

KIC 004346875

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})
004346875-01	OBS	6113.01	4.694220	133.780145	177872.2	4.551	5236.9	3295.2	0.79	5512	50.21	189.68
004346875-02	OBS	No	2.347112	133.779701	17791.2	4.435	543.7	531.4	0.79	5512	13.45	477.97
004346875-03	OBS	No	353.497194	239.052228	1789.8	4.556	12.1	6.2	0.79	5512	3.42	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004346875-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
004346875-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
004346875-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— 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.

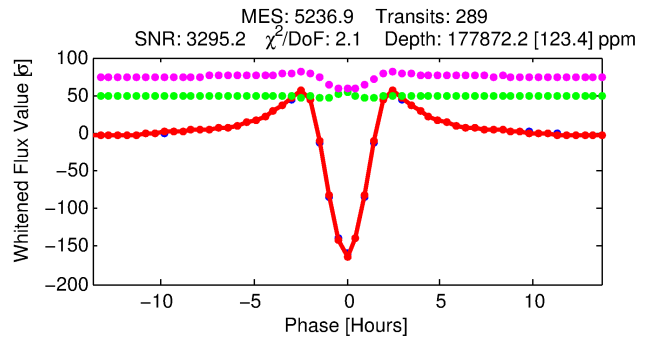
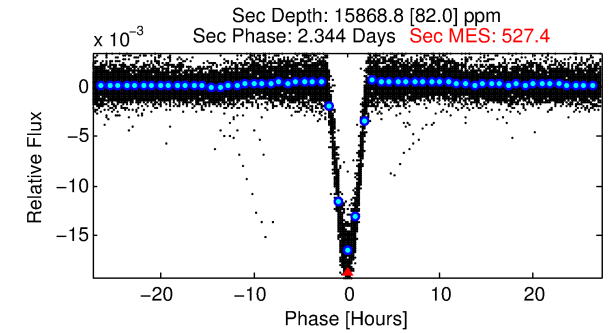
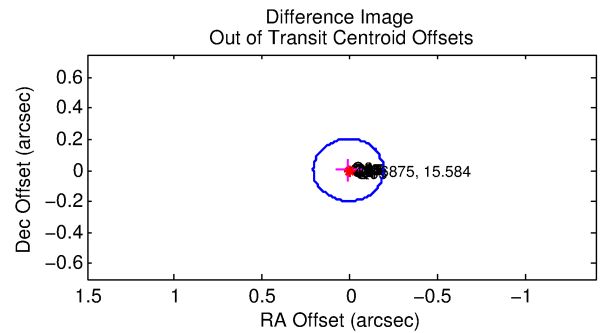
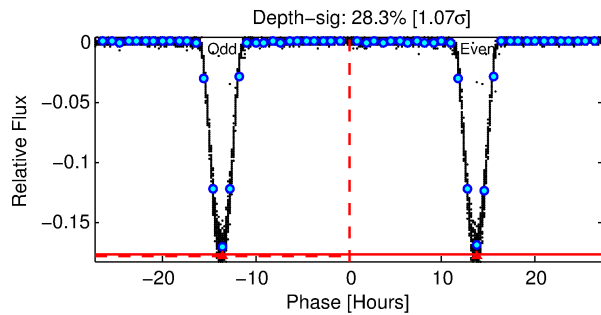
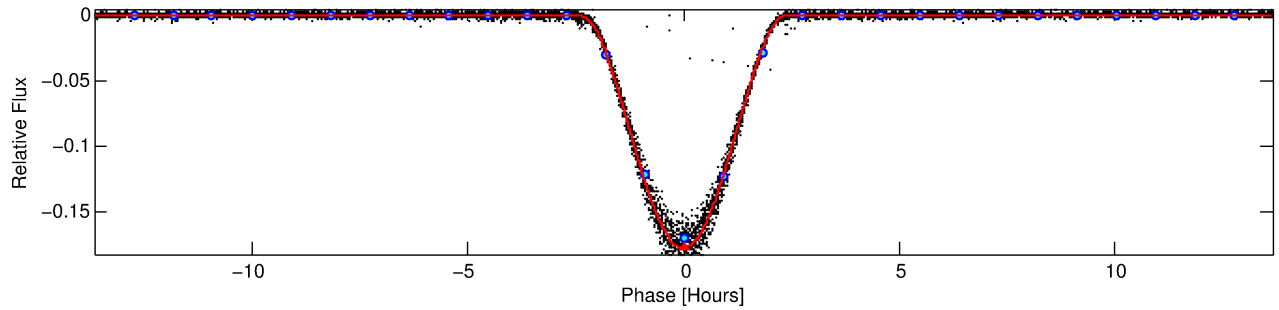
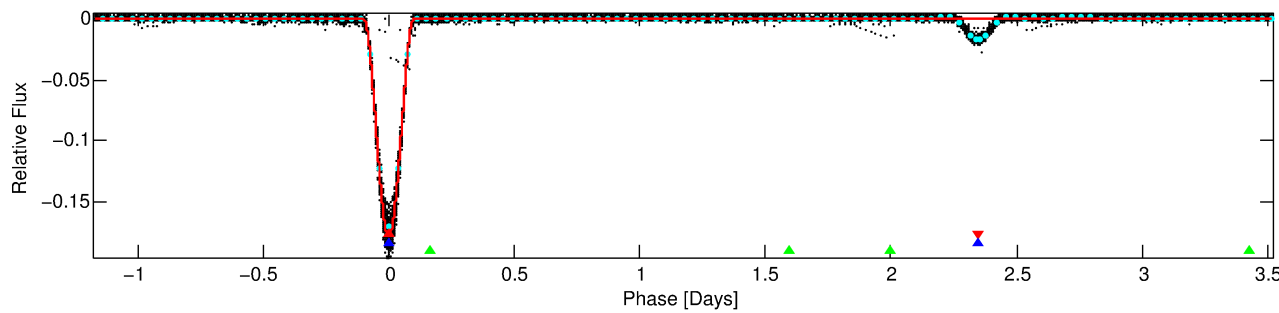
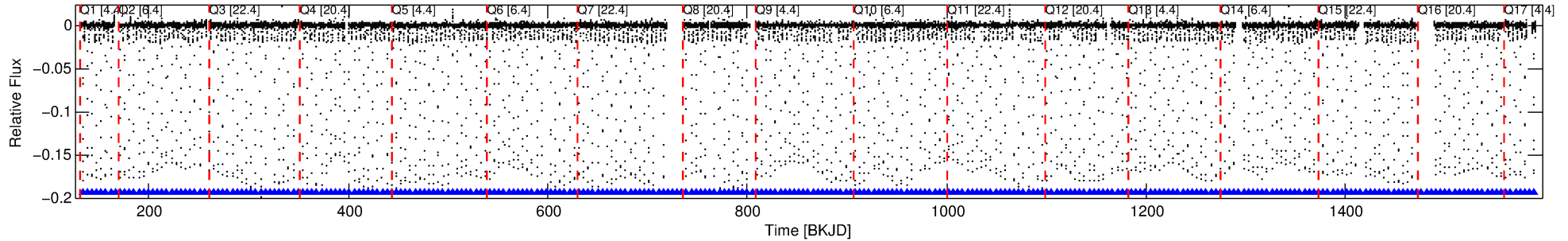
Ephemeris Match Information For 004346875-01

No Significant Match Found

DV One-Page Summary

KIC: 4346875 Candidate: 1 of 3 Period: 4.694 d
KOI: K06113.01 Corr: 0.999

Kp: 15.58 R*: 0.79 Rs Teff: 5512.0 K Logg: 4.58 Fe/H: -0.240



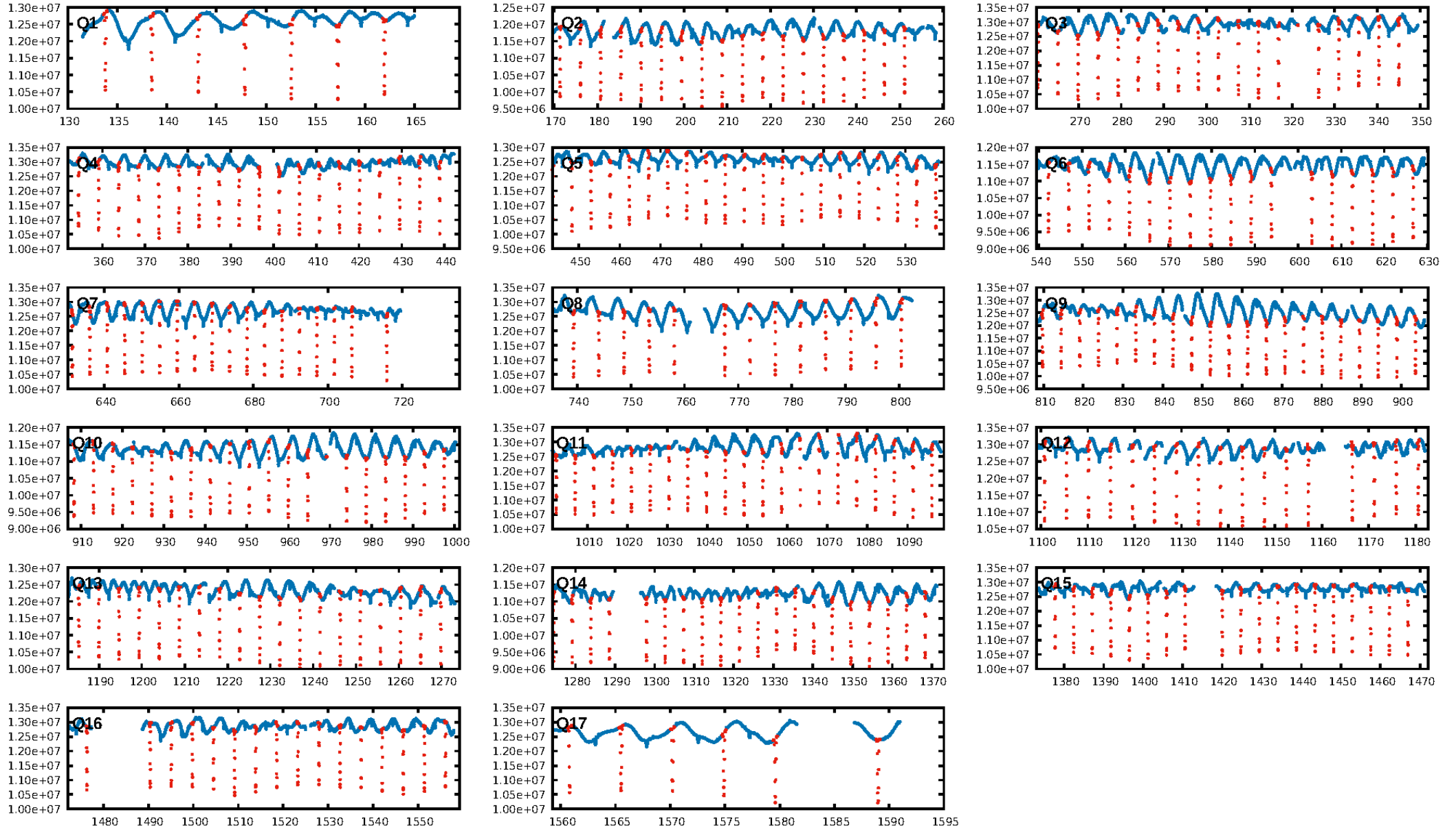
DV Fit Results:

Period = 4.69422 [0.00000] d
Epoch = 133.7801 [0.0000] BKJD
Rp/R* = 0.5847 [0.0190]
a/R* = 10.33 [0.05]
b = 0.90 [0.03]
Seff = 189.68 [53.54]
Teff = 946 [67] K
Rp = 50.21 [11.35] Re
a = 0.0520 [0.0094] AU
Ag = 9.35 [2.46] [3.39σ]
Teffp = 2558 [88] K [14.63σ]

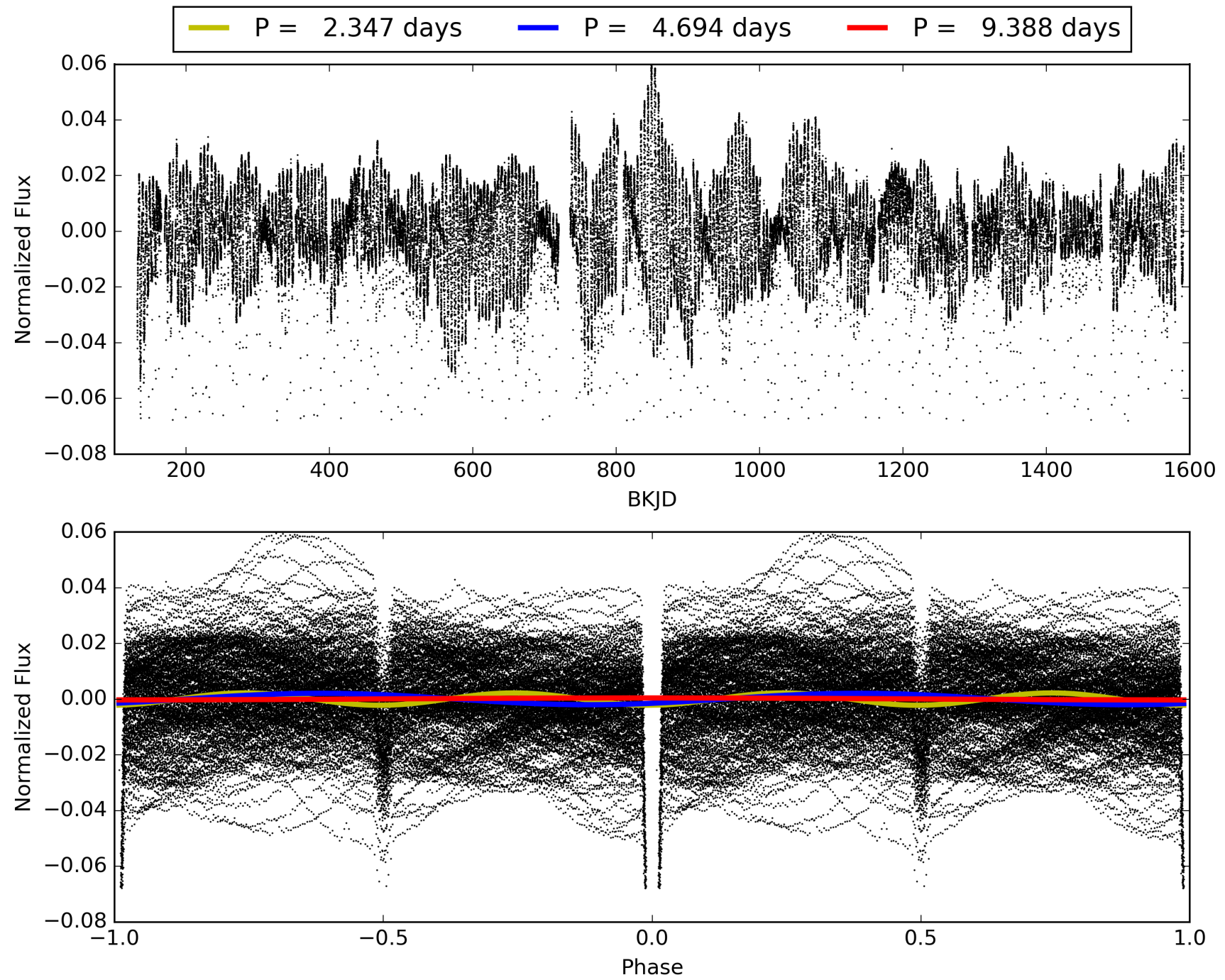
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.86σ]
LongPeriod-sig: 100.0% [1299.91σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [276/276]
GhostDiagnostic-chr: 1.482
Centroid-sig: 0.0%
Centroid-so: 0.400 arcsec [182.87σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
KicOffset-rm: 0.079 arcsec [1.16σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 004346875-01, PDC Light Curves

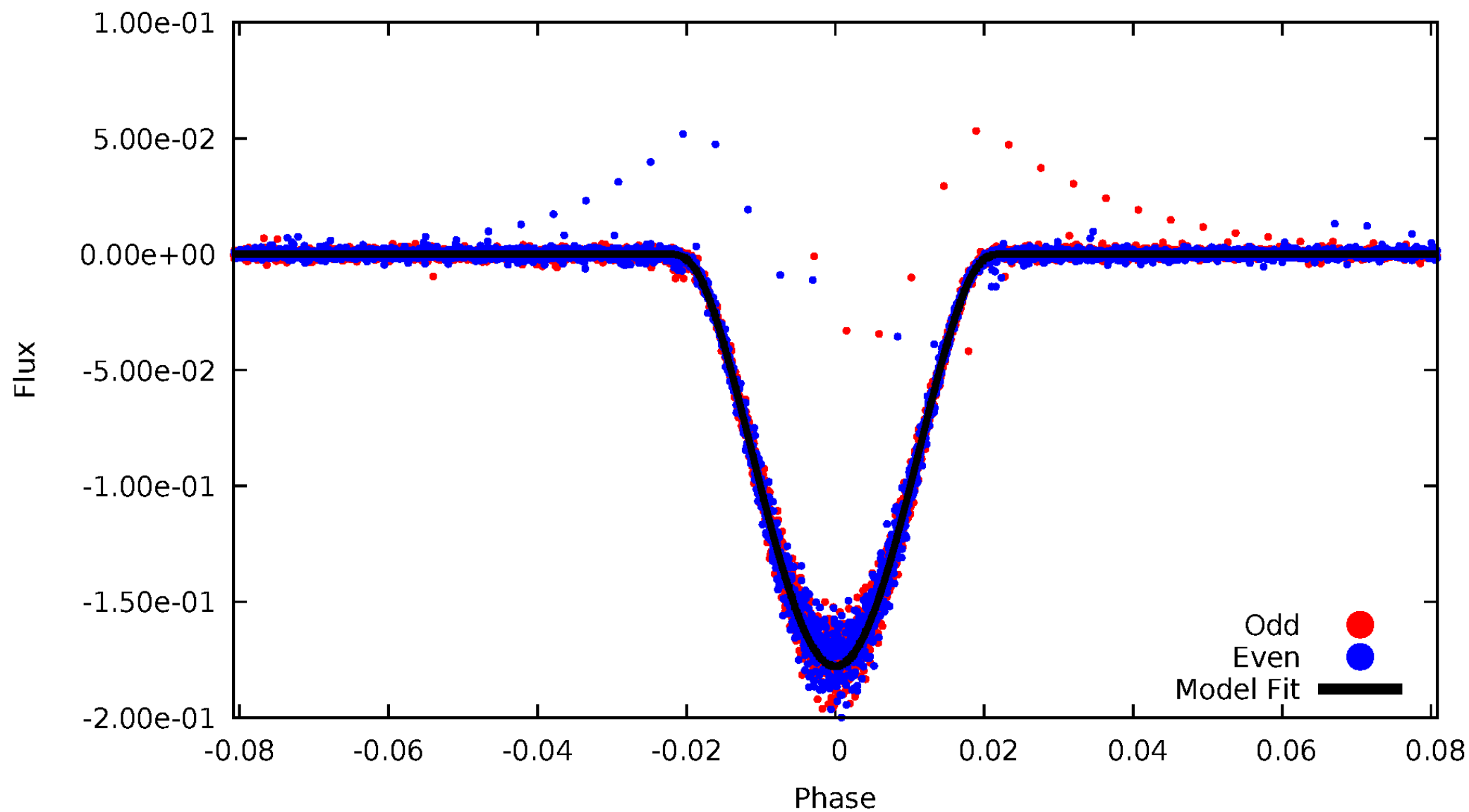


TCE 004346875-01



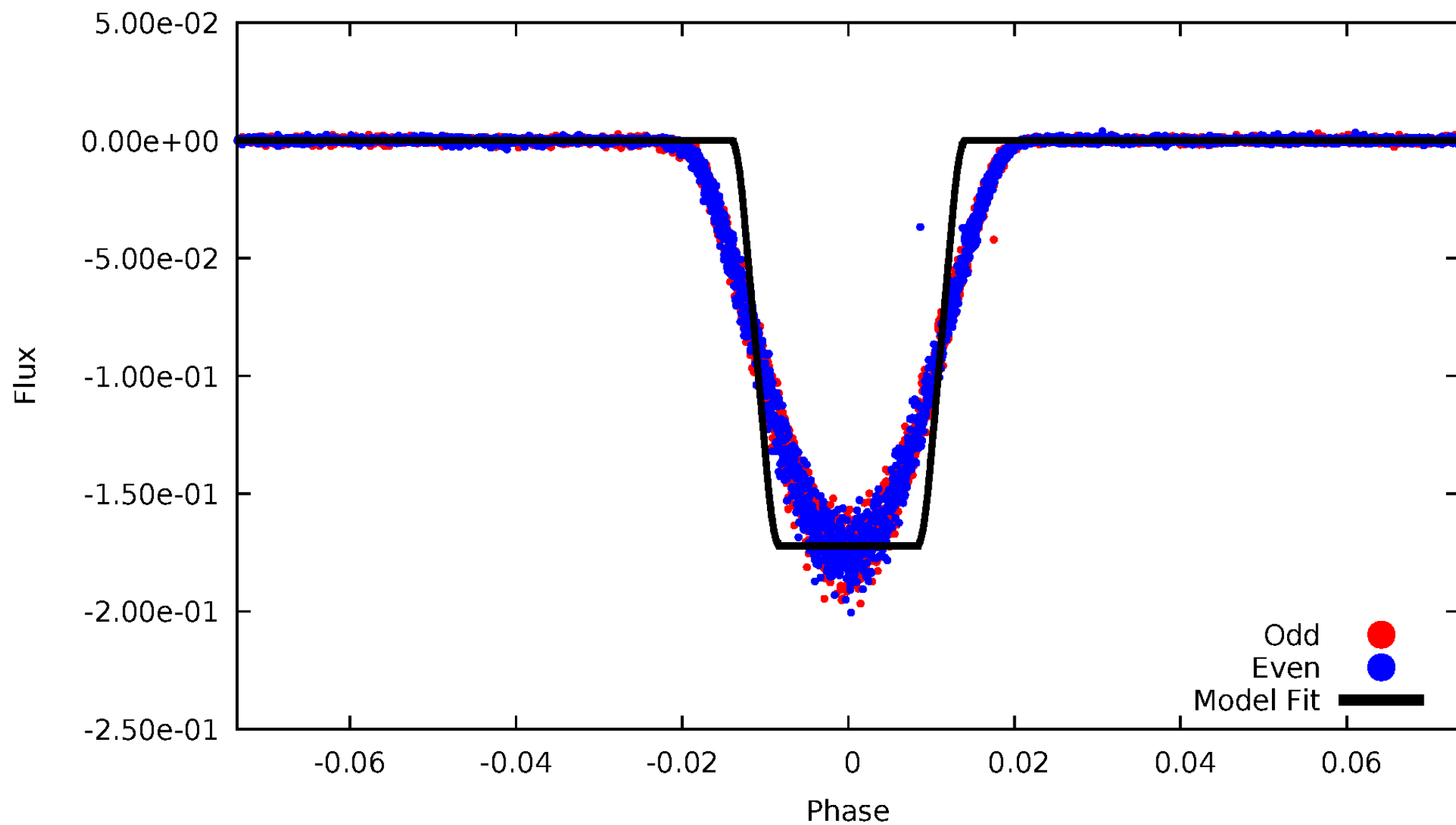
DV Odd/Even

TCE 004346875-01



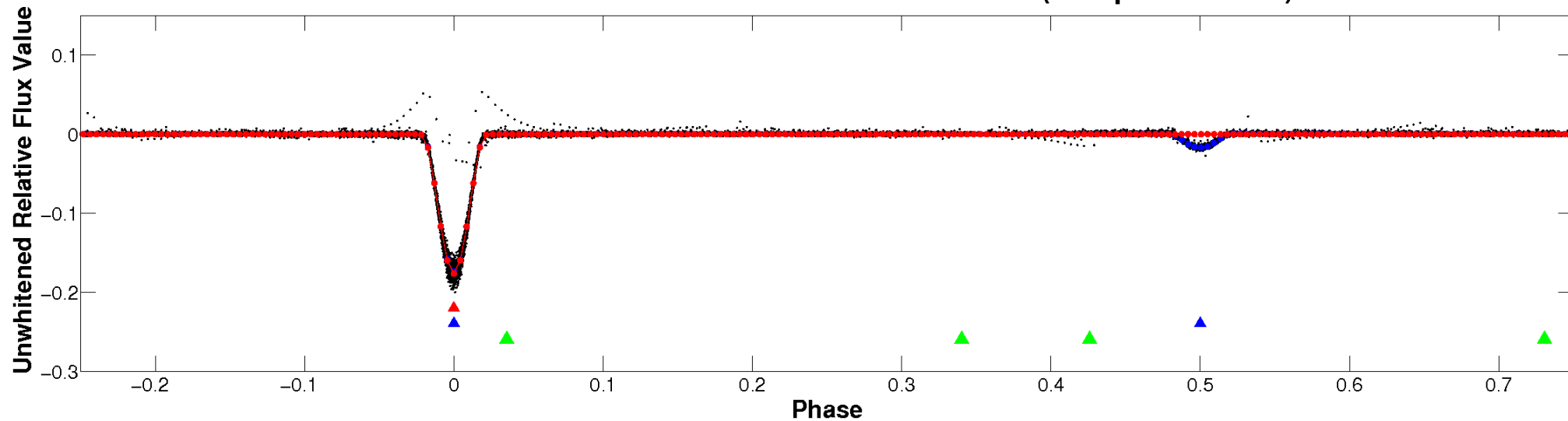
ALT Odd/Even

TCE 004346875-01

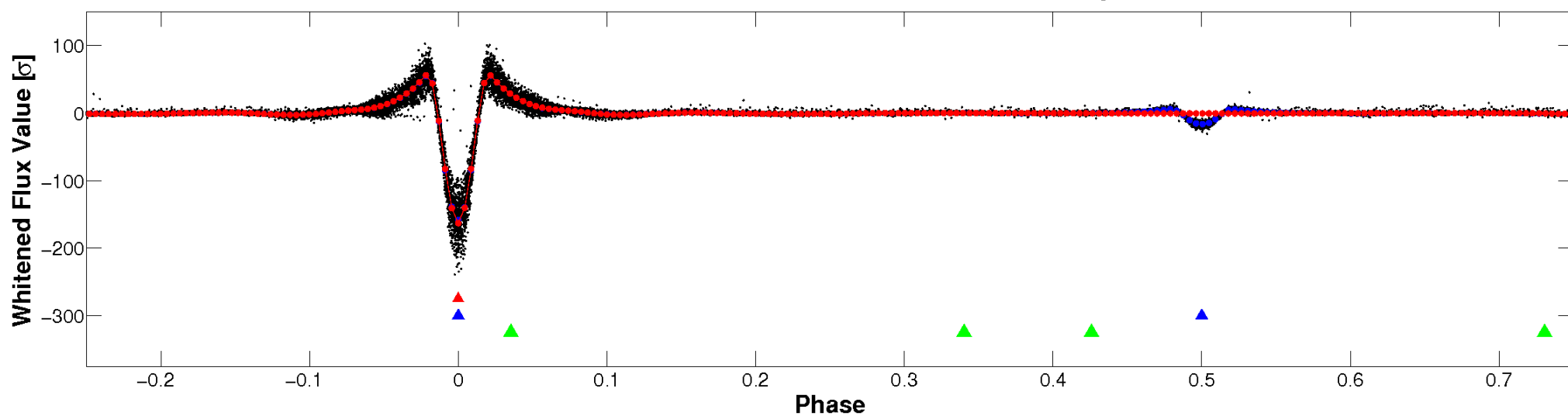


Non-Whitened Vs. Whitened Light Curve

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

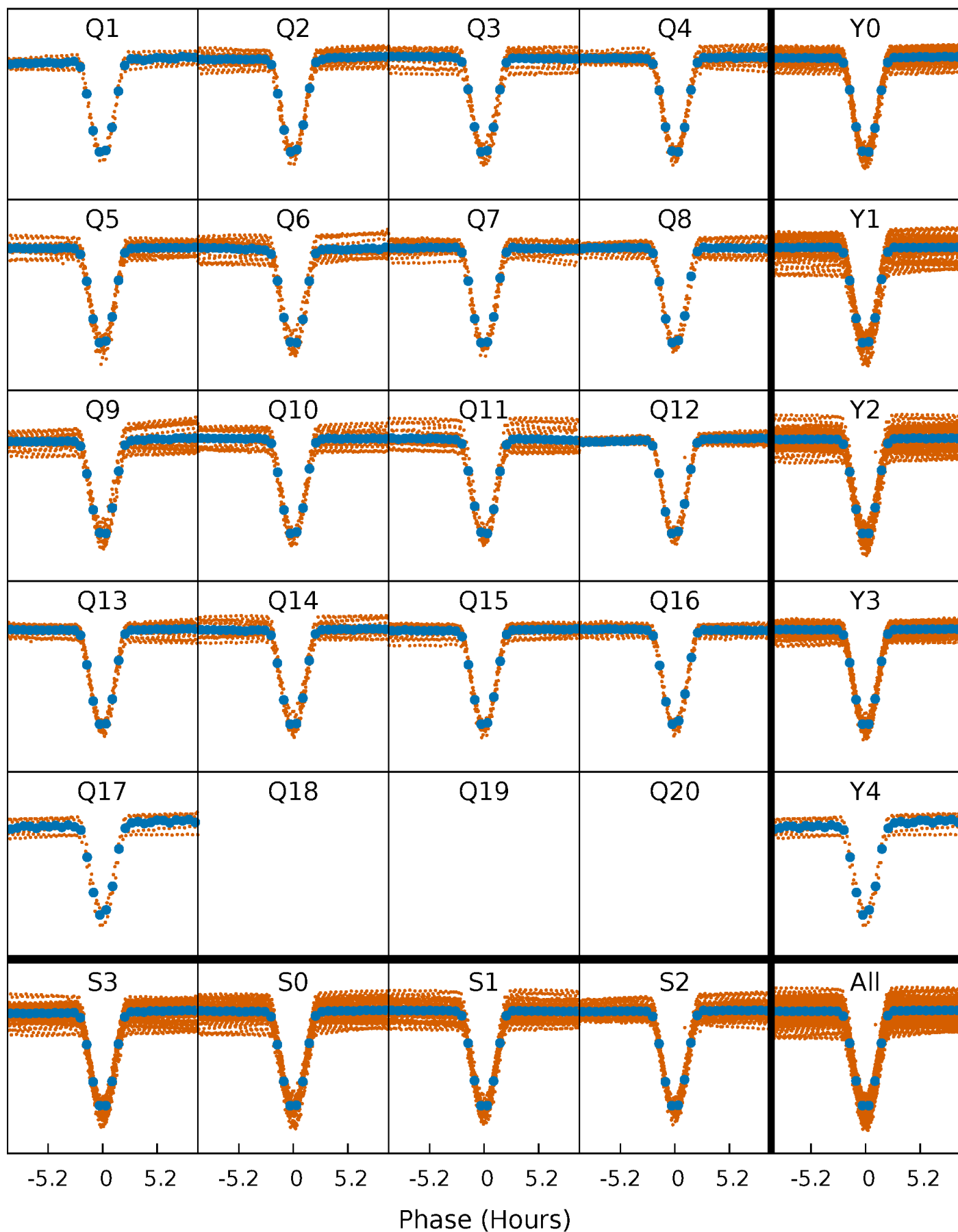


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



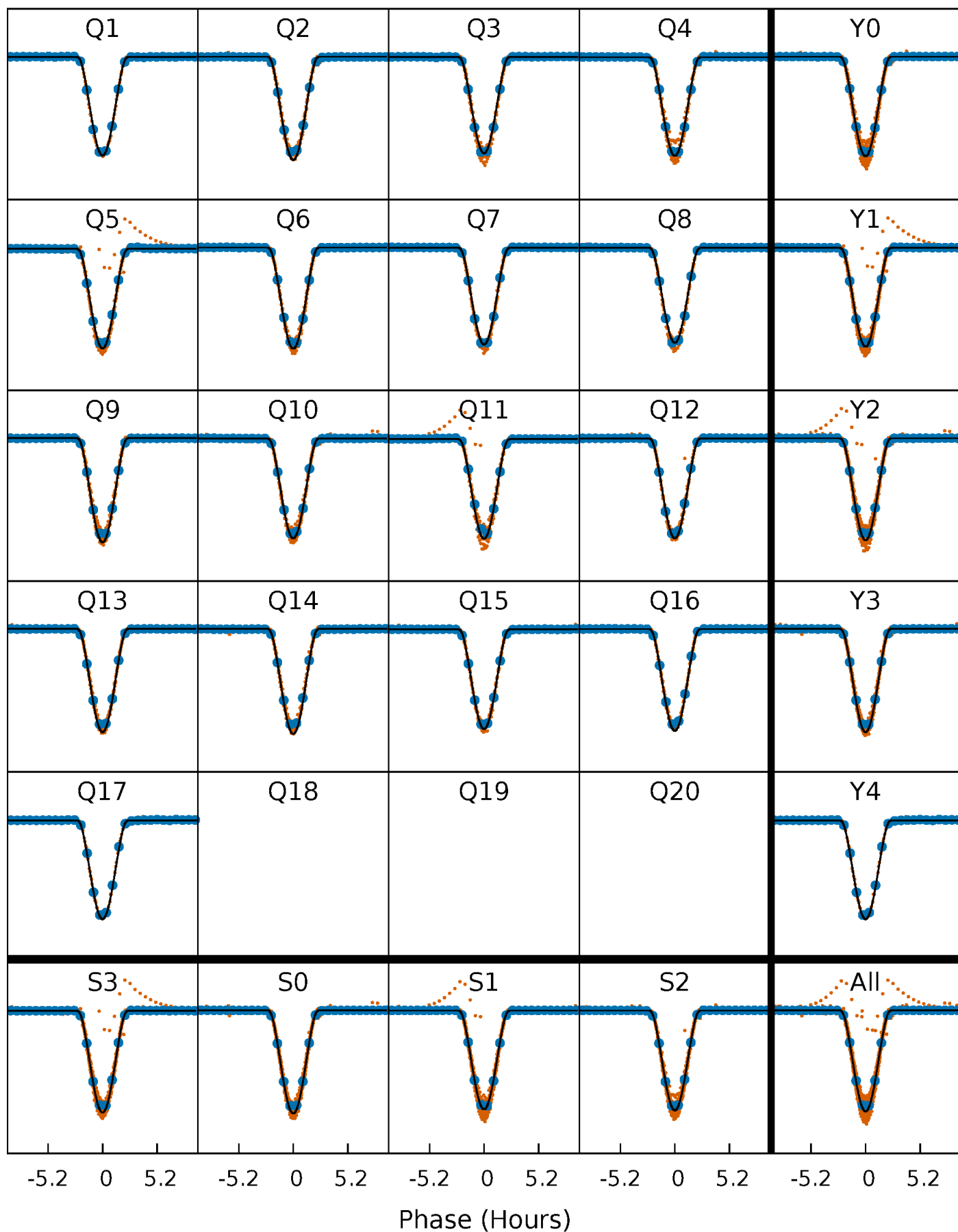
PDC Quarter-Phased Transit Curves

TCE 004346875-01 P= 4.694220 Days $T_0=133.780145$ (BKJD)



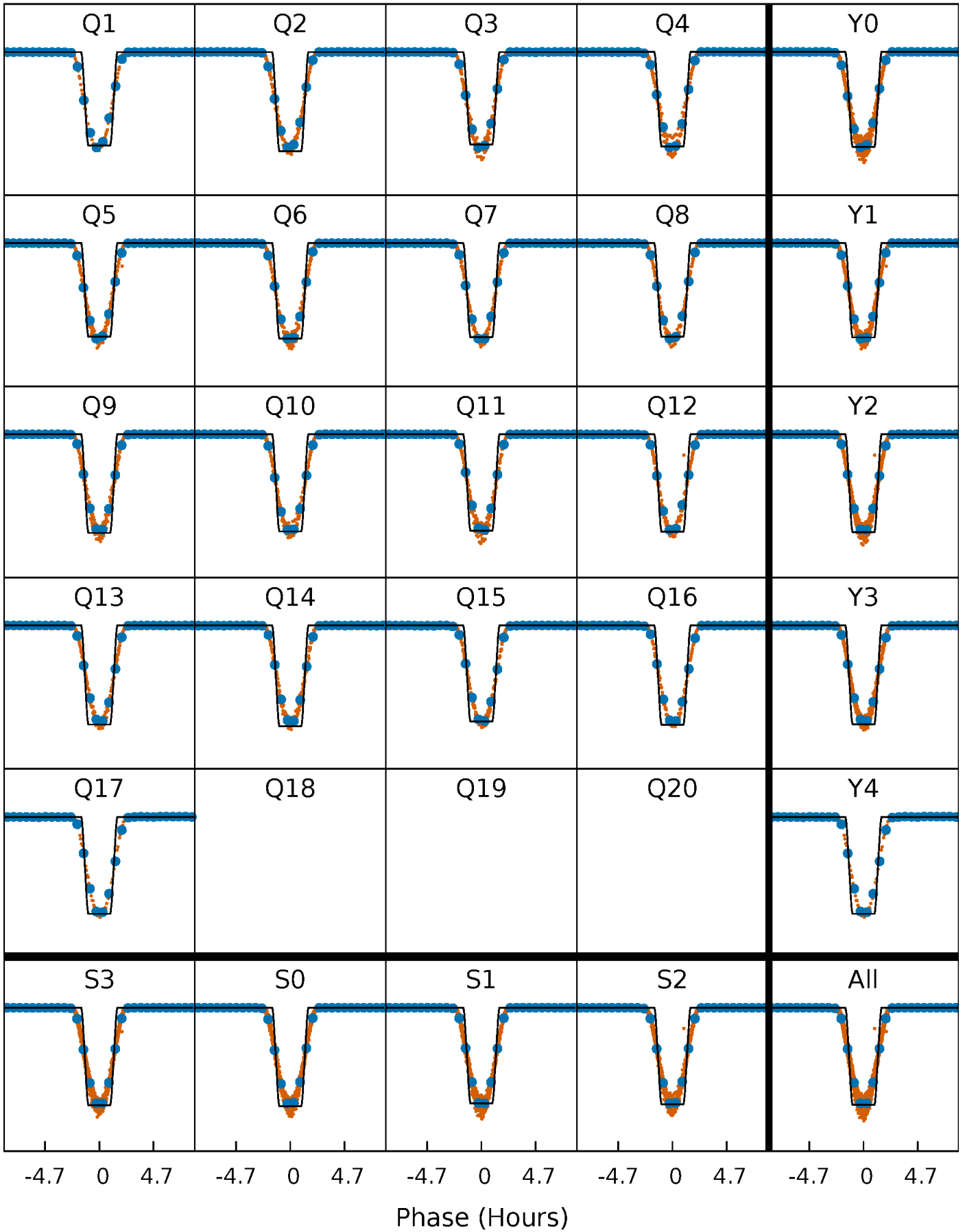
DV Quarter-Phased Transit Curves

TCE 004346875-01 P= 4.694220 Days $T_0=133.780145$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

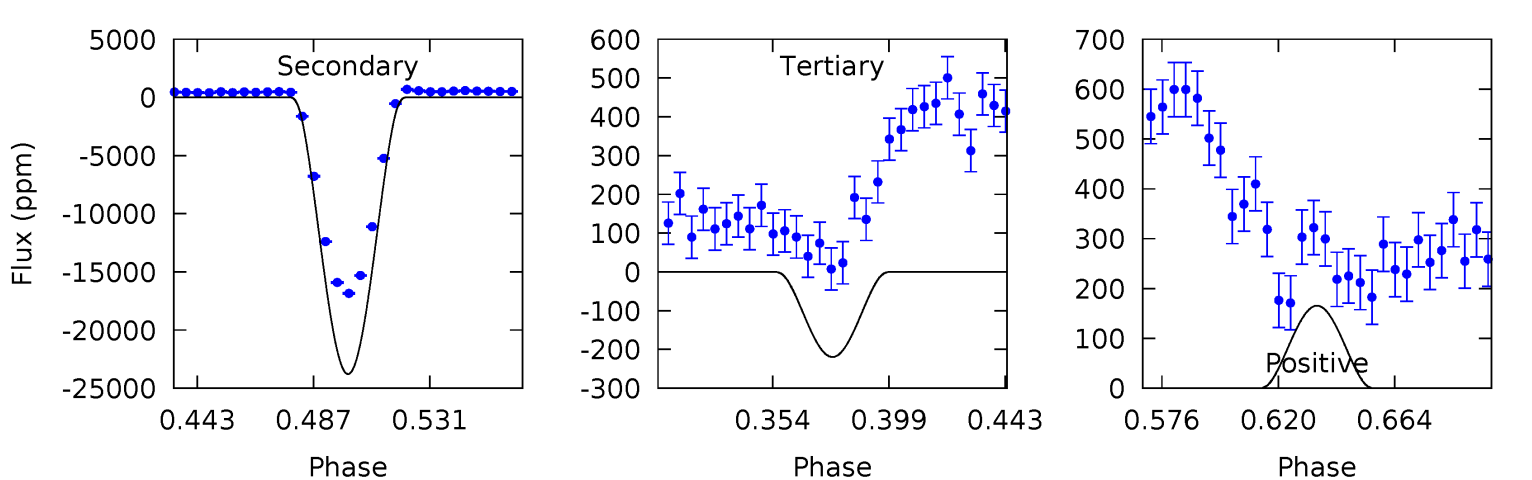
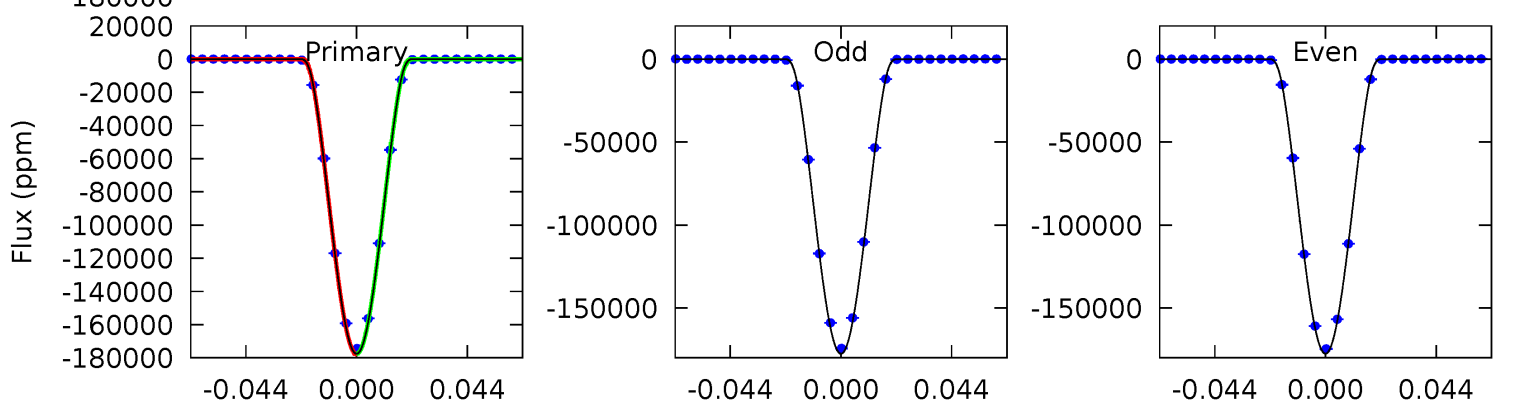
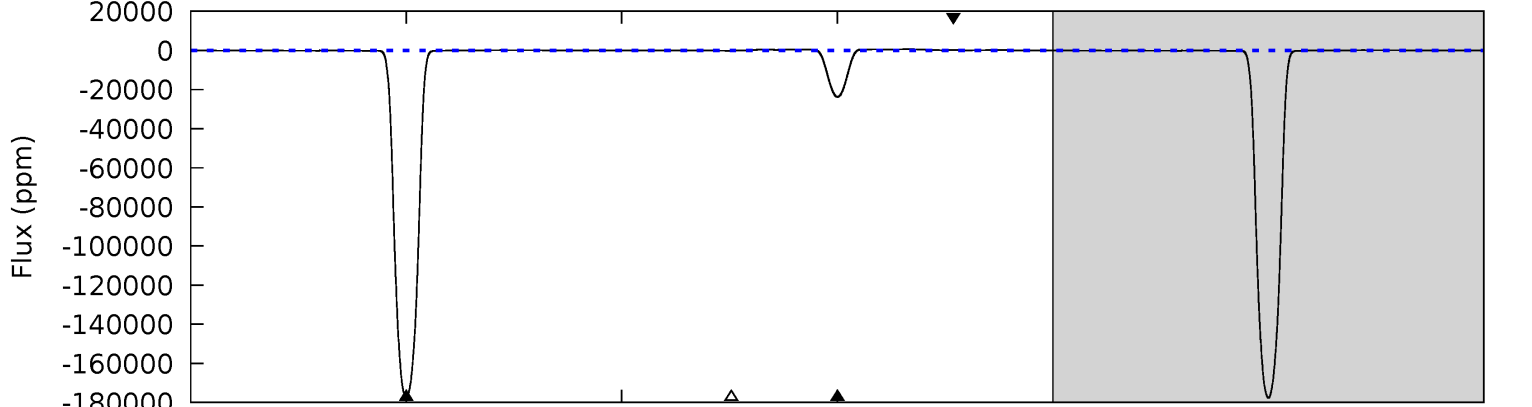
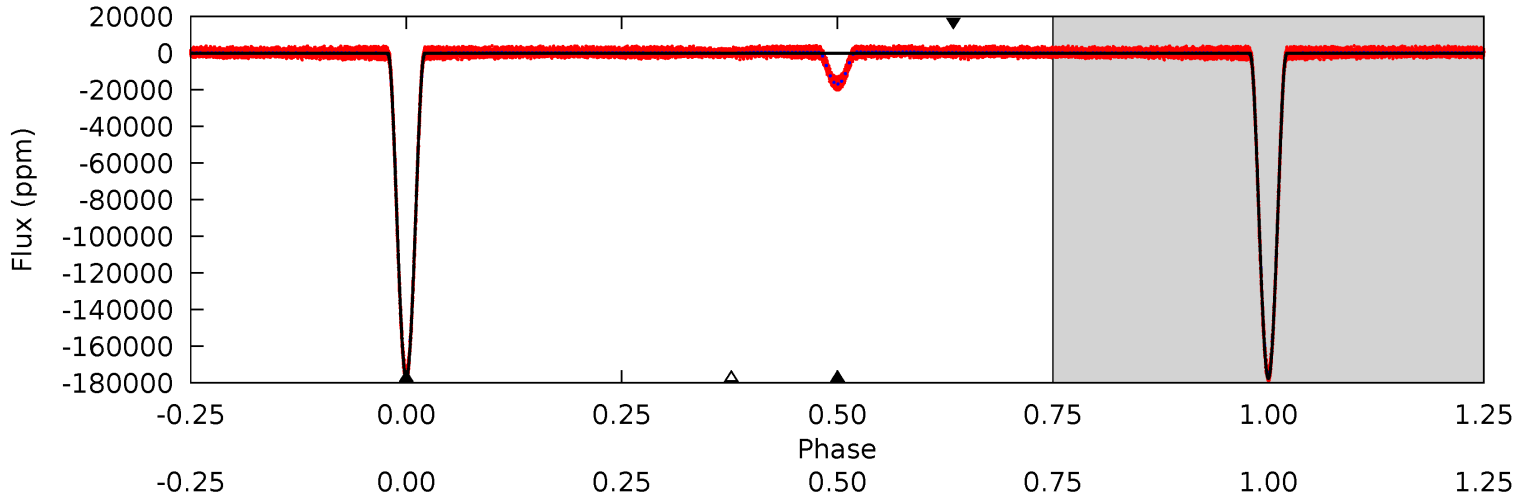
TCE 004346875-01 P= 4.694198 Days $T_0=133.783351$ (BKJD)



DV Model-Shift Uniqueness Test

004346875-01, P = 4.694220 Days, E = 129.085925 Days

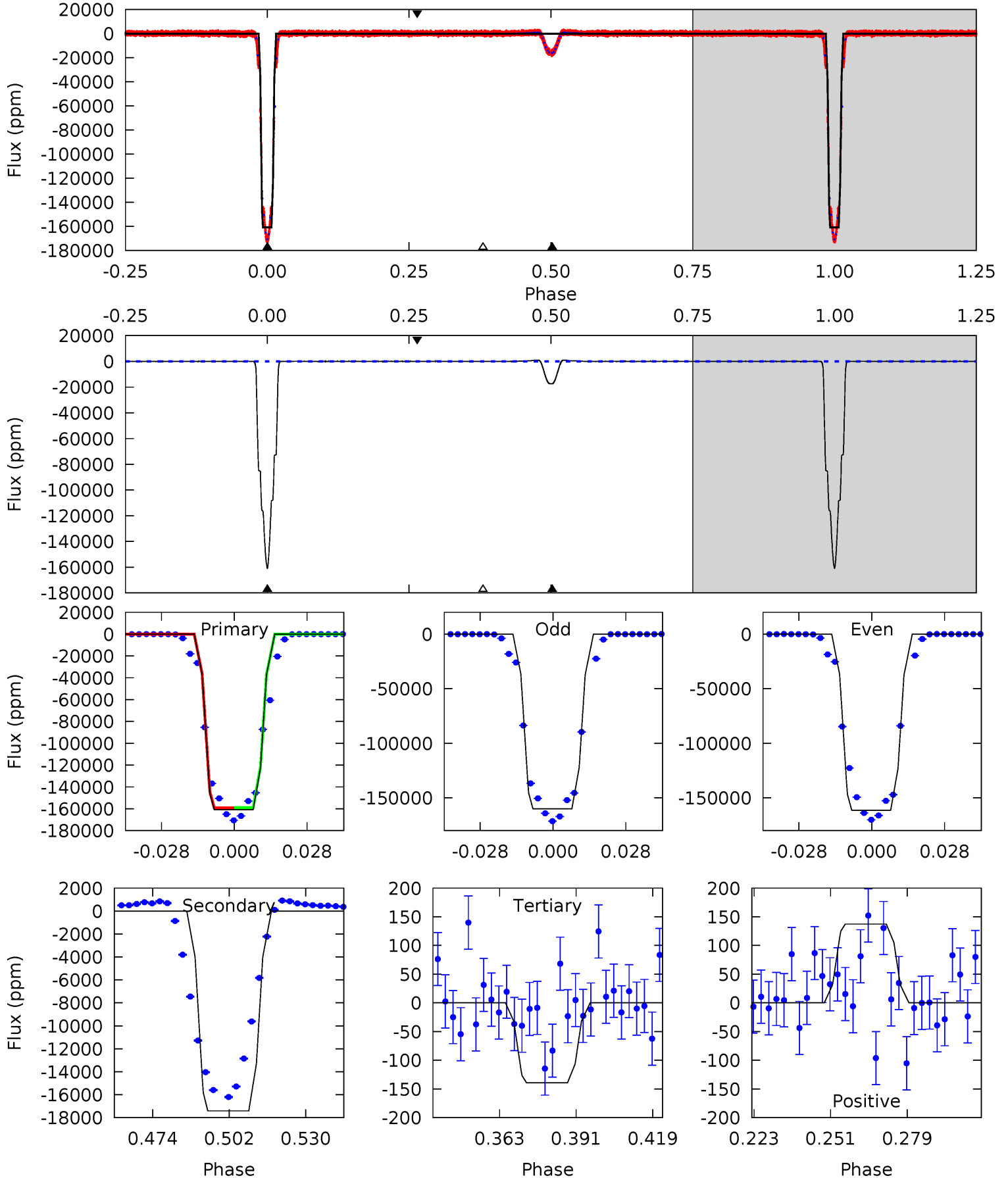
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8109	1086	10.0	7.56	4.73	2.01	8.64	8099	8101	1076	1078	1.58	0.99	0.00	4.56



Alt Model-Shift Uniqueness Test

004346875-01, P = 4.694198 Days, E = 129.089153 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4468	483.9	3.87	3.82	4.83	2.20	3.24	4464	4464	480.0	480.0	19.1	1.00	0.01	0



Stellar Parameters For KIC 004346875

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5512^{+166}_{-149}	$4.575^{+0.036}_{-0.135}$	$-0.240^{+0.300}_{-0.300}$	$0.787^{+0.176}_{-0.070}$	$0.851^{+0.092}_{-0.083}$	$2.454^{+0.459}_{-0.984}$
	+3%/-3%	+1%/-3%	+125%/-125%	+22%/-9%	+11%/-10%	+19%/-40%
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 004346875-01 / KOI 6113.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-23787 ± 22	$51.46^{+6.10}_{-3.72}$	1343^{+72}_{-51}	3359^{+71}_{-72}	13^{+2}_{-2}
Alt.	-17412 ± 36	$36.55^{+4.12}_{-2.83}$	1345^{+70}_{-56}	3559^{+93}_{-87}	19^{+3}_{-3}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

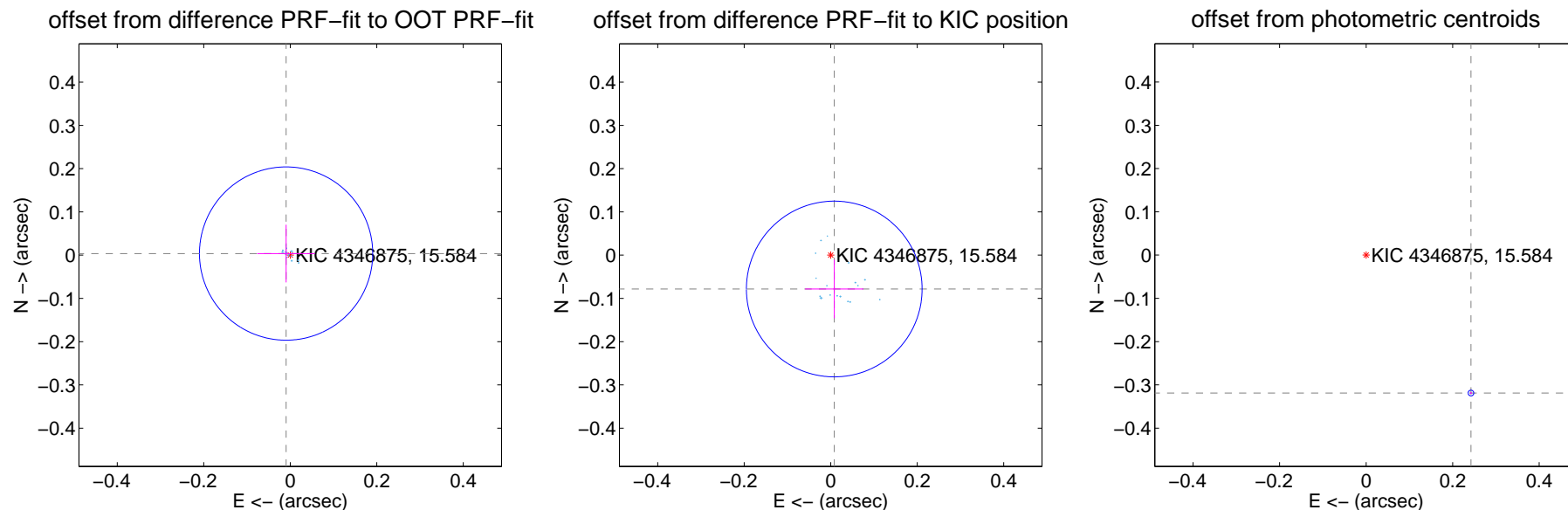
DV Centroid Data

Supplemental centroid analysis for 004346875-01. Kepler magnitude: 15.58. Transit SNR 3295.20

There are 17 quarters with good PRF difference image offsets

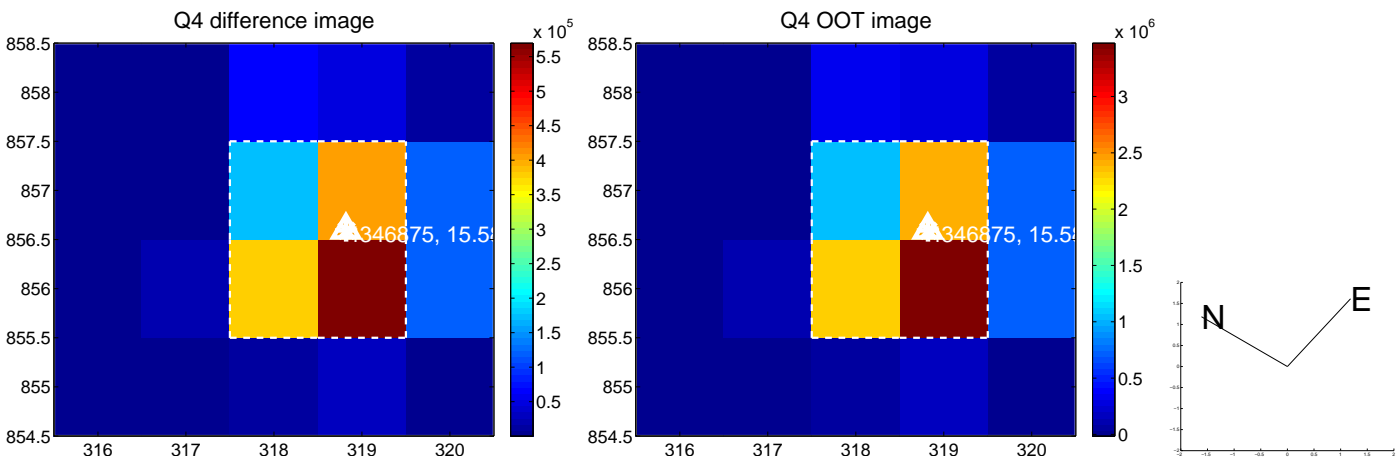
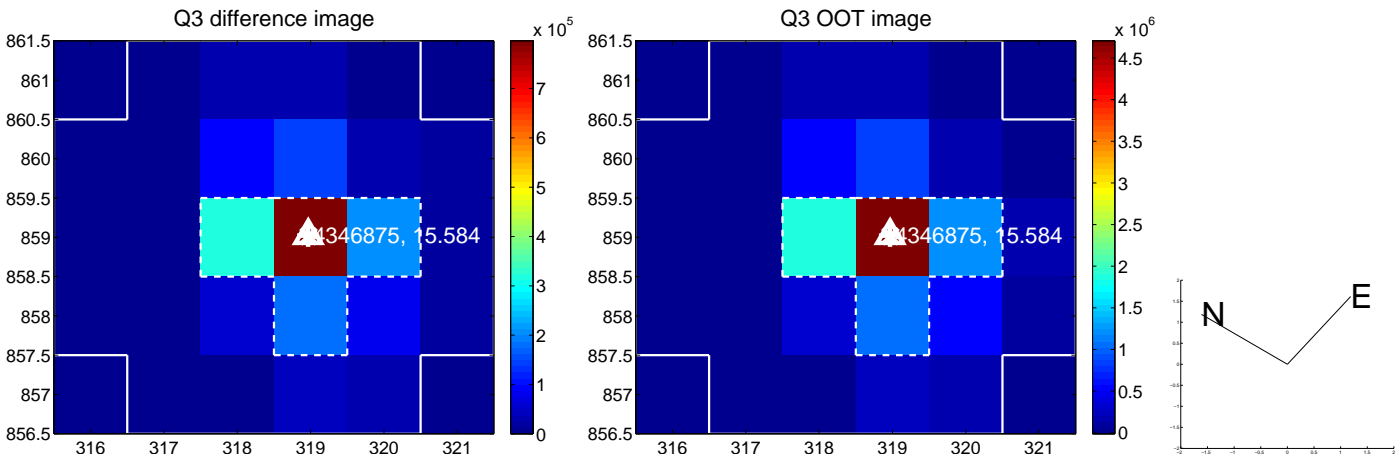
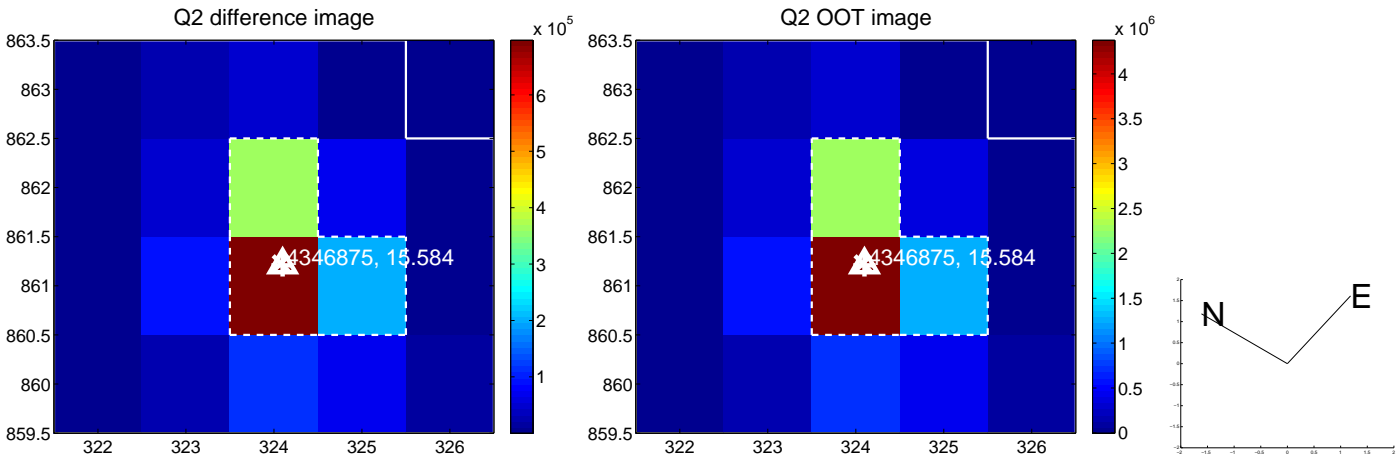
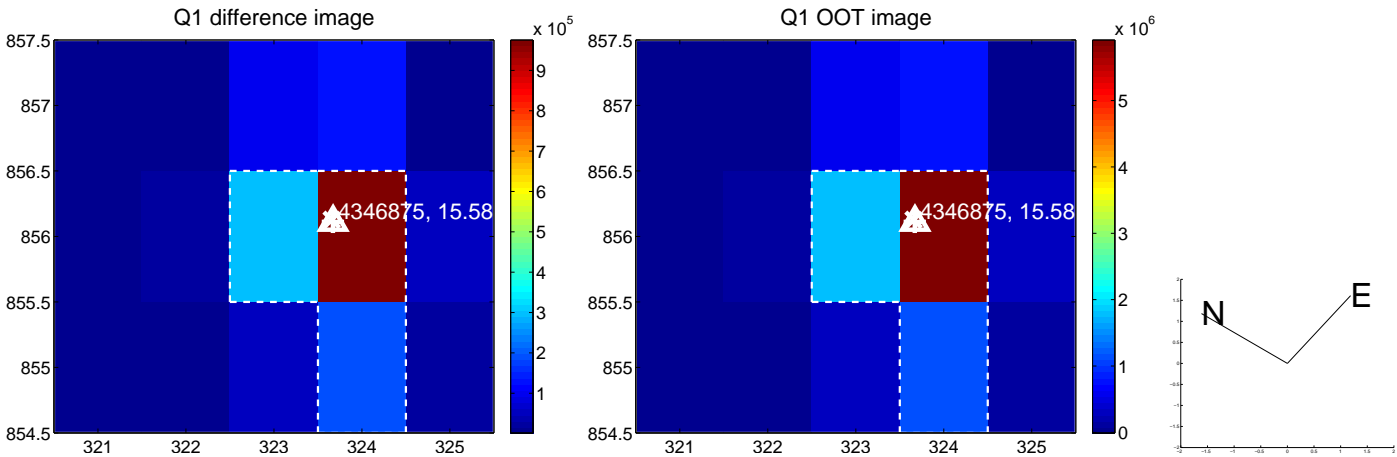
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.15	0.010 ± 0.067	0.004 ± 0.067
PRF-fit source offset from KIC position	0.079 ± 0.068	1.16	-0.008 ± 0.067	-0.078 ± 0.068
photometric centroid source offset	0.40 ± 0.00	182.87	-0.24 ± 0.00	-0.32 ± 0.00

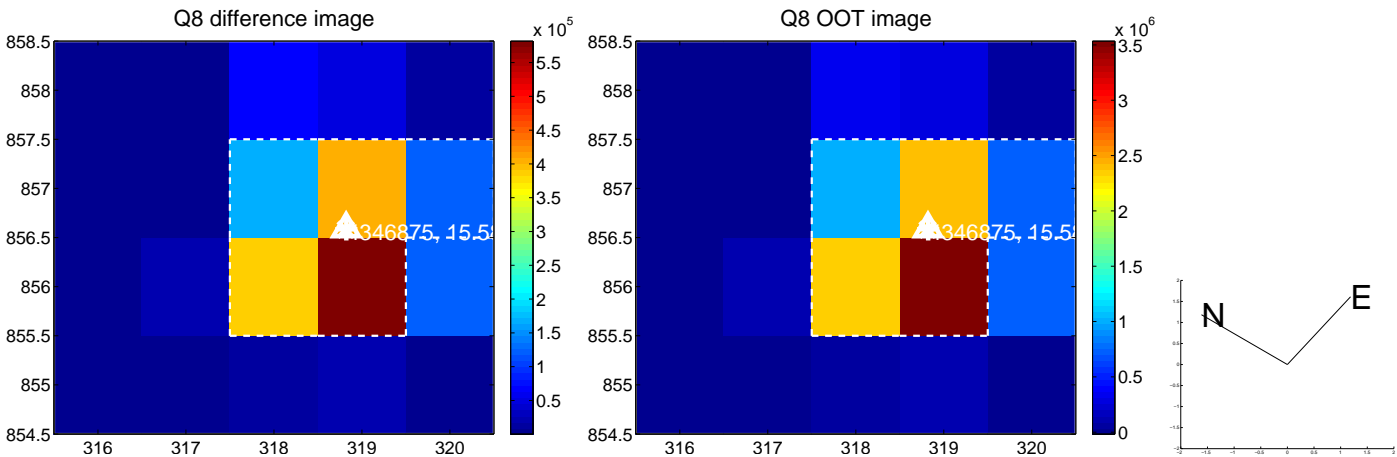
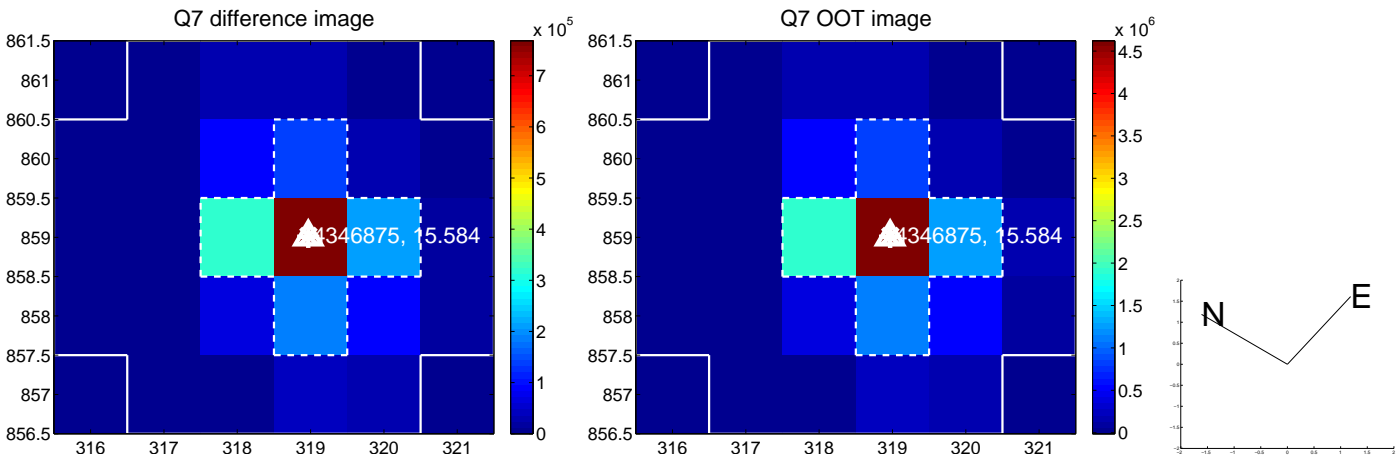
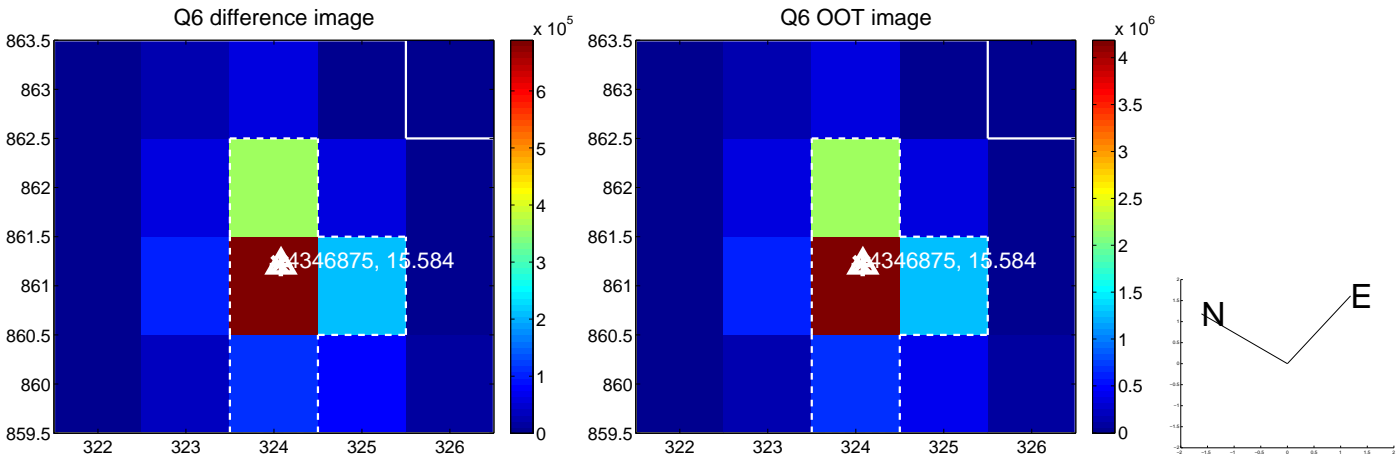
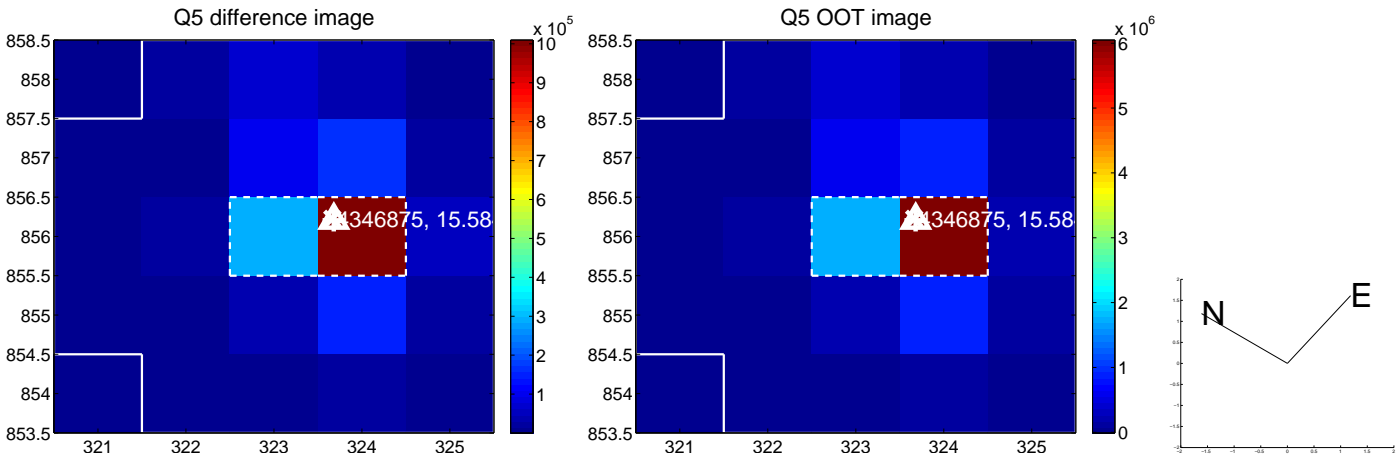


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

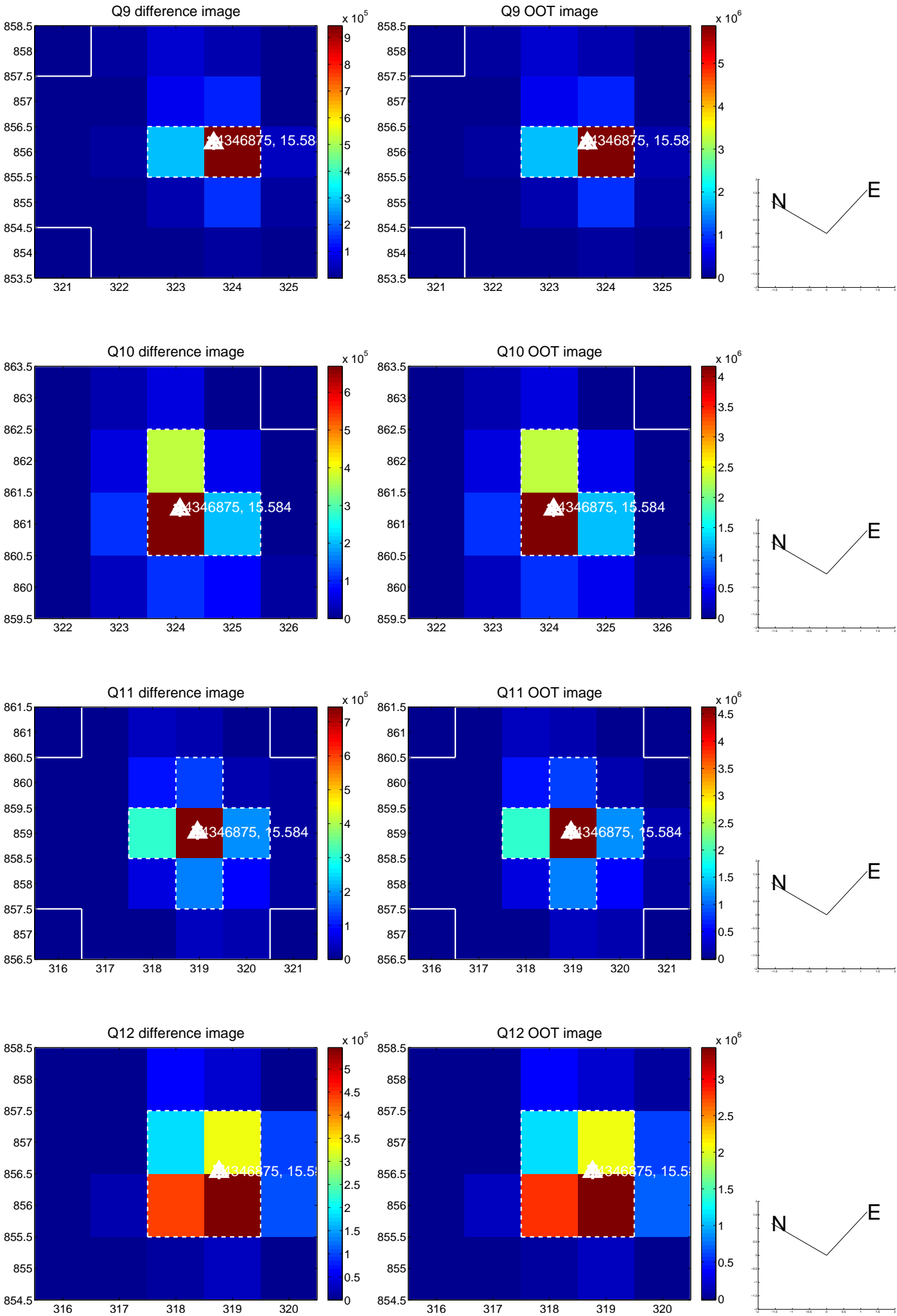
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



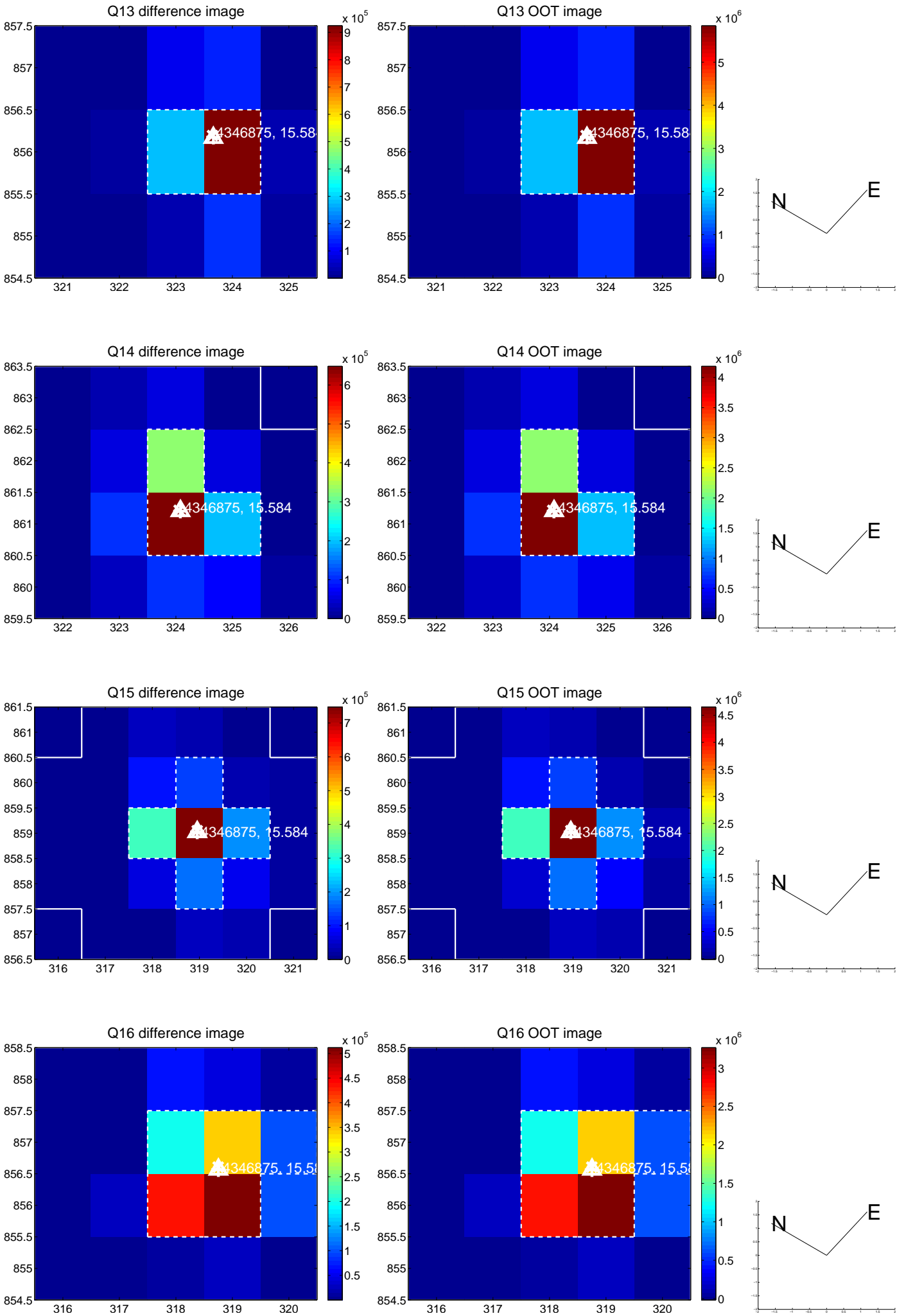
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



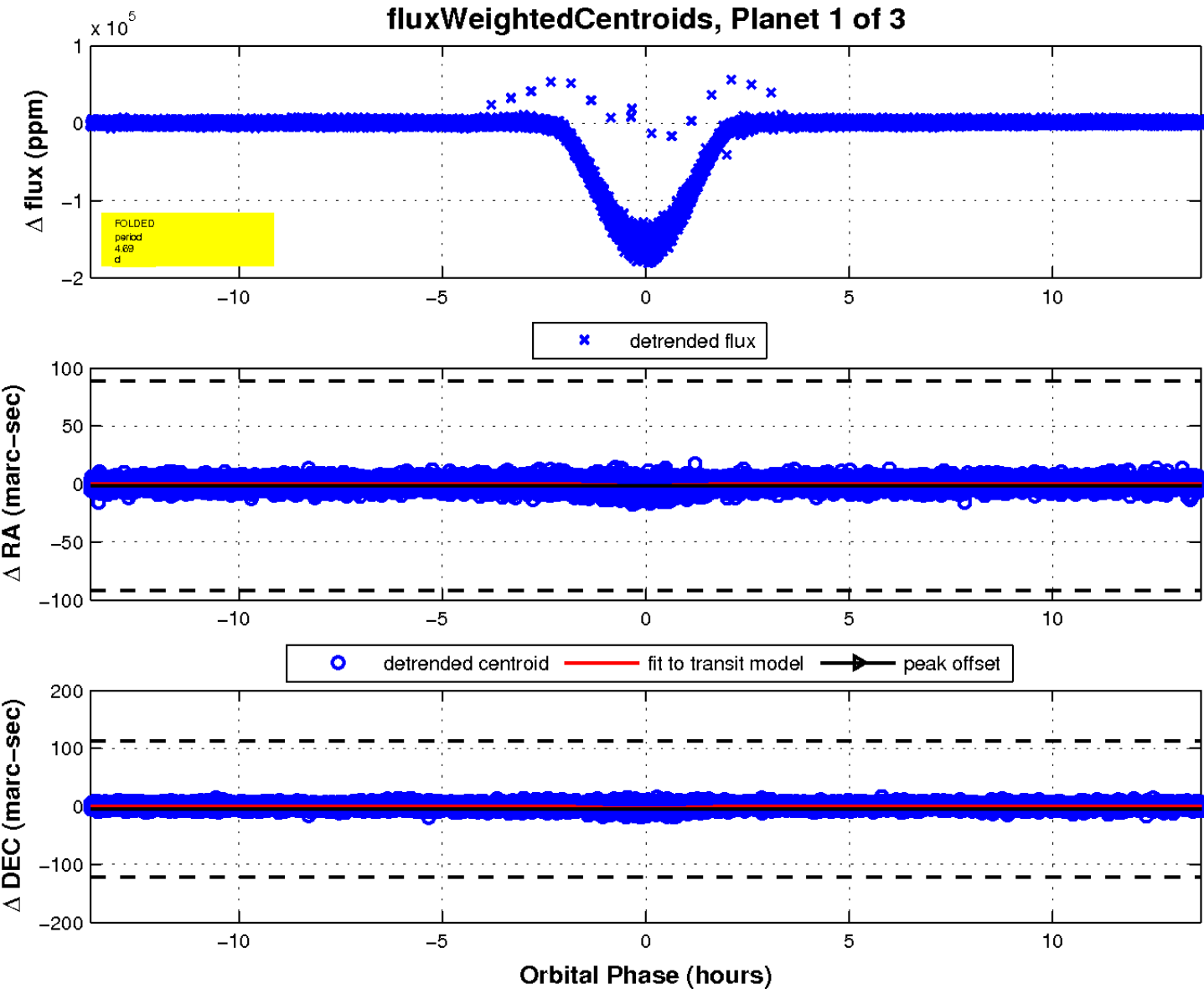
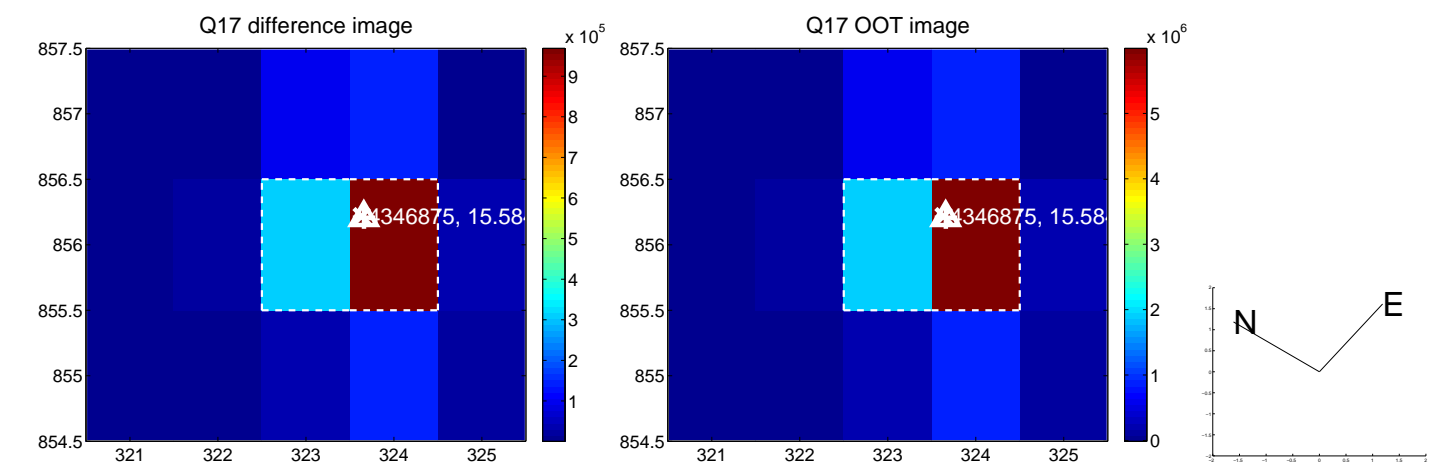
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

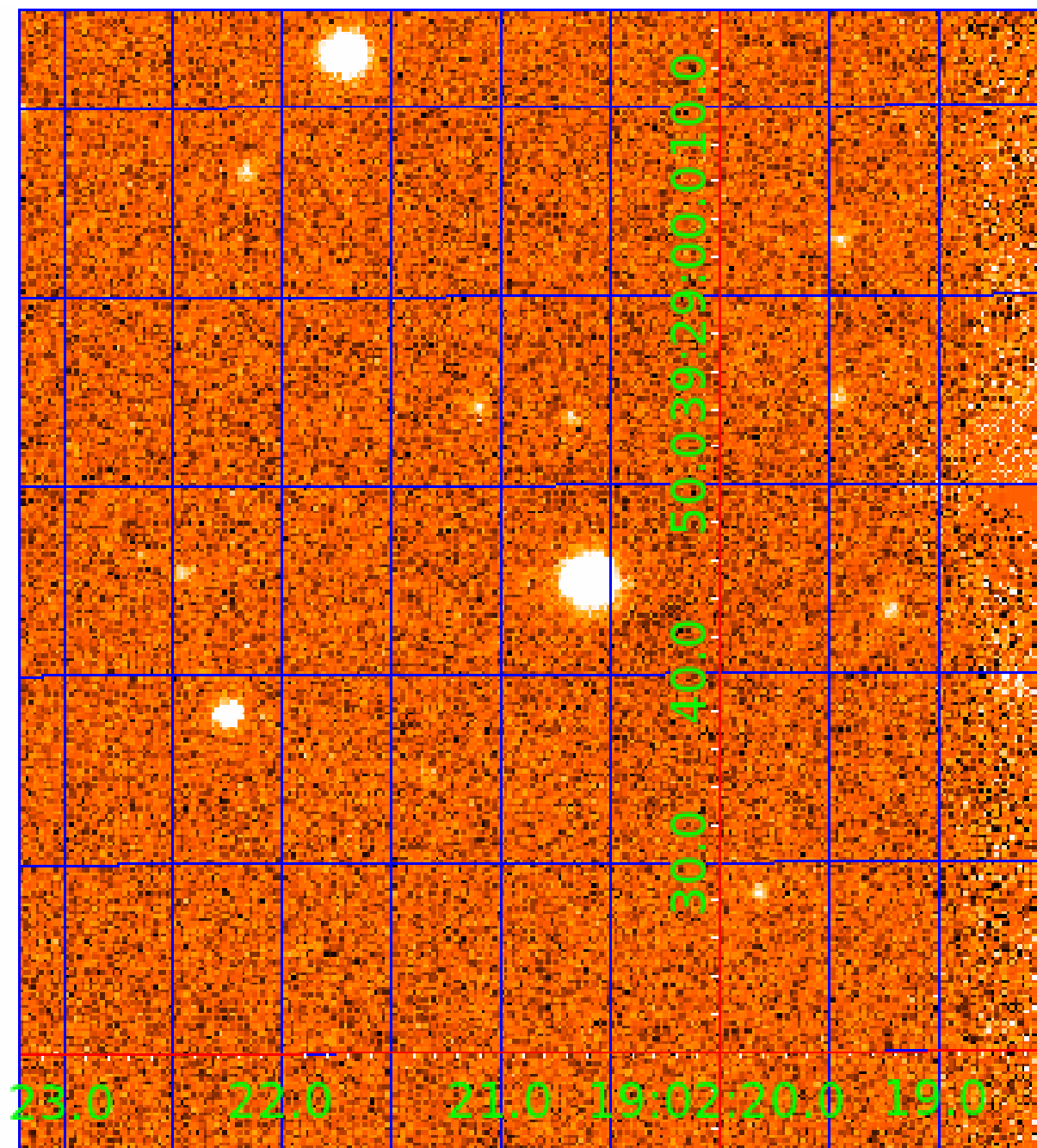


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004346875

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})
004346875-01	OBS	6113.01	4.694220	133.780145	177872.2	4.551	5236.9	3295.2	0.79	5512	50.21	189.68
004346875-02	OBS	No	2.347112	133.779701	17791.2	4.435	543.7	531.4	0.79	5512	13.45	477.97
004346875-03	OBS	No	353.497194	239.052228	1789.8	4.556	12.1	6.2	0.79	5512	3.42	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004346875-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
004346875-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
004346875-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— 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.

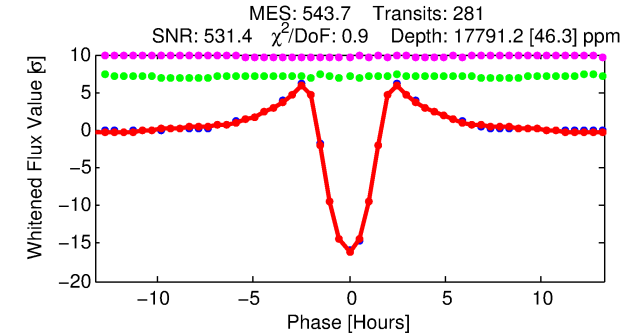
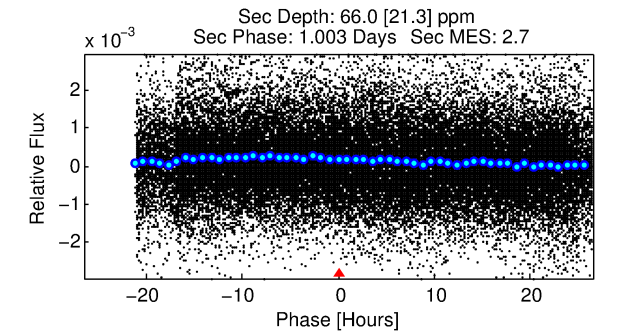
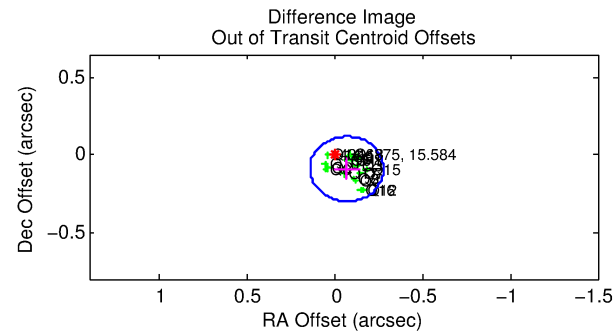
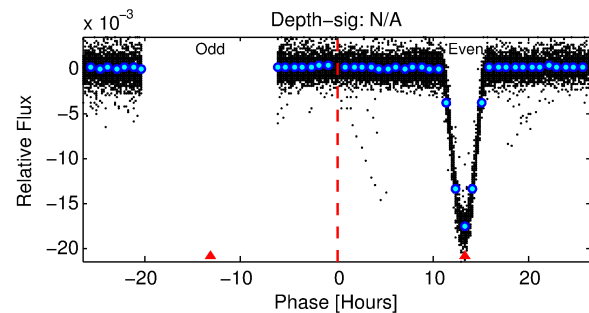
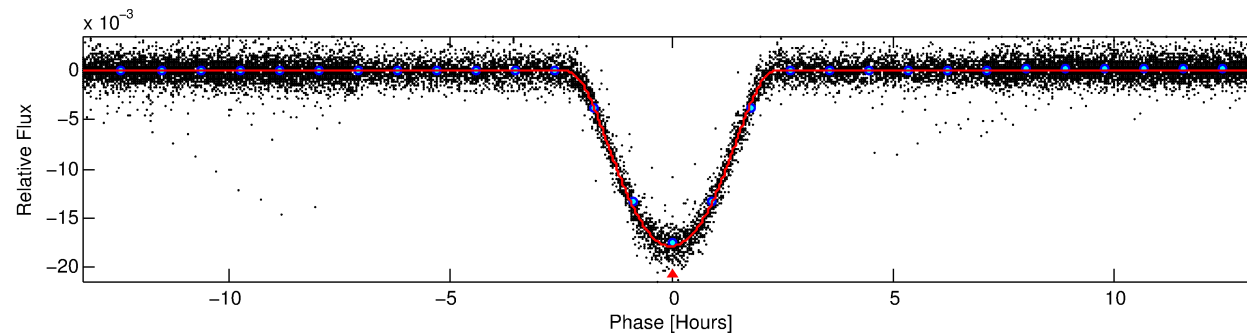
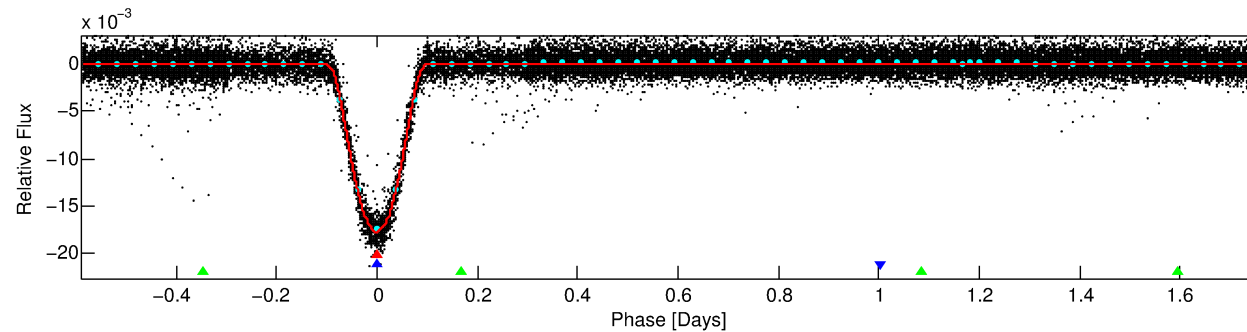
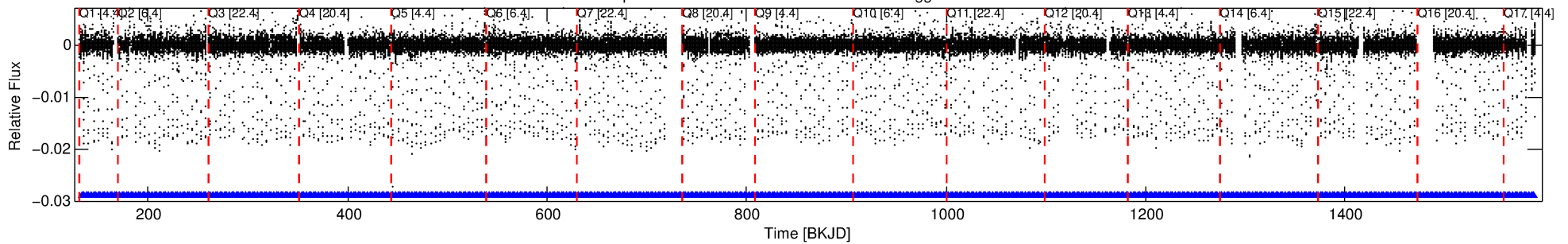
Ephemeris Match Information For 004346875-02

No Significant Match Found

DV One-Page Summary

KIC: 4346875 Candidate: 2 of 3 Period: 2.347 d
KOI: K06113 Corr: No Ephemeris Match

Kp: 15.58 R*: 0.79 Rs Teff: 5512.0 K Logg: 4.58 Fe/H: -0.240



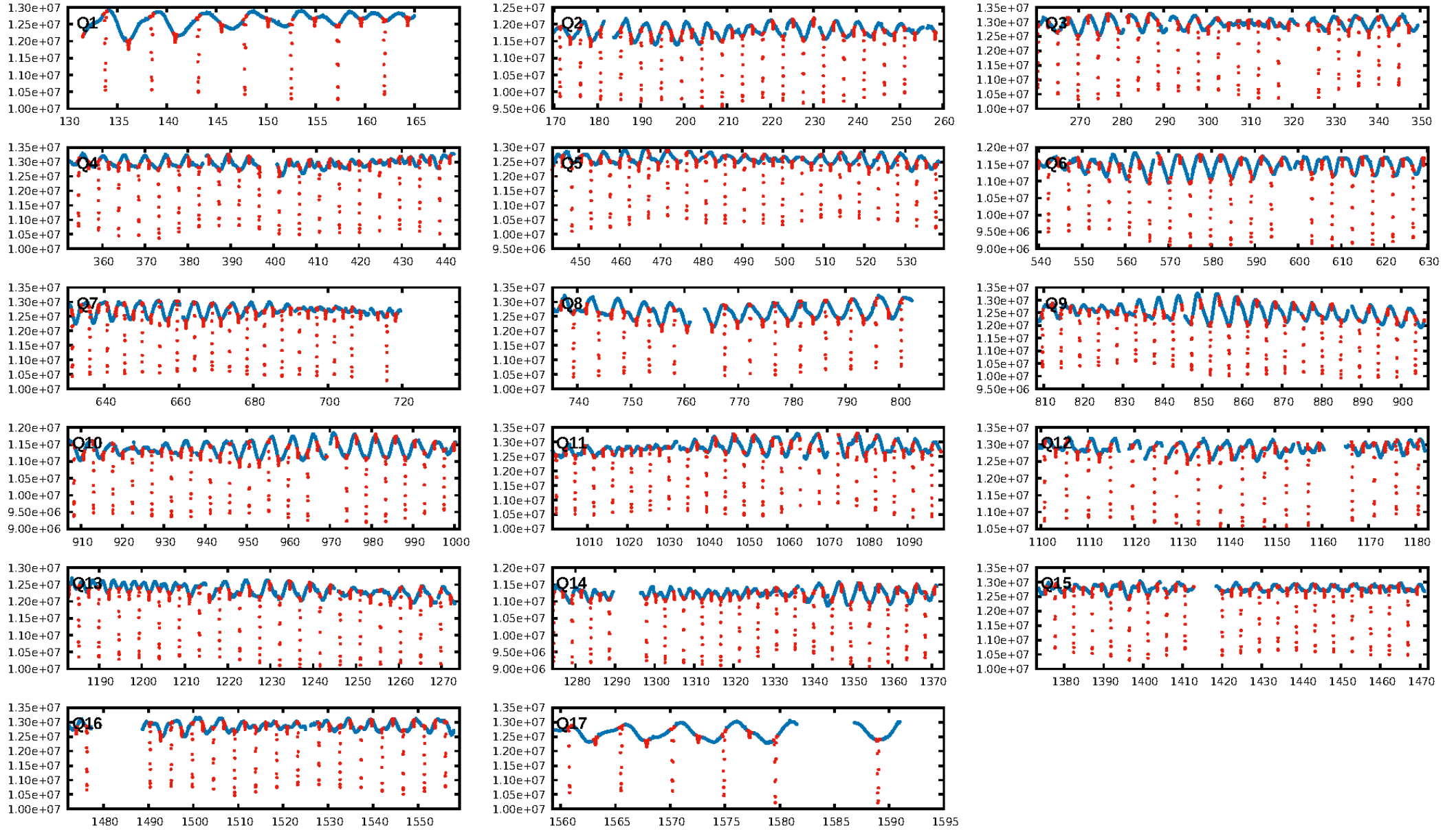
DV Fit Results:

Period = 2.34711 [0.00000] d
Epoch = 133.7797 [0.0001] BKJD
Rp/R* = 0.1566 [0.0020]
a/R* = 3.11 [0.01]
b = 0.90 [0.00]
Seff = 477.97 [134.92]
Teq = 1192 [84] K
Rp = 13.45 [3.01] Re
a = 0.0327 [0.0059] AU
Ag = 0.22 [0.09] [-8.86σ]
Teffp = 1255 [108] K [0.46σ]

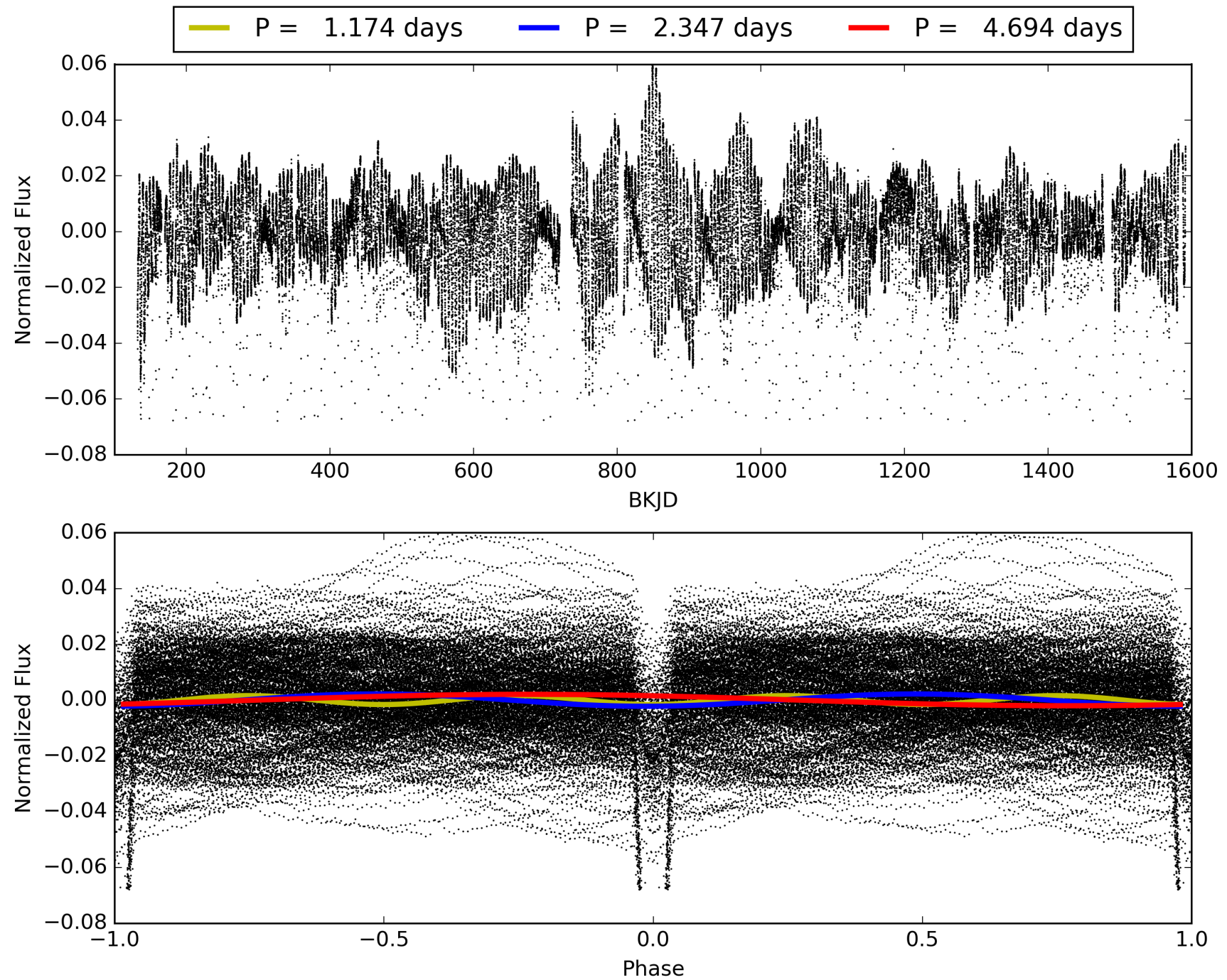
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [8.86σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [269/269]
GhostDiagnostic-chr: 1.555
Centroid-sig: 0.0%
Centroid-so: 0.519 arcsec [35.62σ]
OotOffset-rm: 0.113 arcsec [1.61σ]
KicOffset-rm: 0.162 arcsec [2.28σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004346875-02, PDC Light Curves

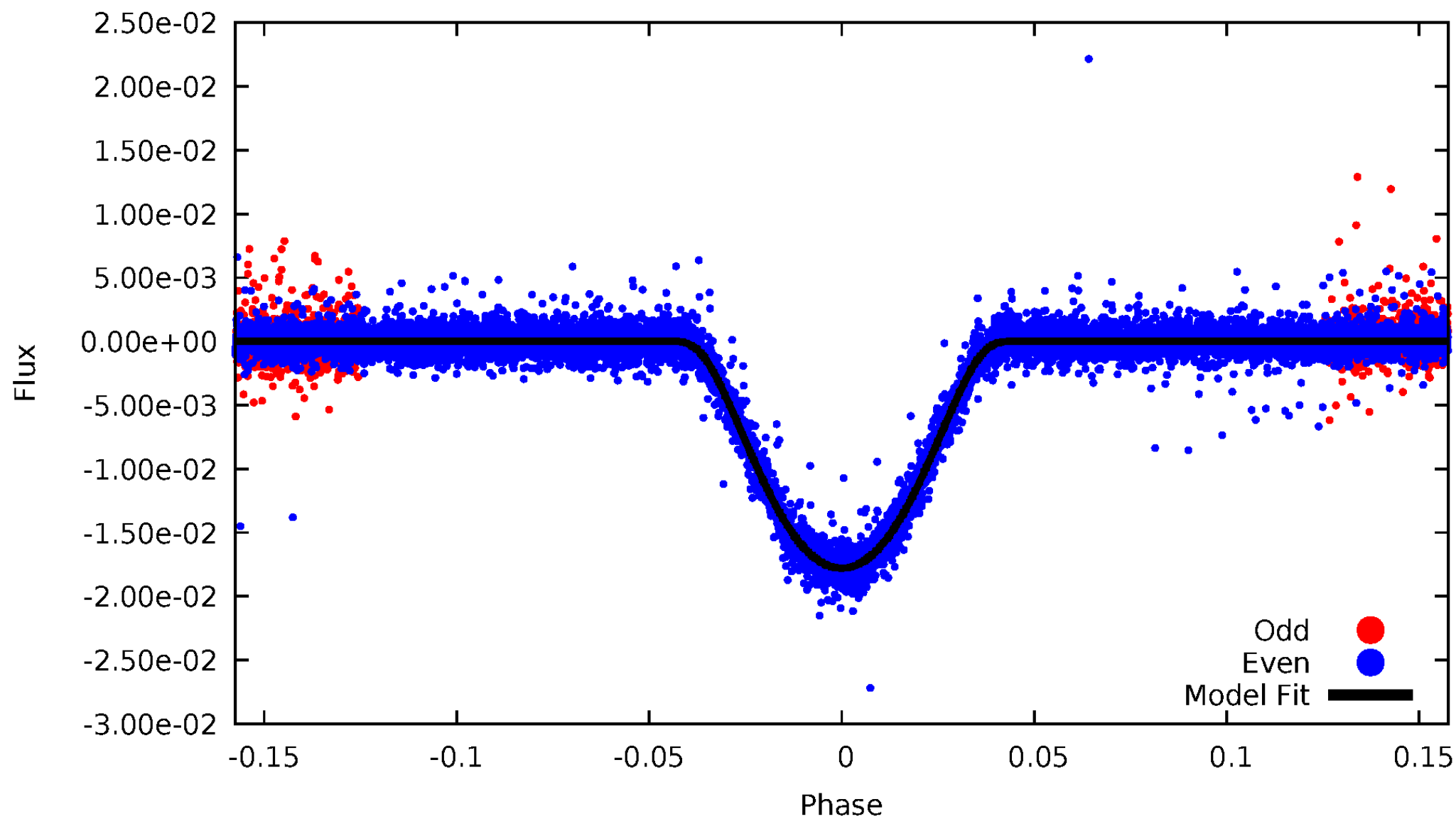


TCE 004346875-02



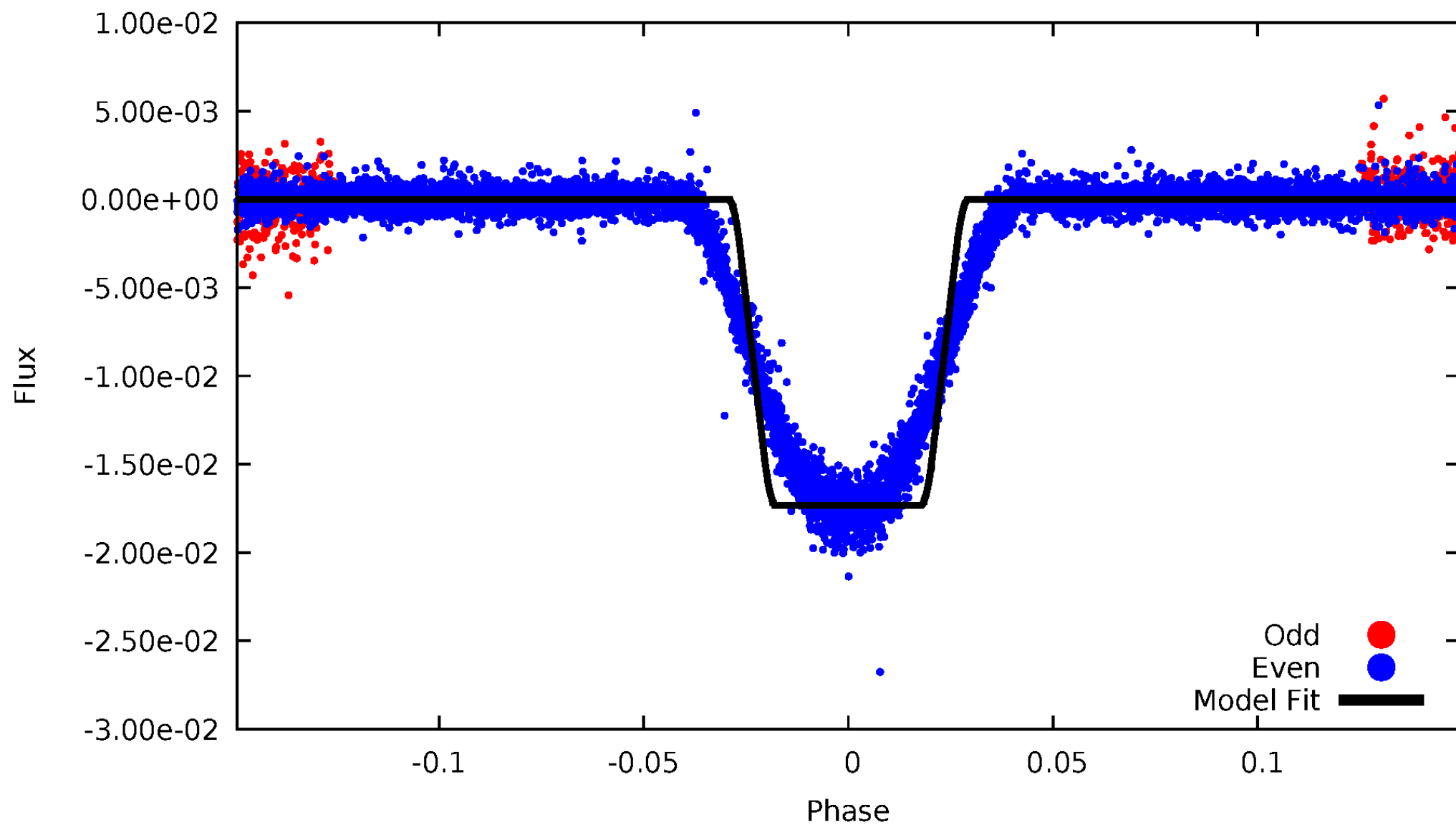
DV Odd/Even

TCE 004346875-02



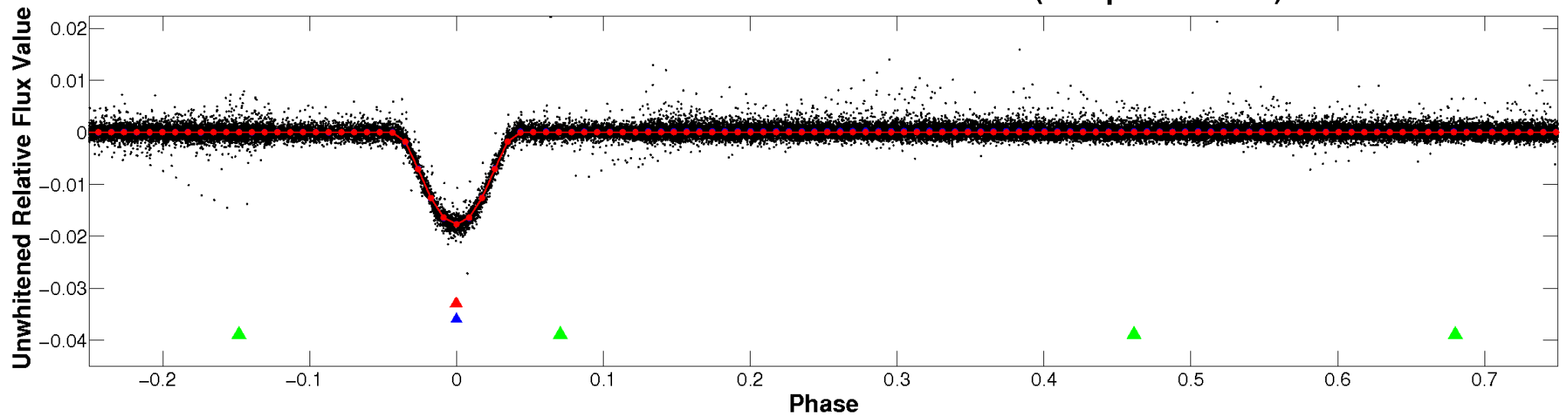
ALT Odd/Even

TCE 004346875-02

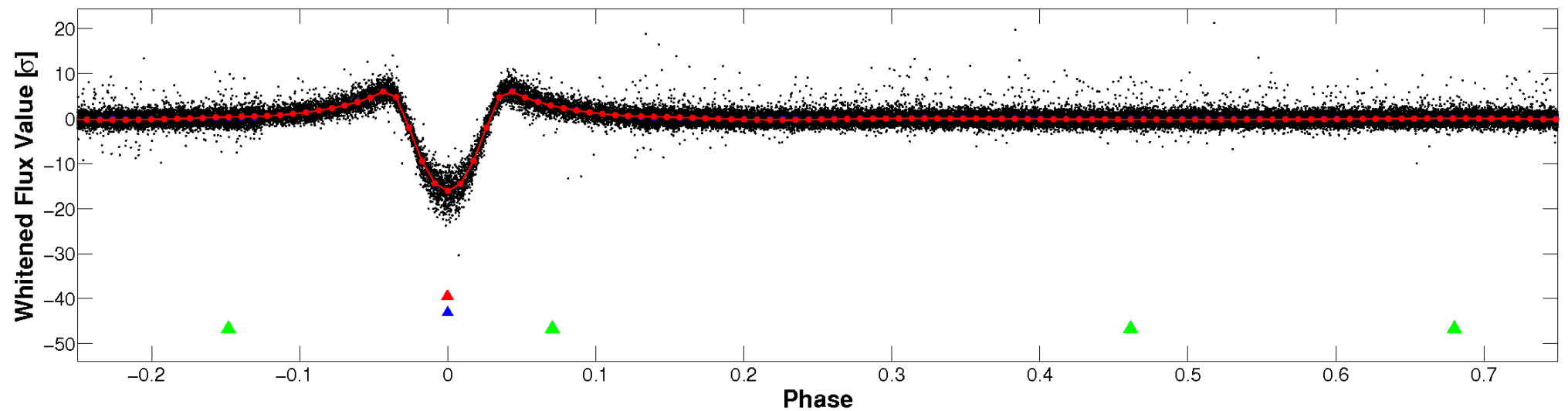


Non-Whitened Vs. Whitened Light Curve

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

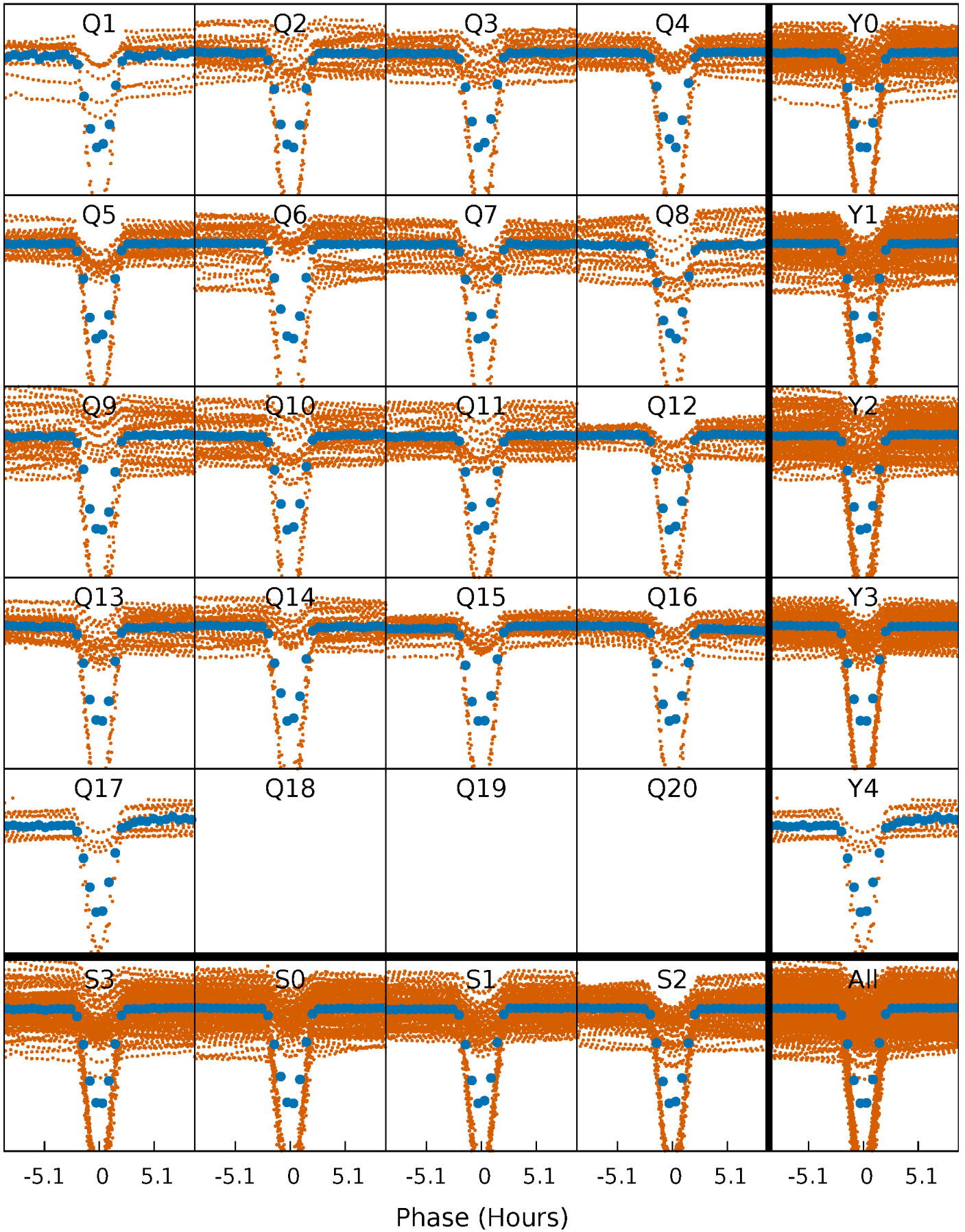


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



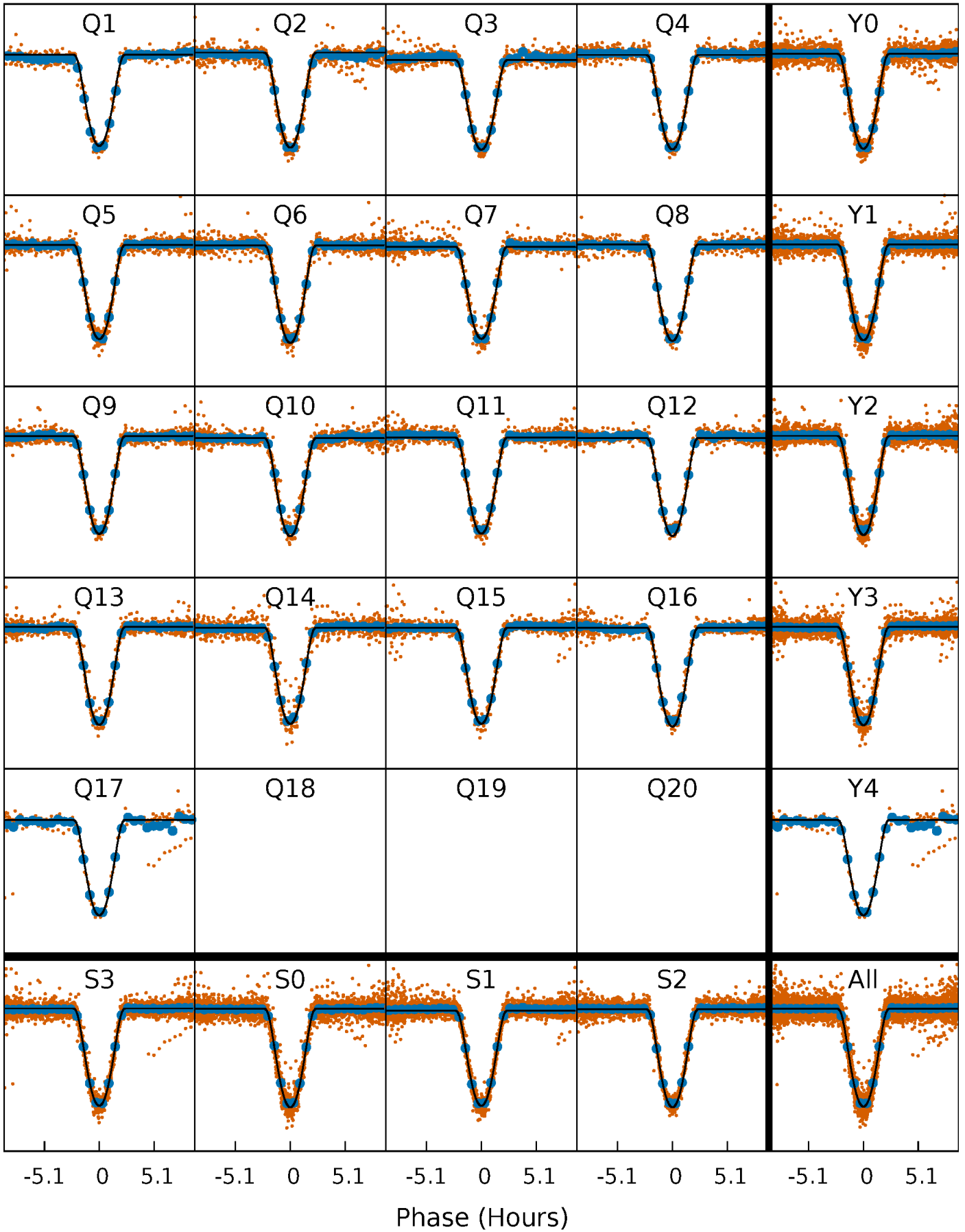
PDC Quarter-Phased Transit Curves

TCE 004346875-02 P= 2.347112 Days $T_0=133.779701$ (BKJD)



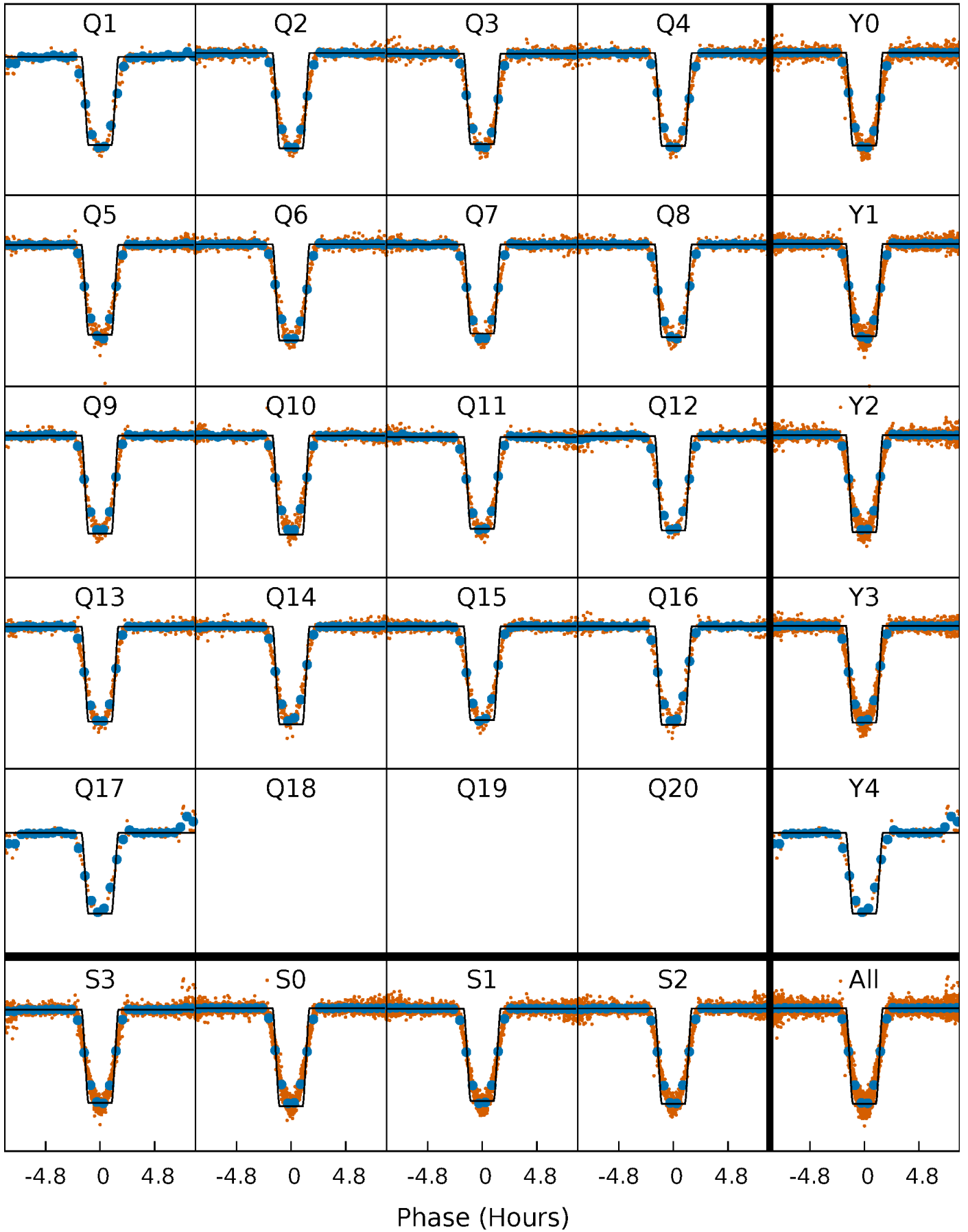
DV Quarter-Phased Transit Curves

TCE 004346875-02 P= 2.347112 Days $T_0=133.779701$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

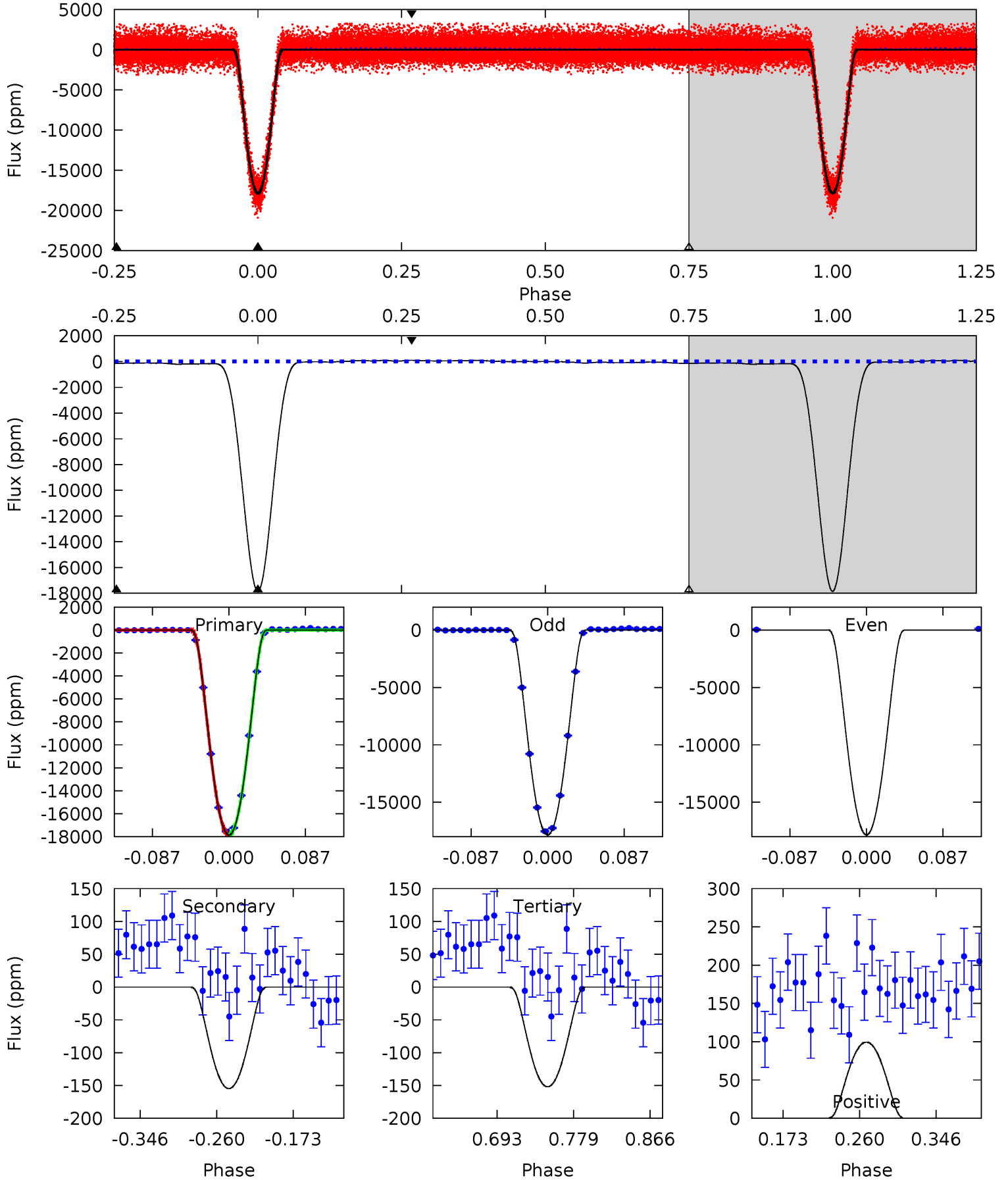
TCE 004346875-02 P= 2.347117 Days $T_0=133.778296$ (BKJD)



DV Model-Shift Uniqueness Test

004346875-02, P = 2.347112 Days, E = 131.432589 Days

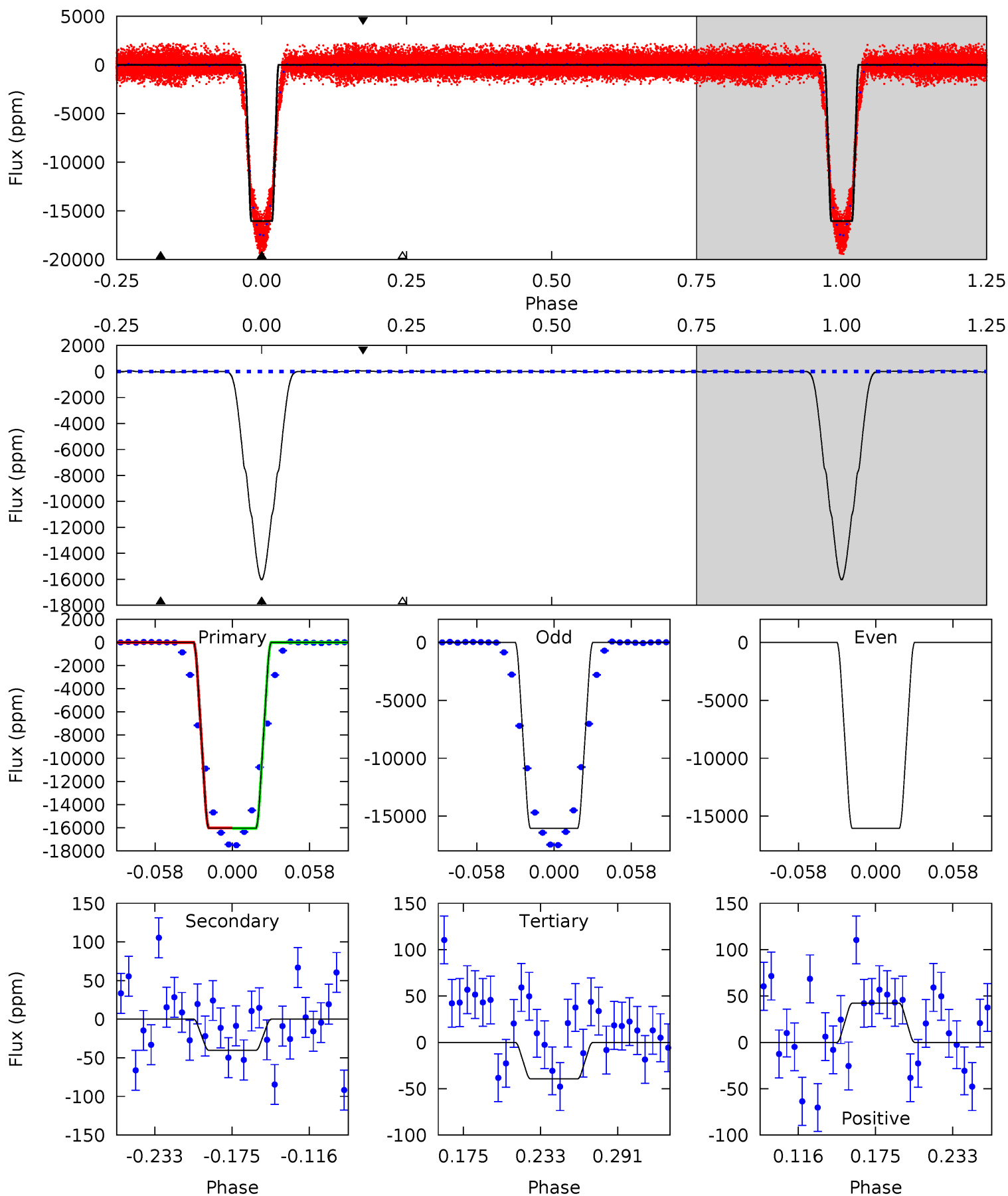
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1095	9.49	9.32	6.10	4.59	1.71	4.80	1086	1089	0.17	3.39	0	1.00	0.01	1.16



Alt Model-Shift Uniqueness Test

004346875-02, P = 2.347117 Days, E = 131.431179 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1128	2.84	2.77	2.97	4.68	1.89	1.18	1126	1125	0.07	-0.13	0	1.00	0.00	1.46



Stellar Parameters For KIC 004346875

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5512^{+166}_{-149}	$4.575^{+0.036}_{-0.135}$	$-0.240^{+0.300}_{-0.300}$	$0.787^{+0.176}_{-0.070}$	$0.851^{+0.092}_{-0.083}$	$2.454^{+0.459}_{-0.984}$
	+3%/-3%	+1%/-3%	+125%/-125%	+22%/-9%	+11%/-10%	+19%/-40%
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 004346875-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-155 ± 16	$13.78^{+1.49}_{-0.91}$	1703^{+84}_{-75}	2151^{+91}_{-127}	$0.464^{+0.085}_{-0.086}$
Alt.	-40 ± 14	$11.58^{+1.31}_{-0.75}$	1700^{+88}_{-68}	-2105^{+164}_{-117}	$0.171^{+0.065}_{-0.067}$

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

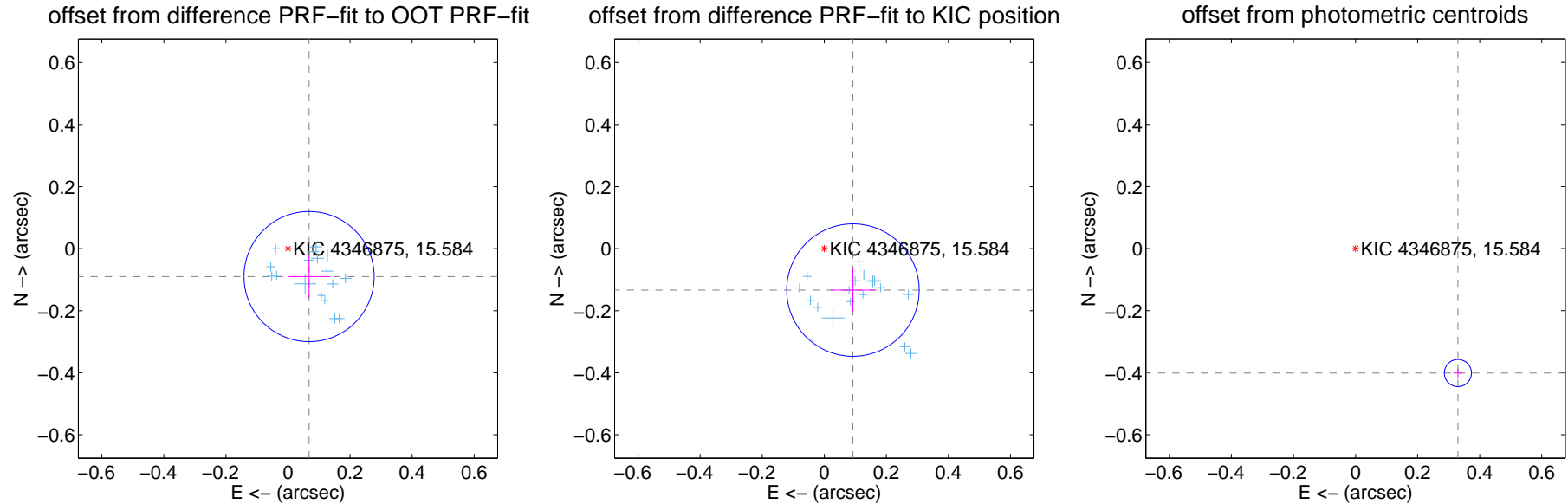
DV Centroid Data

Supplemental centroid analysis for 004346875-02. Kepler magnitude: 15.58. Transit SNR 531.42

There are 17 quarters with good PRF difference image offsets

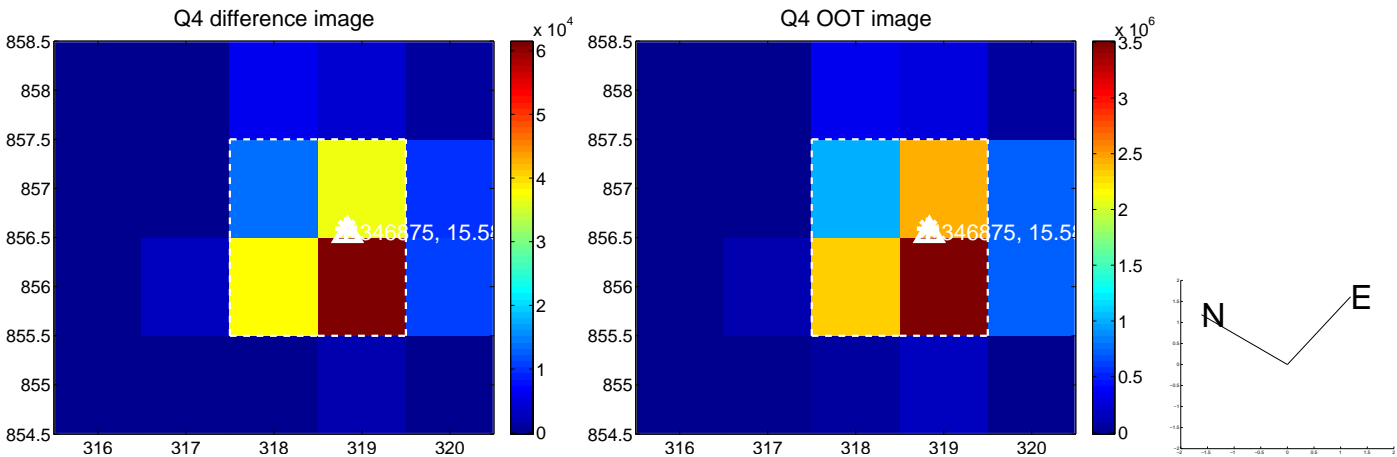
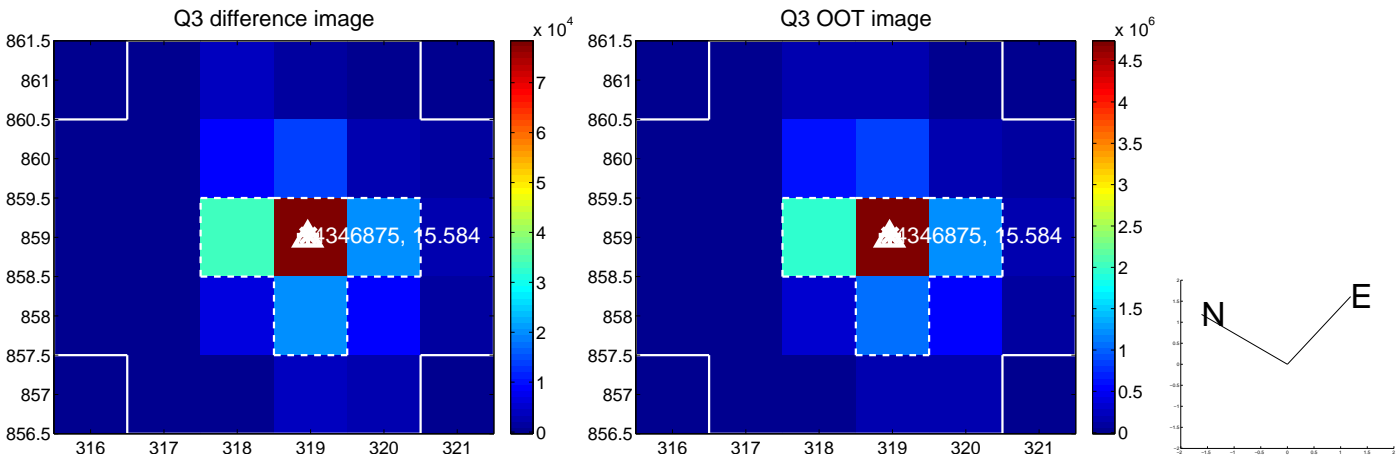
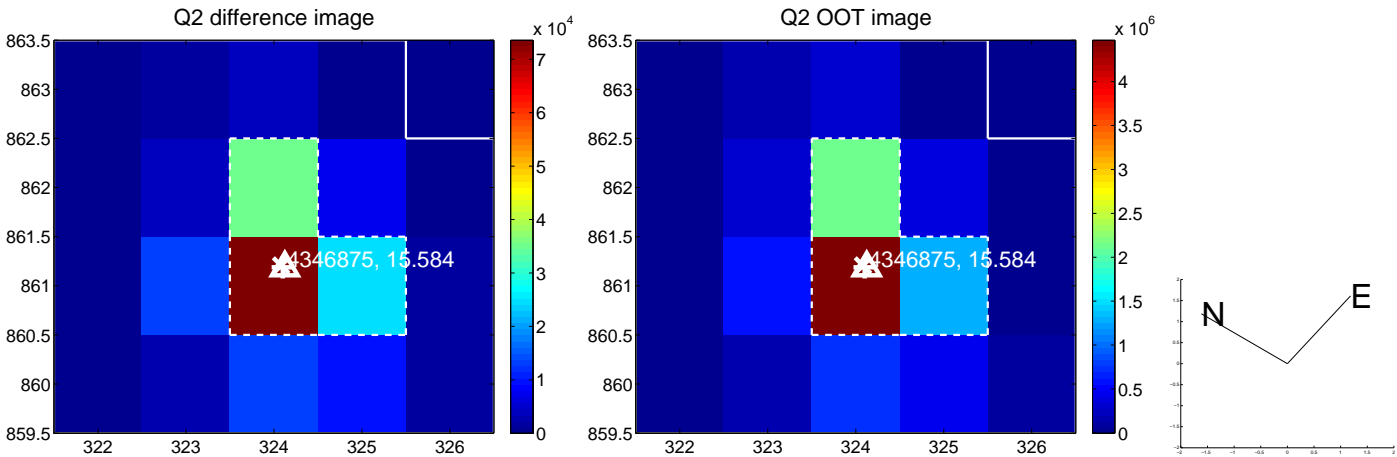
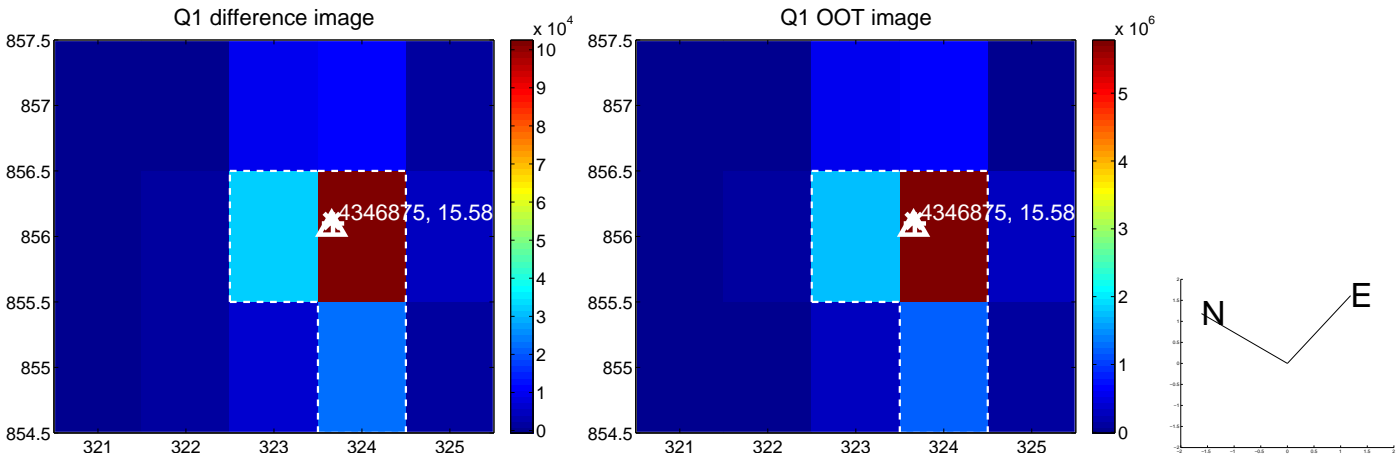
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.070	1.61	-0.068 ± 0.069	-0.090 ± 0.069
PRF-fit source offset from KIC position	0.162 ± 0.071	2.28	-0.092 ± 0.072	-0.134 ± 0.069
photometric centroid source offset	0.52 ± 0.01	35.62	-0.33 ± 0.01	-0.40 ± 0.01

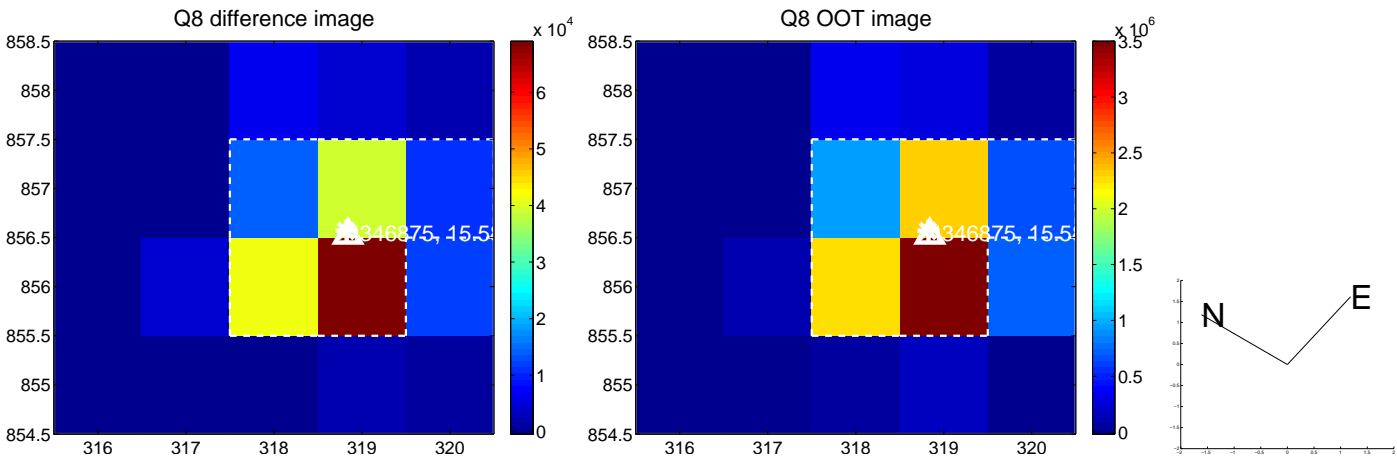
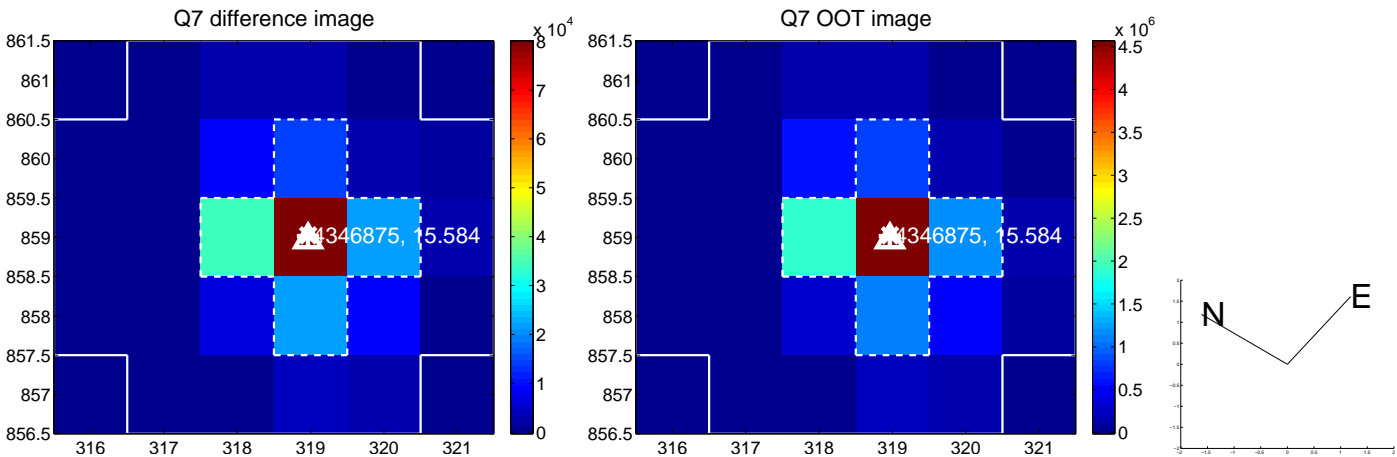
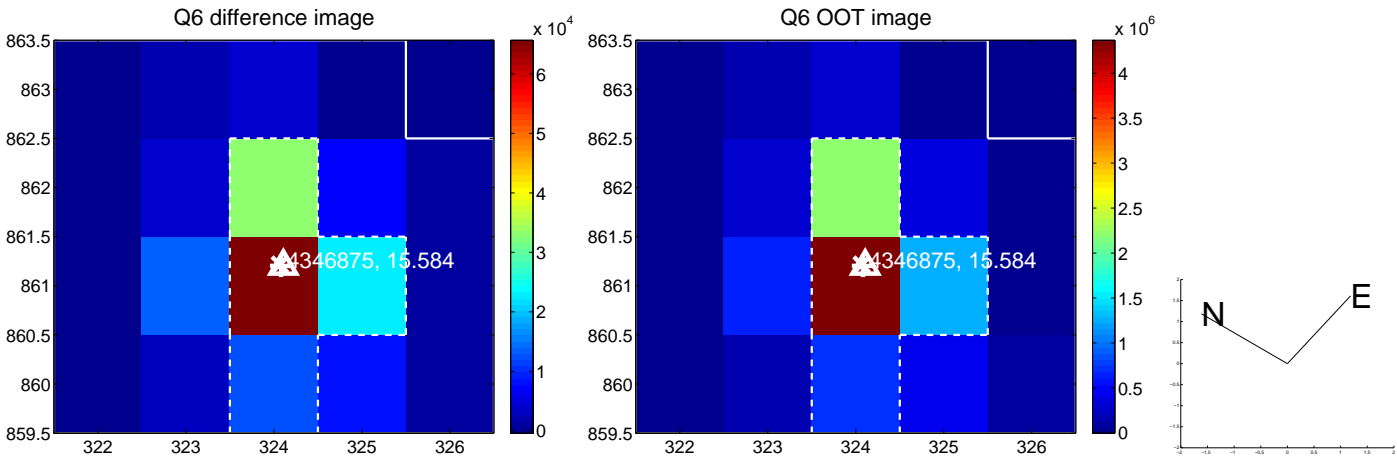
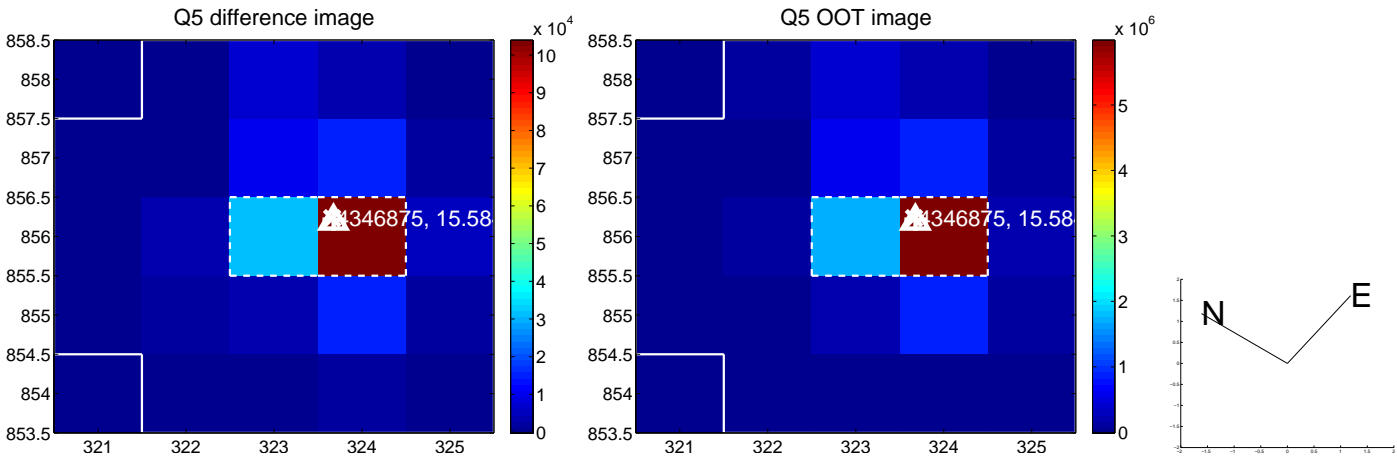


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

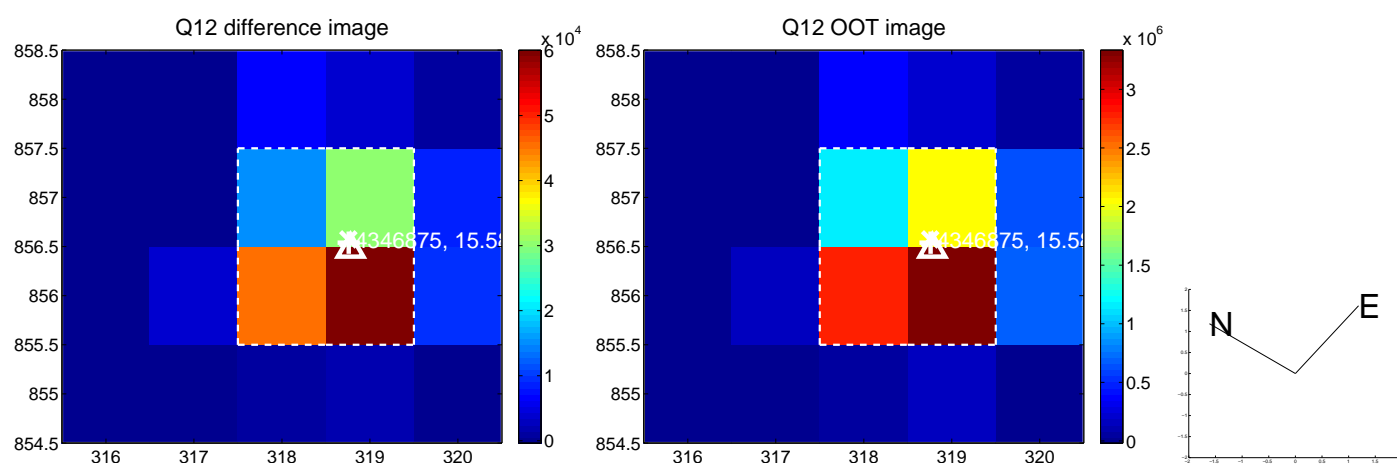
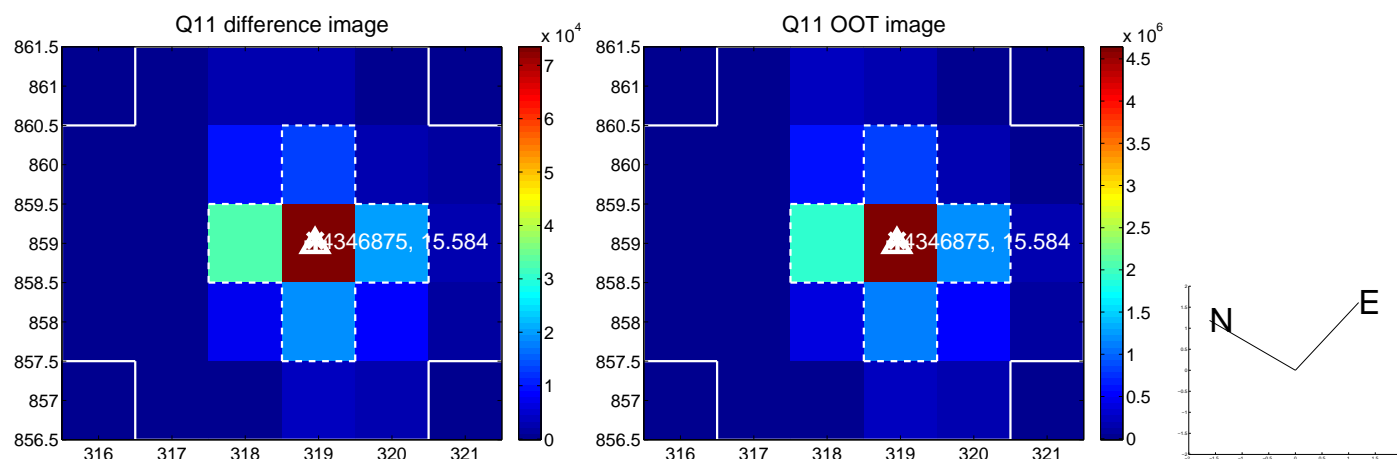
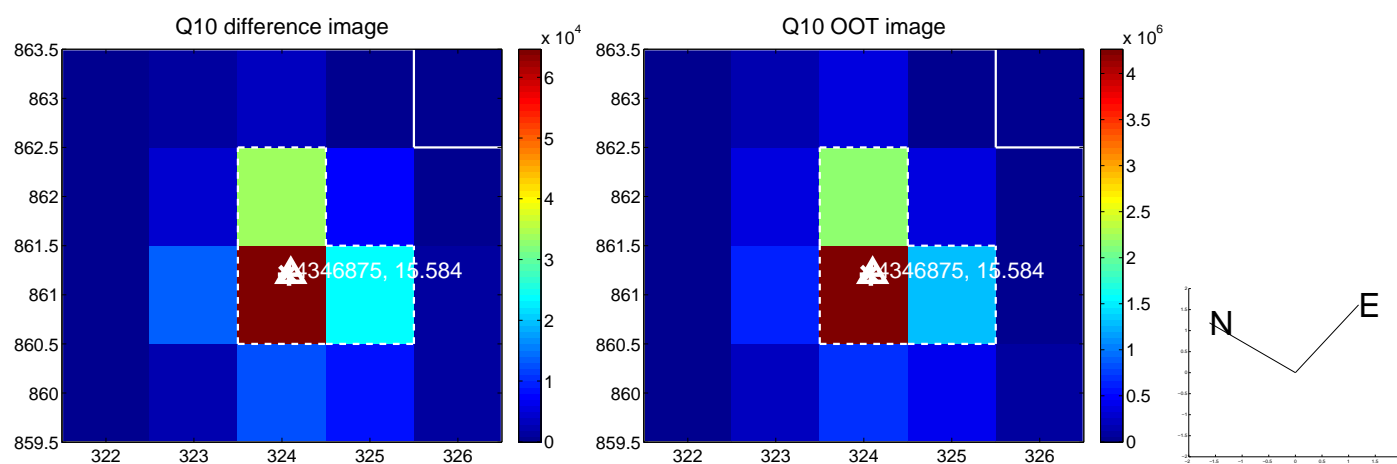
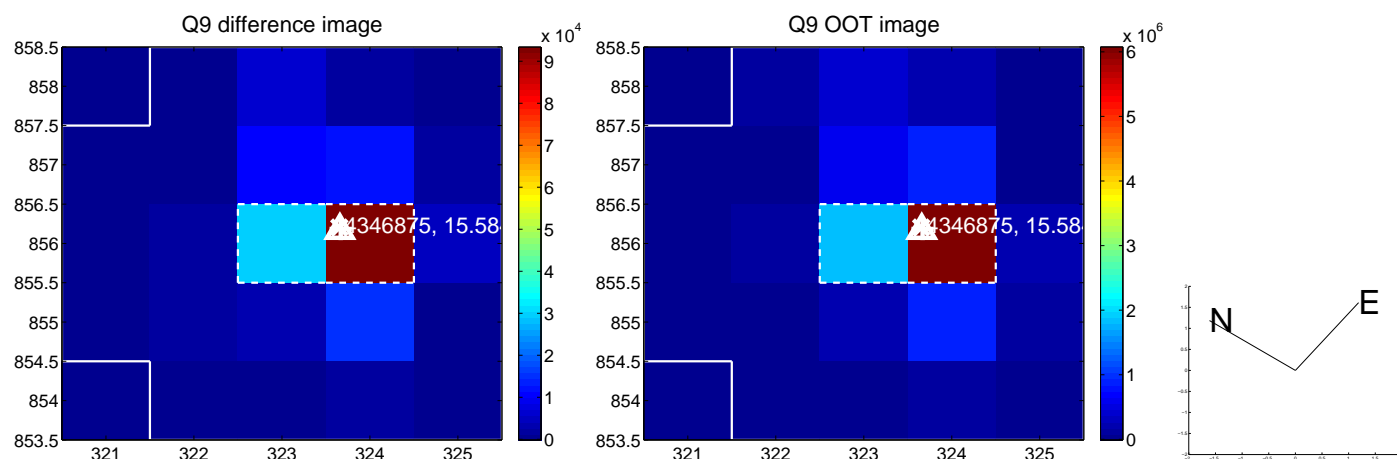
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



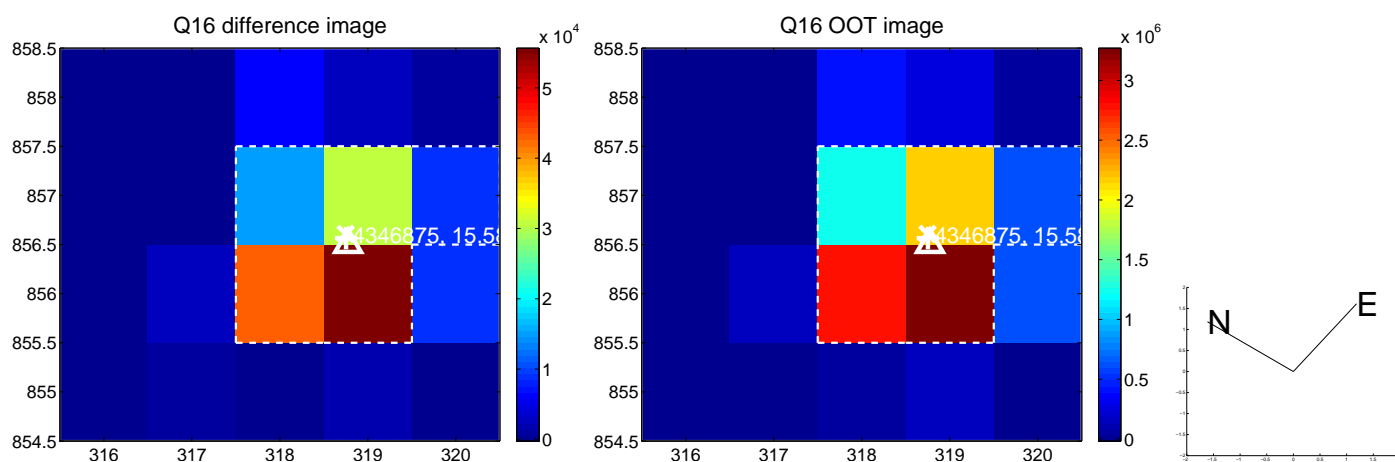
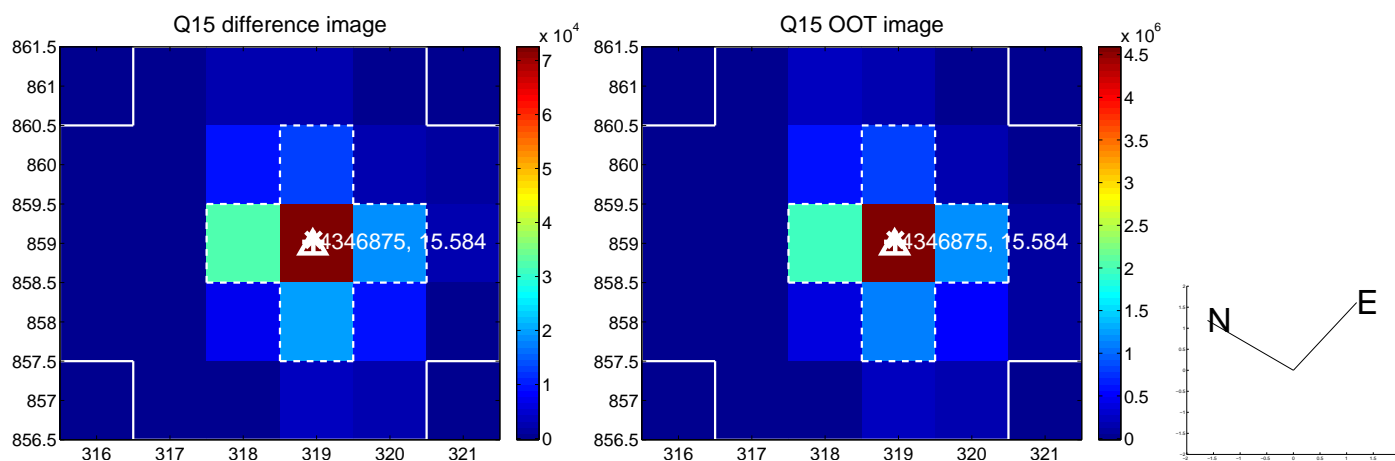
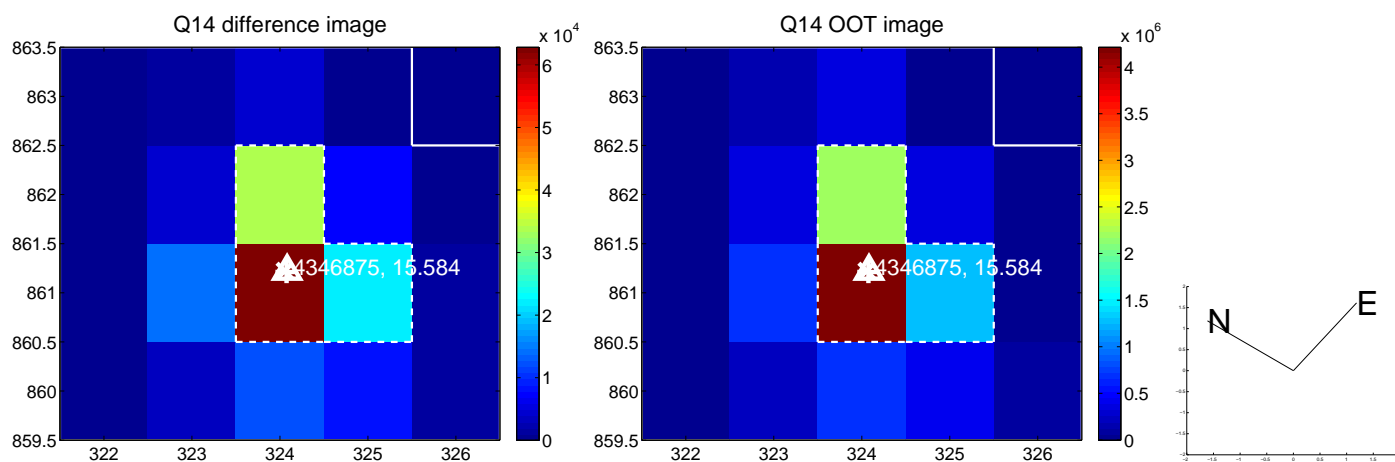
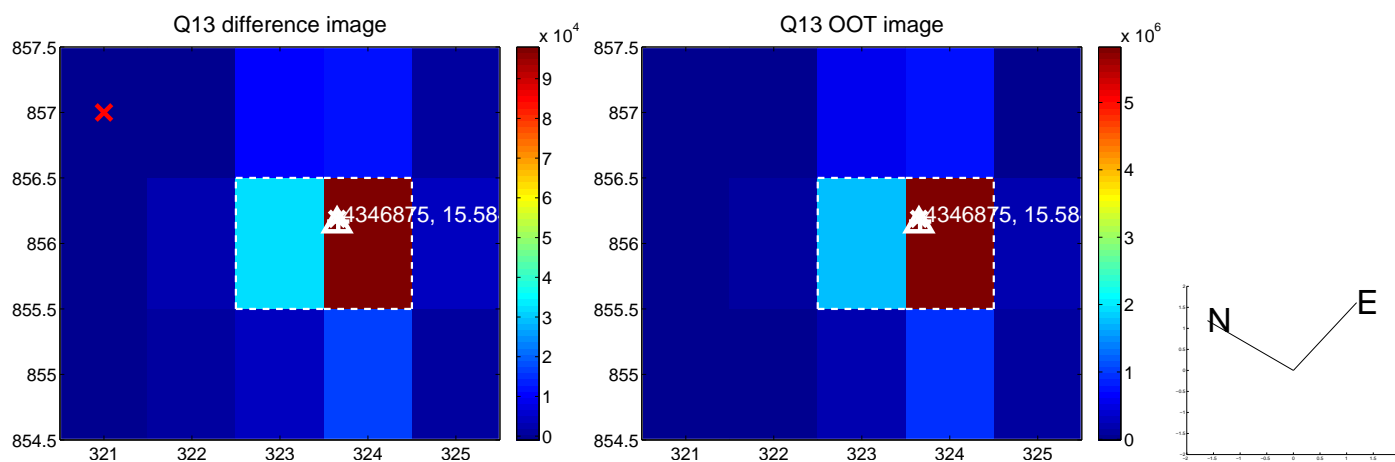
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



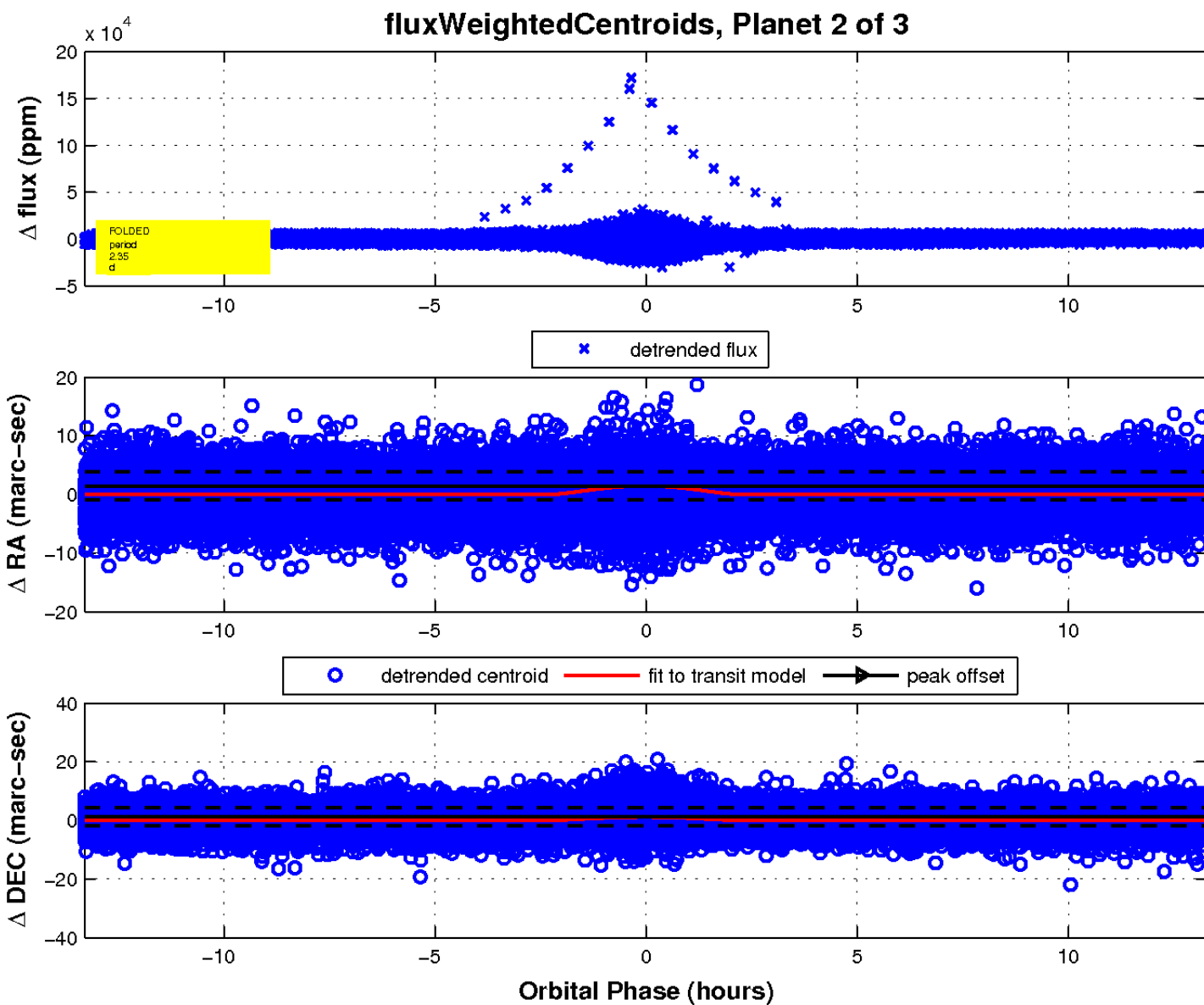
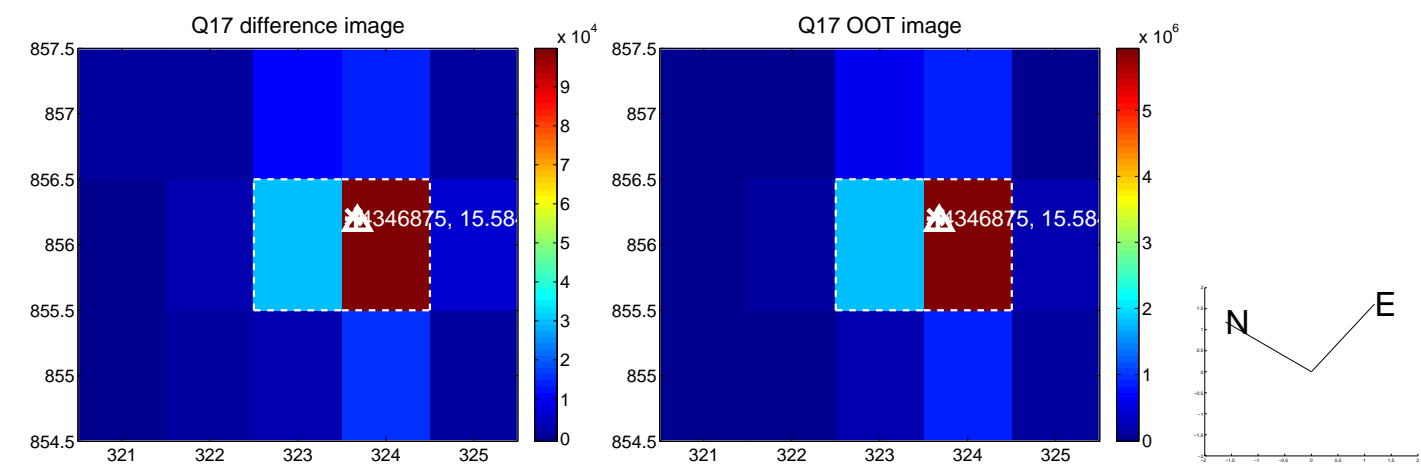
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

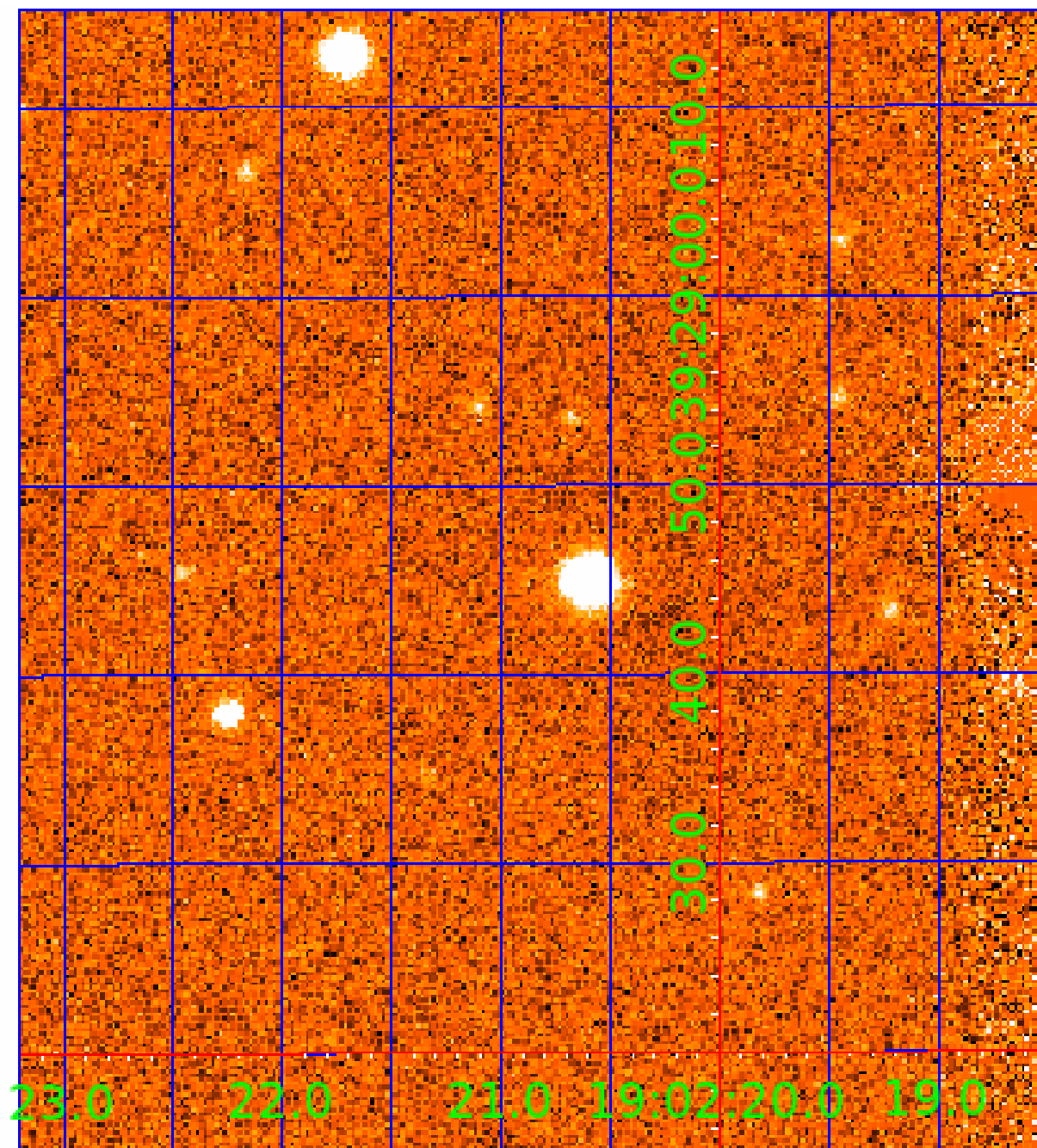


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004346875

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})
004346875-01	OBS	6113.01	4.694220	133.780145	177872.2	4.551	5236.9	3295.2	0.79	5512	50.21	189.68
004346875-02	OBS	No	2.347112	133.779701	17791.2	4.435	543.7	531.4	0.79	5512	13.45	477.97
004346875-03	OBS	No	353.497194	239.052228	1789.8	4.556	12.1	6.2	0.79	5512	3.42	0.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004346875-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
004346875-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
004346875-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— 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 004346875-03

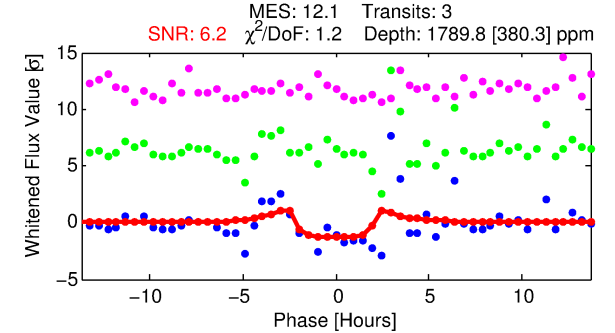
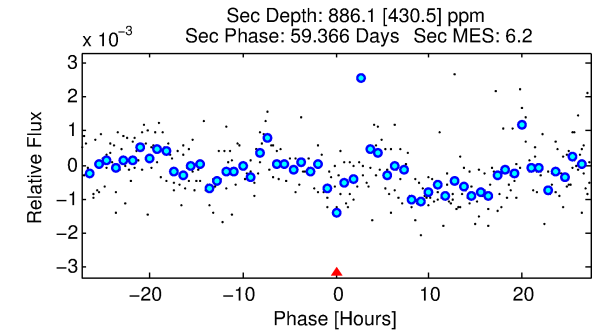
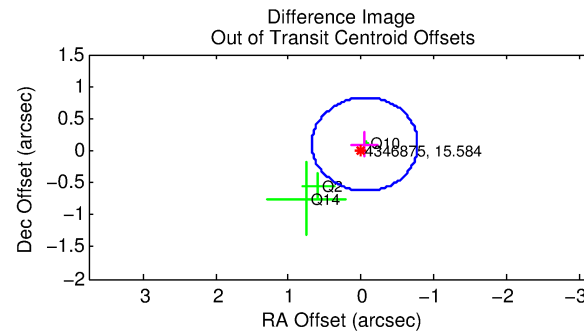
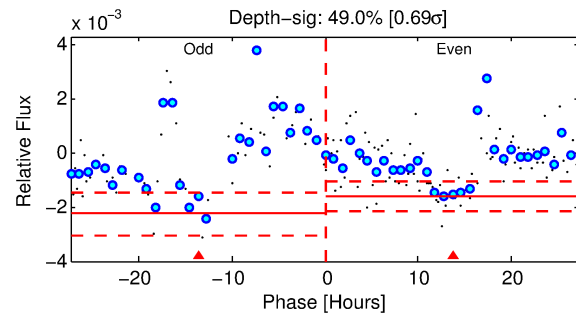
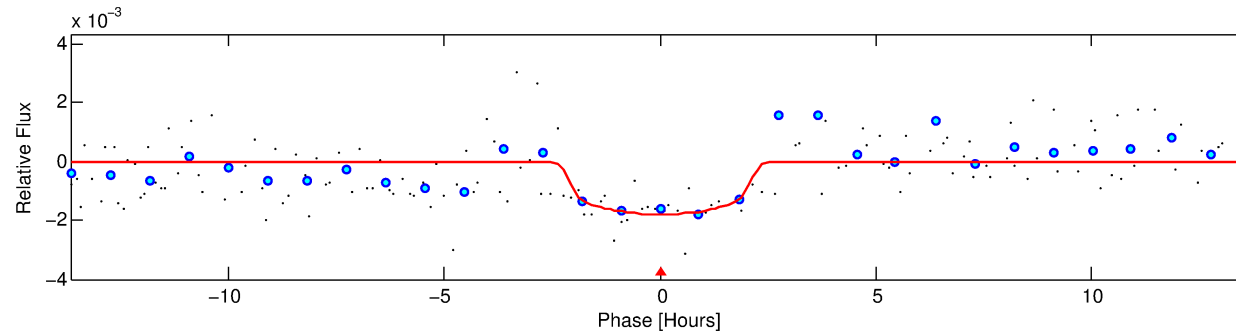
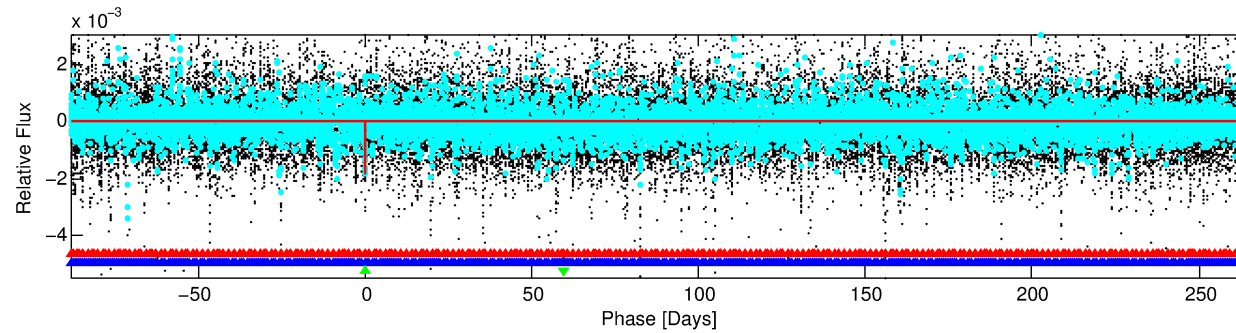
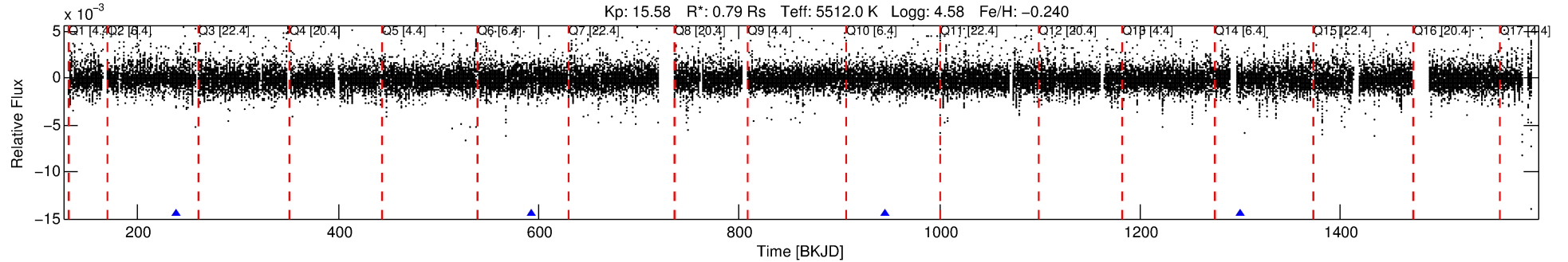
No Significant Match Found

DV One-Page Summary

KIC: 4346875 Candidate: 3 of 3 Period: 353.497 d

KOI: K06113 Corr: No Ephemeris Match

Kp: 15.58 R*: 0.79 Rs Teff: 5512.0 K Logg: 4.58 Fe/H: -0.240



DV Fit Results:

Period = 353.49719 [0.00506] d
Epoch = 239.0522 [0.0111] BKJD
Rp/R* = 0.0398 [0.0361]
a/R* = 525.78 [1902.91]
b = 0.54 [4.78]
Seff = 0.60 [0.17]
Teq = 224 [16] K
Rp = 3.42 [3.19] Re
a = 0.9267 [0.1683] AU
Ag = 35789.52 [67752.09] [0.53σ]
Teffp = 4765 [2239] K [2.03σ]

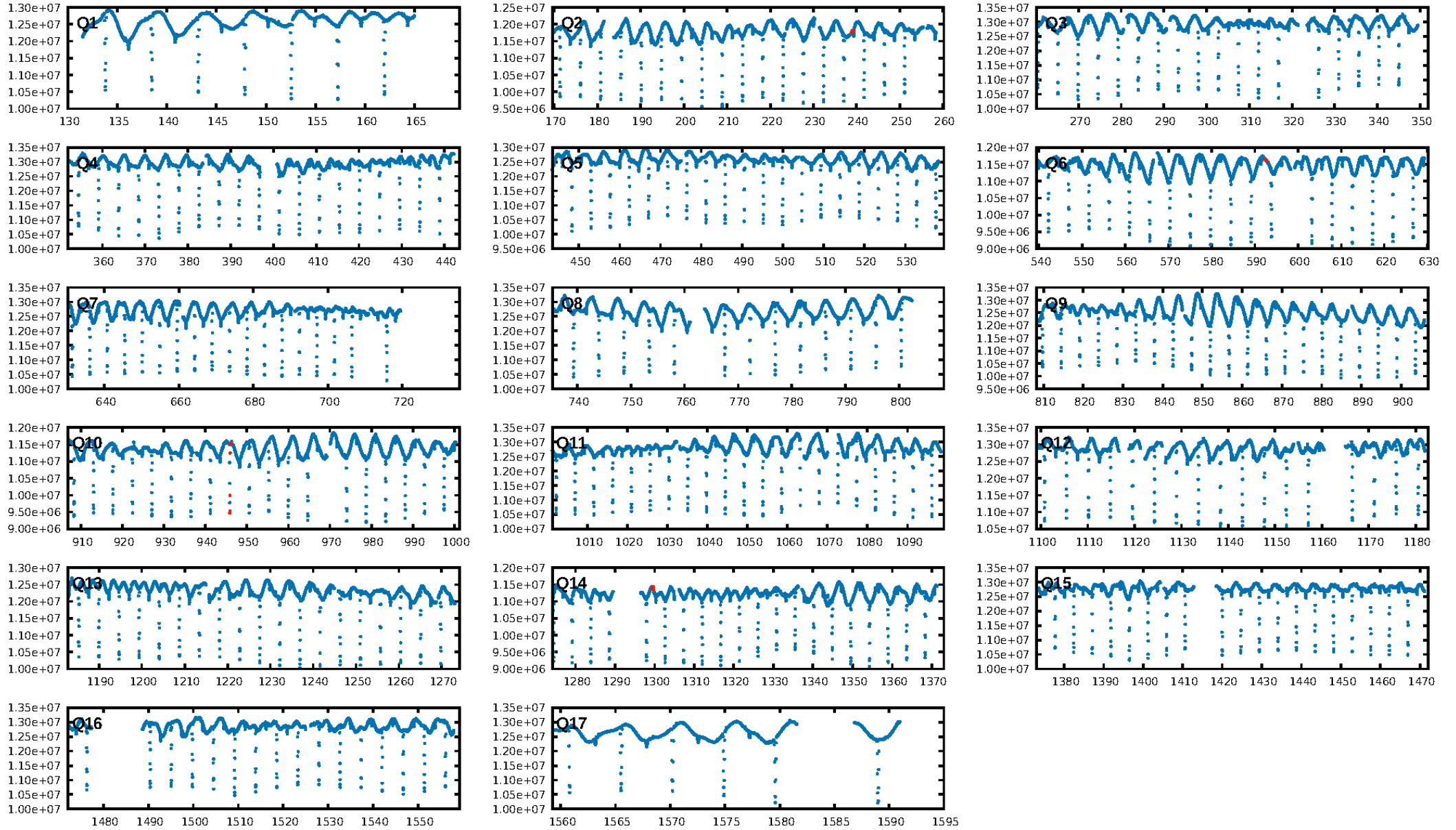
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1299.91σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.3%
ModelChiSquareGof-sig: 86.6%
Bootstrap-pfa: 1.25e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 10.47
Centroid-sig: 23.6%
Centroid-so: 0.757 arcsec [0.76σ]
OotOffset-rm: 0.112 arcsec [0.46σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-rm: 0.090 arcsec [0.42σ]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.50 [2/4]

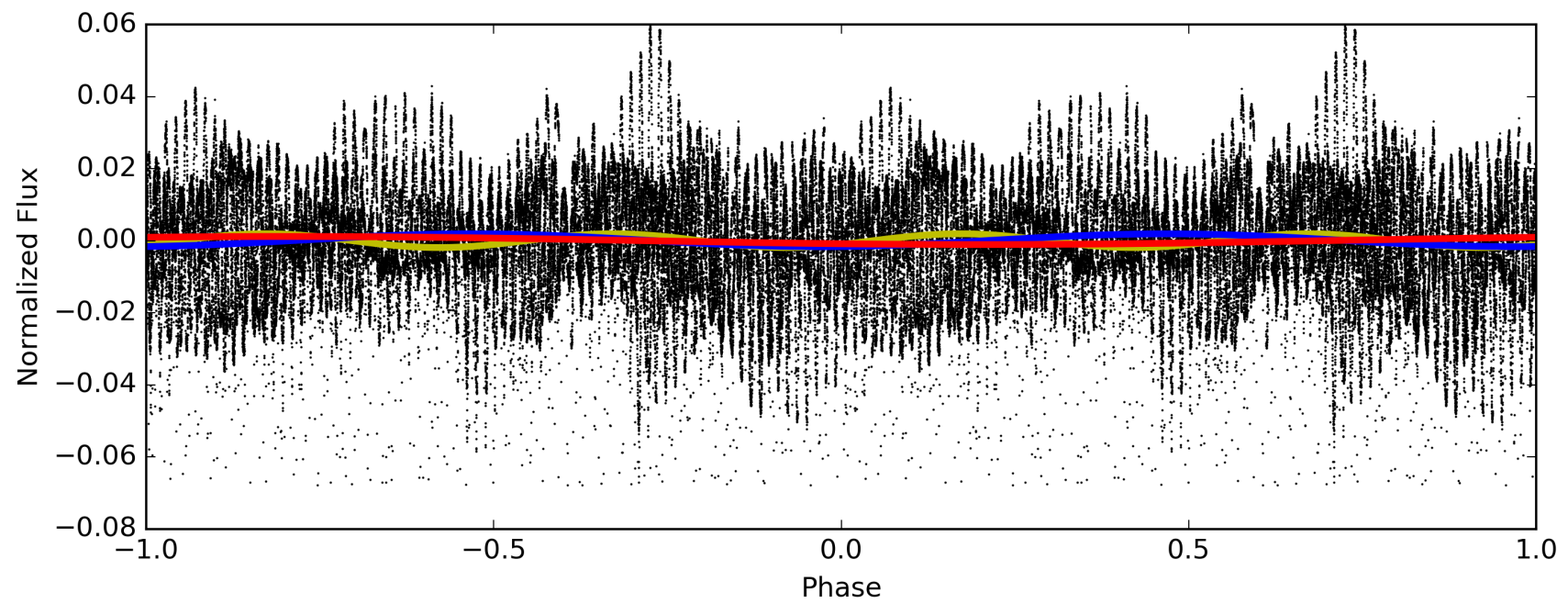
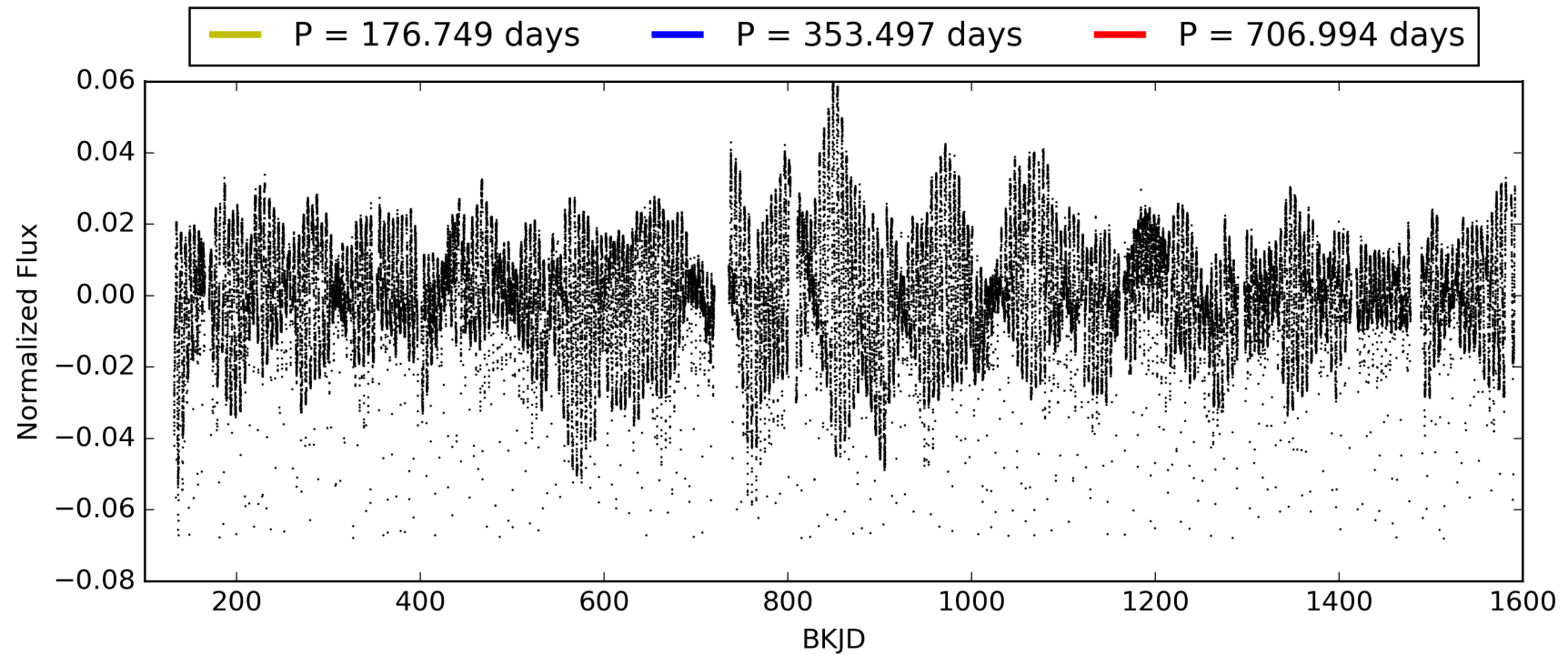
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 06:55:53 Z

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

TCE 004346875-03, PDC Light Curves

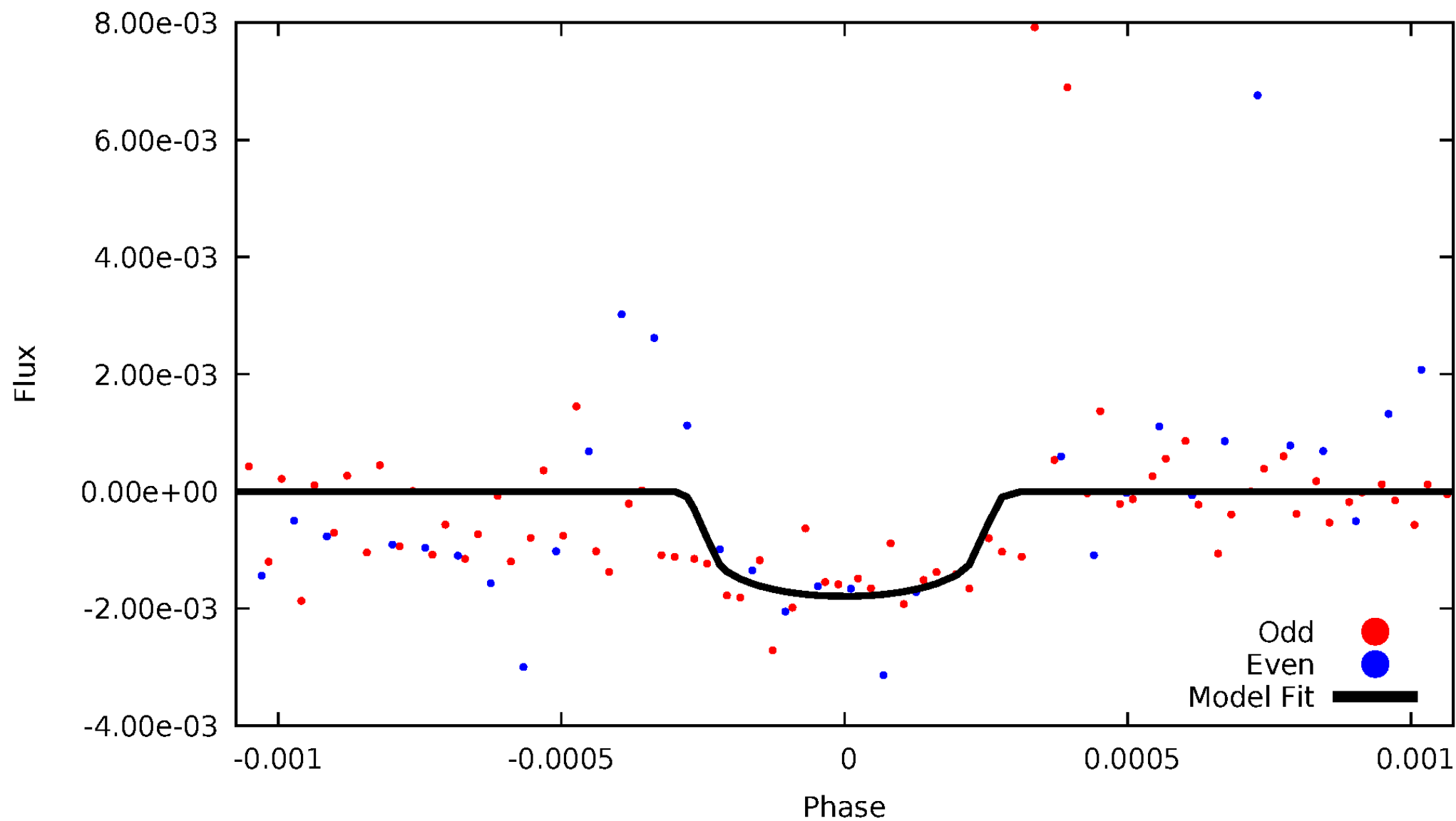


TCE 004346875-03



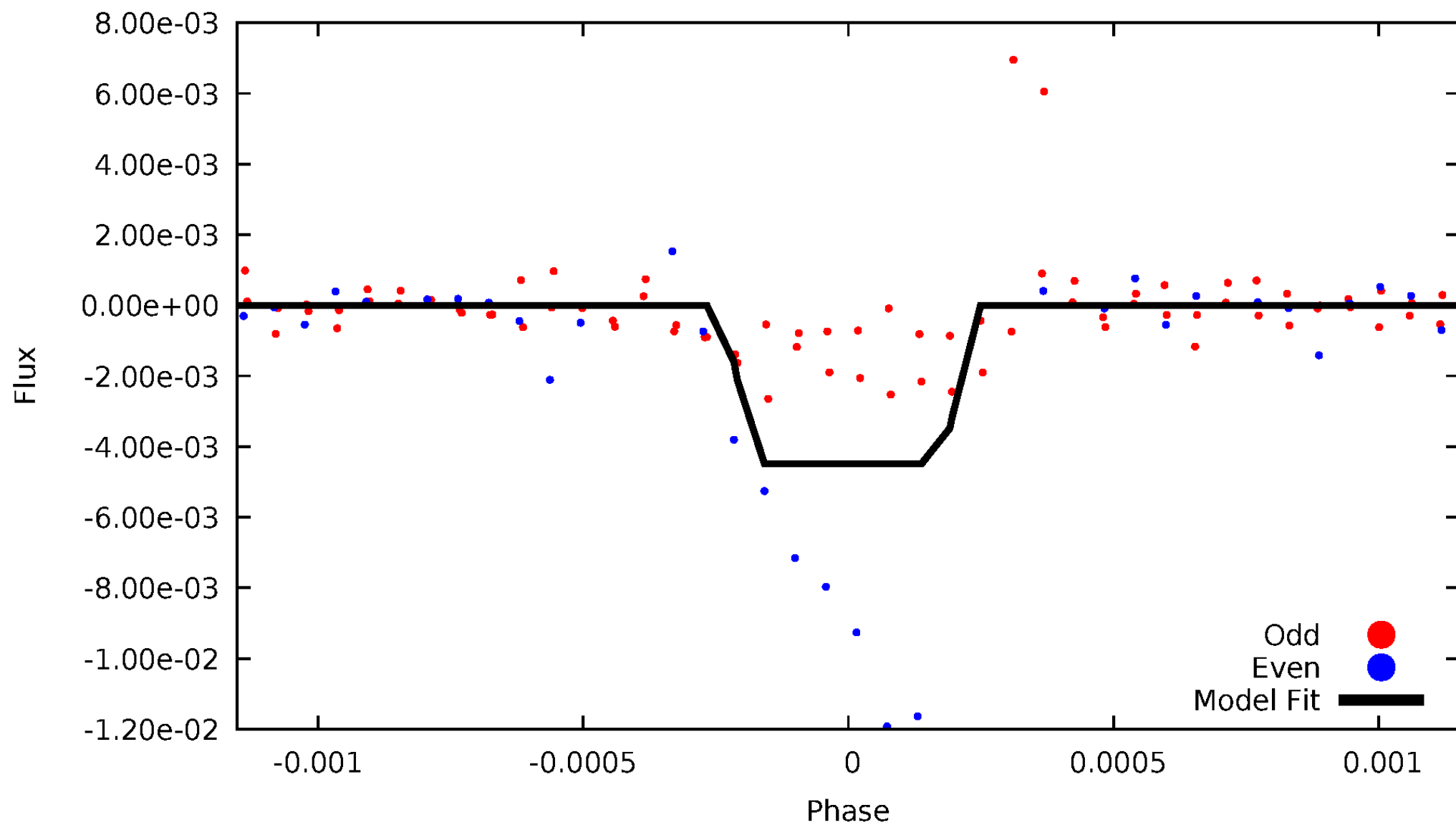
DV Odd/Even

TCE 004346875-03



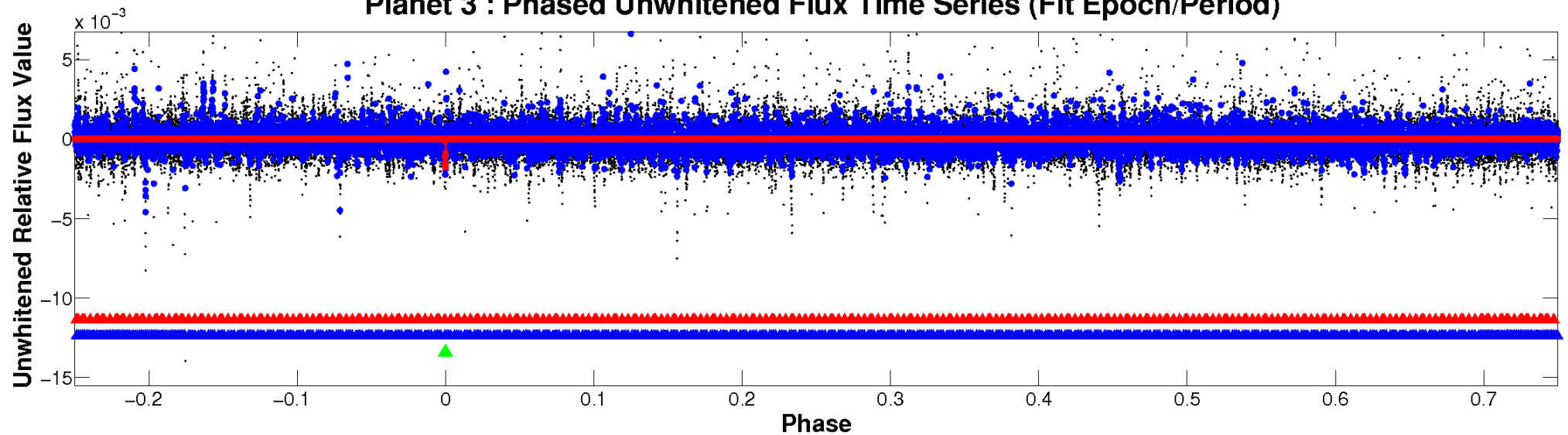
ALT Odd/Even

TCE 004346875-03

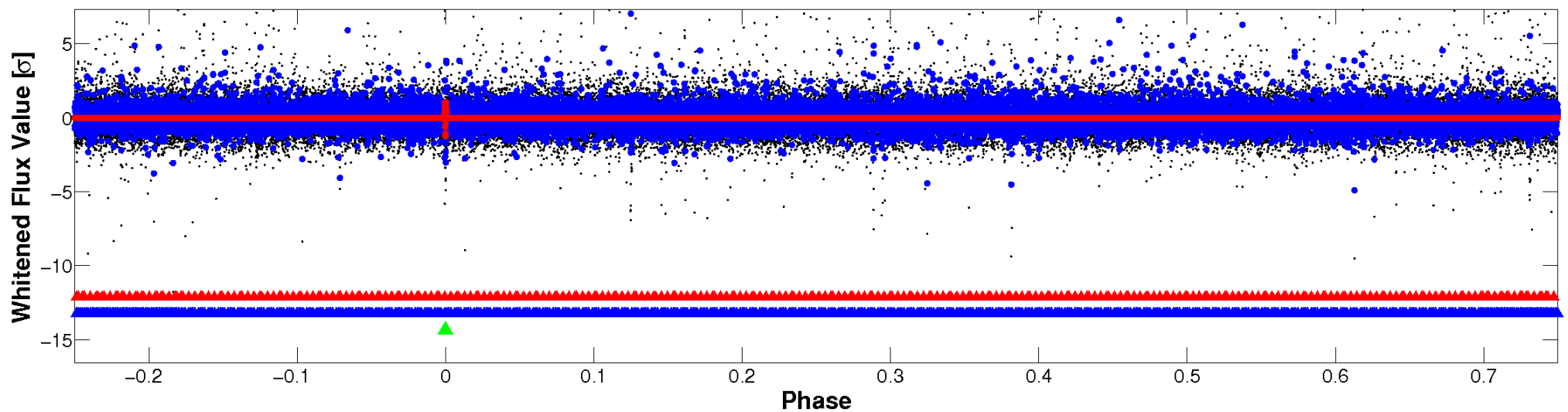


Non-Whitened Vs. Whitened Light Curve

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

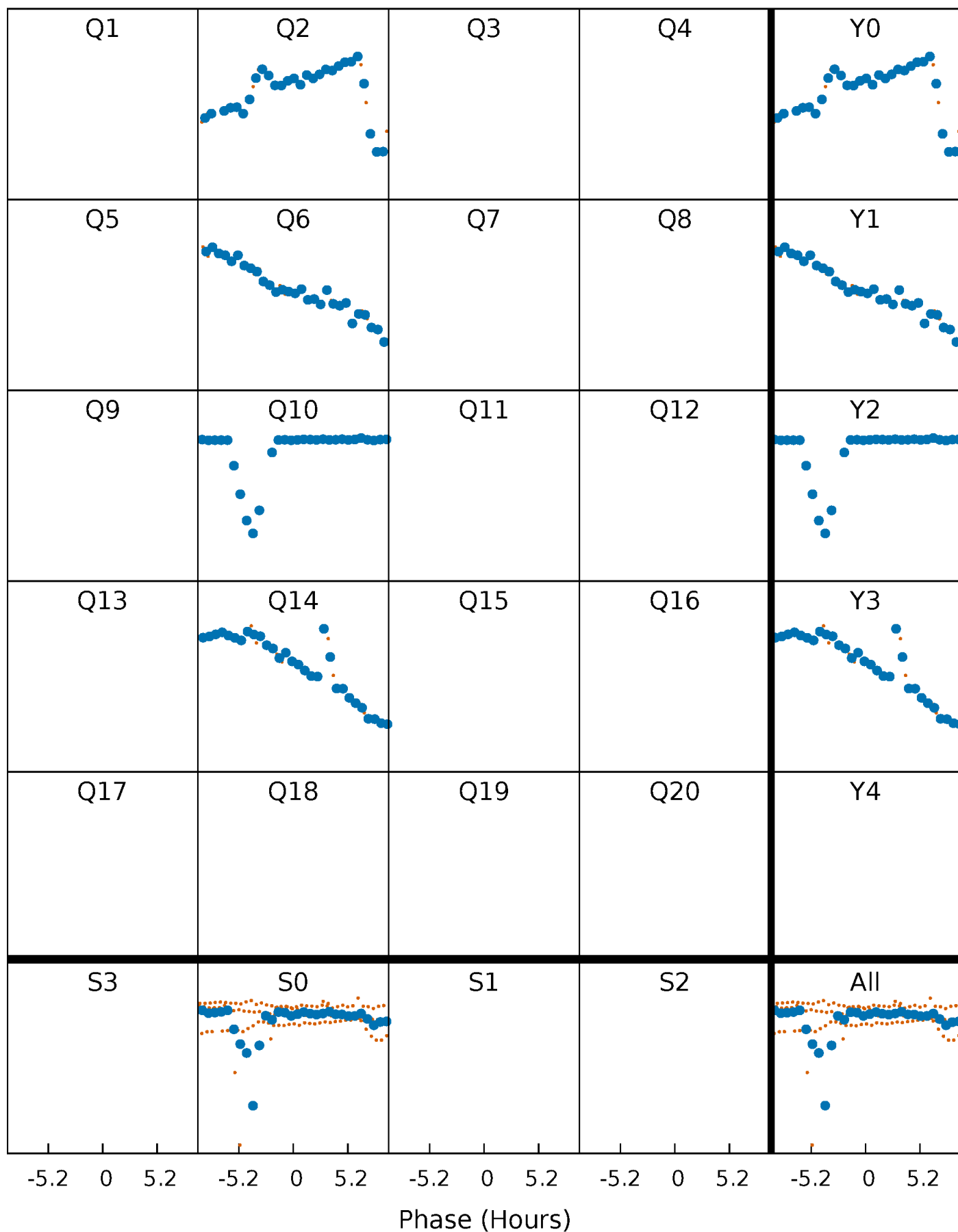


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



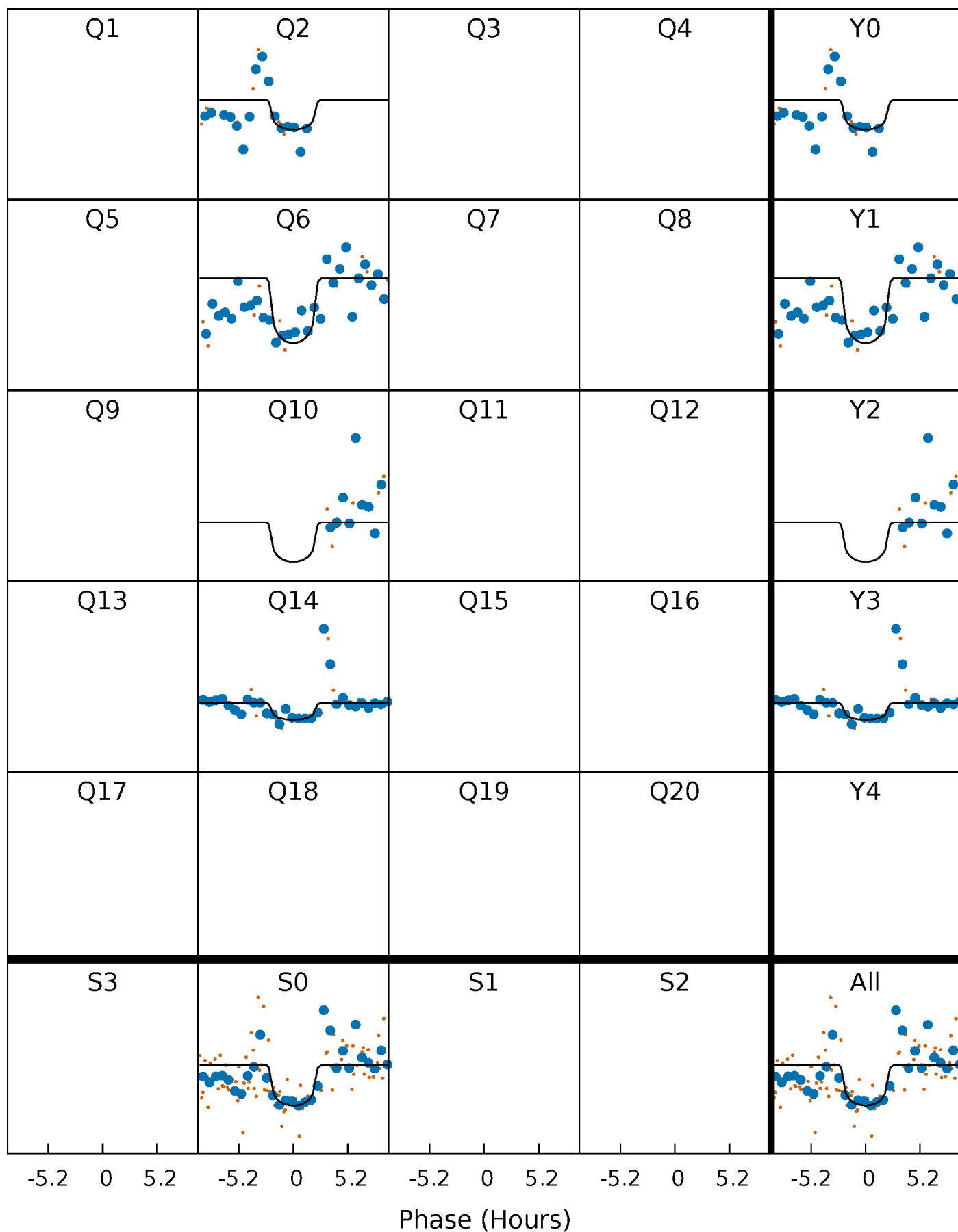
PDC Quarter-Phased Transit Curves

TCE 004346875-03 $P=353.497194$ Days $T_0=239.052228$ (BKJD)



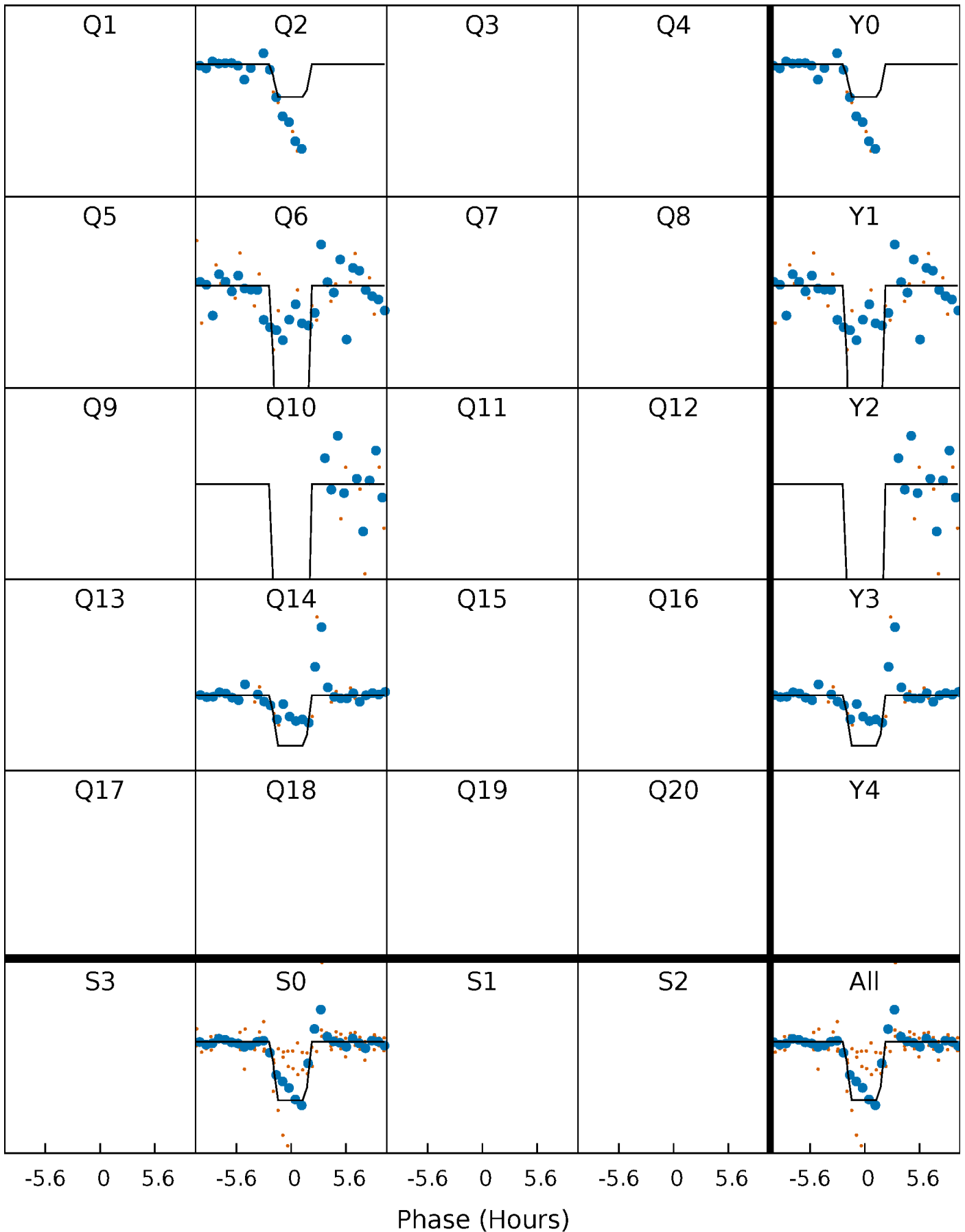
DV Quarter-Phased Transit Curves

TCE 004346875-03 $P=353.497194$ Days $T_0=239.052228$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

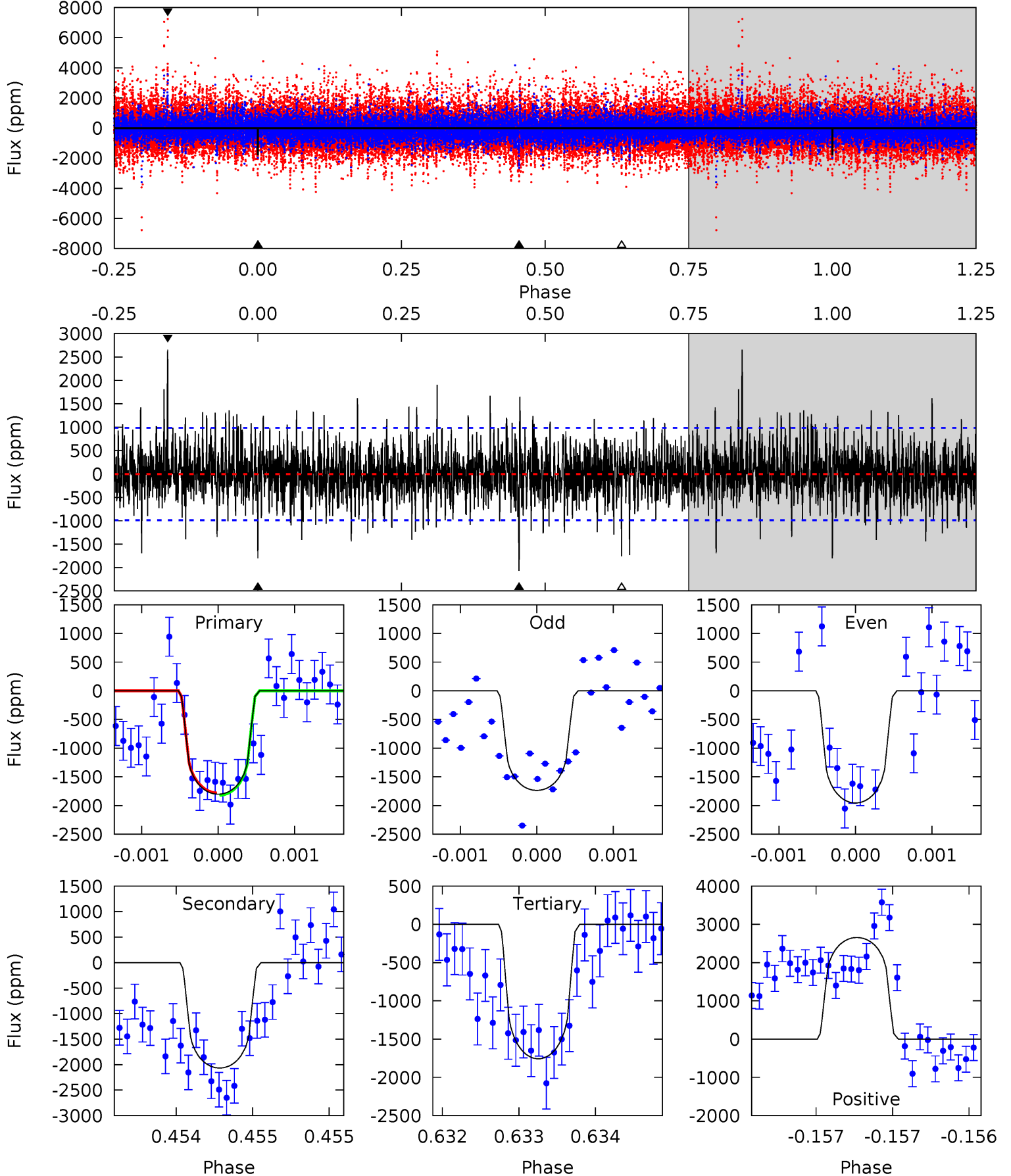
TCE 004346875-03 P=353.500588 Days $T_0=239.050687$ (BKJD)



DV Model-Shift Uniqueness Test

004346875-03, P = 353.497194 Days, E = 239.052228 Days

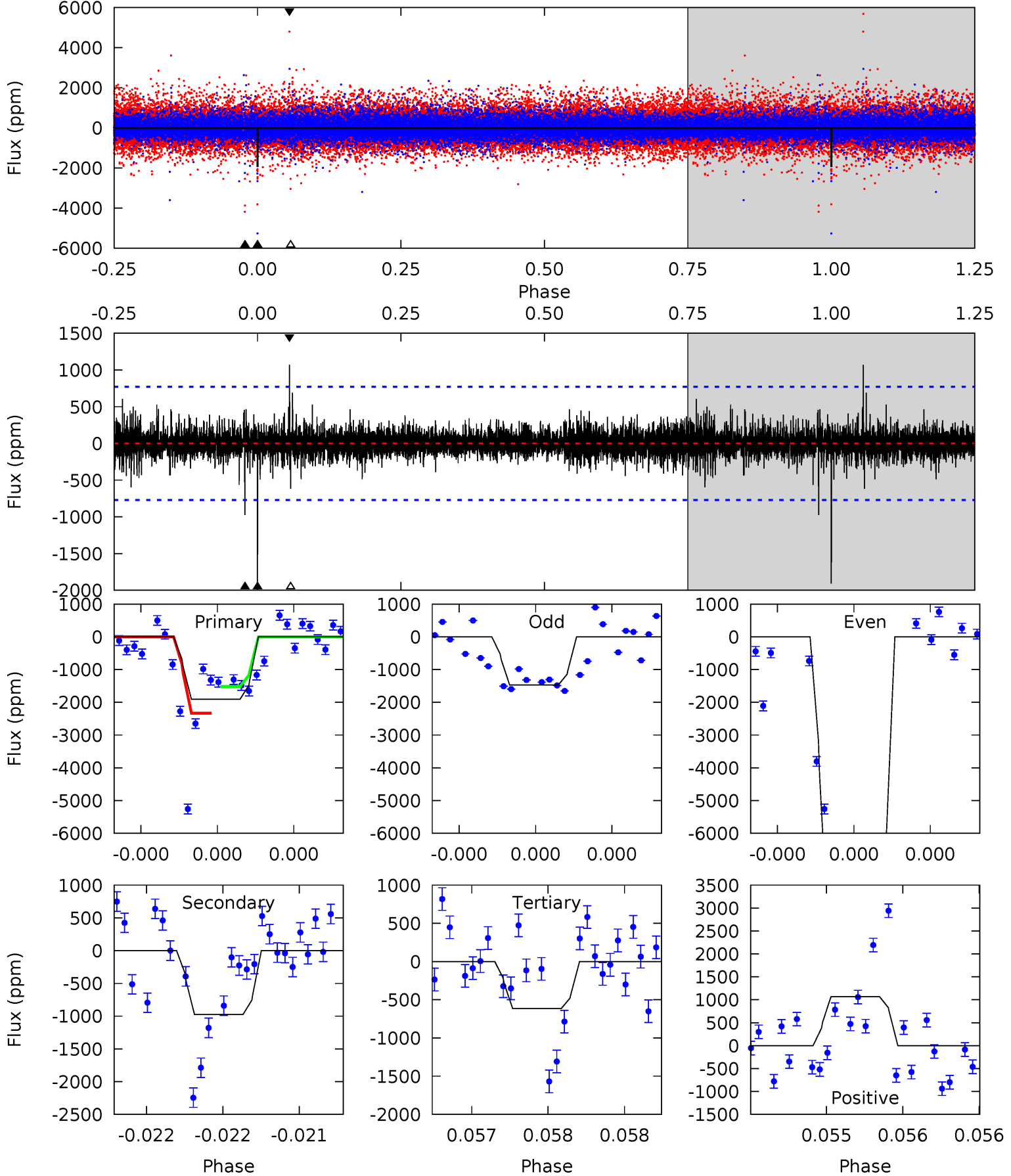
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	11.6	9.87	14.9	5.55	3.44	2.34	0.26	-4.80	1.74	-3.31	0.53	0.98	0.56	0.12



Alt Model-Shift Uniqueness Test

004346875-03, P = 353.500588 Days, E = 239.050687 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	7.06	4.46	7.74	5.59	3.50	0.83	9.35	6.07	2.60	-0.68	26.5	1.82	0.36	2.97



Stellar Parameters For KIC 004346875

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5512^{+166}_{-149}	$4.575^{+0.036}_{-0.135}$	$-0.240^{+0.300}_{-0.300}$	$0.787^{+0.176}_{-0.070}$	$0.851^{+0.092}_{-0.083}$	$2.454^{+0.459}_{-0.984}$
	+3%/-3%	+1%/-3%	+125%/-125%	+22%/-9%	+11%/-10%	+19%/-40%
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 004346875-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2066 ± 178	$4.03^{+3.15}_{-2.43}$	319^{+17}_{-13}	5481^{+3674}_{-1119}	$58956^{+306759}_{-40176}$
Alt.	-974 ± 138	$5.95^{+3.08}_{-3.06}$	319^{+15}_{-12}	4073^{+1275}_{-560}	12985^{+41601}_{-7303}

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 $A_{obs} \gg 1.0$

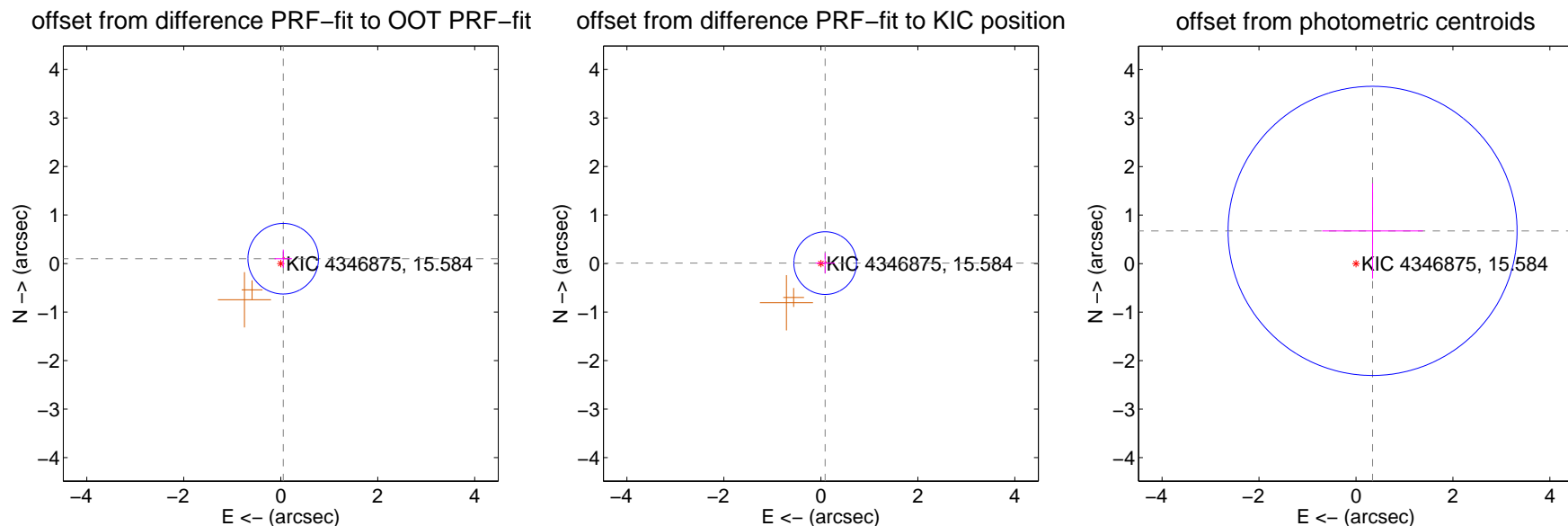
DV Centroid Data

Supplemental centroid analysis for 004346875-03. Kepler magnitude: 15.58. Transit SNR 6.16

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.112 ± 0.243	0.46	-0.051 ± 0.180	0.100 ± 0.189
PRF-fit source offset from KIC position	0.090 ± 0.215	0.42	-0.089 ± 0.198	0.009 ± 0.209
photometric centroid source offset	0.76 ± 0.99	0.76	-0.34 ± 1.04	0.67 ± 0.98



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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

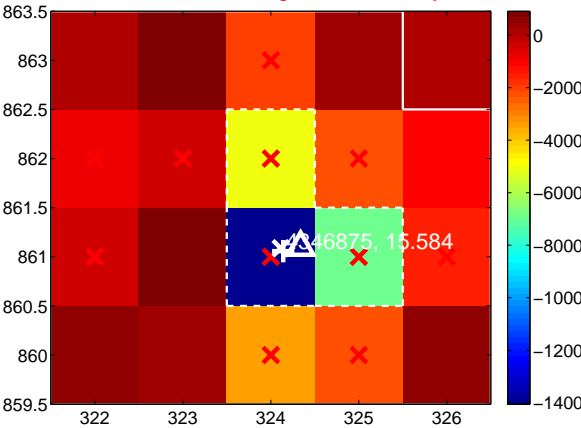
Q1 no difference image



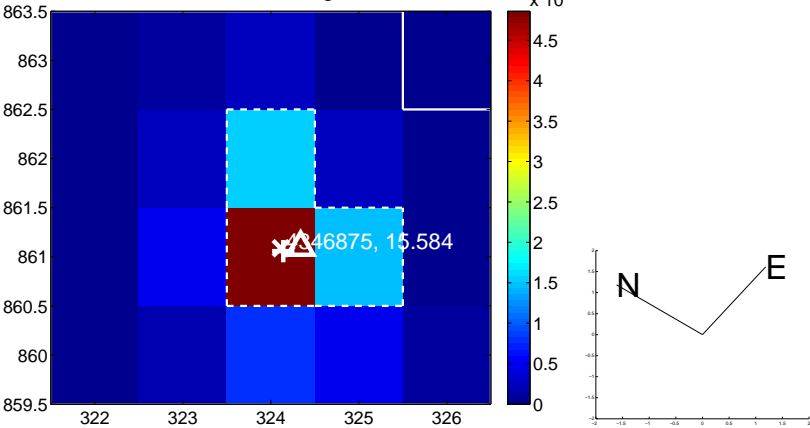
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



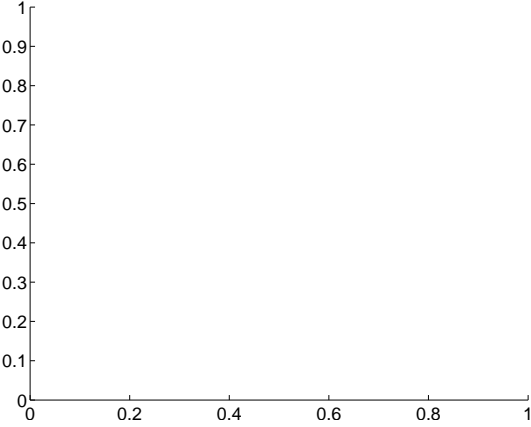
Q3 no difference image



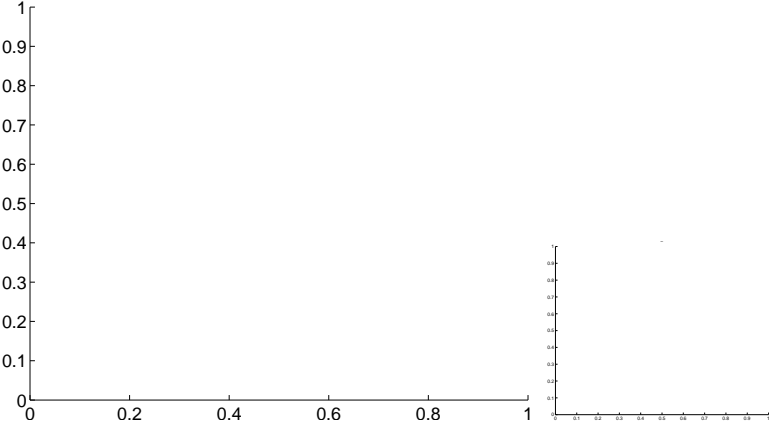
Q3 no OOT image



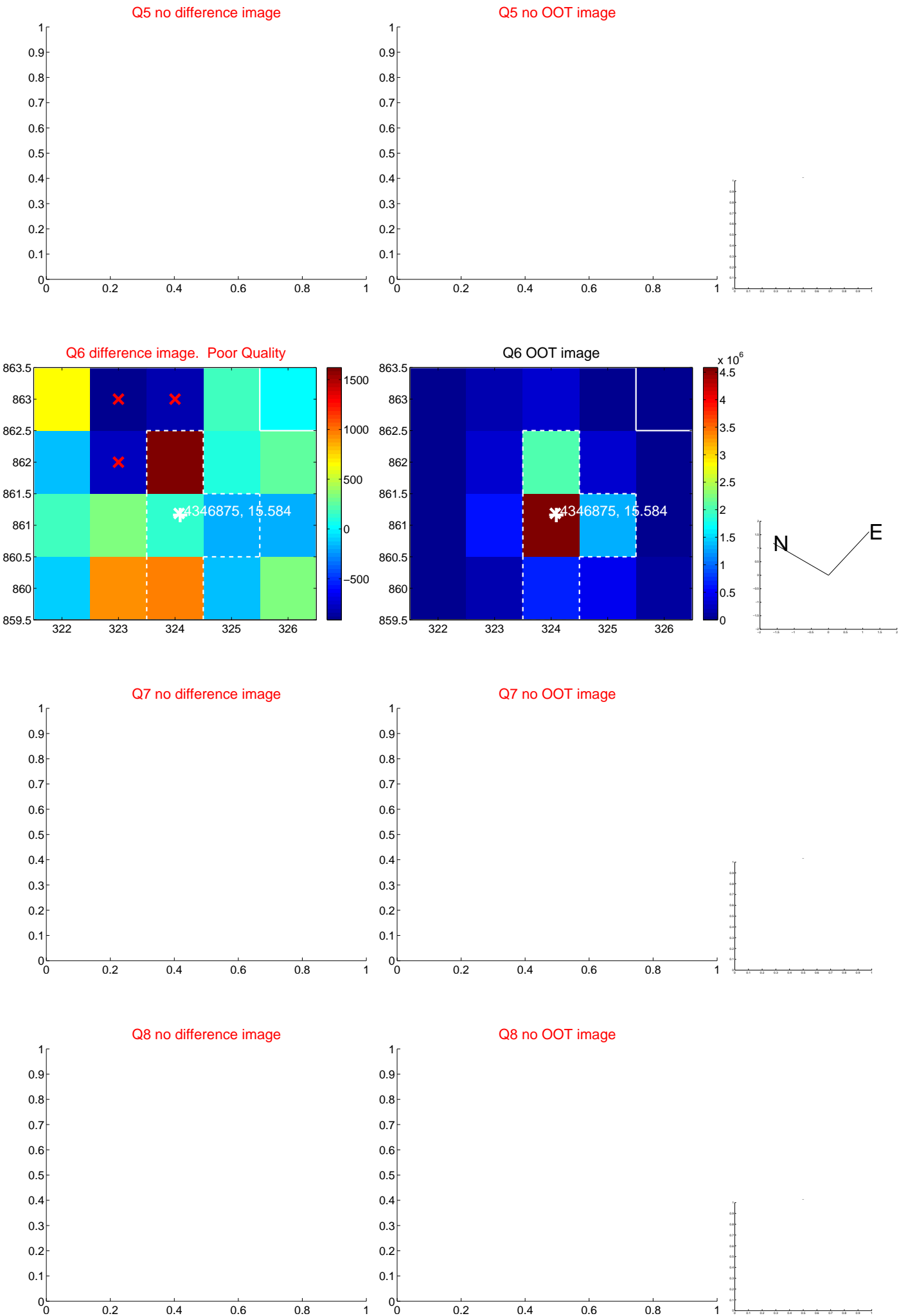
Q4 no difference image



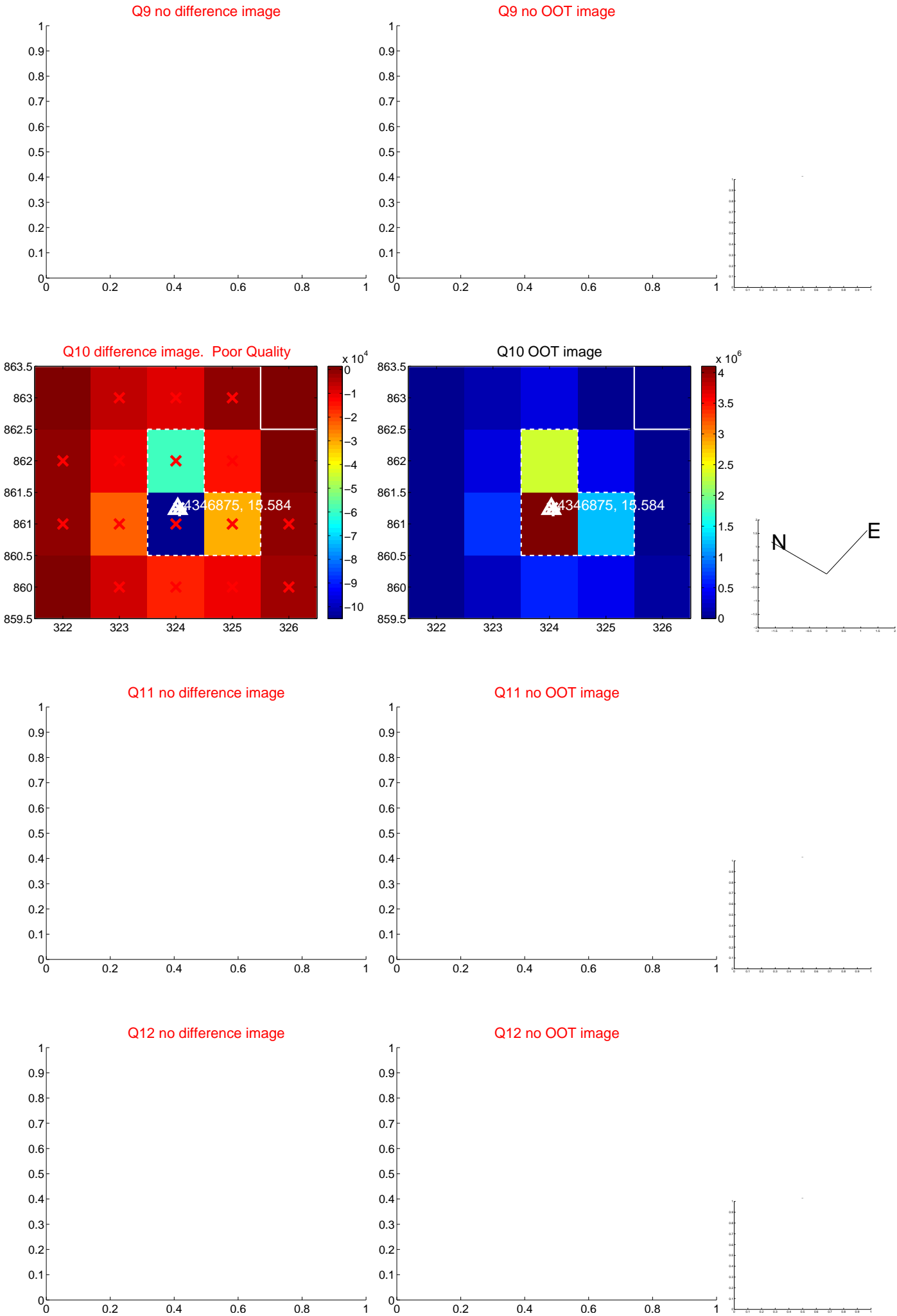
Q4 no OOT image



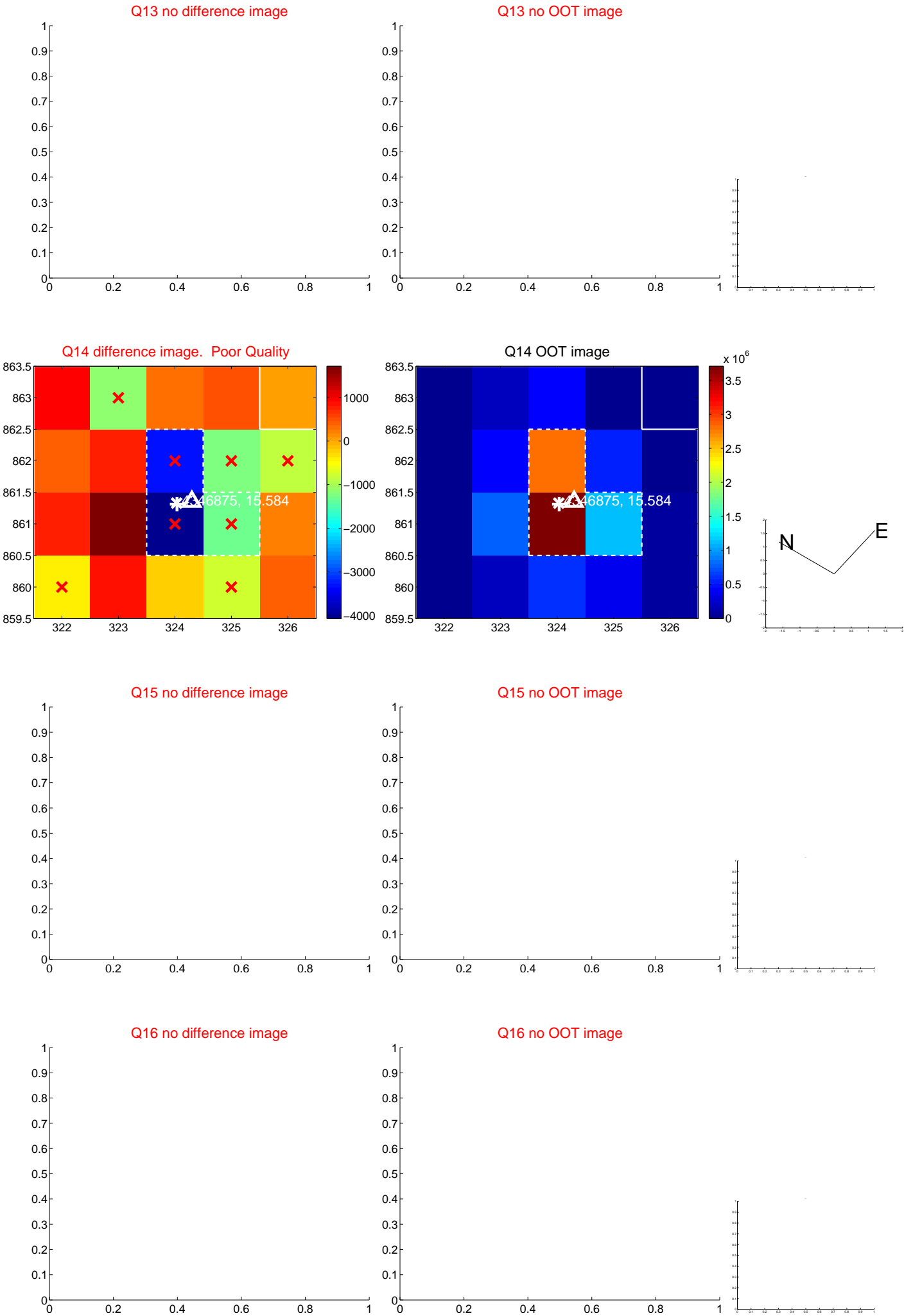
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



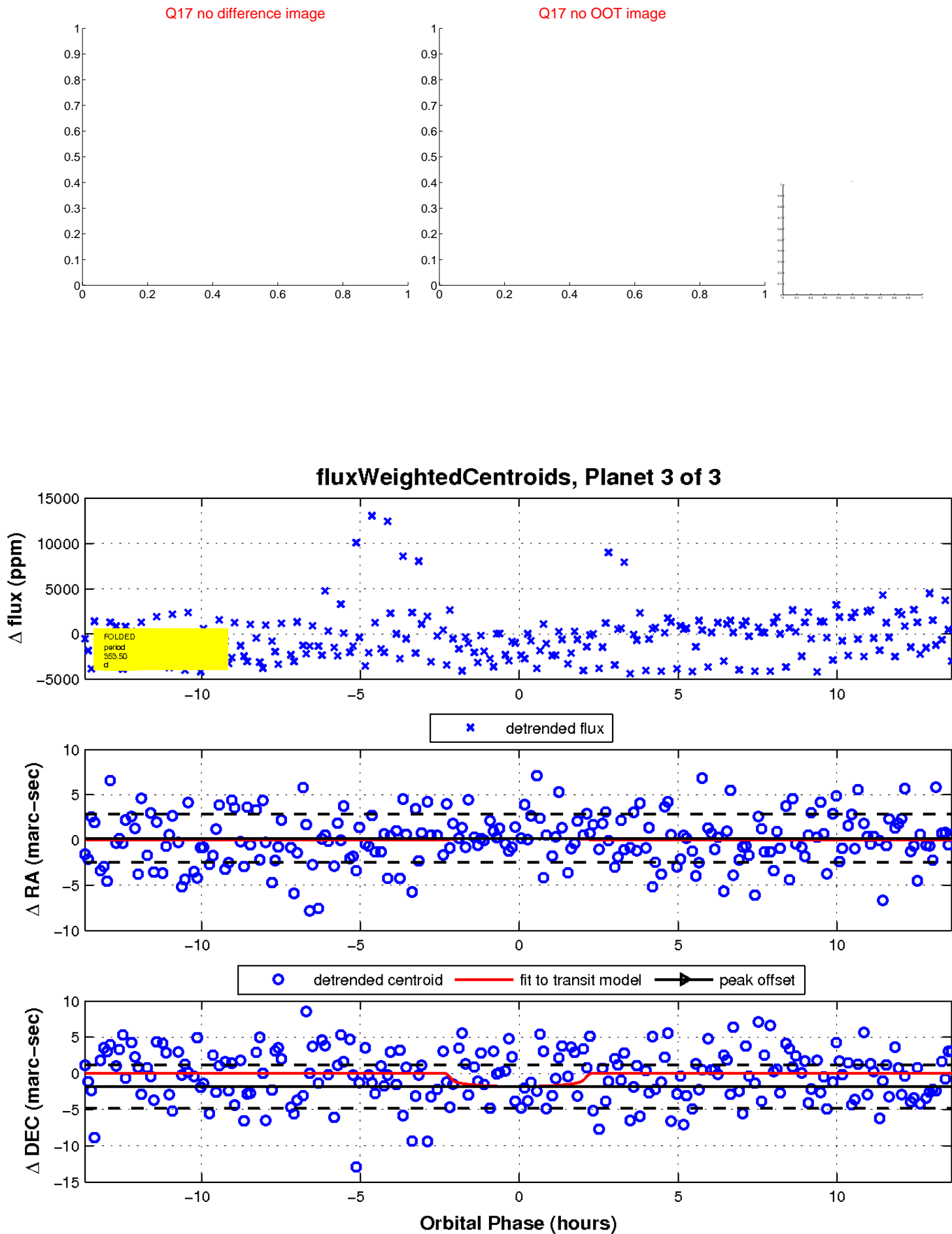
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

