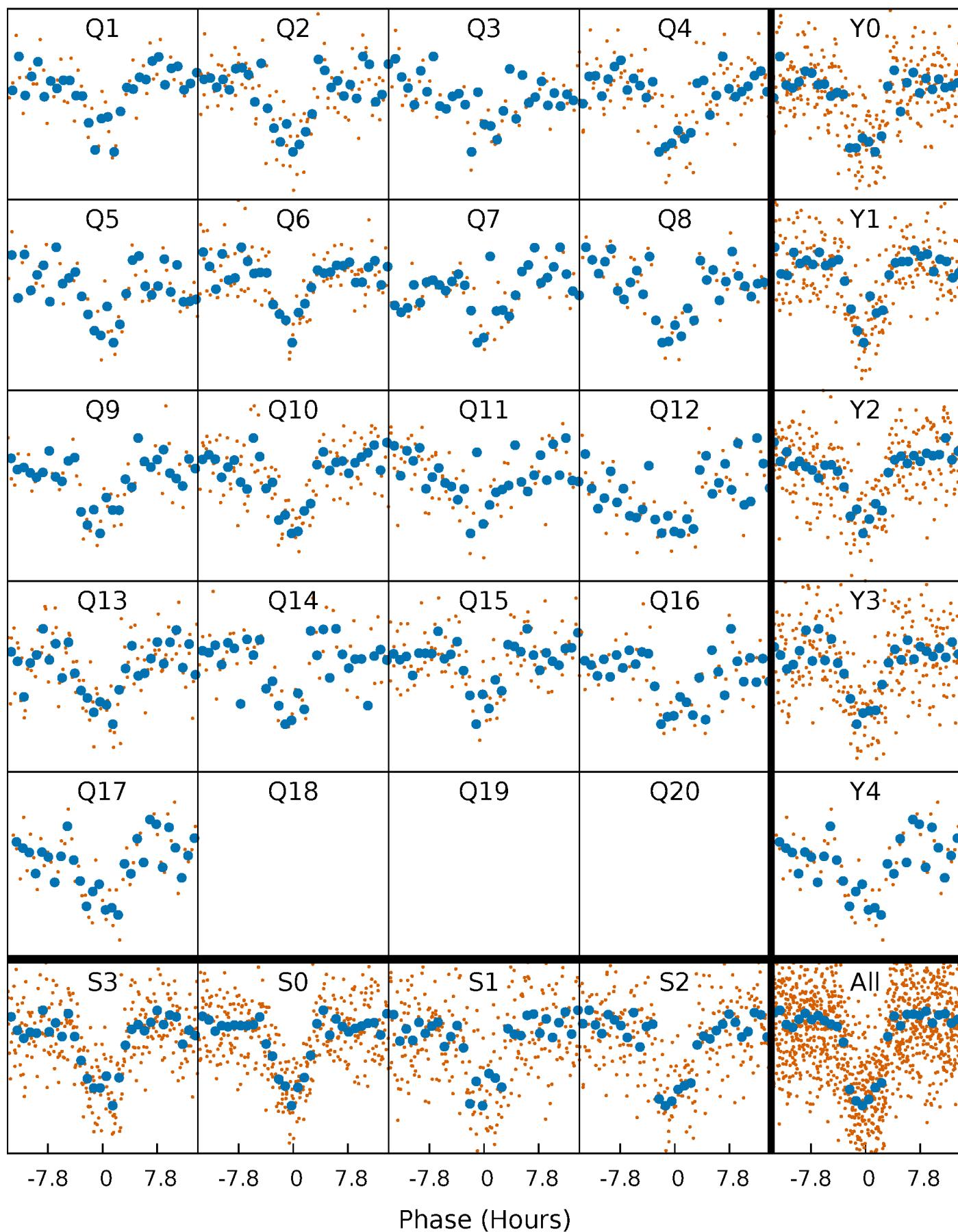


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



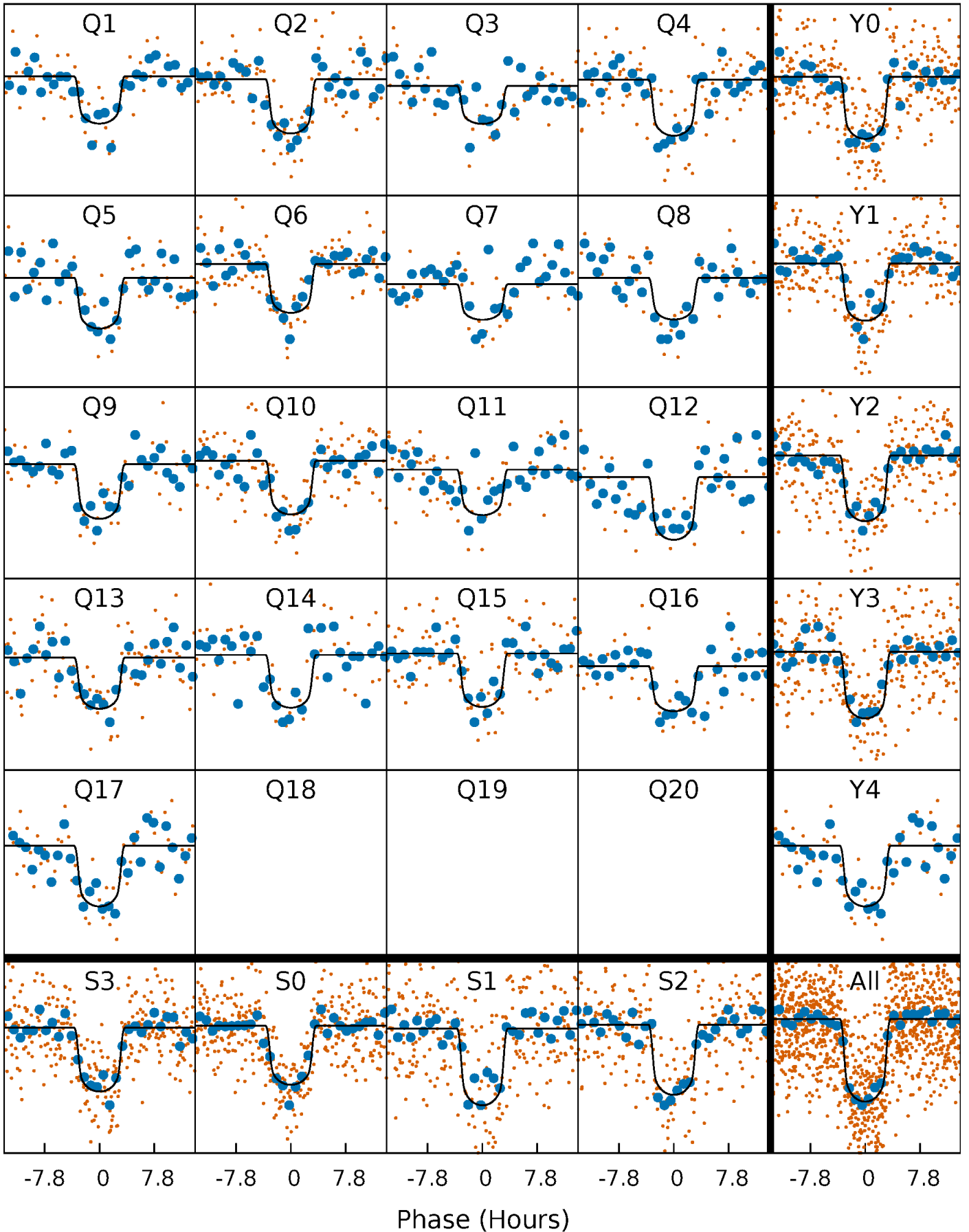
PDC Quarter-Phased Transit Curves

TCE 010213902-01 P= 59.622465 Days $T_0=138.135787$ (BKJD)



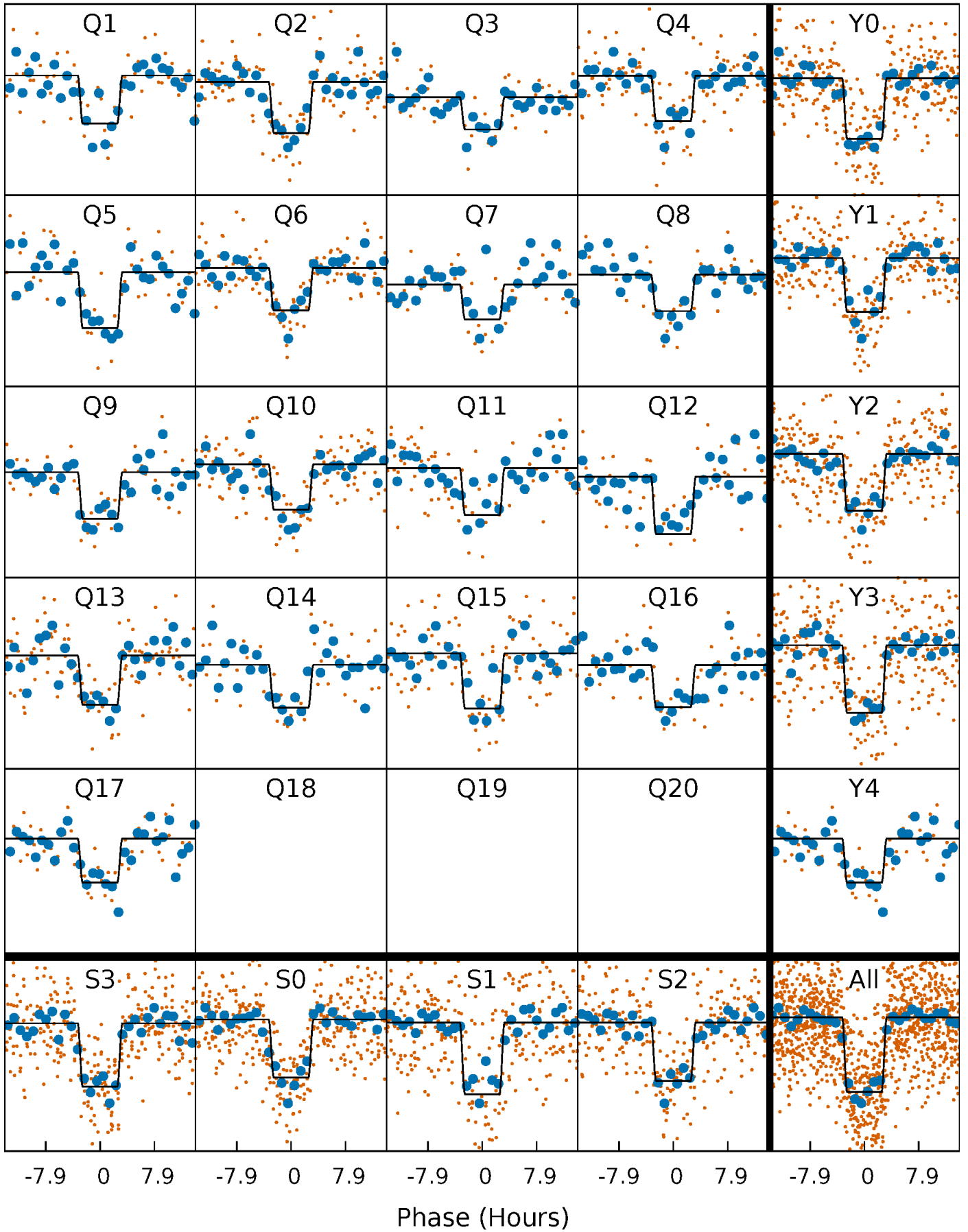
DV Quarter-Phased Transit Curves

TCE 010213902-01 P= 59.622465 Days $T_0=138.135787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

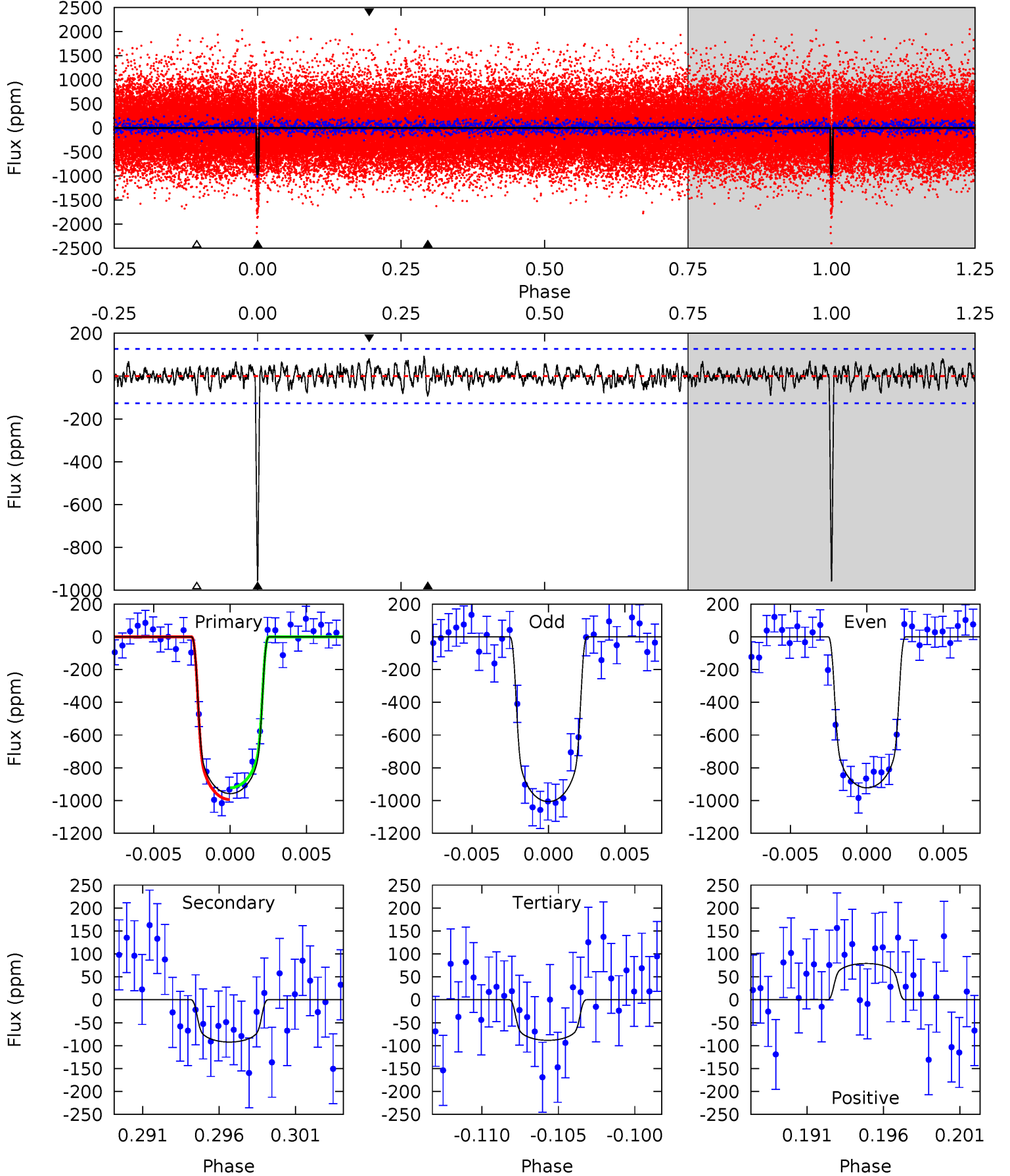
TCE 010213902-01 P= 59.621640 Days $T_0=138.146106$ (BKJD)



DV Model-Shift Uniqueness Test

010213902-01, P = 59.622465 Days, E = 78.513322 Days

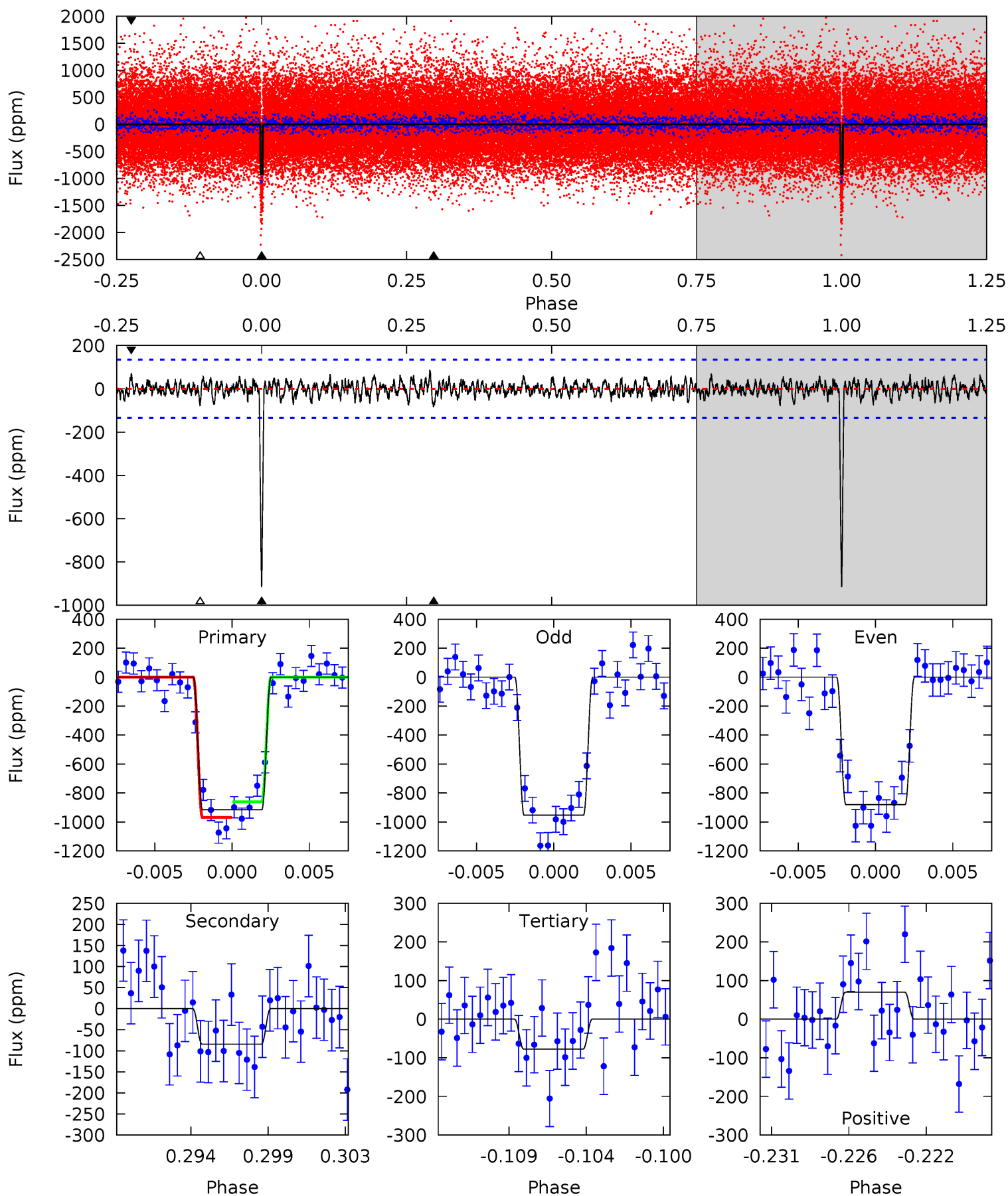
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.8	3.74	3.58	3.21	5.16	2.81	1.16	35.2	35.6	0.15	0.53	1.71	0.99	0.09	1.47



Alt Model-Shift Uniqueness Test

010213902-01, P = 59.621640 Days, E = 78.524466 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.2	3.24	2.98	2.69	5.18	2.84	0.98	32.2	32.5	0.26	0.55	1.42	1.00	0.09	2.08



Stellar Parameters For KIC 010213902

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6108^{+168}_{-210}	$4.471^{+0.058}_{-0.173}$	$-0.080^{+0.250}_{-0.350}$	$0.997^{+0.266}_{-0.114}$	$1.072^{+0.126}_{-0.139}$	$1.525^{+0.438}_{-0.710}$
	+3%/-3%	+1%/-4%	+312%/-438%	+27%/-11%	+12%/-13%	+29%/-47%
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 010213902-01 / KOI 1723.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-92 ± 25	$3.61^{+0.52}_{-0.40}$	690^{+41}_{-31}	3723^{+207}_{-199}	351^{+139}_{-120}
Alt.	-84 ± 26	$3.38^{+0.50}_{-0.34}$	690^{+44}_{-33}	3745^{+209}_{-247}	361^{+151}_{-131}

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

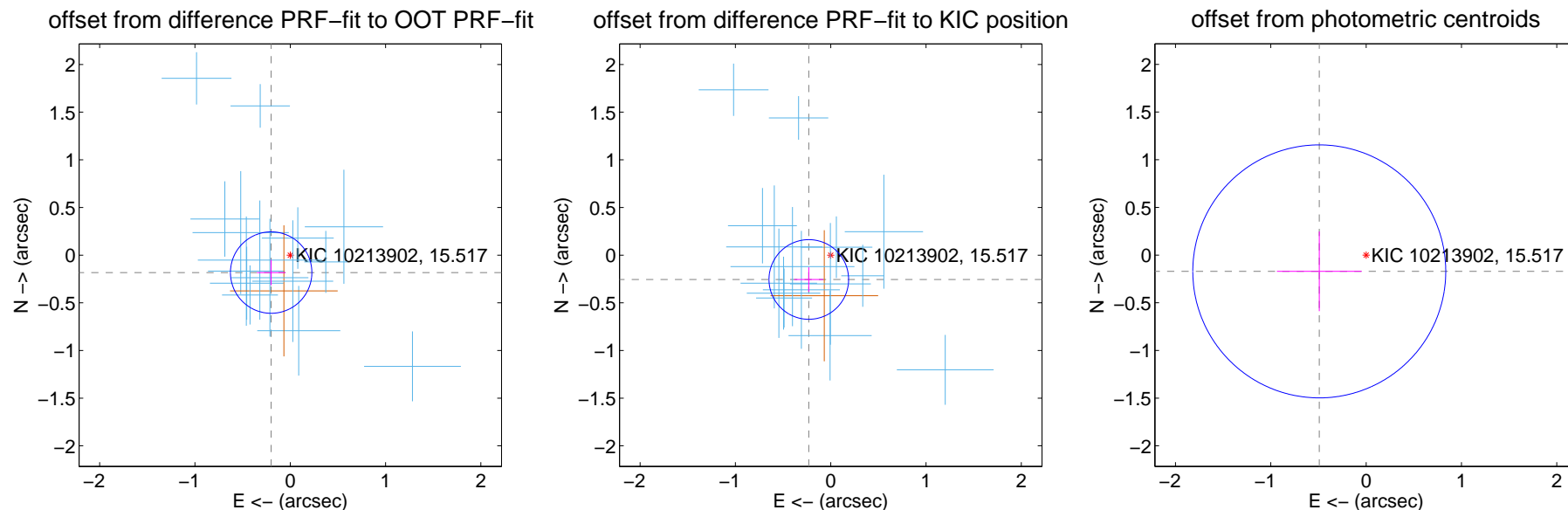
DV Centroid Data

Supplemental centroid analysis for 010213902-01. Kepler magnitude: 15.52. Transit SNR 30.15

There are 15 quarters with good PRF difference image offsets

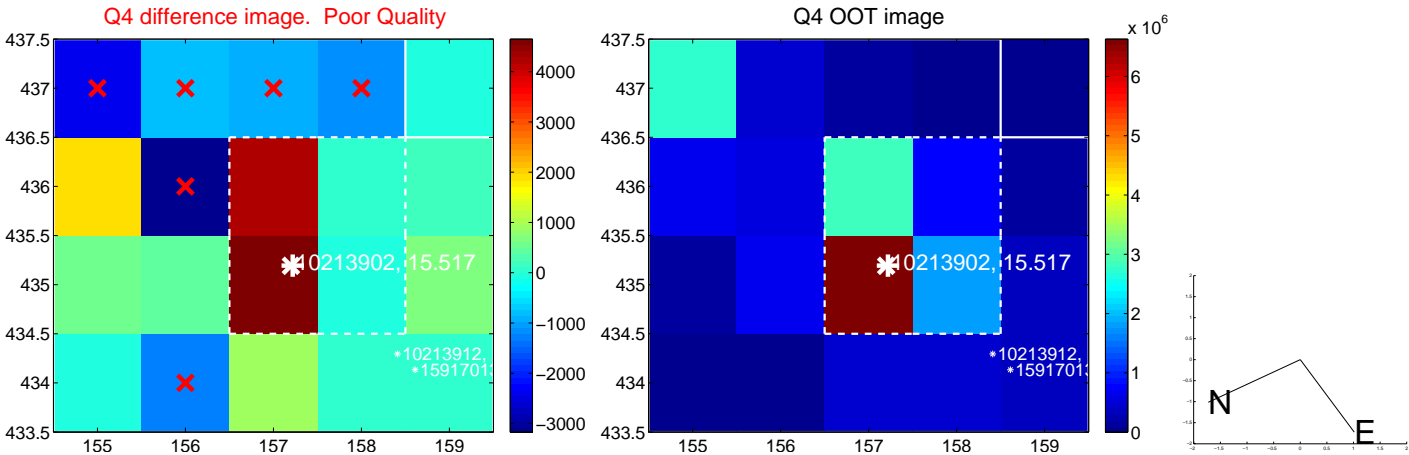
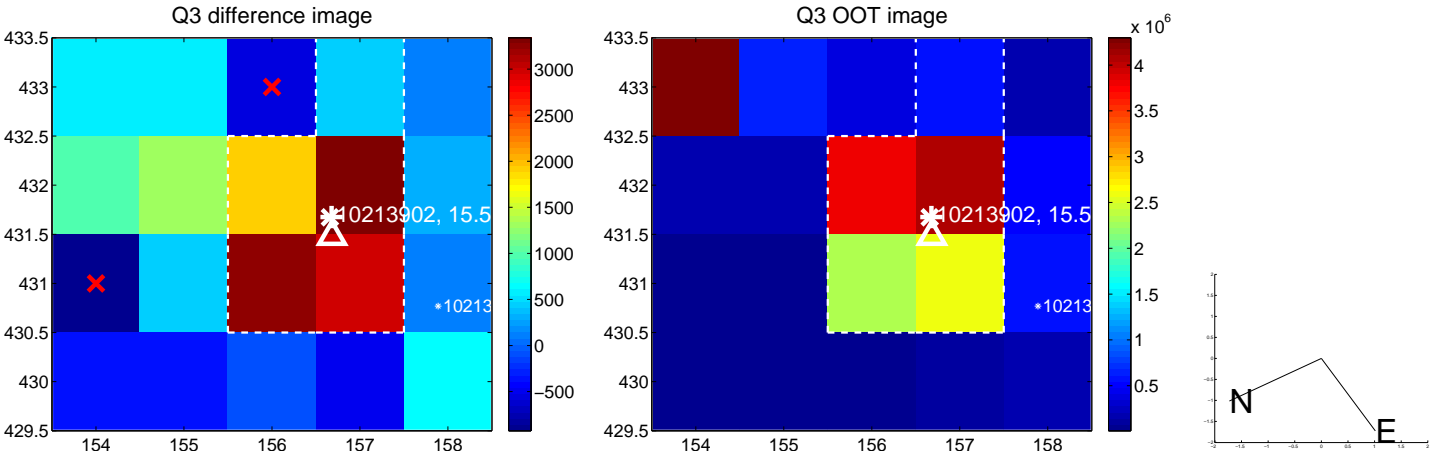
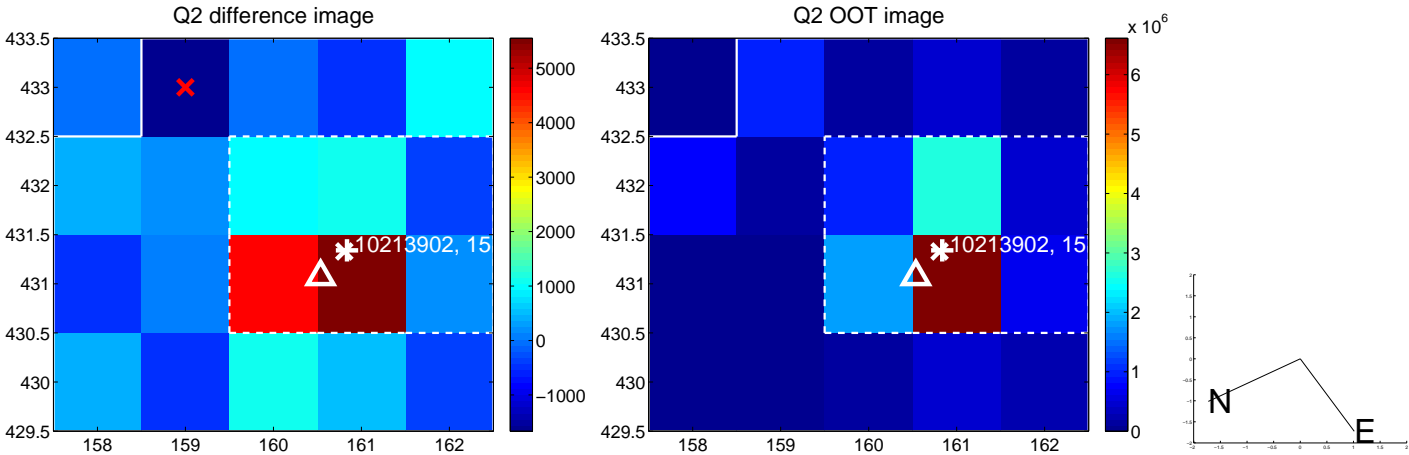
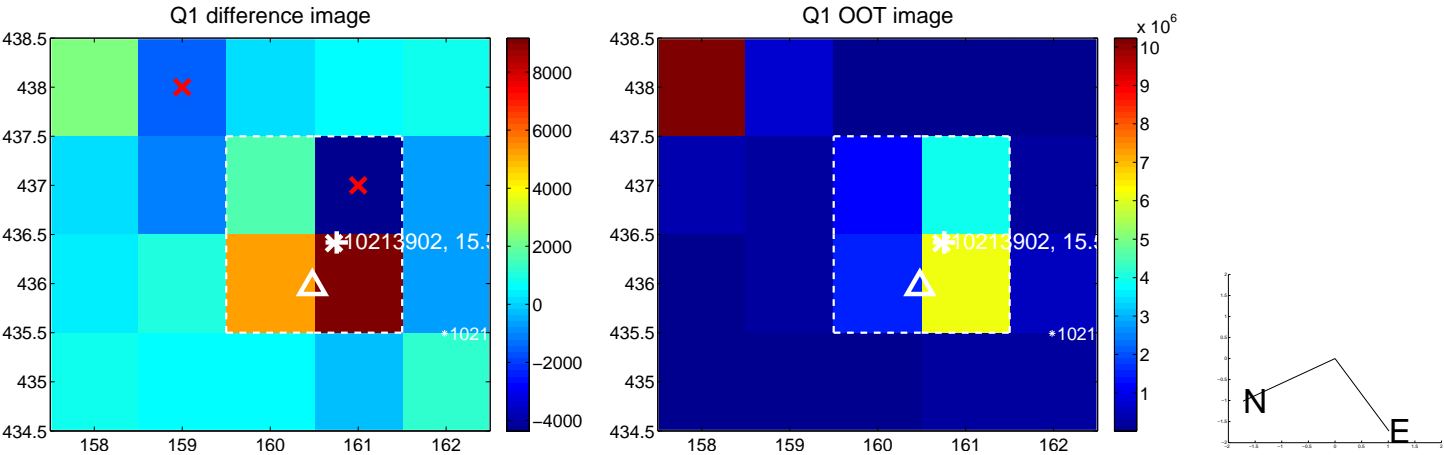
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.271 ± 0.142	1.91	0.201 ± 0.150	-0.183 ± 0.133
PRF-fit source offset from KIC position	0.343 ± 0.139	2.47	0.230 ± 0.152	-0.255 ± 0.128
photometric centroid source offset	0.52 ± 0.44	1.18	0.49 ± 0.45	-0.17 ± 0.42

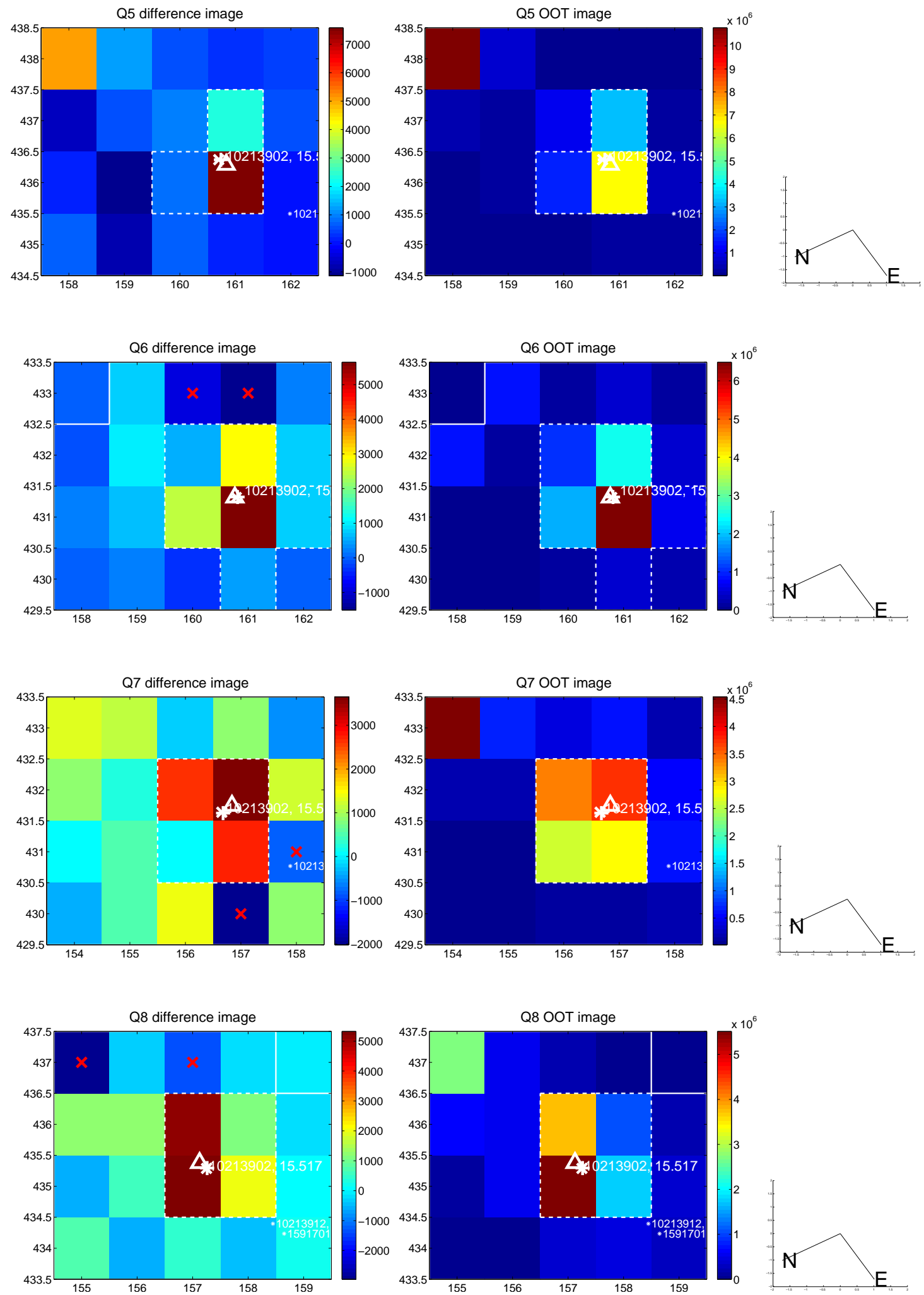


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

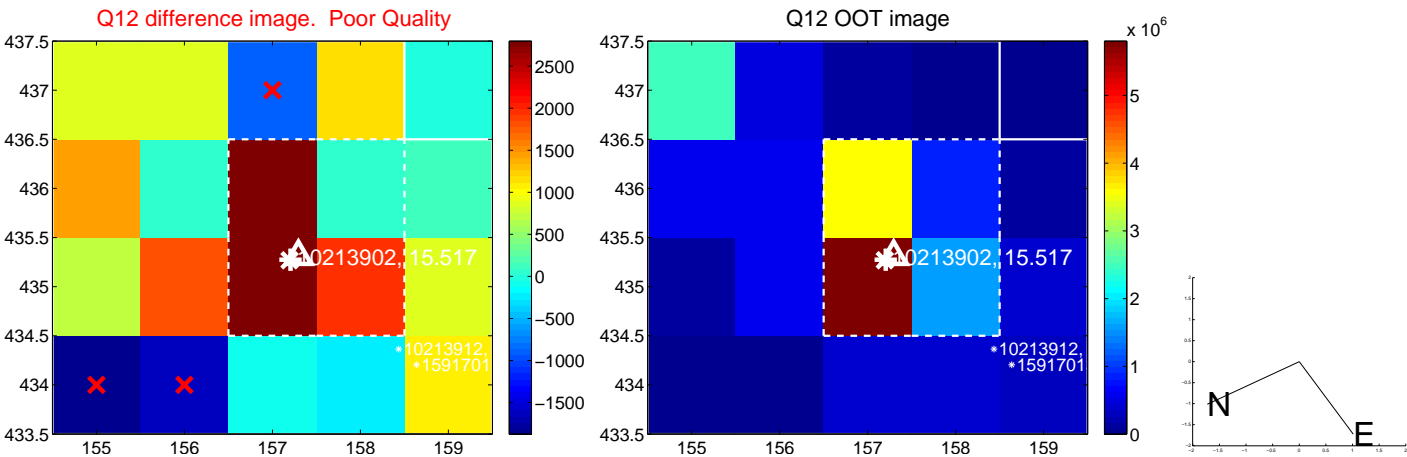
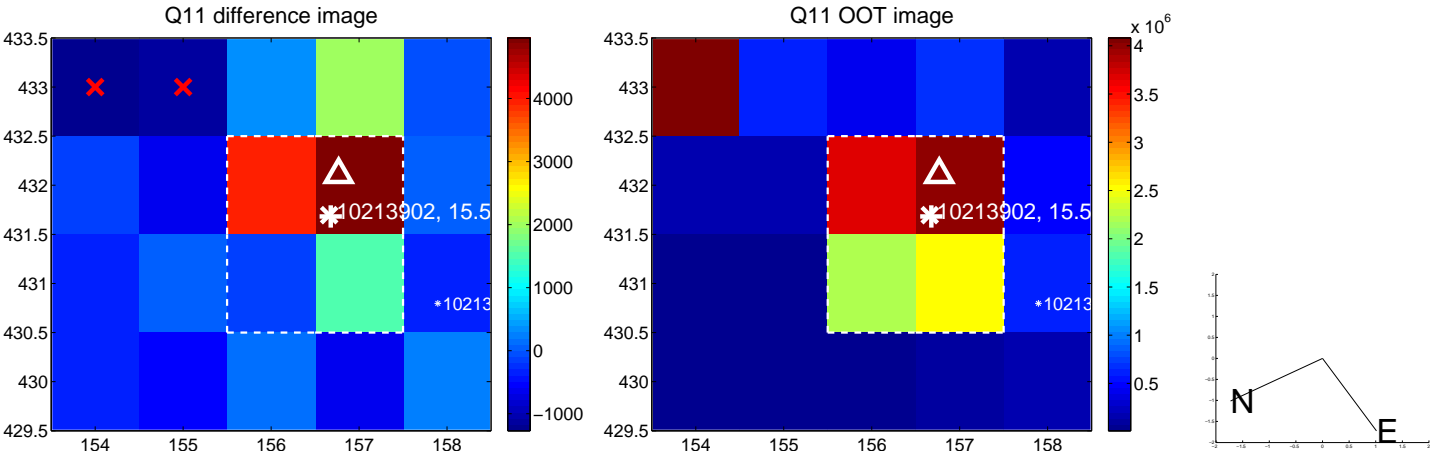
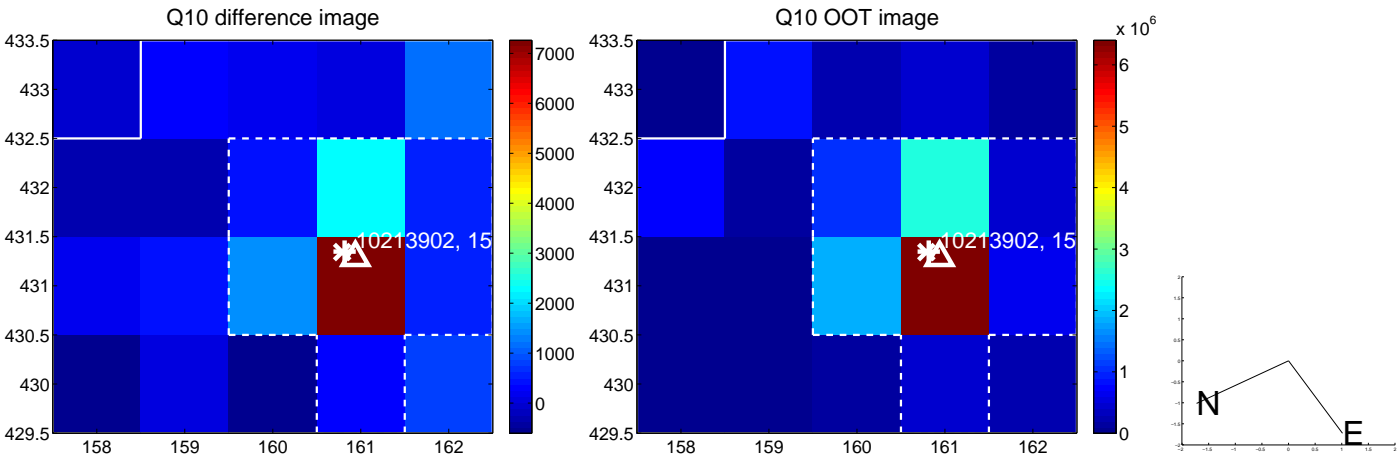
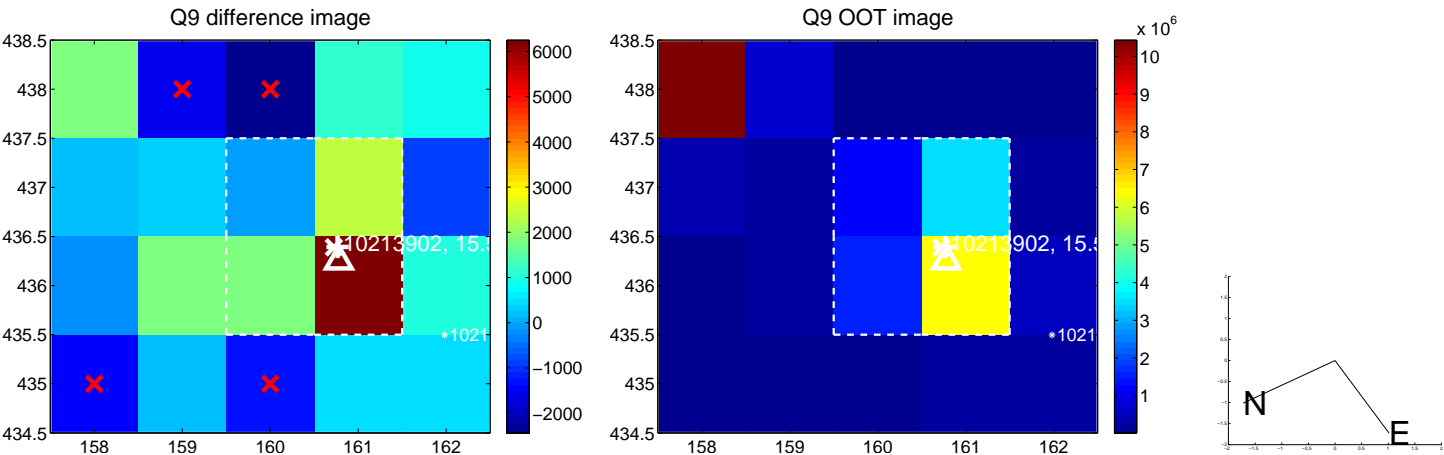
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



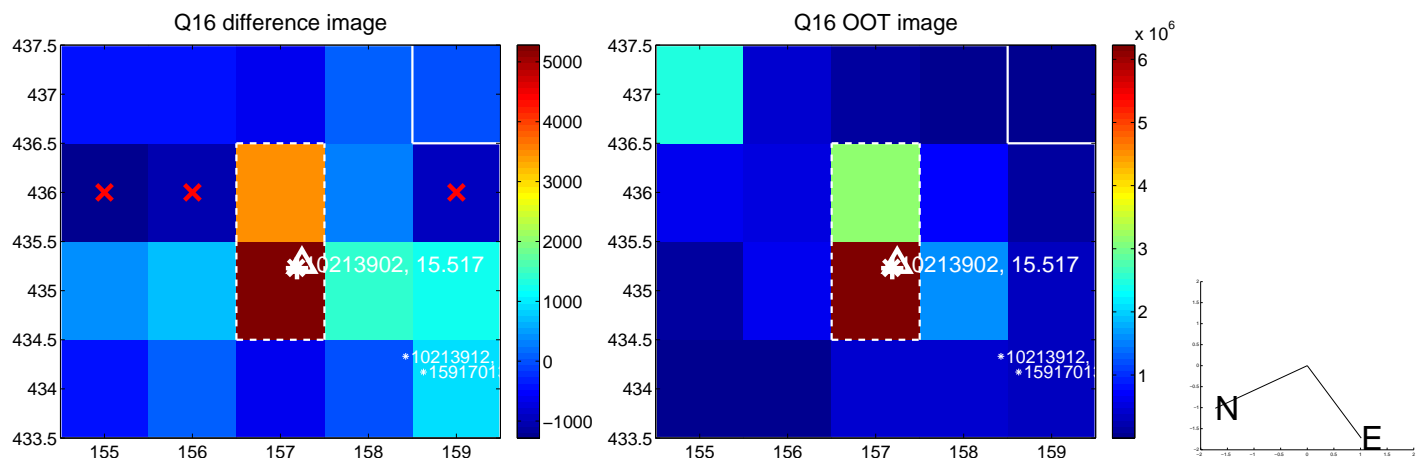
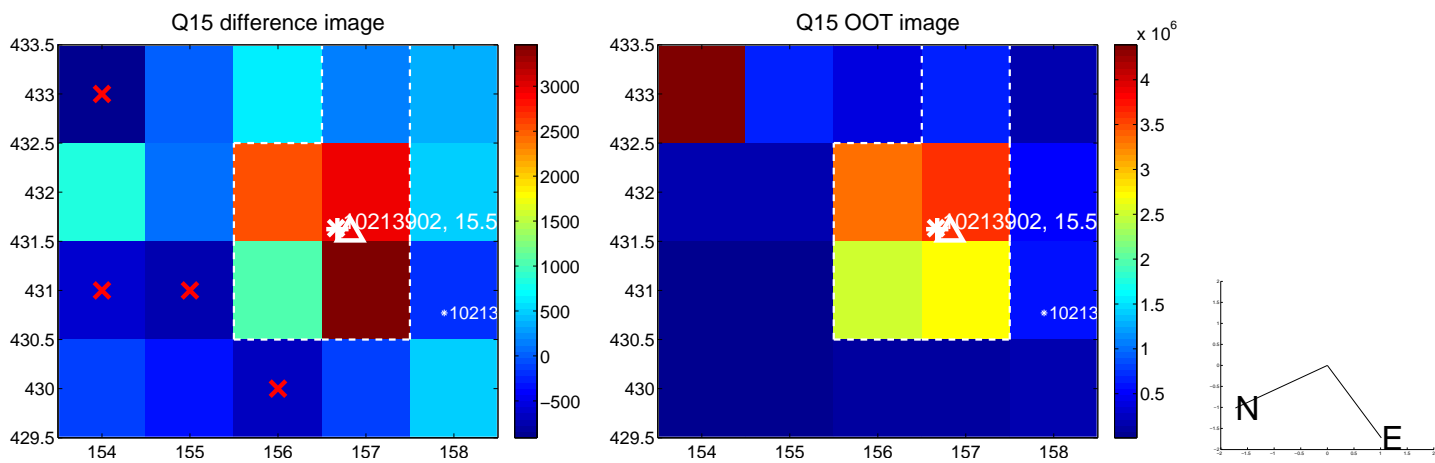
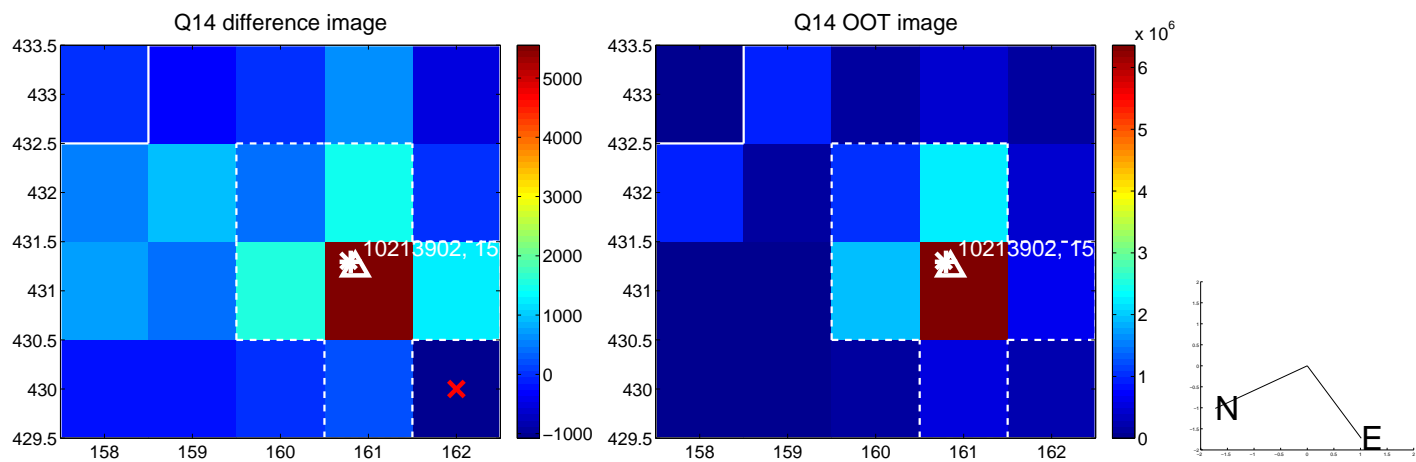
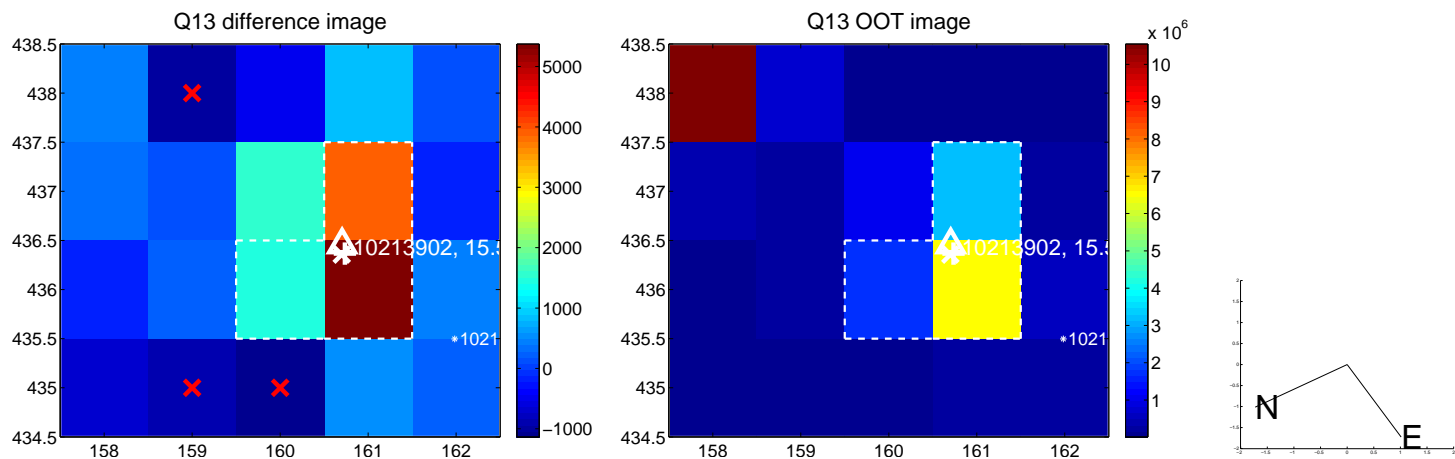
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



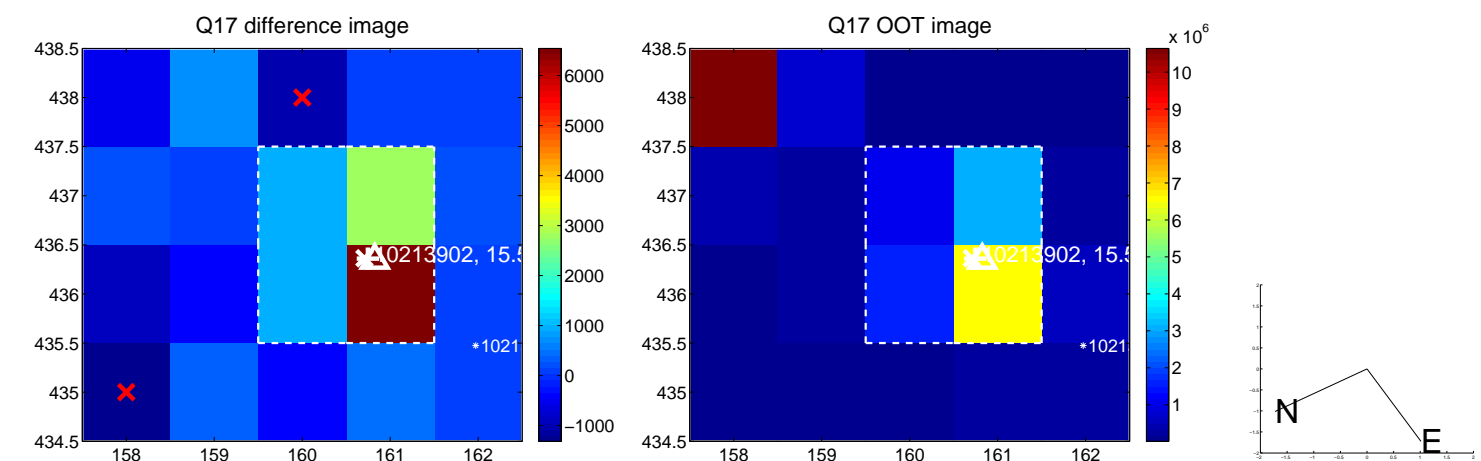
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



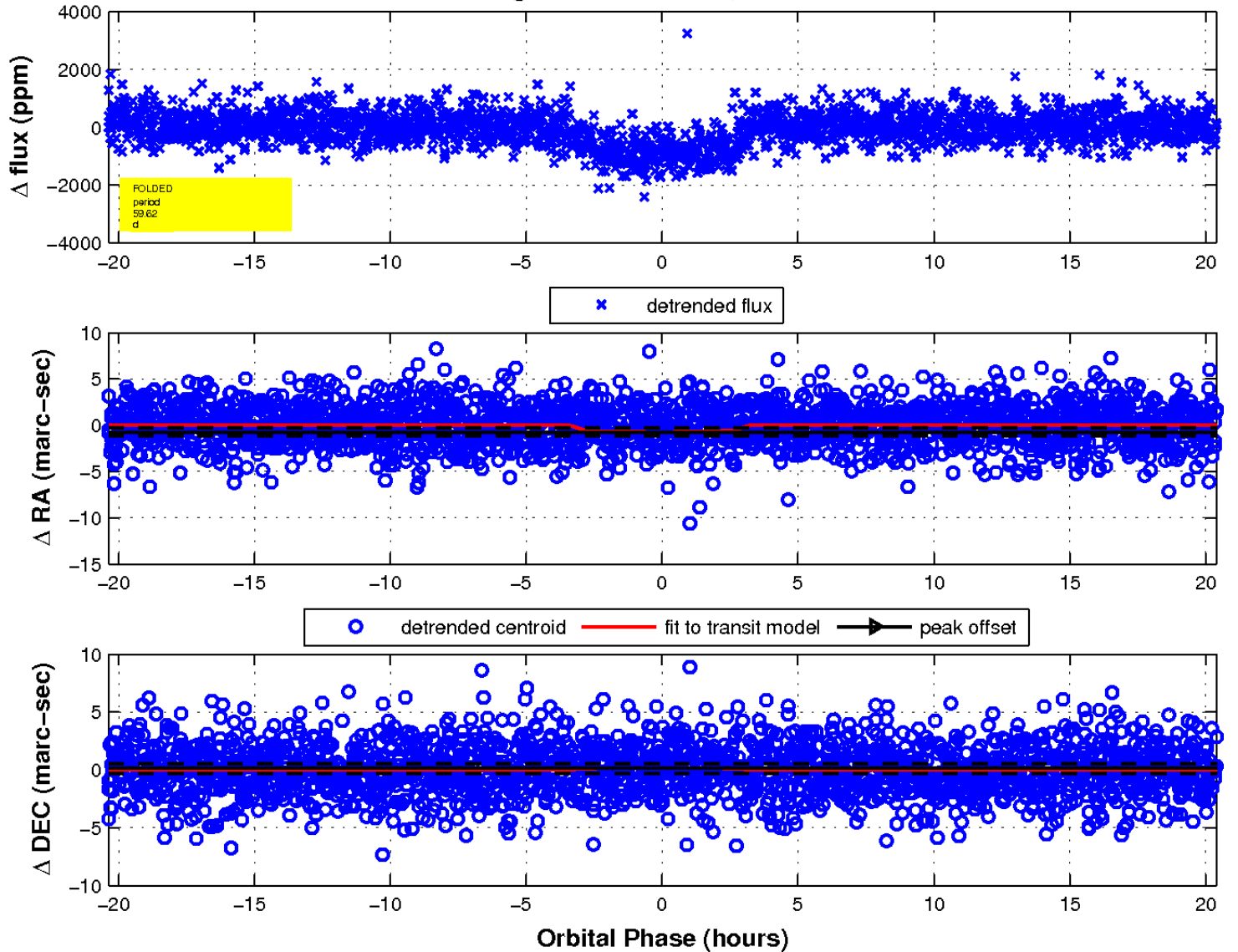
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

