

KIC 009242383

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})
009242383-01	OBS	No	0.885813	132.046751	61.2	1.647	14.3	11.9	13.09	6388	10.53	0.00
009242383-02	OBS	No	0.531494	131.688716	70.6	2.220	16.2	15.8	13.09	6388	12.87	0.00
009242383-03	OBS	No	0.531476	131.864103	57.3	3.078	14.6	9.6	13.09	6388	10.62	0.00
009242383-04	OBS	No	0.542435	131.970309	196.6	1.500	10.7	12.8	13.09	6388	18.65	0.00
009242383-05	OBS	No	4.671724	134.967245	309.2	1.500	9.9	-1.0	13.09	6388	23.19	37181.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009242383-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
009242383-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV
009242383-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_NOFITS

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

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

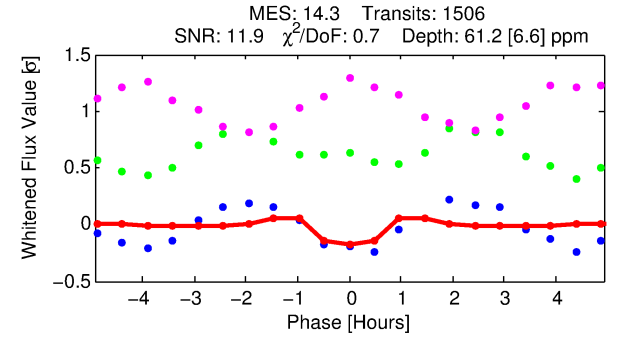
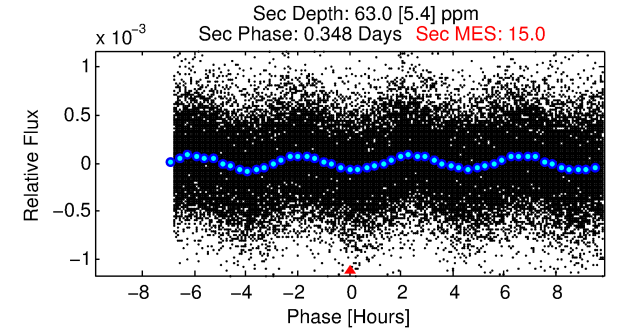
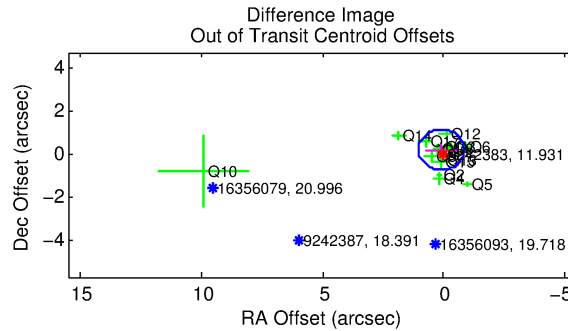
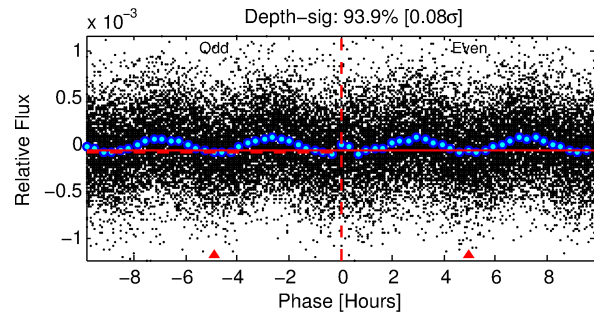
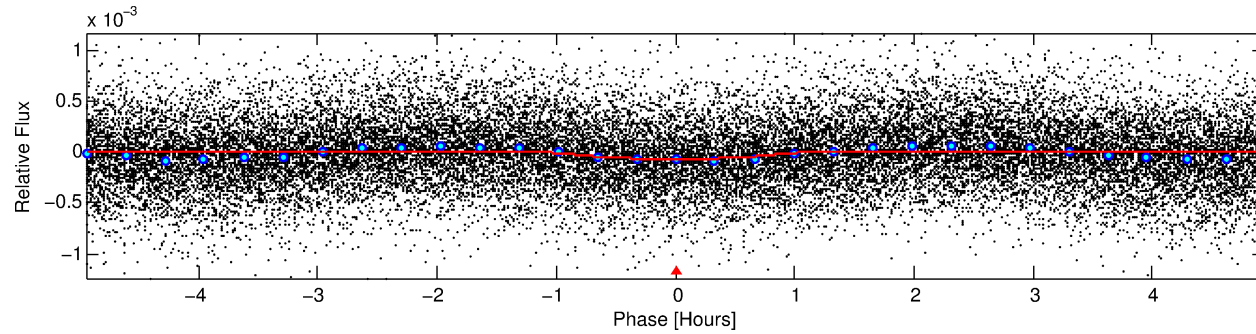
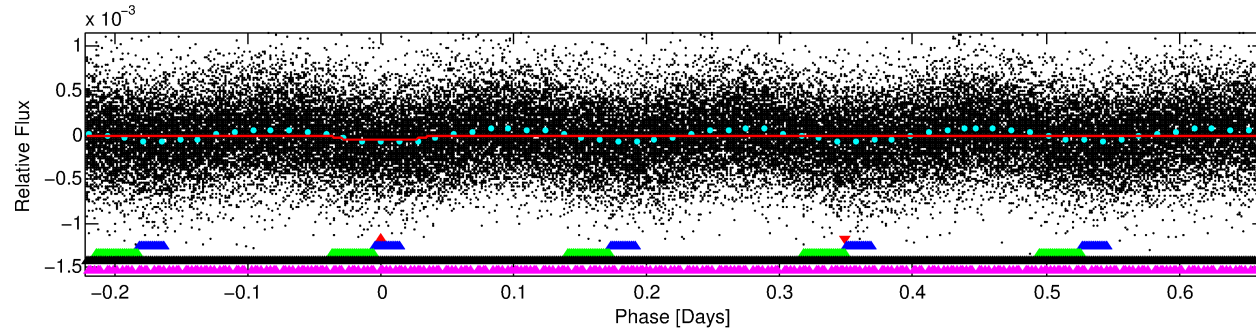
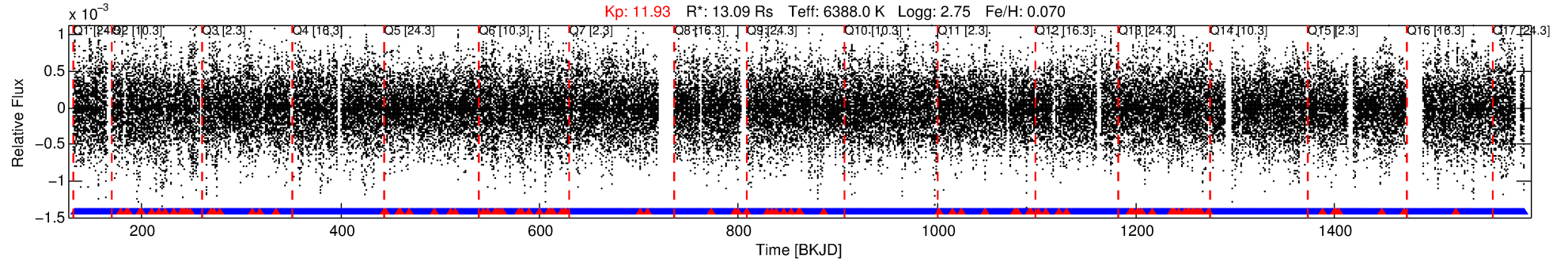
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009242383-01

No Significant Match Found

DV One-Page Summary

KIC: 9242383 Candidate: 1 of 5 Period: 0.886 d



DV Fit Results:

Period = 0.88581 [0.00001] d
Epoch = 132.0468 [0.0012] BKJD
Rp/R* = 0.0074 [0.0017]
a/R* = 3.77 [4.09]
b = 0.45 [2.08]
Seff = N/A
Teq = N/A
Rp = 10.53 [4.82] Re
a = N/A
Ag = N/A
Teffp = N/A

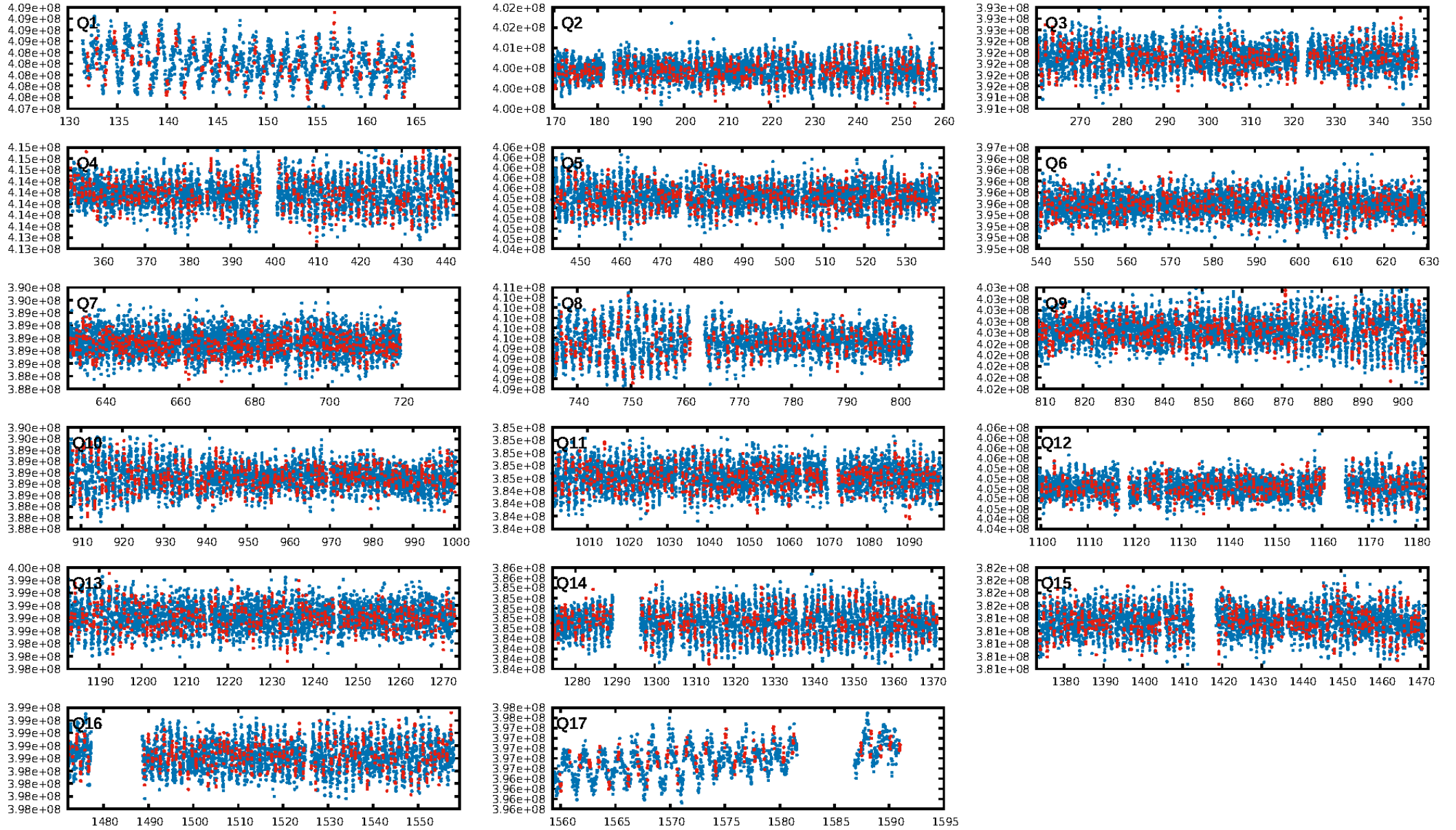
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.70 σ]
LongPeriod-sig: 100.0% [40.78 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [1335/1438]
GhostDiagnostic-chr: 1.455
Centroid-sig: 0.0%
Centroid-so: 0.701 arcsec [2.44 σ]
OotOffset-rm: 0.226 arcsec [0.72 σ]
KicOffset-rm: 0.120 arcsec [0.35 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 0.00 [0/17]

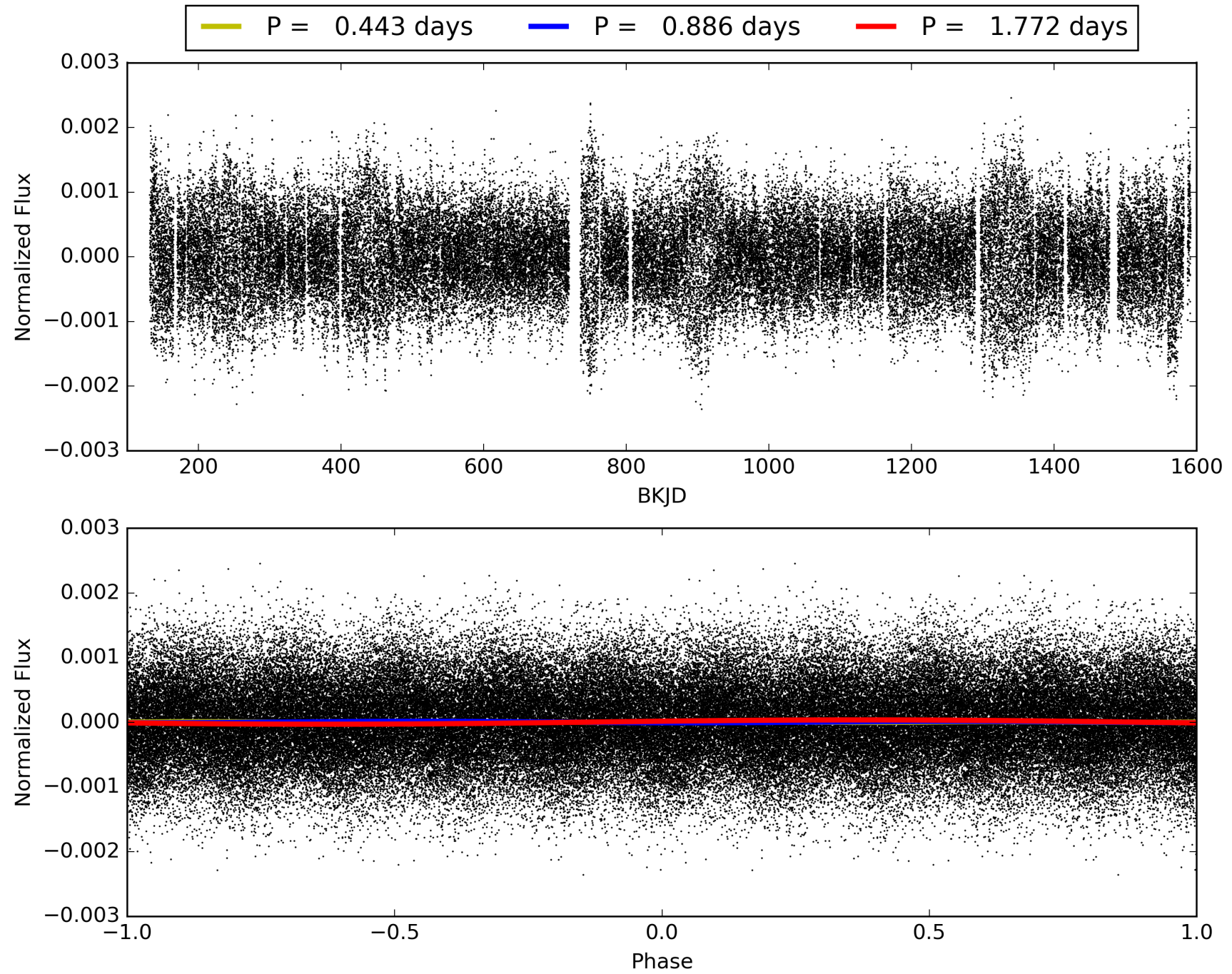
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009242383-01, PDC Light Curves

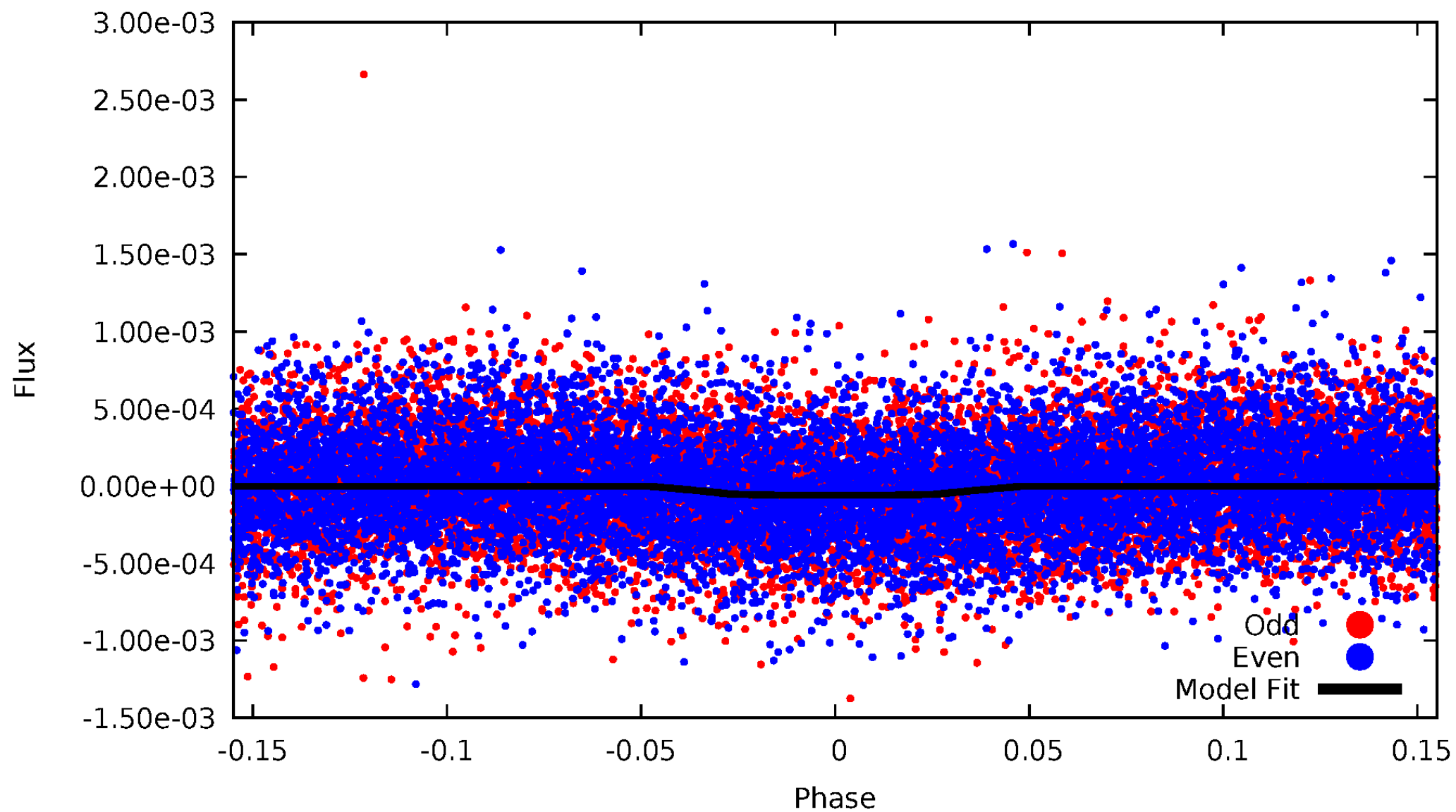


TCE 009242383-01



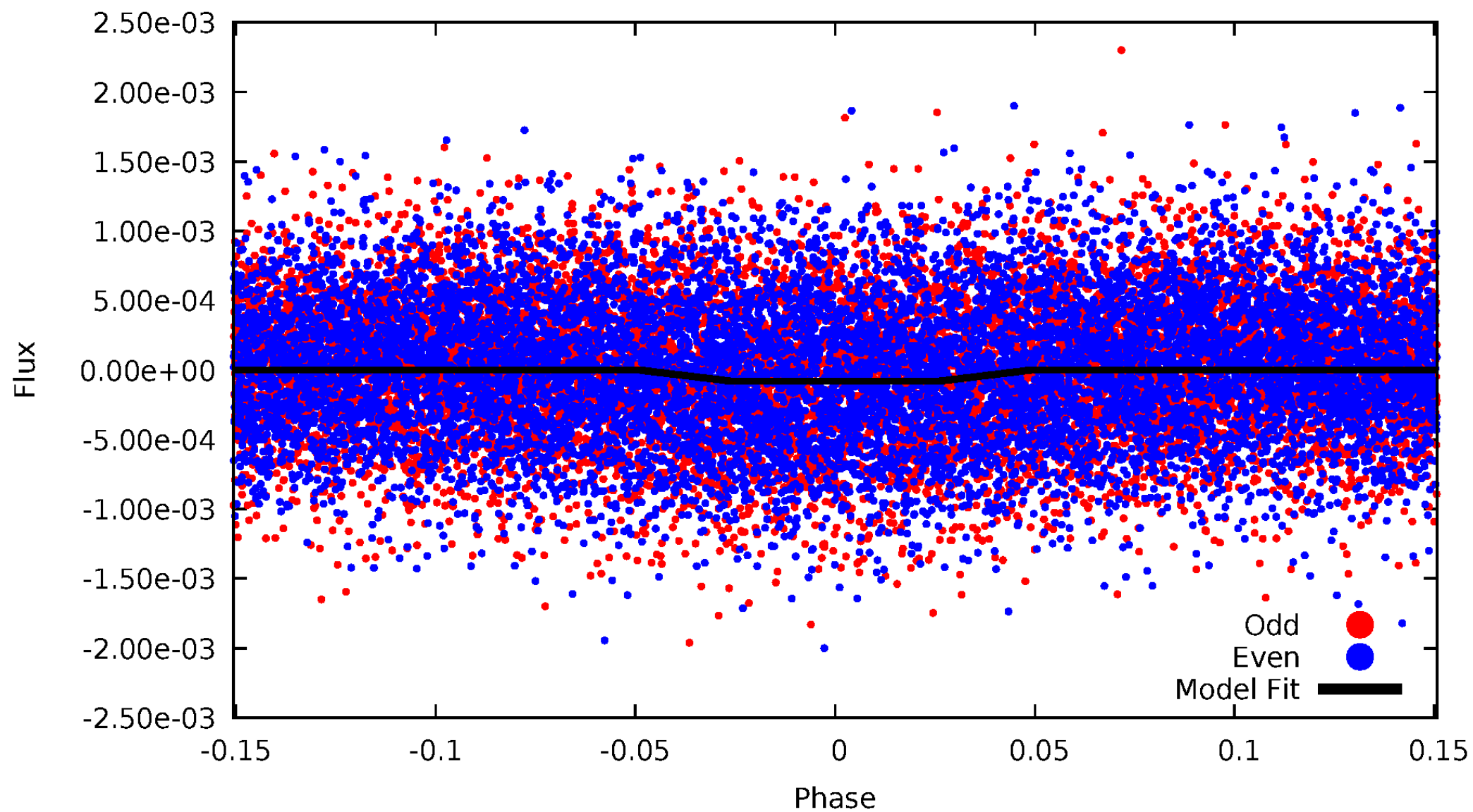
DV Odd/Even

TCE 009242383-01

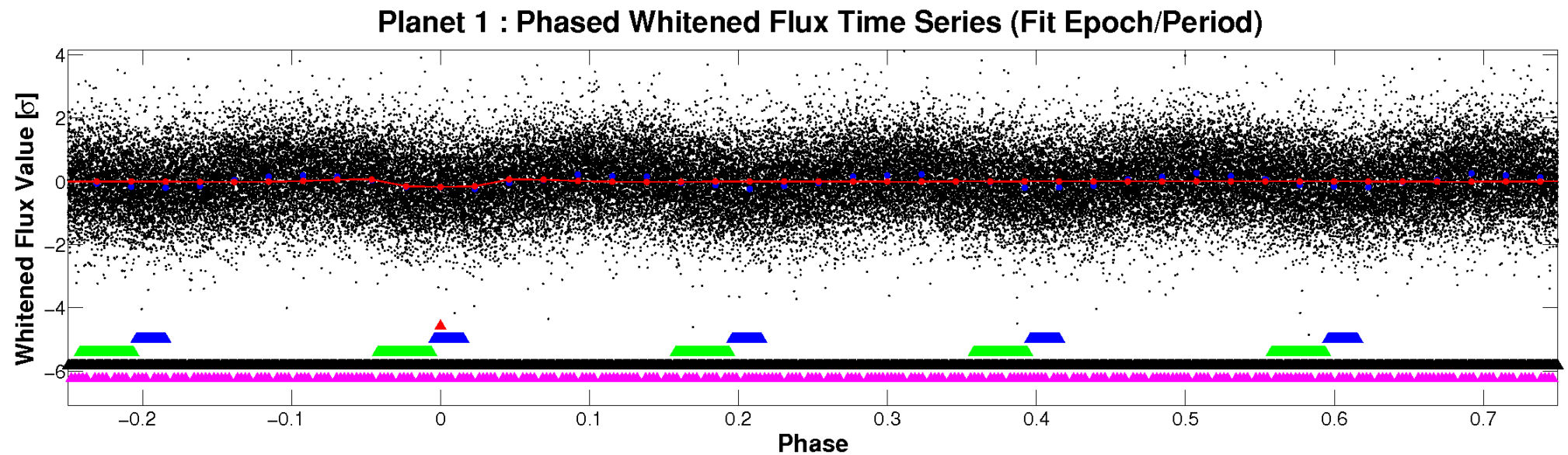
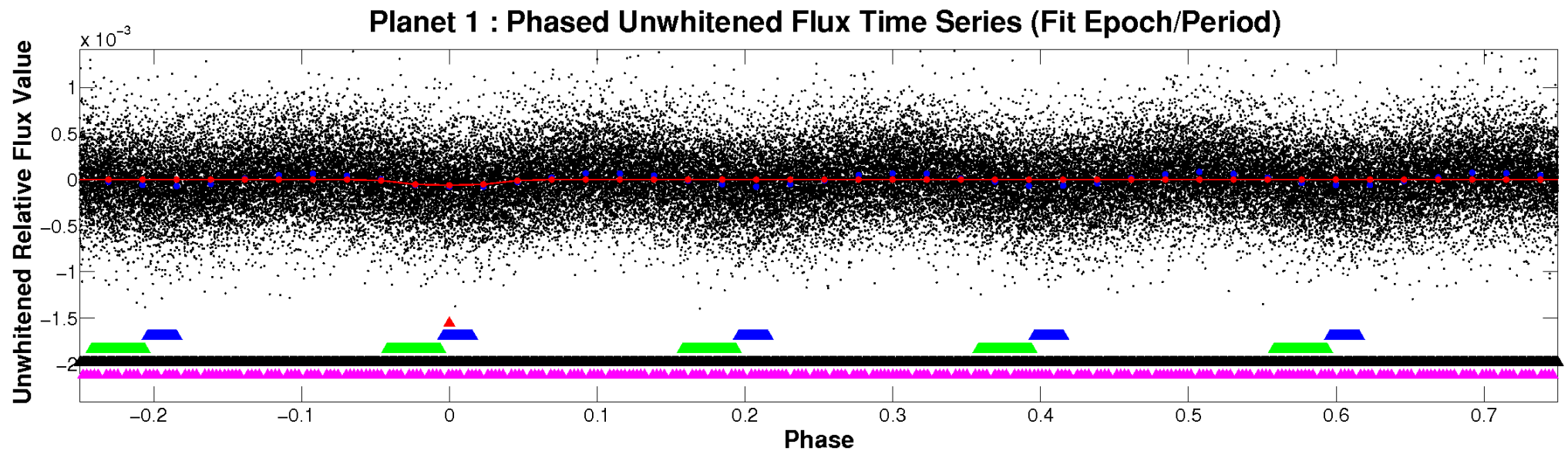


ALT Odd/Even

TCE 009242383-01

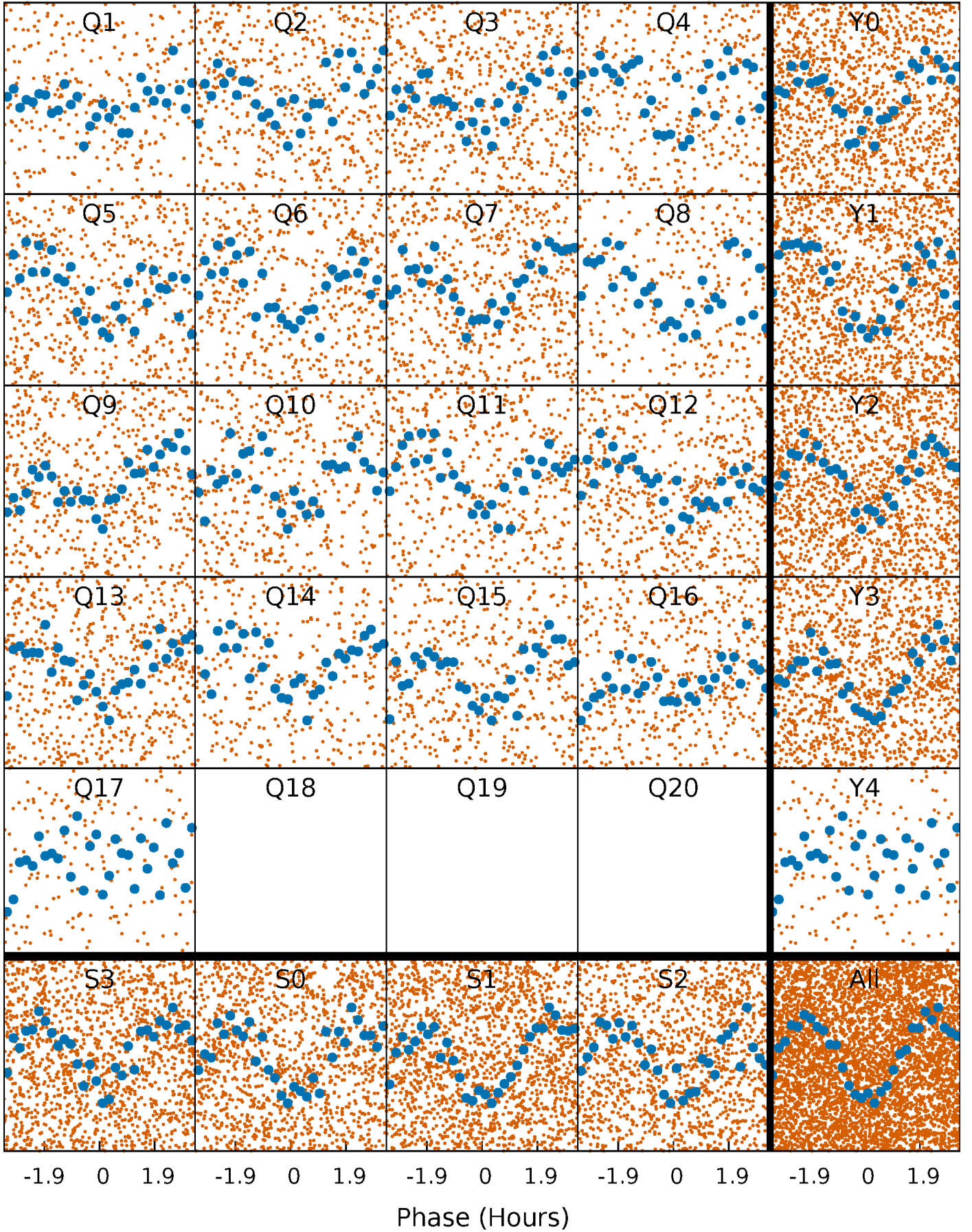


Non-Whitened Vs. Whitened Light Curve



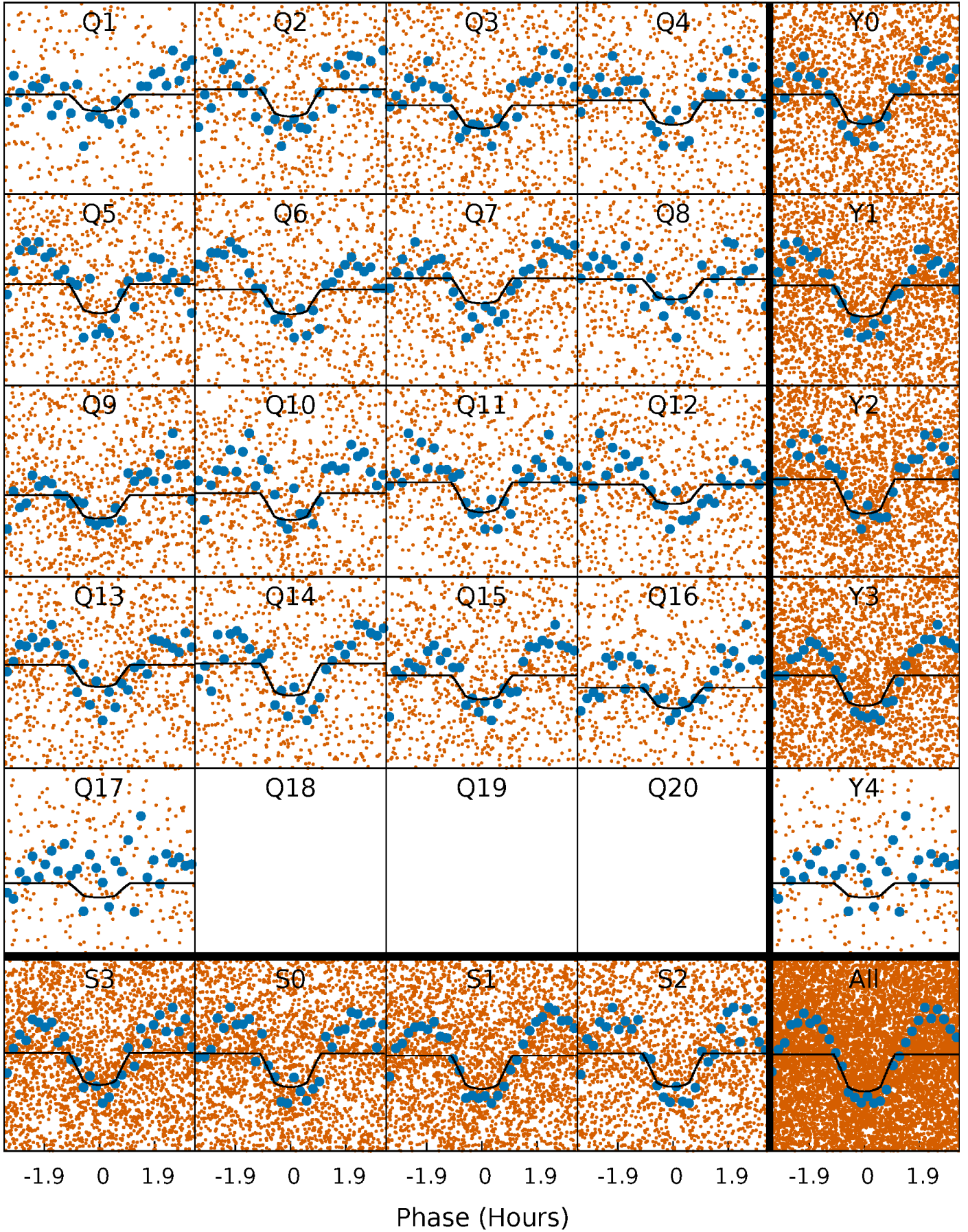
PDC Quarter-Phased Transit Curves

TCE 009242383-01 P= 0.885813 Days $T_0=132.046751$ (BKJD)



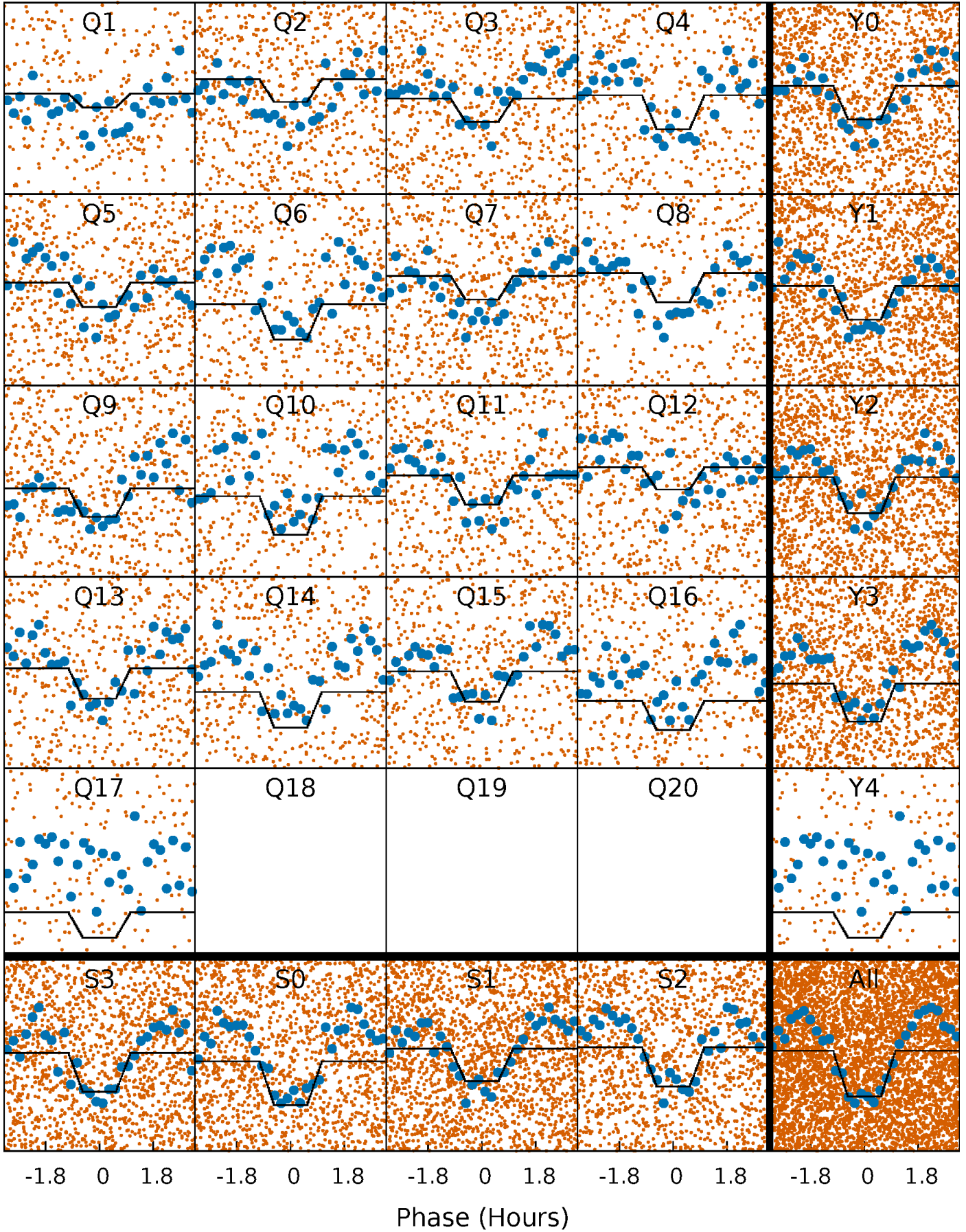
DV Quarter-Phased Transit Curves

TCE 009242383-01 P= 0.885813 Days $T_0=132.046751$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

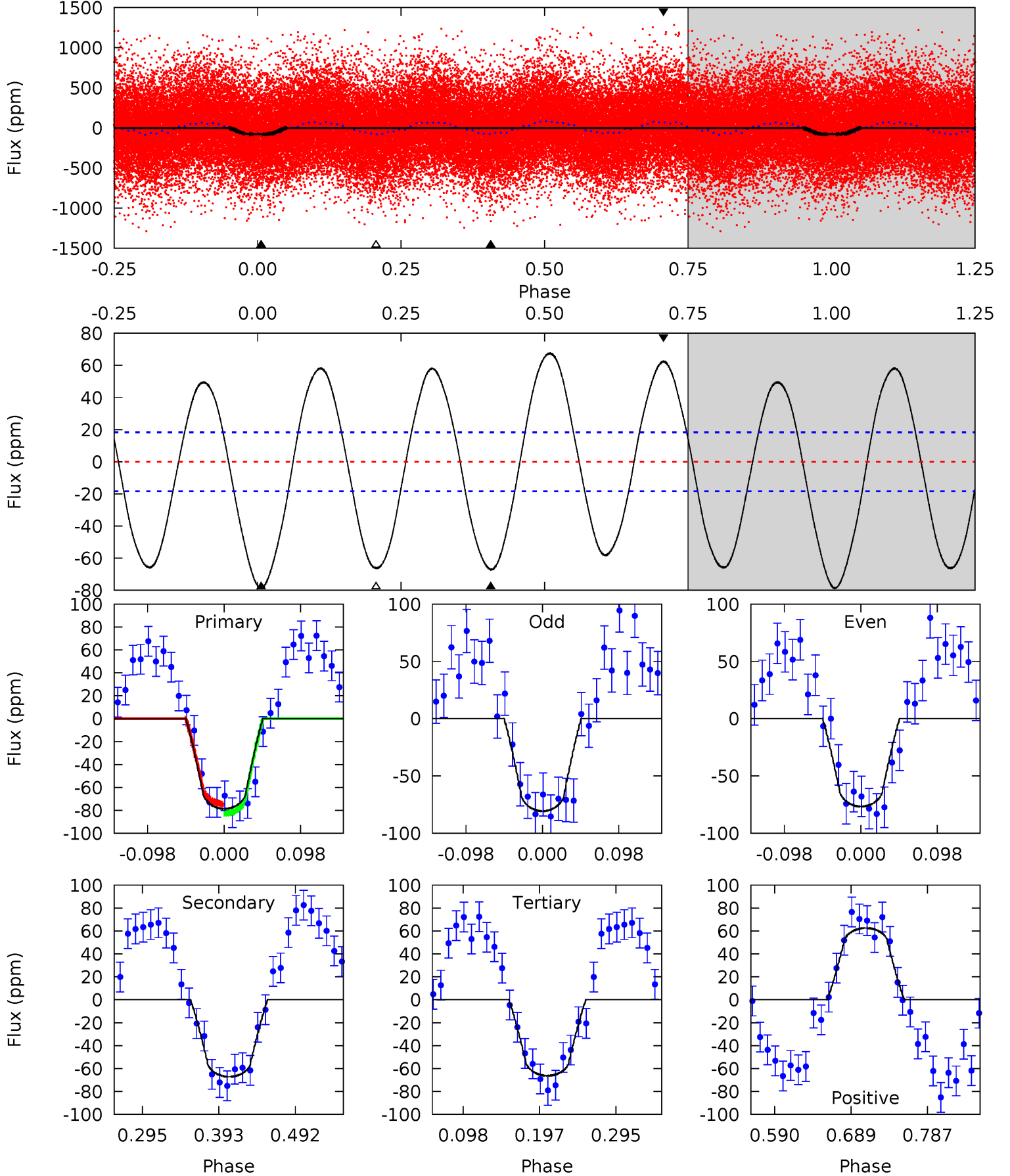
TCE 009242383-01 P= 0.885823 Days $T_0=132.045212$ (BKJD)



DV Model-Shift Uniqueness Test

009242383-01, P = 0.885813 Days, E = 131.160938 Days

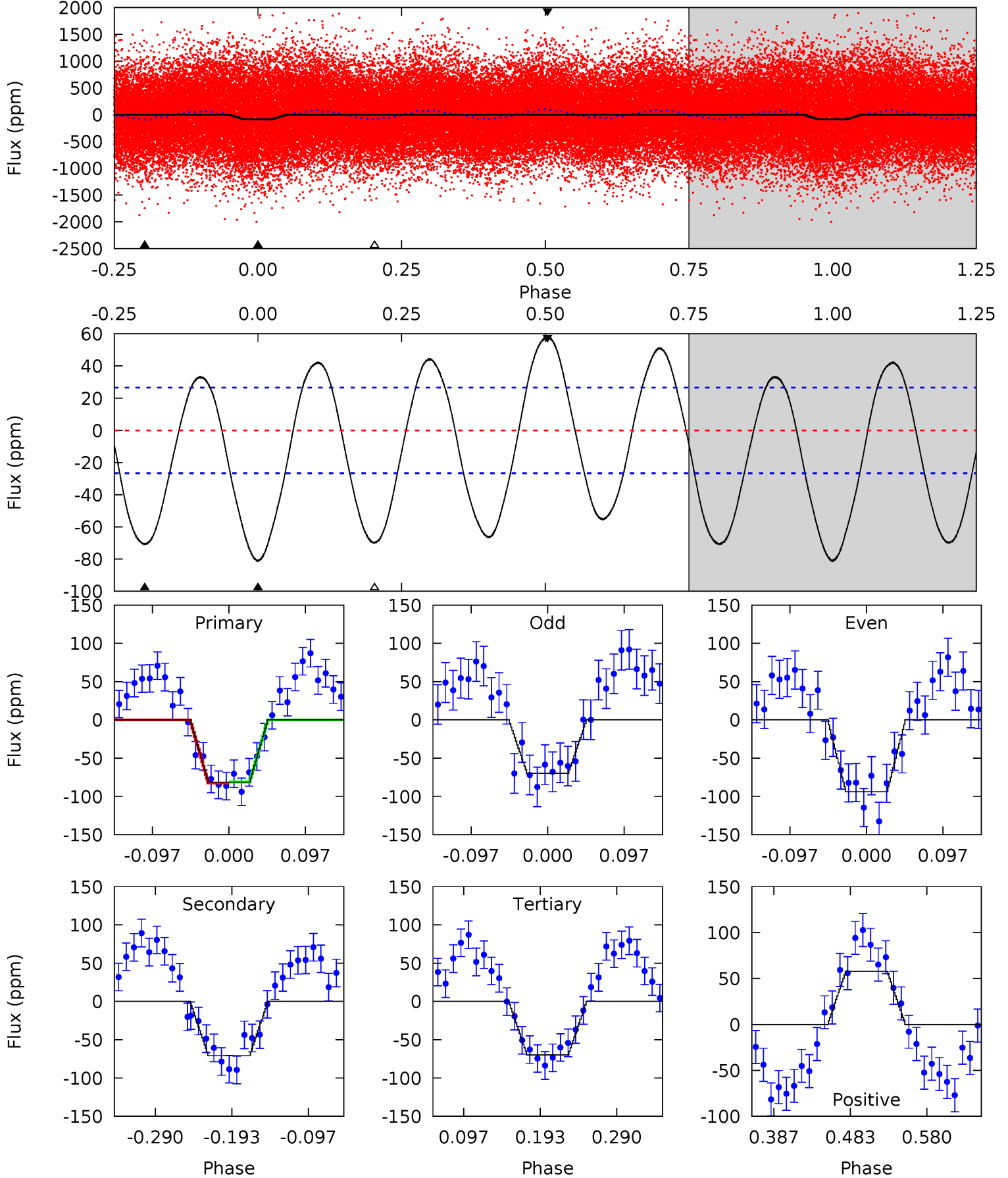
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	16.7	16.5	15.6	4.57	1.65	11.0	3.09	4.01	0.23	1.15	0.50	0.95	0.46	1.04



Alt Model-Shift Uniqueness Test

009242383-01, P = 0.885823 Days, E = 131.159389 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	12.2	12.0	9.94	4.57	1.66	6.95	1.98	4.03	0.19	2.23	2.06	0.86	0.42	0.10



Stellar Parameters For KIC 009242383

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6388^{+520}_{-1562}	$2.746^{+0.172}_{-0.258}$	$0.070^{+0.200}_{-0.550}$	$13.089^{+3.447}_{-5.171}$	$3.479^{+0.113}_{-2.154}$	$0.002^{+0.003}_{-0.001}$
	+8%/-24%	+6%/-9%	+286%/-786%	+26%/-40%	+3%/-62%	+116%/-54%
Source	PHO1	FLK73	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 009242383-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-67 ± 4	$10.70^{+3.46}_{-3.03}$	8591^{+1244}_{-2109}	-4432^{+9310}_{-2000}	$0.227^{+0.181}_{-0.096}$
Alt.	-71 ± 6	$12.78^{+3.54}_{-3.31}$	8487^{+1203}_{-2028}	-5248^{+2745}_{-1581}	$0.169^{+0.124}_{-0.065}$

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 $A_{obs} \gg 1.0$

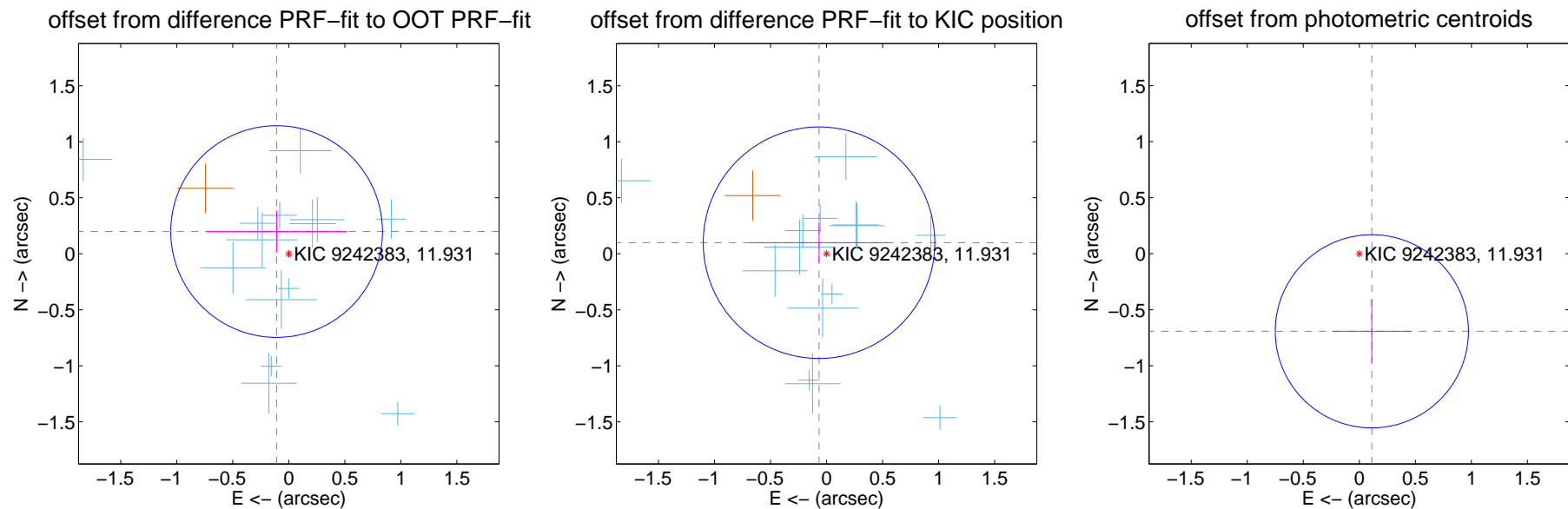
DV Centroid Data

Supplemental centroid analysis for 009242383-01. **Kepler magnitude: 11.93.** Transit SNR 11.86

There are 14 quarters with good PRF difference image offsets

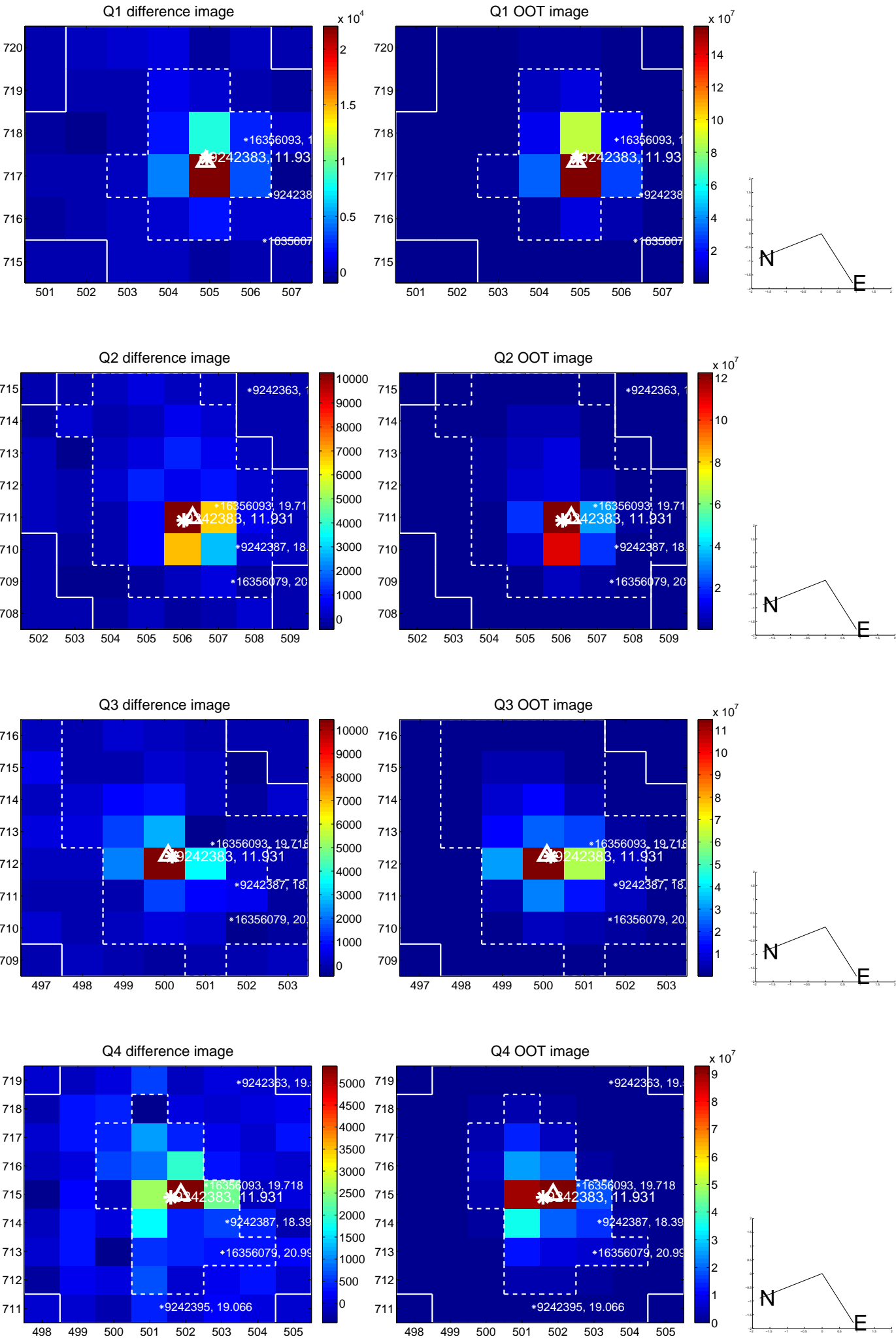
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.226 ± 0.315	0.72	0.109 ± 0.629	0.199 ± 0.187
PRF-fit source offset from KIC position	0.120 ± 0.344	0.35	0.067 ± 0.623	0.099 ± 0.181
photometric centroid source offset	0.70 ± 0.29	2.44	-0.11 ± 0.35	-0.69 ± 0.29

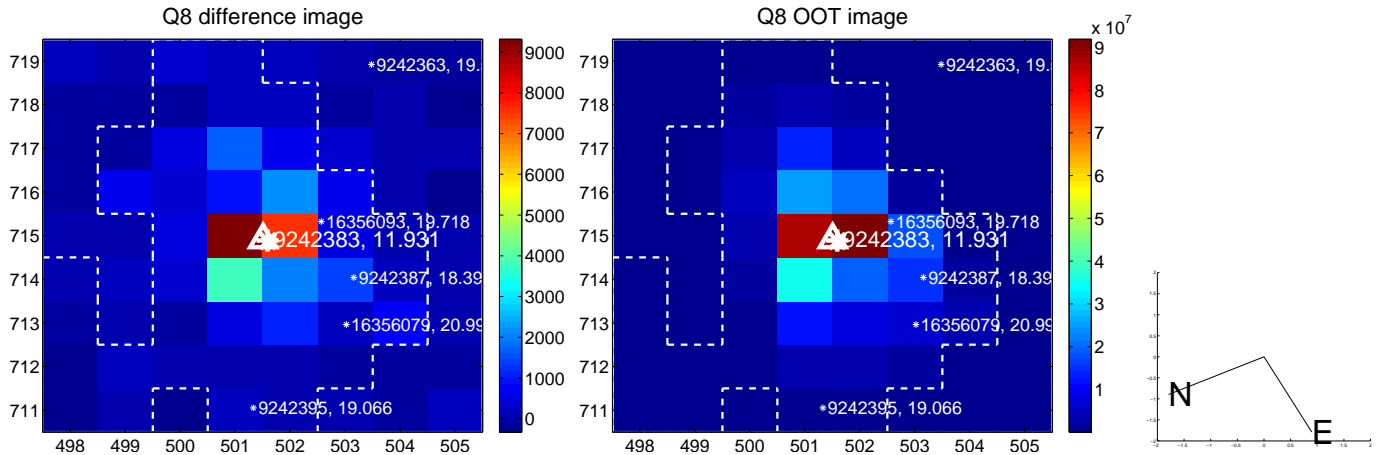
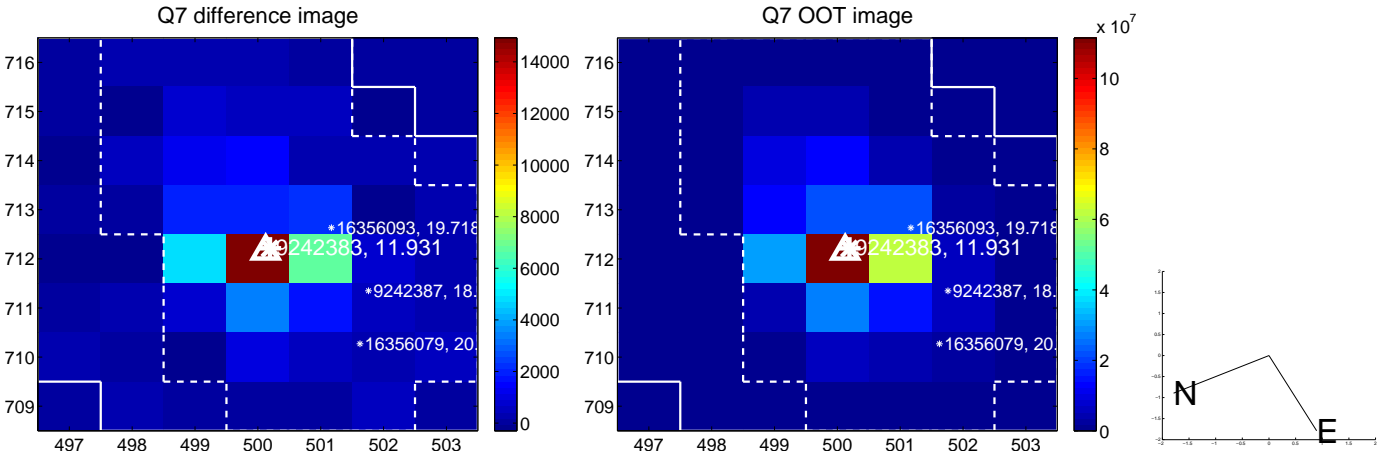
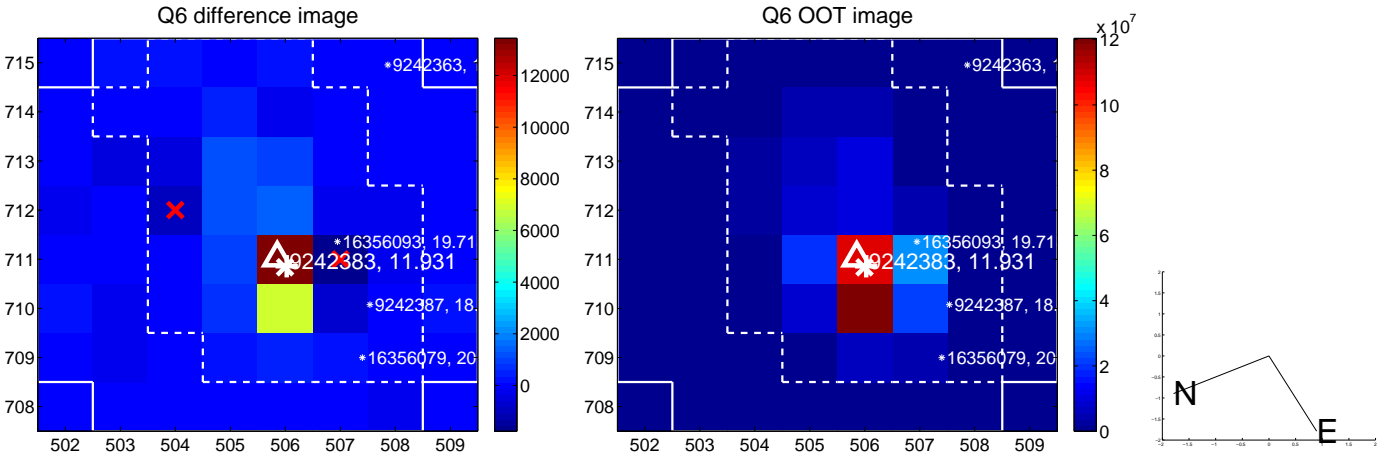
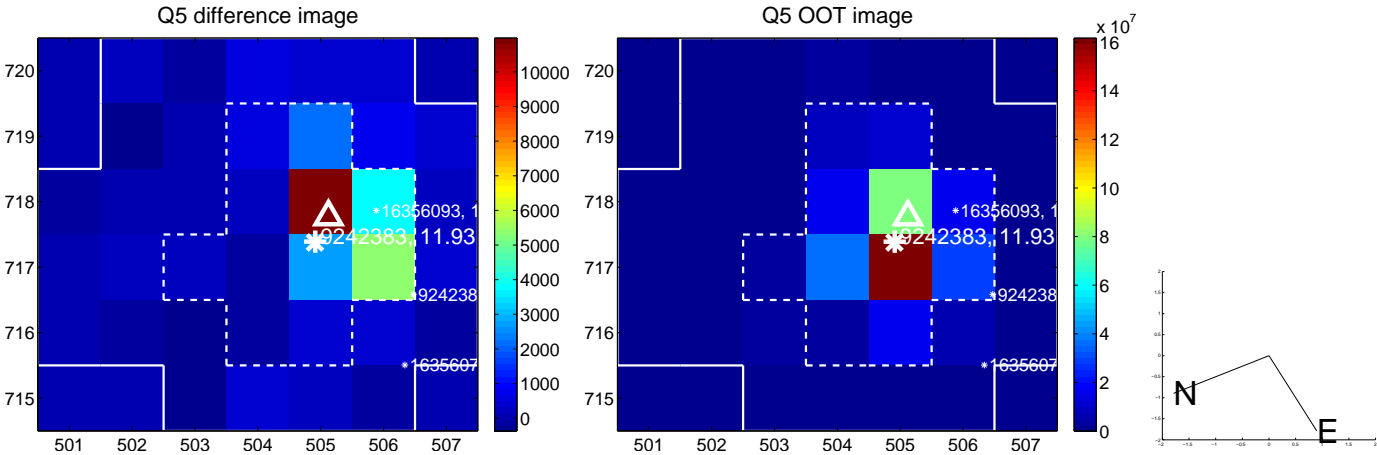


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

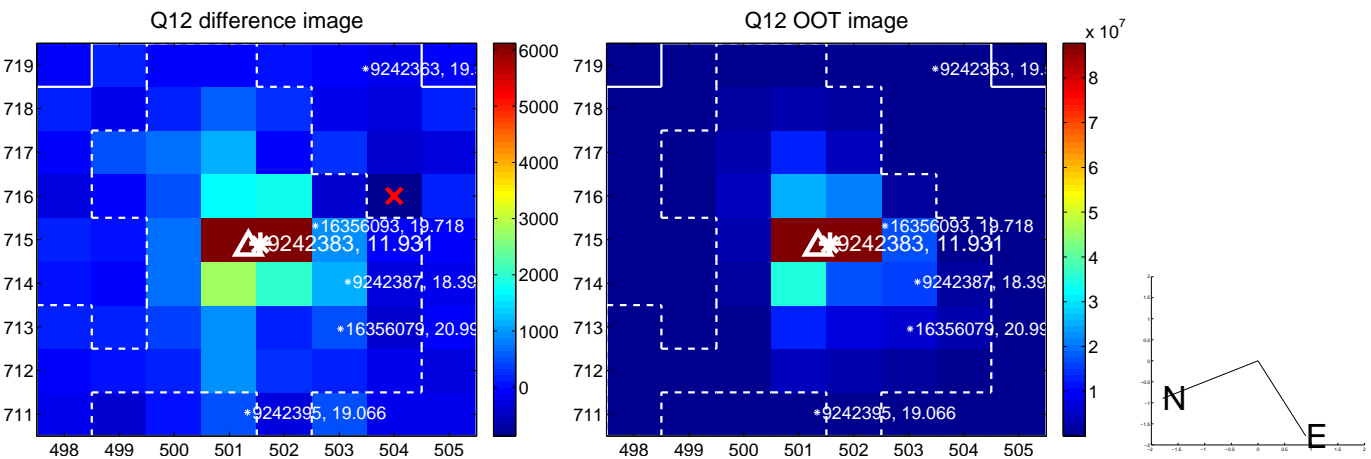
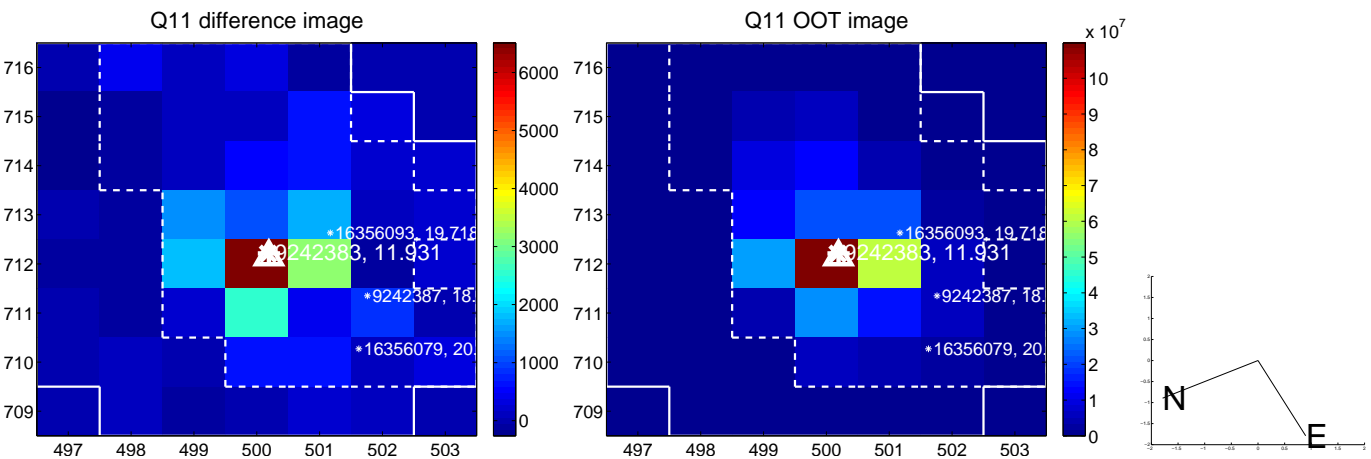
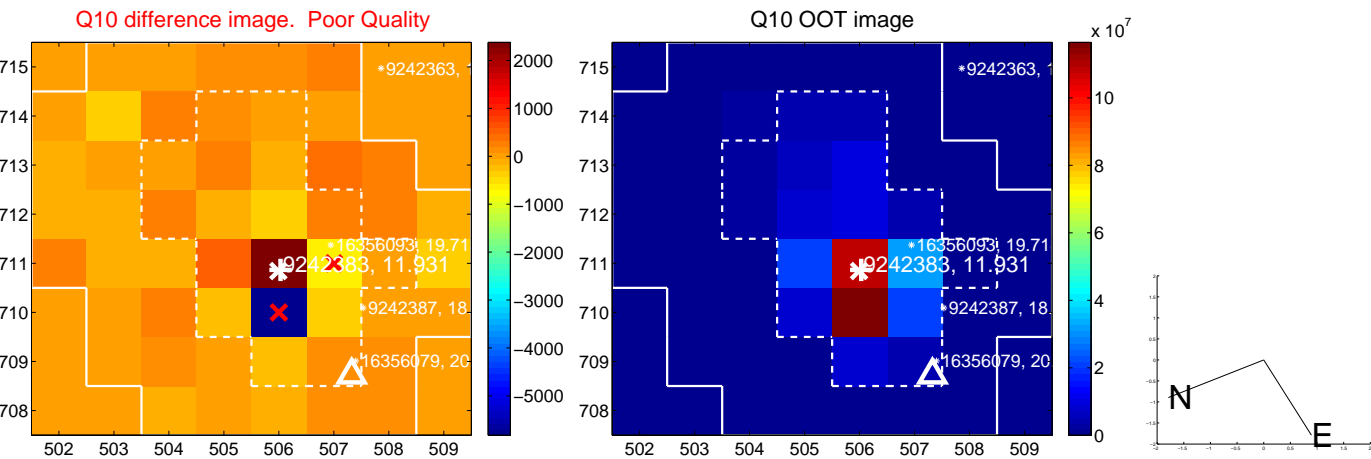
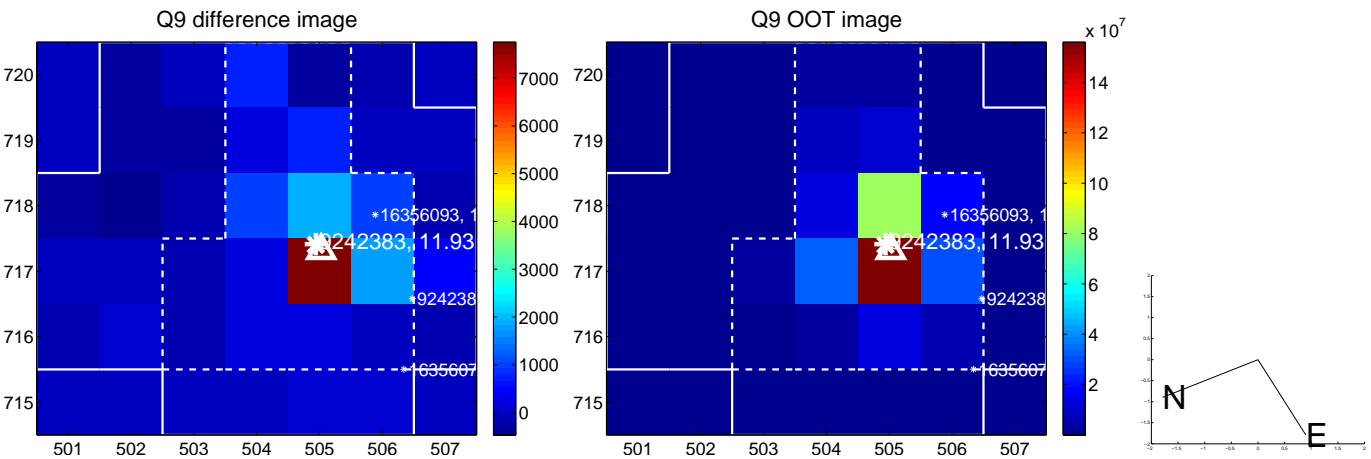
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



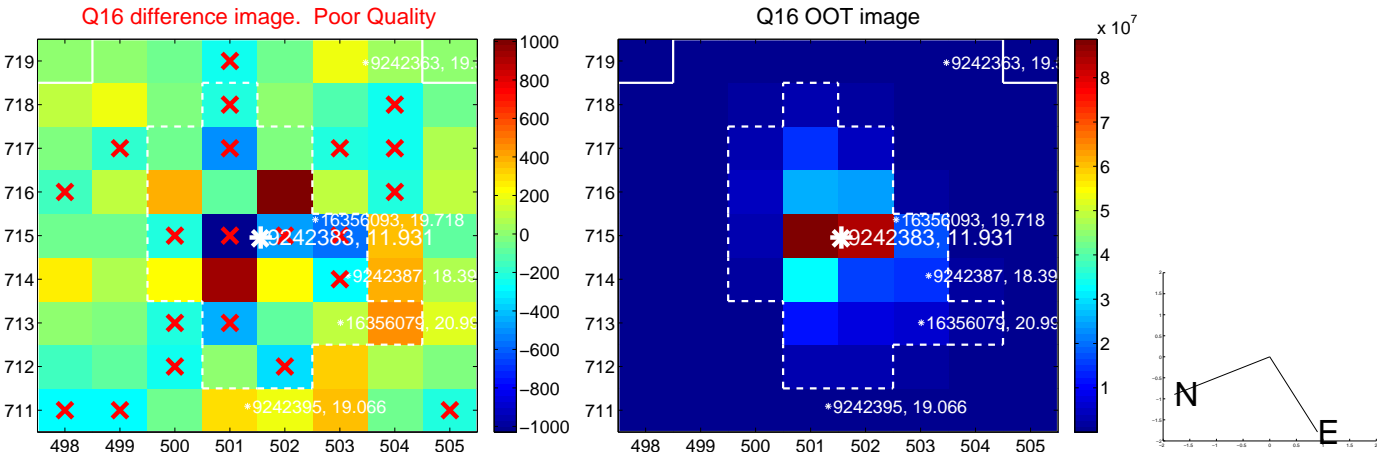
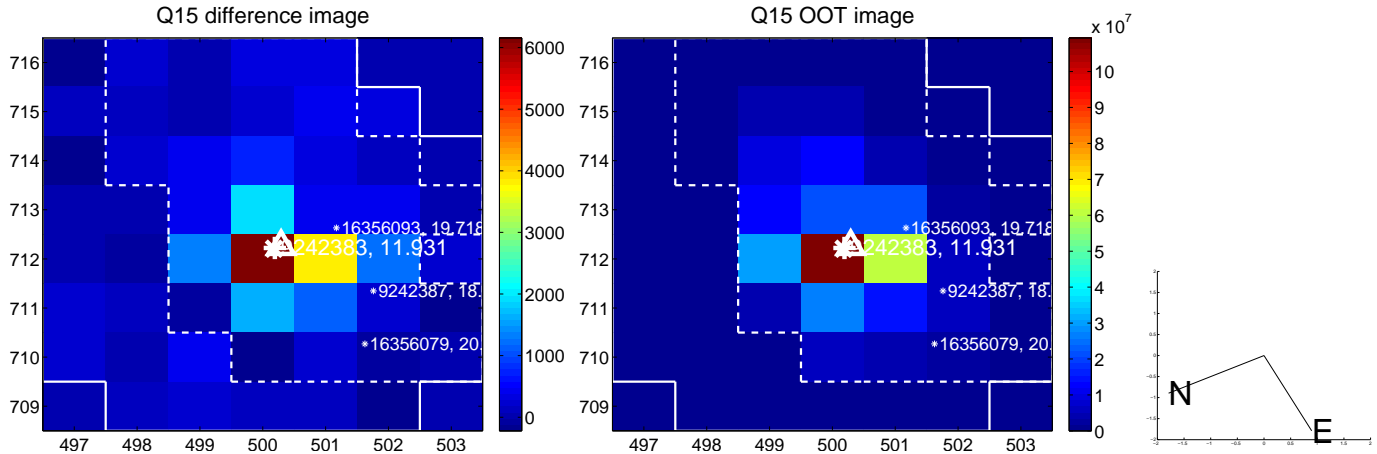
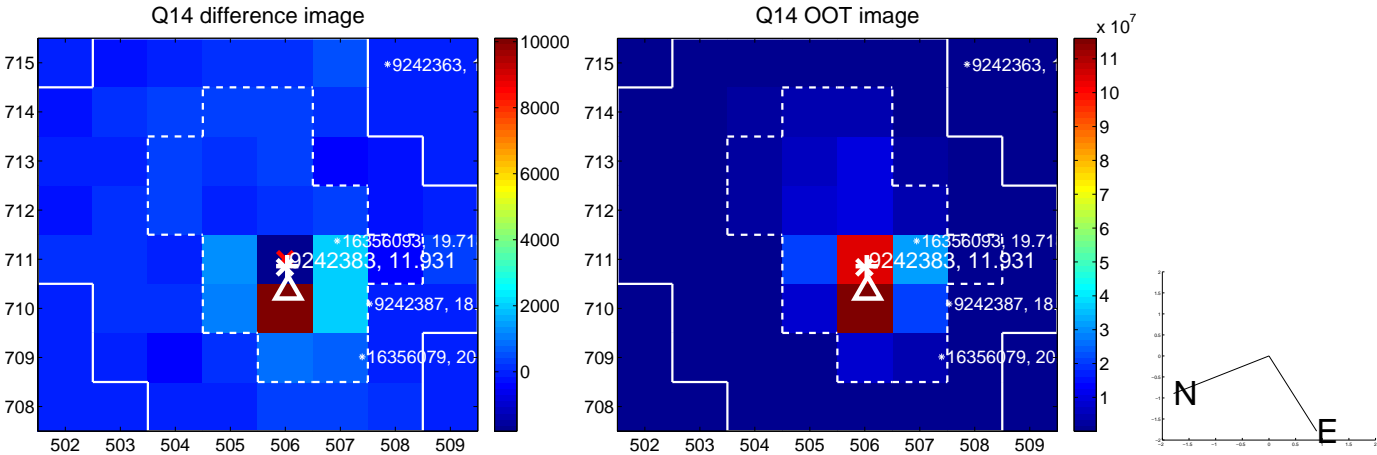
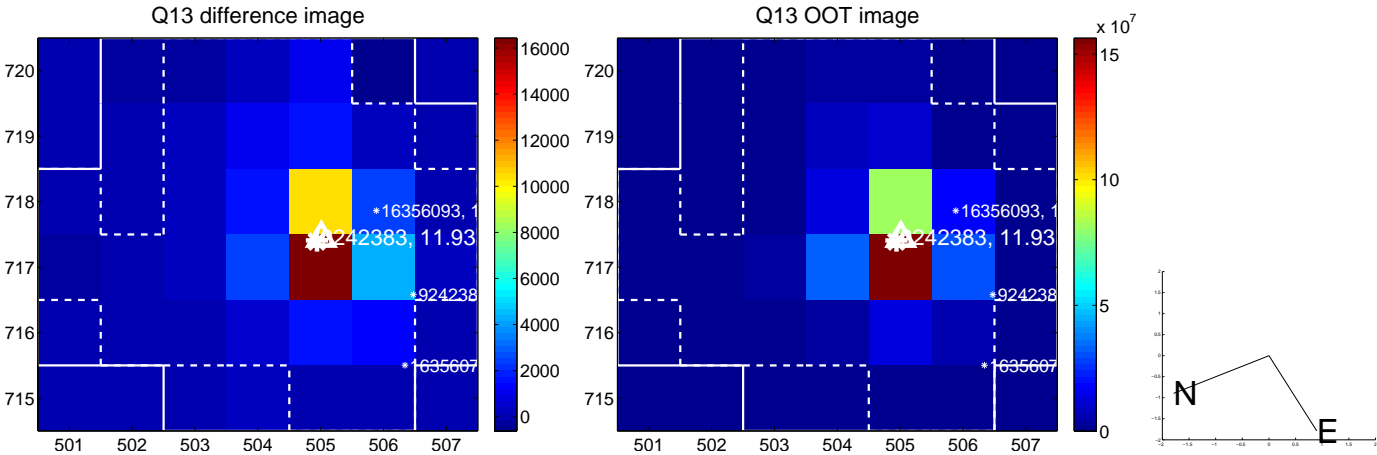
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



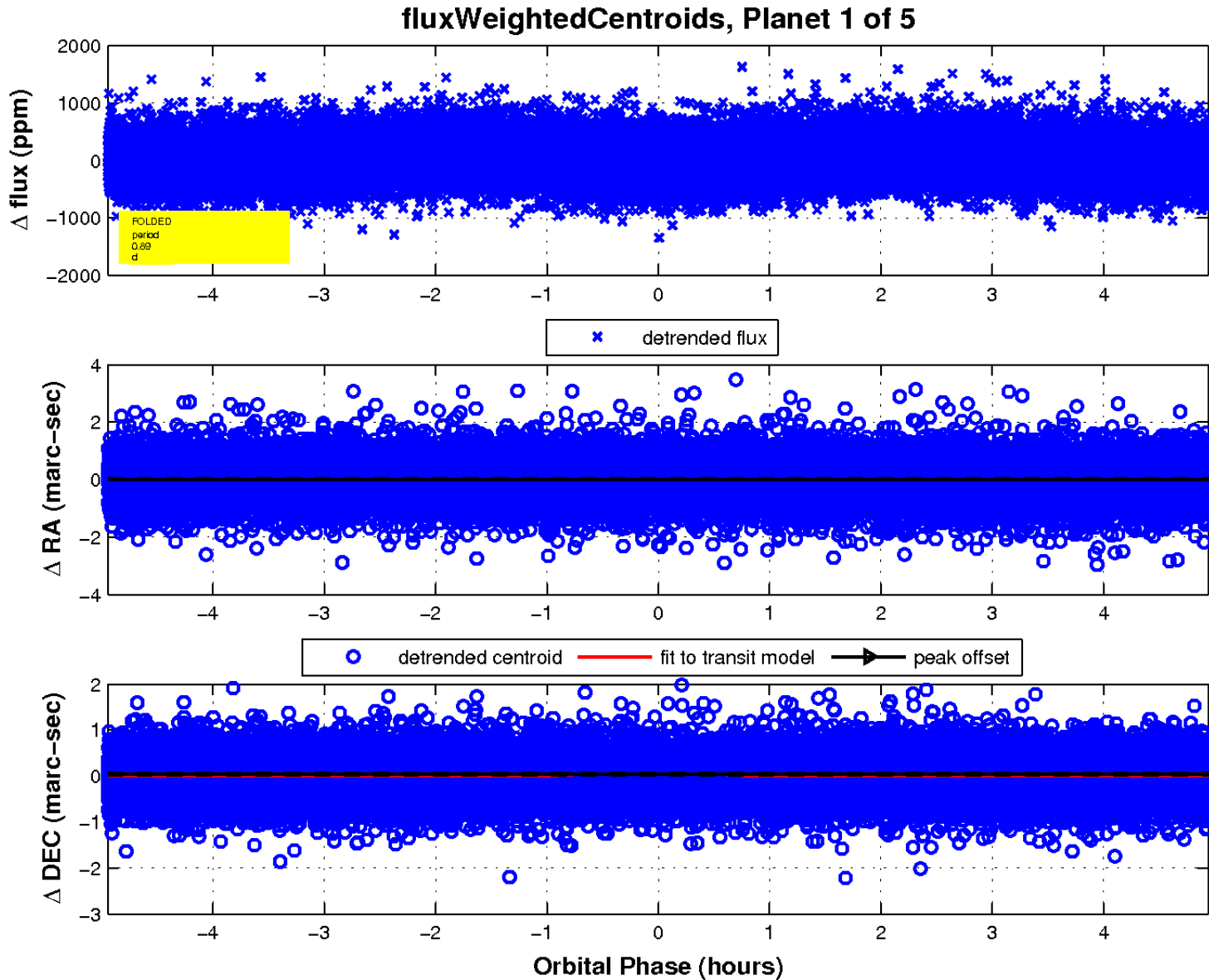
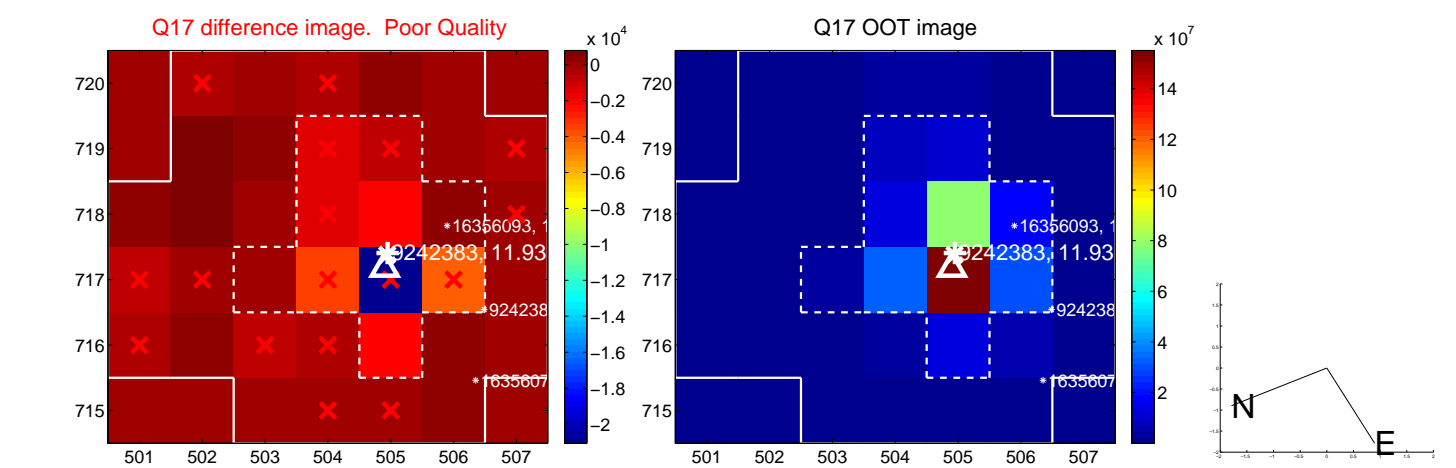
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

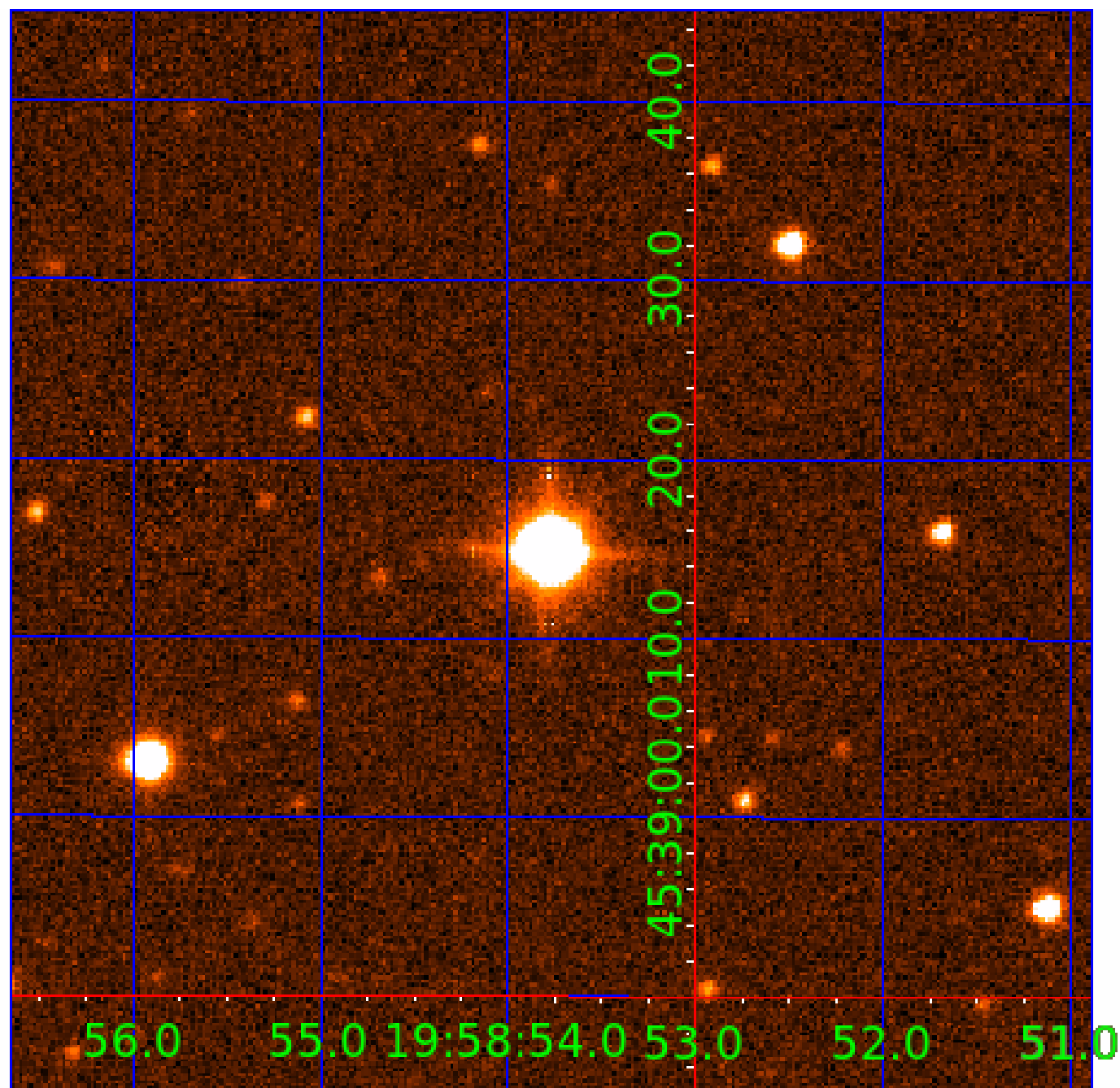


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009242383

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})
009242383-01	OBS	No	0.885813	132.046751	61.2	1.647	14.3	11.9	13.09	6388	10.53	0.00
009242383-02	OBS	No	0.531494	131.688716	70.6	2.220	16.2	15.8	13.09	6388	12.87	0.00
009242383-03	OBS	No	0.531476	131.864103	57.3	3.078	14.6	9.6	13.09	6388	10.62	0.00
009242383-04	OBS	No	0.542435	131.970309	196.6	1.500	10.7	12.8	13.09	6388	18.65	0.00
009242383-05	OBS	No	4.671724	134.967245	309.2	1.500	9.9	-1.0	13.09	6388	23.19	37181.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009242383-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
009242383-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV
009242383-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_NOFITS

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

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

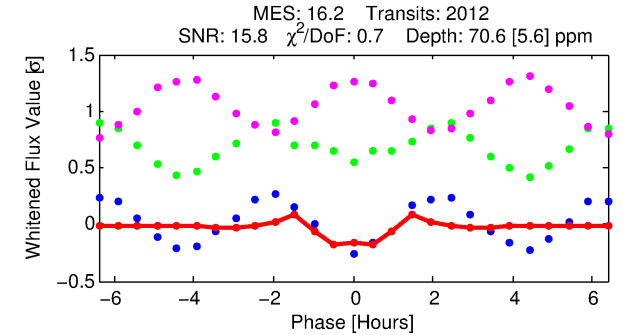
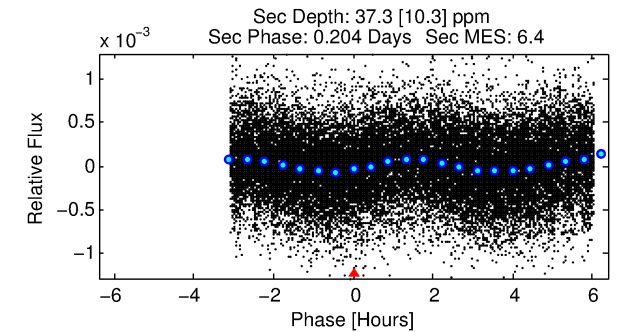
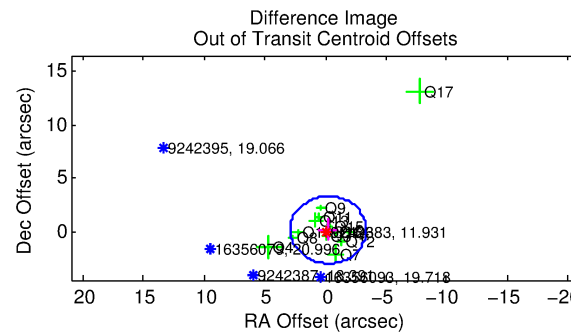
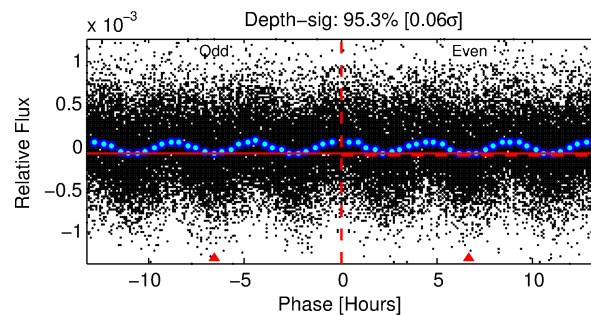
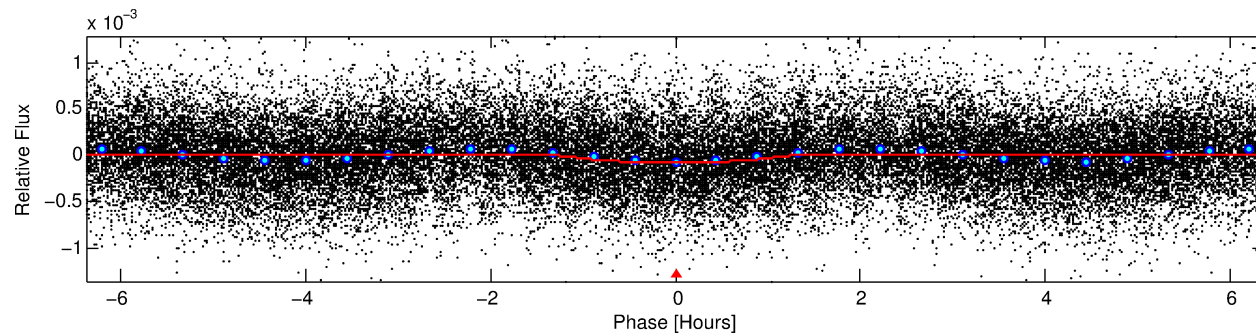
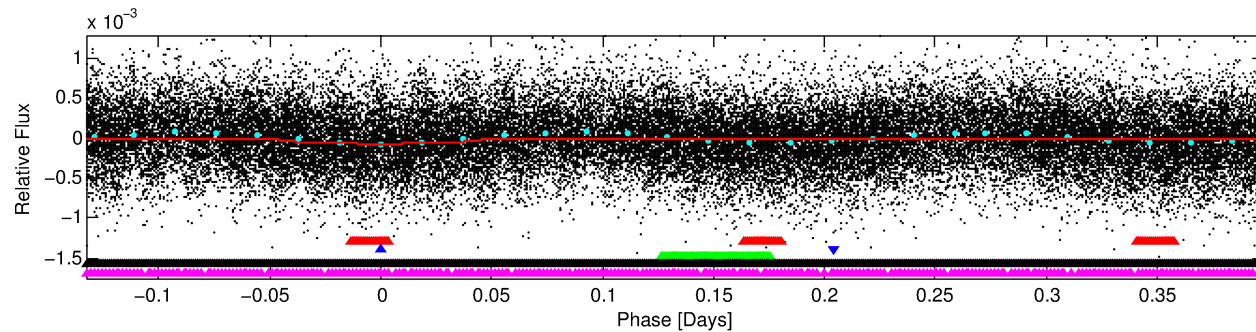
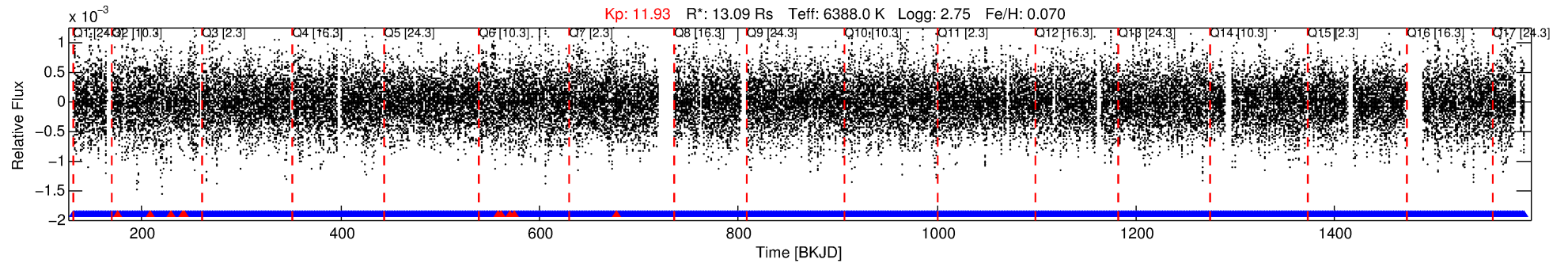
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009242383-02

No Significant Match Found

DV One-Page Summary

KIC: 9242383 Candidate: 2 of 5 Period: 0.531 d



DV Fit Results:

Period = 0.53149 [0.00001] d
Epoch = 131.6887 [0.0010] BKJD
Rp/R* = 0.0090 [0.0021]
a/R* = 1.26 [0.61]
b = 0.90 [0.29]
Seff = N/A
Teq = N/A
Rp = 12.87 [5.91] Re
a = N/A
Ag = N/A
Teffp = N/A

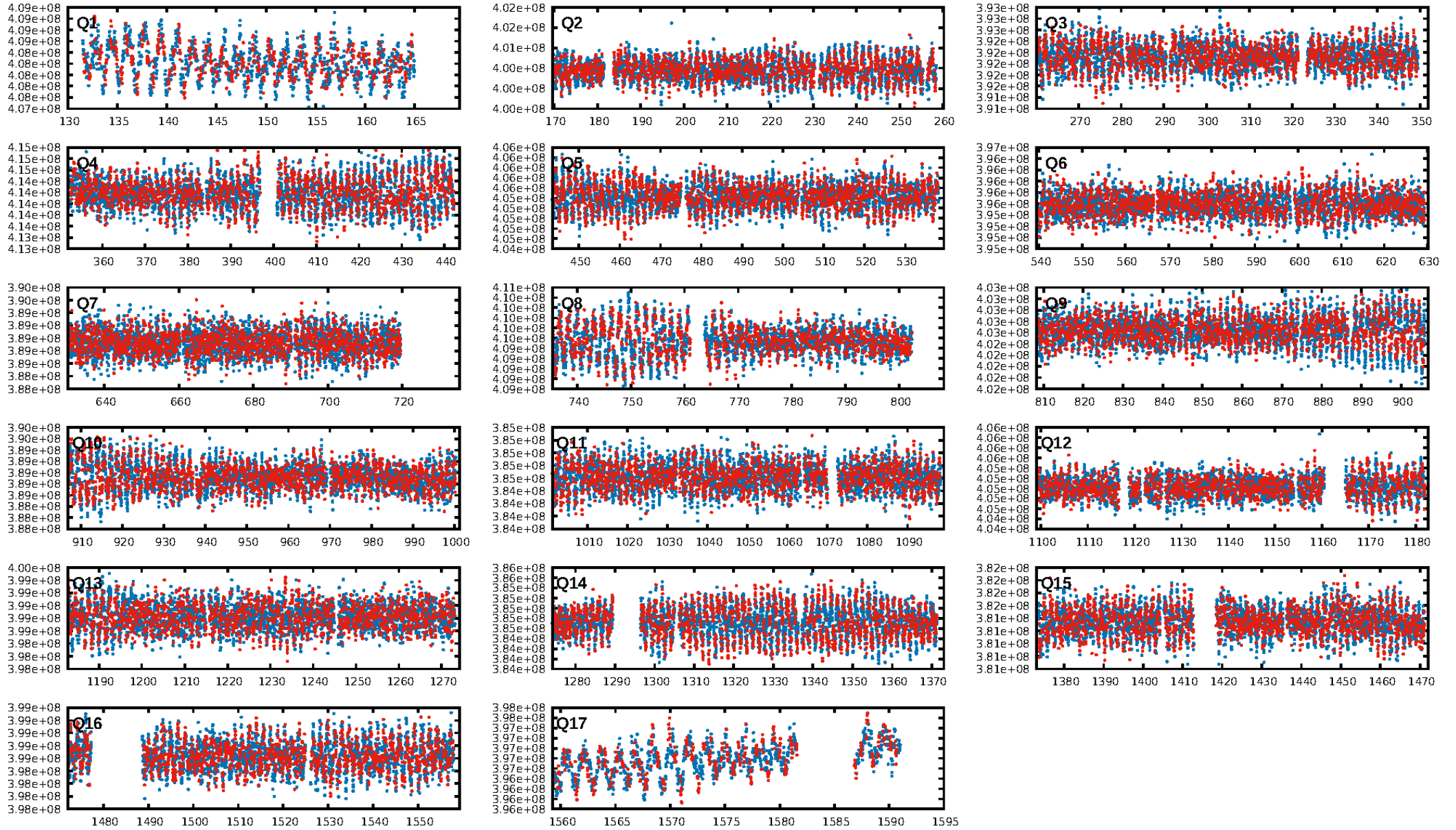
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 7.8% [0.10 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1910/1920]
GhostDiagnostic-chr: 2.689
Centroid-sig: 43.7%
Centroid-so: 0.229 arcsec [1.13 σ]
OotOffset-rm: 0.282 arcsec [0.27 σ]
KicOffset-rm: 0.253 arcsec [0.30 σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 0.00 [0/17]

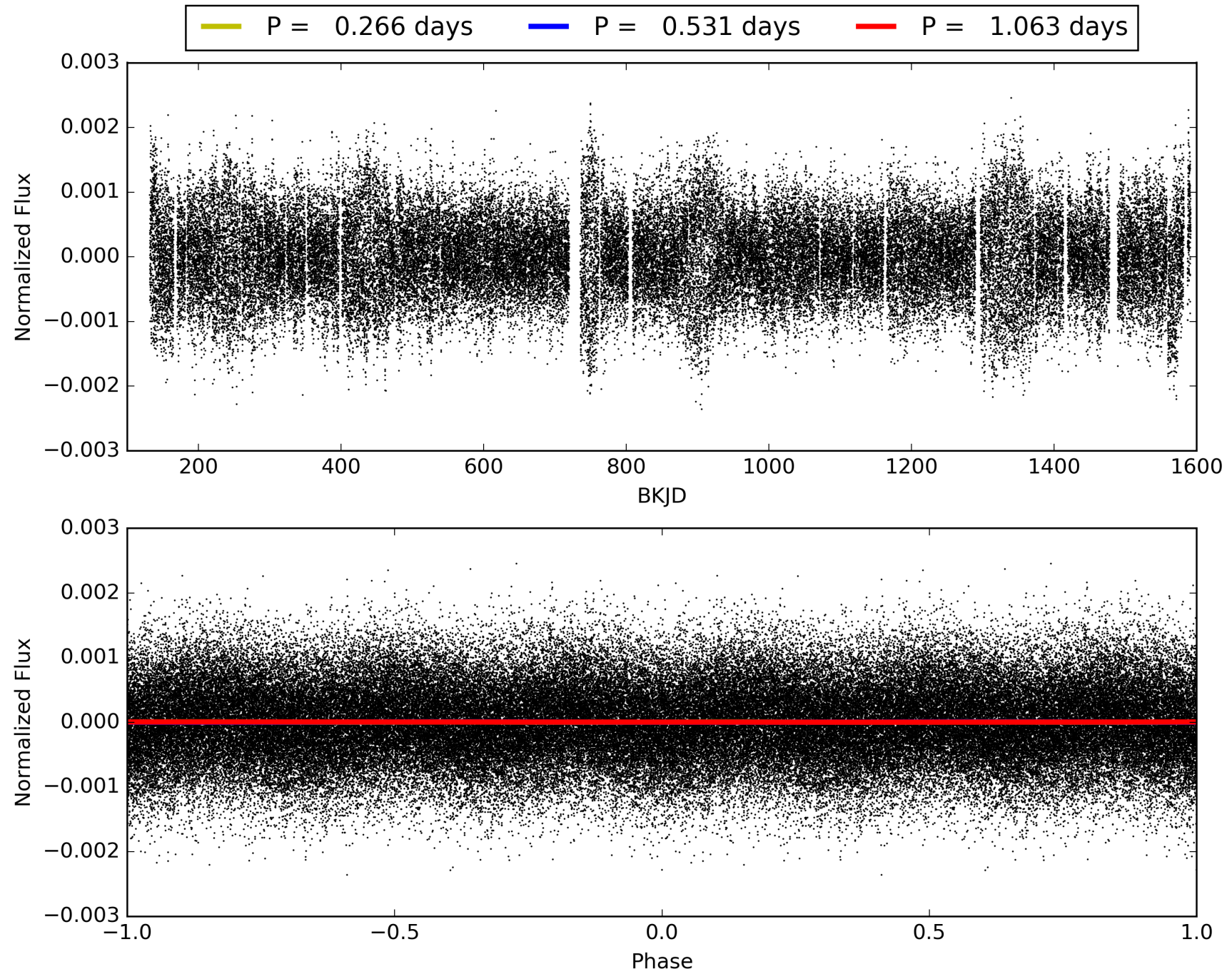
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:40:29 Z

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

TCE 009242383-02, PDC Light Curves

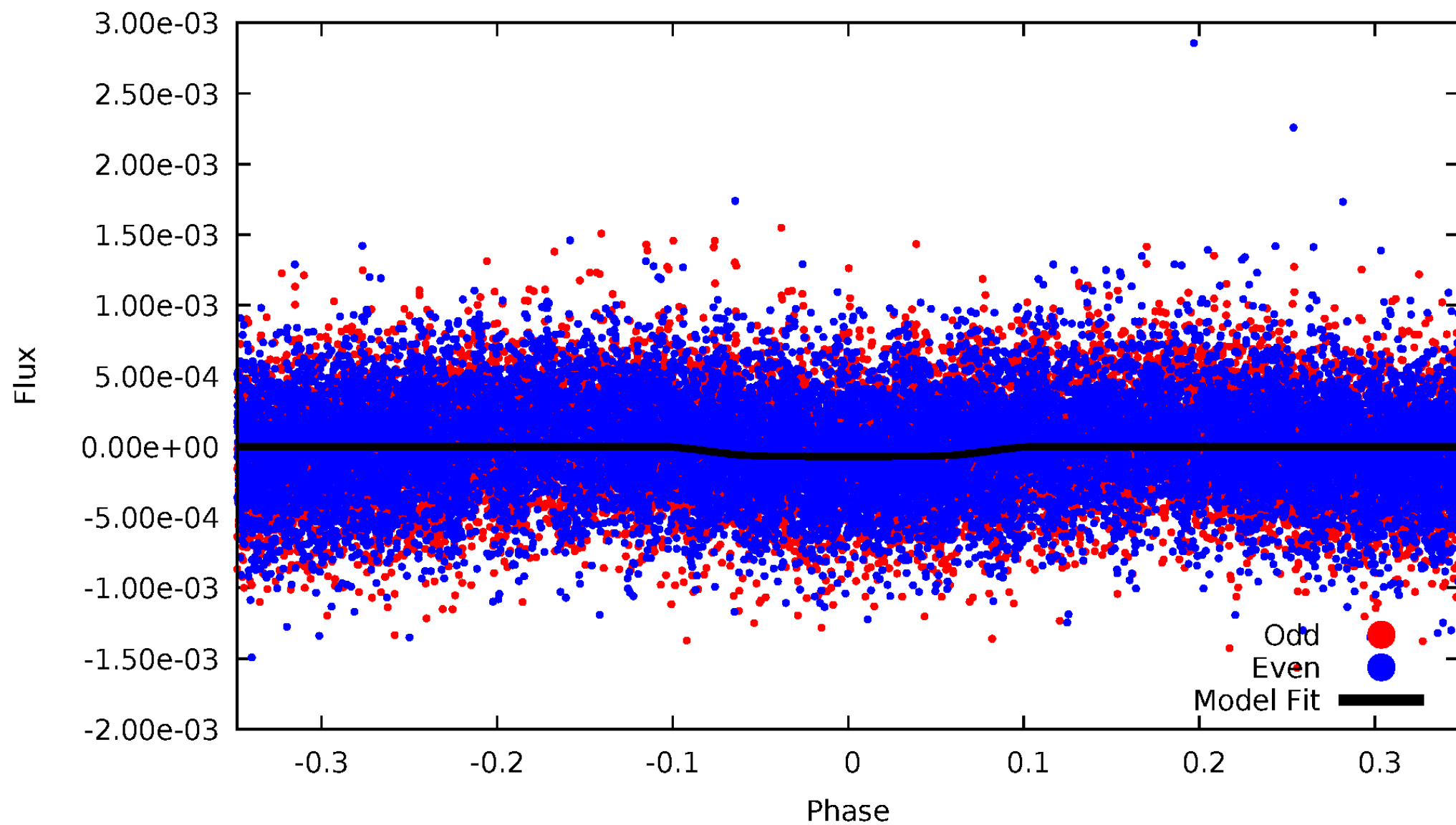


TCE 009242383-02



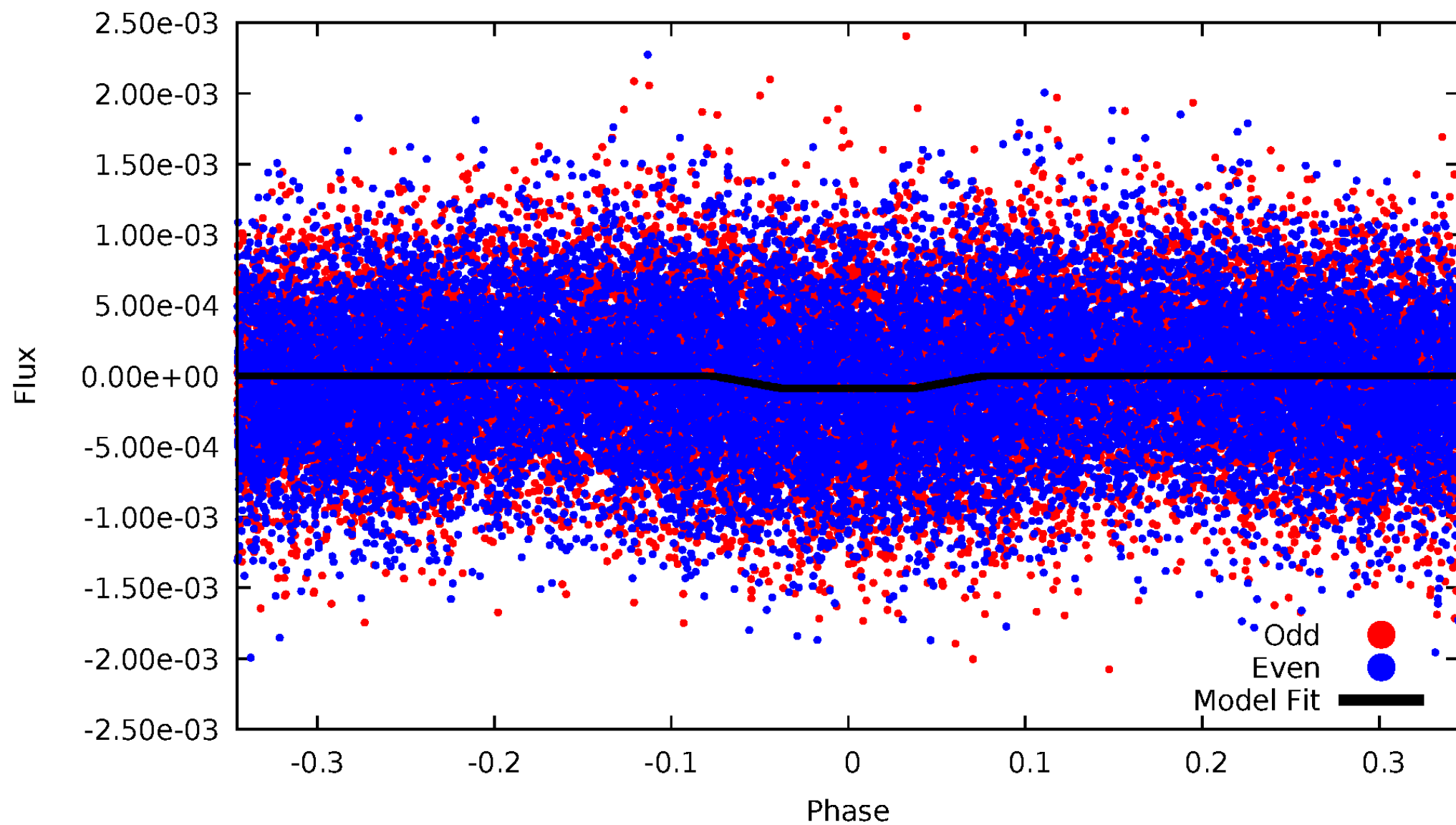
DV Odd/Even

TCE 009242383-02



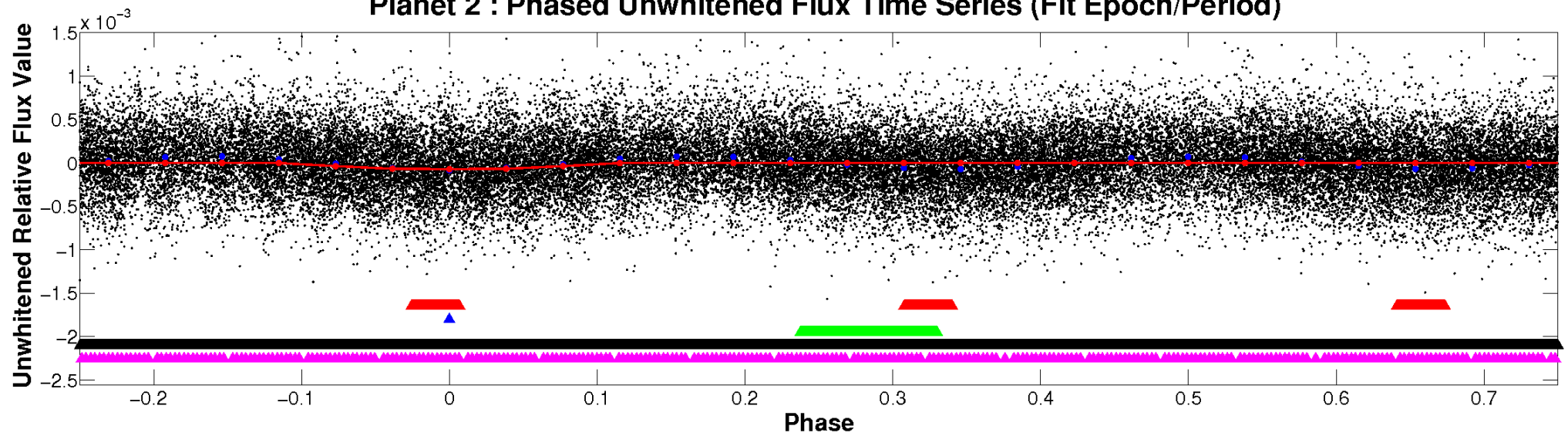
ALT Odd/Even

TCE 009242383-02

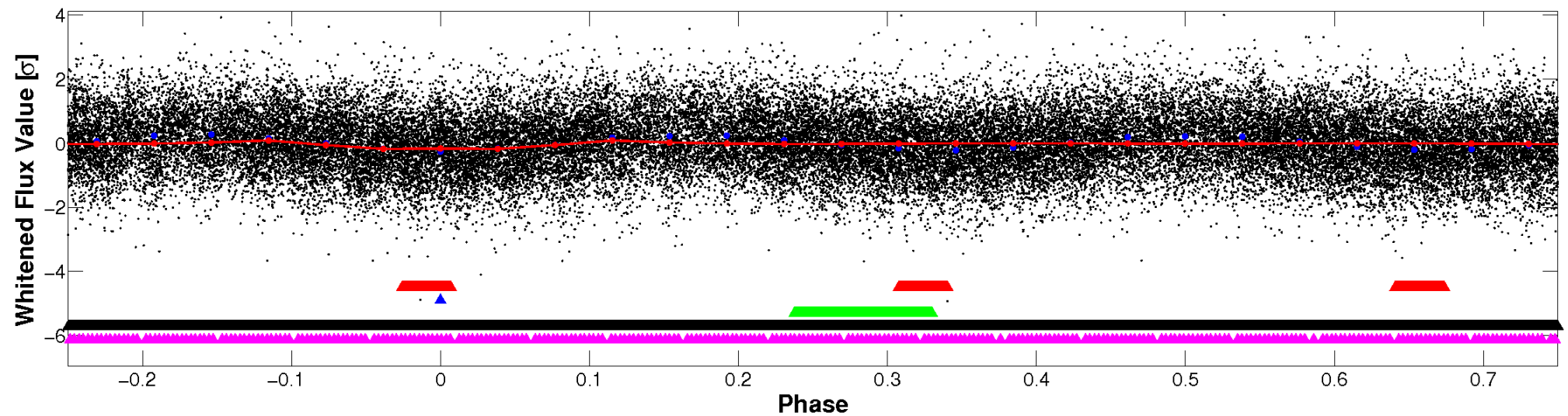


Non-Whitened Vs. Whitened Light Curve

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

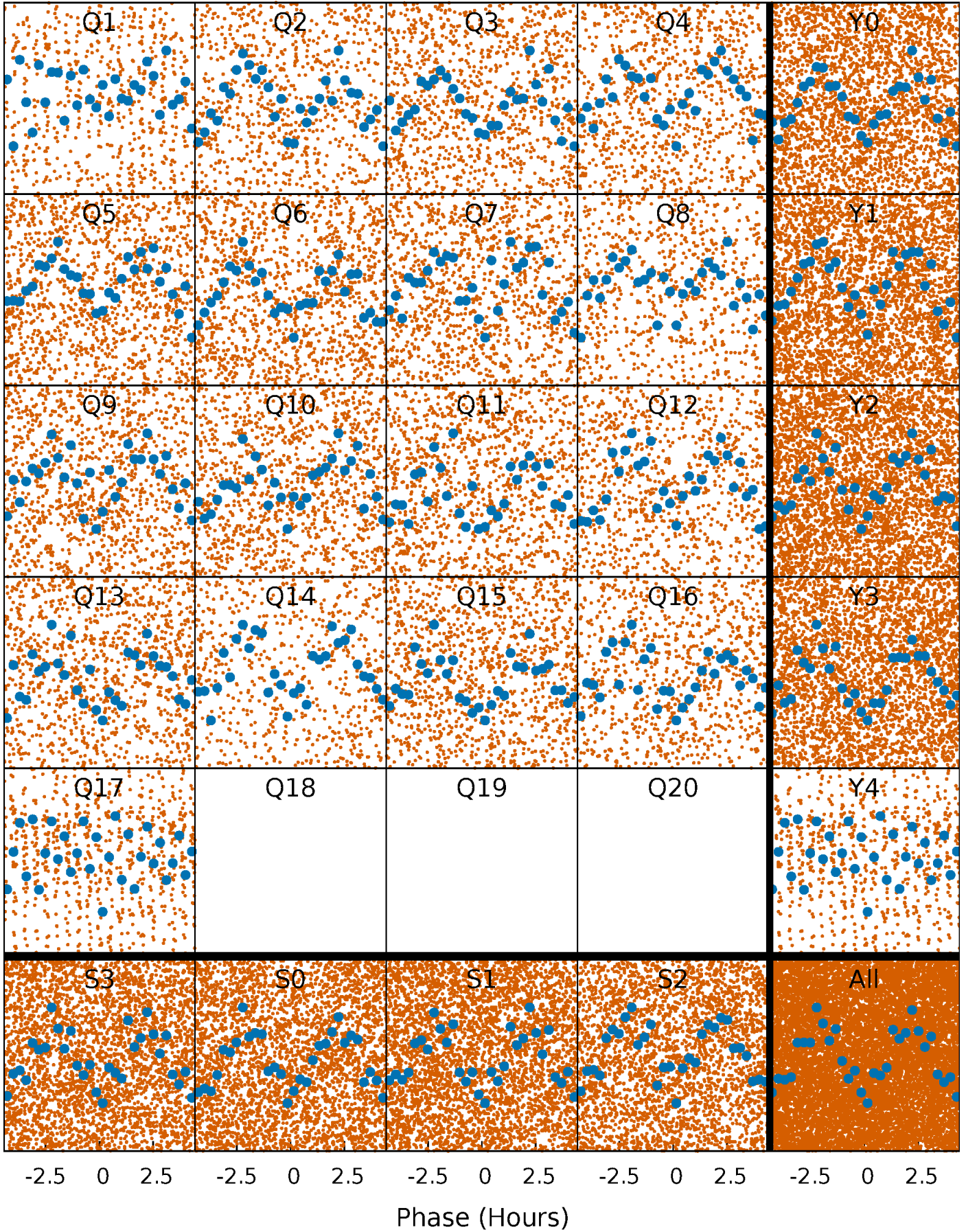


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



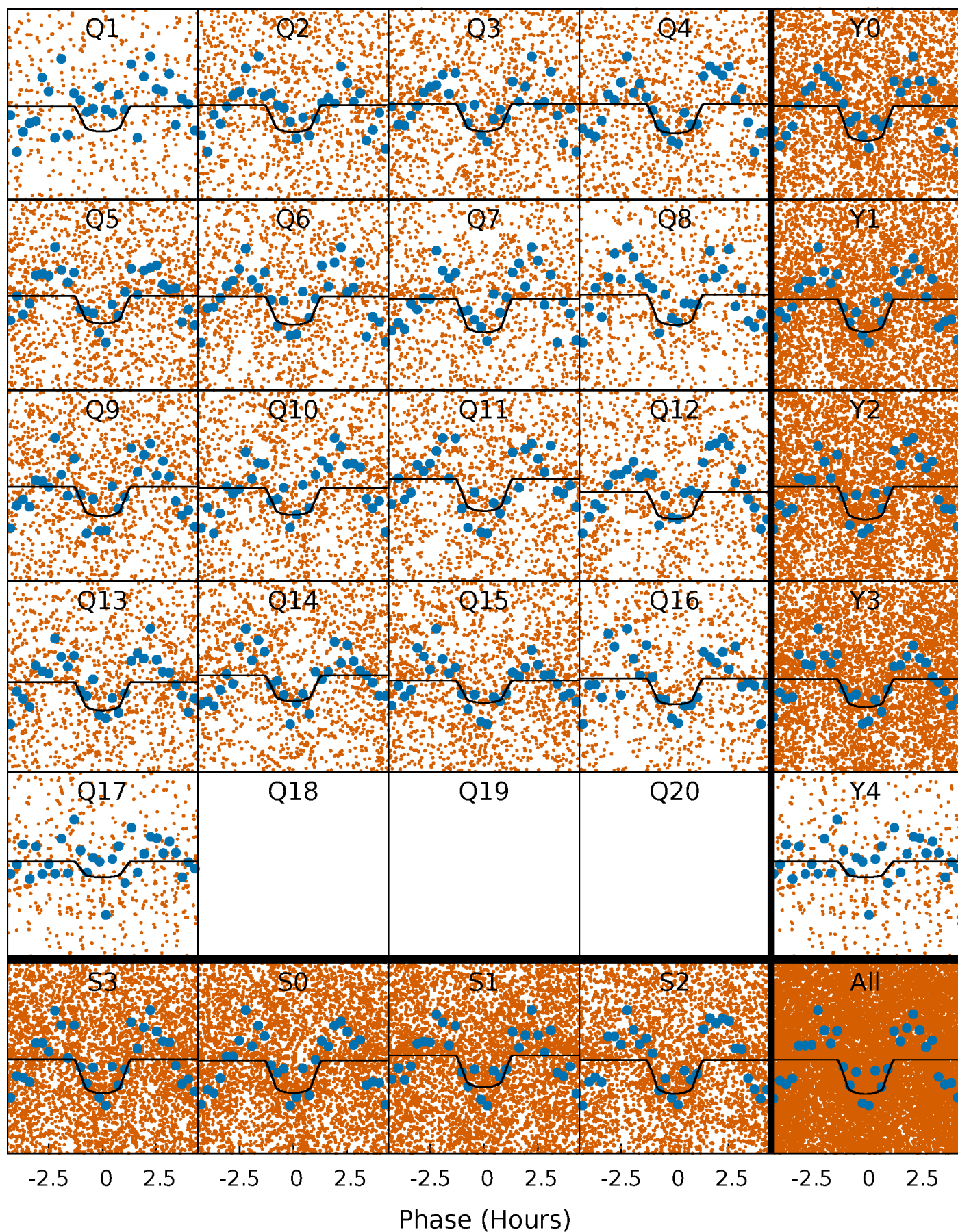
PDC Quarter-Phased Transit Curves

TCE 009242383-02 P= 0.531494 Days $T_0=131.688716$ (BKJD)



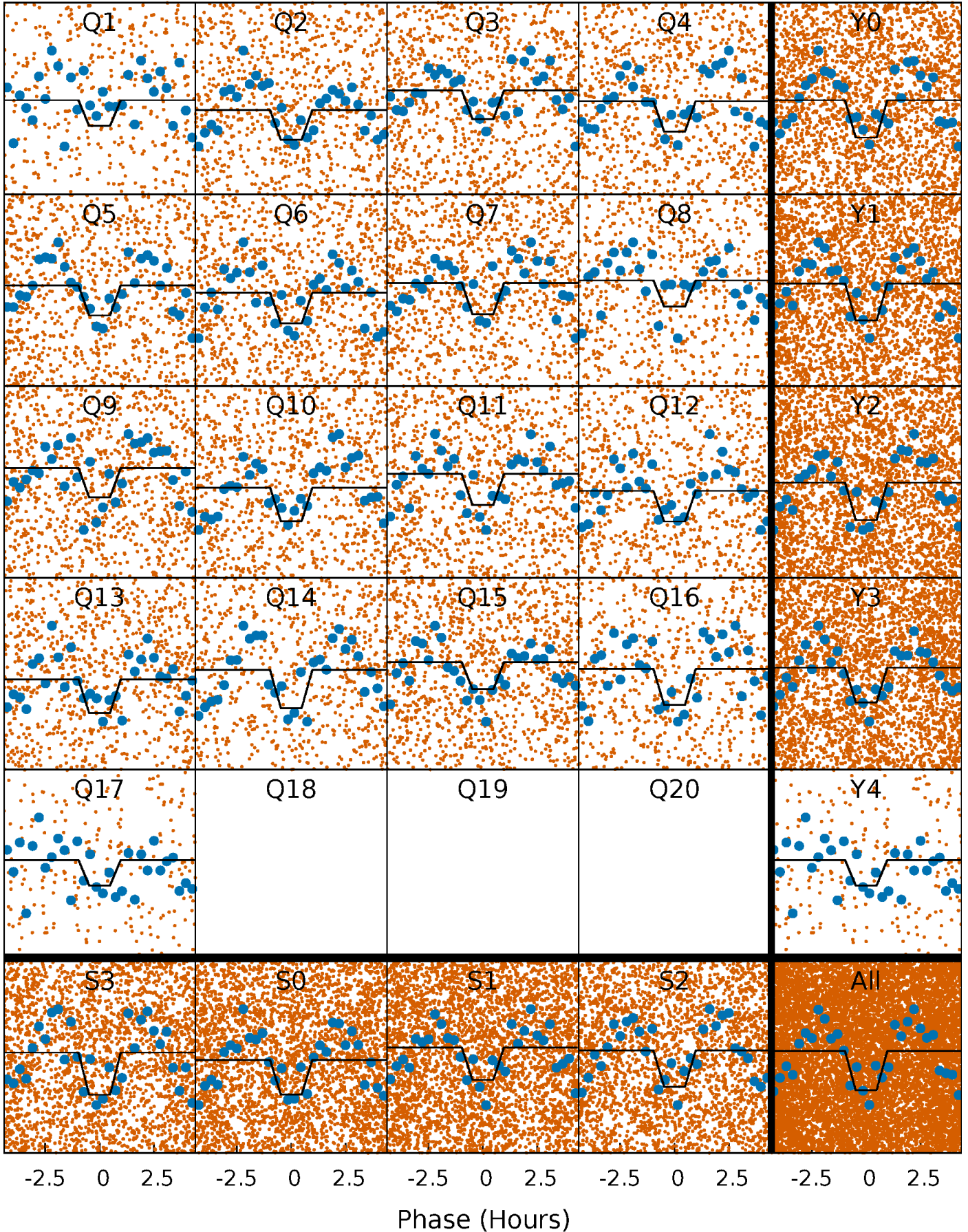
DV Quarter-Phased Transit Curves

TCE 009242383-02 P= 0.531494 Days $T_0=131.688716$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

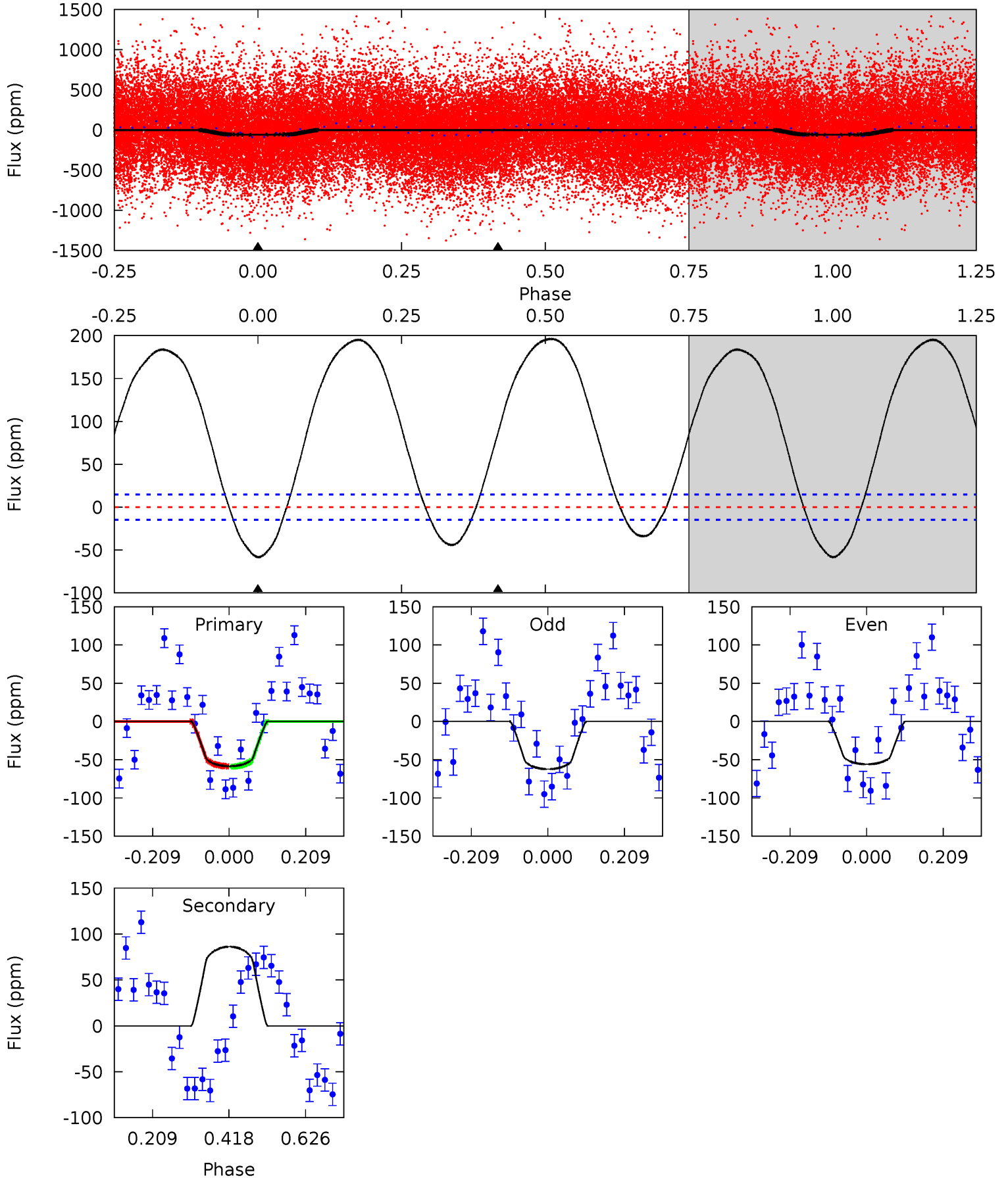
TCE 009242383-02 P= 0.531496 Days $T_0=131.687350$ (BKJD)



DV Model-Shift Uniqueness Test

009242383-02, P = 0.531494 Days, E = 131.157222 Days

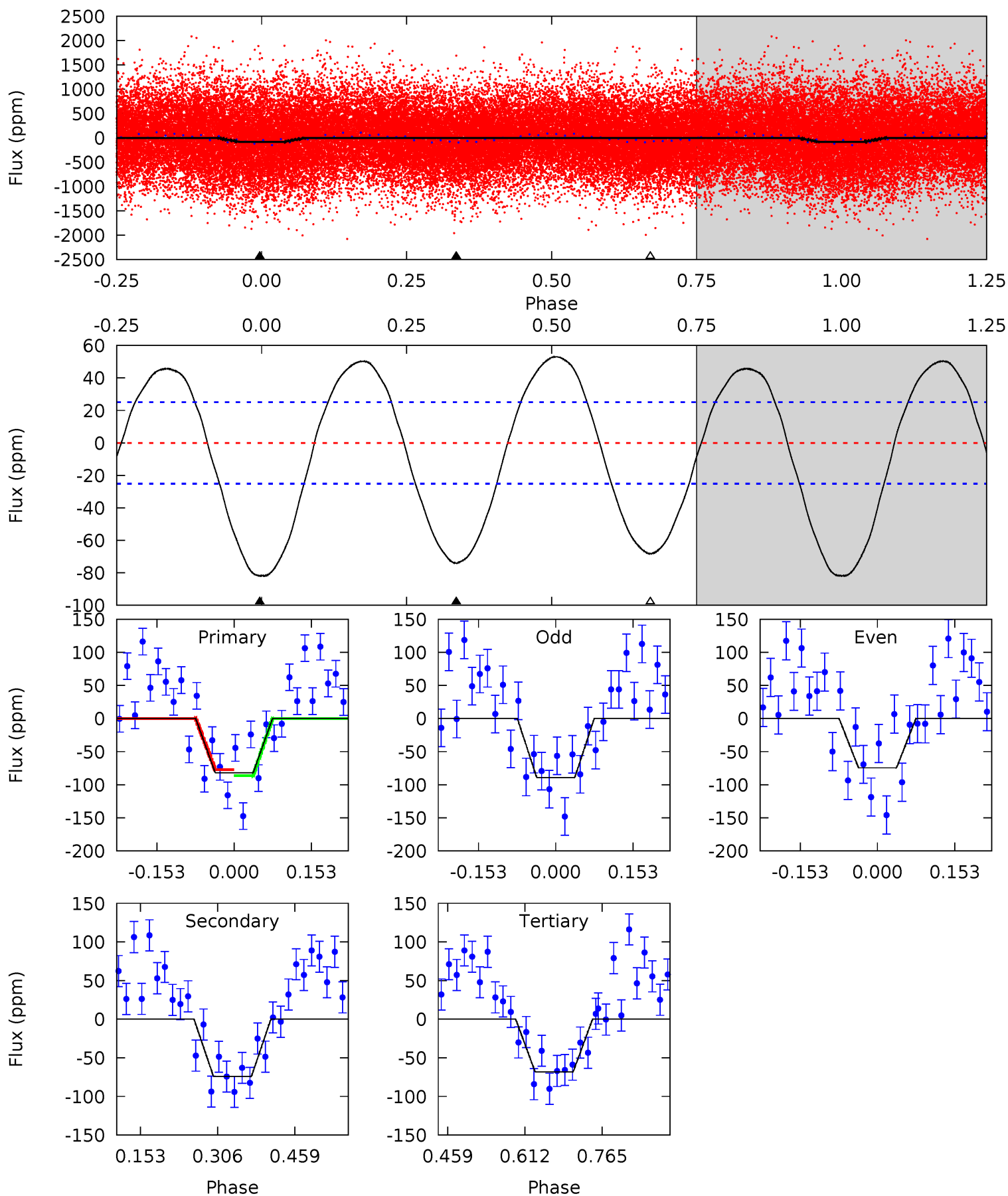
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	-25.6	0	0	4.41	1.26	18.4	17.4	17.4	-25.6	-25.6	0.95	0.79	0.77	0.07



Alt Model-Shift Uniqueness Test

009242383-02, P = 0.531496 Days, E = 131.155854 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	13.2	12.1	0	4.47	1.43	7.82	2.43	14.6	1.03	13.2	1.31	1.07	0.39	0.77



Stellar Parameters For KIC 009242383

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6388^{+520}_{-1562}	$2.746^{+0.172}_{-0.258}$	$0.070^{+0.200}_{-0.550}$	$13.089^{+3.447}_{-5.171}$	$3.479^{+0.113}_{-2.154}$	$0.002^{+0.003}_{-0.001}$
	+8%/-24%	+6%/-9%	+286%/-786%	+26%/-40%	+3%/-62%	+116%/-54%
Source	PHO1	FLK73	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 009242383-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	86 ± 3	$12.85^{+4.17}_{-3.72}$	10118^{+1475}_{-2465}	-9682^{+2915}_{-2128}	$-0.098^{+0.039}_{-0.086}$
Alt.	-74 ± 6	$13.39^{+4.30}_{-3.77}$	10196^{+1489}_{-2363}	-7633^{+2308}_{-1930}	$0.079^{+0.069}_{-0.032}$

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

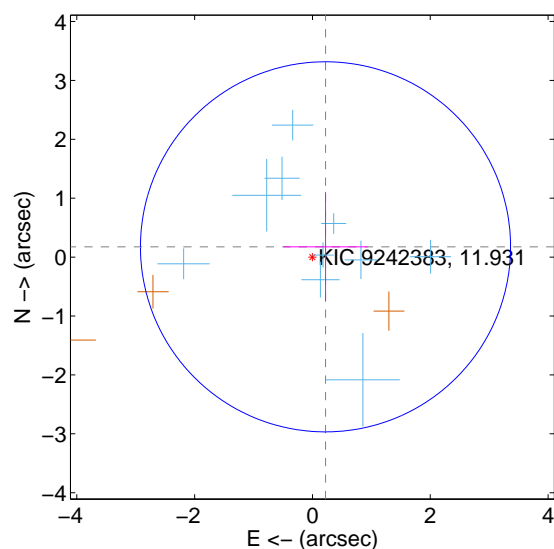
Supplemental centroid analysis for 009242383-02. **Kepler magnitude: 11.93.** Transit SNR 15.78

There are 10 quarters with good PRF difference image offsets

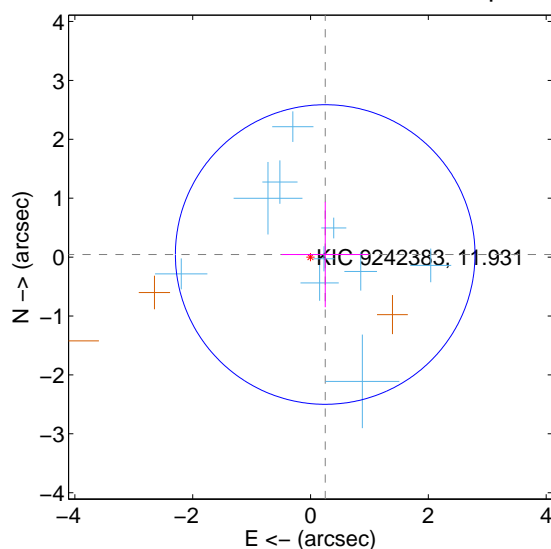
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.282 ± 1.047	0.27	-0.222 ± 0.714	0.174 ± 0.928
PRF-fit source offset from KIC position	0.253 ± 0.848	0.30	-0.249 ± 0.737	0.044 ± 0.895
photometric centroid source offset	0.23 ± 0.20	1.13	0.23 ± 0.20	-0.03 ± 0.17

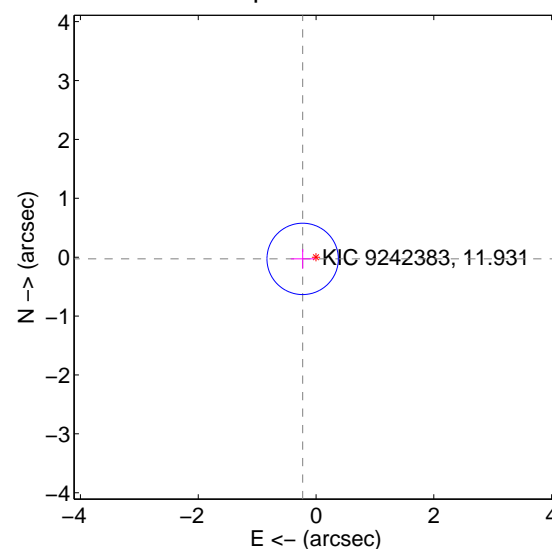
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

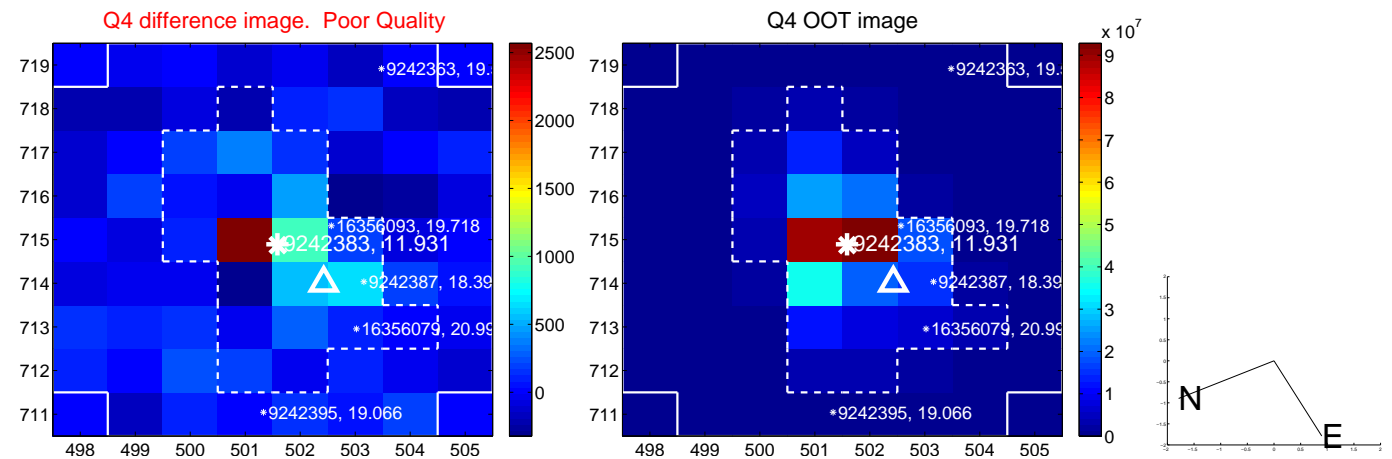
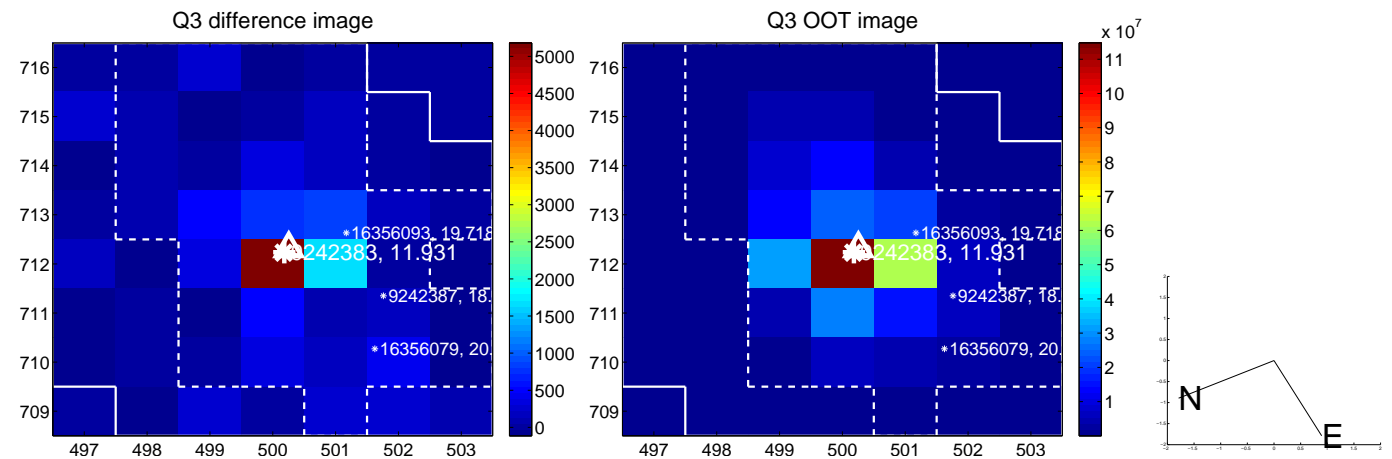
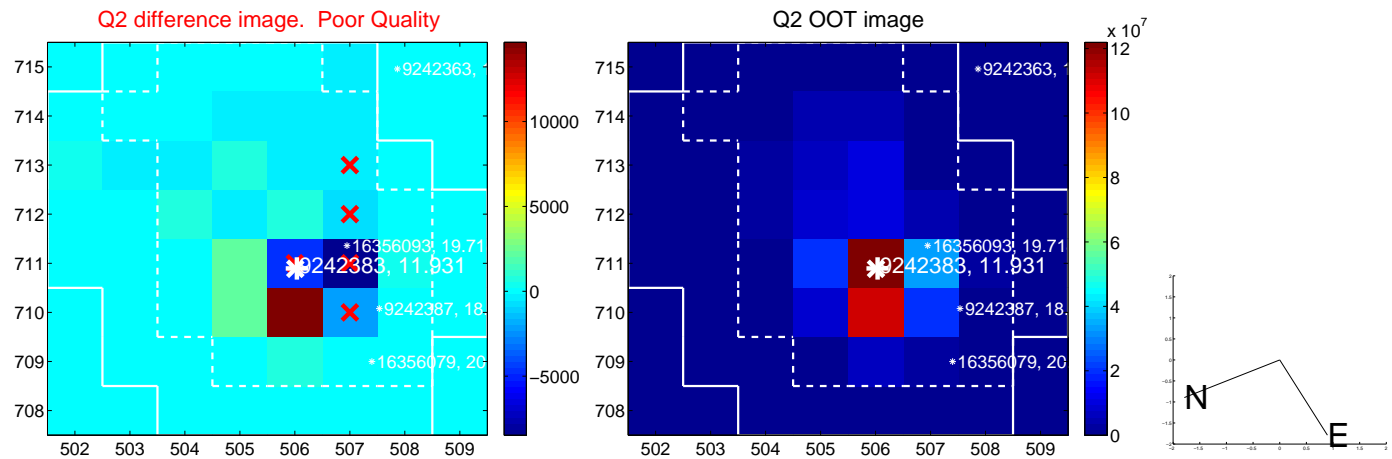
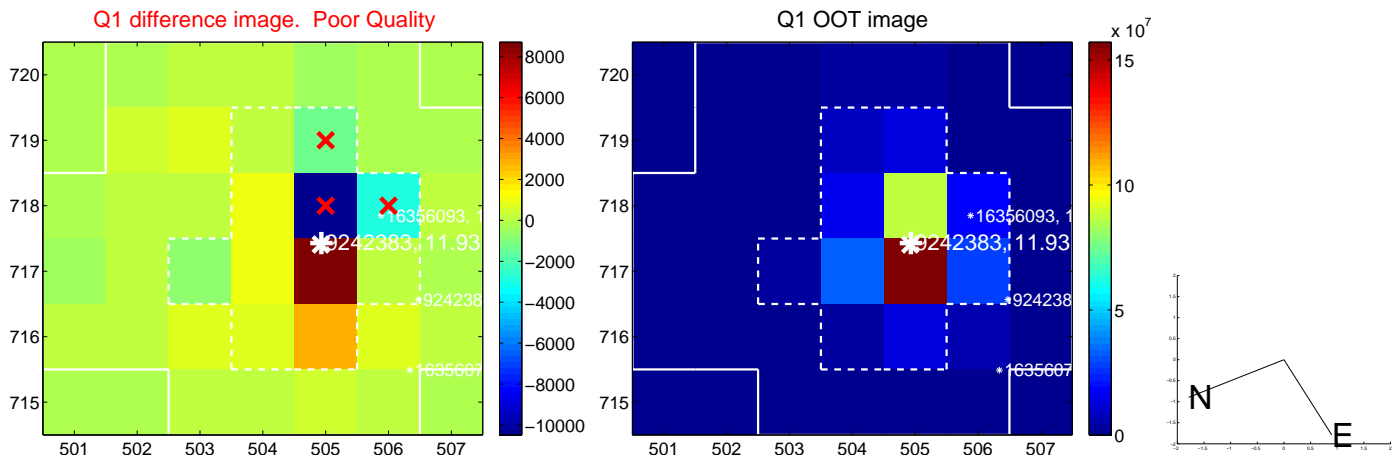


offset from photometric centroids

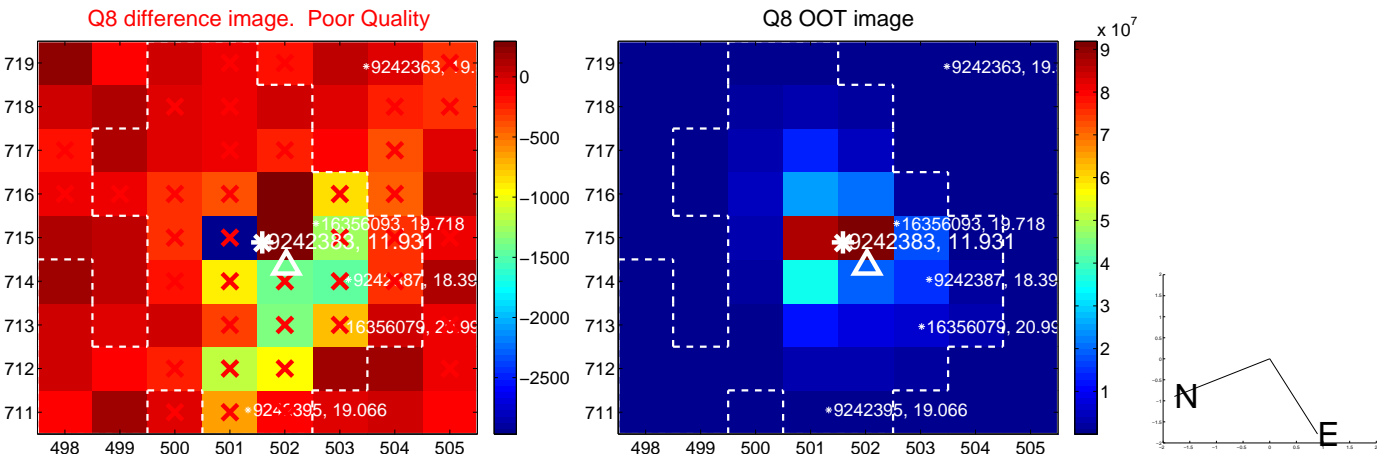
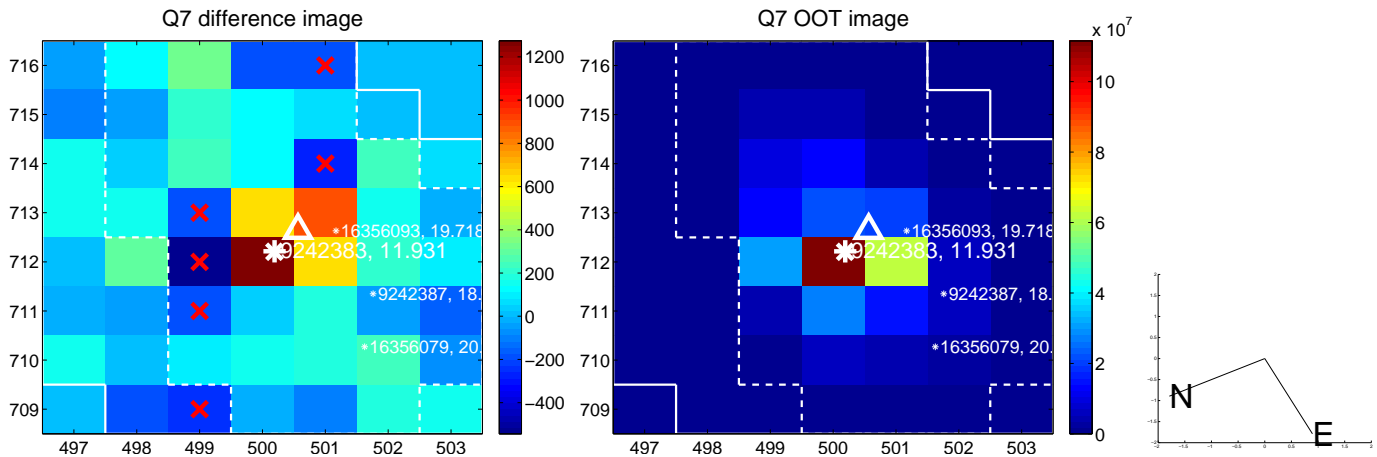
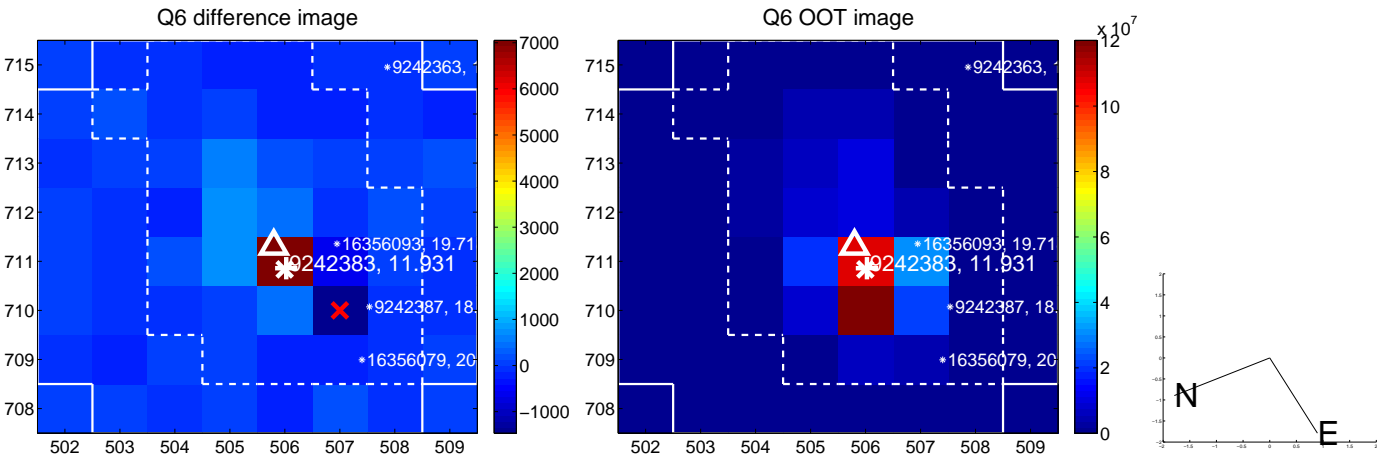
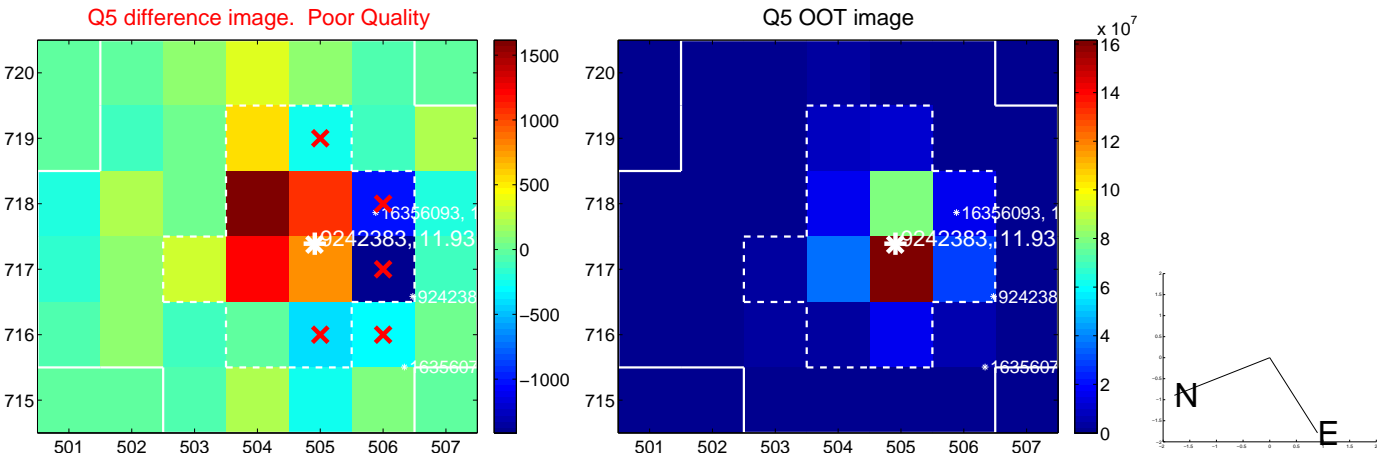


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

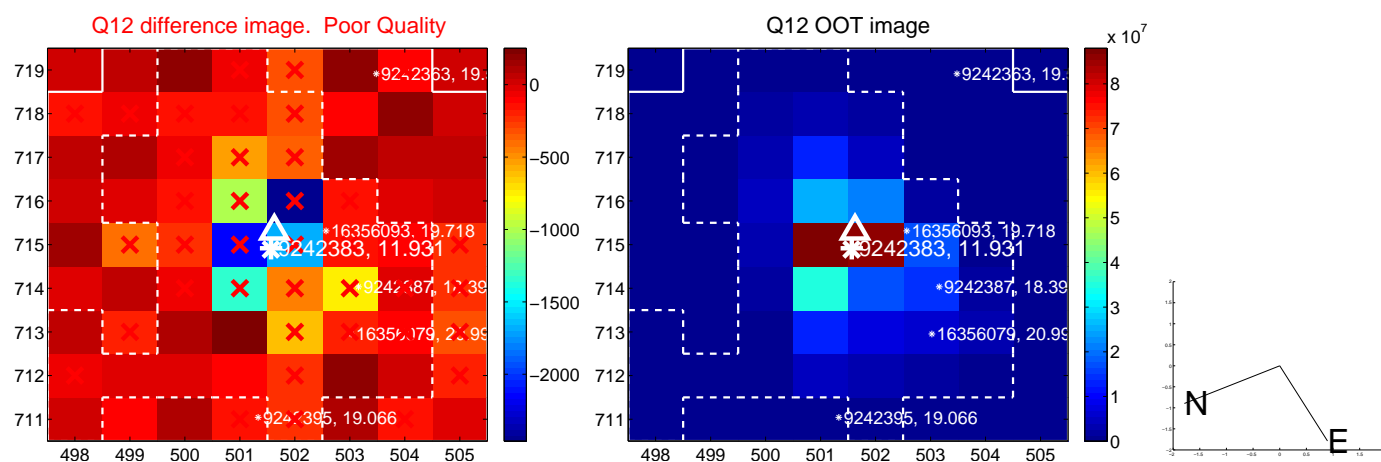
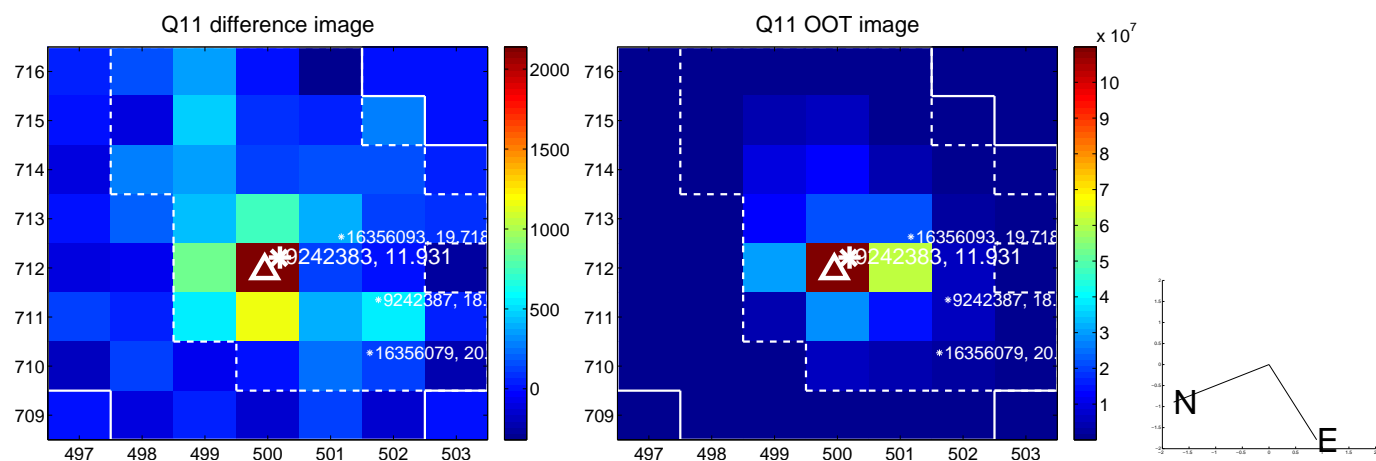
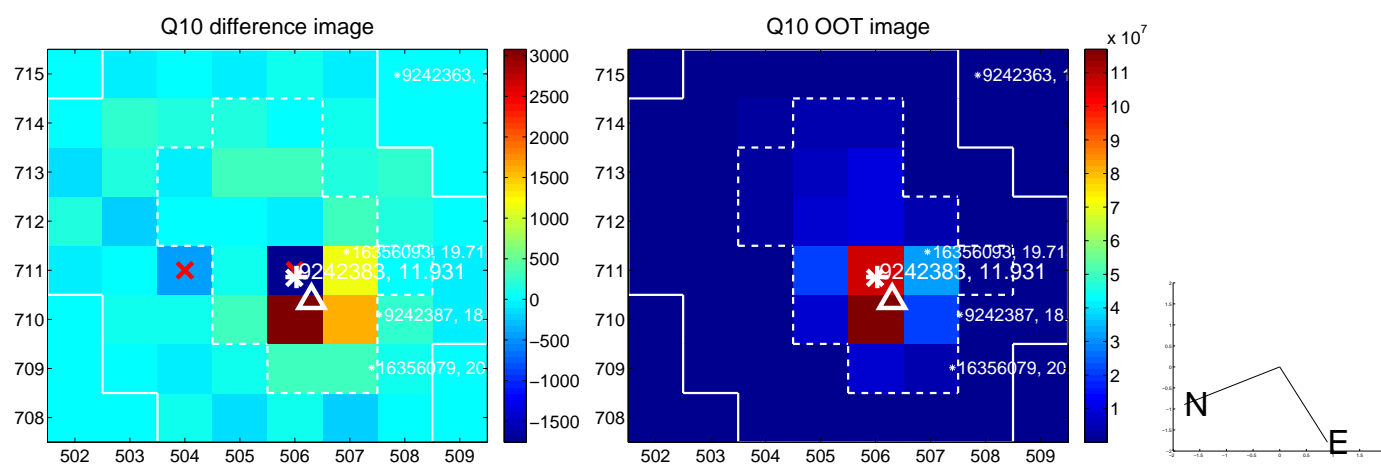
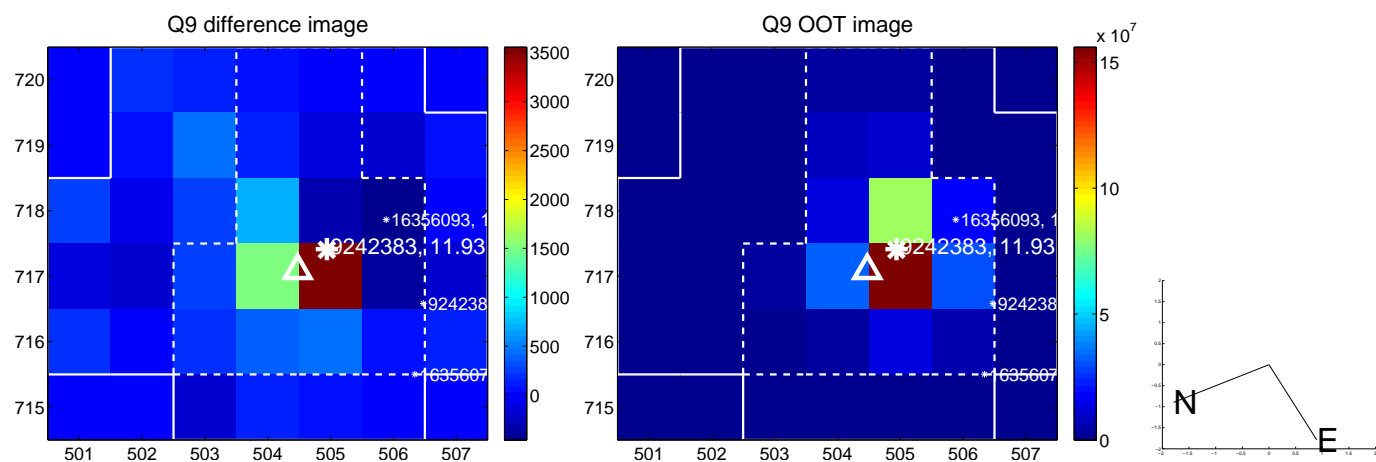
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



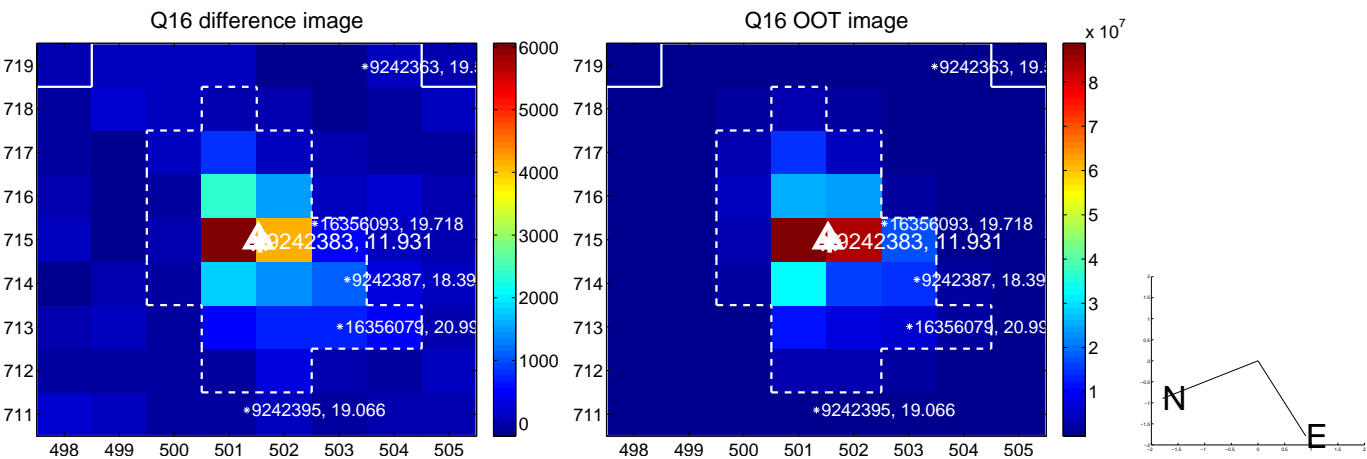
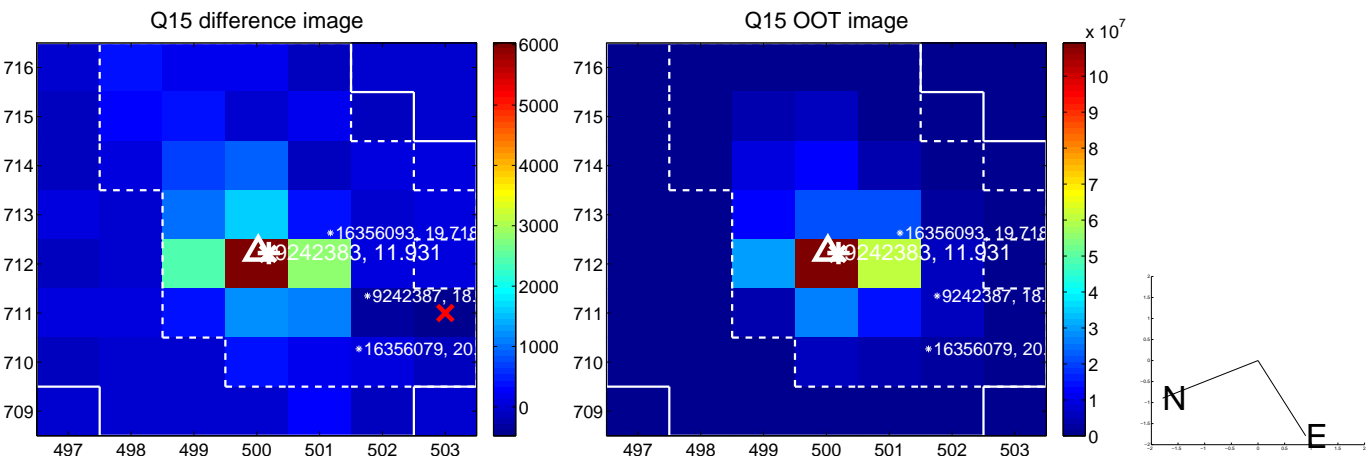
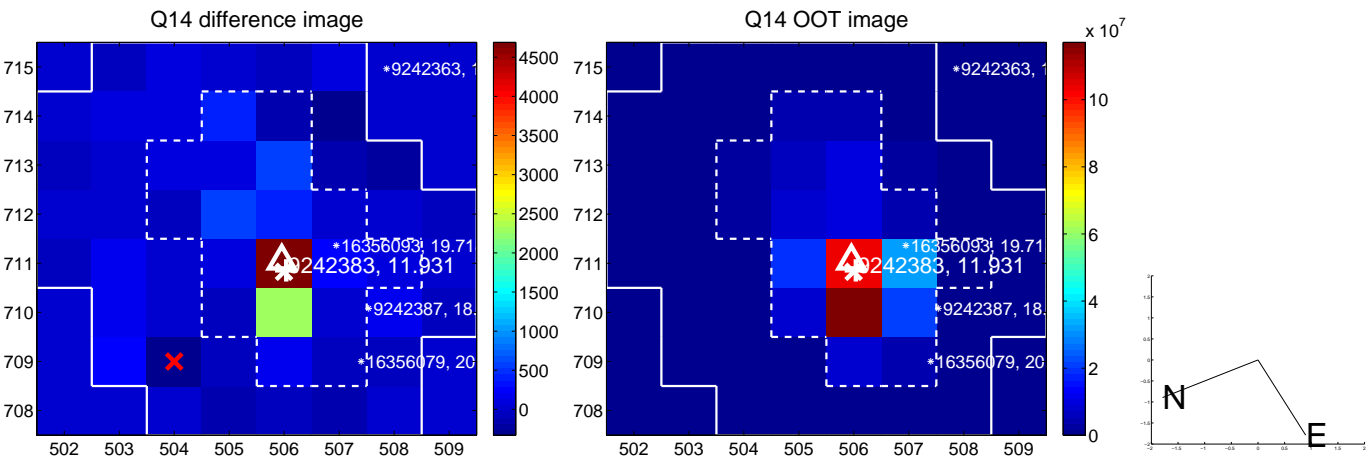
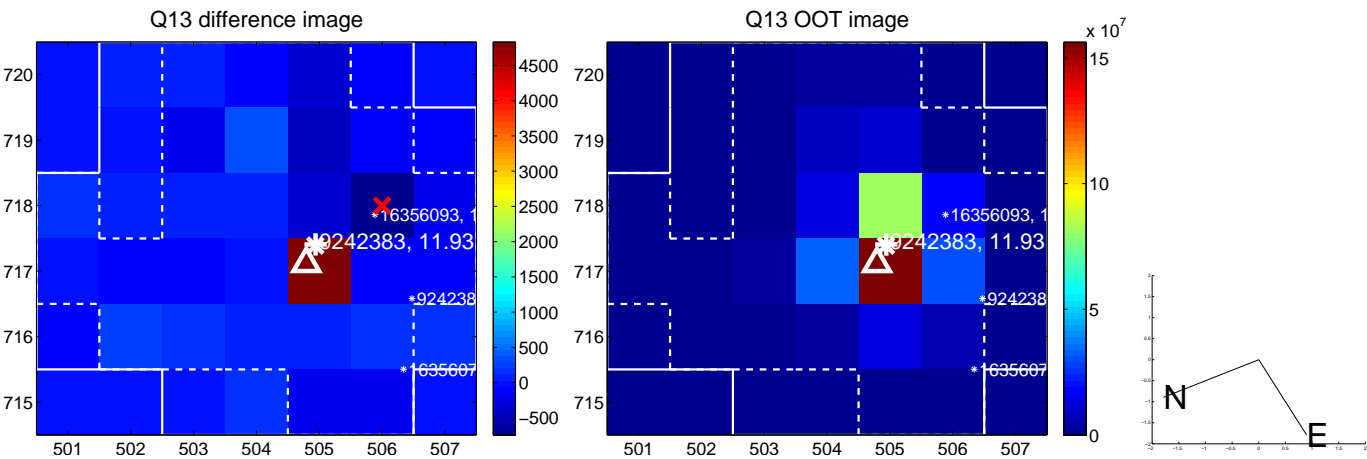
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



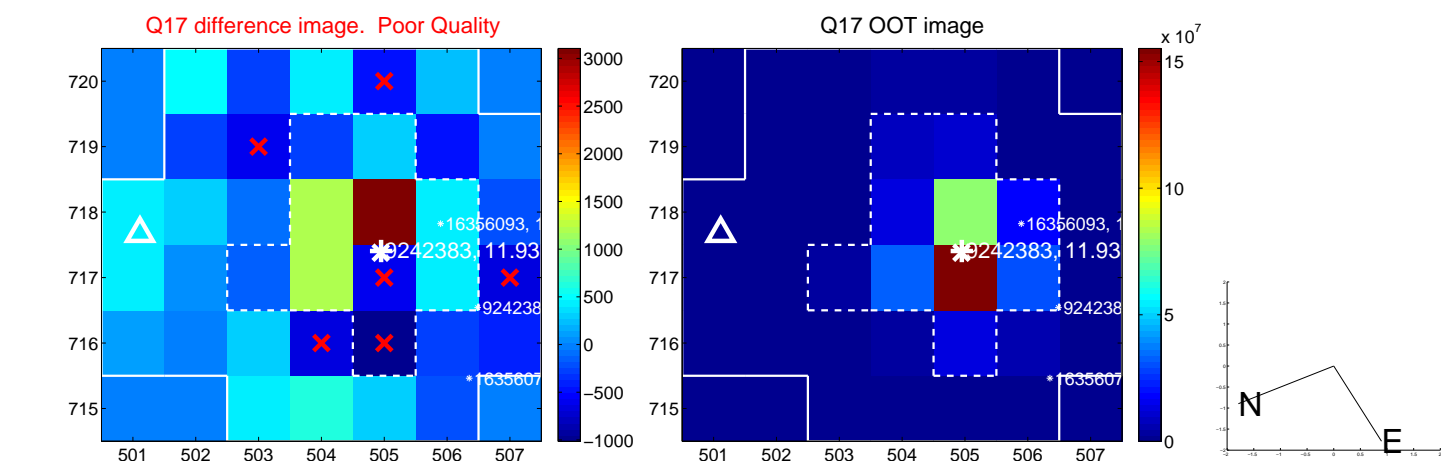
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



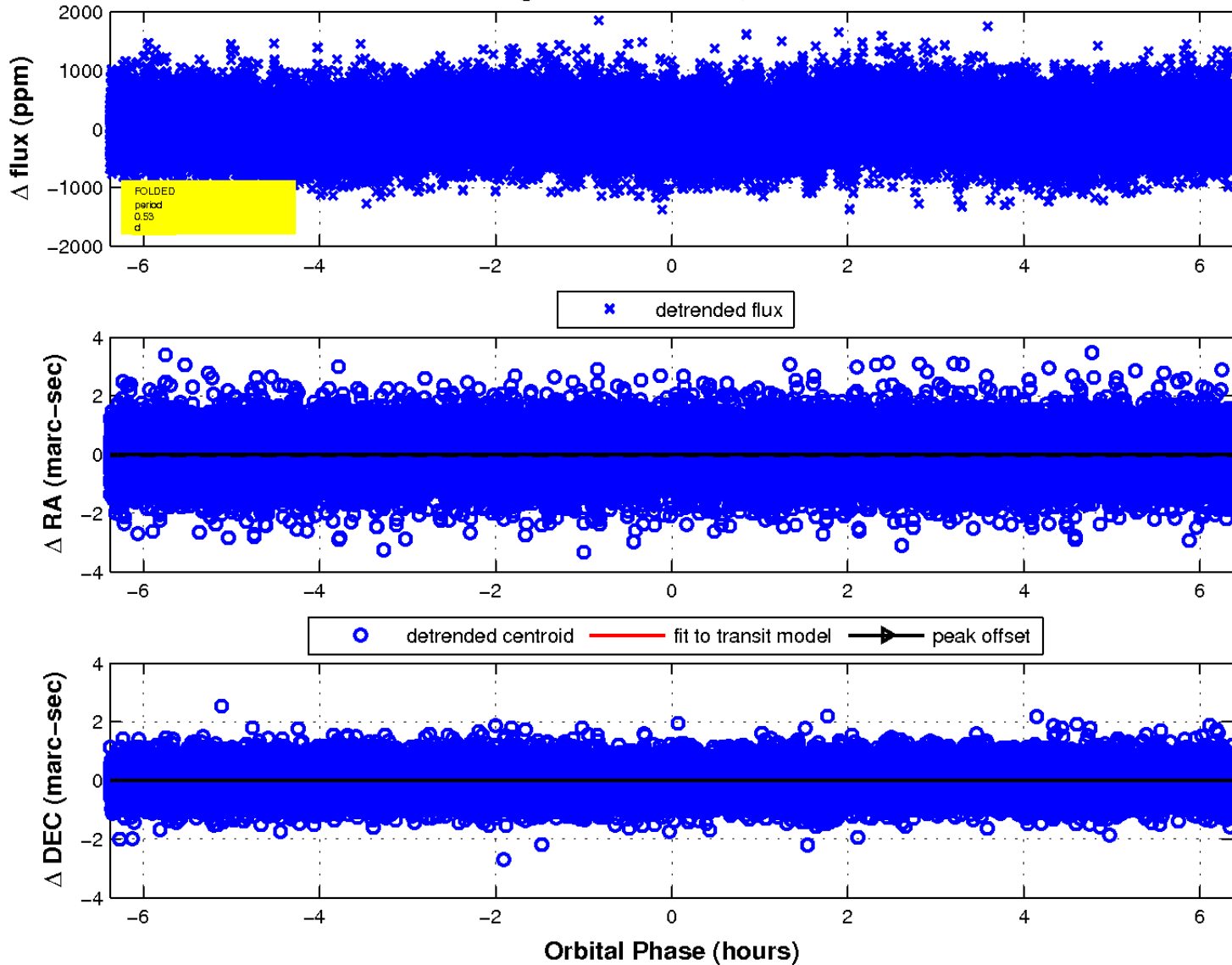
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

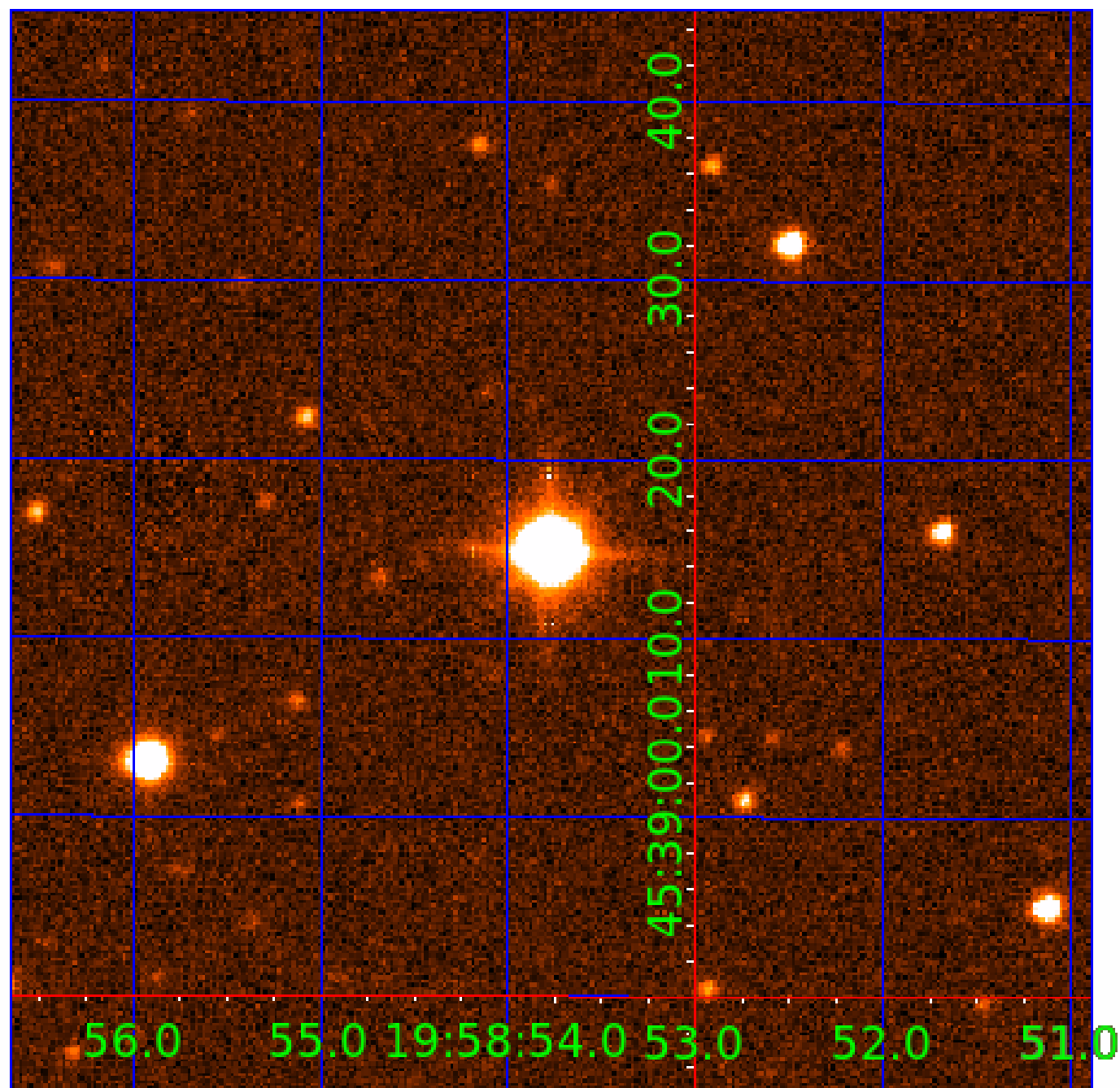


fluxWeightedCentroids, Planet 2 of 5



UKIRT Image

Declination



KIC 009242383

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})
009242383-01	OBS	No	0.885813	132.046751	61.2	1.647	14.3	11.9	13.09	6388	10.53	0.00
009242383-02	OBS	No	0.531494	131.688716	70.6	2.220	16.2	15.8	13.09	6388	12.87	0.00
009242383-03	OBS	No	0.531476	131.864103	57.3	3.078	14.6	9.6	13.09	6388	10.62	0.00
009242383-04	OBS	No	0.542435	131.970309	196.6	1.500	10.7	12.8	13.09	6388	18.65	0.00
009242383-05	OBS	No	4.671724	134.967245	309.2	1.500	9.9	-1.0	13.09	6388	23.19	37181.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009242383-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
009242383-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV
009242383-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_NOFITS

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

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

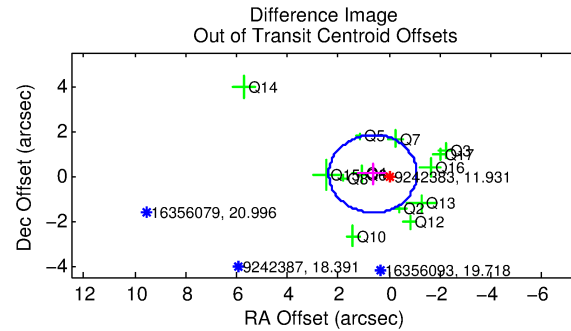
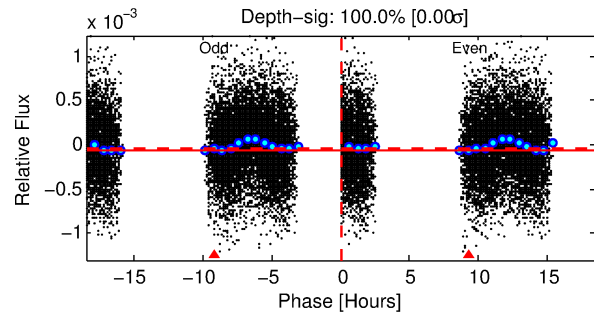
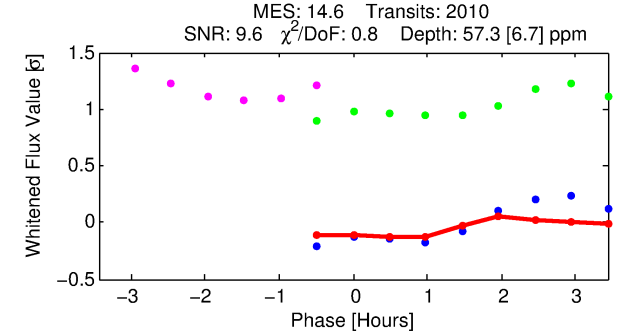
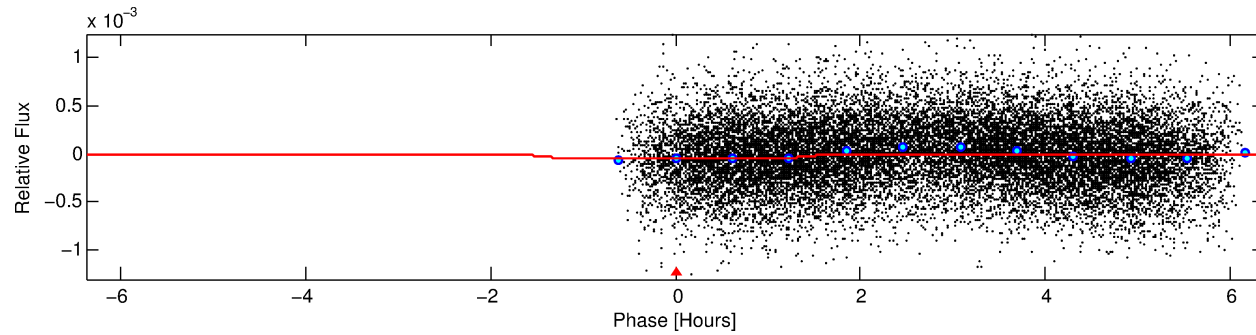
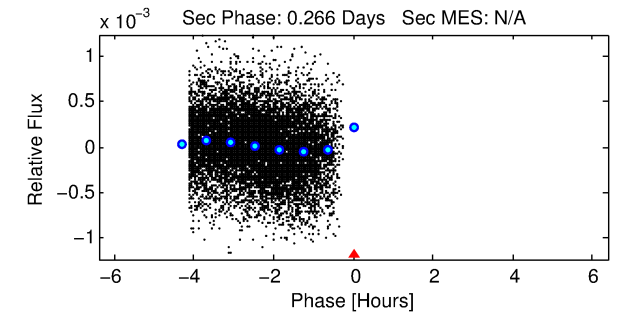
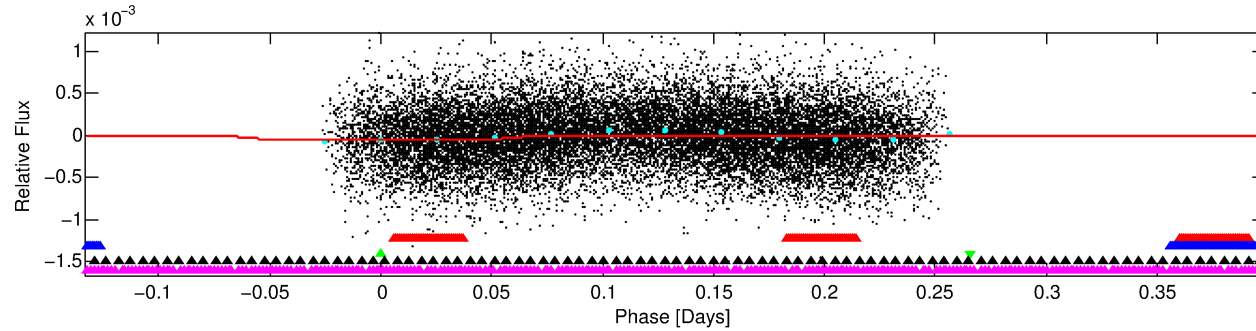
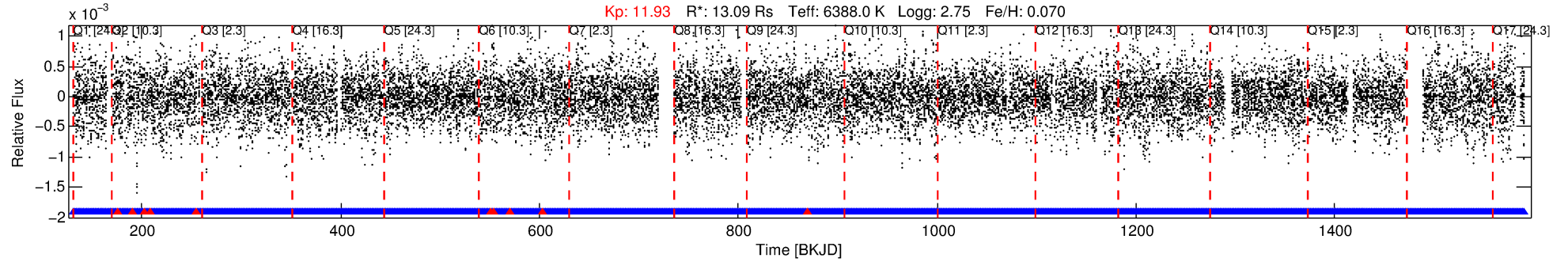
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009242383-03

No Significant Match Found

DV One-Page Summary

KIC: 9242383 Candidate: 3 of 5 Period: 0.531 d



DV Fit Results:

Period = 0.53148 [0.00001] d
 Epoch = 131.8641 [0.0064] BKJD
 Rp/R* = 0.0074 [0.0034]
 a/R* = 1.27 [1.18]
 b = 0.70 [1.84]
 Seff = N/A
 Teq = N/A
 Rp = 10.62 [6.41] Re
 a = N/A

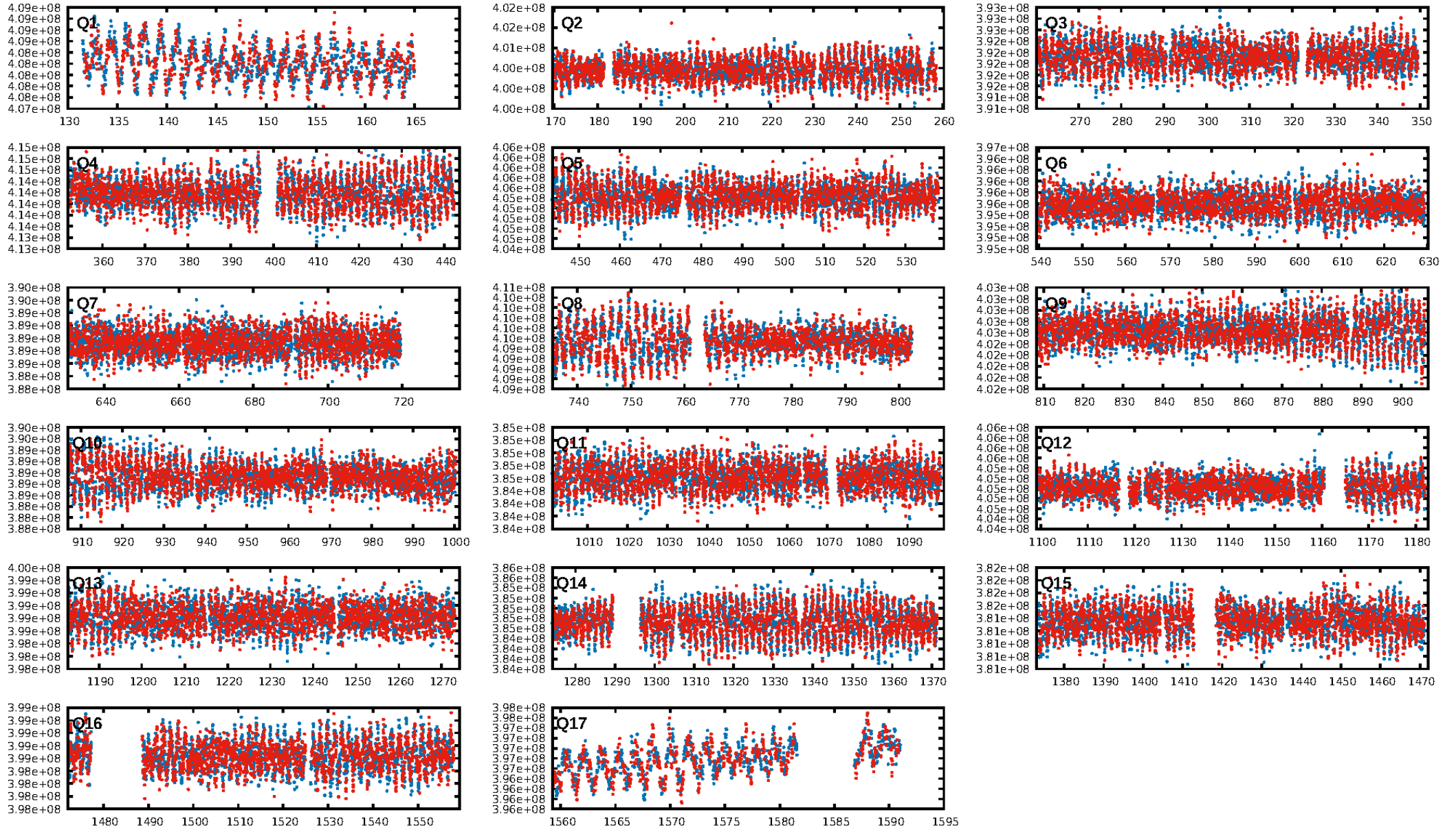
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: 0.0% [0.00σ]
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: N/A
 RollingBand-fgt: 0.99 [1910/1920]
 GhostDiagnostic-chr: 5.878
 Centroid-sig: 0.0%
 Centroid-so: 0.447 arcsec [2.57σ]
 OotOffset-rm: 0.645 arcsec [1.12σ]
 KicOffset-rm: 0.604 arcsec [1.16σ]
 OotOffset-st: 4/3/4/3 [14]
 KicOffset-st: 4/3/4/3 [14]
 DiffImageQuality-fgm: 0.57 [8/14]
 DiffImageOverlap-fno: 0.00 [0/17]

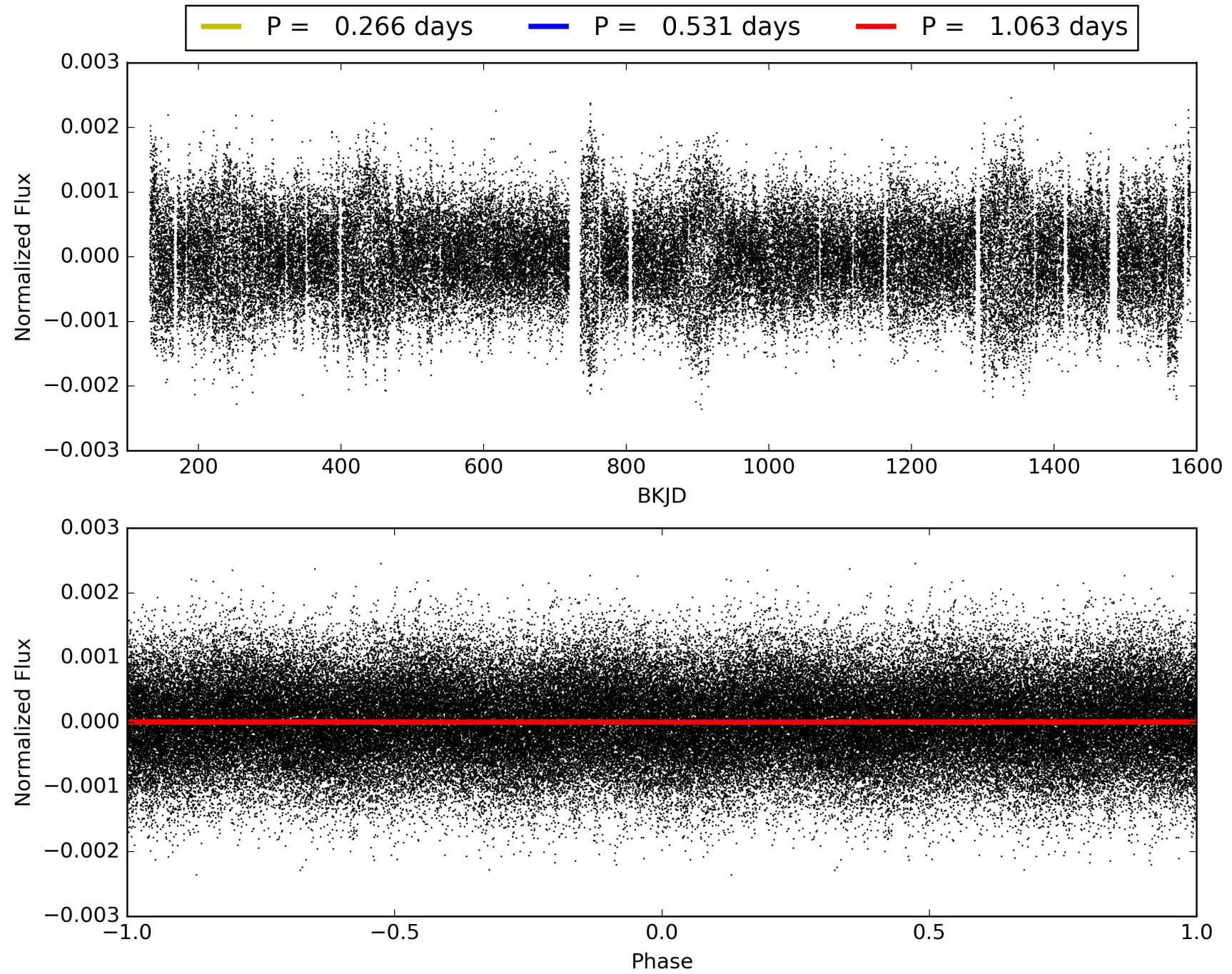
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:40:42 Z

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

TCE 009242383-03, PDC Light Curves

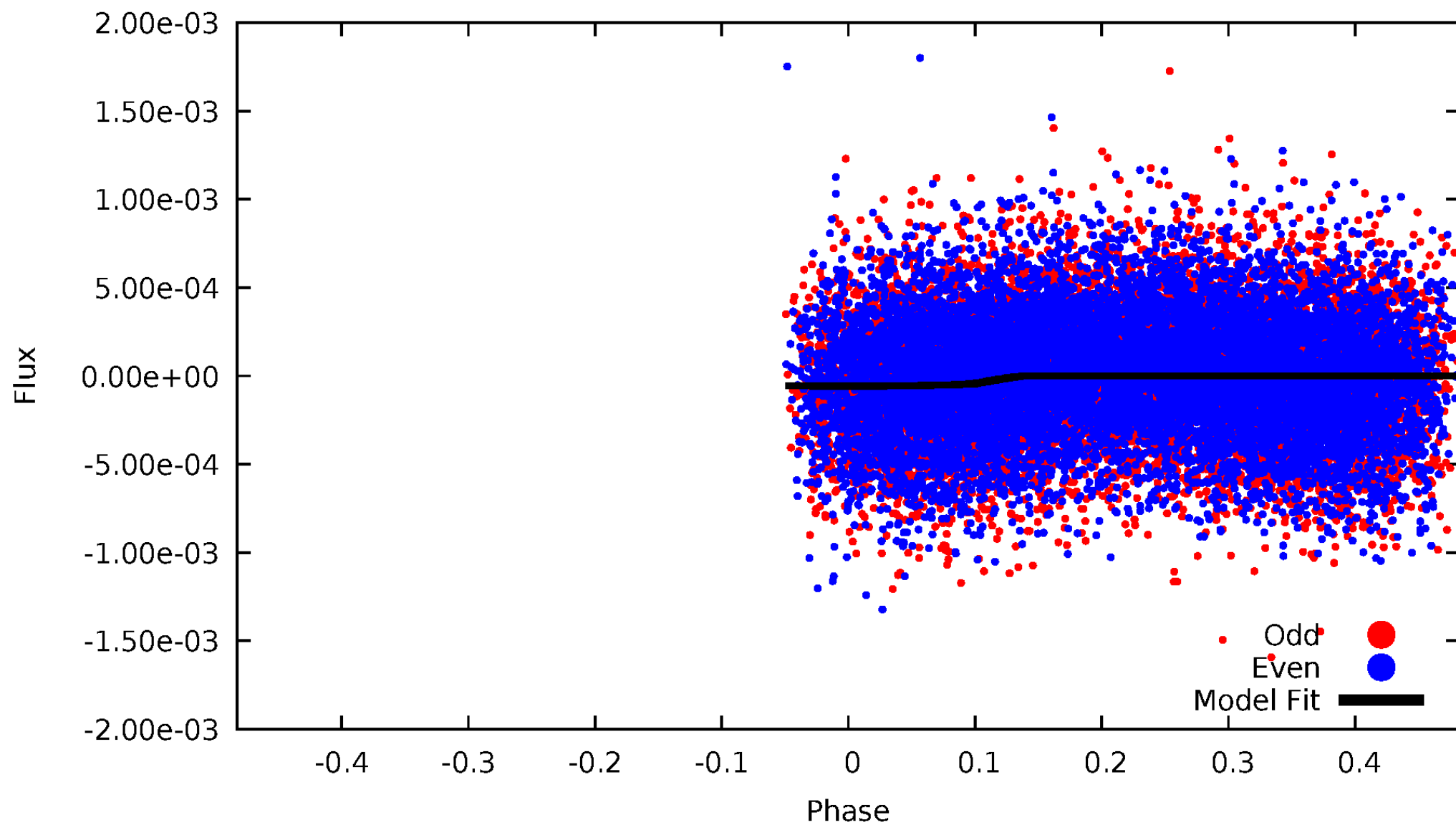


TCE 009242383-03



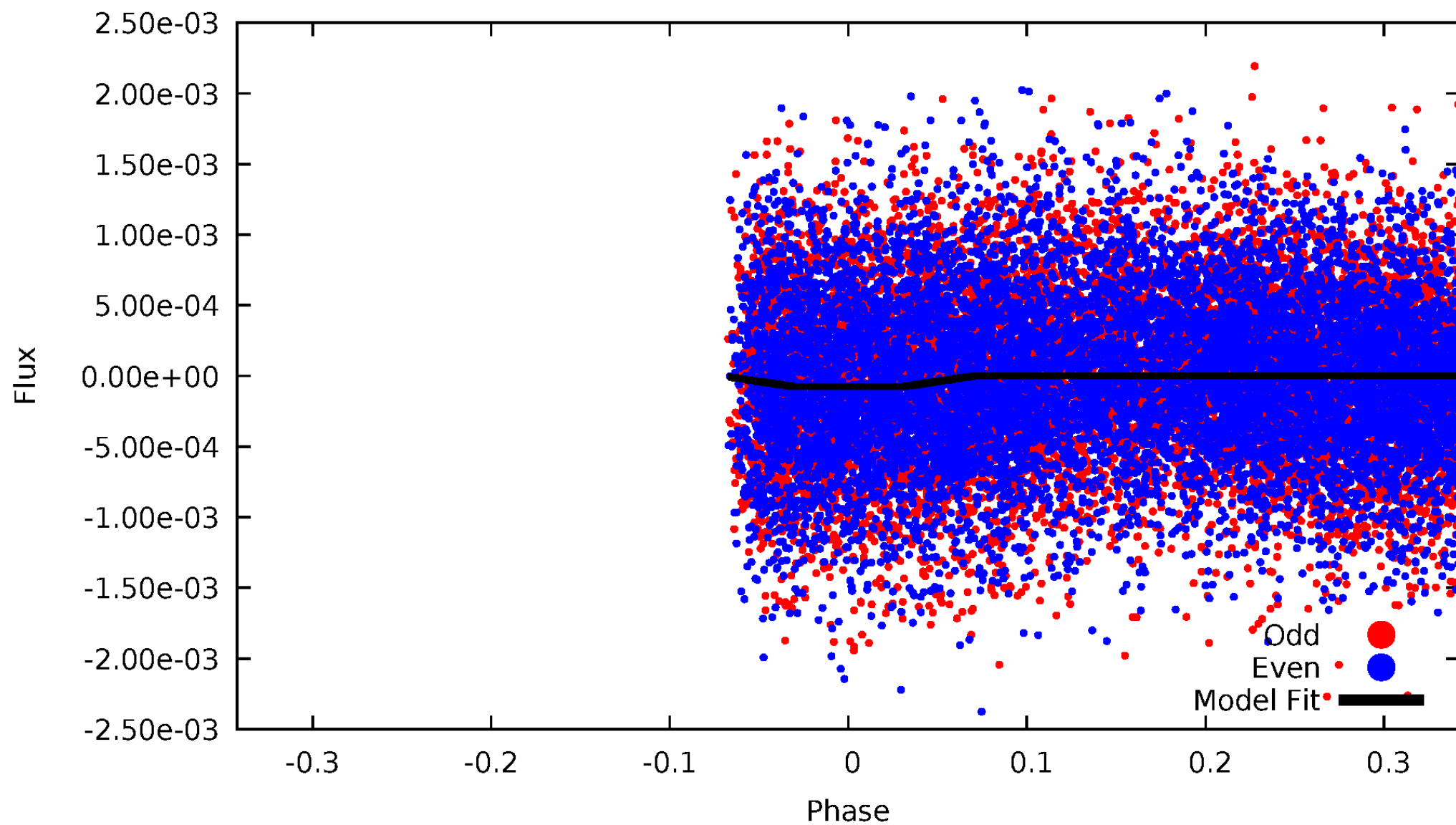
DV Odd/Even

TCE 009242383-03



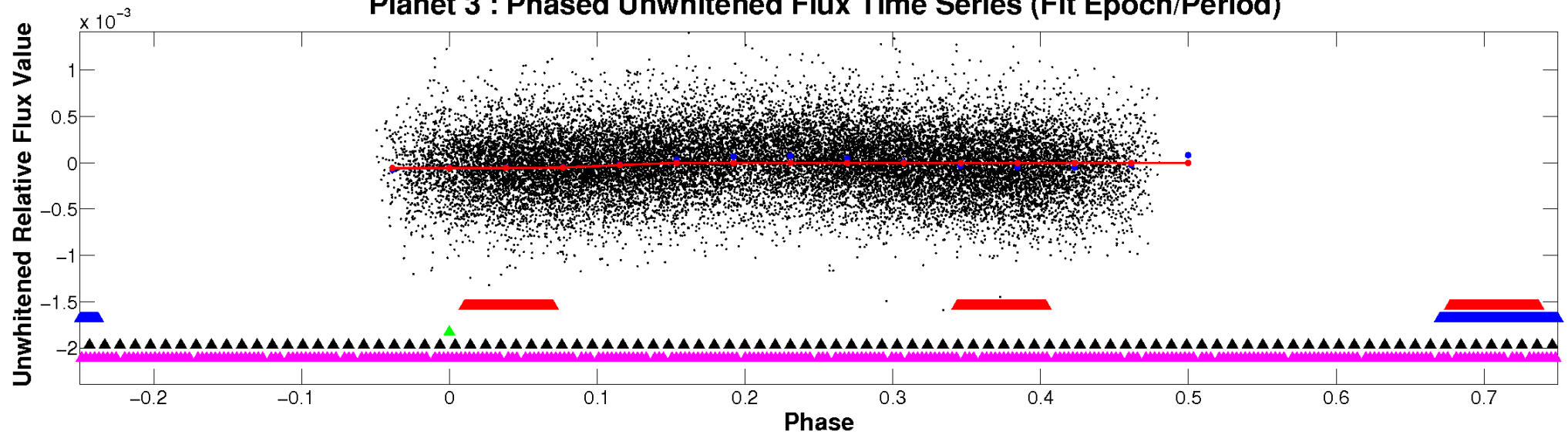
ALT Odd/Even

TCE 009242383-03

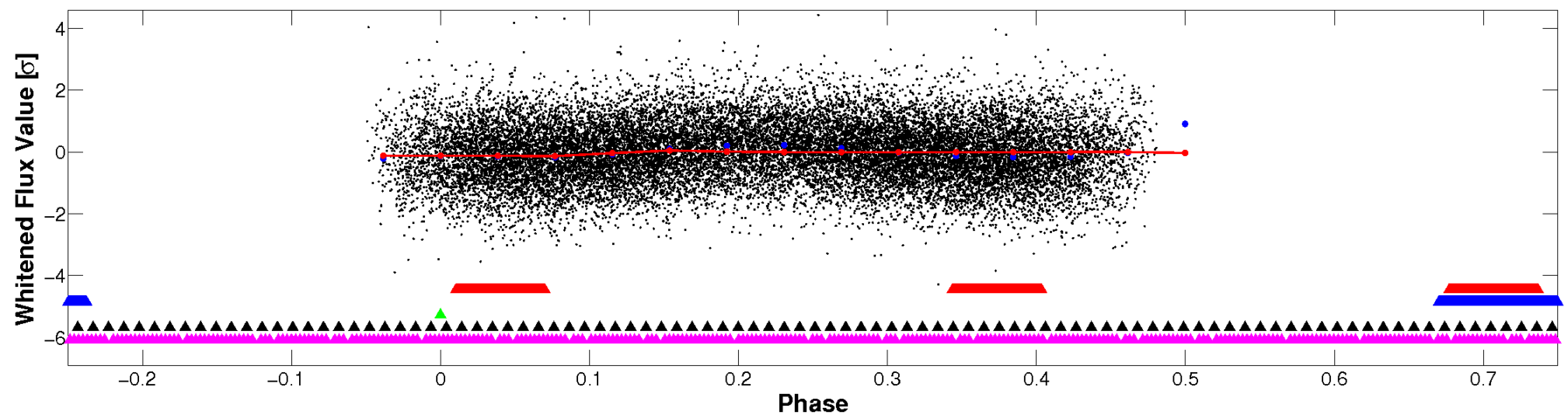


Non-Whitened Vs. Whitened Light Curve

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

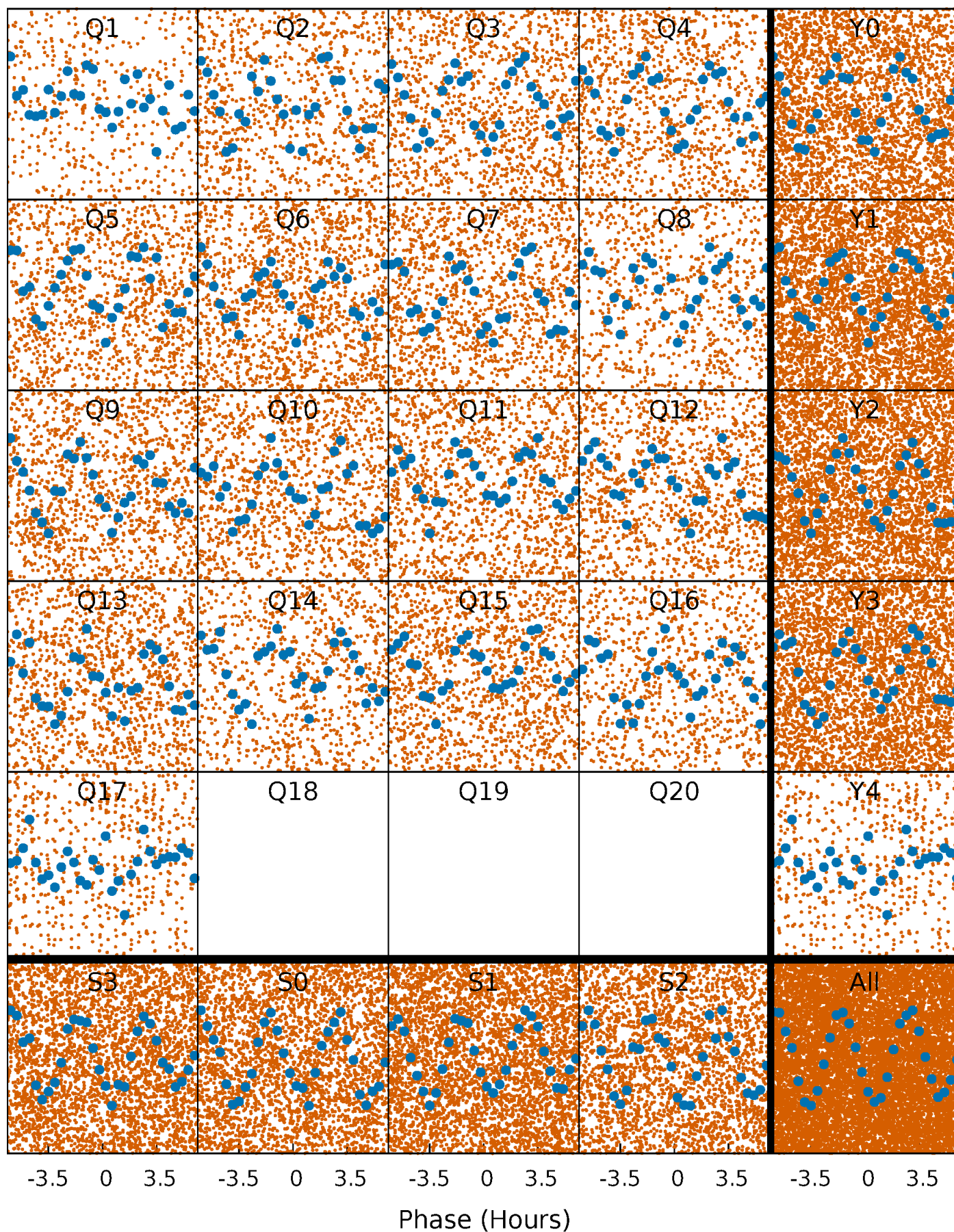


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



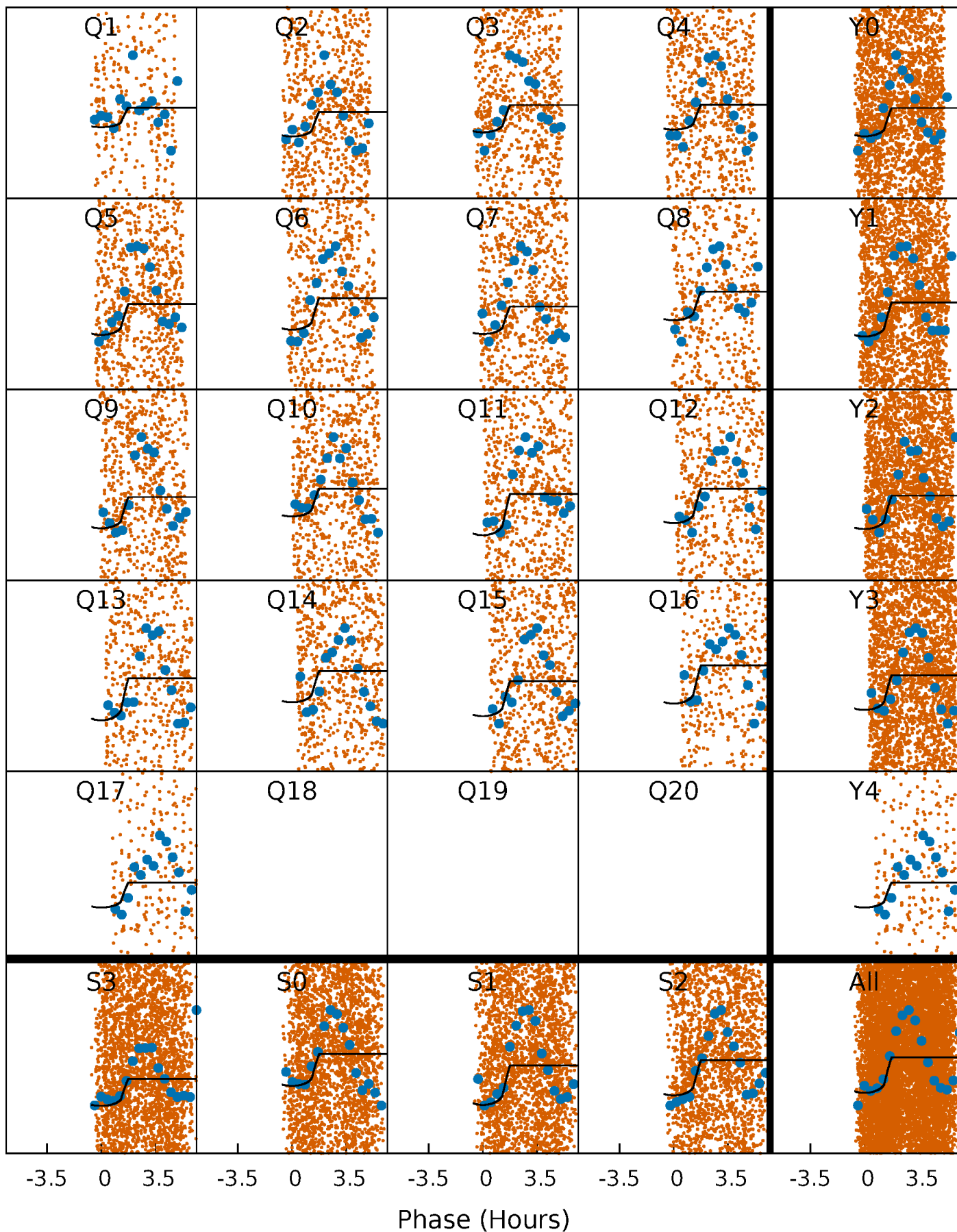
PDC Quarter-Phased Transit Curves

TCE 009242383-03 P= 0.531476 Days $T_0=131.864103$ (BKJD)



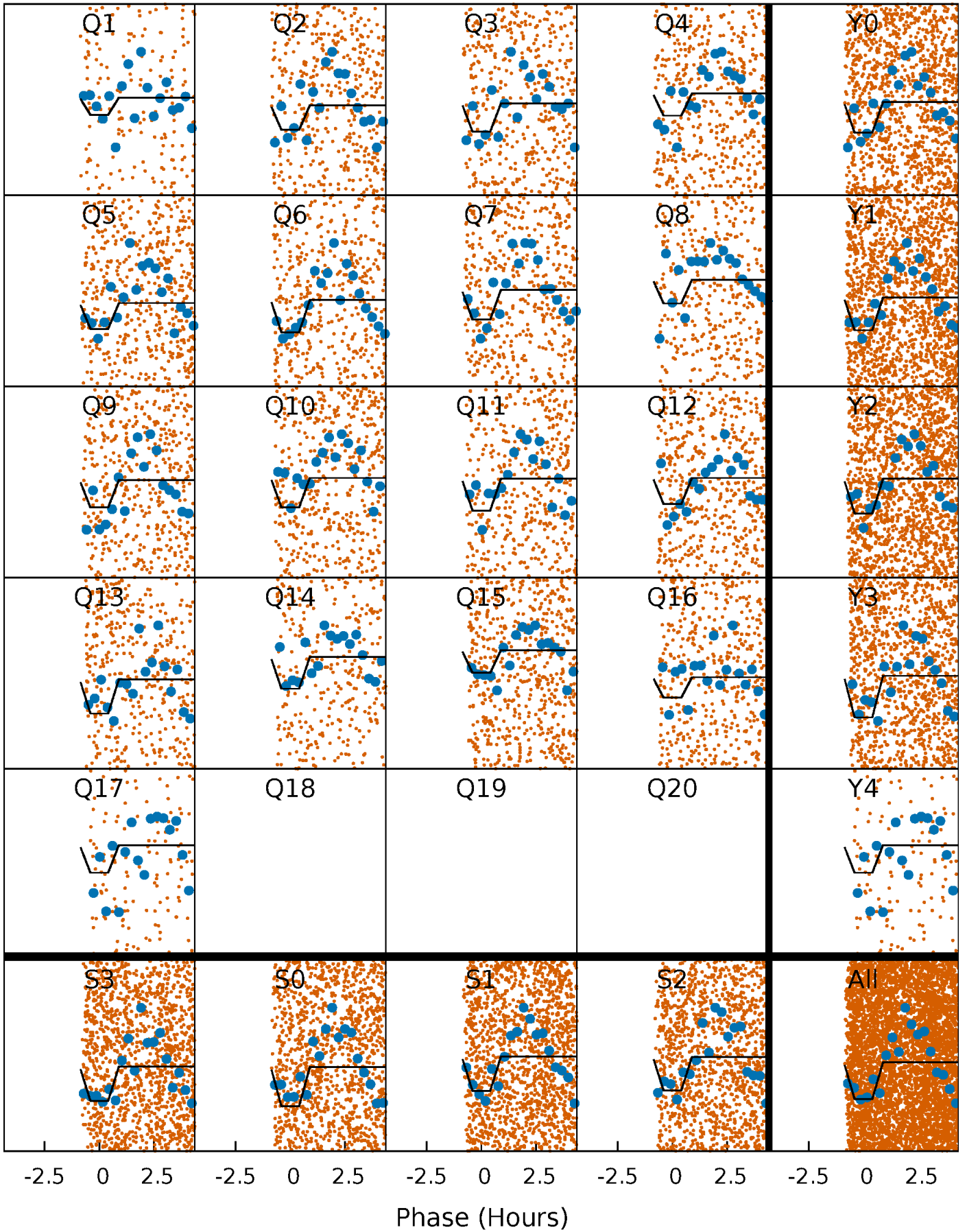
DV Quarter-Phased Transit Curves

TCE 009242383-03 P= 0.531476 Days $T_0=131.864103$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

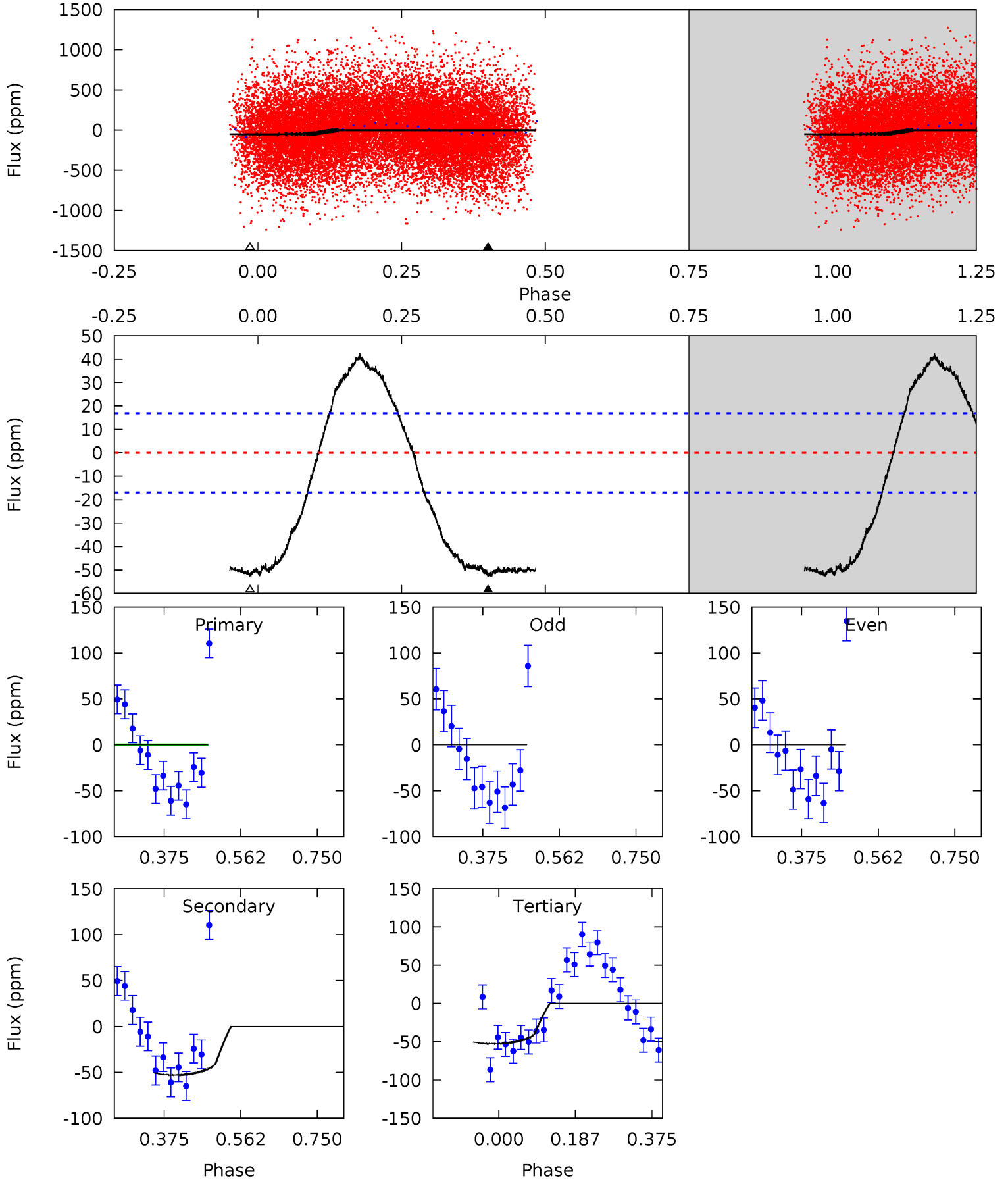
TCE 009242383-03 P= 0.531490 Days $T_0=131.873644$ (BKJD)



DV Model-Shift Uniqueness Test

009242383-03, P = 0.531476 Days, E = 131.332627 Days

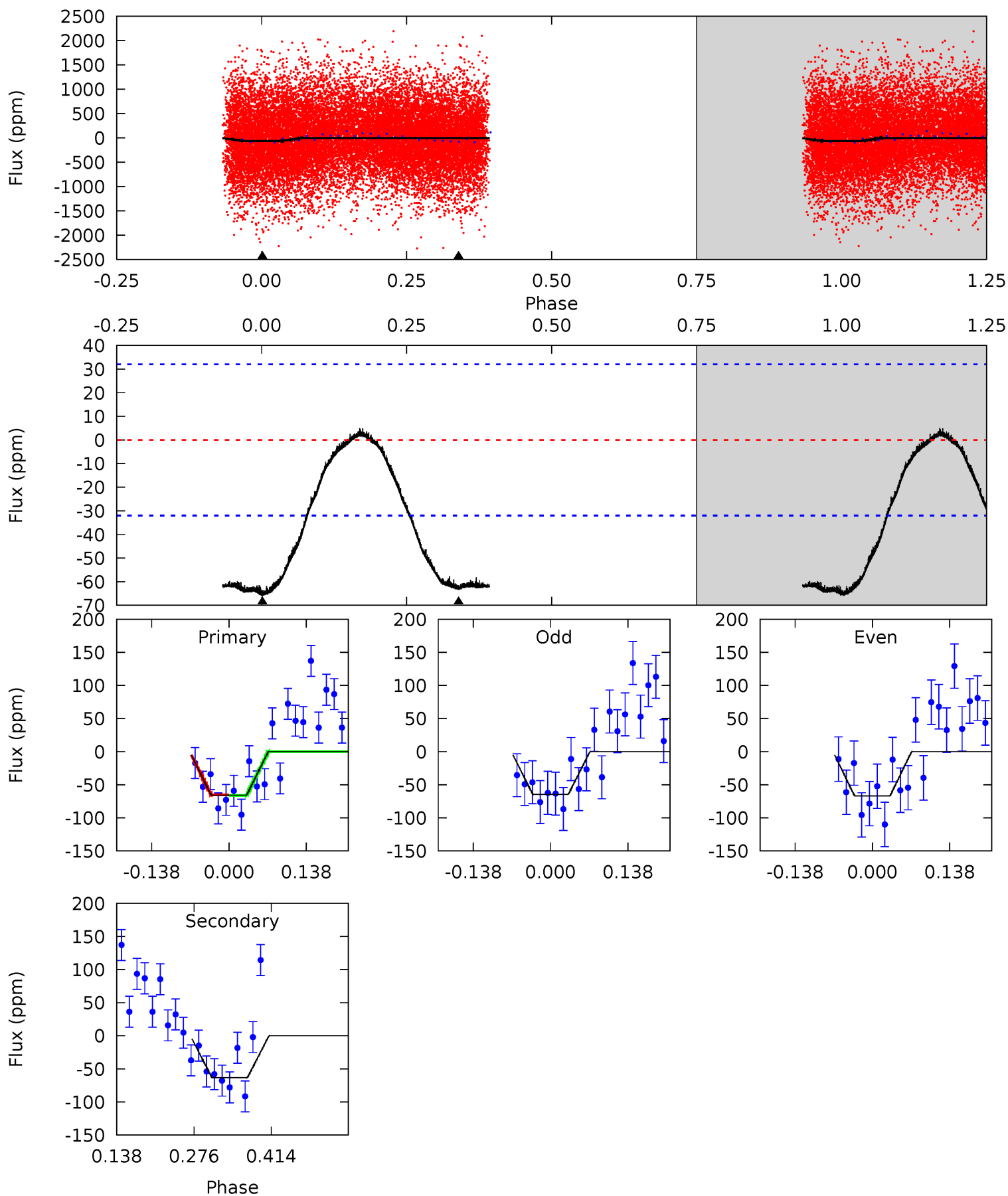
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	13.9	13.8	0	4.43	1.32	8.09	0.09	13.9	0.09	13.9	0.11	1.04	0.45	1.50



Alt Model-Shift Uniqueness Test

009242383-03, P = 0.531490 Days, E = 131.342154 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.24	8.88	0	0	4.50	1.48	0.25	9.24	9.24	8.88	8.88	0.15	0.86	0.07	0.05



Stellar Parameters For KIC 009242383

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6388^{+520}_{-1562}	$2.746^{+0.172}_{-0.258}$	$0.070^{+0.200}_{-0.550}$	$13.089^{+3.447}_{-5.171}$	$3.479^{+0.113}_{-2.154}$	$0.002^{+0.003}_{-0.001}$
	+8%/-24%	+6%/-9%	+286%/-786%	+26%/-40%	+3%/-62%	+116%/-54%
Source	PHO1	FLK73	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 009242383-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-53 ± 4	$10.45^{+5.64}_{-4.74}$	10235^{+1363}_{-2297}	-7002^{+9641}_{-2294}	$0.091^{+0.211}_{-0.053}$
Alt.	-63 ± 7	$11.78^{+6.26}_{-4.74}$	10163^{+1451}_{-2403}	-7098^{+3321}_{-2309}	$0.086^{+0.156}_{-0.047}$

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 $A_{obs} \gg 1.0$

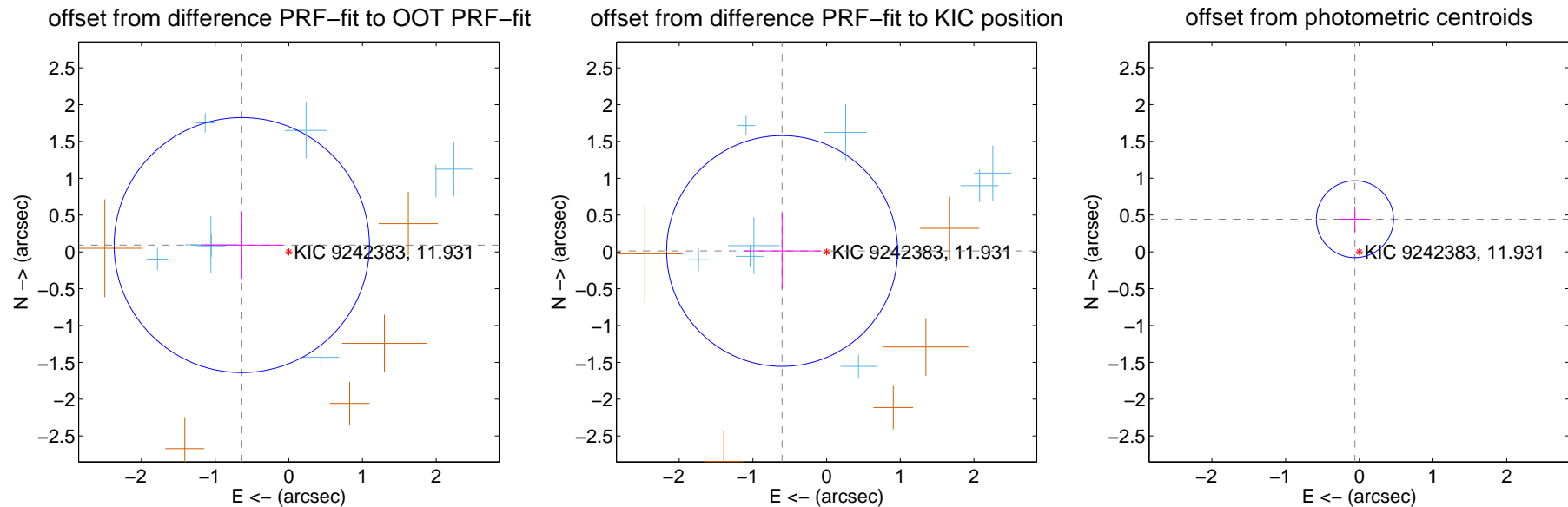
DV Centroid Data

Supplemental centroid analysis for 009242383-03. **Kepler magnitude: 11.93.** Transit SNR 9.61

There are 8 quarters with good PRF difference image offsets

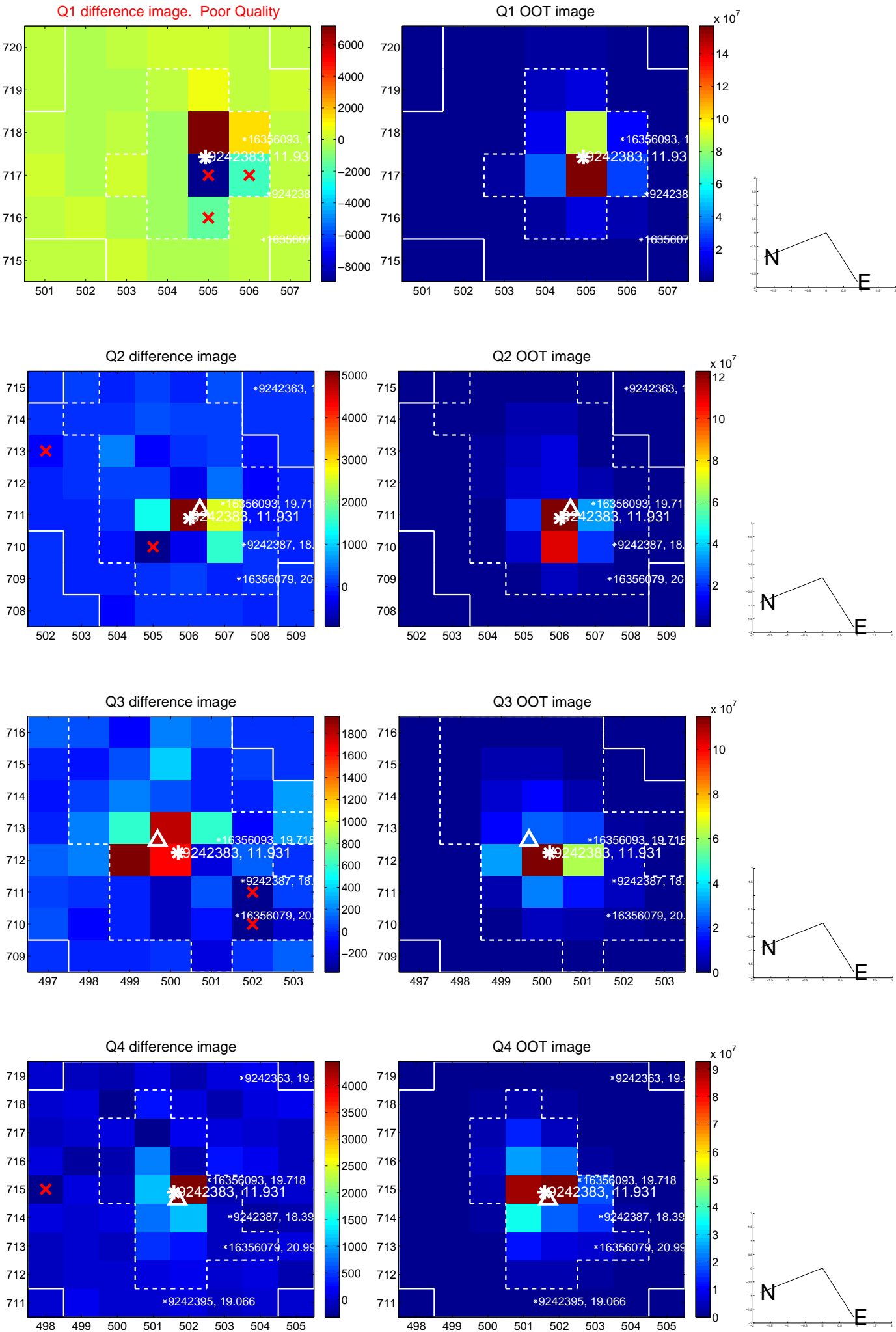
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.645 ± 0.577	1.12	0.638 ± 0.559	0.093 ± 0.459
PRF-fit source offset from KIC position	0.604 ± 0.522	1.16	0.604 ± 0.519	0.013 ± 0.515
photometric centroid source offset	0.45 ± 0.17	2.57	0.06 ± 0.21	0.44 ± 0.17

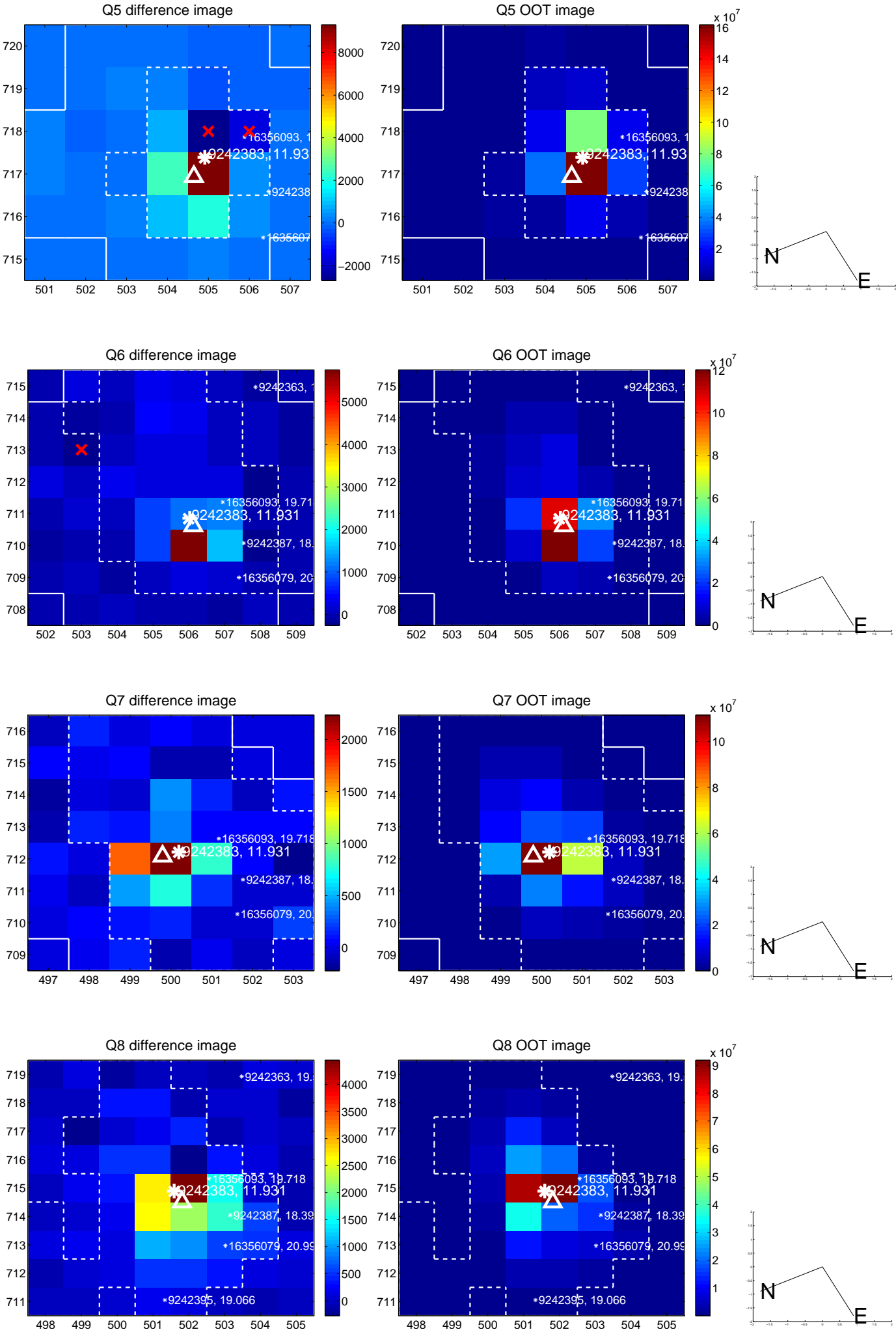


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

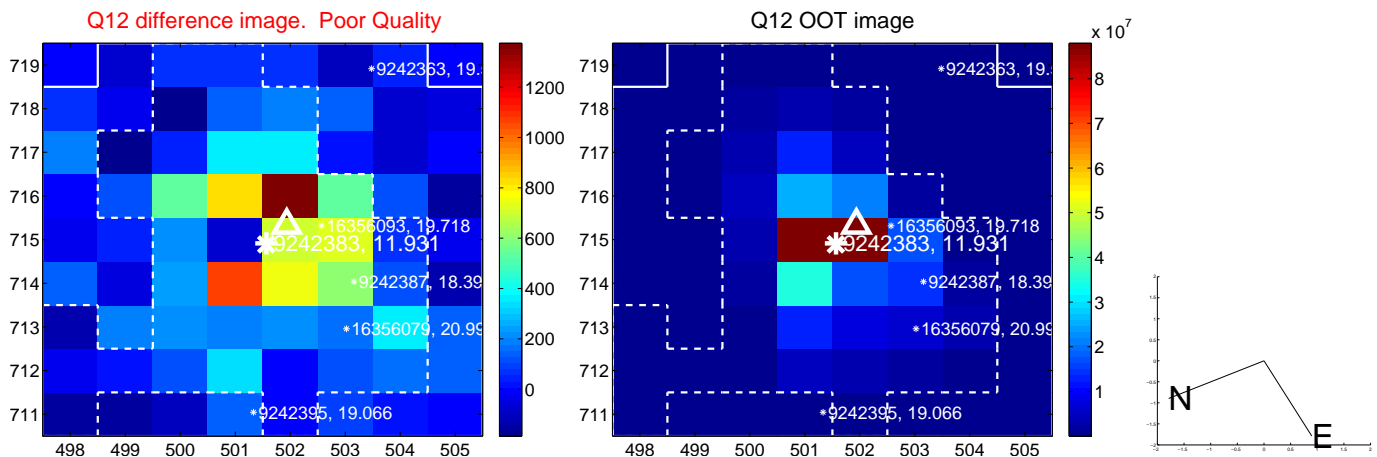
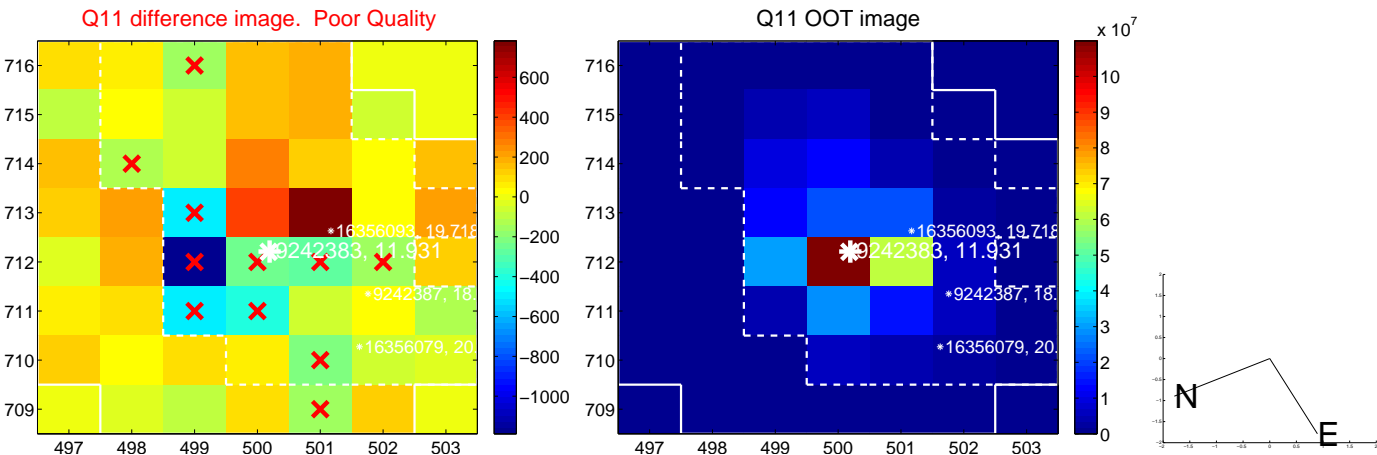
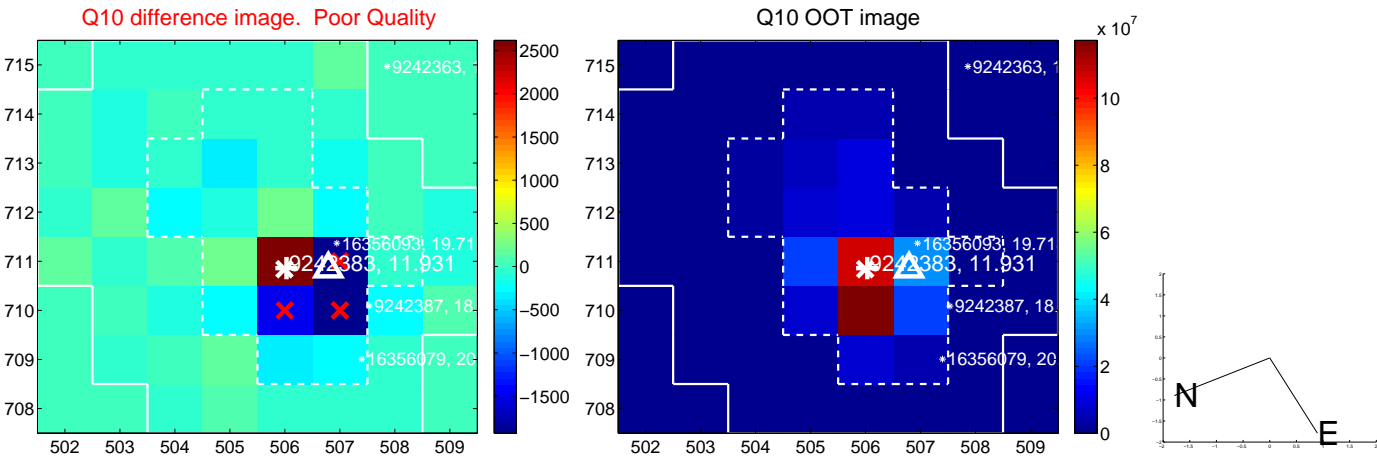
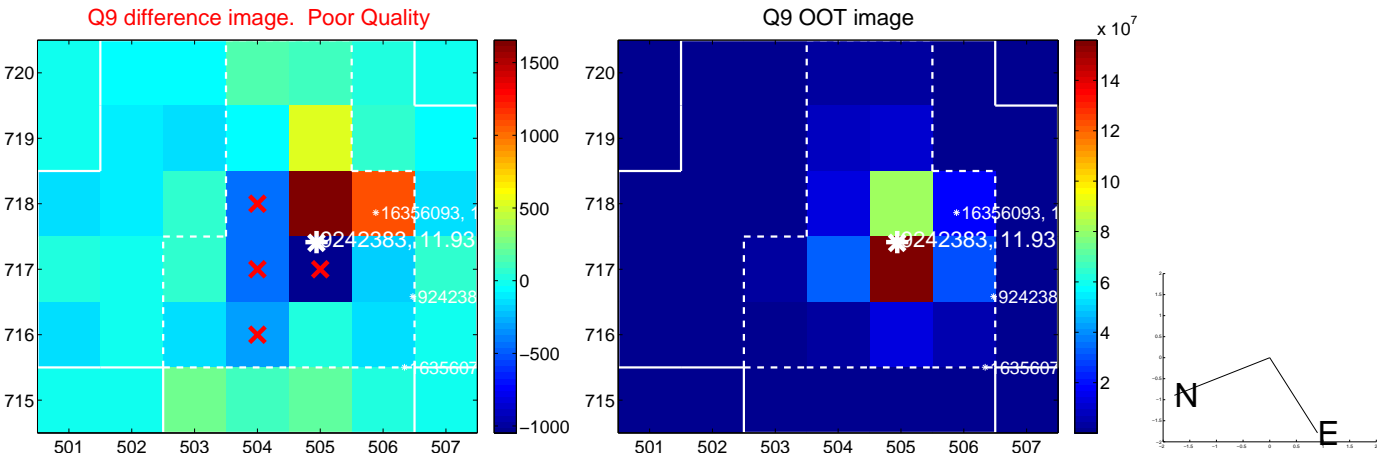
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



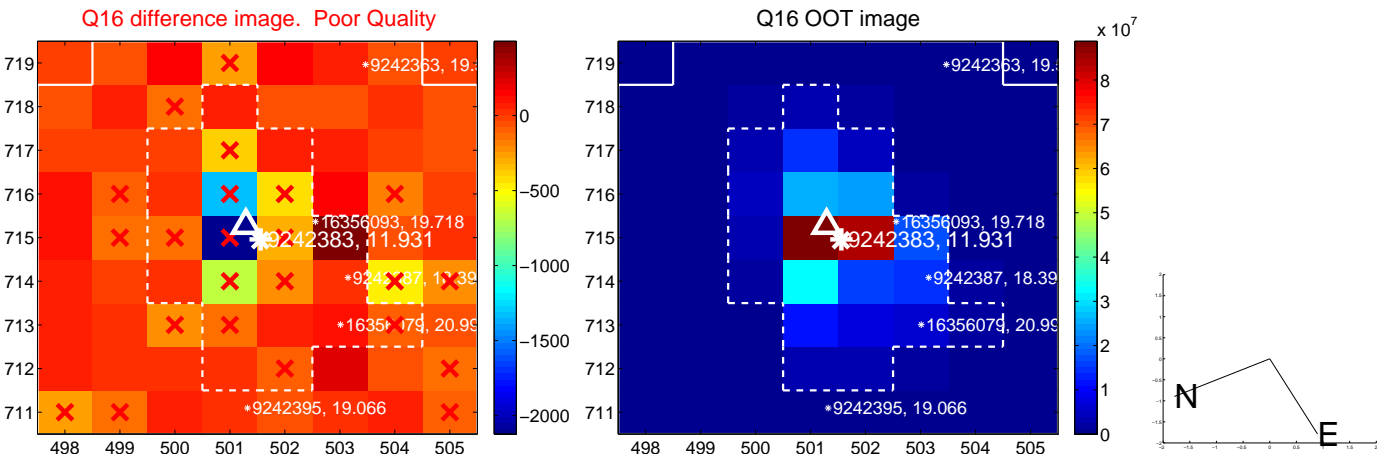
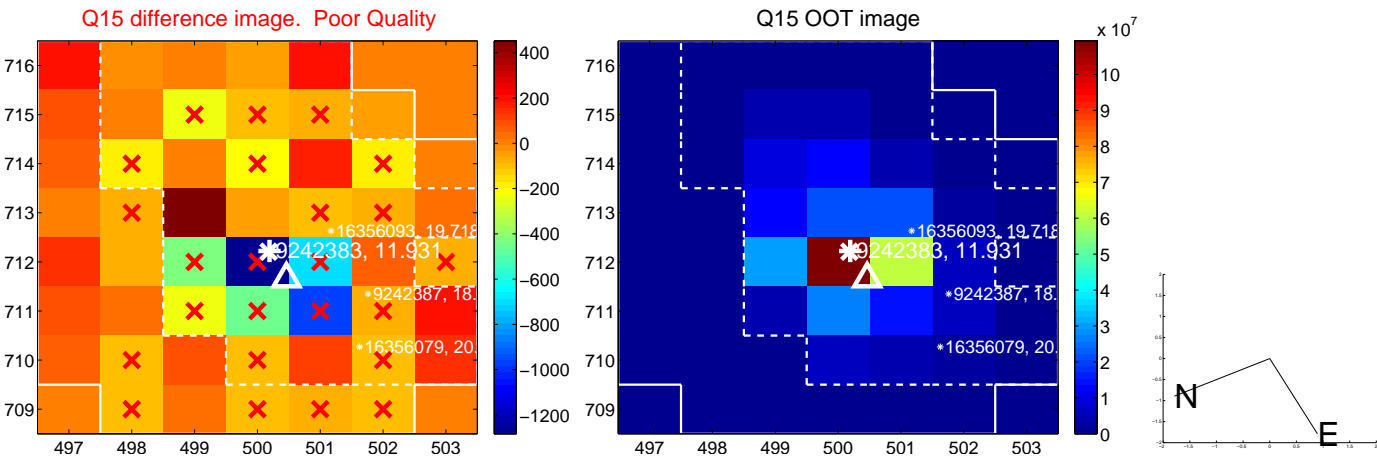
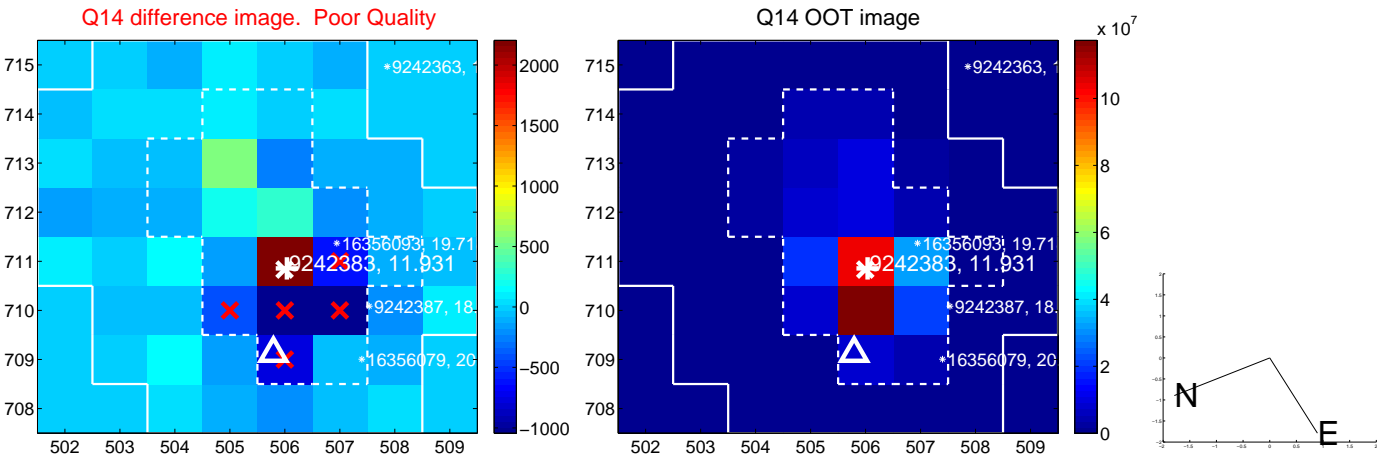
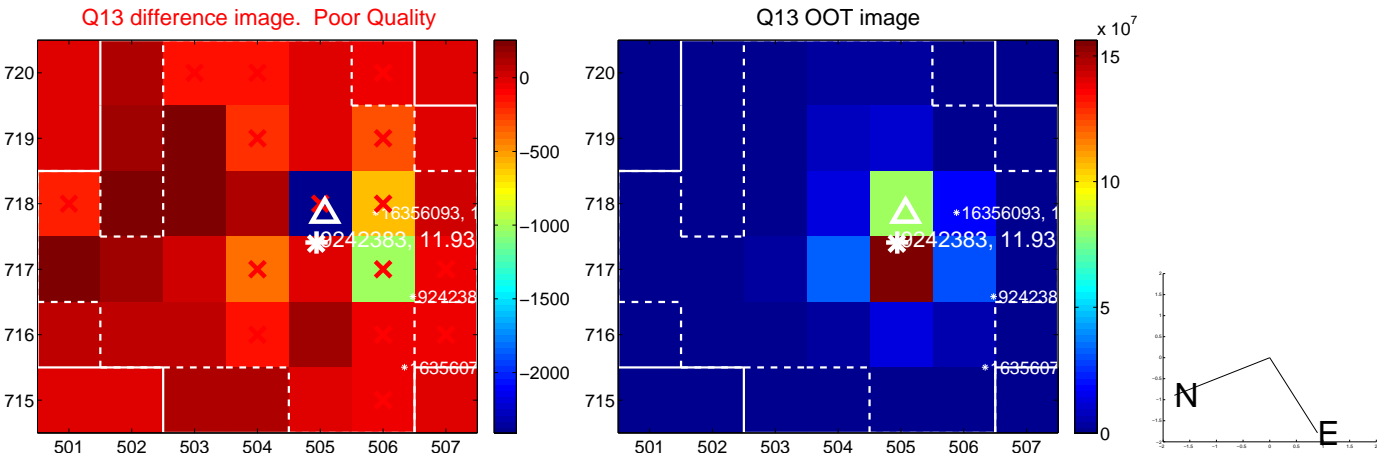
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



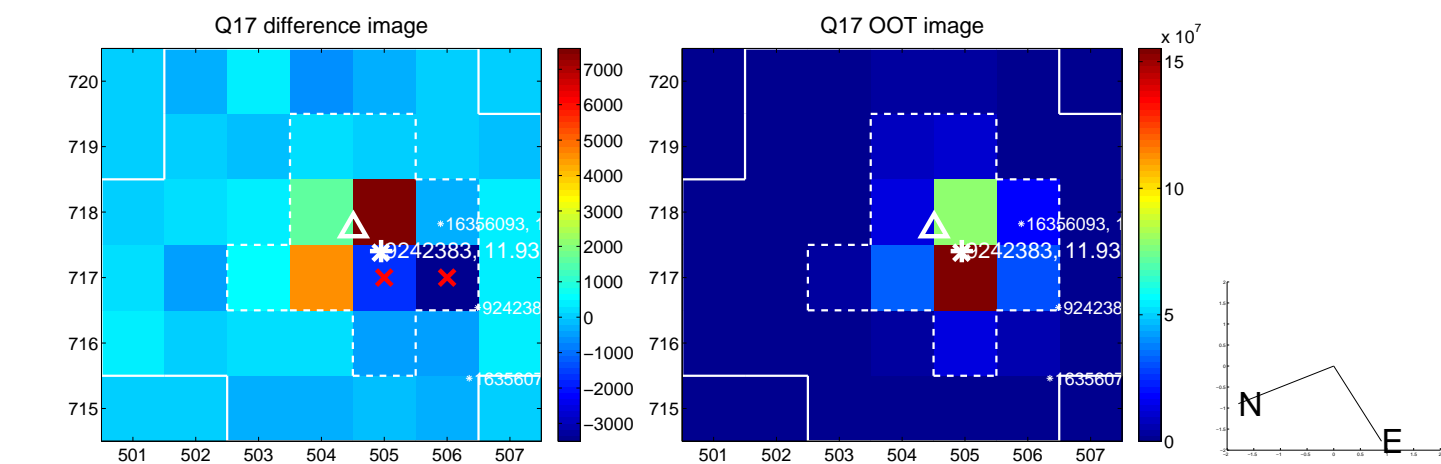
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



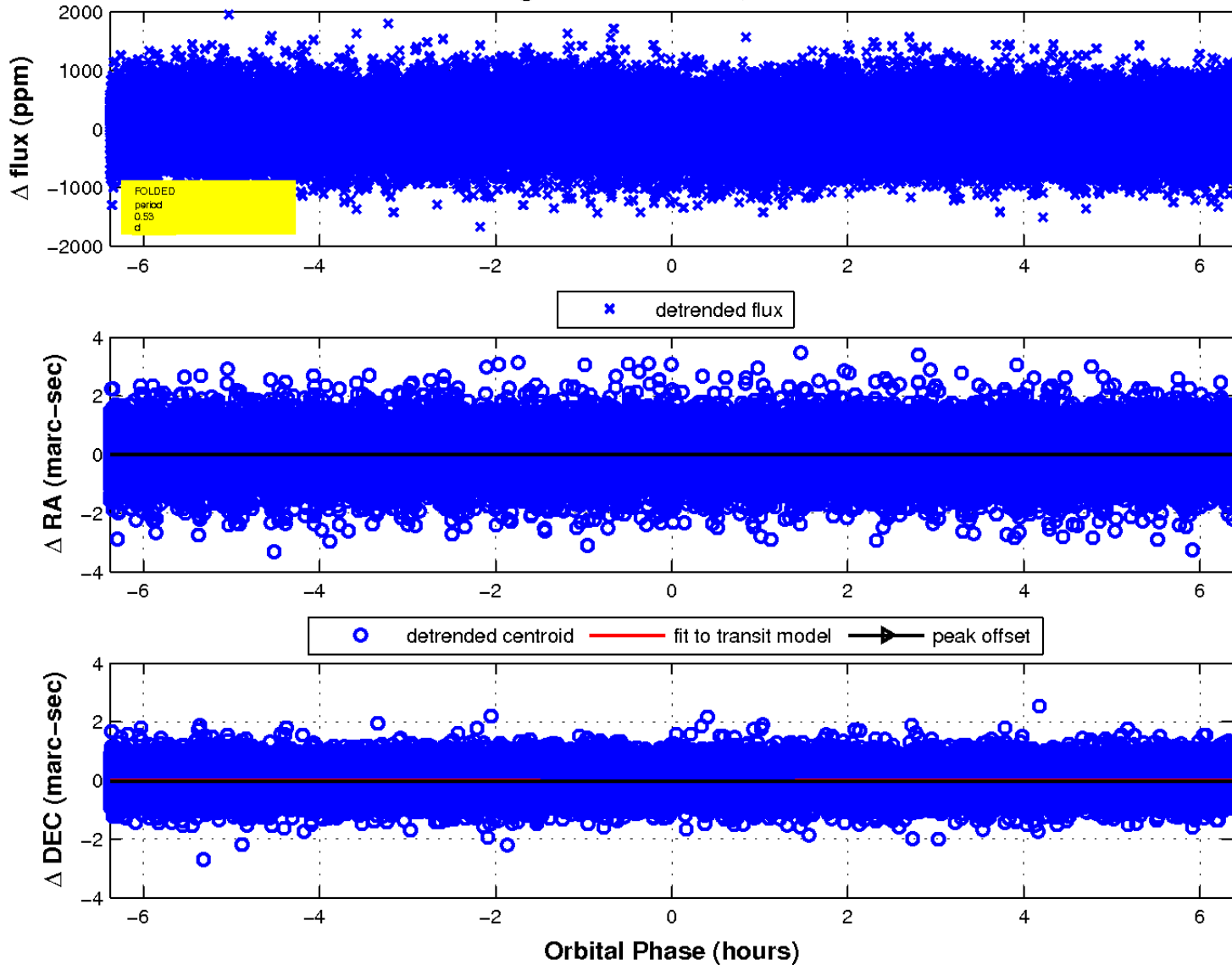
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

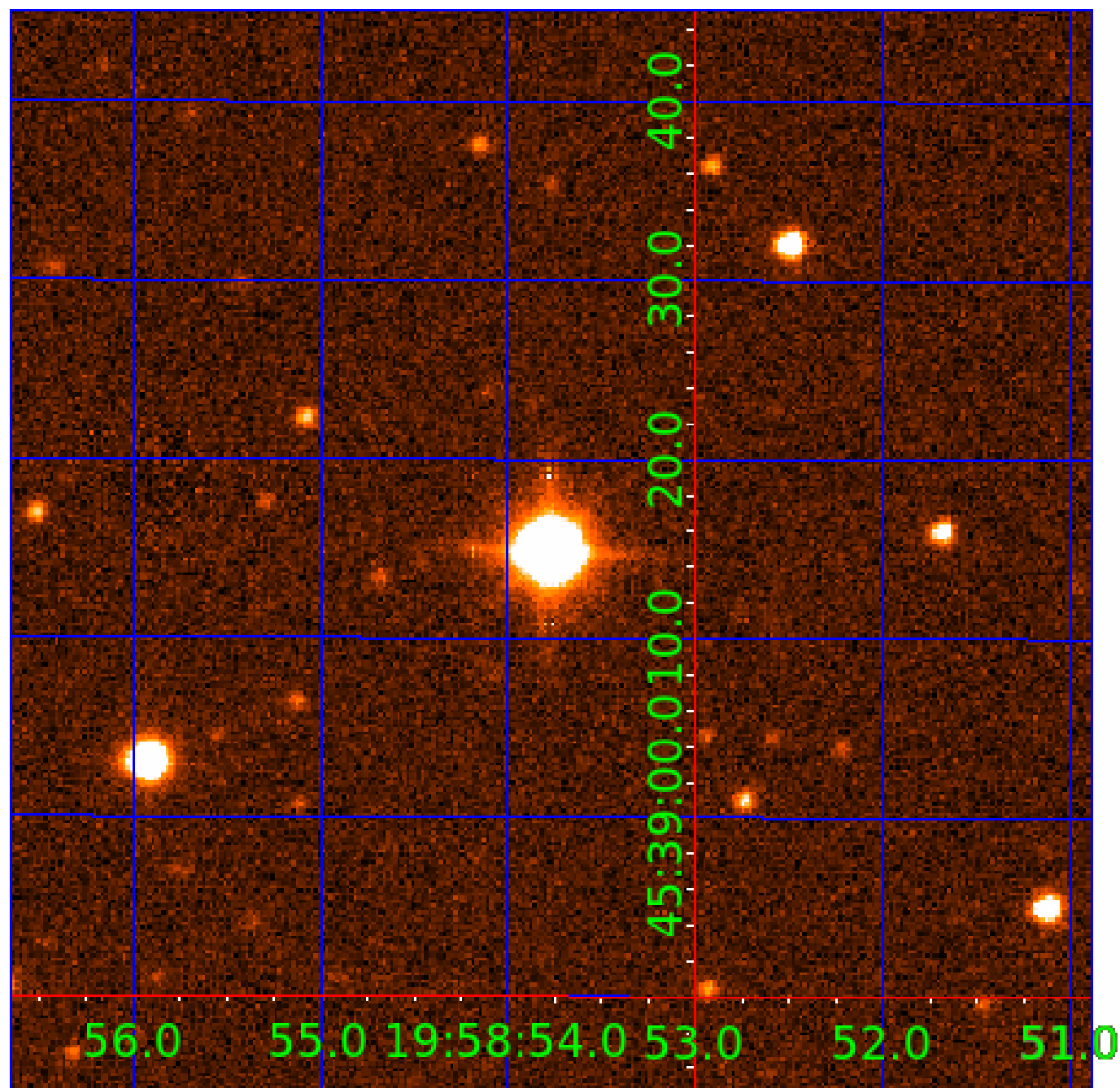


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 009242383

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})
009242383-01	OBS	No	0.885813	132.046751	61.2	1.647	14.3	11.9	13.09	6388	10.53	0.00
009242383-02	OBS	No	0.531494	131.688716	70.6	2.220	16.2	15.8	13.09	6388	12.87	0.00
009242383-03	OBS	No	0.531476	131.864103	57.3	3.078	14.6	9.6	13.09	6388	10.62	0.00
009242383-04	OBS	No	0.542435	131.970309	196.6	1.500	10.7	12.8	13.09	6388	18.65	0.00
009242383-05	OBS	No	4.671724	134.967245	309.2	1.500	9.9	-1.0	13.09	6388	23.19	37181.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009242383-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
009242383-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV
009242383-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_NOFITS

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

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

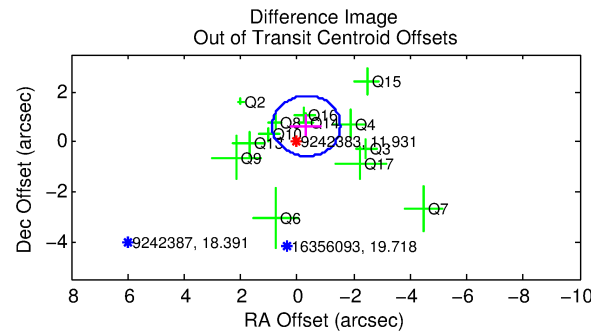
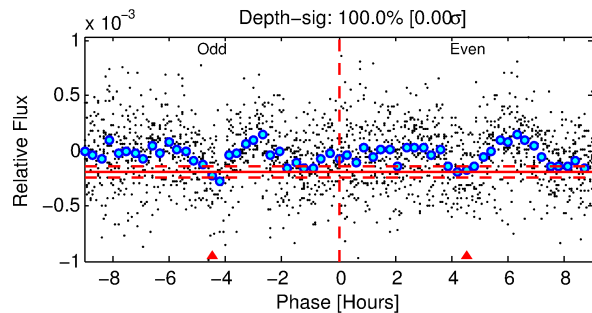
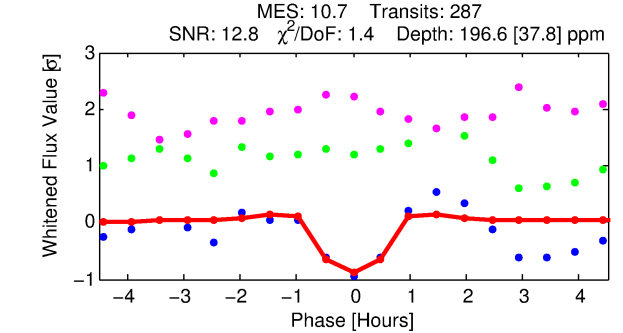
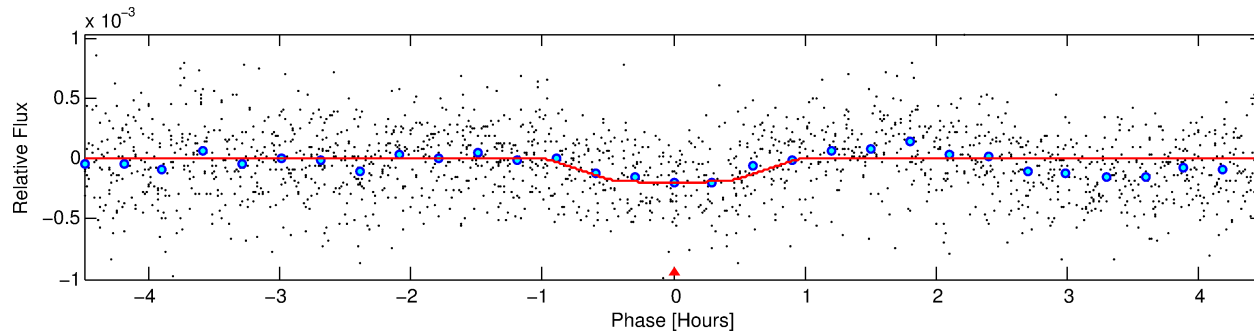
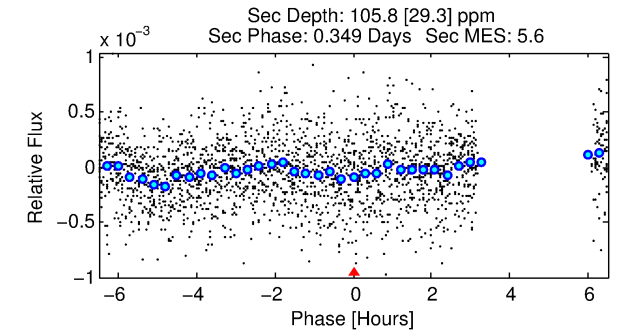
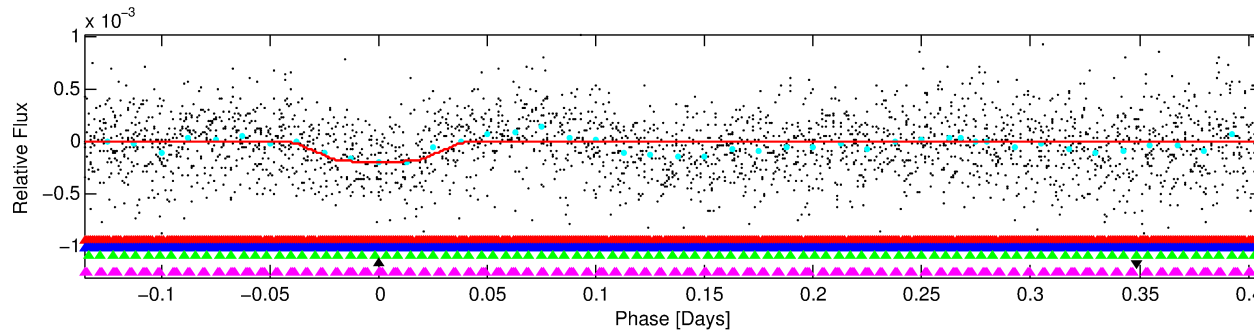
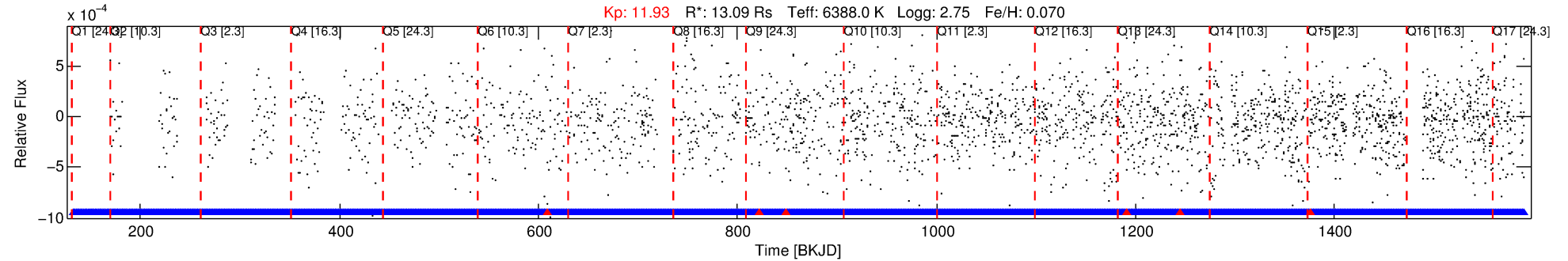
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009242383-04

No Significant Match Found

DV One-Page Summary

KIC: 9242383 Candidate: 4 of 5 Period: 0.542 d



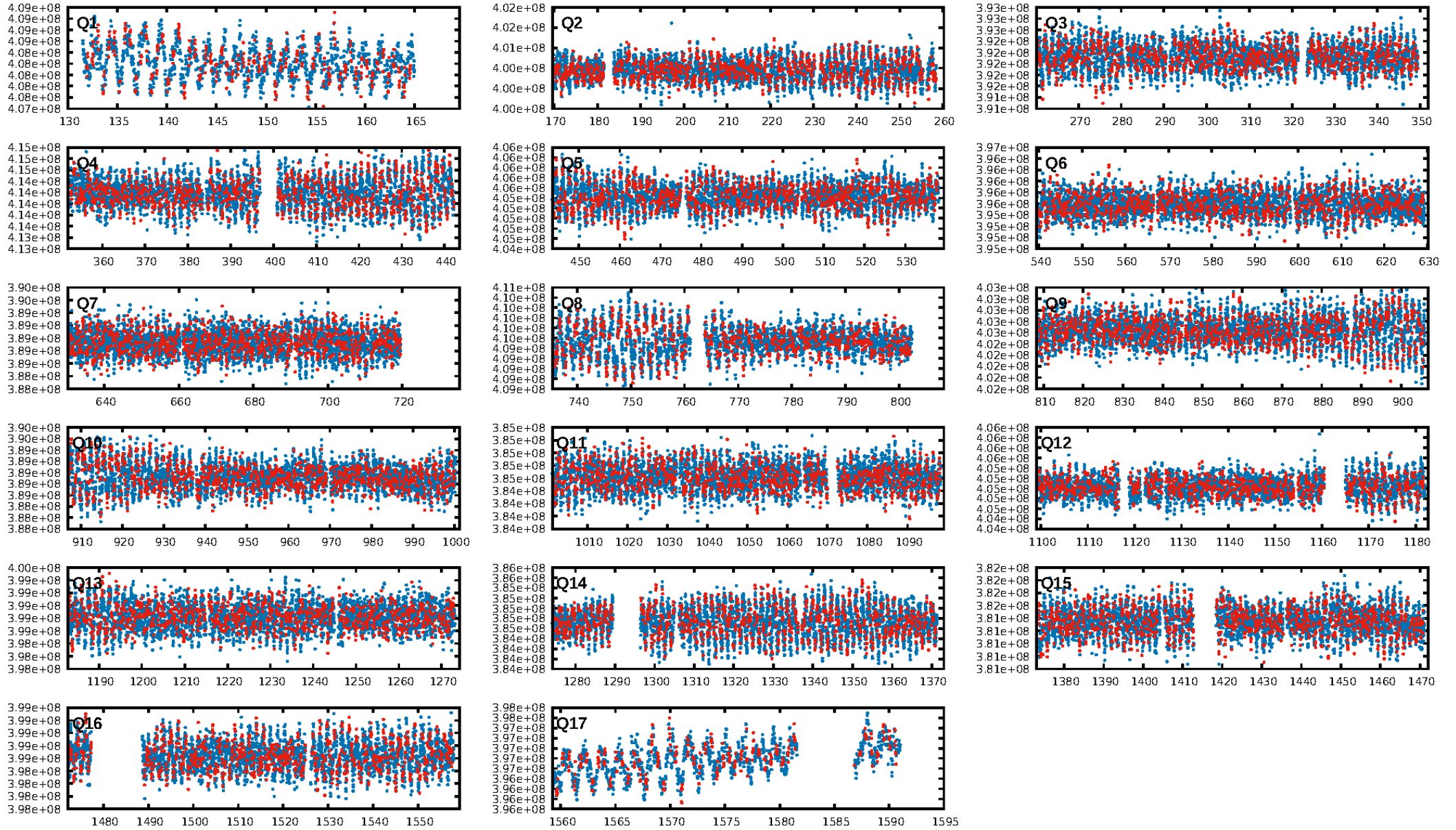
DV Fit Results:

Period = 0.54243 [0.00002] d
Epoch = 131.9703 [0.0020] BKJD
Rp/R* = 0.0131 [0.0106]
a/R* = 2.75 [9.77]
b = 0.30 [12.54]
Seff = N/A
Teq = N/A
Rp = 18.65 [16.78] Re
a = N/A
Ag = N/A
Teffp = N/A

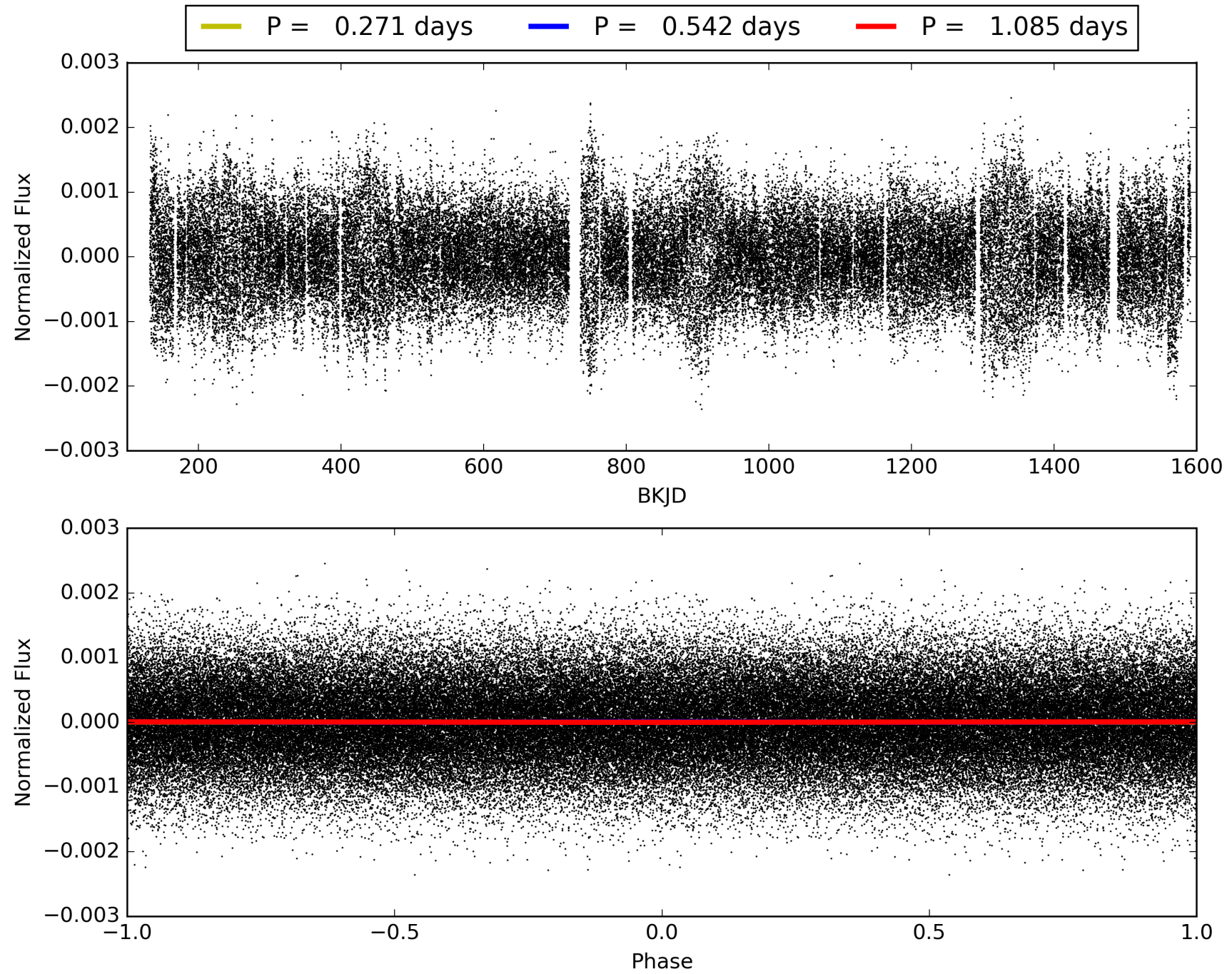
DV Diagnostic Results:

ShortPeriod-sig: 7.8% [0.10σ]
LongPeriod-sig: 100.0% [3.70σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [276/282]
GhostDiagnostic-chr: -4.477
Centroid-sig: 4.5%
Centroid-so: 0.152 arcsec [1.86σ]
OotOffset-rm: 0.709 arcsec [1.76σ]
KicOffset-rm: 0.928 arcsec [2.29σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 009242383-04, PDC Light Curves

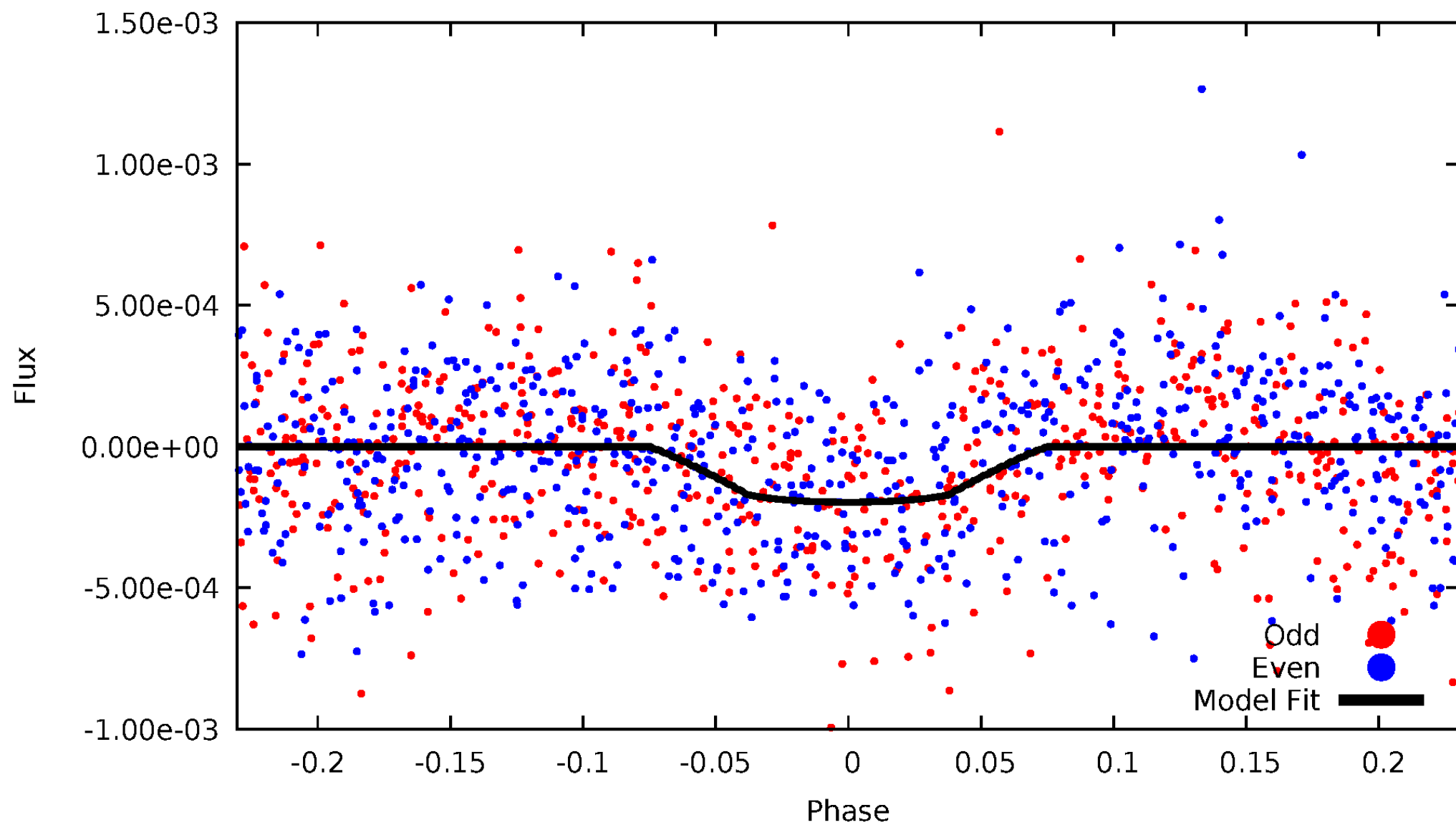


TCE 009242383-04



DV Odd/Even

TCE 009242383-04

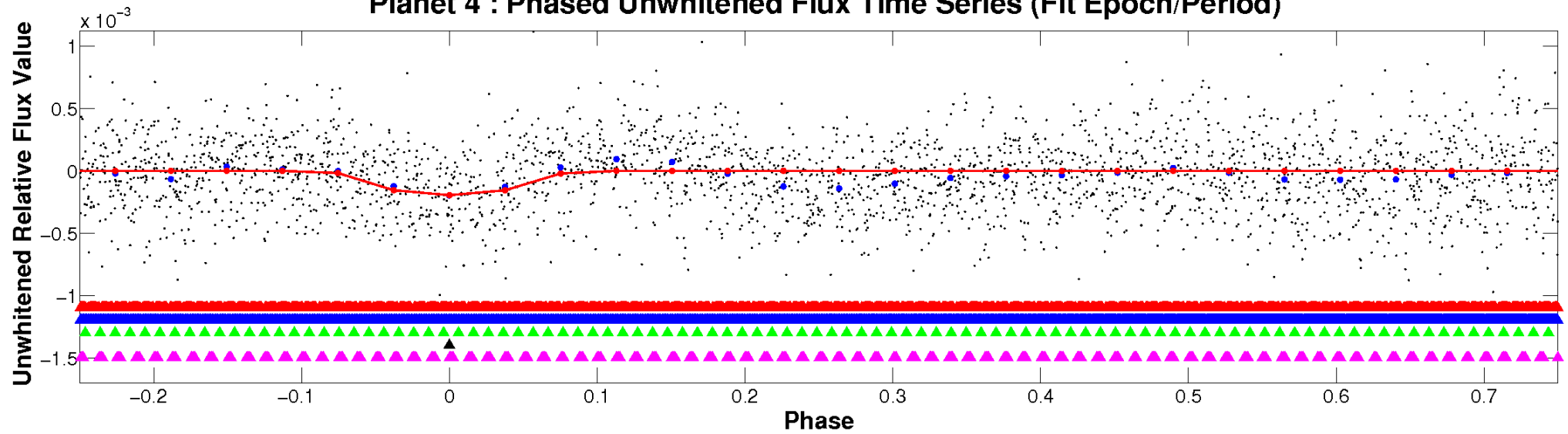


ALT Odd/Even

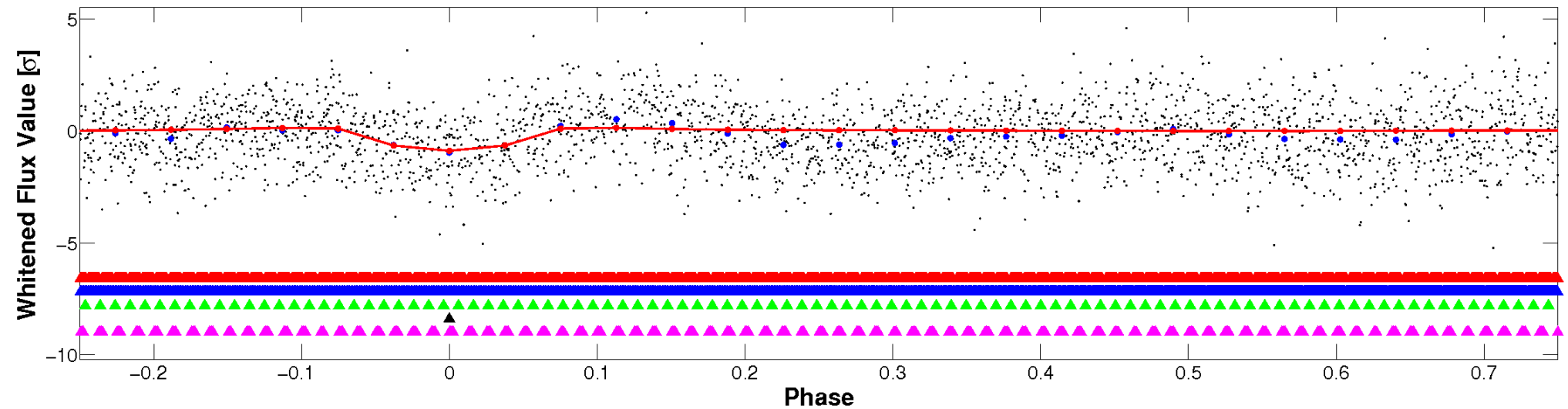
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

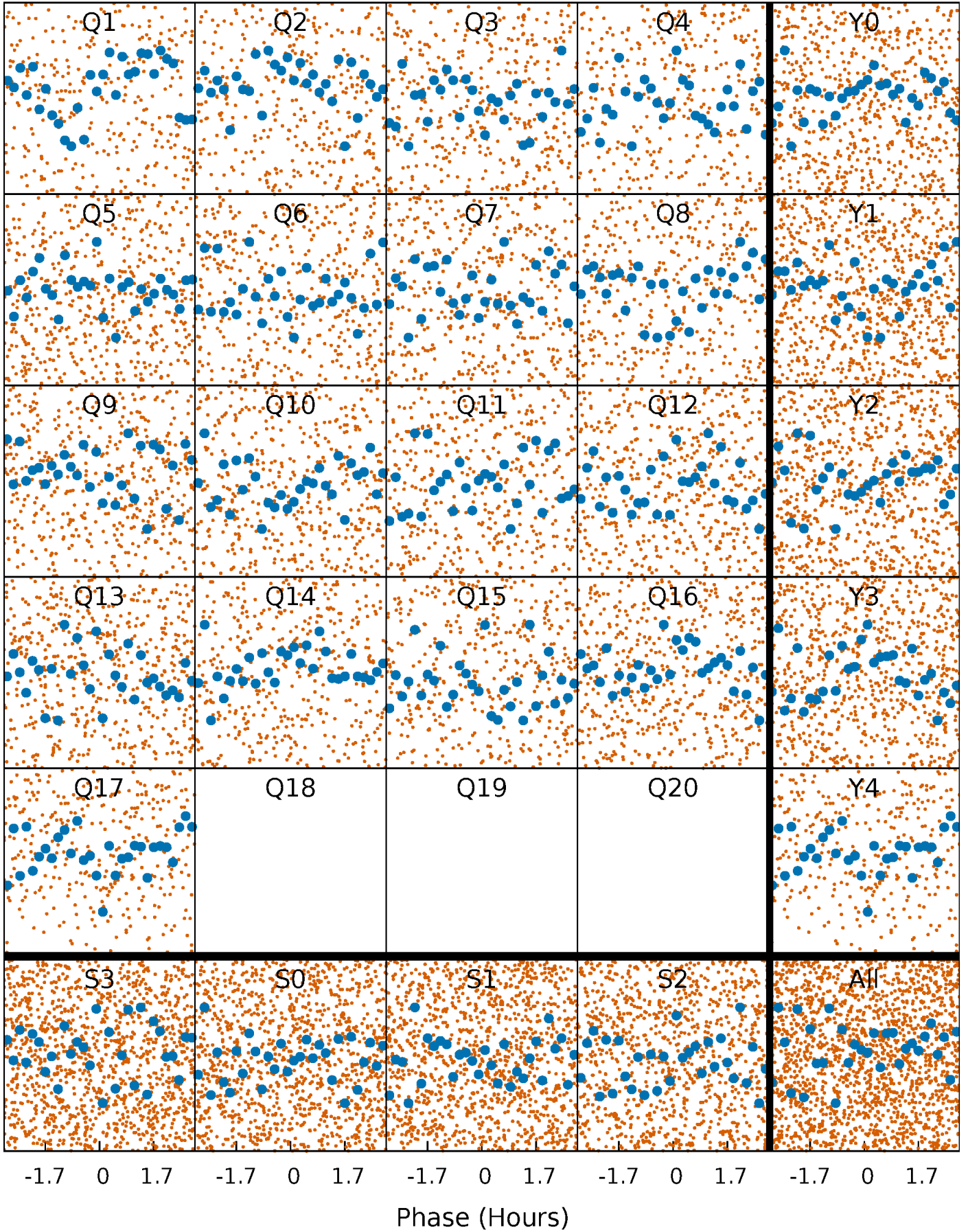


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



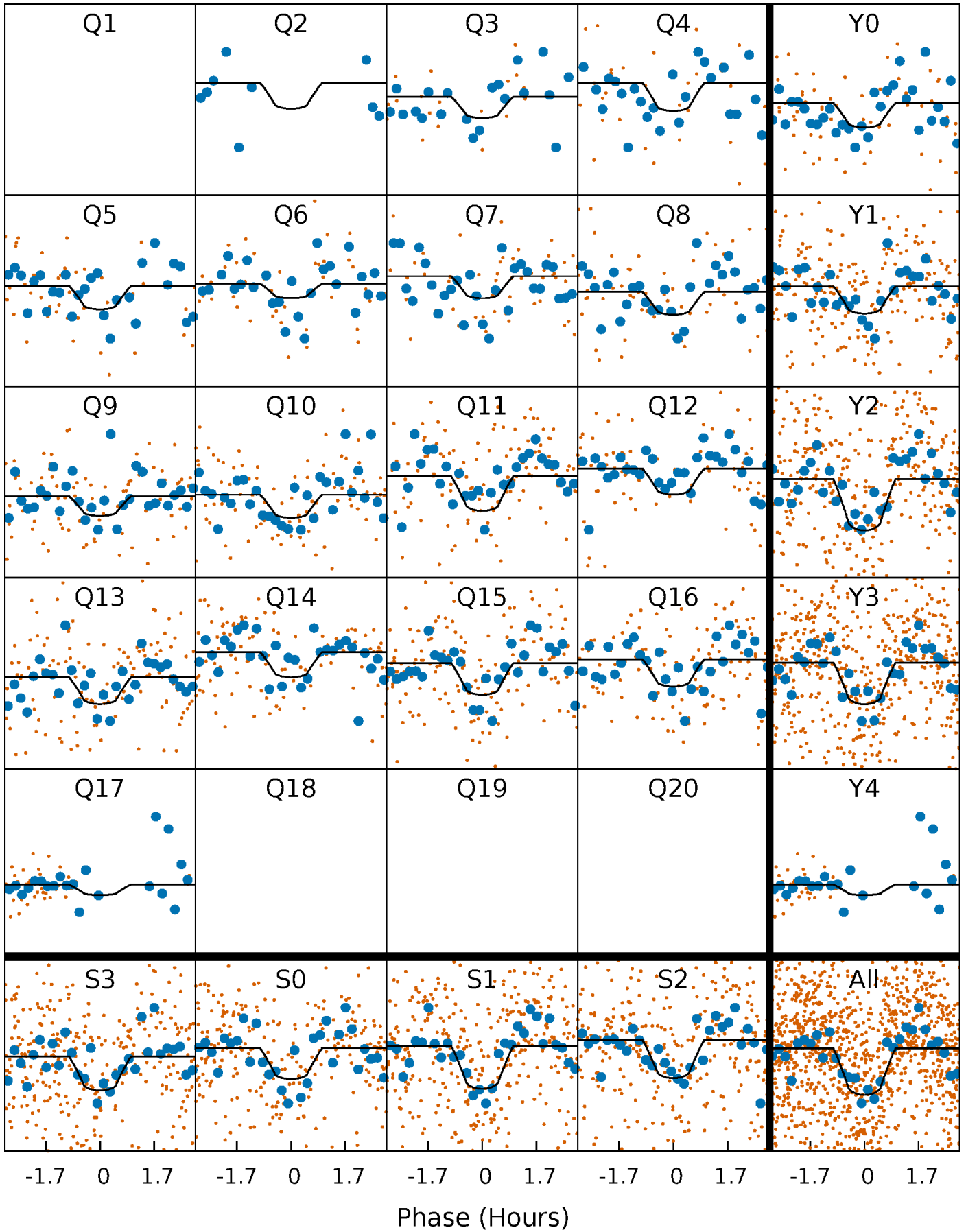
PDC Quarter-Phased Transit Curves

TCE 009242383-04 P= 0.542435 Days $T_0=131.970309$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009242383-04 P= 0.542435 Days $T_0=131.970309$ (BKJD)

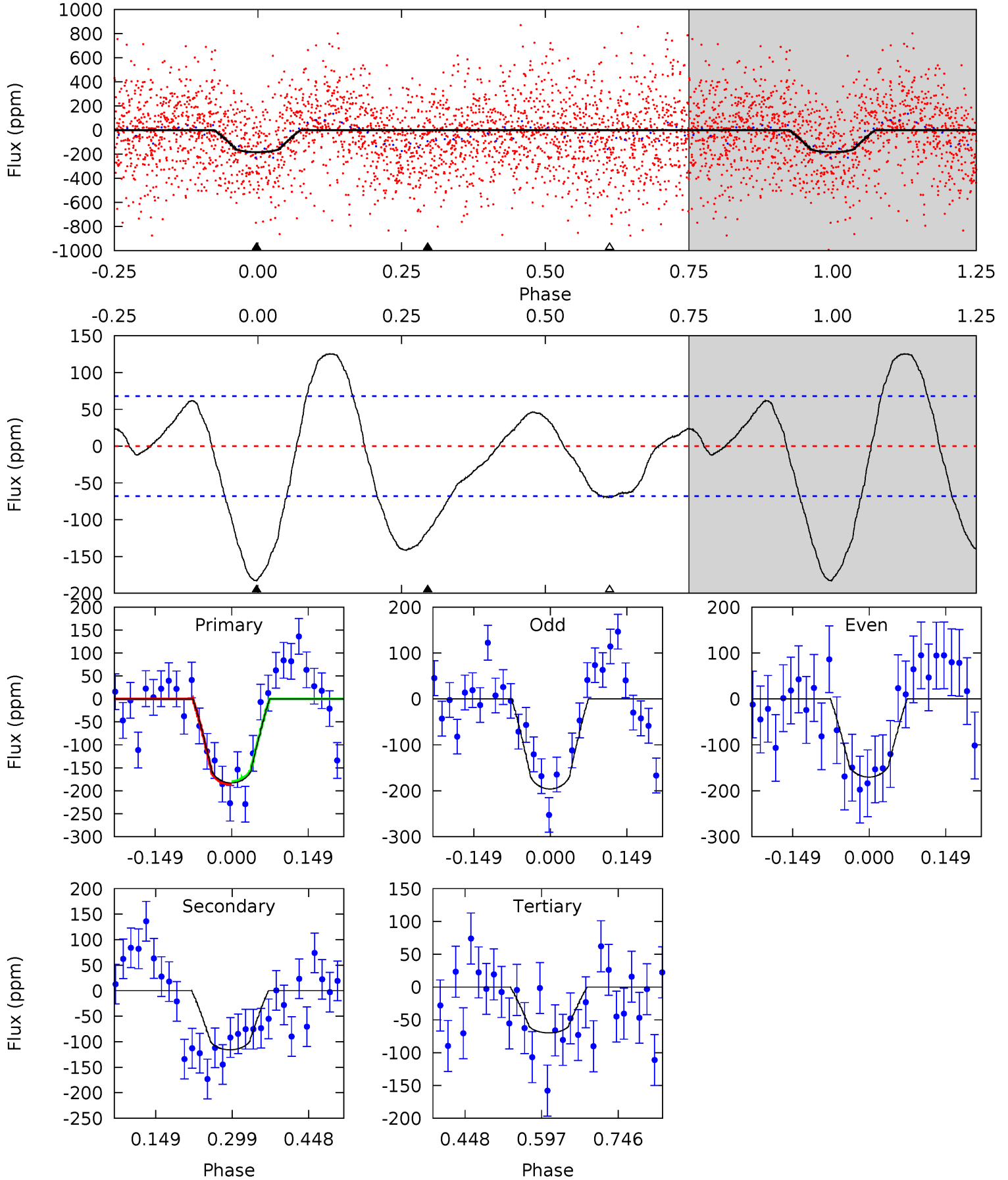


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009242383-04, P = 0.542435 Days, E = 131.970309 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	7.63	4.60	0	4.48	1.44	2.37	7.45	12.1	3.03	7.63	0.86	0.83	0.41	0.21



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009242383

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6388^{+520}_{-1562}	$2.746^{+0.172}_{-0.258}$	$0.070^{+0.200}_{-0.550}$	$13.089^{+3.447}_{-5.171}$	$3.479^{+0.113}_{-2.154}$	$0.002^{+0.003}_{-0.001}$
	+8%/-24%	+6%/-9%	+286%/-786%	+26%/-40%	+3%/-62%	+116%/-54%
Source	PHO1	FLK73	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 009242383-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-116 ± 15	$20.12^{+15.32}_{-11.28}$	9997^{+1497}_{-2333}	-7215^{+4431}_{-2140}	$0.056^{+0.238}_{-0.037}$
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

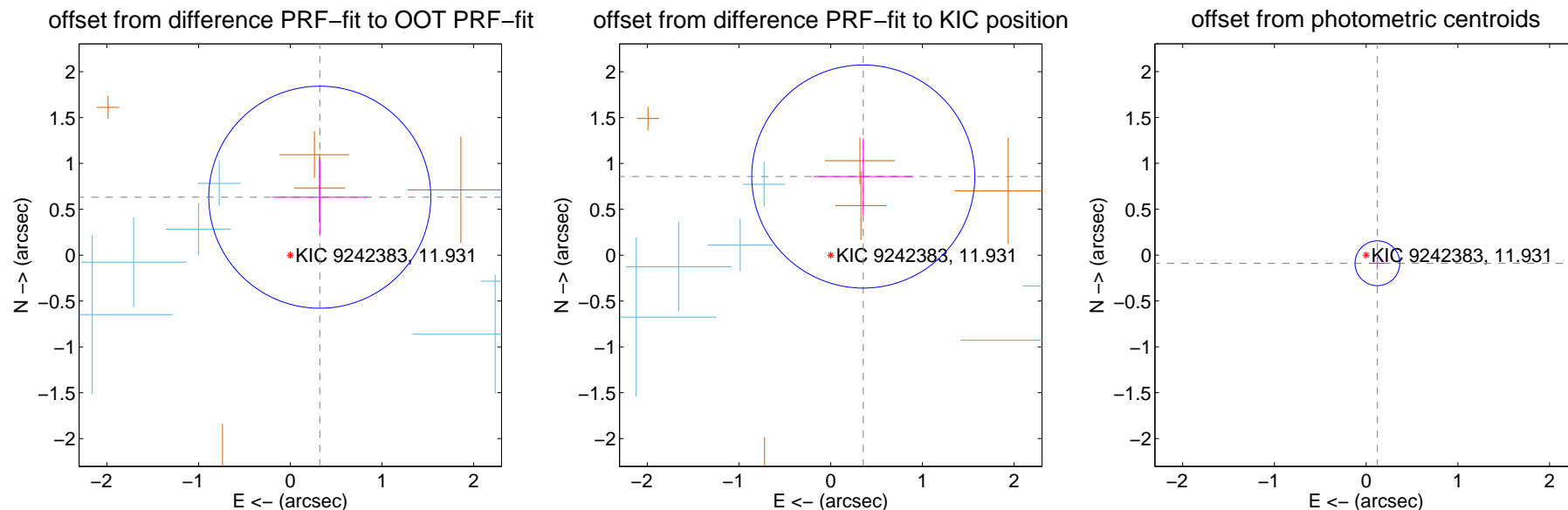
DV Centroid Data

Supplemental centroid analysis for 009242383-04. **Kepler magnitude: 11.93.** Transit SNR 12.79

There are 7 quarters with good PRF difference image offsets

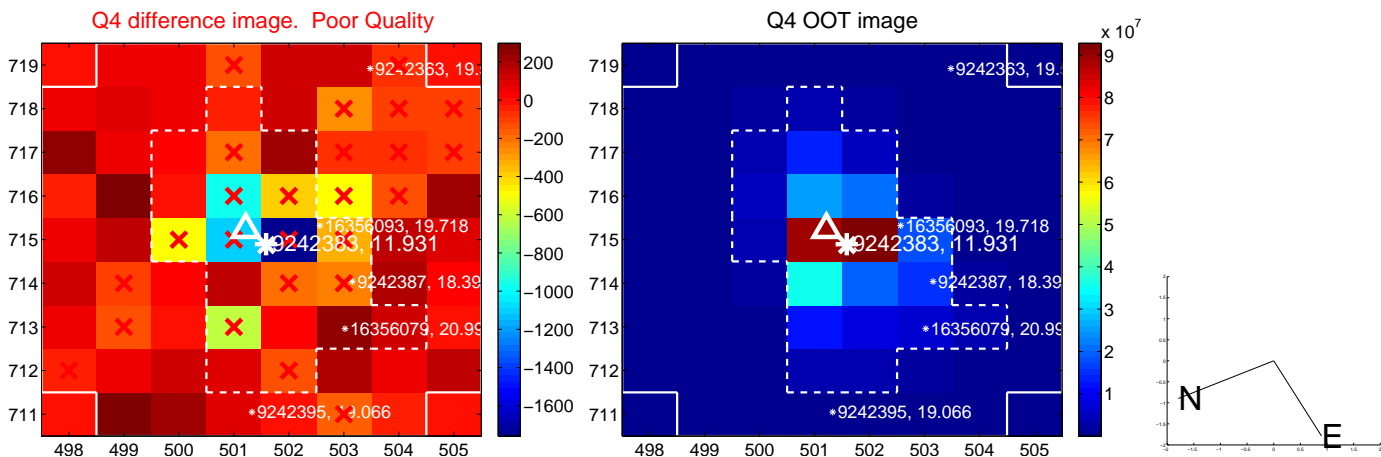
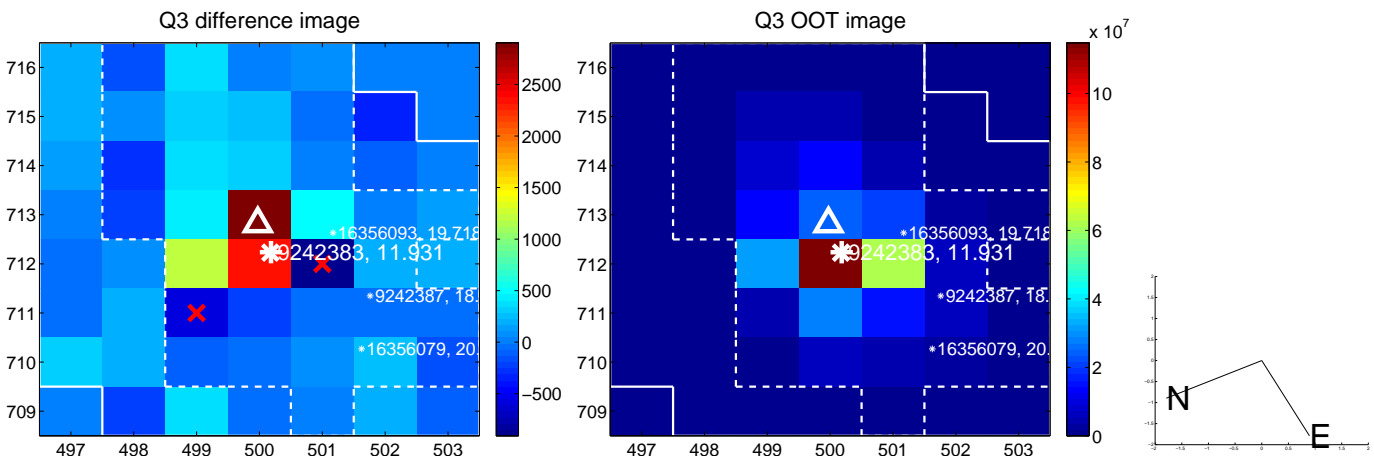
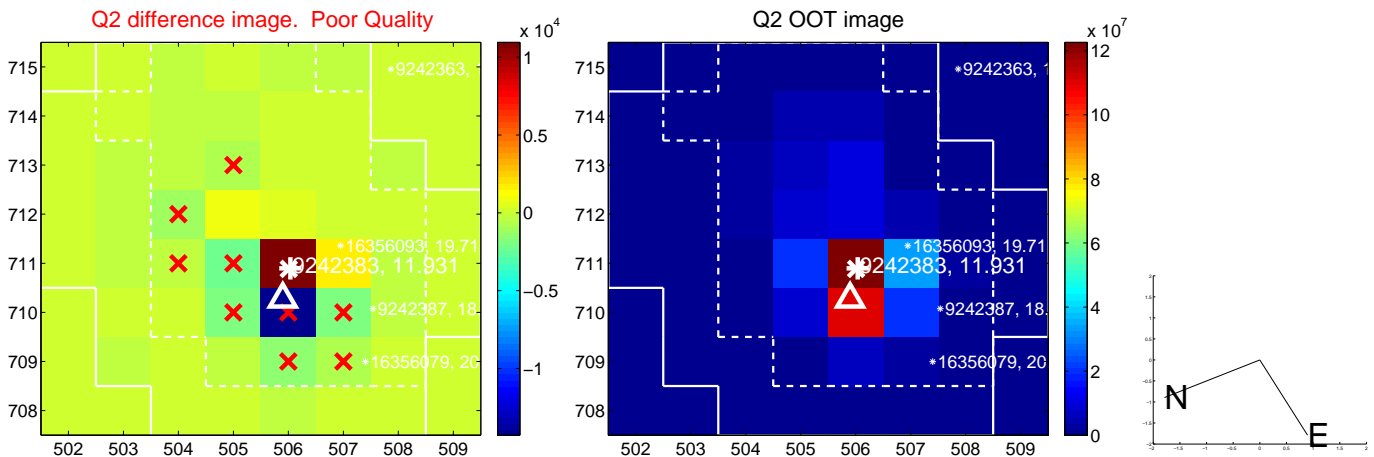
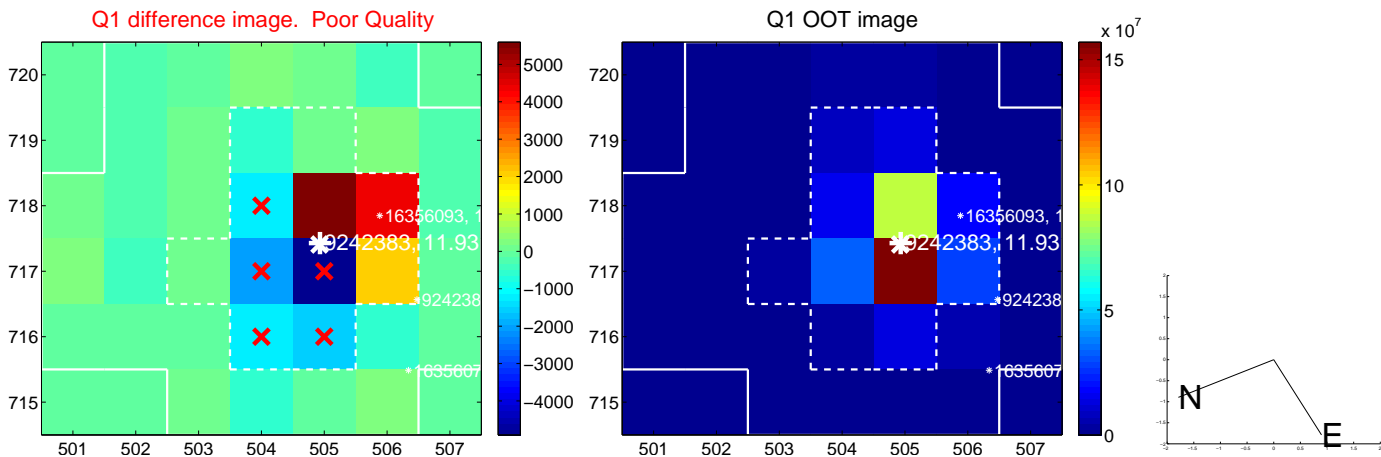
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.709 ± 0.404	1.76	-0.322 ± 0.515	0.632 ± 0.407
PRF-fit source offset from KIC position	0.928 ± 0.405	2.29	-0.355 ± 0.544	0.857 ± 0.415
photometric centroid source offset	0.15 ± 0.08	1.86	-0.12 ± 0.09	-0.09 ± 0.07

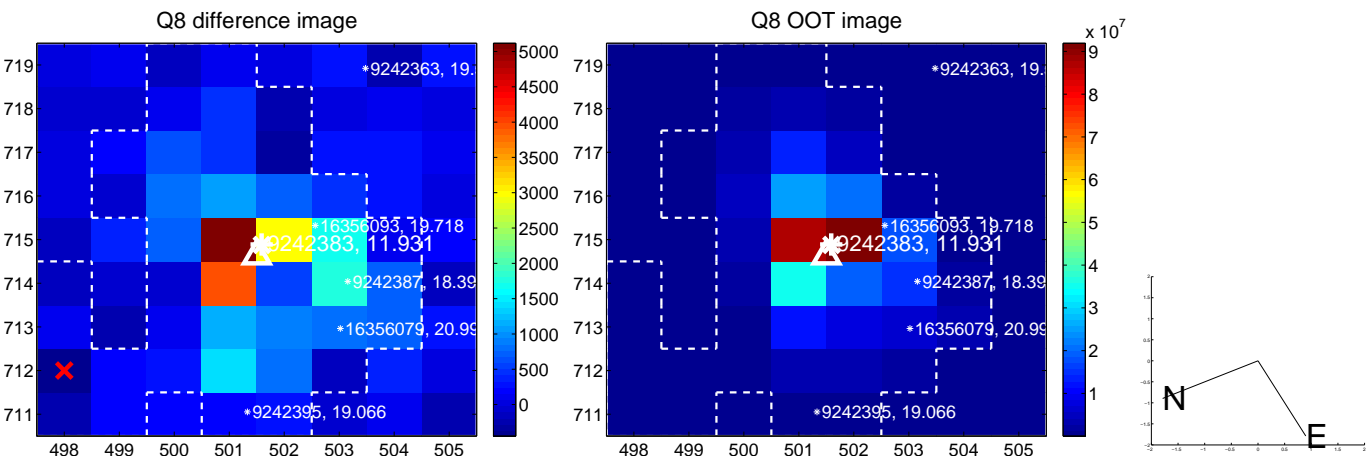
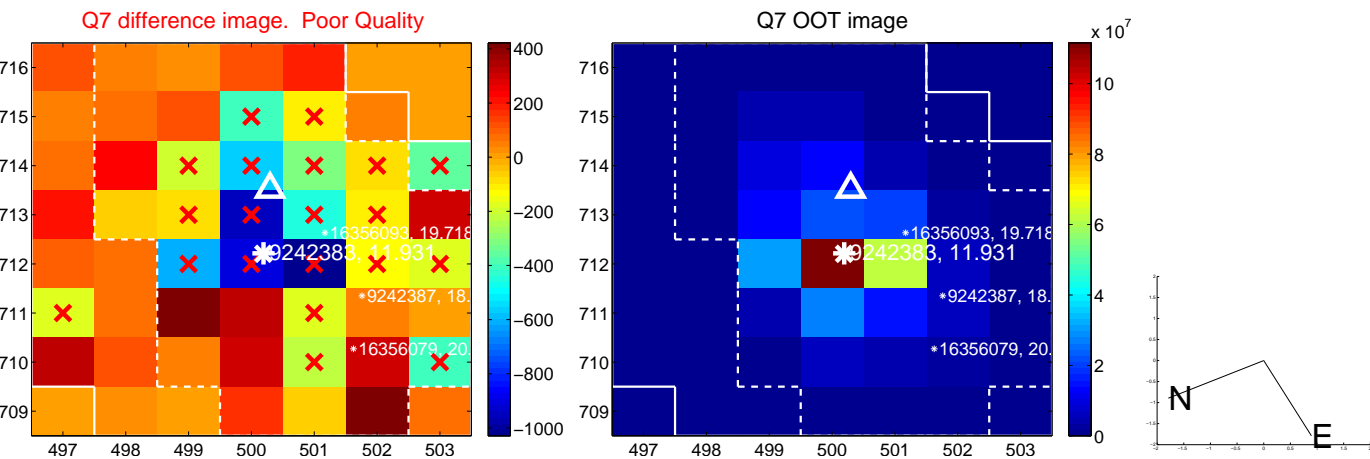
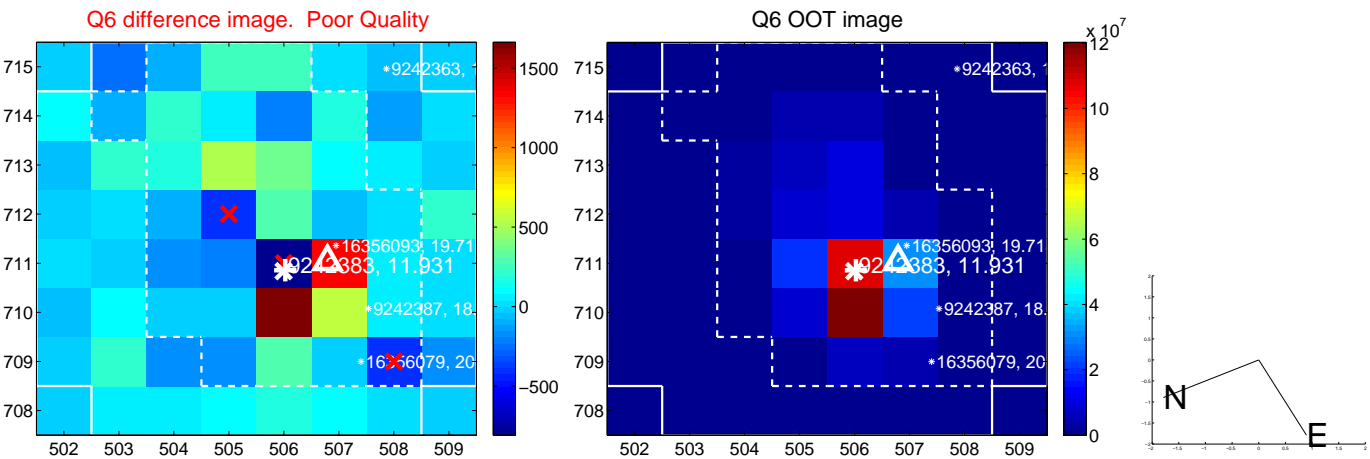
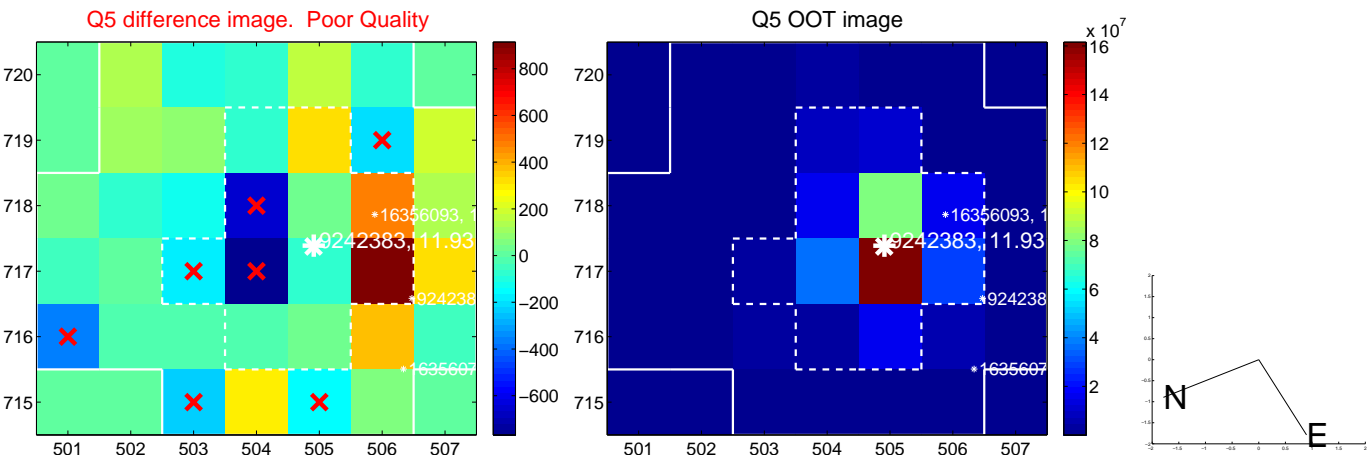


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

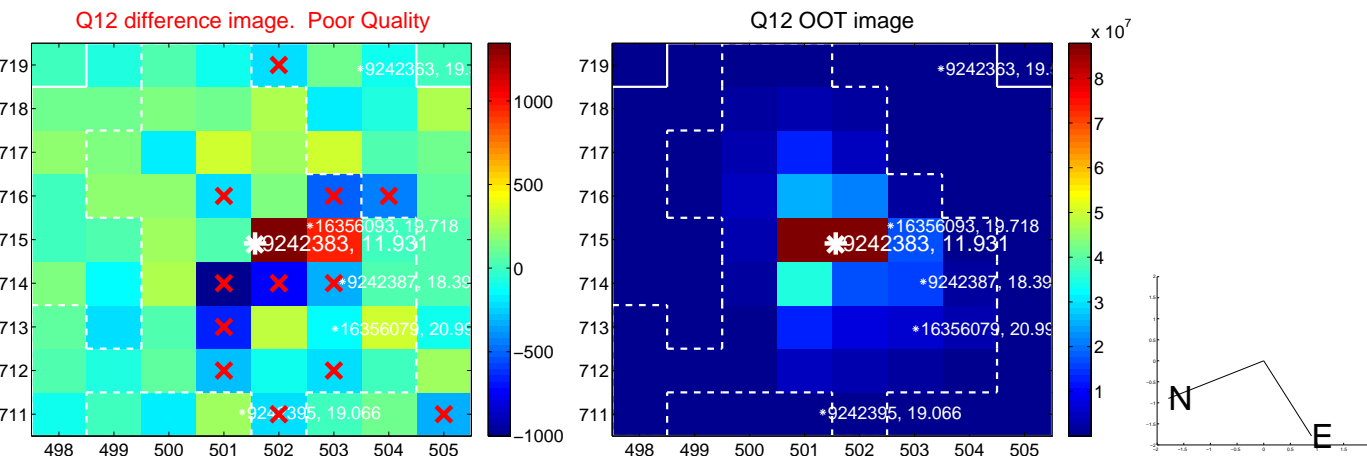
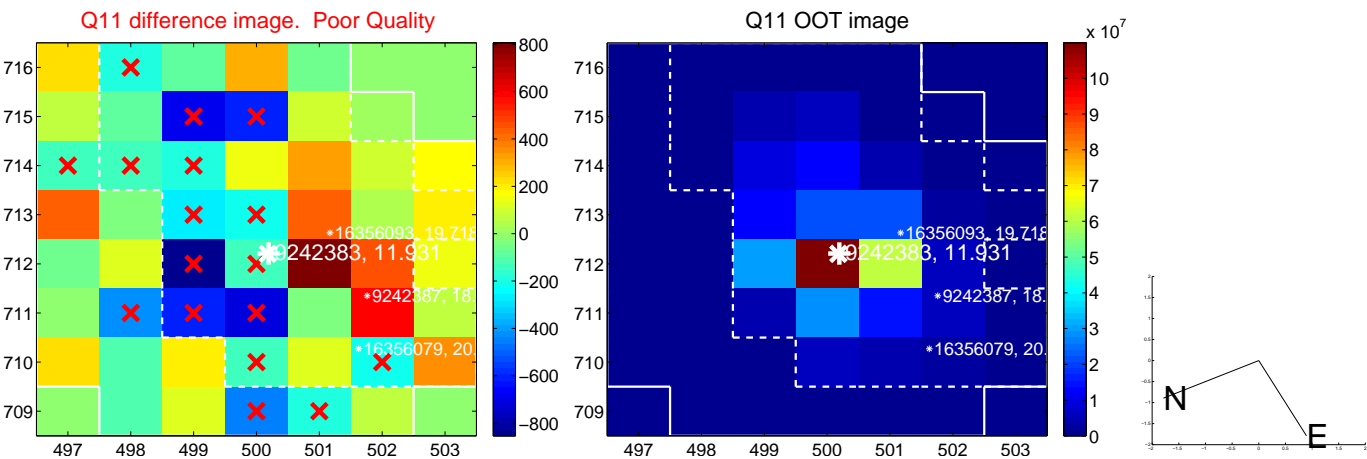
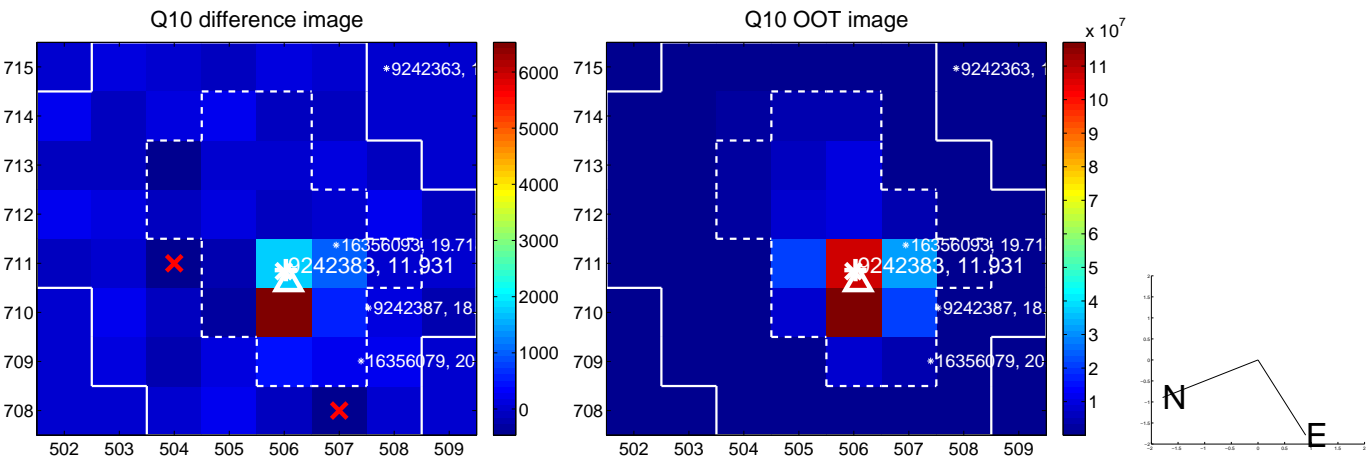
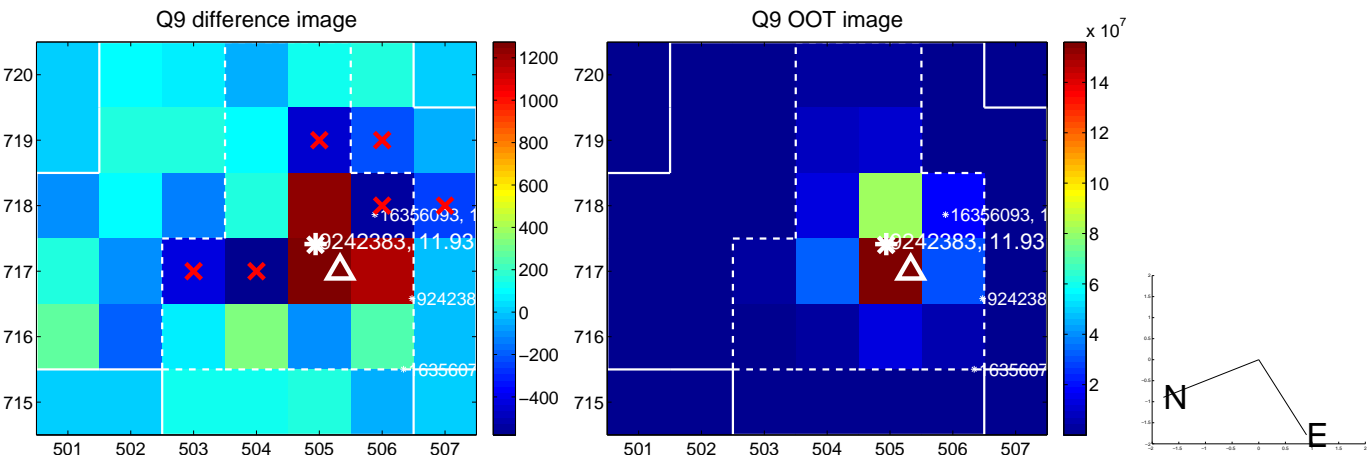
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



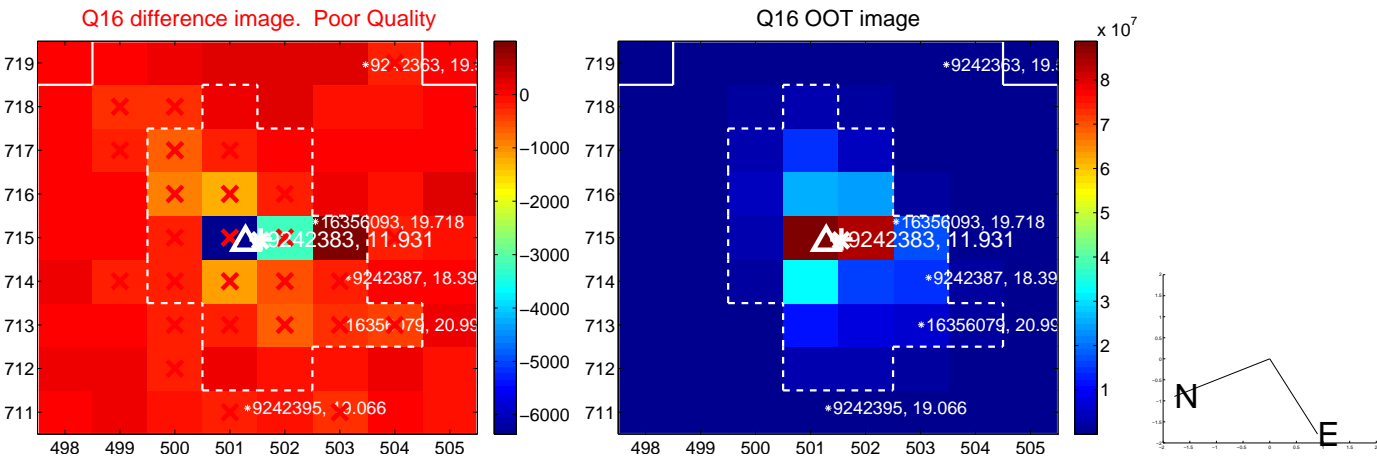
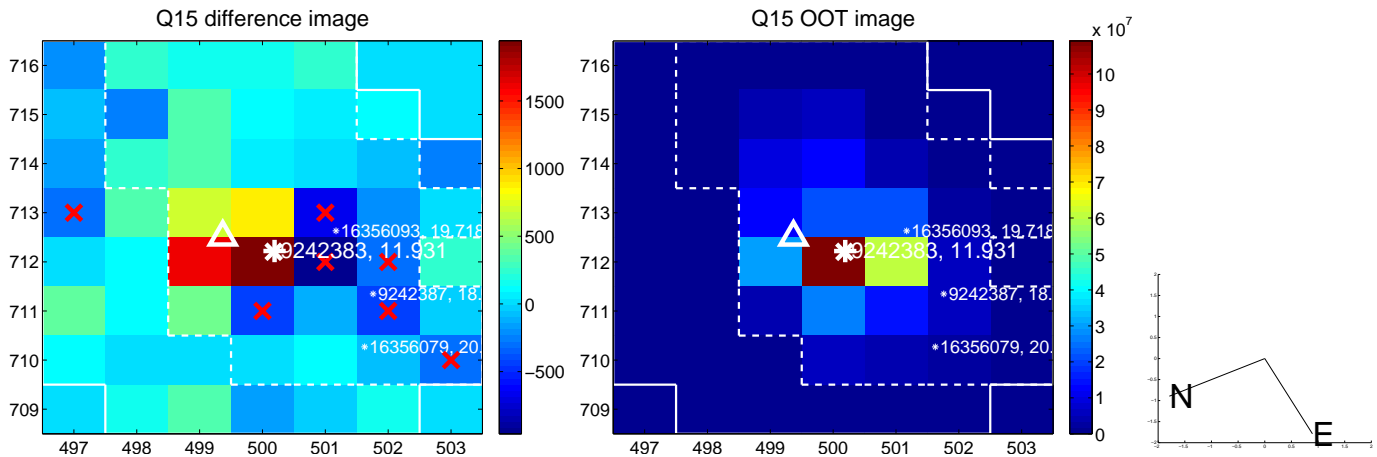
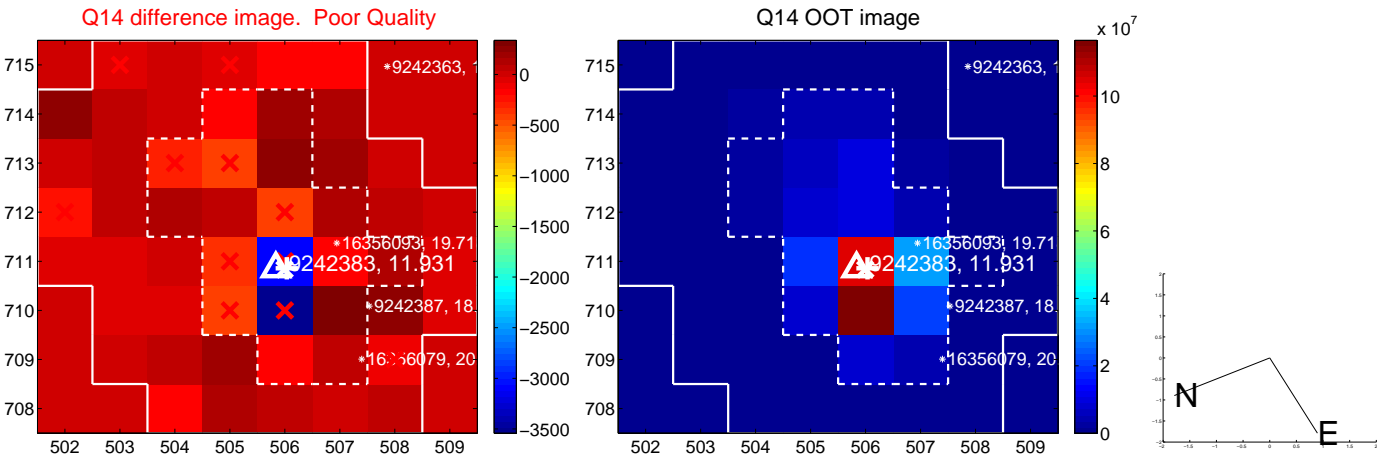
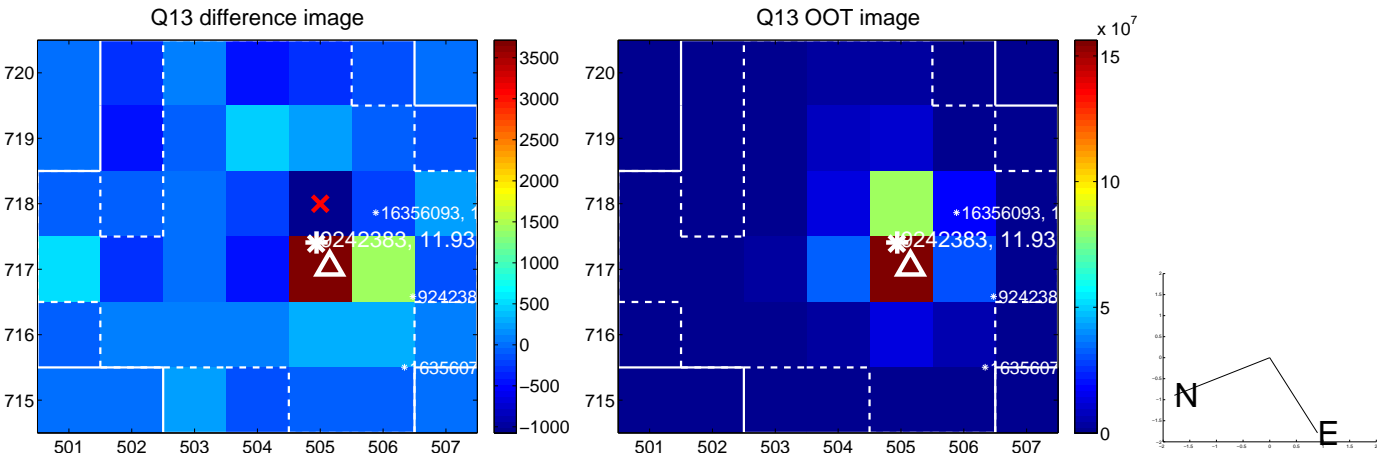
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



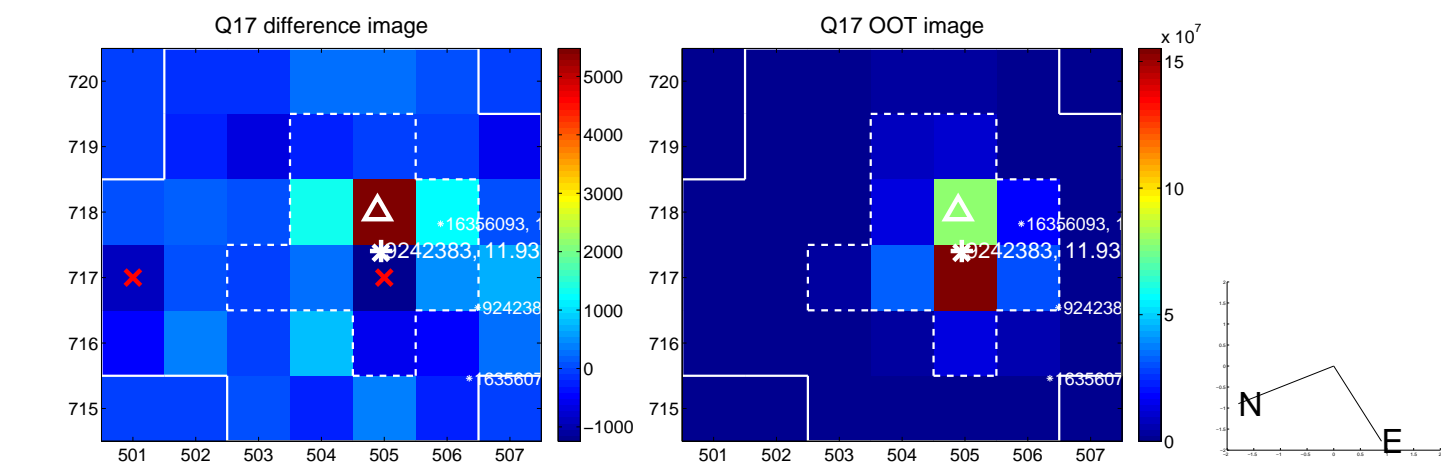
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



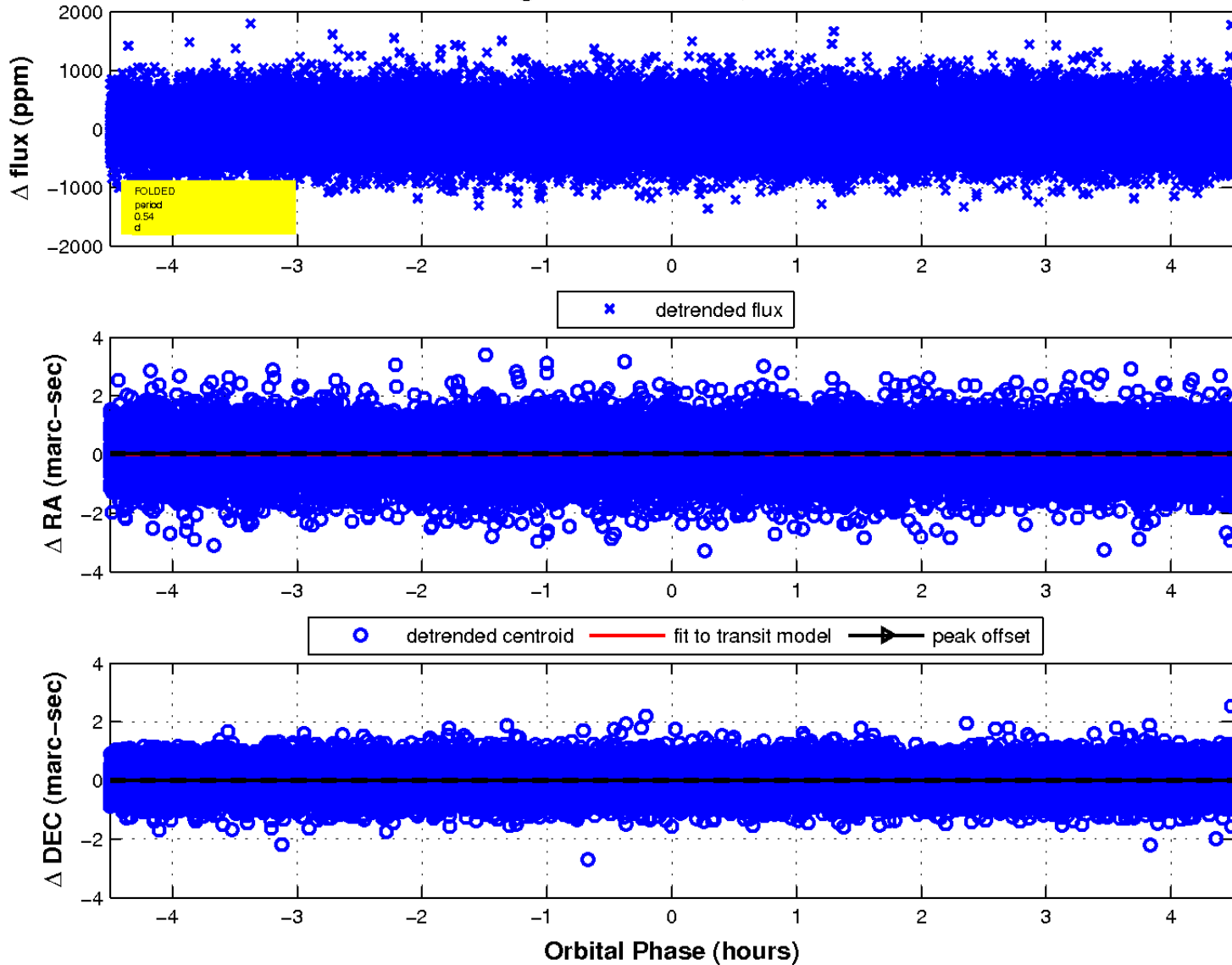
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

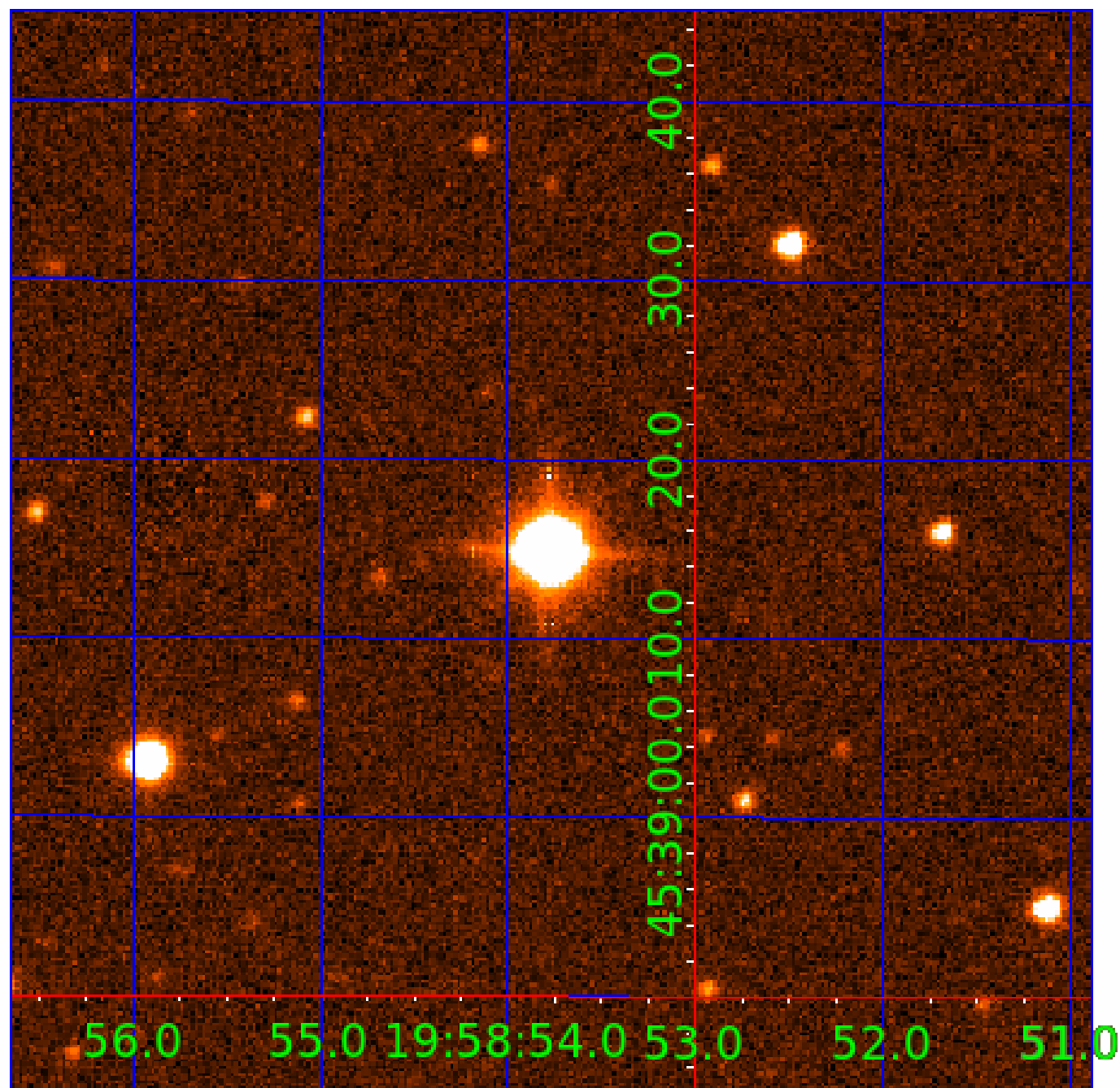


fluxWeightedCentroids, Planet 4 of 5



UKIRT Image

Declination



KIC 009242383

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})
009242383-01	OBS	No	0.885813	132.046751	61.2	1.647	14.3	11.9	13.09	6388	10.53	0.00
009242383-02	OBS	No	0.531494	131.688716	70.6	2.220	16.2	15.8	13.09	6388	12.87	0.00
009242383-03	OBS	No	0.531476	131.864103	57.3	3.078	14.6	9.6	13.09	6388	10.62	0.00
009242383-04	OBS	No	0.542435	131.970309	196.6	1.500	10.7	12.8	13.09	6388	18.65	0.00
009242383-05	OBS	No	4.671724	134.967245	309.2	1.500	9.9	-1.0	13.09	6388	23.19	37181.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009242383-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009242383-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
009242383-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV
009242383-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—NO_FITS—CENT_NOFITS

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

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

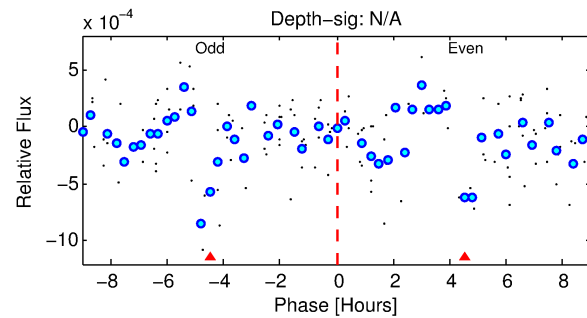
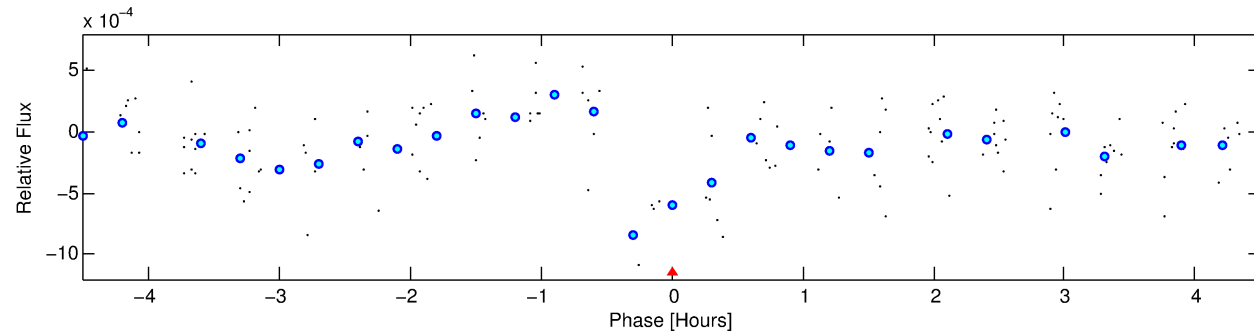
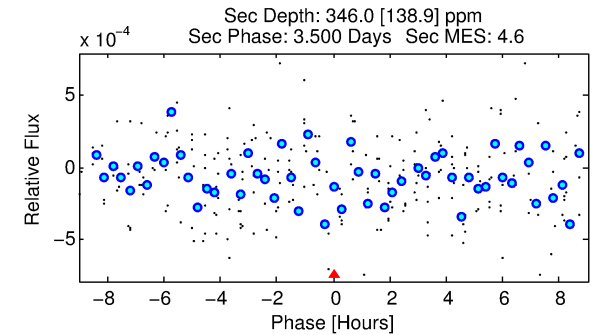
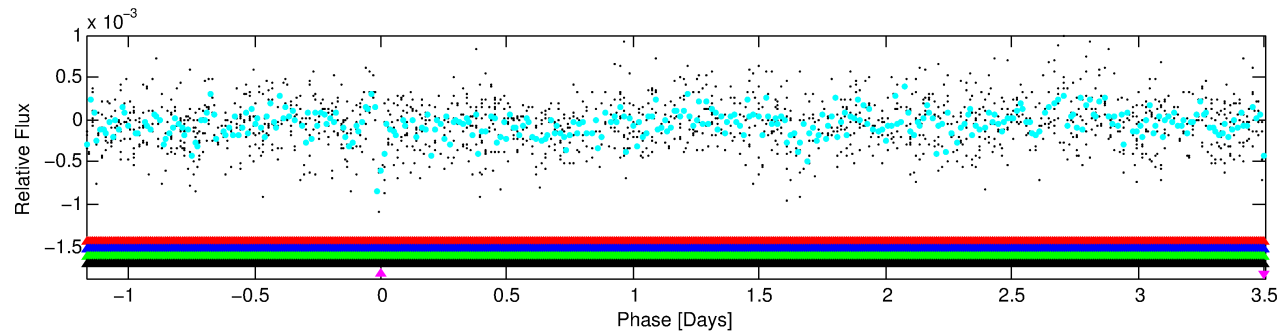
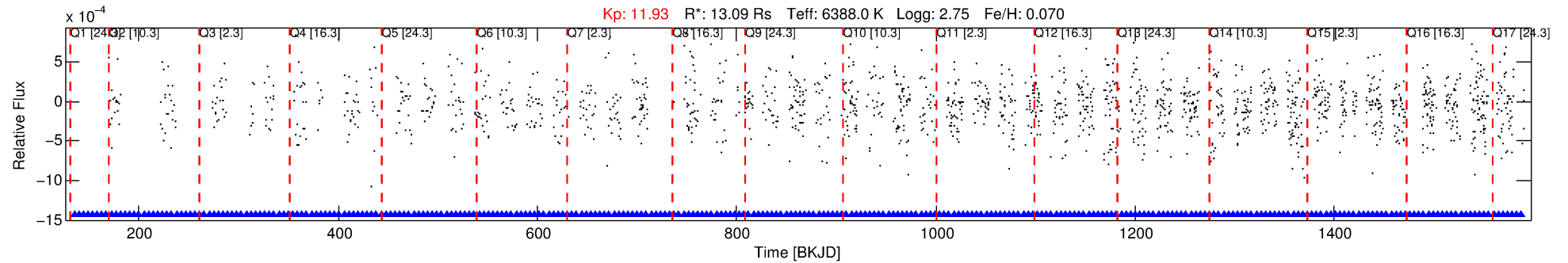
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009242383-05

No Significant Match Found

DV One-Page Summary

KIC: 9242383 Candidate: 5 of 5 Period: 4.672 d



TPS TCE Results:

Period = 4.67172 d
Epoch = 134.9672 BKJD

DV fit results are unavailable

DV Diagnostic Results:

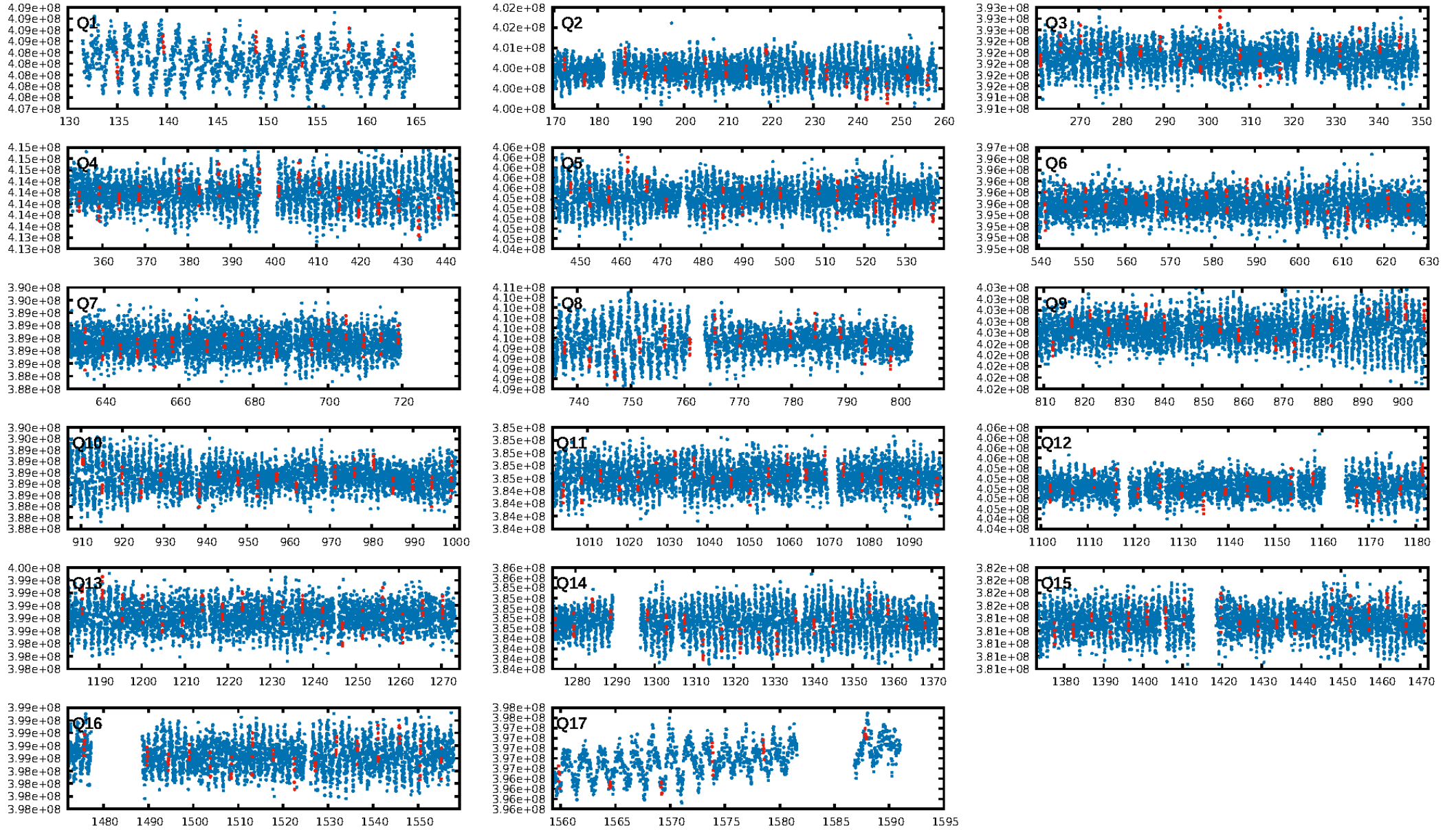
ShortPeriod-sig: 100.0% [40.78 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: N/A
GhostDiagnostic-chr: N/A

Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

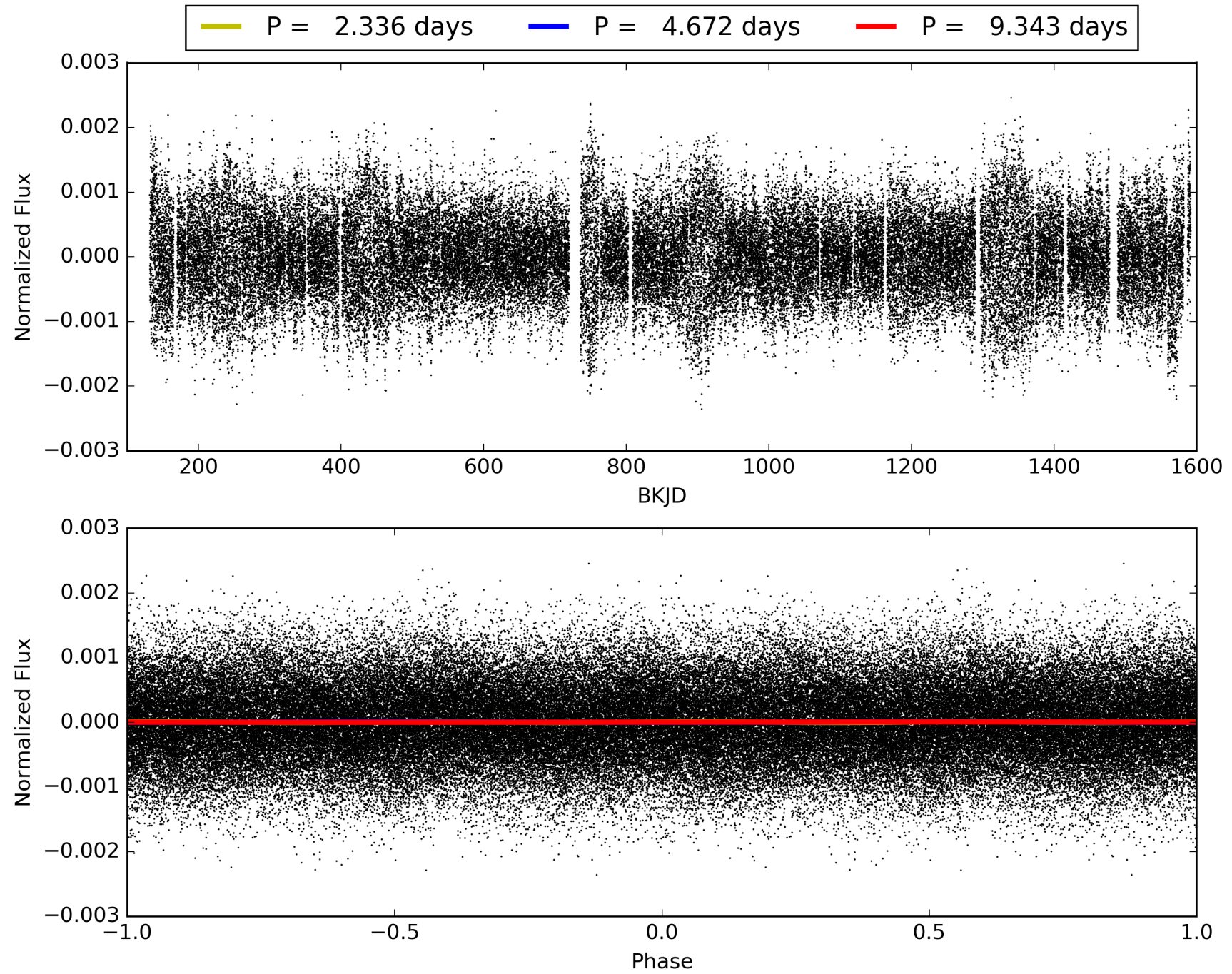
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:40:52 Z

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

TCE 009242383-05, PDC Light Curves

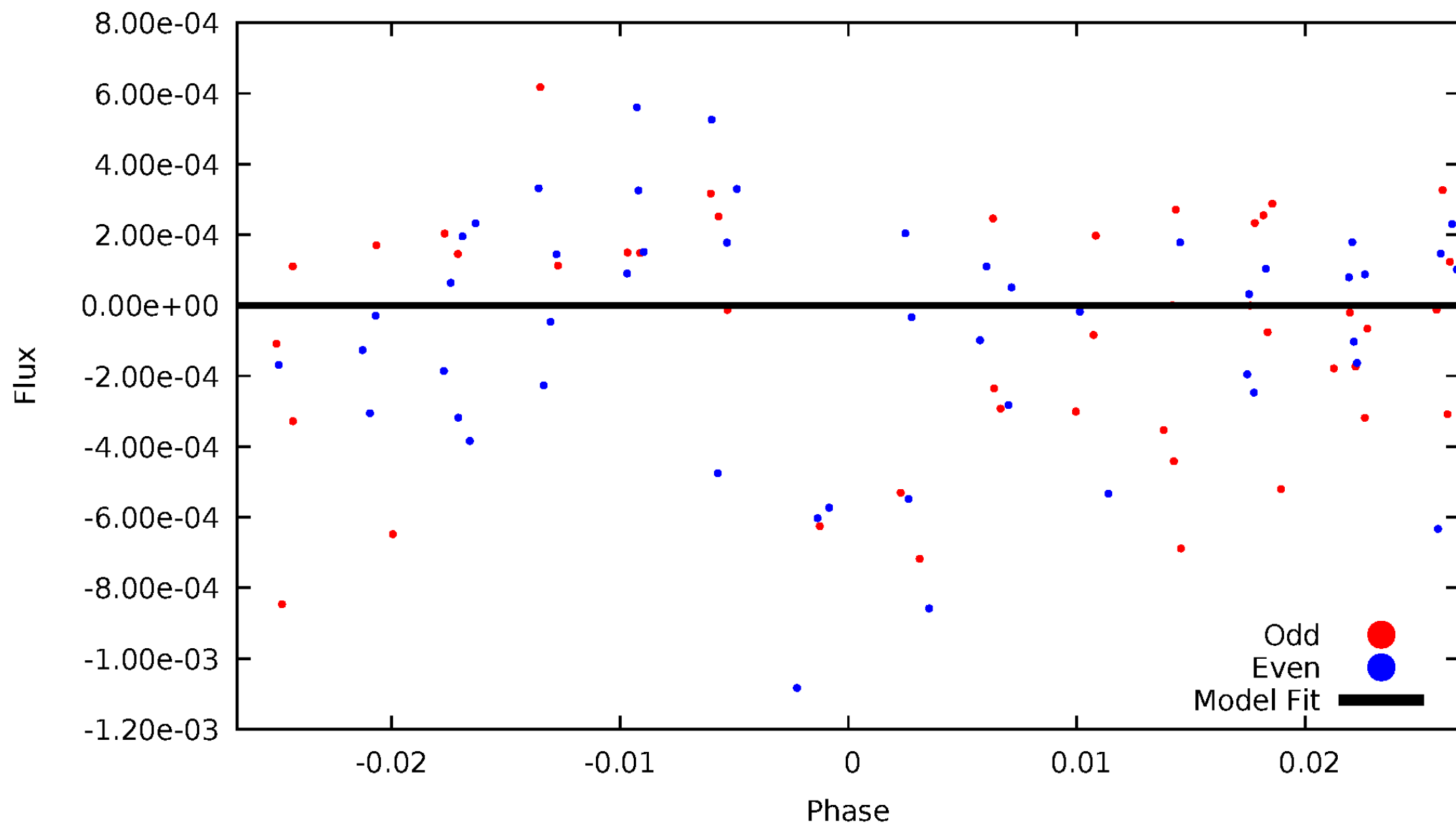


TCE 009242383-05



DV Odd/Even

TCE 009242383-05

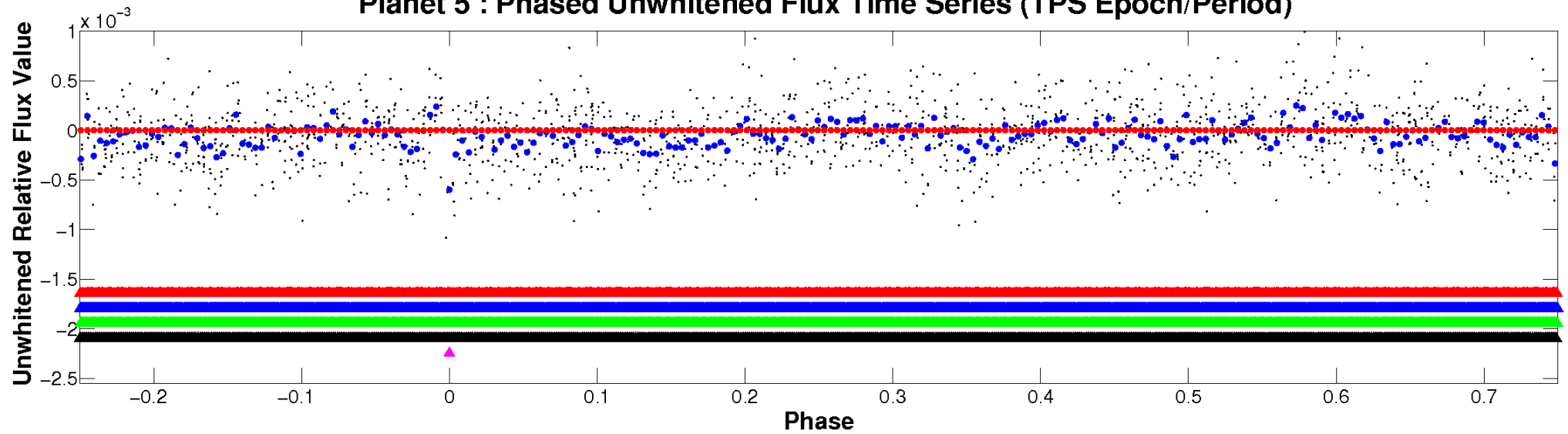


ALT Odd/Even

This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

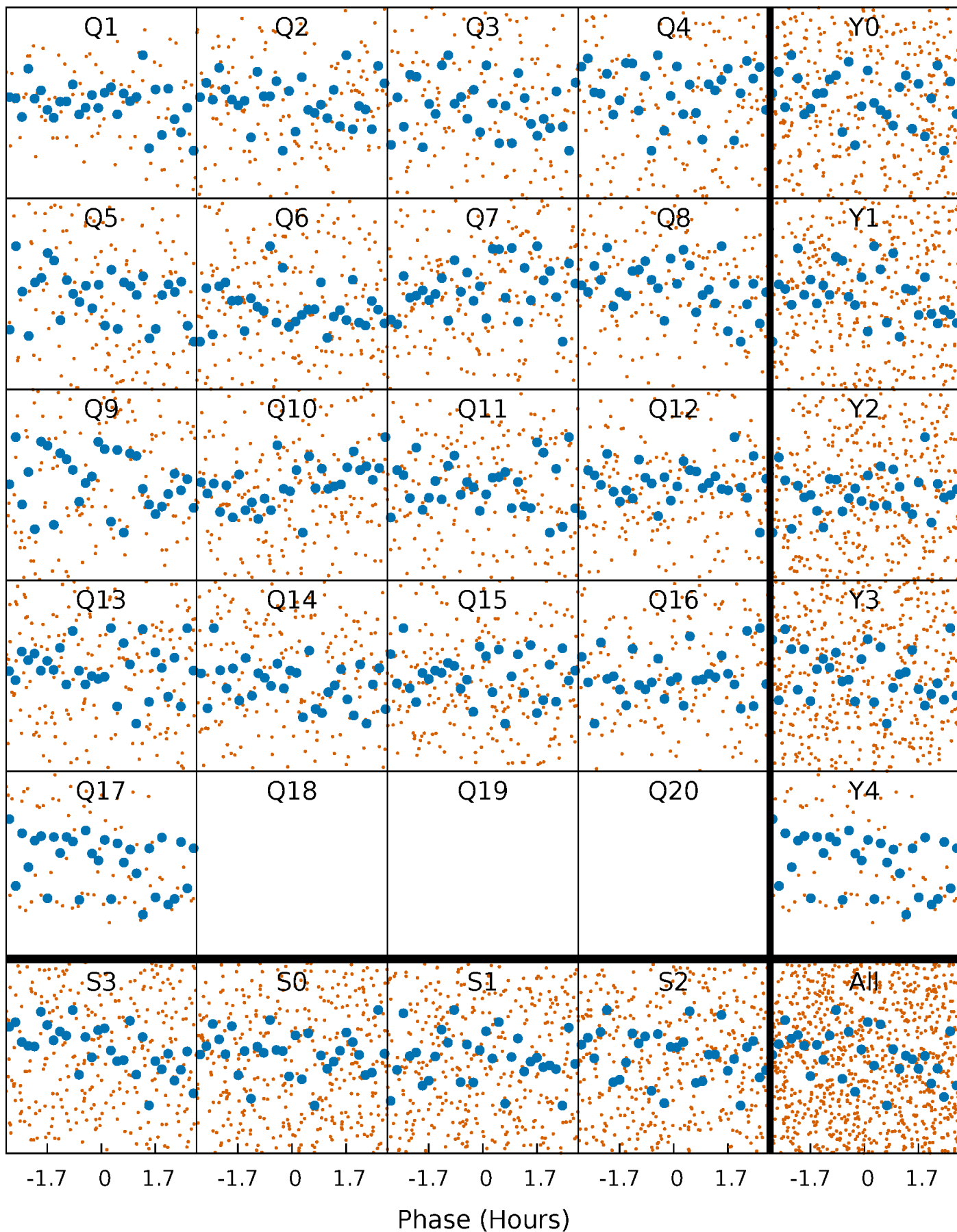


Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)



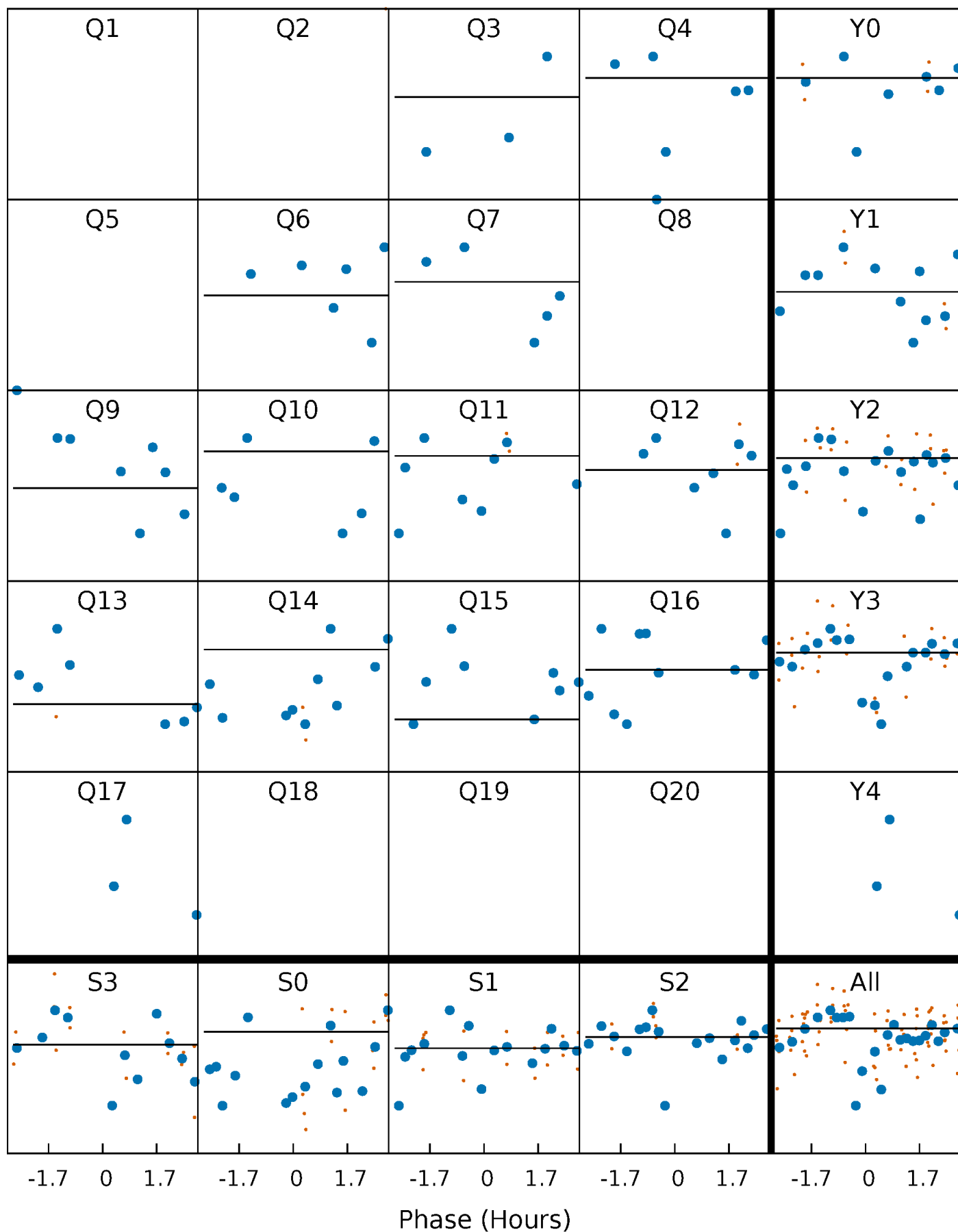
PDC Quarter-Phased Transit Curves

TCE 009242383-05 $P = 4.671724$ Days $T_0 = 134.967245$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009242383-05 $P = 4.671724$ Days $T_0 = 134.967245$ (BKJD)

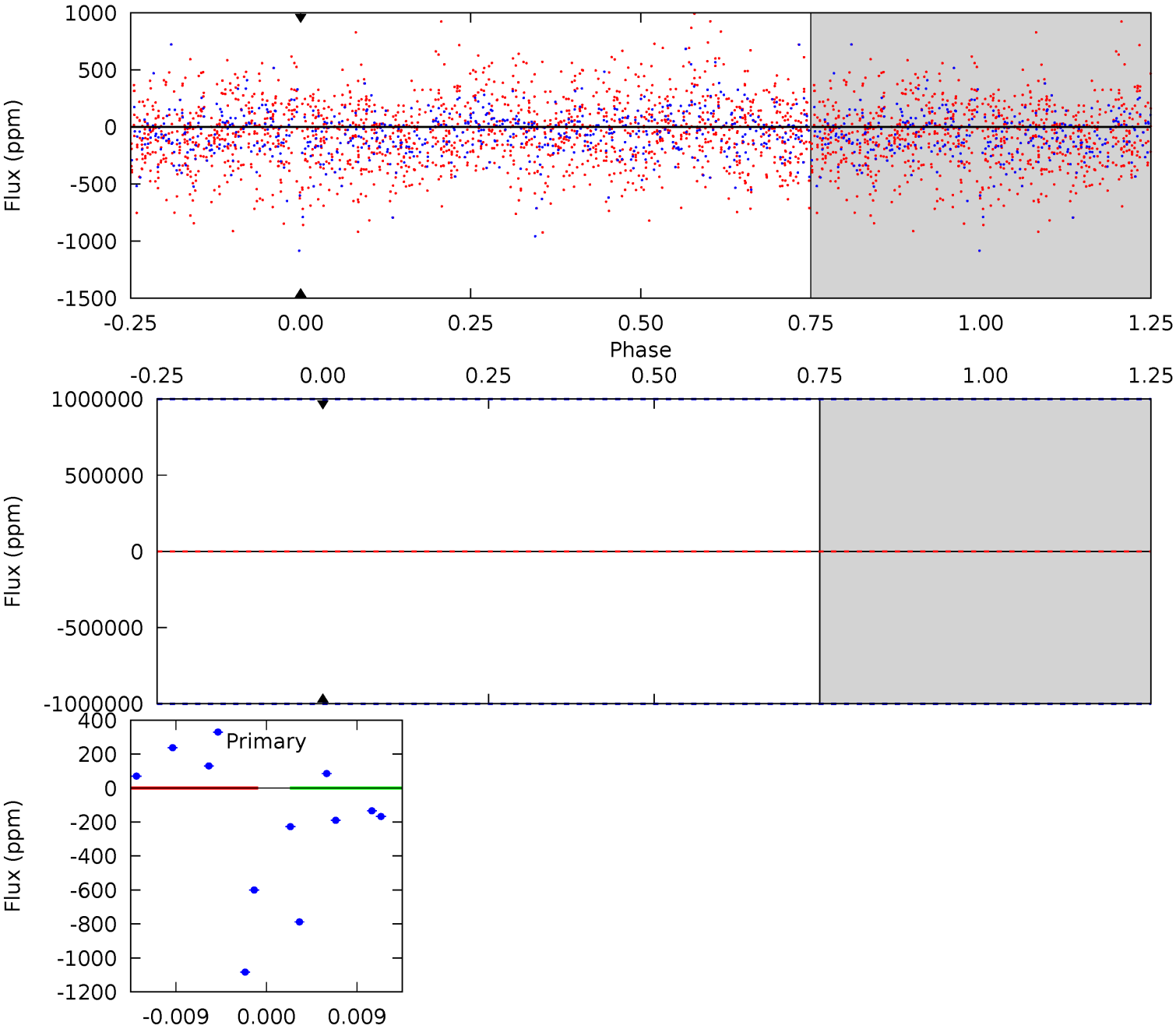


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009242383-05, P = 4.671724 Days, E = 134.967245 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009242383

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6388^{+520}_{-1562}	$2.746^{+0.172}_{-0.258}$	$0.070^{+0.200}_{-0.550}$	$13.089^{+3.447}_{-5.171}$	$3.479^{+0.113}_{-2.154}$	$0.002^{+0.003}_{-0.001}$
	+8%/-24%	+6%/-9%	+286%/-786%	+26%/-40%	+3%/-62%	+116%/-54%
Source	PHO1	FLK73	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 009242383-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$107.96^{+113.47}_{-75.74}$	4955^{+660}_{-1129}	-3277^{+28860}_{-19812}	$-0.084^{+59.845}_{-46.498}$
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

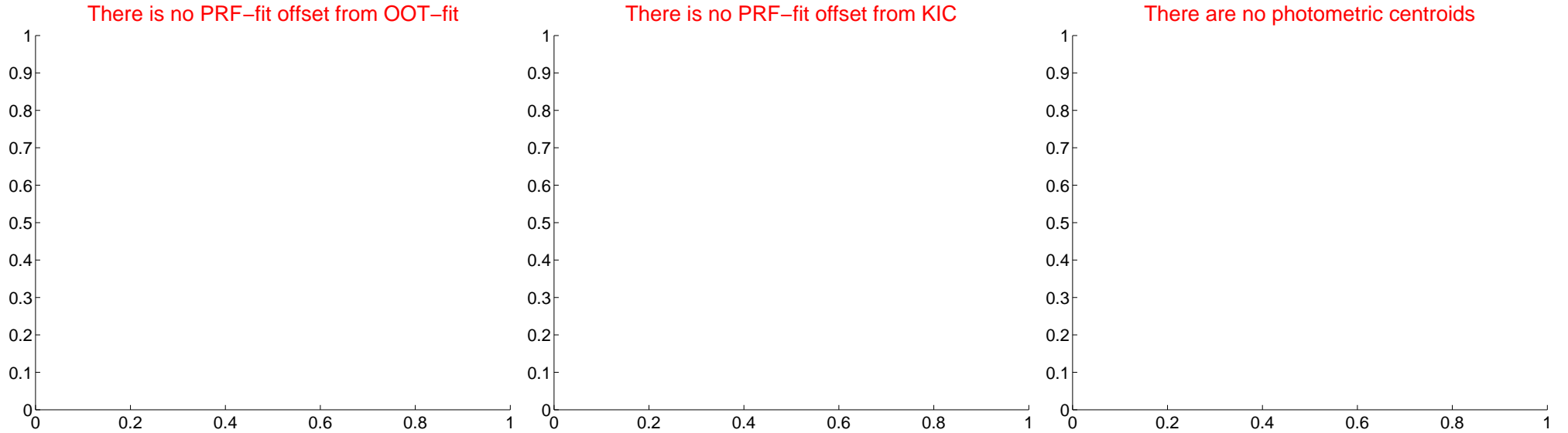
DV Centroid Data

Supplemental centroid analysis for 009242383-05. **Kepler magnitude: 11.93.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

