

KIC 009591519

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})
009591519-01	OBS	No	1.124730	131.946264	53.4	3.645	11.5	10.7	2.30	7308	1.96	25860.39
009591519-02	OBS	No	1.124775	132.647098	61.3	3.487	12.0	13.3	2.30	7308	2.10	25859.03
009591519-03	OBS	No	1.211713	131.914174	120.7	6.742	12.6	13.1	2.30	7308	3.40	23415.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009591519-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009591519-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
009591519-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

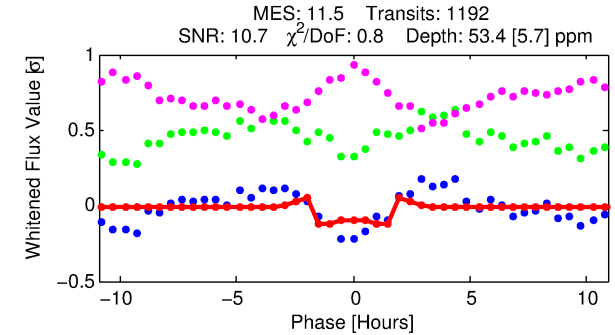
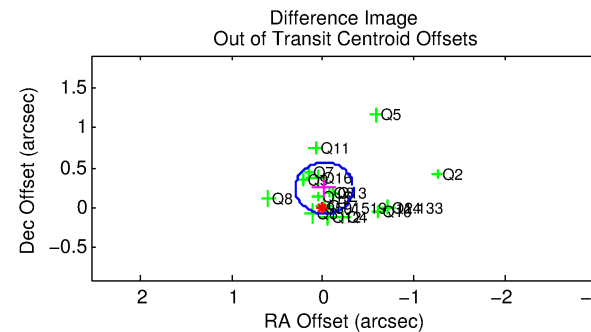
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 009591519-01

No Significant Match Found

KIC: 9591519 Candidate: 1 of 3 Period: 1.125 d

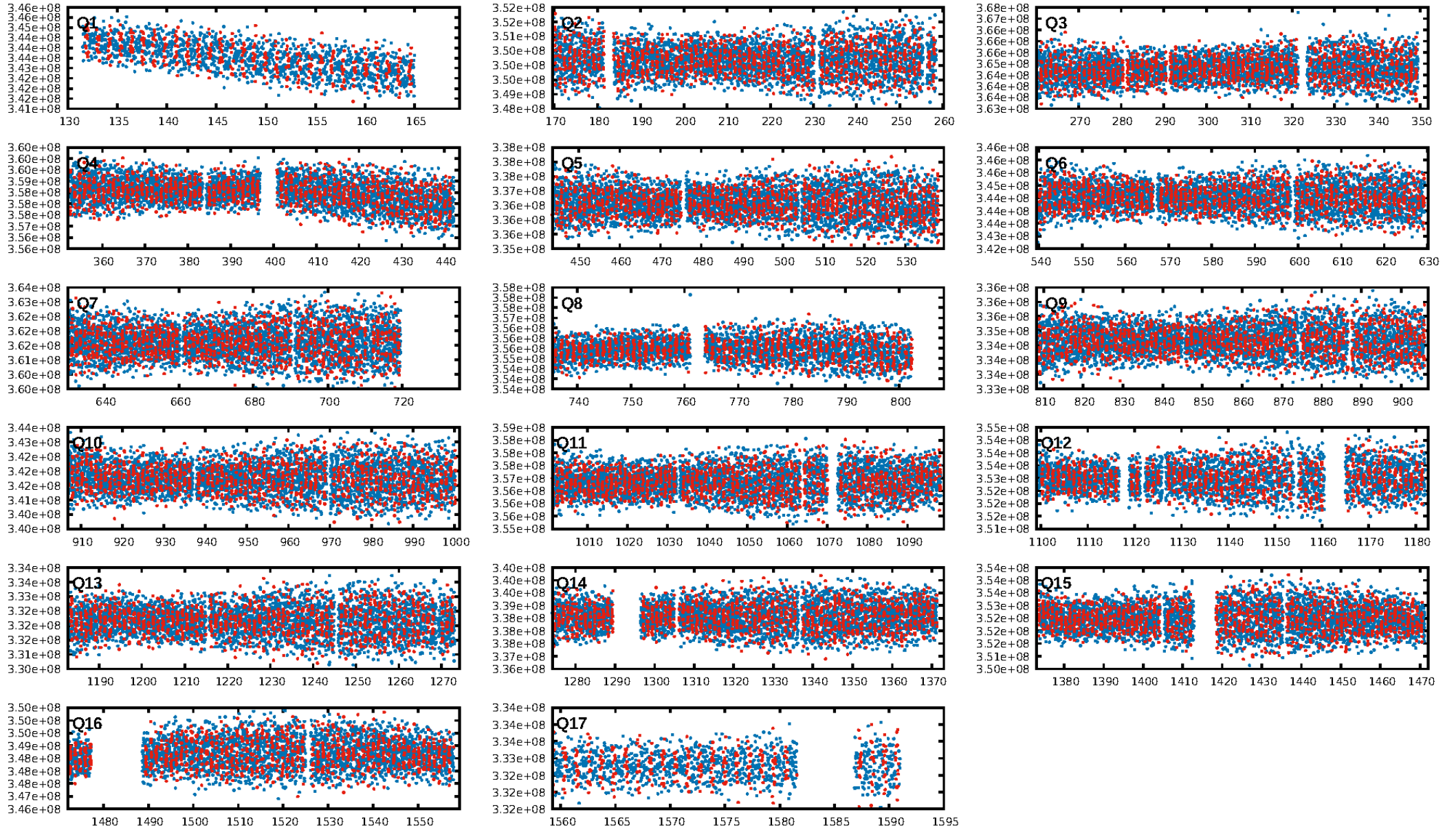


ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: N/A
 RollingBand-fgt: 1.00 [1137/1138]
 GhostDiagnostic-chr: 1.367

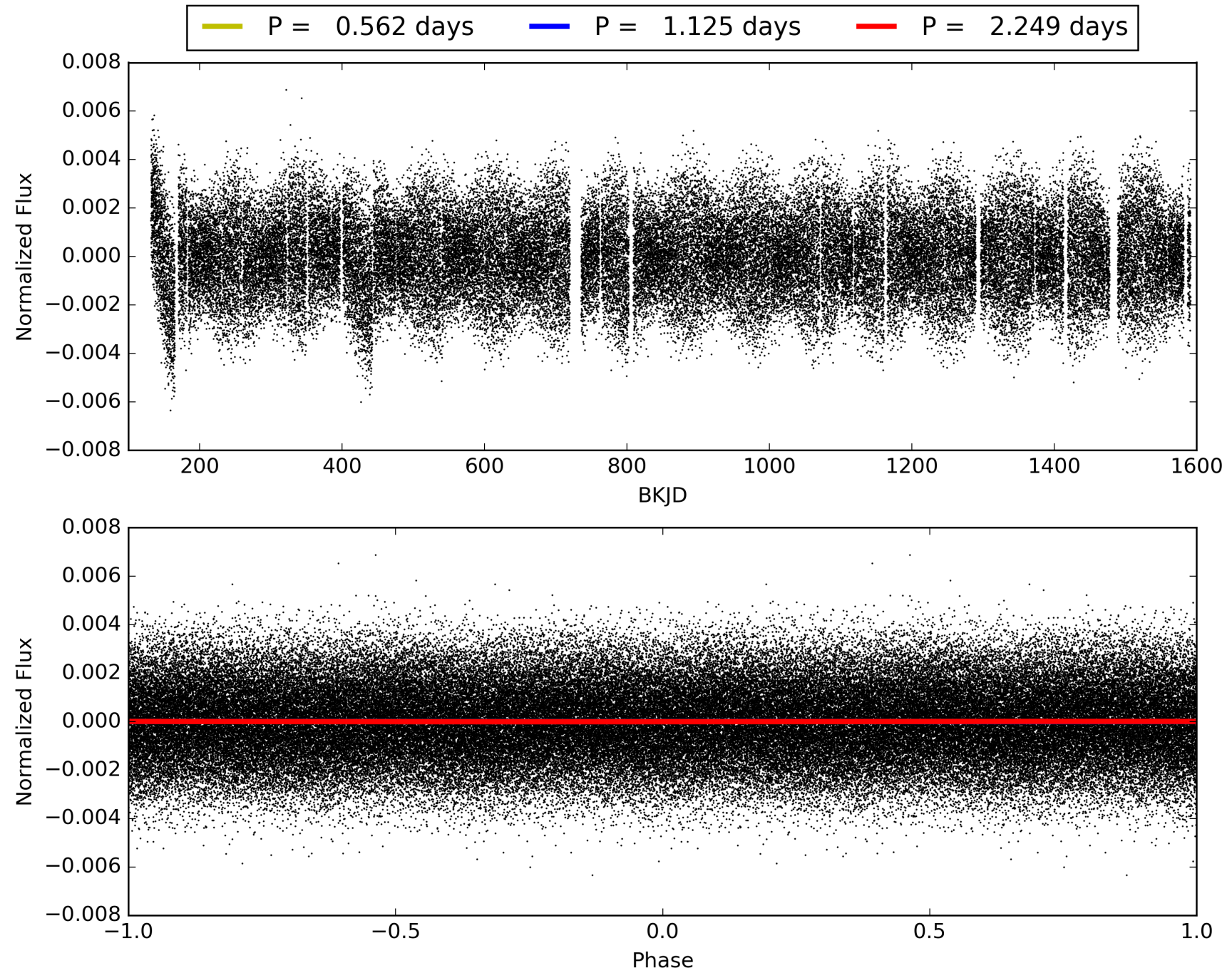
Centroid-sig: 21.2%
 Centroid-so: 0.651 arcsec [2.53σ]
 OotOffset-rm: 0.246 arcsec [2.31σ]
 KicOffset-rm: 0.177 arcsec [1.61σ]
 OotOffset-st: 4/4/4/4 [16]
 KicOffset-st: 4/4/4/4 [16]
 DiffImageQuality-fgm: 1.00 [16/16]
 DiffImageOverlap-fno: 0.00 [0/17]

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

TCE 009591519-01, PDC Light Curves

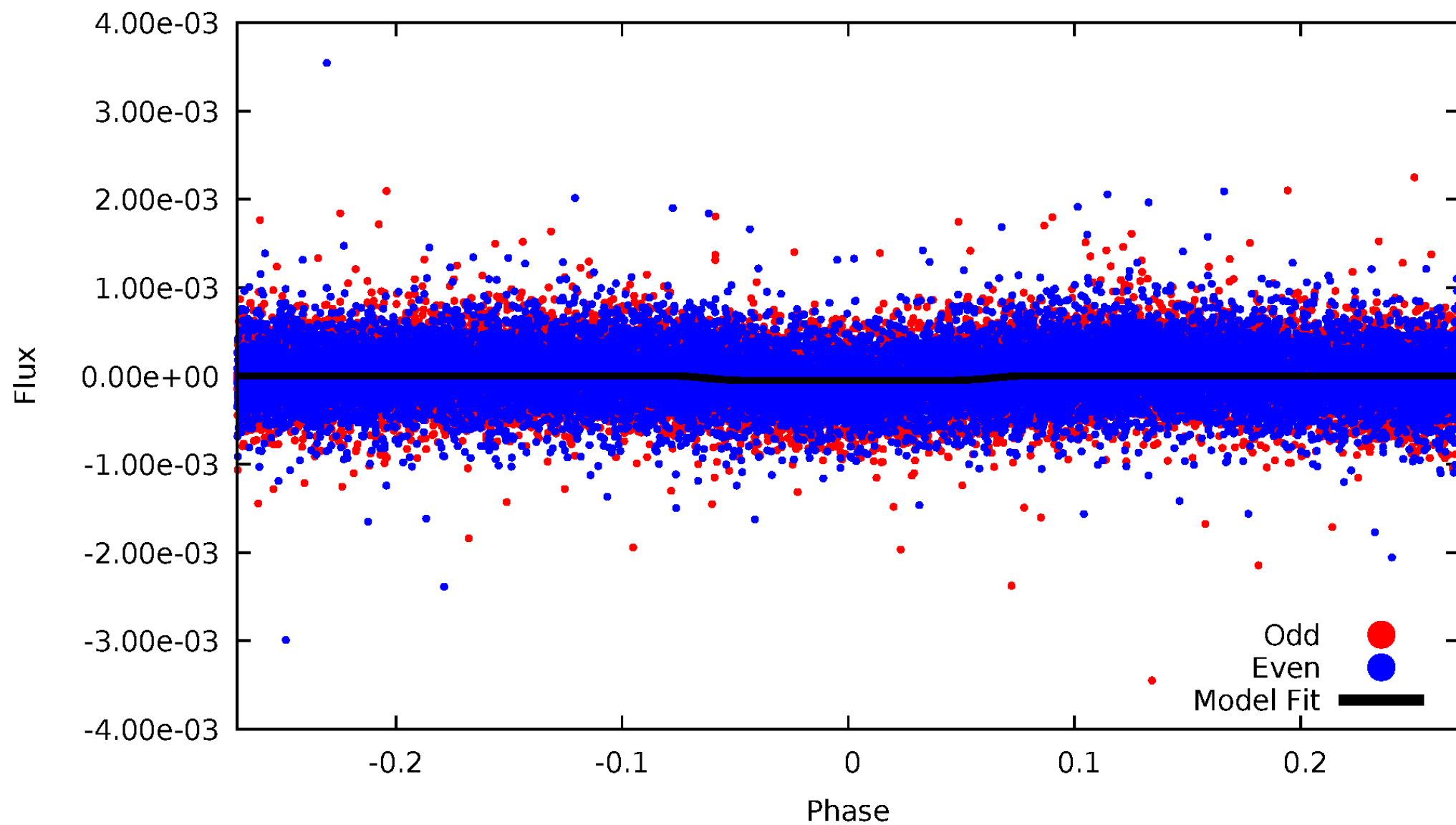


TCE 009591519-01



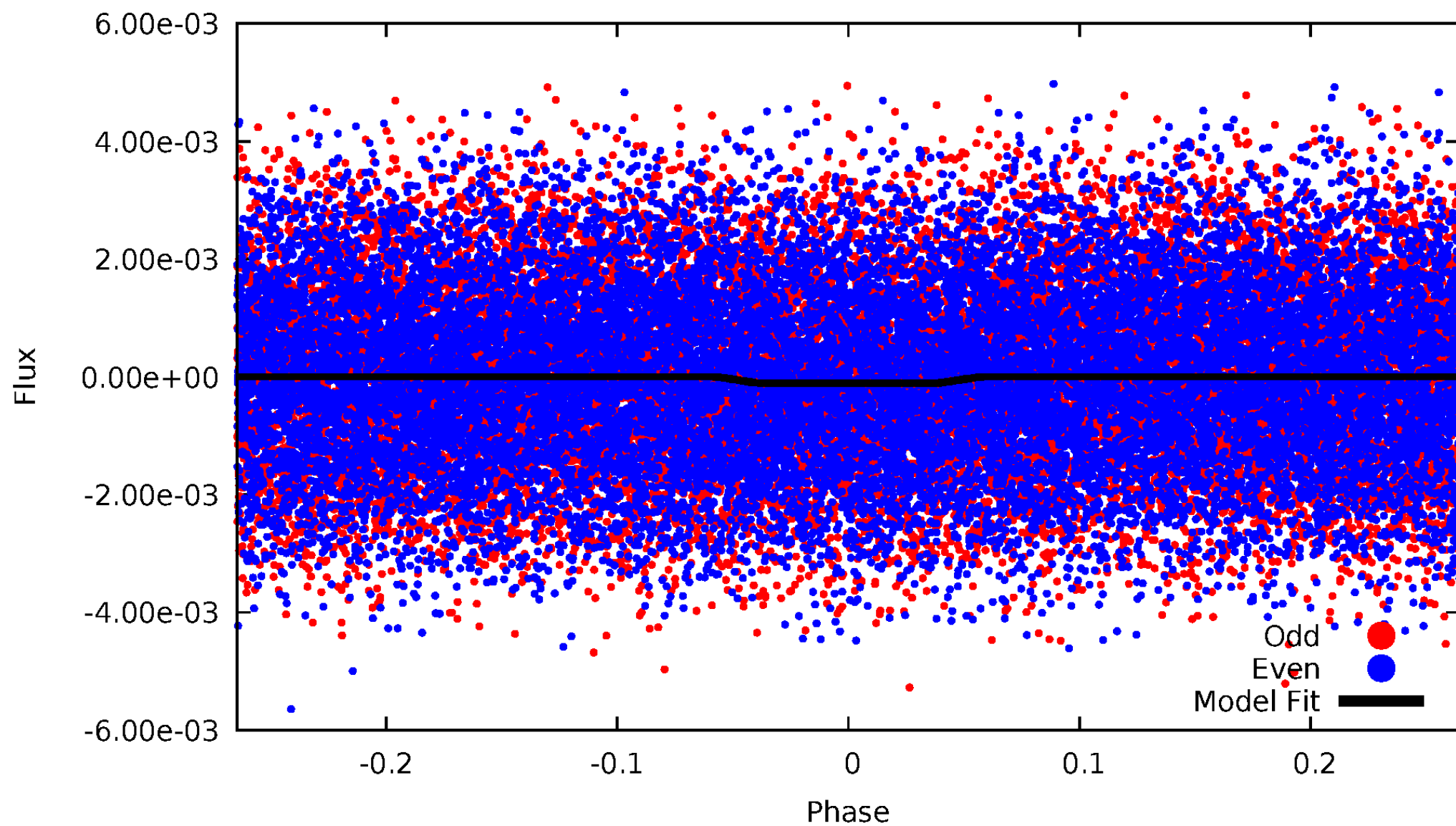
DV Odd/Even

TCE 009591519-01



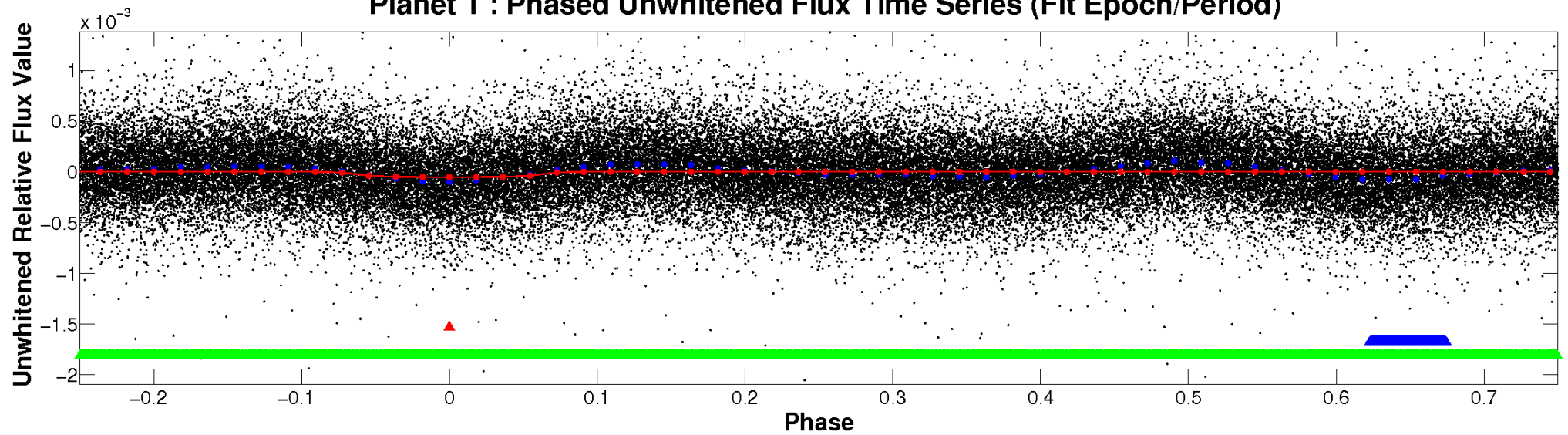
ALT Odd/Even

TCE 009591519-01

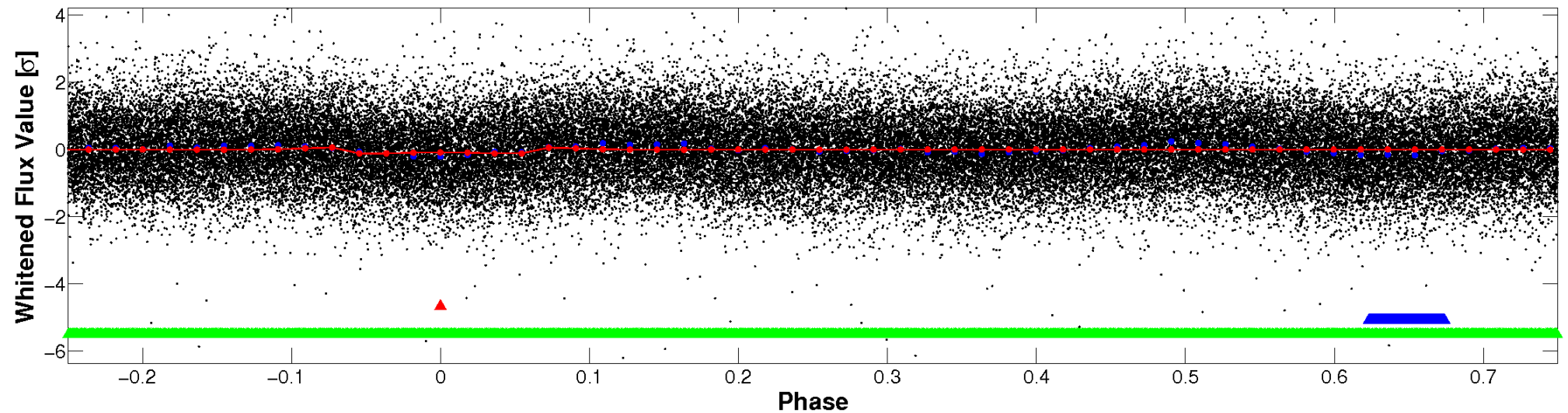


Non-Whitened Vs. Whitened Light Curve

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

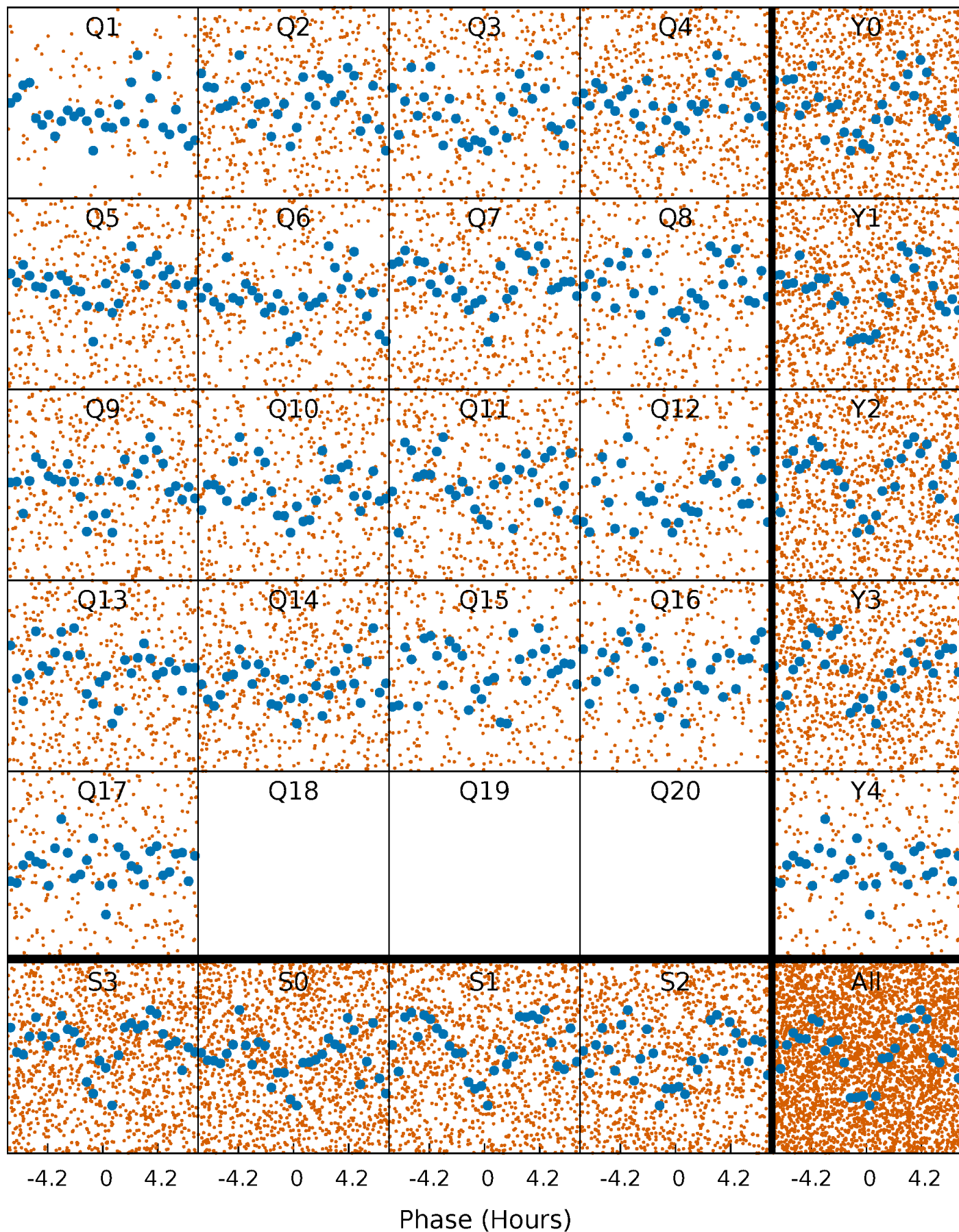


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



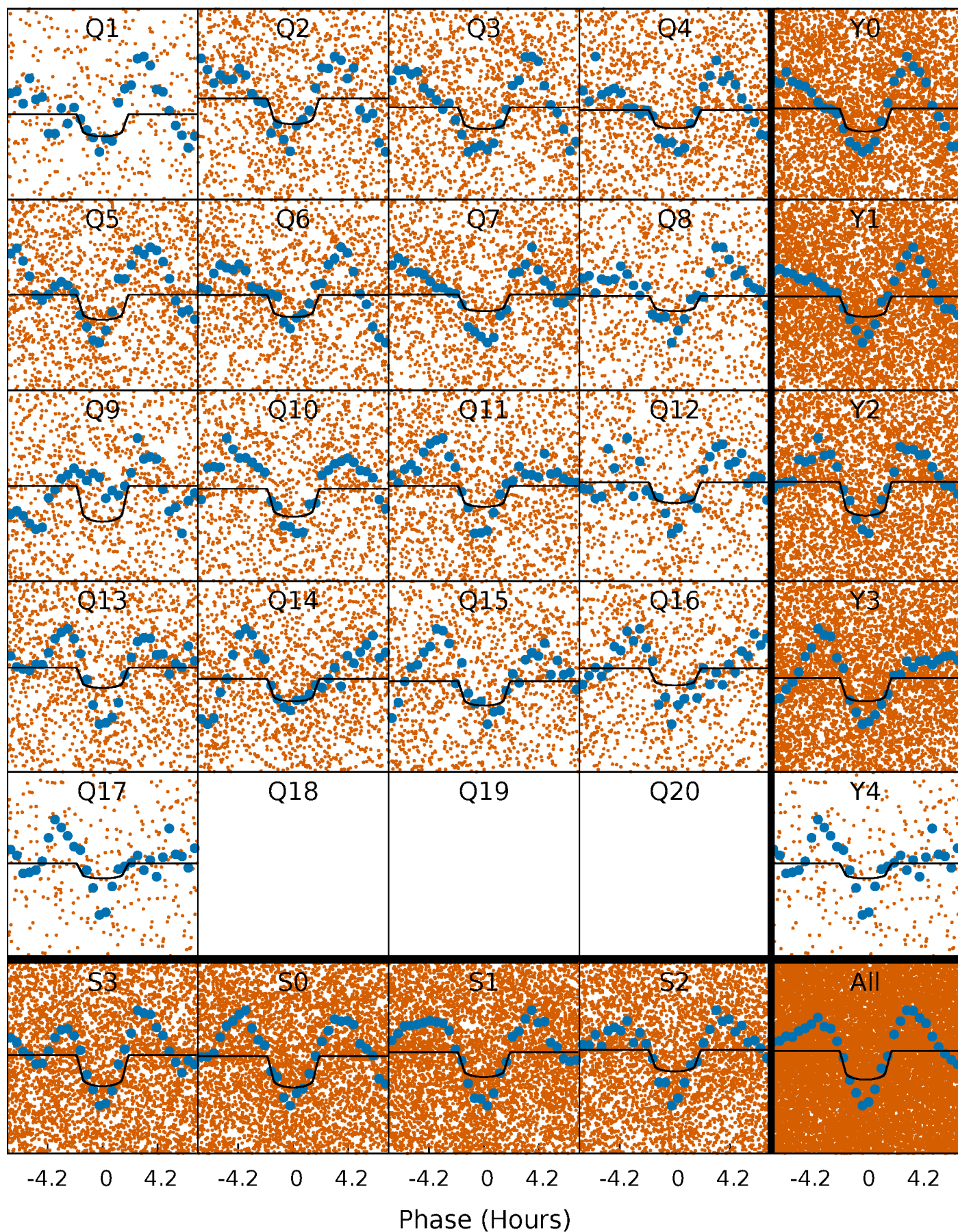
PDC Quarter-Phased Transit Curves

TCE 009591519-01 P= 1.124730 Days $T_0=131.946264$ (BKJD)



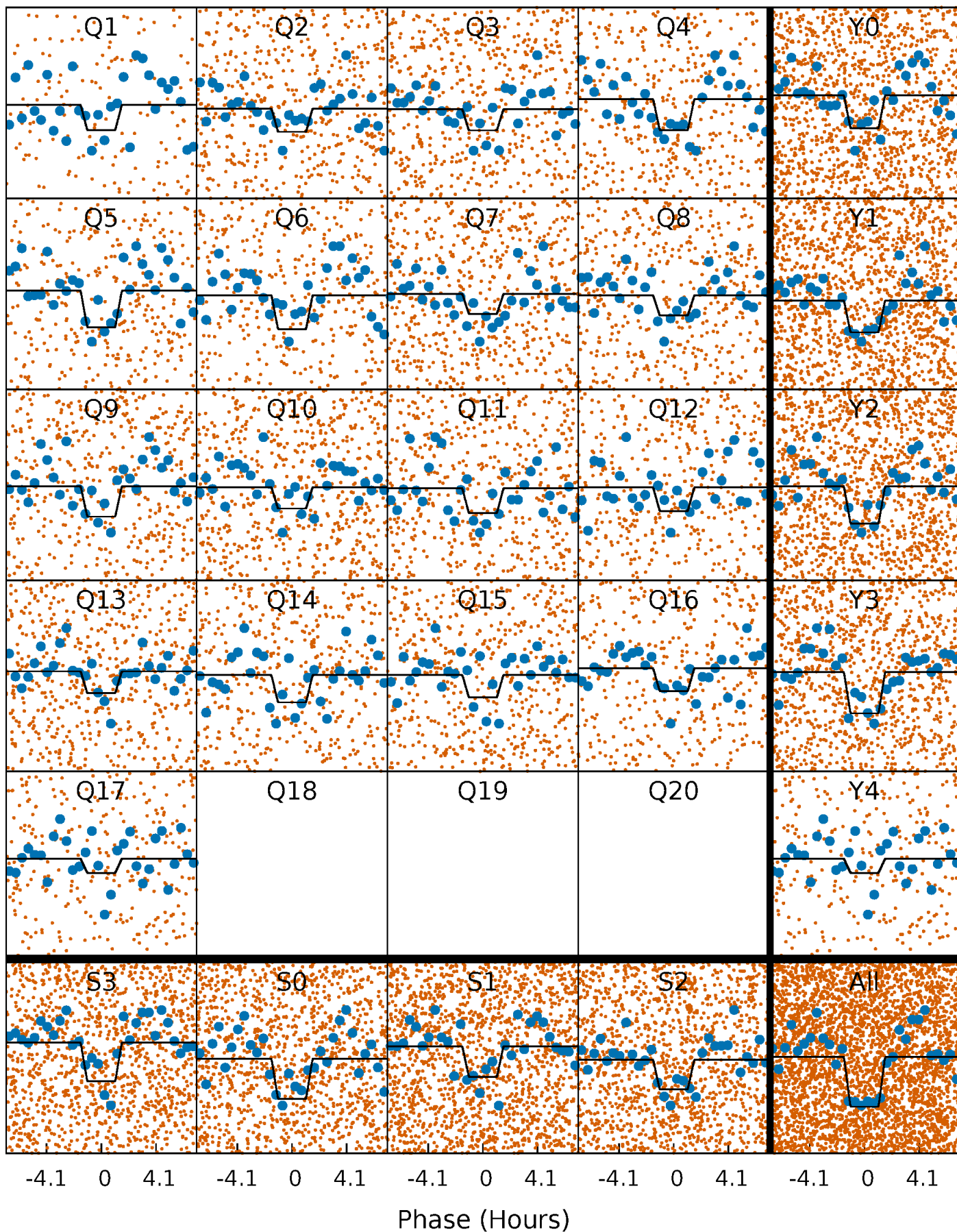
DV Quarter-Phased Transit Curves

TCE 009591519-01 P= 1.124730 Days $T_0=131.946264$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

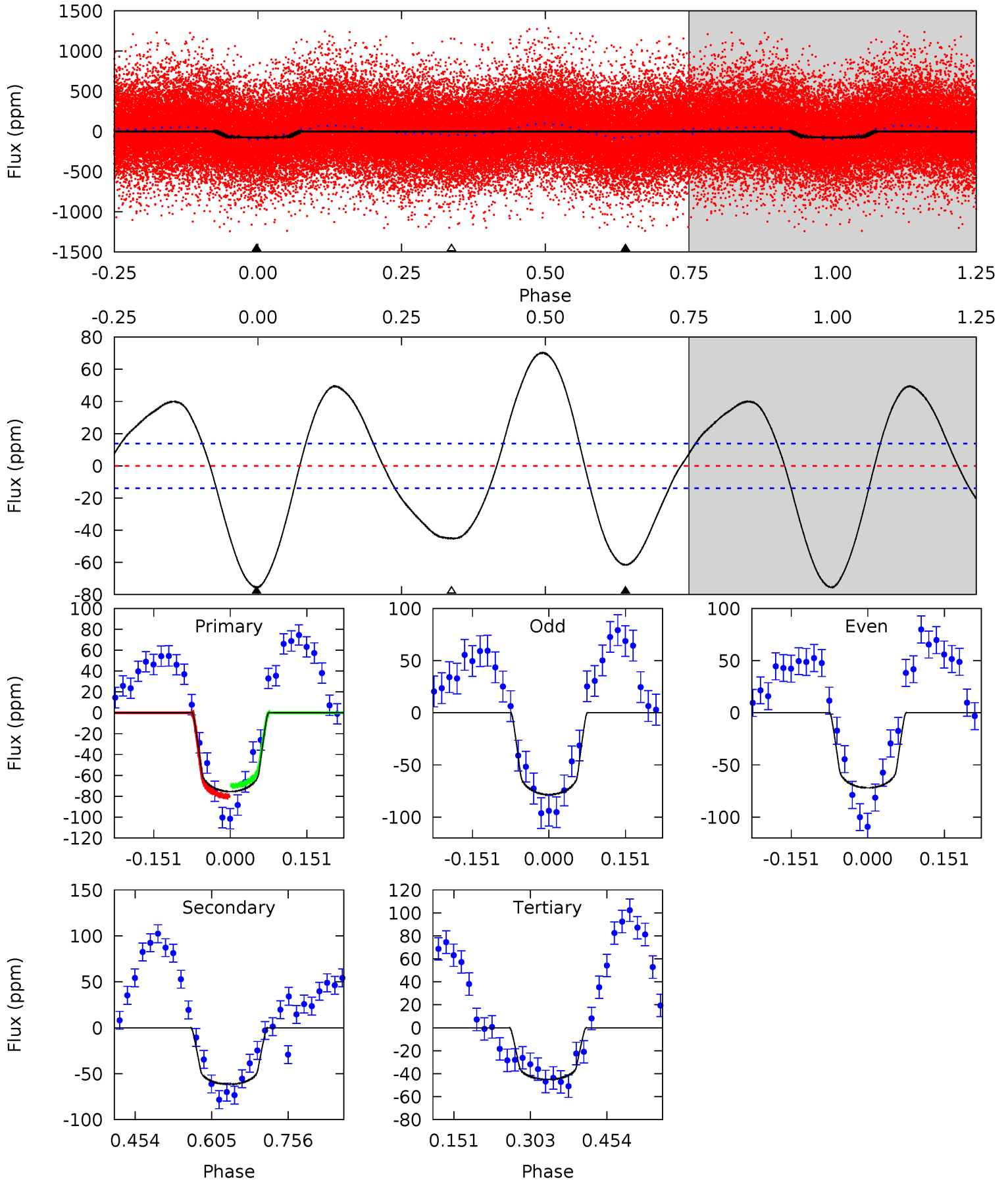
TCE 009591519-01 P= 1.124733 Days $T_0=131.937185$ (BKJD)



DV Model-Shift Uniqueness Test

009591519-01, P = 1.124730 Days, E = 130.821534 Days

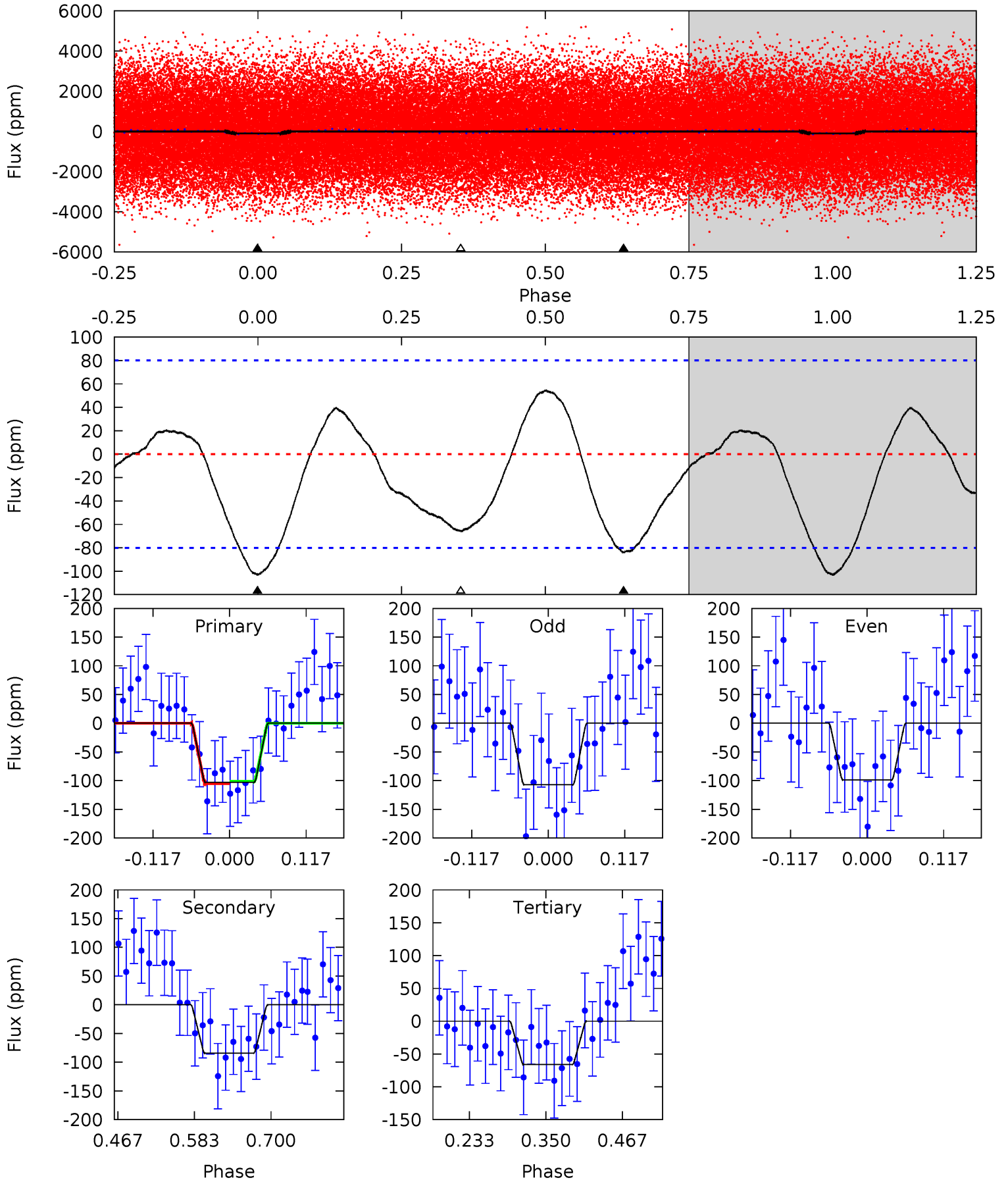
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.3	19.8	14.5	0	4.48	1.44	11.4	9.81	24.3	5.32	19.8	1.04	1.06	0.48	1.63



Alt Model-Shift Uniqueness Test

009591519-01, P = 1.124733 Days, E = 130.812452 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.83	4.76	3.73	0	4.53	1.57	2.05	2.10	5.83	1.03	4.76	0.23	1.02	0.35	0.12



Stellar Parameters For KIC 009591519

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7308^{+229}_{-280}	$3.815^{+0.552}_{-0.130}$	$-0.980^{+0.300}_{-0.300}$	$2.301^{+0.493}_{-1.151}$	$1.261^{+0.149}_{-0.242}$	$0.146^{+0.792}_{-0.053}$
	+3%/-4%	+14%/-3%	+31%/-31%	+21%/-50%	+12%/-19%	+543%/-37%
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 009591519-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-62 ± 3	$1.81^{+0.54}_{-0.54}$	4391^{+383}_{-566}	7178^{+1065}_{-715}	$5.327^{+5.413}_{-2.024}$
Alt.	-84 ± 18	$2.42^{+0.59}_{-0.66}$	4375^{+373}_{-577}	6663^{+815}_{-663}	$4.195^{+3.392}_{-1.557}$

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 $A_{obs} \gg 1.0$

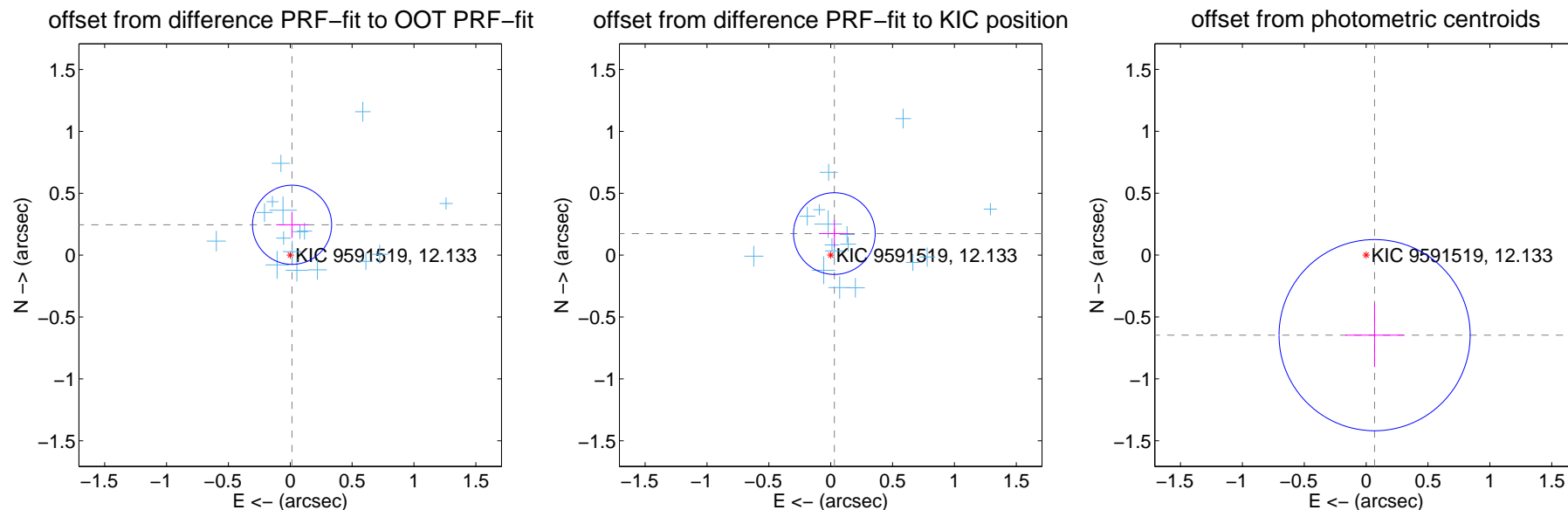
DV Centroid Data

Supplemental centroid analysis for 009591519-01. Kepler magnitude: 12.13. Transit SNR 10.75

There are 16 quarters with good PRF difference image offsets

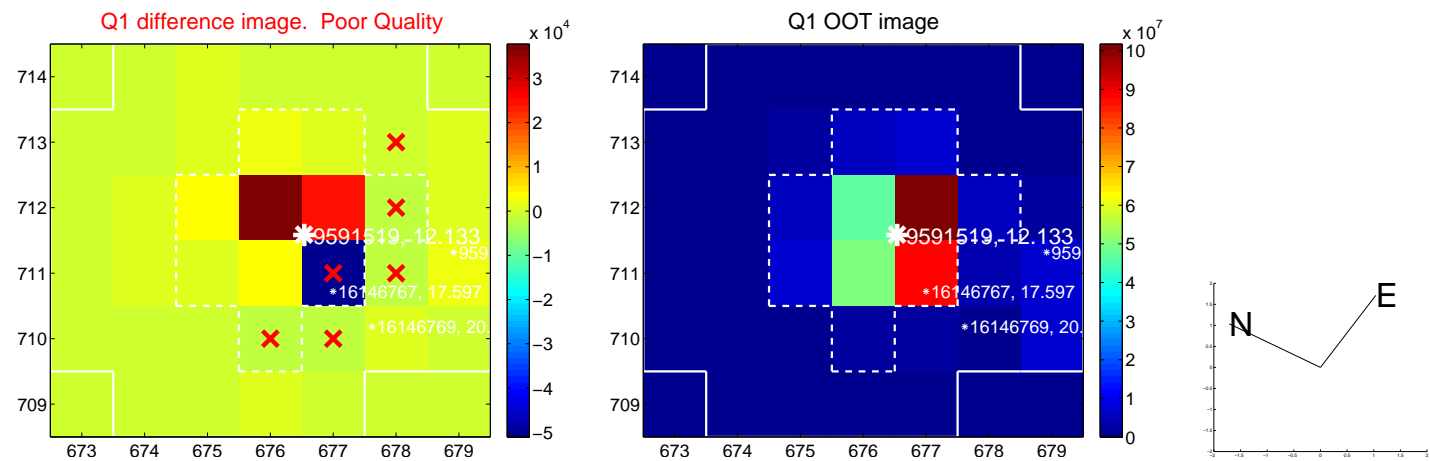
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.246 ± 0.107	2.31	-0.015 ± 0.129	0.245 ± 0.106
PRF-fit source offset from KIC position	0.177 ± 0.110	1.61	-0.029 ± 0.121	0.174 ± 0.107
photometric centroid source offset	0.65 ± 0.26	2.53	-0.07 ± 0.24	-0.65 ± 0.26

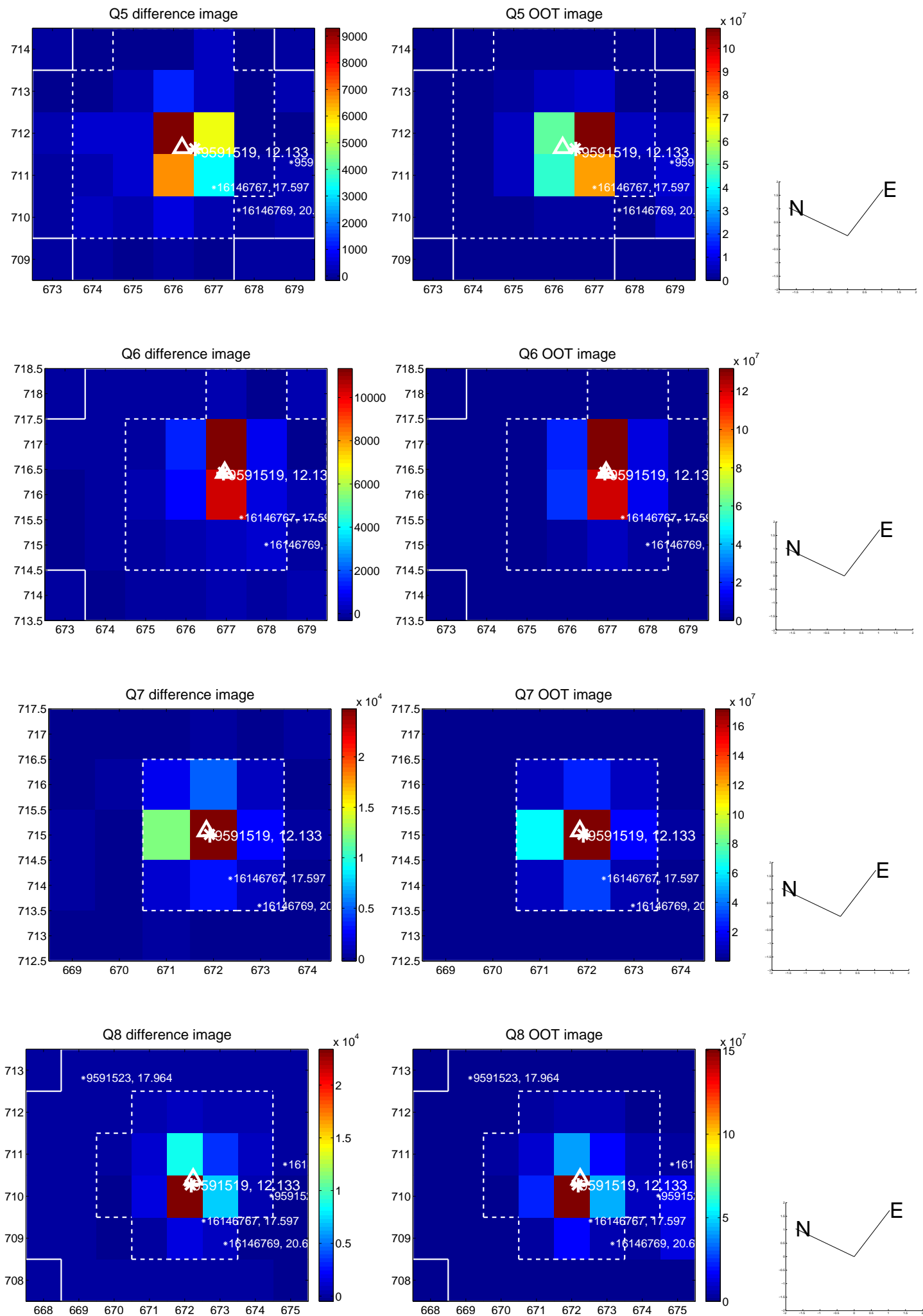


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

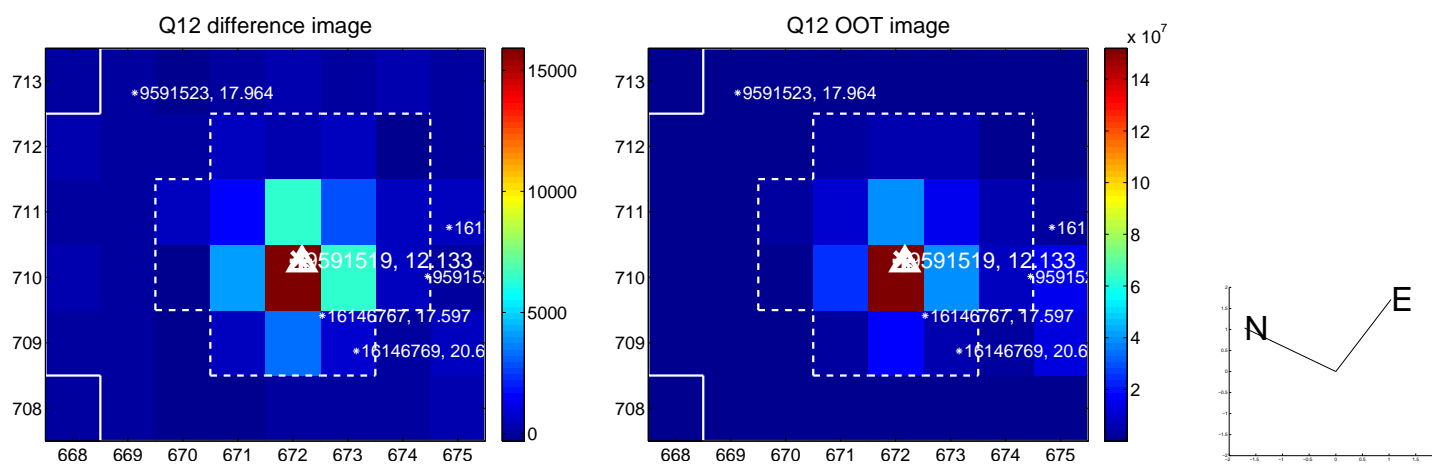
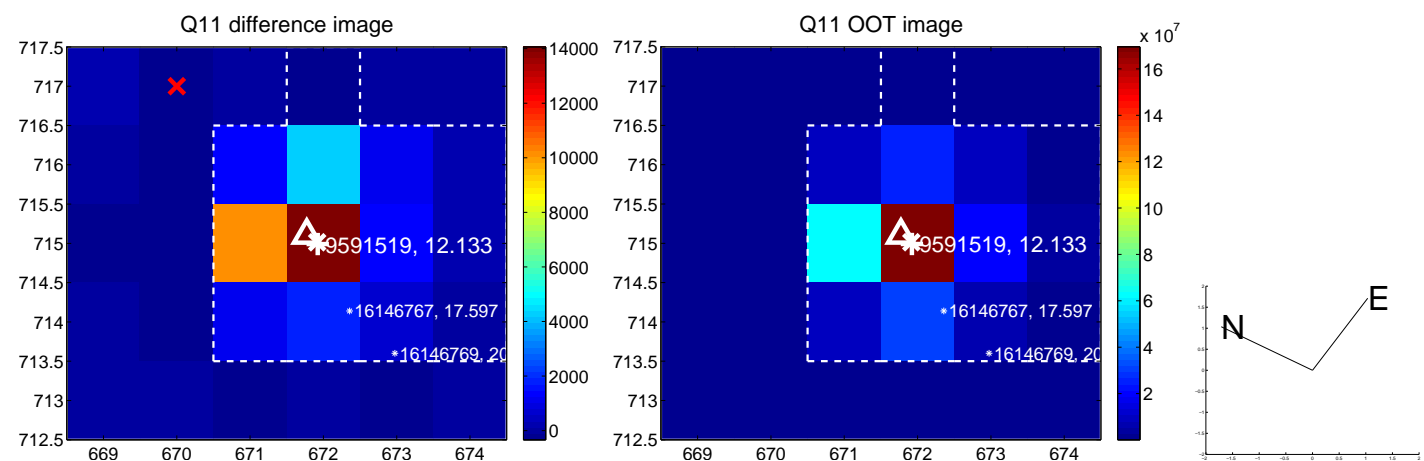
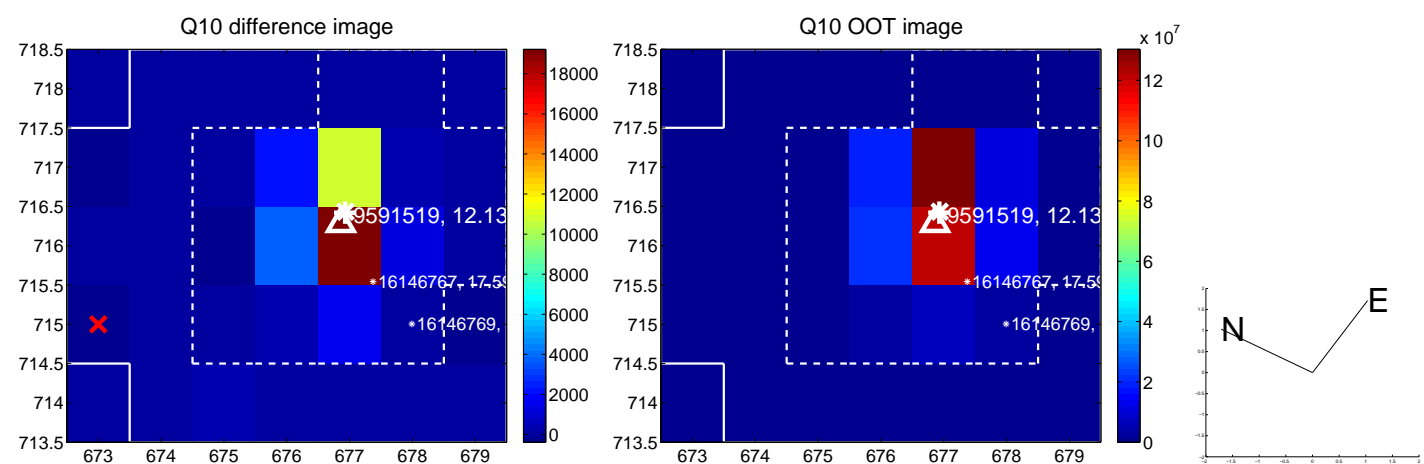
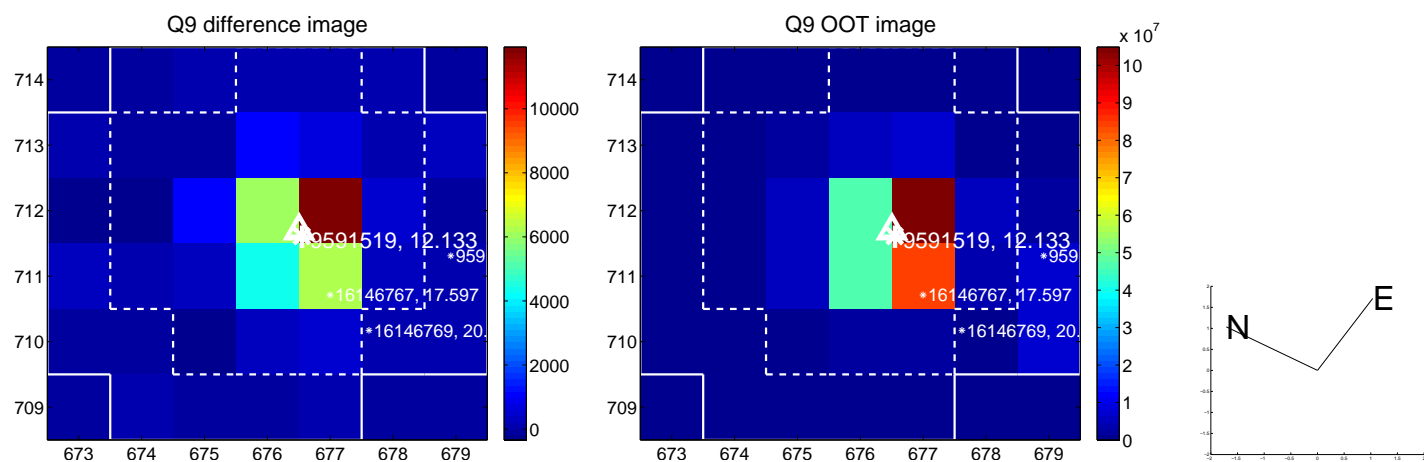
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



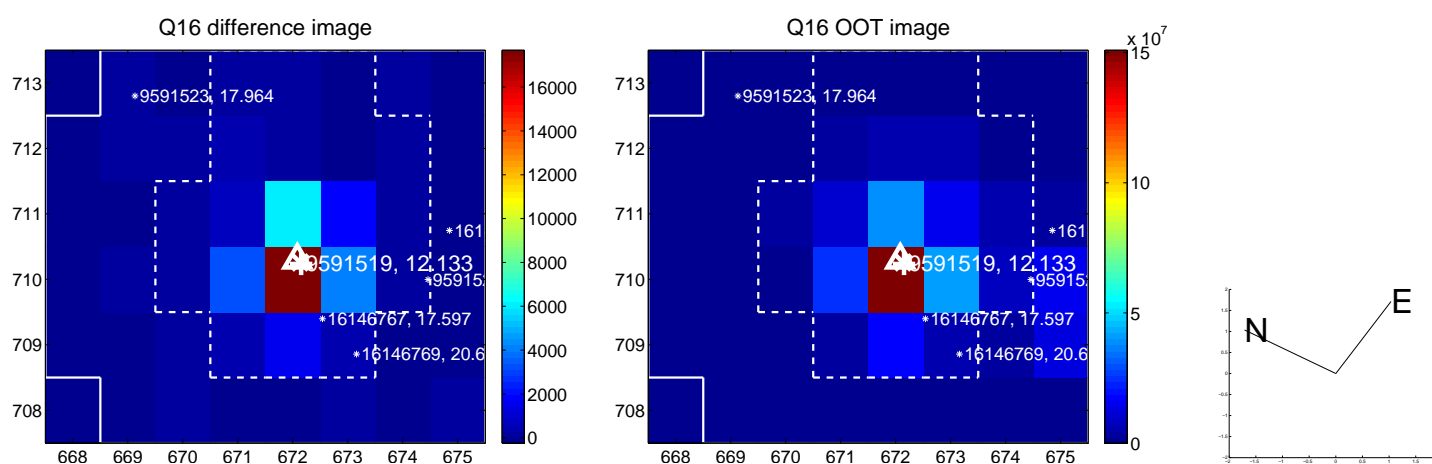
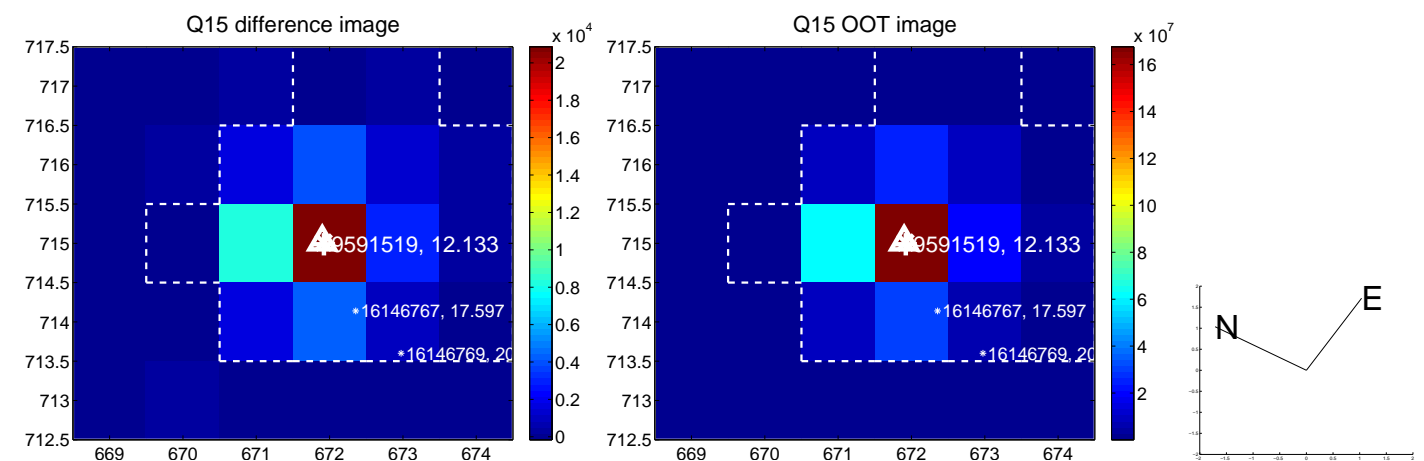
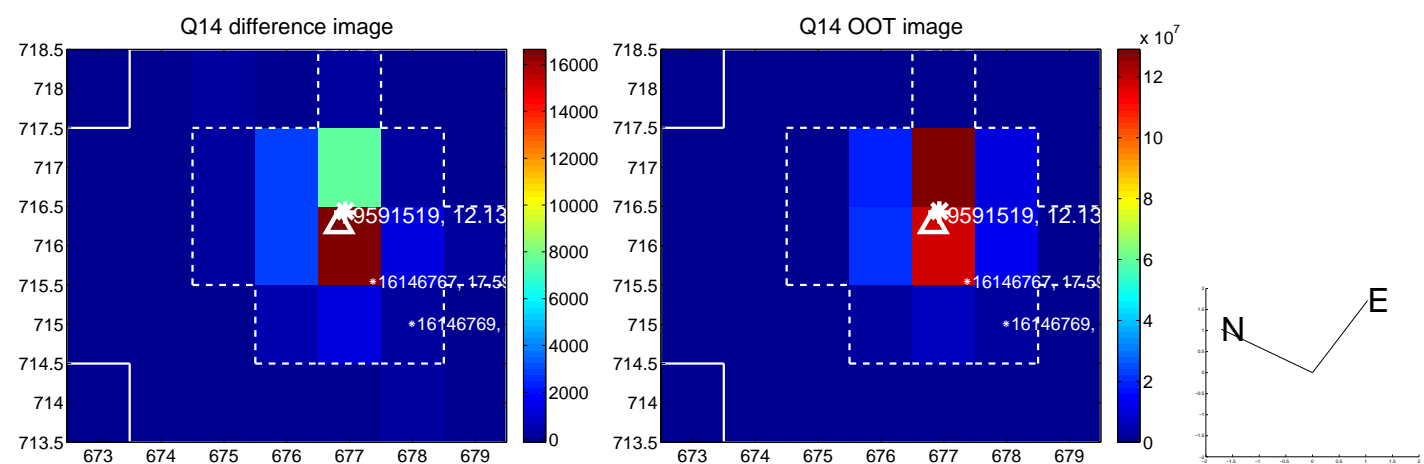
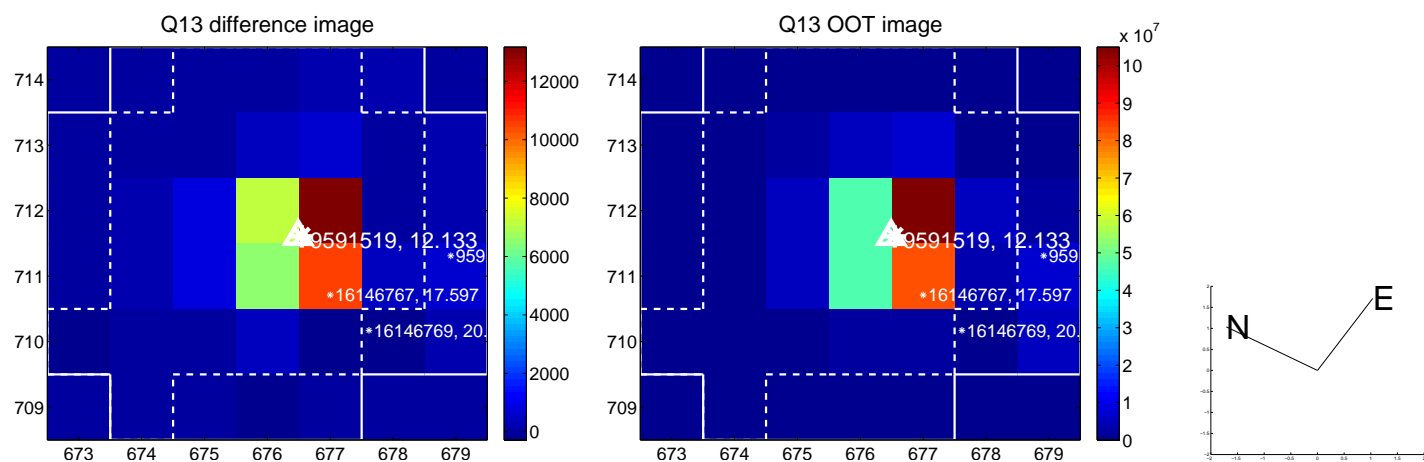
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



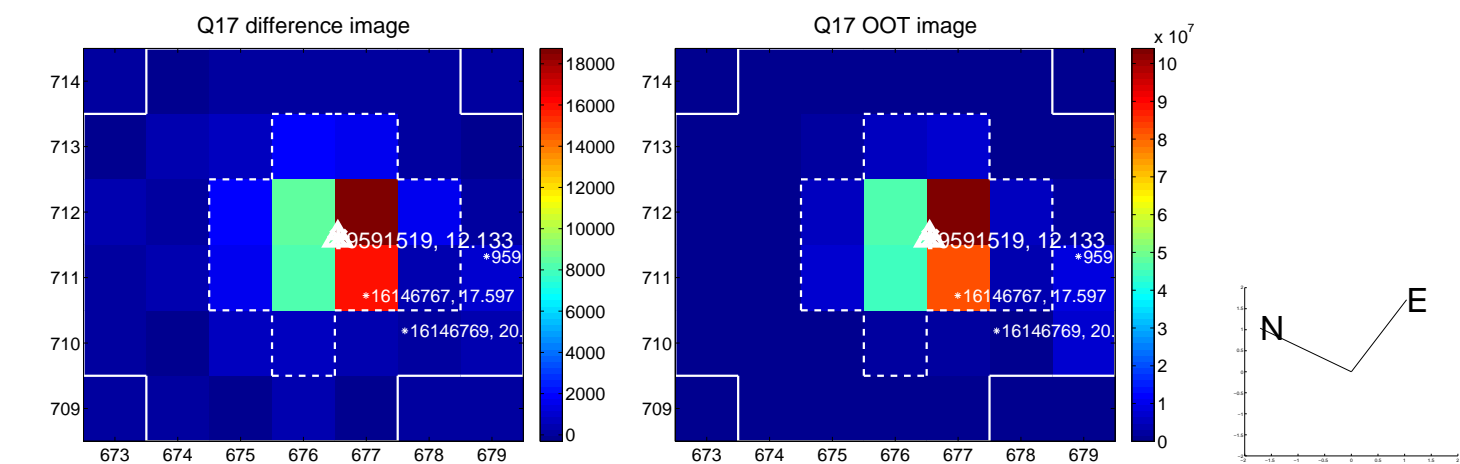
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



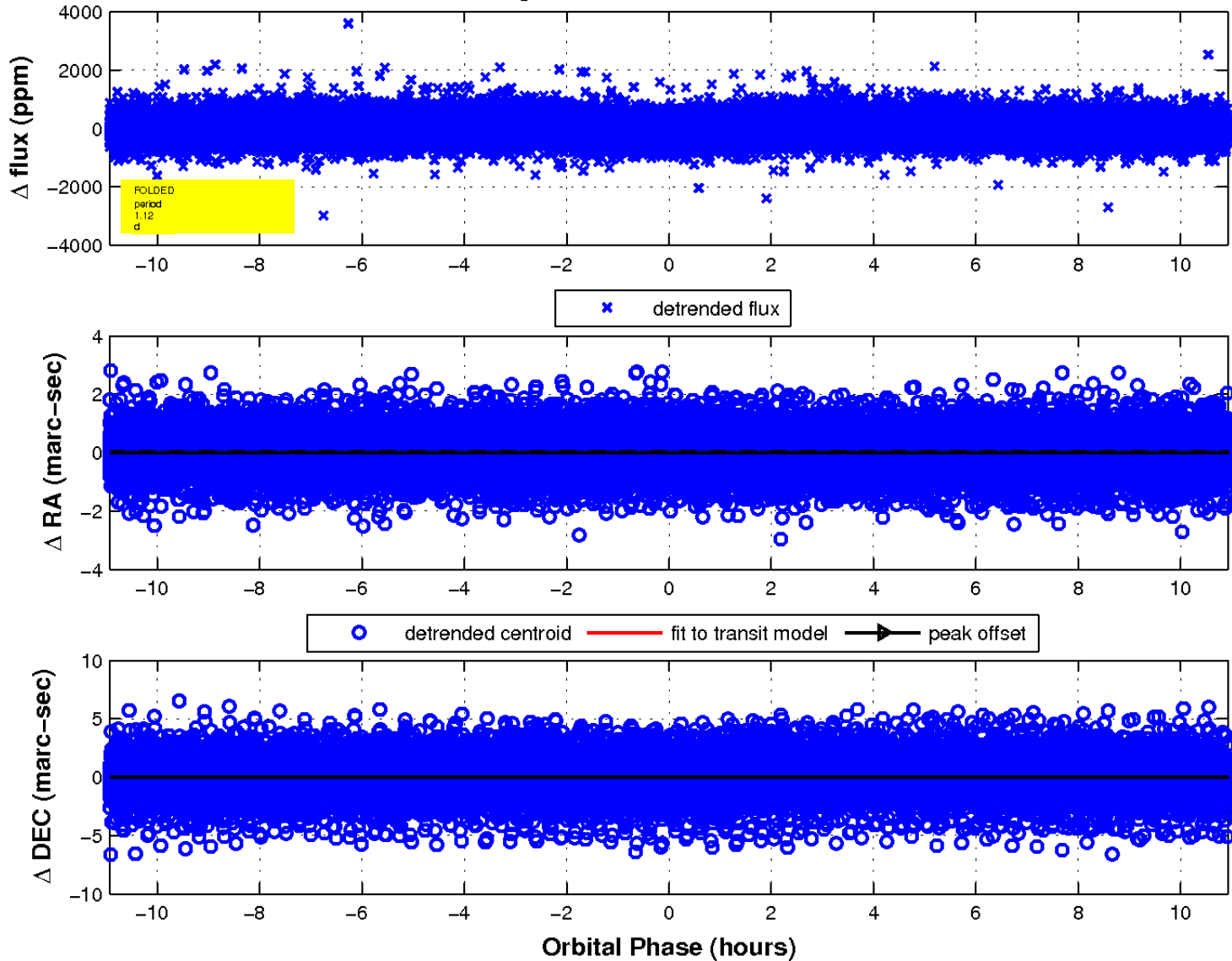
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



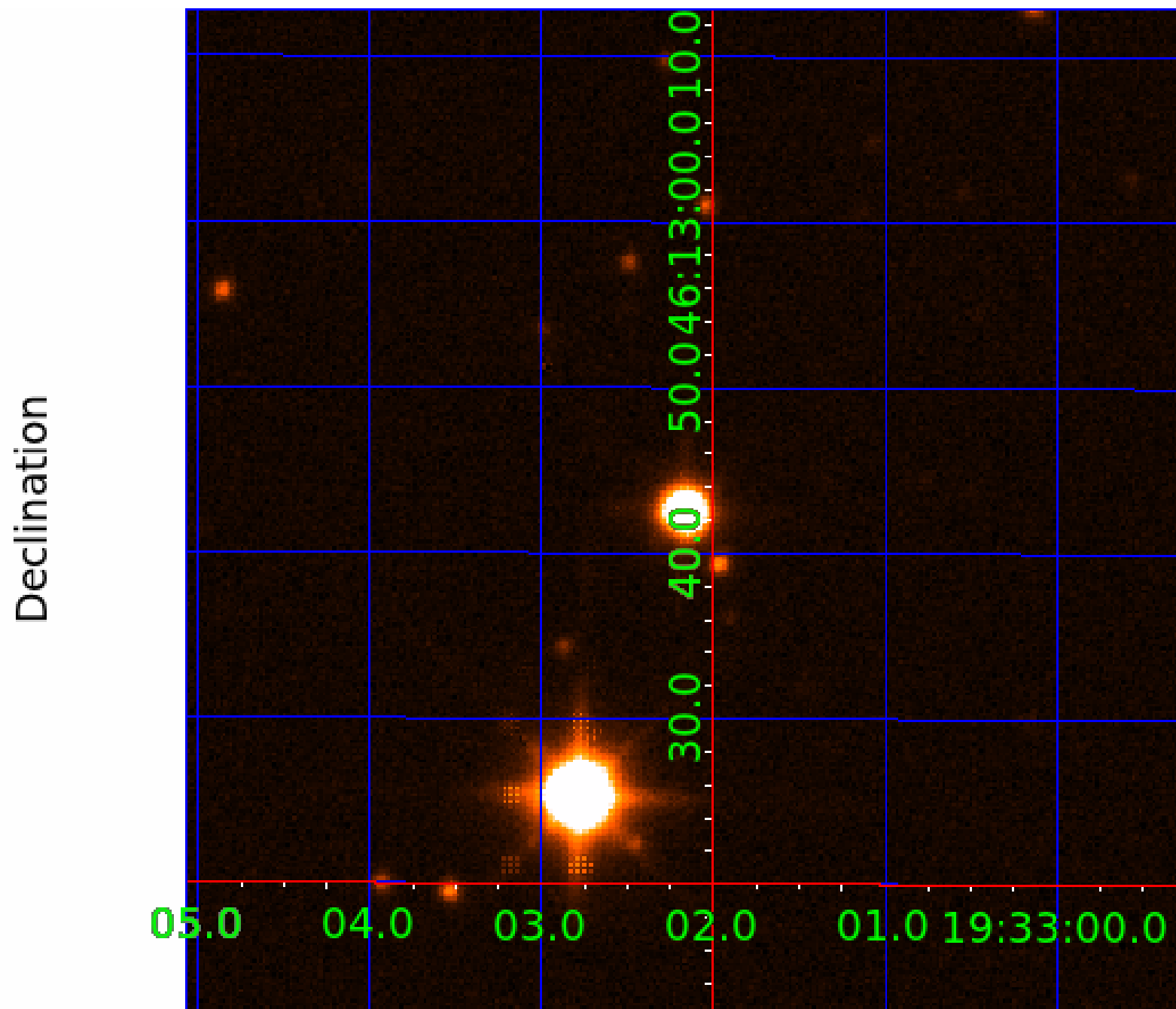
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 009591519

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})
009591519-01	OBS	No	1.124730	131.946264	53.4	3.645	11.5	10.7	2.30	7308	1.96	25860.39
009591519-02	OBS	No	1.124775	132.647098	61.3	3.487	12.0	13.3	2.30	7308	2.10	25859.03
009591519-03	OBS	No	1.211713	131.914174	120.7	6.742	12.6	13.1	2.30	7308	3.40	23415.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009591519-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009591519-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
009591519-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

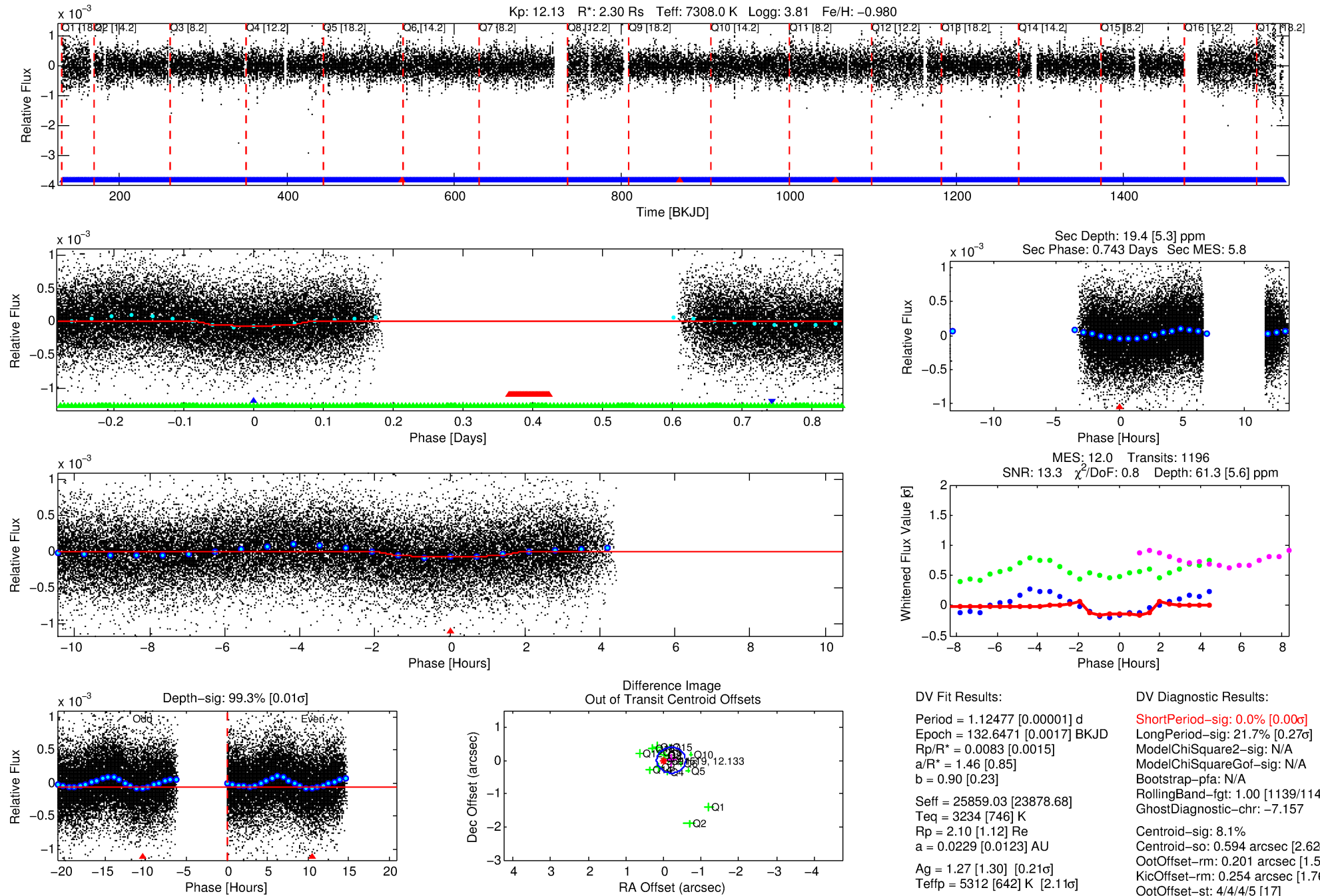
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009591519-02

No Significant Match Found

DV One-Page Summary

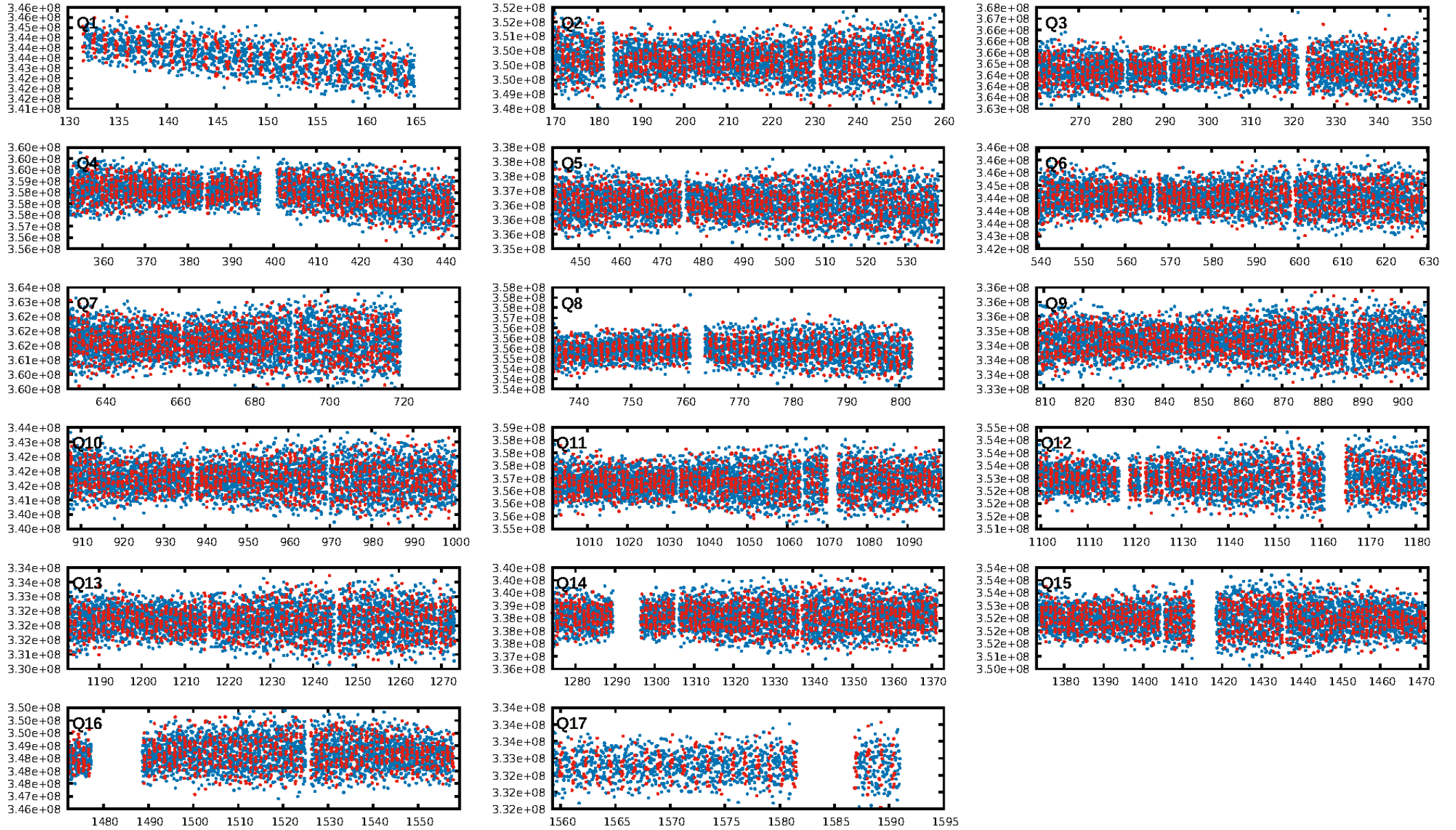
KIC: 9591519 Candidate: 2 of 3 Period: 1.125 d



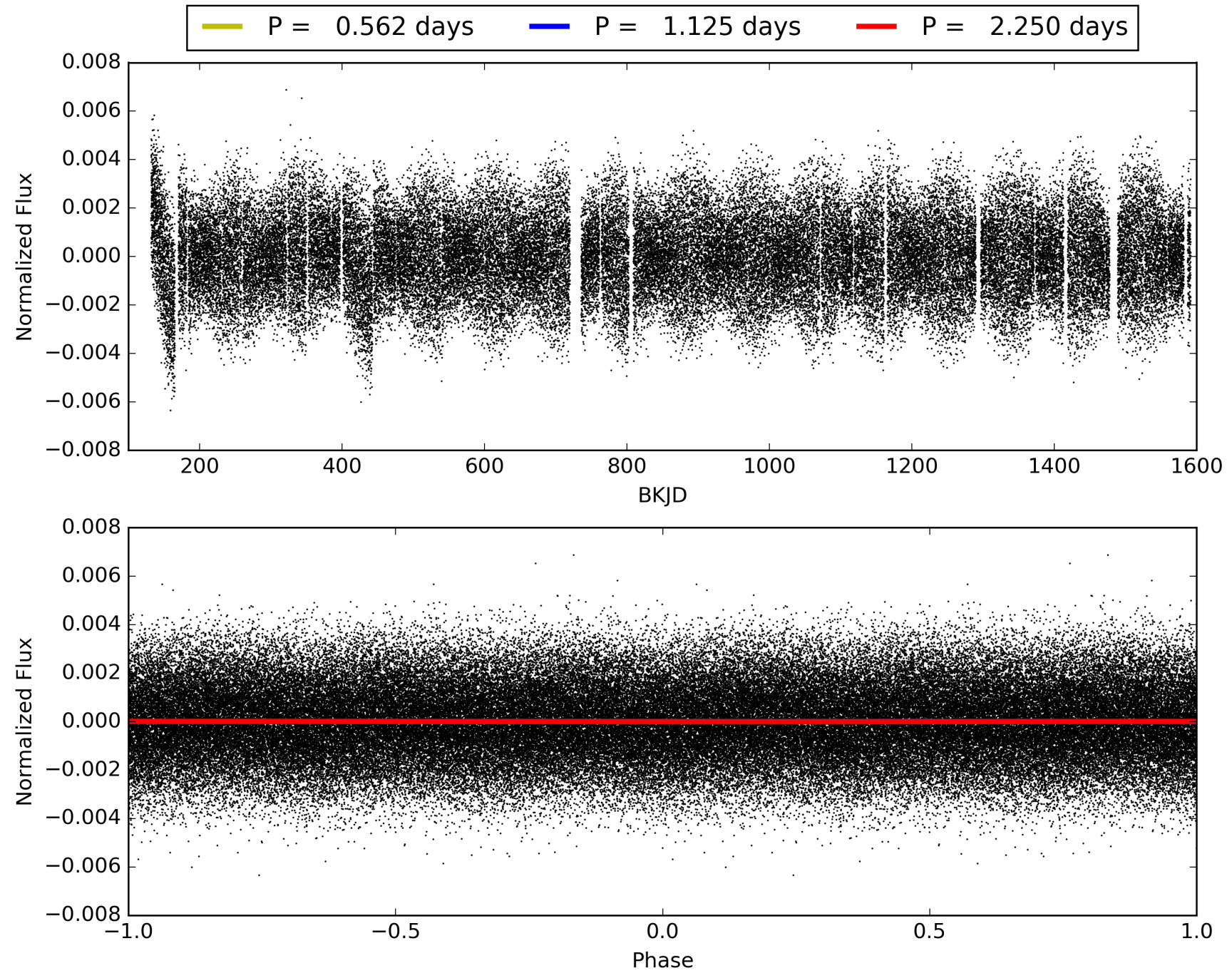
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:35:33 Z

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

TCE 009591519-02, PDC Light Curves

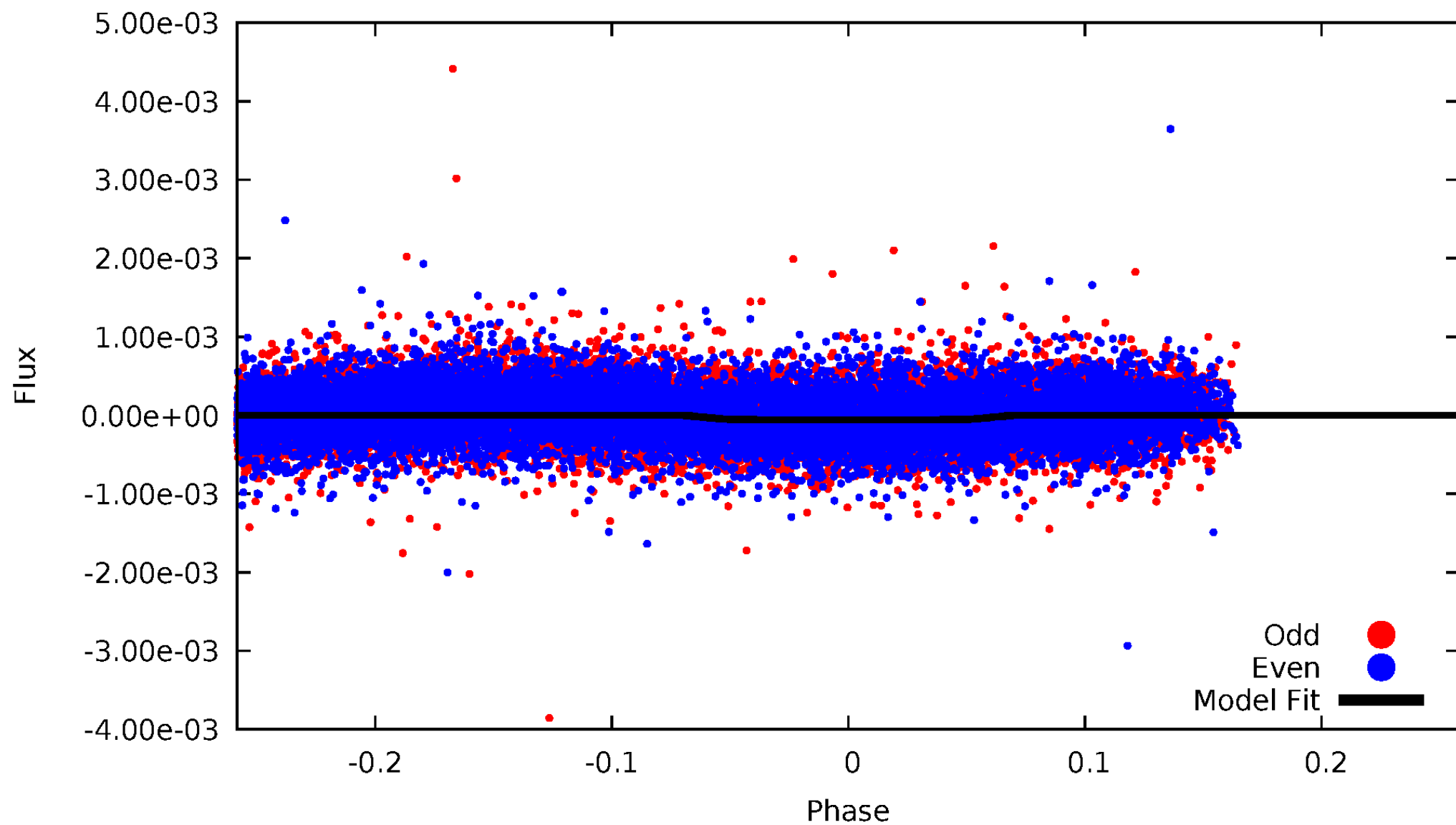


TCE 009591519-02



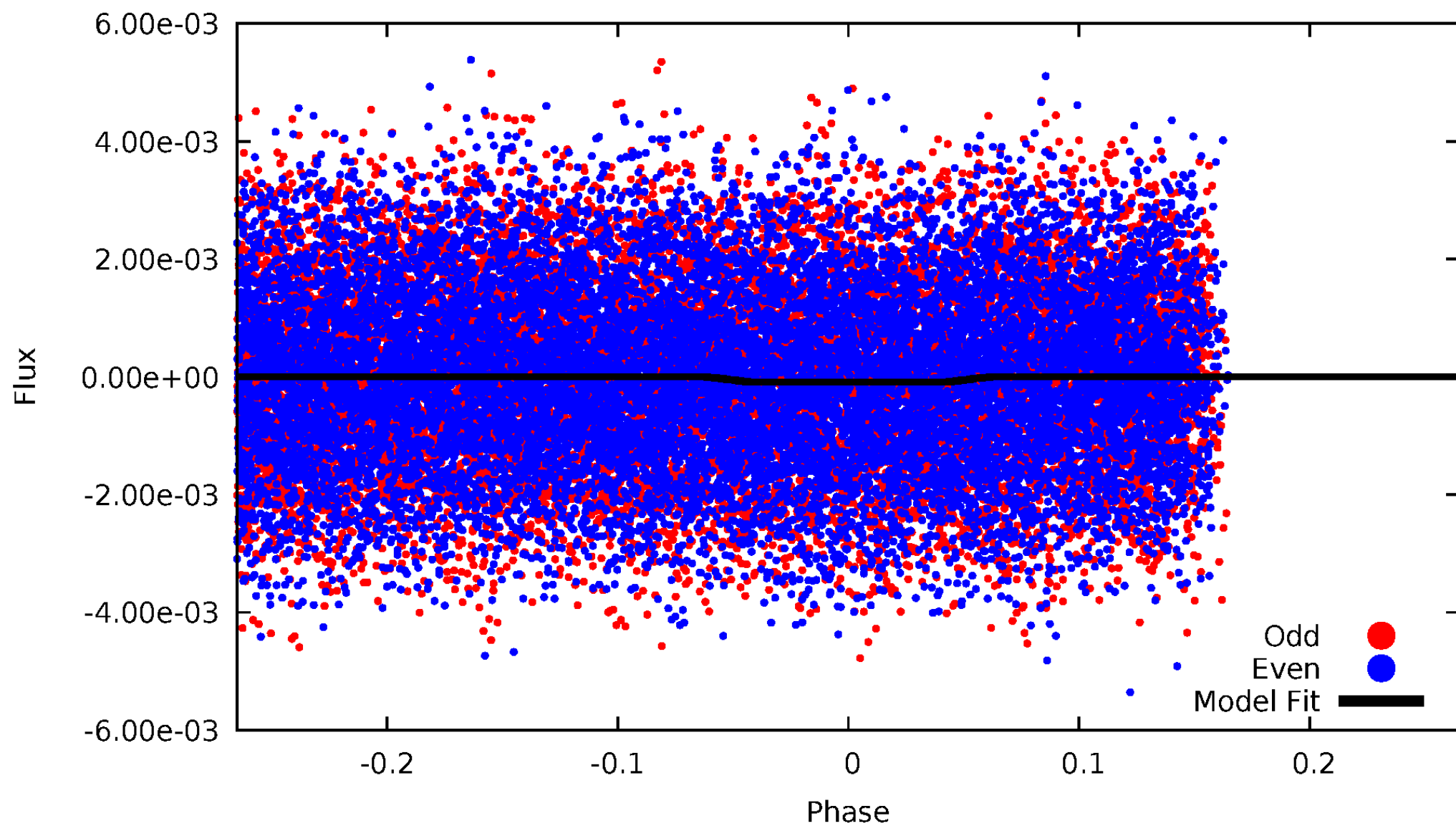
DV Odd/Even

TCE 009591519-02



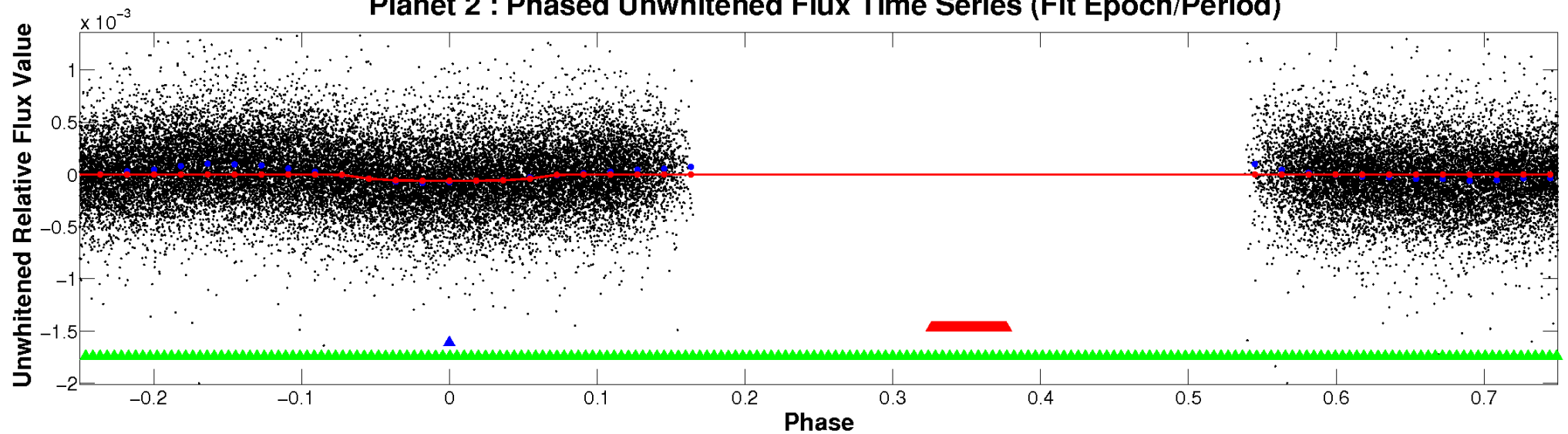
ALT Odd/Even

TCE 009591519-02

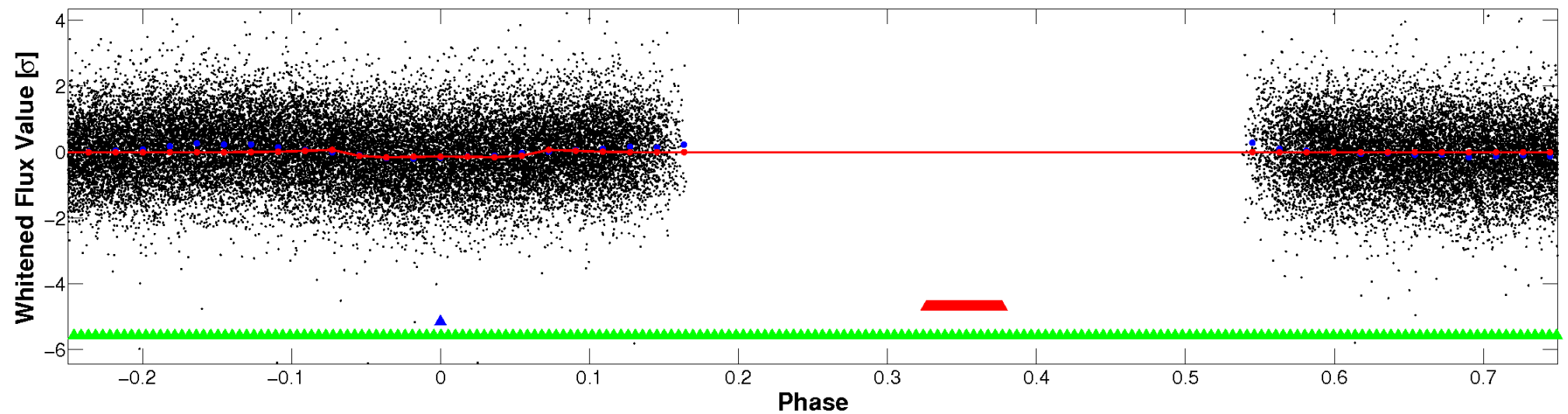


Non-Whitened Vs. Whitened Light Curve

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

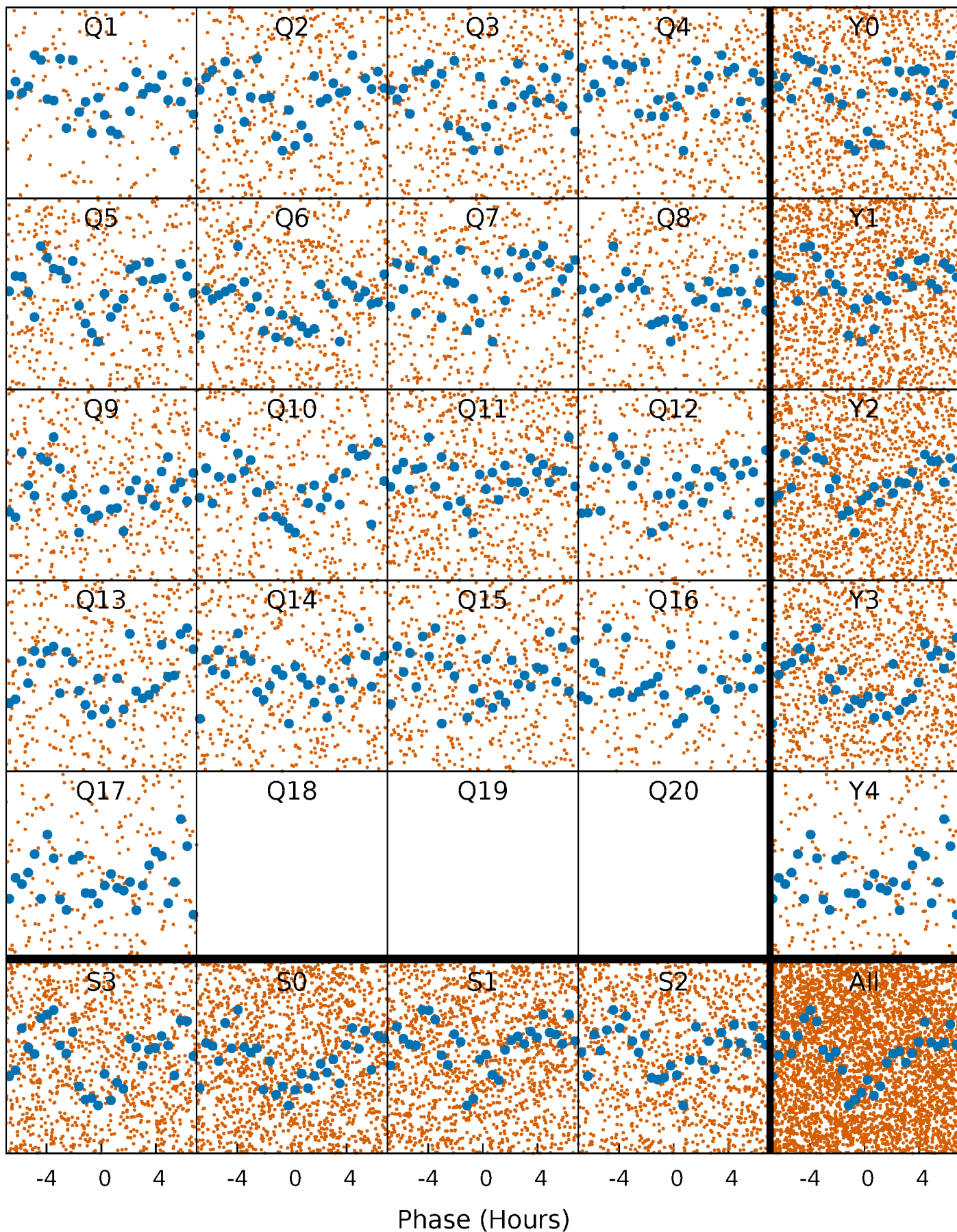


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



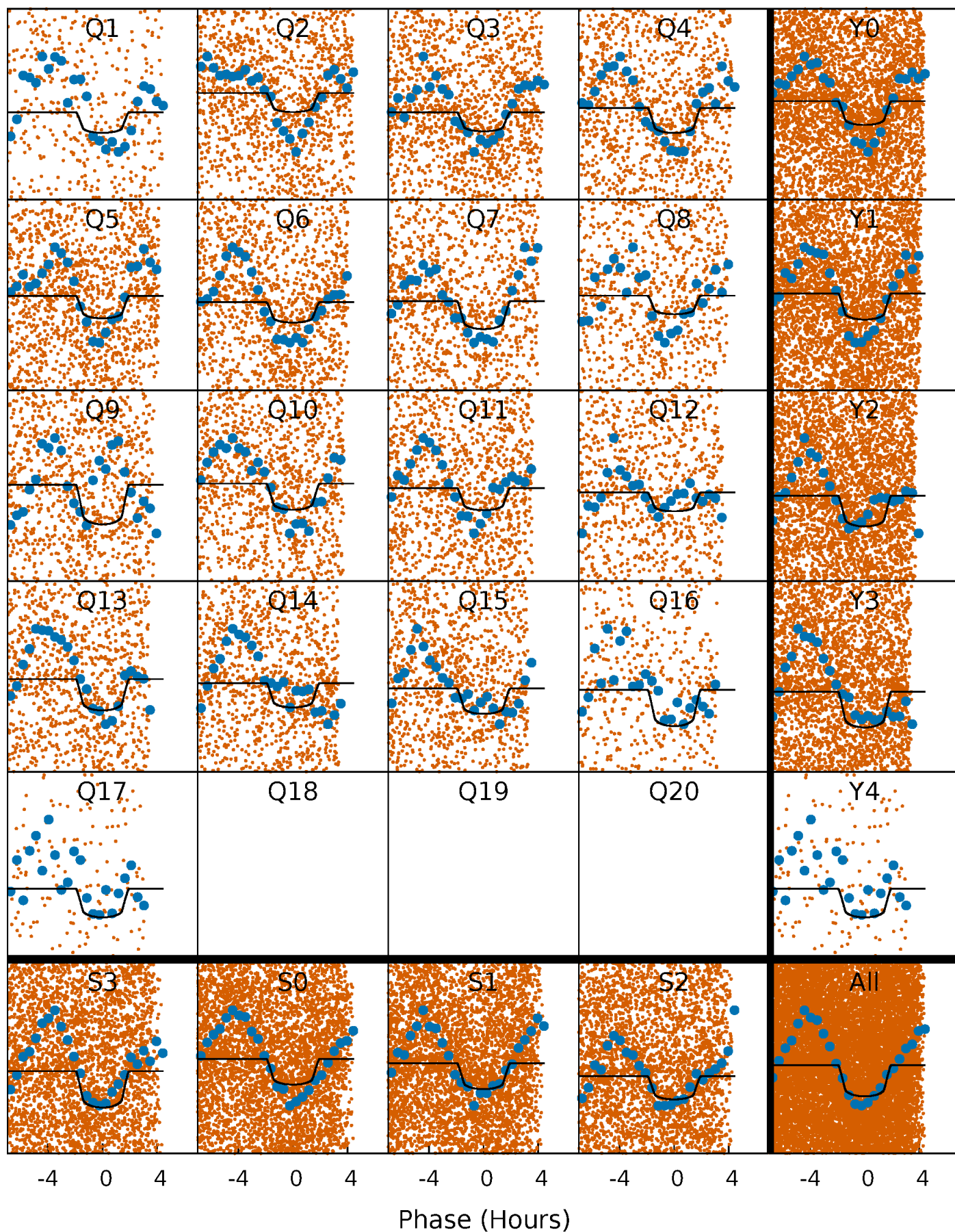
PDC Quarter-Phased Transit Curves

TCE 009591519-02 P= 1.124774 Days $T_0=132.647098$ (BKJD)



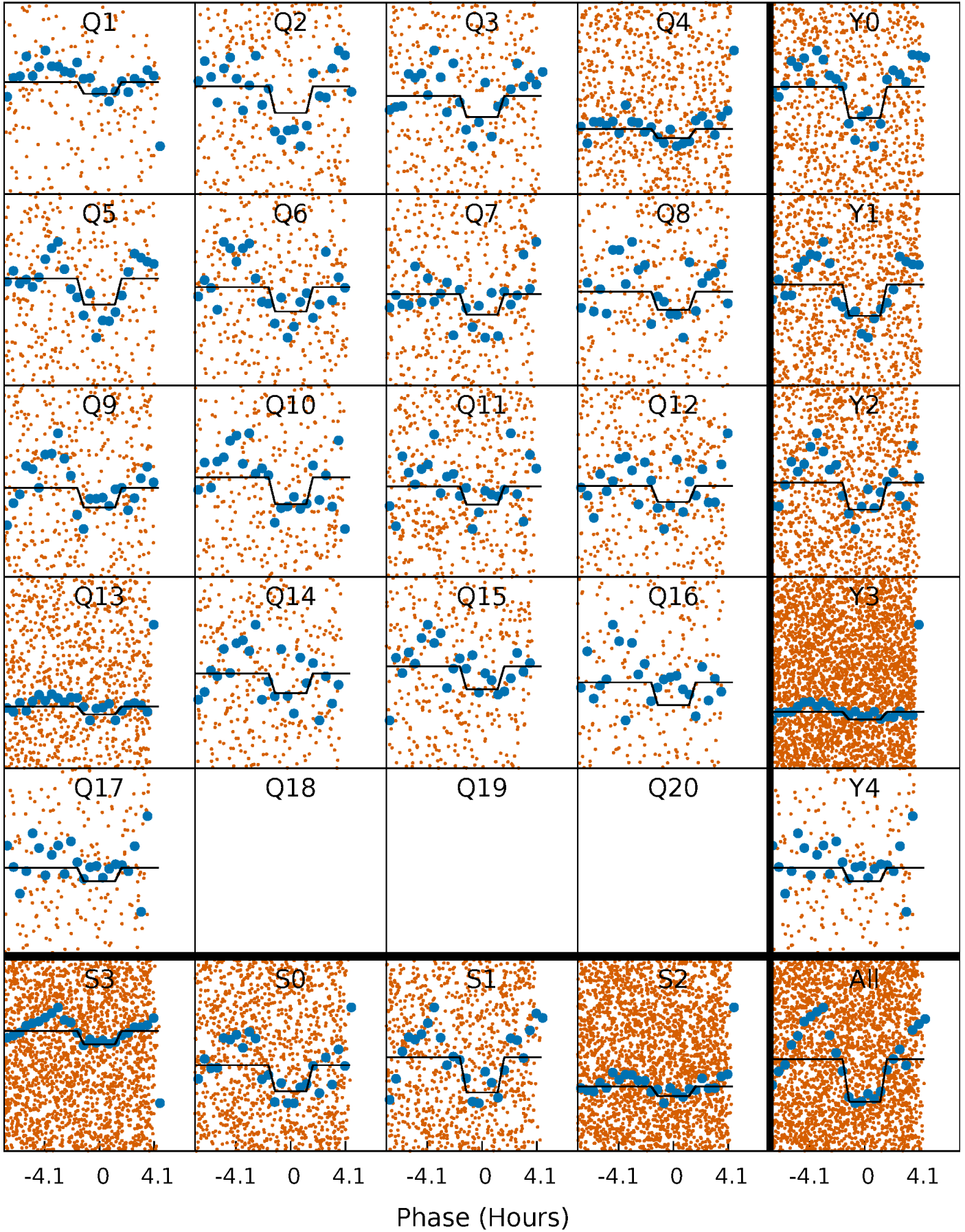
DV Quarter-Phased Transit Curves

TCE 009591519-02 P= 1.124774 Days $T_0=132.647098$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

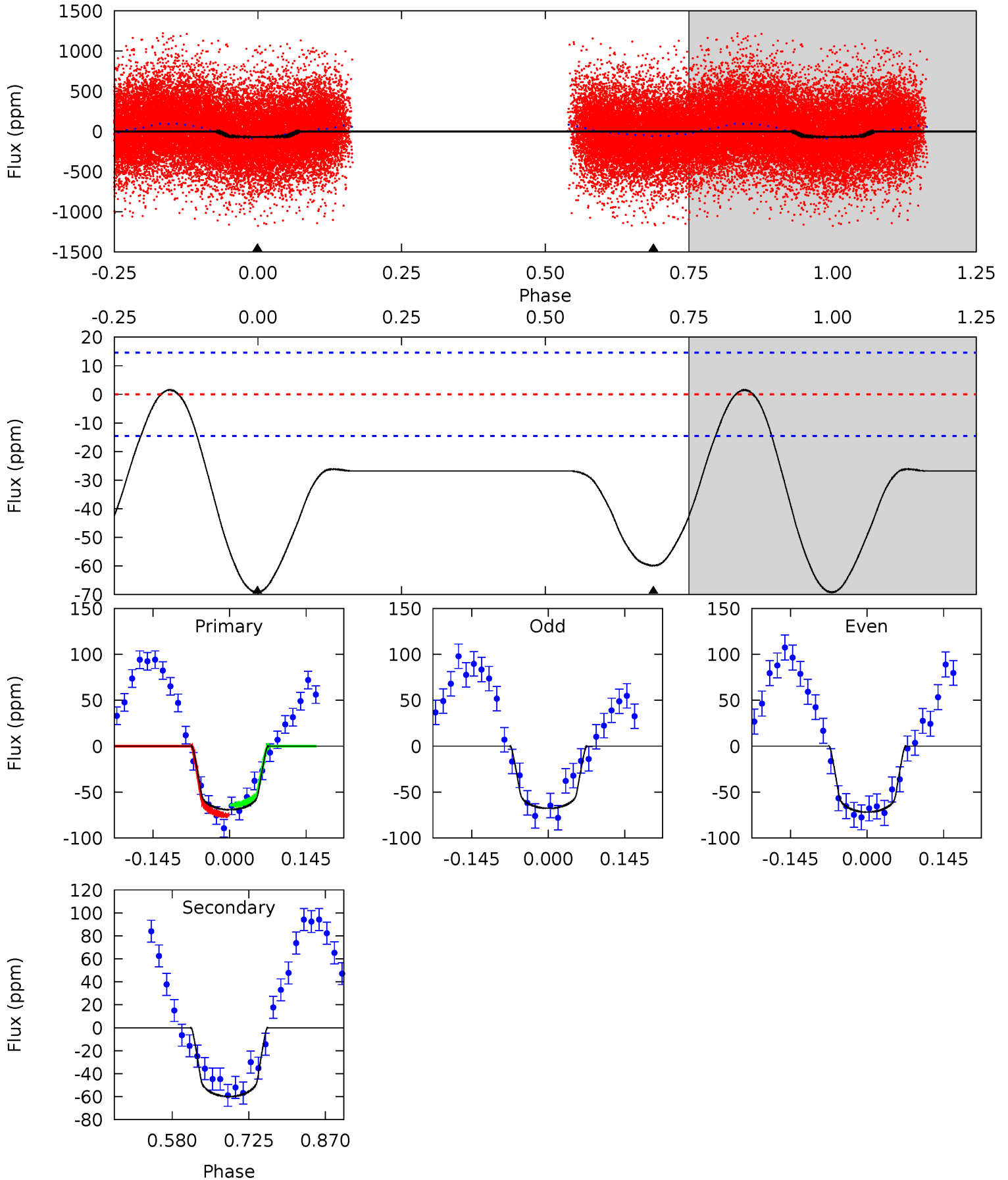
TCE 009591519-02 P= 1.124756 Days $T_0=132.647247$ (BKJD)



DV Model-Shift Uniqueness Test

009591519-02, P = 1.124774 Days, E = 130.397550 Days

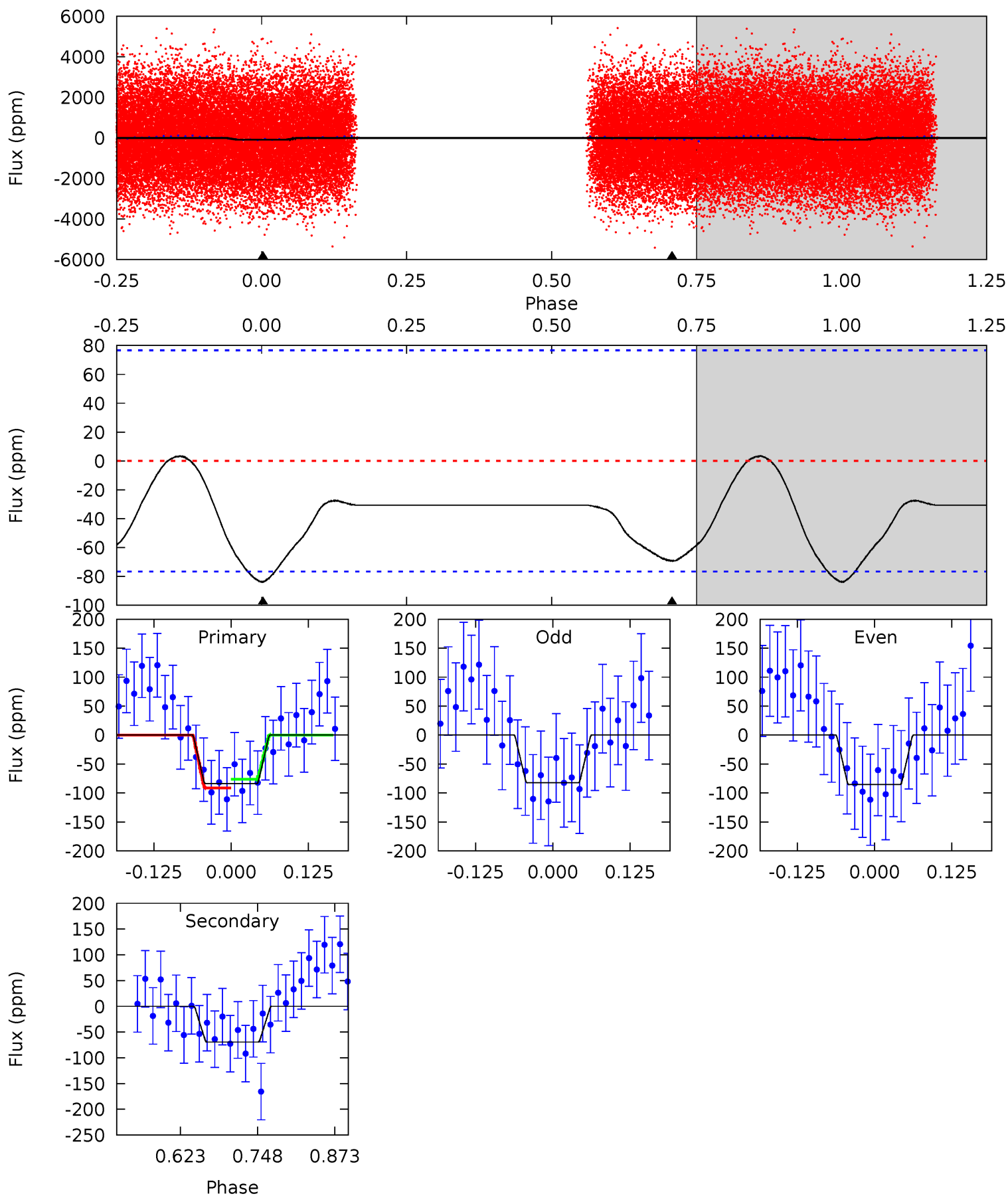
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	18.5	0	0	4.49	1.46	3.53	21.3	21.3	18.5	18.5	0.64	1.03	0.02	1.85



Alt Model-Shift Uniqueness Test

009591519-02, P = 1.124756 Days, E = 130.397735 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.94	4.09	0	0	4.52	1.54	0.91	4.94	4.94	4.09	4.09	0.09	1.10	0.04	0.44



Stellar Parameters For KIC 009591519

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7308^{+229}_{-280}	$3.815^{+0.552}_{-0.130}$	$-0.980^{+0.300}_{-0.300}$	$2.301^{+0.493}_{-1.151}$	$1.261^{+0.149}_{-0.242}$	$0.146^{+0.792}_{-0.053}$
	+3%/-4%	+14%/-3%	+31%/-31%	+21%/-50%	+12%/-19%	+543%/-37%
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 009591519-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-60 ± 3	$1.90^{+0.56}_{-0.57}$	4377^{+379}_{-592}	6899^{+1008}_{-735}	$4.746^{+4.766}_{-1.884}$
Alt.	-69 ± 17	$2.17^{+0.59}_{-0.65}$	4386^{+393}_{-636}	6642^{+898}_{-717}	$4.167^{+4.178}_{-1.809}$

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 $A_{obs} \gg 1.0$

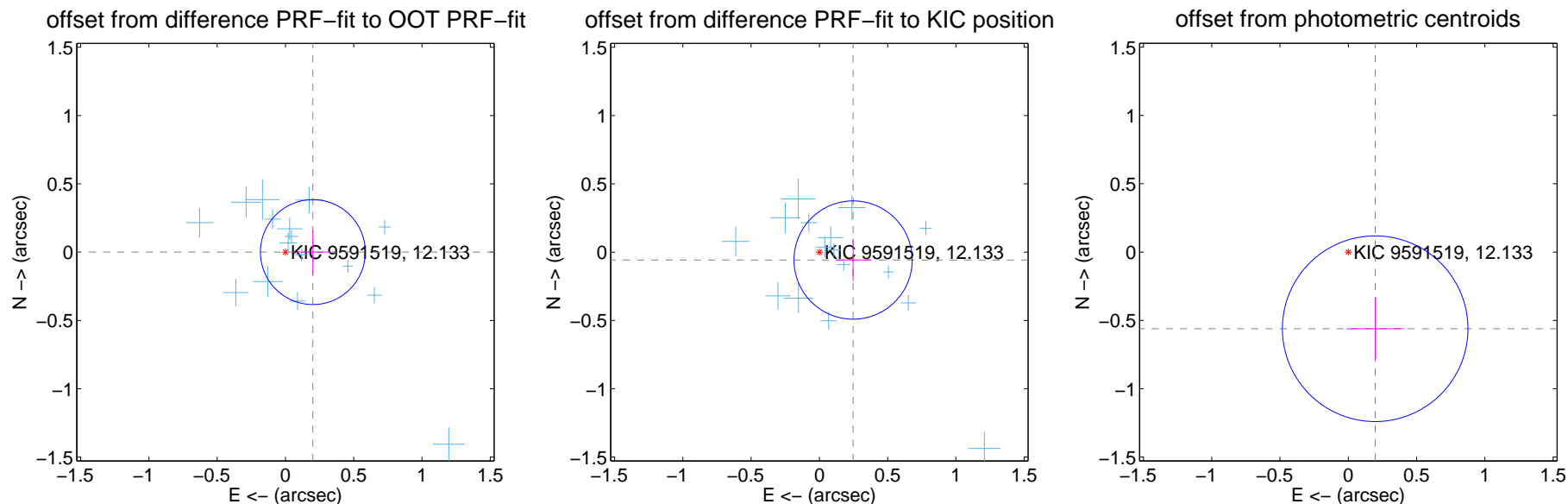
DV Centroid Data

Supplemental centroid analysis for 009591519-02. Kepler magnitude: 12.13. Transit SNR 13.26

There are 17 quarters with good PRF difference image offsets

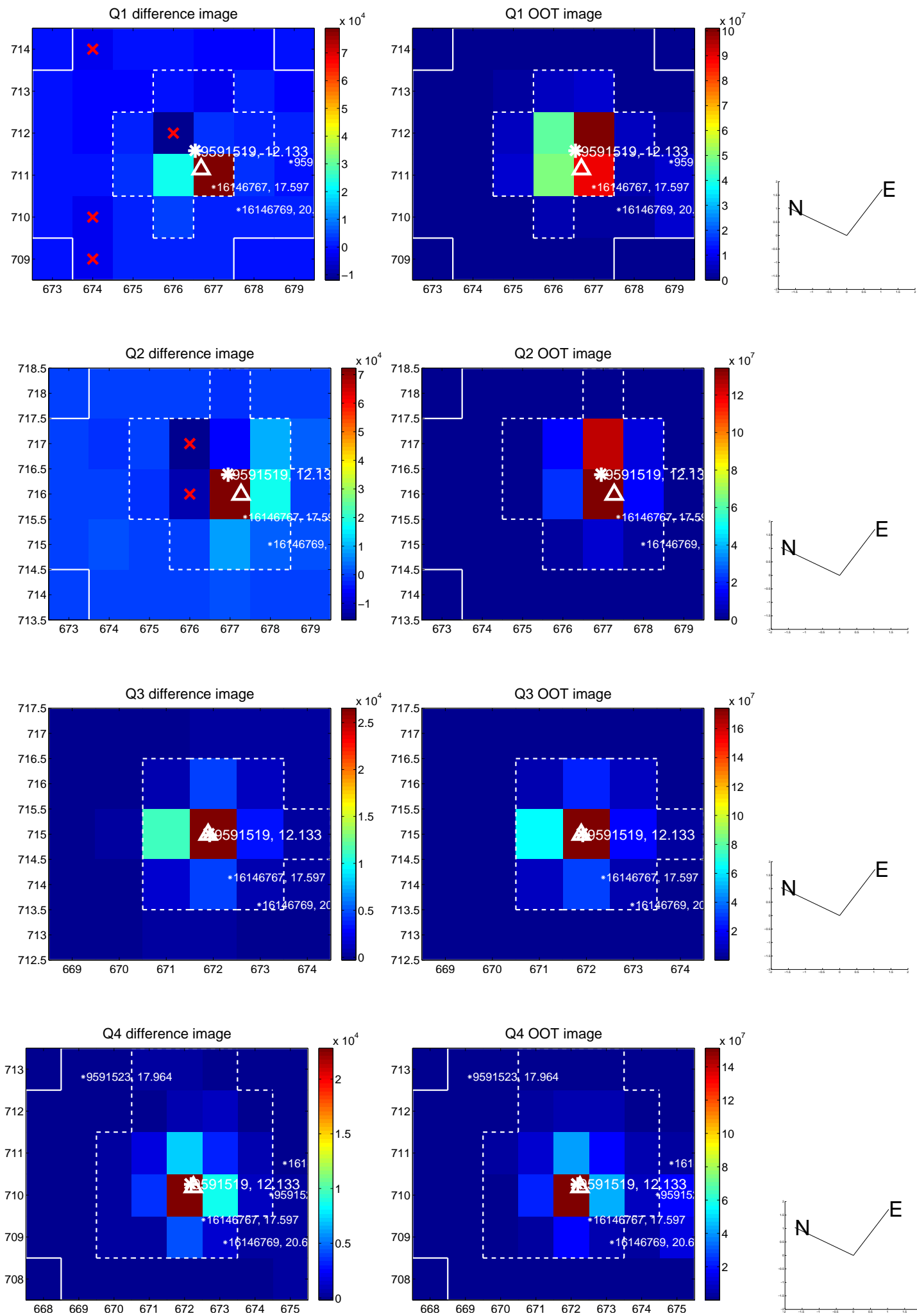
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.201 ± 0.128	1.57	-0.201 ± 0.128	0.001 ± 0.161
PRF-fit source offset from KIC position	0.254 ± 0.144	1.76	-0.247 ± 0.129	-0.058 ± 0.155
photometric centroid source offset	0.59 ± 0.23	2.62	-0.20 ± 0.21	-0.56 ± 0.23

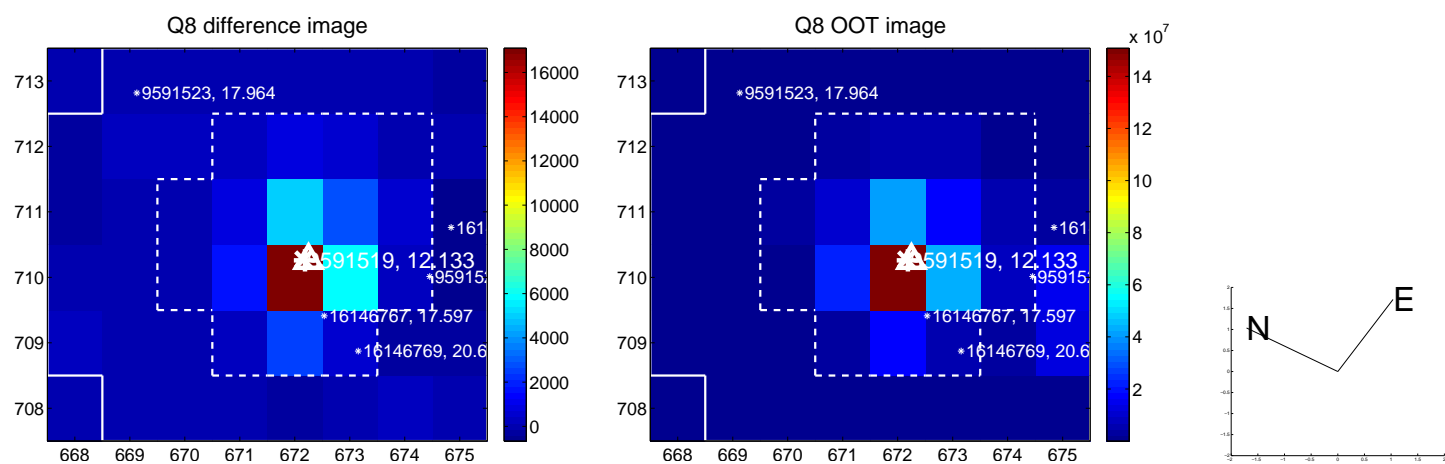
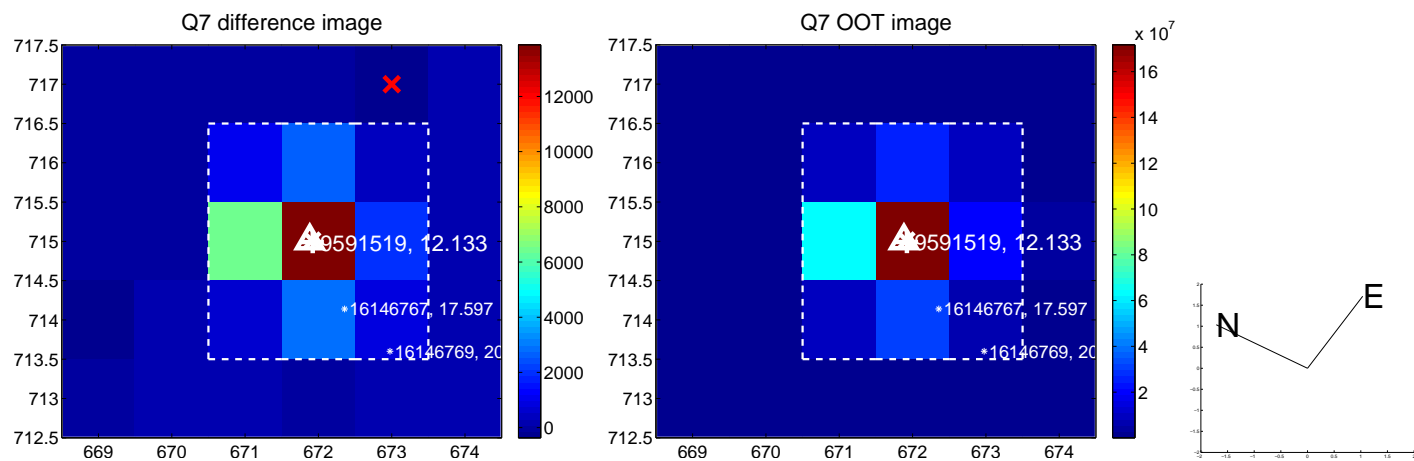
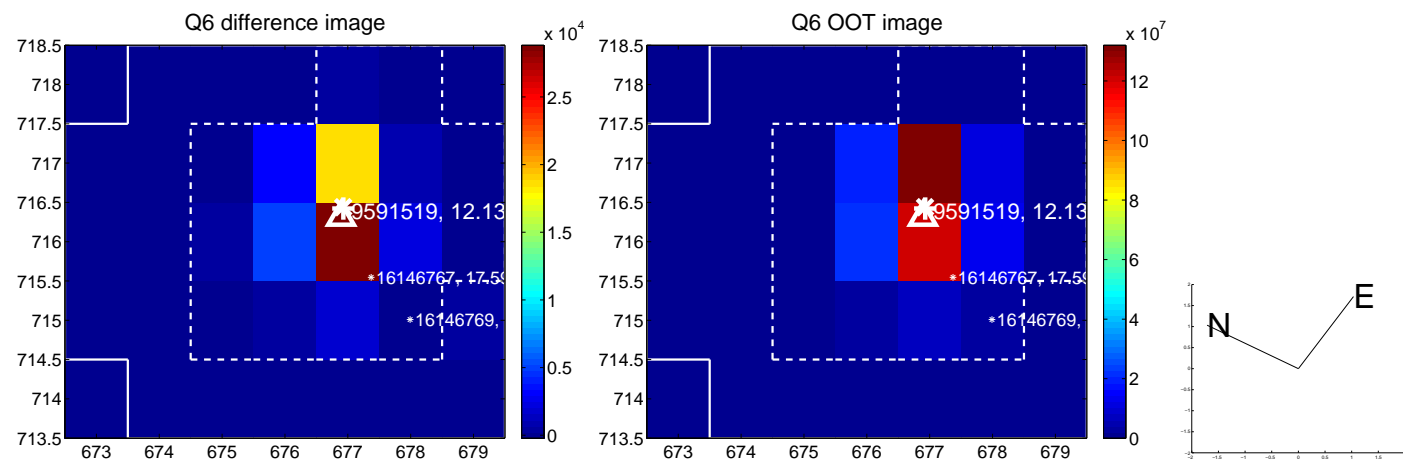
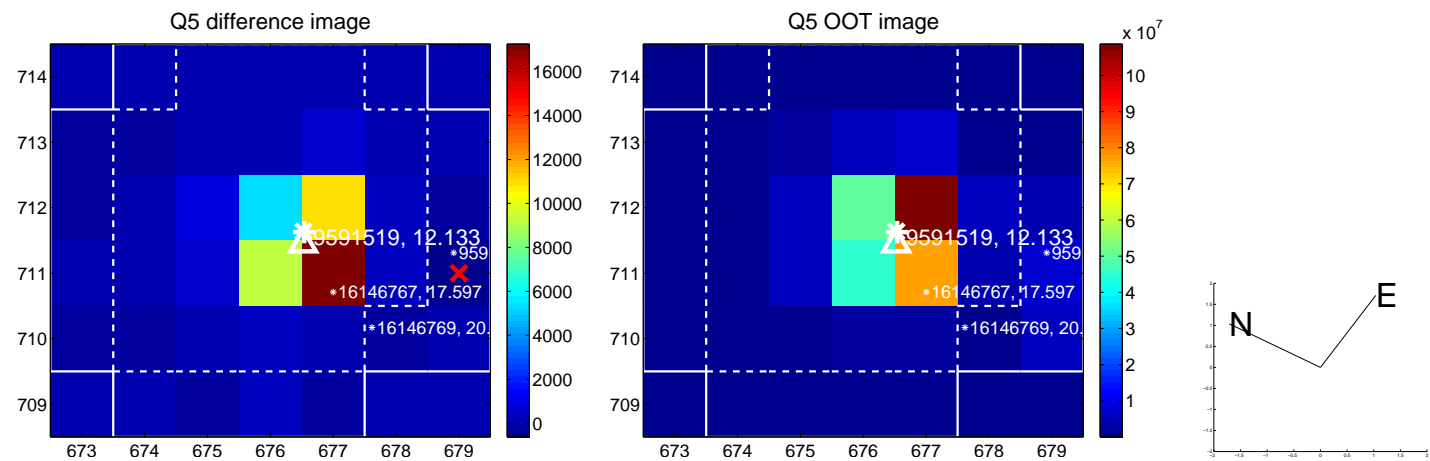


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

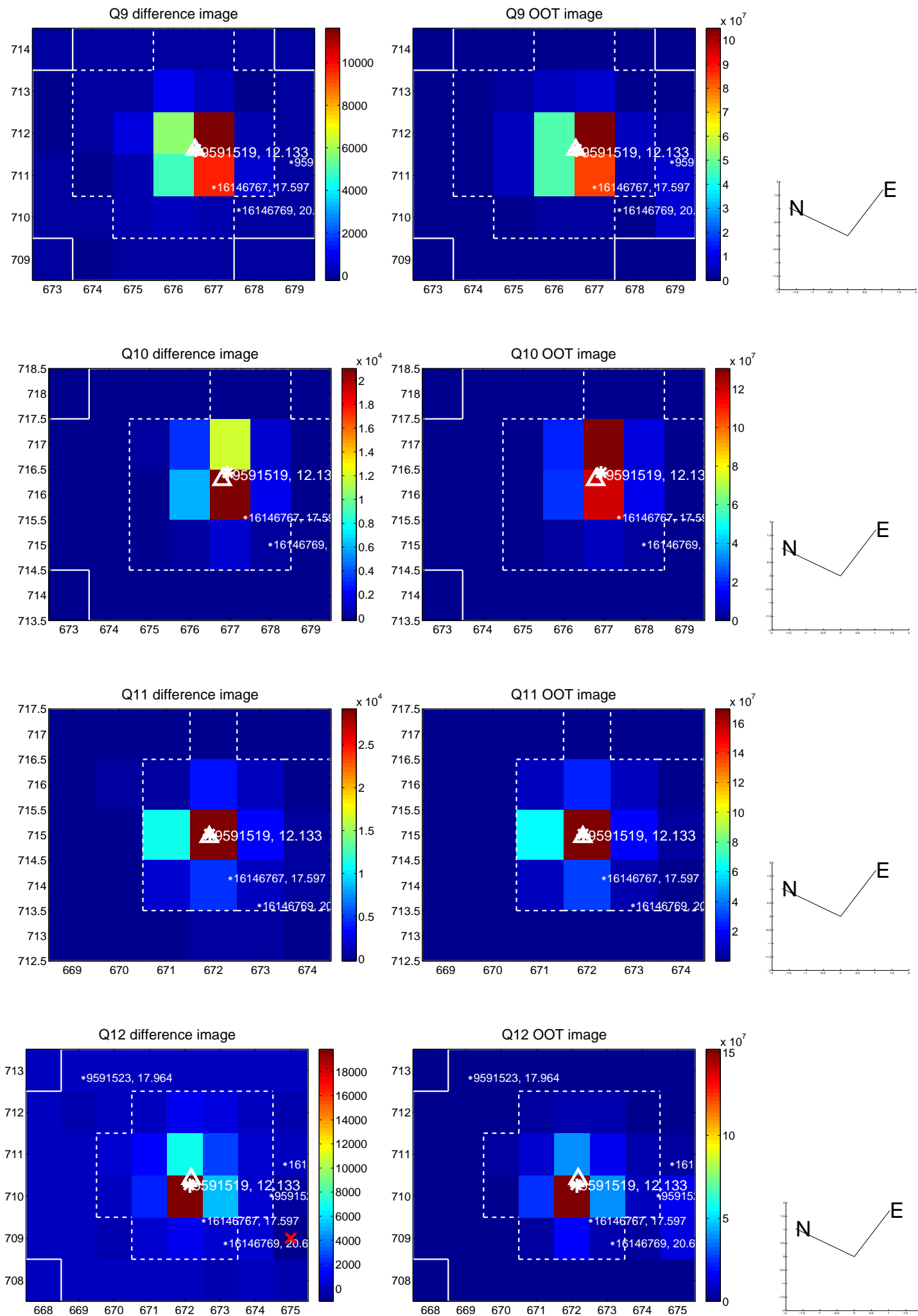
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



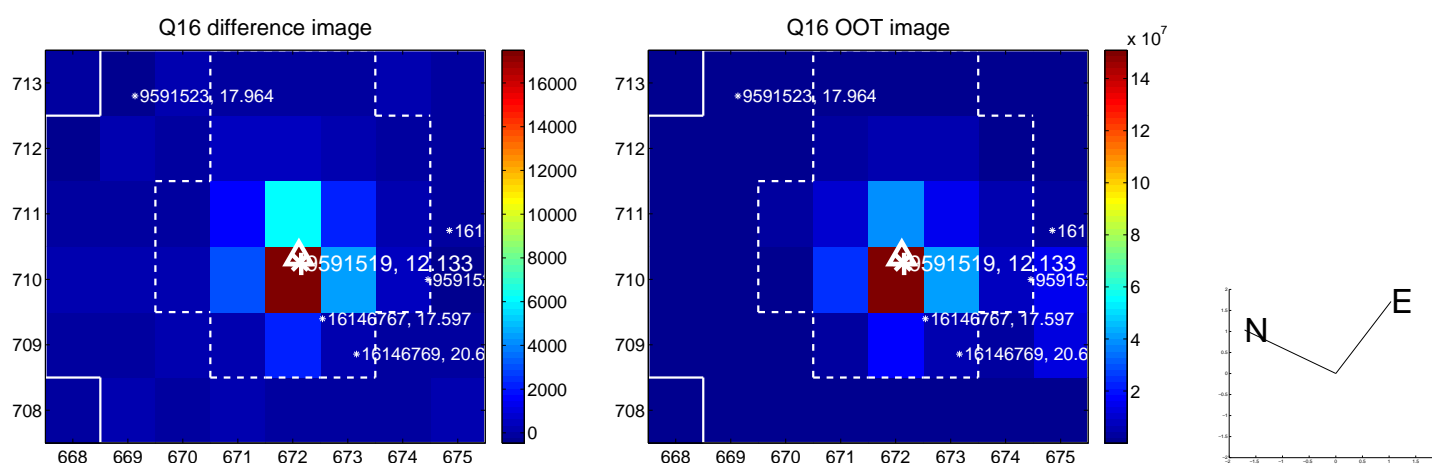
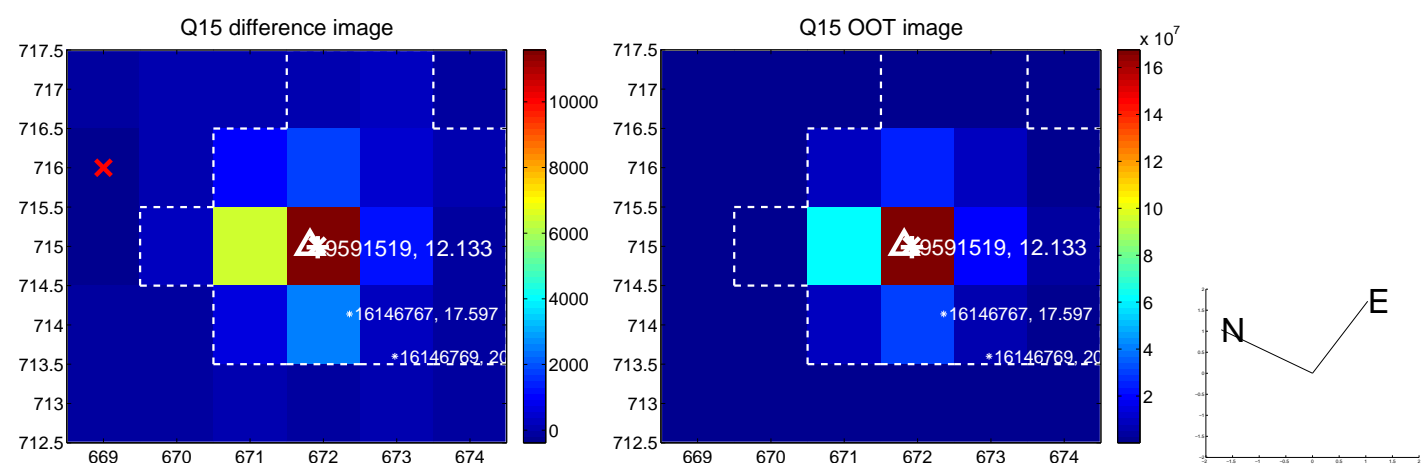
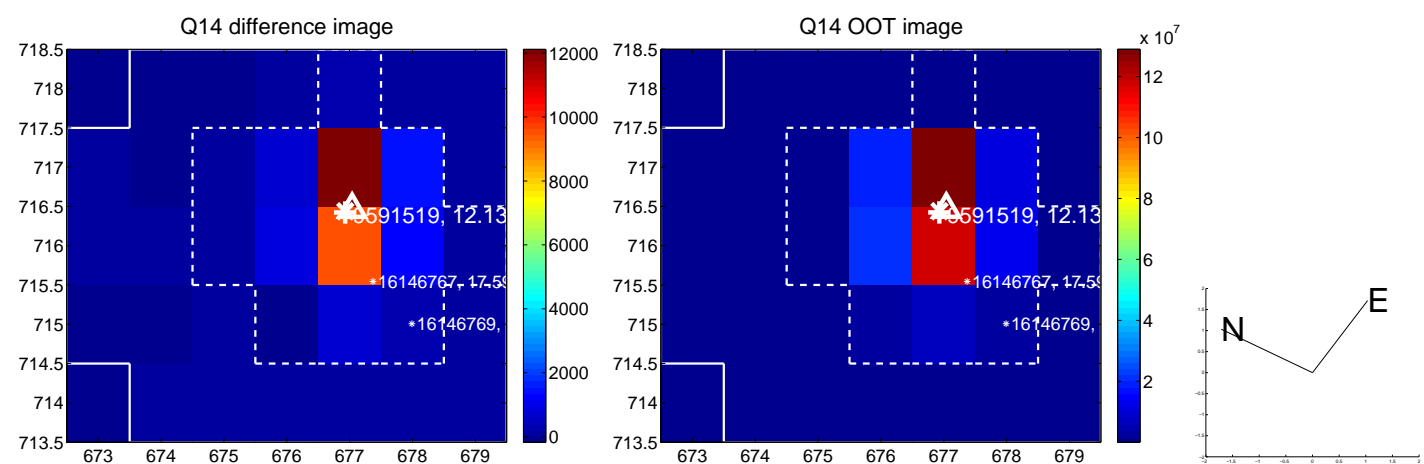
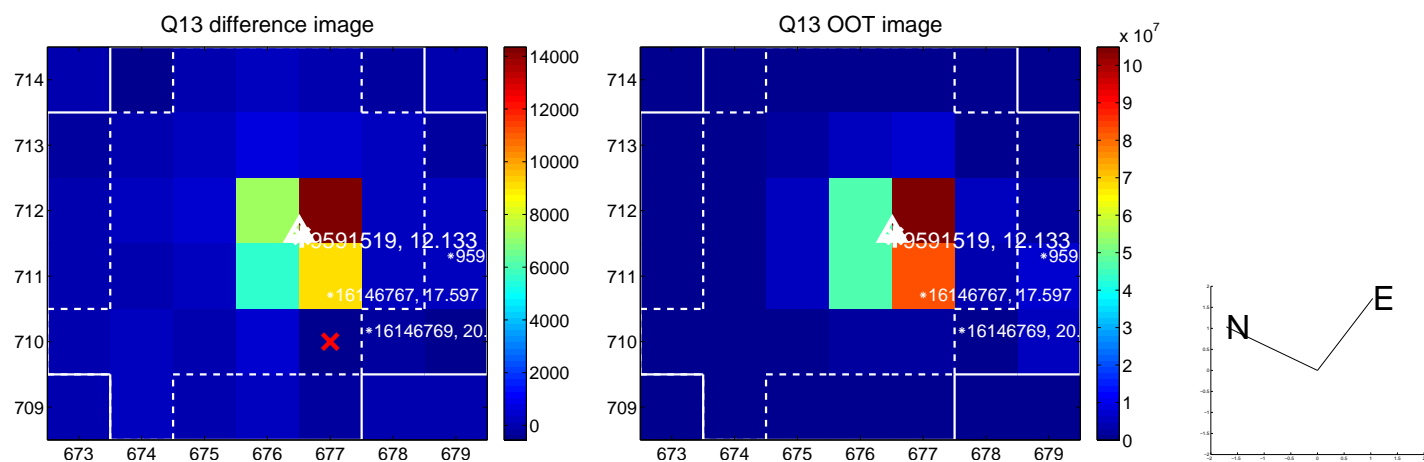
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



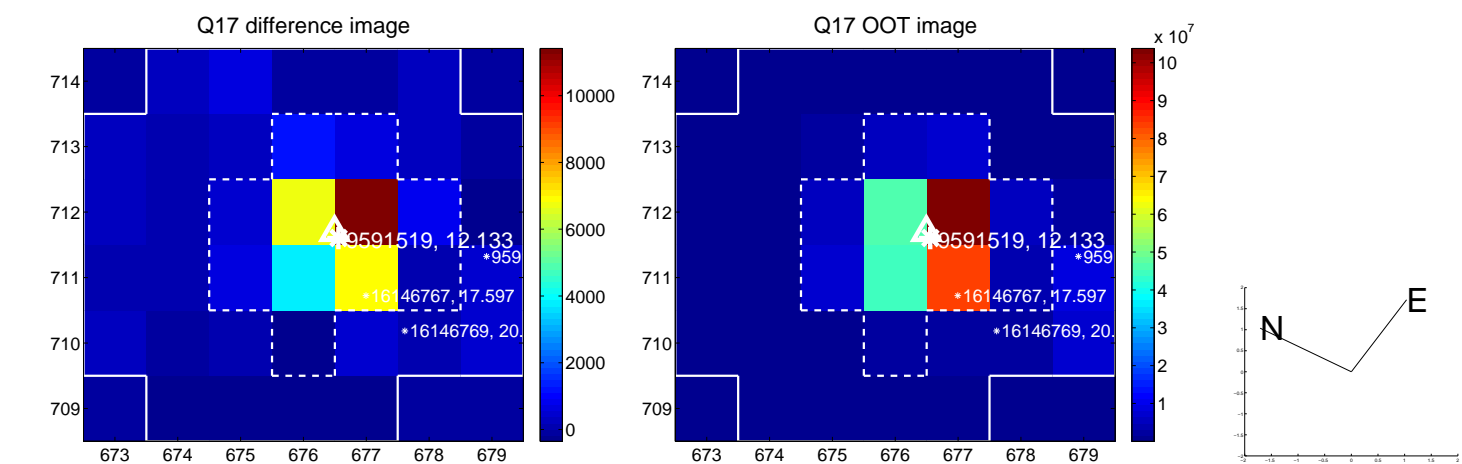
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



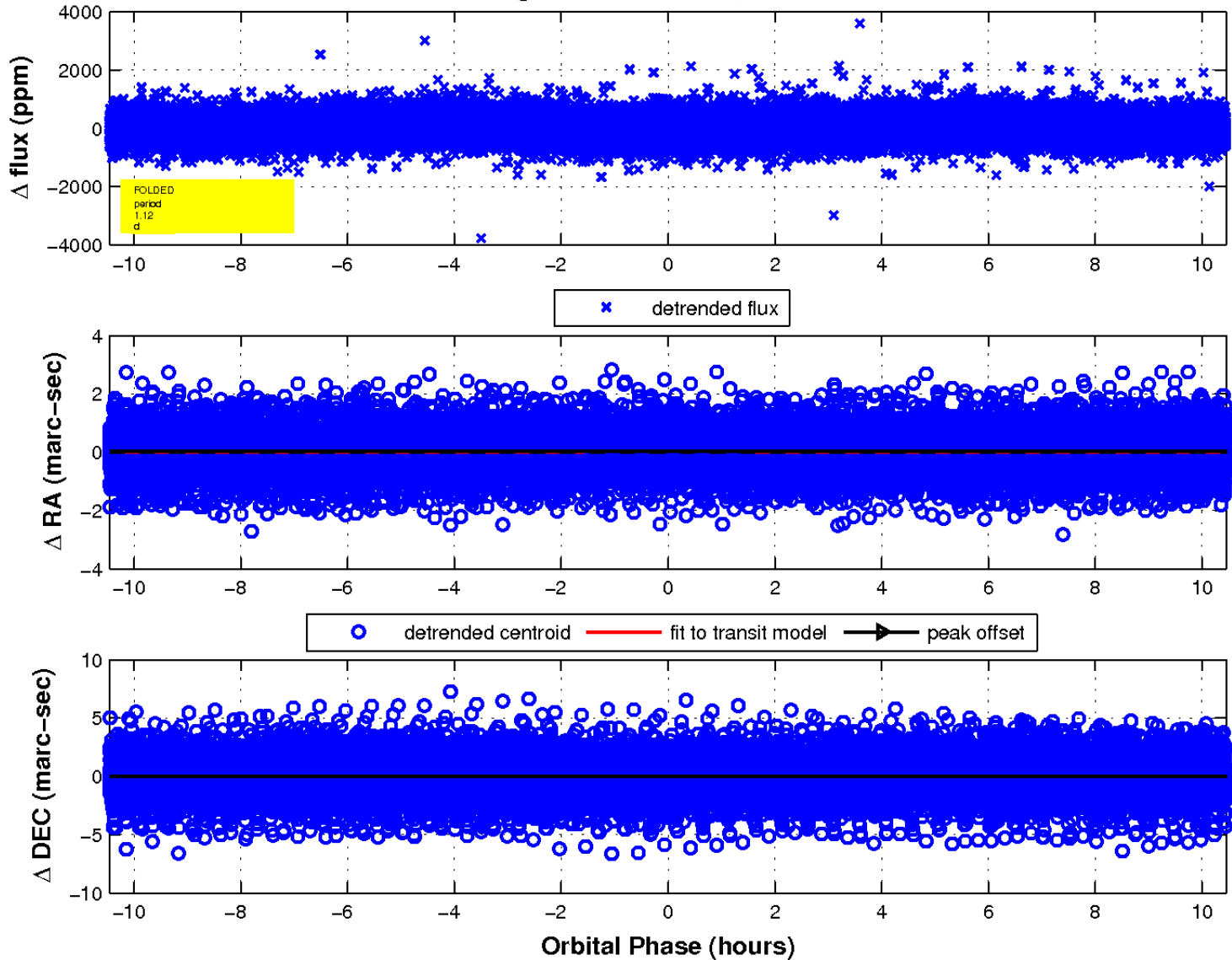
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



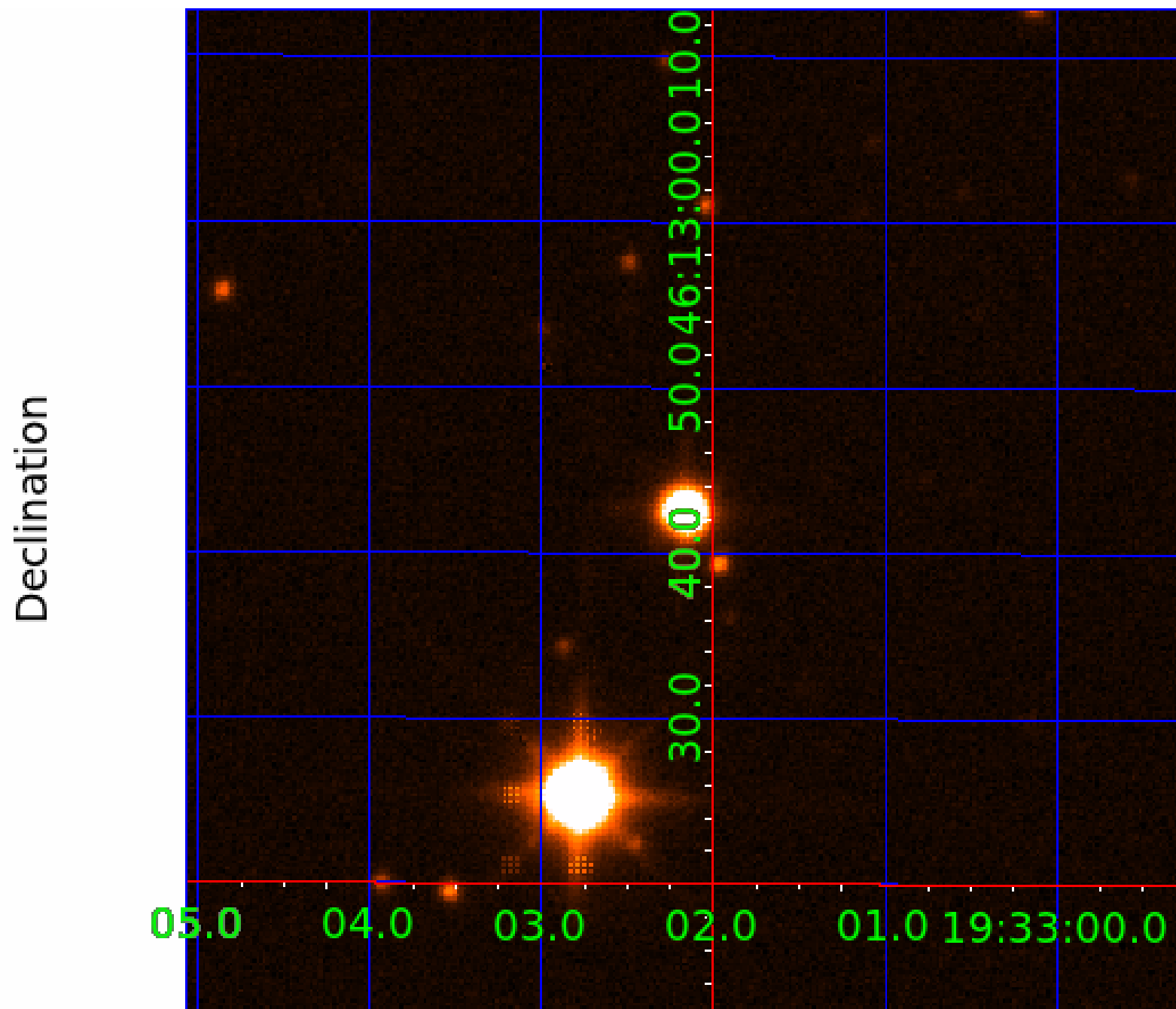
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 3



UKIRT Image



KIC 009591519

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})
009591519-01	OBS	No	1.124730	131.946264	53.4	3.645	11.5	10.7	2.30	7308	1.96	25860.39
009591519-02	OBS	No	1.124775	132.647098	61.3	3.487	12.0	13.3	2.30	7308	2.10	25859.03
009591519-03	OBS	No	1.211713	131.914174	120.7	6.742	12.6	13.1	2.30	7308	3.40	23415.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009591519-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009591519-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
009591519-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

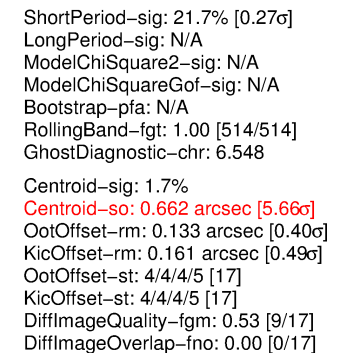
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

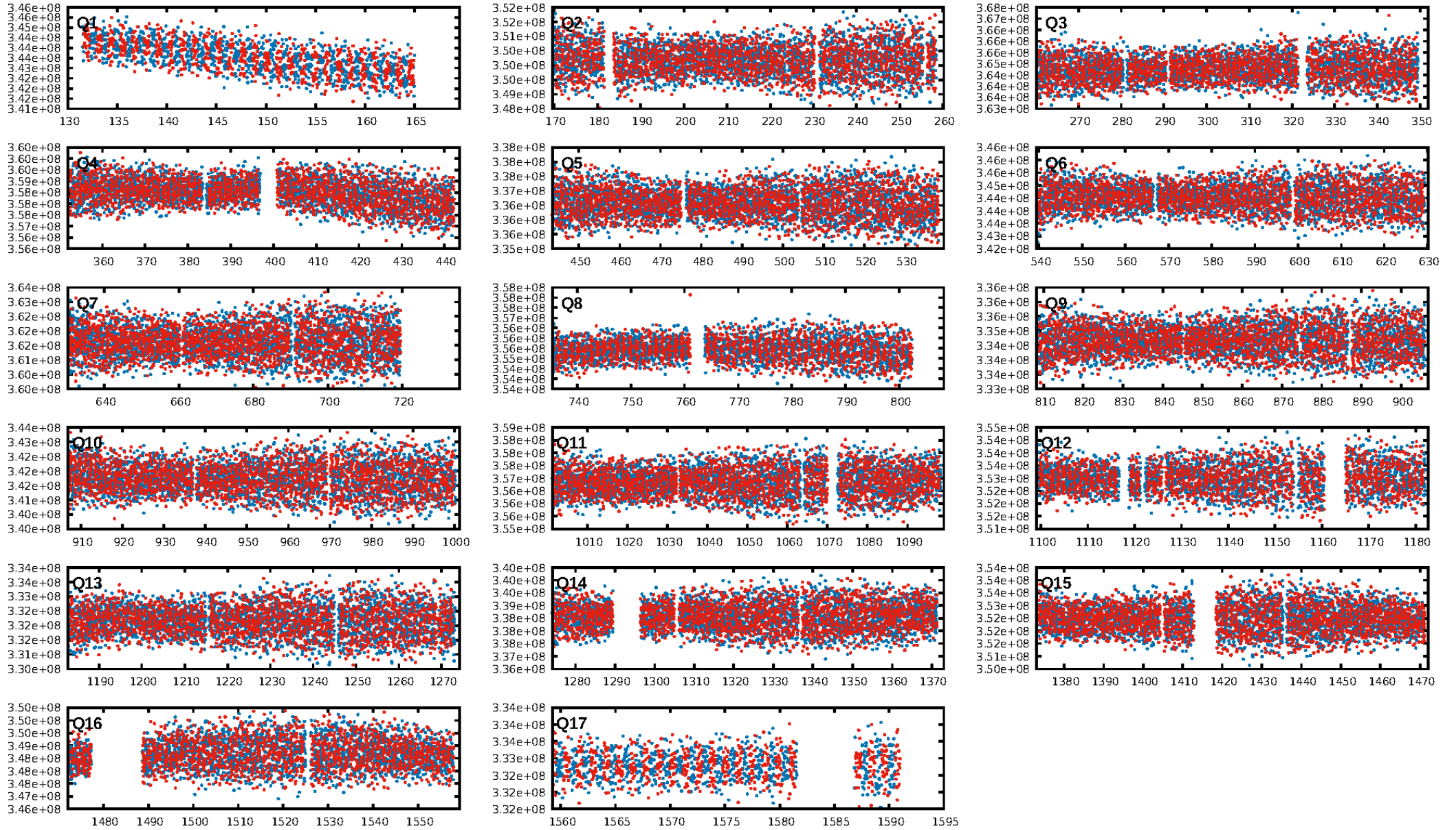
Ephemeris Match Information For 009591519-03

No Significant Match Found

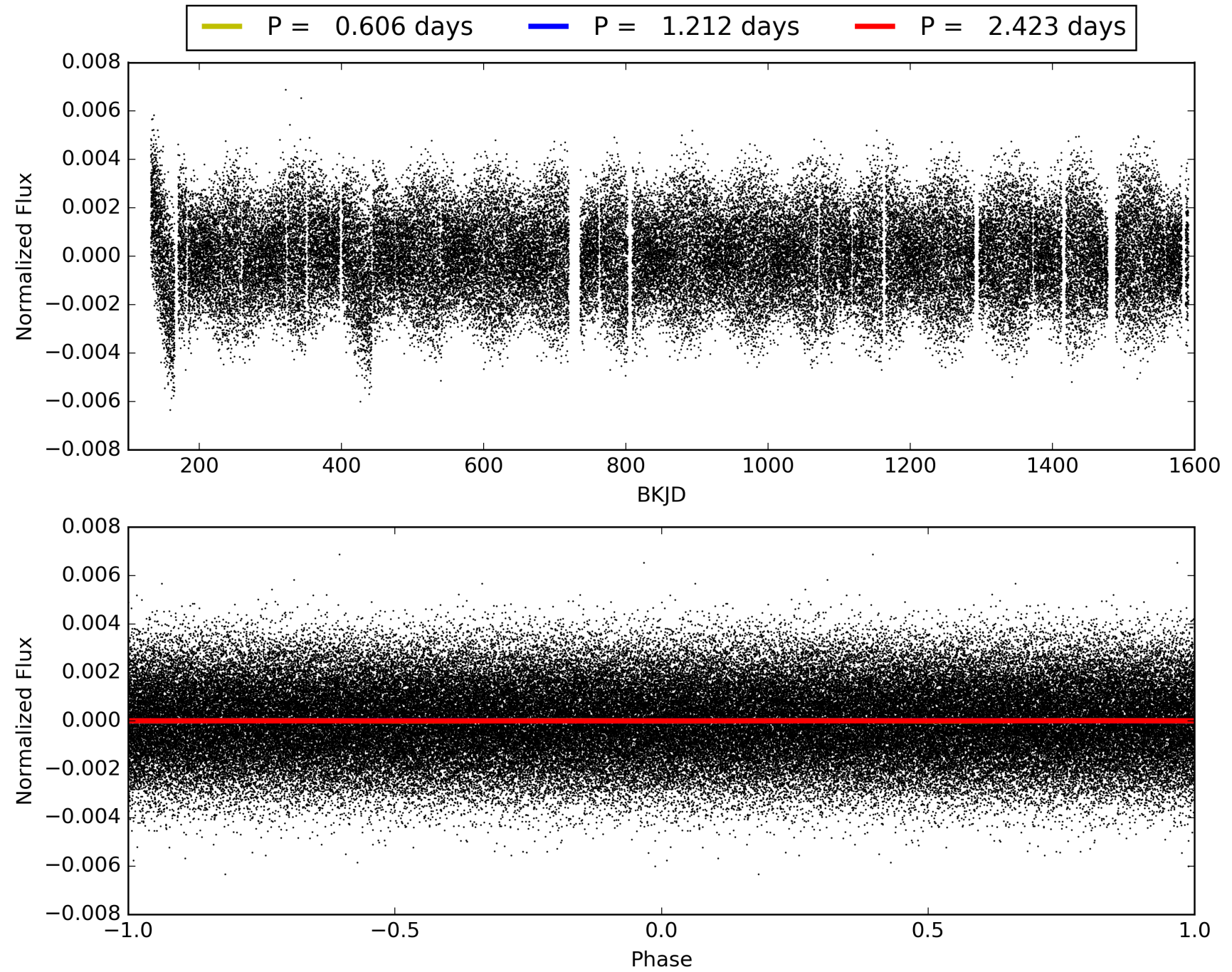
KIC: 9591519 Candidate: 3 of 3 Period: 1.212 d



TCE 009591519-03, PDC Light Curves

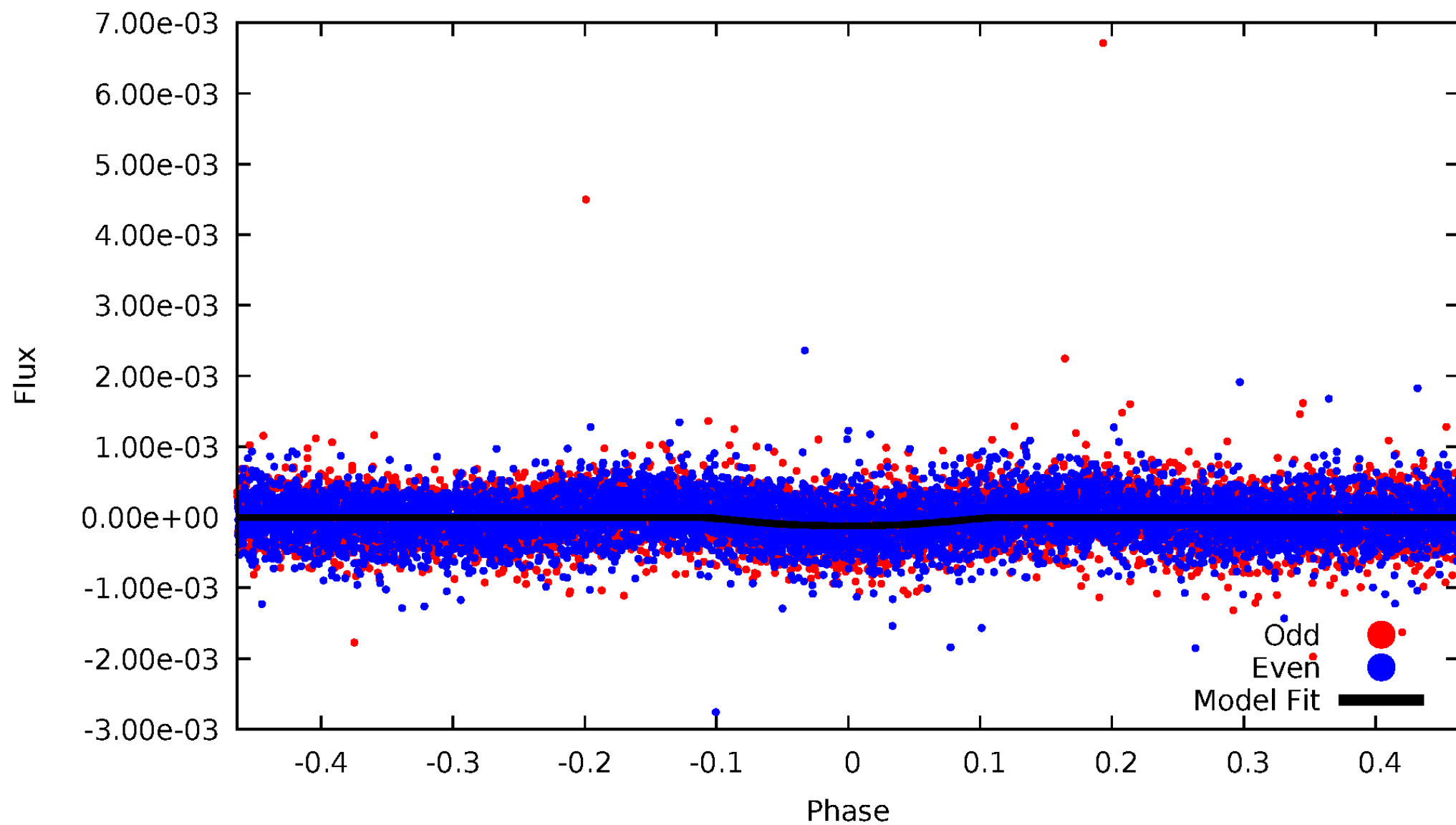


TCE 009591519-03



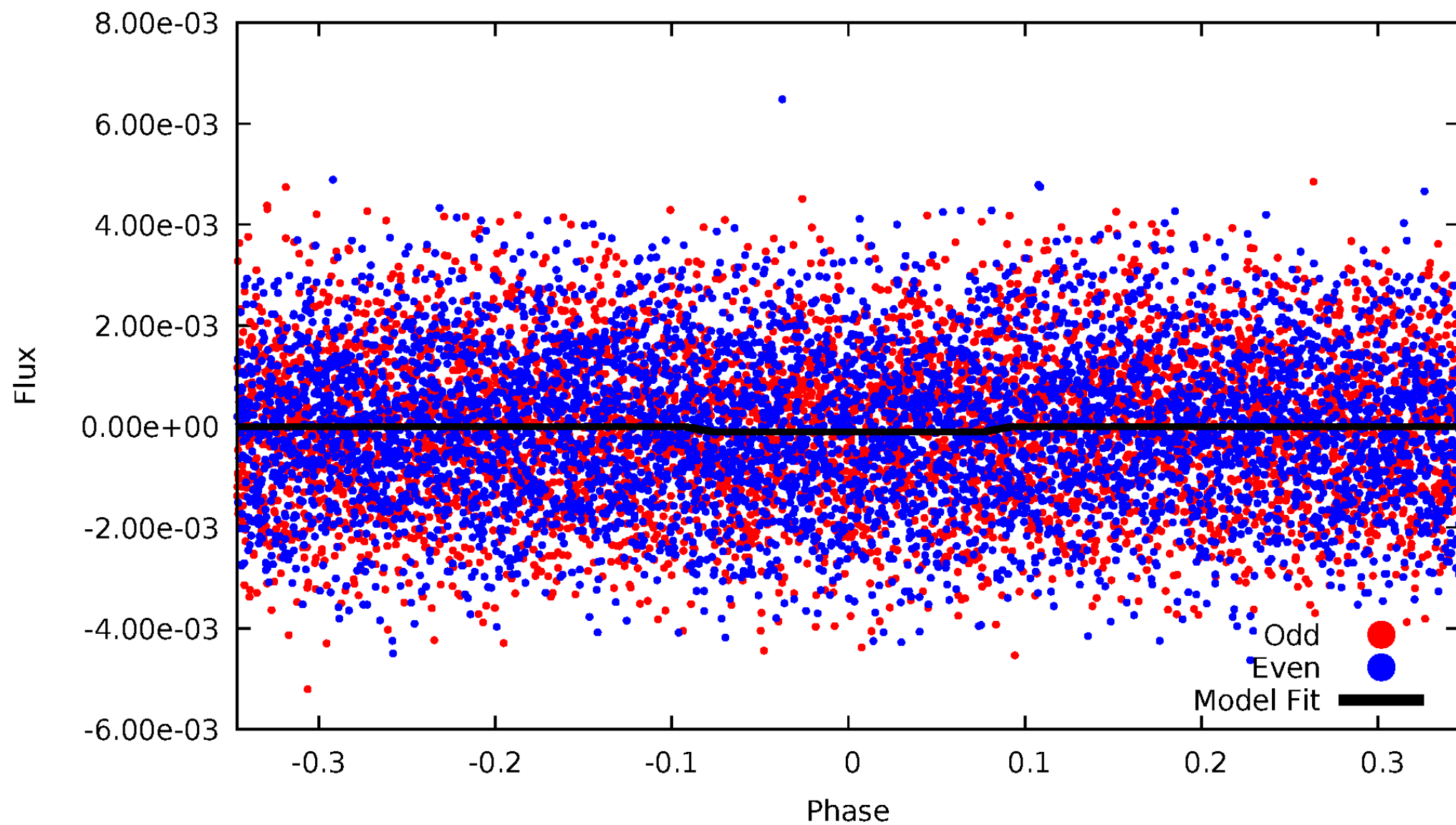
DV Odd/Even

TCE 009591519-03



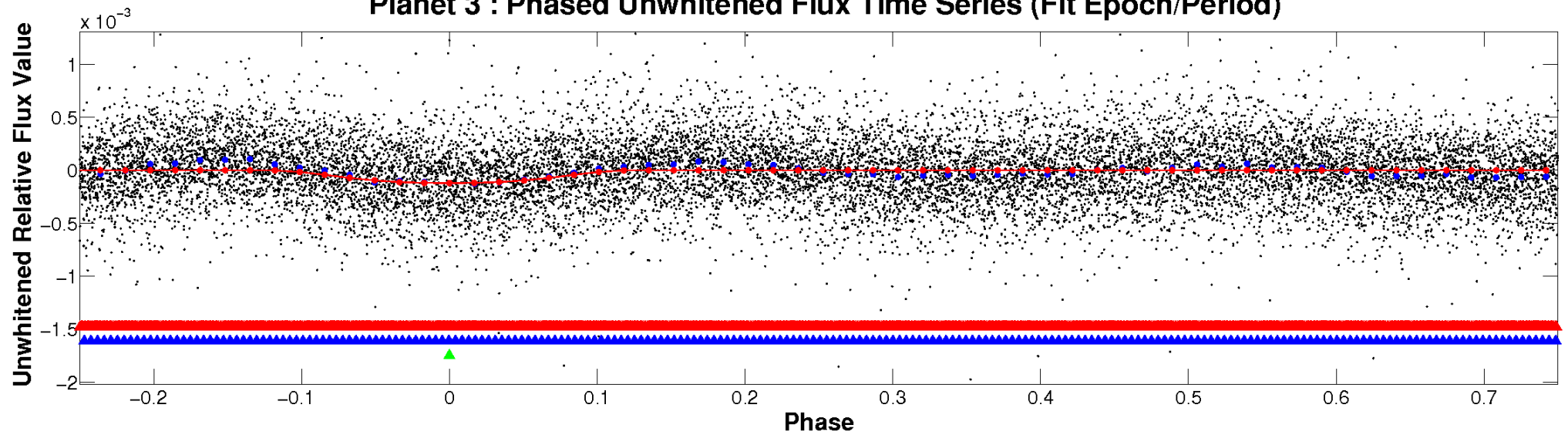
ALT Odd/Even

TCE 009591519-03

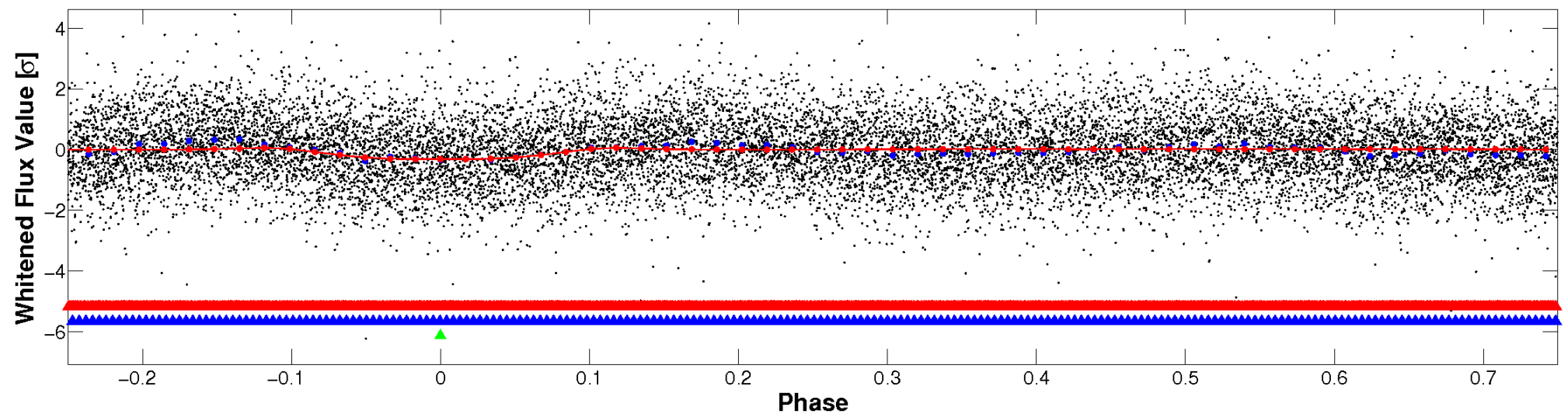


Non-Whitened Vs. Whitened Light Curve

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

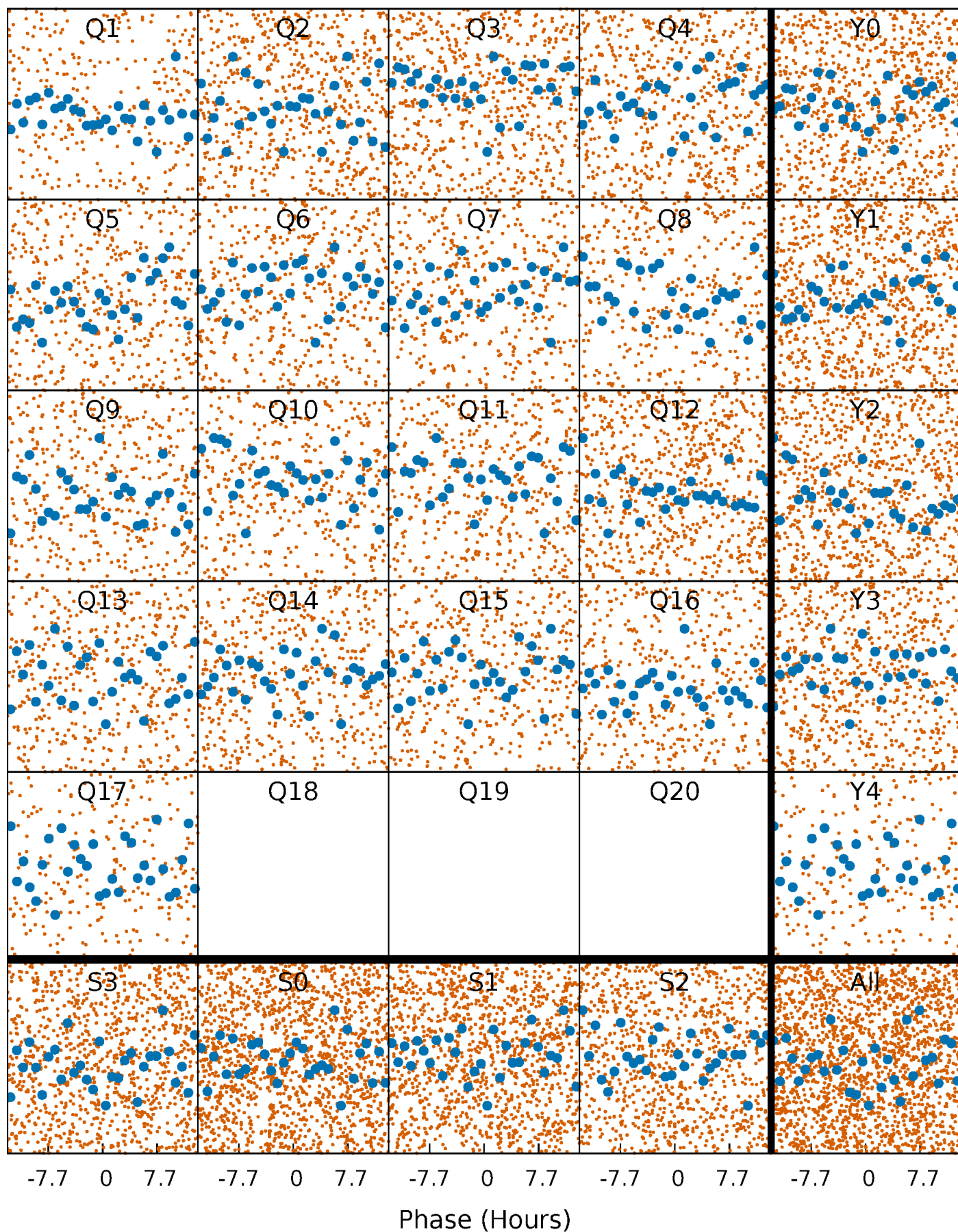


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



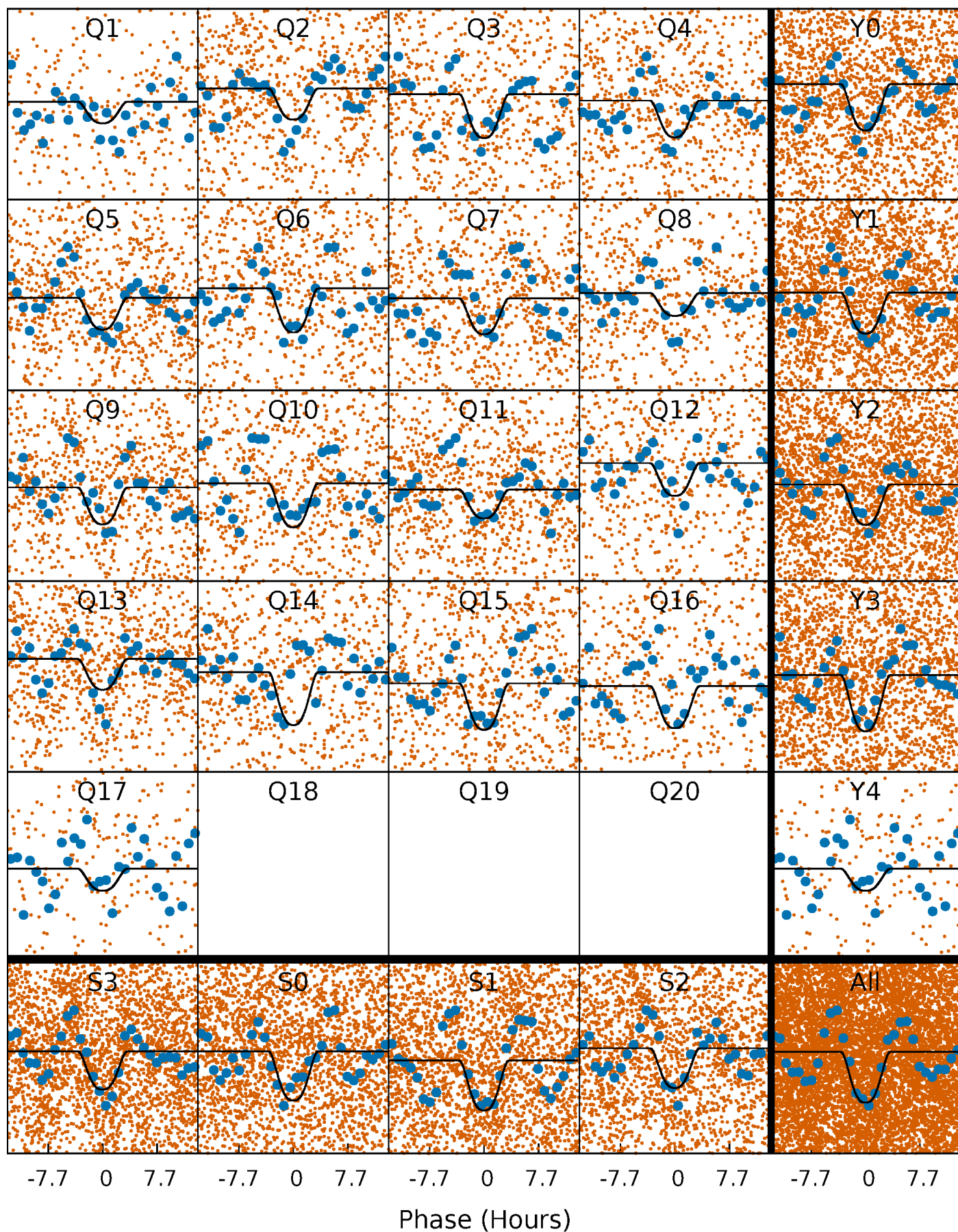
PDC Quarter-Phased Transit Curves

TCE 009591519-03 P= 1.211713 Days $T_0=131.914174$ (BKJD)



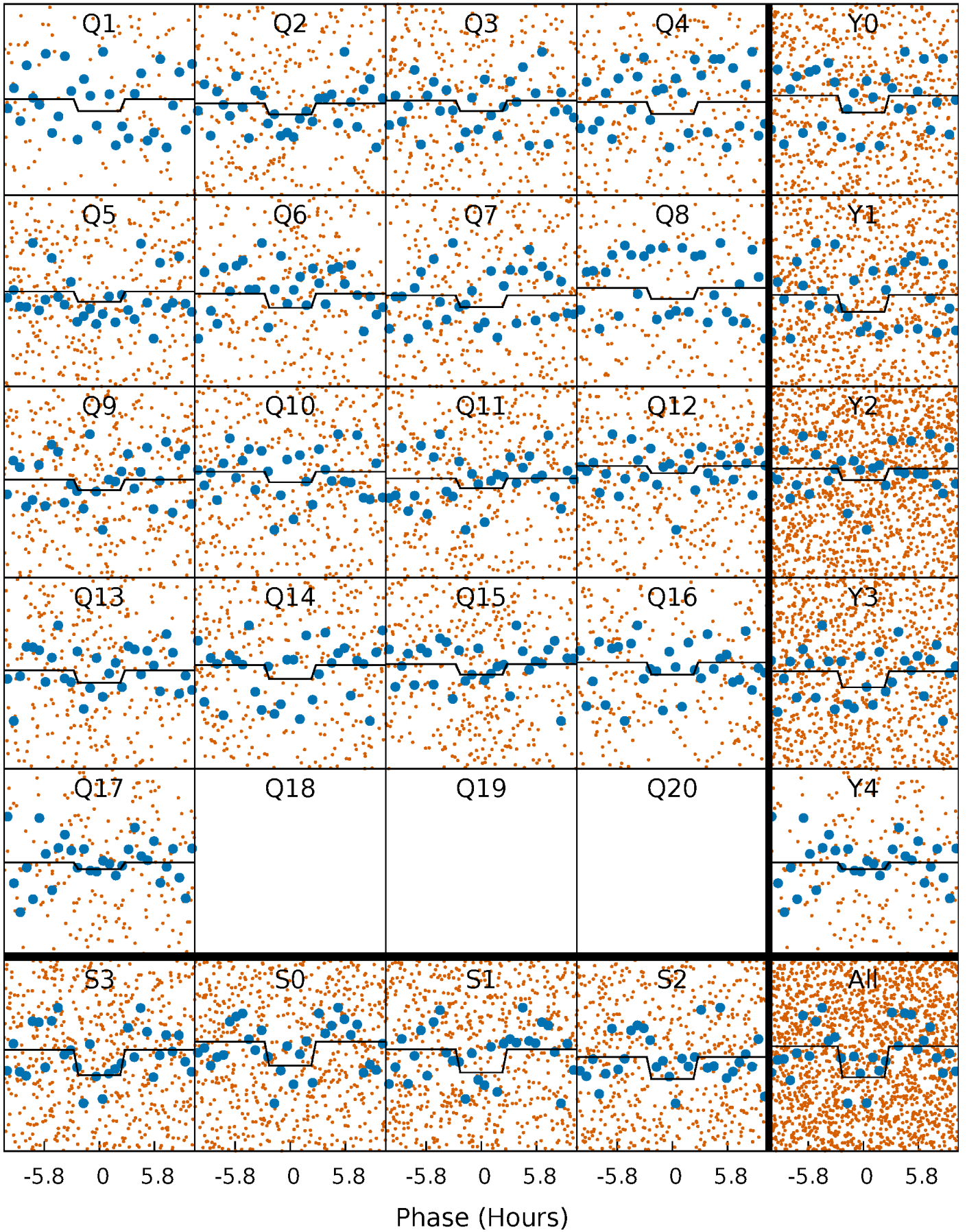
DV Quarter-Phased Transit Curves

TCE 009591519-03 P= 1.211713 Days $T_0=131.914174$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

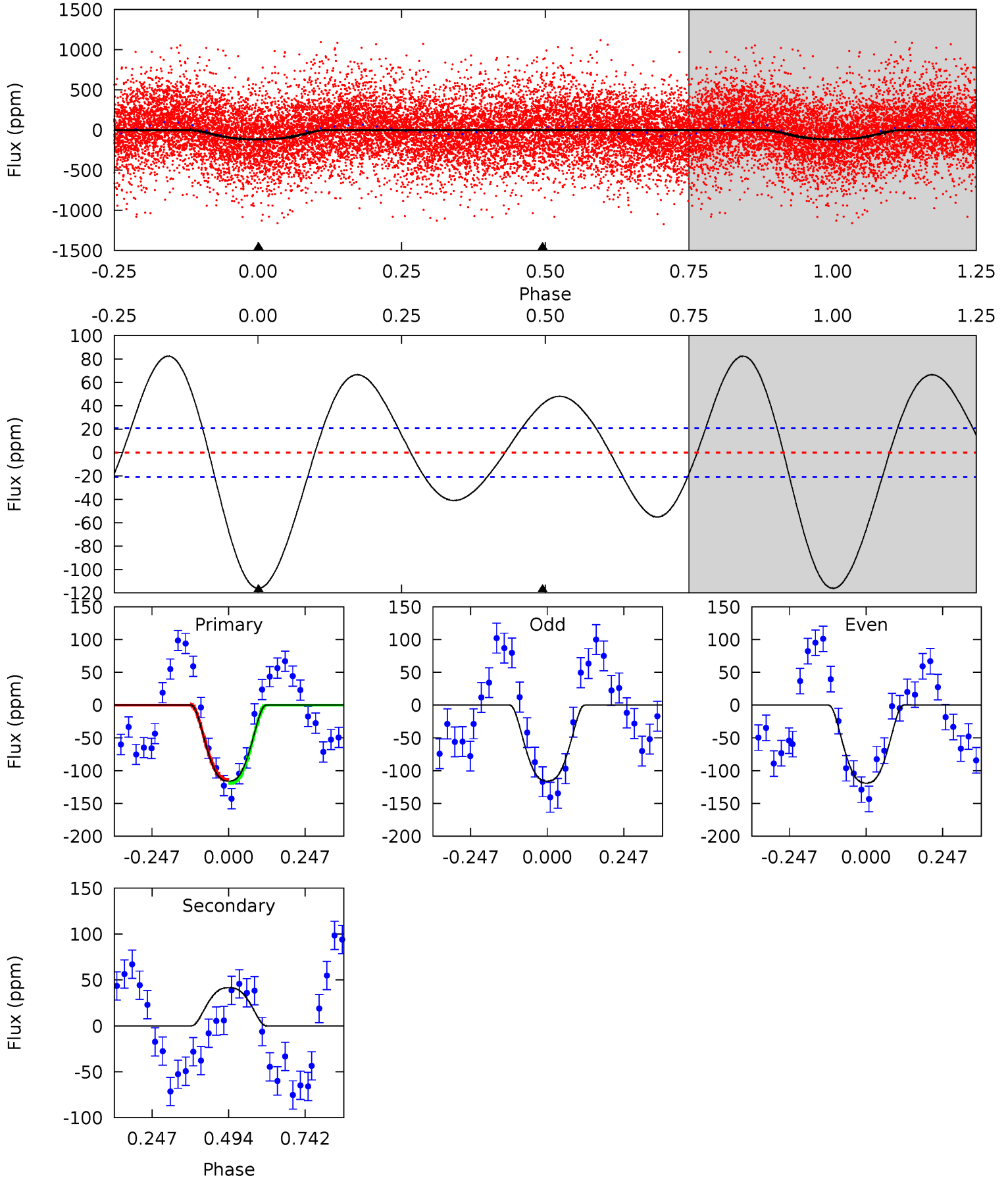
TCE 009591519-03 P= 1.211724 Days $T_0=131.917541$ (BKJD)



DV Model-Shift Uniqueness Test

009591519-03, P = 1.211713 Days, E = 131.914174 Days

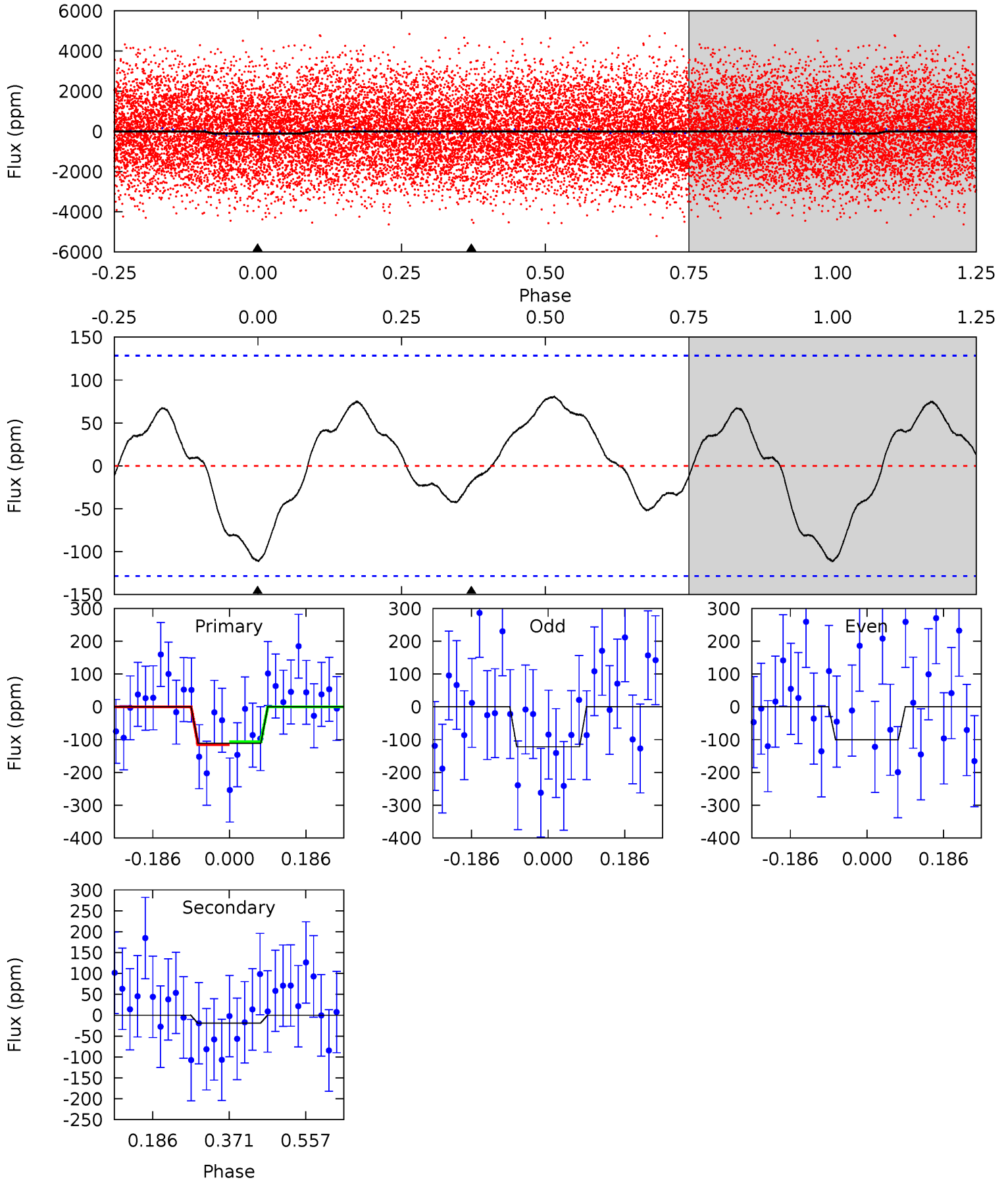
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	-8.63	0	0	4.37	1.16	4.92	24.2	24.2	-8.63	-8.63	0.32	-0.82	0.42	0.59



Alt Model-Shift Uniqueness Test

009591519-03, P = 1.211724 Days, E = 131.917541 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.83	0.66	0	0	4.43	1.32	1.18	3.83	3.83	0.66	0.66	0.37	0.78	0.42	0.16



Stellar Parameters For KIC 009591519

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7308^{+229}_{-280}	$3.815^{+0.552}_{-0.130}$	$-0.980^{+0.300}_{-0.300}$	$2.301^{+0.493}_{-1.151}$	$1.261^{+0.149}_{-0.242}$	$0.146^{+0.792}_{-0.053}$
	+3%/-4%	+14%/-3%	+31%/-31%	+21%/-50%	+12%/-19%	+543%/-37%
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 009591519-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	41 ± 5	$3.23^{+0.57}_{-0.85}$	4275^{+361}_{-582}	-5291^{+239}_{-227}	$-1.286^{+0.377}_{-0.989}$
Alt.	-19 ± 29	$2.51^{+0.49}_{-0.62}$	4295^{+338}_{-556}	4491^{+1154}_{-8910}	$1.025^{+1.860}_{-1.398}$

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 $A_{obs} \gg 1.0$

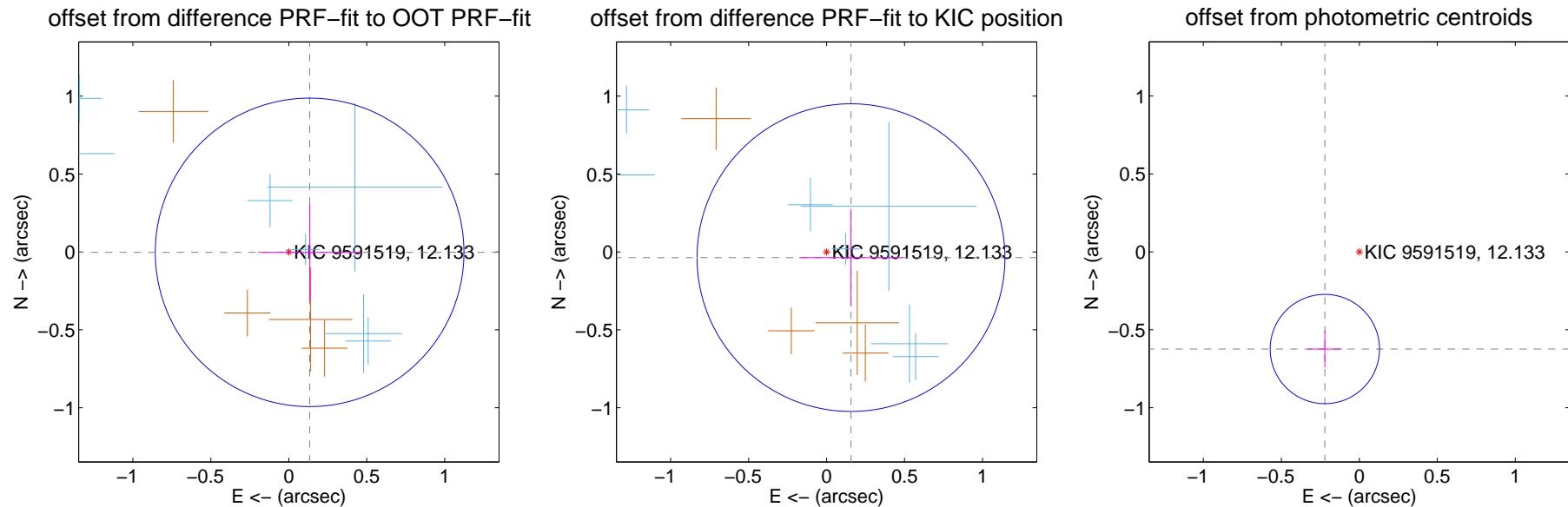
DV Centroid Data

Supplemental centroid analysis for 009591519-03. Kepler magnitude: 12.13. Transit SNR 13.07

There are 9 quarters with good PRF difference image offsets

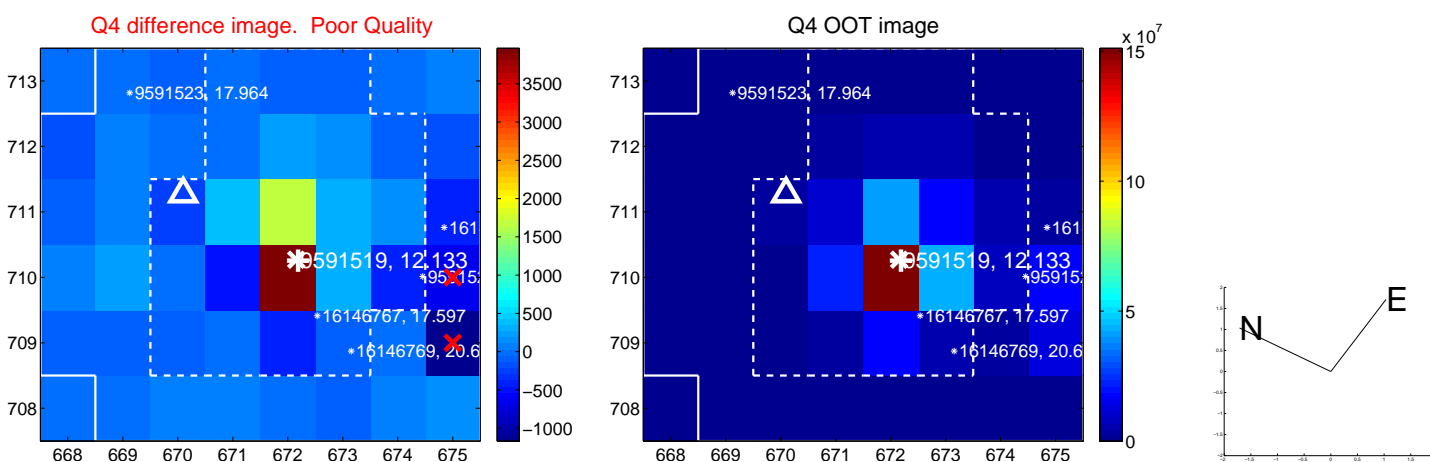
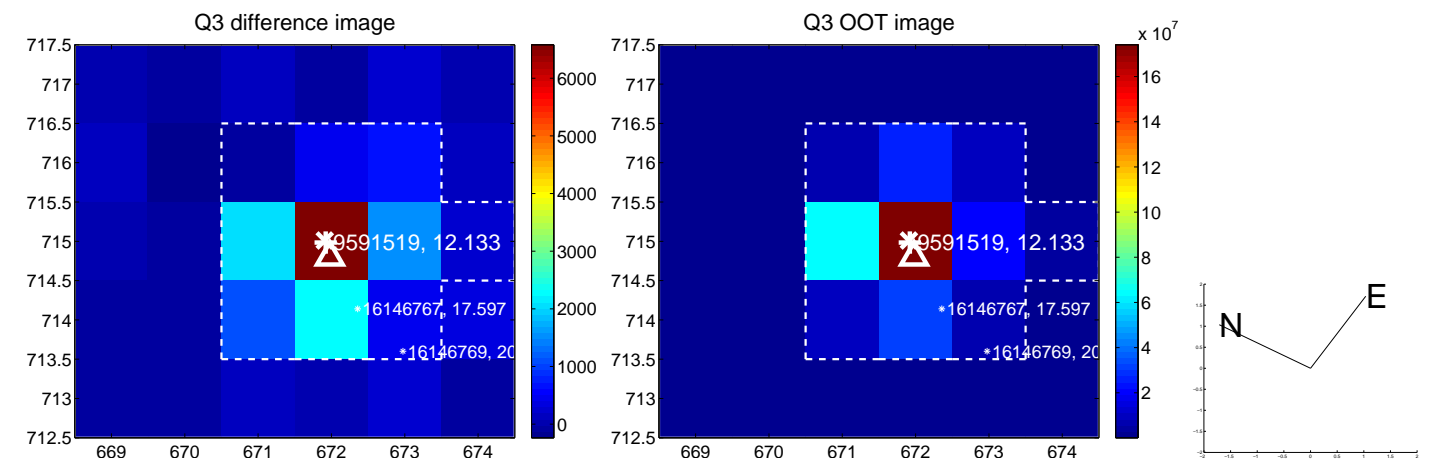
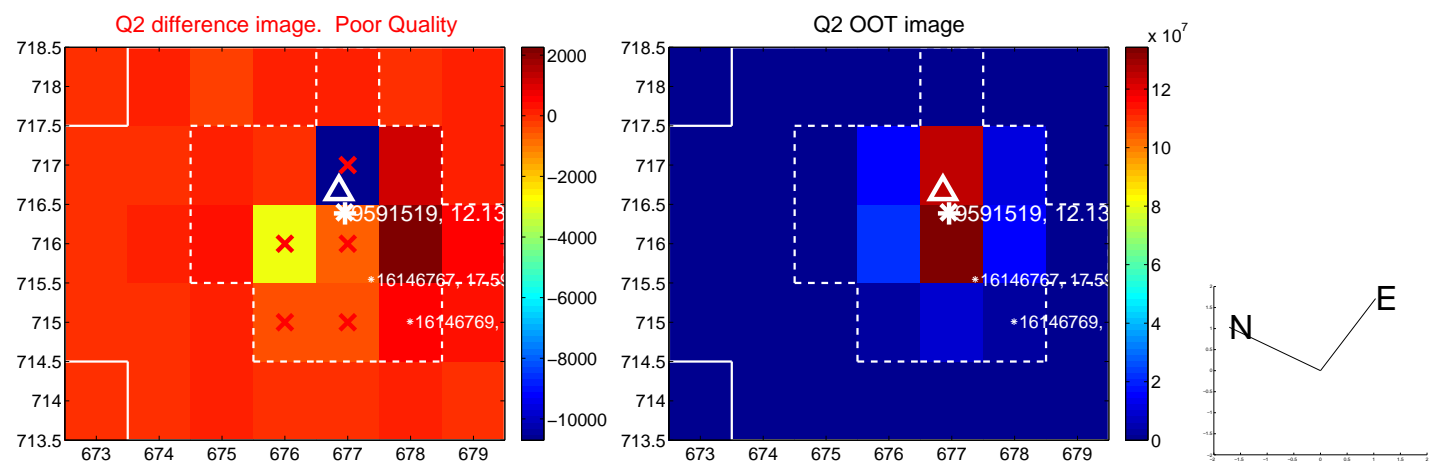
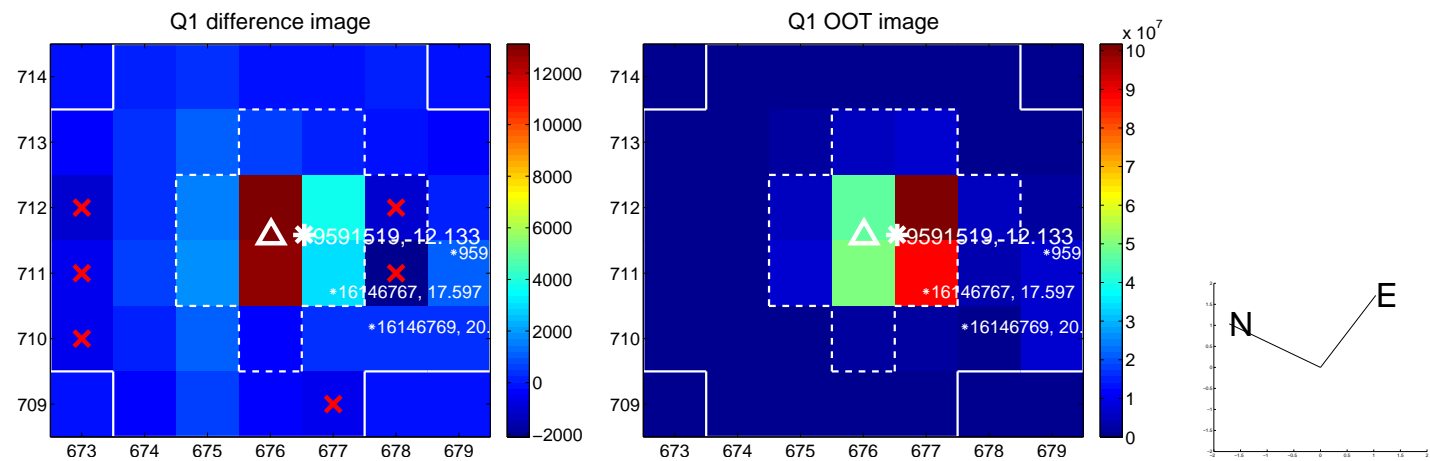
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.133 ± 0.330	0.40	-0.133 ± 0.330	-0.003 ± 0.313
PRF-fit source offset from KIC position	0.161 ± 0.329	0.49	-0.157 ± 0.330	-0.037 ± 0.313
photometric centroid source offset	0.66 ± 0.12	5.66	0.22 ± 0.11	-0.62 ± 0.12

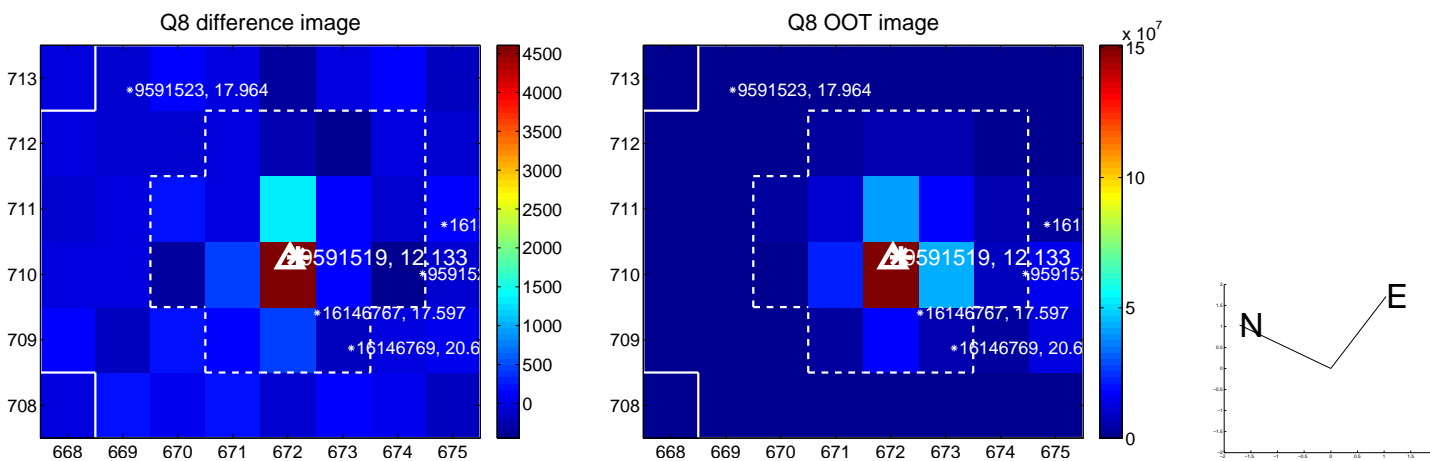
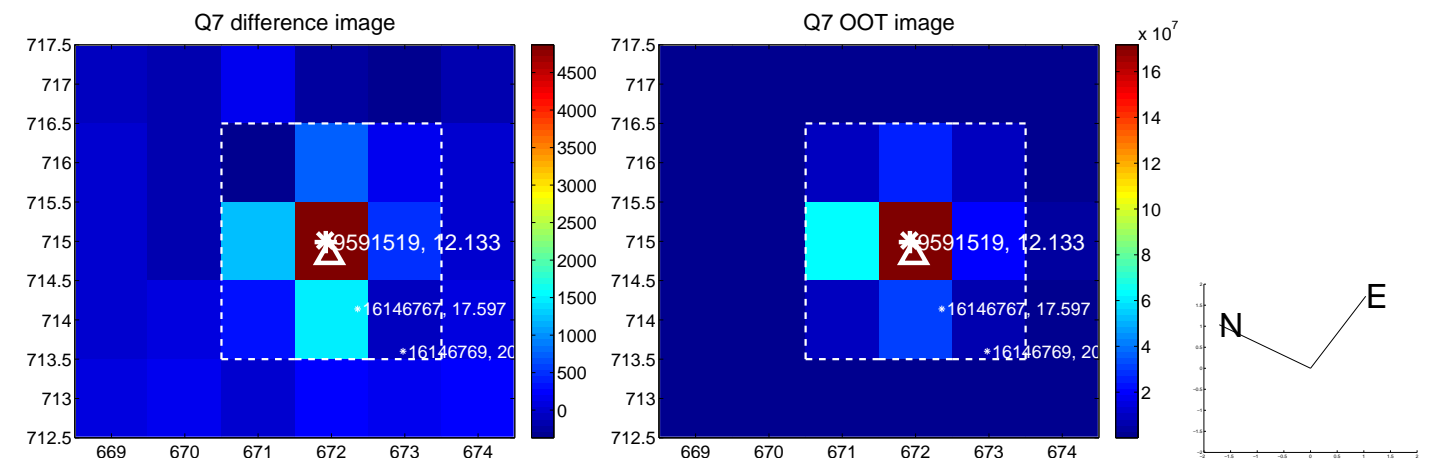
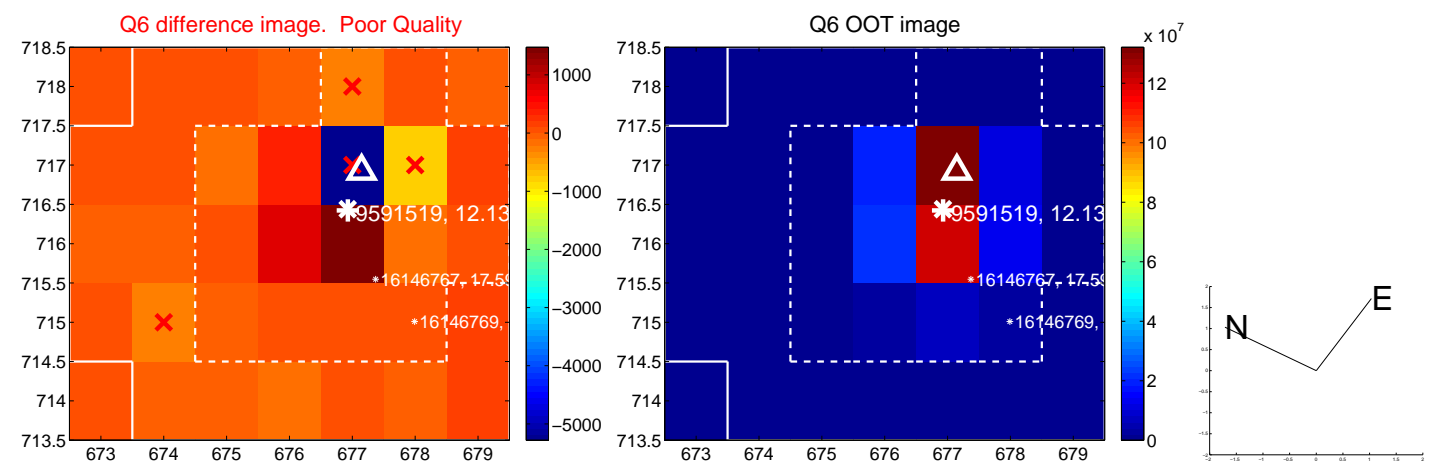
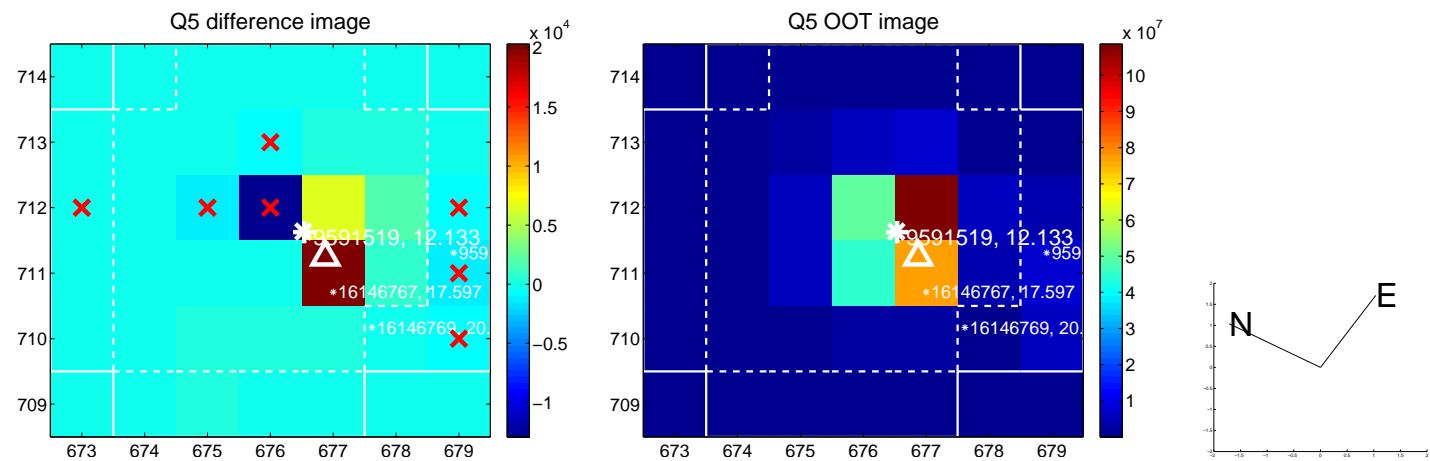


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

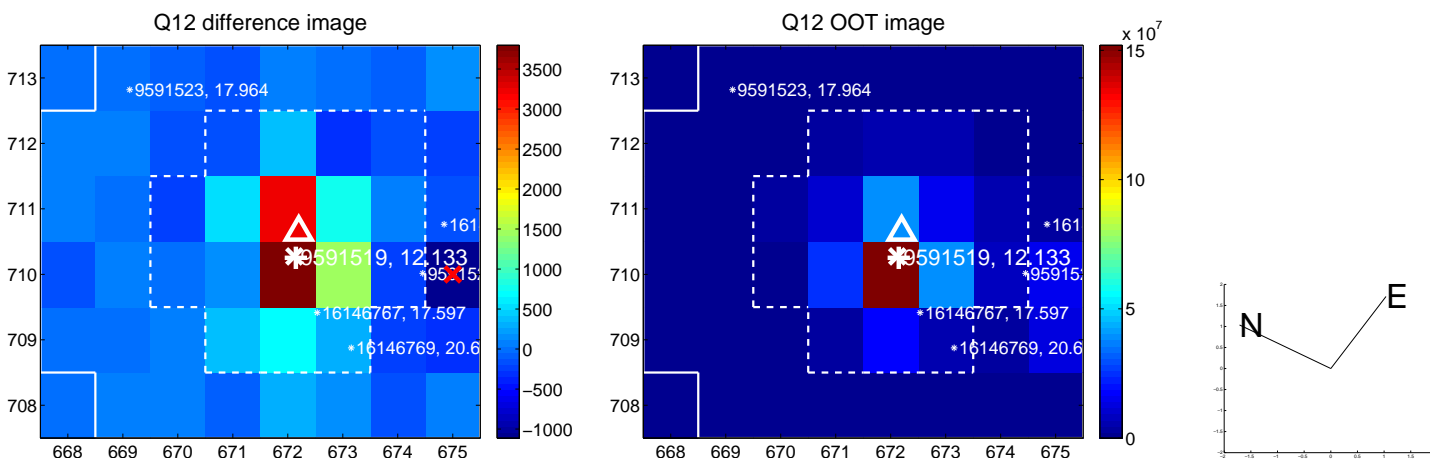
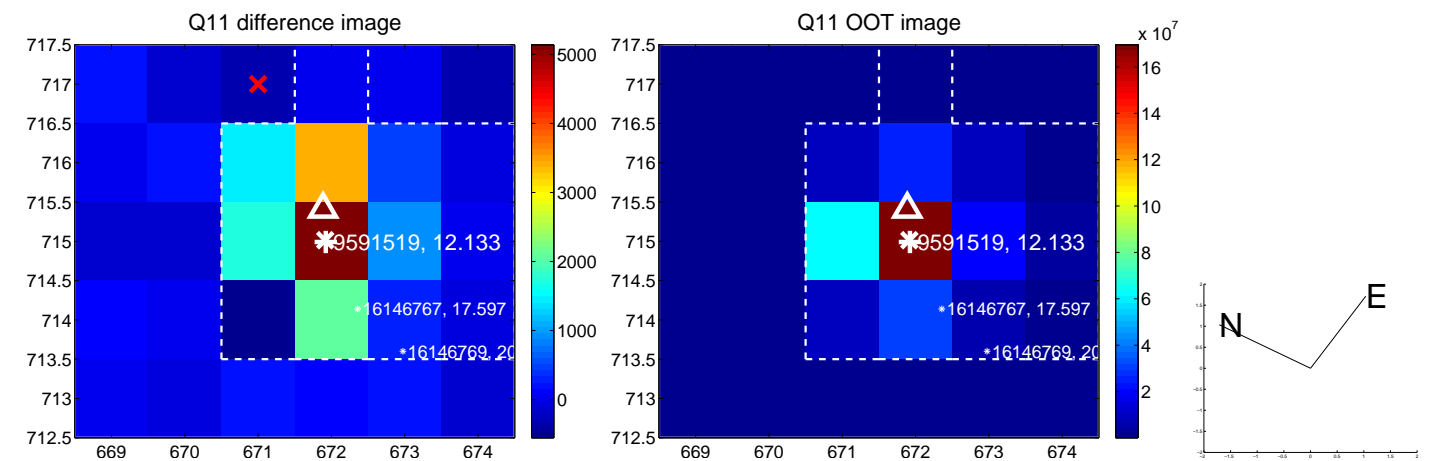
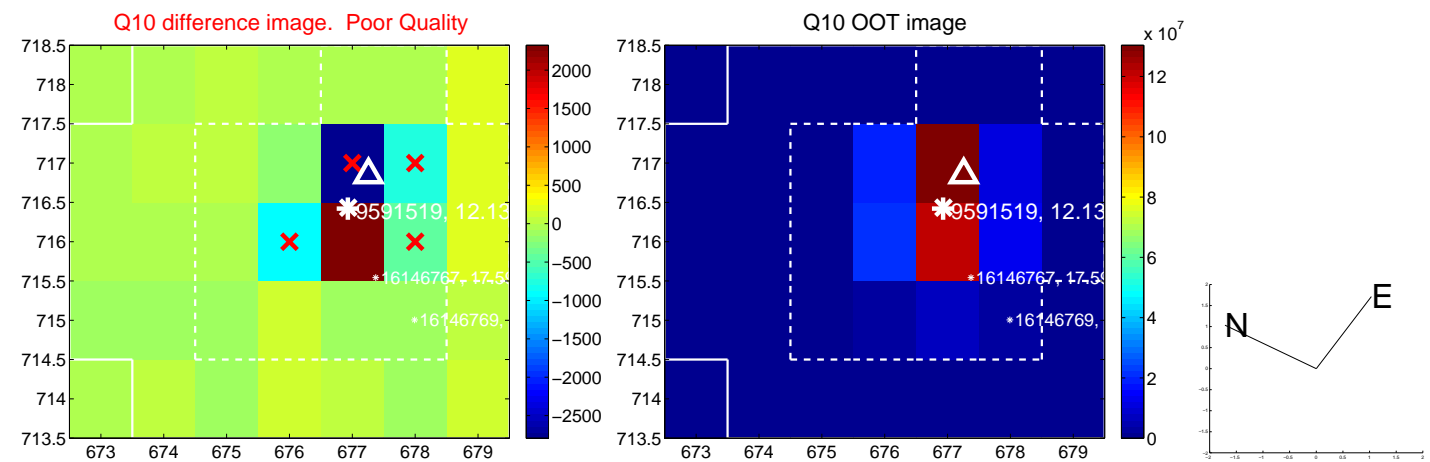
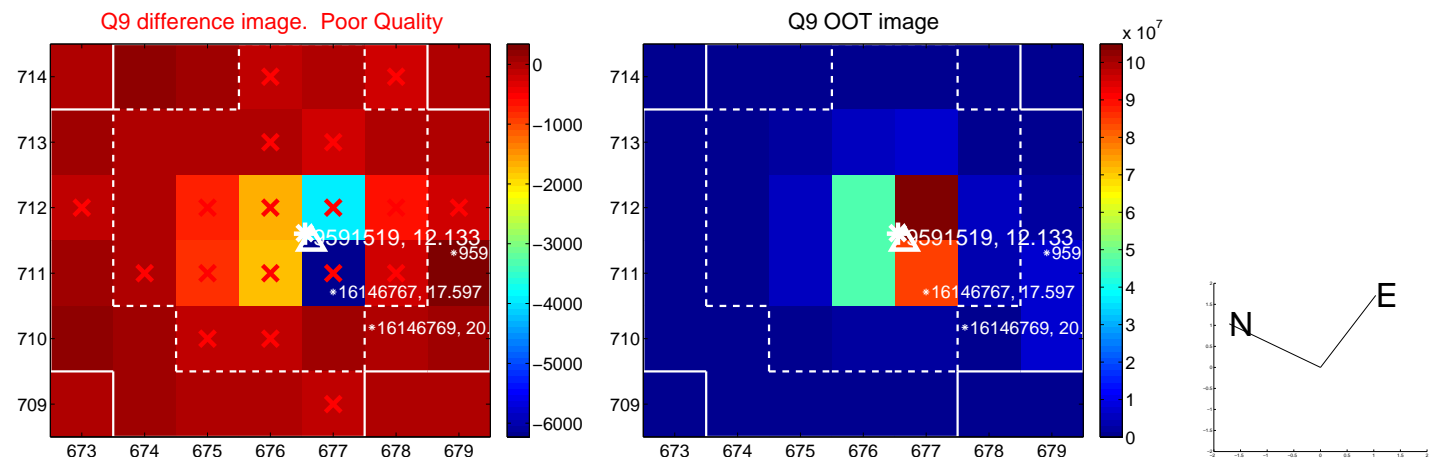
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



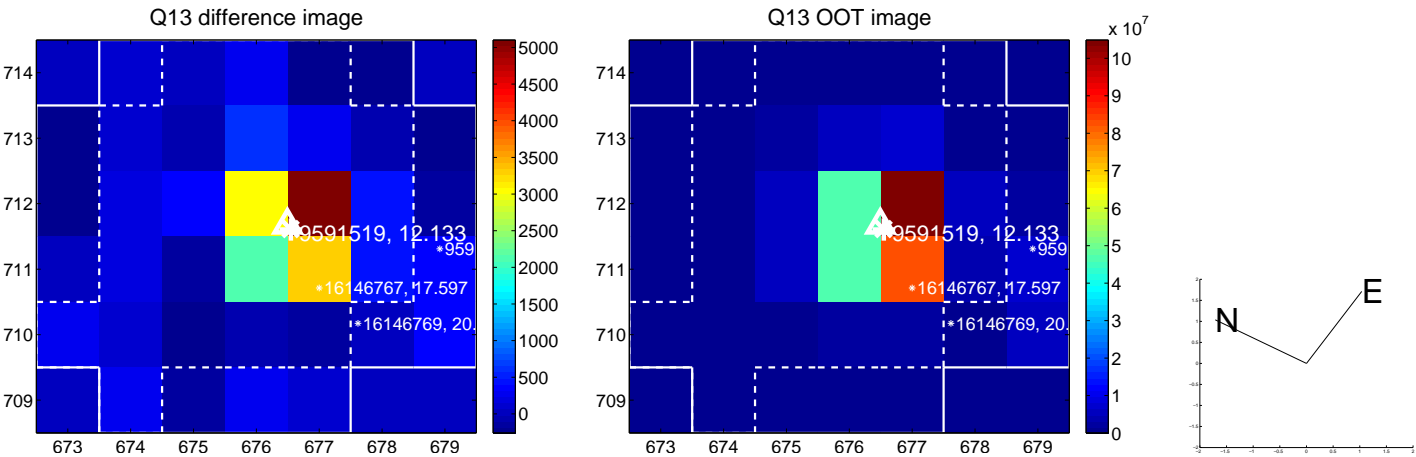
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



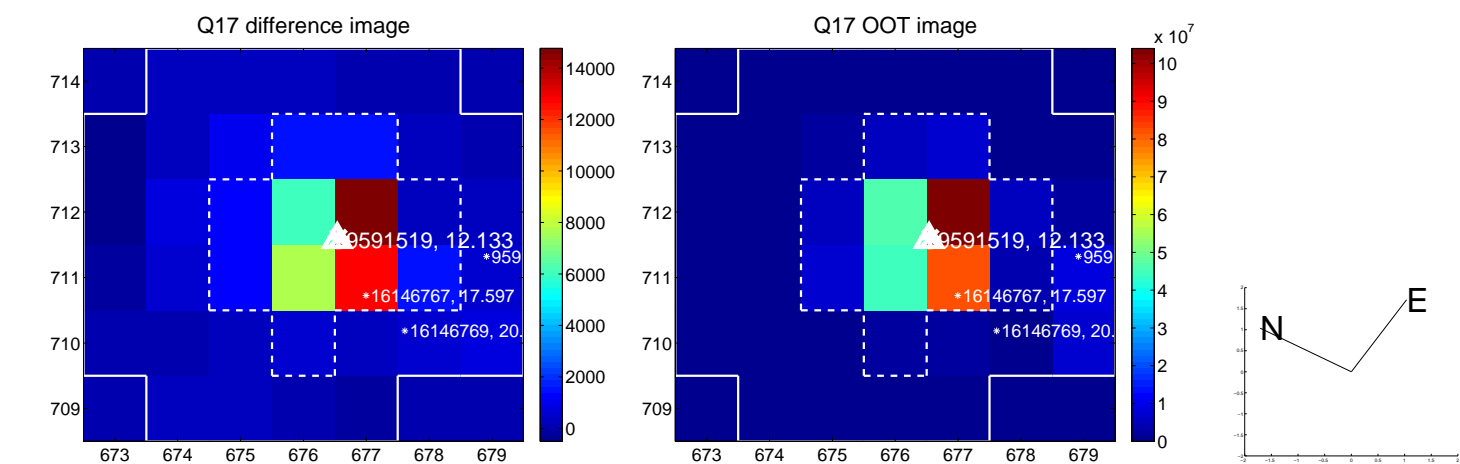
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



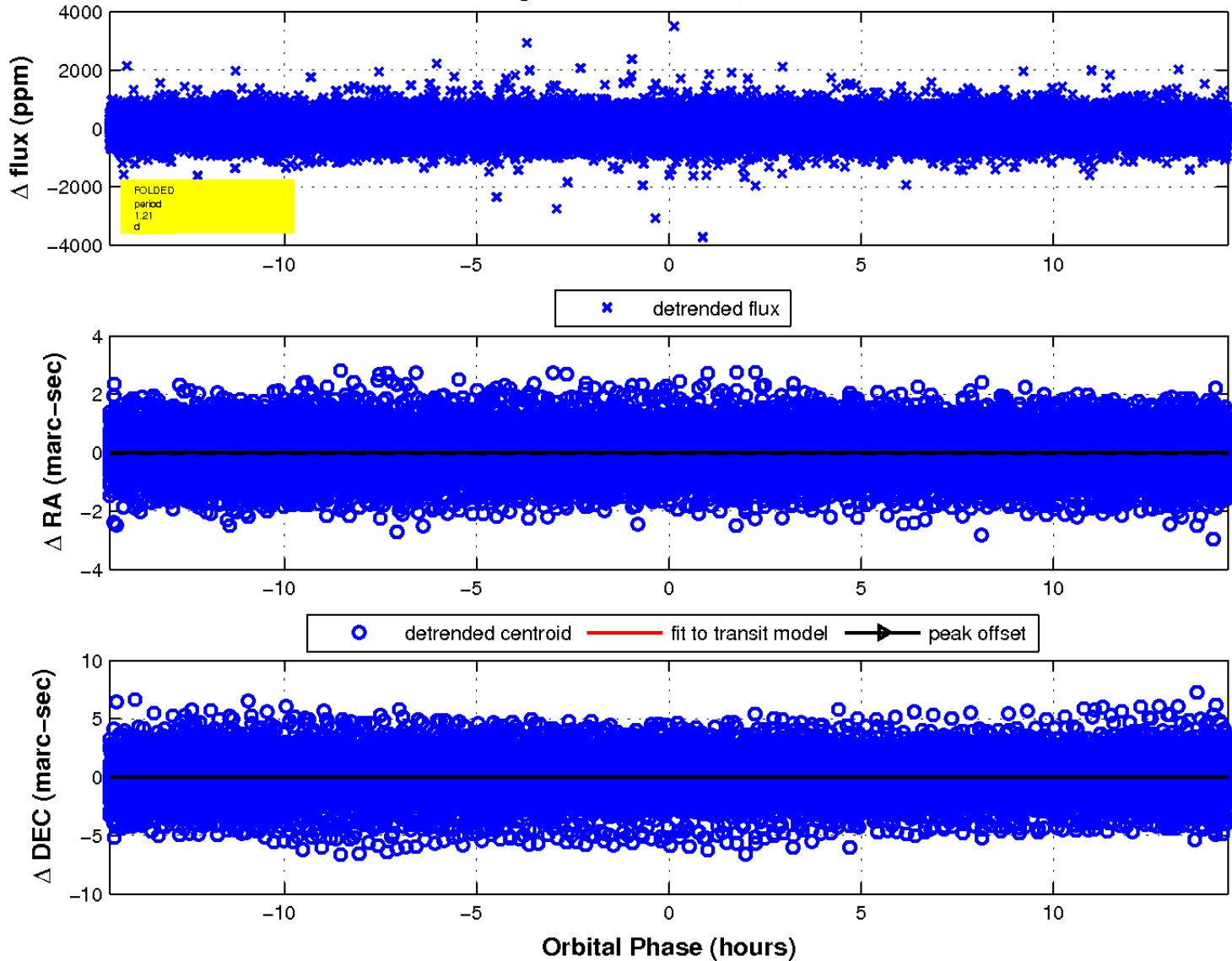
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fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

