

KIC 011599038

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})
011599038-01	OBS	1437.01	7.017309	133.907914	232.7	3.676	12.5	13.3	0.97	6052	1.72	222.10
011599038-02	OBS	1437.02	9.279960	133.748216	183.2	3.020	7.7	8.3	0.97	6052	1.47	153.01
011599038-03	OBS	1437.03	17.421680	145.903536	198.4	4.858	7.1	7.5	0.97	6052	1.56	66.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011599038-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011599038-02	OBS	FP	0.00	0	0	1	0	HALO_GHOST
011599038-03	OBS	FP	0.47	1	0	0	0	MOD_NONUNIQ_ALT

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

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

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

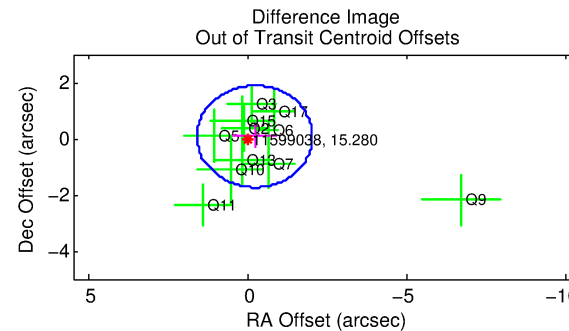
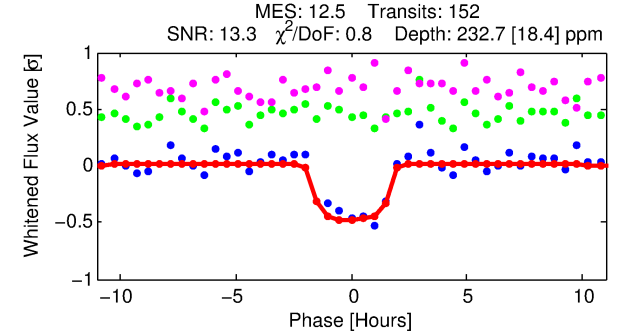
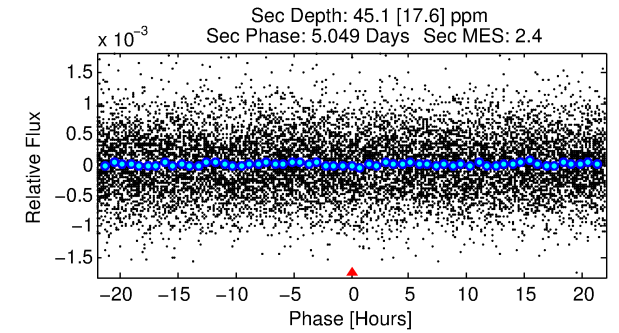
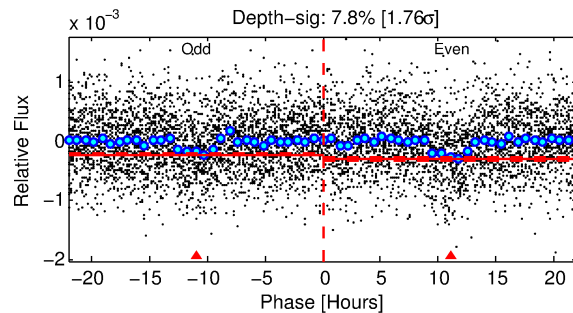
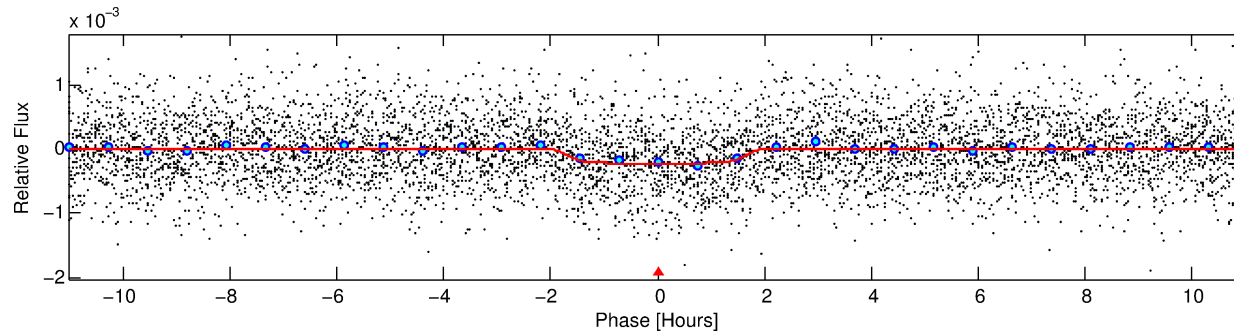
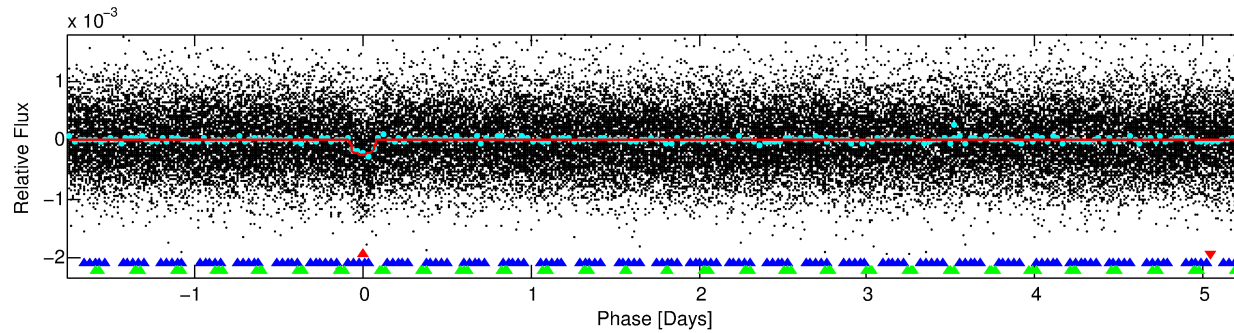
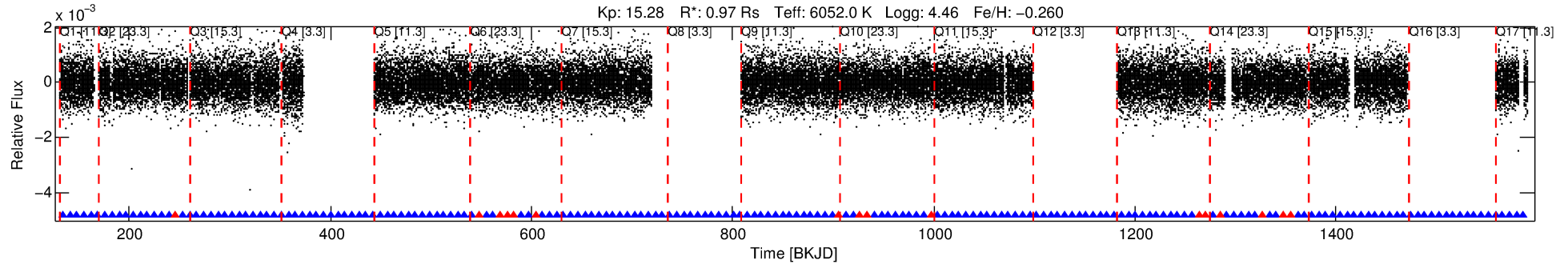
Ephemeris Match Information For 011599038-01

No Significant Match Found

DV One-Page Summary

KIC: 11599038 Candidate: 1 of 3 Period: 7.017 d

KOI: K01437.01 Corr: 0.978



DV Fit Results:

Period = 7.01731 [0.00005] d
Epoch = 133.9079 [0.0053] BKJD
Rp/R* = 0.0163 [0.0057]
a/R* = 7.27 [13.09]
b = 0.89 [0.44]
Seff = 222.10 [90.26]
Teq = 984 [100] K
Rp = 1.72 [0.81] Re
a = 0.0711 [0.0188] AU
Ag = 42.52 [37.93] [1.09 σ]
Teffp = 3887 [792] K [3.63 σ]

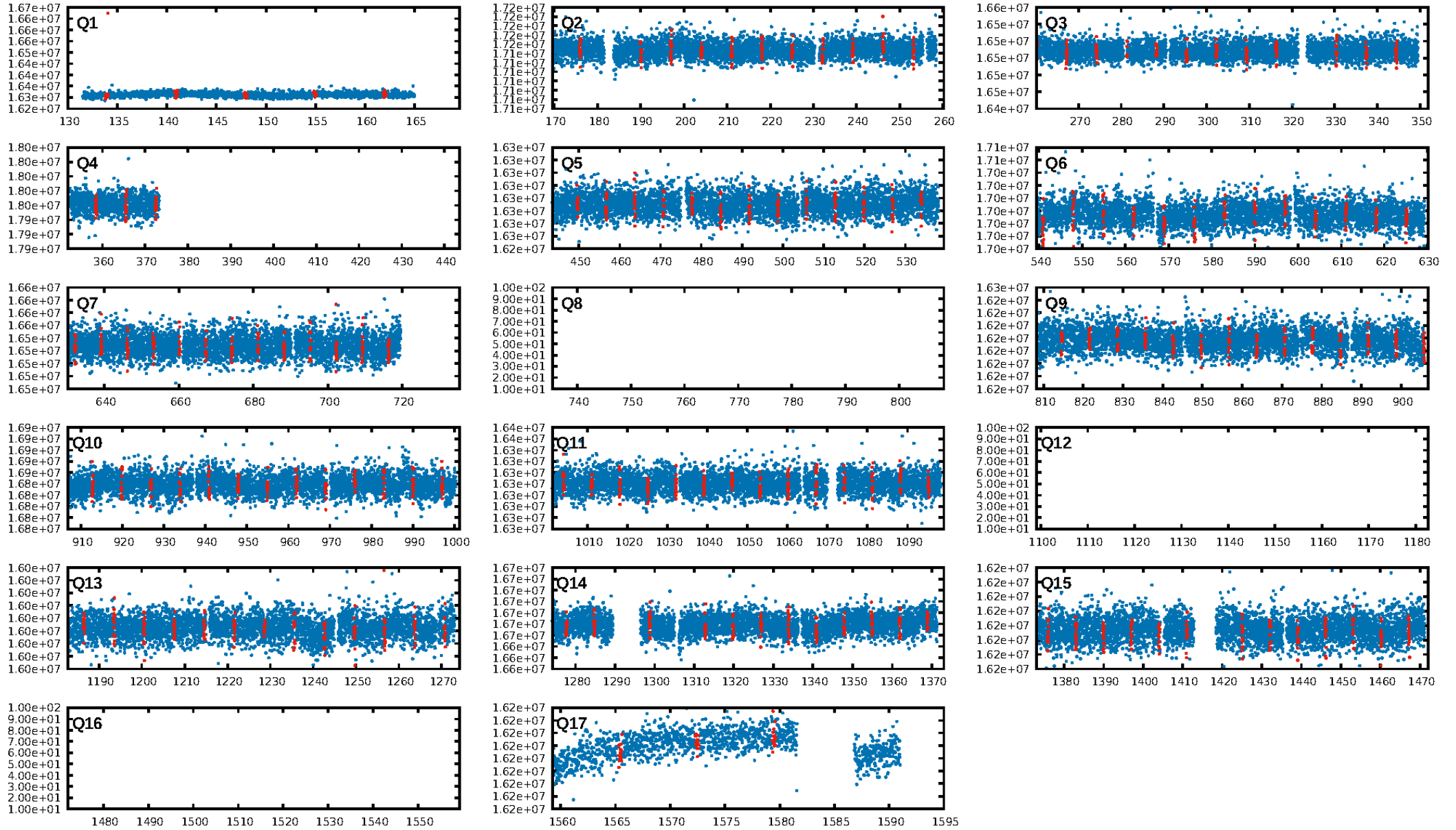
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [11.41 σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.27e-35
RollingBand-fgt: 0.89 [125/141]
GhostDiagnostic-chr: 13.71
Centroid-sig: 11.6%
Centroid-so: 0.916 arcsec [0.80 σ]
OotOffset-rm: 0.222 arcsec [0.37 σ]
KicOffset-rm: 0.348 arcsec [0.61 σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 1.00 [14/14]

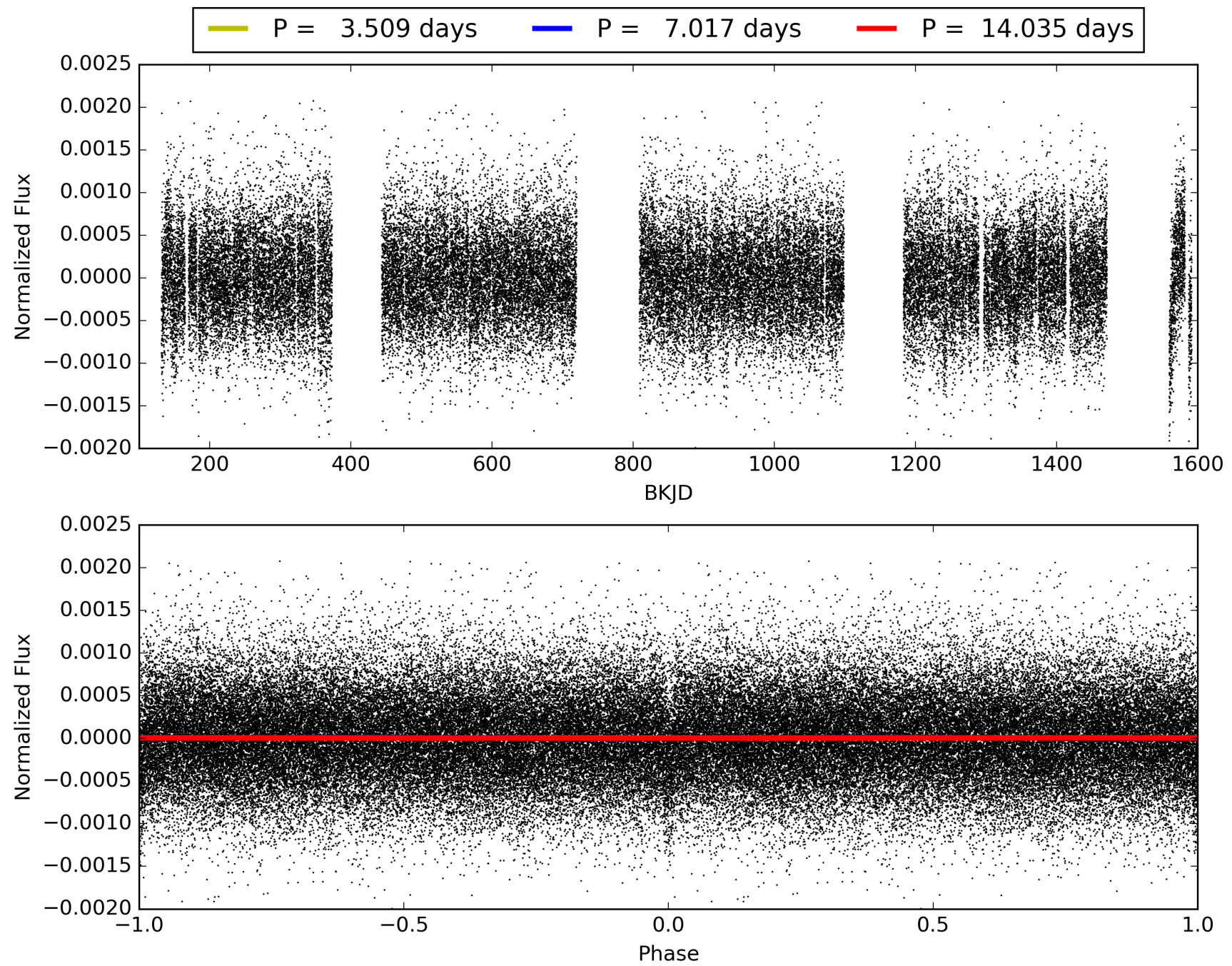
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:23:22 Z

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

TCE 011599038-01, PDC Light Curves

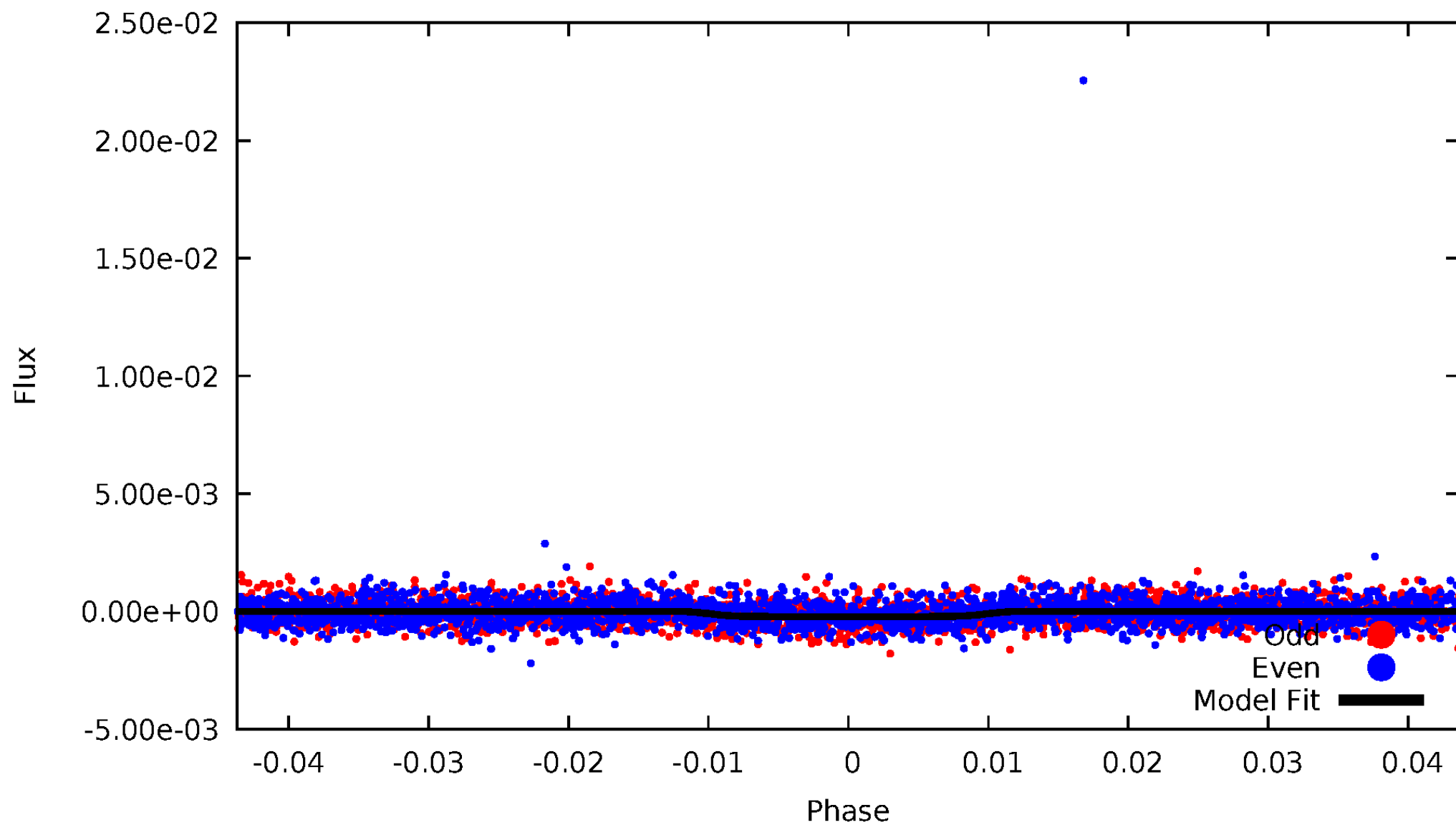


TCE 011599038-01



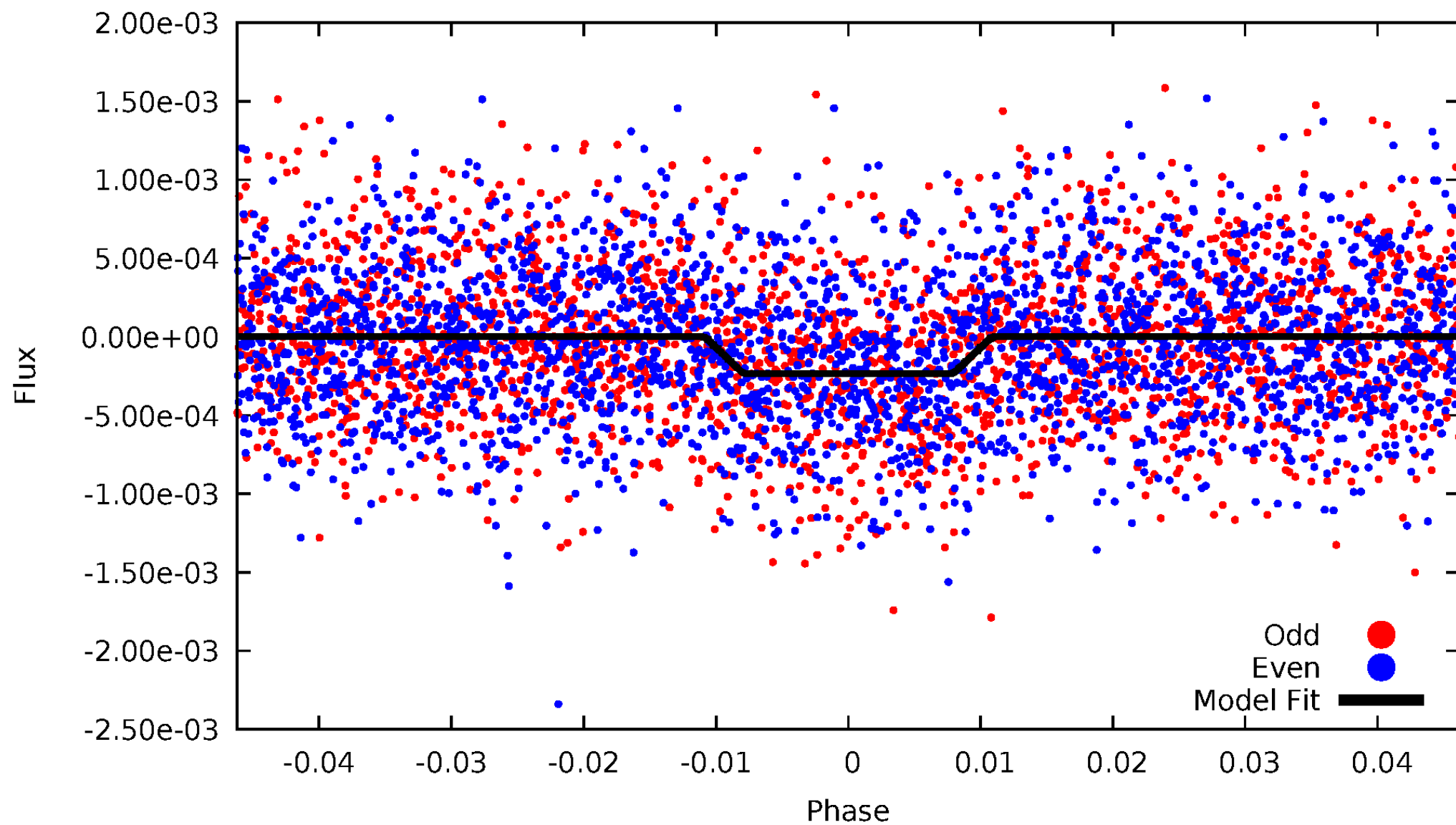
DV Odd/Even

TCE 011599038-01



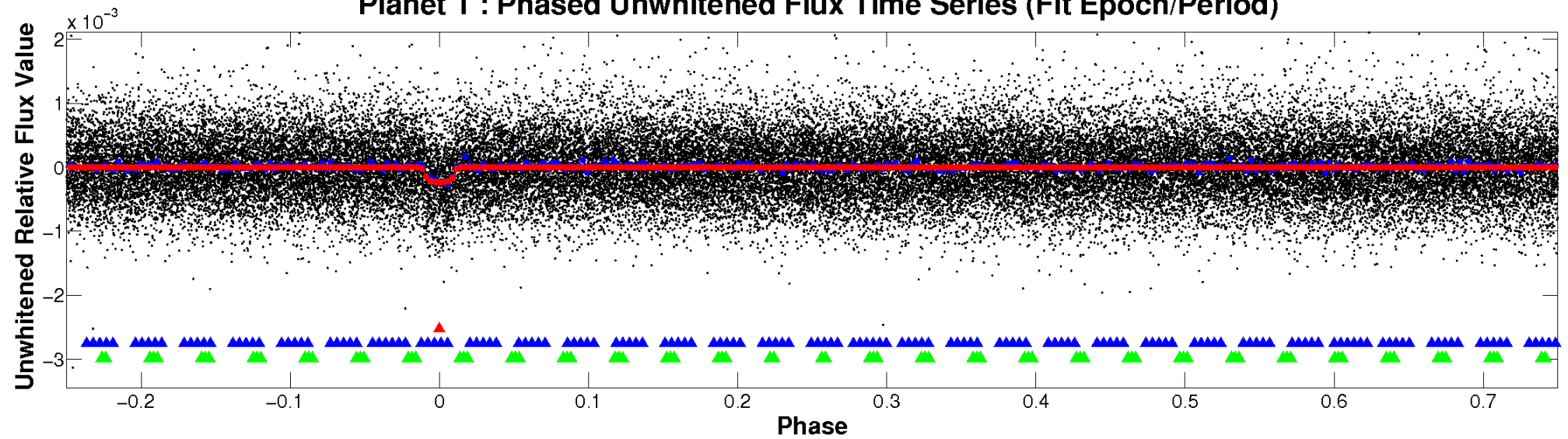
ALT Odd/Even

TCE 011599038-01

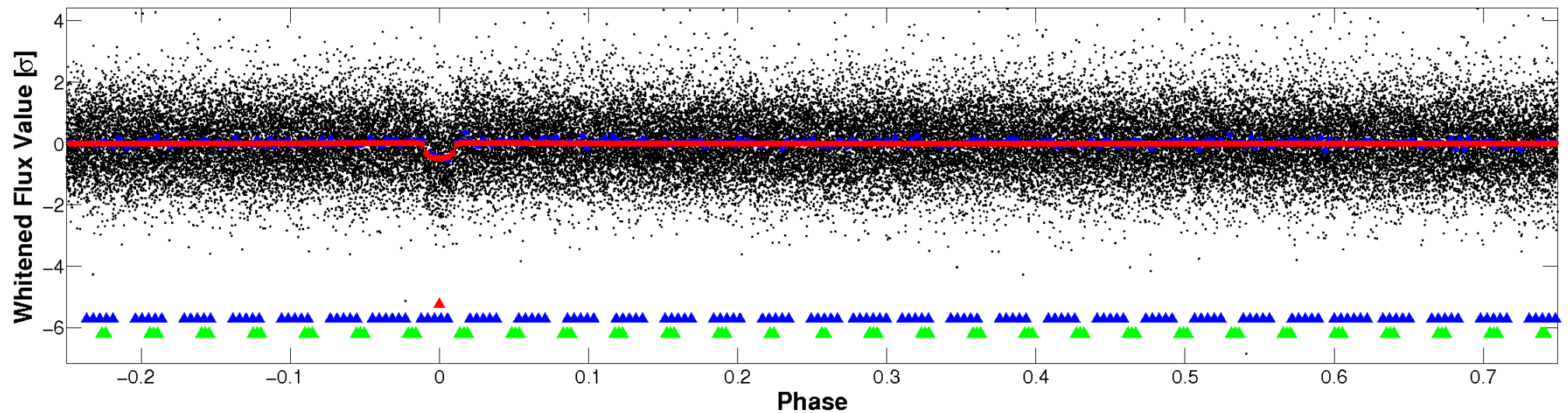


Non-Whitened Vs. Whitened Light Curve

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

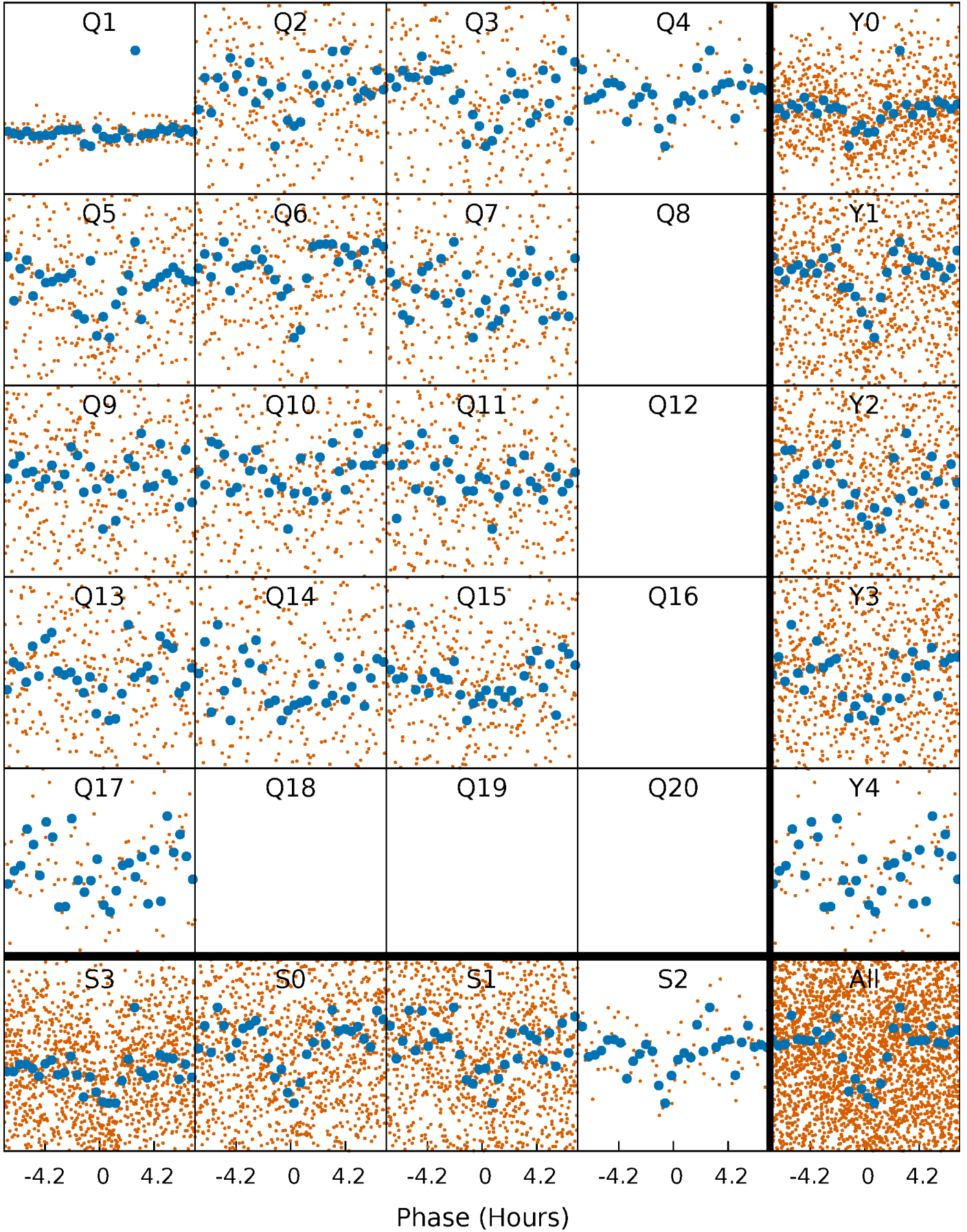


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



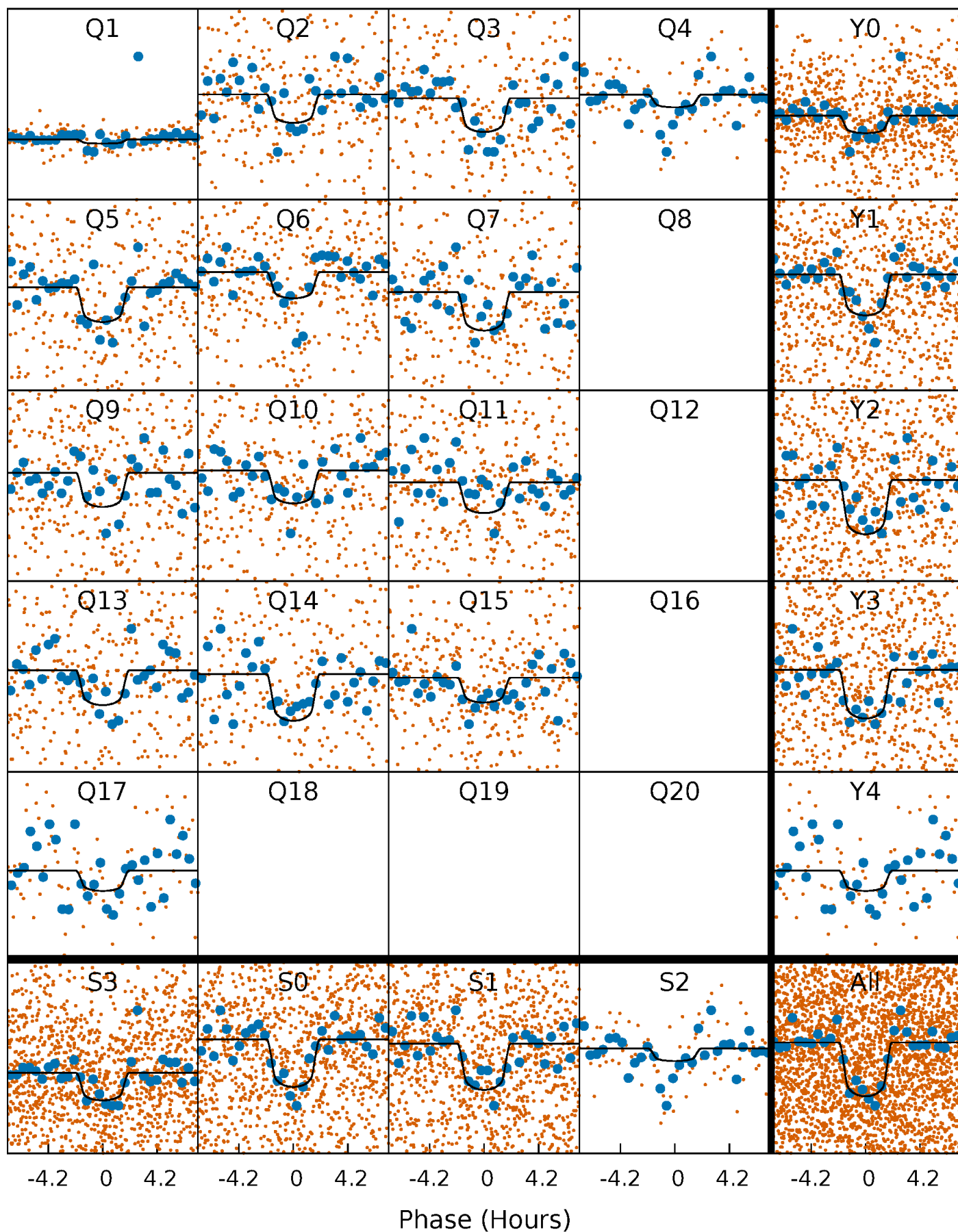
PDC Quarter-Phased Transit Curves

TCE 011599038-01 P= 7.017309 Days $T_0=133.907914$ (BKJD)



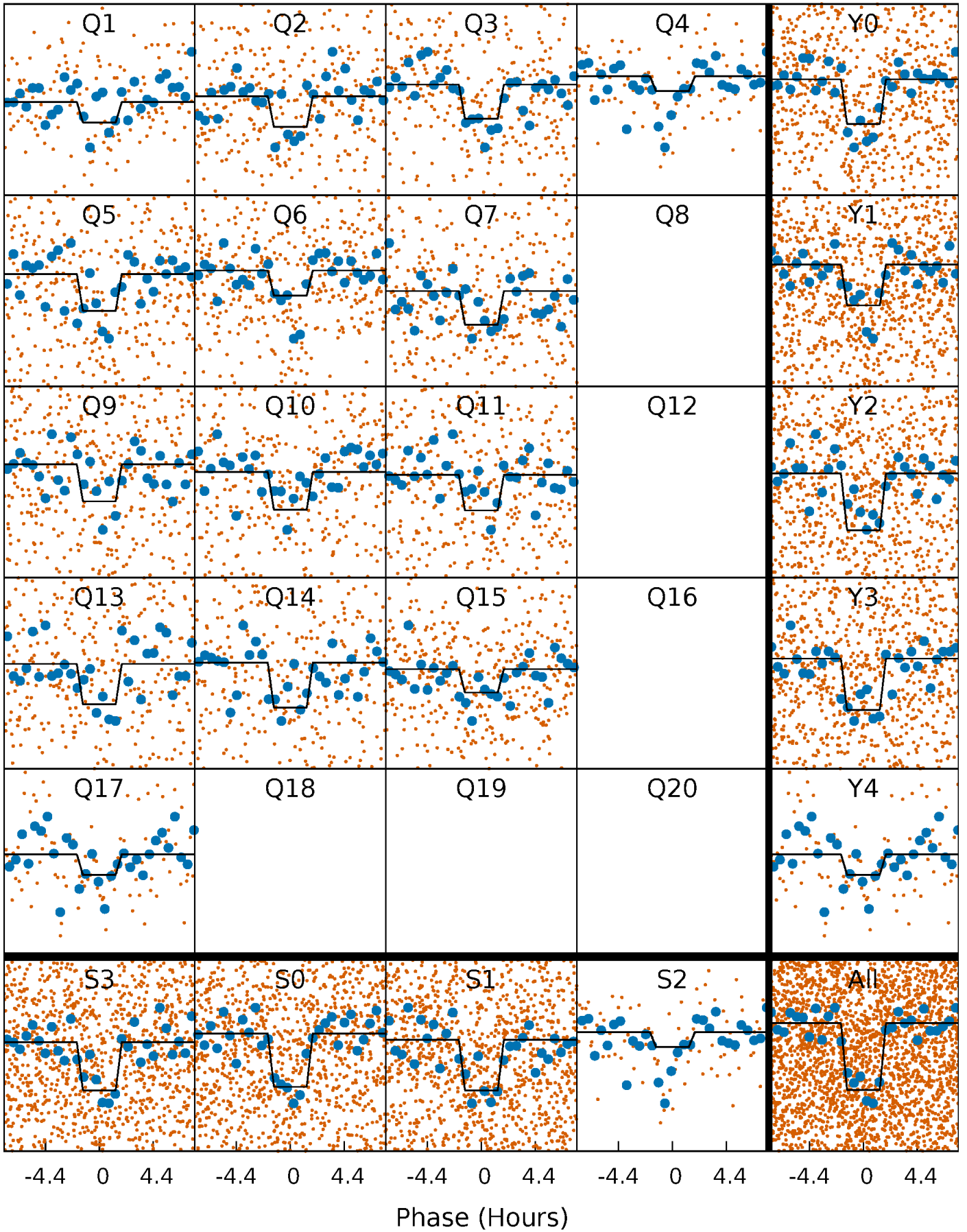
DV Quarter-Phased Transit Curves

TCE 011599038-01 P= 7.017309 Days $T_0=133.907914$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

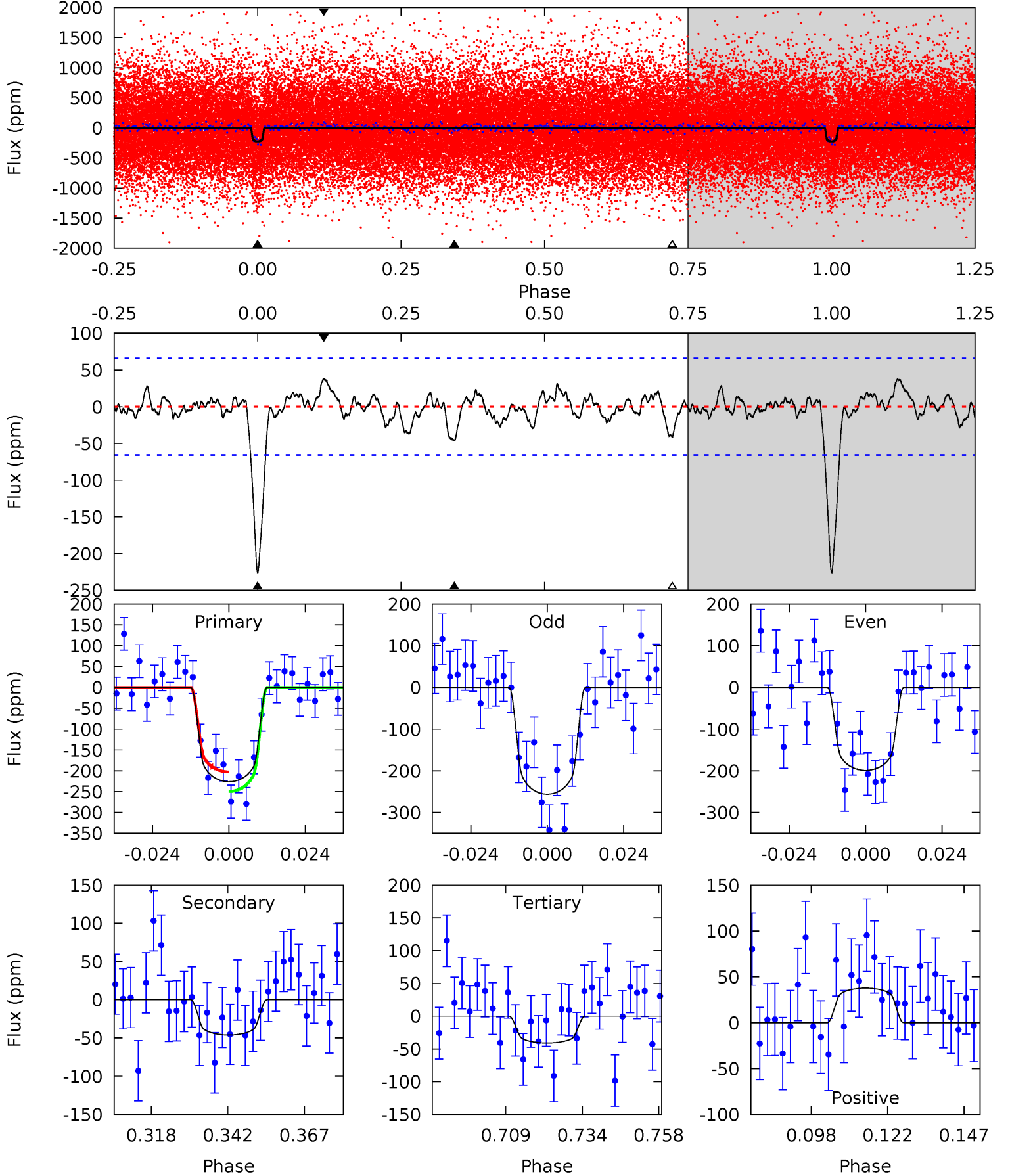
TCE 011599038-01 P= 7.017394 Days $T_0=133.899924$ (BKJD)



DV Model-Shift Uniqueness Test

011599038-01, P = 7.017309 Days, E = 126.890605 Days

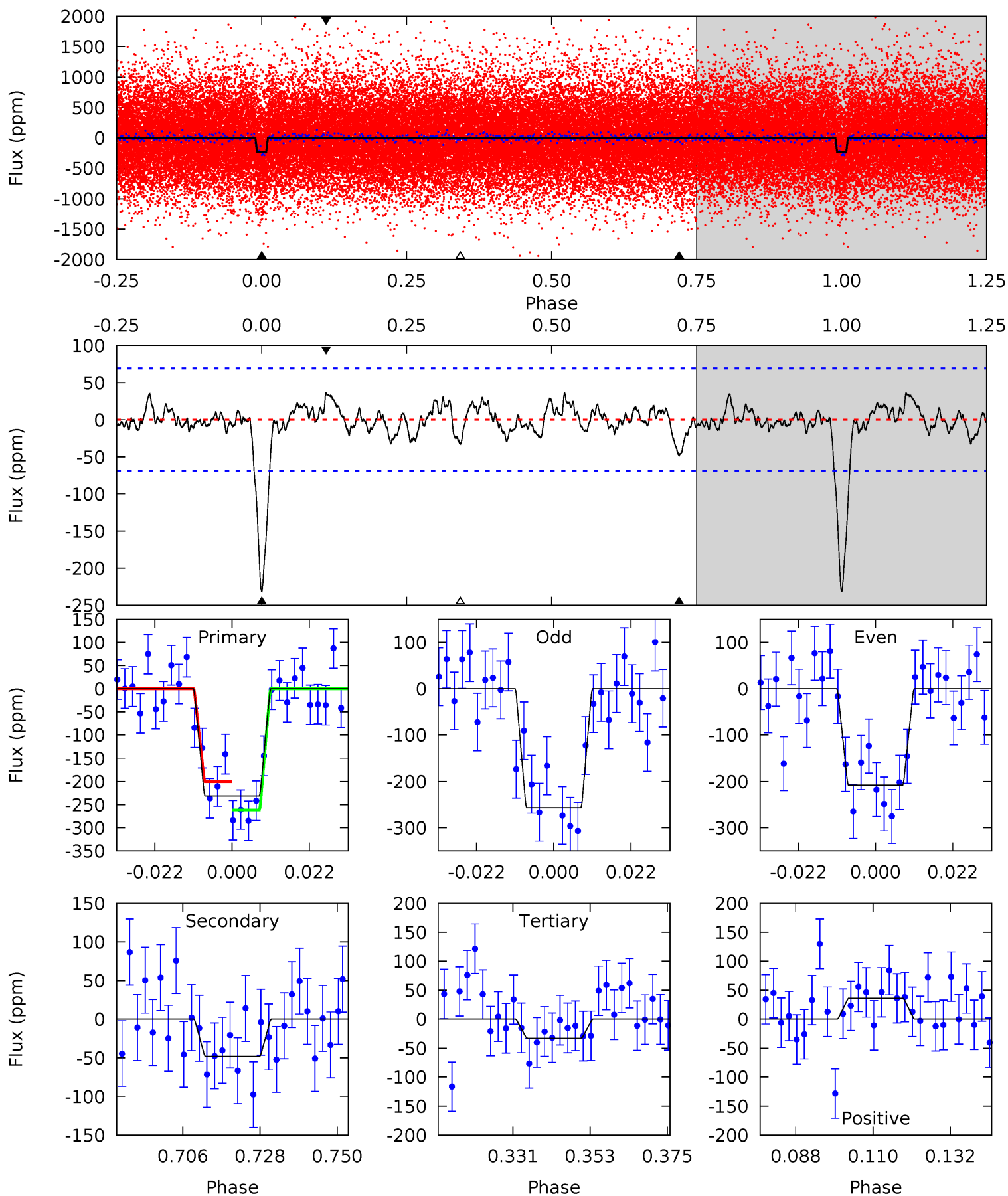
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	3.41	3.03	2.78	4.85	2.25	1.02	13.7	13.9	0.38	0.62	2.11	1.05	0.14	1.74



Alt Model-Shift Uniqueness Test

011599038-01, P = 7.017394 Days, E = 126.882530 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	3.38	2.30	2.54	4.87	2.29	0.98	14.0	13.7	1.08	0.85	1.71	0.96	0.13	2.15



Stellar Parameters For KIC 011599038

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6052^{+163}_{-199}	$4.456^{+0.070}_{-0.210}$	$-0.260^{+0.300}_{-0.300}$	$0.967^{+0.304}_{-0.121}$	$0.974^{+0.130}_{-0.117}$	$1.518^{+0.559}_{-0.791}$
	+3%/-3%	+2%/-5%	+115%/-115%	+31%/-13%	+13%/-12%	+37%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011599038-01 / KOI 1437.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-46 ± 14	$1.76^{+0.64}_{-0.62}$	1399^{+102}_{-71}	4182^{+767}_{-503}	40^{+60}_{-21}
Alt.	-48 ± 14	$1.69^{+0.69}_{-0.61}$	1399^{+106}_{-68}	4268^{+923}_{-525}	45^{+75}_{-23}

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

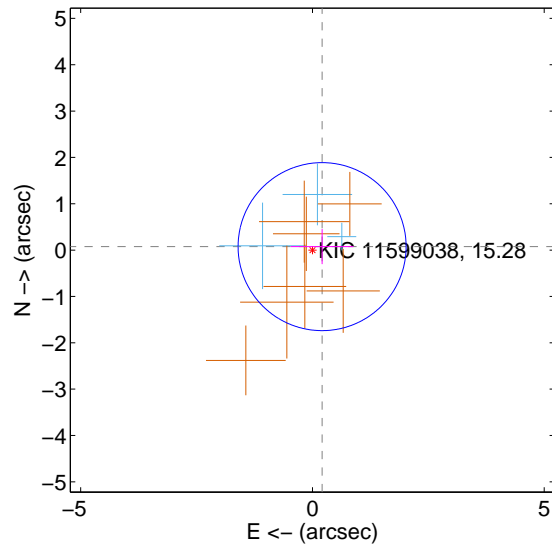
Supplemental centroid analysis for 011599038-01. Kepler magnitude: 15.28. Transit SNR 13.30

There are 3 quarters with good PRF difference image offsets

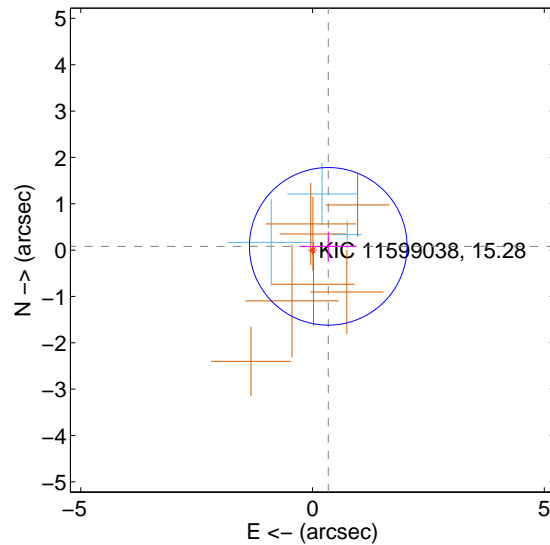
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.222 ± 0.604	0.37	-0.209 ± 0.676	0.075 ± 0.378
PRF-fit source offset from KIC position	0.348 ± 0.567	0.61	-0.339 ± 0.608	0.081 ± 0.326
photometric centroid source offset	0.92 ± 1.14	0.80	0.81 ± 1.15	-0.42 ± 1.13

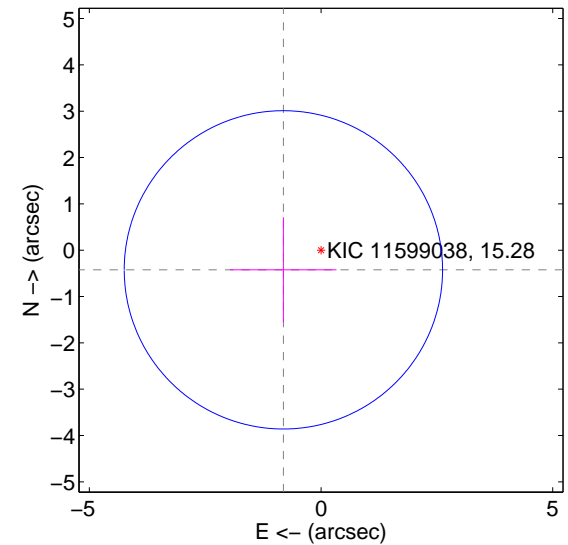
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

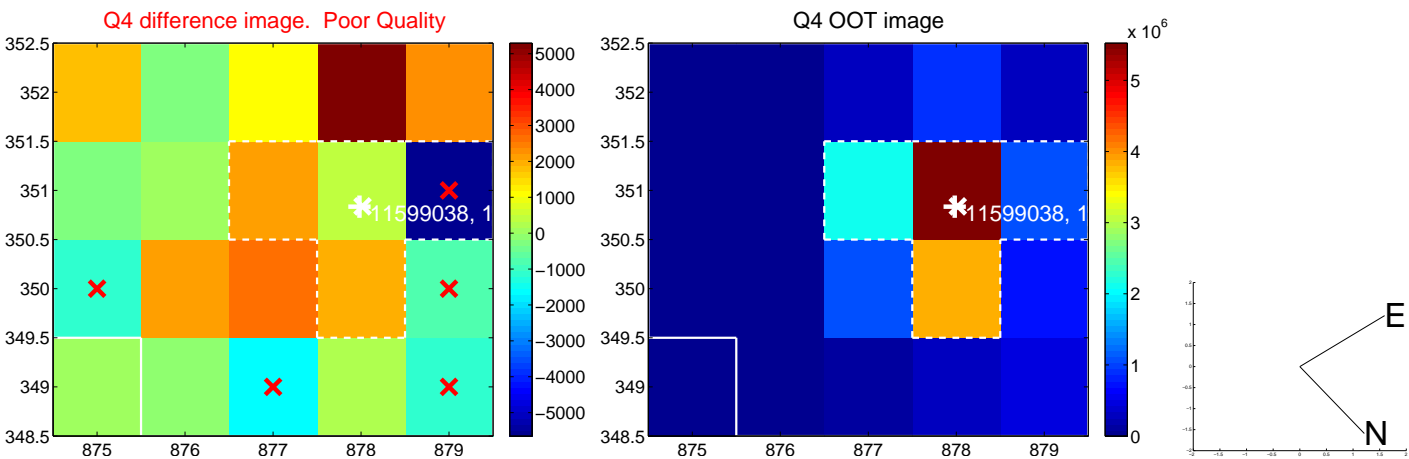
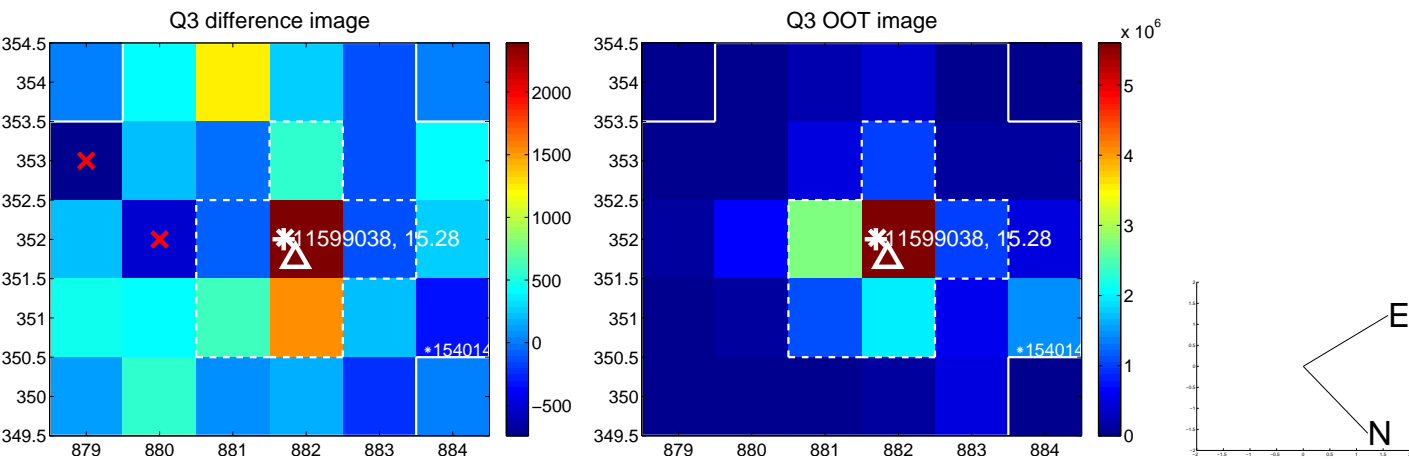
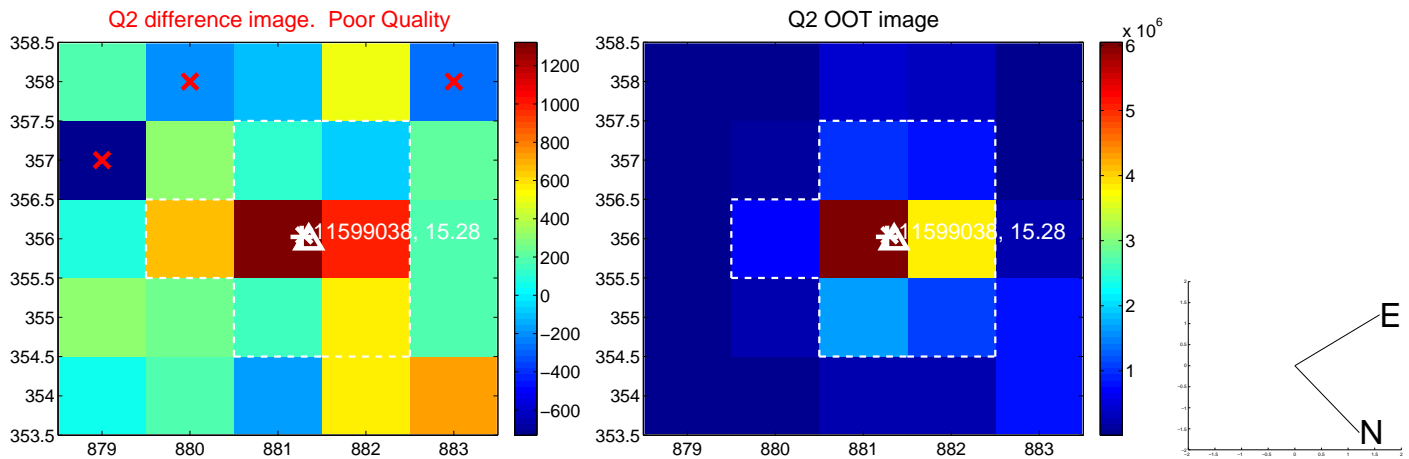
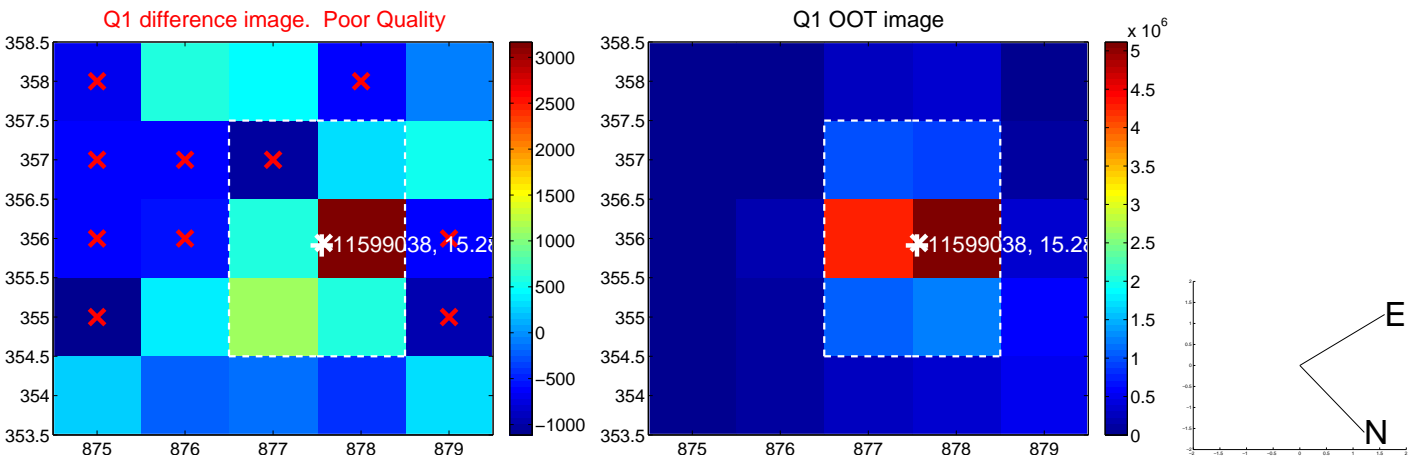


offset from photometric centroids

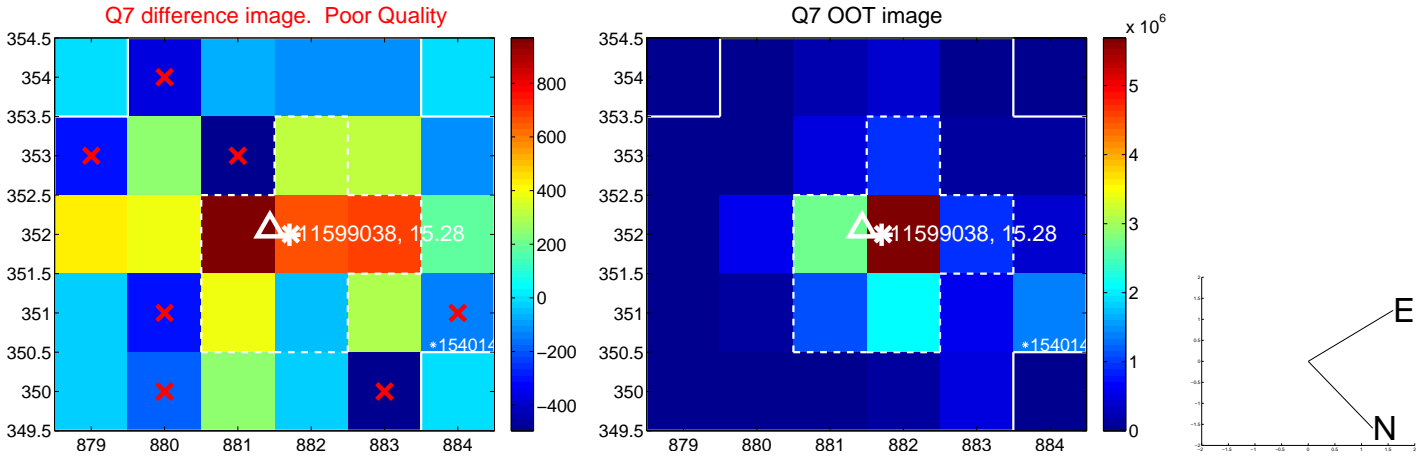
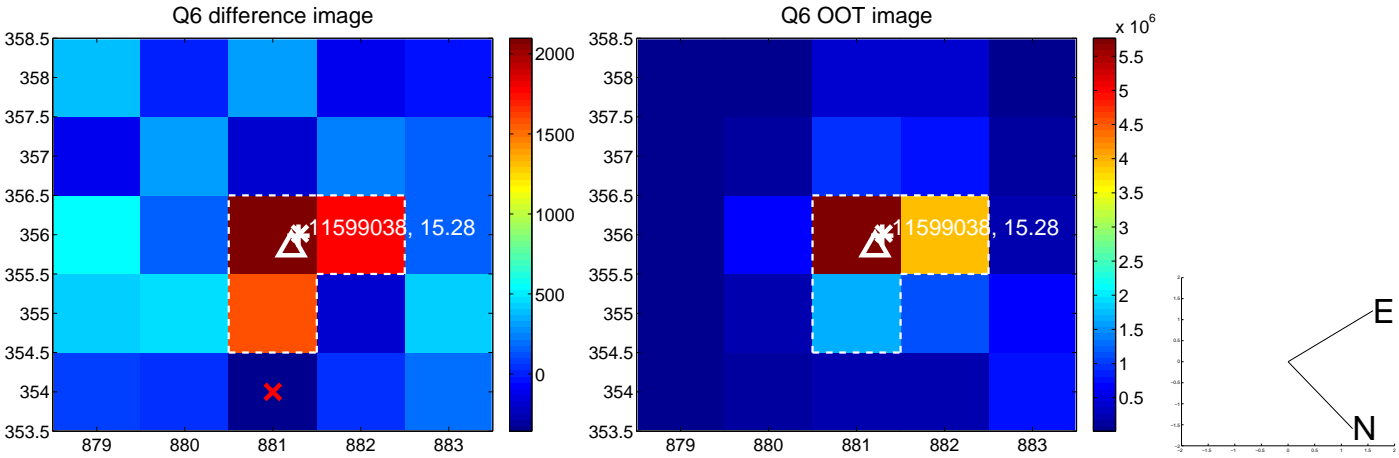
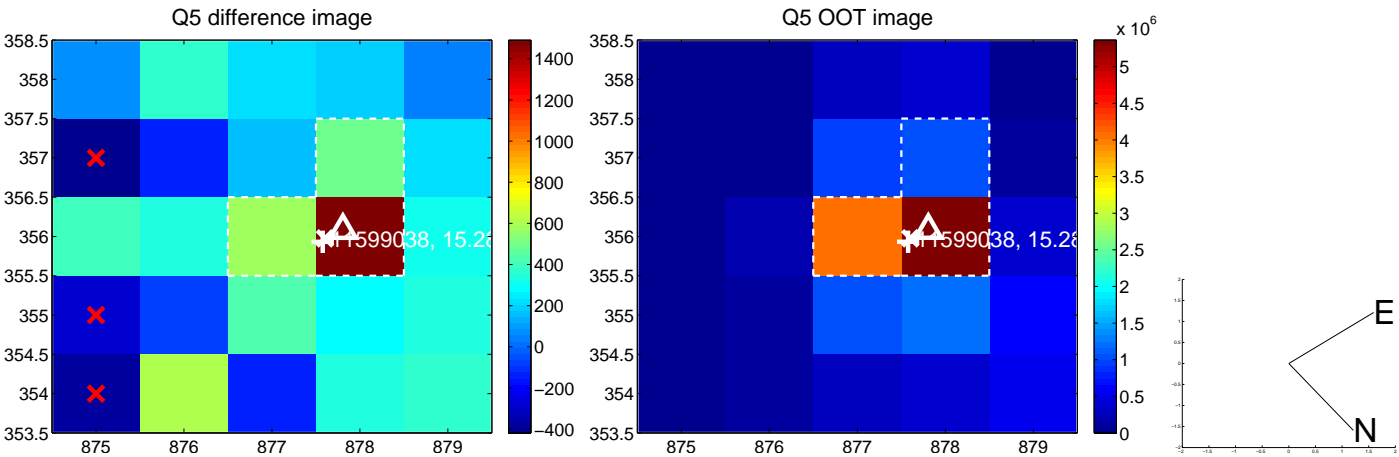


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

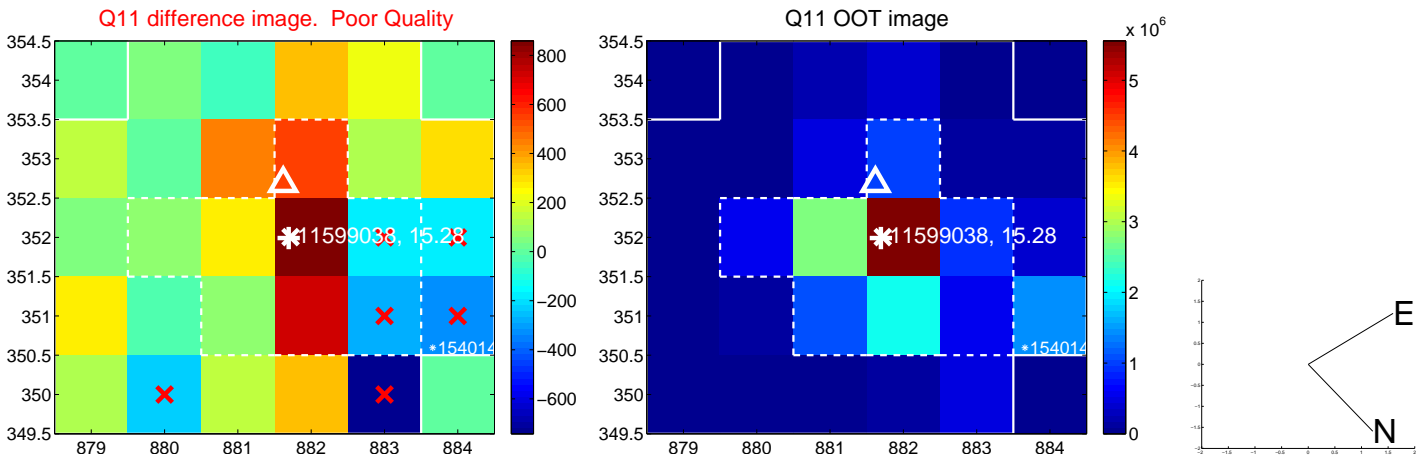
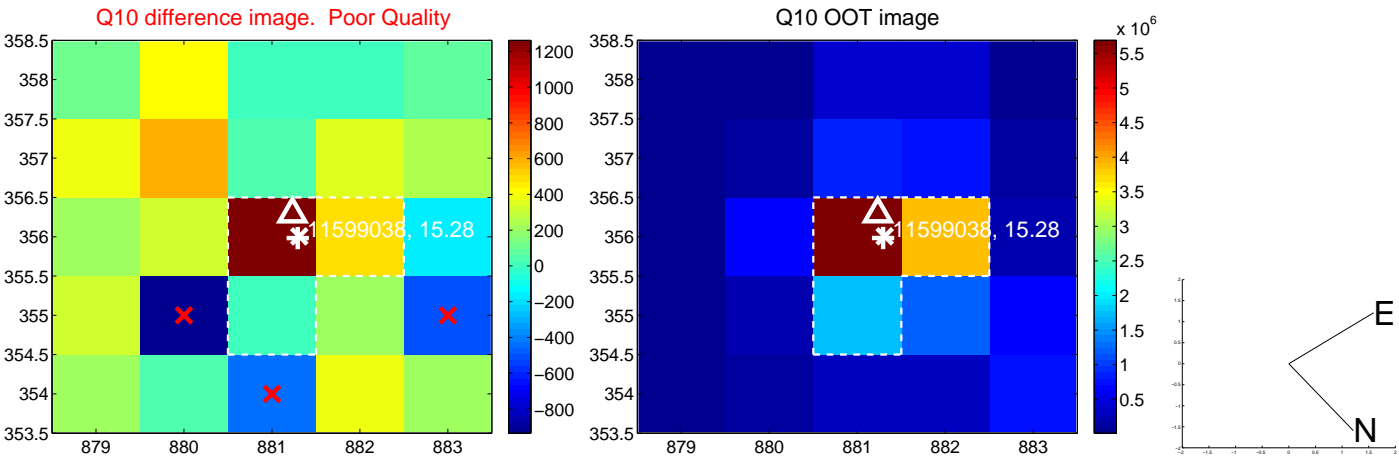
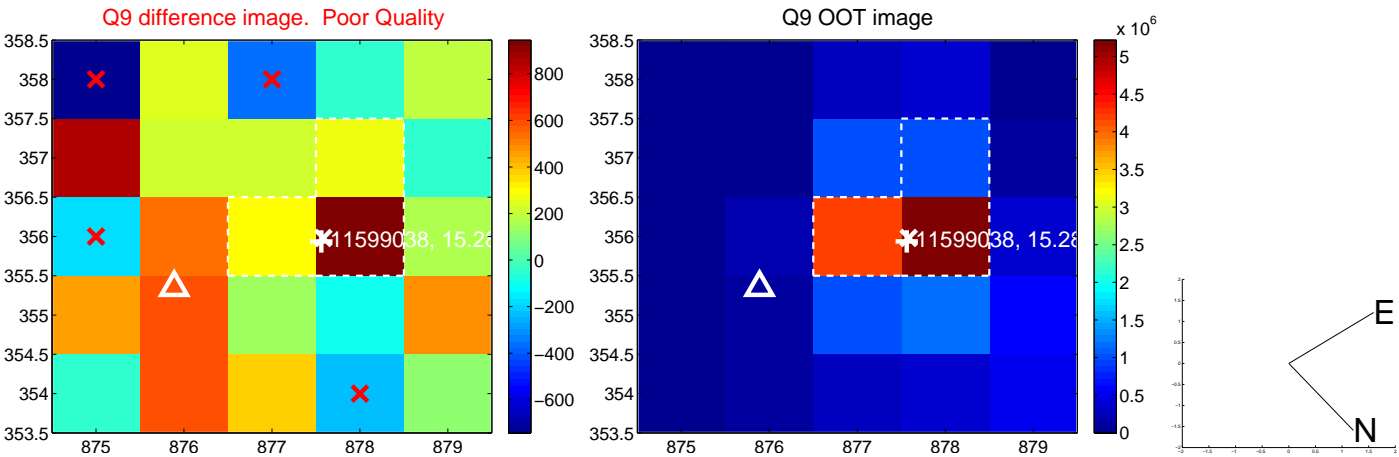
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



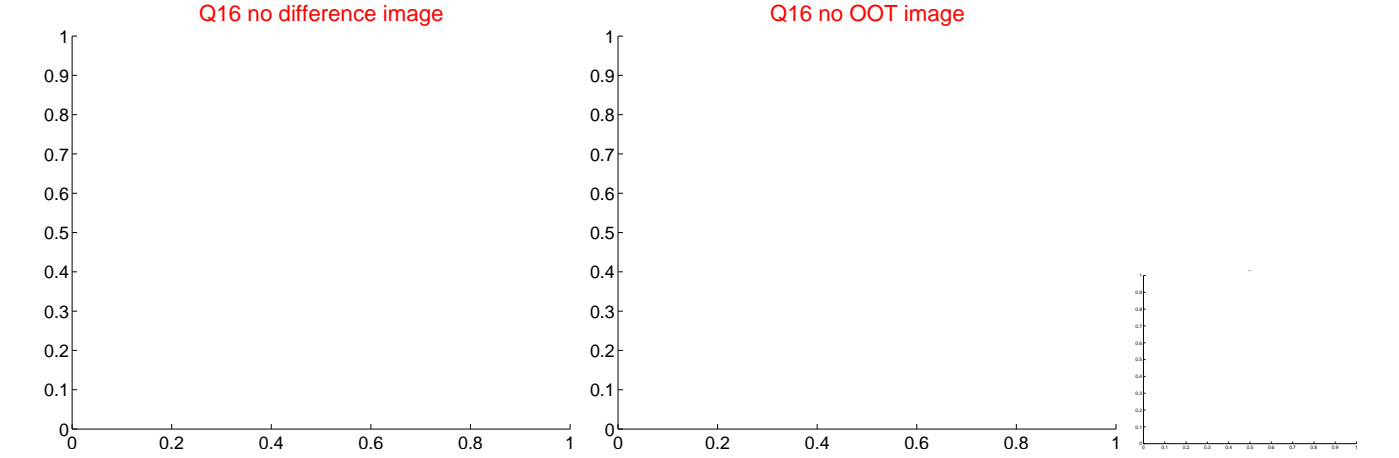
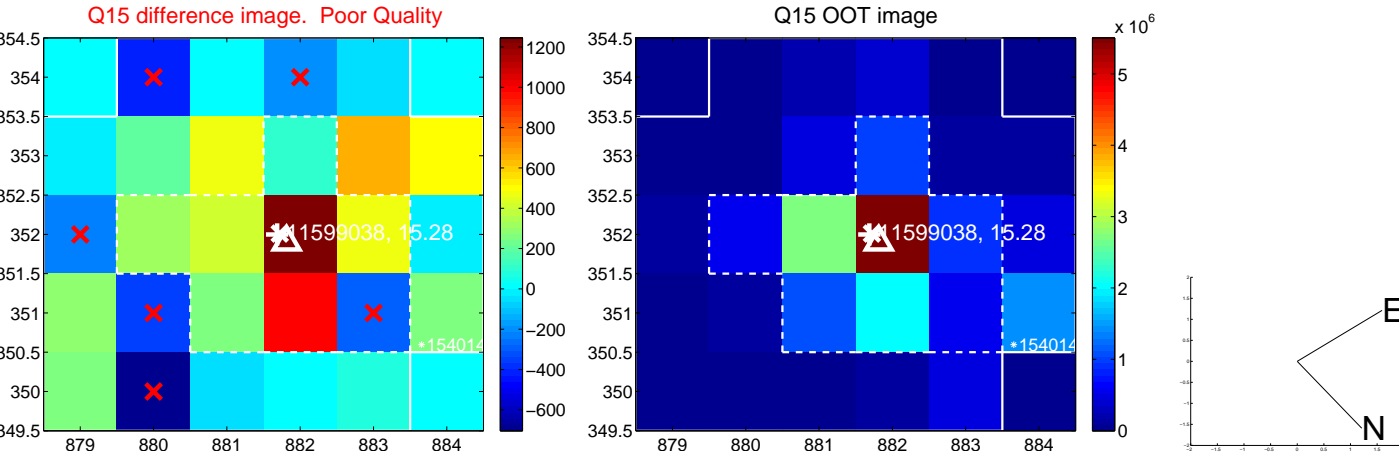
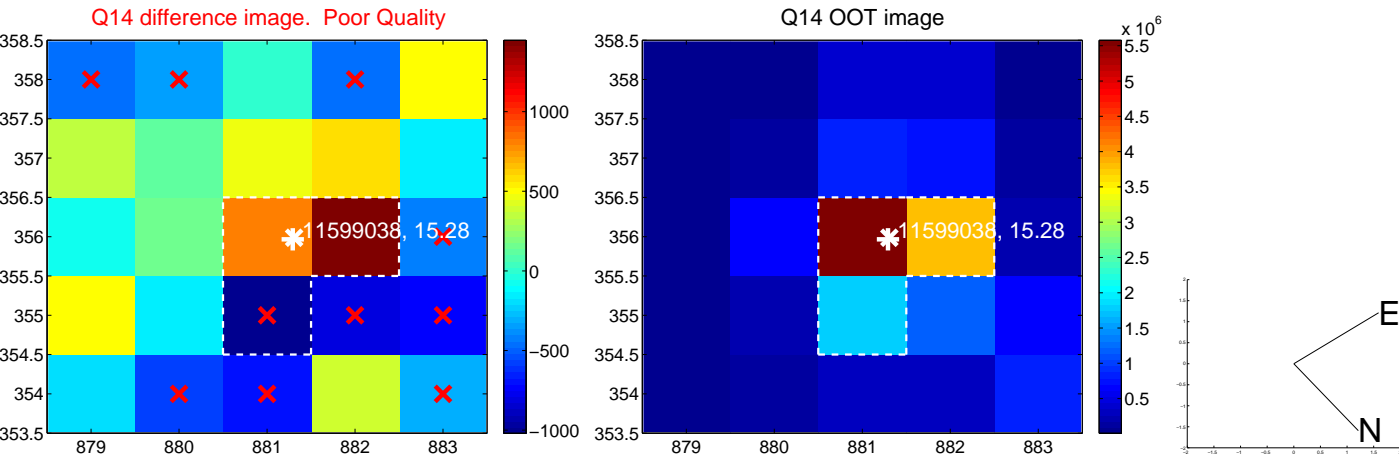
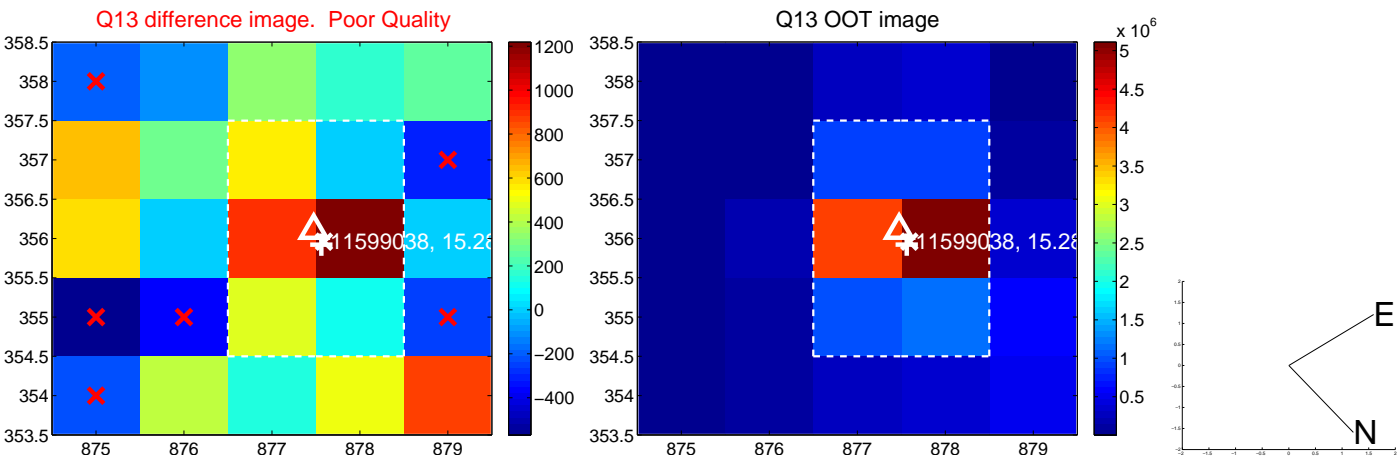
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



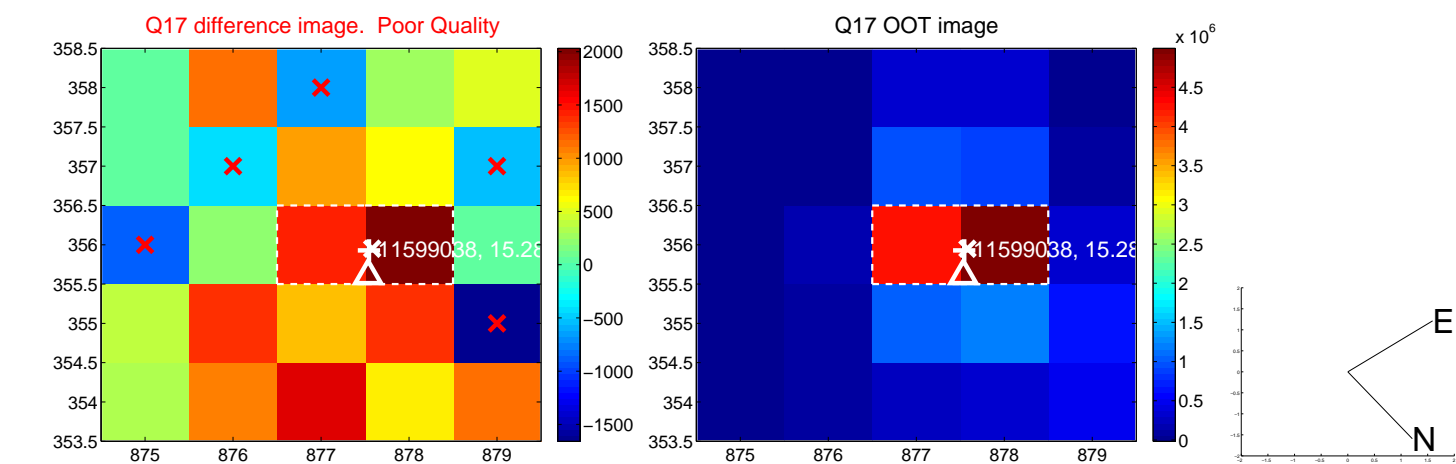
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



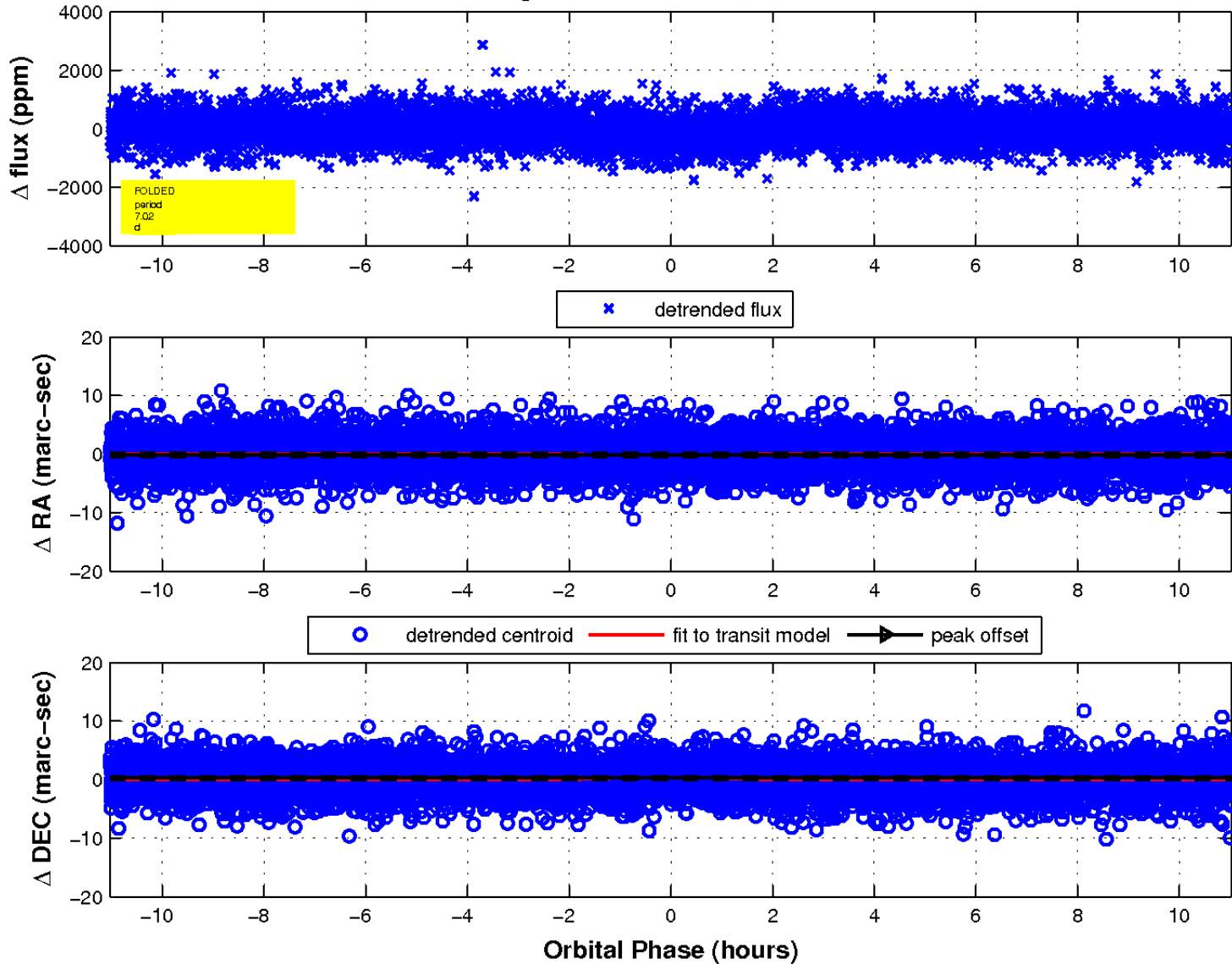
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

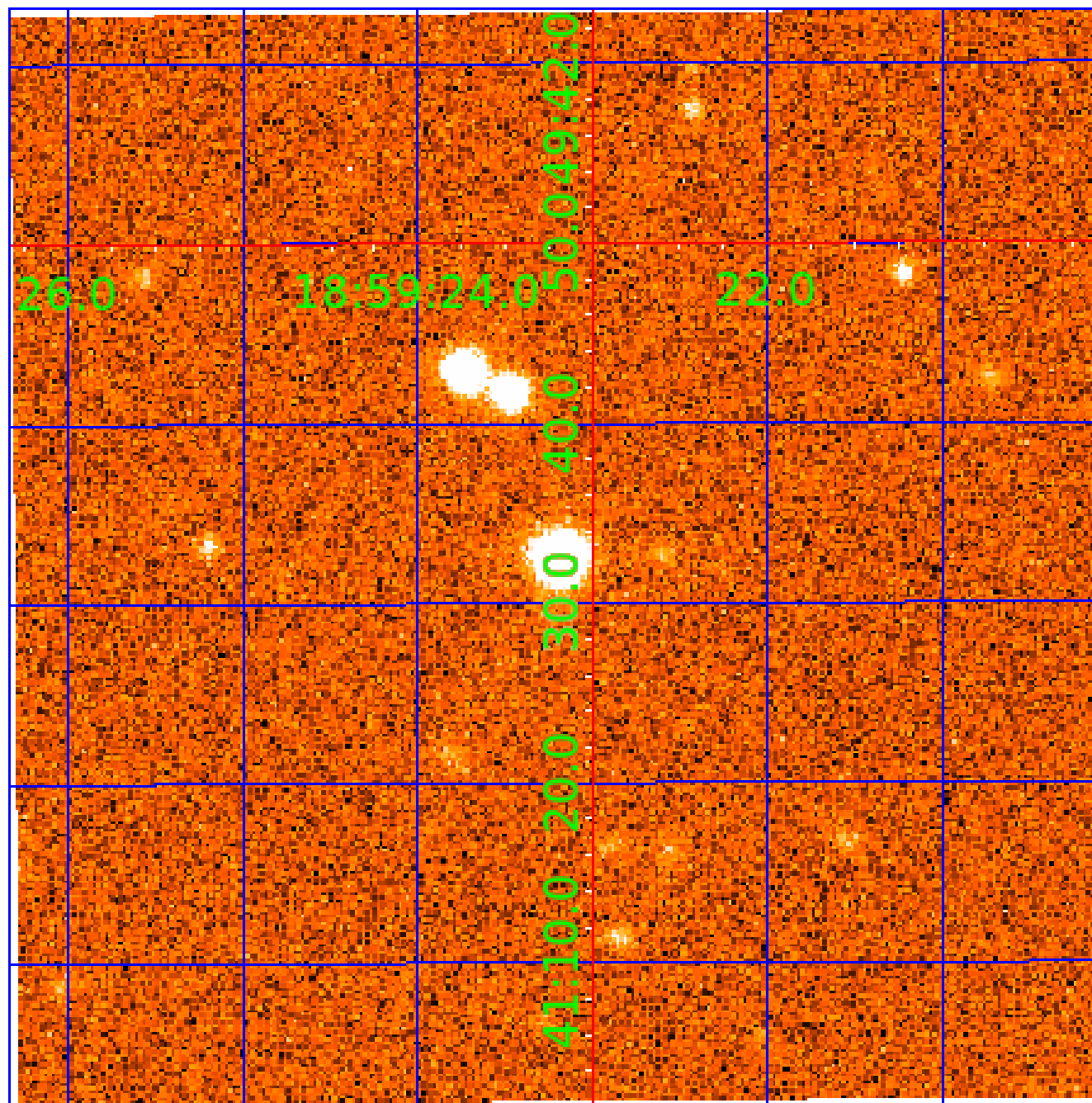


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 011599038

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})
011599038-01	OBS	1437.01	7.017309	133.907914	232.7	3.676	12.5	13.3	0.97	6052	1.72	222.10
011599038-02	OBS	1437.02	9.279960	133.748216	183.2	3.020	7.7	8.3	0.97	6052	1.47	153.01
011599038-03	OBS	1437.03	17.421680	145.903536	198.4	4.858	7.1	7.5	0.97	6052	1.56	66.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011599038-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011599038-02	OBS	FP	0.00	0	0	1	0	HALO_GHOST
011599038-03	OBS	FP	0.47	1	0	0	0	MOD_NONUNIQ_ALT

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

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

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

Ephemeris Match Information For 011599038-02

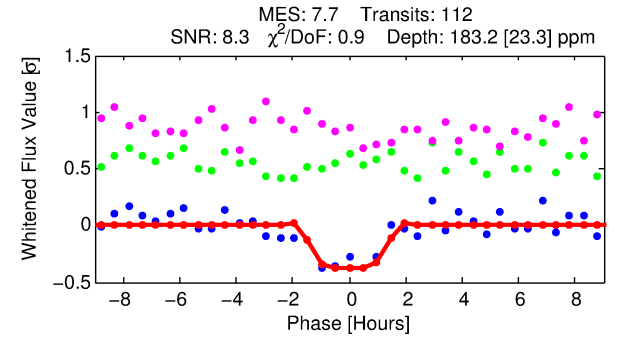
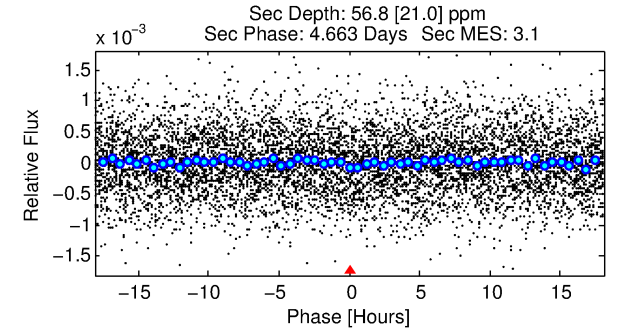
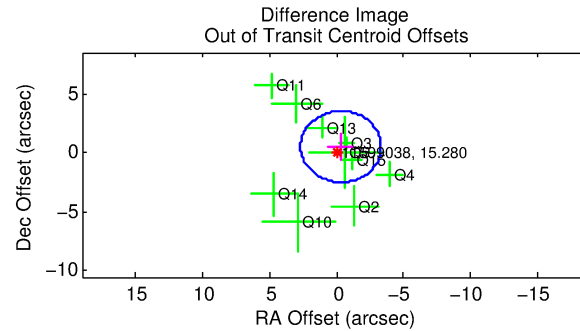
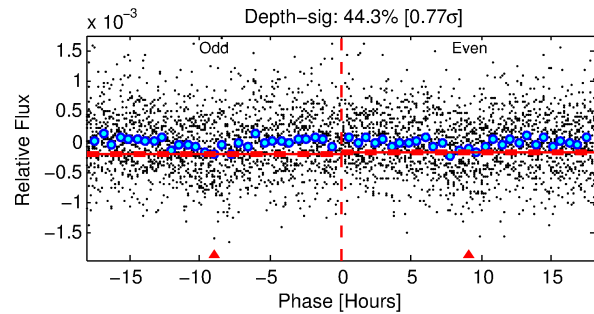
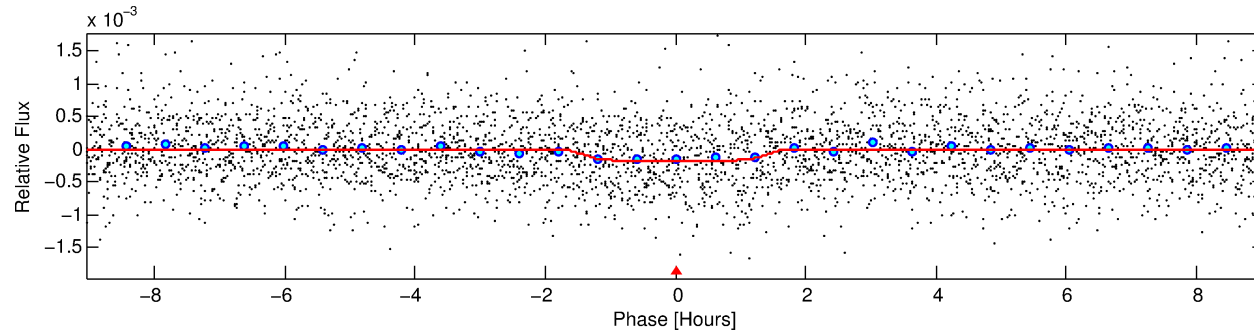
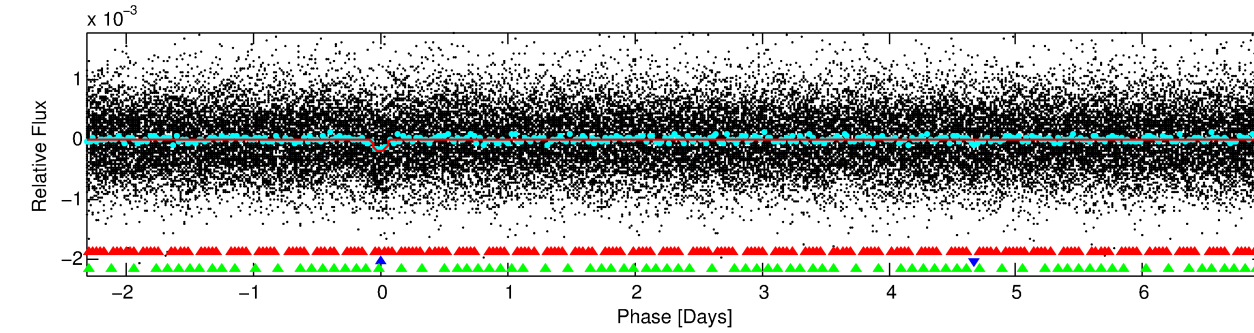
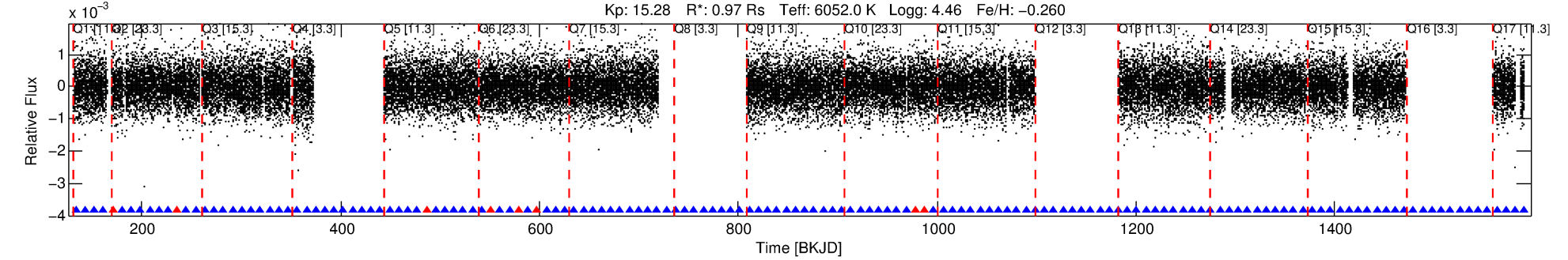
No Significant Match Found

DV One-Page Summary

KIC: 11599038 Candidate: 2 of 3 Period: 9.280 d

KOI: K01437 Corr: No Ephemeris Match

Kp: 15.28 R*: 0.97 Rs Teff: 6052.0 K Logg: 4.46 Fe/H: -0.260



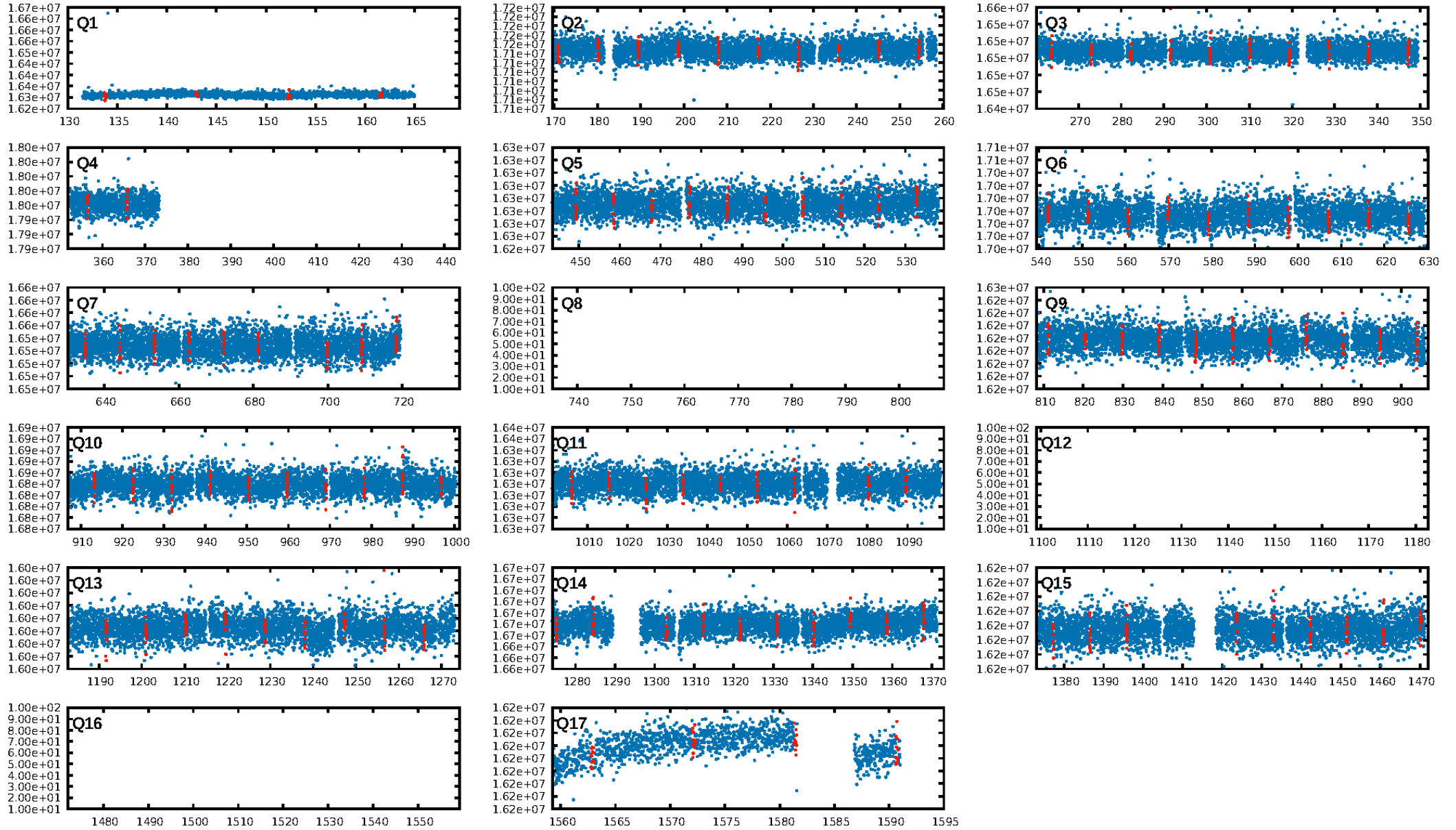
DV Fit Results:

Period = 9.27996 [0.00009] d
Epoch = 133.7482 [0.0077] BKJD
Rp/R* = 0.0139 [0.0125]
a/R* = 13.87 [63.64]
b = 0.82 [1.81]
Seff = 153.01 [62.18]
Teff = 897 [91] K
Rp = 1.47 [1.40] Re
a = 0.0857 [0.0227] AU
Ag = 106.85 [200.47] [0.53σ]
Teffp = 4458 [2052] K [1.73σ]

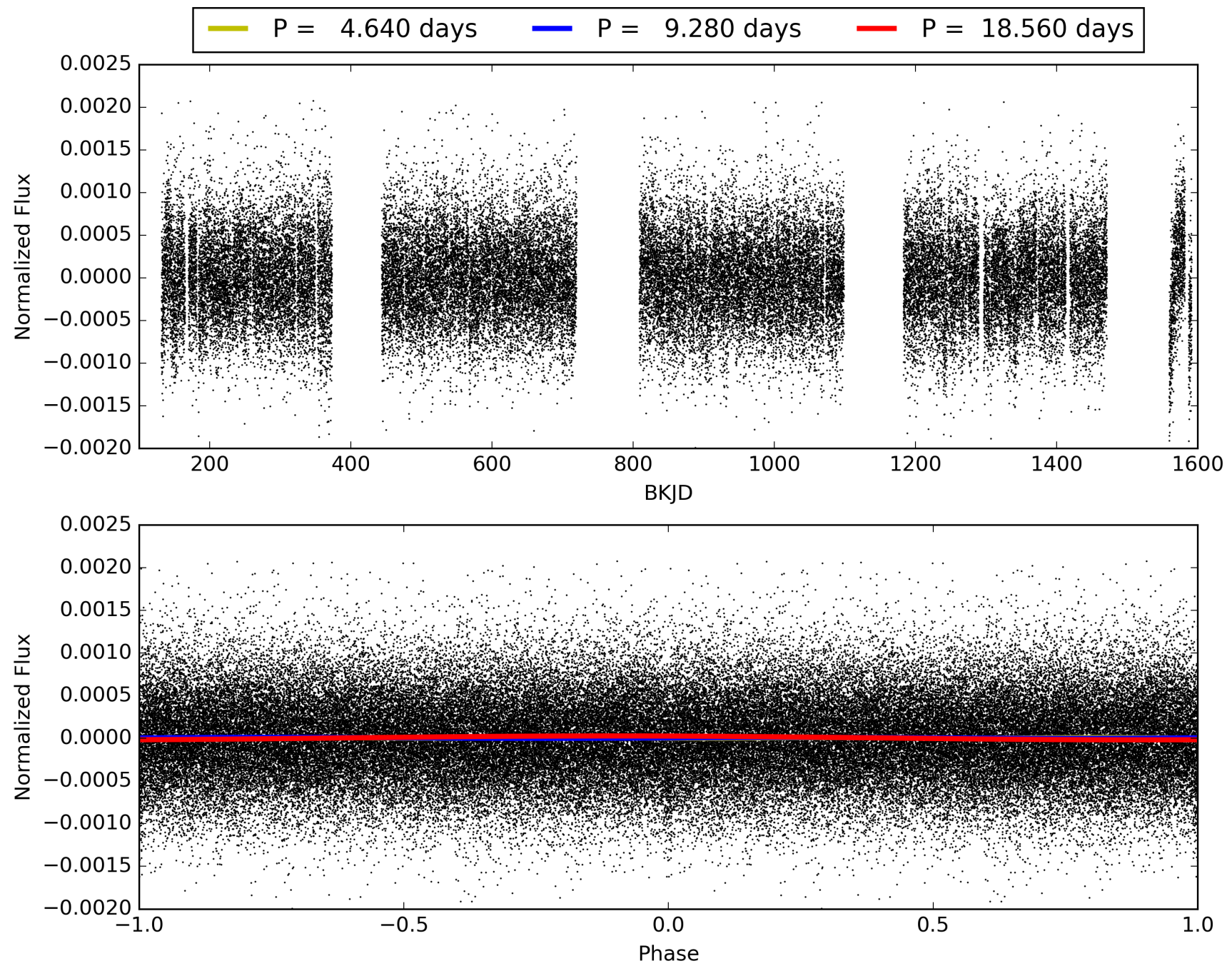
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.41σ]
LongPeriod-sig: 100.0% [34.16σ]
ModelChiSquare2-sig: 97.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.37e-14
RollingBand-fgt: 0.92 [95/103]
GhostDiagnostic-chr: -0.08104
Centroid-sig: 0.0%
Centroid-so: 4.892 arcsec [2.79σ]
OotOffset-rm: 0.607 arcsec [0.60σ]
KicOffset-rm: 0.673 arcsec [0.76σ]
OotOffset-st: 4/3/1/2 [10]
KicOffset-st: 4/3/1/2 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011599038-02, PDC Light Curves

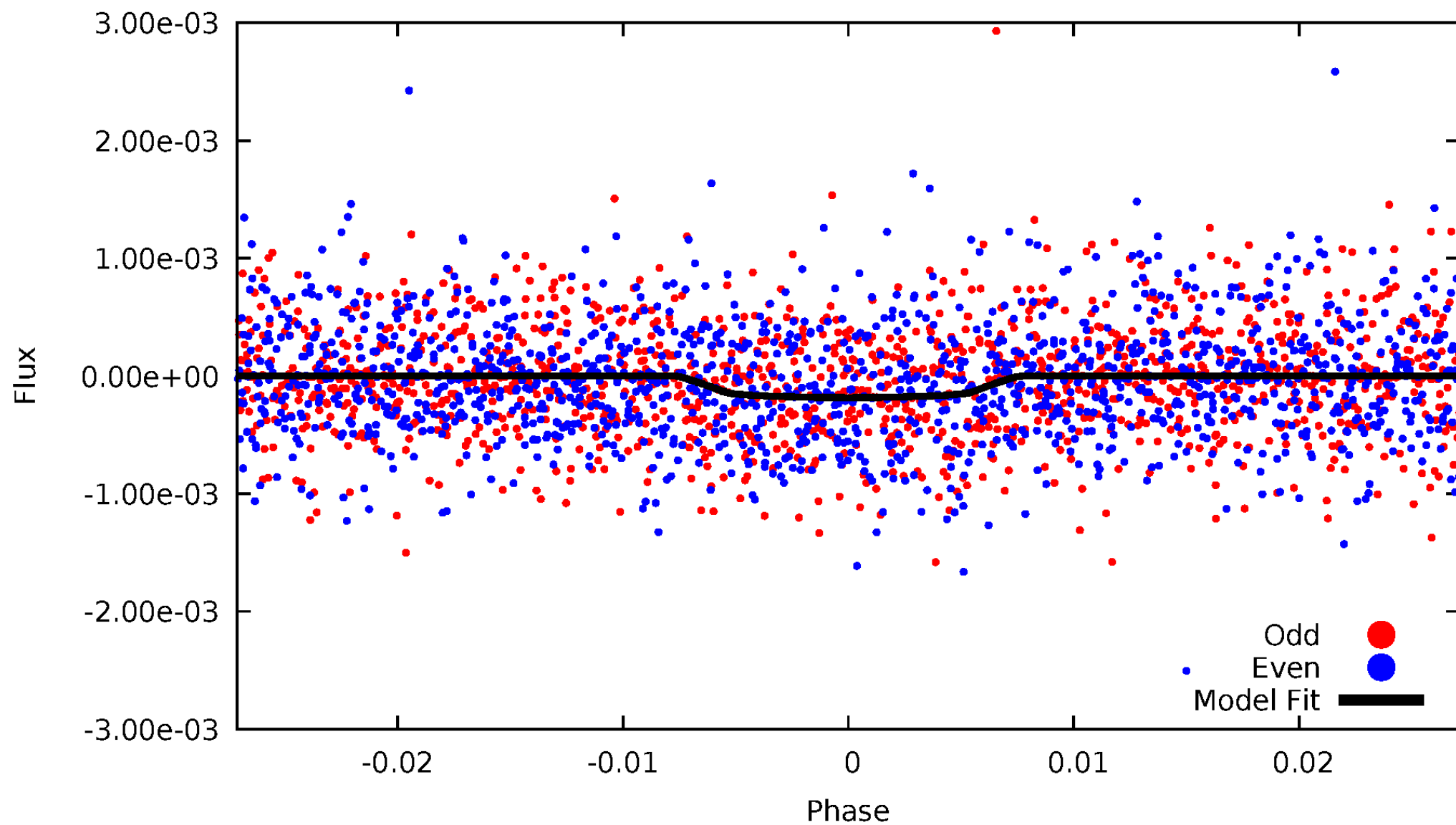


TCE 011599038-02



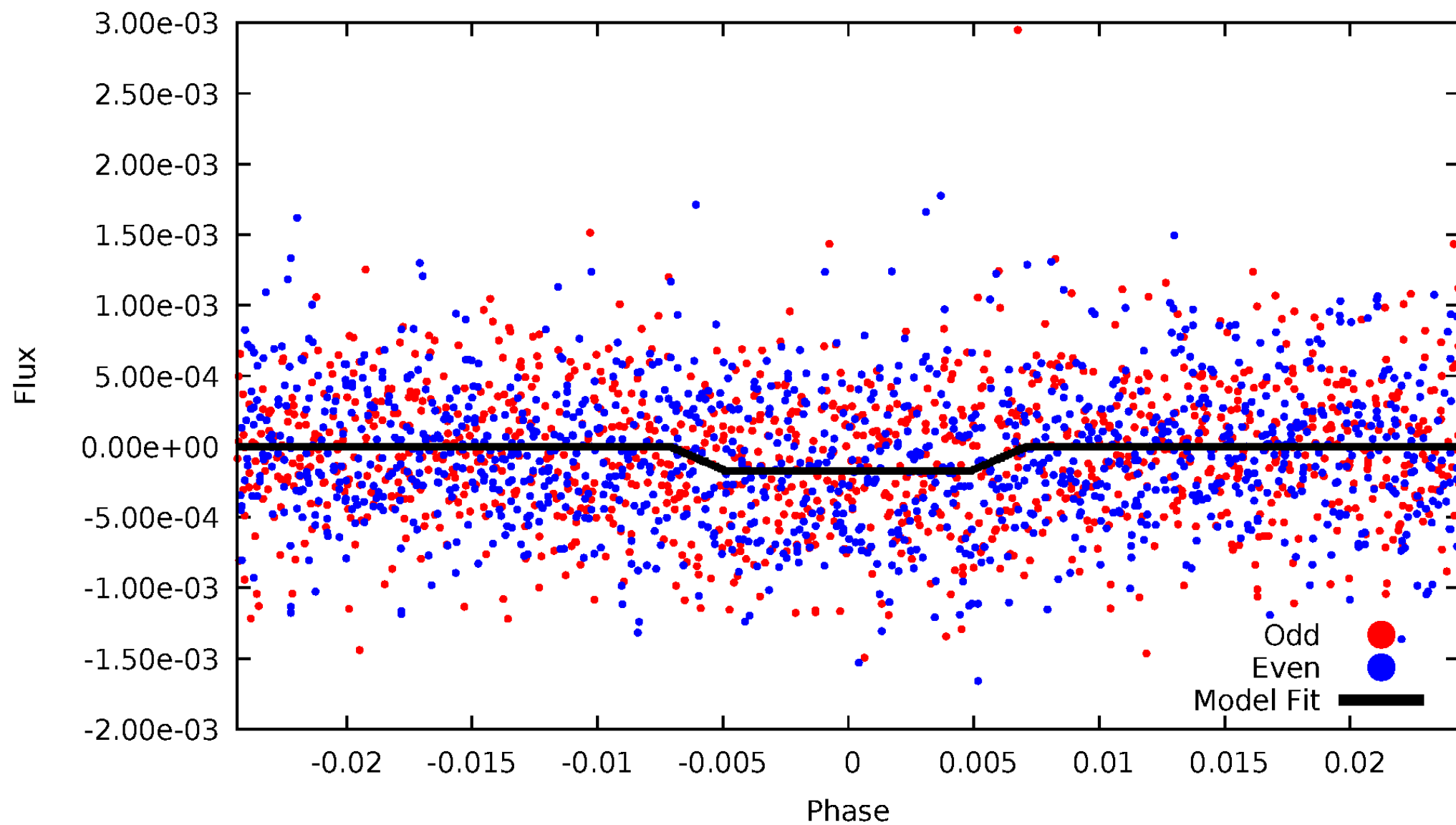
DV Odd/Even

TCE 011599038-02



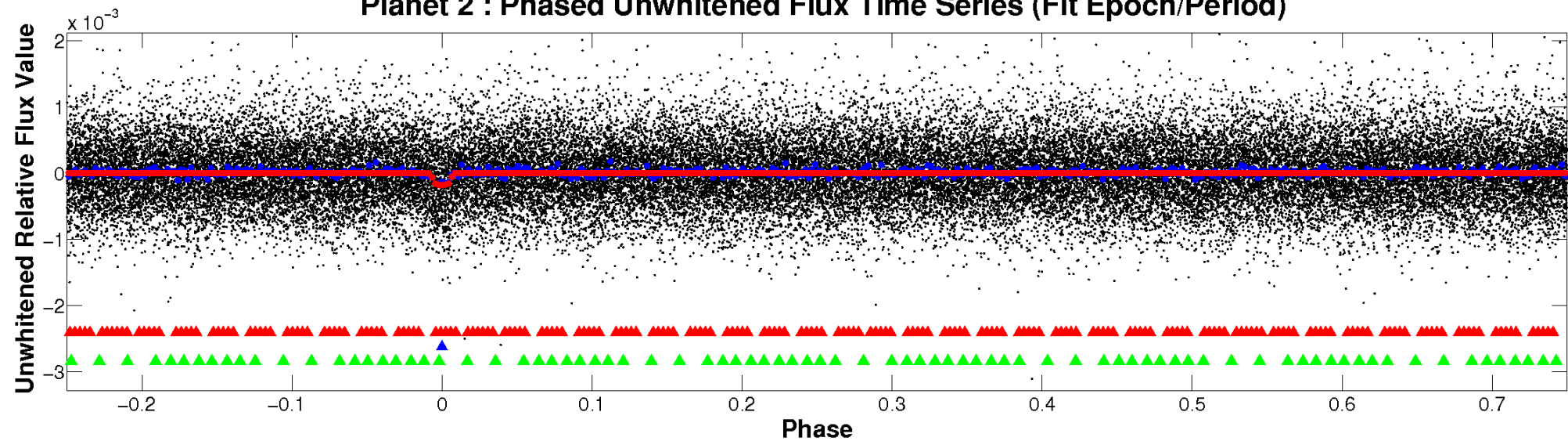
ALT Odd/Even

TCE 011599038-02

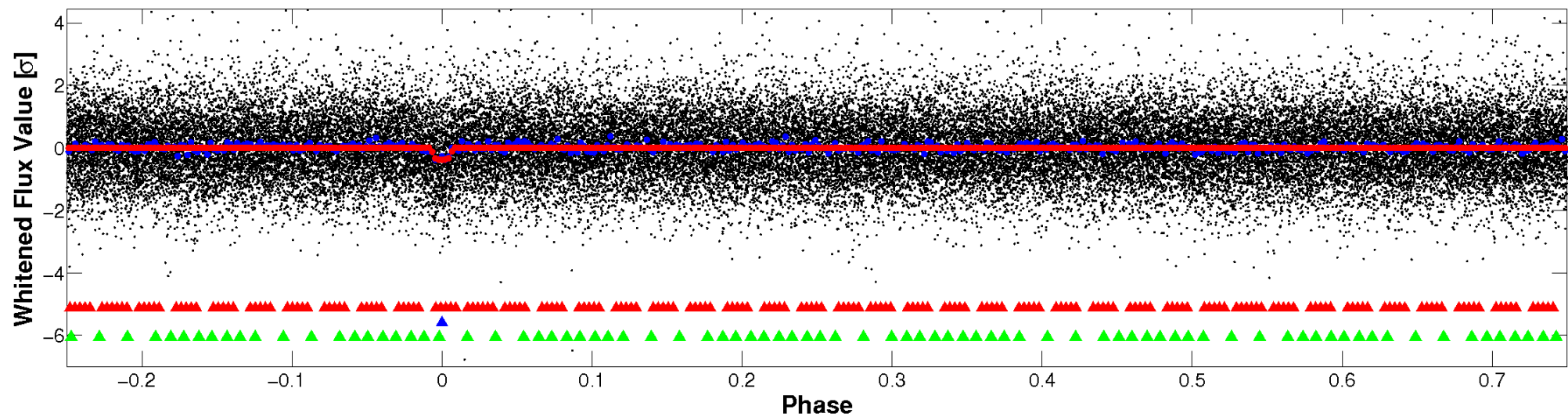


Non-Whitened Vs. Whitened Light Curve

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

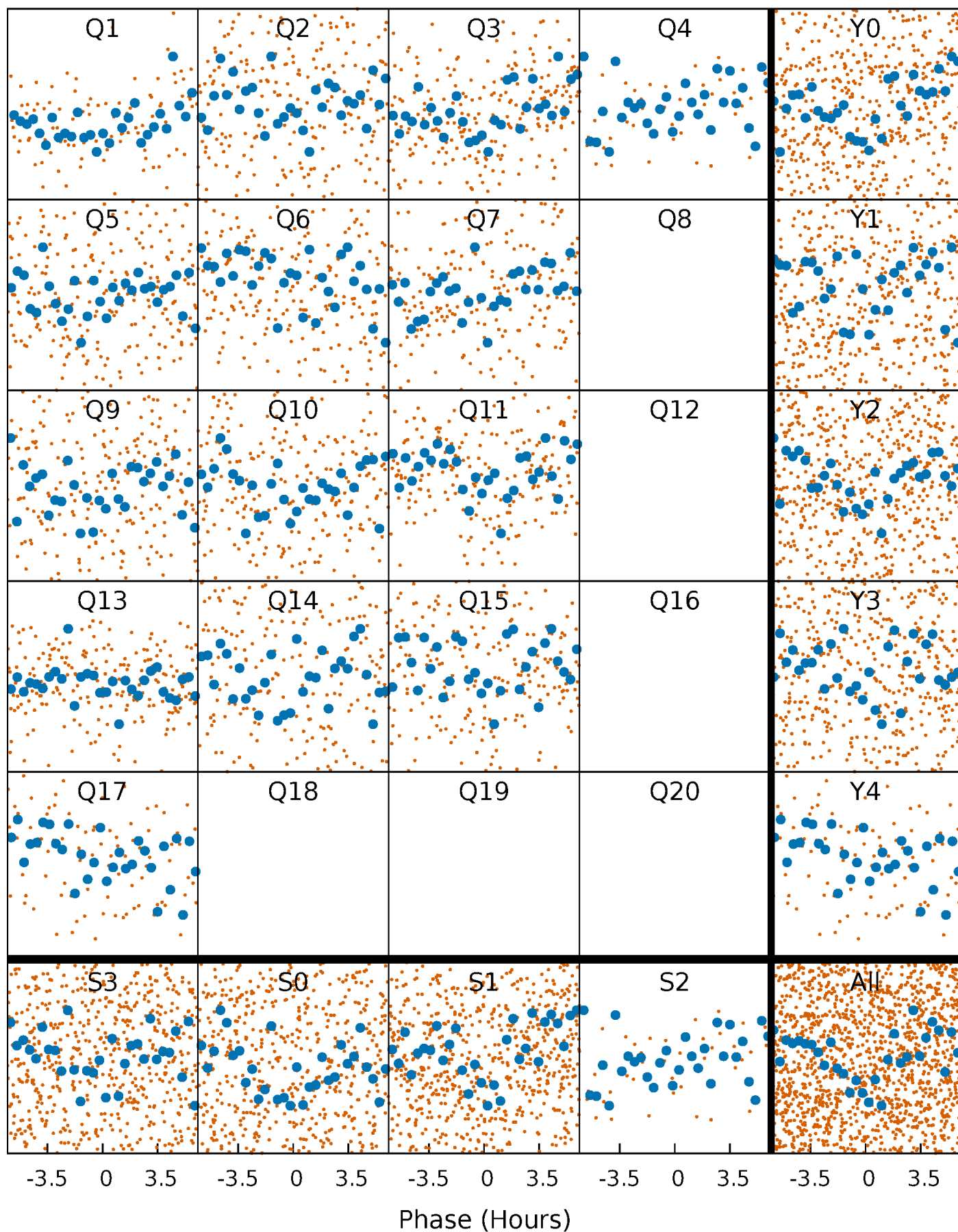


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



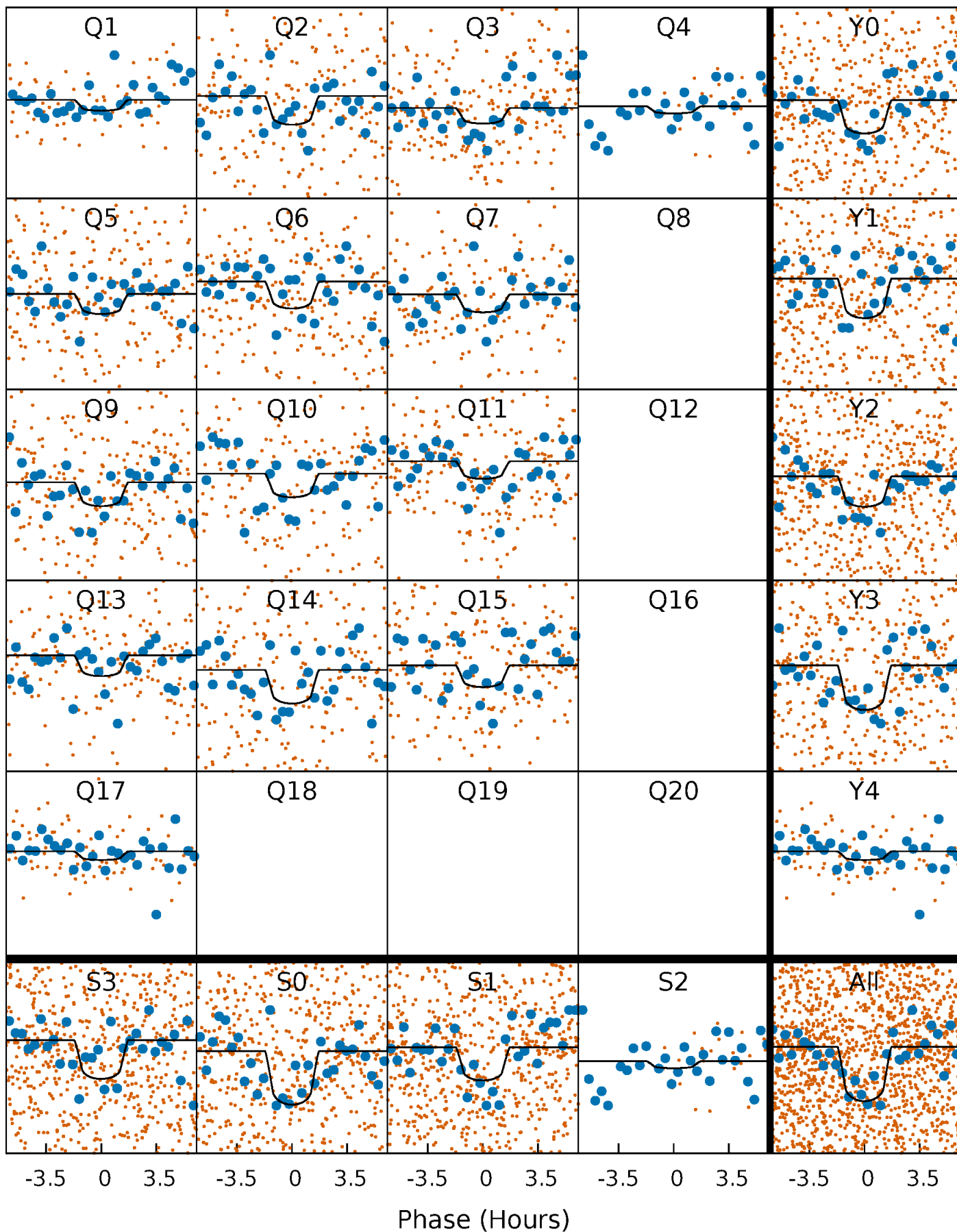
PDC Quarter-Phased Transit Curves

TCE 011599038-02 P= 9.279960 Days $T_0=133.748216$ (BKJD)



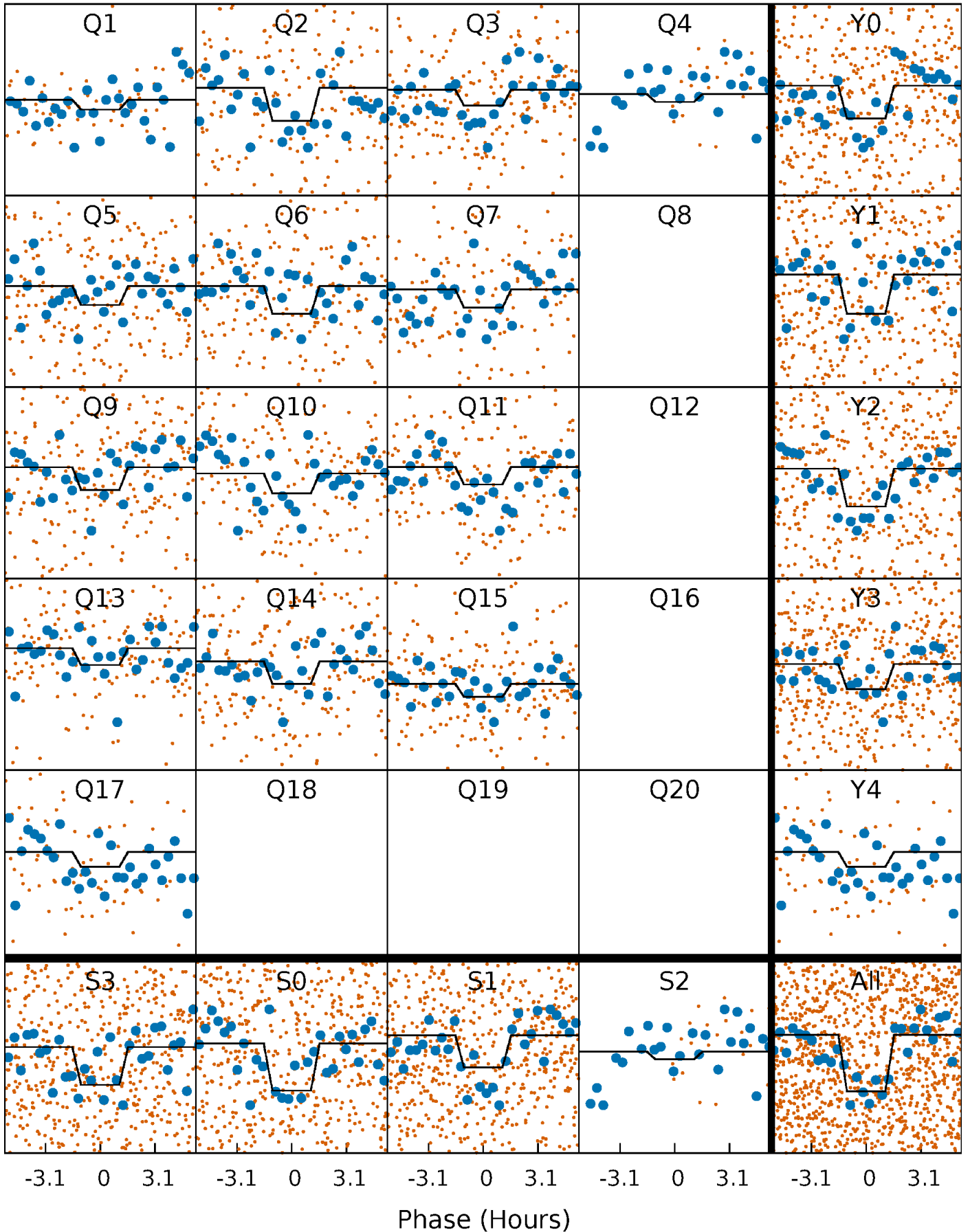
DV Quarter-Phased Transit Curves

TCE 011599038-02 P= 9.279960 Days $T_0=133.748216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

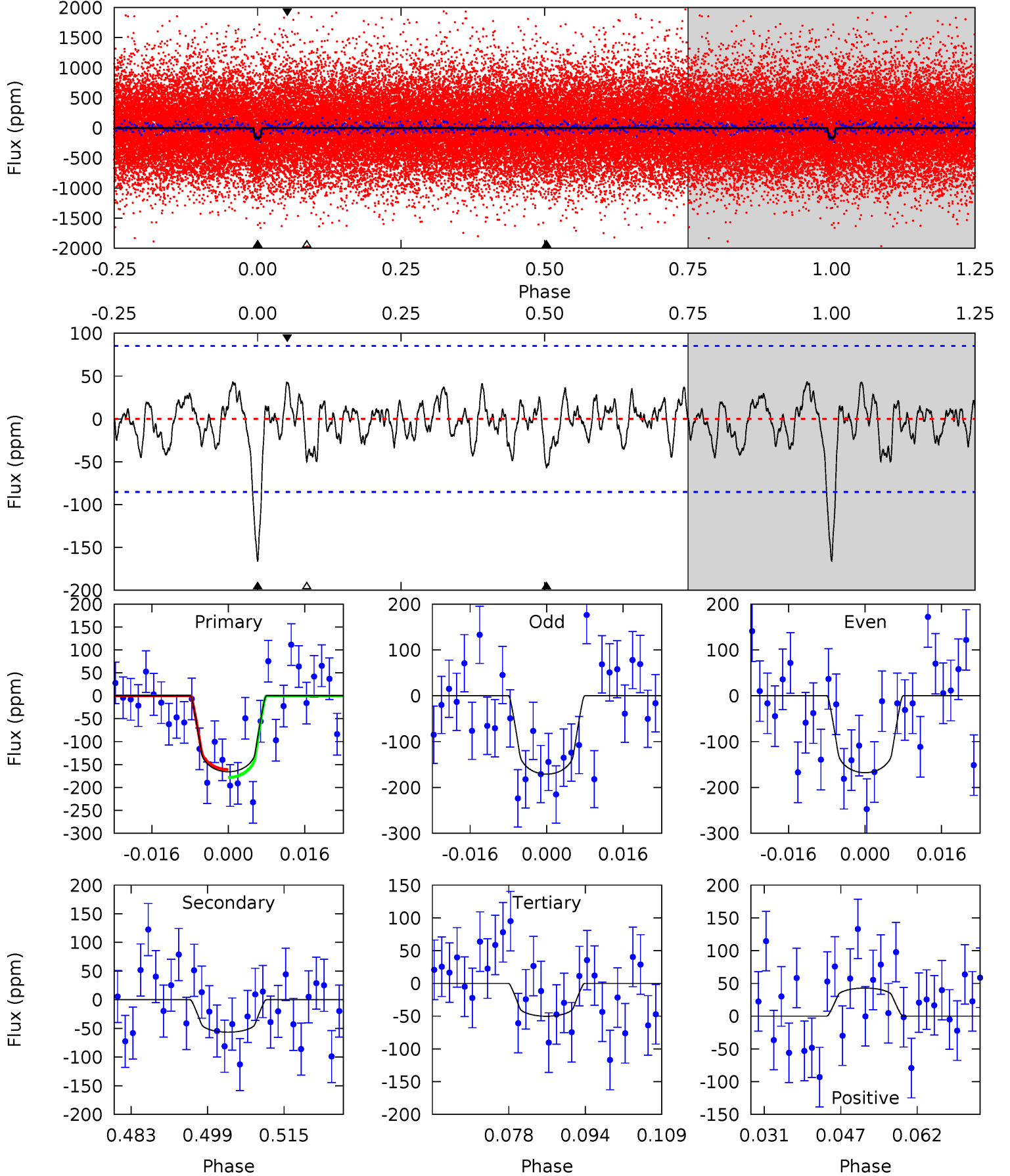
TCE 011599038-02 P= 9.279975 Days $T_0=133.746169$ (BKJD)



DV Model-Shift Uniqueness Test

011599038-02, P = 9.279960 Days, E = 124.468256 Days

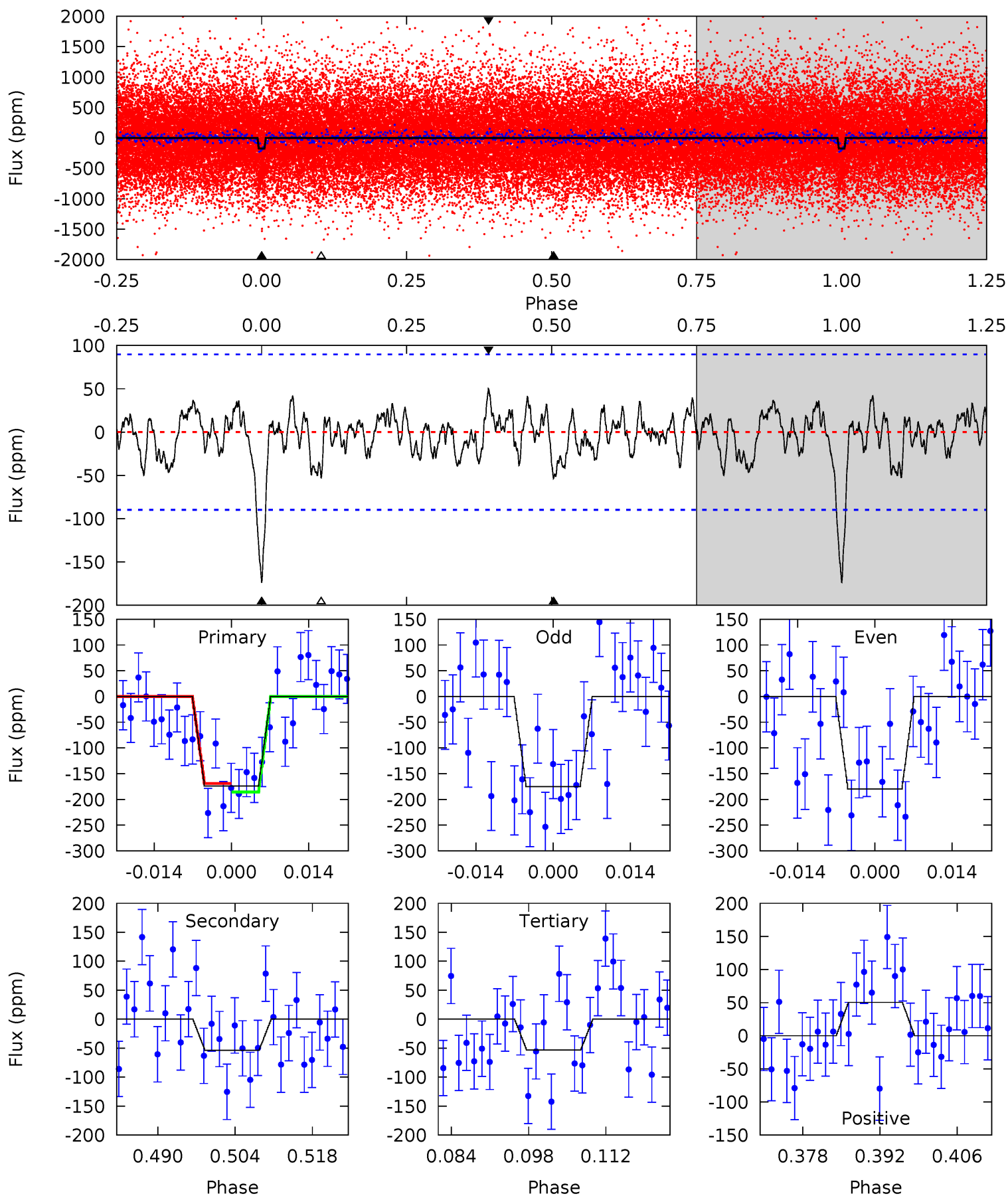
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.62	3.28	2.91	2.48	4.94	2.42	1.11	6.72	7.14	0.37	0.80	0.09	0.89	0.21	0.50



Alt Model-Shift Uniqueness Test

011599038-02, P = 9.279975 Days, E = 124.466194 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.61	2.98	2.94	2.78	4.96	2.46	1.09	6.67	6.83	0.04	0.20	0.13	1.12	0.22	0.45



Stellar Parameters For KIC 011599038

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6052^{+163}_{-199}	$4.456^{+0.070}_{-0.210}$	$-0.260^{+0.300}_{-0.300}$	$0.967^{+0.304}_{-0.121}$	$0.974^{+0.130}_{-0.117}$	$1.518^{+0.559}_{-0.791}$
	+3%/-3%	+2%/-5%	+115%/-115%	+31%/-13%	+13%/-12%	+37%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011599038-02 / KOI 1437.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-57 ± 17	$1.77^{+1.29}_{-1.11}$	1274^{+93}_{-65}	4319^{+2429}_{-764}	71^{+462}_{-49}
Alt.	-54 ± 18	$1.75^{+1.30}_{-1.09}$	1276^{+83}_{-62}	4361^{+2321}_{-849}	72^{+421}_{-51}

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

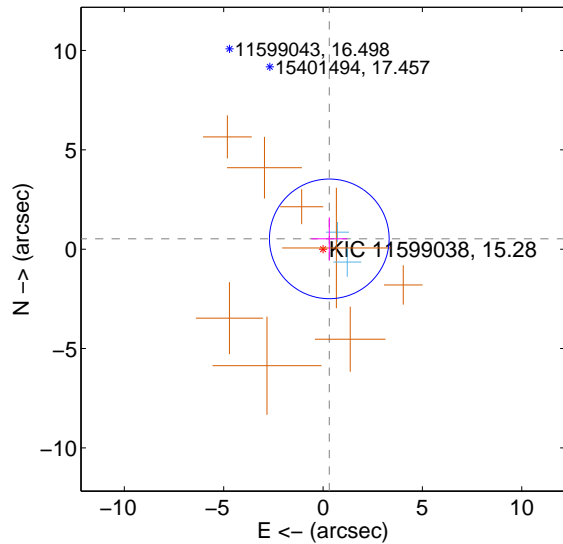
Supplemental centroid analysis for 011599038-02. Kepler magnitude: 15.28. Transit SNR 8.25

There are 2 quarters with good PRF difference image offsets

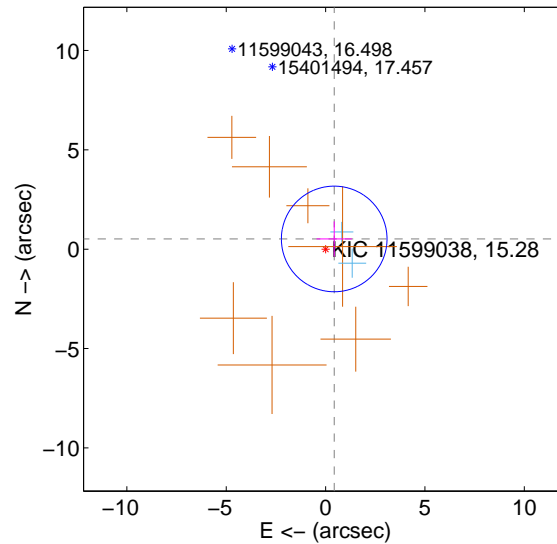
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.607 ± 1.004	0.60	-0.315 ± 0.903	0.519 ± 1.088
PRF-fit source offset from KIC position	0.673 ± 0.886	0.76	-0.434 ± 0.889	0.515 ± 0.884
photometric centroid source offset	4.89 ± 1.75	2.79	-3.14 ± 1.76	3.75 ± 1.75

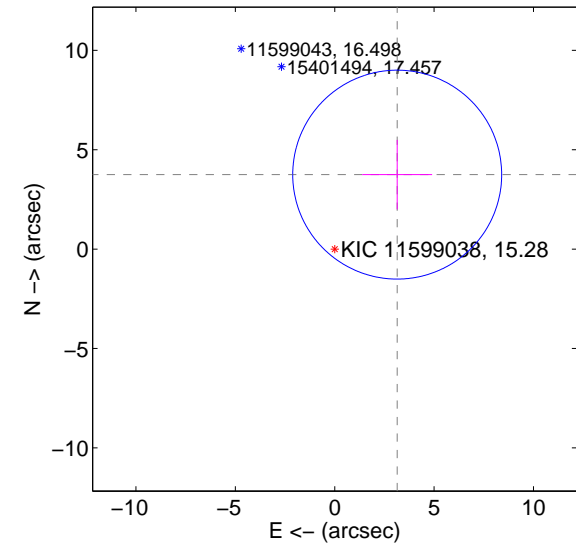
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

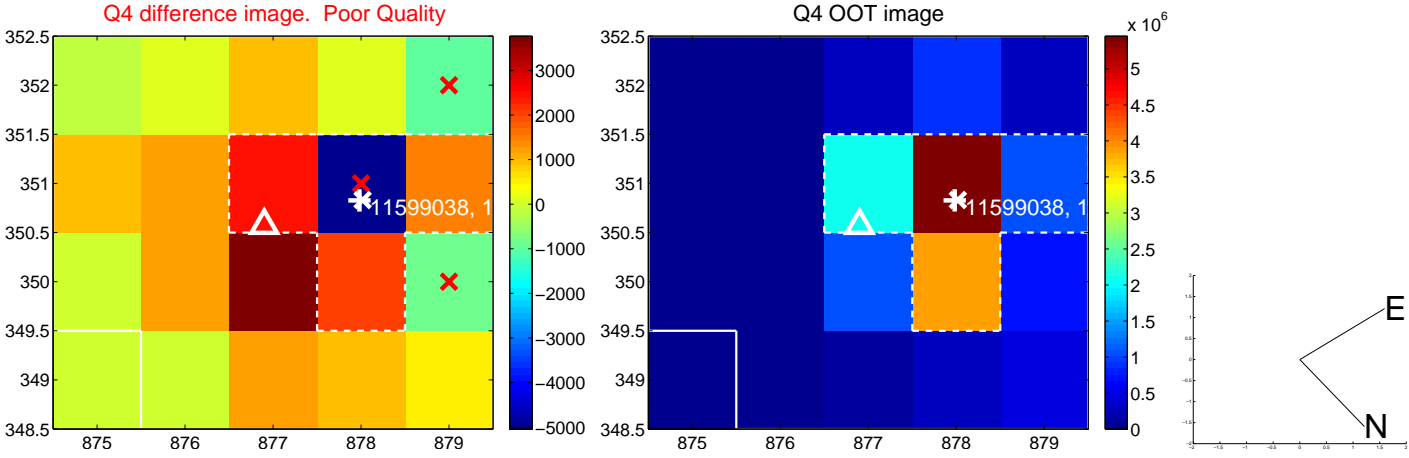
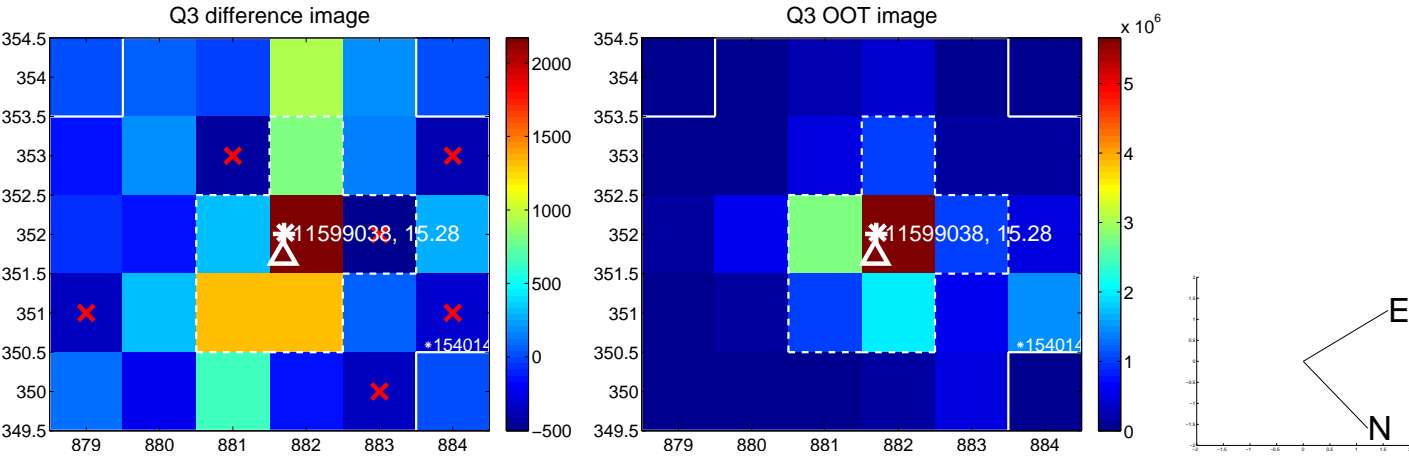
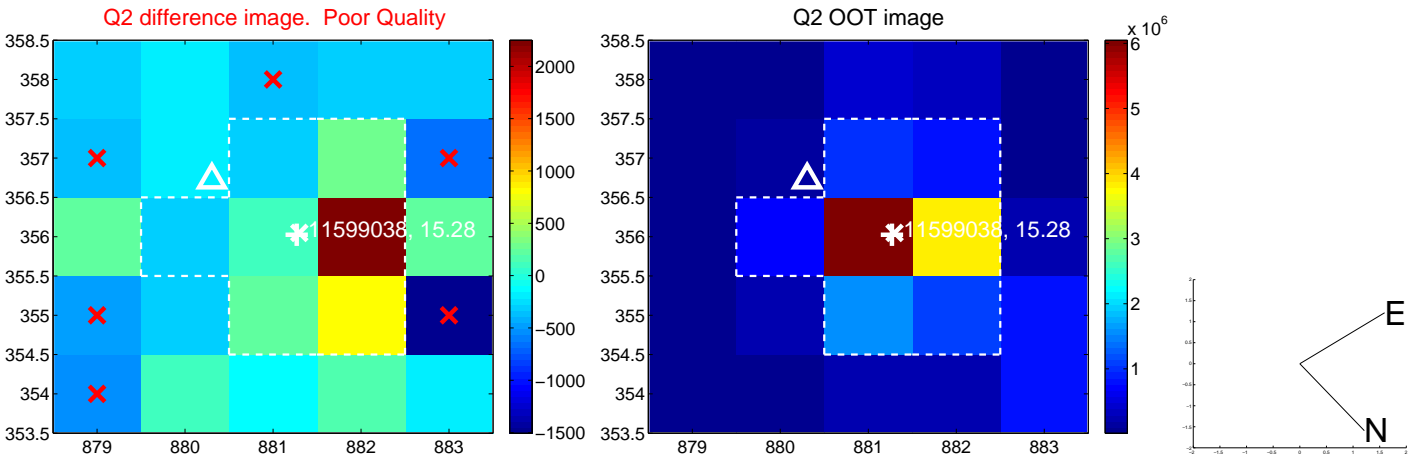
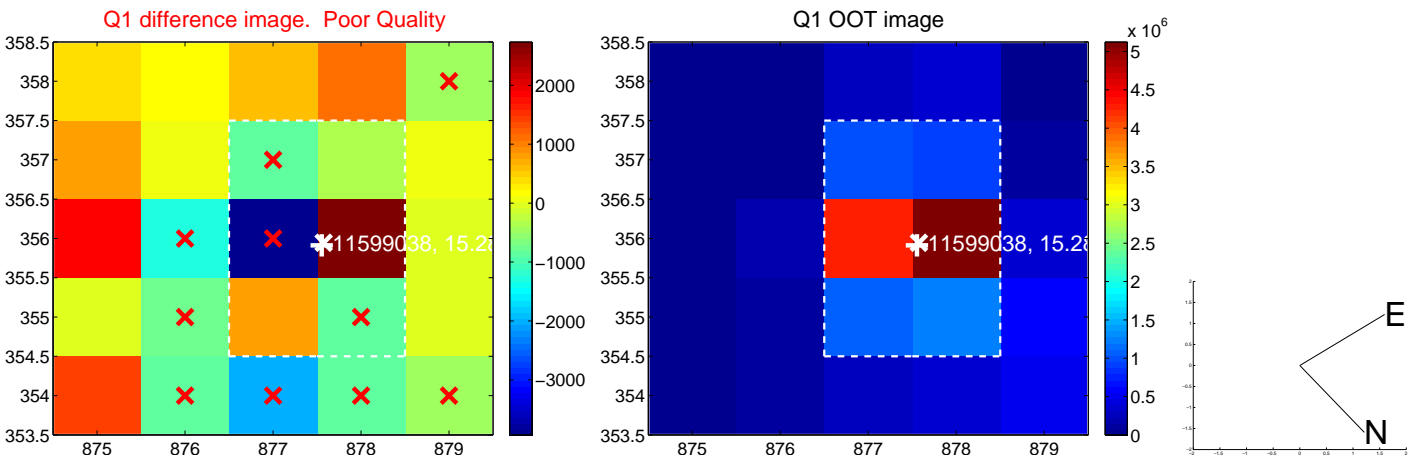


offset from photometric centroids

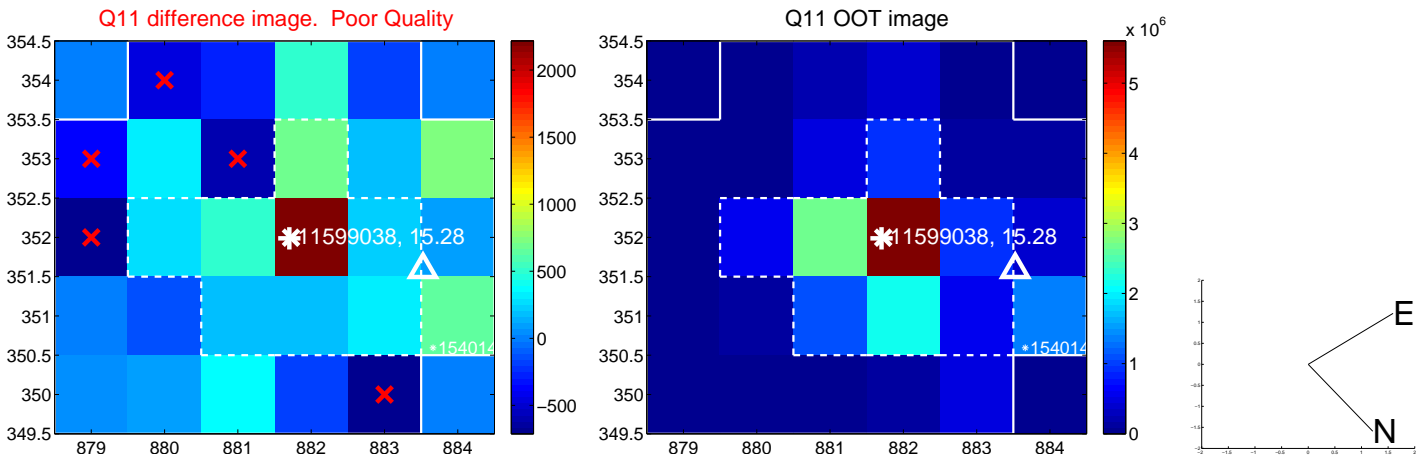
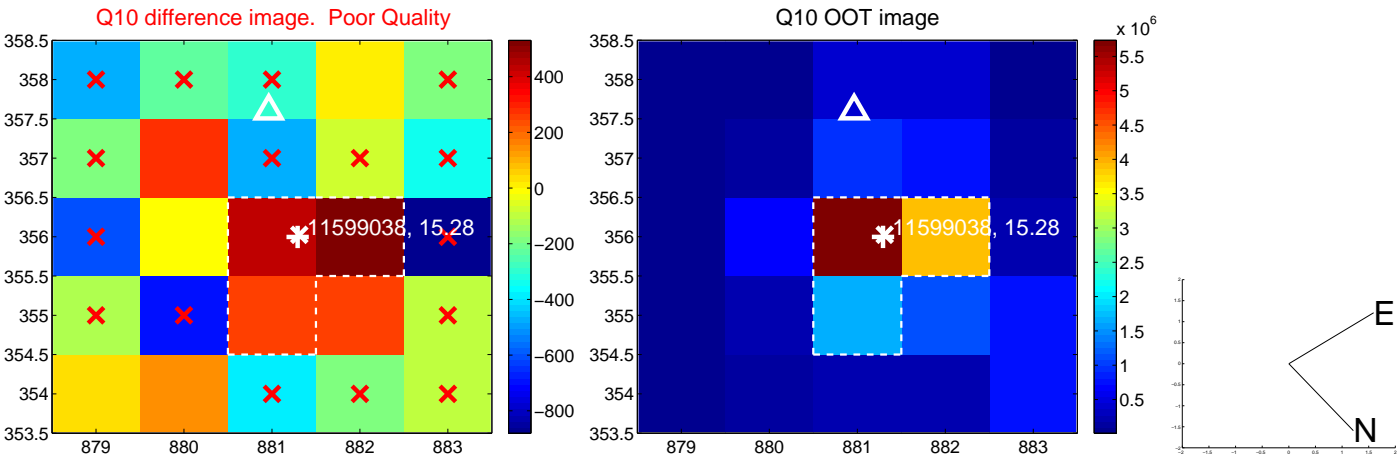
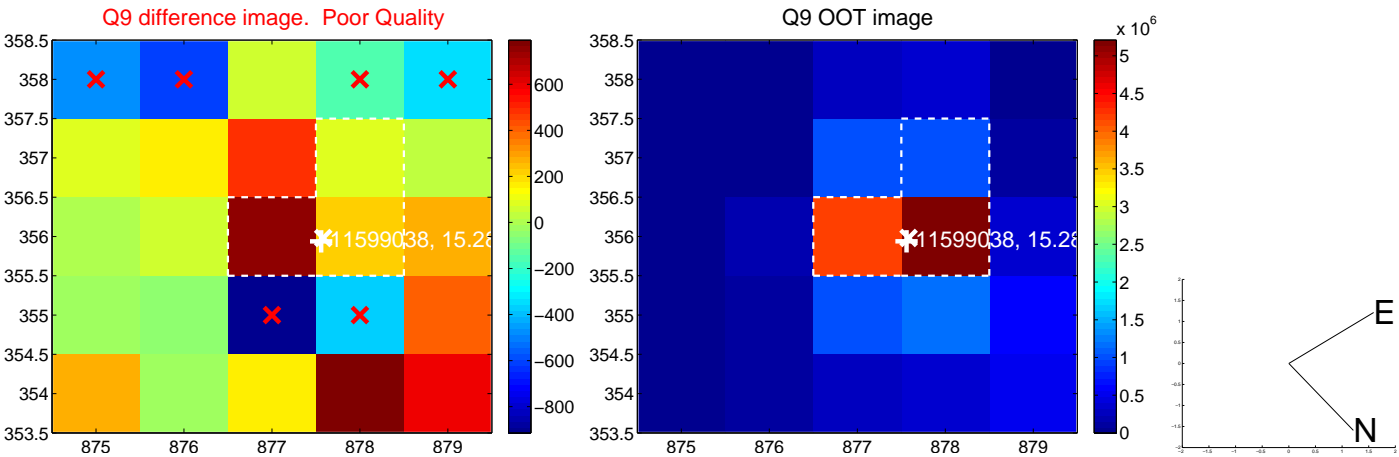


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

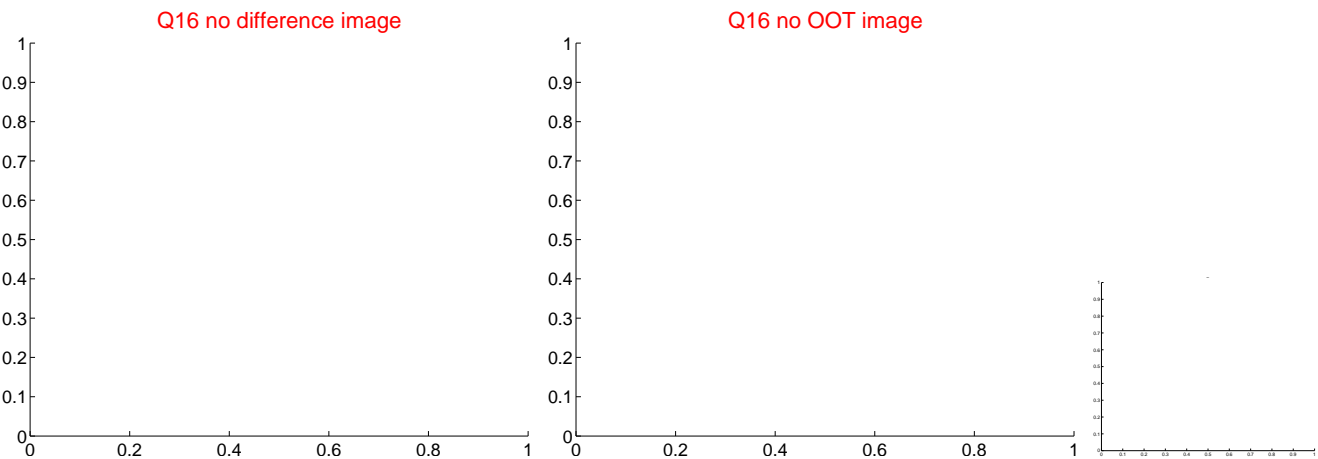
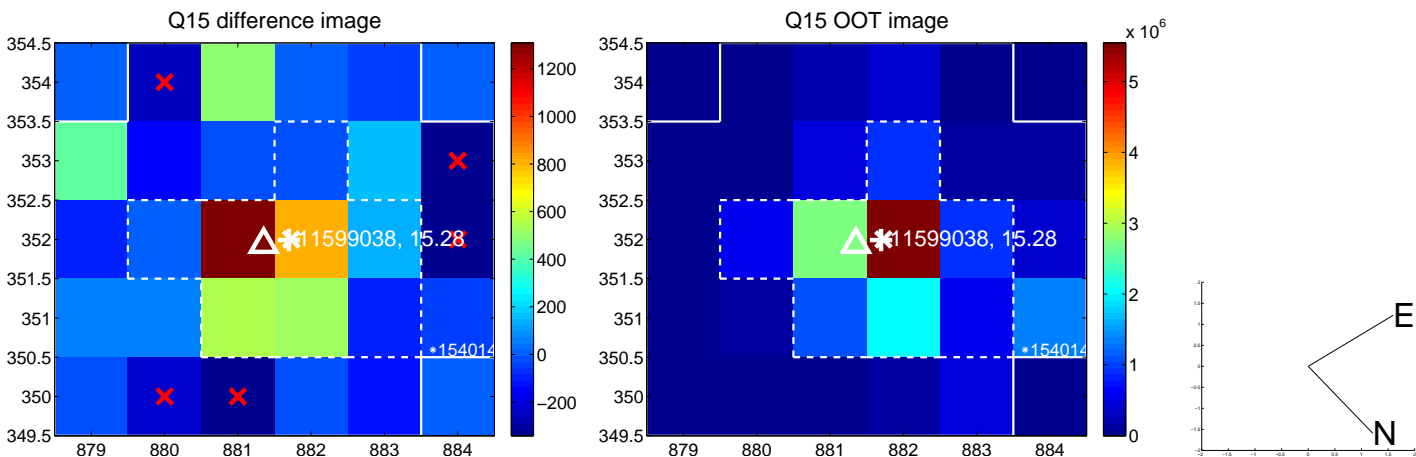
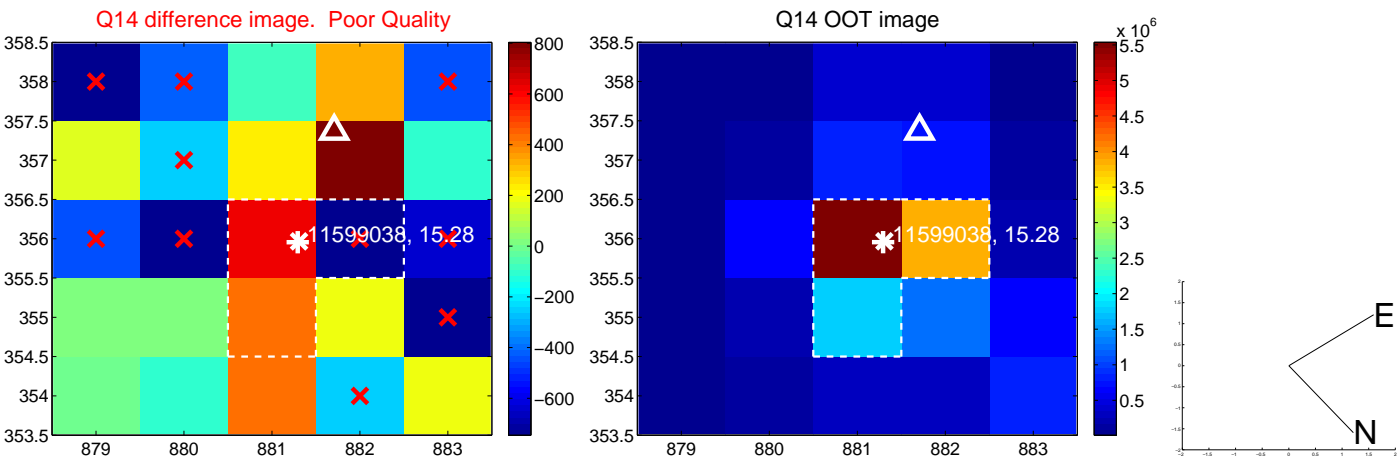
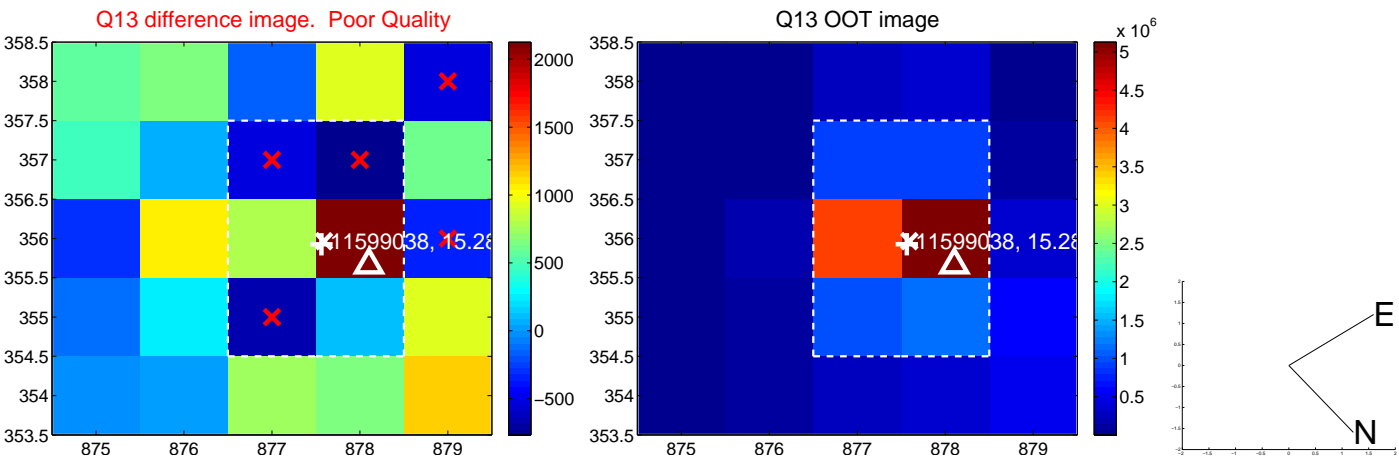
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



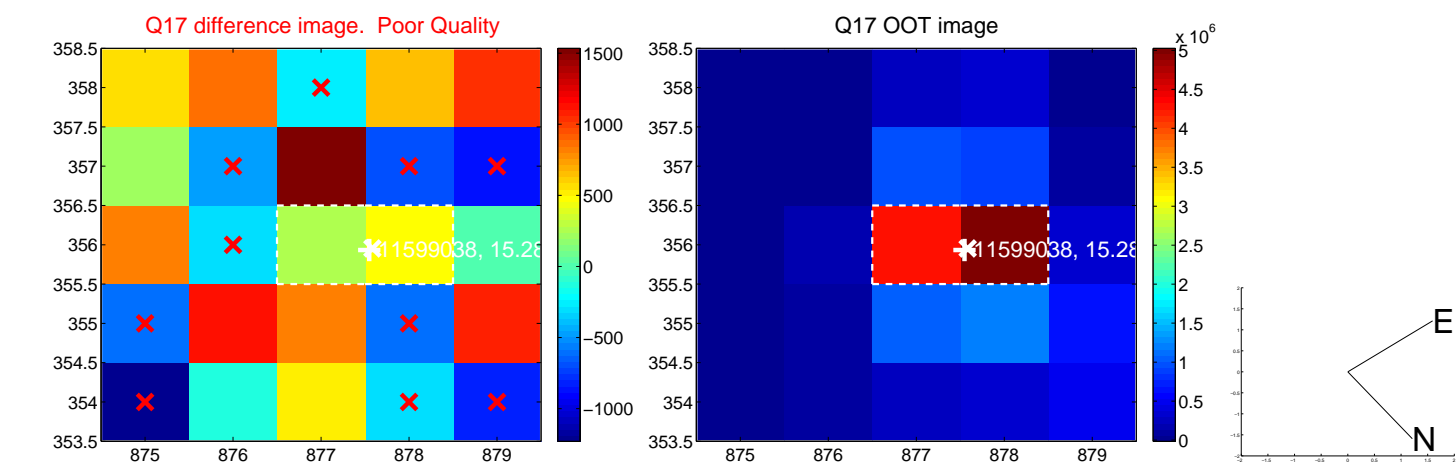
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



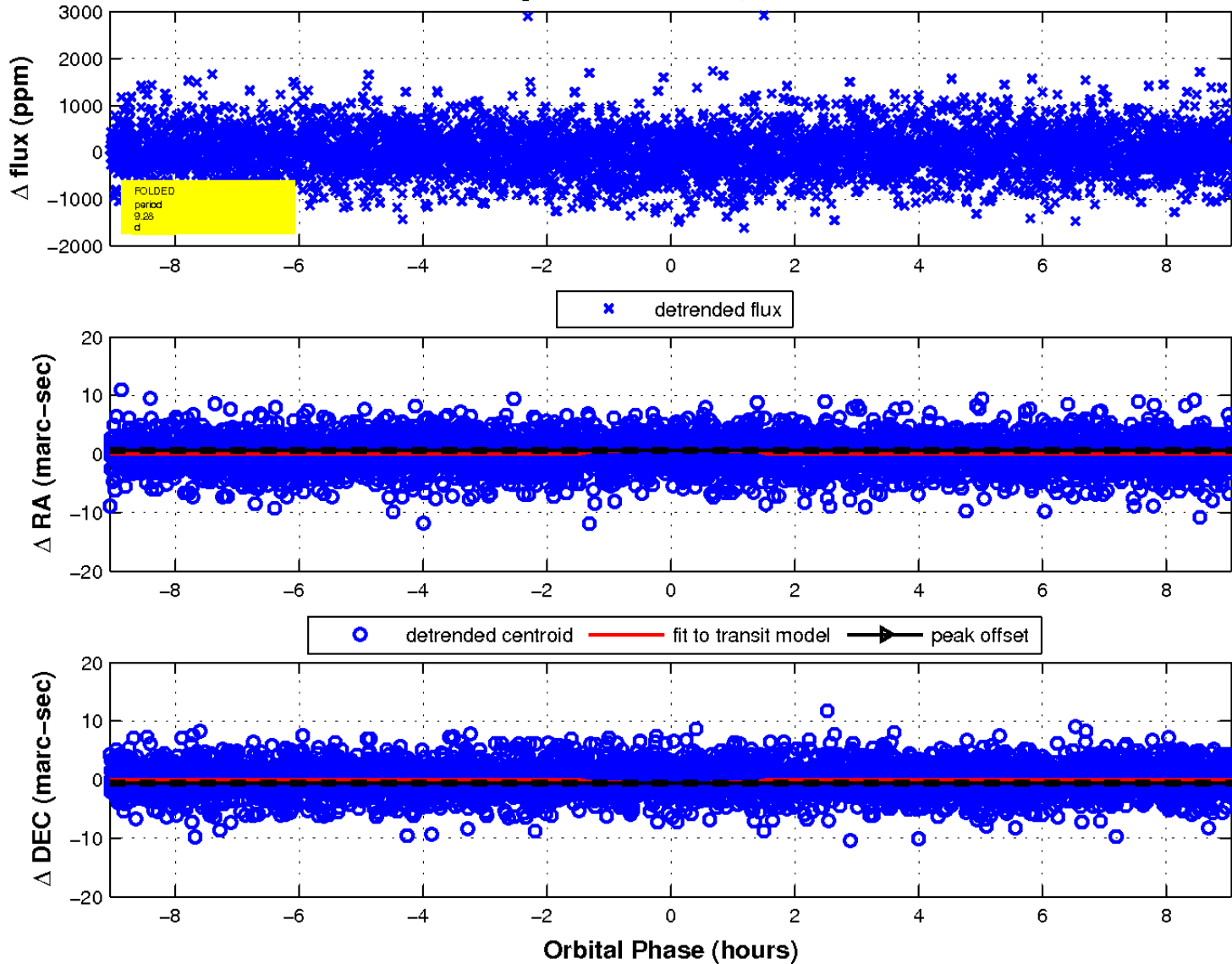
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

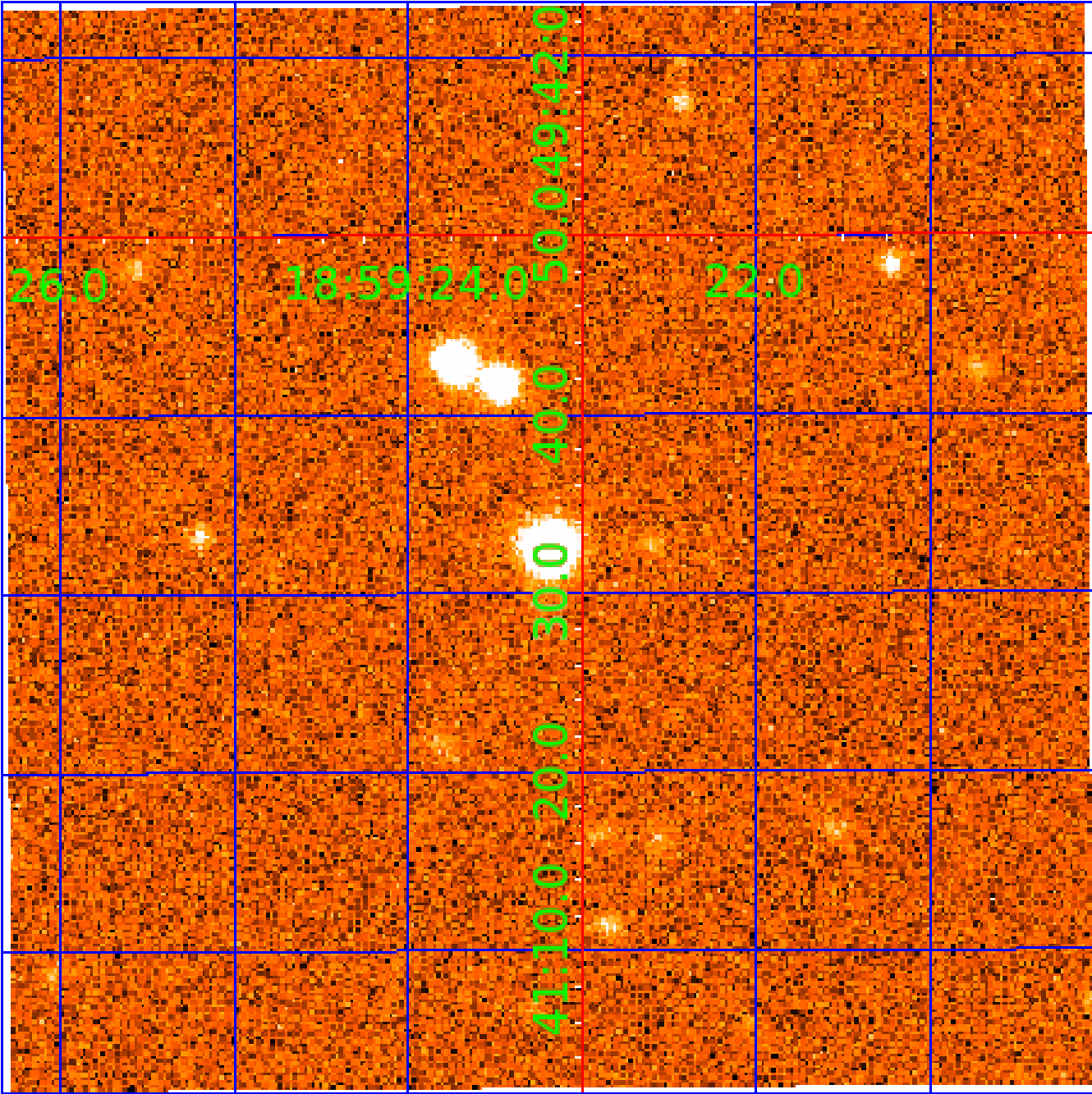


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 011599038

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})
011599038-01	OBS	1437.01	7.017309	133.907914	232.7	3.676	12.5	13.3	0.97	6052	1.72	222.10
011599038-02	OBS	1437.02	9.279960	133.748216	183.2	3.020	7.7	8.3	0.97	6052	1.47	153.01
011599038-03	OBS	1437.03	17.421680	145.903536	198.4	4.858	7.1	7.5	0.97	6052	1.56	66.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011599038-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011599038-02	OBS	FP	0.00	0	0	1	0	HALO_GHOST
011599038-03	OBS	FP	0.47	1	0	0	0	MOD_NONUNIQ_ALT

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

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

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

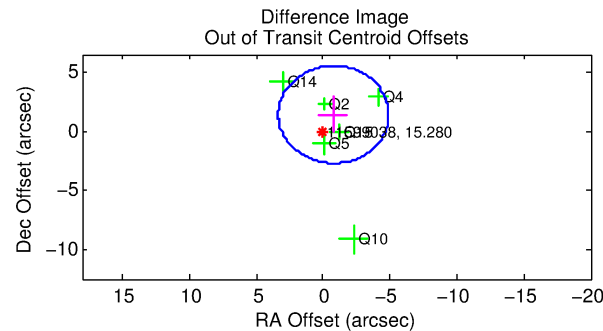
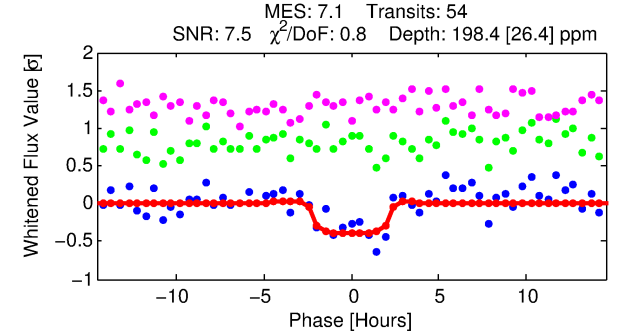
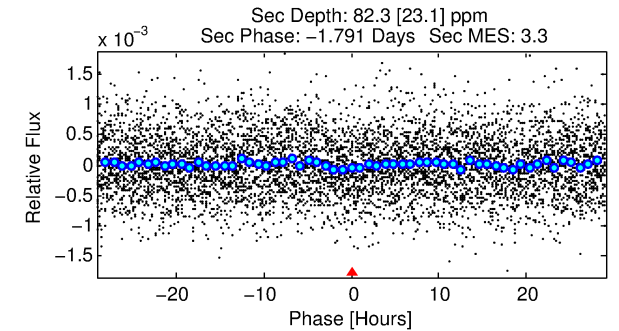
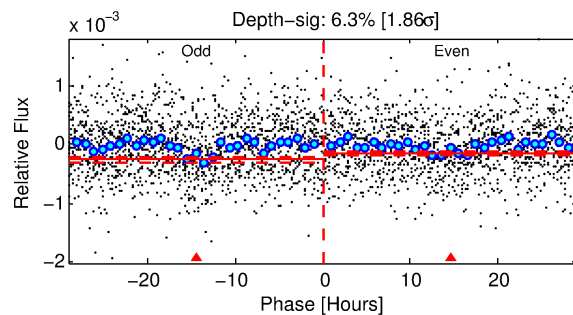
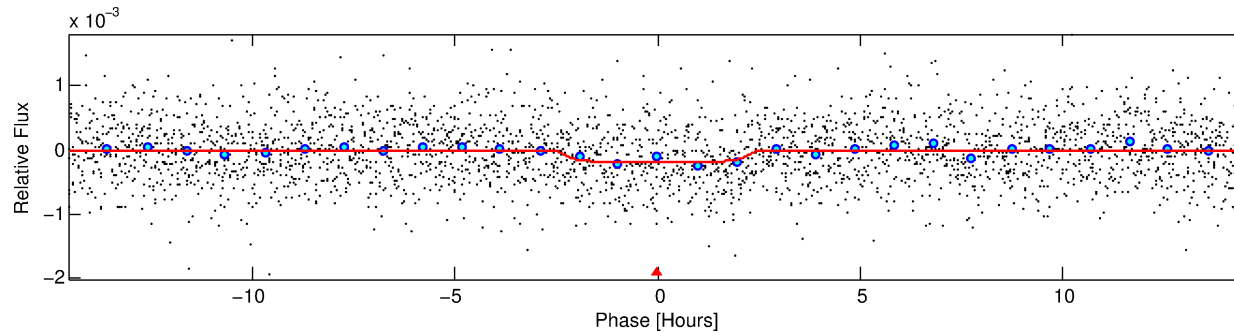
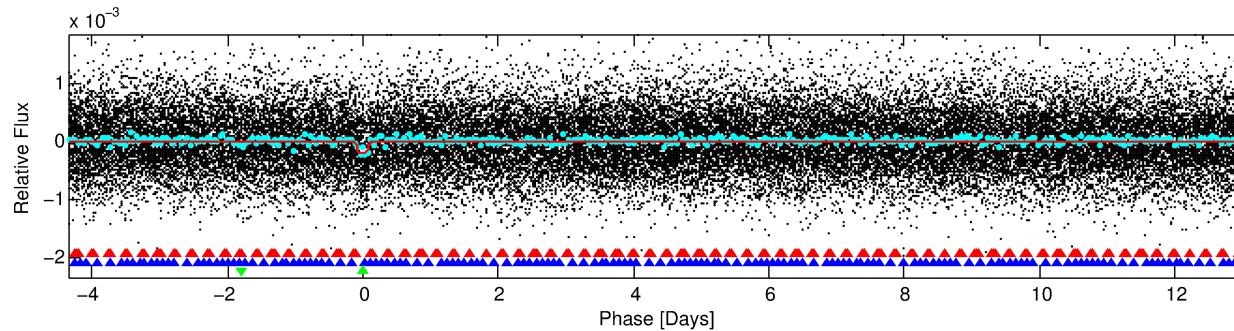
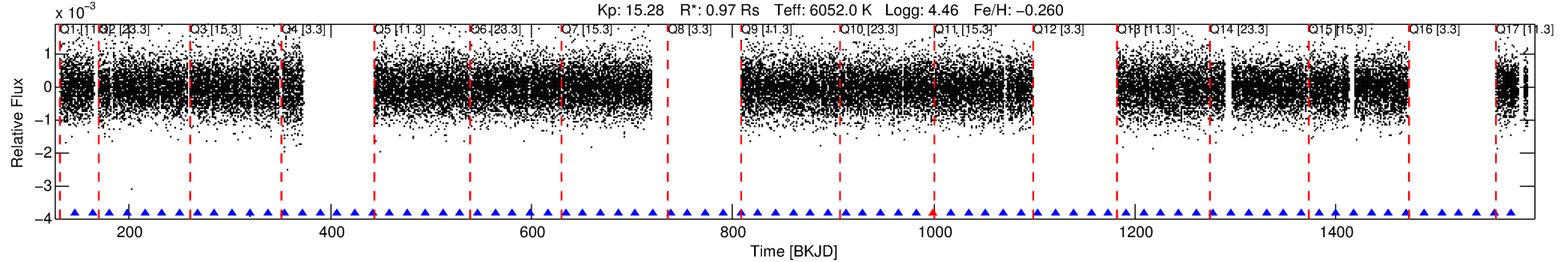
Ephemeris Match Information For 011599038-03

No Significant Match Found

DV One-Page Summary

KIC: 11599038 Candidate: 3 of 3 Period: 17.422 d
KOI: K01437 Corr: No Ephemeris Match

Kp: 15.28 R*: 0.97 Rs Teff: 6052.0 K Logg: 4.46 Fe/H: -0.260



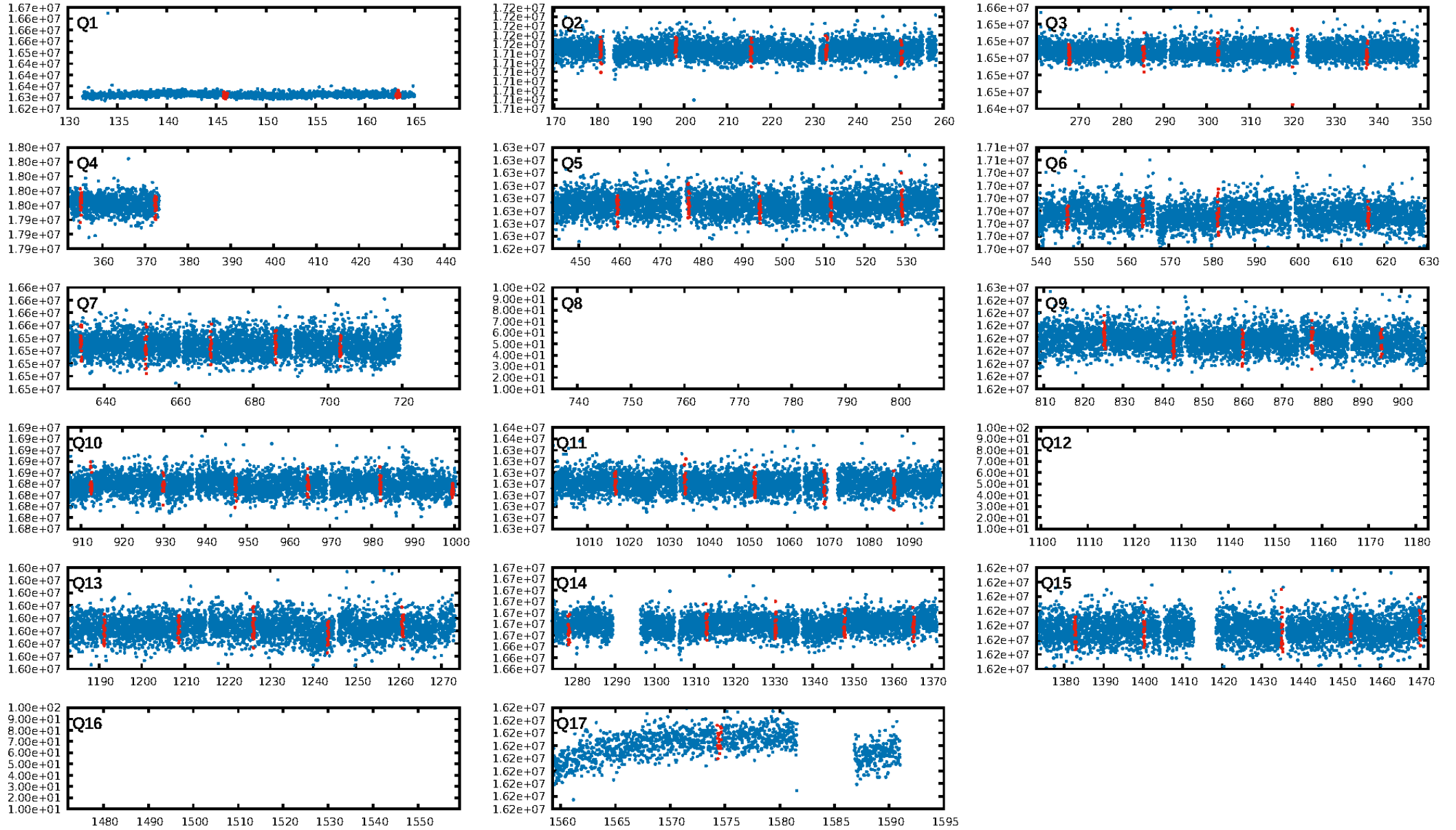
DV Fit Results:

Period = 17.42168 [0.00027] d
Epoch = 145.9035 [0.0122] BKJD
Rp/R* = 0.0148 [0.0095]
a/R* = 14.47 [47.55]
b = 0.87 [0.96]
Seff = 66.07 [26.85]
Teq = 727 [74] K
Rp = 1.56 [1.11] Re
a = 0.1304 [0.0345] AU
Ag = 315.49 [429.96] [0.73σ]
Teffp = 4737 [1556] K [2.57σ]

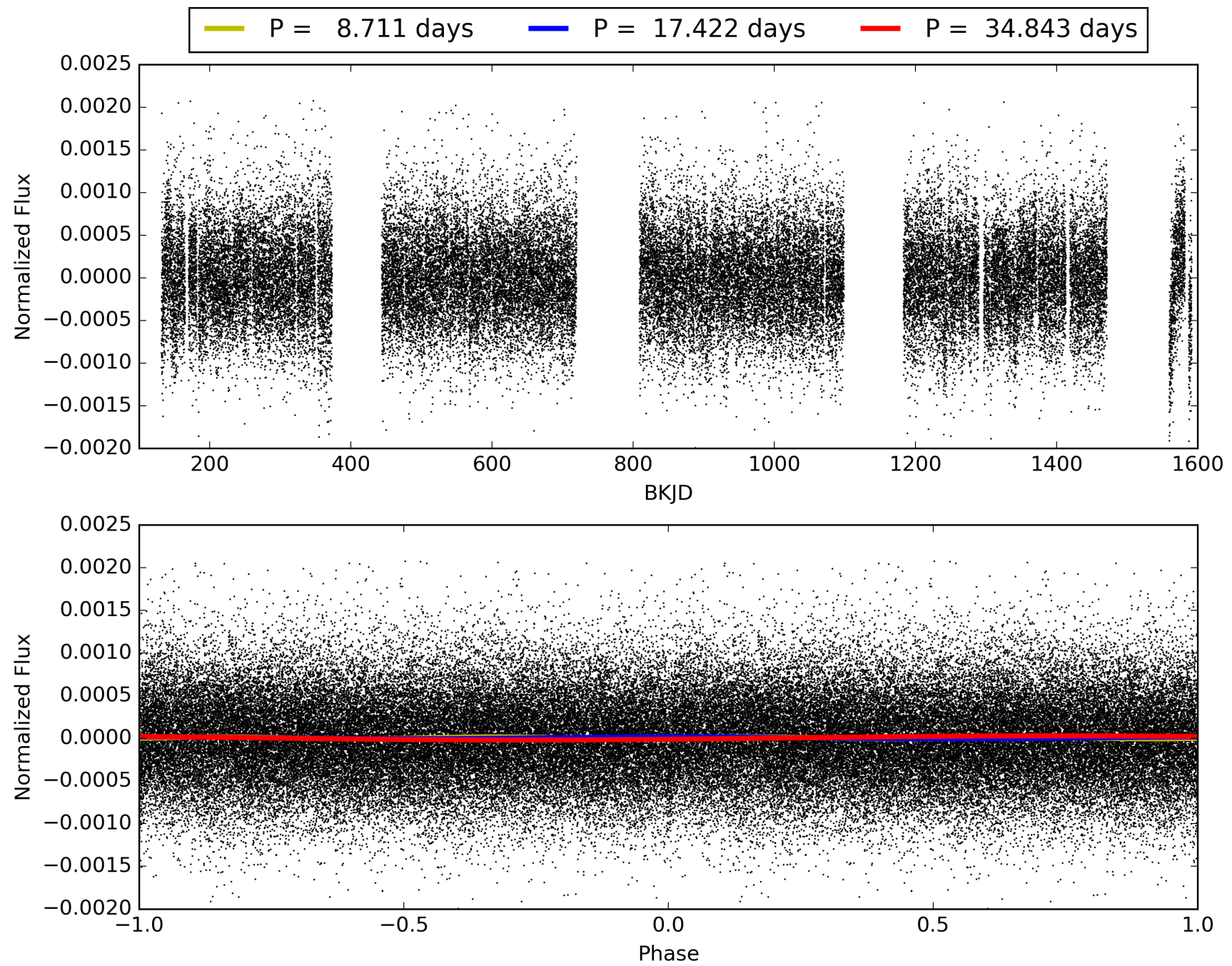
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [34.16σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.59e-12
RollingBand-fgt: 0.98 [49/50]
GhostDiagnostic-chr: 2.223
Centroid-sig: 55.9%
Centroid-so: 0.454 arcsec [0.24σ]
OotOffset-rm: 1.603 arcsec [1.17σ]
OotOffset-st: 3/1/1/1 [6]
KicOffset-rm: 1.650 arcsec [1.16σ]
KicOffset-st: 3/1/1/1 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011599038-03, PDC Light Curves

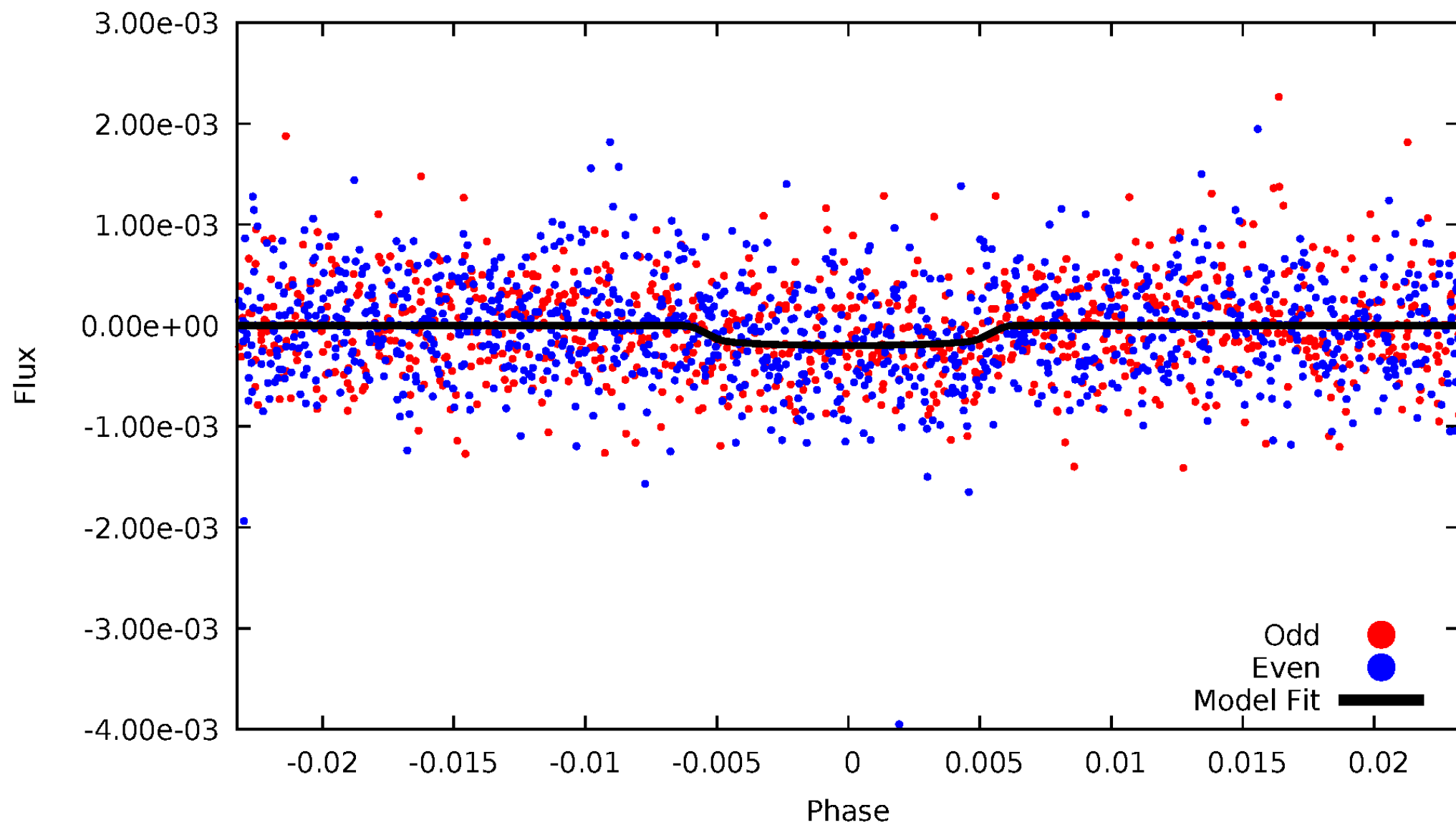


TCE 011599038-03



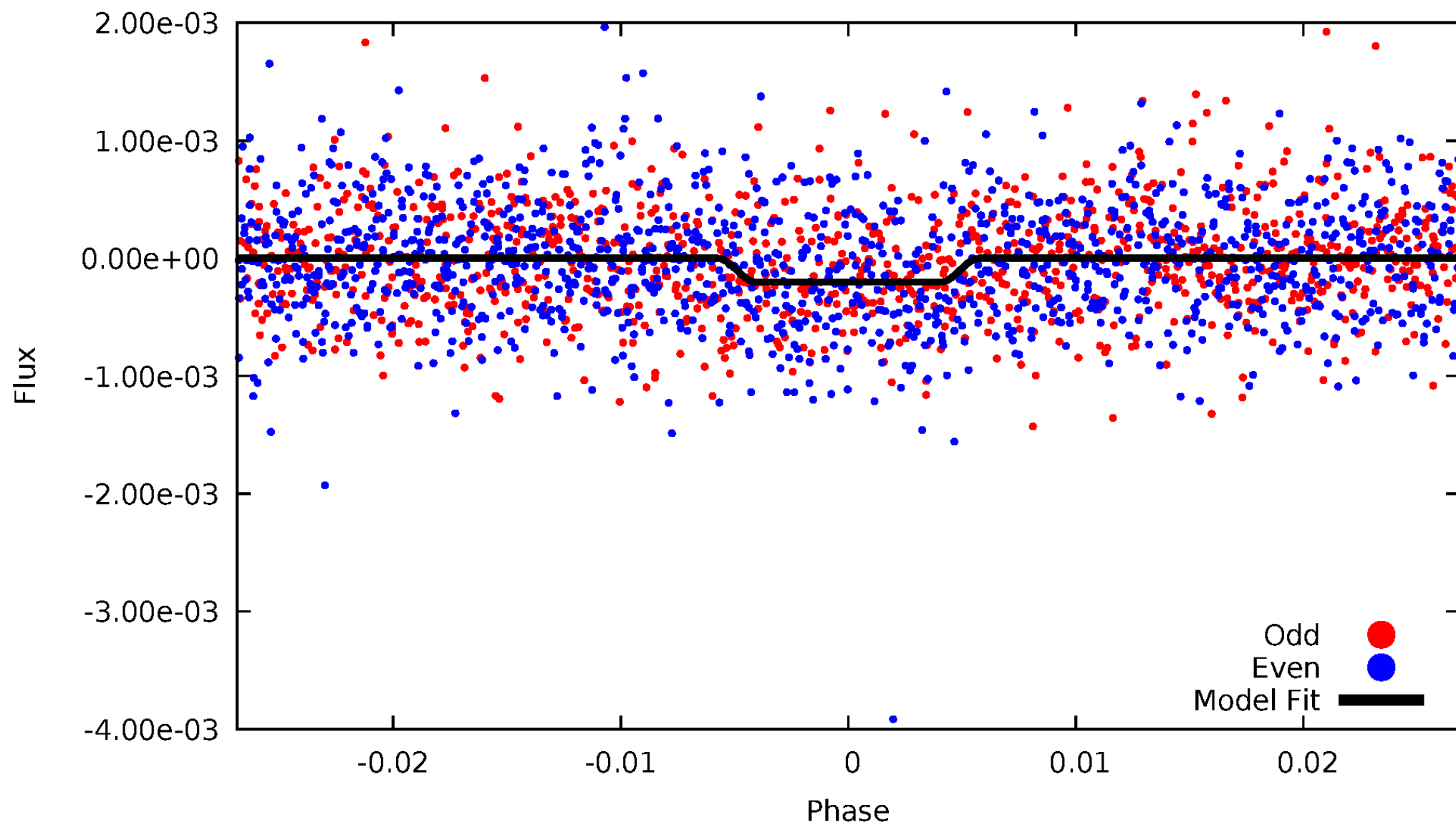
DV Odd/Even

TCE 011599038-03

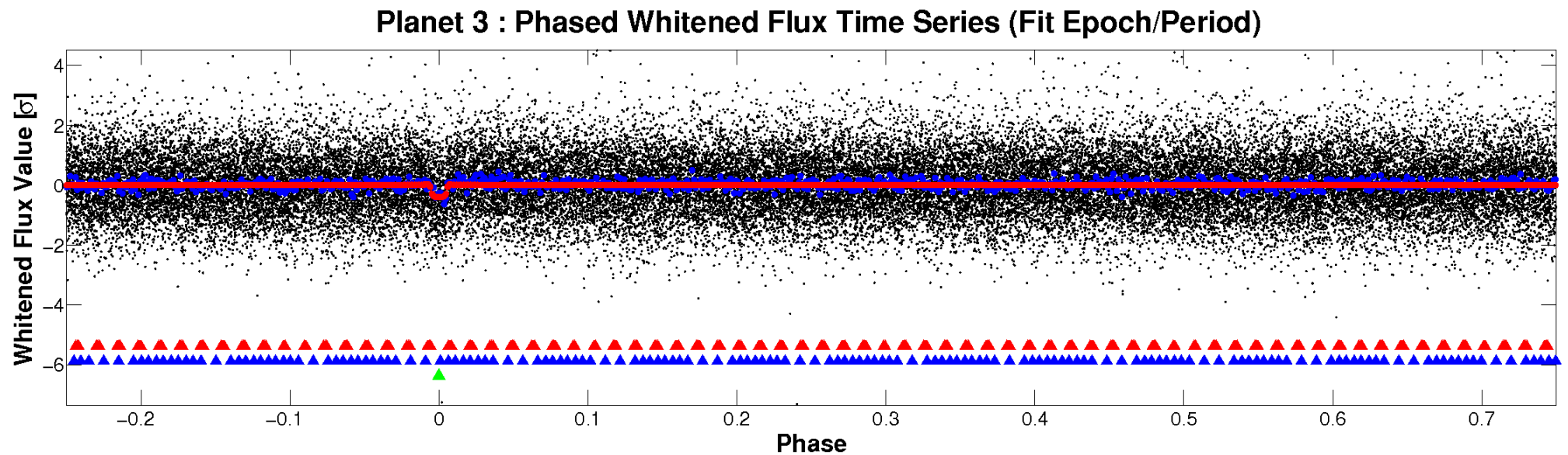
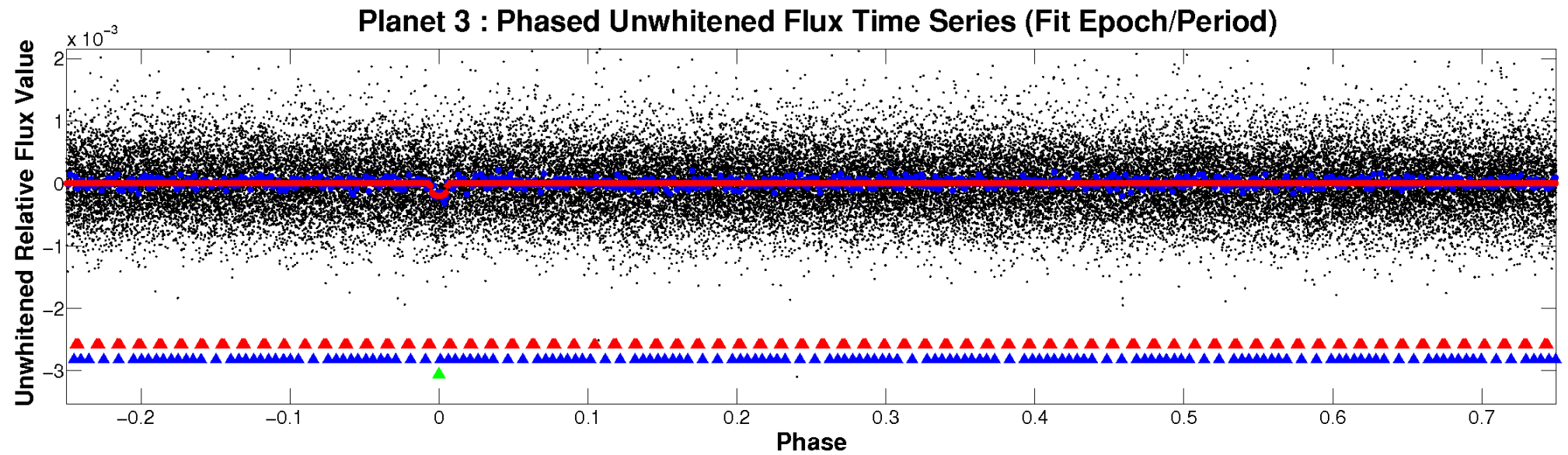


ALT Odd/Even

TCE 011599038-03

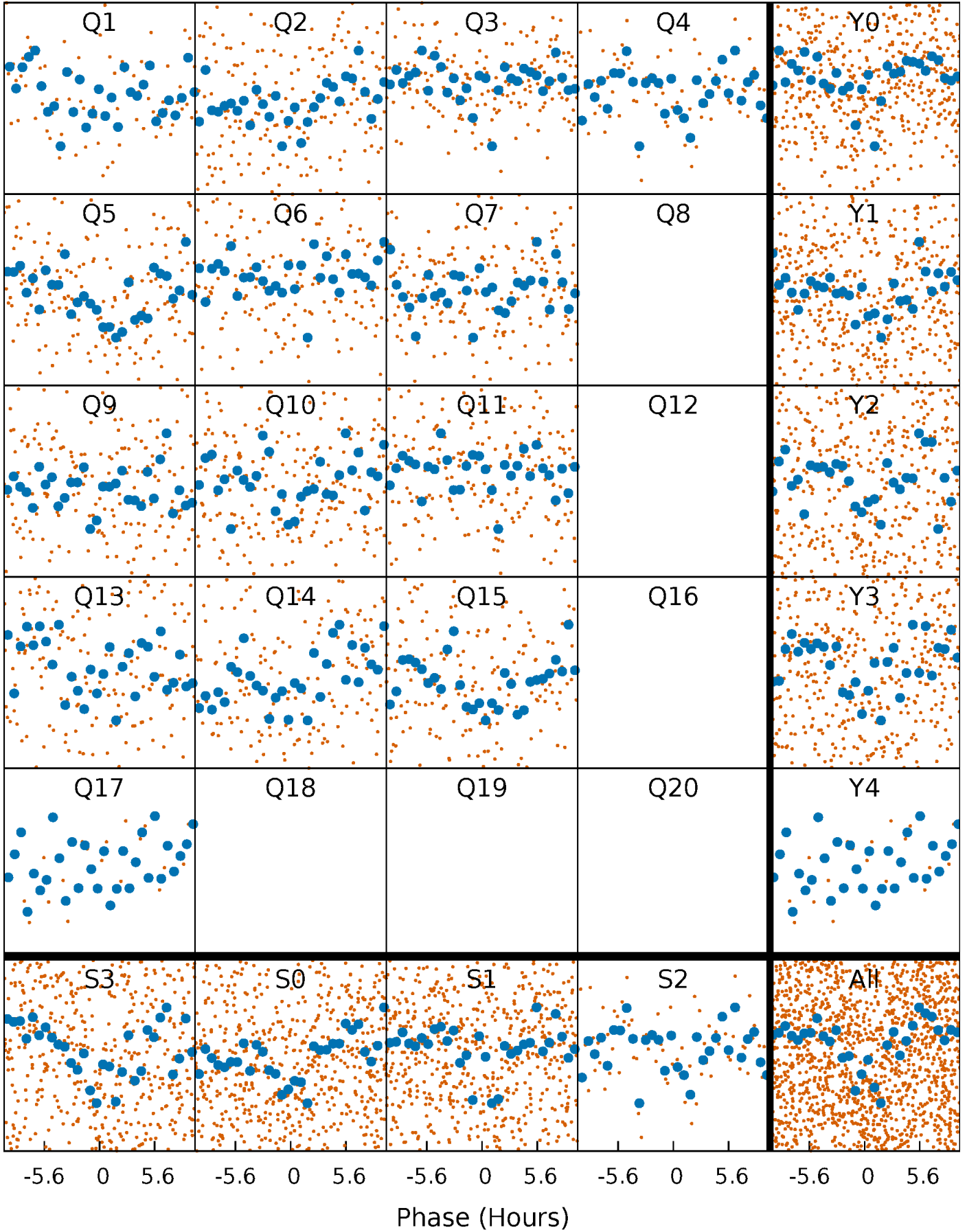


Non-Whitened Vs. Whitened Light Curve



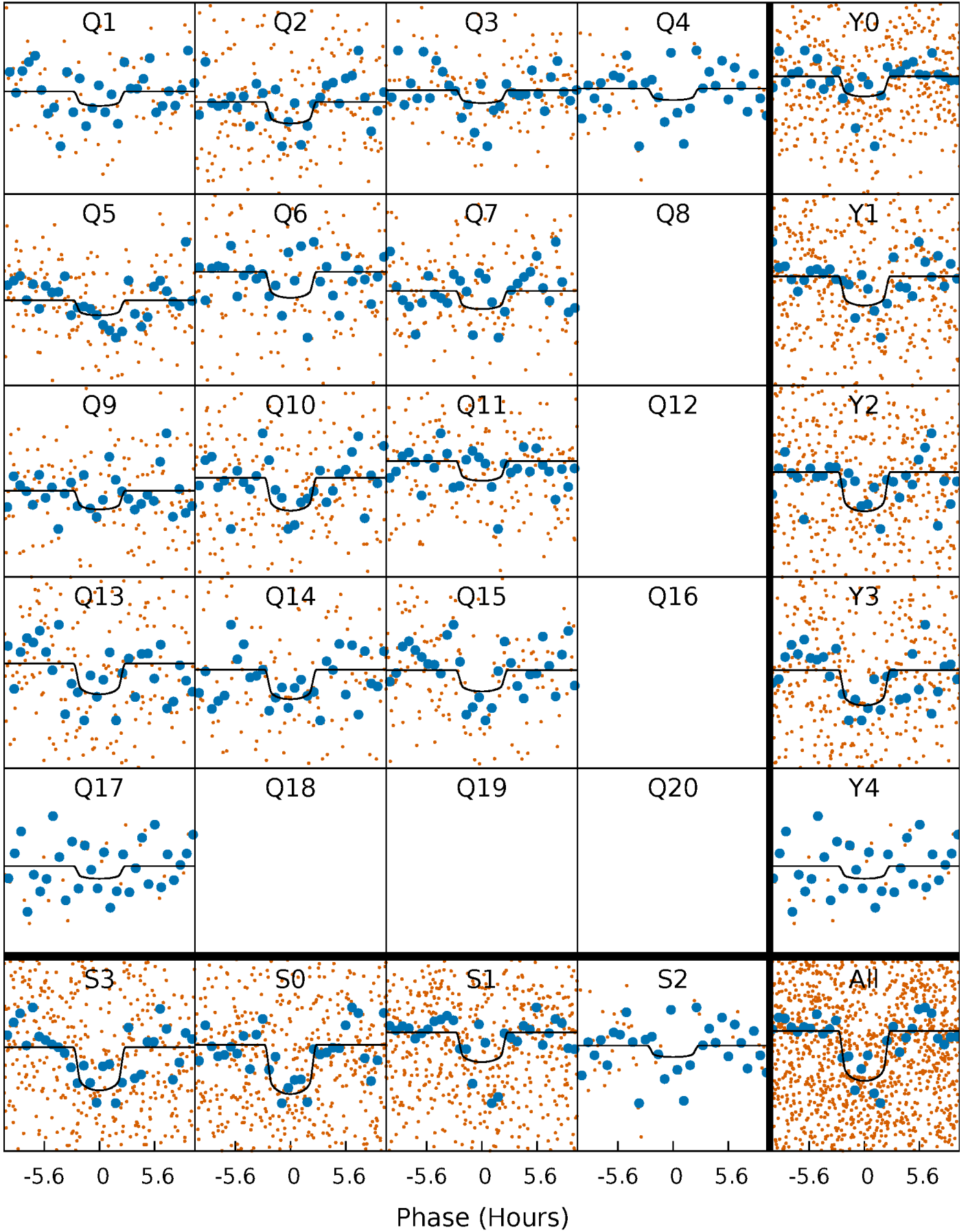
PDC Quarter-Phased Transit Curves

TCE 011599038-03 P= 17.421680 Days $T_0=145.903536$ (BKJD)



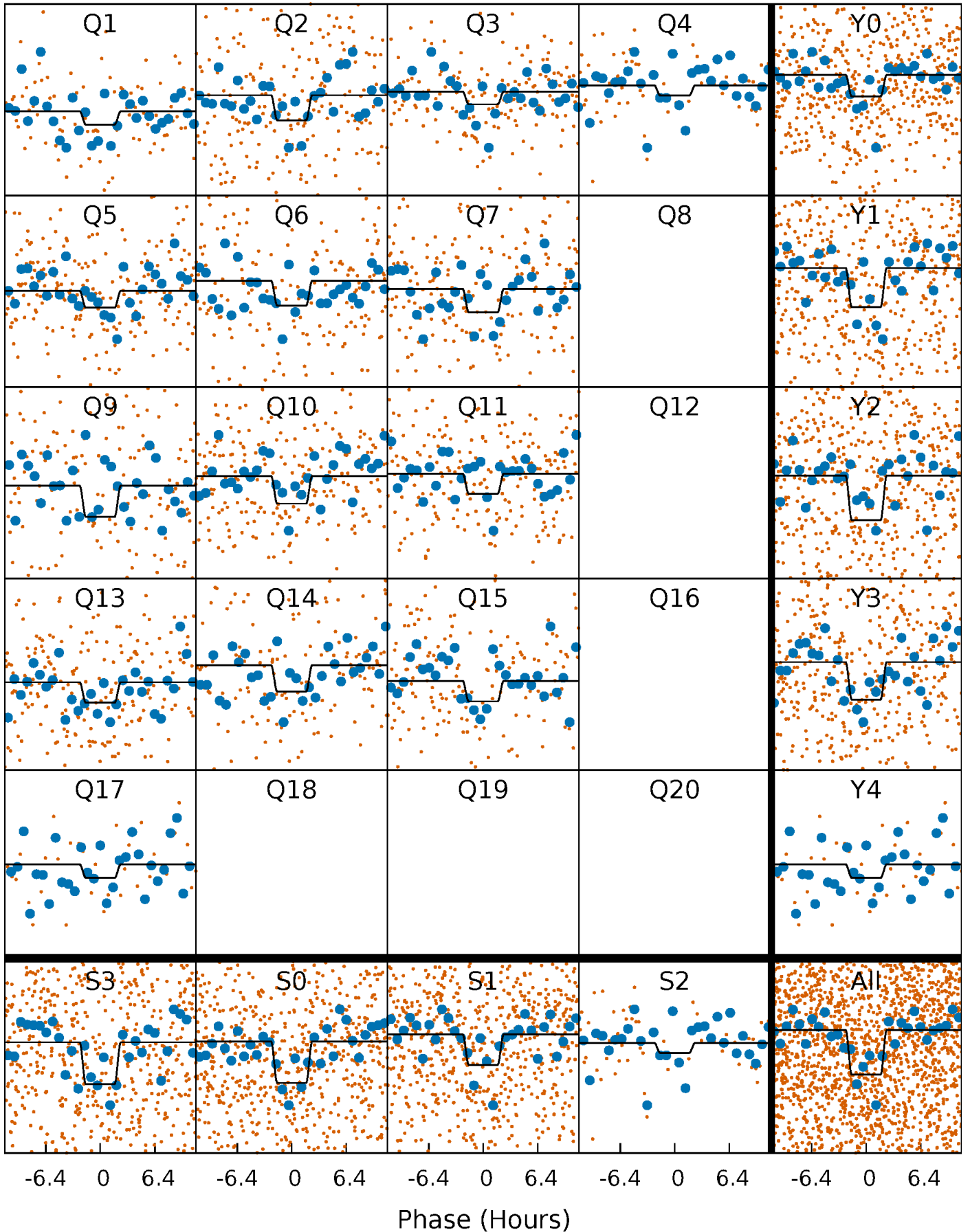
DV Quarter-Phased Transit Curves

TCE 011599038-03 P= 17.421680 Days $T_0=145.903536$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

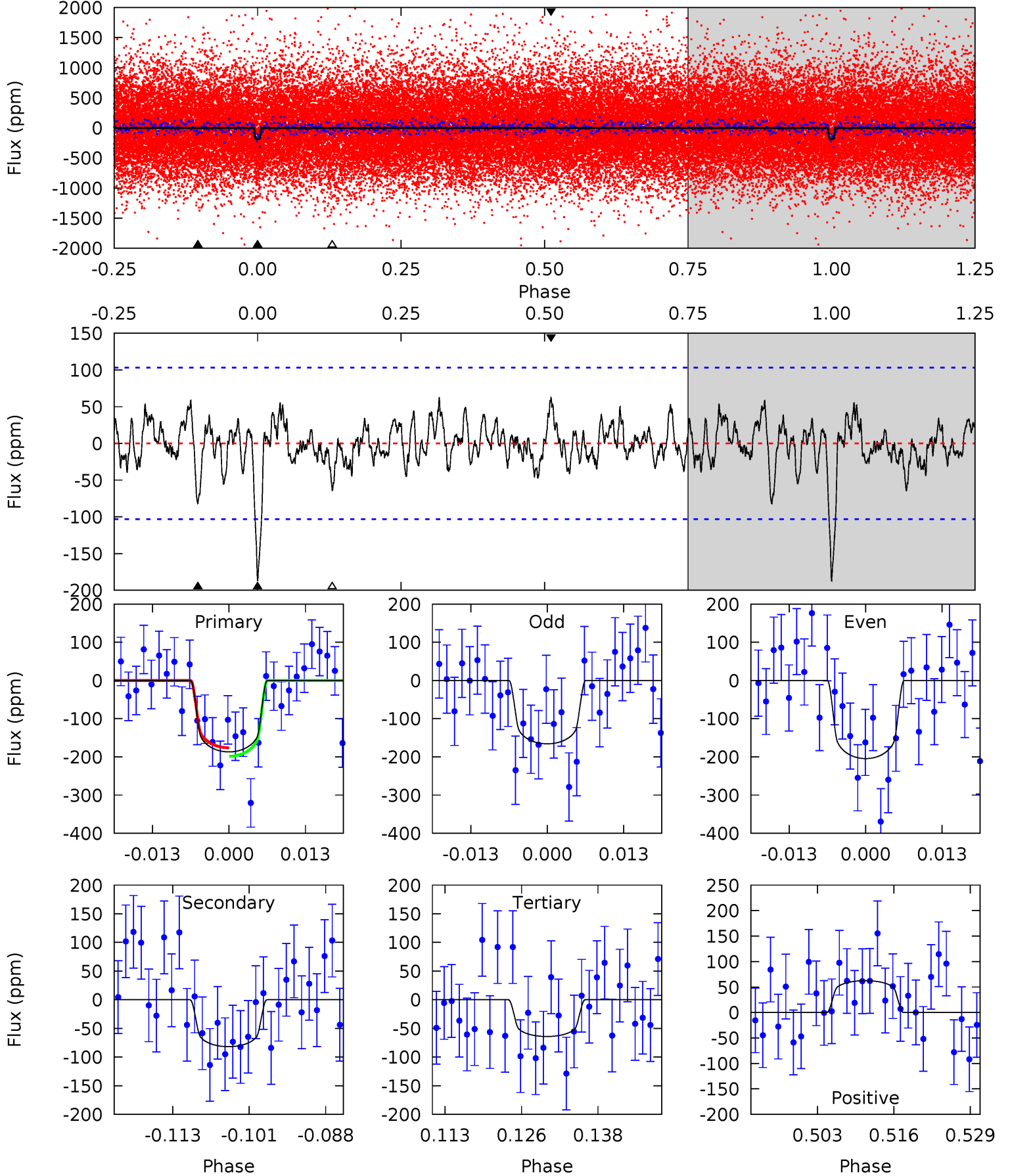
TCE 011599038-03 P= 17.422137 Days $T_0=145.898507$ (BKJD)



DV Model-Shift Uniqueness Test

011599038-03, P = 17.421680 Days, E = 128.481856 Days

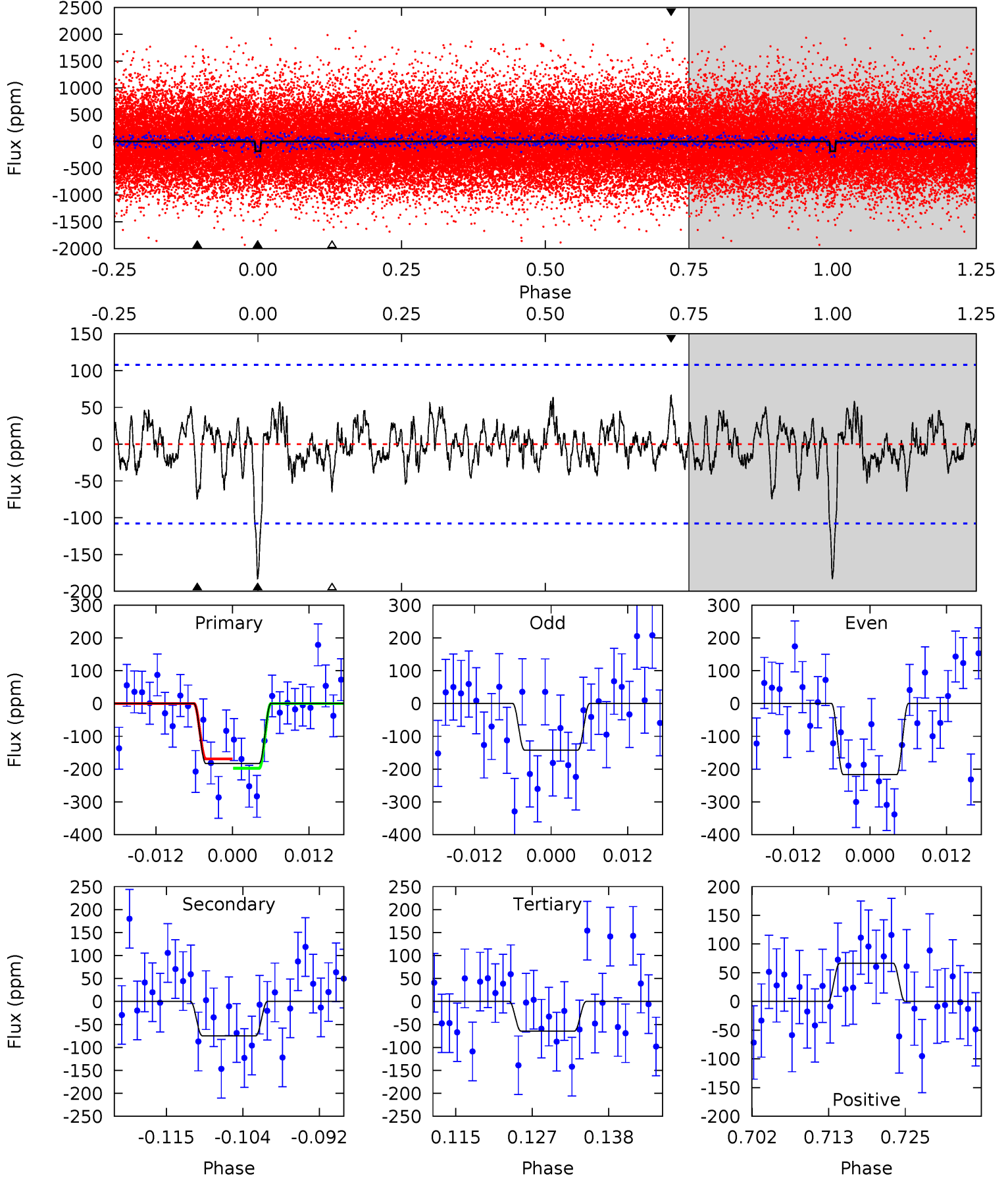
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.03	3.95	3.10	3.02	4.98	2.50	1.09	5.93	6.01	0.86	0.94	0.93	0.99	0.25	0.54



Alt Model-Shift Uniqueness Test

011599038-03, P = 17.422137 Days, E = 128.476370 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.46	3.46	2.99	3.09	5.00	2.53	1.04	5.48	5.38	0.48	0.38	1.73	1.02	0.27	0.67



Stellar Parameters For KIC 011599038

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6052^{+163}_{-199}	$4.456^{+0.070}_{-0.210}$	$-0.260^{+0.300}_{-0.300}$	$0.967^{+0.304}_{-0.121}$	$0.974^{+0.130}_{-0.117}$	$1.518^{+0.559}_{-0.791}$
	+3%/-3%	+2%/-5%	+115%/-115%	+31%/-13%	+13%/-12%	+37%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011599038-03 / KOI 1437.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-82 ± 21	$1.73^{+1.00}_{-0.98}$	1036^{+77}_{-56}	4741^{+2366}_{-808}	250^{+1110}_{-155}
Alt.	-75 ± 22	$1.62^{+1.03}_{-0.91}$	1032^{+76}_{-50}	4692^{+2404}_{-773}	243^{+1121}_{-148}

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

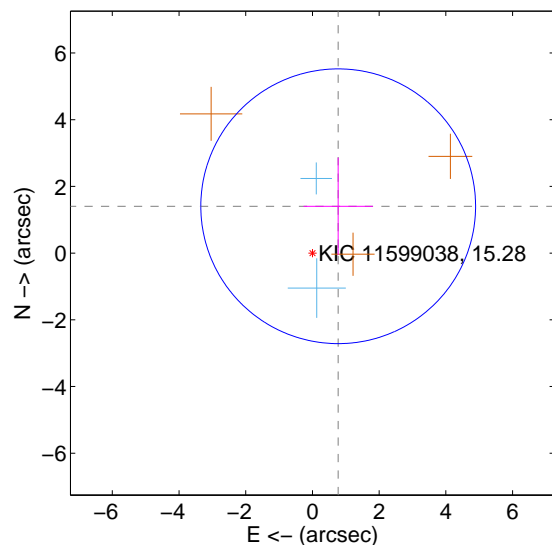
Supplemental centroid analysis for 011599038-03. Kepler magnitude: 15.28. Transit SNR 7.49

There are 2 quarters with good PRF difference image offsets

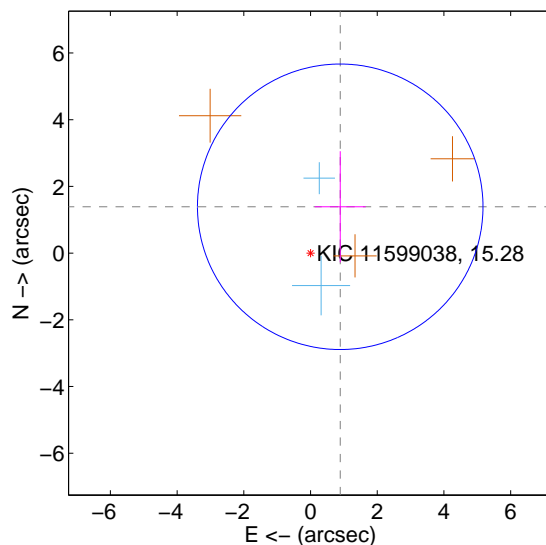
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.603 ± 1.373	1.17	-0.772 ± 1.038	1.404 ± 1.459
PRF-fit source offset from KIC position	1.650 ± 1.427	1.16	-0.890 ± 0.766	1.389 ± 1.667
photometric centroid source offset	0.45 ± 1.86	0.24	-0.31 ± 1.87	-0.33 ± 1.86

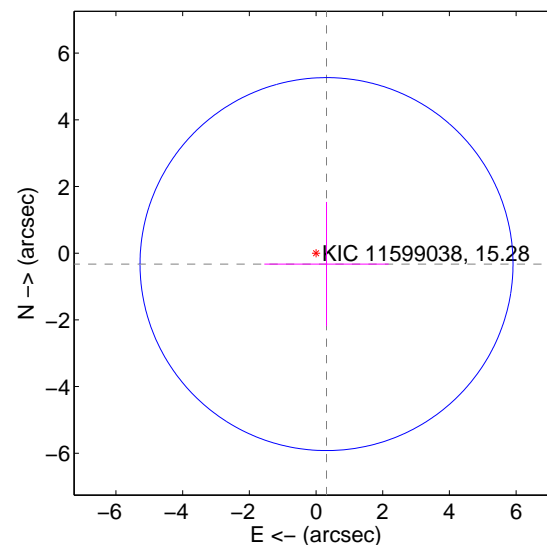
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

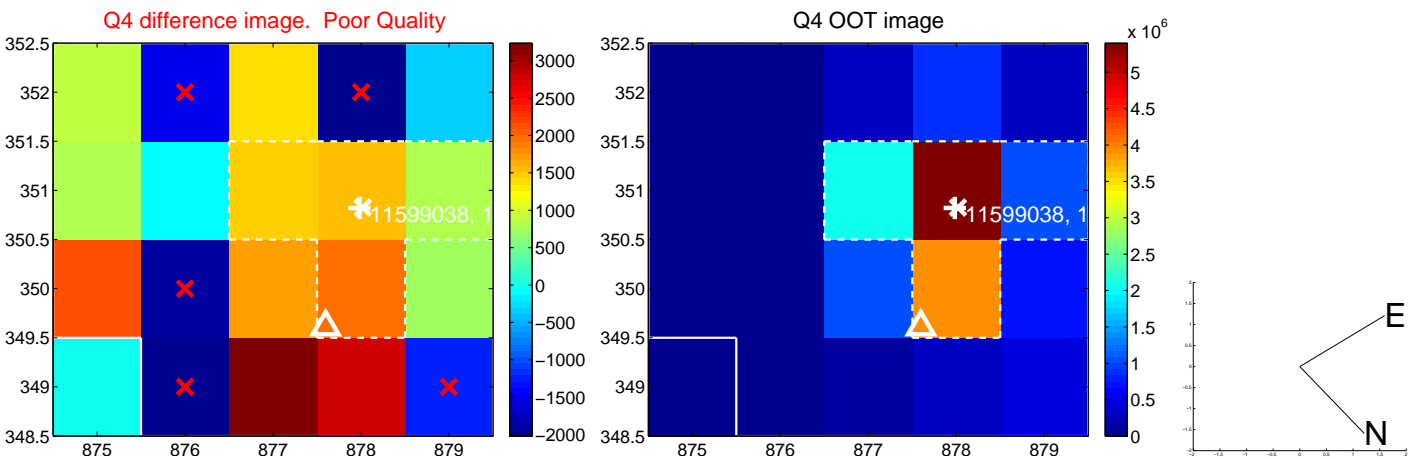
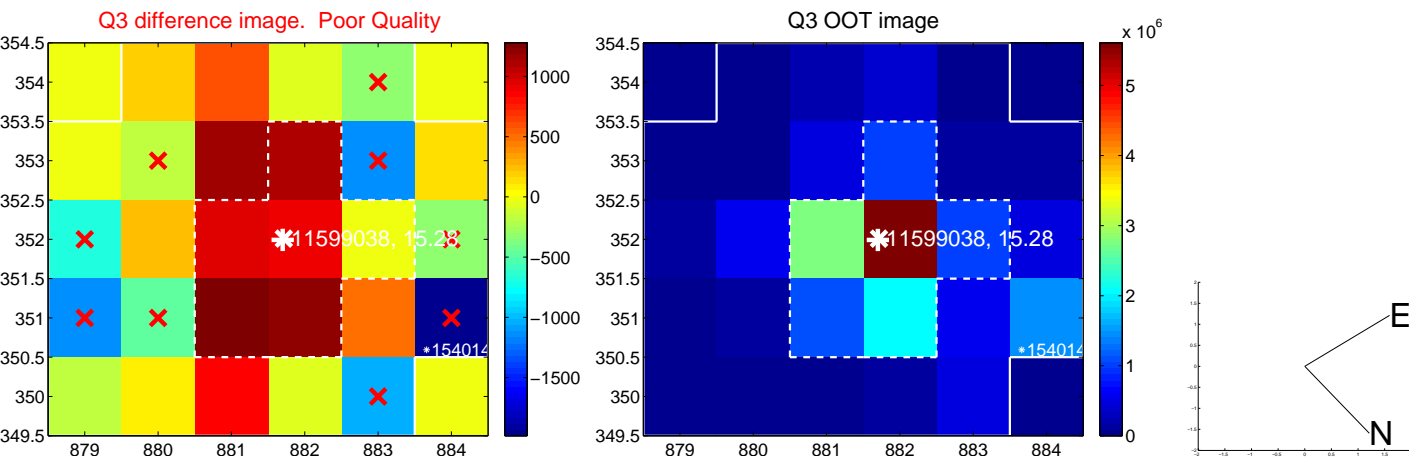
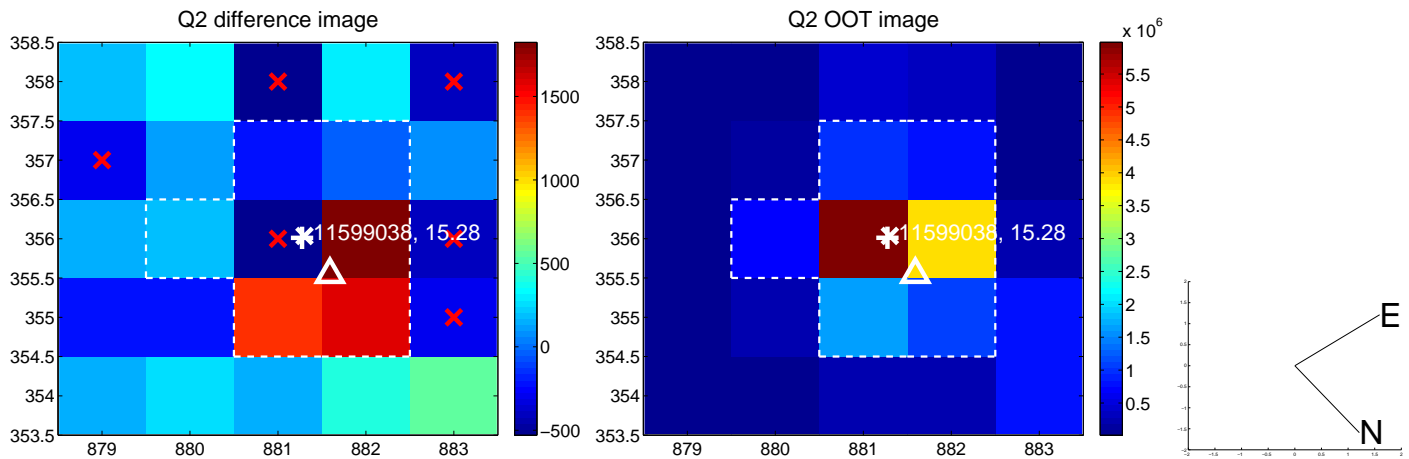
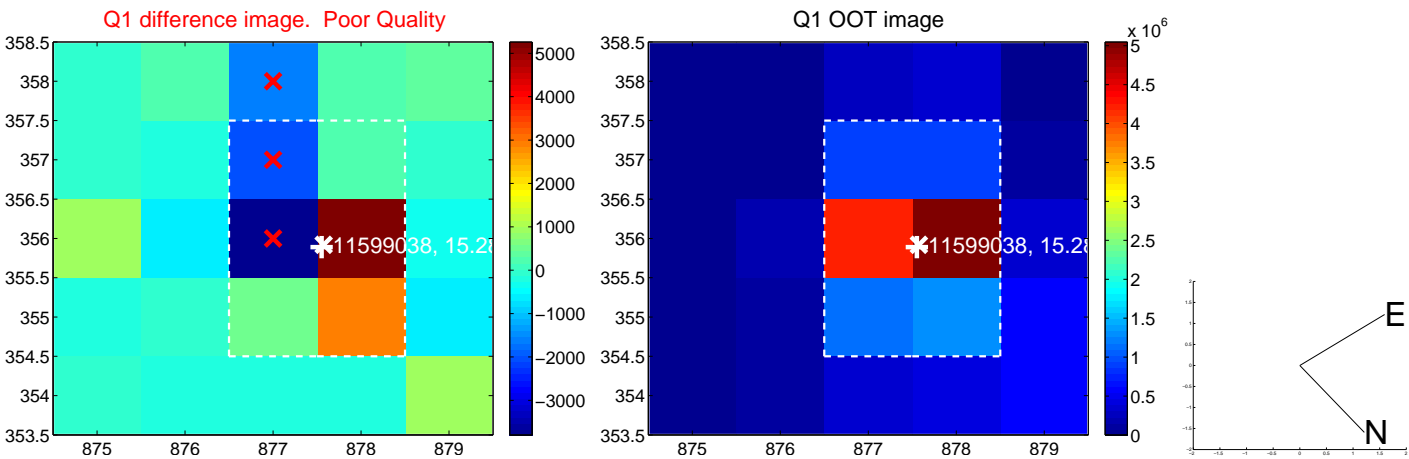


offset from photometric centroids

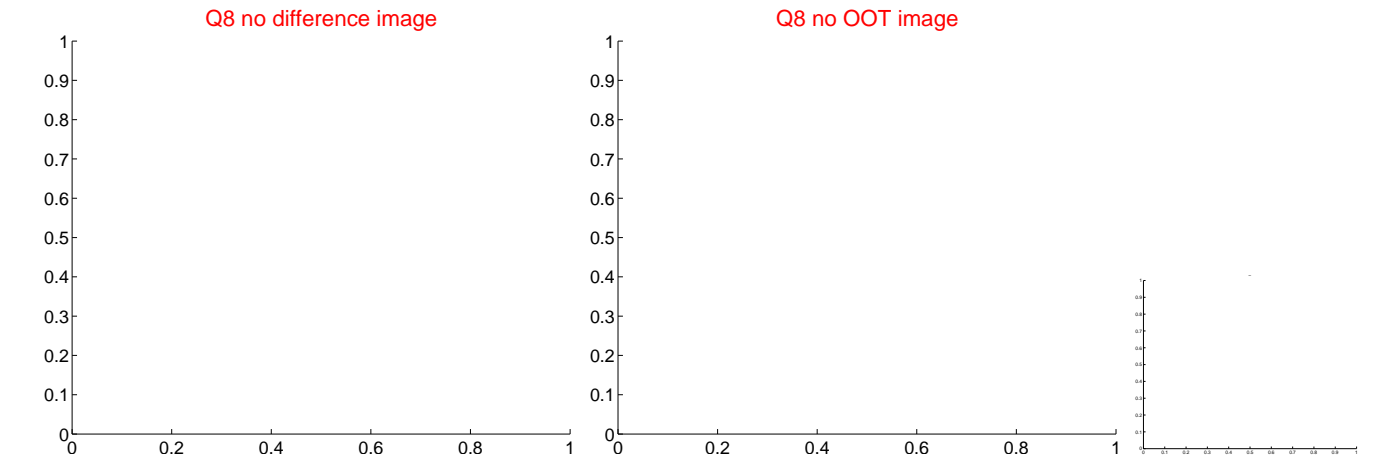
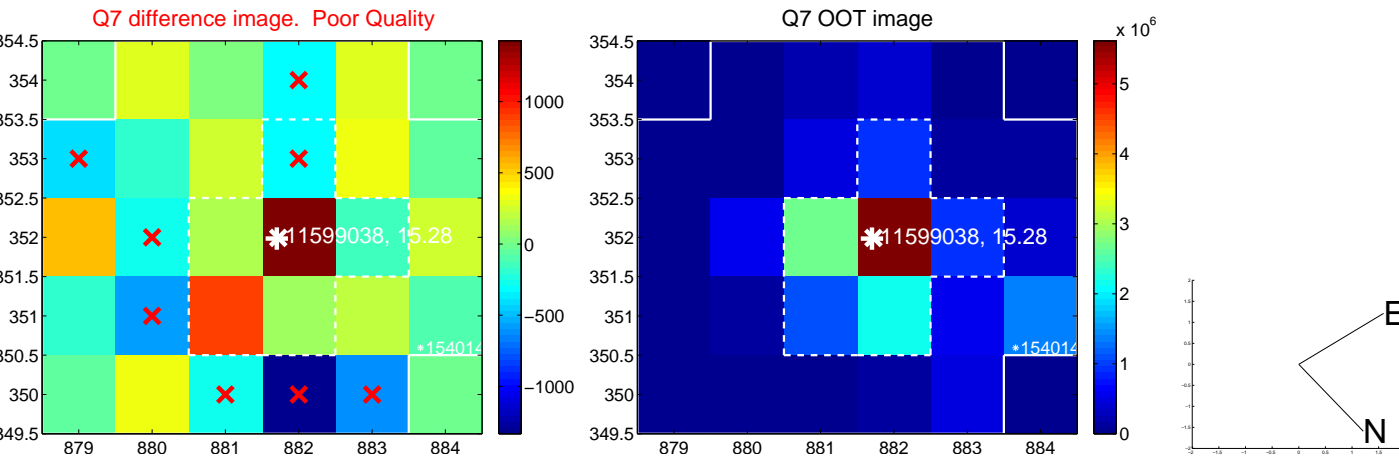
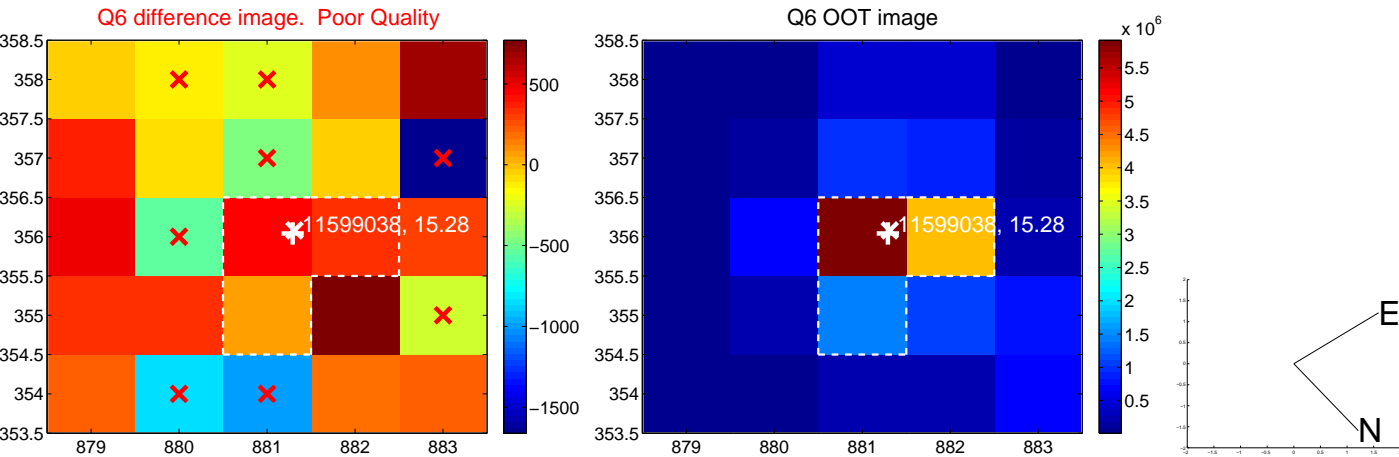
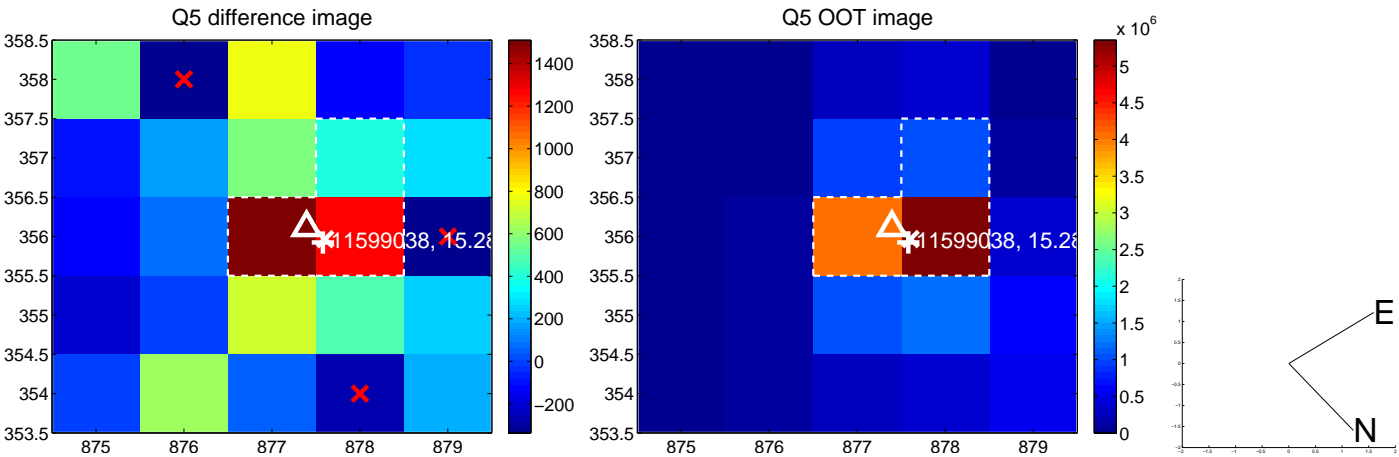


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

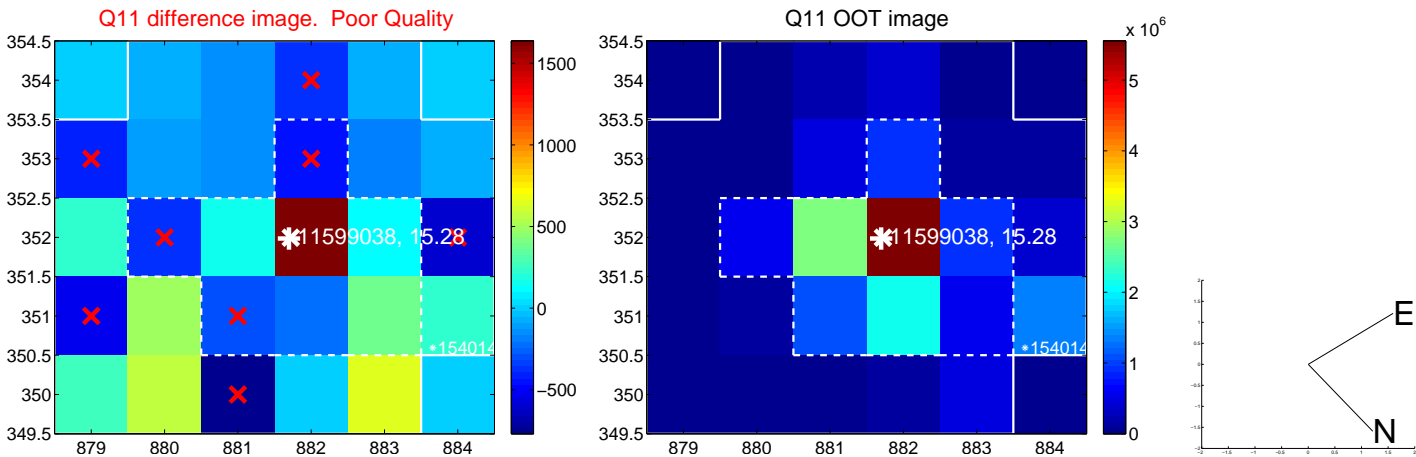
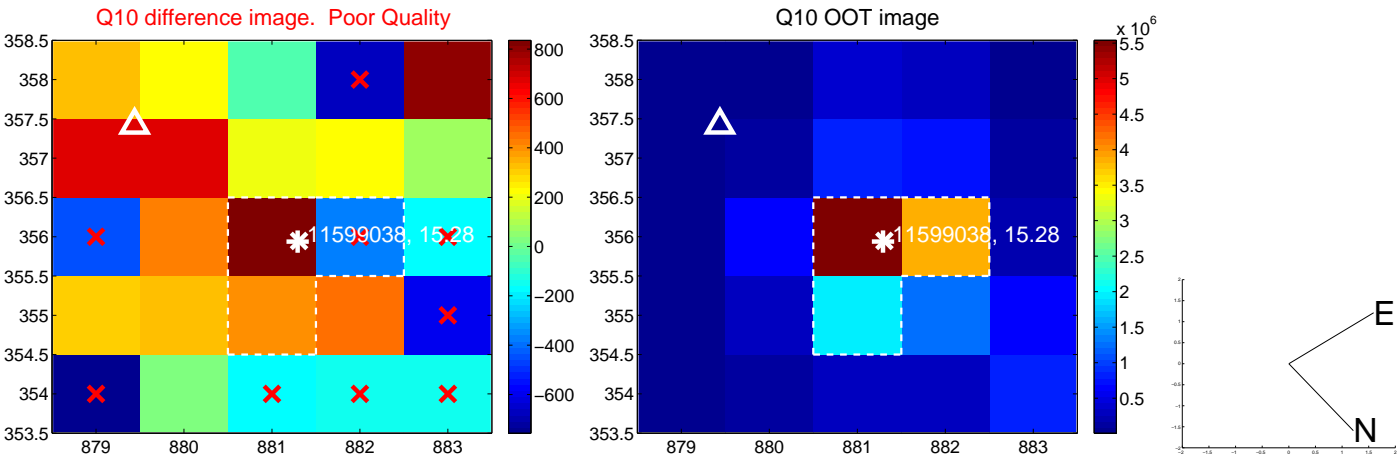
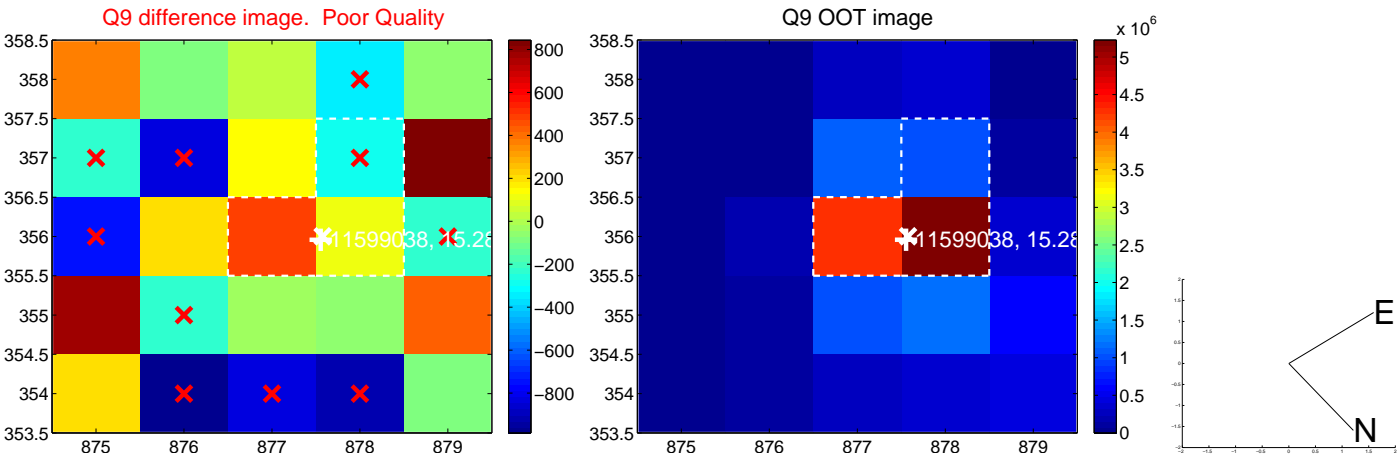
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



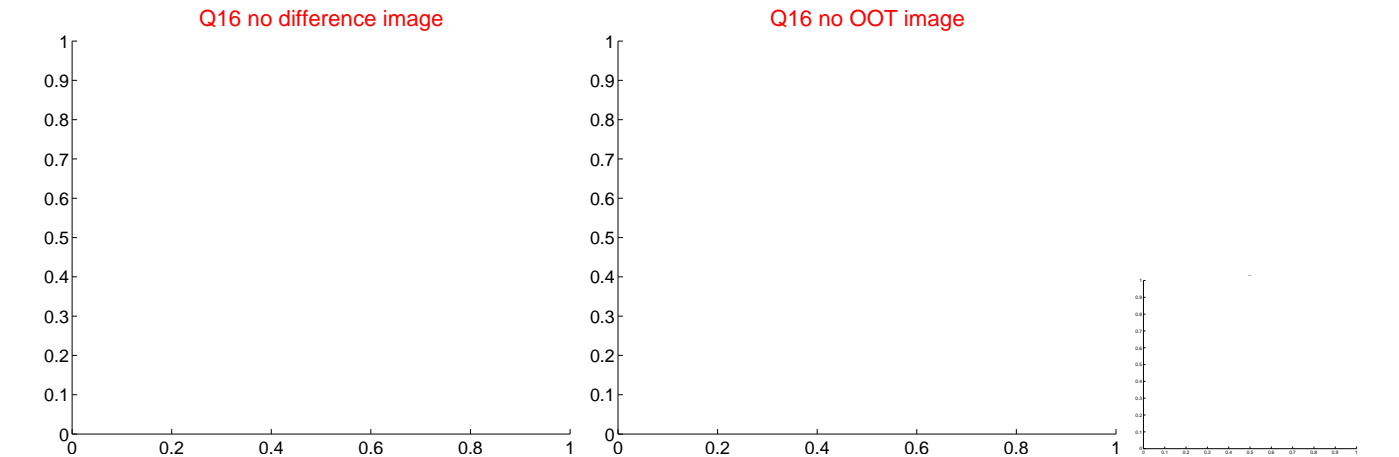
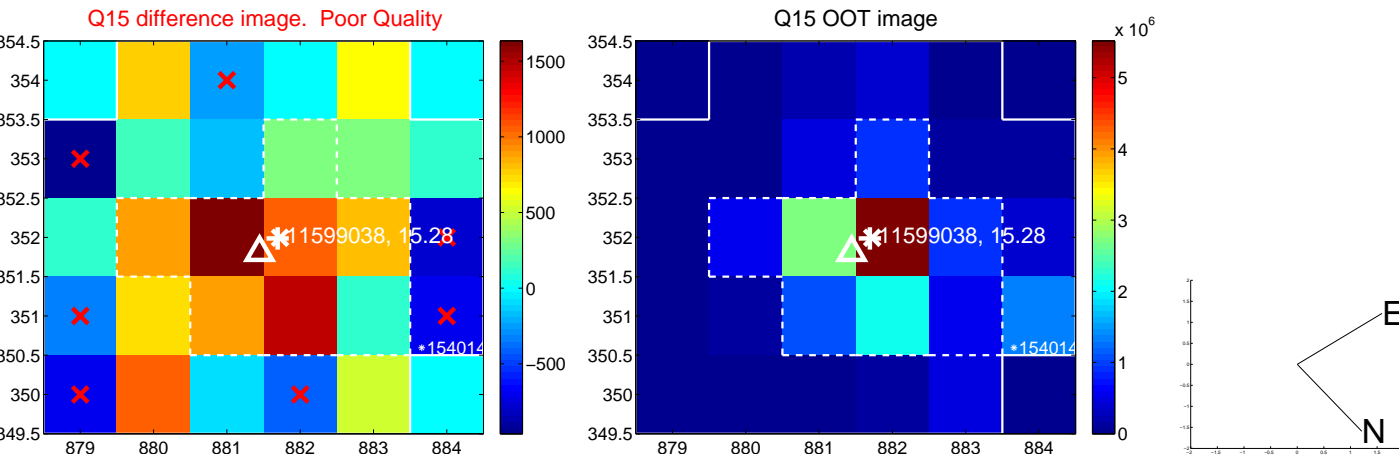
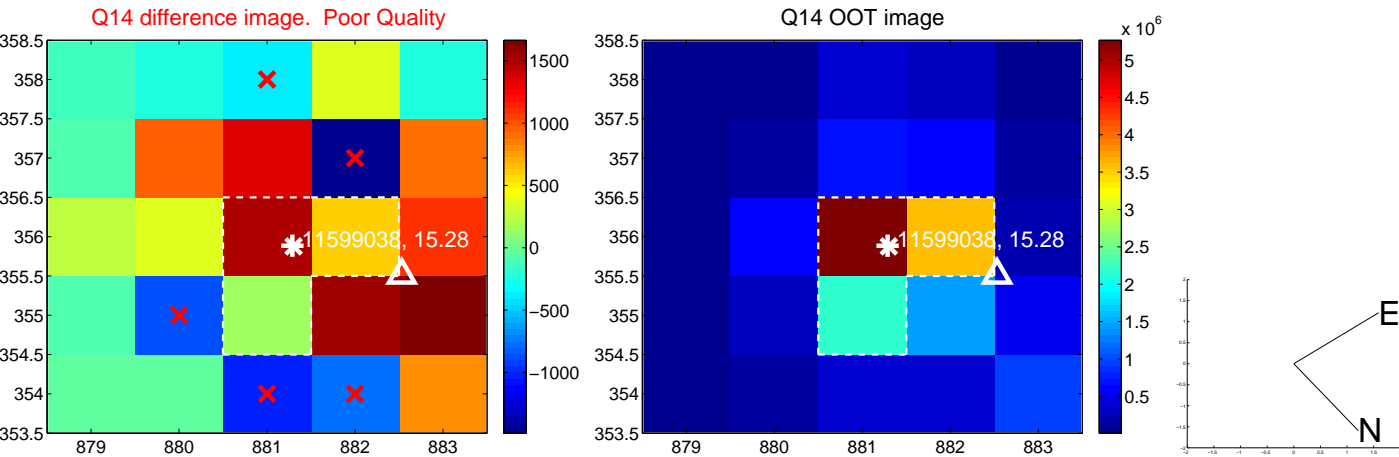
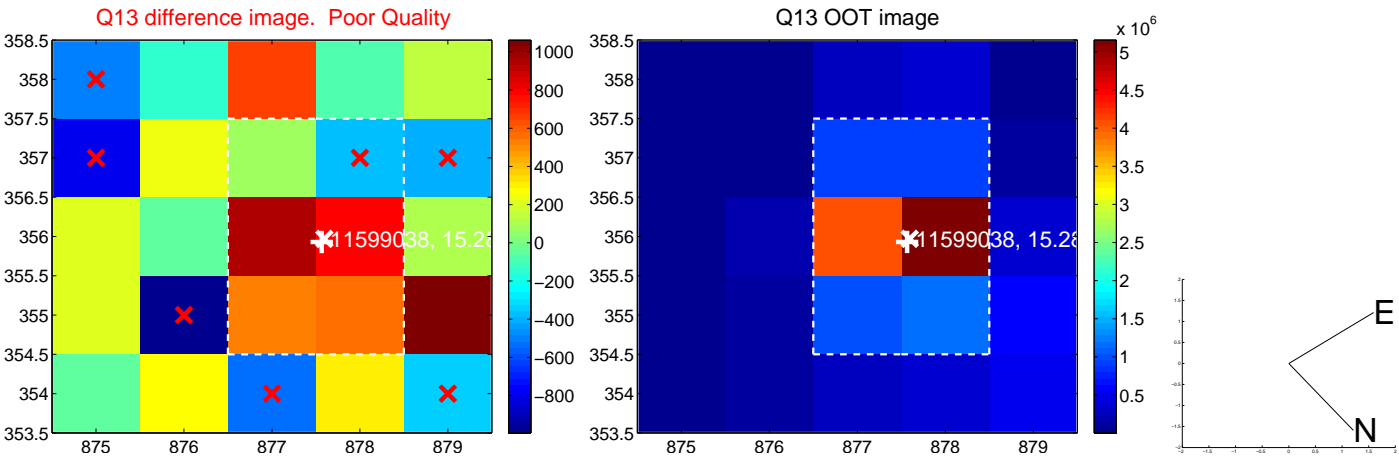
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



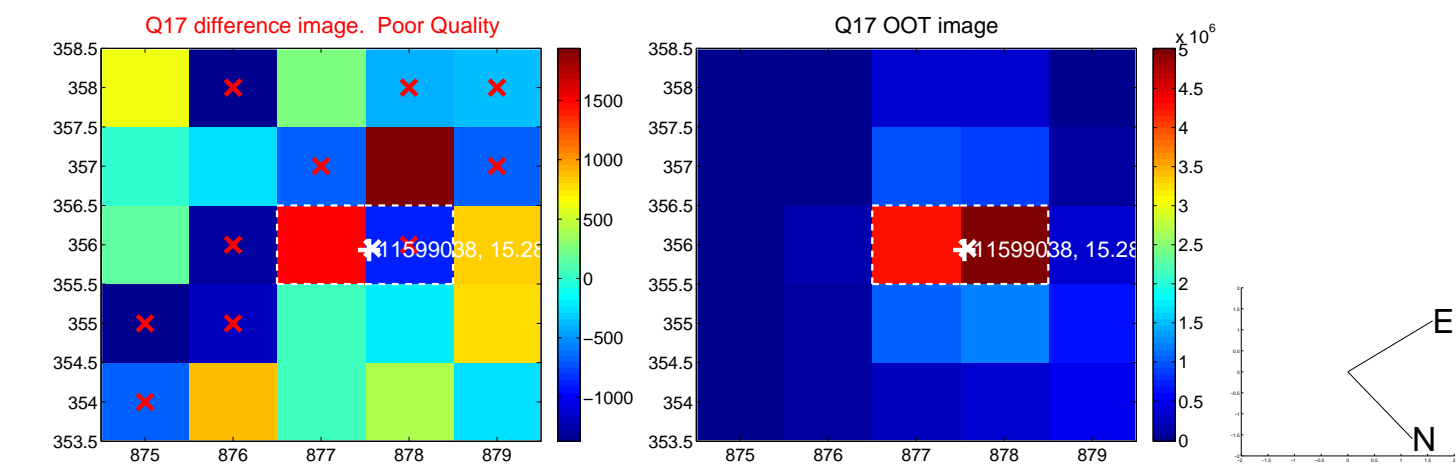
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



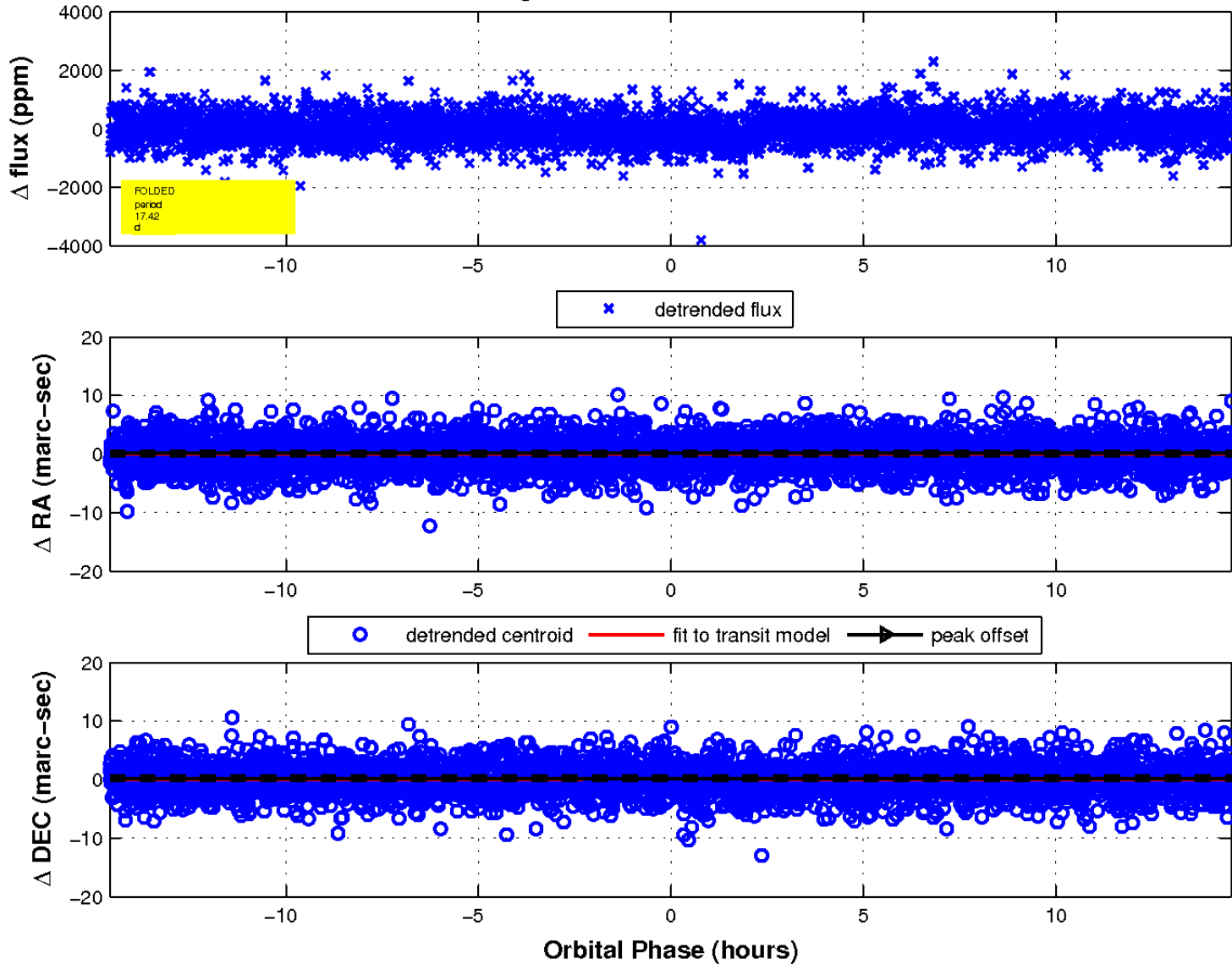
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

