

KIC 004864462

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})
004864462-01	OBS	No	0.578543	131.603188	9.2	4.266	7.5	2.1	0.98	6480	0.31	8140.97
004864462-02	OBS	No	45.840833	152.584351	1510.8	3.393	12.8	13.5	0.98	6480	3.82	23.92
004864462-03	OBS	No	4.291182	135.792919	968.3	0.547	11.6	6.8	0.98	6480	3.20	562.80
004864462-04	OBS	No	13.986216	143.647032	1163.4	1.421	10.8	9.9	0.98	6480	3.40	116.46
004864462-05	OBS	No	5.043872	131.870691	1015.3	0.905	11.1	11.3	0.98	6480	3.22	453.70
004864462-06	OBS	No	11.587027	141.078323	1600.6	0.632	11.2	10.8	0.98	6480	4.18	149.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004864462-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
004864462-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES
004864462-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV
004864462-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV
004864462-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004864462-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV

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

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

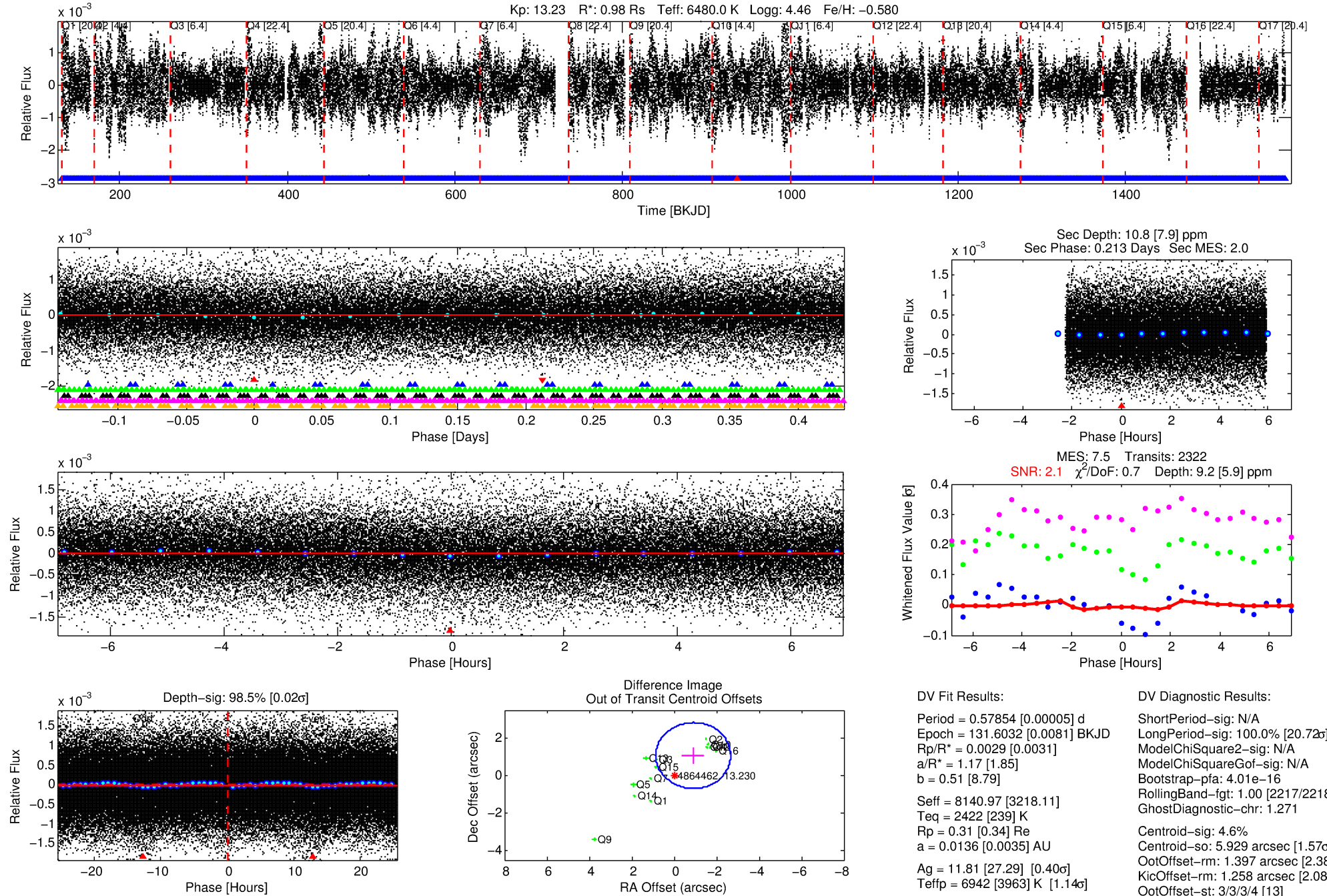
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004864462-01

No Significant Match Found

DV One-Page Summary

KIC: 4864462 Candidate: 1 of 6 Period: 0.579 d



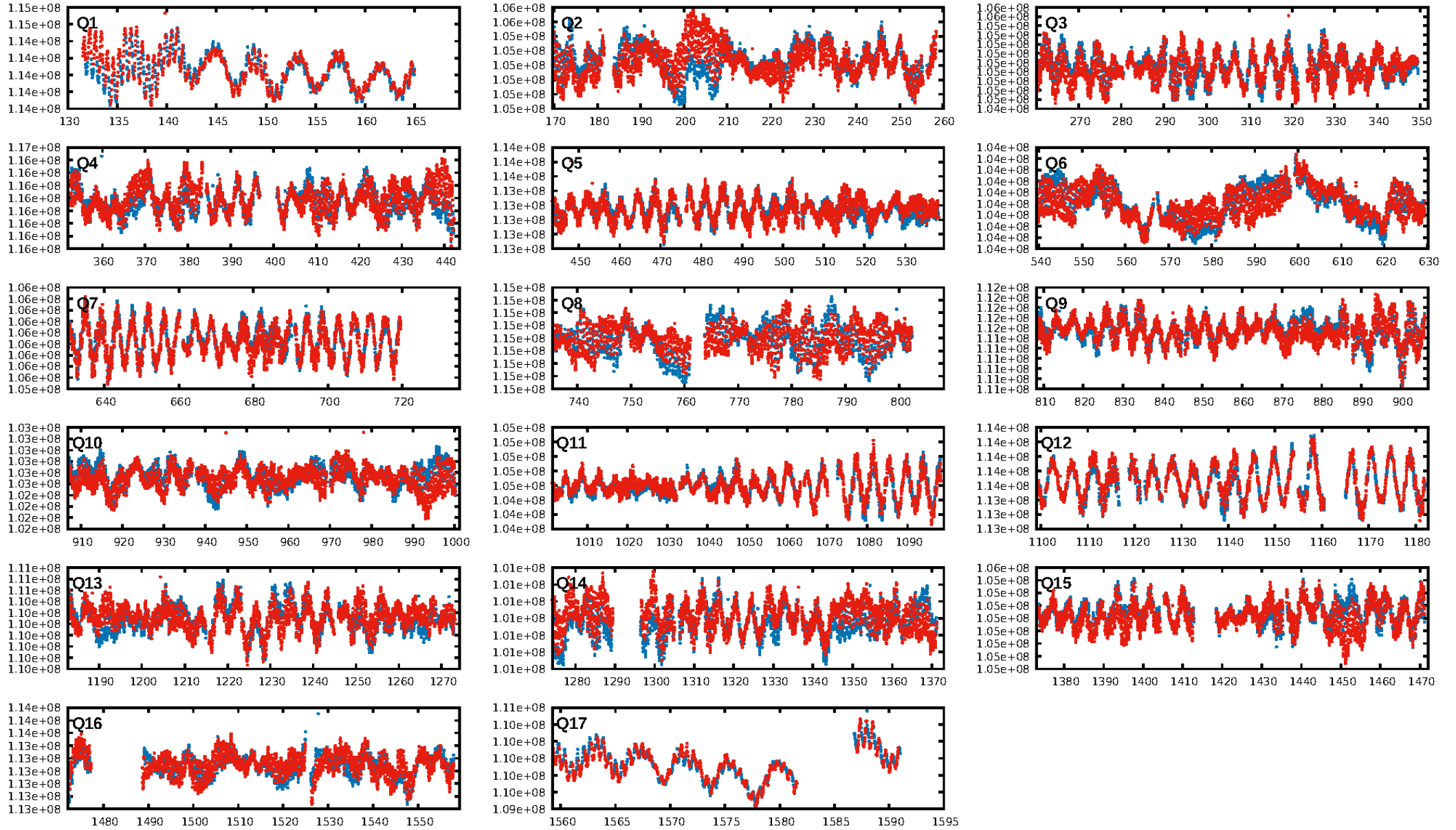
DV Fit Results:

Period = 0.57854 [0.00005] d
Epoch = 131.6032 [0.0081] BKJD
Rp/R* = 0.0029 [0.0031]
a/R* = 1.17 [1.85]
b = 0.51 [8.79]
Seff = 8140.97 [3218.11]
Teff = 2422 [239] K
Rp = 0.31 [0.34] Re
a = 0.0136 [0.0035] AU
Ag = 11.81 [27.29] [0.40σ]
Teffp = 6942 [3963] K [1.14σ]

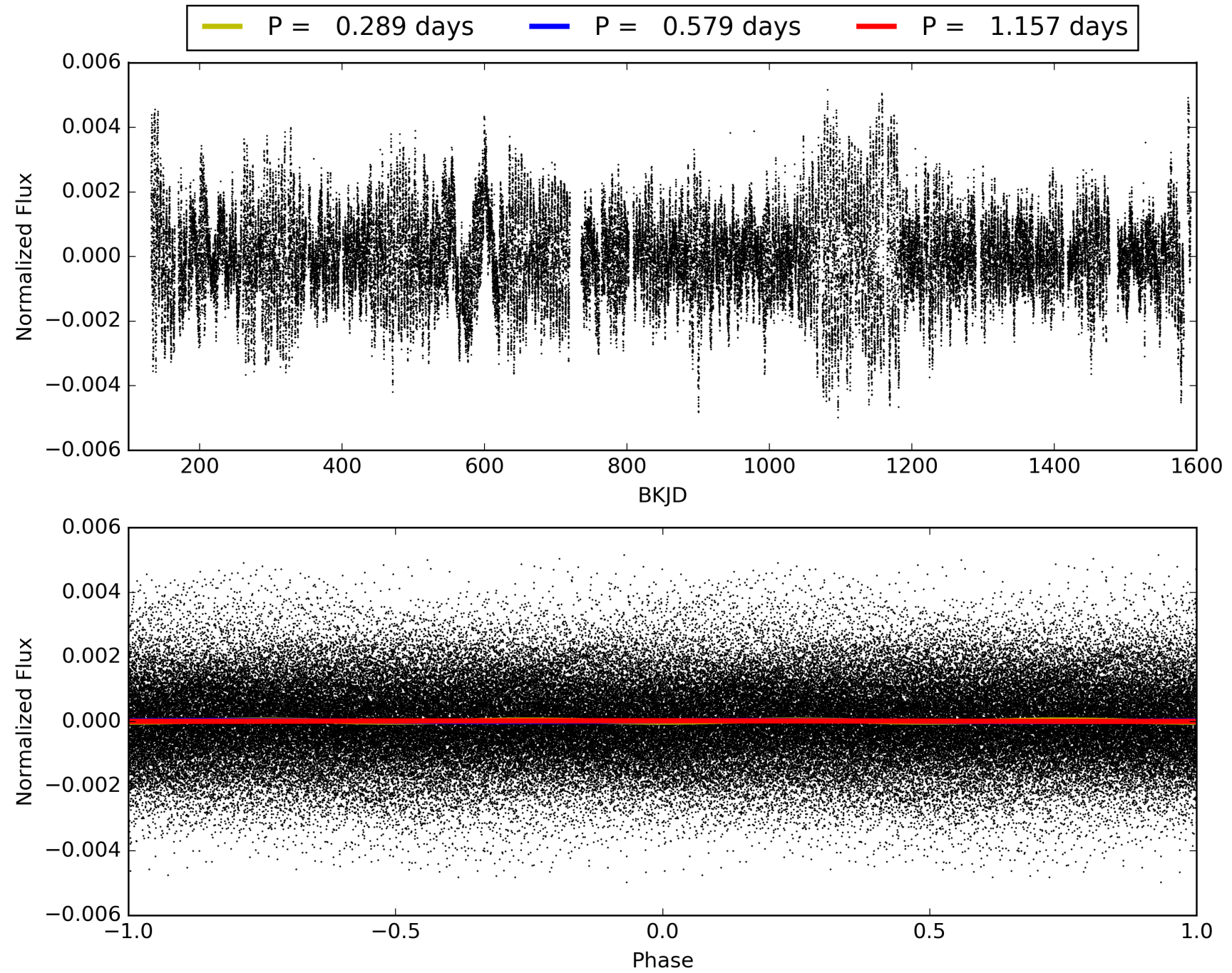
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [20.72σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.01e-16
RollingBand-fgt: 1.00 [2217/2218]
GhostDiagnostic-chr: 1.271
Centroid-sig: 4.6%
Centroid-so: 5.929 arcsec [1.57σ]
OotOffset-rm: 1.397 arcsec [2.38σ]
KicOffset-rm: 1.258 arcsec [2.08σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004864462-01, PDC Light Curves

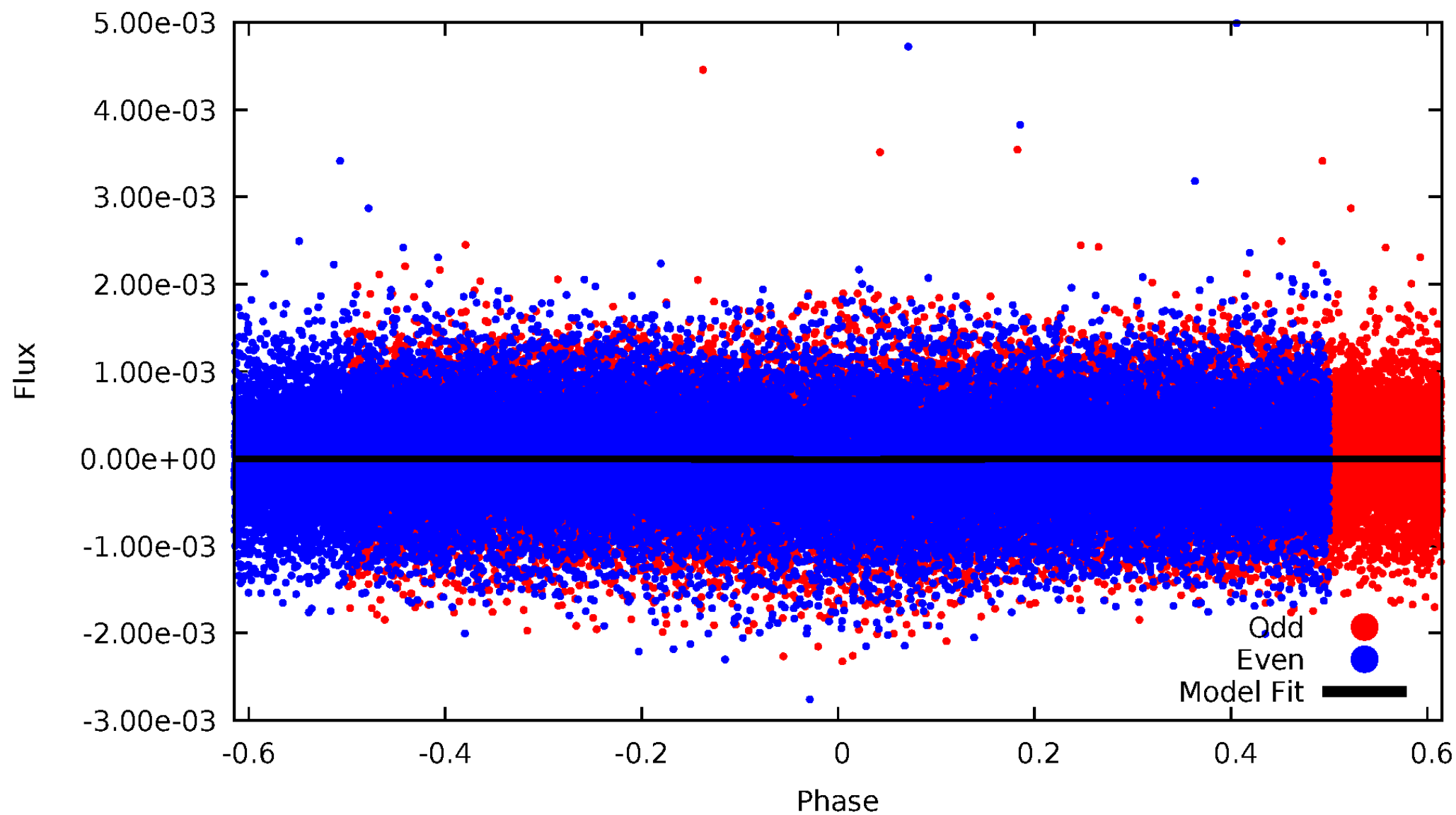


TCE 004864462-01



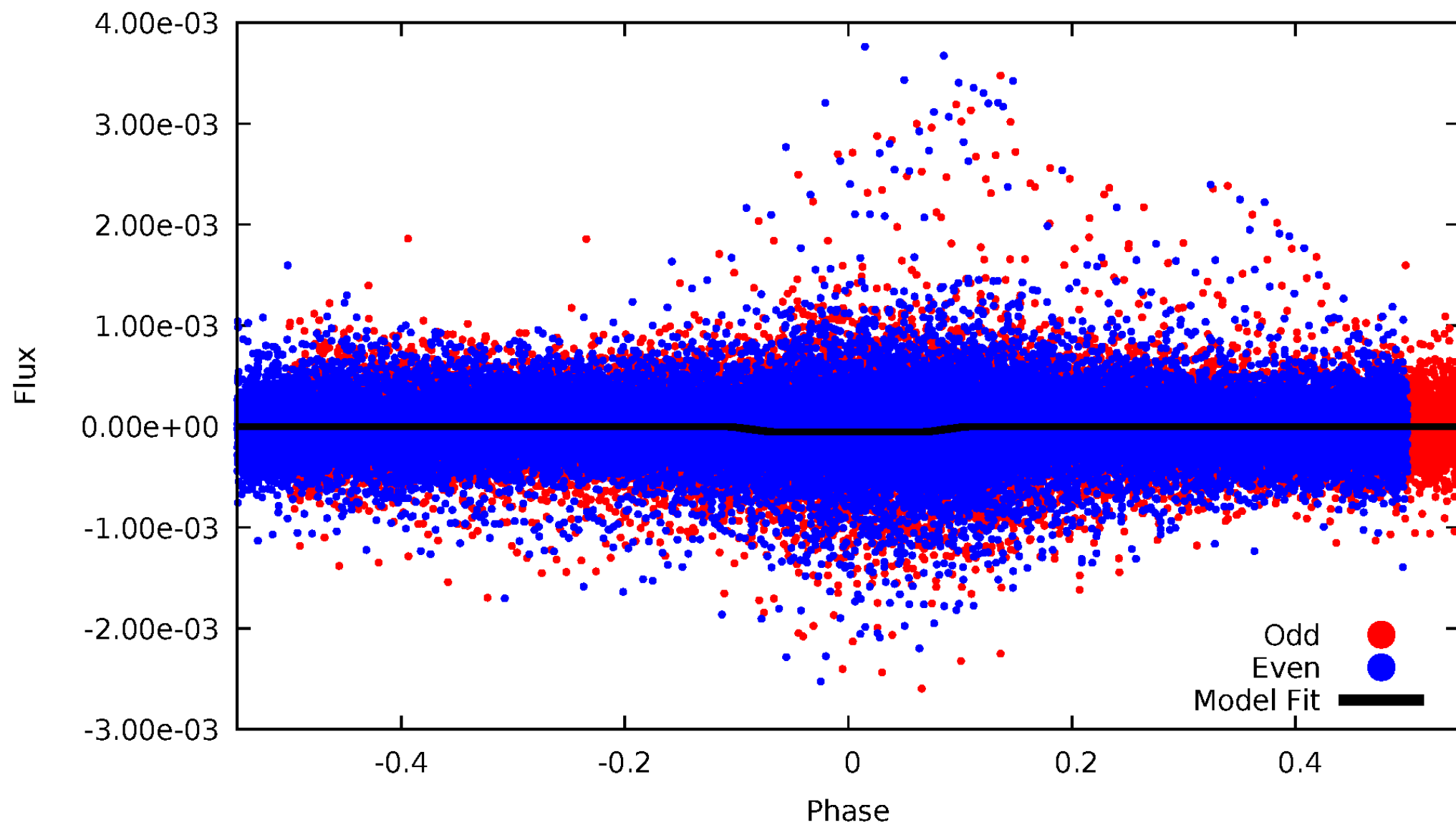
DV Odd/Even

TCE 004864462-01



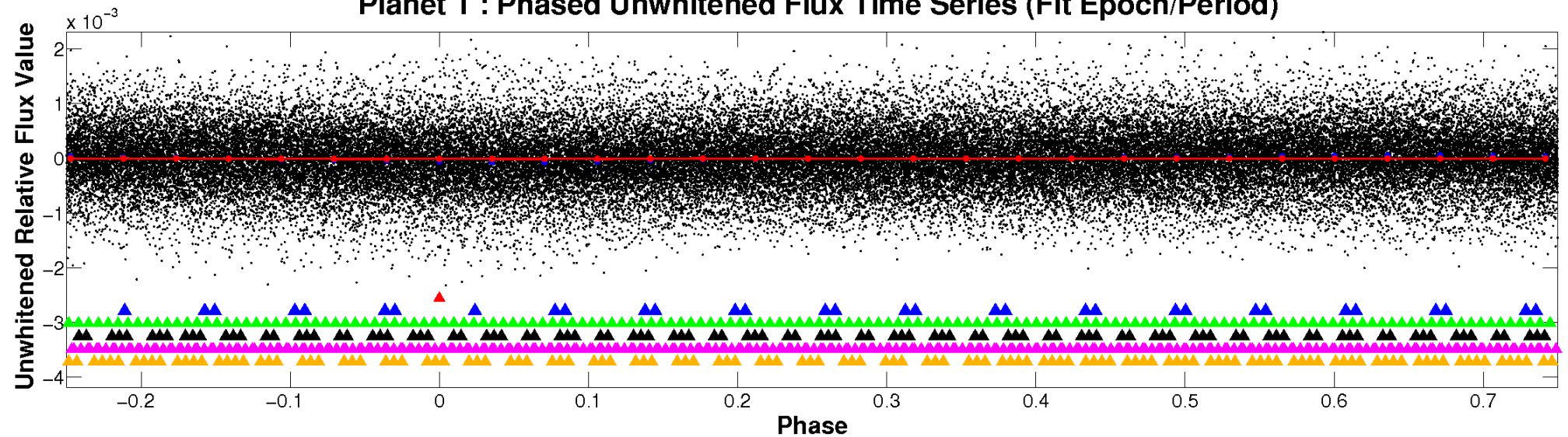
ALT Odd/Even

TCE 004864462-01

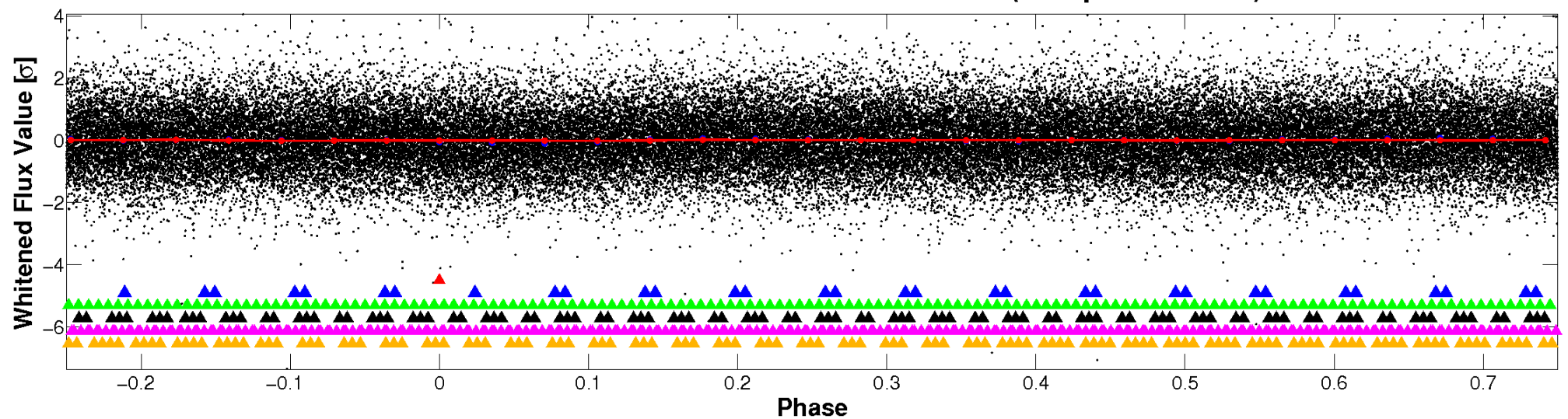


Non-Whitened Vs. Whitened Light Curve

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

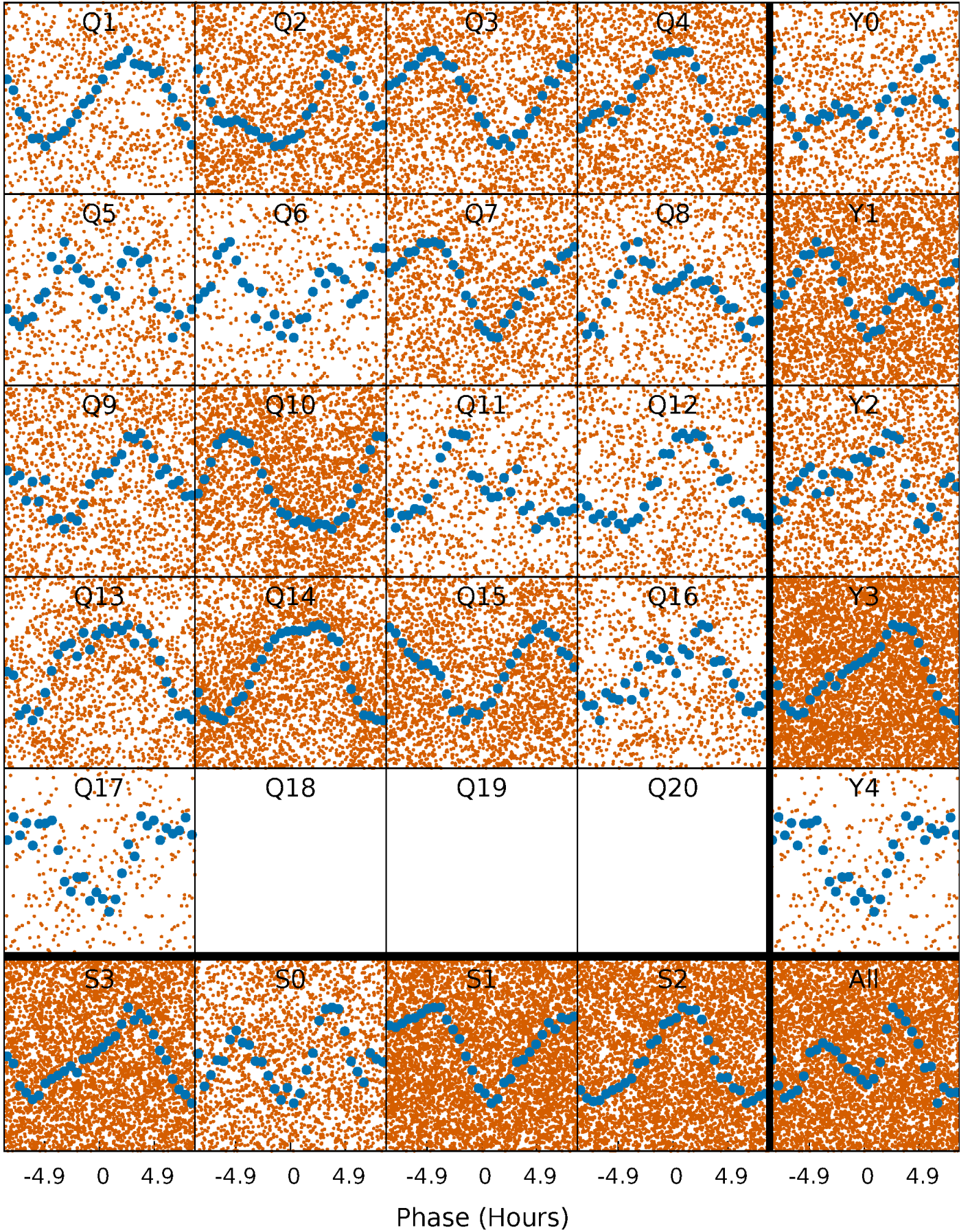


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



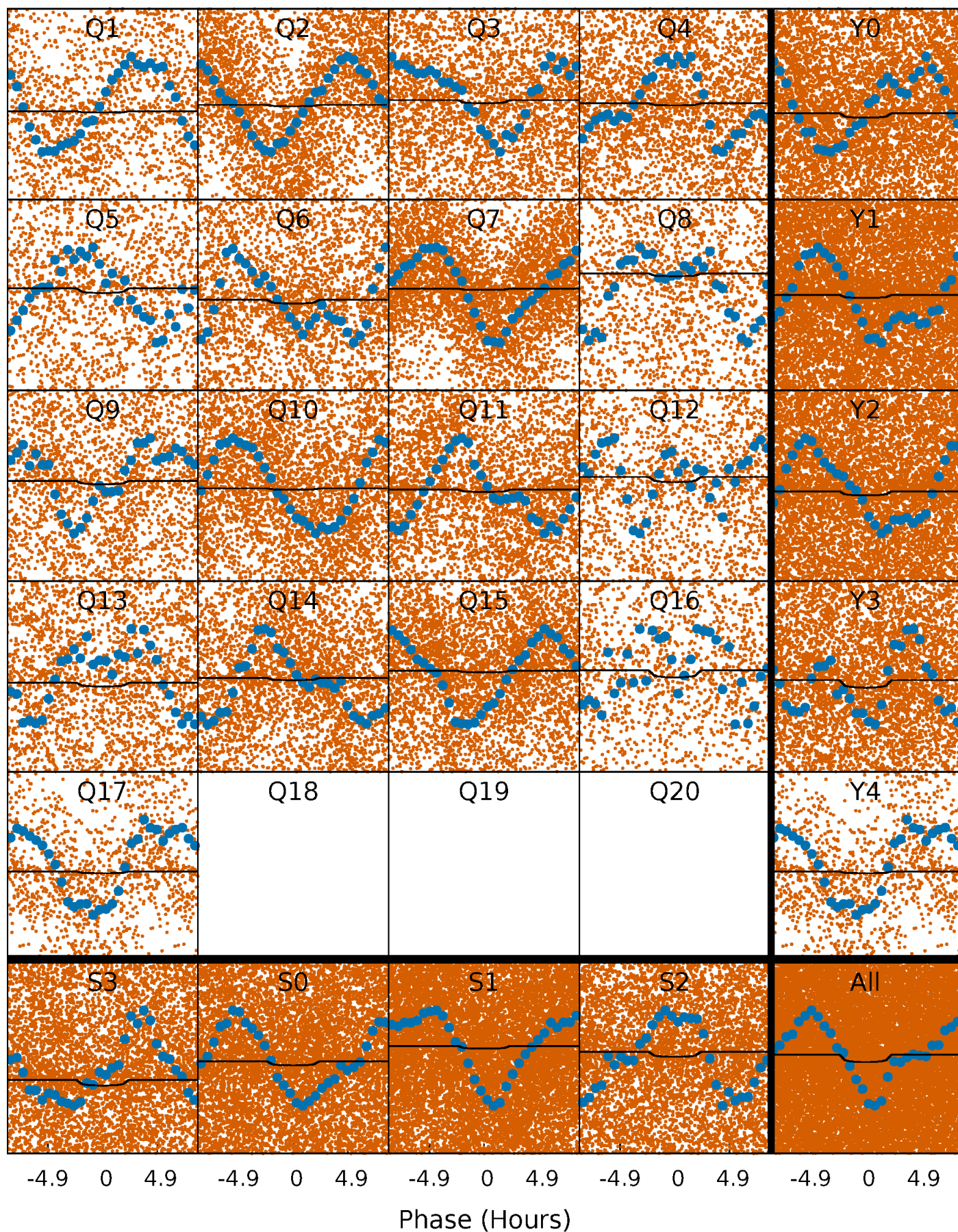
PDC Quarter-Phased Transit Curves

TCE 004864462-01 P= 0.578543 Days $T_0=131.603188$ (BKJD)



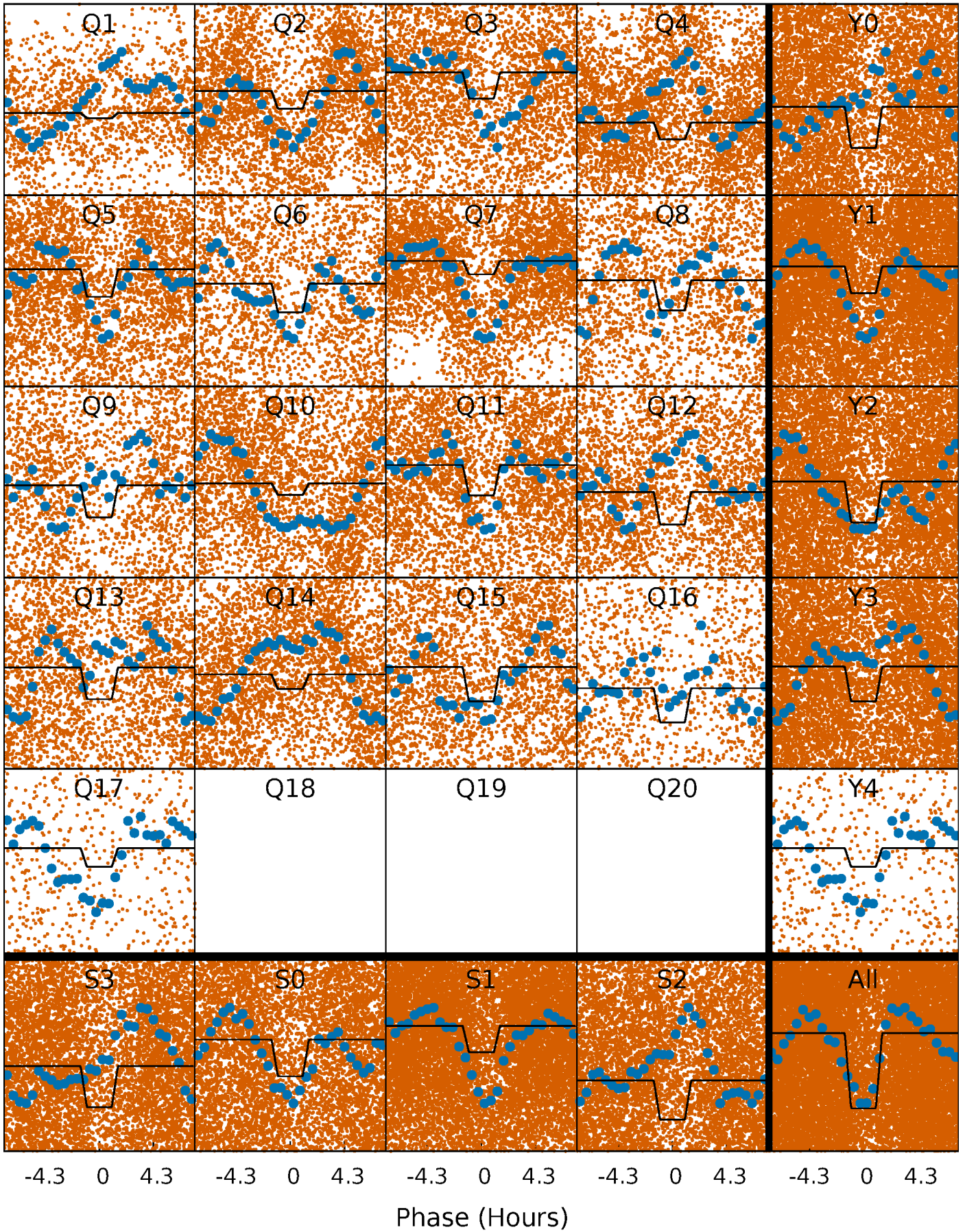
DV Quarter-Phased Transit Curves

TCE 004864462-01 P= 0.578543 Days $T_0=131.603188$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

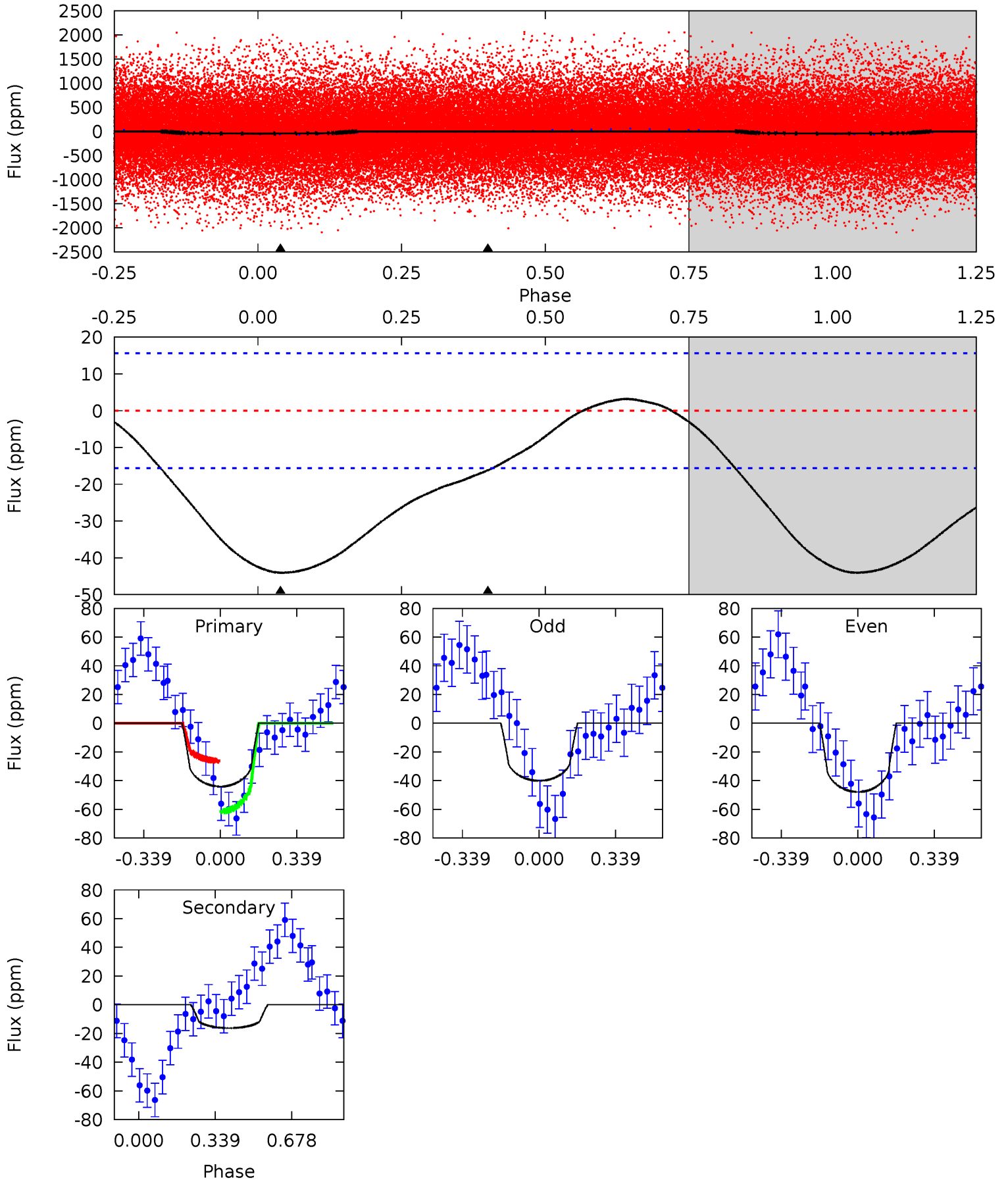
TCE 004864462-01 P= 0.578550 Days $T_0=131.606925$ (BKJD)



DV Model-Shift Uniqueness Test

004864462-01, P = 0.578543 Days, E = 131.024645 Days

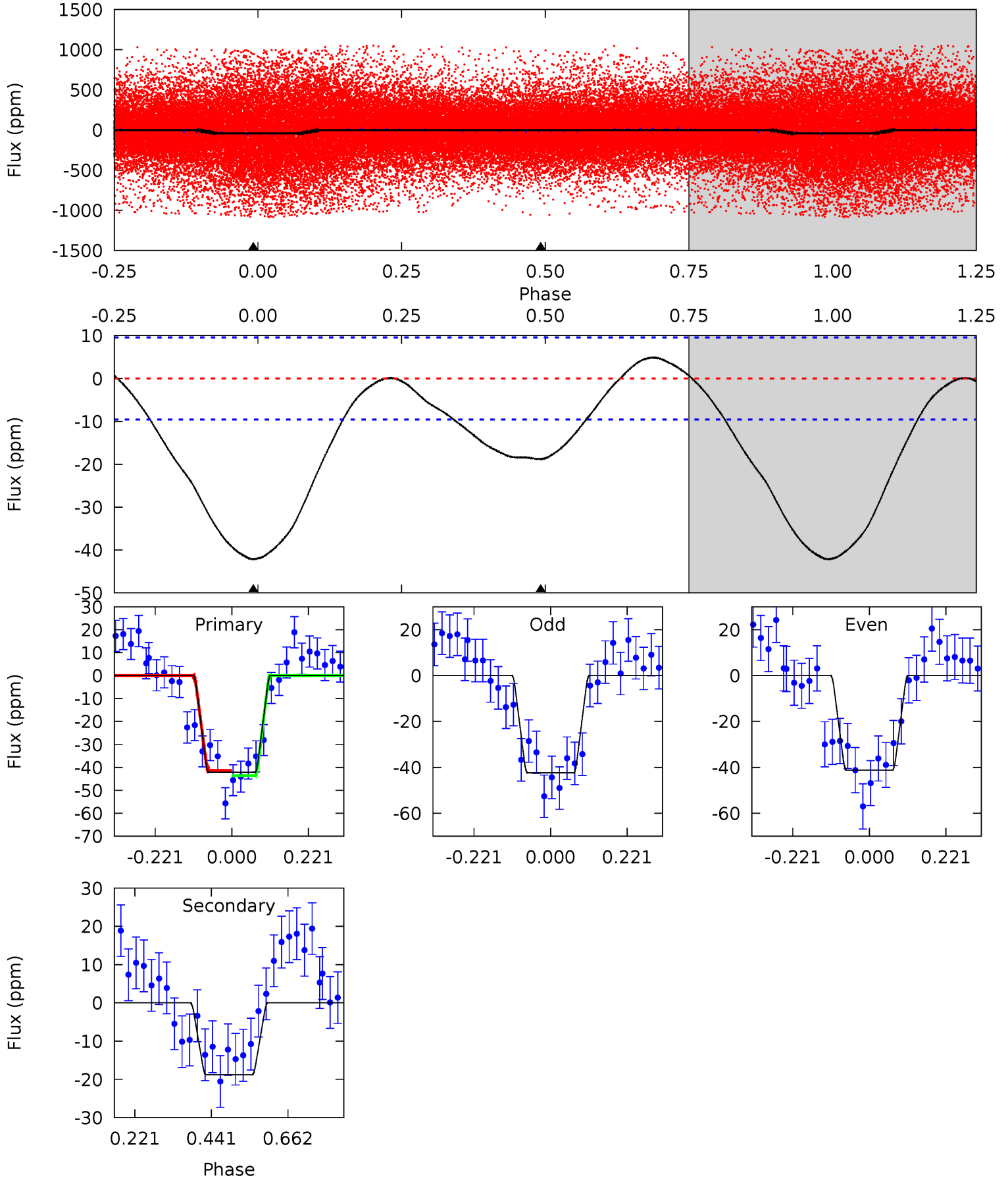
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	4.47	0	0	4.30	0.96	0.66	12.1	12.1	4.47	4.47	1.08	1.50	0.07	4.87



Alt Model-Shift Uniqueness Test

004864462-01, P = 0.578550 Days, E = 131.028375 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.4	8.64	0	0	4.40	1.23	0.77	19.4	19.4	8.64	8.64	0.29	1.36	0.10	0.54



Stellar Parameters For KIC 004864462

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6480^{+162}_{-194}	$4.460^{+0.065}_{-0.208}$	$-0.580^{+0.300}_{-0.350}$	$0.977^{+0.293}_{-0.098}$	$1.004^{+0.122}_{-0.110}$	$1.518^{+0.411}_{-0.775}$
	+2%/-3%	+1%/-5%	+52%/-60%	+30%/-10%	+12%/-11%	+27%/-51%
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 004864462-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-16 ± 4	$0.40^{+0.30}_{-0.24}$	3430^{+264}_{-151}	6748^{+6775}_{-1637}	$9.900^{+64.028}_{-6.644}$
Alt.	-19 ± 2	$0.81^{+0.34}_{-0.34}$	3437^{+239}_{-170}	4920^{+1553}_{-737}	$2.862^{+5.582}_{-1.456}$

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

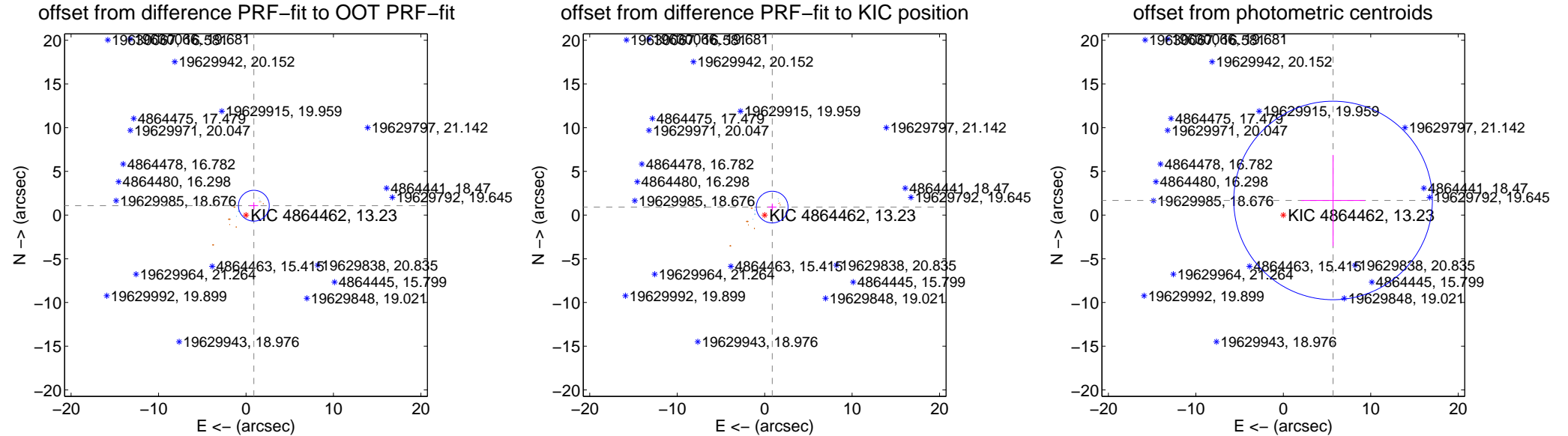
DV Centroid Data

Supplemental centroid analysis for 004864462-01. Kepler magnitude: 13.23. Transit SNR 2.05

There are 5 quarters with good PRF difference image offsets

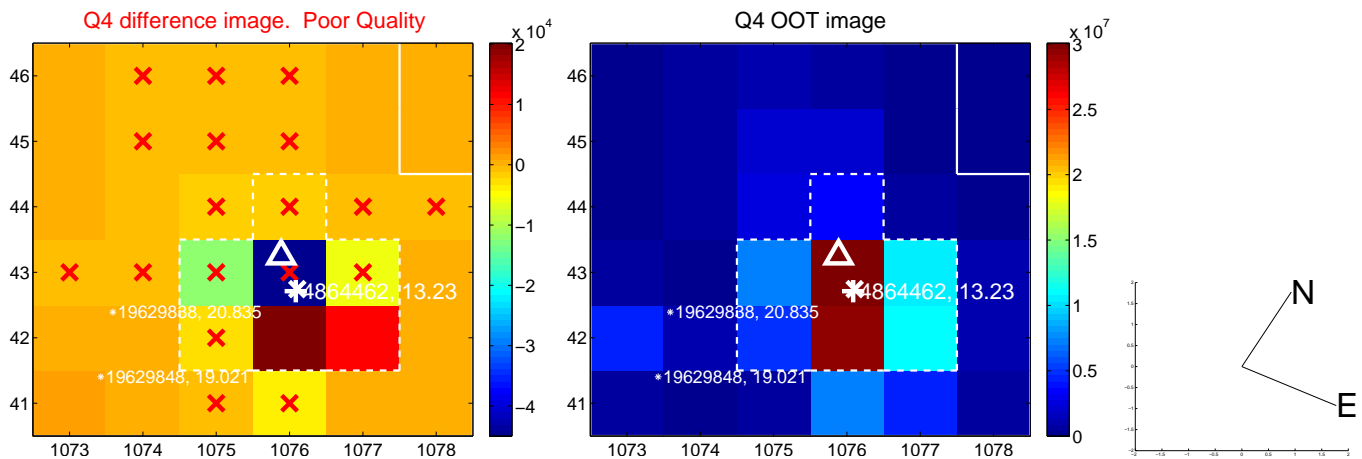
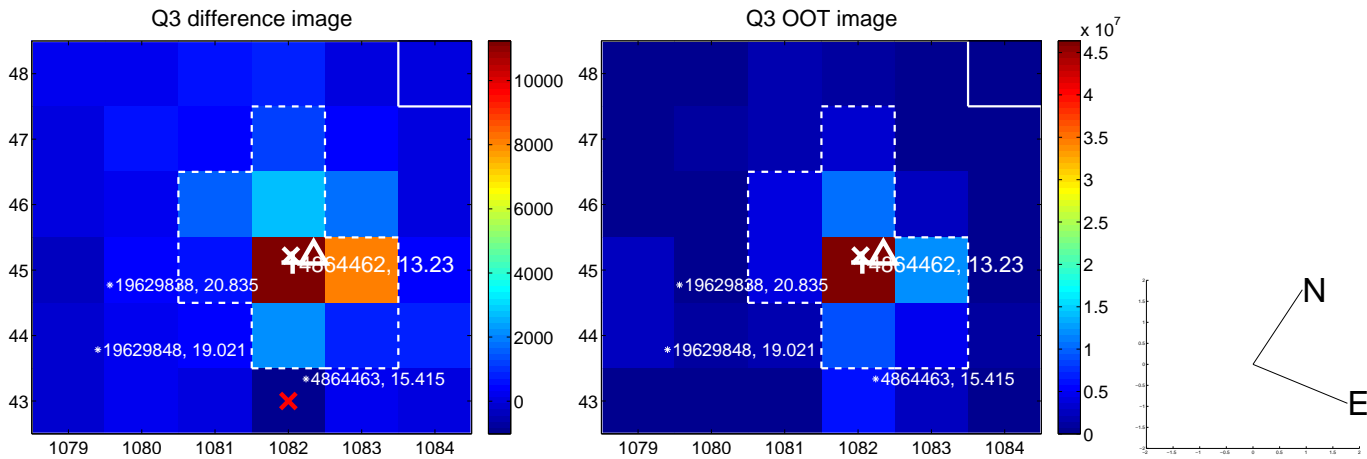
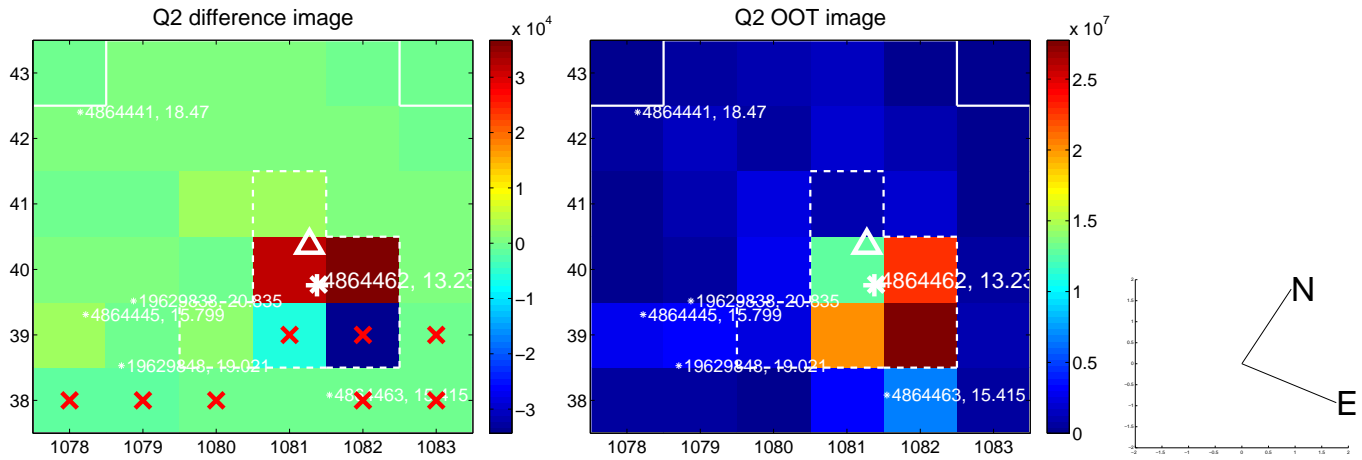
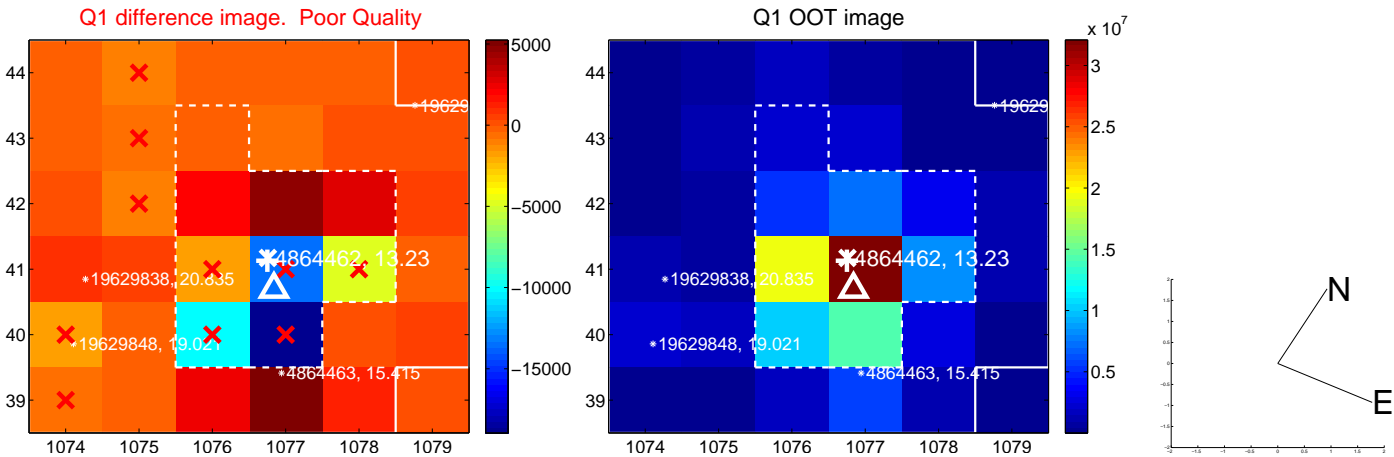
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.397 ± 0.588	2.38	-0.897 ± 0.487	1.071 ± 0.391
PRF-fit source offset from KIC position	1.258 ± 0.604	2.08	-0.864 ± 0.485	0.915 ± 0.406
photometric centroid source offset	5.93 ± 3.78	1.57	-5.69 ± 3.64	1.67 ± 5.20

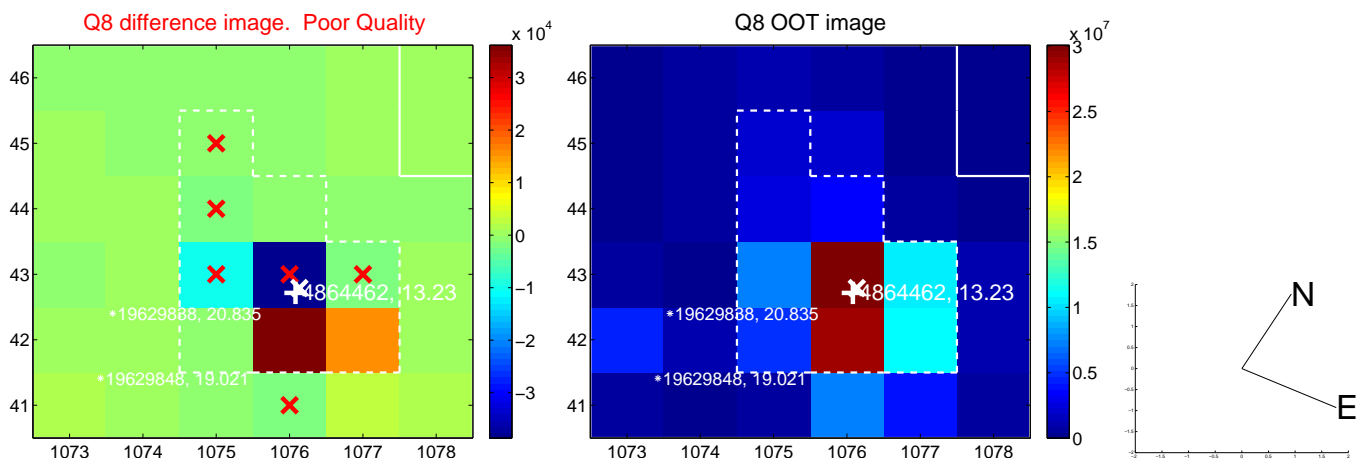
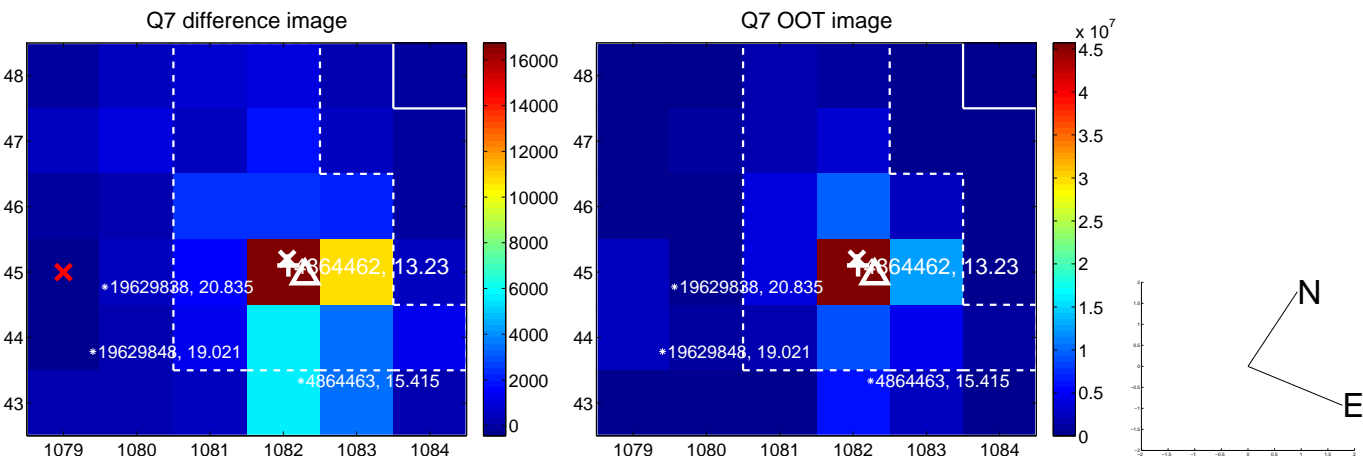
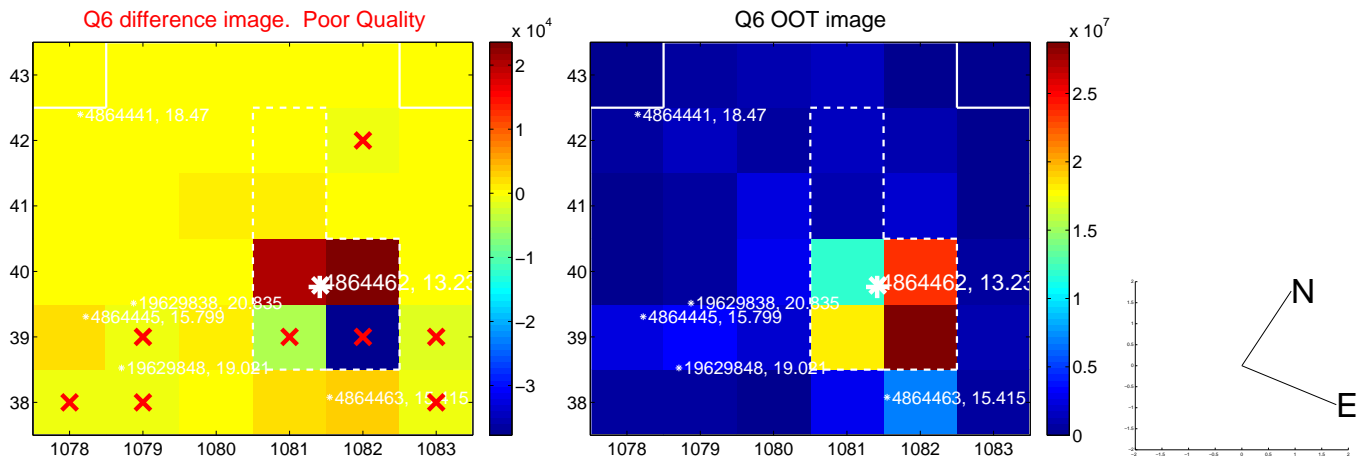
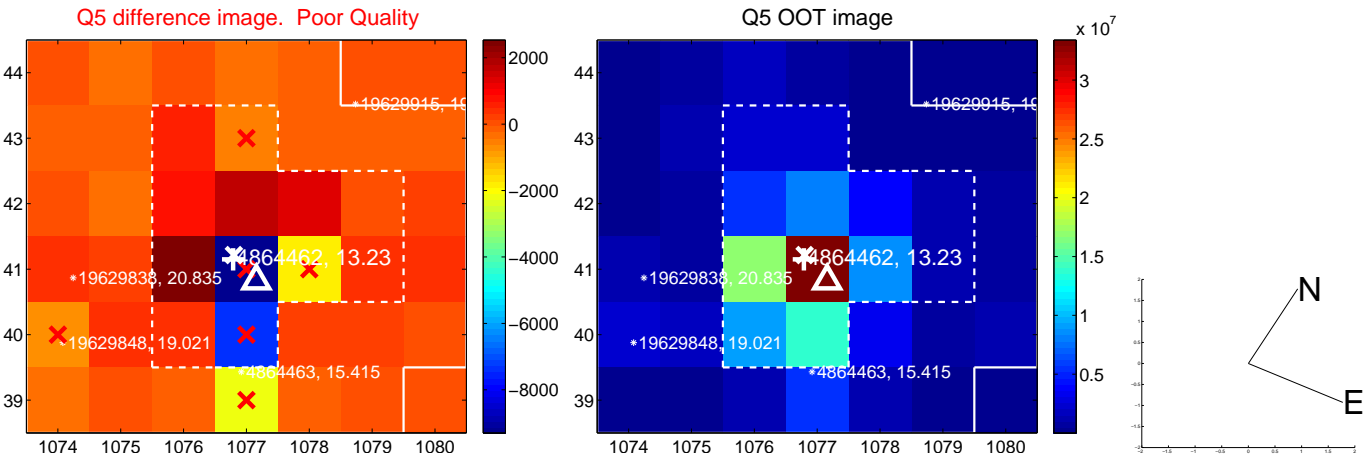


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

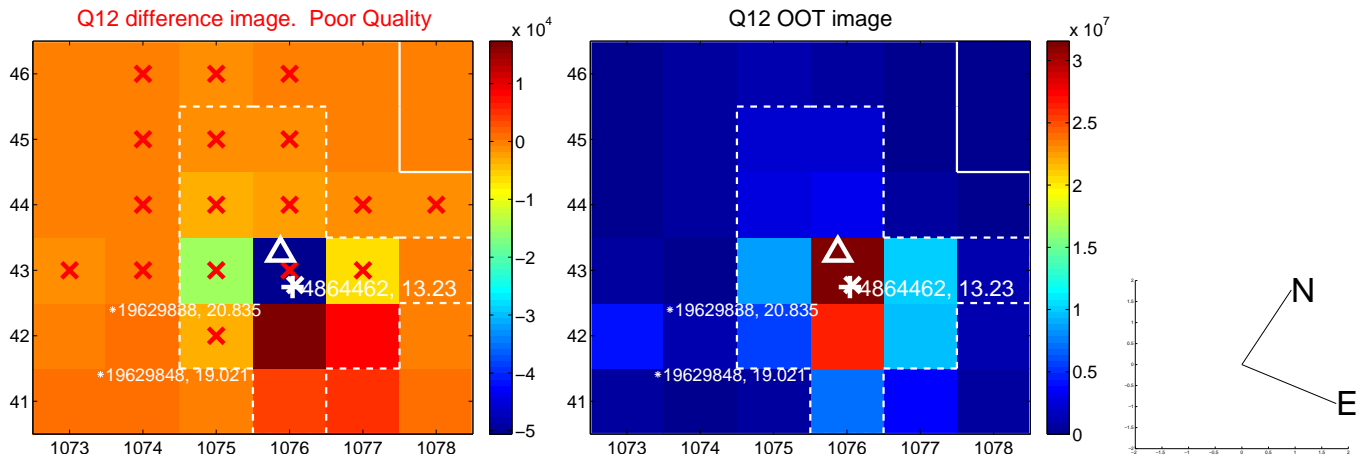
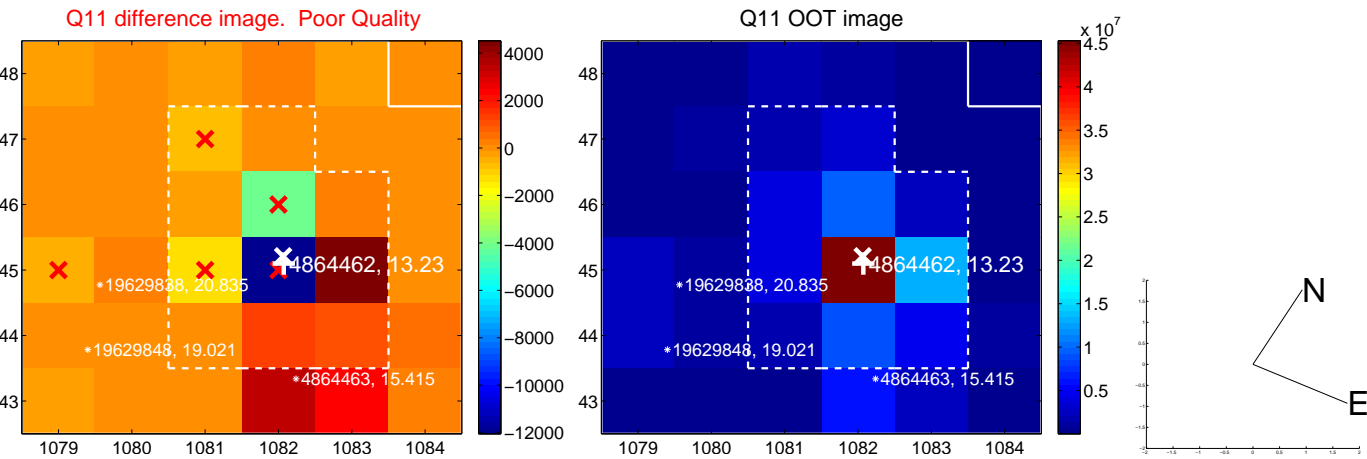
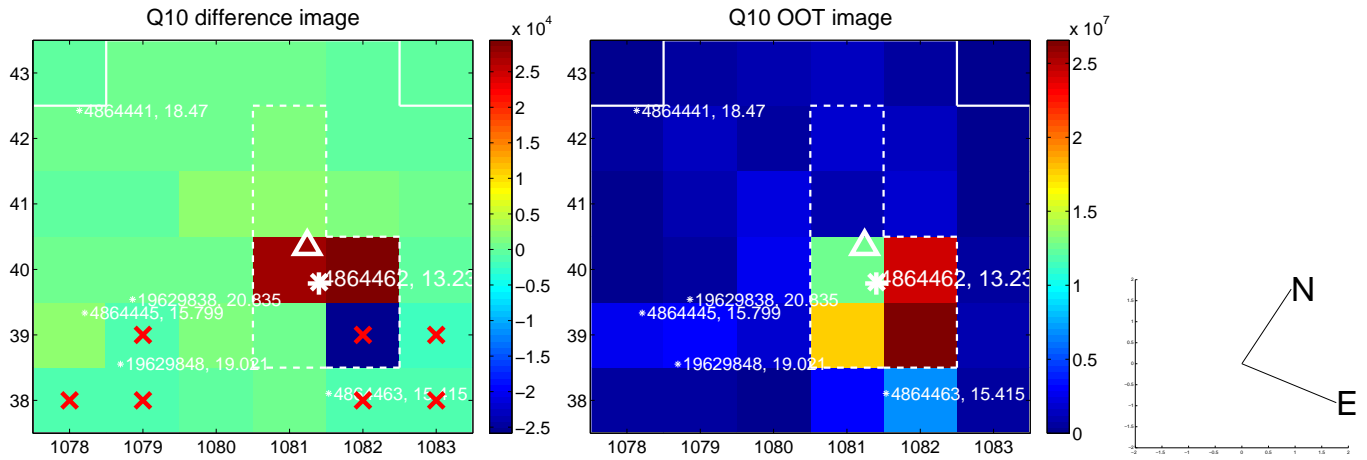
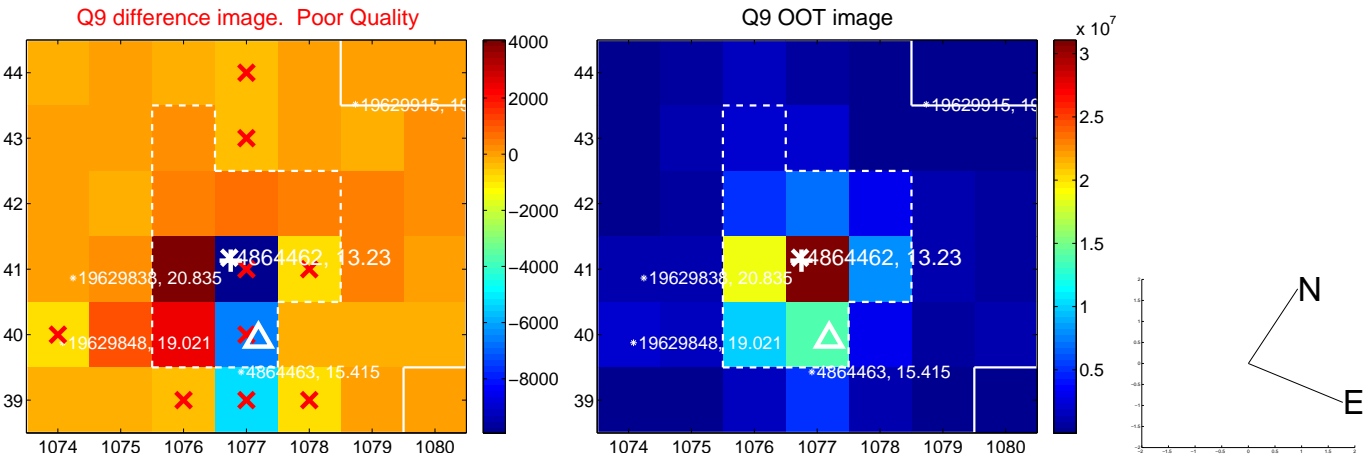
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



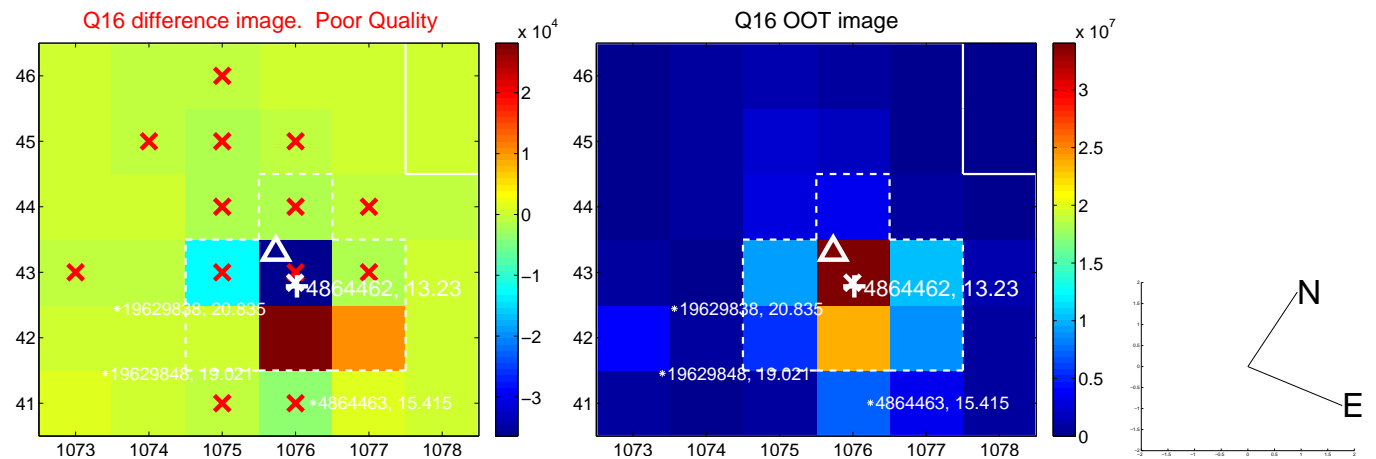
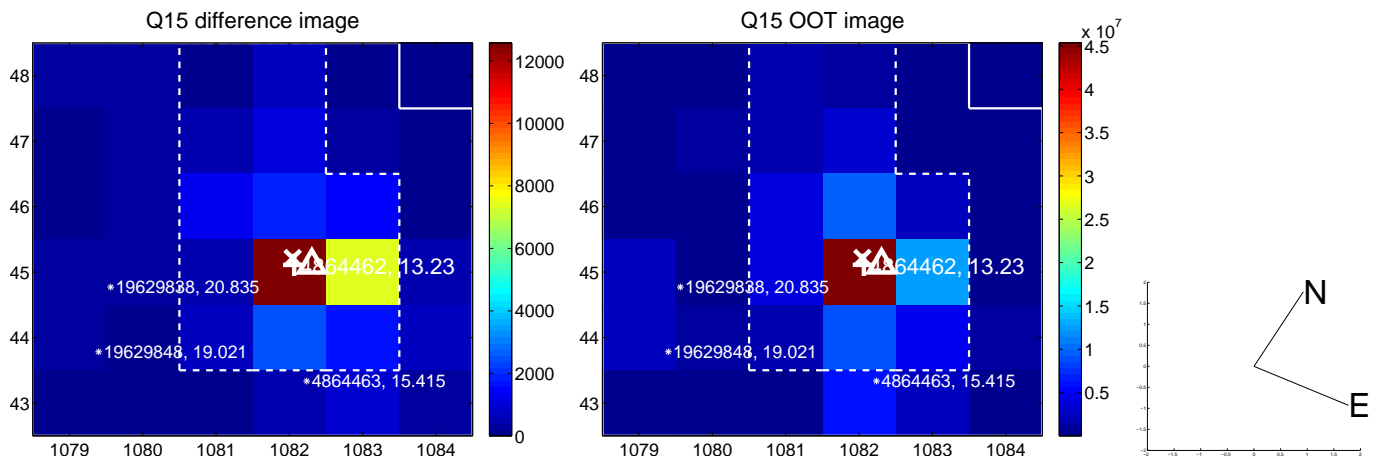
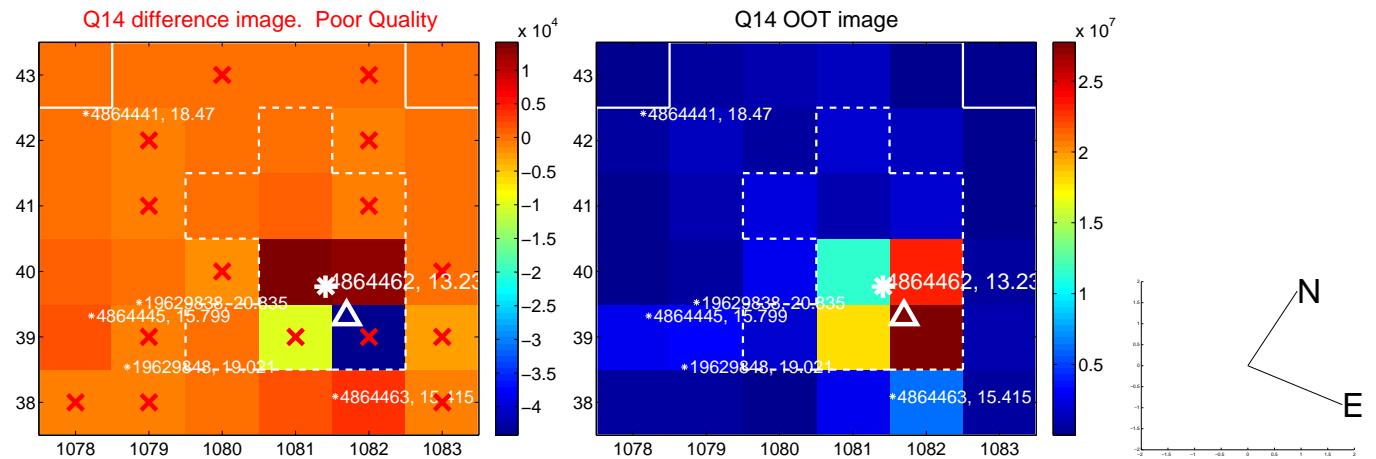
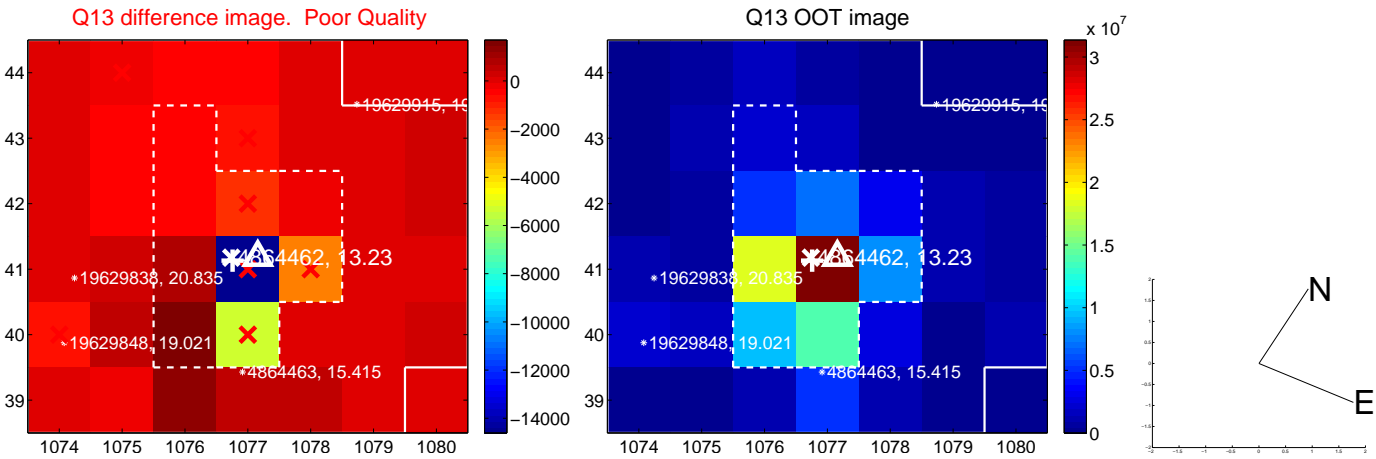
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



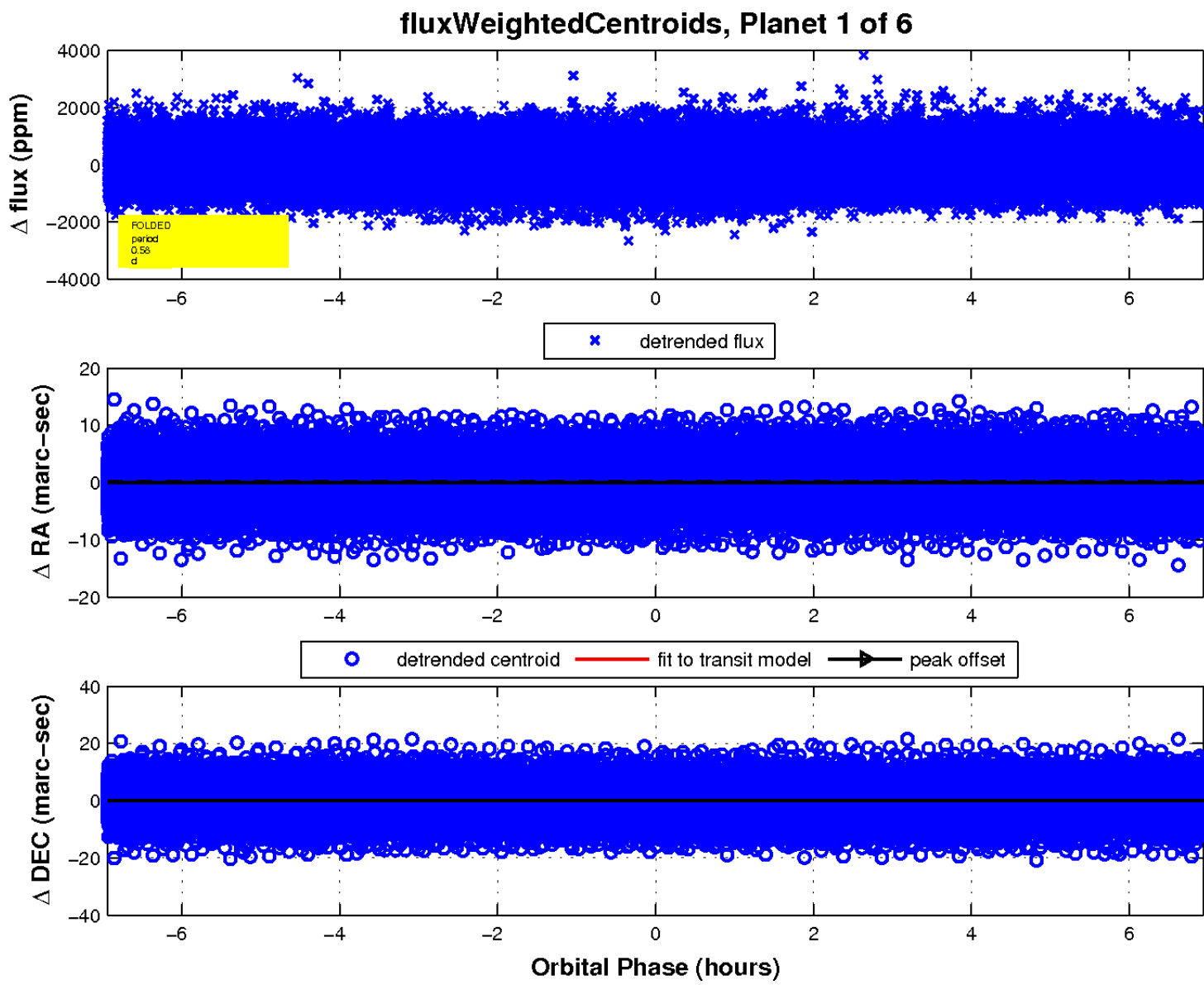
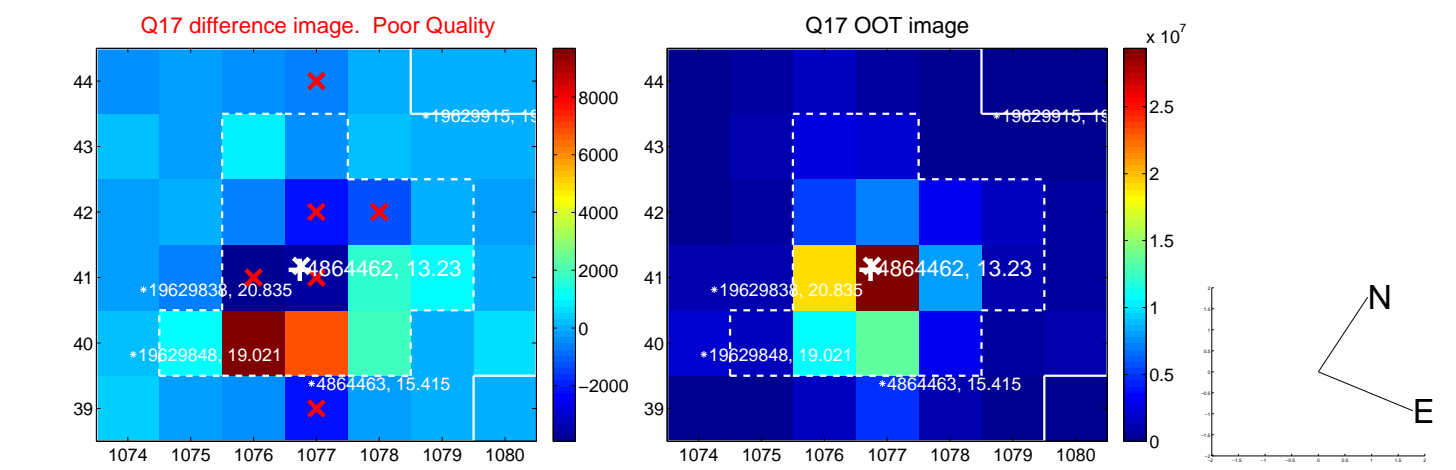
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

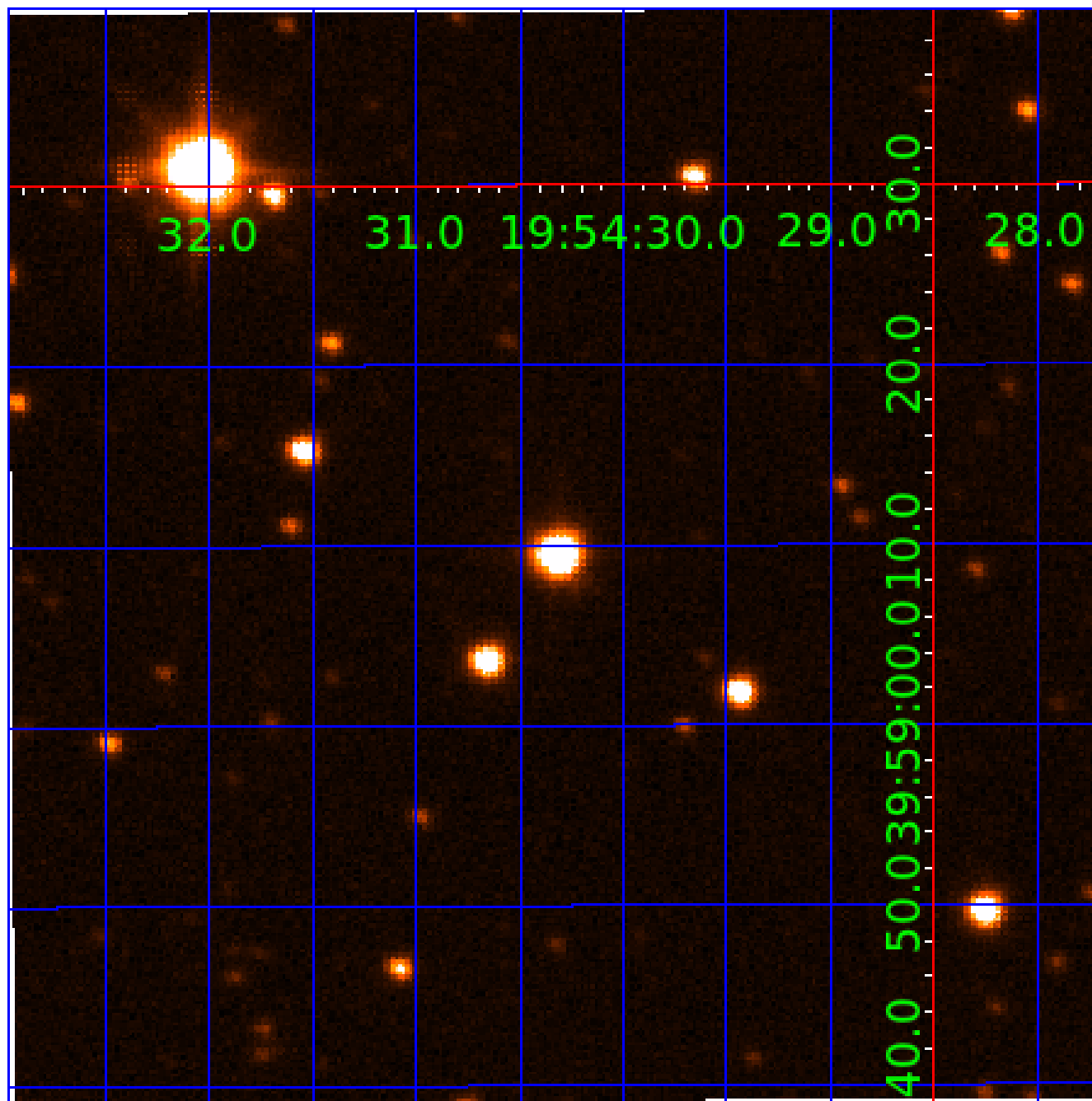


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004864462

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})
004864462-01	OBS	No	0.578543	131.603188	9.2	4.266	7.5	2.1	0.98	6480	0.31	8140.97
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004864462-04	OBS	No	13.986216	143.647032	1163.4	1.421	10.8	9.9	0.98	6480	3.40	116.46
004864462-05	OBS	No	5.043872	131.870691	1015.3	0.905	11.1	11.3	0.98	6480	3.22	453.70
004864462-06	OBS	No	11.587027	141.078323	1600.6	0.632	11.2	10.8	0.98	6480	4.18	149.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004864462-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
004864462-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES
004864462-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV
004864462-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV
004864462-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004864462-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV

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

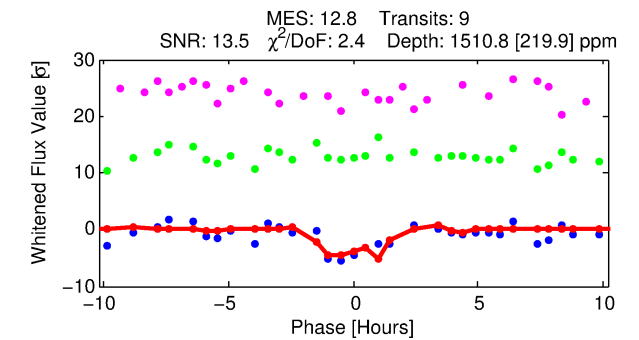
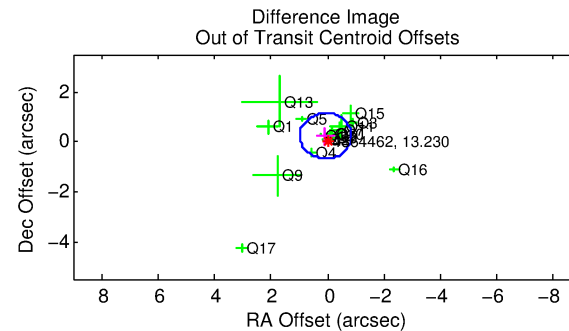
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 004864462-02

No Significant Match Found

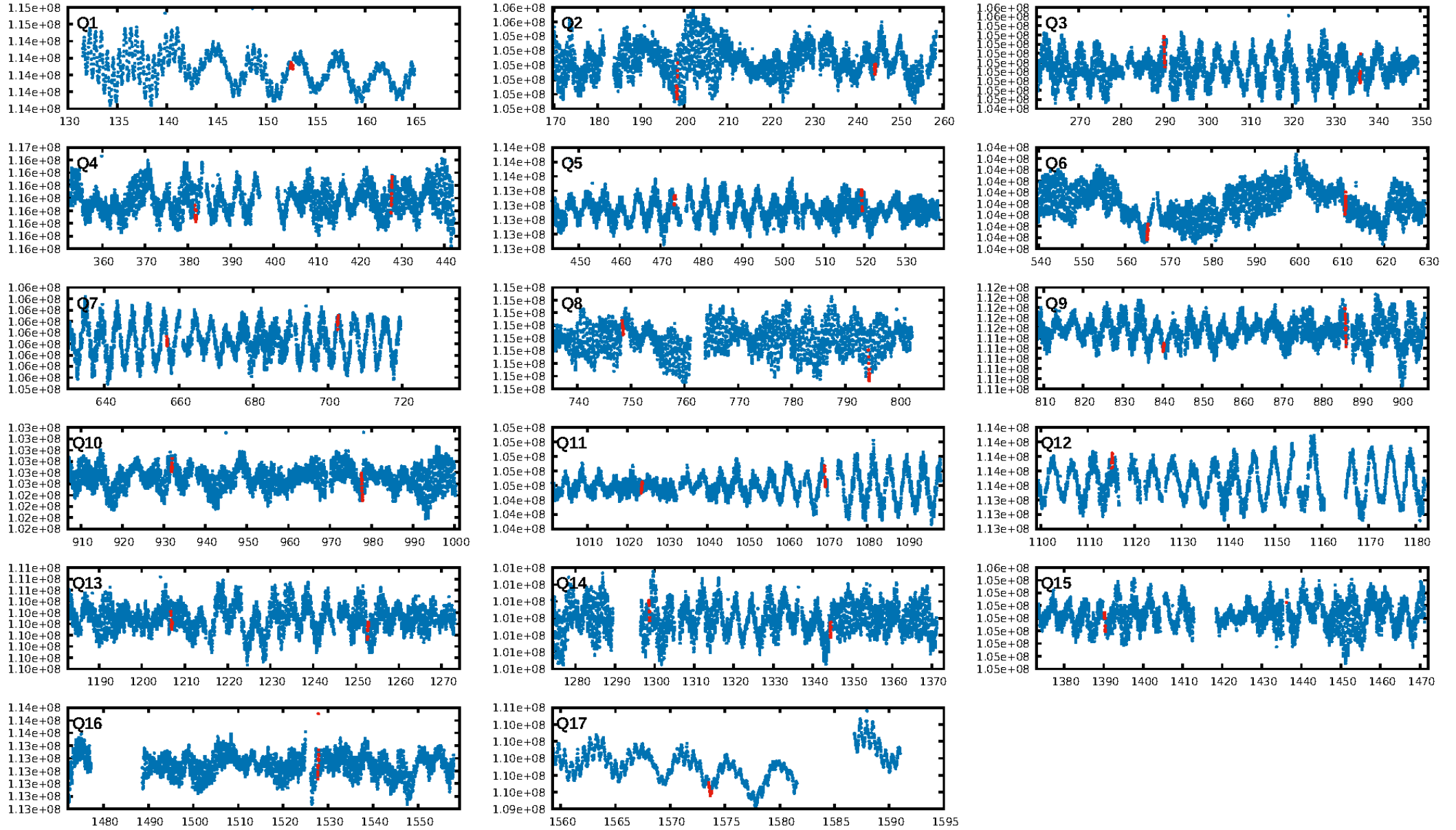
KIC: 4864462 Candidate: 2 of 6 Period: 45.841 d



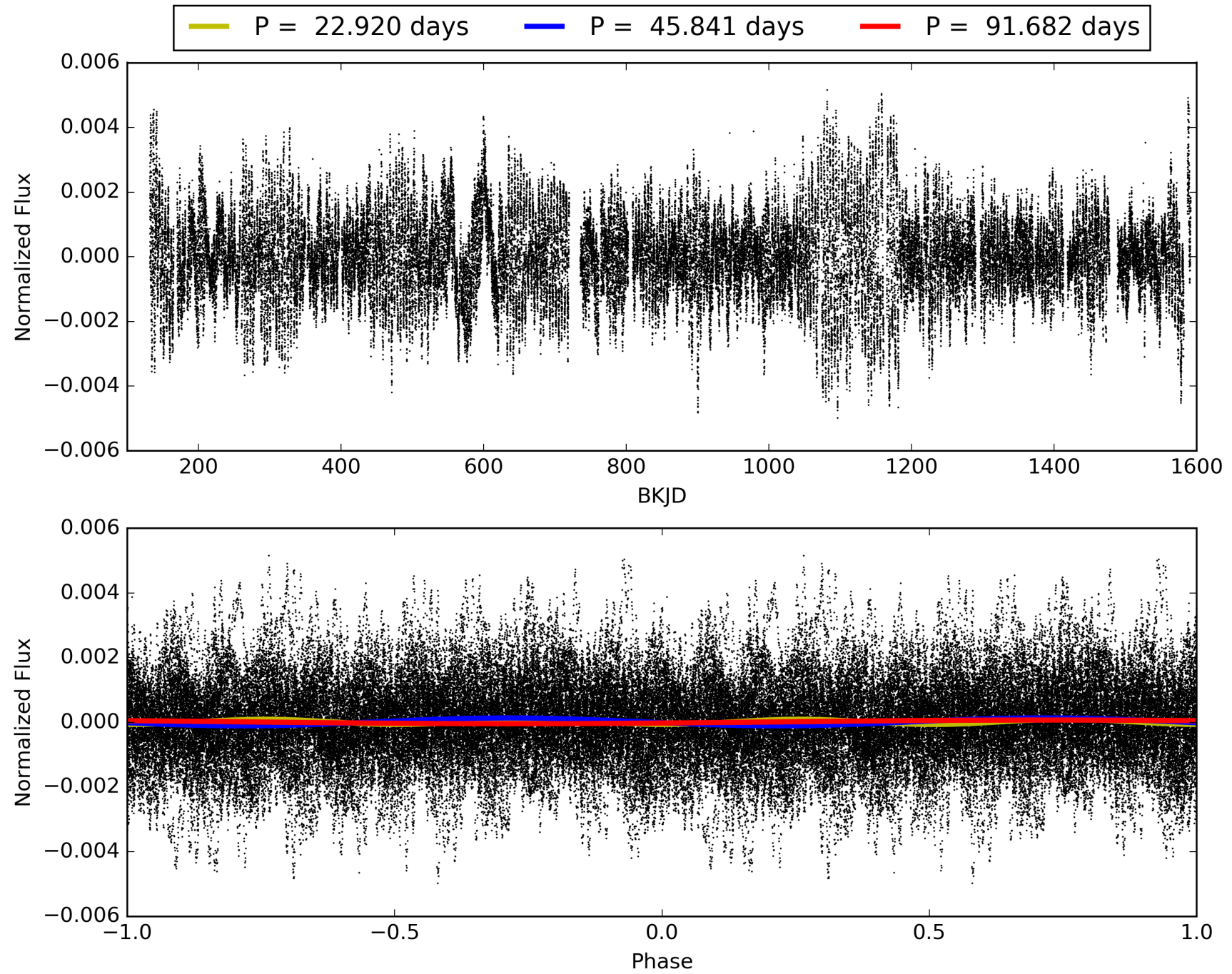
ShortPeriod-sig: 100.0% [207.81σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.92e-45
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.9205

Centroid-sig: 81.4%
Centroid-so: 0.881 arcsec [3.28σ]
OotOffset-rm: 0.240 arcsec [0.79σ]
KicOffset-rm: 0.079 arcsec [0.26σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 004864462-02, PDC Light Curves

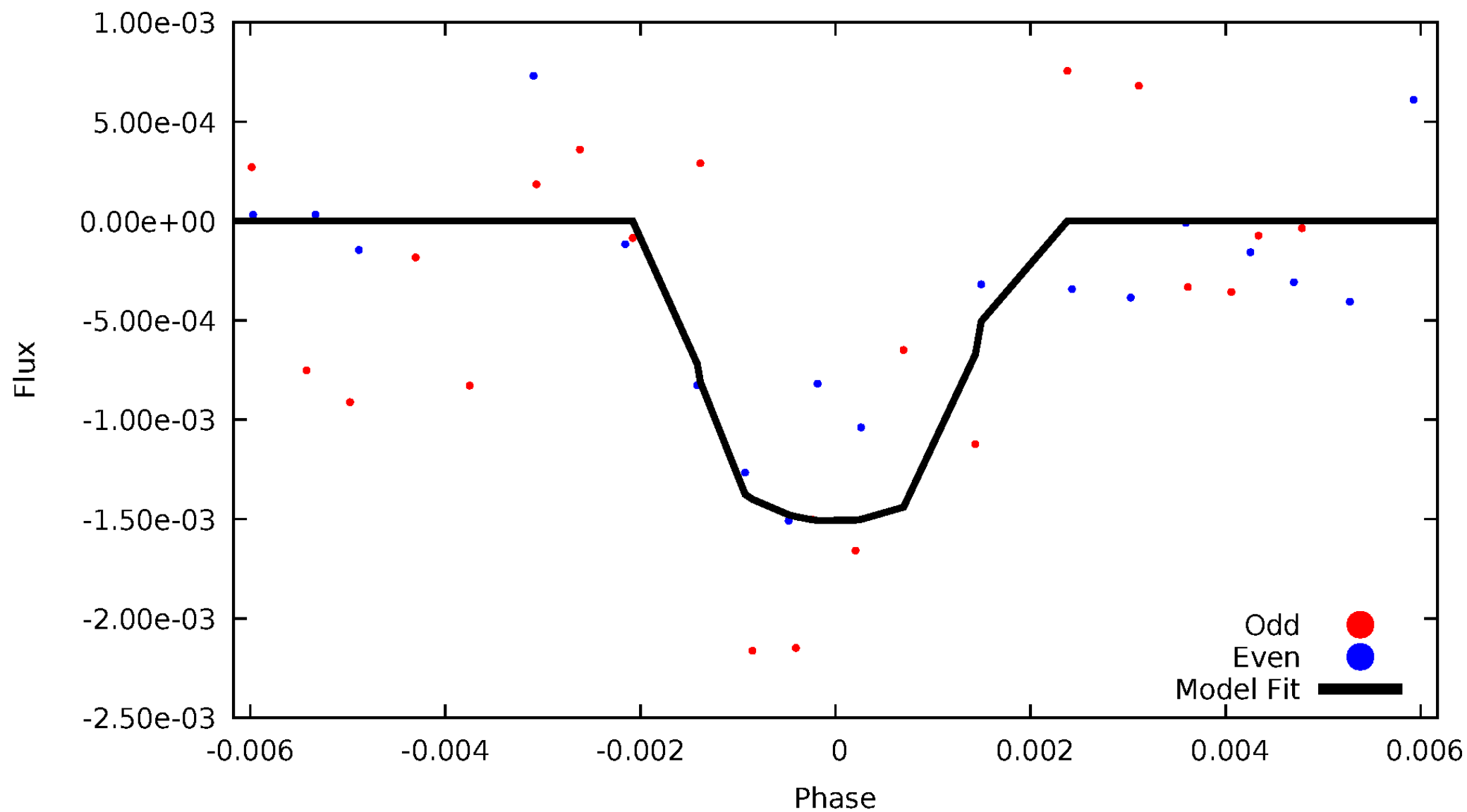


TCE 004864462-02



DV Odd/Even

TCE 004864462-02

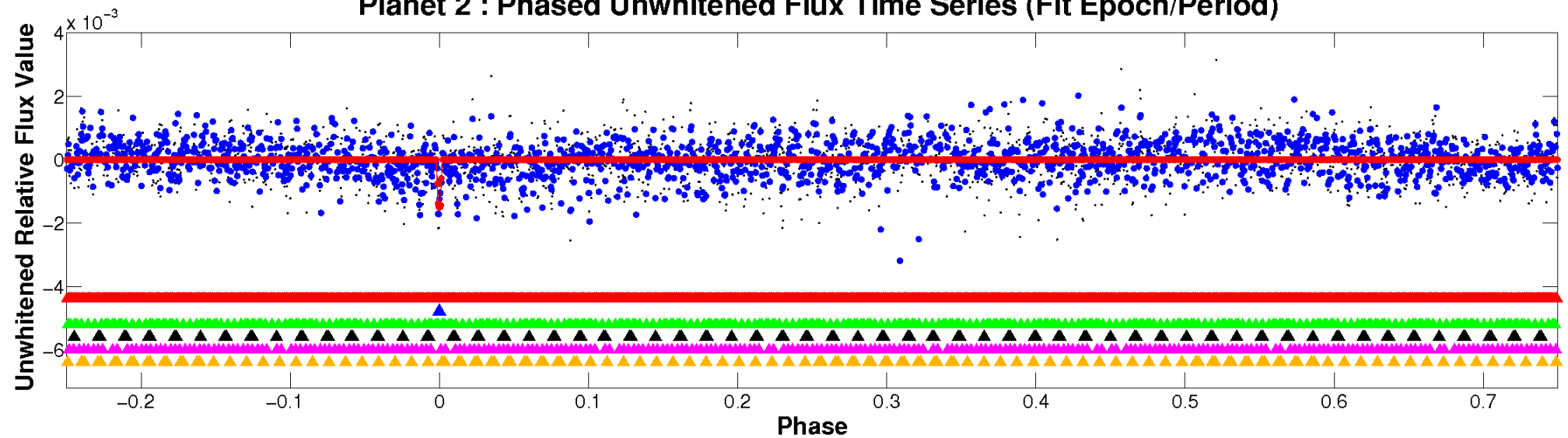


ALT Odd/Even

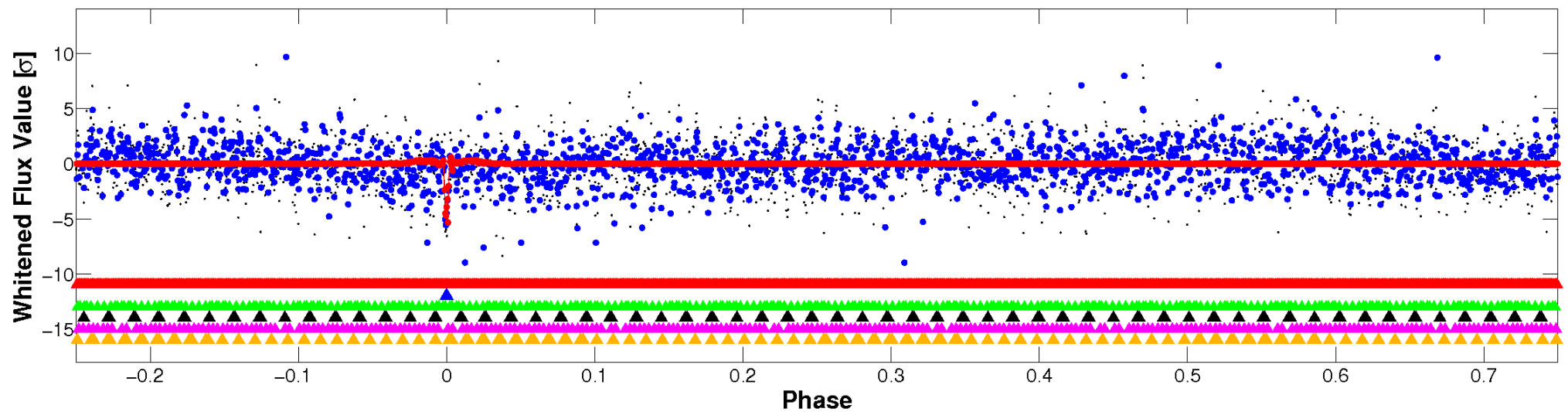
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

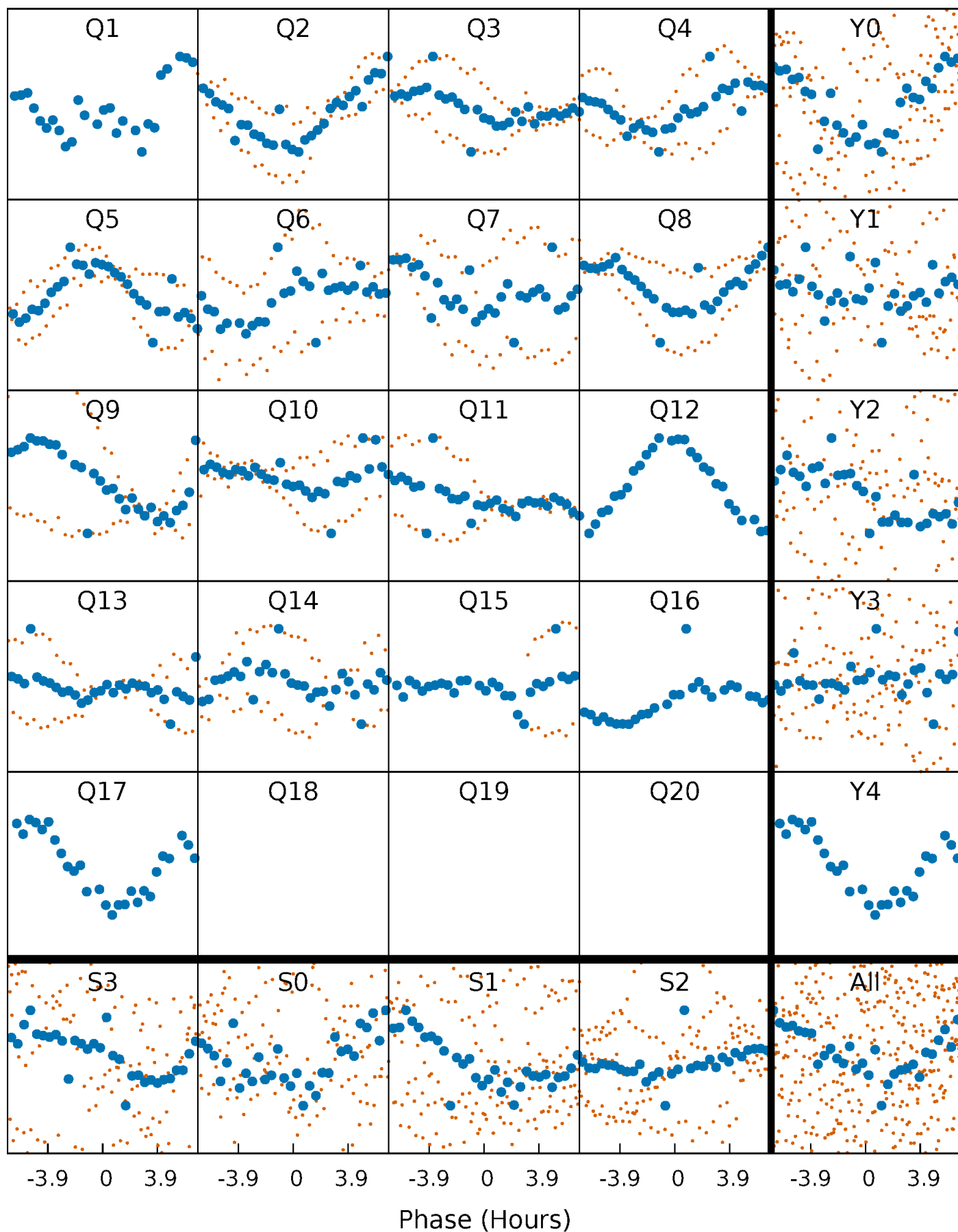


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



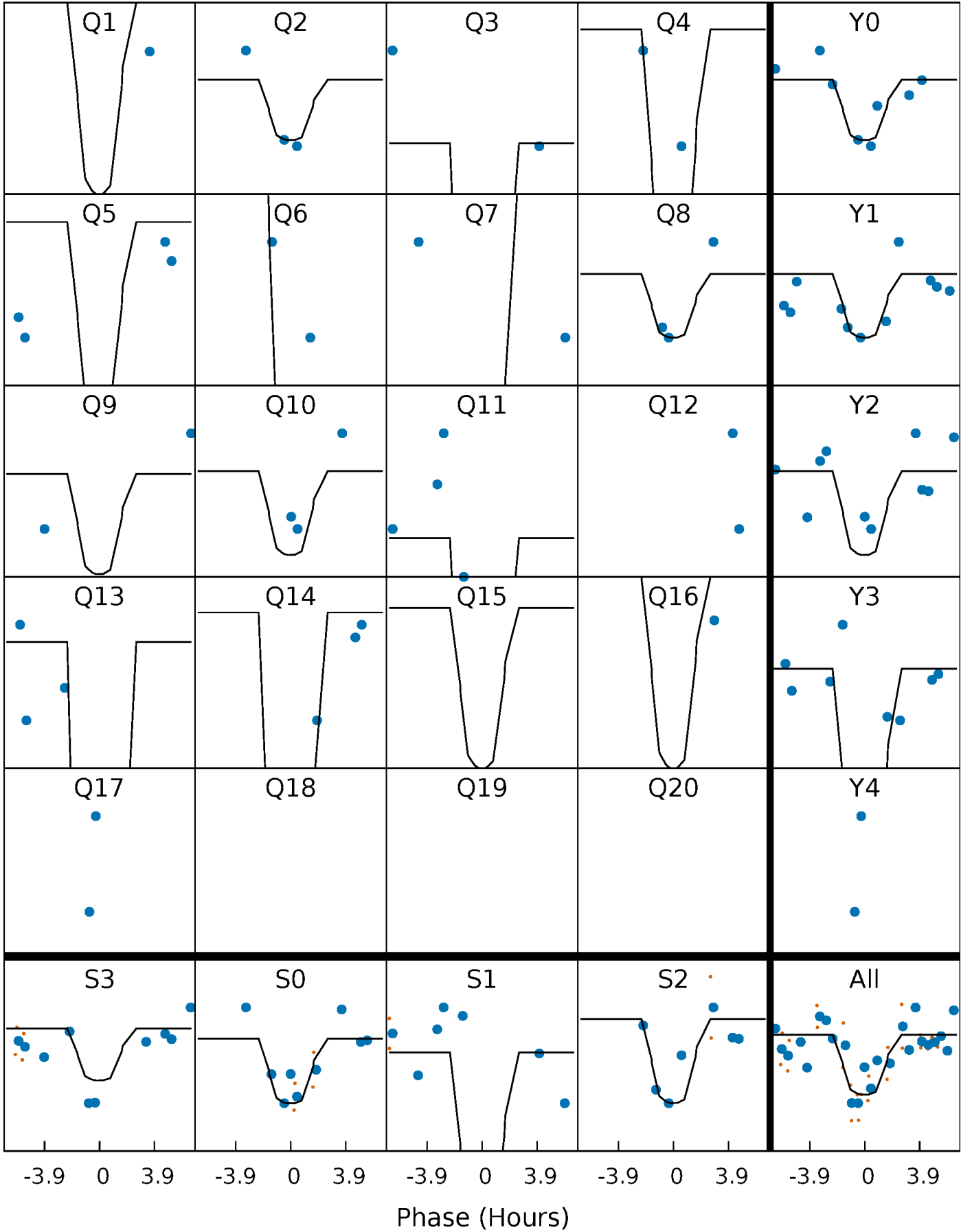
PDC Quarter-Phased Transit Curves

TCE 004864462-02 P= 45.840833 Days $T_0=152.584351$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004864462-02 P= 45.840833 Days $T_0=152.584351$ (BKJD)

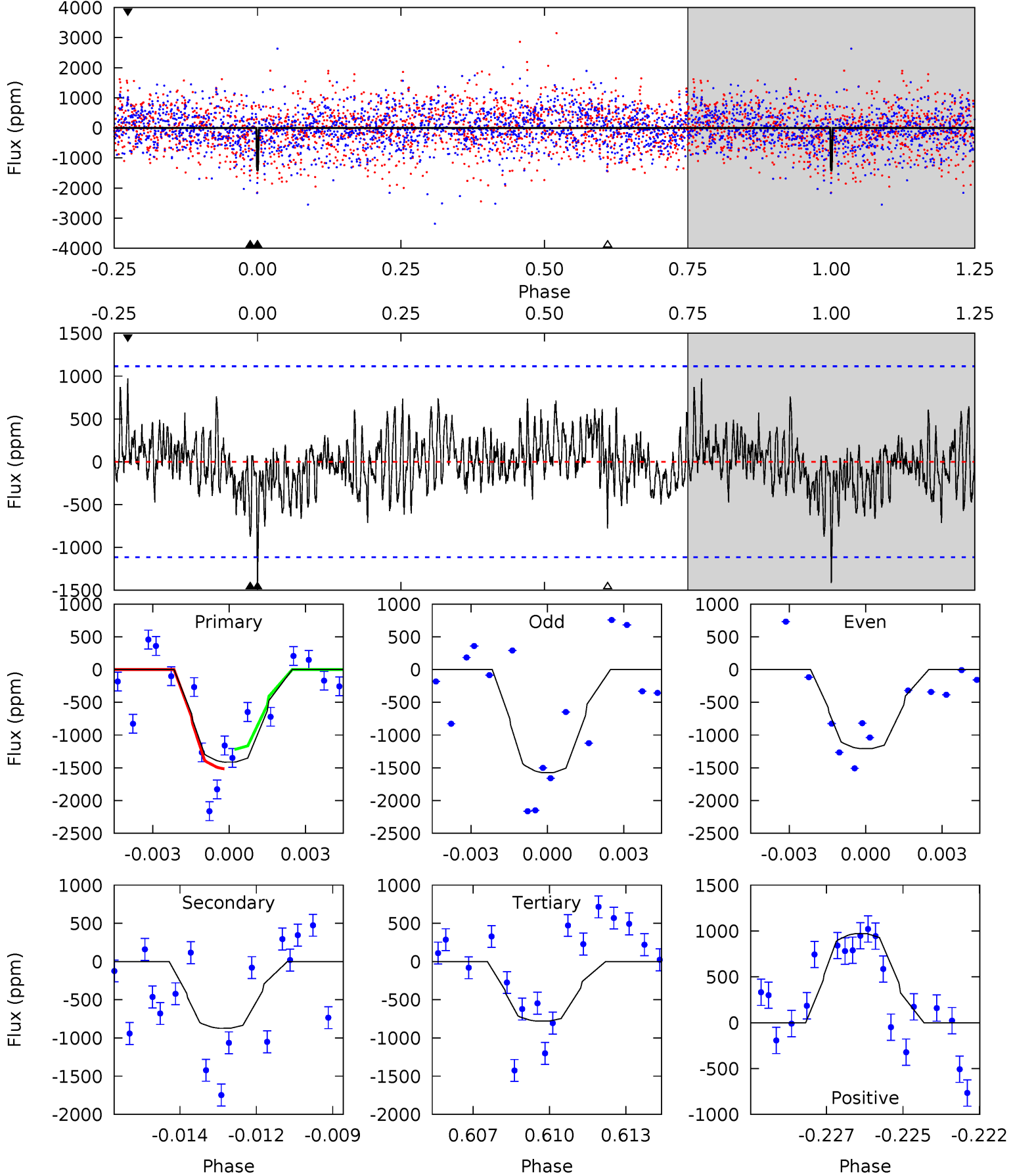


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004864462-02, P = 45.840833 Days, E = 106.743518 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.68	4.12	3.68	4.59	5.26	2.98	1.29	2.99	2.09	0.44	-0.46	0.85	1.02	0.41	0.68



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004864462

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6480^{+162}_{-194}	$4.460^{+0.065}_{-0.208}$	$-0.580^{+0.300}_{-0.350}$	$0.977^{+0.293}_{-0.098}$	$1.004^{+0.122}_{-0.110}$	$1.518^{+0.411}_{-0.775}$
	+2%/-3%	+1%/-5%	+52%/-60%	+30%/-10%	+12%/-11%	+27%/-51%
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 004864462-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-873 ± 212	$9.55^{+8.93}_{-6.59}$	801^{+58}_{-40}	4096^{+2589}_{-838}	350^{+3042}_{-271}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

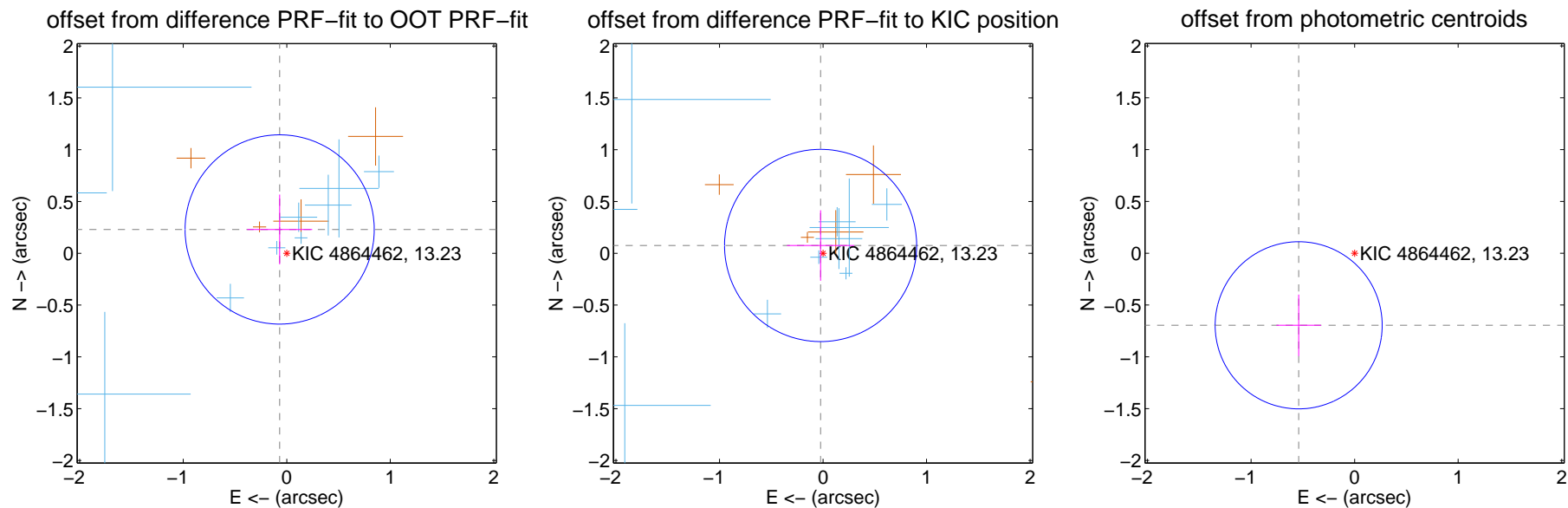
DV Centroid Data

Supplemental centroid analysis for 004864462-02. Kepler magnitude: 13.23. Transit SNR 13.49

There are 10 quarters with good PRF difference image offsets

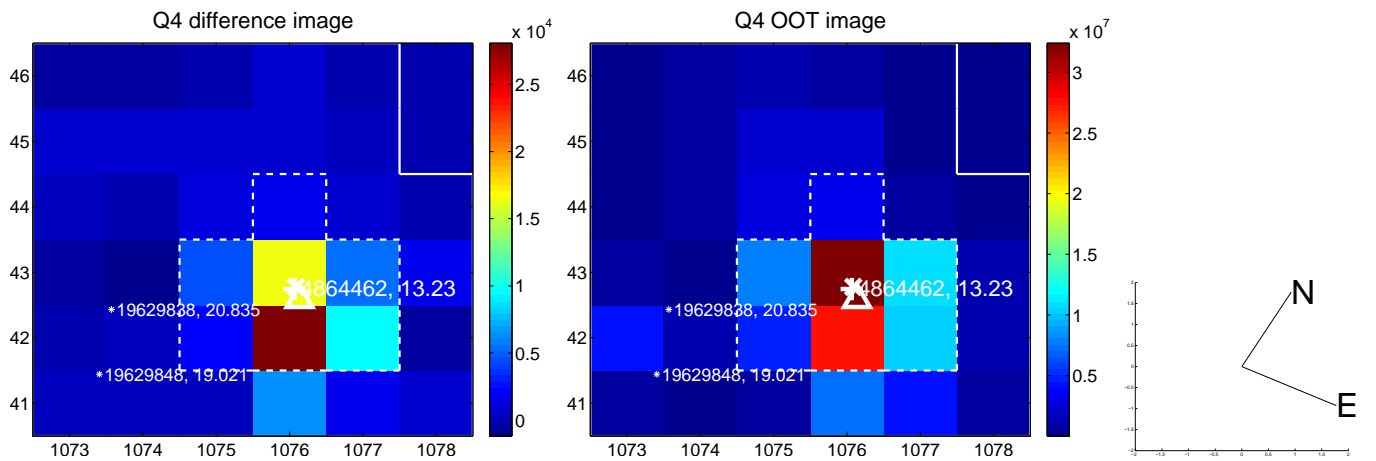
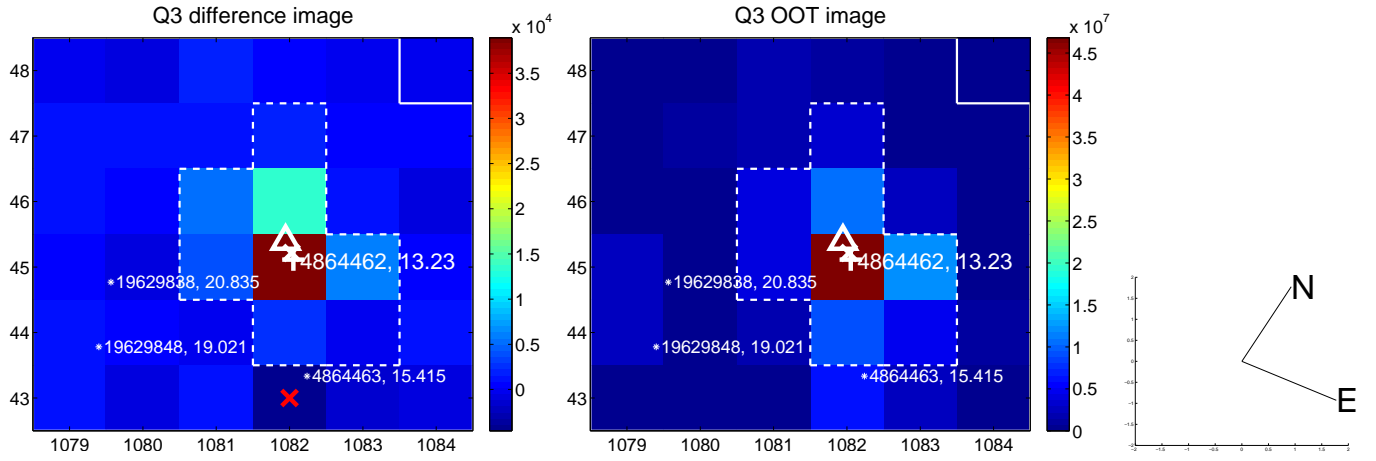
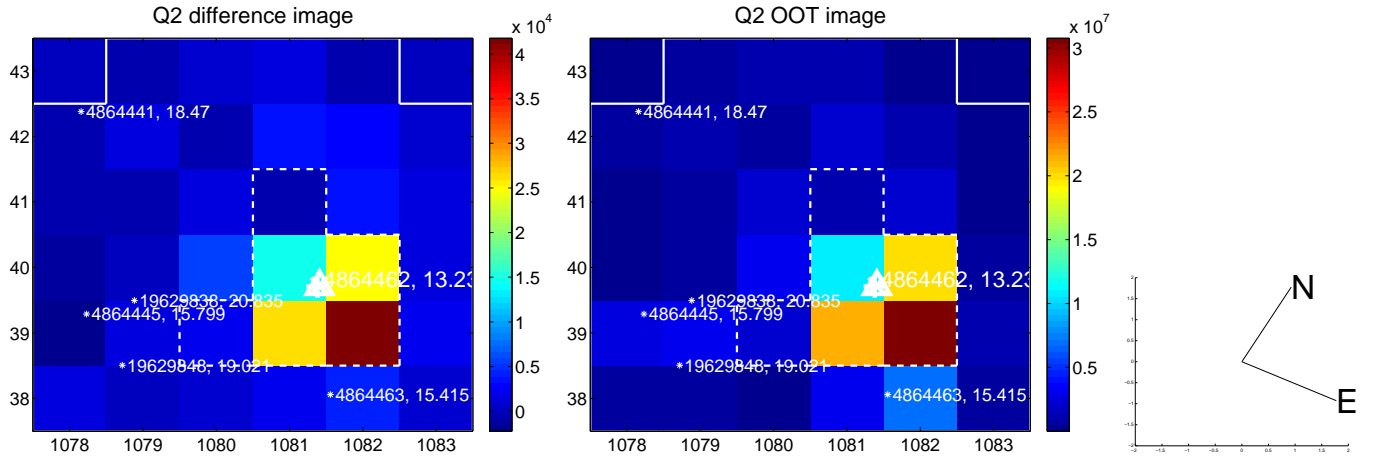
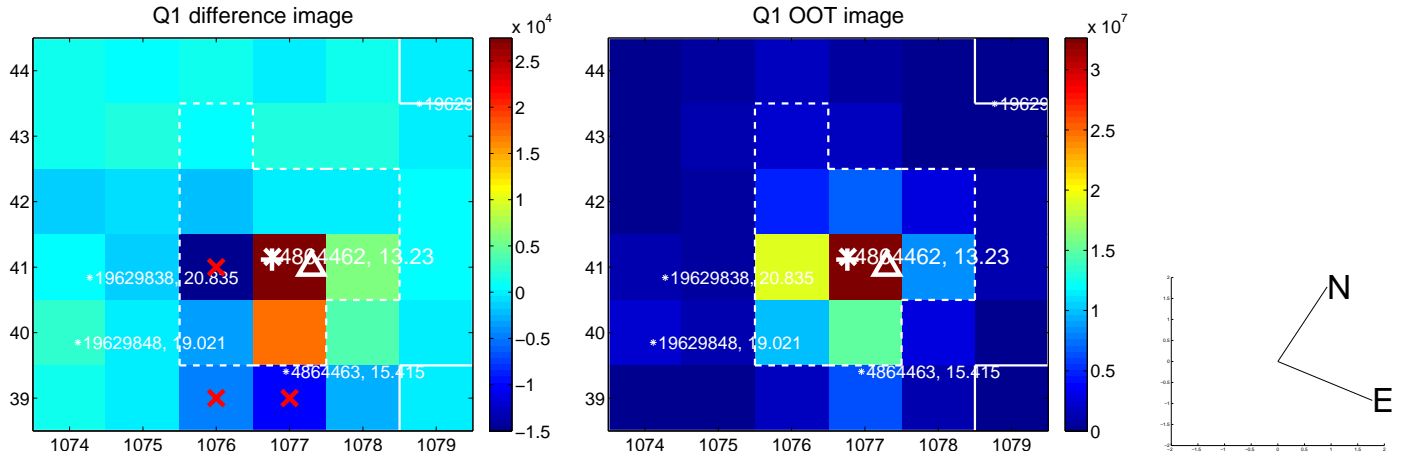
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.240 ± 0.305	0.79	0.069 ± 0.314	0.230 ± 0.337
PRF-fit source offset from KIC position	0.079 ± 0.309	0.26	0.023 ± 0.325	0.075 ± 0.340
photometric centroid source offset	0.88 ± 0.27	3.28	0.54 ± 0.22	-0.70 ± 0.30

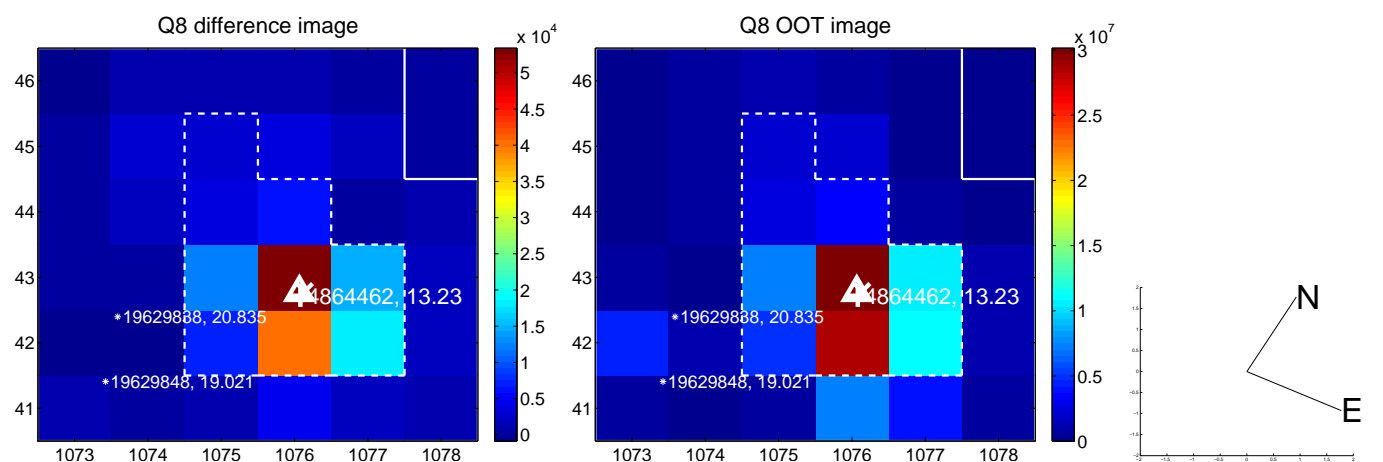
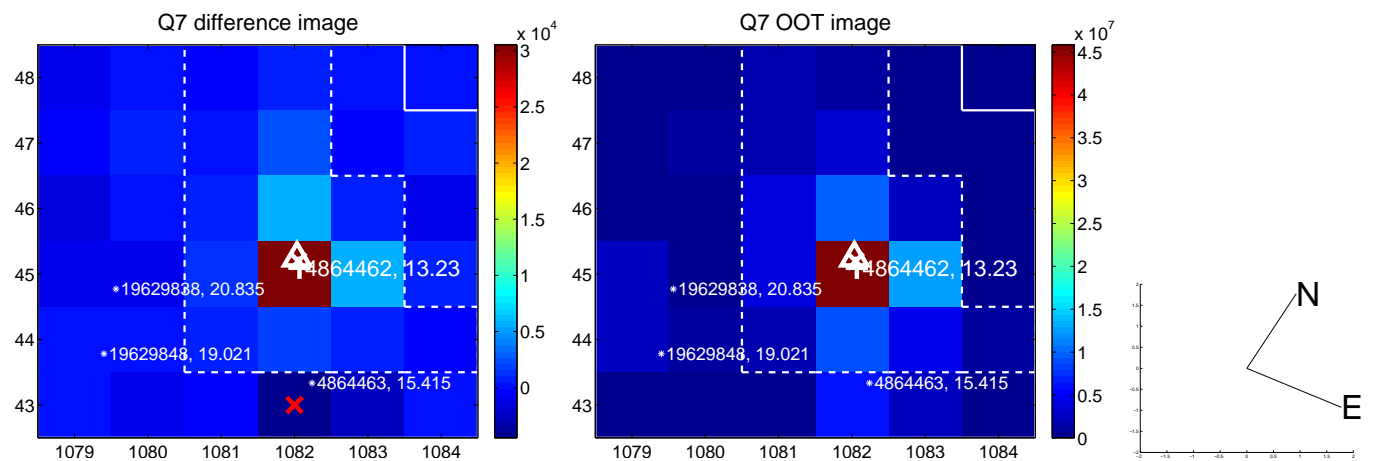
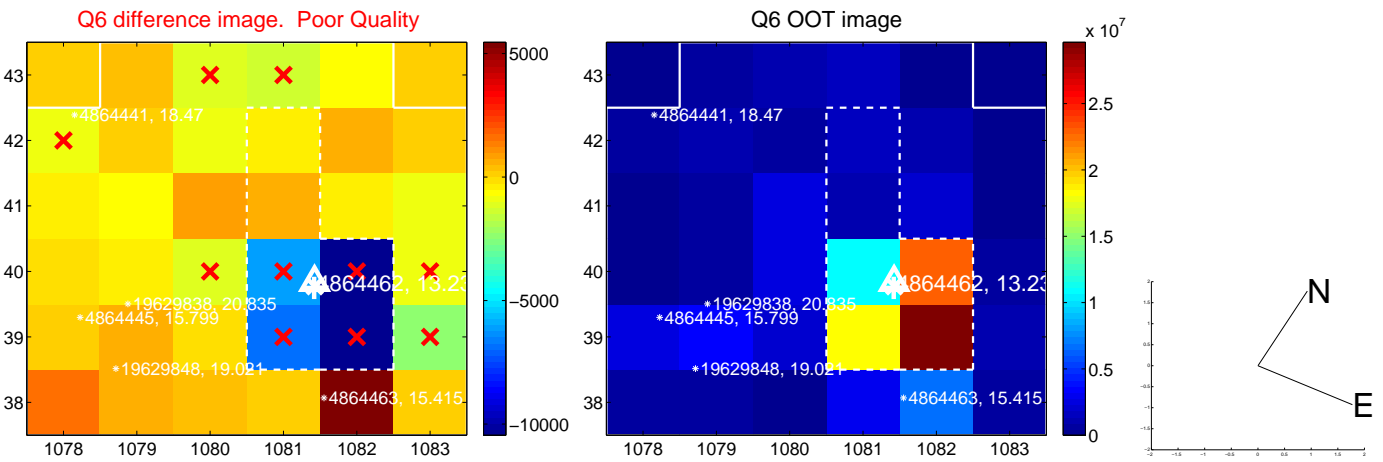
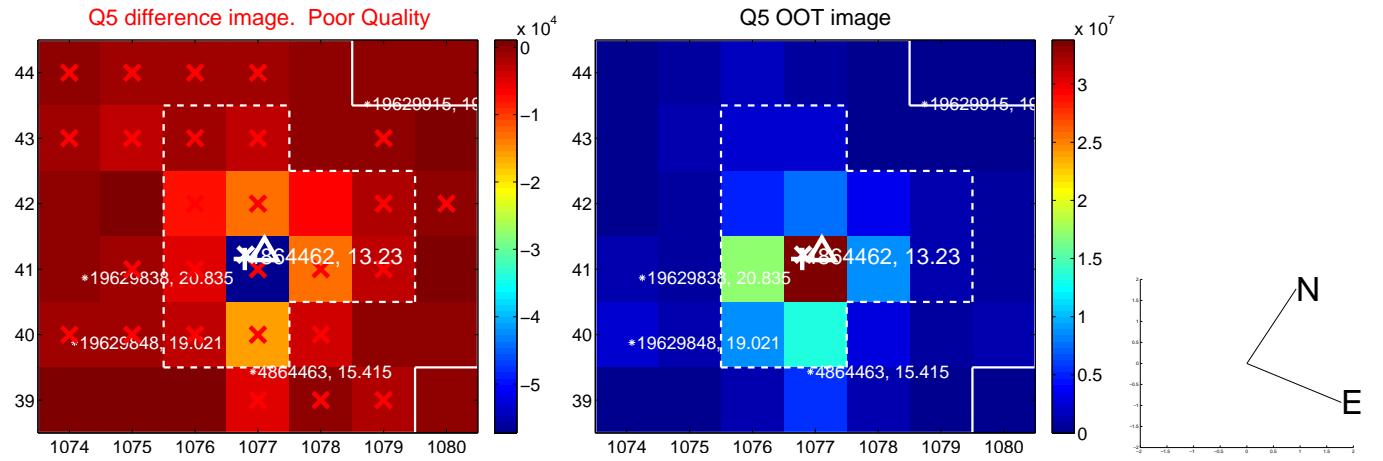


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

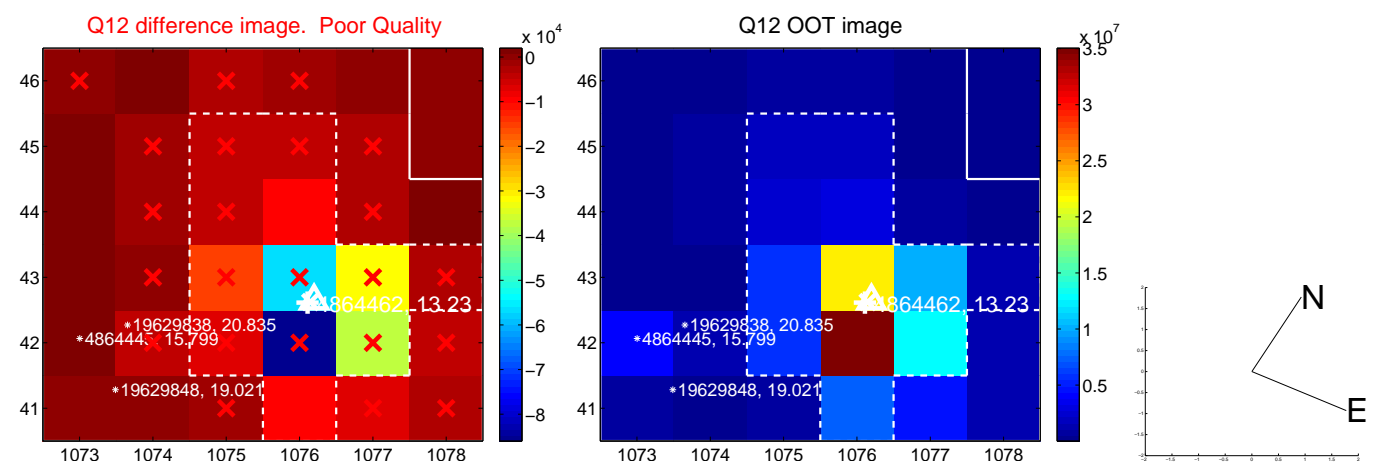
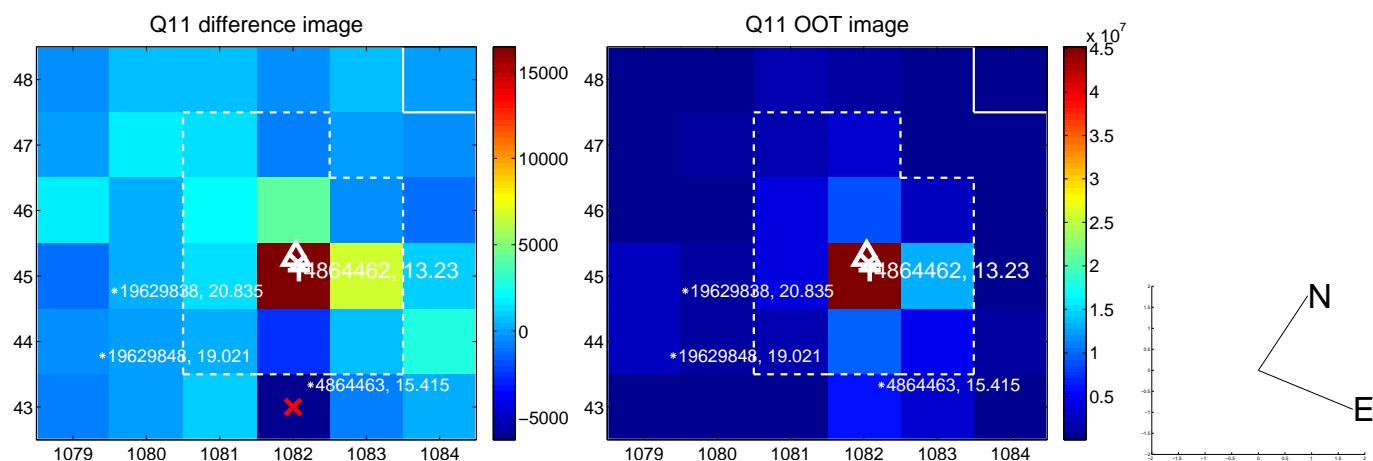
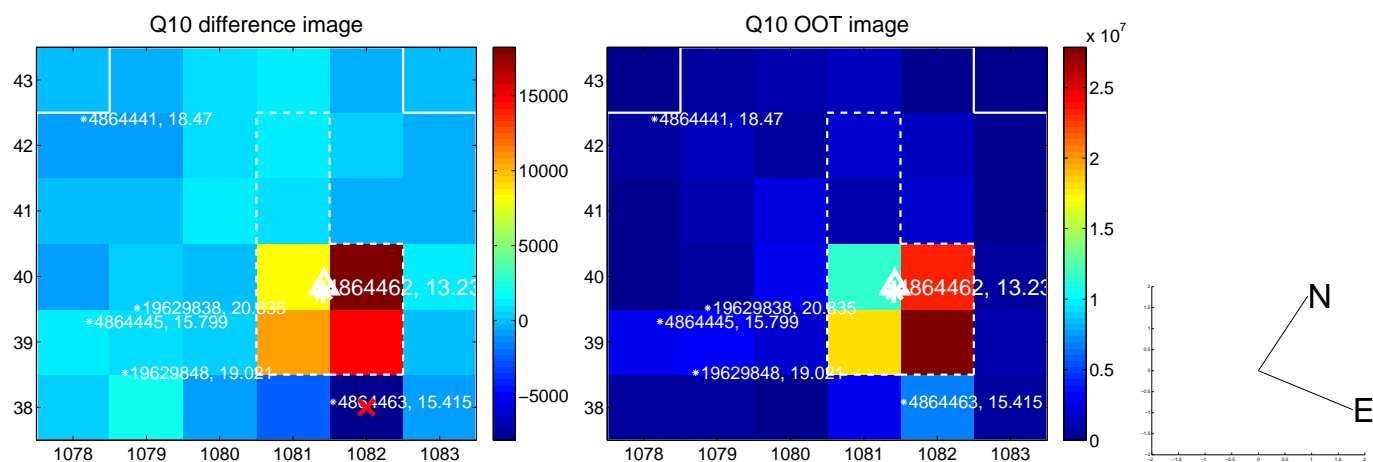
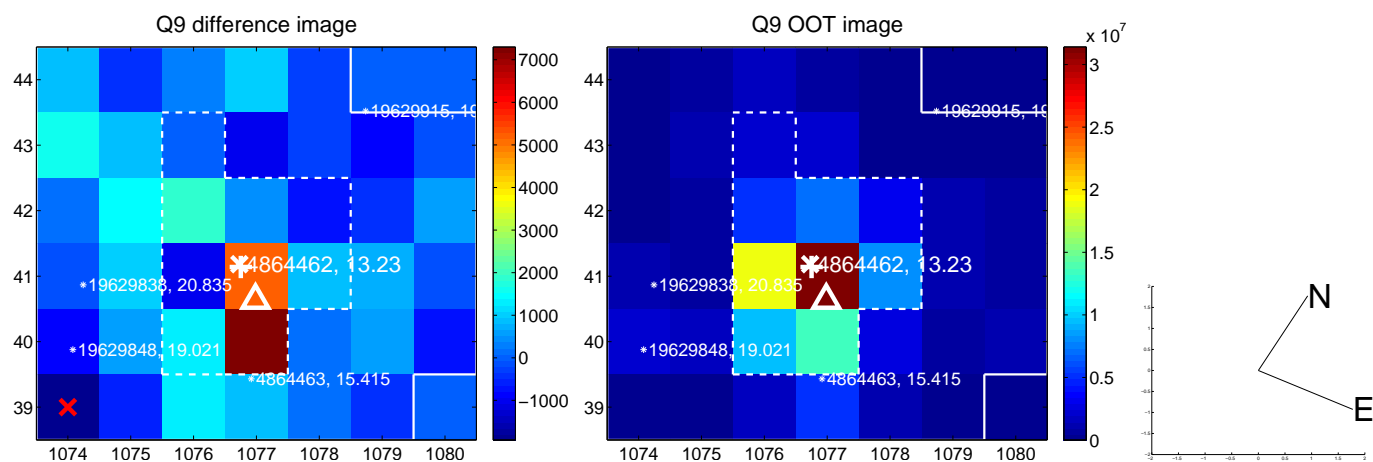
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



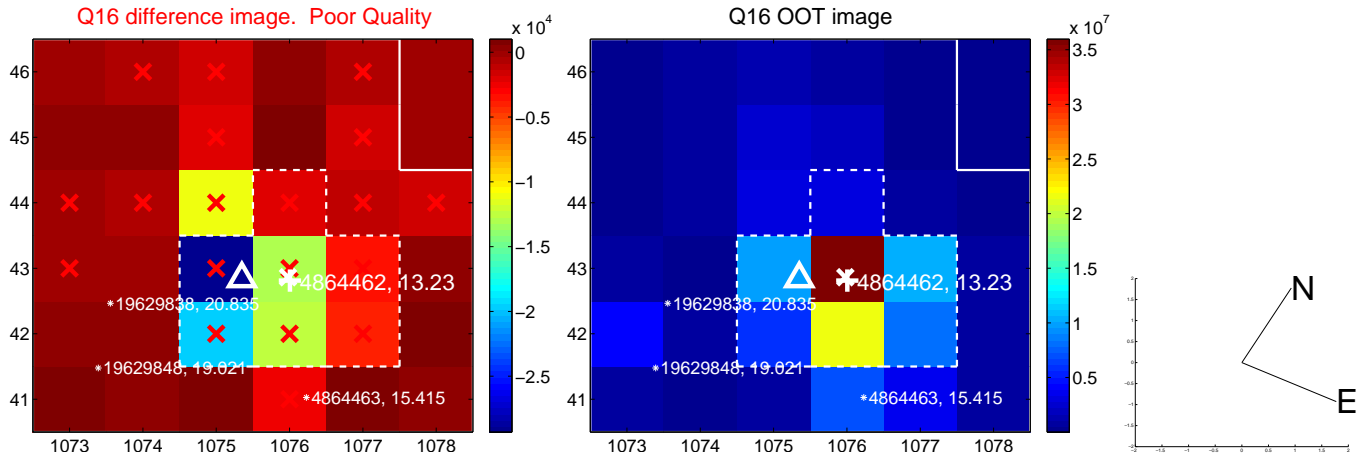
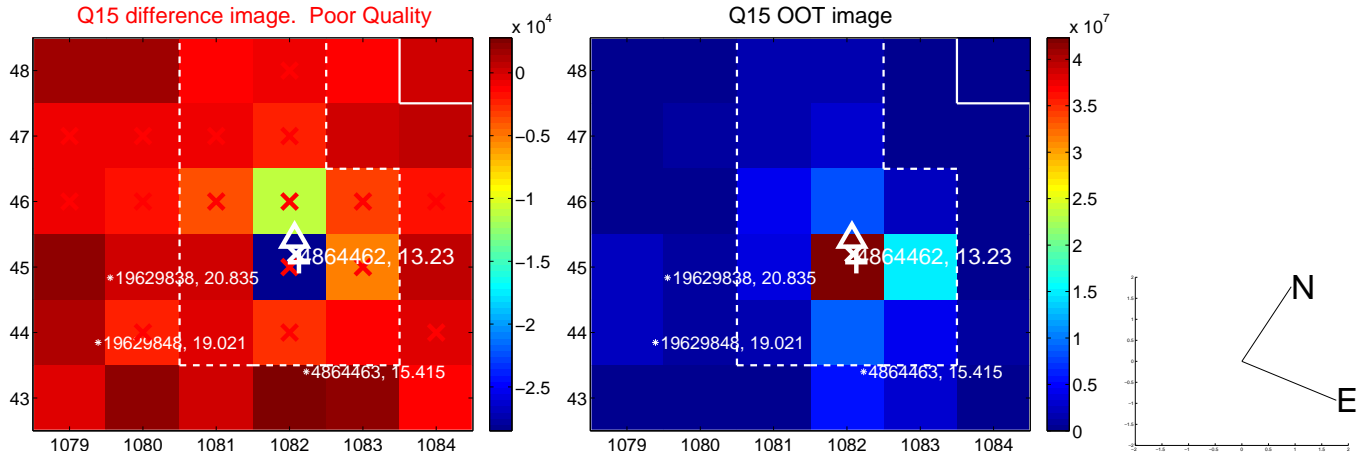
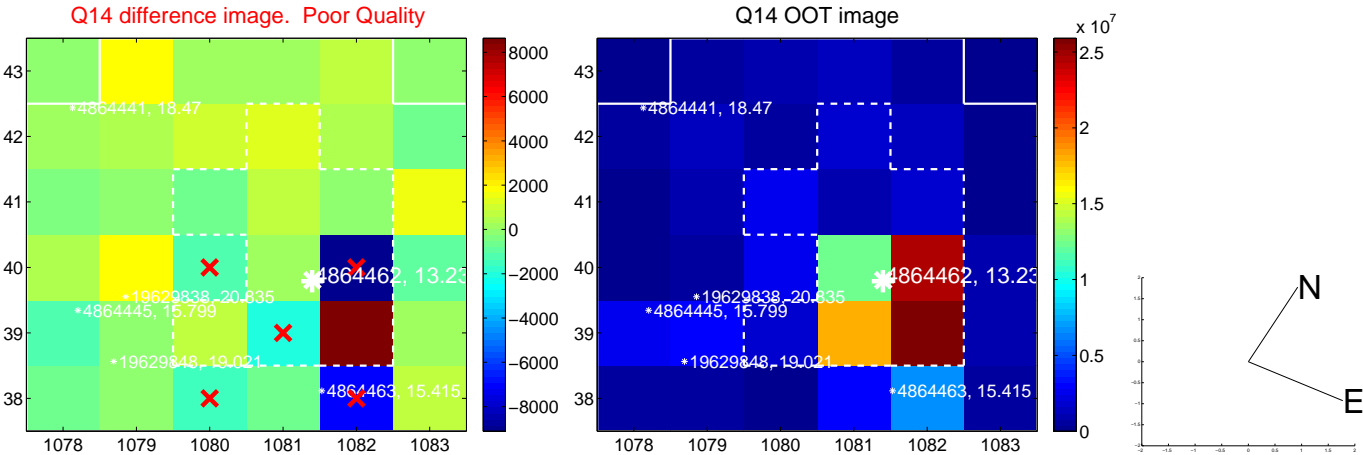
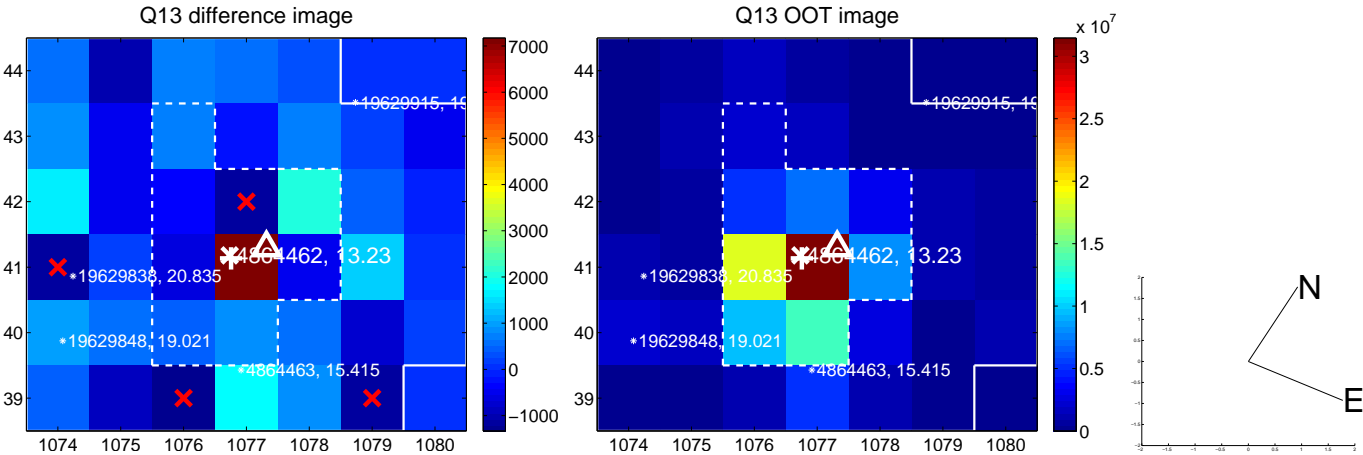
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



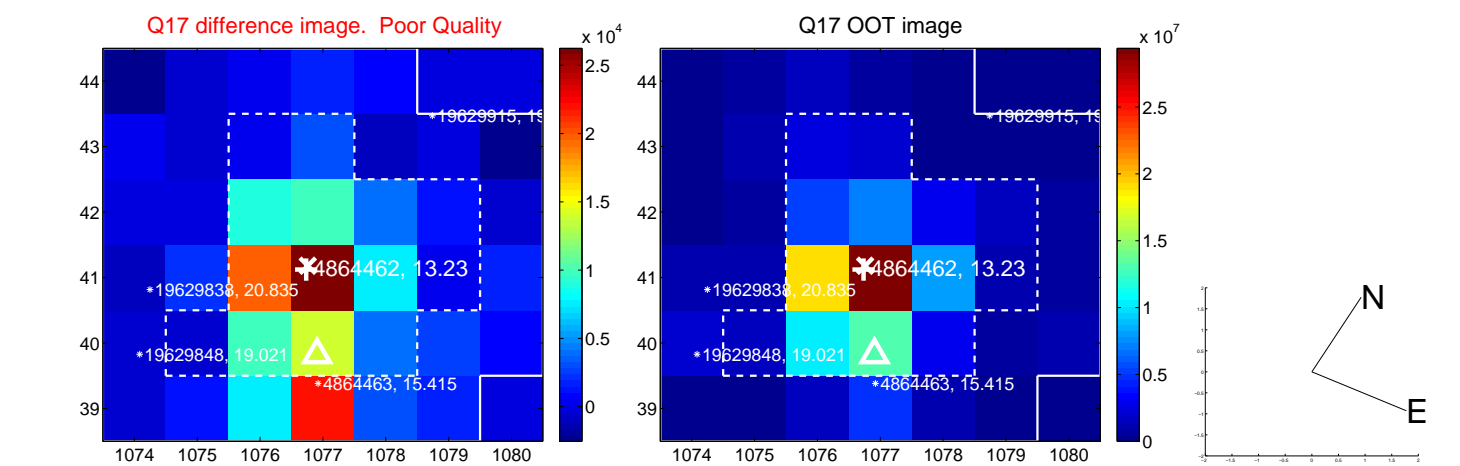
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



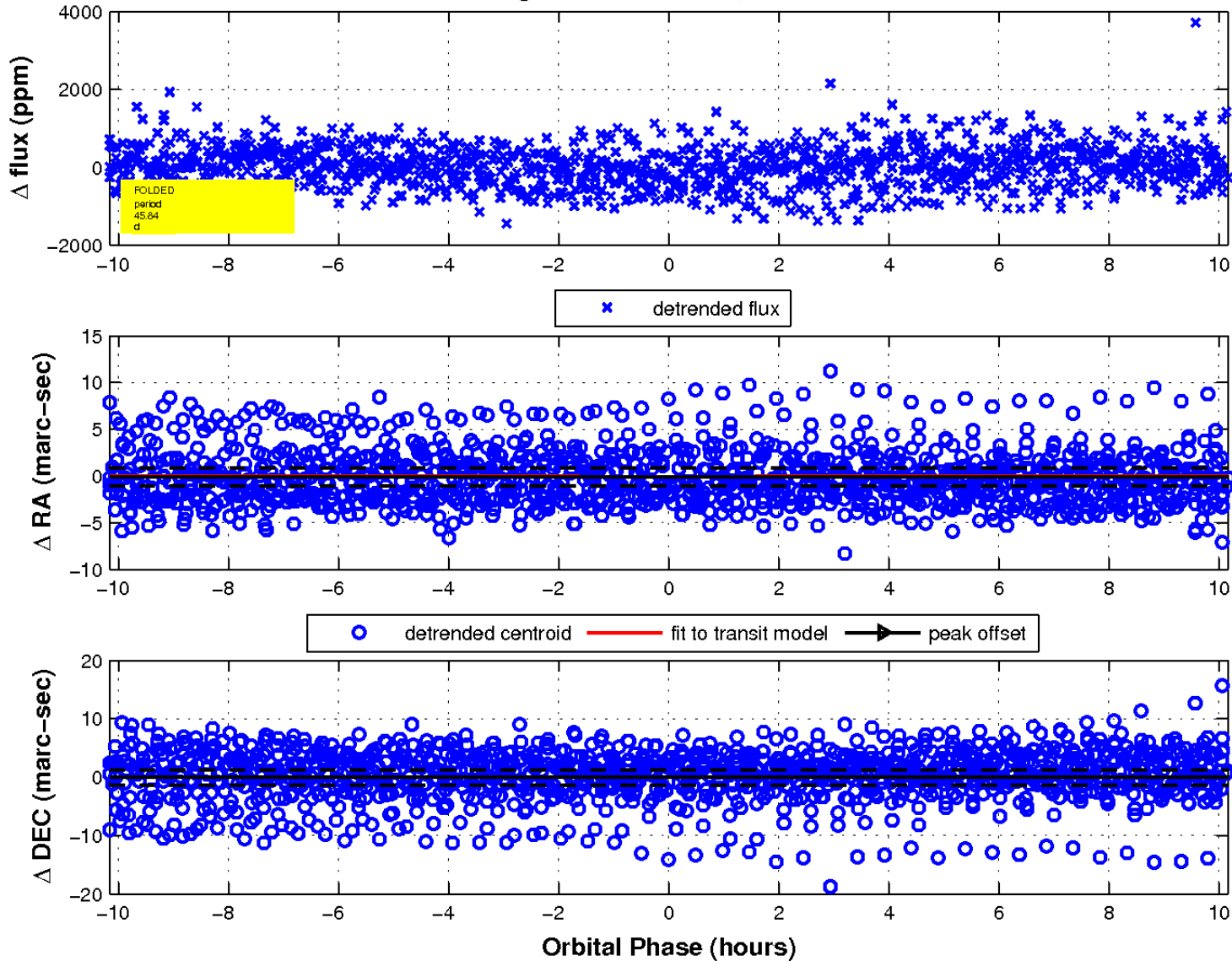
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

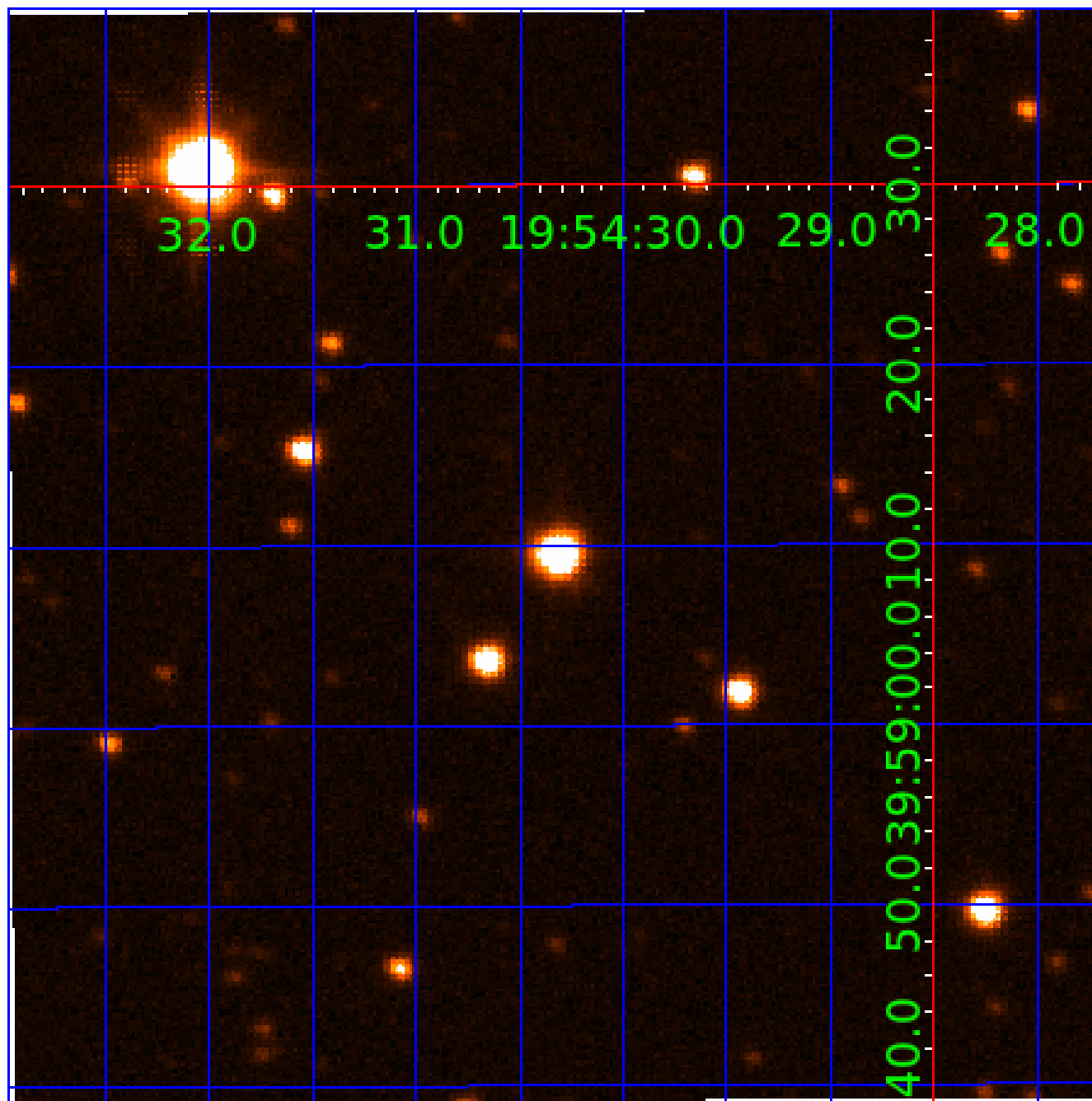


fluxWeightedCentroids, Planet 2 of 6



UKIRT Image

Declination



KIC 004864462

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})
004864462-01	OBS	No	0.578543	131.603188	9.2	4.266	7.5	2.1	0.98	6480	0.31	8140.97
004864462-02	OBS	No	45.840833	152.584351	1510.8	3.393	12.8	13.5	0.98	6480	3.82	23.92
004864462-03	OBS	No	4.291182	135.792919	968.3	0.547	11.6	6.8	0.98	6480	3.20	562.80
004864462-04	OBS	No	13.986216	143.647032	1163.4	1.421	10.8	9.9	0.98	6480	3.40	116.46
004864462-05	OBS	No	5.043872	131.870691	1015.3	0.905	11.1	11.3	0.98	6480	3.22	453.70
004864462-06	OBS	No	11.587027	141.078323	1600.6	0.632	11.2	10.8	0.98	6480	4.18	149.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004864462-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
004864462-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES
004864462-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV
004864462-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV
004864462-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004864462-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV

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

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

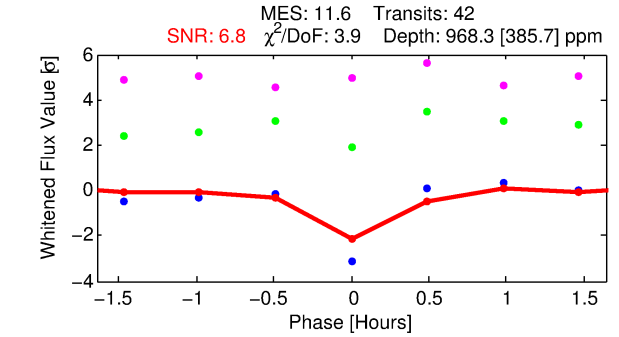
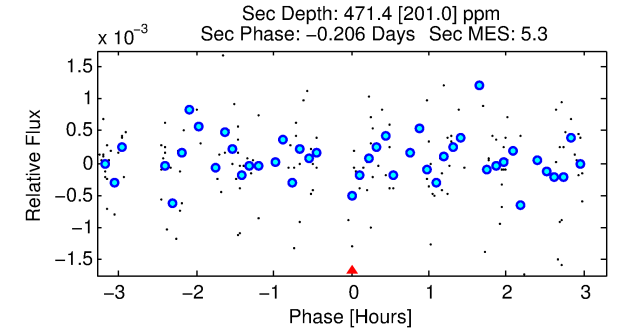
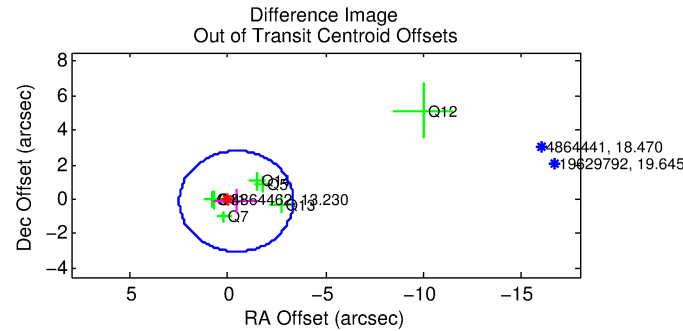
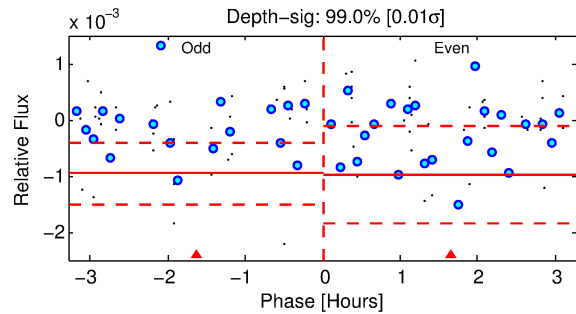
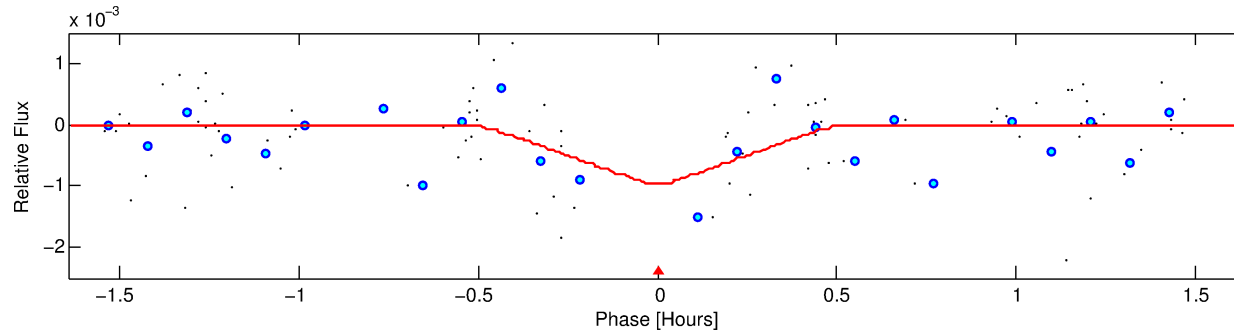
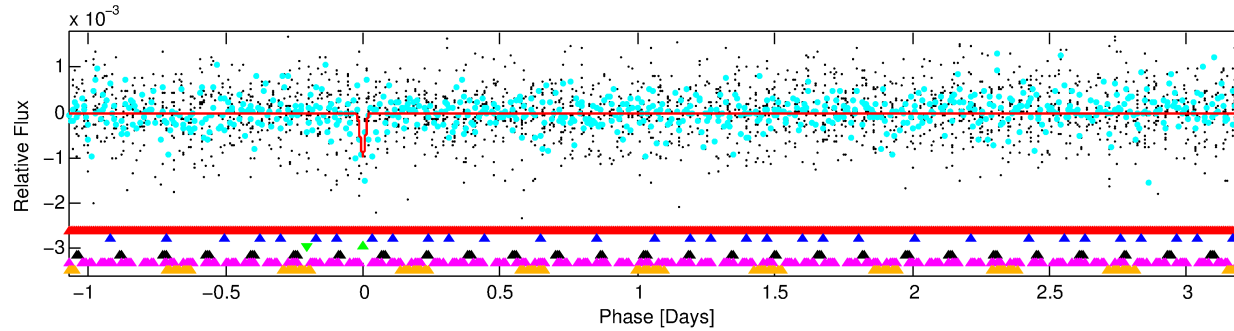
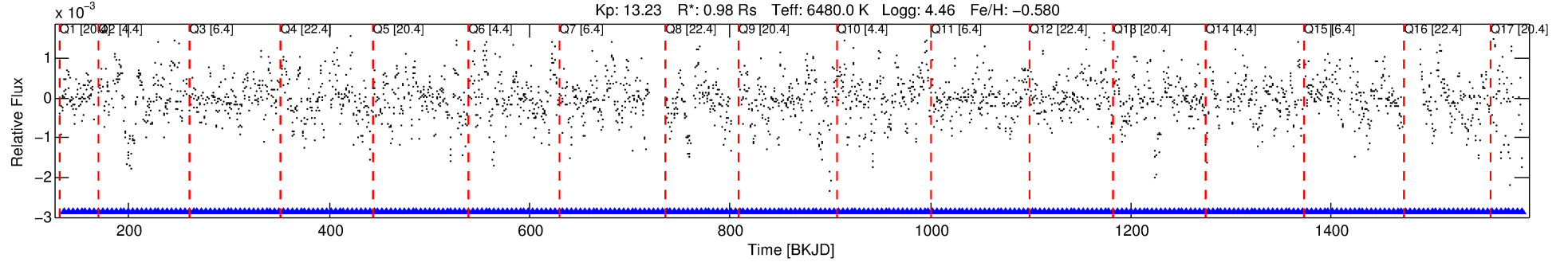
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004864462-03

No Significant Match Found

DV One-Page Summary

KIC: 4864462 Candidate: 3 of 6 Period: 4.291 d



DV Fit Results:

Period = 4.29118 [0.00003] d
Epoch = 135.7929 [0.0034] BKJD
Rp/R* = 0.0300 [0.0445]
a/R* = 59.00 [502.64]
b = 0.30 [25.86]
Seff = 562.80 [222.47]
Teq = 1242 [123] K
Rp = 3.20 [4.84] Re
a = 0.0518 [0.0132] AU
Ag = 67.89 [204.89] [0.33 σ]
Teffp = 5512 [4130] K [1.03 σ]

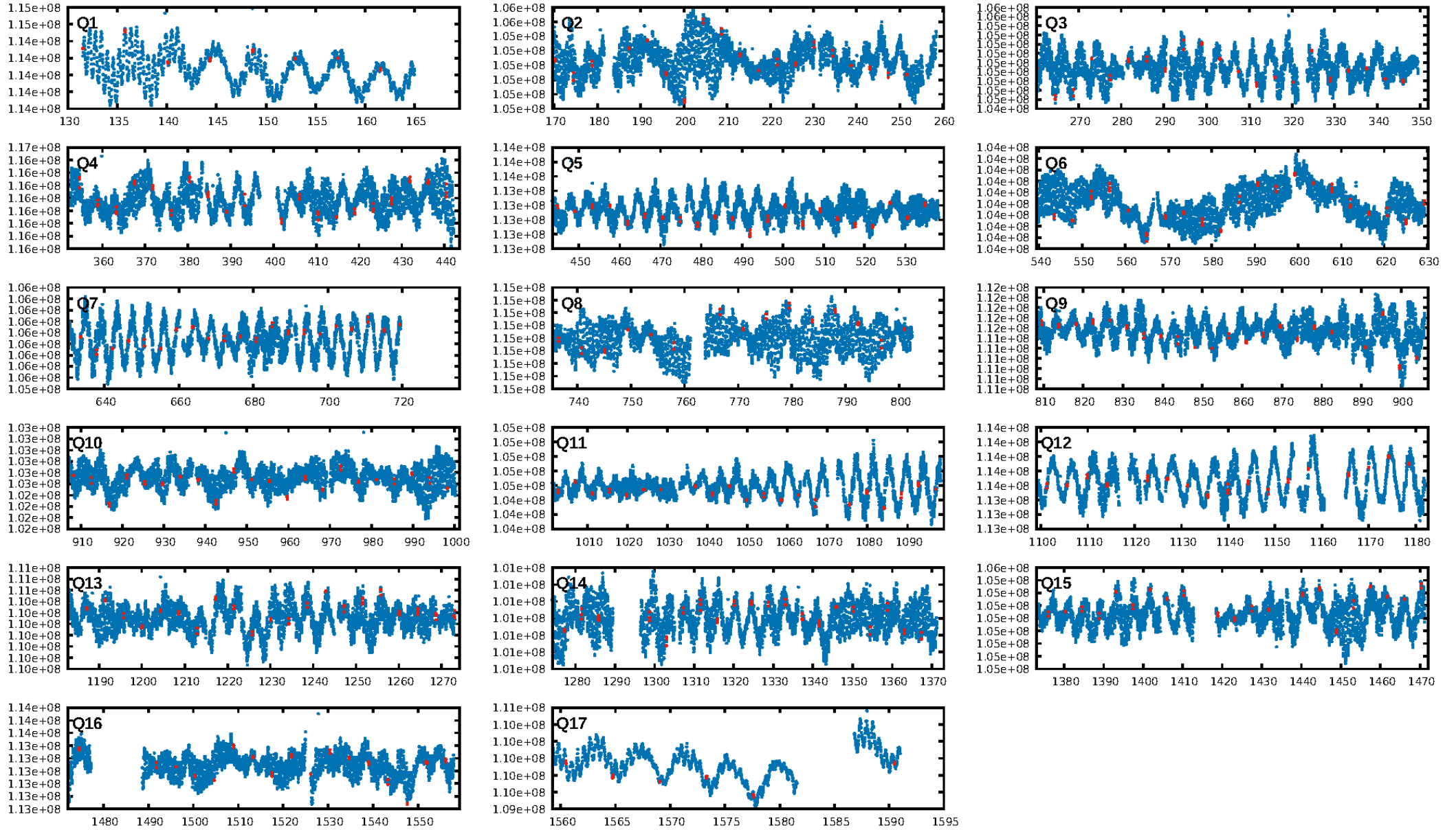
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.72 σ]
LongPeriod-sig: 100.0% [17.07 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 1.54e-33
RollingBand-fgt: 1.00 [41/41]
GhostDiagnostic-chr: -55.65
Centroid-sig: 65.4%
Centroid-so: 0.962 arcsec [4.88 σ]
OotOffset-rm: 0.461 arcsec [0.47 σ]
KicOffset-rm: 0.465 arcsec [0.82 σ]
OotOffset-st: 1/3/1/2 [7]
KicOffset-st: 1/3/1/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.00 [0/10]

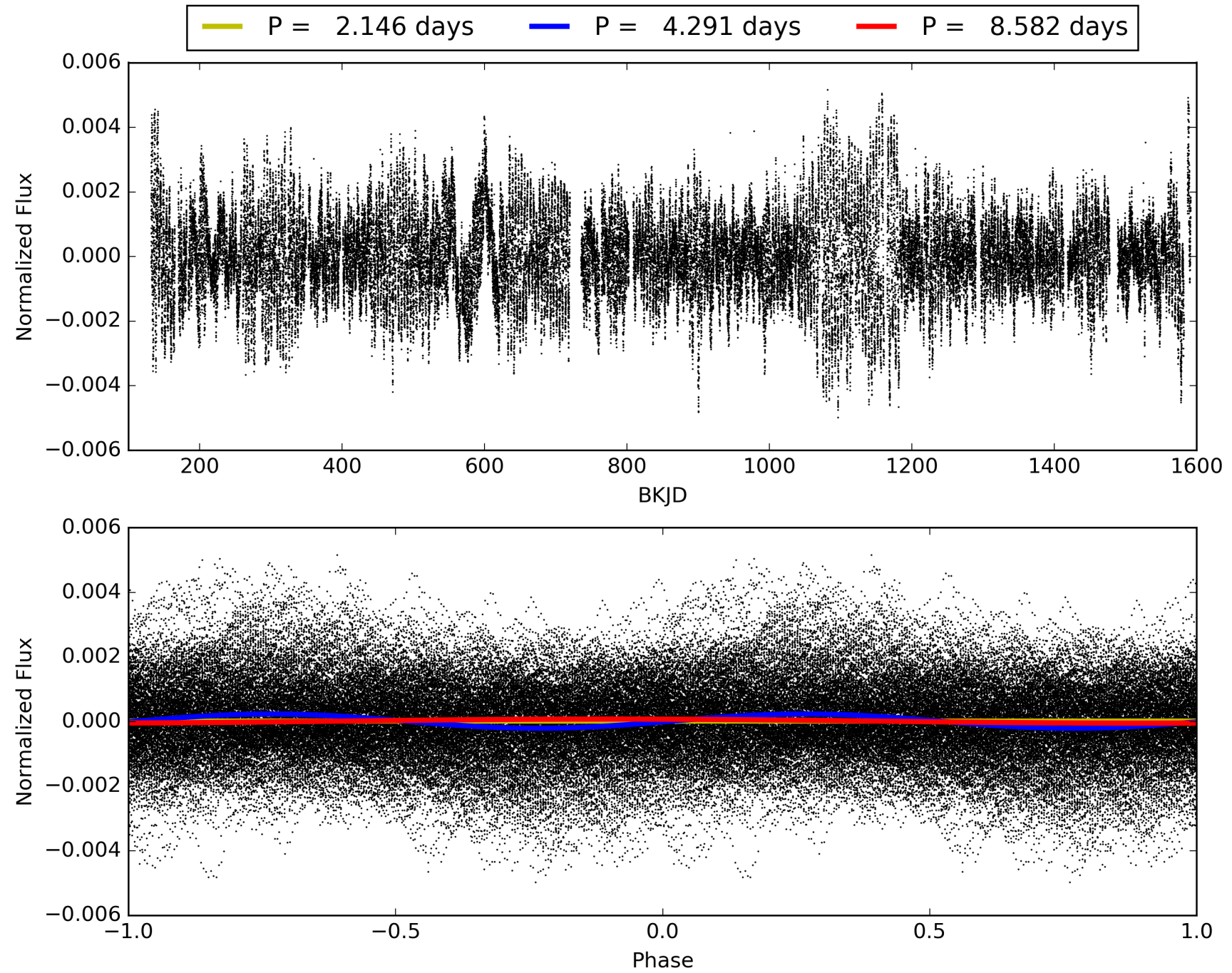
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:28:20 Z

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

TCE 004864462-03, PDC Light Curves

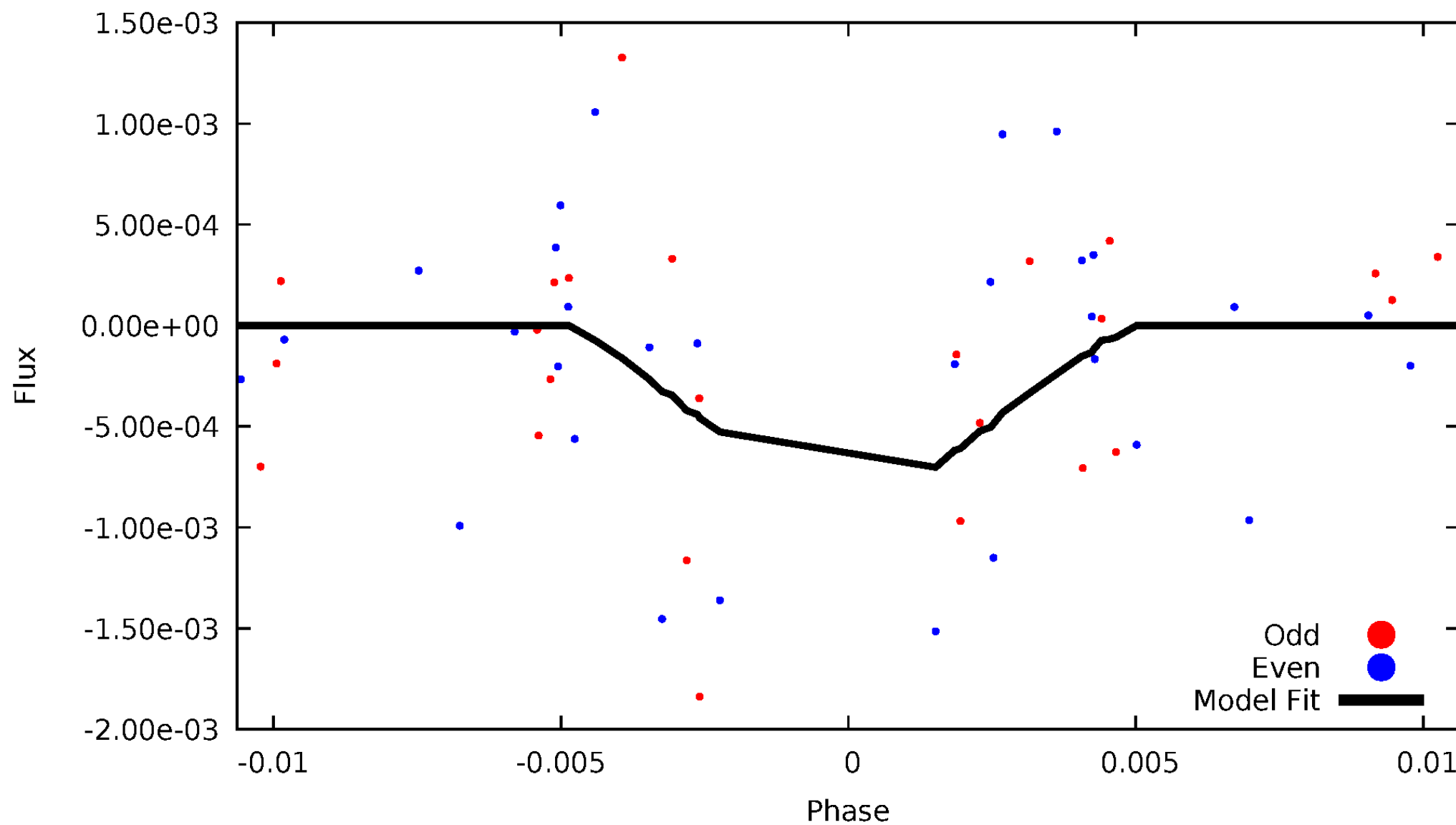


TCE 004864462-03



DV Odd/Even

TCE 004864462-03

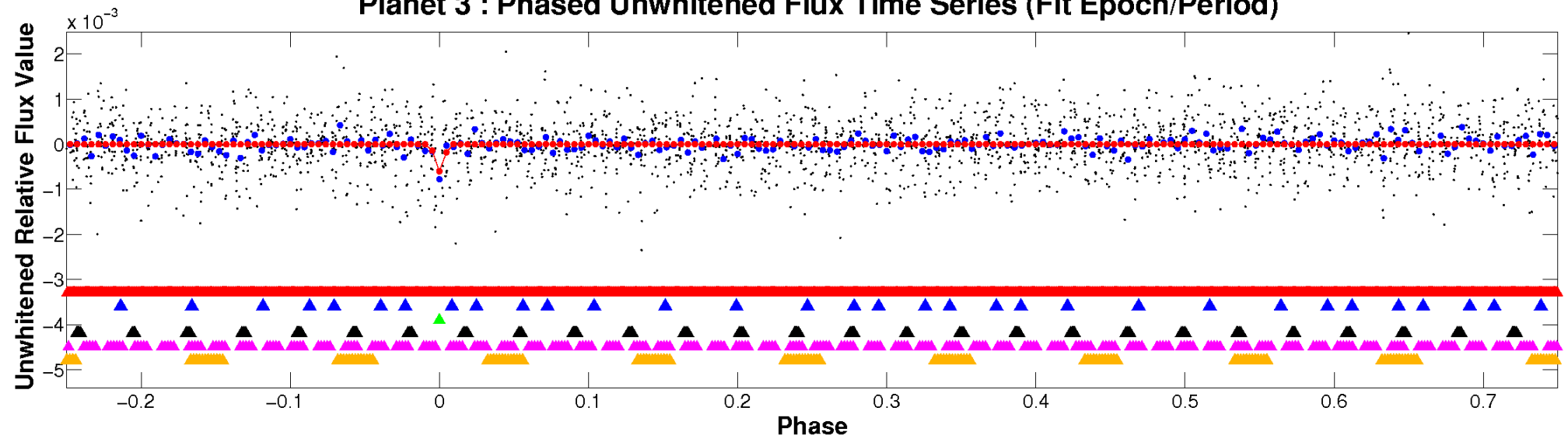


ALT Odd/Even

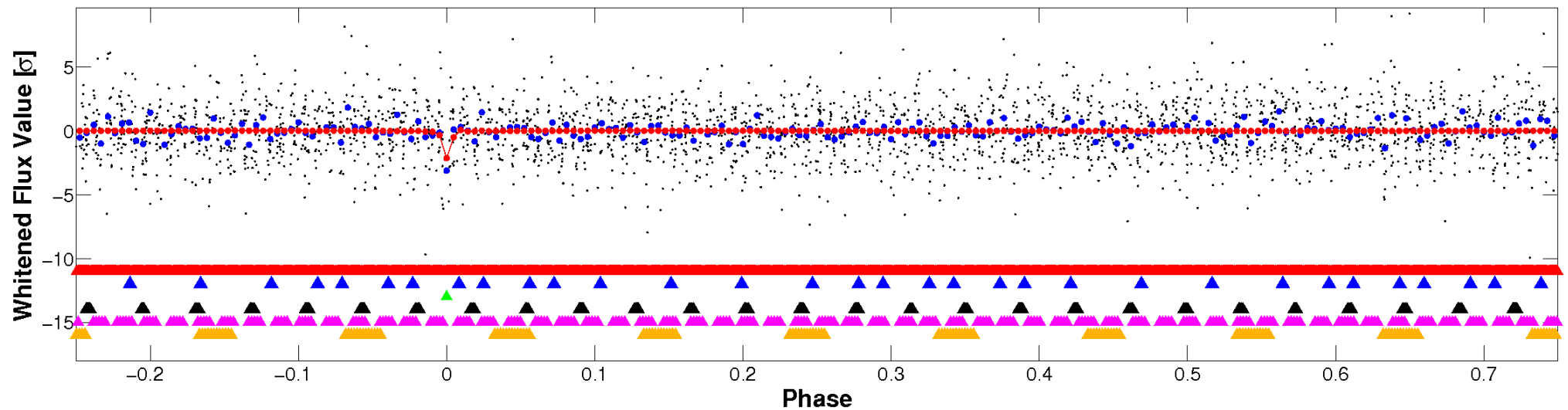
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

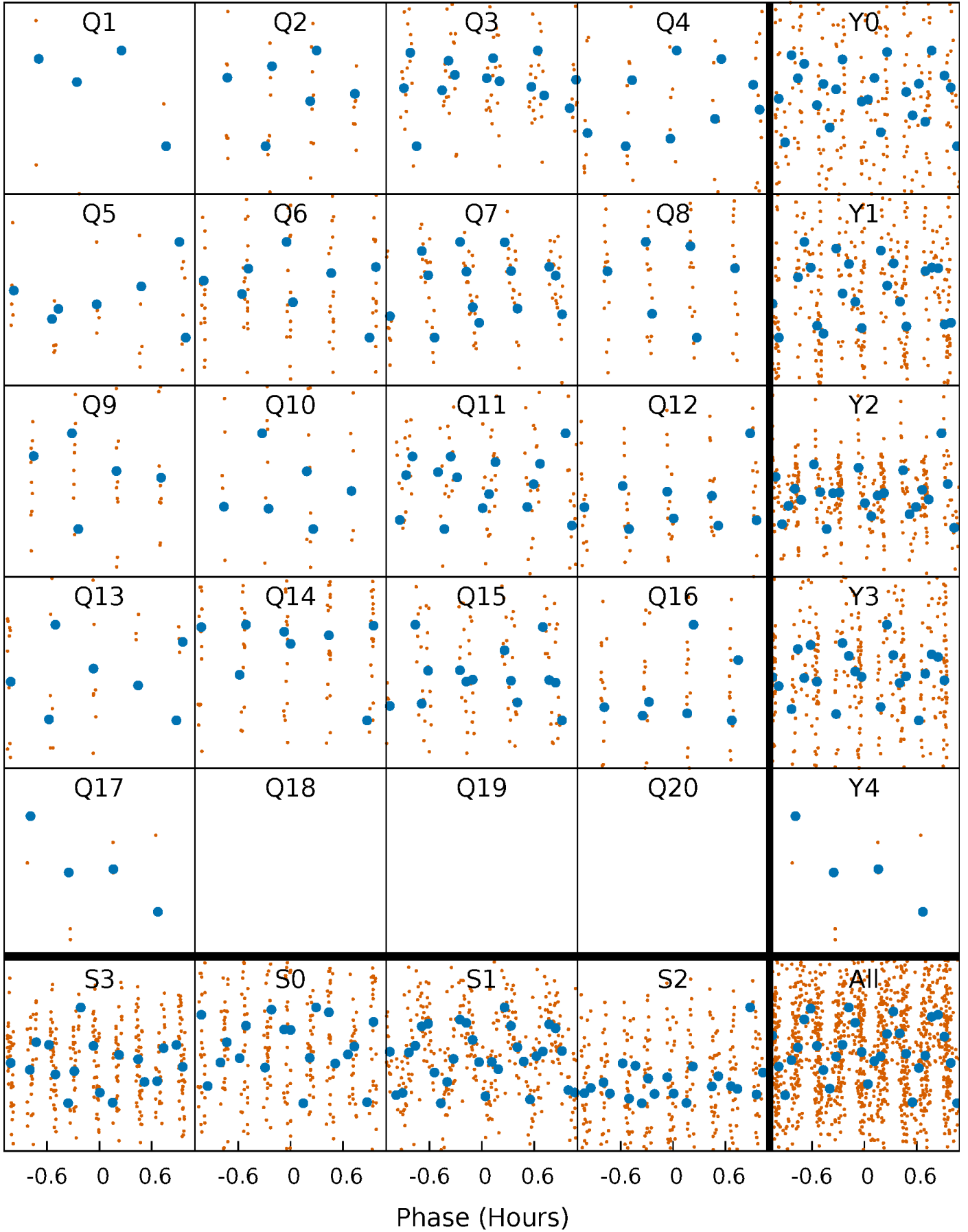


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



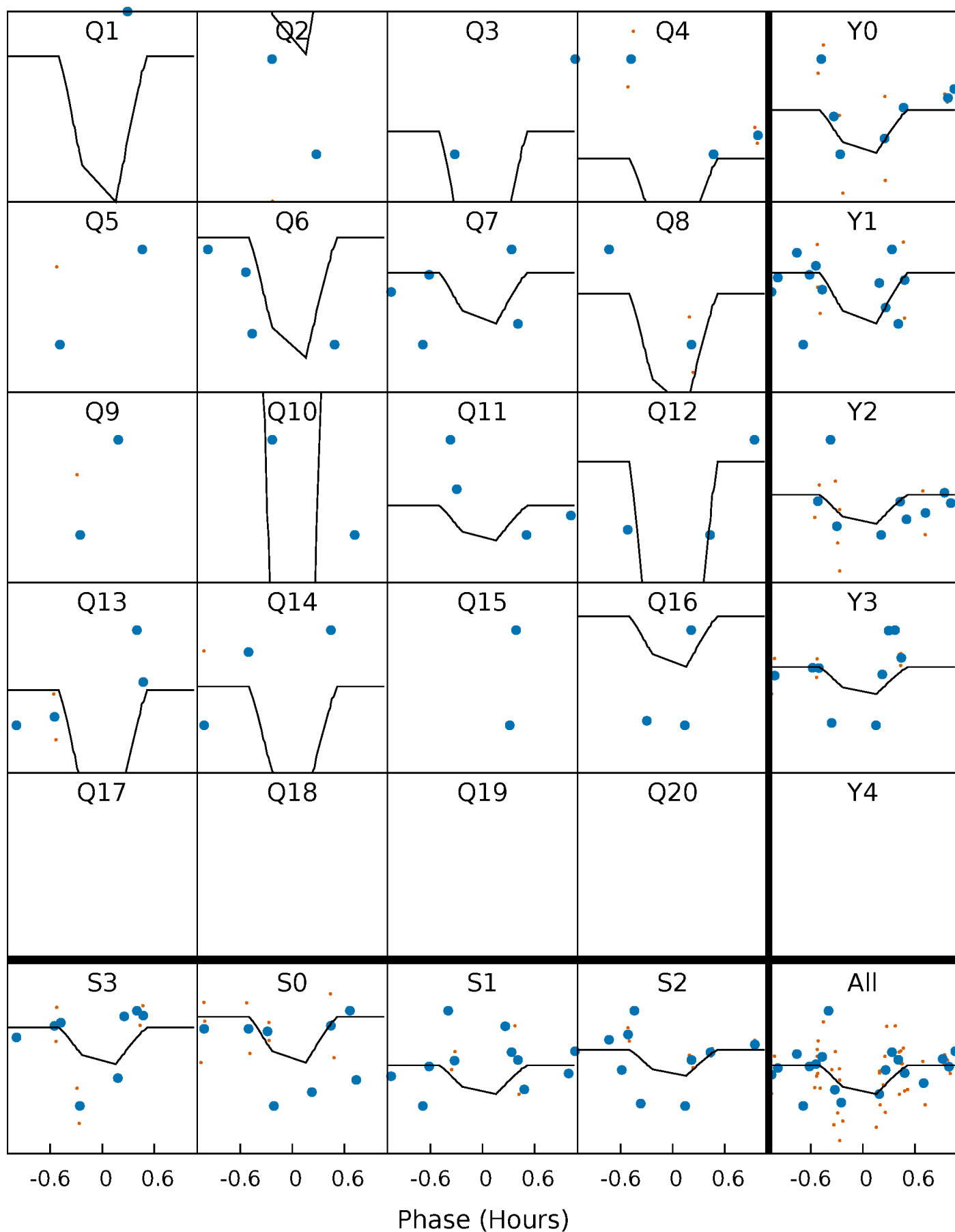
PDC Quarter-Phased Transit Curves

TCE 004864462-03 P= 4.291182 Days $T_0=135.792919$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004864462-03 P= 4.291182 Days $T_0=135.792919$ (BKJD)

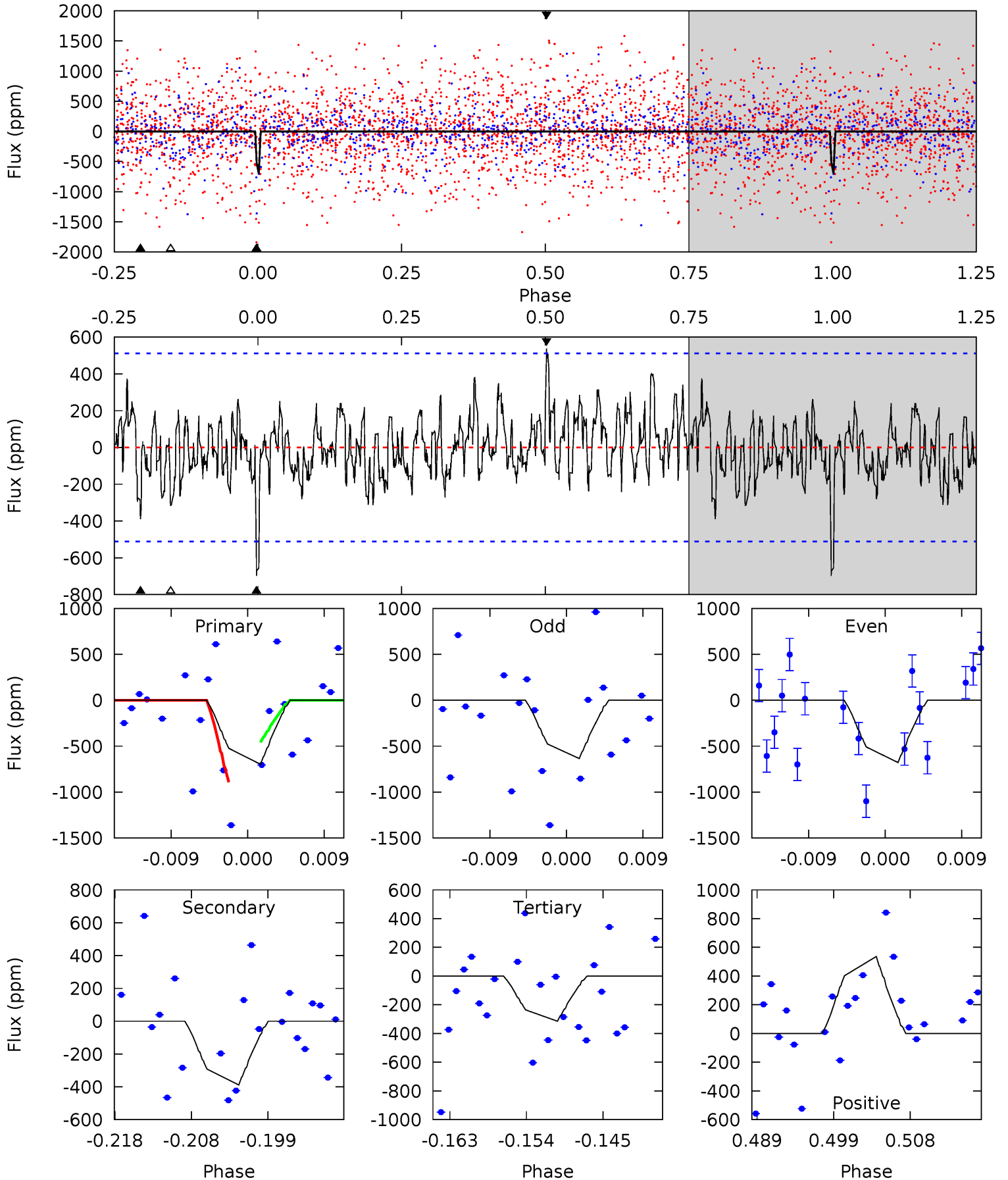


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004864462-03, P = 4.291182 Days, E = 131.501737 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.88	3.83	3.10	5.29	5.05	2.61	1.35	3.78	1.59	0.73	-1.46	0.21	0.94	0.43	2.05



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004864462

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6480^{+162}_{-194}	$4.460^{+0.065}_{-0.208}$	$-0.580^{+0.300}_{-0.350}$	$0.977^{+0.293}_{-0.098}$	$1.004^{+0.122}_{-0.110}$	$1.518^{+0.411}_{-0.775}$
	+2%/-3%	+1%/-5%	+52%/-60%	+30%/-10%	+12%/-11%	+27%/-51%
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 004864462-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-389±101	$4.74^{+4.45}_{-3.09}$	1761^{+120}_{-78}	4527^{+3048}_{-987}	25^{+198}_{-19}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

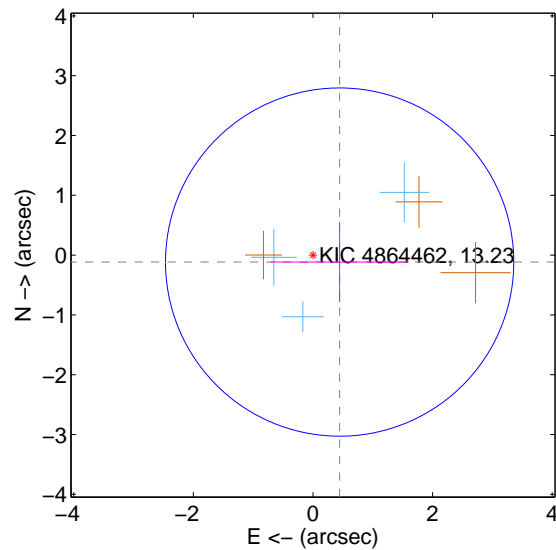
Supplemental centroid analysis for 004864462-03. Kepler magnitude: 13.23. Transit SNR 6.79

There are 3 quarters with good PRF difference image offsets

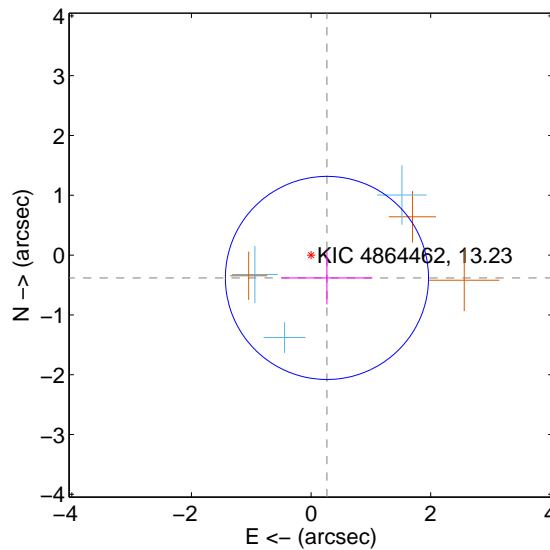
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.461 ± 0.971	0.47	-0.446 ± 1.153	-0.117 ± 0.671
PRF-fit source offset from KIC position	0.465 ± 0.566	0.82	-0.266 ± 0.759	-0.382 ± 0.443
photometric centroid source offset	0.96 ± 0.20	4.88	0.50 ± 0.17	-0.82 ± 0.21

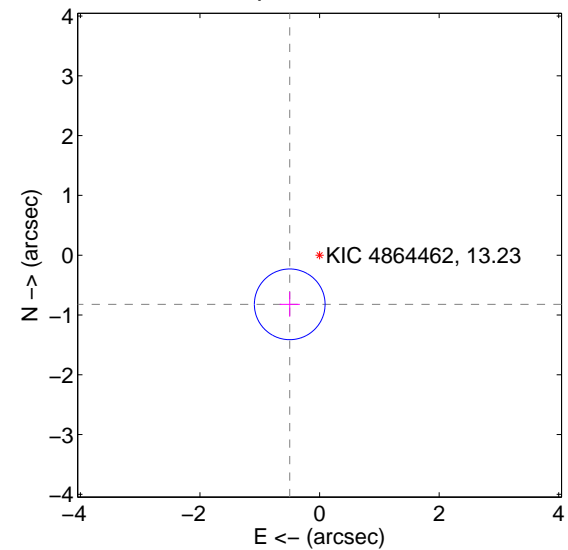
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

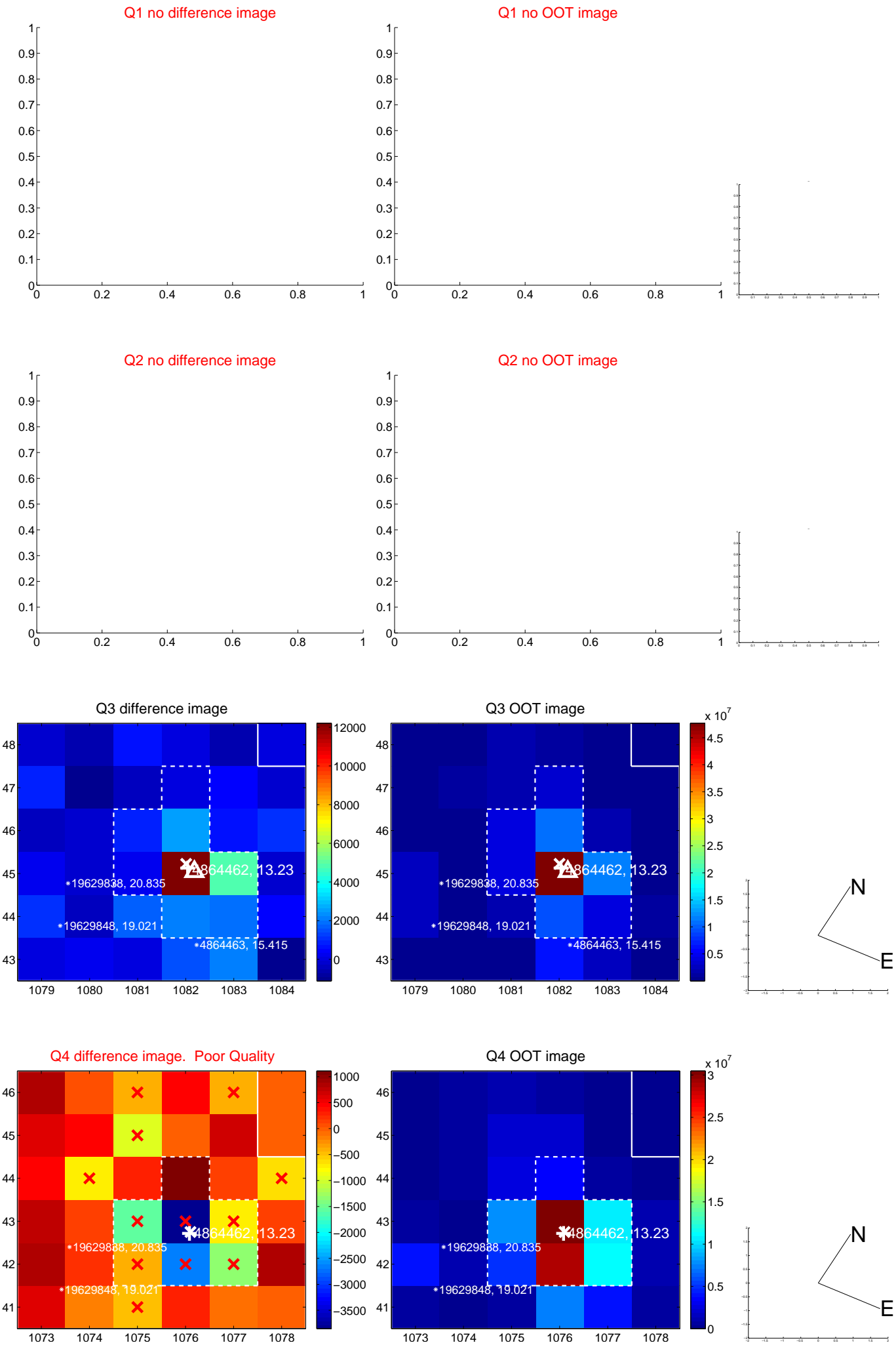


offset from photometric centroids

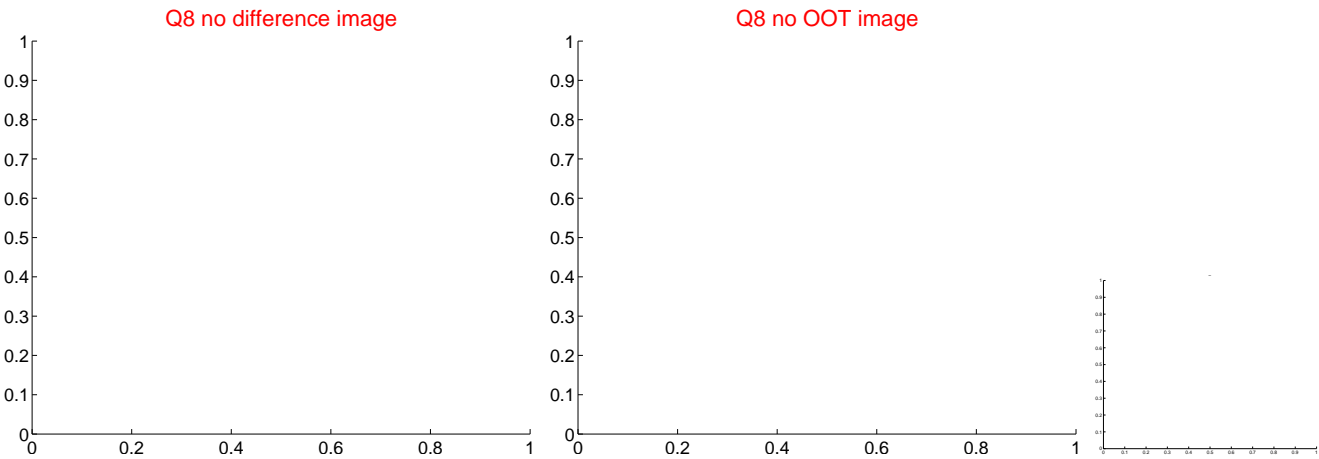
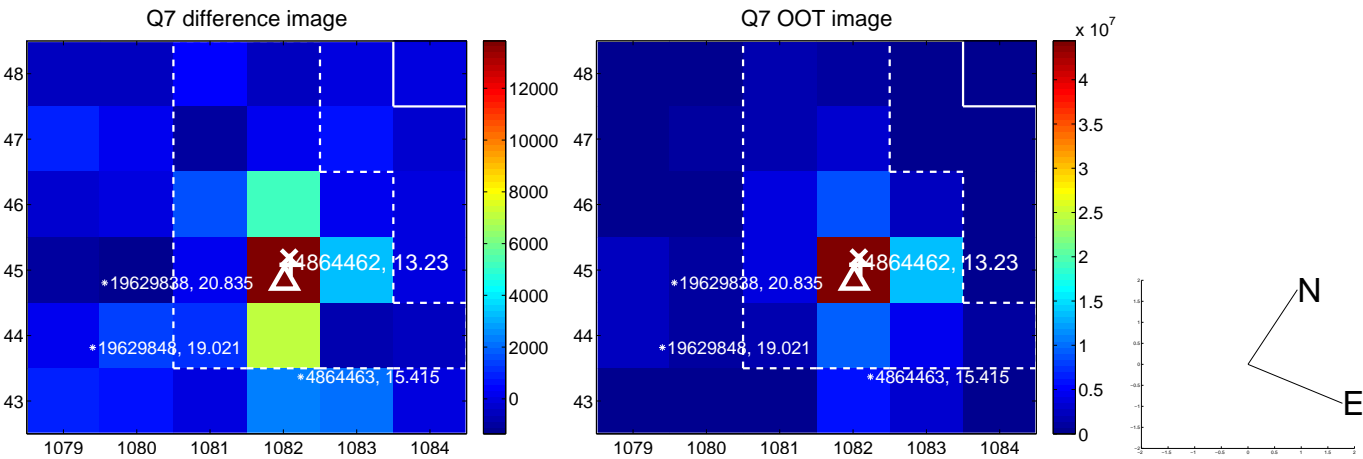
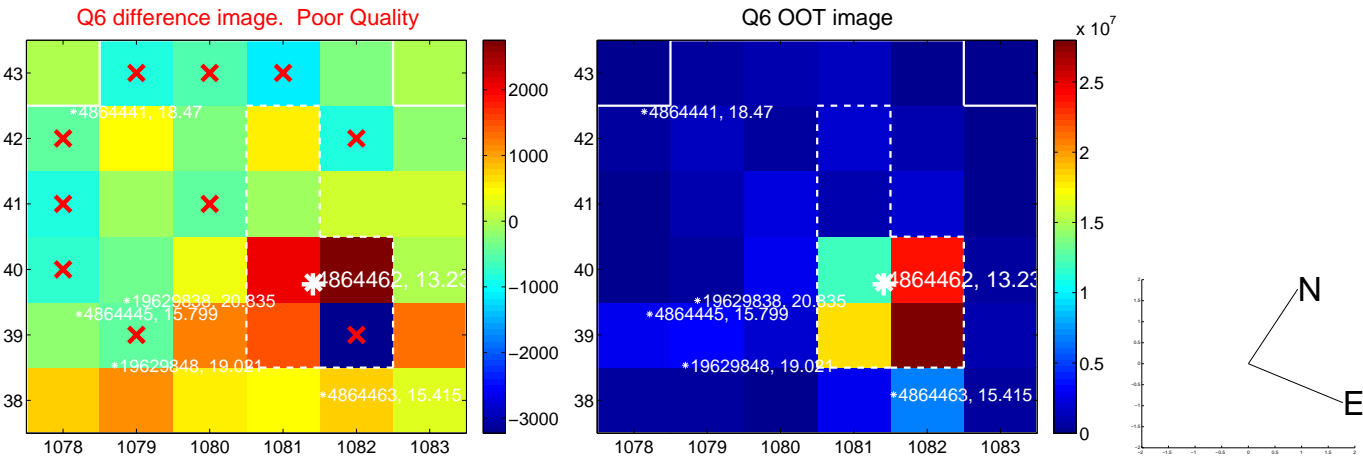
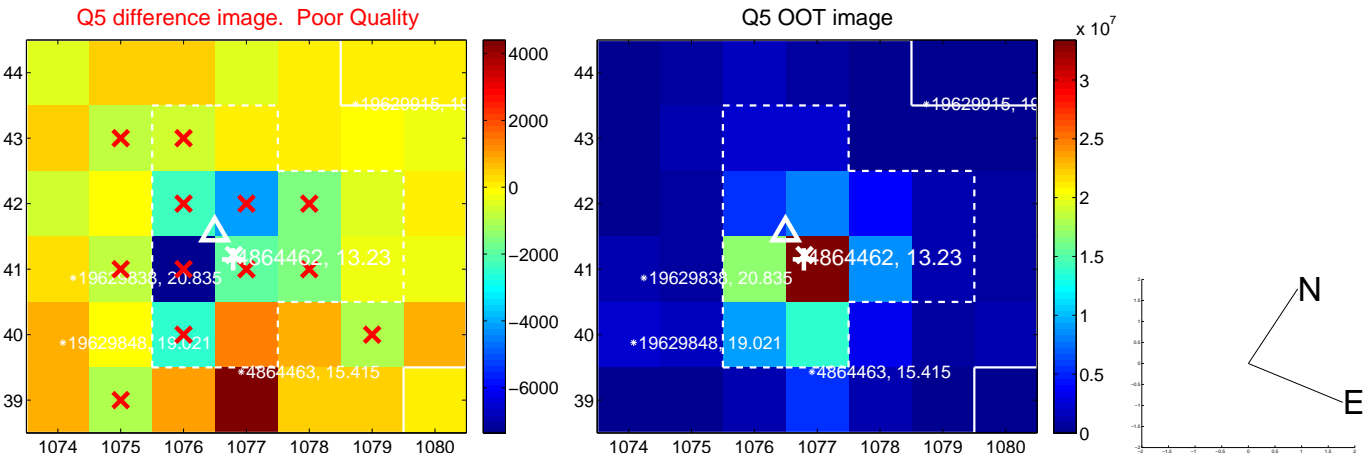


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

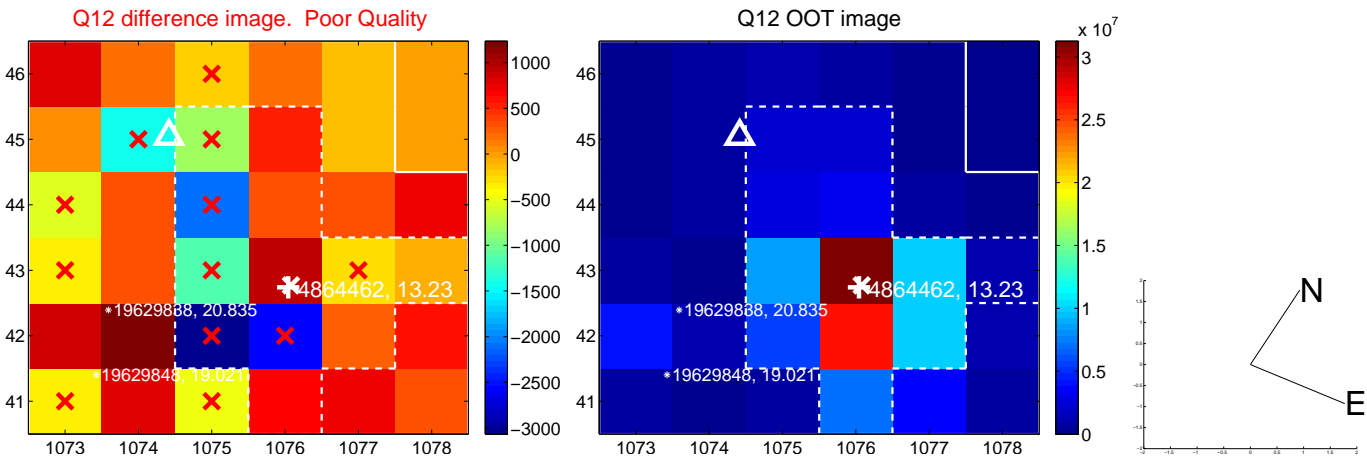
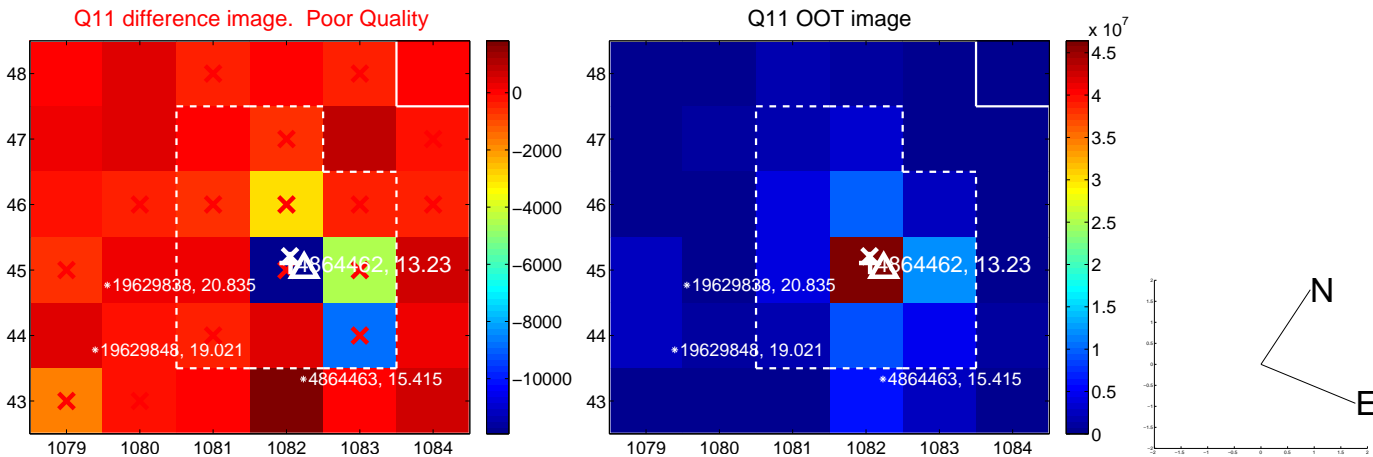
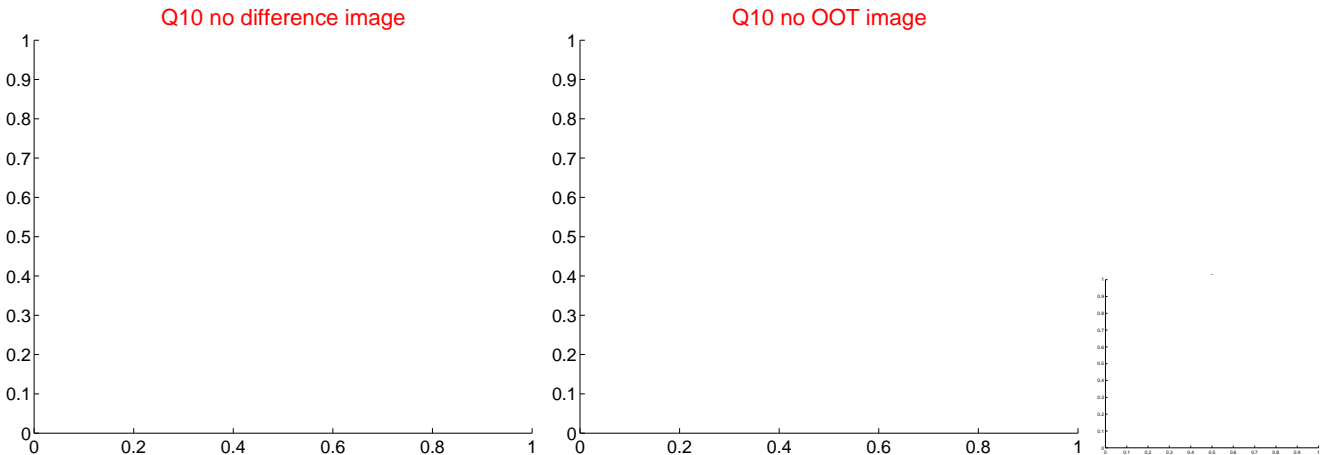
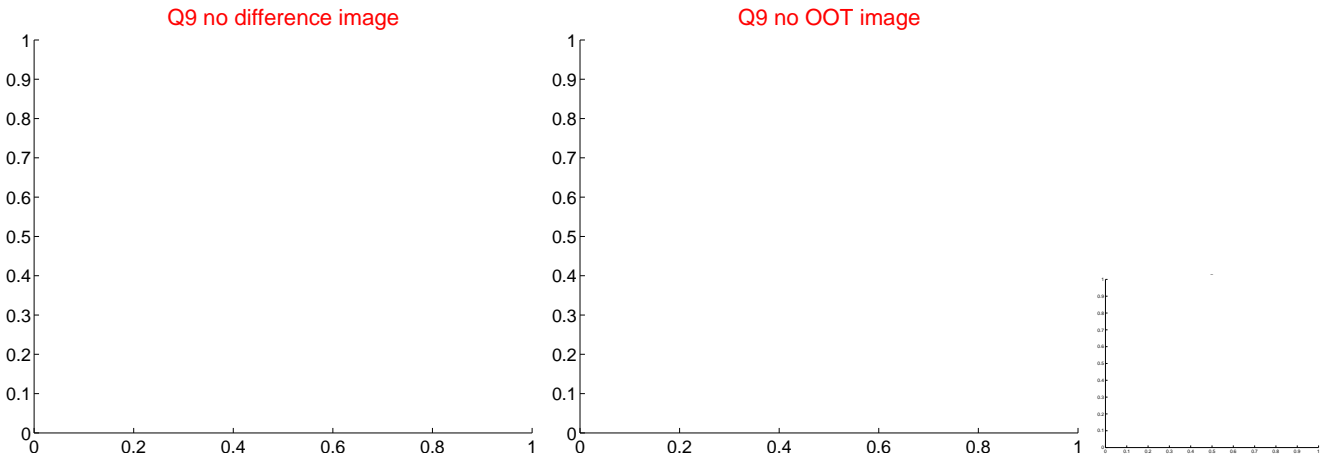
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



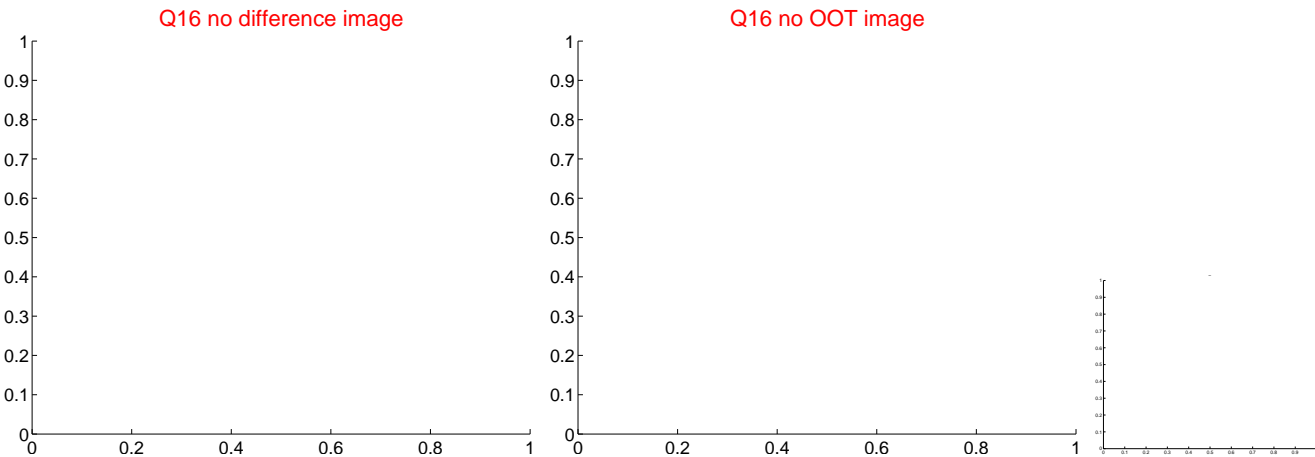
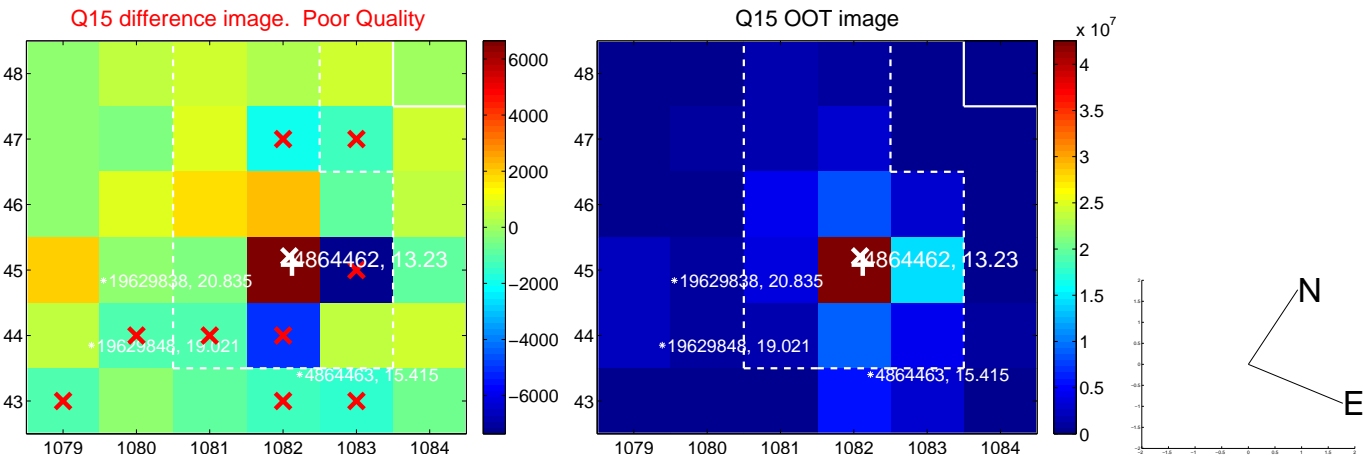
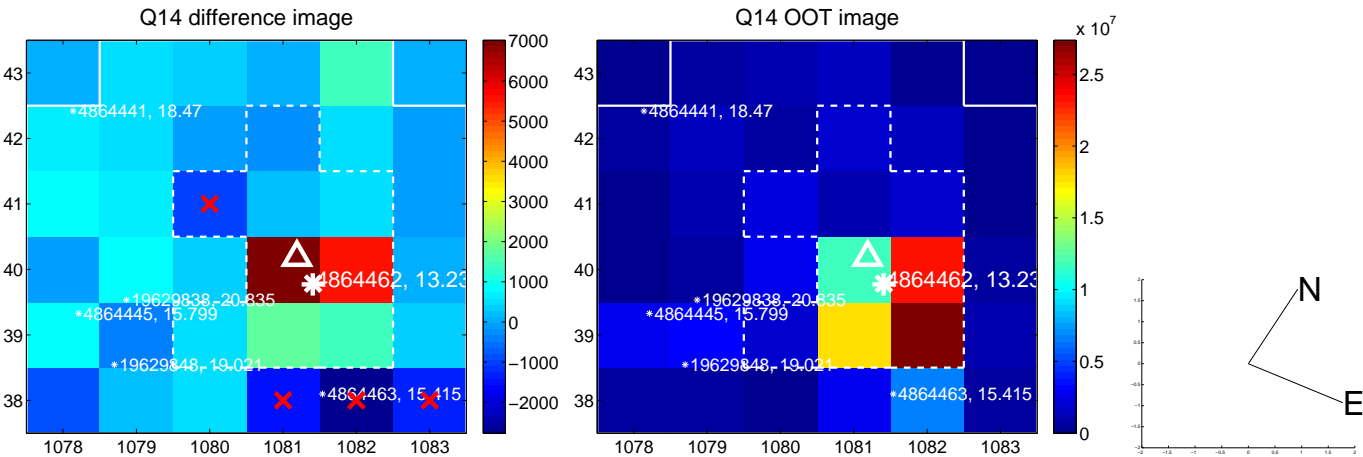
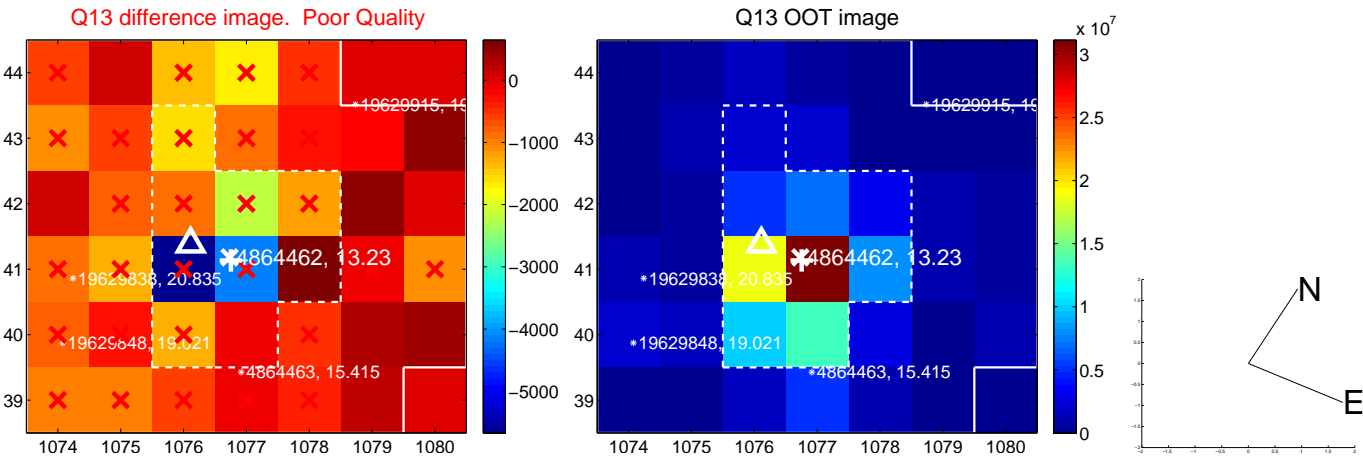
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



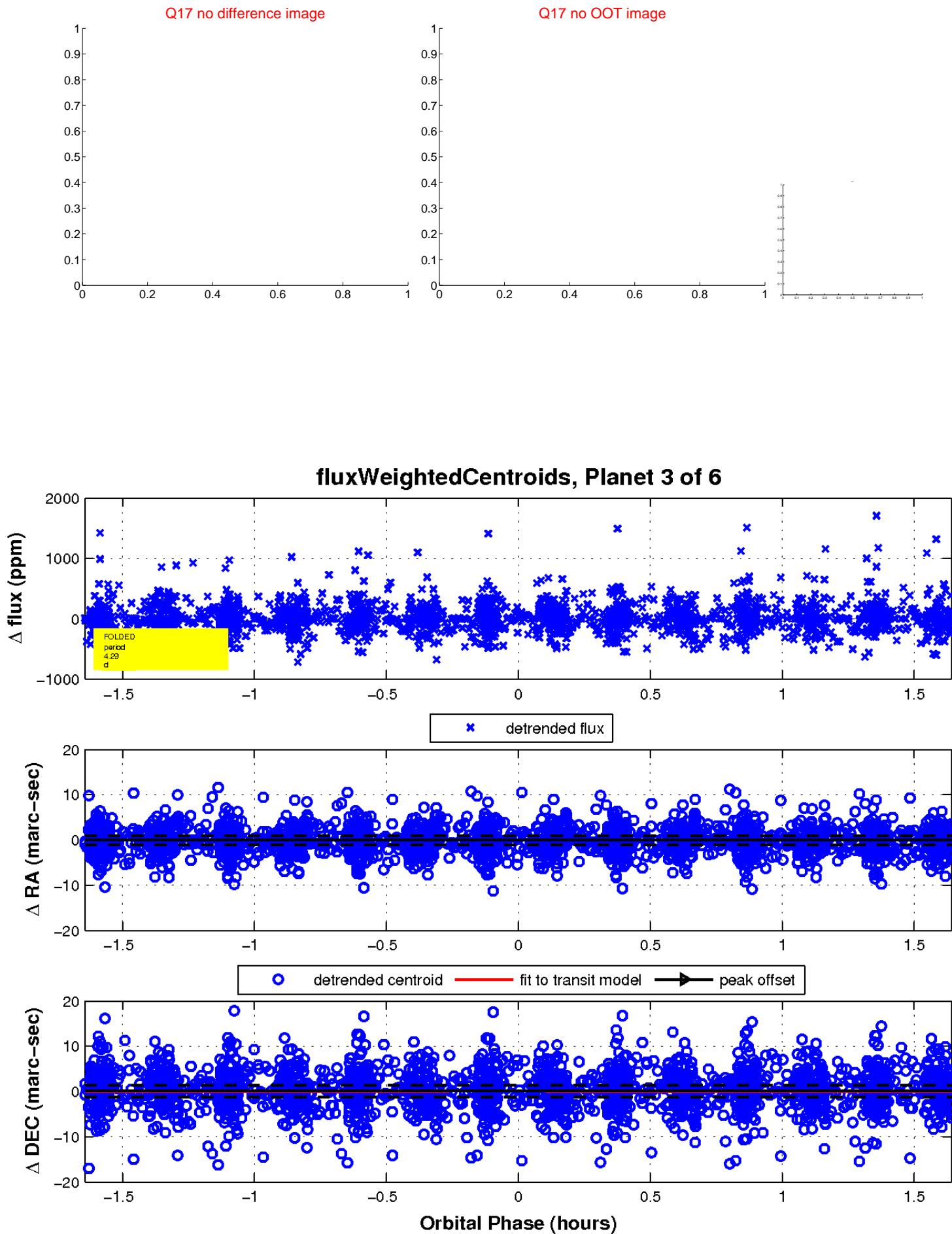
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

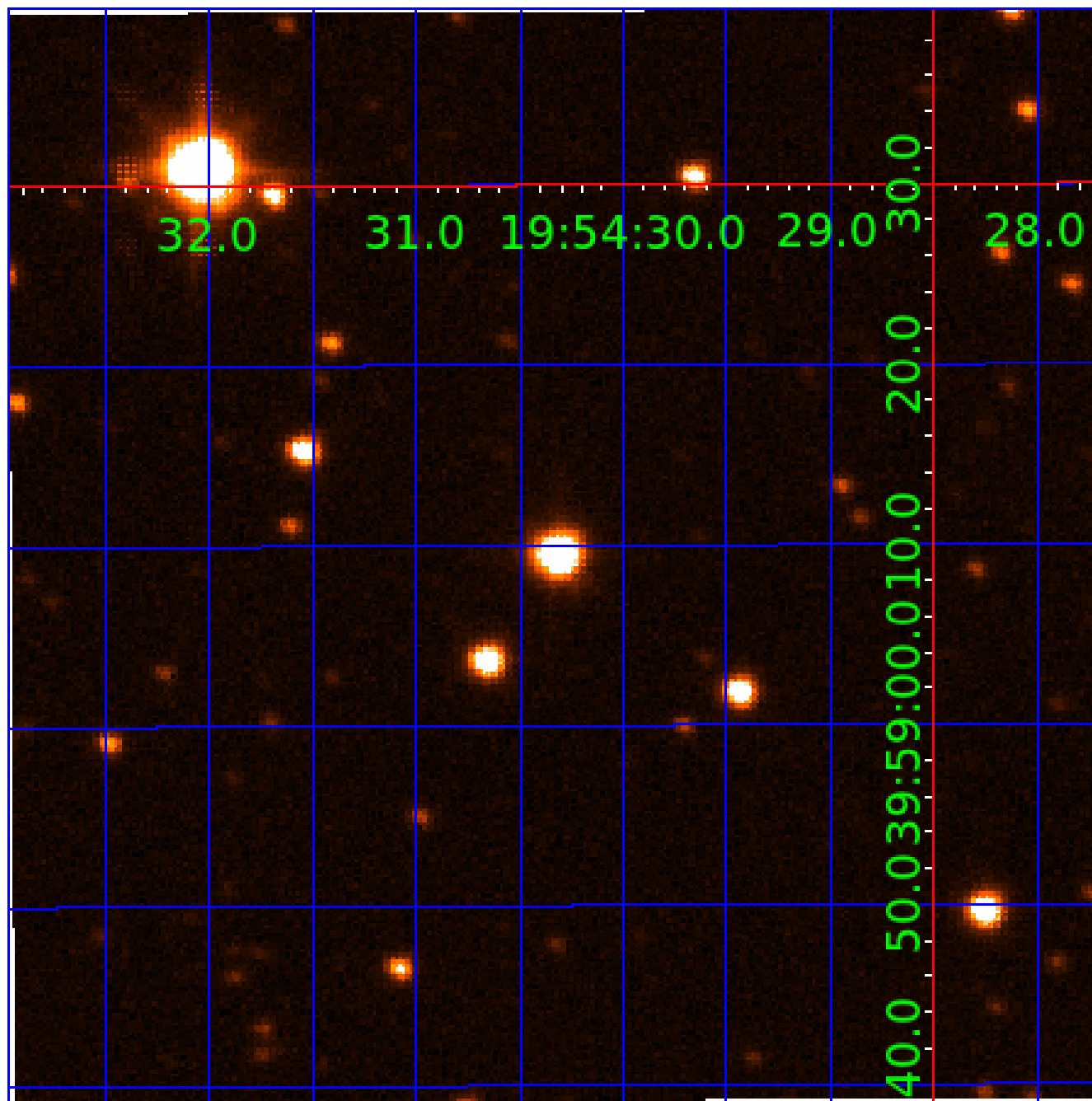


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004864462

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})
004864462-01	OBS	No	0.578543	131.603188	9.2	4.266	7.5	2.1	0.98	6480	0.31	8140.97
004864462-02	OBS	No	45.840833	152.584351	1510.8	3.393	12.8	13.5	0.98	6480	3.82	23.92
004864462-03	OBS	No	4.291182	135.792919	968.3	0.547	11.6	6.8	0.98	6480	3.20	562.80
004864462-04	OBS	No	13.986216	143.647032	1163.4	1.421	10.8	9.9	0.98	6480	3.40	116.46
004864462-05	OBS	No	5.043872	131.870691	1015.3	0.905	11.1	11.3	0.98	6480	3.22	453.70
004864462-06	OBS	No	11.587027	141.078323	1600.6	0.632	11.2	10.8	0.98	6480	4.18	149.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004864462-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
004864462-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES
004864462-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV
004864462-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV
004864462-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004864462-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV

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

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

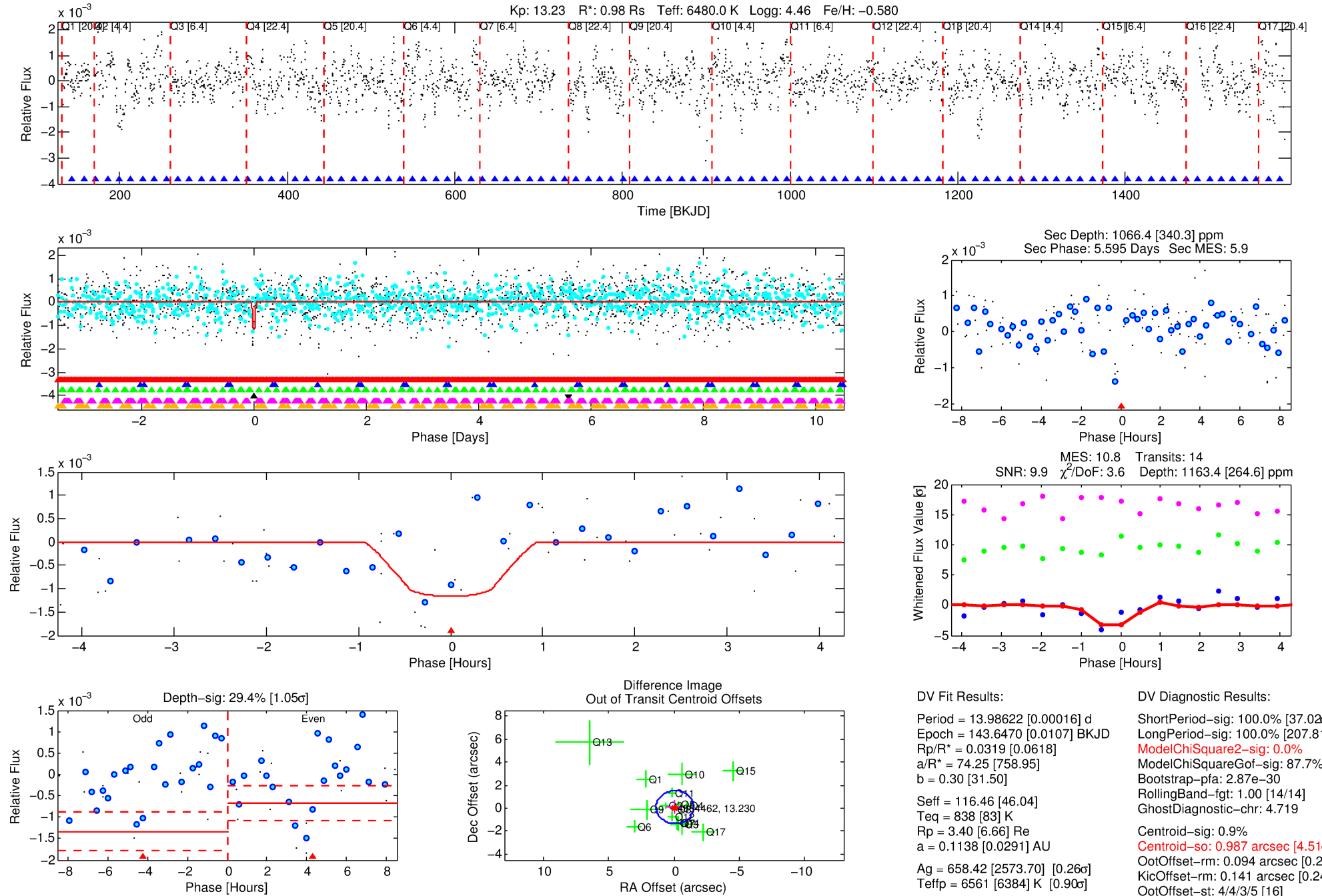
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004864462-04

No Significant Match Found

DV One-Page Summary

KIC: 4864462 Candidate: 4 of 6 Period: 13.986 d



DV Fit Results:

Period = 13.98622 [0.00016] d
Epoch = 143.6470 [0.0107] BKJD
Rp/R* = 0.0319 [0.0618]
a/R* = 74.25 [758.95]
b = 0.30 [31.50]
Seff = 116.46 [46.04]
Teff = 838 [83] K
Rp = 3.40 [6.66] Re
a = 0.1138 [0.0291] AU
Ag = 658.42 [2573.70] [0.26 σ]
Teffp = 6561 [6384] K [0.90 σ]

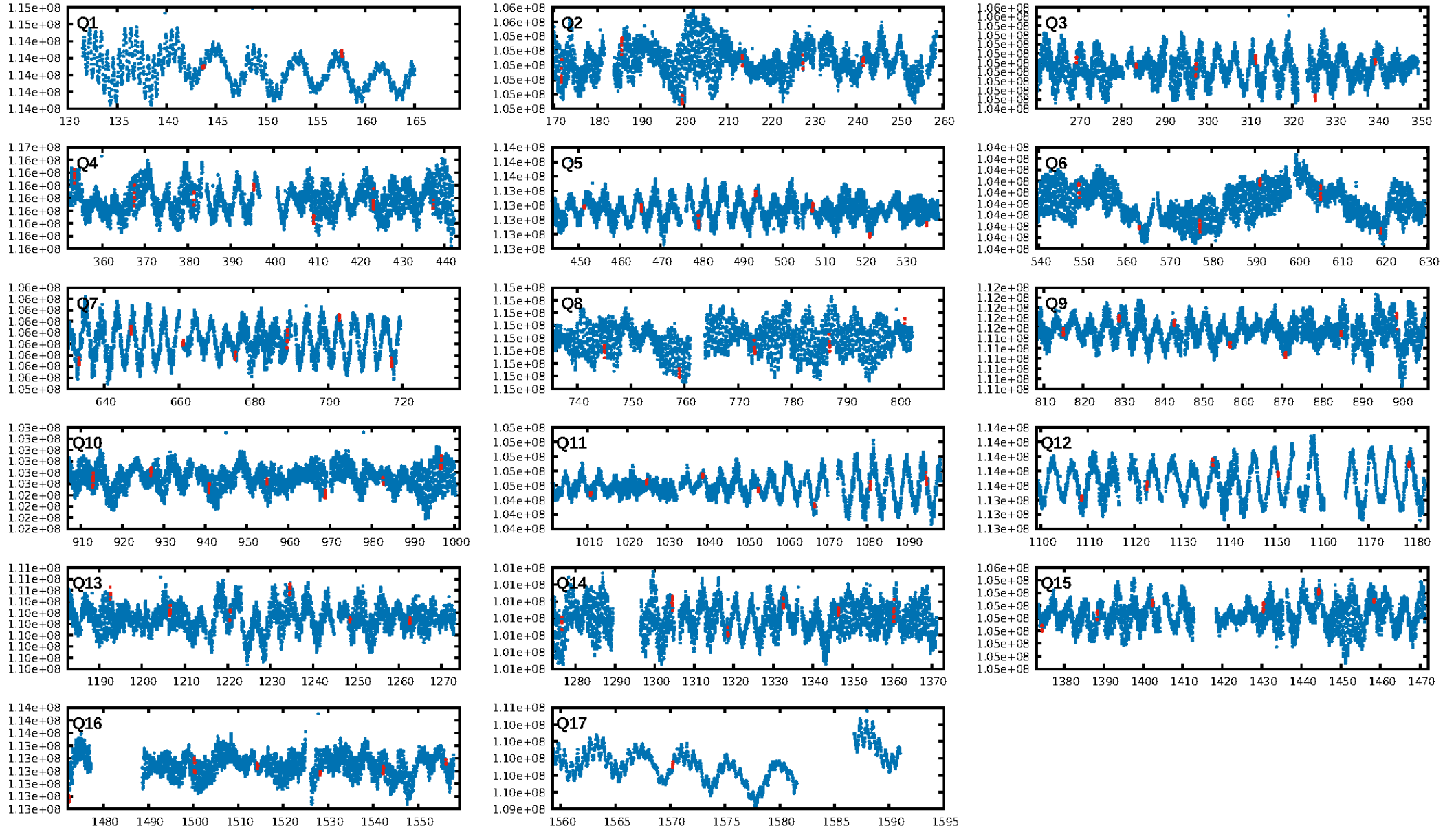
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [37.02 σ]
LongPeriod-sig: 100.0% [207.81 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 87.7%
Bootstrap-pfa: 2.87e-30
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 4.719
Centroid-sig: 0.9%
Centroid-so: 0.987 arcsec [4.51 σ]
OotOffset-rm: 0.094 arcsec [0.20 σ]
KicOffset-rm: 0.141 arcsec [0.24 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.38 [6/16]
DiffImageOverlap-fno: 0.00 [0/17]

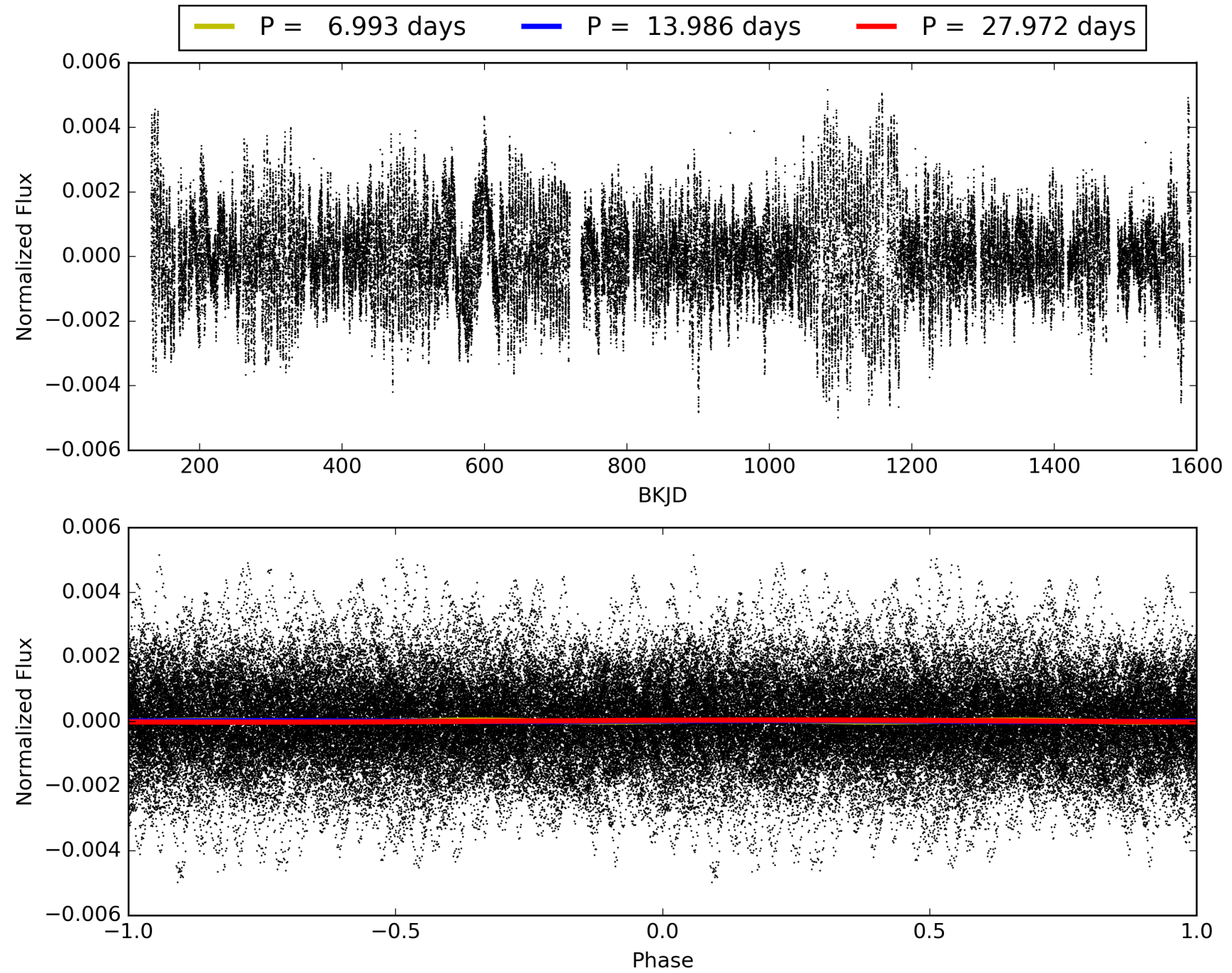
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:28:23 Z

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

TCE 004864462-04, PDC Light Curves

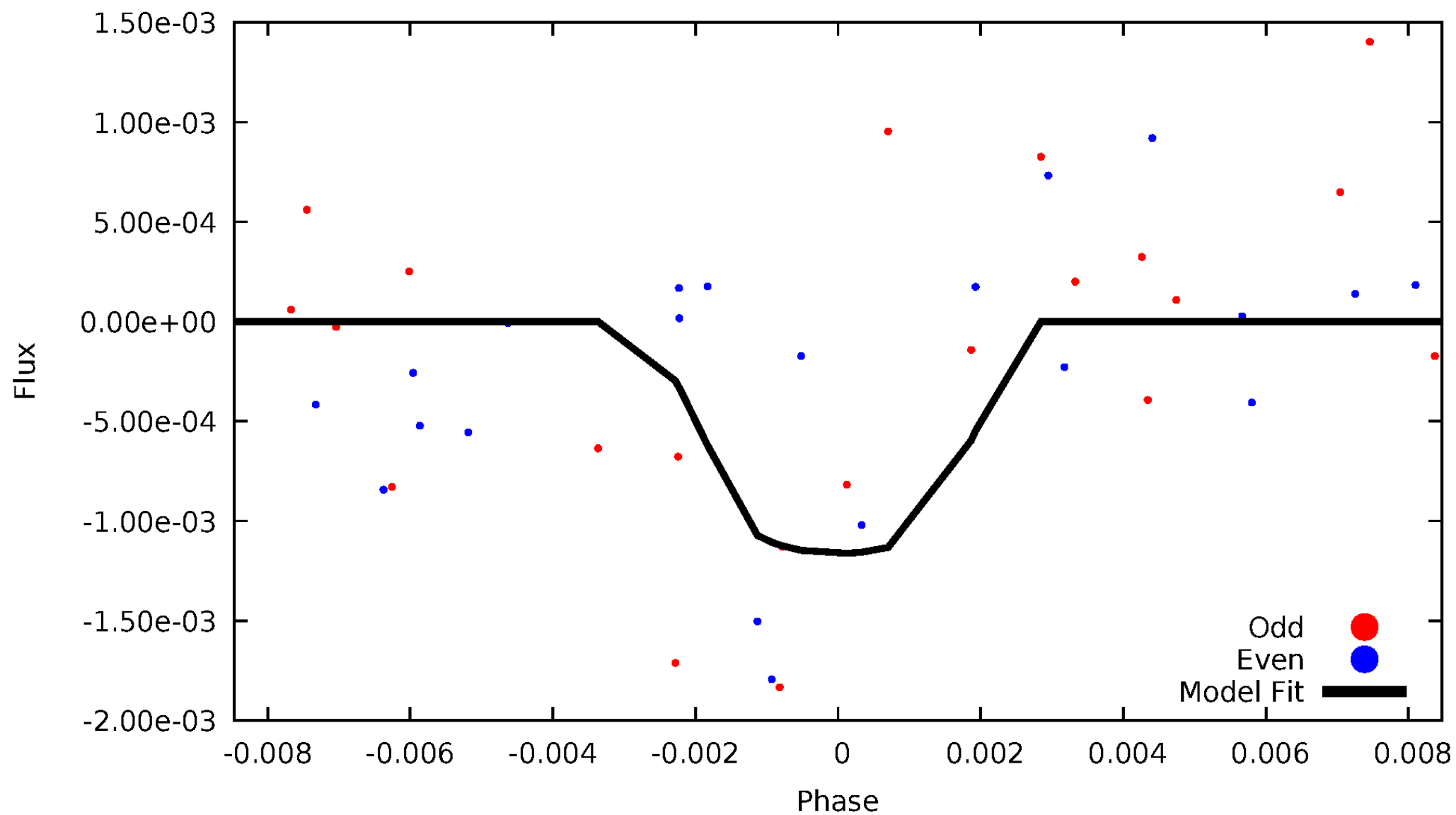


TCE 004864462-04



DV Odd/Even

TCE 004864462-04

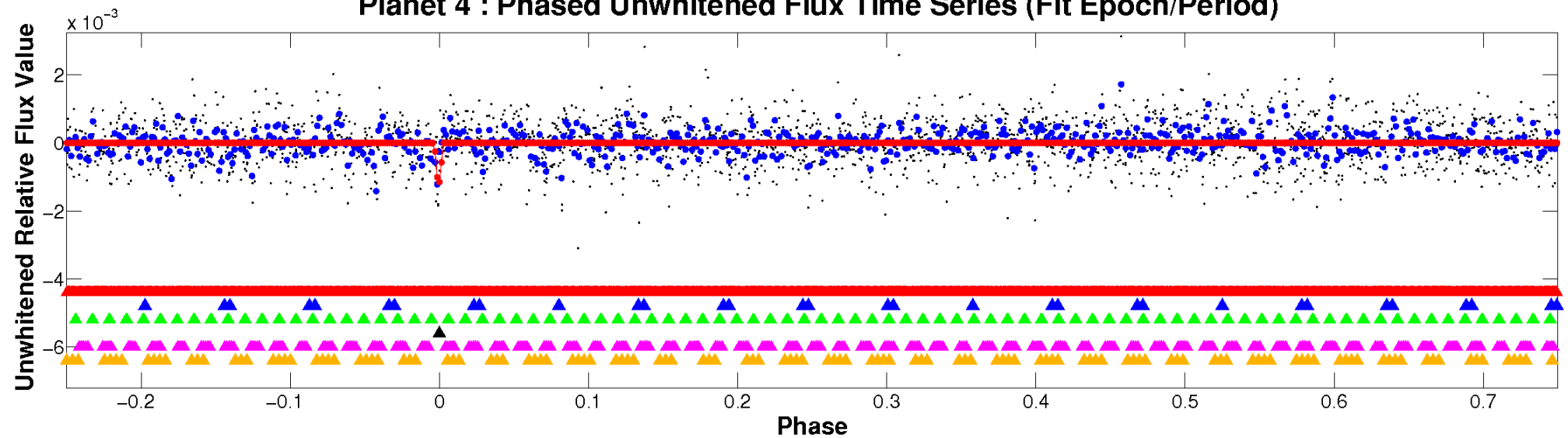


ALT Odd/Even

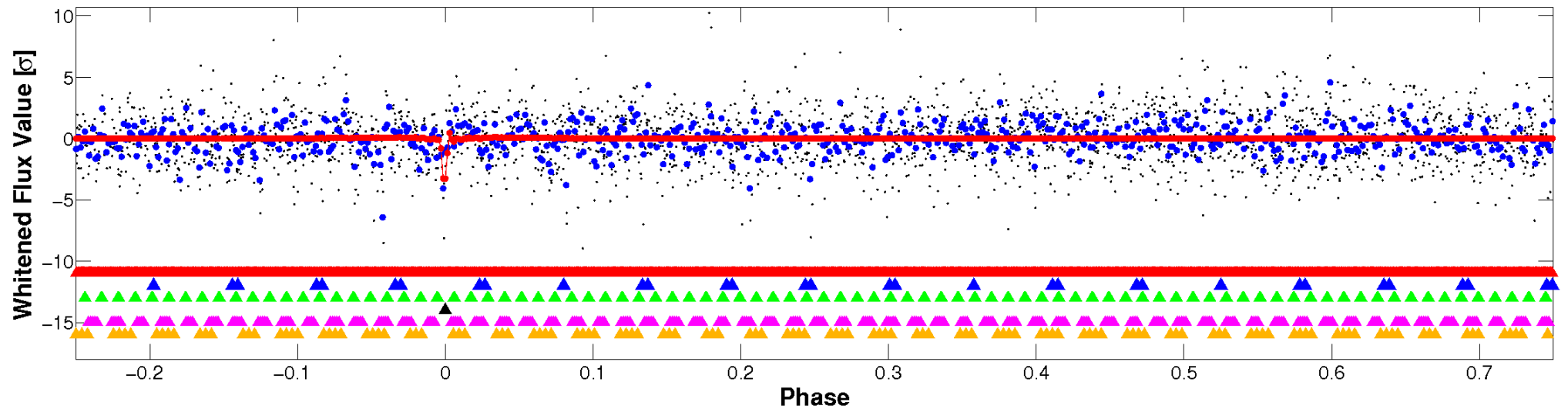
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

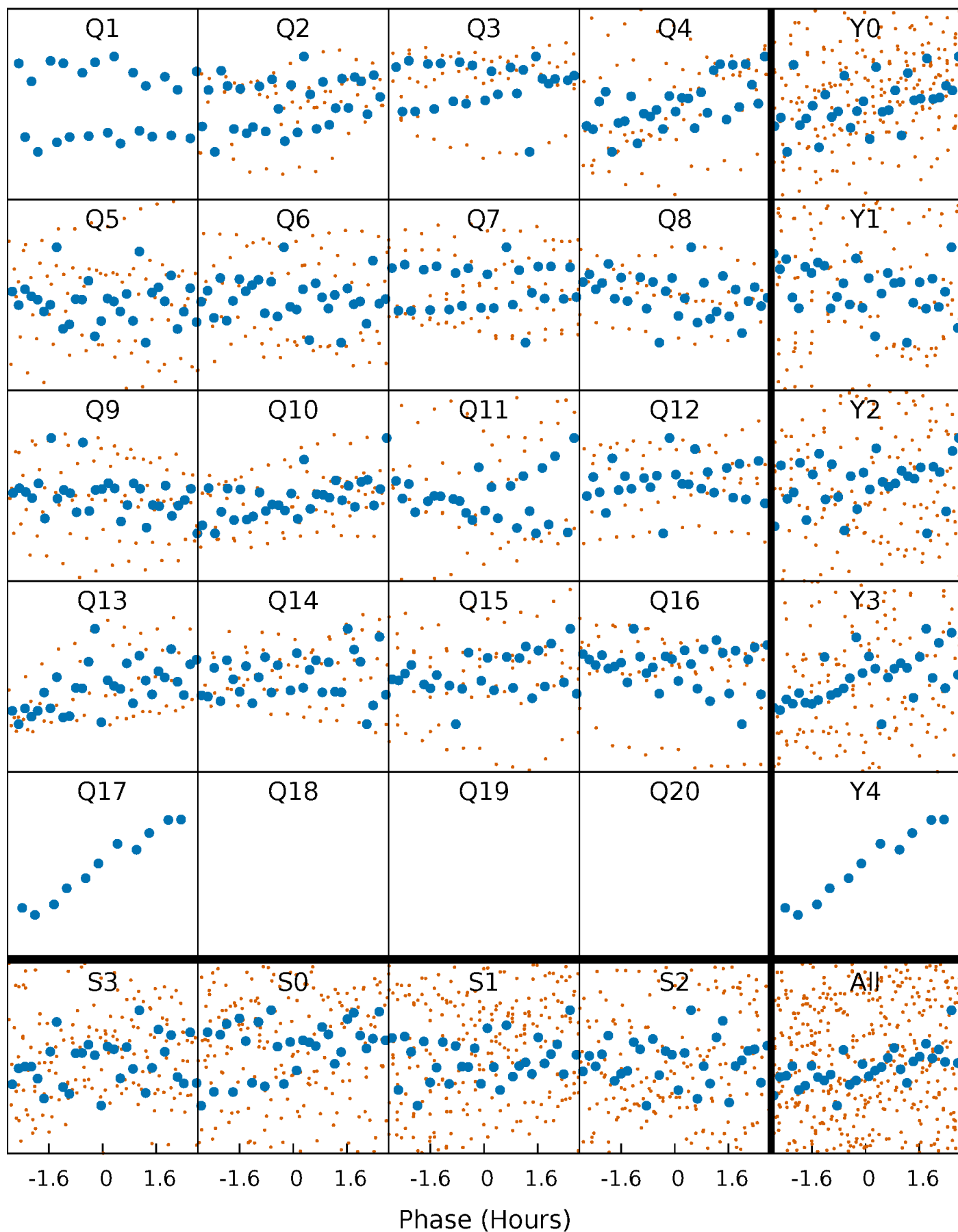


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



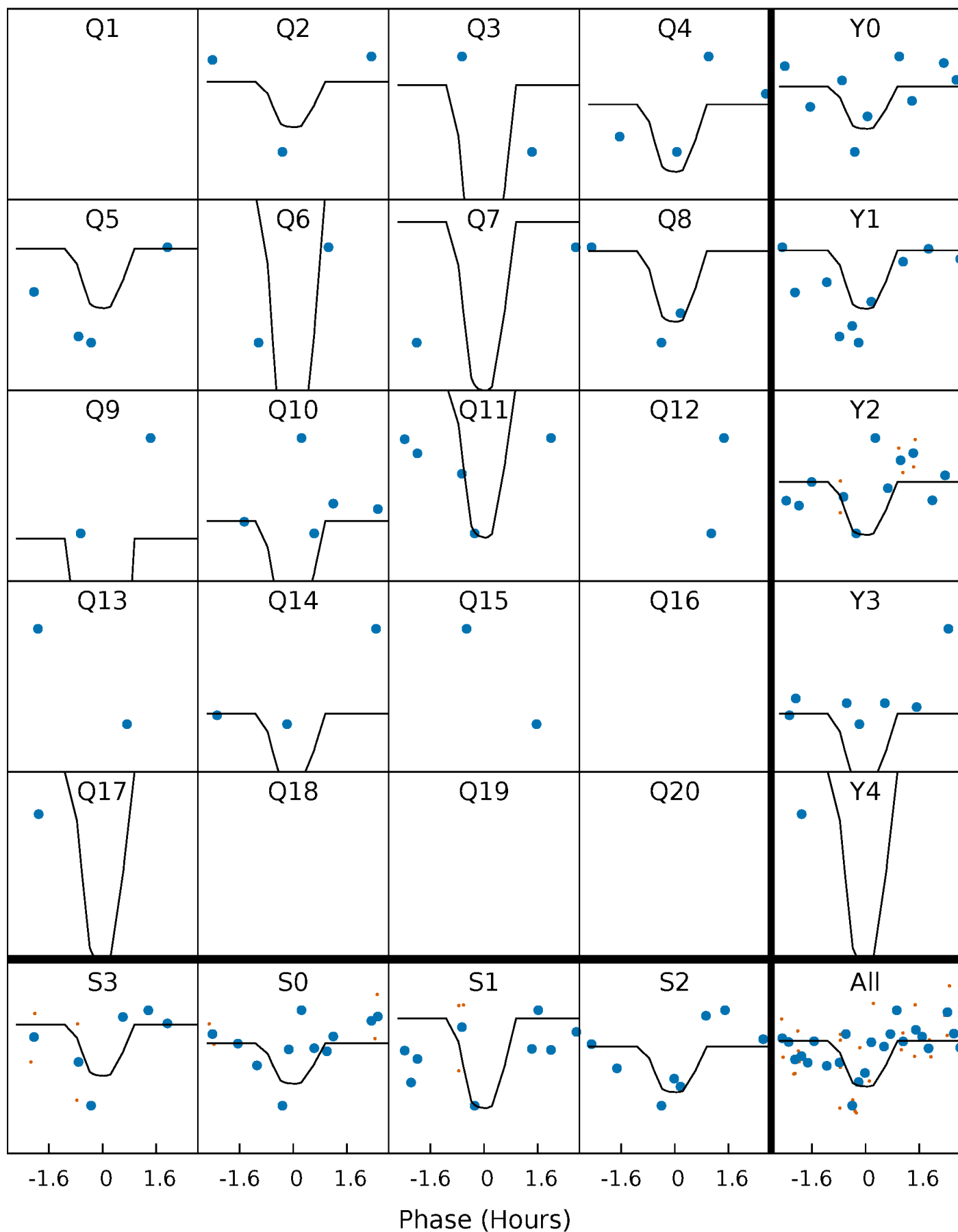
PDC Quarter-Phased Transit Curves

TCE 004864462-04 P= 13.986216 Days $T_0=143.647032$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004864462-04 P= 13.986216 Days $T_0=143.647032$ (BKJD)

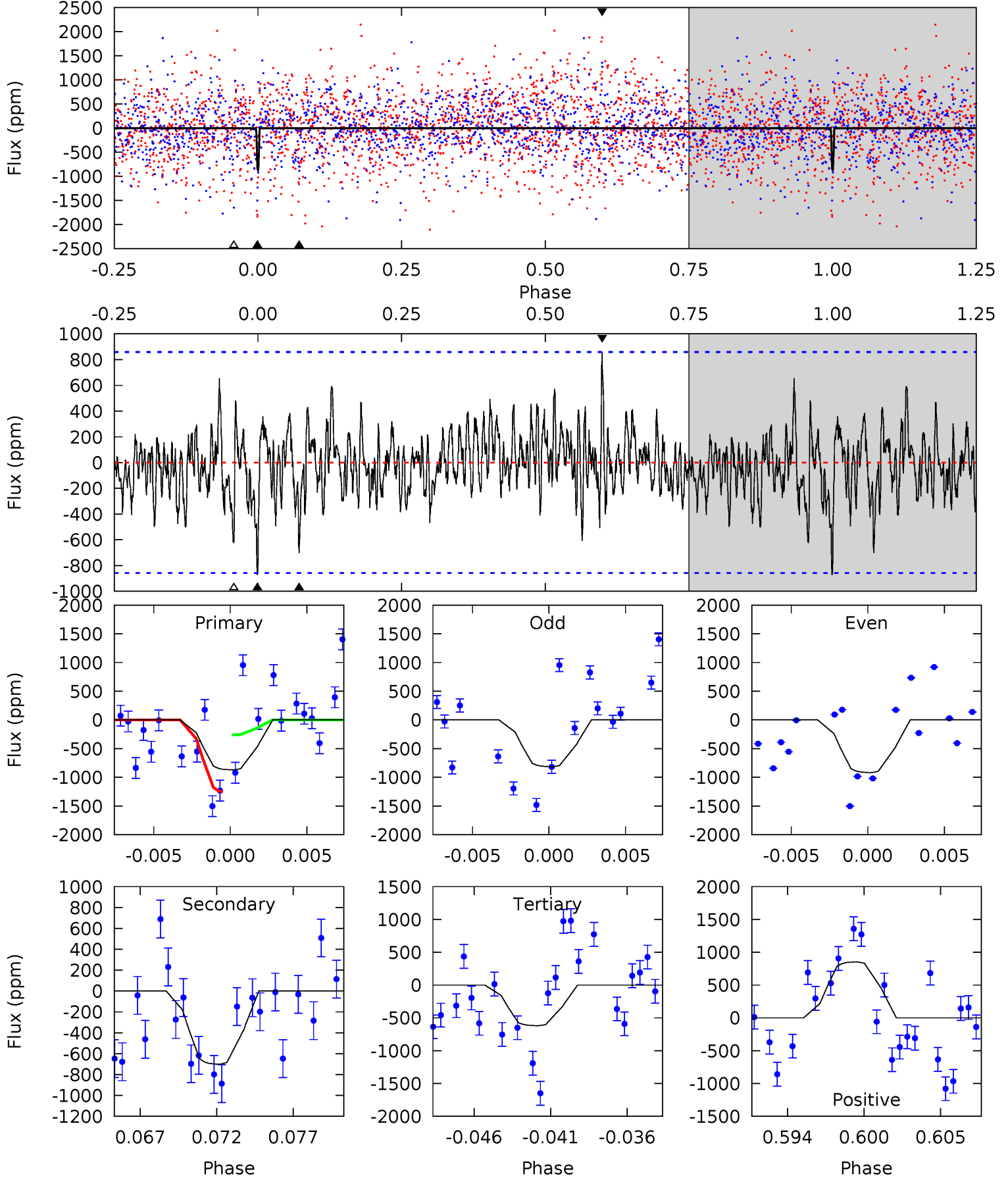


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004864462-04, P = 13.986216 Days, E = 129.660816 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.23	4.22	3.72	5.13	5.15	2.80	1.22	1.51	0.10	0.49	-0.91	0.31	1.22	0.49	2.90



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004864462

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6480^{+162}_{-194}	$4.460^{+0.065}_{-0.208}$	$-0.580^{+0.300}_{-0.350}$	$0.977^{+0.293}_{-0.098}$	$1.004^{+0.122}_{-0.110}$	$1.518^{+0.411}_{-0.775}$
	+2%/-3%	+1%/-5%	+52%/-60%	+30%/-10%	+12%/-11%	+27%/-51%
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 004864462-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-702 ± 167	$6.37^{+6.28}_{-4.47}$	1190^{+80}_{-56}	4534^{+3959}_{-972}	121^{+1264}_{-90}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

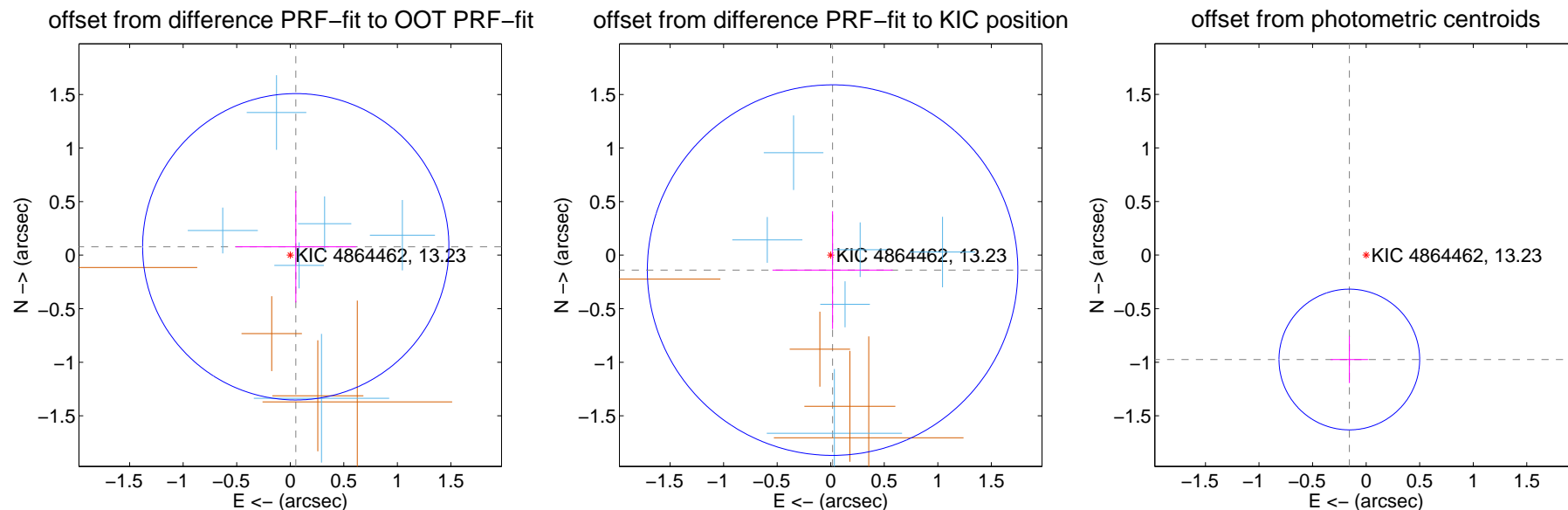
DV Centroid Data

Supplemental centroid analysis for 004864462-04. Kepler magnitude: 13.23. Transit SNR 9.87

There are 6 quarters with good PRF difference image offsets

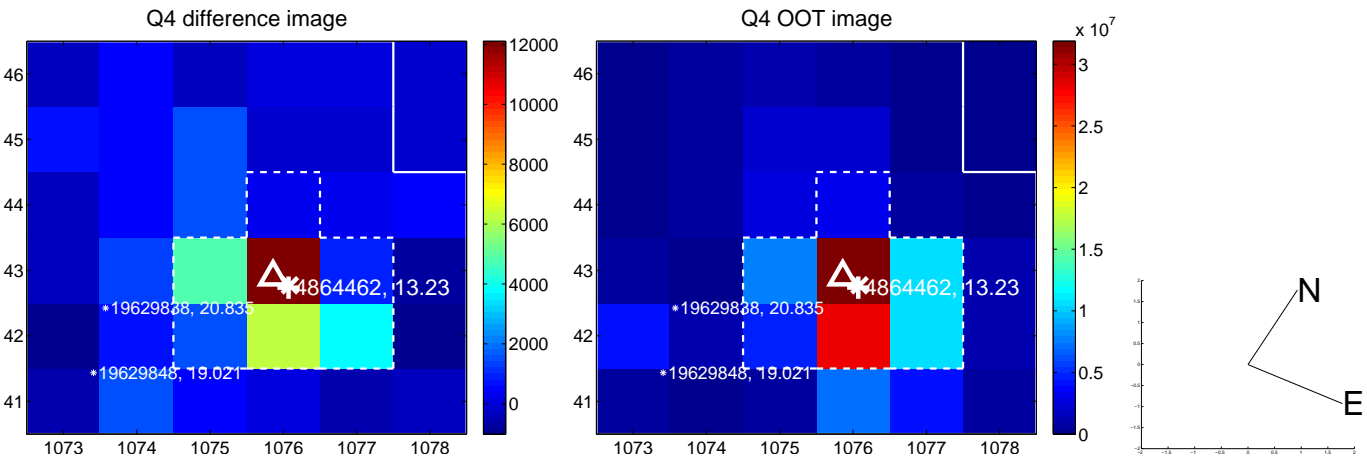
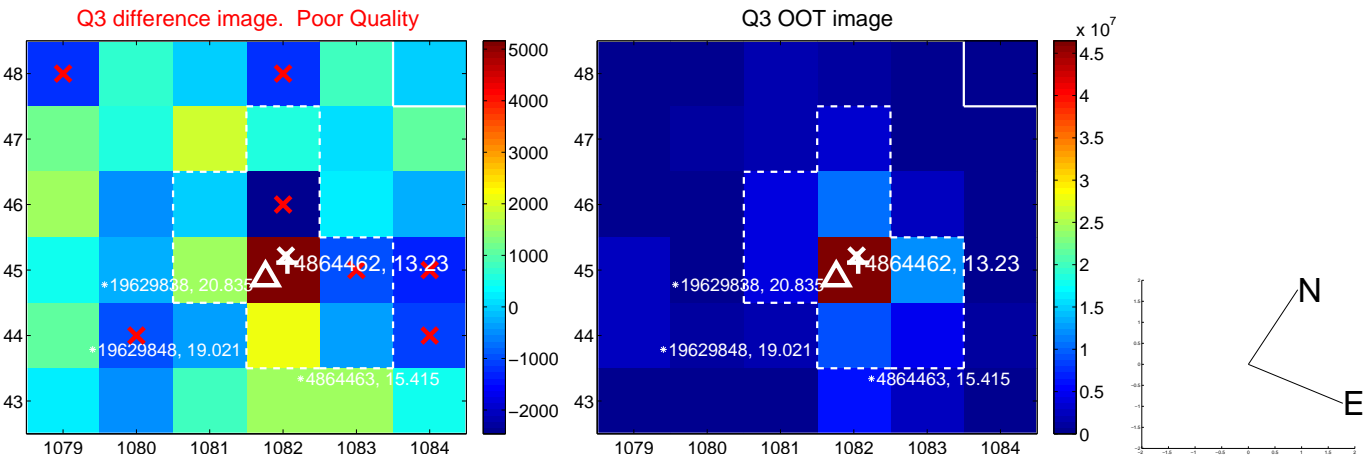
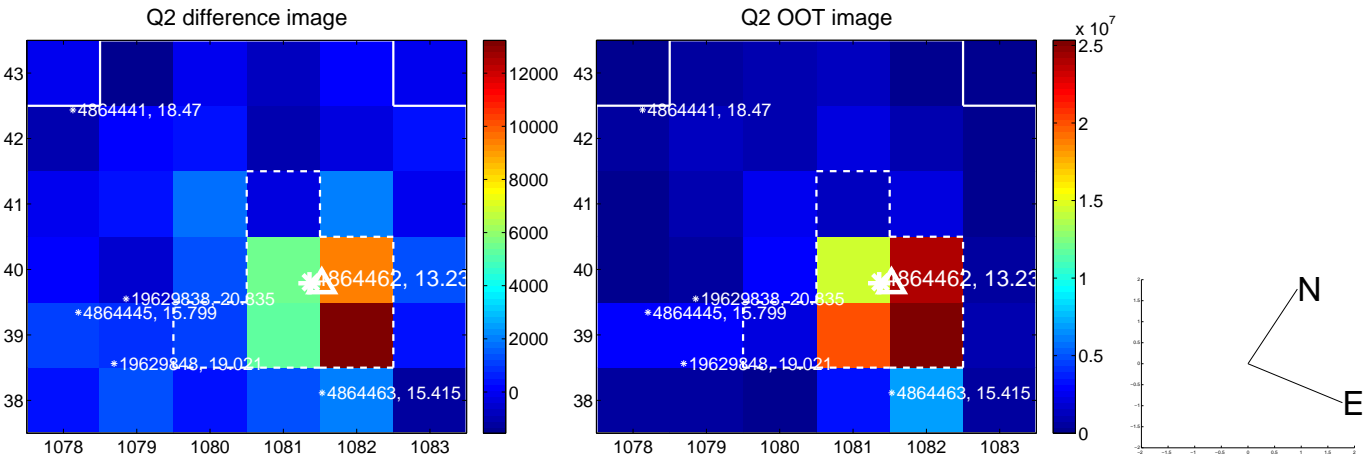
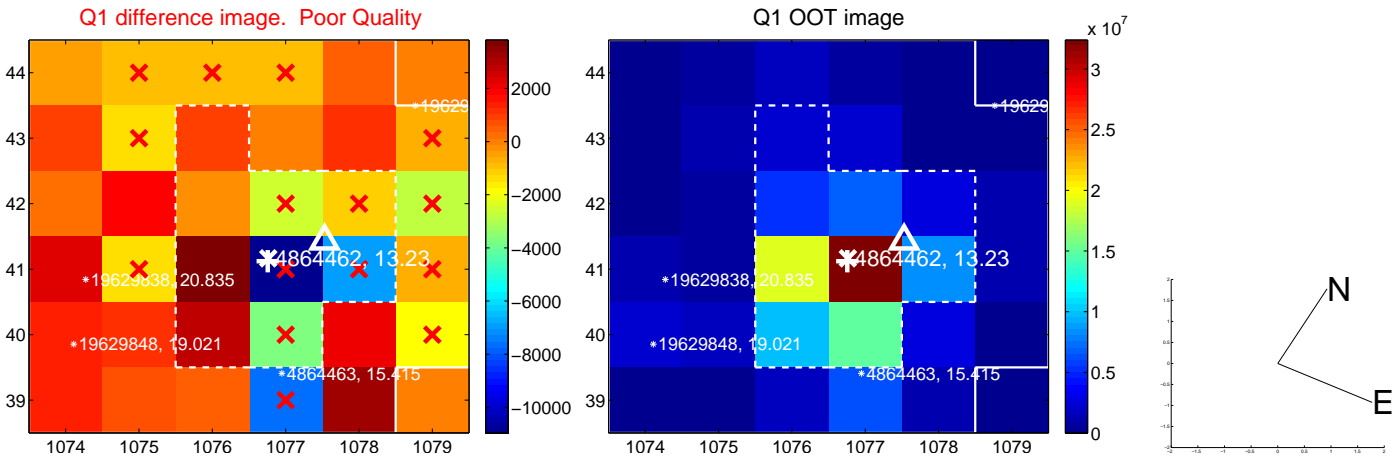
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.094 ± 0.477	0.20	-0.051 ± 0.563	0.078 ± 0.520
PRF-fit source offset from KIC position	0.141 ± 0.577	0.24	-0.017 ± 0.562	-0.140 ± 0.550
photometric centroid source offset	0.99 ± 0.22	4.51	0.16 ± 0.17	-0.97 ± 0.22

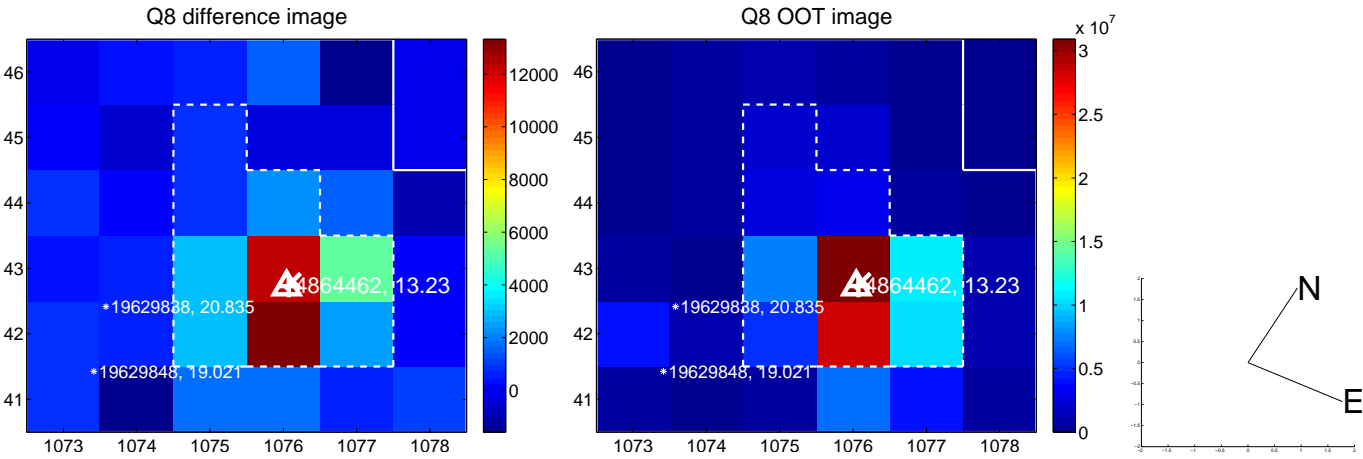
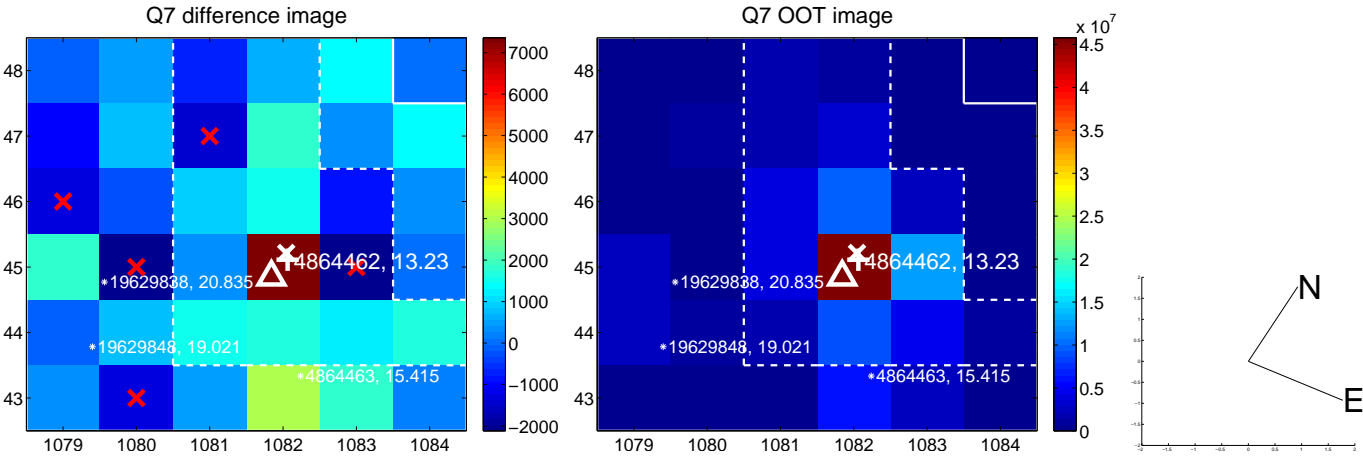
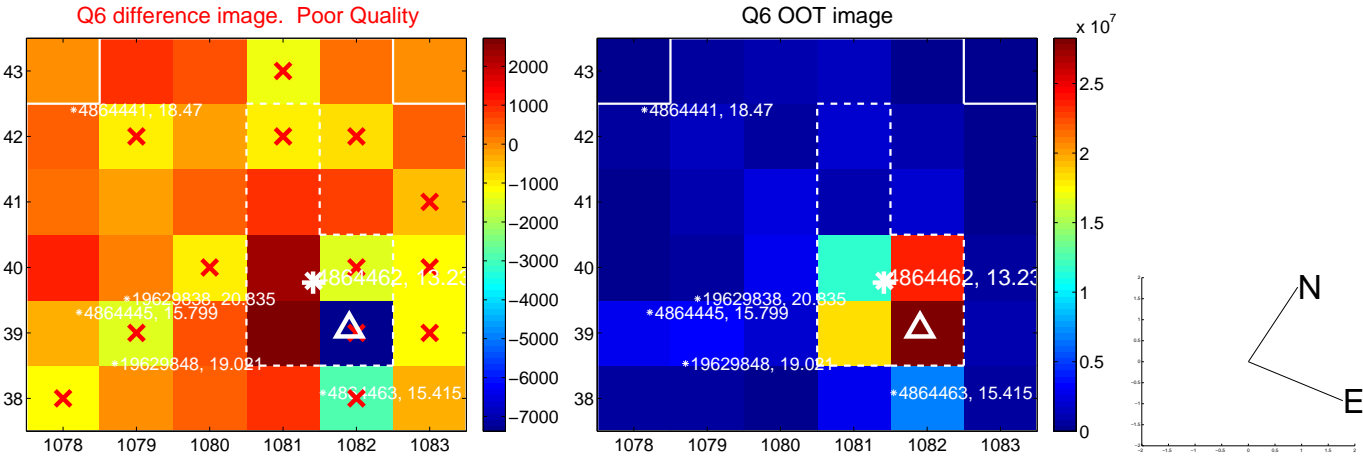
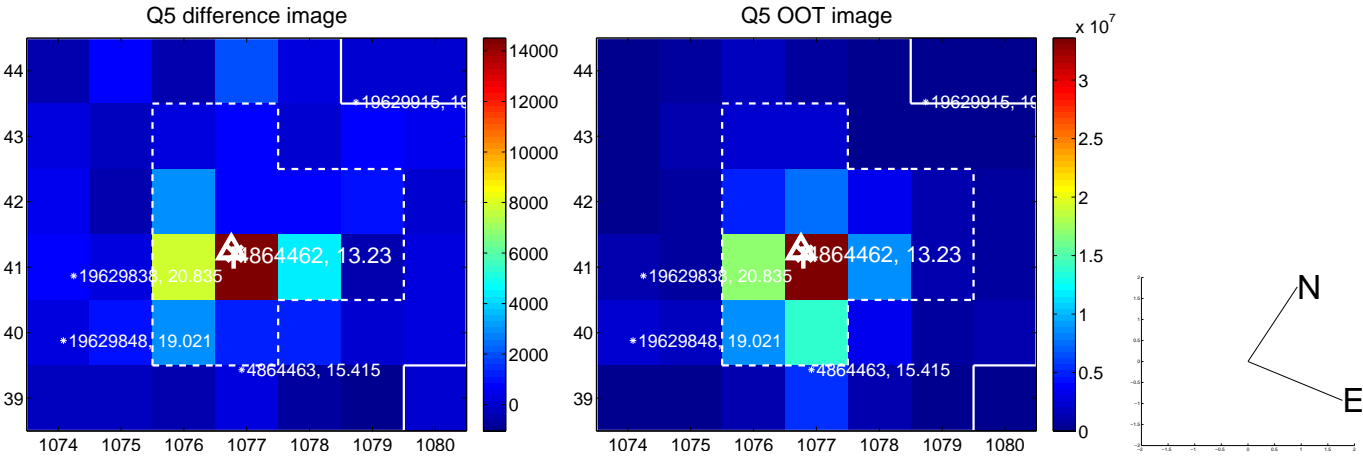


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

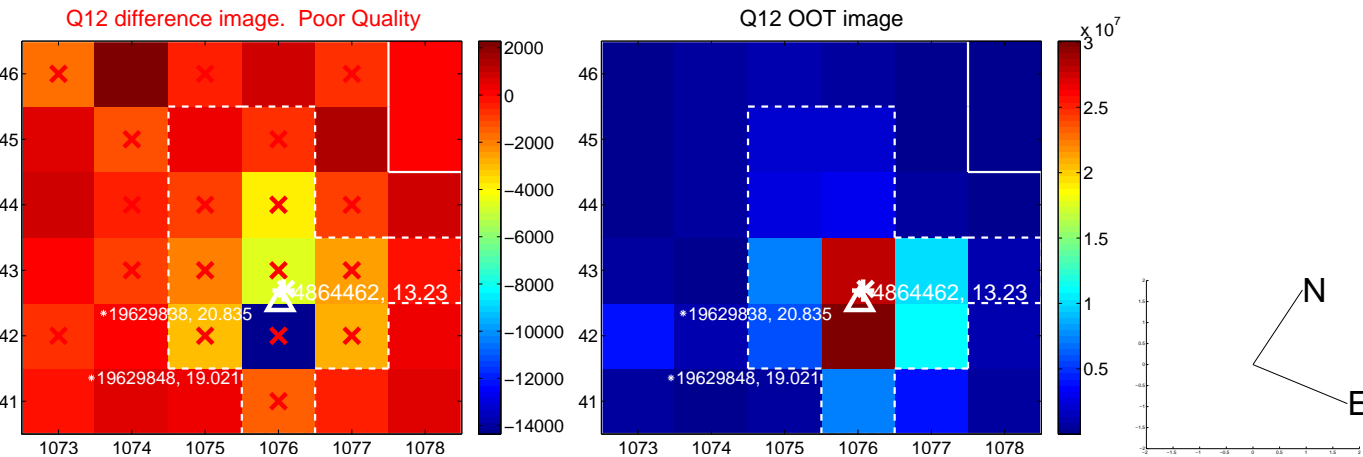
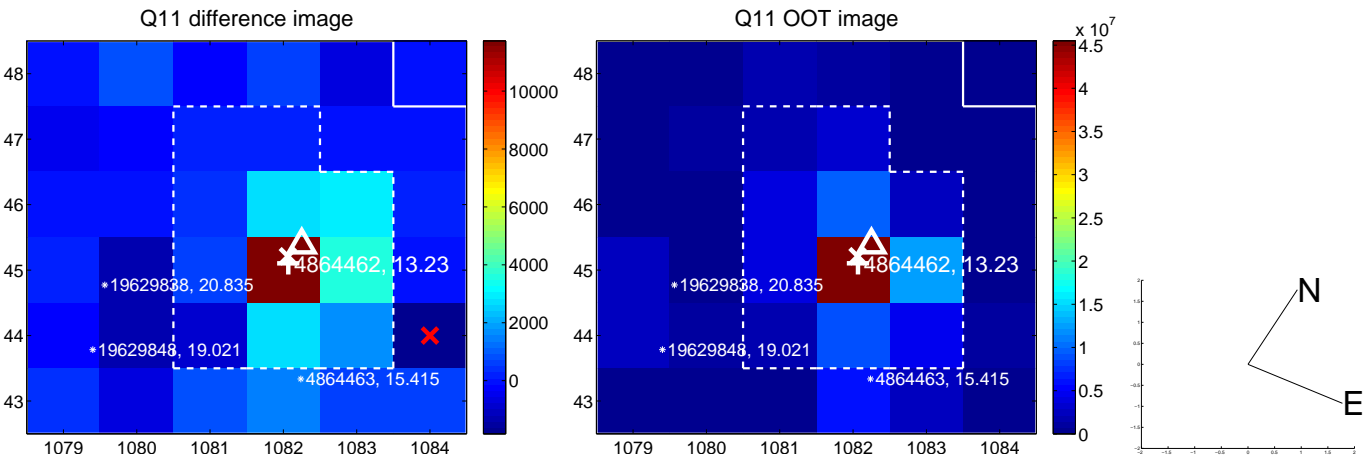
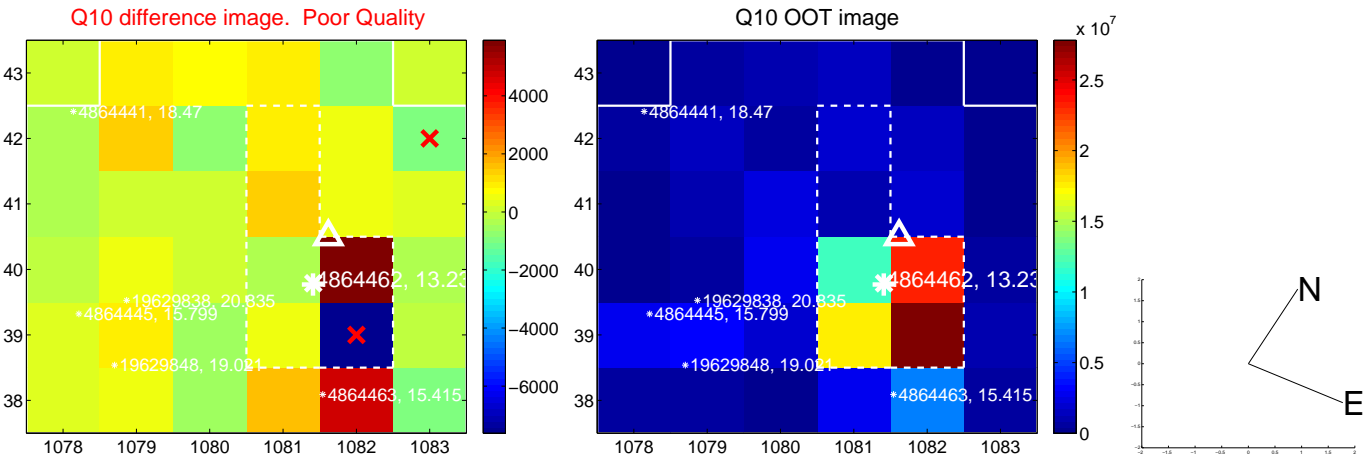
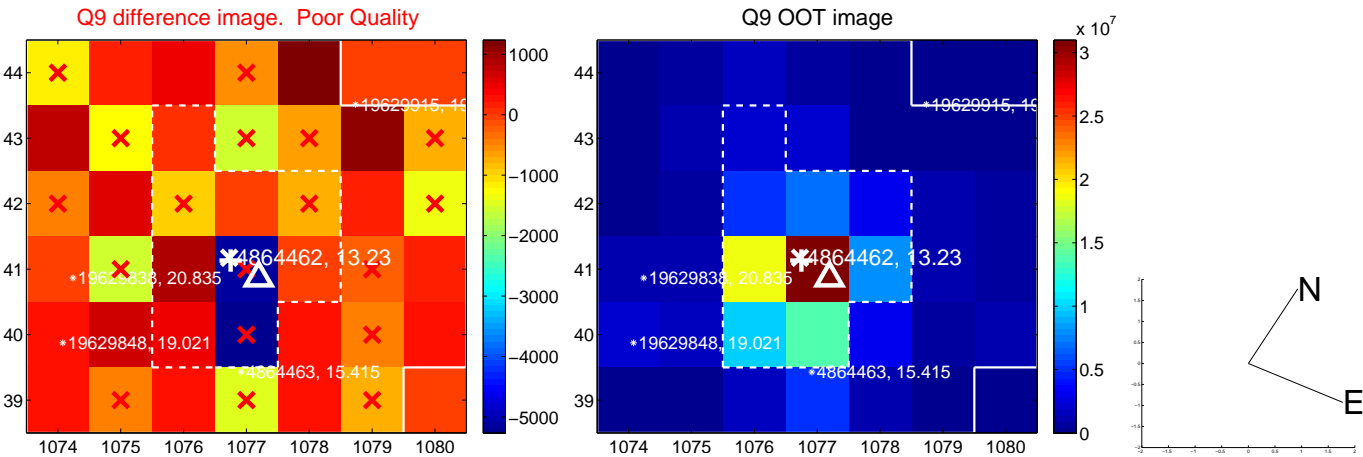
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



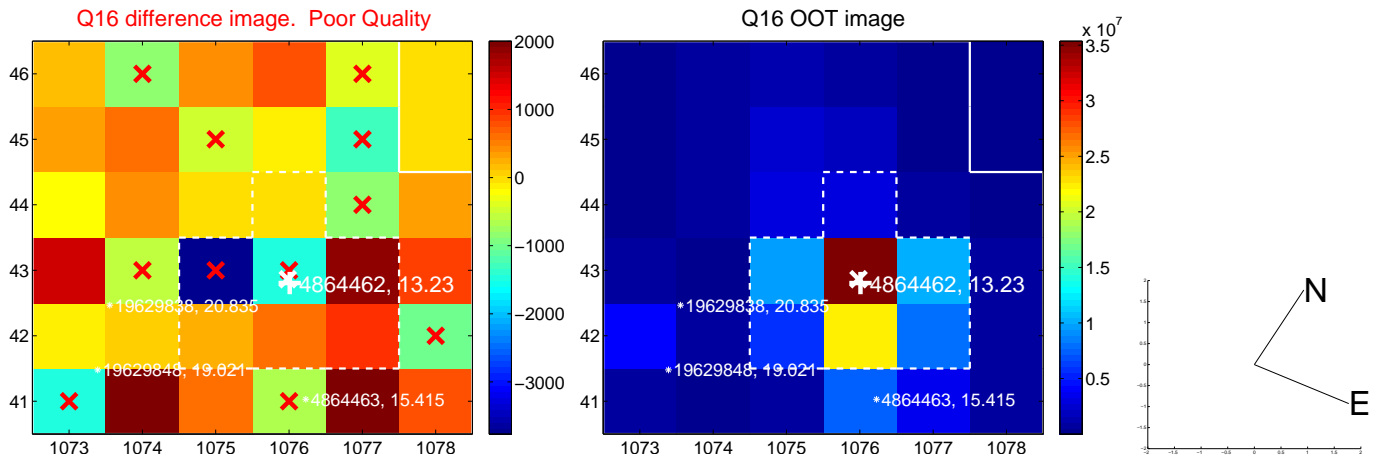
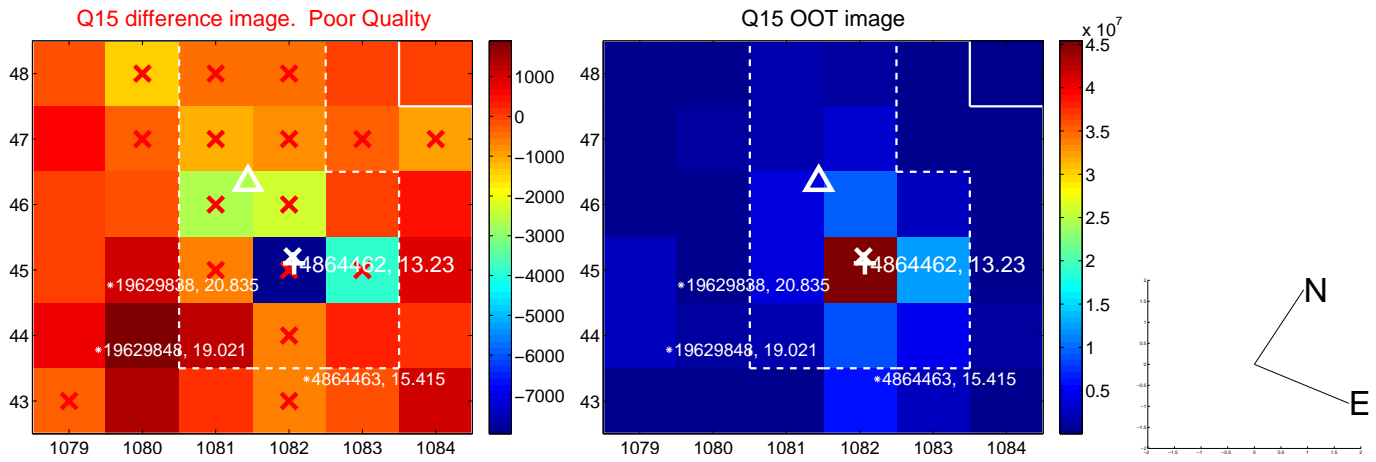
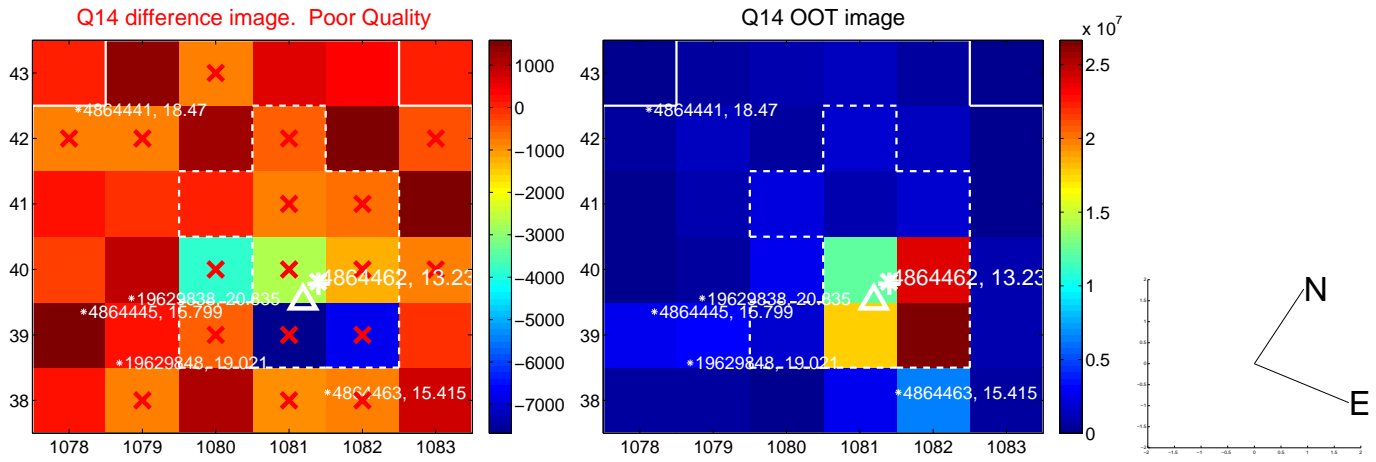
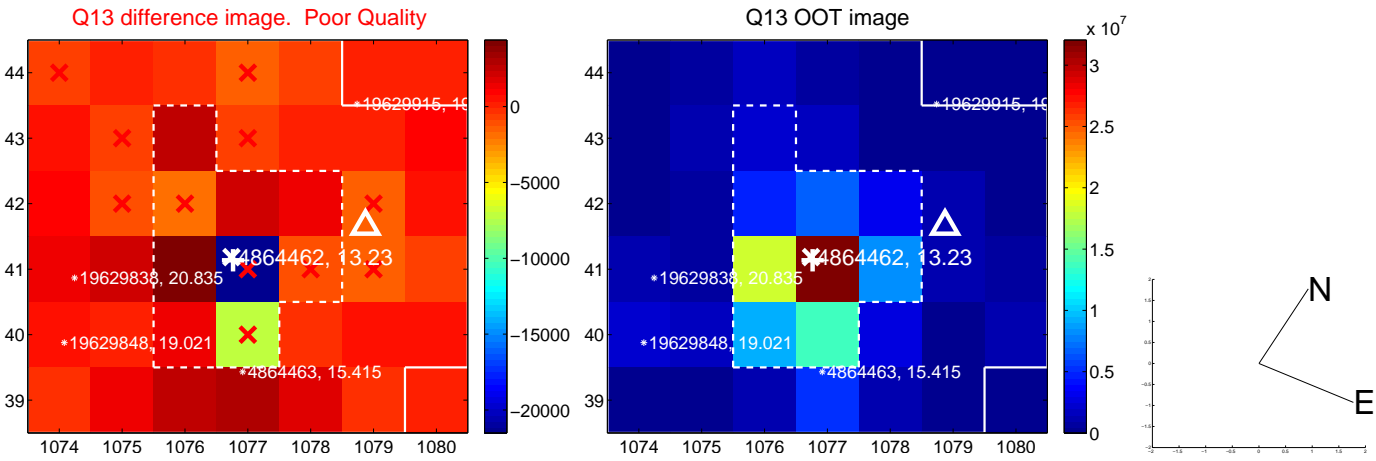
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



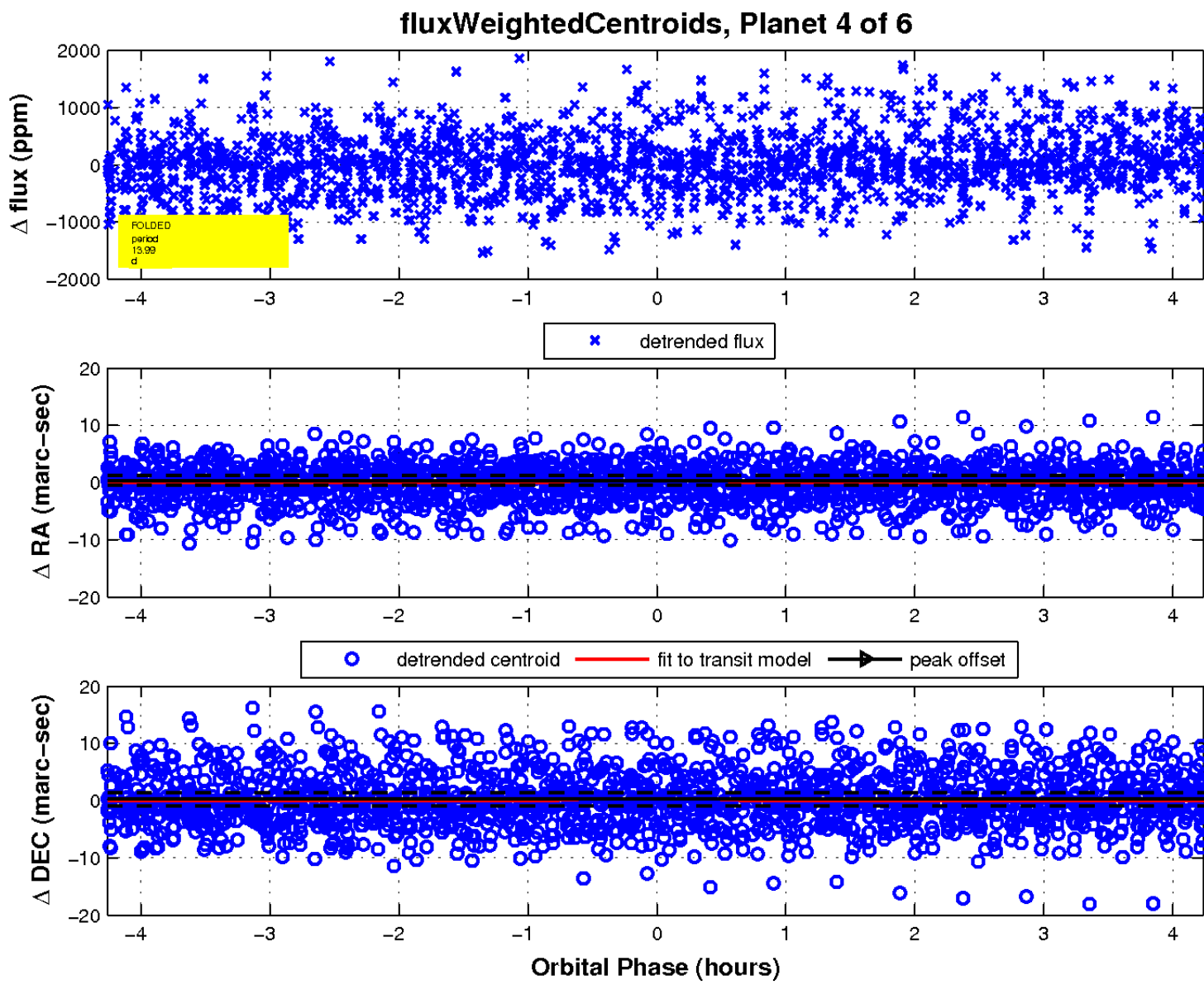
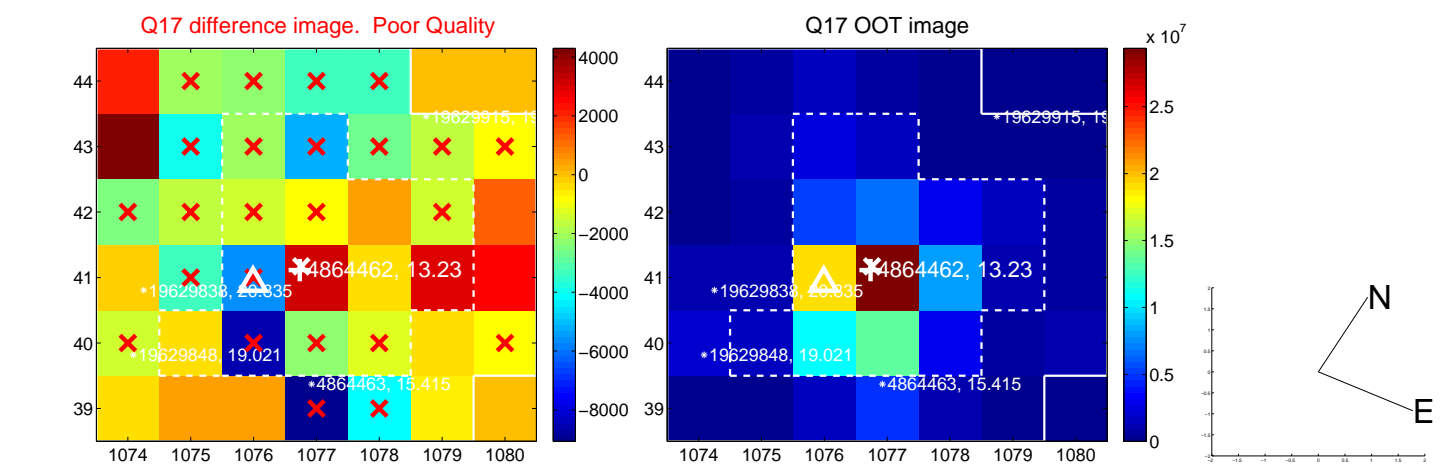
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

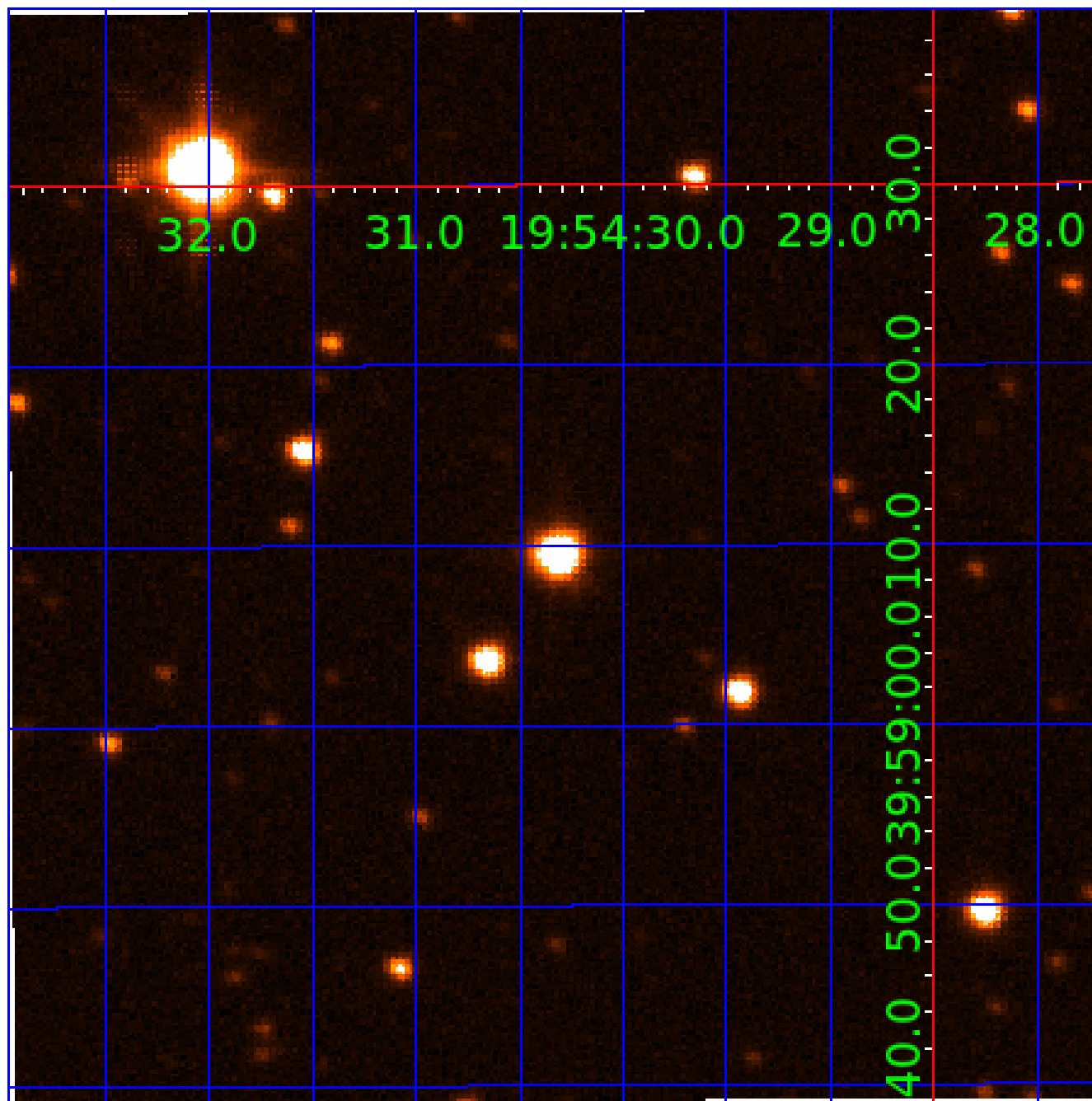


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004864462

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})
004864462-01	OBS	No	0.578543	131.603188	9.2	4.266	7.5	2.1	0.98	6480	0.31	8140.97
004864462-02	OBS	No	45.840833	152.584351	1510.8	3.393	12.8	13.5	0.98	6480	3.82	23.92
004864462-03	OBS	No	4.291182	135.792919	968.3	0.547	11.6	6.8	0.98	6480	3.20	562.80
004864462-04	OBS	No	13.986216	143.647032	1163.4	1.421	10.8	9.9	0.98	6480	3.40	116.46
004864462-05	OBS	No	5.043872	131.870691	1015.3	0.905	11.1	11.3	0.98	6480	3.22	453.70
004864462-06	OBS	No	11.587027	141.078323	1600.6	0.632	11.2	10.8	0.98	6480	4.18	149.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004864462-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
004864462-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES
004864462-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV
004864462-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV
004864462-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004864462-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV

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

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

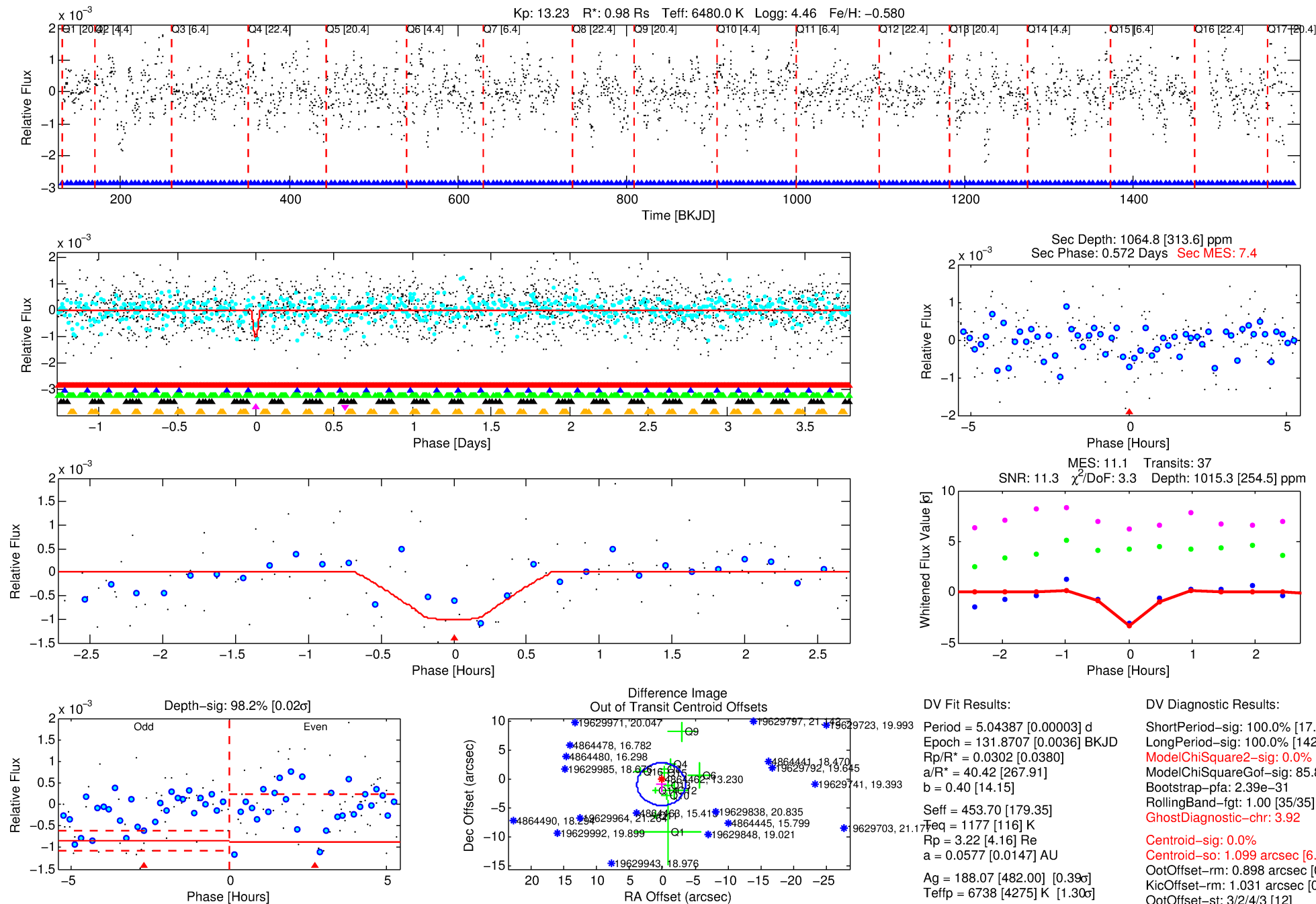
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004864462-05

No Significant Match Found

DV One-Page Summary

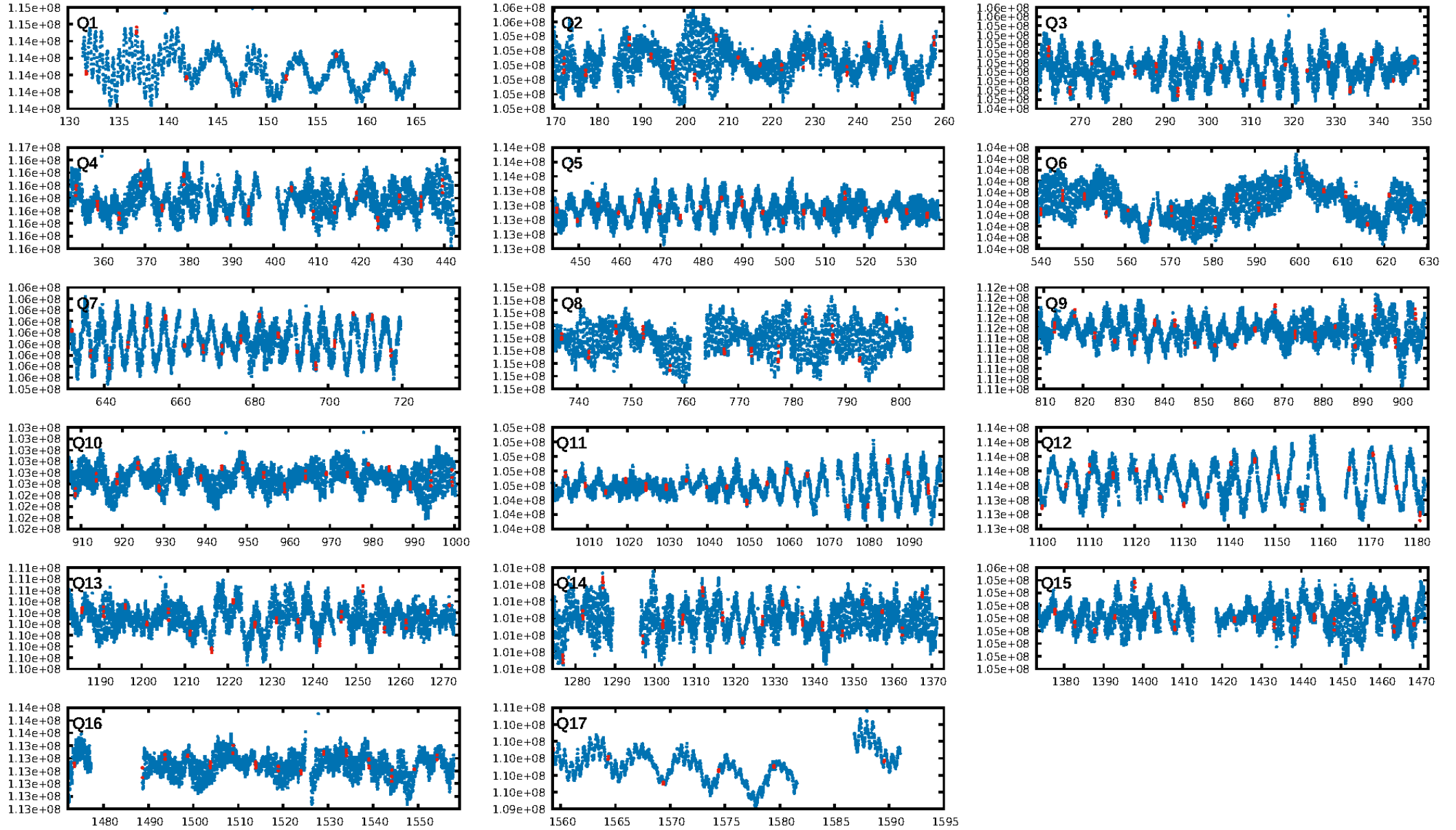
KIC: 4864462 Candidate: 5 of 6 Period: 5.044 d



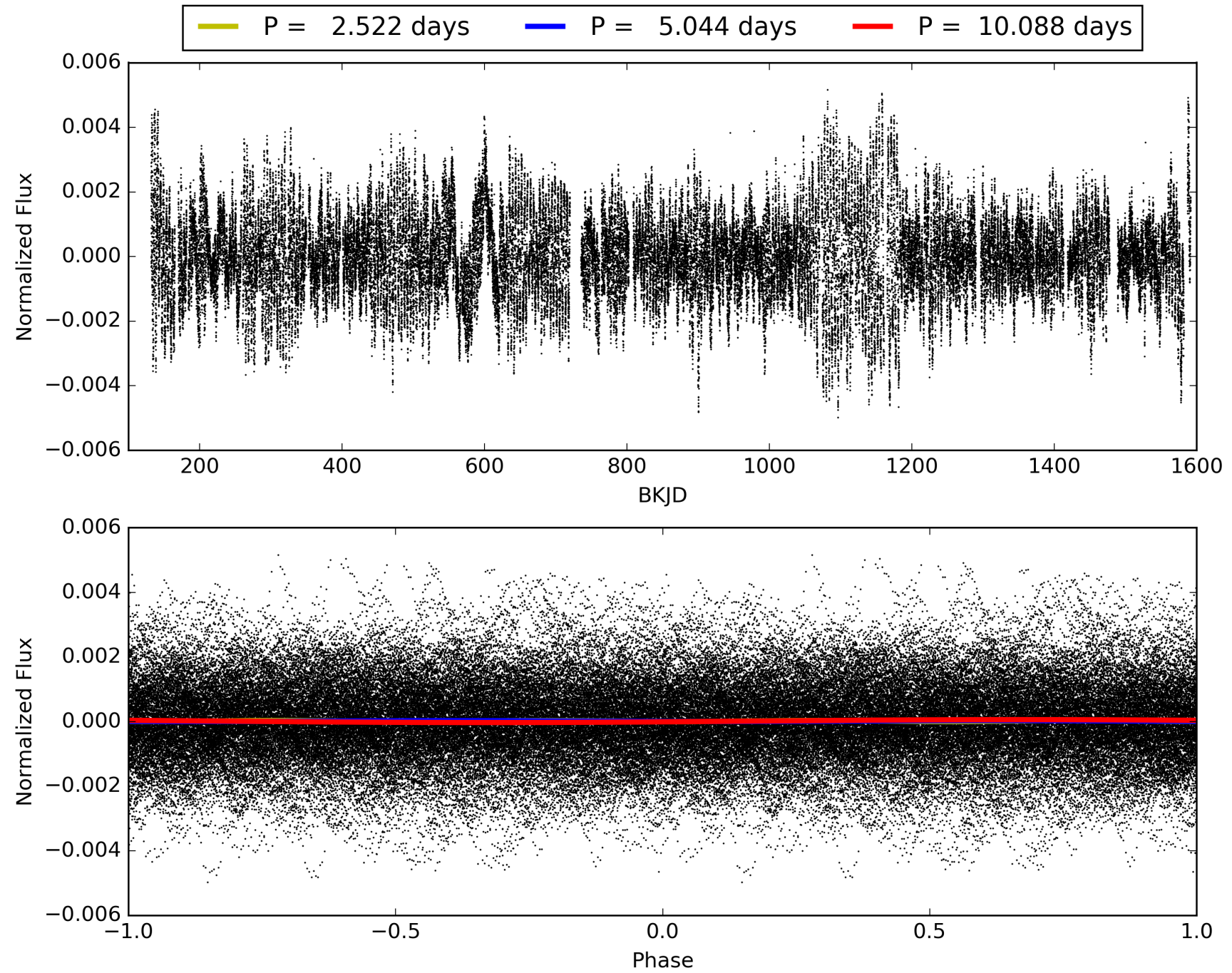
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:28:26 Z

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

TCE 004864462-05, PDC Light Curves

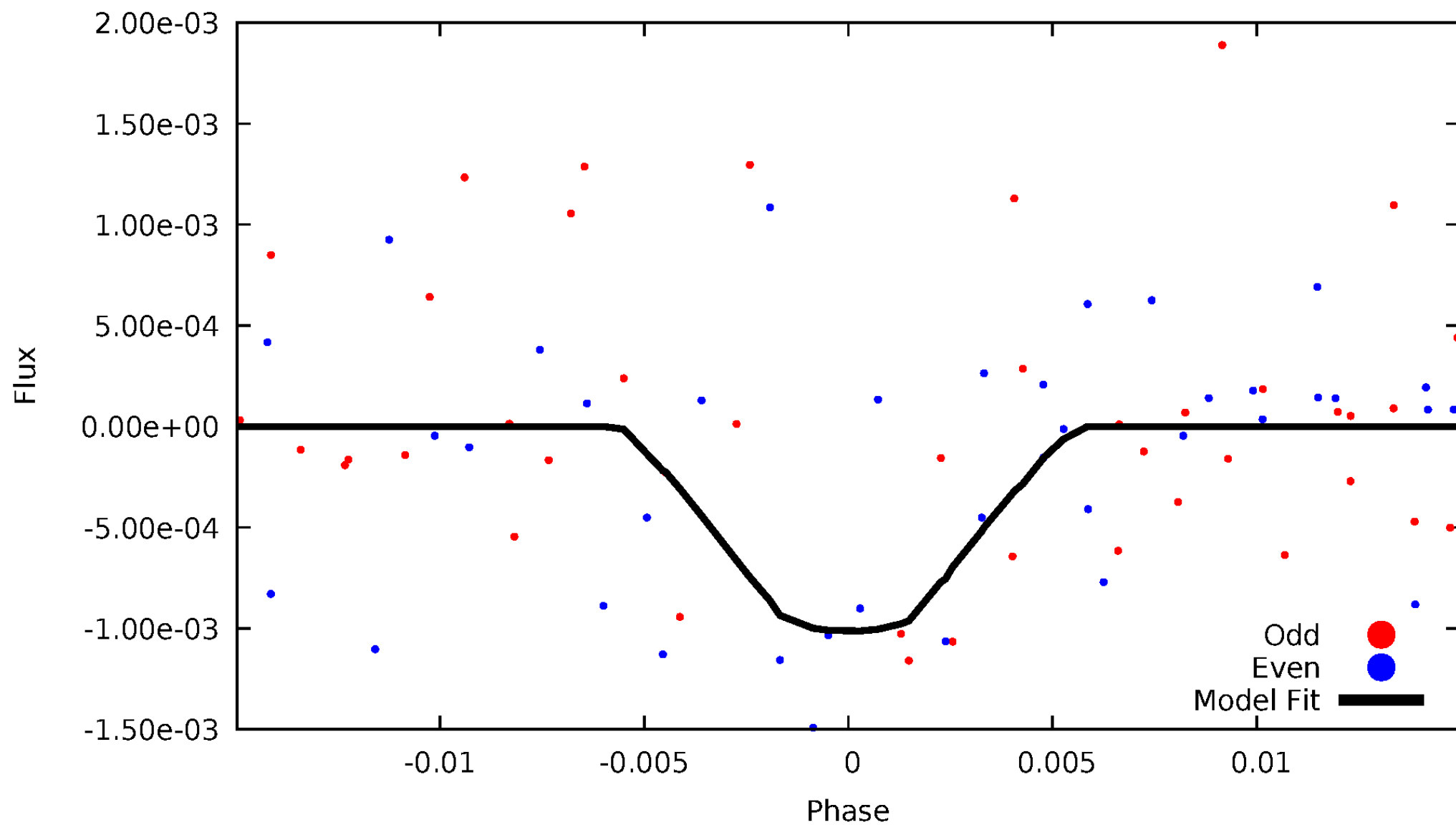


TCE 004864462-05



DV Odd/Even

TCE 004864462-05

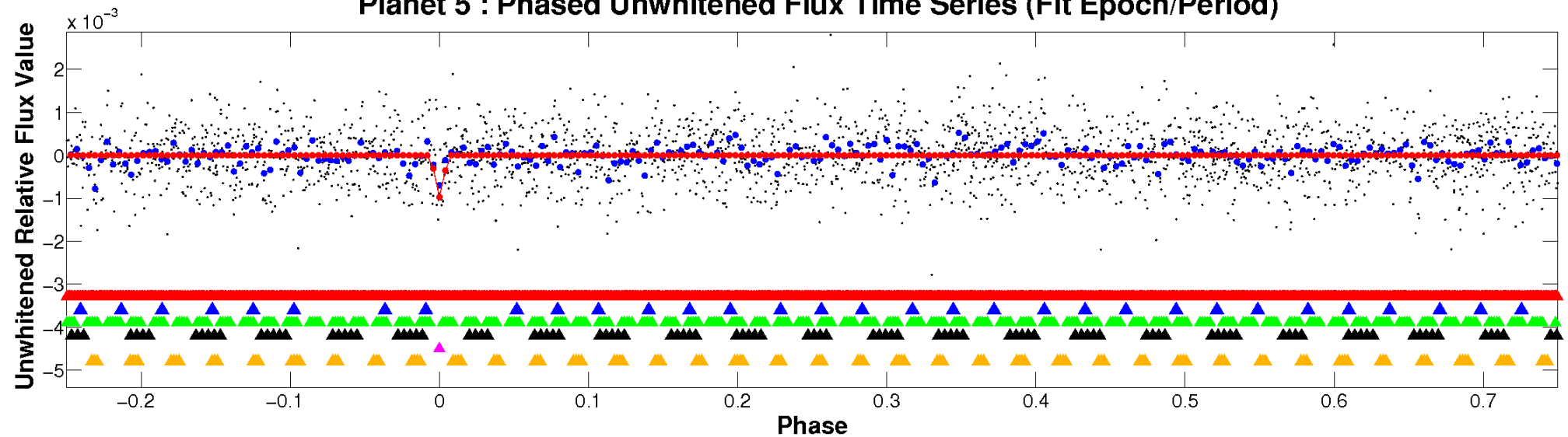


ALT Odd/Even

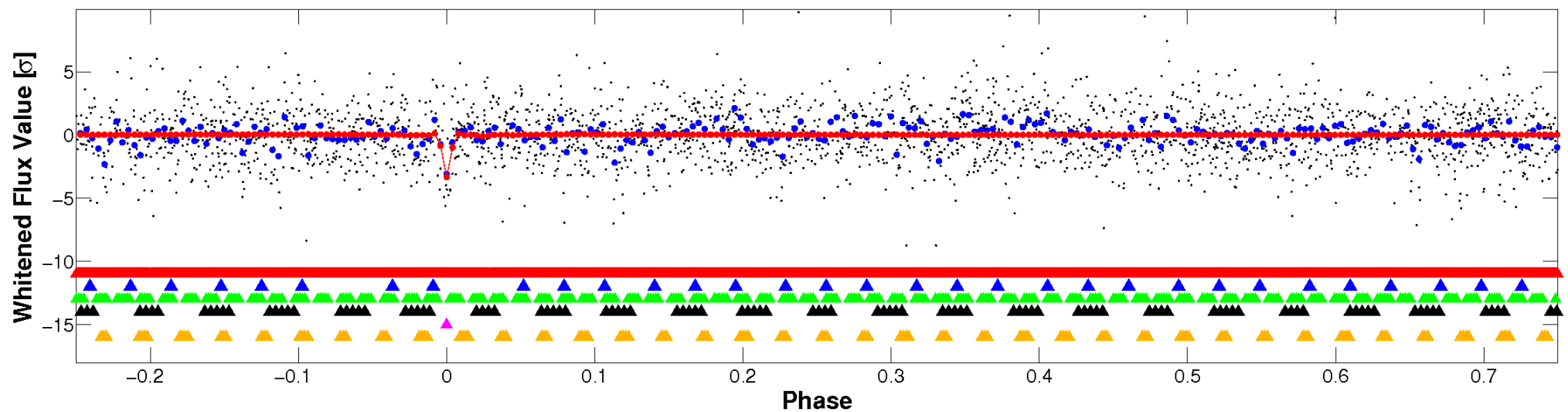
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

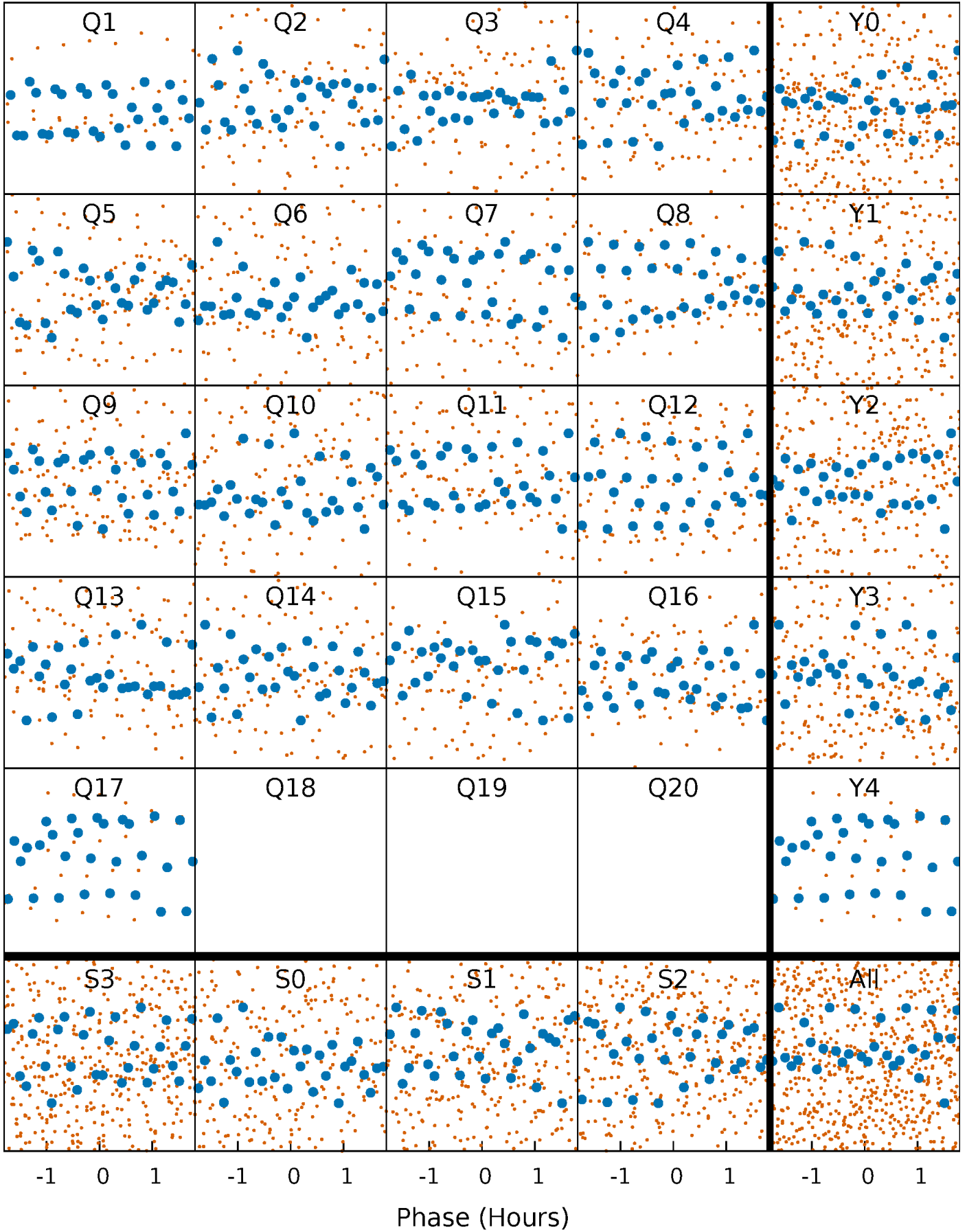


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



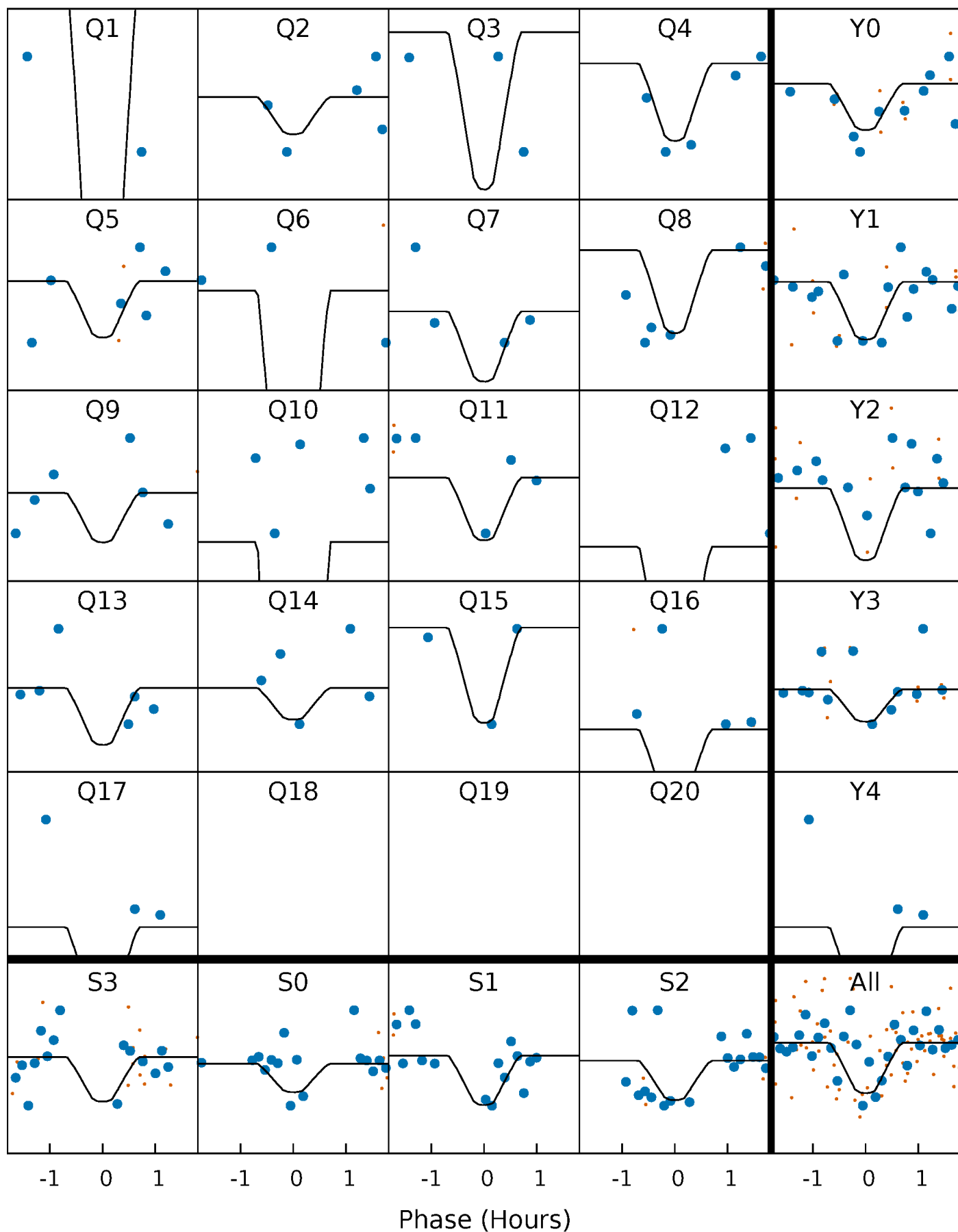
PDC Quarter-Phased Transit Curves

TCE 004864462-05 P= 5.043872 Days $T_0=131.870691$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004864462-05 P= 5.043872 Days $T_0=131.870691$ (BKJD)

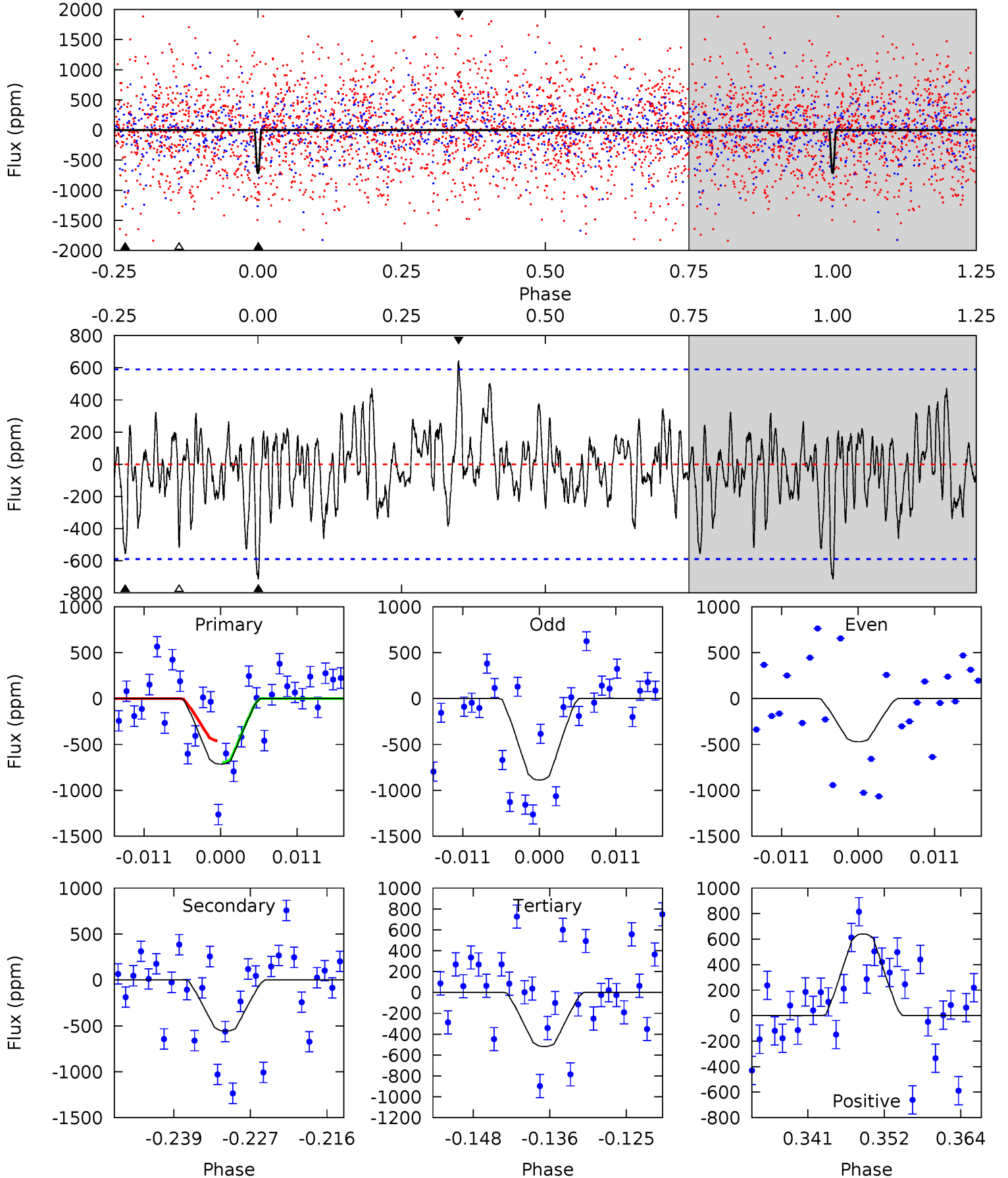


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004864462-05, P = 5.043872 Days, E = 131.870691 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.06	4.73	4.39	5.43	5.00	2.53	1.52	1.67	0.63	0.33	-0.71	1.80	1.00	0.47	1.03



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004864462

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6480^{+162}_{-194}	$4.460^{+0.065}_{-0.208}$	$-0.580^{+0.300}_{-0.350}$	$0.977^{+0.293}_{-0.098}$	$1.004^{+0.122}_{-0.110}$	$1.518^{+0.411}_{-0.775}$
	+2%/-3%	+1%/-5%	+52%/-60%	+30%/-10%	+12%/-11%	+27%/-51%
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 004864462-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-557 ± 118	$4.51^{+3.89}_{-3.02}$	1671^{+118}_{-81}	5072^{+3903}_{-1132}	52^{+409}_{-38}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

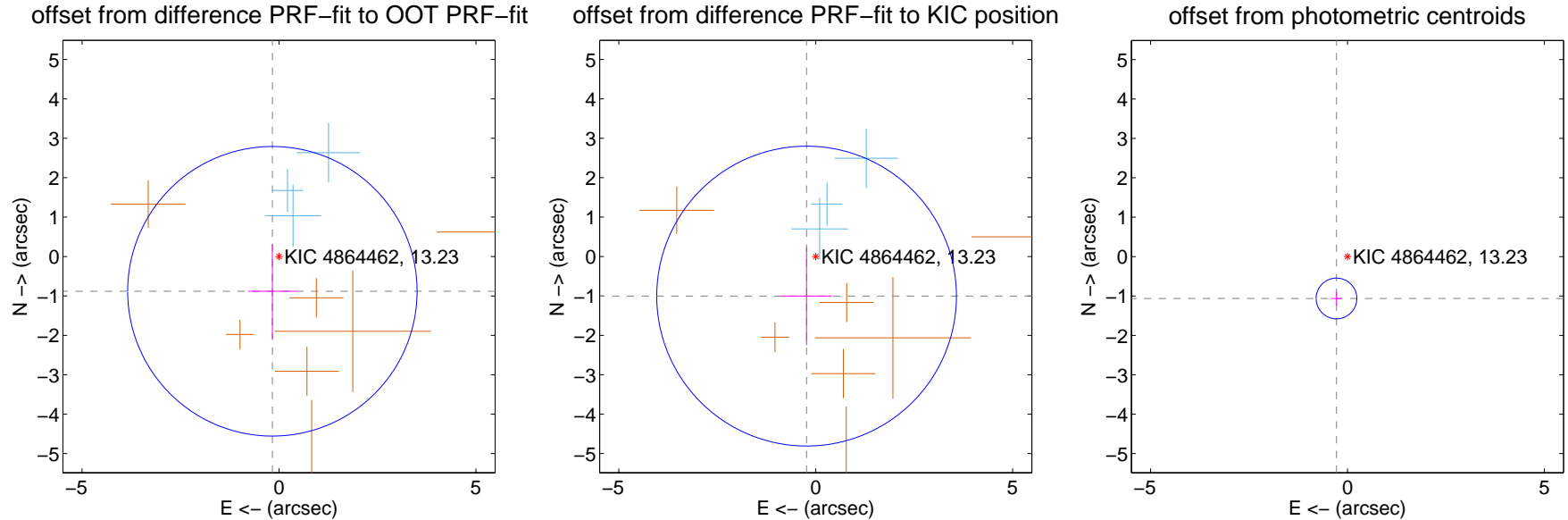
DV Centroid Data

Supplemental centroid analysis for 004864462-05. Kepler magnitude: 13.23. Transit SNR 11.27

There are 3 quarters with good PRF difference image offsets

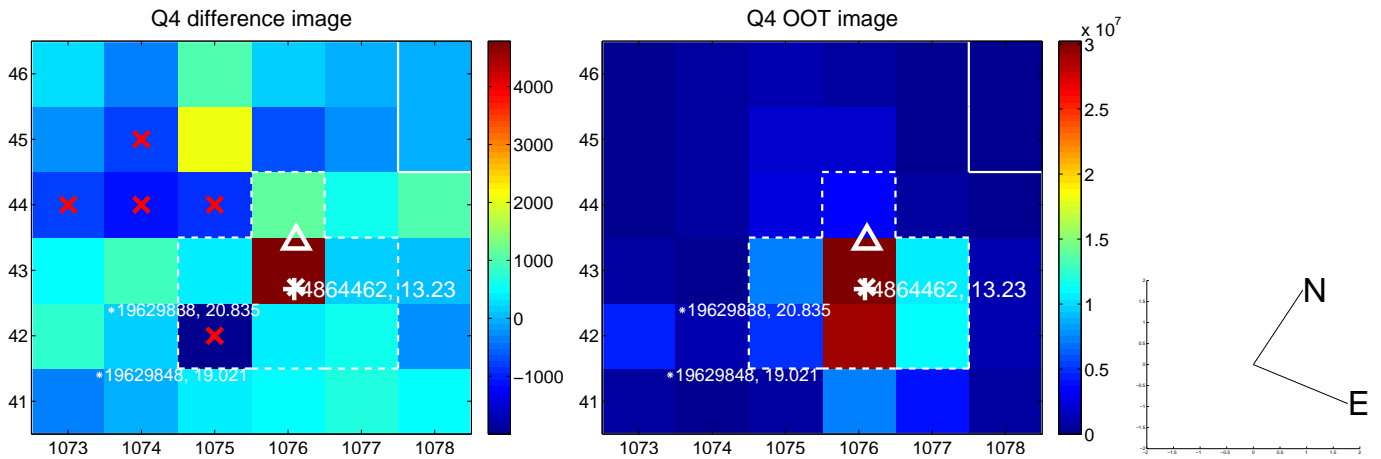
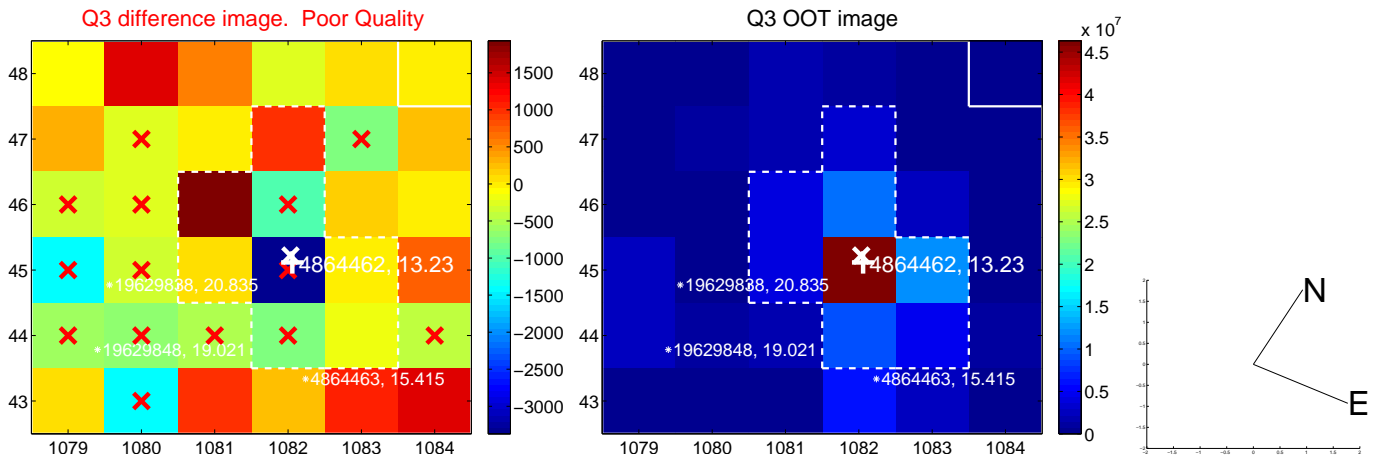
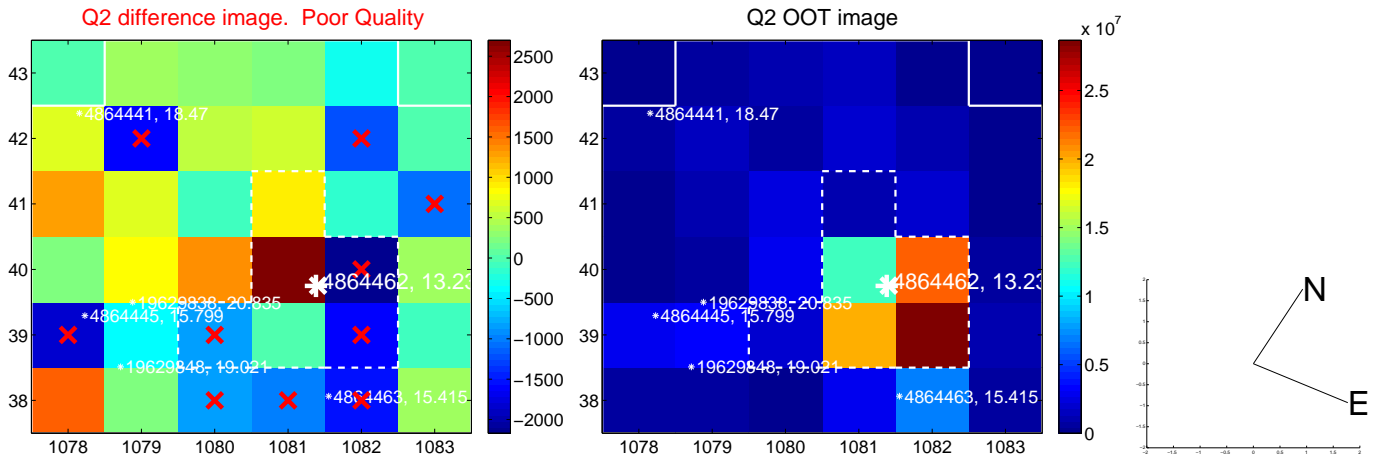
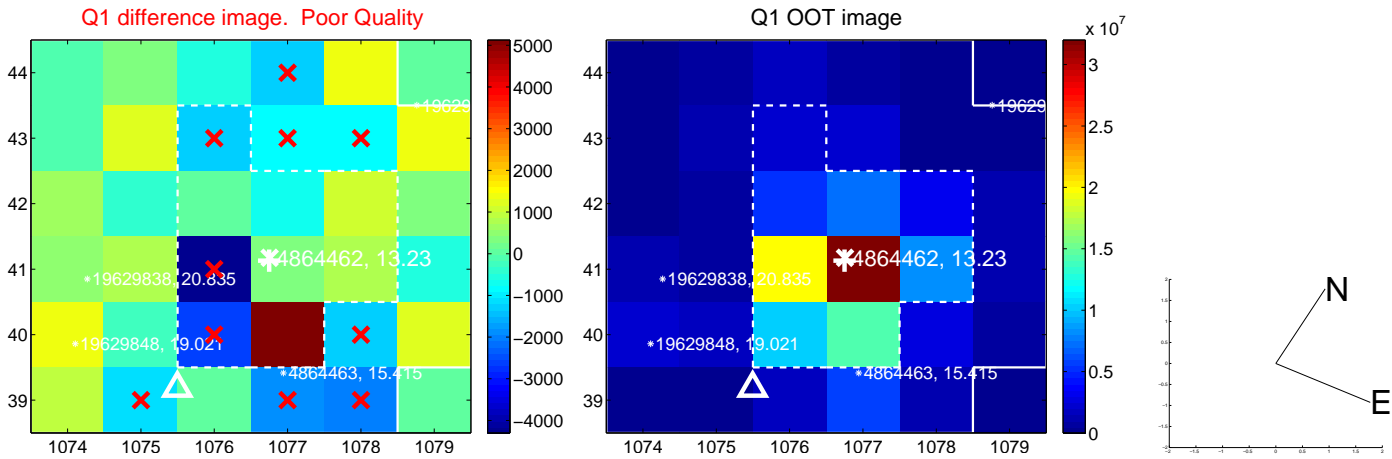
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.898 ± 1.225	0.73	0.168 ± 0.620	-0.882 ± 1.203
PRF-fit source offset from KIC position	1.031 ± 1.268	0.81	0.232 ± 0.644	-1.005 ± 1.244
photometric centroid source offset	1.10 ± 0.17	6.38	0.28 ± 0.14	-1.06 ± 0.17

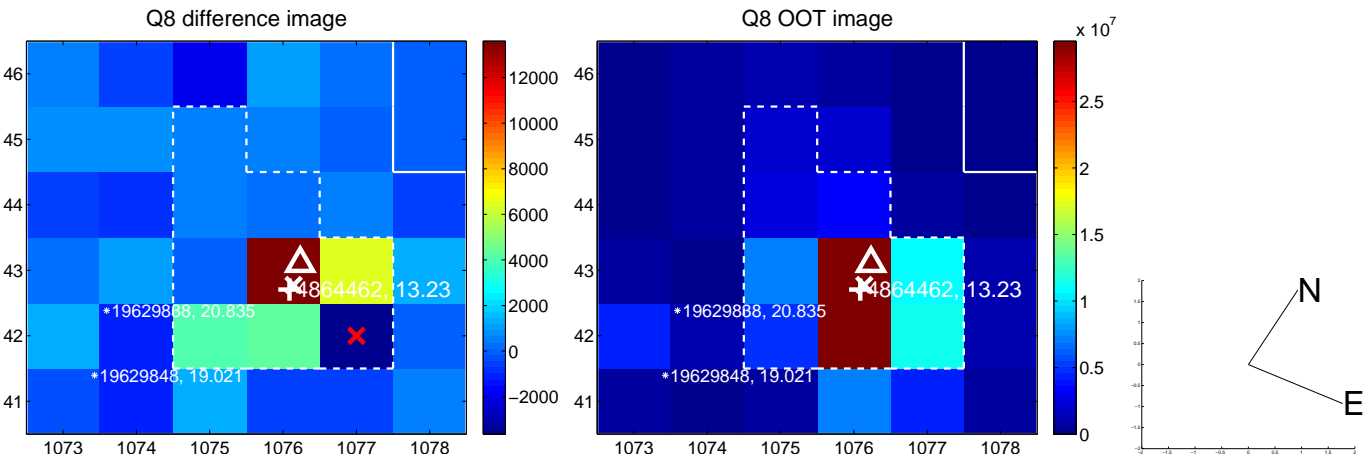
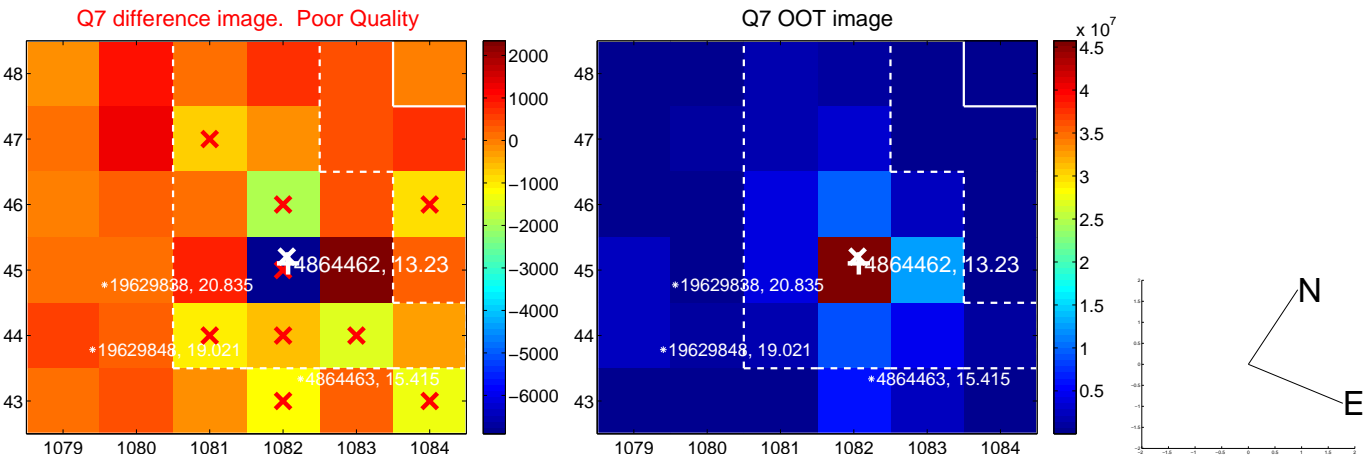
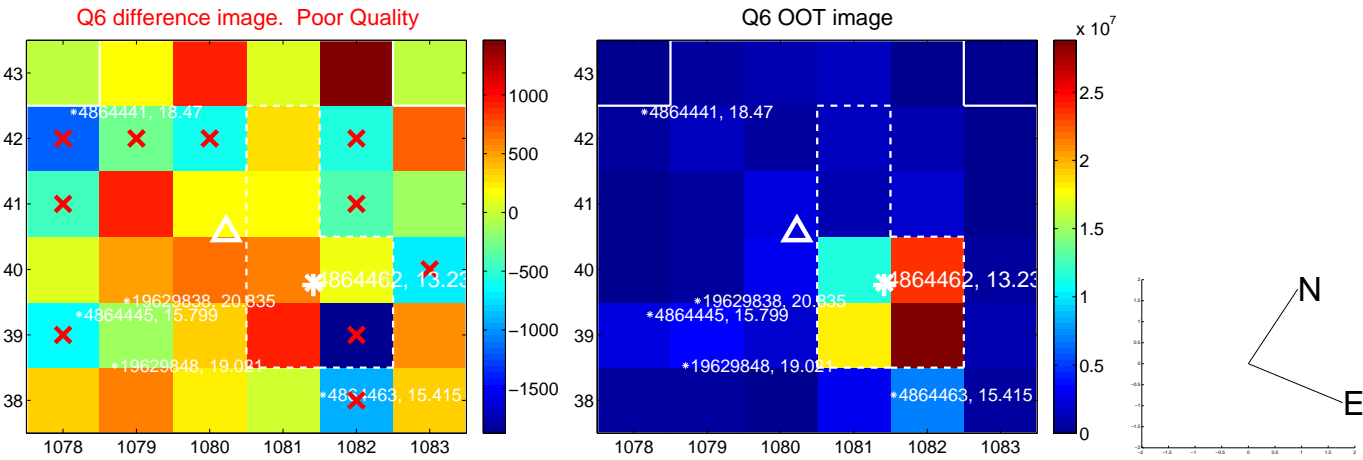
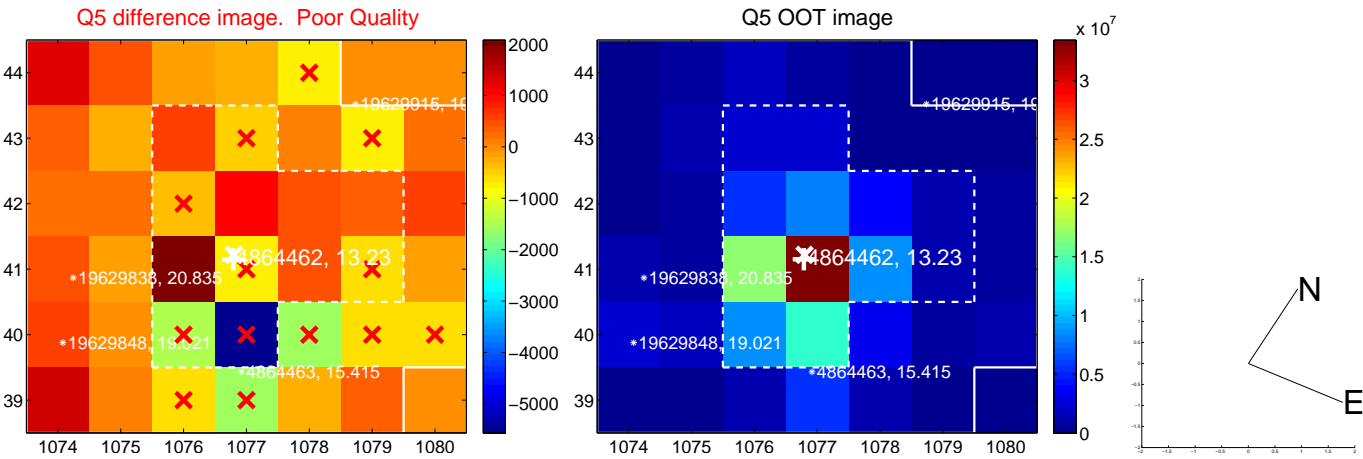


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

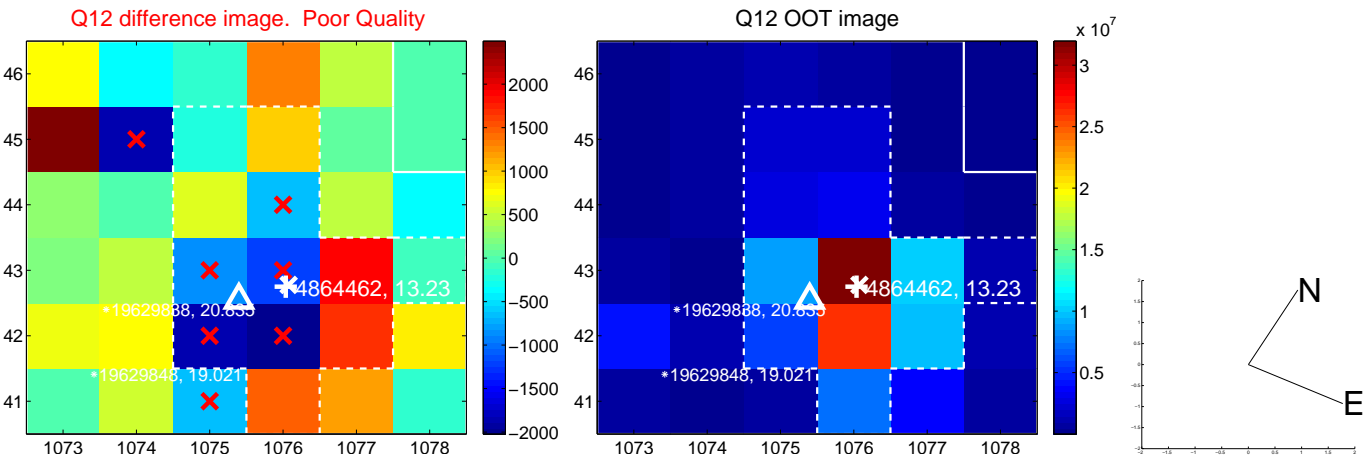
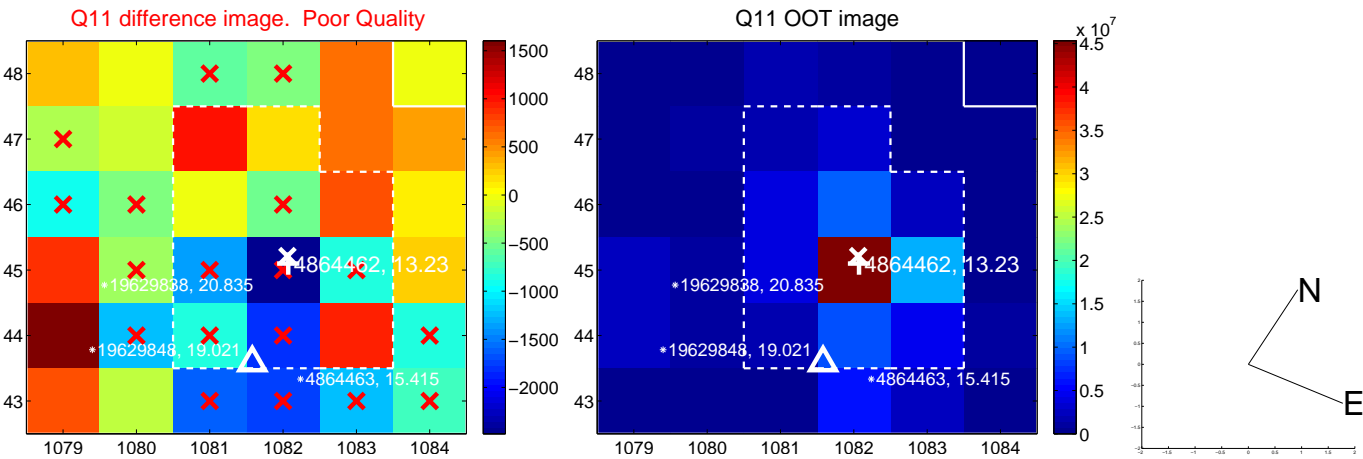
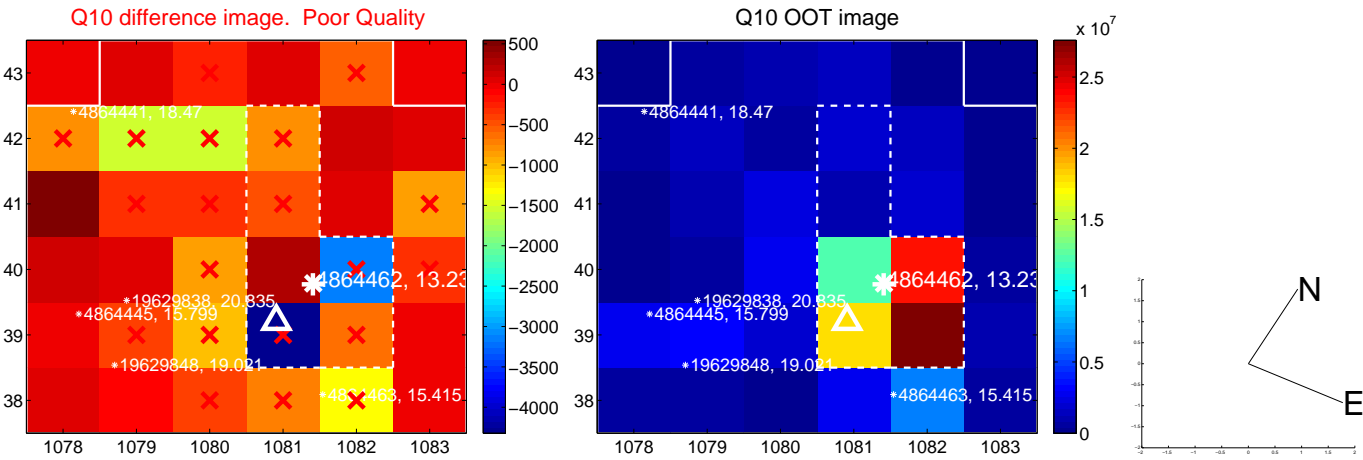
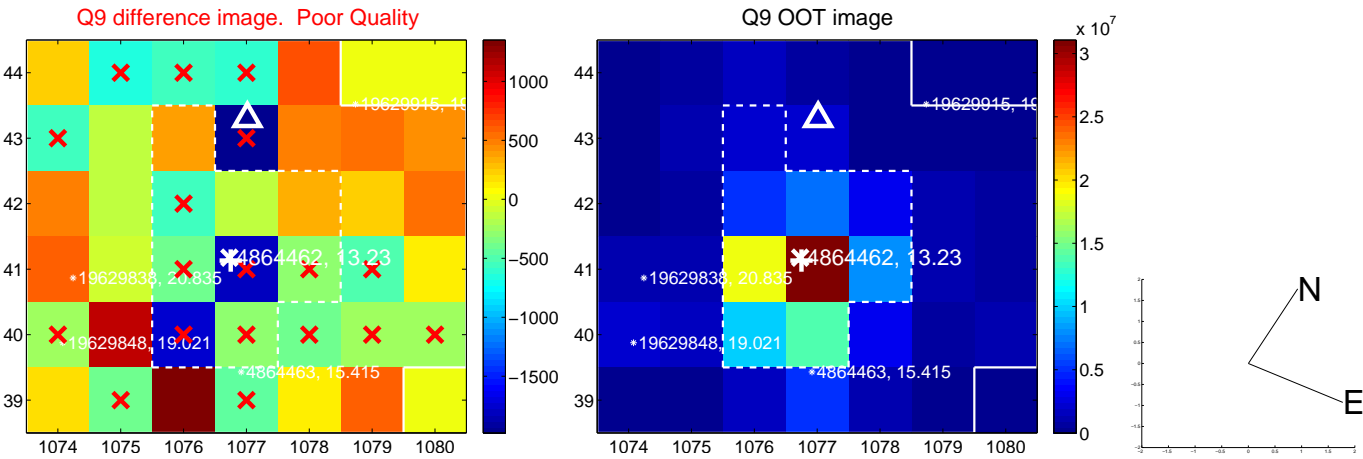
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



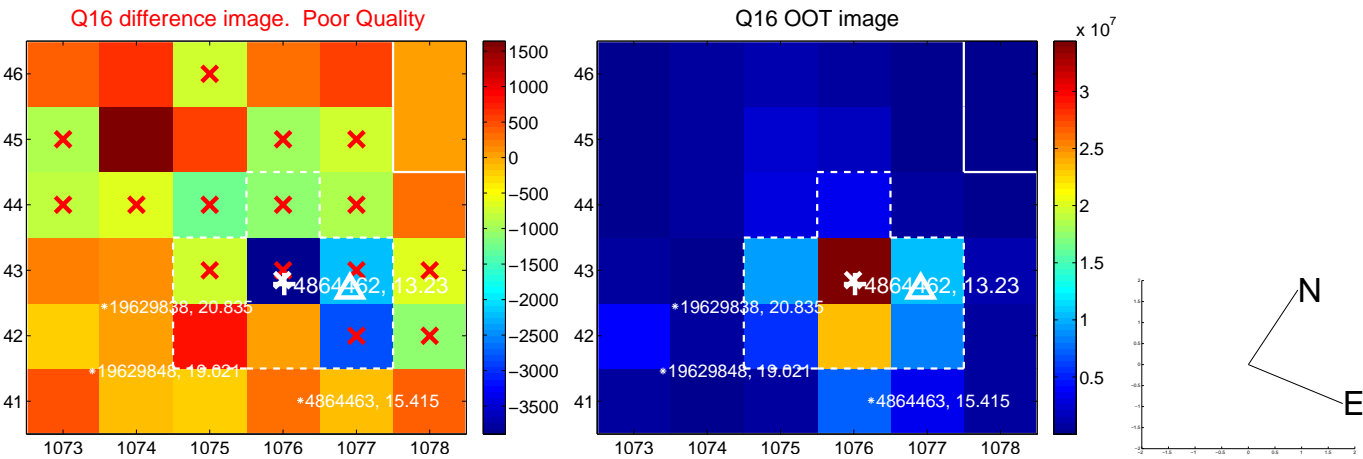
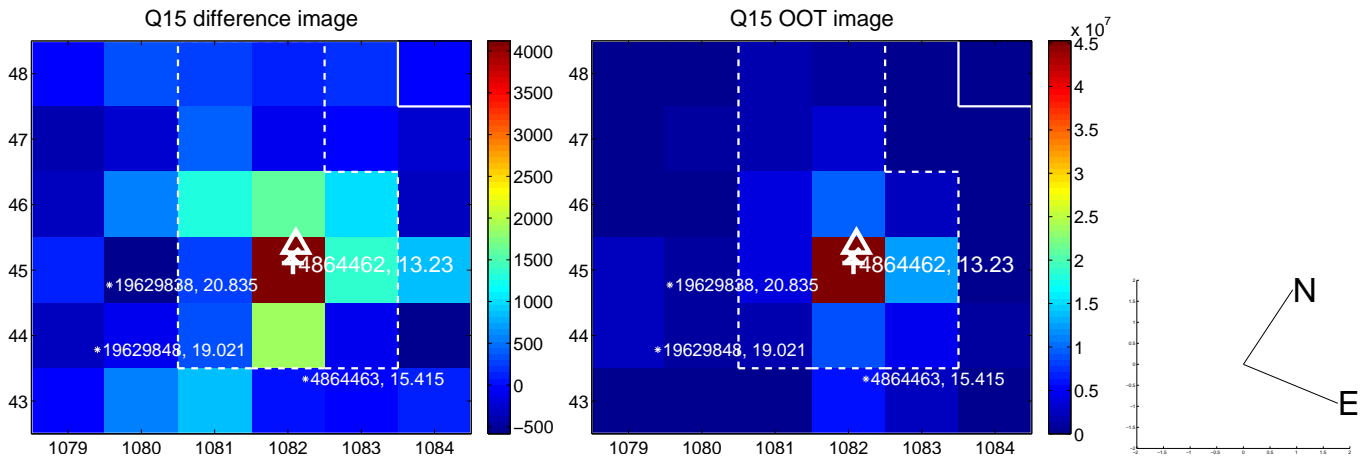
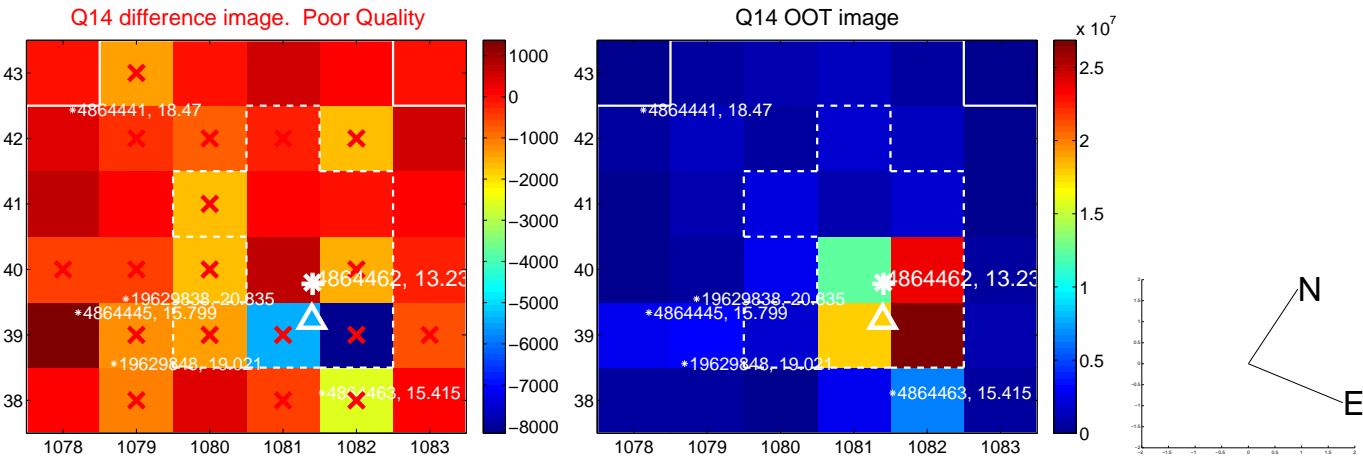
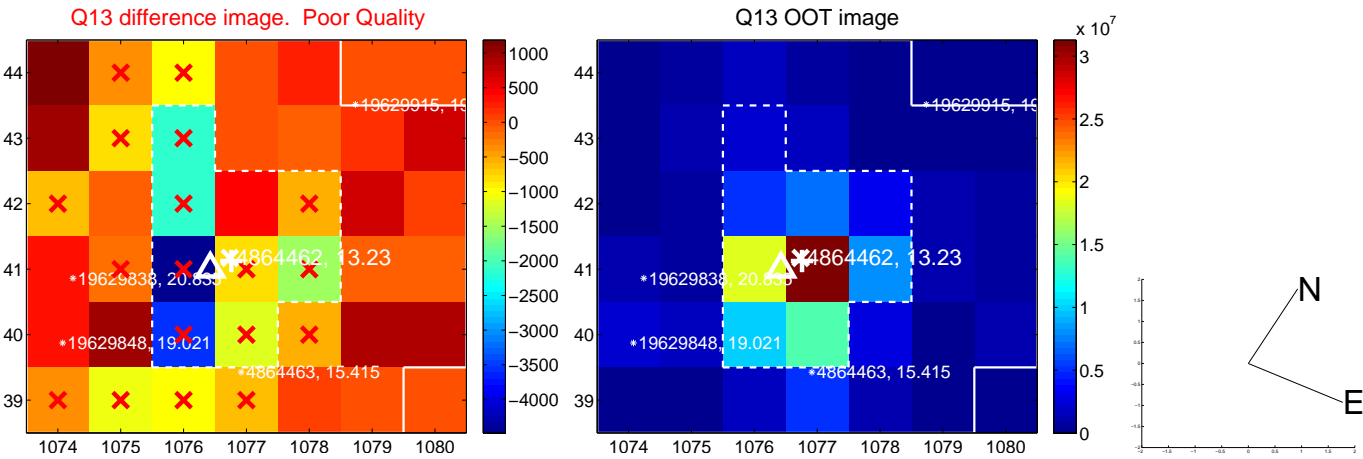
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



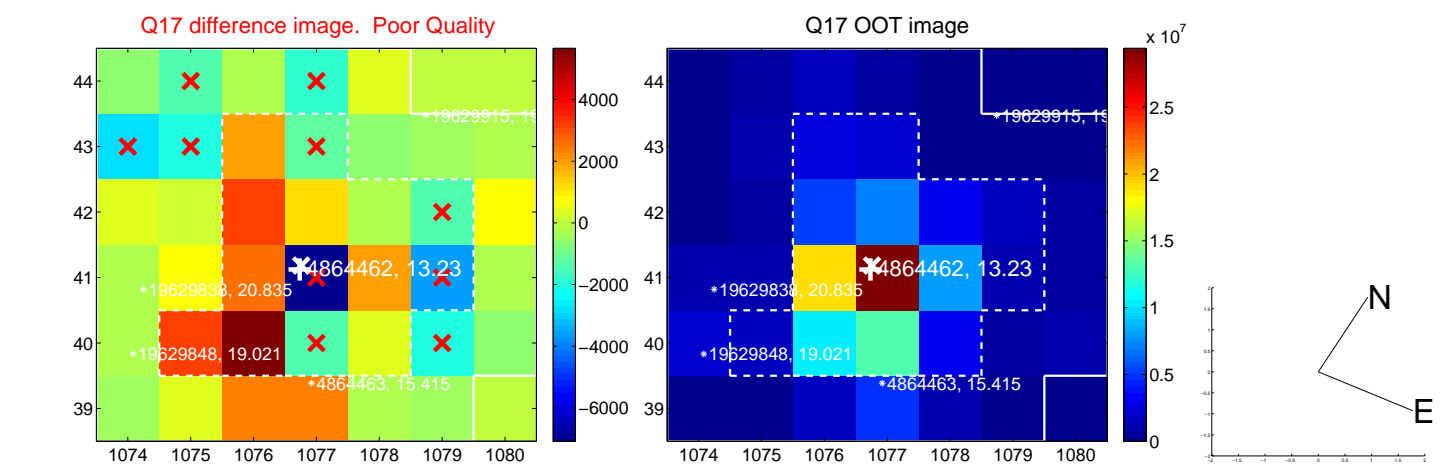
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



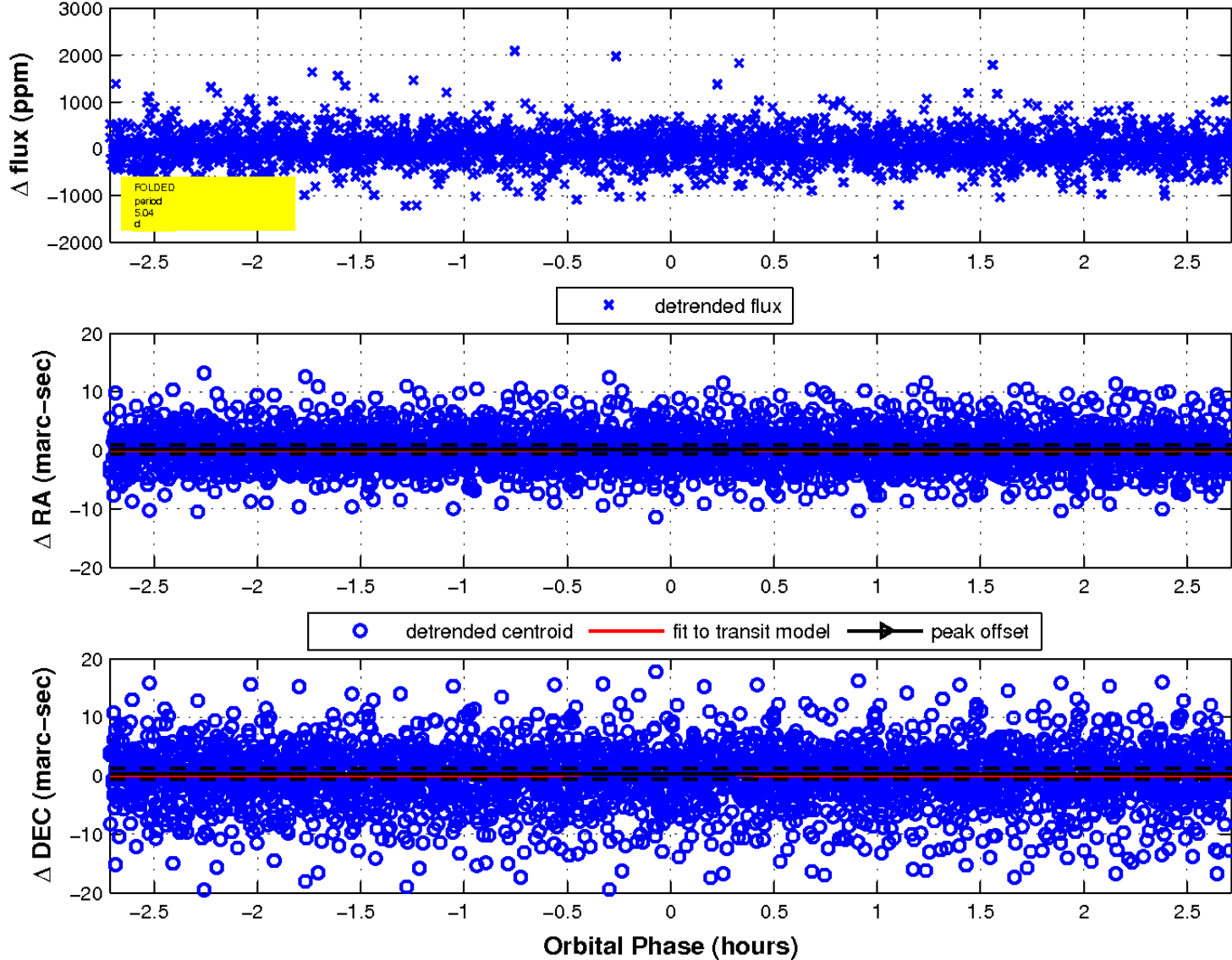
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

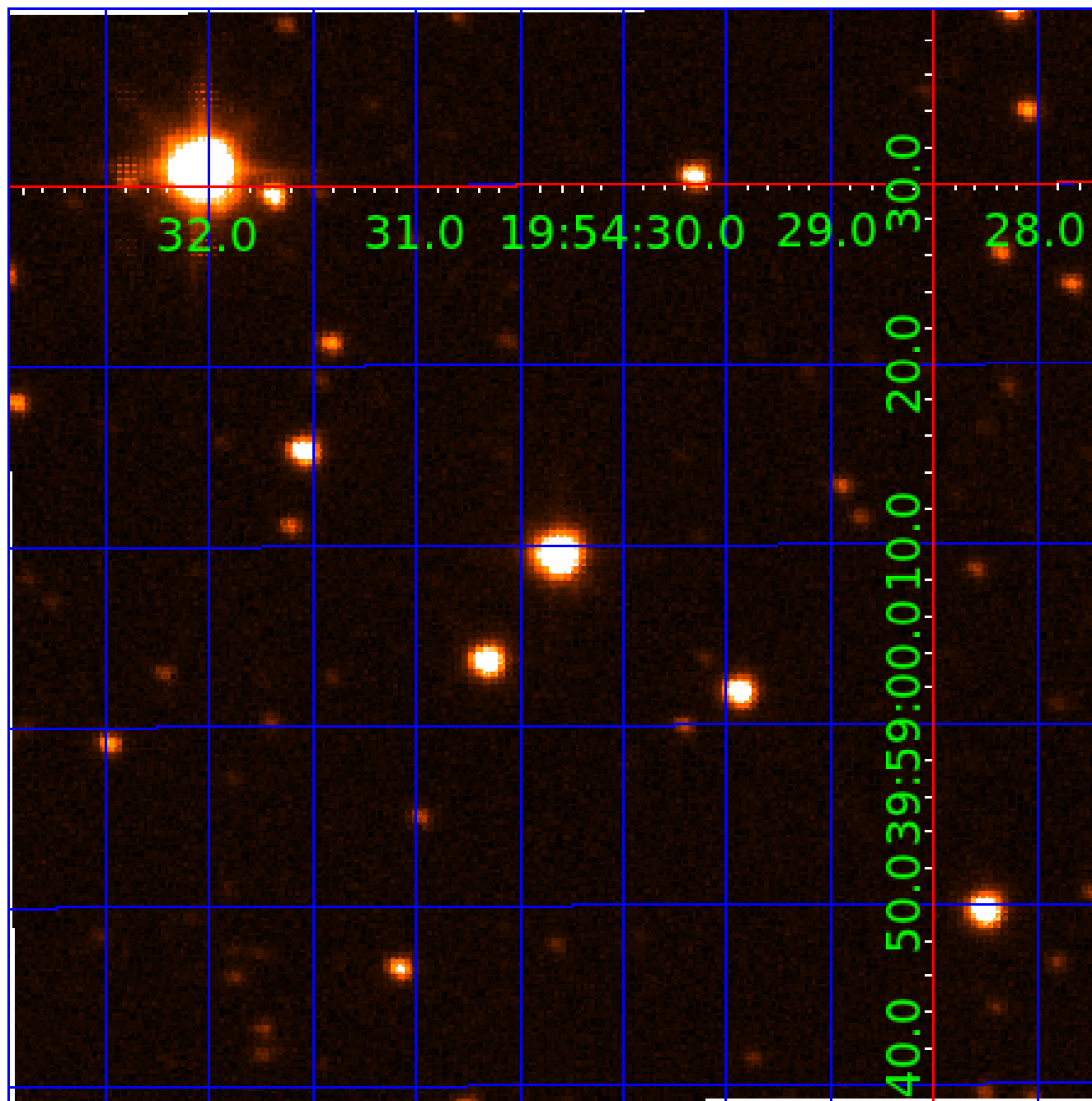


fluxWeightedCentroids, Planet 5 of 6



UKIRT Image

Declination



KIC 004864462

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})
004864462-01	OBS	No	0.578543	131.603188	9.2	4.266	7.5	2.1	0.98	6480	0.31	8140.97
004864462-02	OBS	No	45.840833	152.584351	1510.8	3.393	12.8	13.5	0.98	6480	3.82	23.92
004864462-03	OBS	No	4.291182	135.792919	968.3	0.547	11.6	6.8	0.98	6480	3.20	562.80
004864462-04	OBS	No	13.986216	143.647032	1163.4	1.421	10.8	9.9	0.98	6480	3.40	116.46
004864462-05	OBS	No	5.043872	131.870691	1015.3	0.905	11.1	11.3	0.98	6480	3.22	453.70
004864462-06	OBS	No	11.587027	141.078323	1600.6	0.632	11.2	10.8	0.98	6480	4.18	149.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004864462-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
004864462-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES
004864462-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV
004864462-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV
004864462-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004864462-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV

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

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

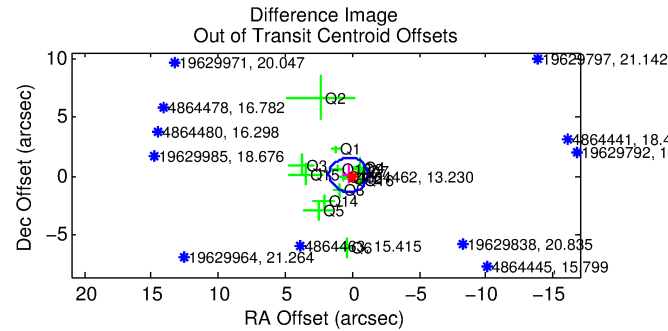
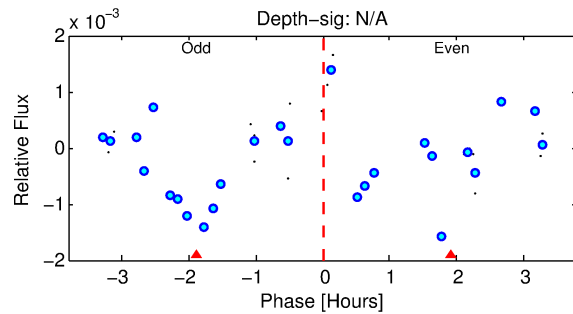
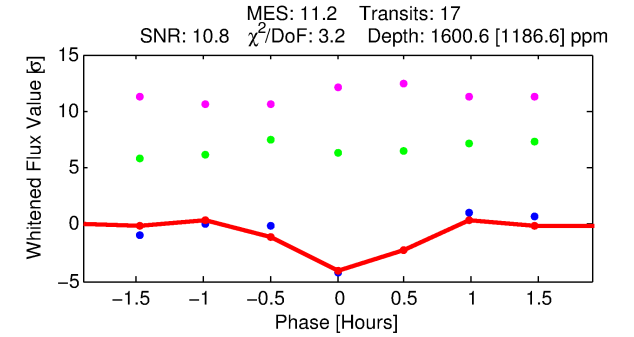
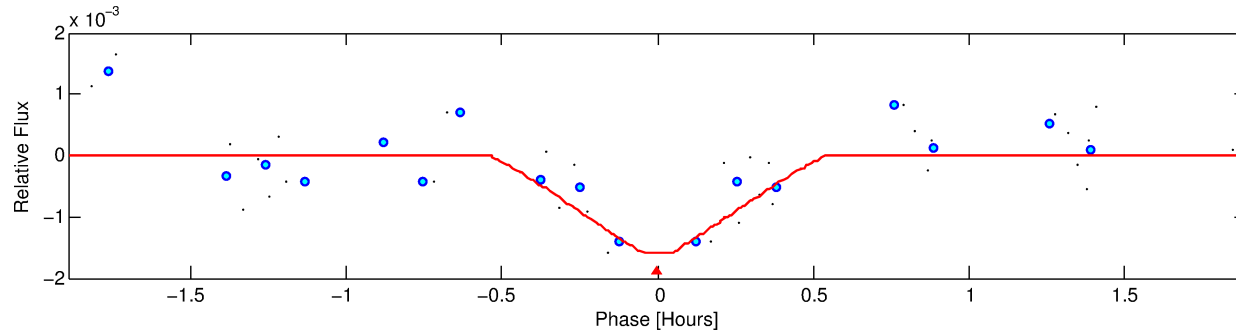
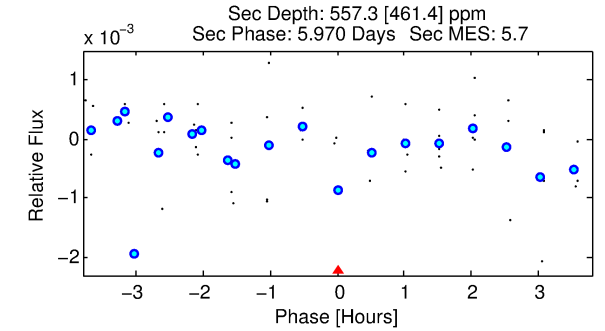
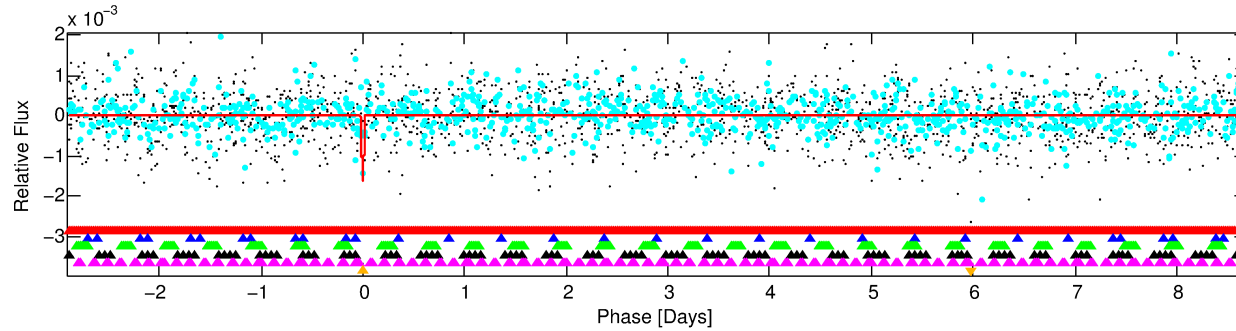
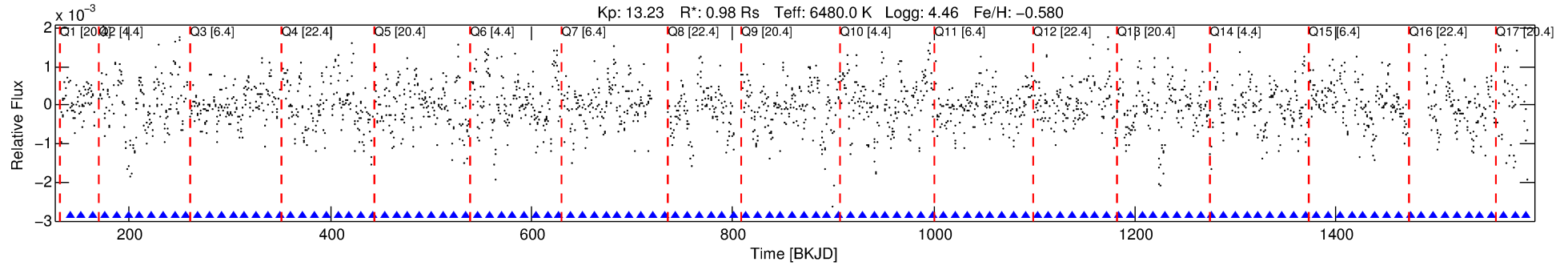
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004864462-06

No Significant Match Found

DV One-Page Summary

KIC: 4864462 Candidate: 6 of 6 Period: 11.587 d



DV Fit Results:

Period = 11.58703 [0.00007] d
Epoch = 141.0783 [0.0034] BKJD
Rp/R* = 0.0392 [0.0376]
a/R* = 121.94 [537.30]
b = 0.57 [5.41]
Seff = 149.68 [59.17]
Teq = 892 [88] K
Rp = 4.18 [4.20] Re
a = 0.1004 [0.0257] AU
Ag = 176.59 [374.64] [0.47σ]
Teffp = 5027 [2628] K [1.57σ]

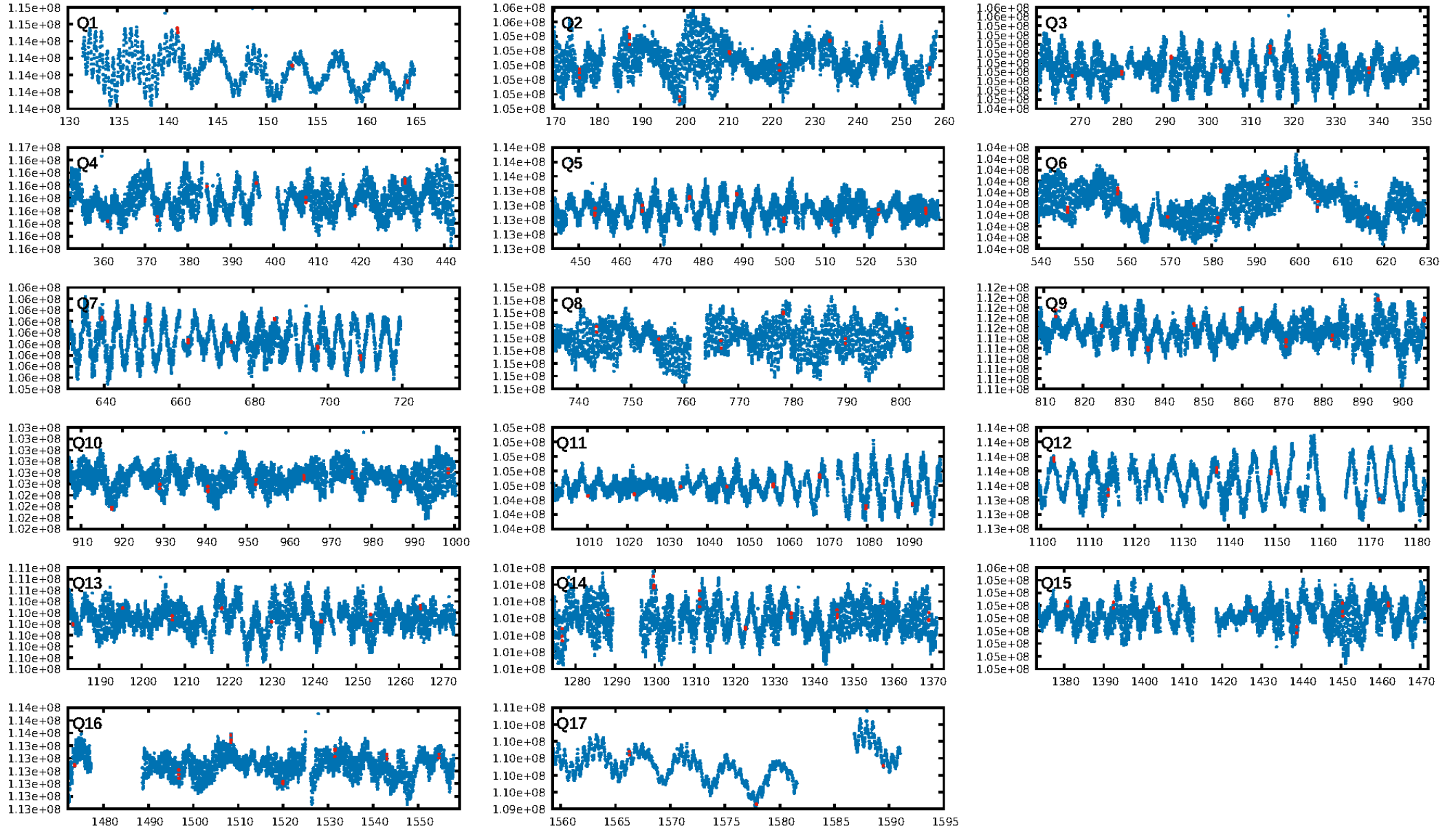
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [142.19σ]
LongPeriod-sig: 100.0% [37.02σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 20.4%
Bootstrap-pfa: 1.18e-32
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 1.706
Centroid-sig: 59.1%
Centroid-so: 0.965 arcsec [5.16σ]
OotOffset-rm: 0.320 arcsec [0.66σ]
KicOffset-rm: 0.385 arcsec [1.00σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 0.00 [0/16]

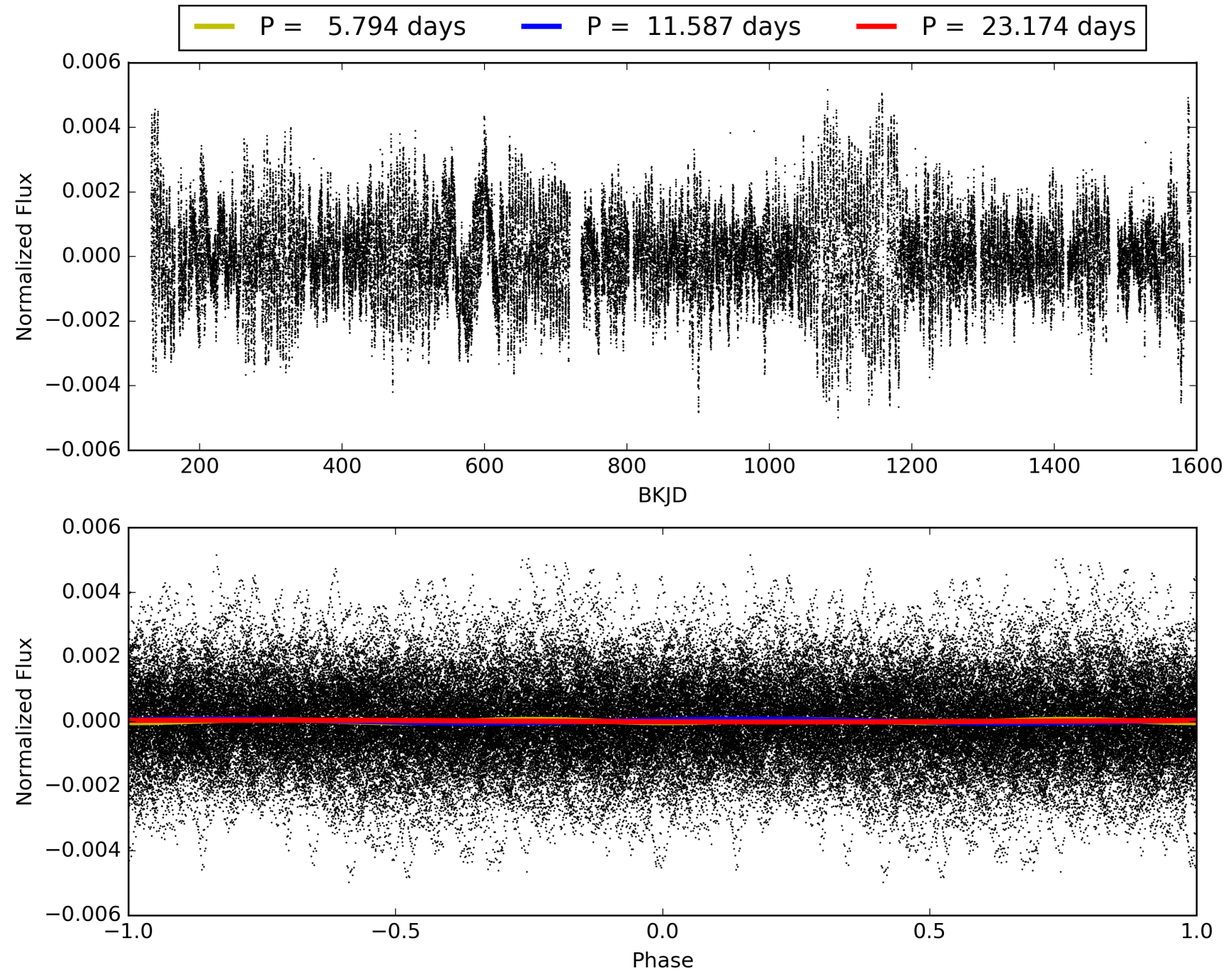
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:28:29 Z

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

TCE 004864462-06, PDC Light Curves

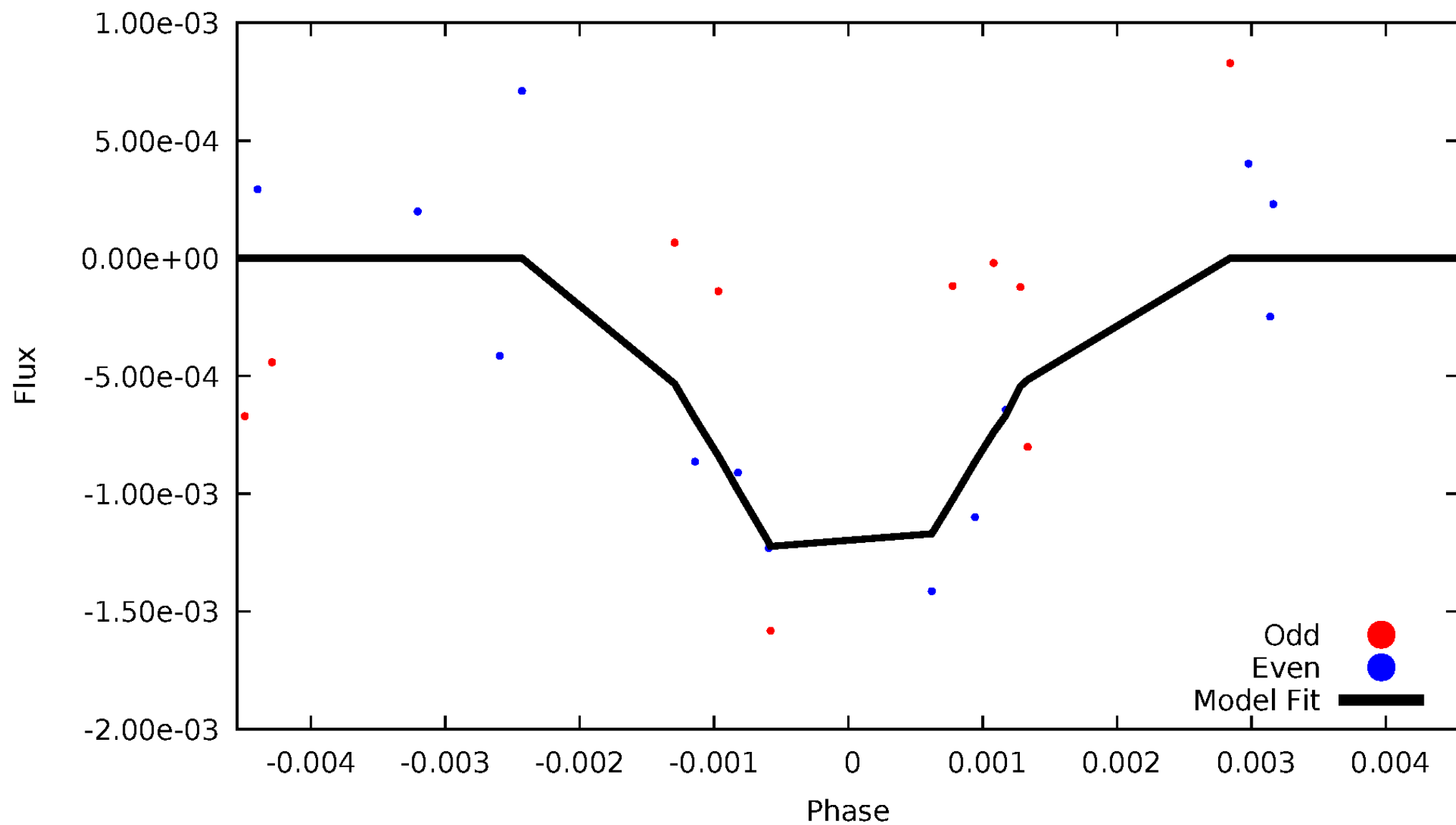


TCE 004864462-06



DV Odd/Even

TCE 004864462-06

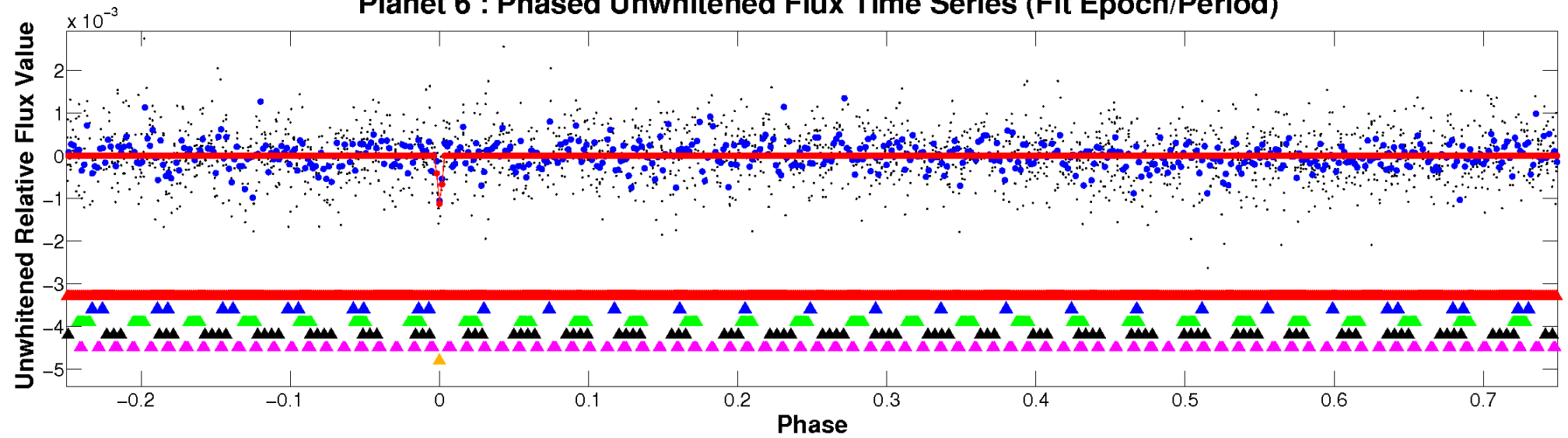


ALT Odd/Even

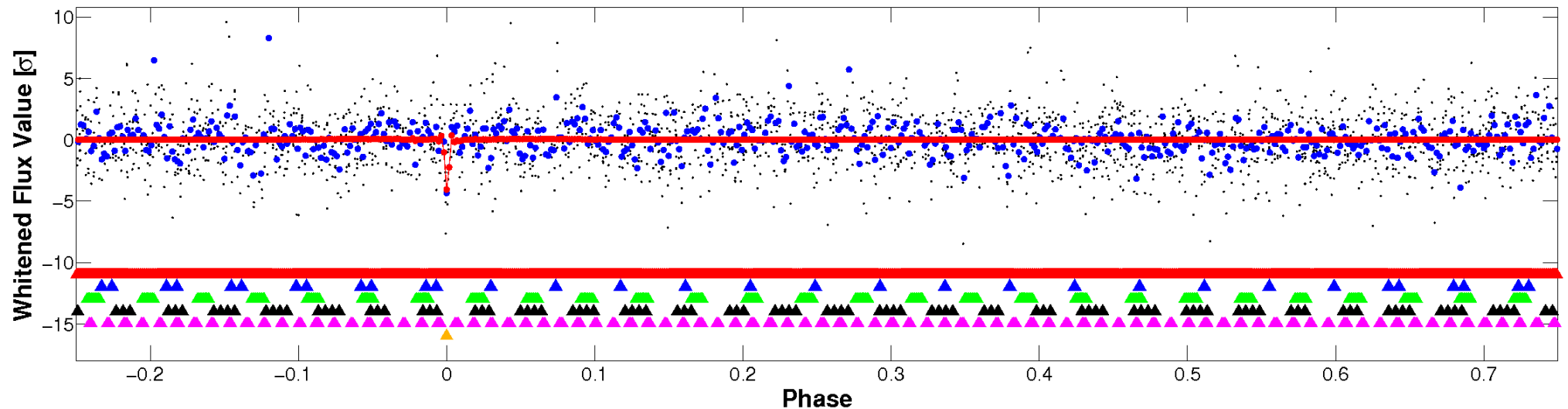
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

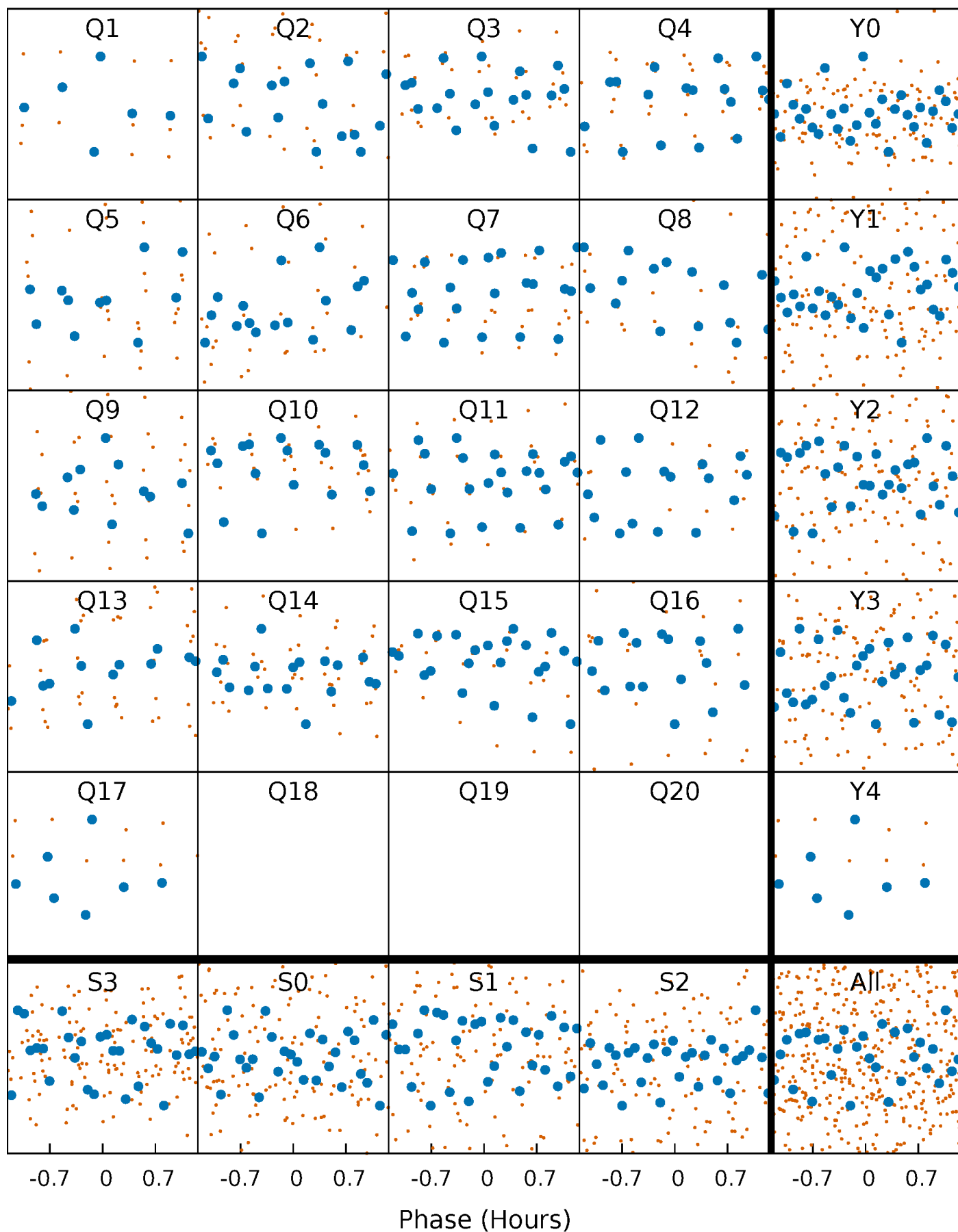


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



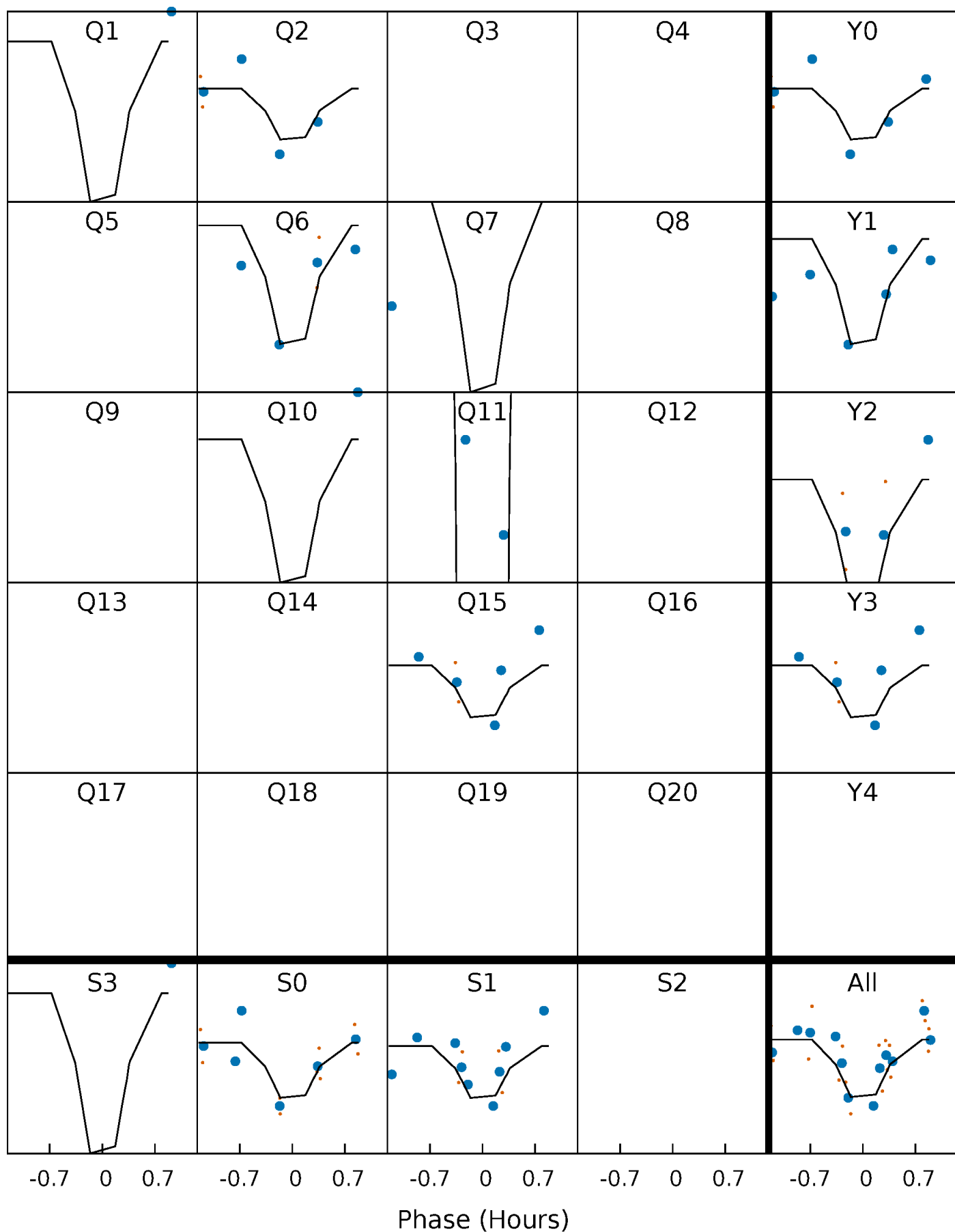
PDC Quarter-Phased Transit Curves

TCE 004864462-06 P= 11.587027 Days $T_0=141.078323$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004864462-06 P= 11.587027 Days $T_0=141.078323$ (BKJD)

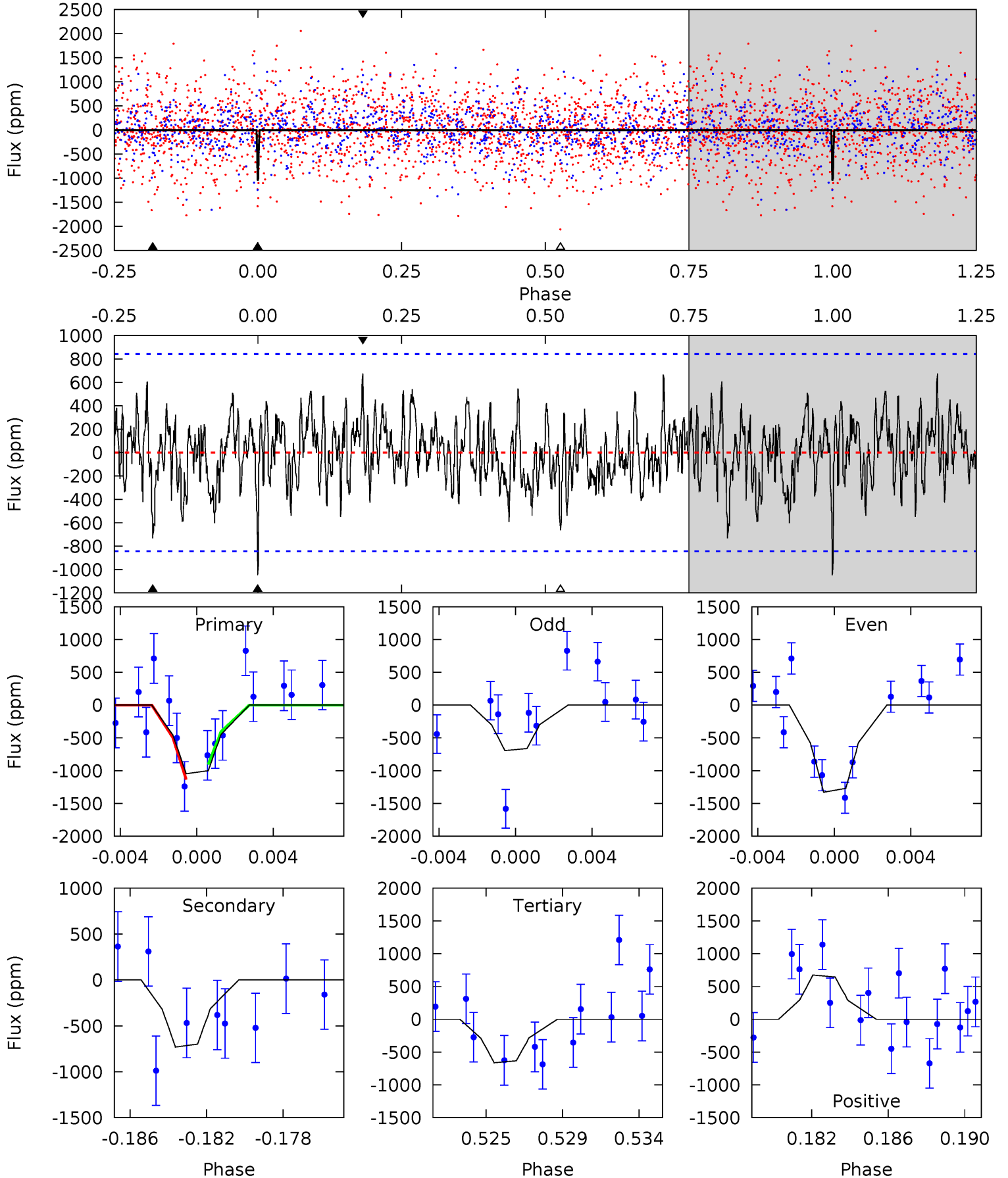


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004864462-06, P = 11.587027 Days, E = 129.491296 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.45	4.51	4.09	4.16	5.19	2.87	1.41	2.37	2.29	0.43	0.35	1.96	1.03	0.39	0.71



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004864462

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6480^{+162}_{-194}	$4.460^{+0.065}_{-0.208}$	$-0.580^{+0.300}_{-0.350}$	$0.977^{+0.293}_{-0.098}$	$1.004^{+0.122}_{-0.110}$	$1.518^{+0.411}_{-0.775}$
	+2%/-3%	+1%/-5%	+52%/-60%	+30%/-10%	+12%/-11%	+27%/-51%
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 004864462-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-732 ± 162	$5.05^{+4.02}_{-3.29}$	1266^{+83}_{-57}	5047^{+3547}_{-1037}	161^{+1039}_{-112}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

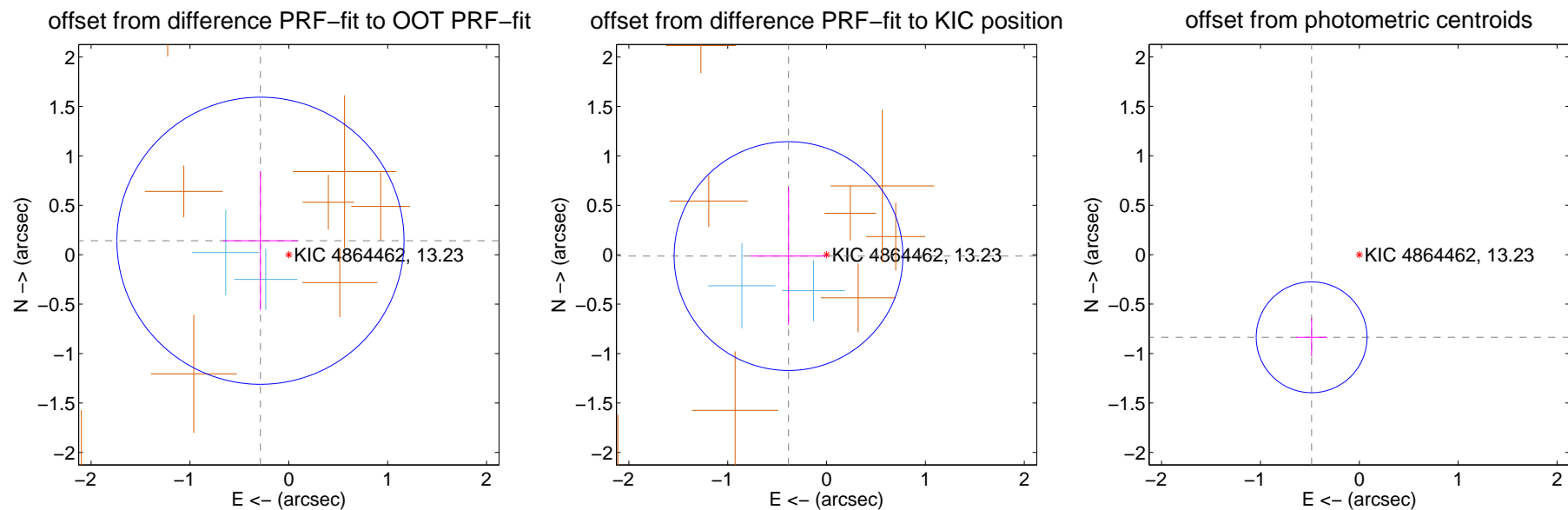
DV Centroid Data

Supplemental centroid analysis for 004864462-06. Kepler magnitude: 13.23. Transit SNR 10.76

There are 2 quarters with good PRF difference image offsets

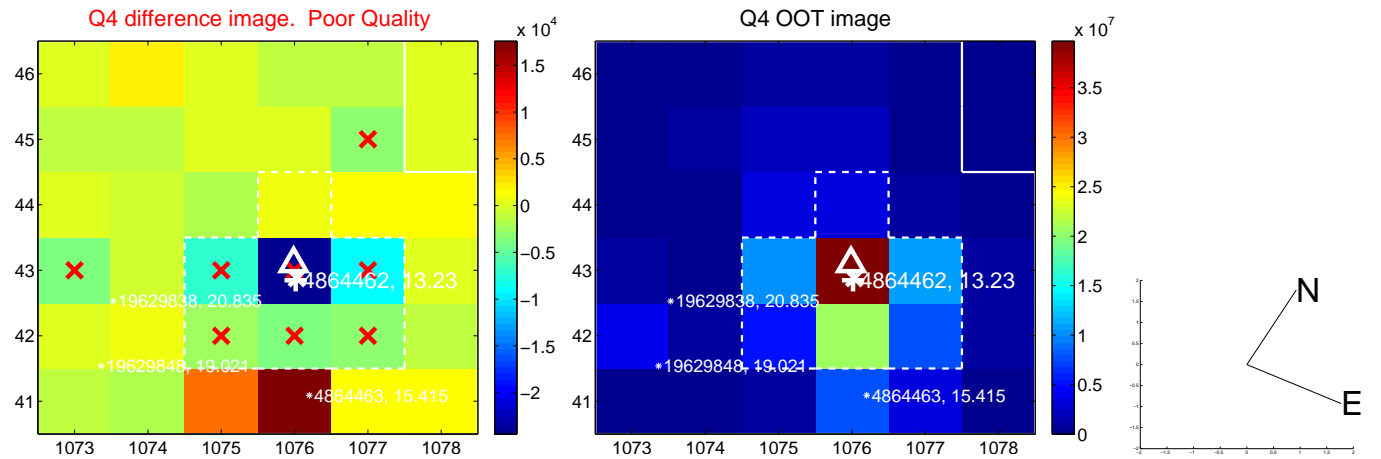
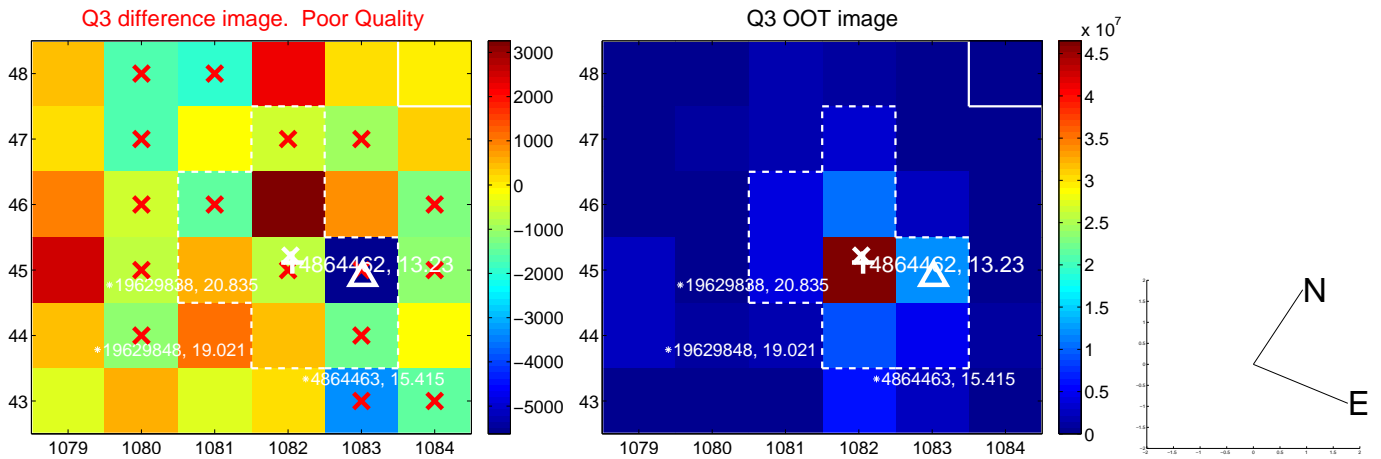
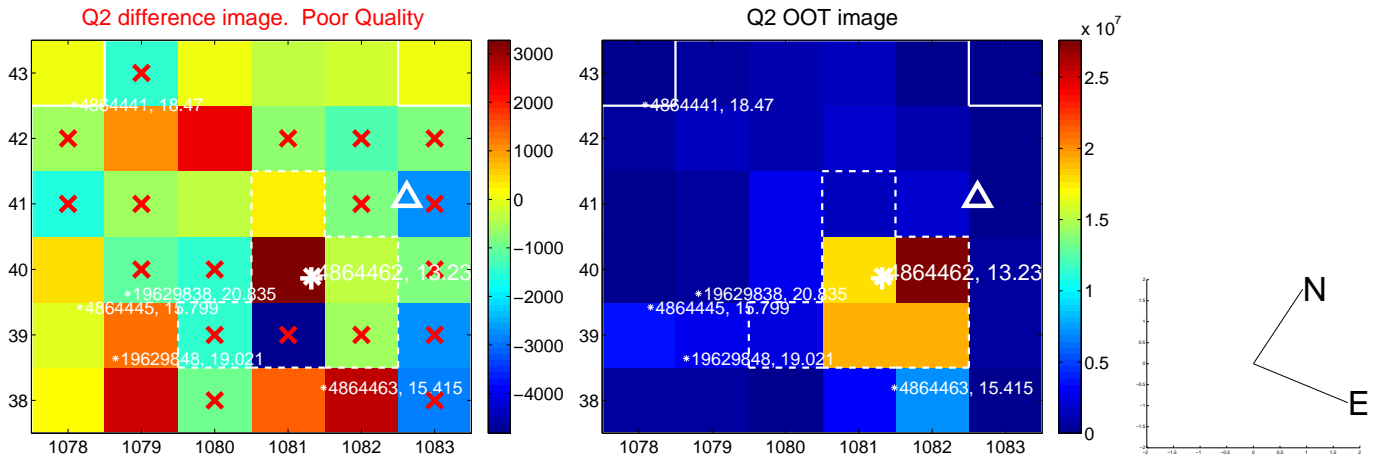
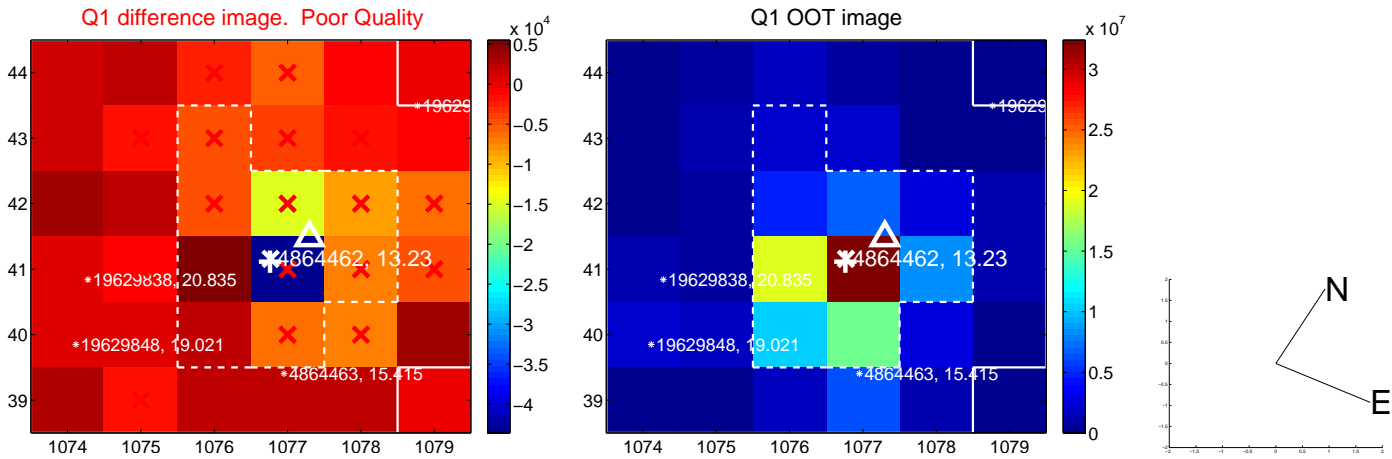
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.320 ± 0.484	0.66	0.287 ± 0.378	0.141 ± 0.702
PRF-fit source offset from KIC position	0.385 ± 0.386	1.00	0.385 ± 0.388	-0.014 ± 0.697
photometric centroid source offset	0.96 ± 0.19	5.16	0.48 ± 0.16	-0.84 ± 0.20

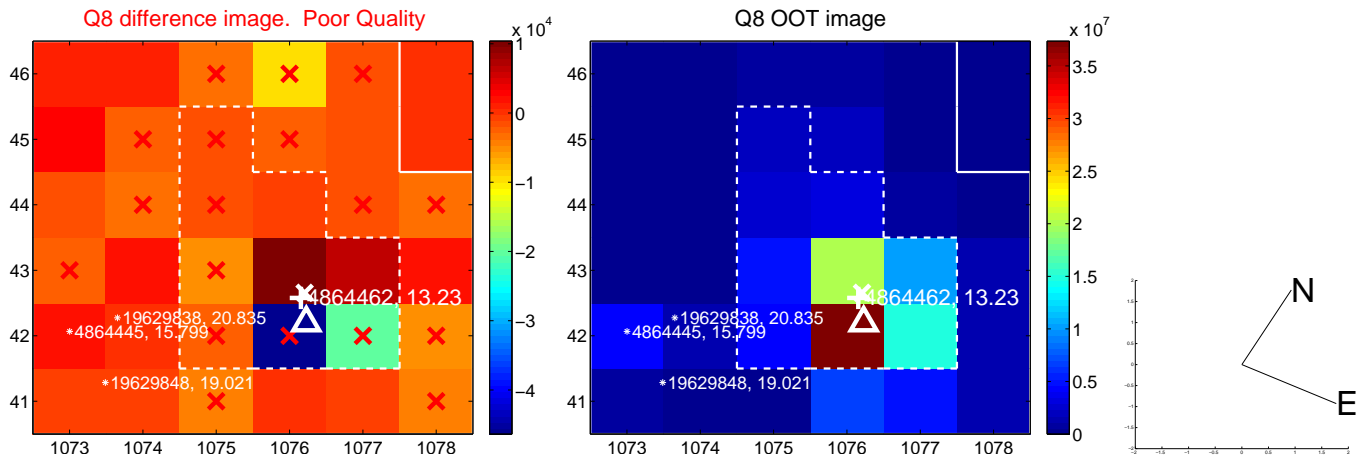
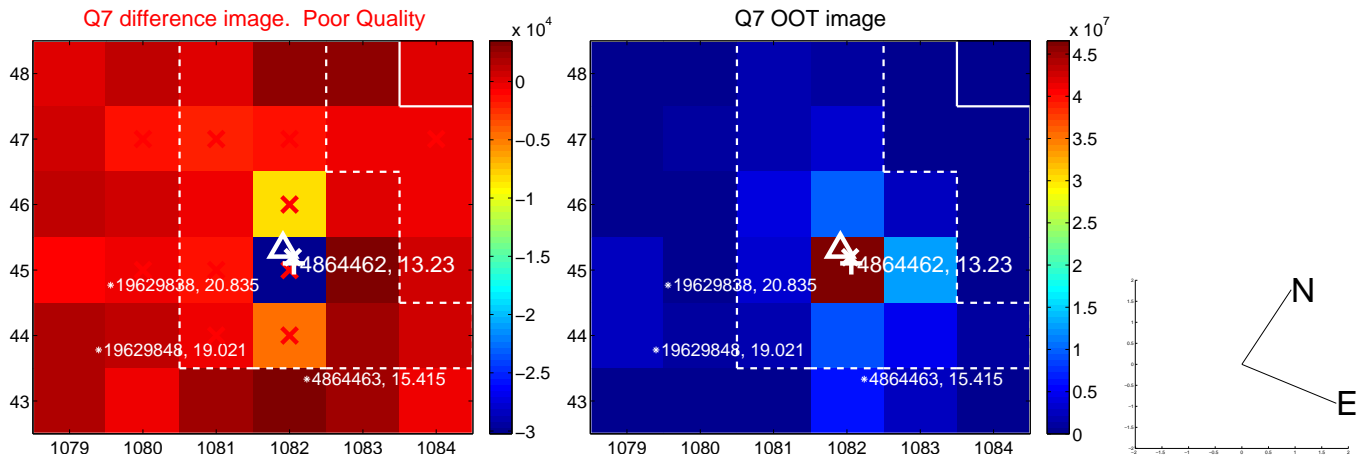
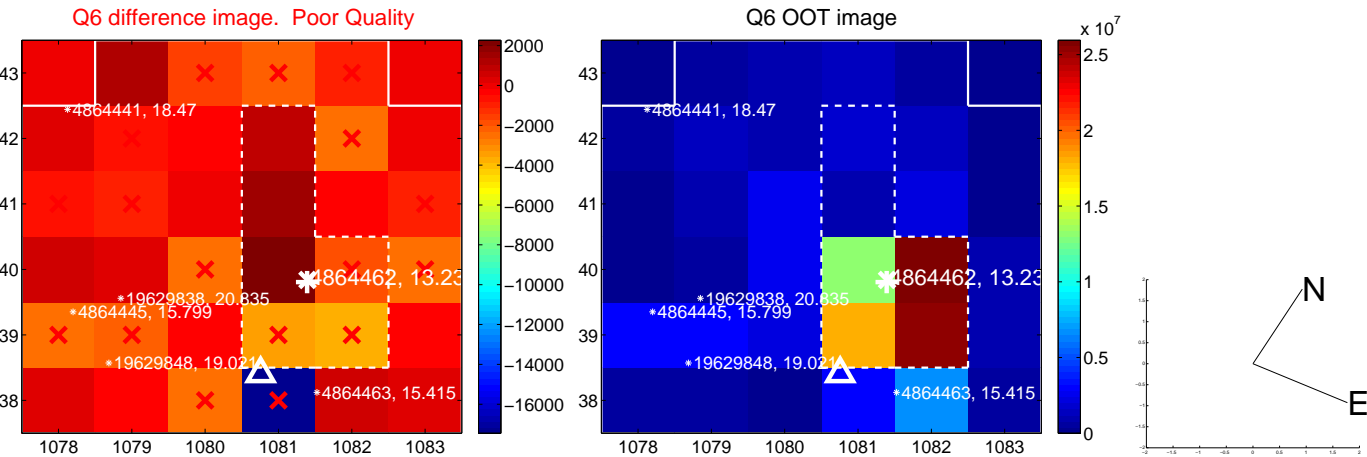
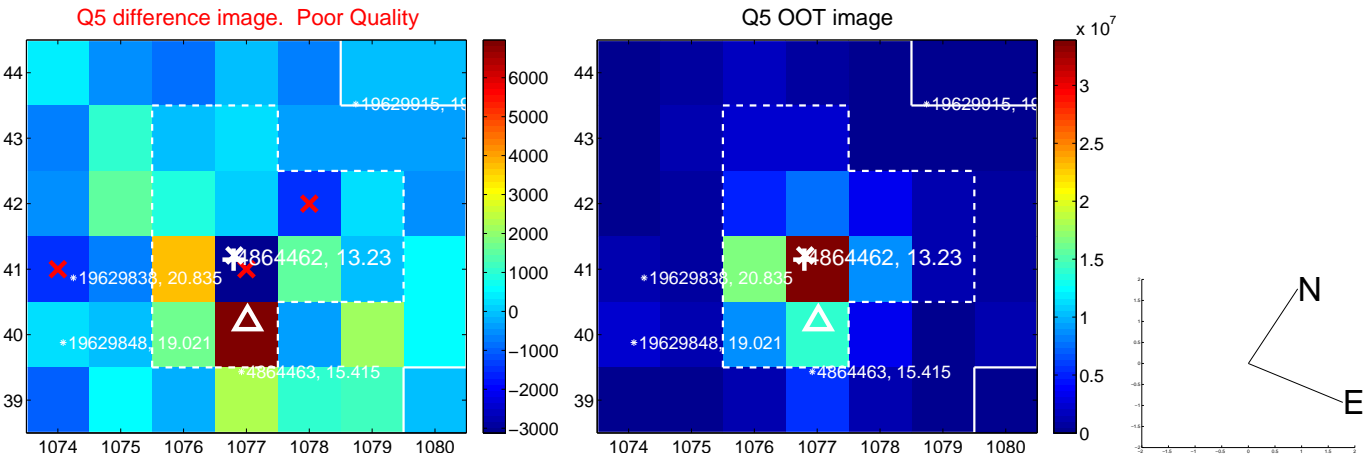


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

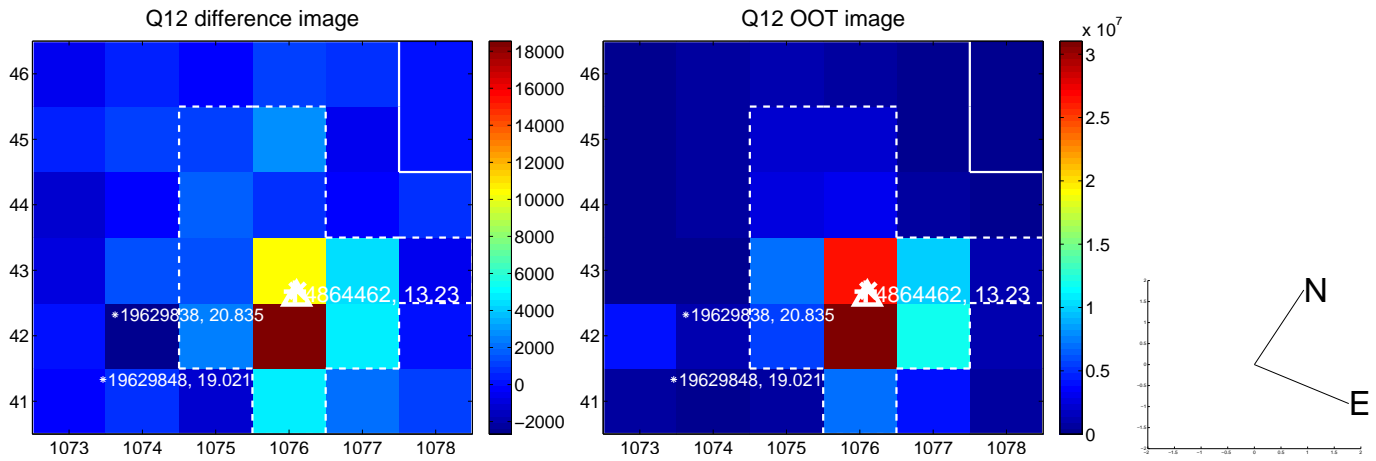
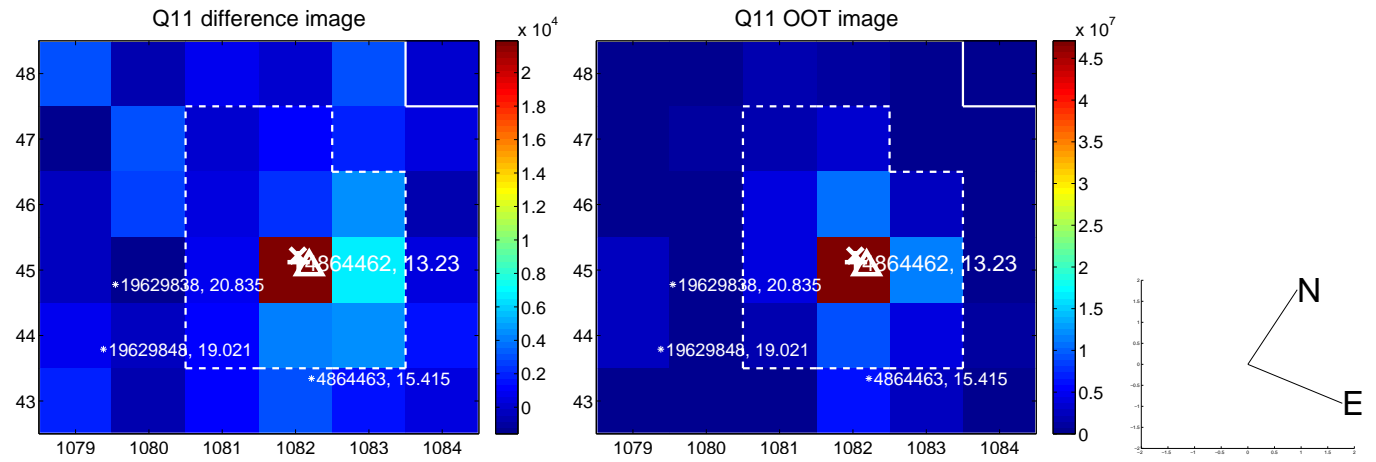
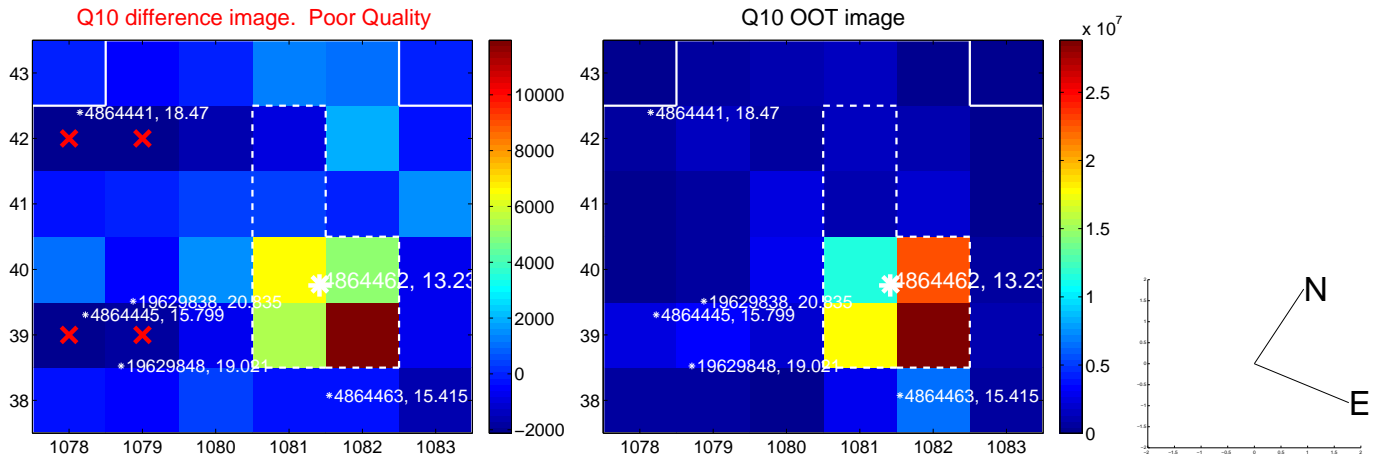
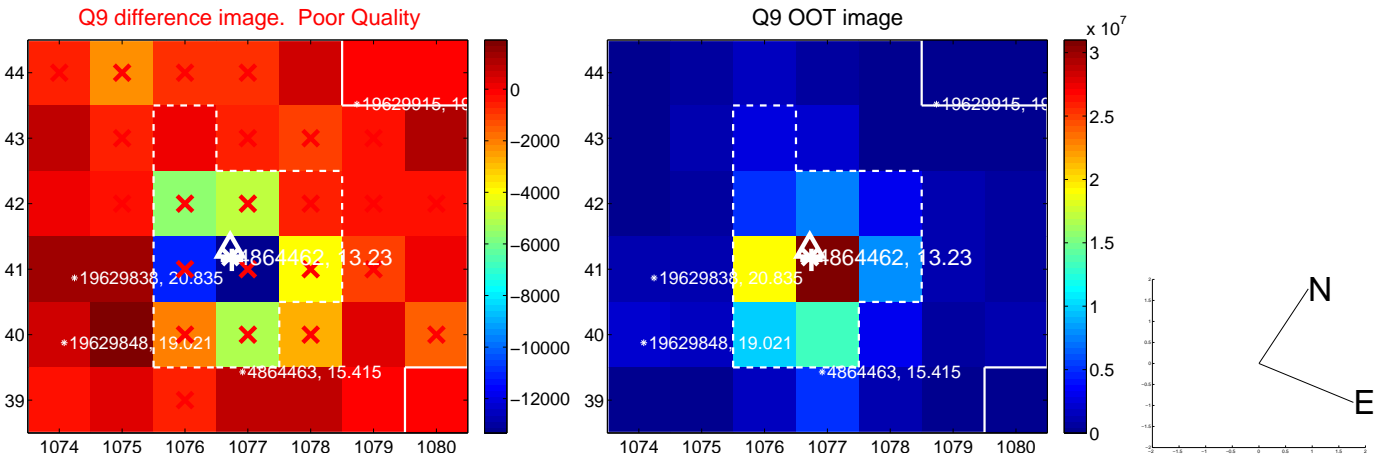
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



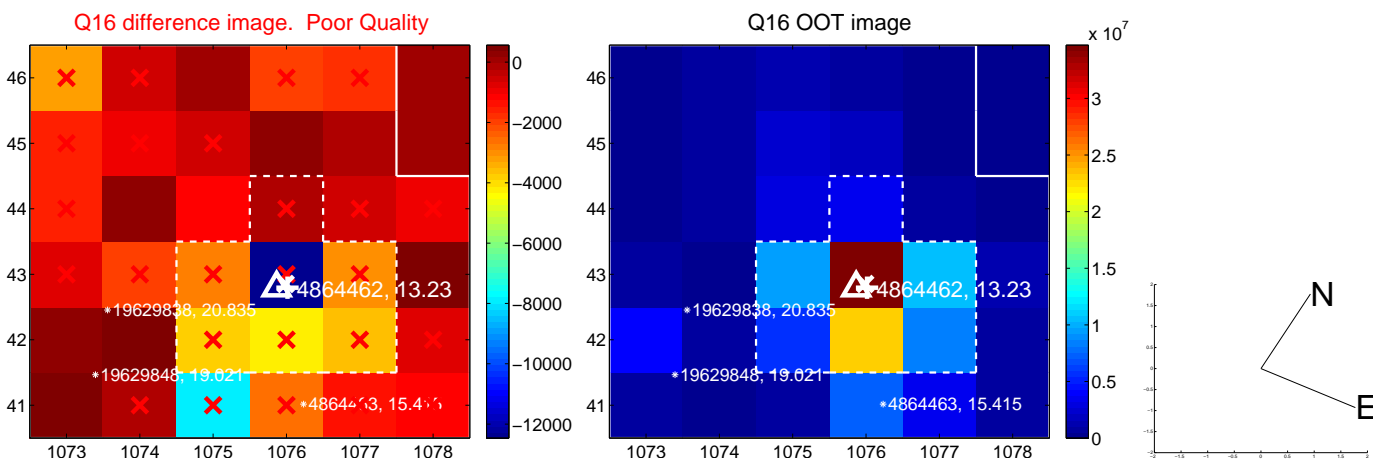
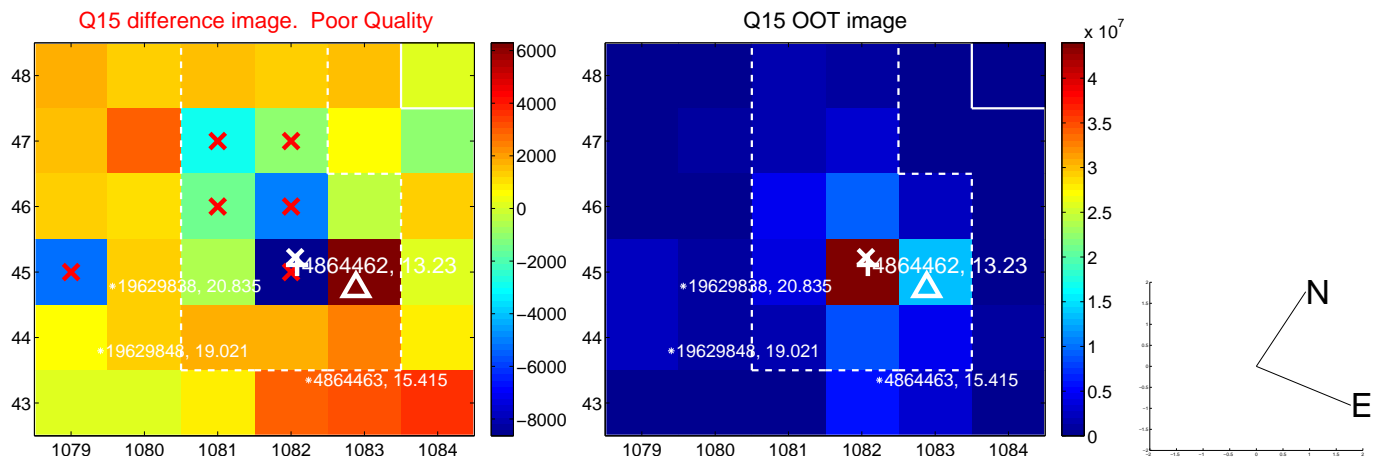
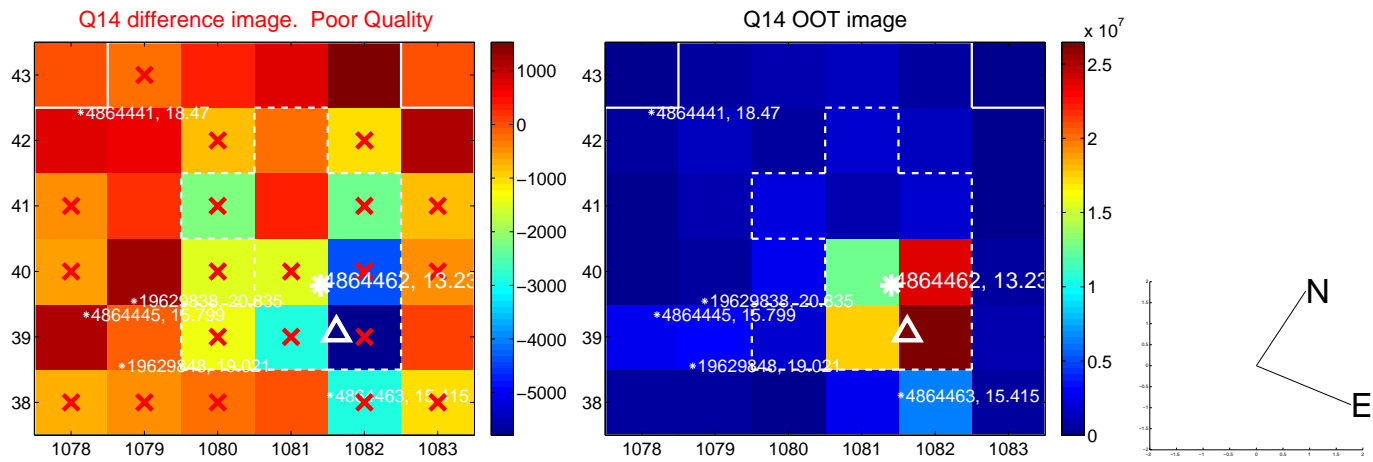
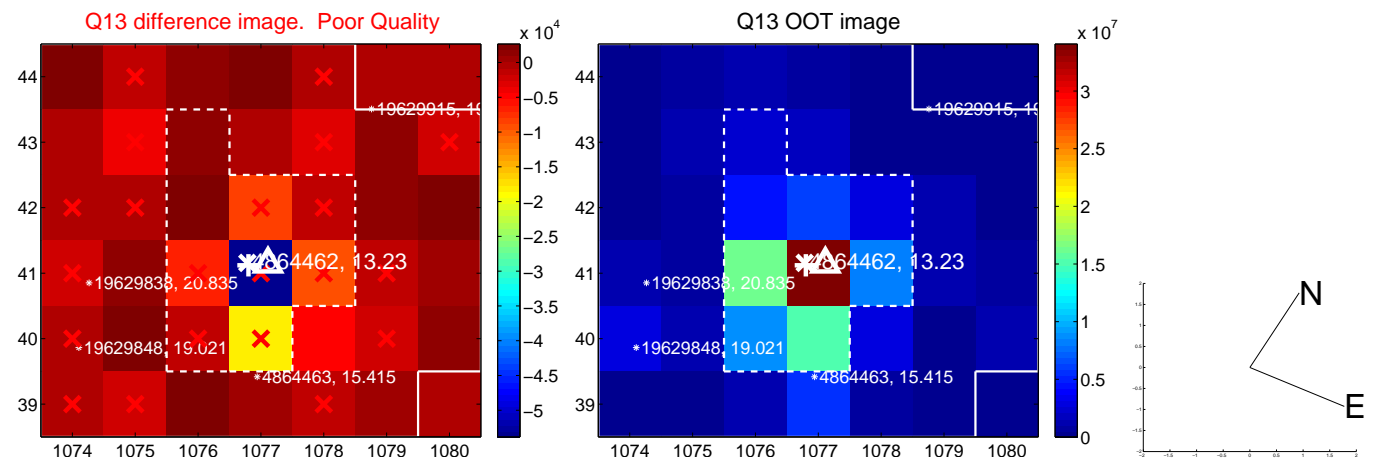
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



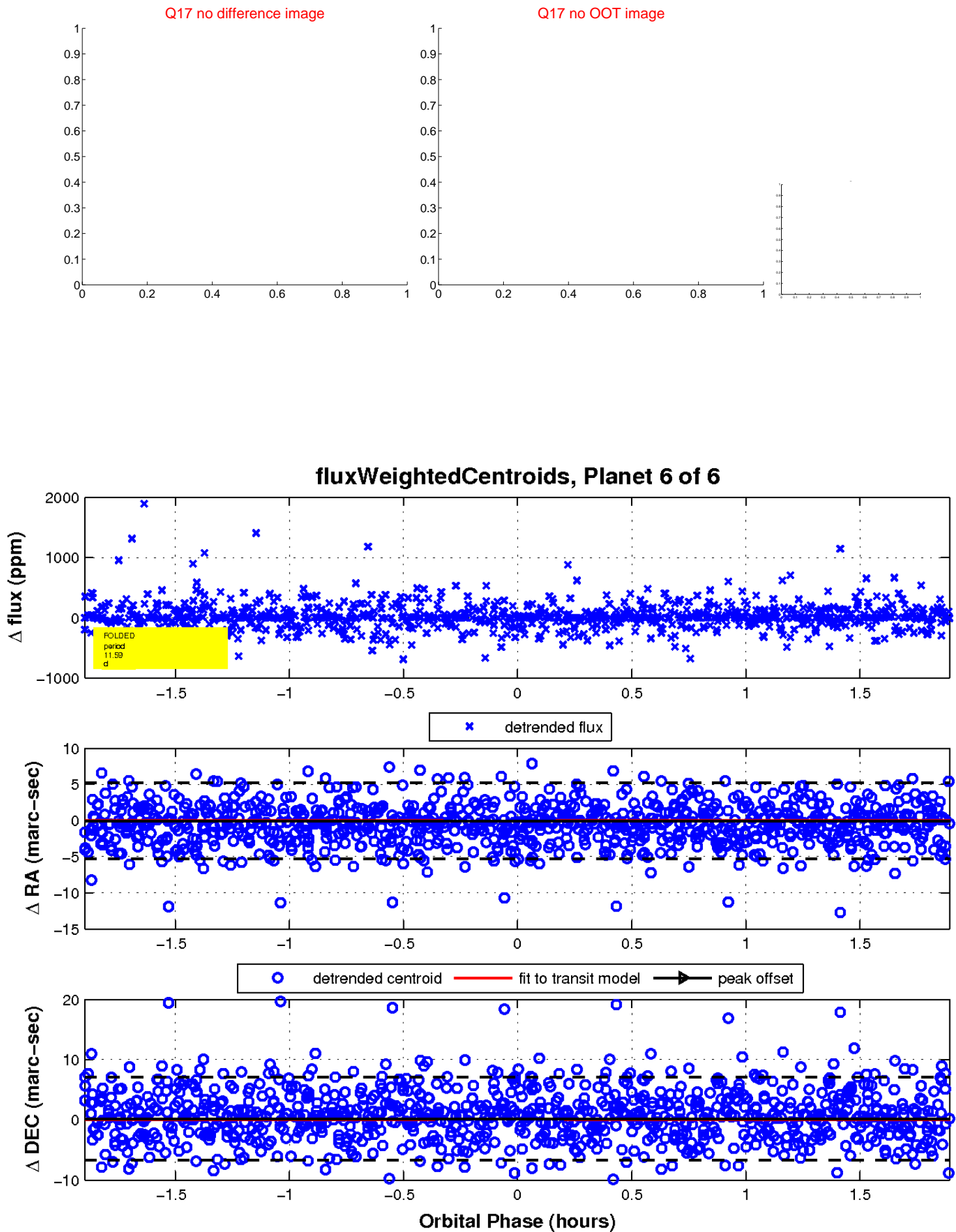
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

