

KIC 005731623

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})
005731623-01	OBS	1793.01	3.261767	131.777170	3788.8	1.720	184.2	186.5	0.94	6131	7.23	600.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005731623-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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 005731623-01

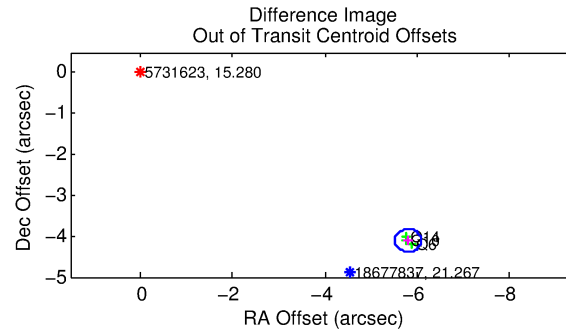
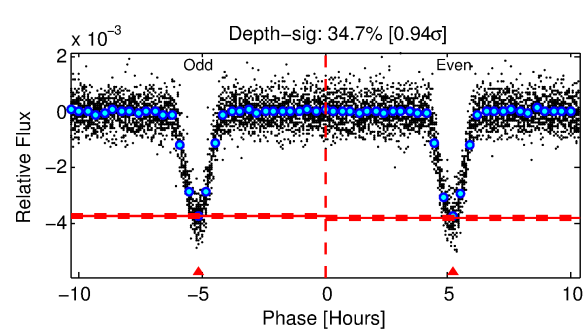
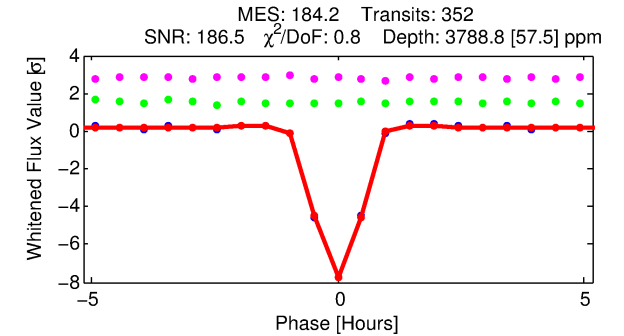
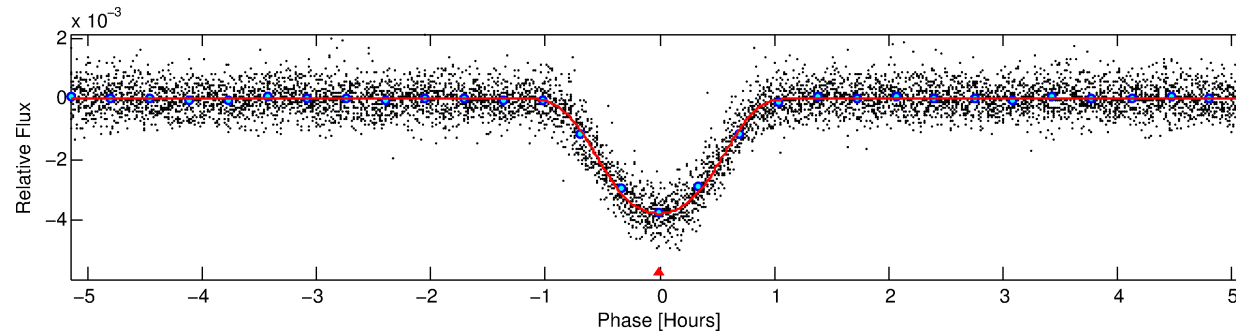
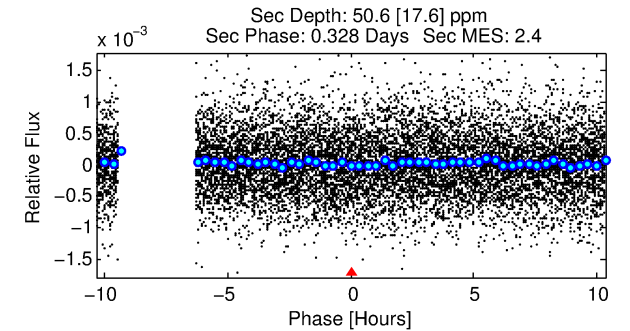
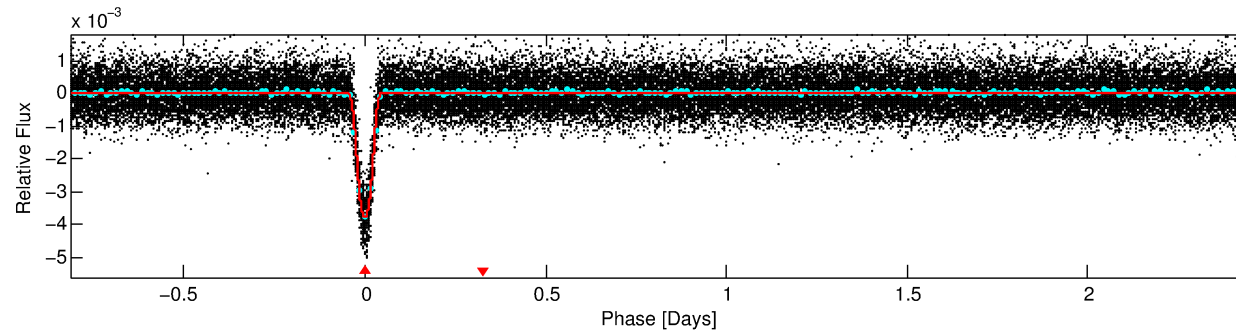
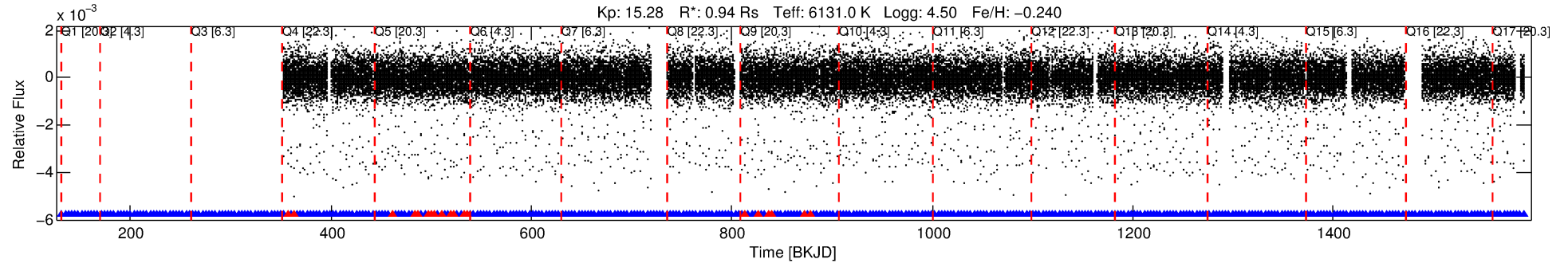
No Significant Match Found

DV One-Page Summary

KIC: 5731623 Candidate: 1 of 1 Period: 3.262 d

KOI: K01793.01 Corr: 0.988

Kp: 15.28 R*: 0.94 Rs Teff: 6131.0 K Logg: 4.50 Fe/H: -0.240



DV Fit Results:

Period = 3.26177 [0.00000] d
Epoch = 131.7772 [0.0002] BKJD
Rp/R* = 0.0701 [0.0016]
a/R* = 7.69 [0.20]
b = 0.93 [0.01]
Seff = 600.76 [266.15]
Teq = 1262 [140] K
Rp = 7.23 [2.42] Re
a = 0.0434 [0.0123] AU
Ag = 1.00 [0.55] [0.00σ]
Teff = 1953 [187] K [2.96σ]

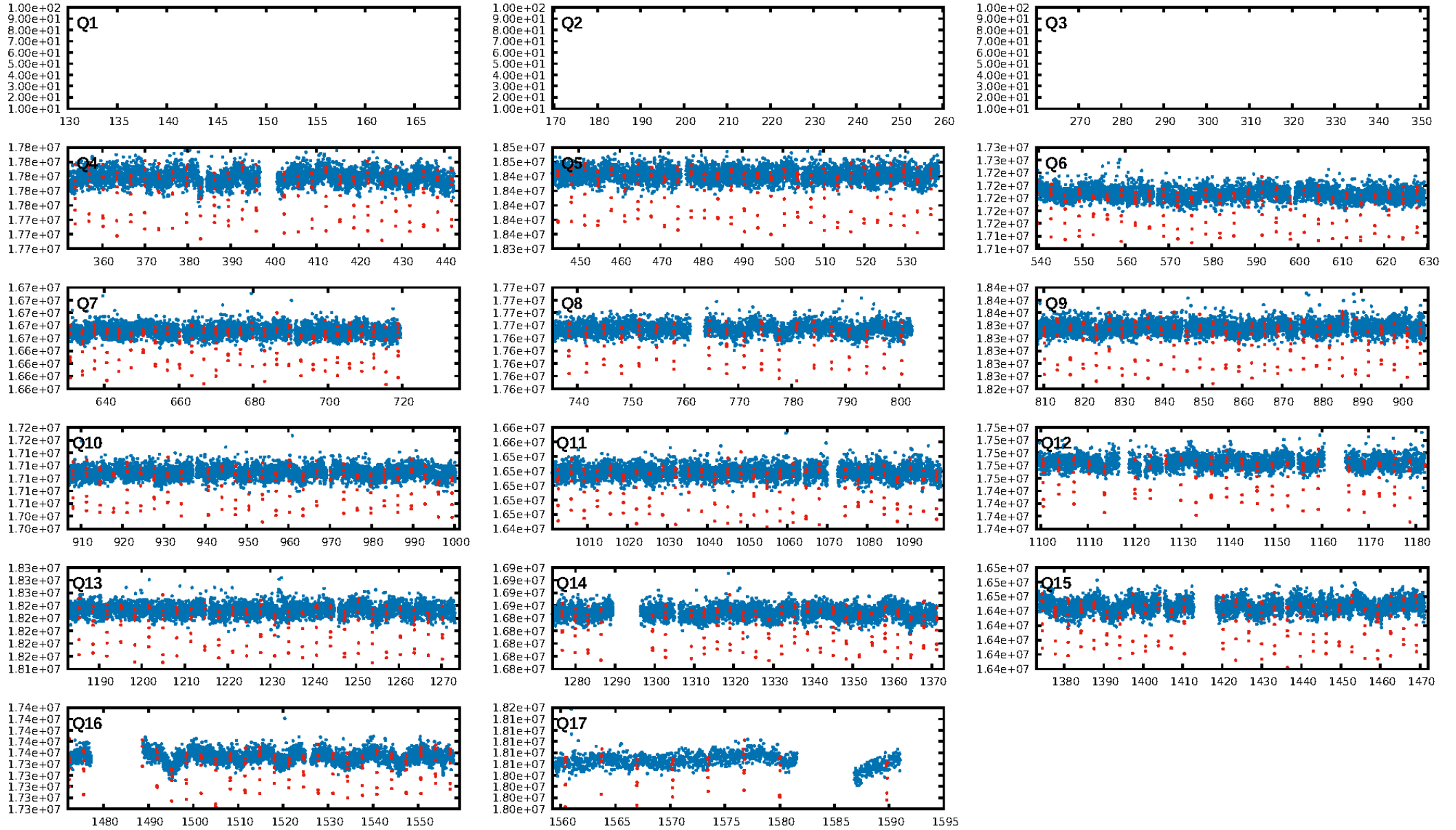
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.94 [325/344]
GhostDiagnostic-chr: 5.081
Centroid-sig: 0.0%
Centroid-so: 1.328 arcsec [19.90σ]
OotOffset-rm: 7.106 arcsec [75.64σ]
KicOffset-rm: 0.195 arcsec [2.45σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

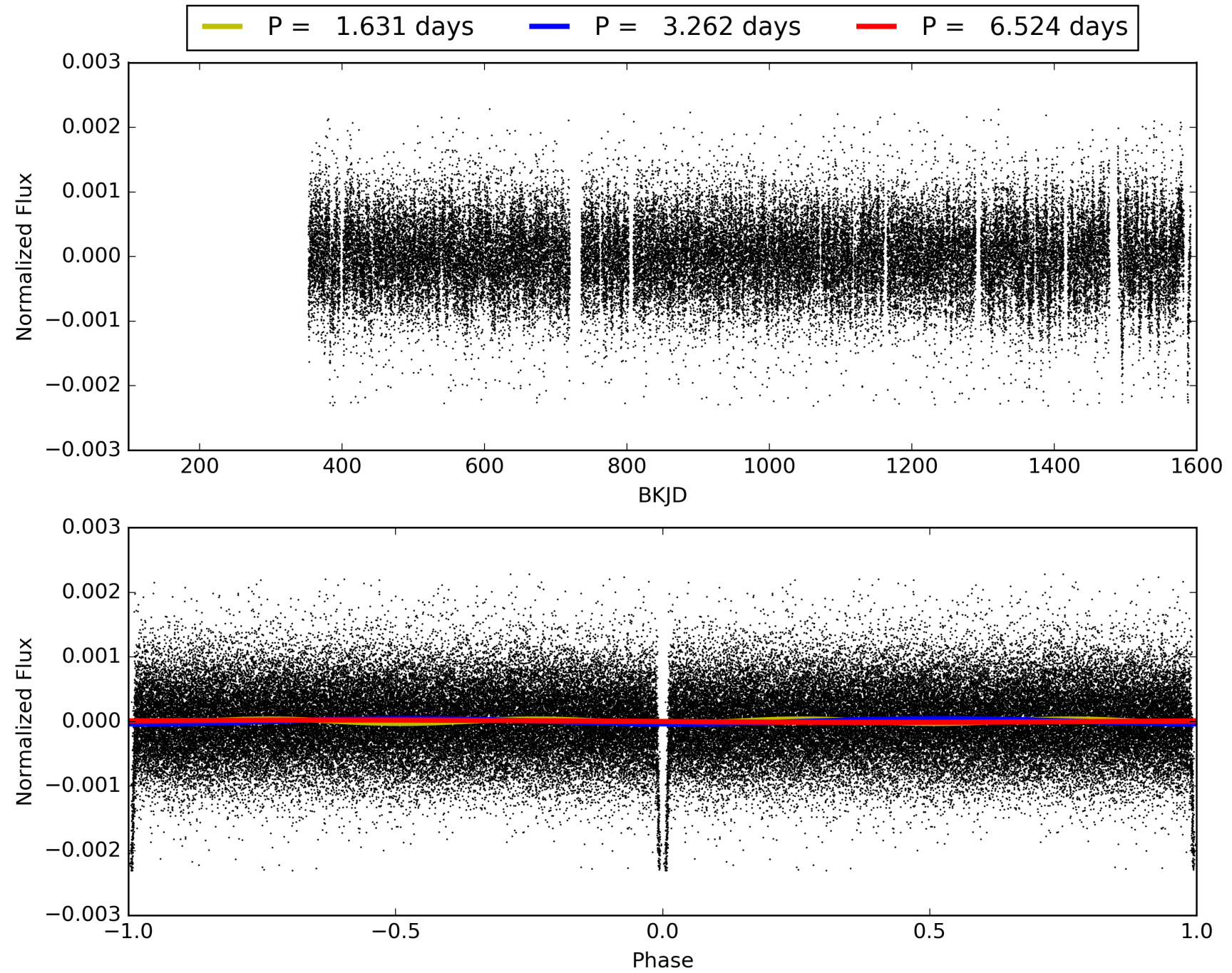
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:39:40 Z

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

TCE 005731623-01, PDC Light Curves

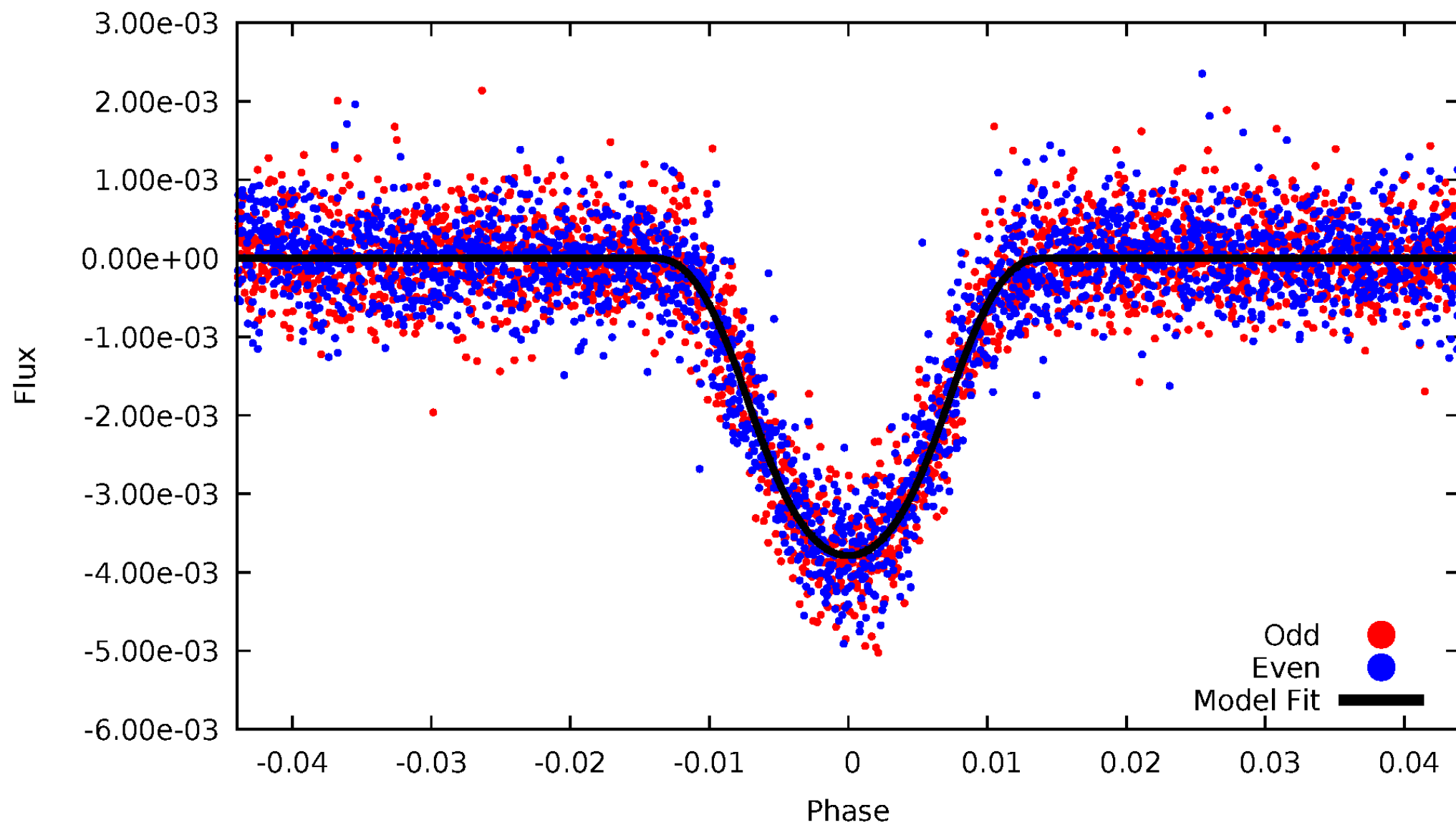


TCE 005731623-01



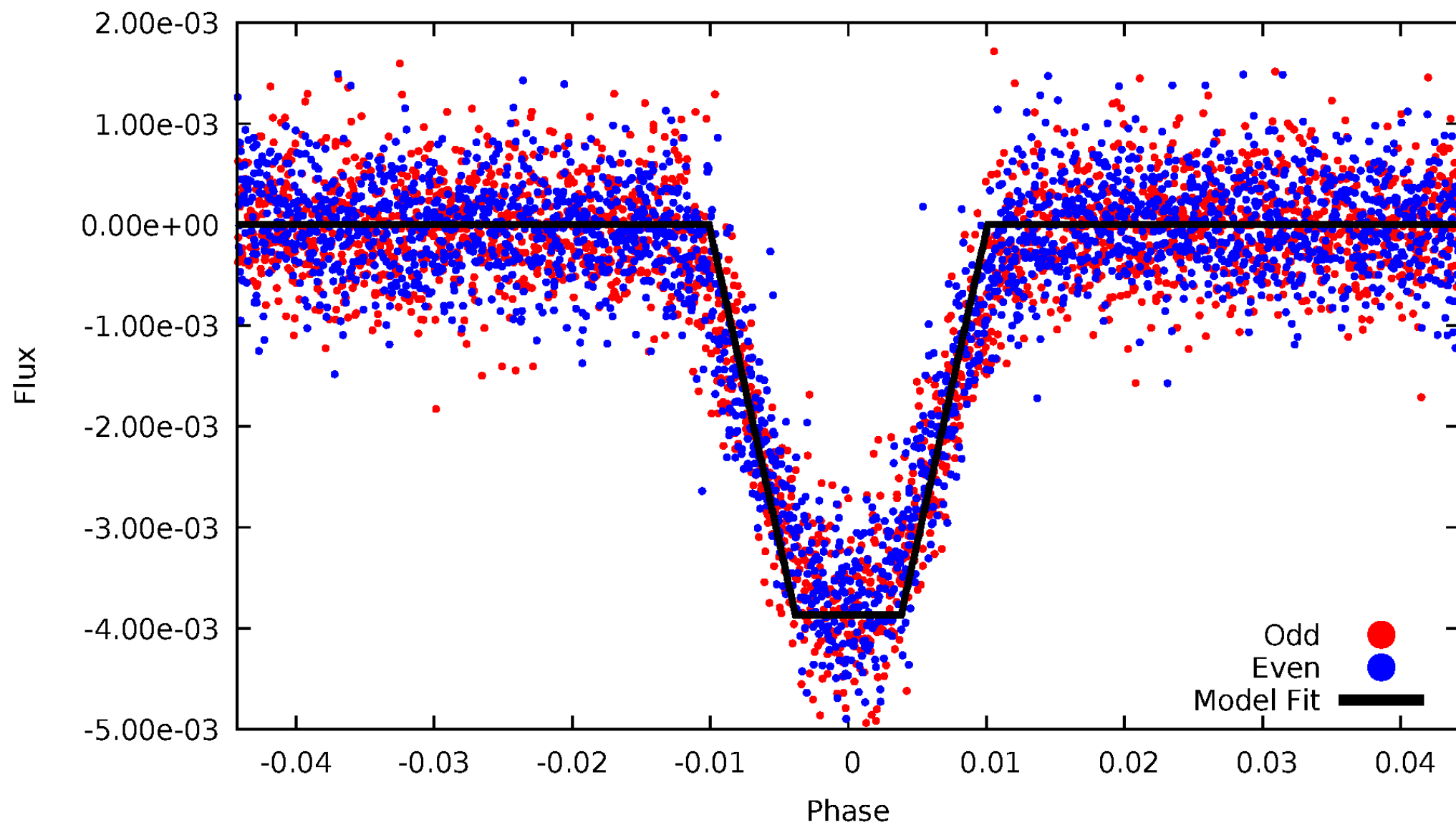
DV Odd/Even

TCE 005731623-01



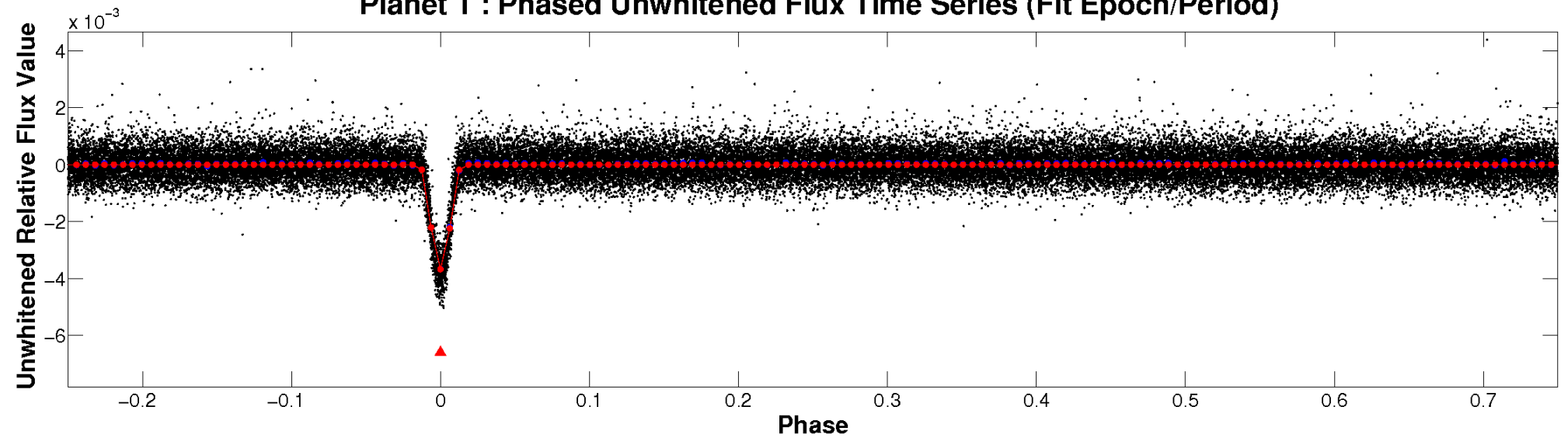
ALT Odd/Even

TCE 005731623-01

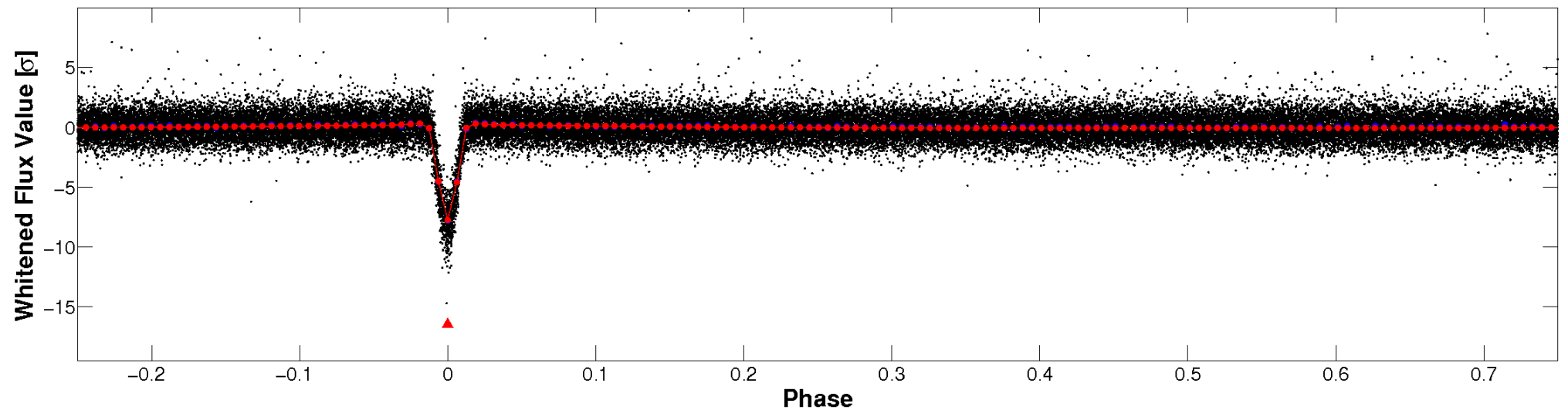


Non-Whitened Vs. Whitened Light Curve

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

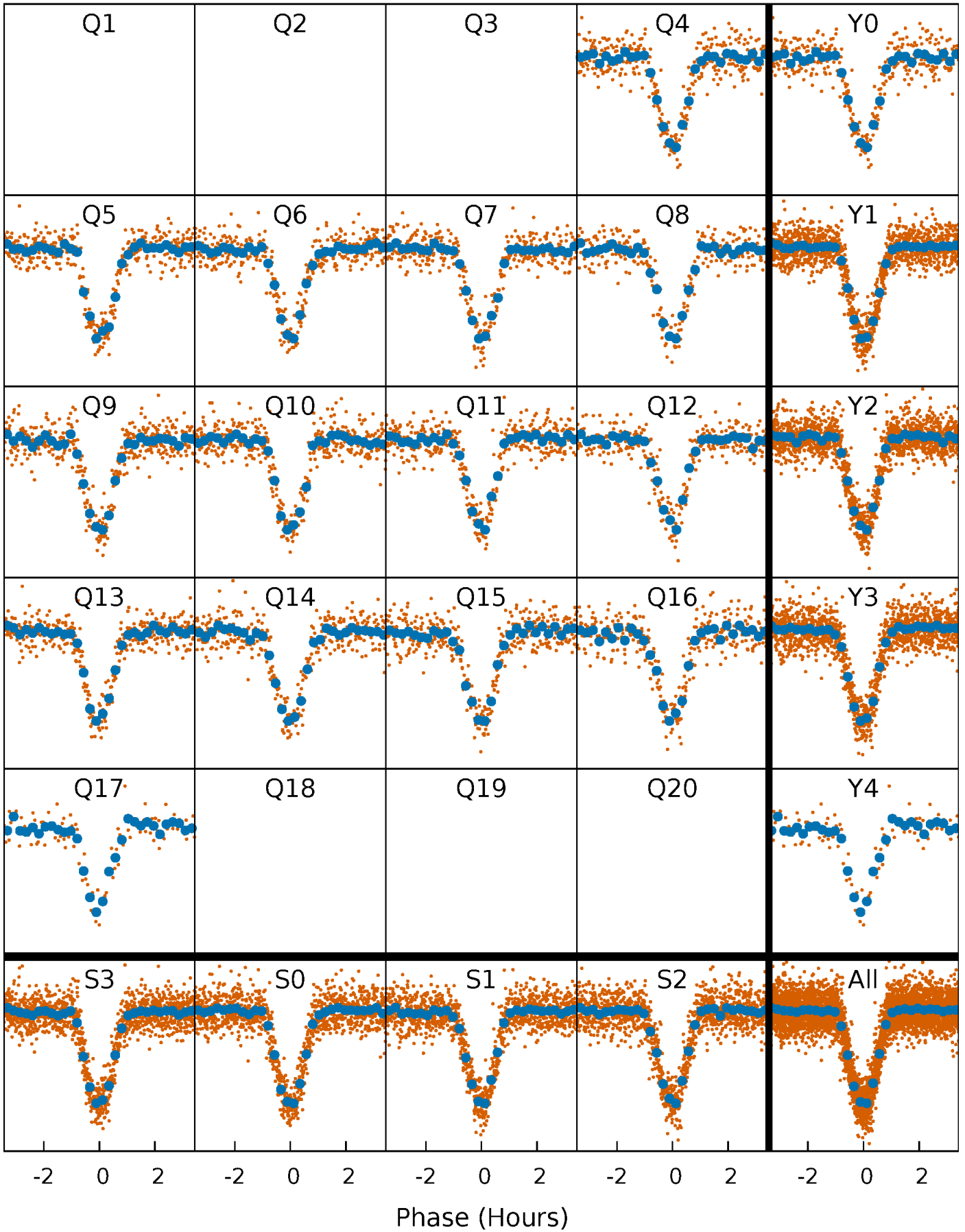


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



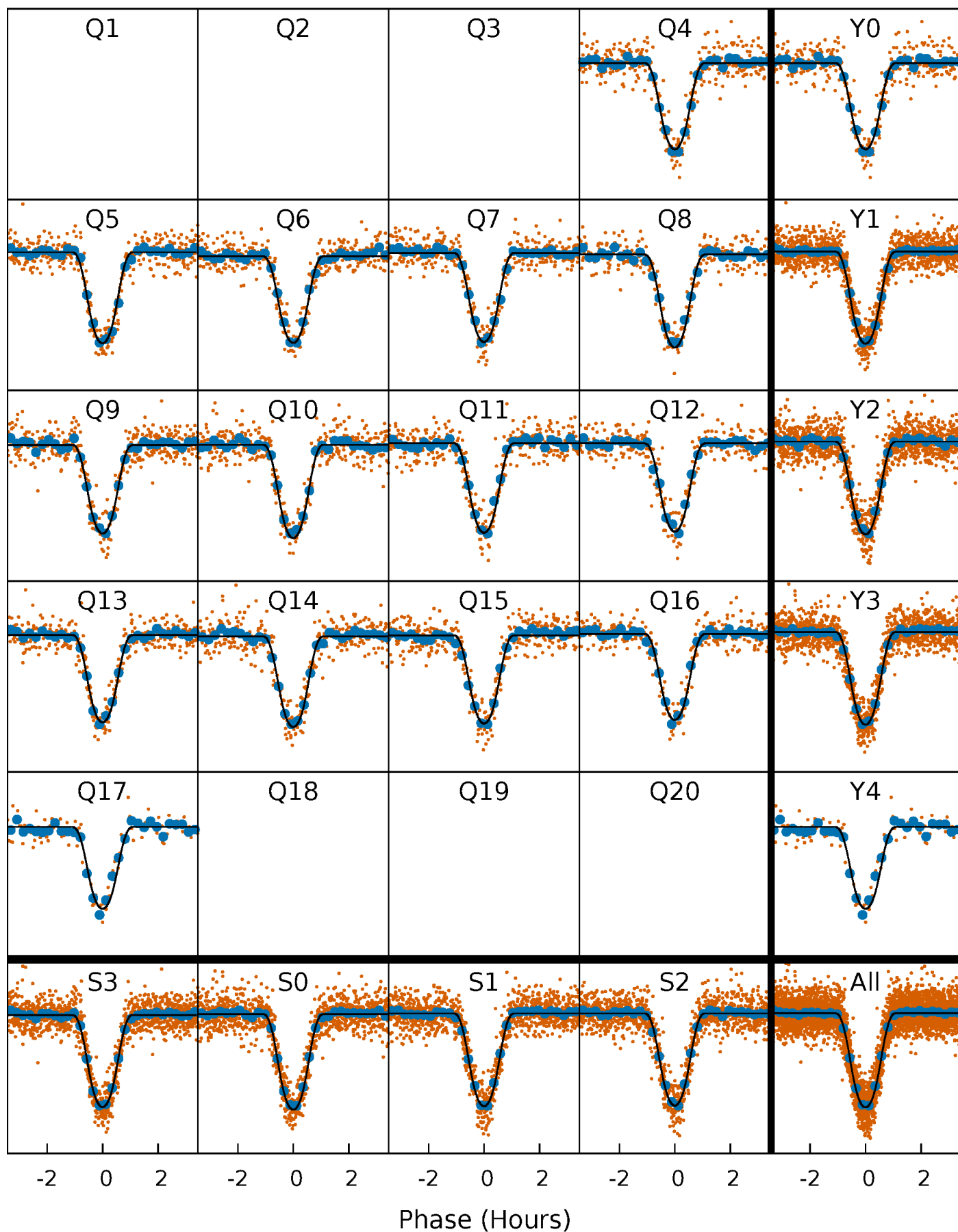
PDC Quarter-Phased Transit Curves

TCE 005731623-01 P= 3.261767 Days $T_0=131.777170$ (BKJD)



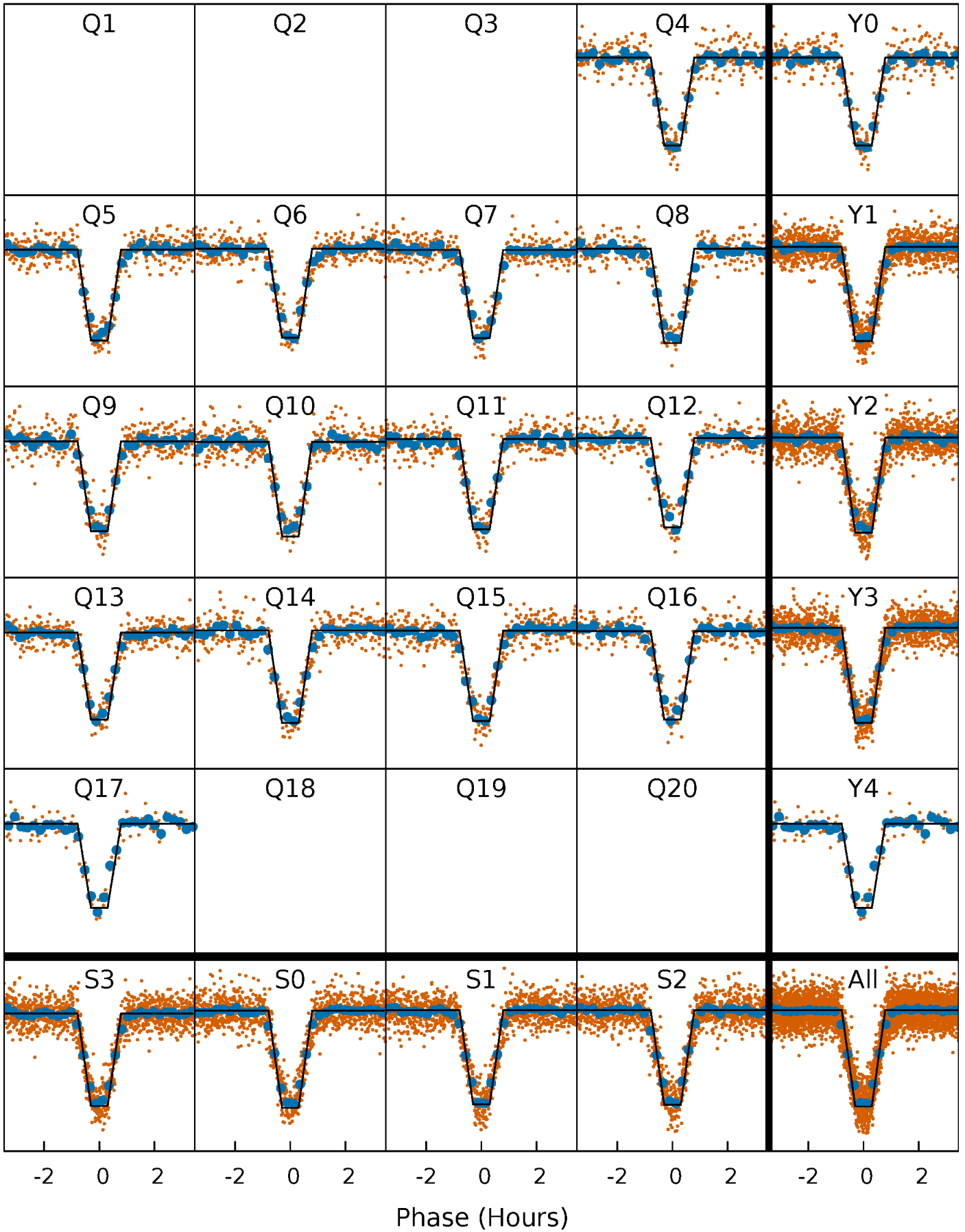
DV Quarter-Phased Transit Curves

TCE 005731623-01 P= 3.261767 Days $T_0=131.777170$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

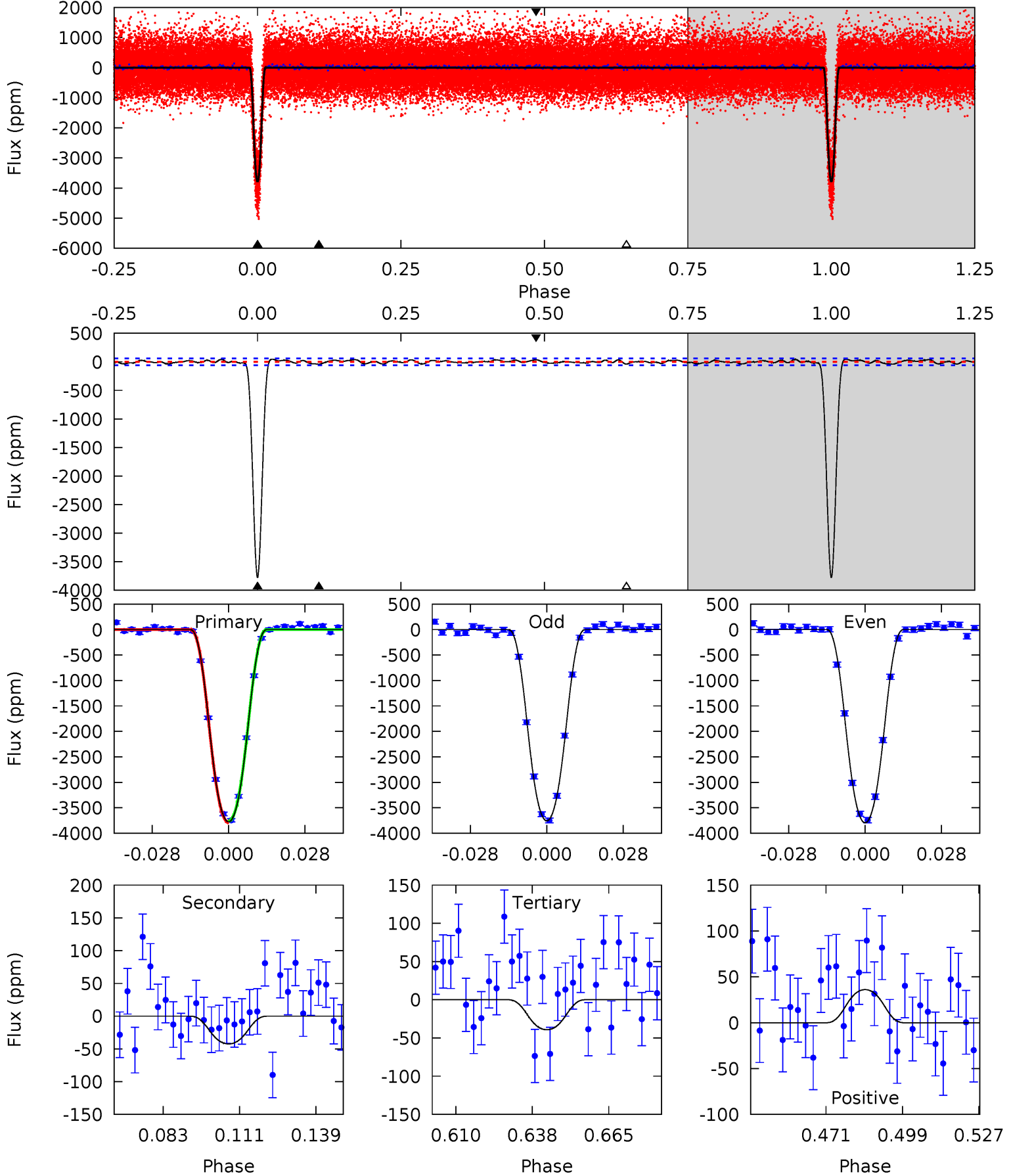
TCE 005731623-01 P= 3.261764 Days $T_0=131.777853$ (BKJD)



DV Model-Shift Uniqueness Test

005731623-01, P = 3.261767 Days, E = 131.777170 Days

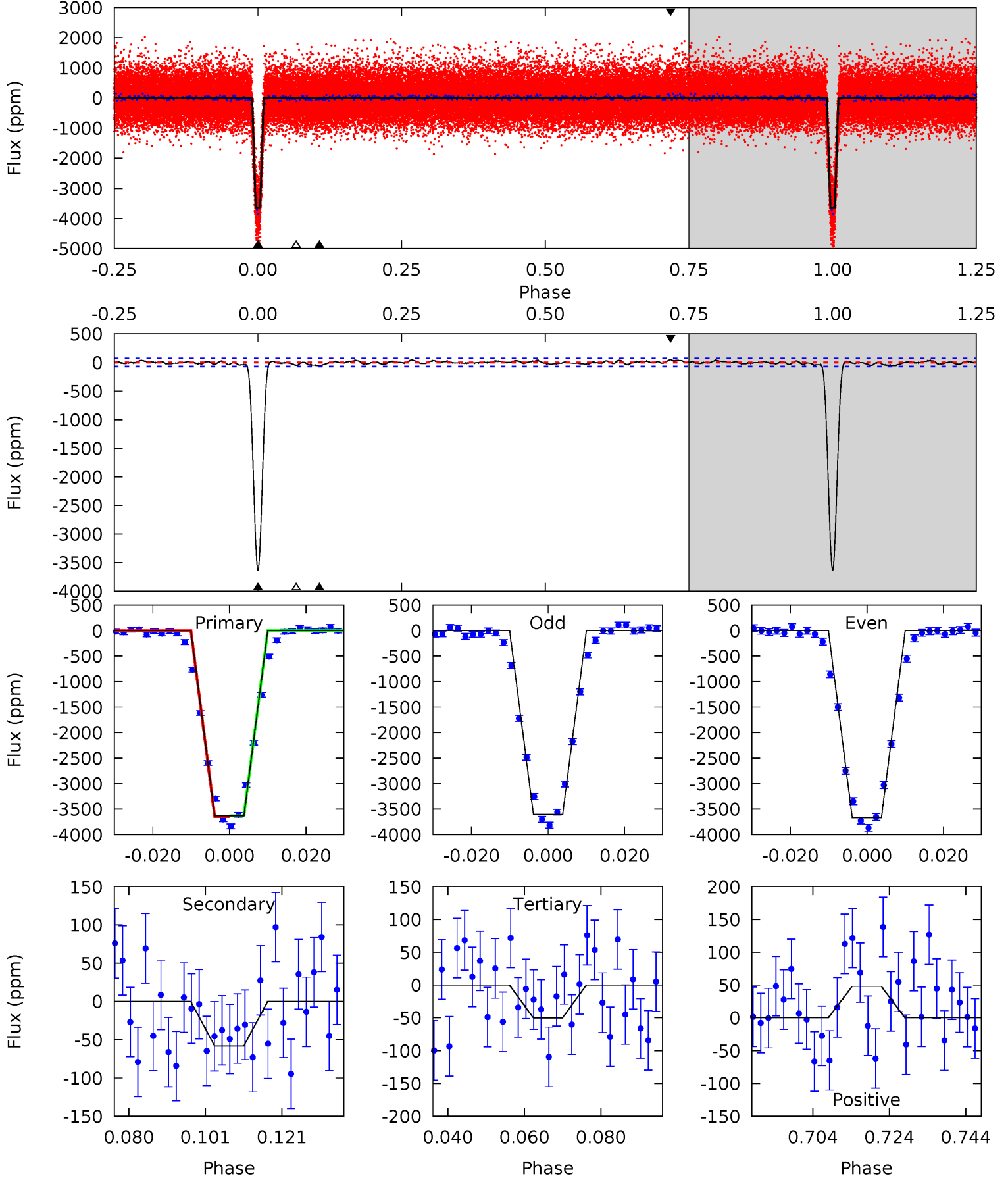
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
310.9	3.49	3.23	2.97	4.83	2.20	1.52	307.7	307.9	0.26	0.52	1.53	1.00	0.01	1.19



Alt Model-Shift Uniqueness Test

005731623-01, P = 3.261764 Days, E = 131.777853 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
251.3	4.02	3.46	3.32	4.89	2.32	1.27	247.8	248.0	0.56	0.70	2.14	1.00	0.01	0.47



Stellar Parameters For KIC 005731623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6131^{+191}_{-234}	$4.497^{+0.054}_{-0.229}$	$-0.240^{+0.250}_{-0.300}$	$0.945^{+0.315}_{-0.105}$	$1.023^{+0.138}_{-0.138}$	$1.707^{+0.401}_{-0.982}$
	+3%/-4%	+1%/-5%	+104%/-125%	+33%/-11%	+13%/-13%	+24%/-58%
Source	KIC0	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 005731623-01 / KOI 1793.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-42 ± 12	$7.49^{+1.31}_{-0.67}$	1805^{+137}_{-90}	2465^{+151}_{-216}	$0.704^{+0.297}_{-0.237}$
Alt.	-58 ± 14	$6.61^{+1.18}_{-0.57}$	1808^{+137}_{-102}	2759^{+116}_{-164}	$1.276^{+0.444}_{-0.418}$

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

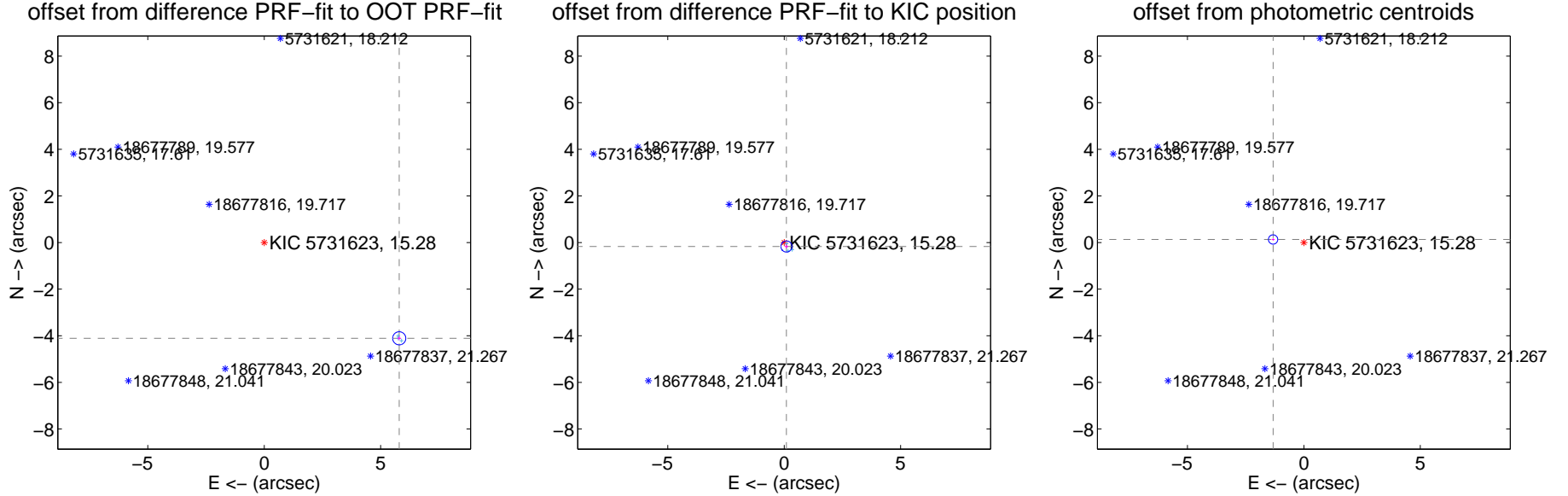
DV Centroid Data

Supplemental centroid analysis for 005731623-01. Kepler magnitude: 15.28. Transit SNR 186.50

There are 14 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.91 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.106 ± 0.094	75.64	-5.797 ± 0.080	-4.109 ± 0.086
PRF-fit source offset from KIC position	0.195 ± 0.080	2.45	-0.096 ± 0.078	-0.169 ± 0.080
photometric centroid source offset	1.33 ± 0.07	19.90	1.32 ± 0.07	0.13 ± 0.05



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



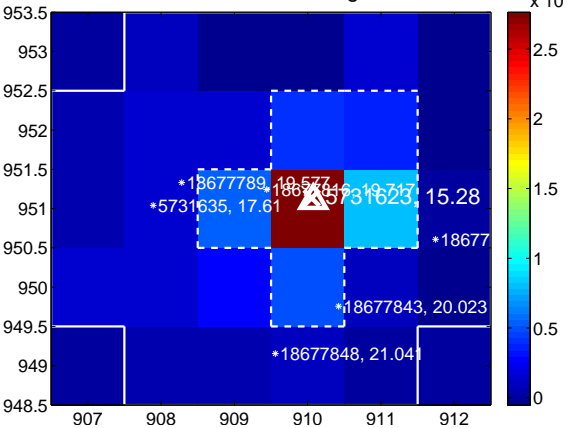
Q3 no difference image



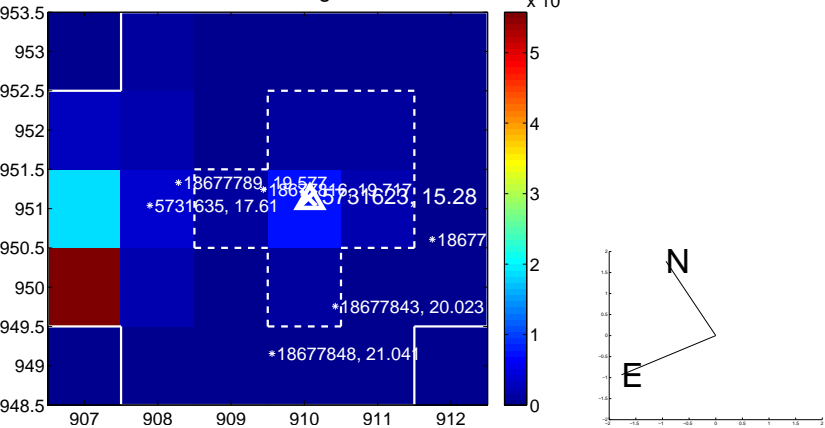
Q3 no OOT image



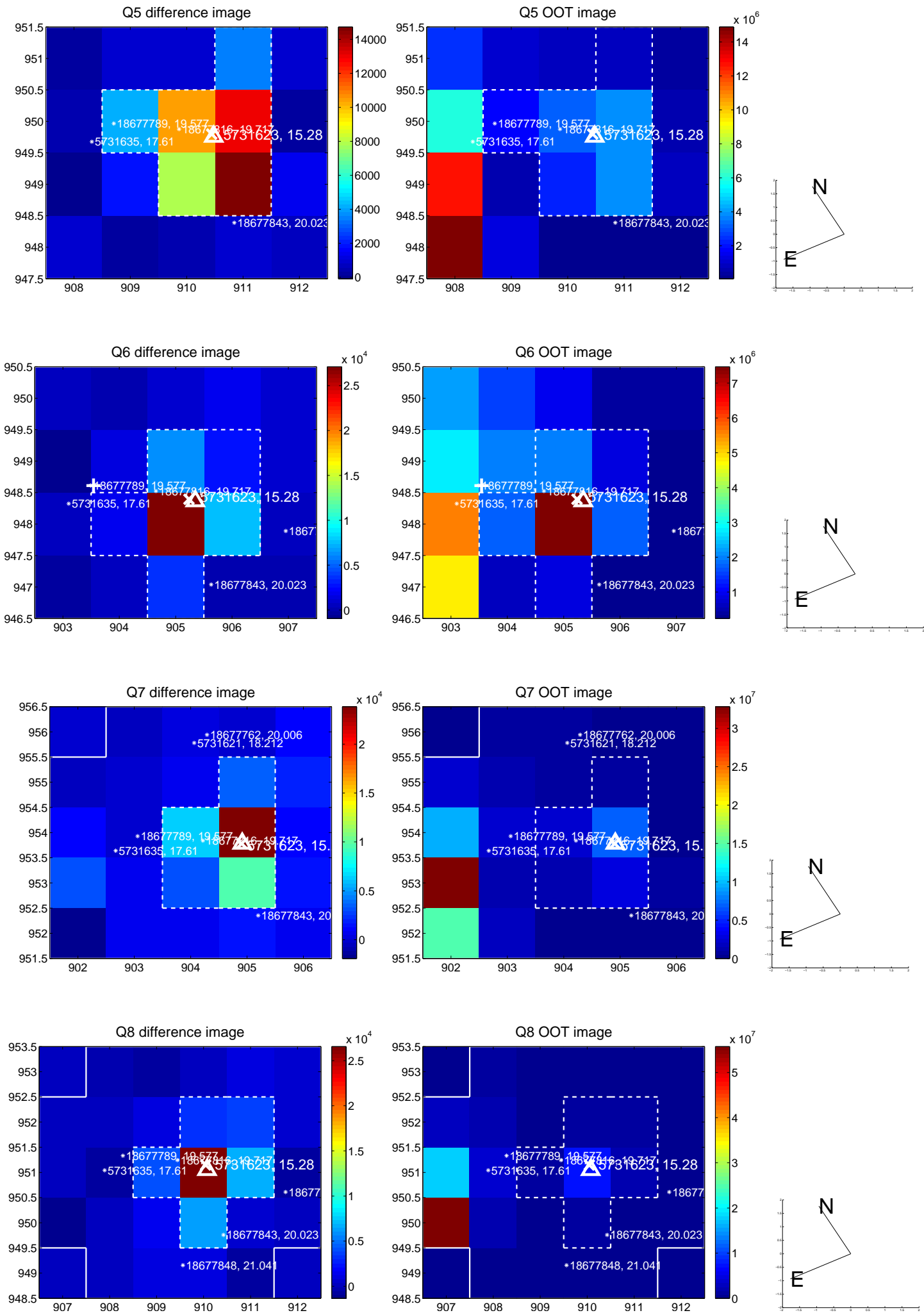
Q4 difference image



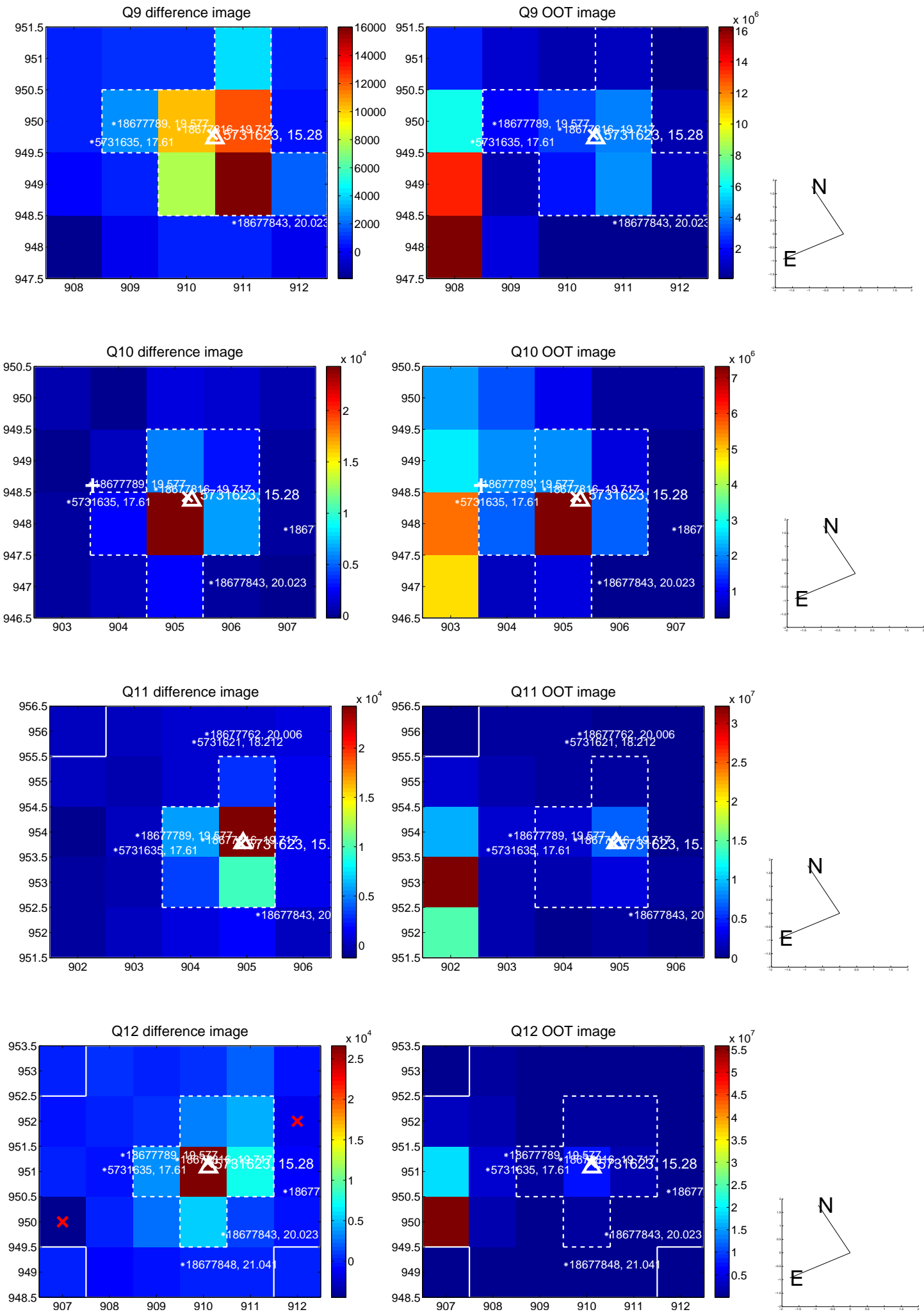
Q4 OOT image



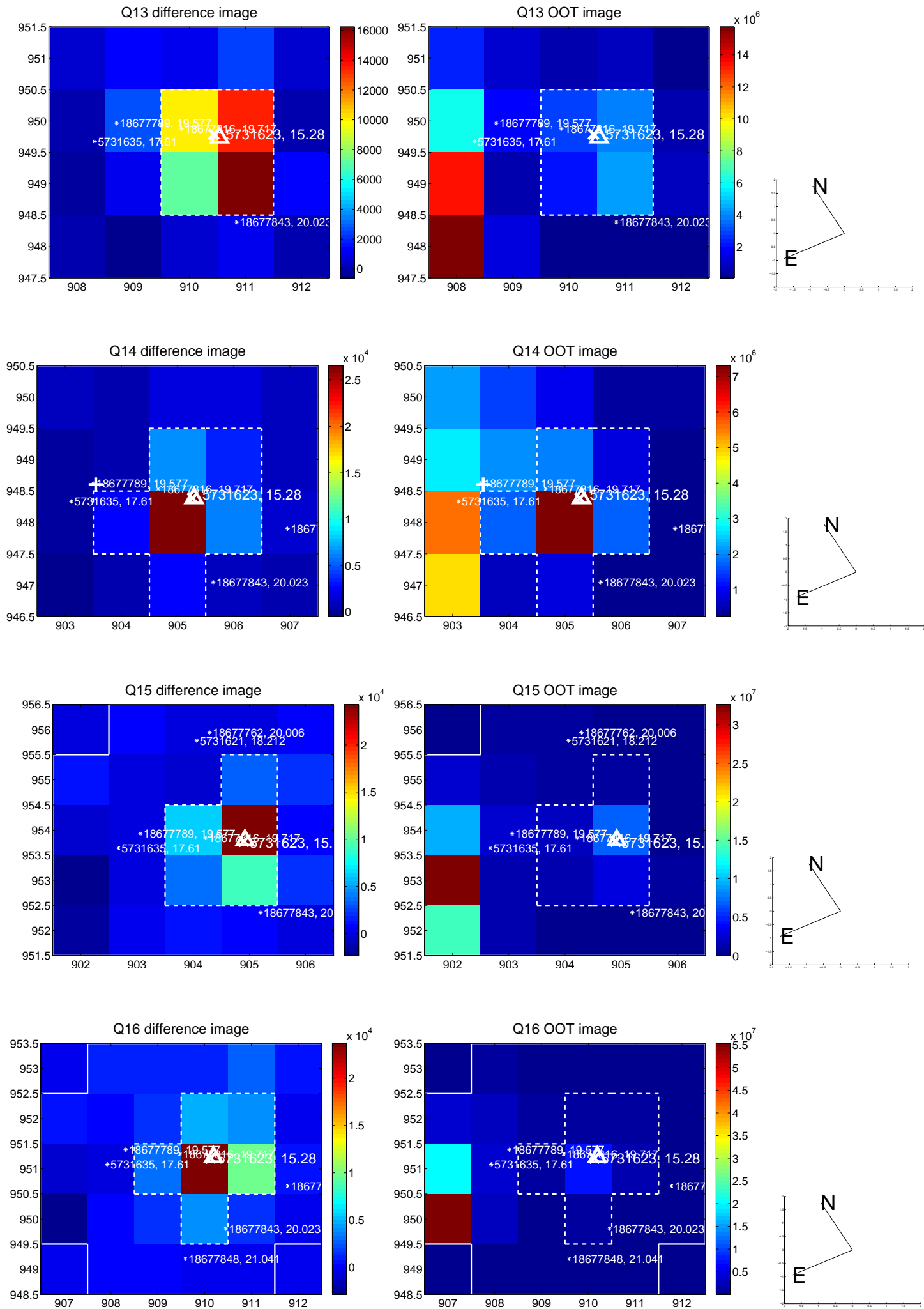
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



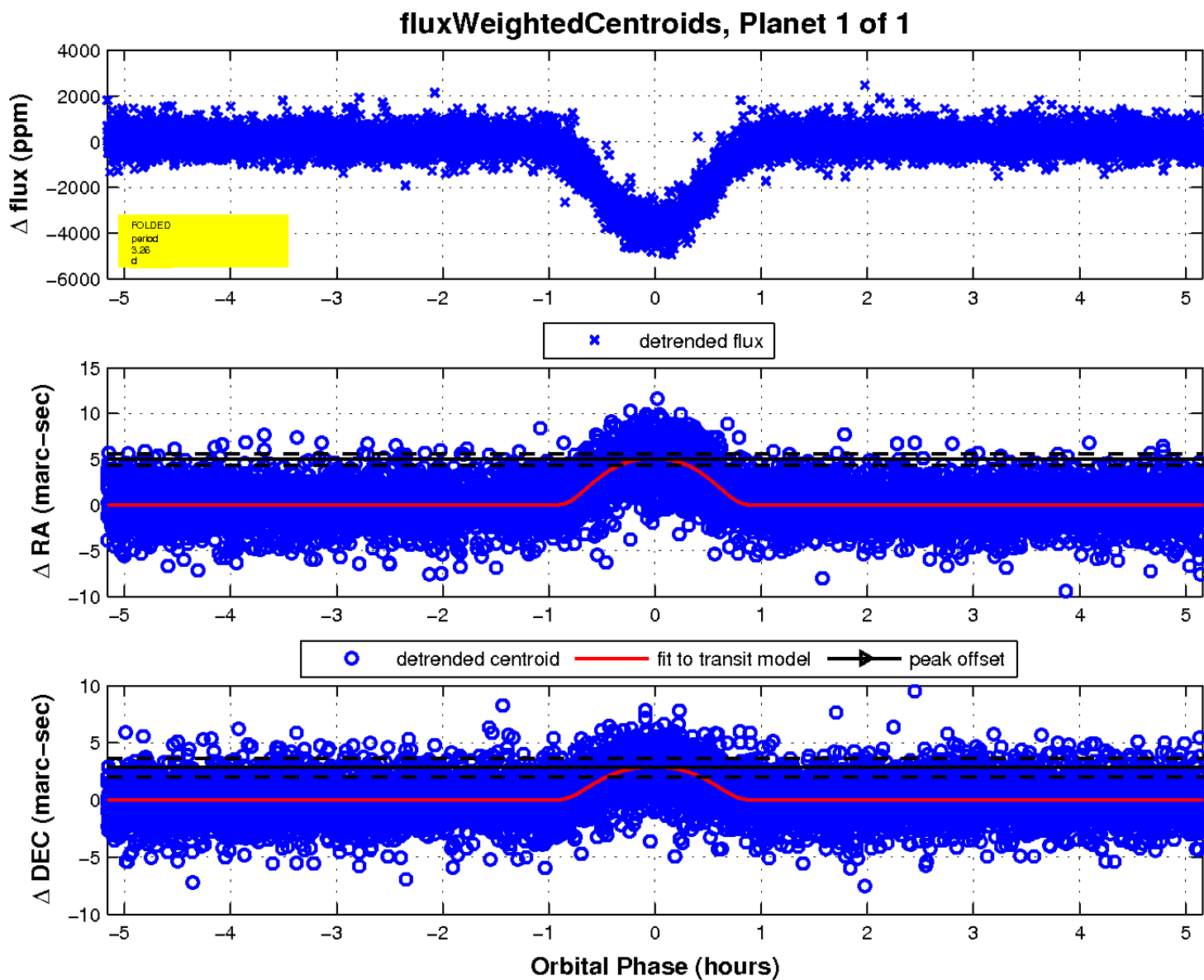
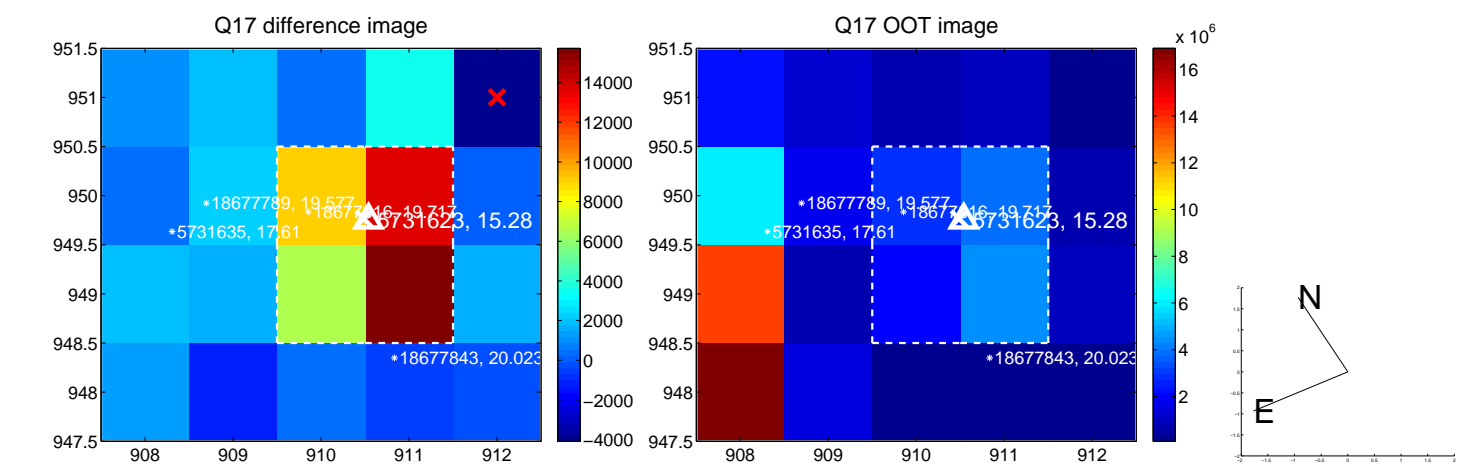
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

