

KIC 003097352

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})
003097352-01	OBS	3648.01	4.029821	134.417360	200502.0	4.412	1234.4	744.6	1.08	6024	48.75	547.60
003097352-02	OBS	No	4.029681	132.439875	7787.8	3.991	48.1	51.9	1.08	6024	10.88	547.63
003097352-03	OBS	No	91.755380	222.513613	6775.0	3.073	8.2	7.1	1.08	6024	8.99	8.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003097352-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE—SEASONAL_DEPTH_ALT—CENT_FEW_MEAS
003097352-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_FEW_MEAS
003097352-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

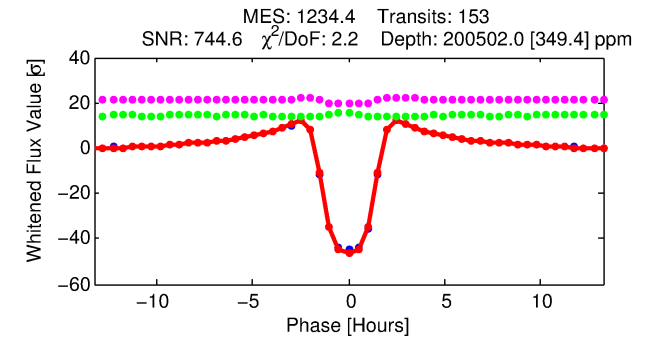
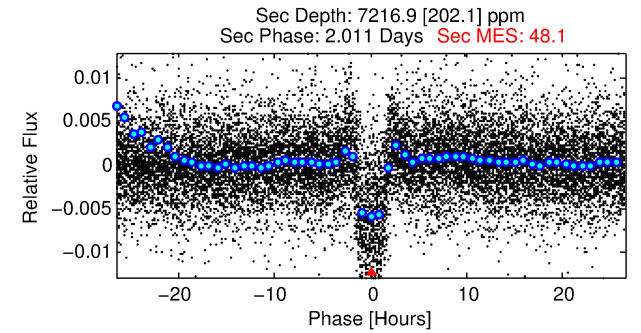
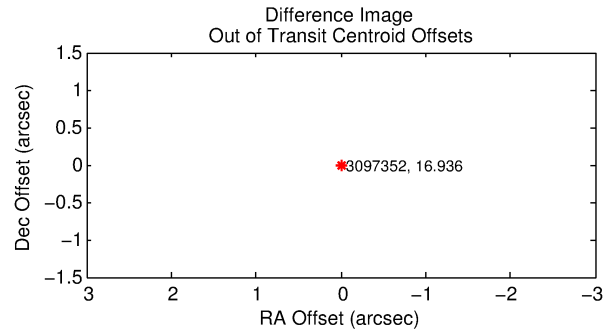
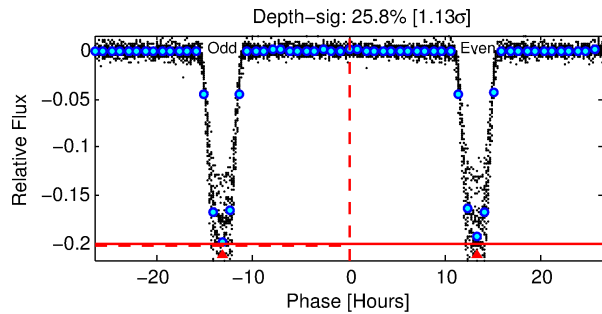
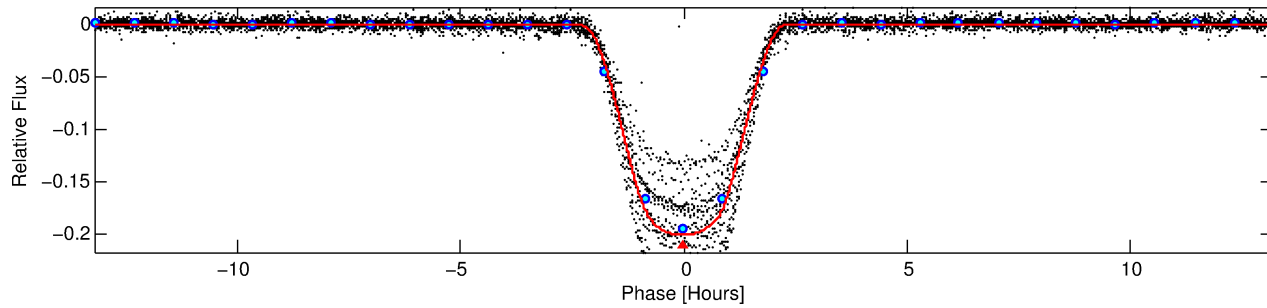
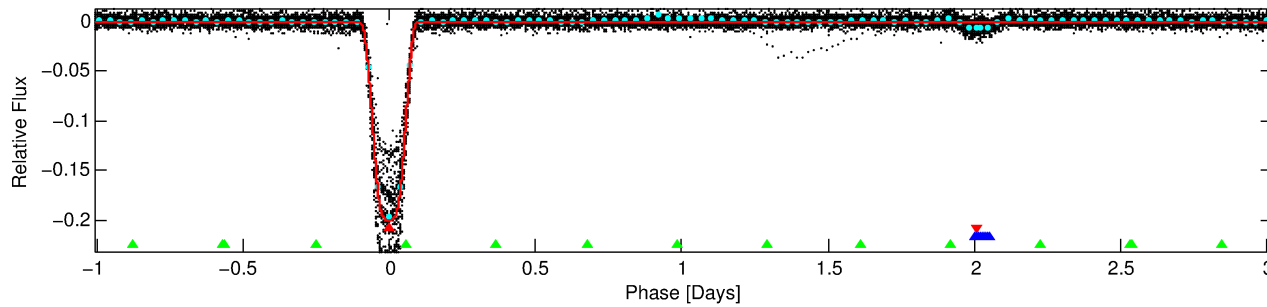
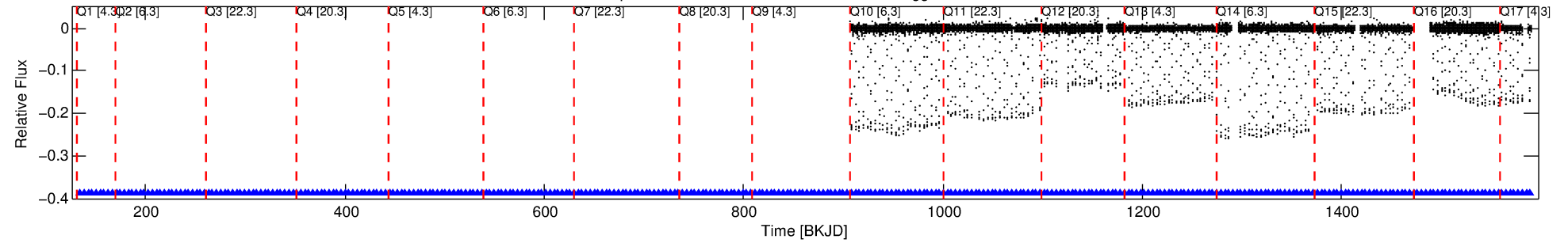
Ephemeris Match Information For 003097352-01

No Significant Match Found

DV One-Page Summary

KIC: 3097352 Candidate: 1 of 3 Period: 4.030 d
KOI: K03648.01 Corr: 0.990

Kp: 16.94 R*: 1.08 Rs Teff: 6024.0 K Logg: 4.38 Fe/H: -0.060



DV Fit Results:

Period = 4.02982 [0.00000] d
Epoch = 134.4174 [0.0002] BKJD
Rp/R* = 0.4145 [0.0005]
a/R* = 9.83 [0.04]
b = 0.17 [0.02]
Seff = 547.60 [220.48]
Teq = 1234 [124] K
Rp = 48.75 [15.20] Re
a = 0.0500 [0.0129] AU
Ag = 4.18 [1.56] [2.04σ]
Teffp = 2727 [107] K [9.12σ]

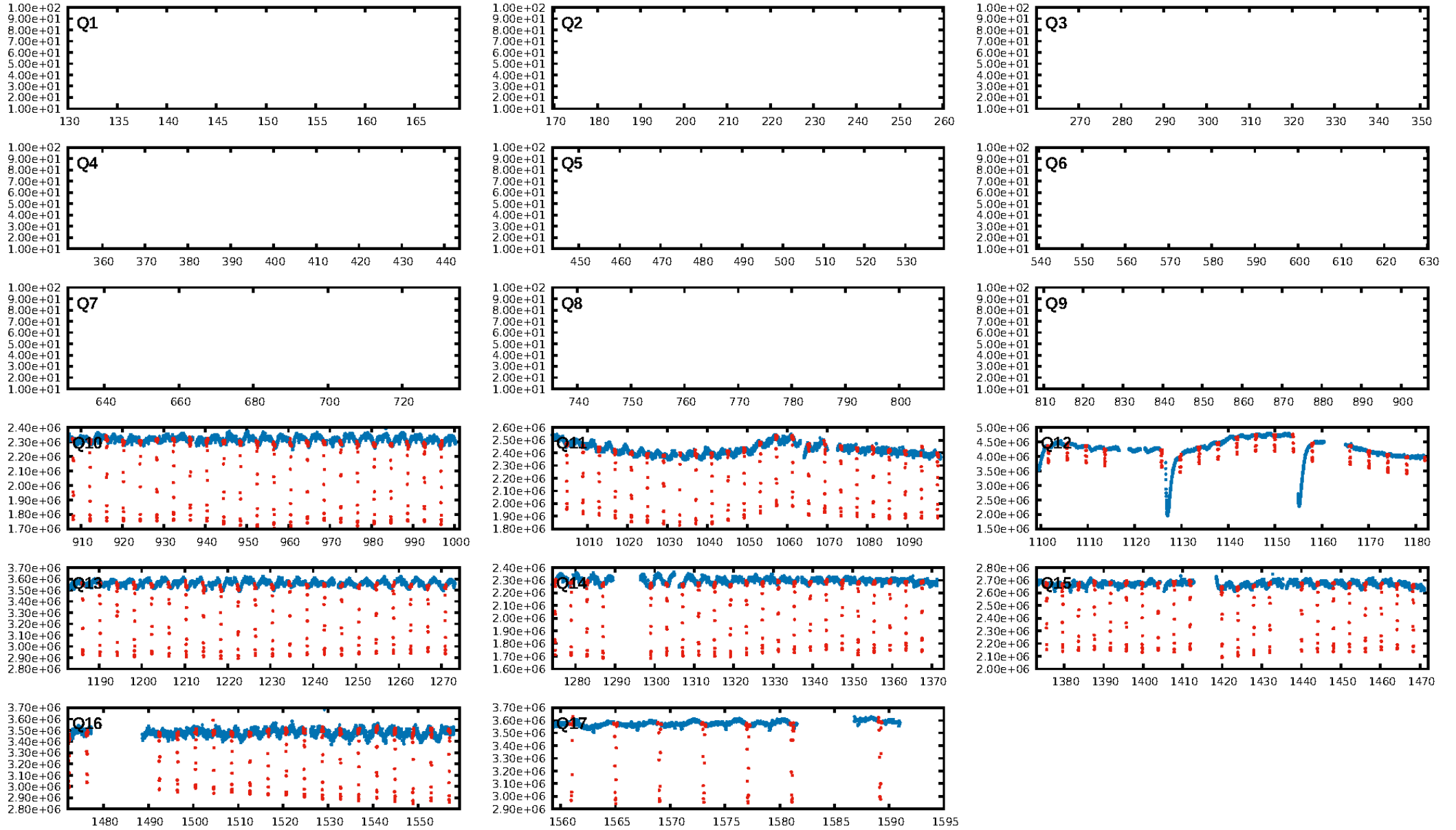
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [391.61σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [146/146]
GhostDiagnostic-chr: 2.562
Centroid-sig: 0.0%
Centroid-so: 4.346 arcsec [4841.39σ]
OotOffset-rm: N/A
KicOffset-rm: 0.137 arcsec [1.83σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

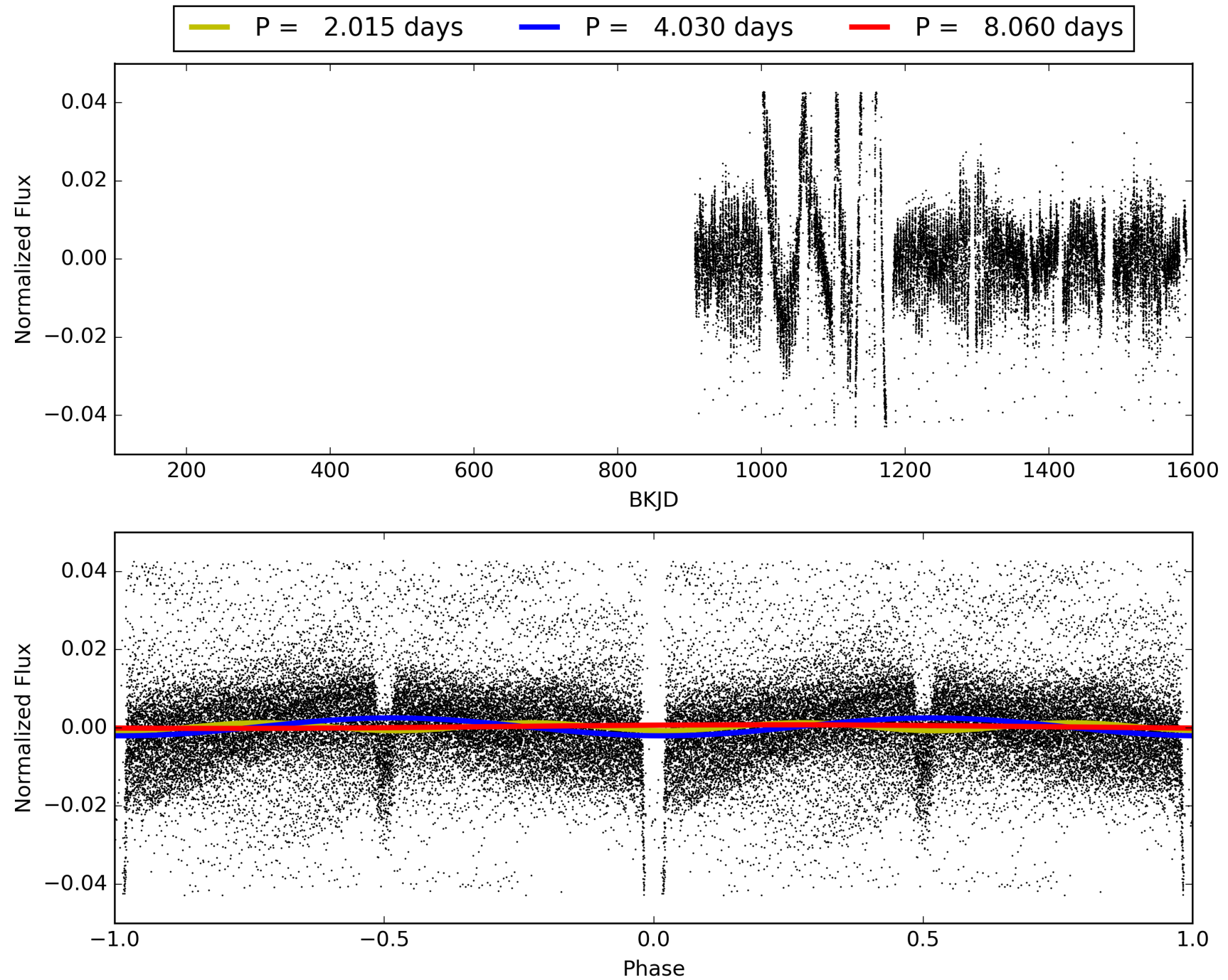
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:16:54 Z

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

TCE 003097352-01, PDC Light Curves

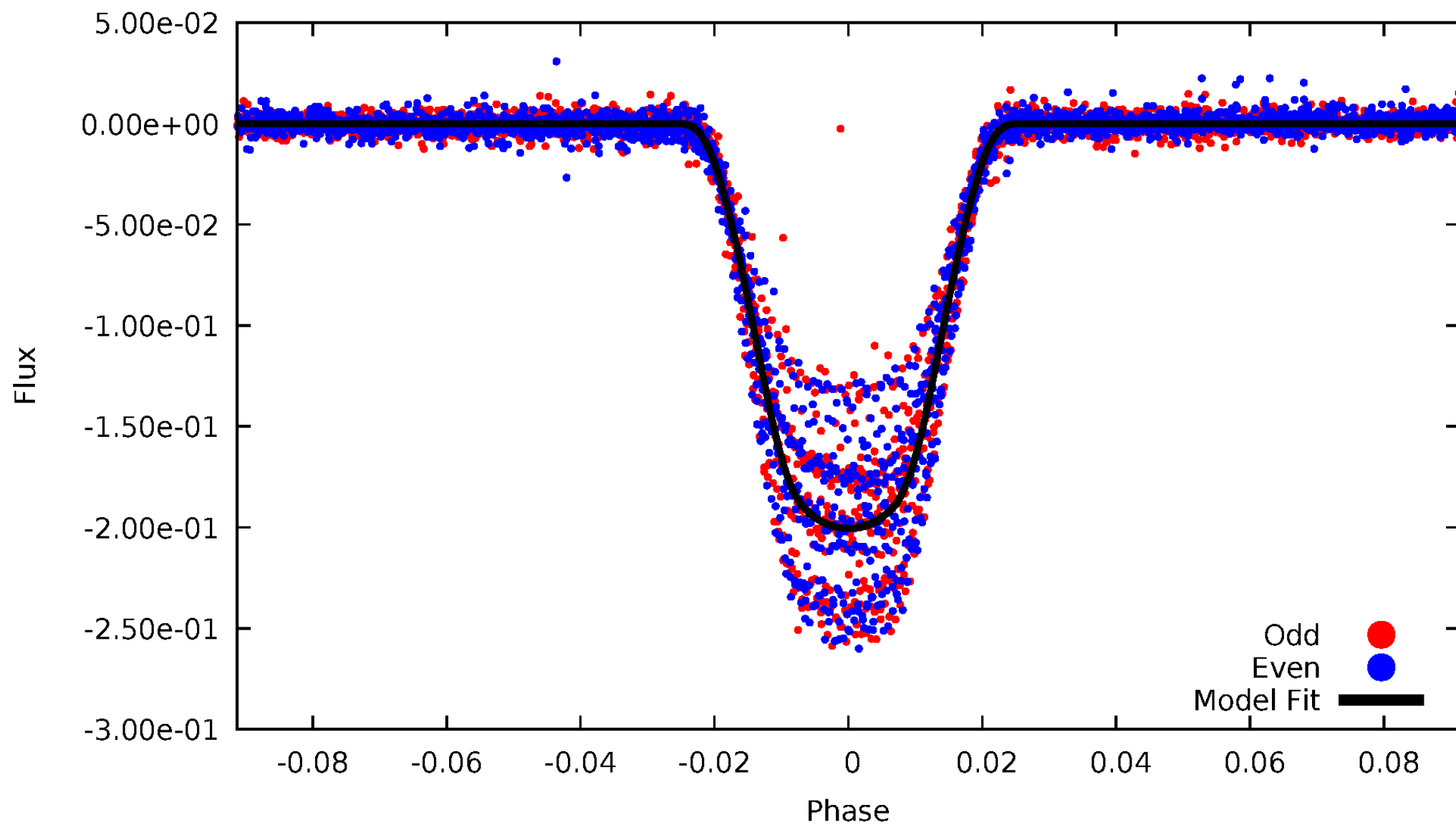


TCE 003097352-01



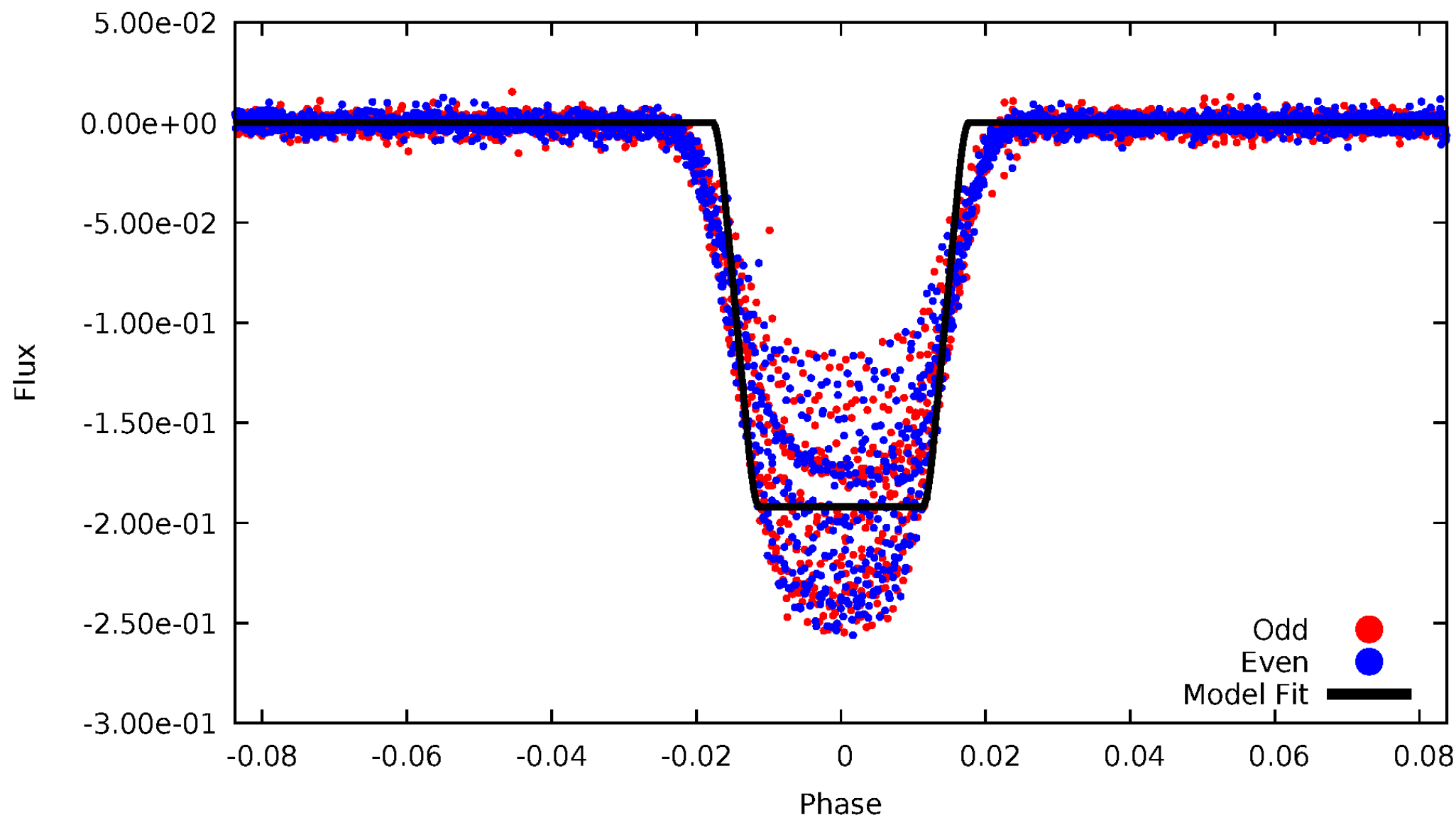
DV Odd/Even

TCE 003097352-01



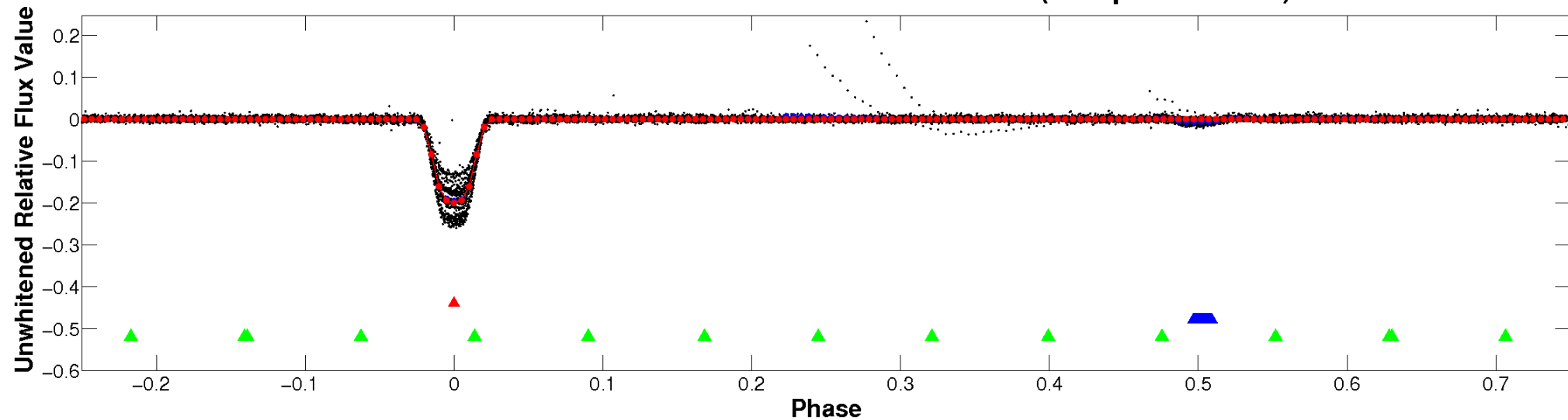
ALT Odd/Even

TCE 003097352-01

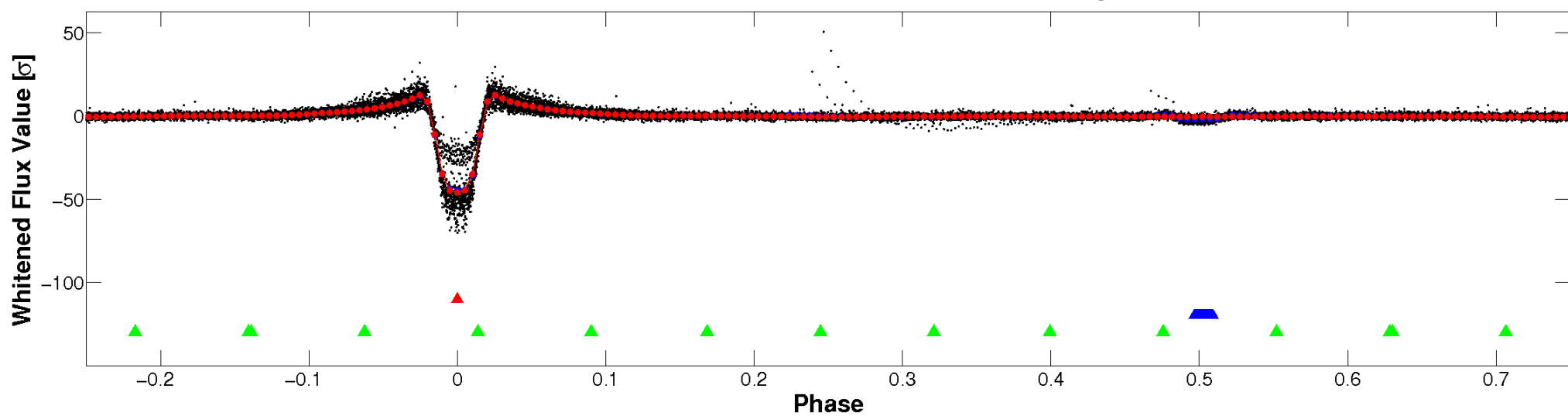


Non-Whitened Vs. Whitened Light Curve

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

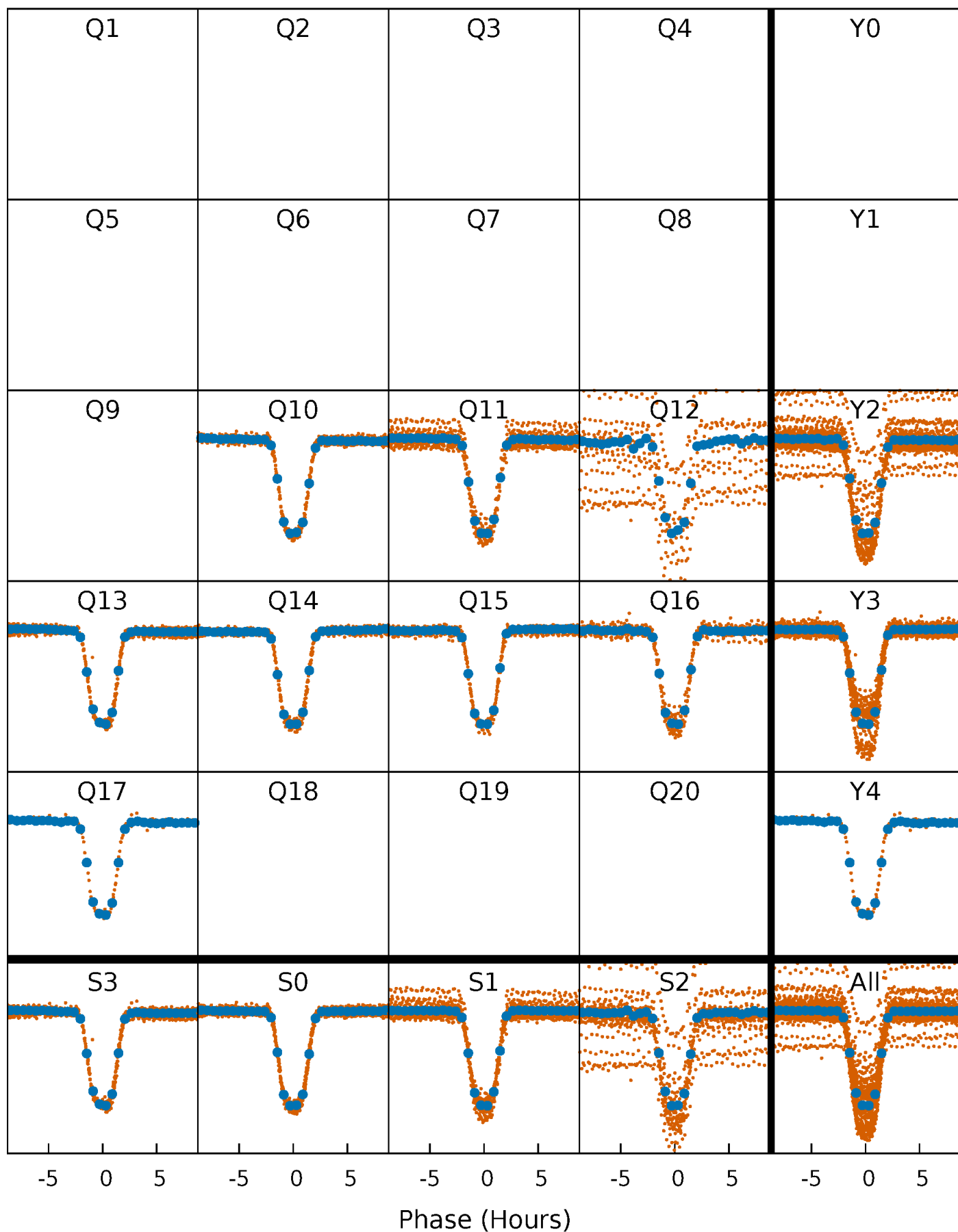


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



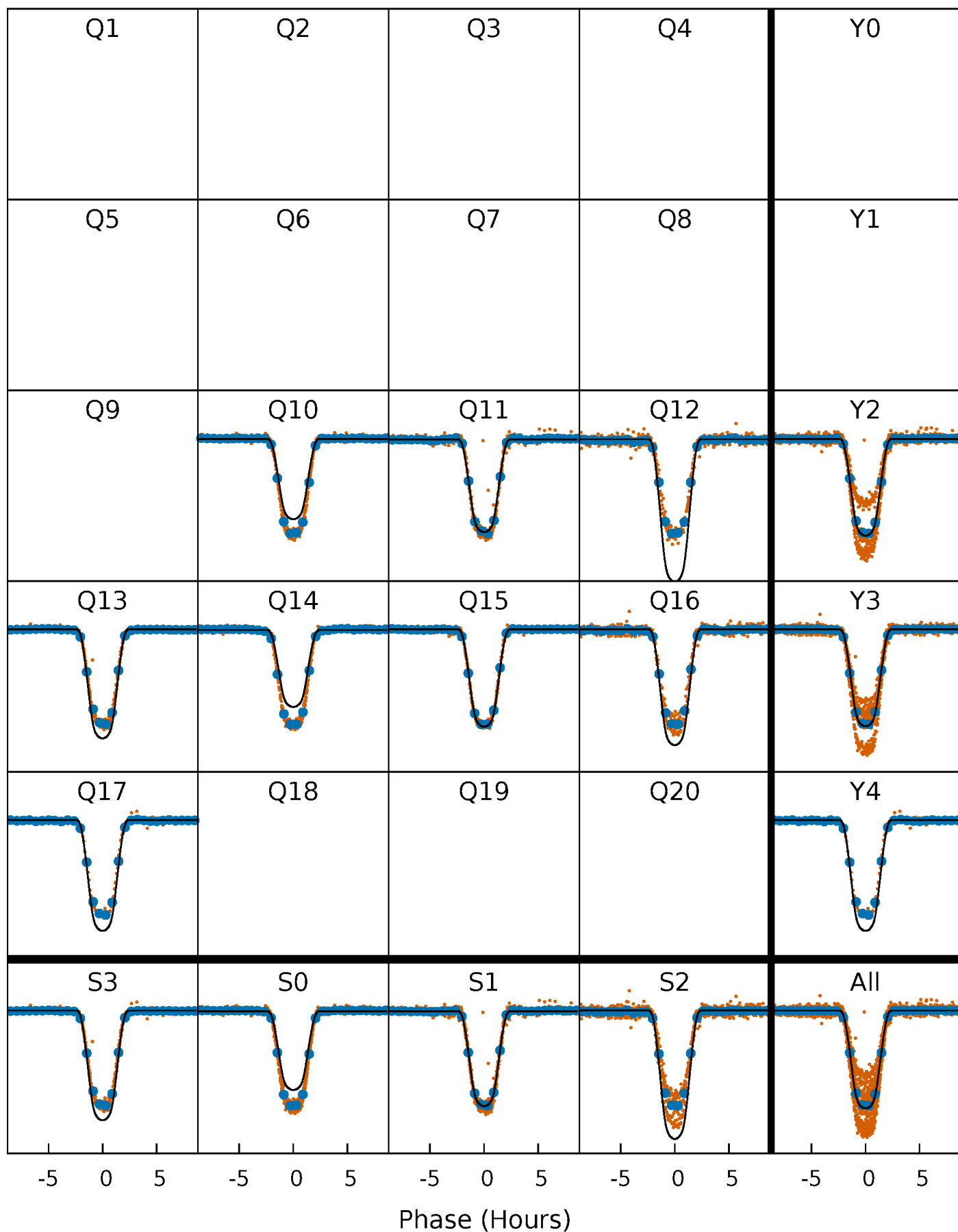
PDC Quarter-Phased Transit Curves

TCE 003097352-01 P= 4.029821 Days $T_0=134.417360$ (BKJD)



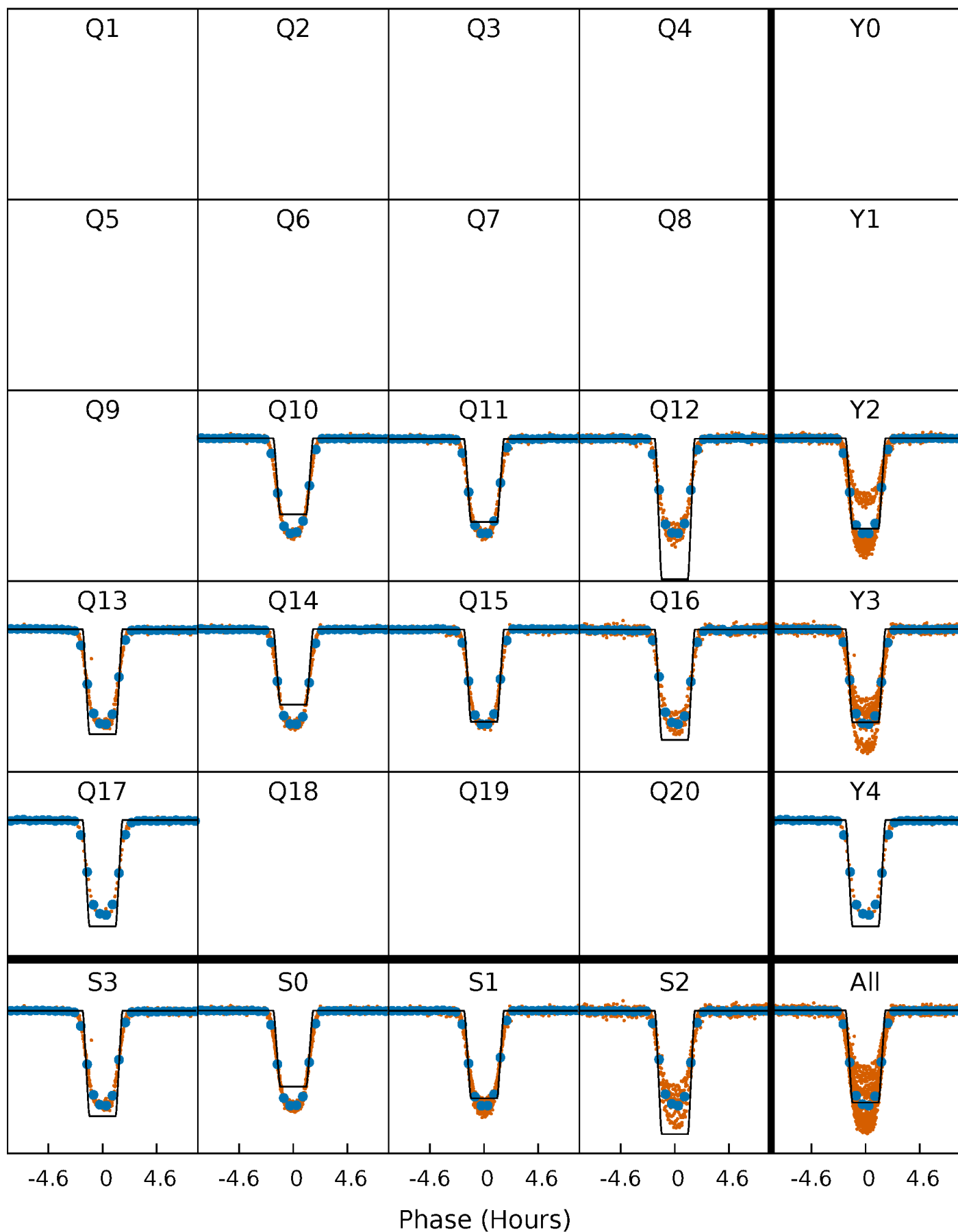
DV Quarter-Phased Transit Curves

TCE 003097352-01 P= 4.029821 Days $T_0=134.417360$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

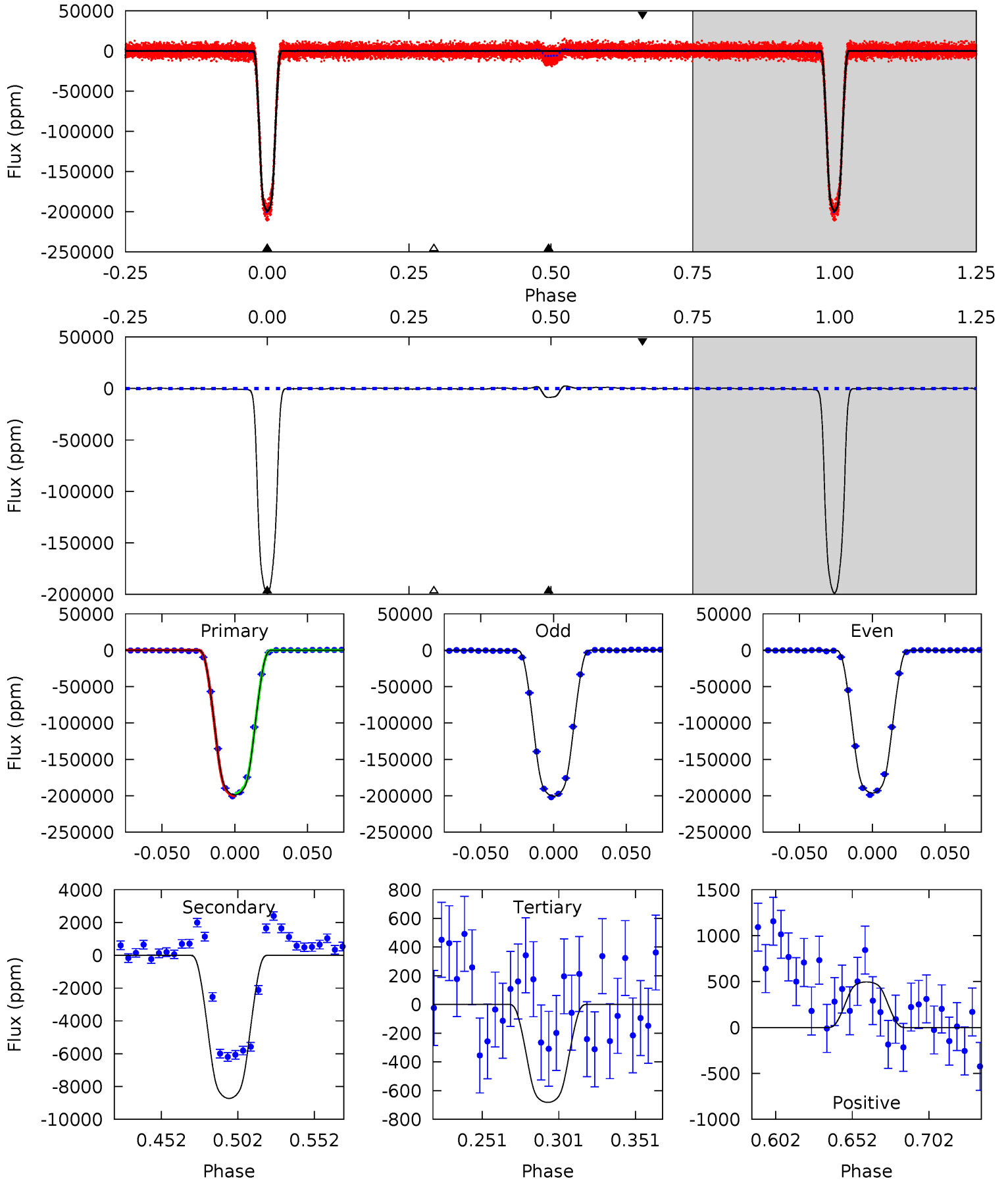
TCE 003097352-01 P= 4.029788 Days $T_0=134.426495$ (BKJD)



DV Model-Shift Uniqueness Test

003097352-01, P = 4.029821 Days, E = 134.417360 Days

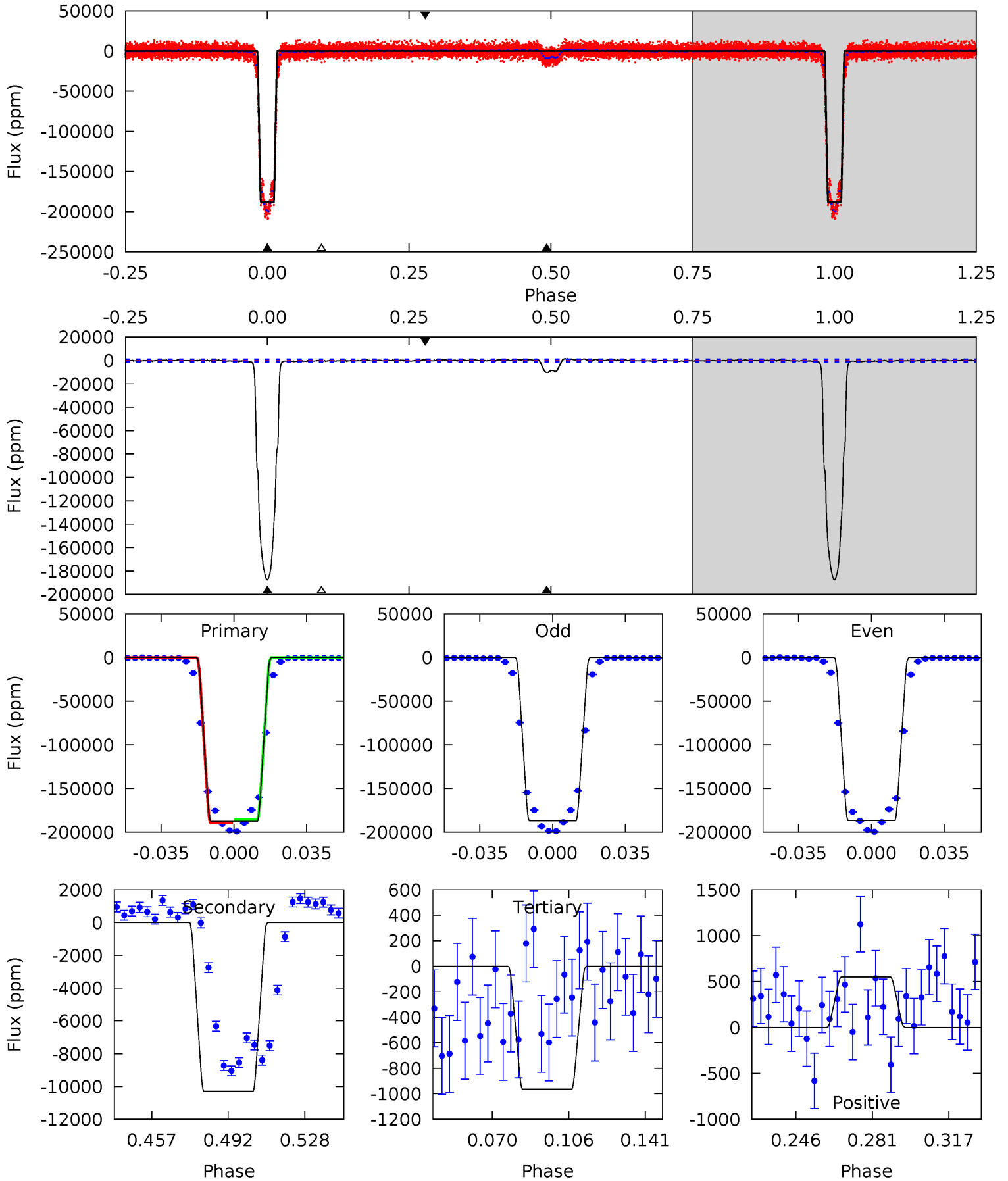
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1670	73.3	5.73	4.16	4.71	1.96	3.21	1664	1665	67.6	69.1	17.9	1.00	0.01	0



Alt Model-Shift Uniqueness Test

003097352-01, P = 4.029788 Days, E = 134.426495 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
908.3	49.9	4.67	2.66	4.78	2.11	1.93	903.6	905.6	45.2	47.2	0.28	1.00	0.01	0



Stellar Parameters For KIC 003097352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6024^{+189}_{-232}	$4.385^{+0.108}_{-0.201}$	$-0.060^{+0.250}_{-0.300}$	$1.078^{+0.336}_{-0.144}$	$1.028^{+0.153}_{-0.126}$	$1.155^{+0.553}_{-0.600}$
	+3%/-4%	+2%/-5%	+417%/-500%	+31%/-13%	+15%/-12%	+48%/-52%
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 003097352-01 / KOI 3648.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8726 ± 119	$48.60^{+8.64}_{-3.77}$	1738^{+131}_{-109}	3362^{+65}_{-89}	$4.975^{+0.971}_{-1.216}$
Alt.	-10296 ± 206	$51.45^{+8.88}_{-3.97}$	1736^{+133}_{-100}	3386^{+77}_{-82}	$5.322^{+0.929}_{-1.358}$

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 $A_{obs} \gg 1.0$

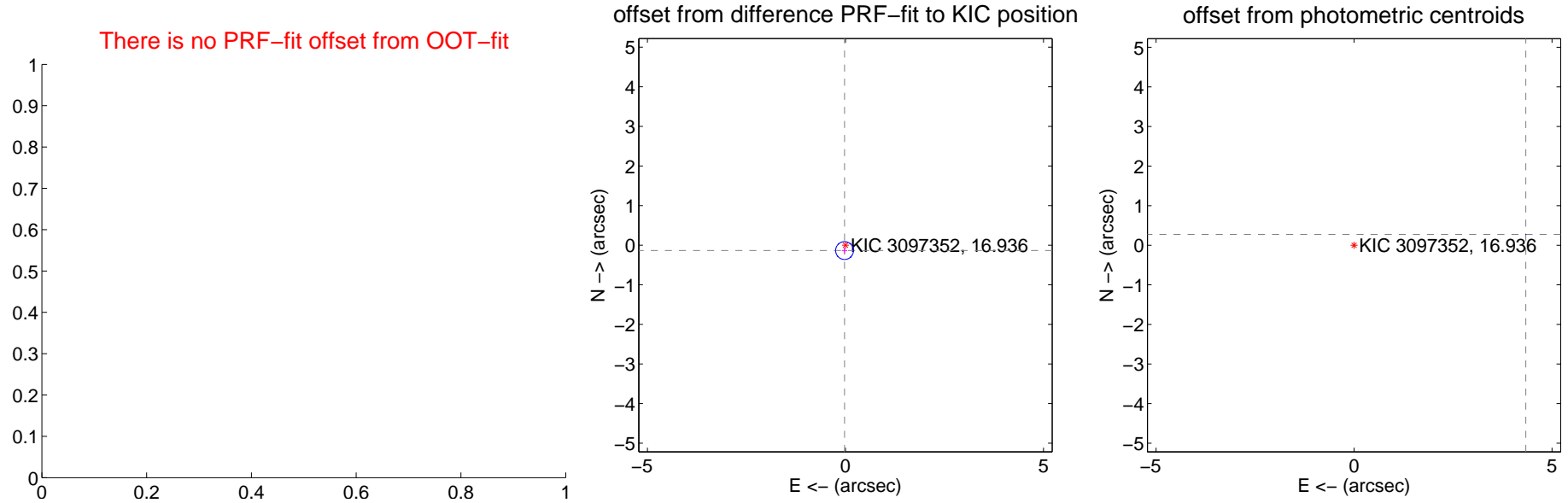
DV Centroid Data

Supplemental centroid analysis for 003097352-01. Kepler magnitude: 16.94. Transit SNR 744.61

There are 8 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.137 ± 0.075	1.83	0.023 ± 0.067	-0.135 ± 0.075
photometric centroid source offset	4.35 ± 0.00	4841.39	-4.34 ± 0.00	0.27 ± 0.00



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.

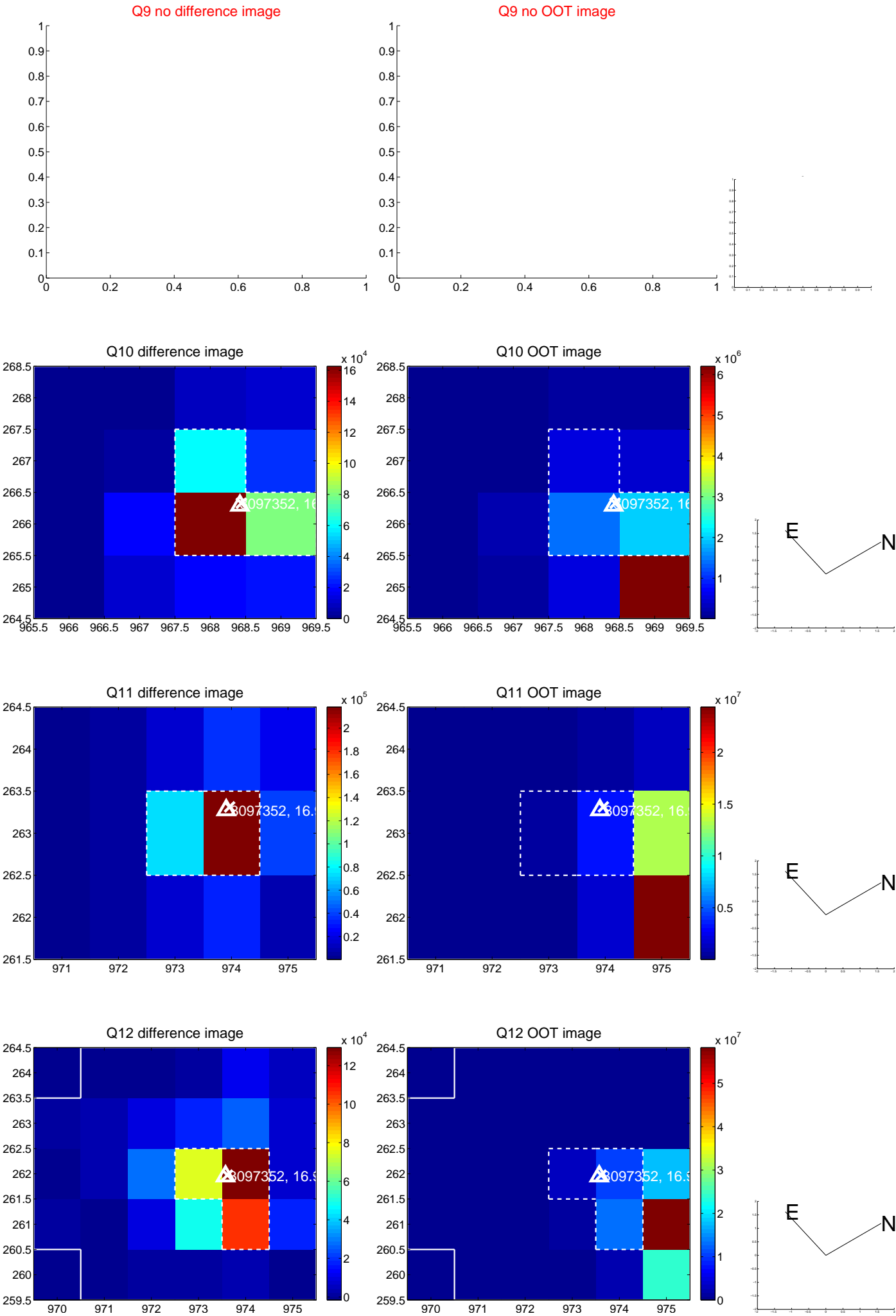
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



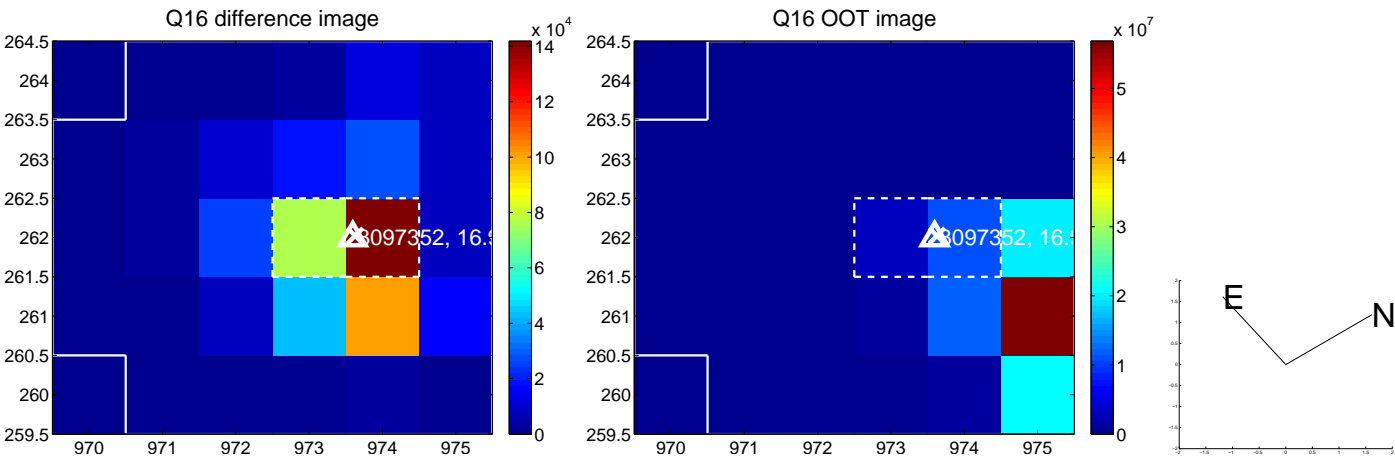
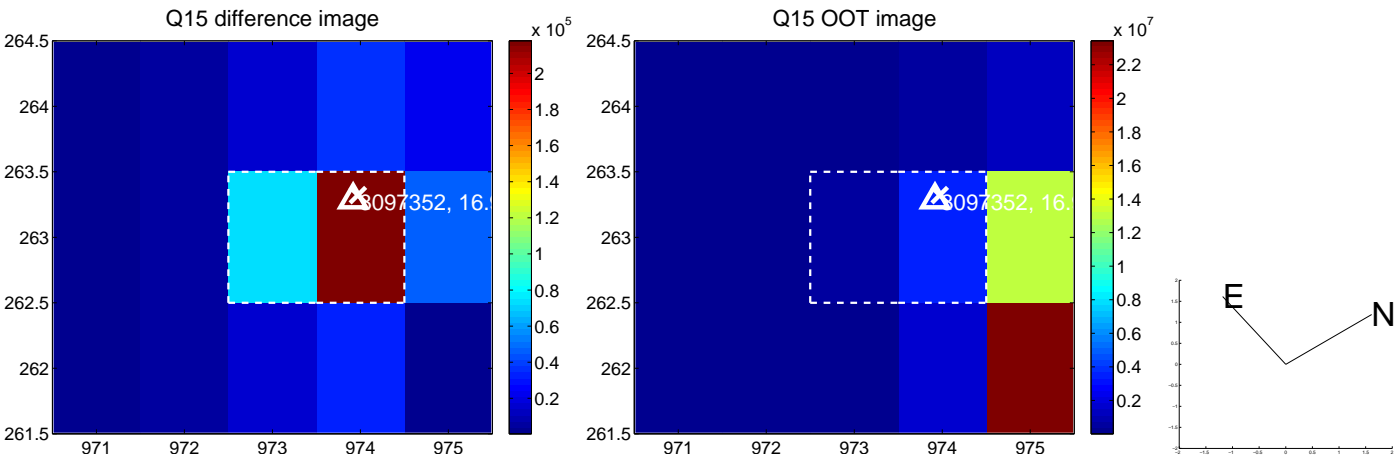
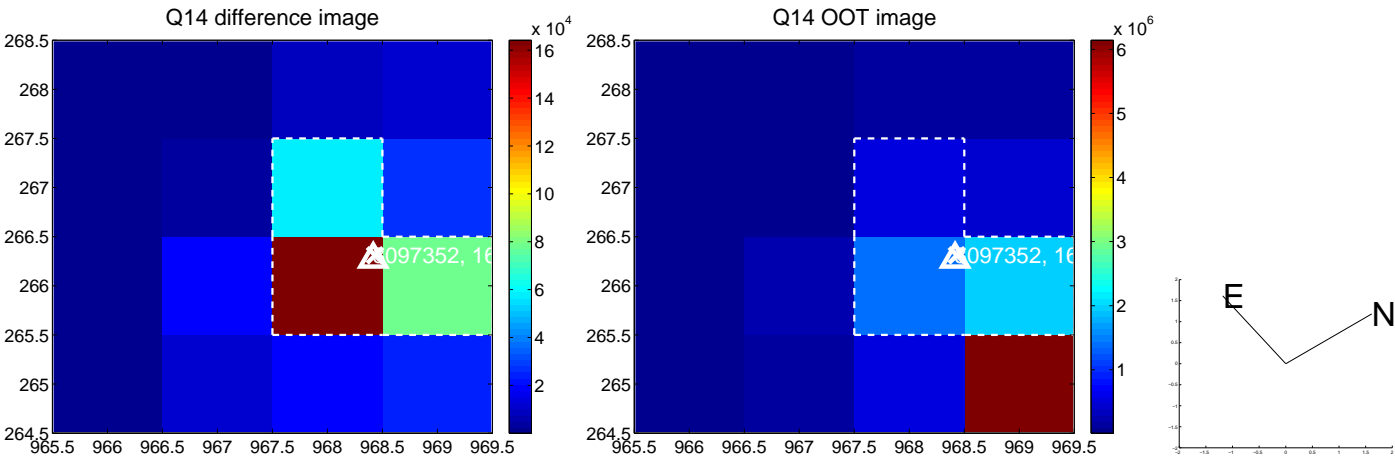
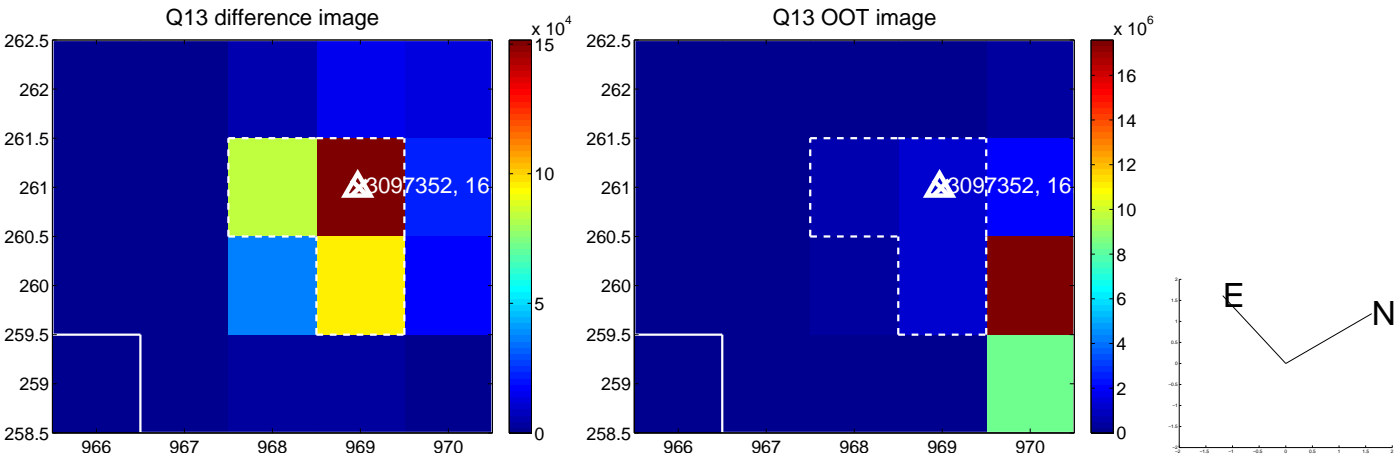
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



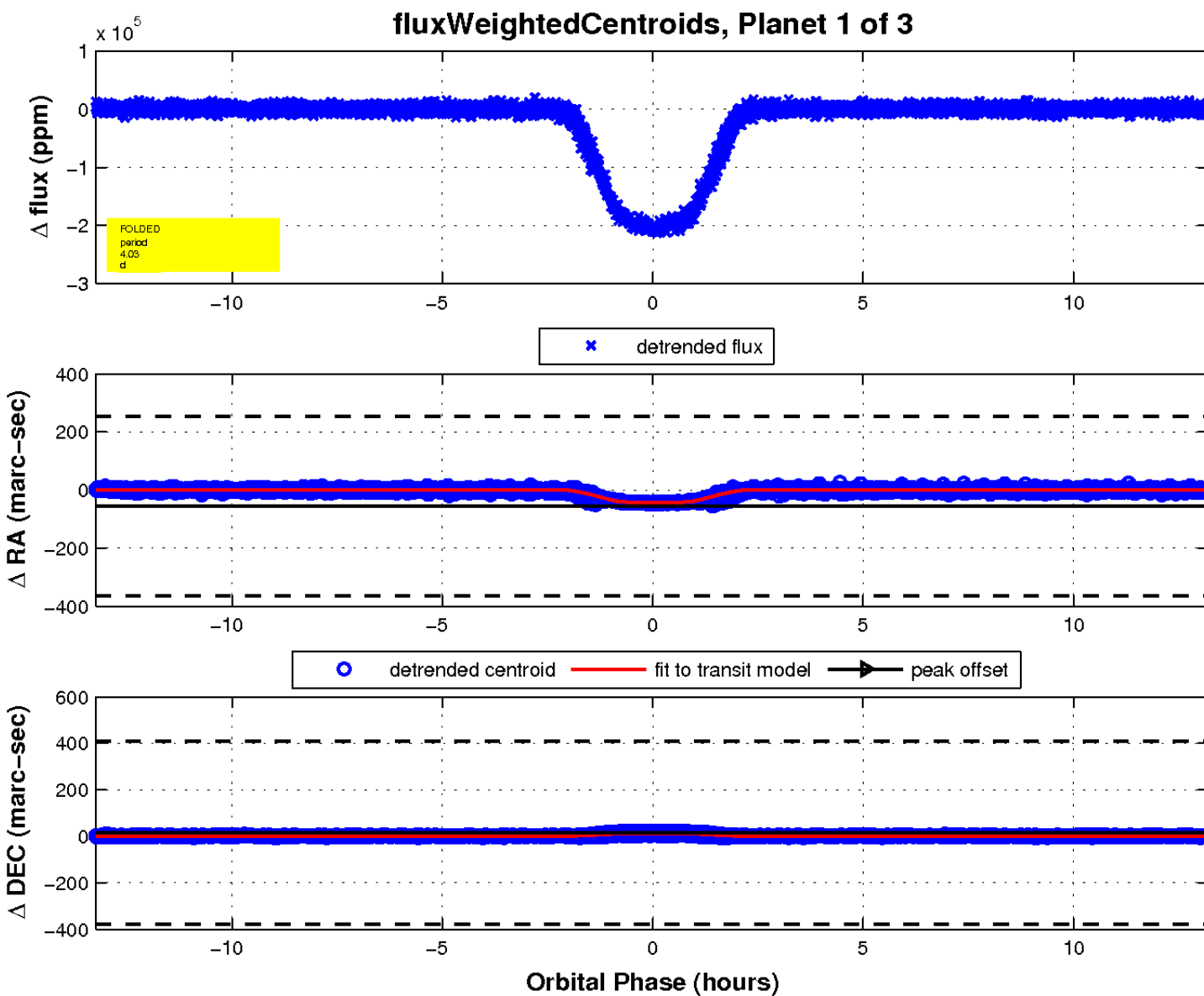
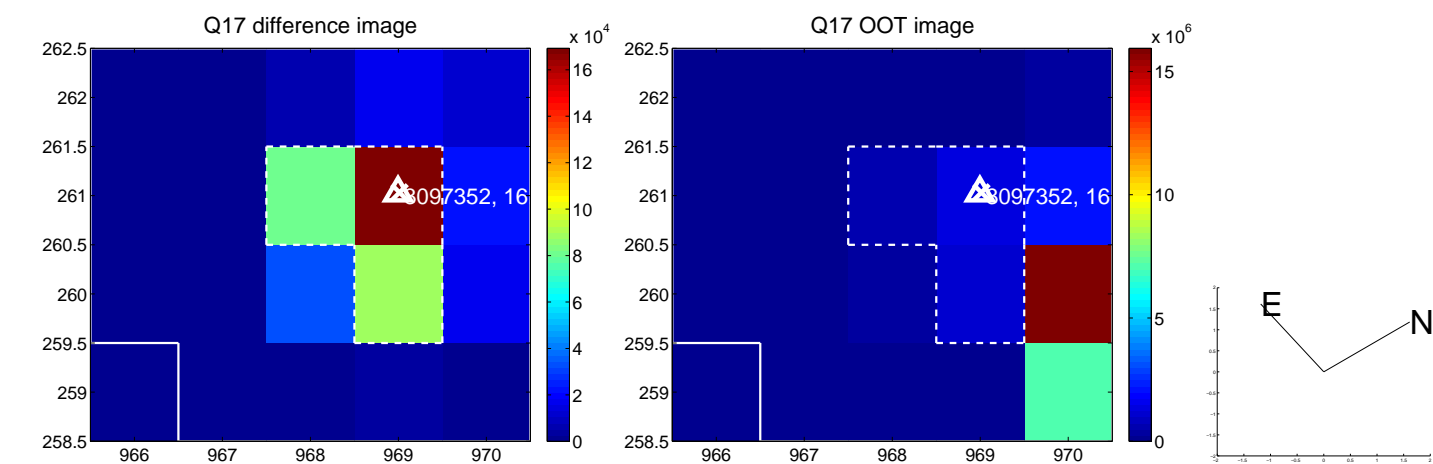
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

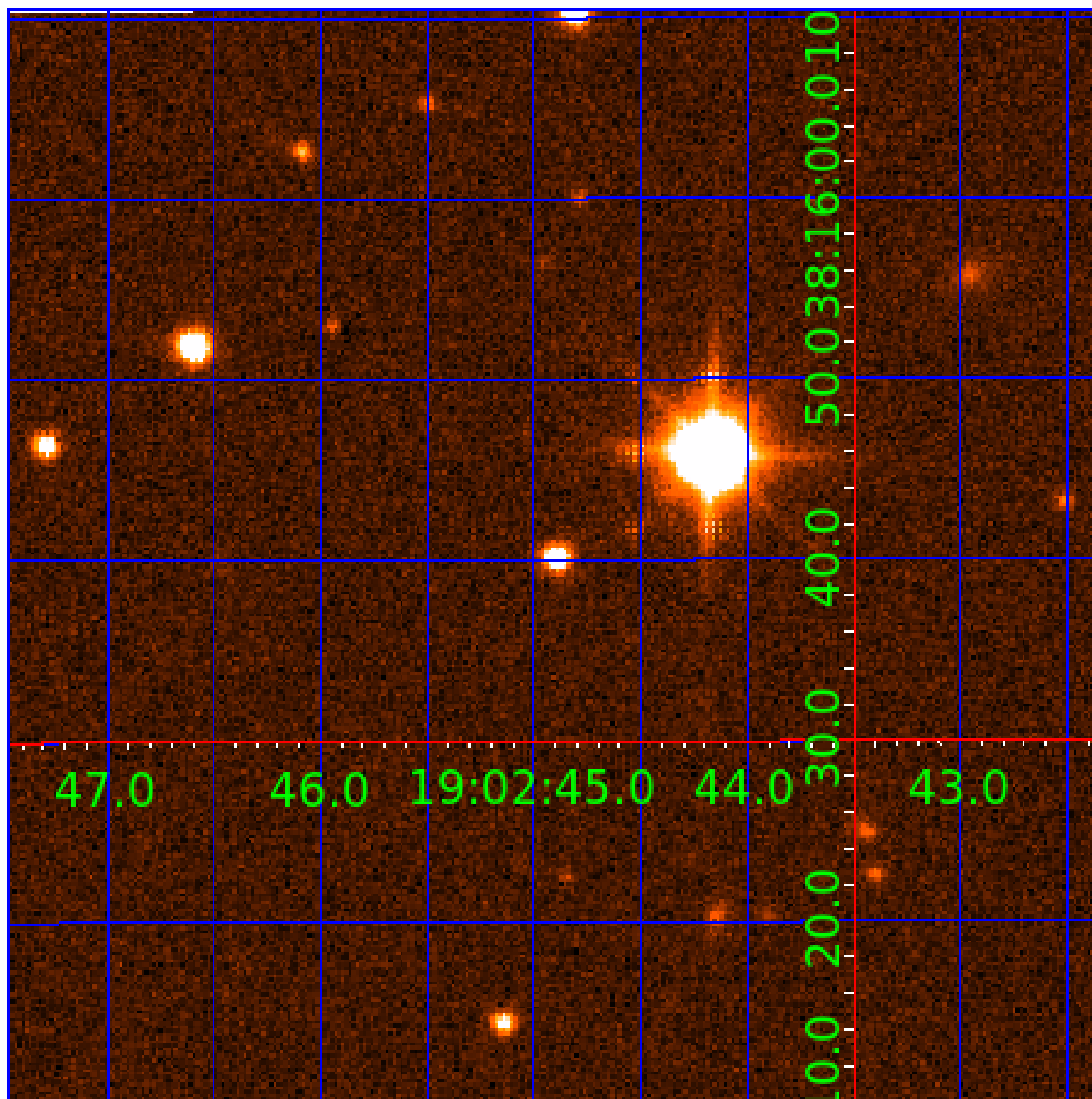


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003097352

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})
003097352-01	OBS	3648.01	4.029821	134.417360	200502.0	4.412	1234.4	744.6	1.08	6024	48.75	547.60
003097352-02	OBS	No	4.029681	132.439875	7787.8	3.991	48.1	51.9	1.08	6024	10.88	547.63
003097352-03	OBS	No	91.755380	222.513613	6775.0	3.073	8.2	7.1	1.08	6024	8.99	8.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003097352-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE—SEASONAL_DEPTH_ALT—CENT_FEW_MEAS
003097352-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_FEW_MEAS
003097352-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

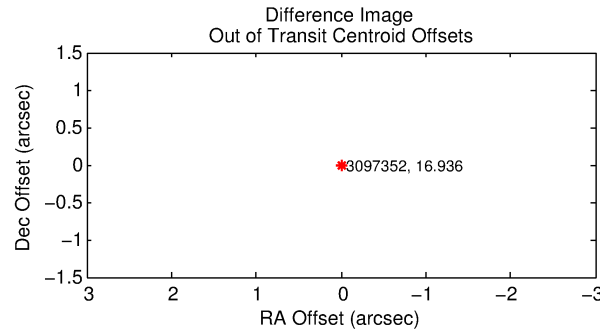
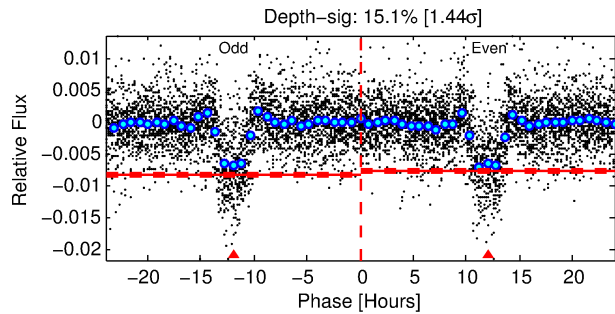
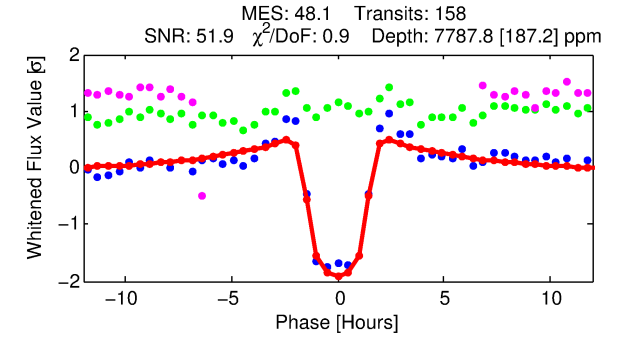
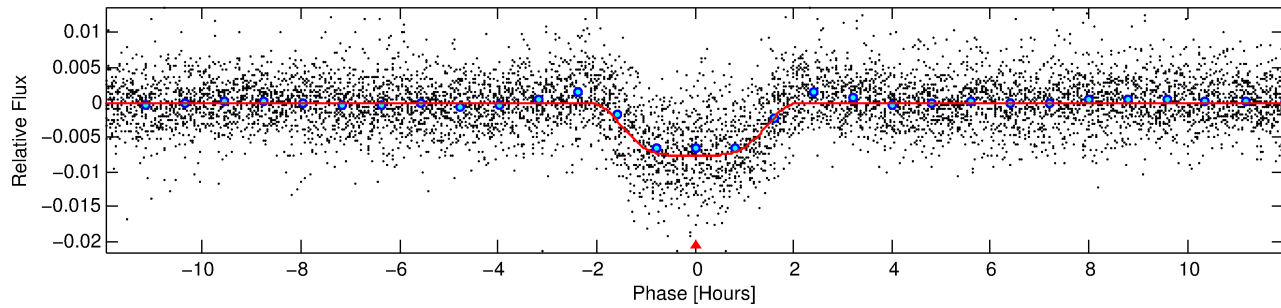
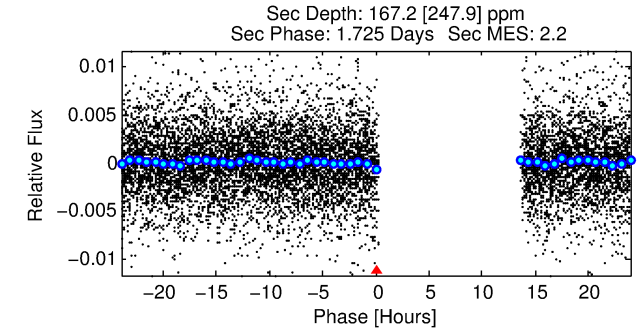
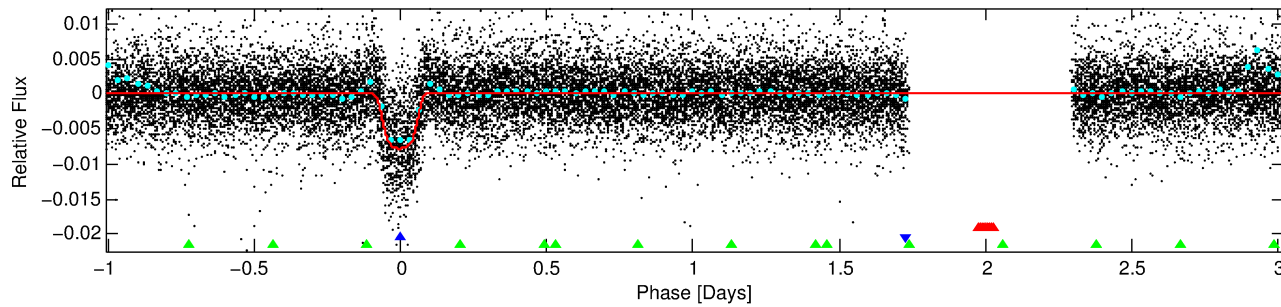
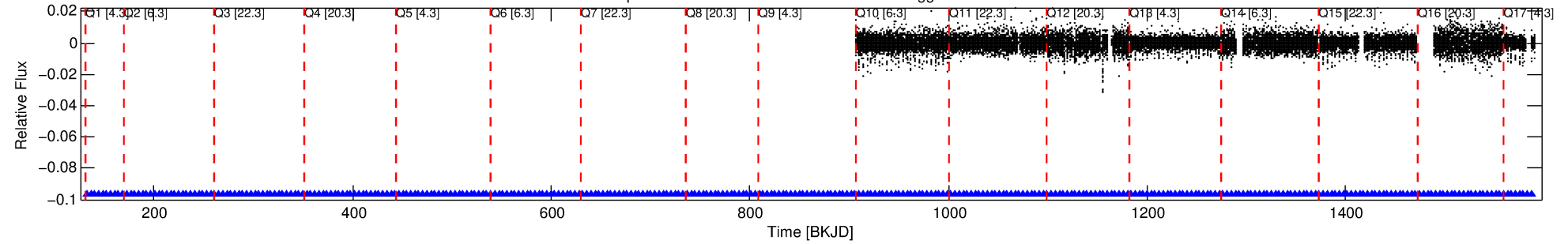
Ephemeris Match Information For 003097352-02

No Significant Match Found

DV One-Page Summary

KIC: 3097352 Candidate: 2 of 3 Period: 4.030 d
KOI: K03648 Corr: No Ephemeris Match

Kp: 16.94 R*: 1.08 Rs Teff: 6024.0 K Logg: 4.38 Fe/H: -0.060



DV Fit Results:

Period = 4.02968 [0.00001] d
Epoch = 132.4399 [0.0018] BKJD
Rp/R* = 0.0924 [0.0018]
a/R* = 5.37 [0.34]
b = 0.85 [0.02]
Seff = 547.63 [220.49]
Teq = 1234 [124] K
Rp = 10.88 [3.40] Re
a = 0.0500 [0.0129] AU
Ag = 1.95 [2.98] [0.32σ]
Teffp = 2253 [840] K [1.20σ]

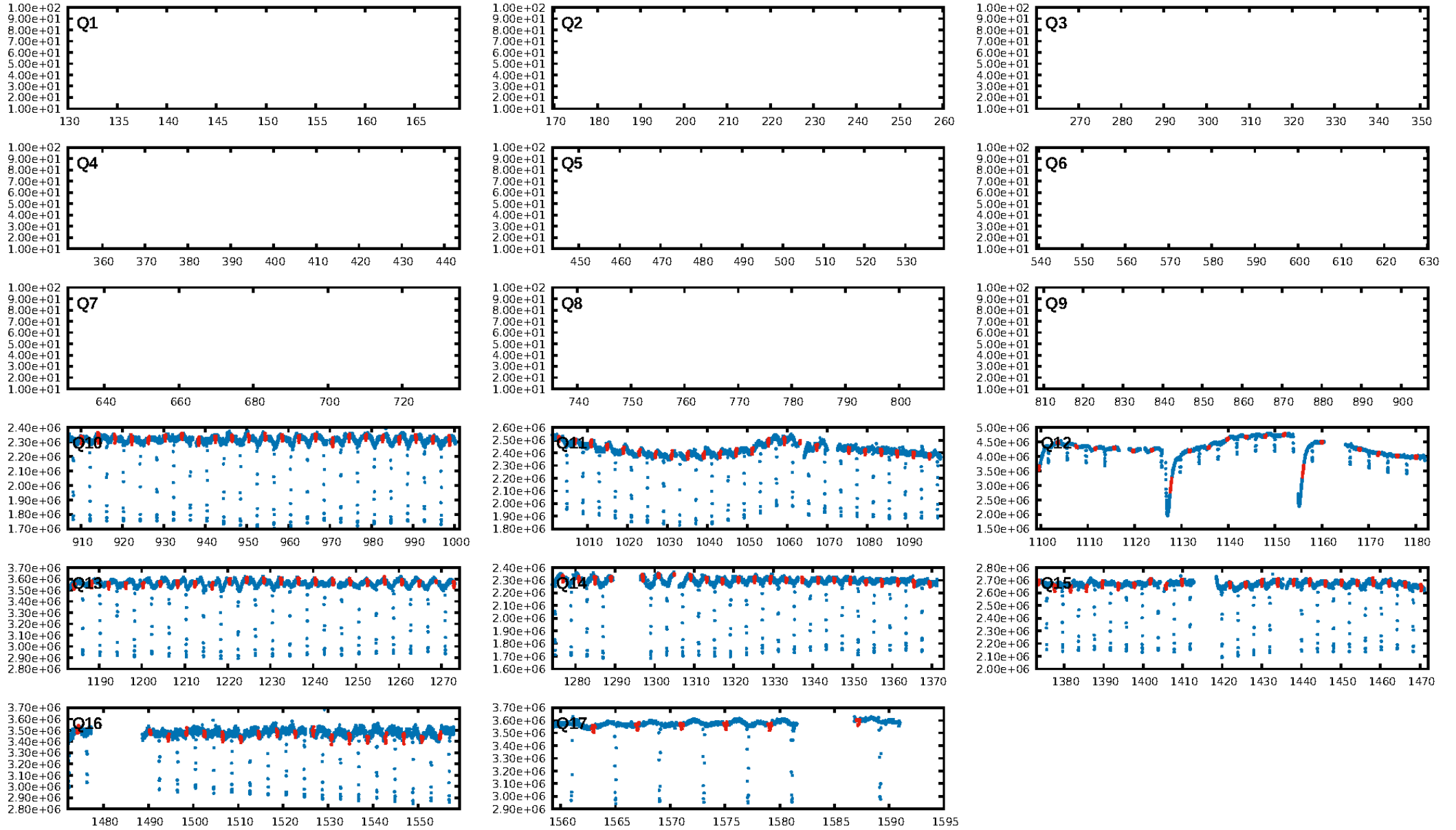
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [152/152]
GhostDiagnostic-chr: 2.726
Centroid-sig: 0.0%
Centroid-so: 4.332 arcsec [233.90σ]
OotOffset-rm: N/A
KicOffset-rm: 0.274 arcsec [2.93σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 2/2/2/2 [8]
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DiffImageOverlap-fno: 1.00 [8/8]

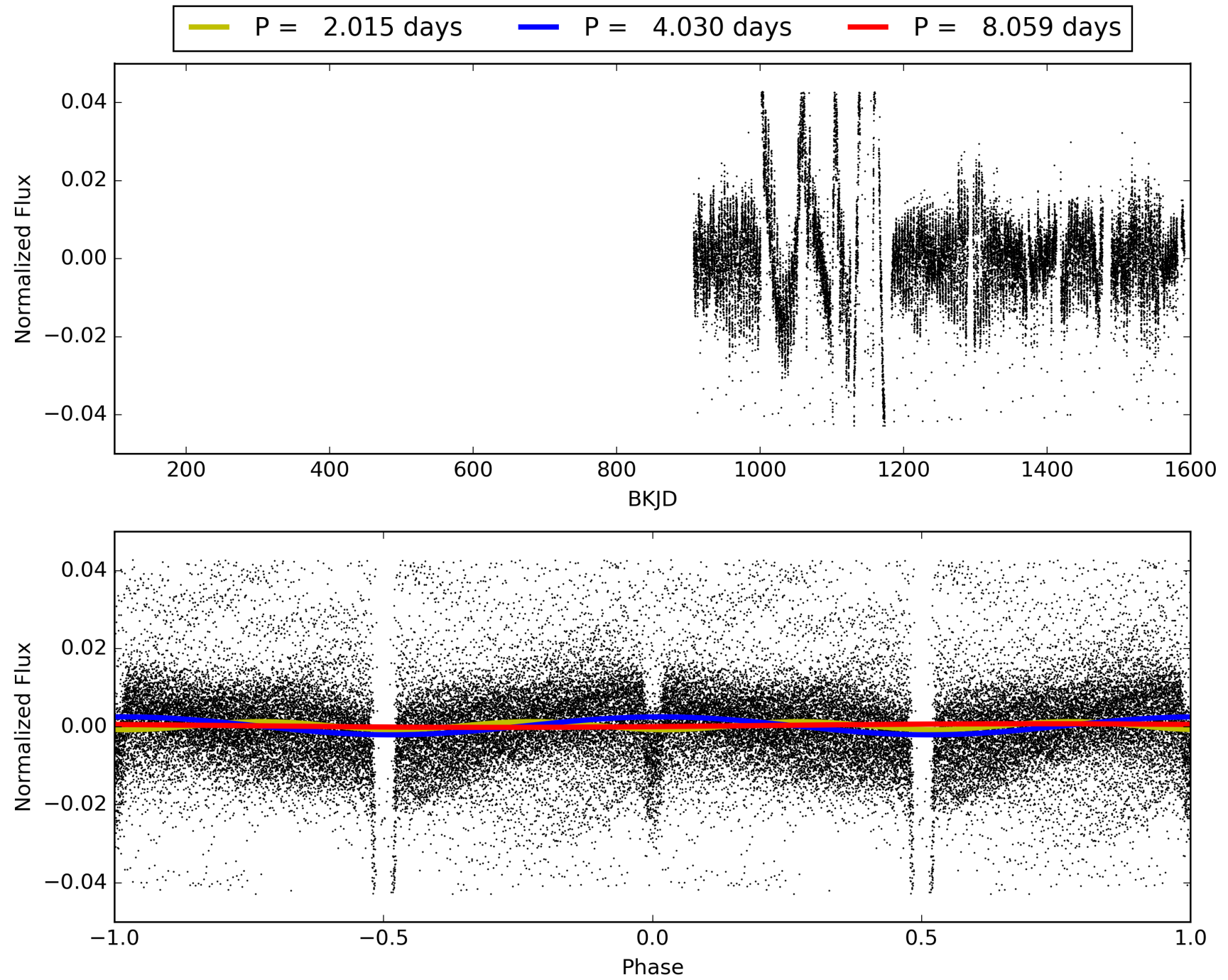
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:16:59 Z

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

TCE 003097352-02, PDC Light Curves

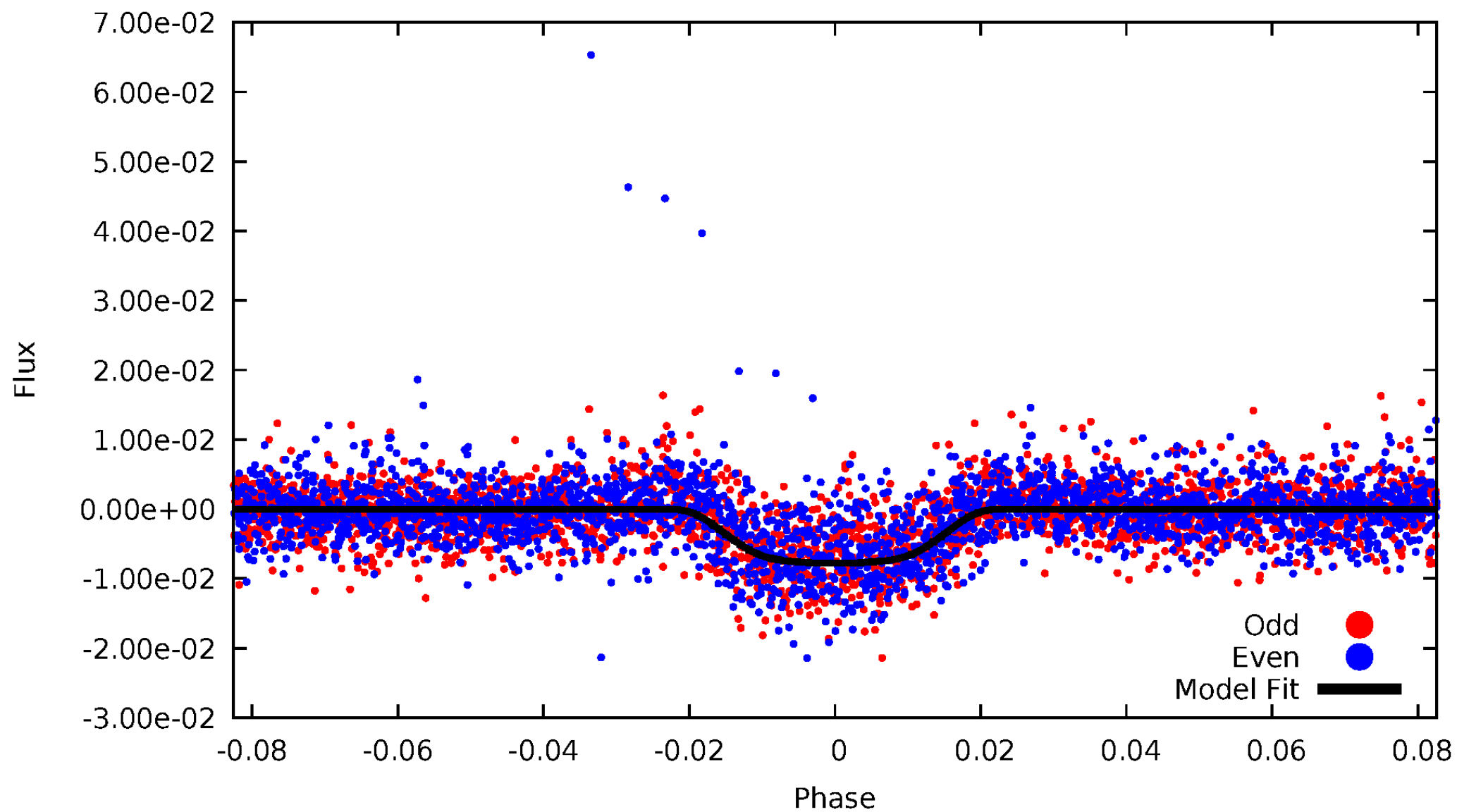


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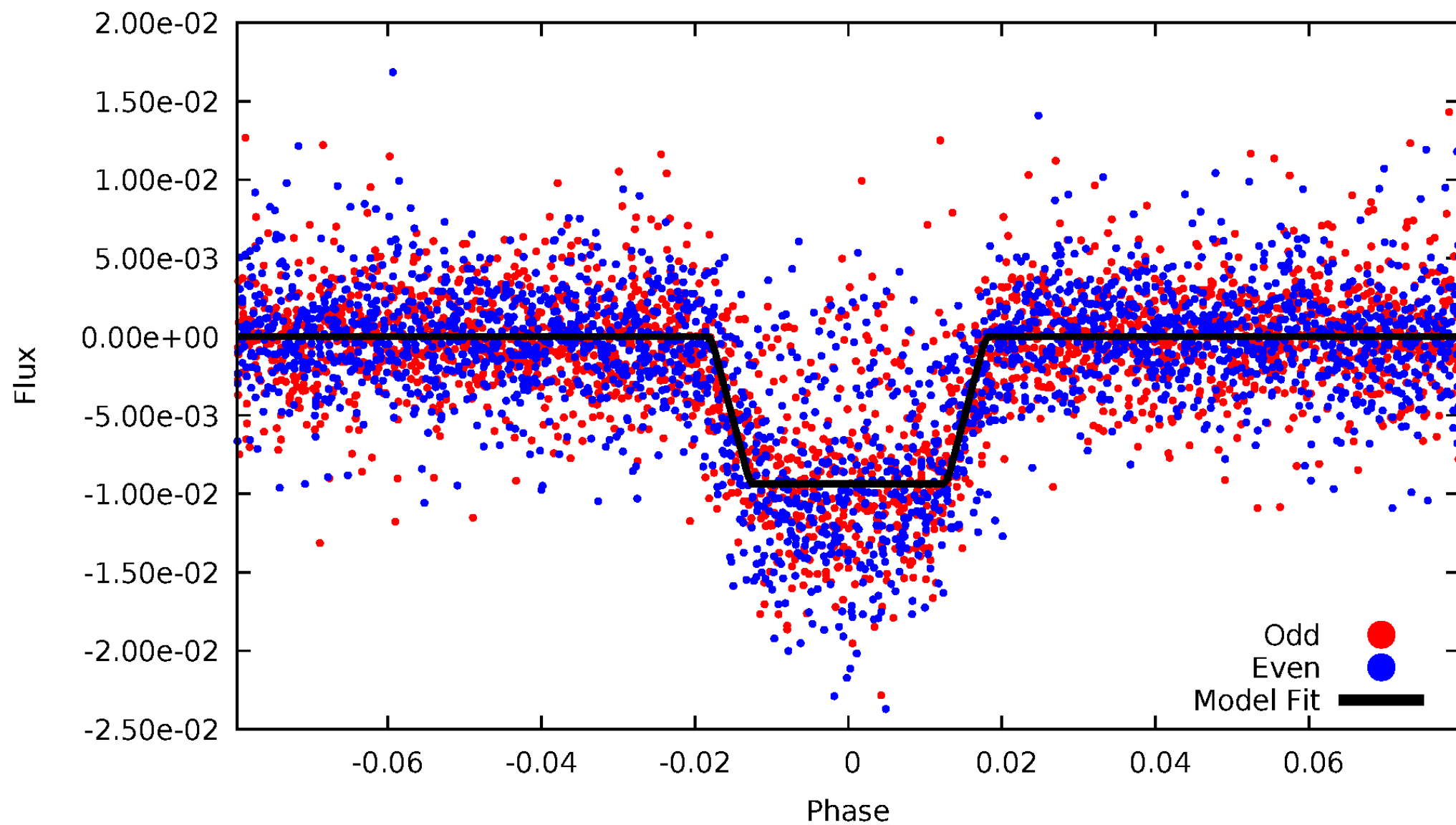
DV Odd/Even

TCE 003097352-02



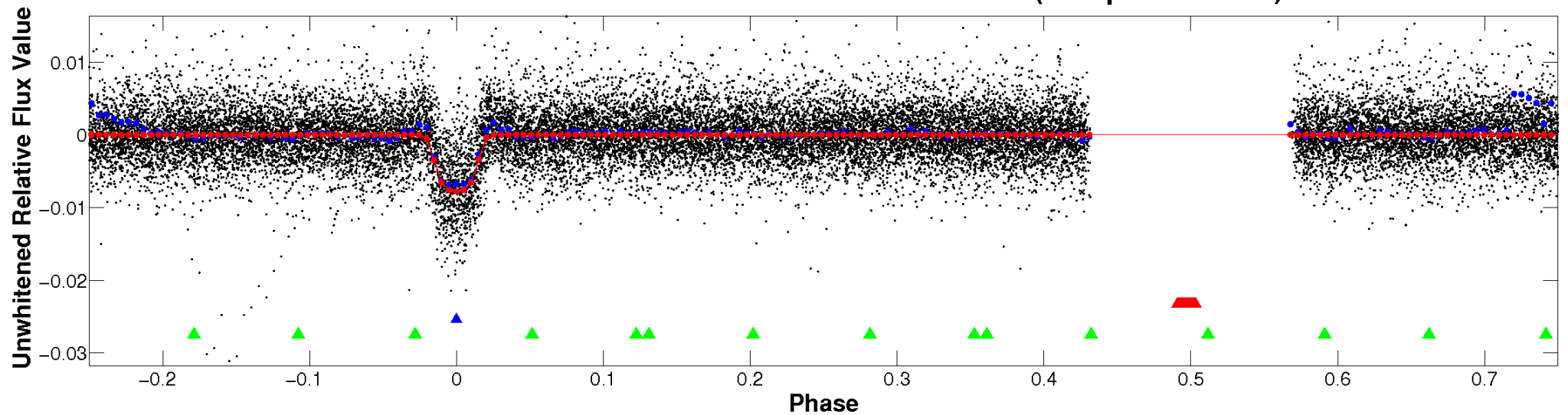
ALT Odd/Even

TCE 003097352-02

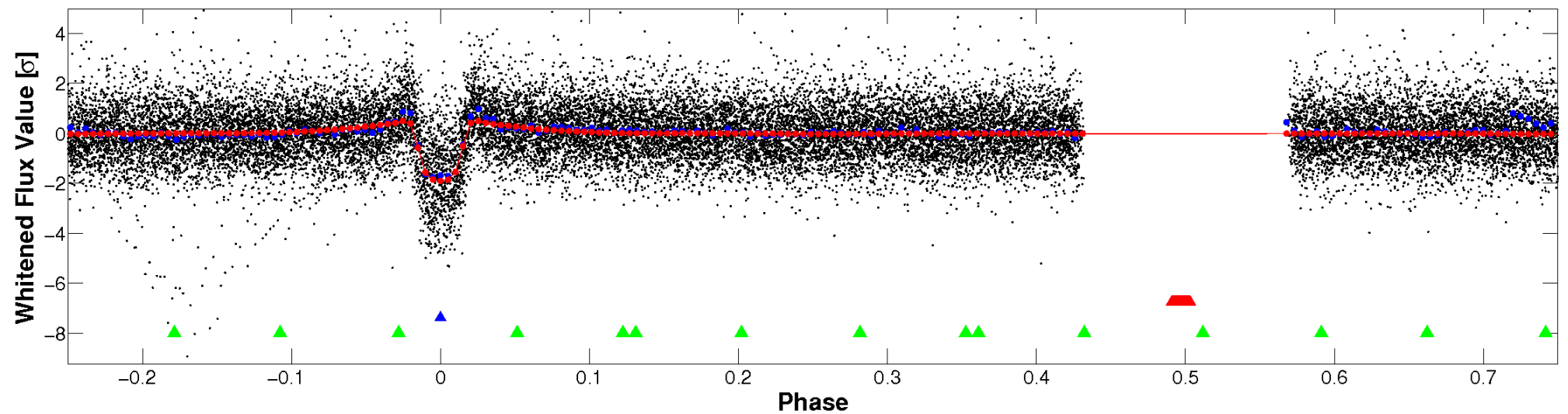


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

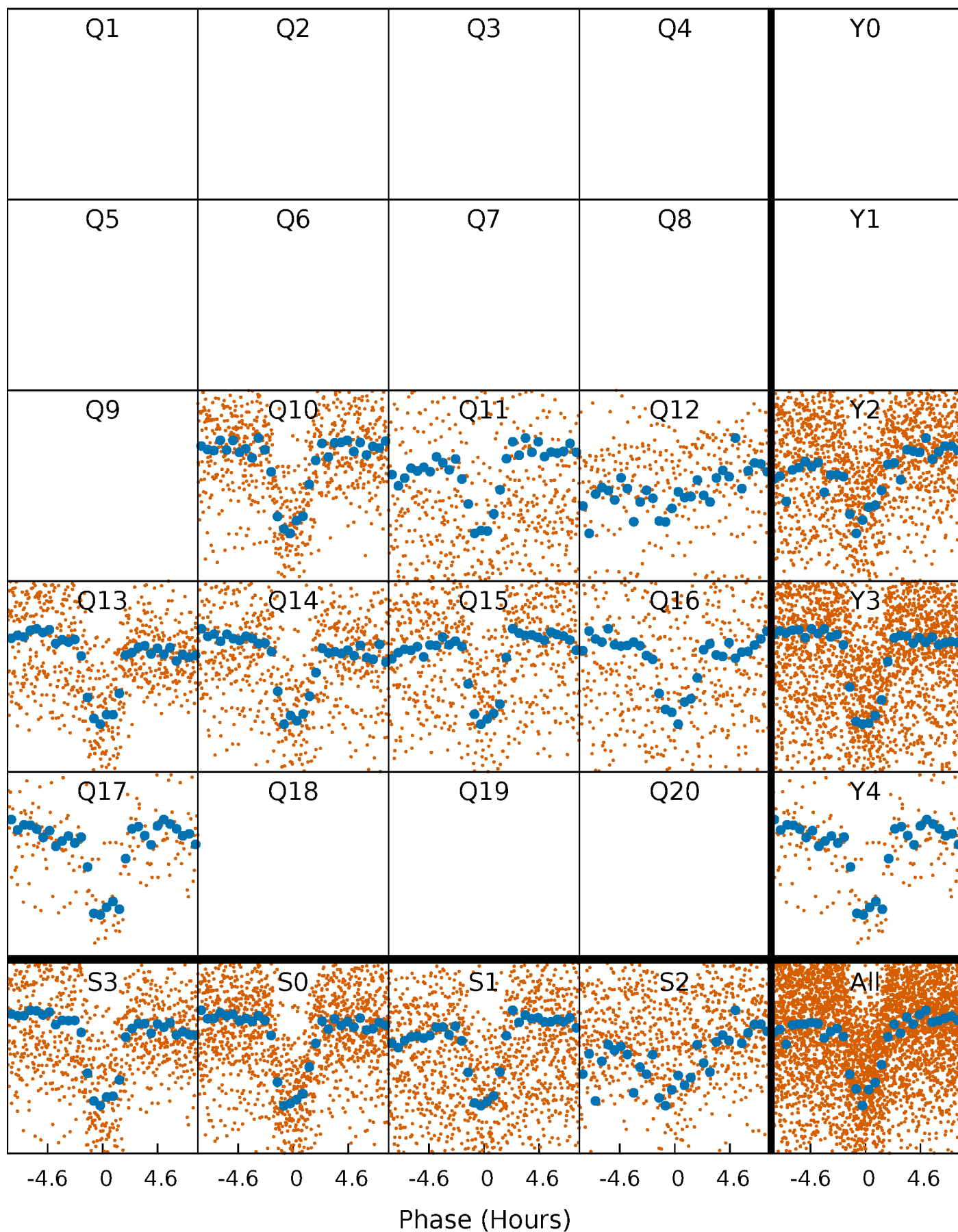


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



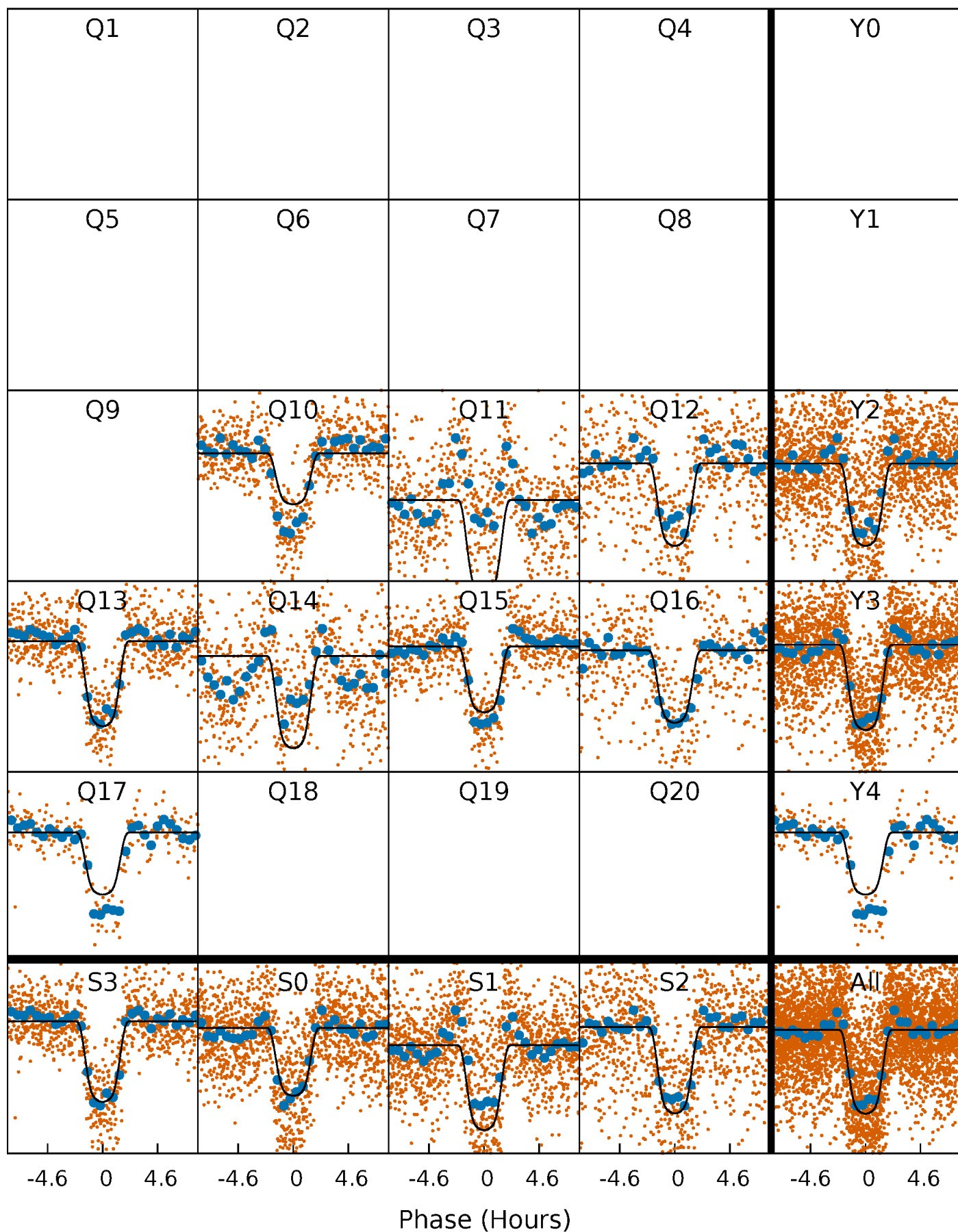
PDC Quarter-Phased Transit Curves

TCE 003097352-02 P= 4.029681 Days $T_0=132.439875$ (BKJD)



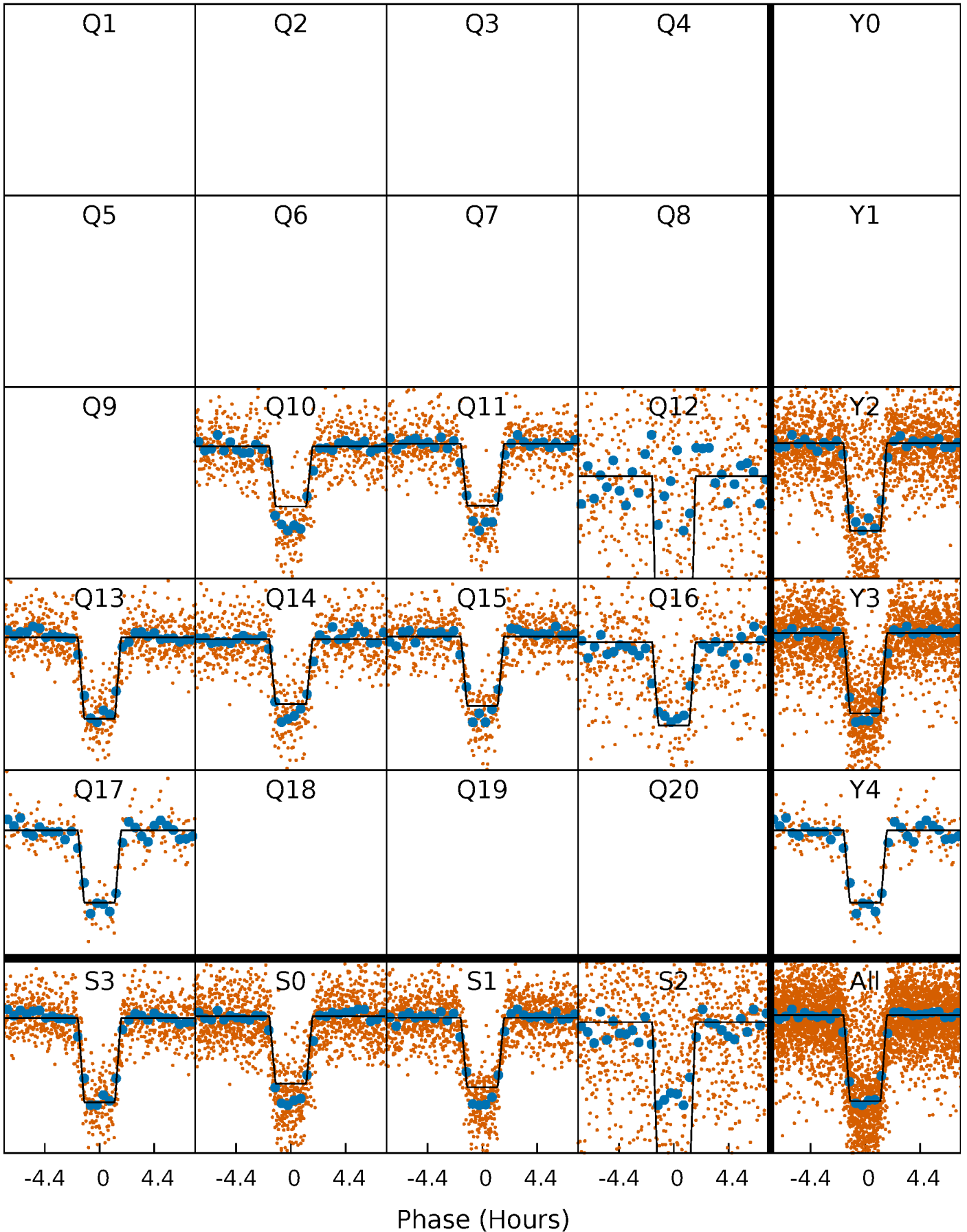
DV Quarter-Phased Transit Curves

TCE 003097352-02 P= 4.029681 Days $T_0=132.439875$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

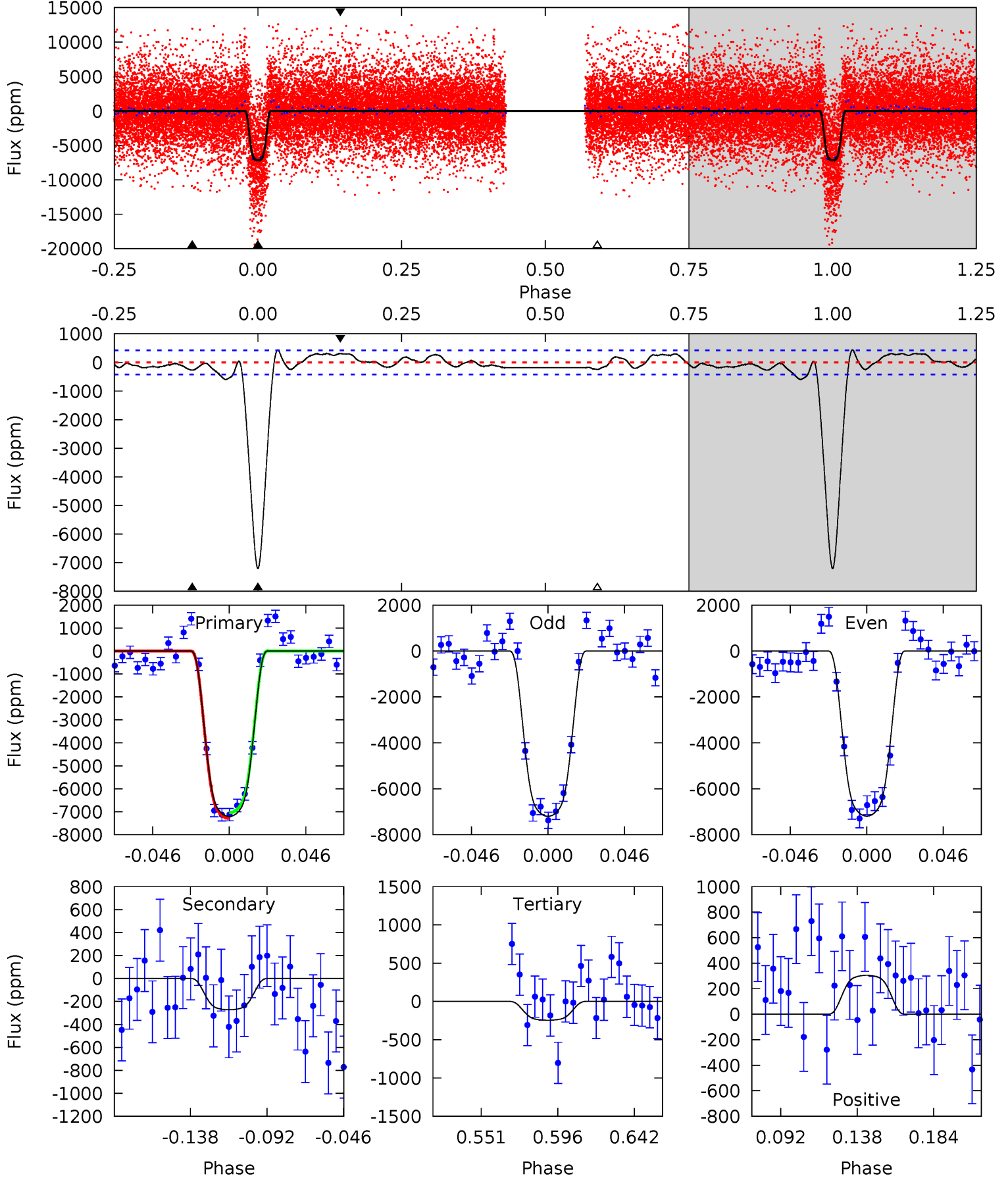
TCE 003097352-02 P= 4.029788 Days $T_0=132.410969$ (BKJD)



DV Model-Shift Uniqueness Test

003097352-02, P = 4.029681 Days, E = 132.439875 Days

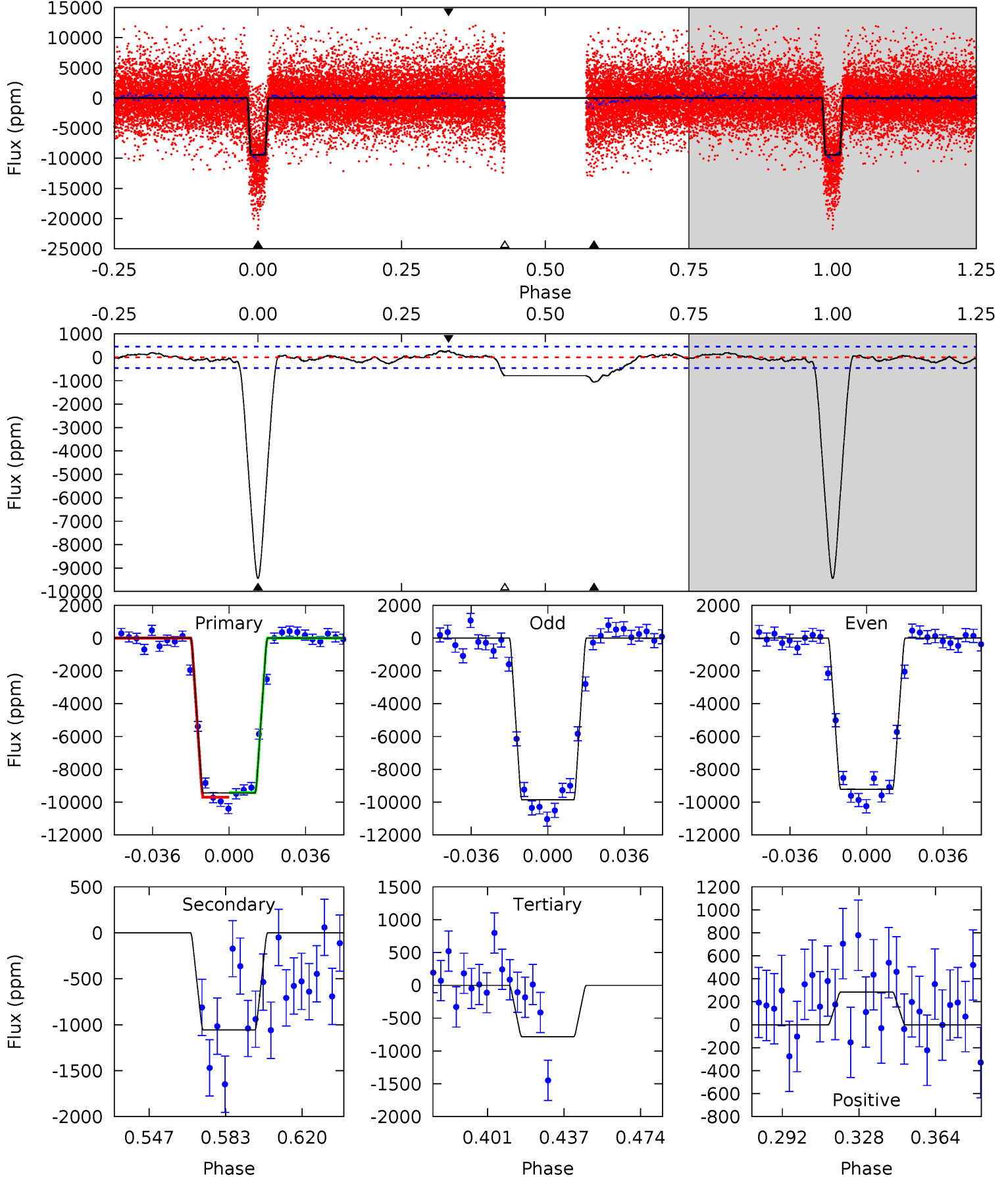
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
80.8	3.06	2.75	3.42	4.73	2.00	2.19	78.1	77.4	0.30	-0.36	0.05	0.92	0.06	1.41



Alt Model-Shift Uniqueness Test

003097352-02, P = 4.029788 Days, E = 132.410969 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
98.8	11.1	8.21	2.98	4.77	2.09	1.63	90.6	95.8	2.86	8.09	3.34	0.92	0.03	1.48



Stellar Parameters For KIC 003097352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6024^{+189}_{-232}	$4.385^{+0.108}_{-0.201}$	$-0.060^{+0.250}_{-0.300}$	$1.078^{+0.336}_{-0.144}$	$1.028^{+0.153}_{-0.126}$	$1.155^{+0.553}_{-0.600}$
	+3%/-4%	+2%/-5%	+417%/-500%	+31%/-13%	+15%/-12%	+48%/-52%
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 003097352-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-272 ± 89	$10.92^{+1.89}_{-0.91}$	1738^{+136}_{-102}	3101^{+155}_{-191}	$2.955^{+1.280}_{-1.159}$
Alt.	-1057 ± 96	$11.51^{+1.92}_{-1.07}$	1737^{+130}_{-98}	3831^{+108}_{-113}	11^{+2}_{-3}

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

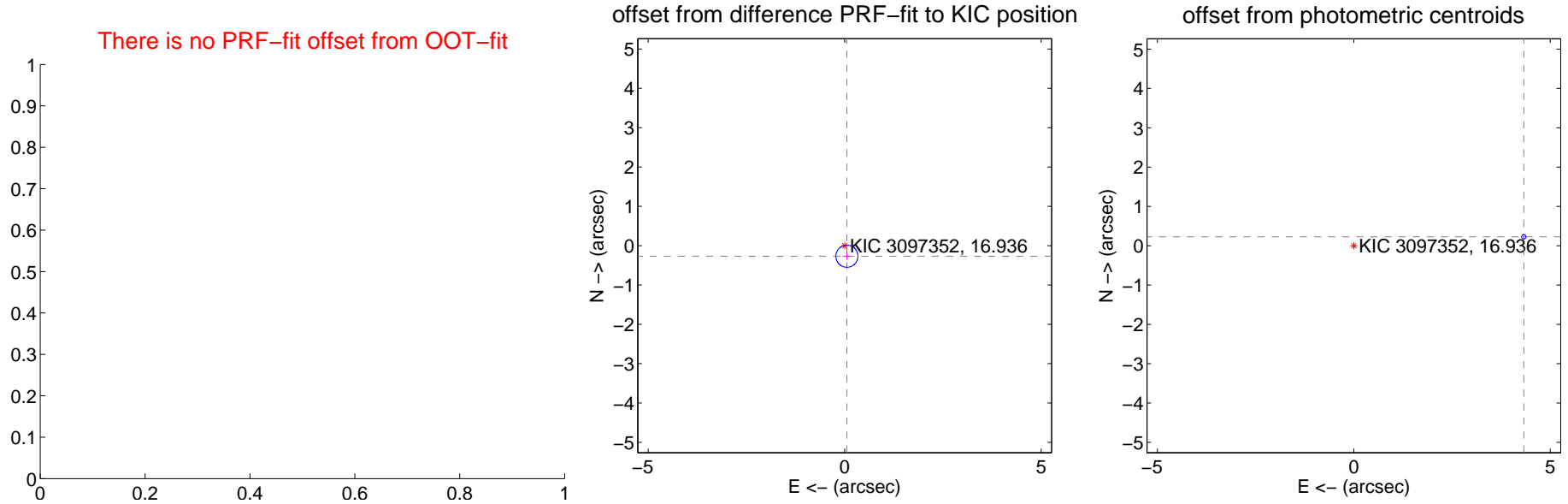
DV Centroid Data

Supplemental centroid analysis for 003097352-02. Kepler magnitude: 16.94. Transit SNR 51.89

There are 8 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.274 ± 0.094	2.93	-0.056 ± 0.110	-0.269 ± 0.088
photometric centroid source offset	4.33 ± 0.02	233.90	-4.33 ± 0.02	0.23 ± 0.01



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.

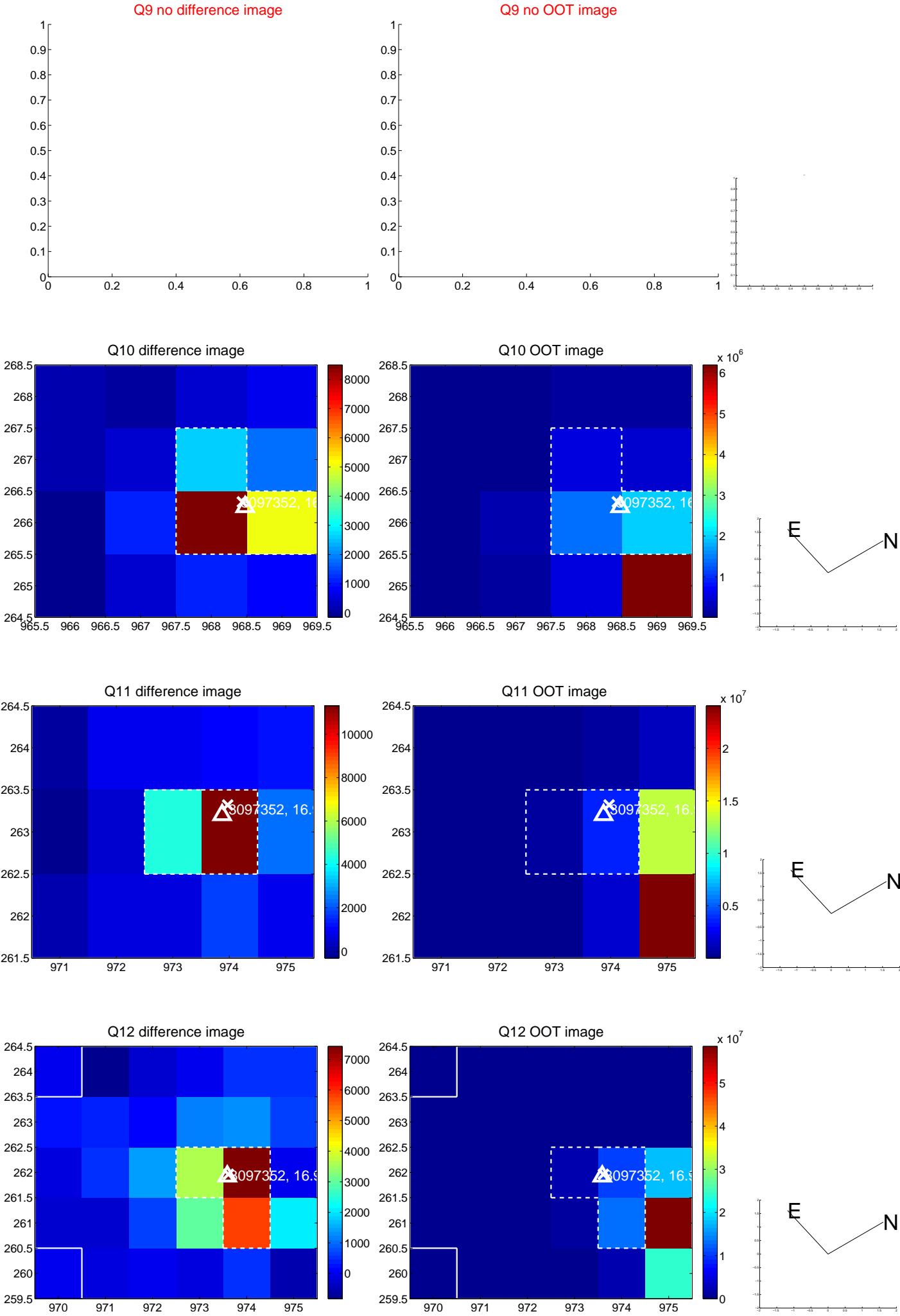
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



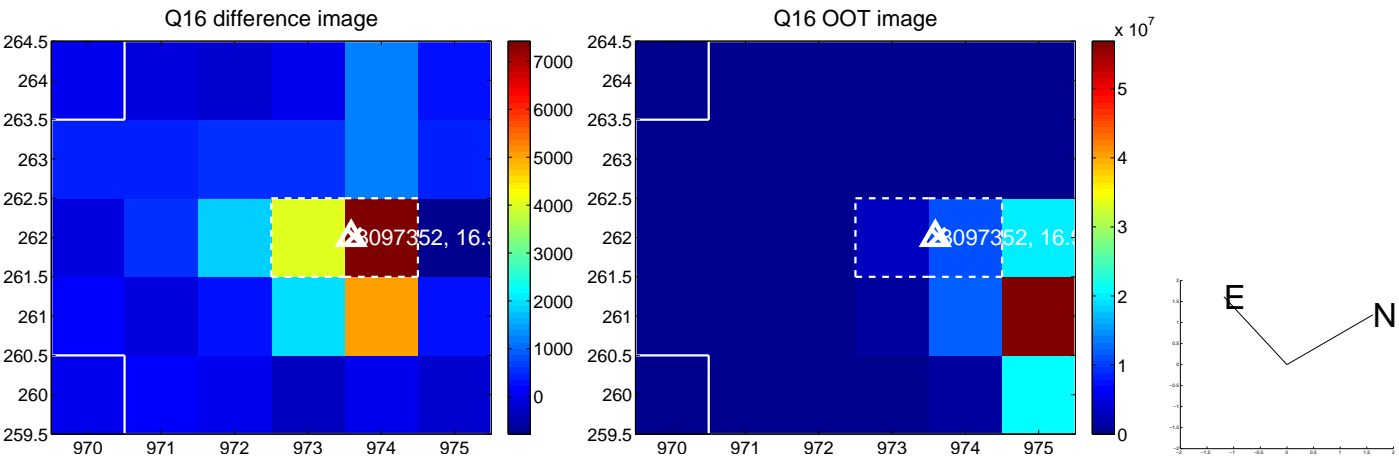
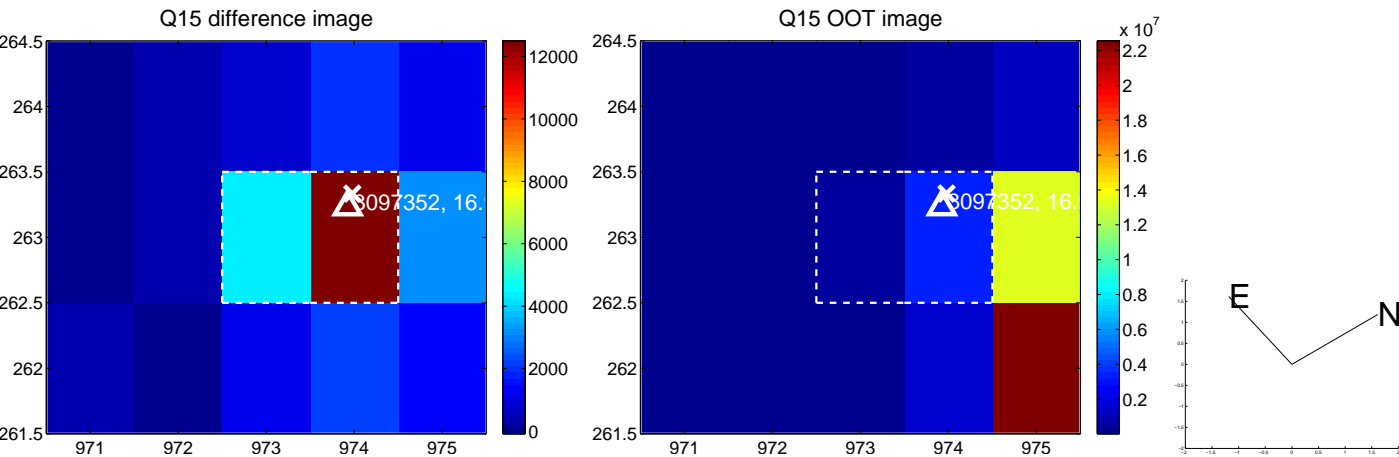
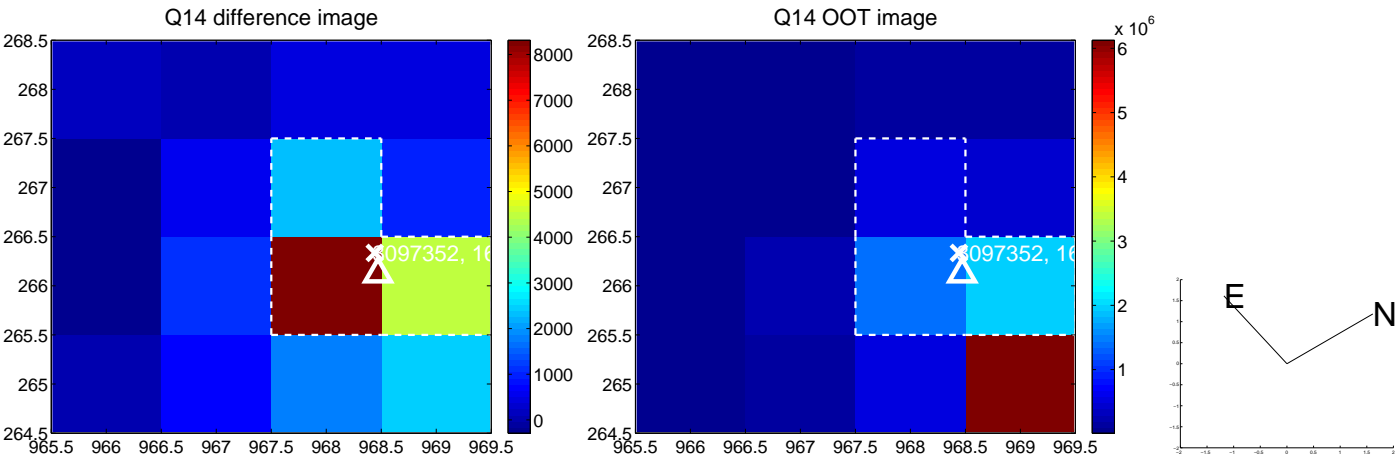
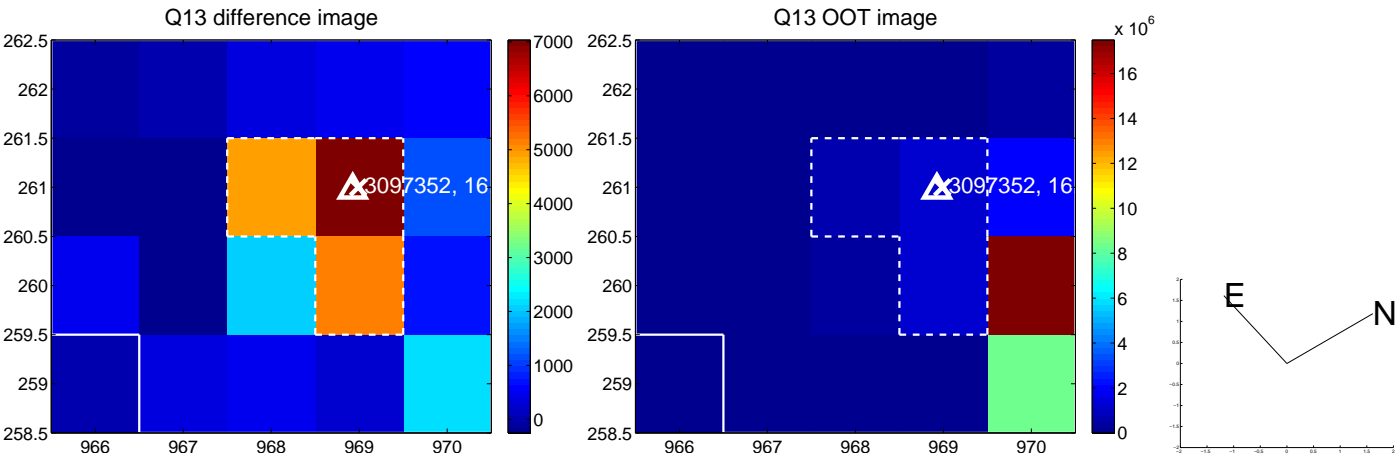
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



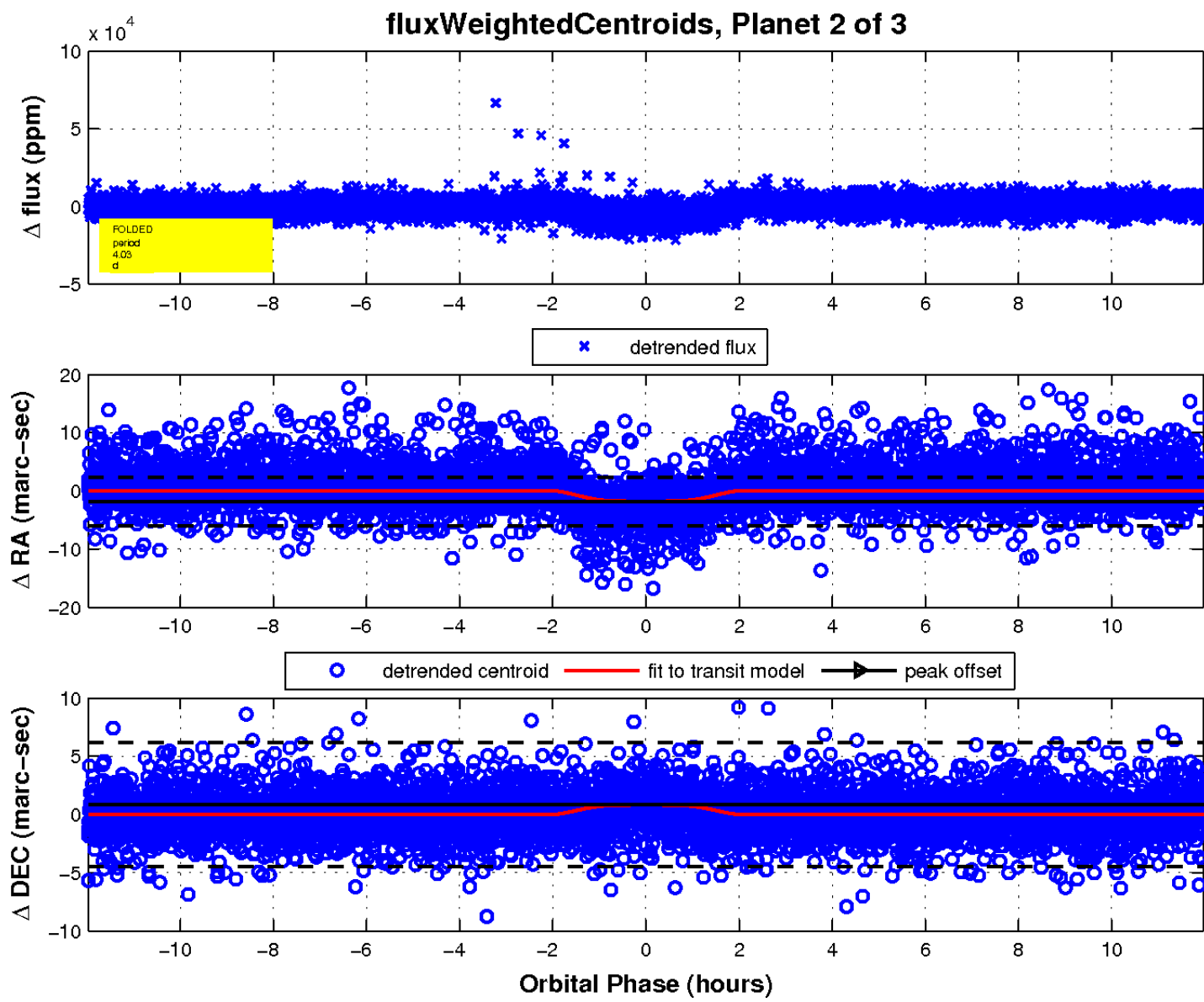
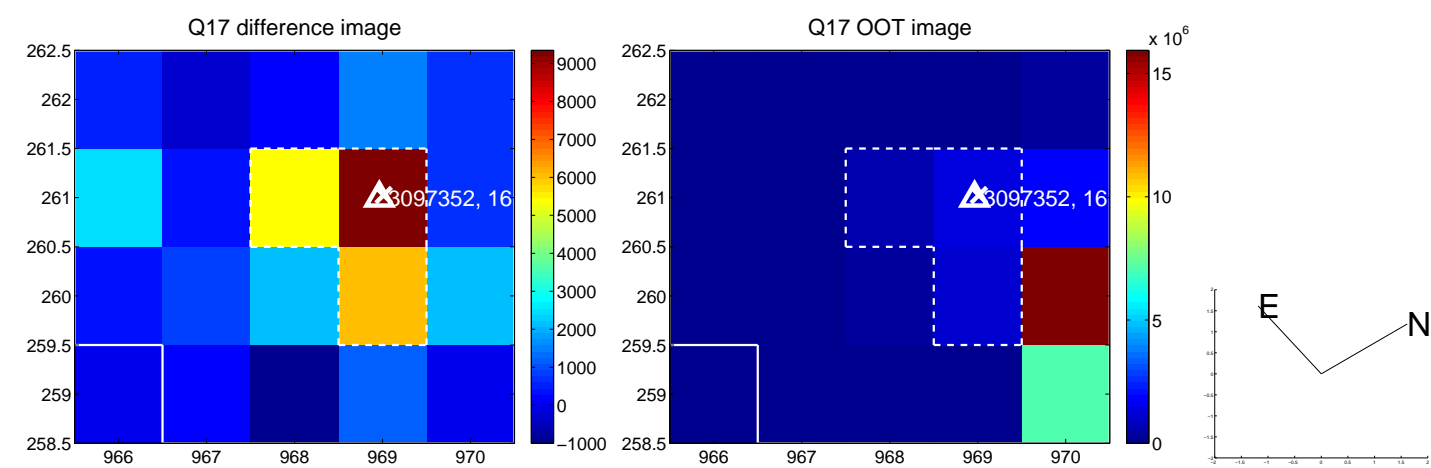
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

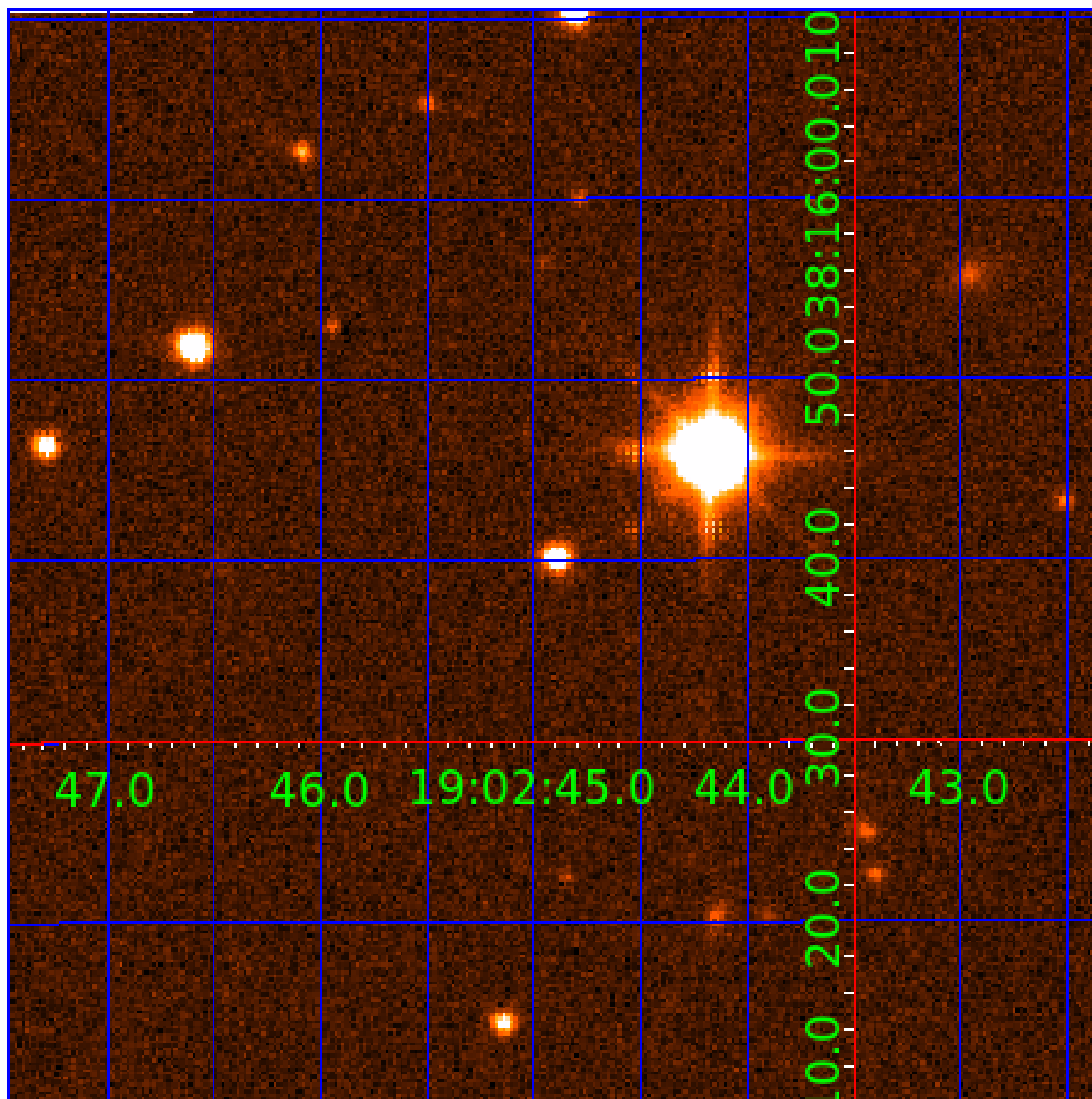


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003097352

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})
003097352-01	OBS	3648.01	4.029821	134.417360	200502.0	4.412	1234.4	744.6	1.08	6024	48.75	547.60
003097352-02	OBS	No	4.029681	132.439875	7787.8	3.991	48.1	51.9	1.08	6024	10.88	547.63
003097352-03	OBS	No	91.755380	222.513613	6775.0	3.073	8.2	7.1	1.08	6024	8.99	8.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003097352-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—HAS_SEC_TCE—SEASONAL_DEPTH_ALT—CENT_FEW_MEAS
003097352-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_FEW_MEAS
003097352-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

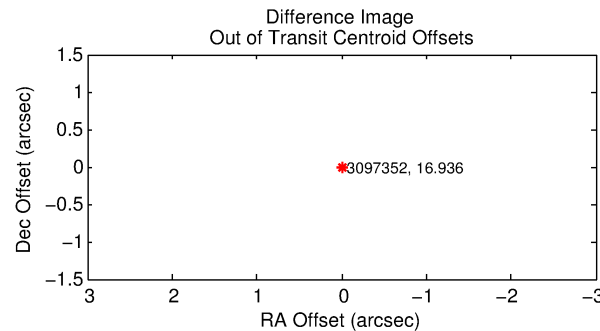
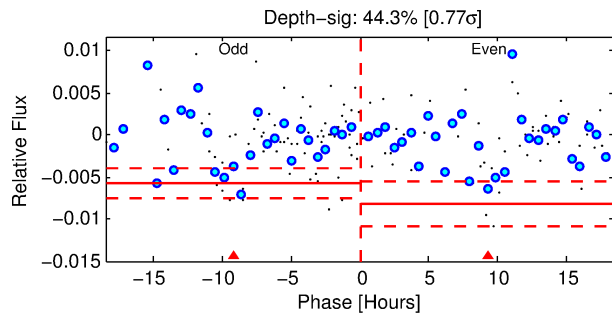
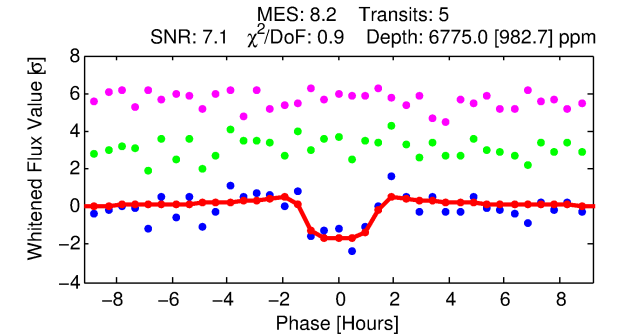
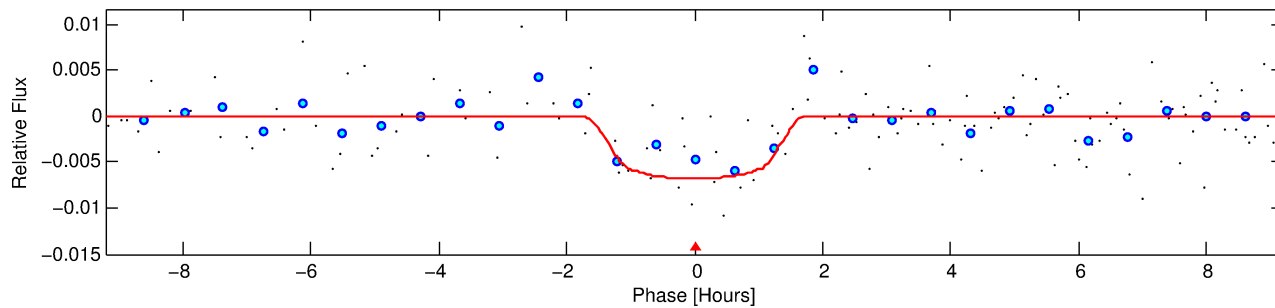
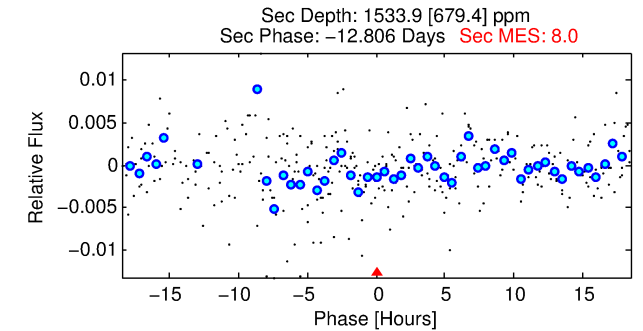
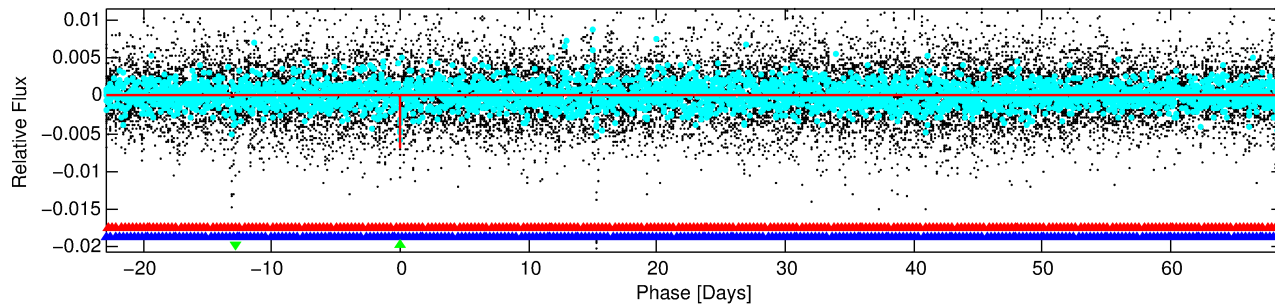
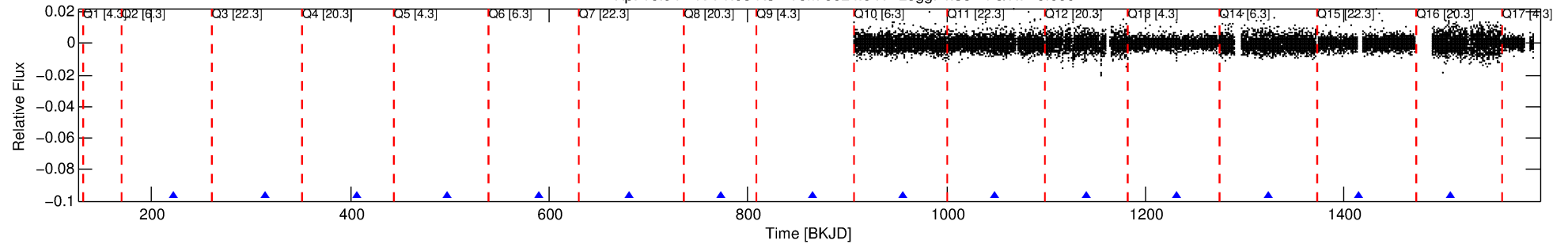
Ephemeris Match Information For 003097352-03

No Significant Match Found

DV One-Page Summary

KIC: 3097352 Candidate: 3 of 3 Period: 91.755 d
KOI: K03648 Corr: No Ephemeris Match

Kp: 16.94 R*: 1.08 Rs Teff: 6024.0 K Logg: 4.38 Fe/H: -0.060



DV Fit Results:

Period = 91.75538 [0.00237] d
Epoch = 222.5136 [0.0273] BKJD
Rp/R* = 0.0764 [0.0695]
a/R* = 230.10 [977.05]
b = 0.38 [9.72]
Seff = 8.49 [3.42]
Teq = 435 [44] K
Rp = 8.99 [8.65] Re
a = 0.4020 [0.1040] AU
Ag = 1687.69 [3223.45] [0.52σ]
Teffp = 4313 [2027] K [1.91σ]

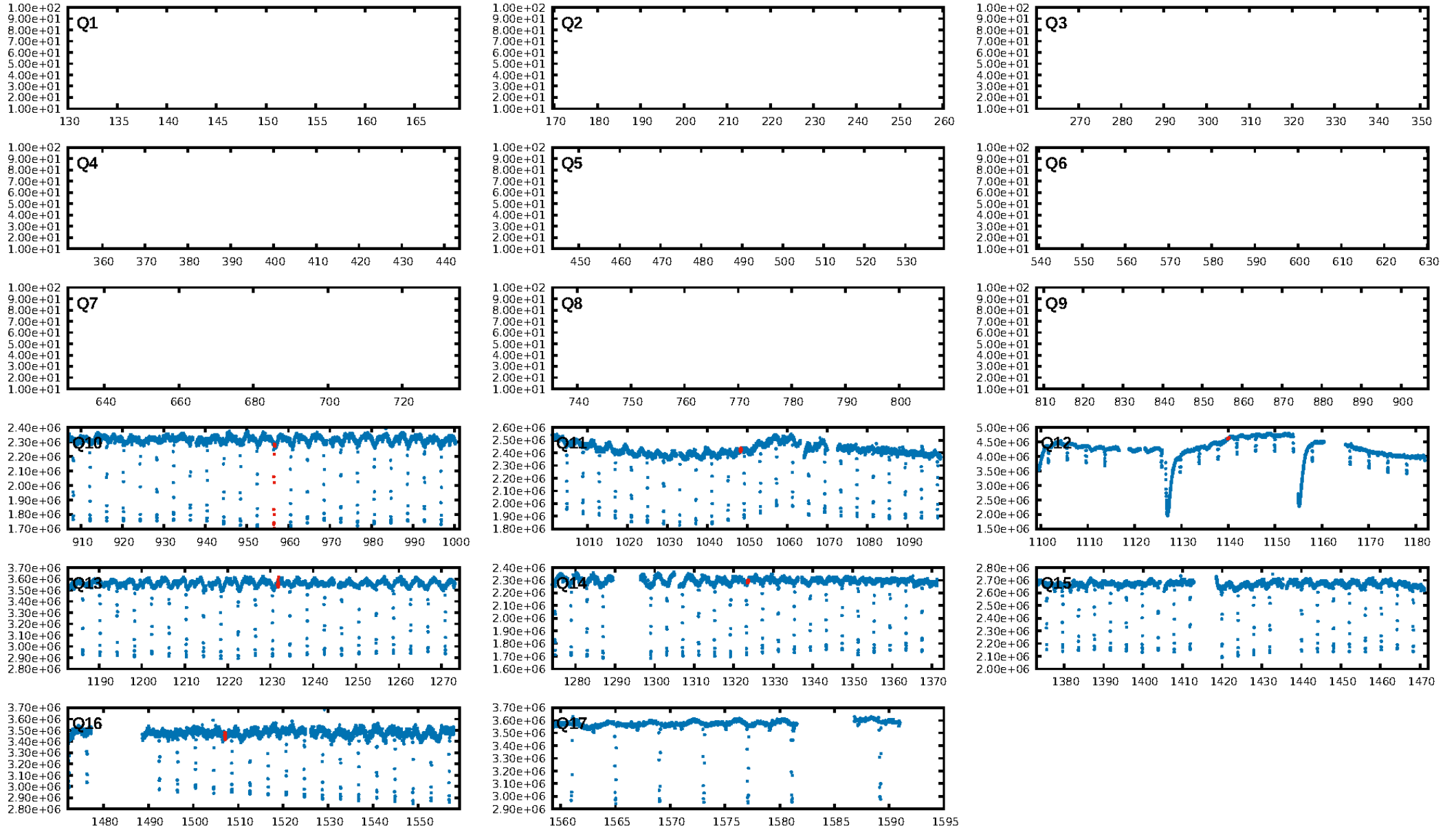
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [391.61σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.1%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 5.35e-14
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.6325
Centroid-sig: 0.6%
Centroid-so: 4.497 arcsec [44.66σ]
OotOffset-rm: N/A
KicOffset-rm: 0.291 arcsec [0.54σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.40 [2/5]

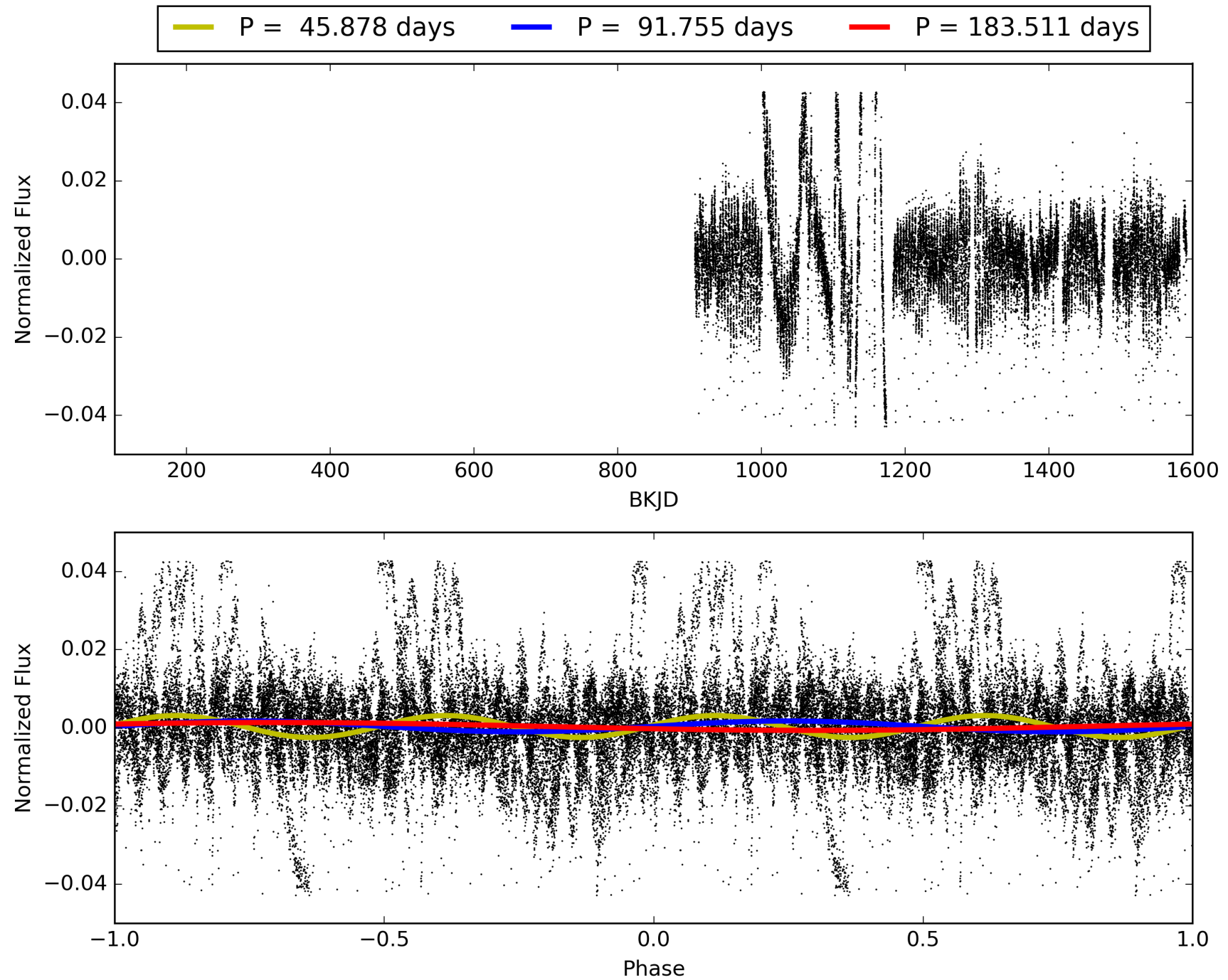
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:17:04 Z

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

TCE 003097352-03, PDC Light Curves

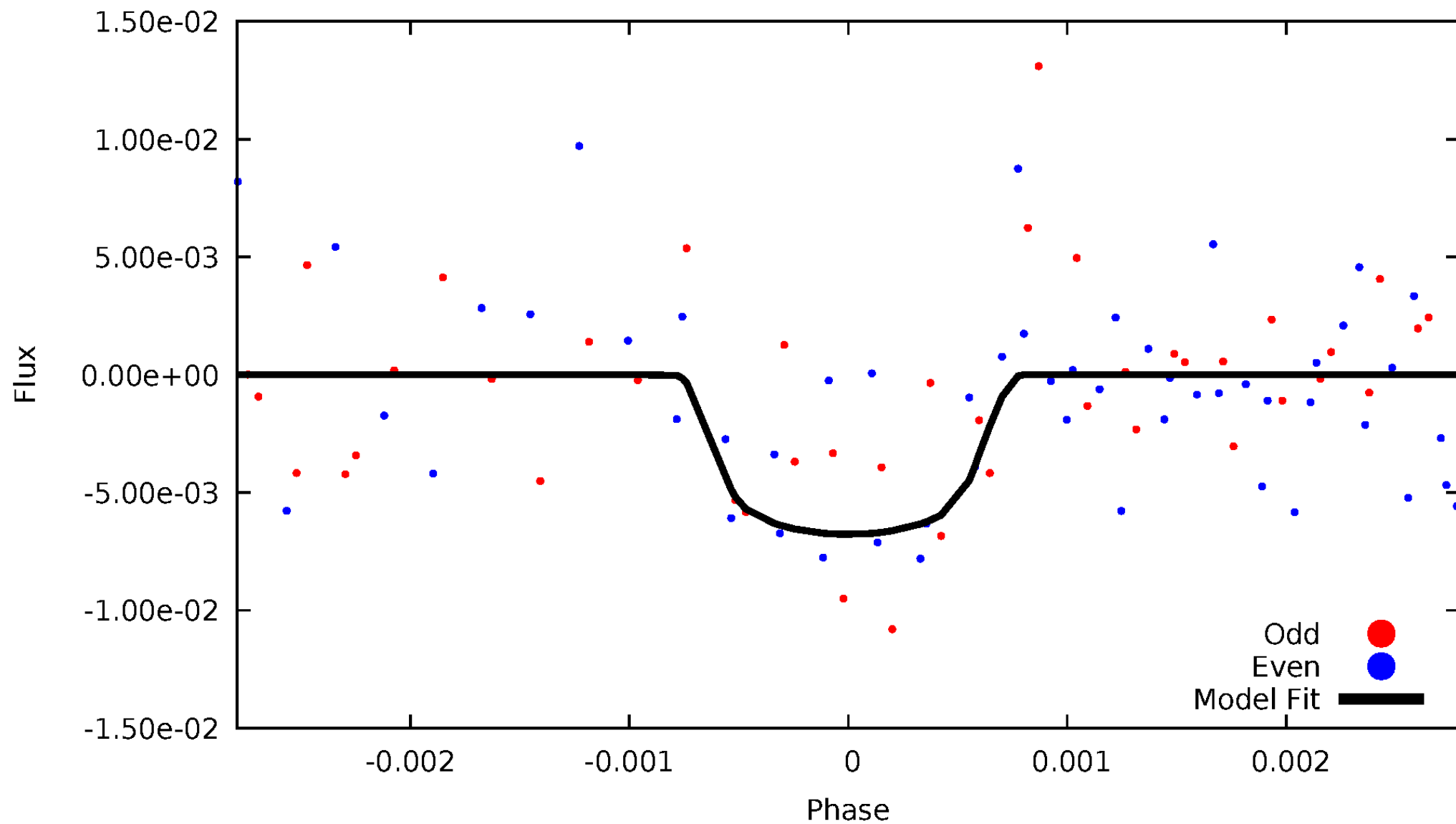


TCE 003097352-03



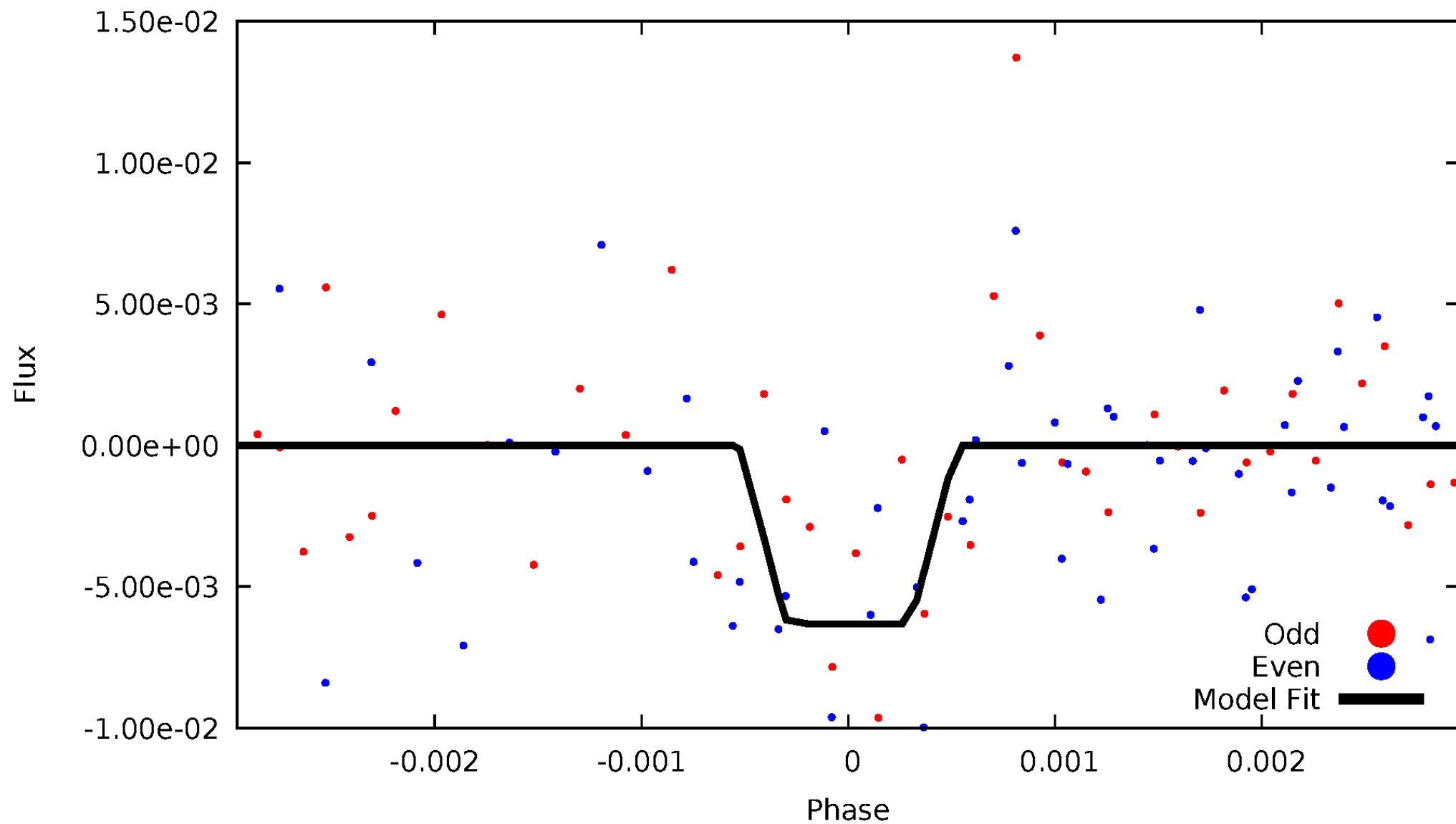
DV Odd/Even

TCE 003097352-03



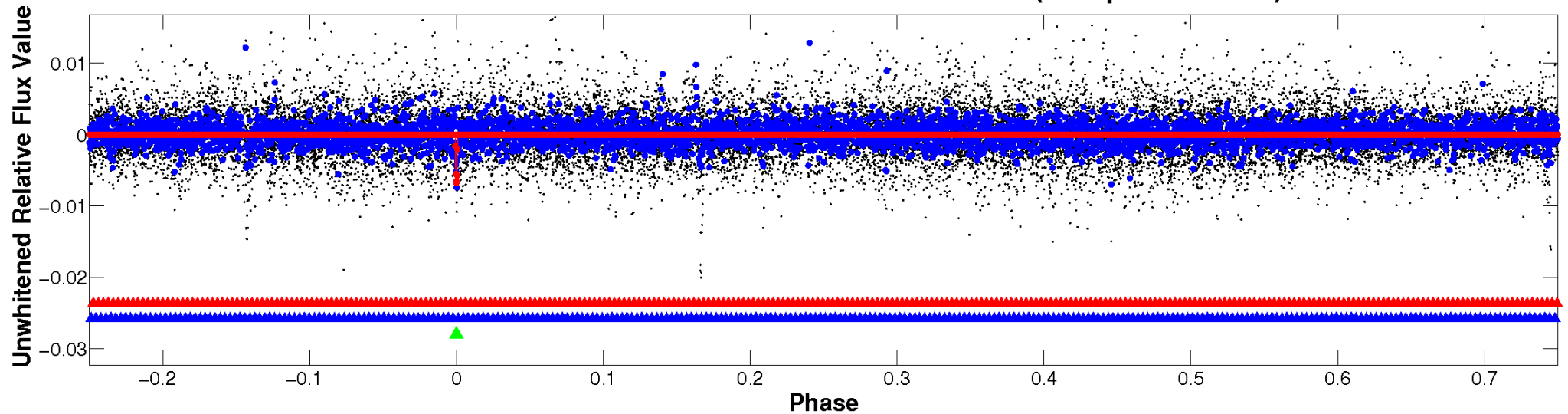
ALT Odd/Even

TCE 003097352-03

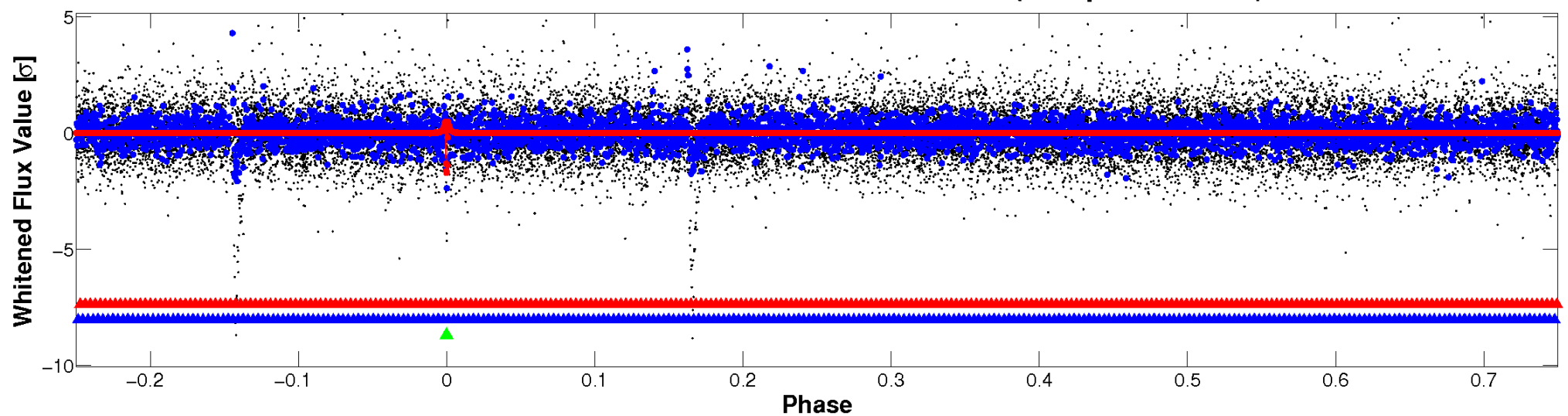


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

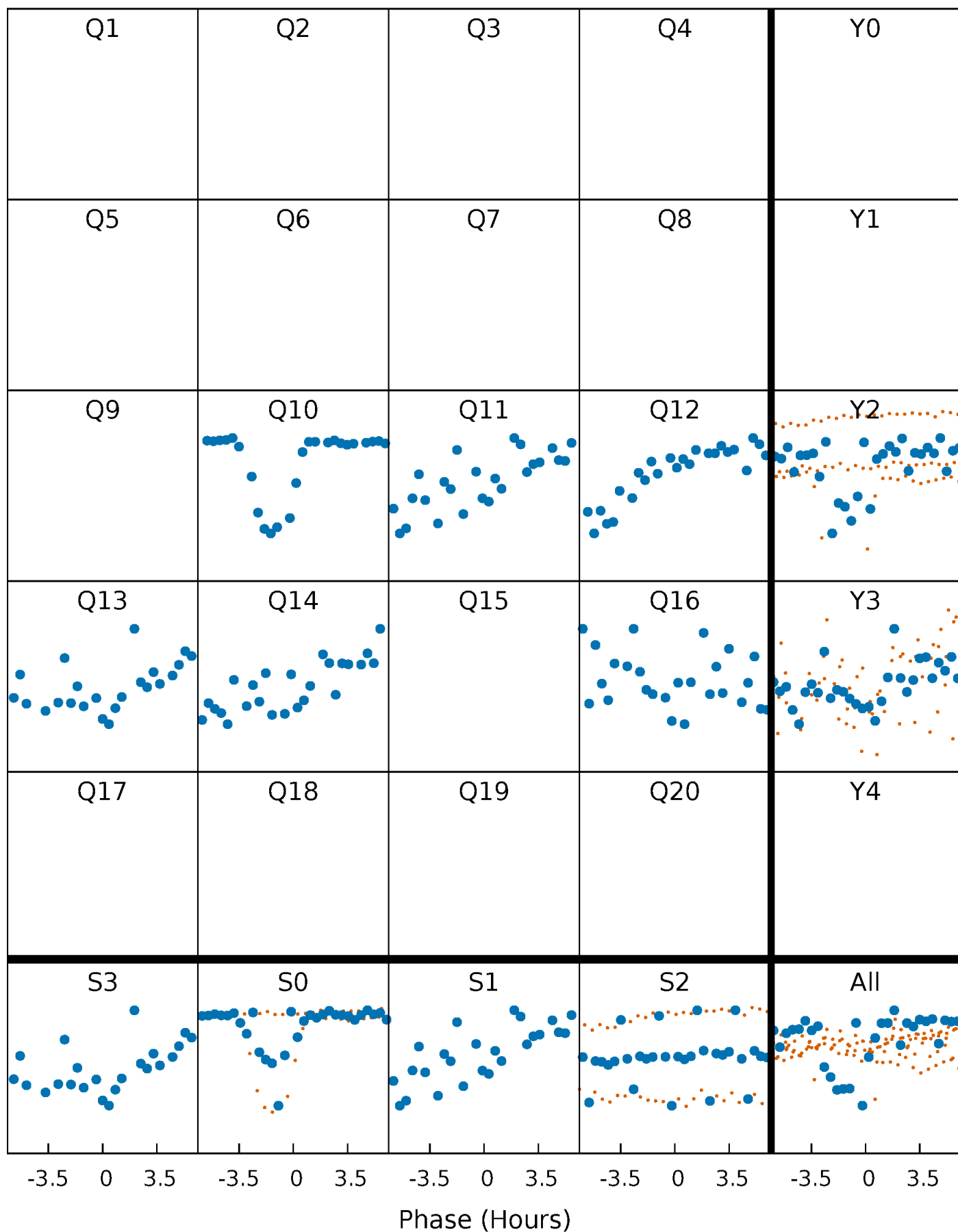


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



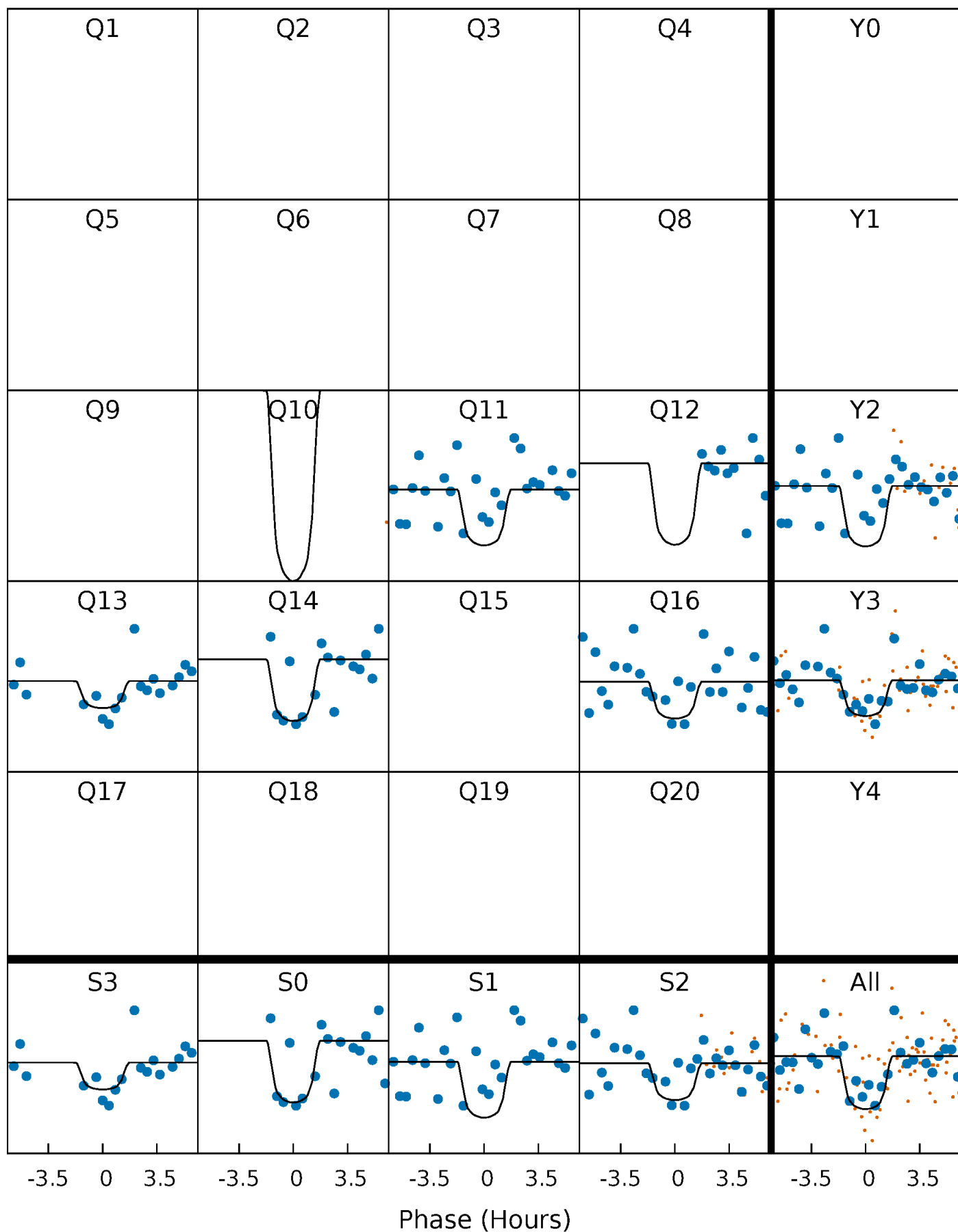
PDC Quarter-Phased Transit Curves

TCE 003097352-03 P= 91.755380 Days $T_0=222.513613$ (BKJD)



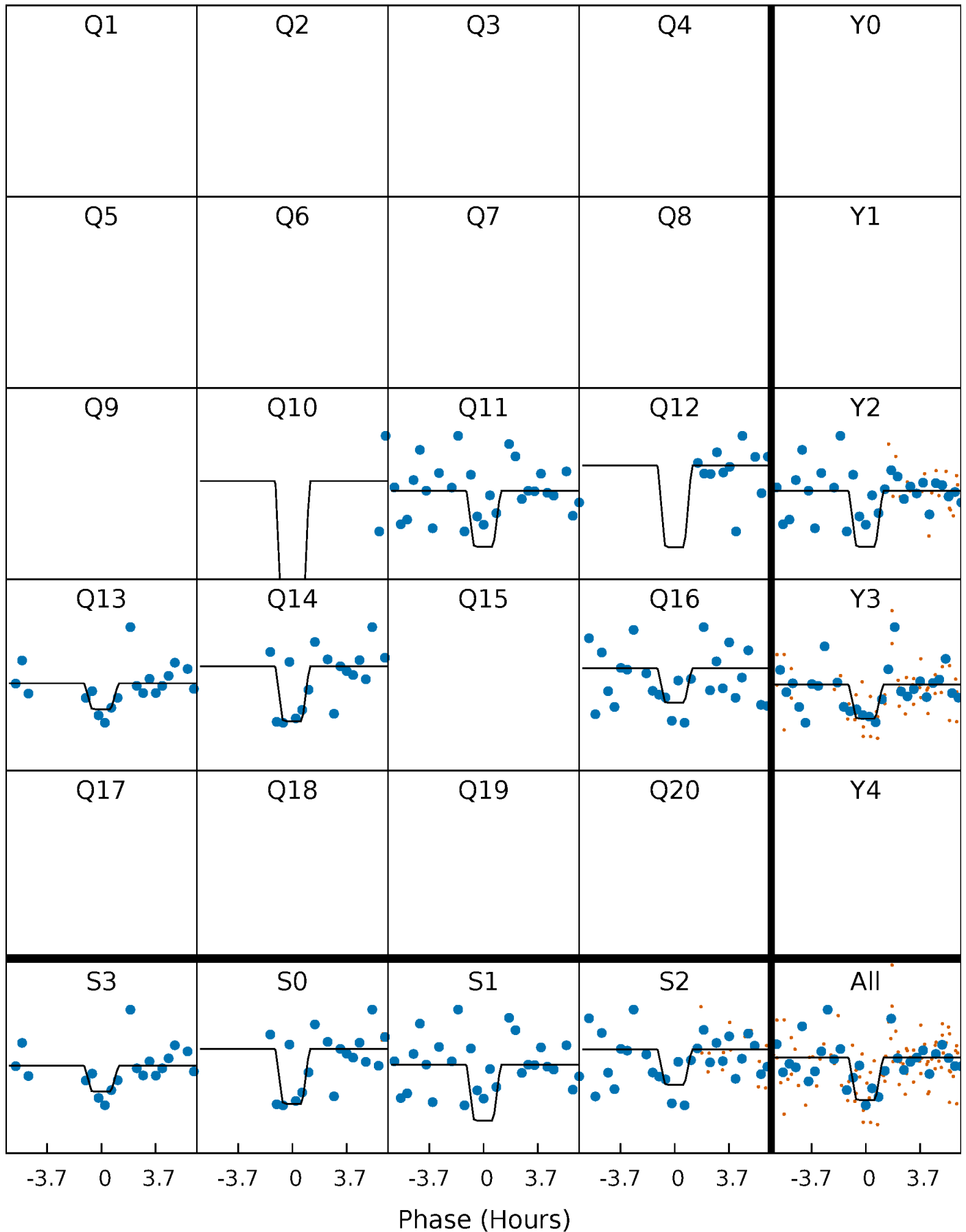
DV Quarter-Phased Transit Curves

TCE 003097352-03 $P = 91.755380$ Days $T_0 = 222.513613$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

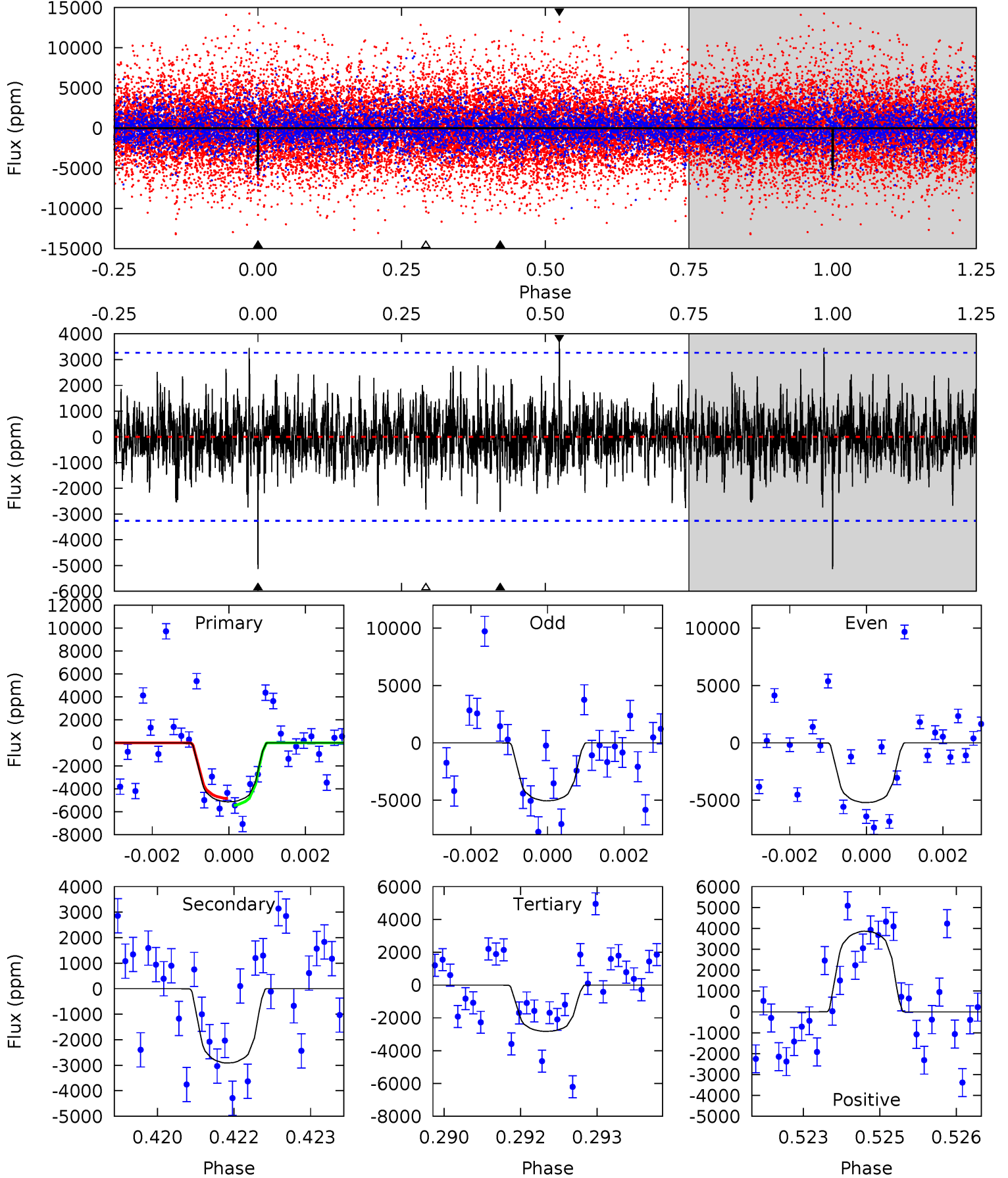
TCE 003097352-03 $P = 91.752618$ Days $T_0 = 222.549095$ (BKJD)



DV Model-Shift Uniqueness Test

003097352-03, P = 91.755380 Days, E = 222.513613 Days

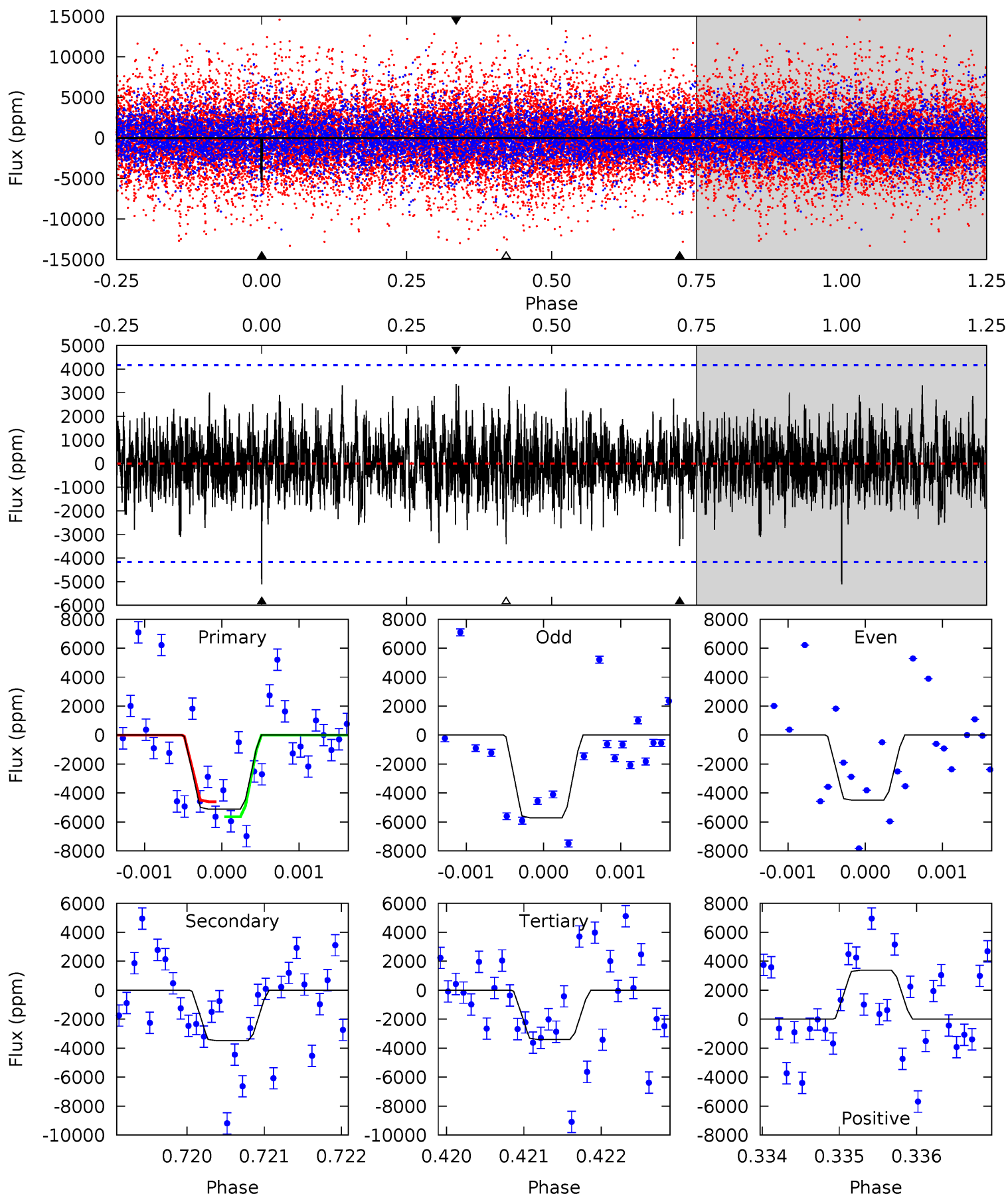
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.46	4.80	4.66	6.37	5.37	3.16	1.33	3.81	2.10	0.14	-1.57	0.13	1.01	0.43	0.51



Alt Model-Shift Uniqueness Test

003097352-03, P = 91.752618 Days, E = 222.549095 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.67	4.54	4.43	4.40	5.44	3.27	1.21	2.23	2.27	0.10	0.14	0.77	0.90	0.40	0.68



Stellar Parameters For KIC 003097352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6024^{+189}_{-232}	$4.385^{+0.108}_{-0.201}$	$-0.060^{+0.250}_{-0.300}$	$1.078^{+0.336}_{-0.144}$	$1.028^{+0.153}_{-0.126}$	$1.155^{+0.553}_{-0.600}$
	+3%/-4%	+2%/-5%	+417%/-500%	+31%/-13%	+15%/-12%	+48%/-52%
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 003097352-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2914 ± 607	$10.33^{+7.73}_{-6.24}$	613^{+46}_{-35}	4872^{+3038}_{-971}	2463^{+13667}_{-1745}
Alt.	-3483 ± 768	$10.75^{+8.61}_{-6.48}$	614^{+46}_{-36}	5001^{+2841}_{-1035}	2604^{+14209}_{-1796}

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

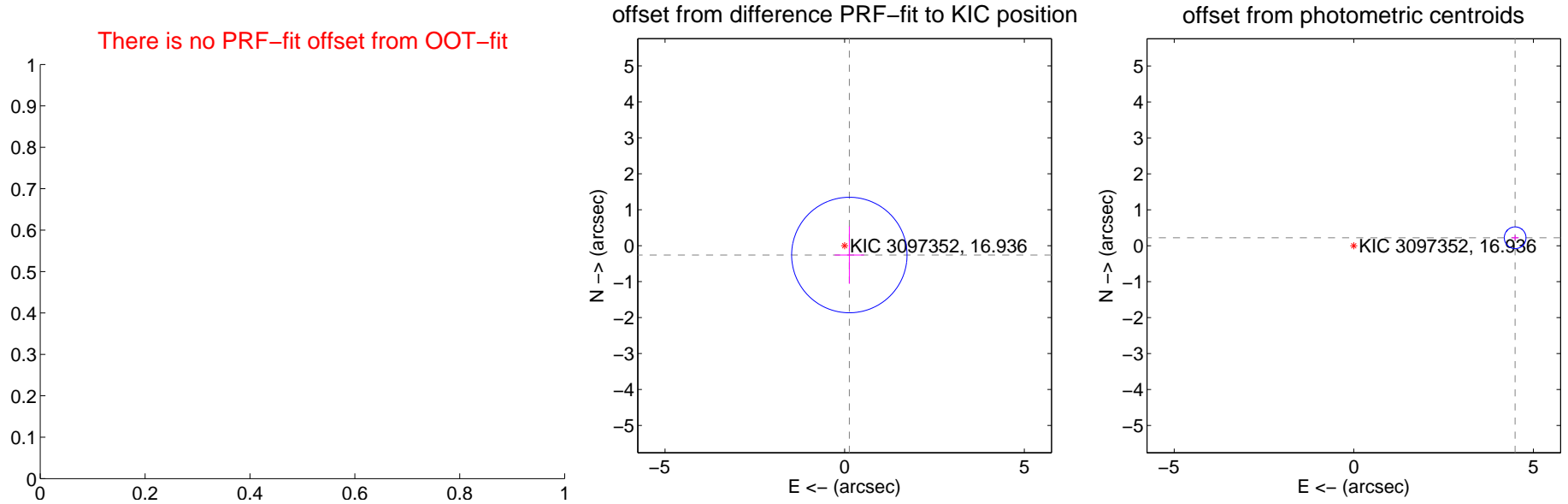
DV Centroid Data

Supplemental centroid analysis for 003097352-03. Kepler magnitude: 16.94. Transit SNR 7.15

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.291 ± 0.535	0.54	-0.130 ± 0.410	-0.260 ± 0.797
photometric centroid source offset	4.50 ± 0.10	44.66	-4.49 ± 0.10	0.22 ± 0.07



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.

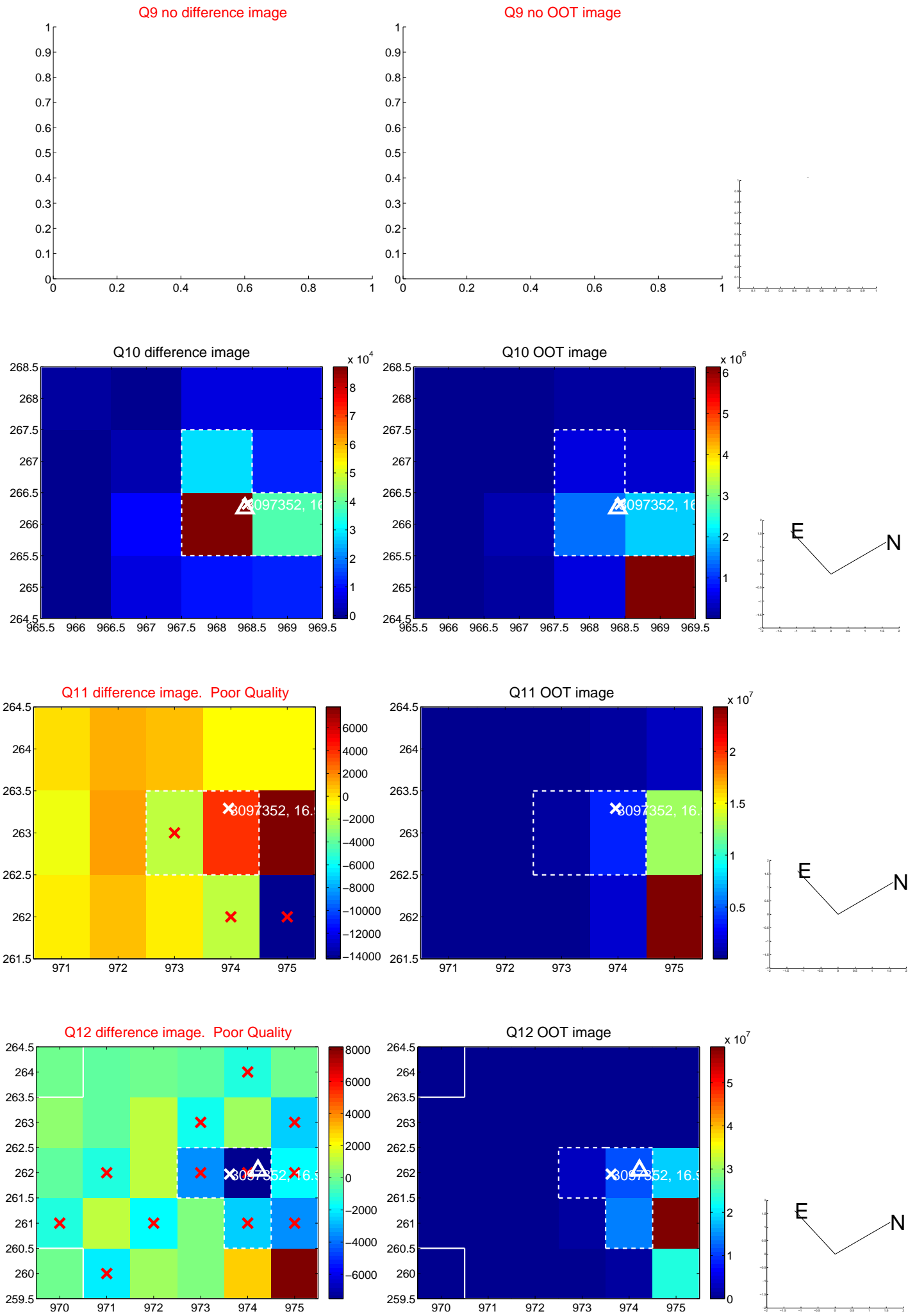
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



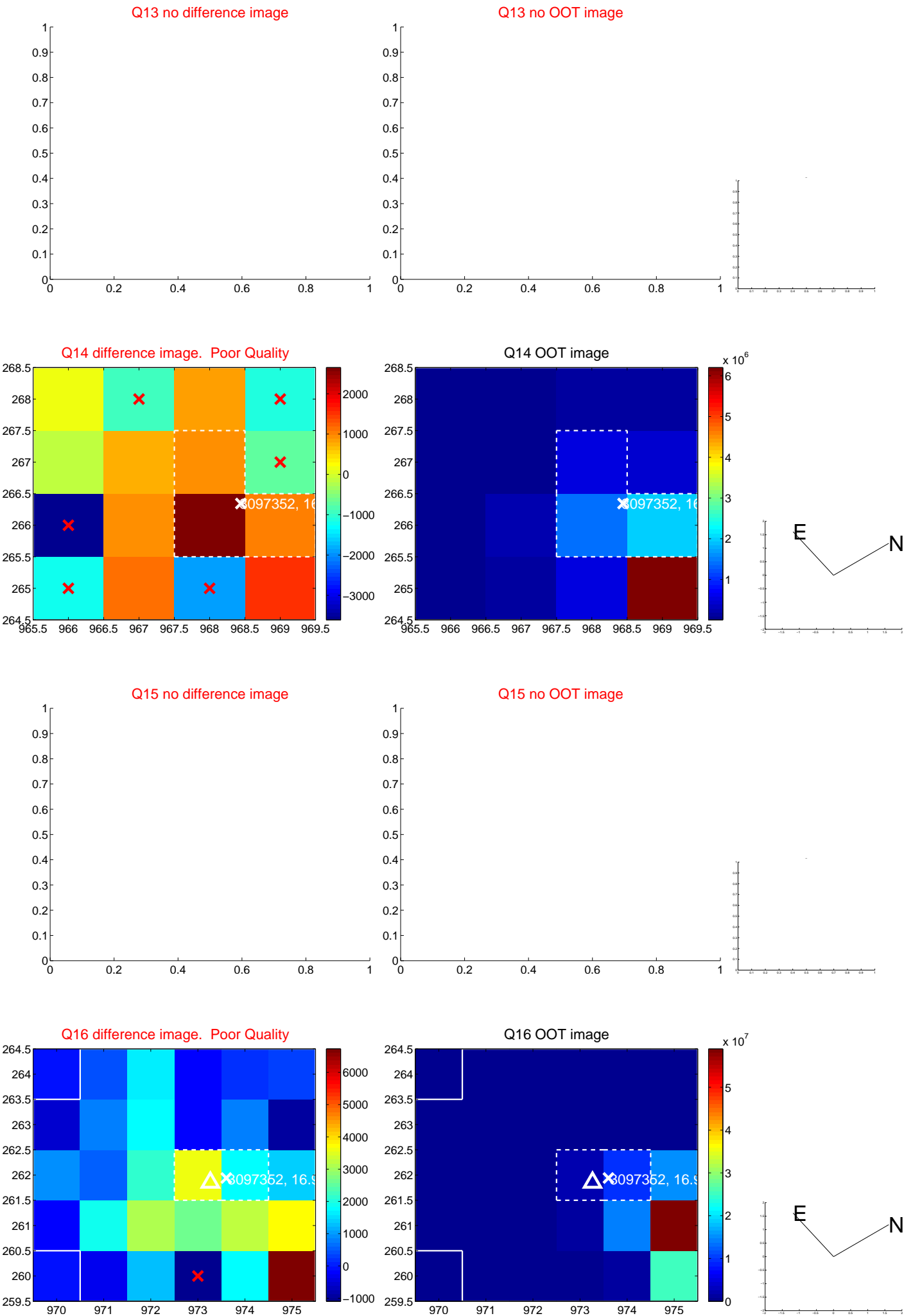
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



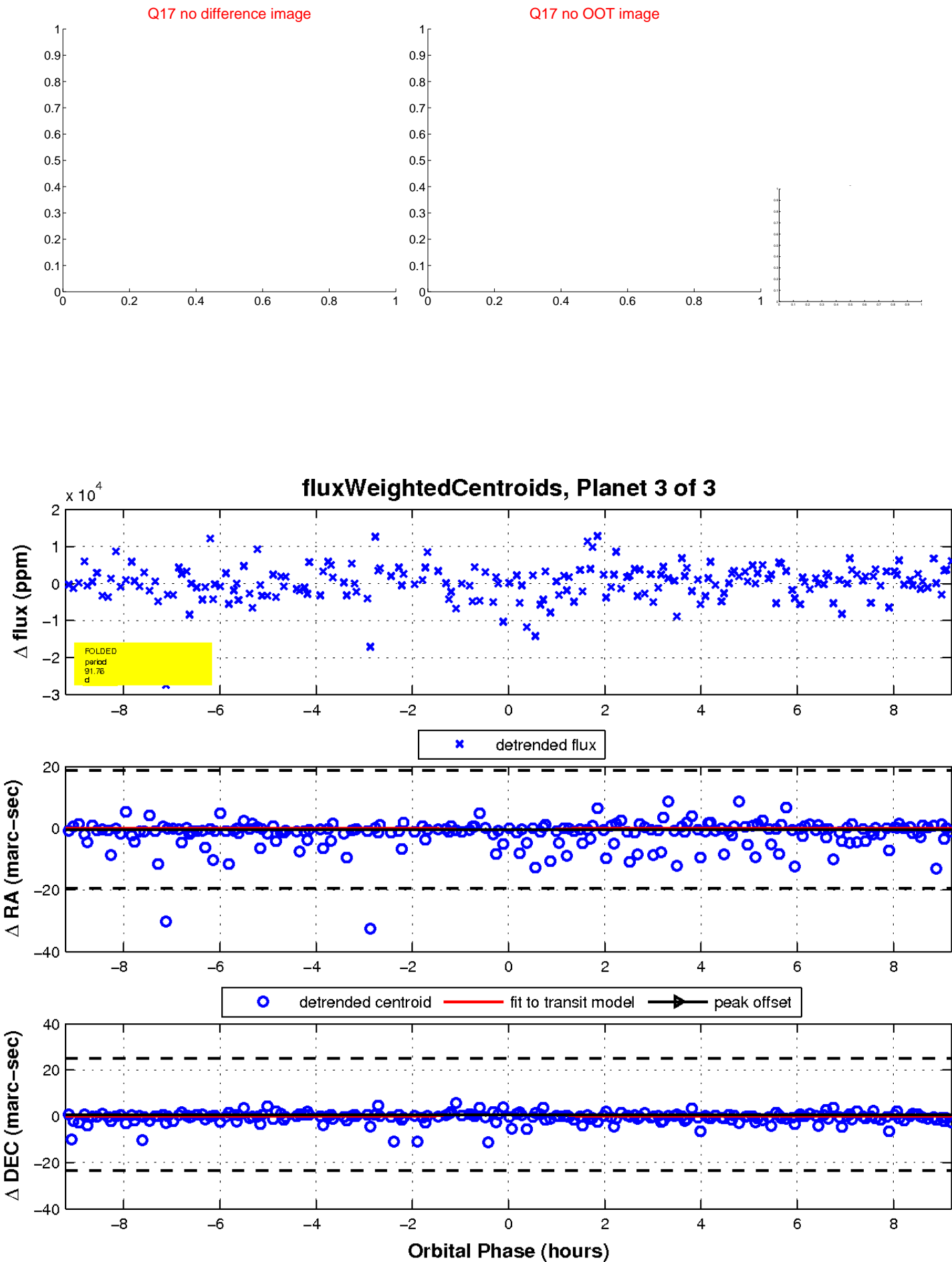
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

