

KIC 006867155

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})
006867155-01	OBS	0868.01	235.998905	208.399106	20768.8	8.285	311.3	276.9	0.66	4245	10.67	0.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006867155-01	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.

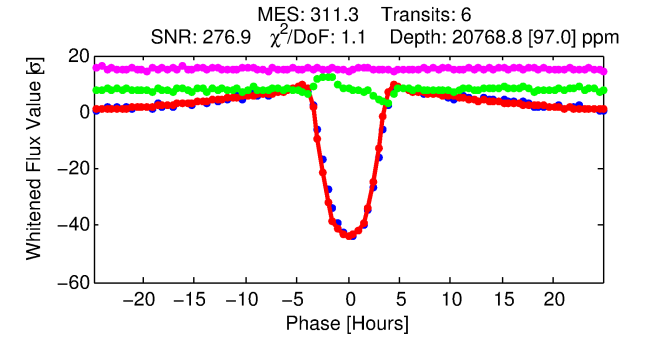
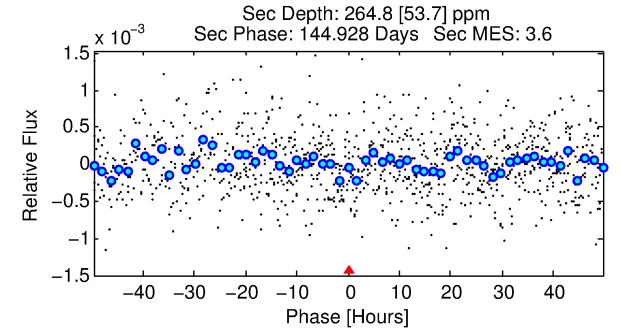
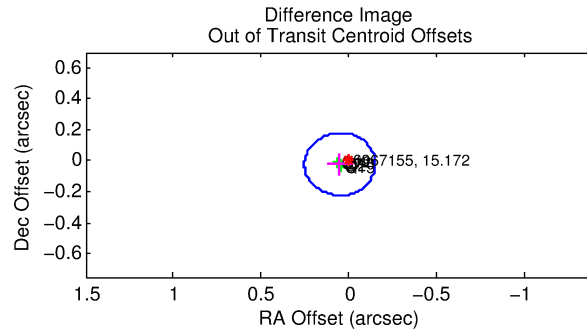
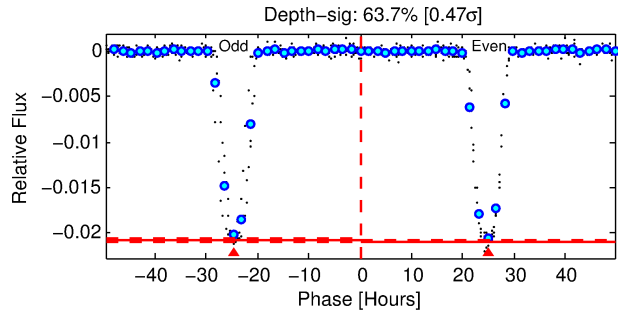
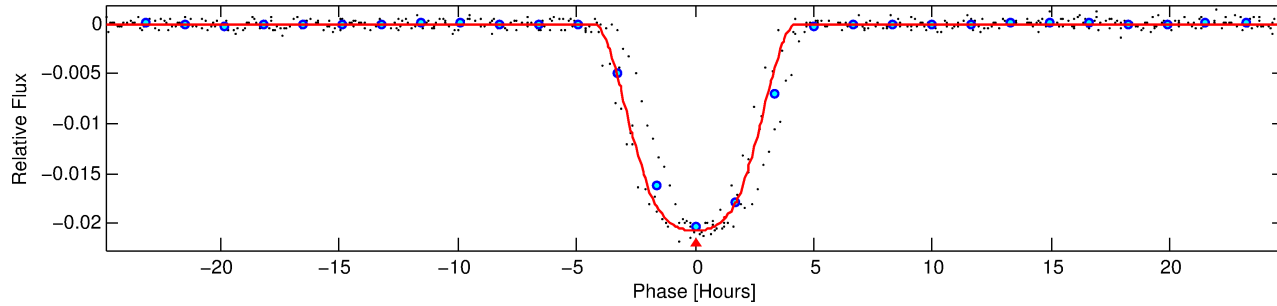
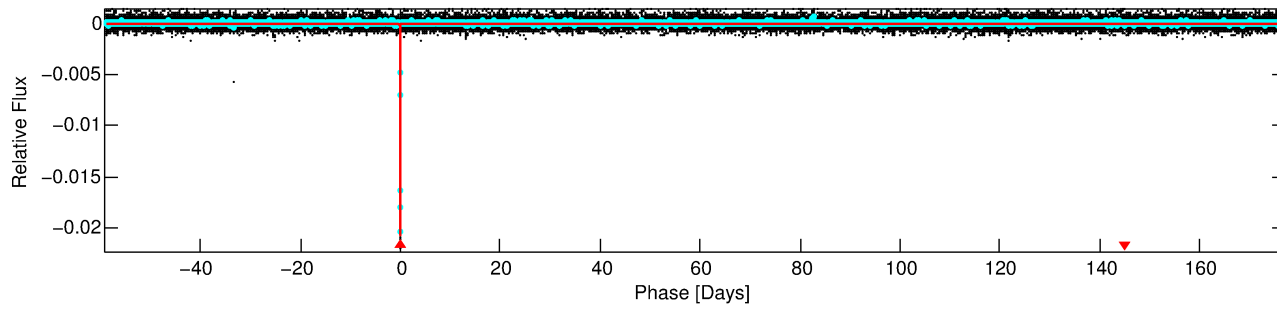
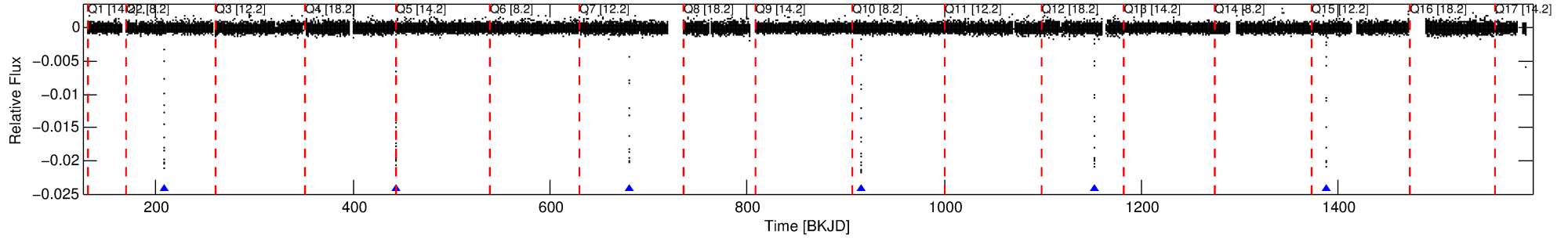
Ephemeris Match Information For 006867155-01

No Significant Match Found

DV One-Page Summary

KIC: 6867155 Candidate: 1 of 1 Period: 235.999 d
KOI: K00868.01 Corr: 0.996

Kp: 15.17 R*: 0.66 Rs Teff: 4245.0 K Logg: 4.63 Fe/H: 0.120



DV Fit Results:

Period = 235.99891 [0.00019] d
Epoch = 208.3991 [0.0006] BKJD
Rp/R* = 0.1488 [0.0008]
a/R* = 182.17 [1.73]
b = 0.79 [0.01]
Seff = 0.29 [0.03]
Teq = 188 [5] K
Rp = 10.67 [0.52] Re
a = 0.6532 [0.0260] AU
Ag = 545.91 [115.12] [4.73σ]
Teffp = 1404 [77] K [15.83σ]

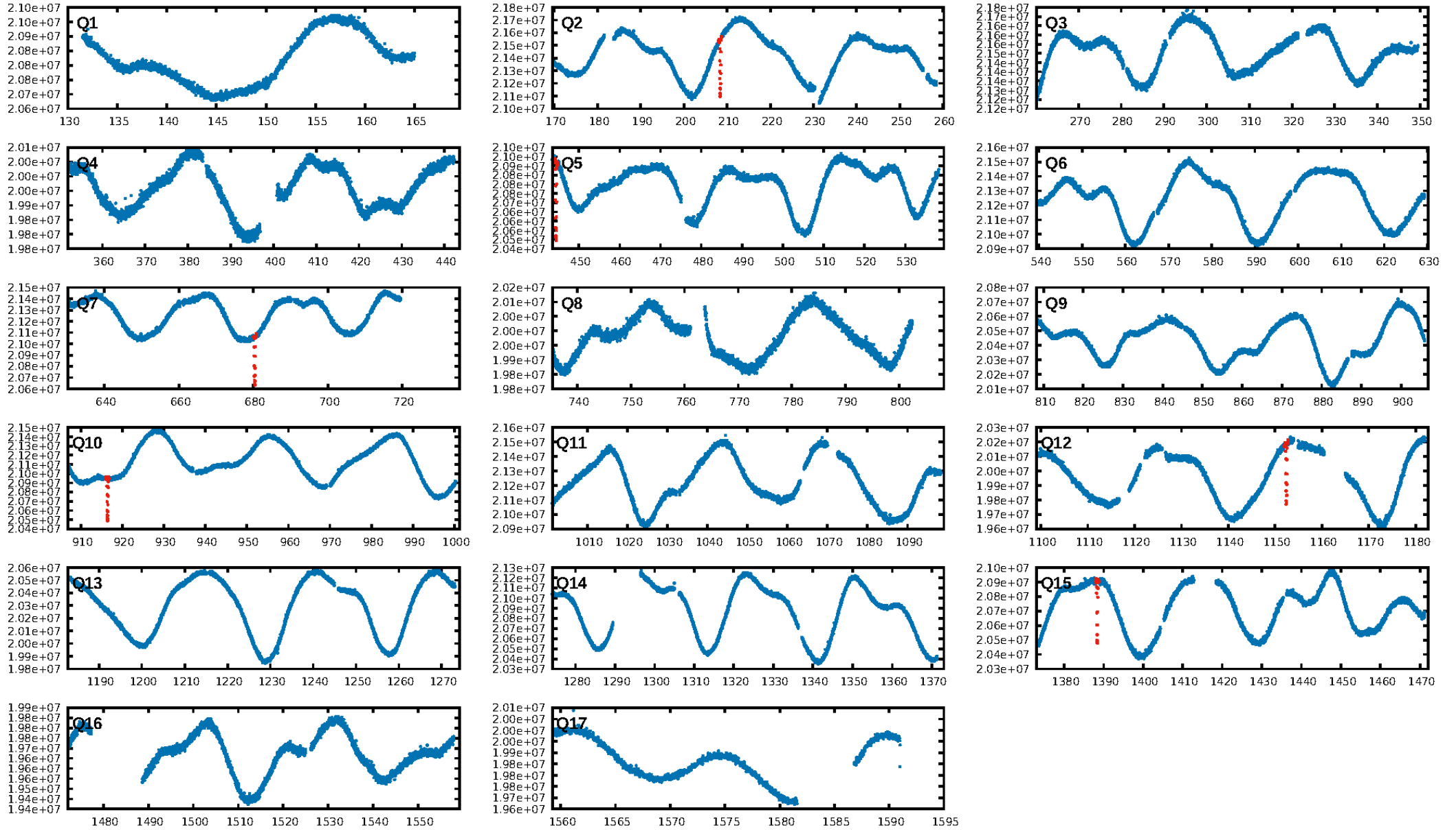
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.8%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 2.969
Centroid-sig: 0.0%
Centroid-so: 0.159 arcsec [3.52σ]
OotOffset-rm: 0.056 arcsec [0.83σ]
KicOffset-rm: 0.123 arcsec [1.61σ]
OotOffset-st: 2/2/1/0 [5]
KicOffset-st: 2/2/1/0 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [5/5]

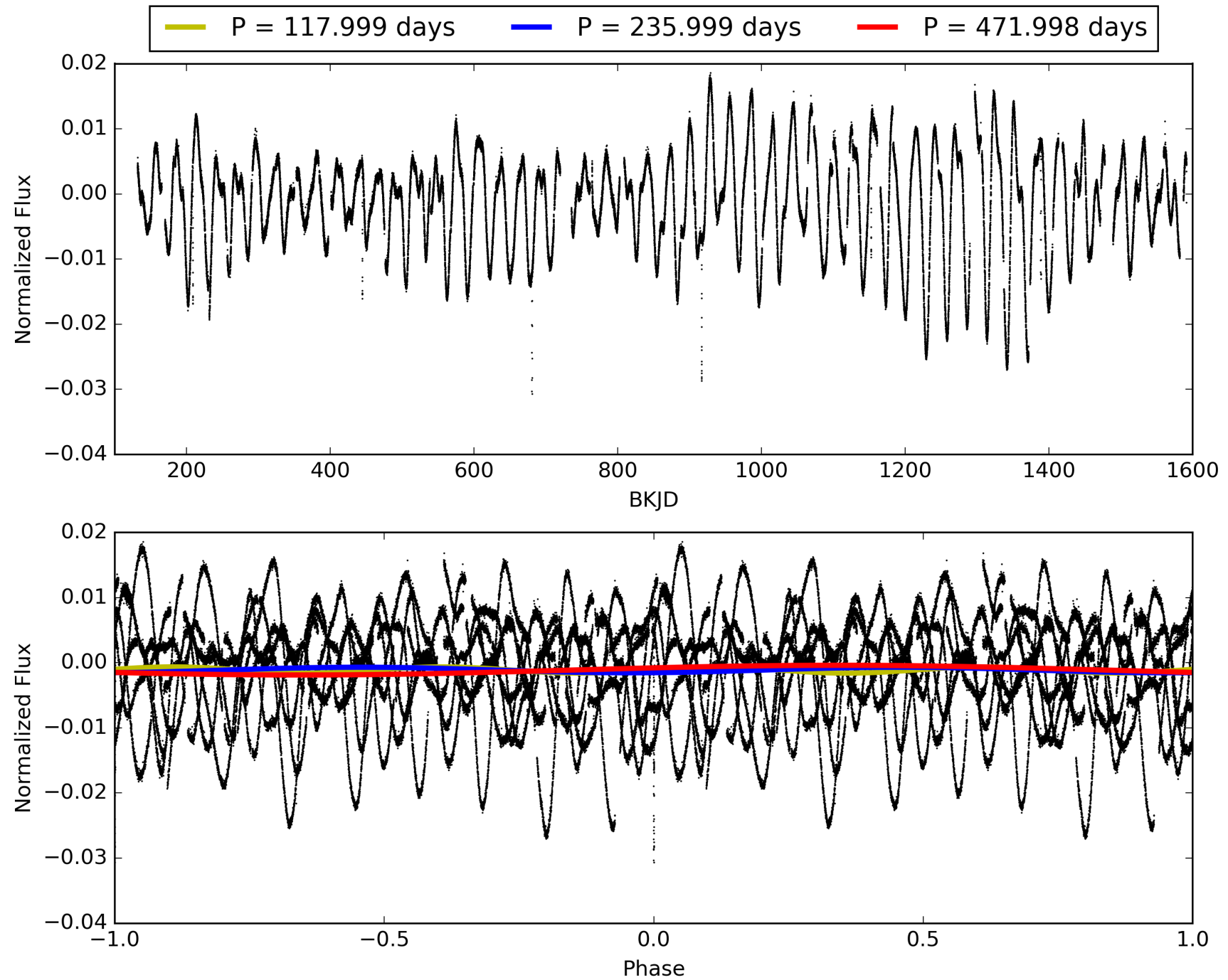
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:16 Z

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

TCE 006867155-01, PDC Light Curves

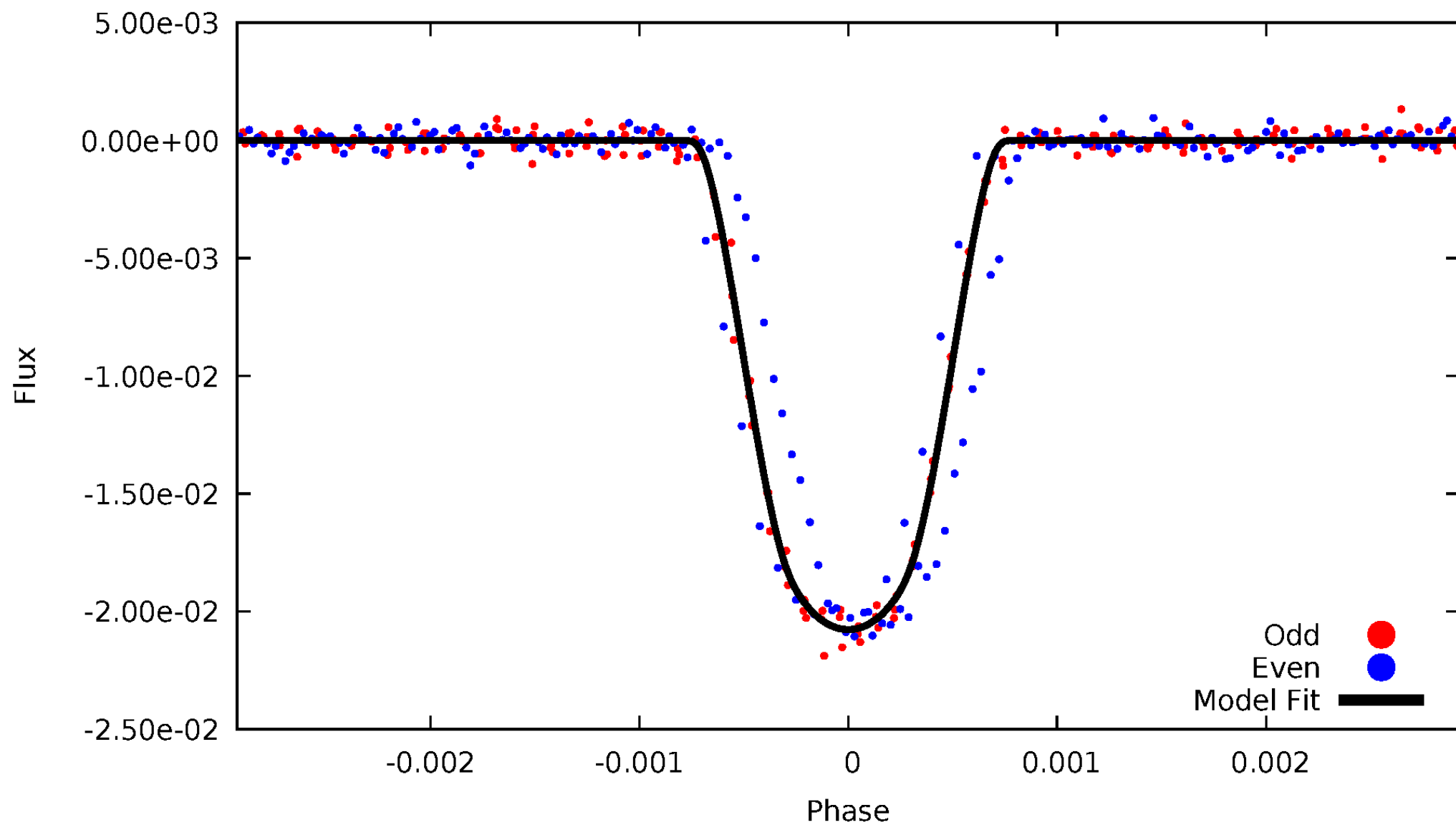


TCE 006867155-01



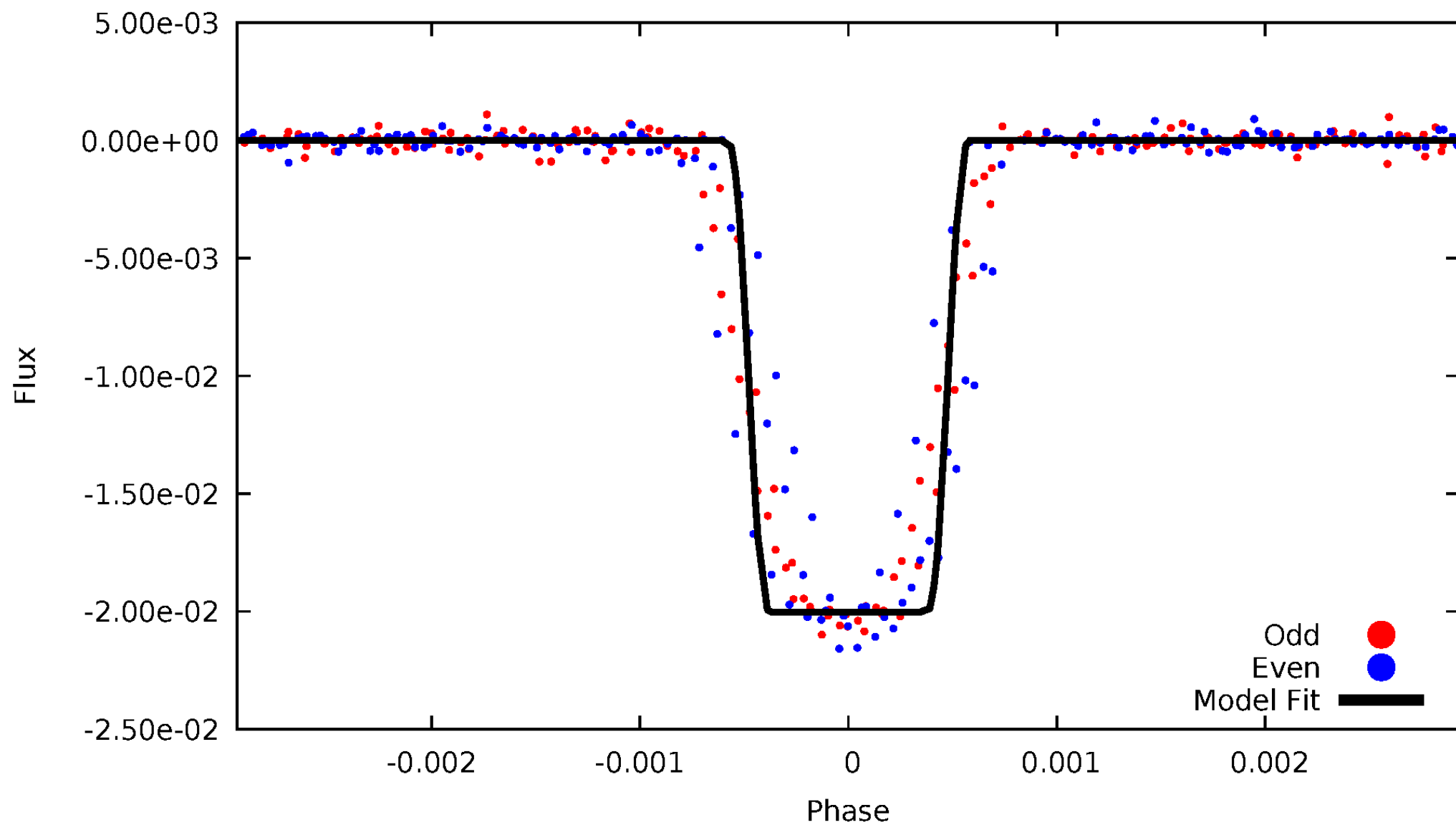
DV Odd/Even

TCE 006867155-01



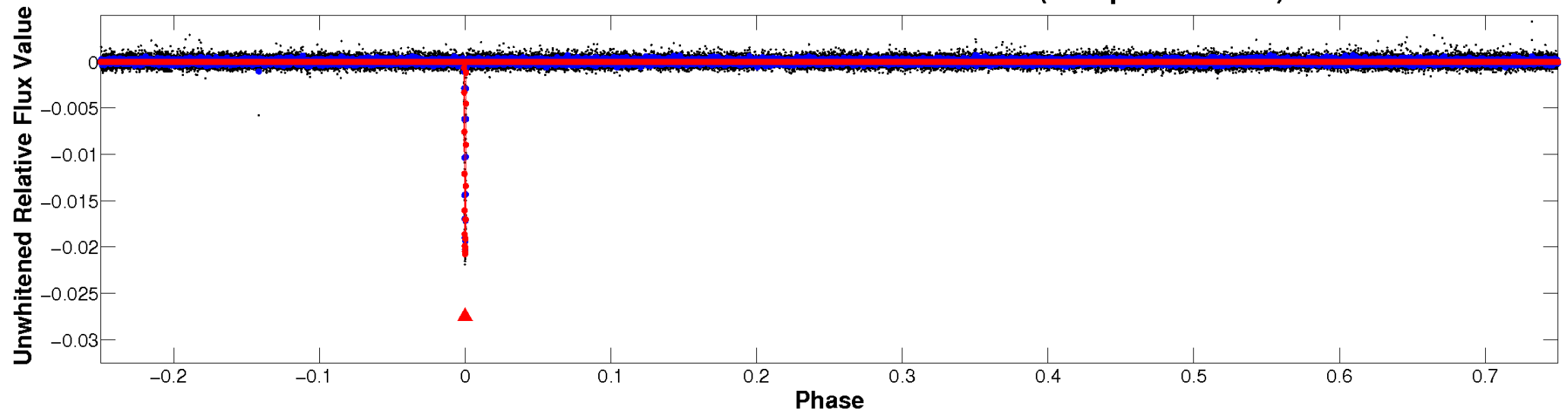
ALT Odd/Even

TCE 006867155-01

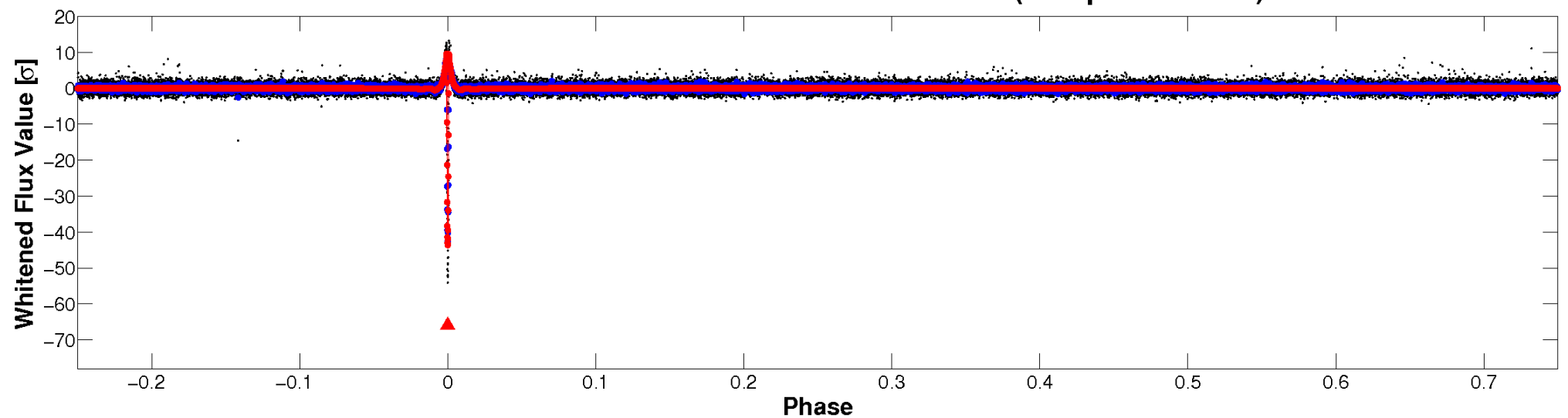


Non-Whitened Vs. Whitened Light Curve

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

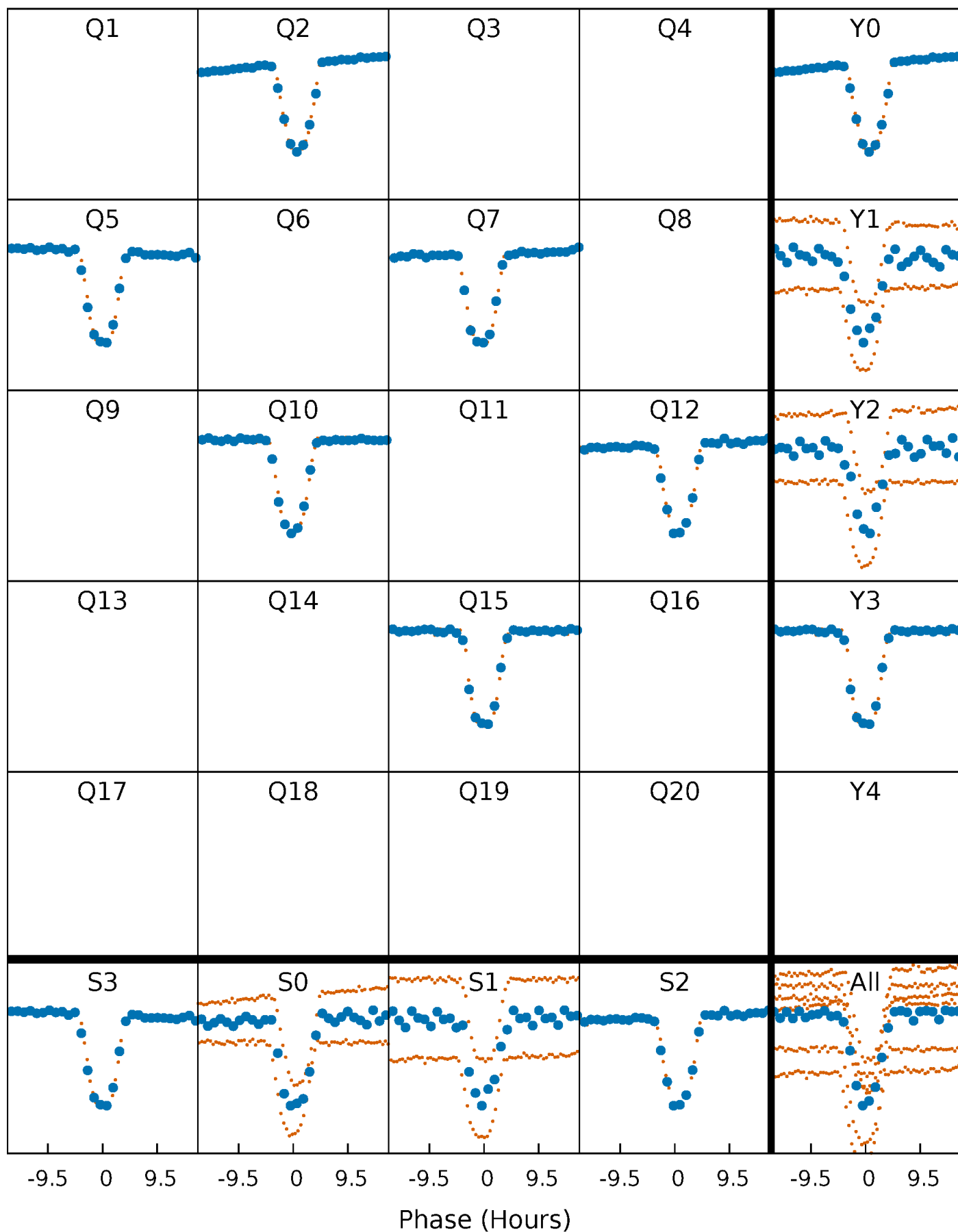


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



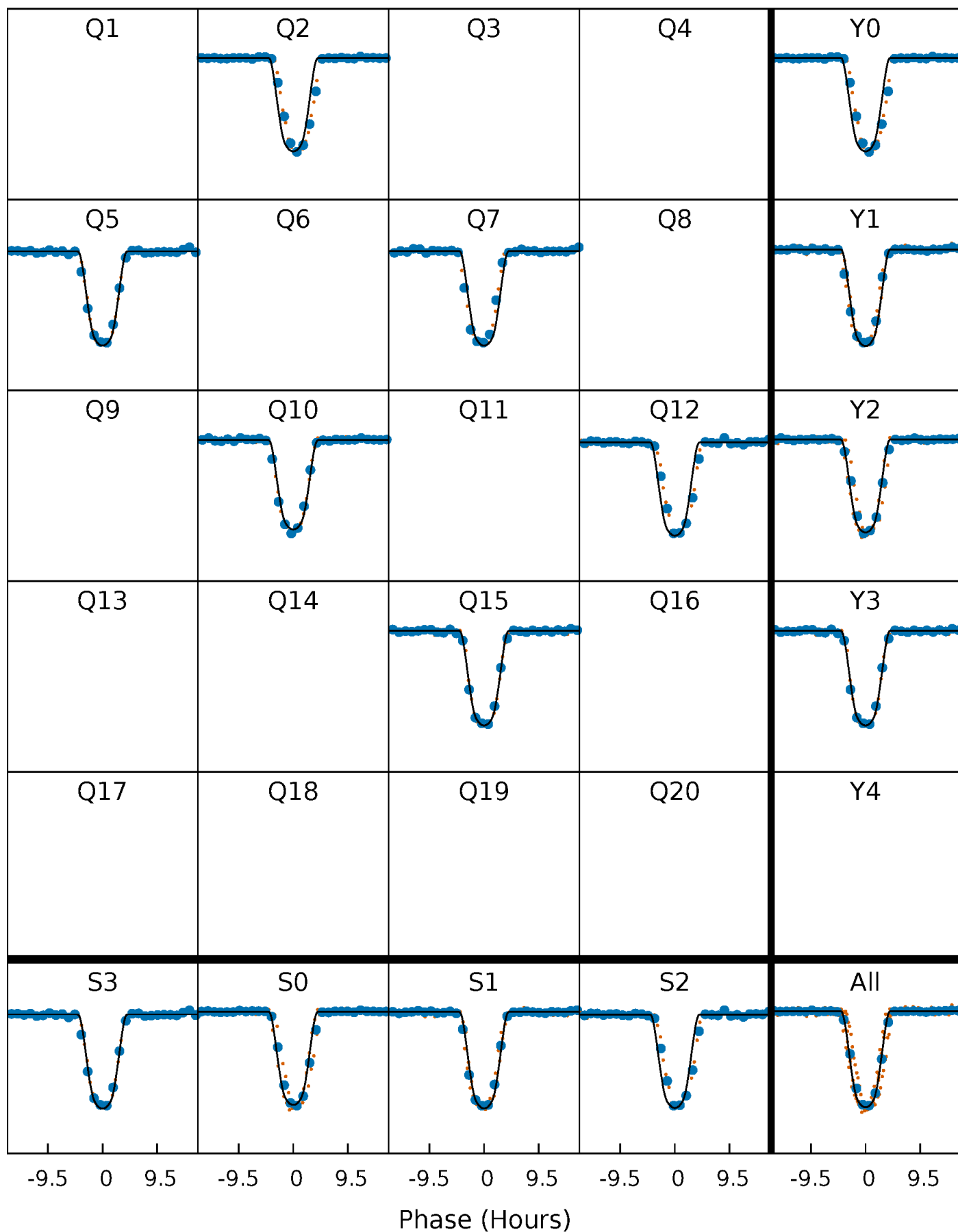
PDC Quarter-Phased Transit Curves

TCE 006867155-01 P=235.998905 Days $T_0=208.399106$ (BKJD)



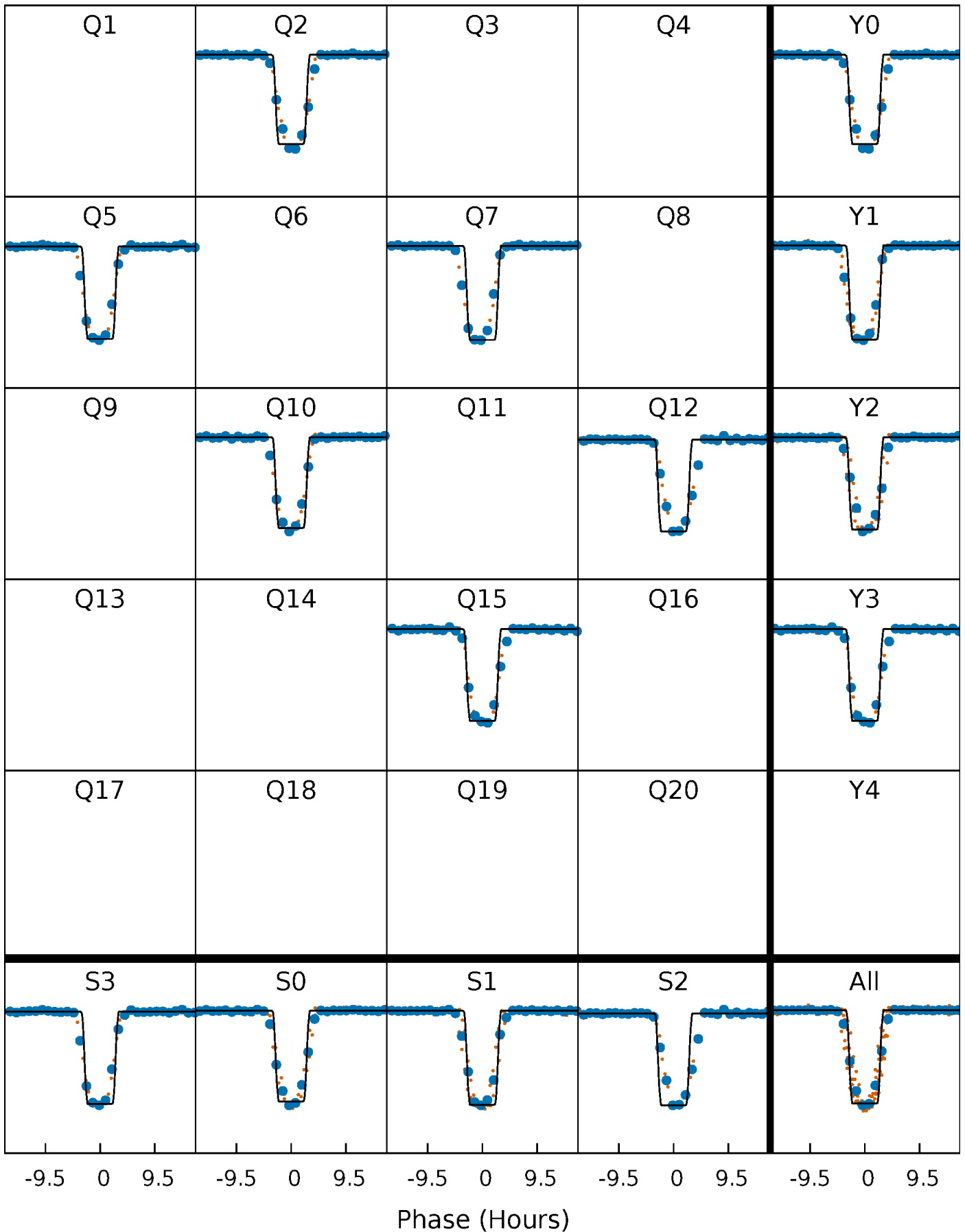
DV Quarter-Phased Transit Curves

TCE 006867155-01 P=235.998905 Days $T_0=208.399106$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

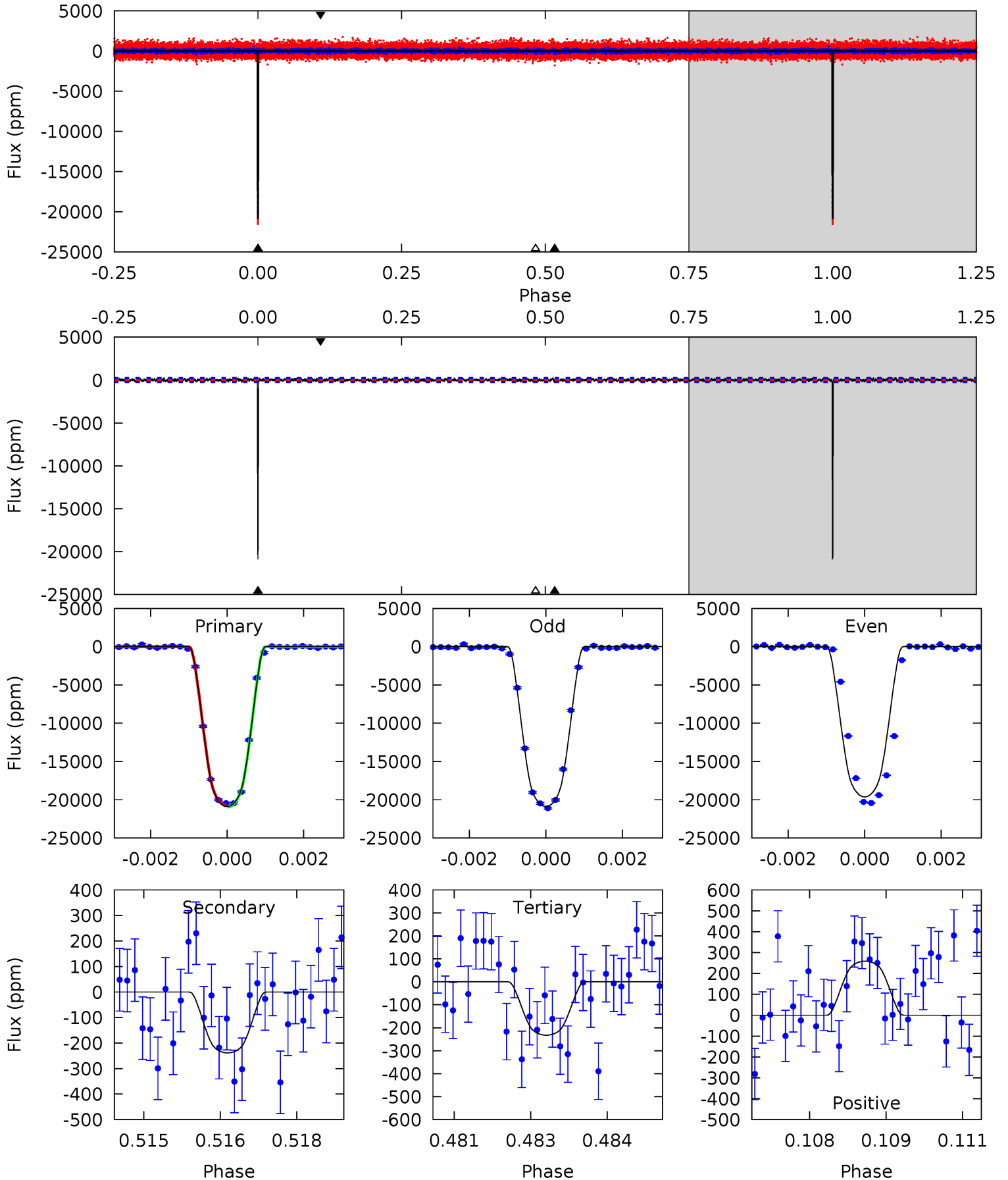
TCE 006867155-01 P=235.993996 Days $T_0=208.416363$ (BKJD)



DV Model-Shift Uniqueness Test

006867155-01, P = 235.998905 Days, E = 208.399106 Days

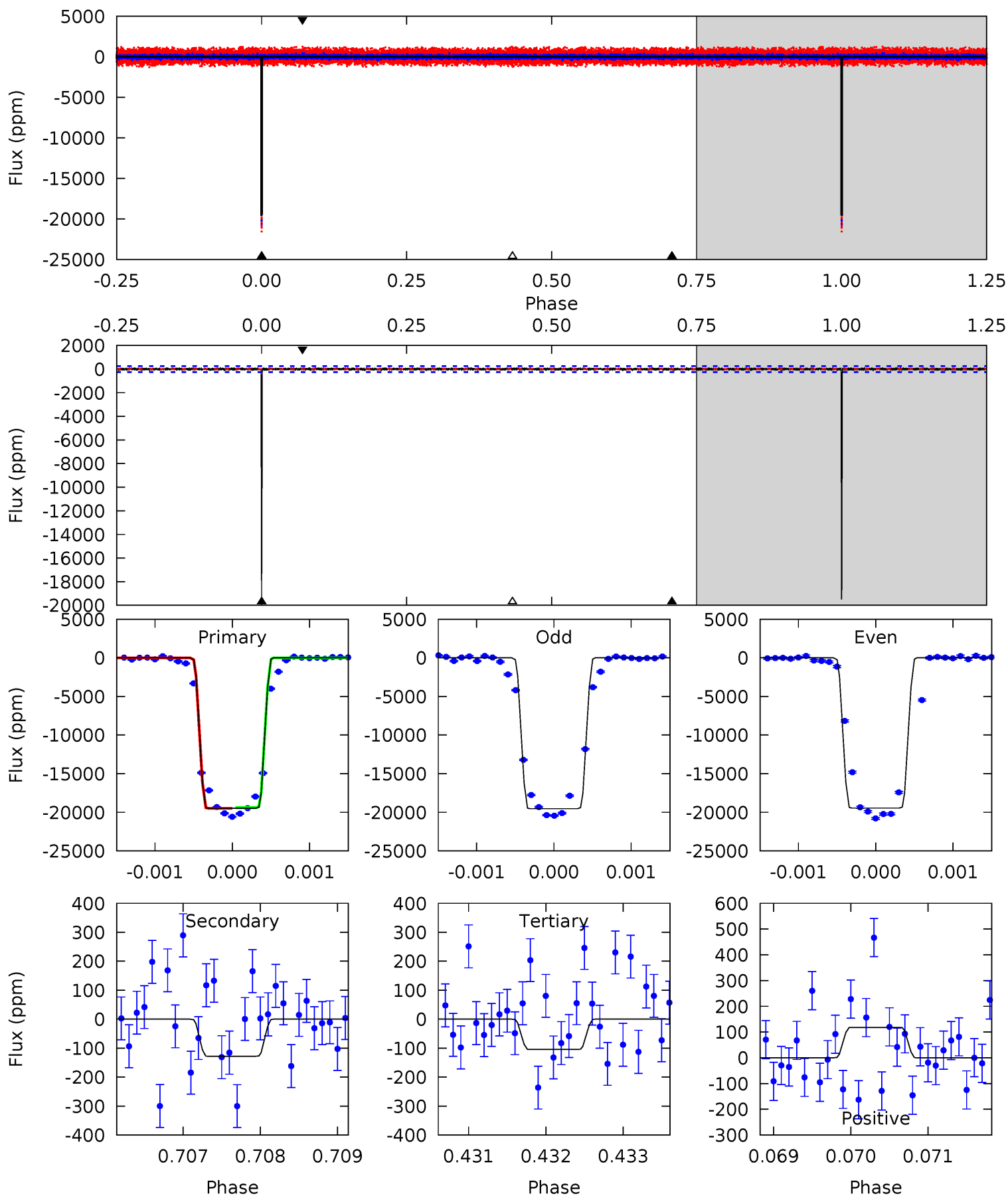
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
463.9	5.30	5.17	5.75	5.38	3.17	1.49	458.7	458.1	0.13	-0.45	15.4	1.00	0.01	1.85



Alt Model-Shift Uniqueness Test

006867155-01, P = 235.993996 Days, E = 208.416363 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
415.0	2.73	2.22	2.52	5.43	3.26	0.54	412.8	412.5	0.50	0.21	0.87	0.99	0.01	0.94



Stellar Parameters For KIC 006867155

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4245^{+85}_{-85}	$4.627^{+0.030}_{-0.018}$	$0.120^{+0.150}_{-0.150}$	$0.657^{+0.022}_{-0.032}$	$0.666^{+0.031}_{-0.031}$	$3.309^{+0.422}_{-0.236}$
	+2%/-2%	+1%/-0%	+125%/-125%	+3%/-5%	+5%/-5%	+13%/-7%
Source	SPE60	SPE60	SPE60	DSEP		

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

Secondary Eclipse Parameters for KIC 006867155-01 / KOI 0868.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-239 ± 45	$10.68^{+0.23}_{-0.30}$	262^{+6}_{-6}	2230^{+53}_{-55}	497^{+91}_{-89}
Alt.	-128 ± 47	$10.14^{+0.24}_{-0.29}$	262^{+6}_{-6}	2107^{+76}_{-99}	292^{+113}_{-100}

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

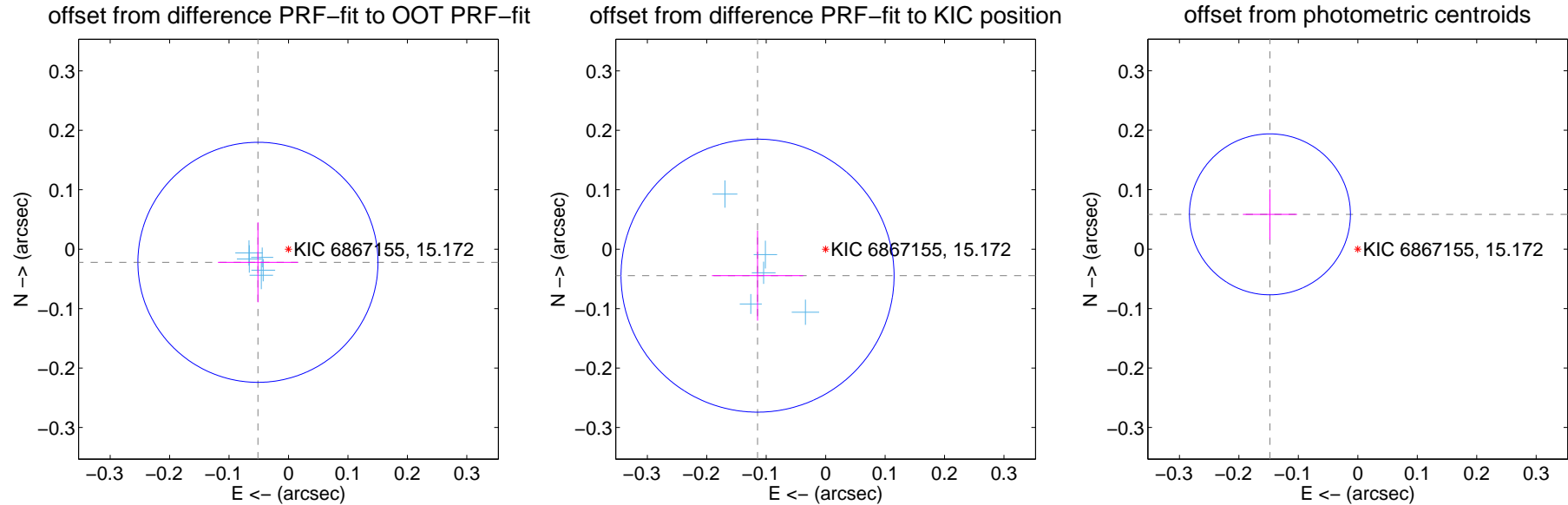
DV Centroid Data

Supplemental centroid analysis for 006867155-01. Kepler magnitude: 15.17. Transit SNR 276.88

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.067	0.83	0.051 ± 0.067	-0.022 ± 0.067
PRF-fit source offset from KIC position	0.123 ± 0.077	1.61	0.115 ± 0.077	-0.045 ± 0.076
photometric centroid source offset	0.16 ± 0.05	3.52	0.15 ± 0.05	0.06 ± 0.04



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.

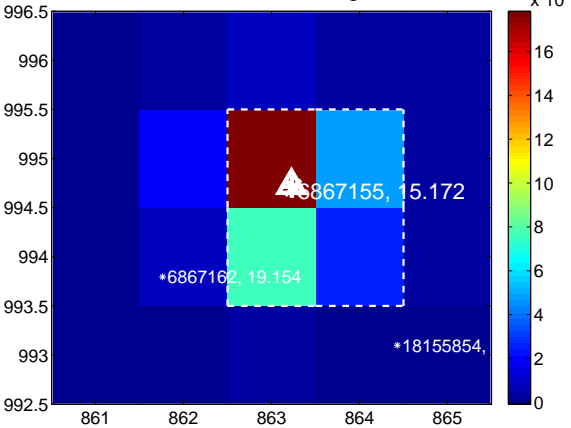
Q1 no difference image



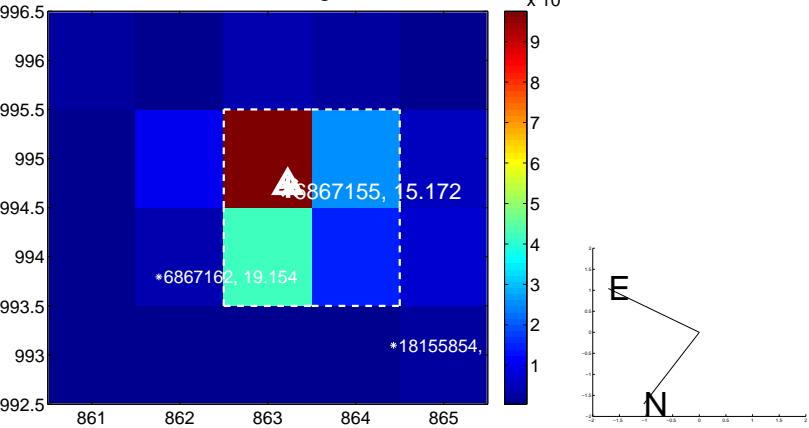
Q1 no OOT image



Q2 difference image



Q2 OOT image



Q3 no difference image



Q3 no OOT image



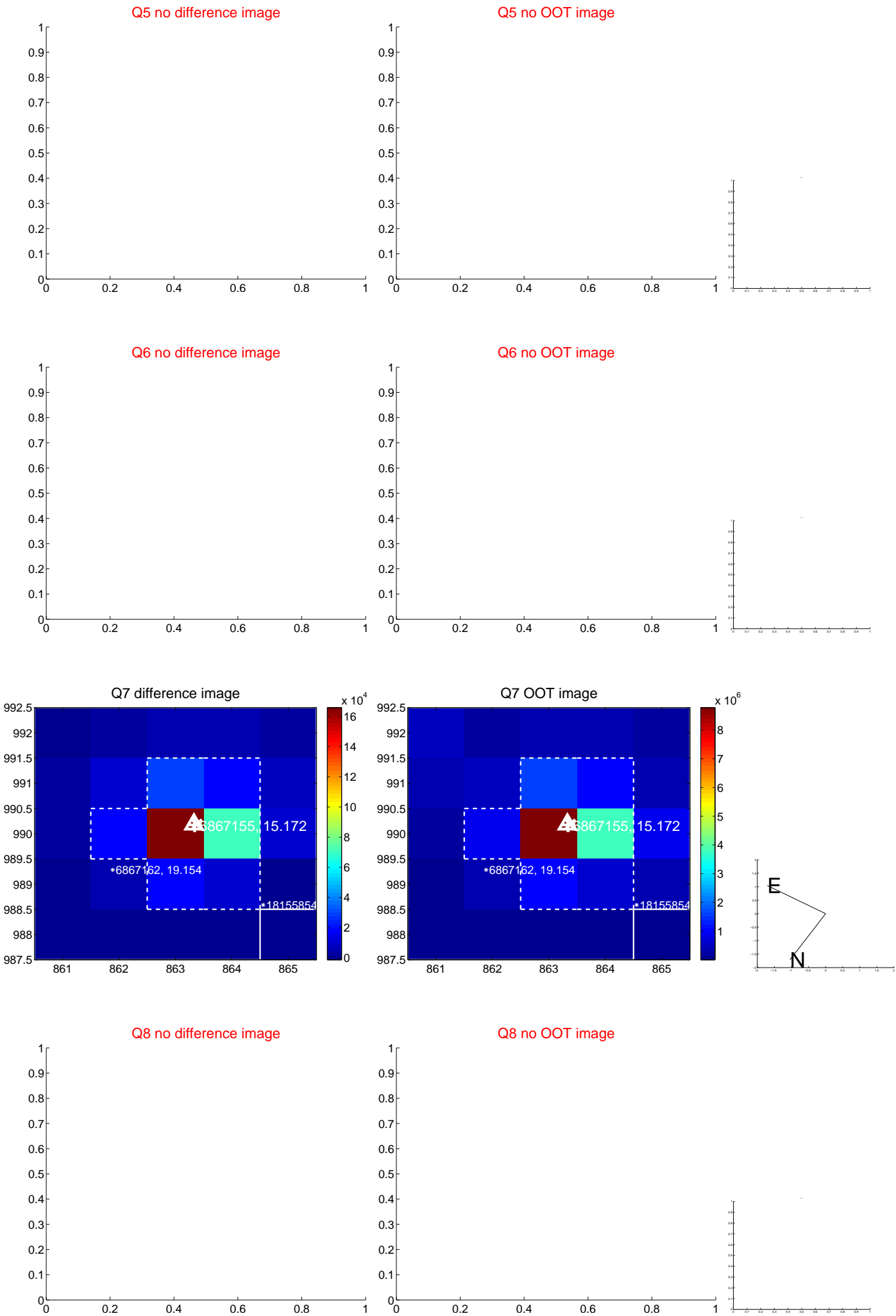
Q4 no difference image



Q4 no 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.

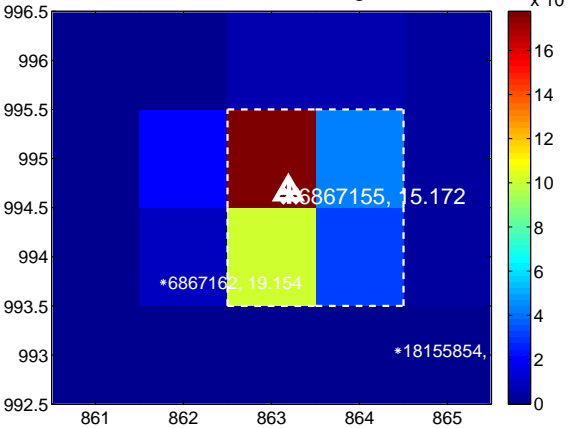
Q9 no difference image



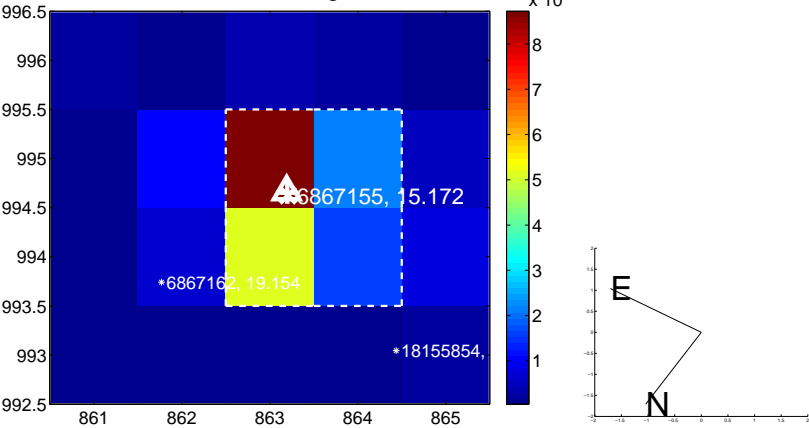
Q9 no OOT image



Q10 difference image



Q10 OOT image



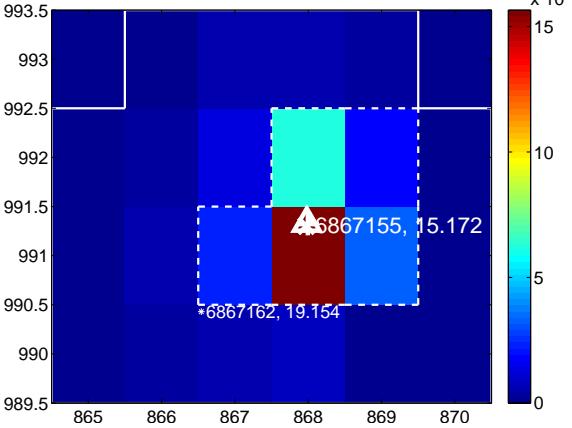
Q11 no difference image



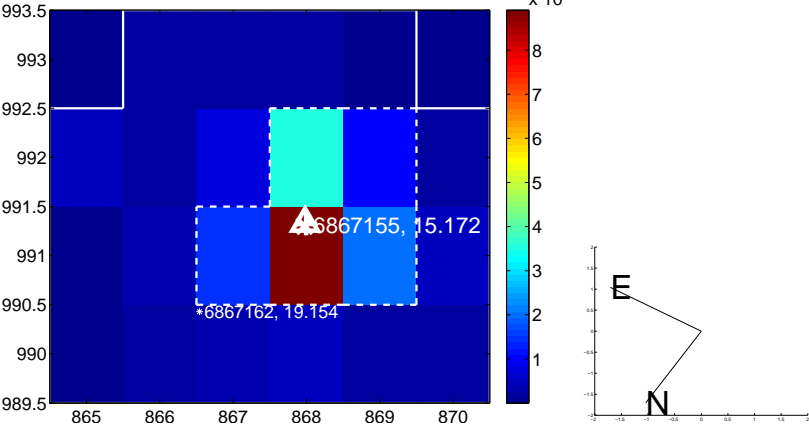
Q11 no OOT image



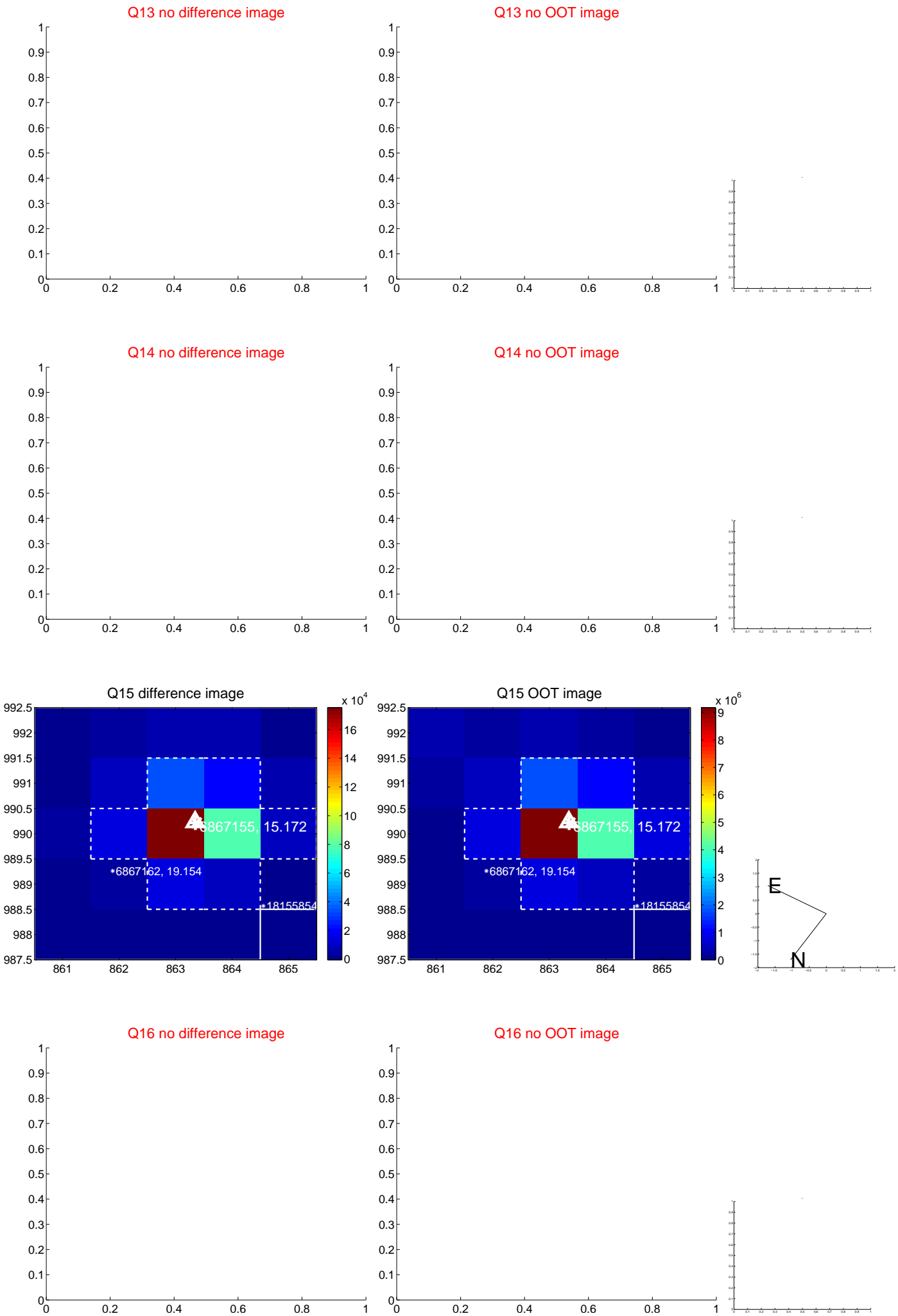
Q12 difference image



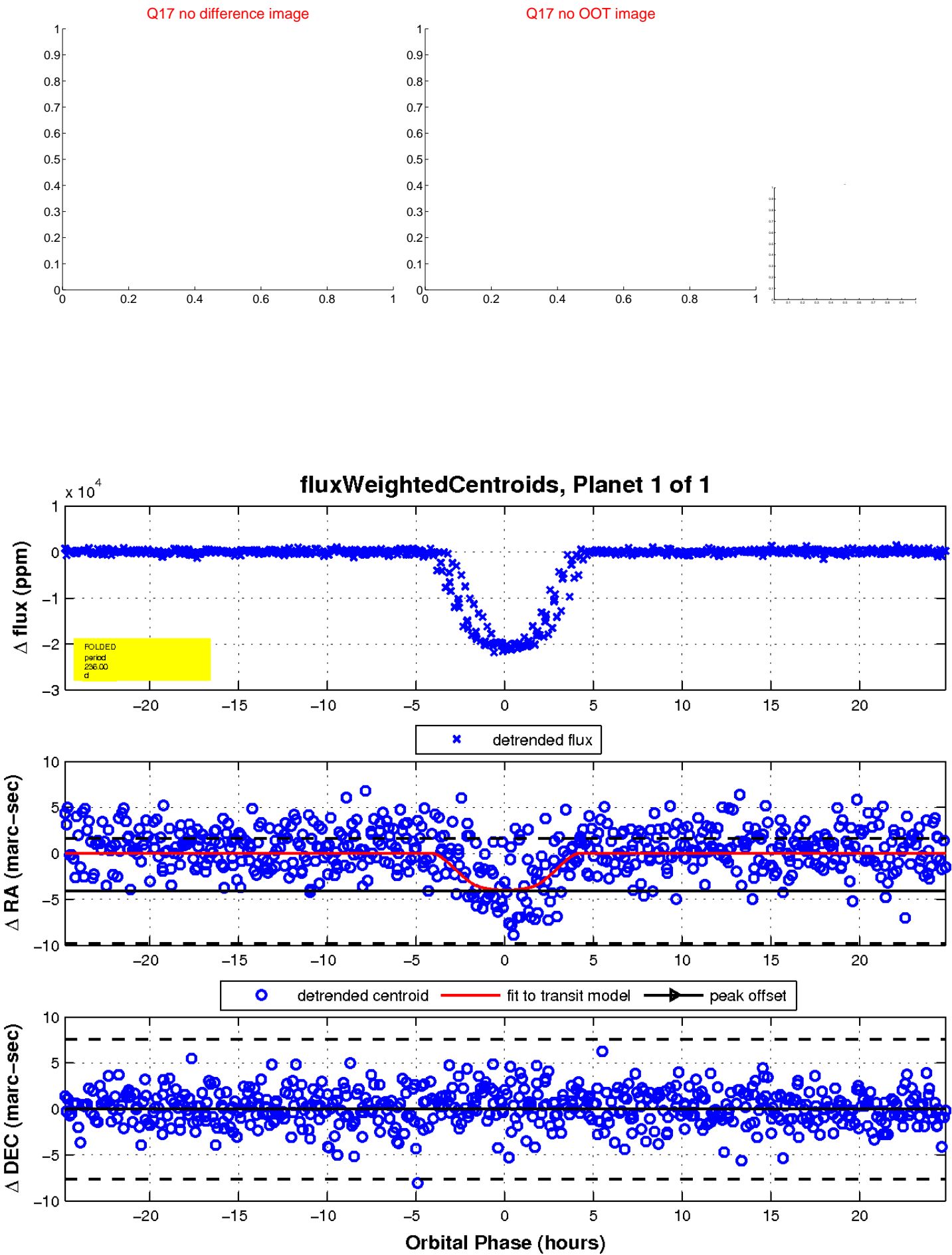
Q12 OOT image



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.



UKIRT Image

Declination

