

KIC 006223256

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})
006223256-01	OBS	No	321.735184	315.957367	1436.6	2.304	17.0	9.1	1.11	5951	4.29	1.76
006223256-02	OBS	No	350.981238	389.540616	1289.9	4.056	12.9	6.6	1.11	5951	6.37	1.57
006223256-03	OBS	No	361.127054	234.745340	504.8	7.511	12.5	2.6	1.11	5951	2.49	1.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006223256-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006223256-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006223256-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

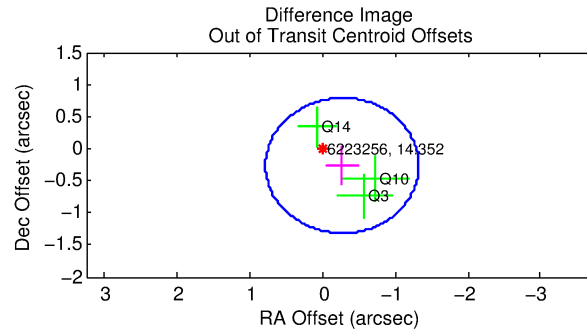
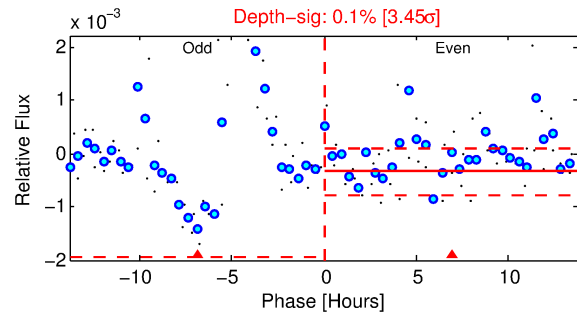
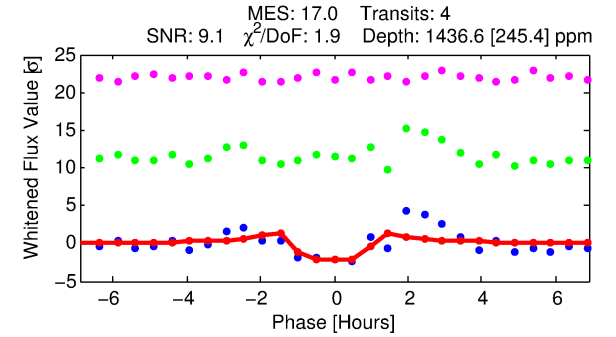
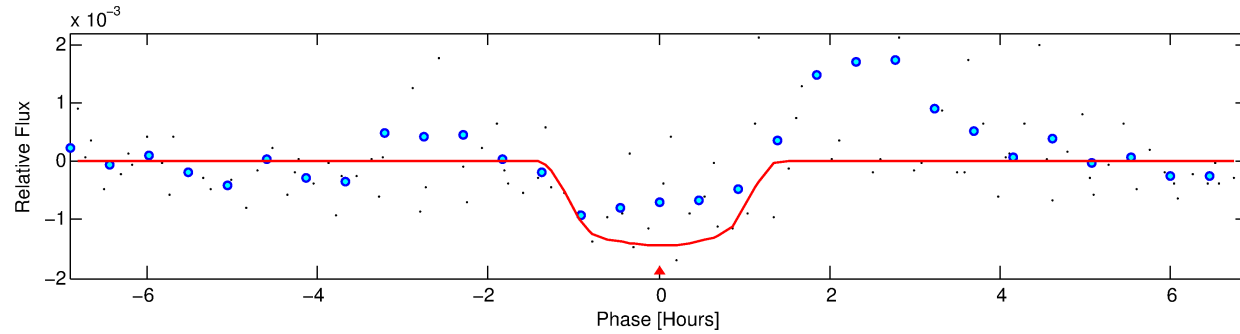
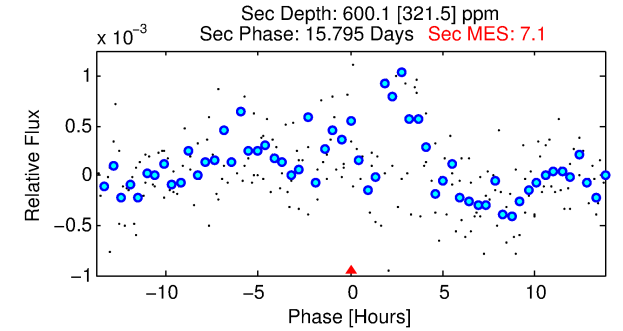
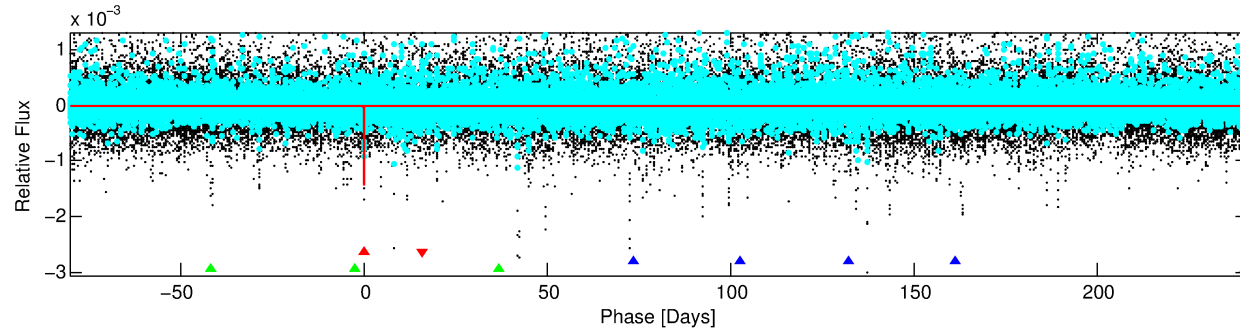
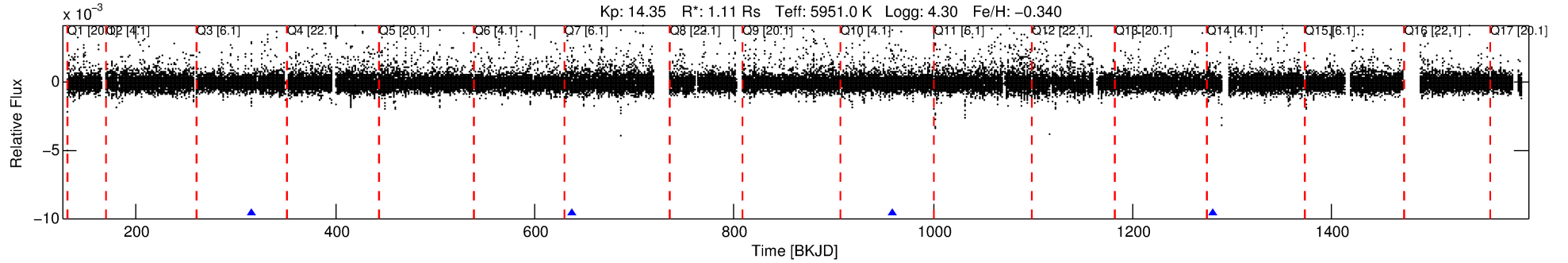
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006223256-01

No Significant Match Found

DV One-Page Summary

KIC: 6223256 Candidate: 1 of 3 Period: 321.735 d



DV Fit Results:

Period = 321.73518 [0.00335] d
Epoch = 315.9574 [0.0054] BKJD
Rp/R* = 0.0354 [0.0732]
a/R* = 1007.52 [9844.64]
b = 0.42 [19.16]
Seff = 1.76 [0.65]
Teq = 294 [27] K
Rp = 4.30 [8.95] Re
a = 0.8868 [0.2100] AU
Ag = 14073.71 [58808.10] [0.24σ]
Teffp = 4948 [5154] K [0.90σ]

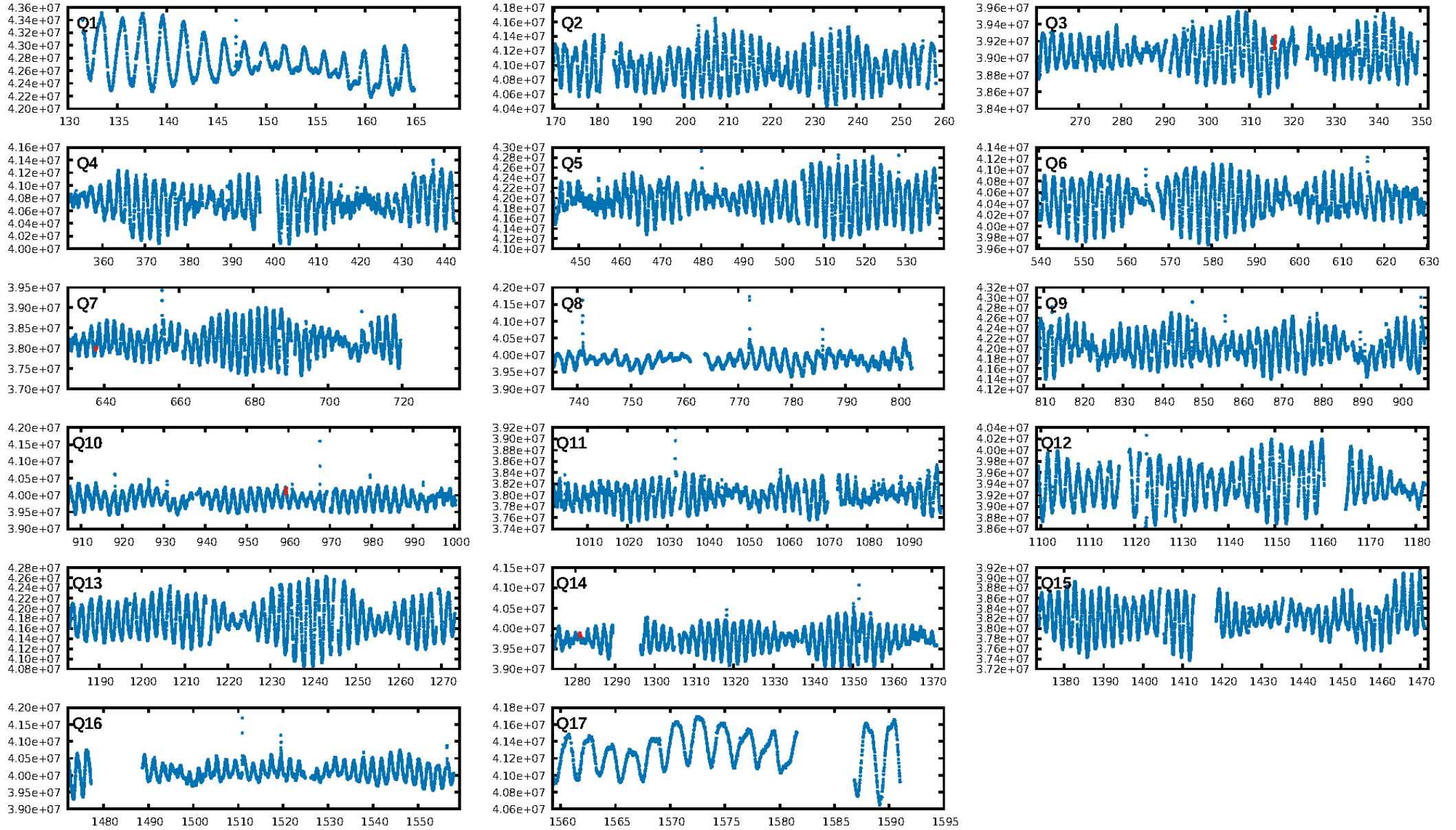
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [150.47σ]
ModelChiSquare2-sig: 0.0%
a/R* = 1007.52 [9844.64]
Bootstrap-pfa: 2.34e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.13
Centroid-sig: 33.5%
Centroid-so: 0.903 arcsec [1.13σ]
OotOffset-rm: 0.378 arcsec [1.08σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-rm: 0.360 arcsec [0.97σ]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

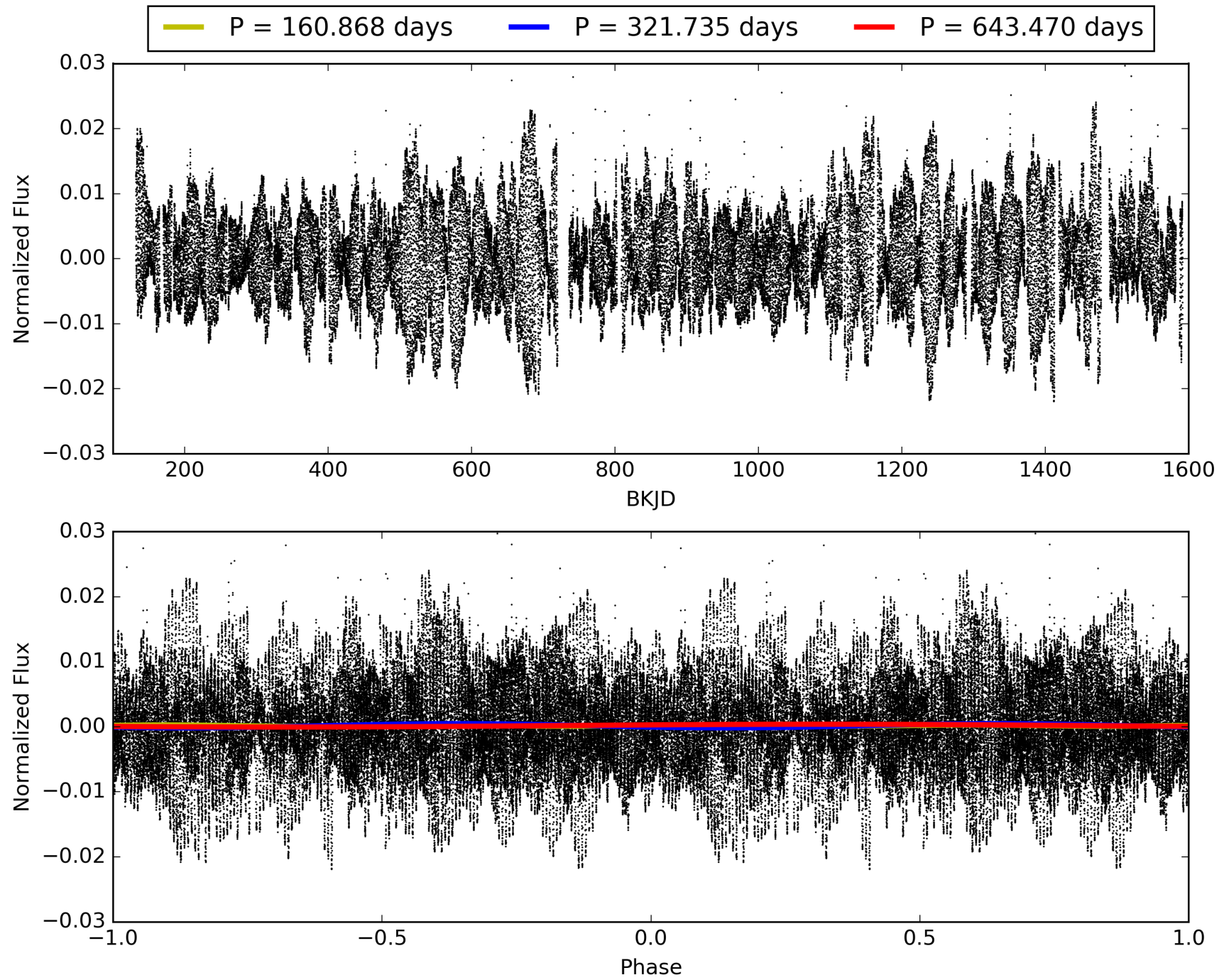
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:09:36 Z

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

TCE 006223256-01, PDC Light Curves

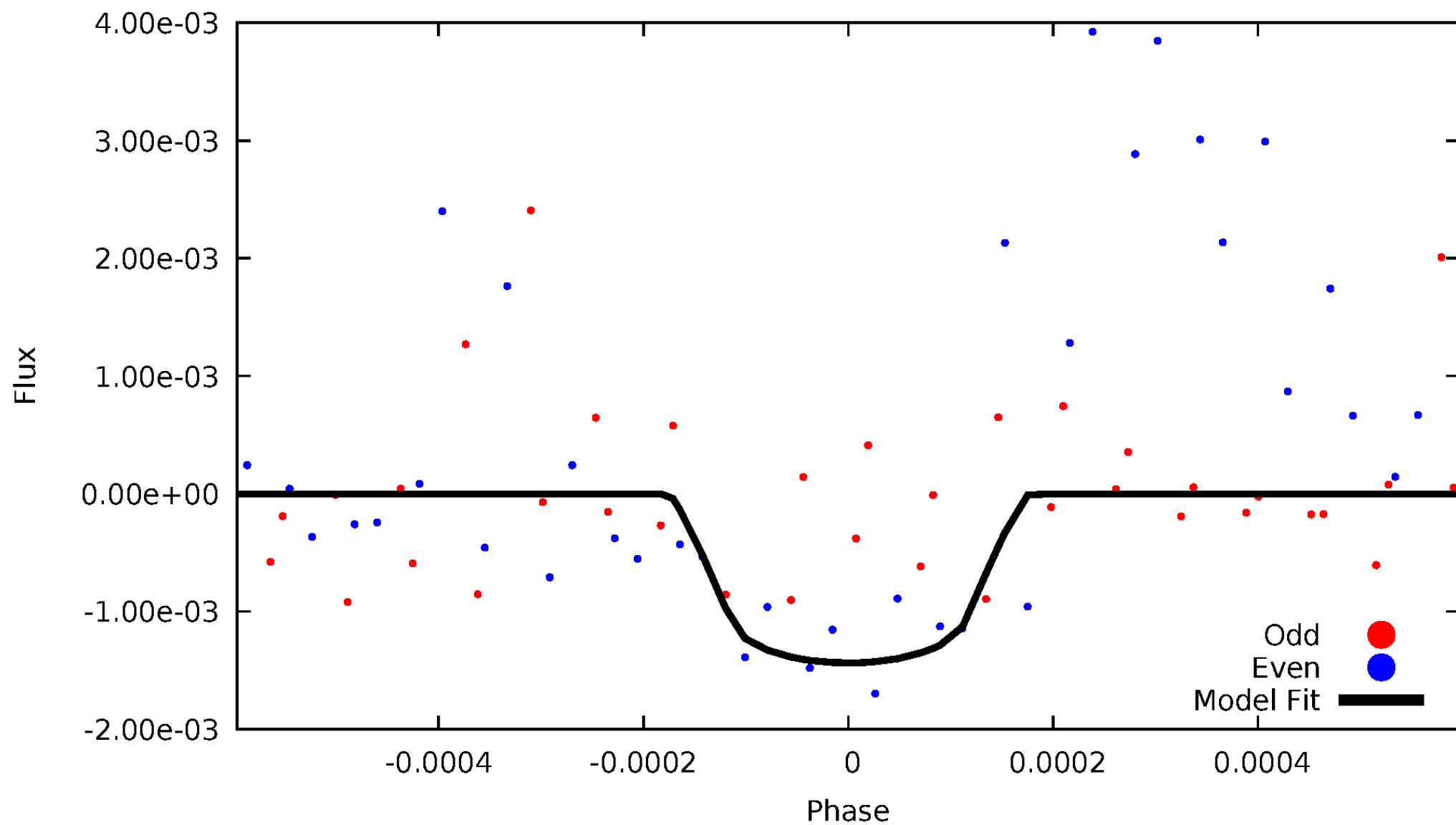


TCE 006223256-01



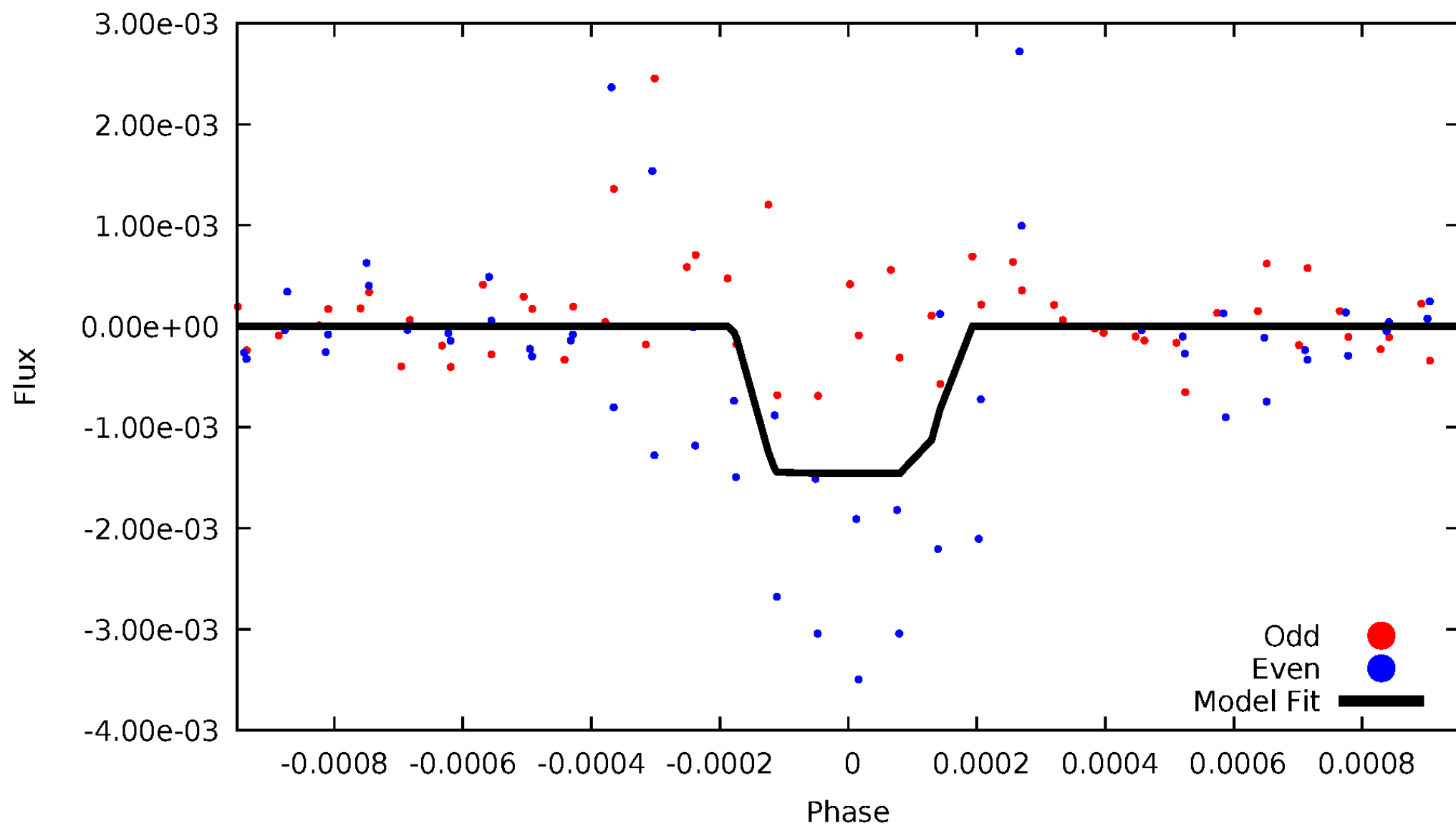
DV Odd/Even

TCE 006223256-01



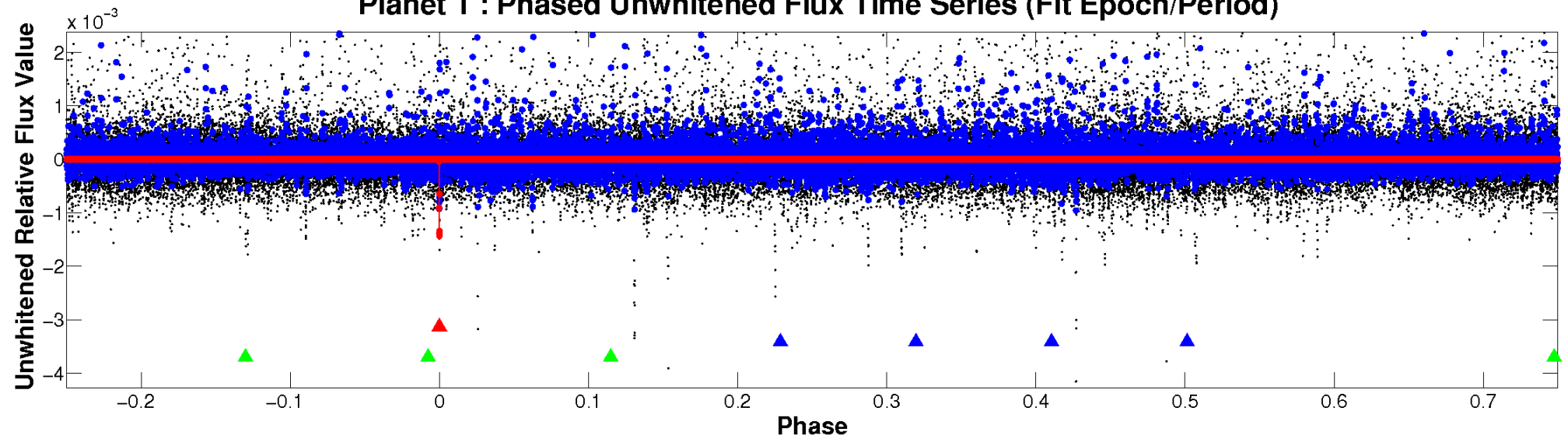
ALT Odd/Even

TCE 006223256-01

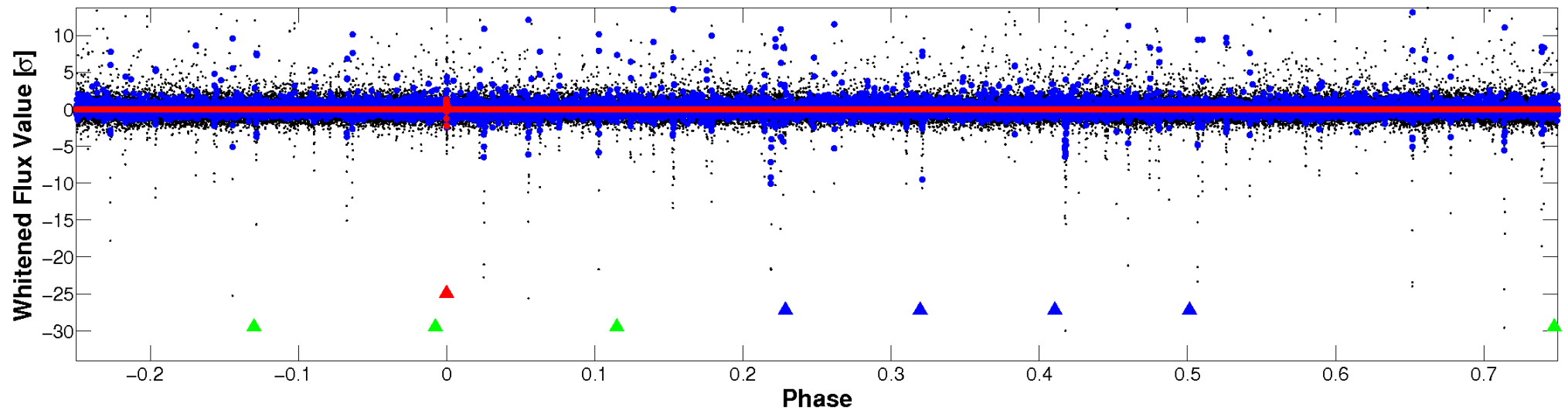


Non-Whitened Vs. Whitened Light Curve

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

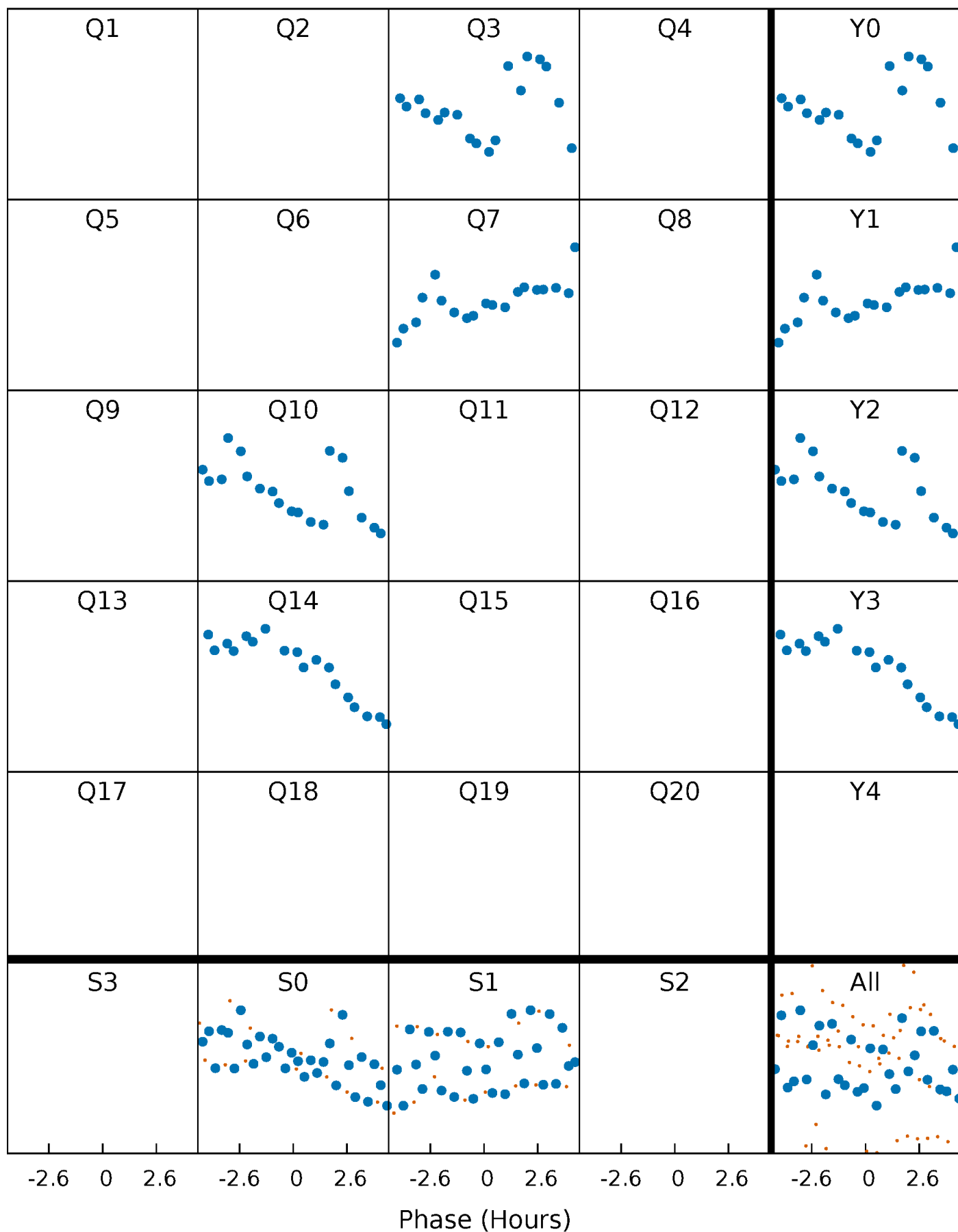


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



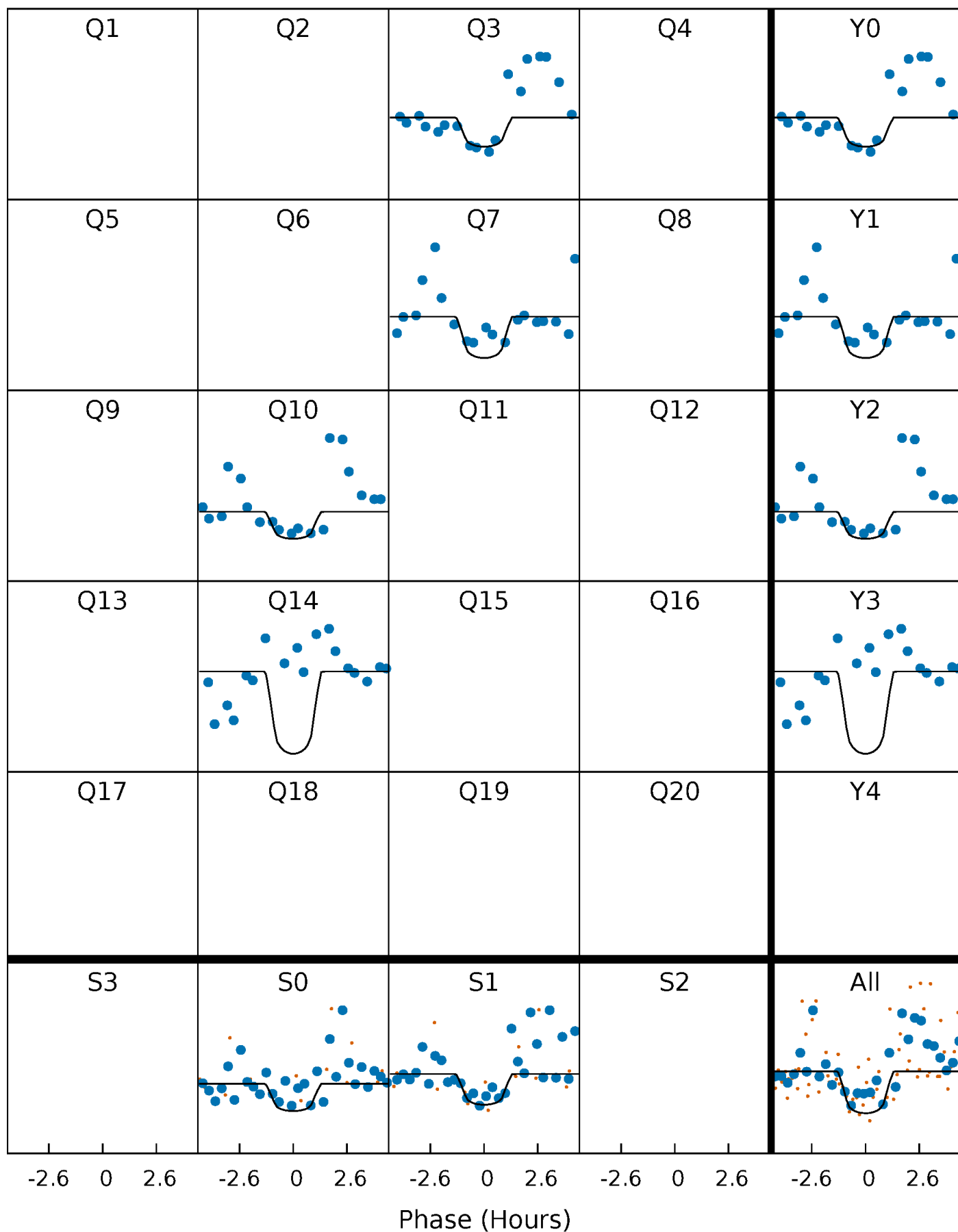
PDC Quarter-Phased Transit Curves

TCE 006223256-01 P=321.735184 Days $T_0=315.957367$ (BKJD)



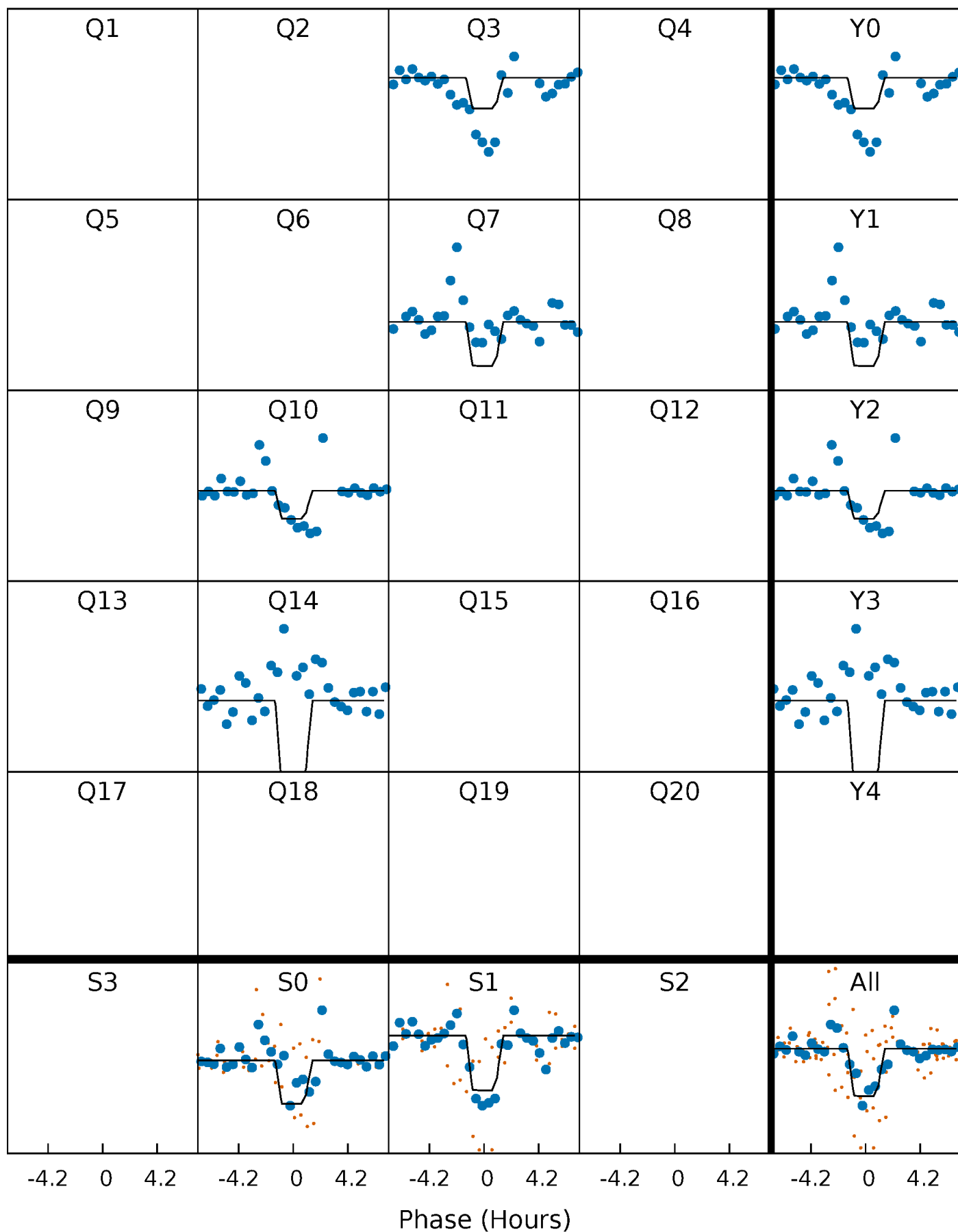
DV Quarter-Phased Transit Curves

TCE 006223256-01 P=321.735184 Days $T_0=315.957367$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

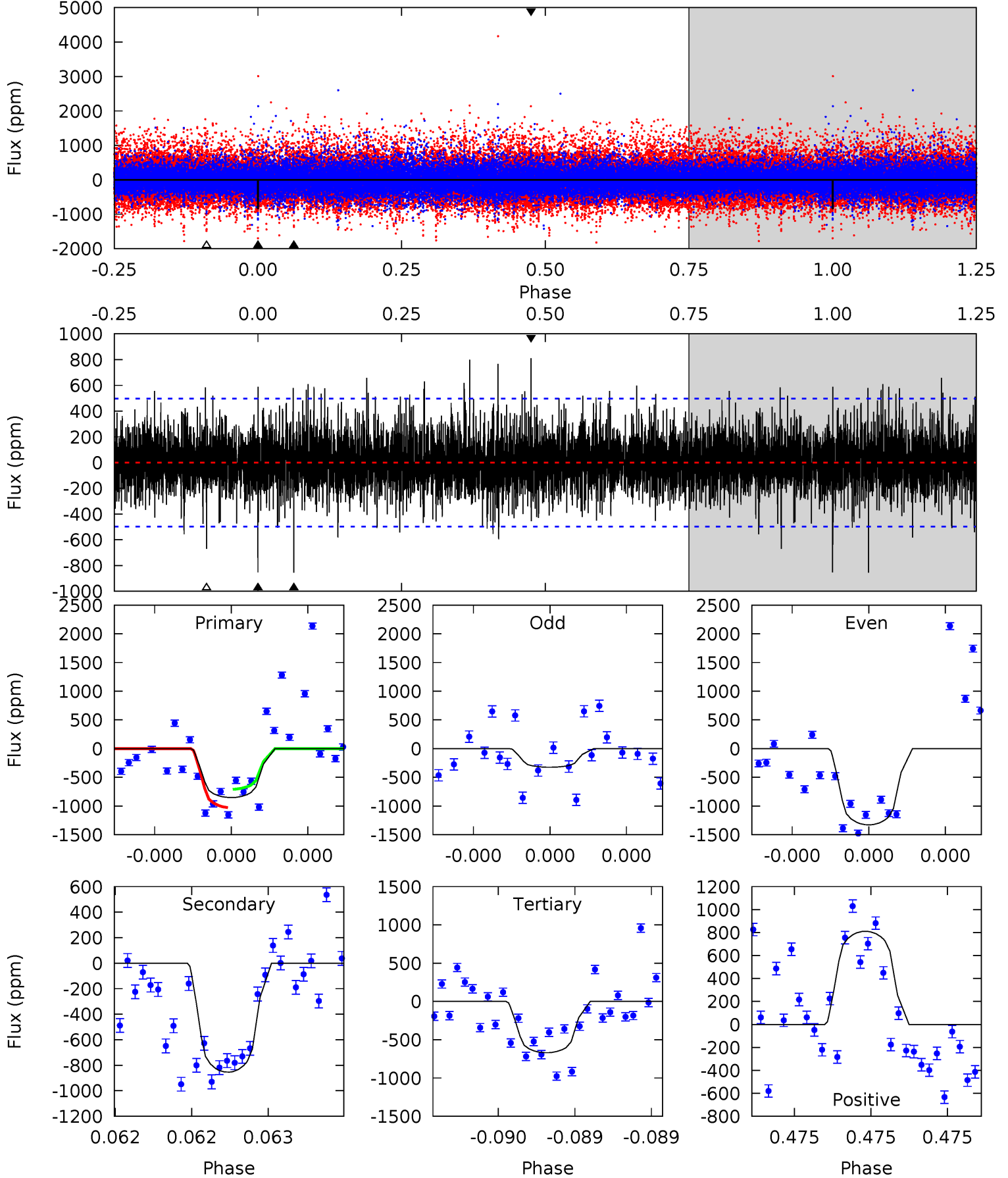
TCE 006223256-01 P=321.729070 Days $T_0=315.960637$ (BKJD)



DV Model-Shift Uniqueness Test

006223256-01, P = 321.735184 Days, E = 315.957367 Days

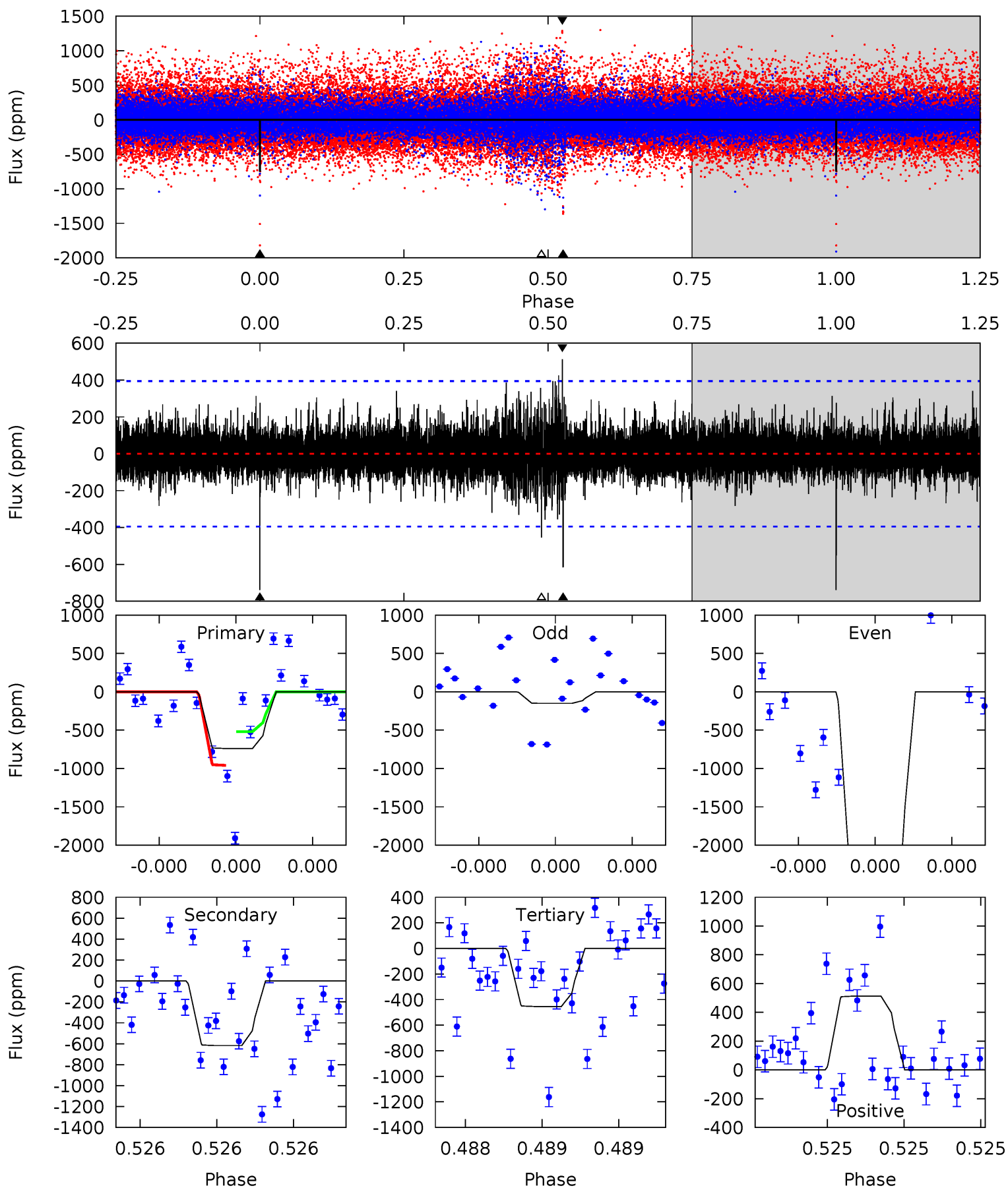
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.67	9.68	7.59	9.19	5.64	3.58	1.78	2.08	0.48	2.09	0.49	4.87	0.79	0.49	1.81



Alt Model-Shift Uniqueness Test

006223256-01, P = 321.729070 Days, E = 315.960637 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	8.79	6.48	7.32	5.63	3.56	1.10	4.06	3.22	2.32	1.48	19.5	1.00	0.41	3.10



Stellar Parameters For KIC 006223256

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5951^{+178}_{-178}	$4.300^{+0.190}_{-0.190}$	$-0.340^{+0.300}_{-0.300}$	$1.111^{+0.311}_{-0.254}$	$0.899^{+0.131}_{-0.087}$	$0.924^{+0.916}_{-0.464}$
	+3%/-3%	+4%/-4%	+88%/-88%	+28%/-23%	+15%/-10%	+99%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006223256-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-854 ± 88	$8.29^{+7.69}_{-5.54}$	412^{+33}_{-28}	4168^{+2616}_{-789}	5526^{+43841}_{-4073}
Alt.	-616 ± 70	$8.62^{+7.75}_{-6.24}$	412^{+32}_{-29}	3882^{+2823}_{-713}	3781^{+41232}_{-2777}

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

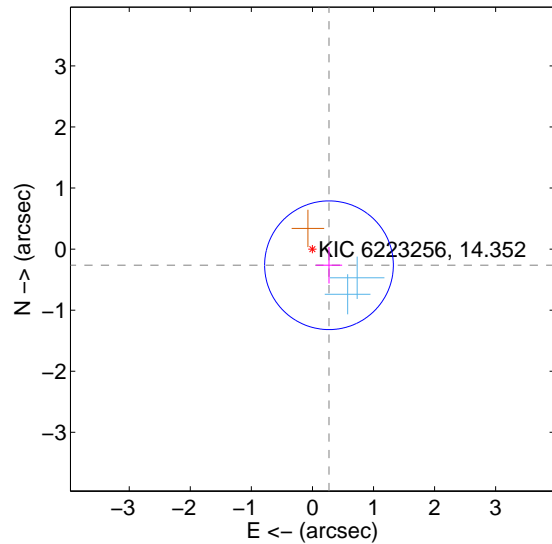
Supplemental centroid analysis for 006223256-01. Kepler magnitude: 14.35. Transit SNR 9.09

There are 2 quarters with good PRF difference image offsets

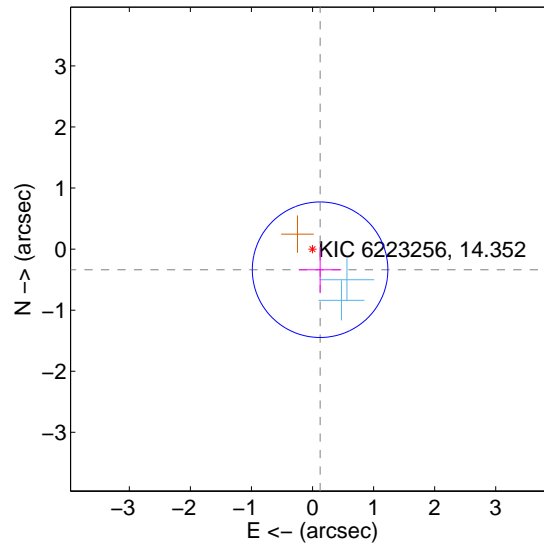
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.378 ± 0.351	1.08	-0.271 ± 0.216	-0.264 ± 0.299
PRF-fit source offset from KIC position	0.360 ± 0.370	0.97	-0.124 ± 0.347	-0.338 ± 0.373
photometric centroid source offset	0.90 ± 0.80	1.13	0.73 ± 0.74	-0.53 ± 0.90

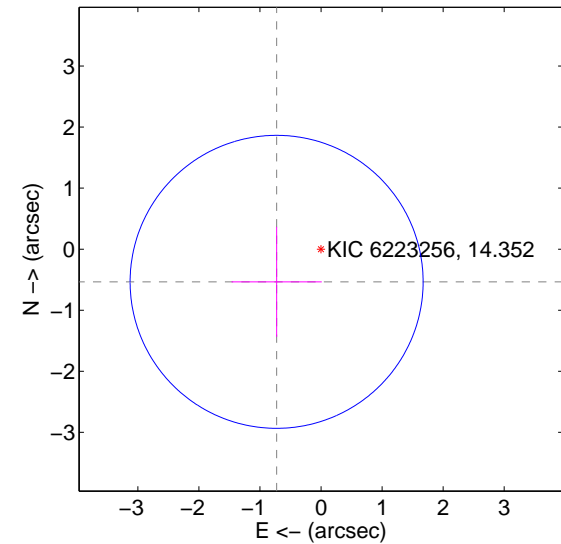
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



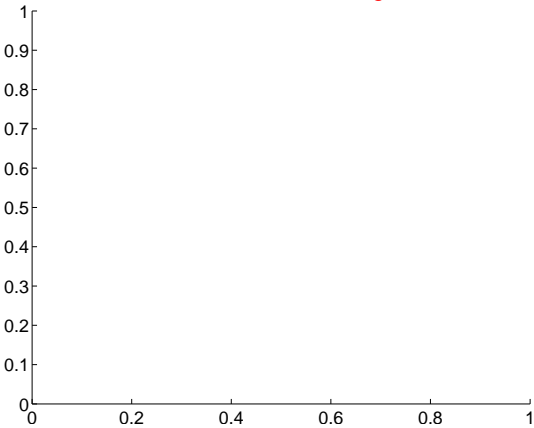
offset from photometric centroids



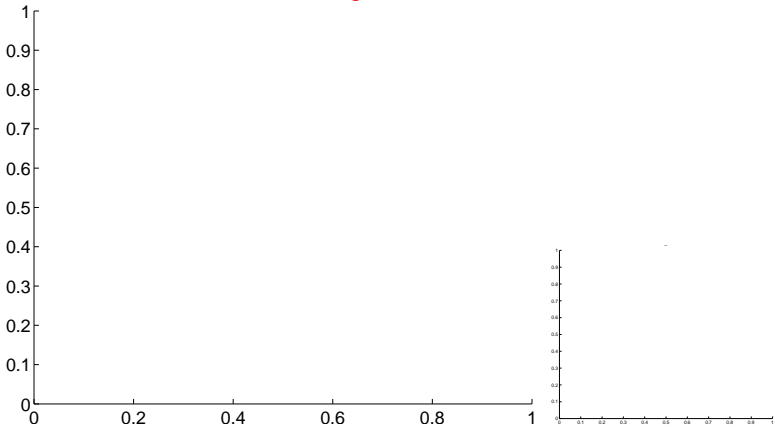
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

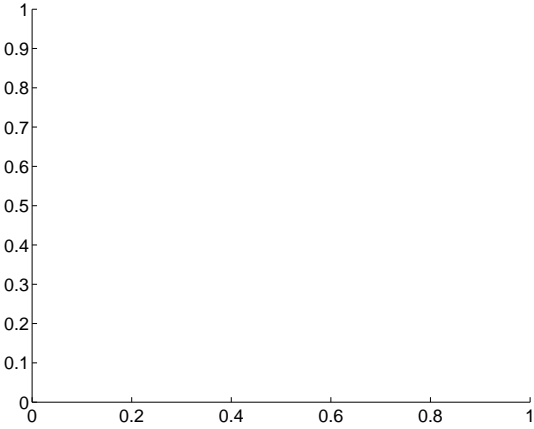
Q1 no difference image



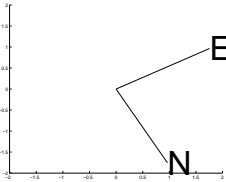
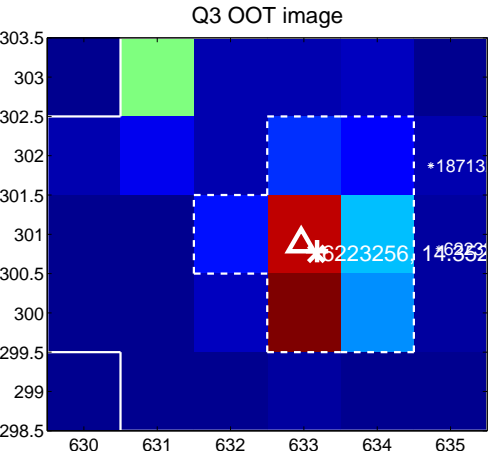
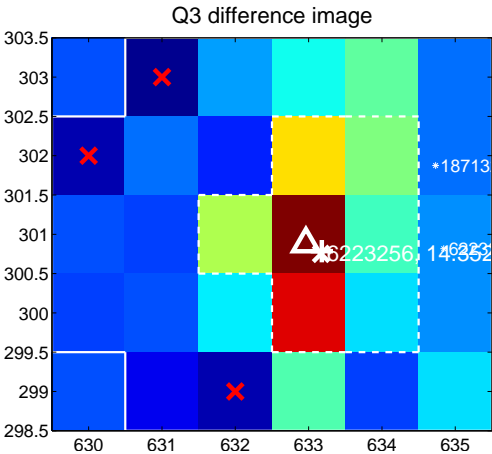
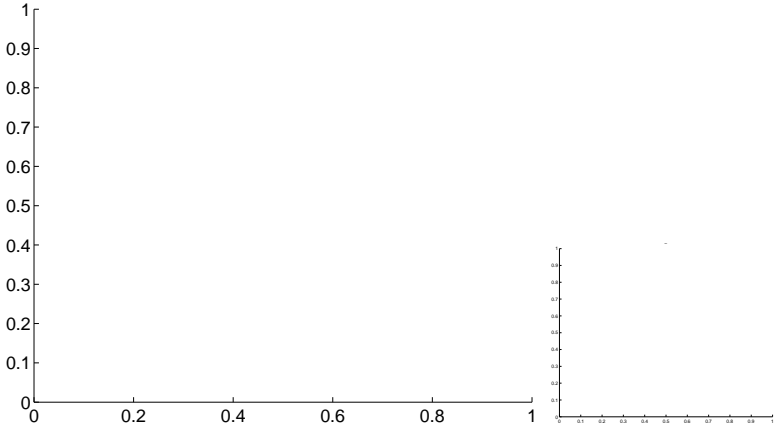
Q1 no OOT image



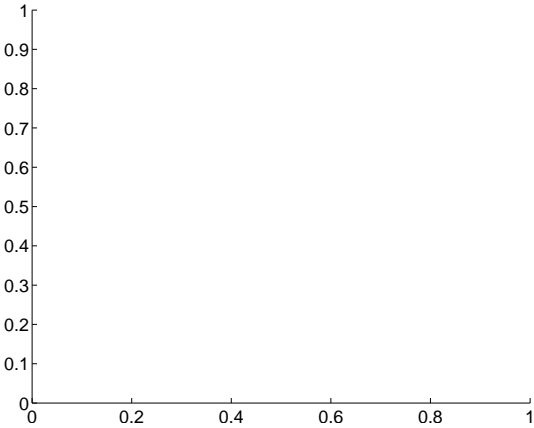
Q2 no difference image



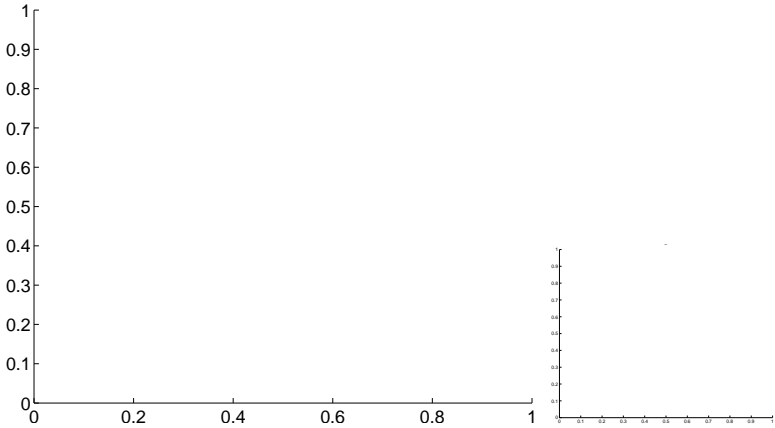
Q2 no OOT image



Q4 no difference image

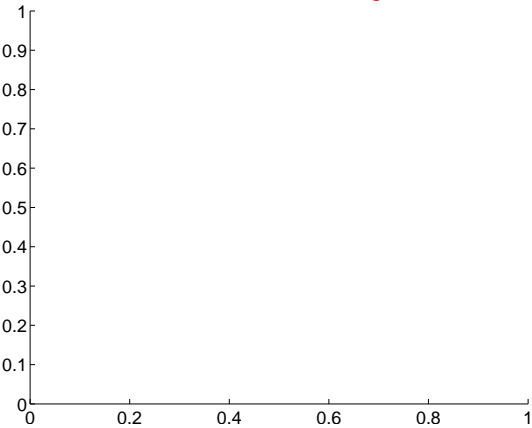


Q4 no OOT image

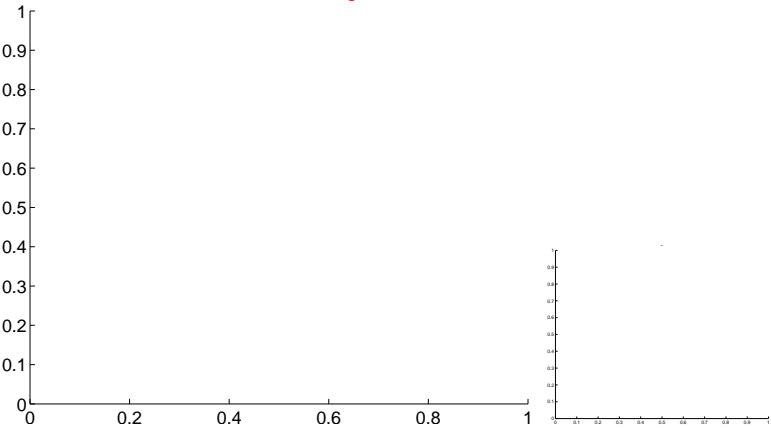


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

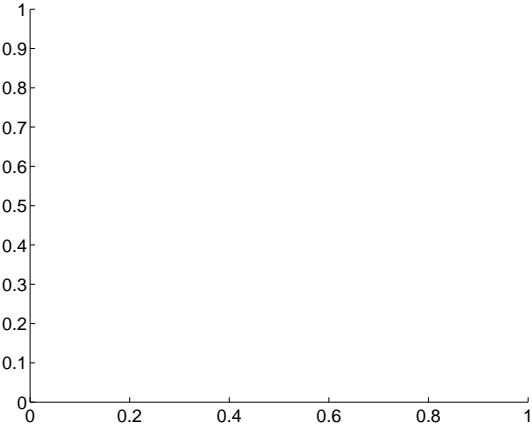
Q5 no difference image



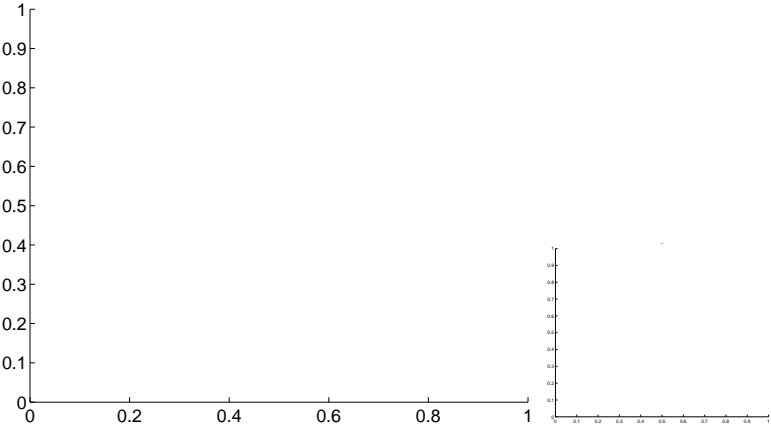
Q5 no OOT image



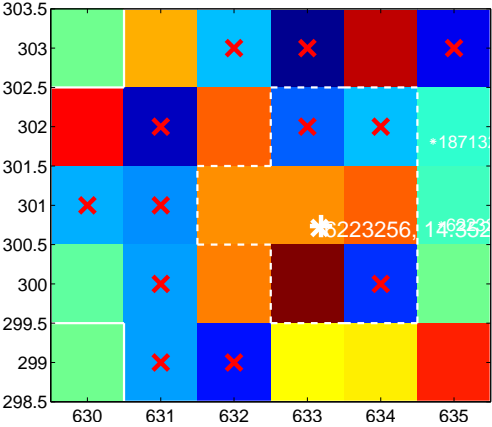
Q6 no difference image



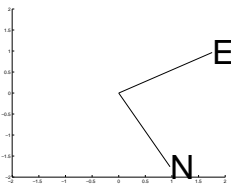
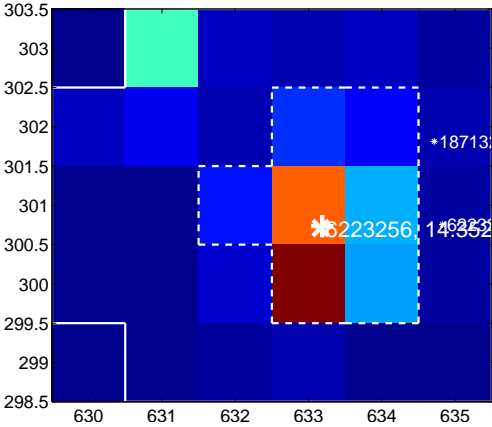
Q6 no OOT image



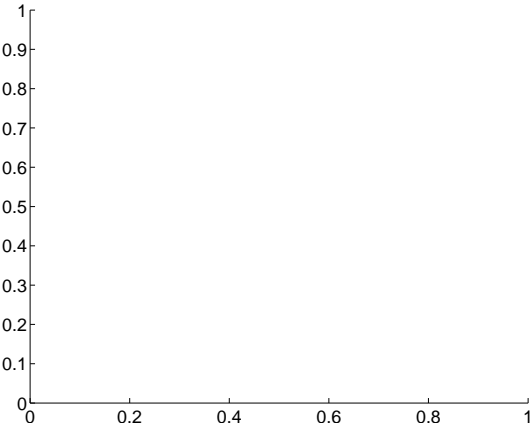
Q7 difference image. Poor Quality



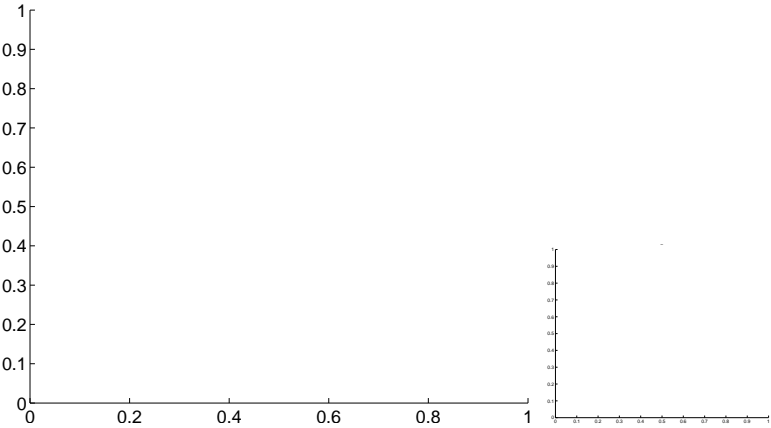
Q7 OOT image



Q8 no difference image

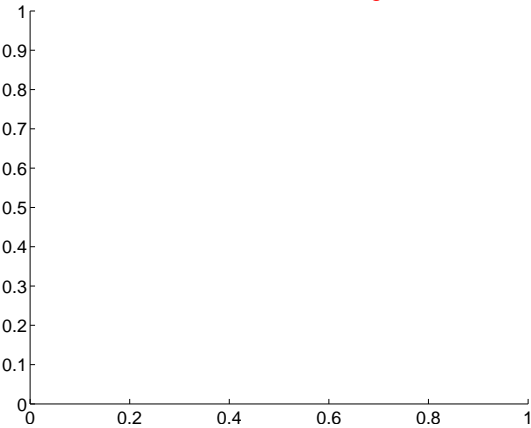


Q8 no OOT image

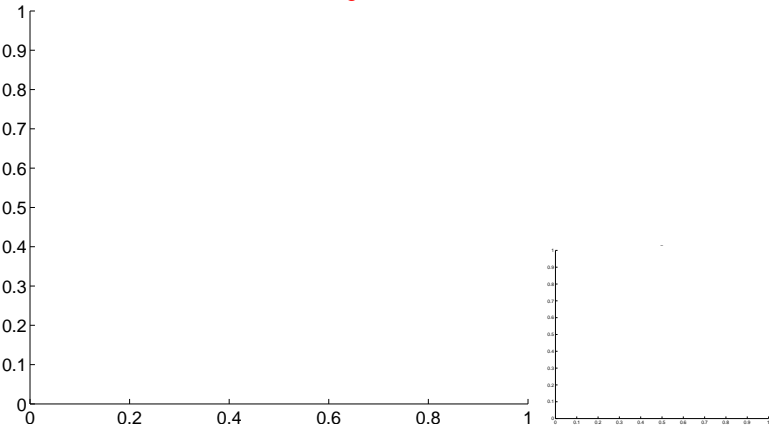


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

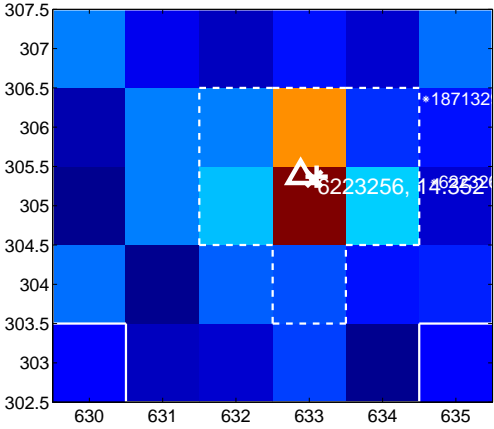
Q9 no difference image



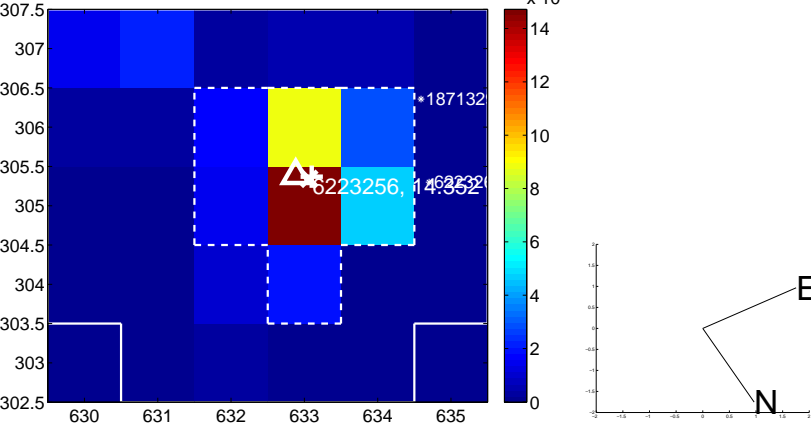
Q9 no OOT image



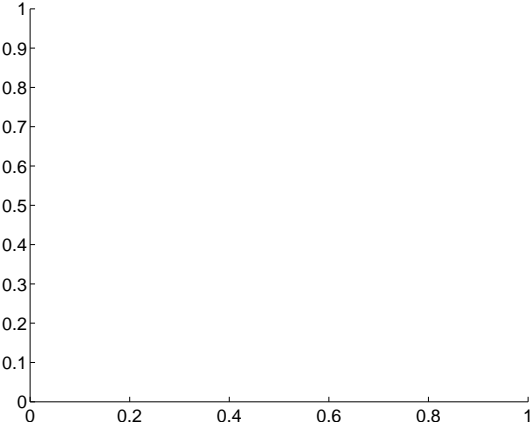
Q10 difference image



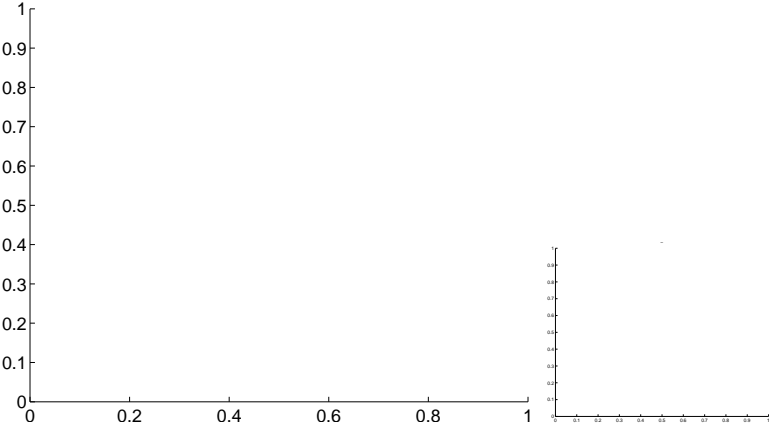
Q10 OOT image



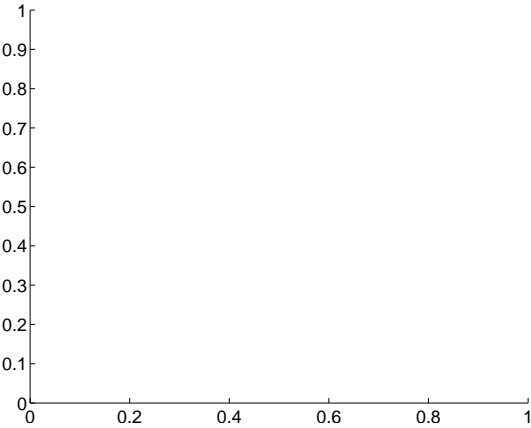
Q11 no difference image



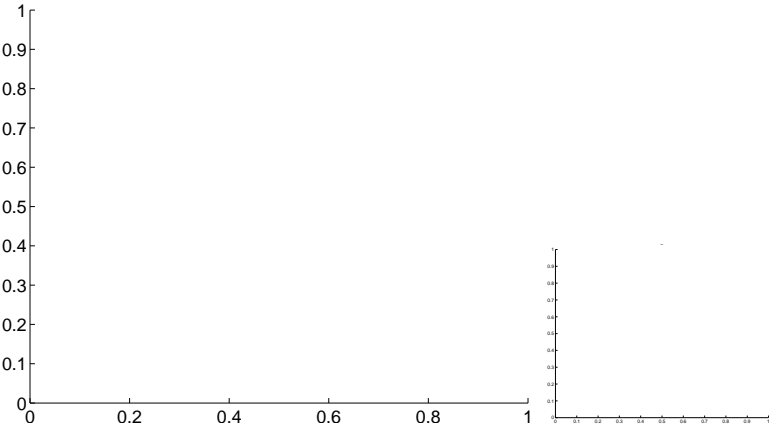
Q11 no OOT image



Q12 no difference image

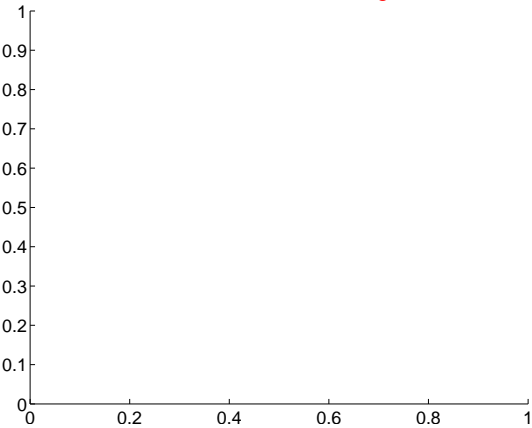


Q12 no OOT image

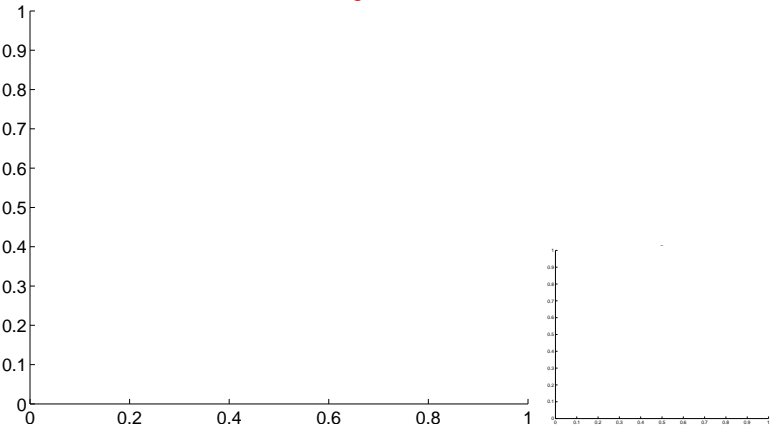


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

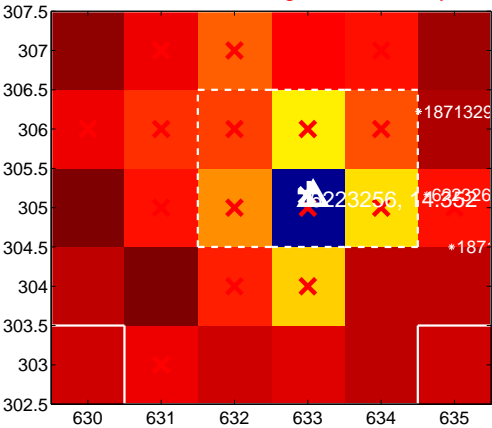
Q13 no difference image



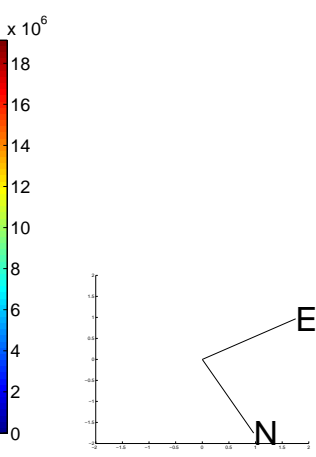
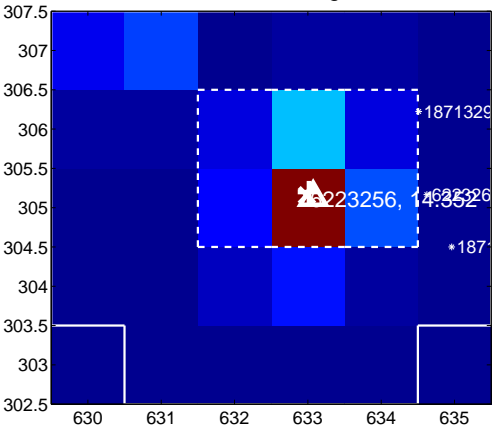
Q13 no OOT image



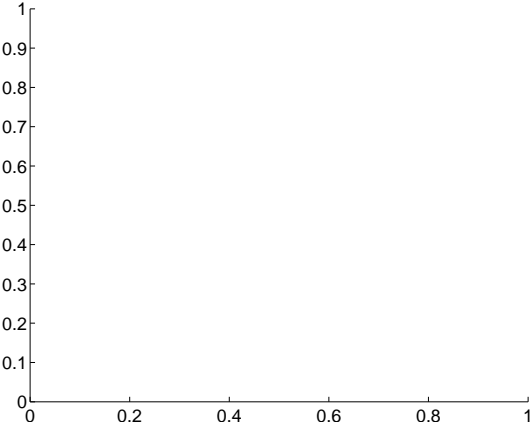
Q14 difference image. Poor Quality



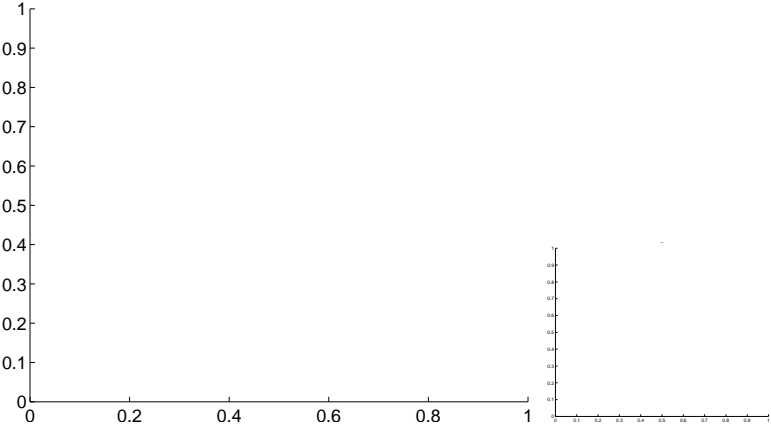
Q14 OOT image



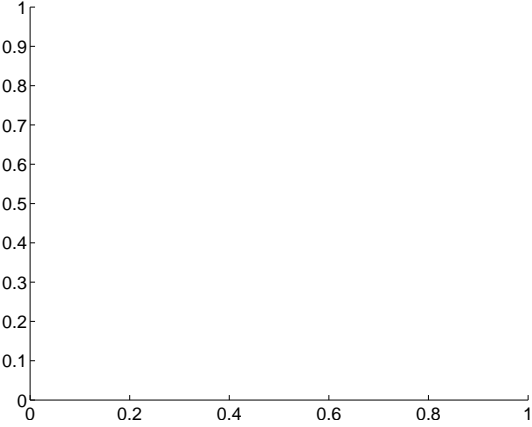
Q15 no difference image



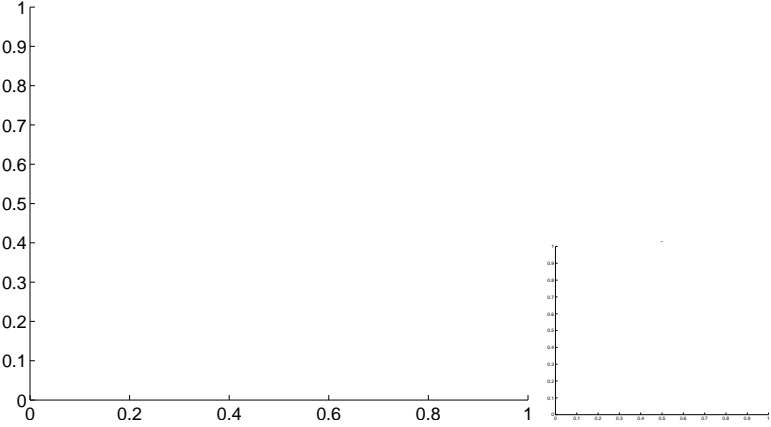
Q15 no OOT image



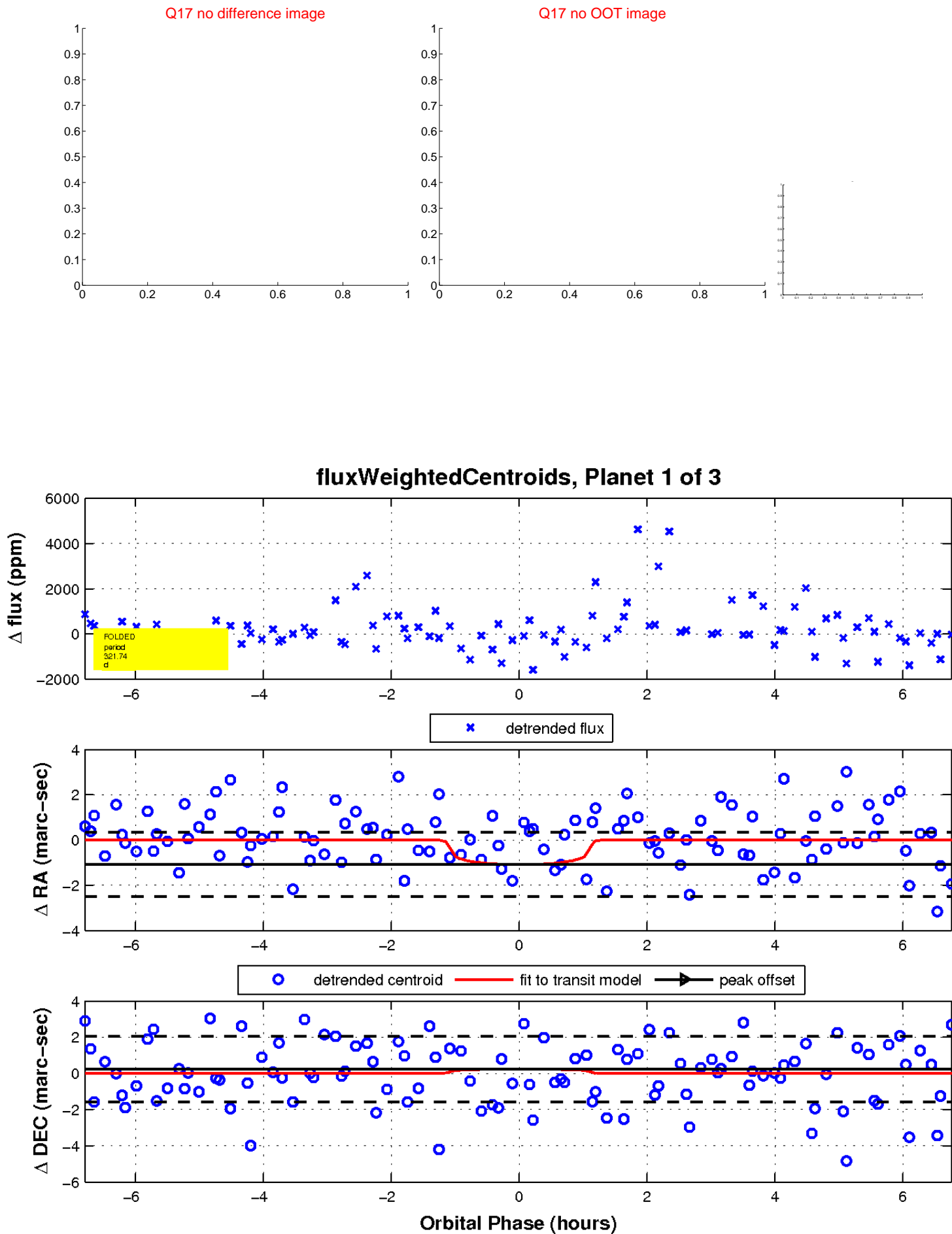
Q16 no difference image



Q16 no OOT image

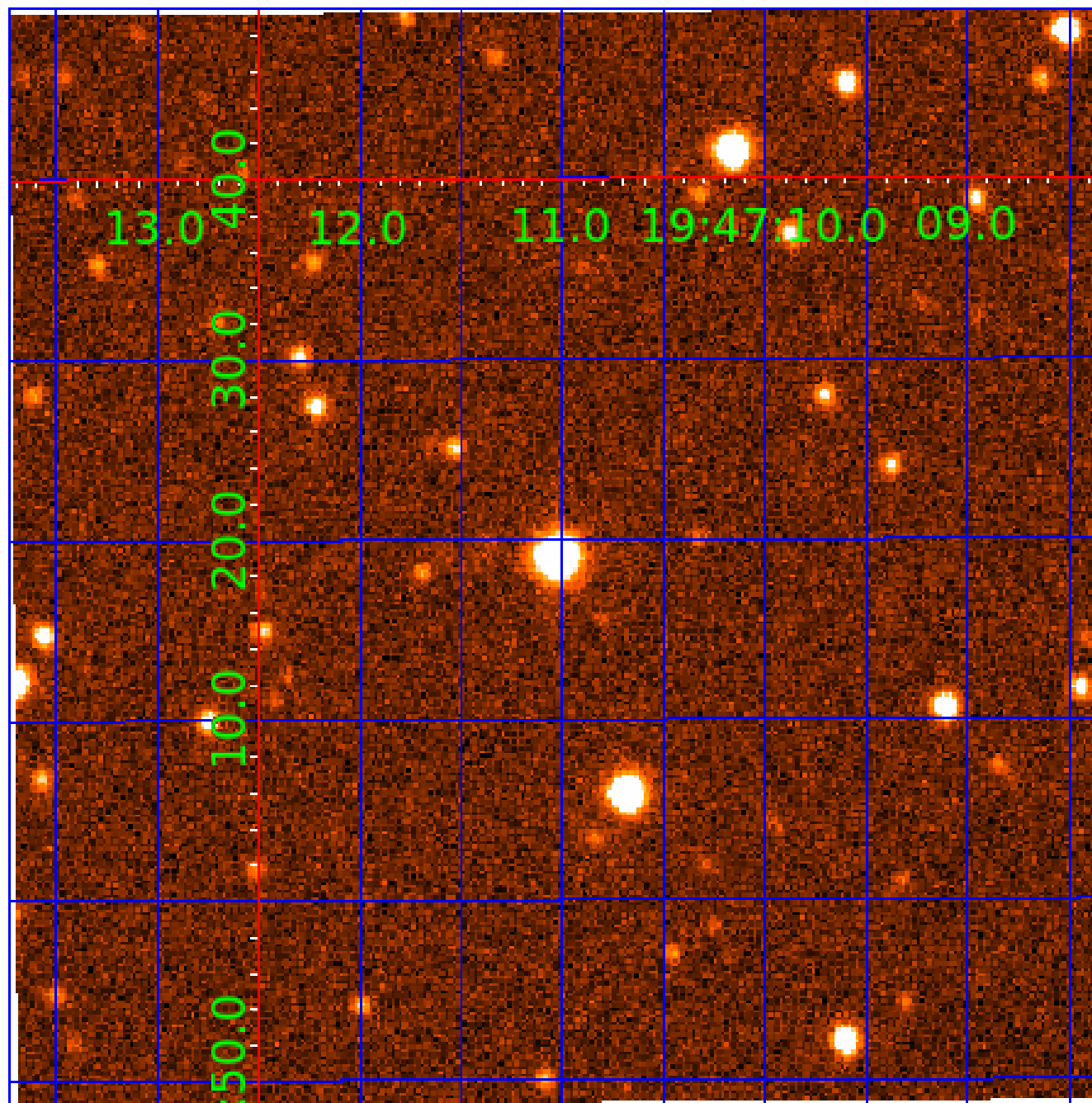


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006223256

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006223256-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006223256-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006223256-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

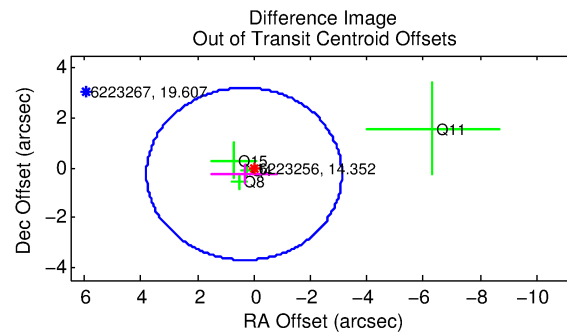
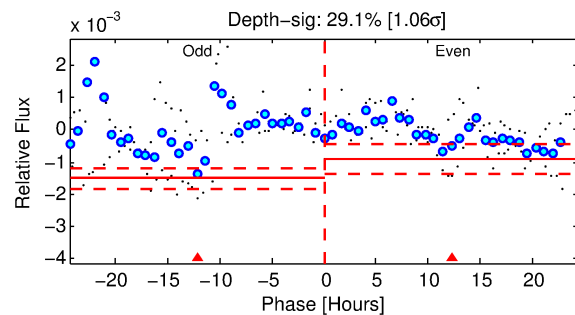
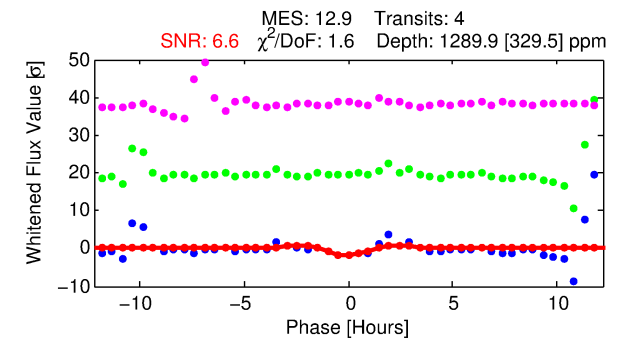
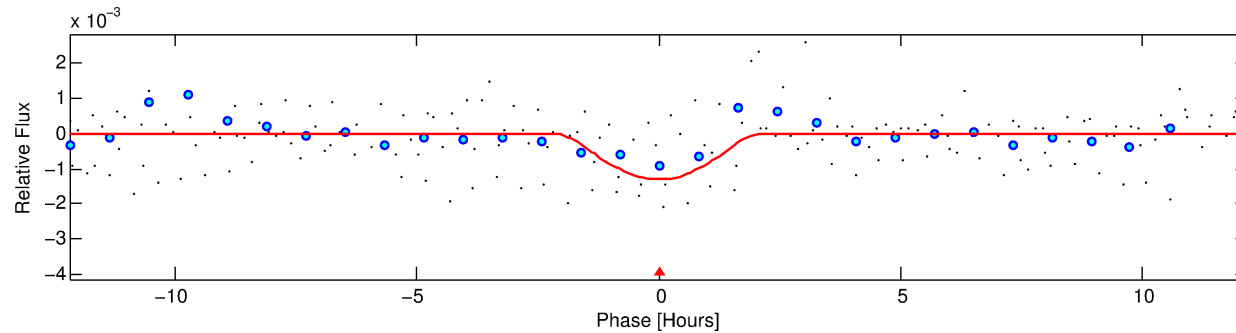
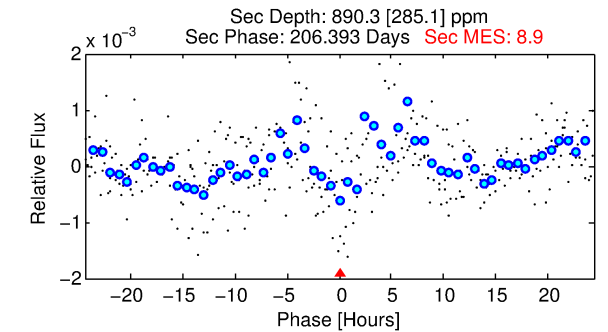
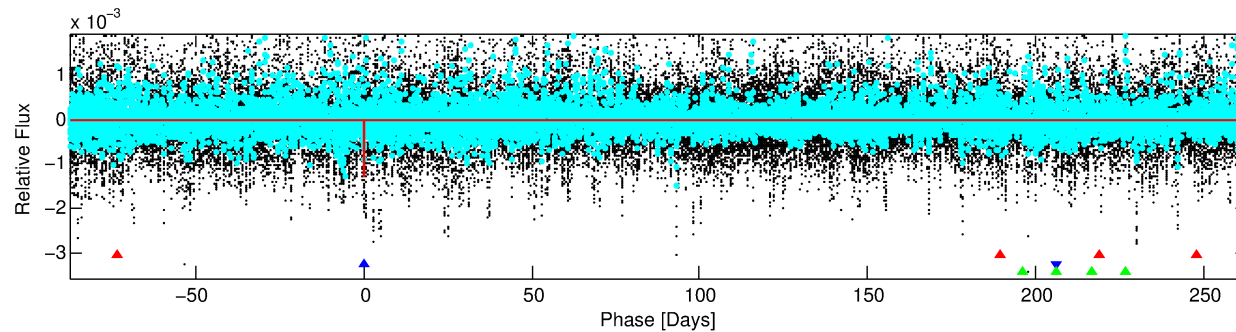
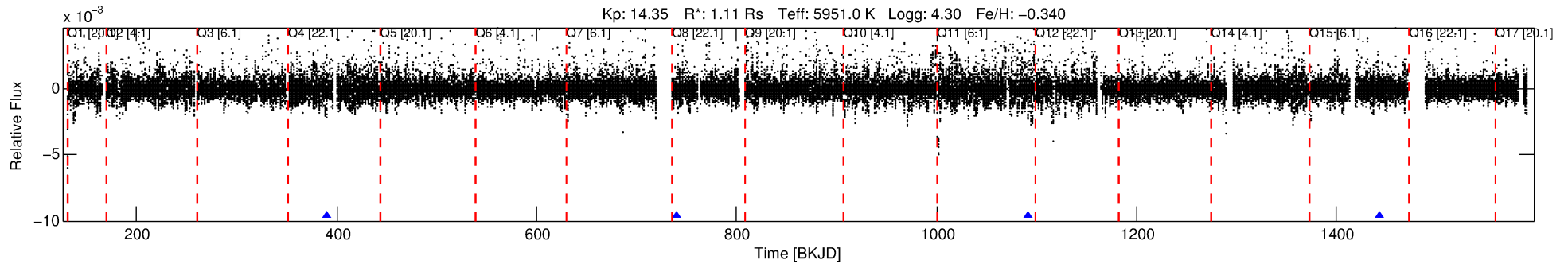
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006223256-02

No Significant Match Found

DV One-Page Summary

KIC: 6223256 Candidate: 2 of 3 Period: 350.981 d



DV Fit Results:

Period = 350.98124 [0.00600] d
Epoch = 389.5406 [0.0101] BKJD
Rp/R* = 0.0525 [0.1123]
a/R* = 247.80 [171.64]
b = 0.98 [0.20]
Seff = 1.57 [0.58]
Teq = 285 [26] K
Rp = 6.37 [13.73] Re
a = 0.9398 [0.2226] AU
Ag = 10661.91 [45857.93] [0.23 σ]
Teffp = 4485 [4808] K [0.87 σ]

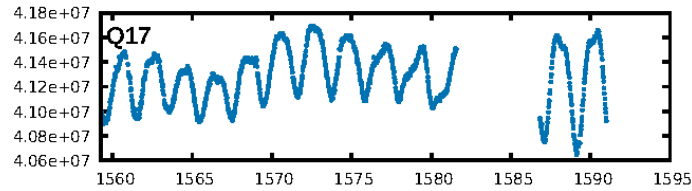
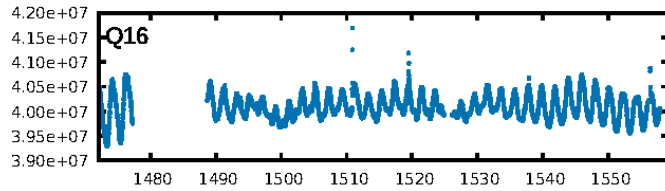
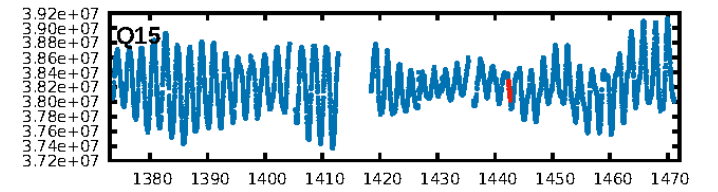
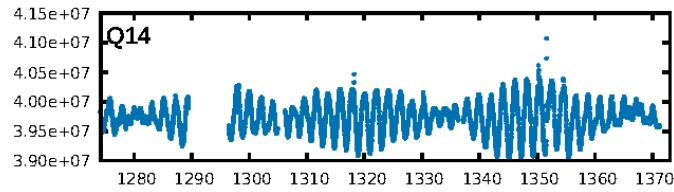
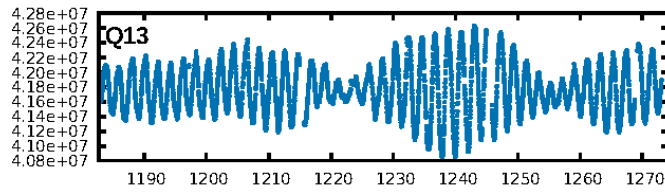
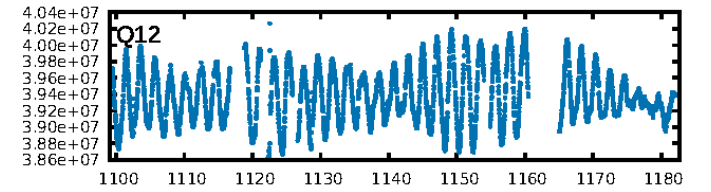
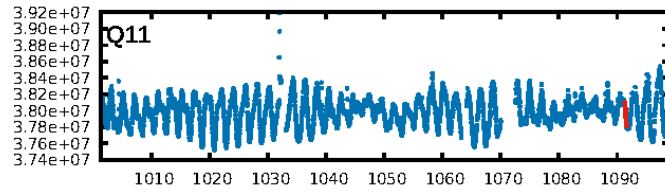
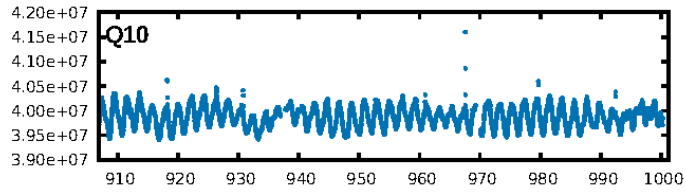
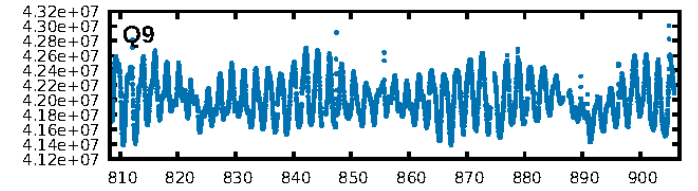
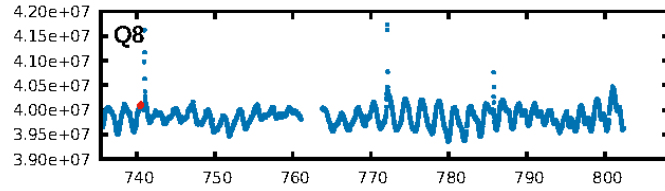
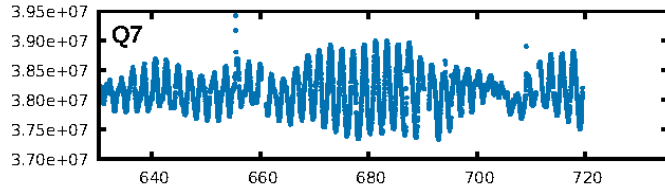
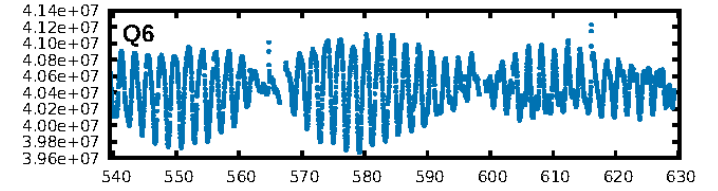
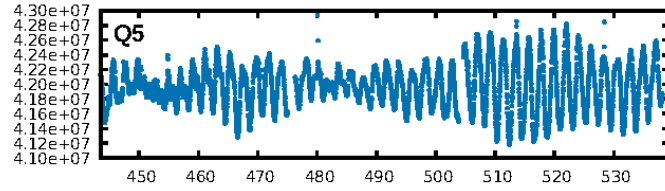
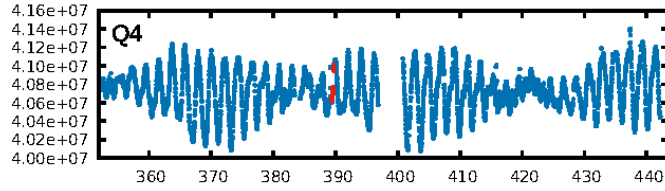
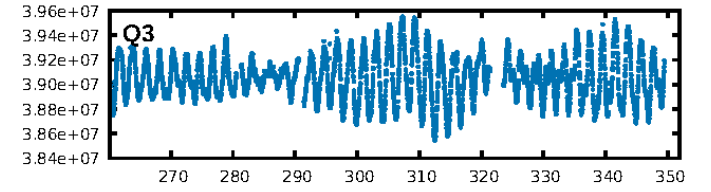
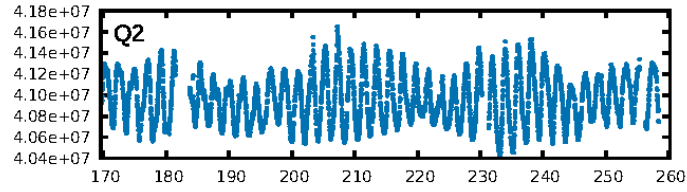
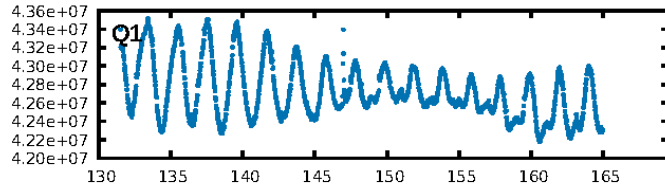
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [150.47 σ]
LongPeriod-sig: 100.0% [28.52 σ]
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 51.6%
Bootstrap-pfa: 2.02e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 4.74
Centroid-sig: 9.8%
Centroid-so: 0.687 arcsec [0.69 σ]
OotOffset-rm: 0.427 arcsec [0.37 σ]
OotOffset-st: 0/2/2/0 [4]
KicOffset-rm: 0.612 arcsec [0.47 σ]
KicOffset-st: 0/2/2/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

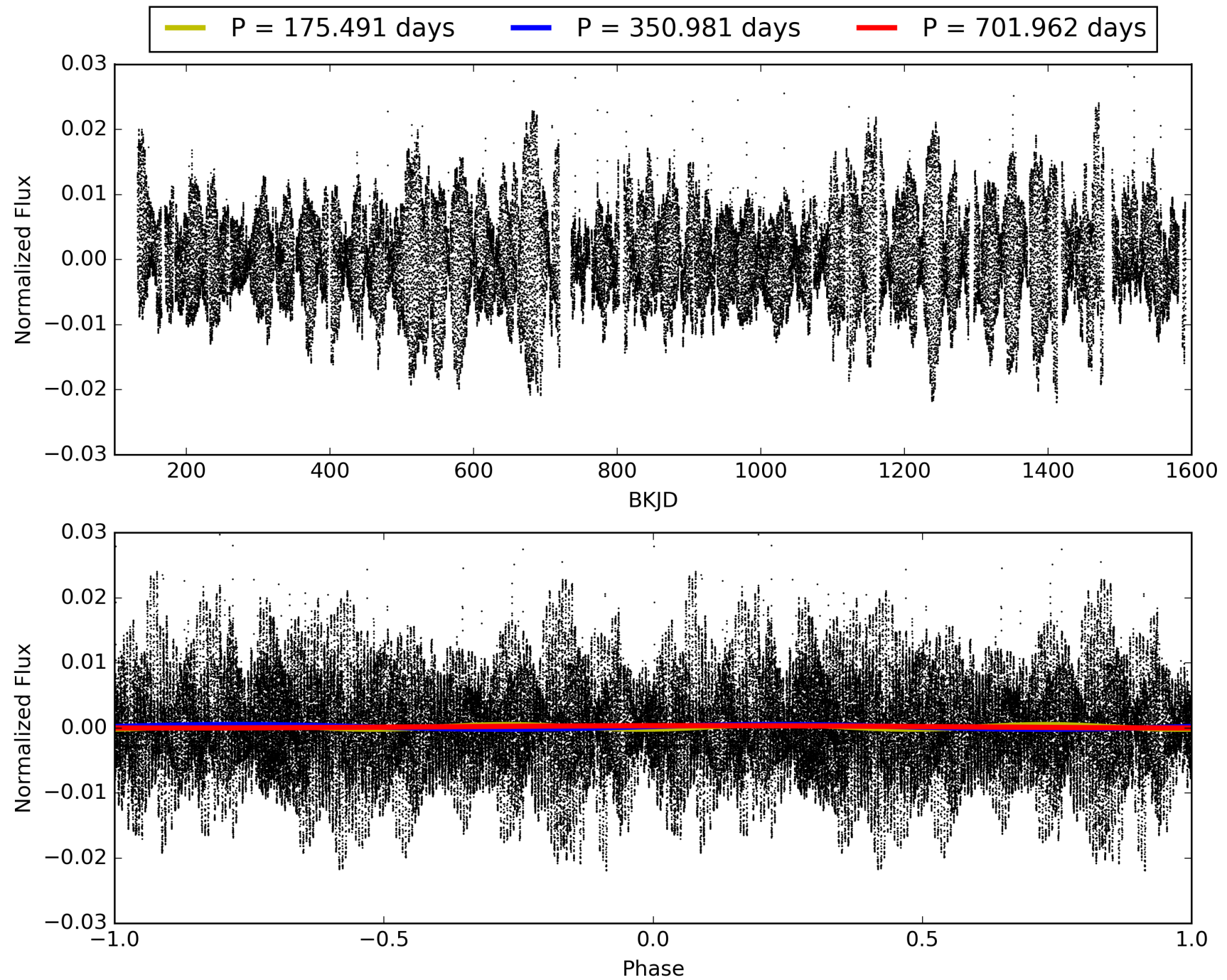
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:09:51 Z

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

TCE 006223256-02, PDC Light Curves

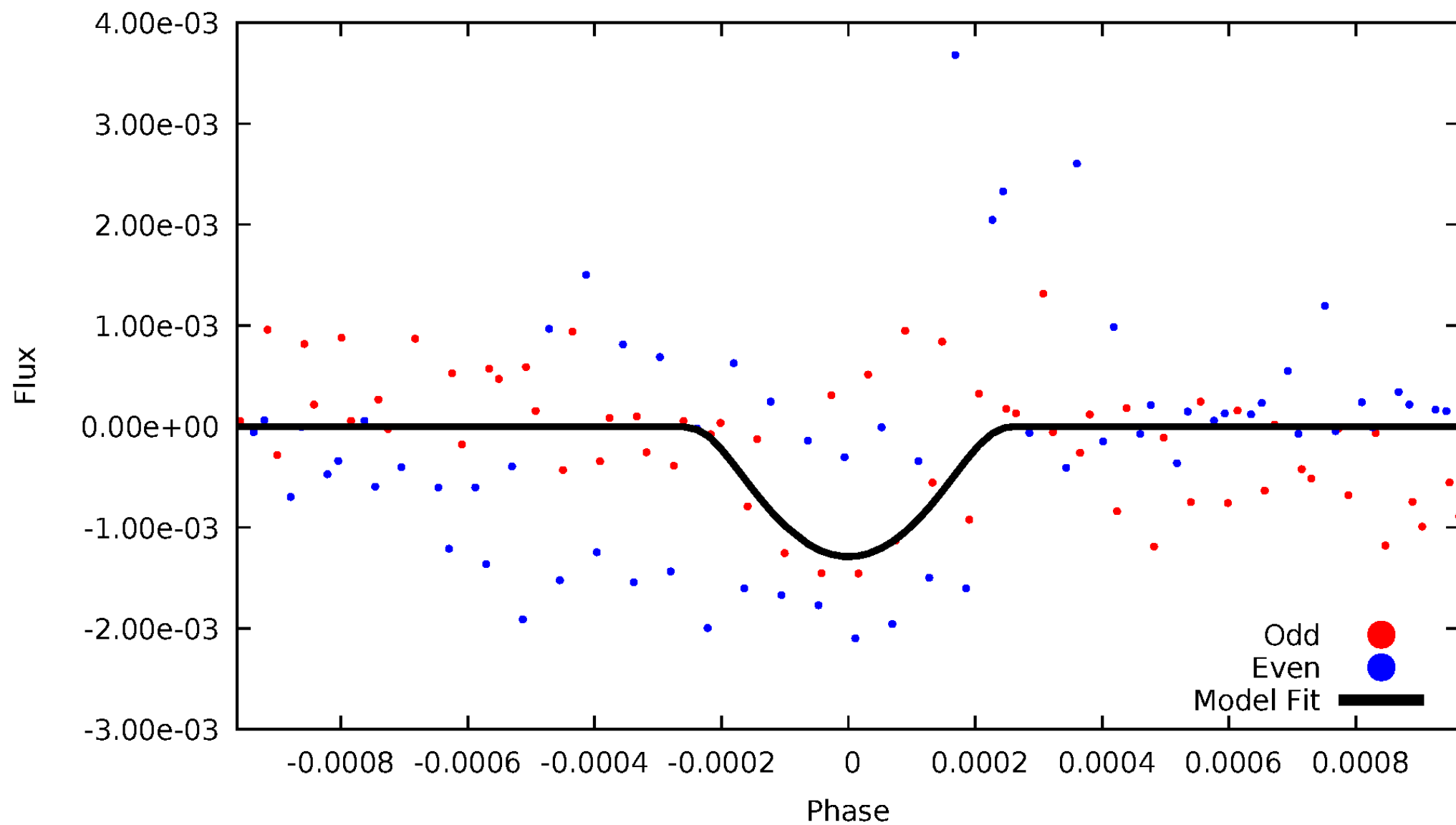


TCE 006223256-02



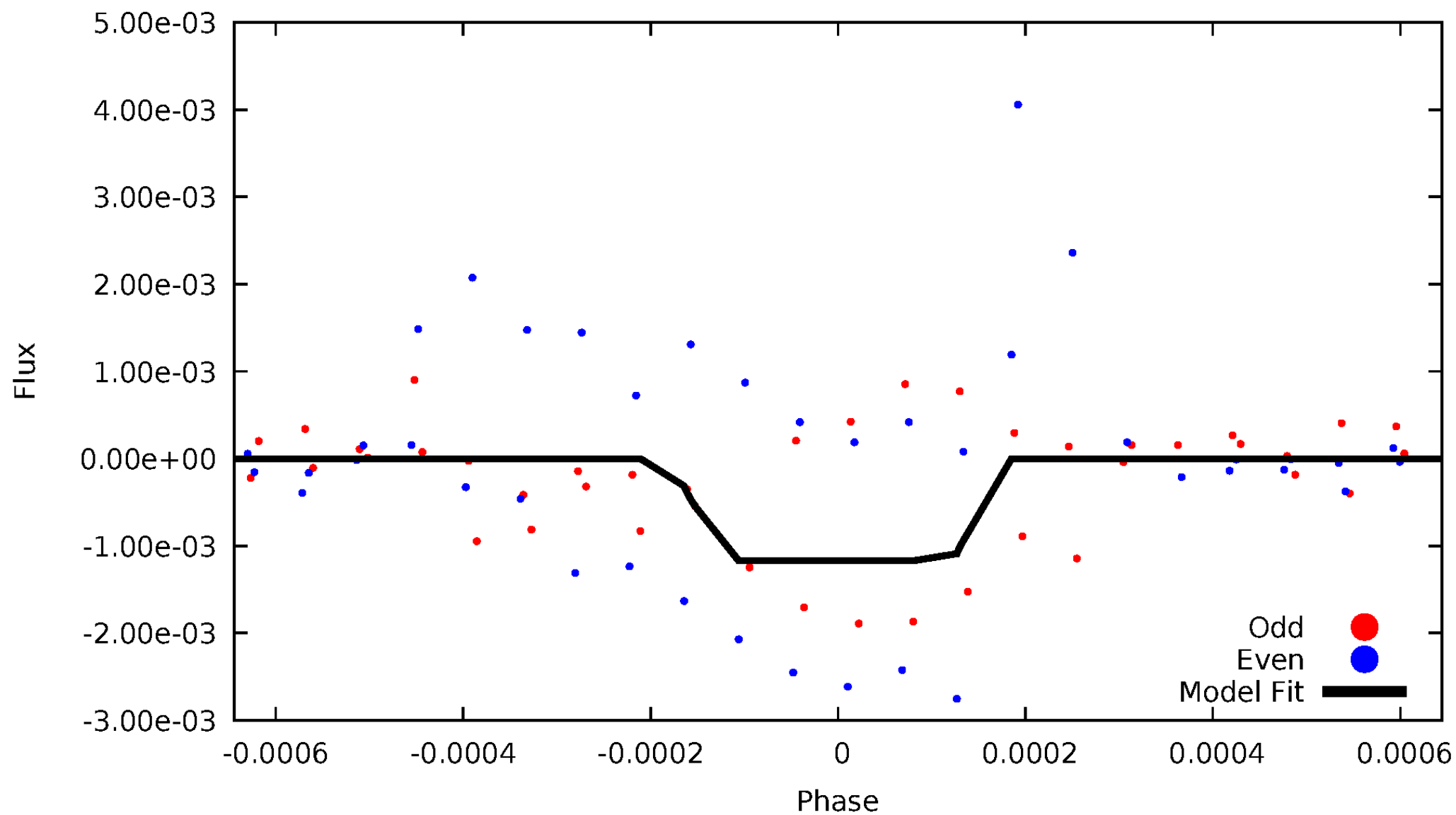
DV Odd/Even

TCE 006223256-02



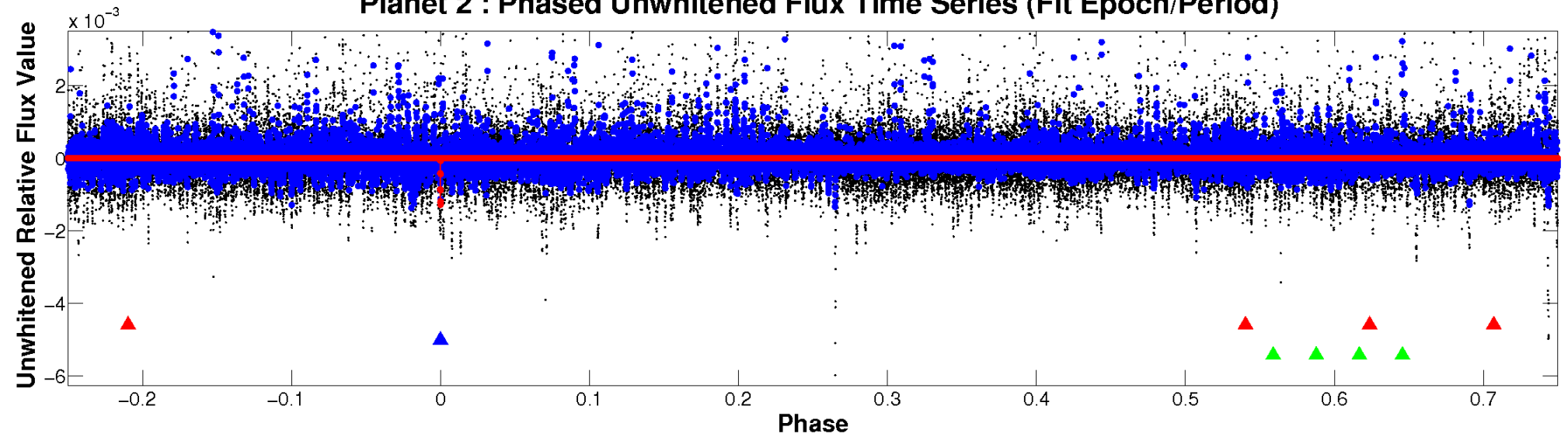
ALT Odd/Even

TCE 006223256-02

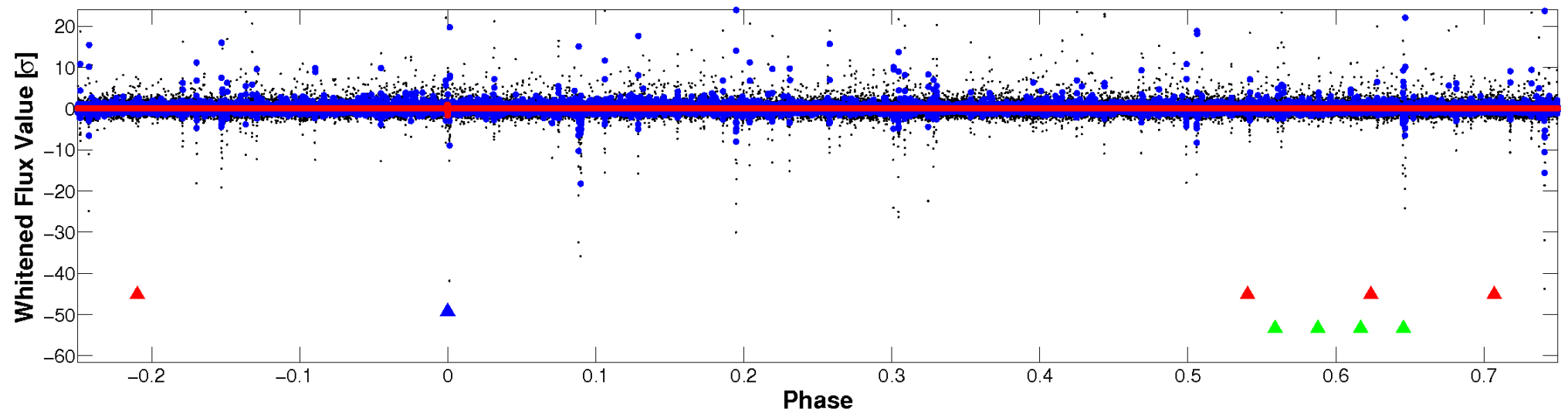


Non-Whitened Vs. Whitened Light Curve

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

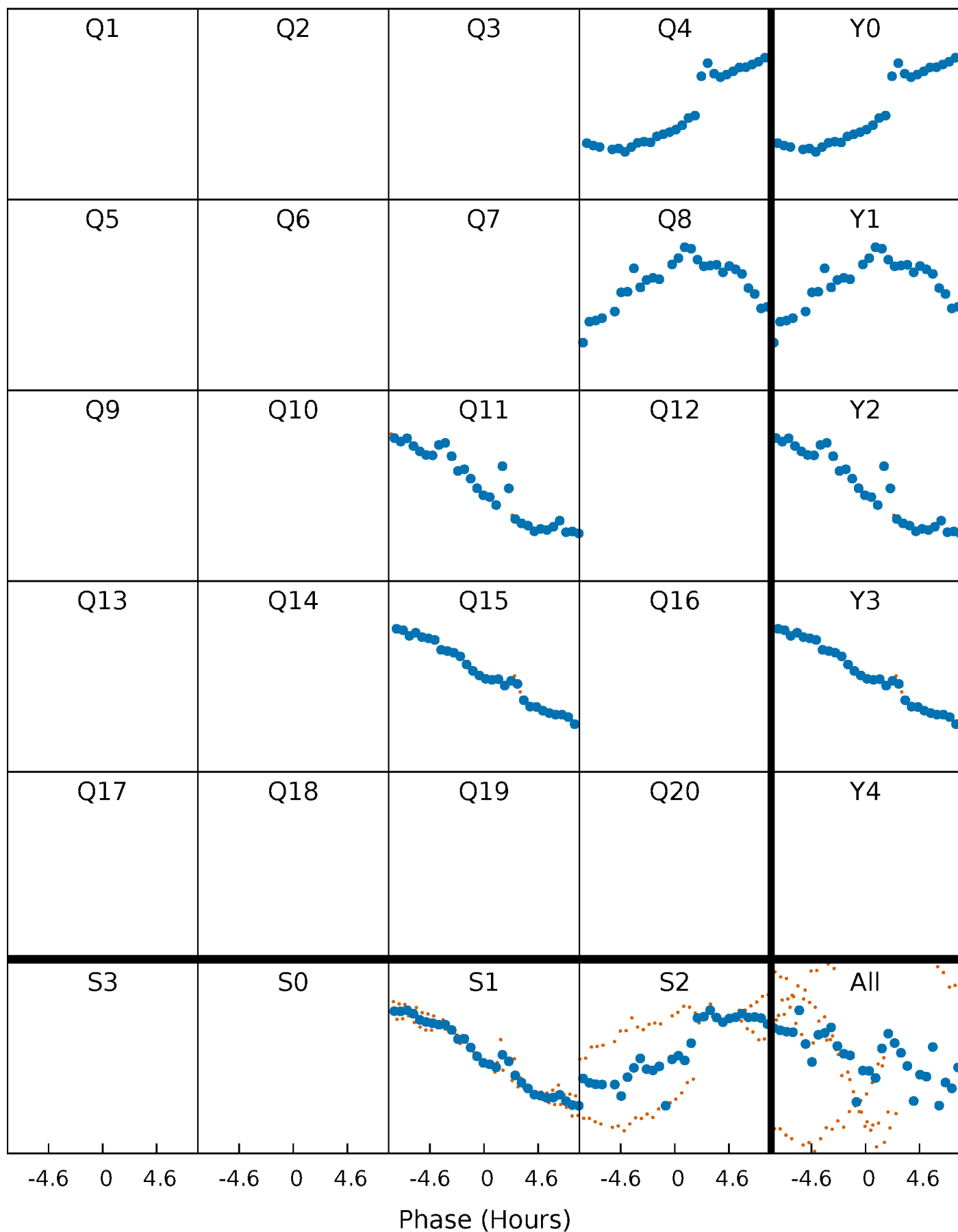


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



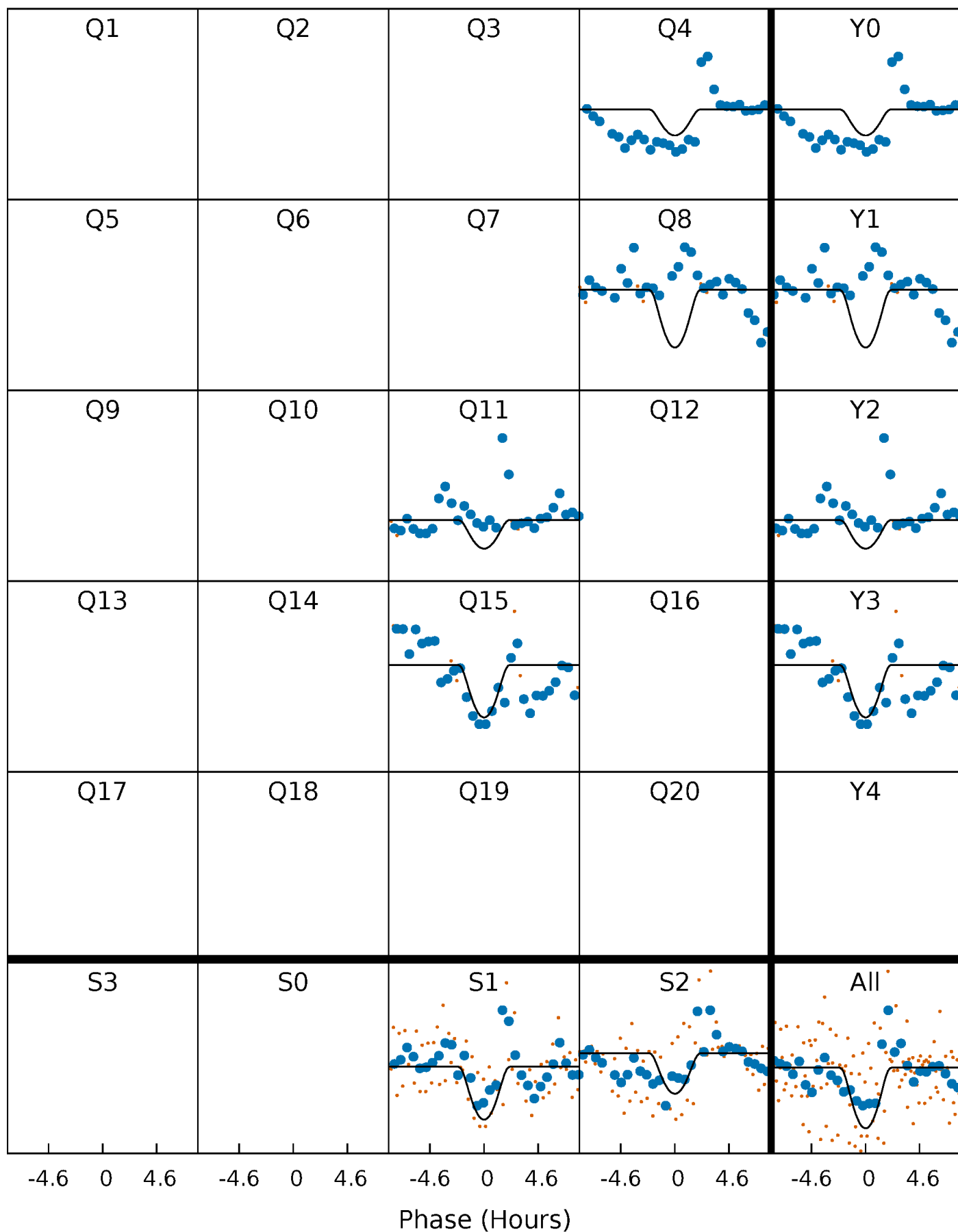
PDC Quarter-Phased Transit Curves

TCE 006223256-02 P=350.981238 Days $T_0=389.540616$ (BKJD)



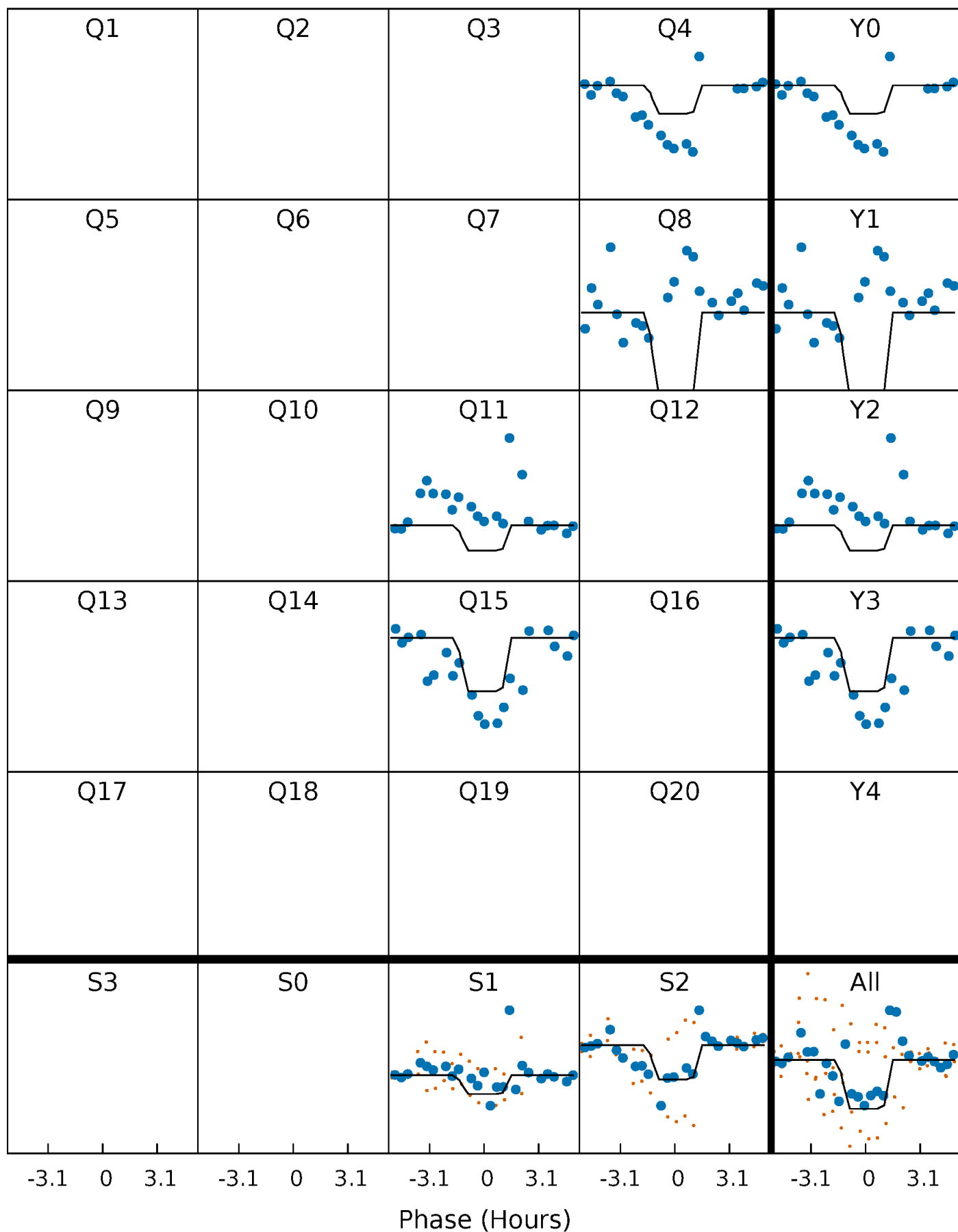
DV Quarter-Phased Transit Curves

TCE 006223256-02 P=350.981238 Days $T_0=389.540616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

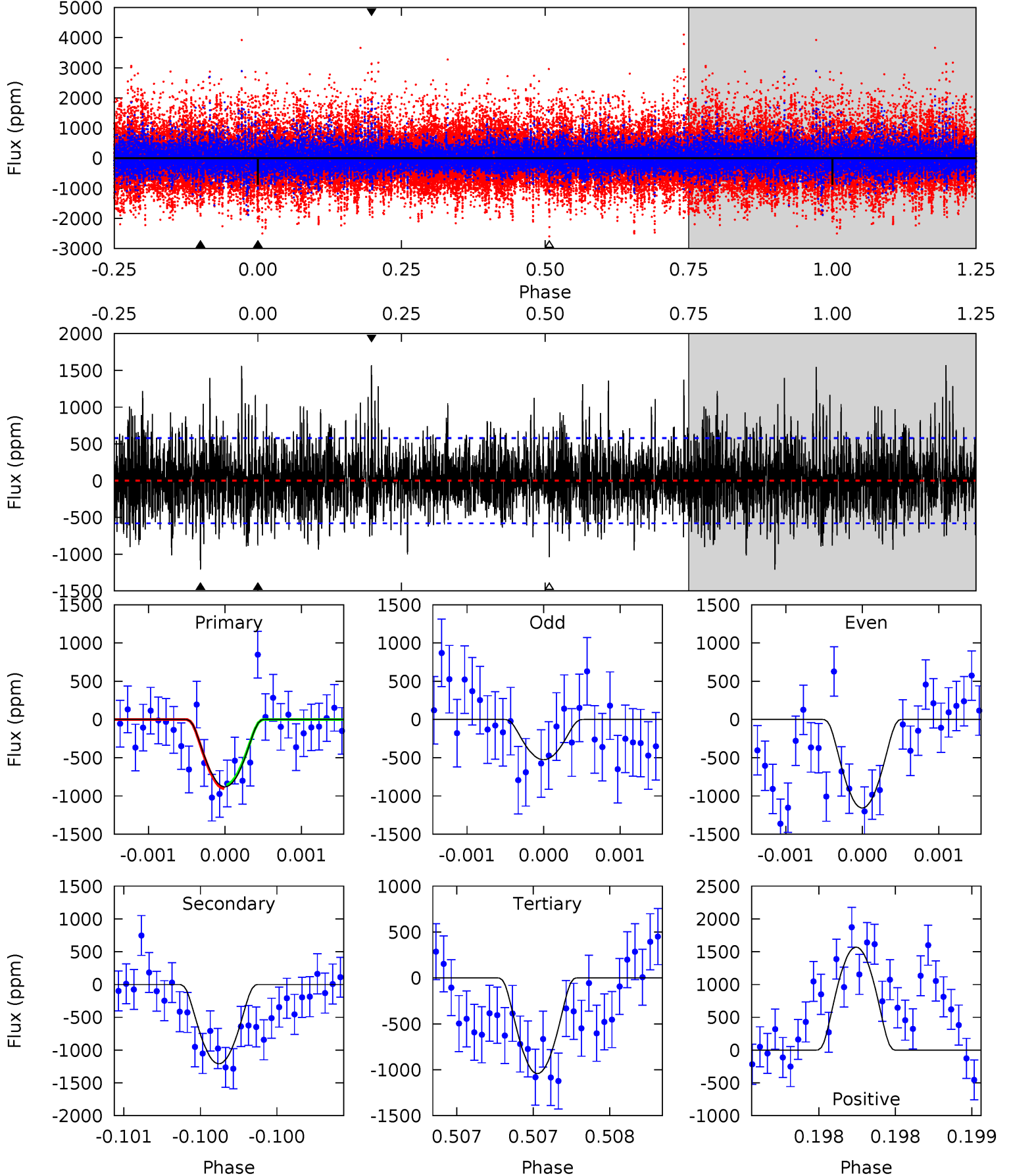
TCE 006223256-02 $P=350.966827$ Days $T_0=389.561273$ (BKJD)



DV Model-Shift Uniqueness Test

006223256-02, P = 350.981238 Days, E = 38.559378 Days

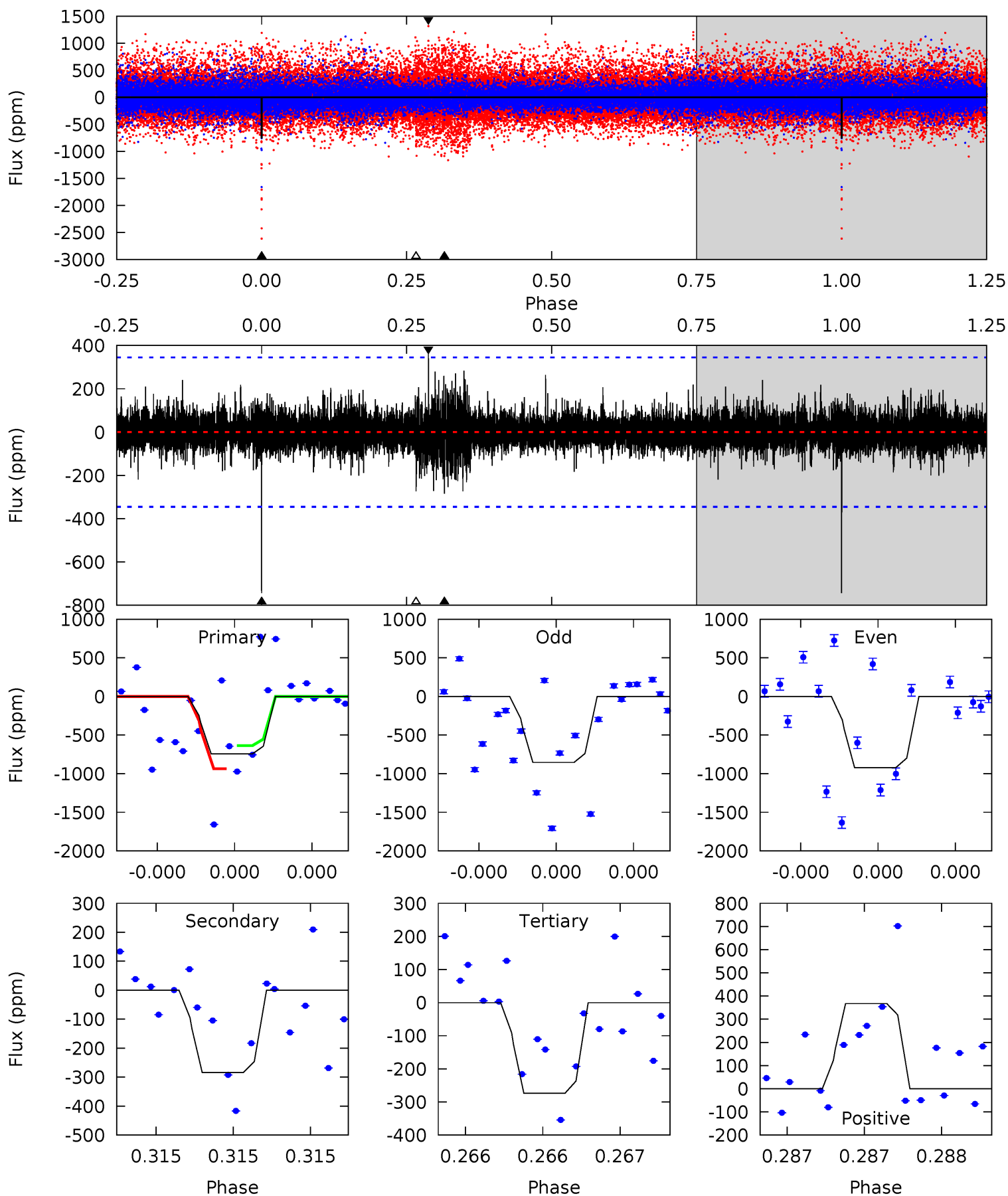
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.46	11.6	10.0	15.1	5.57	3.47	3.00	-1.55	-6.61	1.60	-3.46	2.68	1.21	0.56	0.24



Alt Model-Shift Uniqueness Test

006223256-02, P = 350.966827 Days, E = 38.594446 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	4.63	4.47	6.00	5.64	3.58	0.91	7.68	6.15	0.17	-1.36	0.58	1.35	0.33	2.11



Stellar Parameters For KIC 006223256

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5951^{+178}_{-178}	$4.300^{+0.190}_{-0.190}$	$-0.340^{+0.300}_{-0.300}$	$1.111^{+0.311}_{-0.254}$	$0.899^{+0.131}_{-0.087}$	$0.924^{+0.916}_{-0.464}$
	+3%/-3%	+4%/-4%	+88%/-88%	+28%/-23%	+15%/-10%	+99%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006223256-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1209 ± 104	$13.08^{+11.44}_{-8.52}$	398^{+35}_{-26}	3828^{+1883}_{-726}	3592^{+24031}_{-2619}
Alt.	-284 ± 61	$10.66^{+11.01}_{-7.28}$	401^{+32}_{-29}	3170^{+1613}_{-561}	1195^{+10833}_{-908}

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

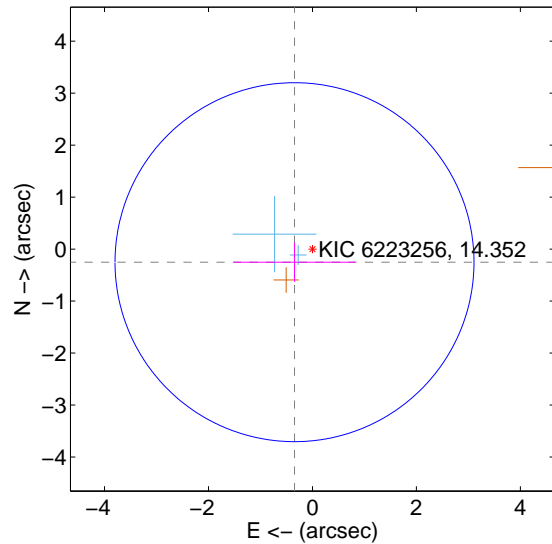
Supplemental centroid analysis for 006223256-02. Kepler magnitude: 14.35. Transit SNR 6.62

There are 2 quarters with good PRF difference image offsets

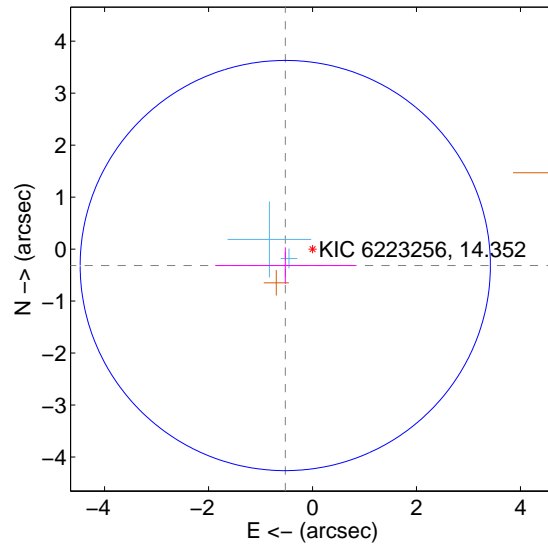
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.427 ± 1.151	0.37	0.345 ± 1.170	-0.252 ± 0.377
PRF-fit source offset from KIC position	0.612 ± 1.315	0.47	0.524 ± 1.347	-0.316 ± 0.349
photometric centroid source offset	0.69 ± 1.00	0.69	-0.10 ± 0.86	0.68 ± 1.00

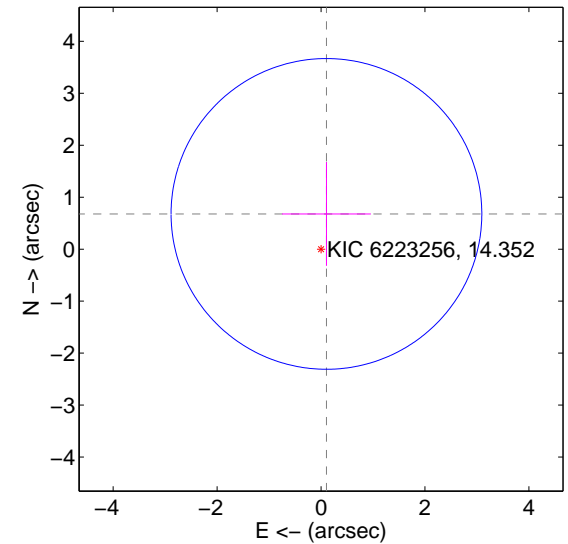
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



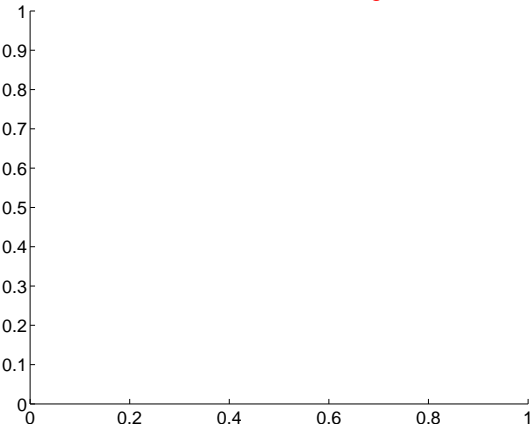
offset from photometric centroids



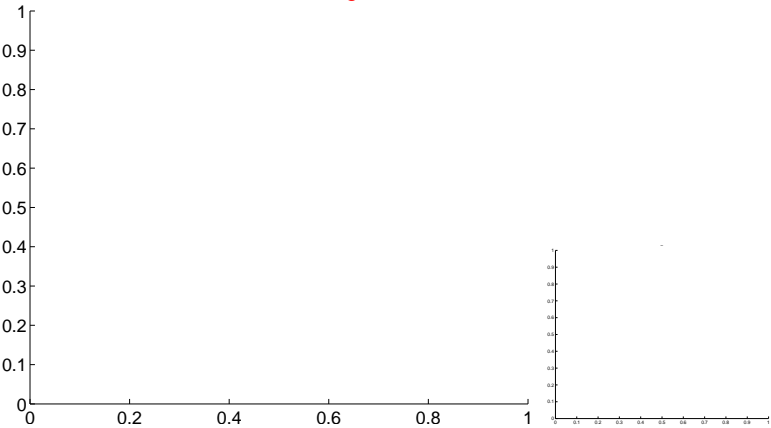
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

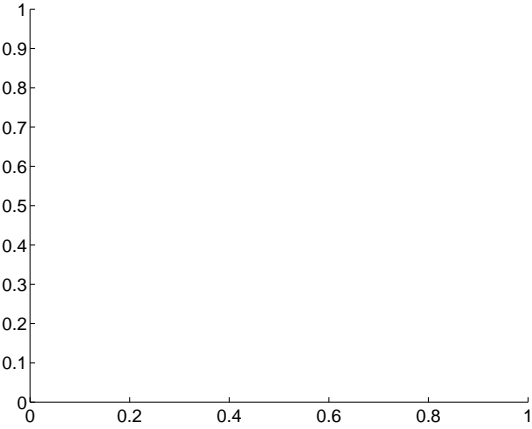
Q1 no difference image



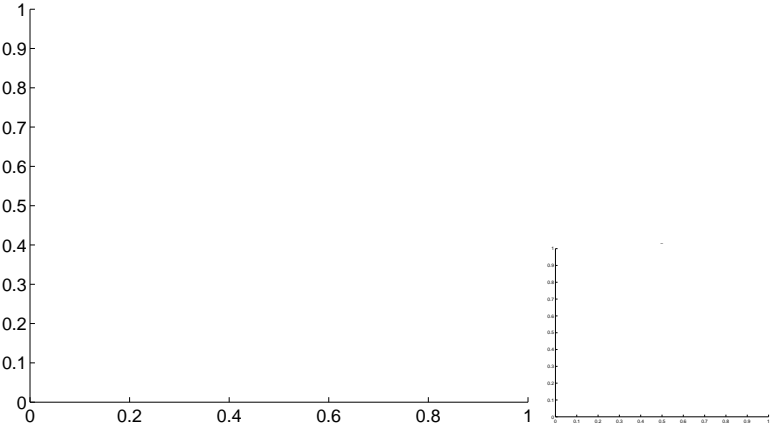
Q1 no OOT image



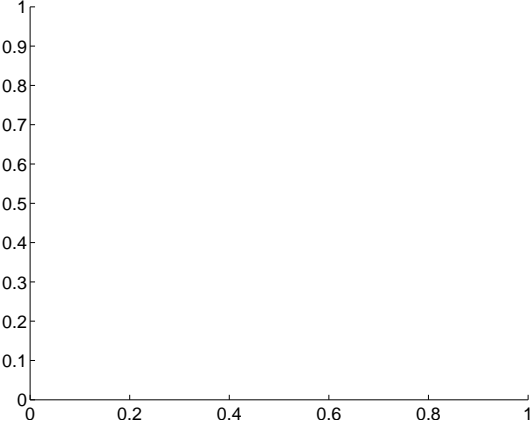
Q2 no difference image



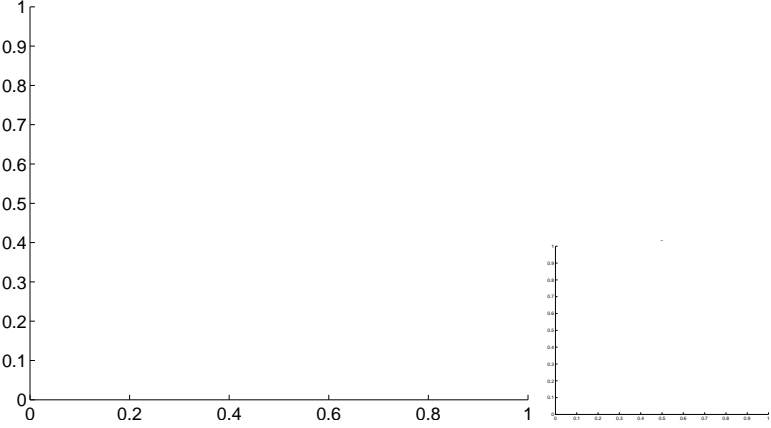
Q2 no OOT image



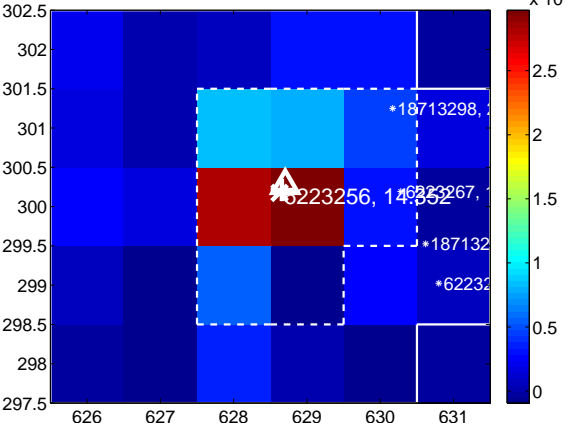
Q3 no difference image



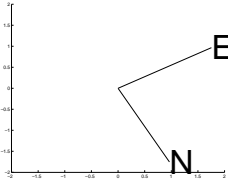
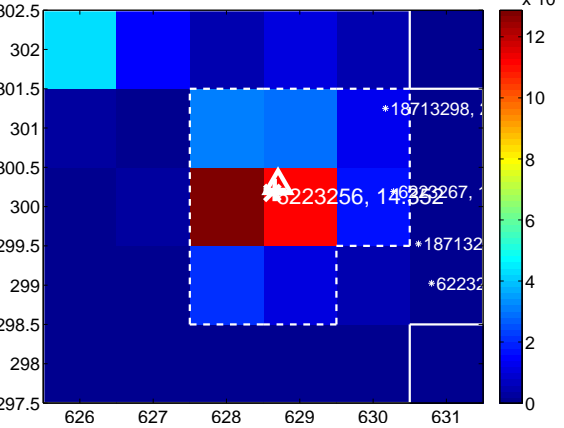
Q3 no OOT image



Q4 difference image

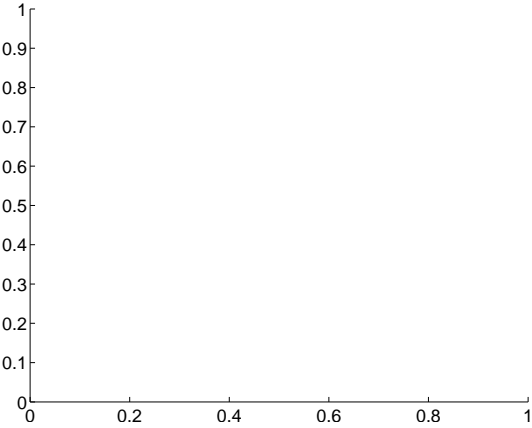


Q4 OOT image

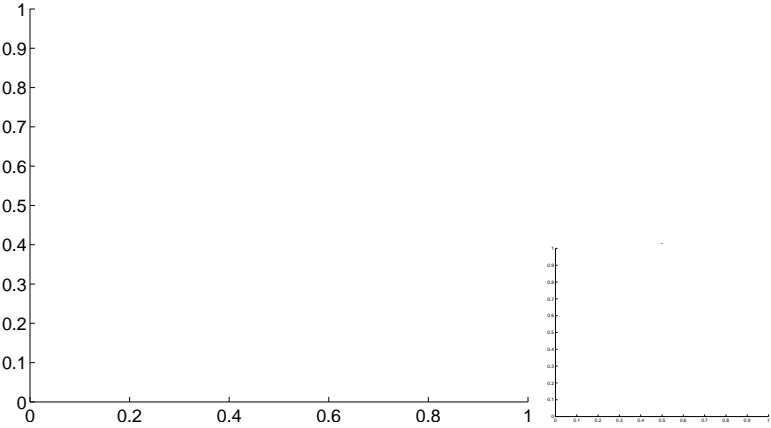


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

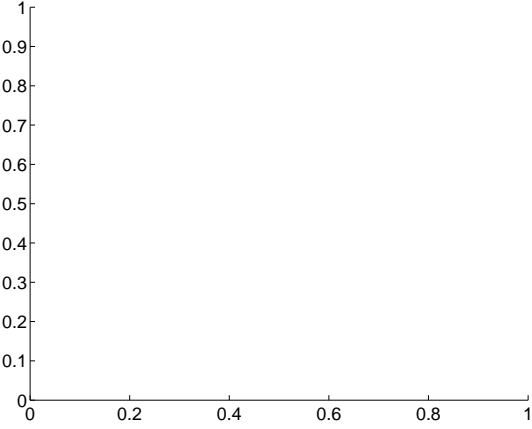
Q5 no difference image



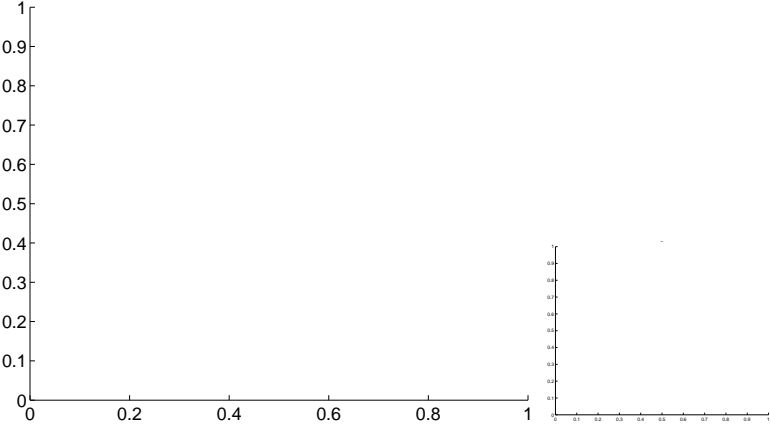
Q5 no OOT image



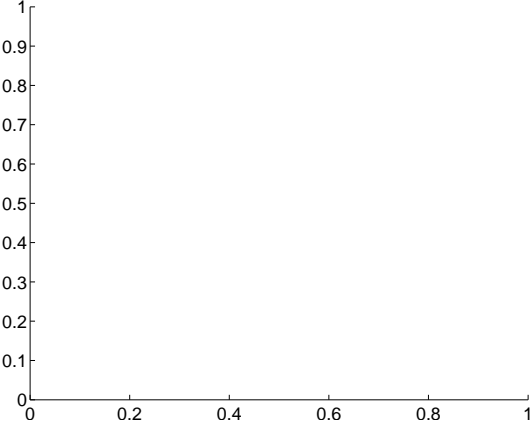
Q6 no difference image



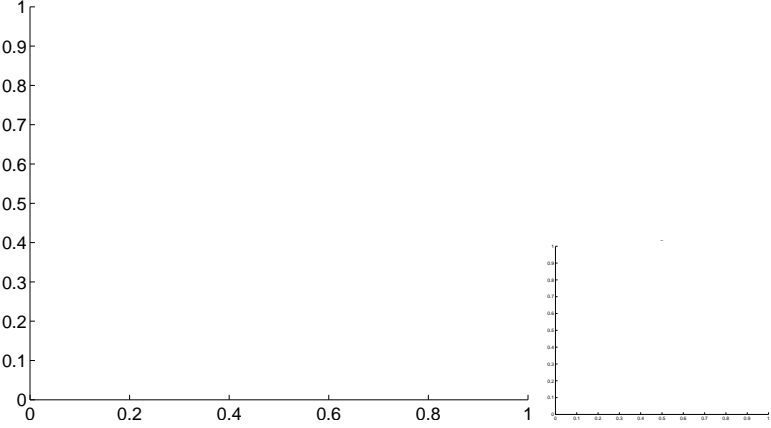
Q6 no OOT image



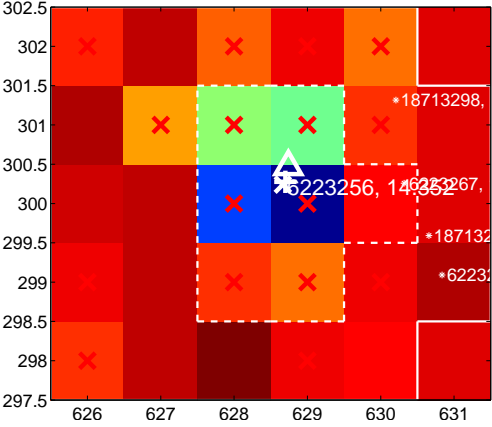
Q7 no difference image



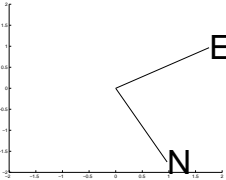
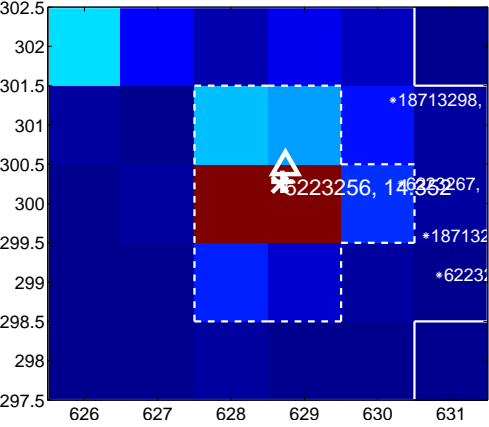
Q7 no OOT image



Q8 difference image. Poor Quality

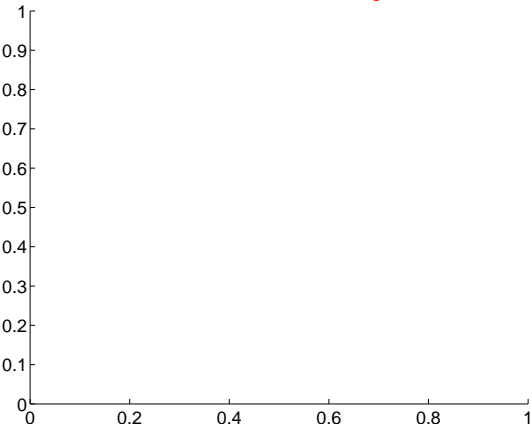


Q8 OOT image

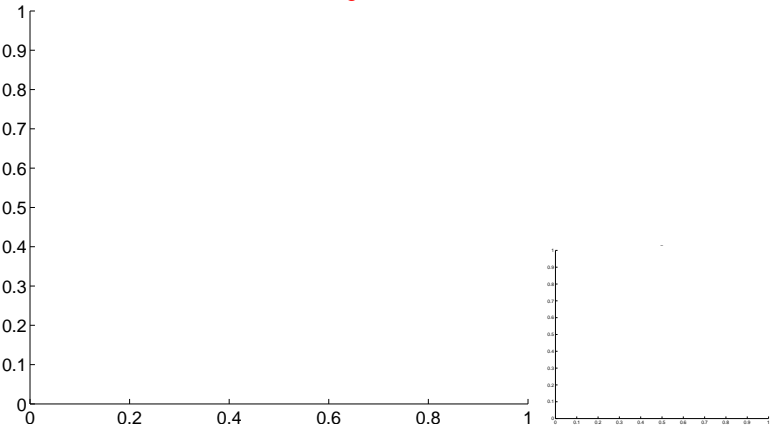


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

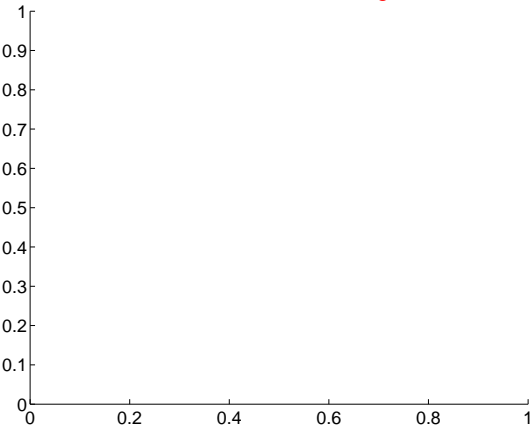
Q9 no difference image



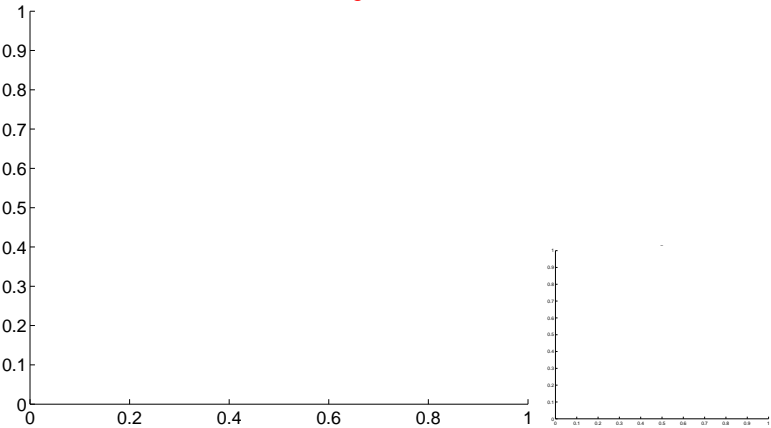
Q9 no OOT image



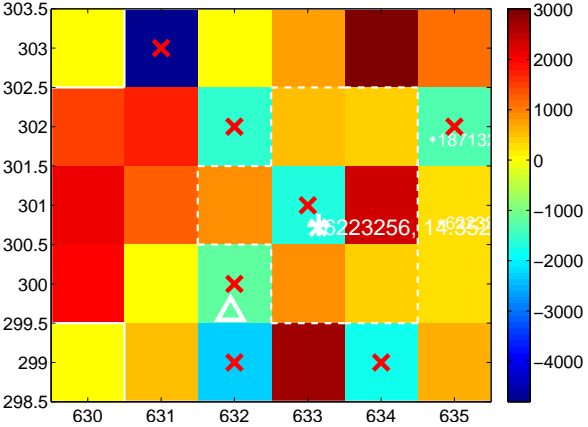
Q10 no difference image



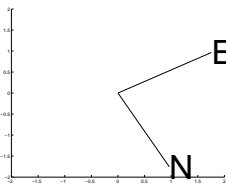
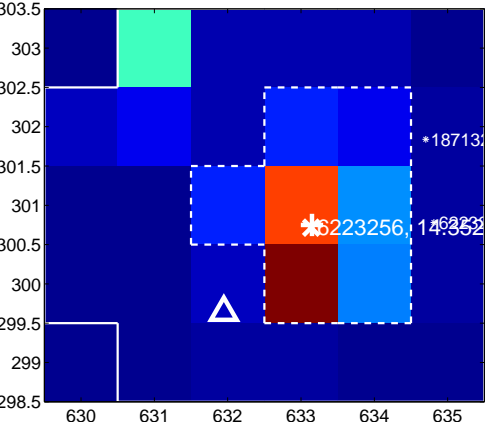
Q10 no OOT image



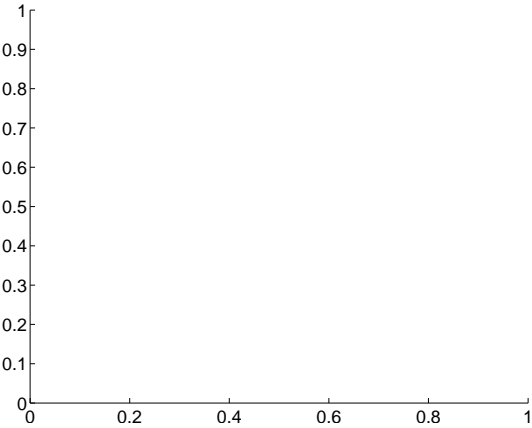
Q11 difference image. Poor Quality



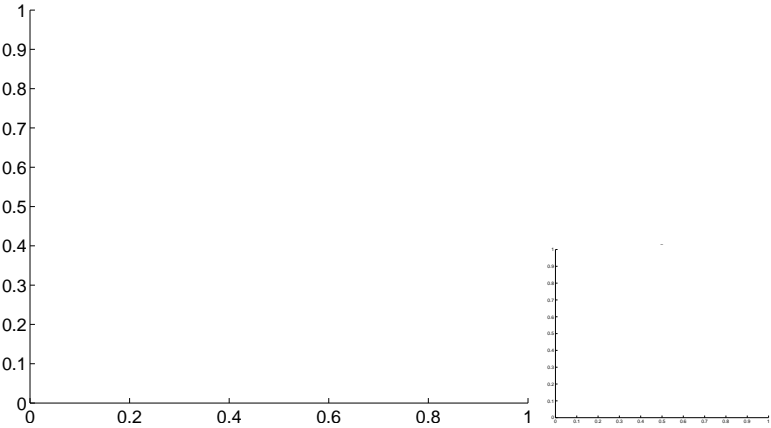
Q11 OOT image



Q12 no difference image

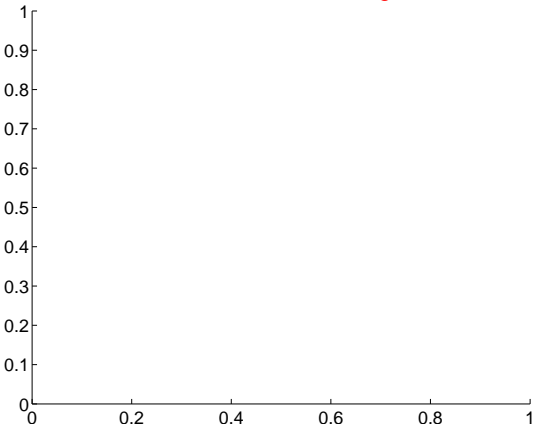


Q12 no OOT image

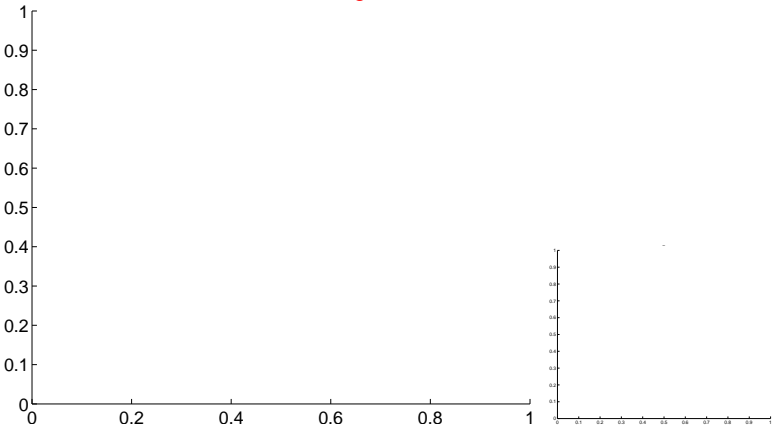


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

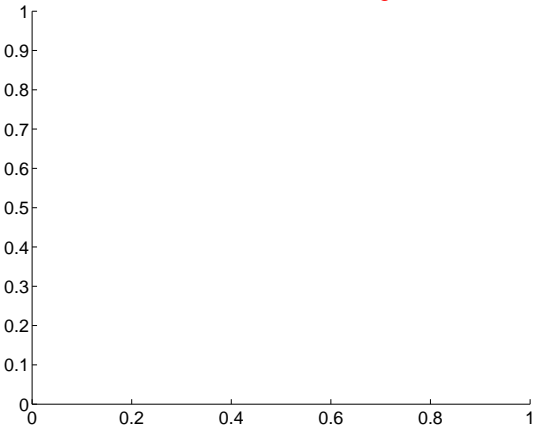
Q13 no difference image



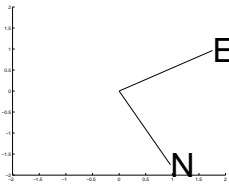
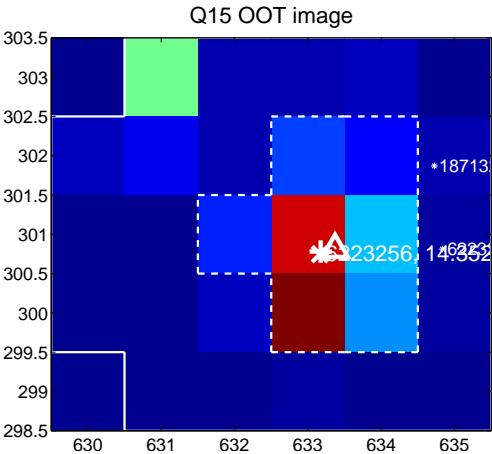
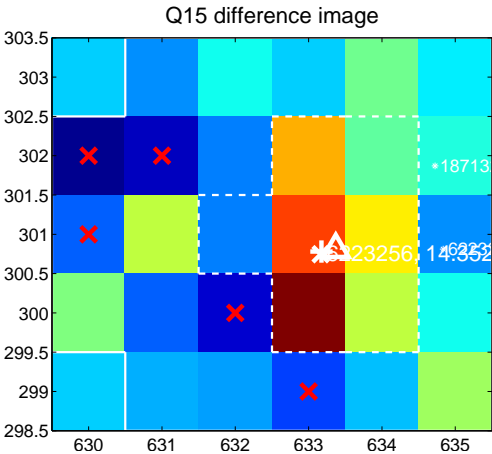
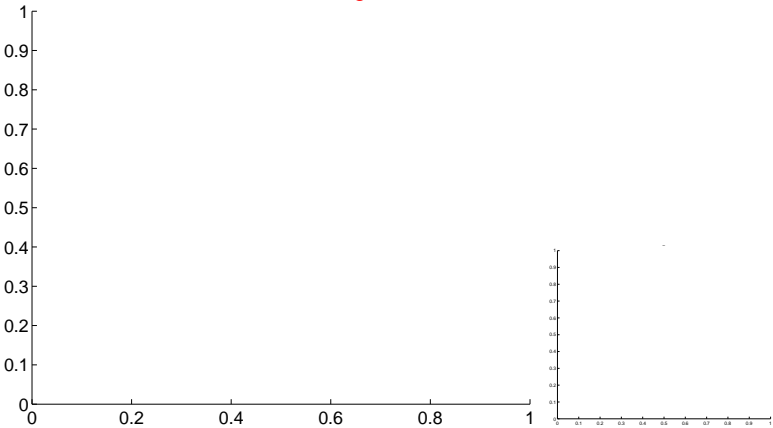
Q13 no OOT image



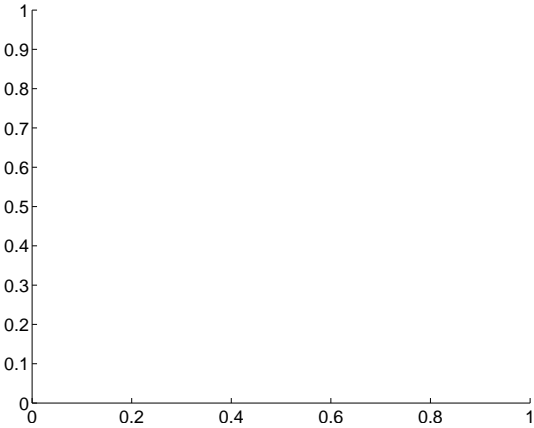
Q14 no difference image



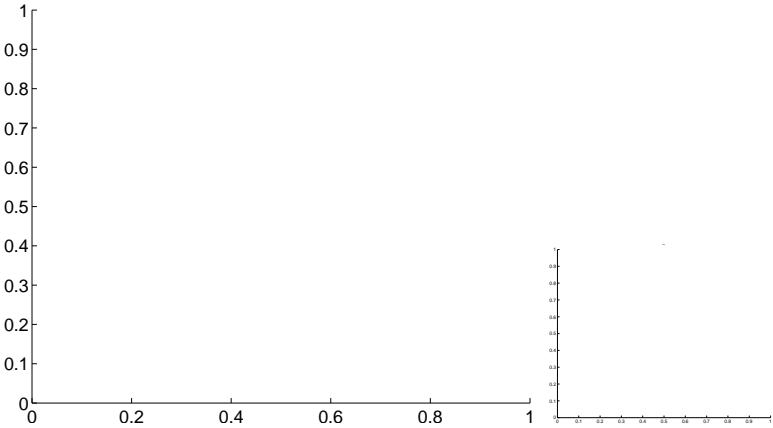
Q14 no OOT image



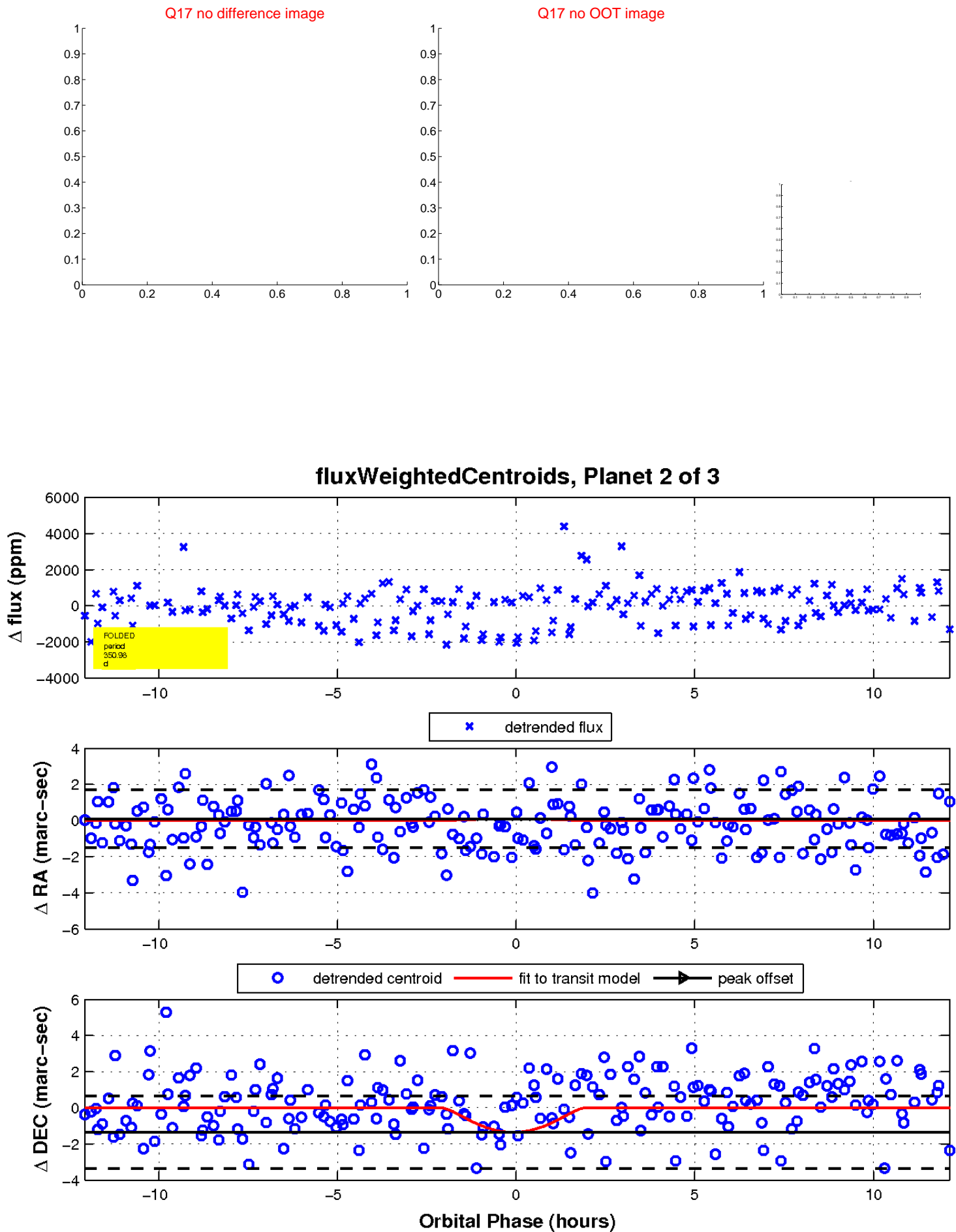
Q16 no difference image



Q16 no OOT image

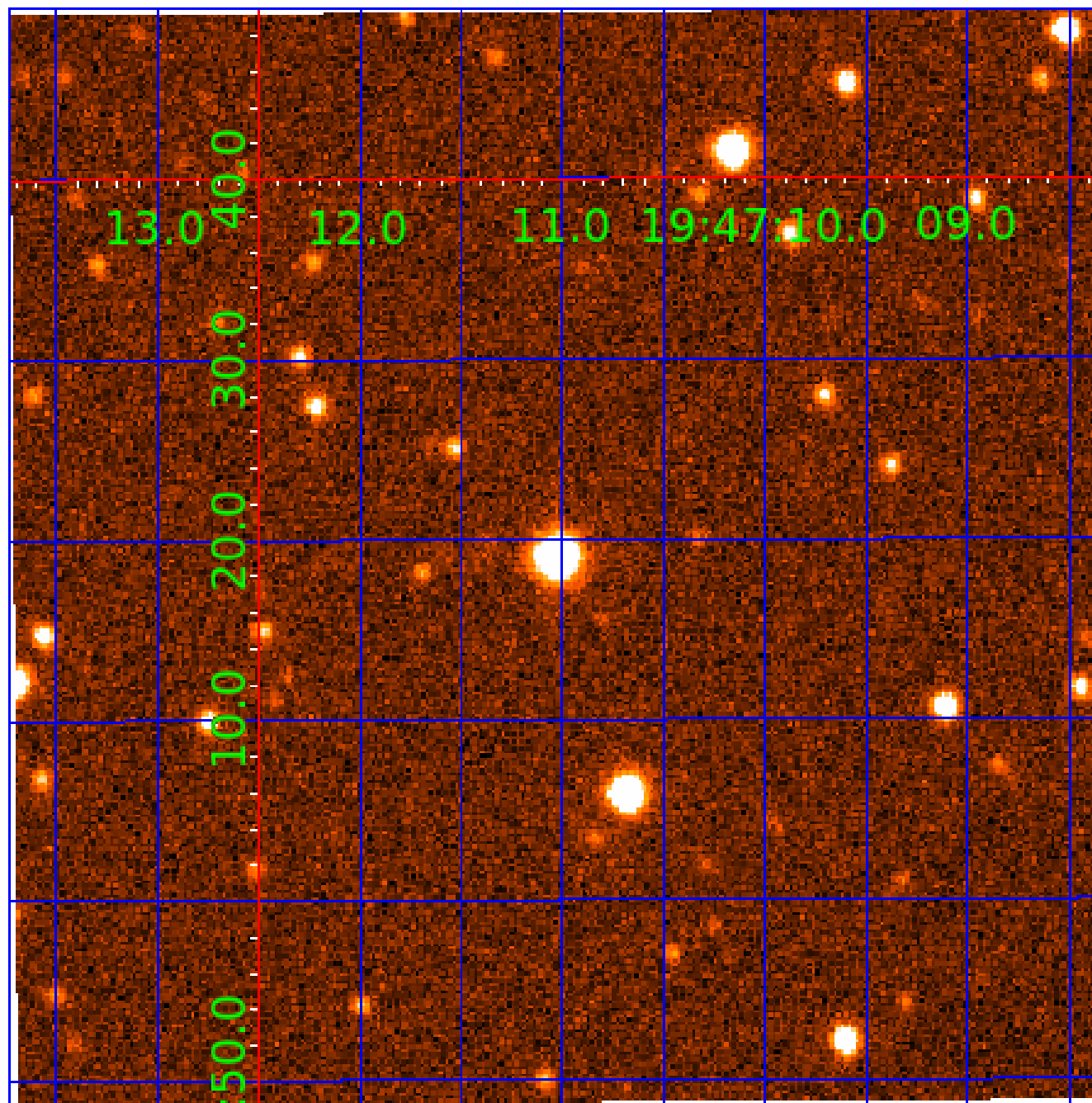


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006223256

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})
006223256-01	OBS	No	321.735184	315.957367	1436.6	2.304	17.0	9.1	1.11	5951	4.29	1.76
006223256-02	OBS	No	350.981238	389.540616	1289.9	4.056	12.9	6.6	1.11	5951	6.37	1.57
006223256-03	OBS	No	361.127054	234.745340	504.8	7.511	12.5	2.6	1.11	5951	2.49	1.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006223256-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006223256-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006223256-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

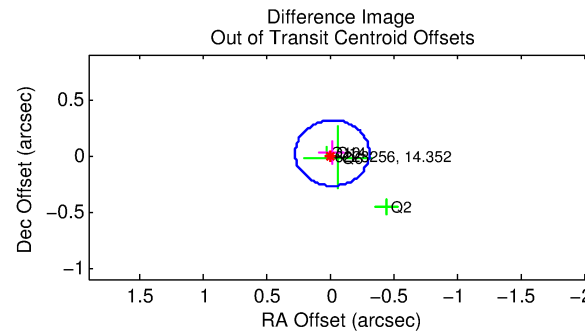
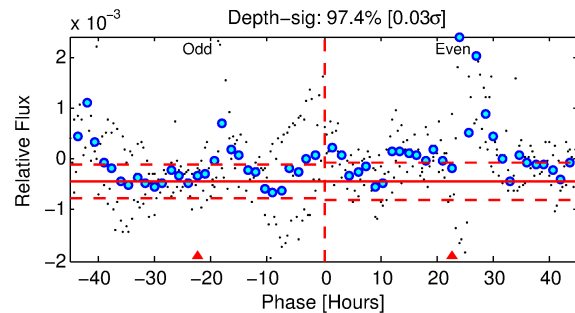
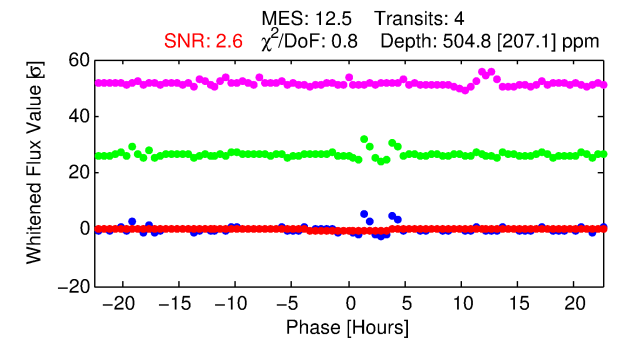
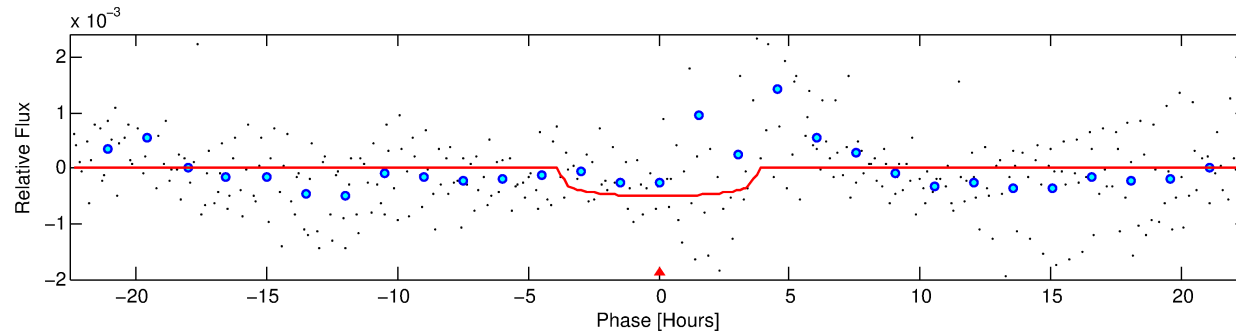
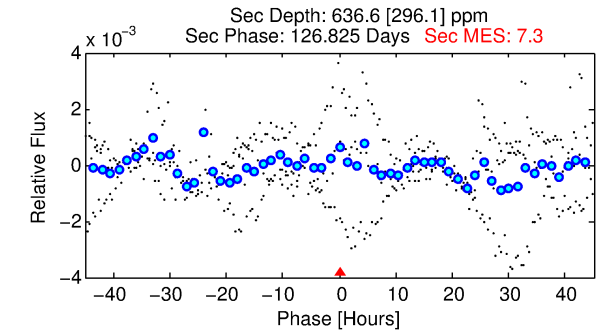
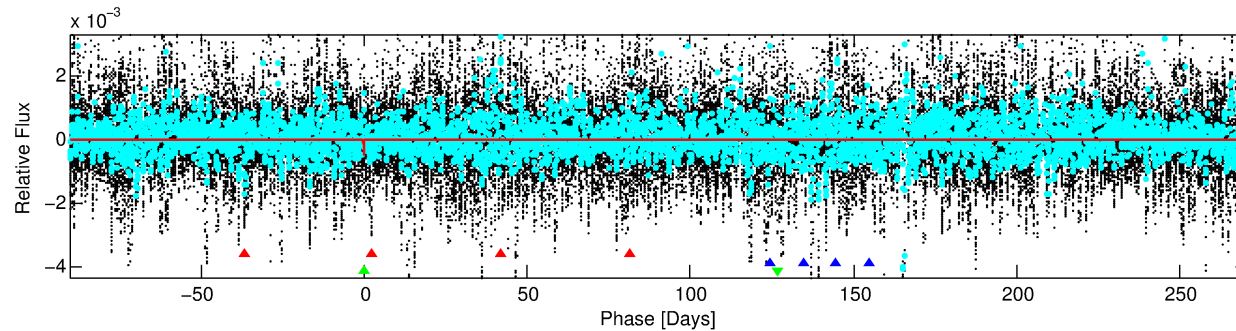
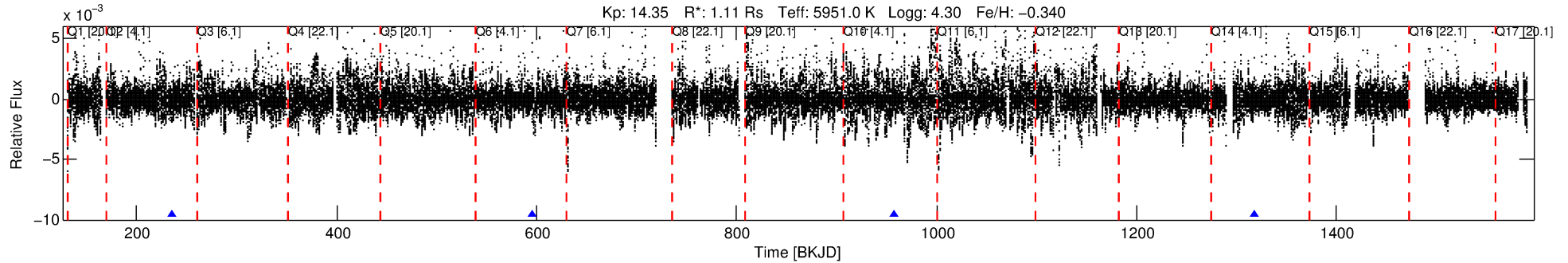
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006223256-03

No Significant Match Found

DV One-Page Summary

KIC: 6223256 Candidate: 3 of 3 Period: 361.127 d



DV Fit Results:

Period = 361.12705 [0.00940] d
Epoch = 234.7453 [0.0194] BKJD
Rp/R* = 0.0205 [0.0535]
a/R* = 374.77 [4753.60]
b = 0.02 [732.93]
Seff = 1.51 [0.55]
Teq = 283 [26] K
Rp = 2.49 [6.52] Re
a = 0.9578 [0.2268] AU
Ag = 51827.76 [271600.59] [0.19 σ]
Teffp = 6596 [8625] K [0.73 σ]

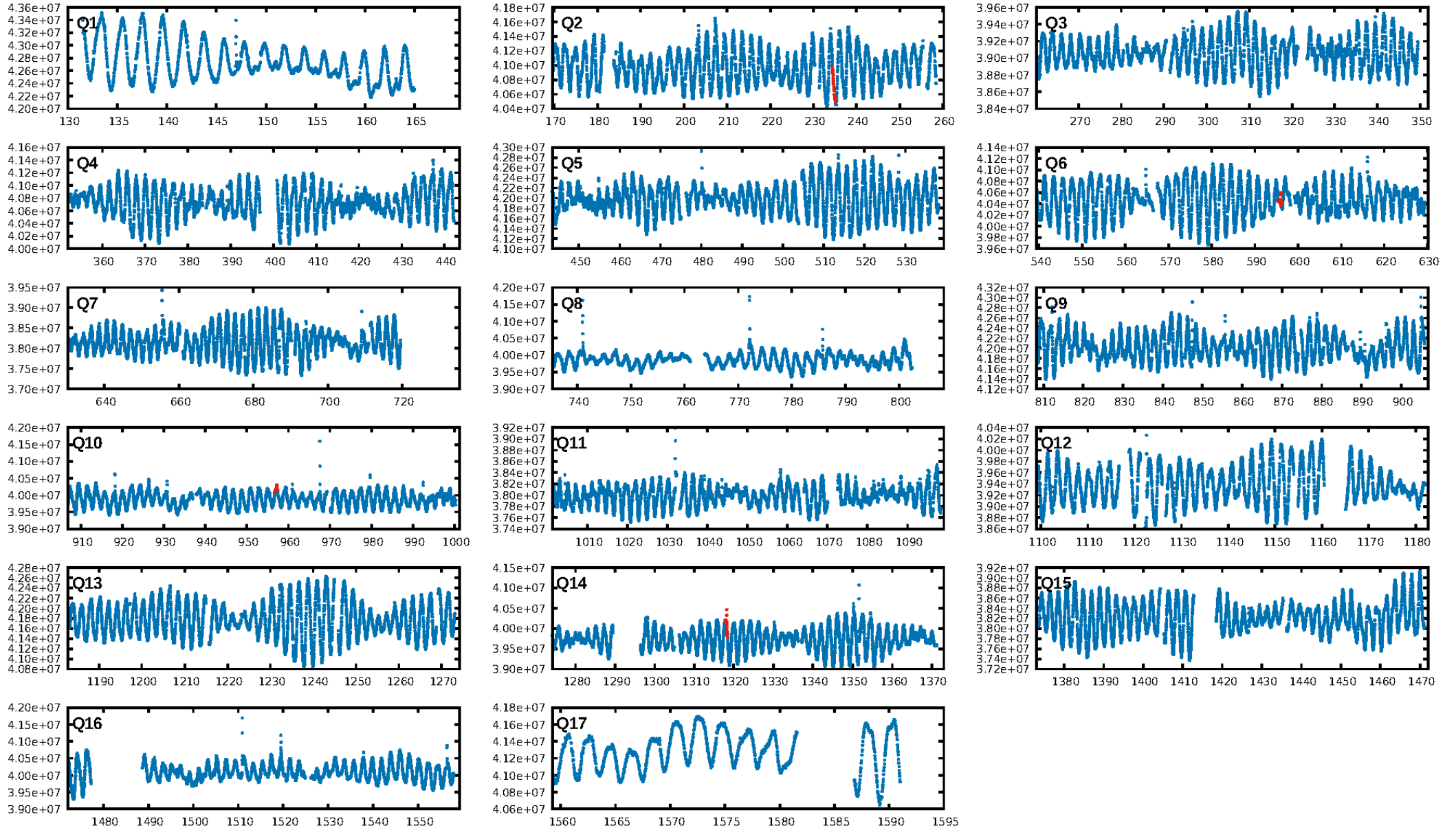
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [28.52 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 3.35e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.925
Centroid-sig: 63.9%
Centroid-so: 1.116 arcsec [0.68 σ]
OotOffset-rm: 0.027 arcsec [0.28 σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-rm: 0.187 arcsec [1.93 σ]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [4/4]

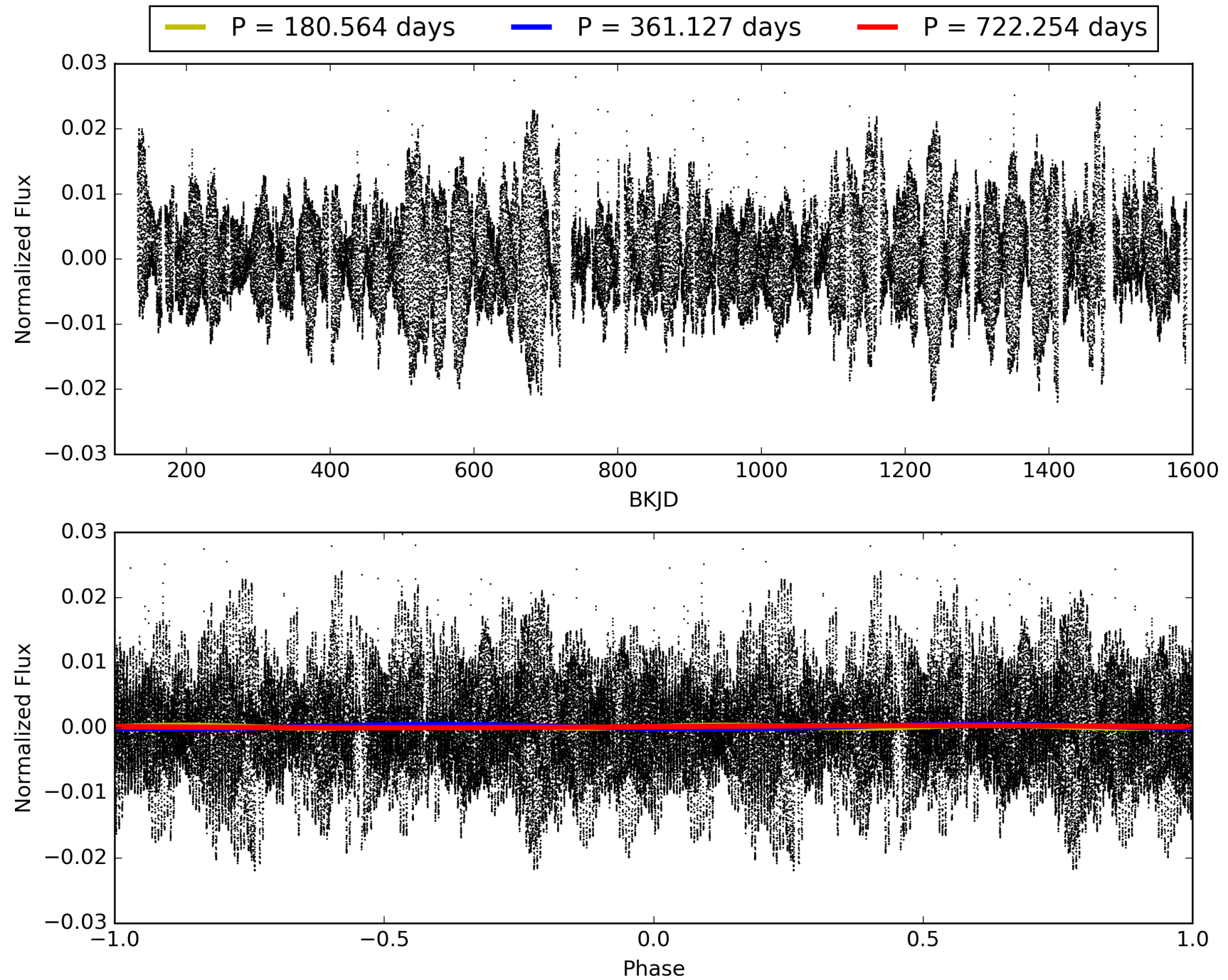
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:10:02 Z

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

TCE 006223256-03, PDC Light Curves

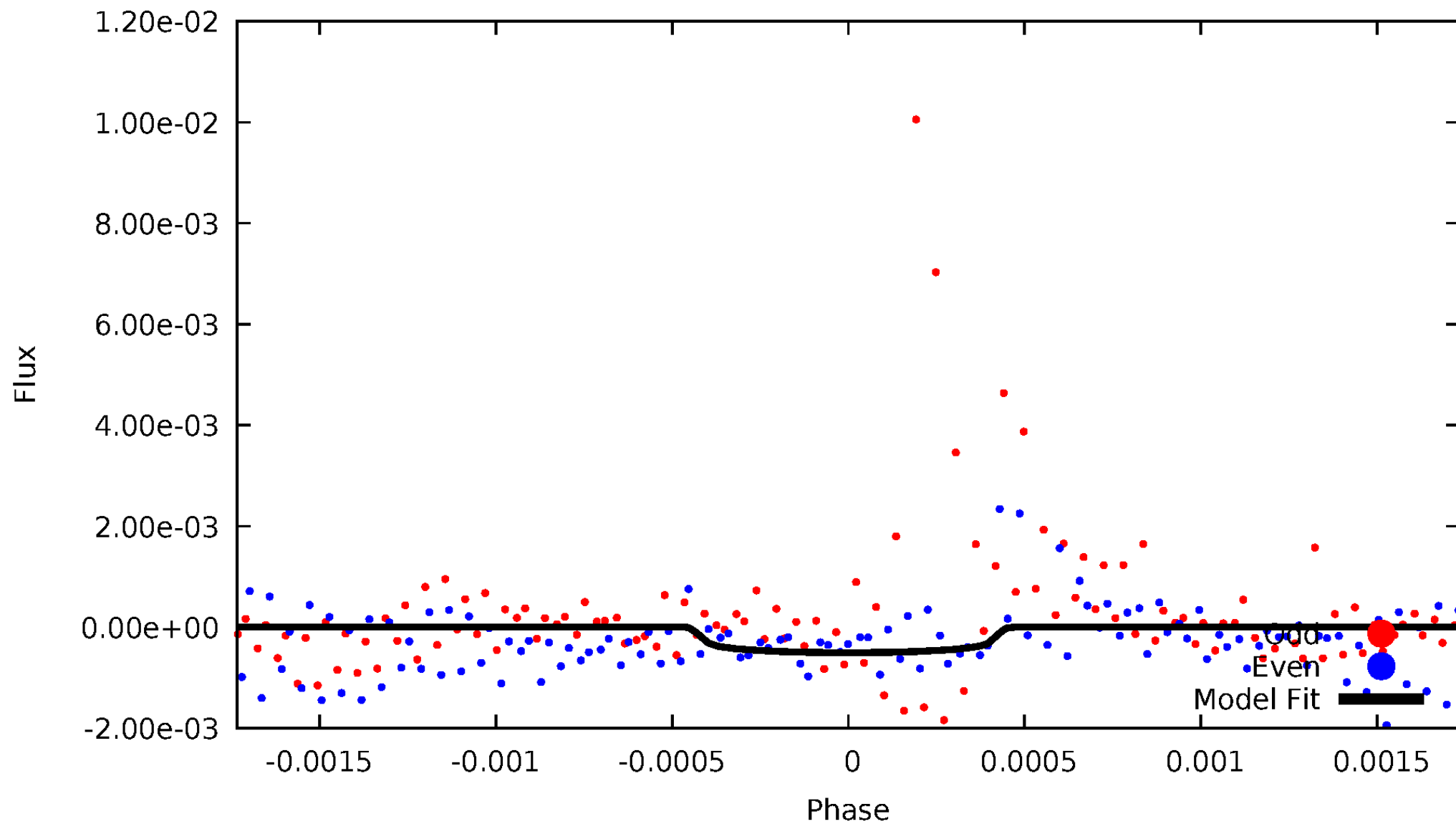


TCE 006223256-03



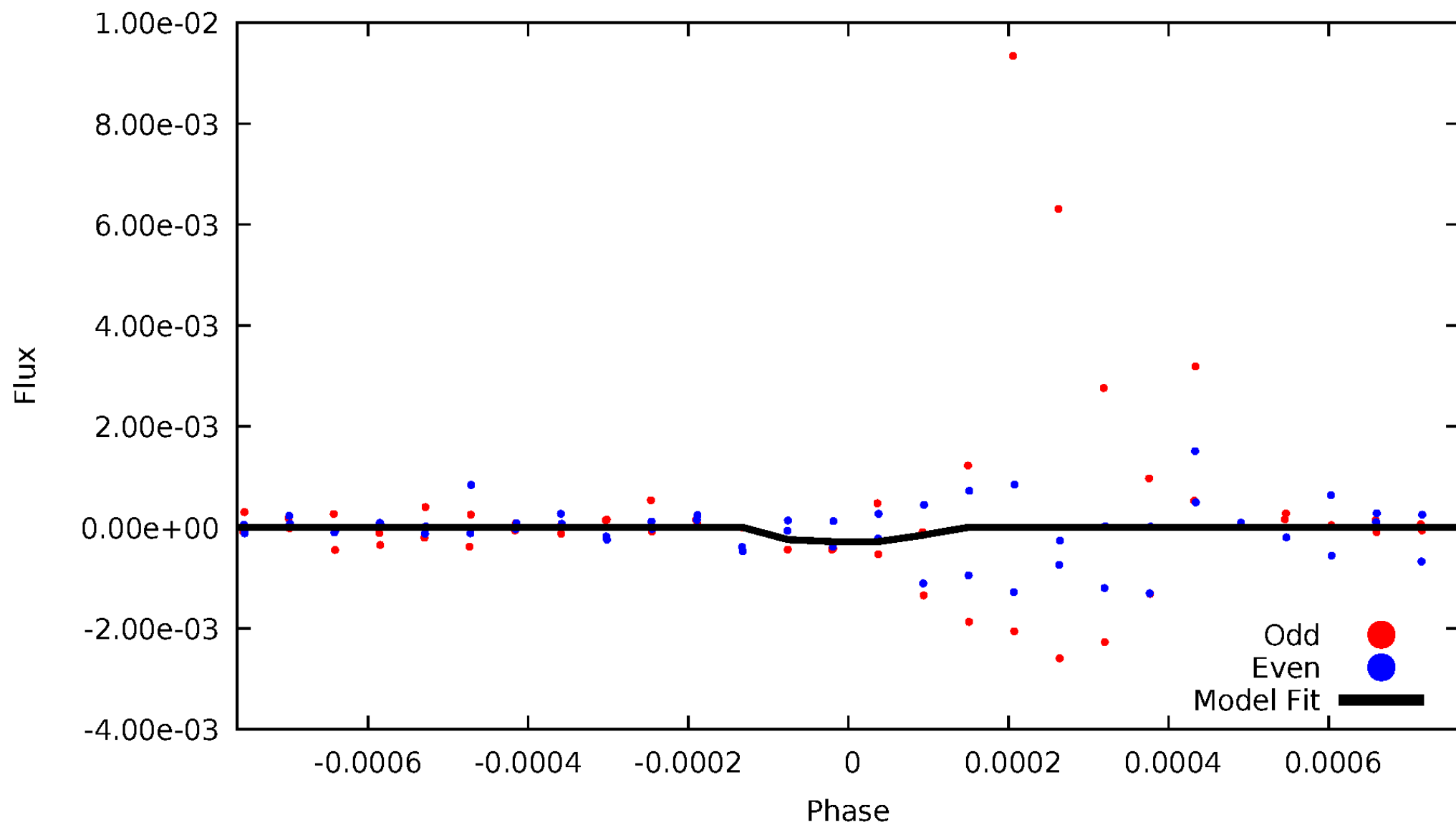
DV Odd/Even

TCE 006223256-03

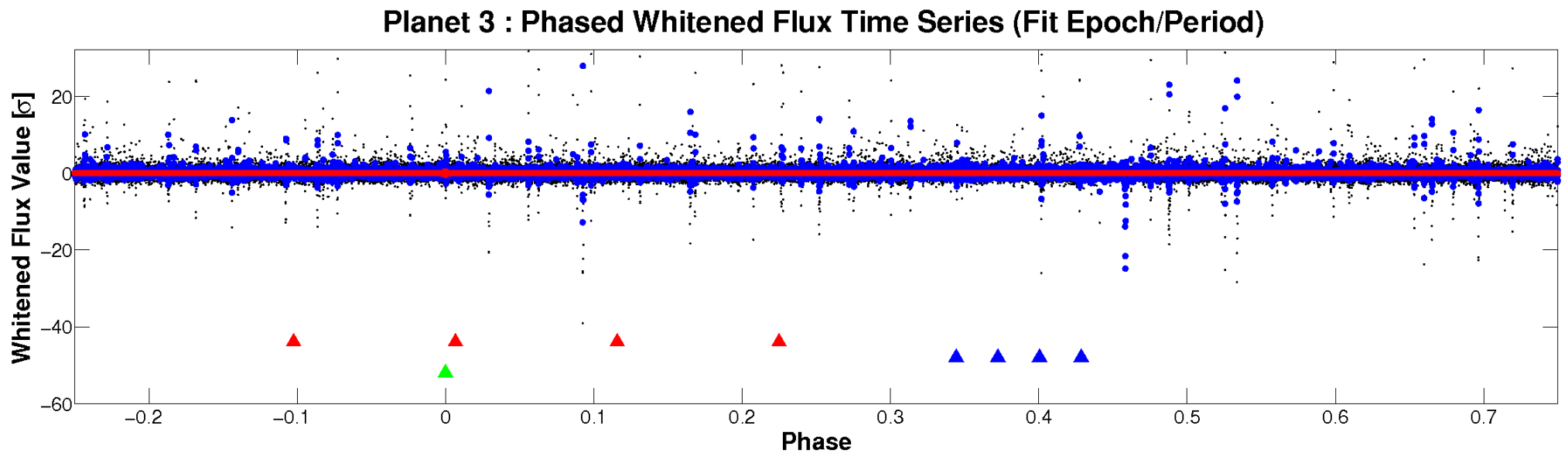
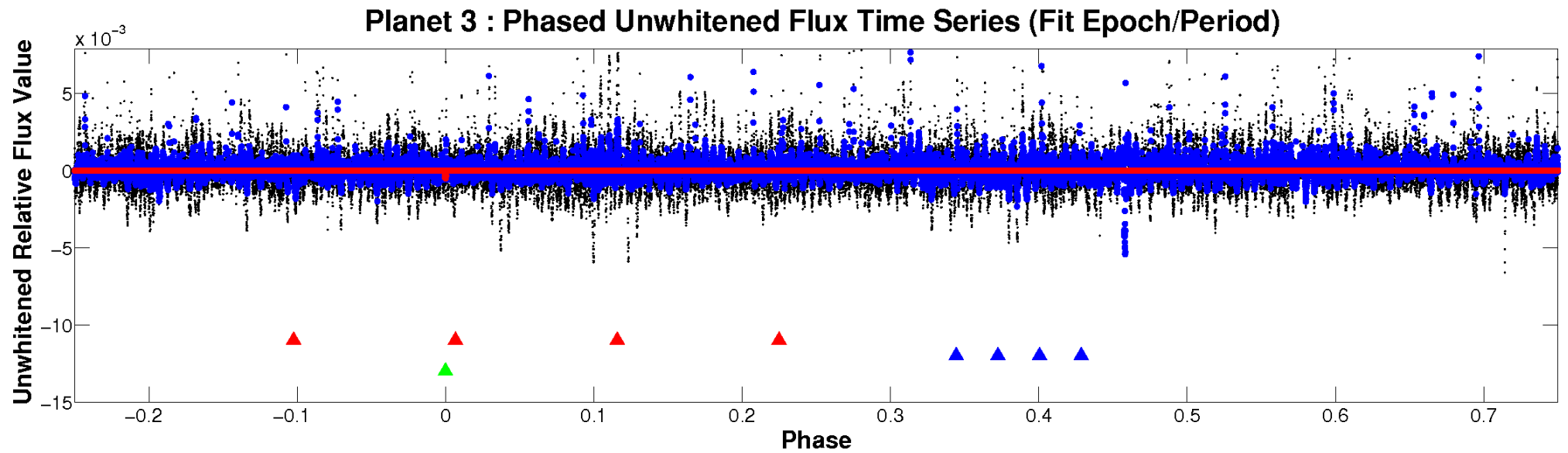


ALT Odd/Even

TCE 006223256-03

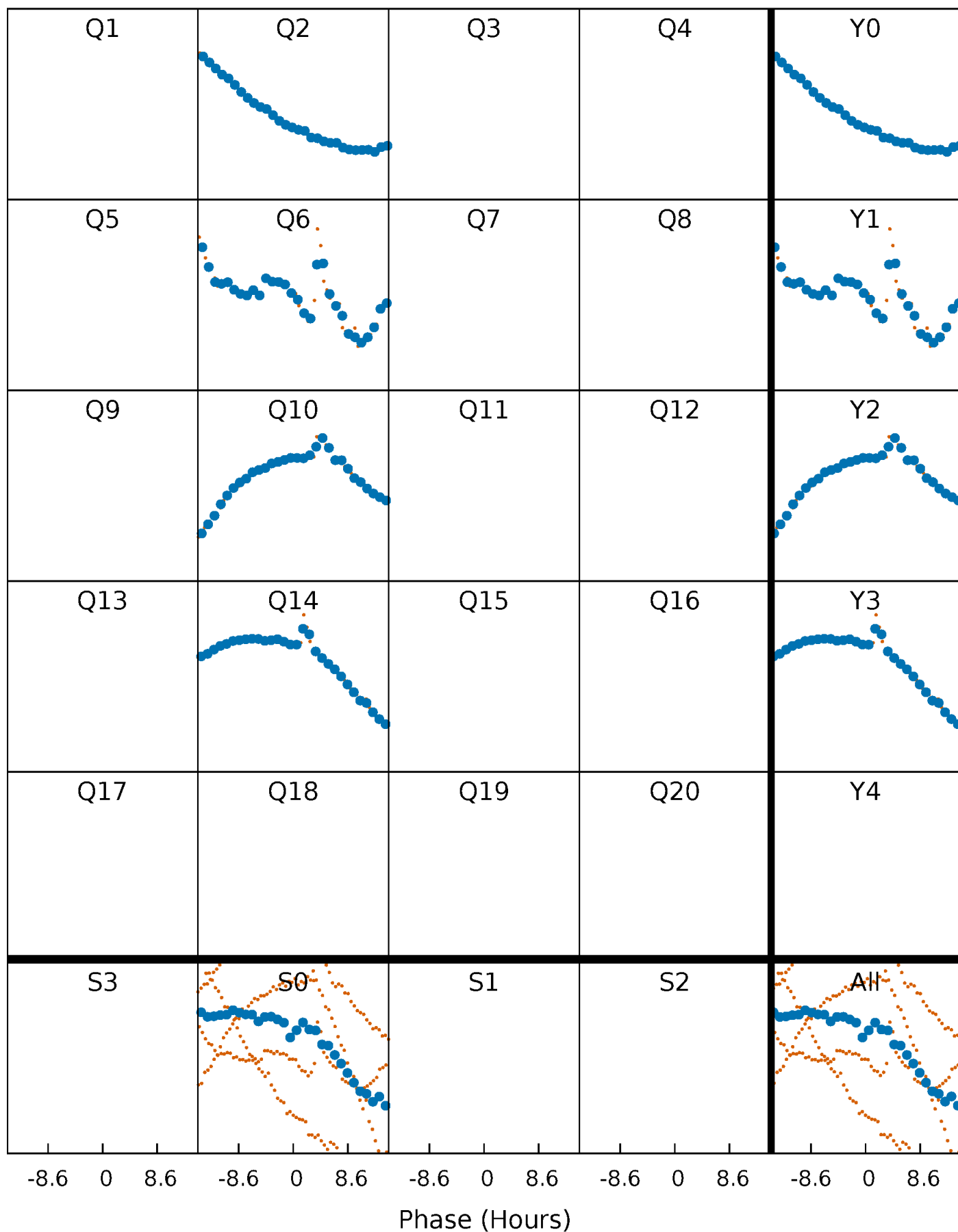


Non-Whitened Vs. Whitened Light Curve



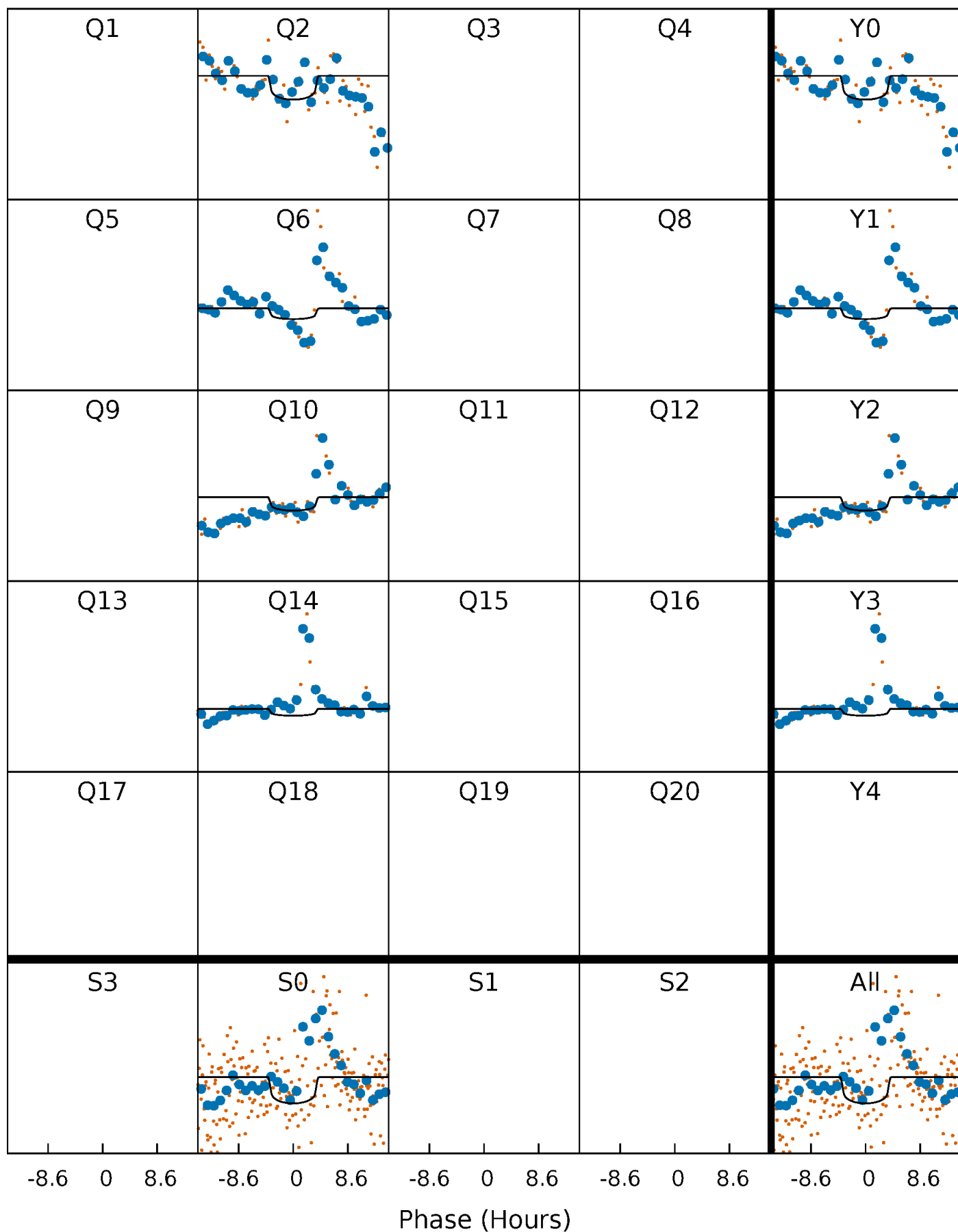
PDC Quarter-Phased Transit Curves

TCE 006223256-03 P=361.127054 Days $T_0=234.745340$ (BKJD)



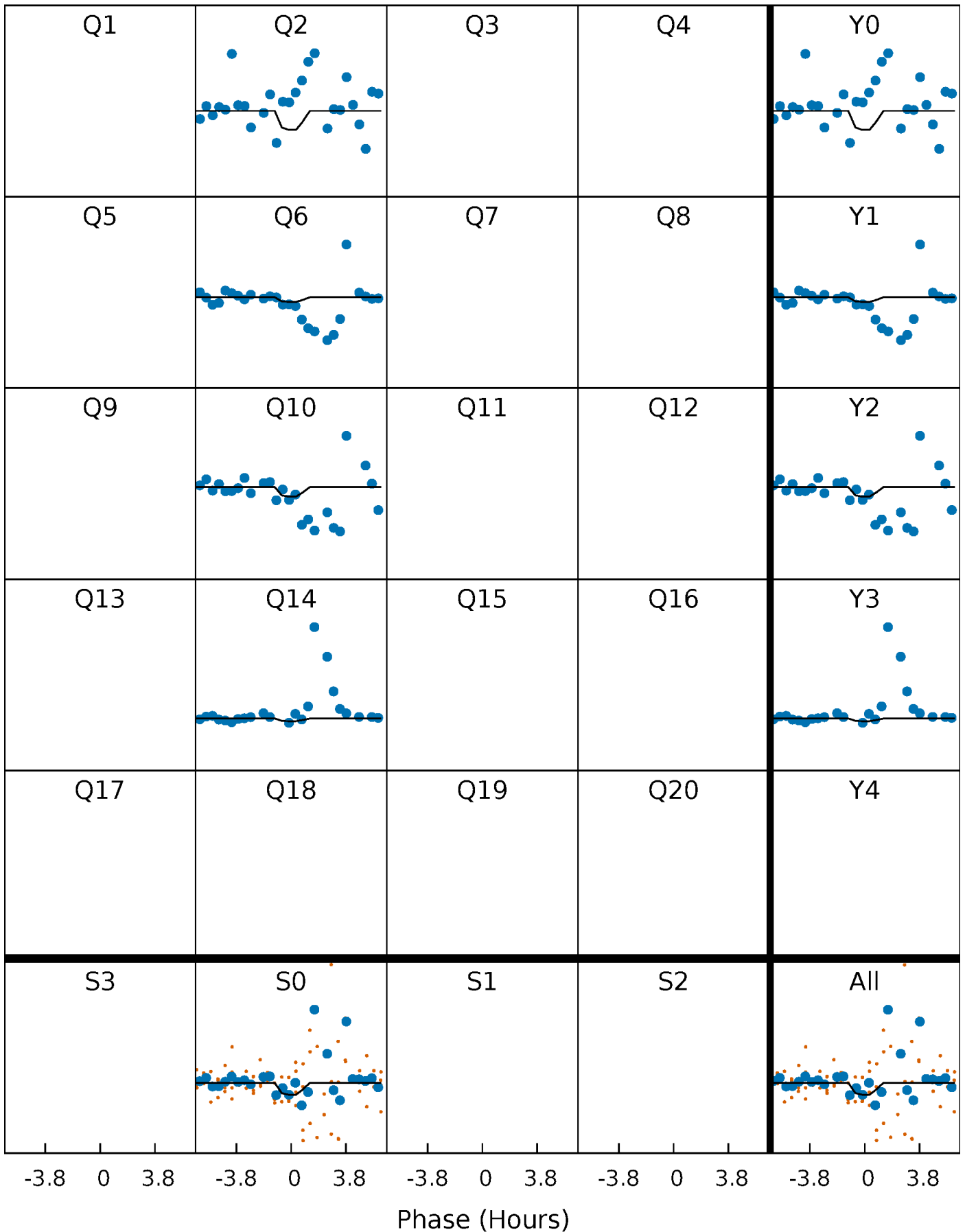
DV Quarter-Phased Transit Curves

TCE 006223256-03 $P=361.127054$ Days $T_0=234.745340$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

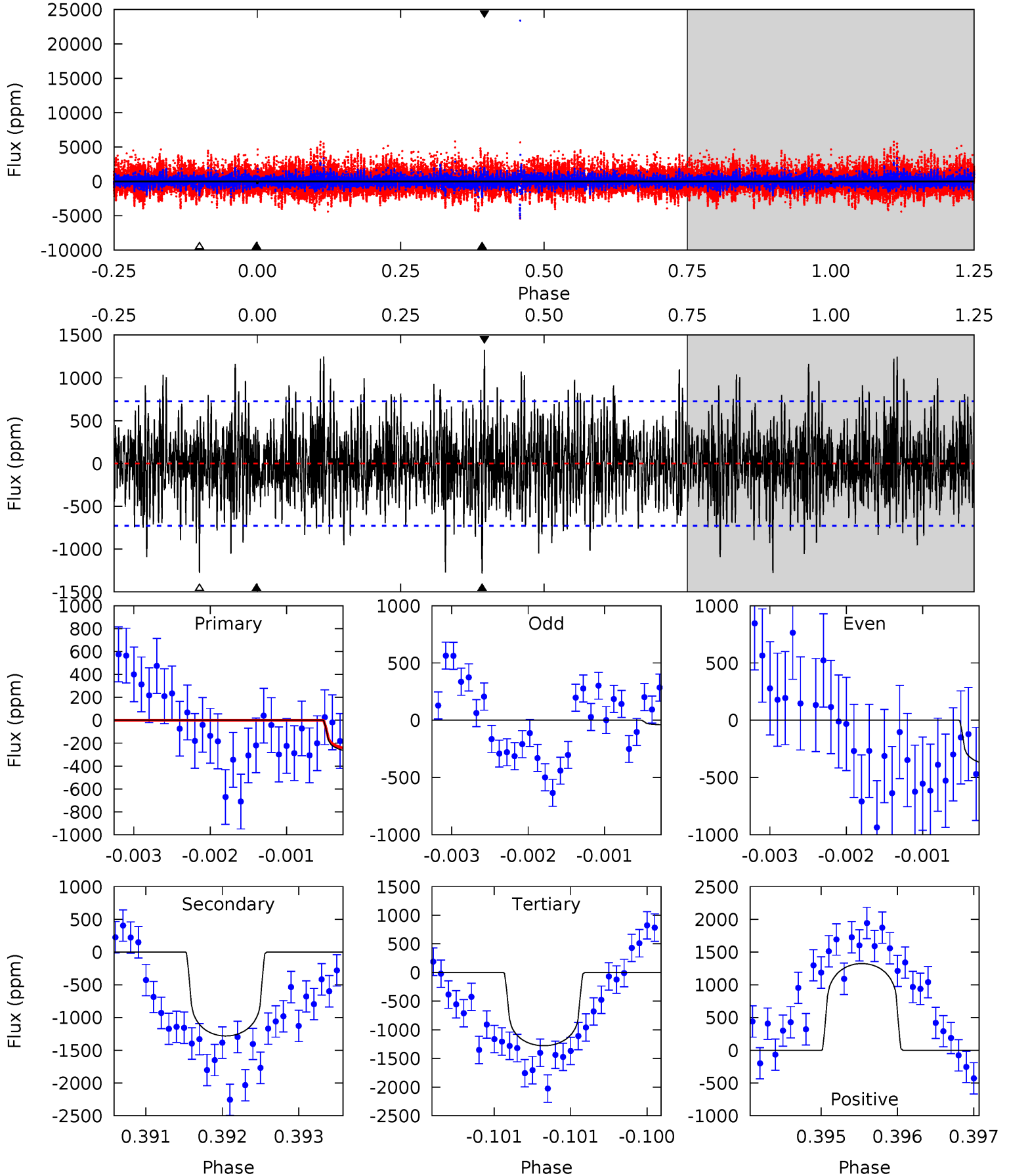
TCE 006223256-03 P=361.123186 Days $T_0=234.751834$ (BKJD)



DV Model-Shift Uniqueness Test

006223256-03, P = 361.127054 Days, E = 234.745340 Days

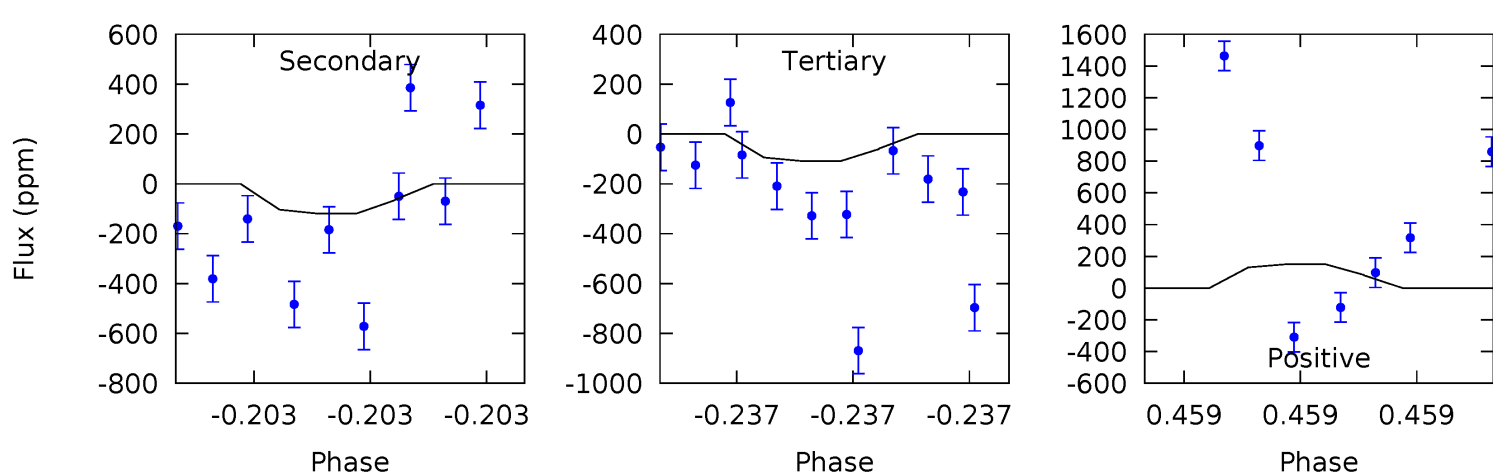
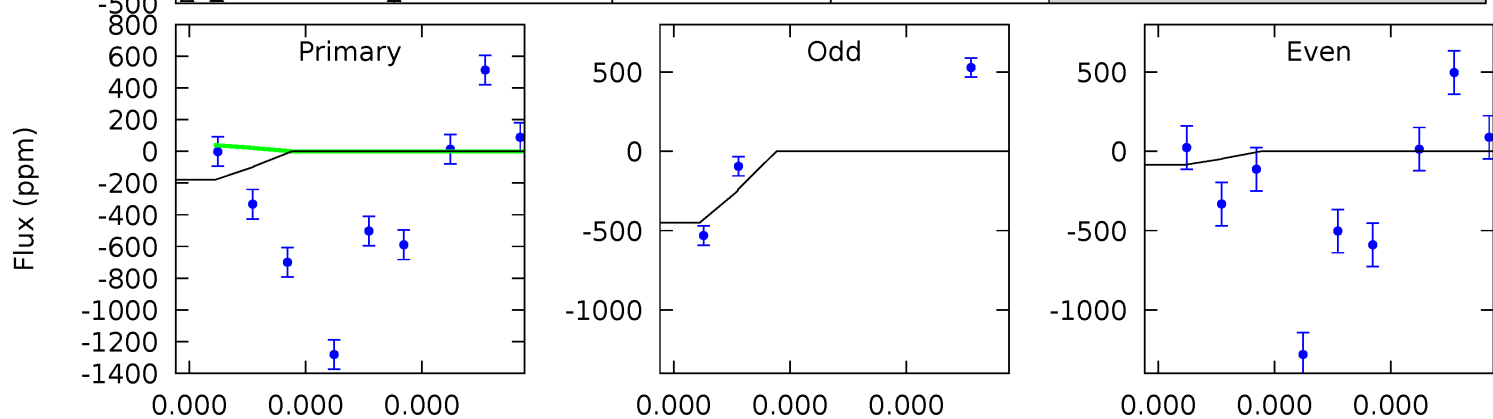
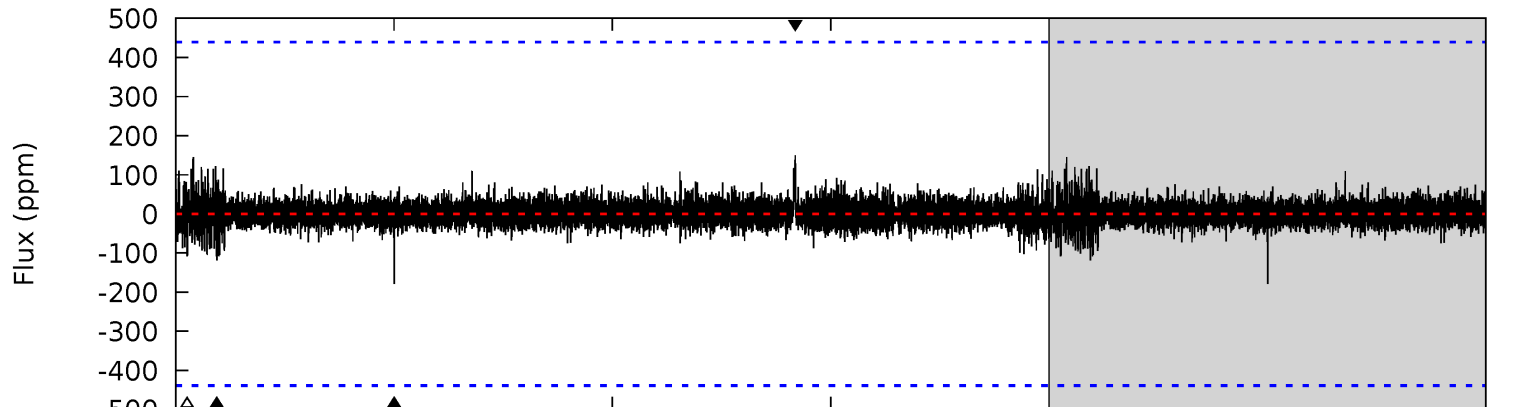
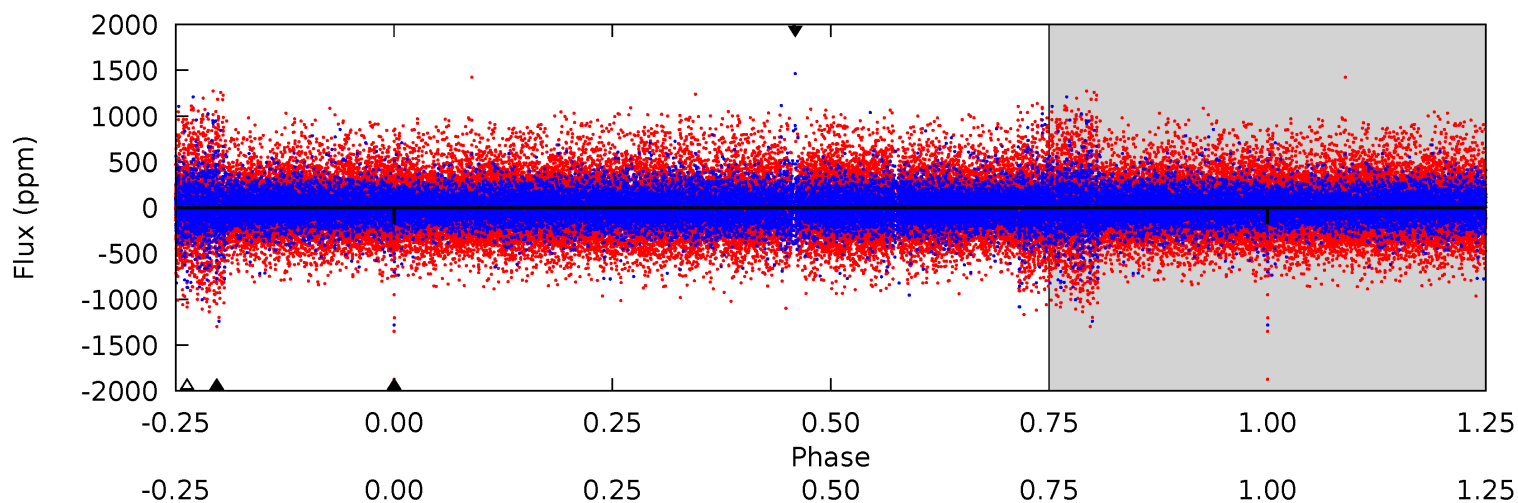
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.12	9.64	9.61	9.96	5.47	3.33	2.65	-7.49	-7.84	0.03	-0.32	1.23	-0.32	0.51	0.18



Alt Model-Shift Uniqueness Test

006223256-03, P = 361.123186 Days, E = 234.751834 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.35	1.56	1.42	1.96	5.76	3.76	0.29	0.92	0.38	0.14	-0.40	2.28	1.01	0.46	1.21



Stellar Parameters For KIC 006223256

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5951^{+178}_{-178}	$4.300^{+0.190}_{-0.190}$	$-0.340^{+0.300}_{-0.300}$	$1.111^{+0.311}_{-0.254}$	$0.899^{+0.131}_{-0.087}$	$0.924^{+0.916}_{-0.464}$
	+3%/-3%	+4%/-4%	+88%/-88%	+28%/-23%	+15%/-10%	+99%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006223256-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1282 ± 133	$5.14^{+5.31}_{-3.45}$	396^{+32}_{-31}	5426^{+4961}_{-1301}	$24656^{+190319}_{-18771}$
Alt.	-119 ± 76	$5.18^{+5.60}_{-3.66}$	394^{+31}_{-25}	3417^{+2015}_{-779}	1918^{+22727}_{-1623}

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

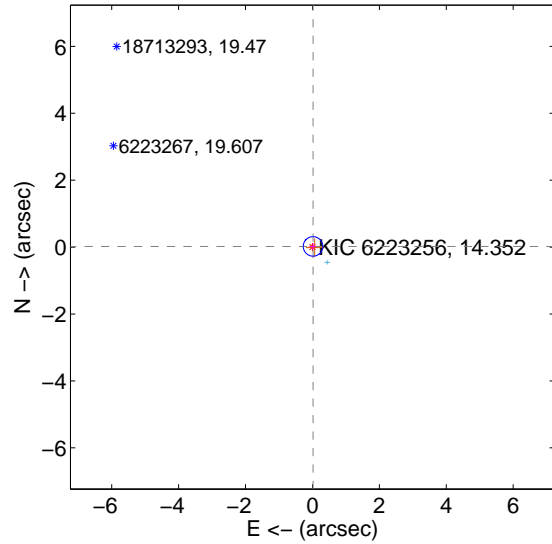
Supplemental centroid analysis for 006223256-03. Kepler magnitude: 14.35. Transit SNR 2.56

There are 1 quarters with good PRF difference image offsets

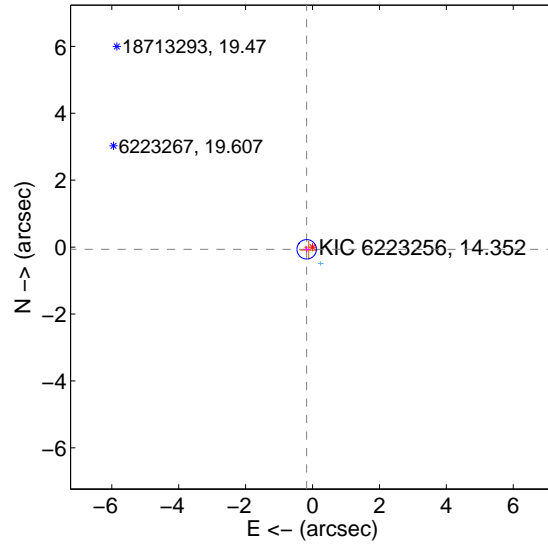
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.027 ± 0.097	0.28	-0.018 ± 0.097	0.020 ± 0.098
PRF-fit source offset from KIC position	0.187 ± 0.097	1.93	0.175 ± 0.097	-0.066 ± 0.098
photometric centroid source offset	1.12 ± 1.64	0.68	0.85 ± 1.35	-0.72 ± 1.97

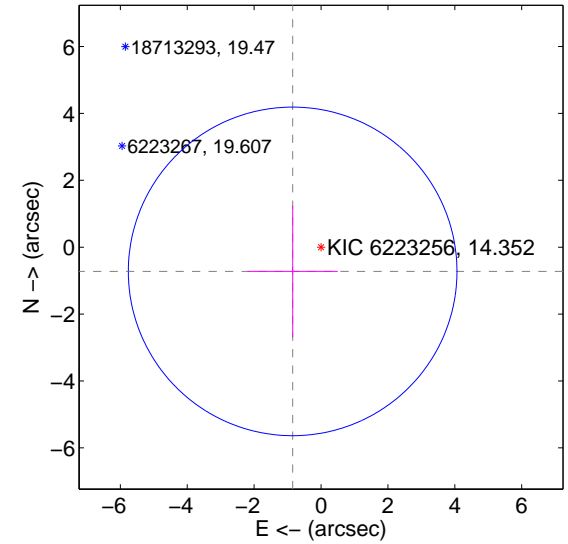
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



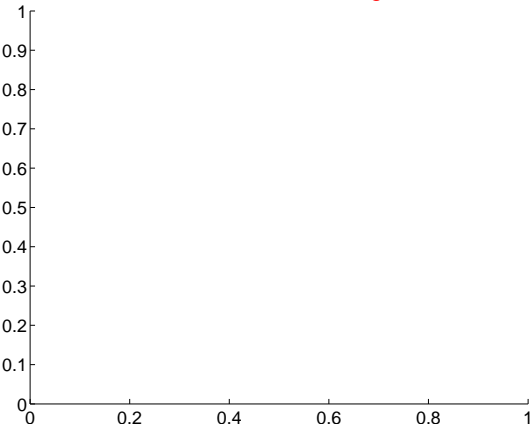
offset from photometric centroids



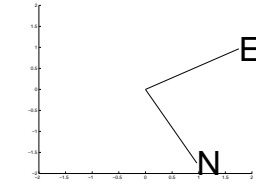
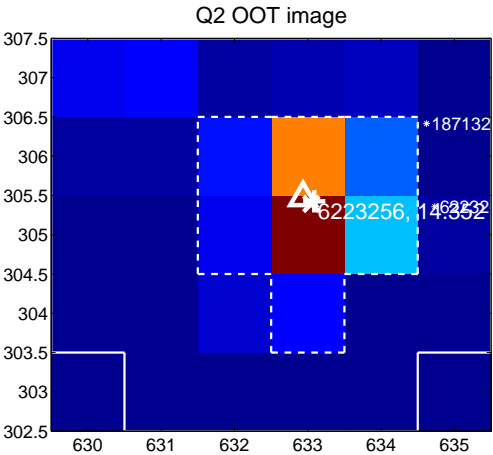
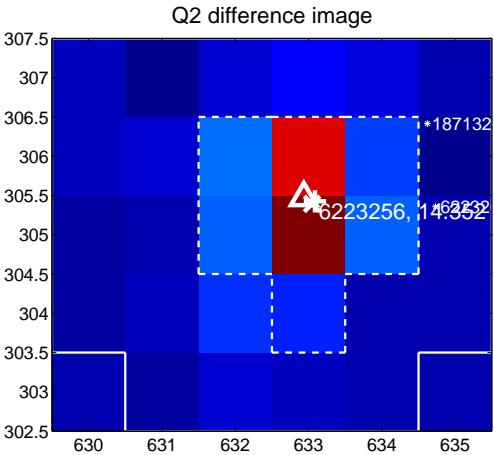
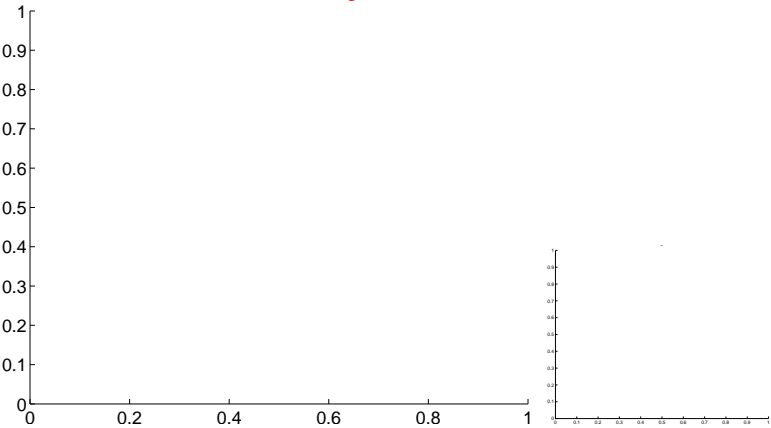
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

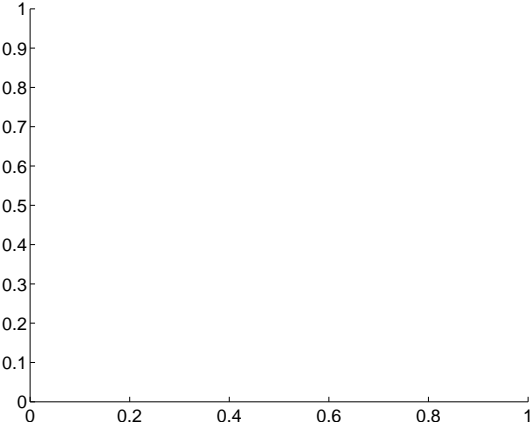
Q1 no difference image



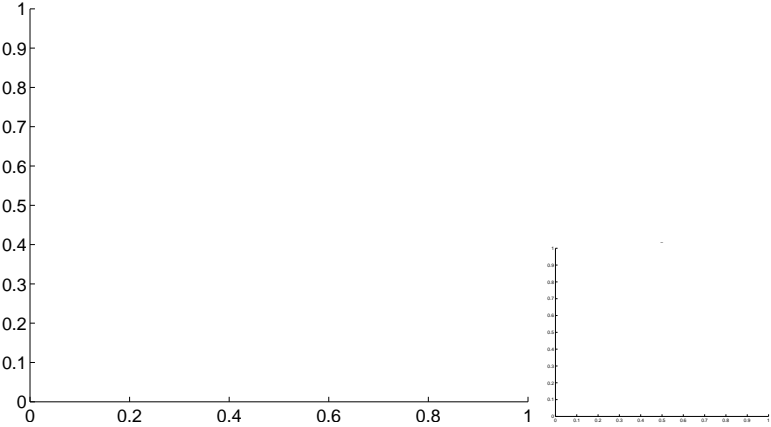
Q1 no OOT image



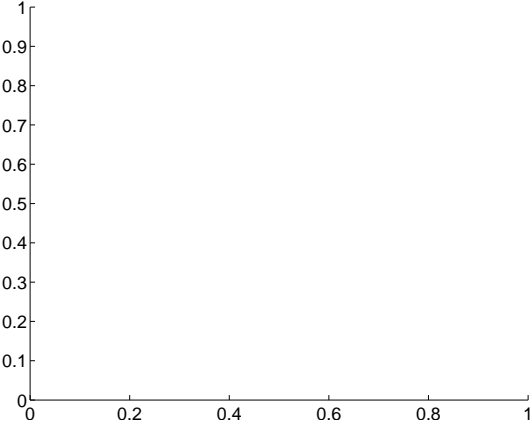
Q3 no difference image



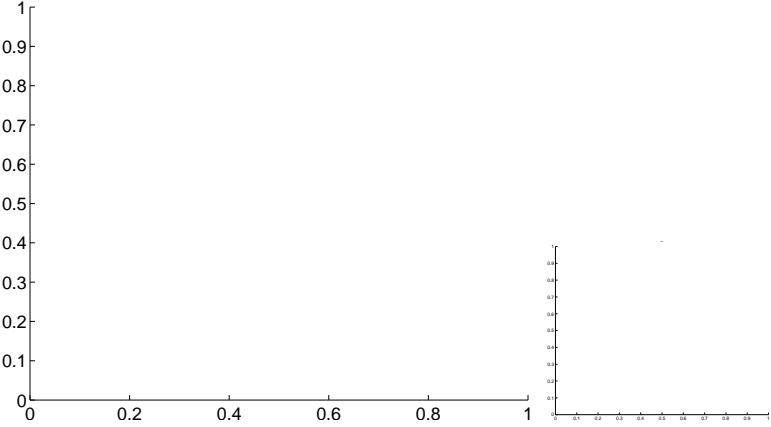
Q3 no OOT image



Q4 no difference image

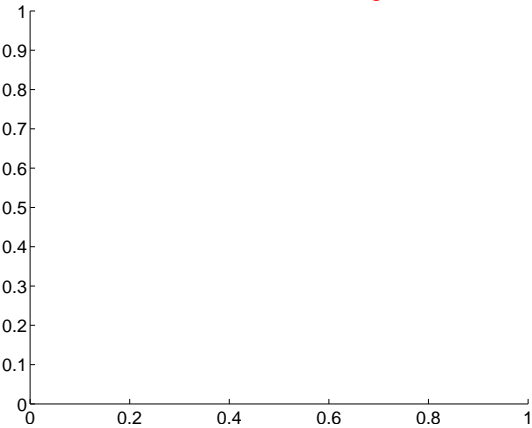


Q4 no OOT image

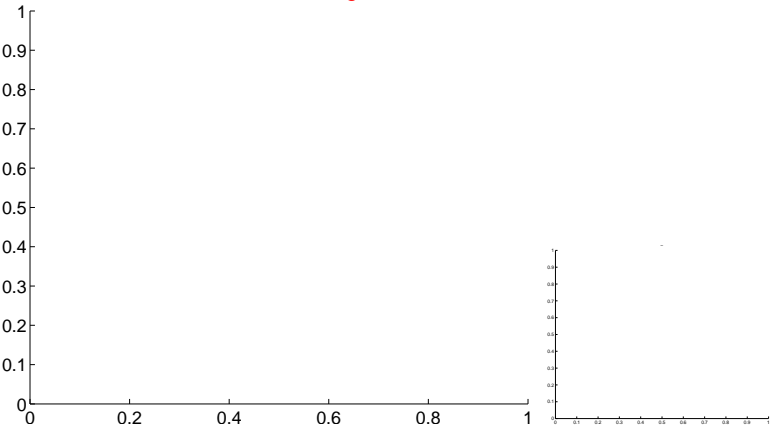


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

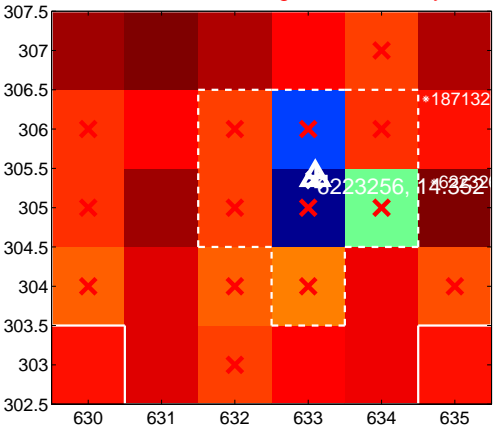
Q5 no difference image



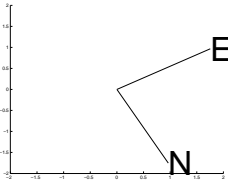
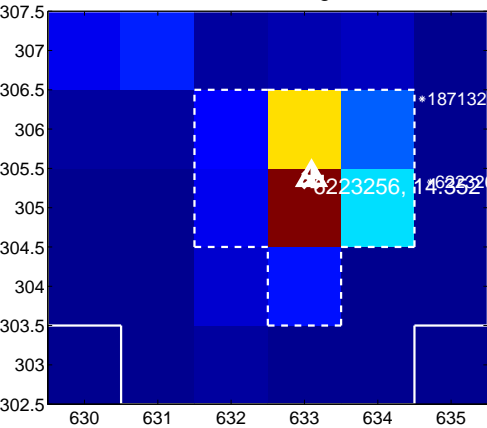
Q5 no OOT image



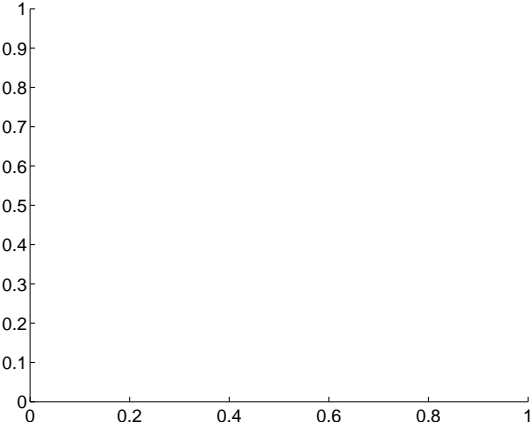
Q6 difference image. Poor Quality



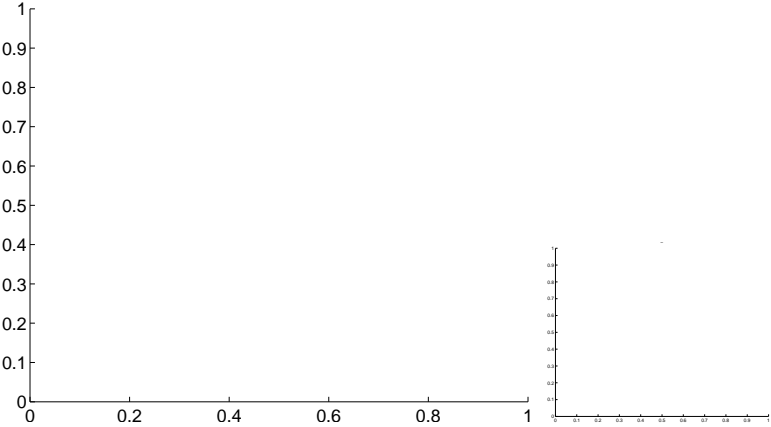
Q6 OOT image



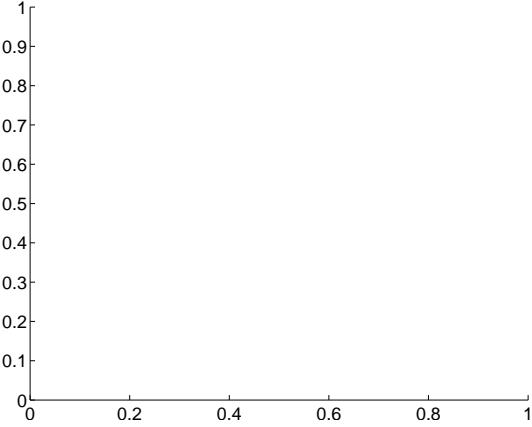
Q7 no difference image



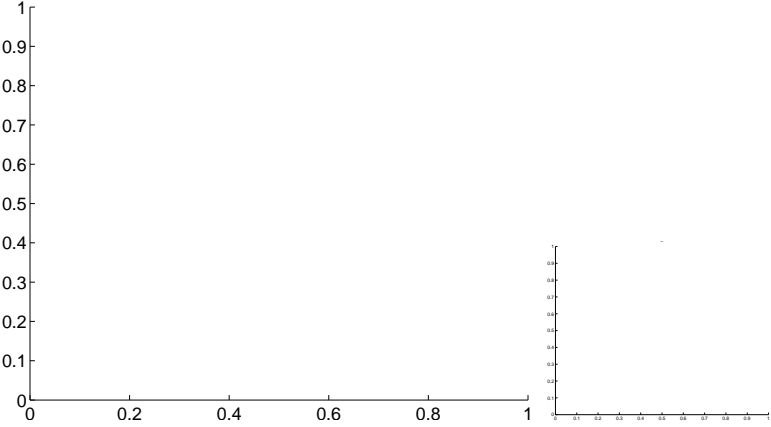
Q7 no OOT image



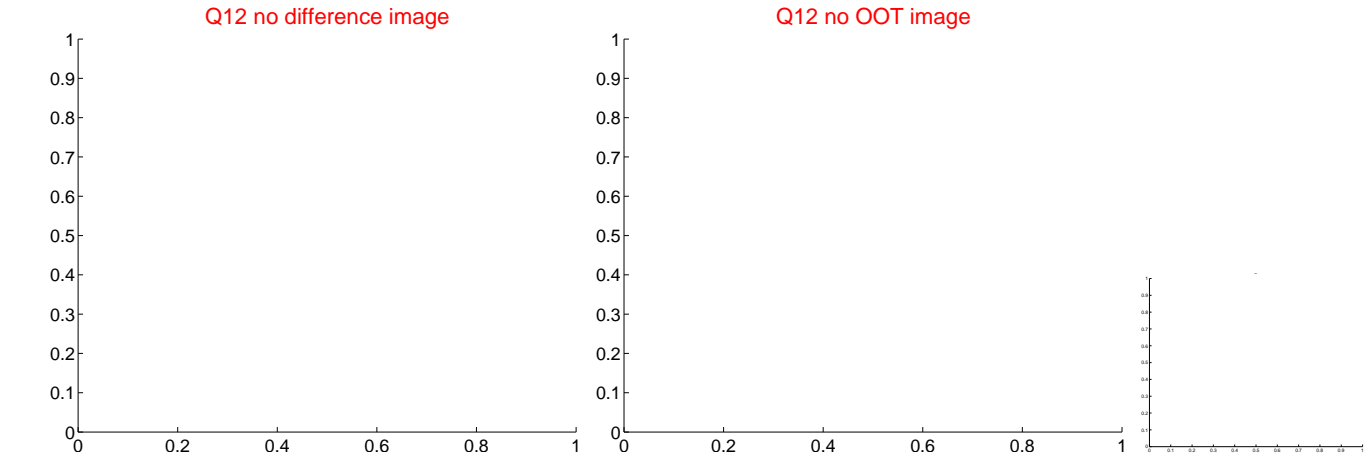
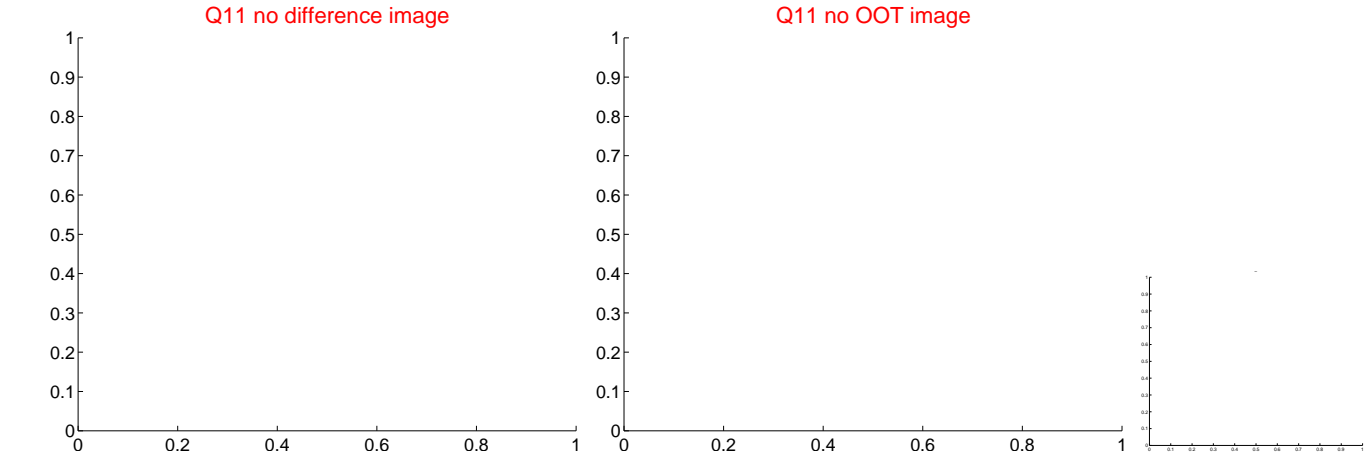
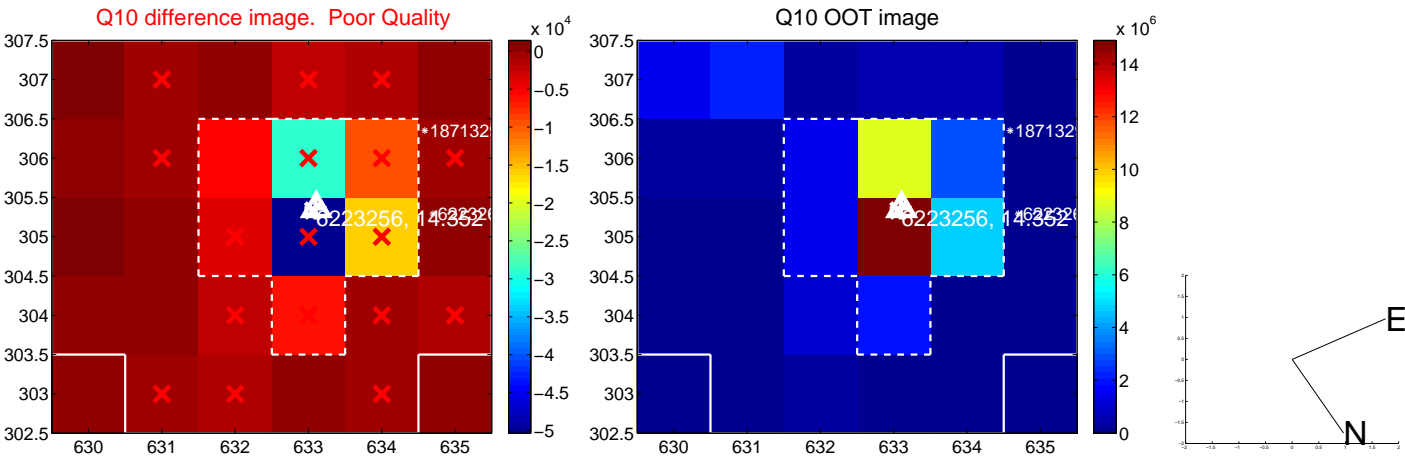
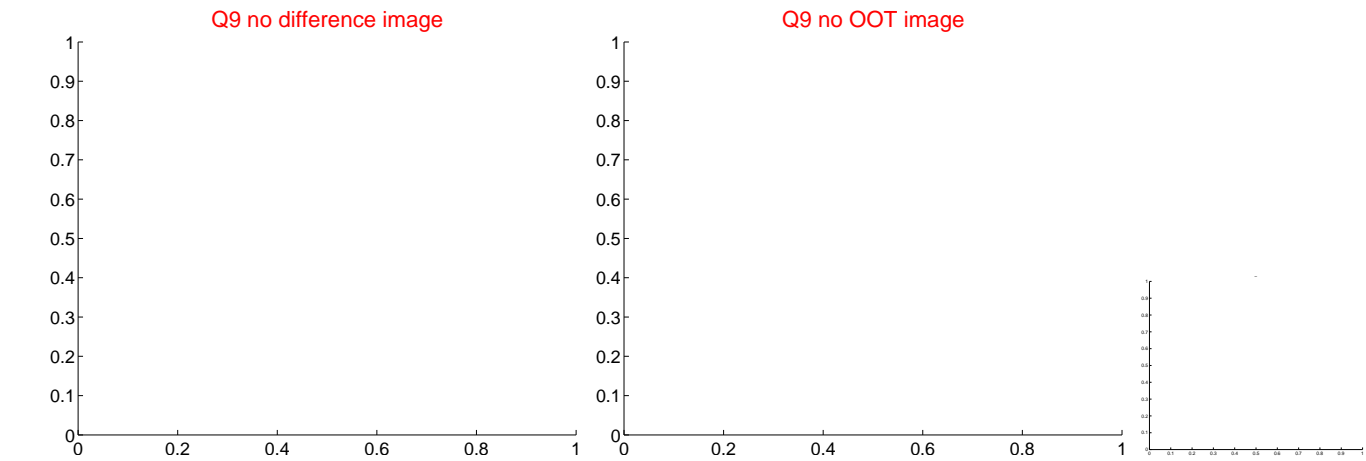
Q8 no difference image



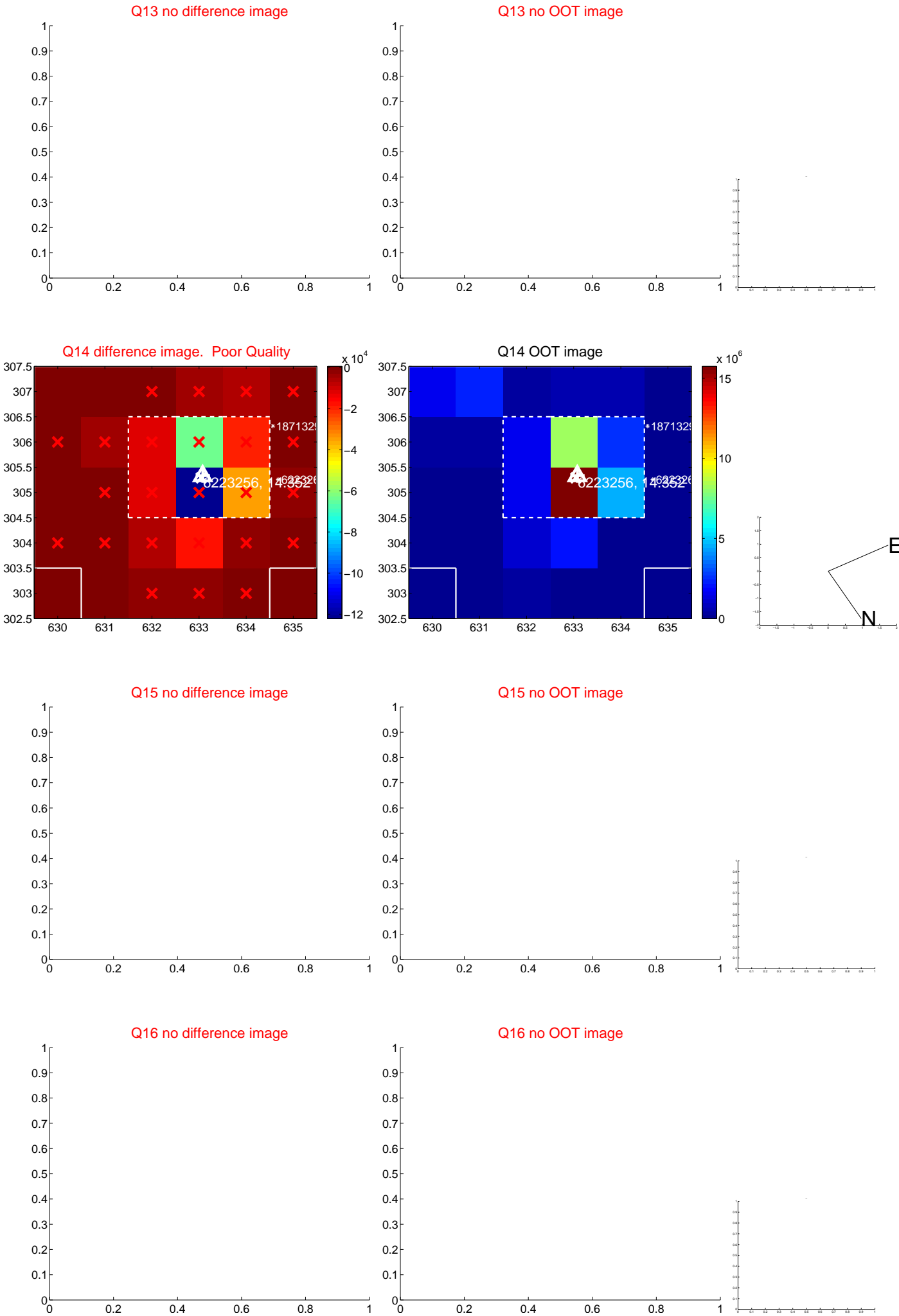
Q8 no OOT image



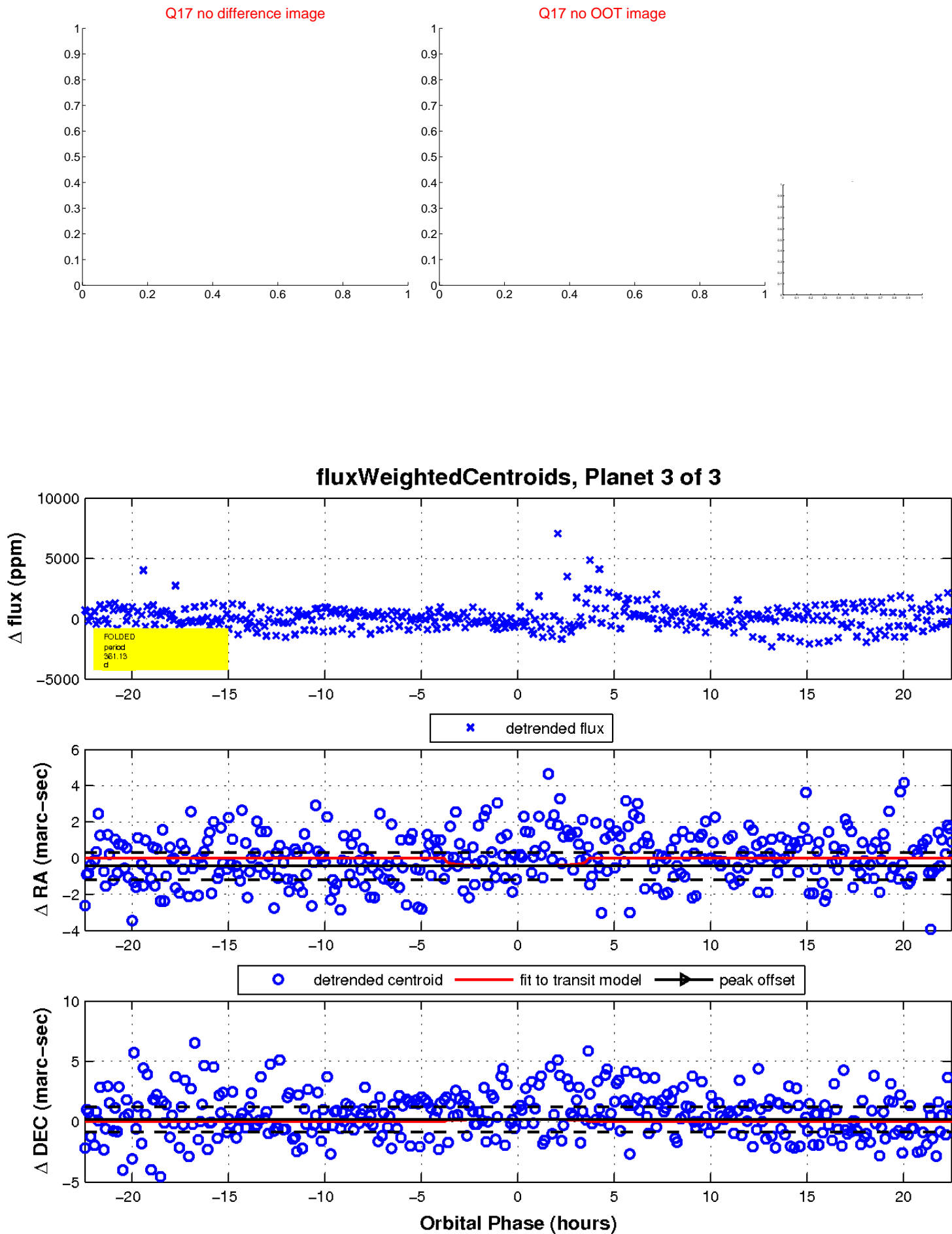
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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

