

KIC 010925104

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})
010925104-01	OBS	0156.03	11.776128	142.706210	1429.1	3.121	137.9	133.9	0.54	3980	2.37	9.39
010925104-02	OBS	0156.01	8.041340	134.997479	591.6	3.048	59.5	66.5	0.54	3980	1.67	15.62
010925104-03	OBS	0156.02	5.188558	134.985816	335.7	2.861	42.2	46.9	0.54	3980	1.30	28.01
010925104-04	OBS	No	490.430135	251.065976	580.8	5.562	7.7	8.7	0.54	3980	1.38	0.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010925104-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
010925104-02	OBS	PC	0.68	0	0	0	0	CENT_KIC_POS
010925104-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
010925104-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST

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

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

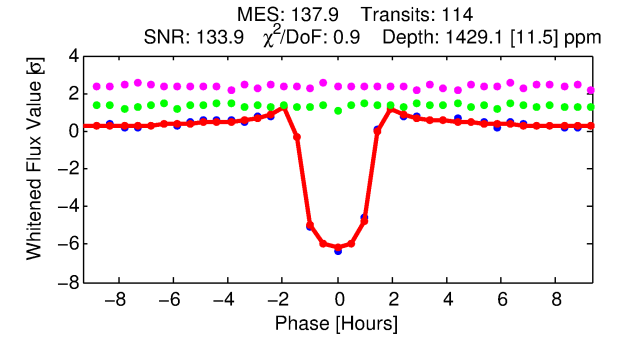
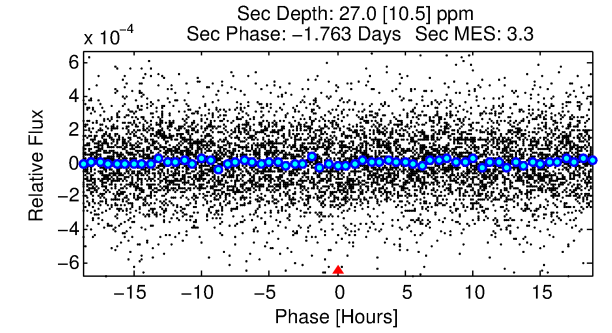
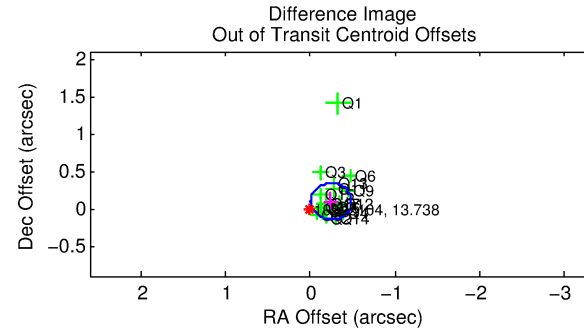
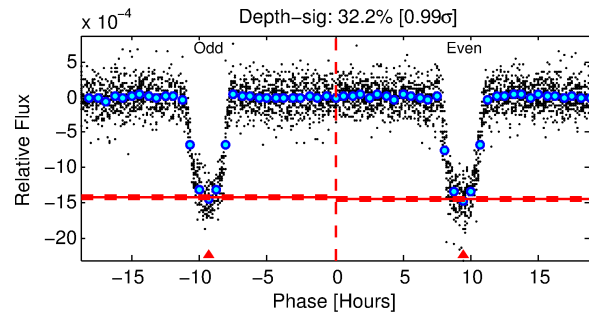
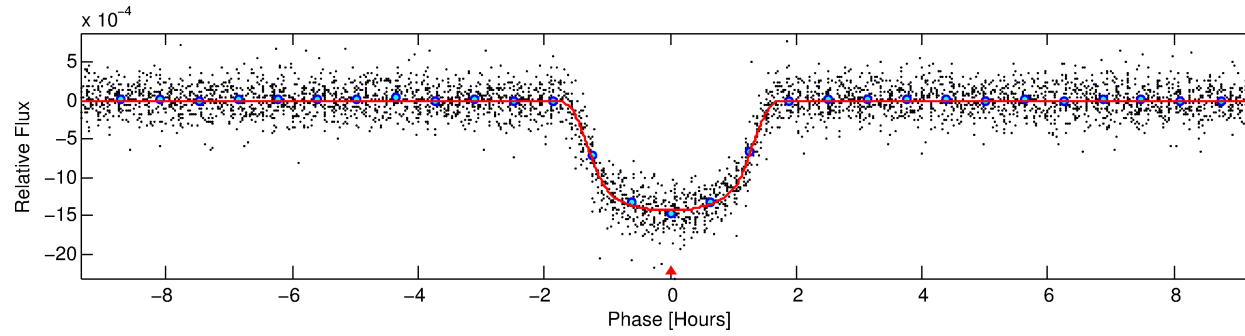
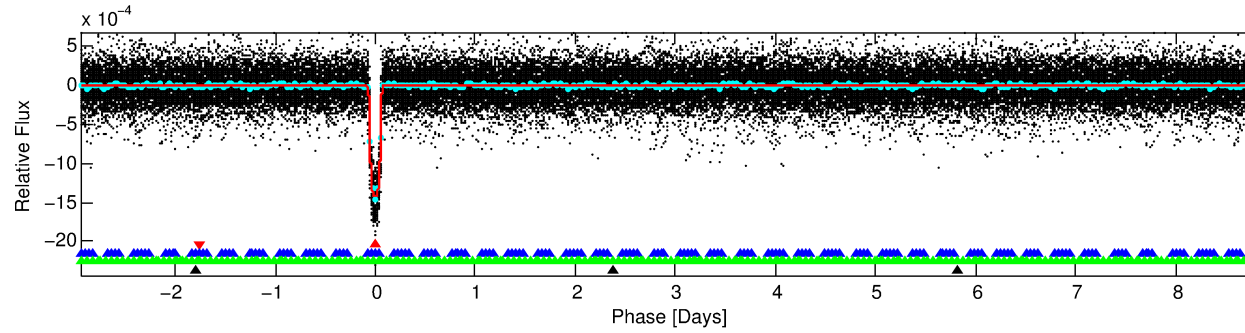
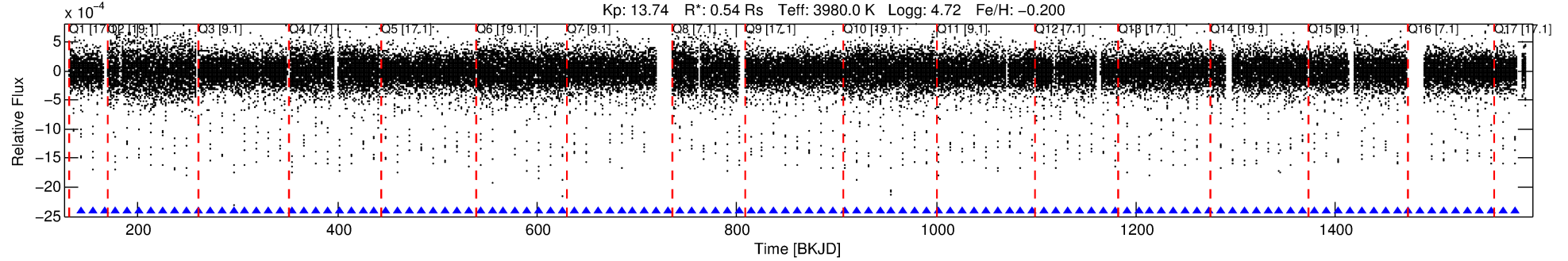
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010925104-01

No Significant Match Found

DV One-Page Summary

KIC: 10925104 Candidate: 1 of 4 Period: 11.776 d
KOI: K00156.03 Name: Kepler-114d Corr: 0.964



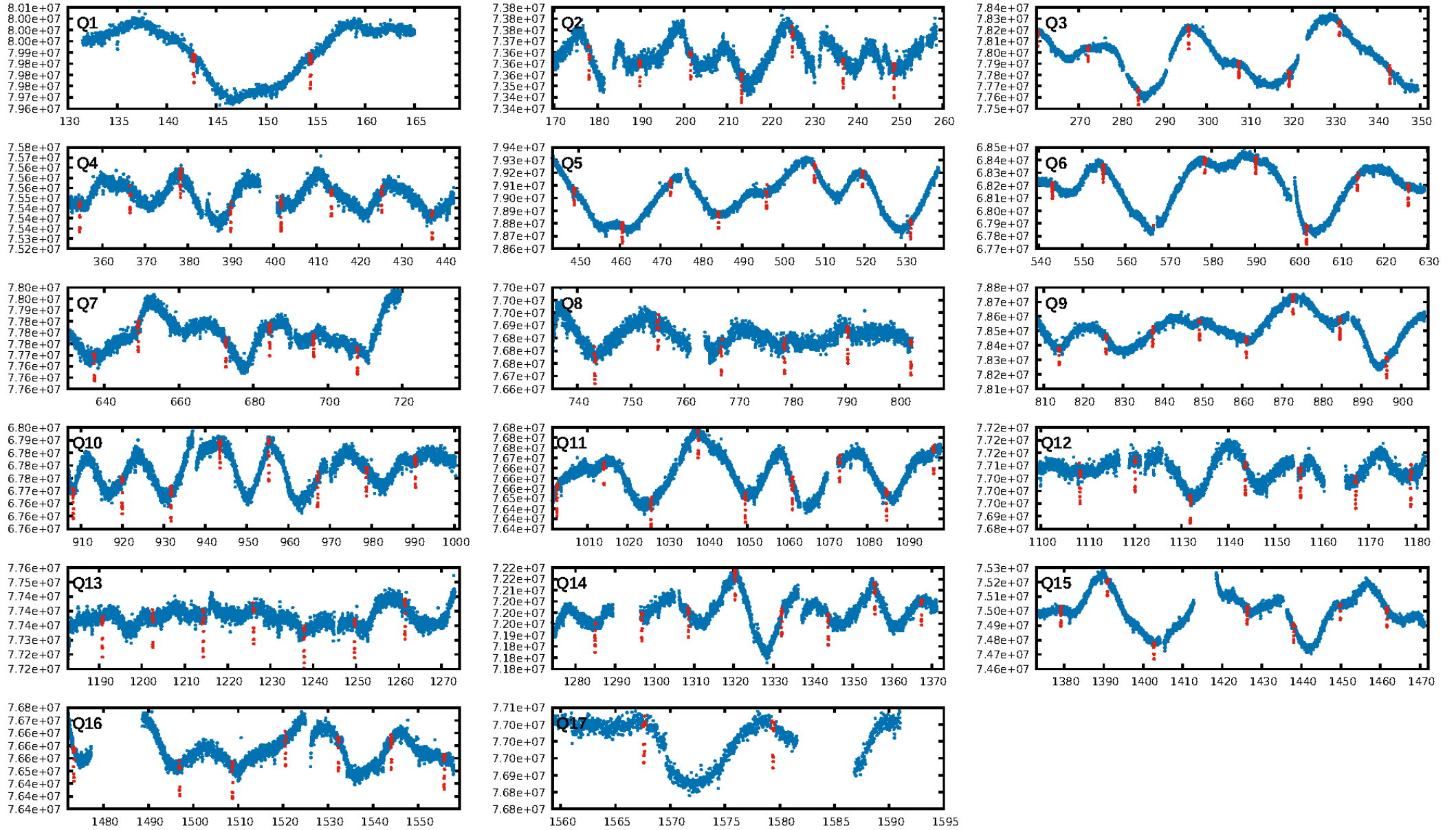
DV Fit Results:

Period = 11.77613 [0.00001] d
Epoch = 142.7062 [0.0005] BKJD
Rp/R* = 0.0402 [0.0006]
a/R* = 16.57 [1.03]
b = 0.87 [0.02]
Seff = 9.39 [0.96]
Teq = 446 [11] K
Rp = 2.37 [0.15] Re
a = 0.0836 [0.0040] AU
Ag = 18.51 [7.34] [2.38 σ]
Teffp = 1431 [143] K [6.87 σ]

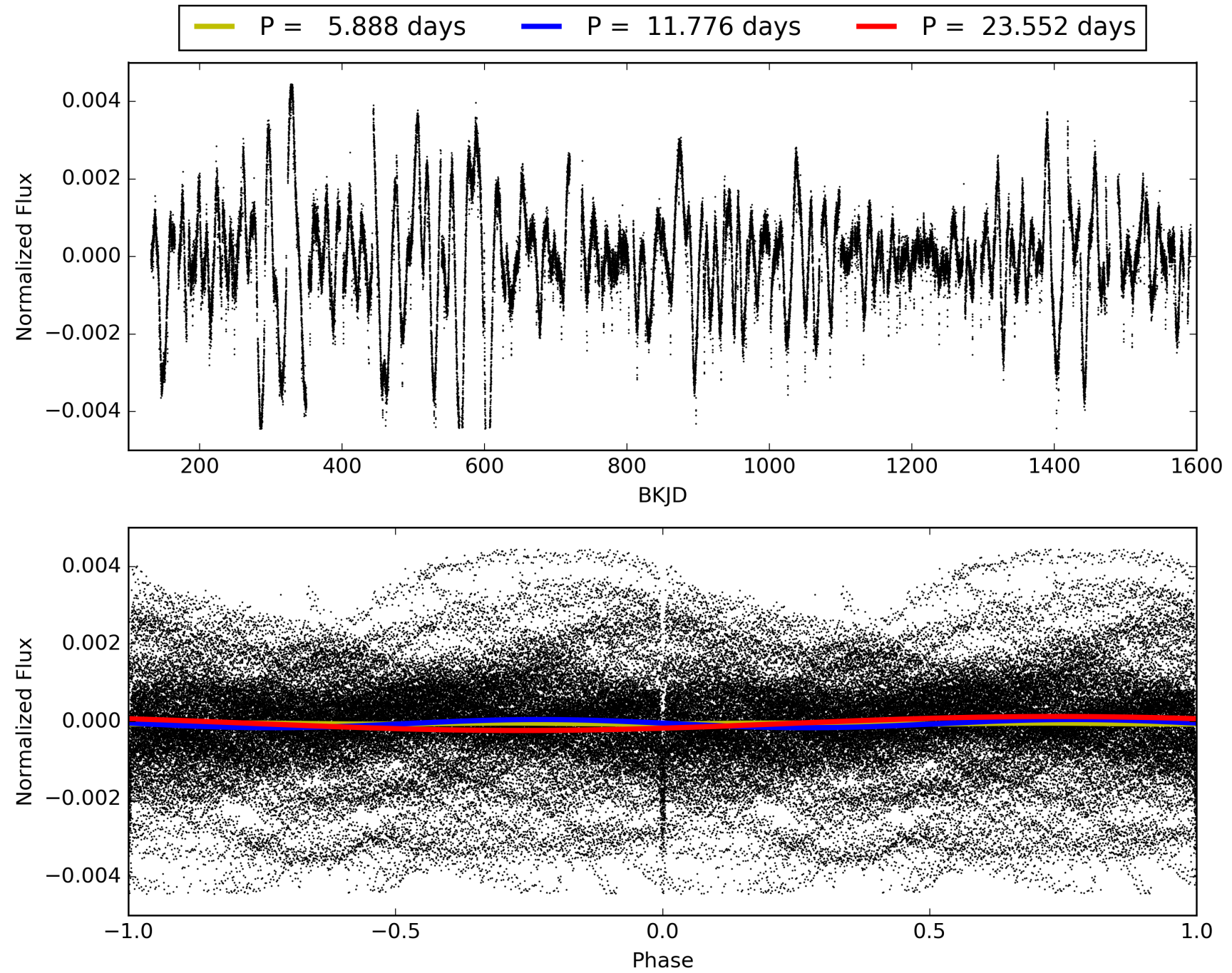
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.55 σ]
LongPeriod-sig: 100.0% [1801.18 σ]
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [110/110]
GhostDiagnostic-chr: 4.631
Centroid-sig: 0.0%
Centroid-so: 0.695 arcsec [12.43 σ]
OotOffset-rm: 0.263 arcsec [3.26 σ]
KicOffset-rm: 0.827 arcsec [7.43 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010925104-01, PDC Light Curves

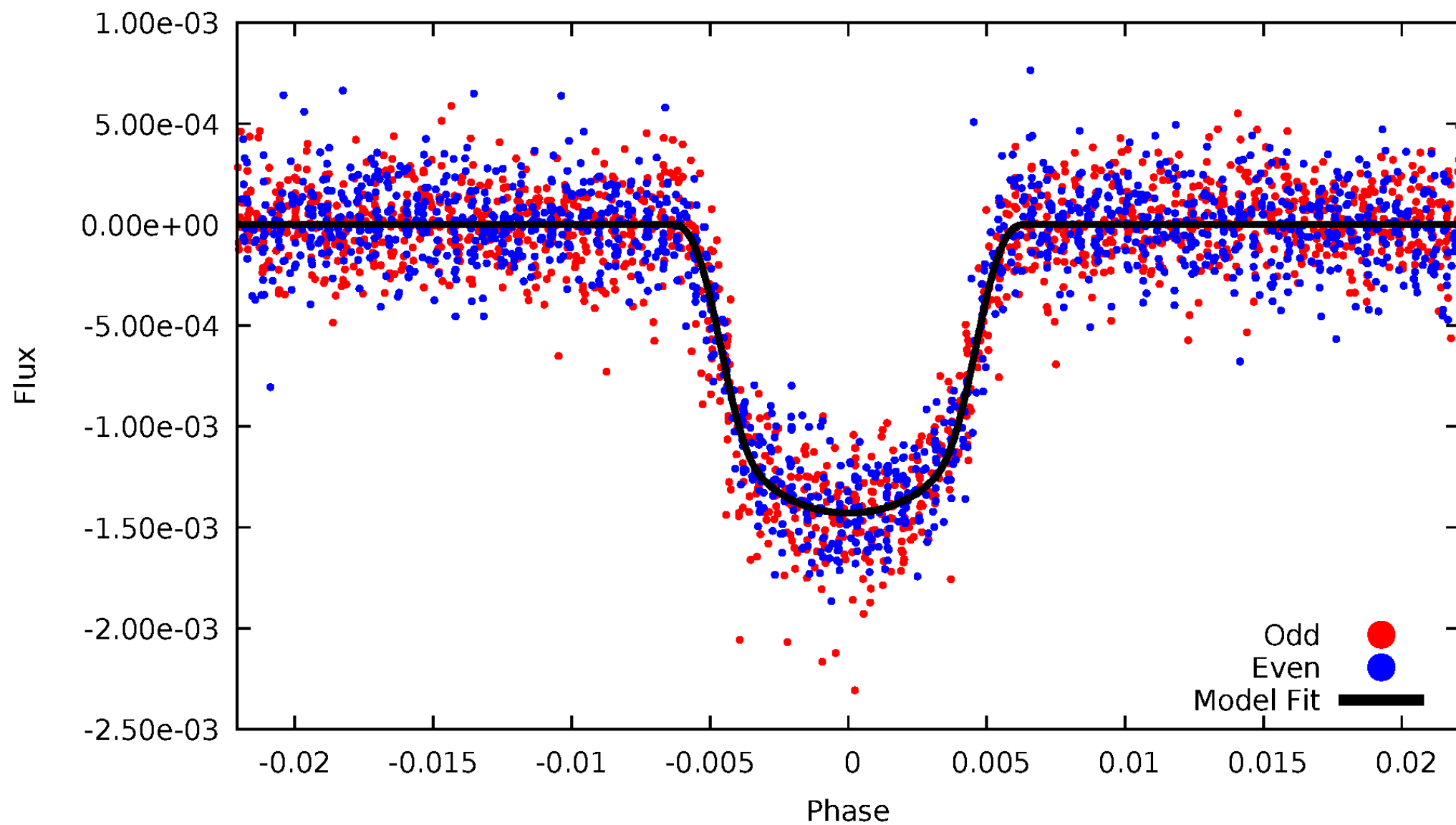


TCE 010925104-01



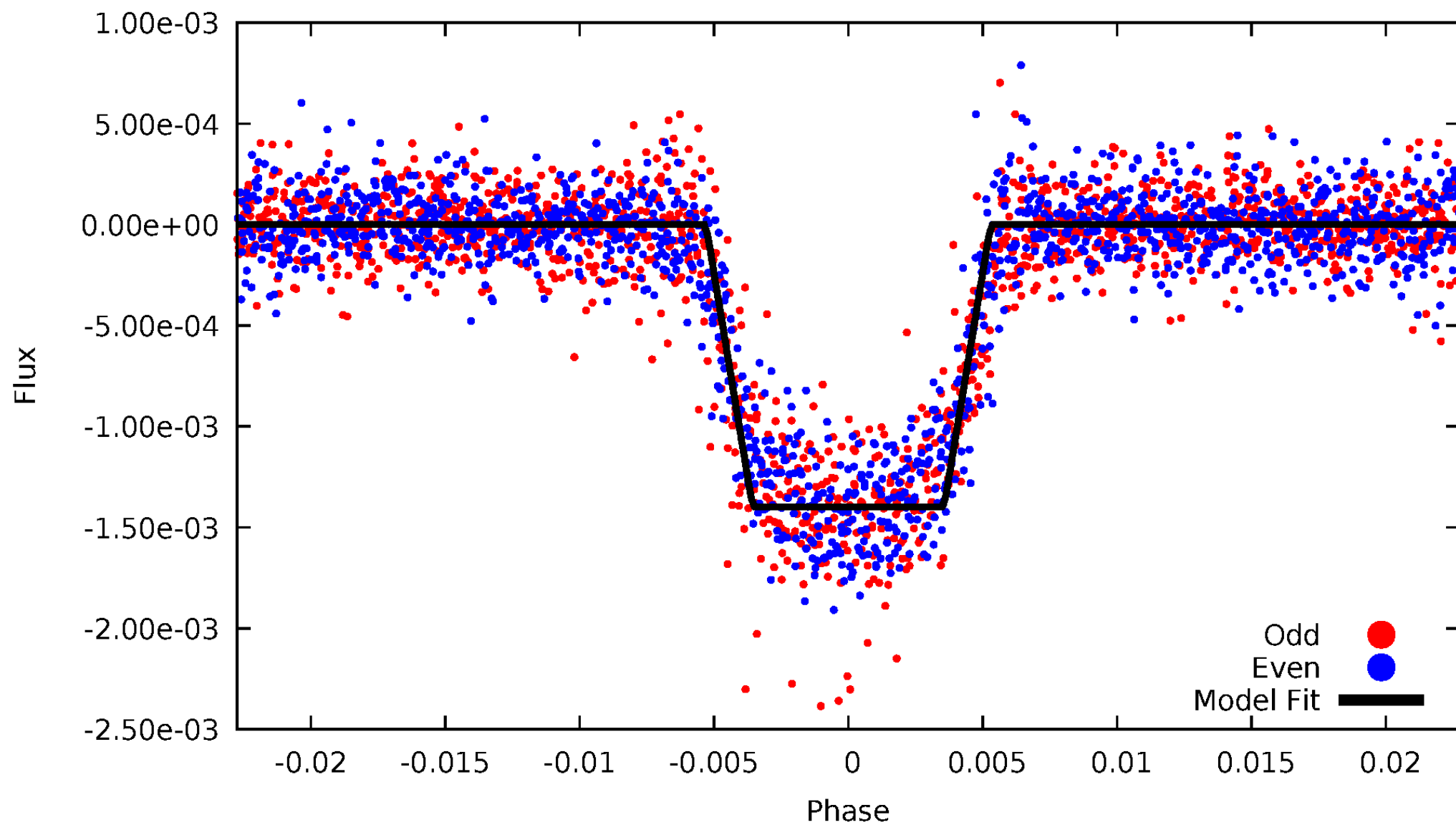
DV Odd/Even

TCE 010925104-01



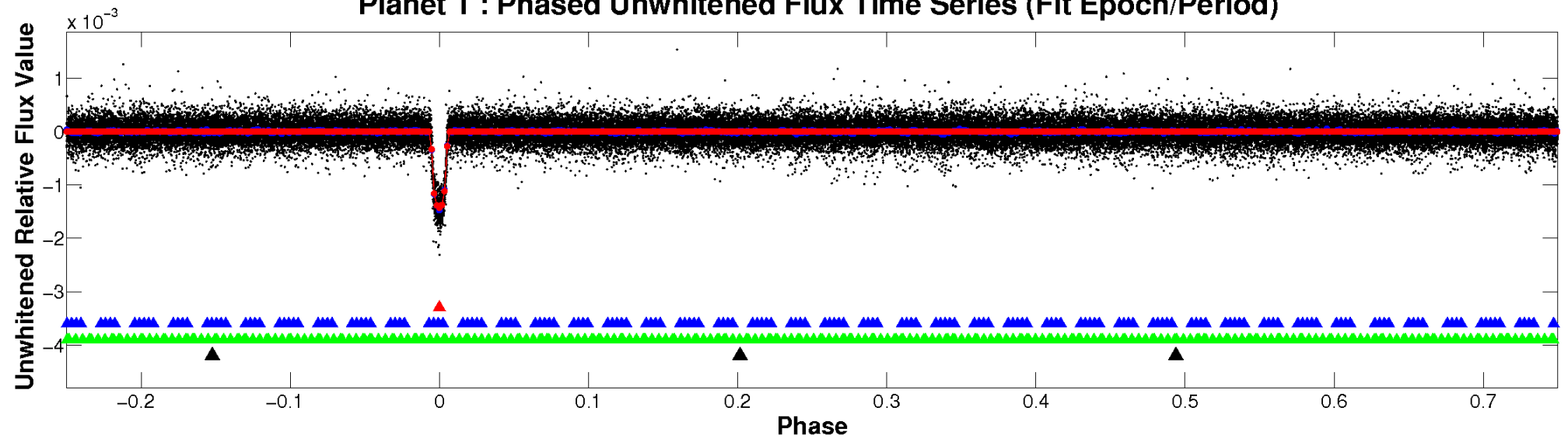
ALT Odd/Even

TCE 010925104-01

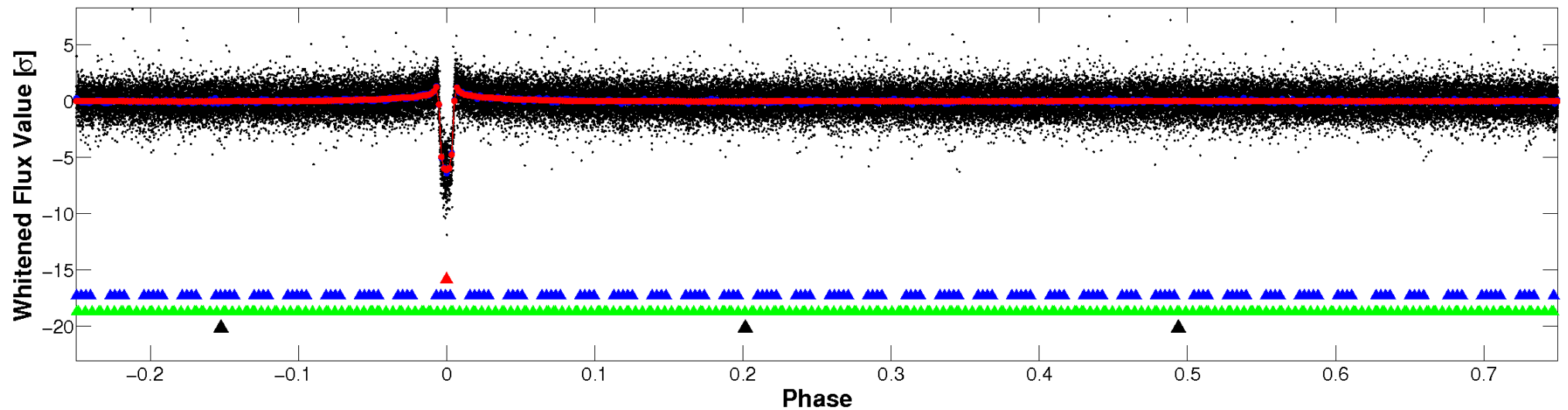


Non-Whitened Vs. Whitened Light Curve

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

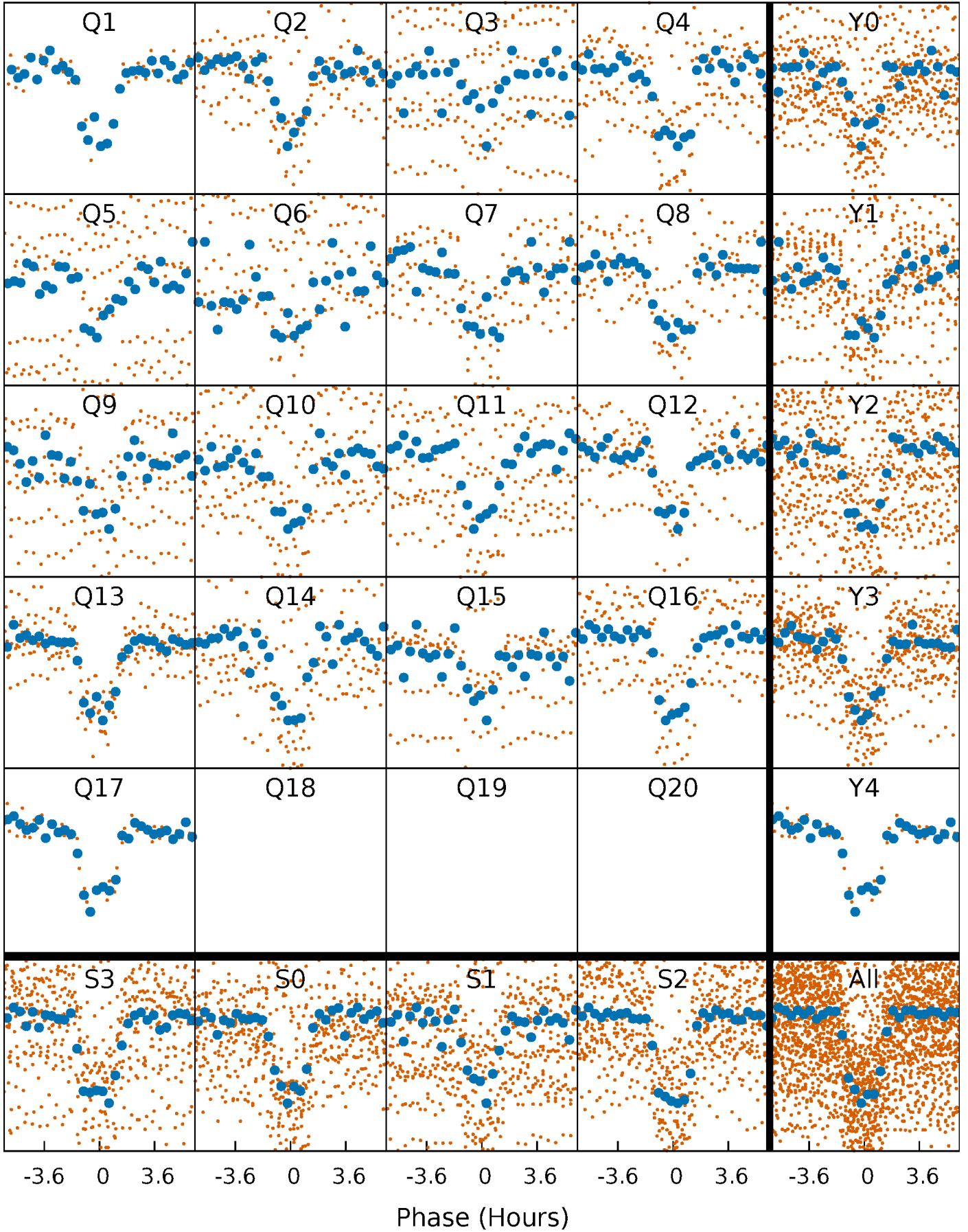


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



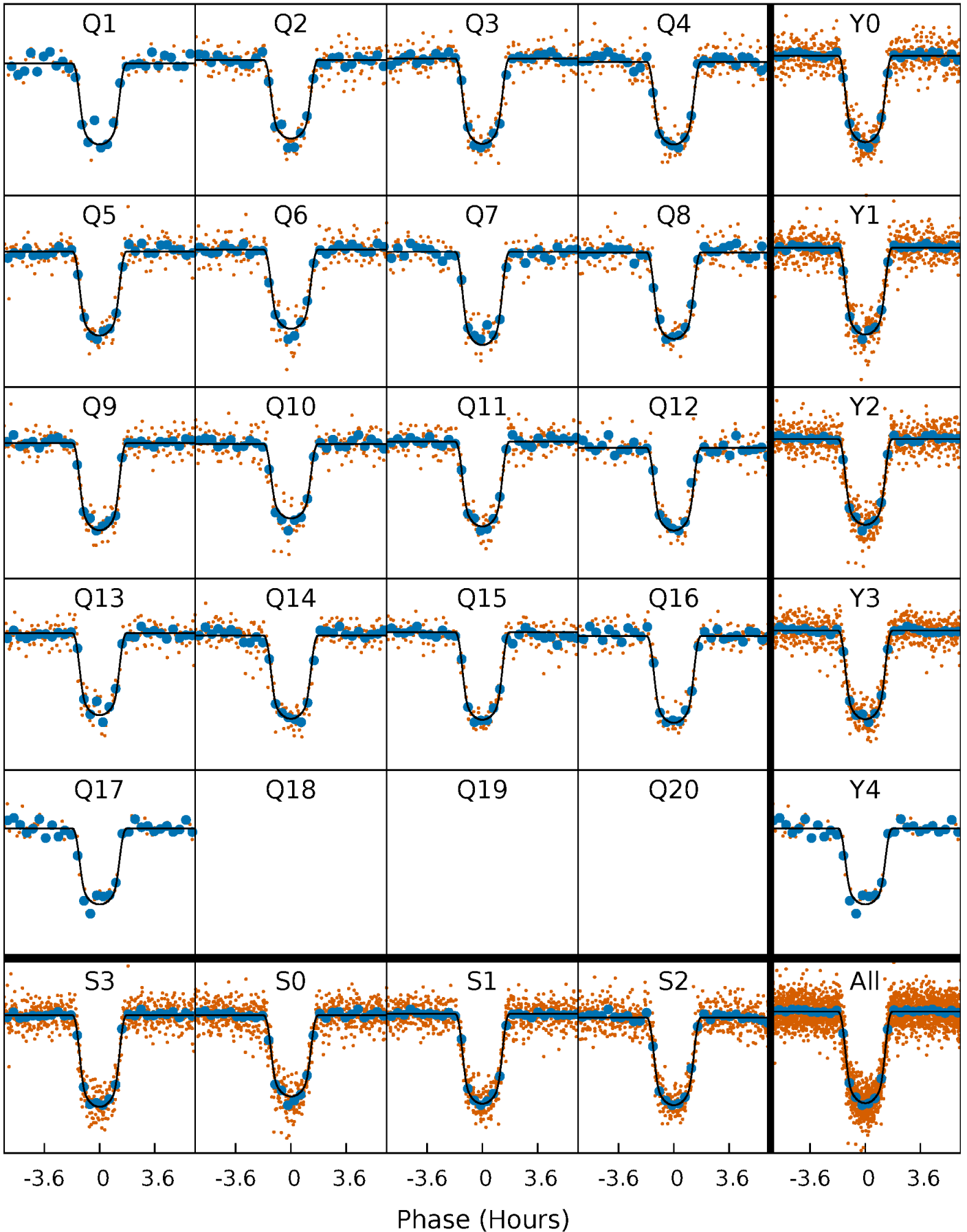
PDC Quarter-Phased Transit Curves

TCE 010925104-01 P= 11.776128 Days $T_0=142.706210$ (BKJD)



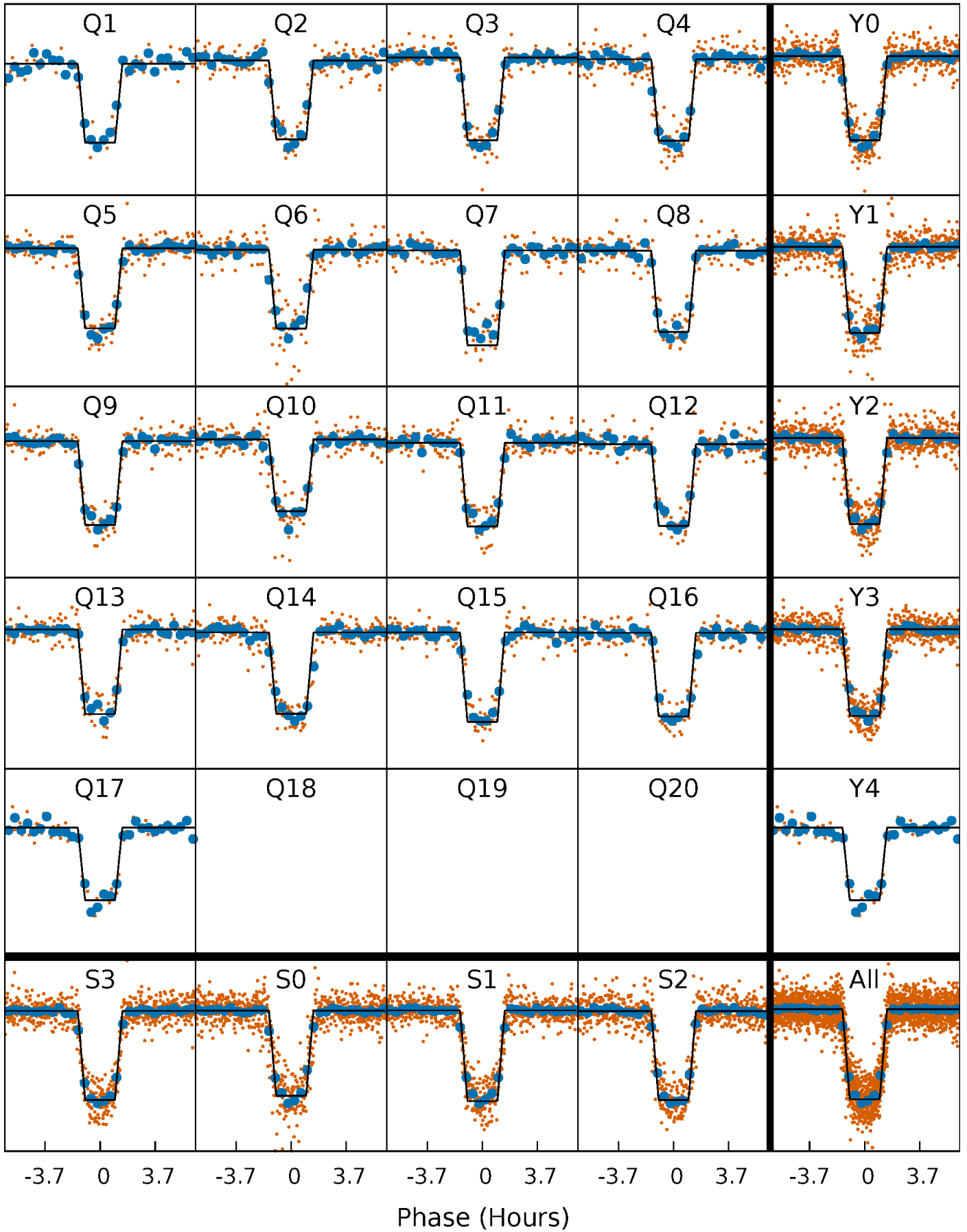
DV Quarter-Phased Transit Curves

TCE 010925104-01 P= 11.776128 Days $T_0=142.706210$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

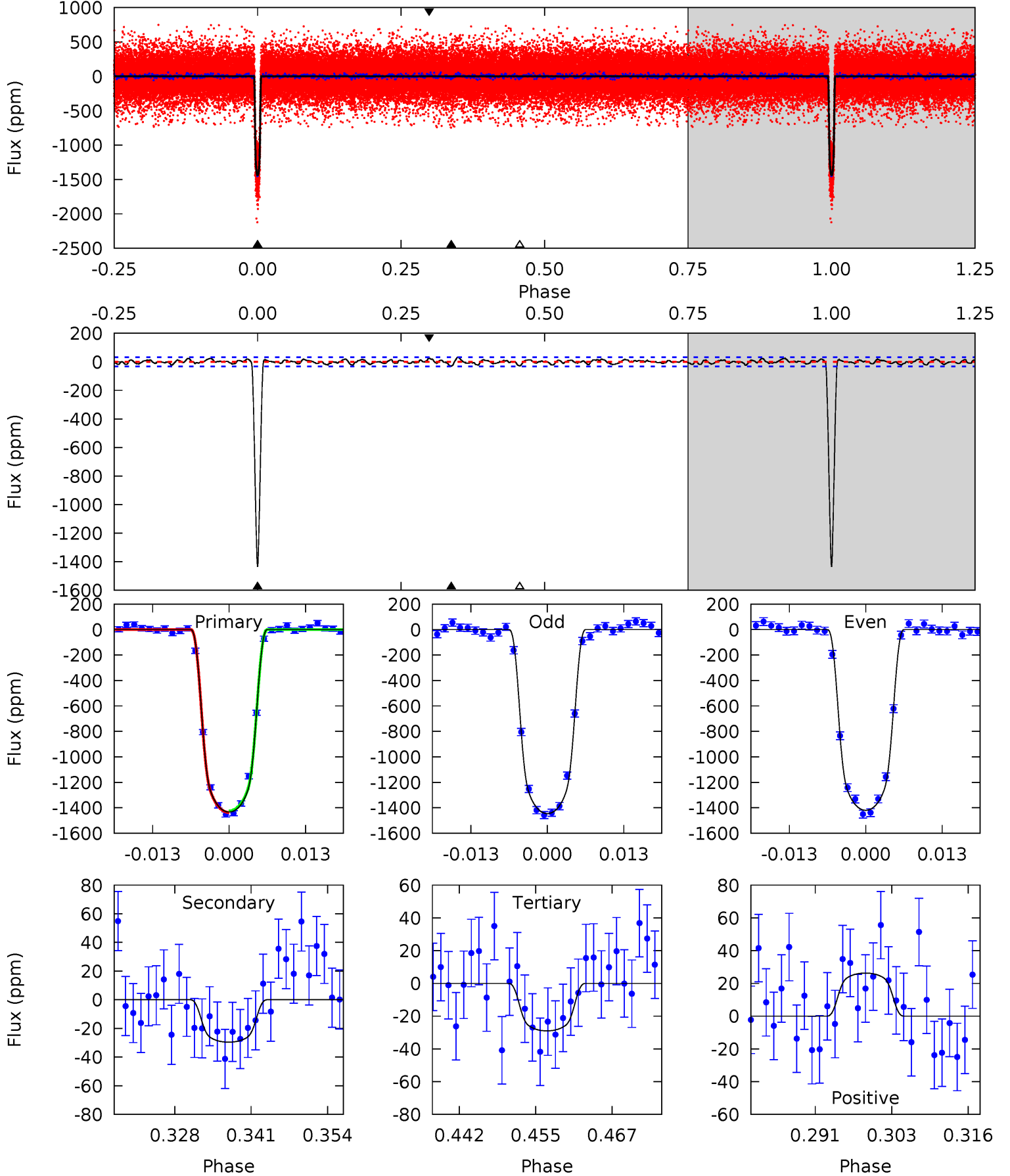
TCE 010925104-01 P= 11.776051 Days $T_0=142.710302$ (BKJD)



DV Model-Shift Uniqueness Test

010925104-01, P = 11.776128 Days, E = 130.930082 Days

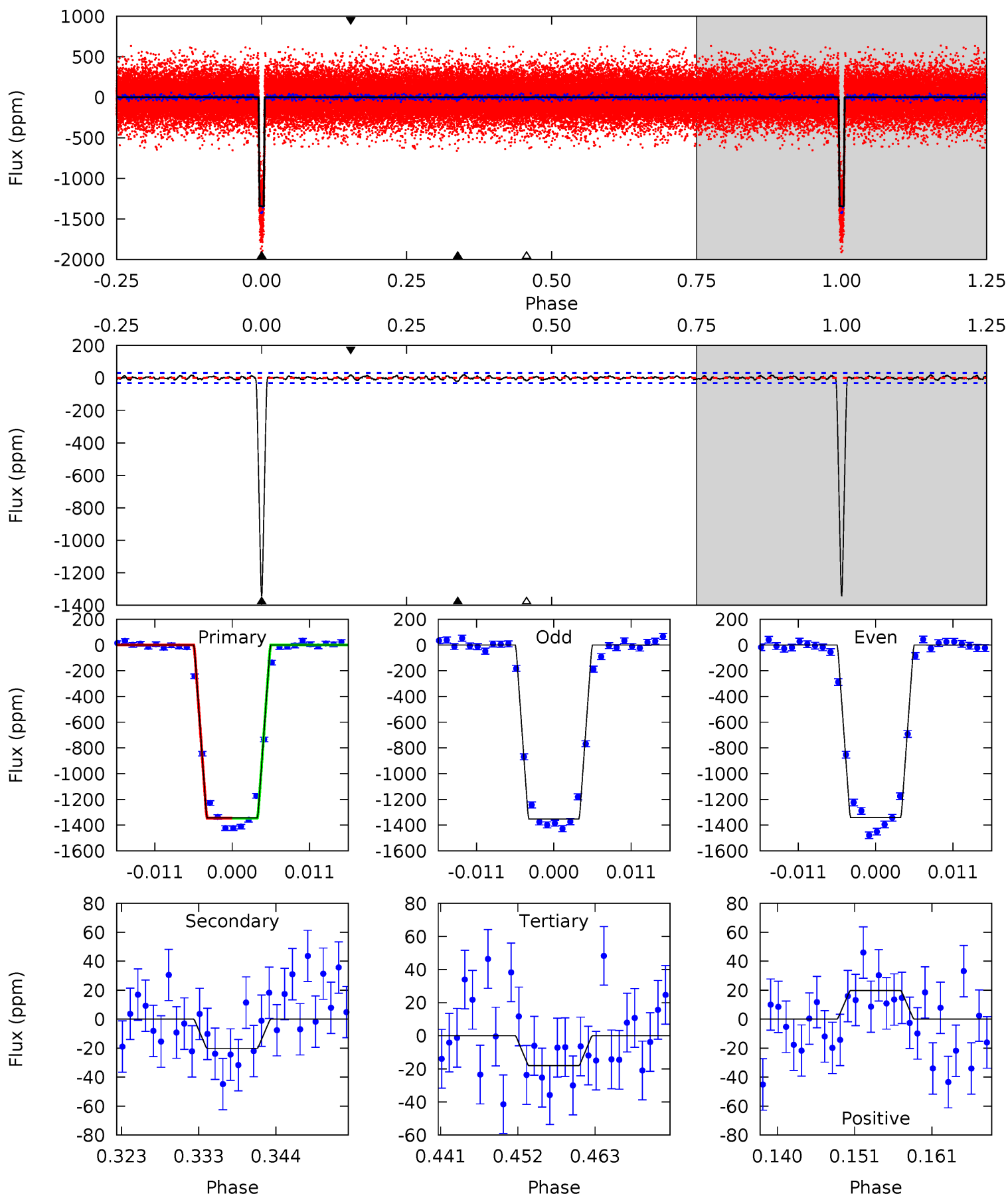
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
219.9	4.54	4.45	4.04	4.98	2.49	1.55	215.4	215.9	0.09	0.51	1.99	1.01	0.02	0.87



Alt Model-Shift Uniqueness Test

010925104-01, $P = 11.776051$ Days, $E = 130.934251$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
218.0	3.27	2.93	3.21	5.01	2.55	1.07	215.1	214.8	0.34	0.06	0.86	1.01	0.02	0.06



Stellar Parameters For KIC 010925104

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3980^{+79}_{-79}	$4.722^{+0.030}_{-0.033}$	$-0.200^{+0.150}_{-0.150}$	$0.540^{+0.033}_{-0.033}$	$0.560^{+0.031}_{-0.038}$	$5.018^{+0.739}_{-0.583}$
	+2%/-2%	+1%/-1%	+75%/-75%	+6%/-6%	+6%/-7%	+15%/-12%
Source	SPE5	SPE5	SPE5	DSEP		

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

Secondary Eclipse Parameters for KIC 010925104-01 / KOI 0156.03

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-30 ± 7	$2.37^{+0.09}_{-0.10}$	624^{+15}_{-15}	2268^{+59}_{-63}	20^{+5}_{-4}
Alt.	-20 ± 6	$2.21^{+0.08}_{-0.09}$	625^{+13}_{-15}	2205^{+78}_{-90}	16^{+5}_{-5}

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

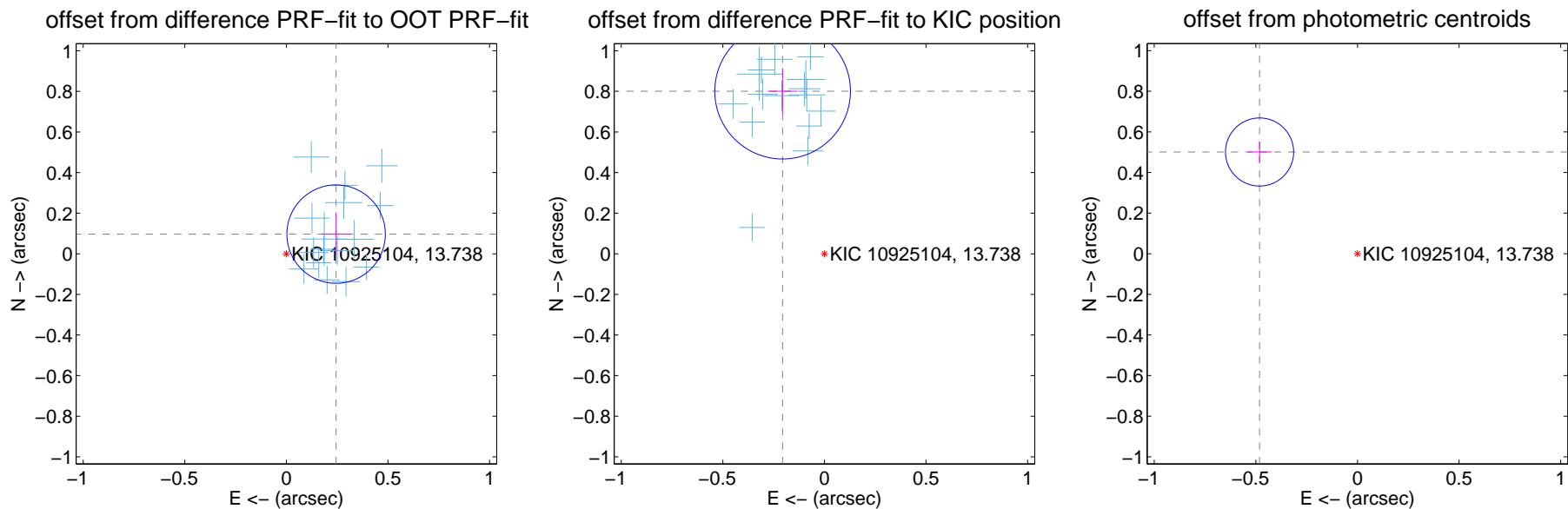
DV Centroid Data

Supplemental centroid analysis for 010925104-01. Kepler magnitude: 13.74. Transit SNR 133.92

There are 17 quarters with good PRF difference image offsets

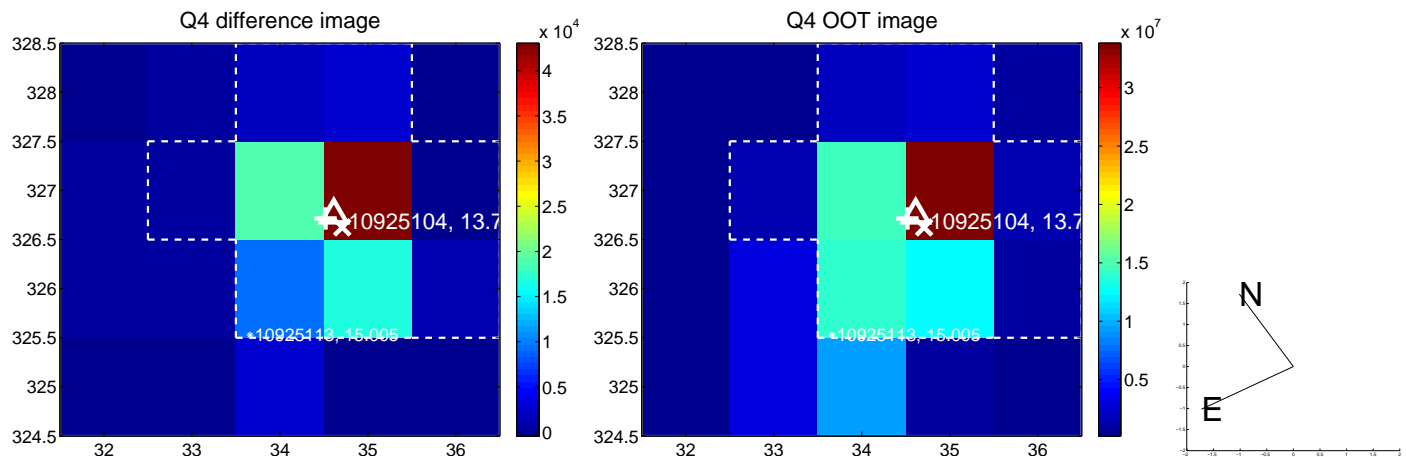
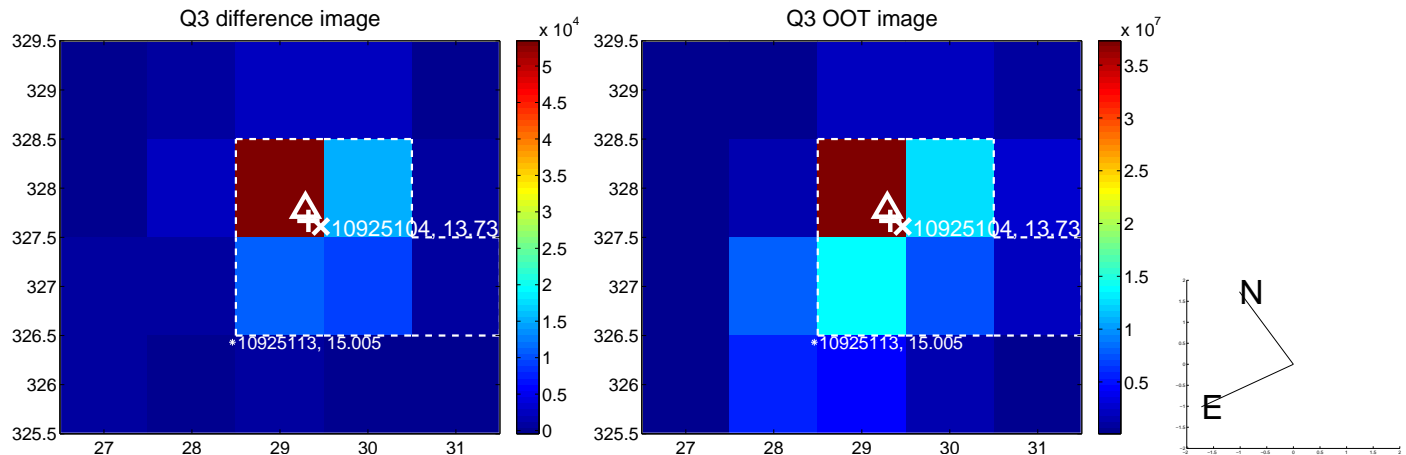
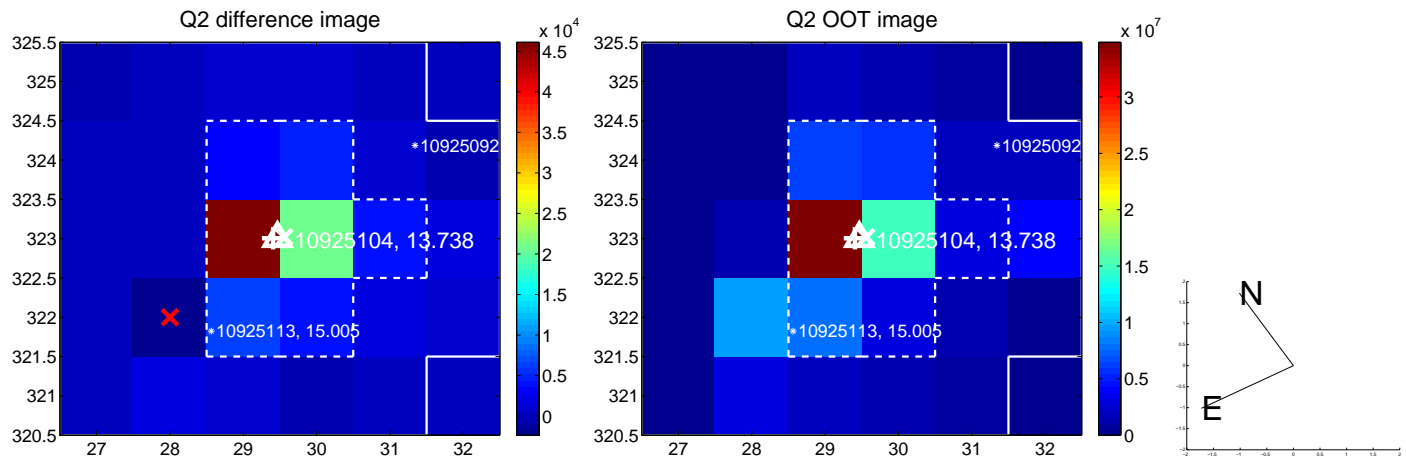
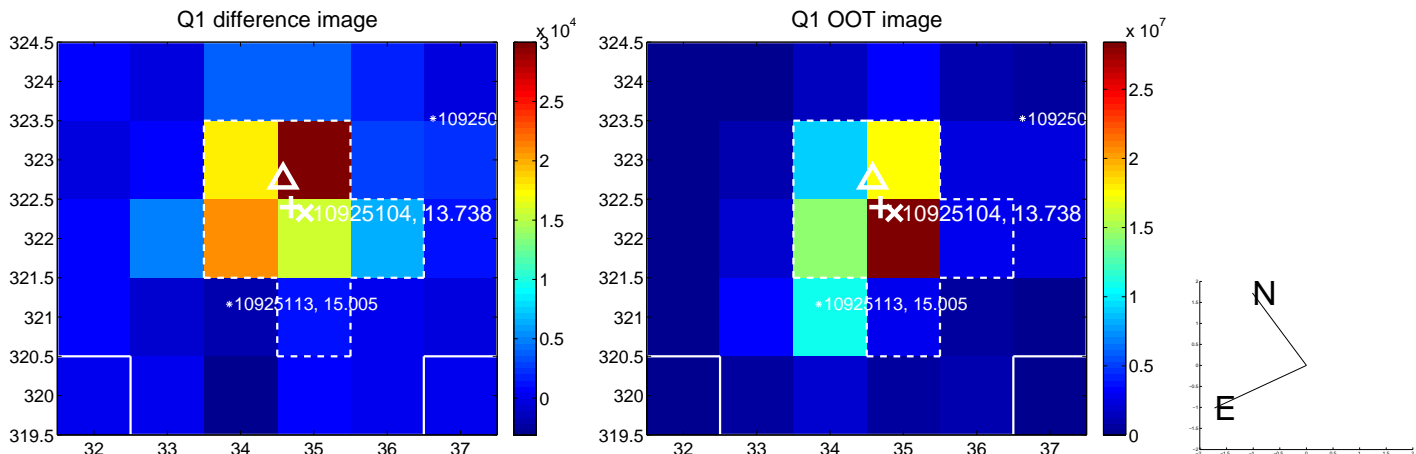
The direct PRF centroid is offset from the target star catalog position by about 0.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.263 ± 0.081	3.26	-0.245 ± 0.072	0.097 ± 0.107
PRF-fit source offset from KIC position	0.827 ± 0.111	7.43	0.206 ± 0.073	0.801 ± 0.114
photometric centroid source offset	0.69 ± 0.06	12.43	0.48 ± 0.06	0.50 ± 0.05

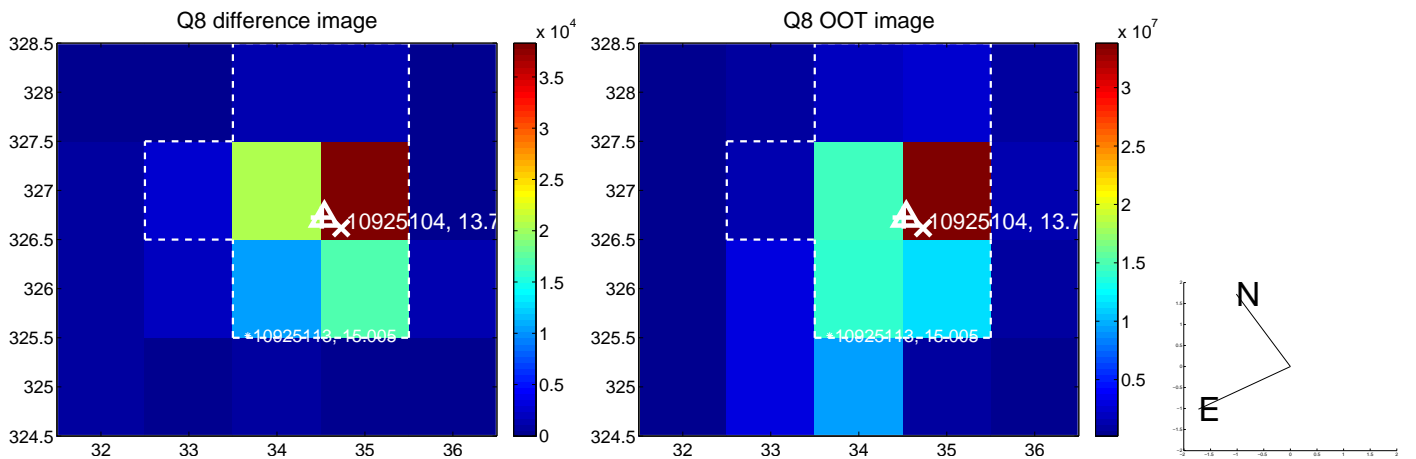
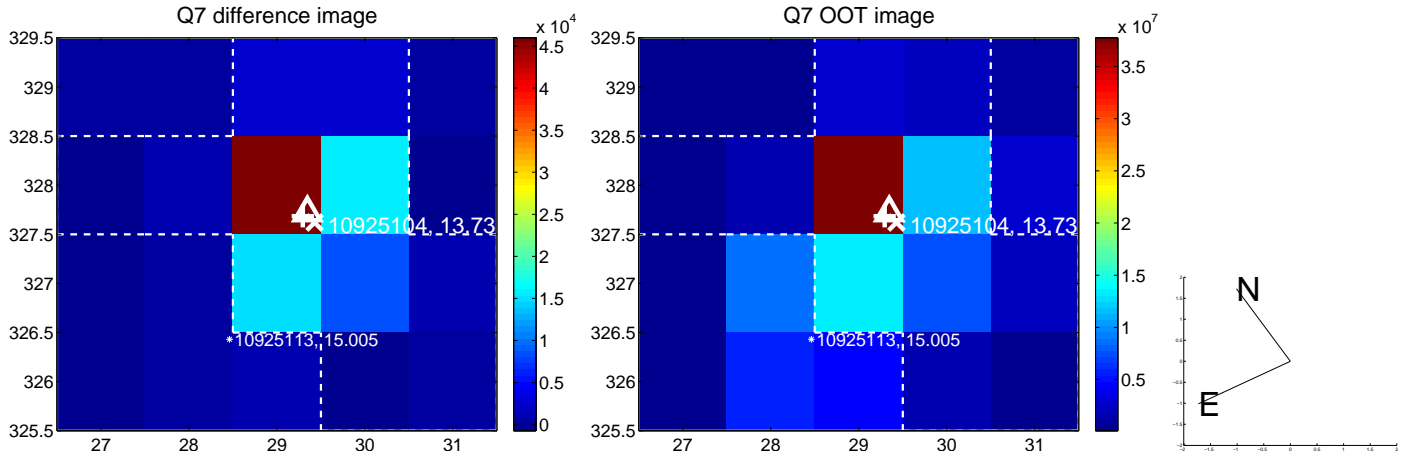
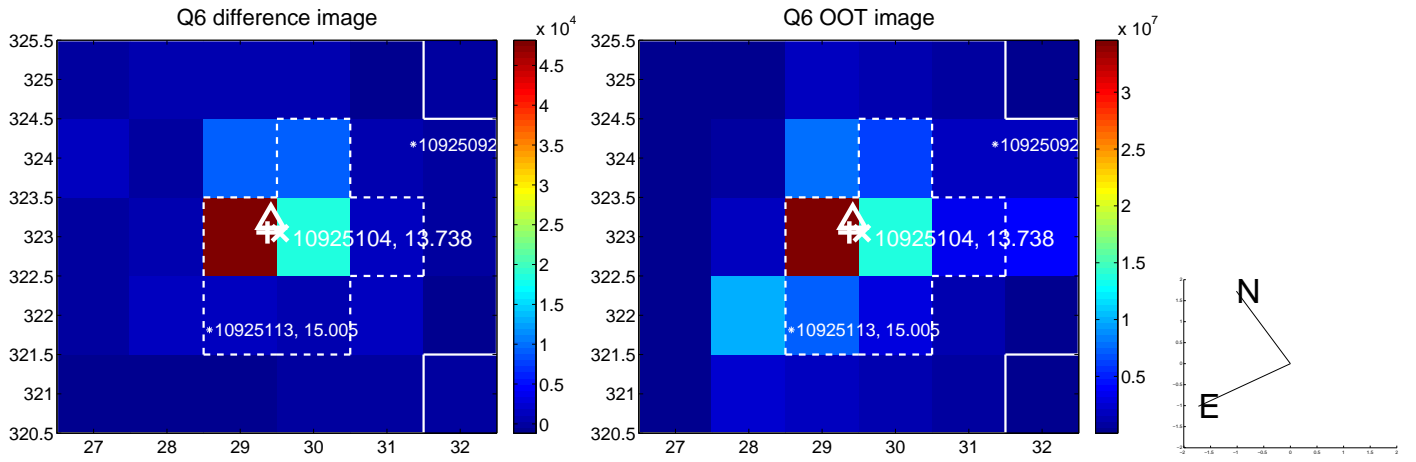
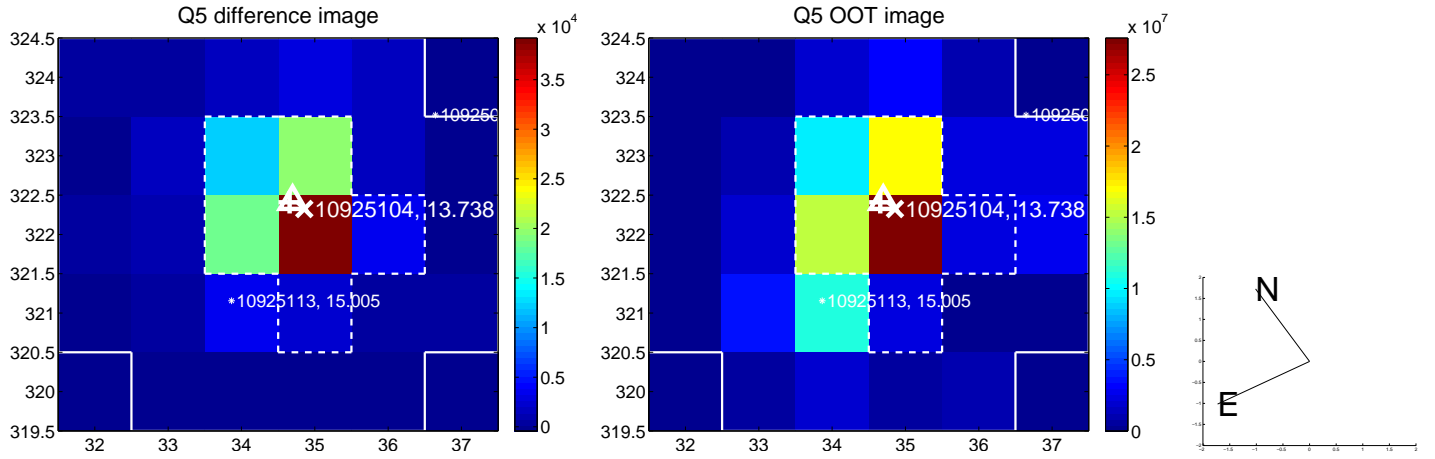


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

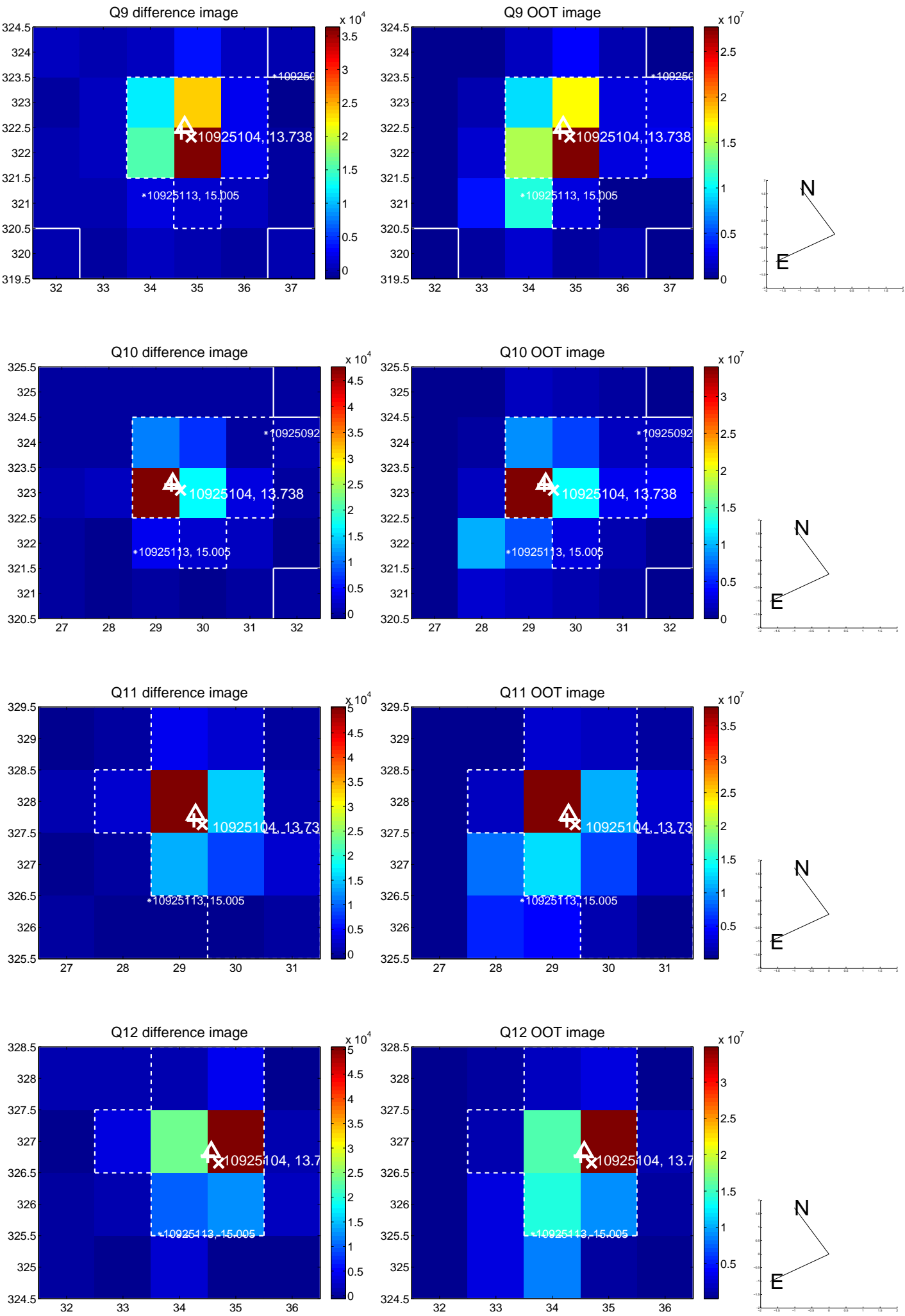
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



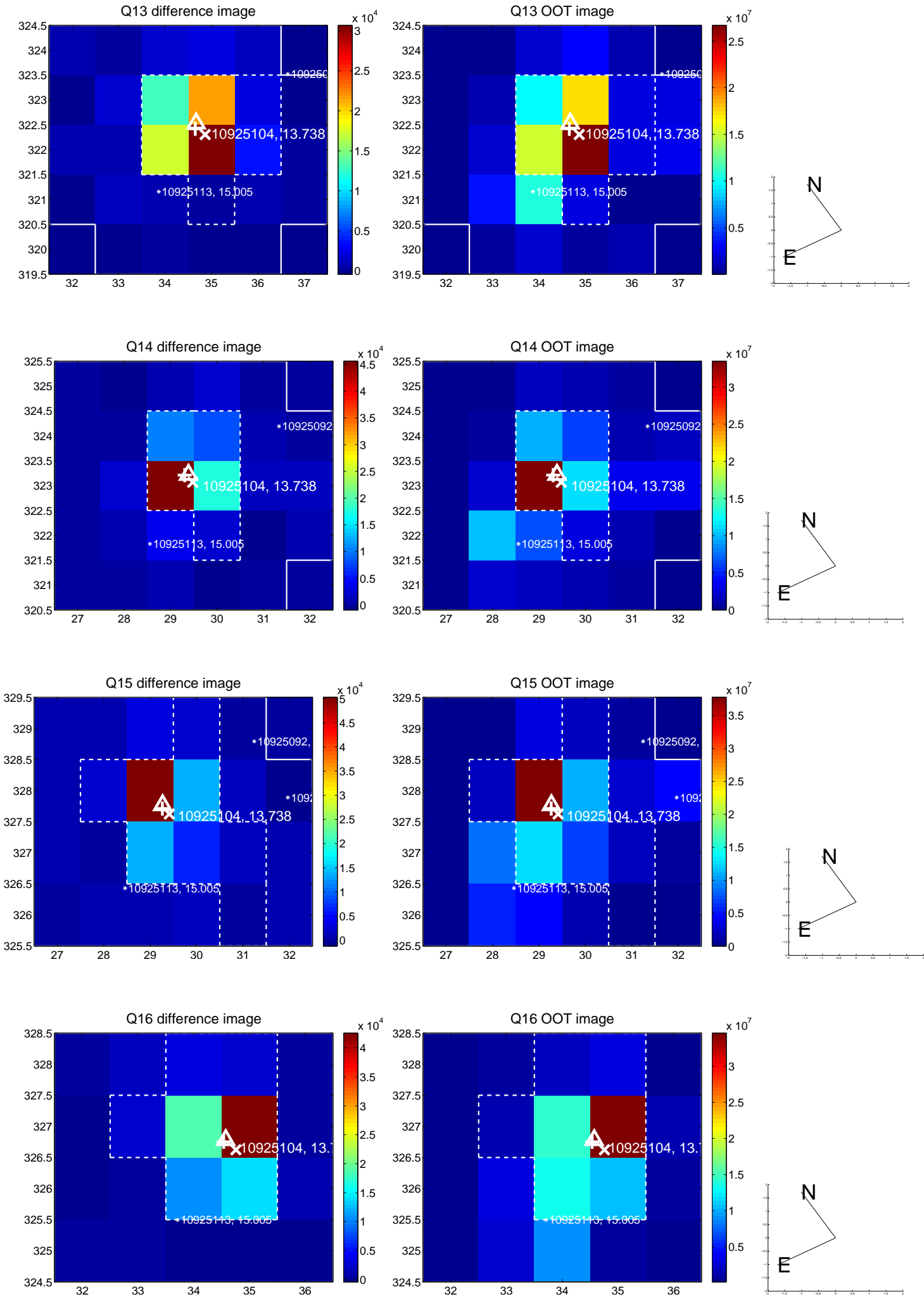
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



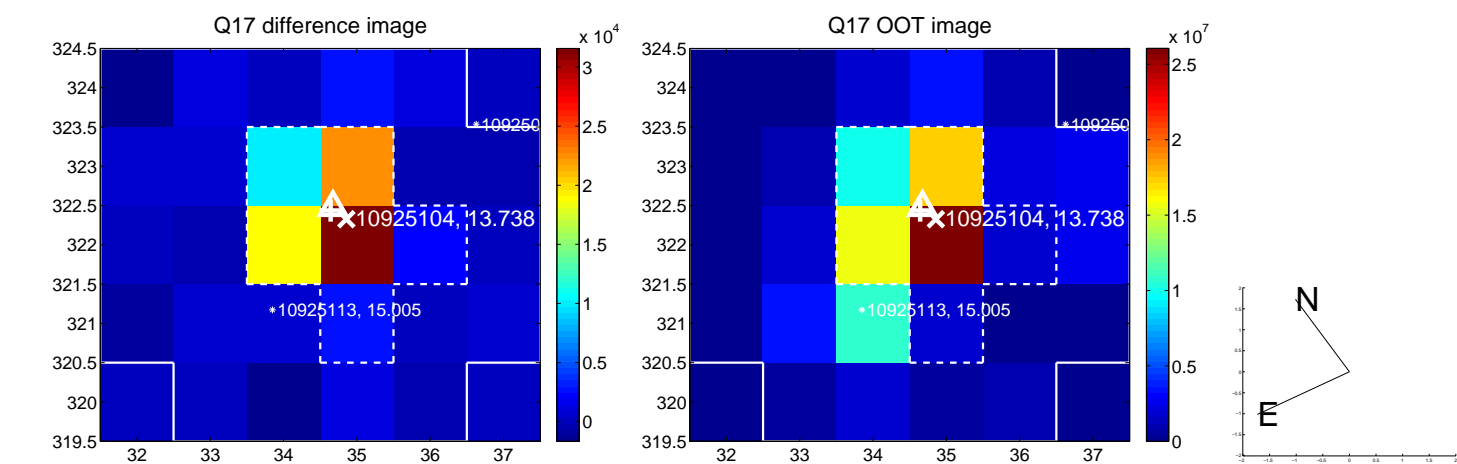
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



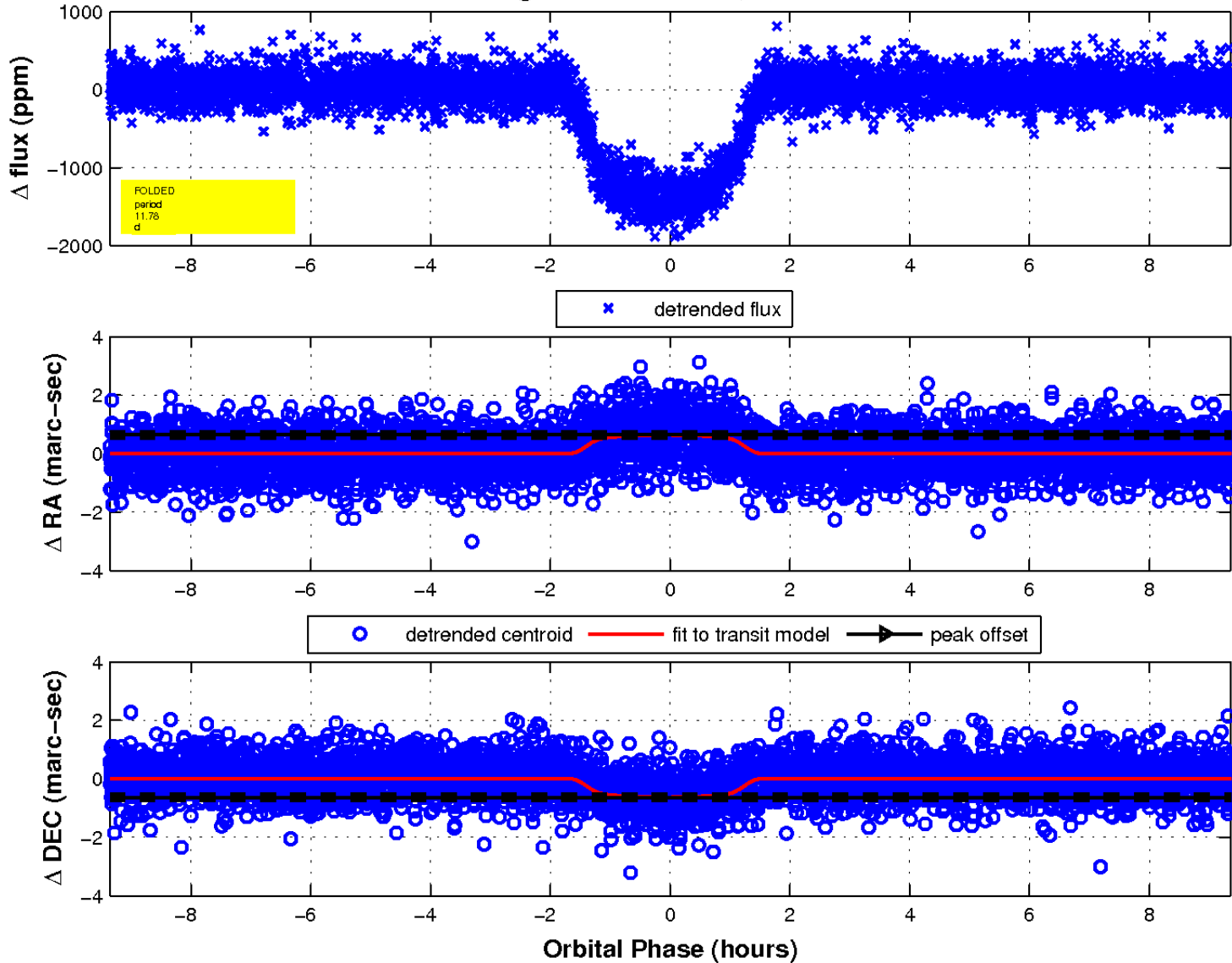
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

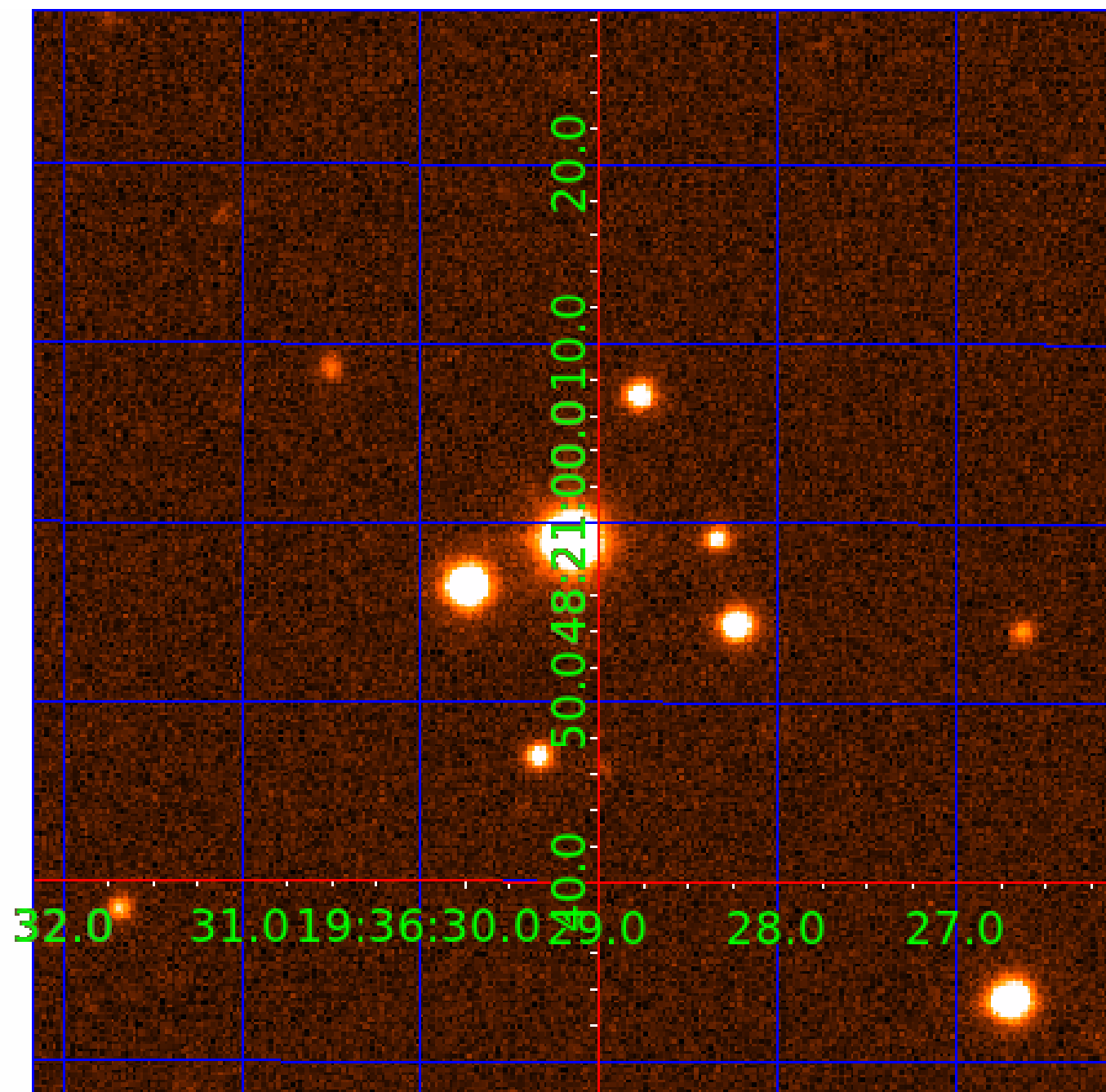


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination



KIC 010925104

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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010925104-02	OBS	PC	0.68	0	0	0	0	CENT_KIC_POS
010925104-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
010925104-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST

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

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

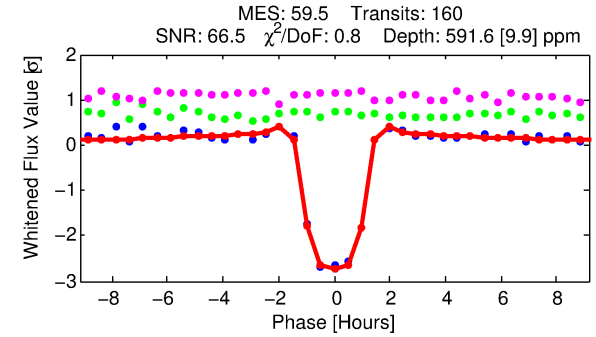
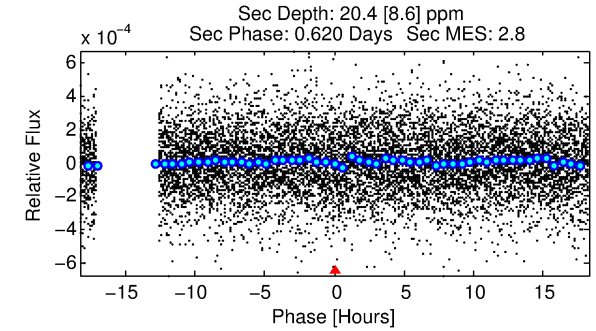
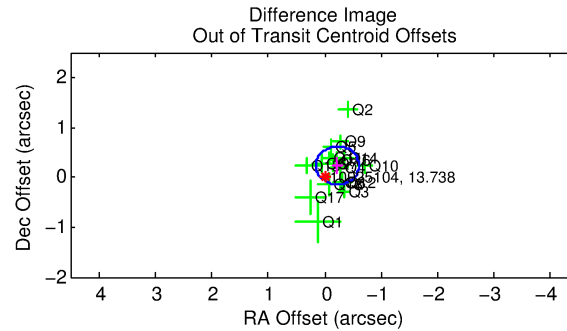
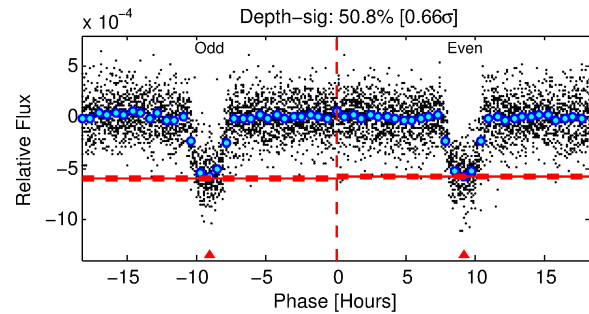
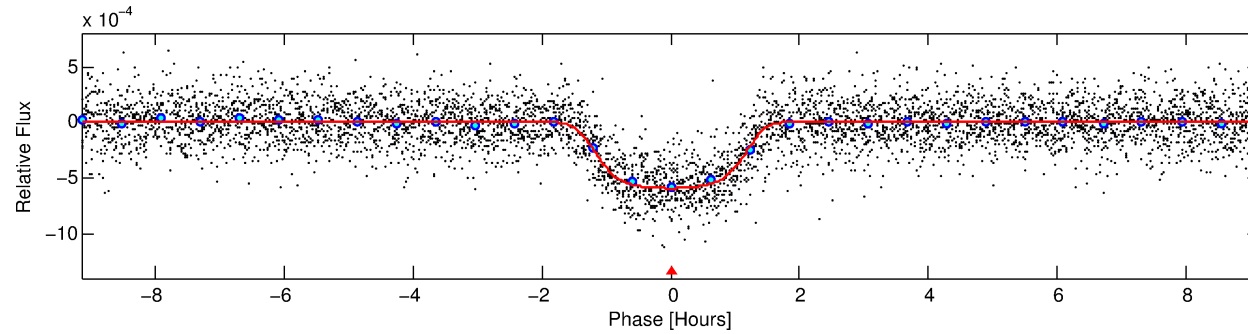
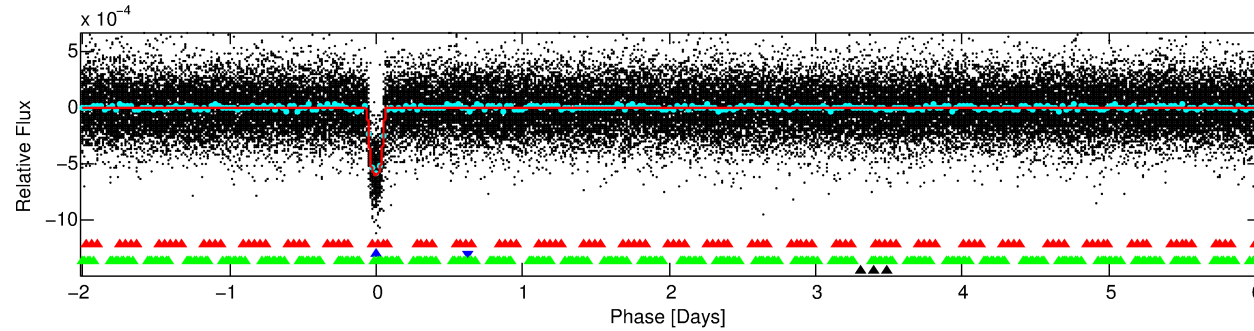
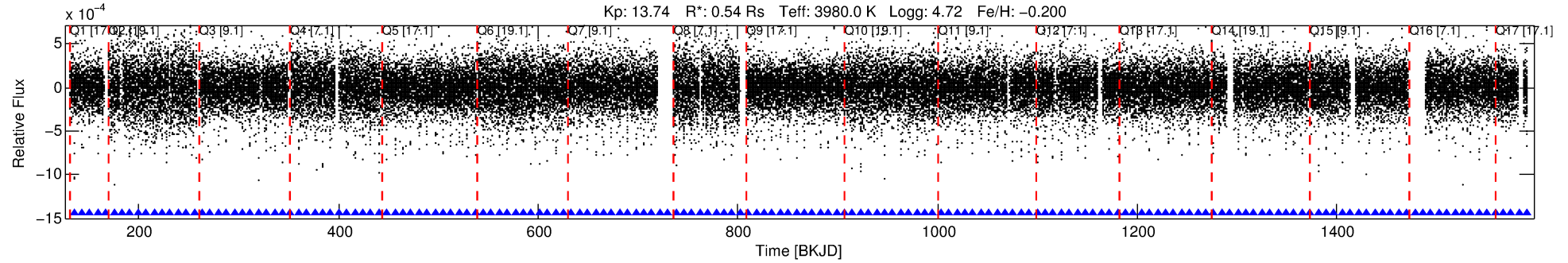
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010925104-02

No Significant Match Found

DV One-Page Summary

KIC: 10925104 Candidate: 2 of 4 Period: 8.041 d
KOI: K00156.01 Name: Kepler-114c Corr: 0.929



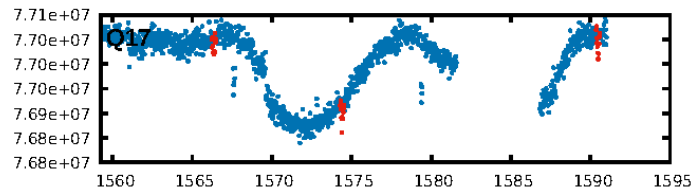
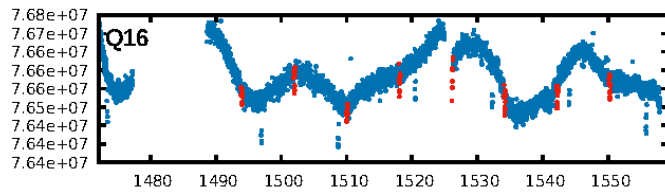
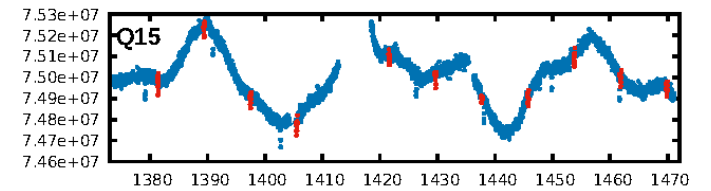
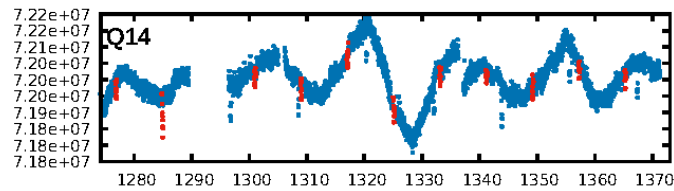
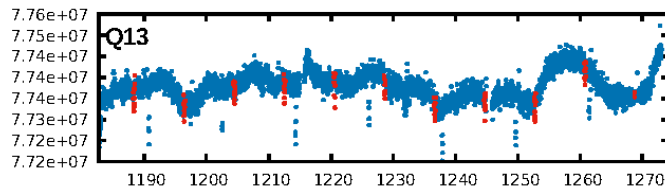
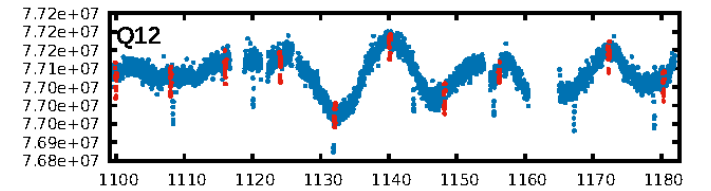
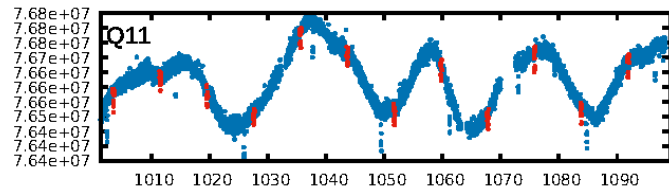
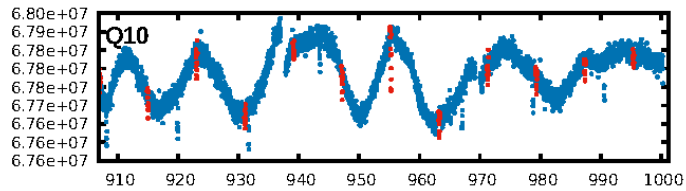
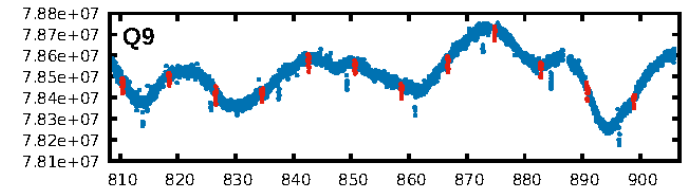
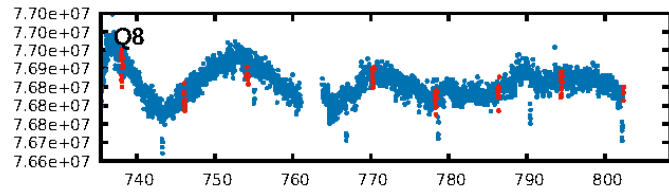
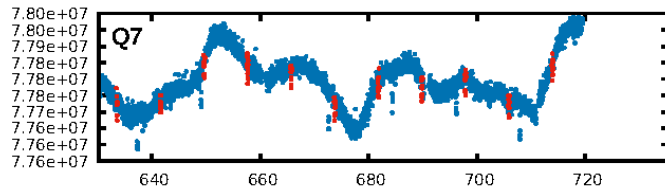
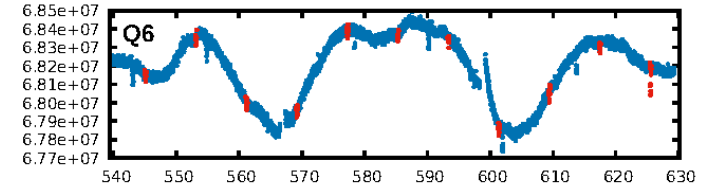
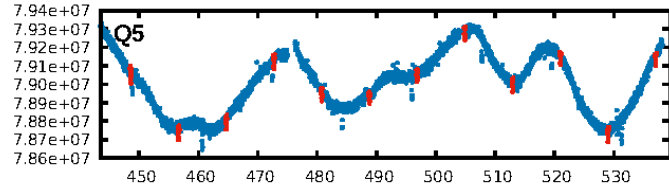
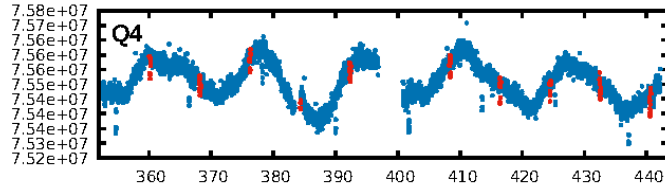
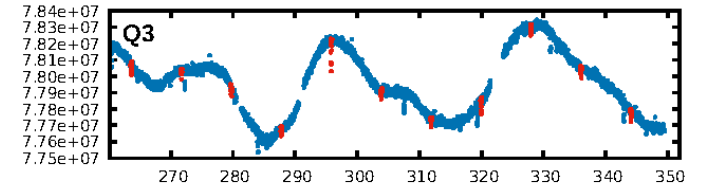
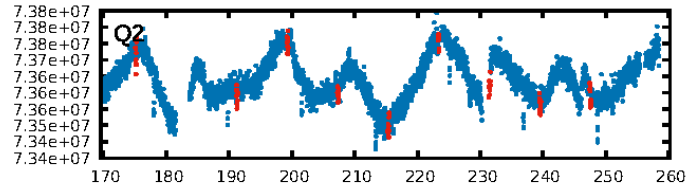
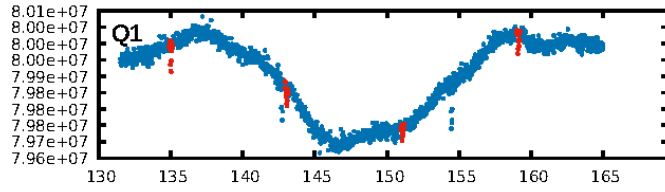
DV Fit Results:

Period = 8.04134 [0.00001] d
Epoch = 134.9975 [0.0009] BKJD
Rp/R* = 0.0283 [0.0005]
a/R* = 8.25 [0.51]
b = 0.94 [0.01]
Seff = 15.62 [1.60]
Teff = 507 [13] K
Rp = 1.66 [0.11] Re
a = 0.0648 [0.0031] AU
Ag = 17.03 [7.27] [2.20 σ]
Teffp = 1592 [171] K [6.33 σ]

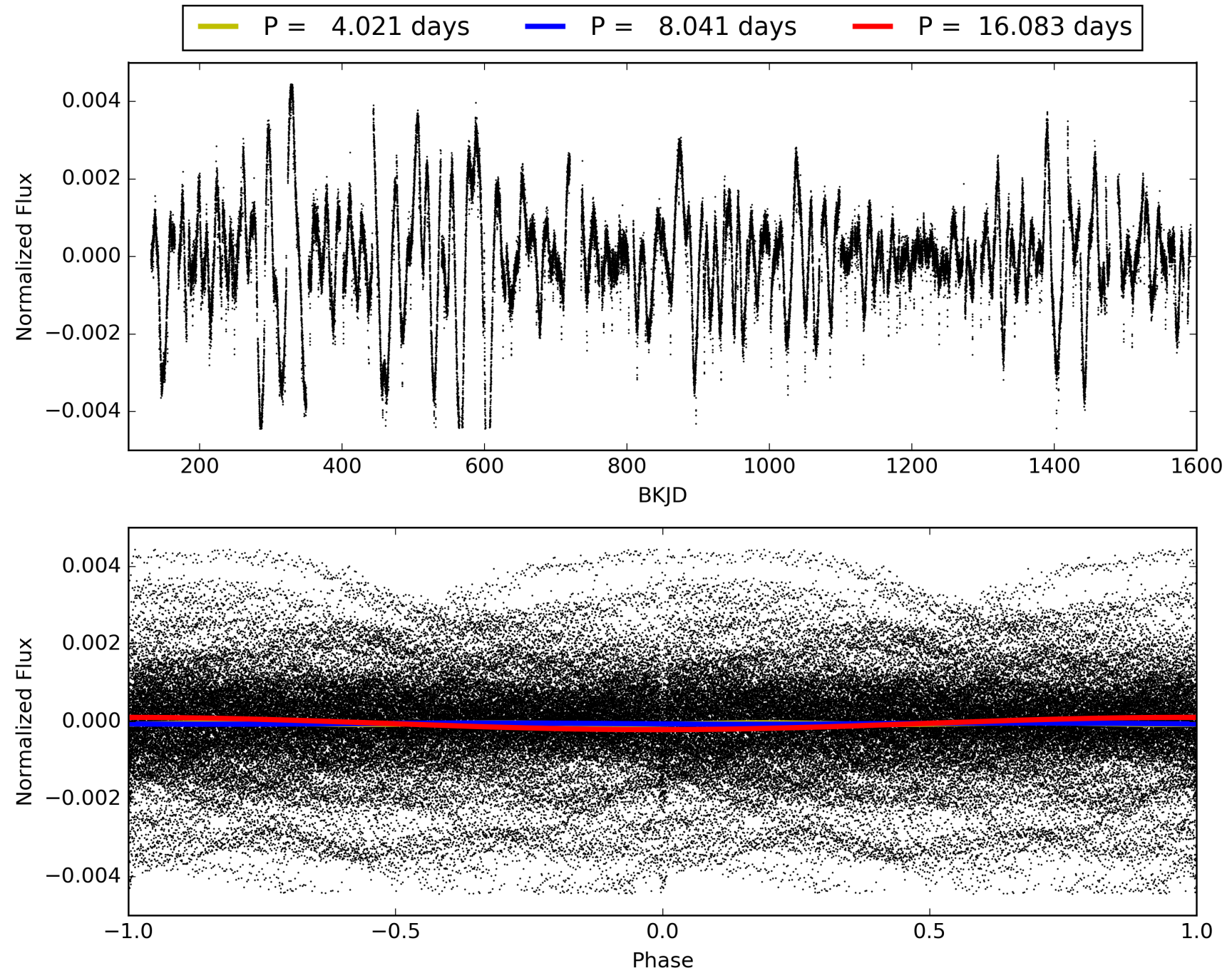
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.38 σ]
LongPeriod-sig: 100.0% [20.55 σ]
ModelChiSquare2-sig: 97.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [153/153]
GhostDiagnostic-chr: 6.592
Centroid-sig: 0.0%
Centroid-so: 0.787 arcsec [6.55 σ]
OotOffset-rm: 0.323 arcsec [2.55 σ]
KicOffset-rm: 0.977 arcsec [8.28 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010925104-02, PDC Light Curves

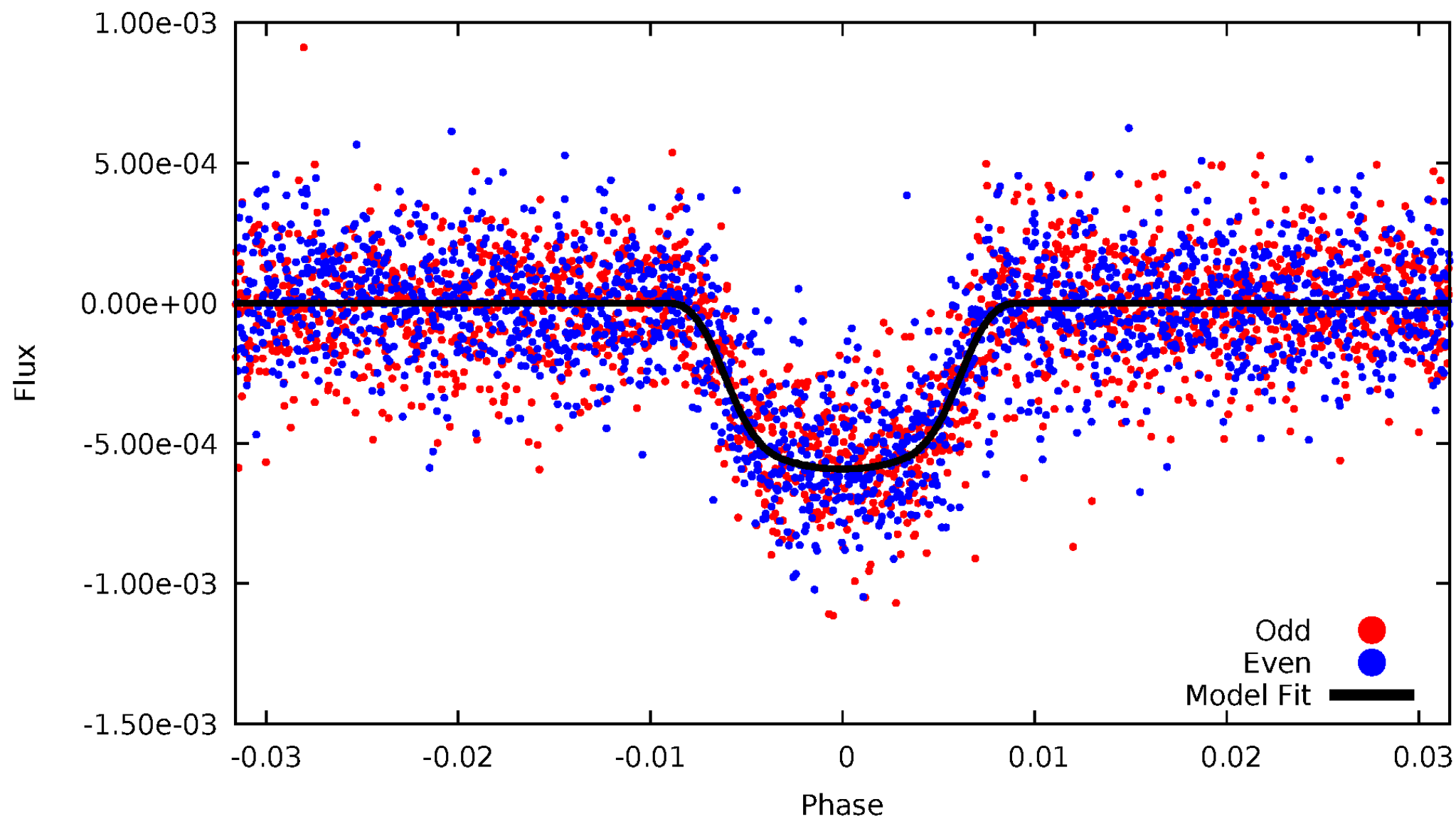


TCE 010925104-02



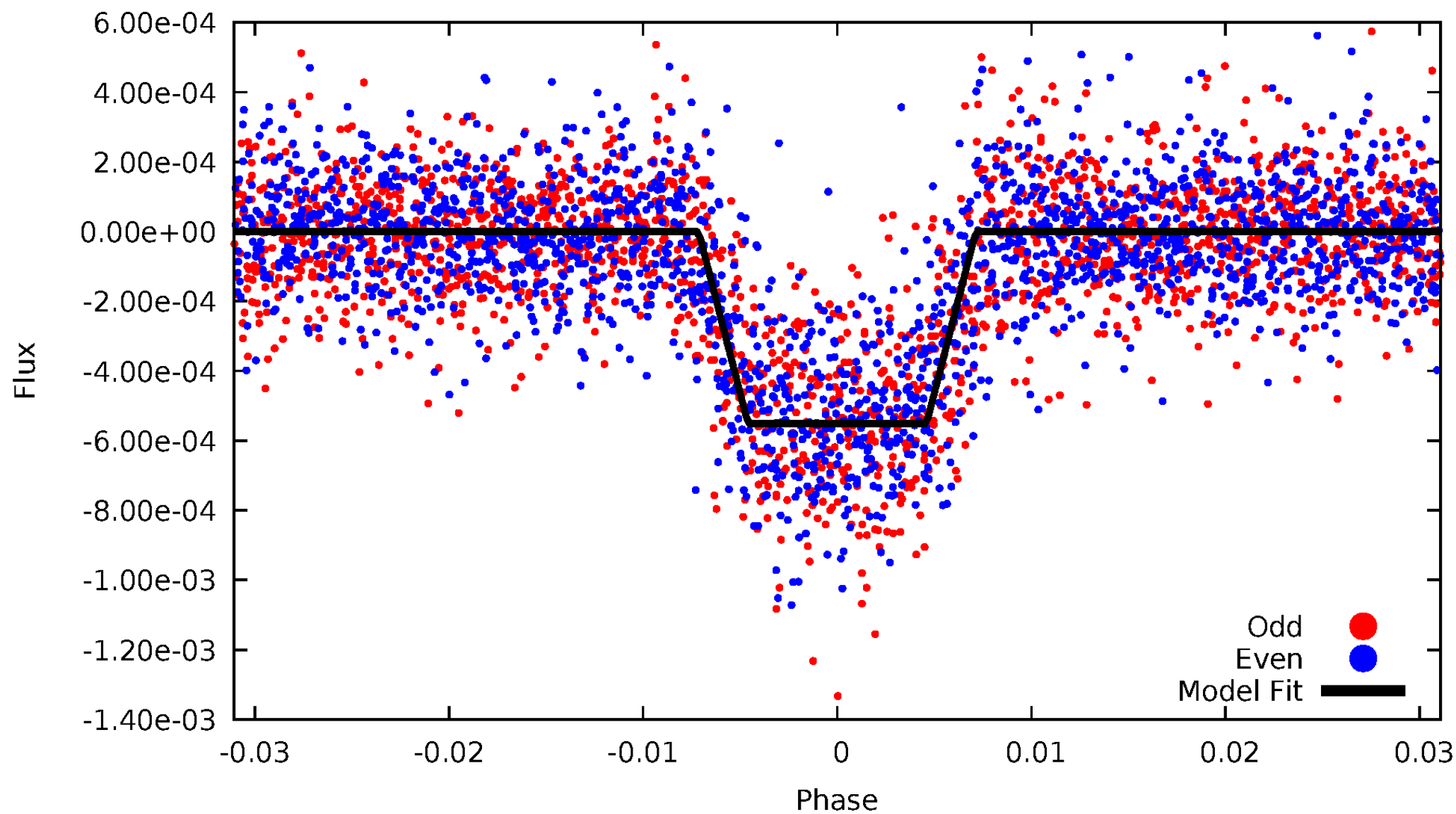
DV Odd/Even

TCE 010925104-02



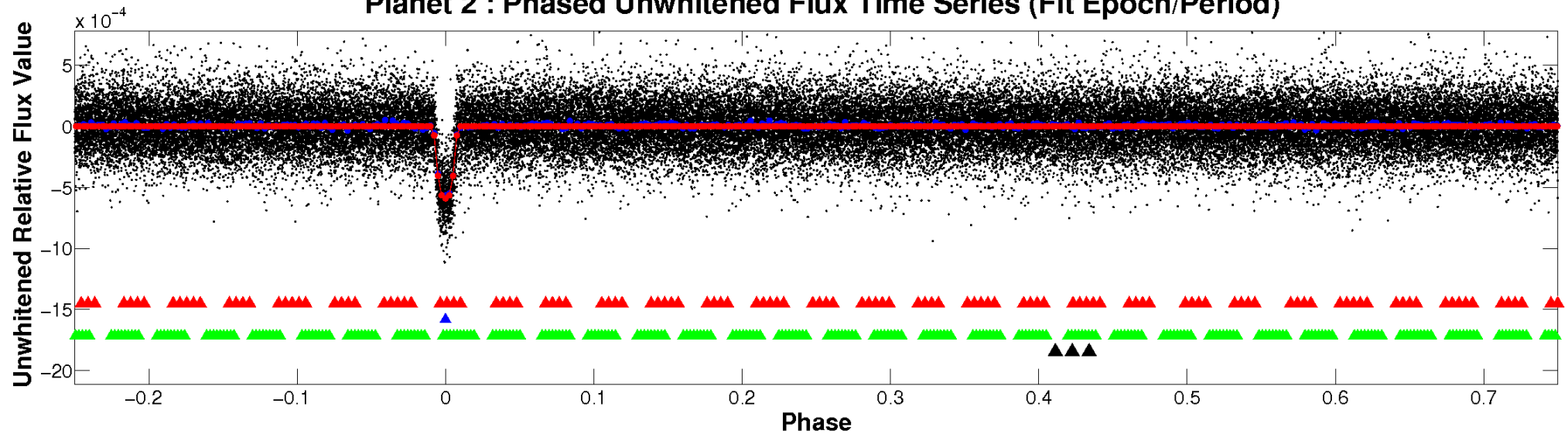
ALT Odd/Even

TCE 010925104-02

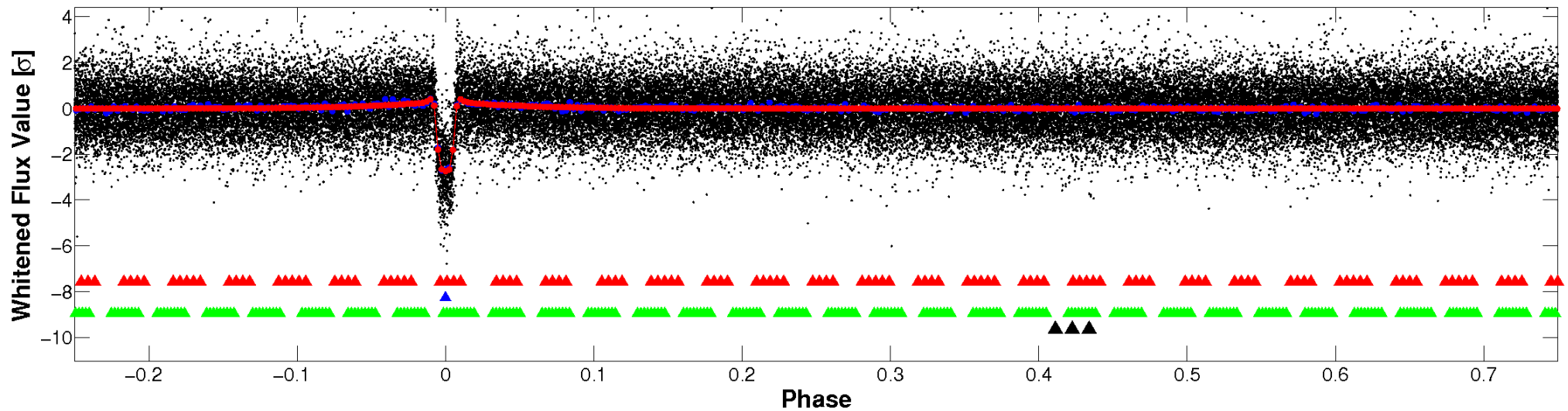


Non-Whitened Vs. Whitened Light Curve

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

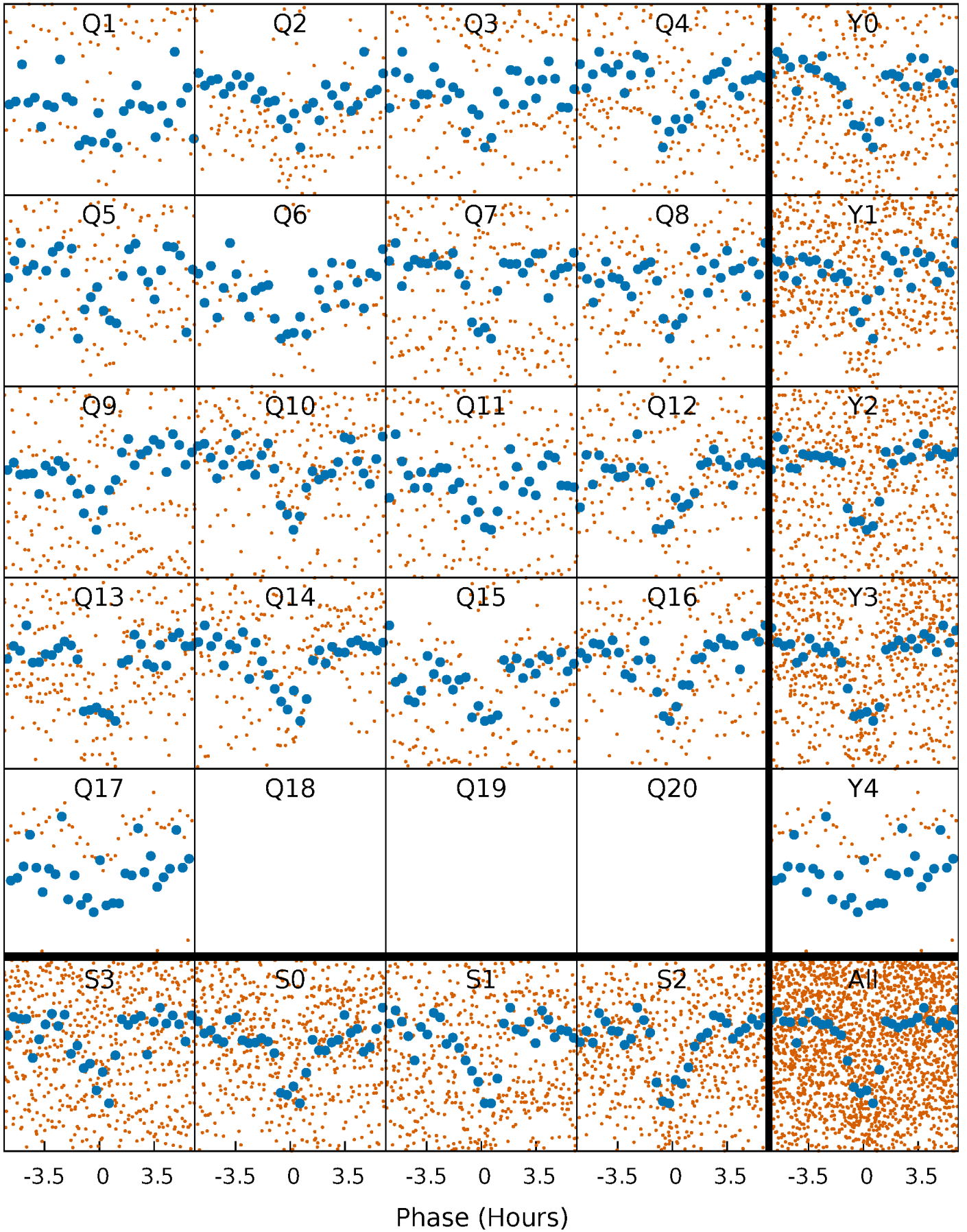


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



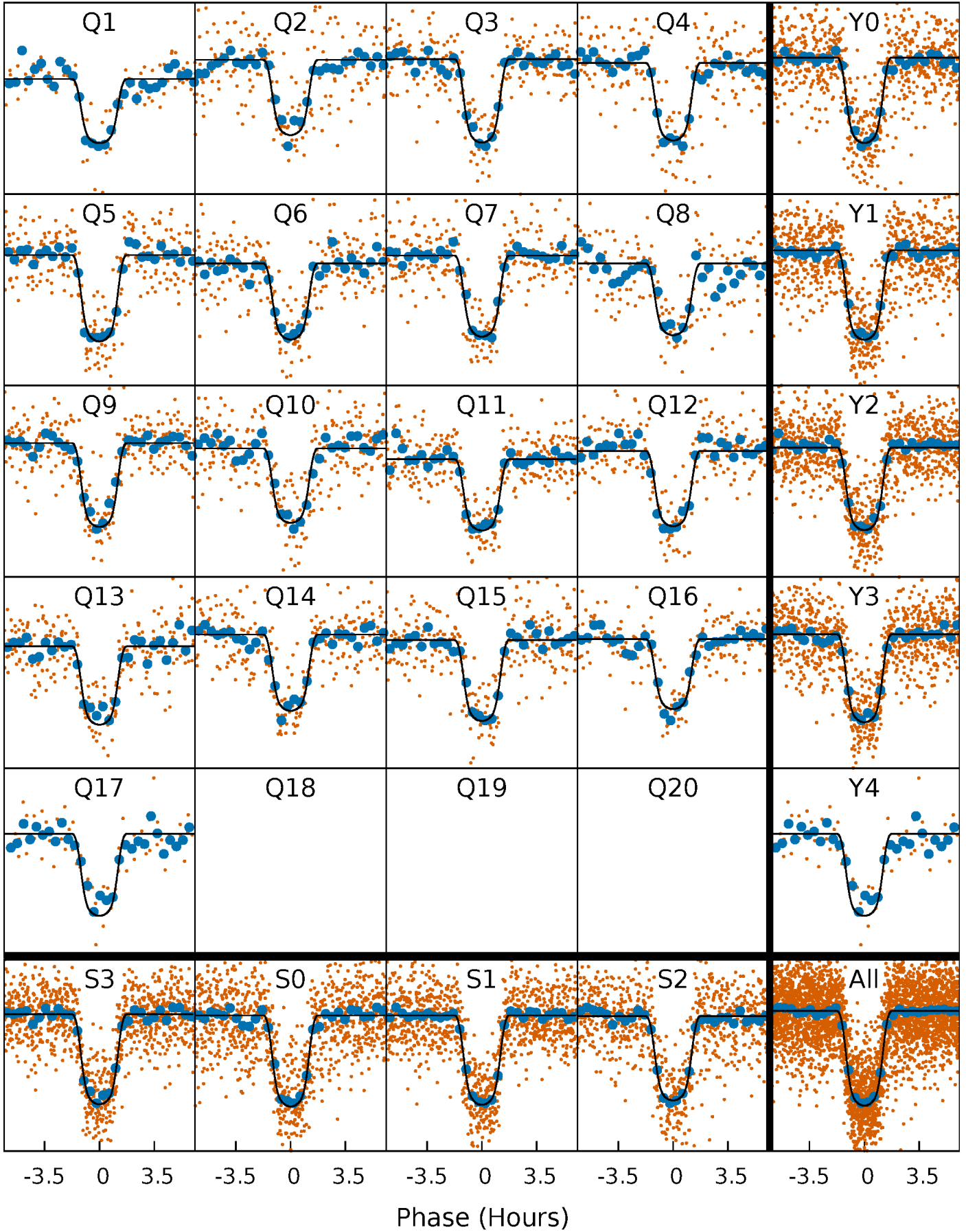
PDC Quarter-Phased Transit Curves

TCE 010925104-02 P= 8.041340 Days $T_0=134.997479$ (BKJD)



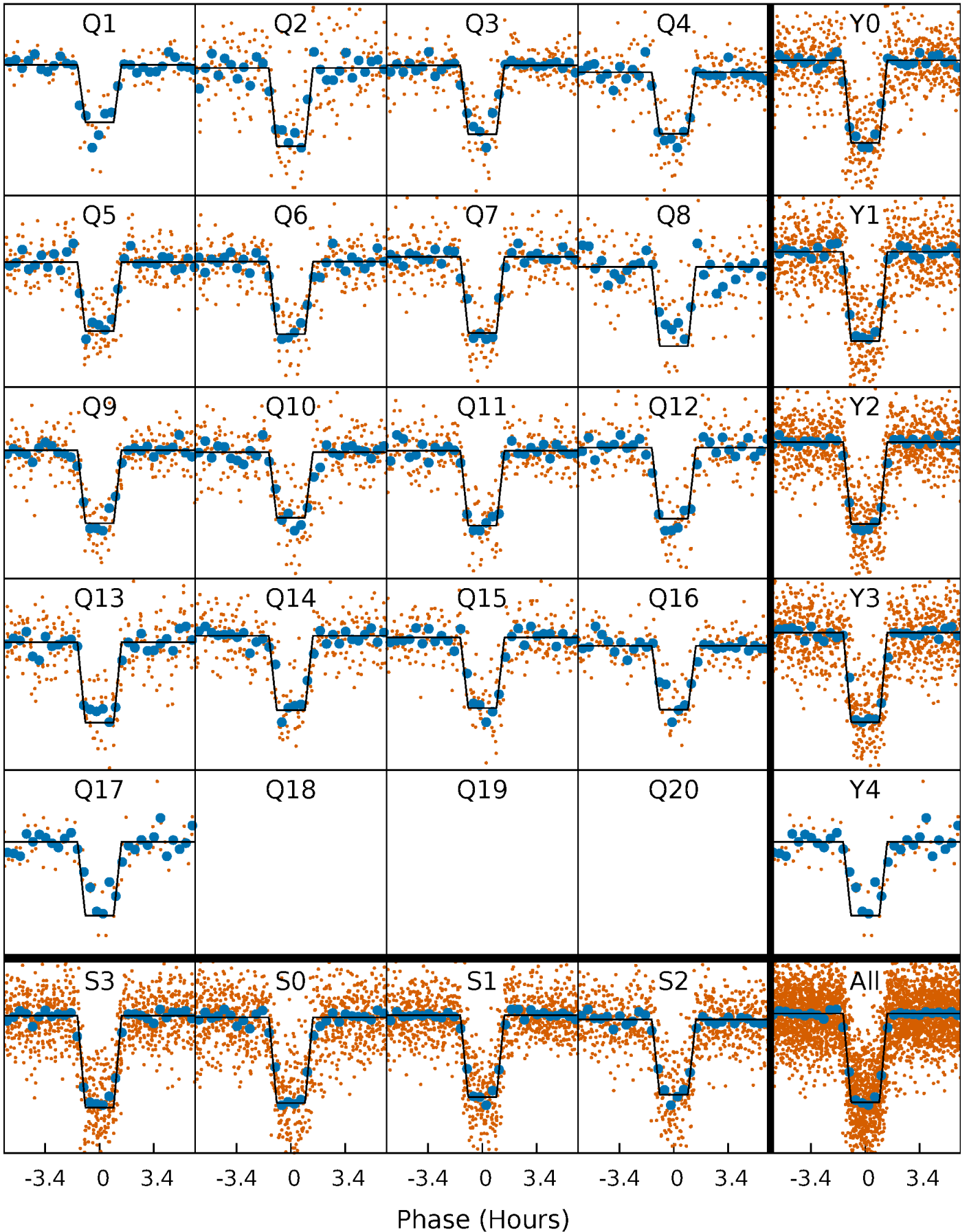
DV Quarter-Phased Transit Curves

TCE 010925104-02 P= 8.041340 Days $T_0=134.997479$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

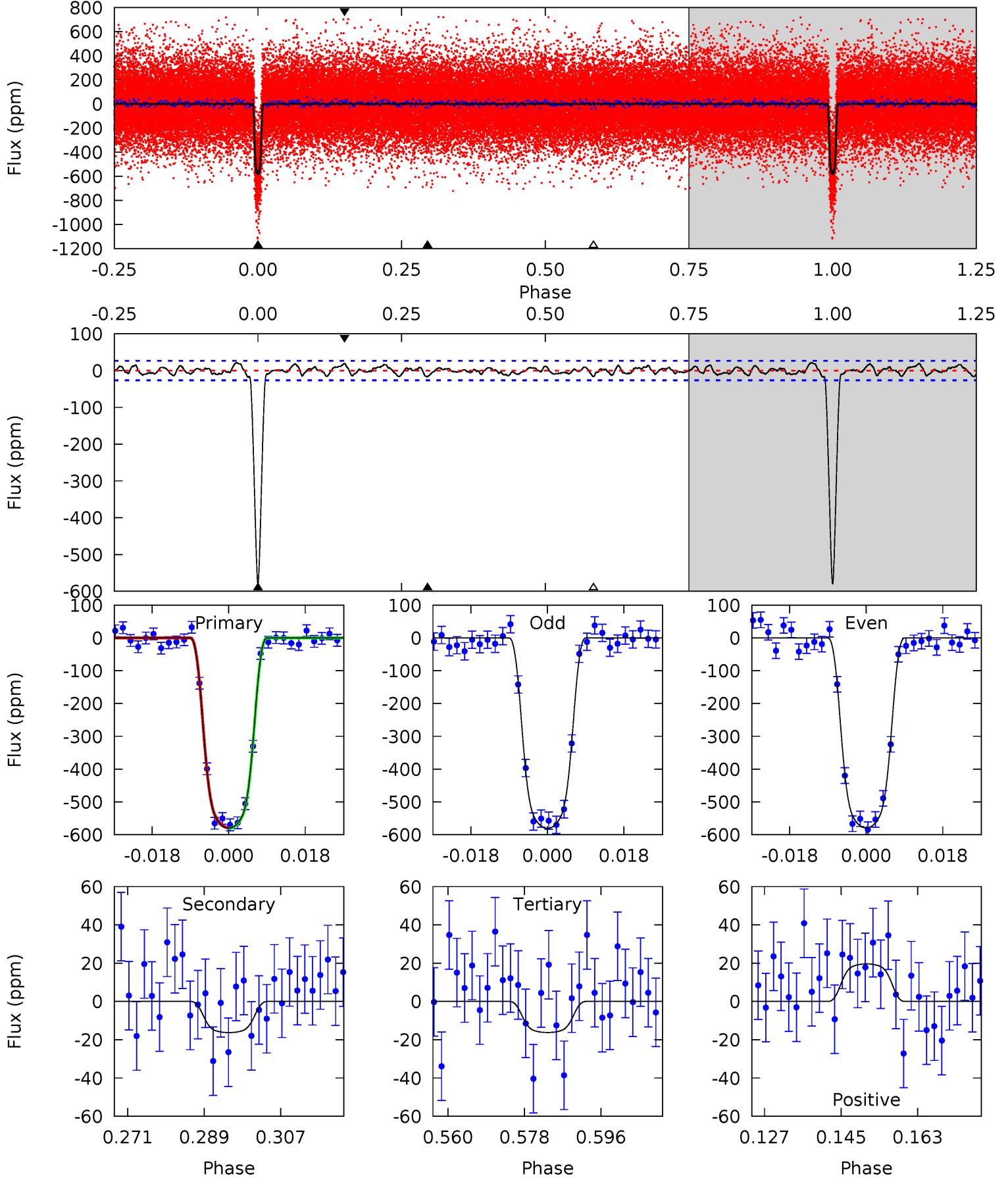
TCE 010925104-02 P= 8.041268 Days $T_0=135.004012$ (BKJD)



DV Model-Shift Uniqueness Test

010925104-02, P = 8.041340 Days, E = 126.956139 Days

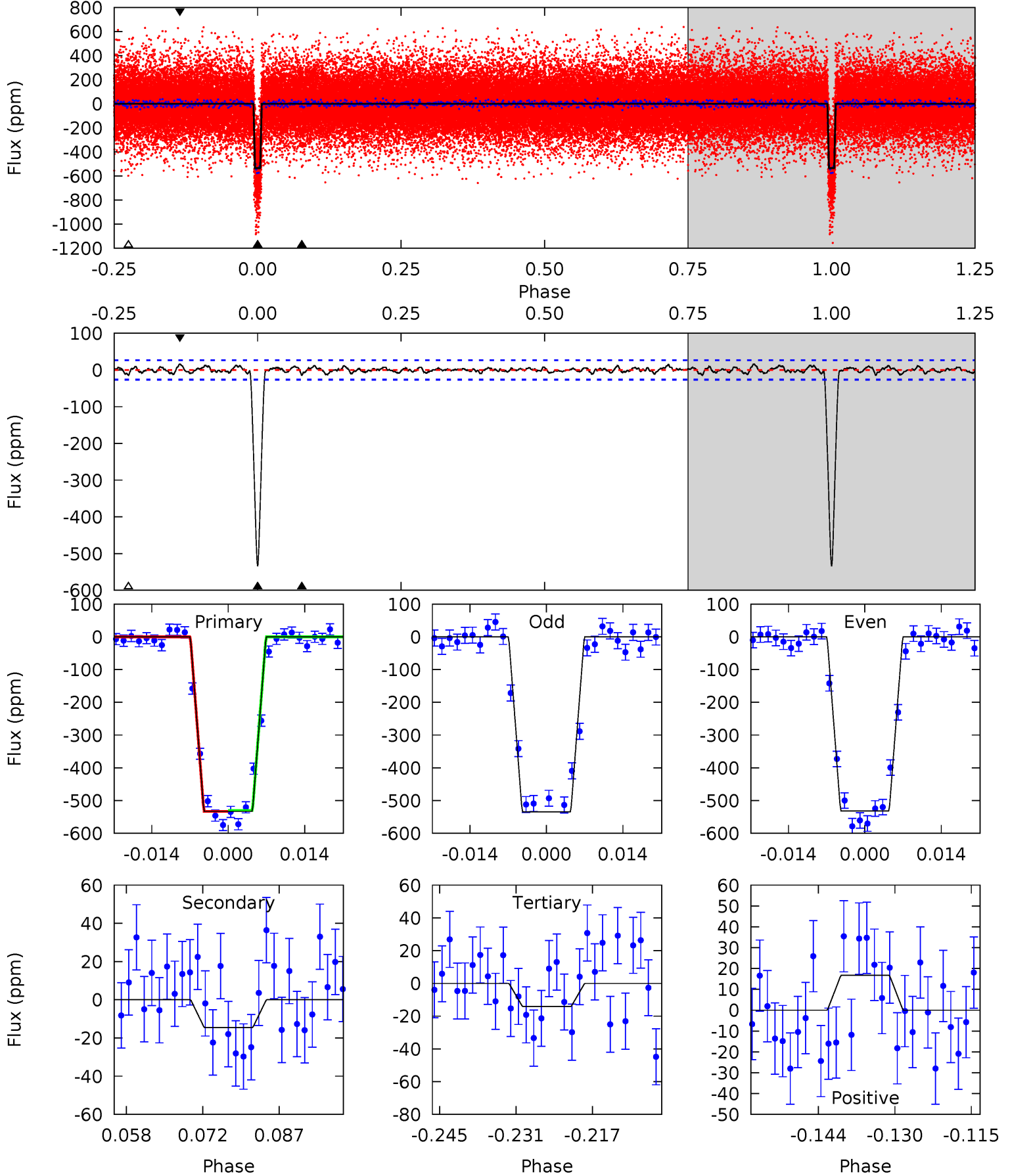
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
107.4	3.01	3.01	3.63	4.91	2.36	1.40	104.4	103.7	0.01	-0.62	0.12	1.00	0.04	0.21



Alt Model-Shift Uniqueness Test

010925104-02, P = 8.041268 Days, E = 126.962744 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
99.5	2.71	2.64	3.12	4.96	2.45	0.95	96.9	96.4	0.07	-0.41	0.28	0.98	0.03	0.23



Stellar Parameters For KIC 010925104

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3980^{+79}_{-79}	$4.722^{+0.030}_{-0.033}$	$-0.200^{+0.150}_{-0.150}$	$0.540^{+0.033}_{-0.033}$	$0.560^{+0.031}_{-0.038}$	$5.018^{+0.739}_{-0.583}$
	+2%/-2%	+1%/-1%	+75%/-75%	+6%/-6%	+6%/-7%	+15%/-12%
Source	SPE5	SPE5	SPE5	DSEP		

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

Secondary Eclipse Parameters for KIC 010925104-02 / KOI 0156.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-16 ± 5	$1.67^{+0.06}_{-0.07}$	709^{+17}_{-16}	2294^{+81}_{-101}	14^{+4}_{-4}
Alt.	-15 ± 5	$1.39^{+0.05}_{-0.06}$	708^{+17}_{-17}	2358^{+104}_{-126}	17^{+7}_{-7}

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

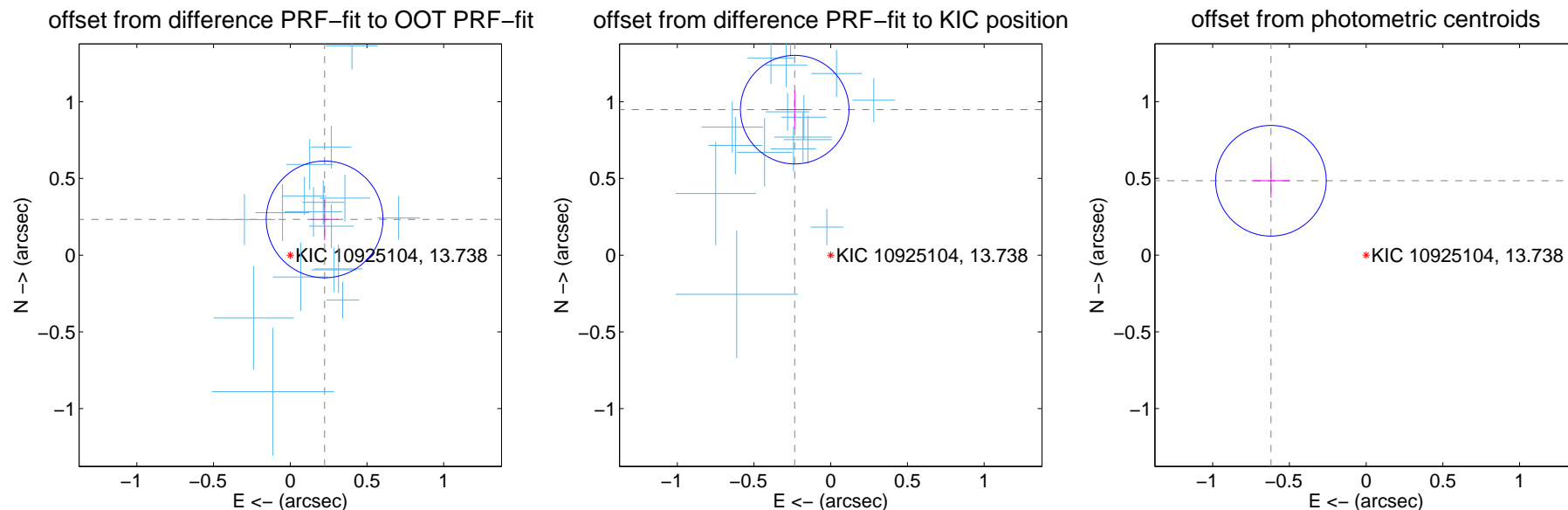
DV Centroid Data

Supplemental centroid analysis for 010925104-02. Kepler magnitude: 13.74. Transit SNR 66.55

There are 17 quarters with good PRF difference image offsets

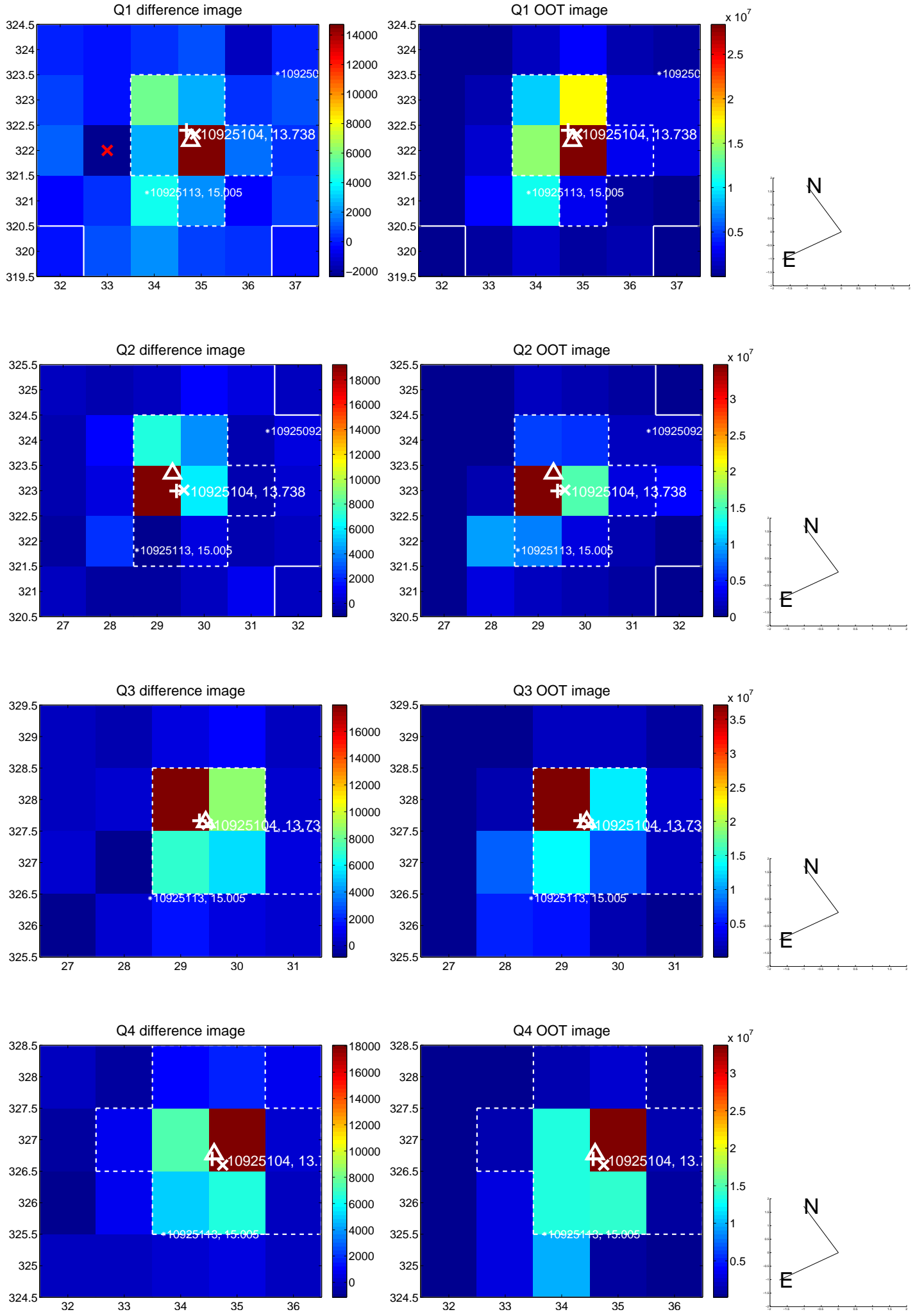
The direct PRF centroid is offset from the target star catalog position by about 0.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.323 ± 0.127	2.55	-0.224 ± 0.088	0.233 ± 0.135
PRF-fit source offset from KIC position	0.977 ± 0.118	8.28	0.235 ± 0.089	0.948 ± 0.124
photometric centroid source offset	0.79 ± 0.12	6.55	0.62 ± 0.13	0.48 ± 0.11

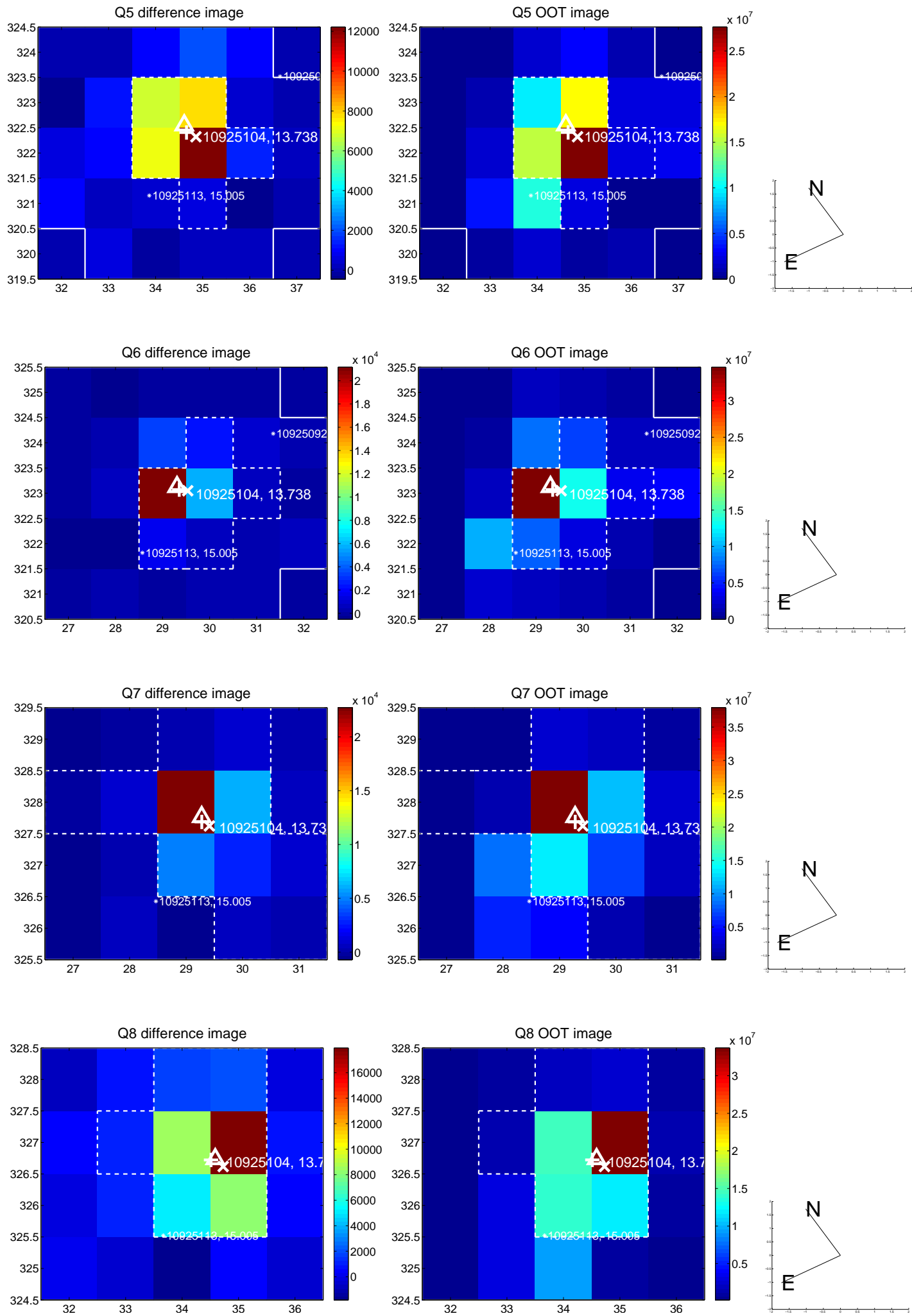


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

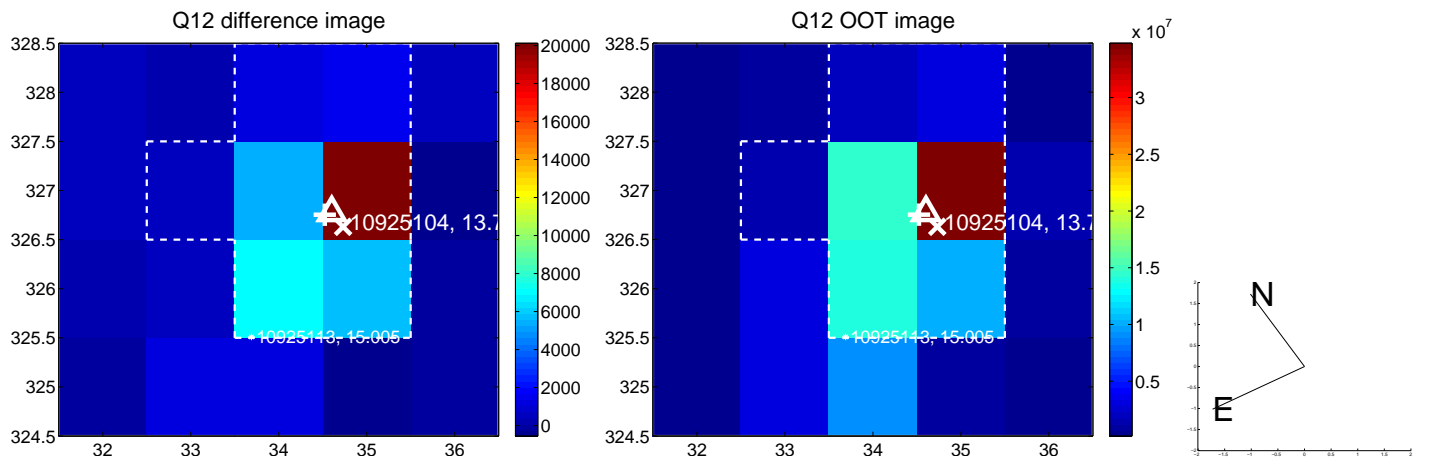
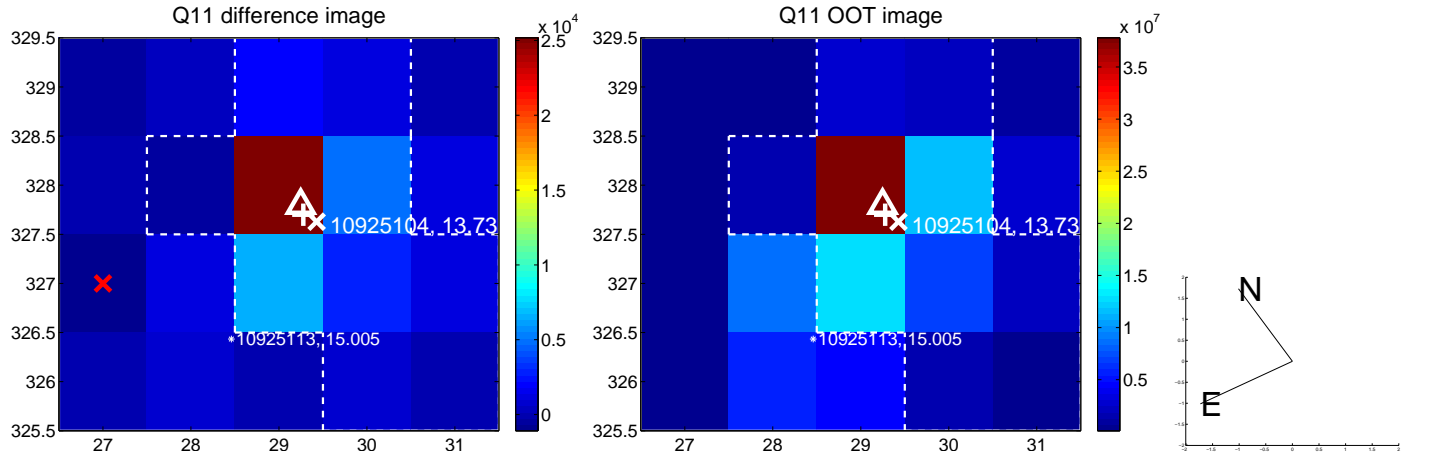
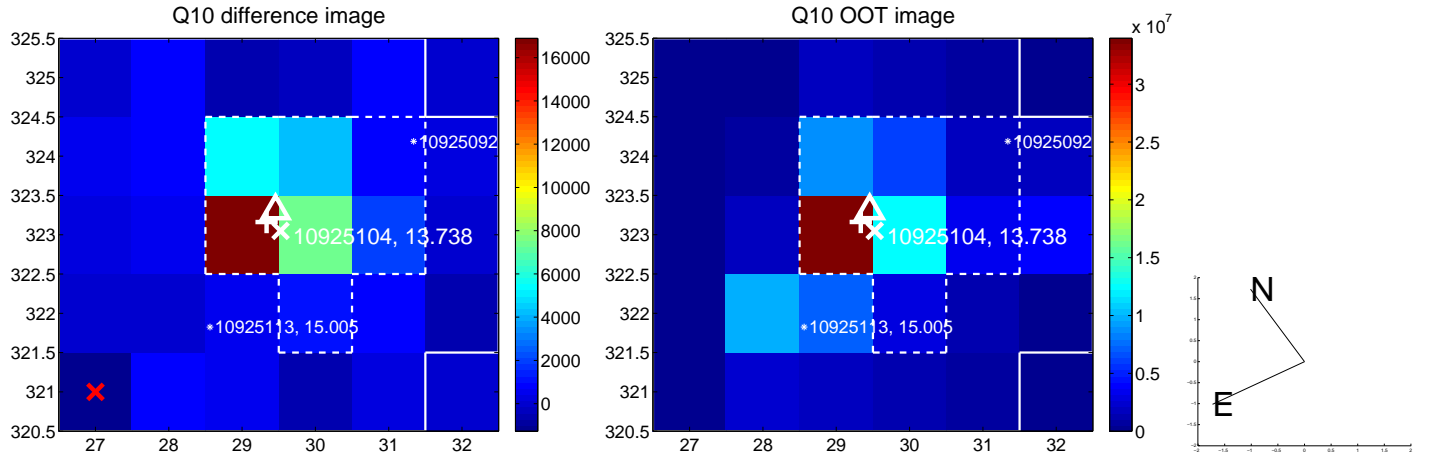
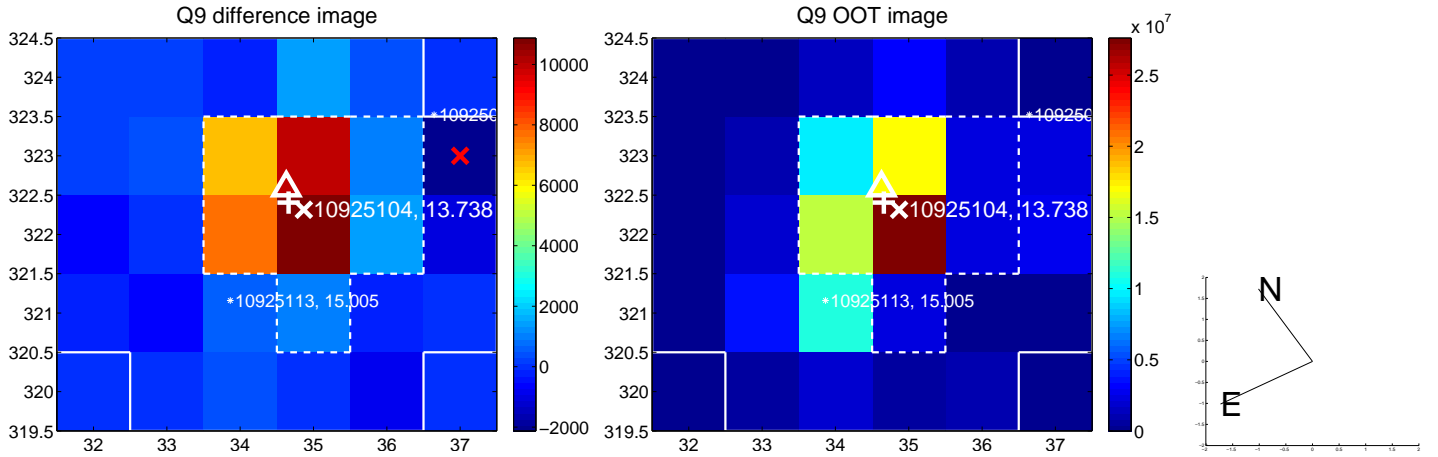
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



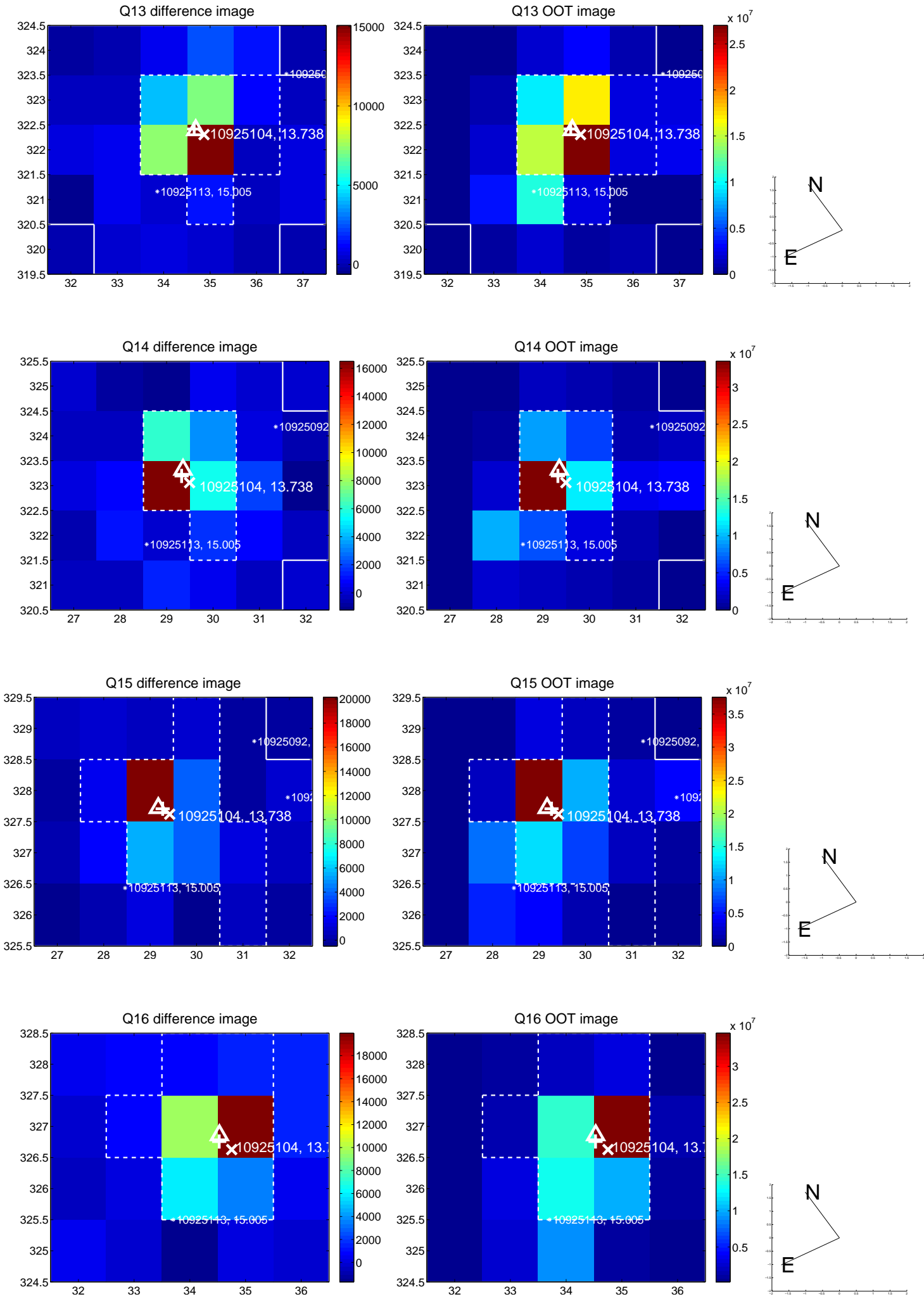
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



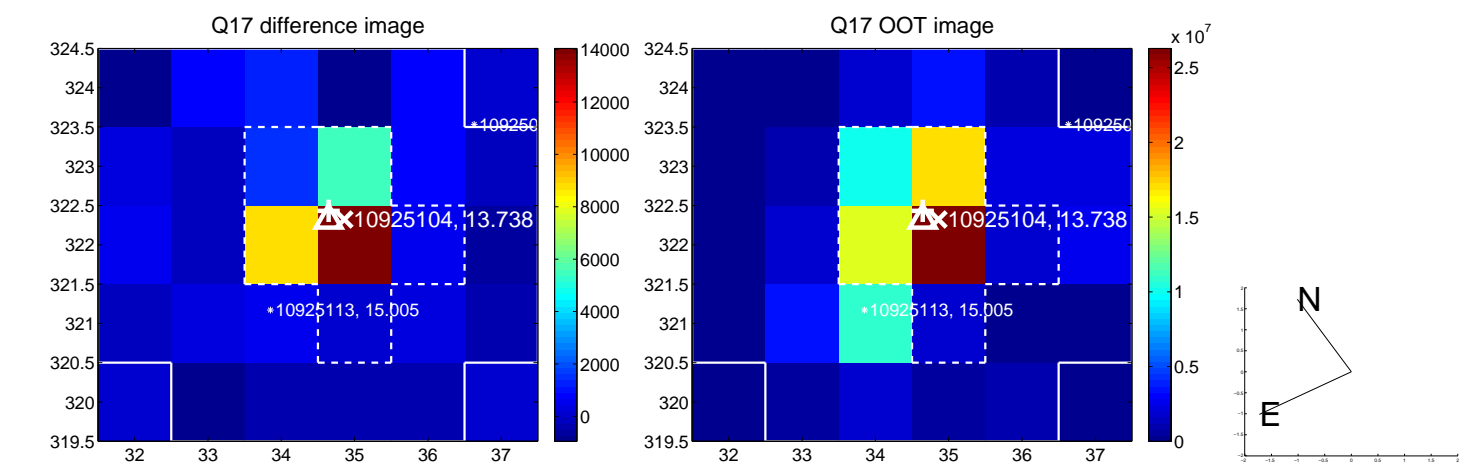
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



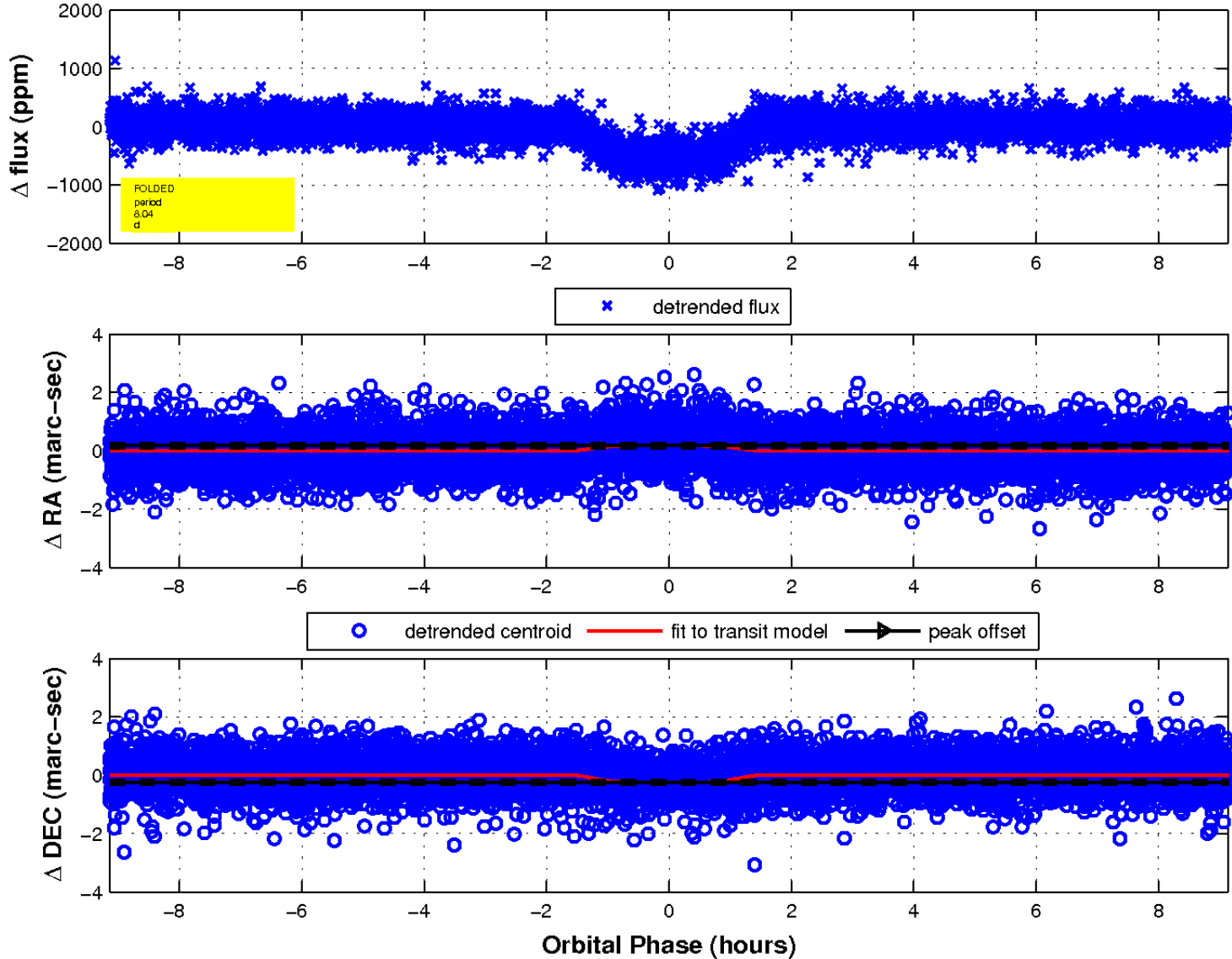
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

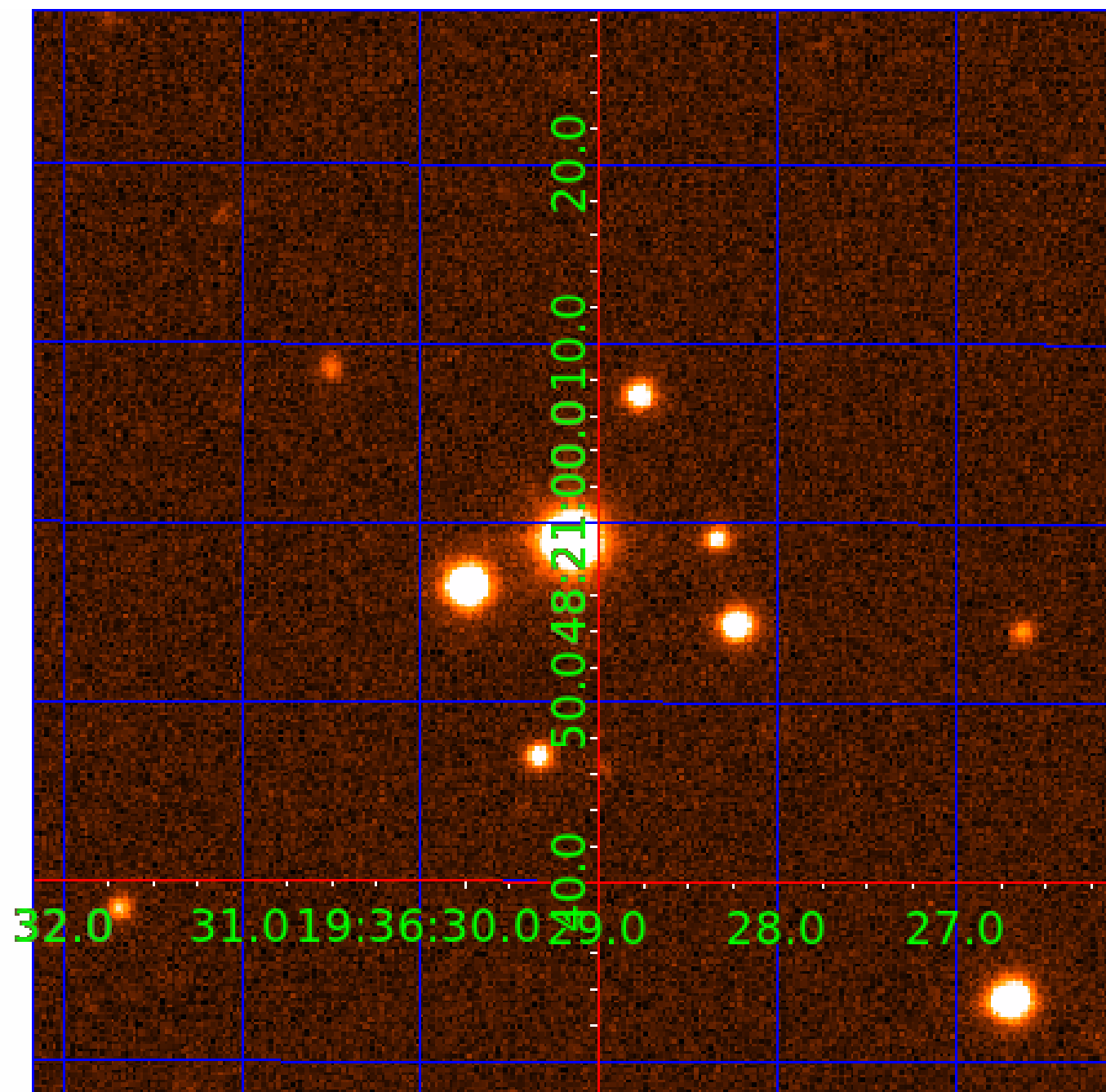


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



KIC 010925104

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})
010925104-01	OBS	0156.03	11.776128	142.706210	1429.1	3.121	137.9	133.9	0.54	3980	2.37	9.39
010925104-02	OBS	0156.01	8.041340	134.997479	591.6	3.048	59.5	66.5	0.54	3980	1.67	15.62
010925104-03	OBS	0156.02	5.188558	134.985816	335.7	2.861	42.2	46.9	0.54	3980	1.30	28.01
010925104-04	OBS	No	490.430135	251.065976	580.8	5.562	7.7	8.7	0.54	3980	1.38	0.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010925104-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
010925104-02	OBS	PC	0.68	0	0	0	0	CENT_KIC_POS
010925104-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
010925104-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST

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

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

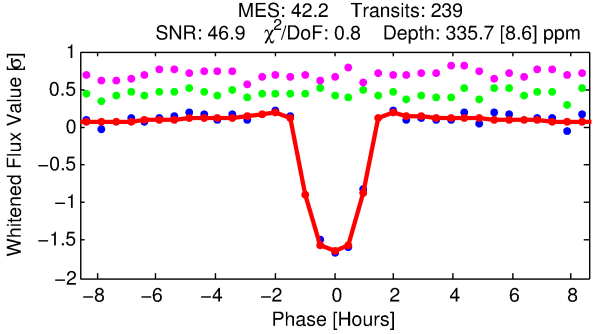
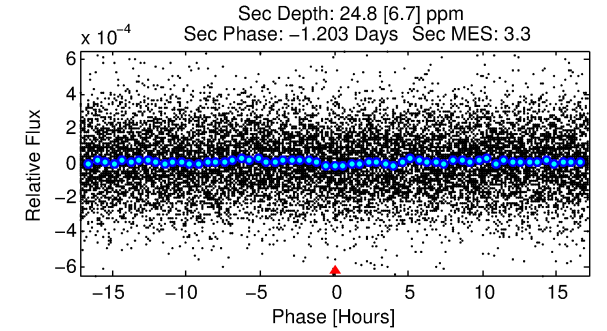
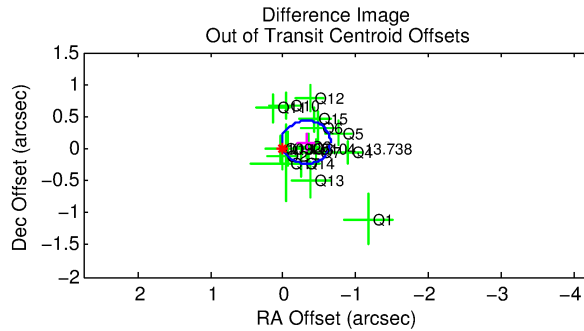
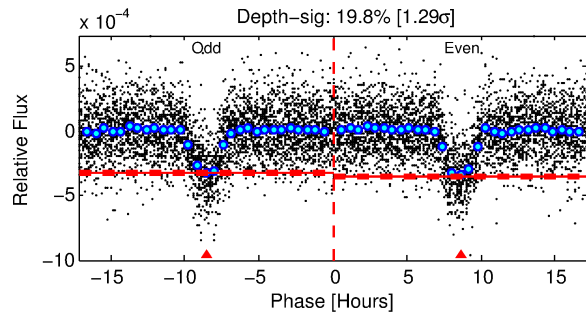
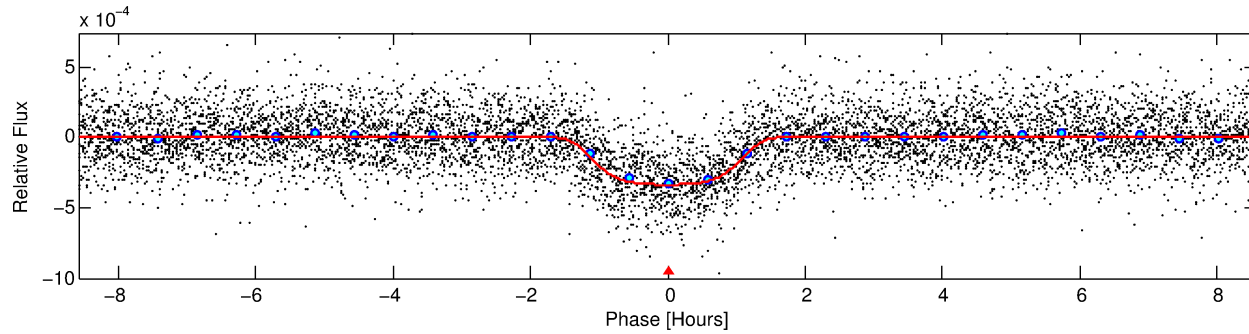
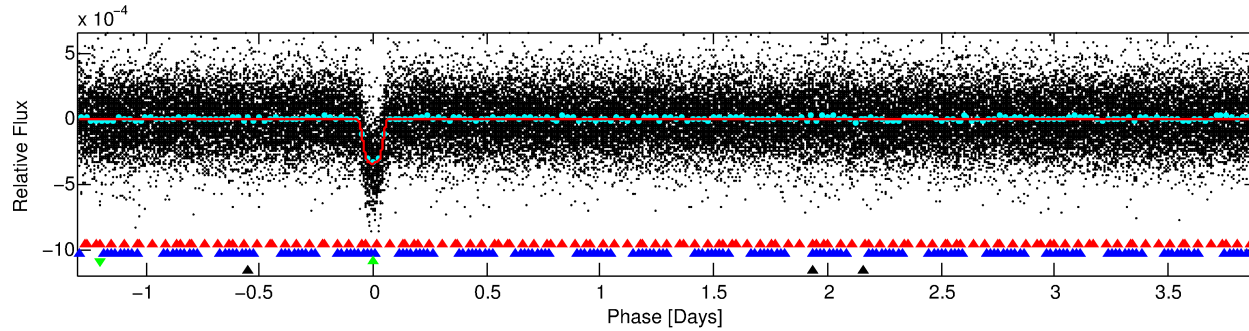
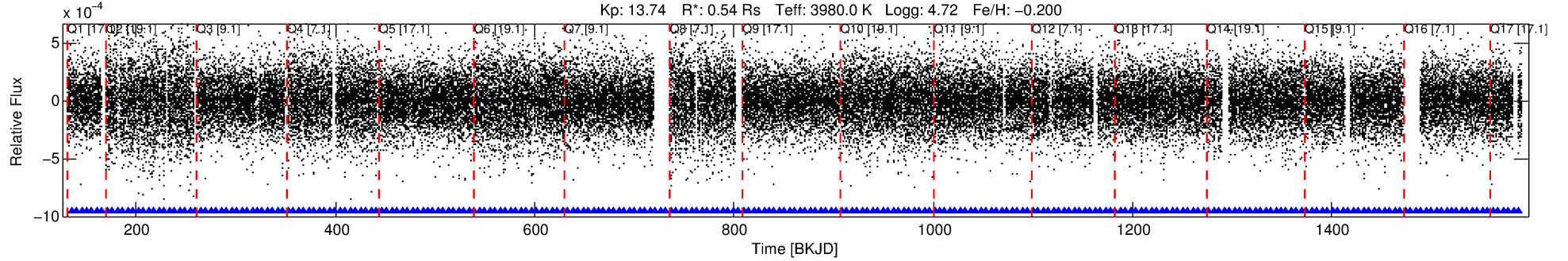
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010925104-03

No Significant Match Found

DV One-Page Summary

KIC: 10925104 Candidate: 3 of 4 Period: 5.189 d
KOI: K00156.02 Name: Kepler-114b Corr: 0.909



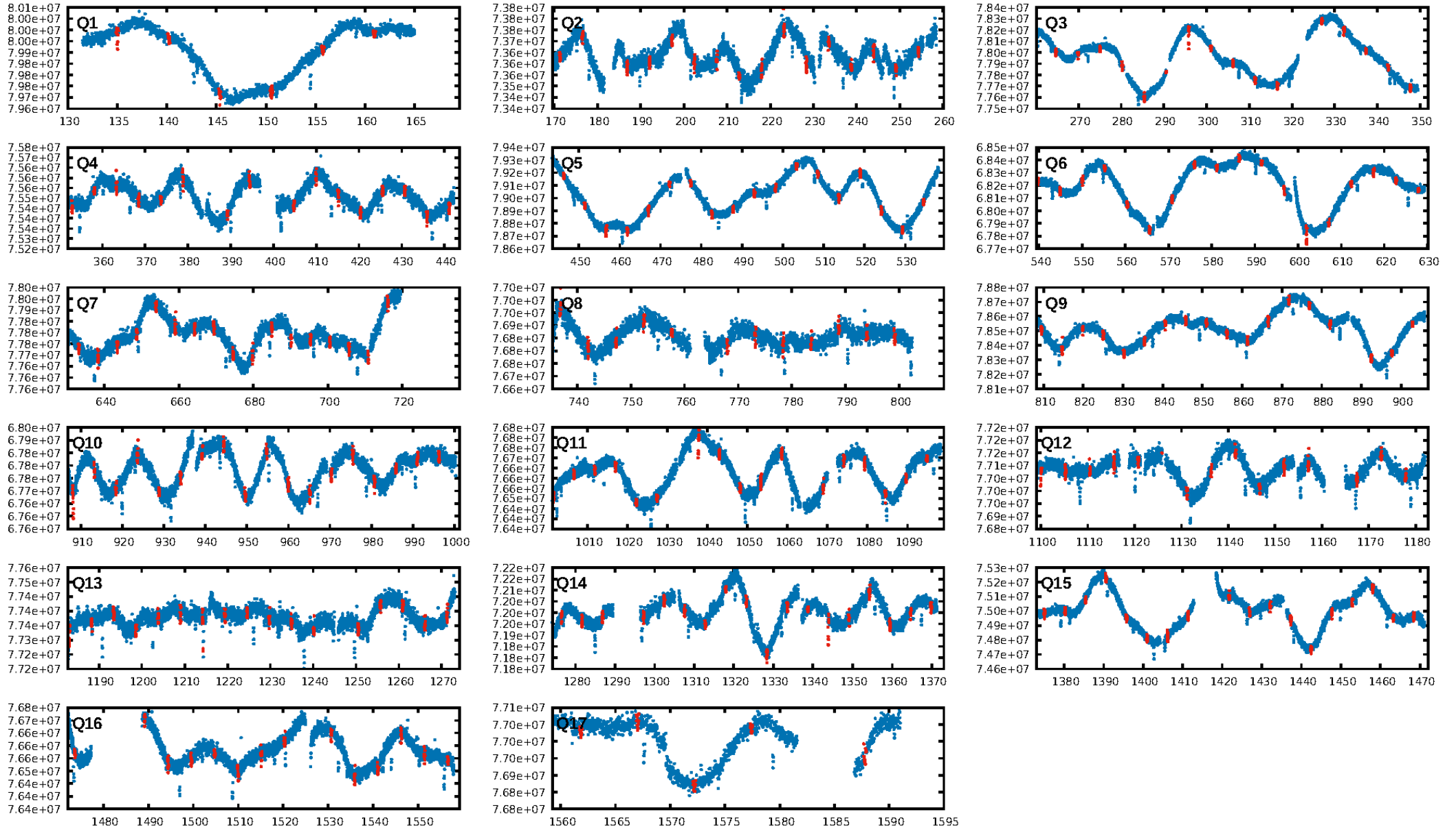
DV Fit Results:

Period = 5.18856 [0.00001] d
Epoch = 134.9858 [0.0011] BKJD
Rp/R* = 0.0220 [0.0006]
a/R* = 4.93 [0.44]
b = 0.96 [0.01]
Seff = 28.01 [2.87]
Teq = 587 [15] K
Rp = 1.30 [0.09] Re
a = 0.0484 [0.0023] AU
Ag = 18.93 [5.35] [3.35 σ]
Teffp = 1892 [135] K [9.59 σ]

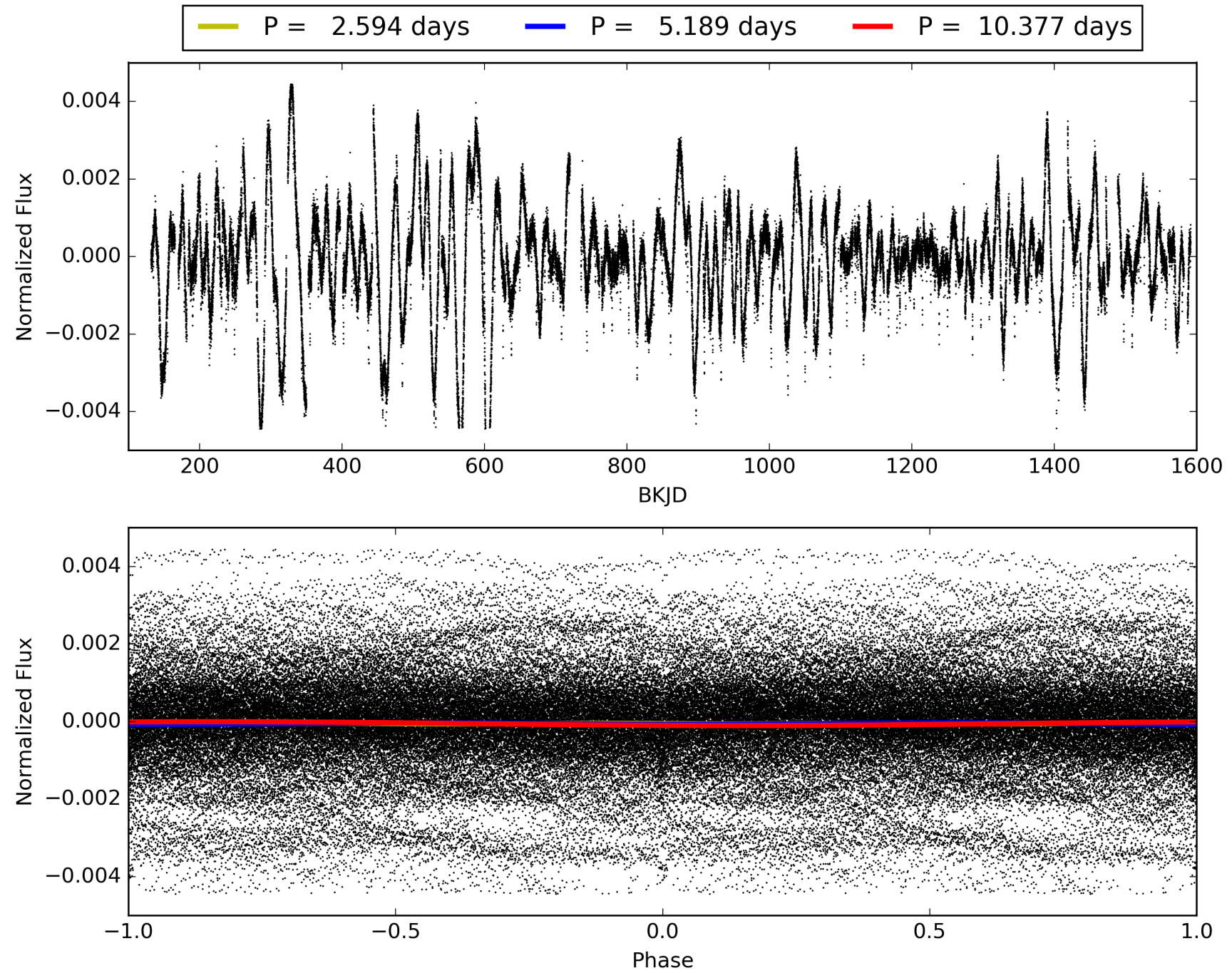
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [16.38 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [229/229]
GhostDiagnostic-chr: 4.45
Centroid-sig: 0.0%
Centroid-so: 0.355 arcsec [2.22 σ]
OotOffset-rm: 0.330 arcsec [2.96 σ]
KicOffset-rm: 0.775 arcsec [5.91 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010925104-03, PDC Light Curves

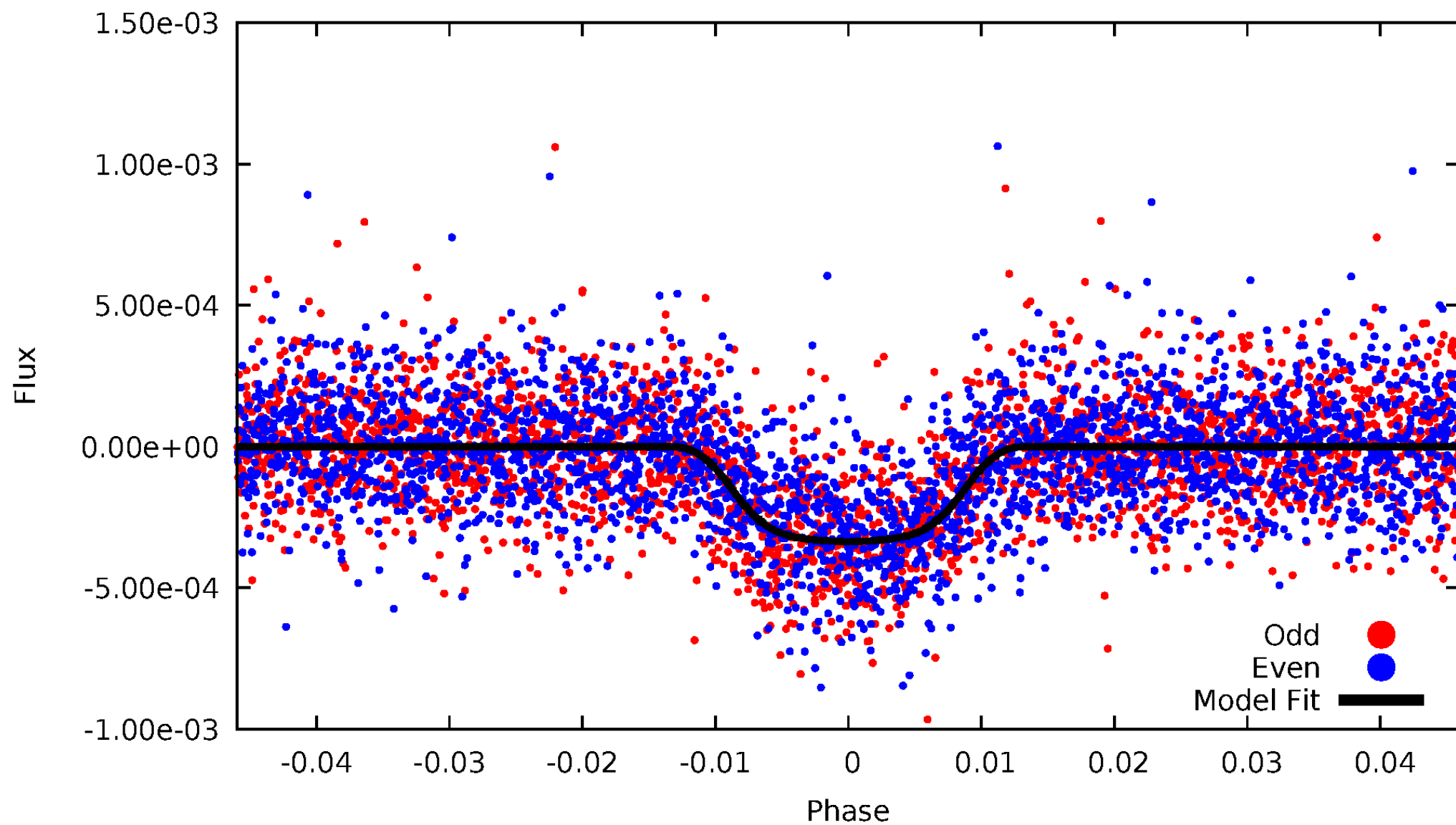


TCE 010925104-03



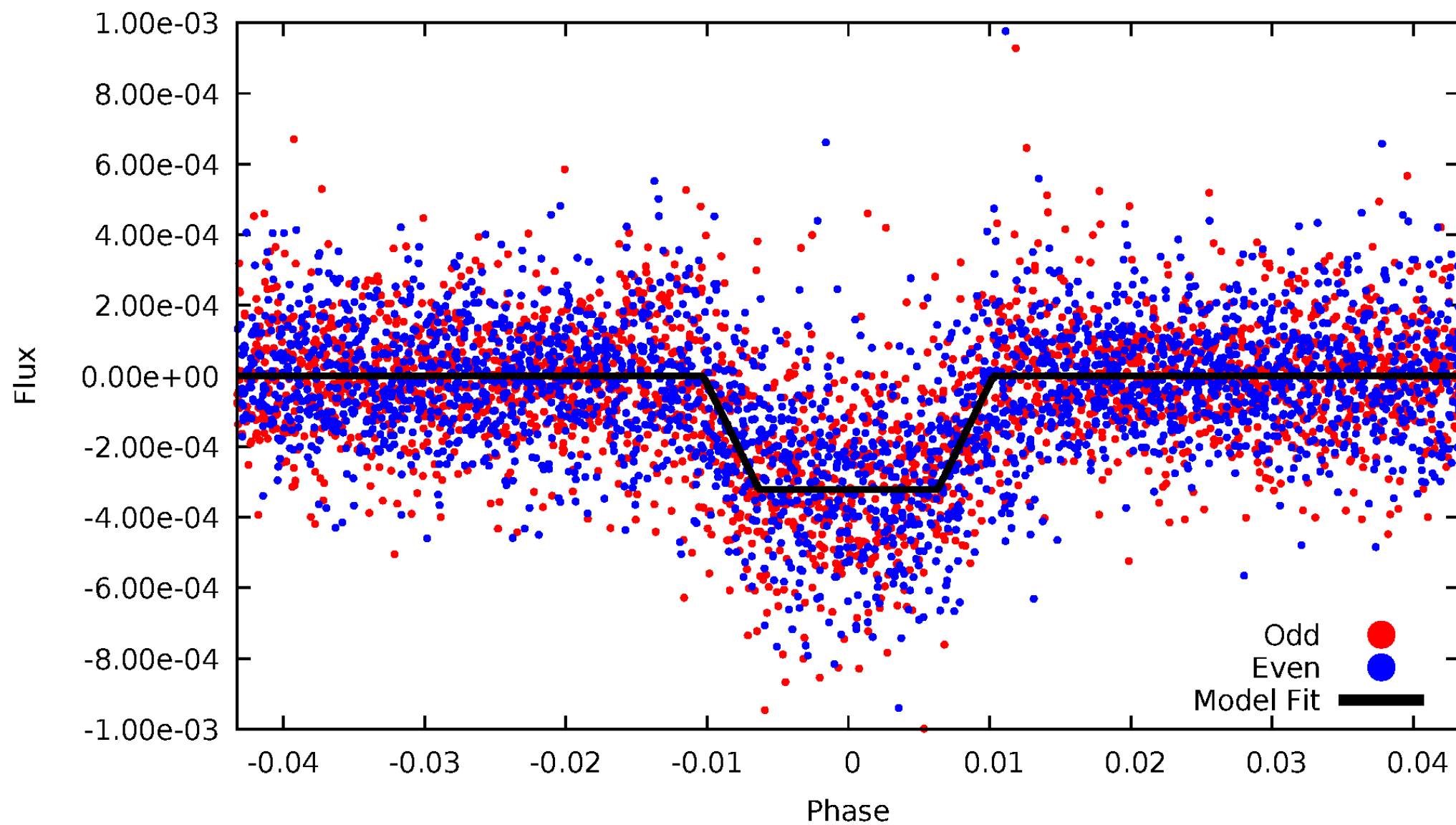
DV Odd/Even

TCE 010925104-03



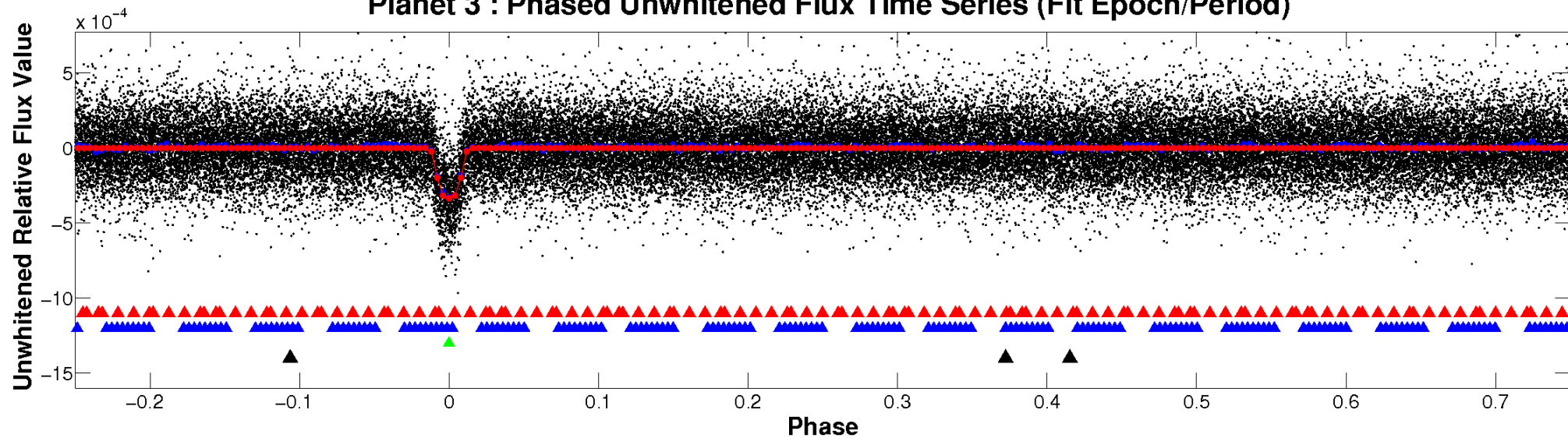
ALT Odd/Even

TCE 010925104-03

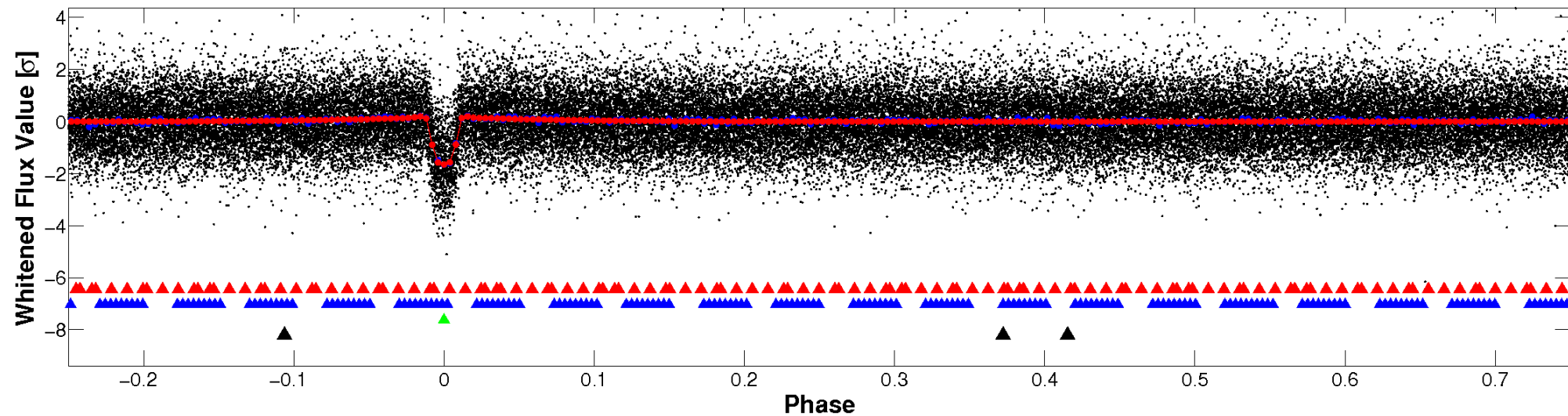


Non-Whitened Vs. Whitened Light Curve

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

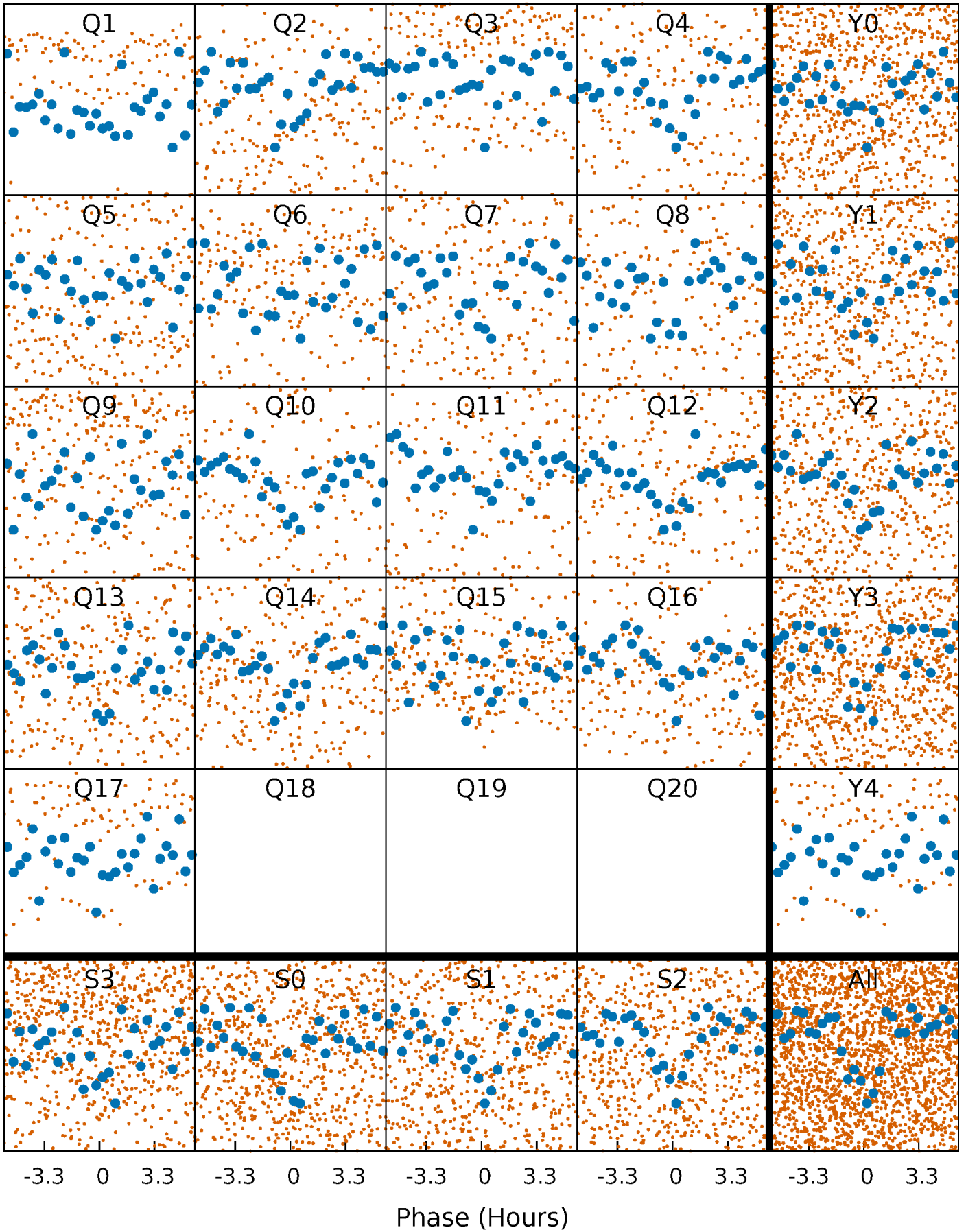


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



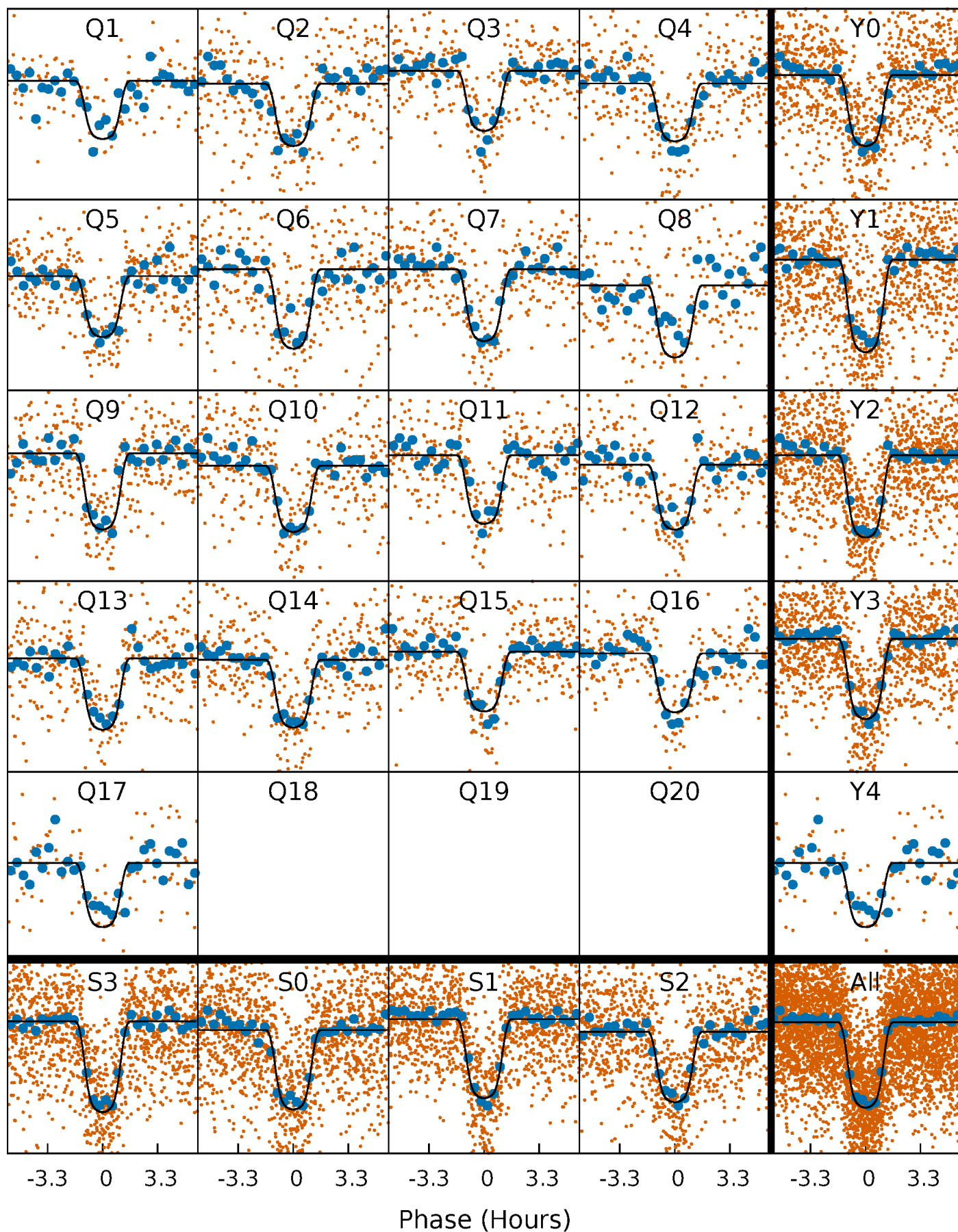
PDC Quarter-Phased Transit Curves

TCE 010925104-03 P= 5.188558 Days $T_0=134.985816$ (BKJD)



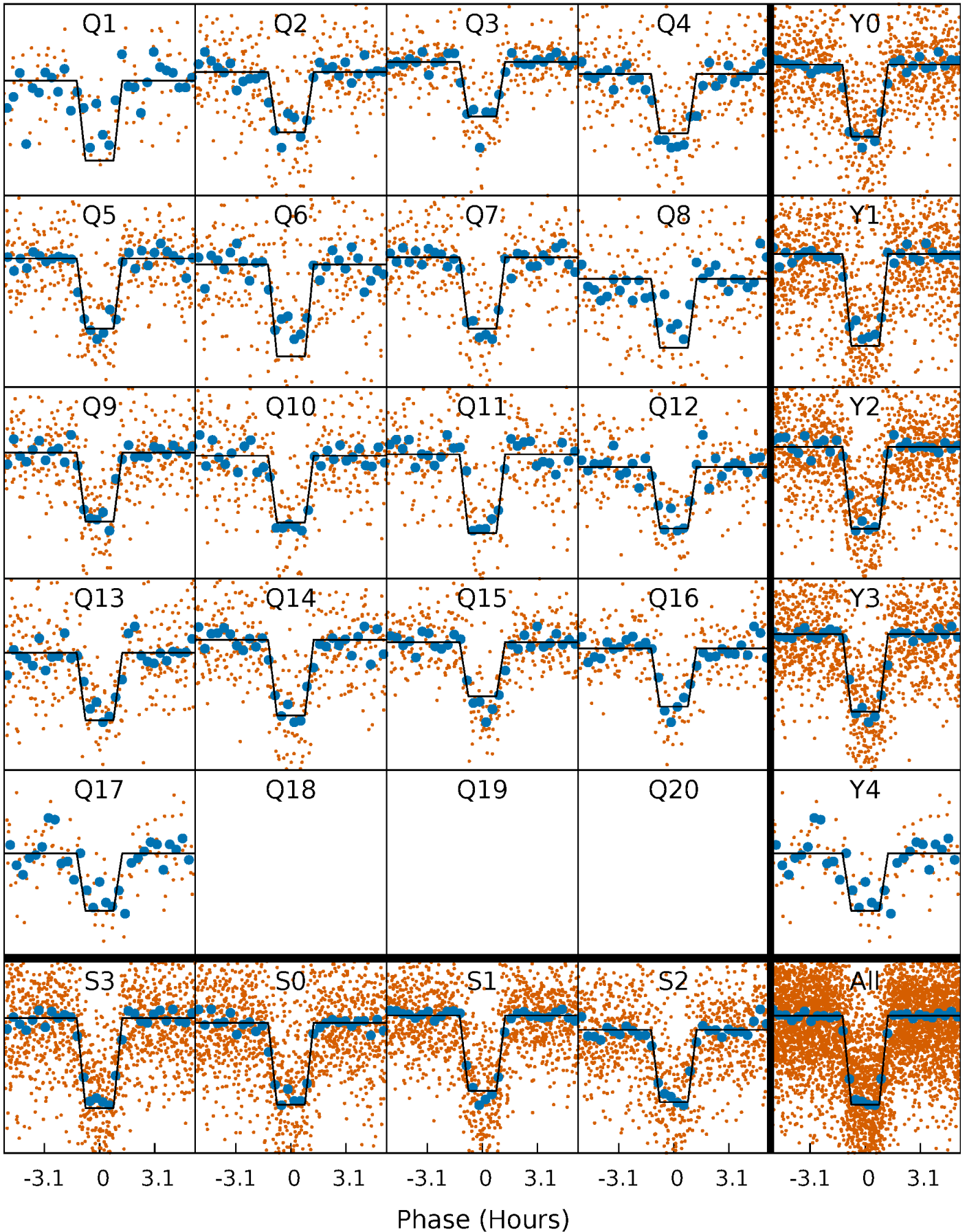
DV Quarter-Phased Transit Curves

TCE 010925104-03 P= 5.188558 Days $T_0=134.985816$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

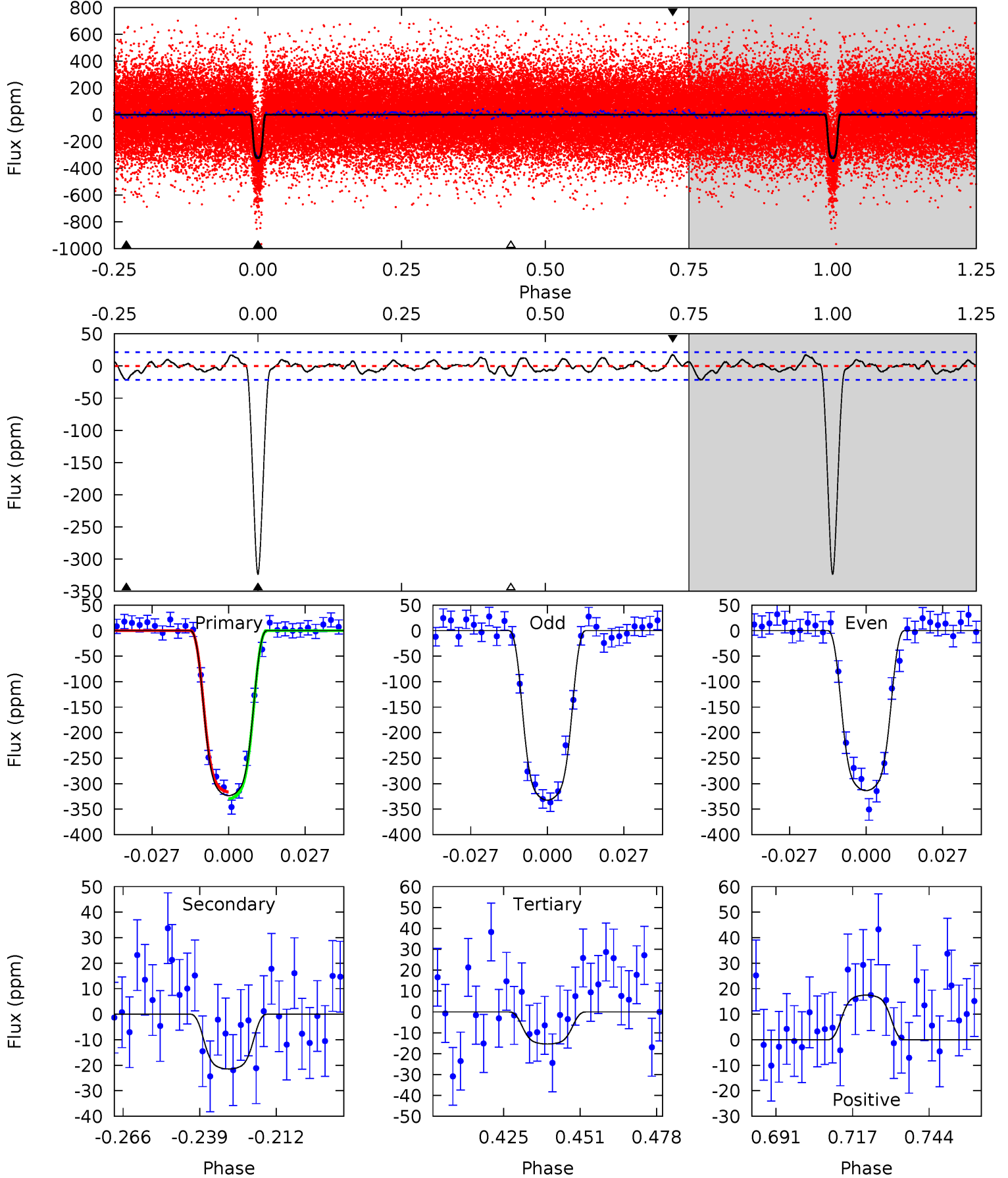
TCE 010925104-03 P= 5.188519 Days $T_0=134.990761$ (BKJD)



DV Model-Shift Uniqueness Test

010925104-03, P = 5.188558 Days, E = 129.797258 Days

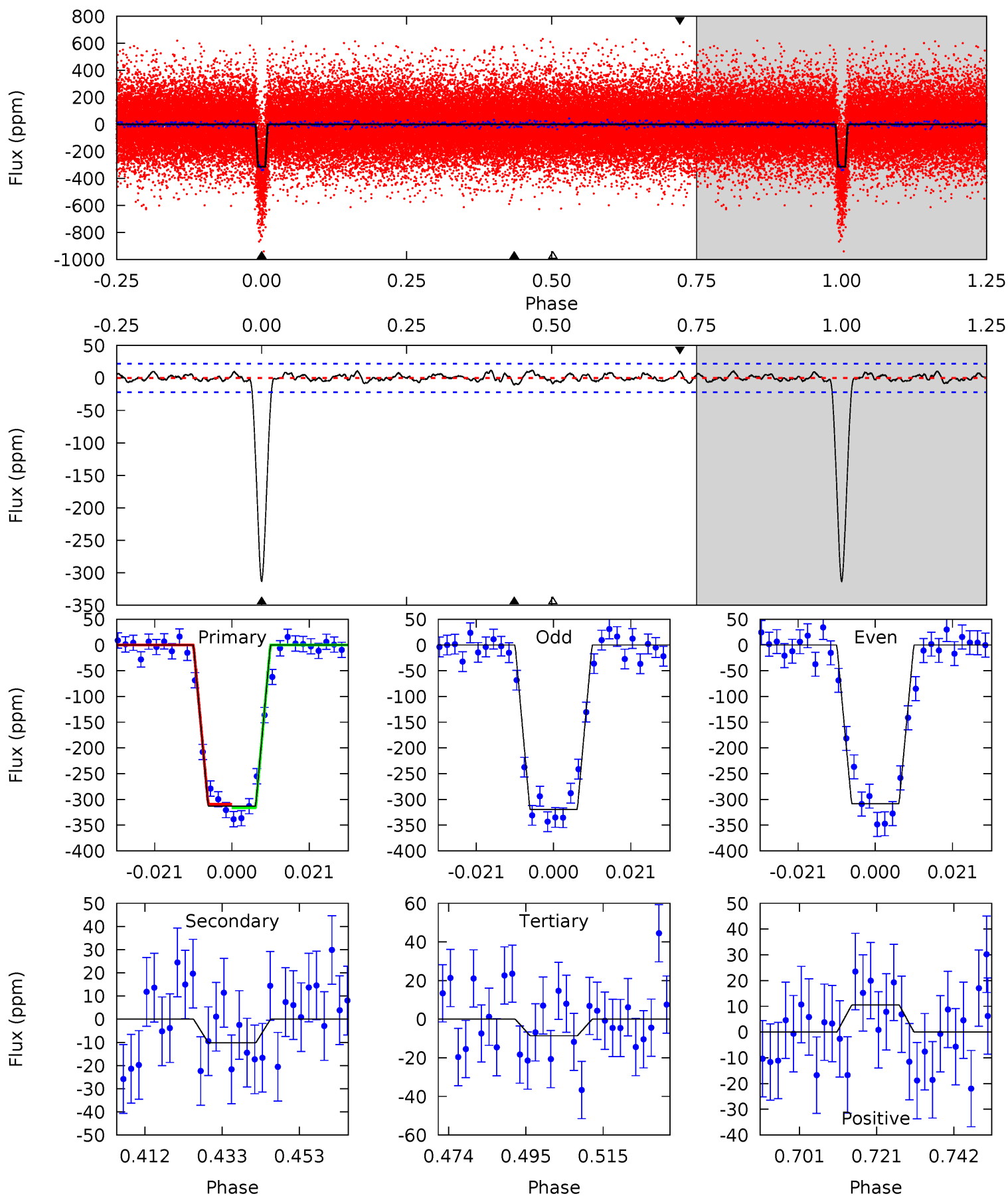
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
72.8	4.84	3.46	3.94	4.84	2.22	1.45	69.3	68.9	1.38	0.90	2.10	1.01	0.05	1.52



Alt Model-Shift Uniqueness Test

010925104-03, P = 5.188519 Days, E = 129.802242 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.7	2.27	1.90	2.34	4.89	2.32	0.94	67.8	67.3	0.37	-0.07	1.26	1.00	0.04	0.76



Stellar Parameters For KIC 010925104

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3980^{+79}_{-79}	$4.722^{+0.030}_{-0.033}$	$-0.200^{+0.150}_{-0.150}$	$0.540^{+0.033}_{-0.033}$	$0.560^{+0.031}_{-0.038}$	$5.018^{+0.739}_{-0.583}$
	+2%/-2%	+1%/-1%	+75%/-75%	+6%/-6%	+6%/-7%	+15%/-12%
Source	SPE5	SPE5	SPE5	DSEP		

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

Secondary Eclipse Parameters for KIC 010925104-03 / KOI 0156.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-21 ± 4	$1.30^{+0.05}_{-0.05}$	821^{+19}_{-21}	2517^{+73}_{-79}	16^{+4}_{-4}
Alt.	-10 ± 4	$1.06^{+0.05}_{-0.05}$	823^{+18}_{-21}	2423^{+123}_{-177}	12^{+6}_{-5}

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

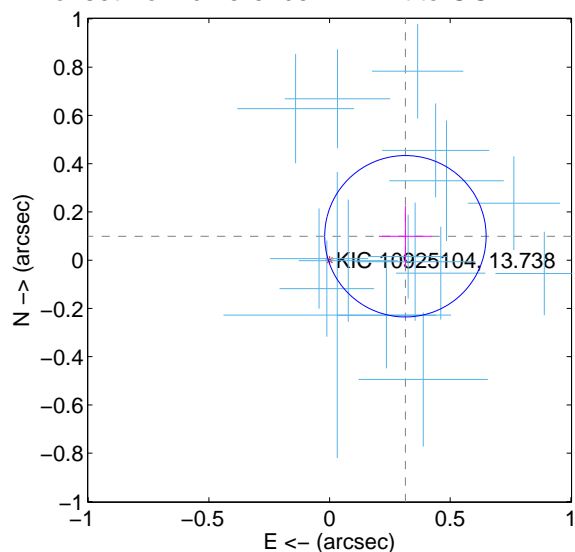
Supplemental centroid analysis for 010925104-03. Kepler magnitude: 13.74. Transit SNR 46.90

There are 17 quarters with good PRF difference image offsets

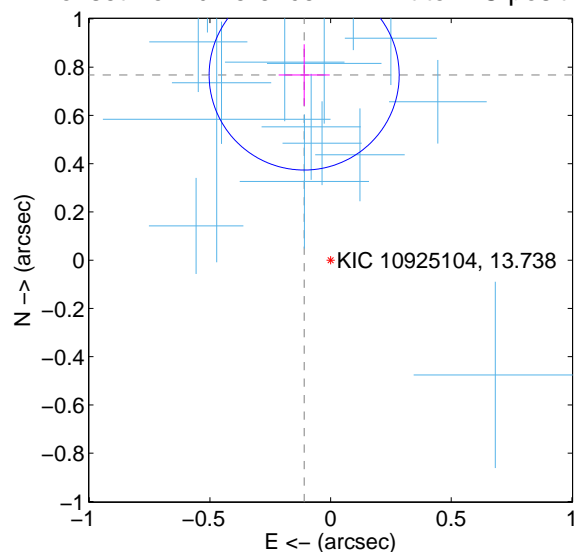
The direct PRF centroid is offset from the target star catalog position by about 0.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.330 ± 0.111	2.96	-0.314 ± 0.110	0.099 ± 0.126
PRF-fit source offset from KIC position	0.775 ± 0.131	5.91	0.110 ± 0.106	0.767 ± 0.127
photometric centroid source offset	0.35 ± 0.16	2.22	-0.00 ± 0.18	0.35 ± 0.16

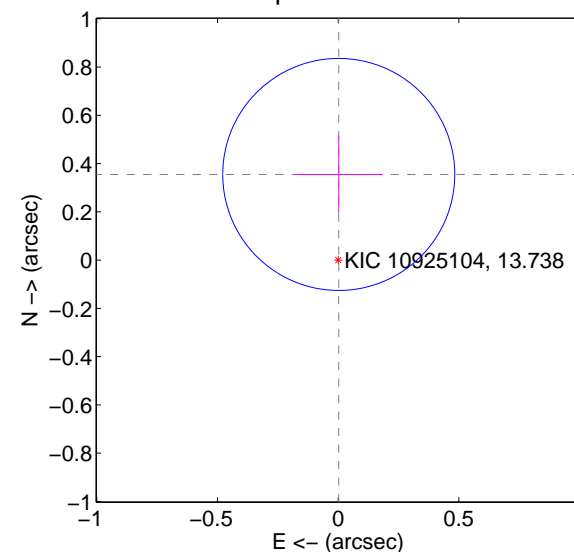
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

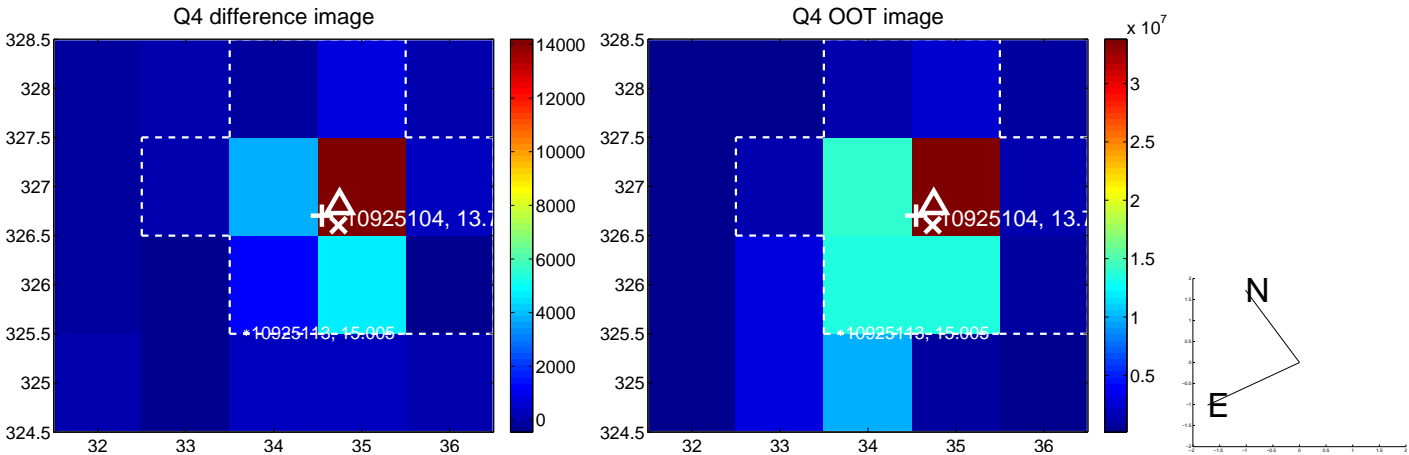
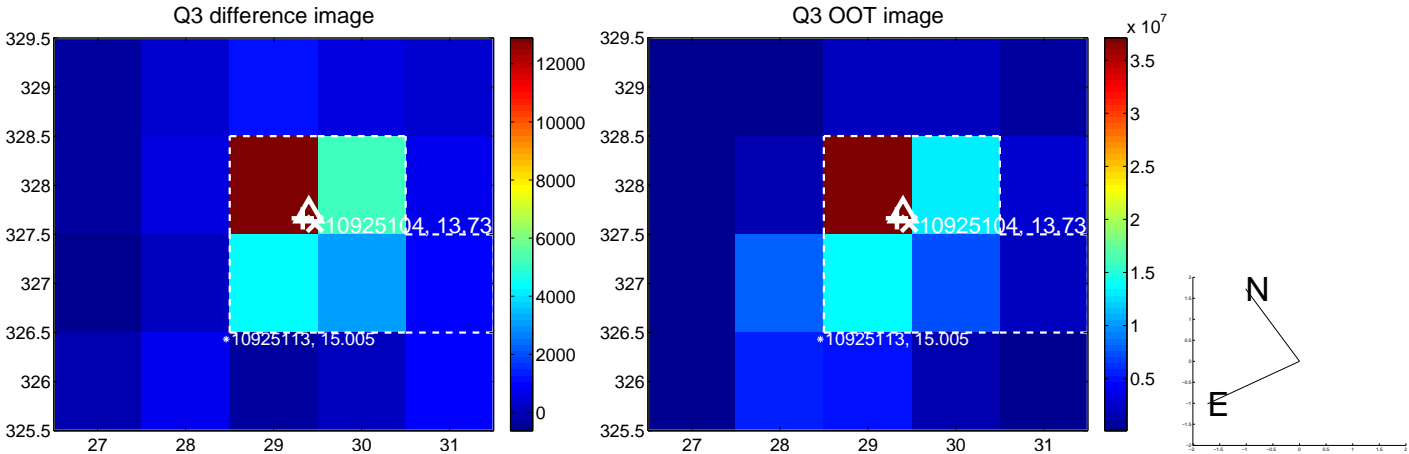
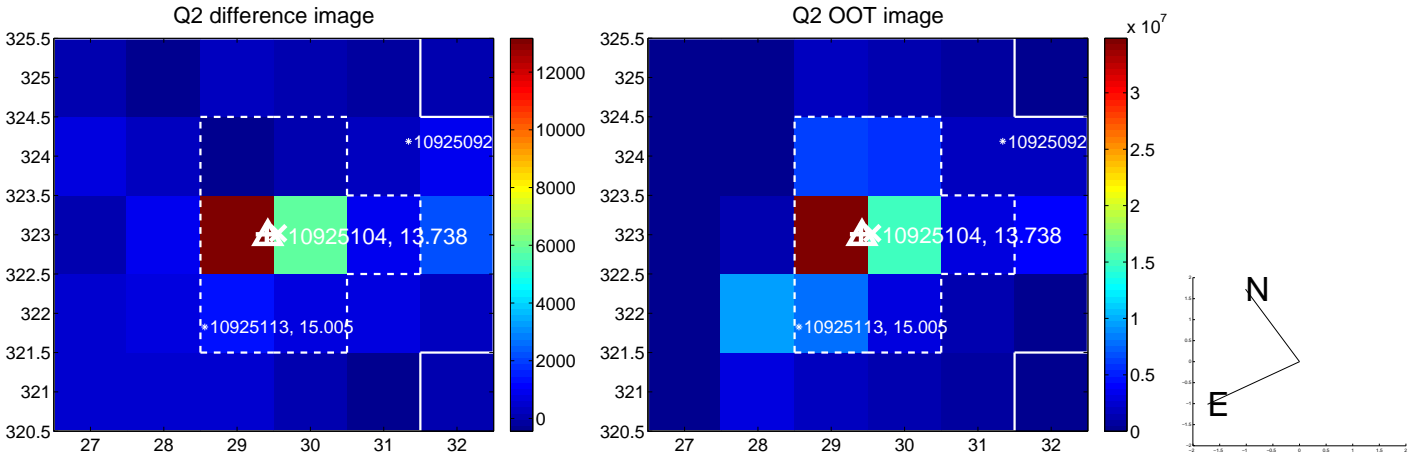
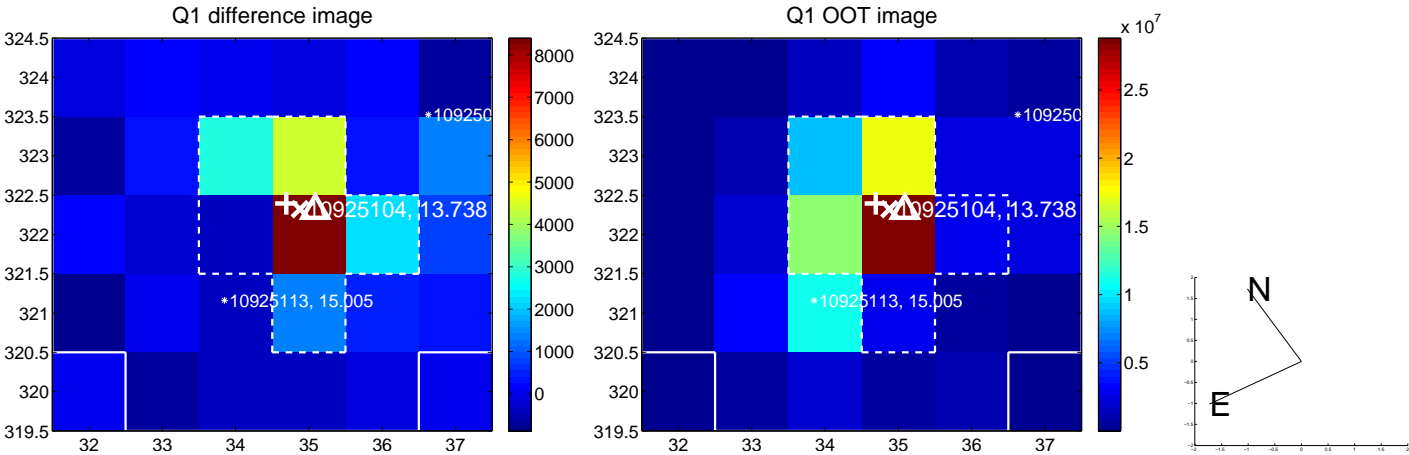


offset from photometric centroids

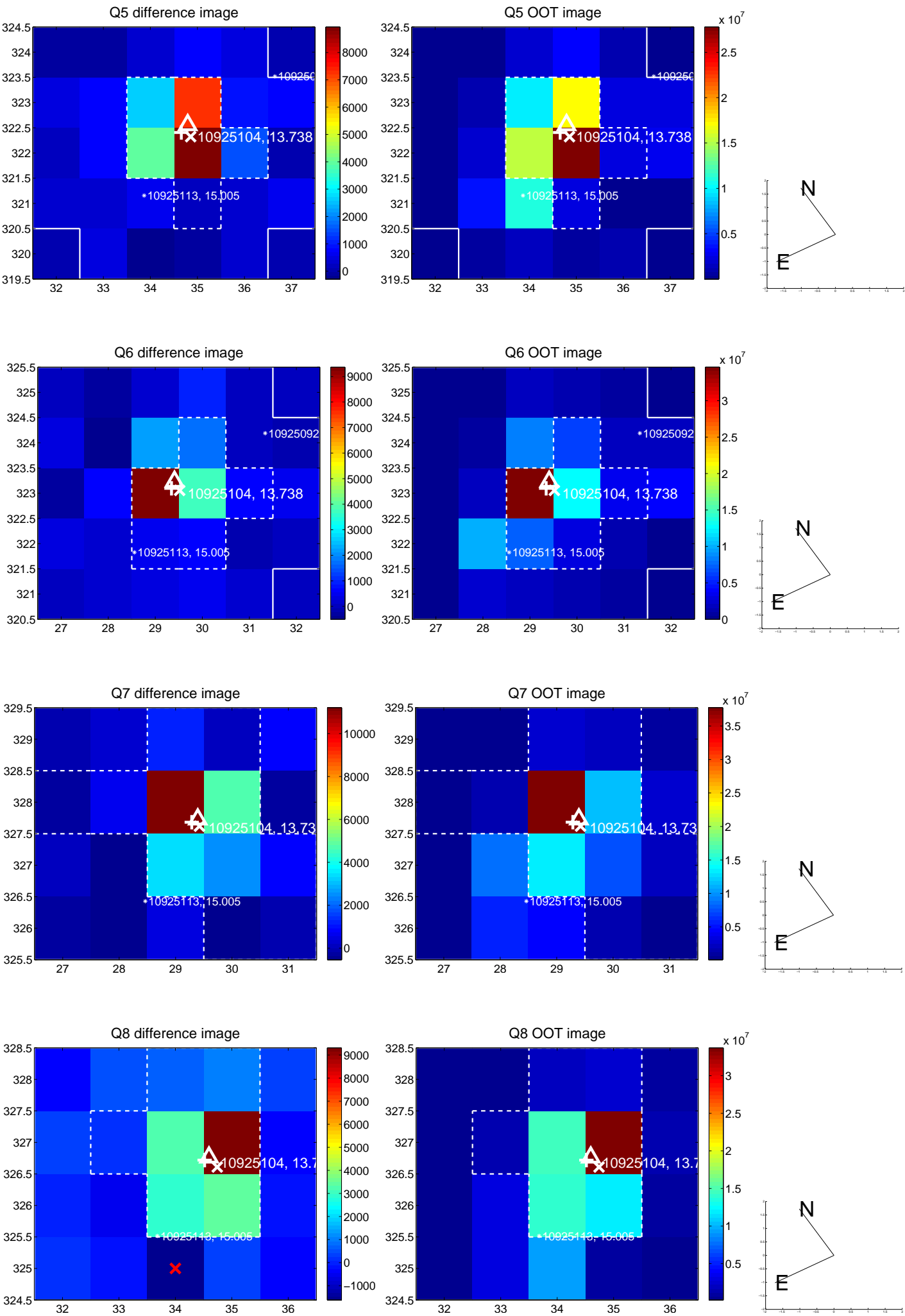


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

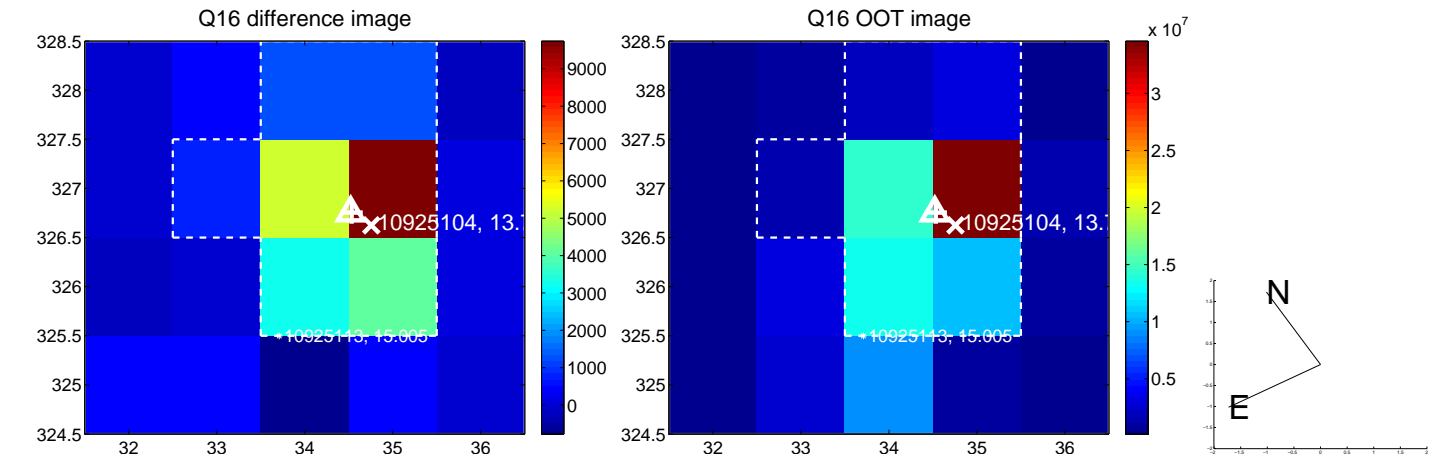
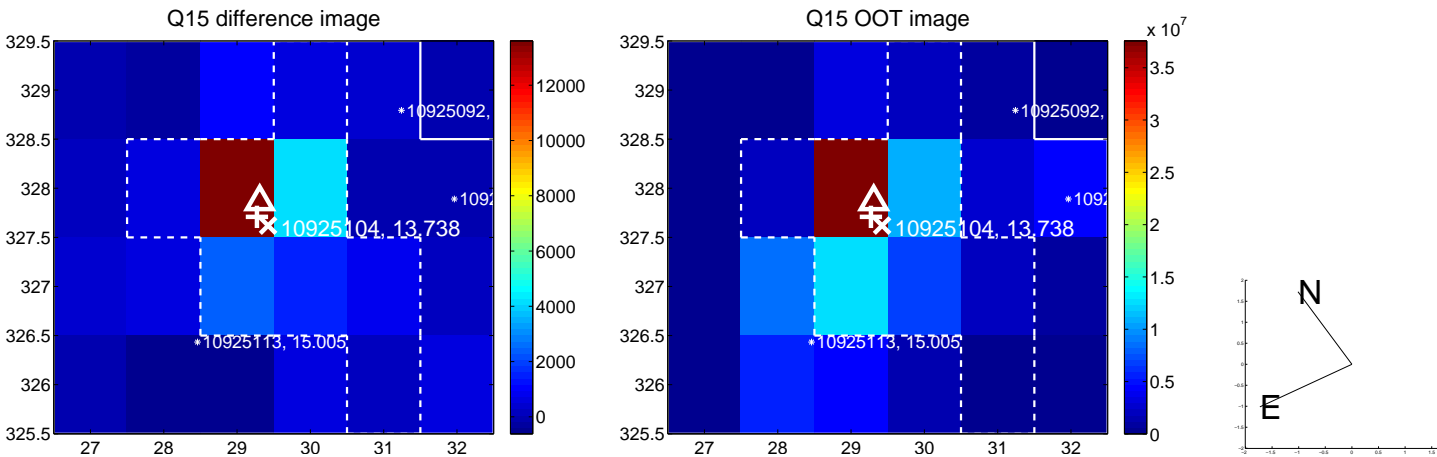
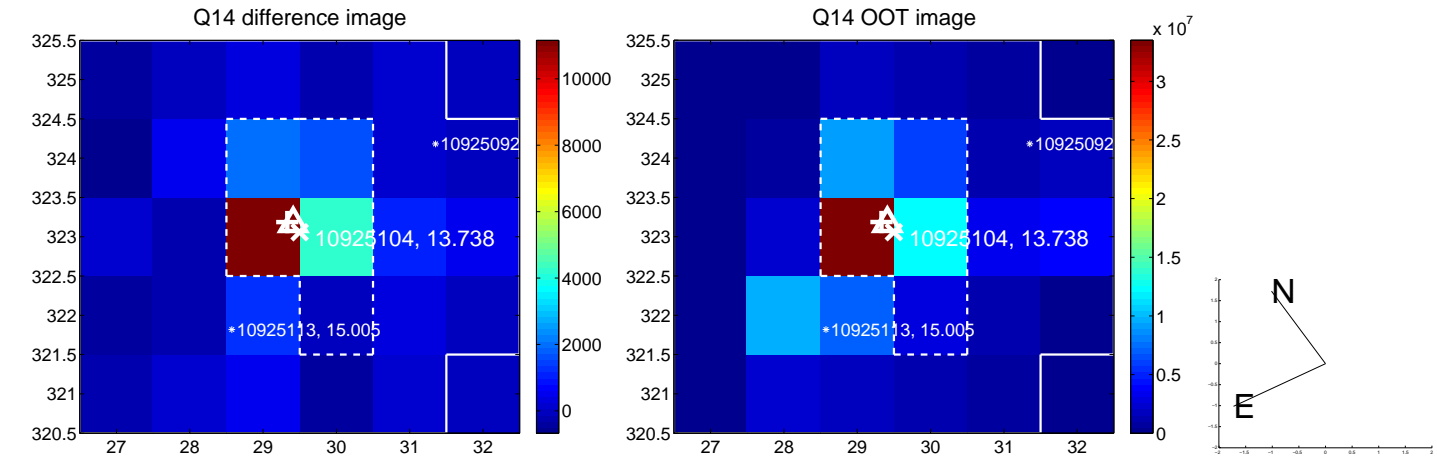
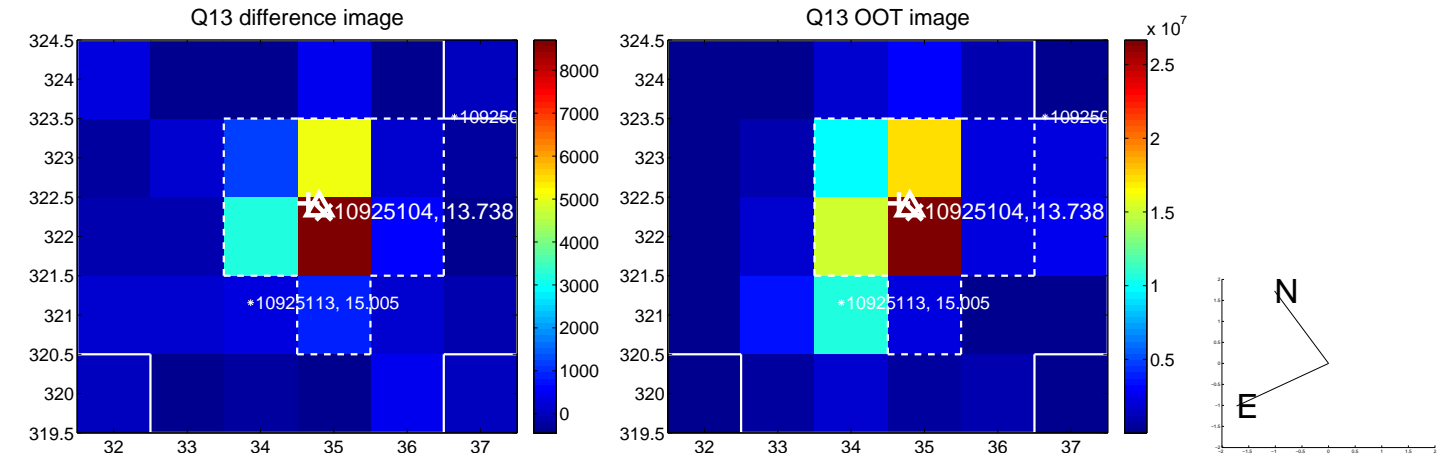
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



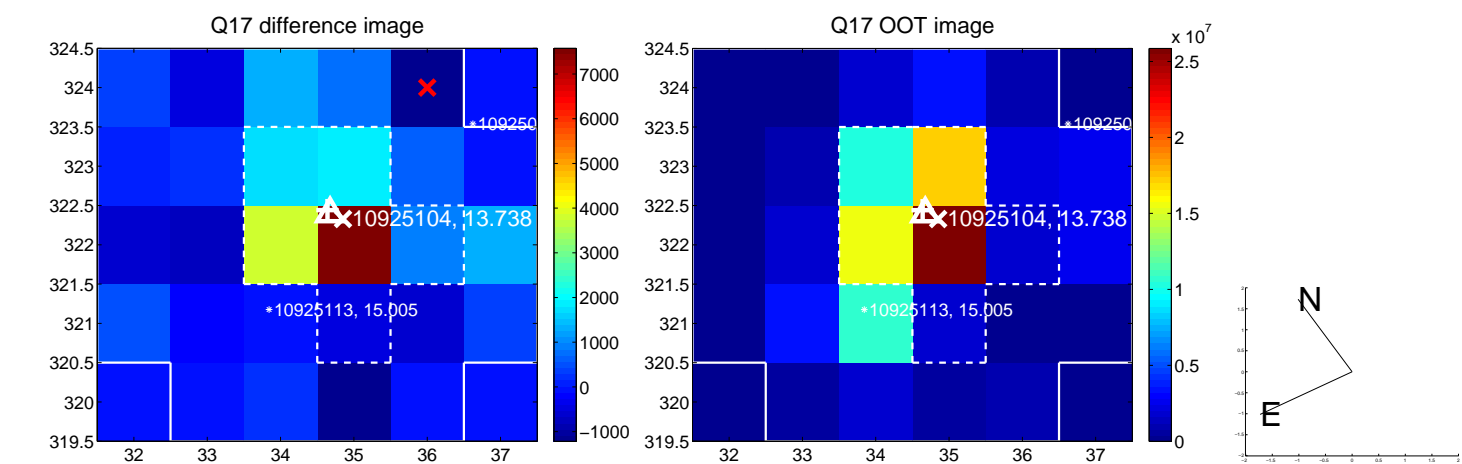
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



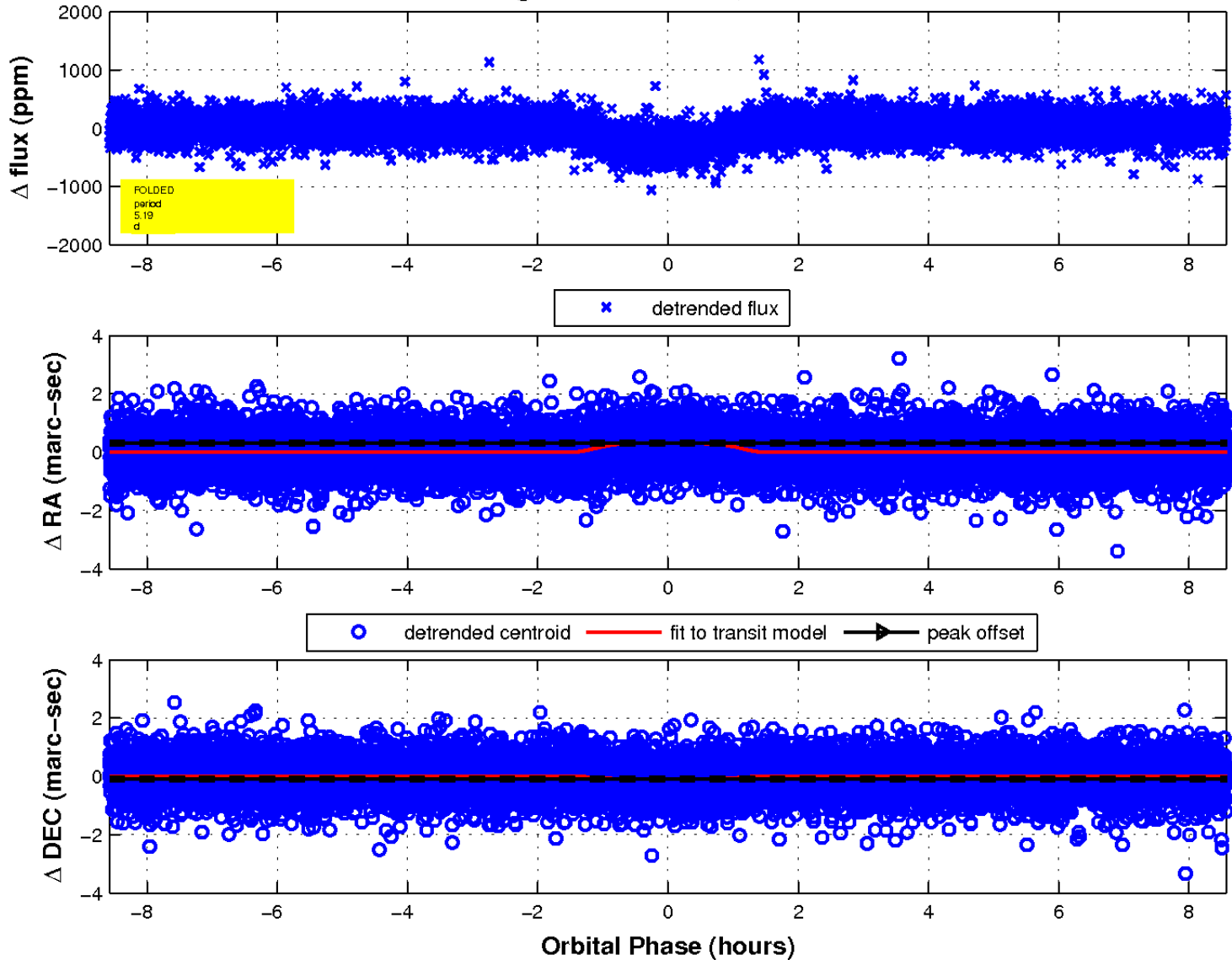
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

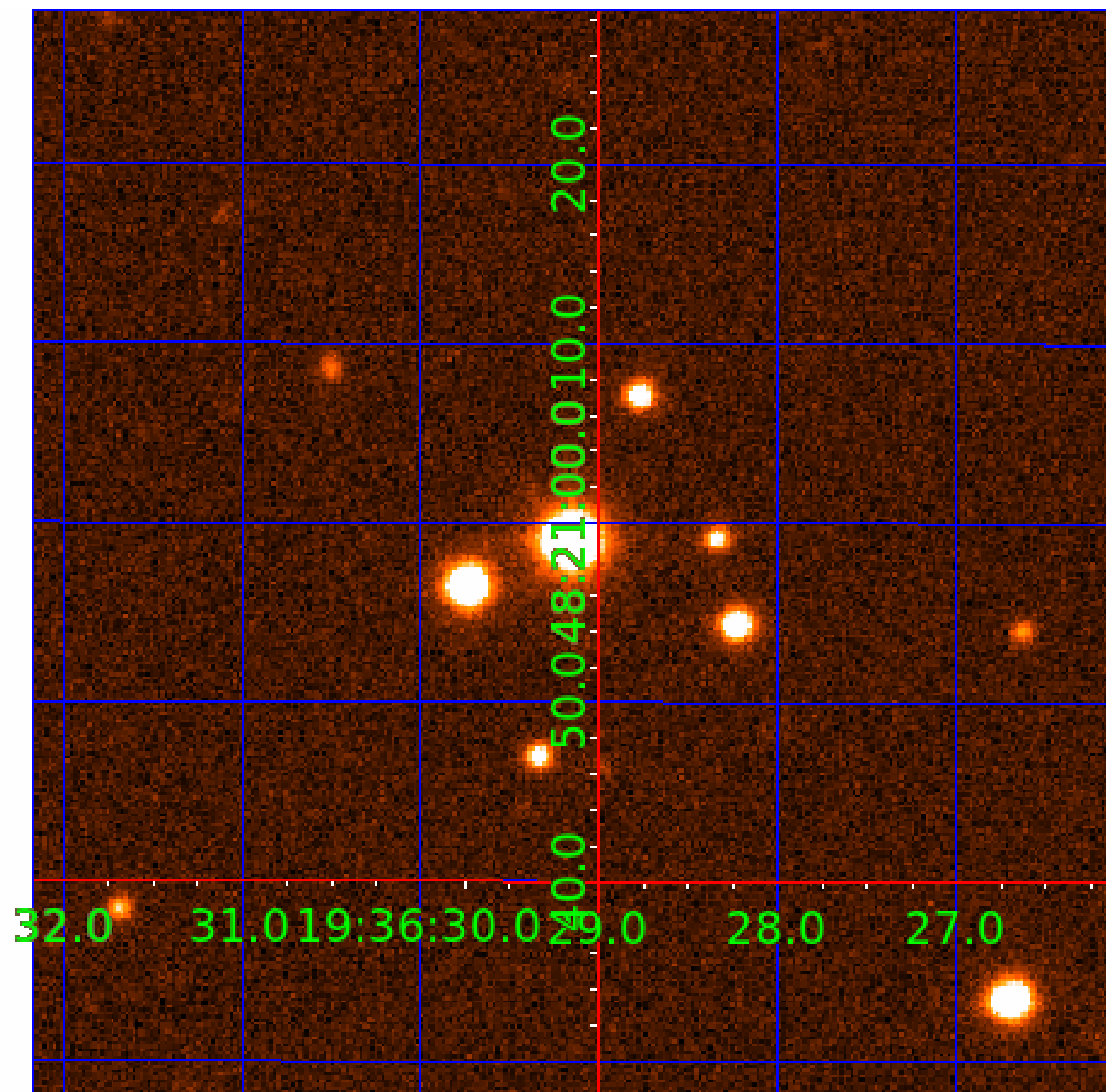


fluxWeightedCentroids, Planet 3 of 4



UKIRT Image

Declination



KIC 010925104

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})
010925104-01	OBS	0156.03	11.776128	142.706210	1429.1	3.121	137.9	133.9	0.54	3980	2.37	9.39
010925104-02	OBS	0156.01	8.041340	134.997479	591.6	3.048	59.5	66.5	0.54	3980	1.67	15.62
010925104-03	OBS	0156.02	5.188558	134.985816	335.7	2.861	42.2	46.9	0.54	3980	1.30	28.01
010925104-04	OBS	No	490.430135	251.065976	580.8	5.562	7.7	8.7	0.54	3980	1.38	0.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010925104-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
010925104-02	OBS	PC	0.68	0	0	0	0	CENT_KIC_POS
010925104-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS
010925104-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST

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

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

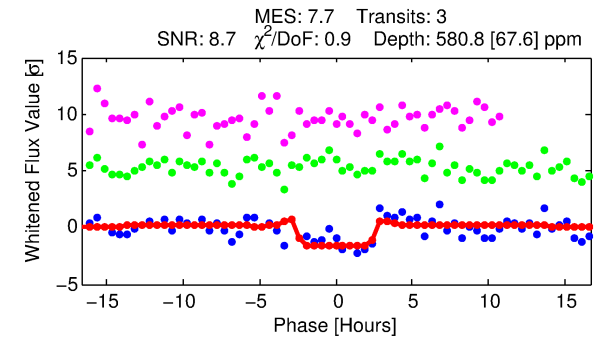
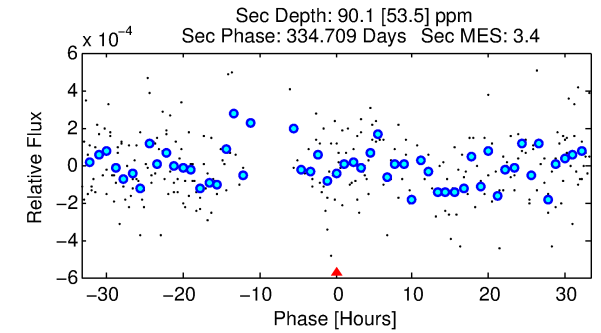
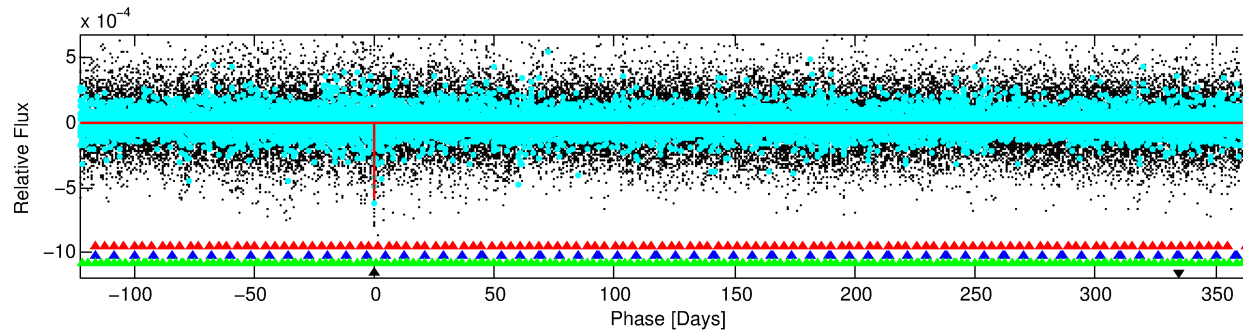
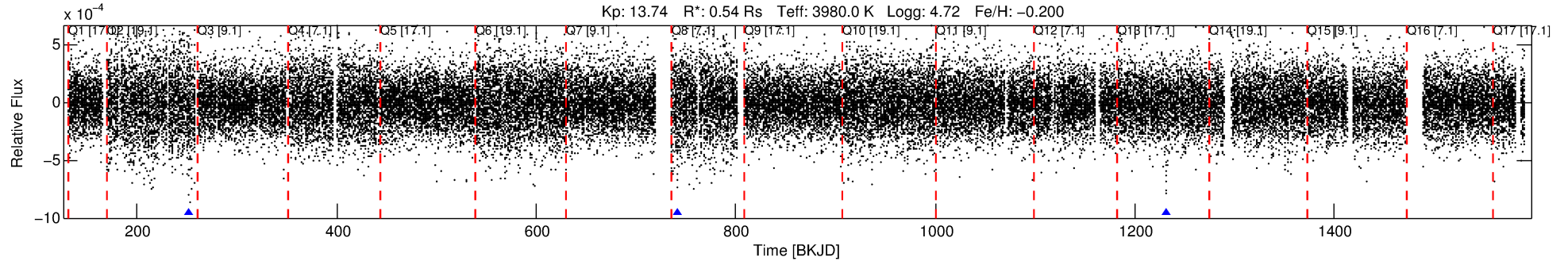
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010925104-04

No Significant Match Found

DV One-Page Summary

KIC: 10925104 Candidate: 4 of 4 Period: 490.430 d
KOI: K00156 Name: Kepler-114 Corr: No Ephemeris Match

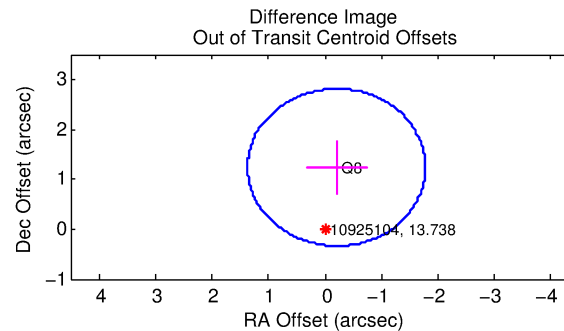
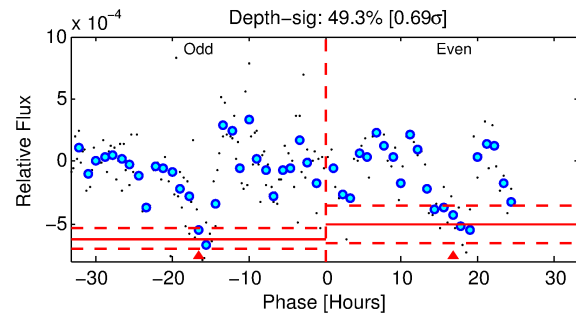
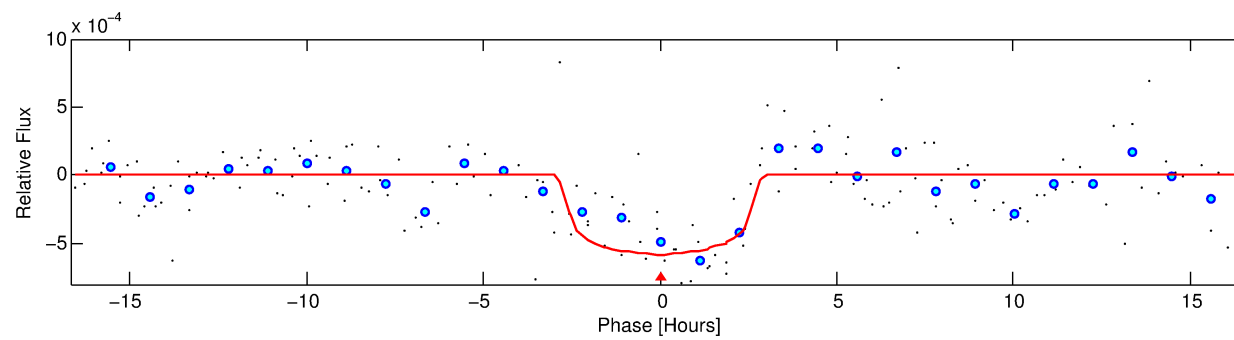


DV Fit Results:

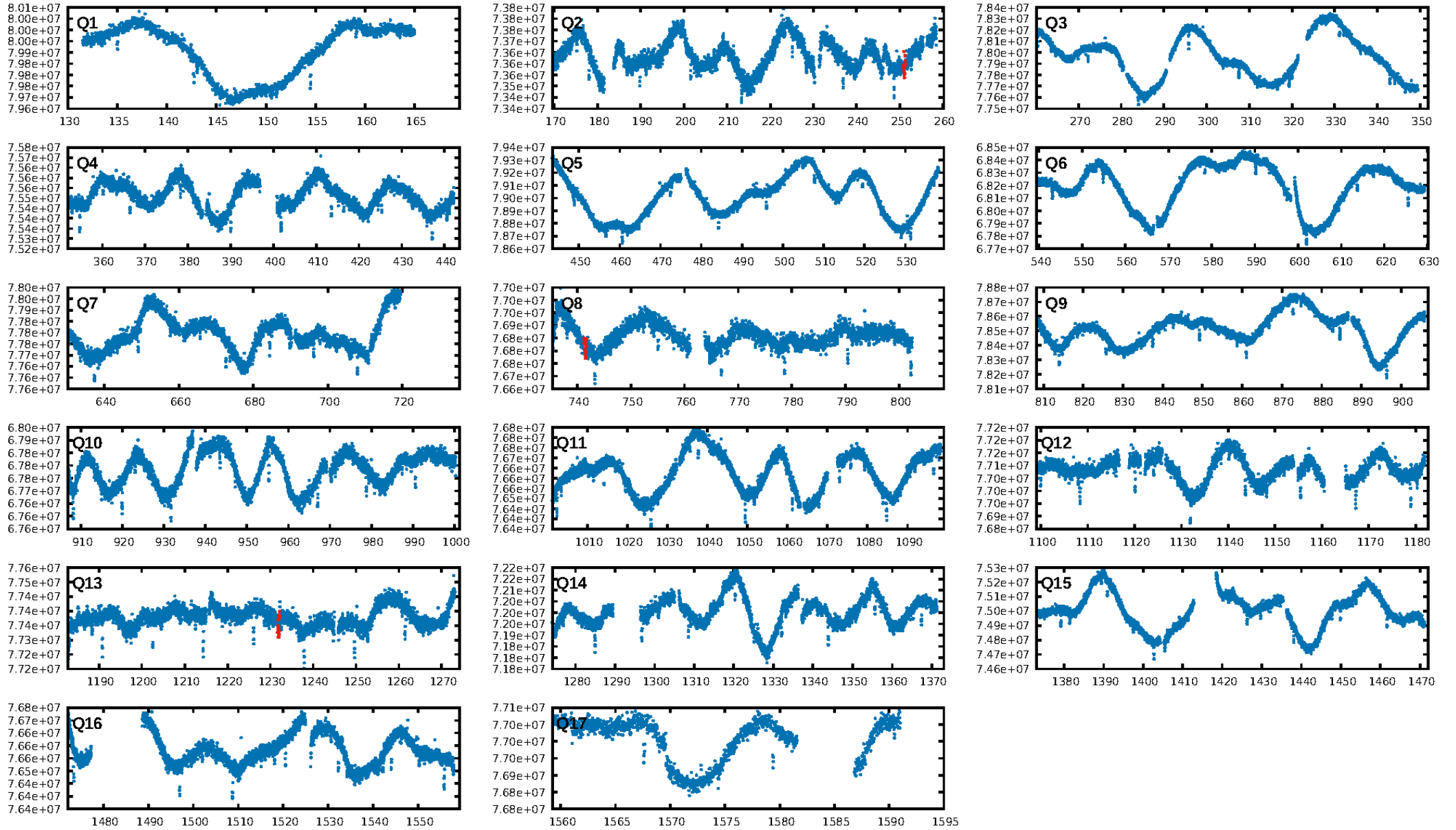
Period = 490.43014 [0.00569] d
Epoch = 251.0660 [0.0082] BKJD
Rp/R* = 0.0234 [0.0156]
a/R* = 515.31 [1459.36]
b = 0.68 [2.26]
Seff = 0.07 [0.01]
Teq = 129 [3] K
Rp = 1.38 [0.92] Re
a = 1.0039 [0.0482] AU
Ag = 26205.12 [38308.67] [0.68σ]
Teffp = 2533 [926] K [2.60σ]

DV Diagnostic Results:

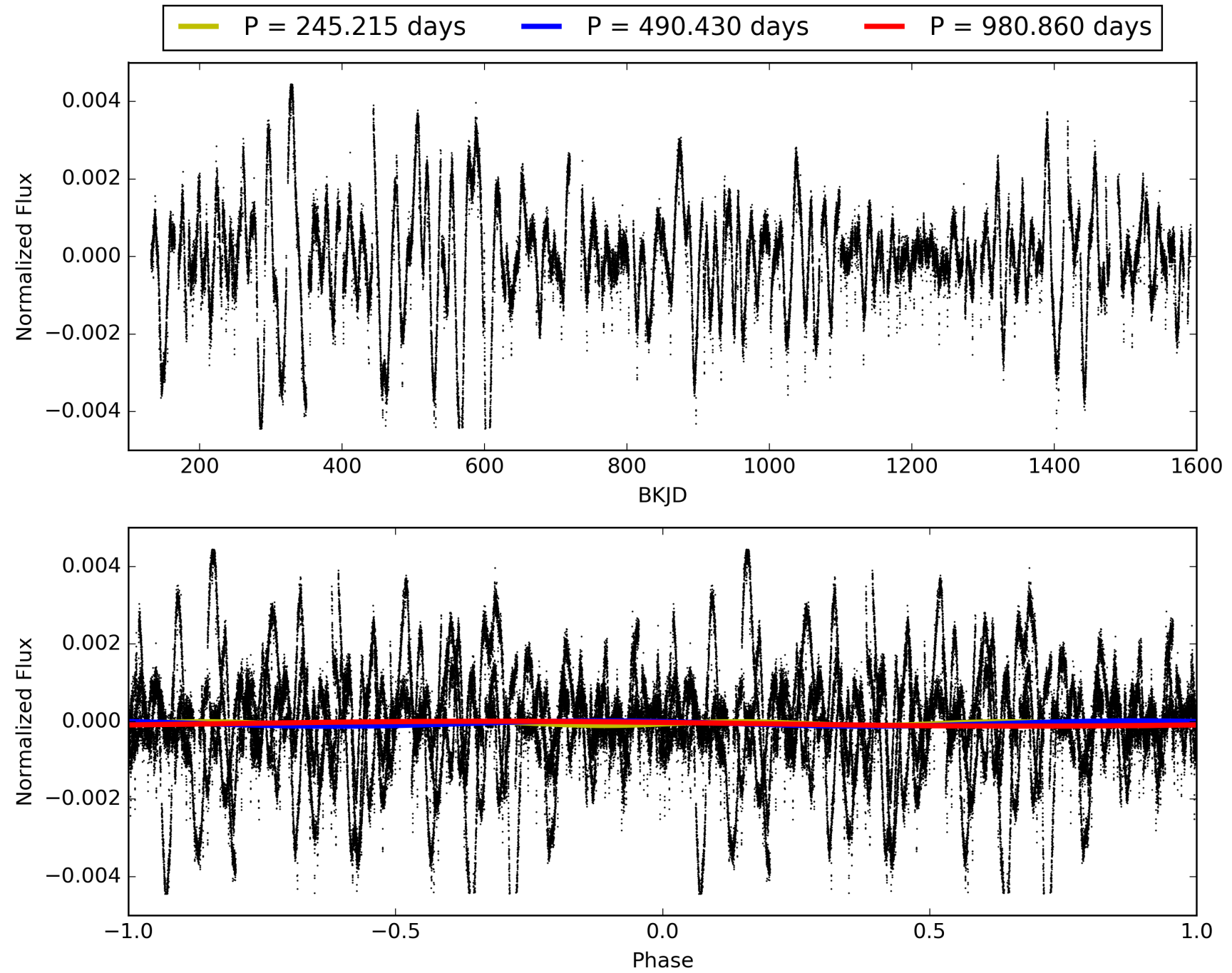
ShortPeriod-sig: 100.0% [1801.18σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.1%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 3.20e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1589
Centroid-sig: 5.5%
Centroid-so: 1.819 arcsec [2.47σ]
OotOffset-rm: 1.252 arcsec [2.39σ]
KicOffset-rm: 2.002 arcsec [3.82σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]



TCE 010925104-04, PDC Light Curves

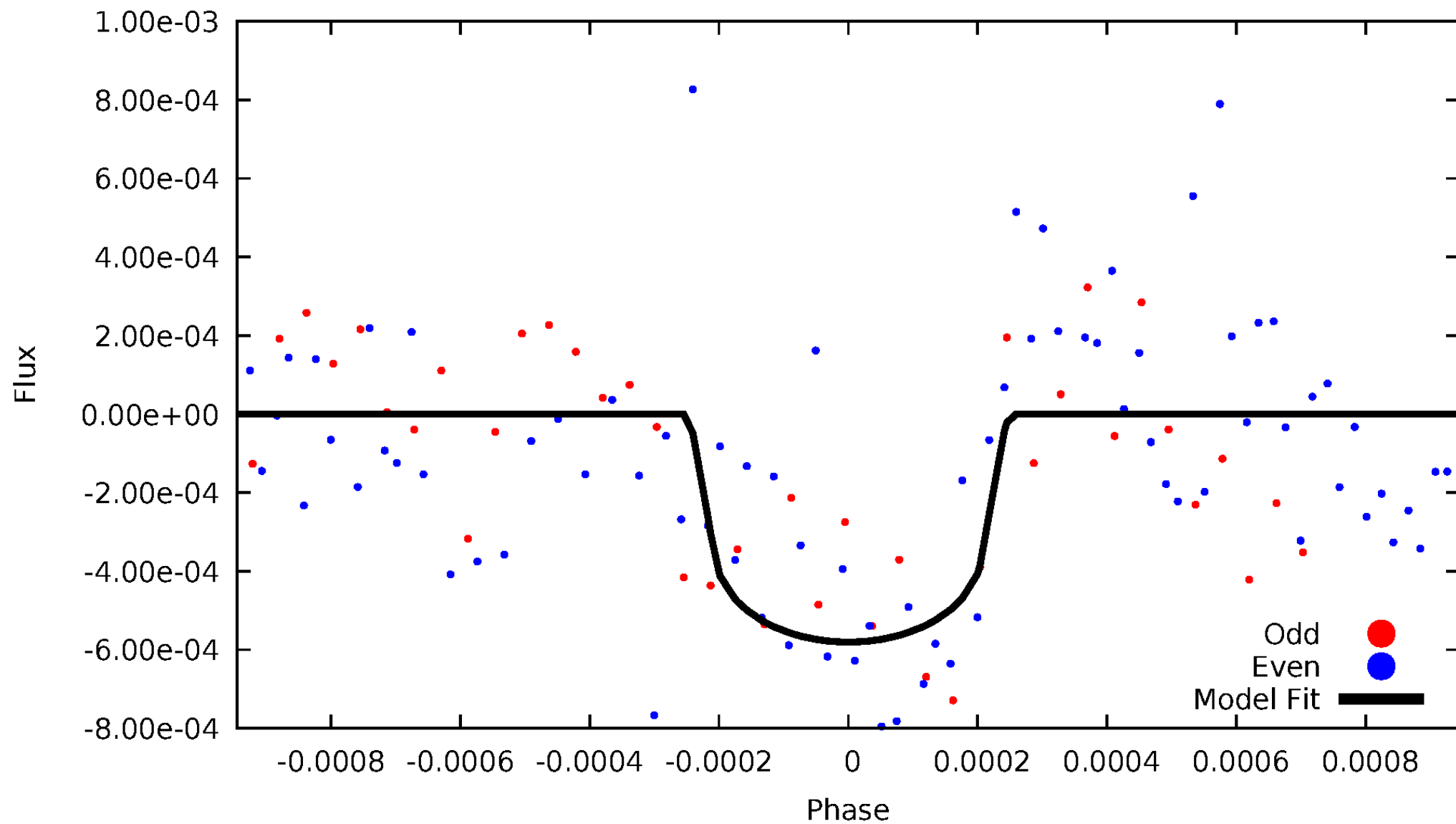


TCE 010925104-04



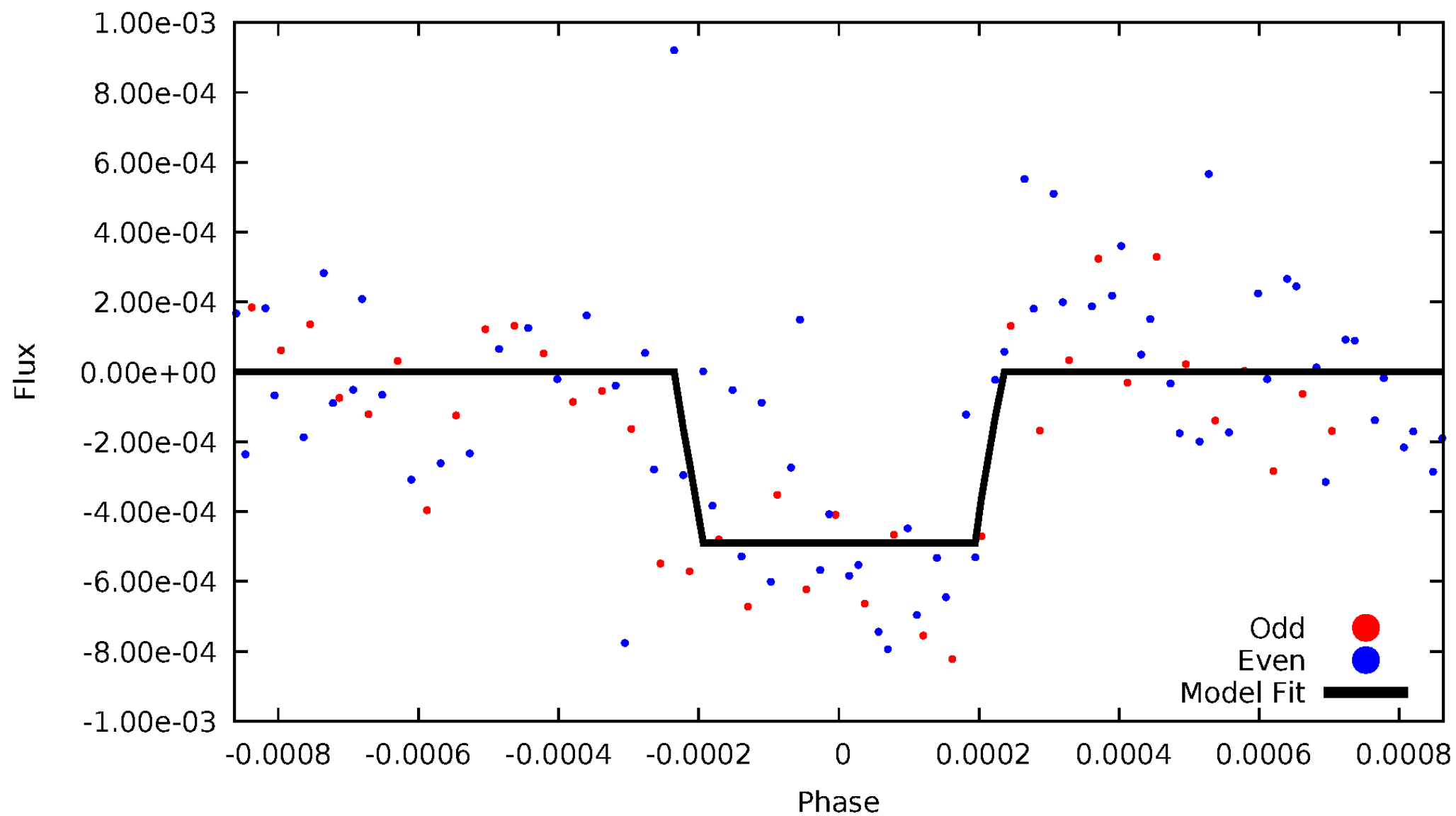
DV Odd/Even

TCE 010925104-04



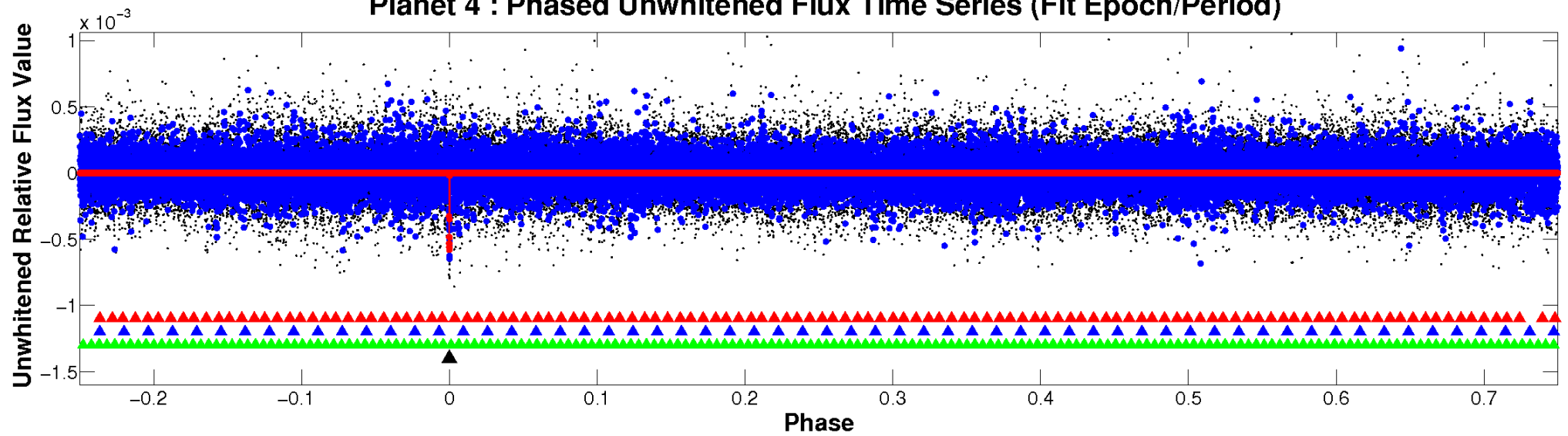
ALT Odd/Even

TCE 010925104-04

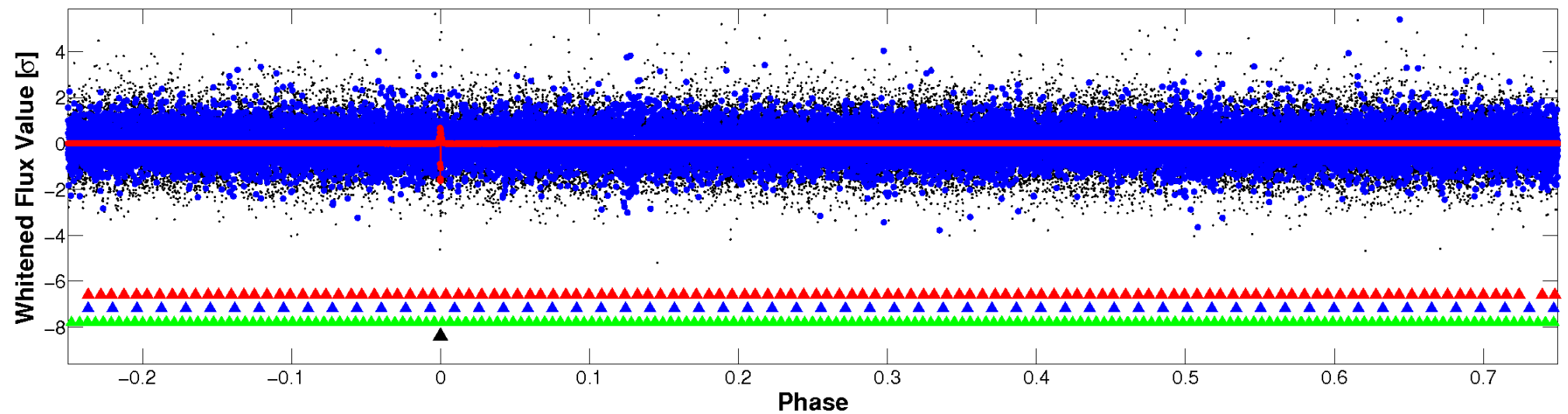


Non-Whitened Vs. Whitened Light Curve

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

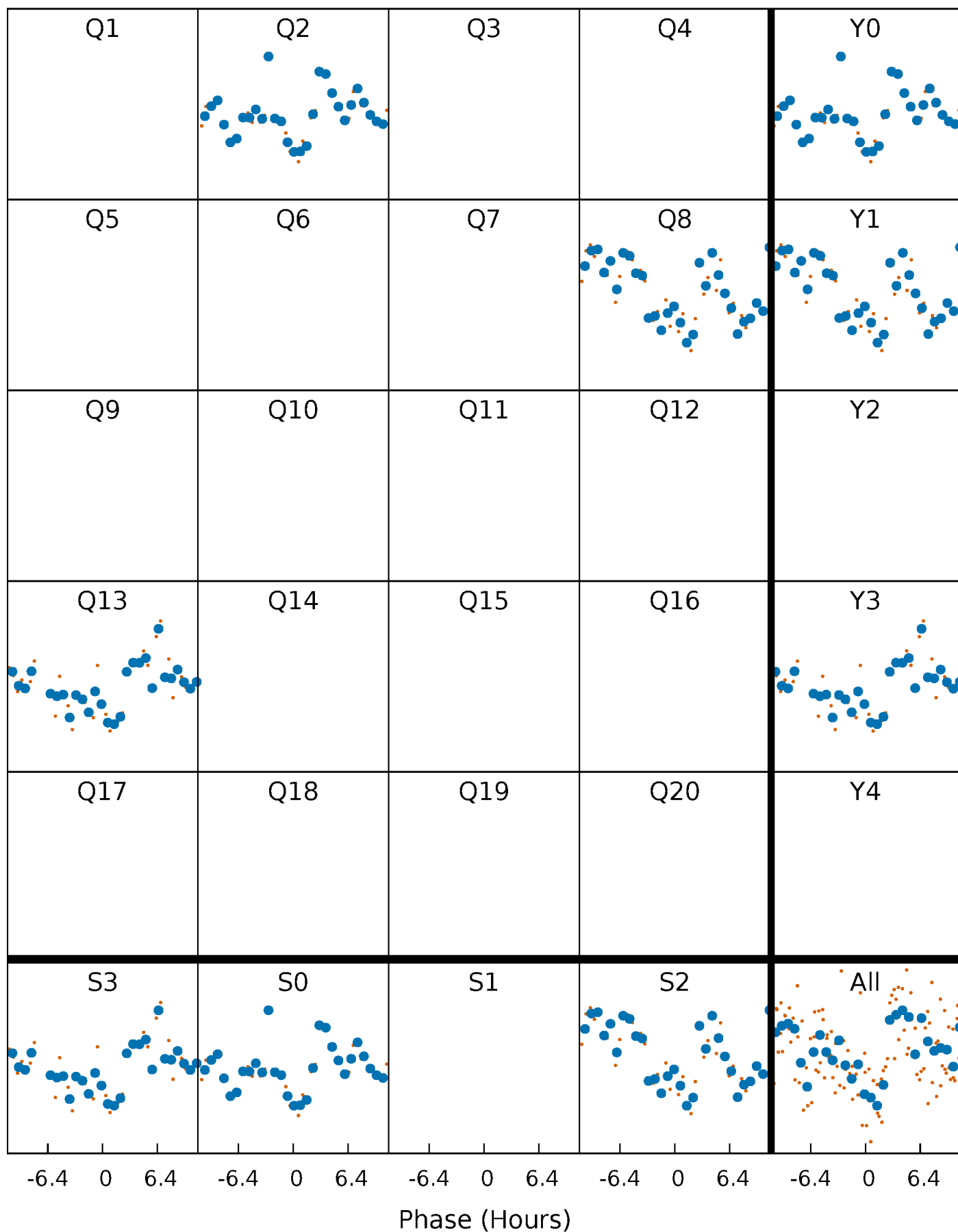


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



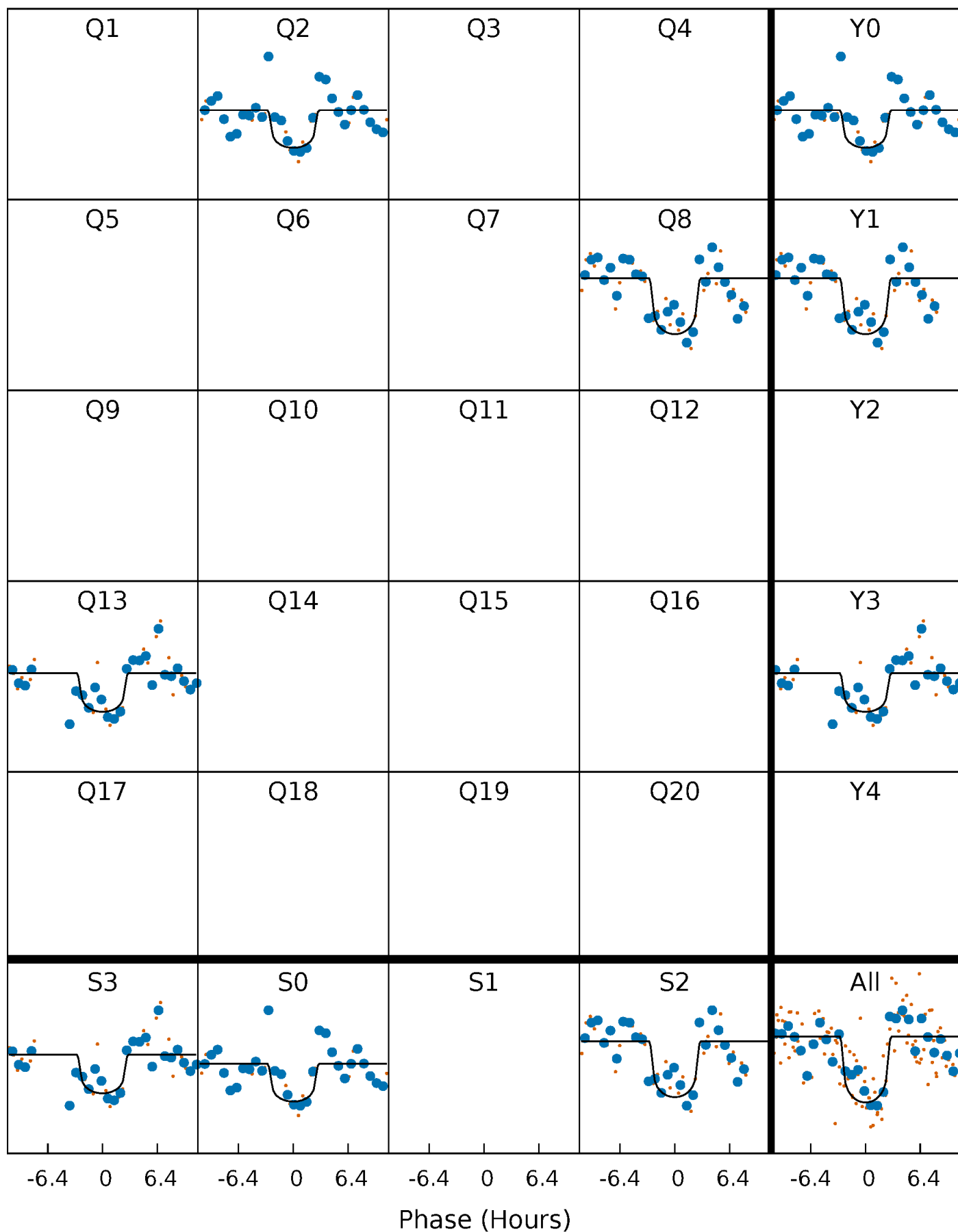
PDC Quarter-Phased Transit Curves

TCE 010925104-04 $P=490.430136$ Days $T_0=251.065976$ (BKJD)



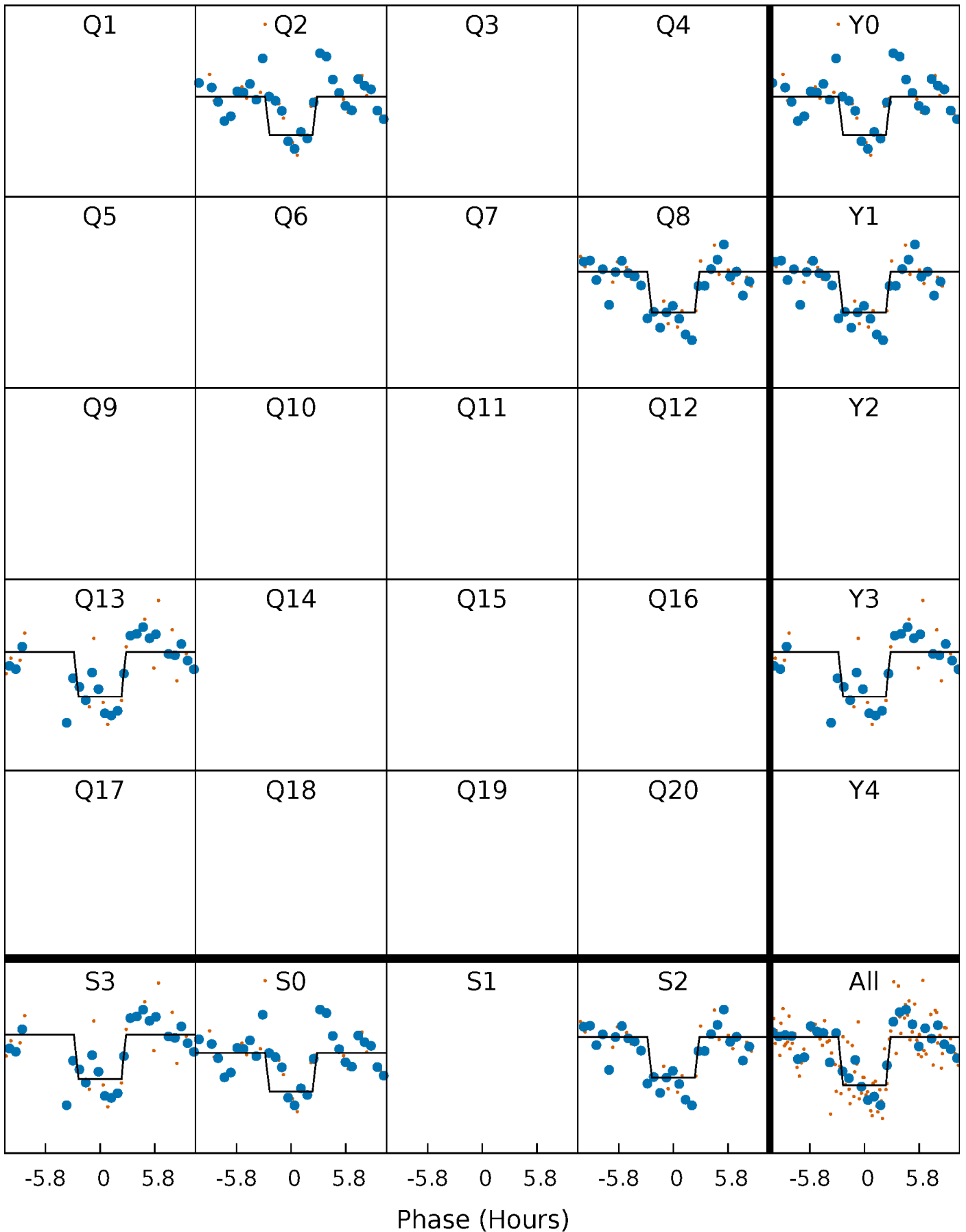
DV Quarter-Phased Transit Curves

TCE 010925104-04 $P=490.430136$ Days $T_0=251.065976$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

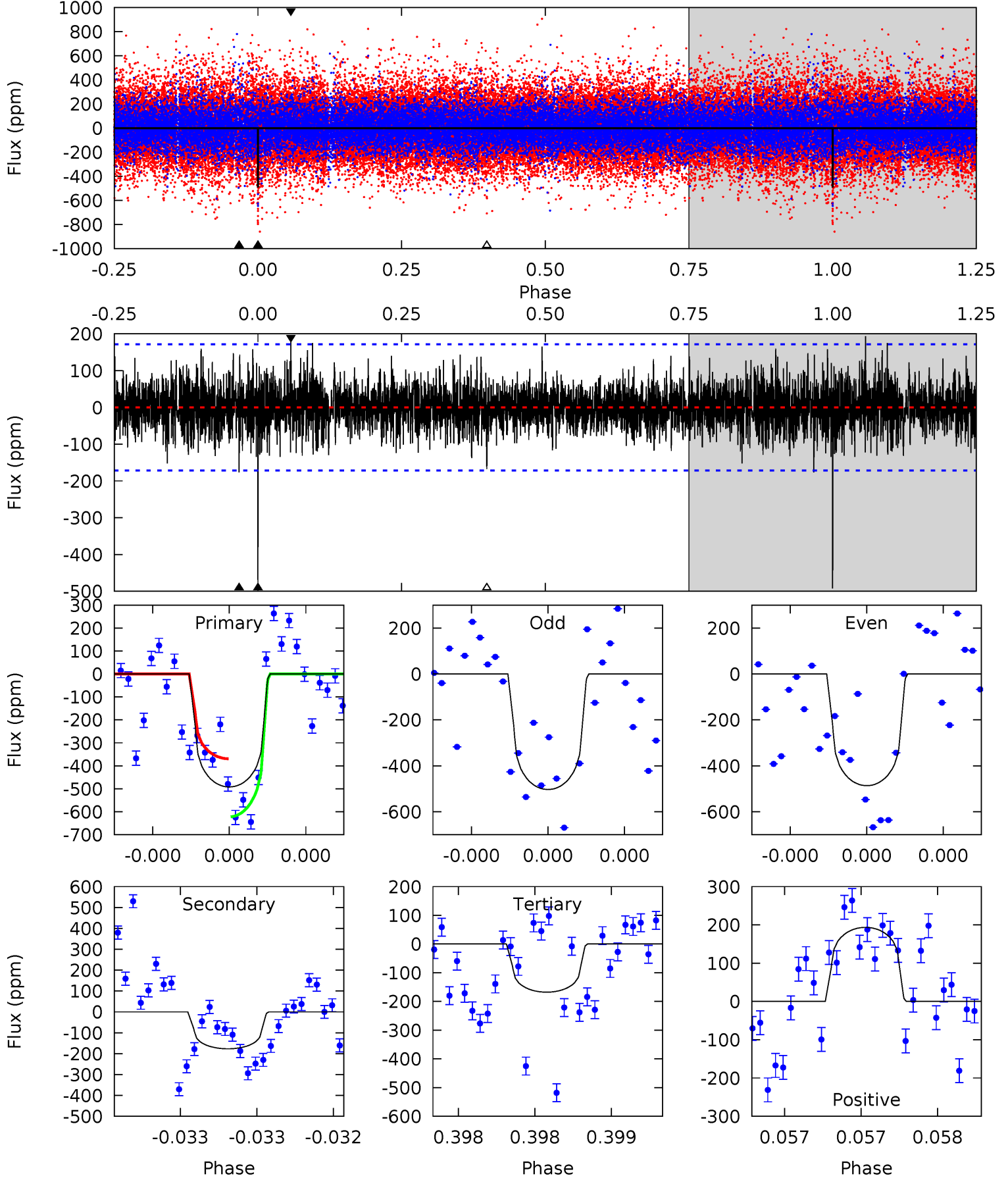
TCE 010925104-04 $P=490.432685$ Days $T_0=251.063362$ (BKJD)



DV Model-Shift Uniqueness Test

010925104-04, P = 490.430136 Days, E = 251.065976 Days

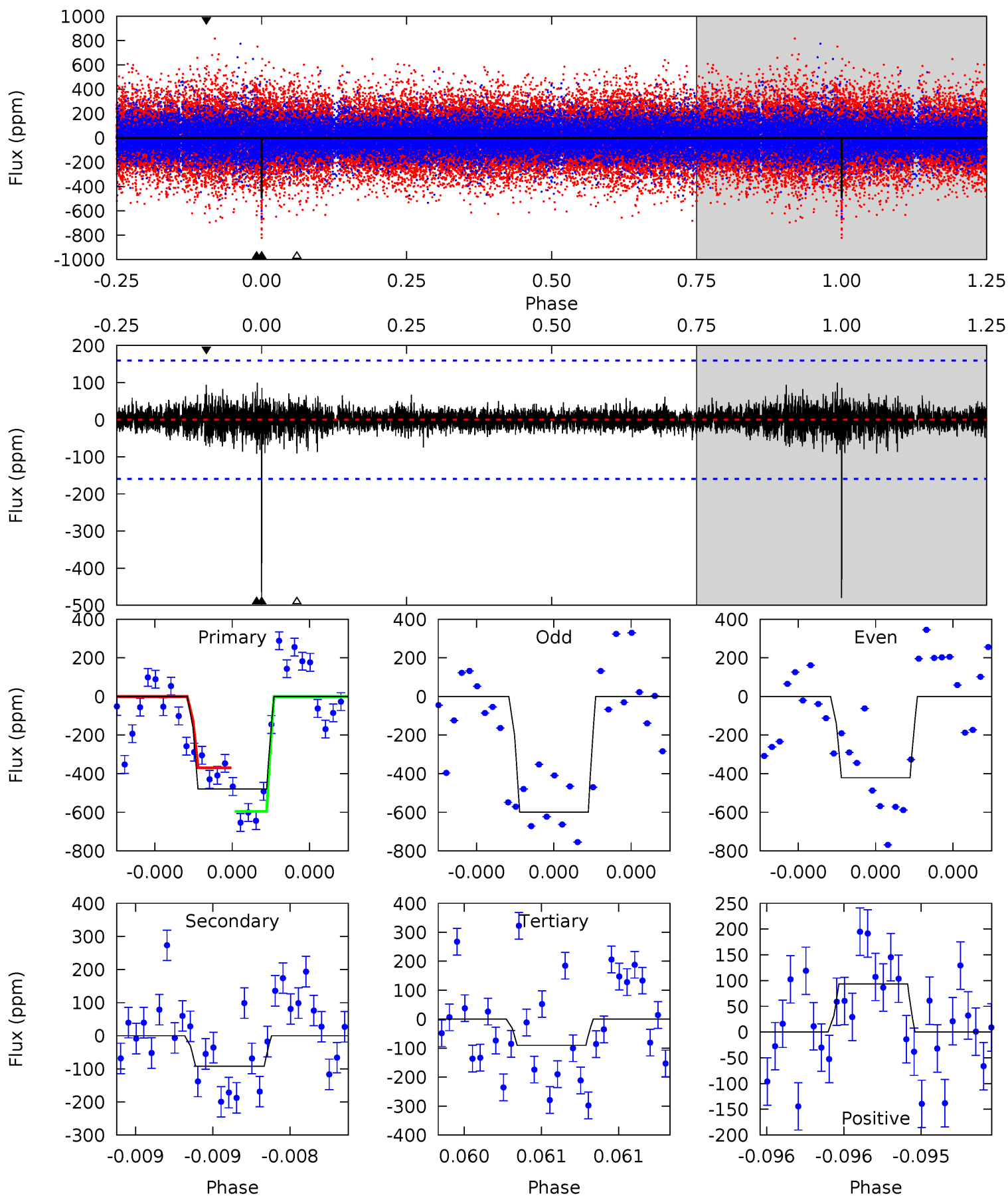
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	5.75	5.45	6.29	5.58	3.49	1.40	10.6	9.71	0.30	-0.55	0.25	0.97	0.28	4.11



Alt Model-Shift Uniqueness Test

010925104-04, P = 490.432685 Days, E = 251.063362 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	3.22	3.17	3.28	5.60	3.52	0.60	13.6	13.5	0.05	-0.06	2.93	0.96	0.17	3.97



Stellar Parameters For KIC 010925104

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3980^{+79}_{-79}	$4.722^{+0.030}_{-0.033}$	$-0.200^{+0.150}_{-0.150}$	$0.540^{+0.033}_{-0.033}$	$0.560^{+0.031}_{-0.038}$	$5.018^{+0.739}_{-0.583}$
	+2%/-2%	+1%/-1%	+75%/-75%	+6%/-6%	+6%/-7%	+15%/-12%
Source	SPE5	SPE5	SPE5	DSEP		

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

Secondary Eclipse Parameters for KIC 010925104-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-177 ± 31	$1.42^{+0.90}_{-0.79}$	180^{+4}_{-4}	3274^{+1079}_{-421}	$46725^{+210312}_{-28500}$
Alt.	-92 ± 29	$1.46^{+0.85}_{-0.83}$	180^{+5}_{-4}	2980^{+823}_{-398}	25470^{+95496}_{-17159}

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

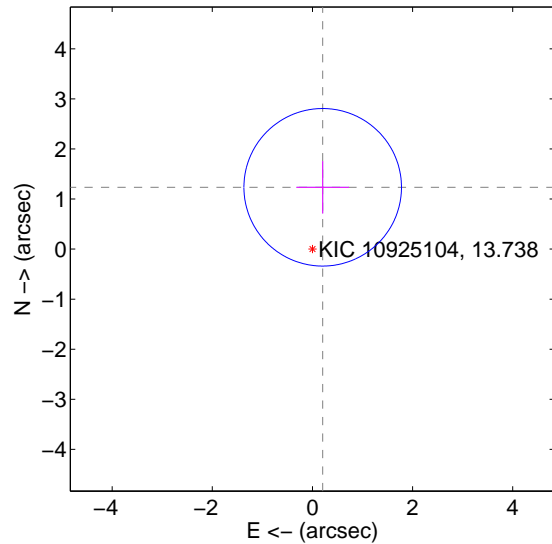
Supplemental centroid analysis for 010925104-04. Kepler magnitude: 13.74. Transit SNR 8.74

There are 1 quarters with good PRF difference image offsets

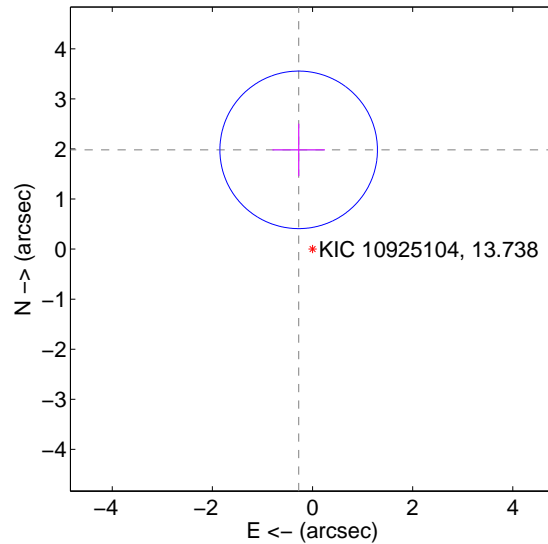
The direct PRF centroid is offset from the target star catalog position by about 0.89 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.252 ± 0.525	2.39	-0.205 ± 0.525	1.235 ± 0.525
PRF-fit source offset from KIC position	2.002 ± 0.525	3.82	0.277 ± 0.525	1.983 ± 0.525
photometric centroid source offset	1.82 ± 0.74	2.47	1.63 ± 0.76	0.81 ± 0.66

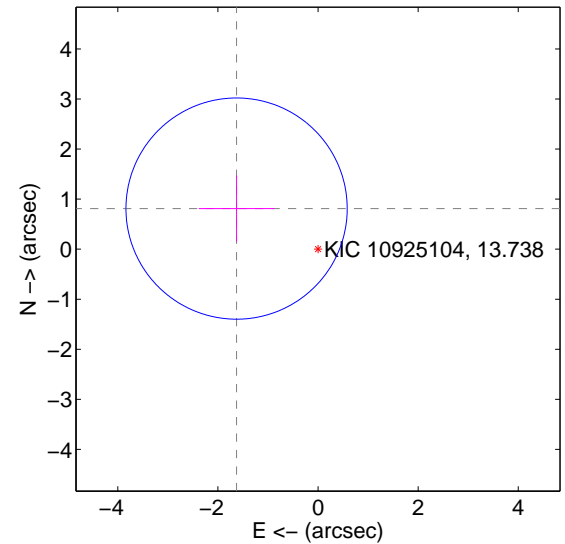
offset from difference PRF-fit to OOT PRF-fit



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.

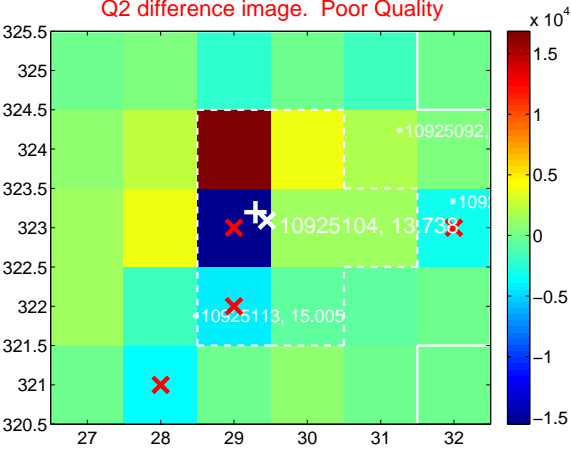
Q1 no difference image



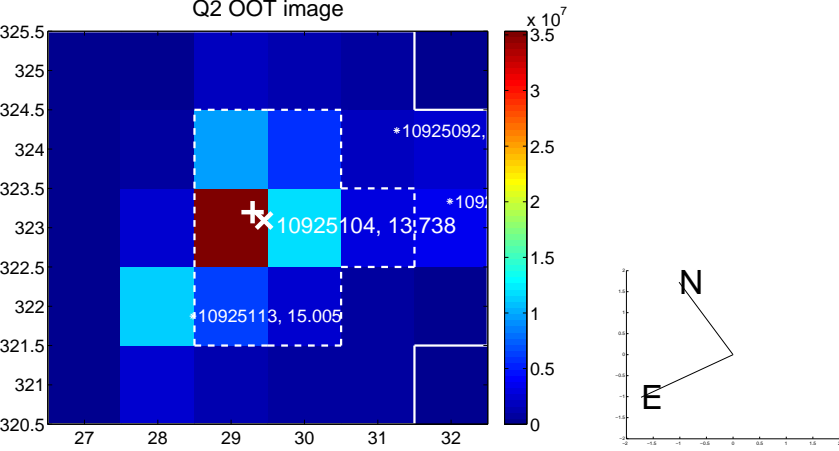
Q1 no OOT image



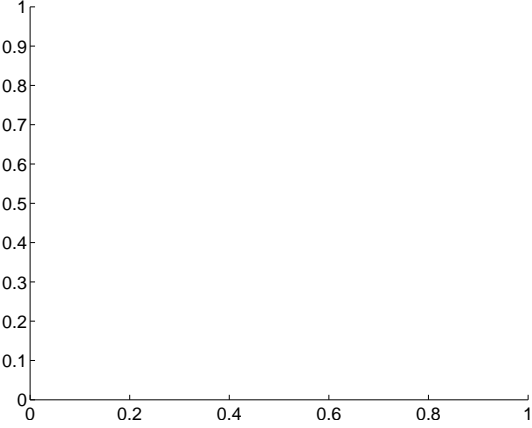
Q2 difference image. Poor Quality



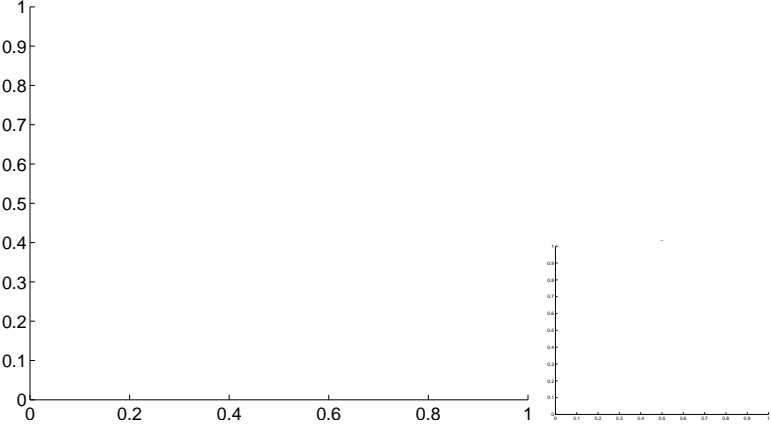
Q2 OOT image



Q3 no difference image



Q3 no OOT image



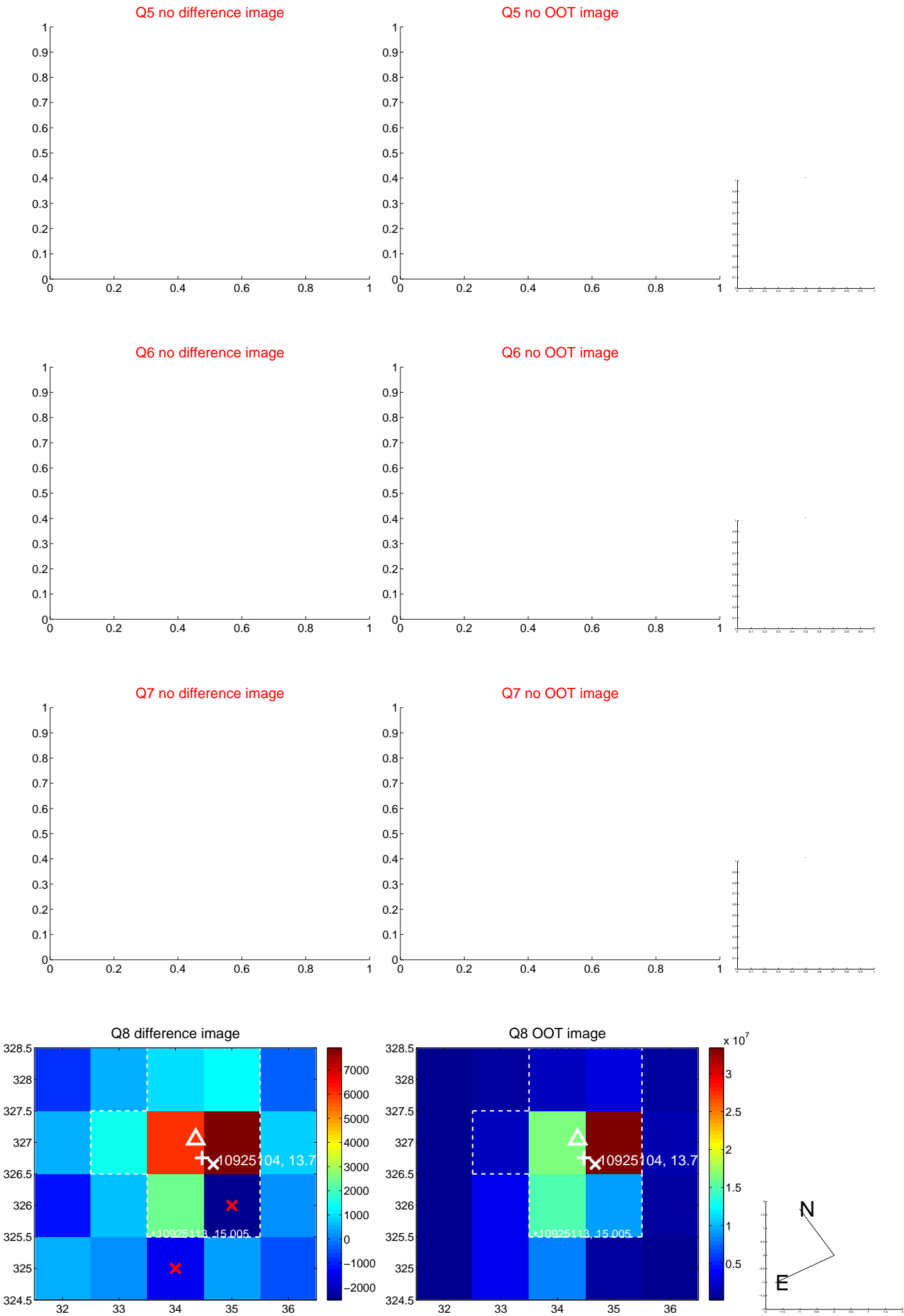
Q4 no difference image



Q4 no OOT image



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



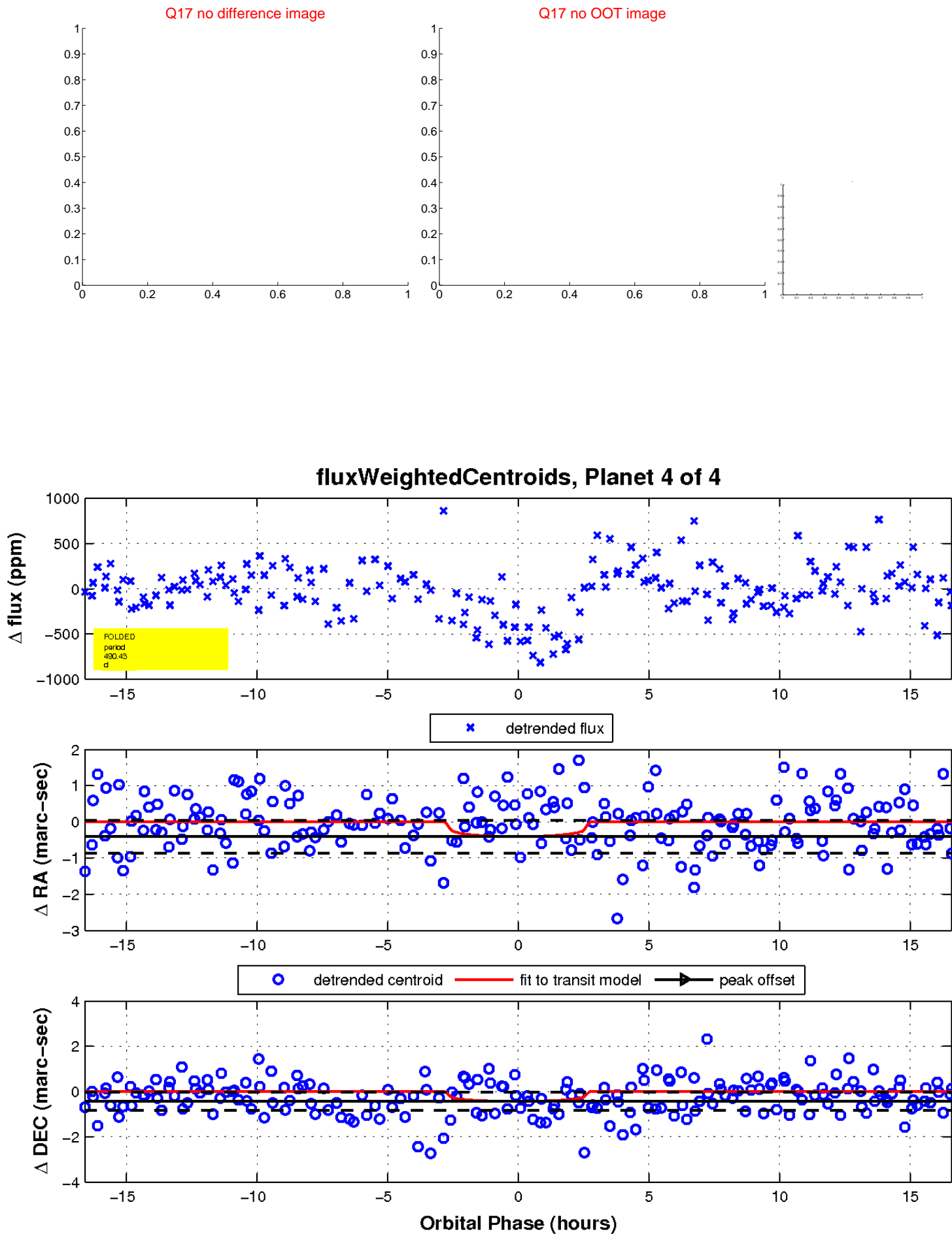
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

