

KIC 010793172

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})
010793172-01	OBS	2871.01	12.099902	143.044658	159.4	3.596	12.9	13.9	1.10	5553	1.66	100.55
010793172-02	OBS	2871.02	5.363709	134.651305	112.0	2.904	12.0	13.3	1.10	5553	1.24	297.48
010793172-03	OBS	2871.04	7.978890	132.254122	96.9	3.238	8.0	9.3	1.10	5553	1.29	175.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010793172-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
010793172-02	OBS	PC	0.99	0	0	0	0	NO_COMMENT
010793172-03	OBS	PC	0.95	0	0	0	0	NO_COMMENT

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

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

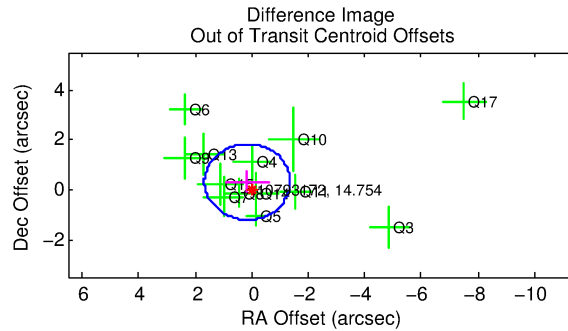
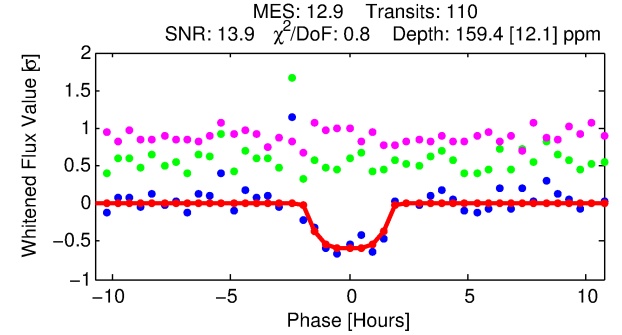
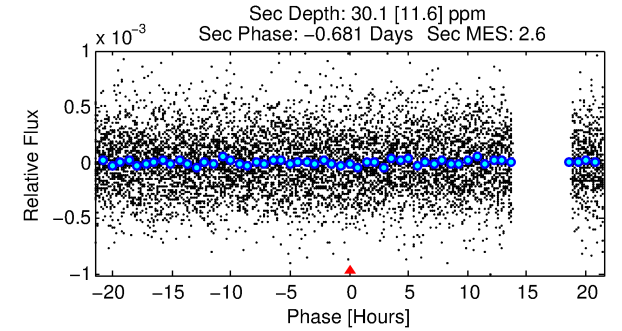
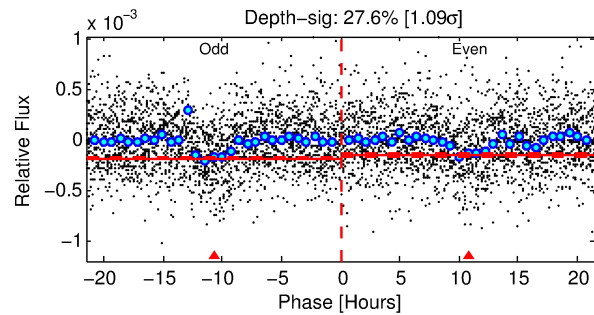
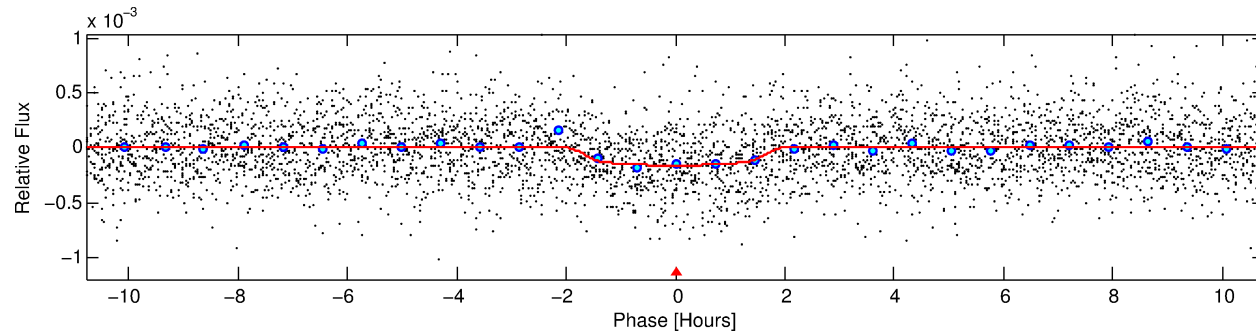
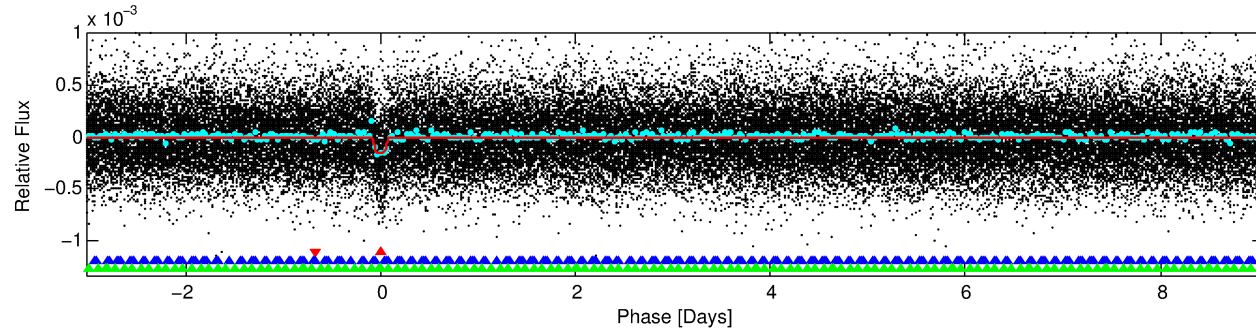
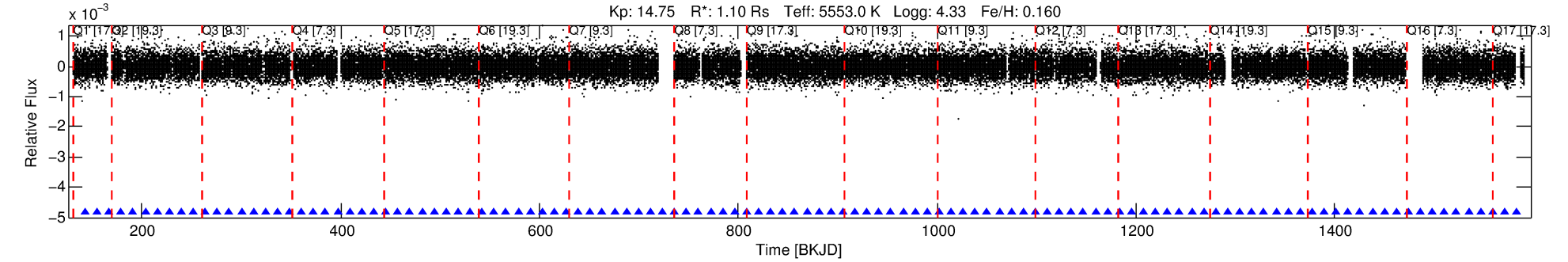
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010793172-01

No Significant Match Found

DV One-Page Summary

KIC: 10793172 Candidate: 1 of 3 Period: 12.100 d
KOI: K02871.01 Corr: 0.966



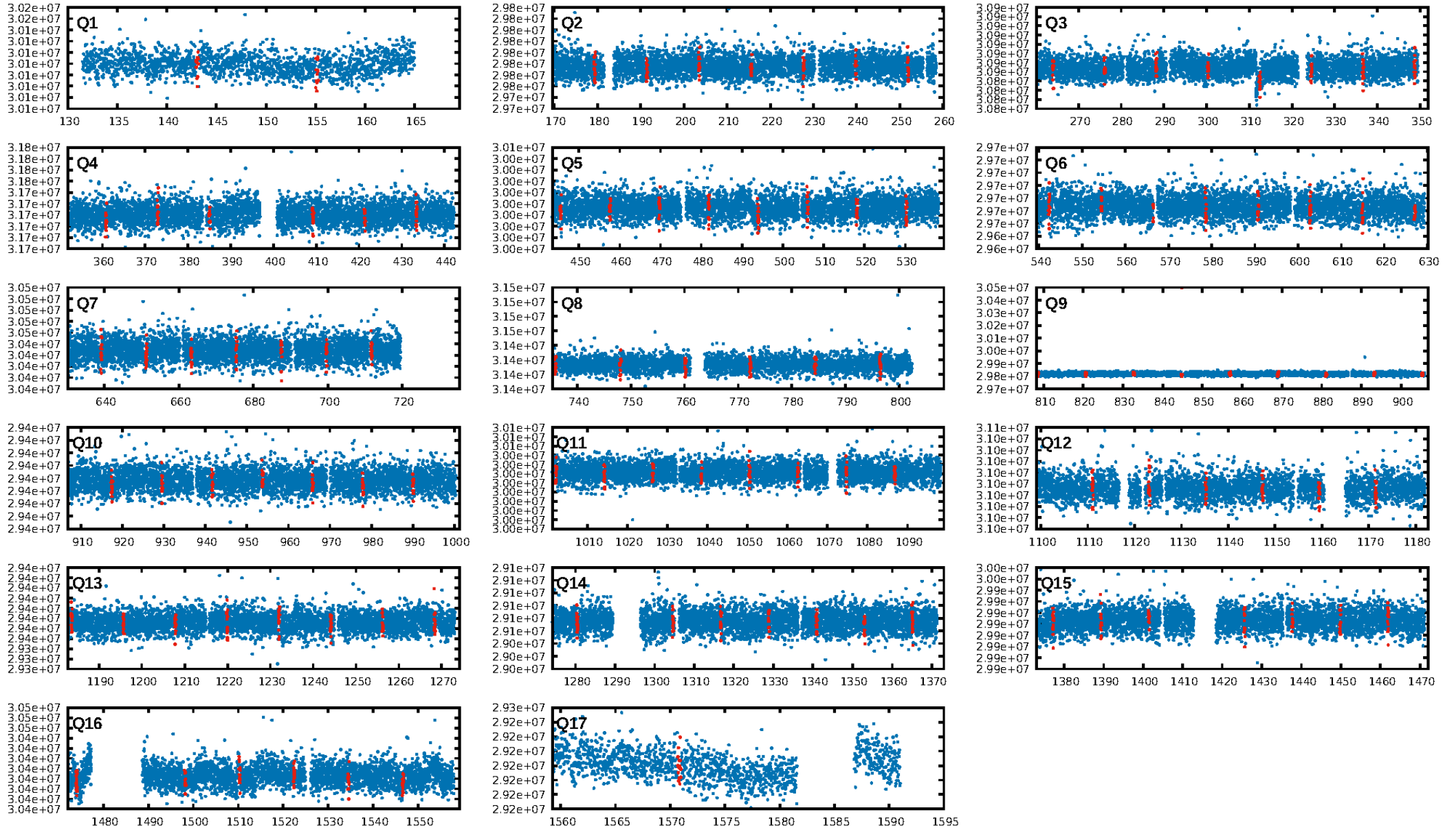
DV Fit Results:

Period = 12.09990 [0.00009] d
Epoch = 143.0447 [0.0059] BKJD
Rp/R* = 0.0139 [0.0060]
a/R* = 11.99 [23.14]
b = 0.90 [0.41]
Seff = 100.55 [23.93]
Teff = 807 [48] K
Rp = 1.66 [0.76] Re
a = 0.1011 [0.0145] AU
Ag = 61.08 [59.55] [1.01 σ]
Teffp = 3490 [828] K [3.24 σ]

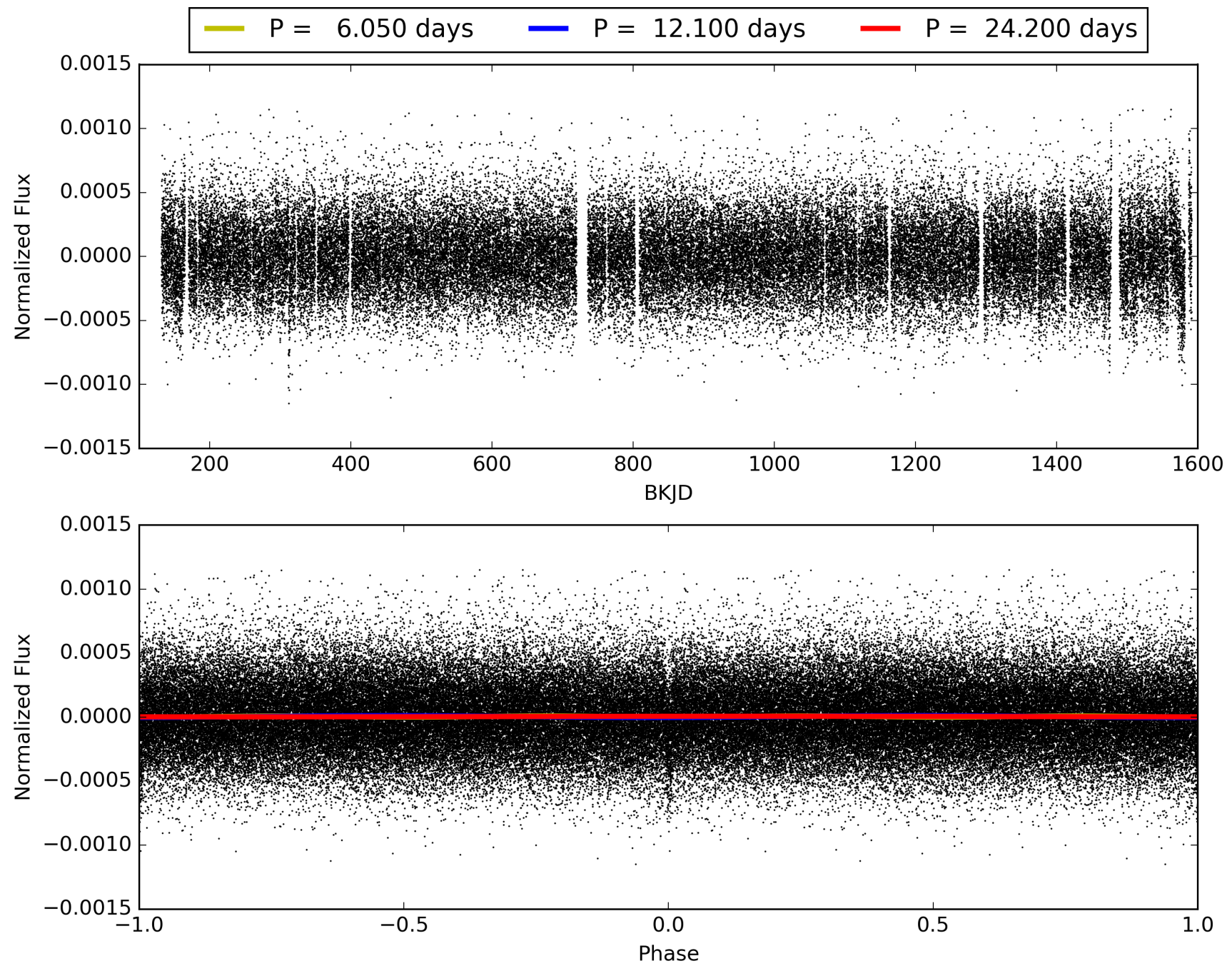
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.44 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.21e-37
RollingBand-fgt: 1.00 [107/107]
GhostDiagnostic-chr: 2.447
Centroid-sig: 10.8%
Centroid-so: 1.184 arcsec [1.14 σ]
OotOffset-rm: 0.345 arcsec [0.68 σ]
KicOffset-rm: 0.175 arcsec [0.37 σ]
OotOffset-st: 3/4/2/4 [13]
KicOffset-st: 3/4/2/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010793172-01, PDC Light Curves

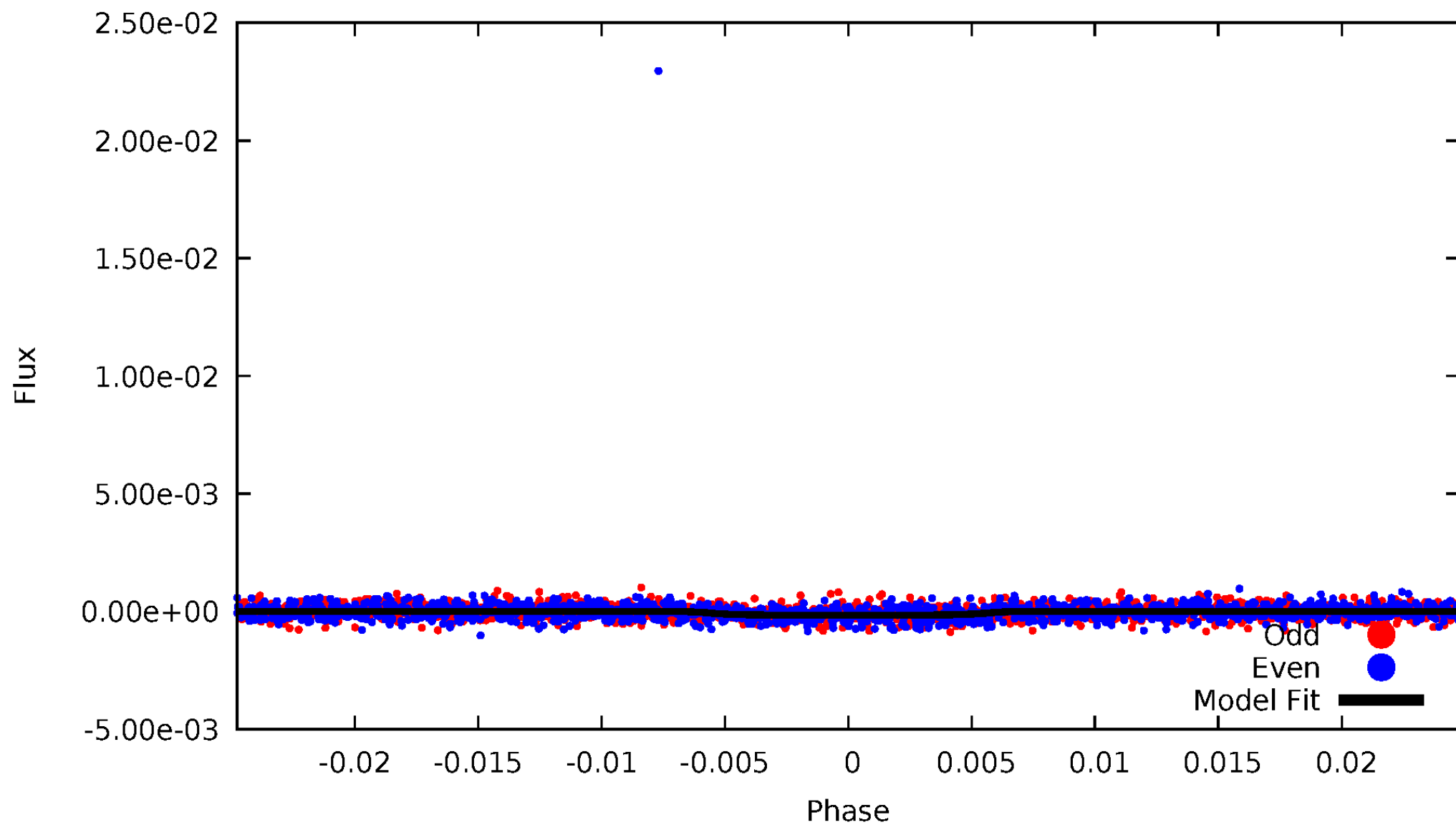


TCE 010793172-01



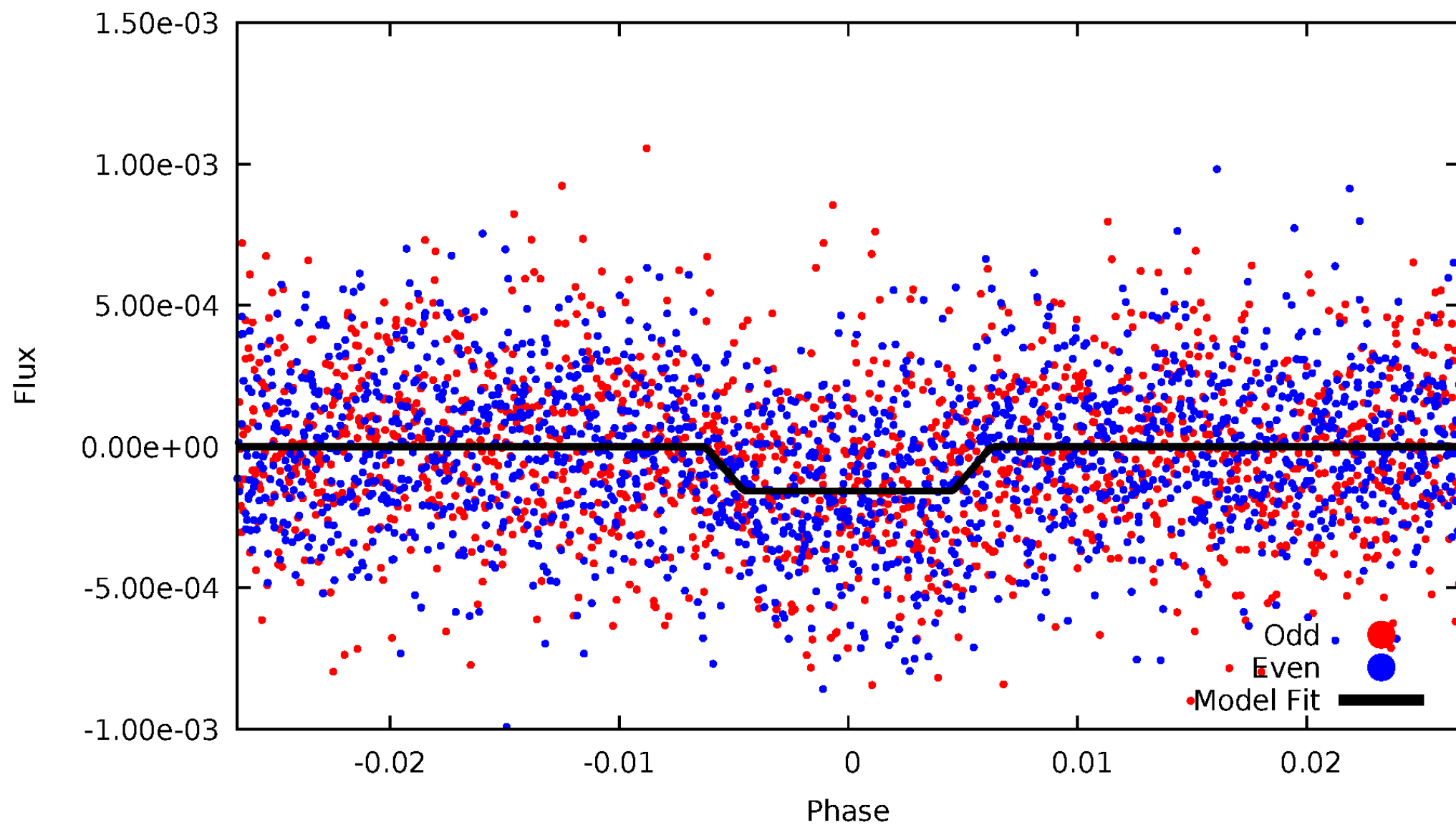
DV Odd/Even

TCE 010793172-01



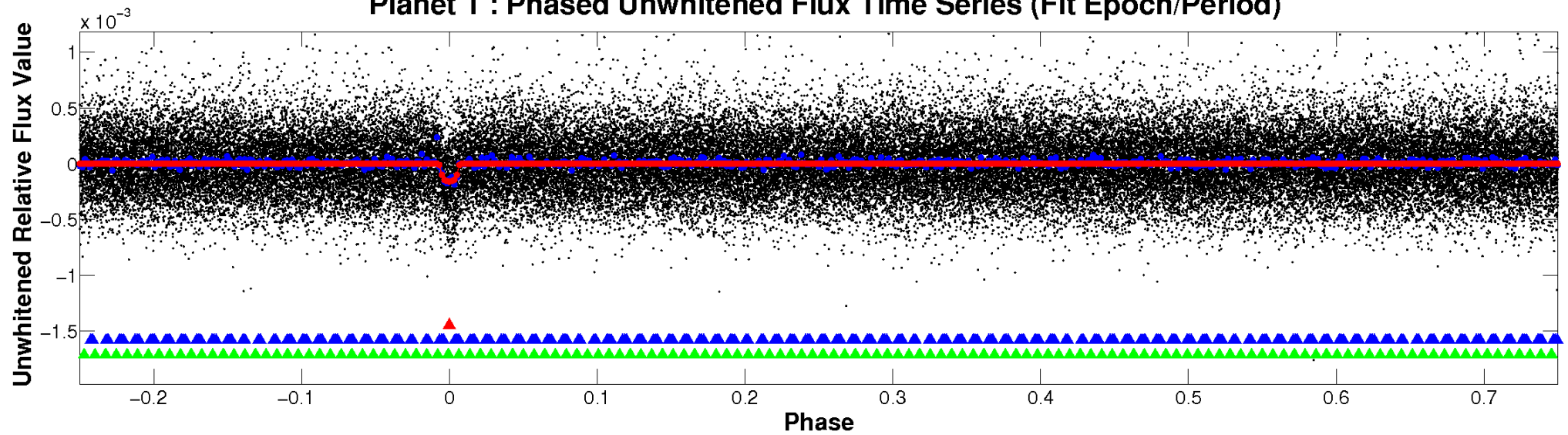
ALT Odd/Even

TCE 010793172-01

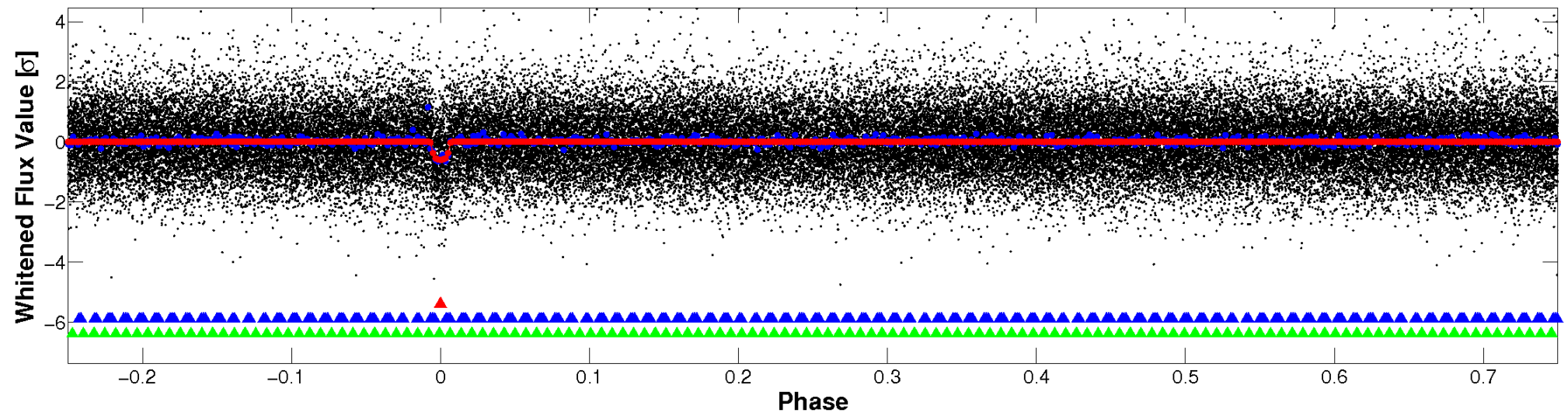


Non-Whitened Vs. Whitened Light Curve

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

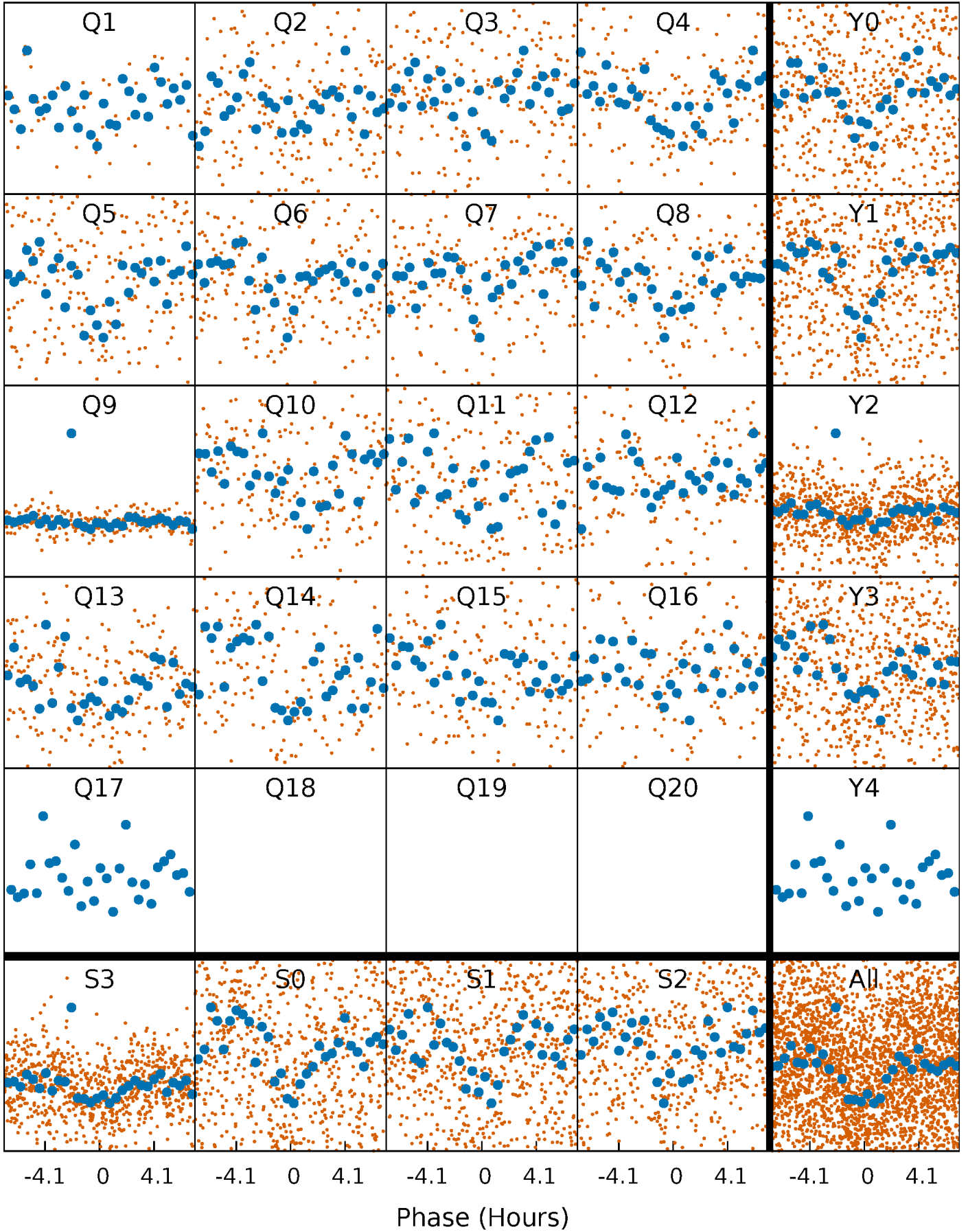


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



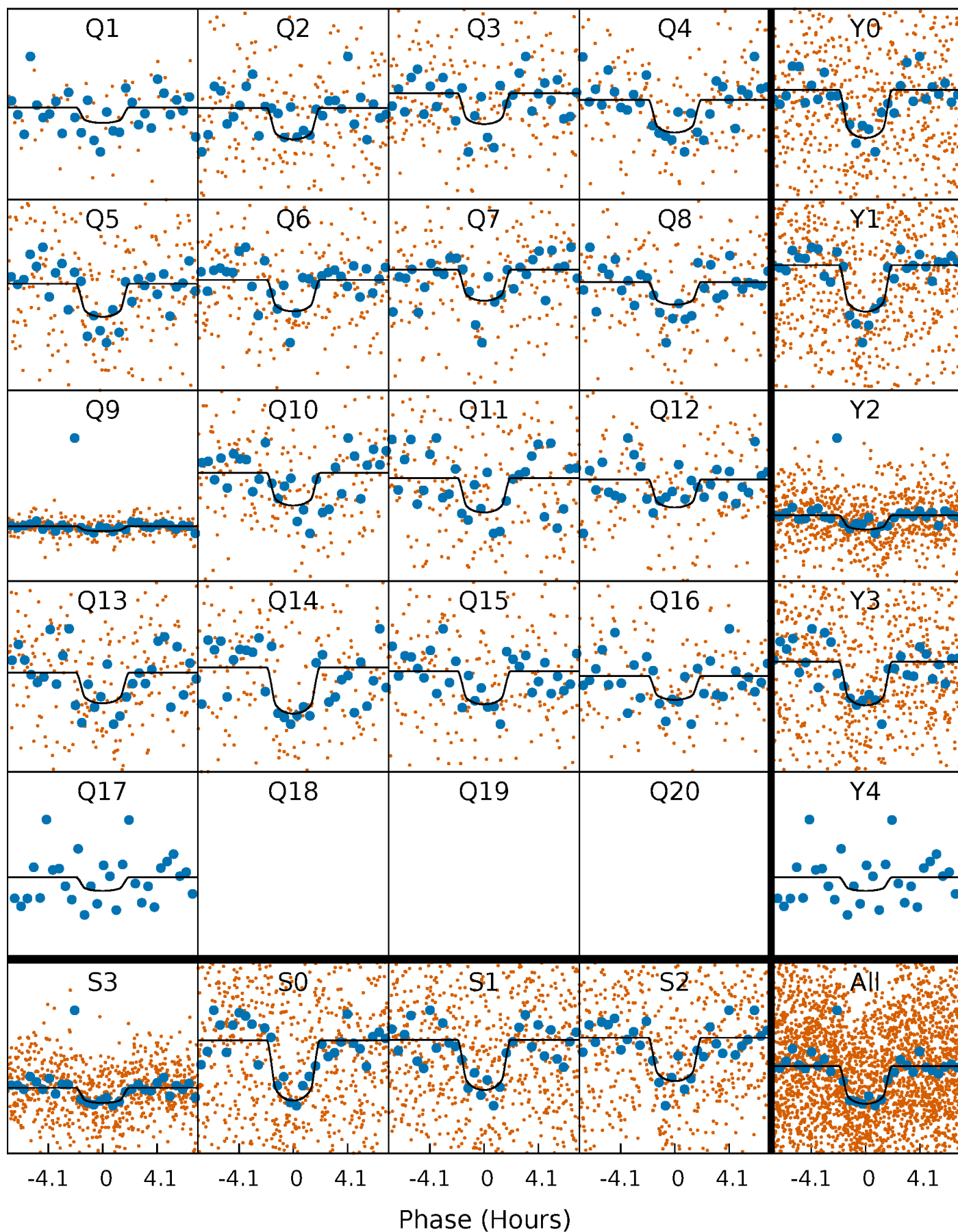
PDC Quarter-Phased Transit Curves

TCE 010793172-01 P= 12.099902 Days $T_0=143.044658$ (BKJD)



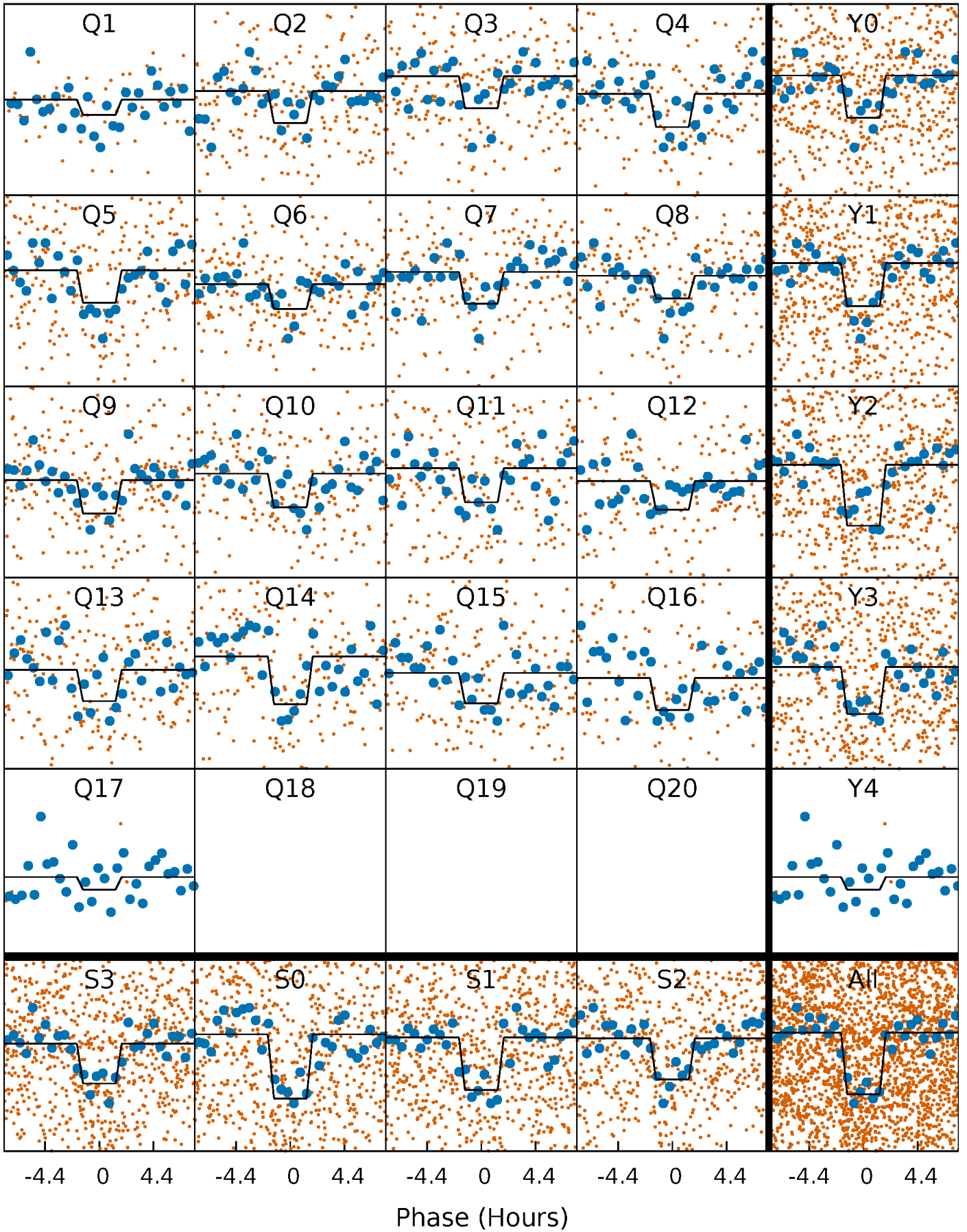
DV Quarter-Phased Transit Curves

TCE 010793172-01 P= 12.099902 Days $T_0=143.044658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

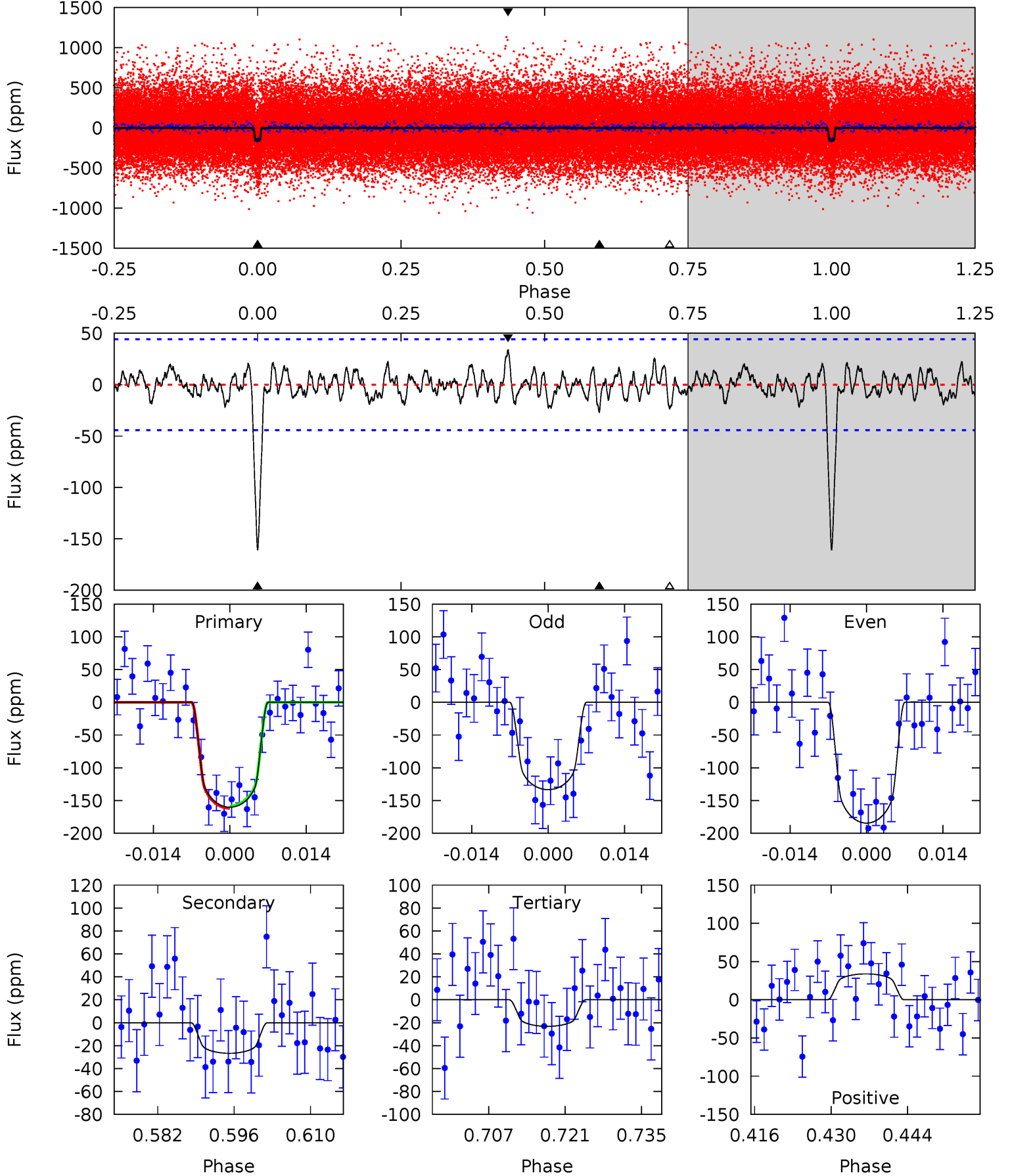
TCE 010793172-01 P= 12.100053 Days $T_0=143.035716$ (BKJD)



DV Model-Shift Uniqueness Test

010793172-01, $P = 12.099902$ Days, $E = 130.944756$ Days

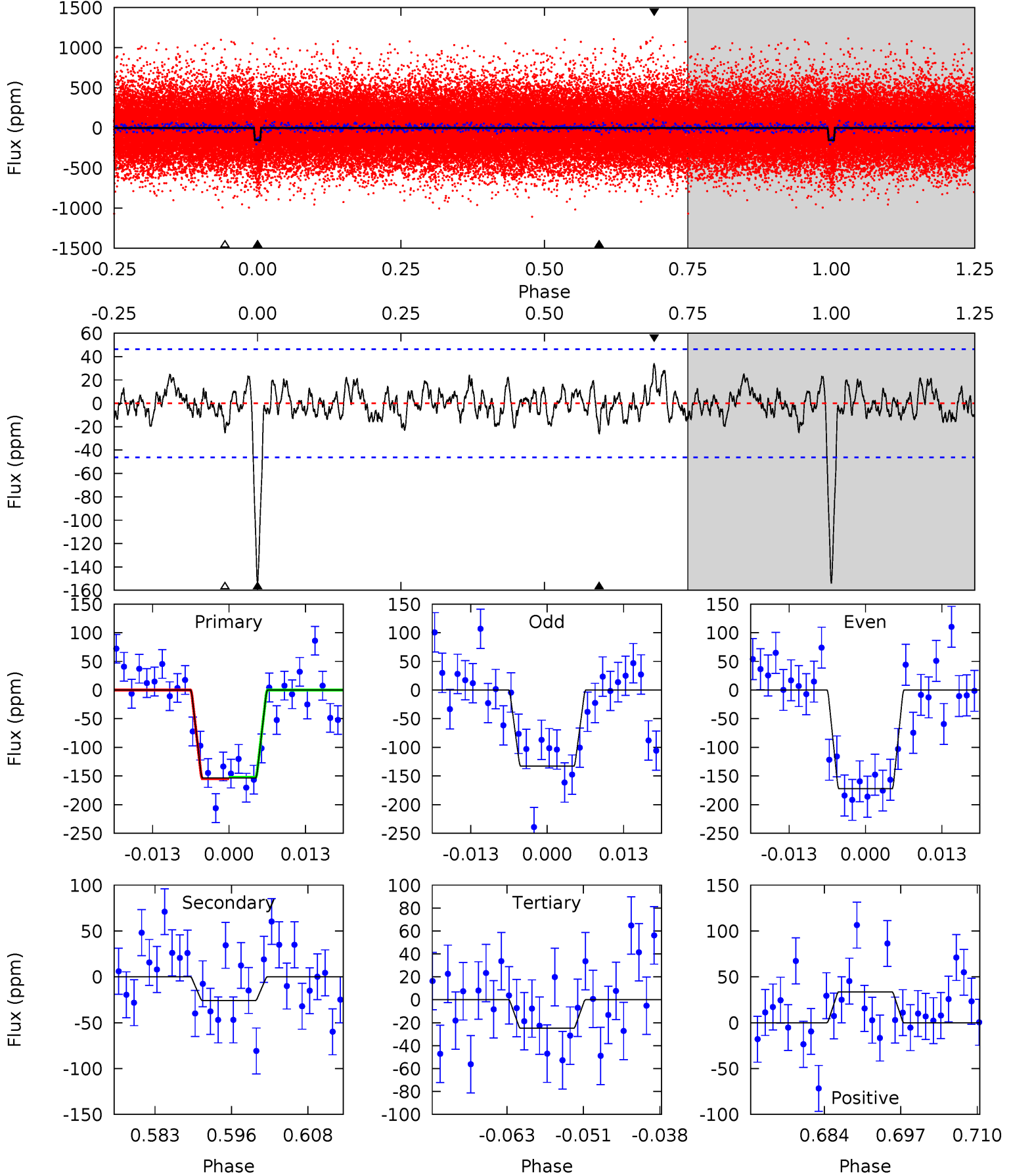
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	3.00	2.60	3.80	4.96	2.46	1.09	15.4	14.2	0.39	-0.80	2.87	1.05	0.17	0.19



Alt Model-Shift Uniqueness Test

010793172-01, P = 12.100053 Days, E = 130.935663 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	2.77	2.67	3.61	4.98	2.49	1.09	13.8	12.9	0.10	-0.85	2.12	0.98	0.18	0.13



Stellar Parameters For KIC 010793172

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5553^{+74}_{-74}	$4.330^{+0.137}_{-0.100}$	$0.160^{+0.150}_{-0.150}$	$1.098^{+0.161}_{-0.161}$	$0.941^{+0.062}_{-0.048}$	$1.001^{+0.590}_{-0.315}$
	+1%/-1%	+3%/-2%	+94%/-94%	+15%/-15%	+7%/-5%	+59%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 010793172-01 / KOI 2871.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-27 ± 9	$1.66^{+0.73}_{-0.67}$	1129^{+50}_{-48}	3753^{+830}_{-462}	52^{+106}_{-29}
Alt.	-26 ± 9	$1.49^{+0.75}_{-0.71}$	1125^{+45}_{-50}	3856^{+1110}_{-521}	65^{+182}_{-39}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

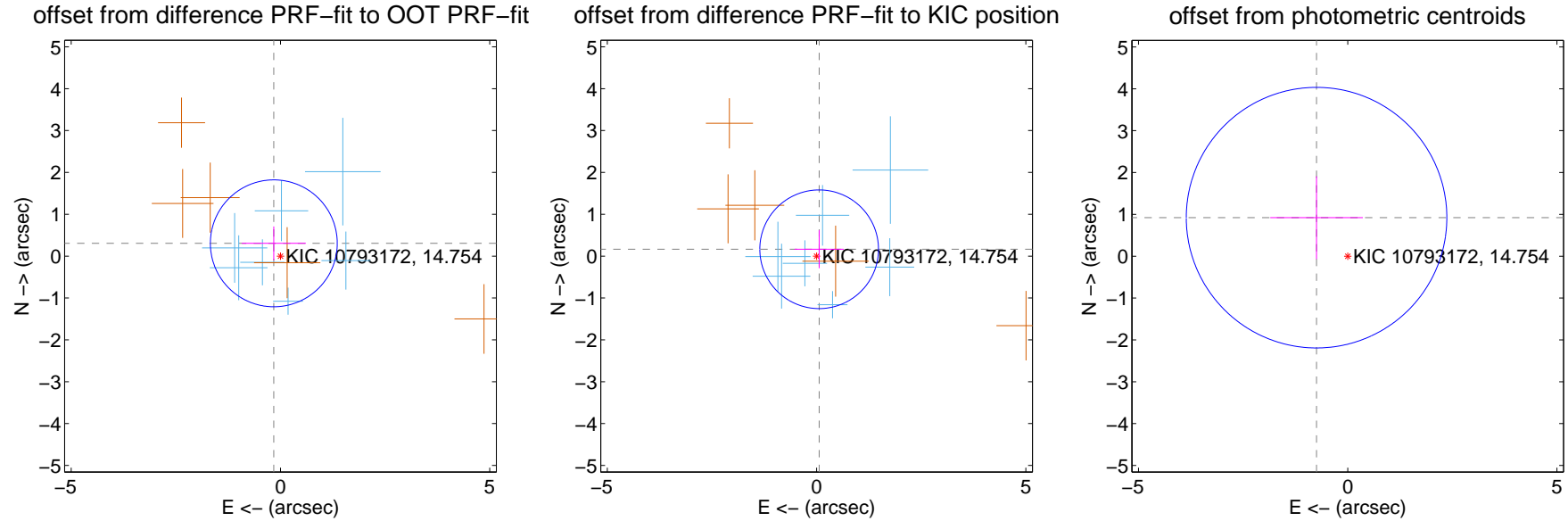
DV Centroid Data

Supplemental centroid analysis for 010793172-01. Kepler magnitude: 14.75. Transit SNR 13.92

There are 7 quarters with good PRF difference image offsets

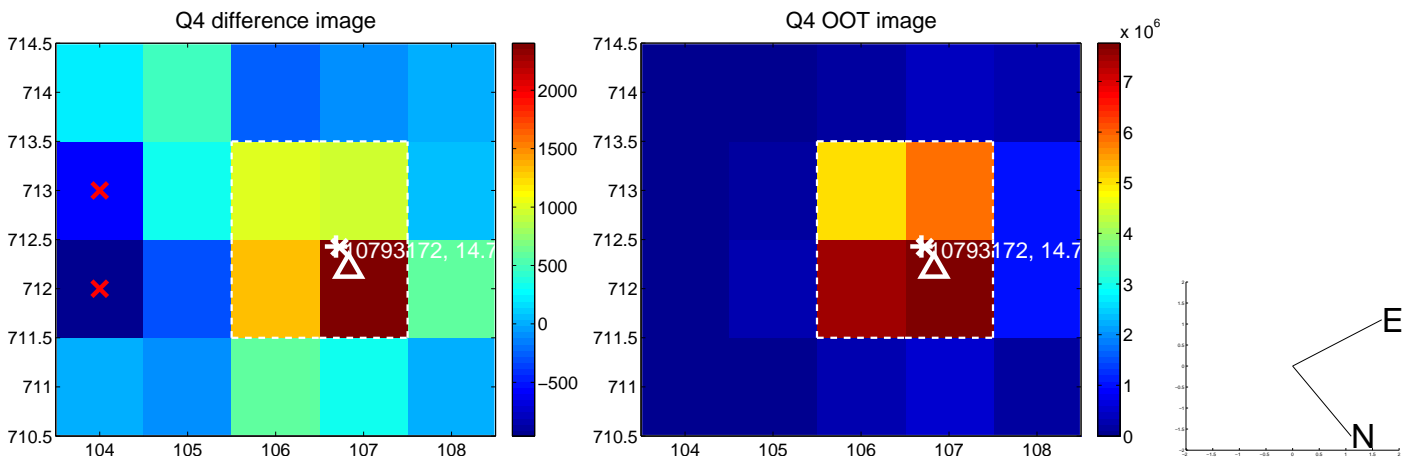
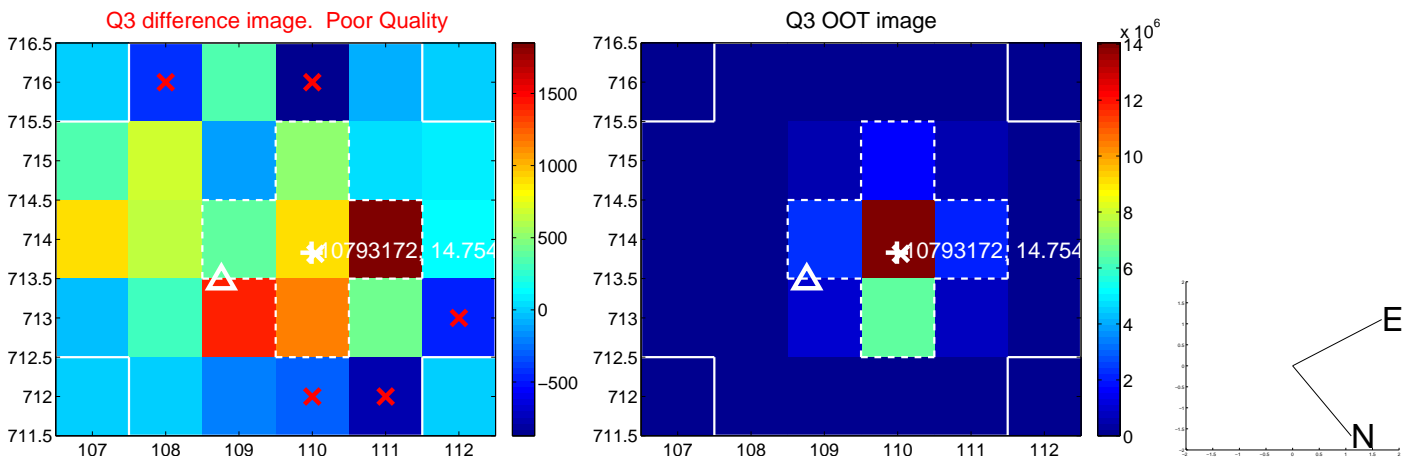
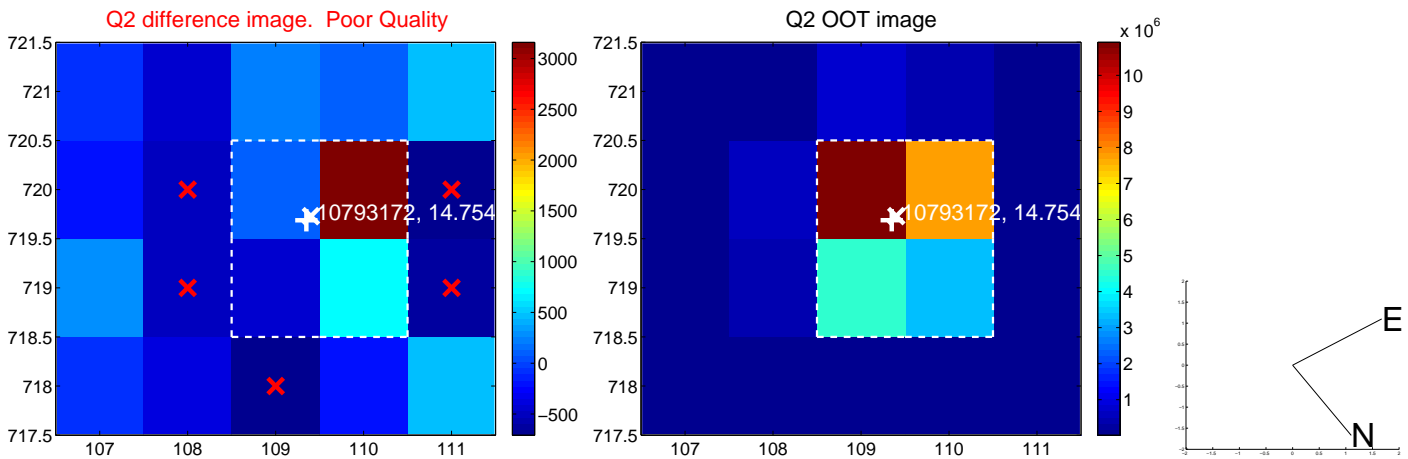
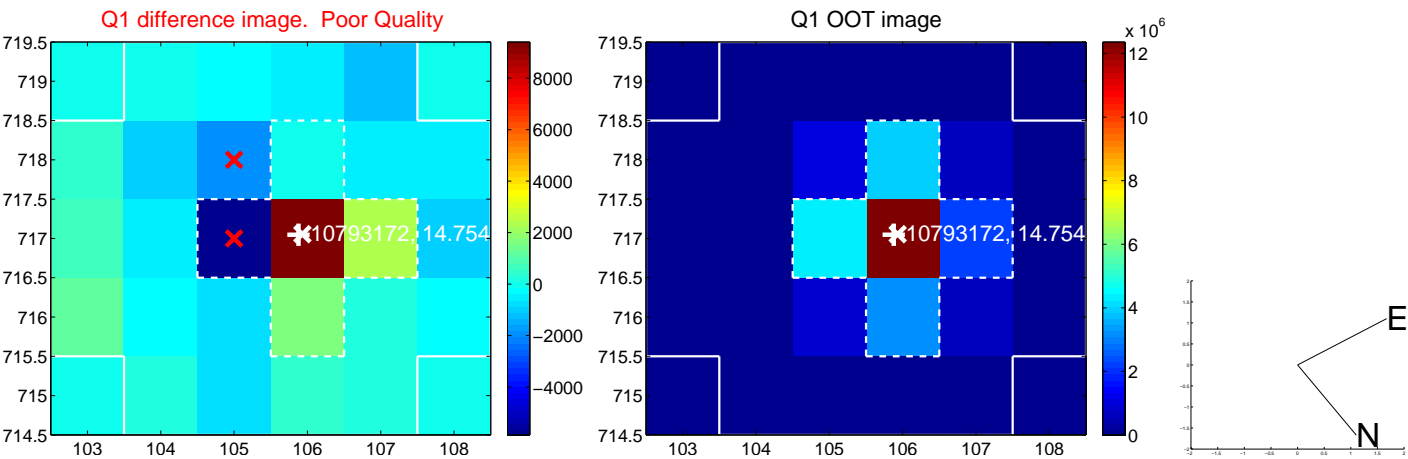
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.345 ± 0.505	0.68	0.159 ± 0.764	0.306 ± 0.403
PRF-fit source offset from KIC position	0.175 ± 0.472	0.37	-0.062 ± 0.586	0.164 ± 0.454
photometric centroid source offset	1.18 ± 1.04	1.14	0.74 ± 1.11	0.92 ± 0.99

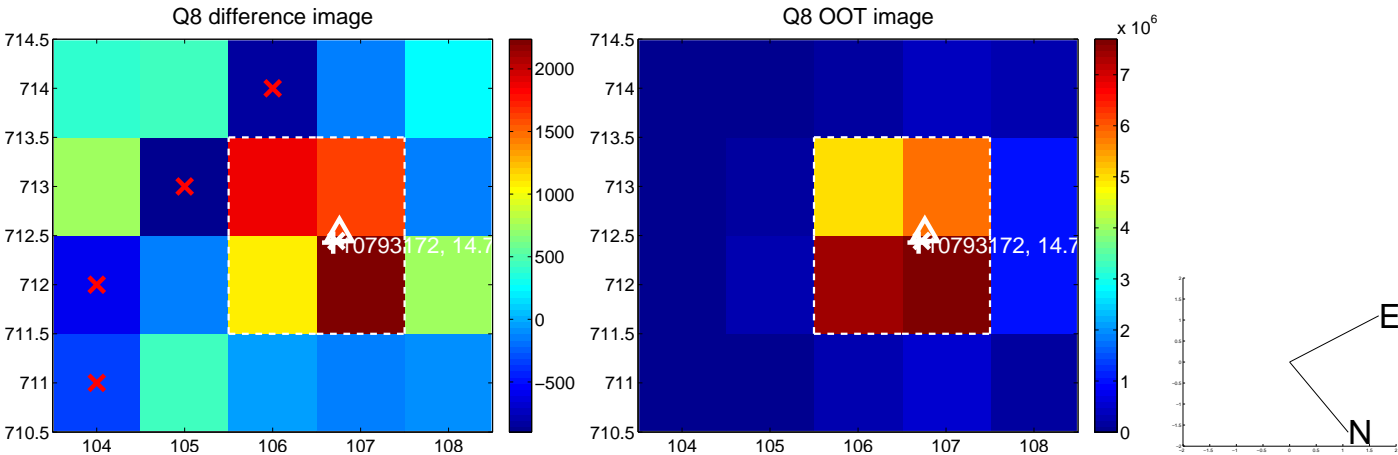
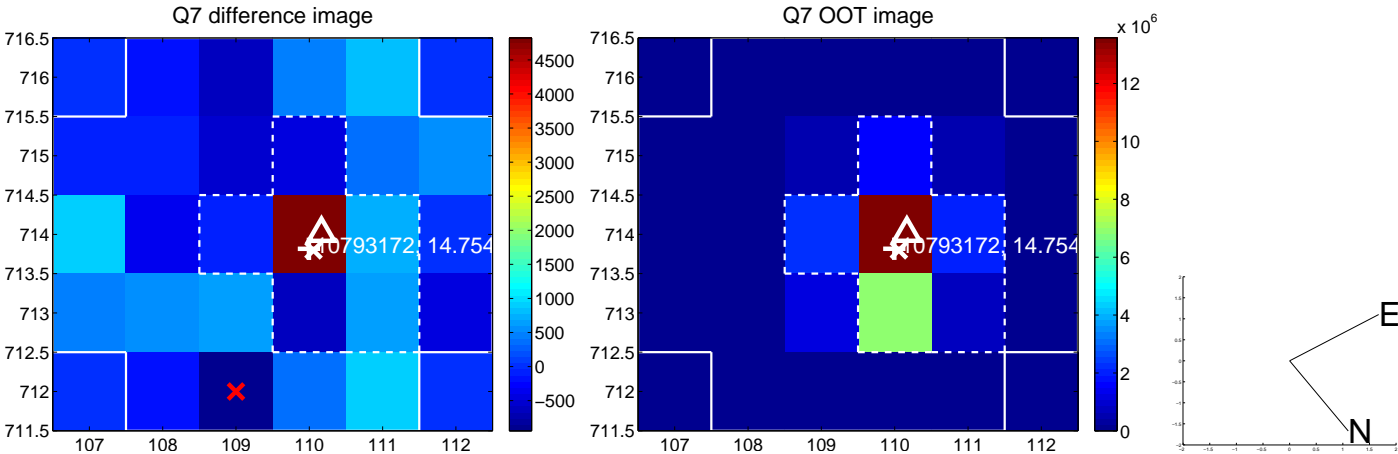
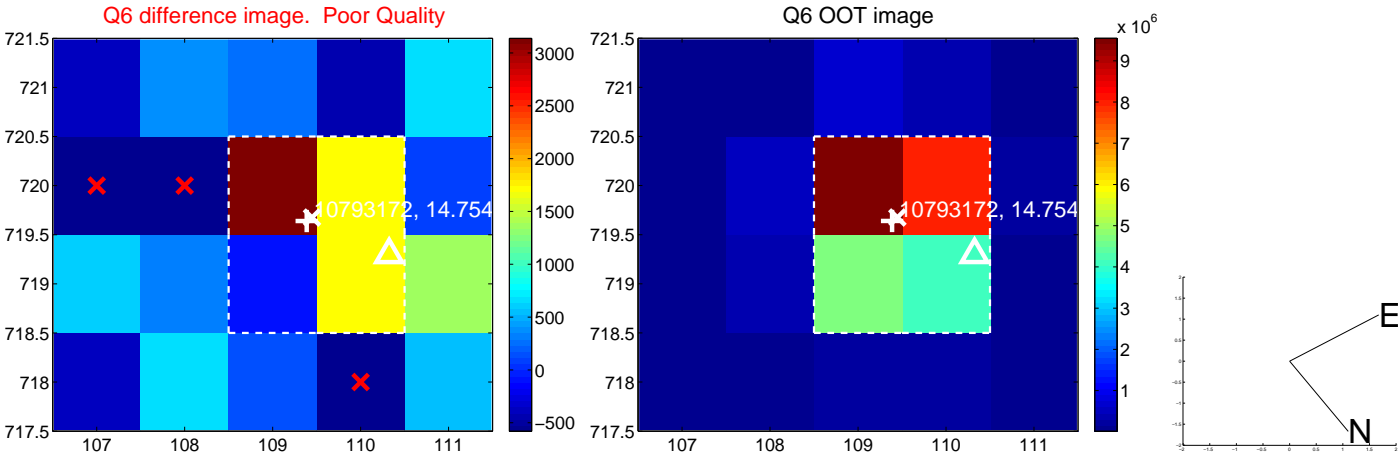
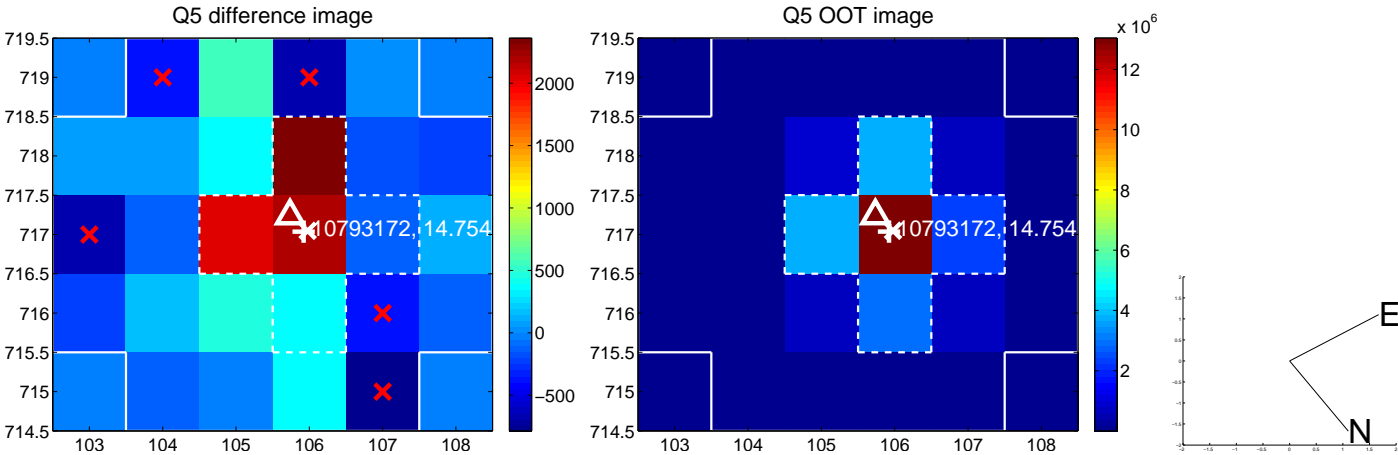


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

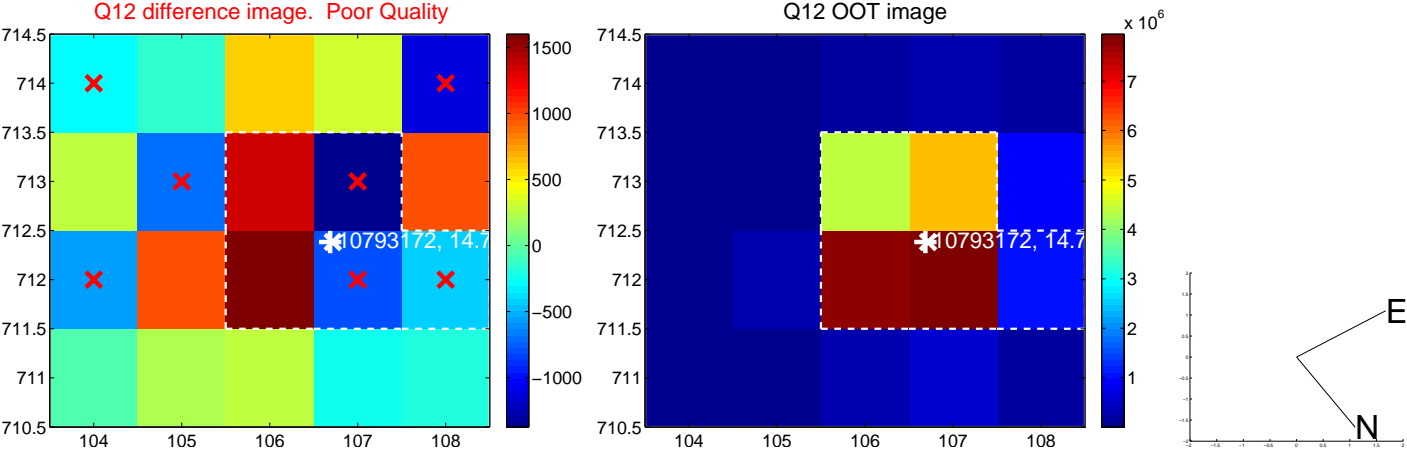
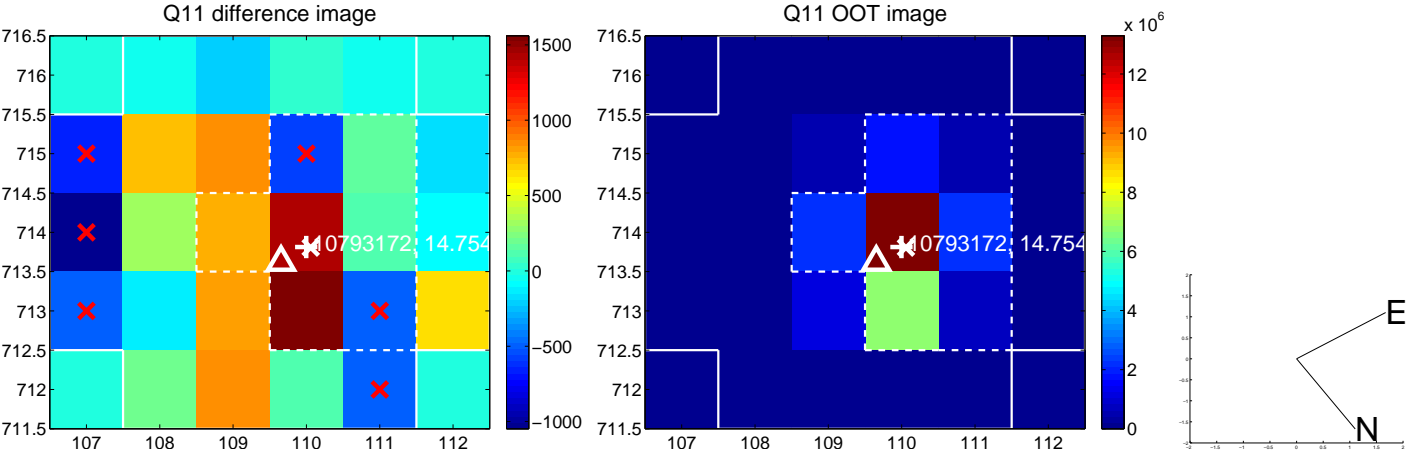
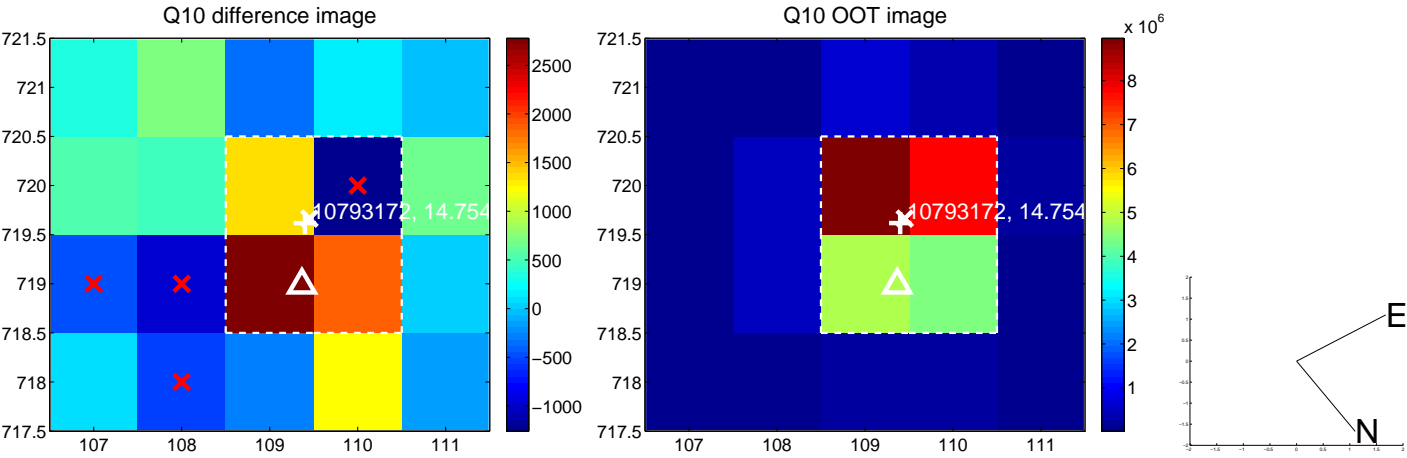
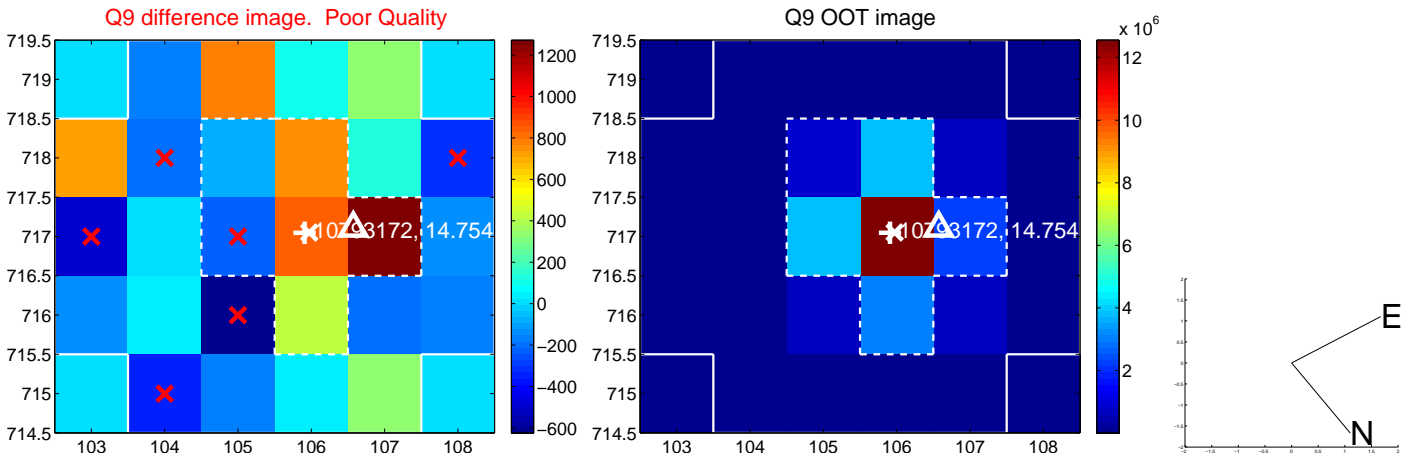
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



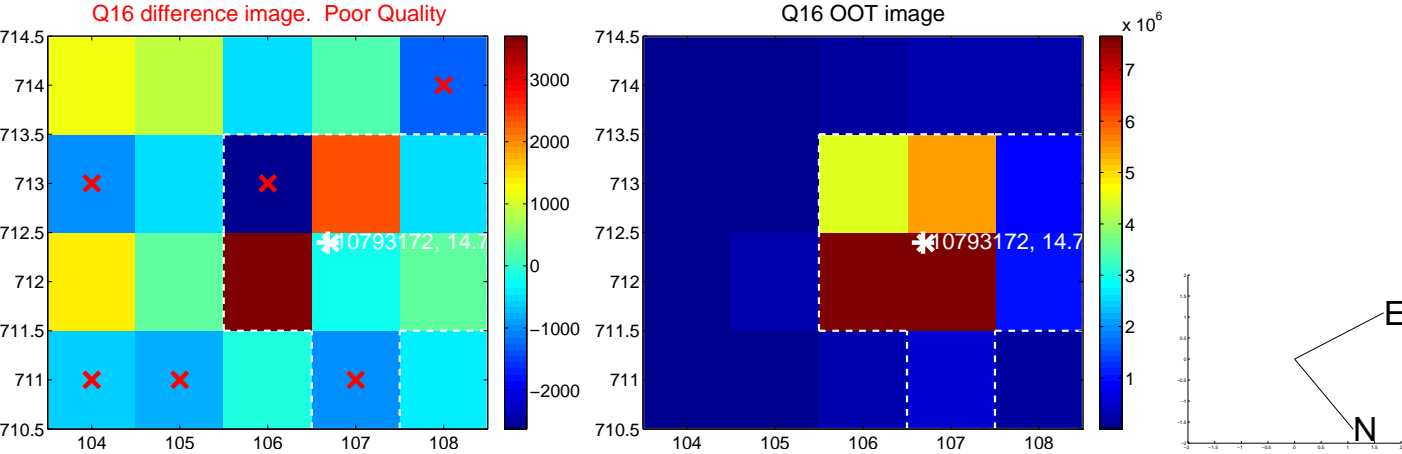
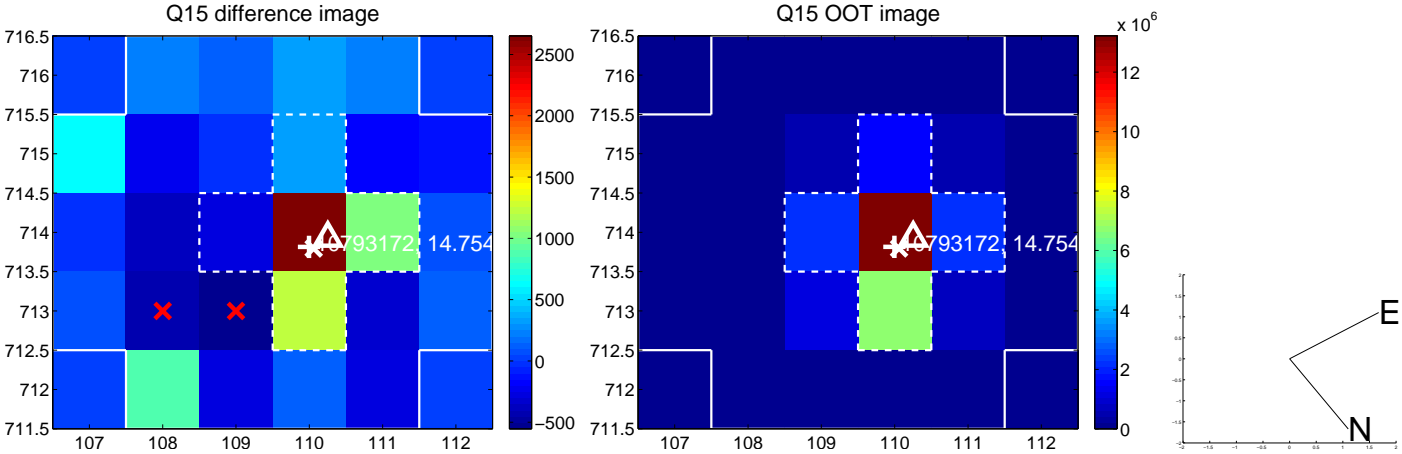
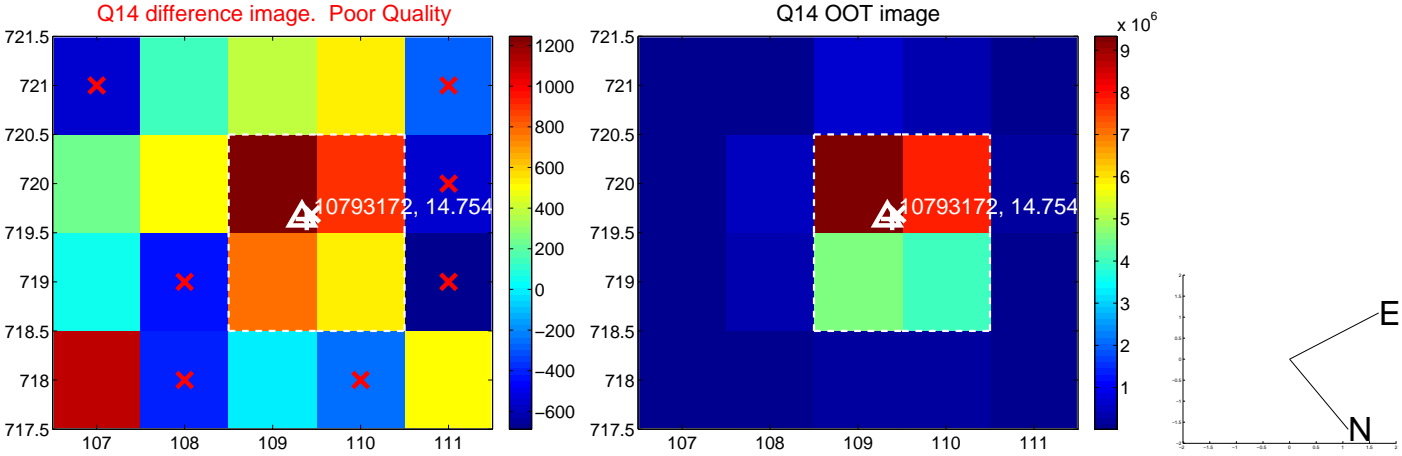
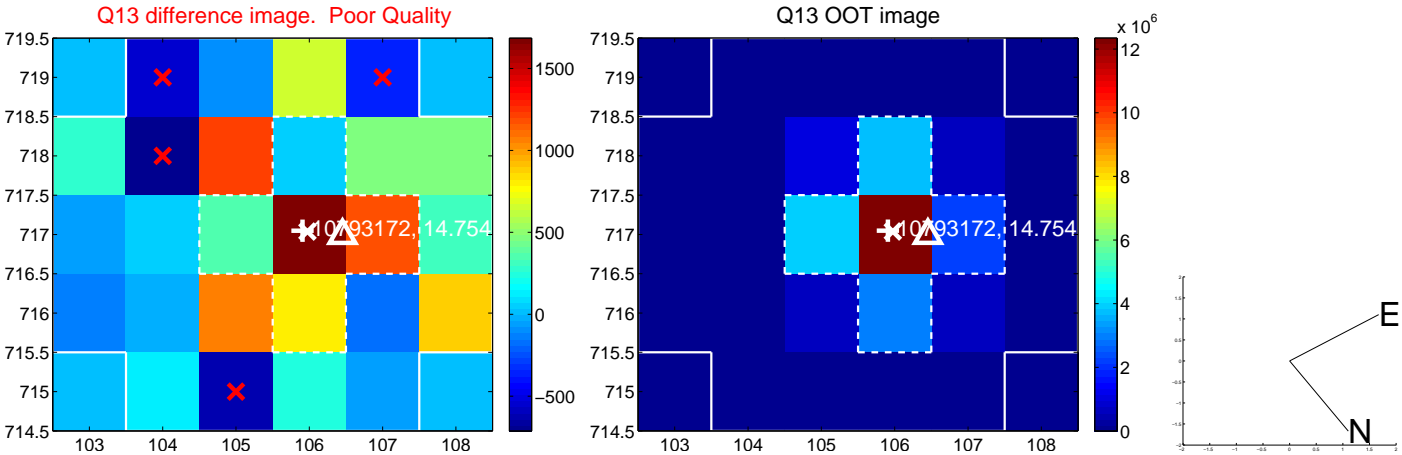
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



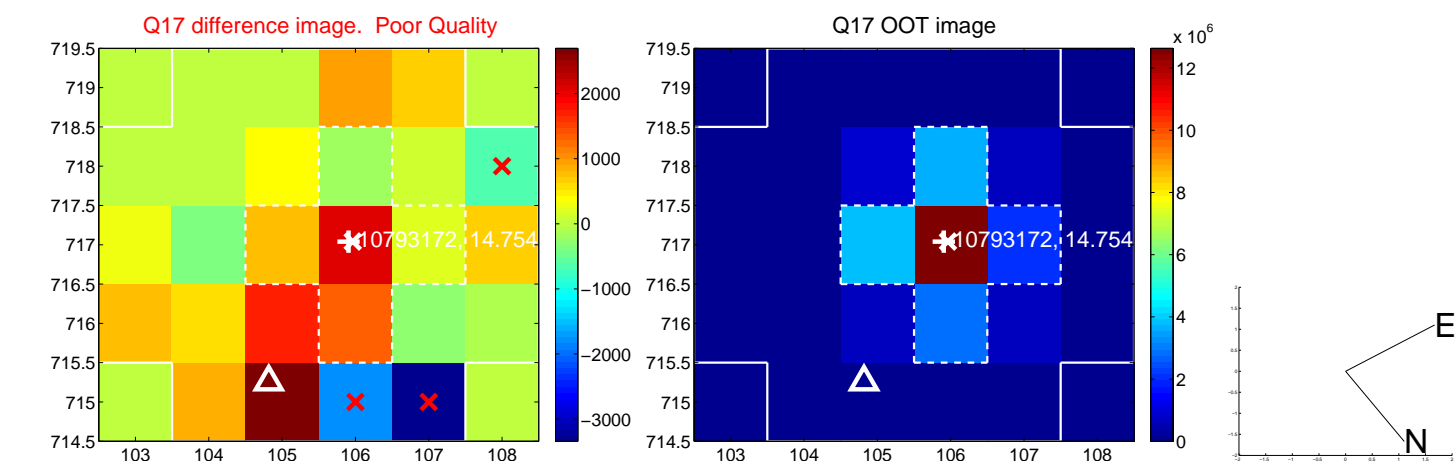
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



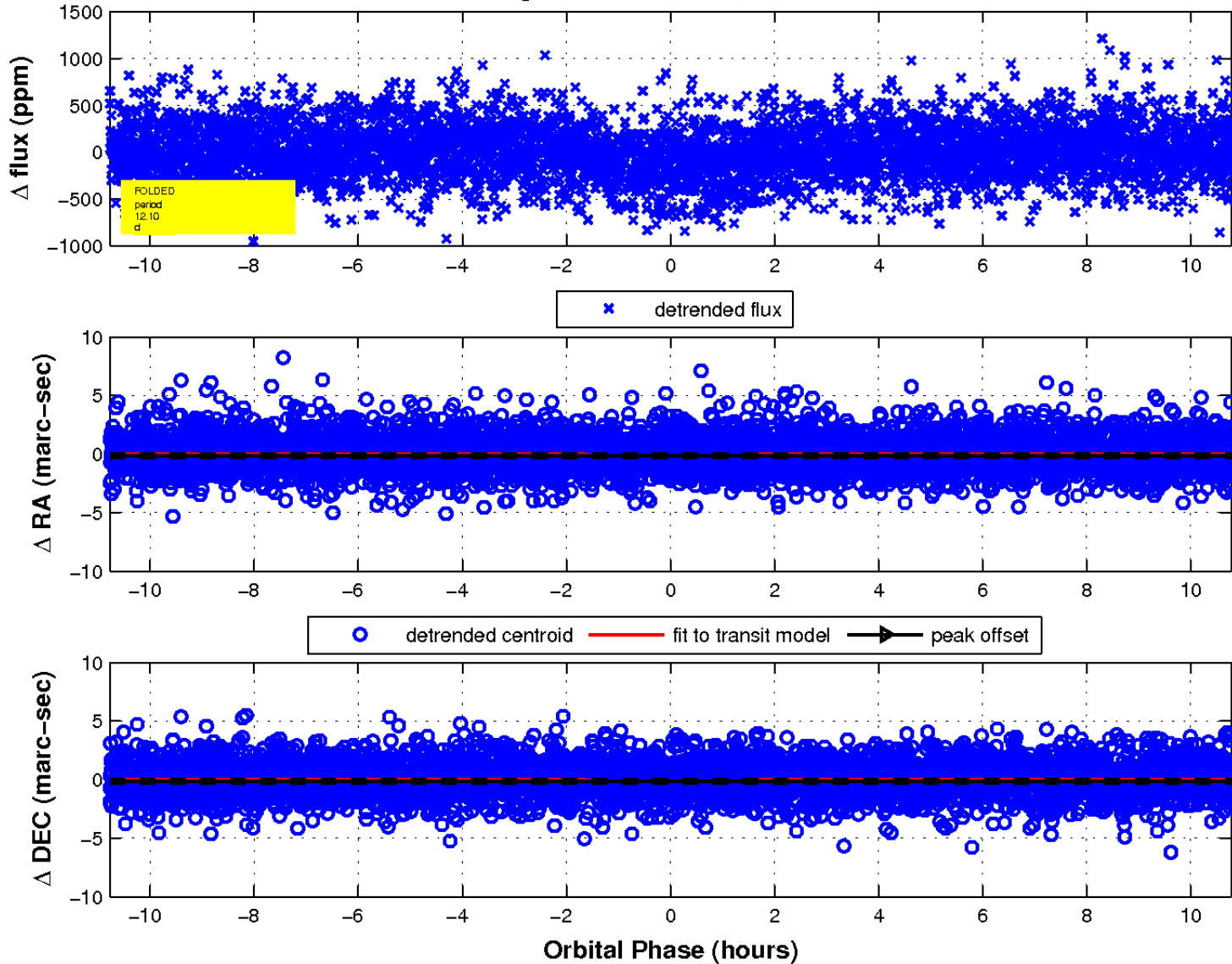
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

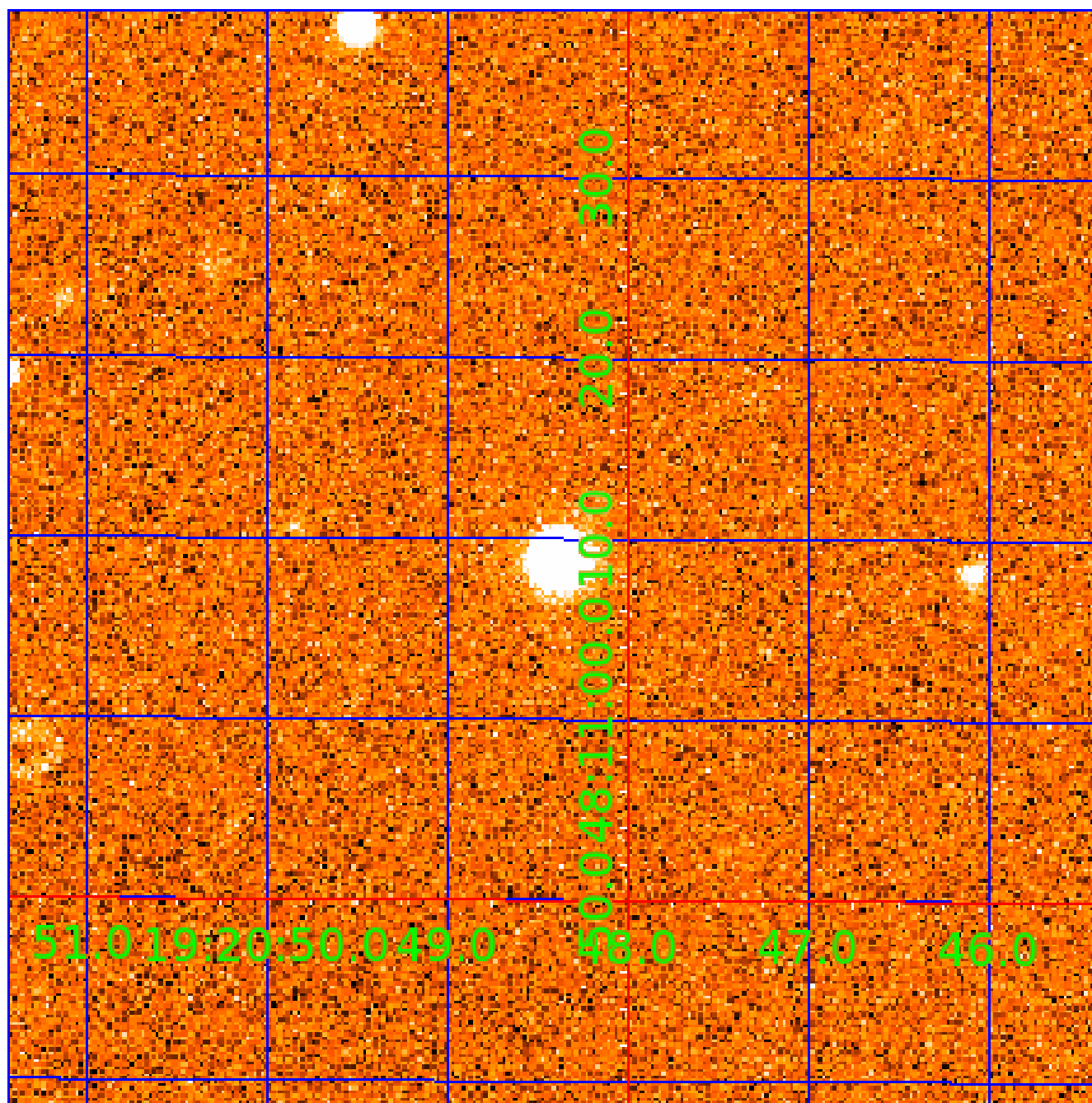


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 010793172

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})
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Robovetter Results

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010793172-02	OBS	PC	0.99	0	0	0	0	NO_COMMENT
010793172-03	OBS	PC	0.95	0	0	0	0	NO_COMMENT

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.

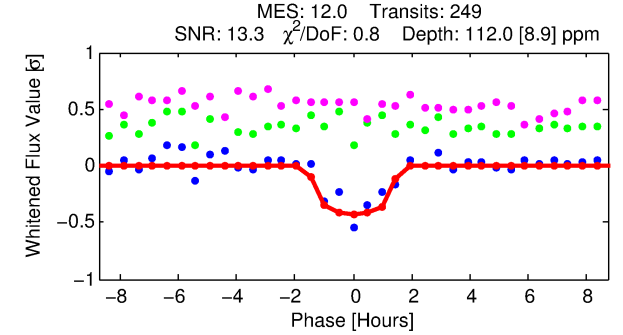
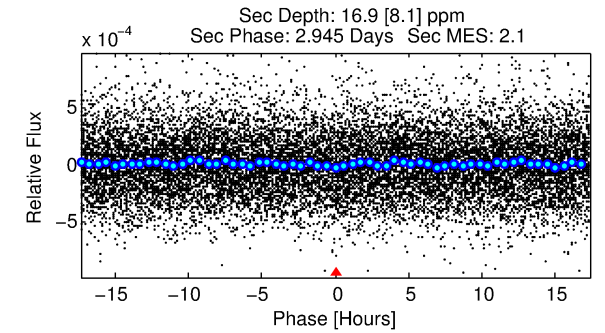
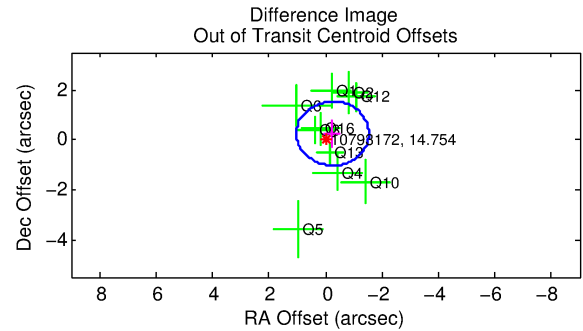
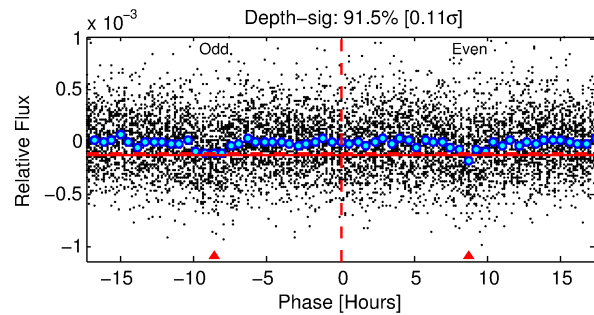
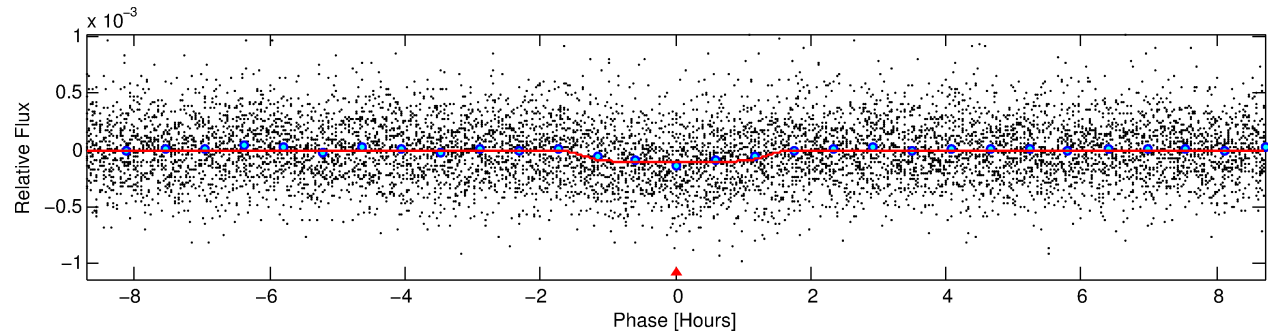
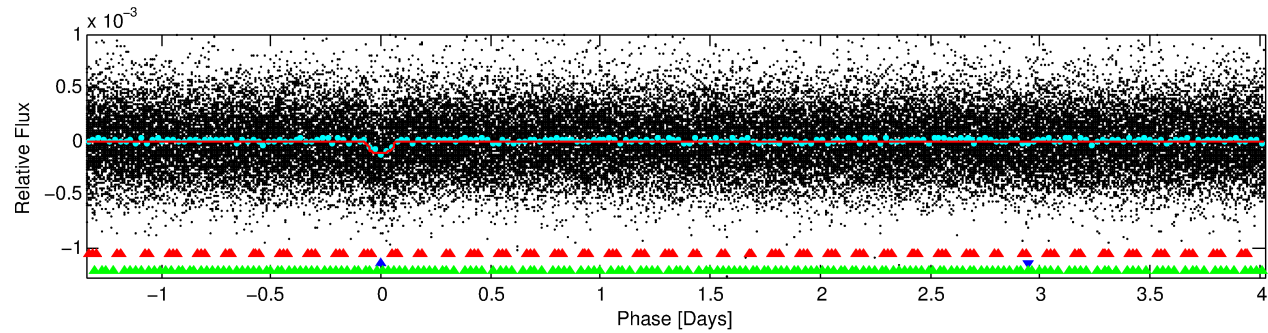
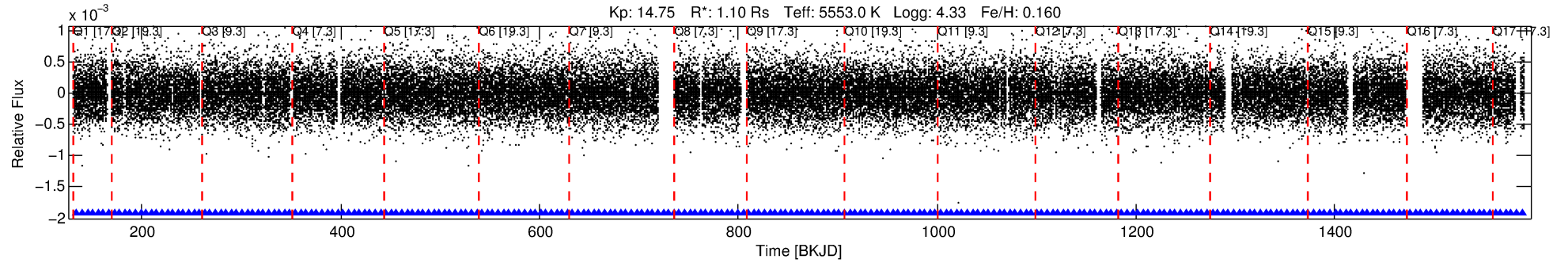
Ephemeris Match Information For 010793172-02

No Significant Match Found

DV One-Page Summary

KIC: 10793172 Candidate: 2 of 3 Period: 5.364 d

KOI: K02871.02 Corr: 0.975



DV Fit Results:

Period = 5.36371 [0.00003] d
Epoch = 134.6513 [0.0043] BKJD
Rp/R* = 0.0104 [0.0083]
a/R* = 10.30 [32.95]
b = 0.70 [2.39]
Seff = 297.48 [70.79]
Teff = 1059 [63] K
Rp = 1.24 [1.01] Re
a = 0.0588 [0.0084] AU
Ag = 20.85 [35.18] [0.56 σ]
Teffp = 3499 [1462] K [1.67 σ]

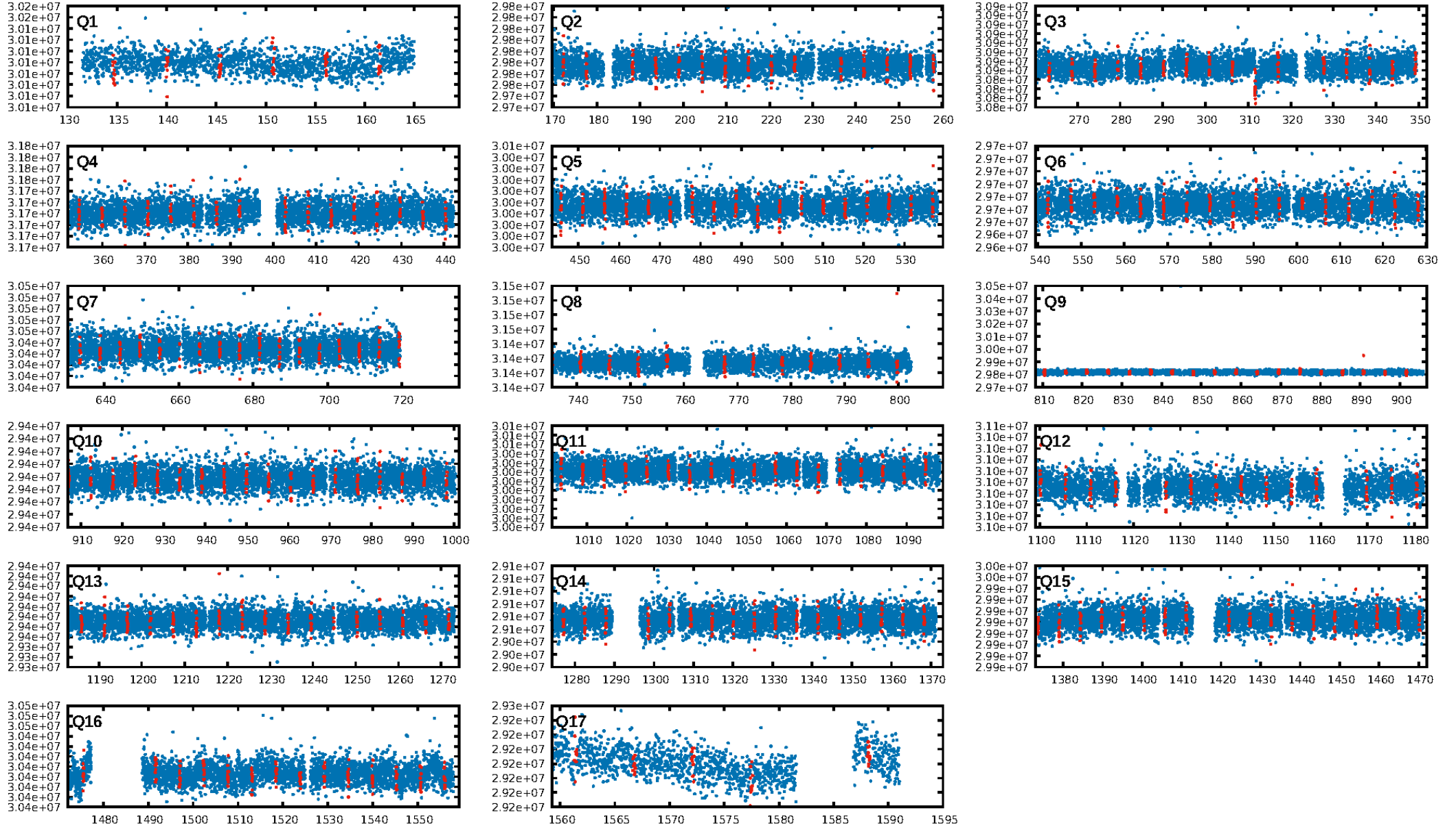
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [14.43 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.73e-32
RollingBand-fgt: 1.00 [238/238]
GhostDiagnostic-chr: 84.58
Centroid-sig: 9.6%
Centroid-so: 1.988 arcsec [1.77 σ]
OotOffset-rm: 0.351 arcsec [0.82 σ]
KicOffset-rm: 0.451 arcsec [1.40 σ]
OotOffset-st: 3/1/3/3 [10]
KicOffset-st: 3/1/3/3 [10]
DiffImageQuality-fgm: 0.90 [9/10]
DiffImageOverlap-fno: 1.00 [17/17]

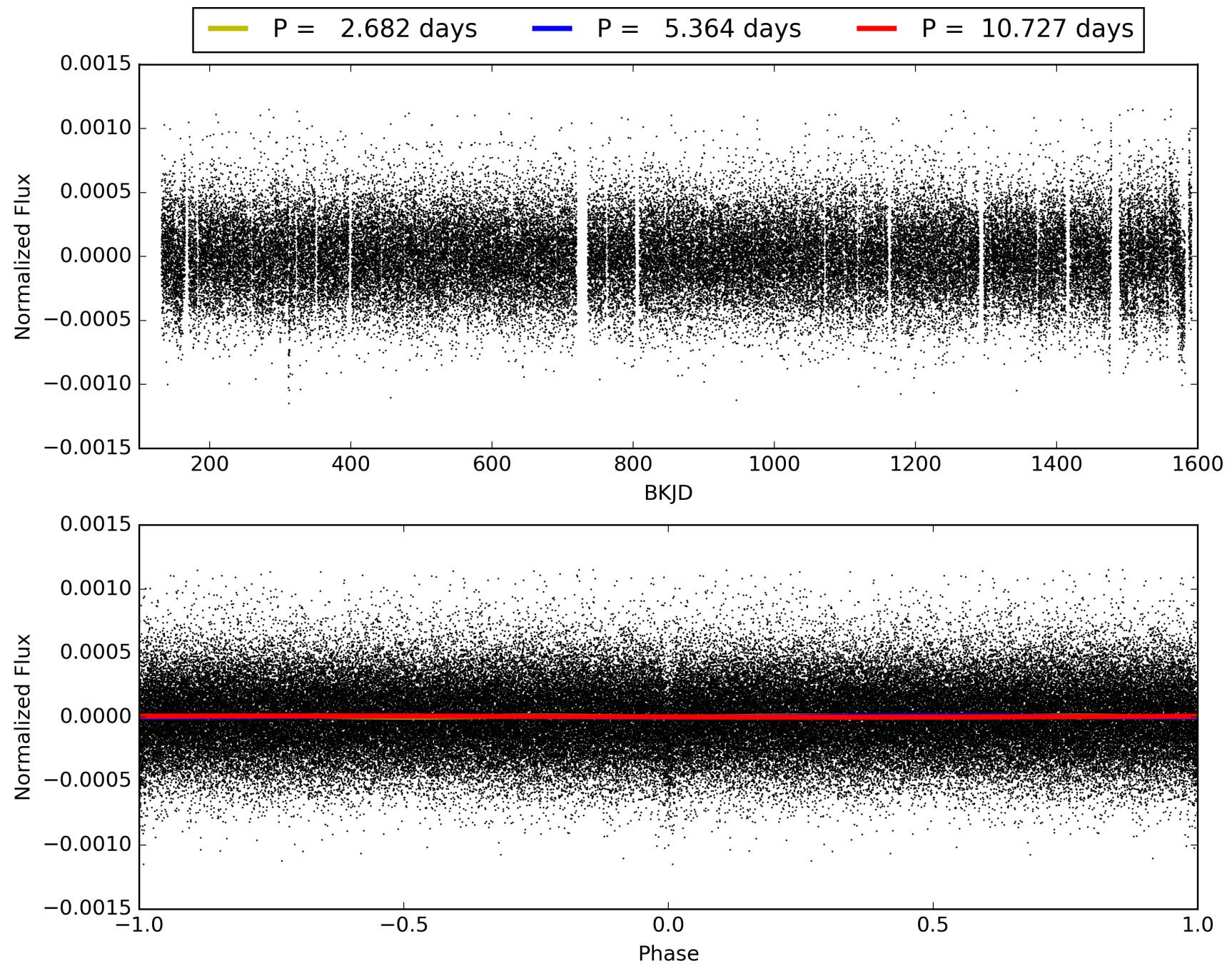
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010793172-02, PDC Light Curves

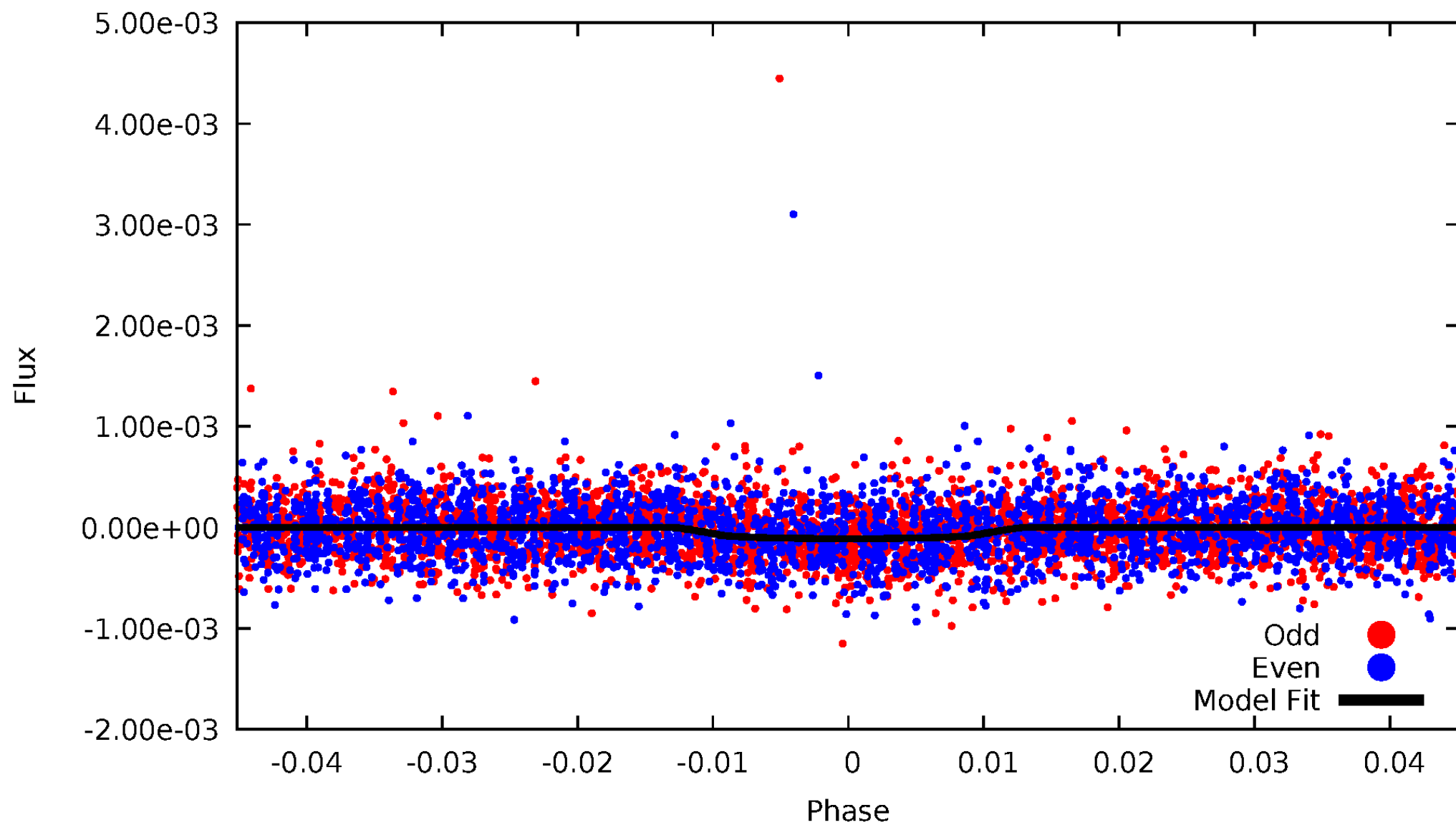


TCE 010793172-02



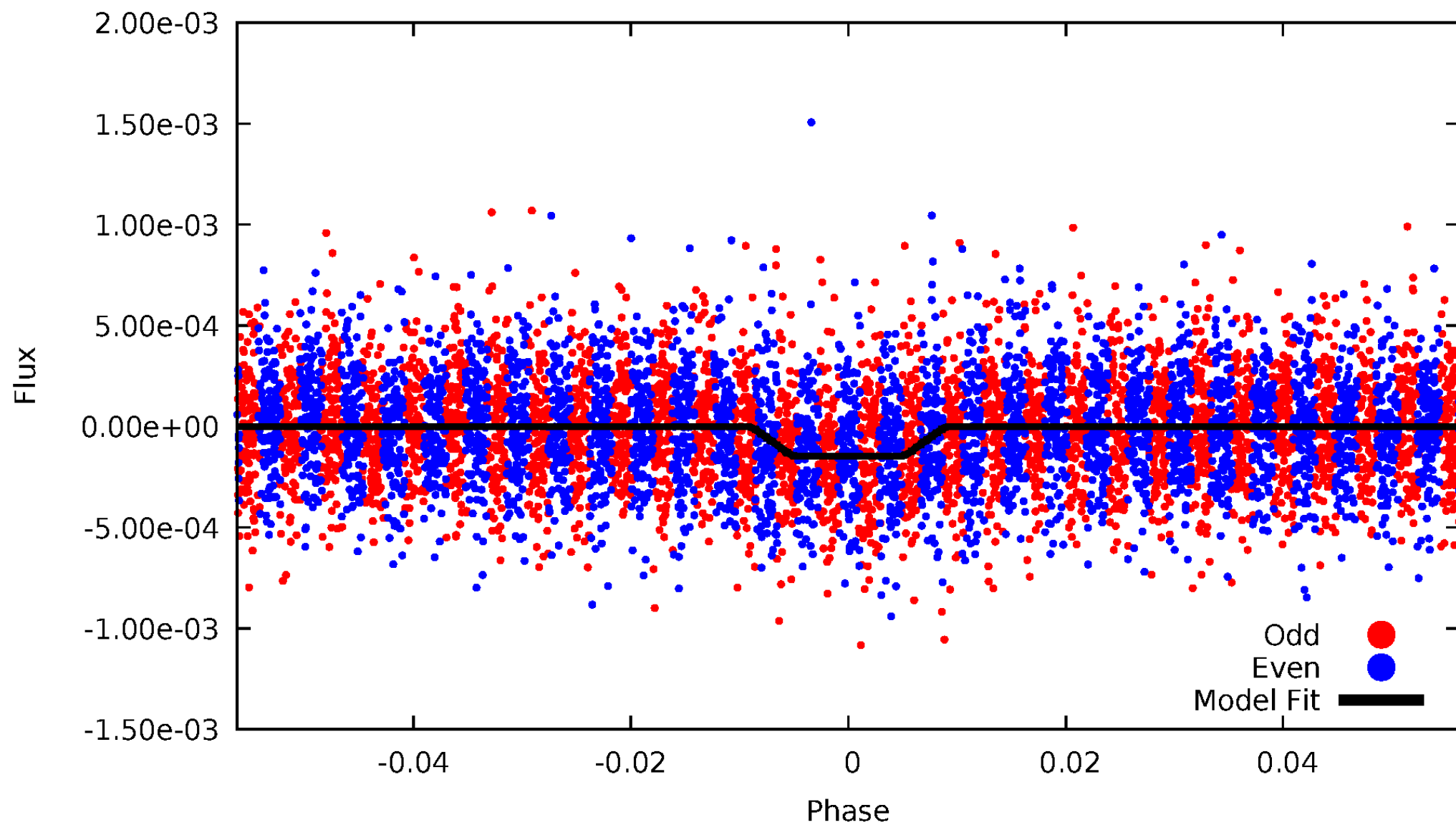
DV Odd/Even

TCE 010793172-02



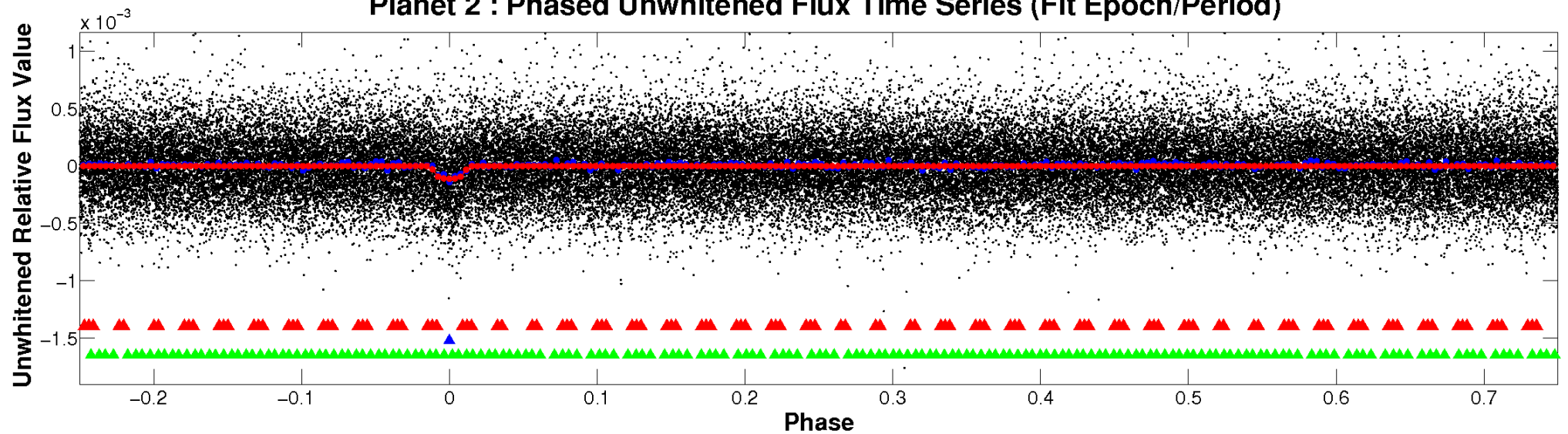
ALT Odd/Even

TCE 010793172-02

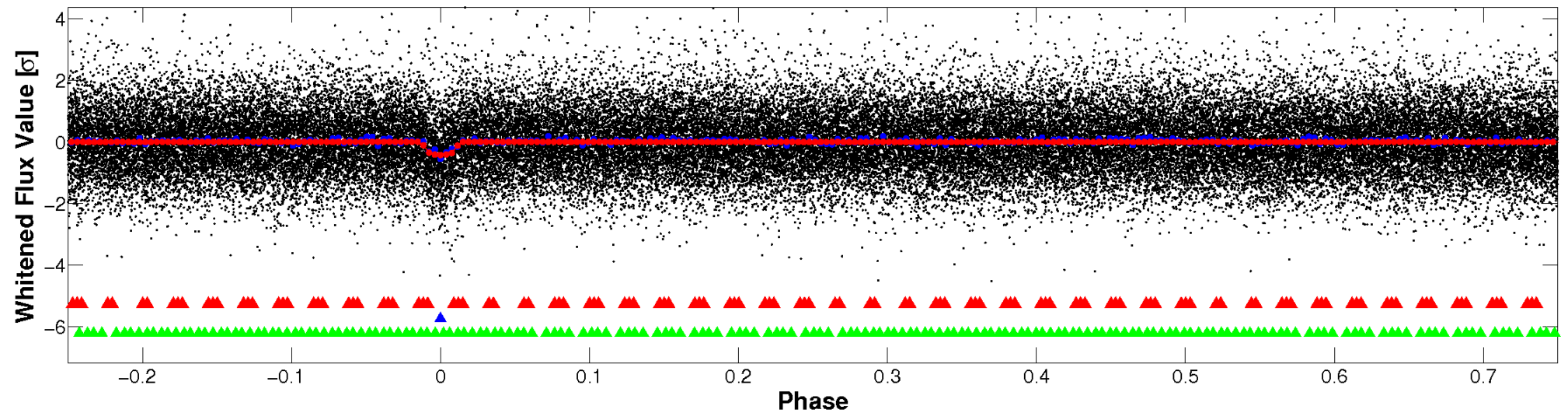


Non-Whitened Vs. Whitened Light Curve

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

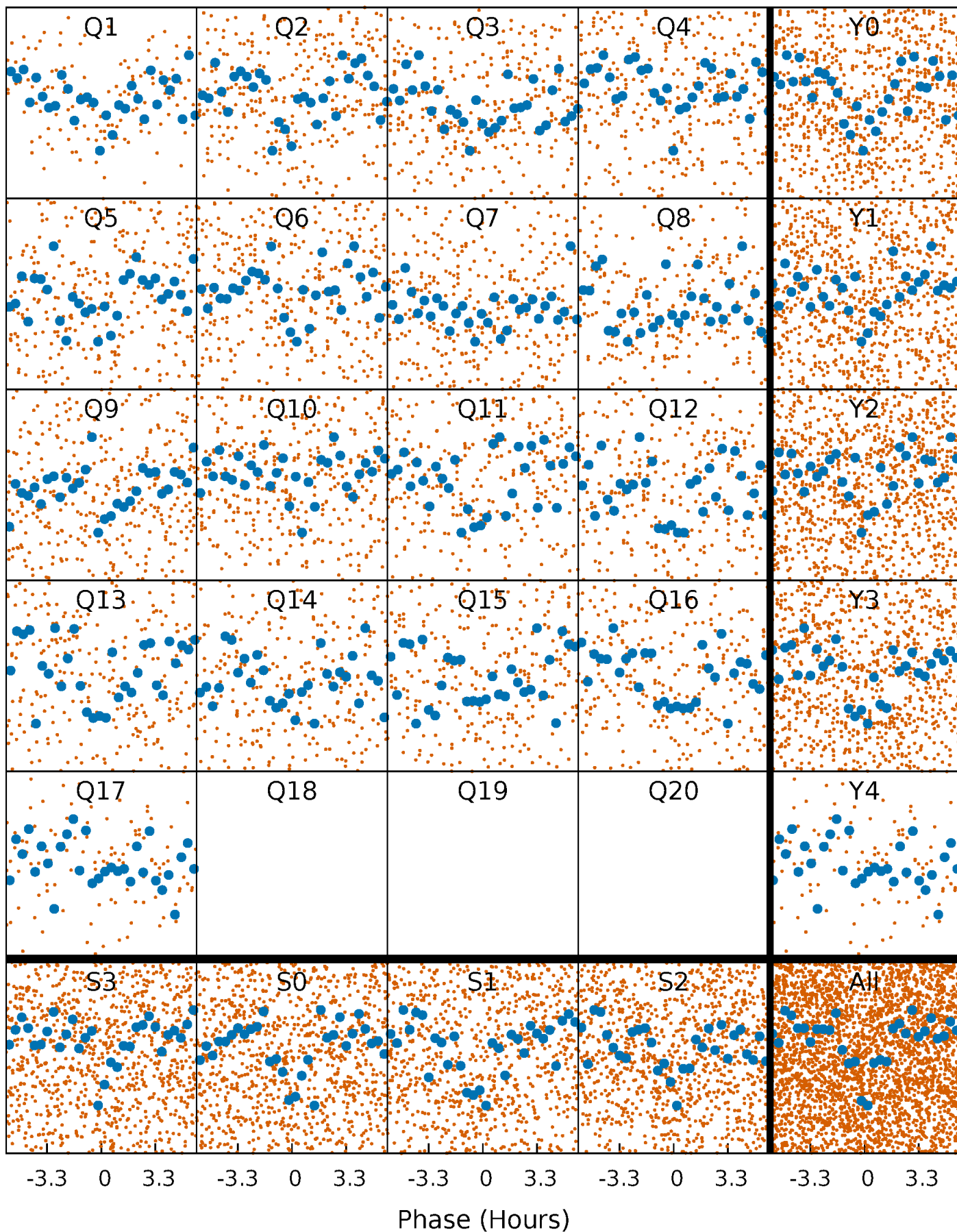


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



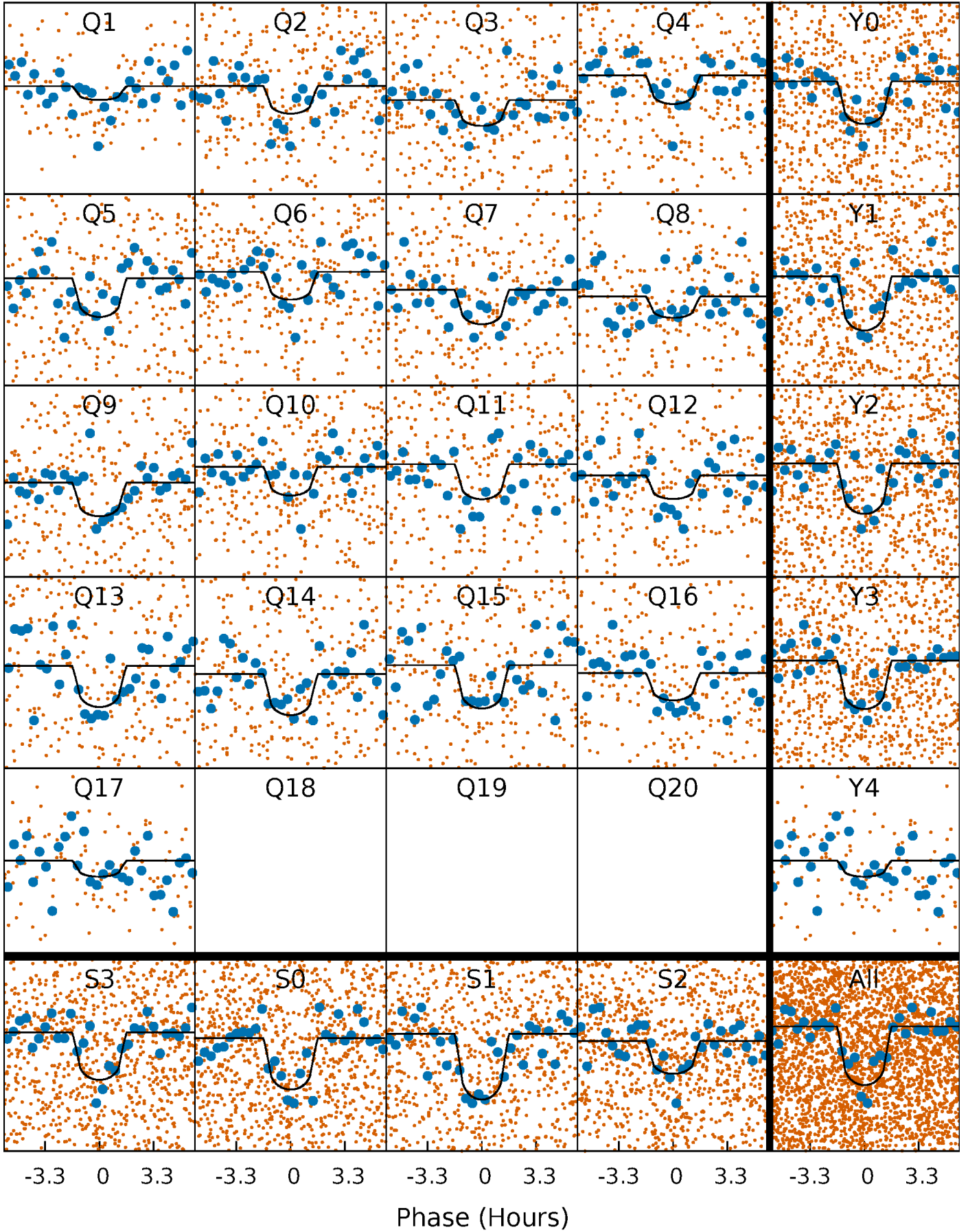
PDC Quarter-Phased Transit Curves

TCE 010793172-02 P= 5.363709 Days $T_0=134.651305$ (BKJD)



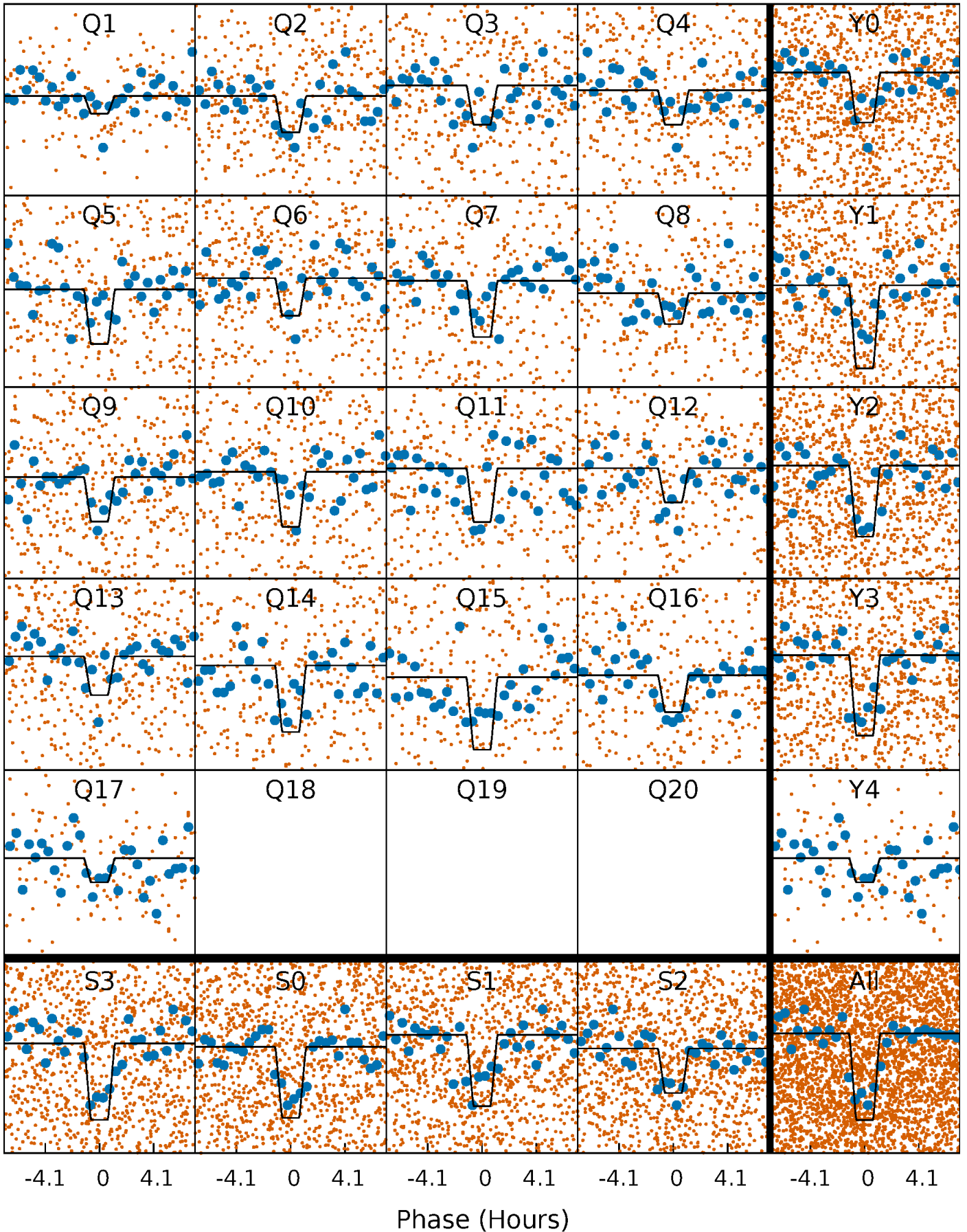
DV Quarter-Phased Transit Curves

TCE 010793172-02 P= 5.363709 Days $T_0=134.651305$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

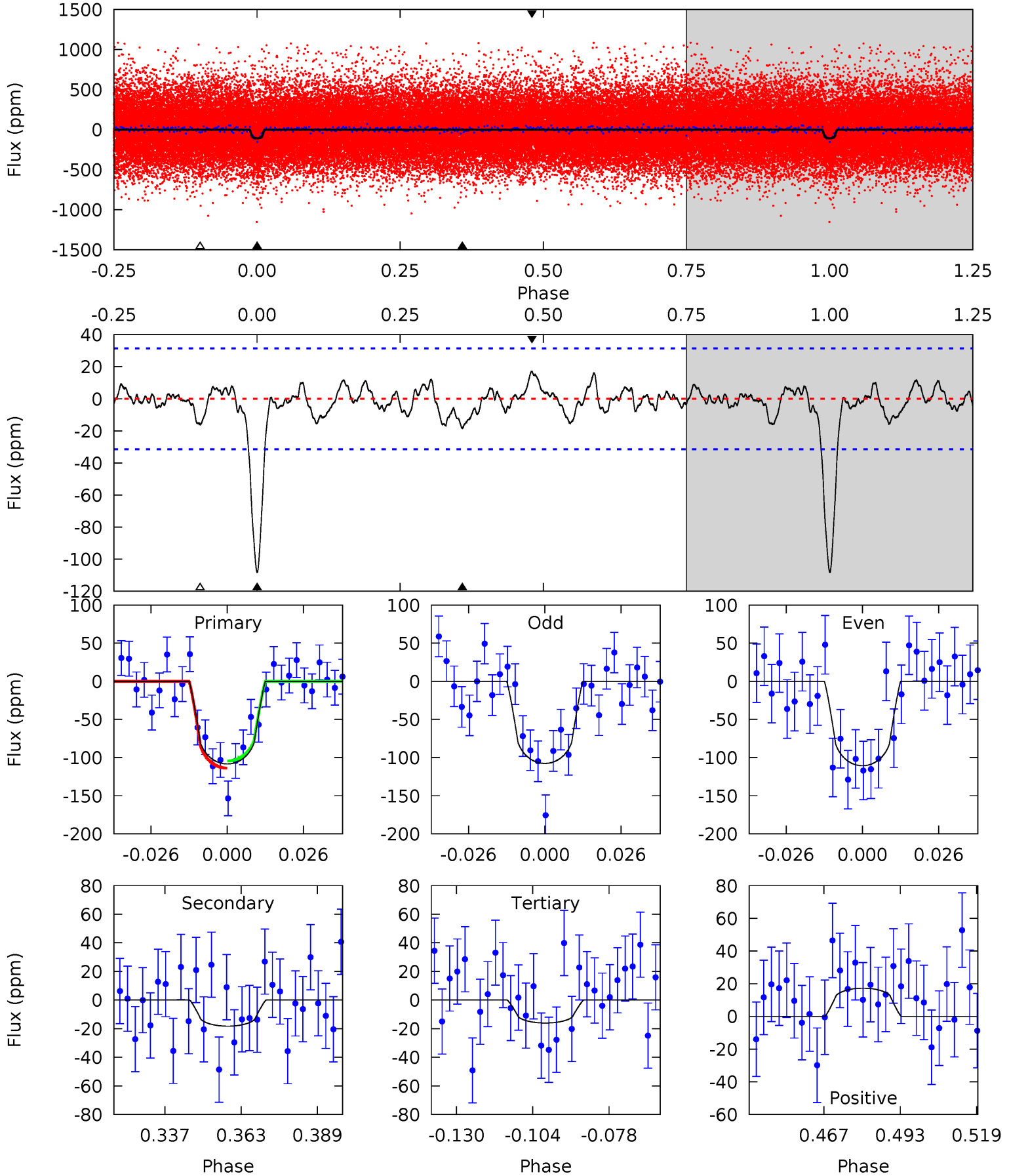
TCE 010793172-02 P= 5.363783 Days $T_0=134.642838$ (BKJD)



DV Model-Shift Uniqueness Test

010793172-02, P = 5.363709 Days, E = 129.287596 Days

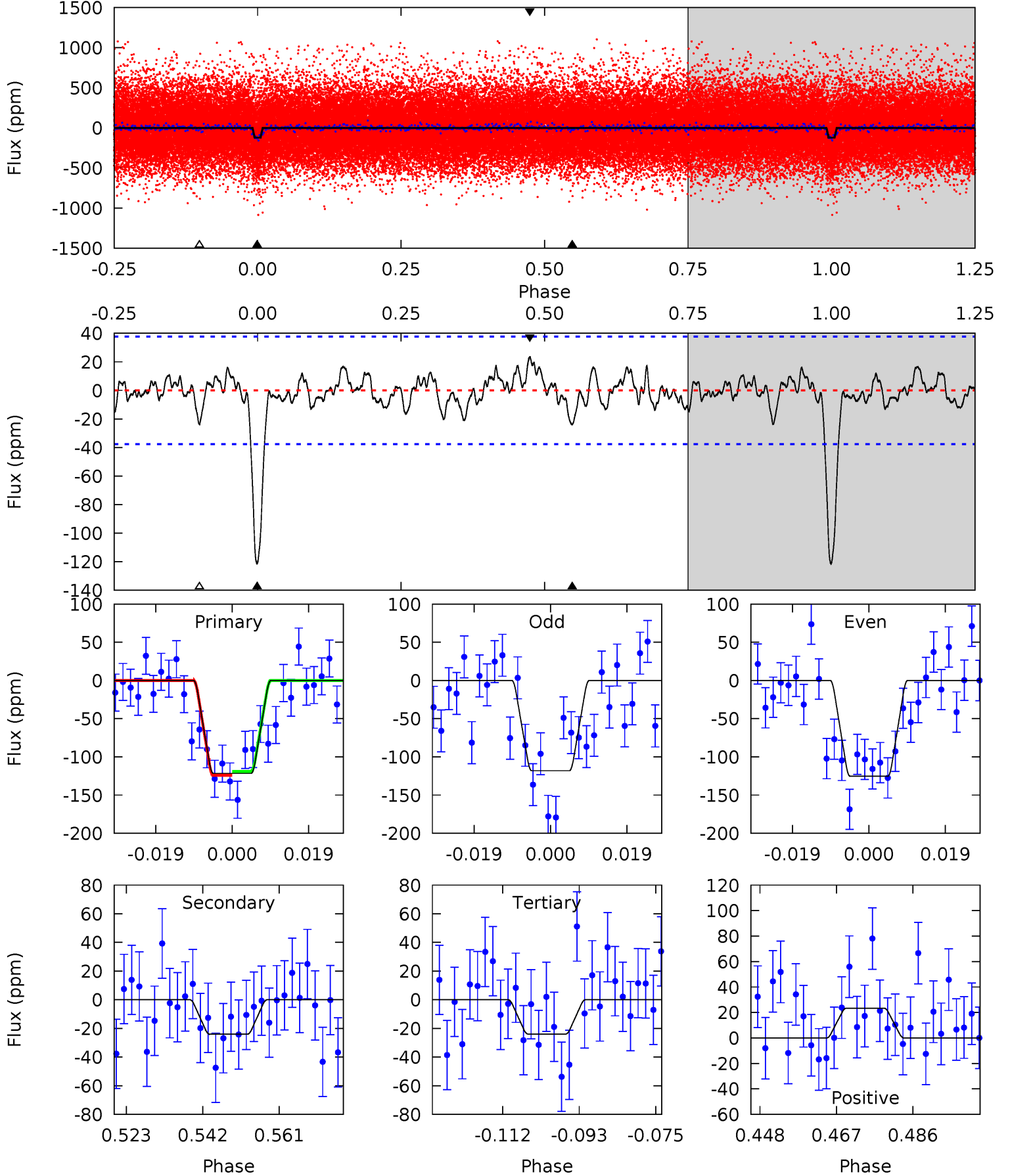
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	2.81	2.47	2.66	4.84	2.23	0.99	14.2	14.0	0.34	0.15	0.23	1.03	0.14	0.72



Alt Model-Shift Uniqueness Test

010793172-02, P = 5.363783 Days, E = 129.279055 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	3.13	3.11	3.04	4.91	2.35	1.08	12.7	12.8	0.02	0.09	0.47	1.02	0.16	0.34



Stellar Parameters For KIC 010793172

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5553^{+74}_{-74}	$4.330^{+0.137}_{-0.100}$	$0.160^{+0.150}_{-0.150}$	$1.098^{+0.161}_{-0.161}$	$0.941^{+0.062}_{-0.048}$	$1.001^{+0.590}_{-0.315}$
	+1%/-1%	+3%/-2%	+94%/-94%	+15%/-15%	+7%/-5%	+59%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 010793172-02 / KOI 2871.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-18 ± 6	$1.44^{+0.93}_{-0.82}$	1473^{+63}_{-63}	3696^{+1337}_{-612}	16^{+72}_{-11}
Alt.	-24 ± 8	$1.49^{+0.93}_{-0.79}$	1474^{+63}_{-63}	3763^{+1386}_{-548}	19^{+81}_{-12}

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 $A_{obs} \gg 1.0$

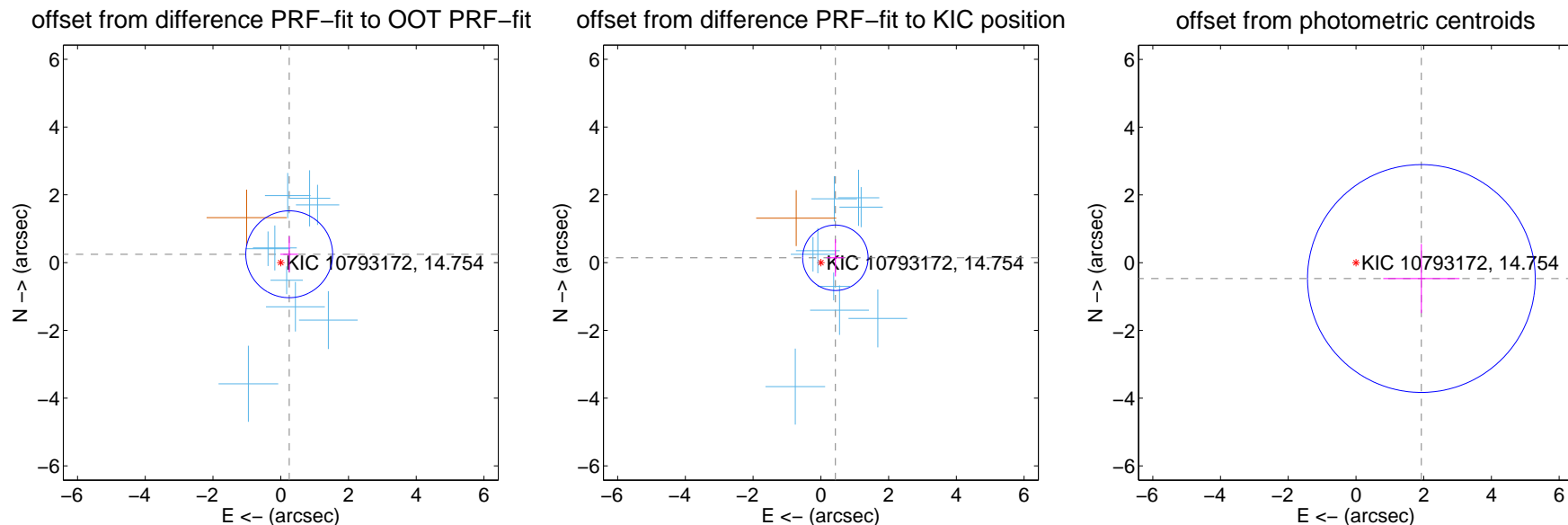
DV Centroid Data

Supplemental centroid analysis for 010793172-02. Kepler magnitude: 14.75. Transit SNR 13.31

There are 9 quarters with good PRF difference image offsets

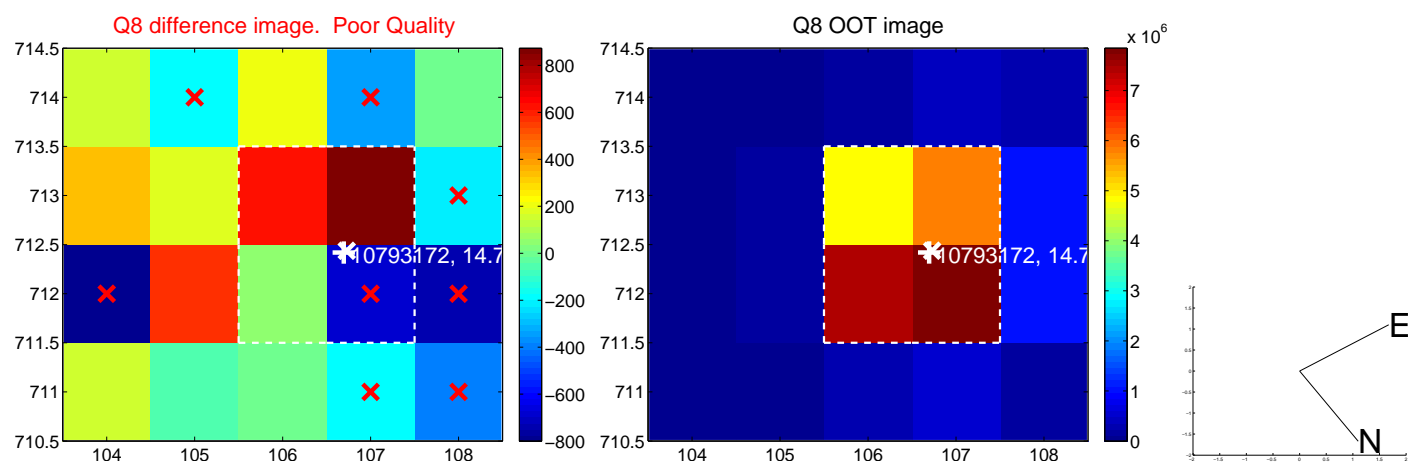
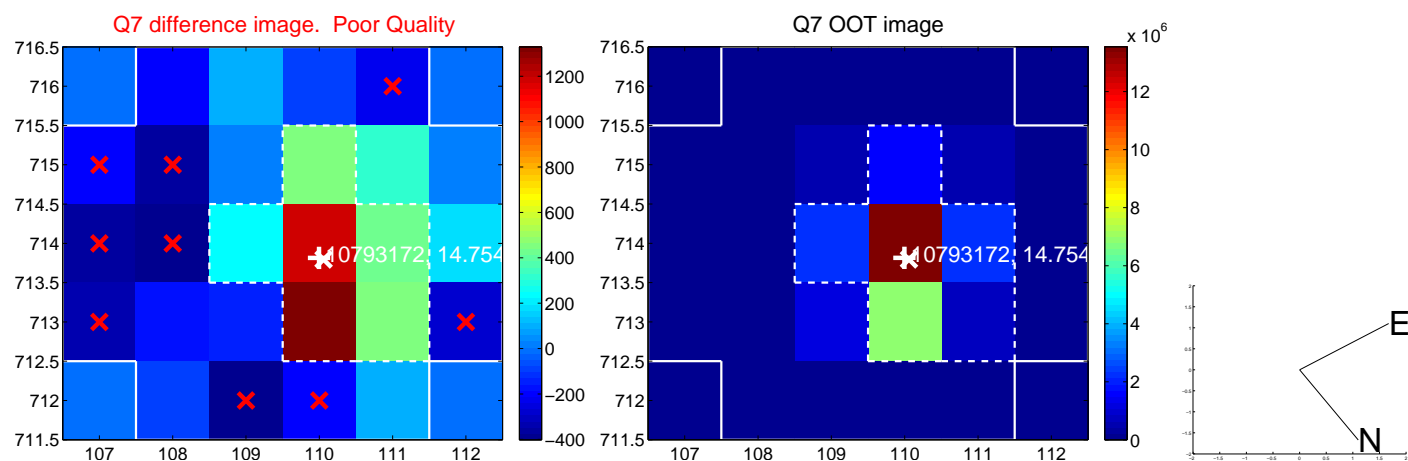
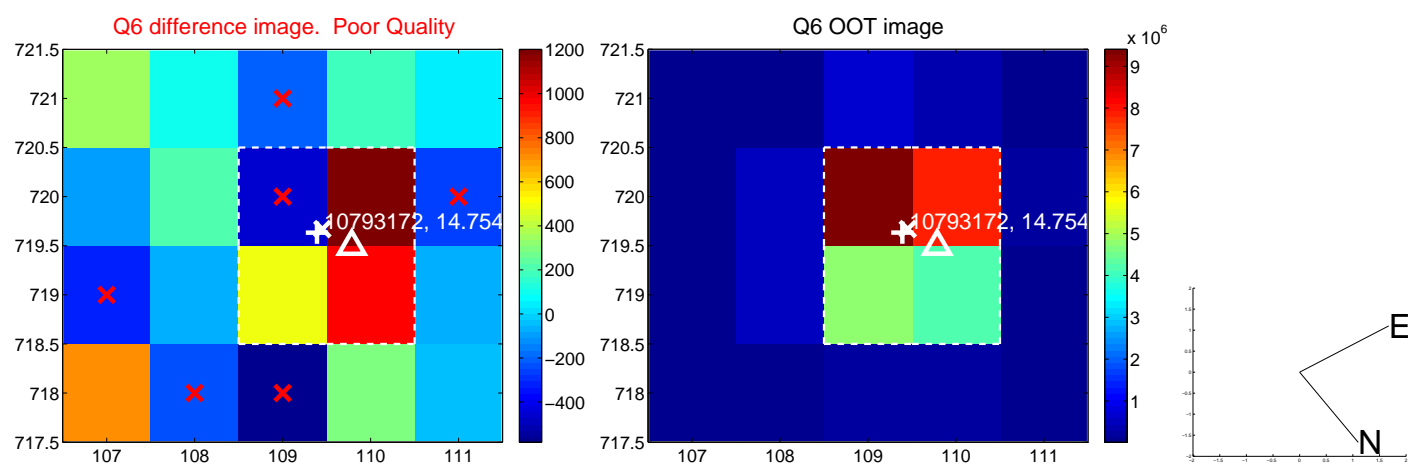
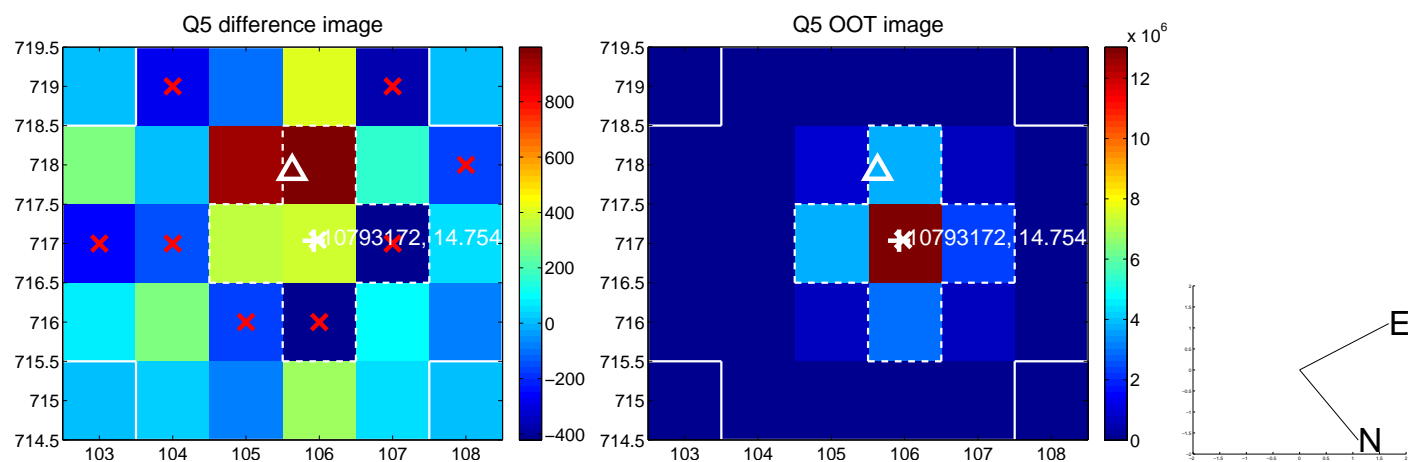
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.351 ± 0.427	0.82	-0.250 ± 0.263	0.246 ± 0.525
PRF-fit source offset from KIC position	0.451 ± 0.322	1.40	-0.428 ± 0.259	0.142 ± 0.551
photometric centroid source offset	1.99 ± 1.12	1.77	-1.93 ± 1.13	-0.47 ± 1.02

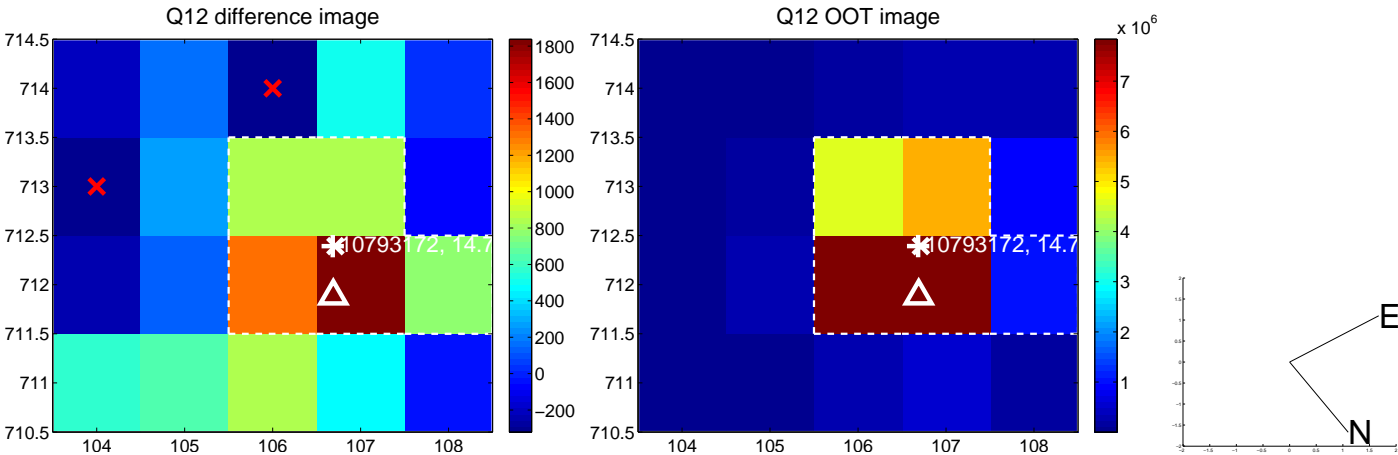
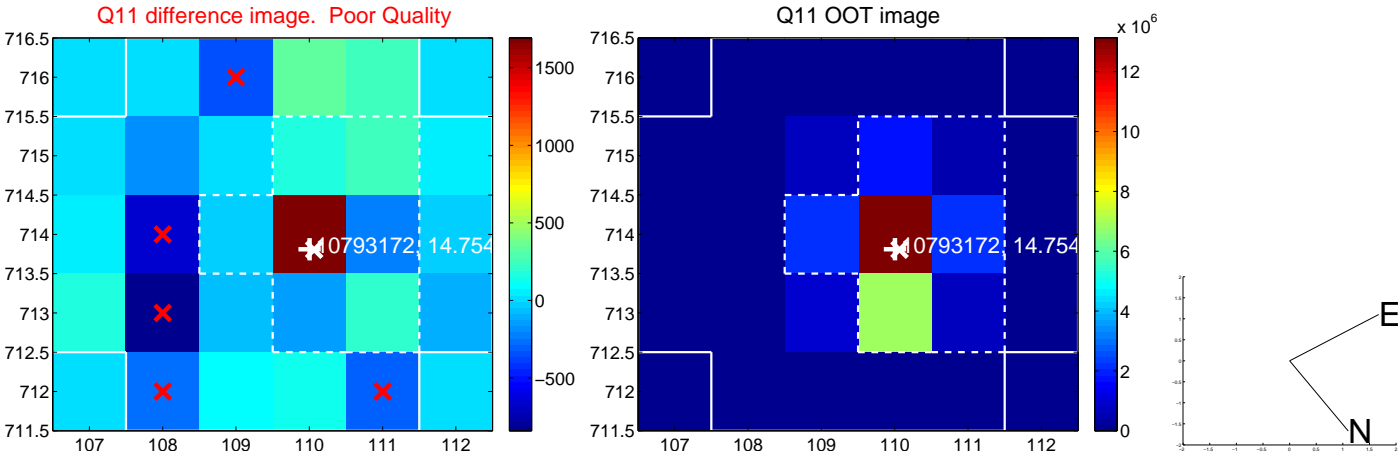
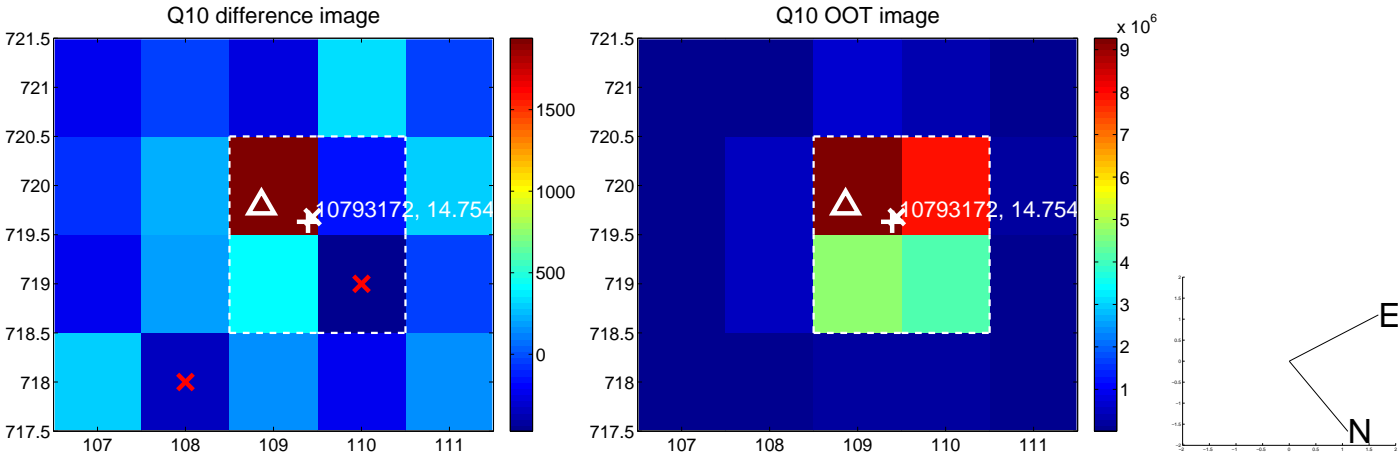
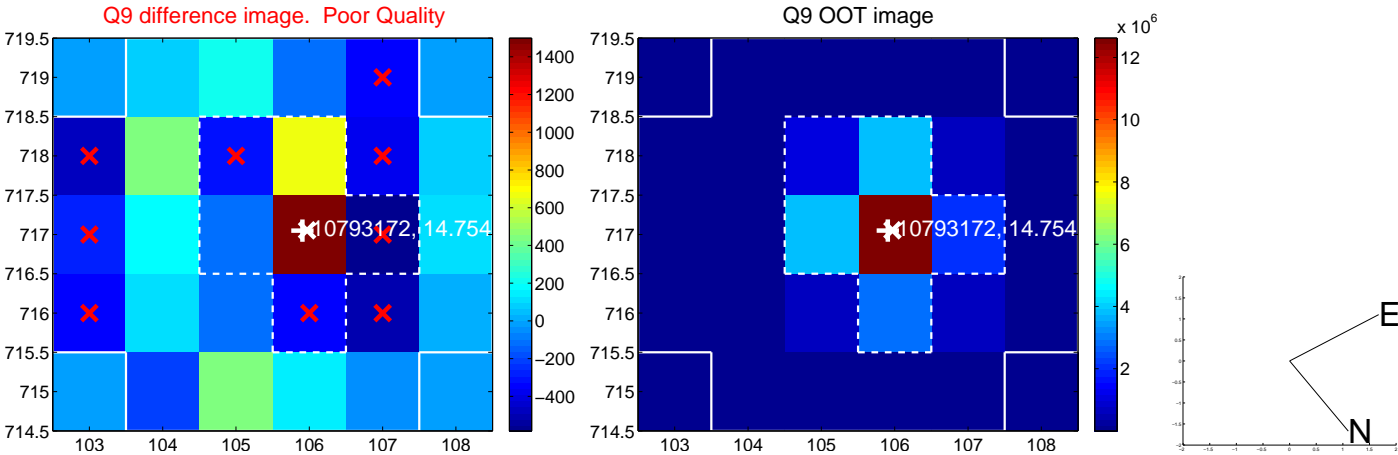


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

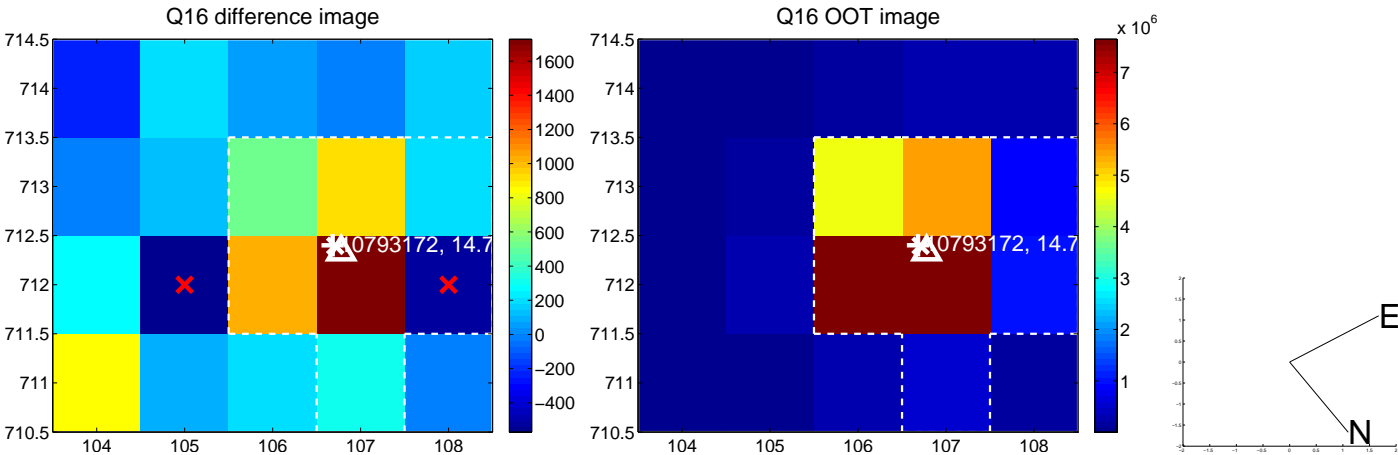
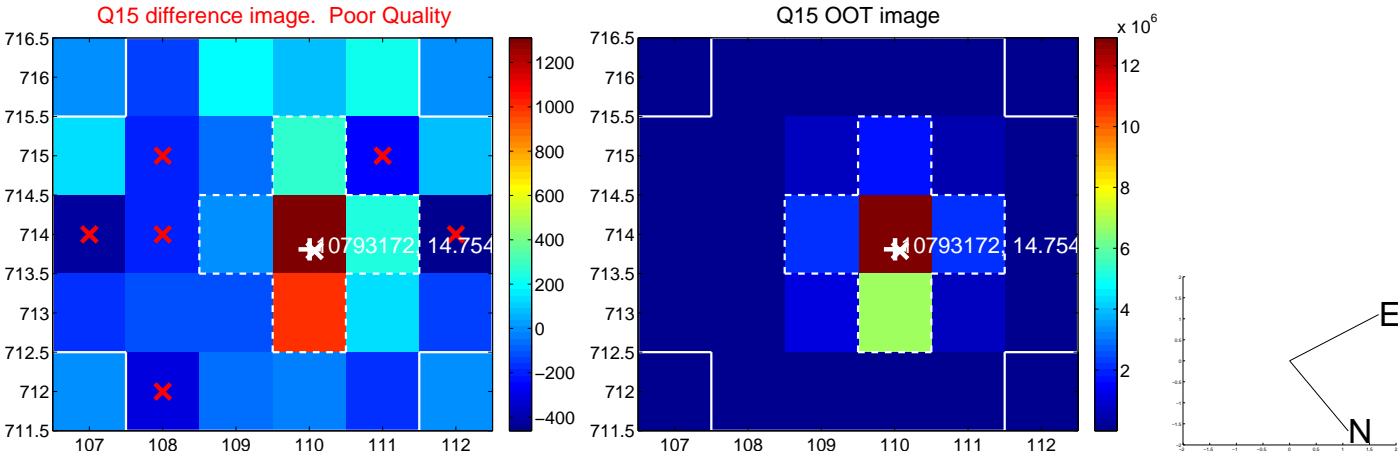
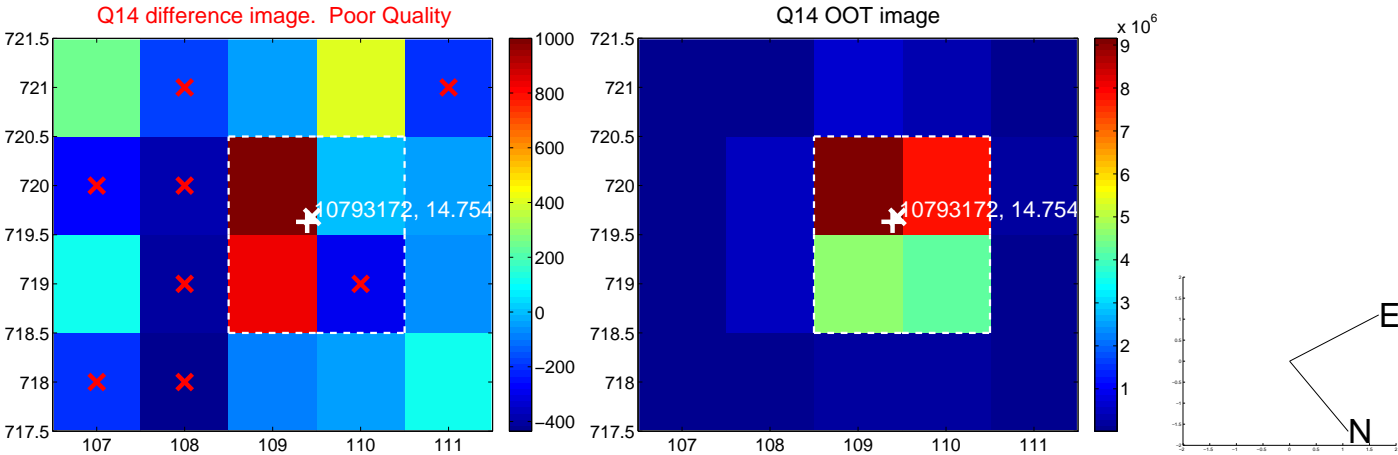
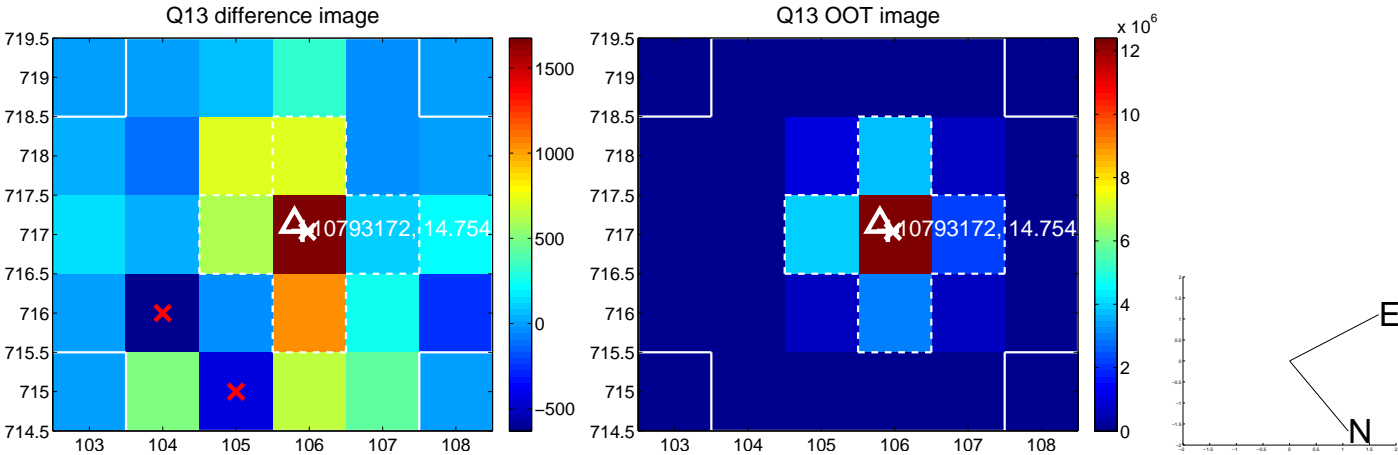
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



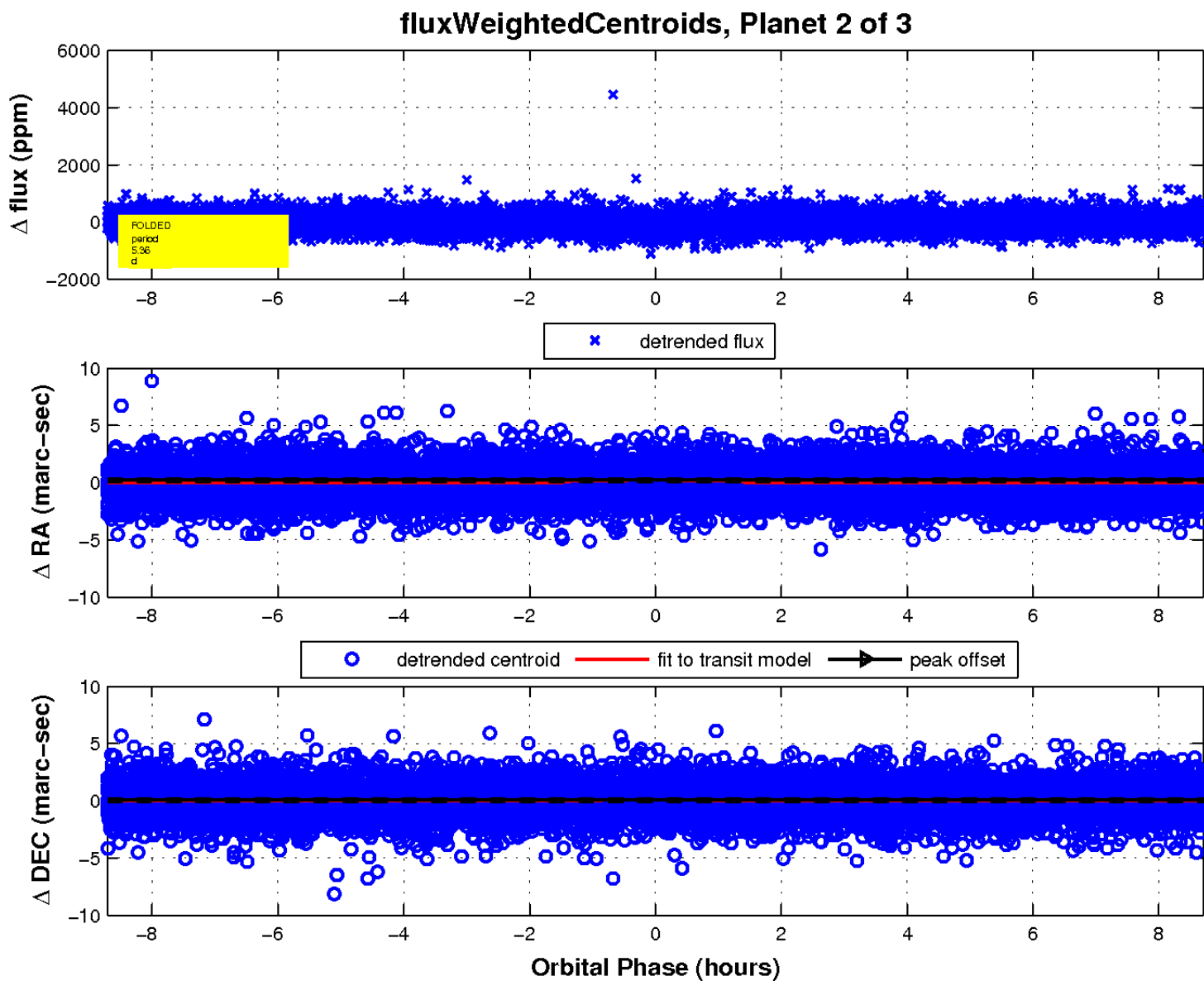
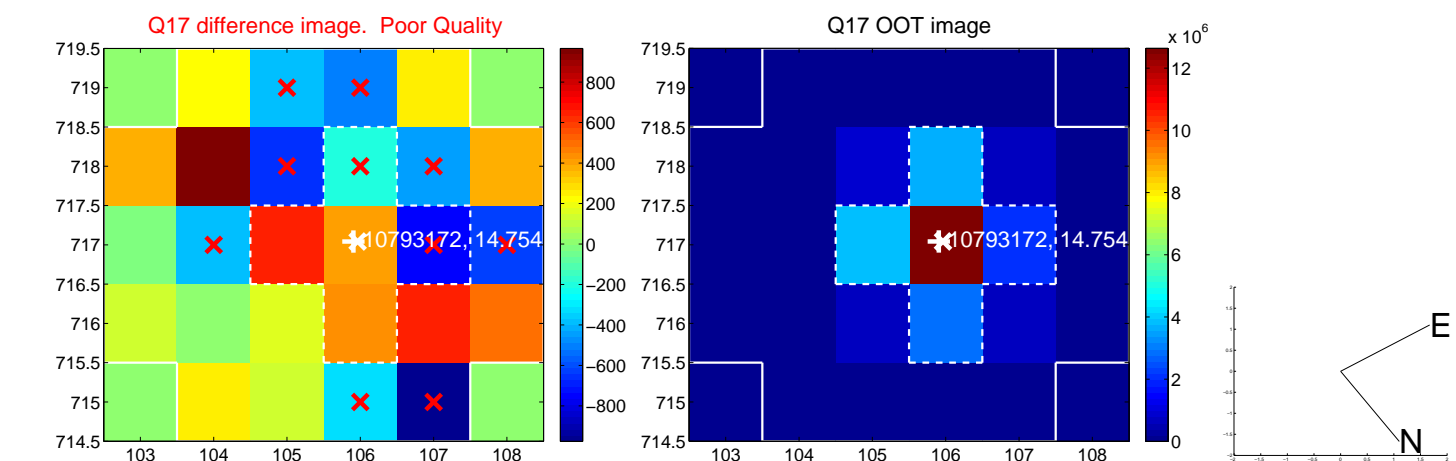
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

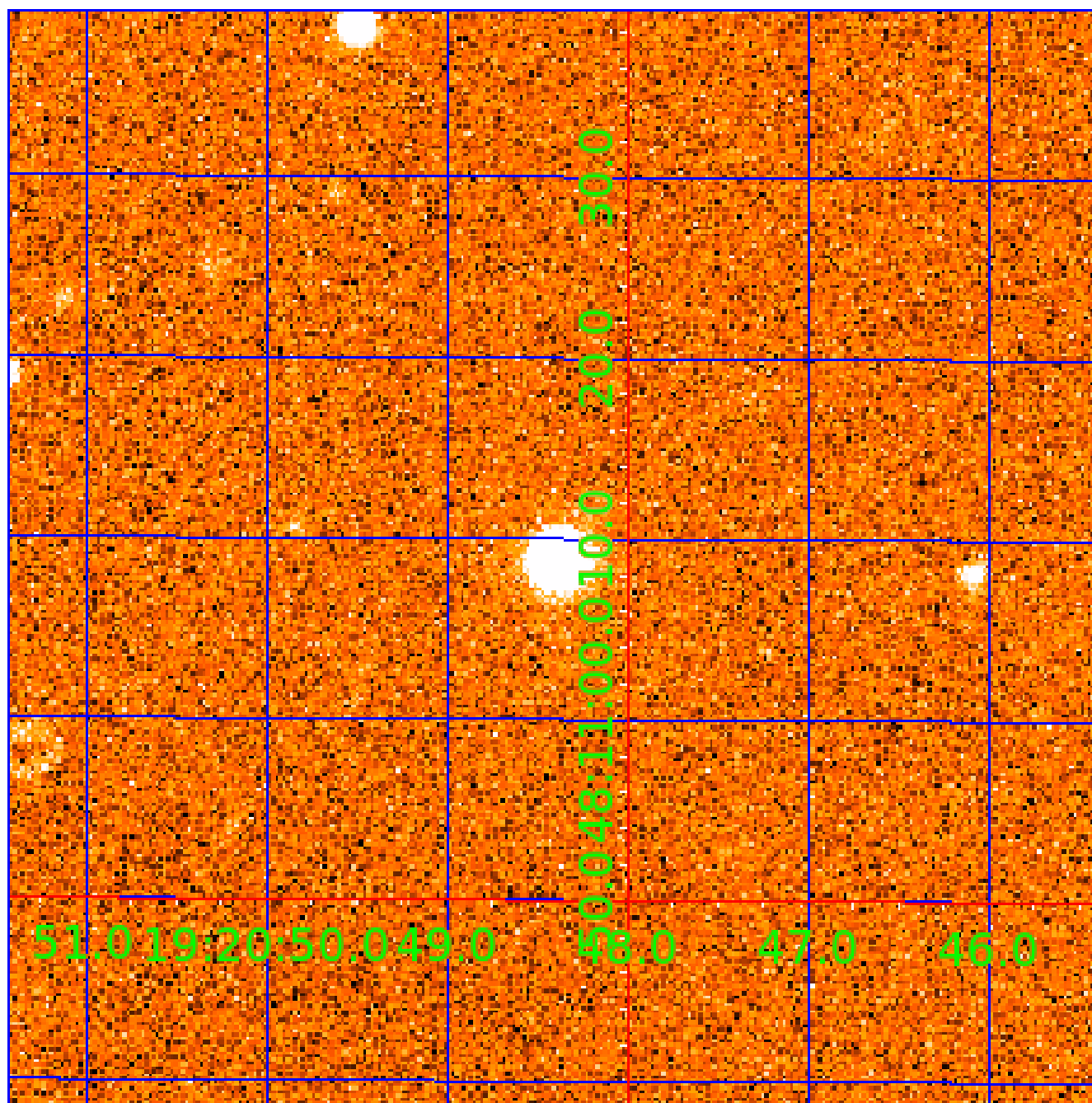


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010793172

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})
010793172-01	OBS	2871.01	12.099902	143.044658	159.4	3.596	12.9	13.9	1.10	5553	1.66	100.55
010793172-02	OBS	2871.02	5.363709	134.651305	112.0	2.904	12.0	13.3	1.10	5553	1.24	297.48
010793172-03	OBS	2871.04	7.978890	132.254122	96.9	3.238	8.0	9.3	1.10	5553	1.29	175.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010793172-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
010793172-02	OBS	PC	0.99	0	0	0	0	NO_COMMENT
010793172-03	OBS	PC	0.95	0	0	0	0	NO_COMMENT

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 010793172-03

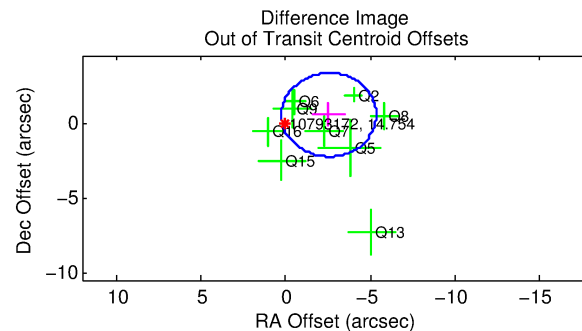
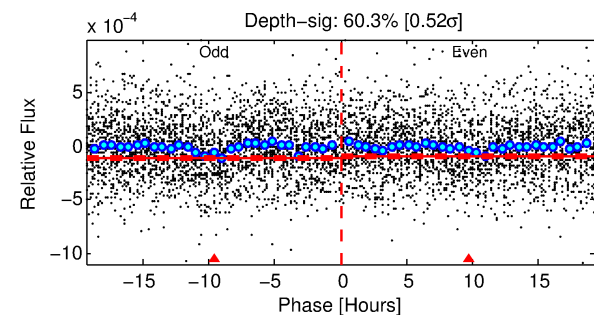
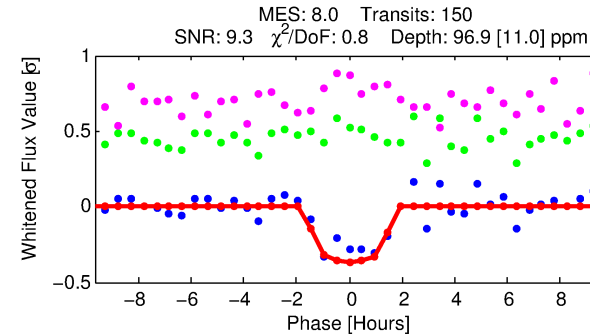
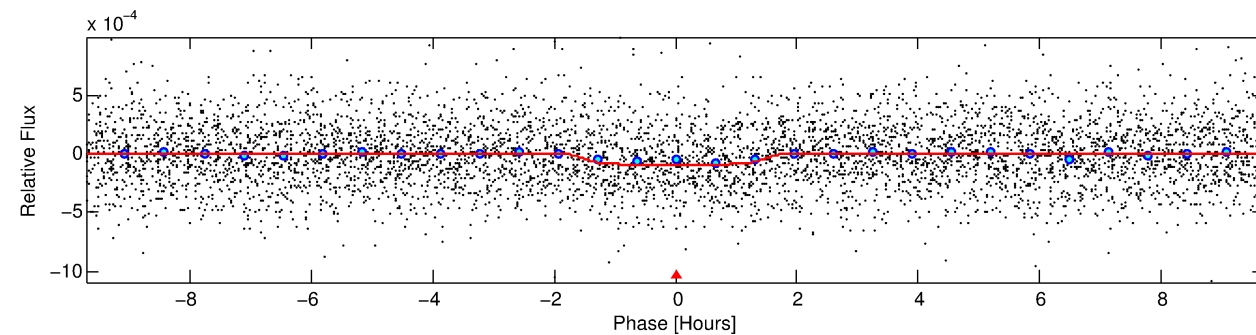
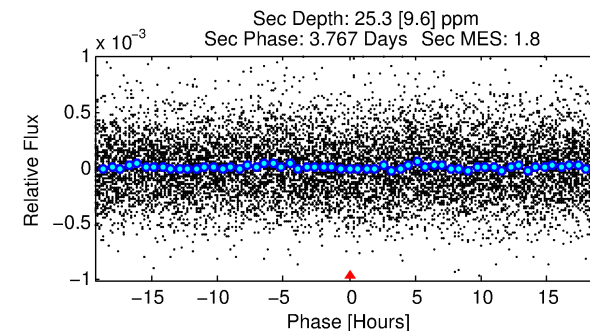
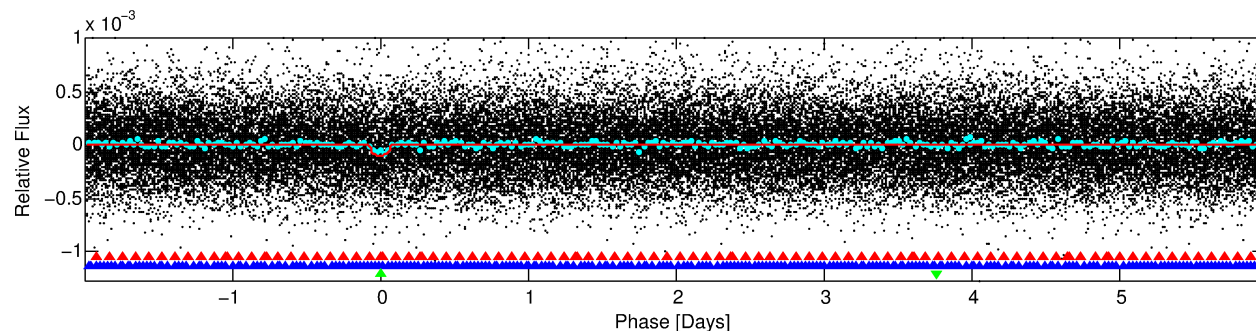
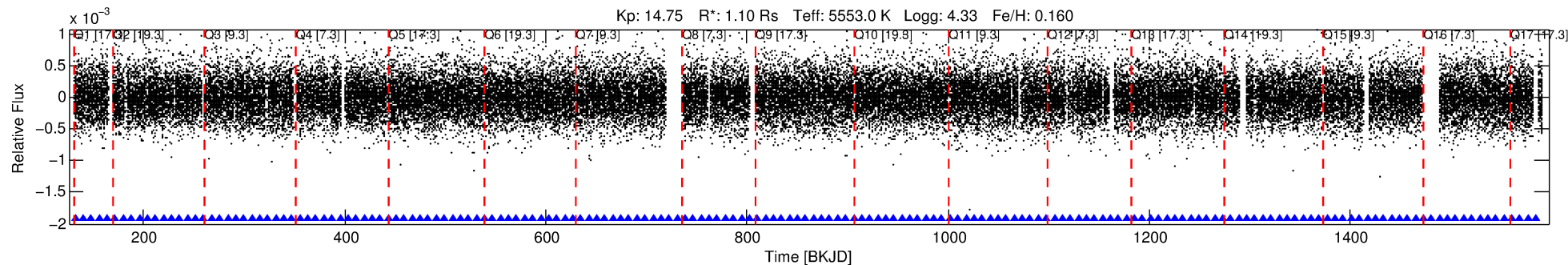
No Significant Match Found

DV One-Page Summary

KIC: 10793172 Candidate: 3 of 3 Period: 7.979 d

KOI: K02871 Corr: No Ephemeris Match

Kp: 14.75 R*: 1.10 Rs Teff: 5553.0 K Logg: 4.33 Fe/H: 0.160



DV Fit Results:

Period = 7.97889 [0.00008] d
Epoch = 132.2541 [0.0076] BKJD
Rp/R* = 0.0108 [0.0081]
a/R* = 8.81 [29.49]
b = 0.90 [0.75]
Seff = 175.18 [41.69]
Teff = 928 [55] K
Rp = 1.29 [0.99] Re
a = 0.0766 [0.0110] AU
Ag = 48.83 [76.56] [0.62σ]
Teffp = 3792 [1471] K [1.95σ]

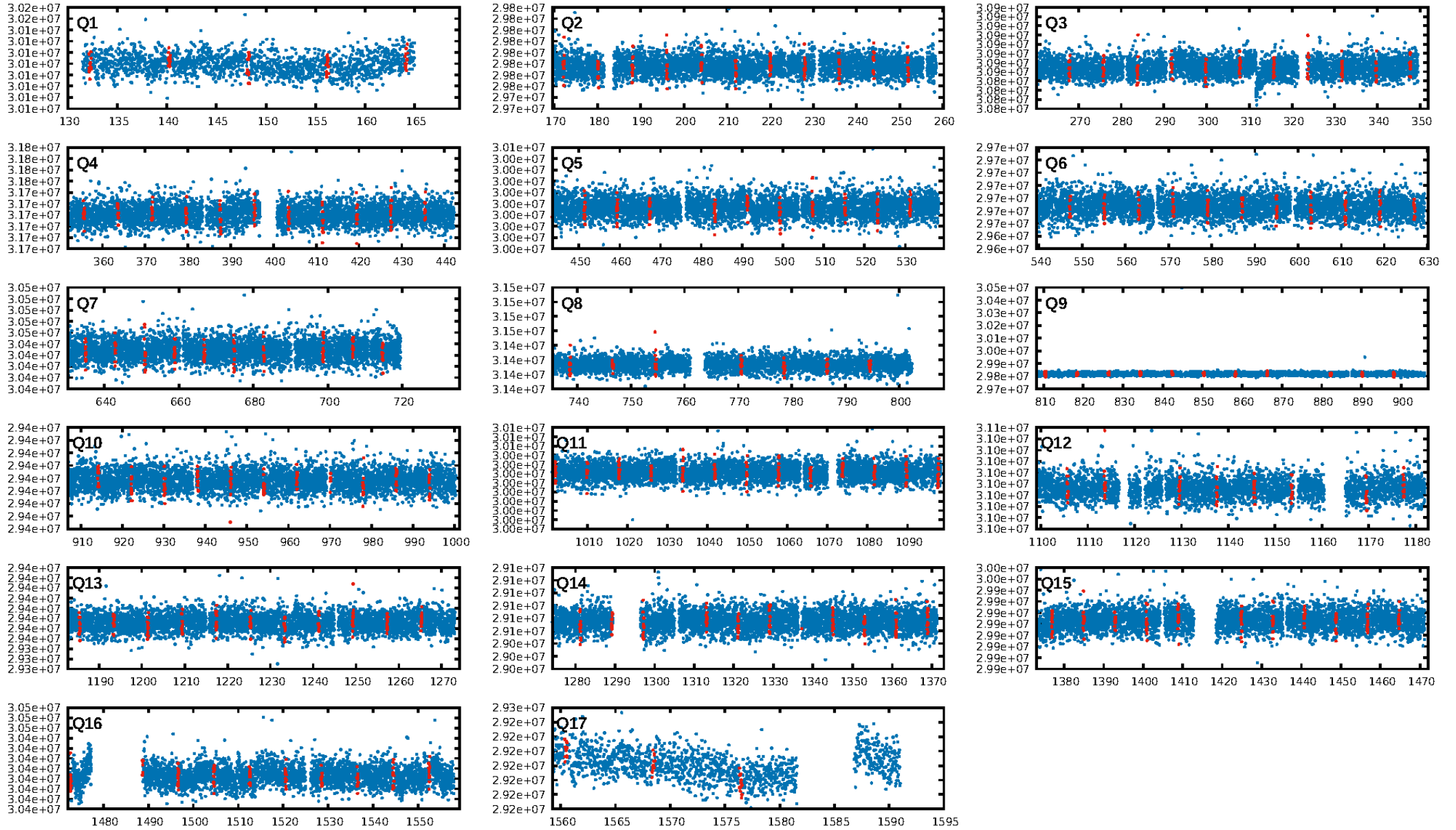
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.43σ]
LongPeriod-sig: 100.0% [20.44σ]
ModelChiSquare2-sig: 98.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.96e-16
RollingBand-fgt: 1.00 [143/143]
GhostDiagnostic-chr: -7.547
Centroid-sig: 3.7%
Centroid-so: 2.992 arcsec [1.93σ]
OotOffset-rm: 2.605 arcsec [2.80σ]
KicOffset-rm: 2.809 arcsec [3.01σ]
OotOffset-st: 2/2/2/3 [9]
KicOffset-st: 2/2/2/3 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [17/17]

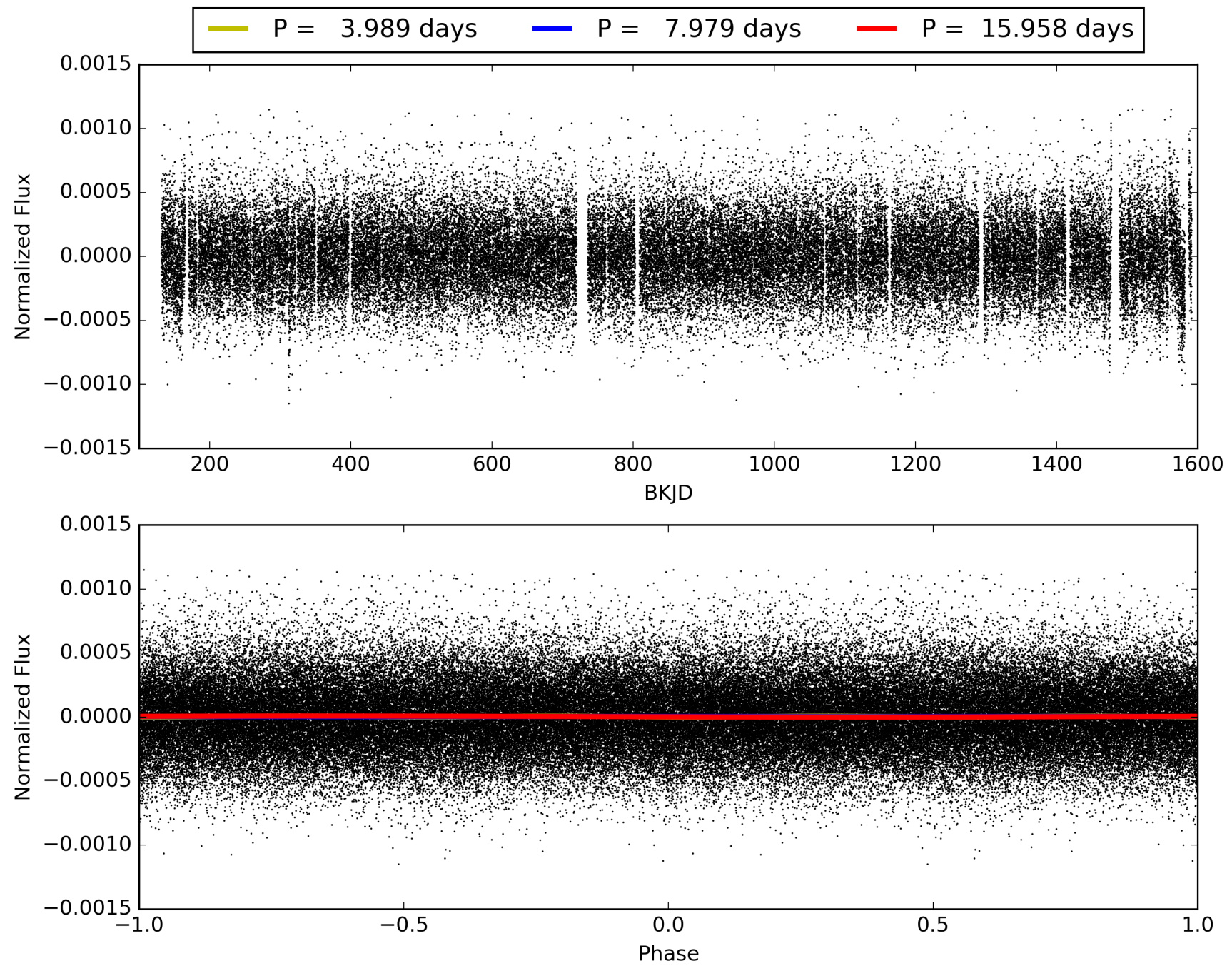
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:52:22 Z

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

TCE 010793172-03, PDC Light Curves

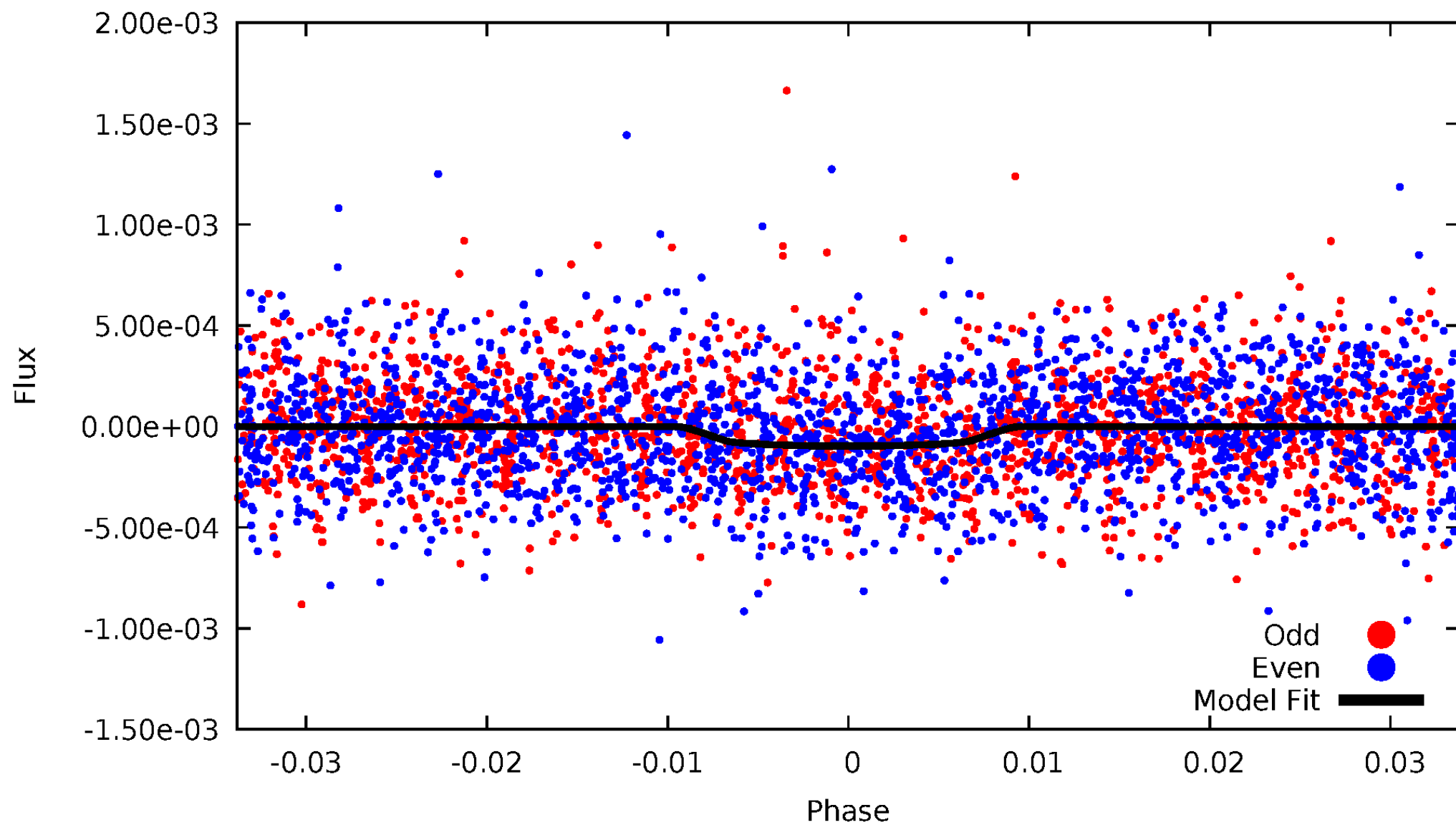


TCE 010793172-03



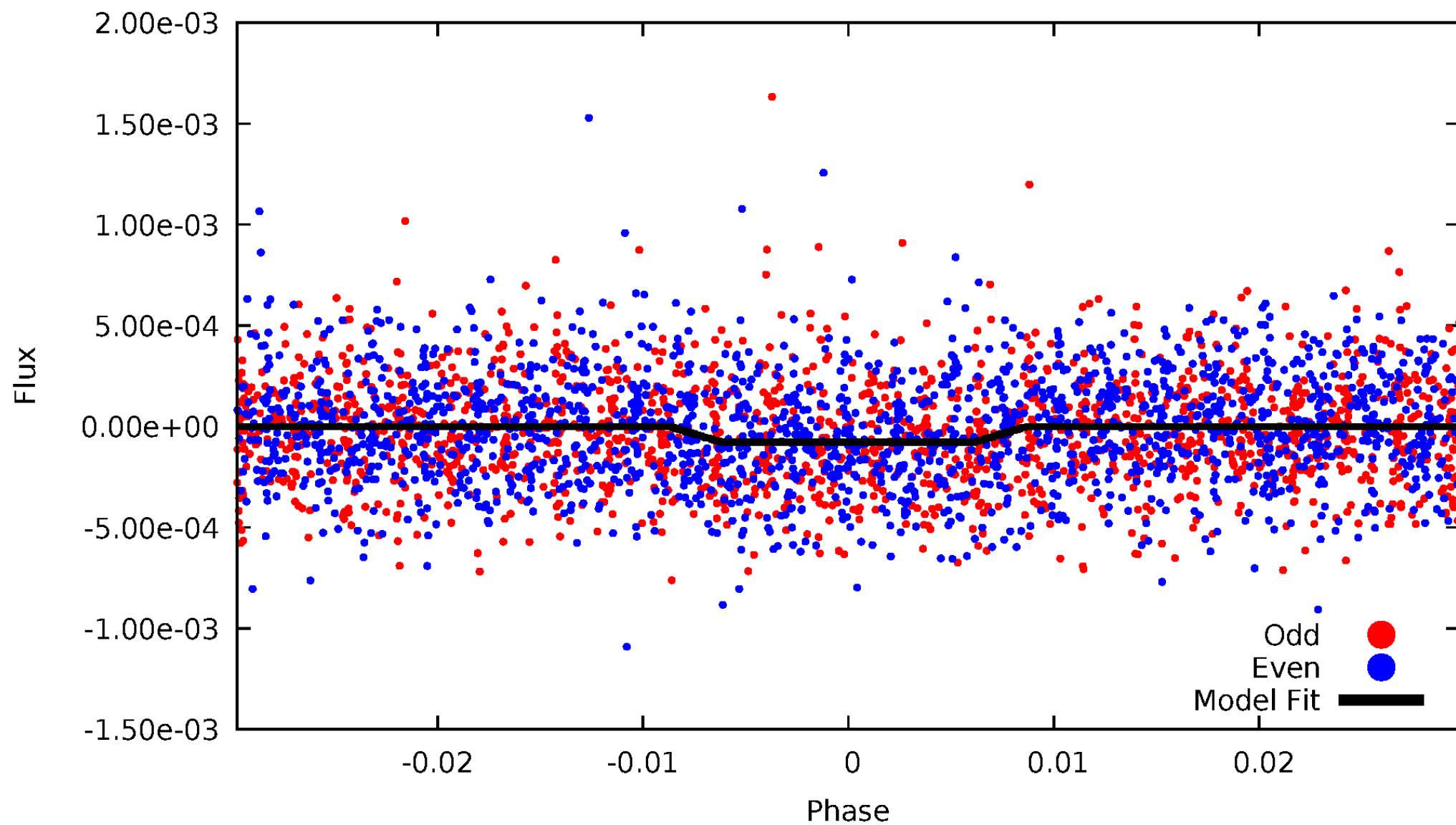
DV Odd/Even

TCE 010793172-03



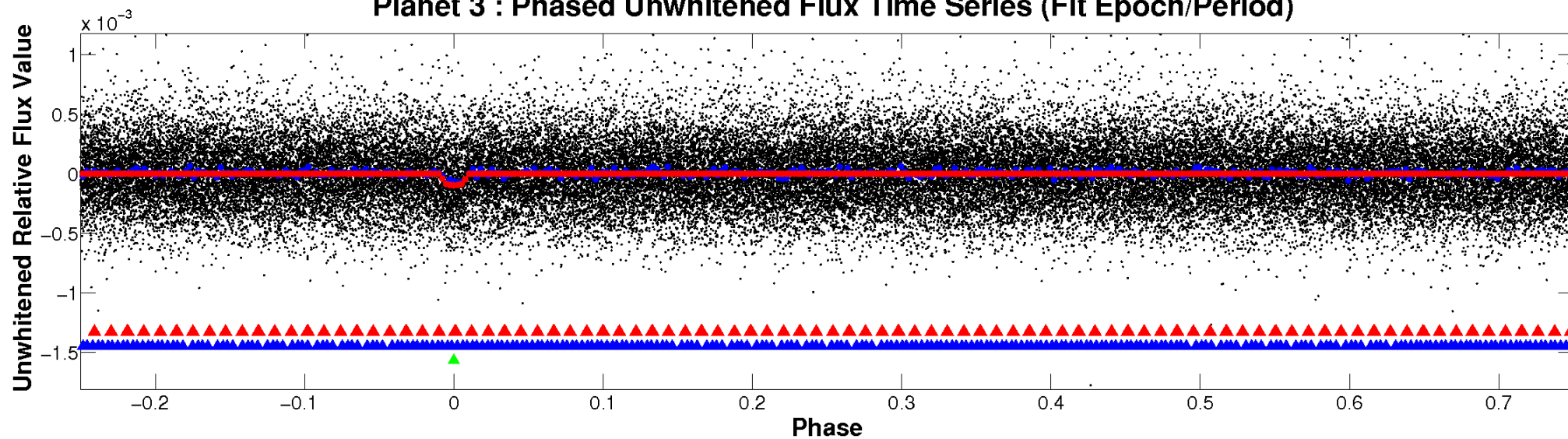
ALT Odd/Even

TCE 010793172-03

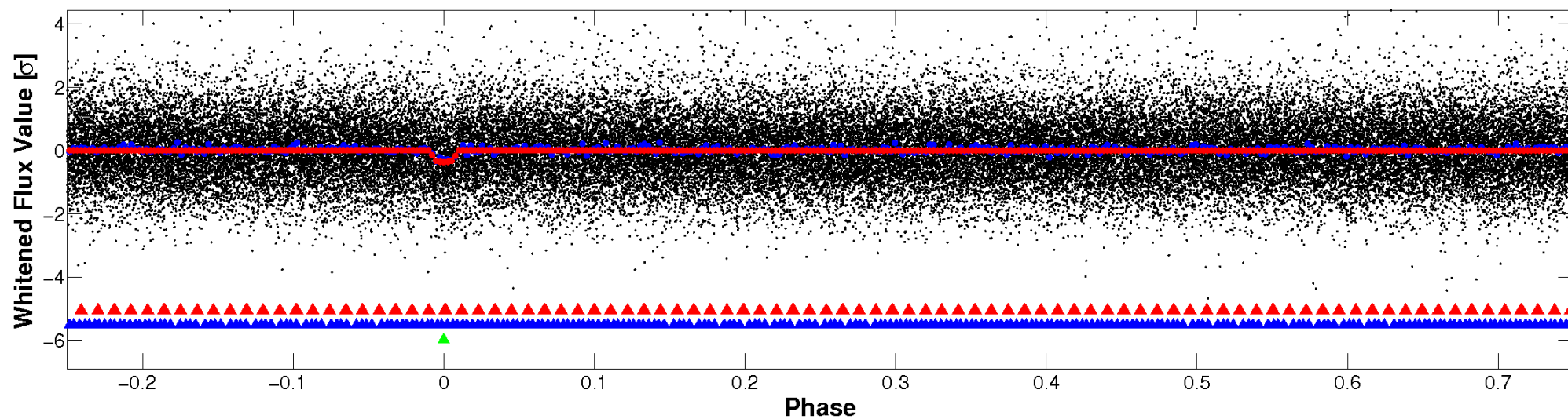


Non-Whitened Vs. Whitened Light Curve

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

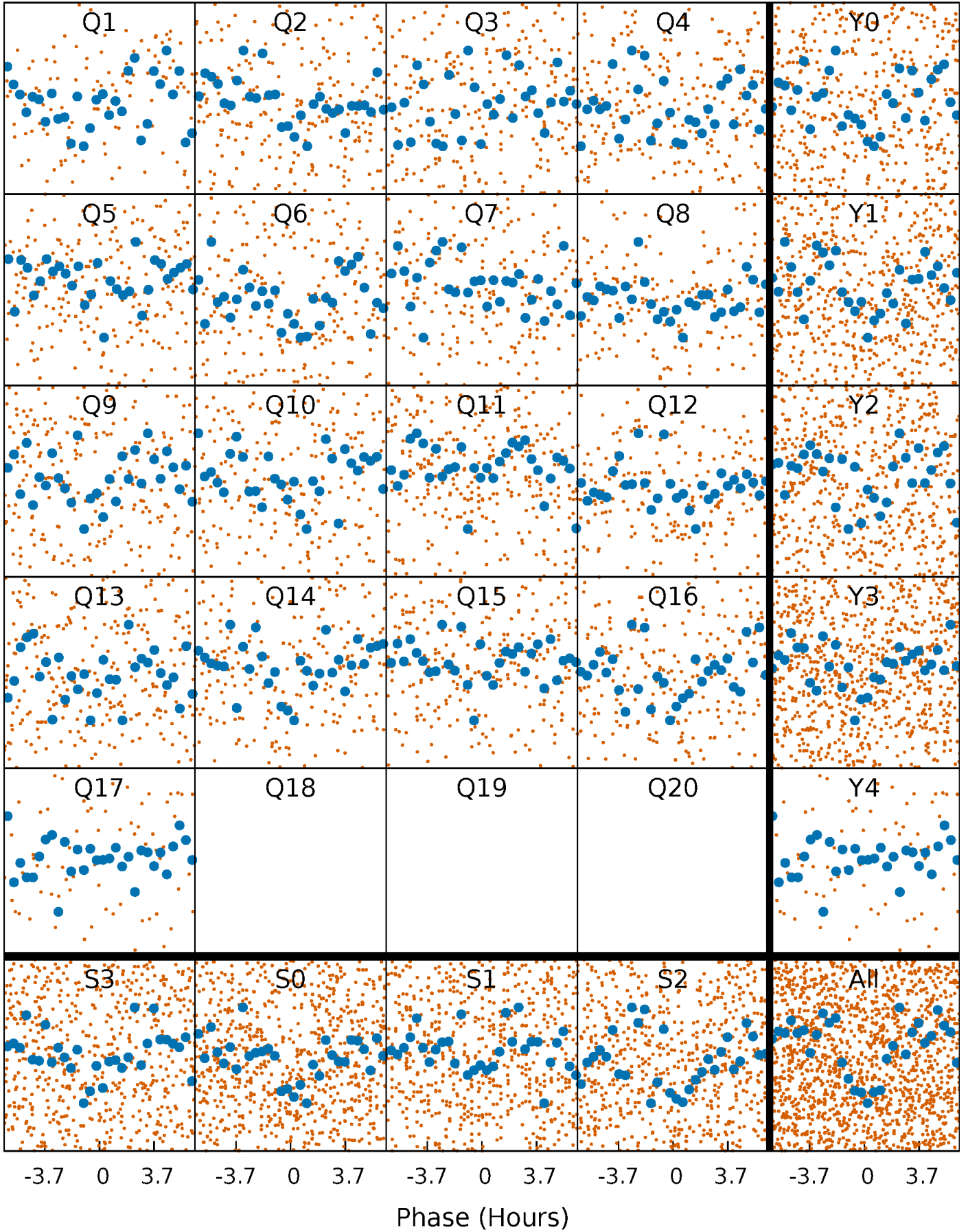


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



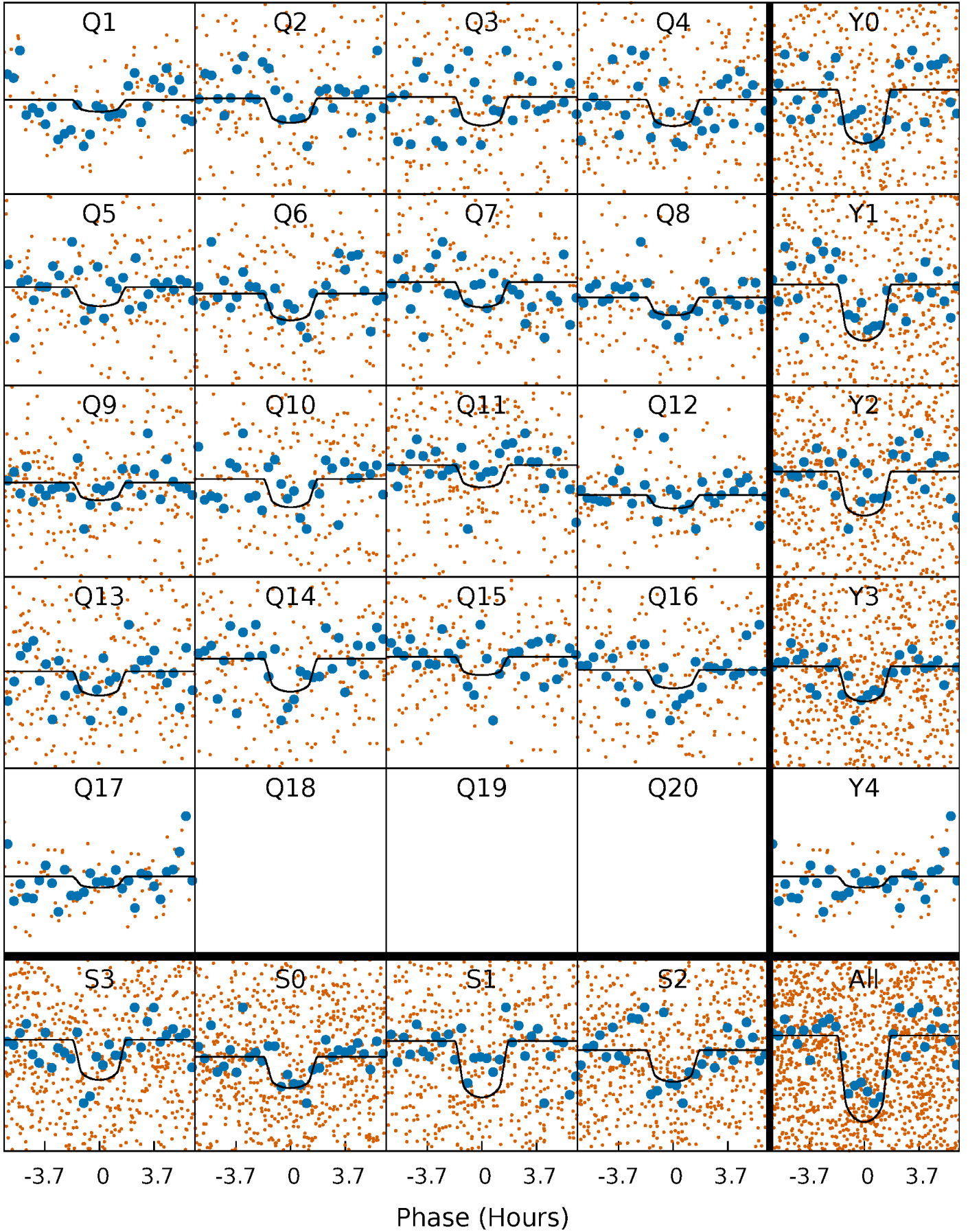
PDC Quarter-Phased Transit Curves

TCE 010793172-03 P= 7.978890 Days $T_0=132.254122$ (BKJD)



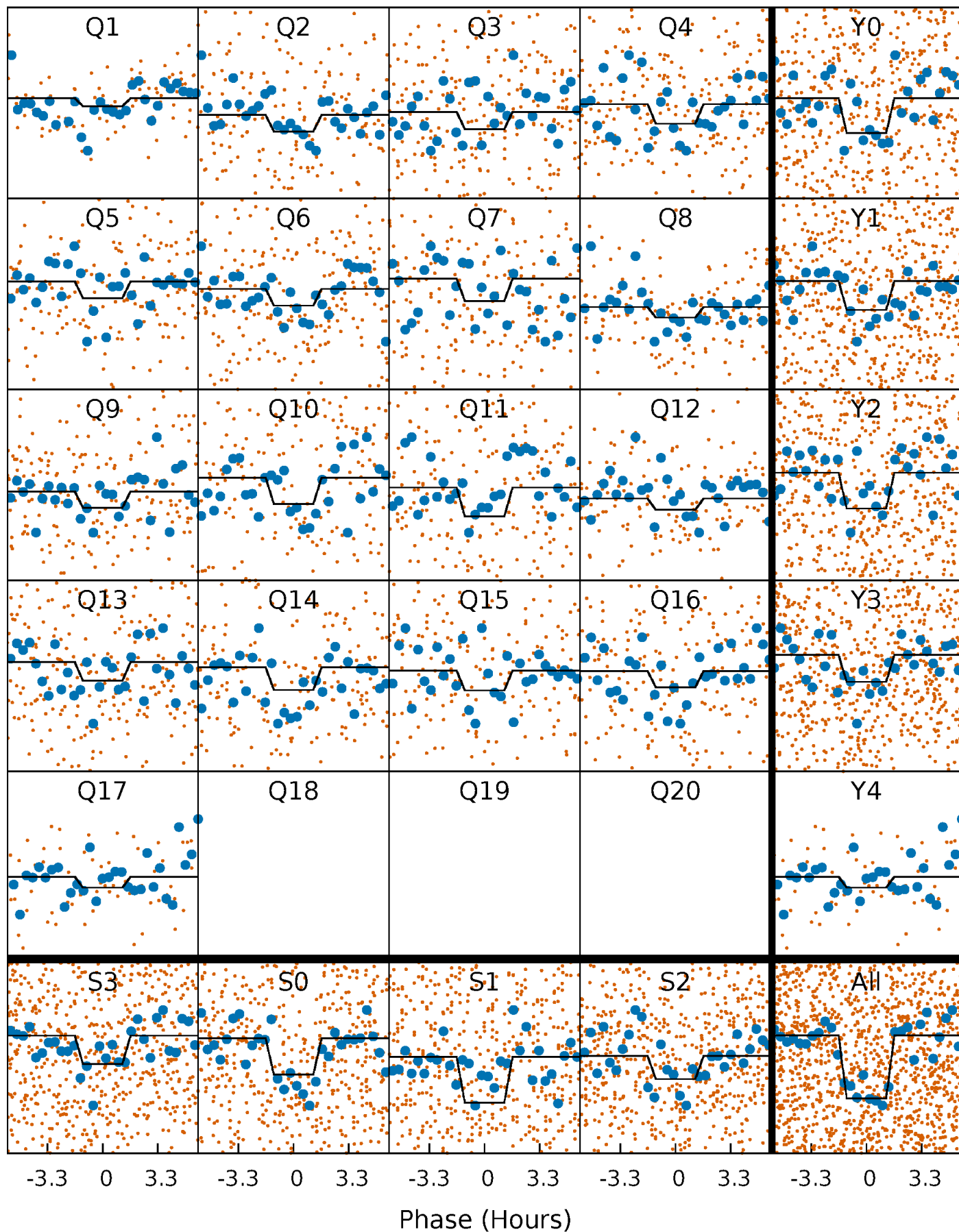
DV Quarter-Phased Transit Curves

TCE 010793172-03 P= 7.978890 Days $T_0=132.254122$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

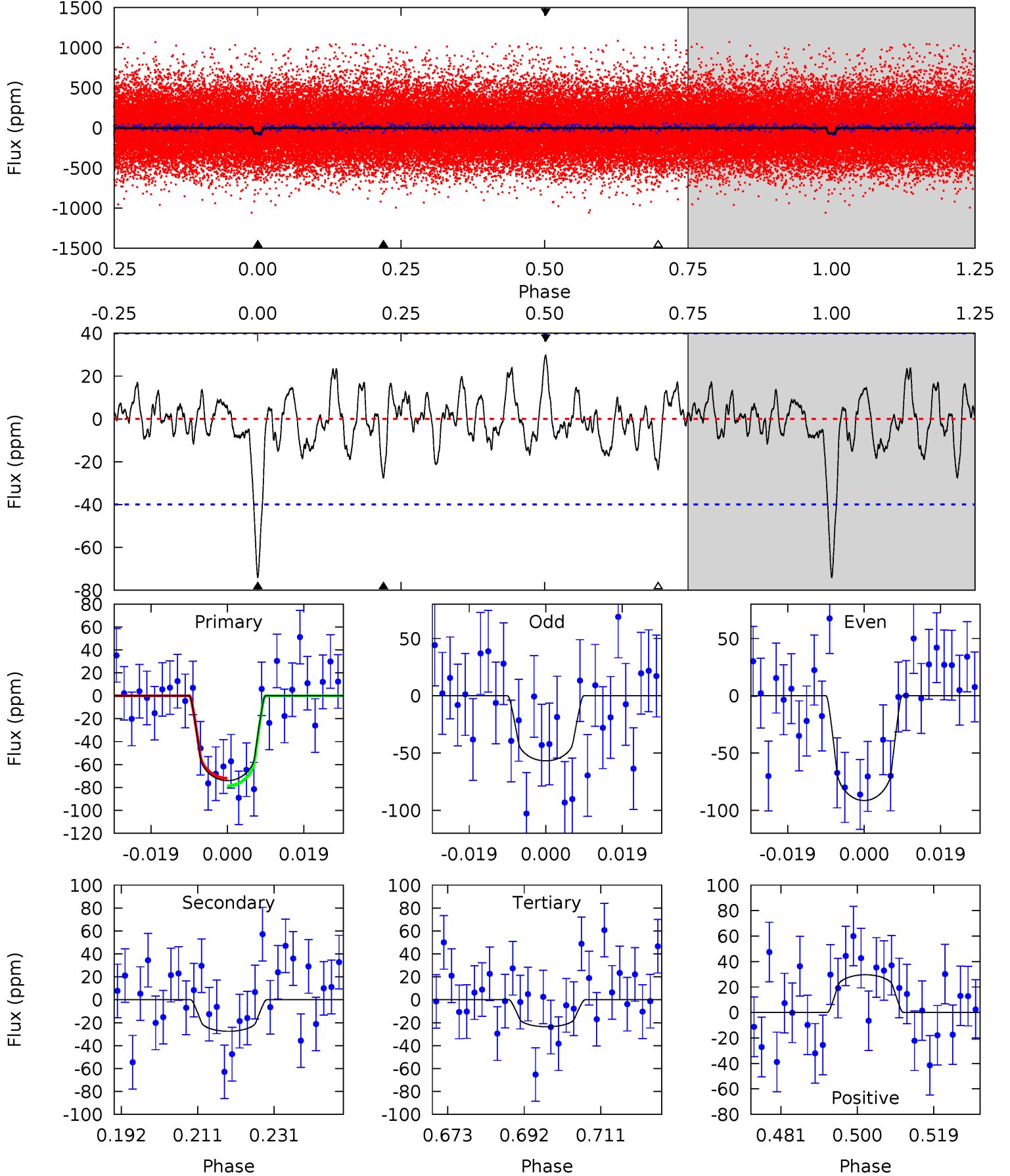
TCE 010793172-03 P= 7.978880 Days $T_0=132.257850$ (BKJD)



DV Model-Shift Uniqueness Test

010793172-03, P = 7.978890 Days, E = 124.275232 Days

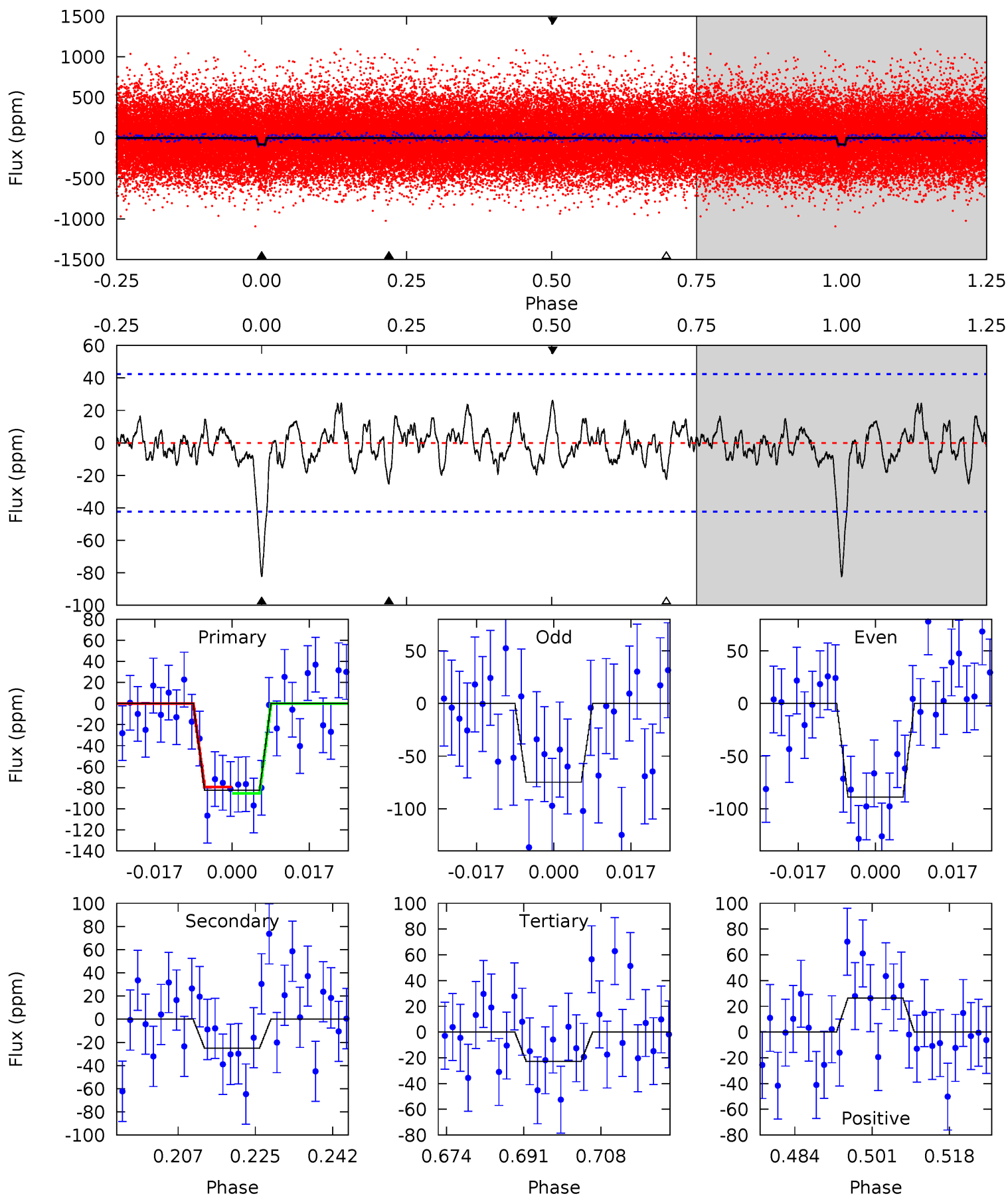
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.09	3.37	2.89	3.64	4.90	2.34	1.14	6.20	5.45	0.49	-0.26	2.12	1.20	0.29	0.41



Alt Model-Shift Uniqueness Test

010793172-03, P = 7.978880 Days, E = 124.278970 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.57	2.91	2.64	3.07	4.92	2.38	1.04	6.93	6.50	0.28	-0.15	0.82	1.13	0.24	0.35



Stellar Parameters For KIC 010793172

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5553^{+74}_{-74}	$4.330^{+0.137}_{-0.100}$	$0.160^{+0.150}_{-0.150}$	$1.098^{+0.161}_{-0.161}$	$0.941^{+0.062}_{-0.048}$	$1.001^{+0.590}_{-0.315}$
	+1%/-1%	+3%/-2%	+94%/-94%	+15%/-15%	+7%/-5%	+59%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 010793172-03 / KOI 2871.04

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-28 ± 8	$1.40^{+0.99}_{-0.75}$	1290^{+59}_{-54}	4016^{+1471}_{-689}	47^{+176}_{-33}
Alt.	-25 ± 9	$1.25^{+0.87}_{-0.75}$	1295^{+56}_{-53}	4079^{+1995}_{-720}	52^{+279}_{-36}

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 $A_{obs} \gg 1.0$

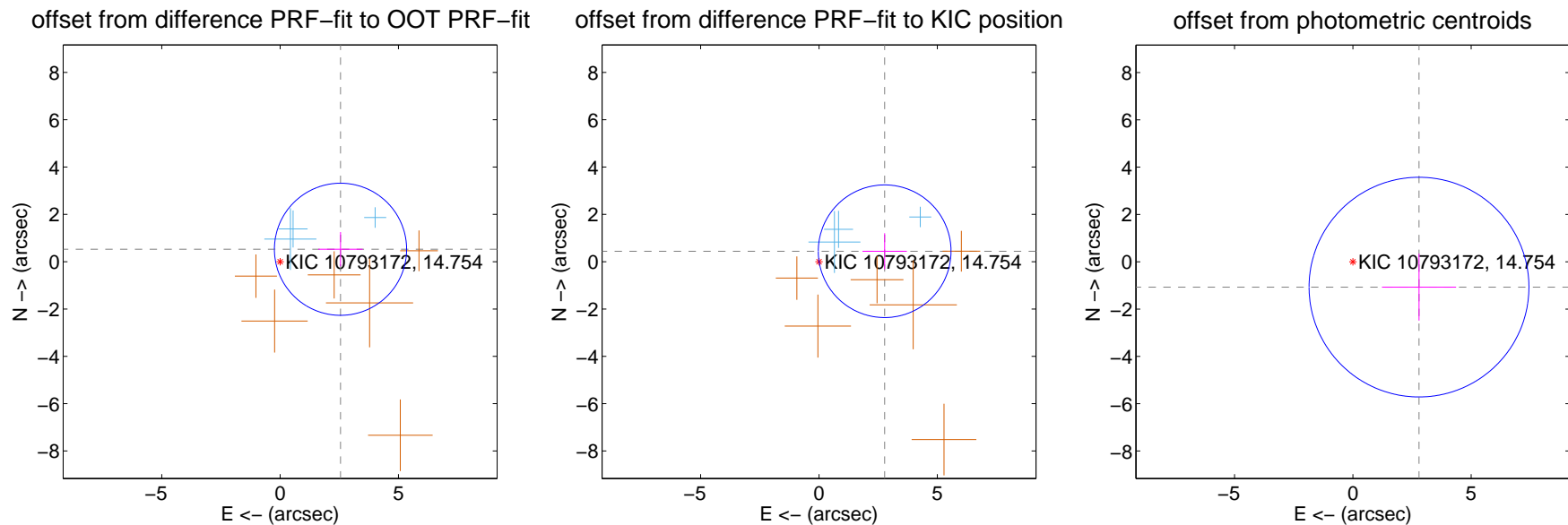
DV Centroid Data

Supplemental centroid analysis for 010793172-03. Kepler magnitude: 14.75. Transit SNR 9.31

There are 3 quarters with good PRF difference image offsets

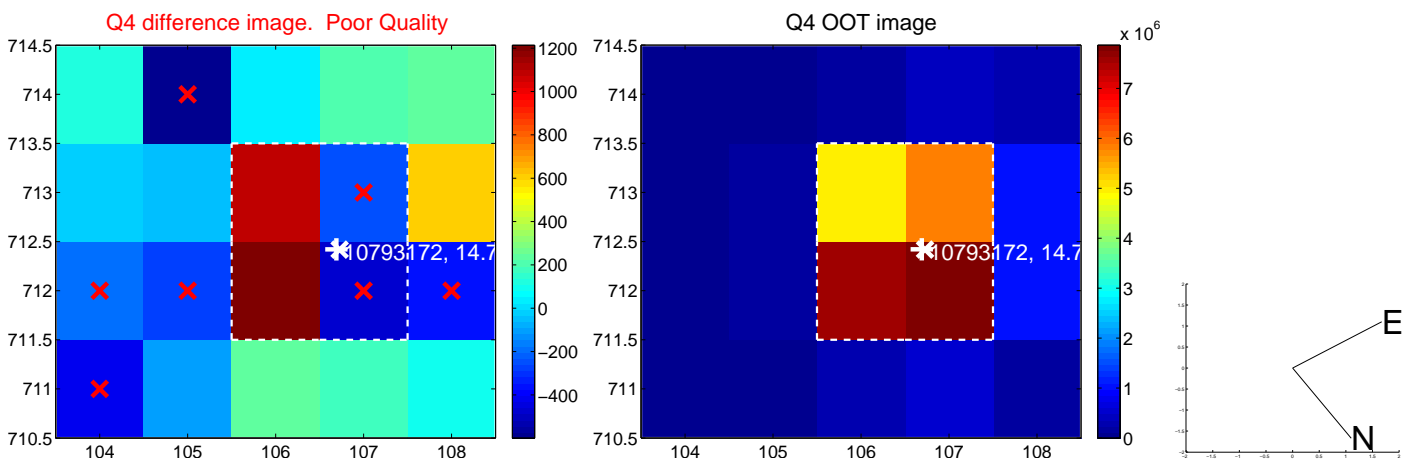
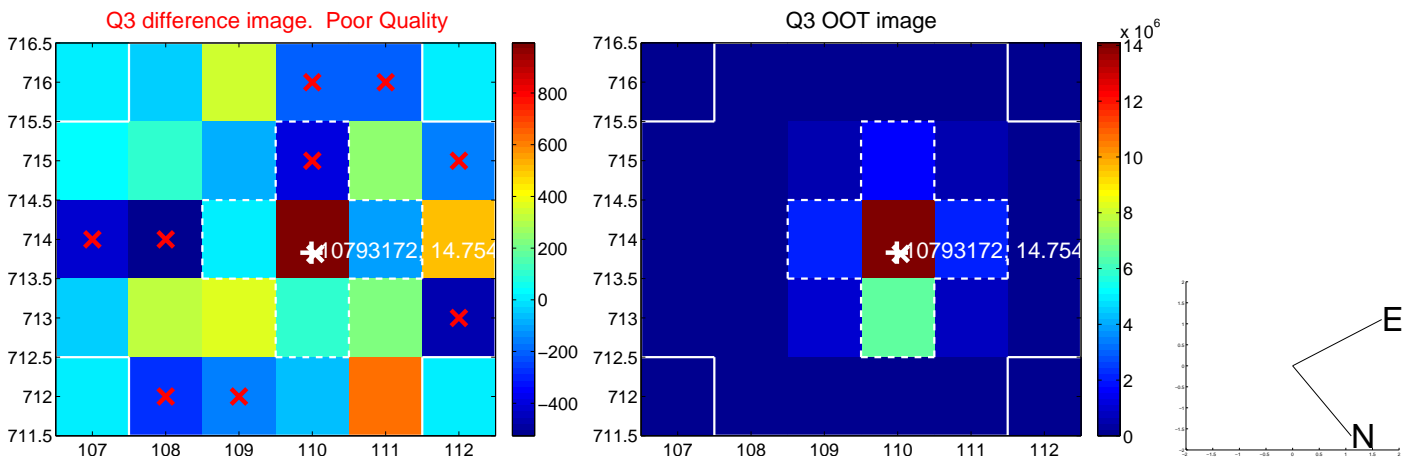
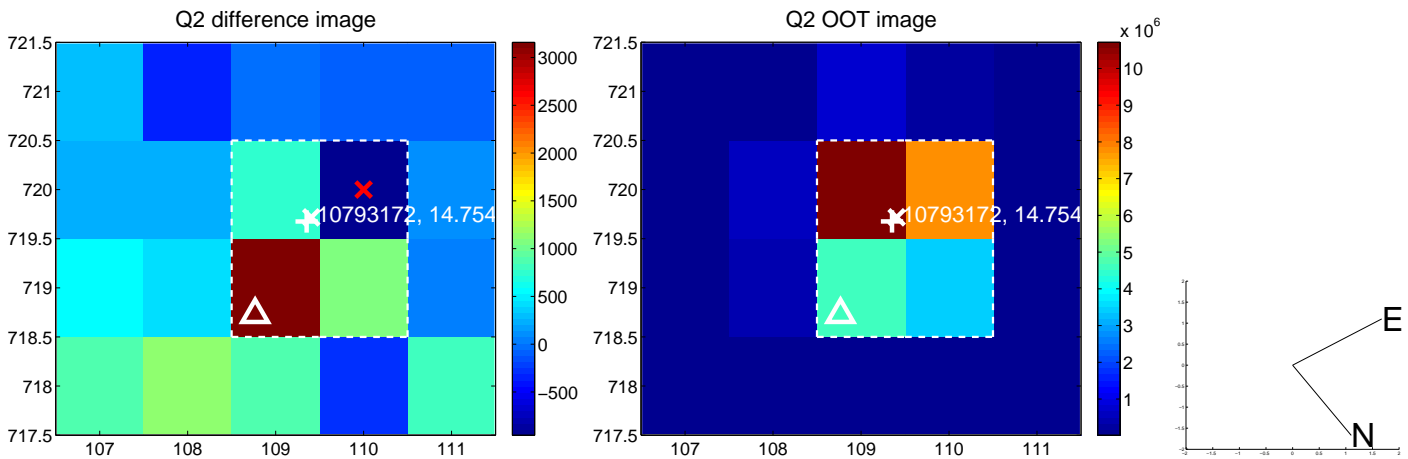
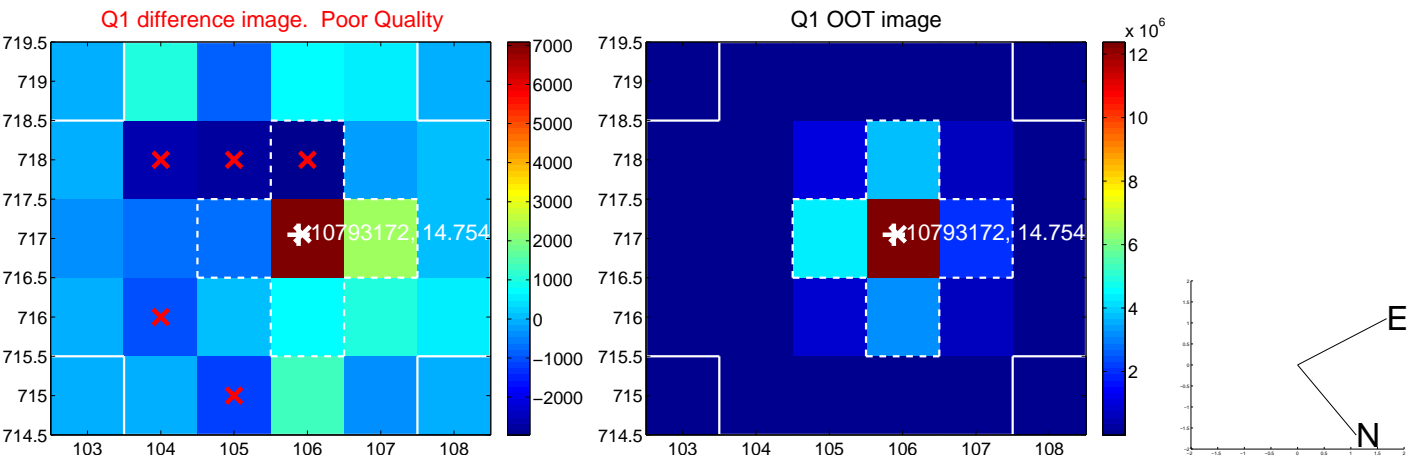
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.605 ± 0.931	2.80	-2.551 ± 0.938	0.525 ± 0.725
PRF-fit source offset from KIC position	2.809 ± 0.934	3.01	-2.774 ± 0.938	0.442 ± 0.763
photometric centroid source offset	2.99 ± 1.55	1.93	-2.79 ± 1.57	-1.07 ± 1.41

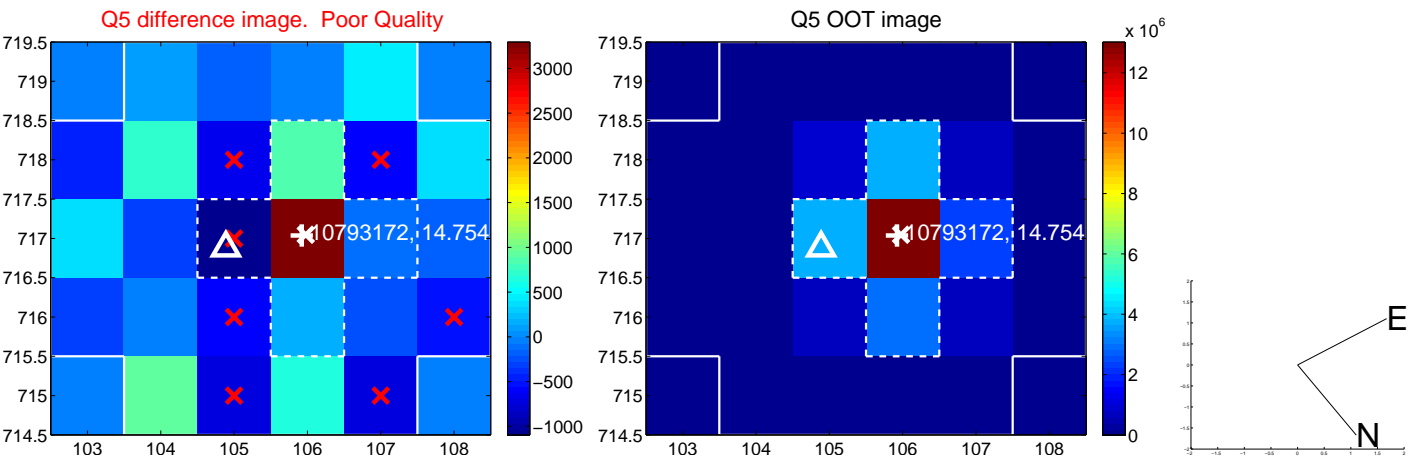


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

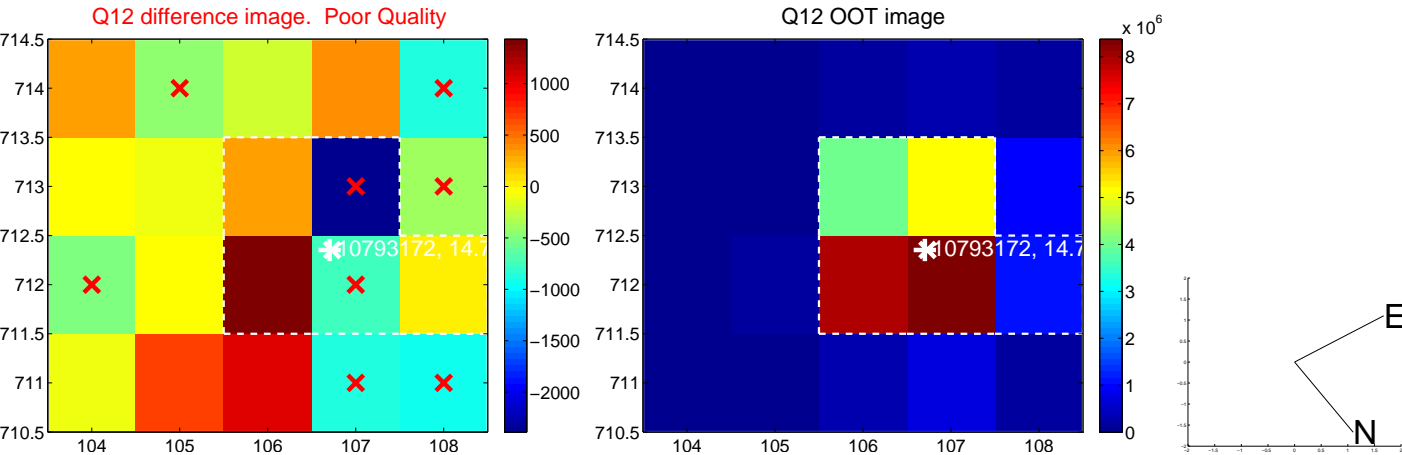
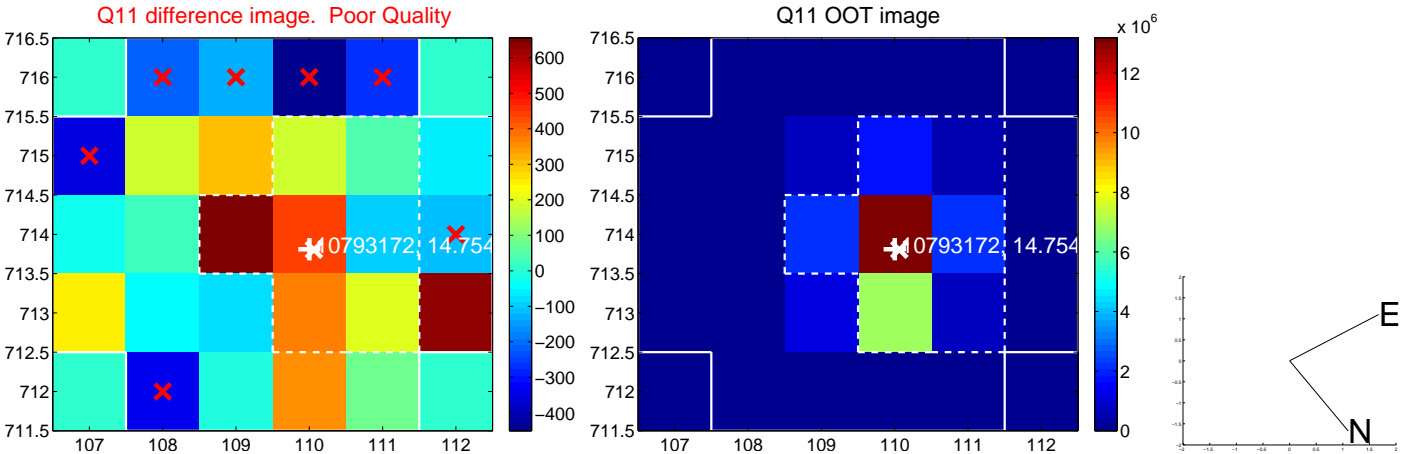
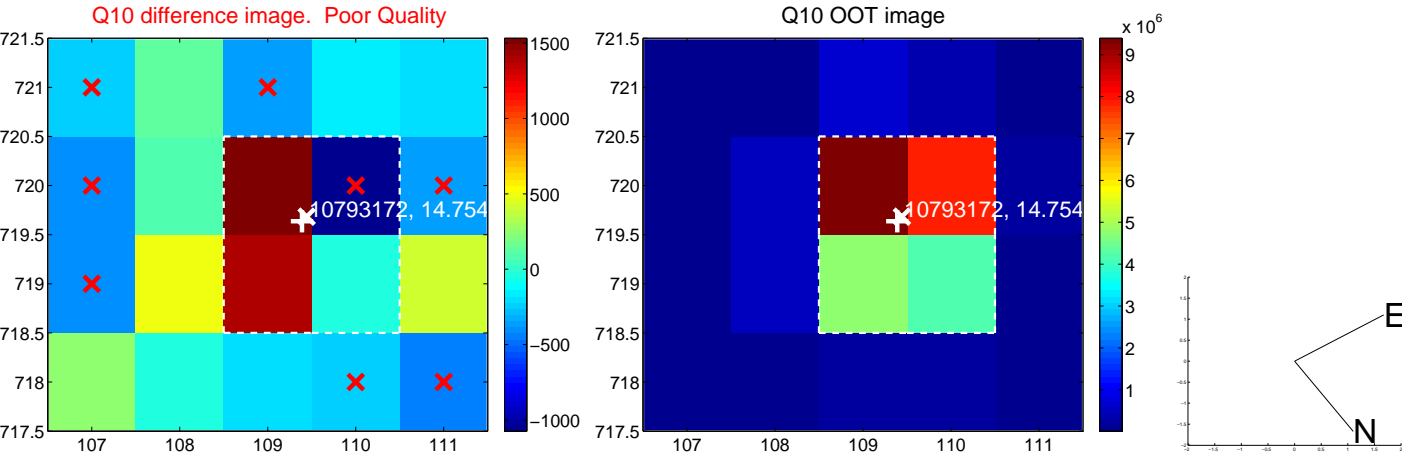
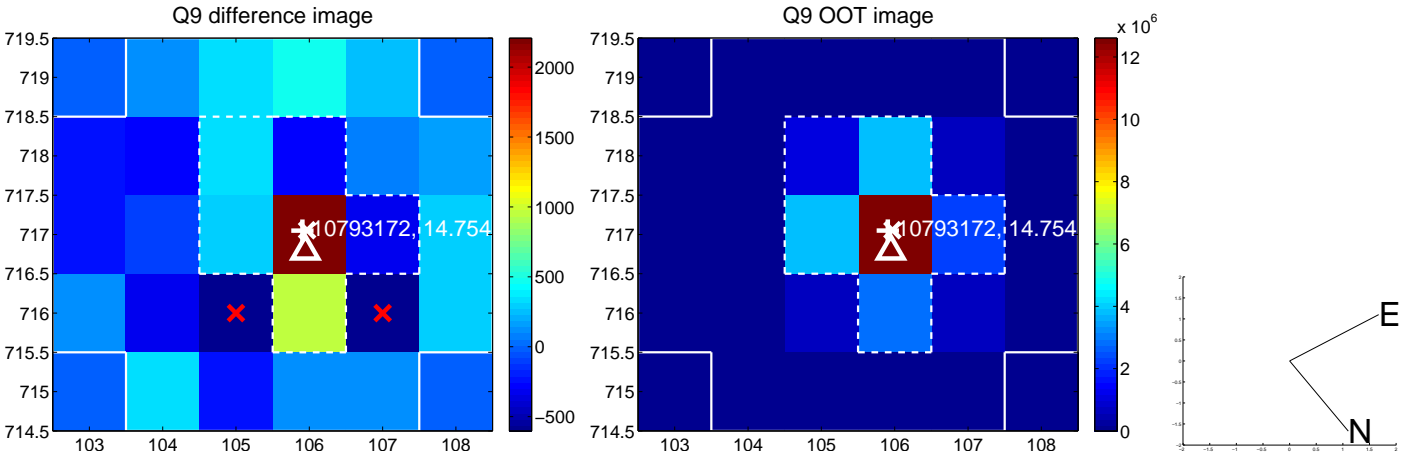
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



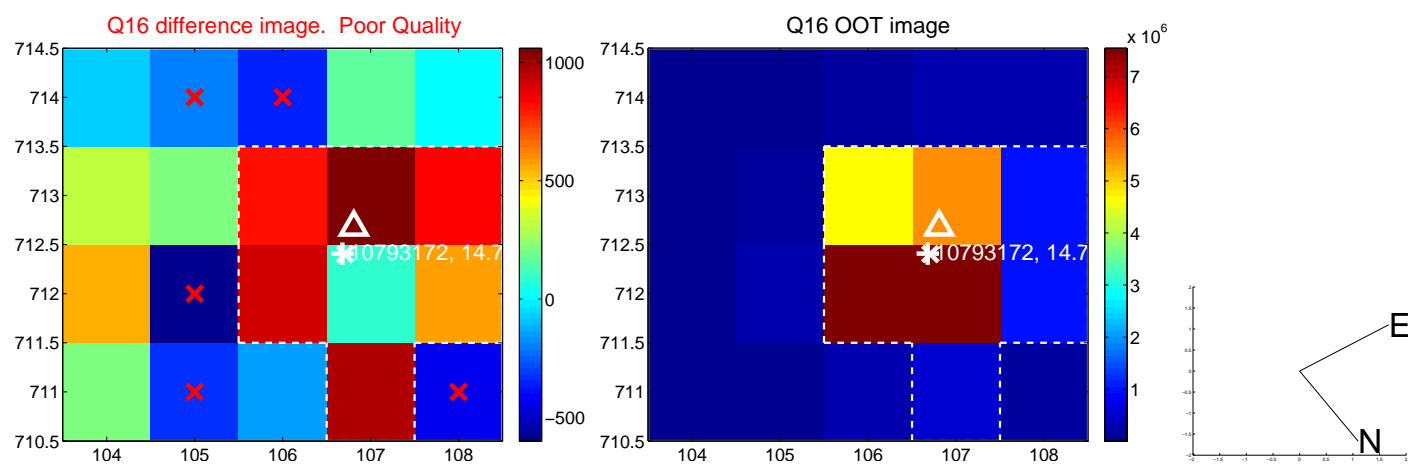
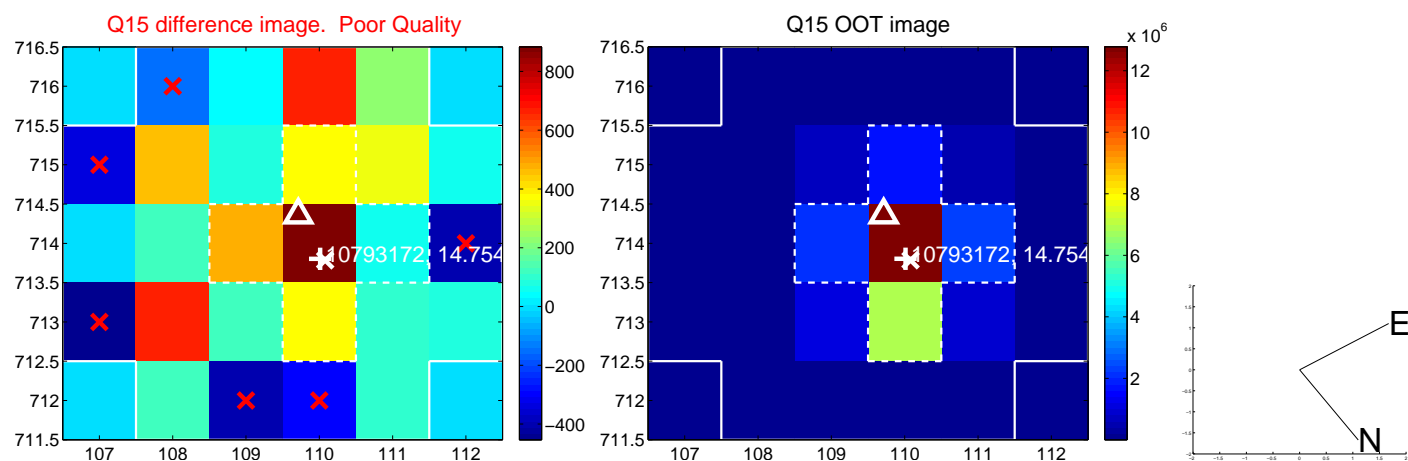
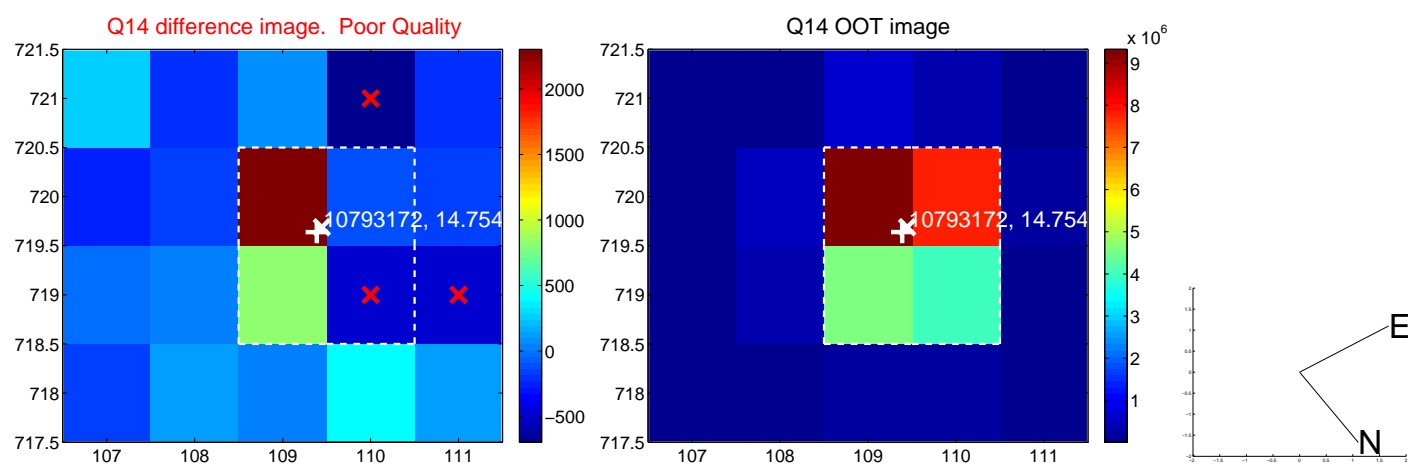
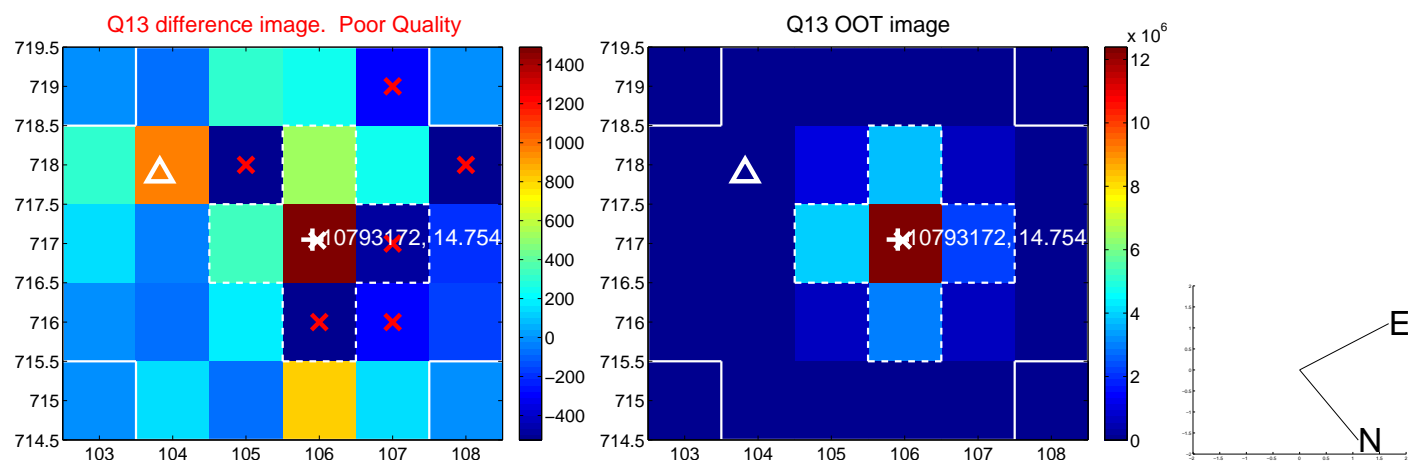
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



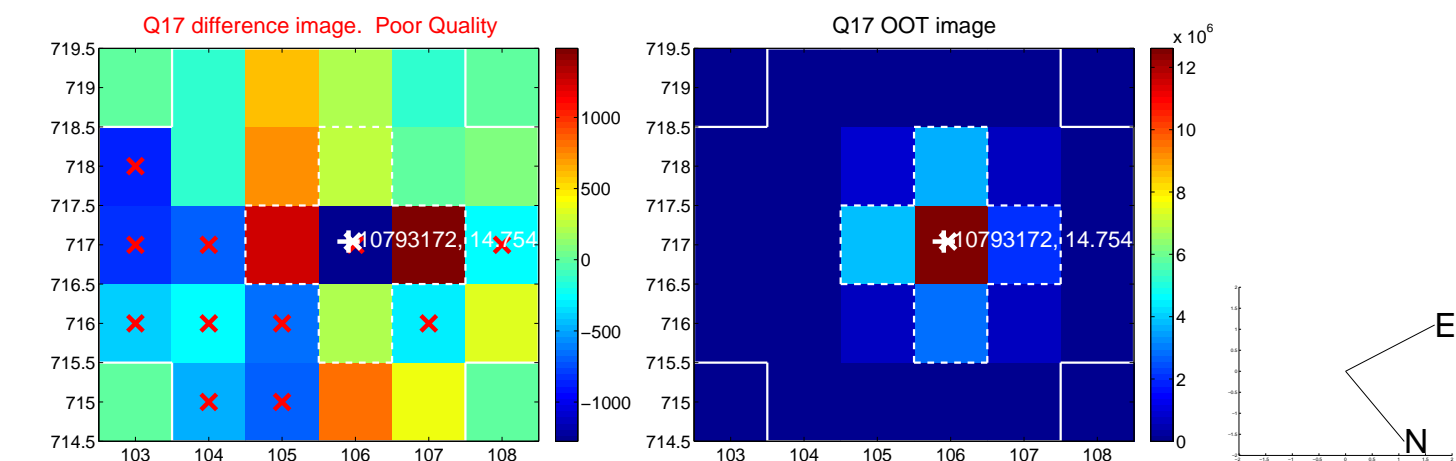
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



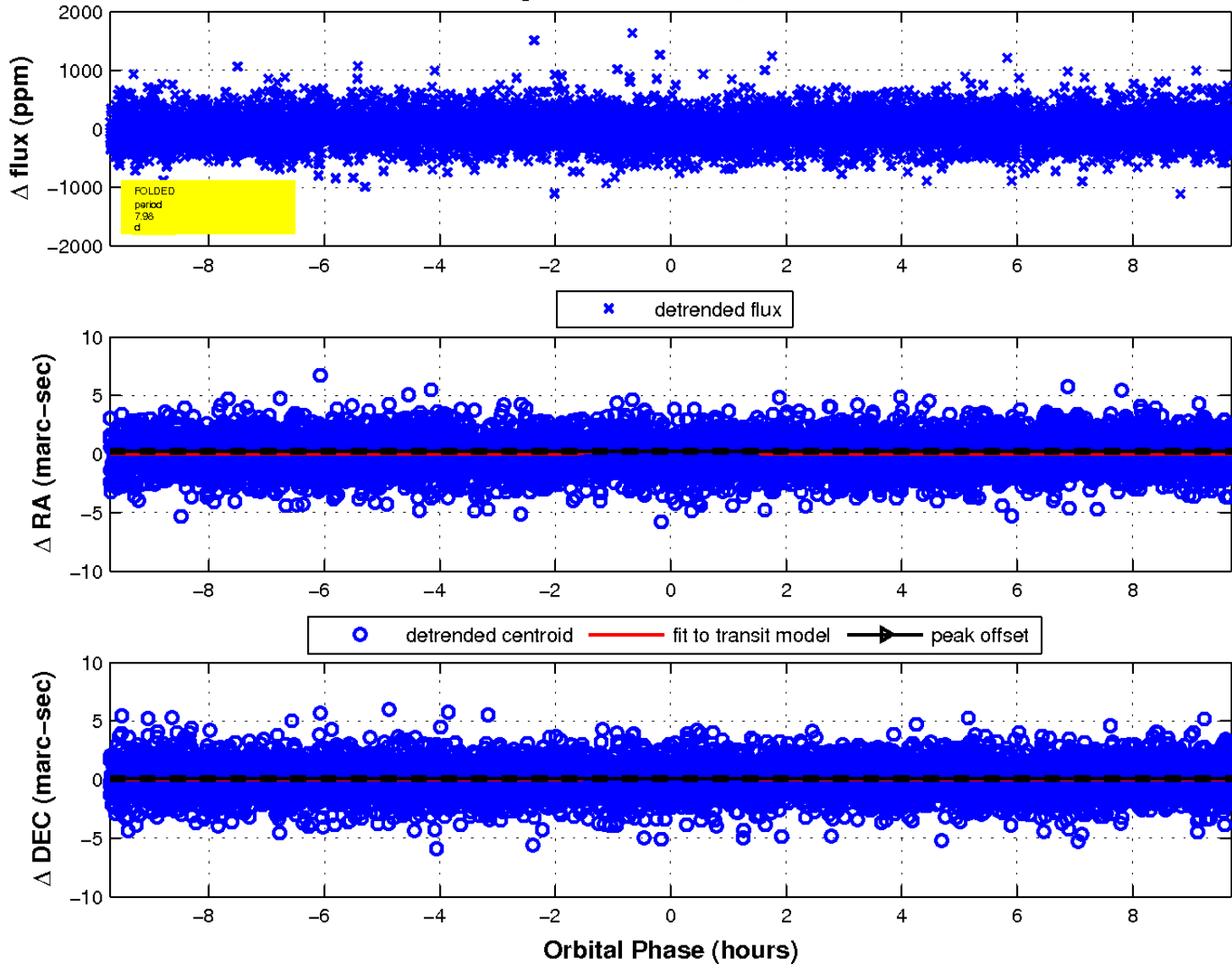
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

