

KIC 009835765

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})
009835765-01	OBS	No	385.389739	247.666458	168.6	4.742	15.0	8.4	148.39	3284	209.48	1863.13
009835765-02	OBS	No	383.782054	251.483671	178.8	2.242	16.7	8.3	148.39	3284	263.59	1873.54
009835765-03	OBS	No	370.905111	185.168975	205.9	3.369	29.0	13.6	148.39	3284	238.54	1960.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009835765-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— INCONSISTENT_TRANS—CENT_SATURATED
009835765-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_SATURATED
009835765-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

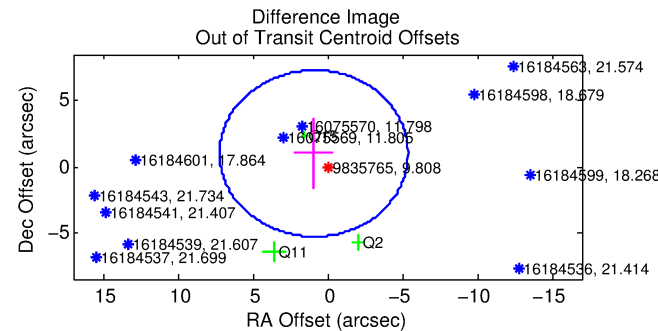
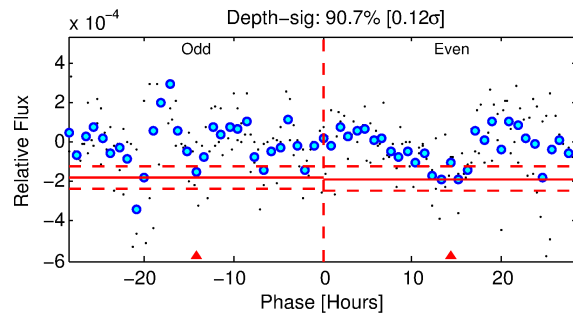
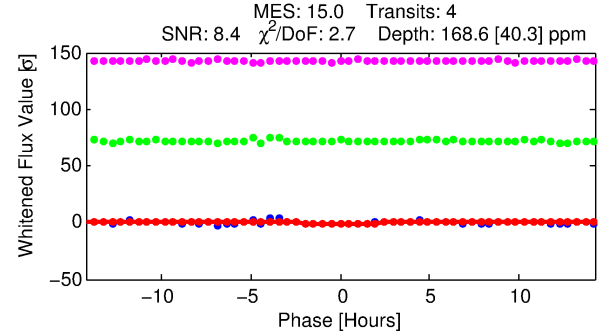
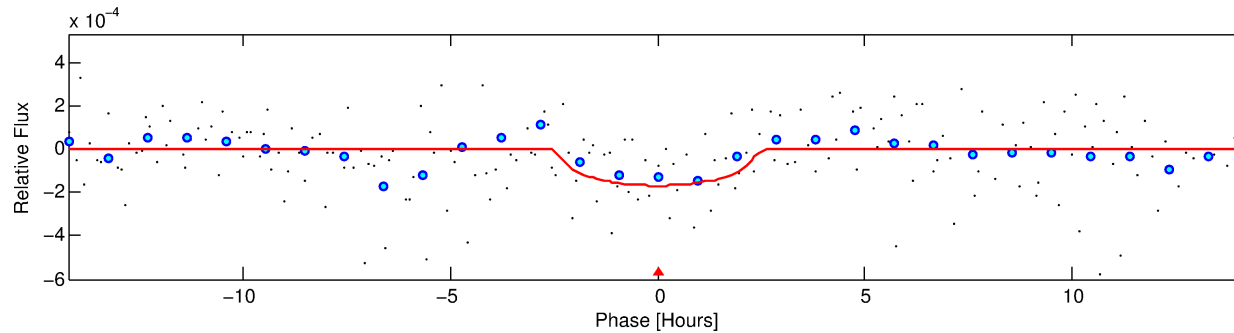
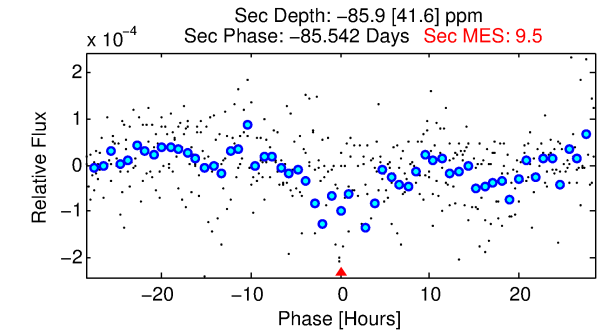
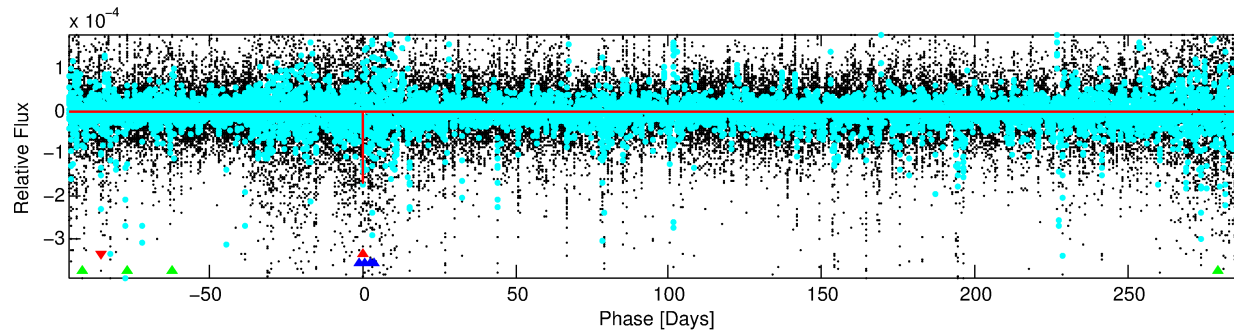
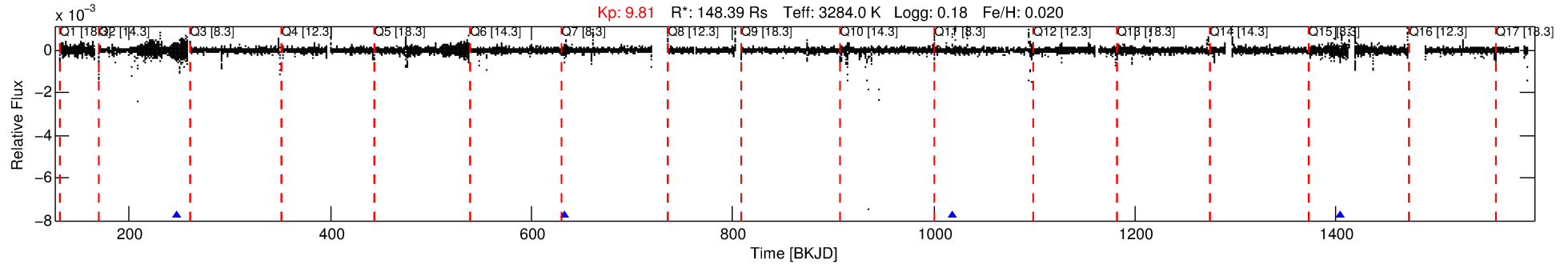
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009835765-01

No Significant Match Found

DV One-Page Summary

KIC: 9835765 Candidate: 1 of 3 Period: 385.390 d



DV Fit Results:

Period = 385.38974 [0.00910] d
Epoch = 247.6665 [0.0173] BKJD
Rp/R* = 0.0129 [0.0123]
a/R* = 438.75 [1017.69]
b = 0.73 [1.58]
Seff = 1863.13 [763.73]
Teq = 1675 [172] K
Rp = 209.48 [204.80] Re
a = 1.1098 [0.2545] AU
Ag = N/A
Teffp = N/A

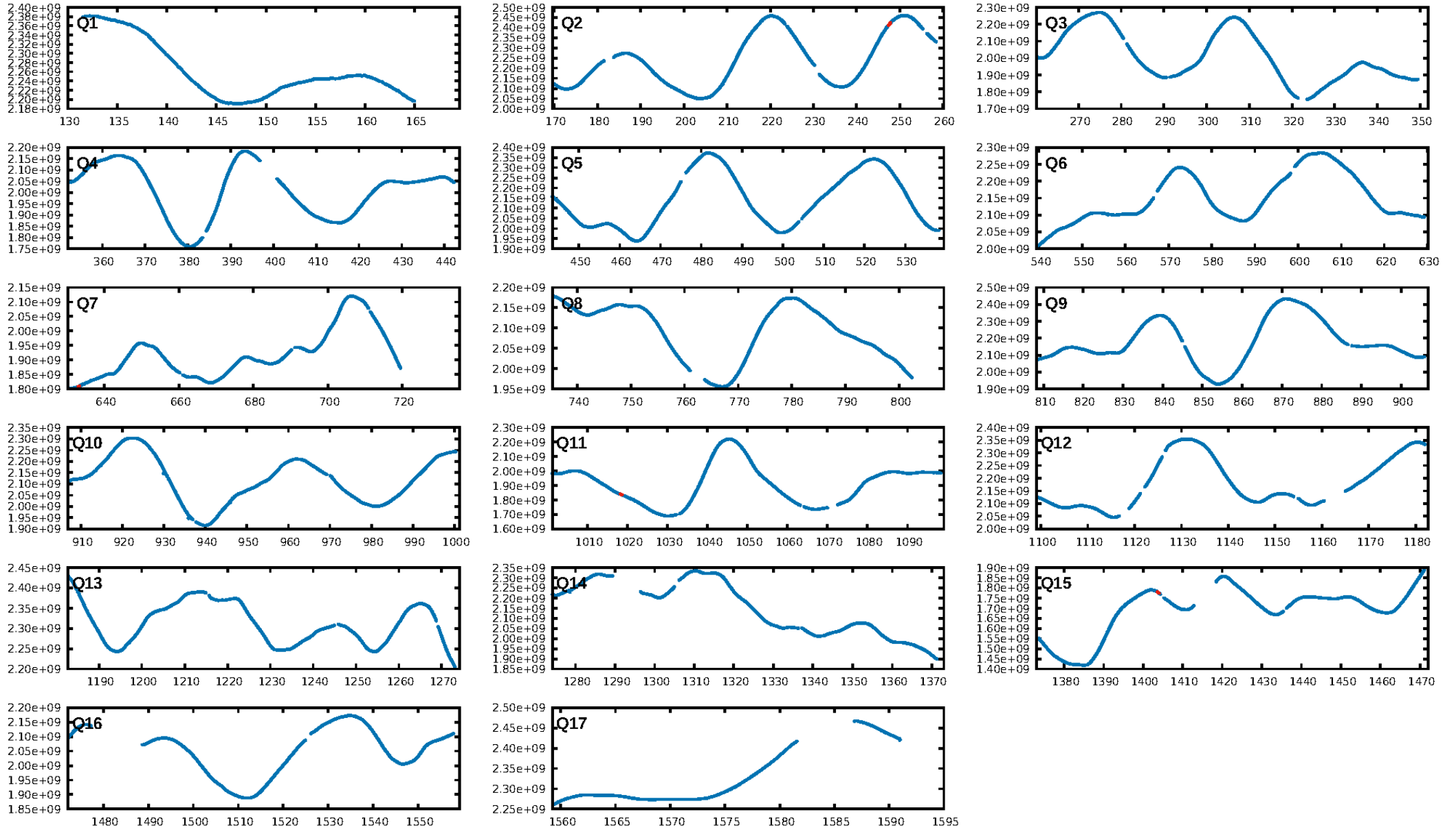
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.36σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.5%
Centroid-so: 11.436 arcsec [1.95σ]
OotOffset-rm: 1.354 arcsec [0.65σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-rm: 1.442 arcsec [0.55σ]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [4/4]

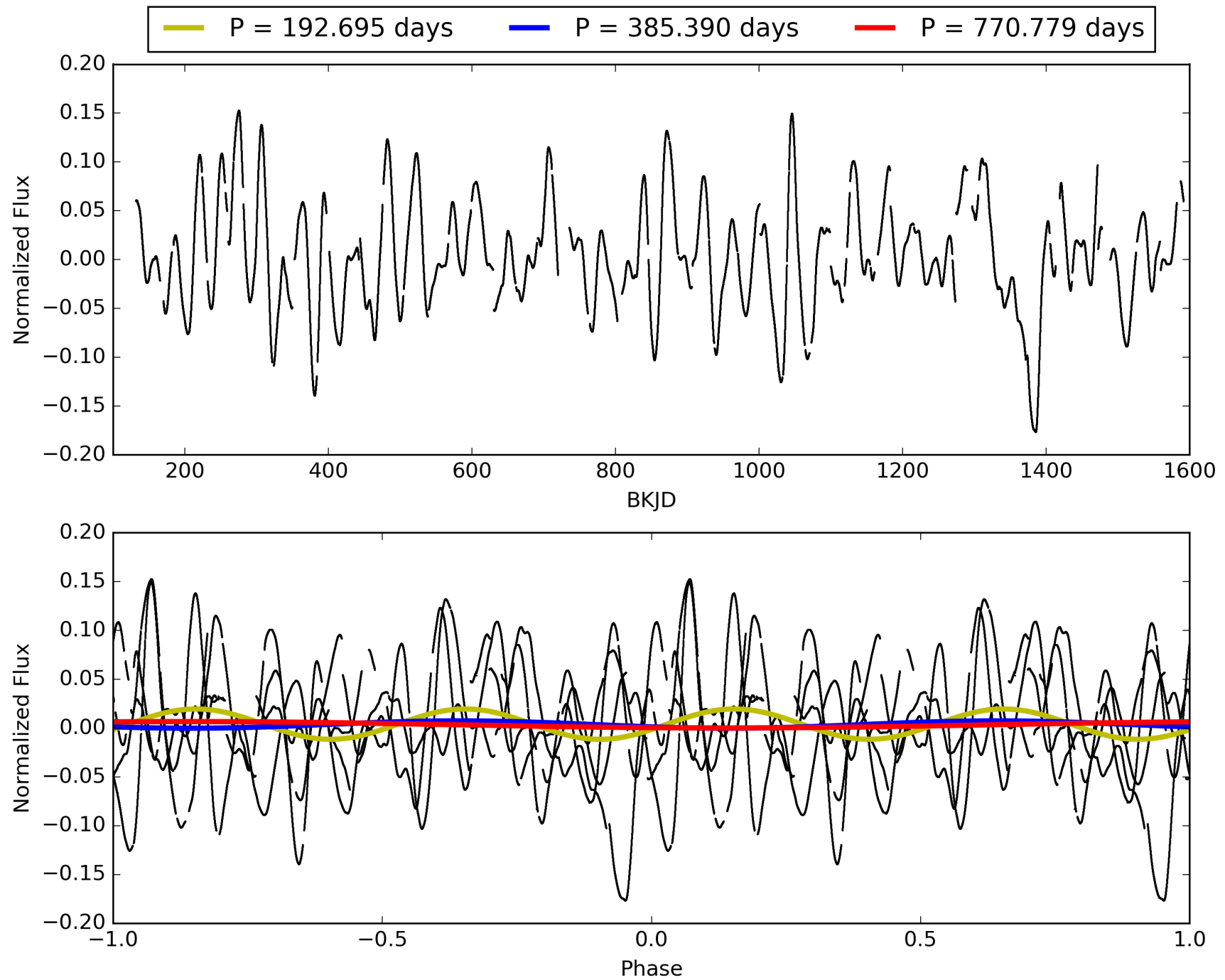
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009835765-01, PDC Light Curves

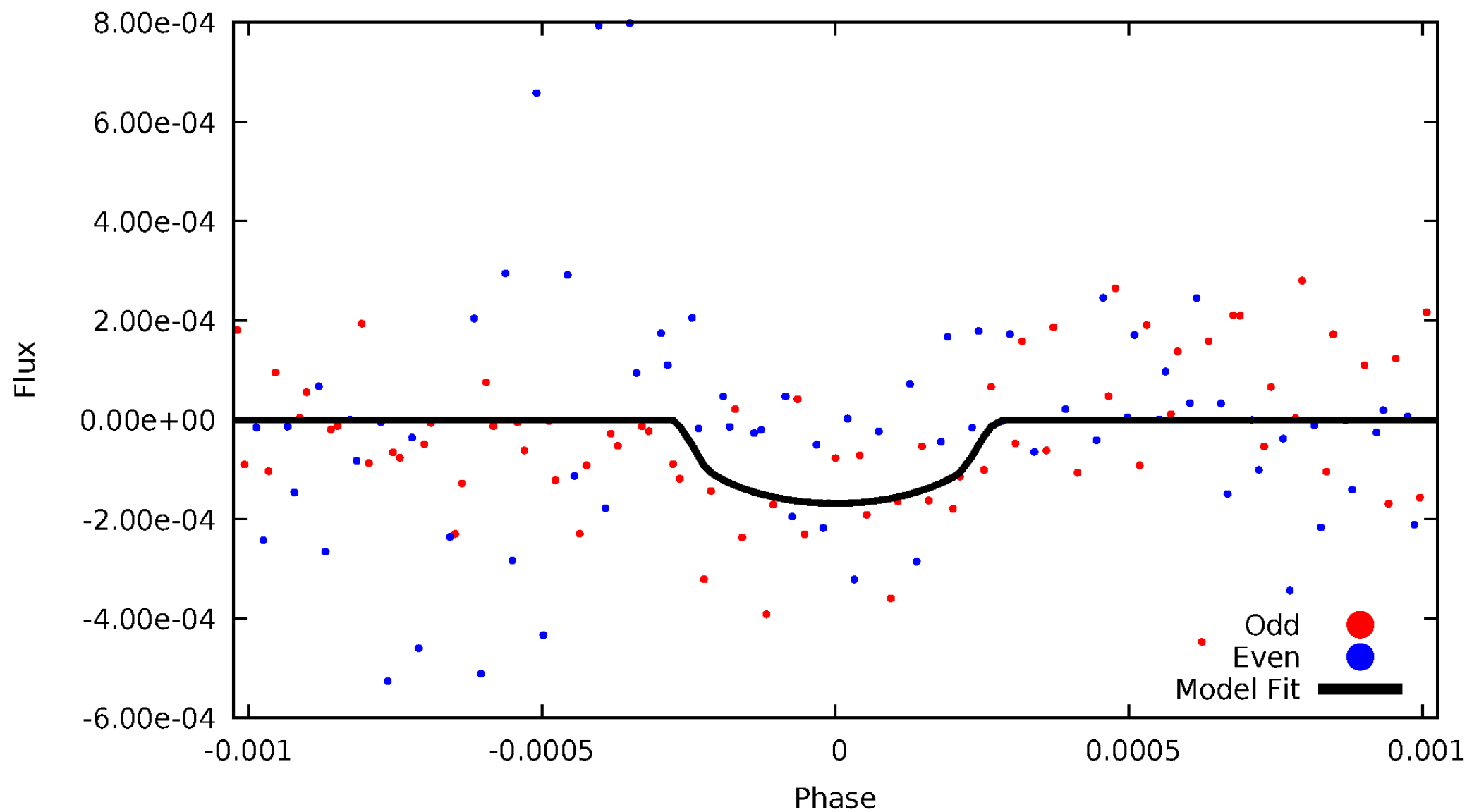


TCE 009835765-01



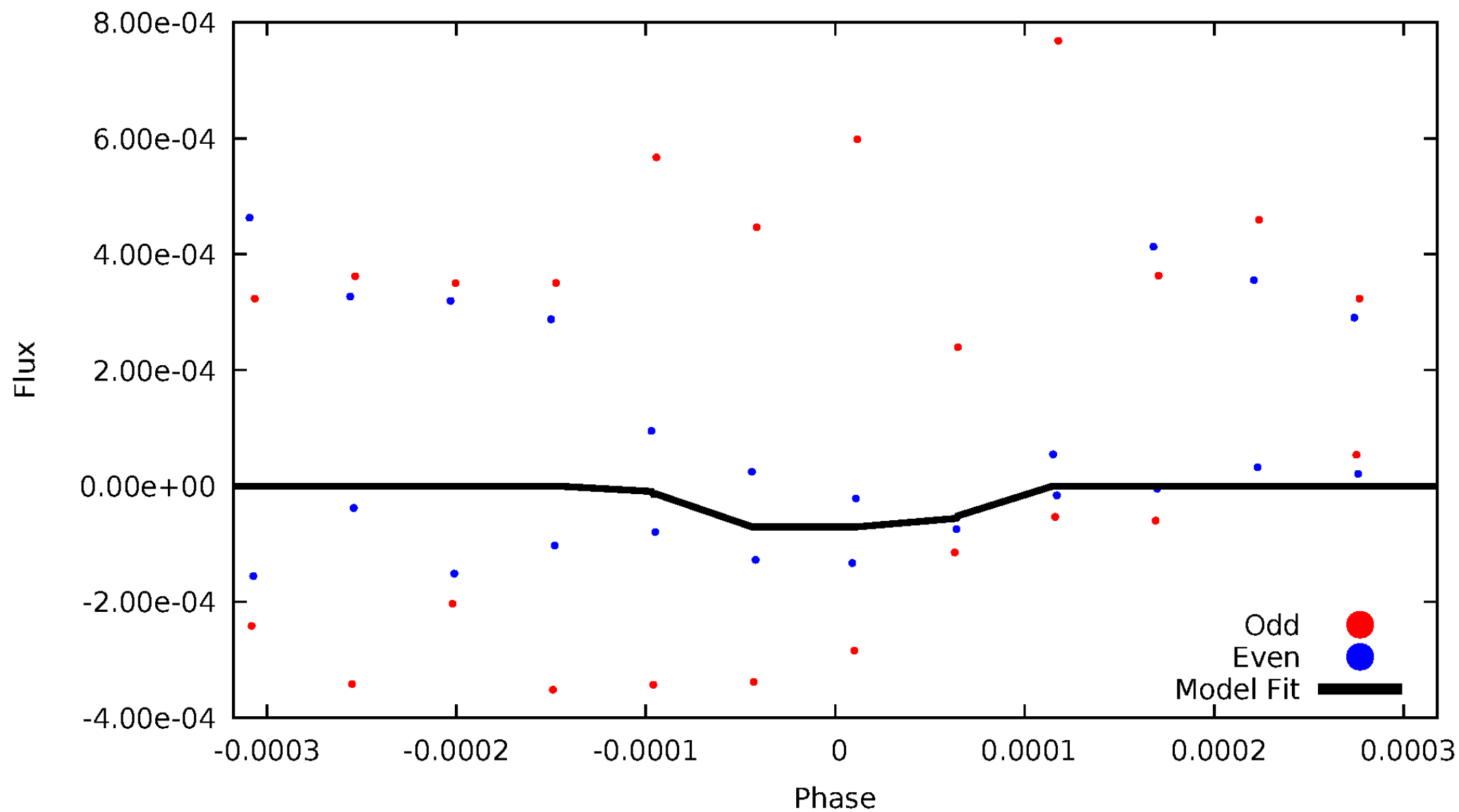
DV Odd/Even

TCE 009835765-01



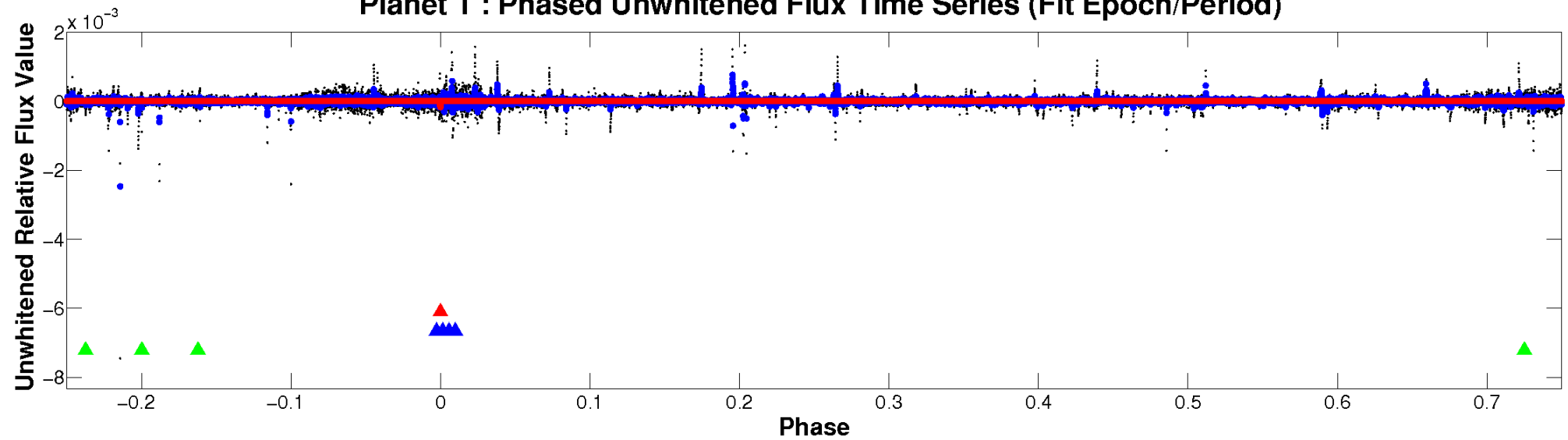
ALT Odd/Even

TCE 009835765-01

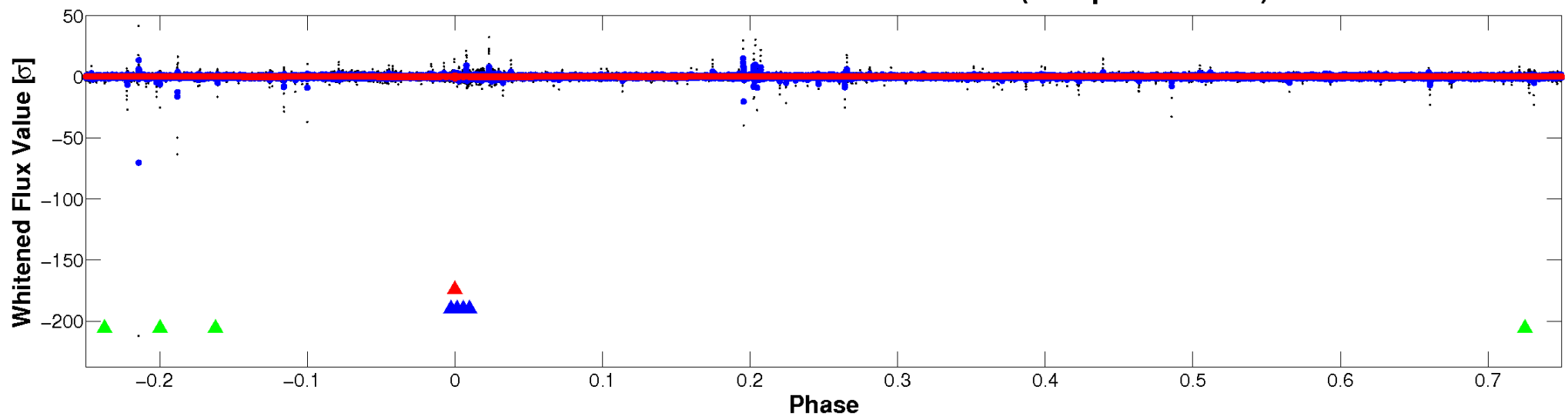


Non-Whitened Vs. Whitened Light Curve

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

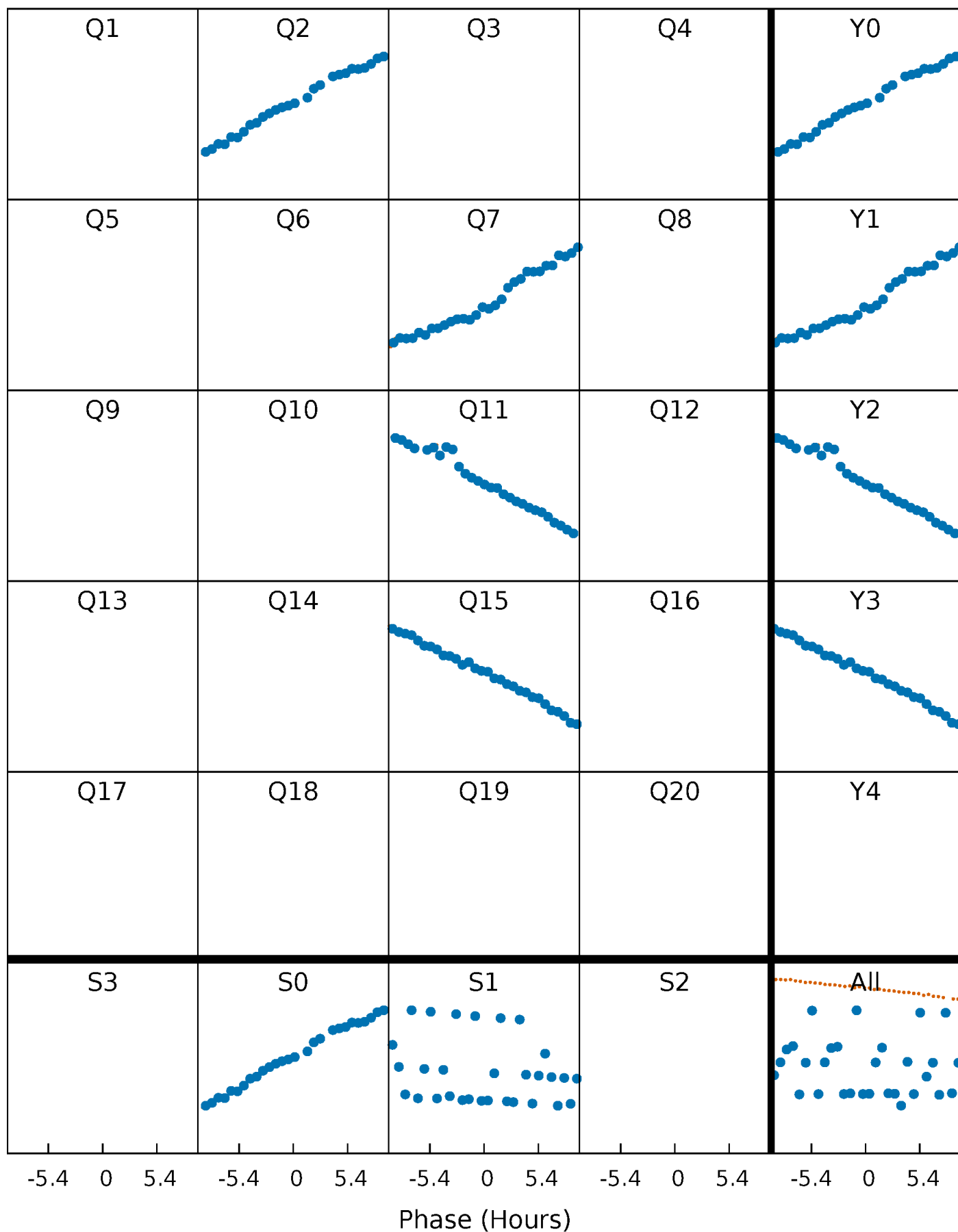


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



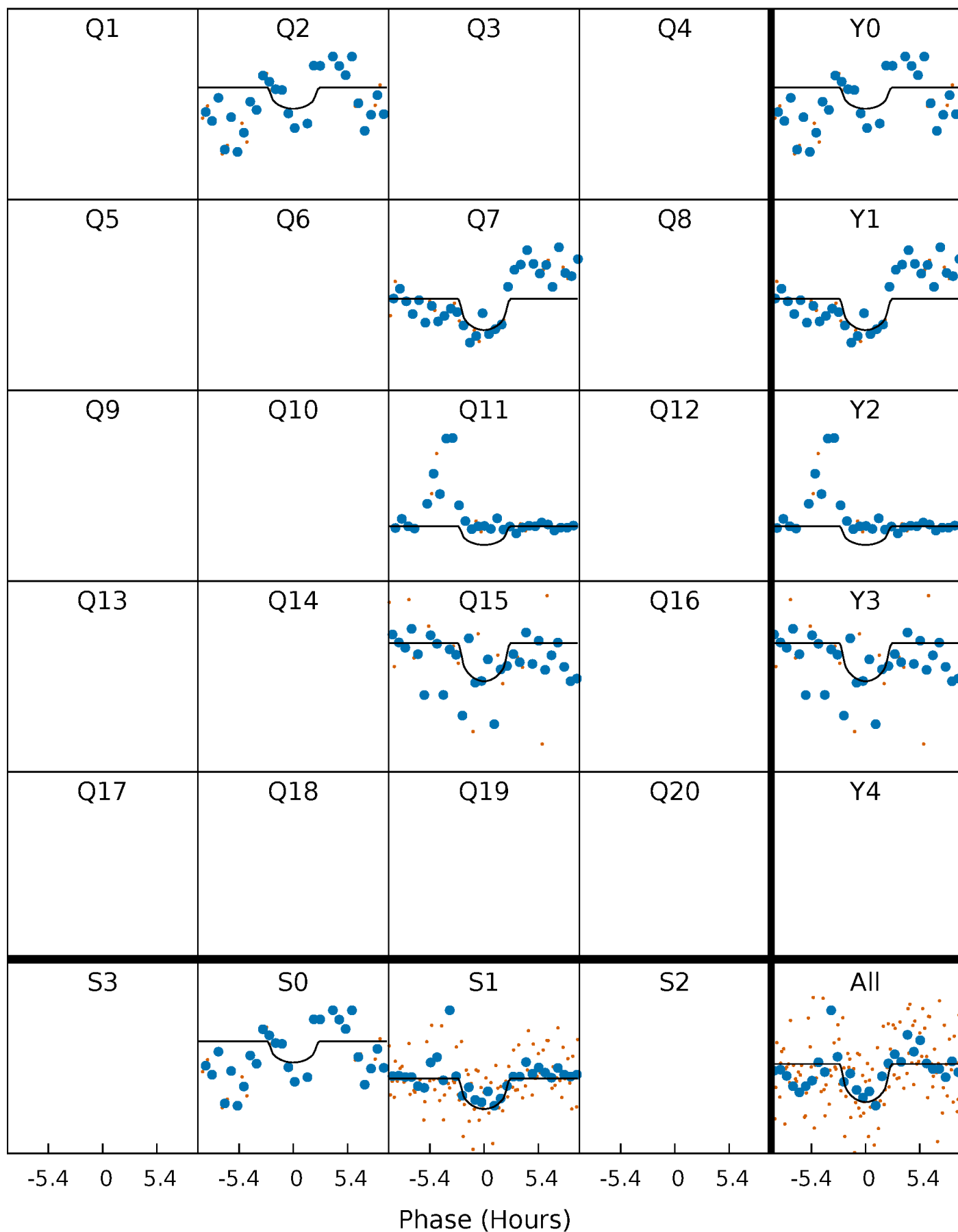
PDC Quarter-Phased Transit Curves

TCE 009835765-01 P=385.389739 Days $T_0=247.666458$ (BKJD)



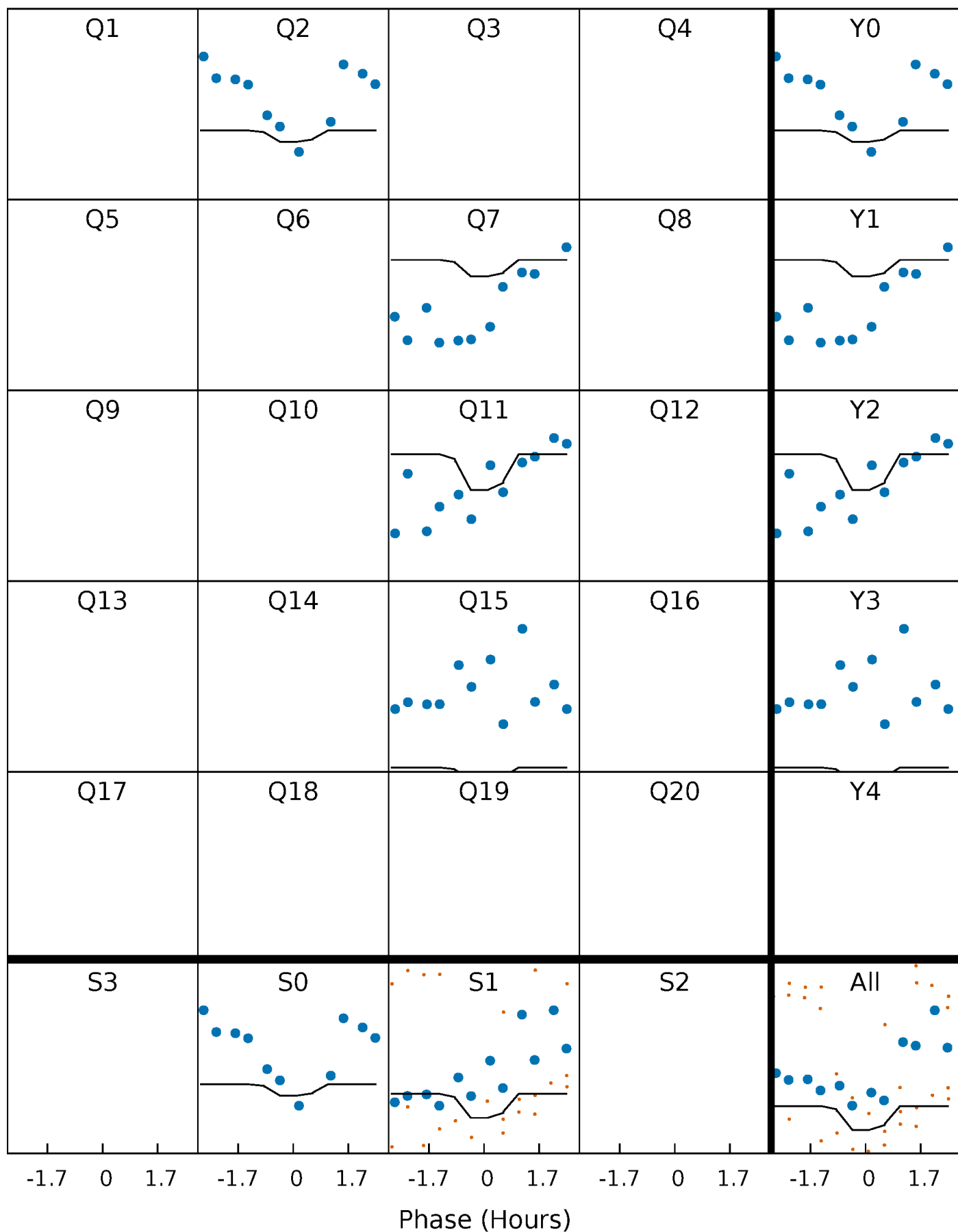
DV Quarter-Phased Transit Curves

TCE 009835765-01 P=385.389739 Days $T_0=247.666458$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

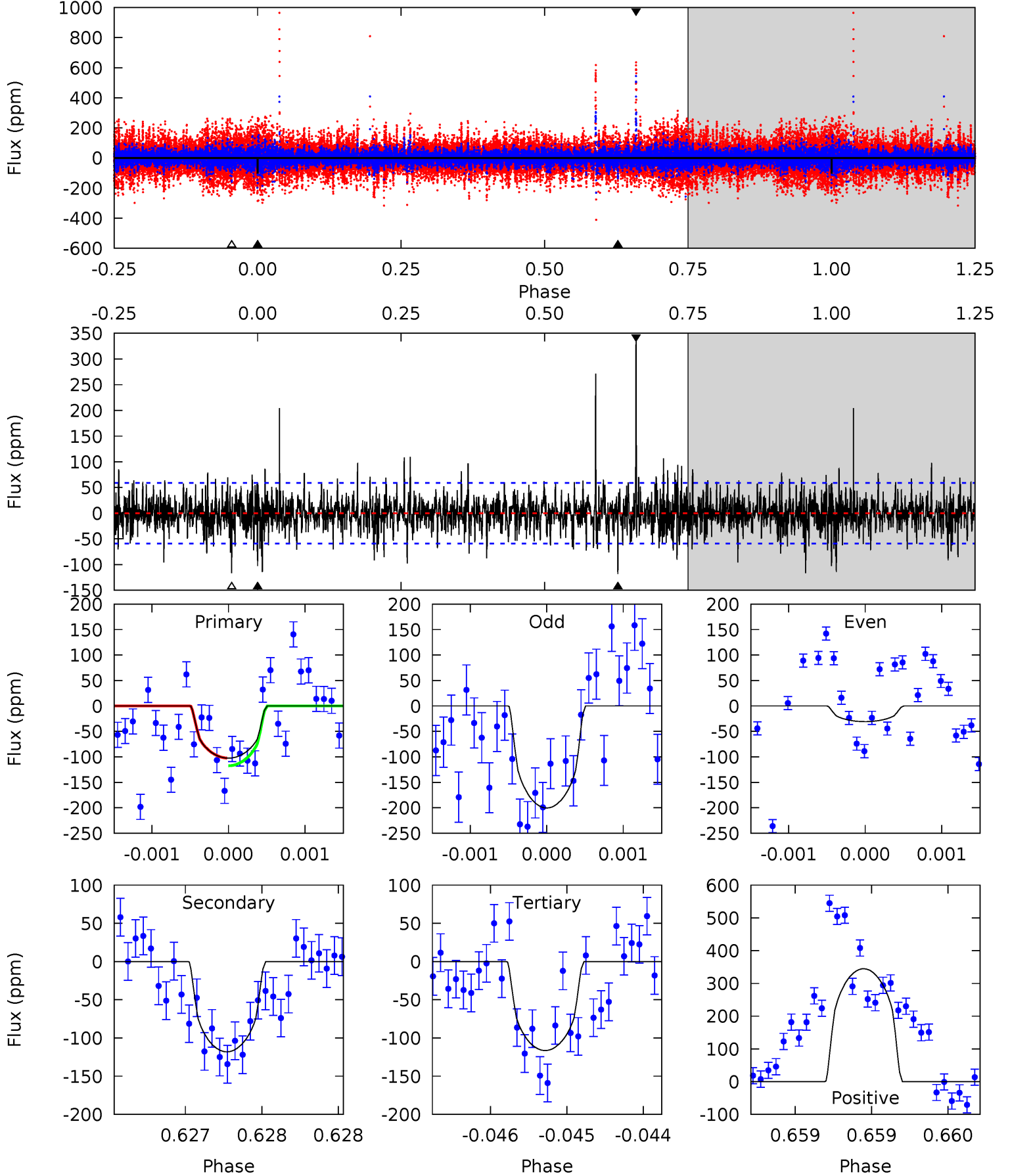
TCE 009835765-01 P=385.458676 Days $T_0=247.675443$ (BKJD)



DV Model-Shift Uniqueness Test

009835765-01, P = 385.389739 Days, E = 247.666458 Days

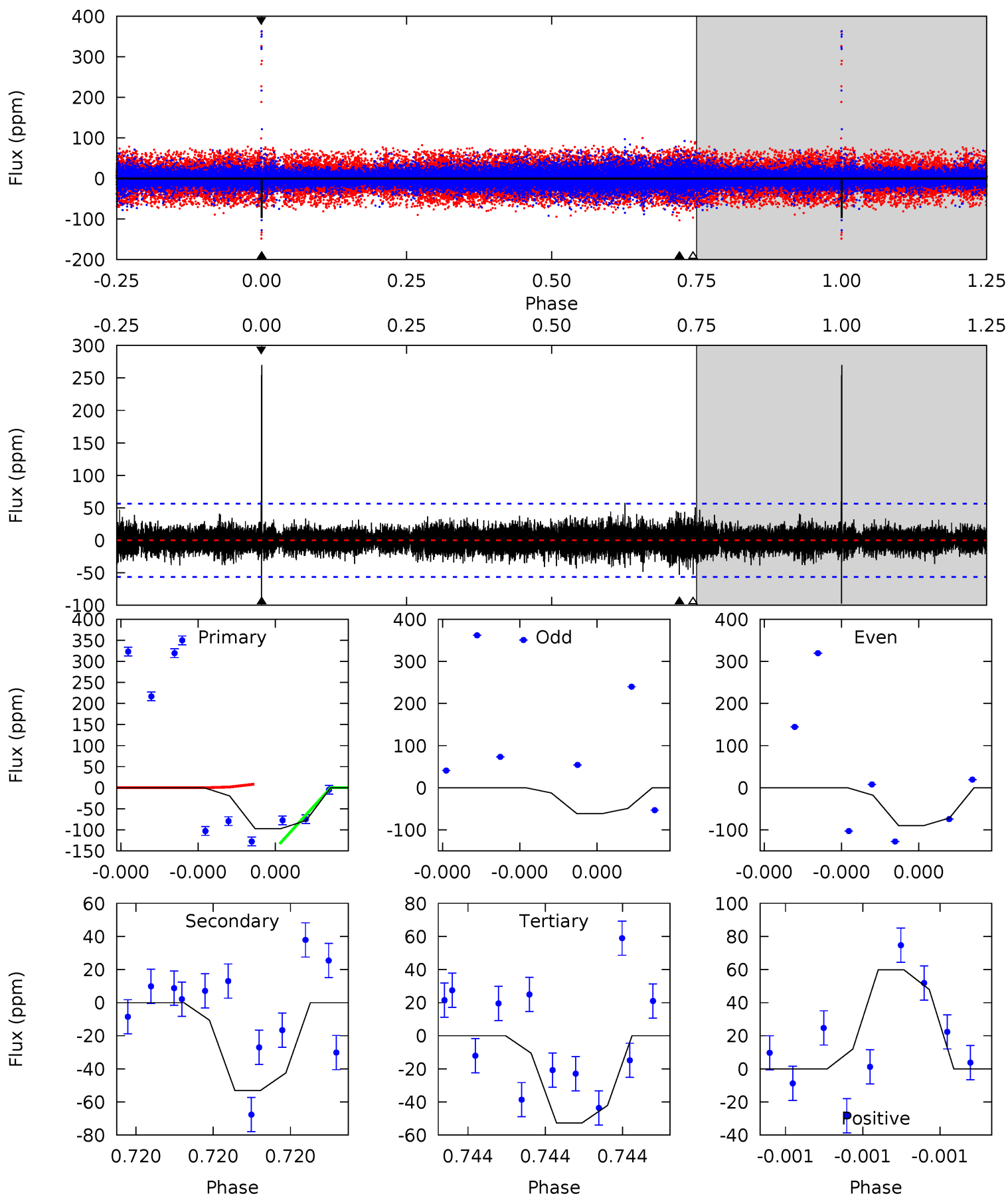
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.65	11.1	11.0	32.5	5.55	3.45	2.41	-1.32	-22.8	0.16	-21.3	6.72	0.78	0.74	0.70



Alt Model-Shift Uniqueness Test

009835765-01, P = 385.458676 Days, E = 247.675443 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.93	5.42	5.38	6.12	5.77	3.77	1.06	4.55	3.81	0.04	-0.70	1.39	-0.36	0.73	0



Stellar Parameters For KIC 009835765

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3284^{+117}_{-88}	$0.184^{+0.232}_{-0.058}$	$0.020^{+0.250}_{-0.150}$	$148.390^{+11.490}_{-32.172}$	$1.226^{+0.235}_{-0.157}$	$0.000^{+0.000}_{-0.000}$
	+4%/-3%	+126%/-32%	+1250%/-750%	+8%/-22%	+19%/-13%	+115%/-17%
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 009835765-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-118 ± 11	$241.01^{+186.97}_{-153.90}$	2306^{+115}_{-137}	2875^{+1163}_{-640}	$1.408^{+9.680}_{-0.965}$
Alt.	-53 ± 10	$194.85^{+179.47}_{-134.52}$	2299^{+117}_{-147}	2662^{+1354}_{-4602}	$0.955^{+8.919}_{-0.694}$

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 $A_{obs} \gg 1.0$

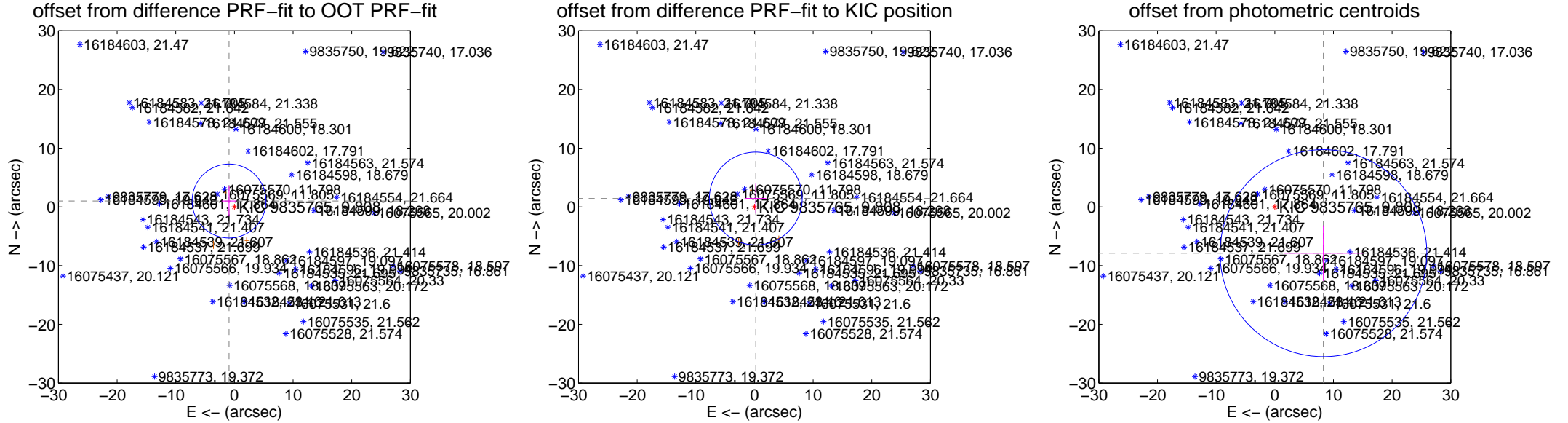
DV Centroid Data

Supplemental centroid analysis for 009835765-01. **Kepler magnitude: 9.81.** Transit SNR 8.36

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.354 ± 2.099	0.65	0.915 ± 1.259	0.998 ± 2.603
PRF-fit source offset from KIC position	1.442 ± 2.637	0.55	-0.225 ± 1.767	1.424 ± 2.548
photometric centroid source offset	11.44 ± 5.88	1.95	-8.29 ± 6.75	-7.88 ± 4.72



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

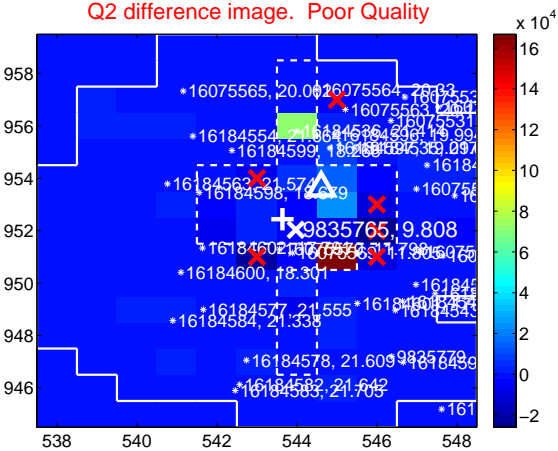
Q1 no difference image



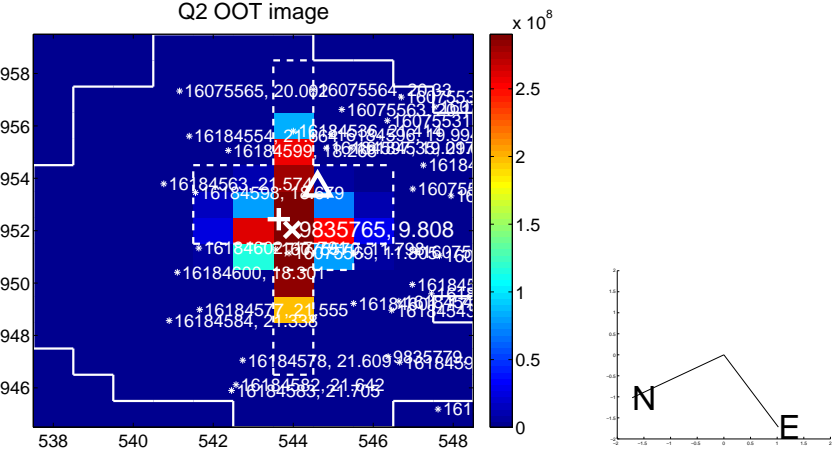
Q1 no OOT image



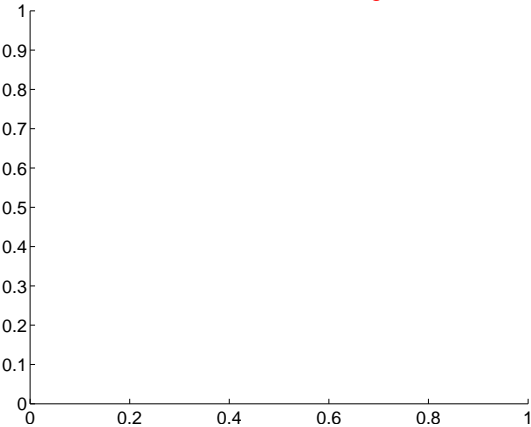
Q2 difference image. Poor Quality



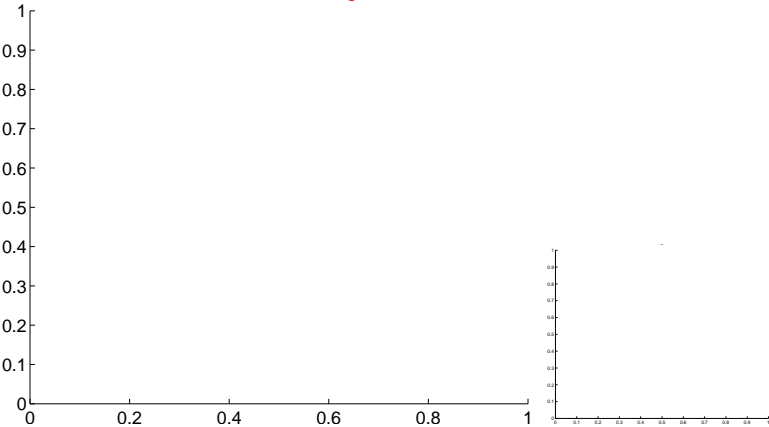
Q2 OOT image



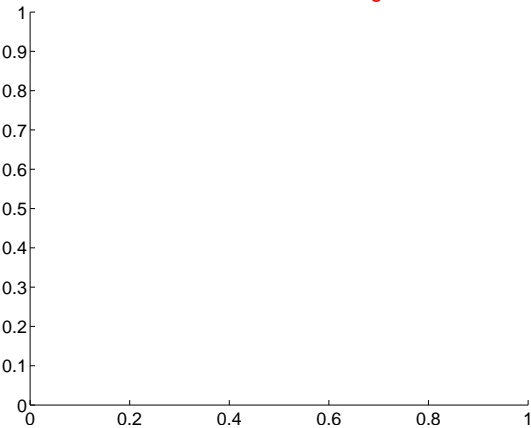
Q3 no difference image



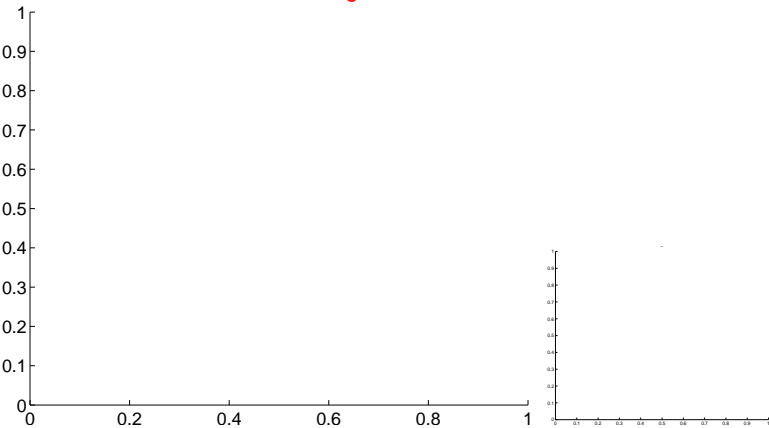
Q3 no OOT image



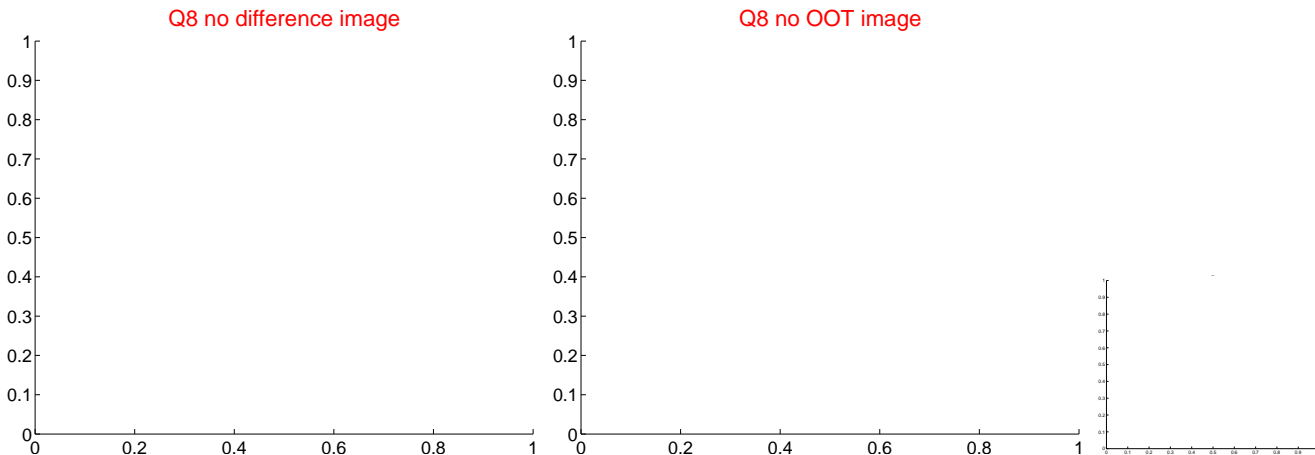
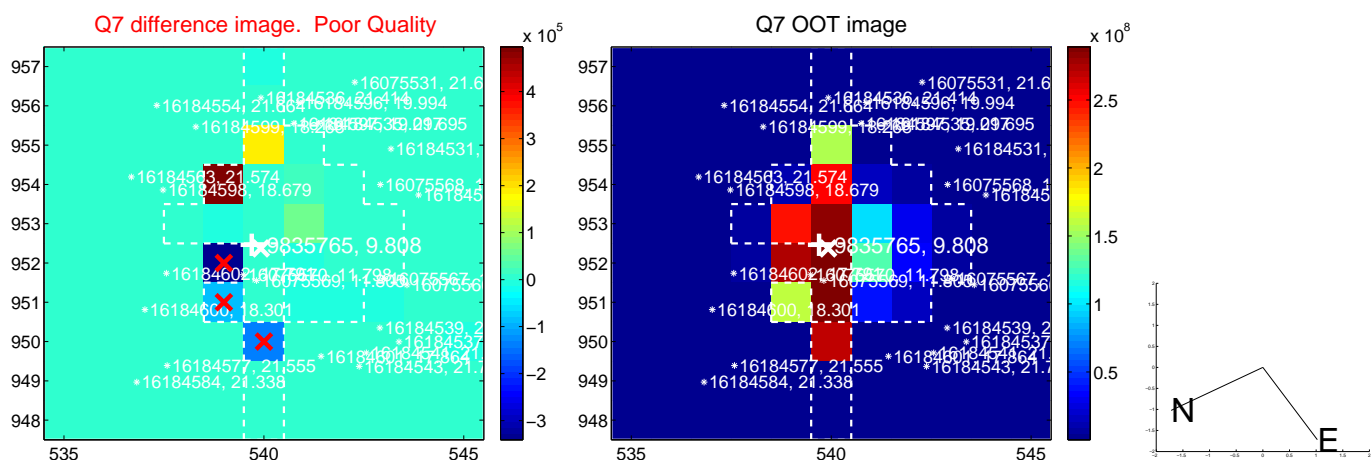
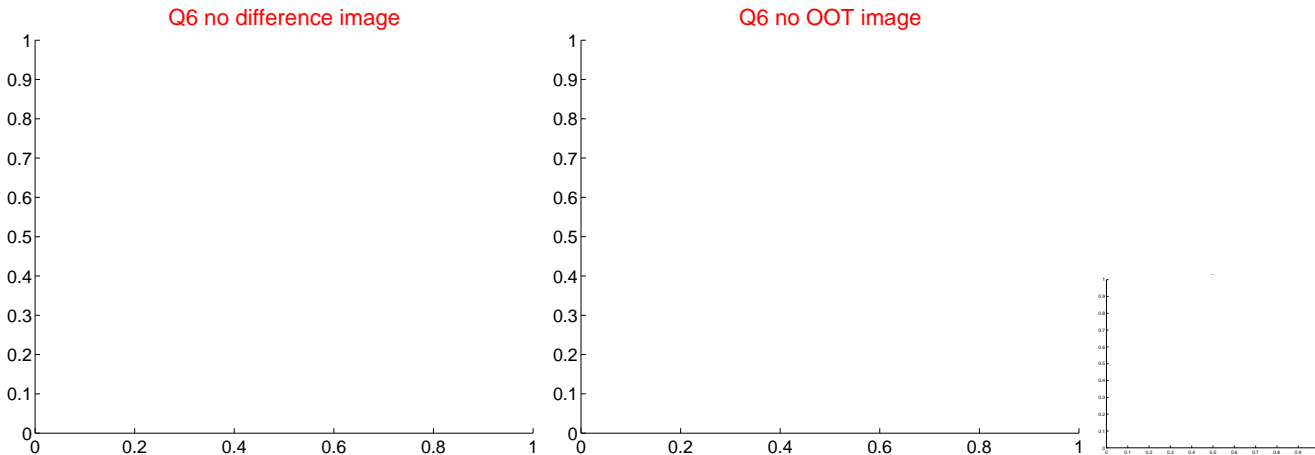
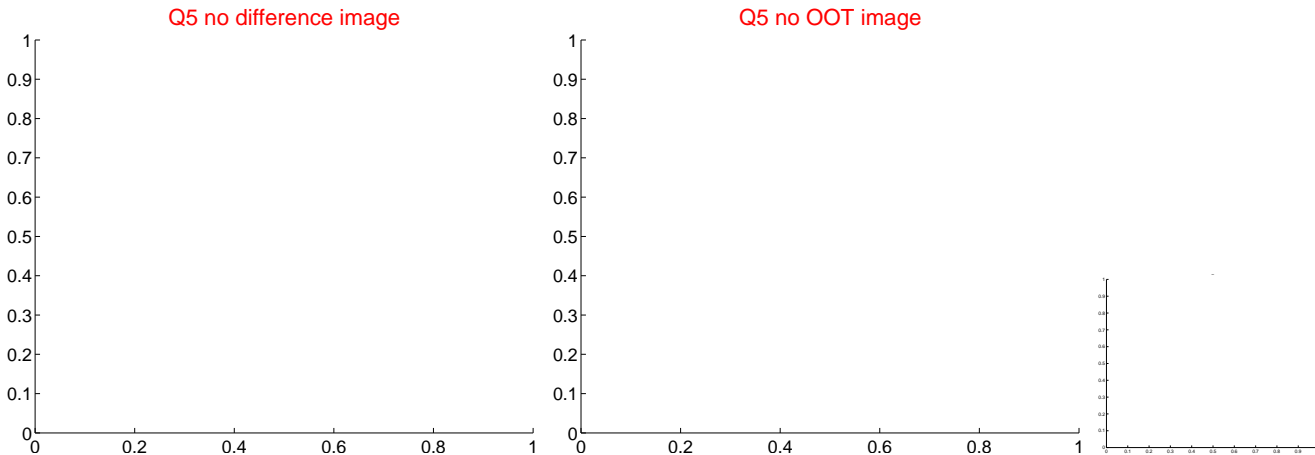
Q4 no difference image



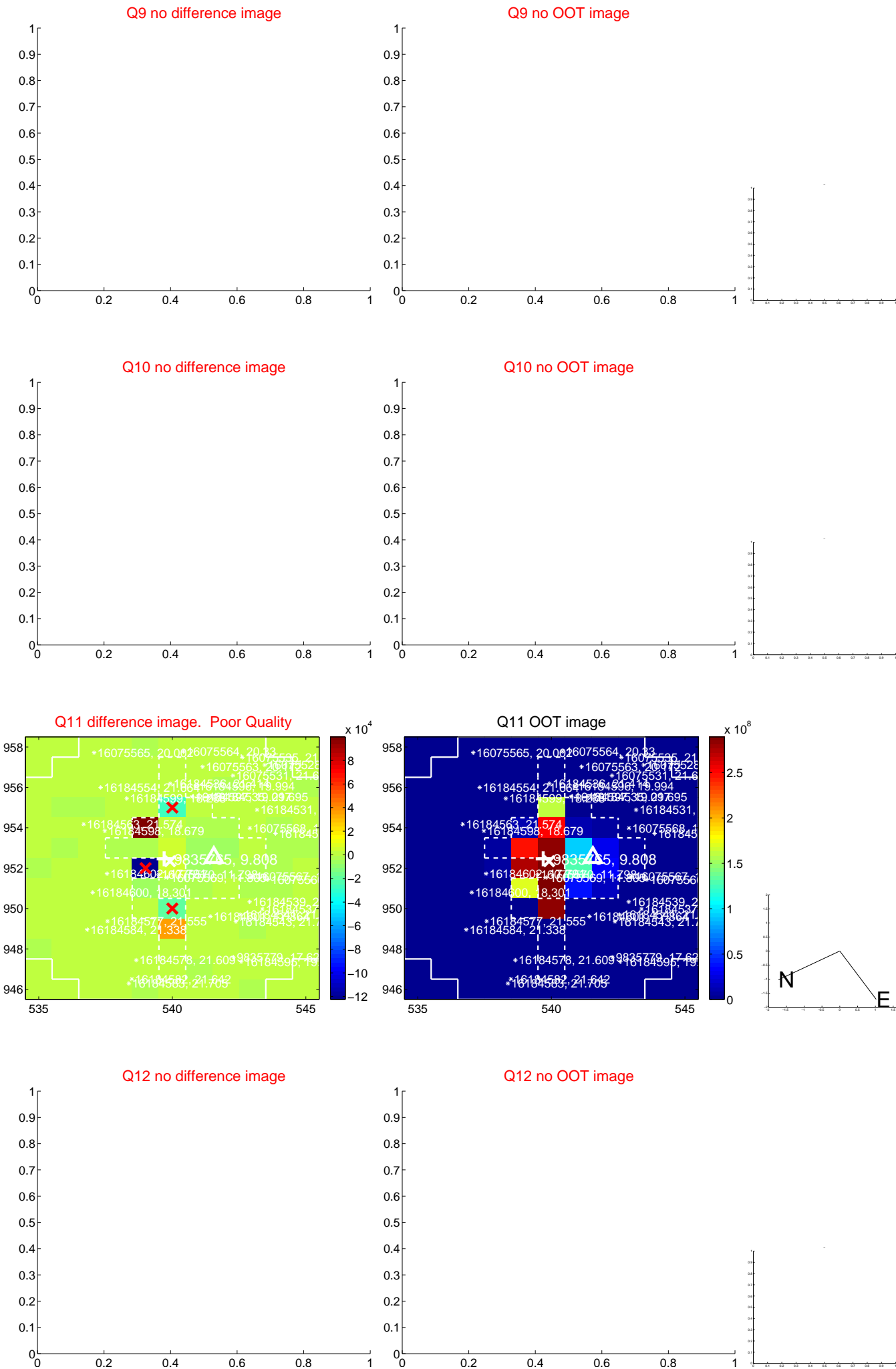
Q4 no OOT image



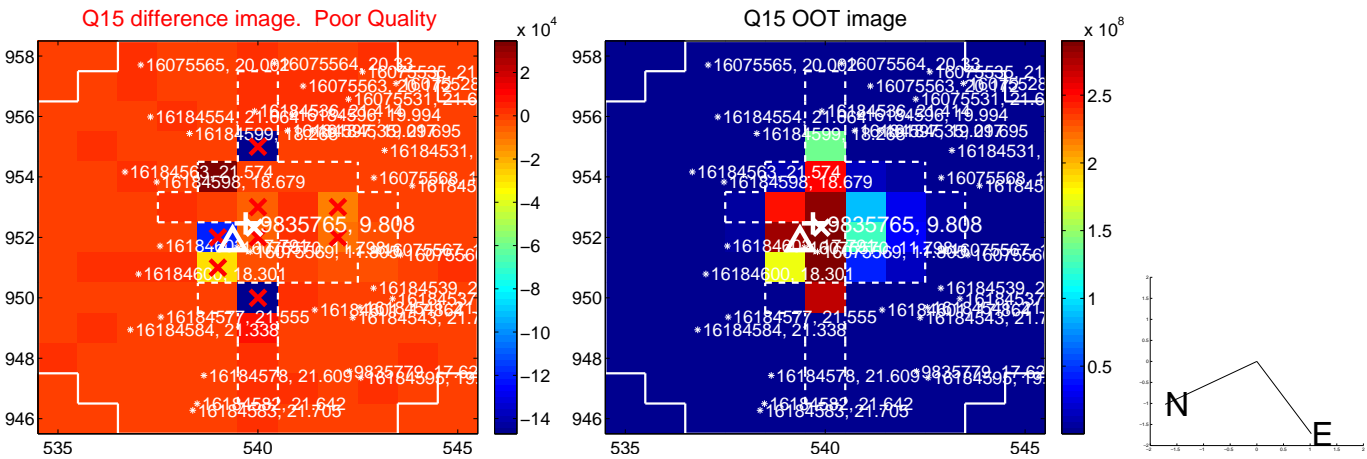
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



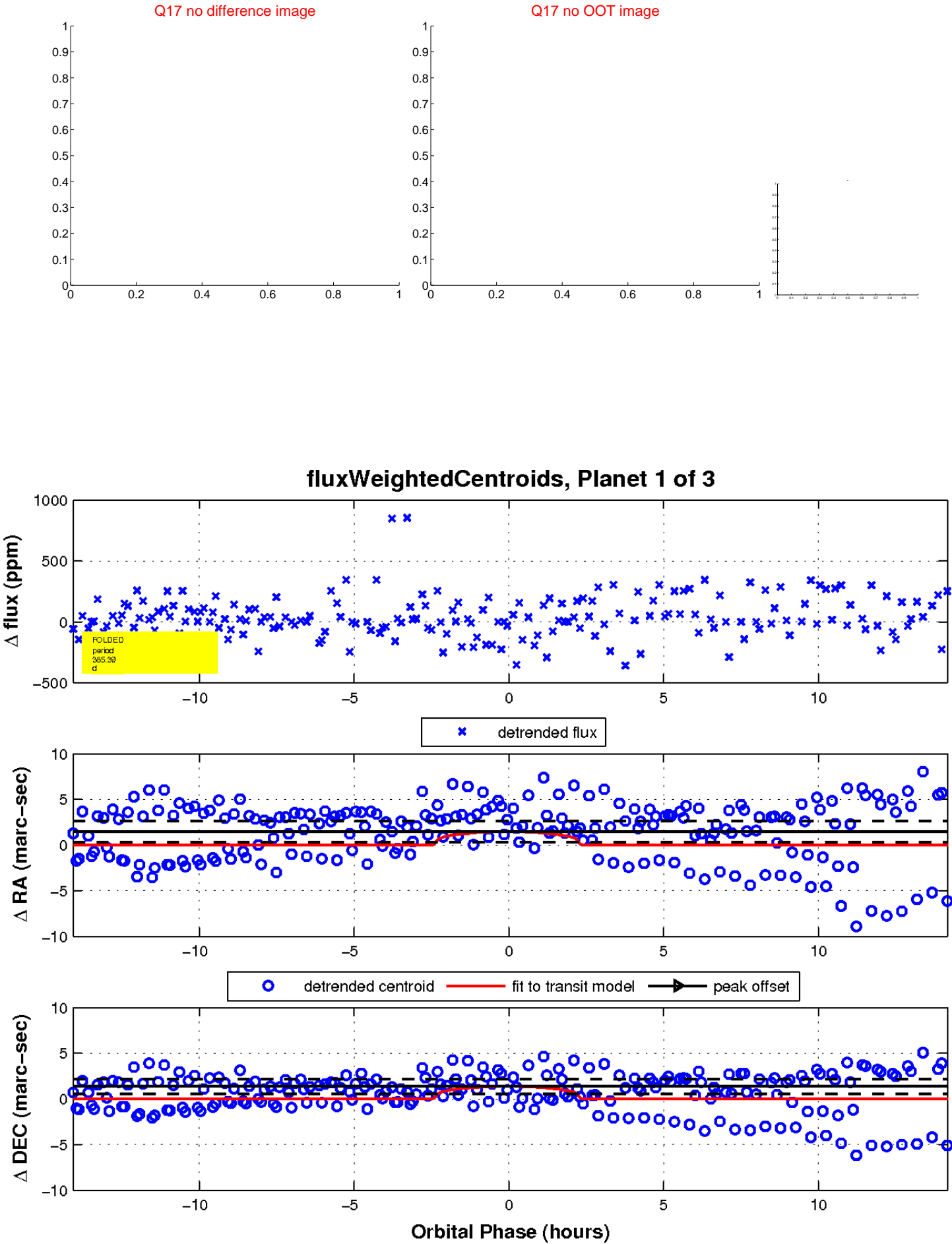
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



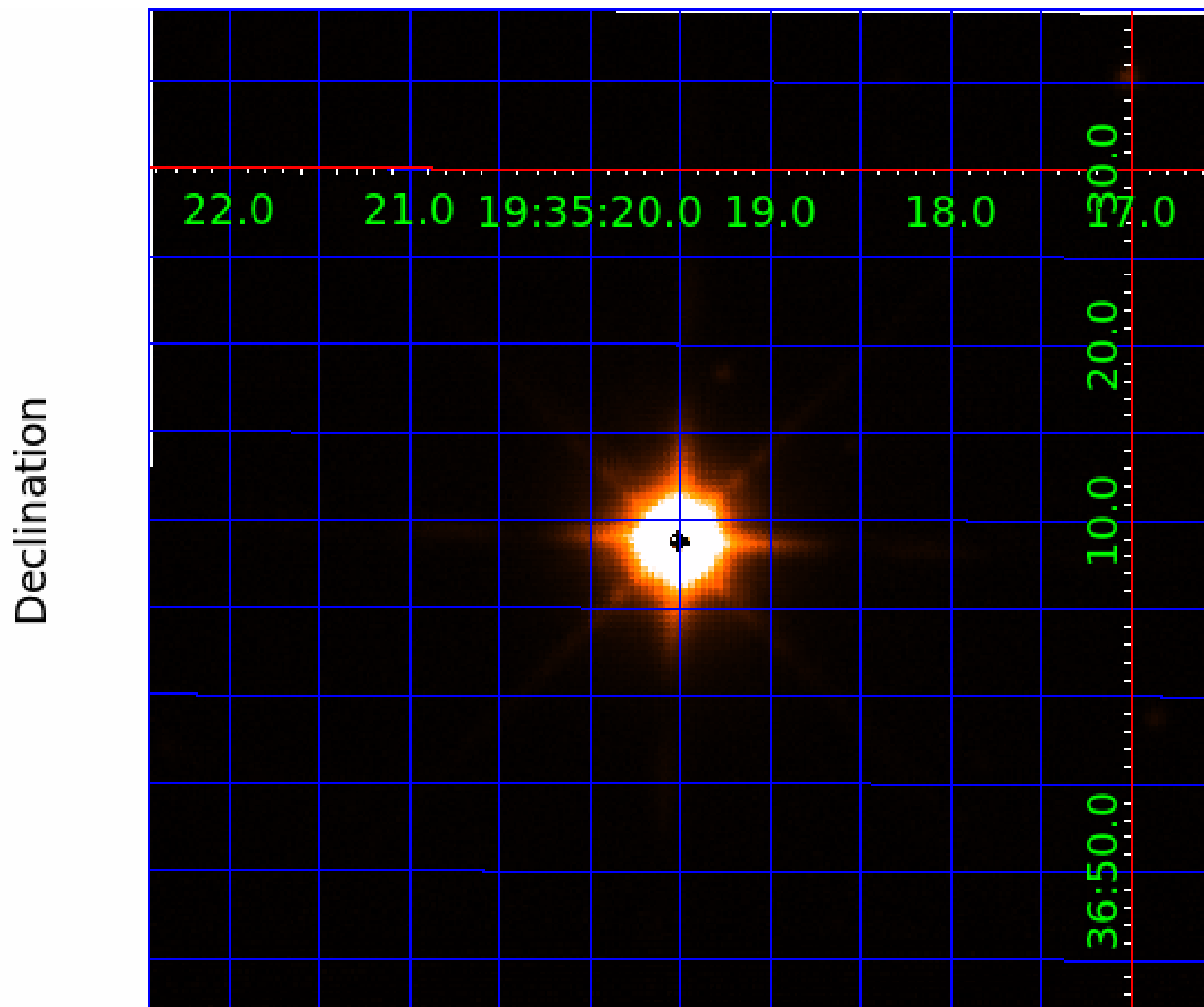
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009835765

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})
009835765-01	OBS	No	385.389739	247.666458	168.6	4.742	15.0	8.4	148.39	3284	209.48	1863.13
009835765-02	OBS	No	383.782054	251.483671	178.8	2.242	16.7	8.3	148.39	3284	263.59	1873.54
009835765-03	OBS	No	370.905111	185.168975	205.9	3.369	29.0	13.6	148.39	3284	238.54	1960.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009835765-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— INCONSISTENT_TRANS—CENT_SATURATED
009835765-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_SATURATED
009835765-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

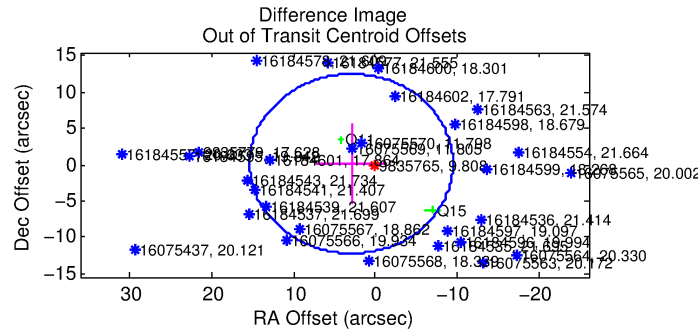
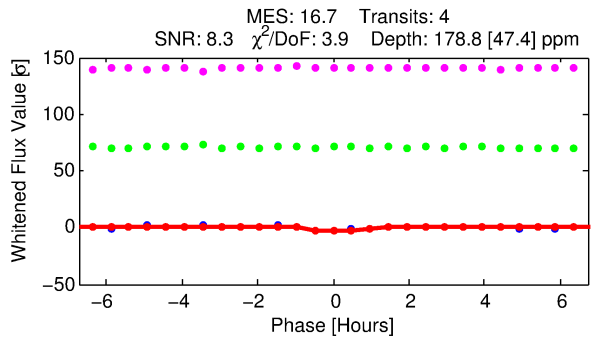
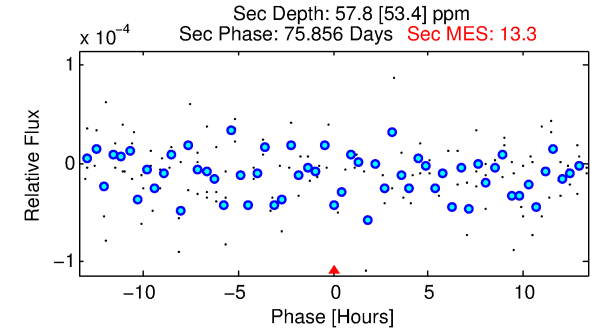
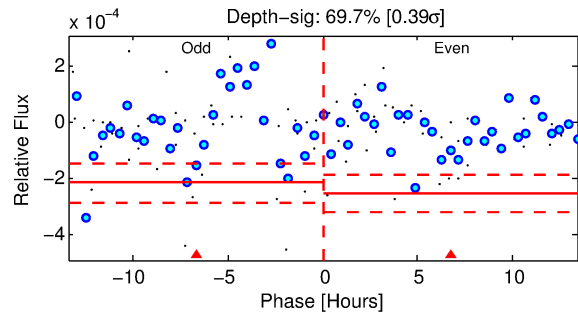
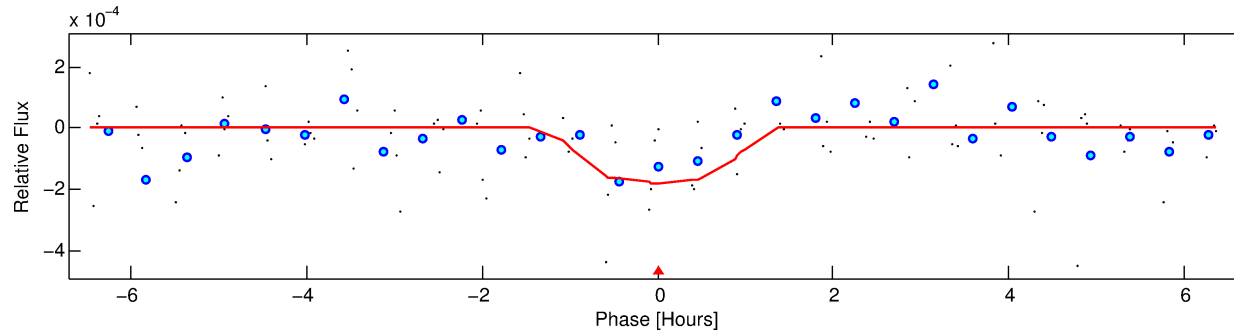
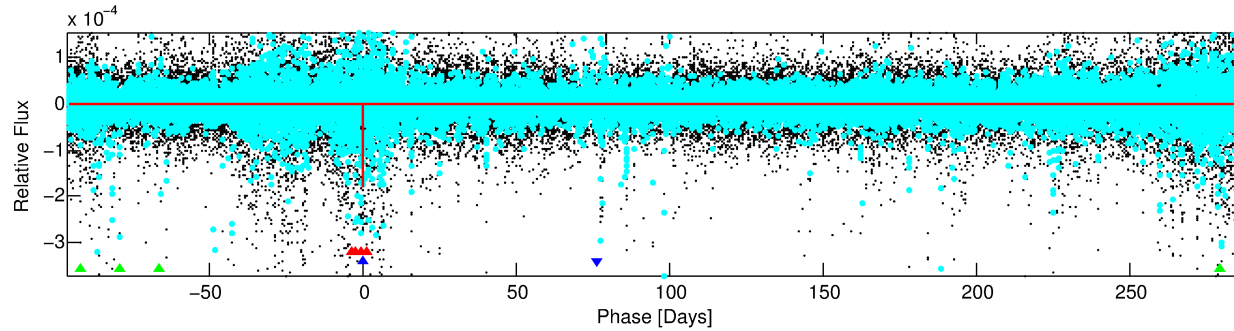
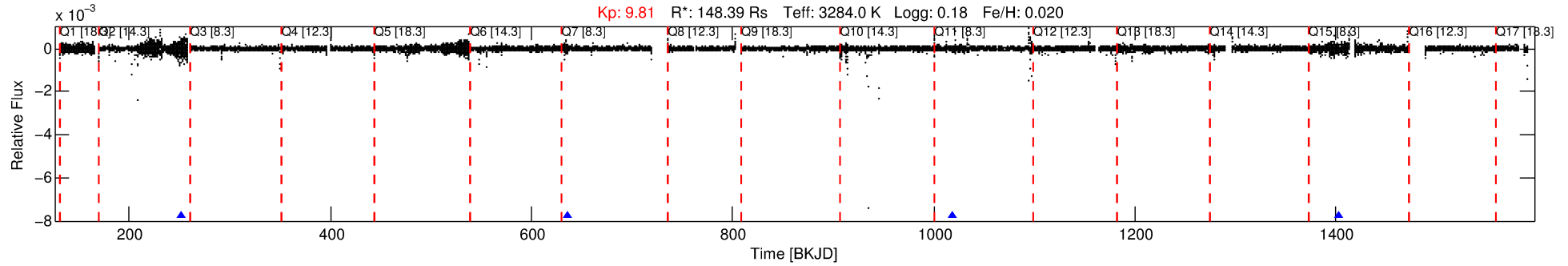
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009835765-02

No Significant Match Found

DV One-Page Summary

KIC: 9835765 Candidate: 2 of 3 Period: 383.782 d



DV Fit Results:

Period = 383.78205 [0.00787] d
Epoch = 251.4837 [0.0154] BKJD
Rp/R* = 0.0163 [0.0631]
a/R* = 567.34 [7212.53]
b = 0.92 [2.23]
Seff = 1873.54 [768.00]
Teq = 1678 [172] K
Rp = 263.59 [1022.74] Re
a = 1.1067 [0.2538] AU
Ag = 0.56 [4.38] [-0.10 σ]
Teffp = 2244 [4379] K [0.13 σ]

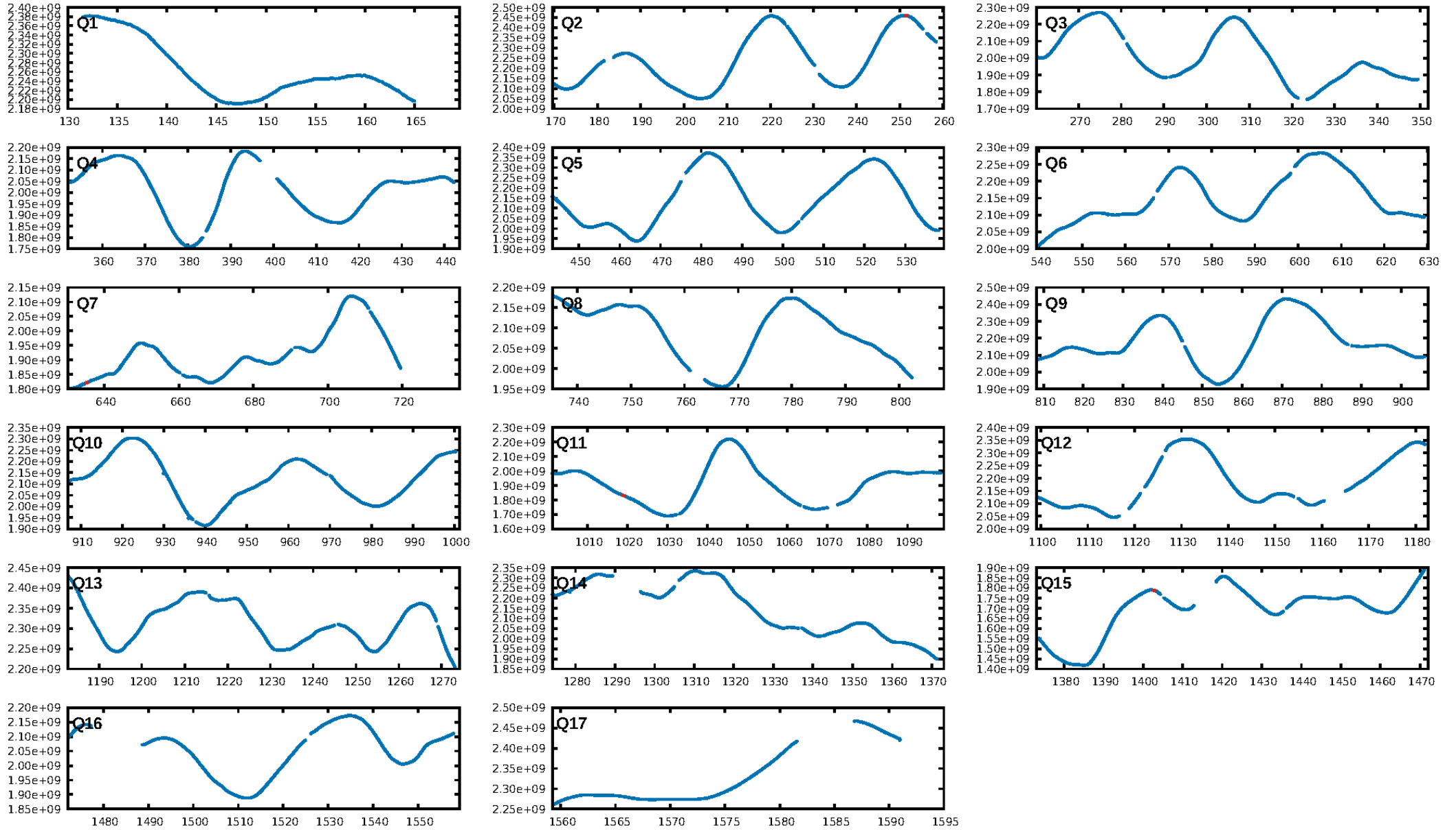
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [76.37 σ]
LongPeriod-sig: 100.0% [7.36 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.2%
Centroid-so: 10.317 arcsec [1.97 σ]
OotOffset-rm: 2.946 arcsec [0.71 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-rm: 2.165 arcsec [0.51 σ]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [4/4]

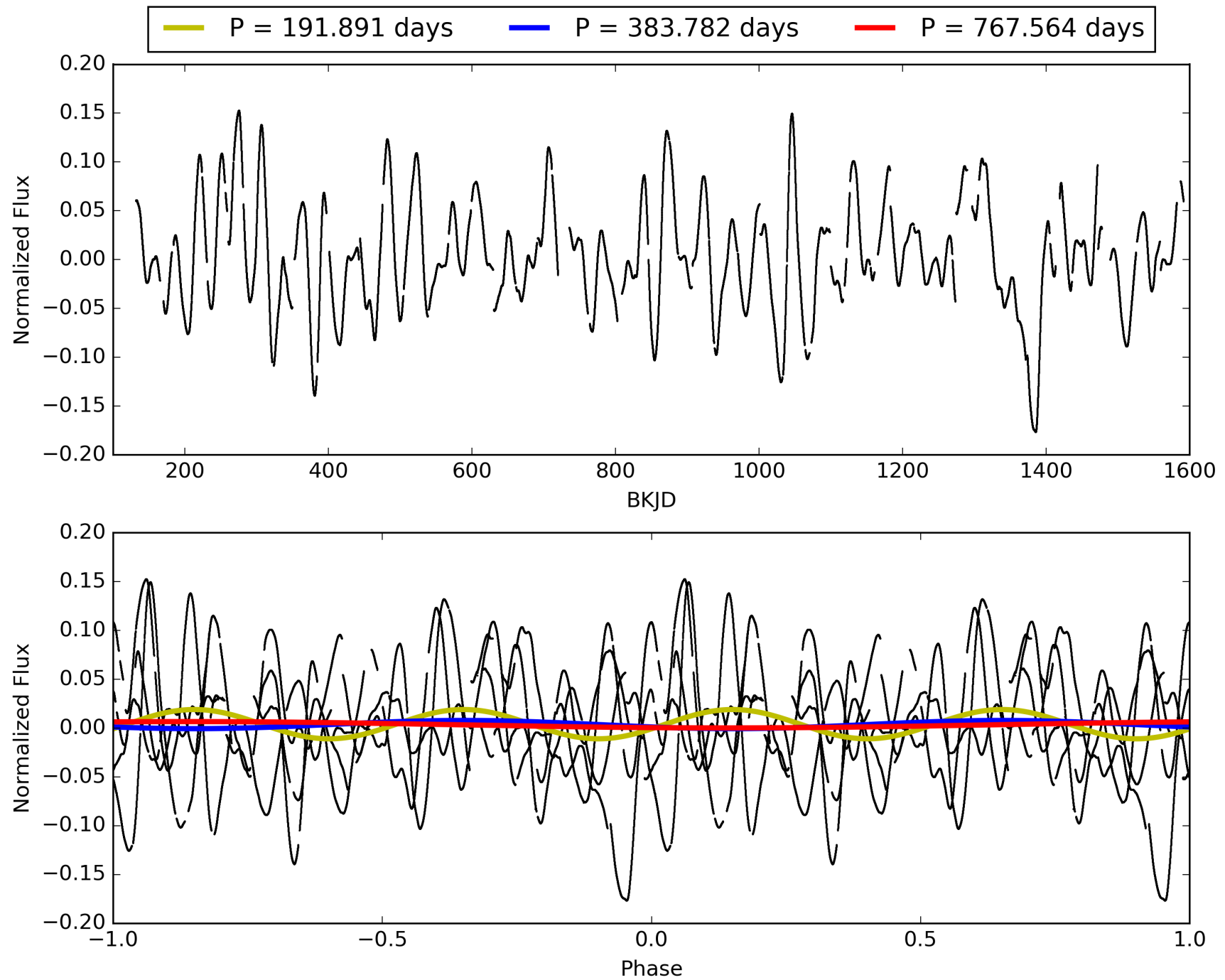
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:40:05 Z

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

TCE 009835765-02, PDC Light Curves

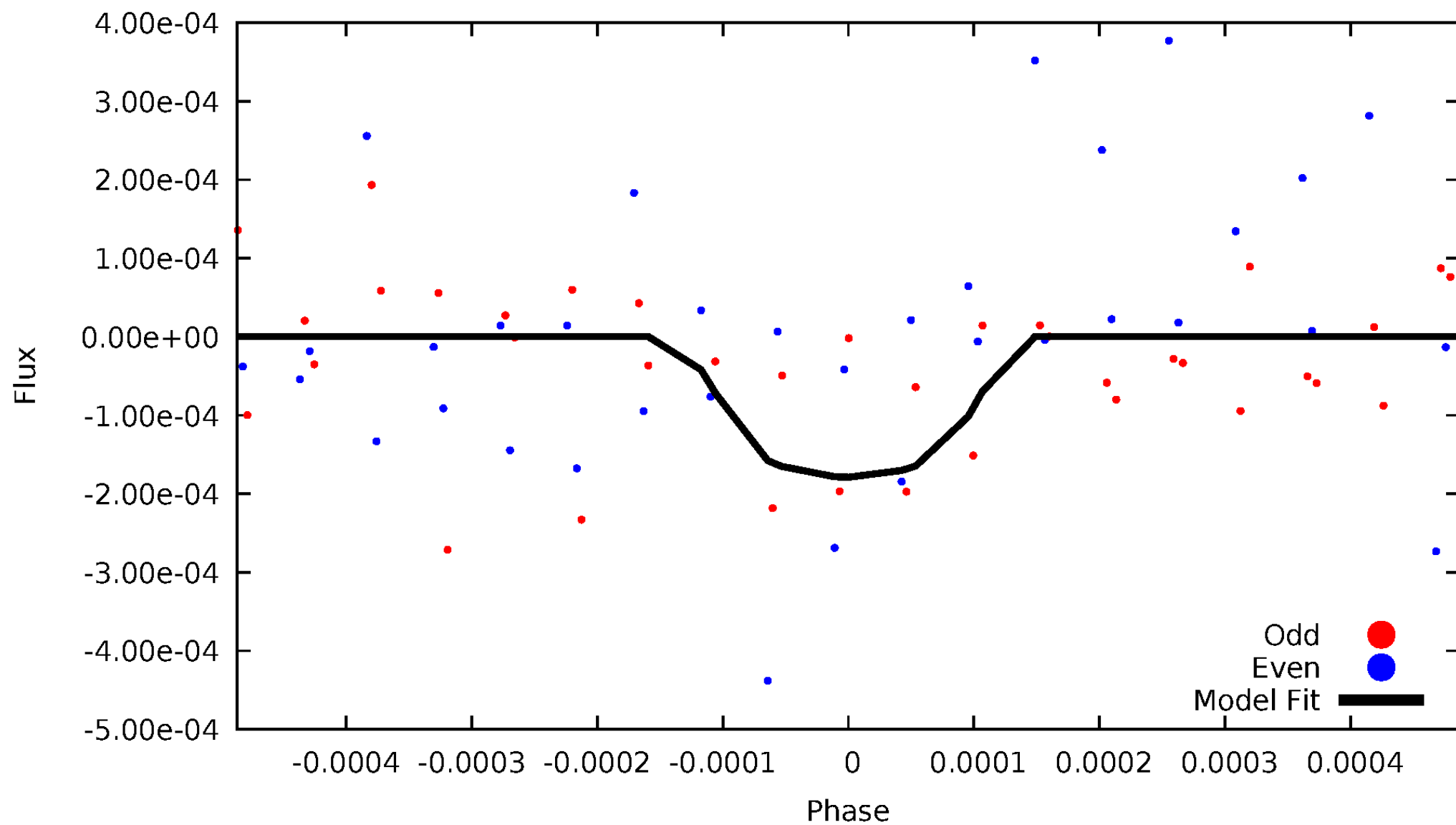


TCE 009835765-02



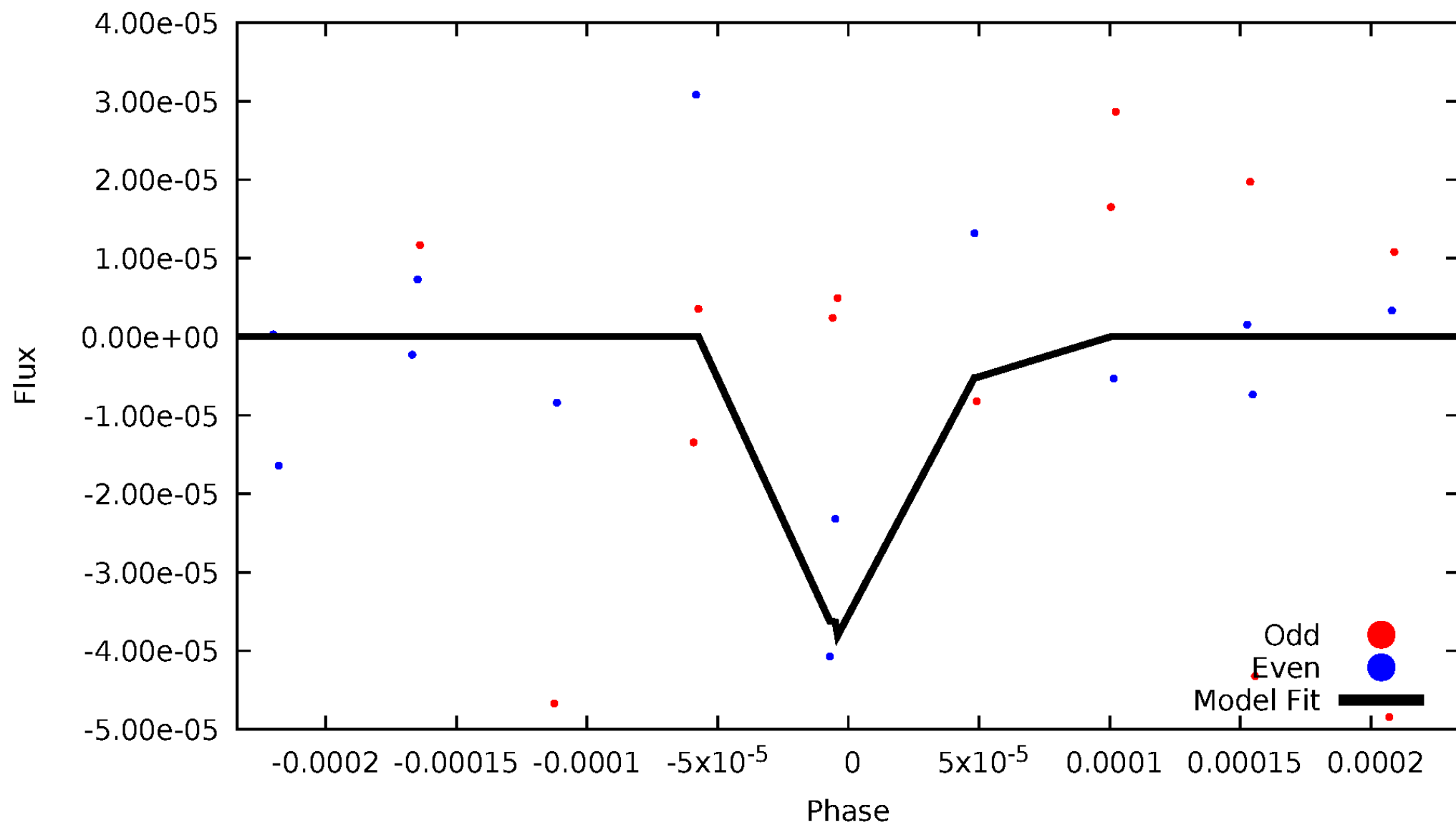
DV Odd/Even

TCE 009835765-02



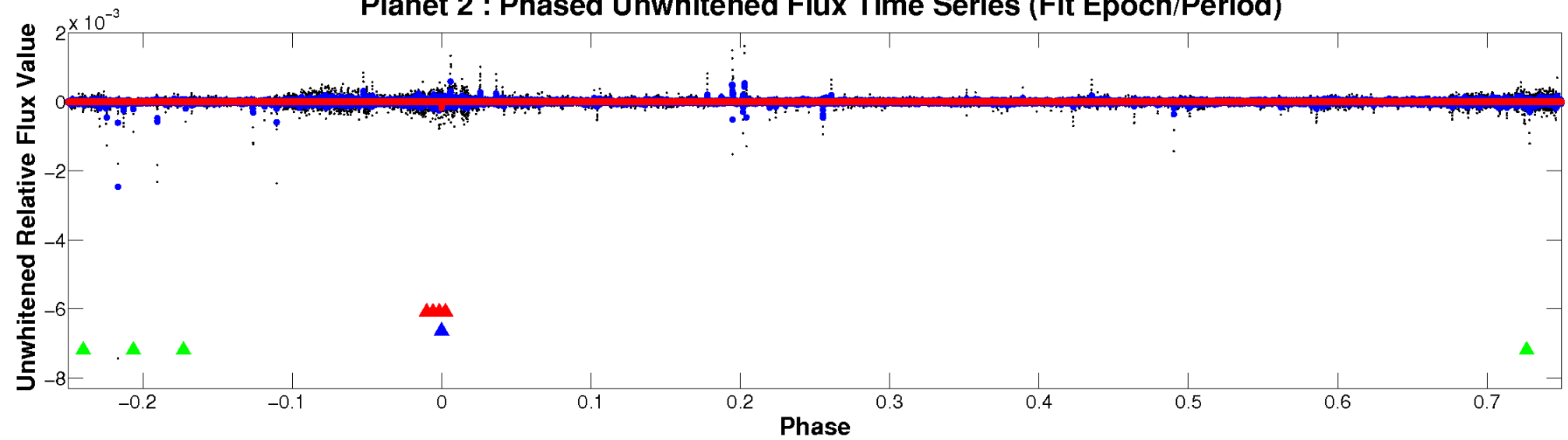
ALT Odd/Even

TCE 009835765-02

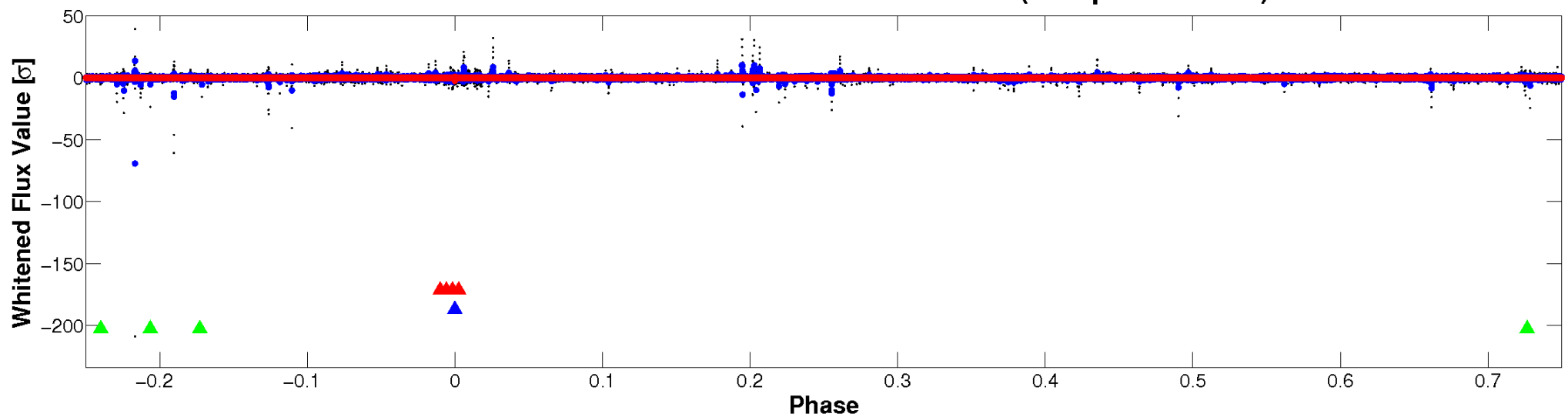


Non-Whitened Vs. Whitened Light Curve

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

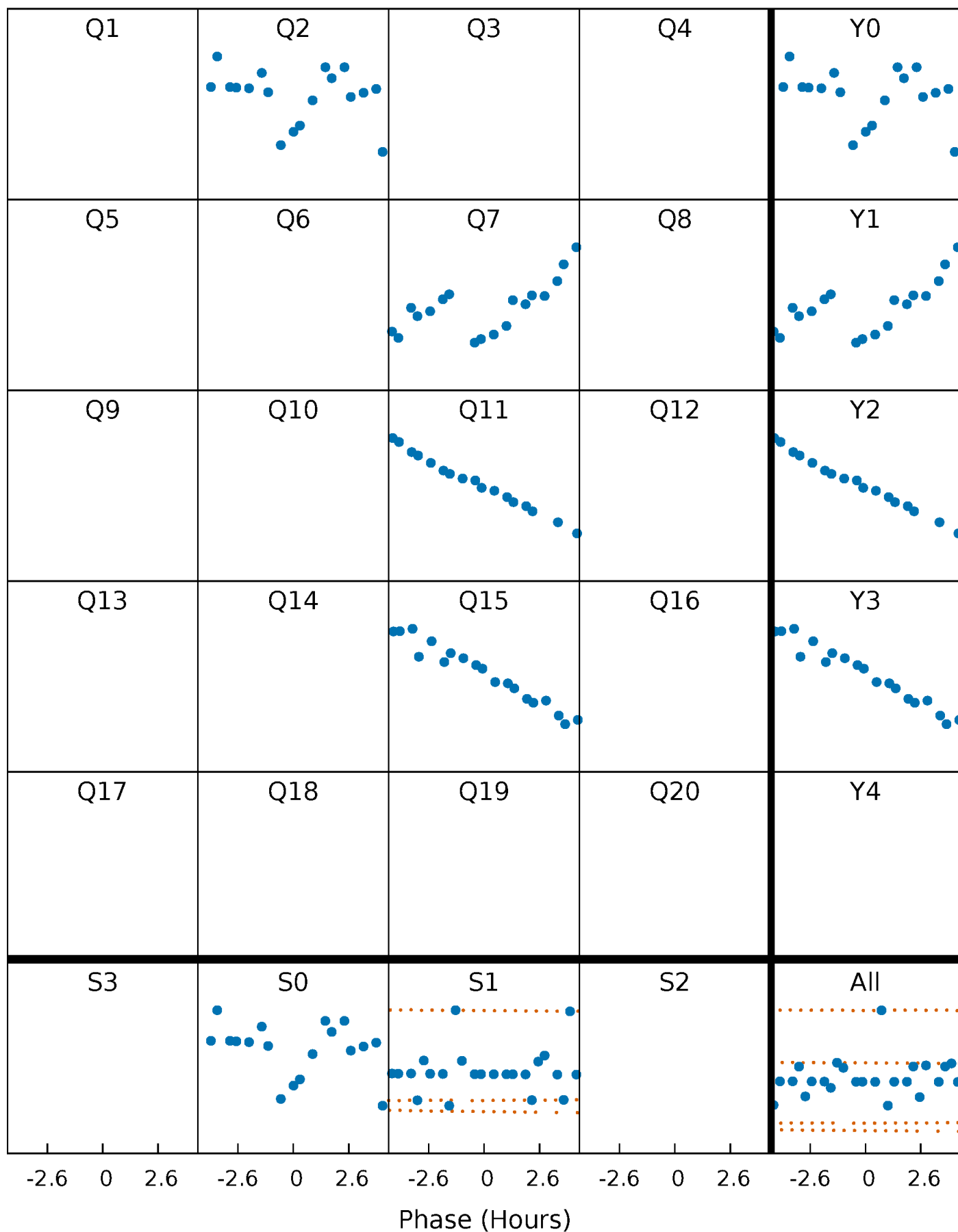


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



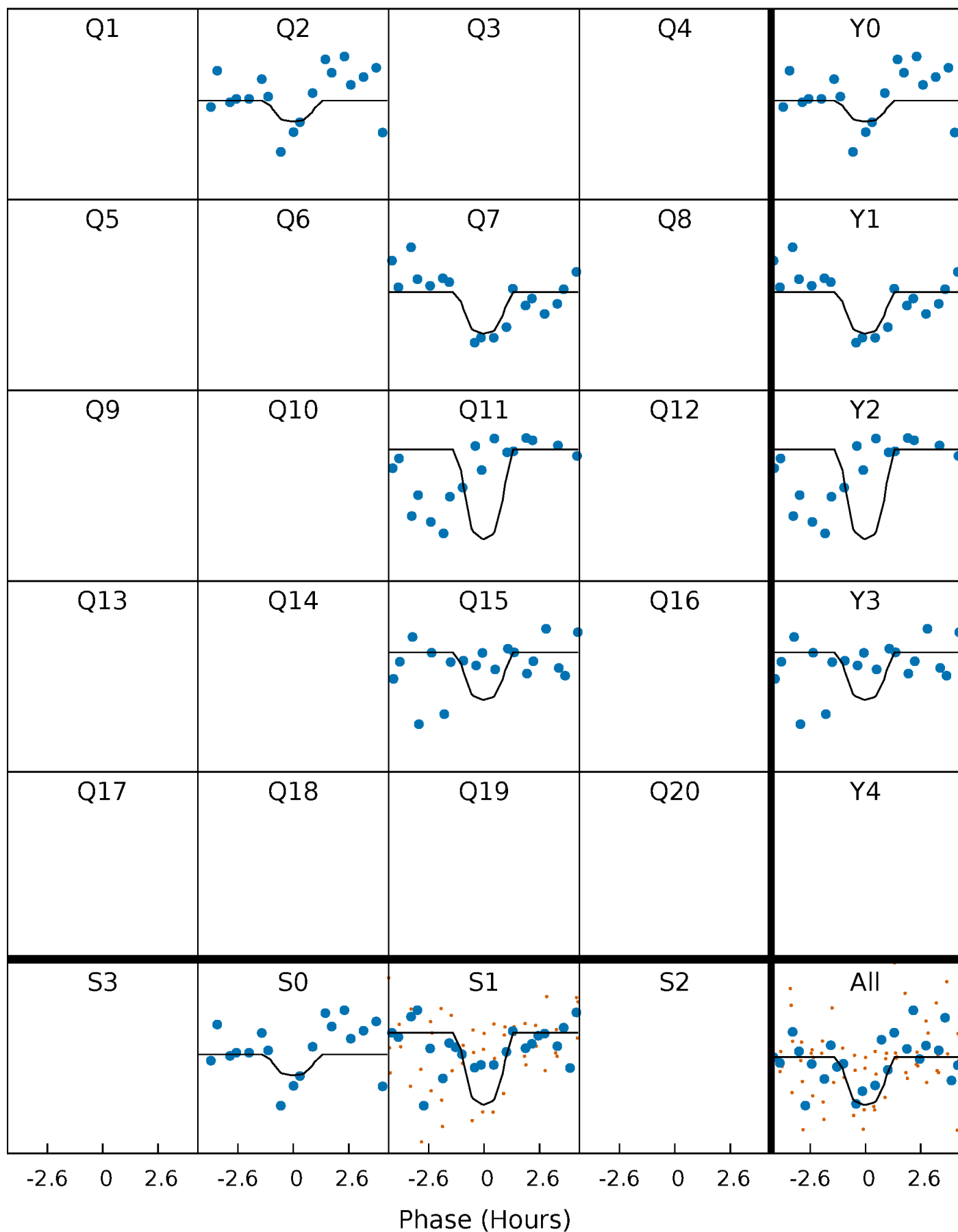
PDC Quarter-Phased Transit Curves

TCE 009835765-02 P=383.782054 Days $T_0=251.483670$ (BKJD)



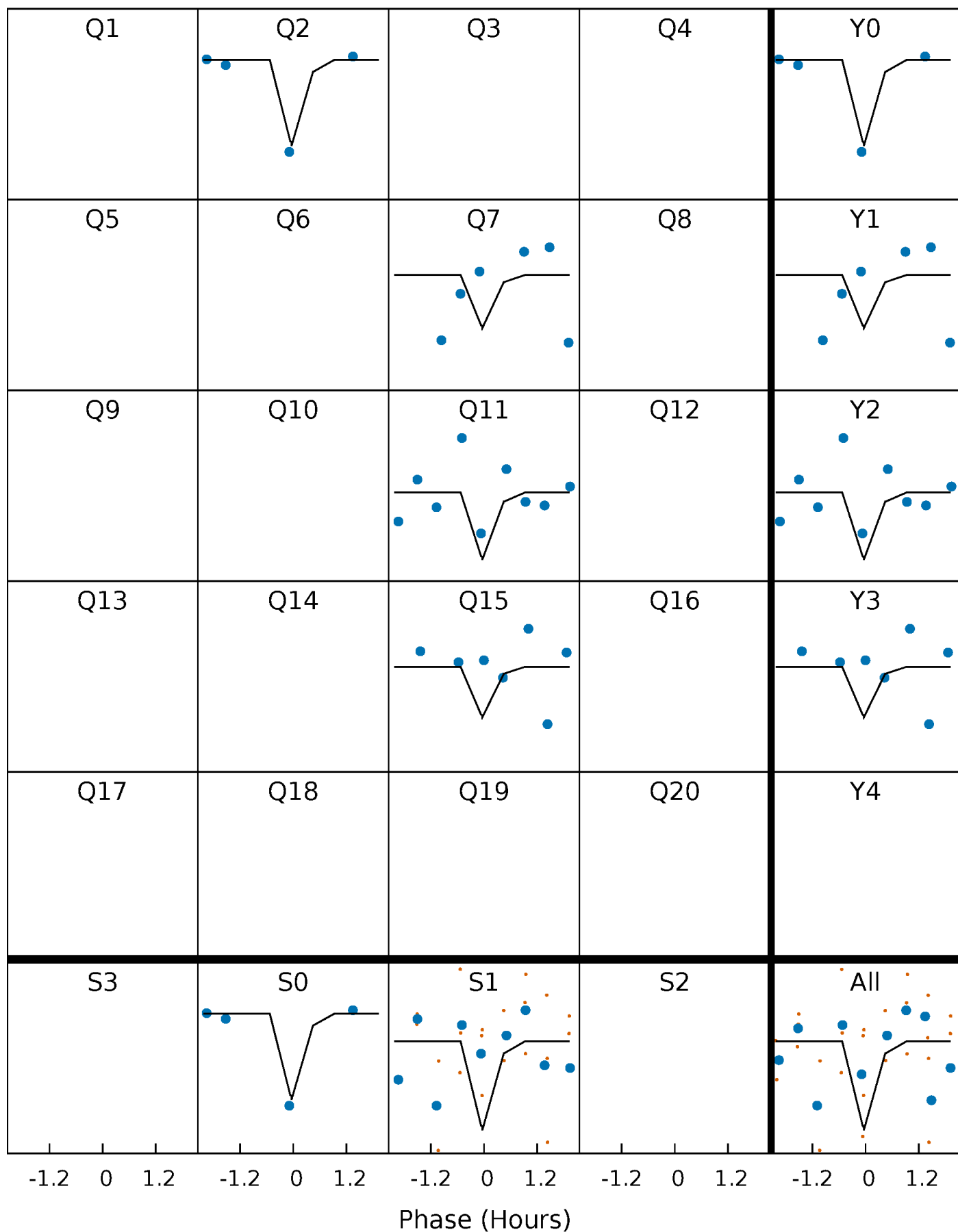
DV Quarter-Phased Transit Curves

TCE 009835765-02 P=383.782054 Days $T_0=251.483670$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

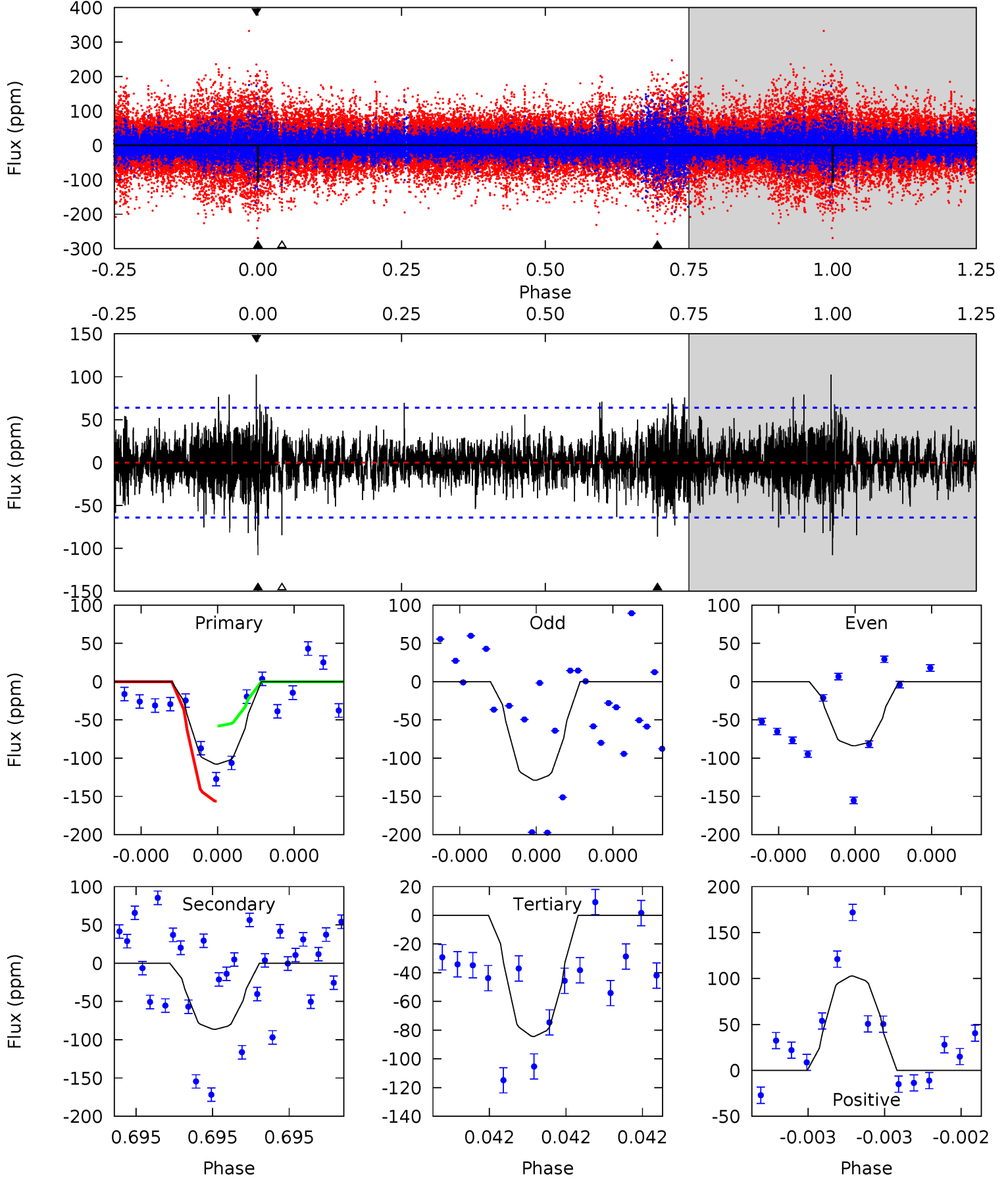
TCE 009835765-02 P=383.742257 Days $T_0=251.563928$ (BKJD)



DV Model-Shift Uniqueness Test

009835765-02, P = 383.782054 Days, E = 251.483670 Days

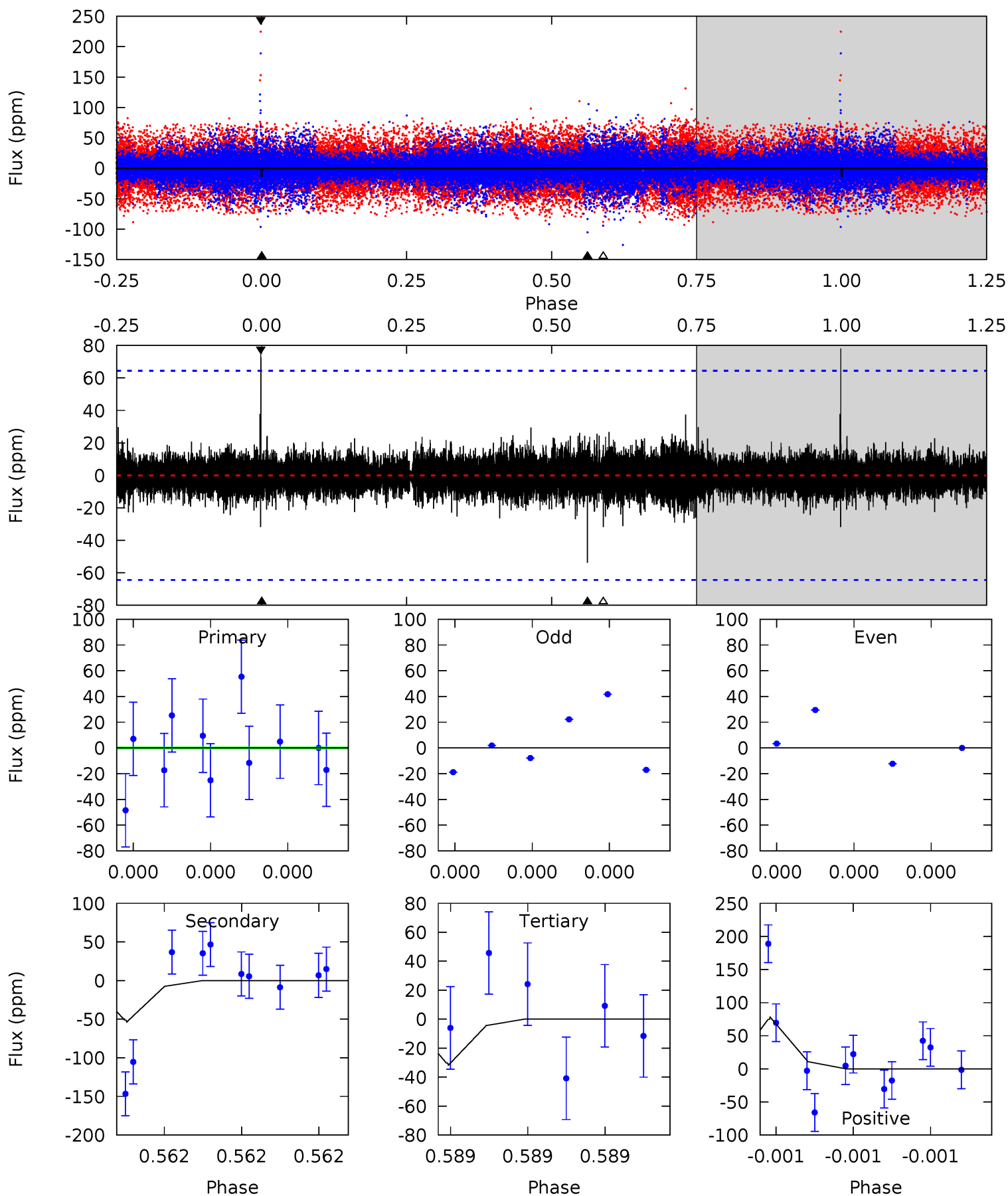
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.57	7.67	7.50	9.12	5.68	3.65	1.40	2.07	0.45	0.17	-1.45	1.79	1.02	0.49	4.04



Alt Model-Shift Uniqueness Test

009835765-02, P = 383.742257 Days, E = 251.563928 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.28	4.87	2.88	7.08	5.84	3.88	0.55	-1.60	-5.80	1.99	-2.21	1.03	1.00	0.59	0.55



Stellar Parameters For KIC 009835765

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3284^{+117}_{-88}	$0.184^{+0.232}_{-0.058}$	$0.020^{+0.250}_{-0.150}$	$148.390^{+11.490}_{-32.172}$	$1.226^{+0.235}_{-0.157}$	$0.000^{+0.000}_{-0.000}$
	+4%/-3%	+126%/-32%	+1250%/-750%	+8%/-22%	+19%/-13%	+115%/-17%
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 009835765-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-86 ± 11	$731.82^{+767.44}_{-493.60}$	2307^{+114}_{-138}	-2284^{+5027}_{-150}	$0.108^{+0.965}_{-0.080}$
Alt.	-54 ± 11	$669.35^{+734.41}_{-484.06}$	2310^{+104}_{-148}	-2318^{+5011}_{-132}	$0.082^{+0.916}_{-0.063}$

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 $A_{obs} \gg 1.0$

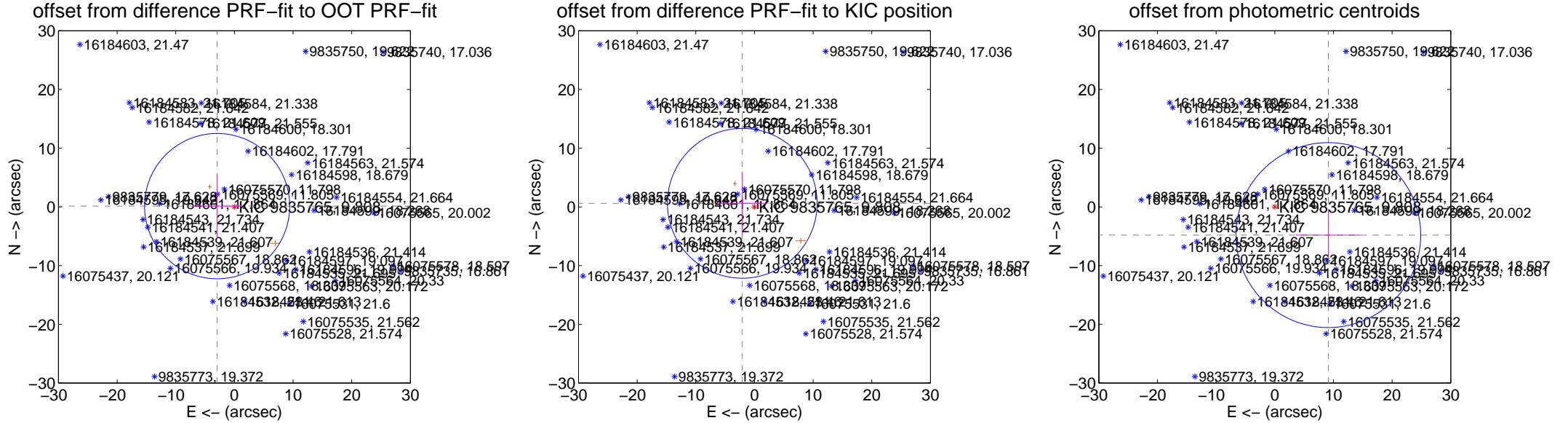
DV Centroid Data

Supplemental centroid analysis for 009835765-02. **Kepler magnitude: 9.81.** Transit SNR 8.27

There are 0 quarters with good PRF difference image offsets

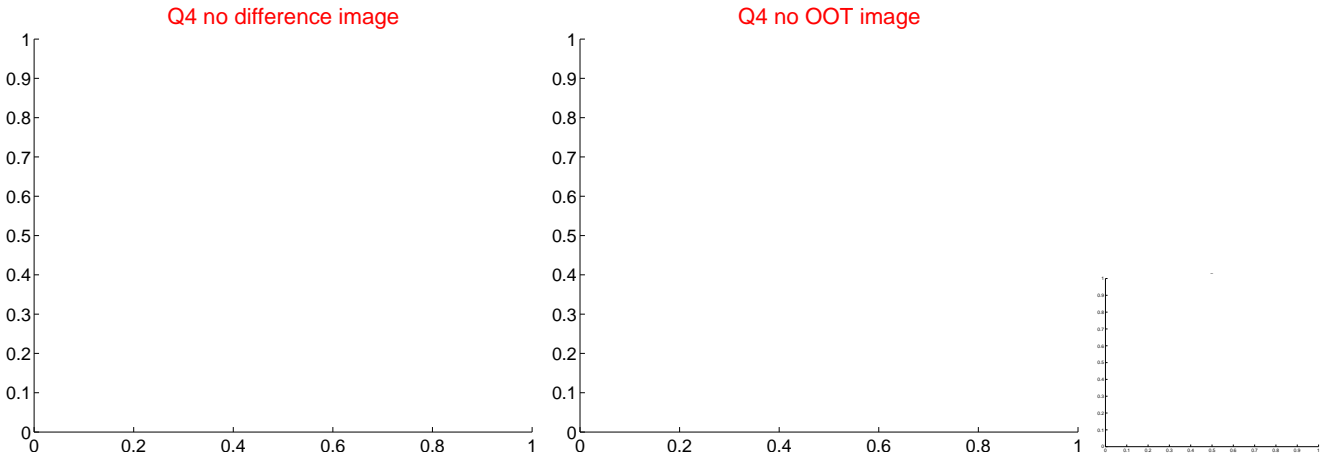
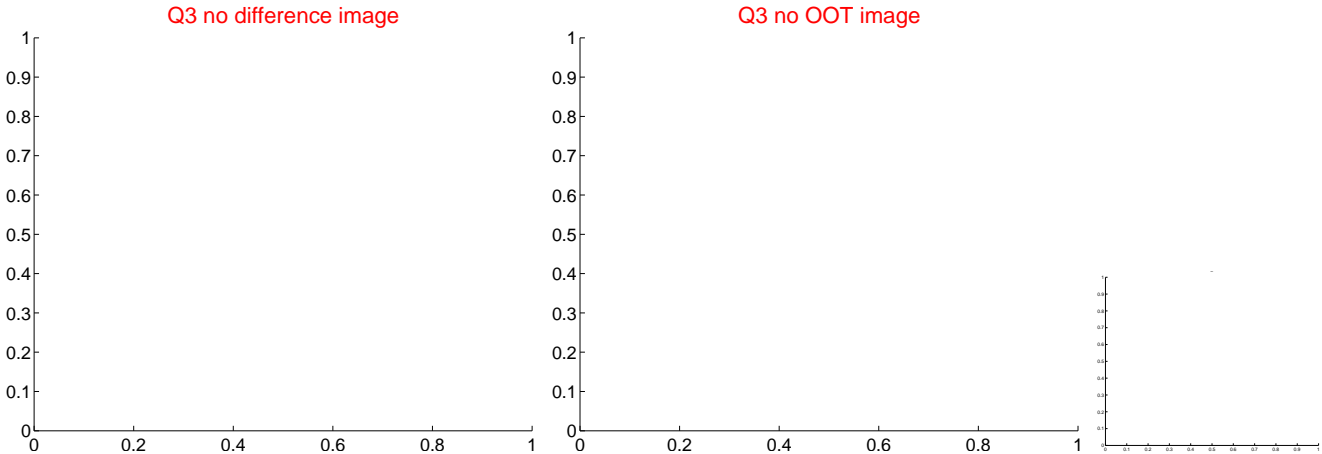
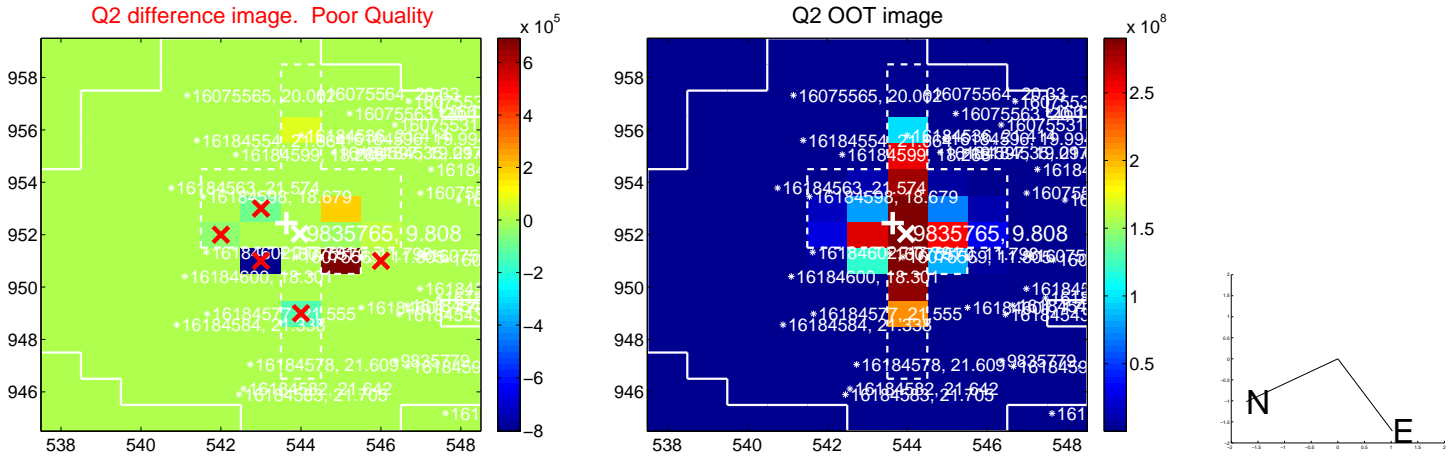
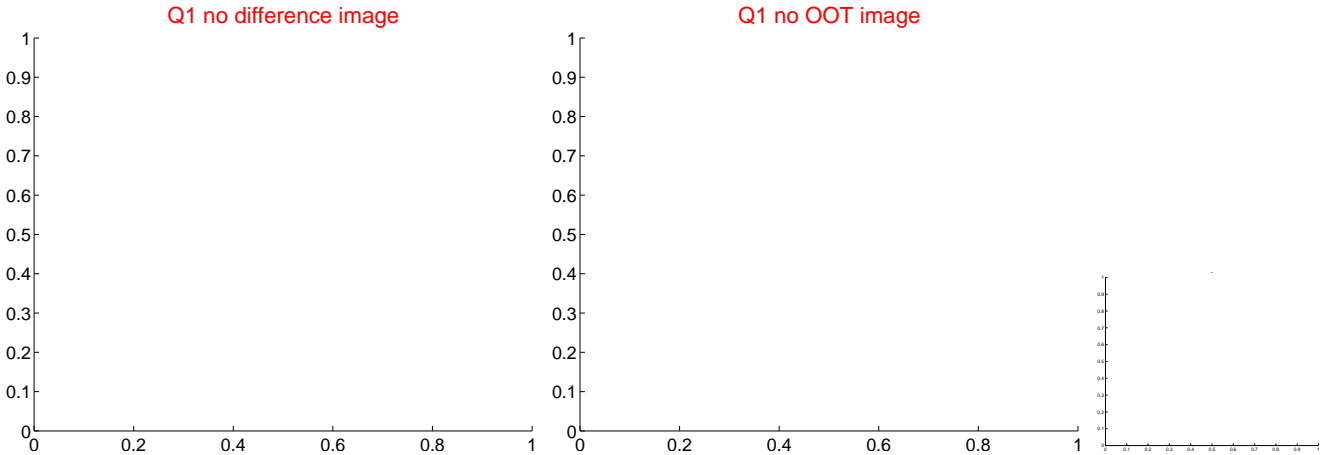
The direct PRF centroid is offset from the target star catalog position by about 1.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.946 ± 4.125	0.71	2.943 ± 4.122	0.128 ± 5.356
PRF-fit source offset from KIC position	2.165 ± 4.253	0.51	2.077 ± 4.140	0.609 ± 5.396
photometric centroid source offset	10.32 ± 5.25	1.97	-9.13 ± 5.53	-4.81 ± 4.05

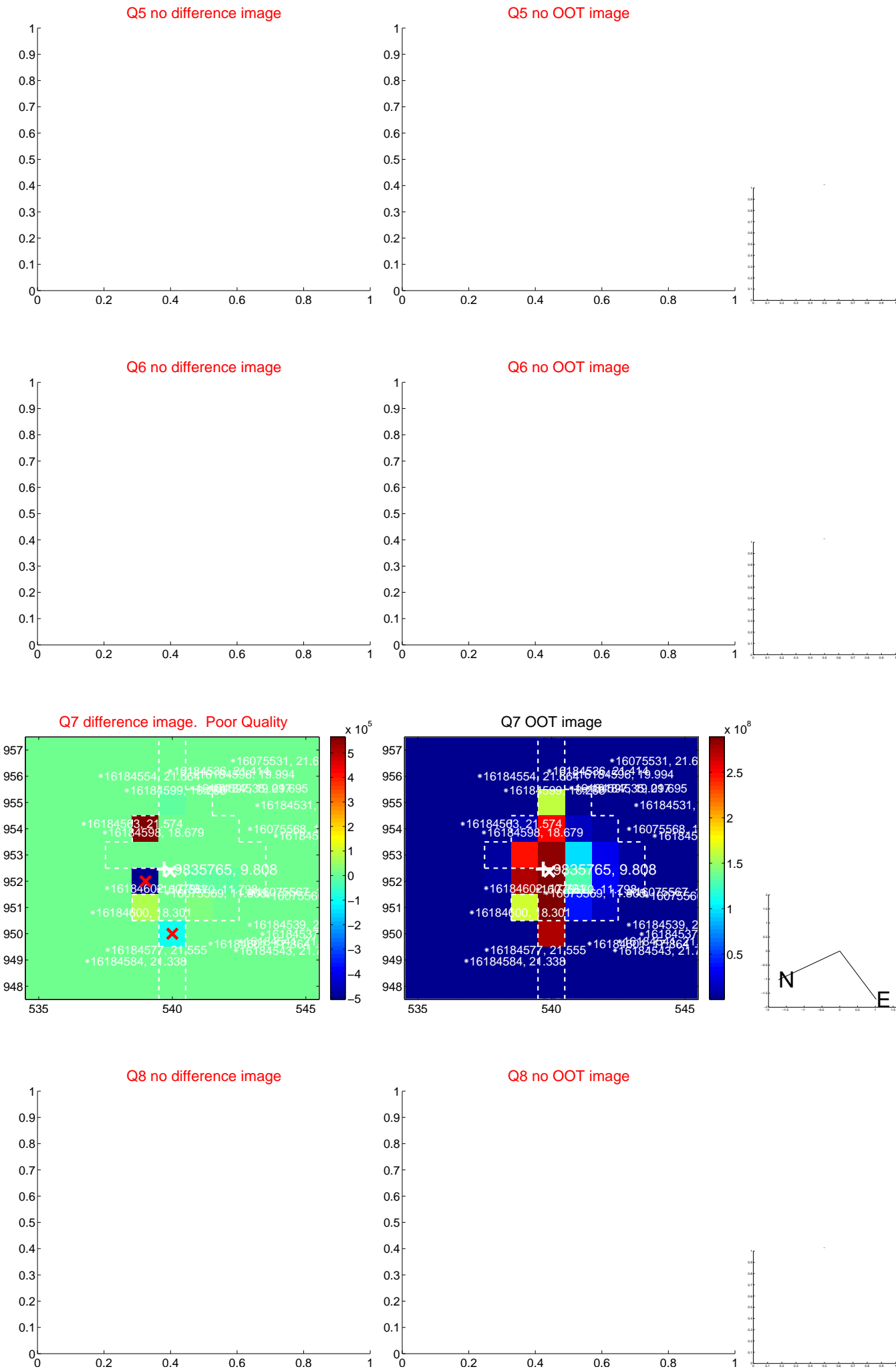


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

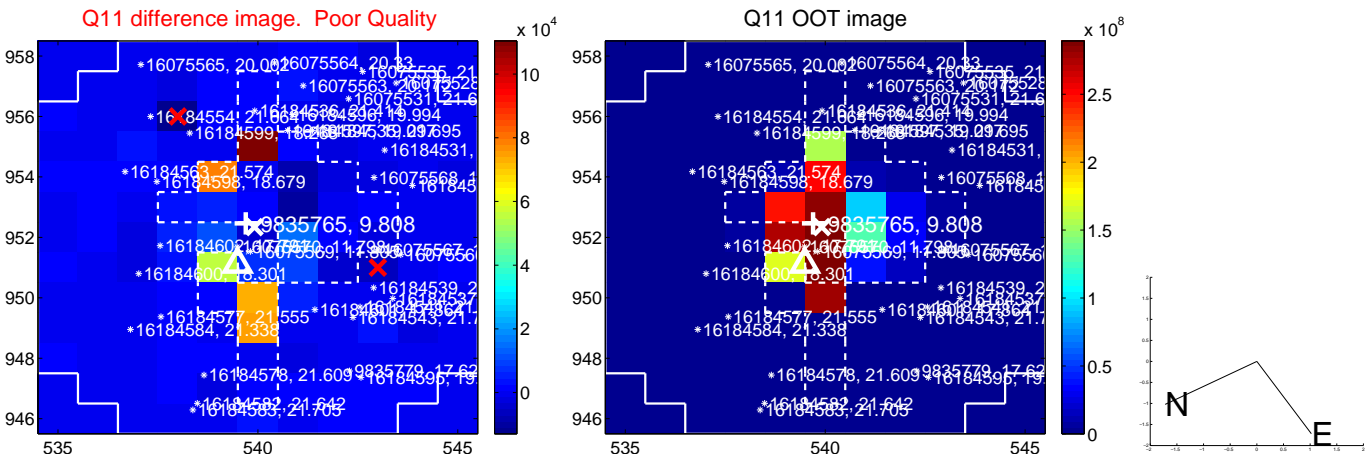
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



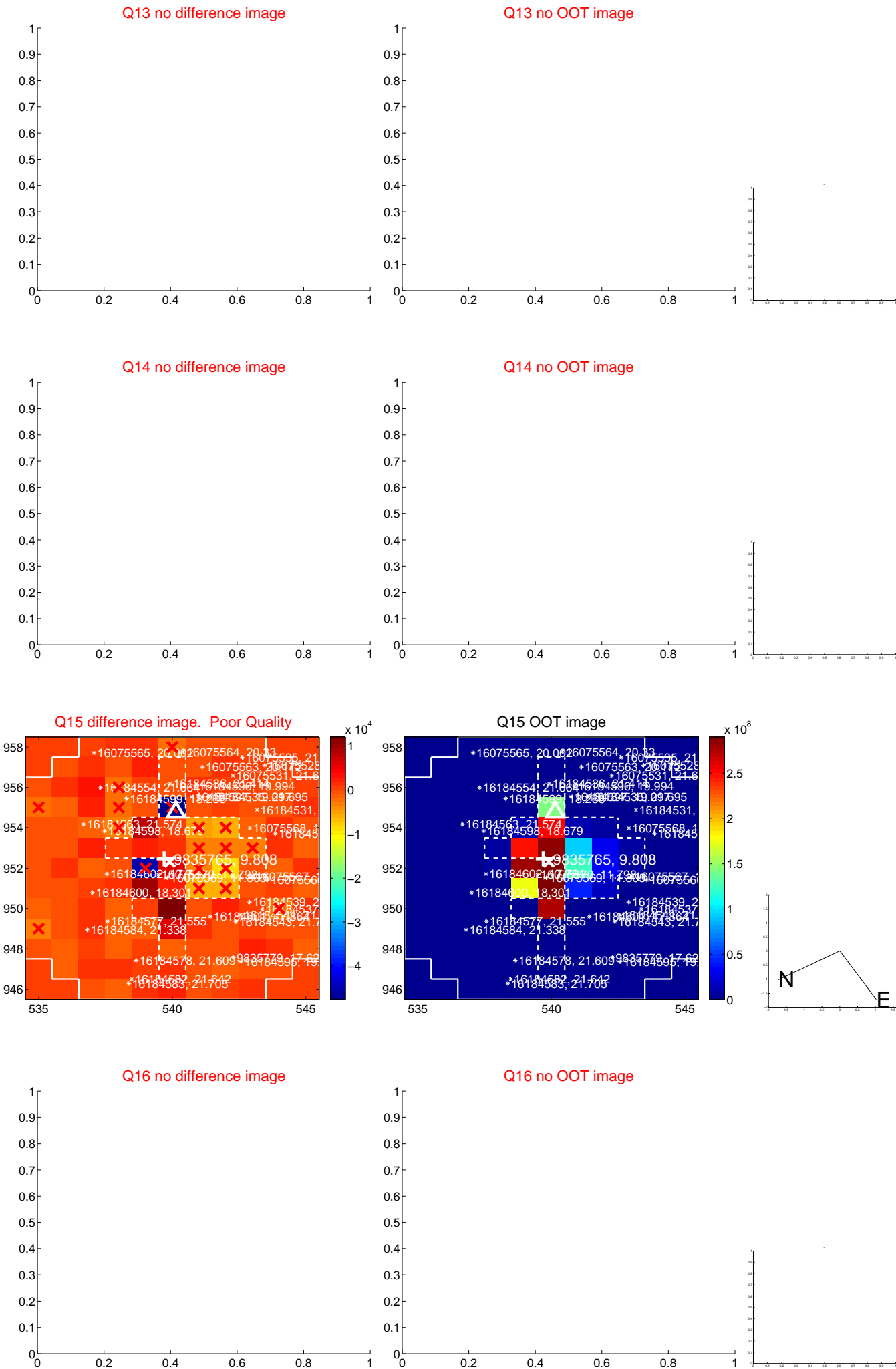
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



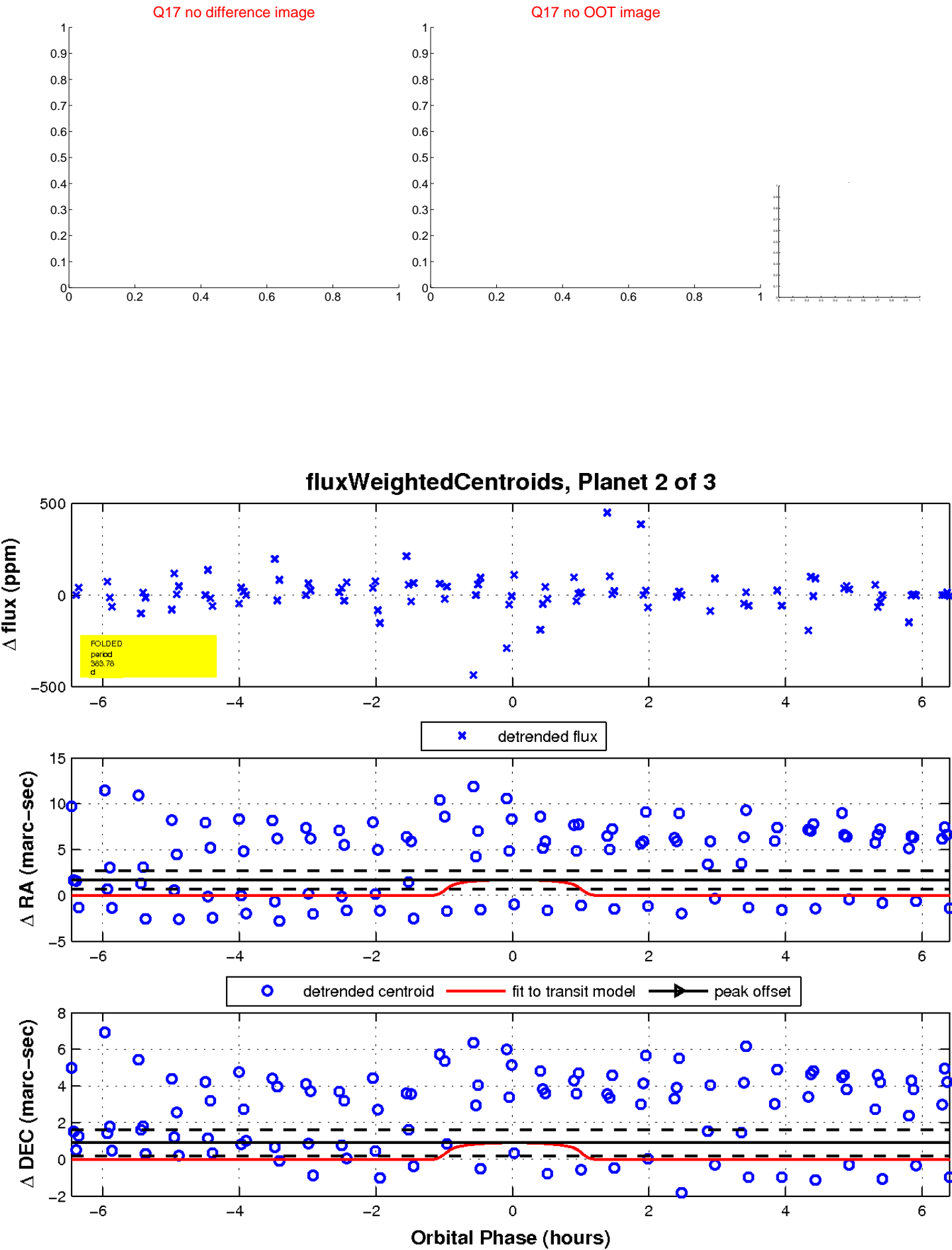
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



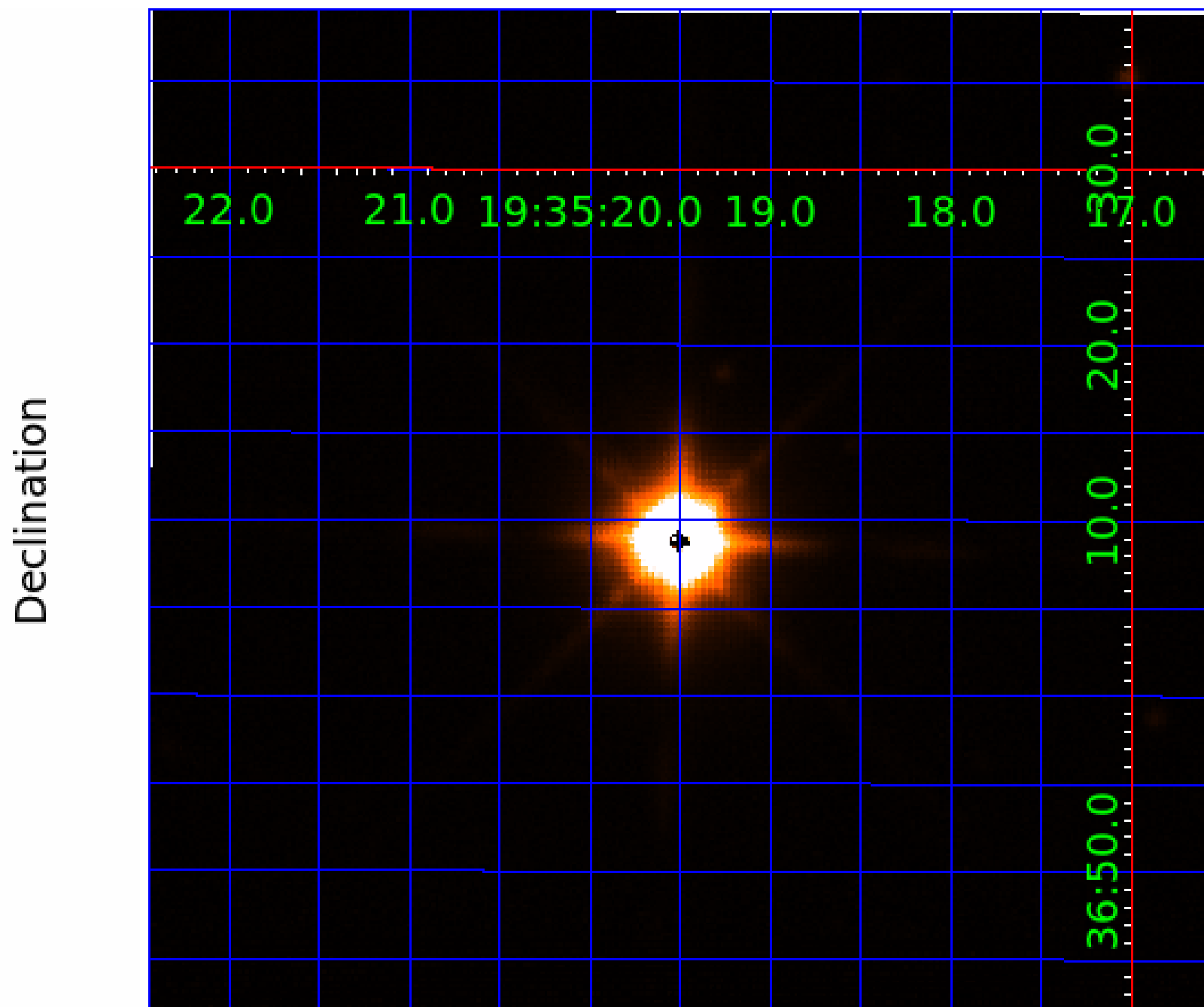
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009835765

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})
009835765-01	OBS	No	385.389739	247.666458	168.6	4.742	15.0	8.4	148.39	3284	209.48	1863.13
009835765-02	OBS	No	383.782054	251.483671	178.8	2.242	16.7	8.3	148.39	3284	263.59	1873.54
009835765-03	OBS	No	370.905111	185.168975	205.9	3.369	29.0	13.6	148.39	3284	238.54	1960.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009835765-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— INCONSISTENT_TRANS—CENT_SATURATED
009835765-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_SATURATED
009835765-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

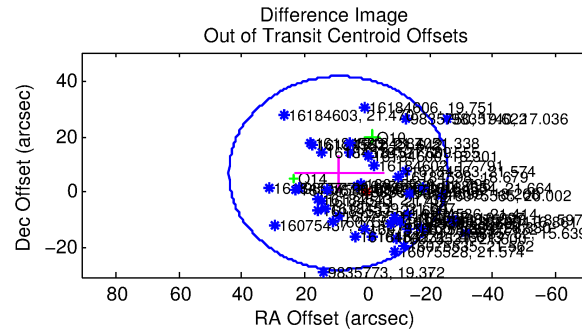
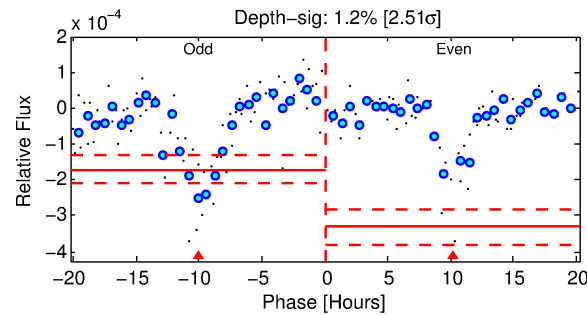
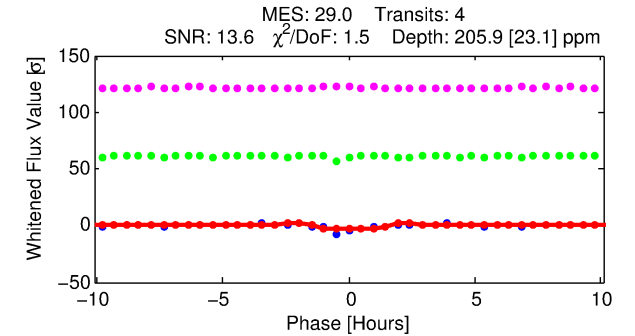
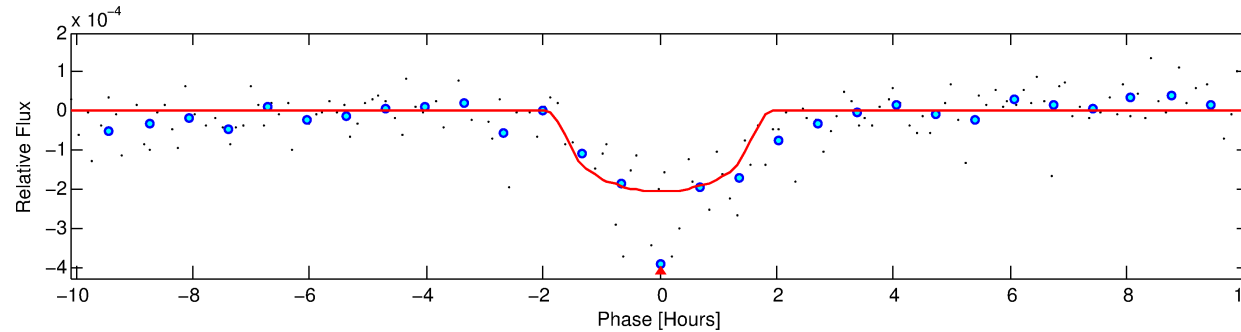
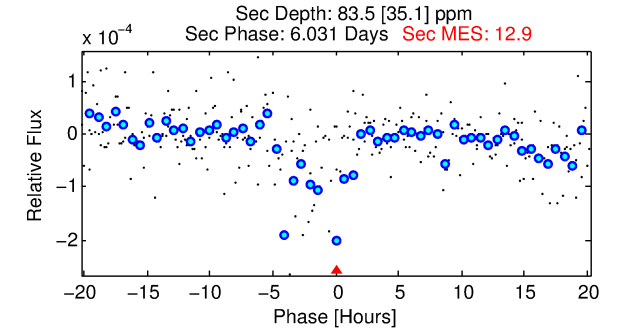
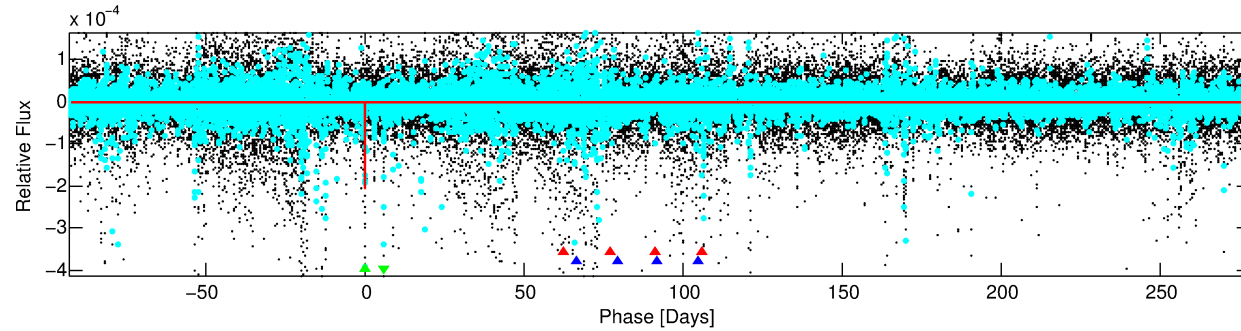
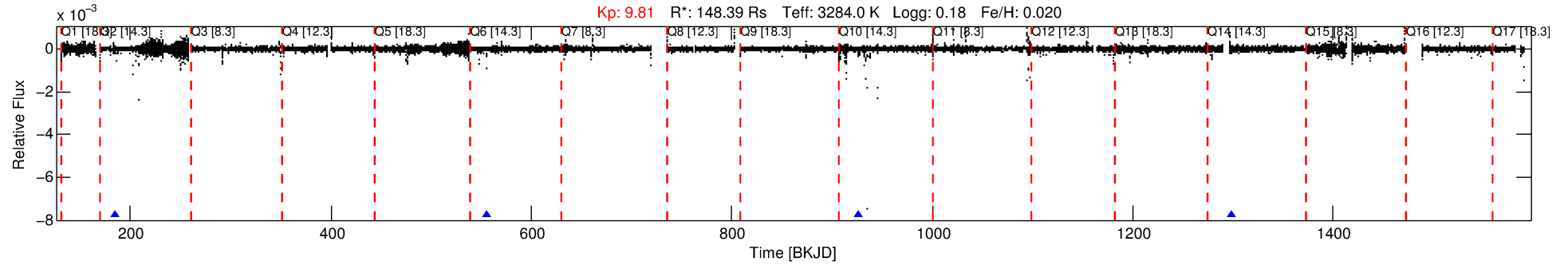
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009835765-03

No Significant Match Found

DV One-Page Summary

KIC: 9835765 Candidate: 3 of 3 Period: 370.905 d



DV Fit Results:

Period = 370.90511 [0.00288] d
Epoch = 185.1690 [0.0054] BKJD
Rp/R* = 0.0147 [0.0096]
a/R* = 557.67 [917.39]
b = 0.77 [0.91]
Seff = 1960.77 [803.75]
Teq = 1697 [174] K
Rp = 238.54 [163.33] Re
a = 1.0818 [0.2481] AU
Ag = 0.94 [1.34] [-0.04σ]
Teff = 2586 [887] K [0.98σ]

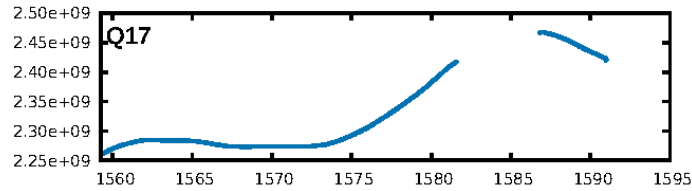
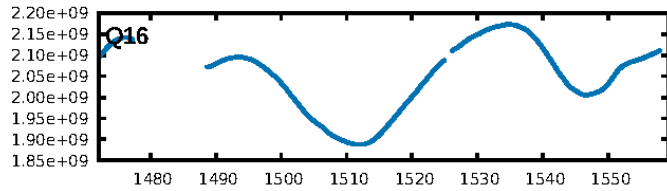
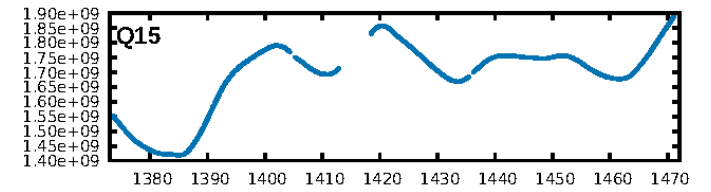
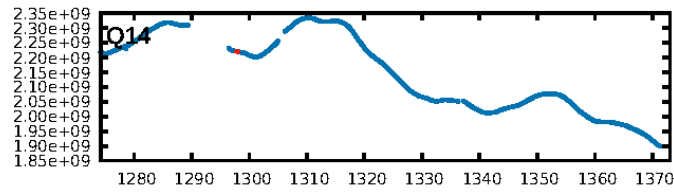
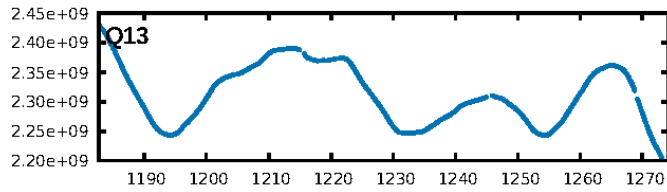
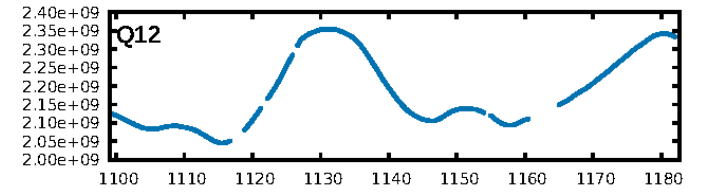
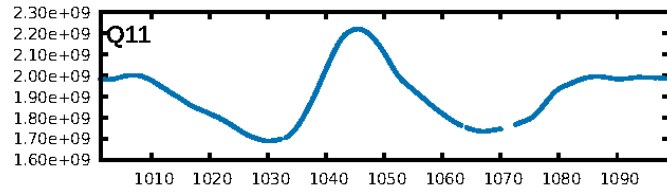
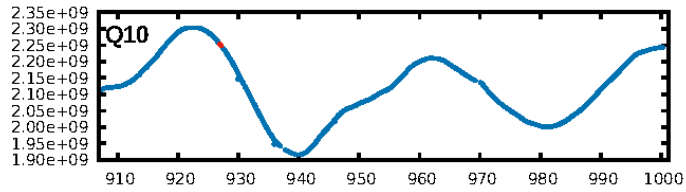
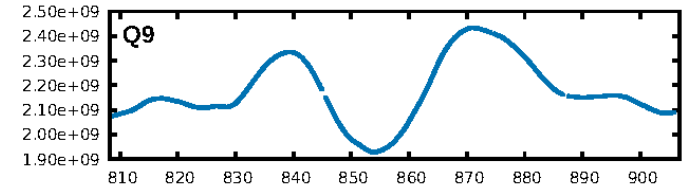
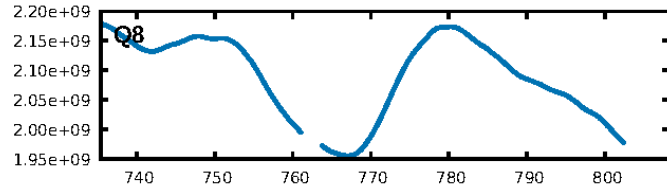
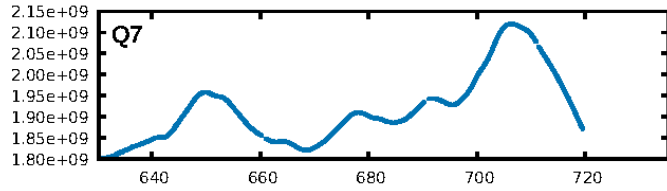
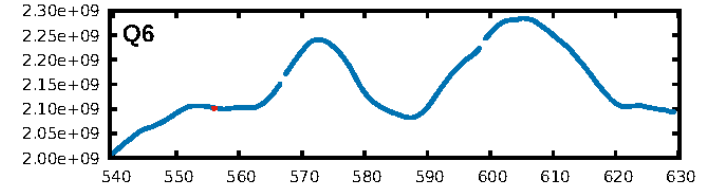
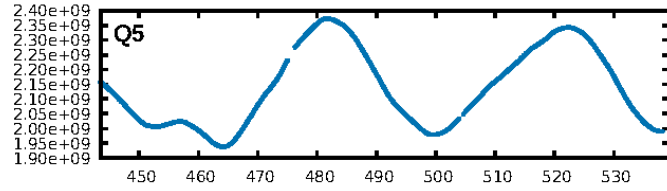
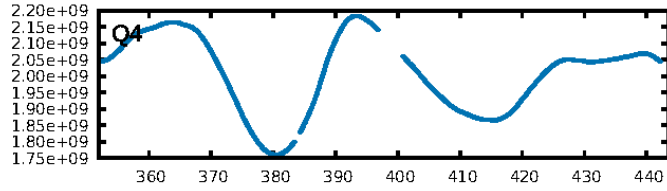
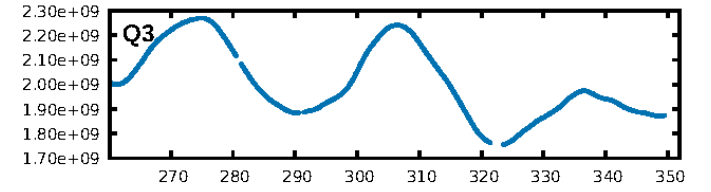
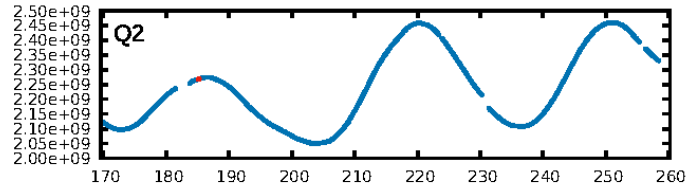
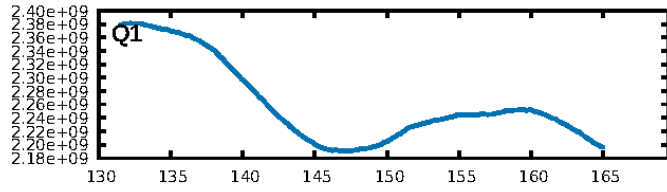
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [76.37σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 5.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 9.1%
Centroid-so: 2.672 arcsec [1.14σ]
OotOffset-rm: 11.441 arcsec [0.98σ]
KicOffset-rm: 9.853 arcsec [0.80σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [4/4]

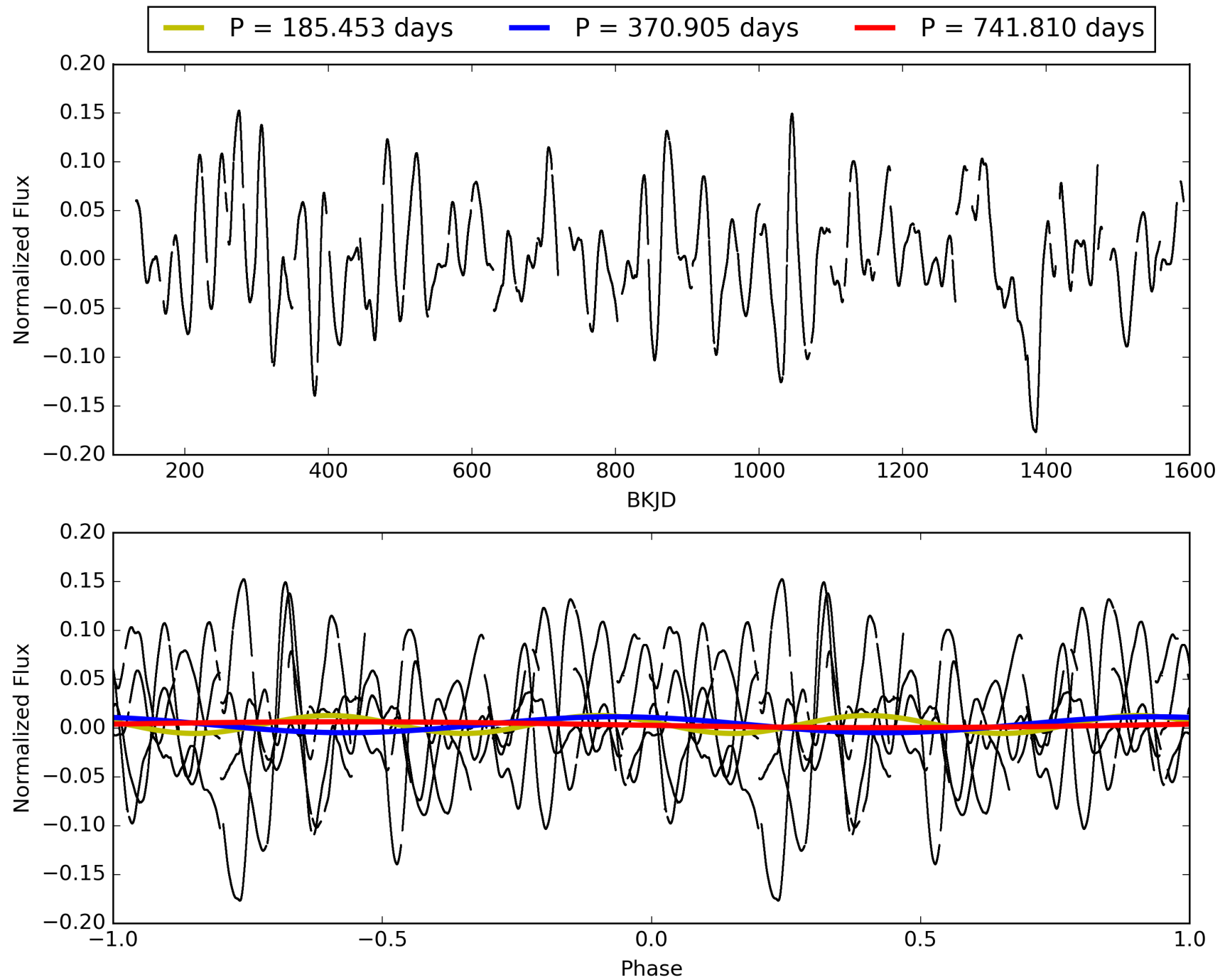
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:40:21 Z

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

TCE 009835765-03, PDC Light Curves

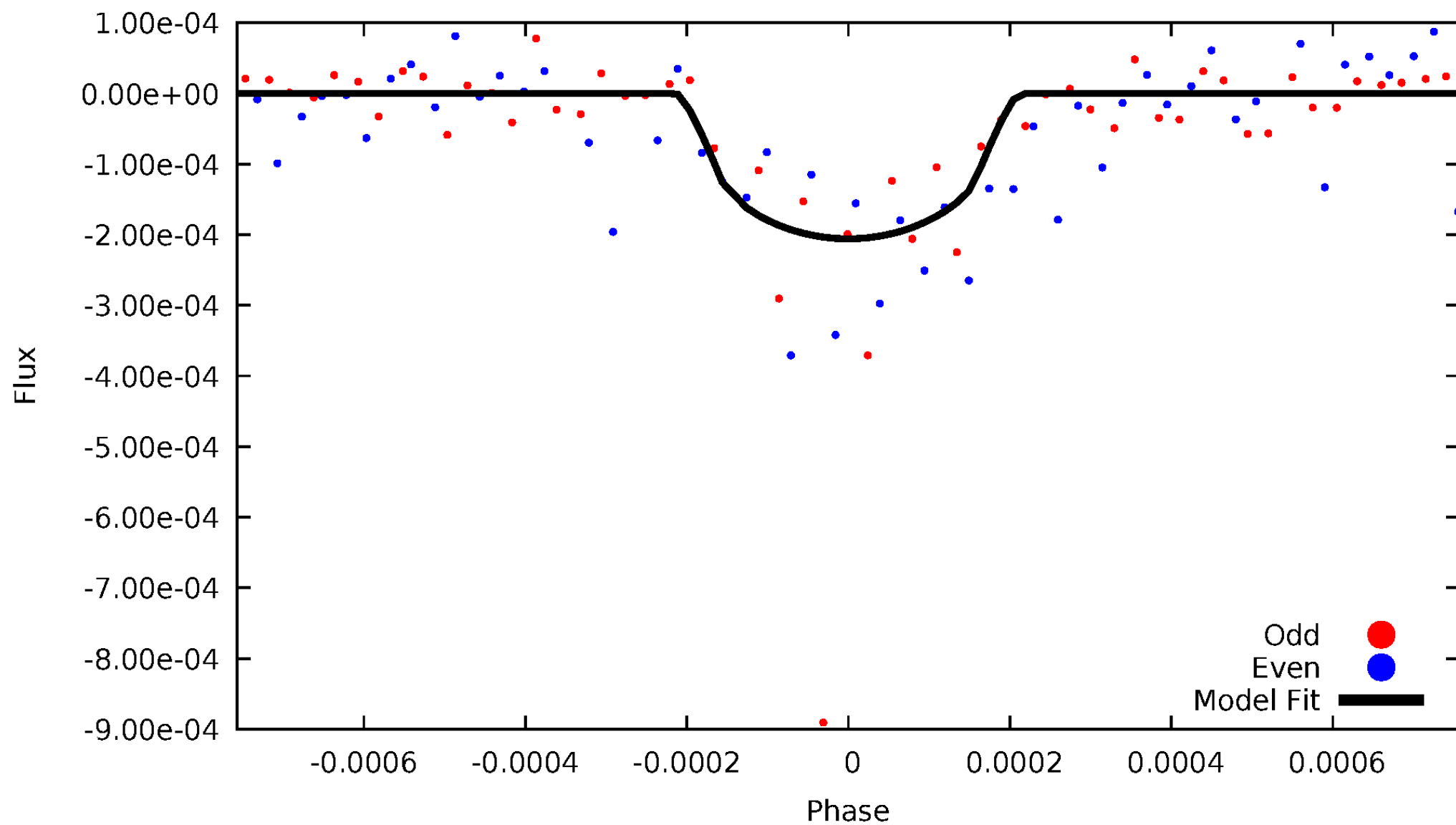


TCE 009835765-03



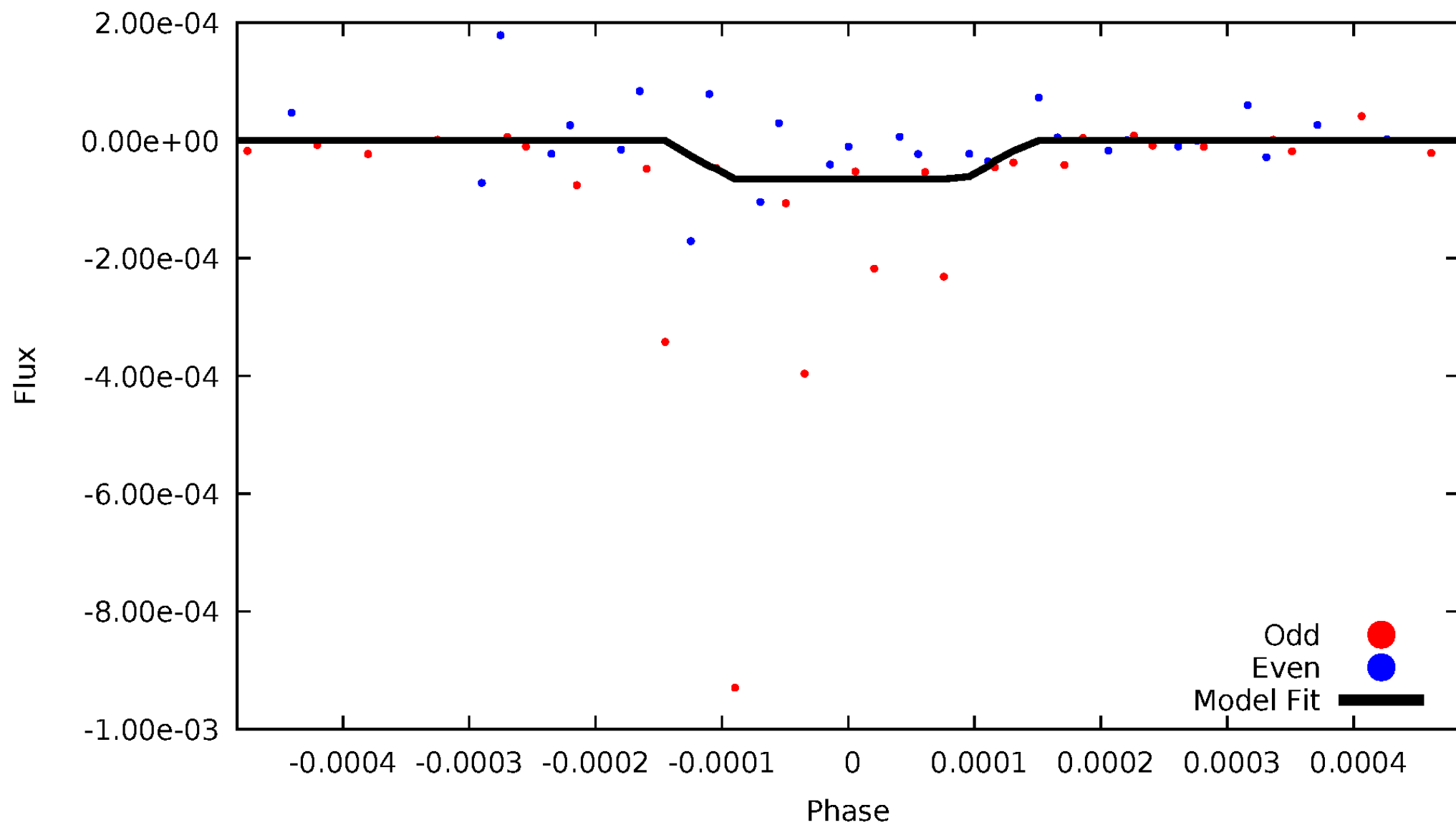
DV Odd/Even

TCE 009835765-03



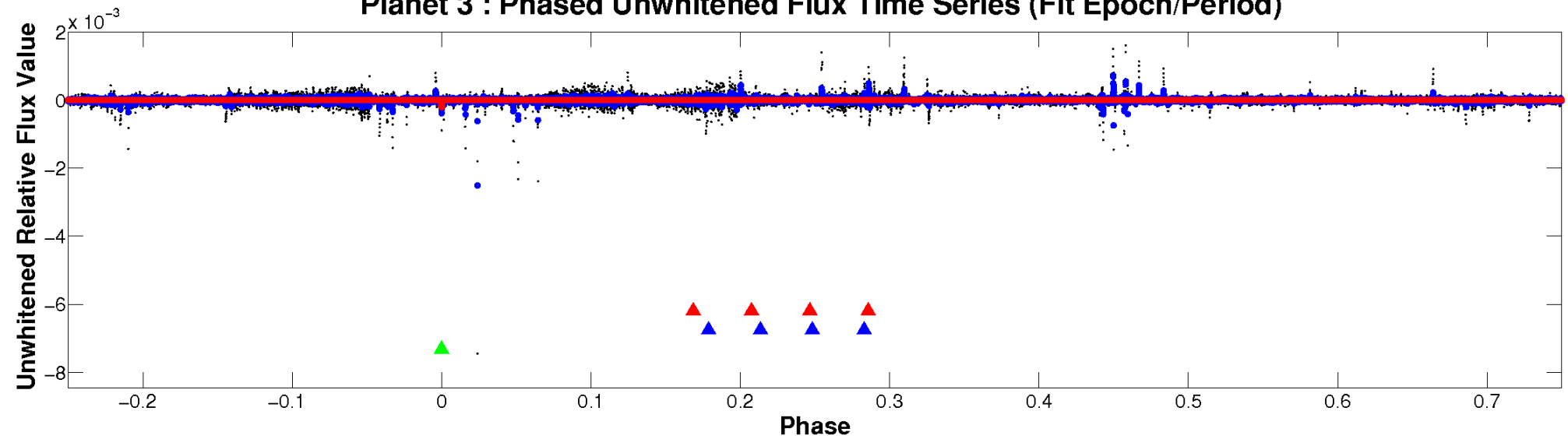
ALT Odd/Even

TCE 009835765-03

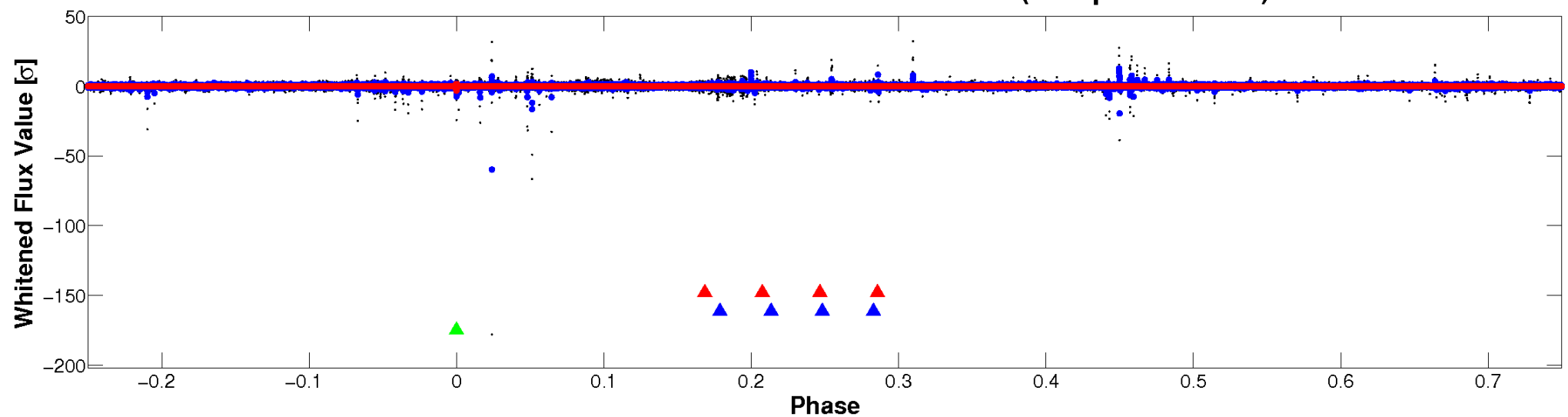


Non-Whitened Vs. Whitened Light Curve

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

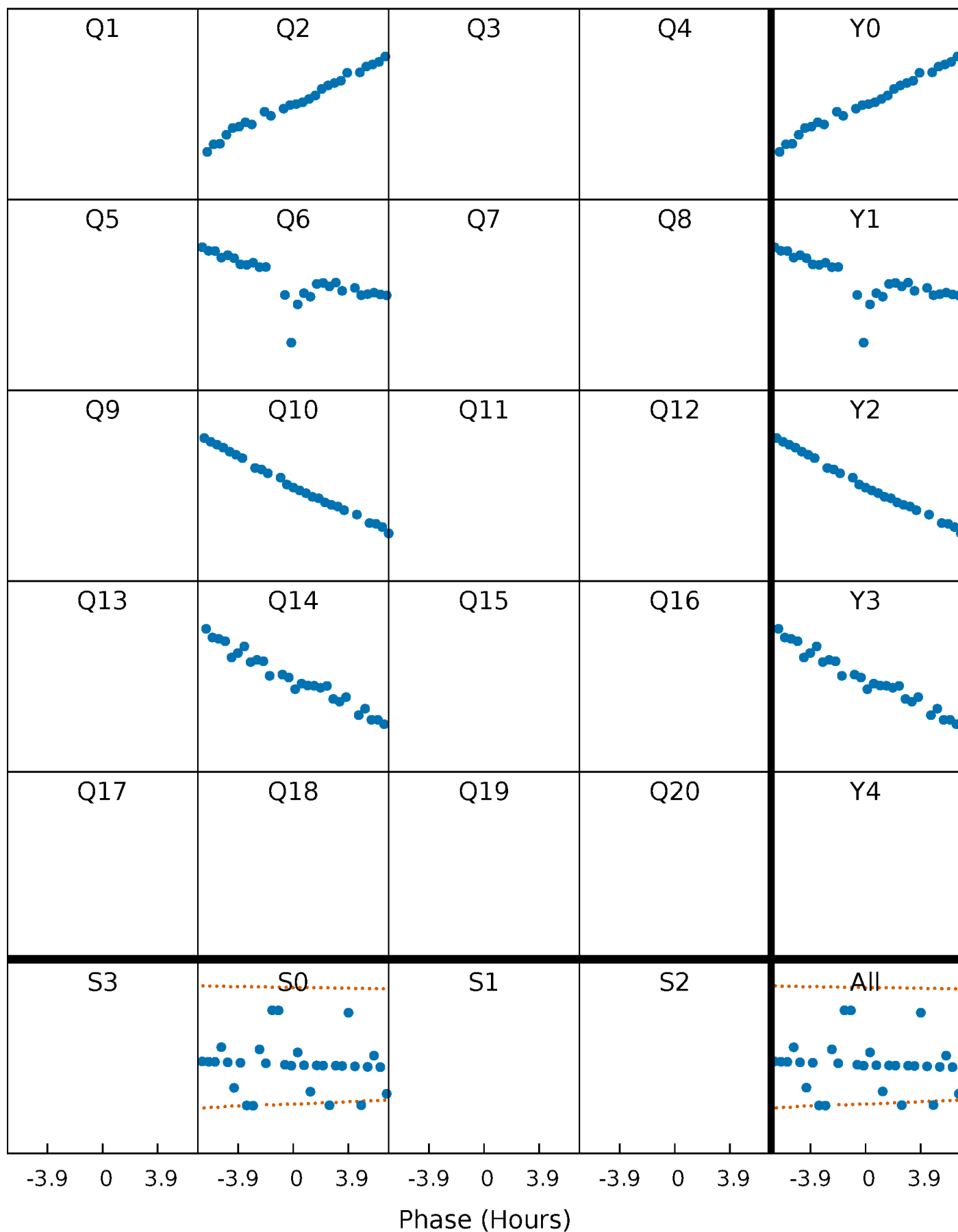


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



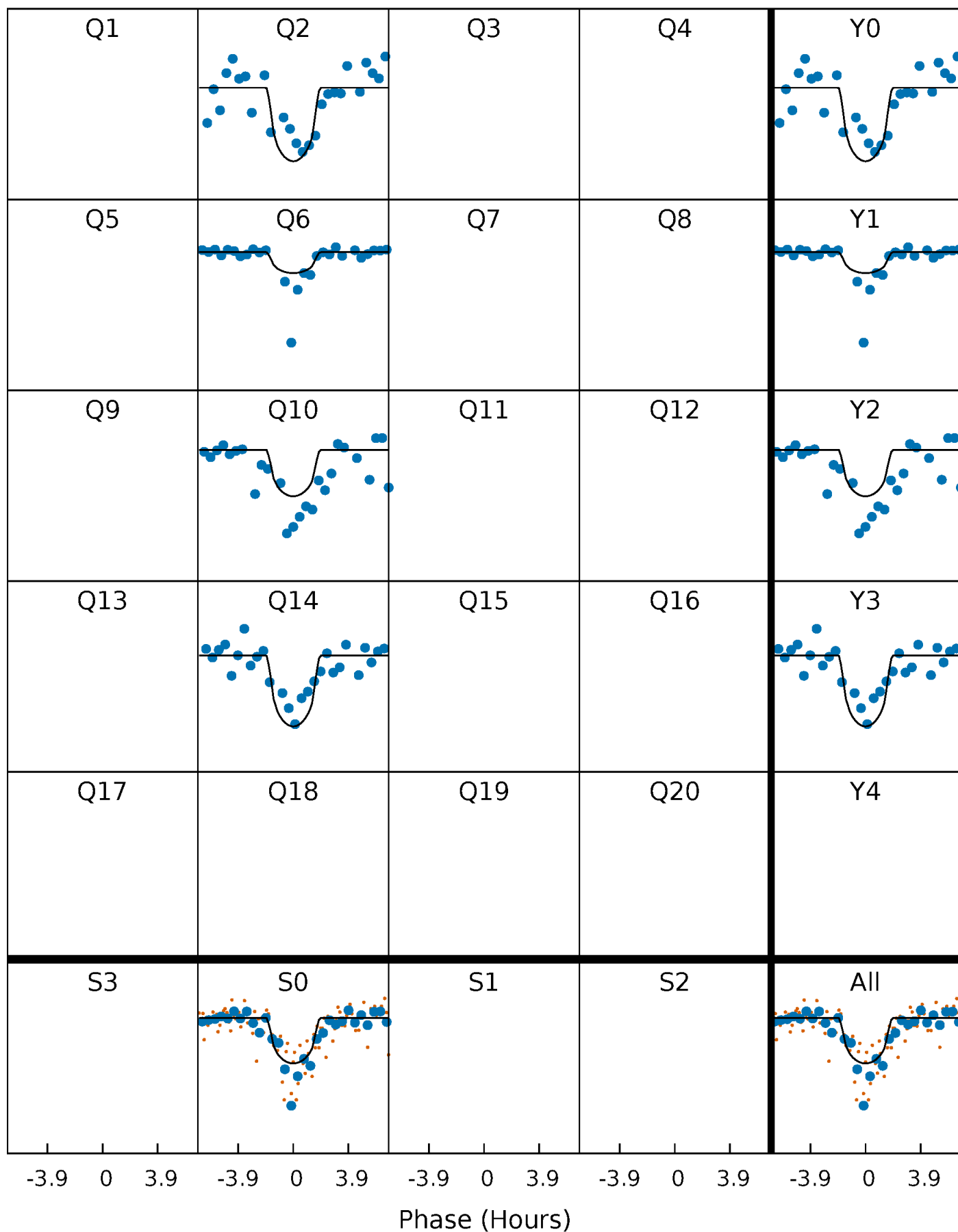
PDC Quarter-Phased Transit Curves

TCE 009835765-03 P=370.905111 Days $T_0=185.168975$ (BKJD)



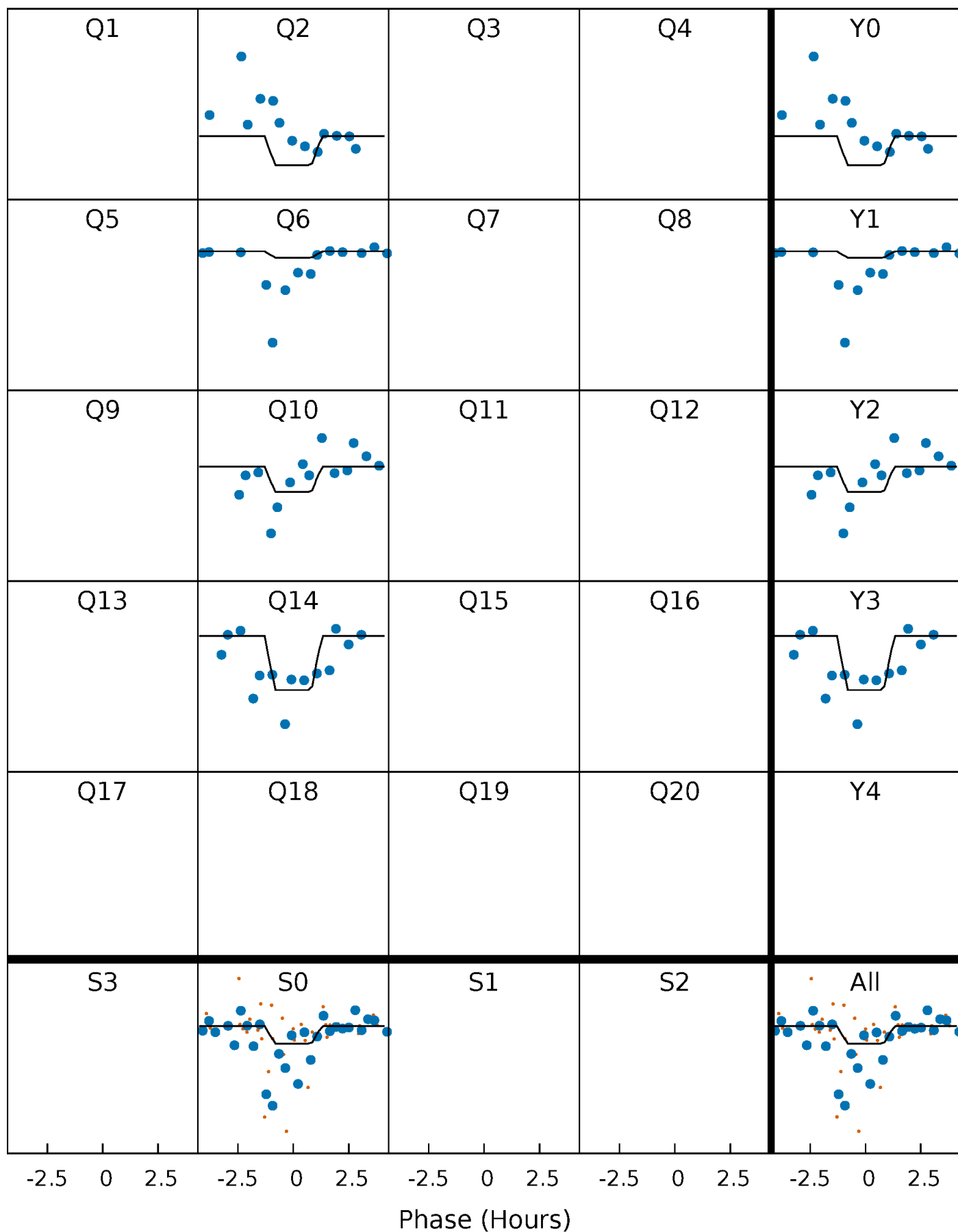
DV Quarter-Phased Transit Curves

TCE 009835765-03 P=370.905111 Days $T_0=185.168975$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

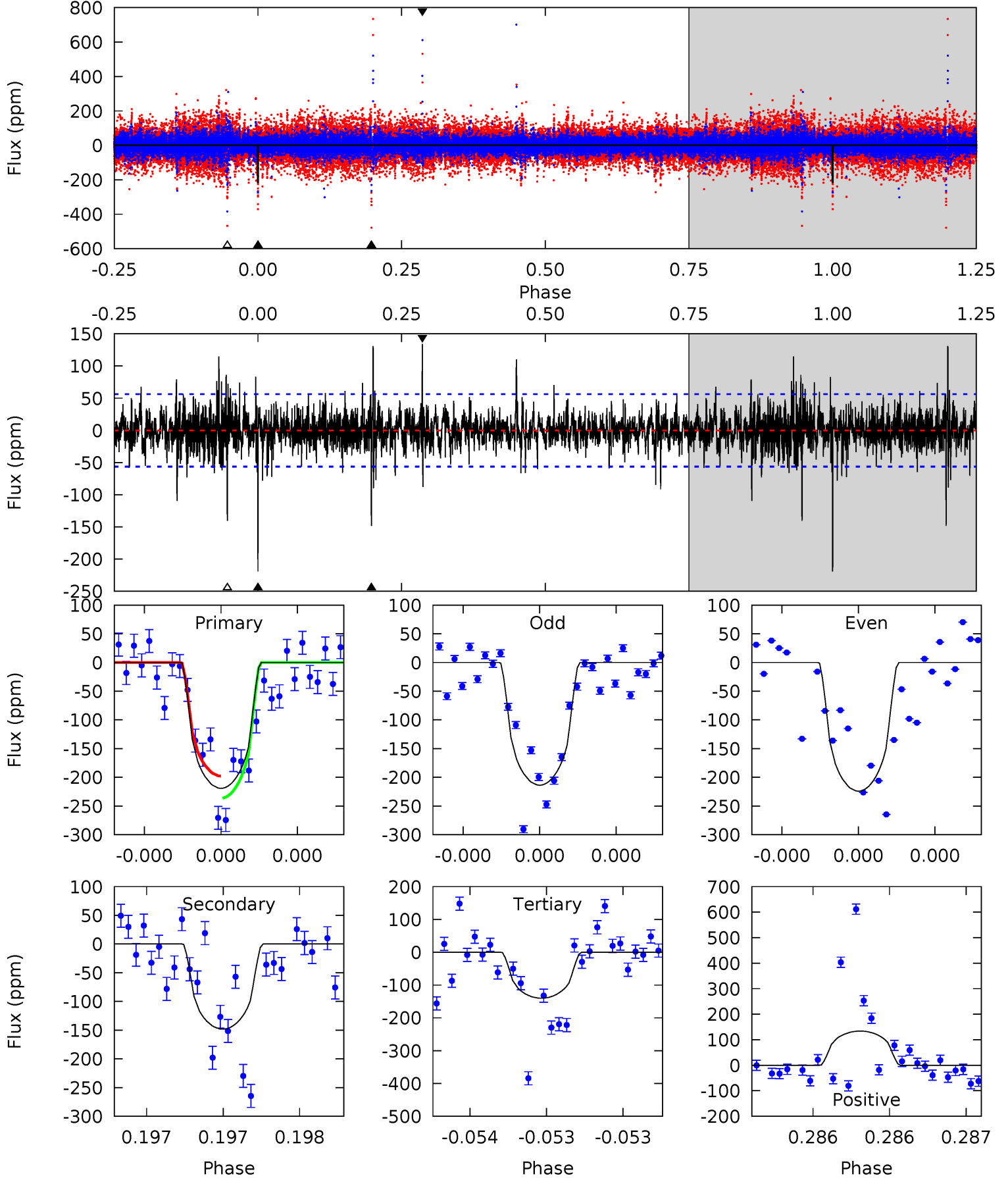
TCE 009835765-03 P=370.903188 Days $T_0=185.192728$ (BKJD)



DV Model-Shift Uniqueness Test

009835765-03, P = 370.905111 Days, E = 185.168975 Days

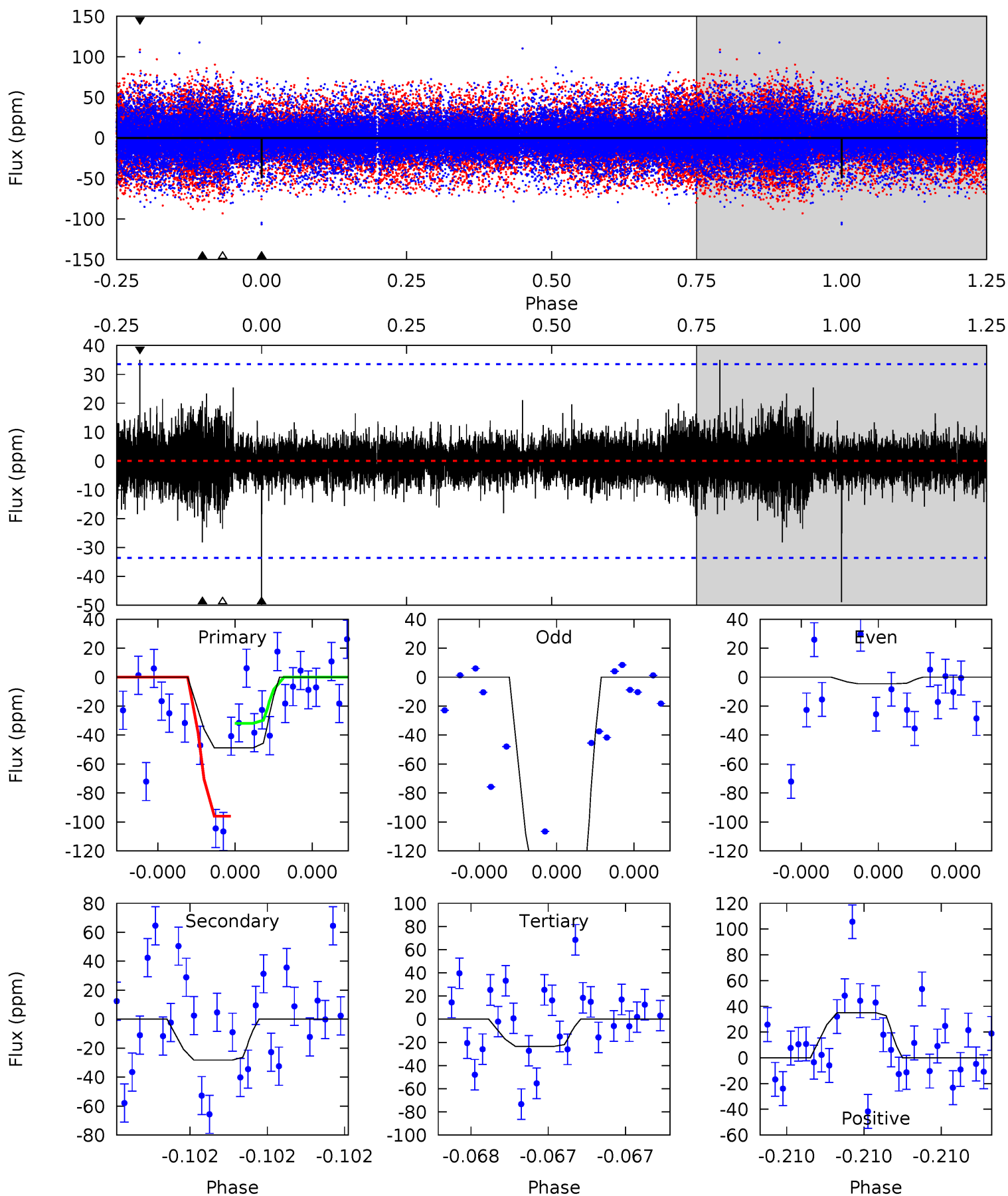
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	14.8	14.0	13.4	5.61	3.53	1.85	7.87	8.48	0.79	1.40	0.44	1.12	0.38	1.92



Alt Model-Shift Uniqueness Test

009835765-03, P = 370.903188 Days, E = 185.192728 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.28	4.78	3.98	5.93	5.69	3.65	0.74	4.30	2.35	0.80	-1.15	12.0	2.19	0.42	4.61



Stellar Parameters For KIC 009835765

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3284^{+117}_{-88}	$0.184^{+0.232}_{-0.058}$	$0.020^{+0.250}_{-0.150}$	$148.390^{+11.490}_{-32.172}$	$1.226^{+0.235}_{-0.157}$	$0.000^{+0.000}_{-0.000}$
	+4%/-3%	+126%/-32%	+1250%/-750%	+8%/-22%	+19%/-13%	+115%/-17%
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 009835765-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-148 ± 10	$242.10^{+153.04}_{-136.56}$	2323^{+119}_{-149}	2982^{+960}_{-517}	$1.683^{+7.133}_{-1.058}$
Alt.	-28 ± 6	$160.39^{+135.08}_{-100.09}$	2332^{+115}_{-147}	2535^{+1036}_{-4686}	$0.701^{+4.459}_{-0.495}$

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 $A_{obs} \gg 1.0$

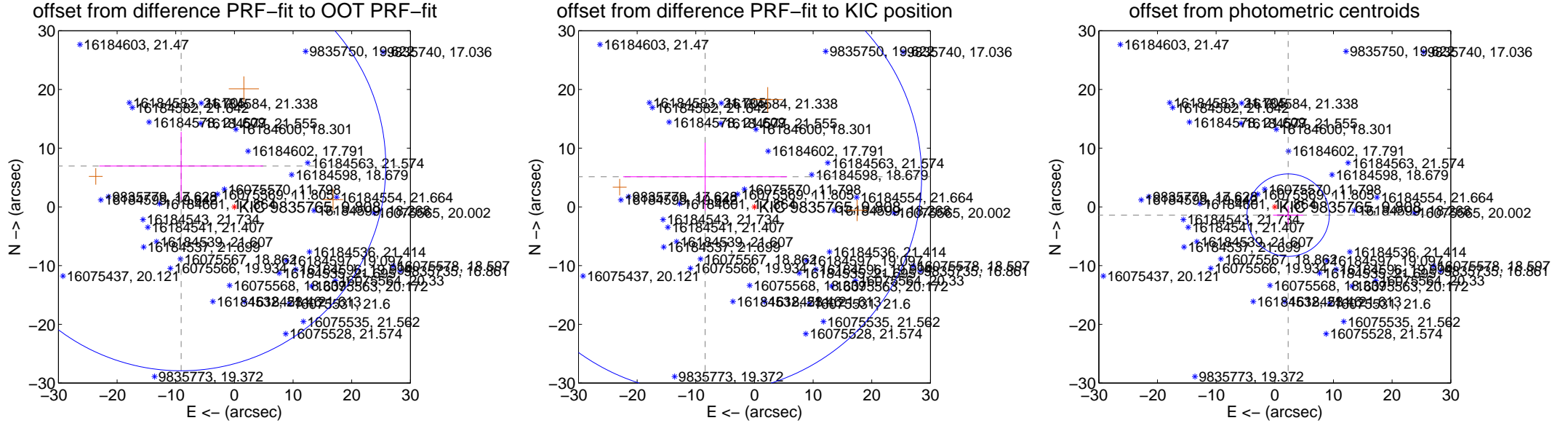
DV Centroid Data

Supplemental centroid analysis for 009835765-03. **Kepler magnitude: 9.81.** Transit SNR 13.59

There are 0 quarters with good PRF difference image offsets

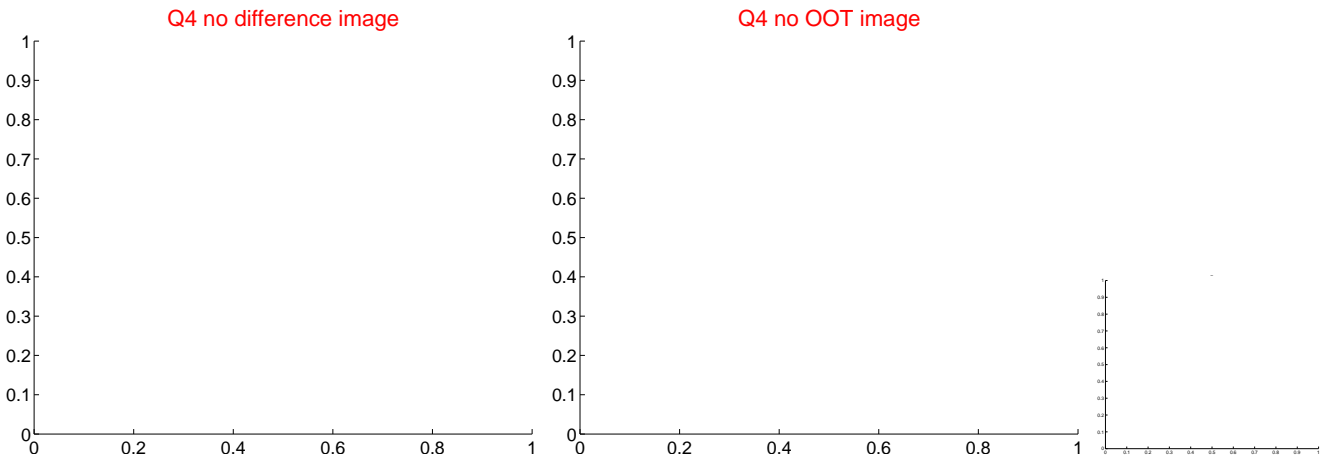
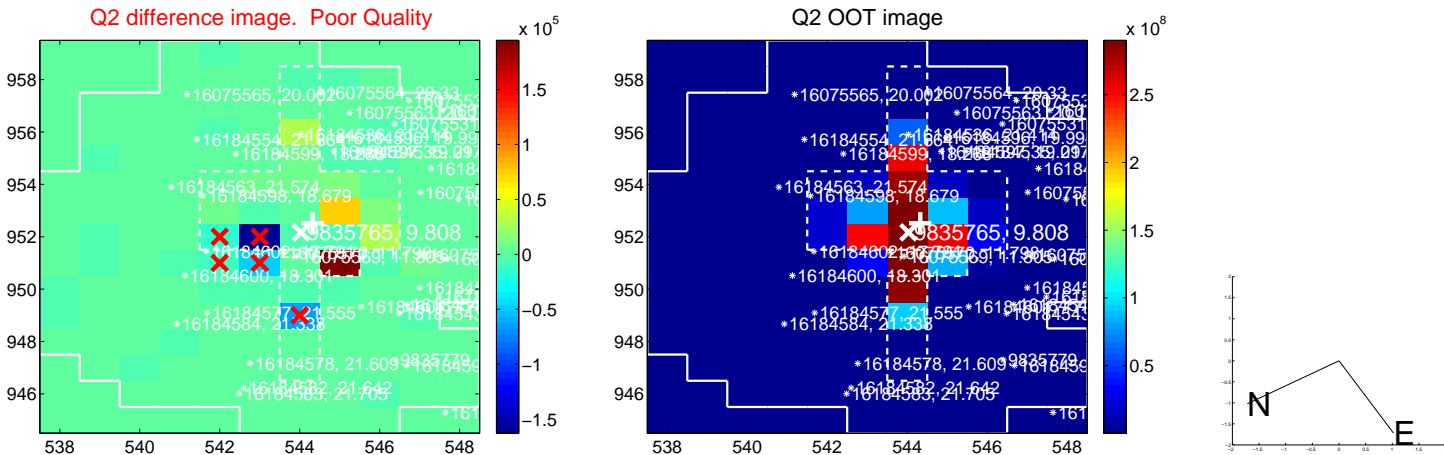
The direct PRF centroid is offset from the target star catalog position by about 1.95 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.441 ± 11.626	0.98	9.074 ± 13.966	6.968 ± 5.796
PRF-fit source offset from KIC position	9.853 ± 12.301	0.80	8.408 ± 13.973	5.136 ± 5.795
photometric centroid source offset	2.67 ± 2.34	1.14	-2.27 ± 2.57	-1.40 ± 1.60



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.

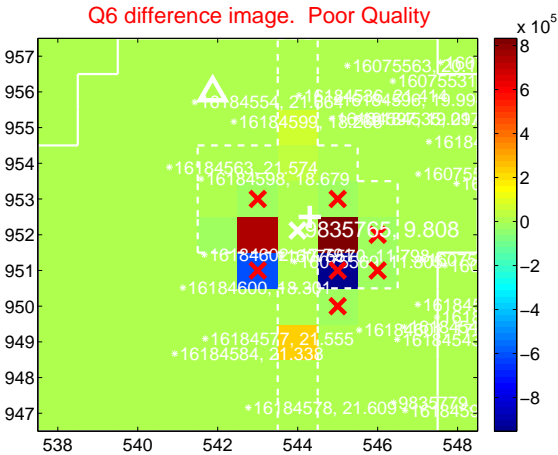
Q5 no difference image



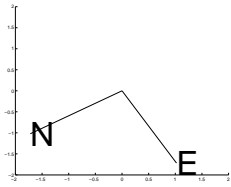
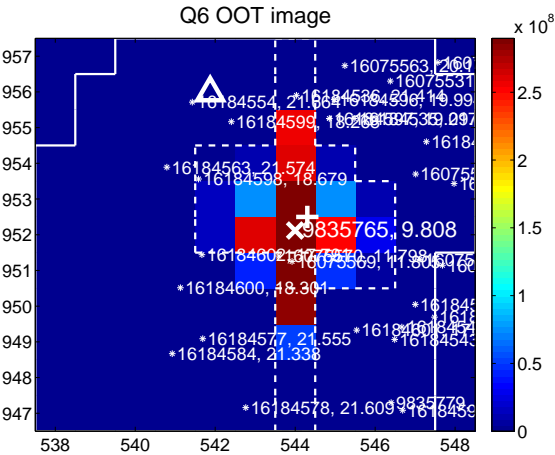
Q5 no OOT image



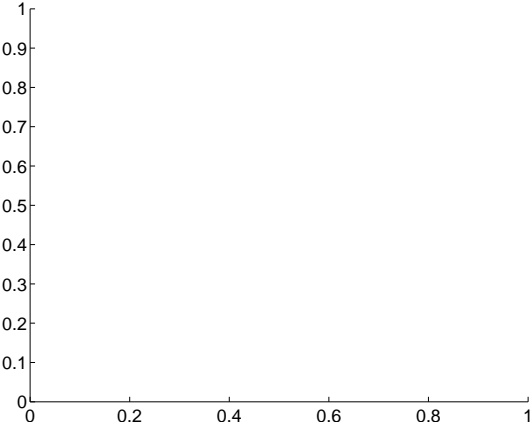
Q6 difference image. Poor Quality



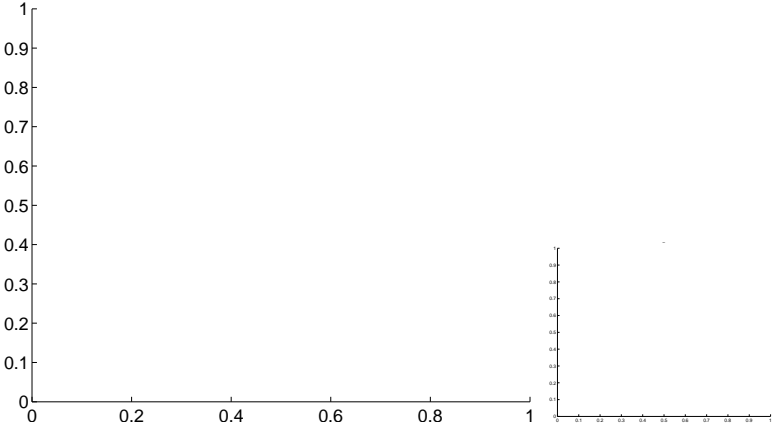
Q6 OOT image



Q7 no difference image



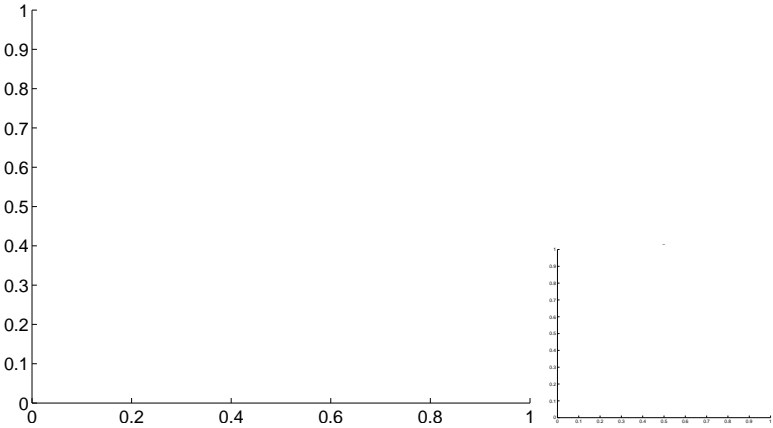
Q7 no OOT image



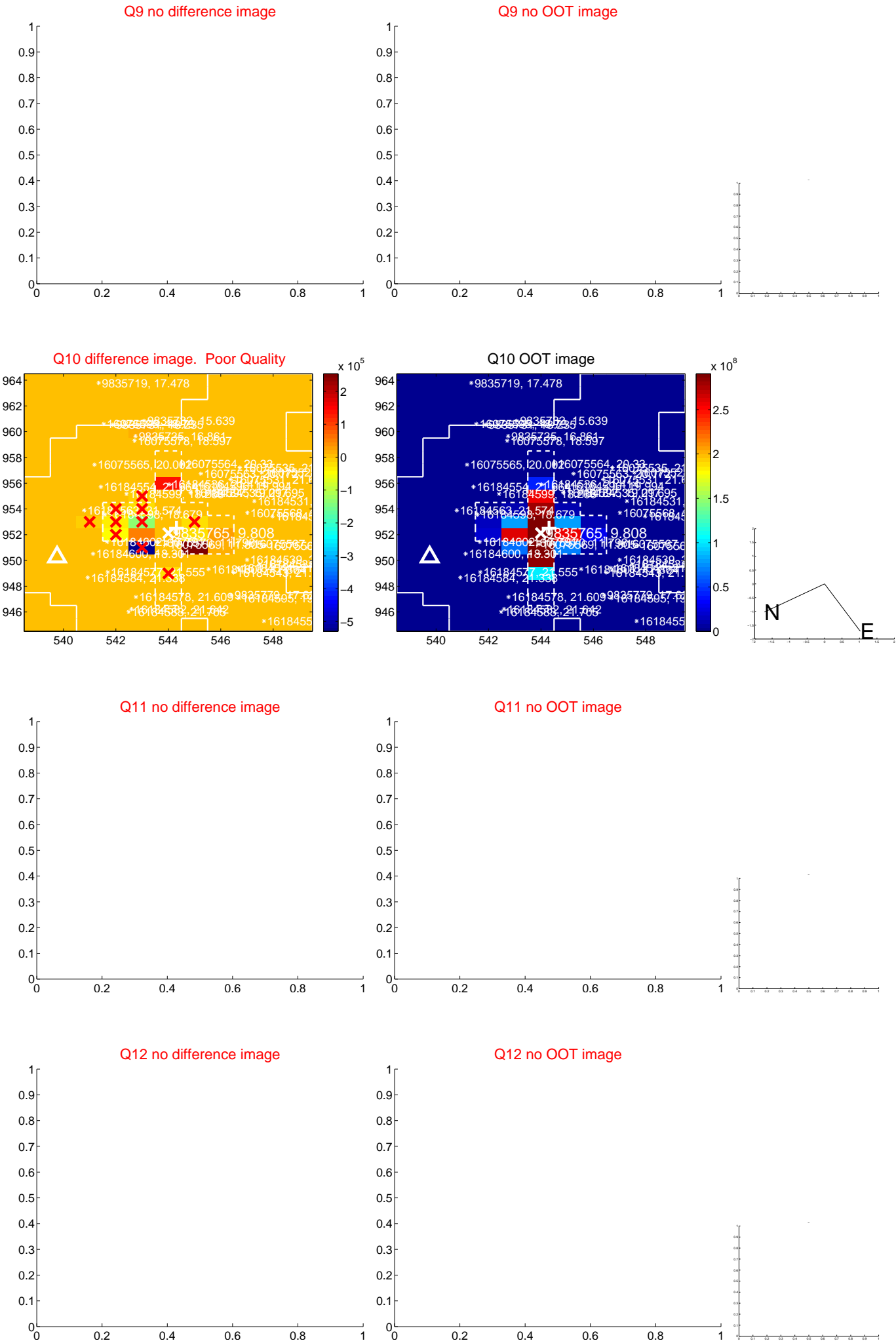
Q8 no difference image



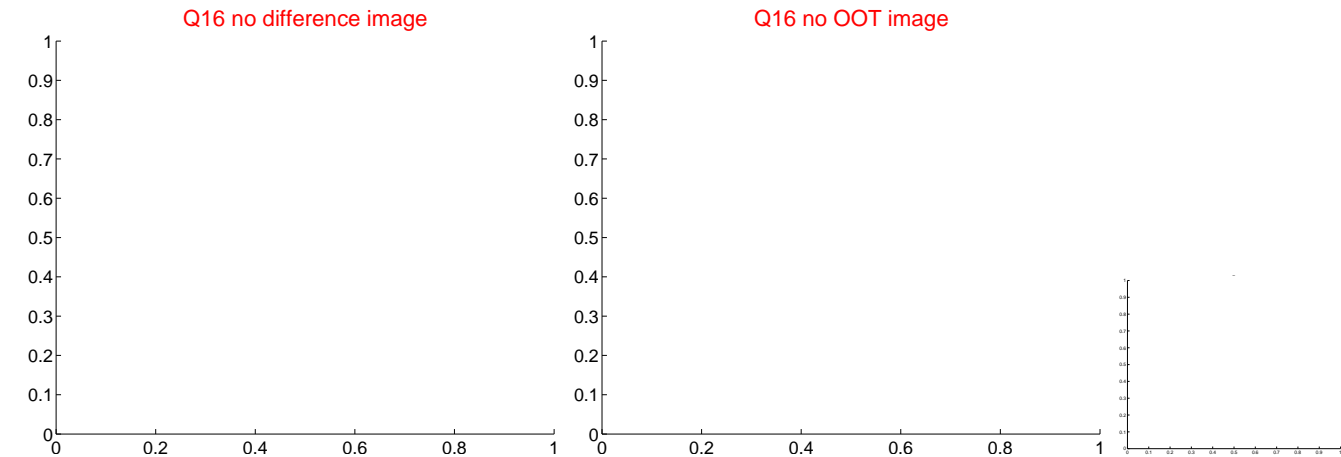
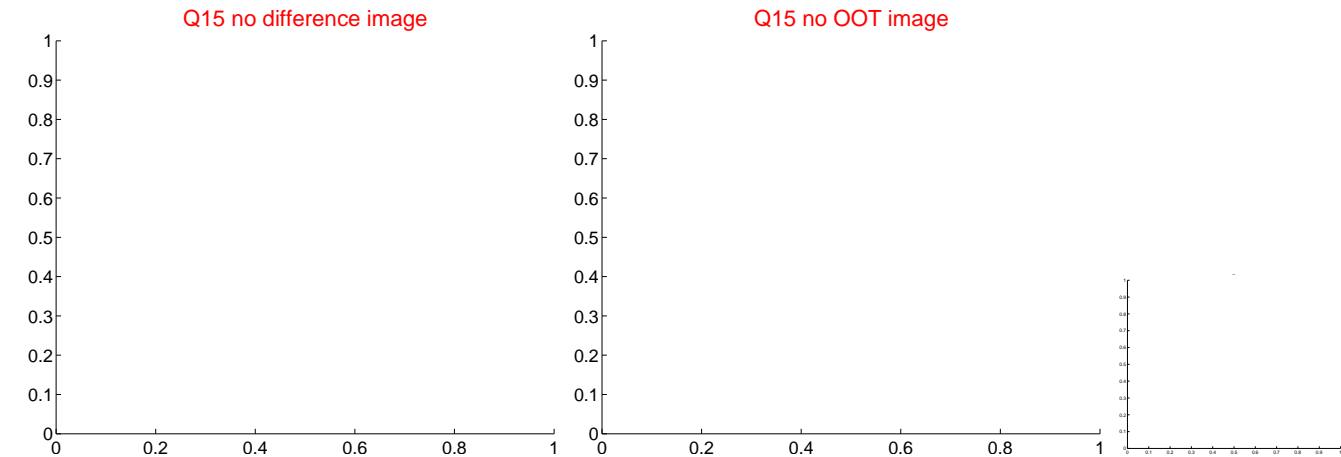
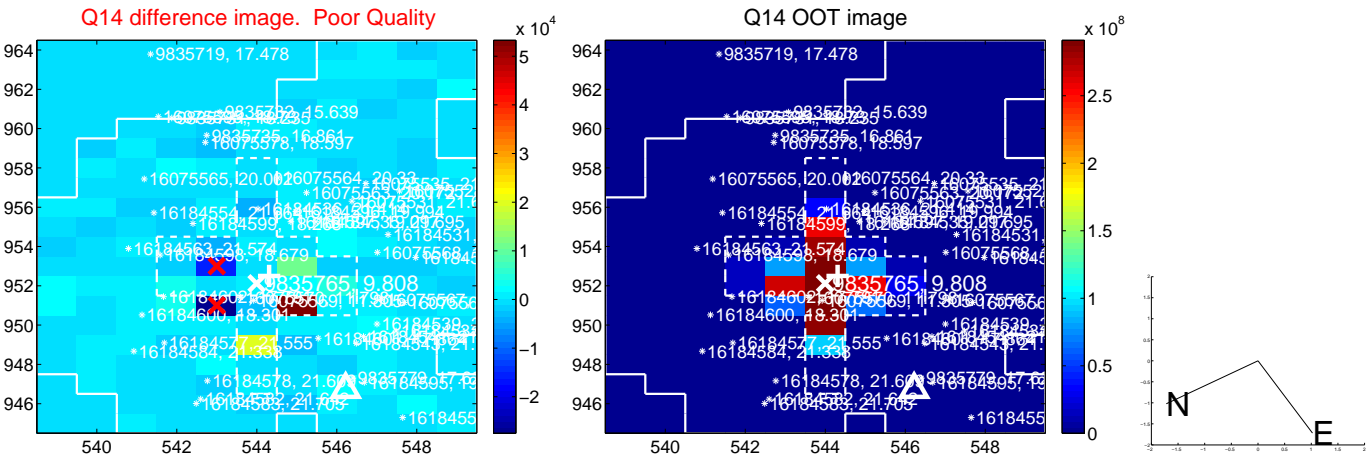
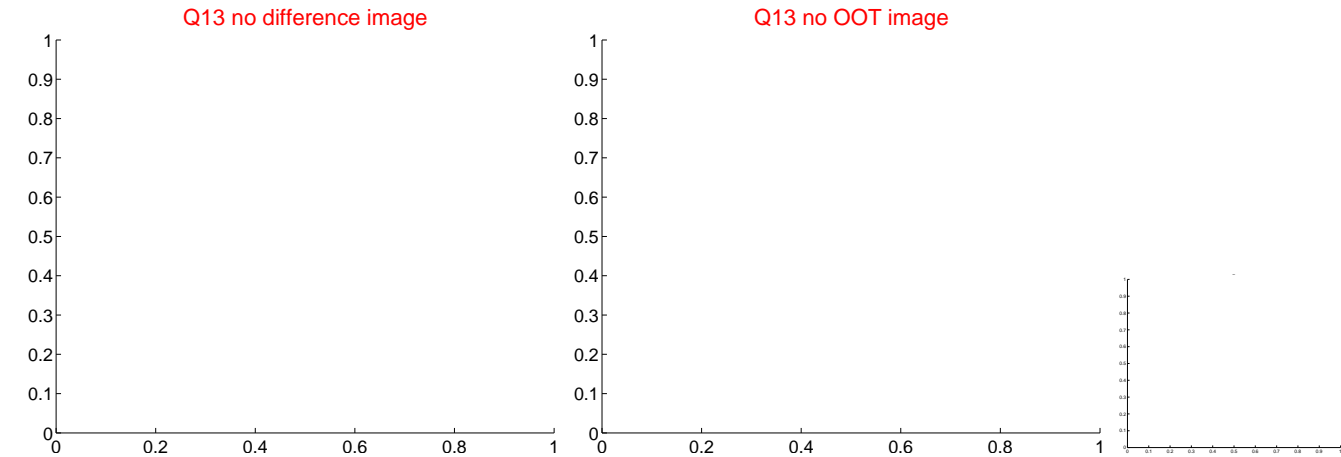
Q8 no OOT image



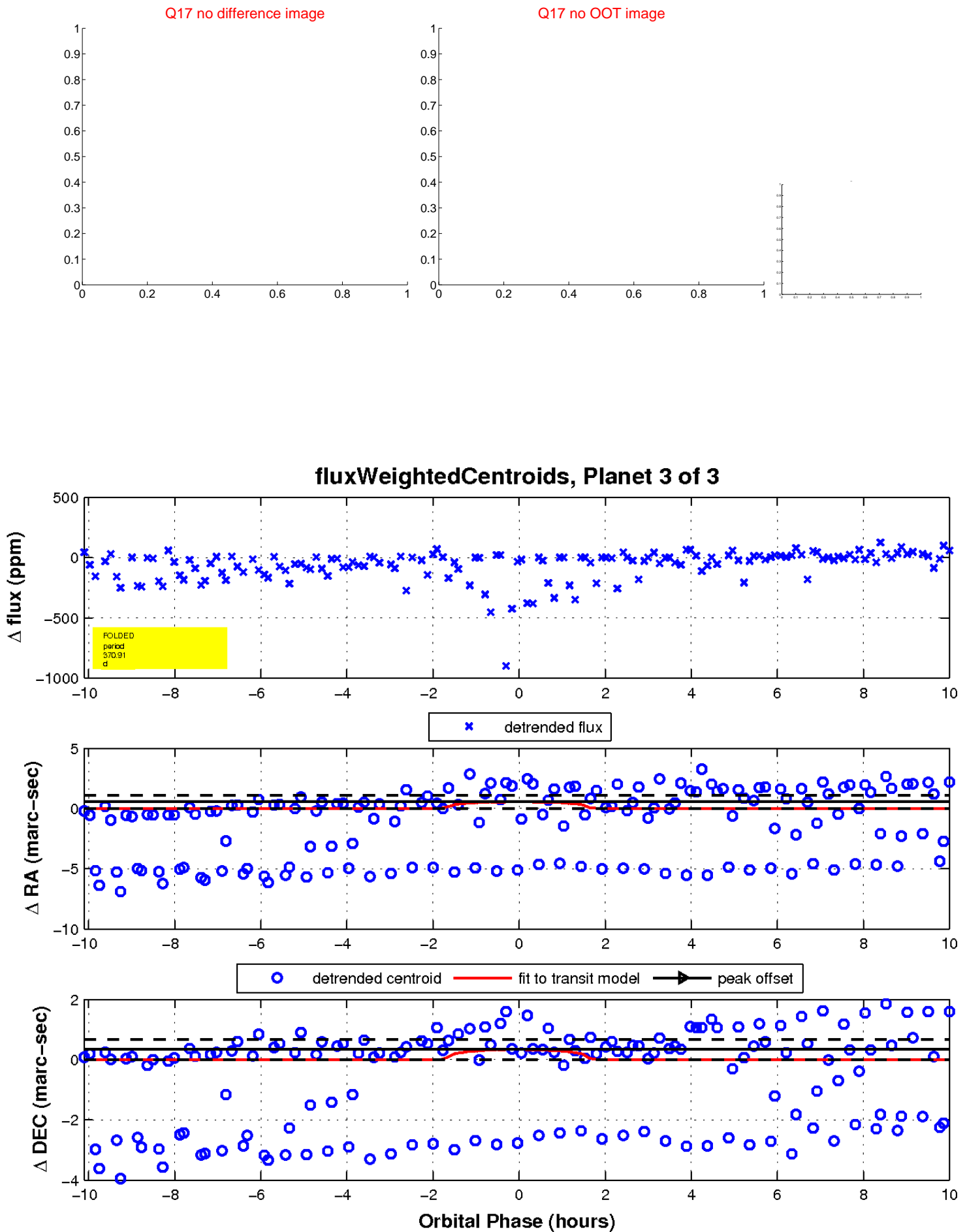
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

