

KIC 003847822

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})
003847822-01	OBS	No	0.638877	131.771380	51.6	2.752	14.3	10.9	2.38	7084	2.02	41439.41
003847822-02	OBS	No	149.455236	194.025893	9061.0	8.670	16.1	5.6	2.38	7084	39.84	28.75
003847822-03	OBS	No	306.585904	268.224206	11997.1	9.412	13.6	8.0	2.38	7084	45.50	11.03
003847822-04	OBS	No	305.596144	313.782002	46.6	8.611	13.7	0.0	2.38	7084	1.75	11.08
003847822-05	OBS	No	141.363902	203.545555	6054.2	6.831	13.7	6.5	2.38	7084	32.92	30.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003847822-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003847822-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003847822-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
003847822-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS— HALO_GHOST
003847822-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT

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

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

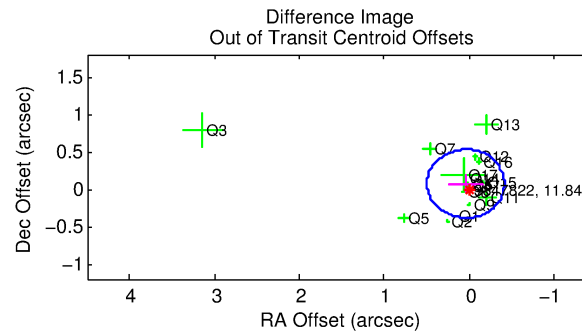
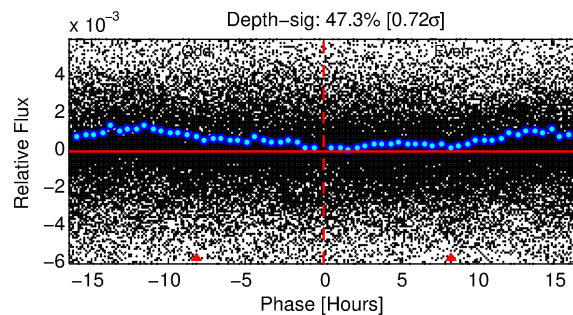
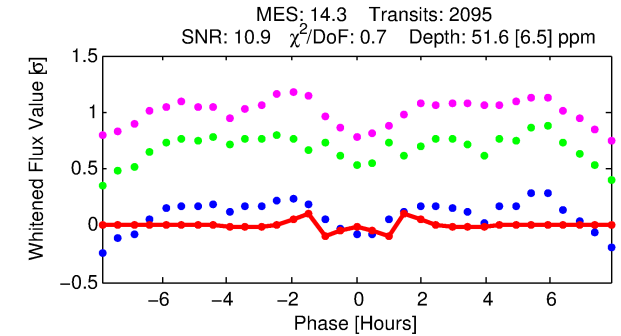
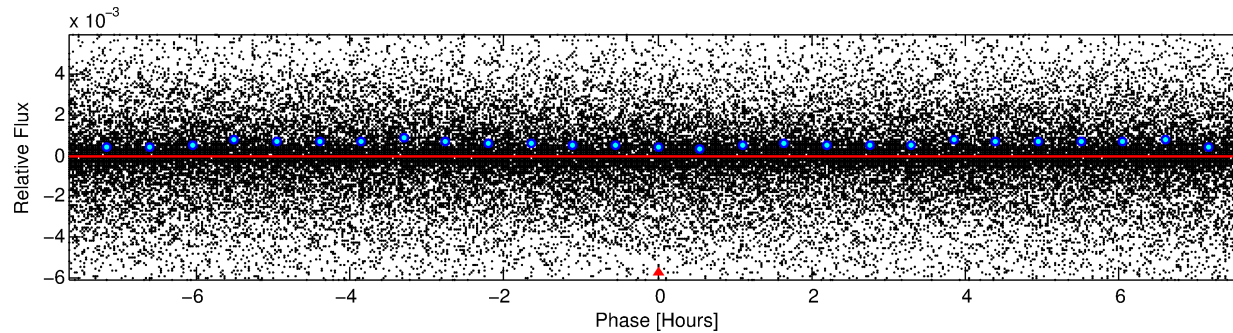
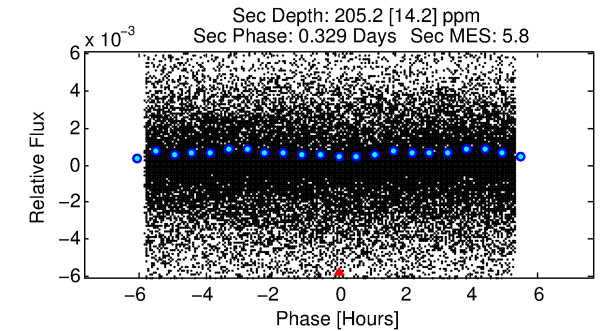
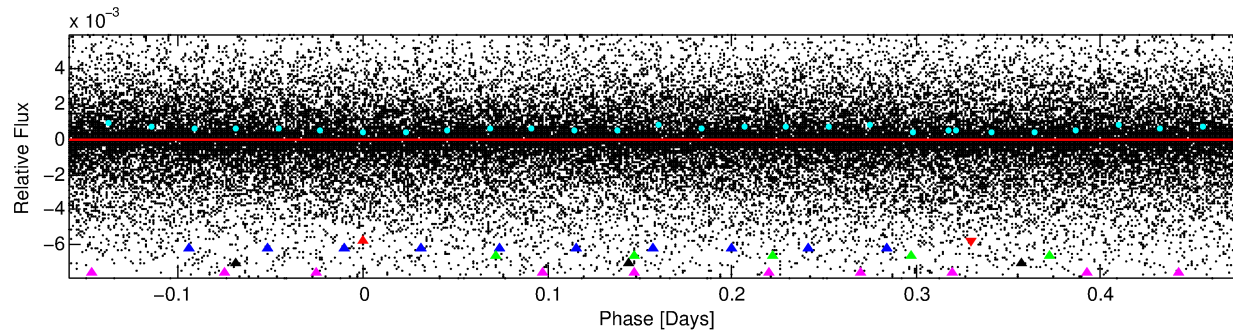
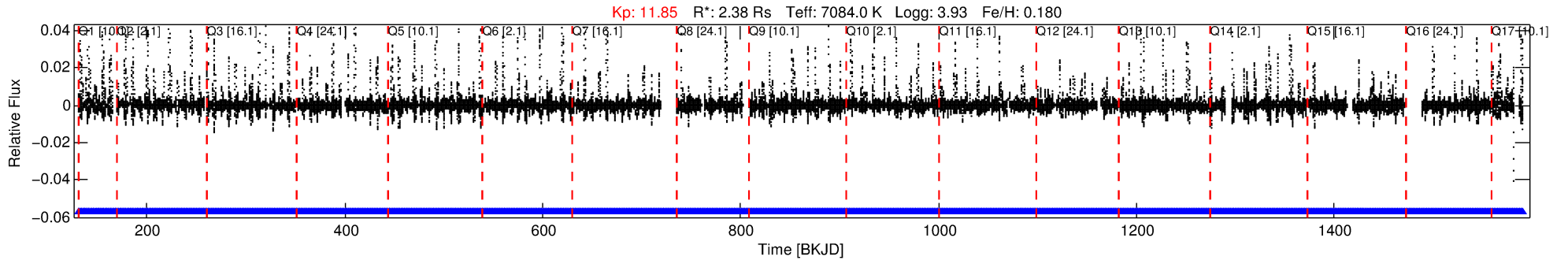
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003847822-01

No Significant Match Found

DV One-Page Summary

KIC: 3847822 Candidate: 1 of 5 Period: 0.639 d



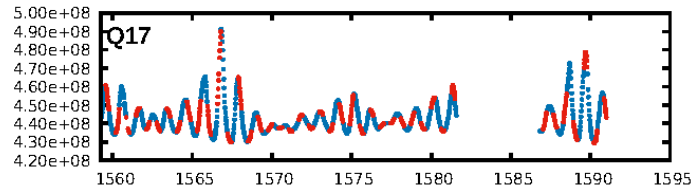
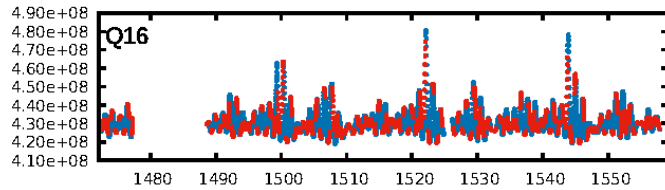
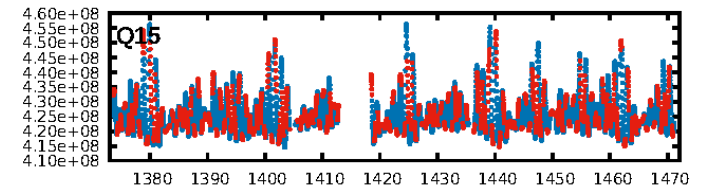
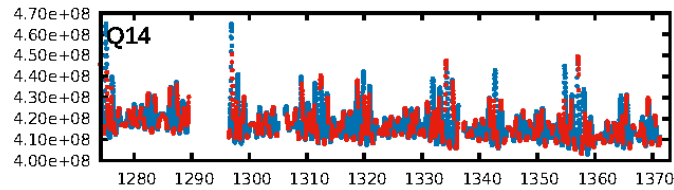
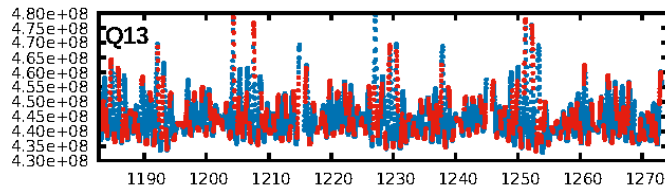
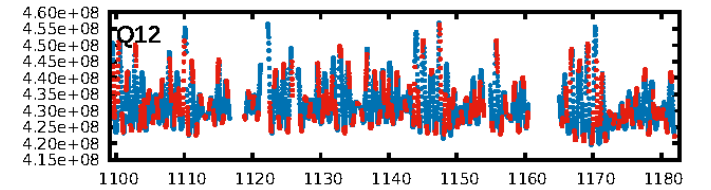
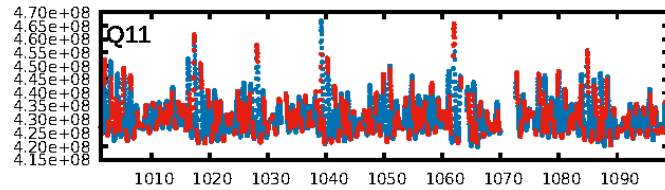
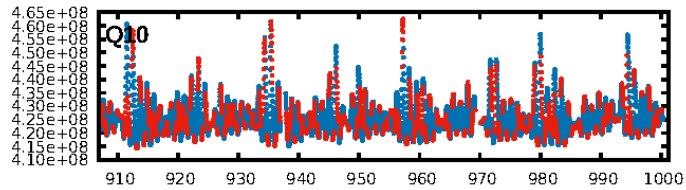
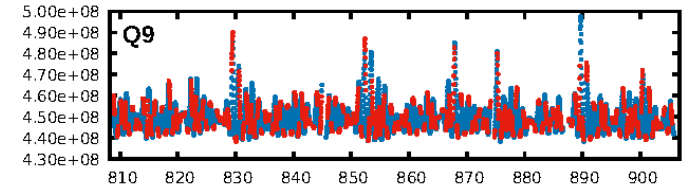
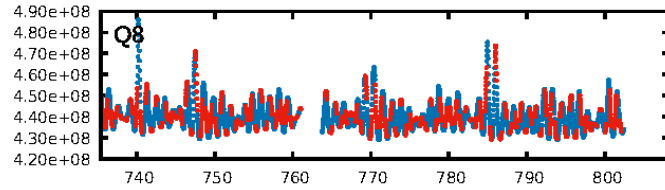
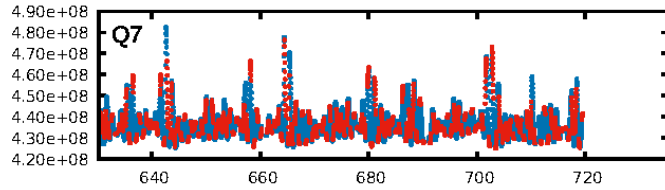
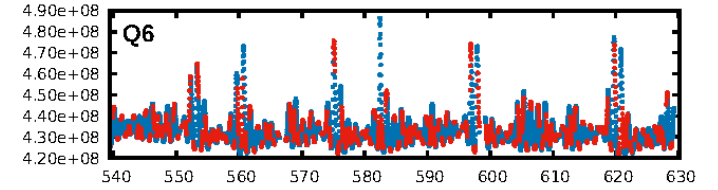
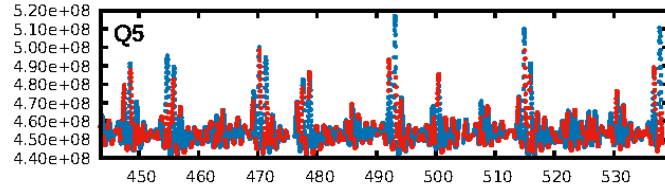
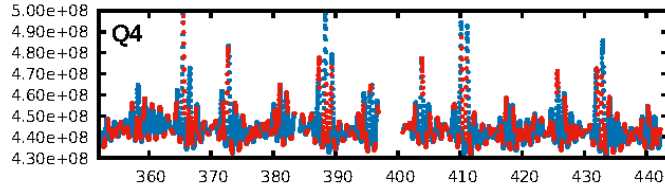
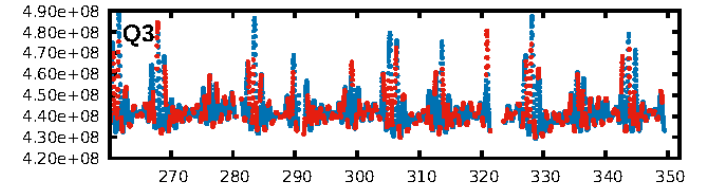
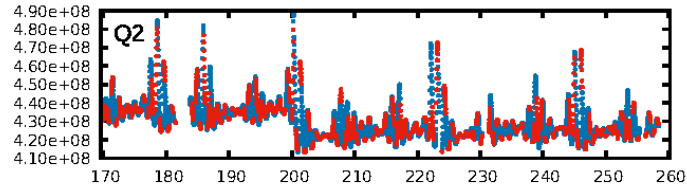
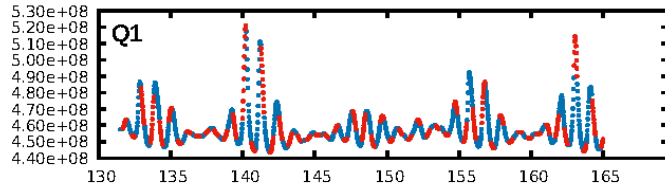
DV Fit Results:

Period = 0.63888 [0.00001] d
Epoch = 131.7714 [0.0010] BKJD
Rp/R* = 0.0078 [0.0012]
a/R* = 1.21 [0.31]
b = 0.92 [0.15]
Seff = 41439.41 [19975.02]
Teq = 3638 [438] K
Rp = 2.01 [0.70] Re
a = 0.0176 [0.0051] AU
Ag = 8.59 [4.74] [1.60σ]
Teffp = 9629 [874] K [6.13σ]

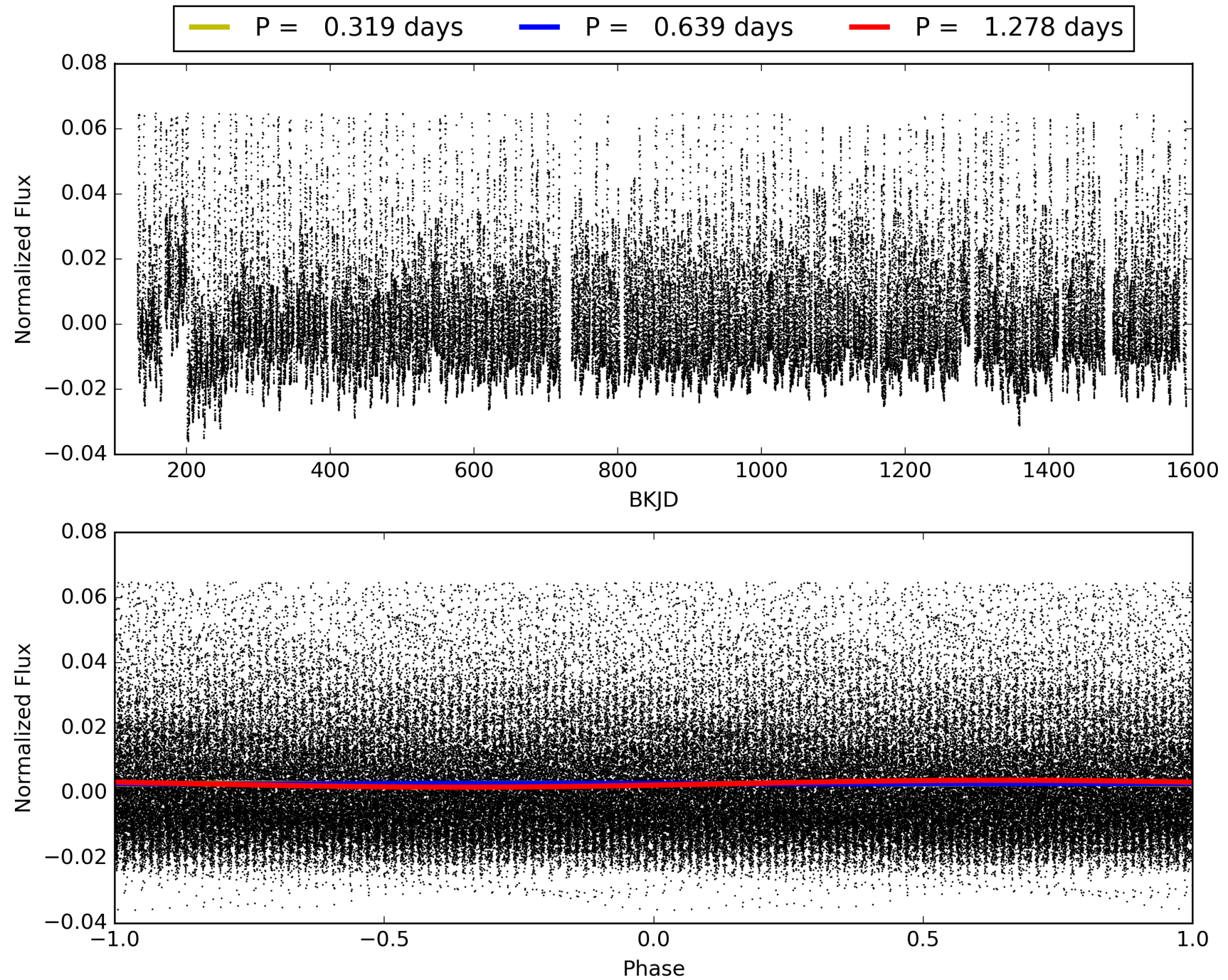
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [458.59σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2000/2000]
GhostDiagnostic-chr: 1.214
Centroid-sig: 0.5%
Centroid-so: 0.679 arcsec [2.53σ]
OotOffset-rm: 0.081 arcsec [0.53σ]
KicOffset-rm: 0.240 arcsec [1.27σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003847822-01, PDC Light Curves

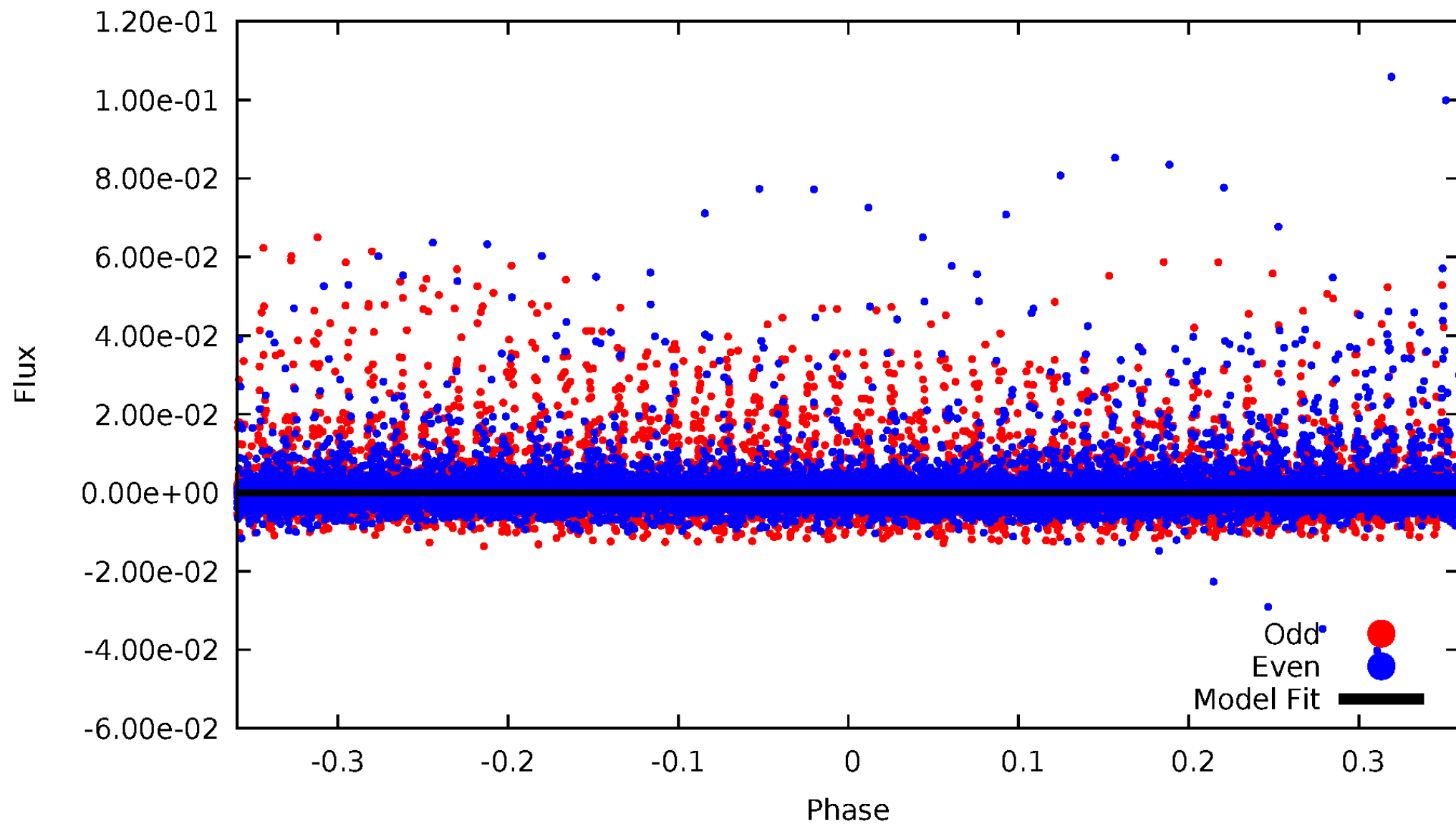


TCE 003847822-01



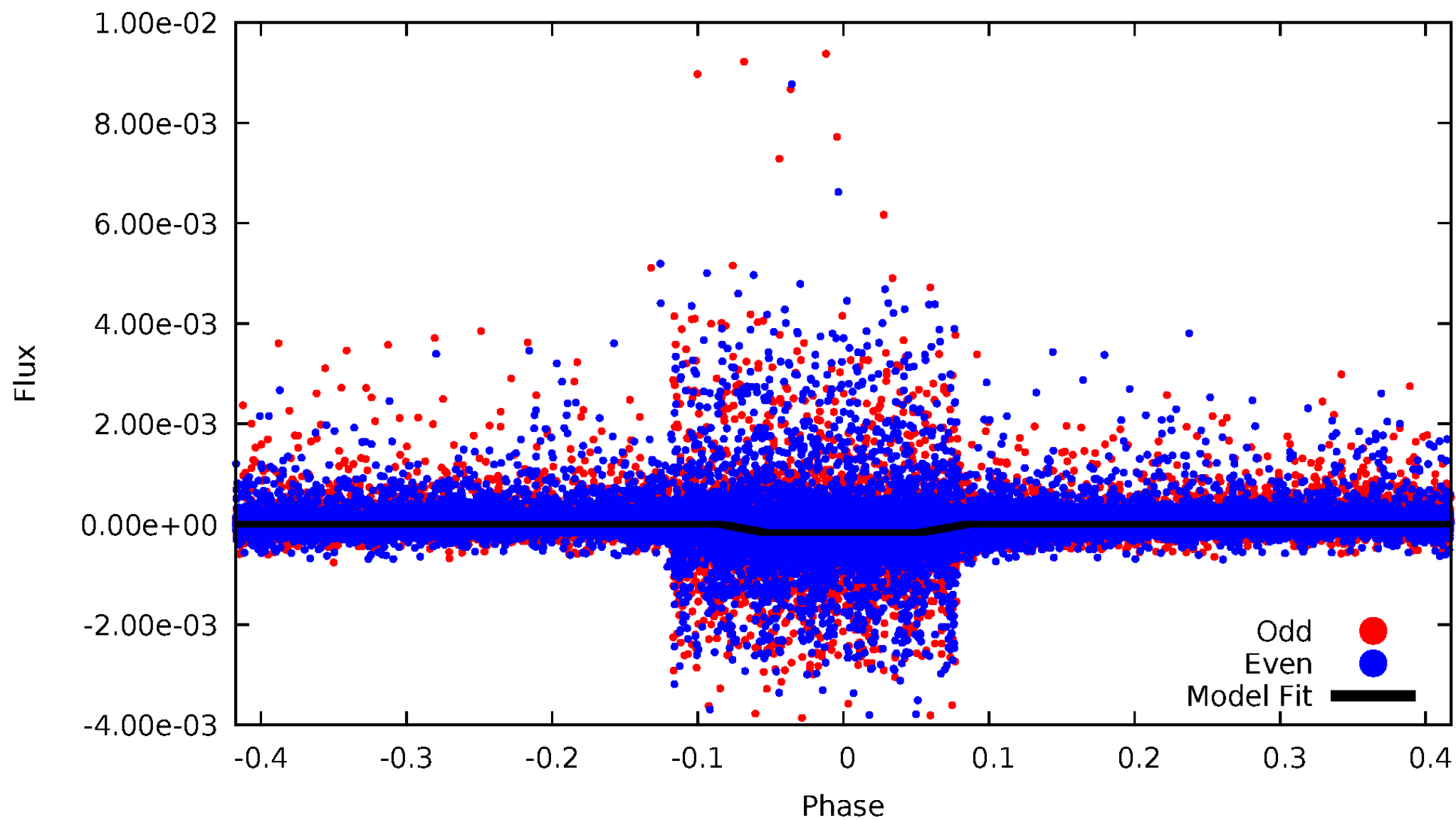
DV Odd/Even

TCE 003847822-01



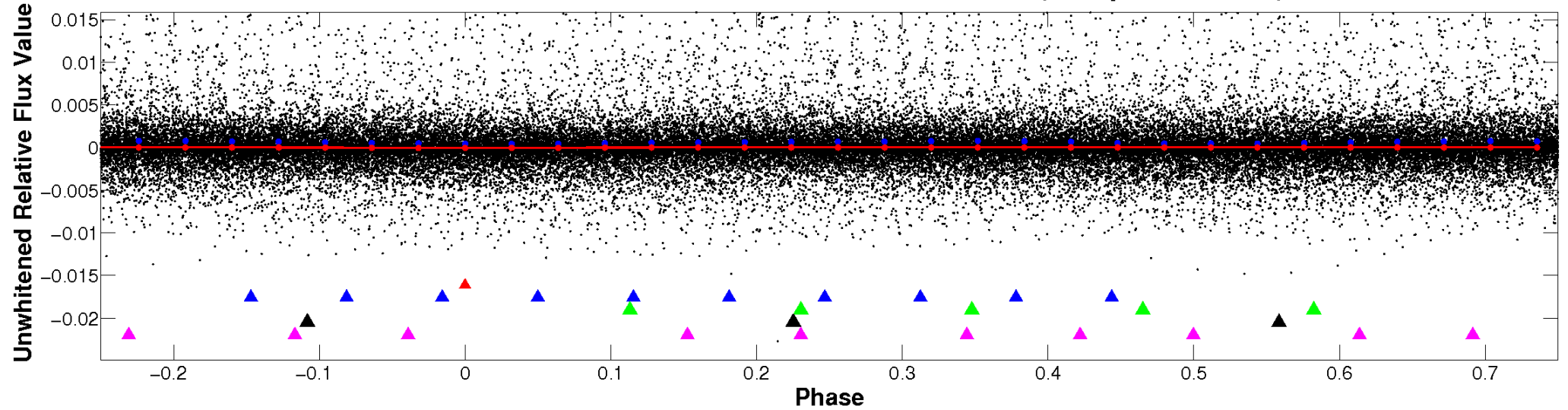
ALT Odd/Even

TCE 003847822-01

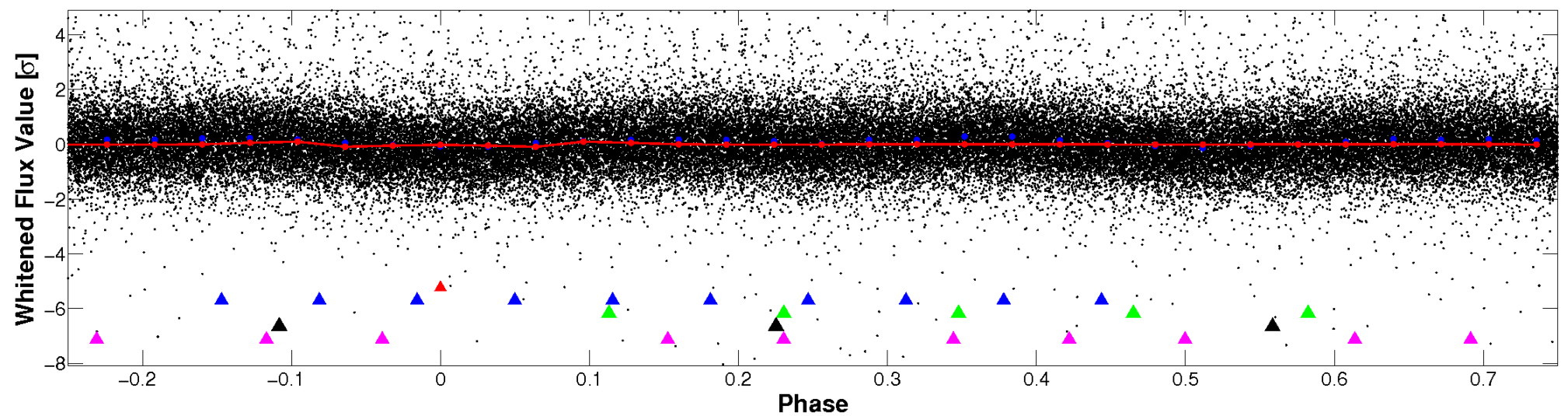


Non-Whitened Vs. Whitened Light Curve

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

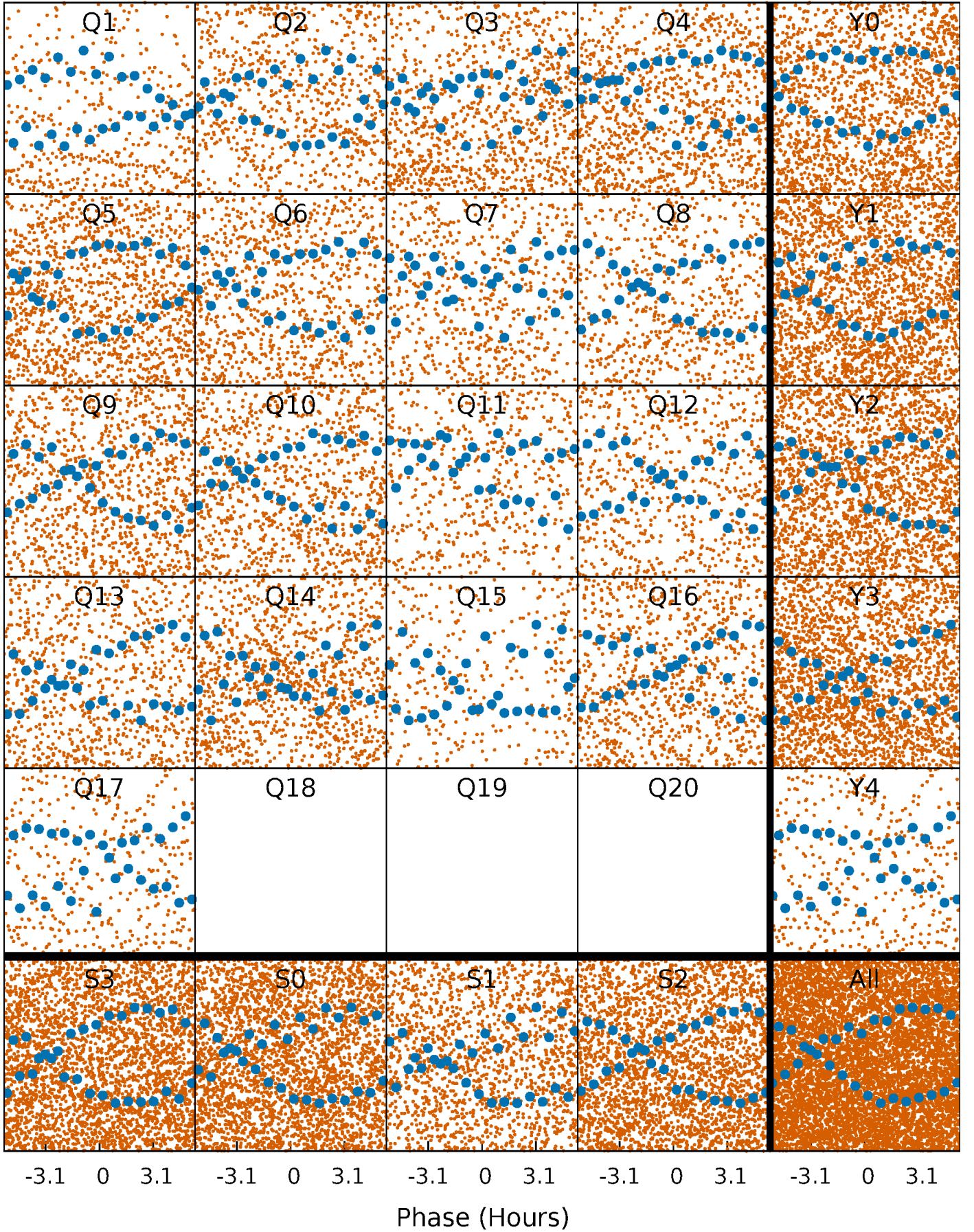


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



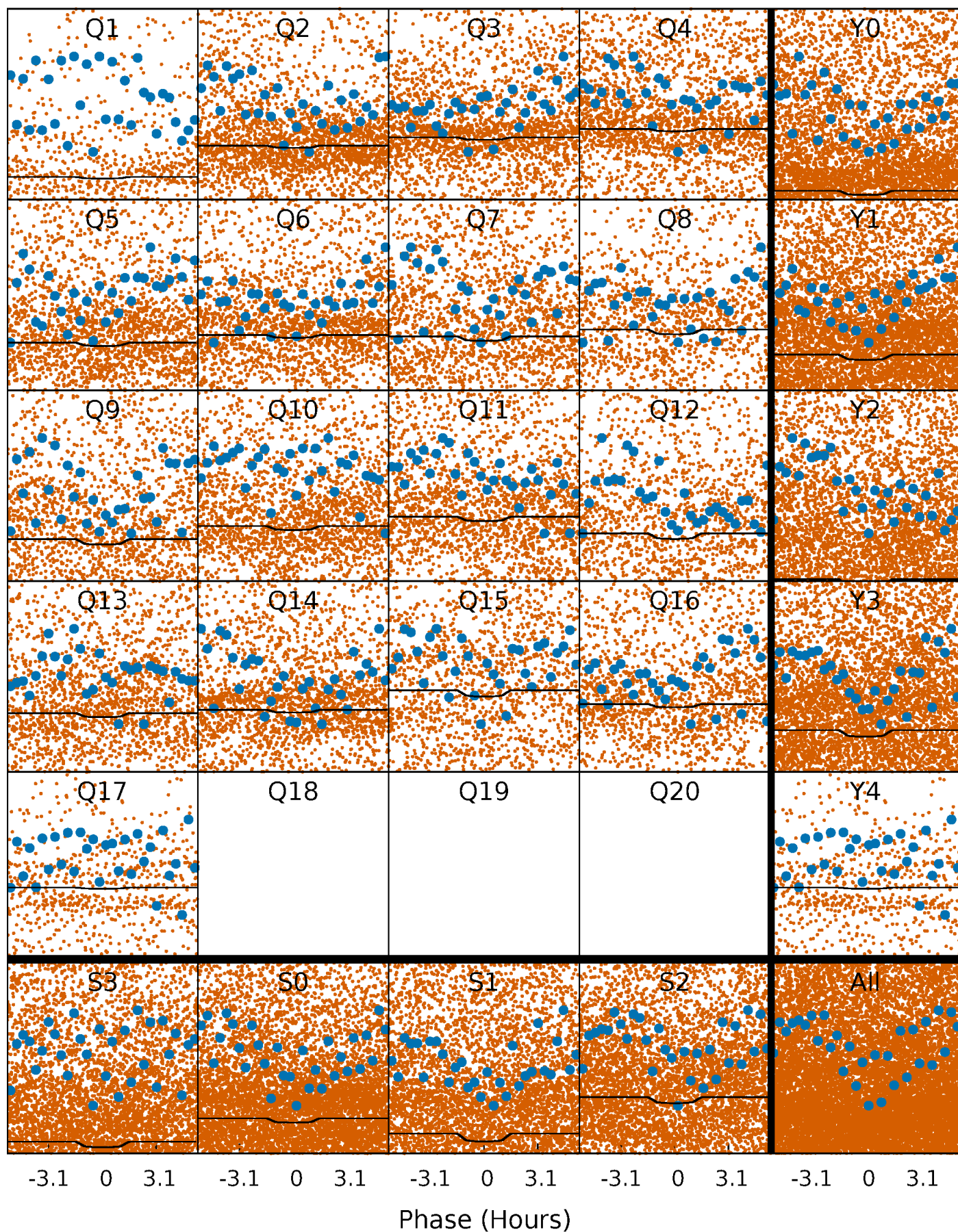
PDC Quarter-Phased Transit Curves

TCE 003847822-01 P= 0.638877 Days $T_0=131.771380$ (BKJD)



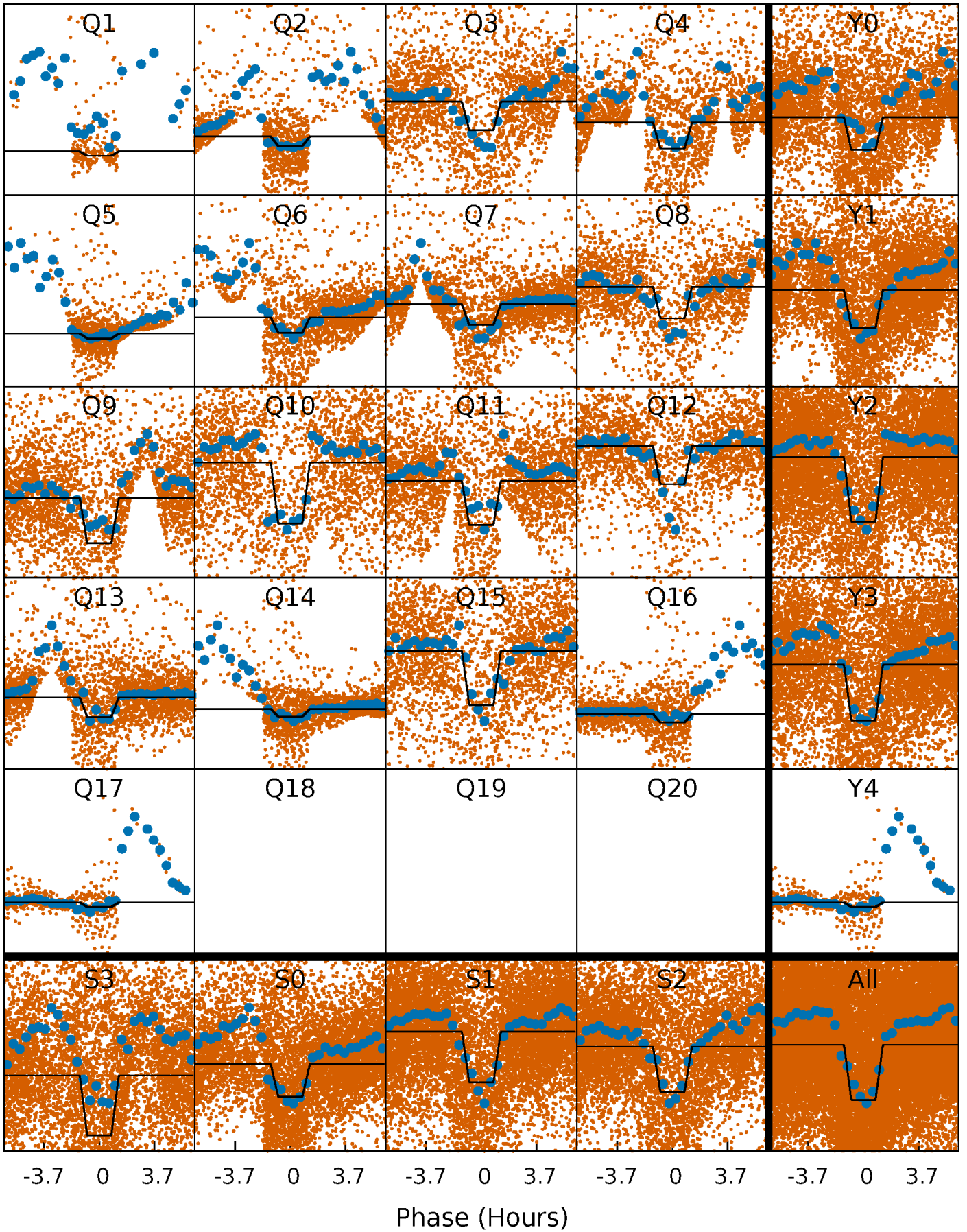
DV Quarter-Phased Transit Curves

TCE 003847822-01 P= 0.638877 Days $T_0=131.771380$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

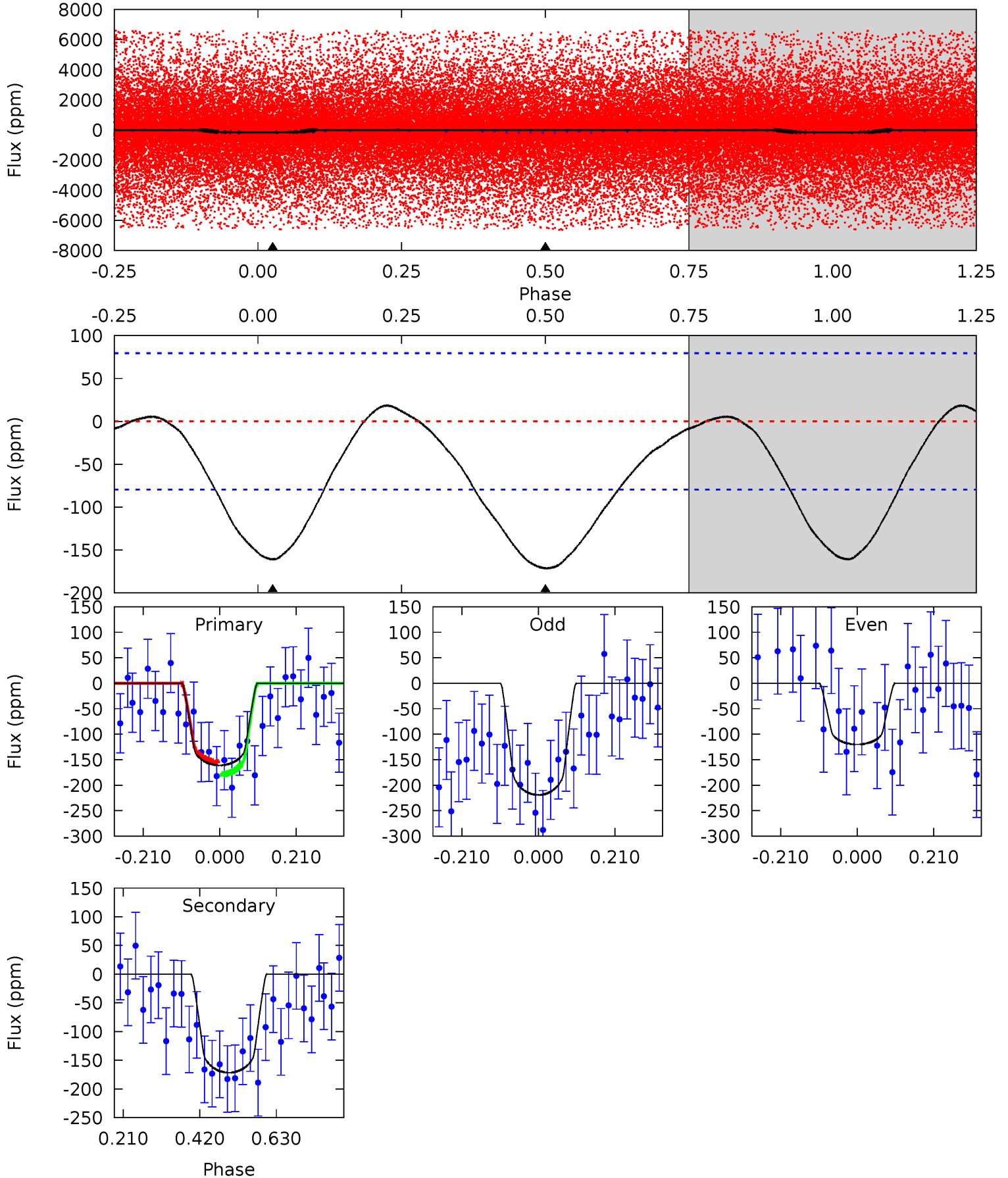
TCE 003847822-01 P= 0.638879 Days $T_0=131.770114$ (BKJD)



DV Model-Shift Uniqueness Test

003847822-01, P = 0.638877 Days, E = 131.132503 Days

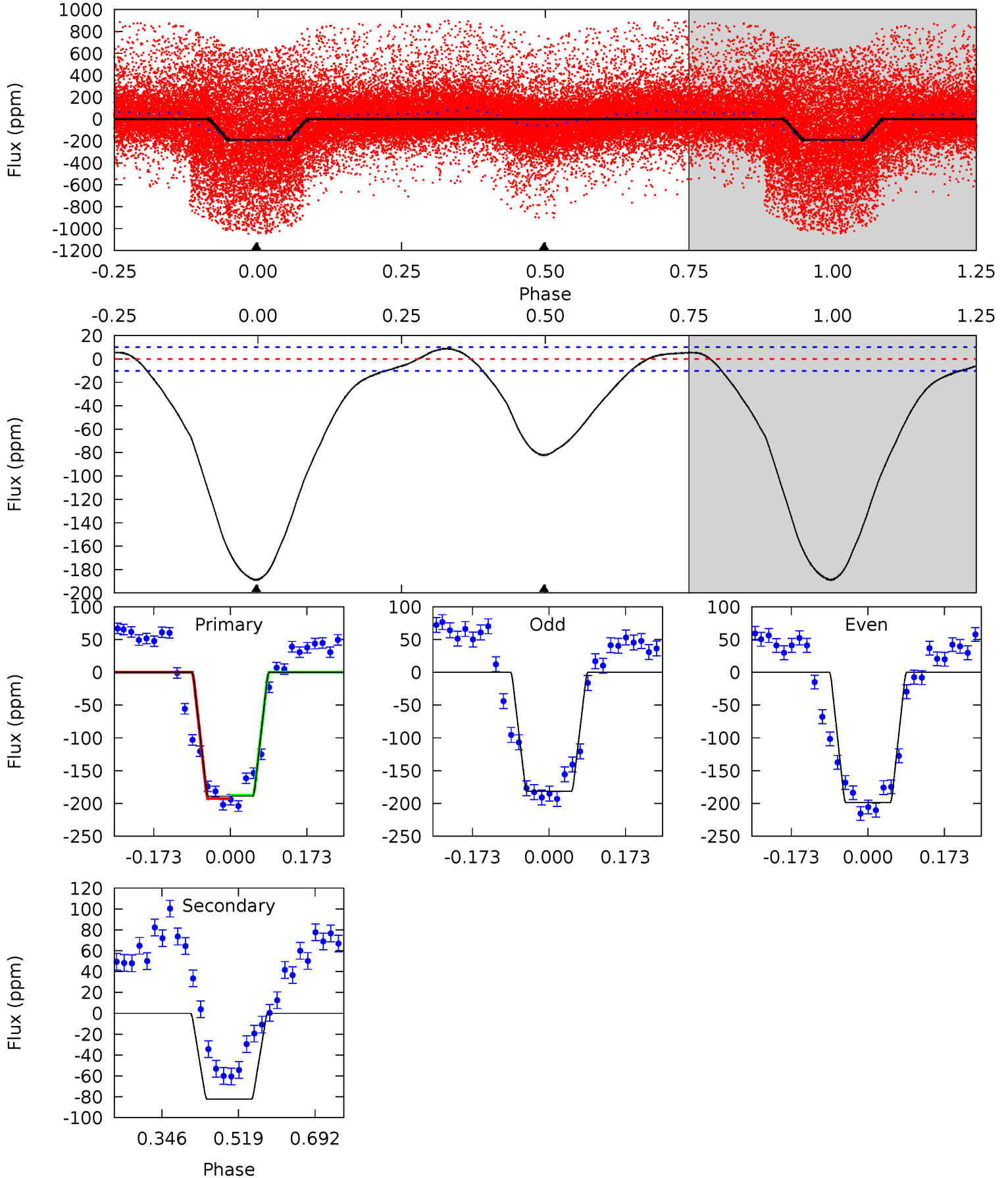
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.93	9.51	0	0	4.41	1.25	0.55	8.93	8.93	9.51	9.51	2.87	-21.7	0.10	0.72



Alt Model-Shift Uniqueness Test

003847822-01, P = 0.638879 Days, E = 131.131235 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.9	36.1	0	0	4.45	1.36	3.61	82.9	82.9	36.1	36.1	3.81	0.67	0.04	1.10



Stellar Parameters For KIC 003847822

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7084^{+195}_{-307}	$3.933^{+0.260}_{-0.160}$	$0.180^{+0.150}_{-0.300}$	$2.382^{+0.607}_{-0.741}$	$1.773^{+0.182}_{-0.339}$	$0.185^{+0.285}_{-0.087}$
	+3%/-4%	+7%/-4%	+83%/-167%	+25%/-31%	+10%/-19%	+154%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003847822-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-172 ± 18	$1.95^{+0.46}_{-0.44}$	5041^{+376}_{-456}	9761^{+1493}_{-1170}	$7.630^{+4.883}_{-2.684}$
Alt.	-82 ± 2	$3.29^{+0.61}_{-0.58}$	5028^{+384}_{-438}	5478^{+373}_{-354}	$1.266^{+0.555}_{-0.348}$

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 $A_{obs} \gg 1.0$

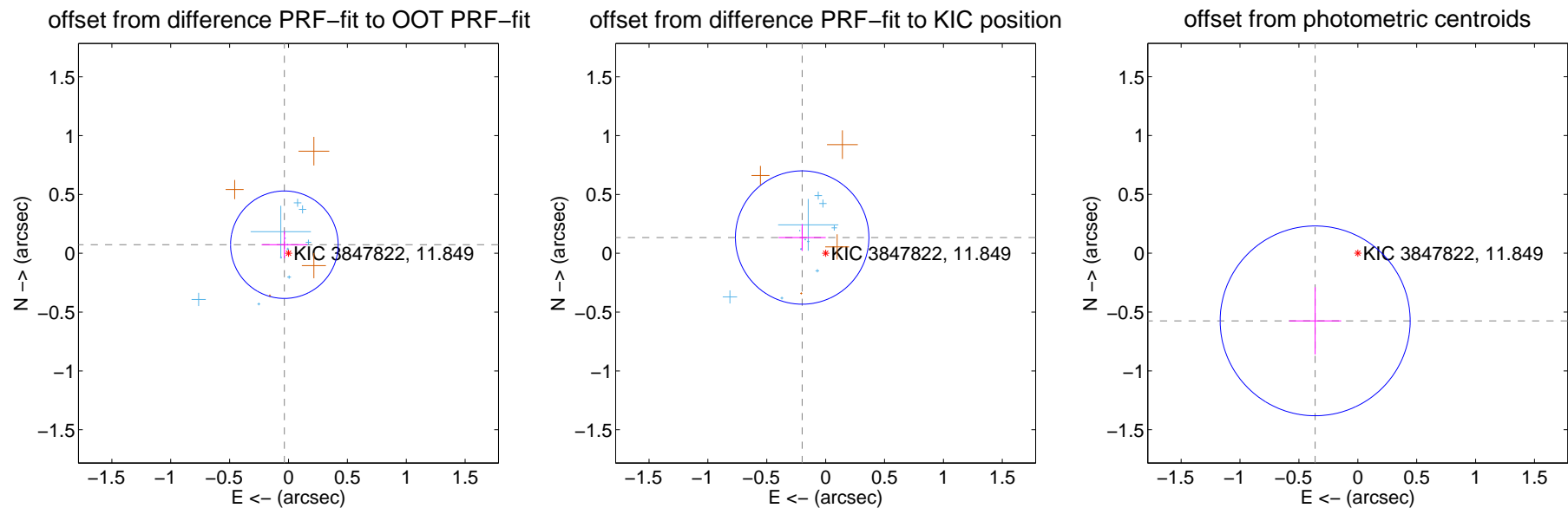
DV Centroid Data

Supplemental centroid analysis for 003847822-01. **Kepler magnitude: 11.85.** Transit SNR 10.88

There are 11 quarters with good PRF difference image offsets

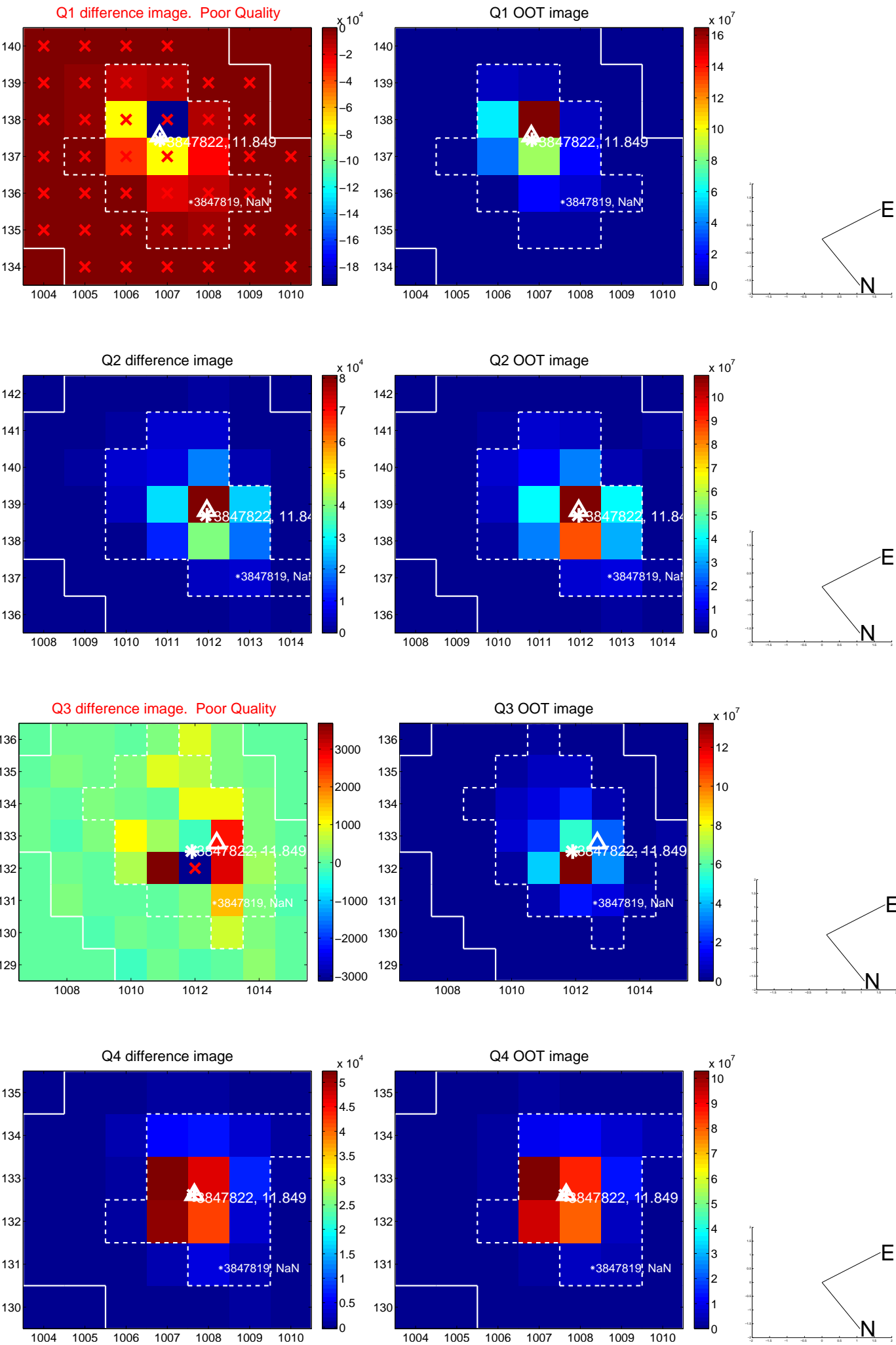
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.081 ± 0.152	0.53	0.035 ± 0.193	0.073 ± 0.116
PRF-fit source offset from KIC position	0.240 ± 0.189	1.27	0.200 ± 0.200	0.134 ± 0.114
photometric centroid source offset	0.68 ± 0.27	2.53	0.36 ± 0.22	-0.57 ± 0.29

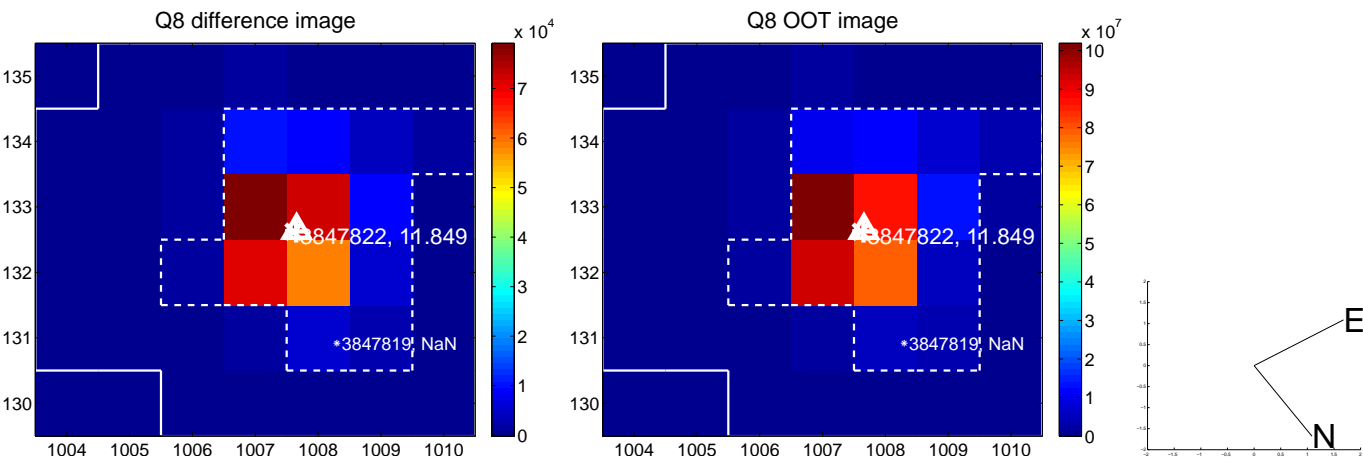
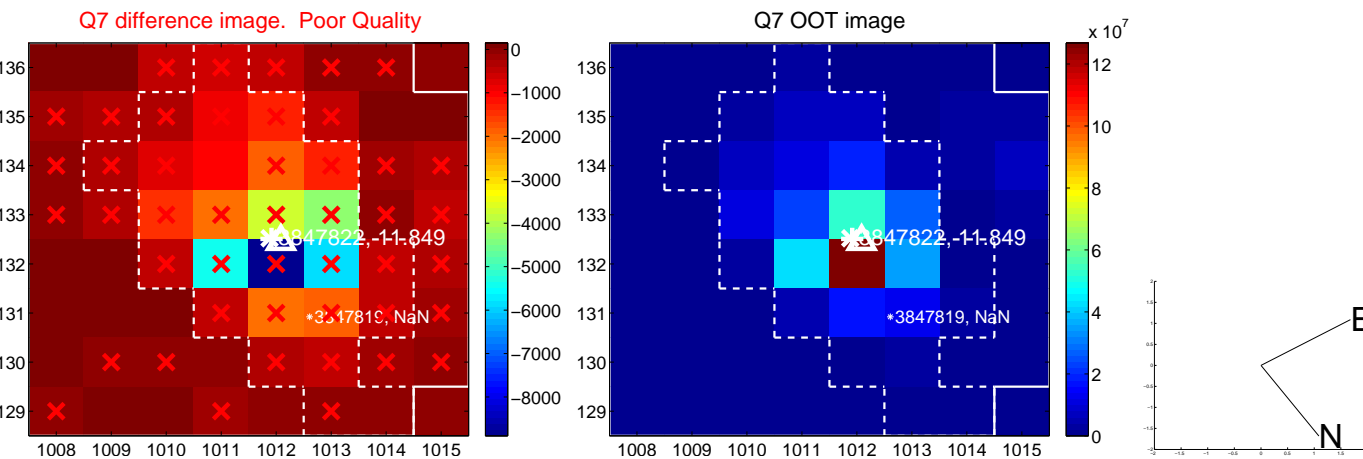
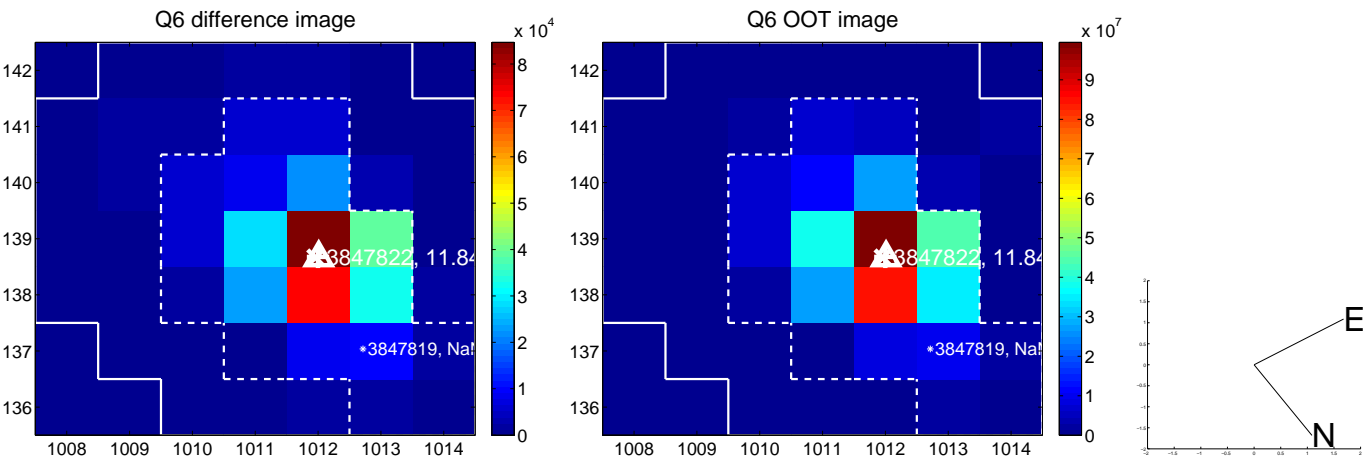
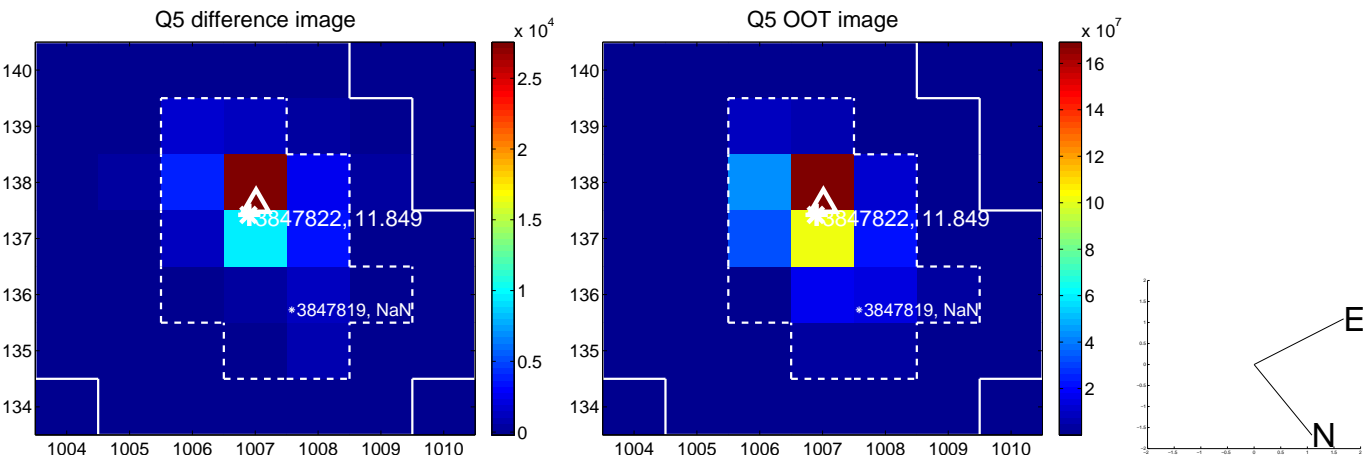


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

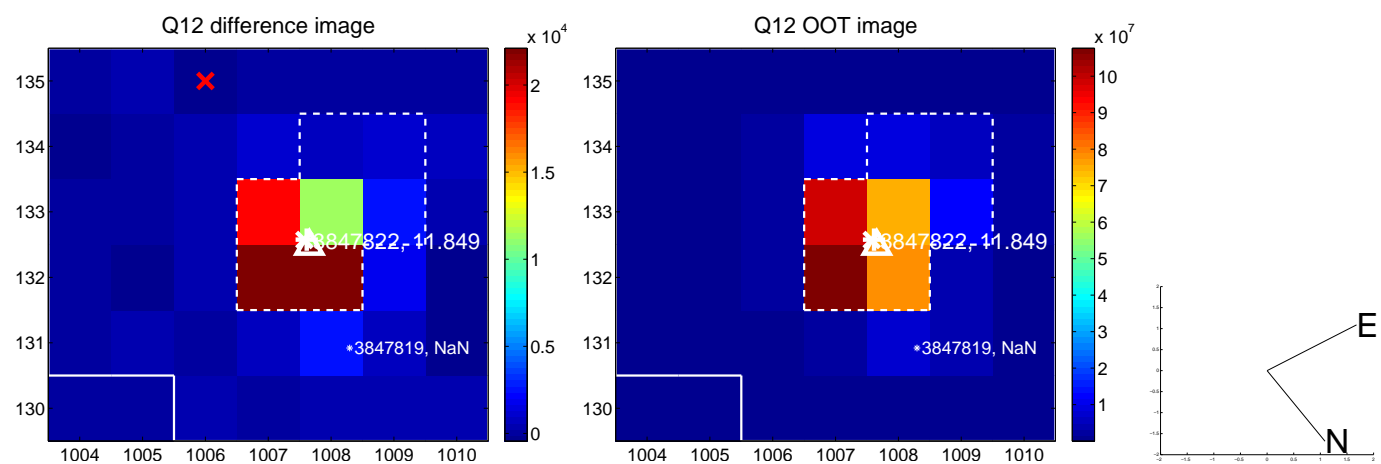
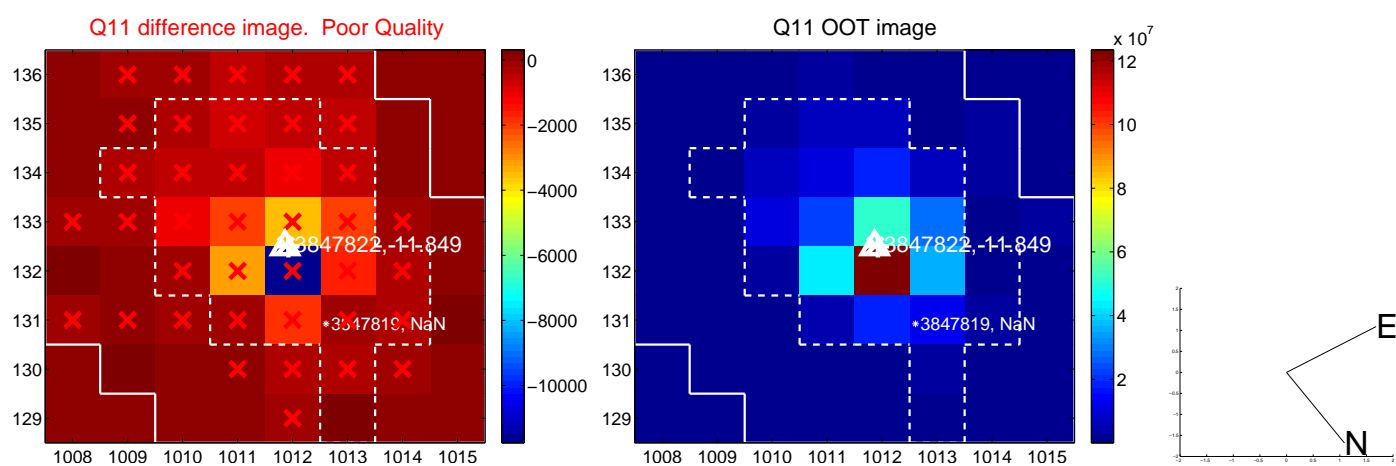
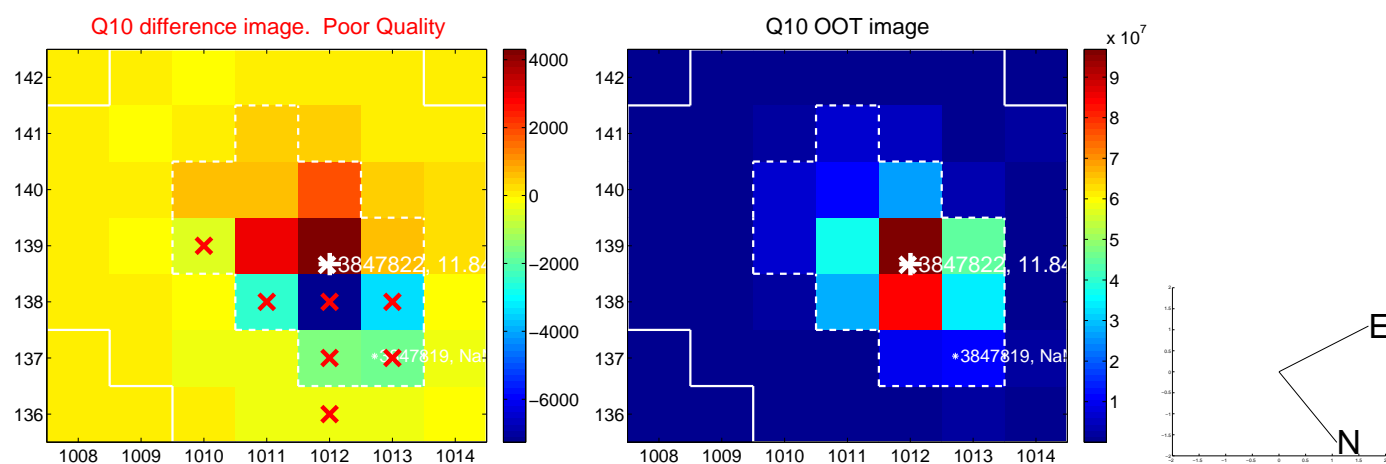
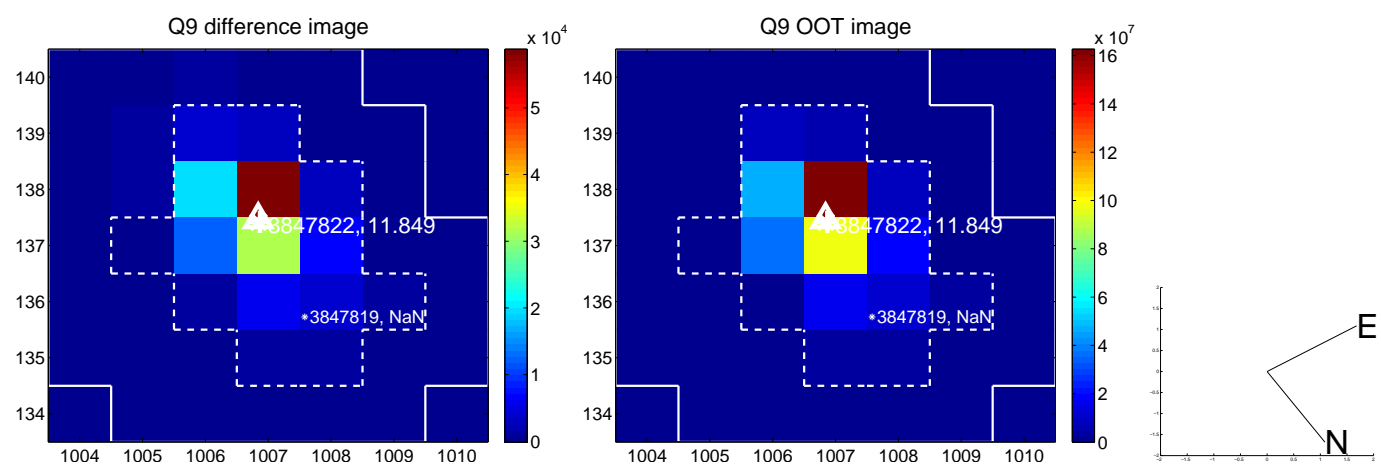
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



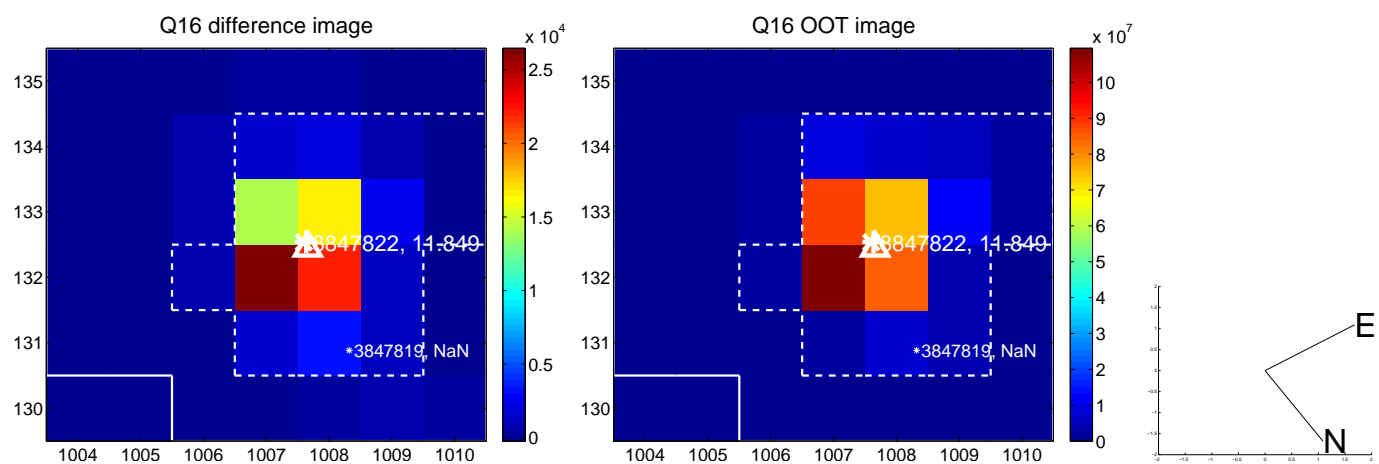
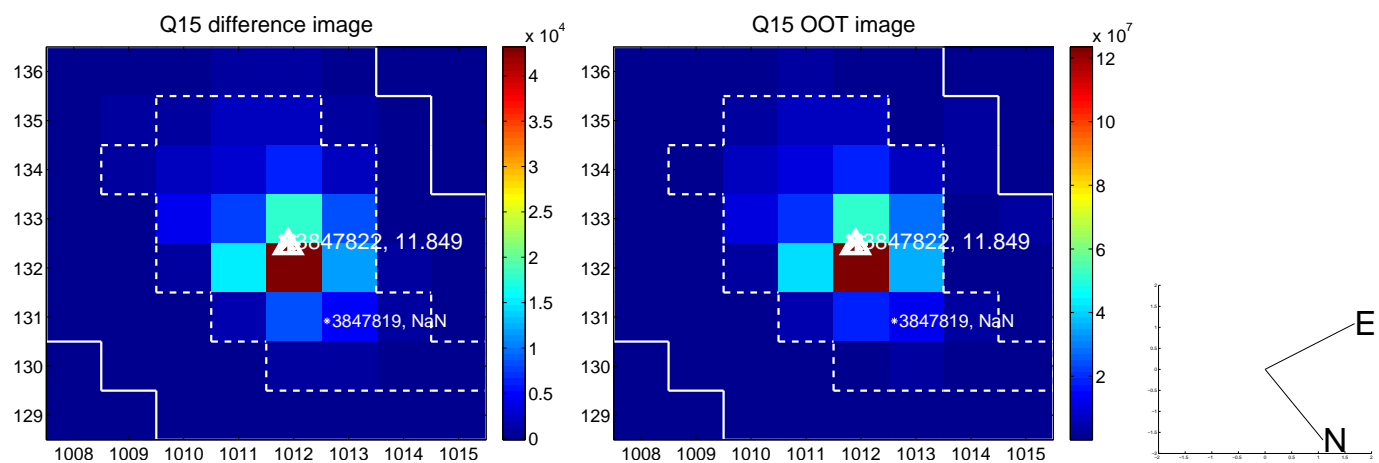
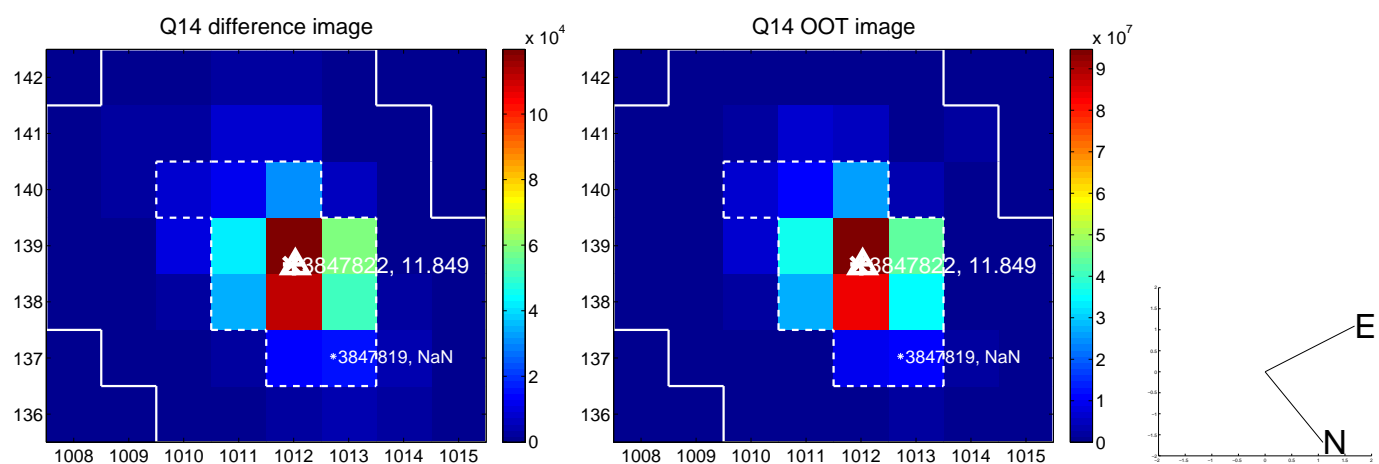
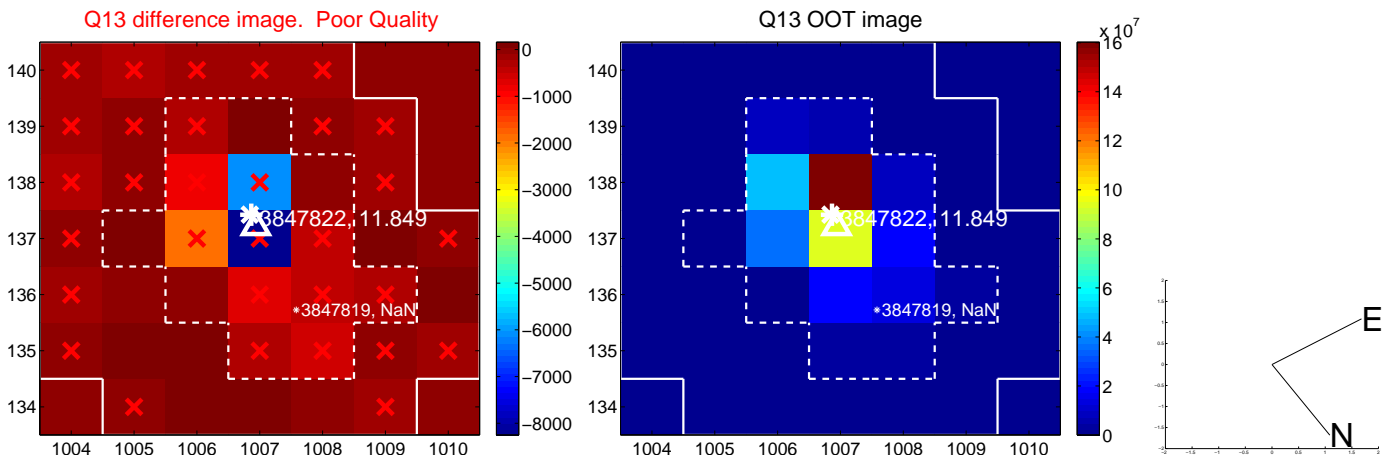
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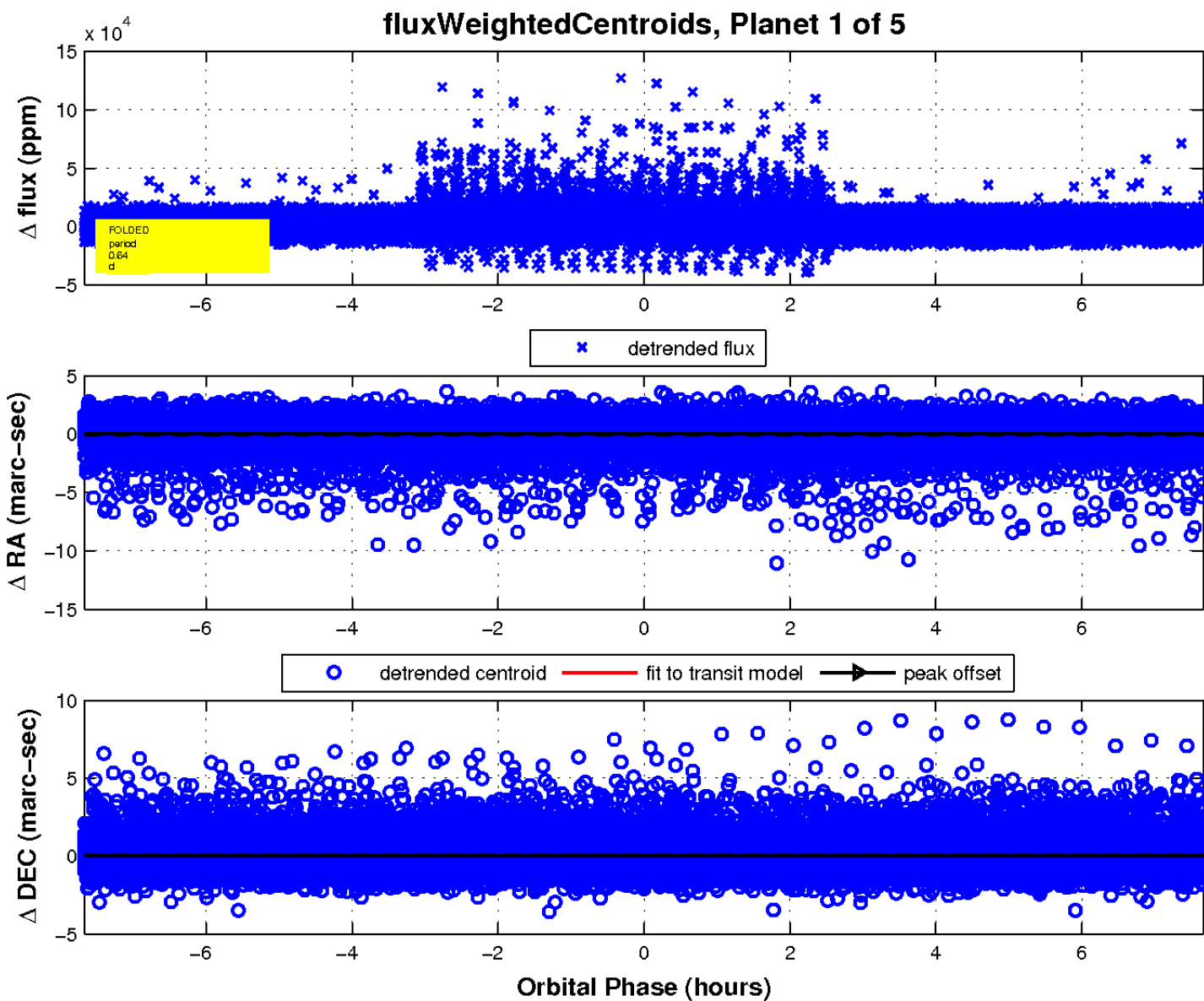
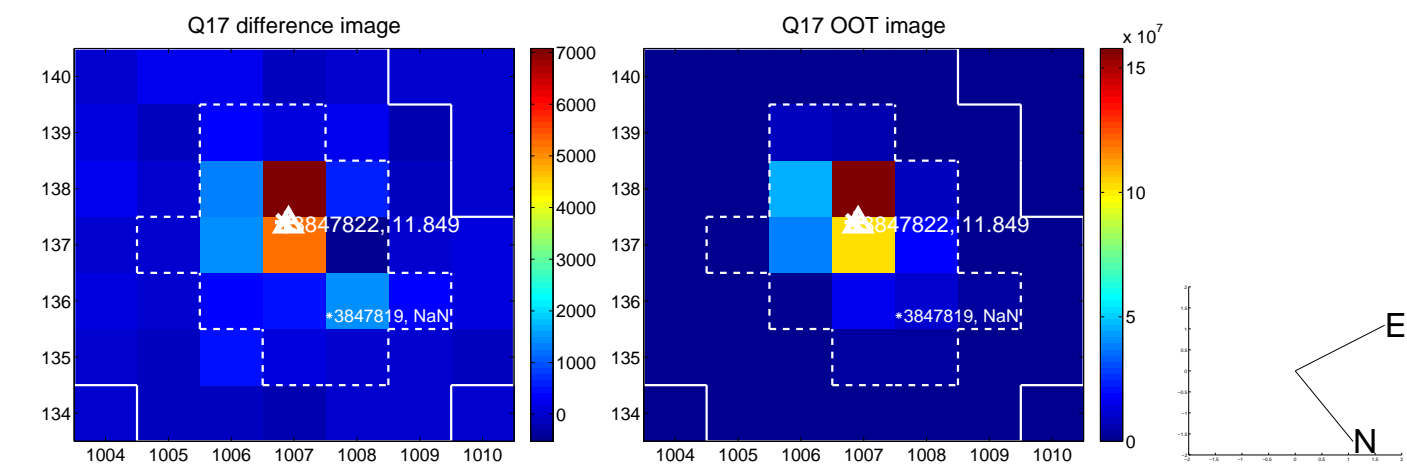
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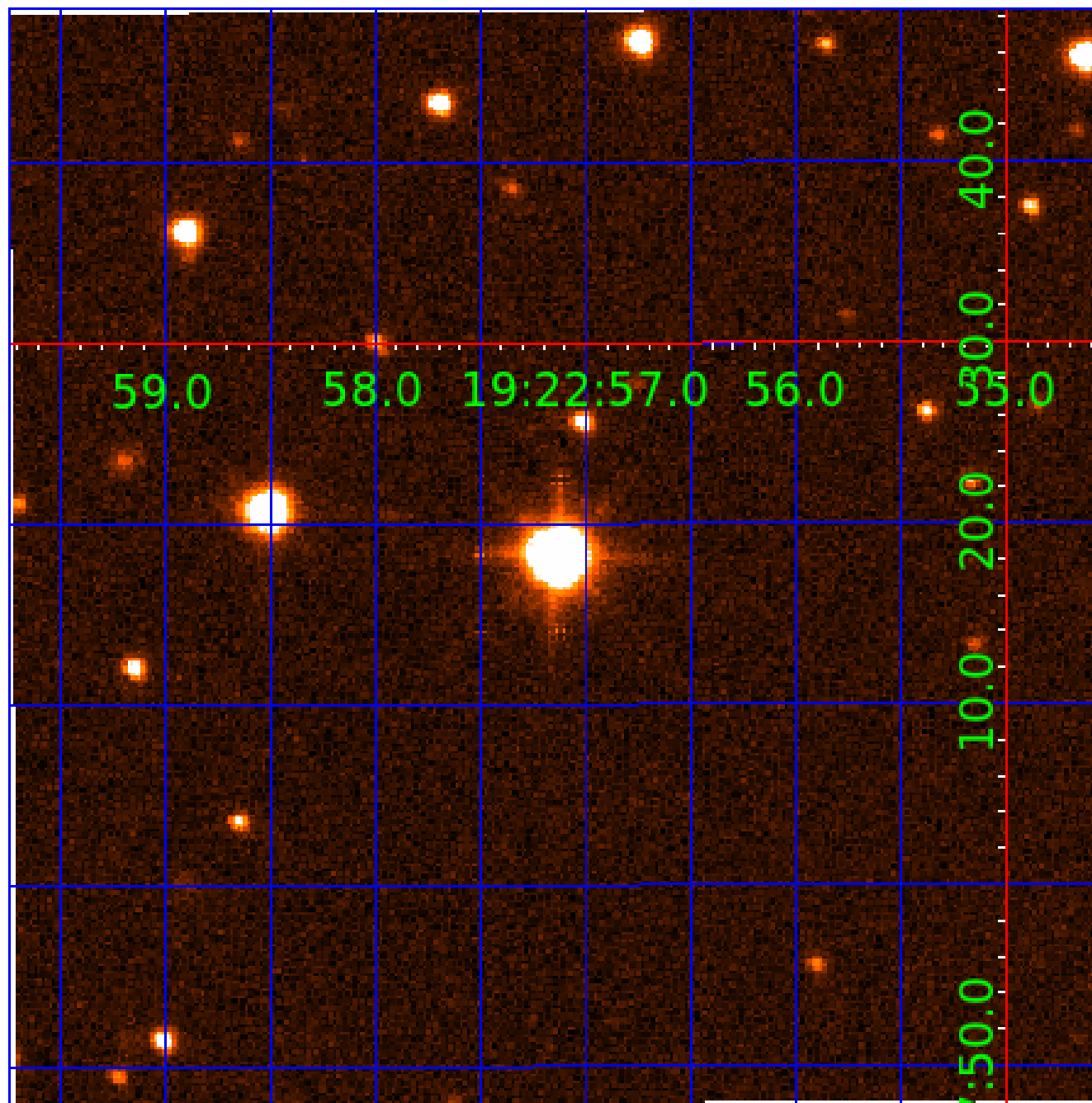


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UKIRT Image

Declination



KIC 003847822

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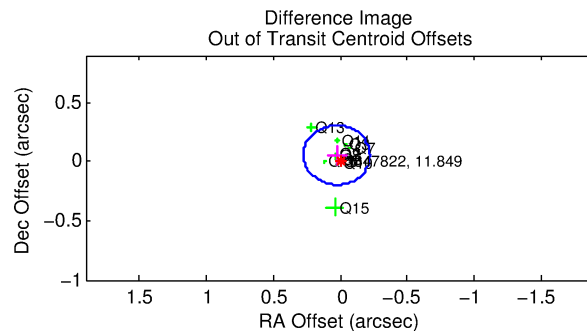
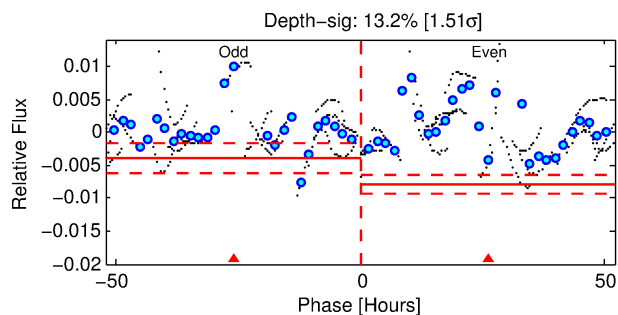
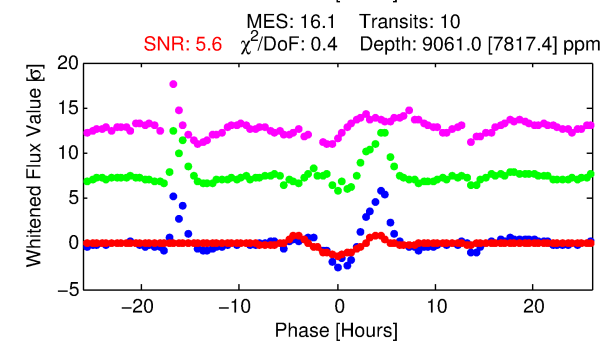
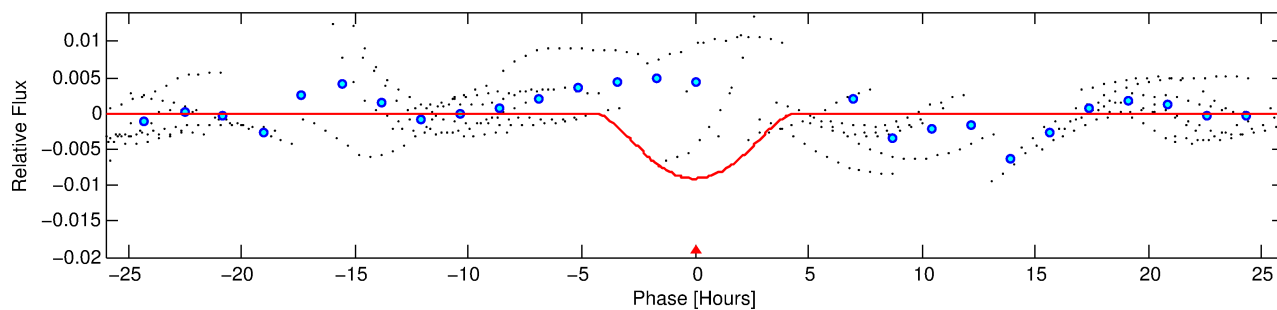
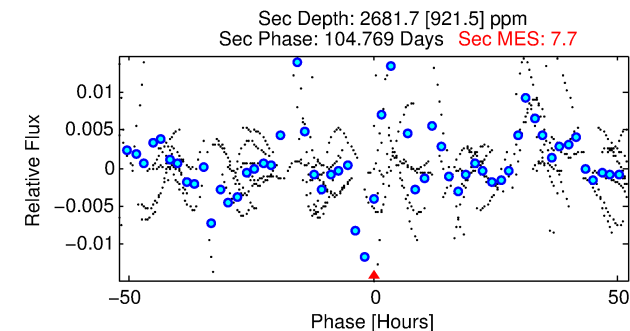
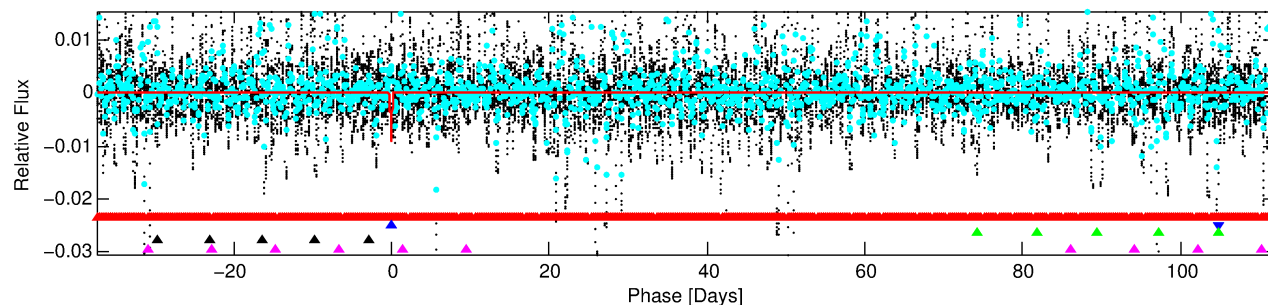
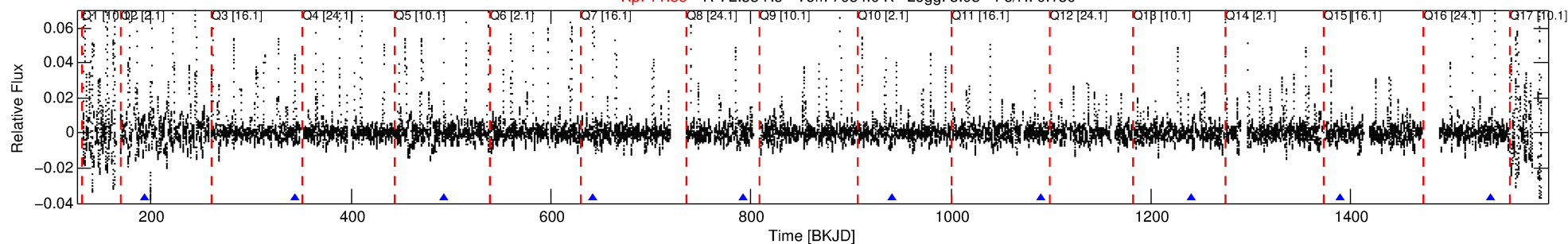
Ephemeris Match Information For 003847822-02

No Significant Match Found

DV One-Page Summary

KIC: 3847822 Candidate: 2 of 5 Period: 149.455 d

Kp: 11.85 R*: 2.38 Rs Teff: 7084.0 K Logg: 3.93 Fe/H: 0.180



DV Fit Results:

Period = 149.45524 [0.00295] d
Epoch = 194.0259 [0.0173] BKJD
Rp/R* = 0.1533 [0.2456]
a/R* = 75.66 [17.17]
b = 1.00 [0.26]
Seff = 28.75 [13.86]
Teq = 590 [71] K
Rp = 39.84 [65.04] Re
a = 0.6673 [0.1921] AU
Ag = 413.90 [1347.17] [0.31σ]
Teffp = 4118 [3323] K [1.06σ]

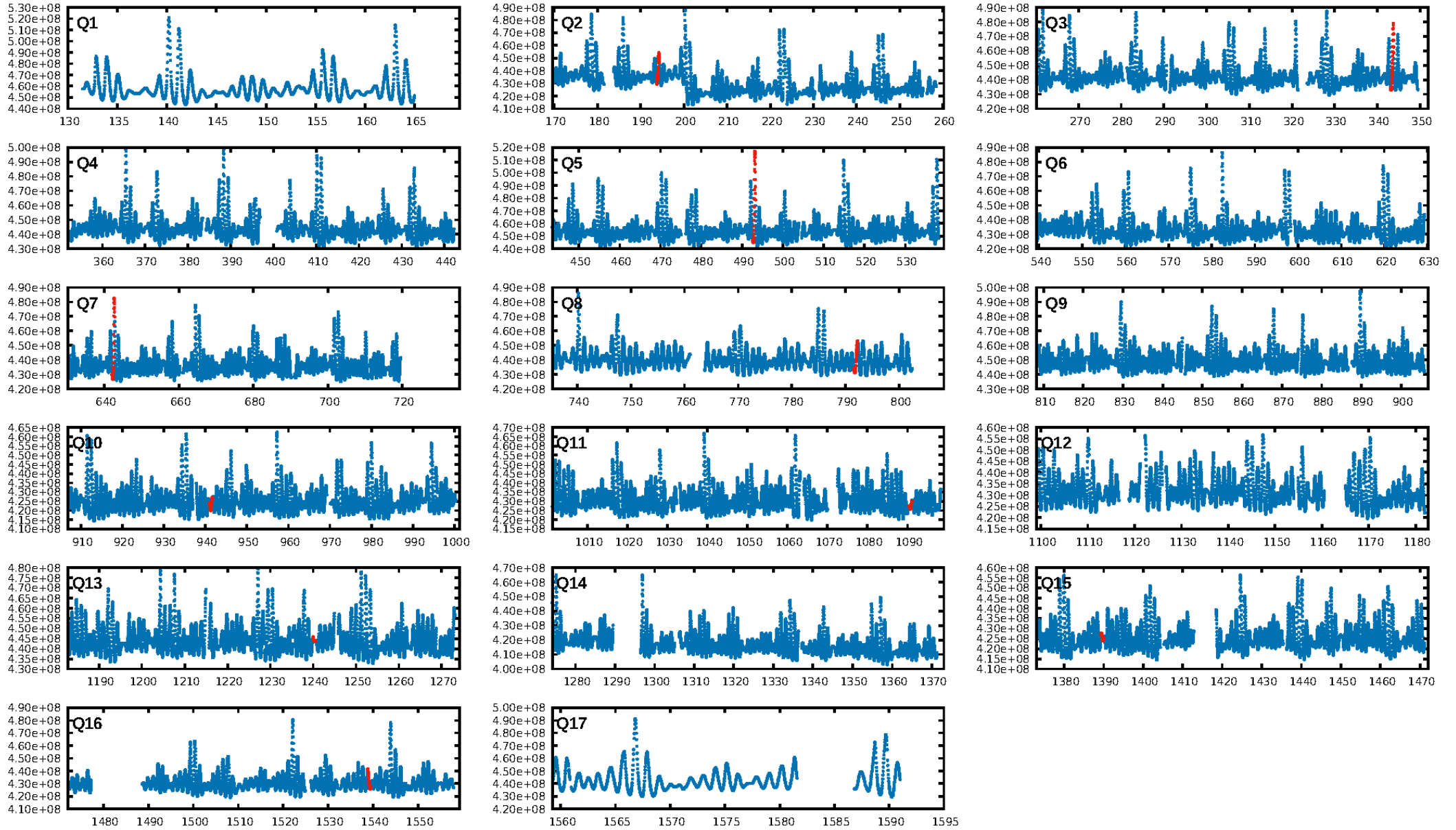
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [17.59σ]
LongPeriod-sig: 100.0% [306.68σ]
ModelChiSquare2-sig: 1.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -0.56
Centroid-sig: 0.4%
Centroid-so: 0.131 arcsec [5.53σ]
OotOffset-rm: 0.061 arcsec [0.73σ]
KicOffset-rm: 0.146 arcsec [1.99σ]
OotOffset-st: 2/4/2/2 [10]
KicOffset-st: 2/4/2/2 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 0.00 [0/10]

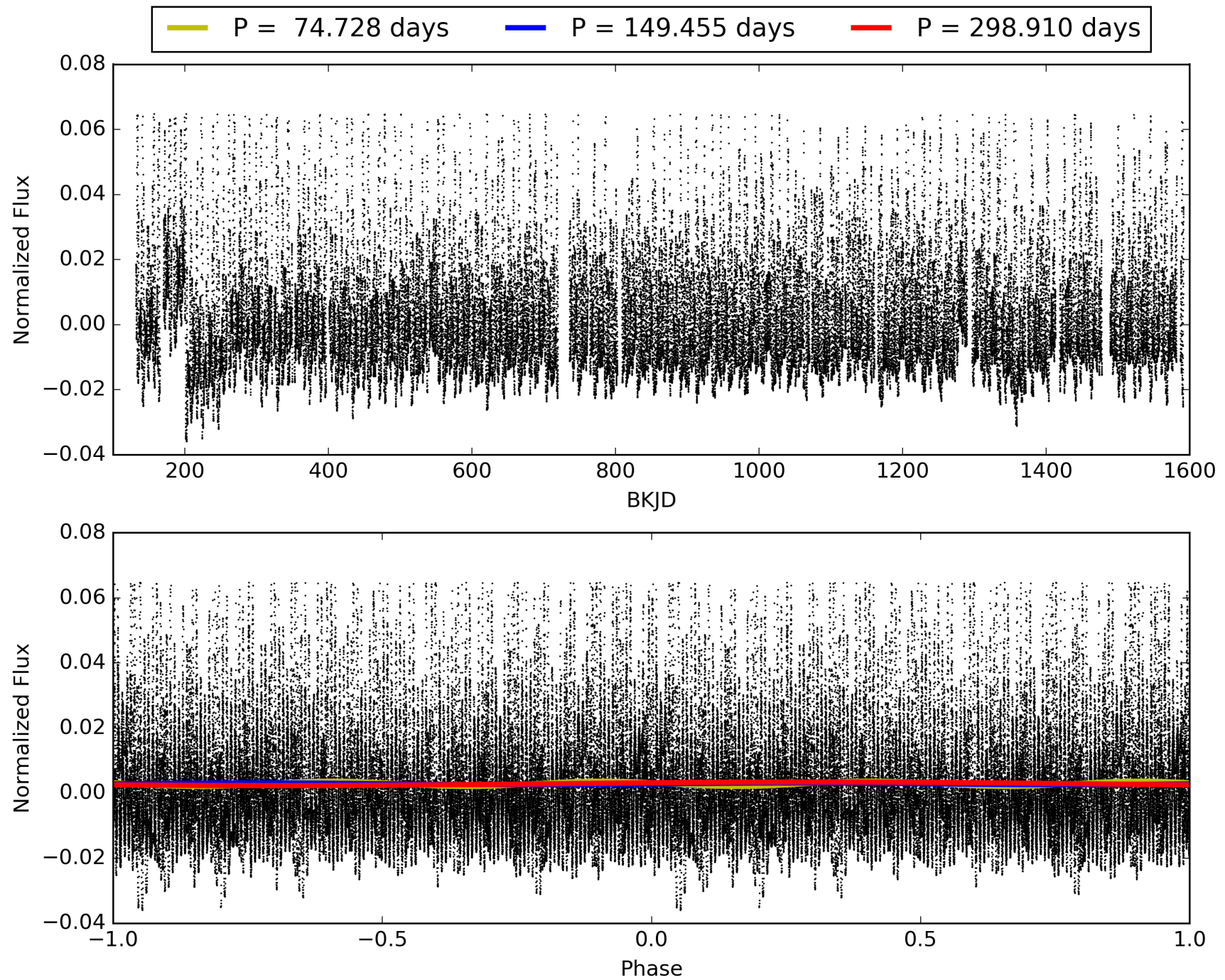
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:15:41 Z

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

TCE 003847822-02, PDC Light Curves

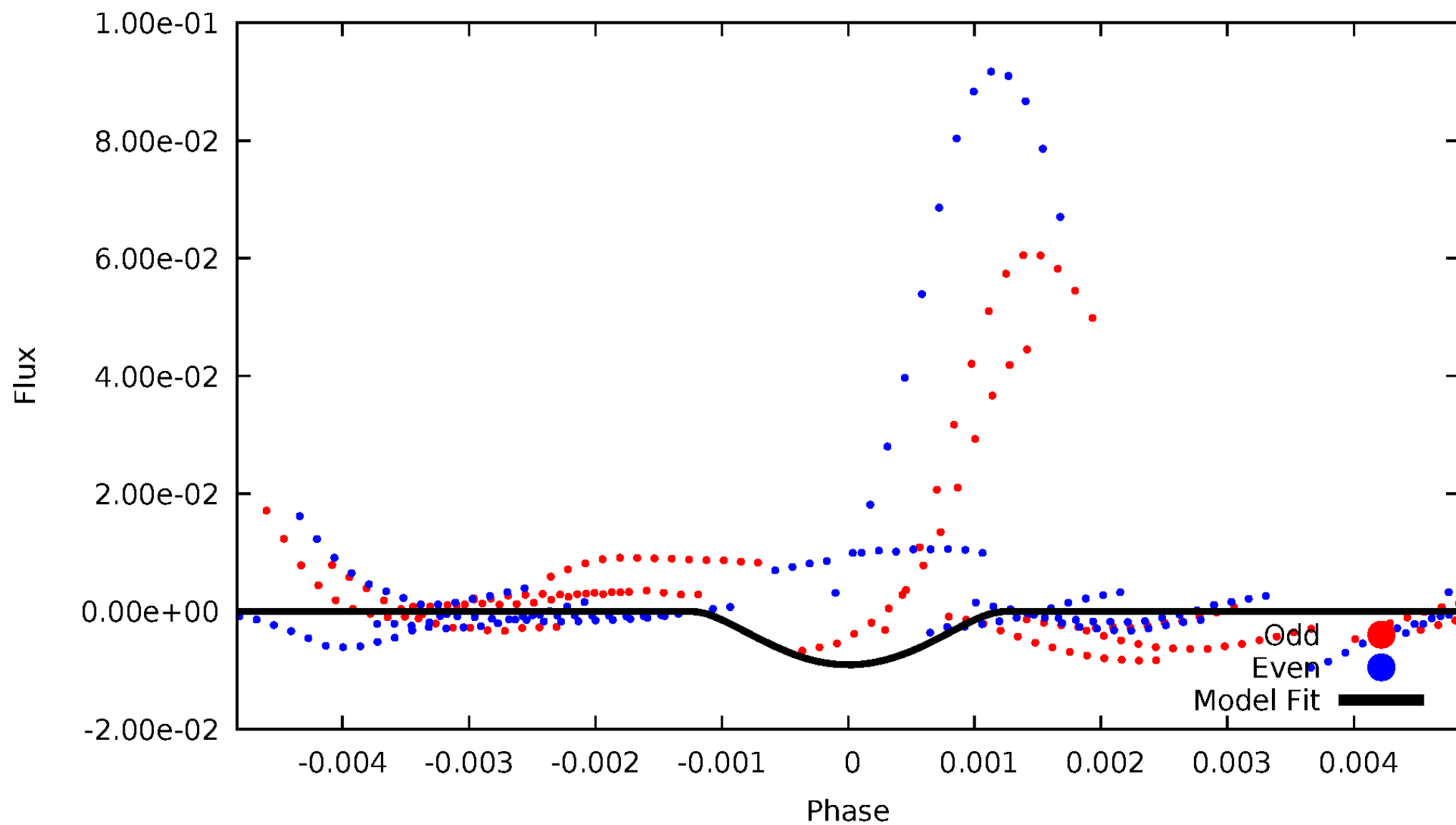


TCE 003847822-02



DV Odd/Even

TCE 003847822-02

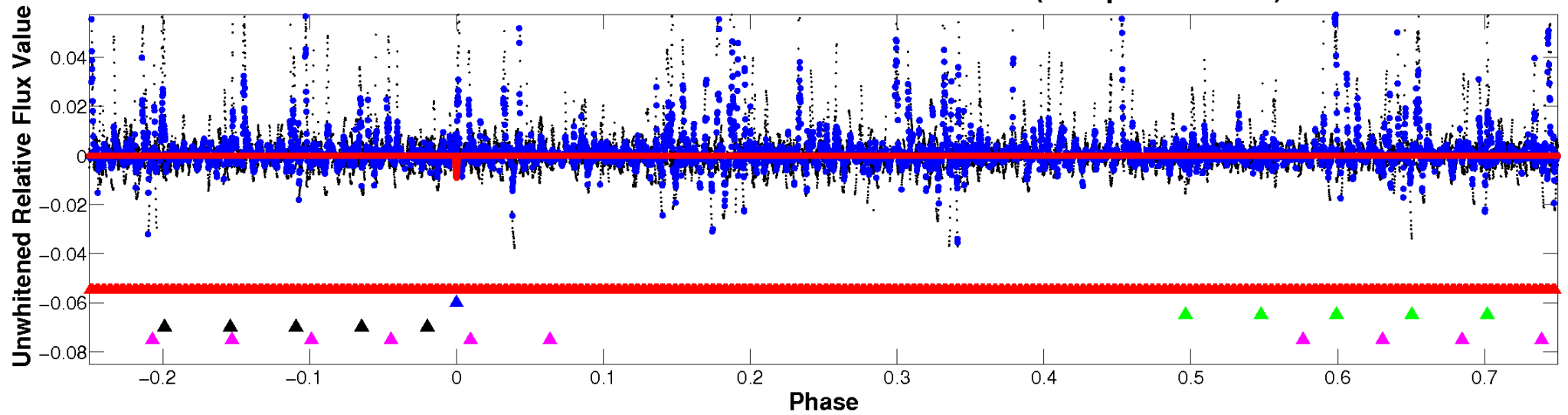


ALT Odd/Even

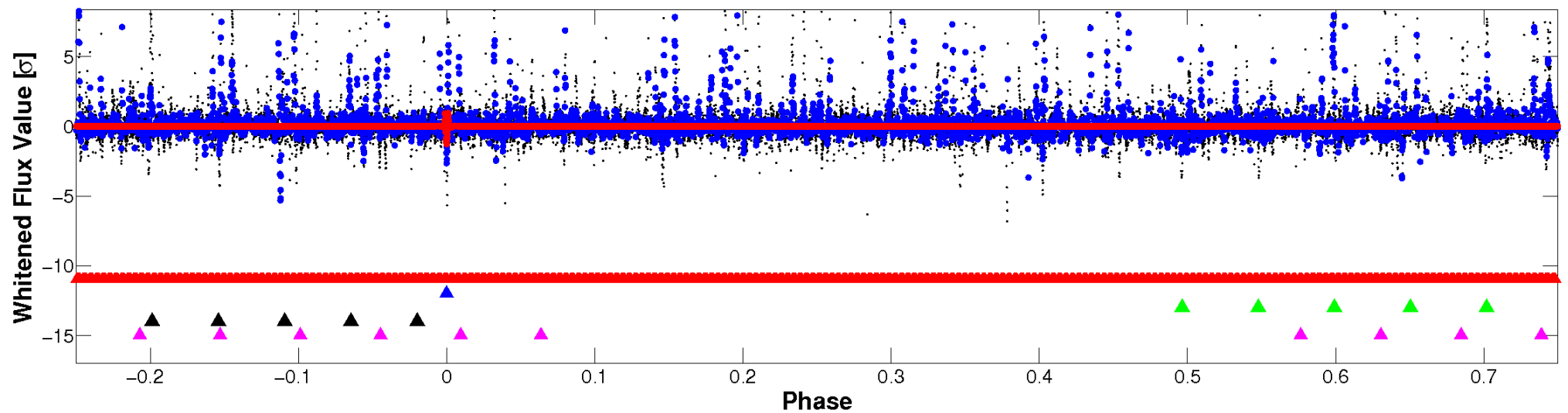
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

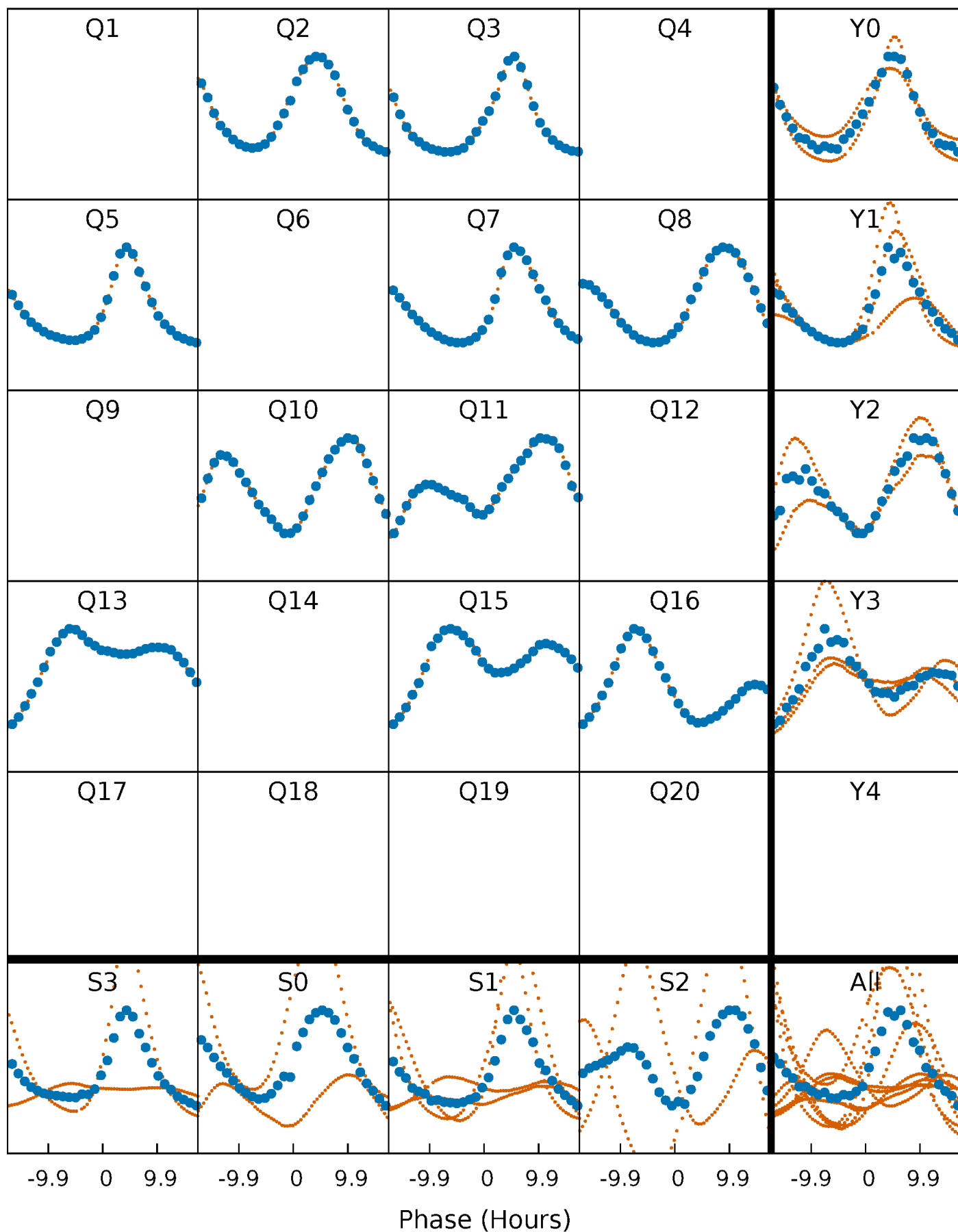


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



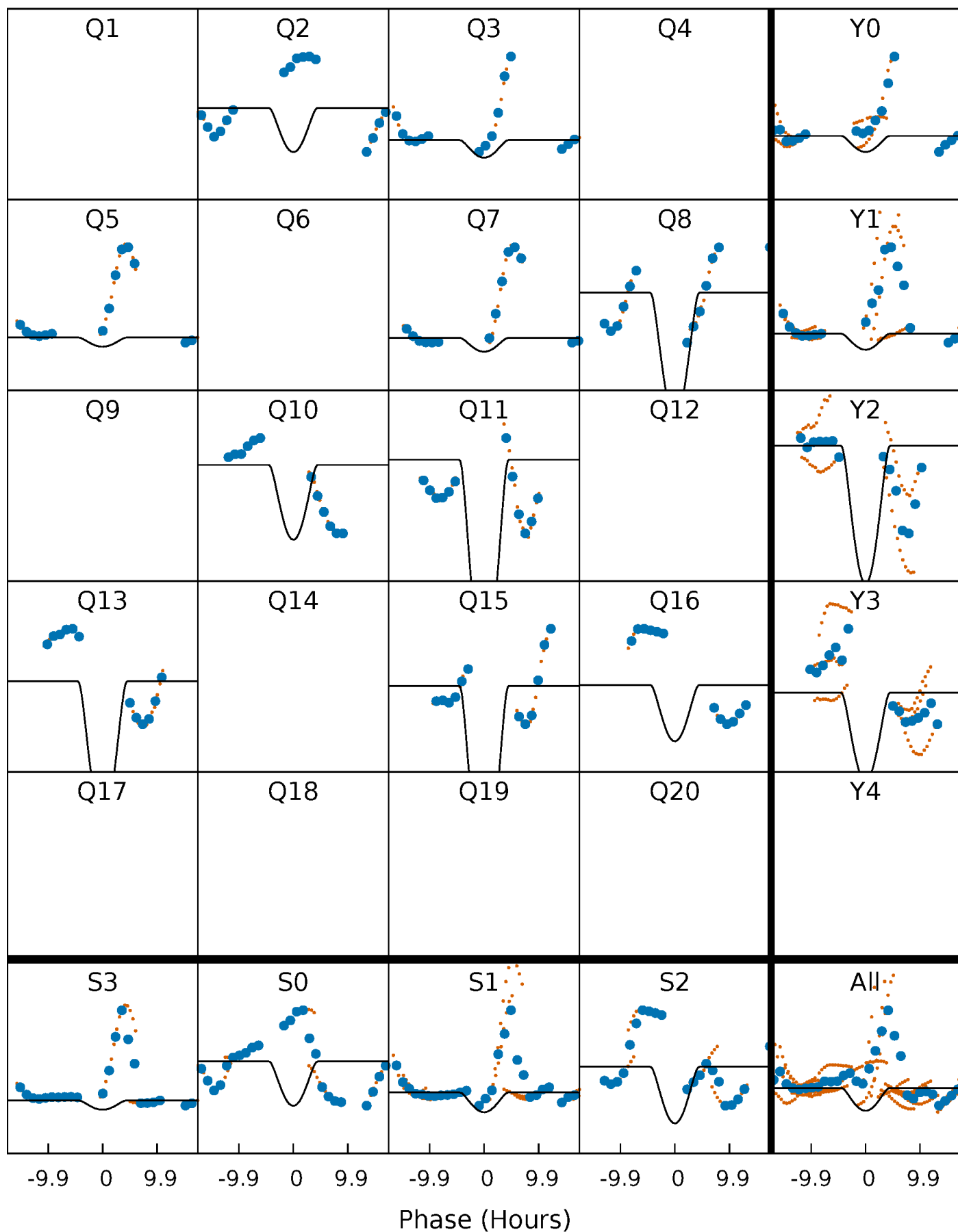
PDC Quarter-Phased Transit Curves

TCE 003847822-02 P=149.455236 Days $T_0=194.025893$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003847822-02 P=149.455236 Days $T_0=194.025893$ (BKJD)

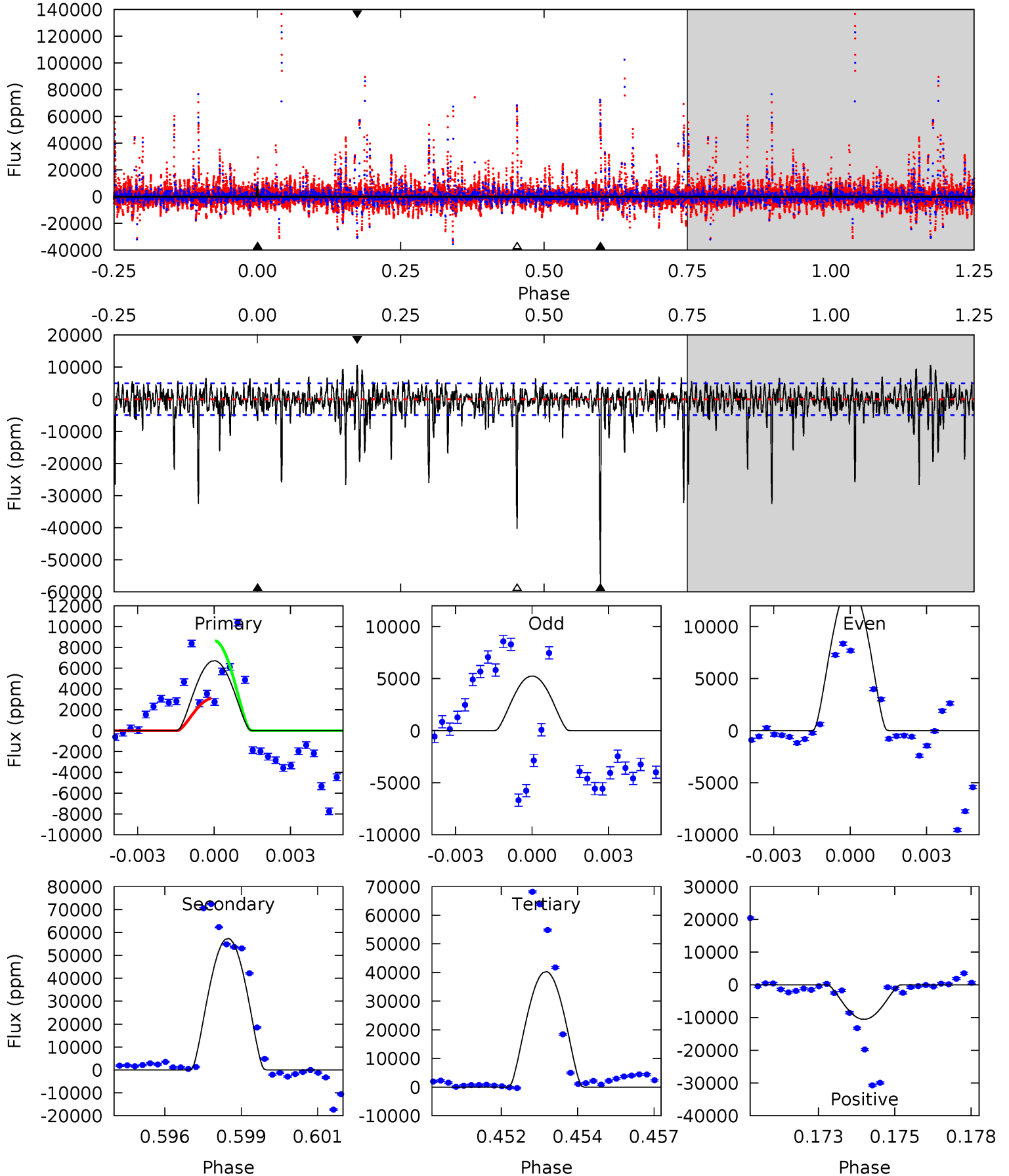


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

003847822-02, P = 149.455236 Days, E = 44.570657 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.19	61.4	43.2	11.3	5.28	3.02	3.95	-36.0	-4.10	18.2	50.1	4.00	0.95	0.16	2.90



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 003847822

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7084^{+195}_{-307}	$3.933^{+0.260}_{-0.160}$	$0.180^{+0.150}_{-0.300}$	$2.382^{+0.607}_{-0.741}$	$1.773^{+0.182}_{-0.339}$	$0.185^{+0.285}_{-0.087}$
	+3%/-4%	+7%/-4%	+83%/-167%	+25%/-31%	+10%/-19%	+154%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003847822-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-57353 ± 934	$61.43^{+50.70}_{-38.78}$	814^{+65}_{-68}	6989^{+7503}_{-1741}	3878^{+24822}_{-2711}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

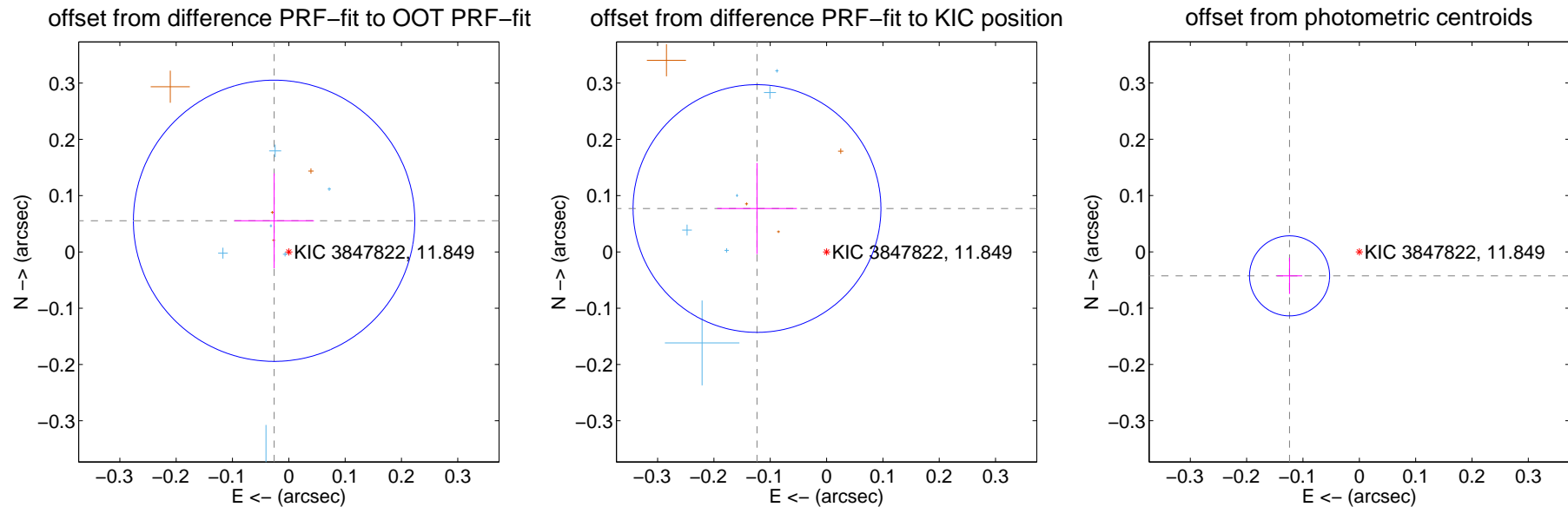
DV Centroid Data

Supplemental centroid analysis for 003847822-02. **Kepler magnitude: 11.85.** Transit SNR 5.59

There are 6 quarters with good PRF difference image offsets

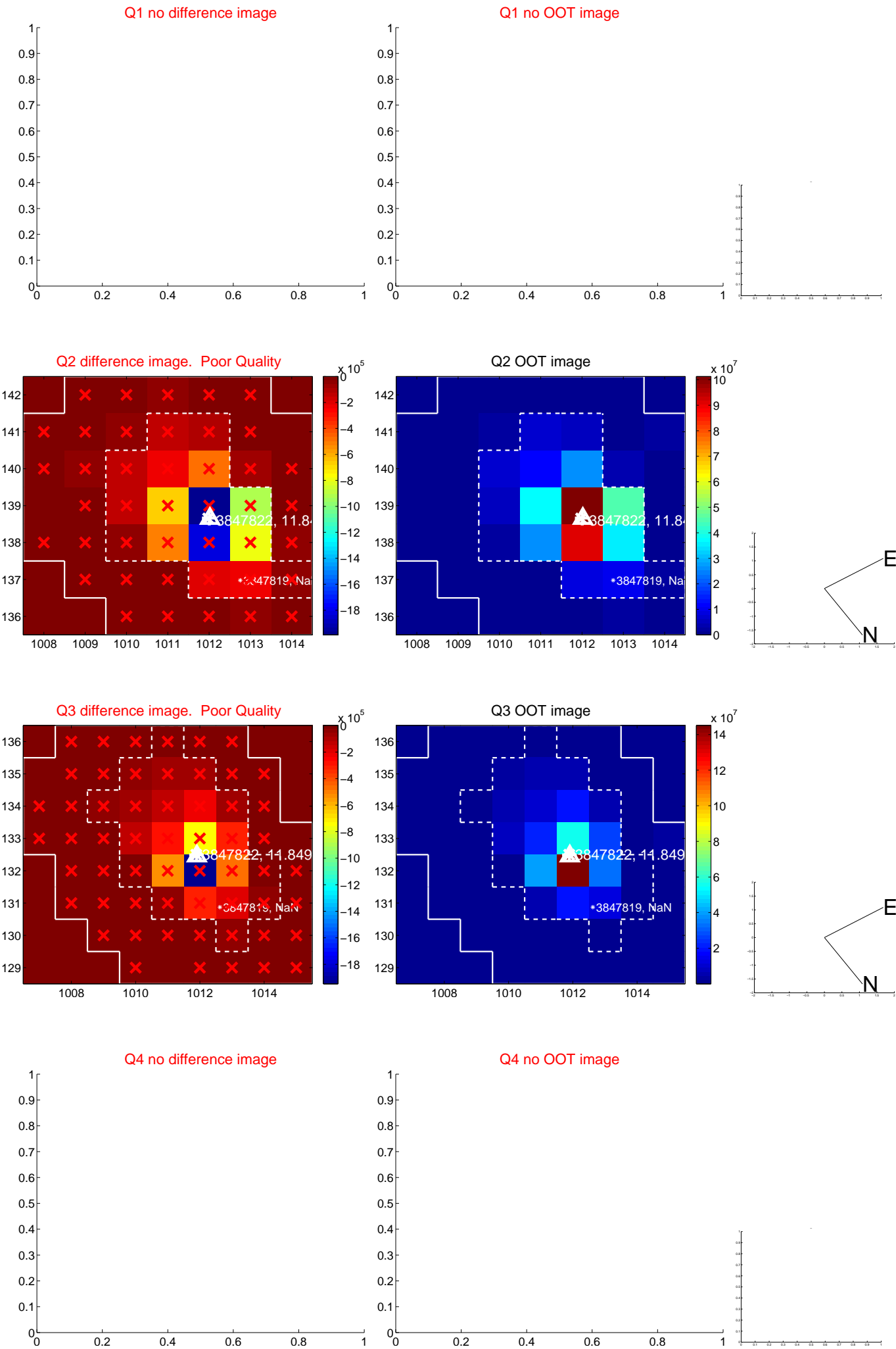
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.061 ± 0.083	0.73	0.026 ± 0.071	0.055 ± 0.084
PRF-fit source offset from KIC position	0.146 ± 0.073	1.99	0.124 ± 0.071	0.077 ± 0.081
photometric centroid source offset	0.13 ± 0.02	5.53	0.12 ± 0.02	-0.04 ± 0.03

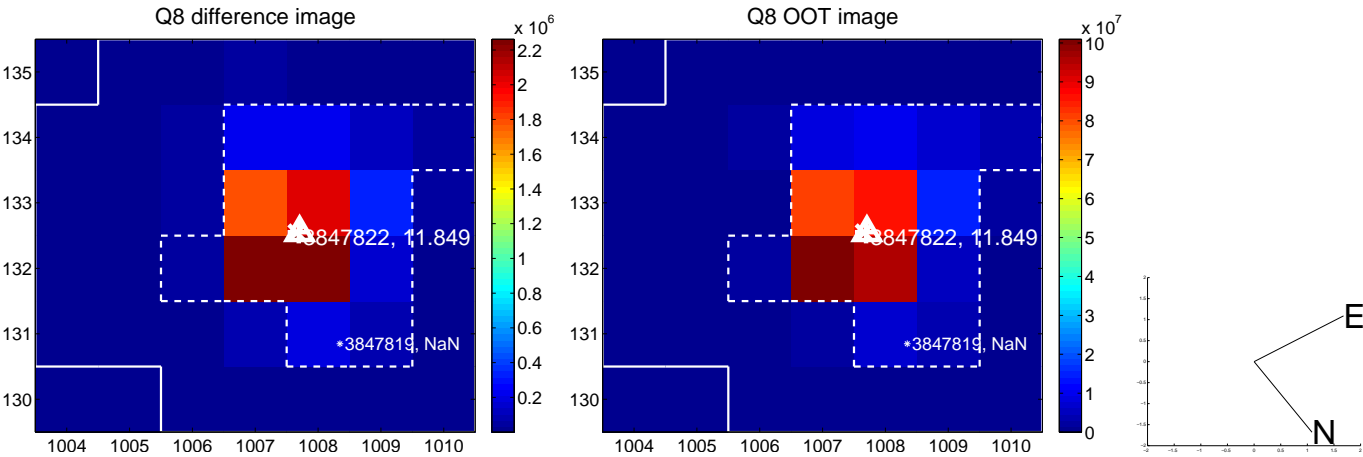
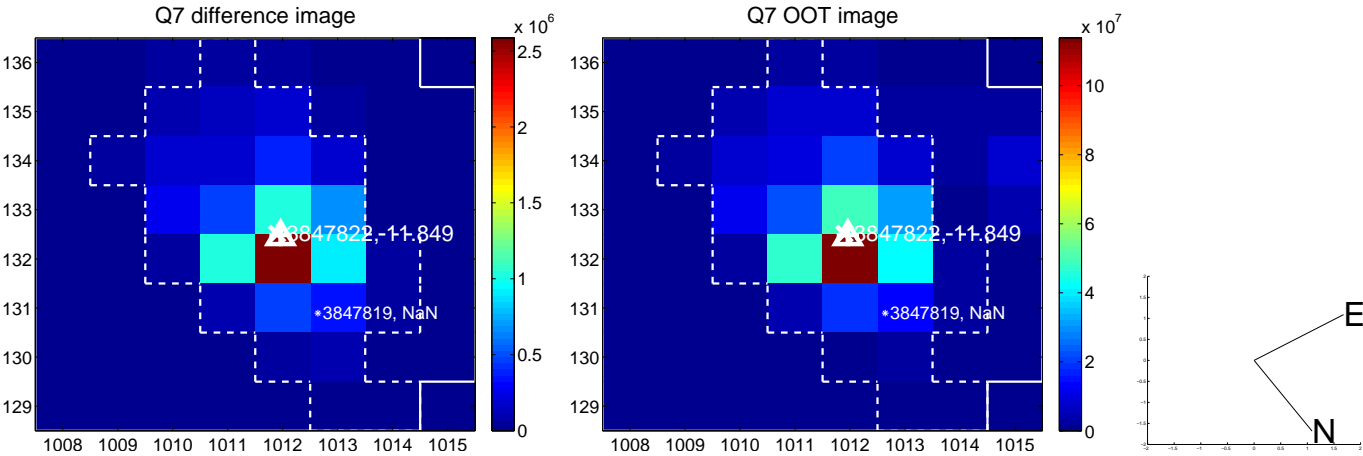
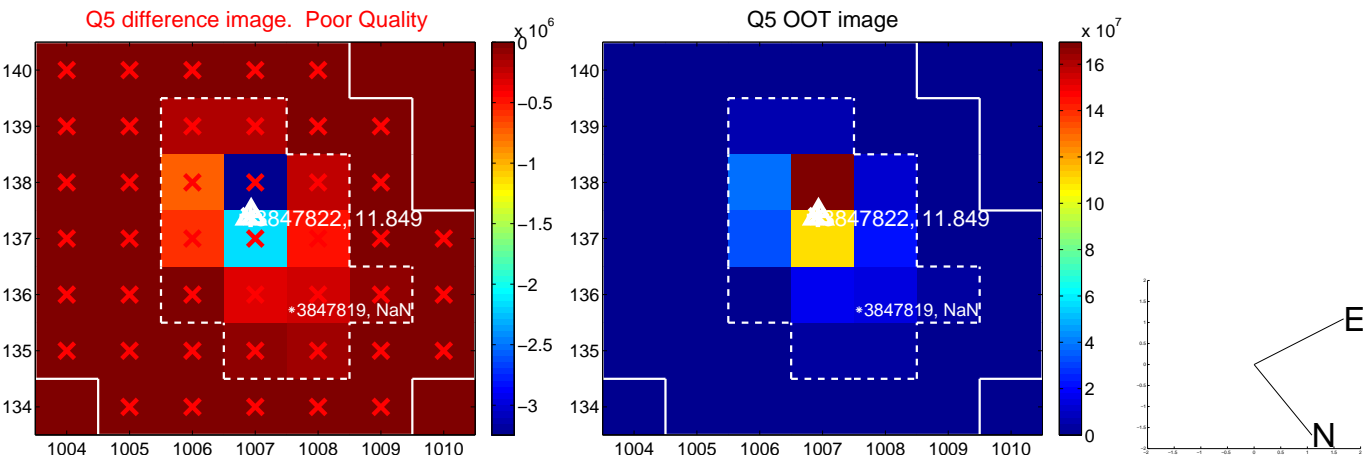


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

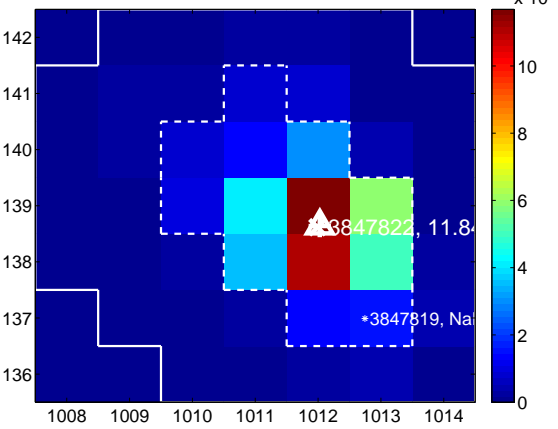
Q9 no difference image



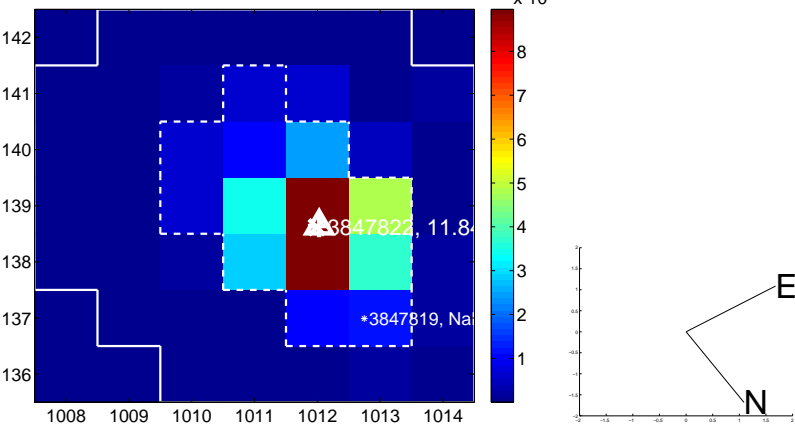
Q9 no OOT image



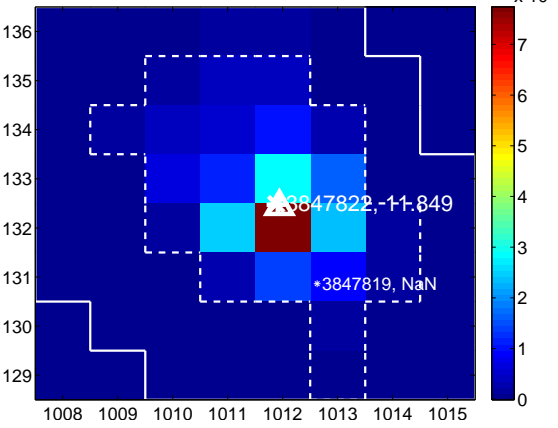
Q10 difference image



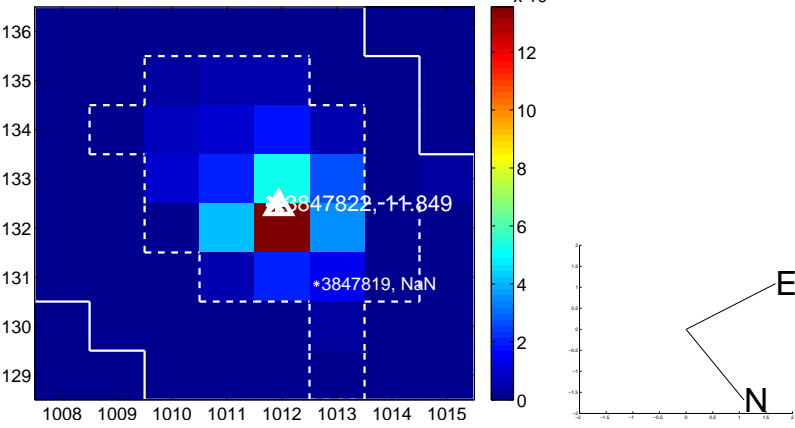
Q10 OOT image



Q11 difference image



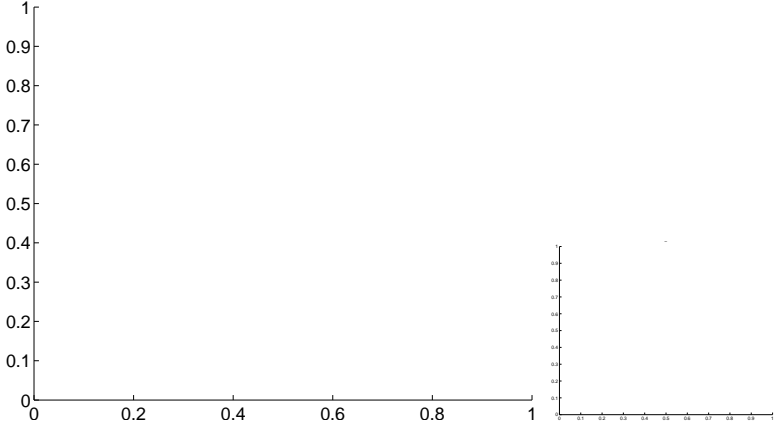
Q11 OOT image



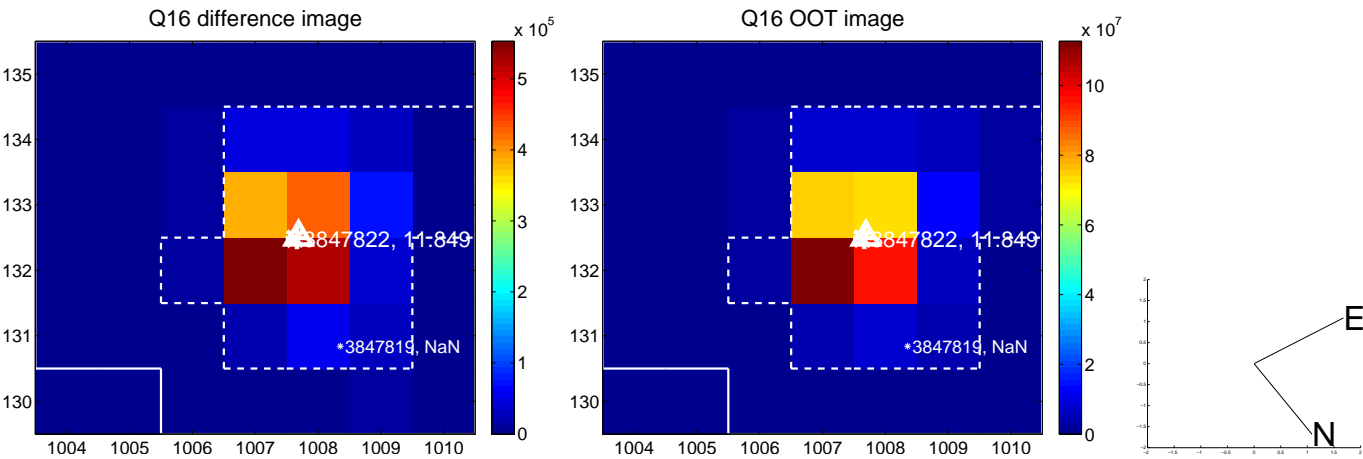
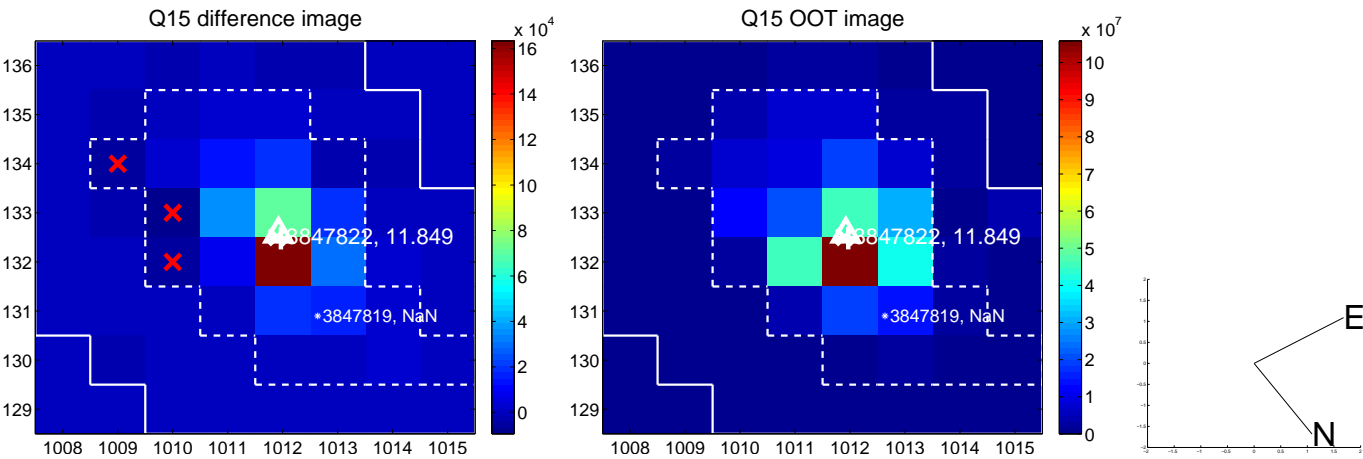
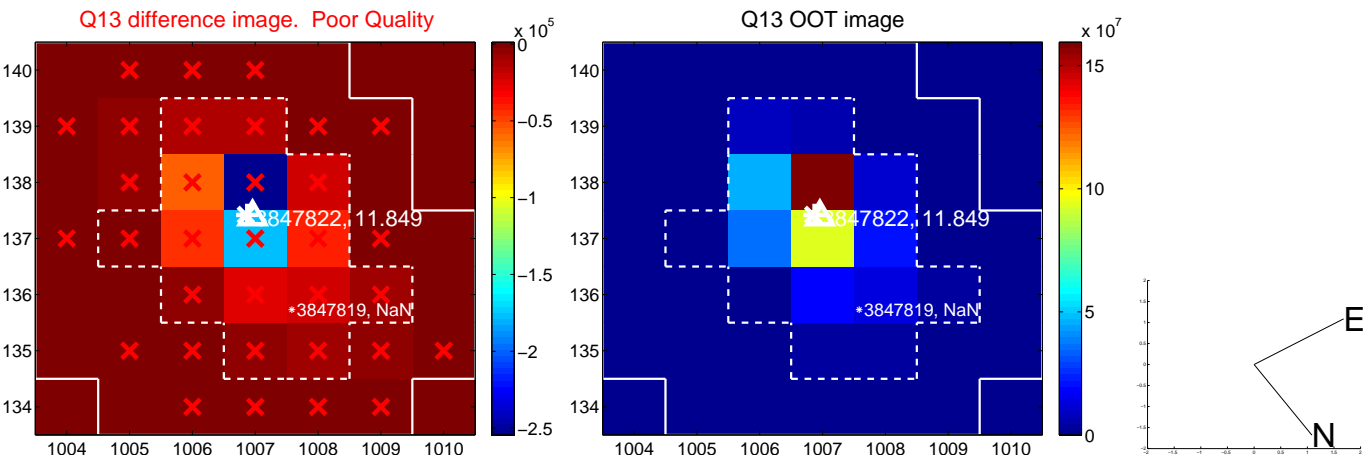
Q12 no difference image



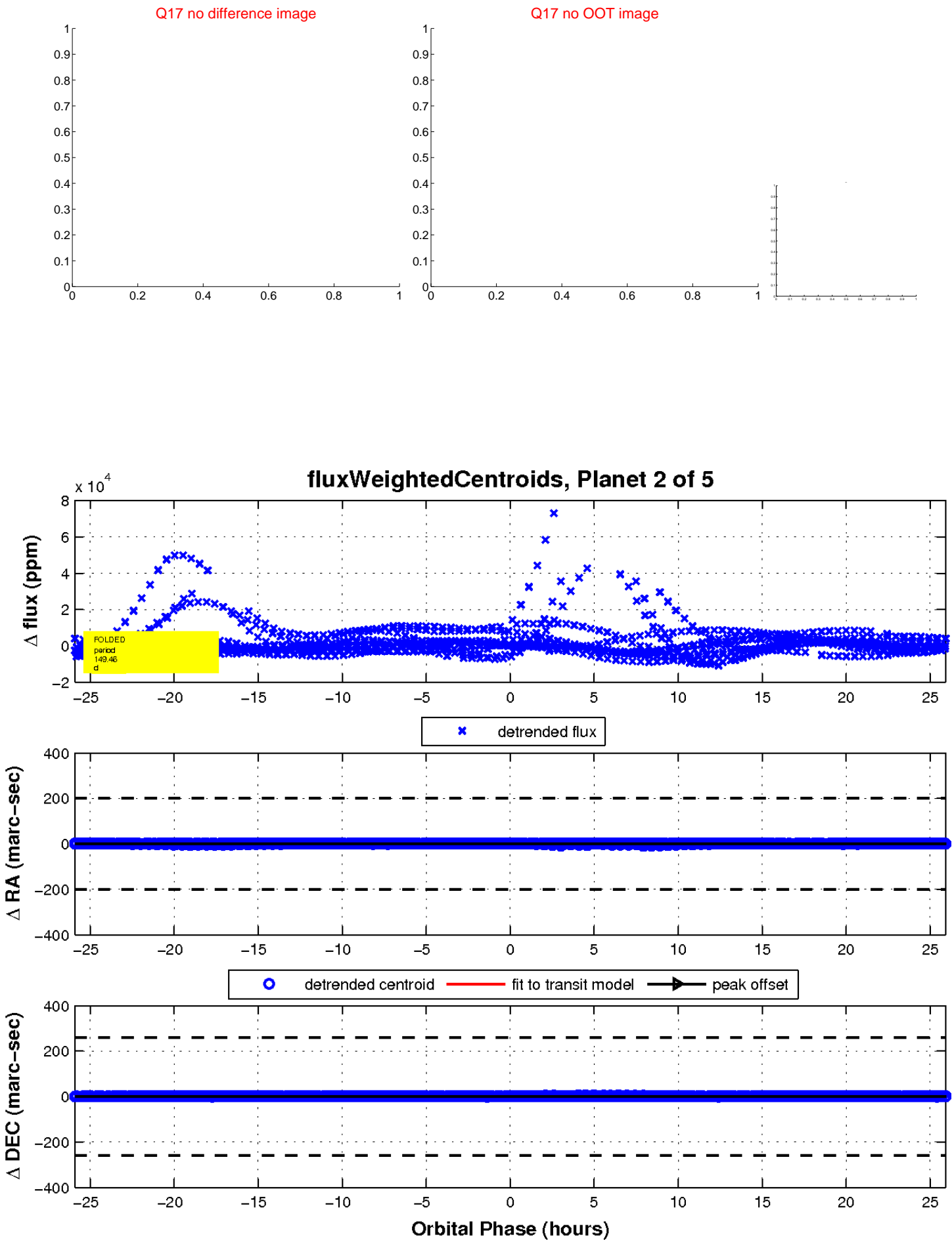
Q12 no OOT image



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

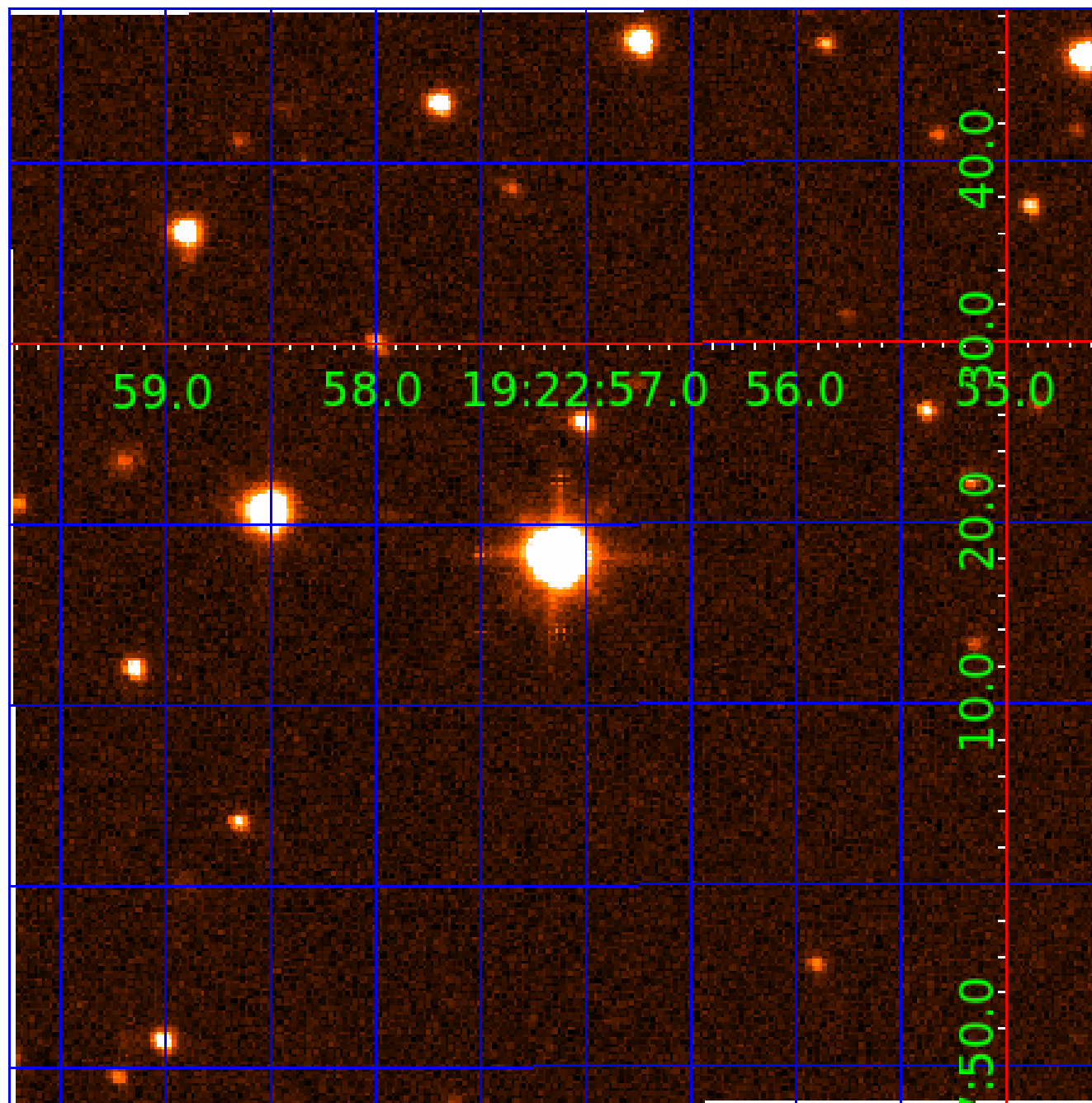


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003847822

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})
003847822-01	OBS	No	0.638877	131.771380	51.6	2.752	14.3	10.9	2.38	7084	2.02	41439.41
003847822-02	OBS	No	149.455236	194.025893	9061.0	8.670	16.1	5.6	2.38	7084	39.84	28.75
003847822-03	OBS	No	306.585904	268.224206	11997.1	9.412	13.6	8.0	2.38	7084	45.50	11.03
003847822-04	OBS	No	305.596144	313.782002	46.6	8.611	13.7	0.0	2.38	7084	1.75	11.08
003847822-05	OBS	No	141.363902	203.545555	6054.2	6.831	13.7	6.5	2.38	7084	32.92	30.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003847822-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003847822-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003847822-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
003847822-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST
003847822-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT

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

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

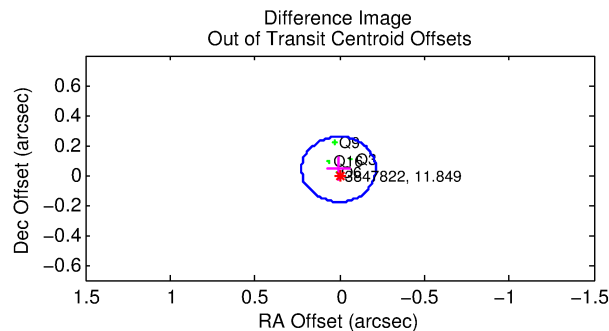
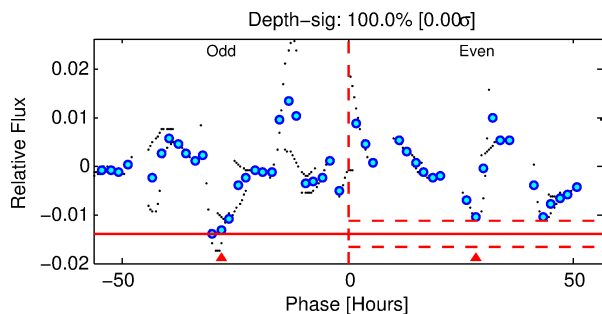
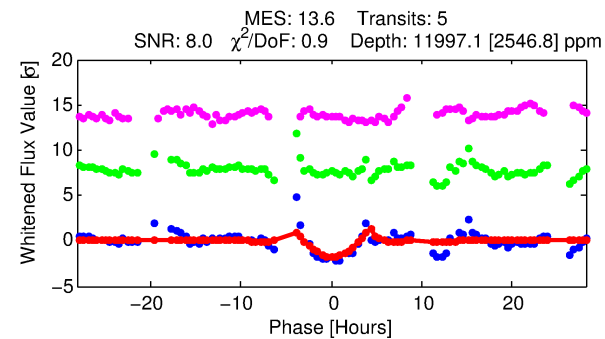
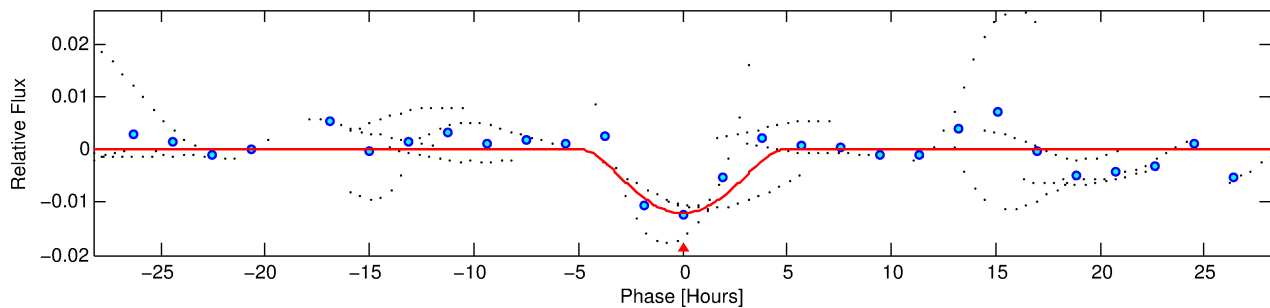
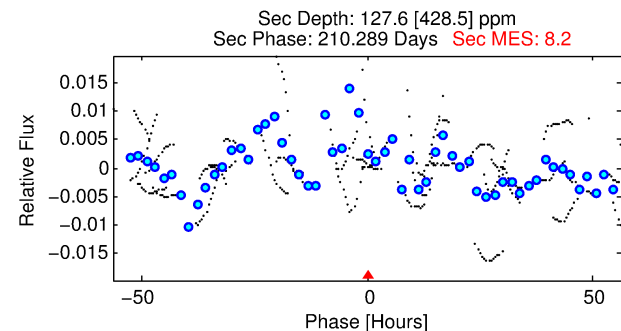
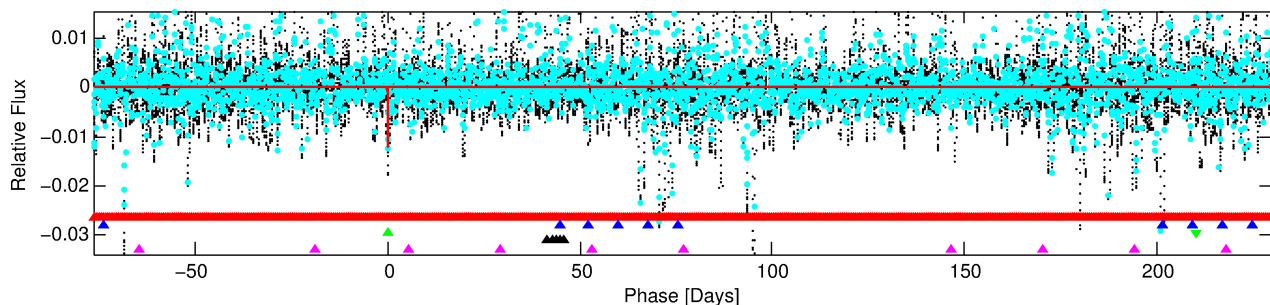
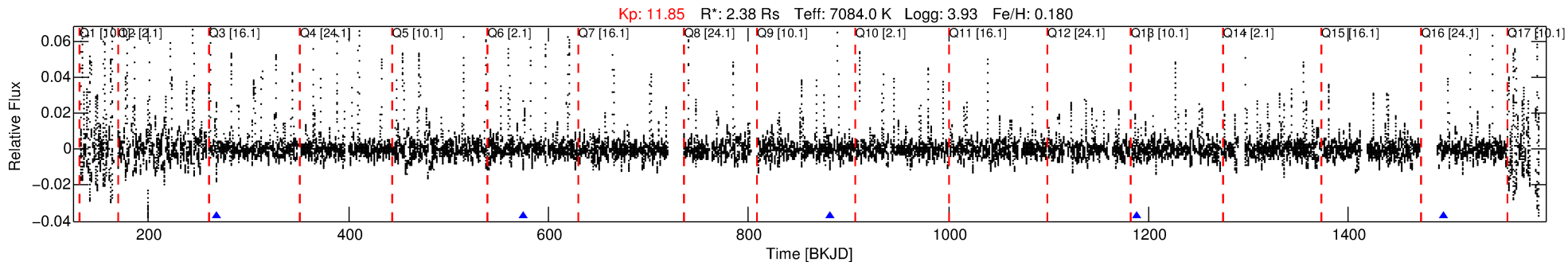
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003847822-03

No Significant Match Found

DV One-Page Summary

KIC: 3847822 Candidate: 3 of 5 Period: 306.586 d



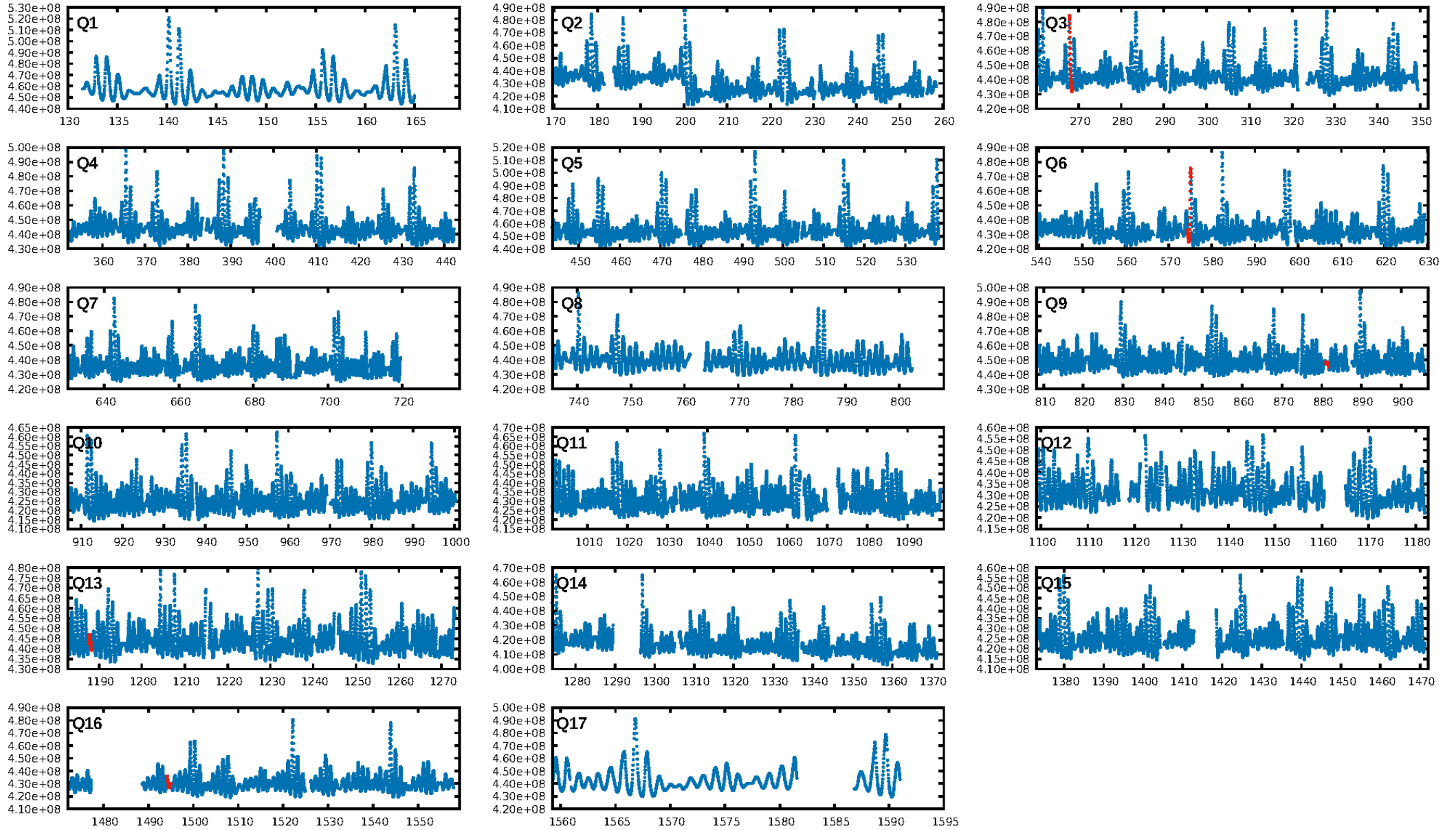
DV Fit Results:

Period = 306.58590 [0.00877] d
Epoch = 268.2242 [0.0153] BKJD
Rp/R* = 0.1750 [0.2832]
a/R* = 153.63 [36.24]
b = 1.00 [0.41]
Seff = 11.03 [5.32]
Teq = 465 [56] K
Rp = 45.50 [74.96] Re
a = 1.0774 [0.3101] AU
Ag = 39.37 [184.43] [0.21σ]
Teffp = 1800 [2099] K [0.64σ]

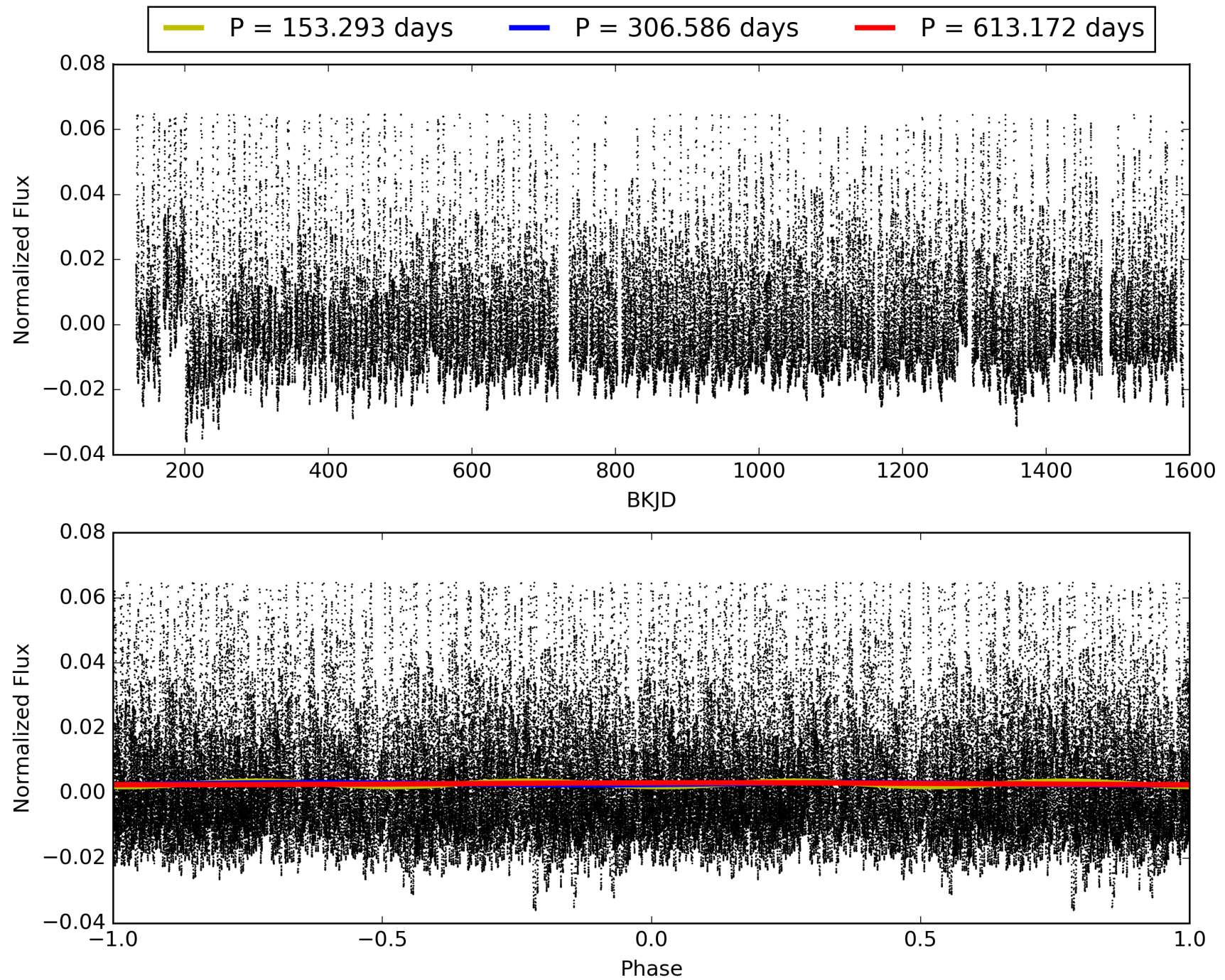
DV Diagnostic Results:

ShortPeriod-sig: 93.7% [1.86σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.909
Centroid-sig: 13.1%
Centroid-so: 0.138 arcsec [5.05σ]
OotOffset-rm: 0.040 arcsec [0.55σ]
KicOffset-rm: 0.177 arcsec [2.29σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.00 [0/4]

TCE 003847822-03, PDC Light Curves

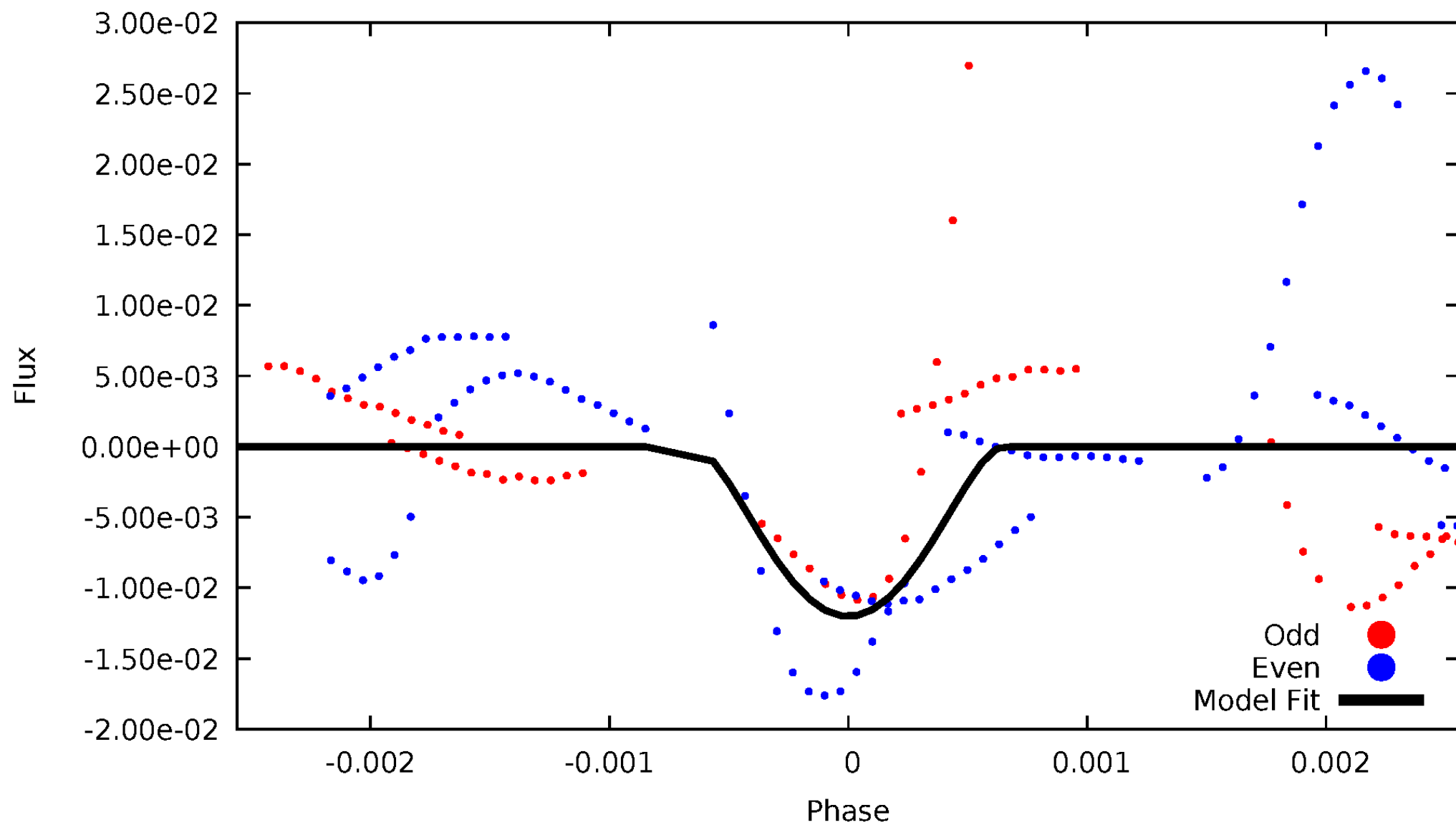


TCE 003847822-03



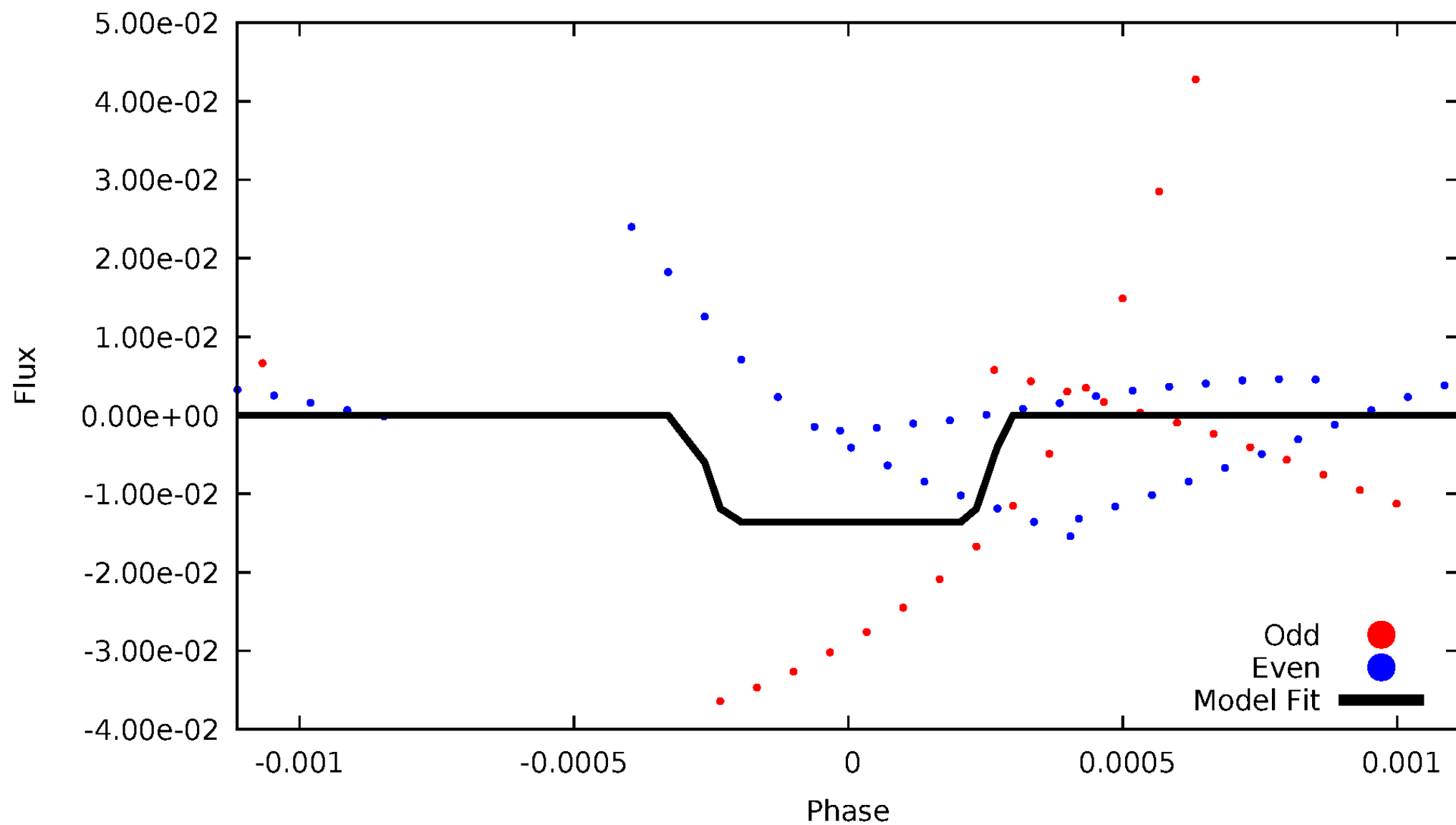
DV Odd/Even

TCE 003847822-03



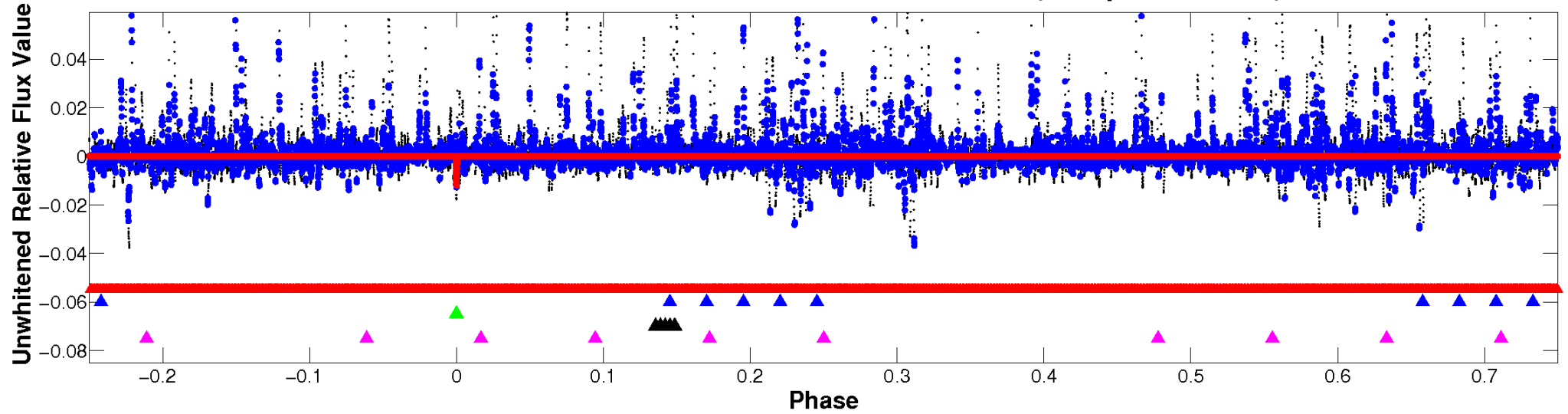
ALT Odd/Even

TCE 003847822-03

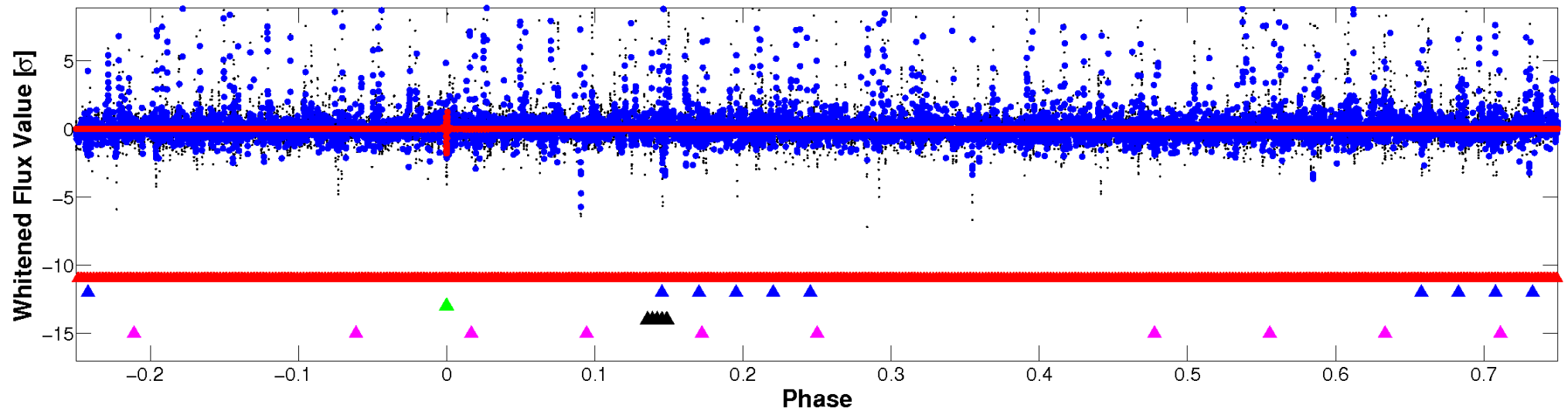


Non-Whitened Vs. Whitened Light Curve

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

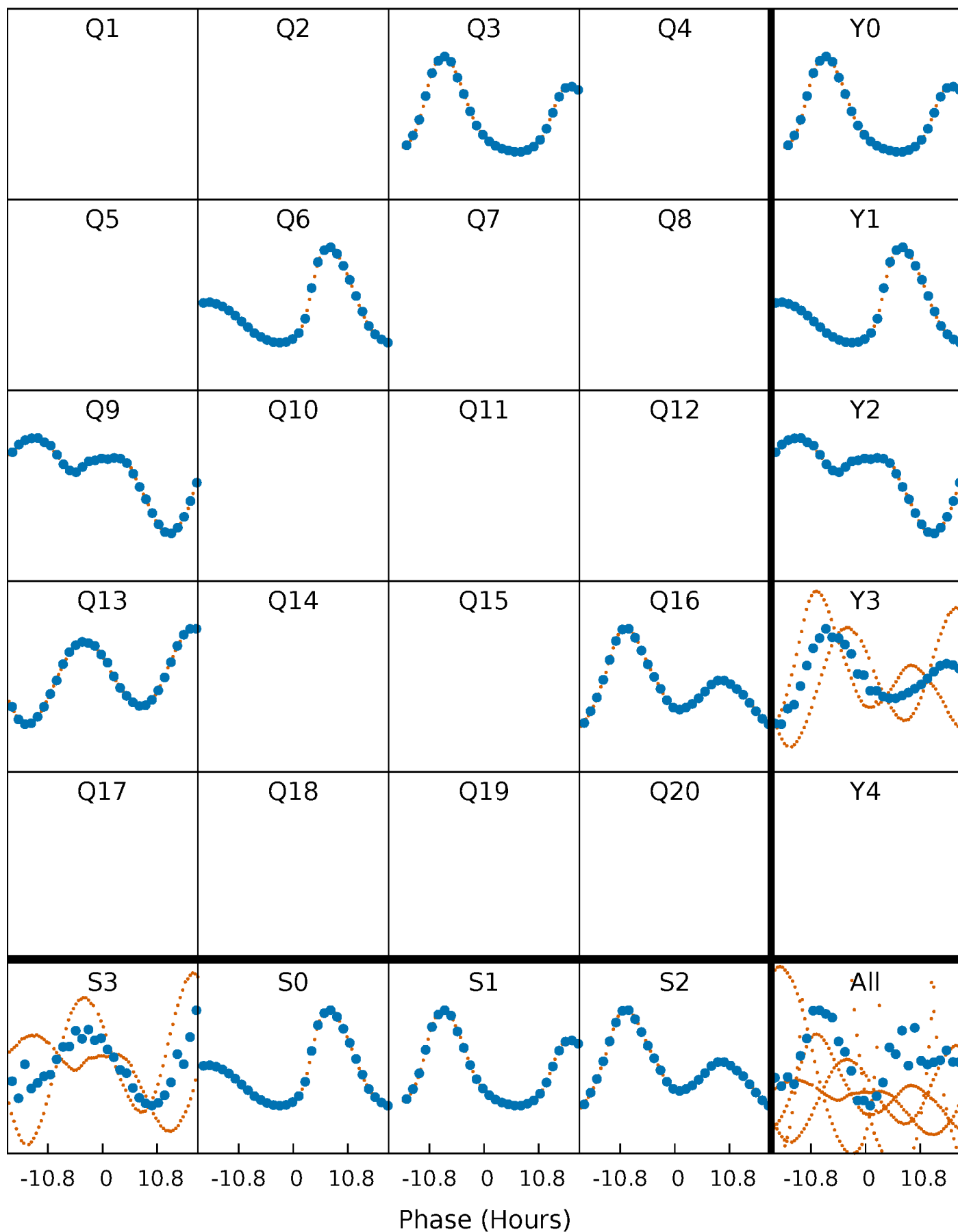


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



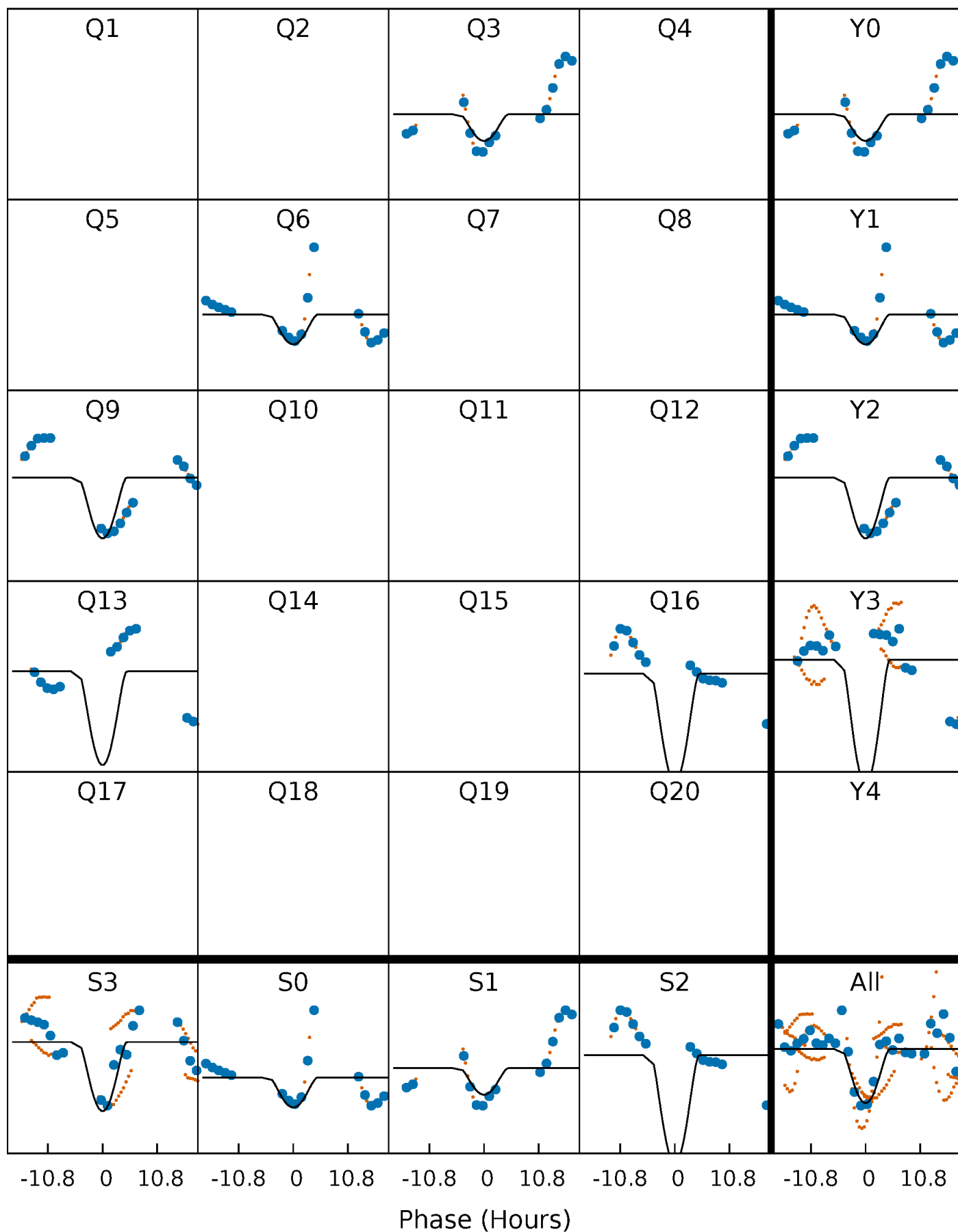
PDC Quarter-Phased Transit Curves

TCE 003847822-03 P=306.585904 Days $T_0=268.224206$ (BKJD)



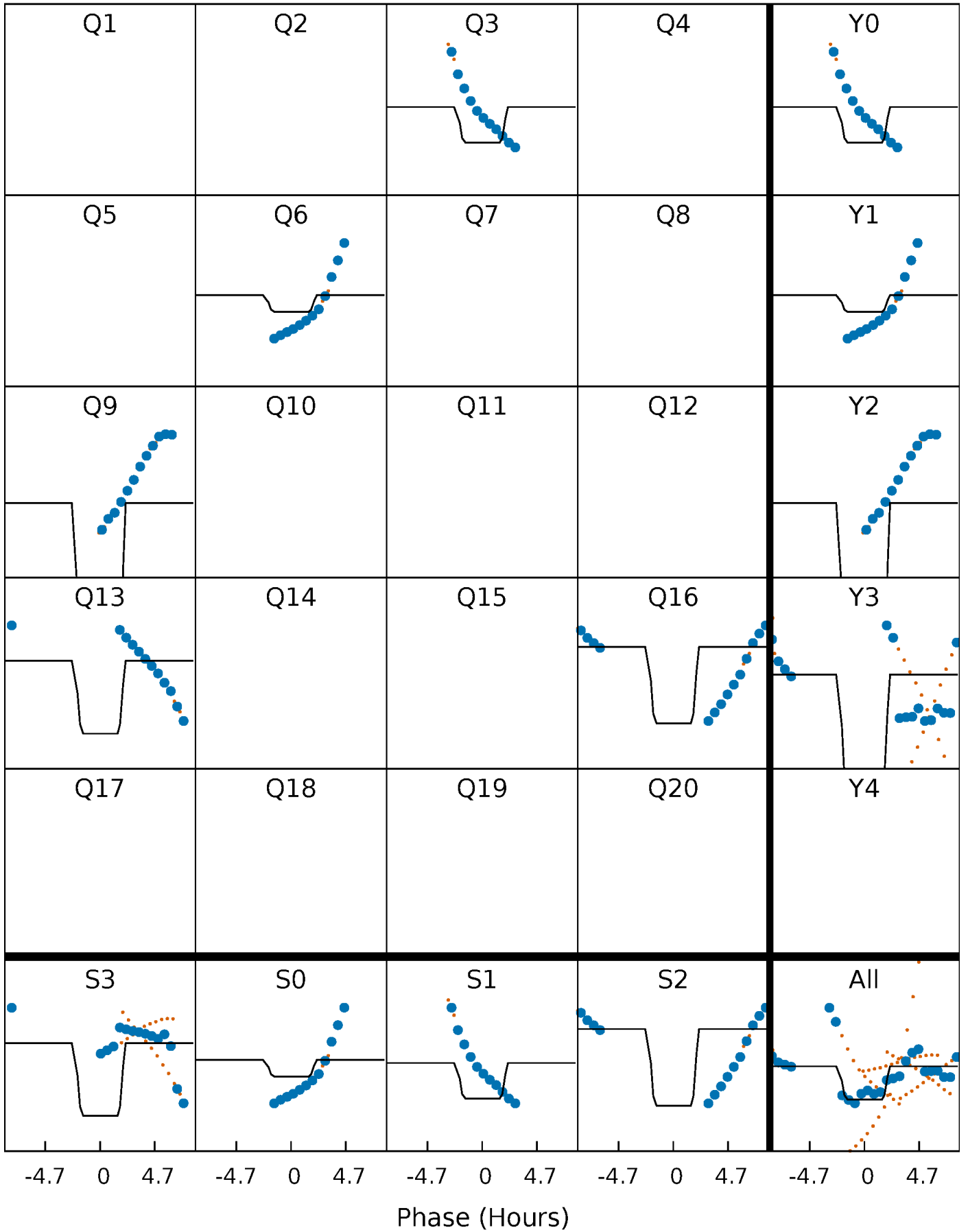
DV Quarter-Phased Transit Curves

TCE 003847822-03 $P=306.585904$ Days $T_0=268.224206$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

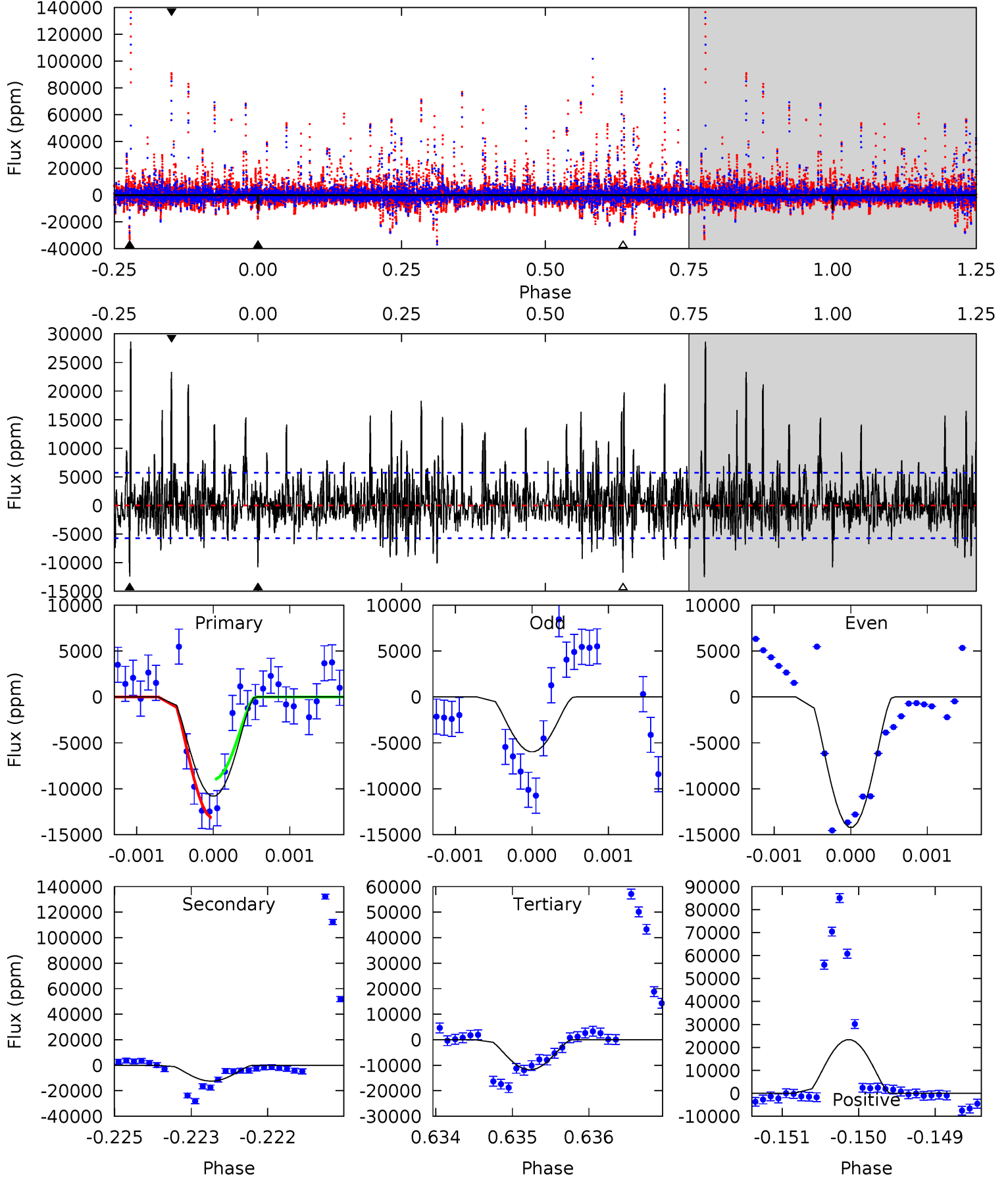
TCE 003847822-03 P=306.598757 Days $T_0=268.171838$ (BKJD)



DV Model-Shift Uniqueness Test

003847822-03, P = 306.585904 Days, E = 268.224206 Days

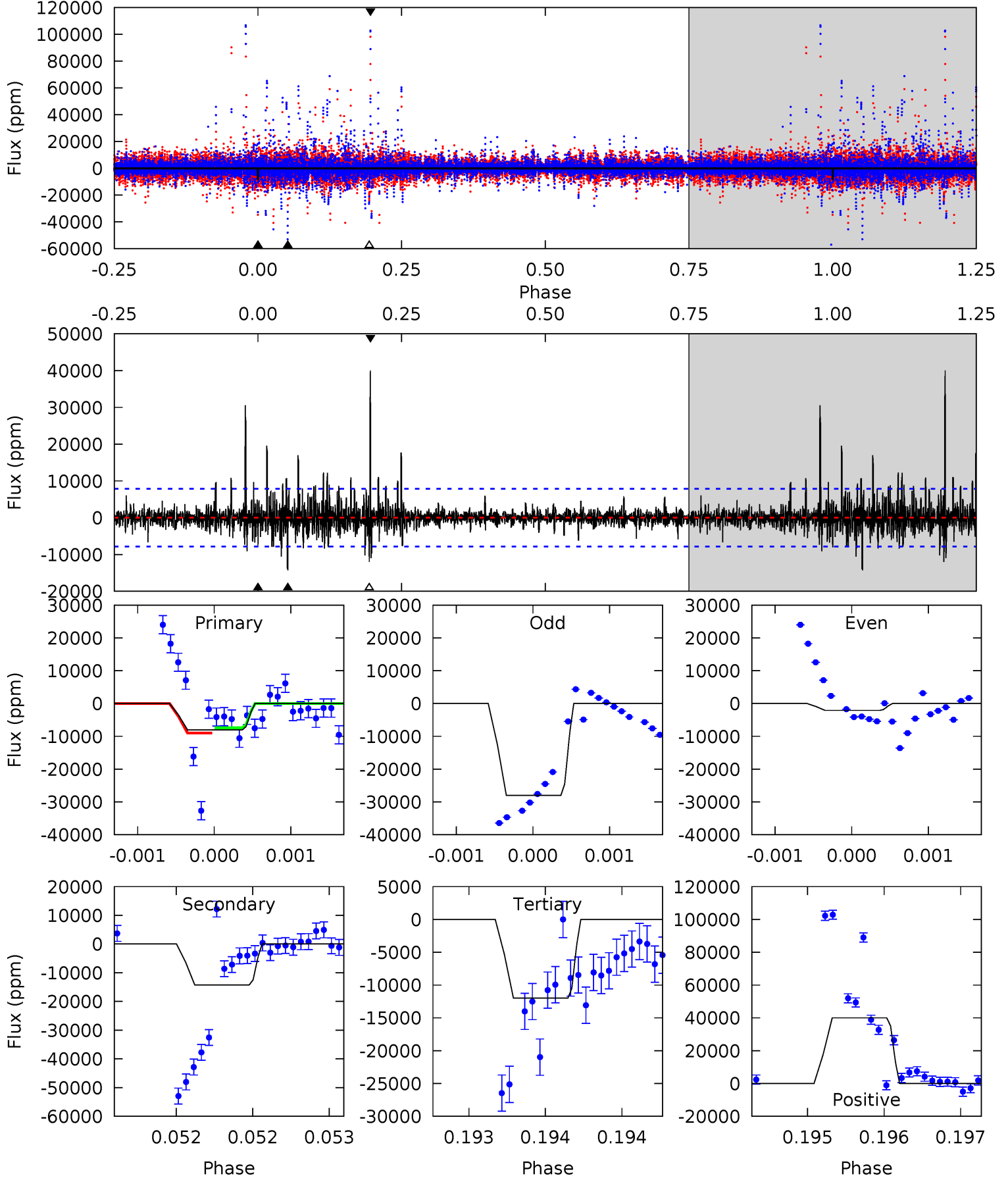
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	11.7	11.1	22.1	5.42	3.24	3.52	-0.88	-11.9	0.63	-10.4	3.18	0.76	0.70	1.78



Alt Model-Shift Uniqueness Test

003847822-03, P = 306.598757 Days, E = 268.171838 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.70	10.1	8.49	28.3	5.55	3.45	1.65	-2.79	-22.6	1.60	-18.3	8.01	4.12	0.74	0.57



Stellar Parameters For KIC 003847822

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7084^{+195}_{-307}	$3.933^{+0.260}_{-0.160}$	$0.180^{+0.150}_{-0.300}$	$2.382^{+0.607}_{-0.741}$	$1.773^{+0.182}_{-0.339}$	$0.185^{+0.285}_{-0.087}$
	+3%/-4%	+7%/-4%	+83%/-167%	+25%/-31%	+10%/-19%	+154%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003847822-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12380 ± 1054	$70.31^{+55.48}_{-47.83}$	643^{+49}_{-57}	4630^{+3207}_{-938}	1606^{+12806}_{-1115}
Alt.	-14247 ± 1412	$57.76^{+62.96}_{-40.66}$	640^{+49}_{-51}	5129^{+5201}_{-1249}	2733^{+28425}_{-2089}

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 $A_{obs} \gg 1.0$

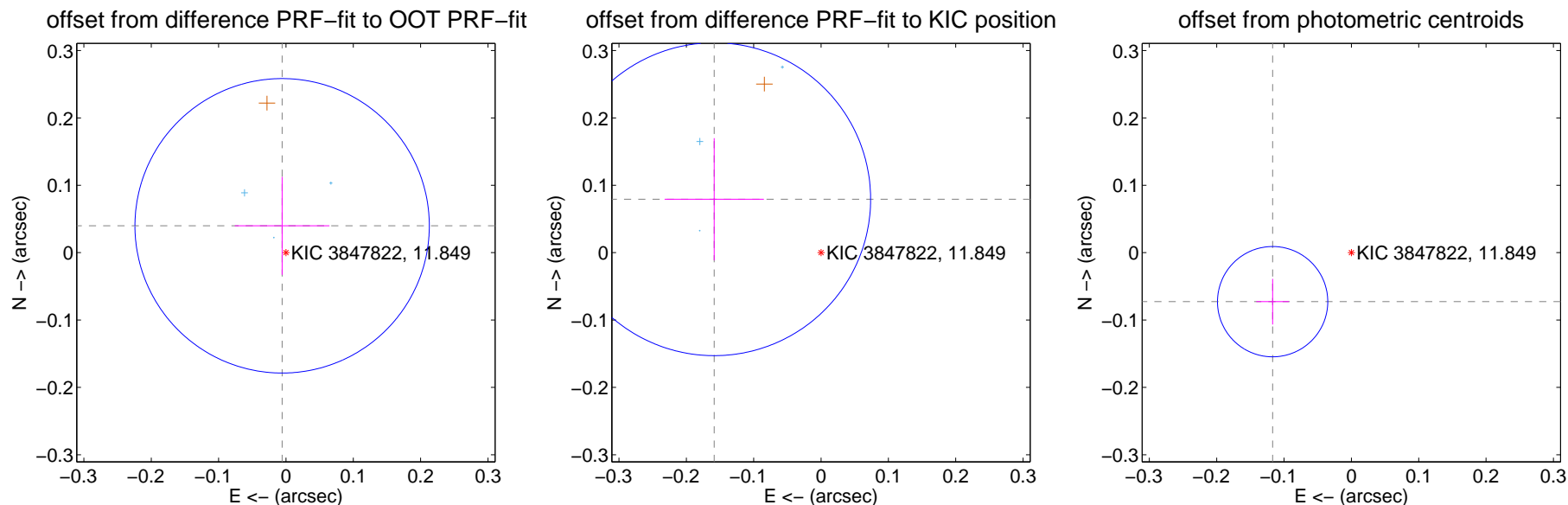
DV Centroid Data

Supplemental centroid analysis for 003847822-03. **Kepler magnitude: 11.85.** Transit SNR 8.04

There are 3 quarters with good PRF difference image offsets

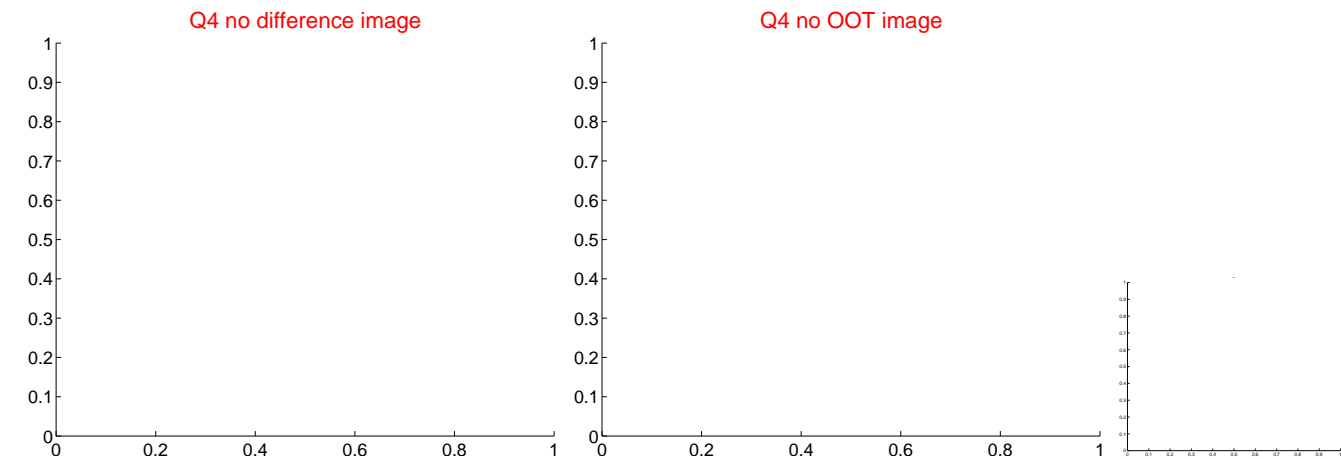
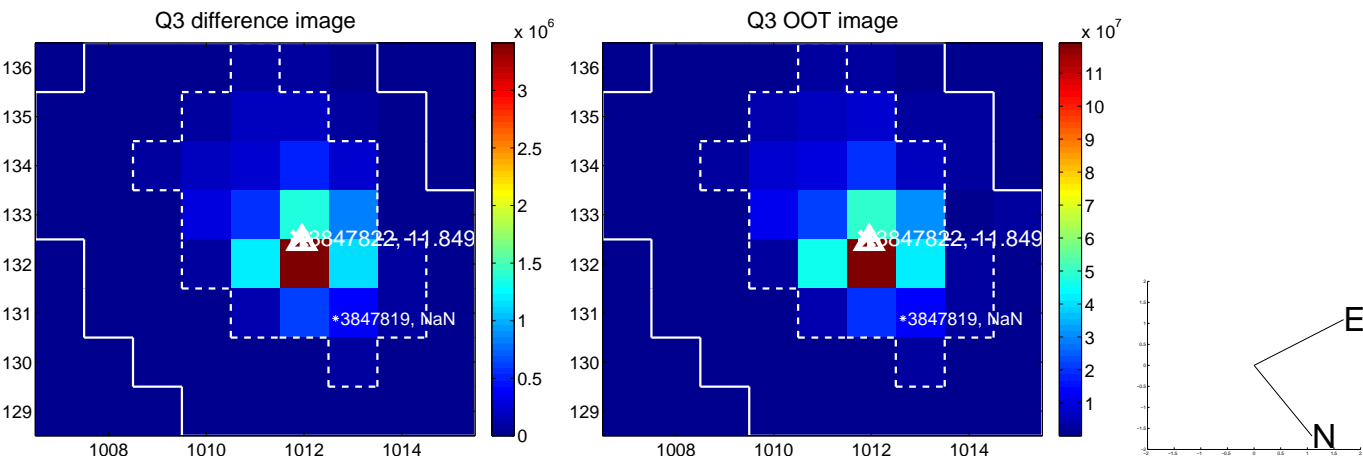
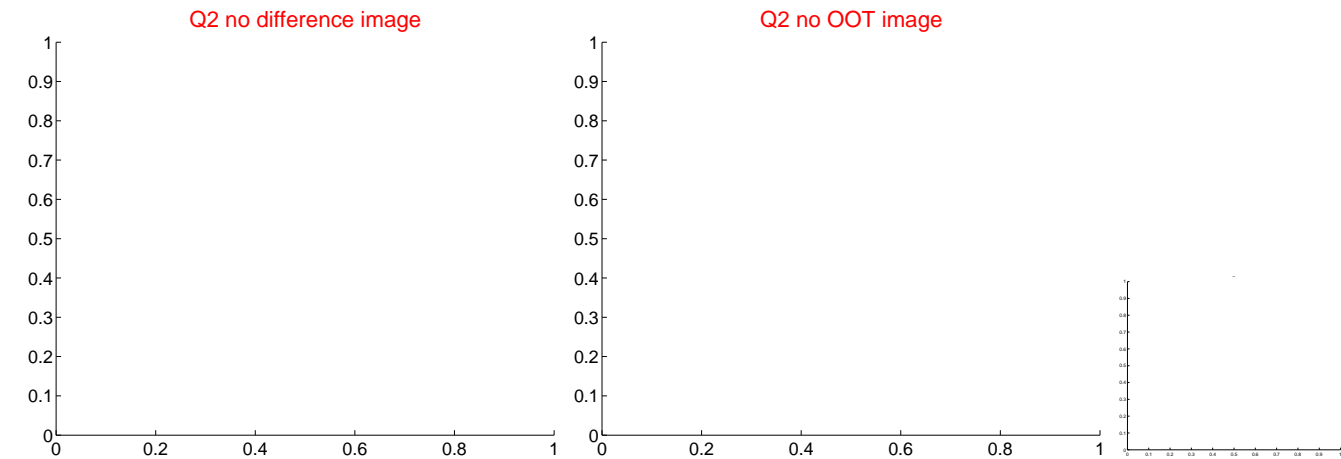
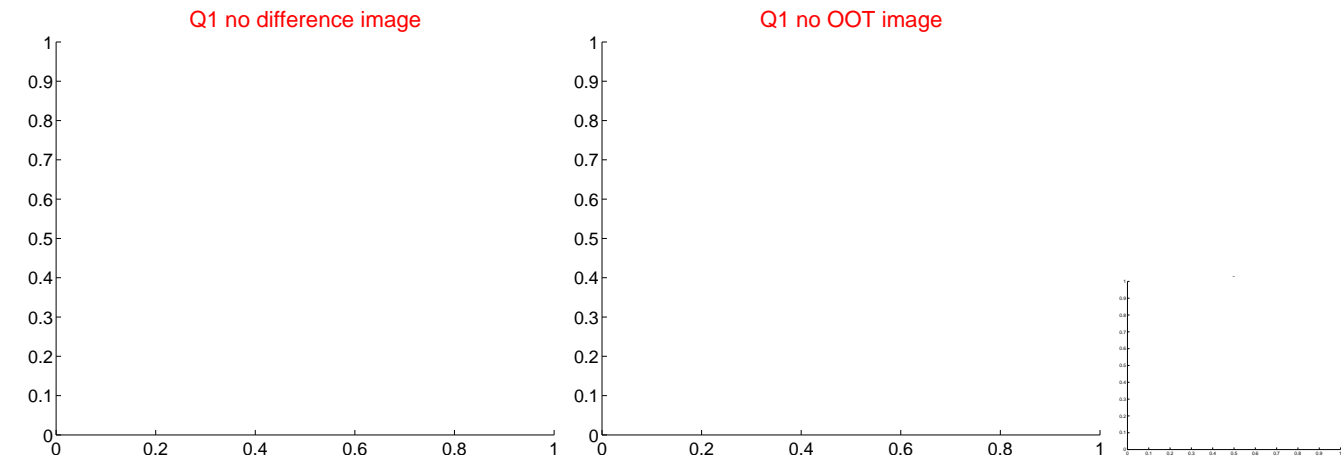
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.040 ± 0.073	0.55	0.006 ± 0.070	0.040 ± 0.073
PRF-fit source offset from KIC position	0.177 ± 0.077	2.29	0.159 ± 0.074	0.079 ± 0.091
photometric centroid source offset	0.14 ± 0.03	5.05	0.12 ± 0.02	-0.07 ± 0.03

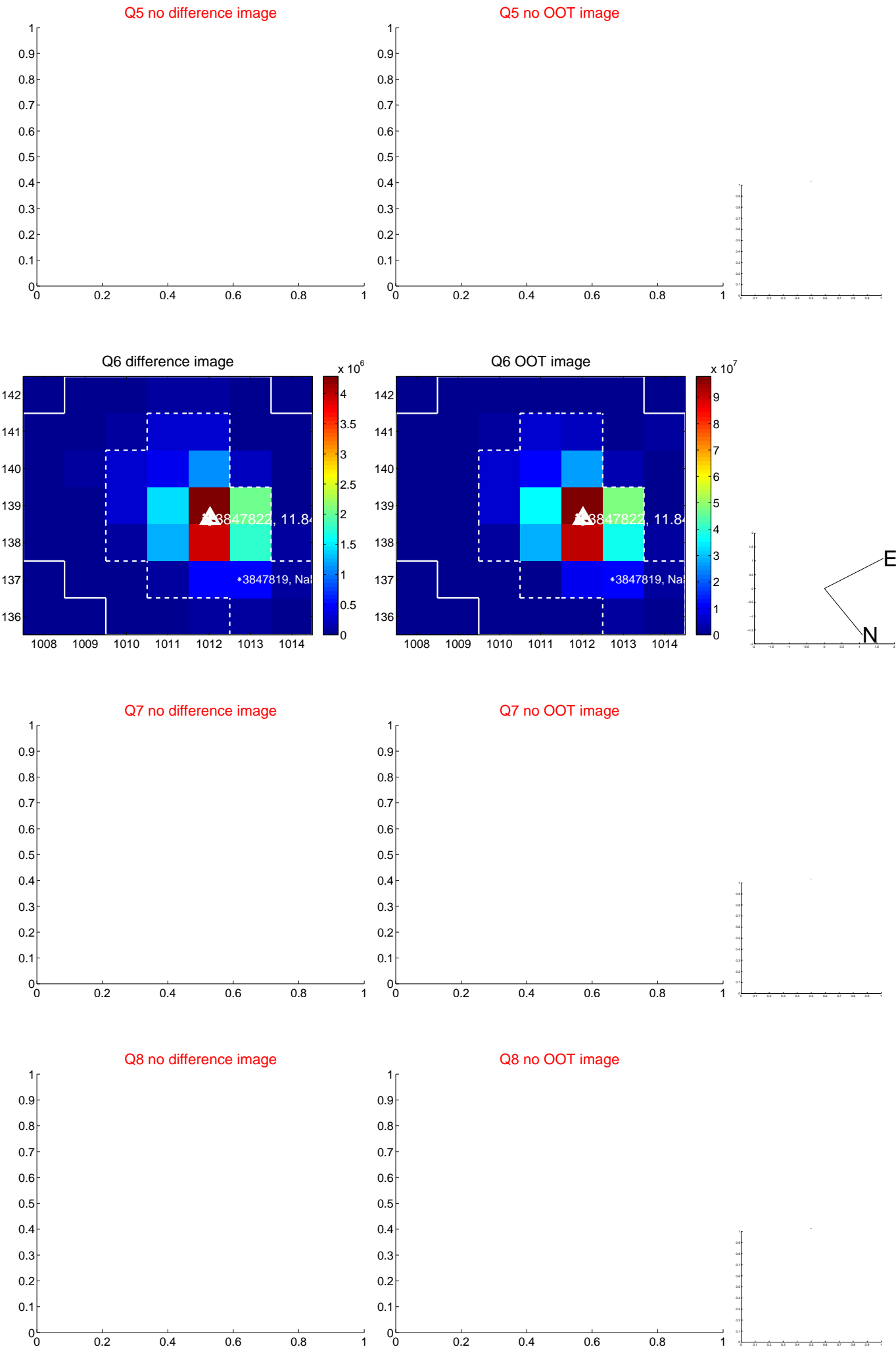


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

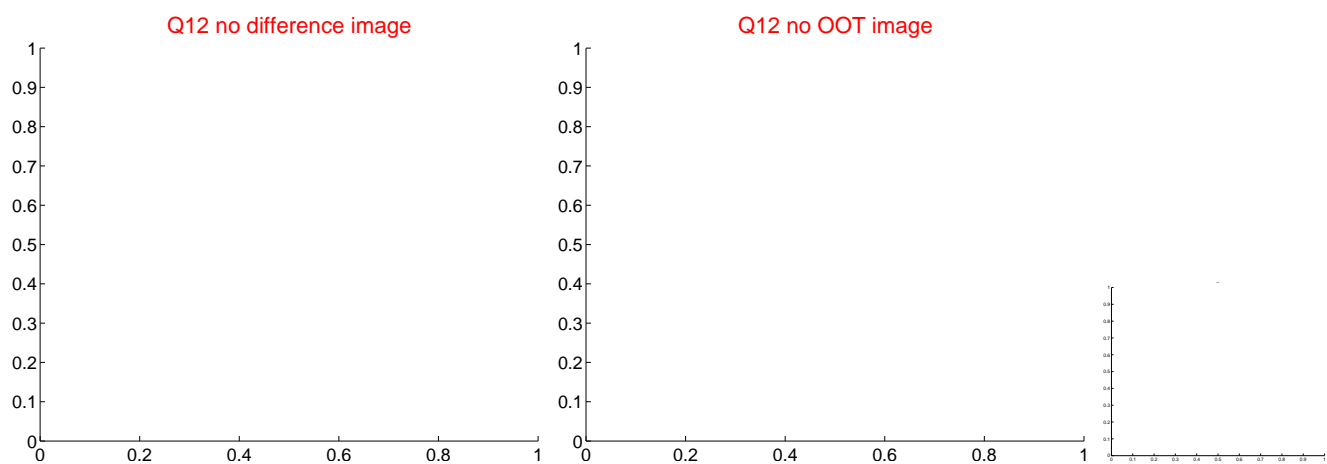
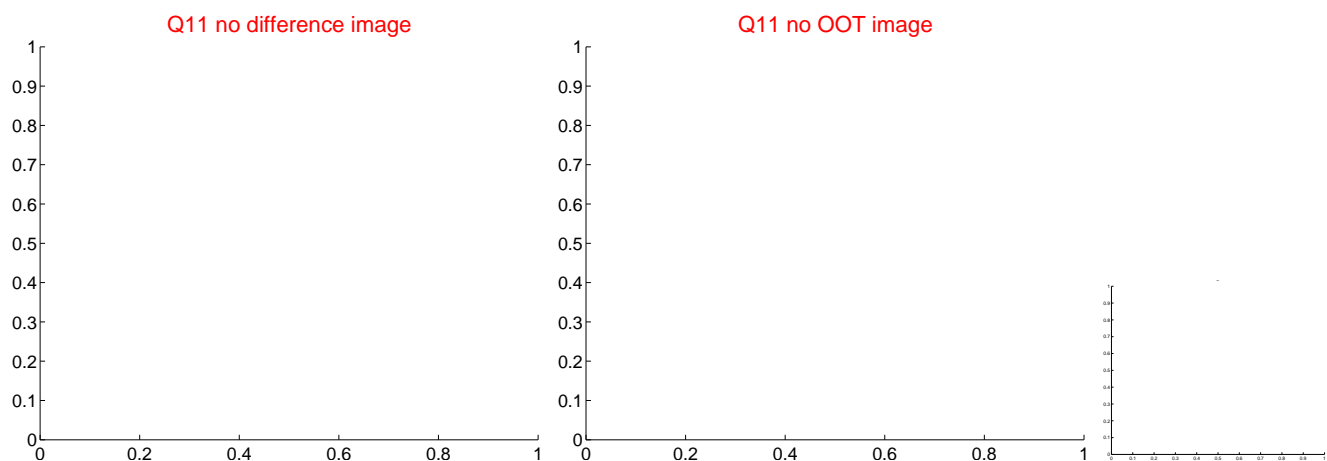
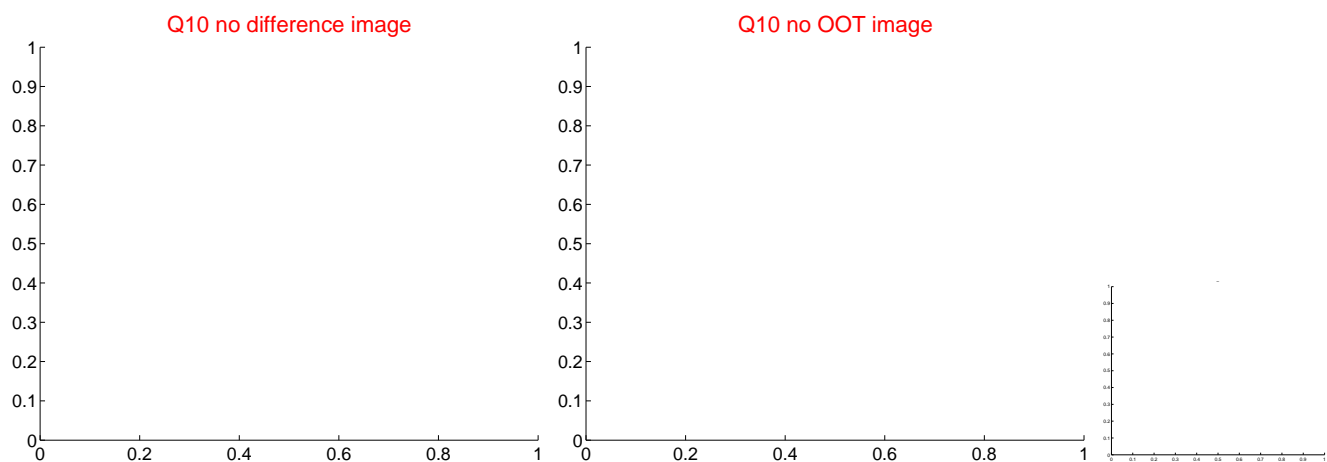
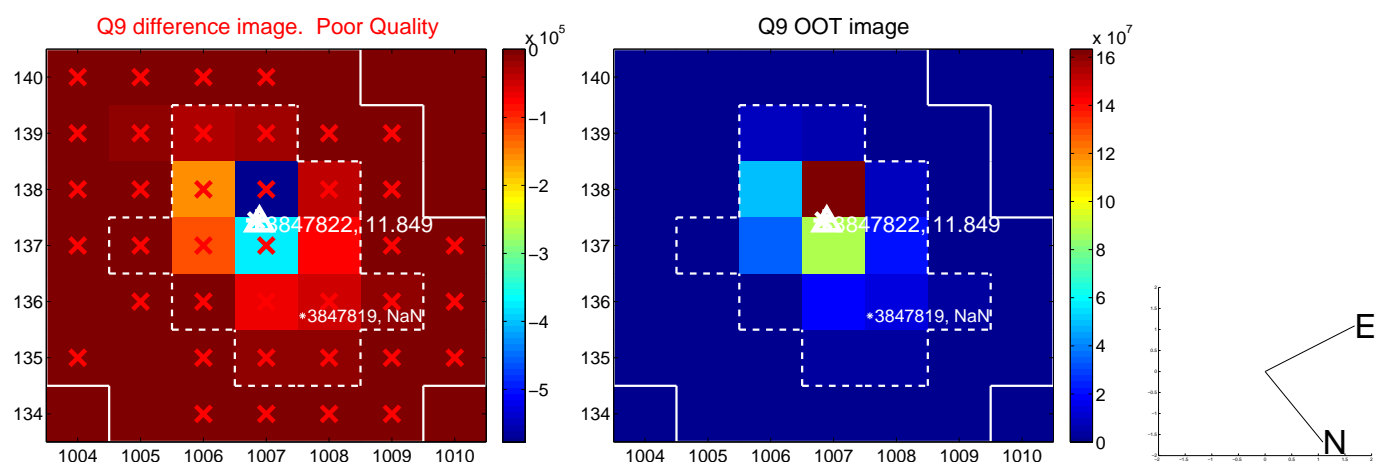
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



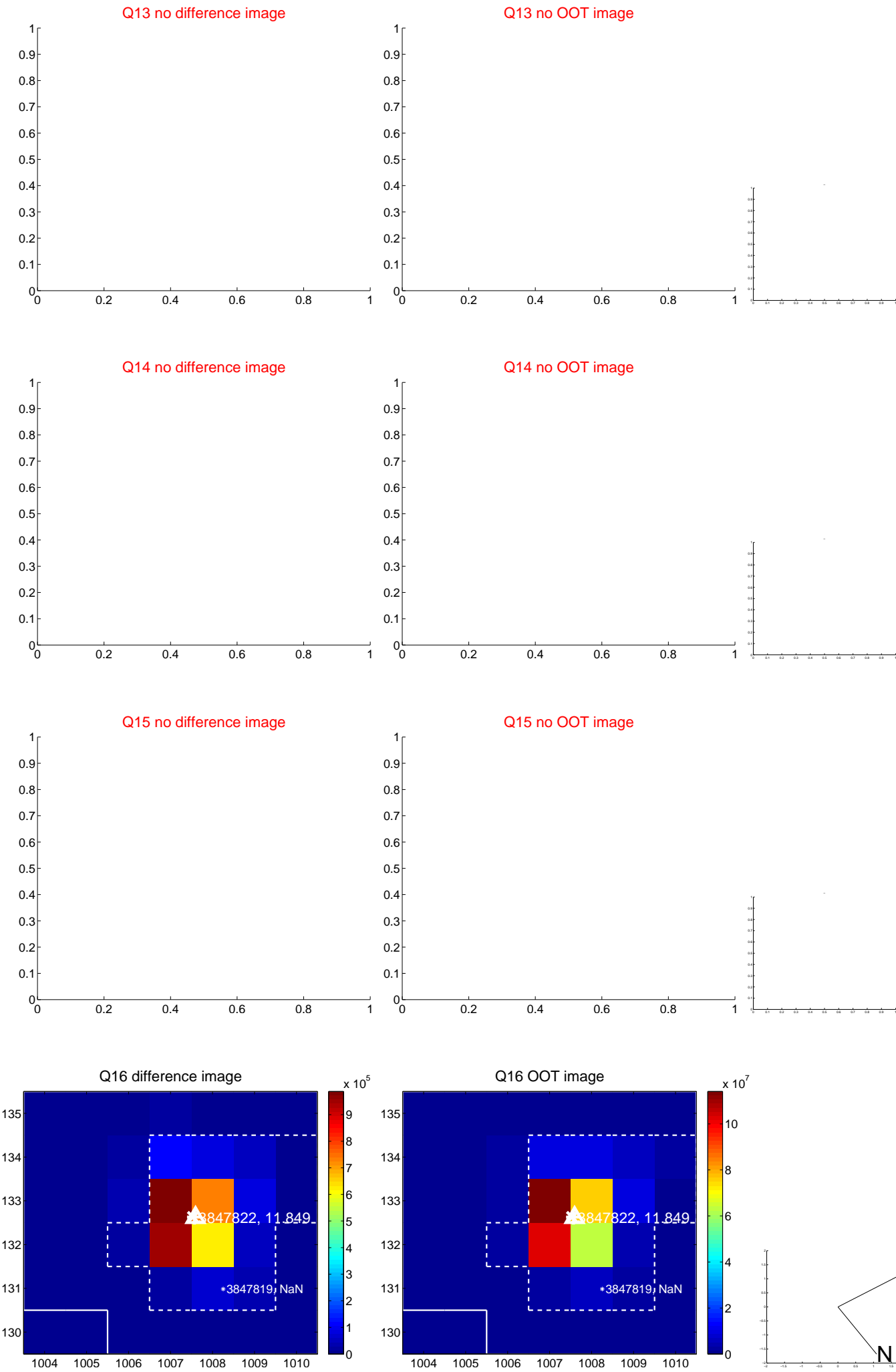
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



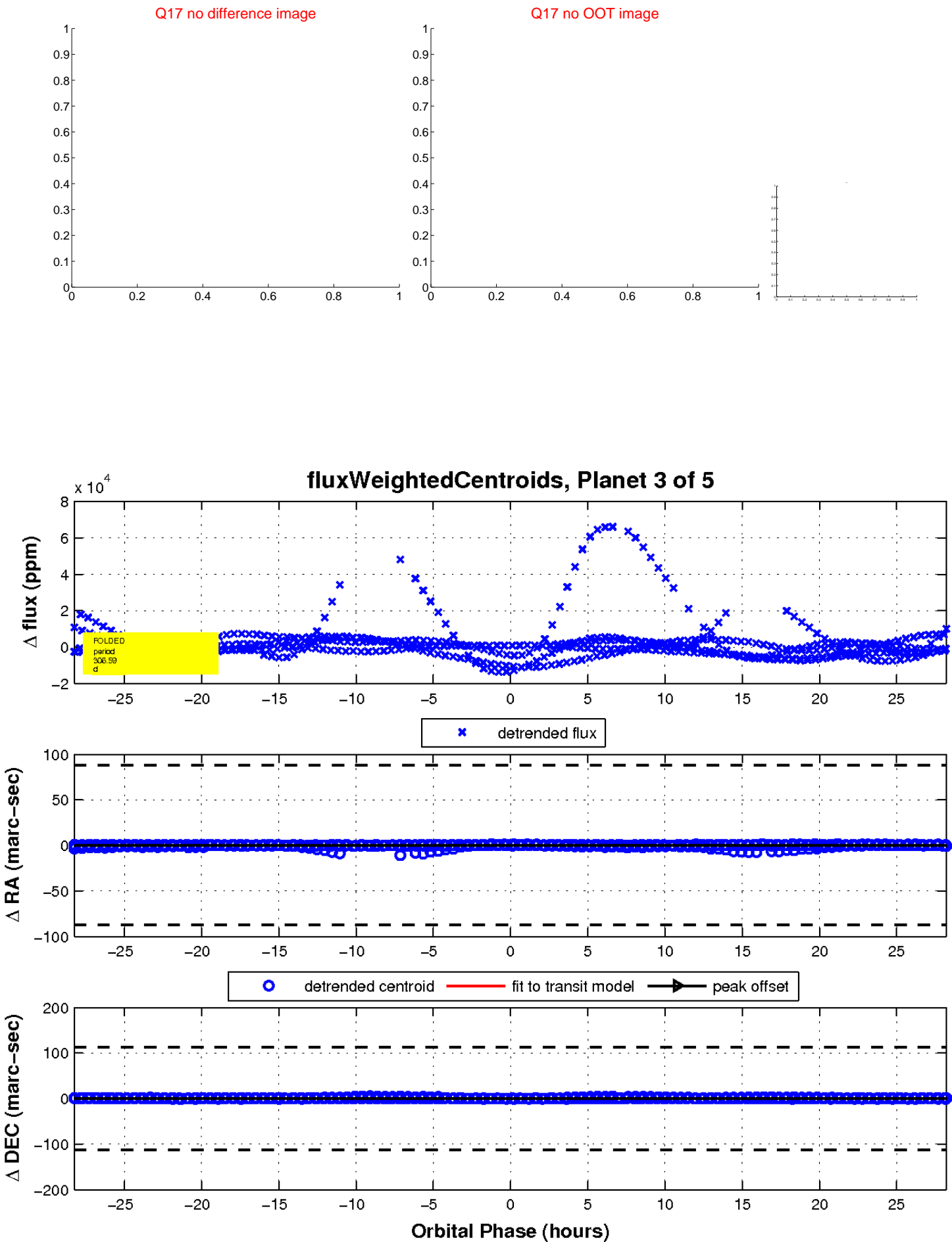
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

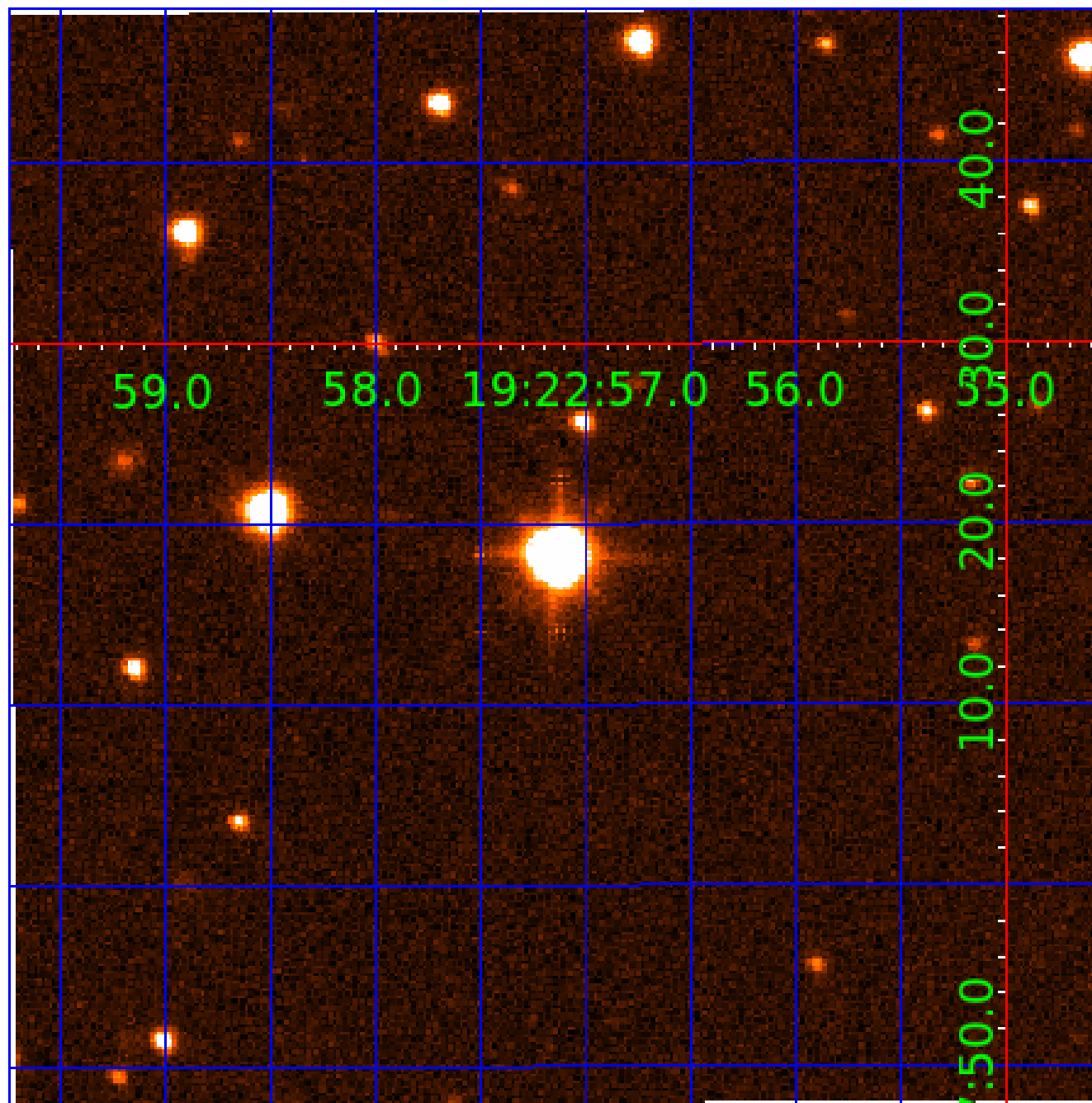


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003847822

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})
003847822-01	OBS	No	0.638877	131.771380	51.6	2.752	14.3	10.9	2.38	7084	2.02	41439.41
003847822-02	OBS	No	149.455236	194.025893	9061.0	8.670	16.1	5.6	2.38	7084	39.84	28.75
003847822-03	OBS	No	306.585904	268.224206	11997.1	9.412	13.6	8.0	2.38	7084	45.50	11.03
003847822-04	OBS	No	305.596144	313.782002	46.6	8.611	13.7	0.0	2.38	7084	1.75	11.08
003847822-05	OBS	No	141.363902	203.545555	6054.2	6.831	13.7	6.5	2.38	7084	32.92	30.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003847822-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003847822-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003847822-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
003847822-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS— HALO_GHOST
003847822-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT

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.

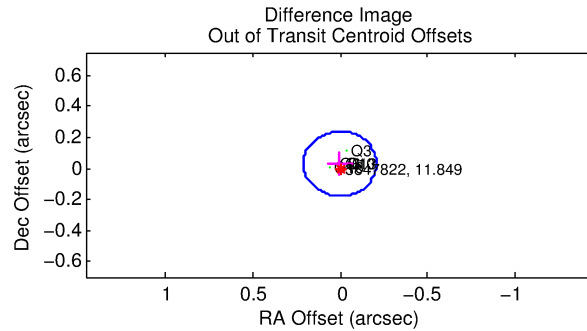
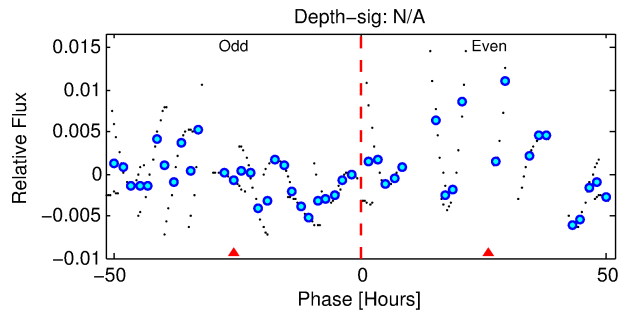
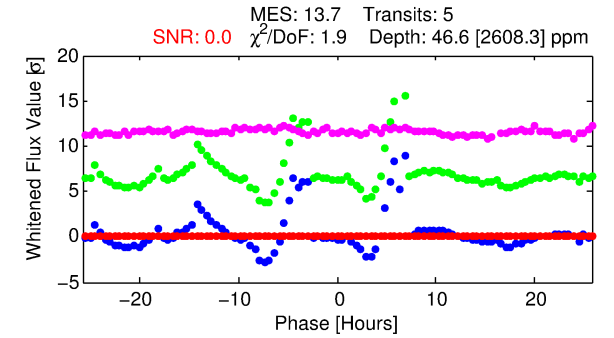
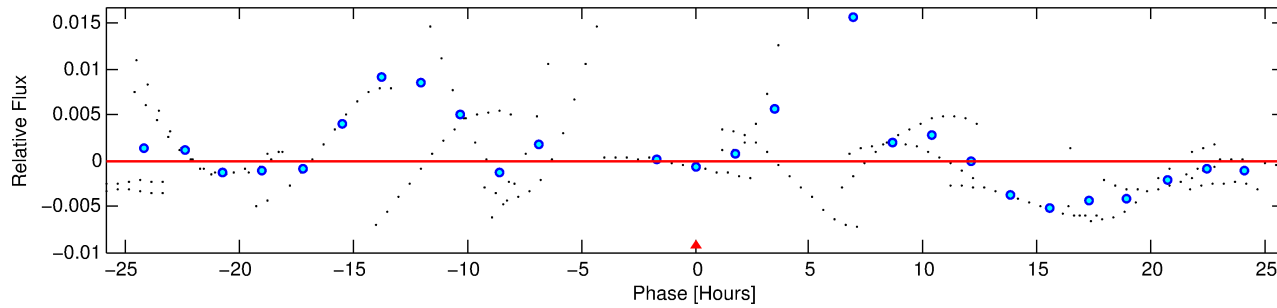
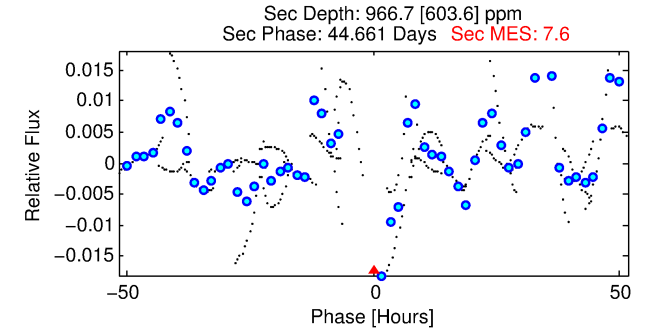
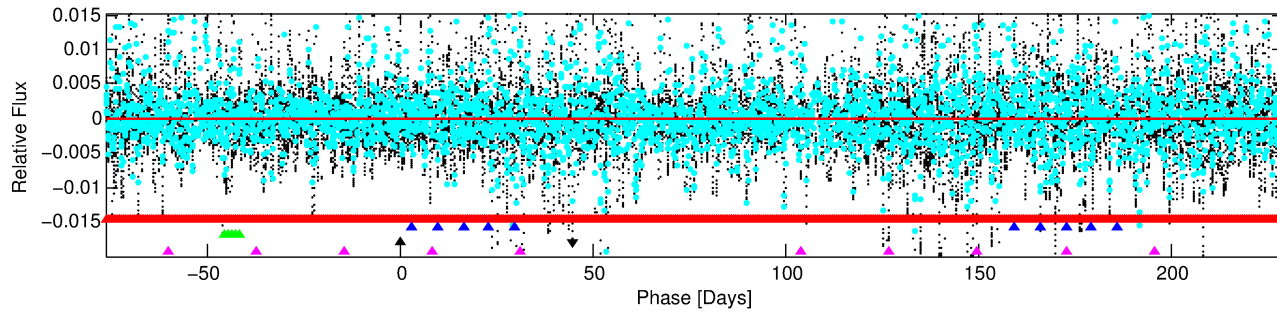
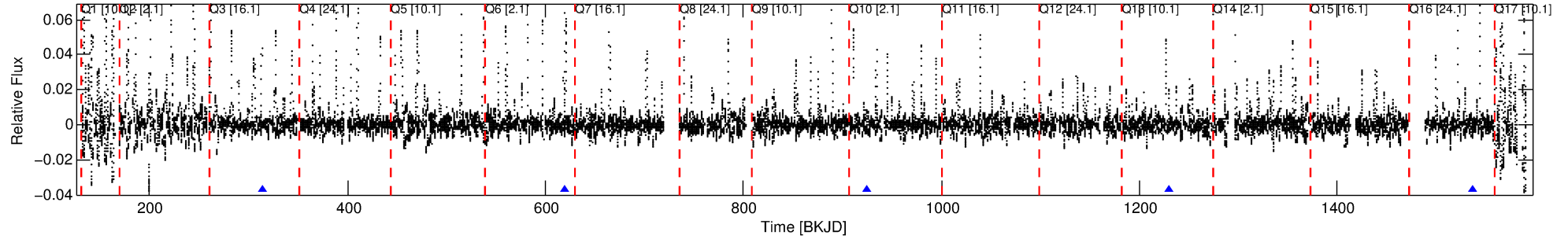
Ephemeris Match Information For 003847822-04

No Significant Match Found

DV One-Page Summary

KIC: 3847822 Candidate: 4 of 5 Period: 305.596 d

Kp: 11.85 R*: 2.38 Rs Teff: 7084.0 K Logg: 3.93 Fe/H: 0.180



DV Fit Results:

Period = 305.59614 [0.68327] d
Epoch = 313.7820 [2.0357] BKJD
Rp/R* = 0.0067 [0.6876]
a/R* = 191.44 [109999.03]
b = 0.72 [387.10]
Seff = 11.08 [5.34]
Teq = 465 [56] K
Rp = 1.75 [178.73] Re
a = 1.0750 [0.3094] AU
Ag = 200778.00 [41021587.76] [0.002]
Teff = 15225 [777667] K [0.025]

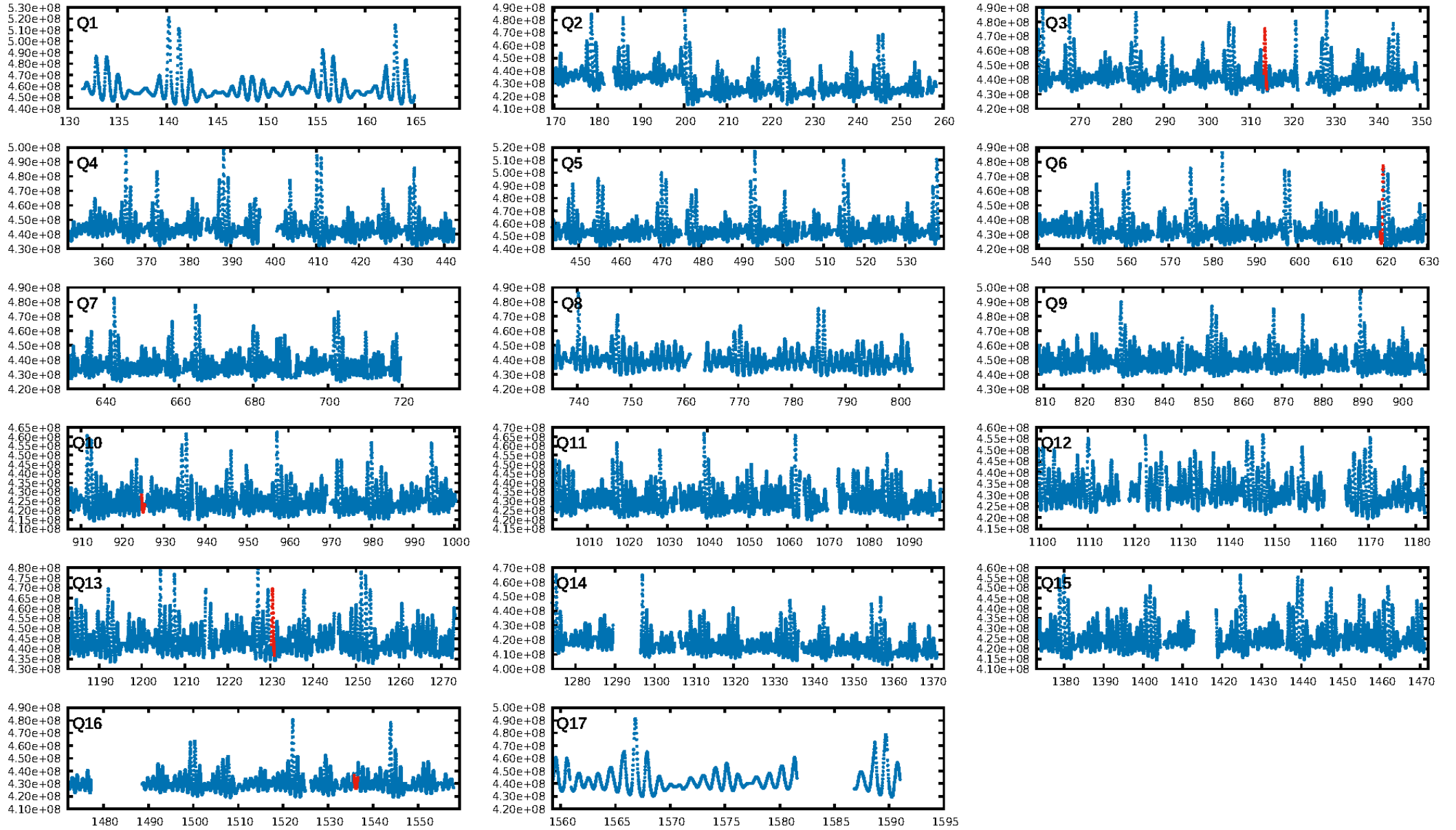
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [306.68σ]
LongPeriod-sig: 93.7% [1.86σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.1632
Centroid-sig: 0.0%
Centroid-so: 15.537 arcsec [2.73σ]
OotOffset-rm: 0.031 arcsec [0.44σ]
OotOffset-st: 2/1/1/1 [5]
KicOffset-rm: 0.139 arcsec [1.89σ]
KicOffset-st: 2/1/1/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.00 [0/5]

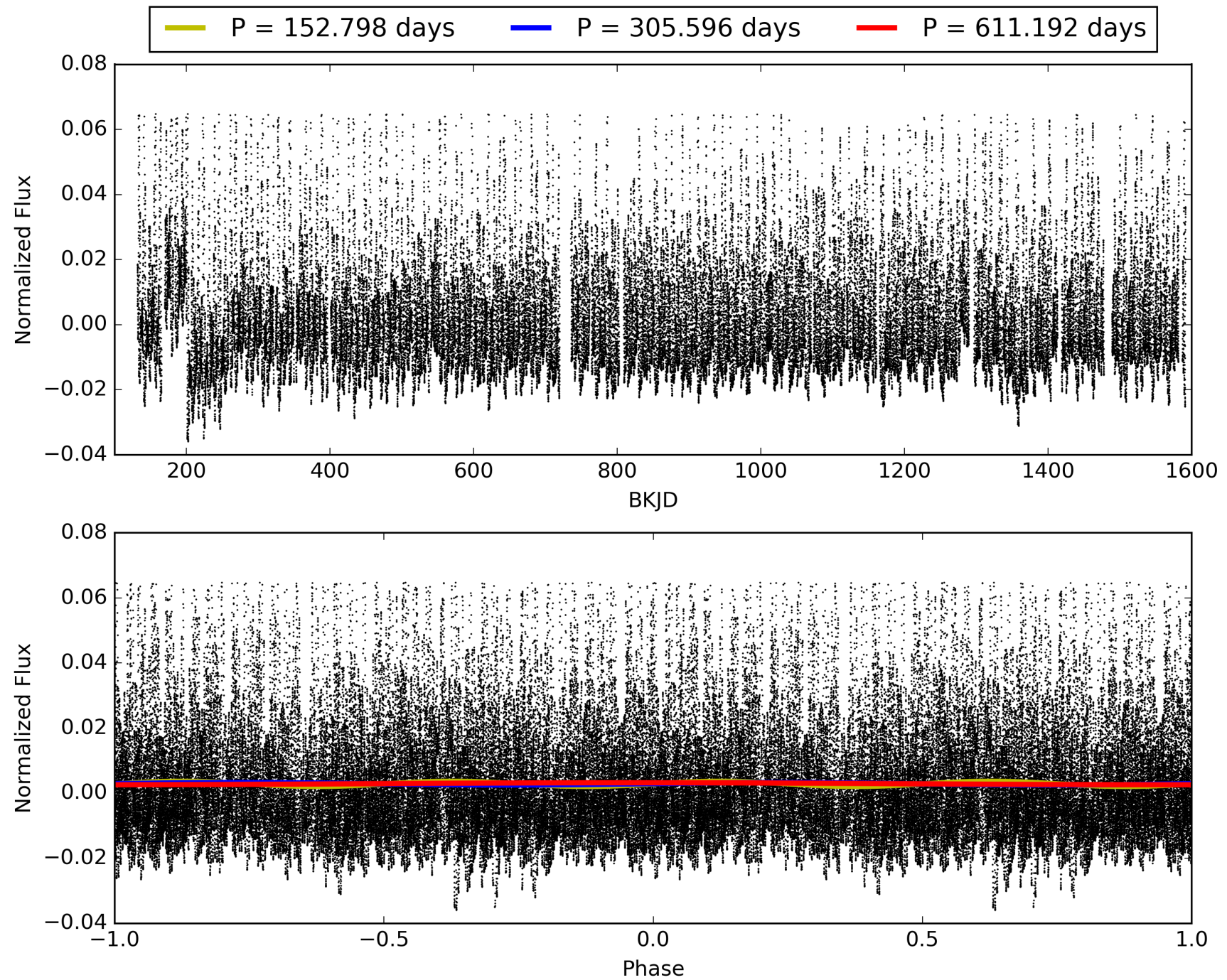
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:15:52 Z

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

TCE 003847822-04, PDC Light Curves

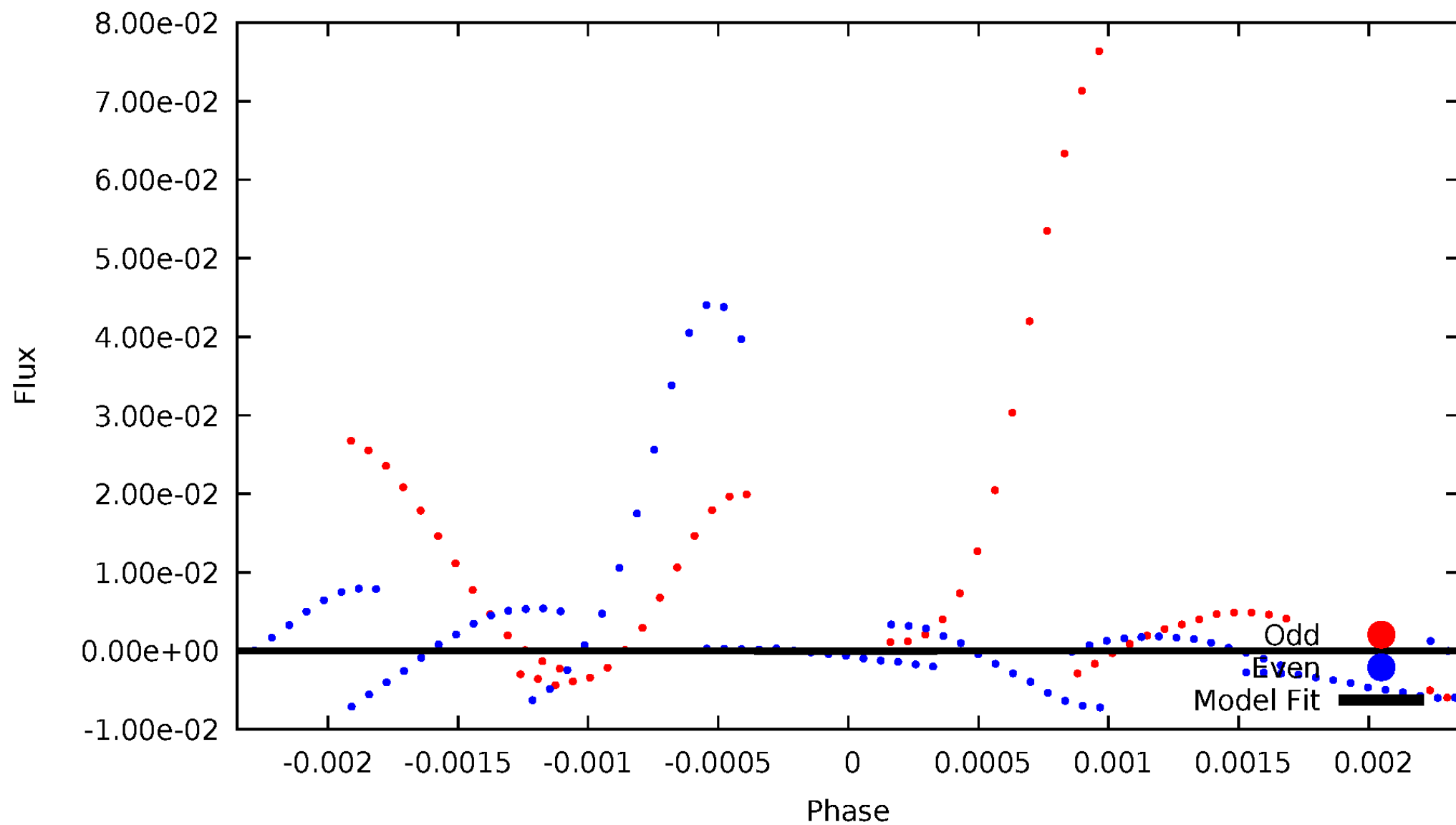


TCE 003847822-04



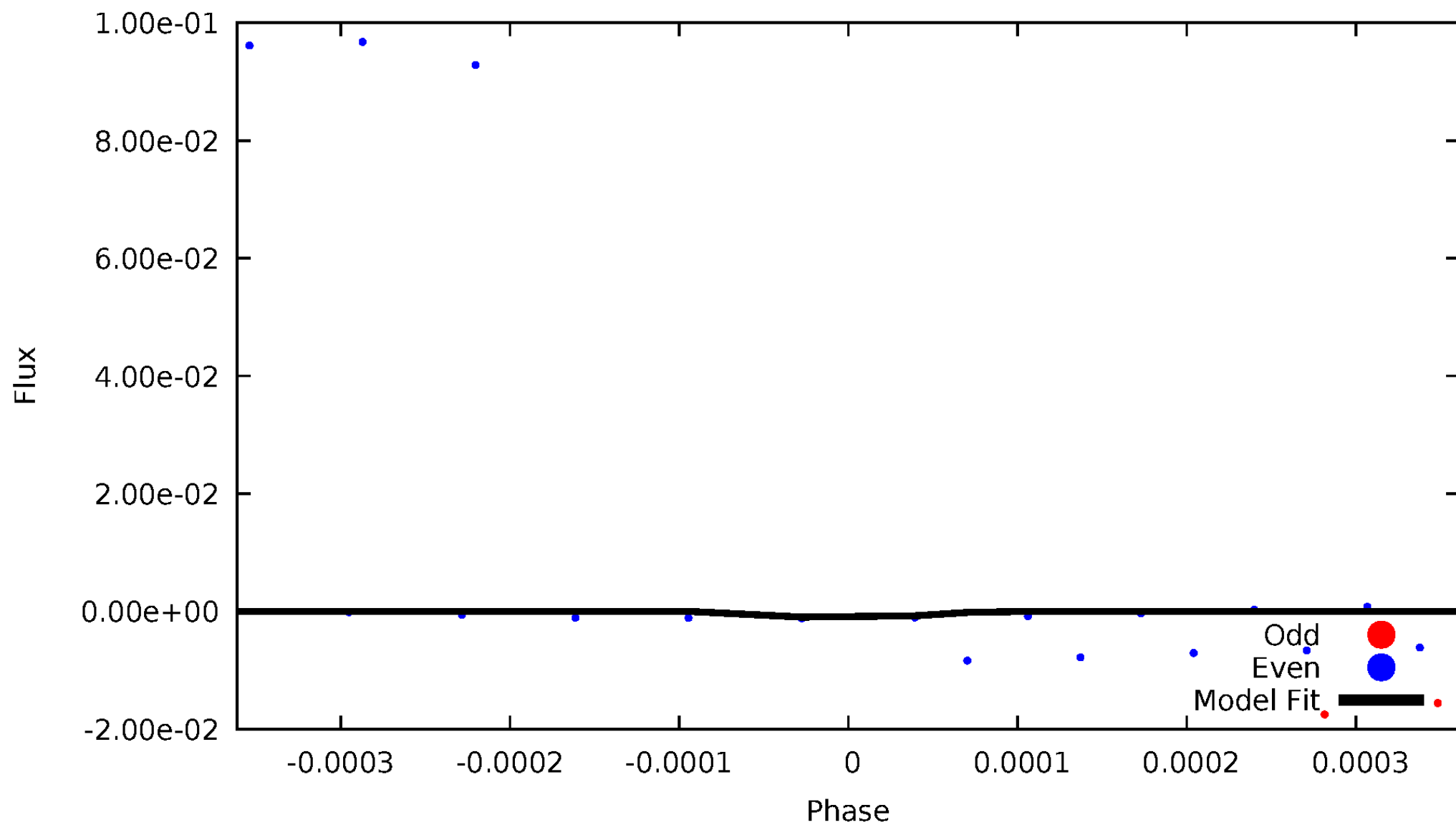
DV Odd/Even

TCE 003847822-04



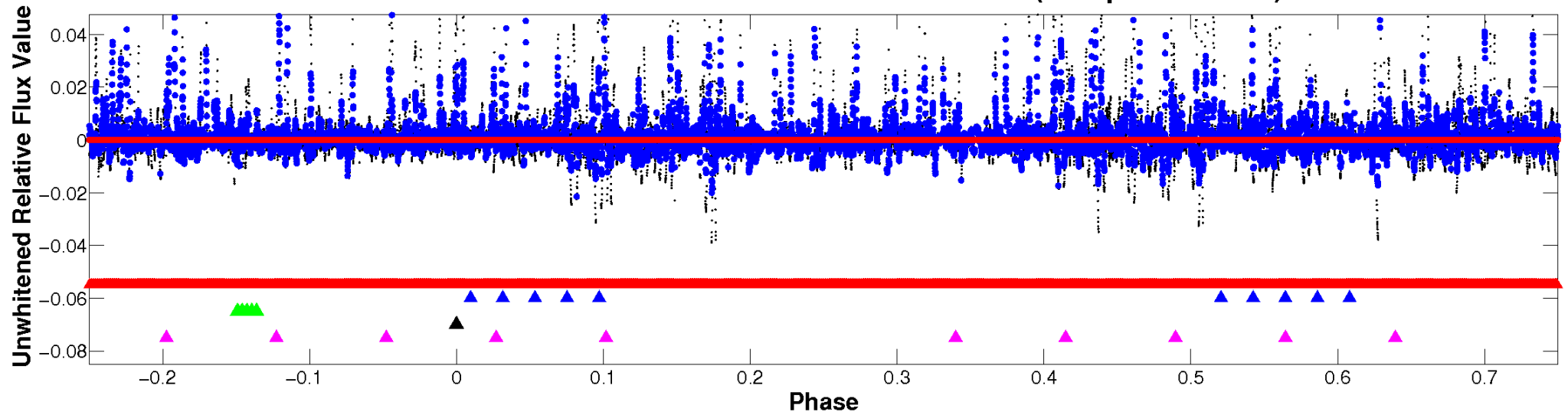
ALT Odd/Even

TCE 003847822-04

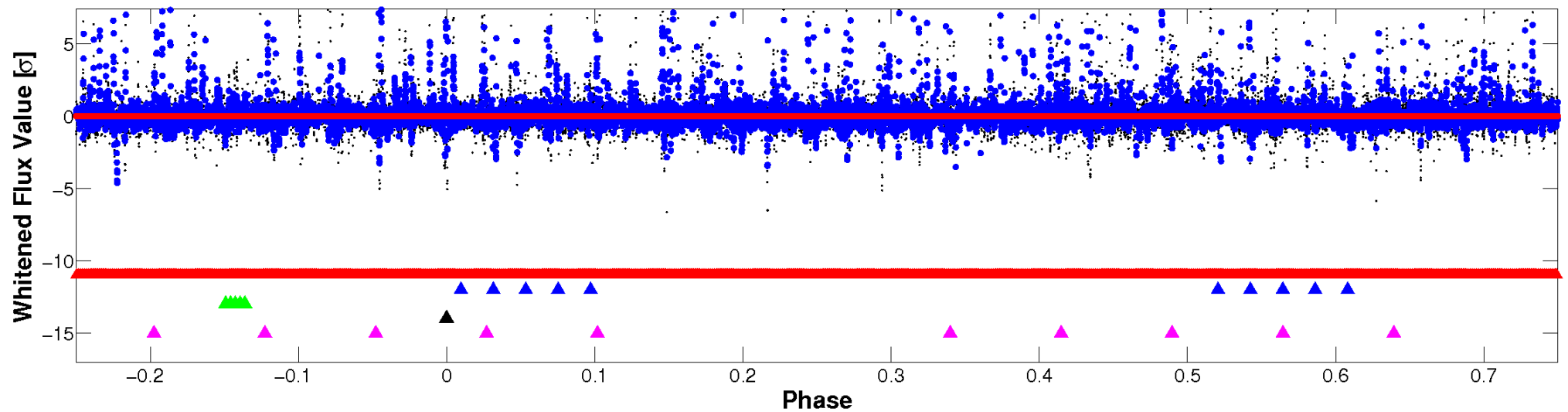


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

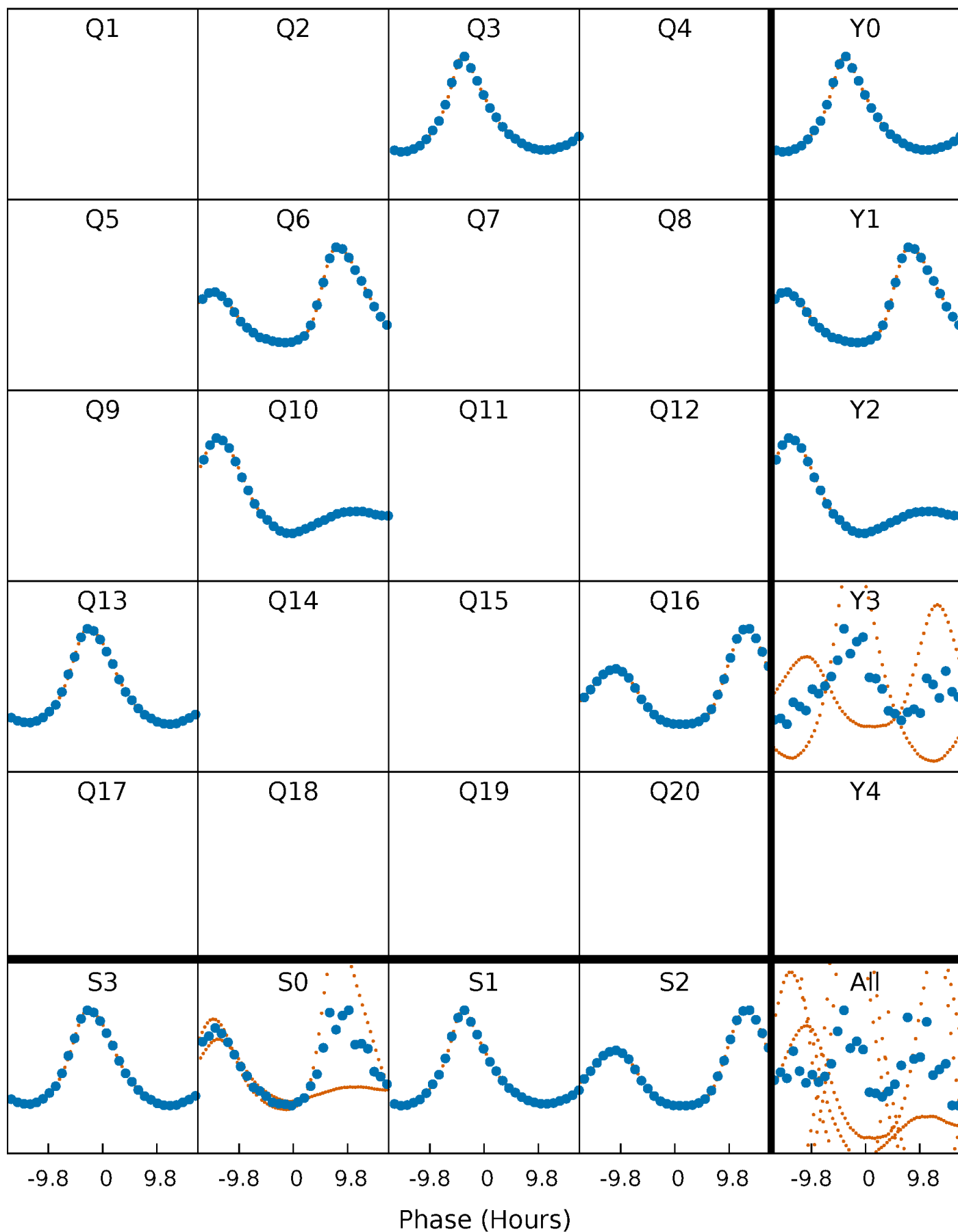


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



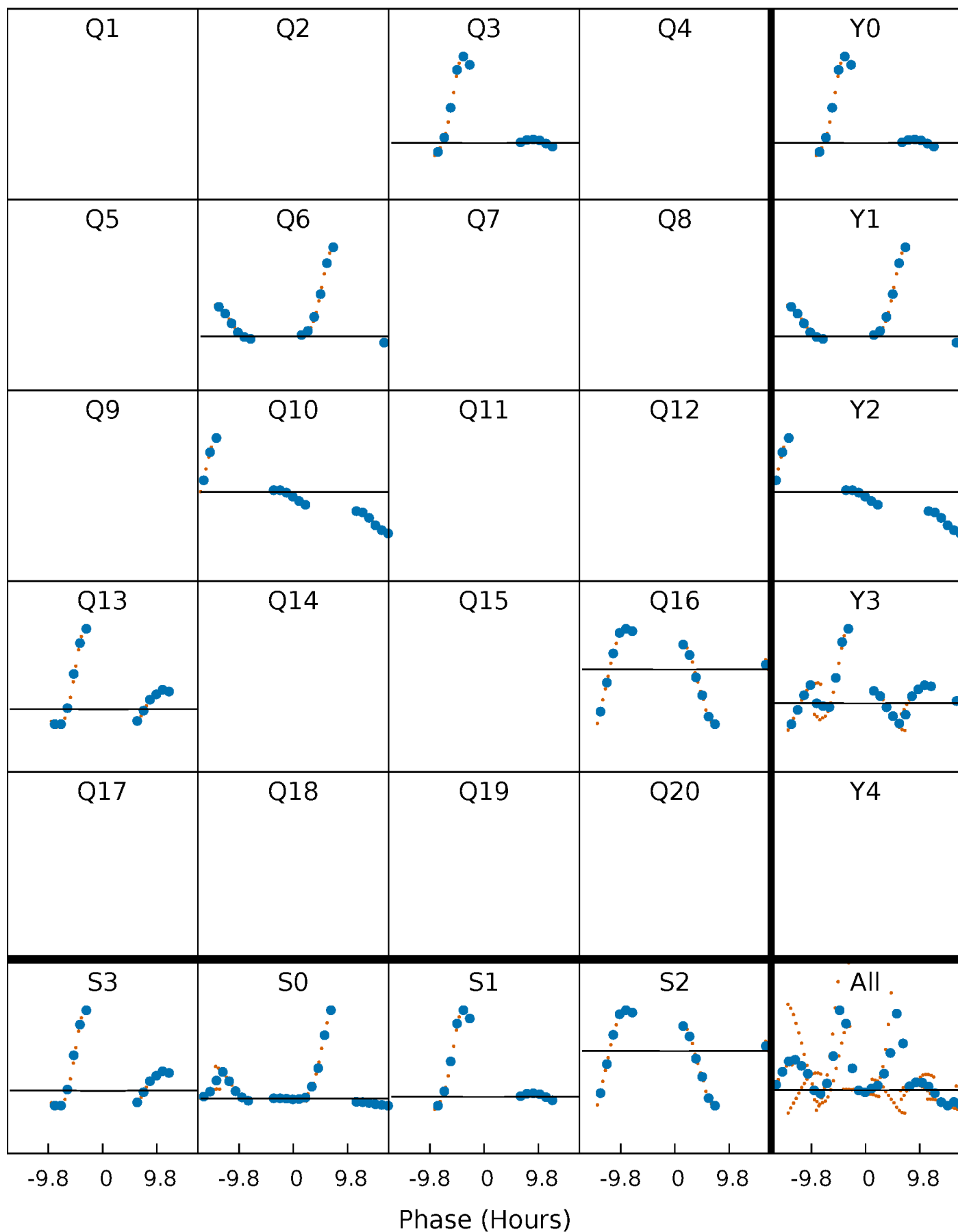
PDC Quarter-Phased Transit Curves

TCE 003847822-04 P=305.596144 Days $T_0=313.782002$ (BKJD)



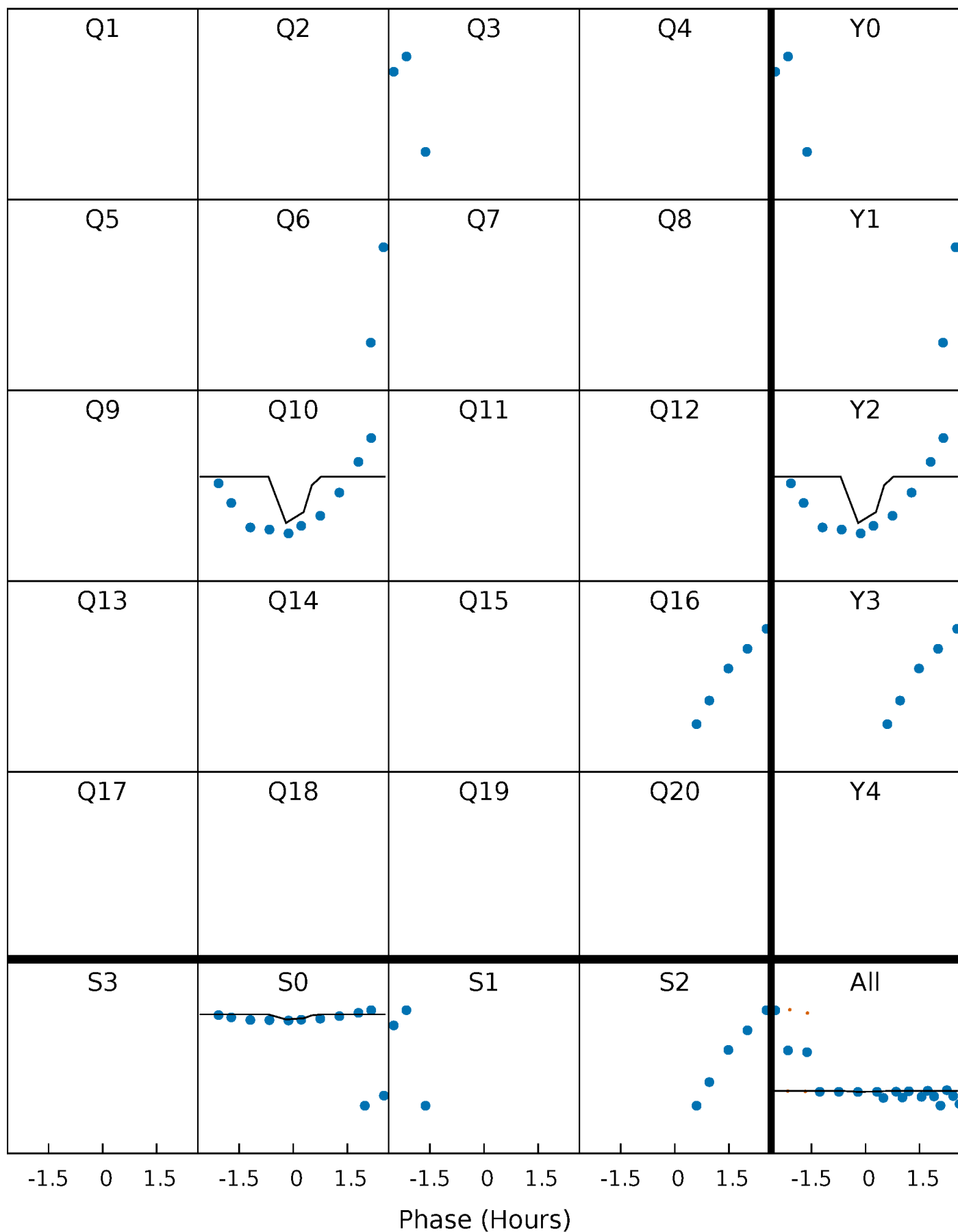
DV Quarter-Phased Transit Curves

TCE 003847822-04 P=305.596144 Days $T_0=313.782002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

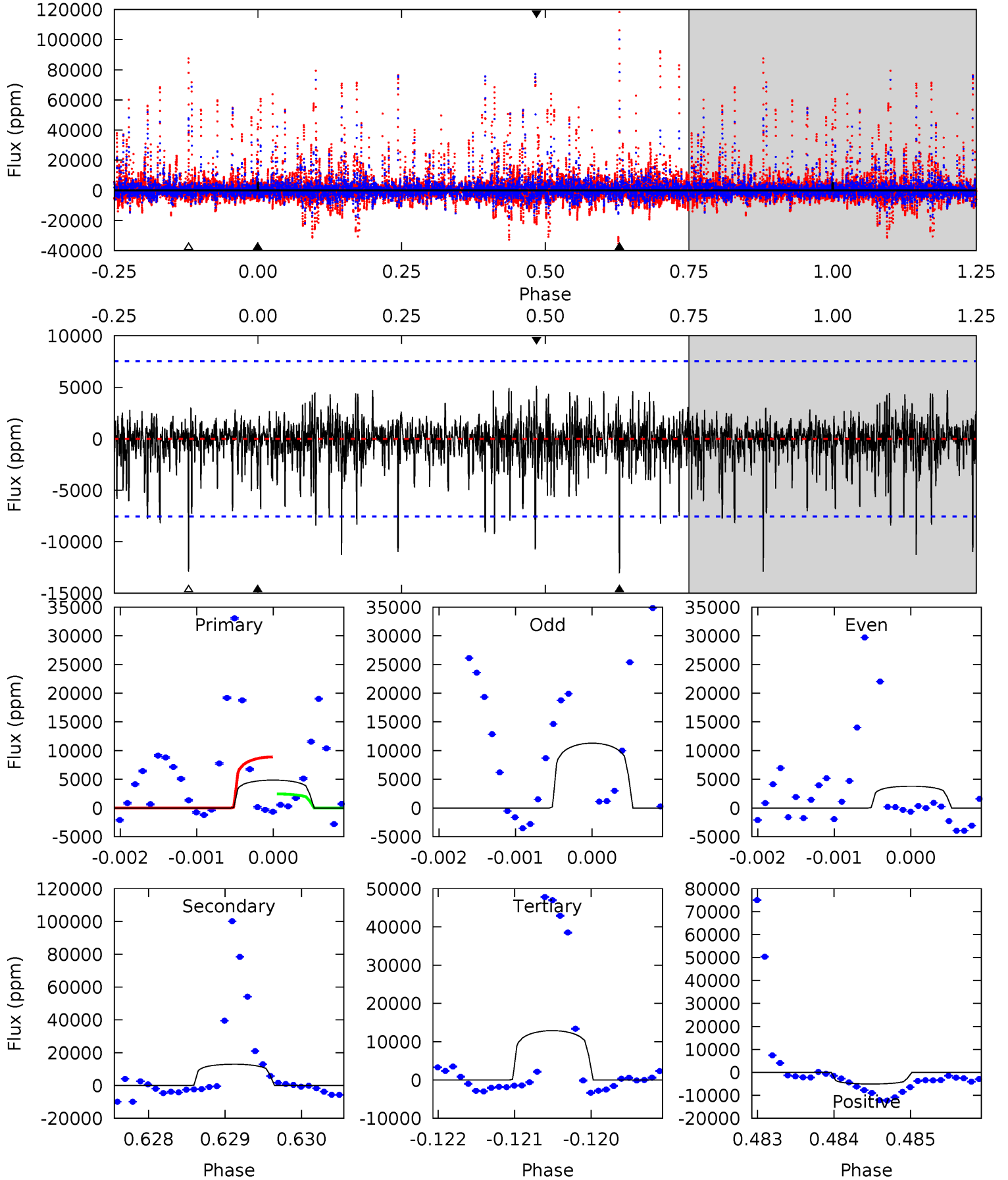
TCE 003847822-04 P=305.617946 Days $T_0=313.723651$ (BKJD)



DV Model-Shift Uniqueness Test

003847822-04, P = 305.596144 Days, E = 8.185858 Days

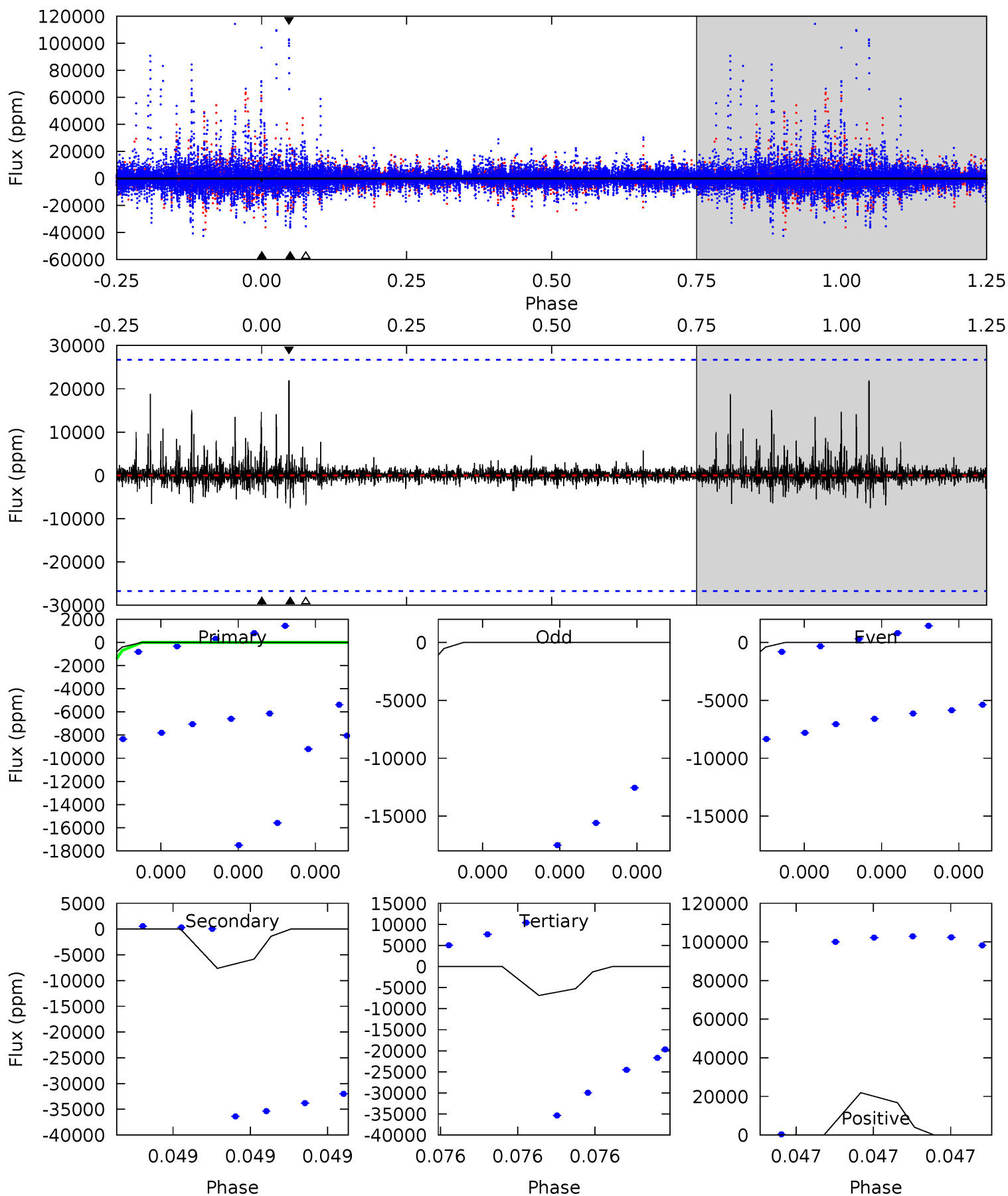
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.50	9.33	9.28	3.65	5.42	3.24	1.35	-5.78	-0.16	0.05	5.67	2.33	2.60	0.28	2.32



Alt Model-Shift Uniqueness Test

003847822-04, P = 305.617946 Days, E = 8.105705 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.47	1.65	1.49	4.75	5.79	3.81	0.25	-1.02	-4.29	0.16	-3.10	0.09	1.00	0.74	0.18



Stellar Parameters For KIC 003847822

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7084^{+195}_{-307}	$3.933^{+0.260}_{-0.160}$	$0.180^{+0.150}_{-0.300}$	$2.382^{+0.607}_{-0.741}$	$1.773^{+0.182}_{-0.339}$	$0.185^{+0.285}_{-0.087}$
	+3%/-4%	+7%/-4%	+83%/-167%	+25%/-31%	+10%/-19%	+154%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003847822-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12965 ± 1390	$115.96^{+130.27}_{-81.80}$	639^{+50}_{-53}	3853^{+2513}_{-808}	621^{+6873}_{-488}
Alt.	-7633 ± 4613	$124.19^{+129.72}_{-81.43}$	642^{+46}_{-58}	3377^{+1550}_{-703}	278^{+2002}_{-228}

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 $A_{obs} \gg 1.0$

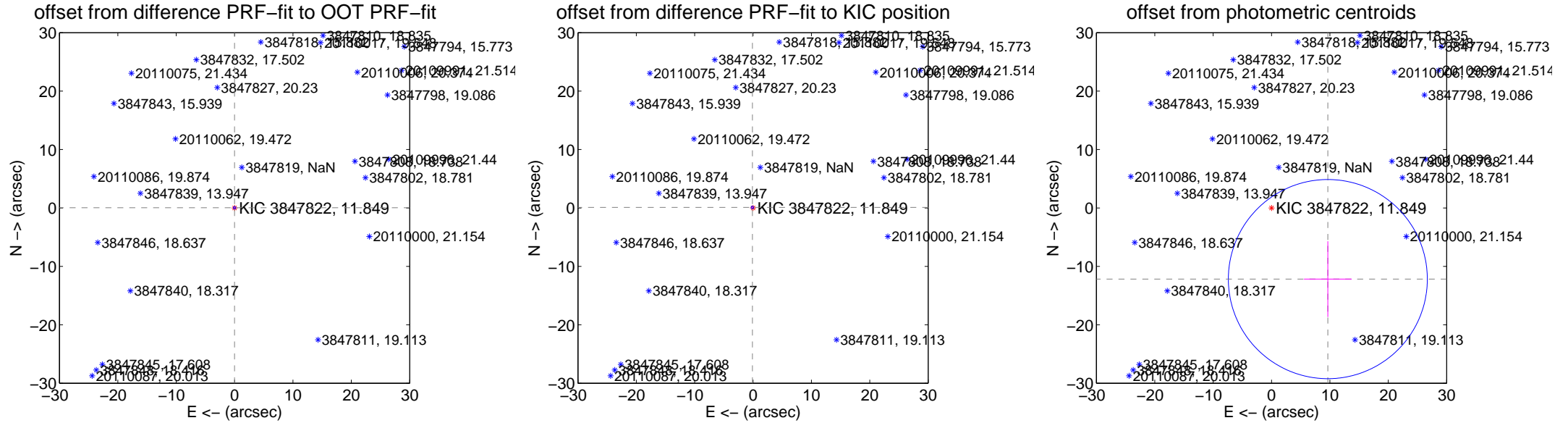
DV Centroid Data

Supplemental centroid analysis for 003847822-04. **Kepler magnitude: 11.85.** Transit SNR 0.04

There are 3 quarters with good PRF difference image offsets

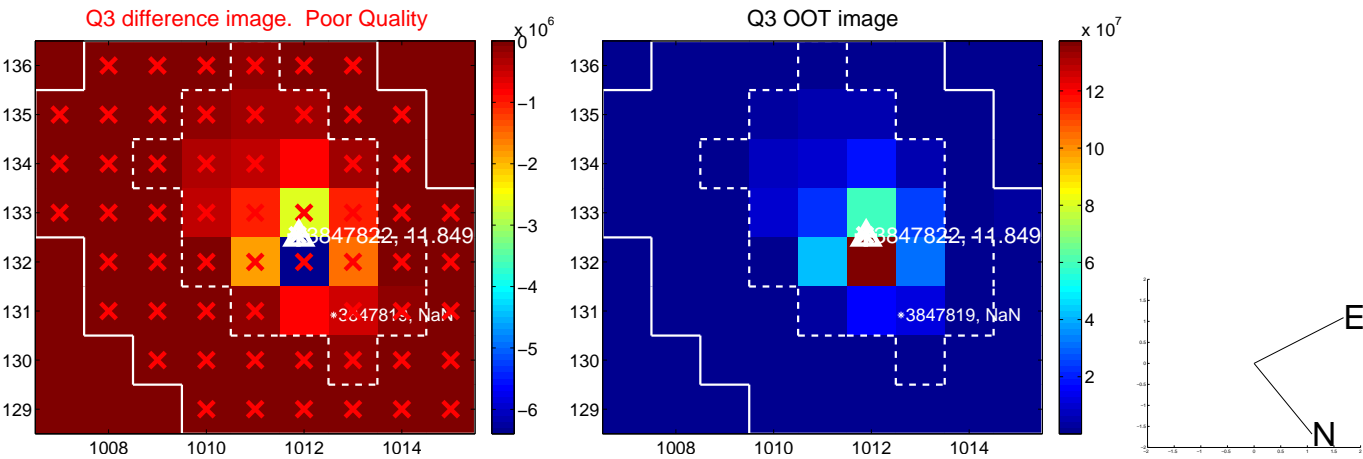
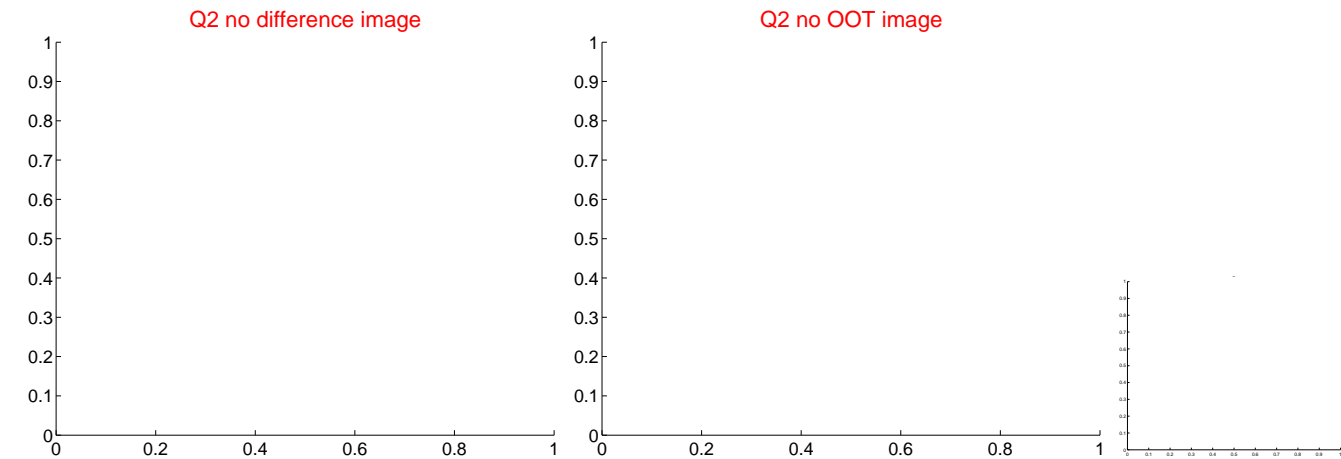
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.031 ± 0.069	0.44	0.001 ± 0.069	0.030 ± 0.070
PRF-fit source offset from KIC position	0.139 ± 0.074	1.89	0.108 ± 0.076	0.088 ± 0.069
photometric centroid source offset	15.54 ± 5.68	2.73	-9.65 ± 4.09	-12.18 ± 6.48

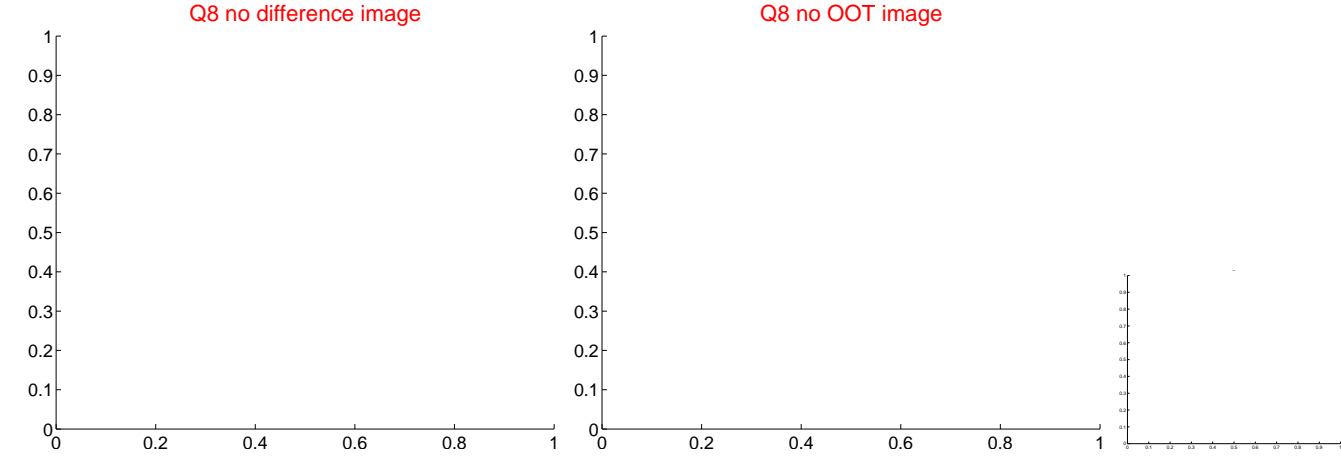
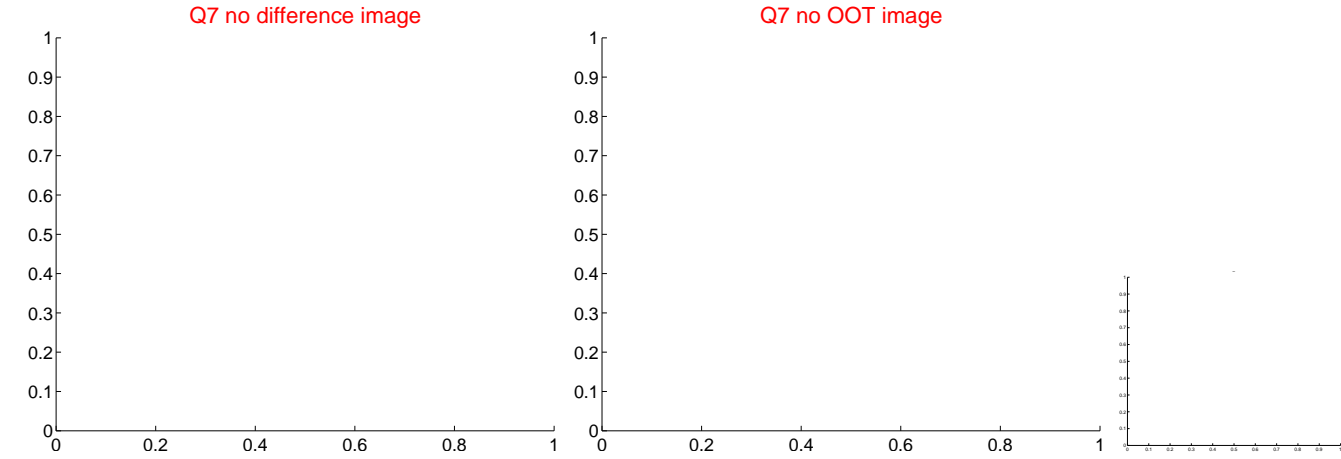
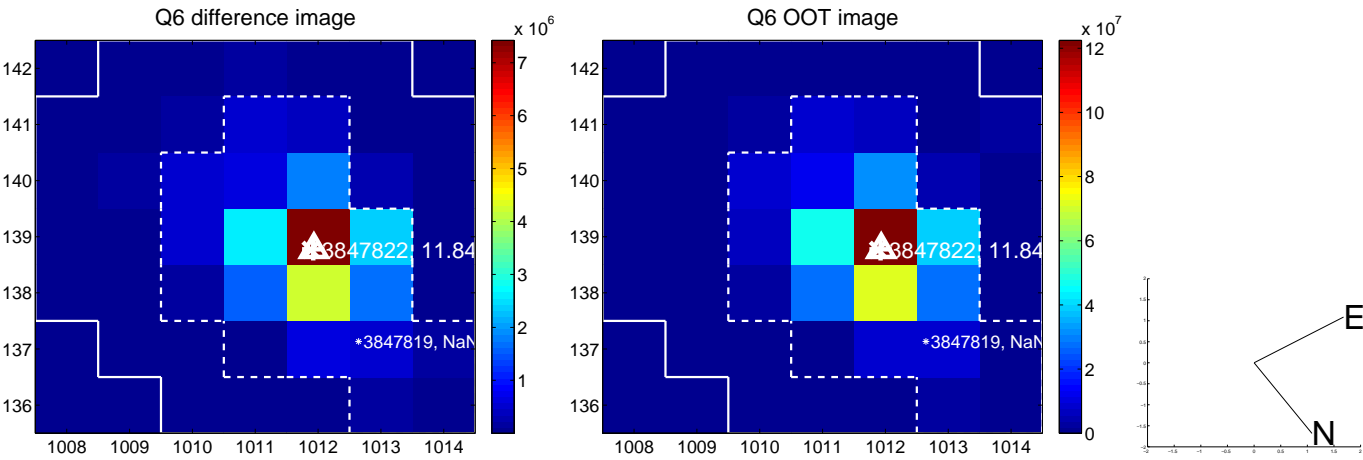


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

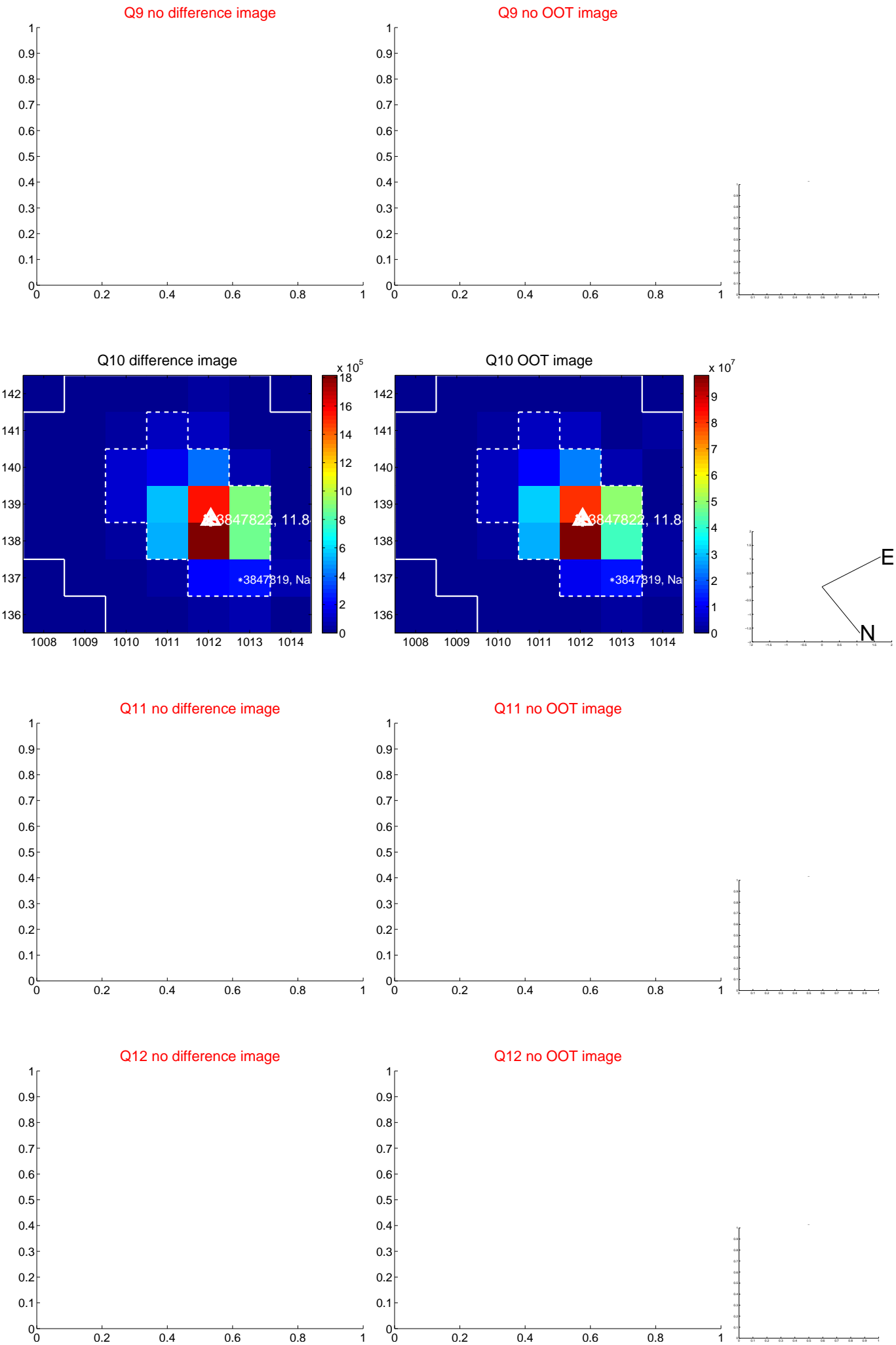
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



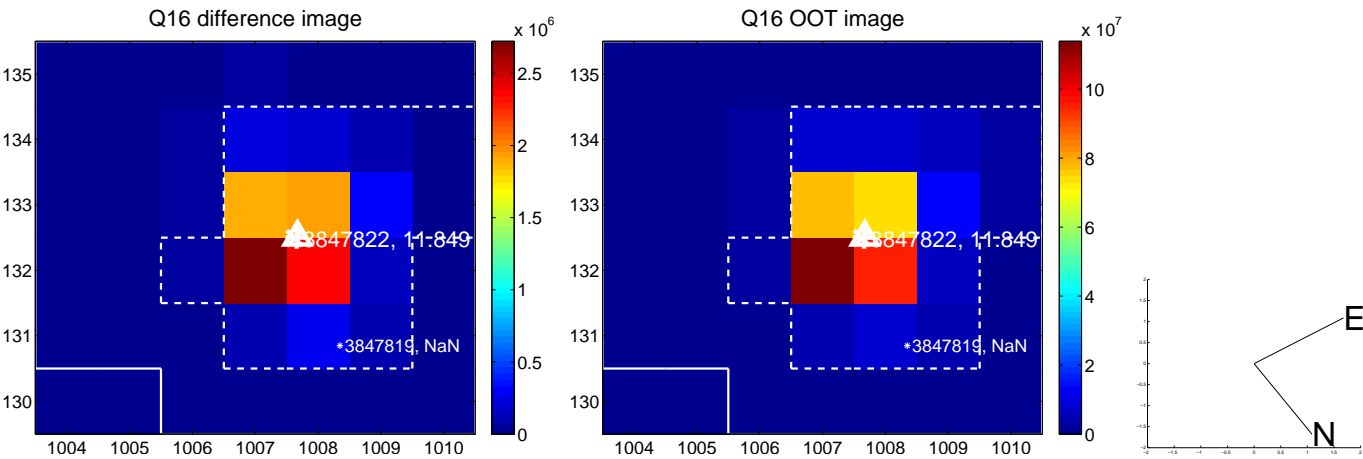
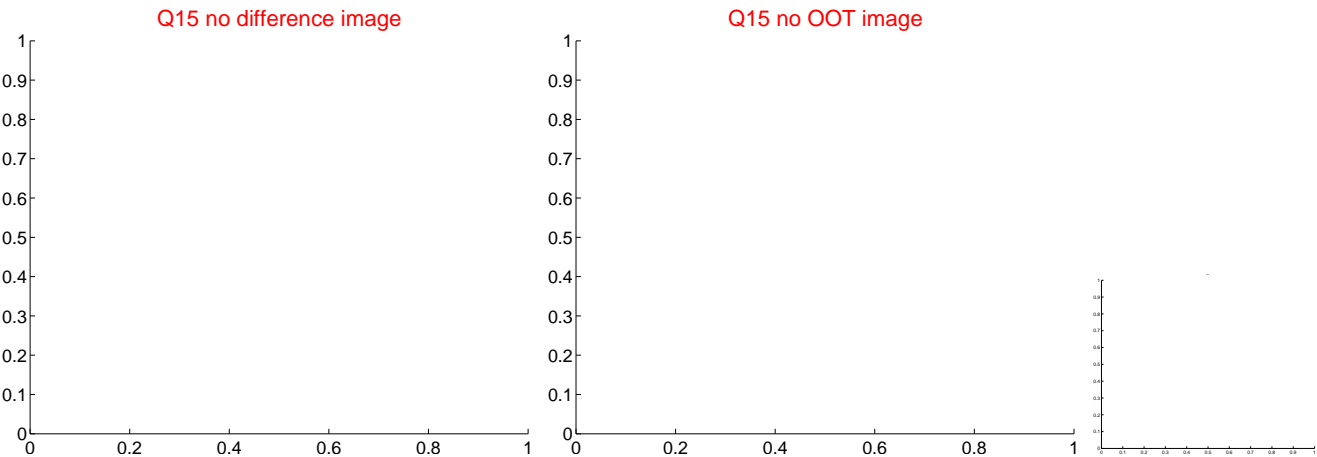
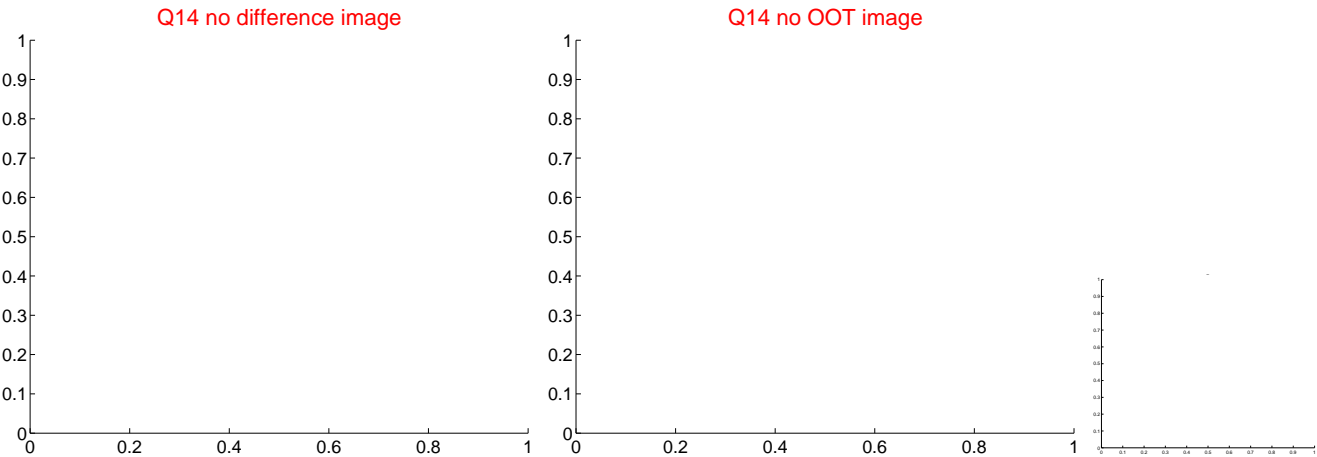
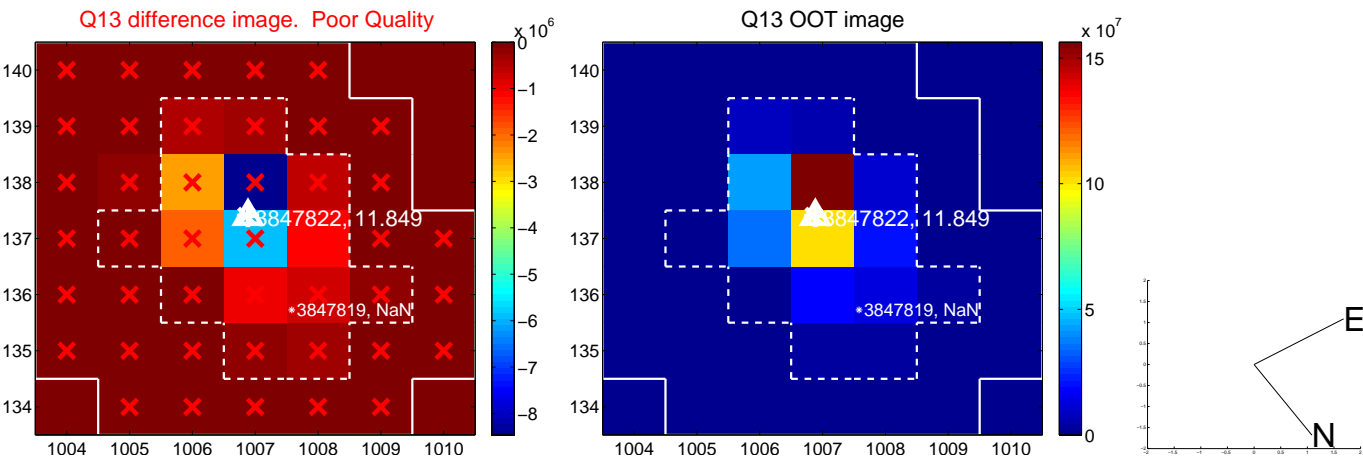
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



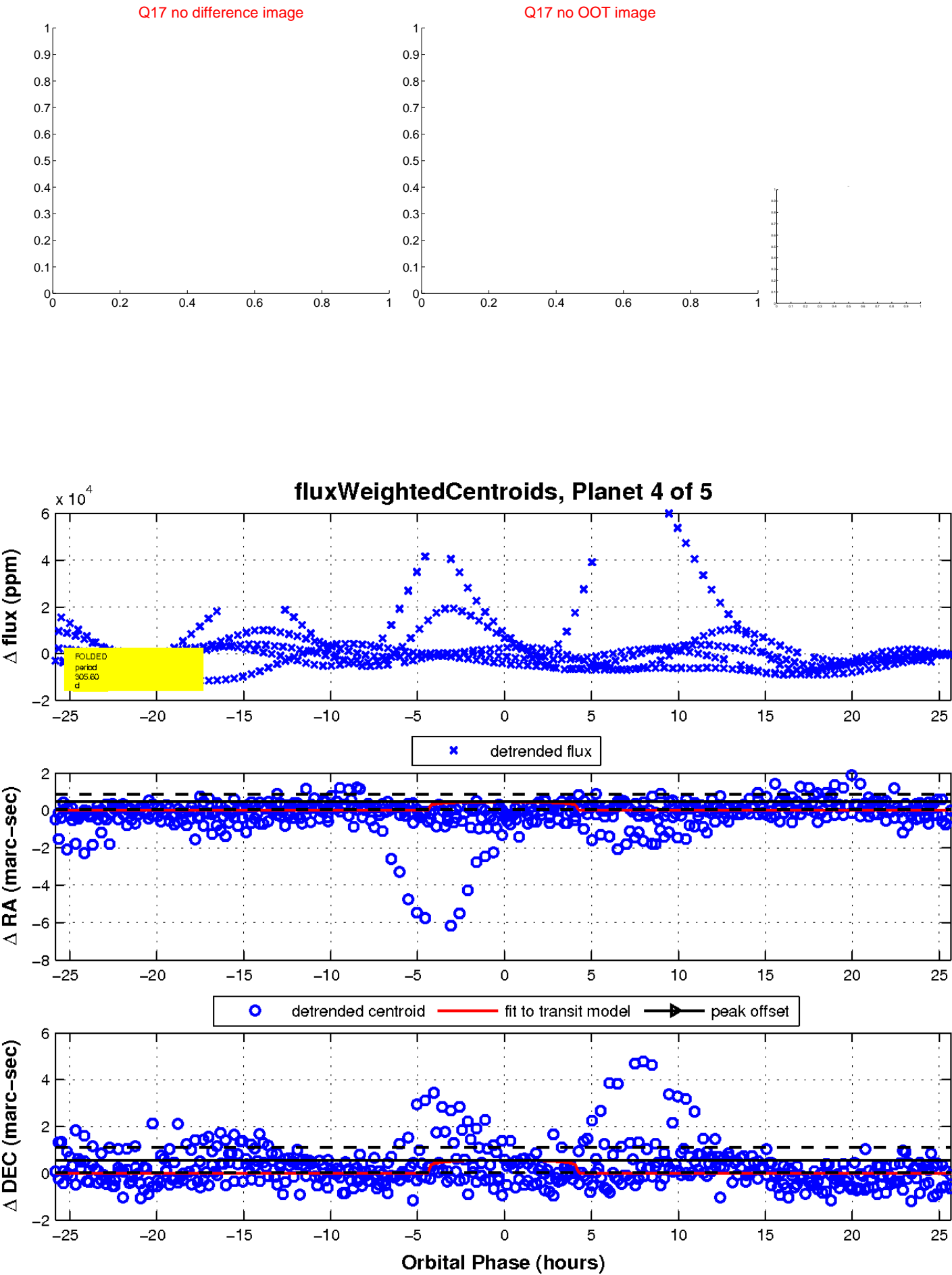
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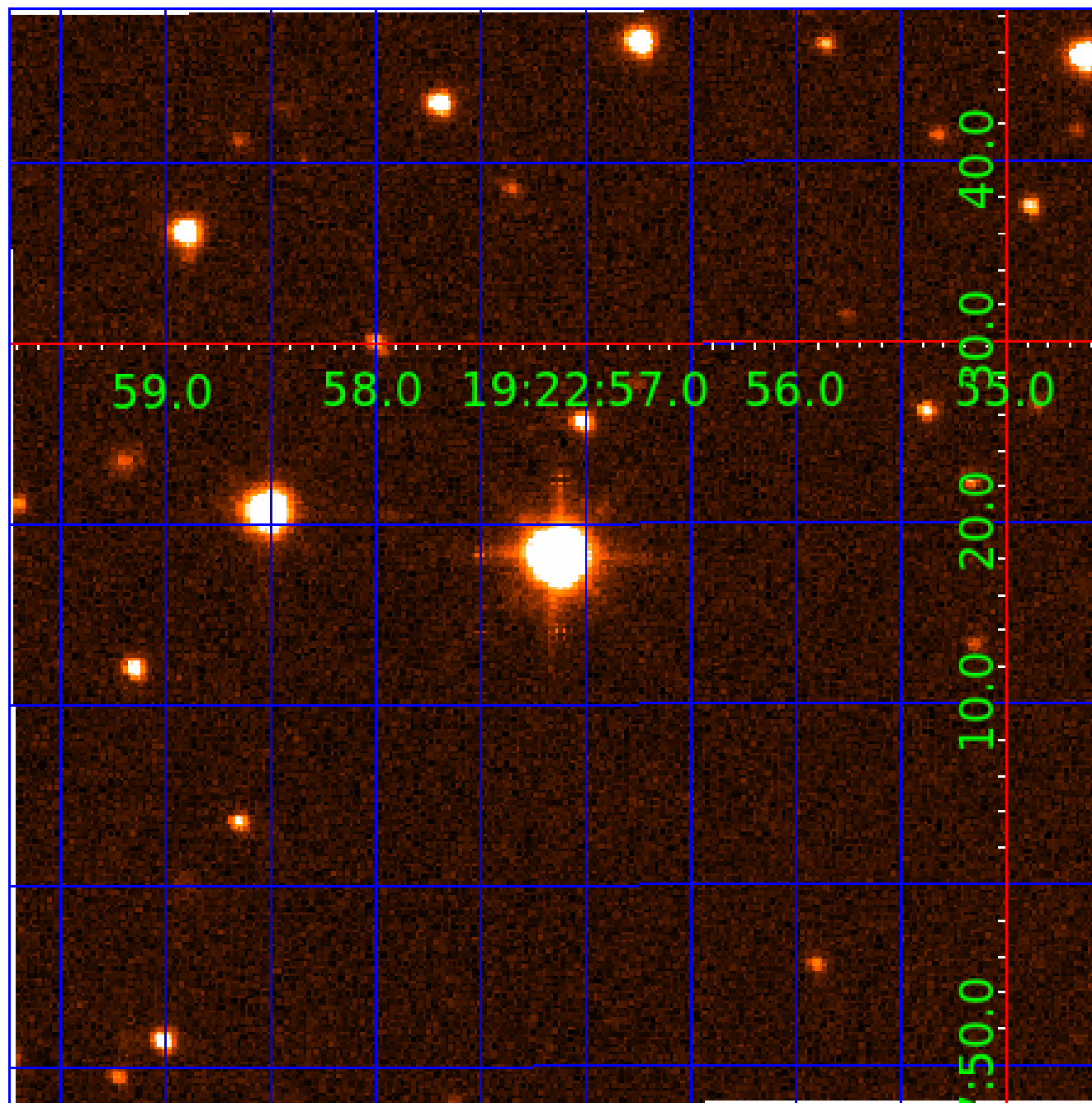


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003847822

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})
003847822-01	OBS	No	0.638877	131.771380	51.6	2.752	14.3	10.9	2.38	7084	2.02	41439.41
003847822-02	OBS	No	149.455236	194.025893	9061.0	8.670	16.1	5.6	2.38	7084	39.84	28.75
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003847822-04	OBS	No	305.596144	313.782002	46.6	8.611	13.7	0.0	2.38	7084	1.75	11.08
003847822-05	OBS	No	141.363902	203.545555	6054.2	6.831	13.7	6.5	2.38	7084	32.92	30.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003847822-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003847822-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003847822-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
003847822-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_TRACKER—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS— HALO_GHOST
003847822-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT

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.

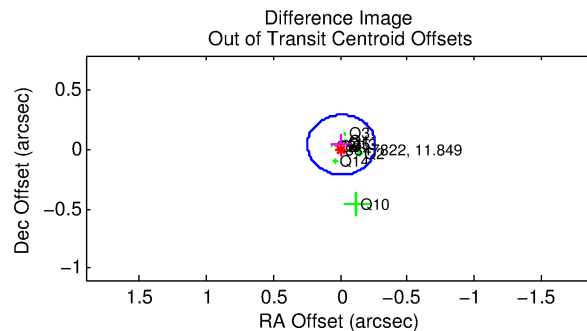
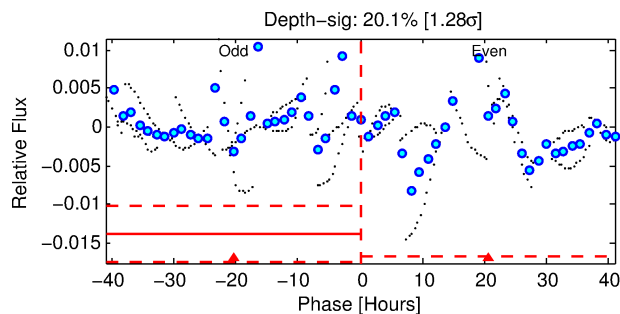
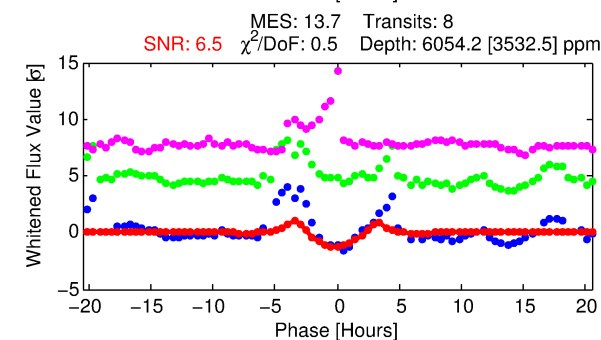
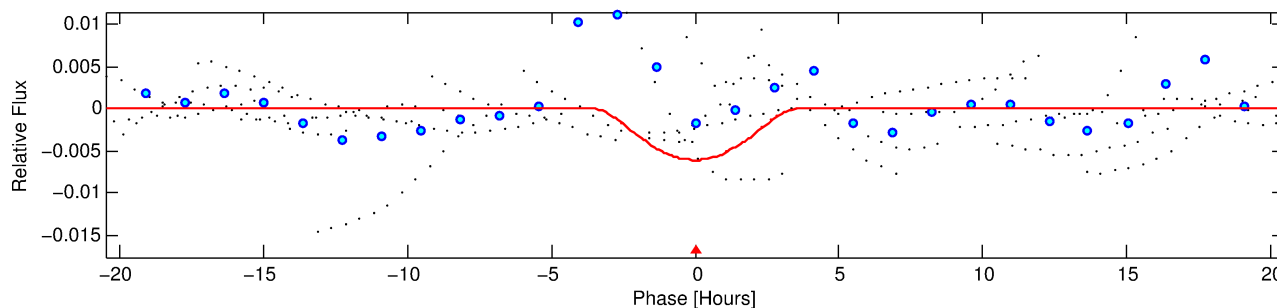
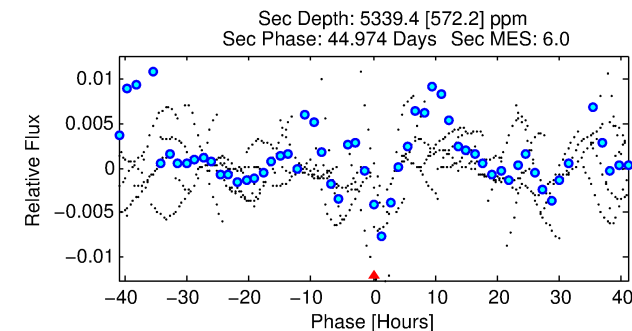
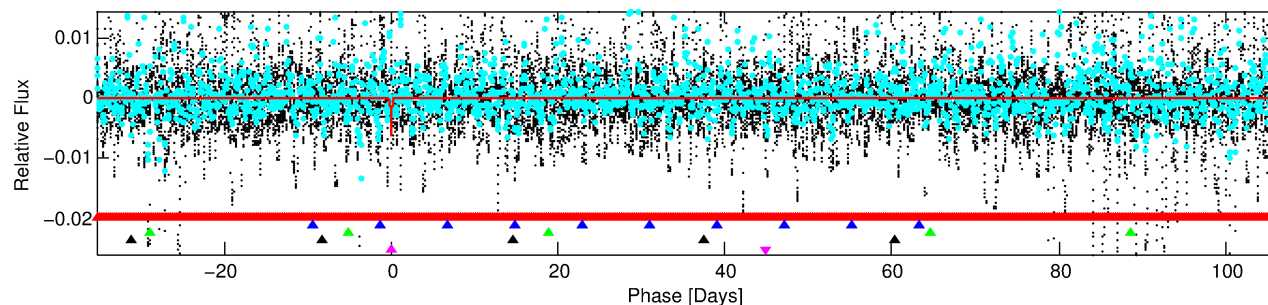
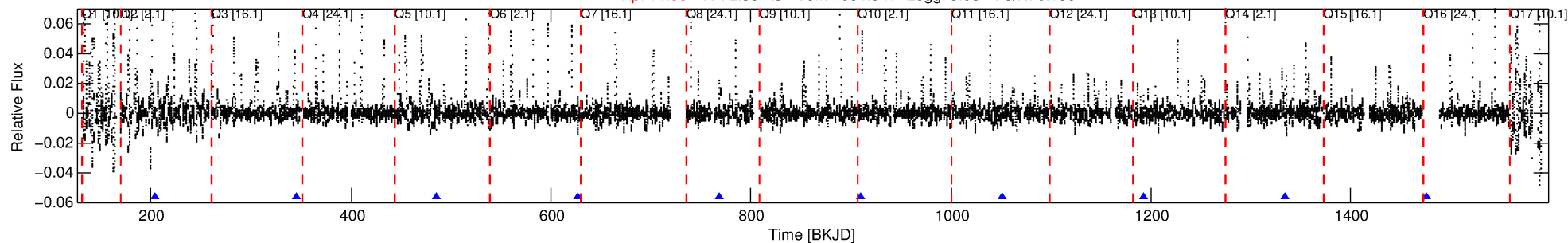
Ephemeris Match Information For 003847822-05

No Significant Match Found

DV One-Page Summary

KIC: 3847822 Candidate: 5 of 5 Period: 141.364 d

Kp: 11.85 R*: 2.38 Rs Teff: 7084.0 K Logg: 3.93 Fe/H: 0.180



DV Fit Results:

Period = 141.36390 [0.00297] d
Epoch = 203.5456 [0.0145] BKJD
Rp/R* = 0.1267 [0.2604]
a/R* = 82.06 [29.69]
b = 1.00 [0.42]
Seff = 30.96 [14.93]
Teq = 602 [72] K
Rp = 32.92 [68.46] Re
a = 0.6430 [0.1851] AU
Ag = 1120.51 [4636.99] [0.24σ]
Teff = 5381 [5539] K [0.86σ]

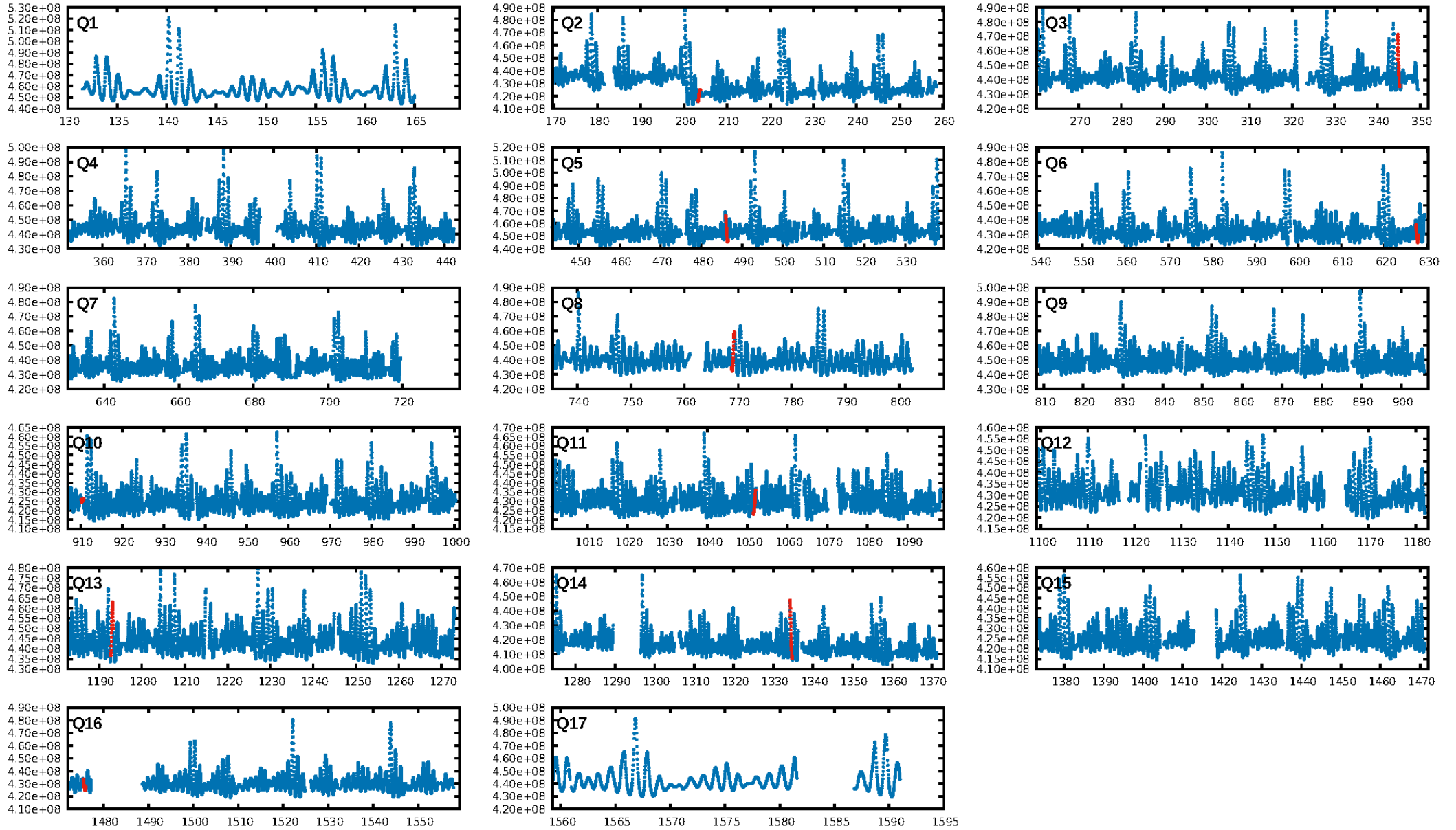
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [458.59σ]
LongPeriod-sig: 100.0% [17.59σ]
ModelChiSquare2-sig: 8.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.9177
Centroid-sig: 43.9%
Centroid-so: 0.173 arcsec [4.93σ]
OotOffset-rm: 0.045 arcsec [0.53σ]
KicOffset-rm: 0.139 arcsec [1.40σ]
OotOffset-st: 4/2/1/2 [9]
KicOffset-st: 4/2/1/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 0.00 [0/9]

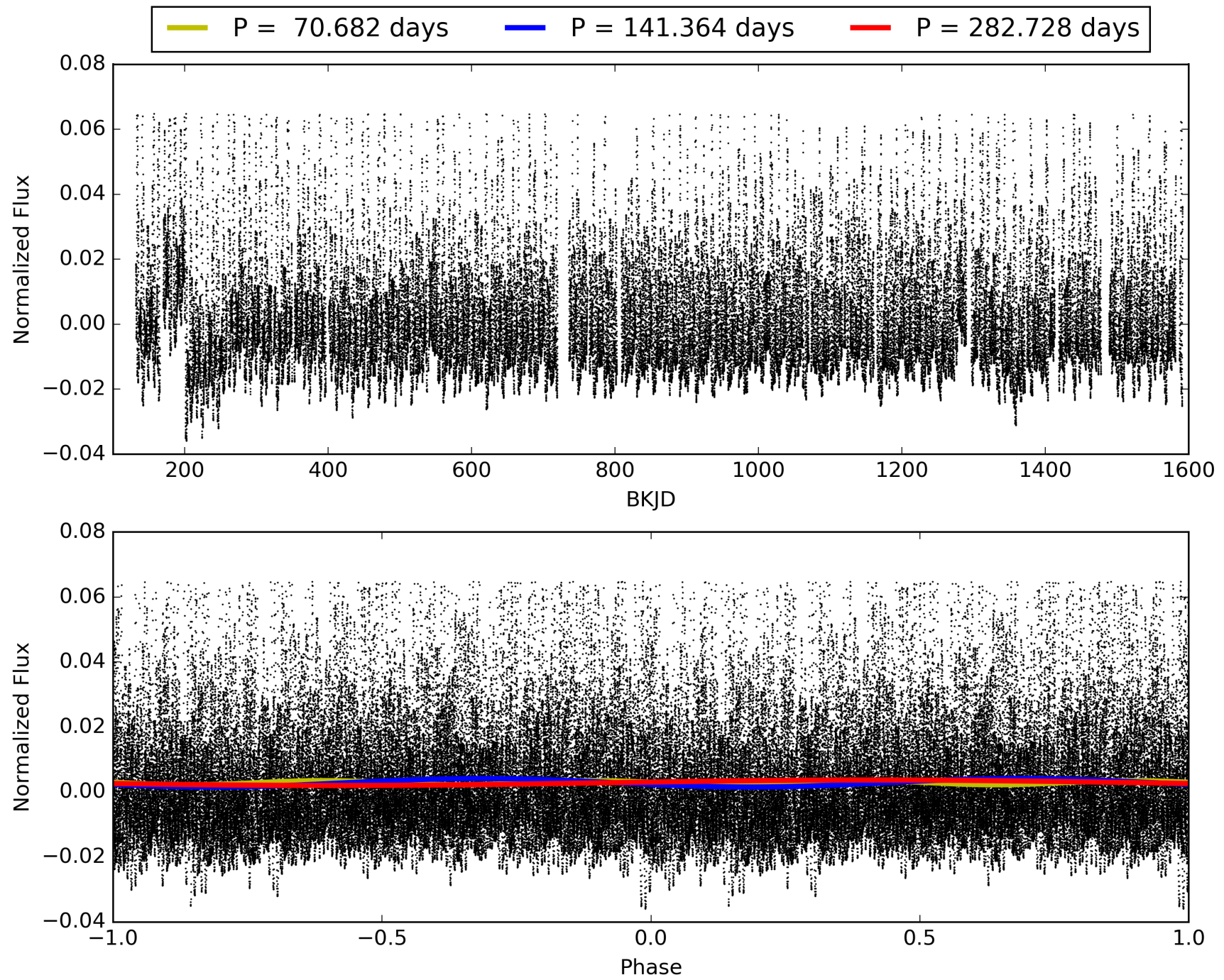
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 09:15:56 Z

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

TCE 003847822-05, PDC Light Curves

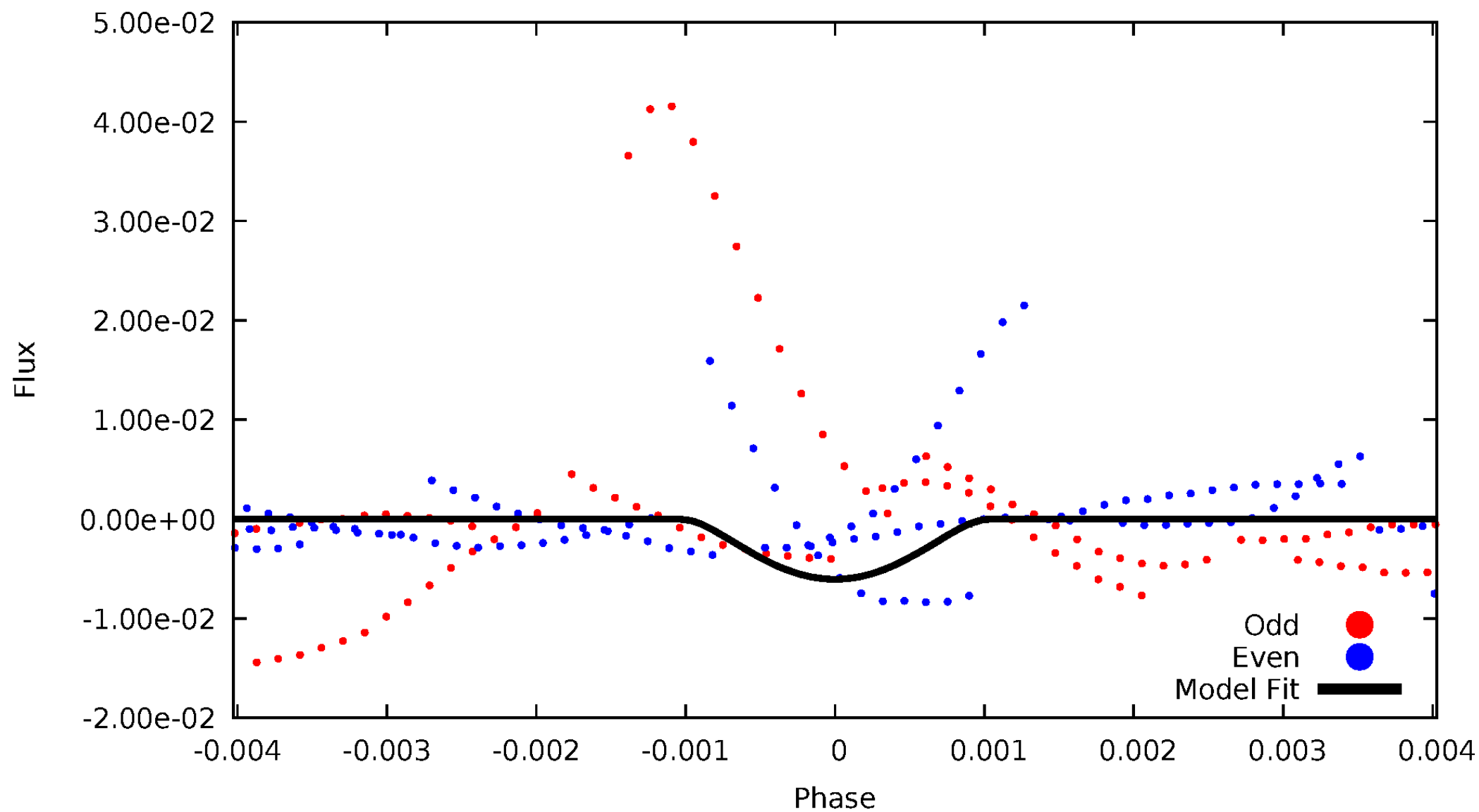


TCE 003847822-05



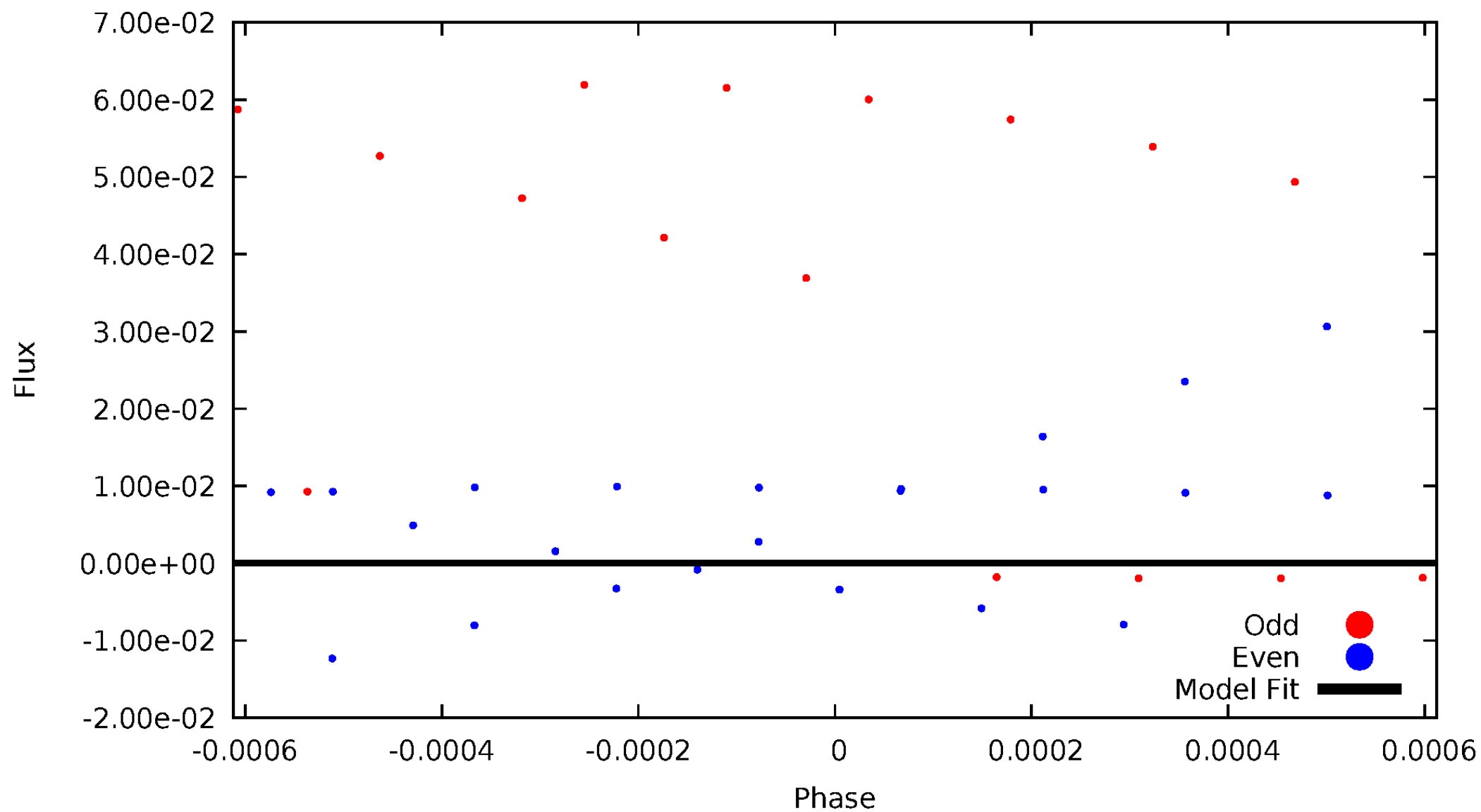
DV Odd/Even

TCE 003847822-05



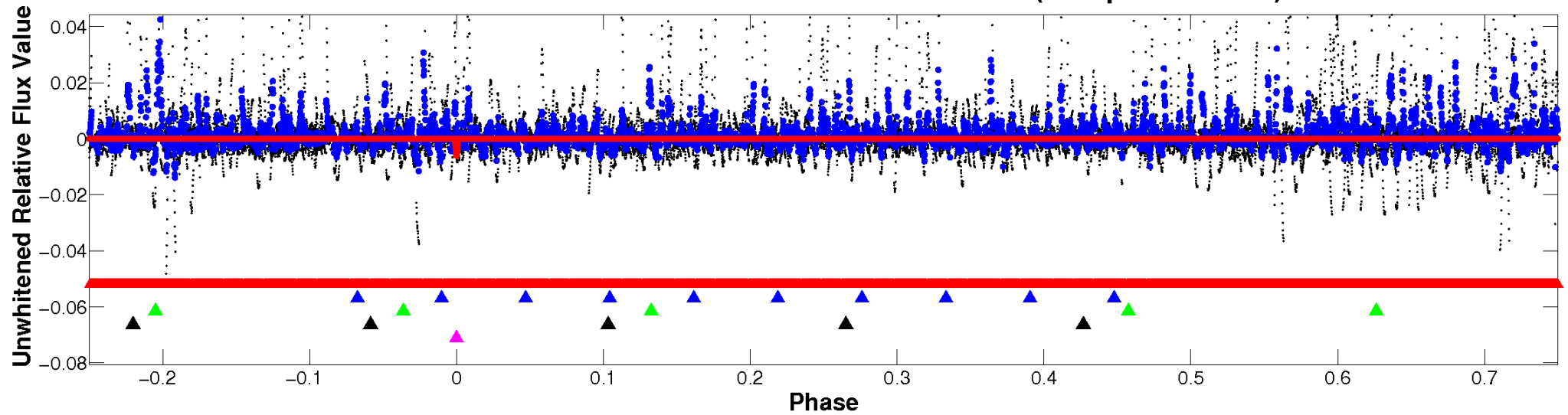
ALT Odd/Even

TCE 003847822-05

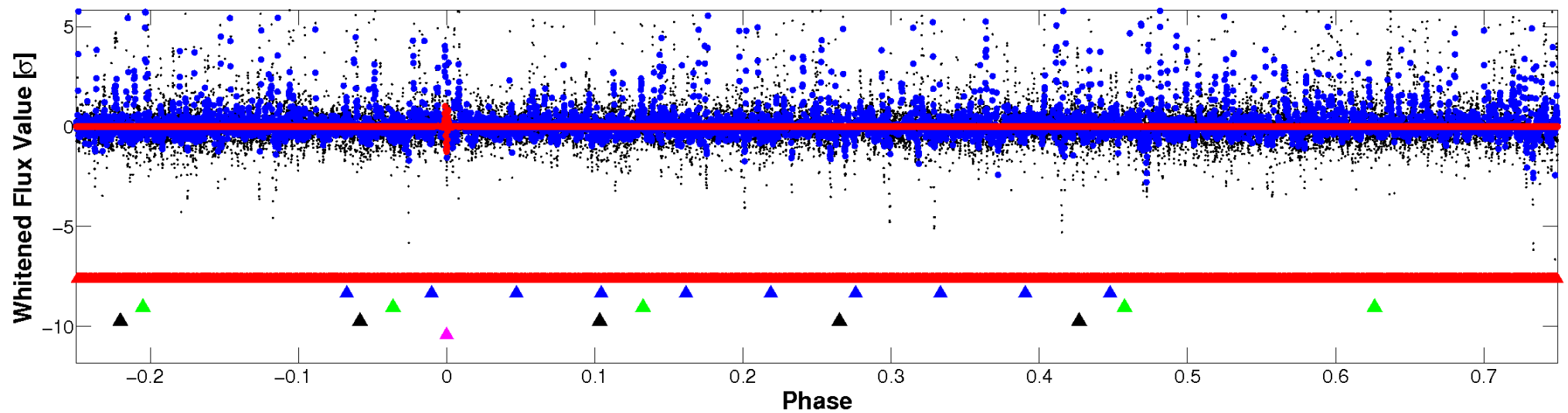


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

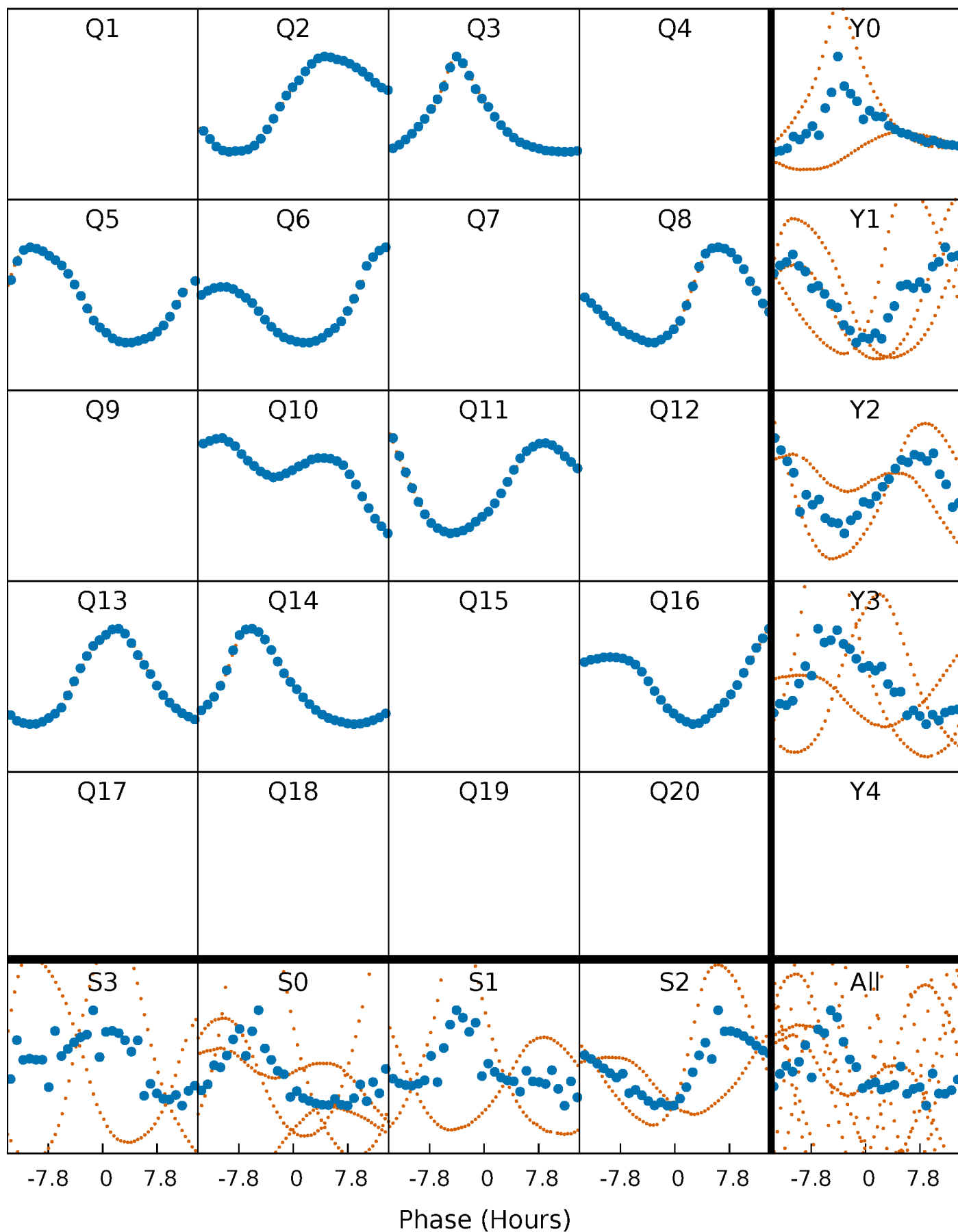


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



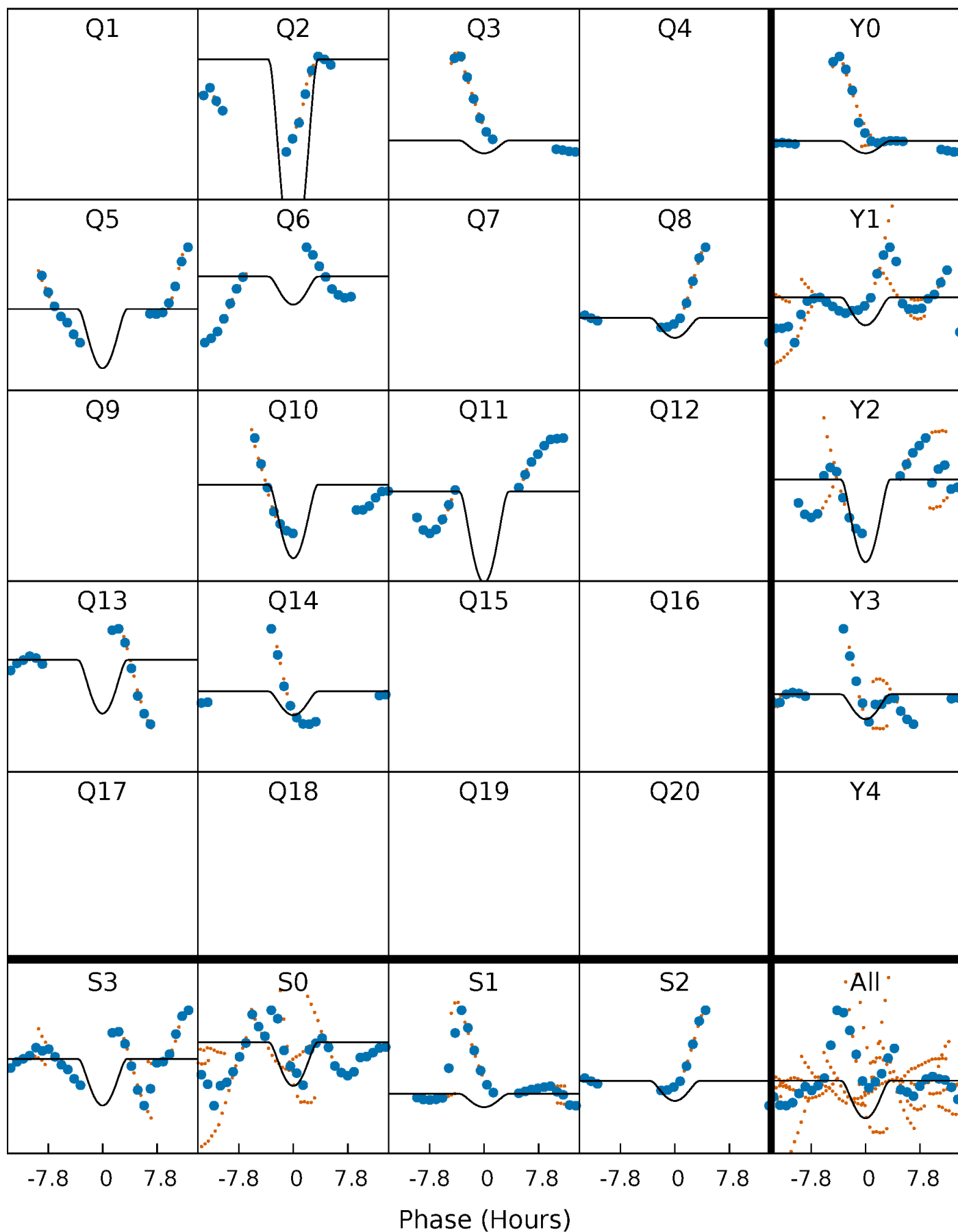
PDC Quarter-Phased Transit Curves

TCE 003847822-05 P=141.363902 Days $T_0=203.545555$ (BKJD)



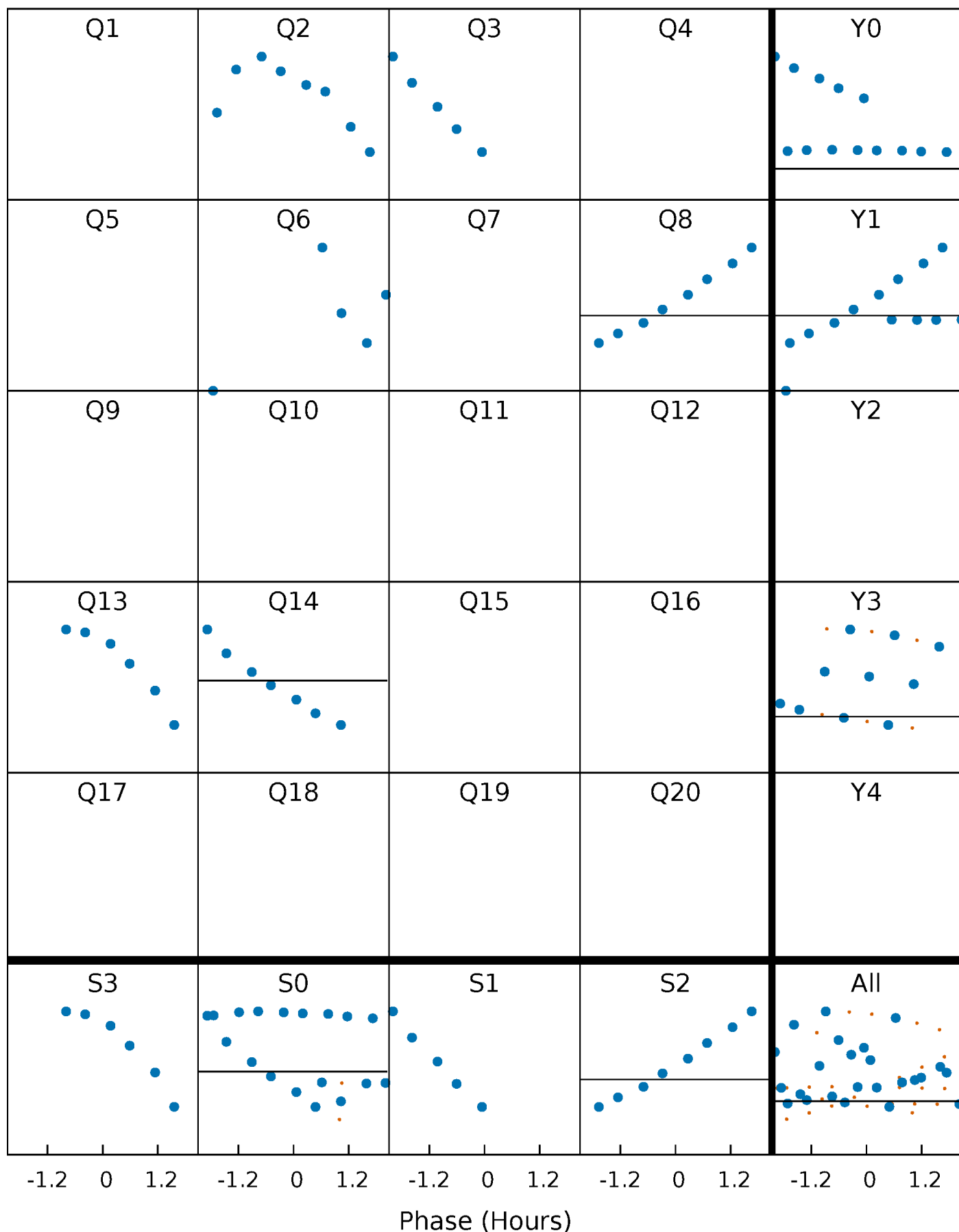
DV Quarter-Phased Transit Curves

TCE 003847822-05 P=141.363902 Days $T_0=203.545555$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

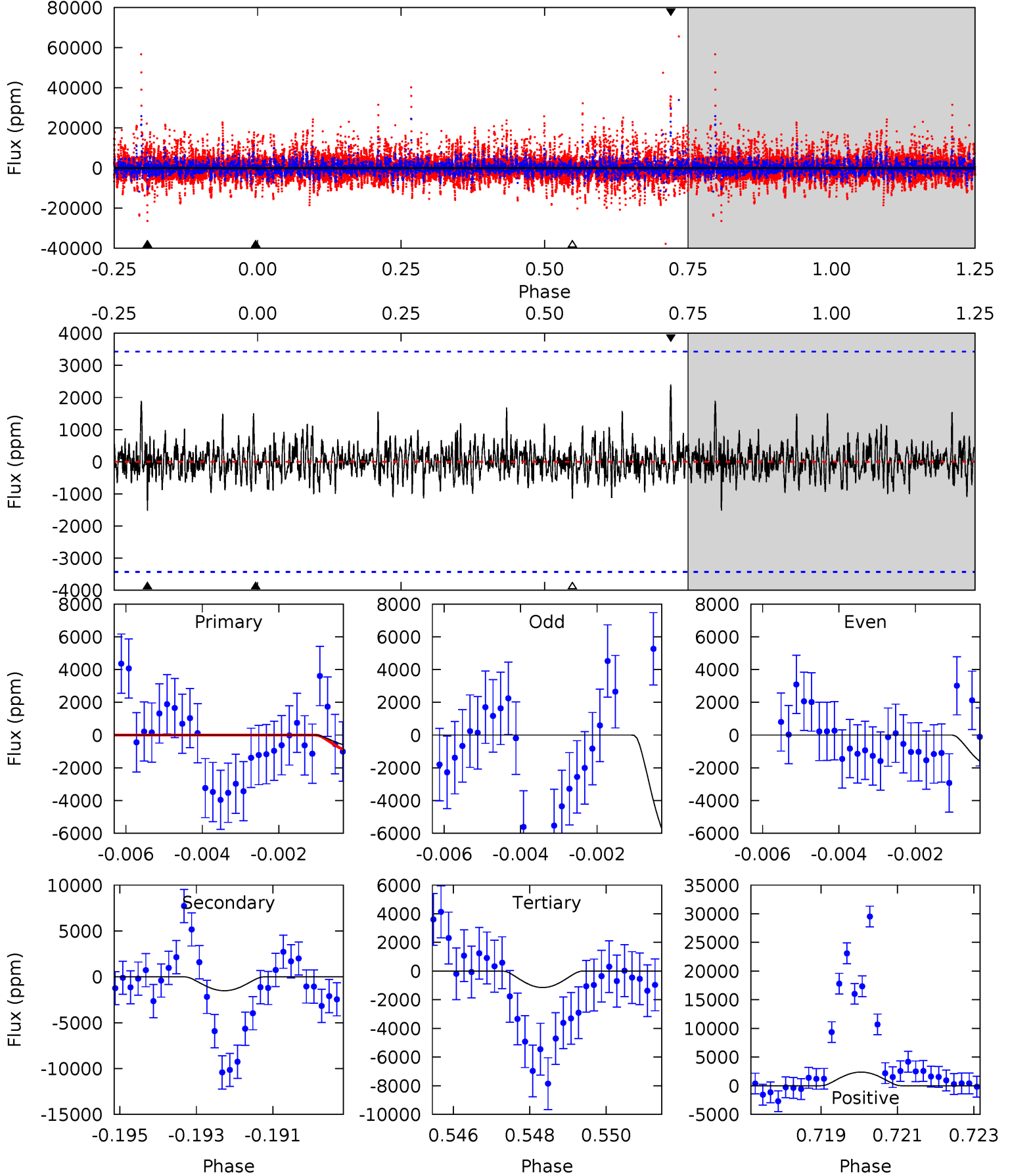
TCE 003847822-05 P=141.368407 Days $T_0=203.594933$ (BKJD)



DV Model-Shift Uniqueness Test

003847822-05, P = 141.363902 Days, E = 62.181653 Days

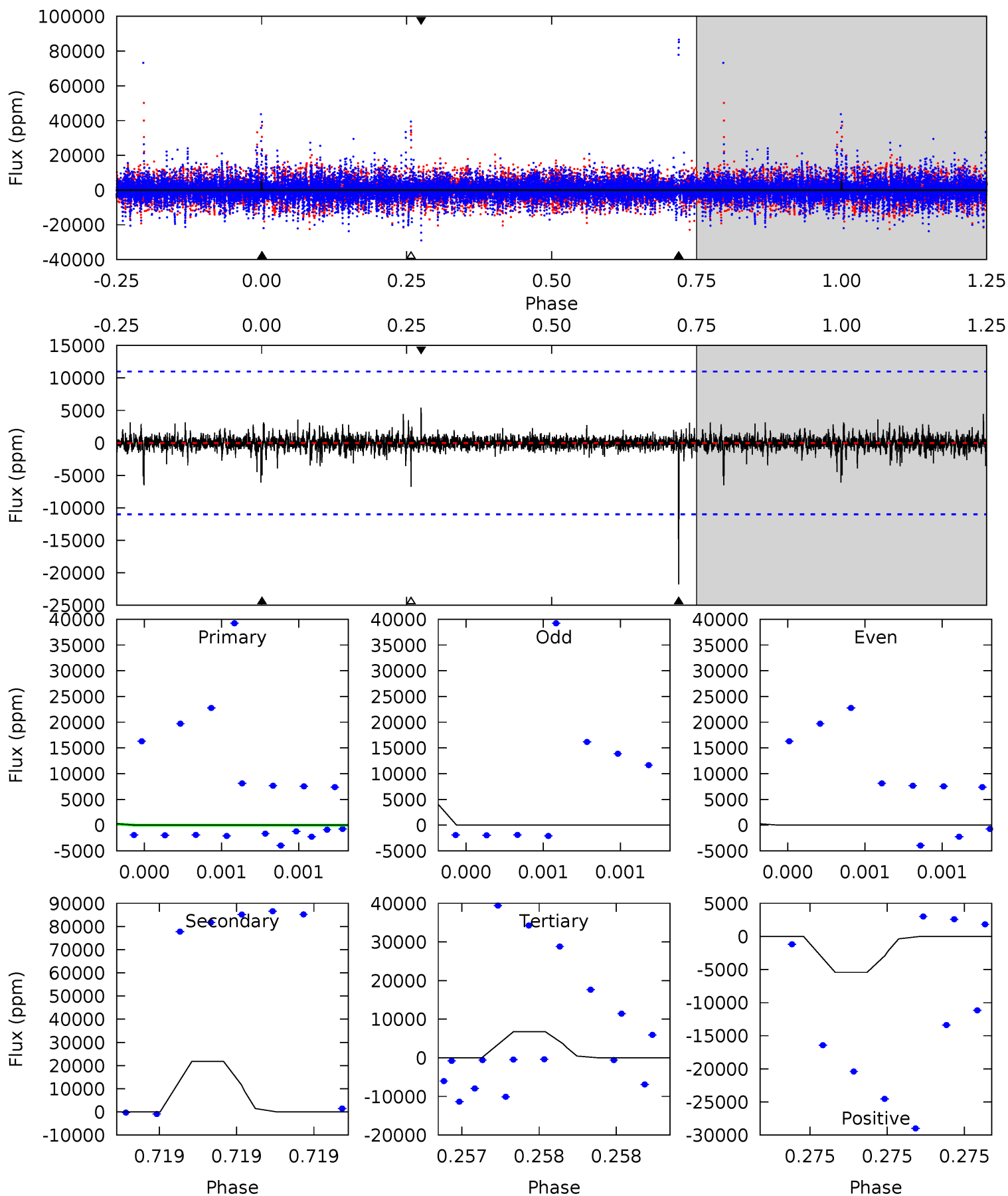
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.07	2.35	1.78	3.70	5.33	3.09	0.63	-0.71	-2.63	0.57	-1.35	2.67	-0.20	0.61	0.50



Alt Model-Shift Uniqueness Test

003847822-05, P = 141.368407 Days, E = 62.226526 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.55	11.2	3.47	2.79	5.63	3.57	0.35	-0.92	-0.24	7.69	8.38	11.9	2.63	0.20	0



Stellar Parameters For KIC 003847822

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7084^{+195}_{-307}	$3.933^{+0.260}_{-0.160}$	$0.180^{+0.150}_{-0.300}$	$2.382^{+0.607}_{-0.741}$	$1.773^{+0.182}_{-0.339}$	$0.185^{+0.285}_{-0.087}$
	+3%/-4%	+7%/-4%	+83%/-167%	+25%/-31%	+10%/-19%	+154%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003847822-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1514 ± 644	$55.29^{+59.83}_{-37.61}$	830^{+65}_{-80}	3379^{+1853}_{-618}	100^{+938}_{-77}
Alt.	-21766 ± 1950	$46.10^{+50.01}_{-33.10}$	834^{+62}_{-75}	6348^{+8279}_{-1778}	2422^{+26173}_{-1885}

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 $A_{obs} \gg 1.0$

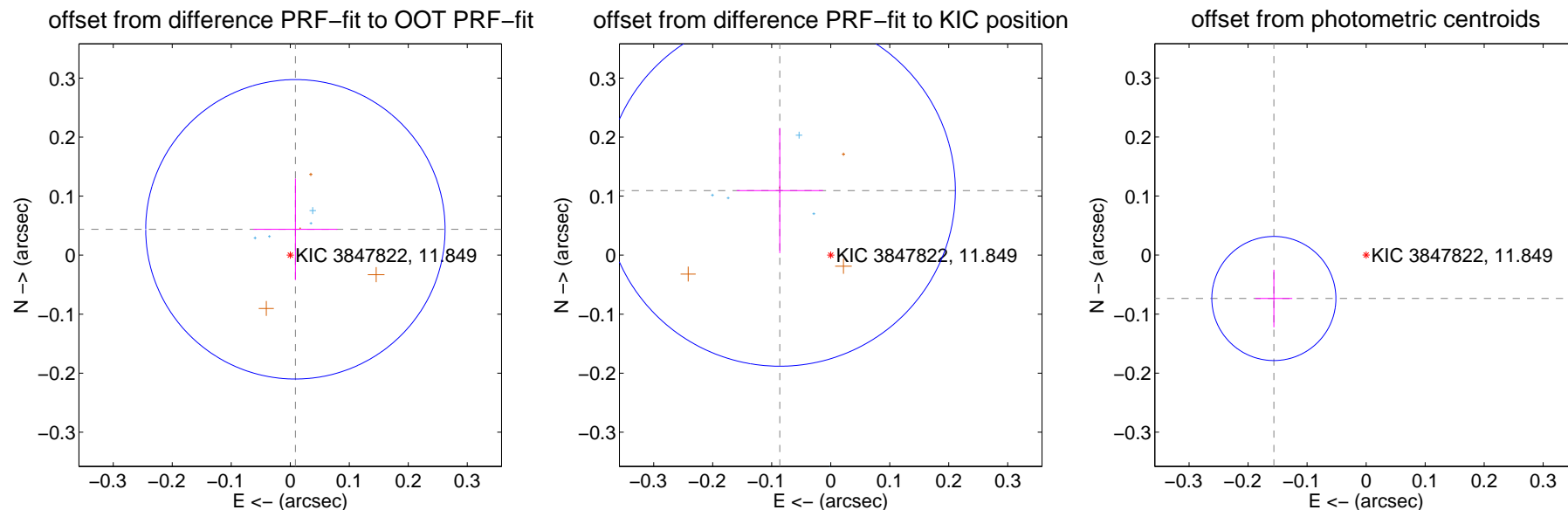
DV Centroid Data

Supplemental centroid analysis for 003847822-05. **Kepler magnitude: 11.85**. Transit SNR 6.51

There are 5 quarters with good PRF difference image offsets

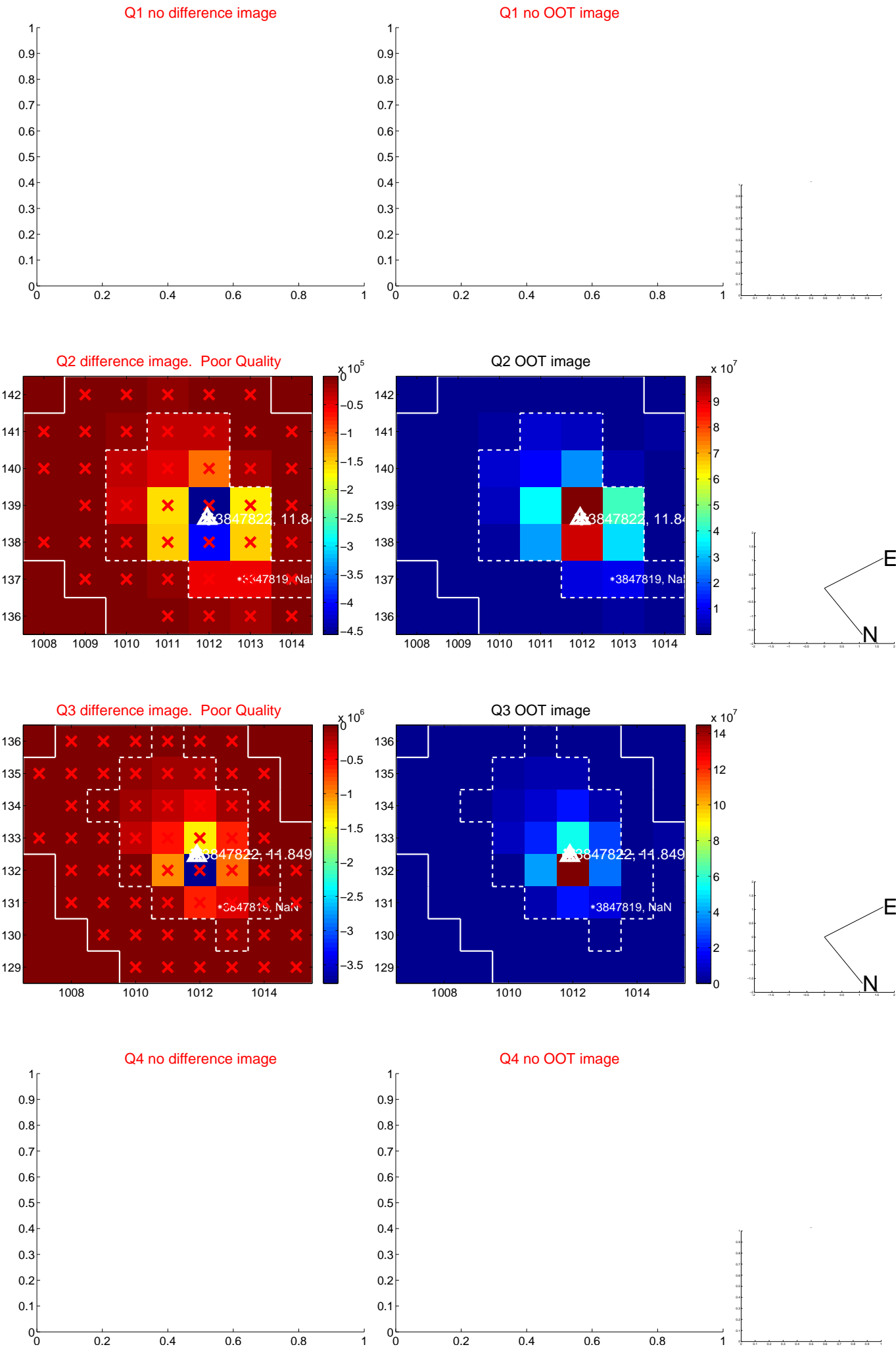
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.085	0.53	-0.009 ± 0.071	0.044 ± 0.086
PRF-fit source offset from KIC position	0.139 ± 0.099	1.40	0.086 ± 0.073	0.109 ± 0.106
photometric centroid source offset	0.17 ± 0.04	4.93	0.16 ± 0.03	-0.07 ± 0.05

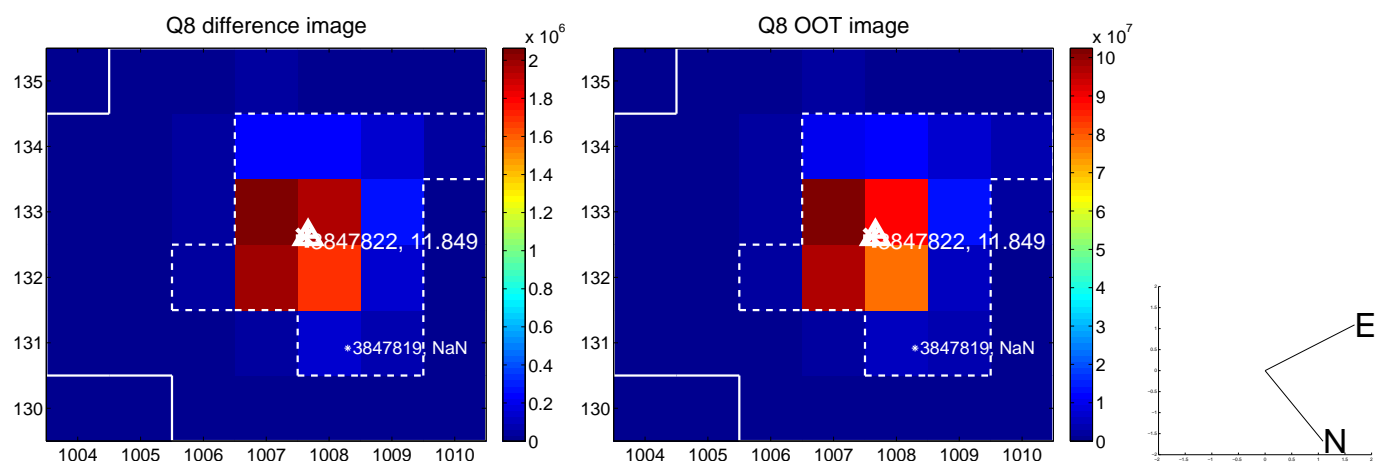
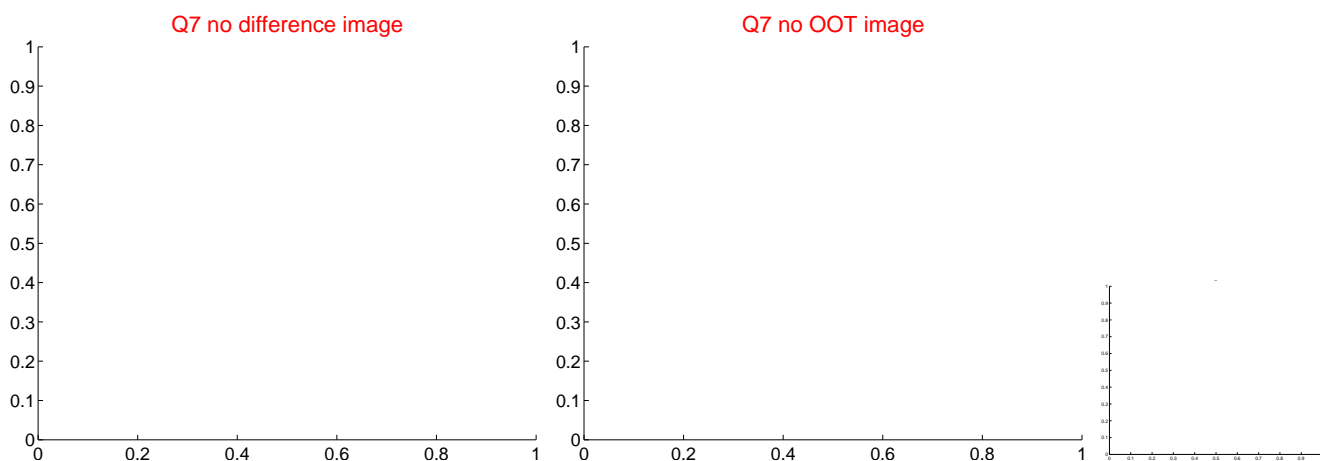
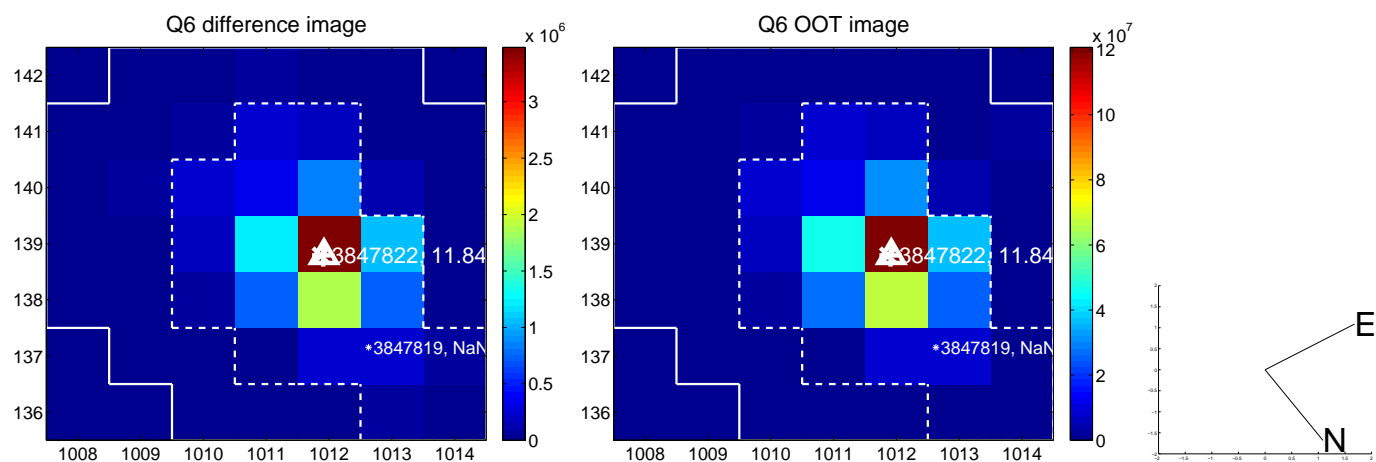
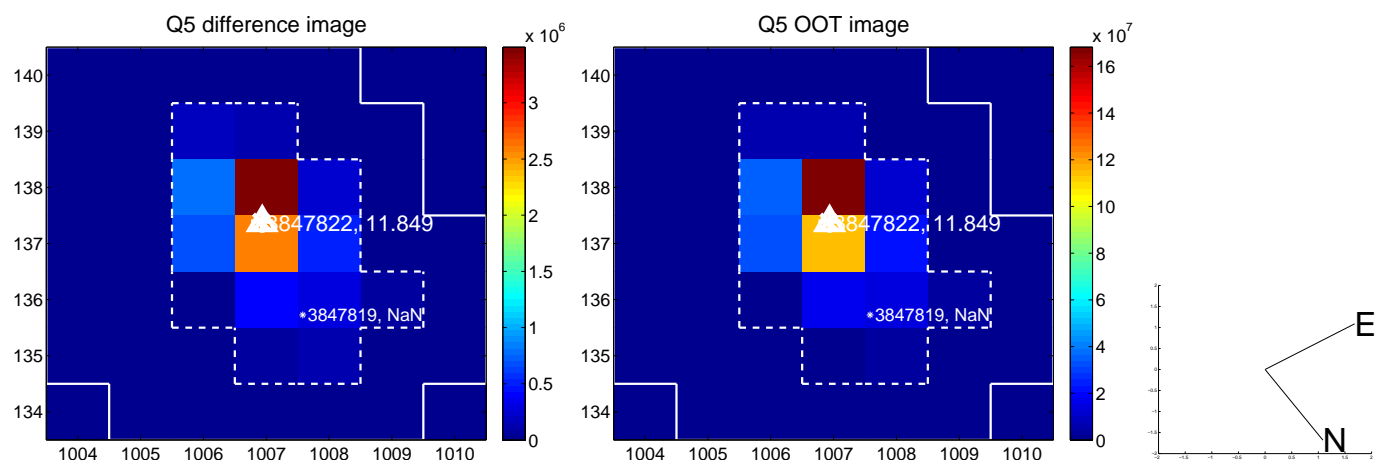


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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



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

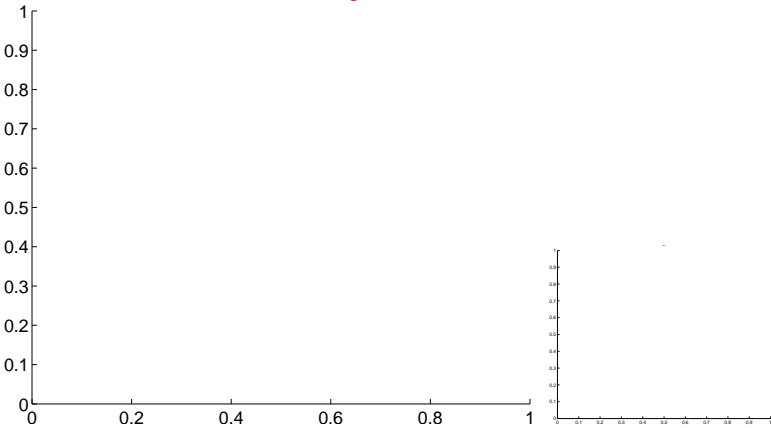


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

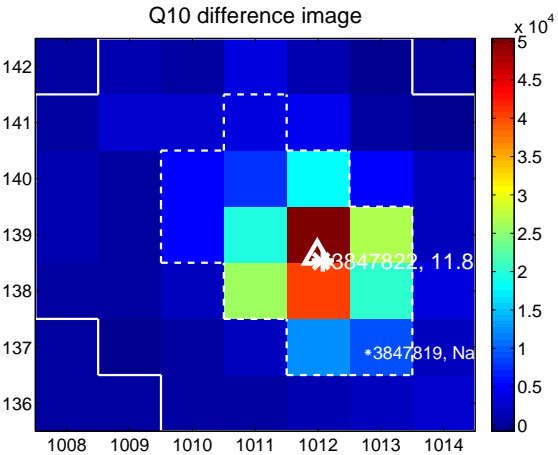
Q9 no difference image



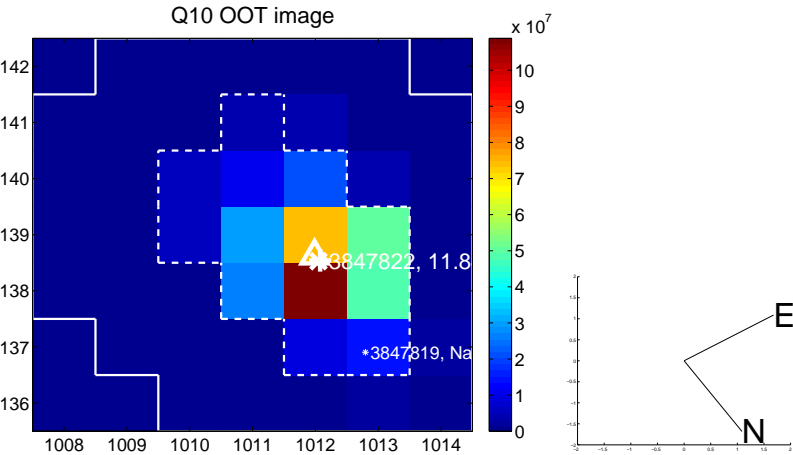
Q9 no OOT image



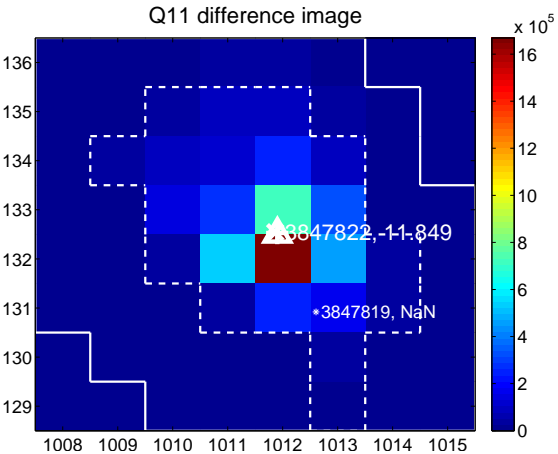
Q10 difference image



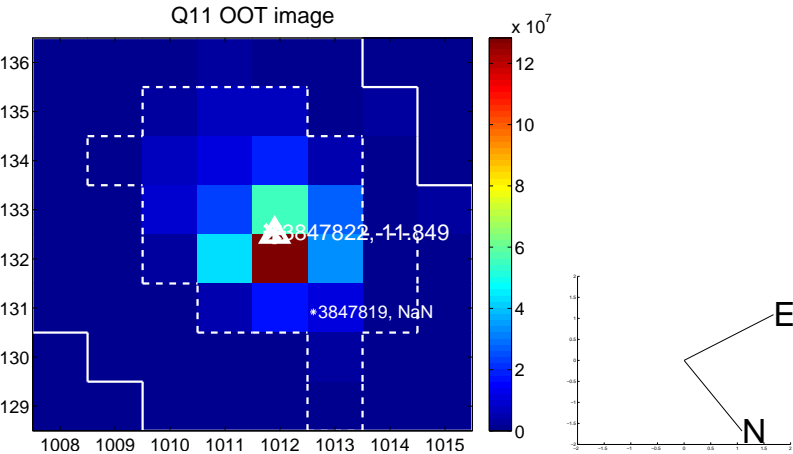
Q10 OOT image



Q11 difference image



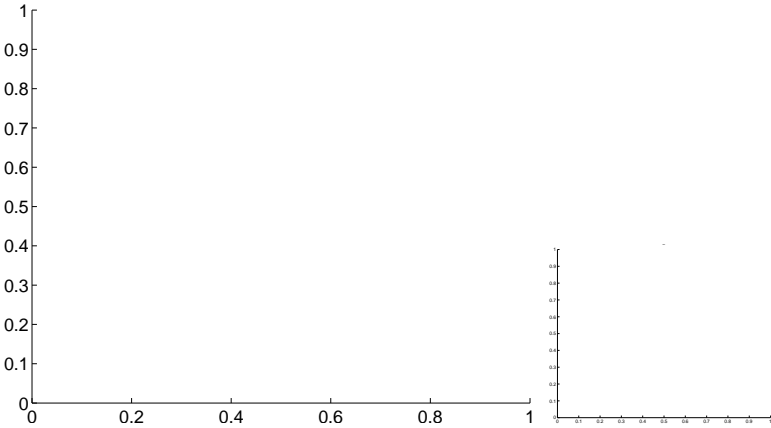
Q11 OOT image



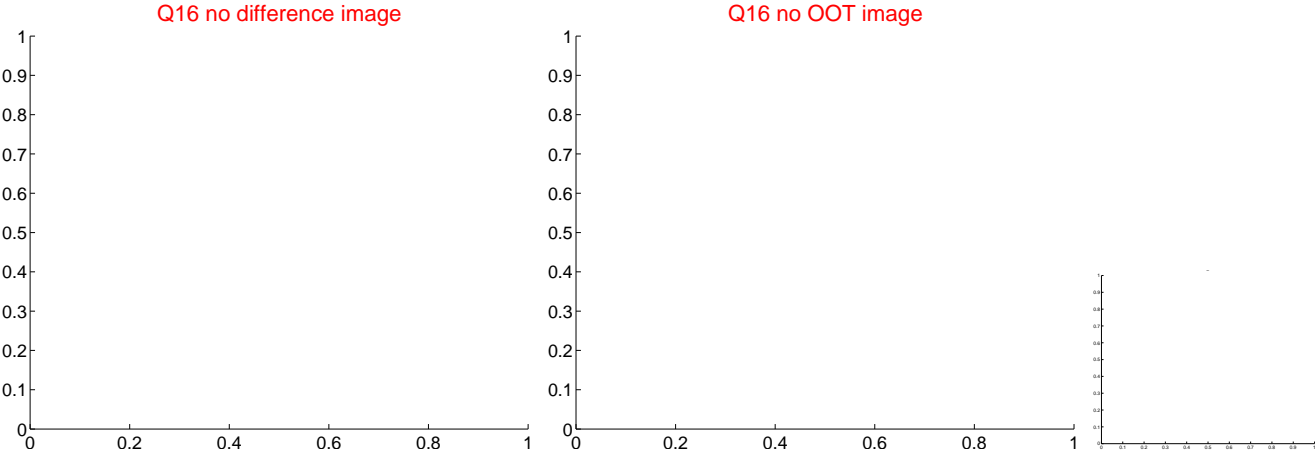
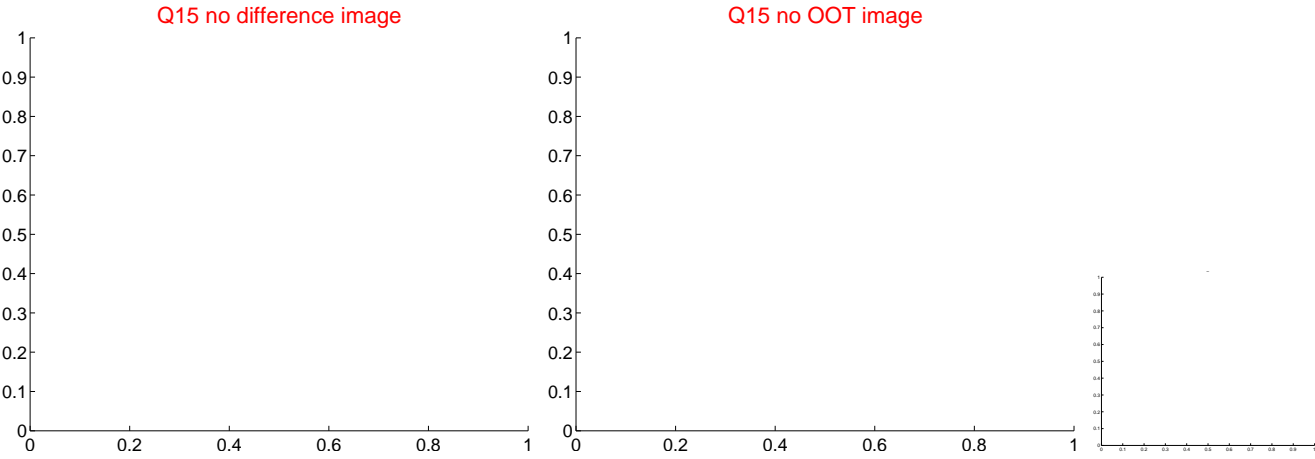
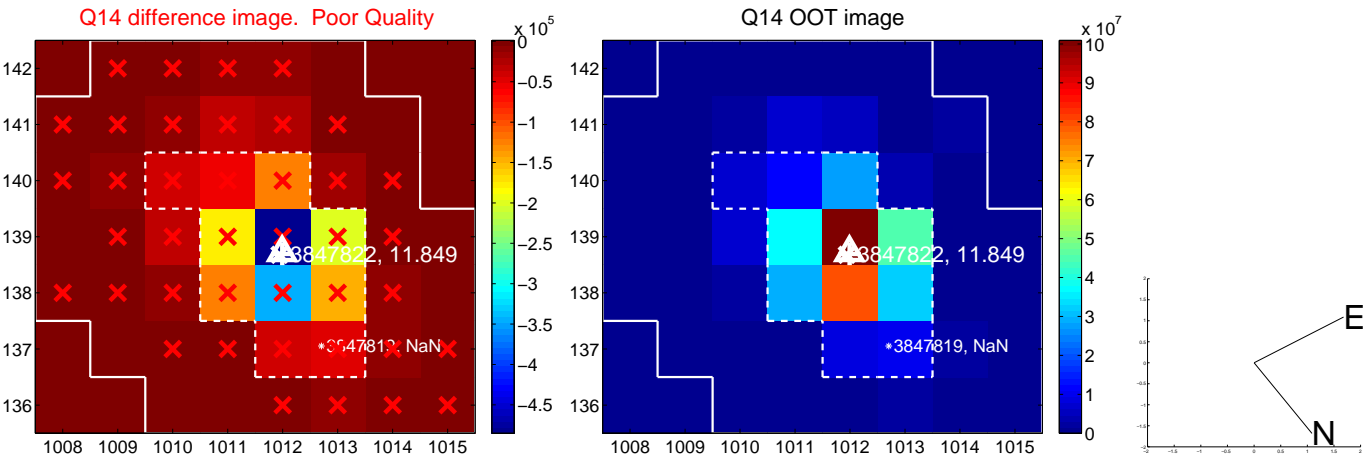
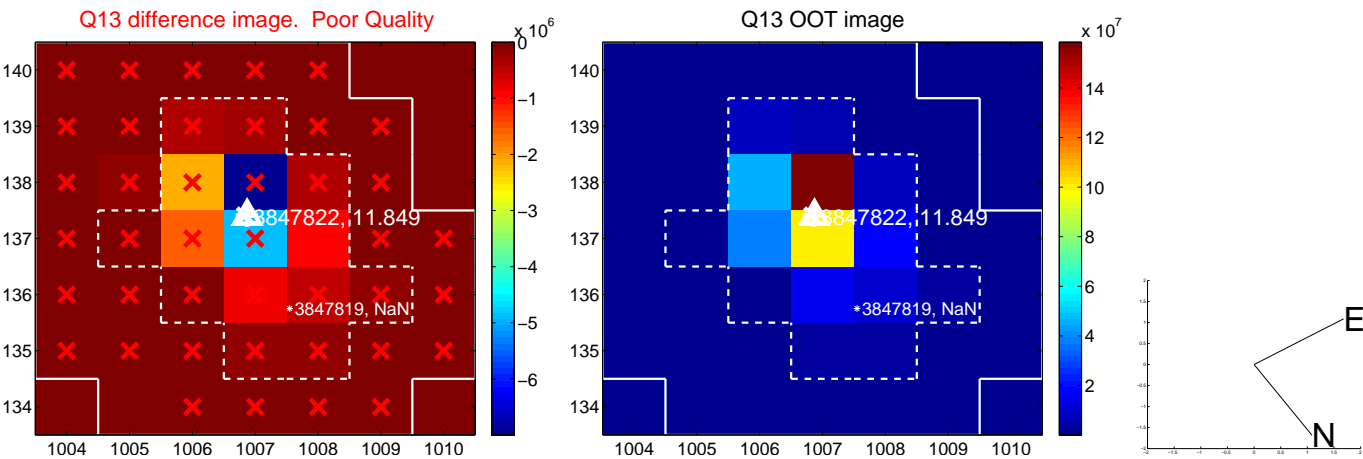
Q12 no difference image



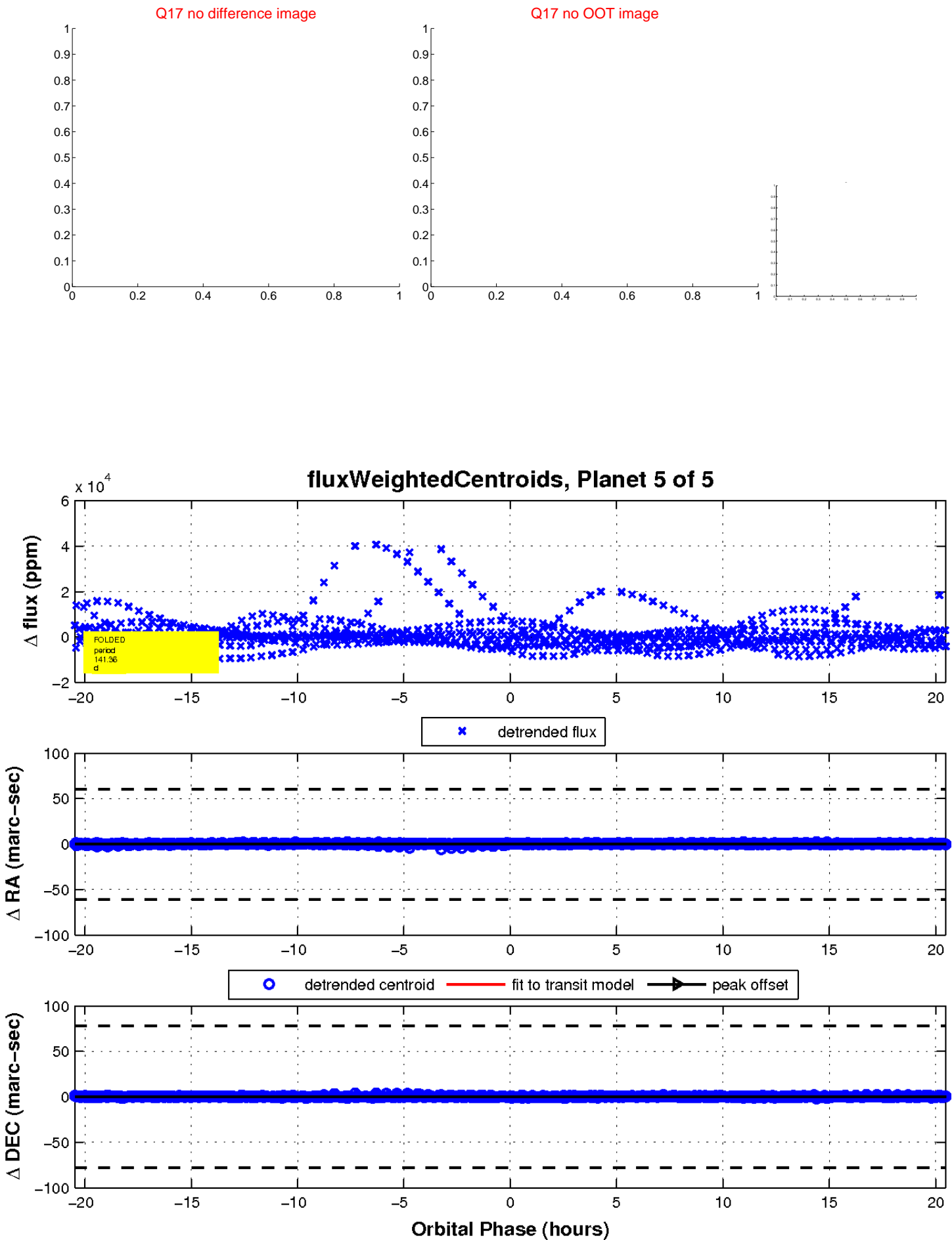
Q12 no OOT image



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



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



UKIRT Image

Declination

