

KIC 006849310

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})
006849310-01	OBS	0864.01	4.311772	134.772153	1136.7	2.796	68.7	77.7	0.93	5527	3.32	275.44
006849310-02	OBS	0864.02	20.050492	147.985385	809.9	4.796	29.4	31.2	0.93	5527	3.09	35.49
006849310-03	OBS	0864.03	9.767366	137.740457	654.2	1.986	17.3	20.9	0.93	5527	3.33	92.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006849310-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006849310-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006849310-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

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

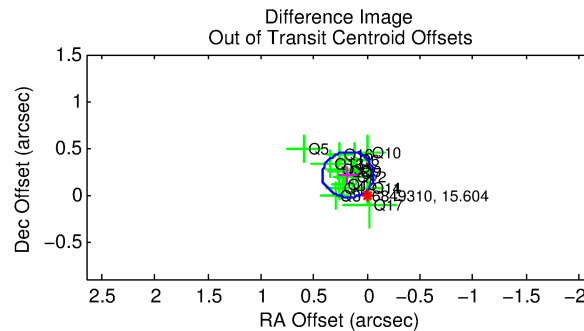
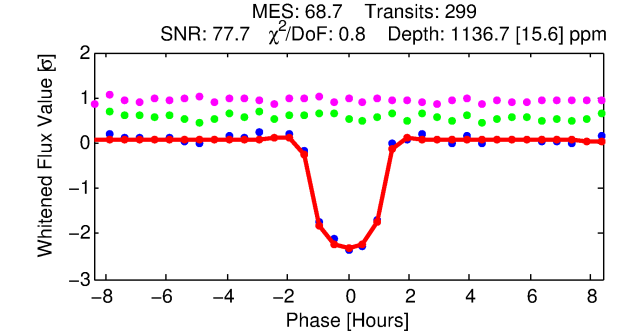
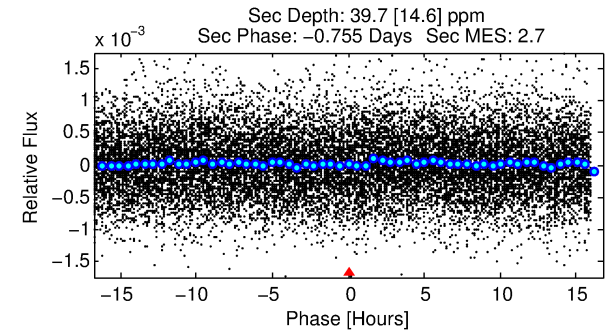
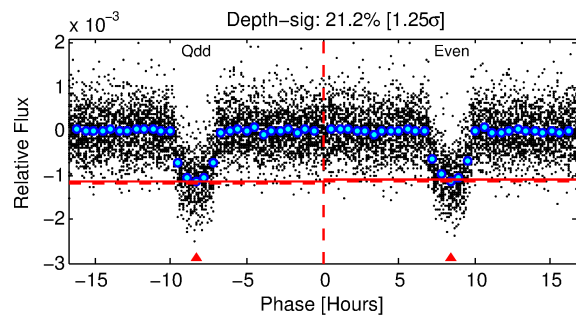
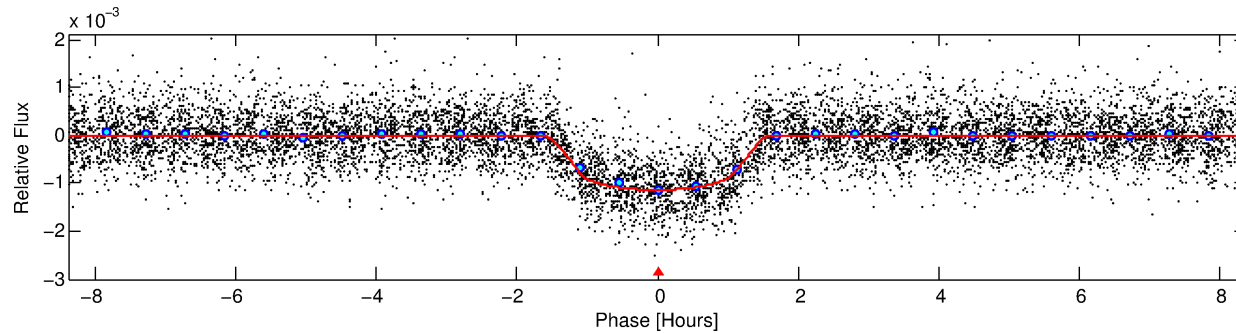
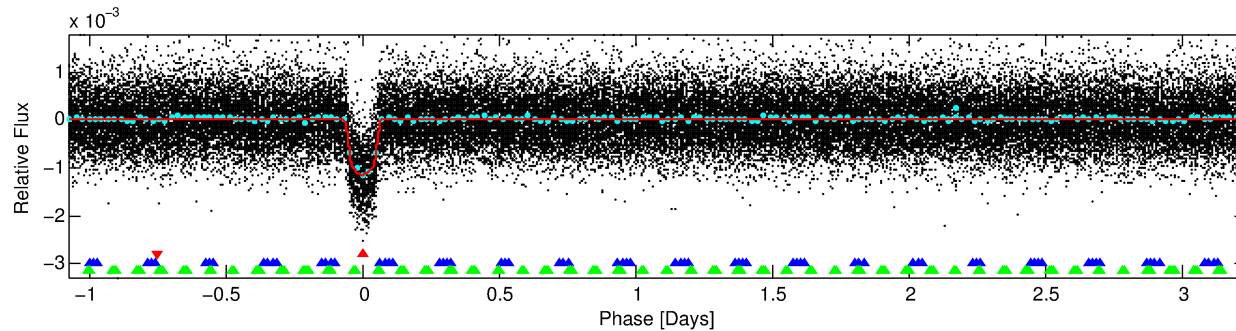
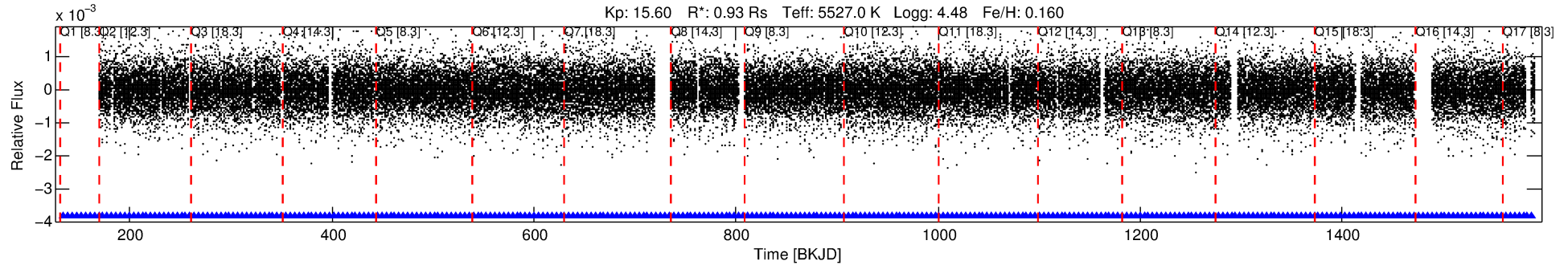
Ephemeris Match Information For 006849310-01

No Significant Match Found

DV One-Page Summary

KIC: 6849310 Candidate: 1 of 3 Period: 4.312 d
KOI: K00864.01 Name: Kepler-244b Corr: 0.987

Kp: 15.60 R*: 0.93 Rs Teff: 5527.0 K Logg: 4.48 Fe/H: 0.160



DV Fit Results:

Period = 4.31177 [0.00000] d
Epoch = 134.7722 [0.0007] BKJD
Rp/R* = 0.0328 [0.0055]
a/R* = 9.18 [5.94]
b = 0.68 [0.52]
Seff = 275.44 [55.09]
Teq = 1039 [52] K
Rp = 3.32 [0.69] Re
a = 0.0511 [0.0061] AU
Ag = 5.18 [2.75] [1.52σ]
Teffp = 2423 [302] K [4.51σ]

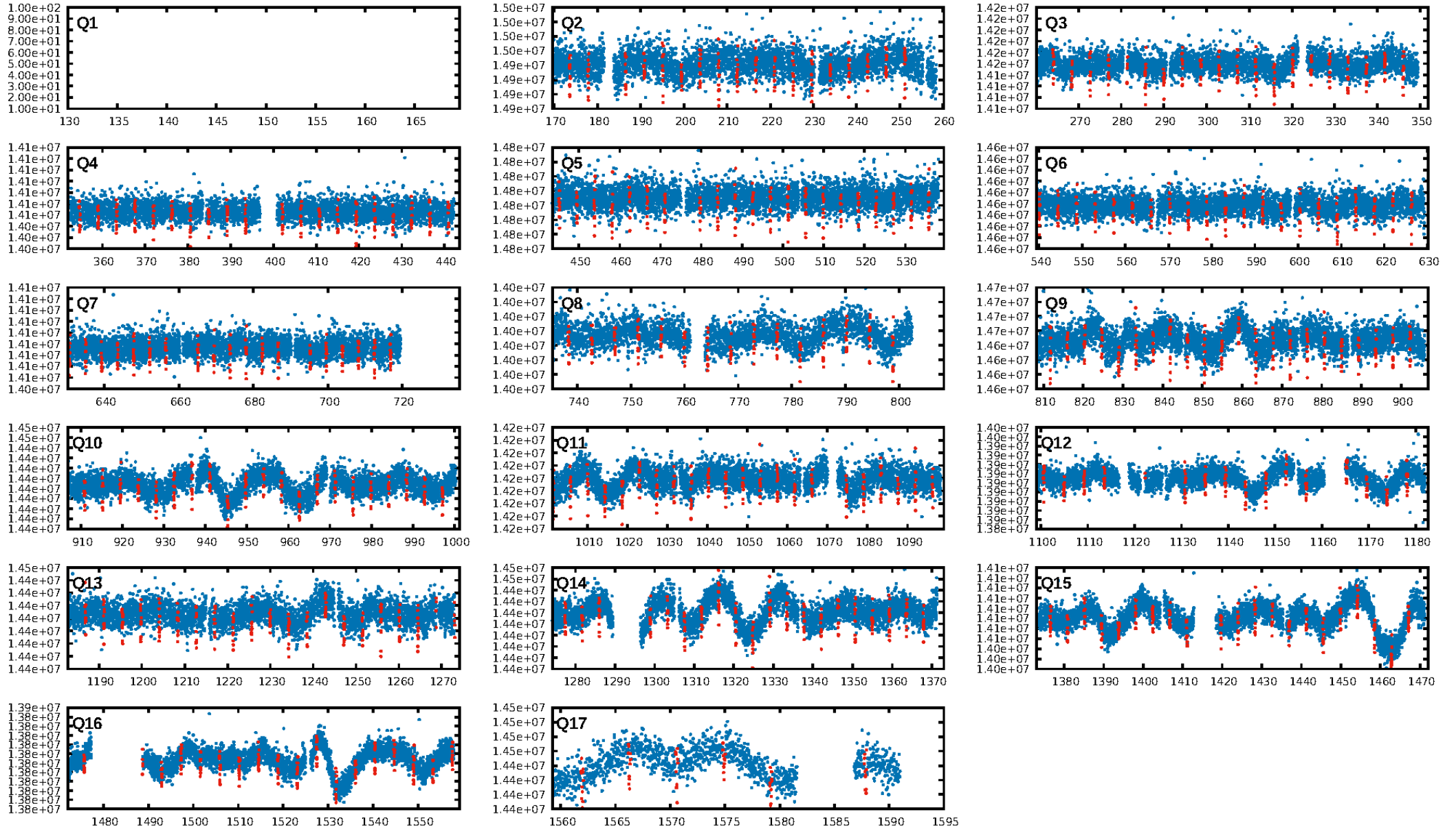
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [38.18σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [293/293]
GhostDiagnostic-chr: 5.099
Centroid-sig: 0.0%
Centroid-so: 0.254 arcsec [1.81σ]
OotOffset-rm: 0.280 arcsec [3.45σ]
KicOffset-rm: 0.250 arcsec [3.15σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
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DiffImageOverlap-fno: 1.00 [16/16]

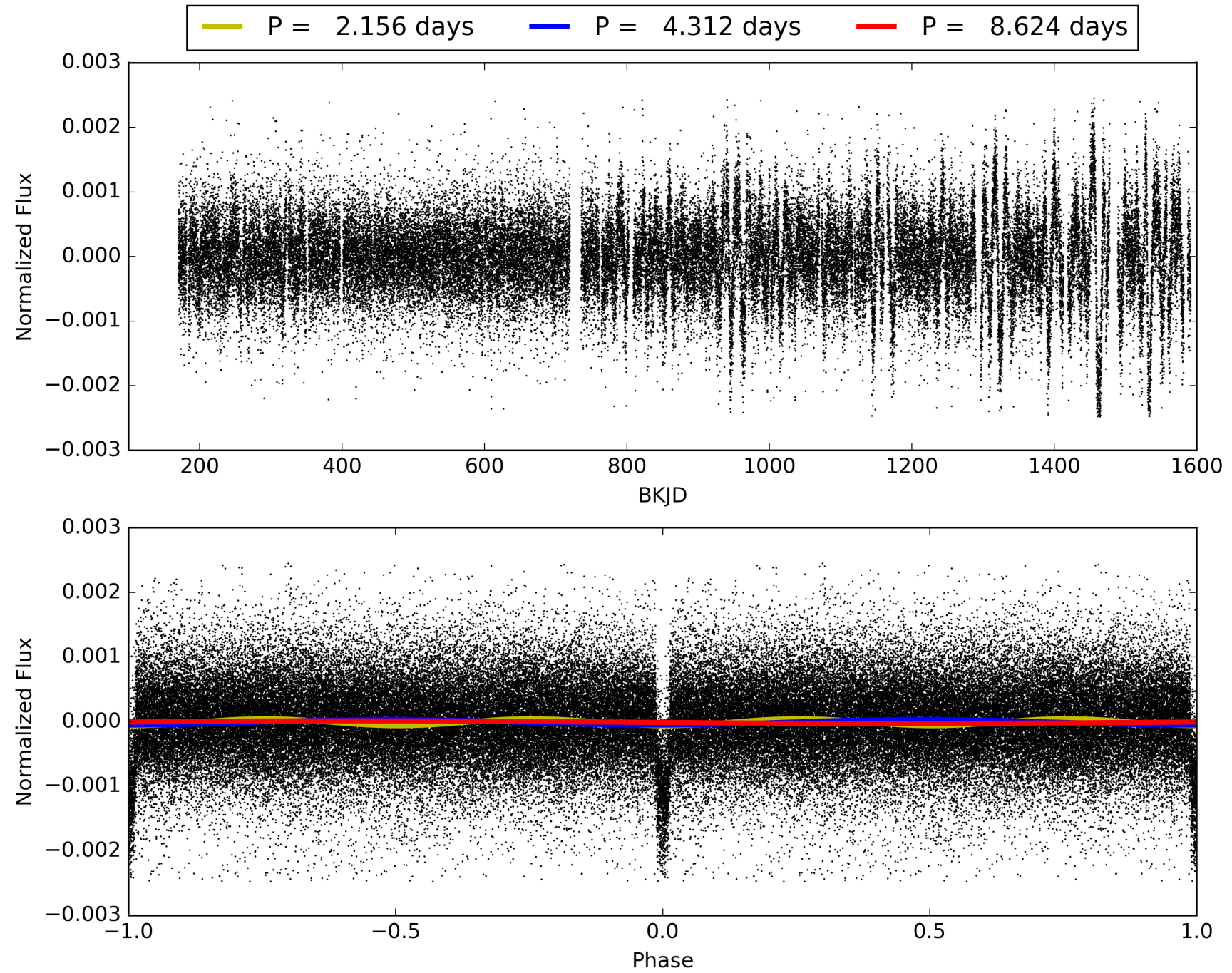
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:47:35 Z

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

TCE 006849310-01, PDC Light Curves

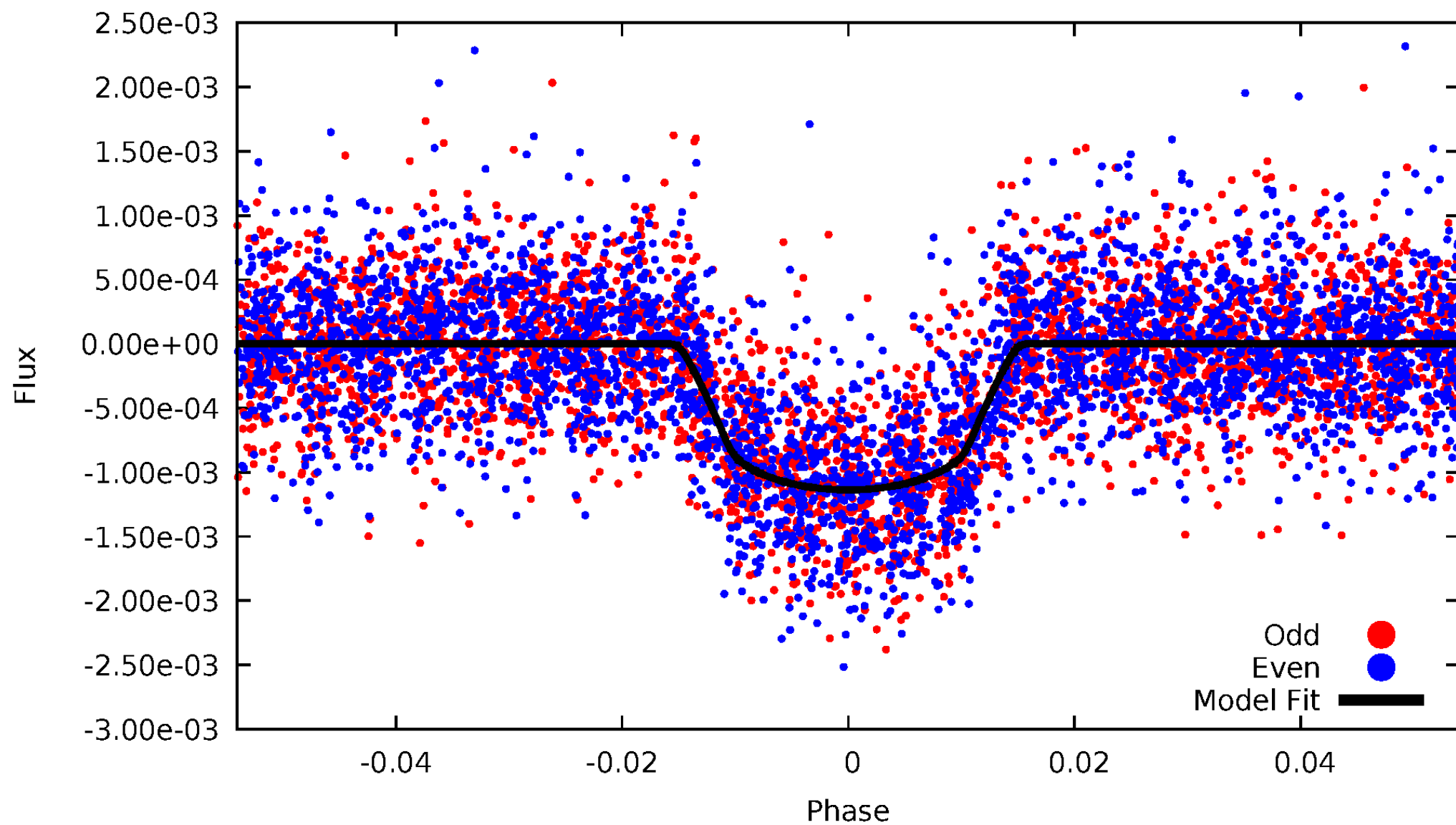


TCE 006849310-01



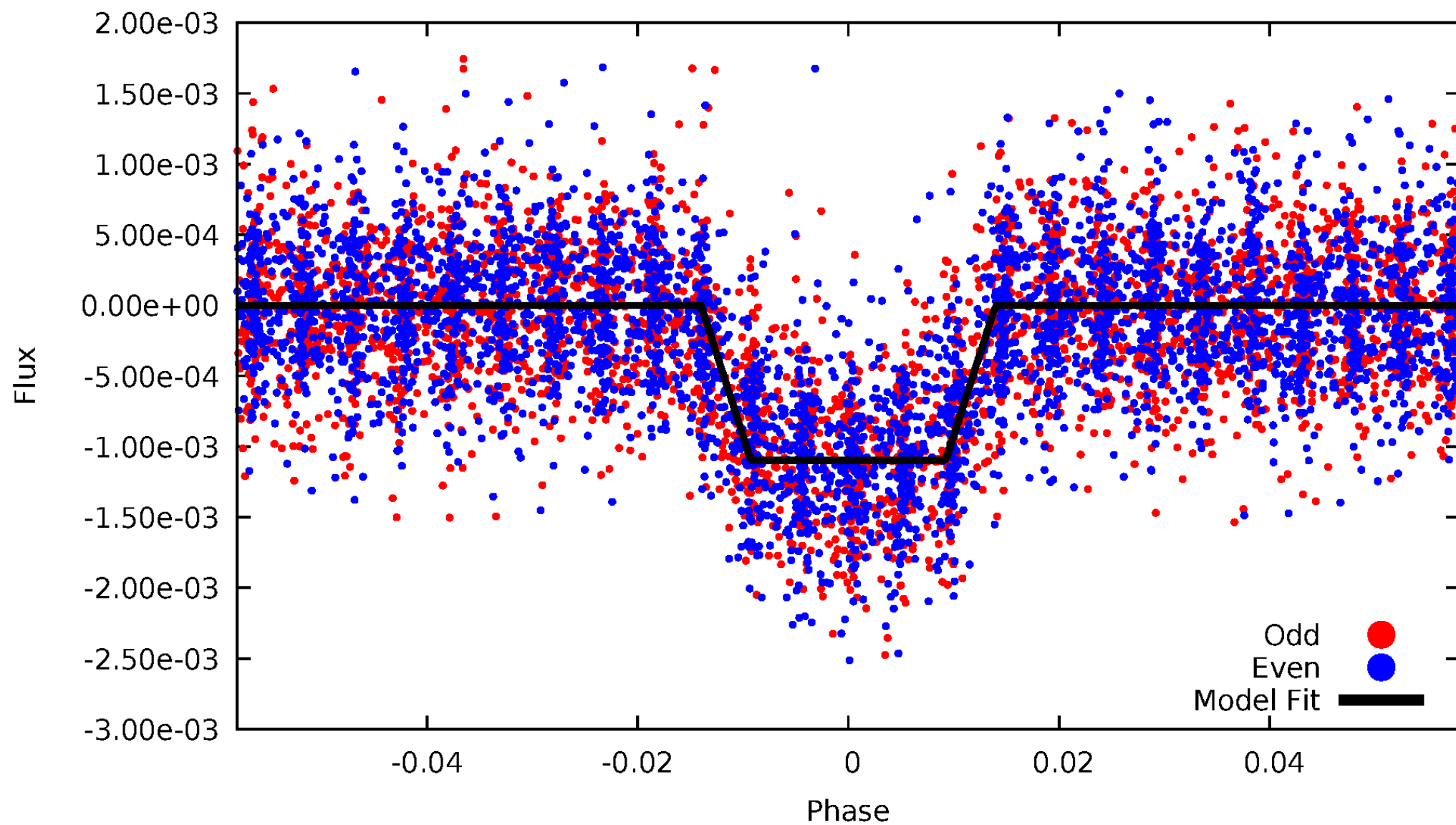
DV Odd/Even

TCE 006849310-01



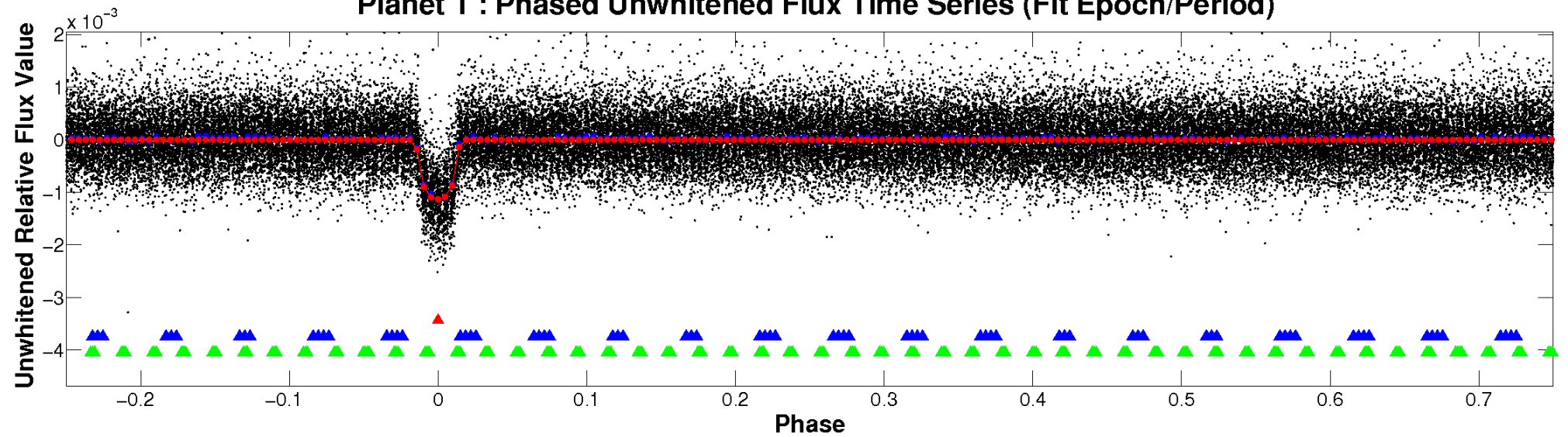
ALT Odd/Even

TCE 006849310-01

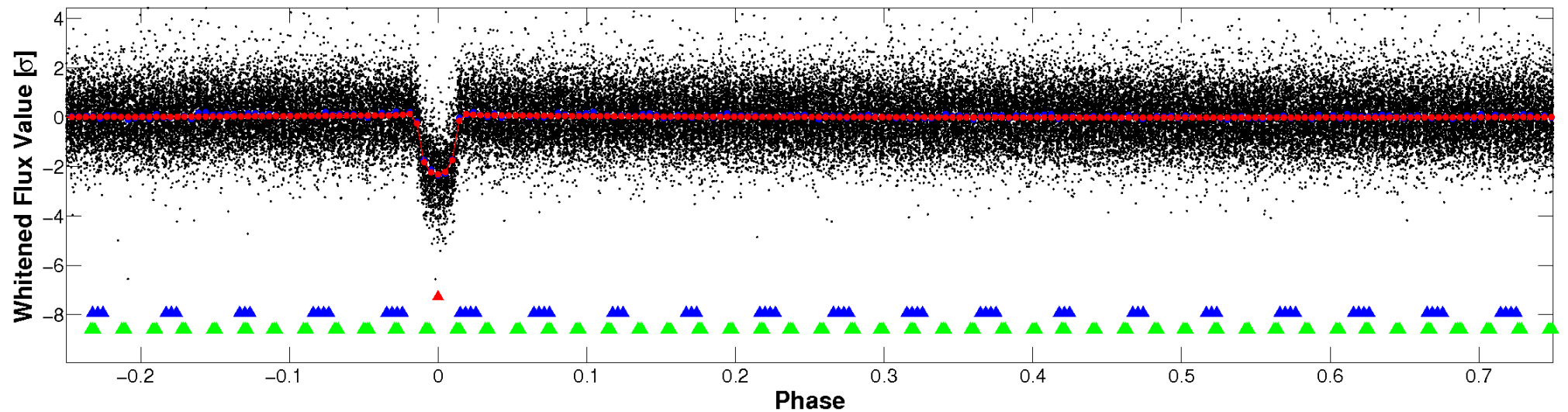


Non-Whitened Vs. Whitened Light Curve

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

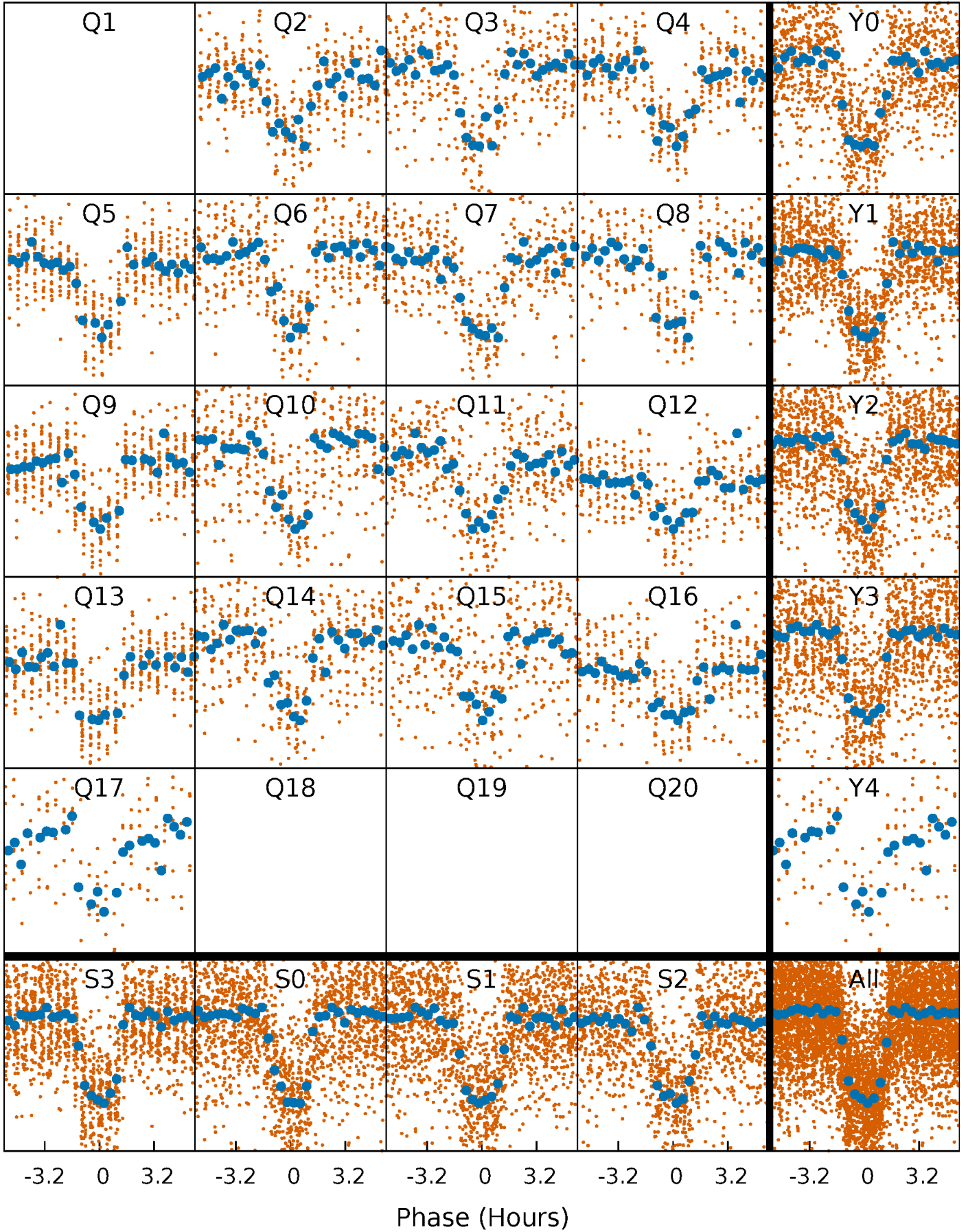


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



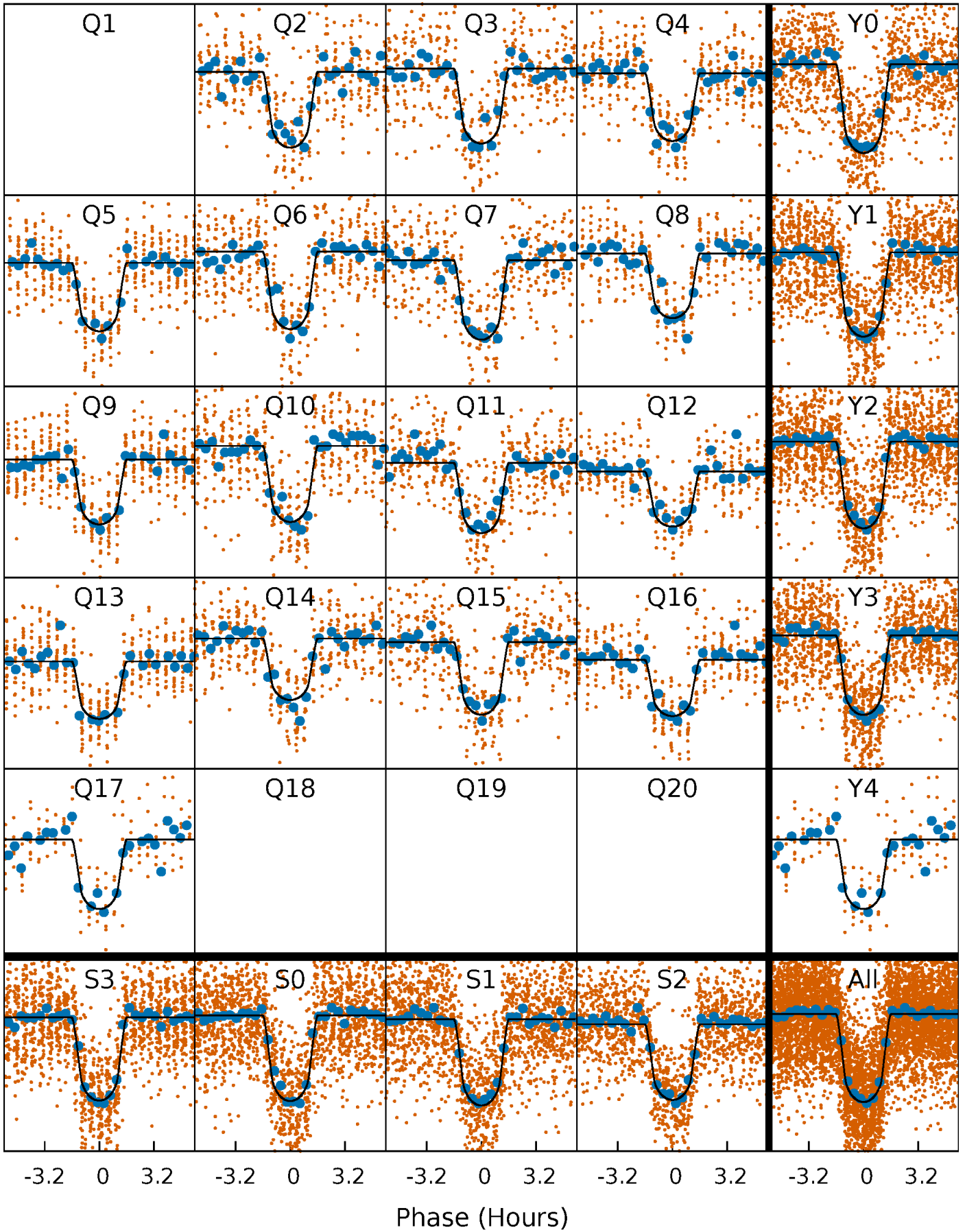
PDC Quarter-Phased Transit Curves

TCE 006849310-01 P= 4.311772 Days $T_0=134.772153$ (BKJD)



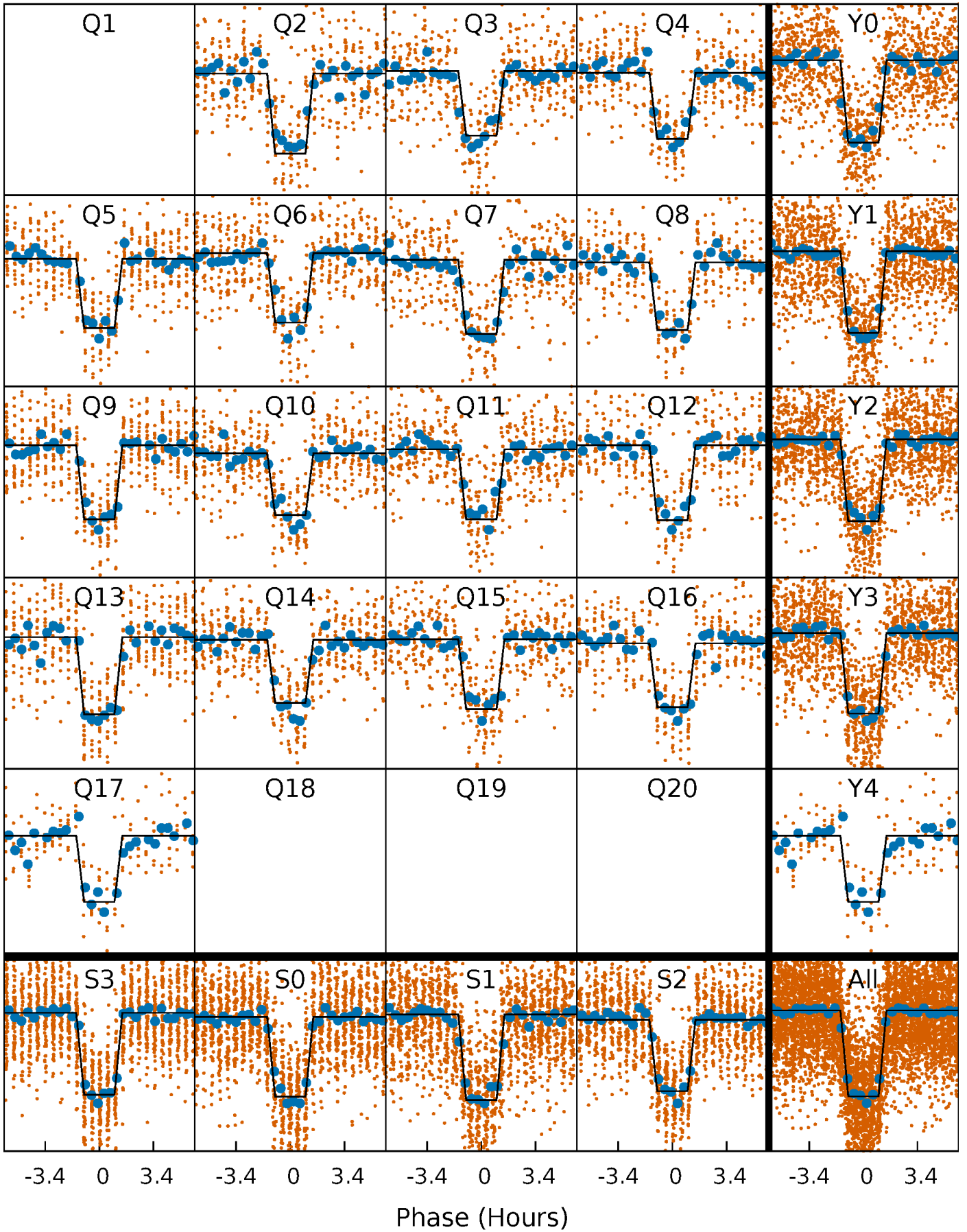
DV Quarter-Phased Transit Curves

TCE 006849310-01 P= 4.311772 Days $T_0=134.772153$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

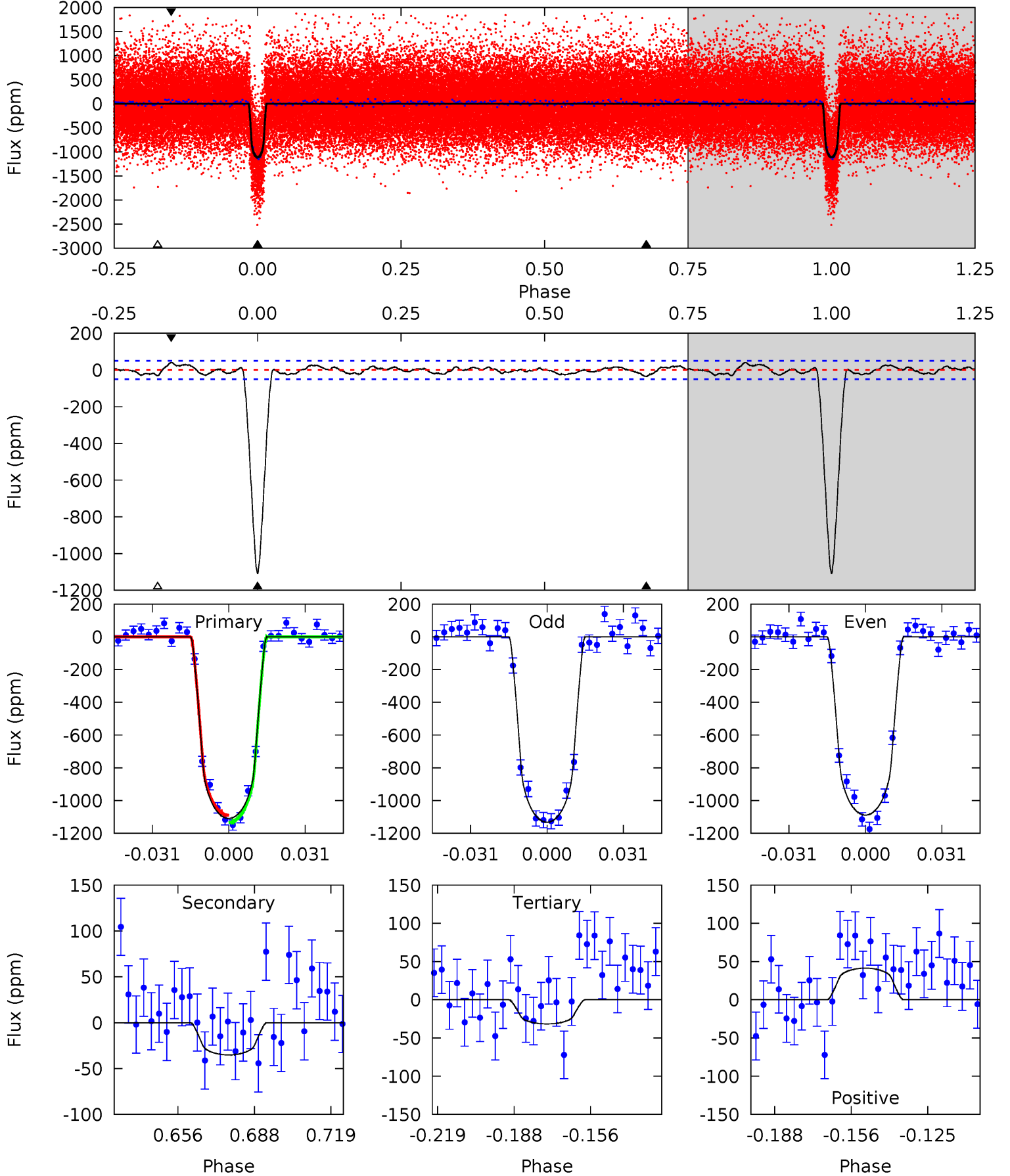
TCE 006849310-01 P= 4.311744 Days $T_0=134.777208$ (BKJD)



DV Model-Shift Uniqueness Test

006849310-01, P = 4.311772 Days, E = 134.772153 Days

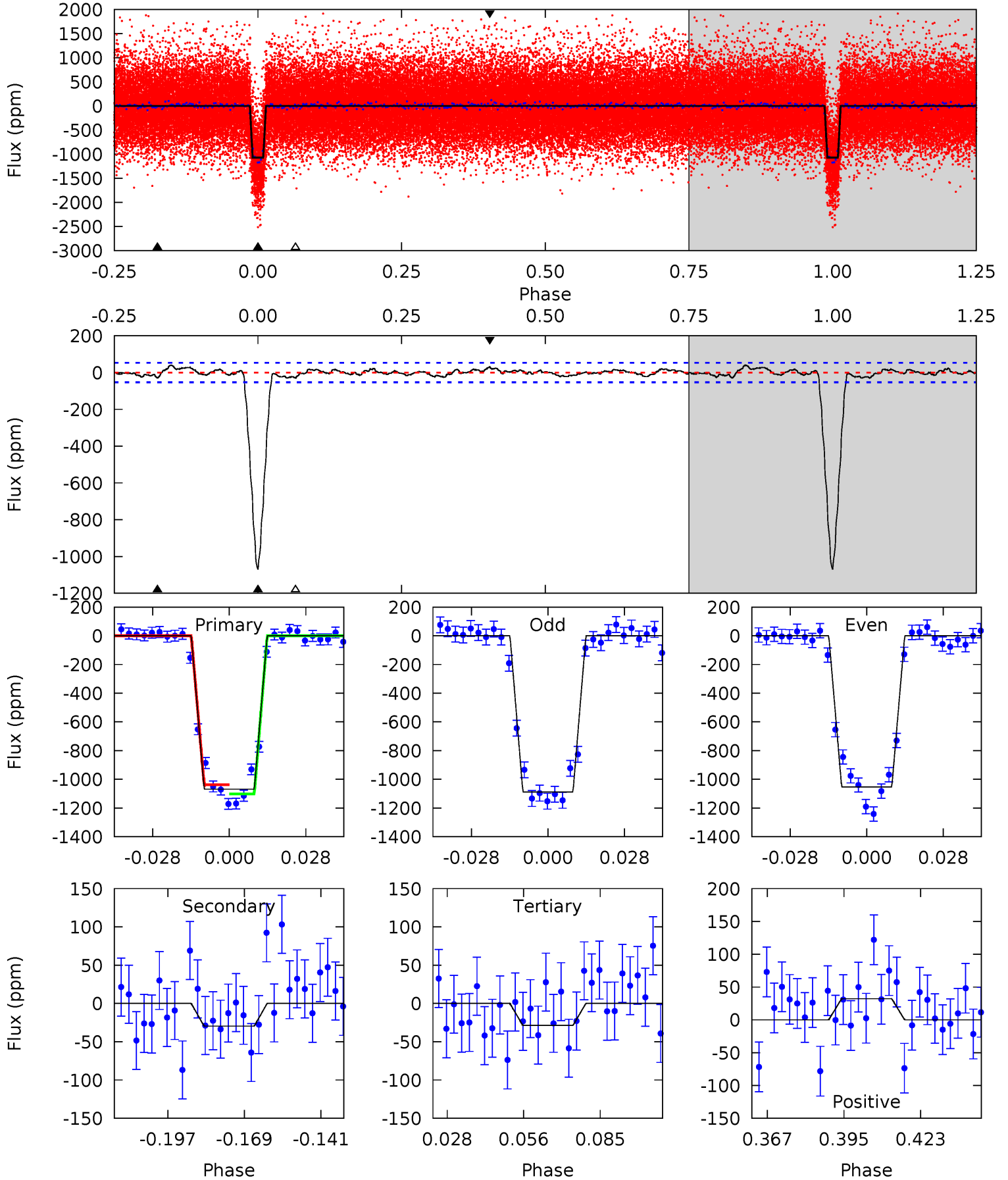
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
106.7	3.38	3.04	3.98	4.80	2.15	1.40	103.6	102.7	0.34	-0.60	2.11	1.02	0.04	2.14



Alt Model-Shift Uniqueness Test

006849310-01, P = 4.311744 Days, E = 134.777208 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
97.2	2.69	2.61	2.93	4.82	2.19	1.14	94.6	94.3	0.08	-0.24	1.57	1.00	0.04	2.89



Stellar Parameters For KIC 006849310

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5527^{+74}_{-83}	$4.484^{+0.040}_{-0.112}$	$0.160^{+0.150}_{-0.150}$	$0.927^{+0.115}_{-0.062}$	$0.956^{+0.044}_{-0.059}$	$1.690^{+0.289}_{-0.520}$
	+1%/-2%	+1%/-2%	+94%/-94%	+12%/-7%	+5%/-6%	+17%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006849310-01 / KOI 0864.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-35 ± 10	$3.39^{+0.61}_{-0.56}$	1467^{+50}_{-40}	2967^{+212}_{-192}	$4.277^{+2.526}_{-1.563}$
Alt.	-30 ± 11	$3.41^{+0.70}_{-0.60}$	1461^{+53}_{-34}	2889^{+237}_{-232}	$3.639^{+2.457}_{-1.651}$

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 $A_{obs} \gg 1.0$

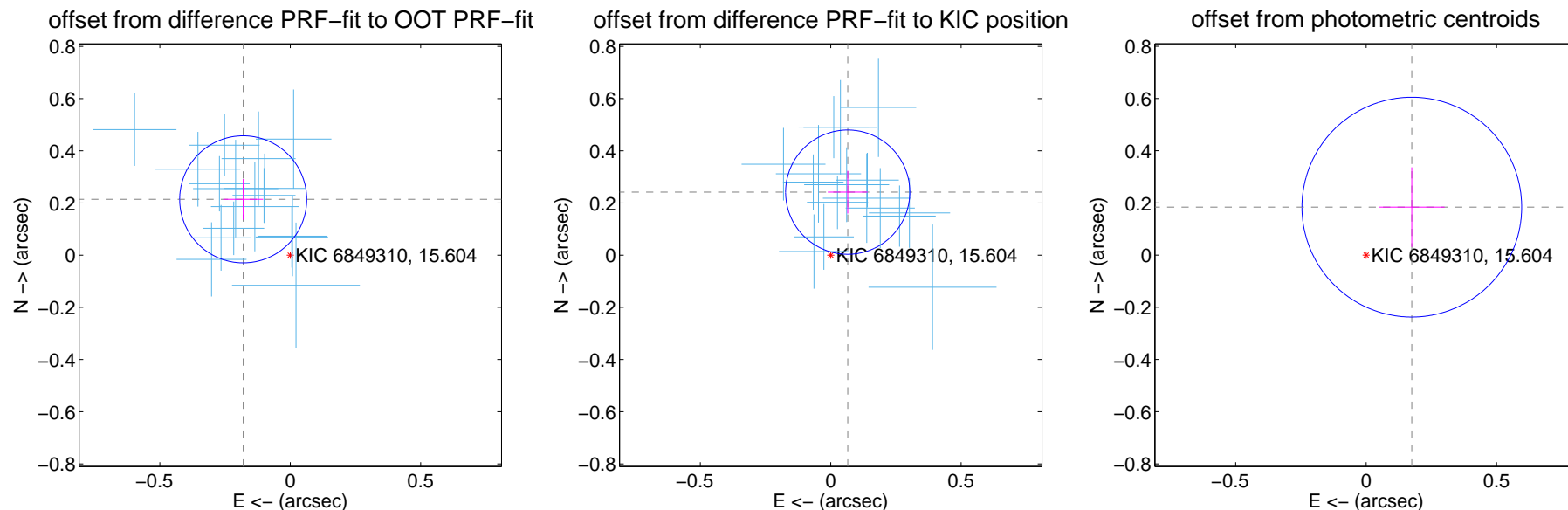
DV Centroid Data

Supplemental centroid analysis for 006849310-01. Kepler magnitude: 15.60. Transit SNR 77.69

There are 16 quarters with good PRF difference image offsets

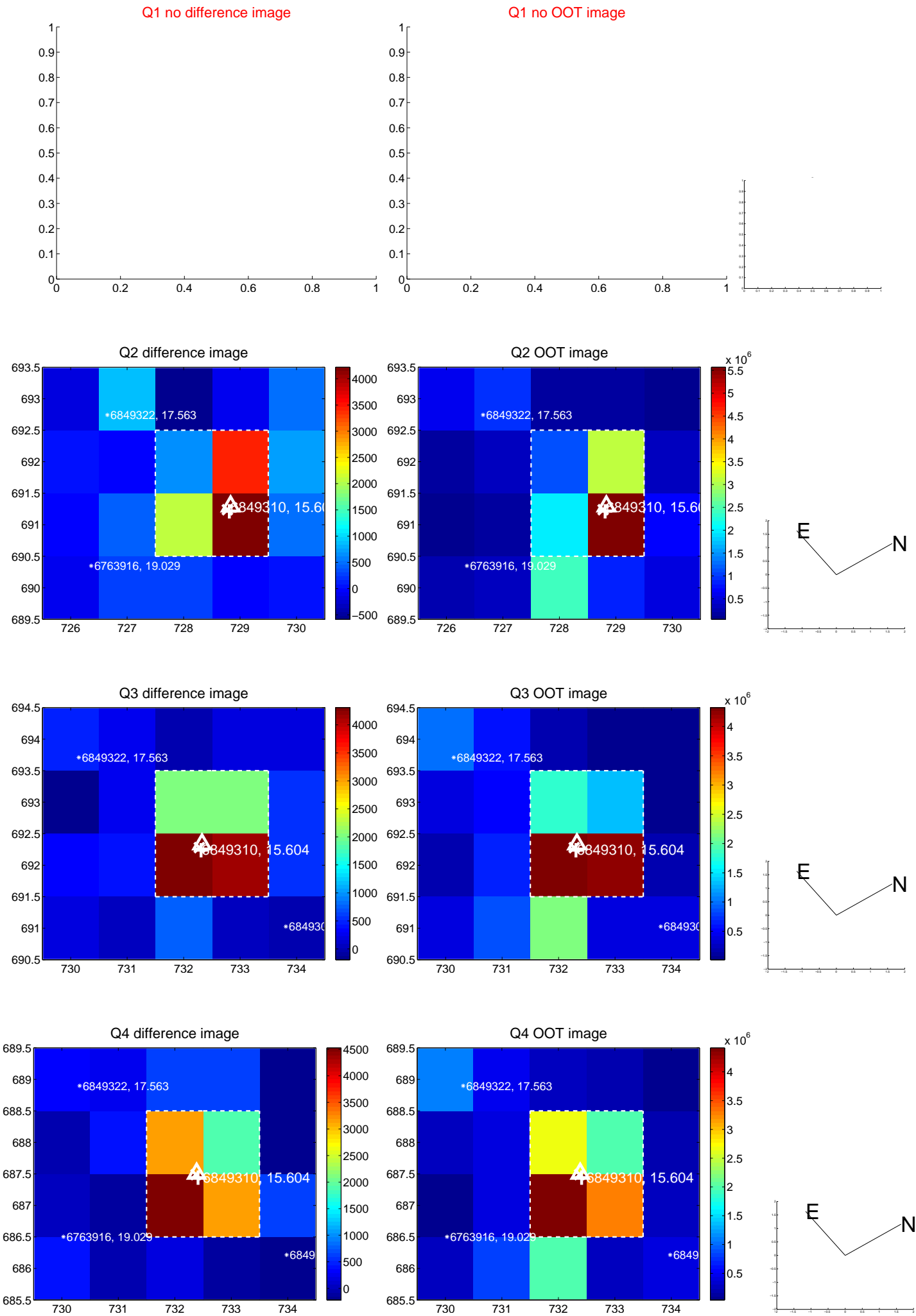
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.280 ± 0.081	3.45	0.180 ± 0.077	0.214 ± 0.078
PRF-fit source offset from KIC position	0.250 ± 0.079	3.15	-0.065 ± 0.076	0.242 ± 0.082
photometric centroid source offset	0.25 ± 0.14	1.81	-0.18 ± 0.13	0.18 ± 0.15

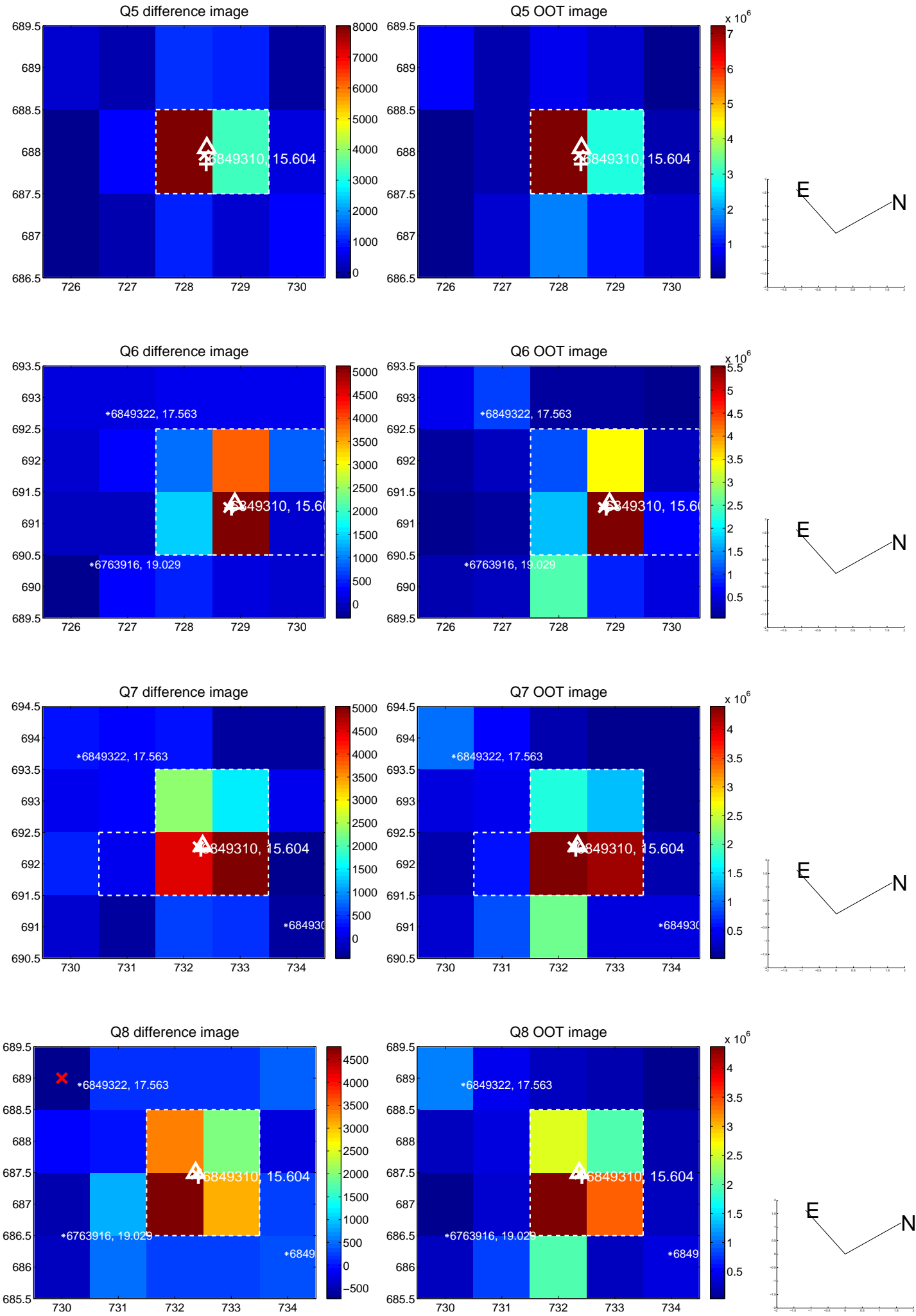


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

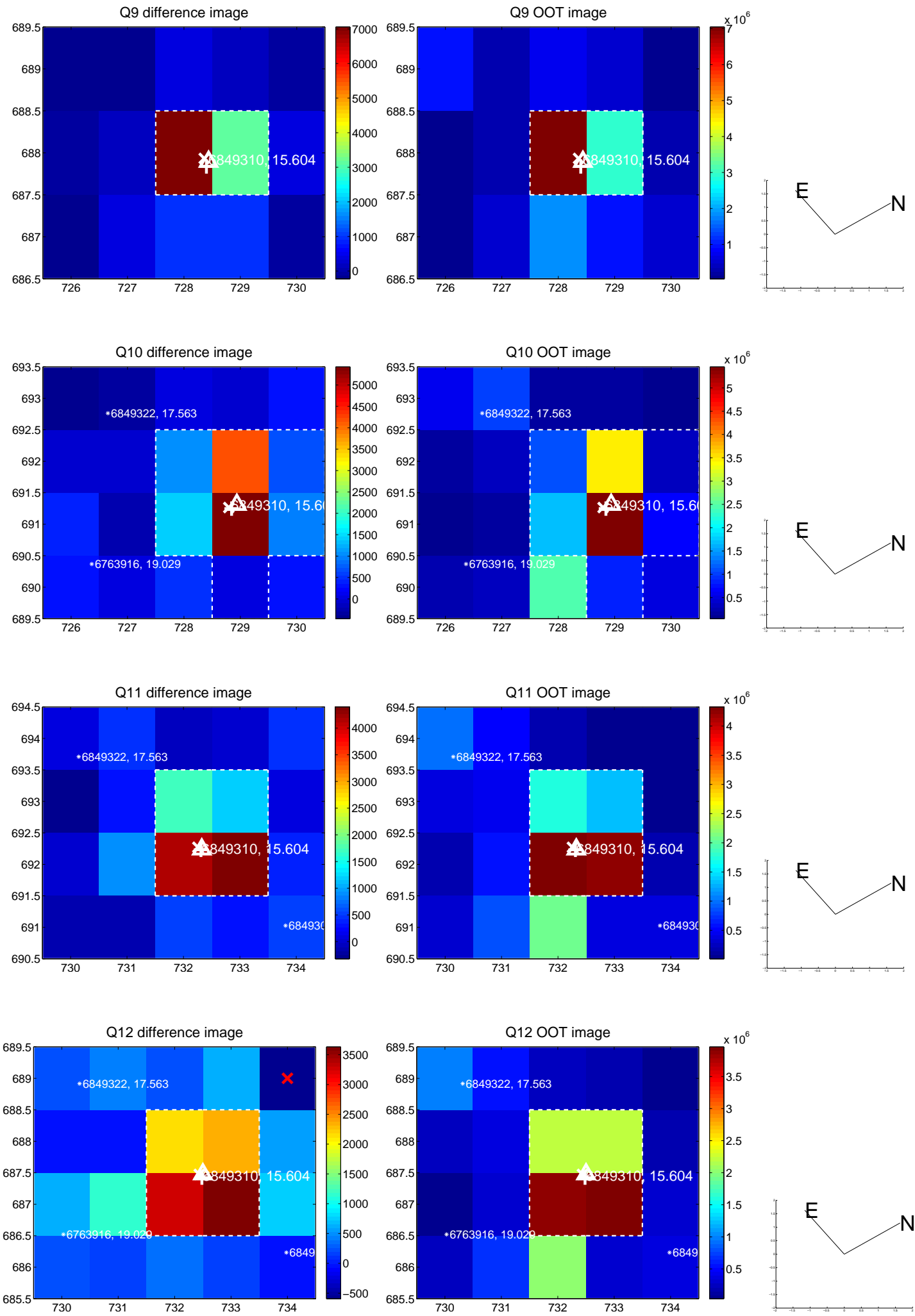
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



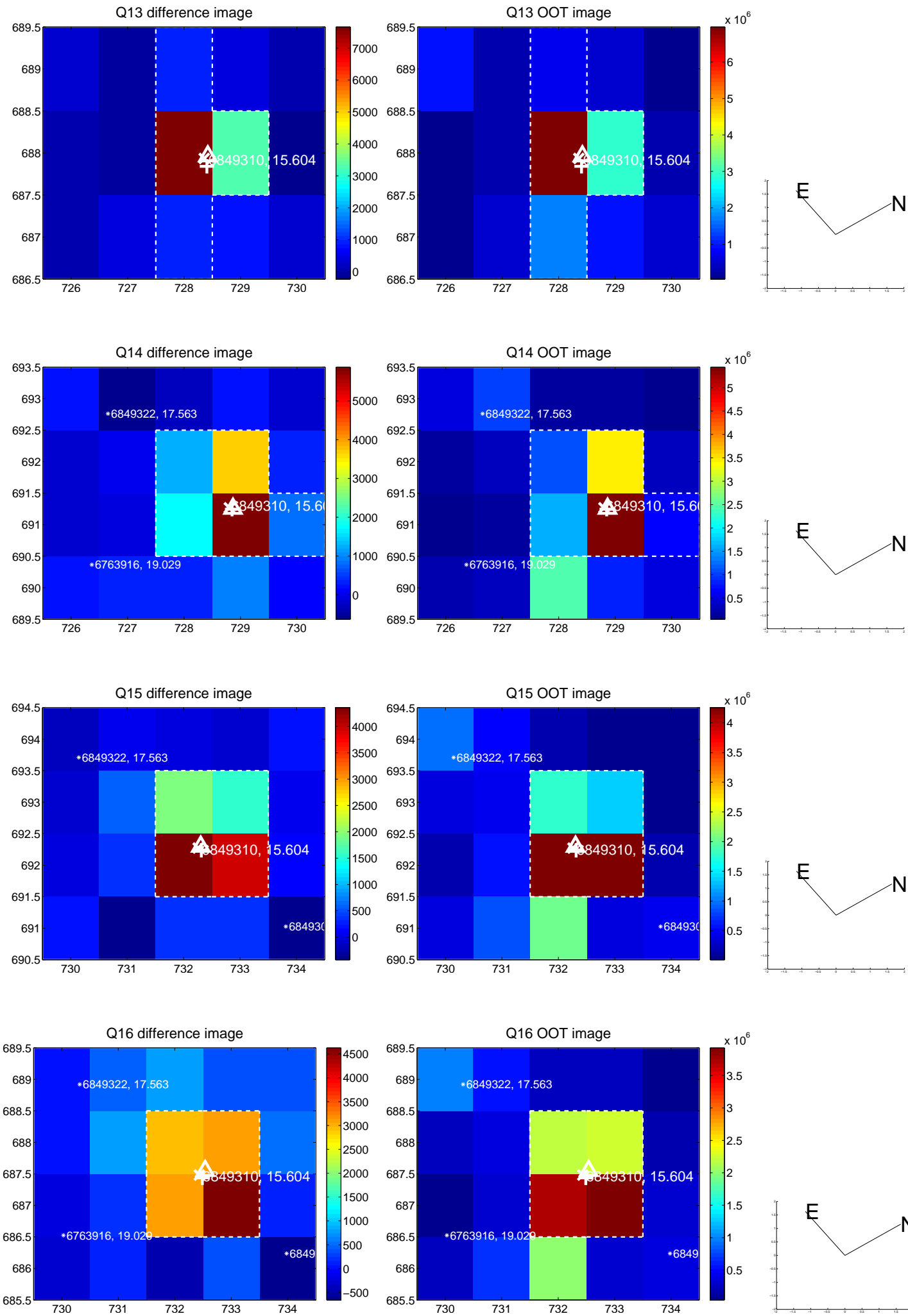
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



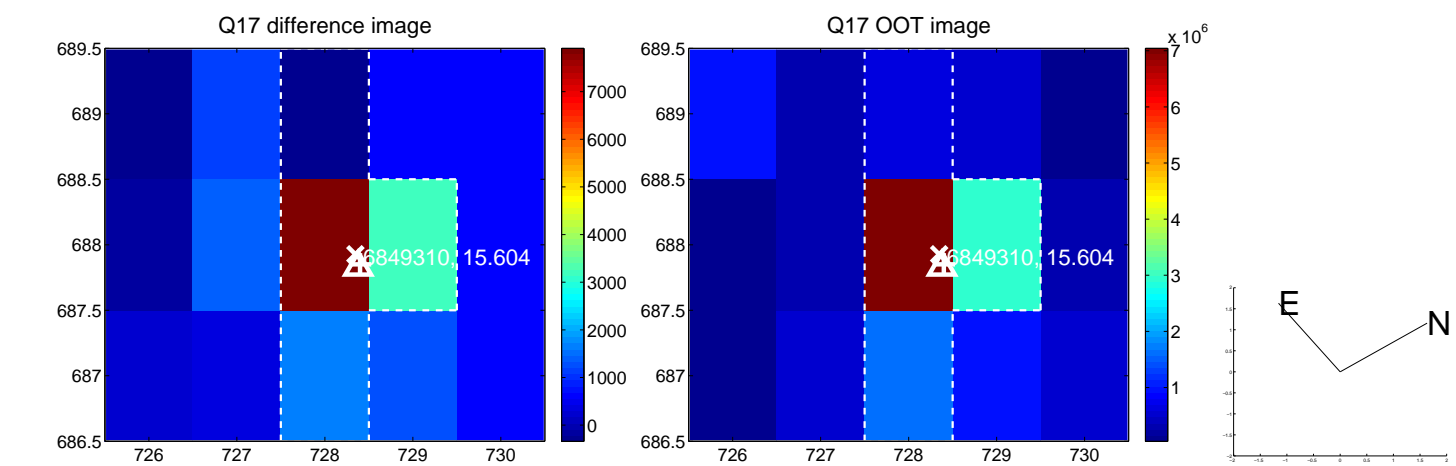
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



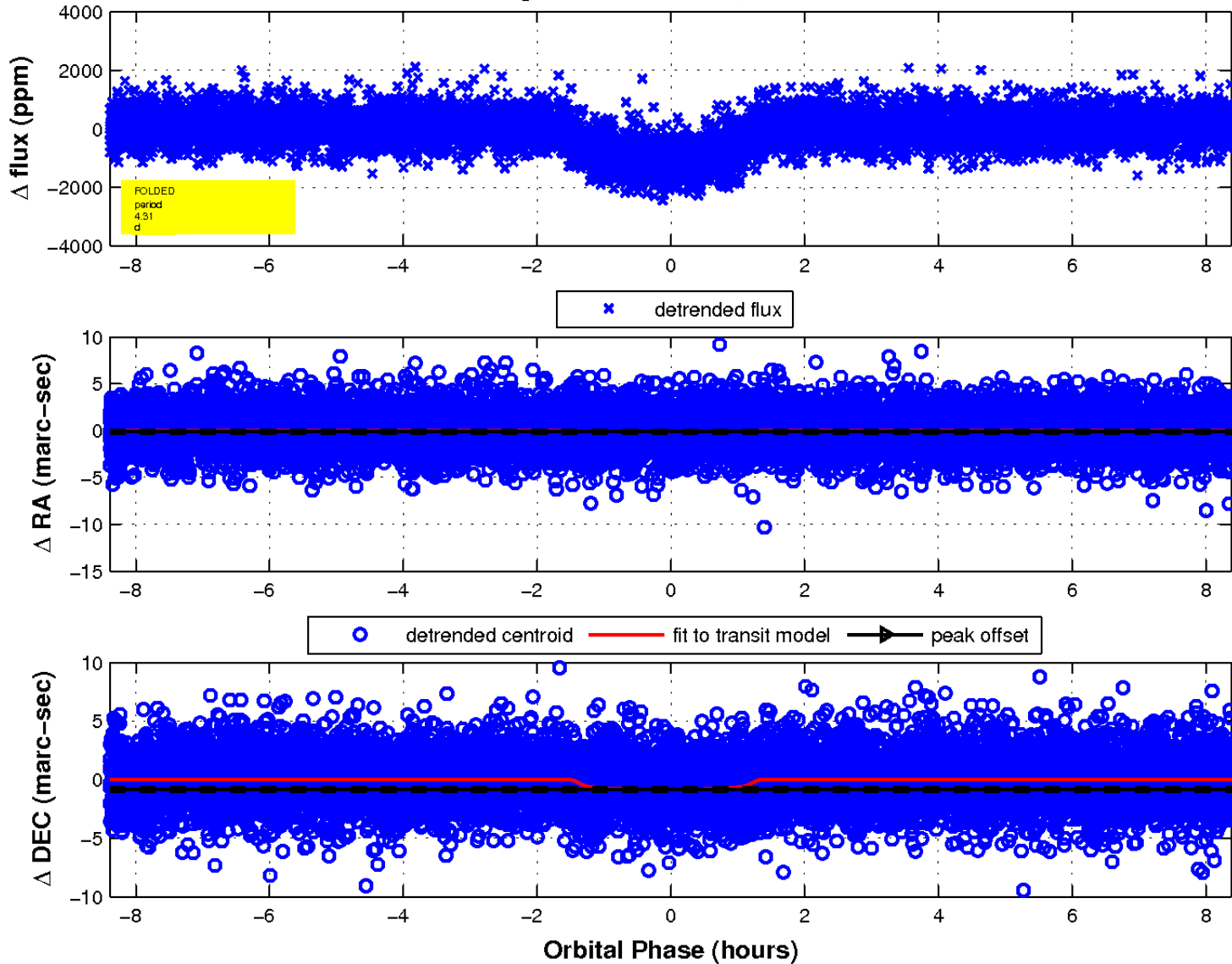
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

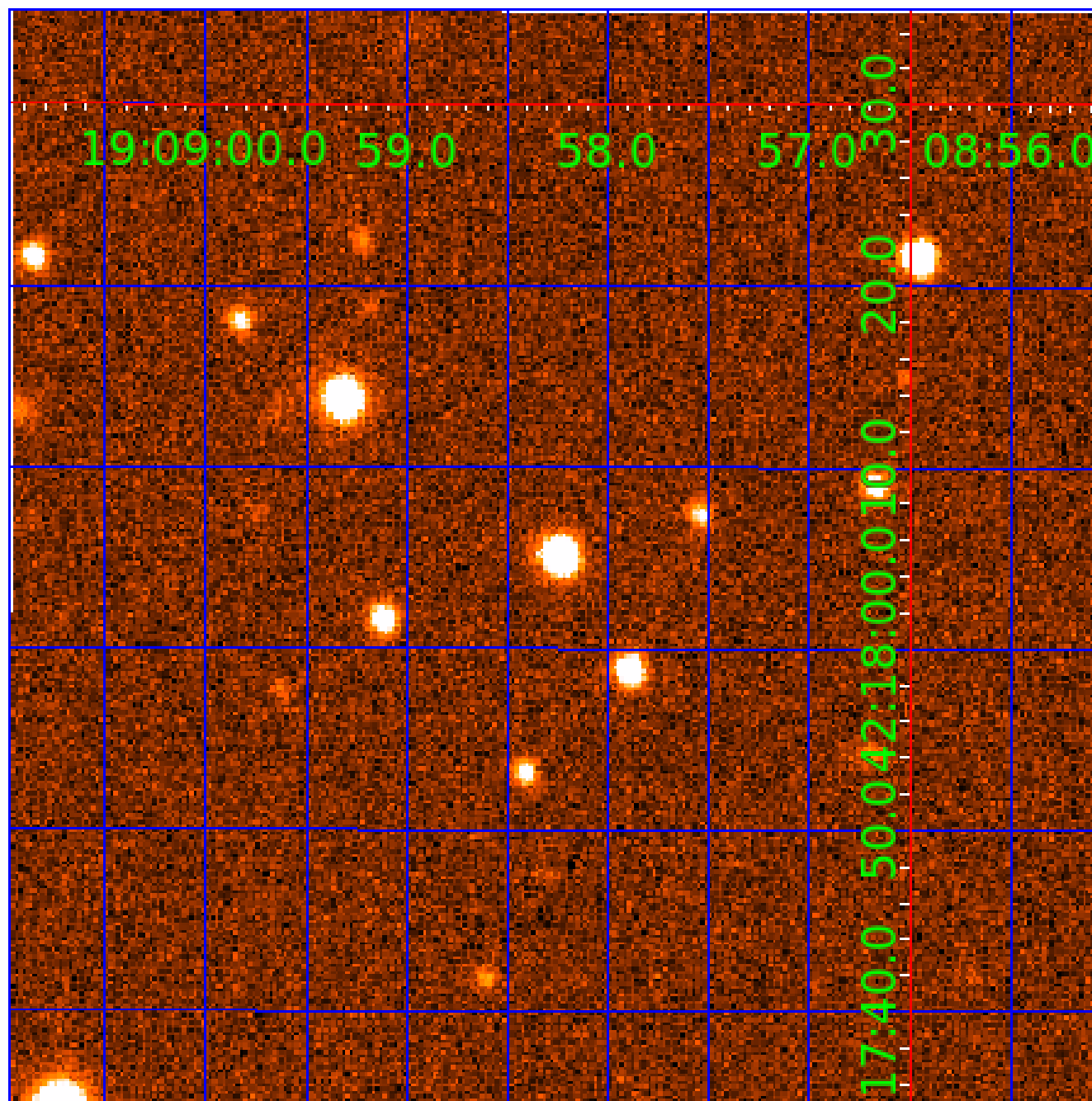


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 006849310

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})
006849310-01	OBS	0864.01	4.311772	134.772153	1136.7	2.796	68.7	77.7	0.93	5527	3.32	275.44
006849310-02	OBS	0864.02	20.050492	147.985385	809.9	4.796	29.4	31.2	0.93	5527	3.09	35.49
006849310-03	OBS	0864.03	9.767366	137.740457	654.2	1.986	17.3	20.9	0.93	5527	3.33	92.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006849310-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006849310-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006849310-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

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

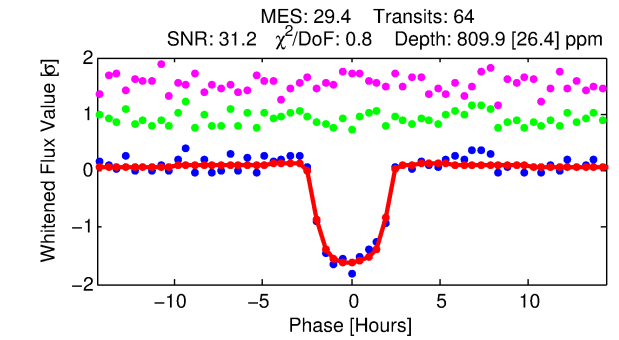
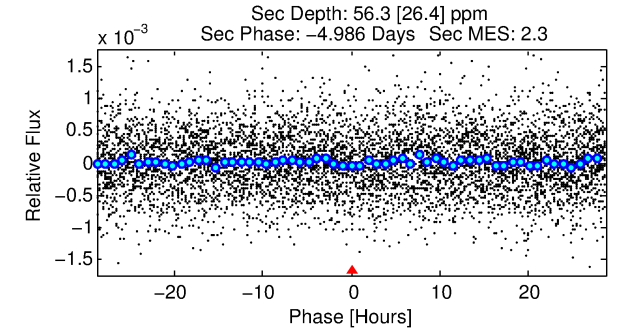
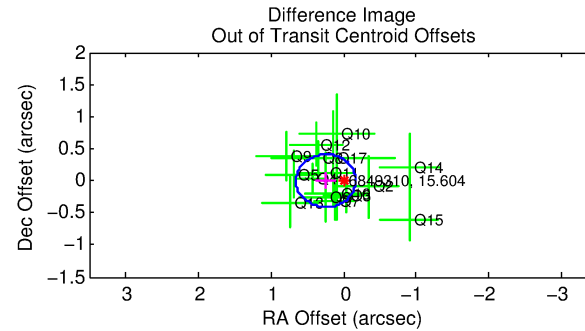
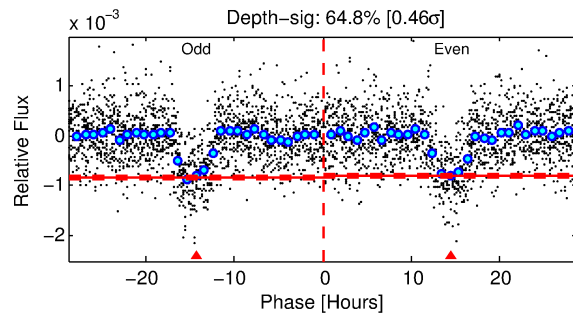
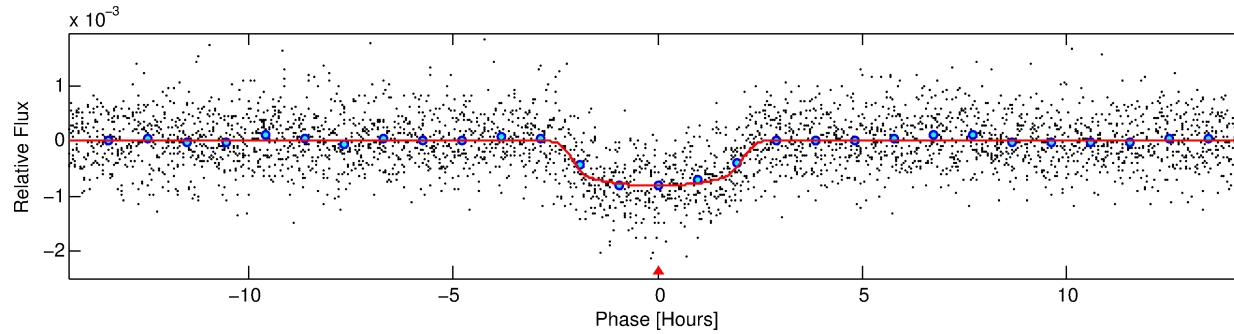
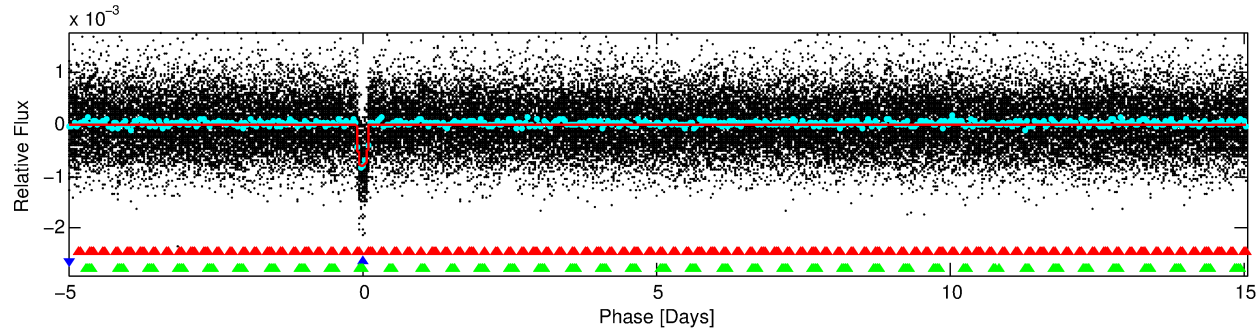
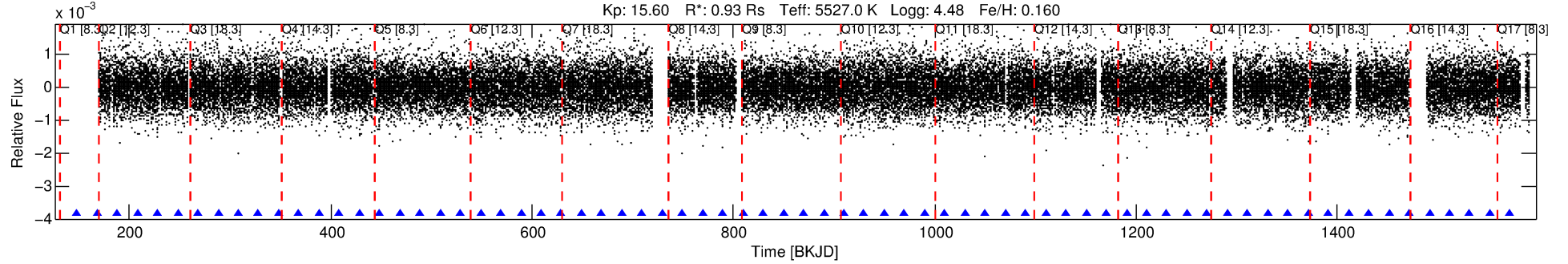
Ephemeris Match Information For 006849310-02

No Significant Match Found

DV One-Page Summary

KIC: 6849310 Candidate: 2 of 3 Period: 20.050 d
KOI: K00864.02 Name: Kepler-244d Corr: 0.991

Kp: 15.60 R*: 0.93 Rs Teff: 5527.0 K Logg: 4.48 Fe/H: 0.160



DV Fit Results:

Period = 20.05049 [0.00008] d
Epoch = 147.9854 [0.0033] BKJD
Rp/R* = 0.0306 [0.0022]
a/R* = 17.44 [5.03]
b = 0.87 [0.08]
Seff = 35.49 [7.10]
Teq = 622 [31] K
Rp = 3.09 [0.44] Re
a = 0.1423 [0.0170] AU
Ag = 65.60 [34.50] [1.87σ]
Teffp = 2739 [338] K [6.23σ]

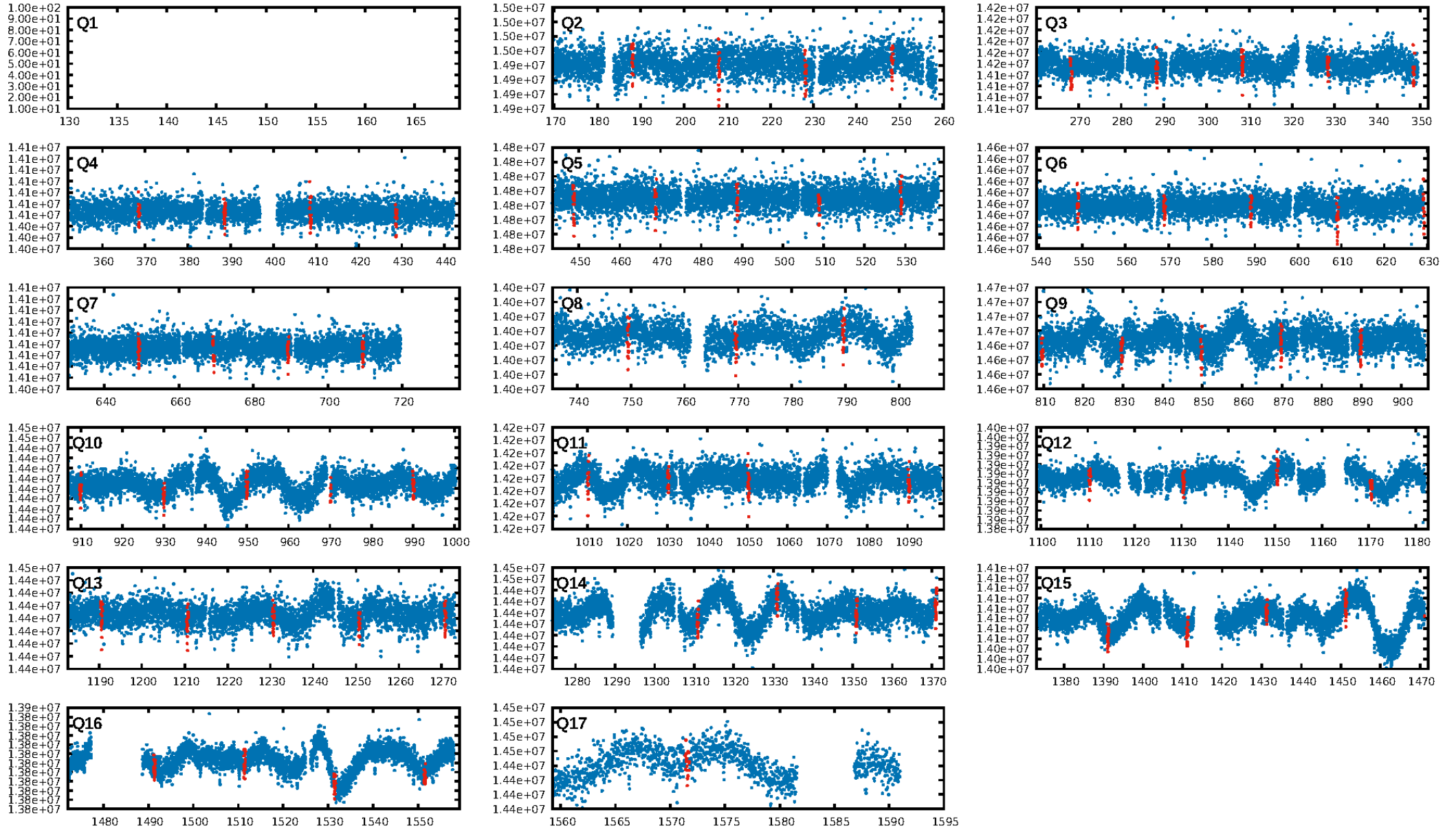
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [47.54σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.25e-188
RollingBand-fgt: 1.00 [63/63]
GhostDiagnostic-chr: 3.699
Centroid-sig: 0.0%
Centroid-so: 0.475 arcsec [1.32σ]
OotOffset-rm: 0.247 arcsec [1.81σ]
KicOffset-rm: 0.024 arcsec [0.20σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
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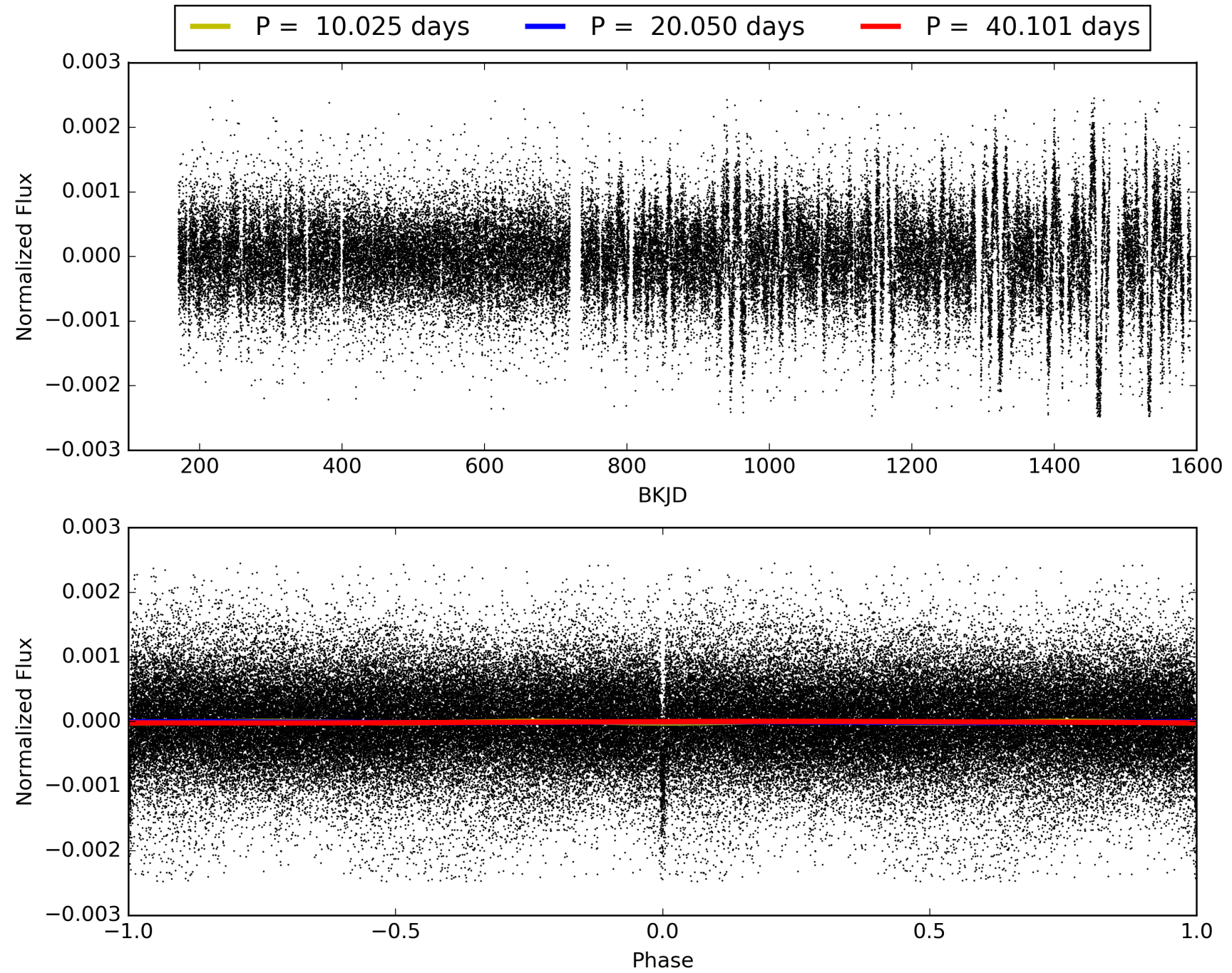
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006849310-02, PDC Light Curves

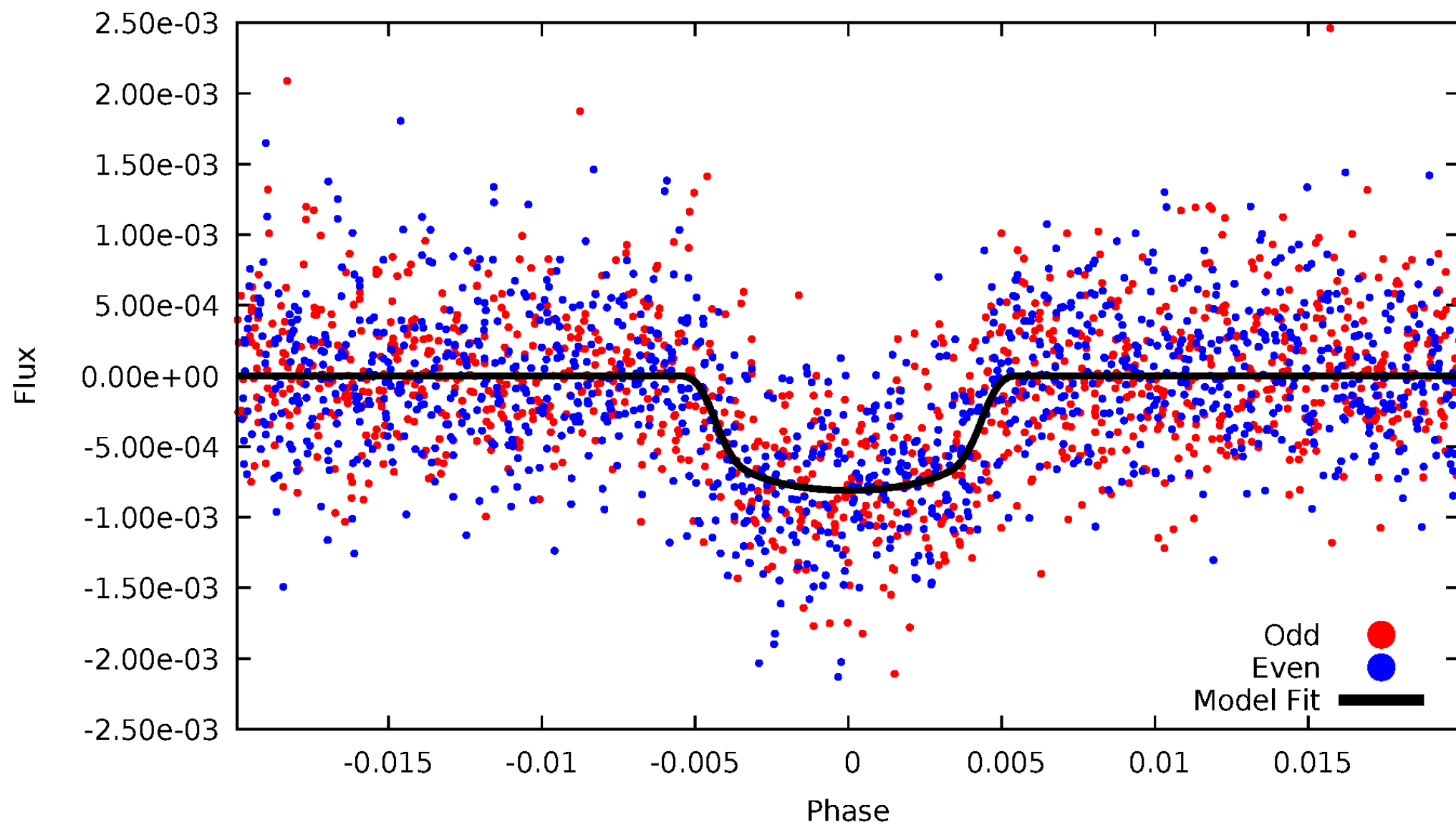


TCE 006849310-02



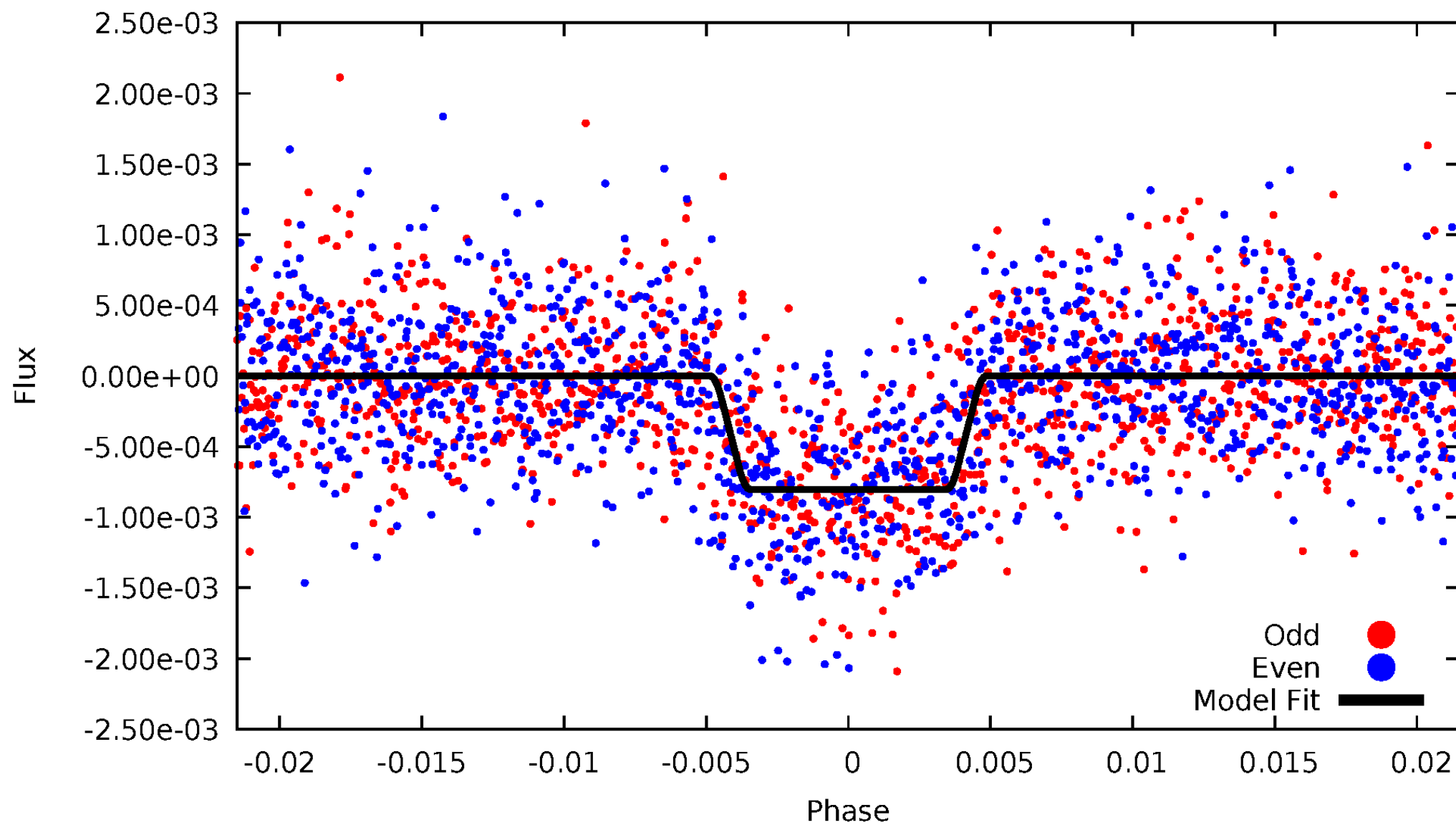
DV Odd/Even

TCE 006849310-02



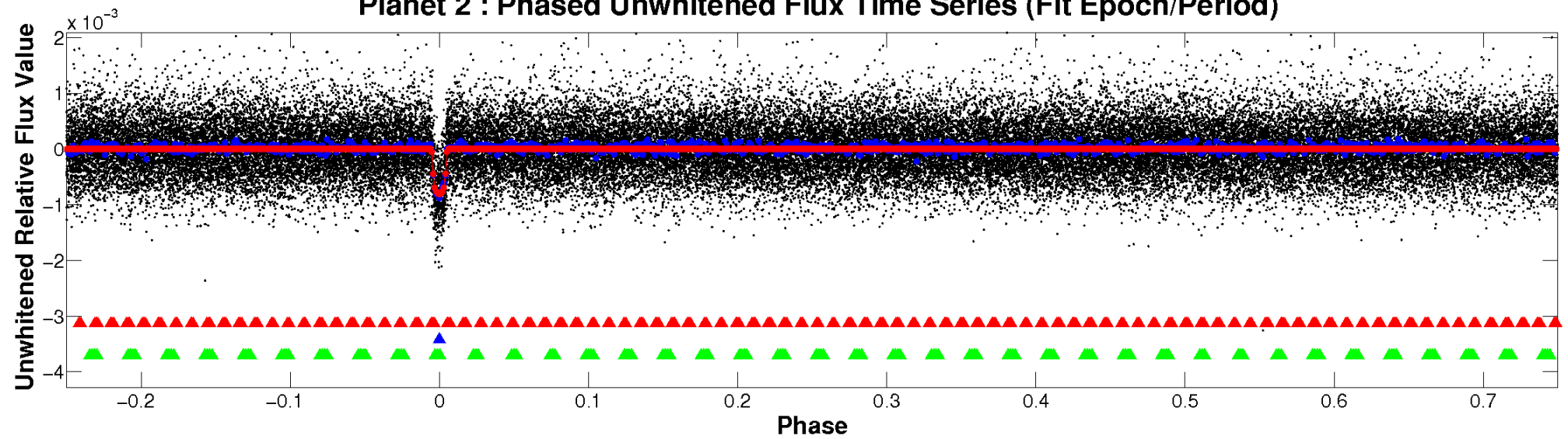
ALT Odd/Even

TCE 006849310-02

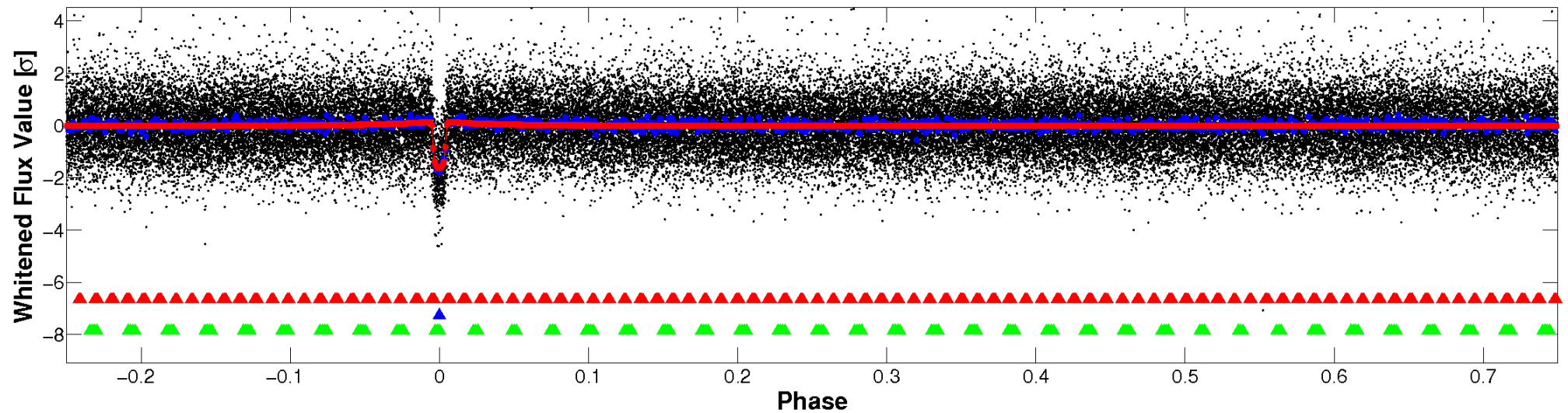


Non-Whitened Vs. Whitened Light Curve

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

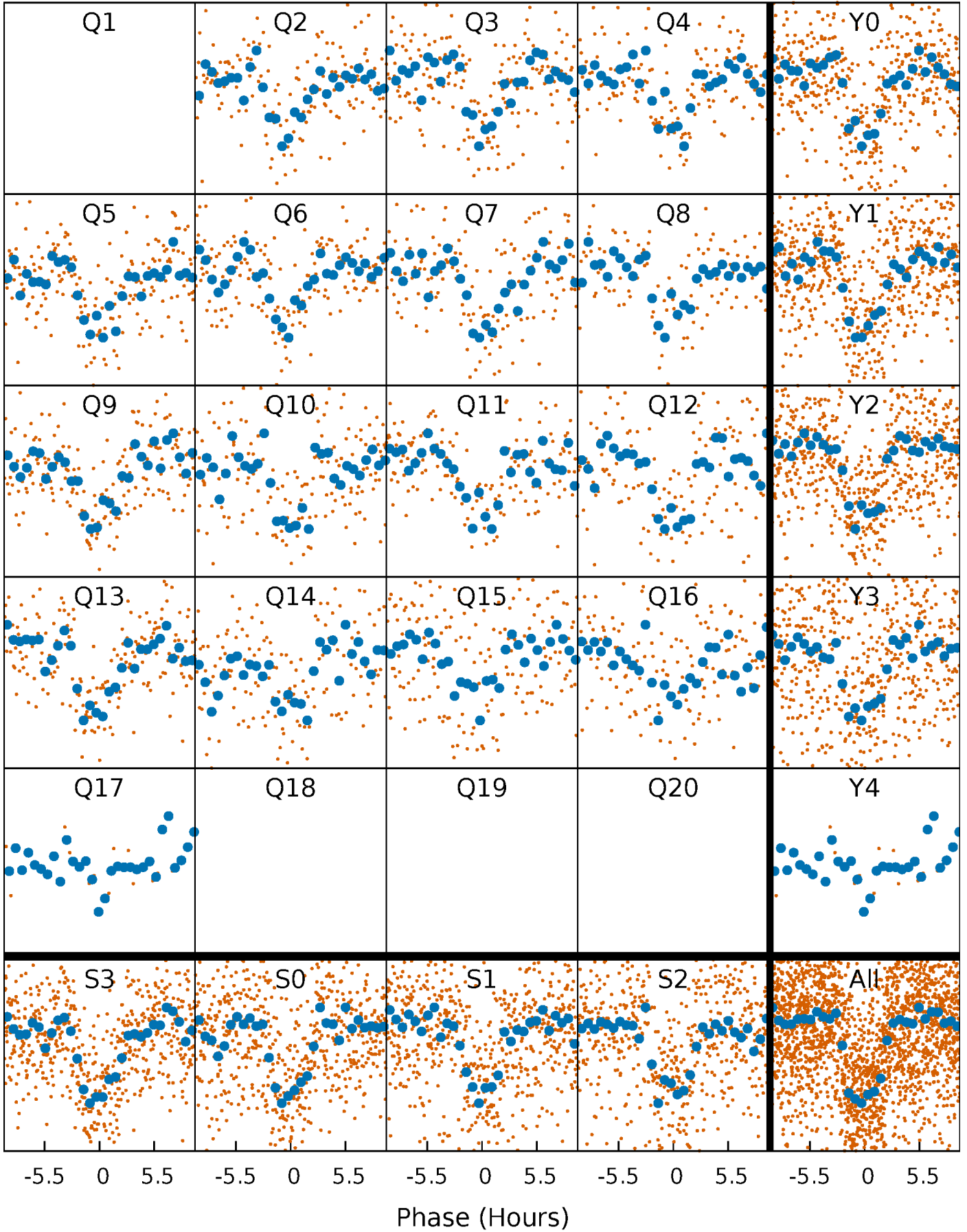


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



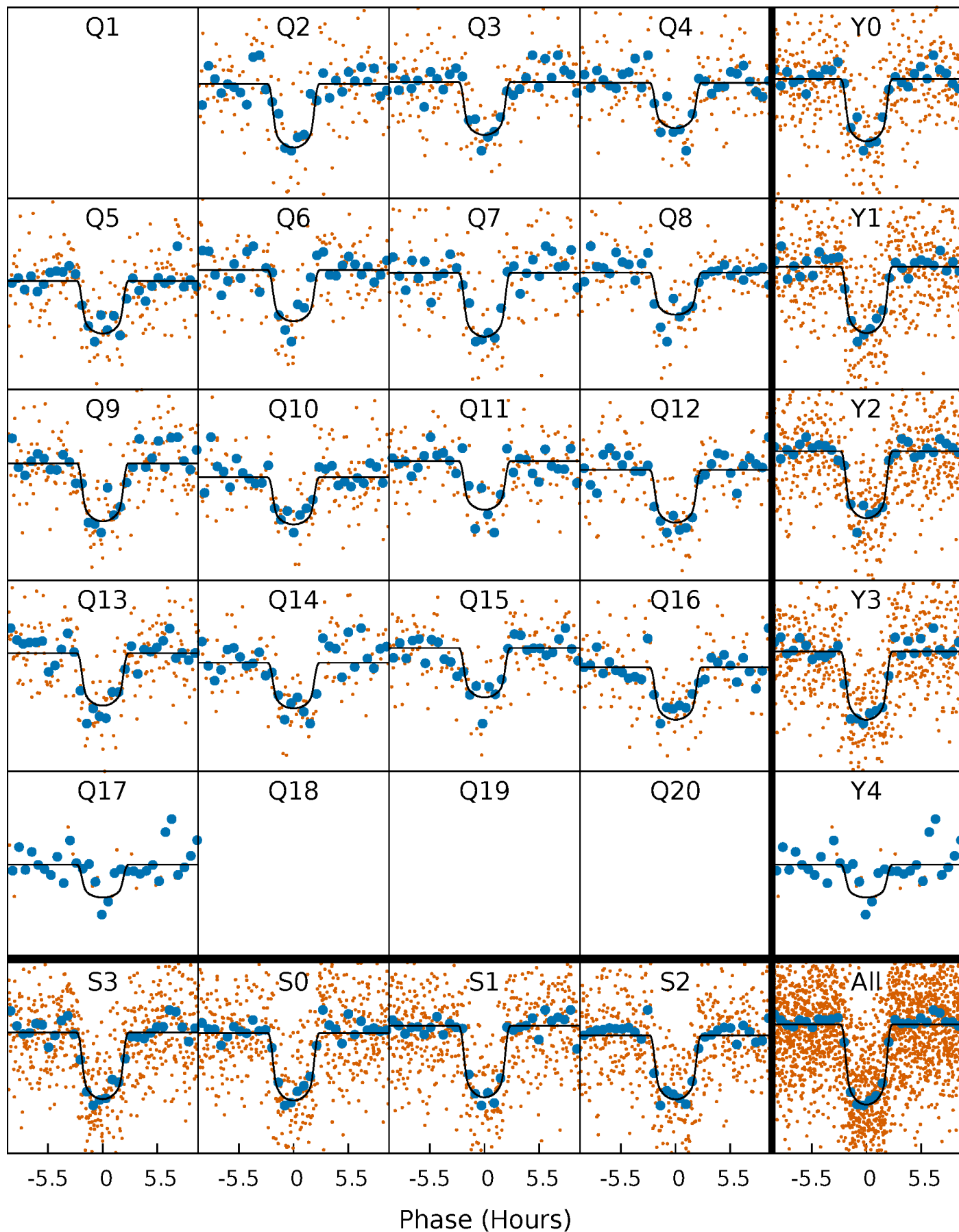
PDC Quarter-Phased Transit Curves

TCE 006849310-02 P= 20.050492 Days $T_0=147.985385$ (BKJD)



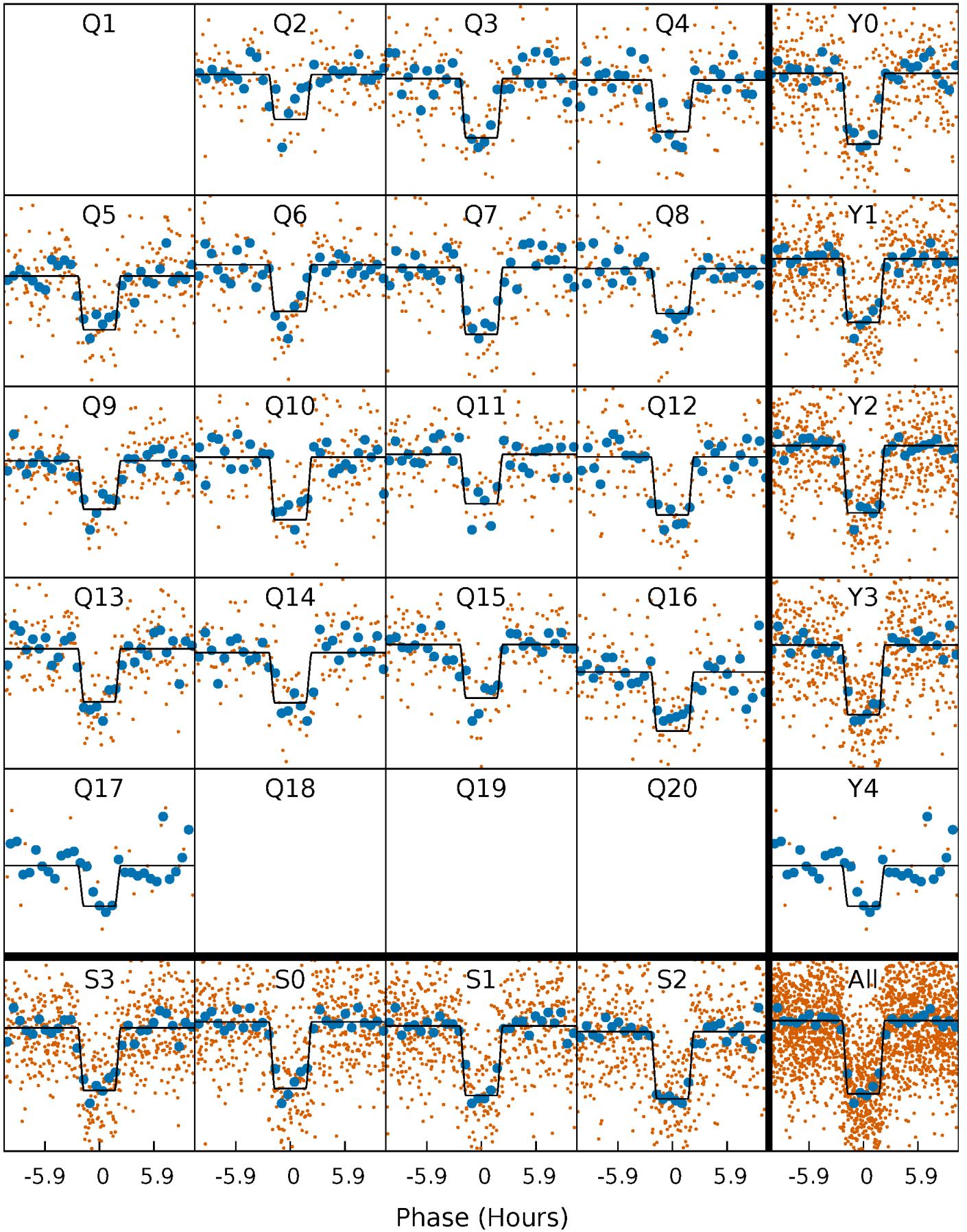
DV Quarter-Phased Transit Curves

TCE 006849310-02 P= 20.050492 Days $T_0=147.985385$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

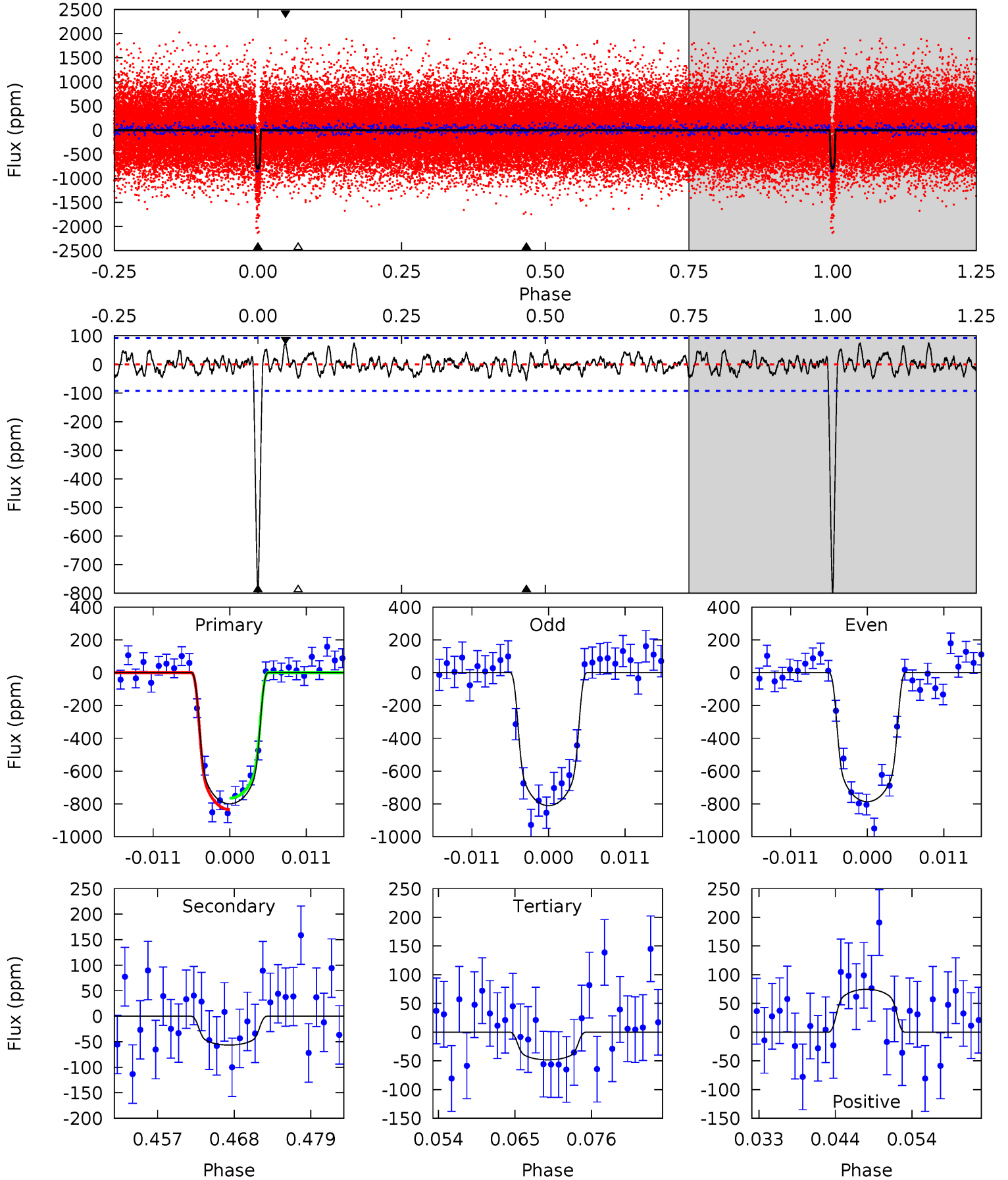
TCE 006849310-02 P= 20.050059 Days $T_0=148.000763$ (BKJD)



DV Model-Shift Uniqueness Test

006849310-02, P = 20.050492 Days, E = 147.985385 Days

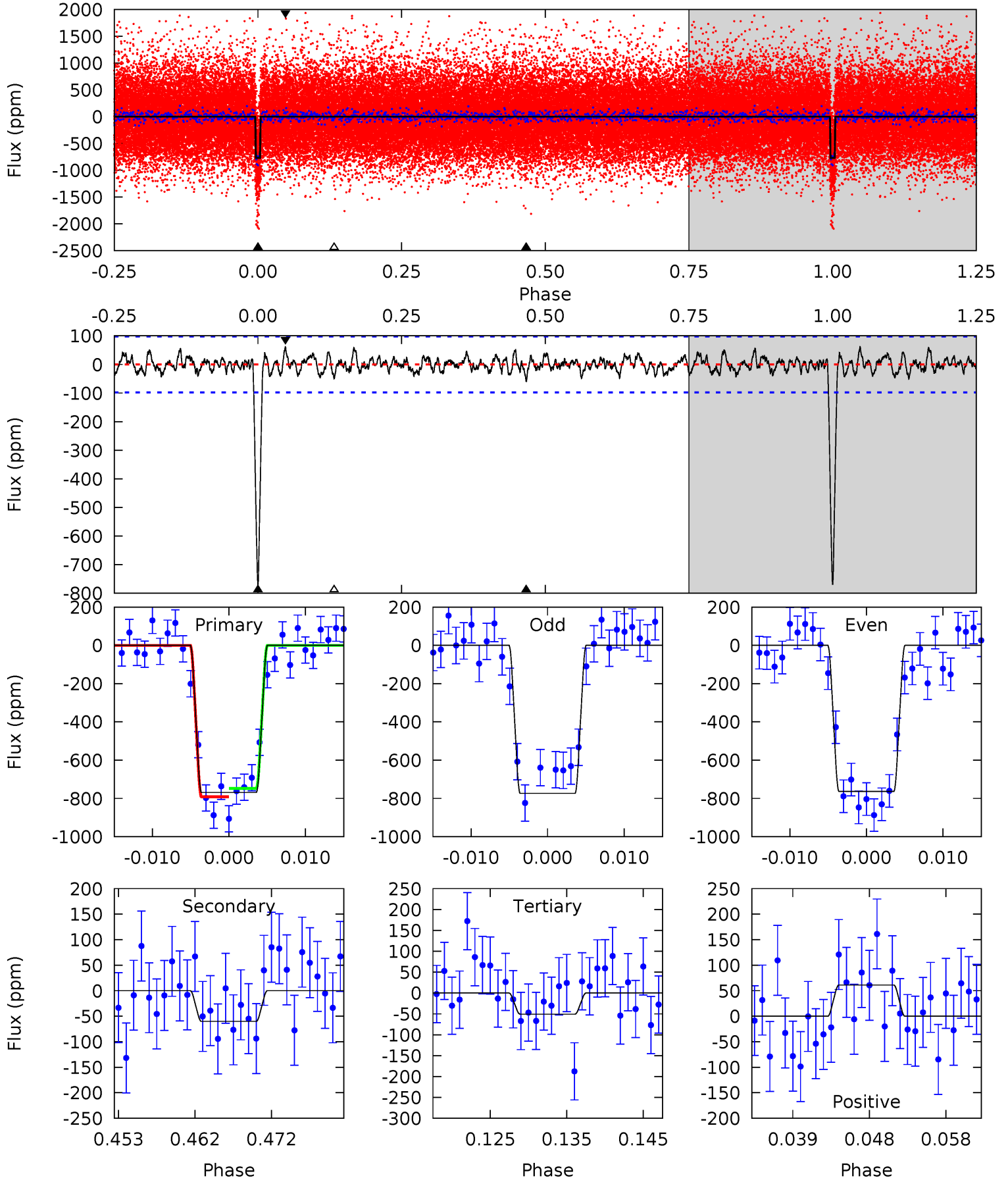
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	3.06	2.61	4.04	5.01	2.55	1.19	40.6	39.2	0.45	-0.98	0.65	1.03	0.09	1.88



Alt Model-Shift Uniqueness Test

006849310-02, $P = 20.050059$ Days, $E = 148.000763$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.6	3.09	2.61	3.15	5.03	2.59	1.02	36.9	36.4	0.48	-0.06	0.26	1.03	0.07	1.12



Stellar Parameters For KIC 006849310

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5527^{+74}_{-83}	$4.484^{+0.040}_{-0.112}$	$0.160^{+0.150}_{-0.150}$	$0.927^{+0.115}_{-0.062}$	$0.956^{+0.044}_{-0.059}$	$1.690^{+0.289}_{-0.520}$
	+1%/-2%	+1%/-2%	+94%/-94%	+12%/-7%	+5%/-6%	+17%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006849310-02 / KOI 0864.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-57 ± 18	$3.14^{+0.29}_{-0.26}$	875^{+30}_{-21}	3278^{+161}_{-206}	62^{+23}_{-22}
Alt.	-60 ± 19	$2.92^{+0.33}_{-0.27}$	877^{+35}_{-22}	3392^{+177}_{-201}	76^{+31}_{-25}

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 $A_{obs} \gg 1.0$

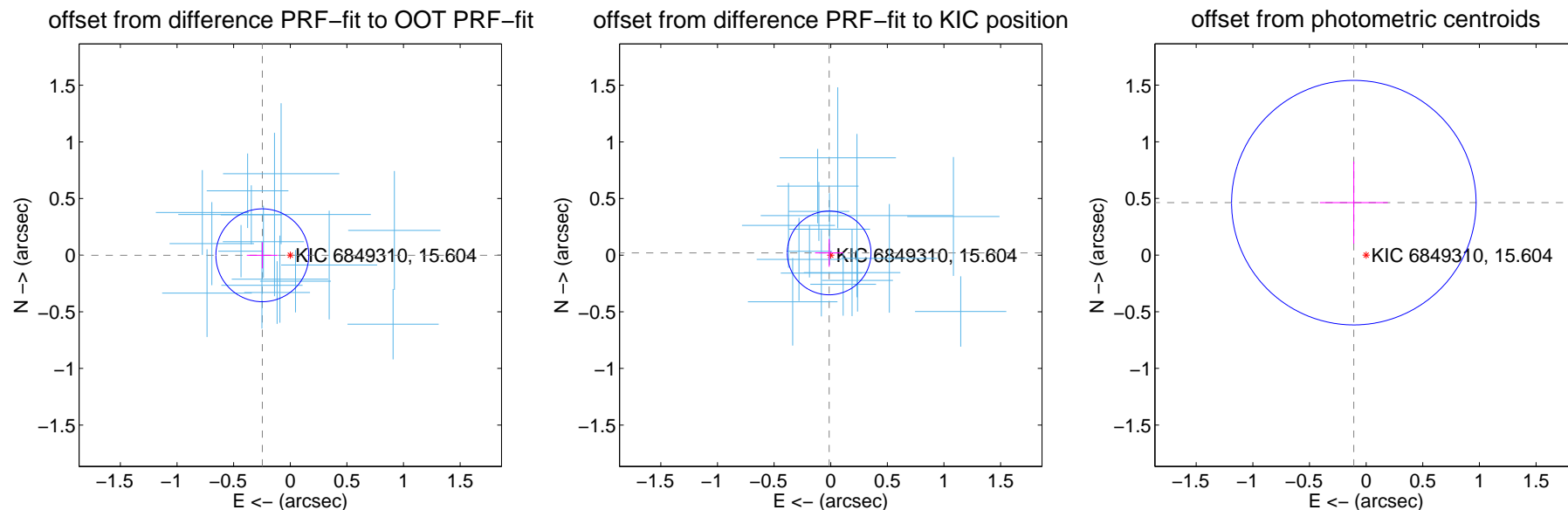
DV Centroid Data

Supplemental centroid analysis for 006849310-02. Kepler magnitude: 15.60. Transit SNR 31.16

There are 16 quarters with good PRF difference image offsets

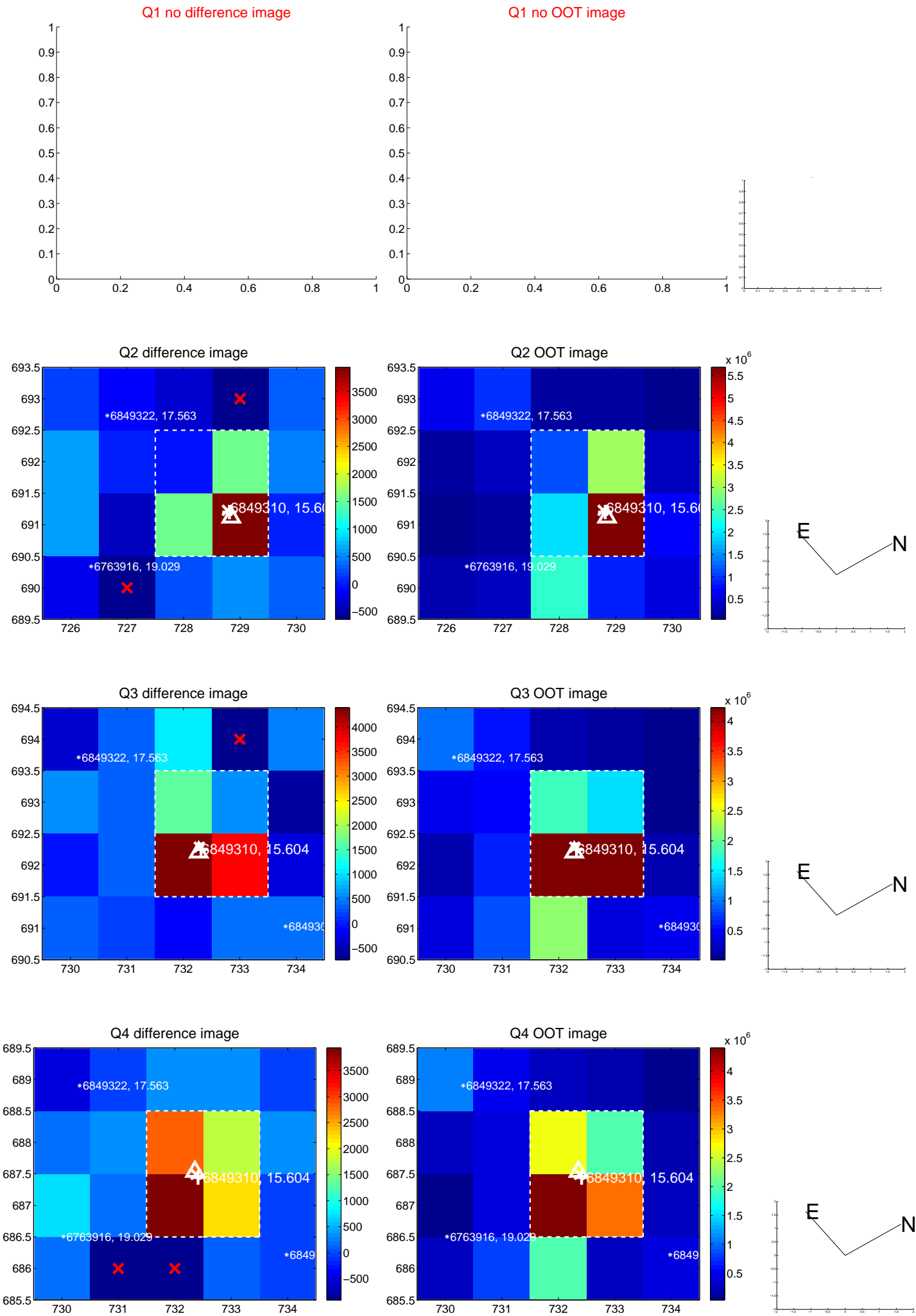
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.247 ± 0.137	1.81	0.247 ± 0.137	-0.001 ± 0.116
PRF-fit source offset from KIC position	0.024 ± 0.123	0.20	0.014 ± 0.124	0.020 ± 0.123
photometric centroid source offset	0.48 ± 0.36	1.32	0.11 ± 0.30	0.46 ± 0.36

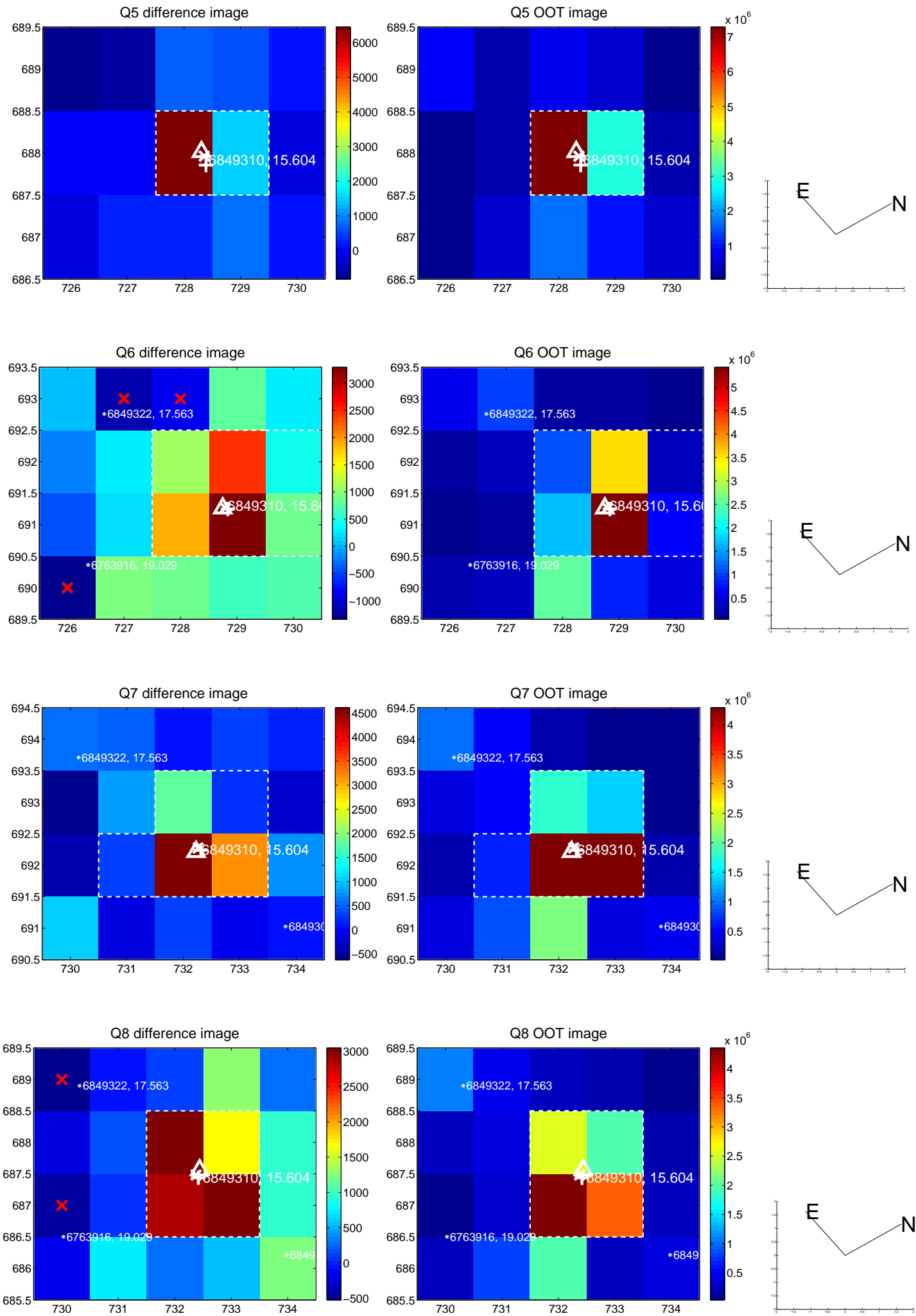


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

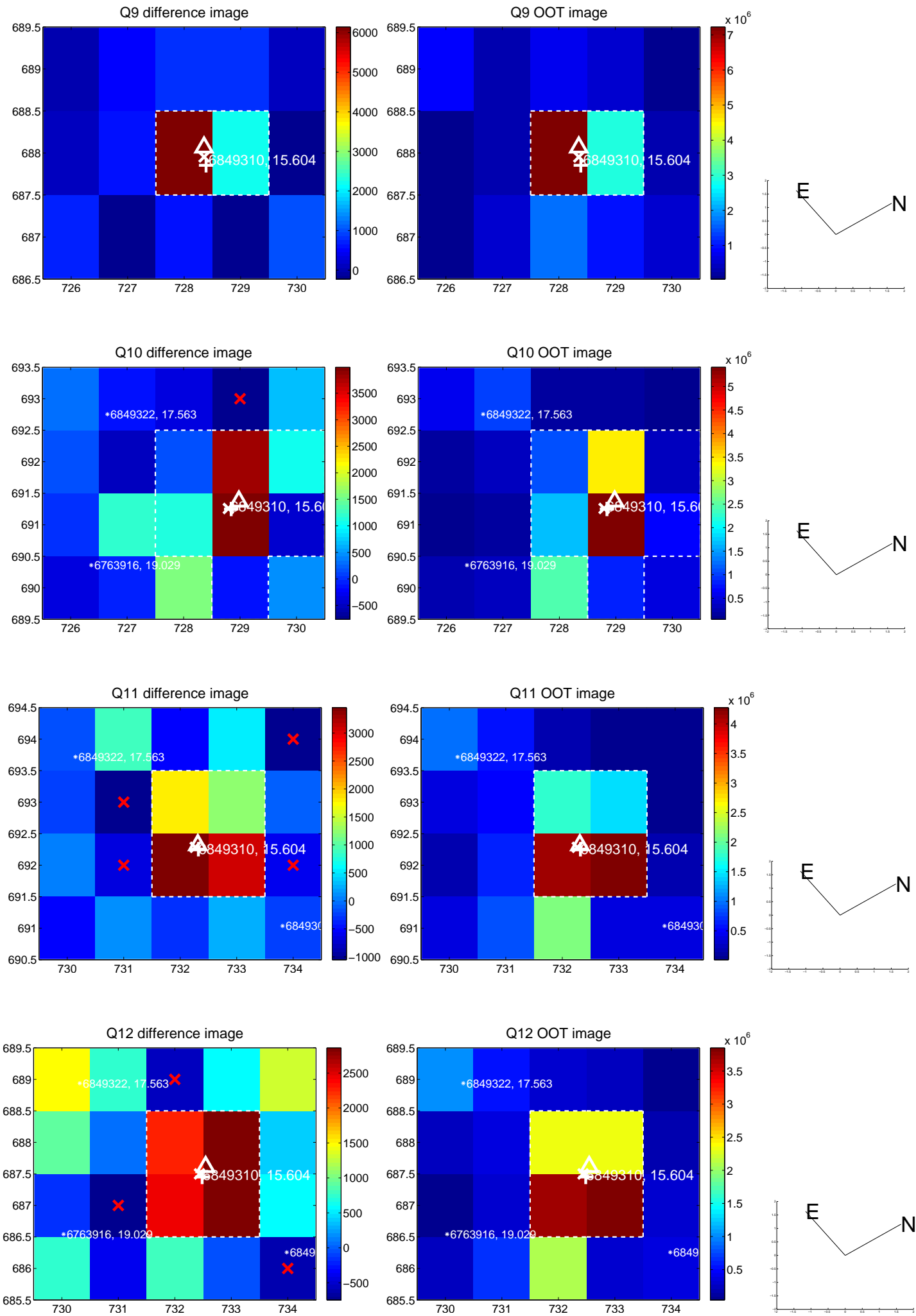
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



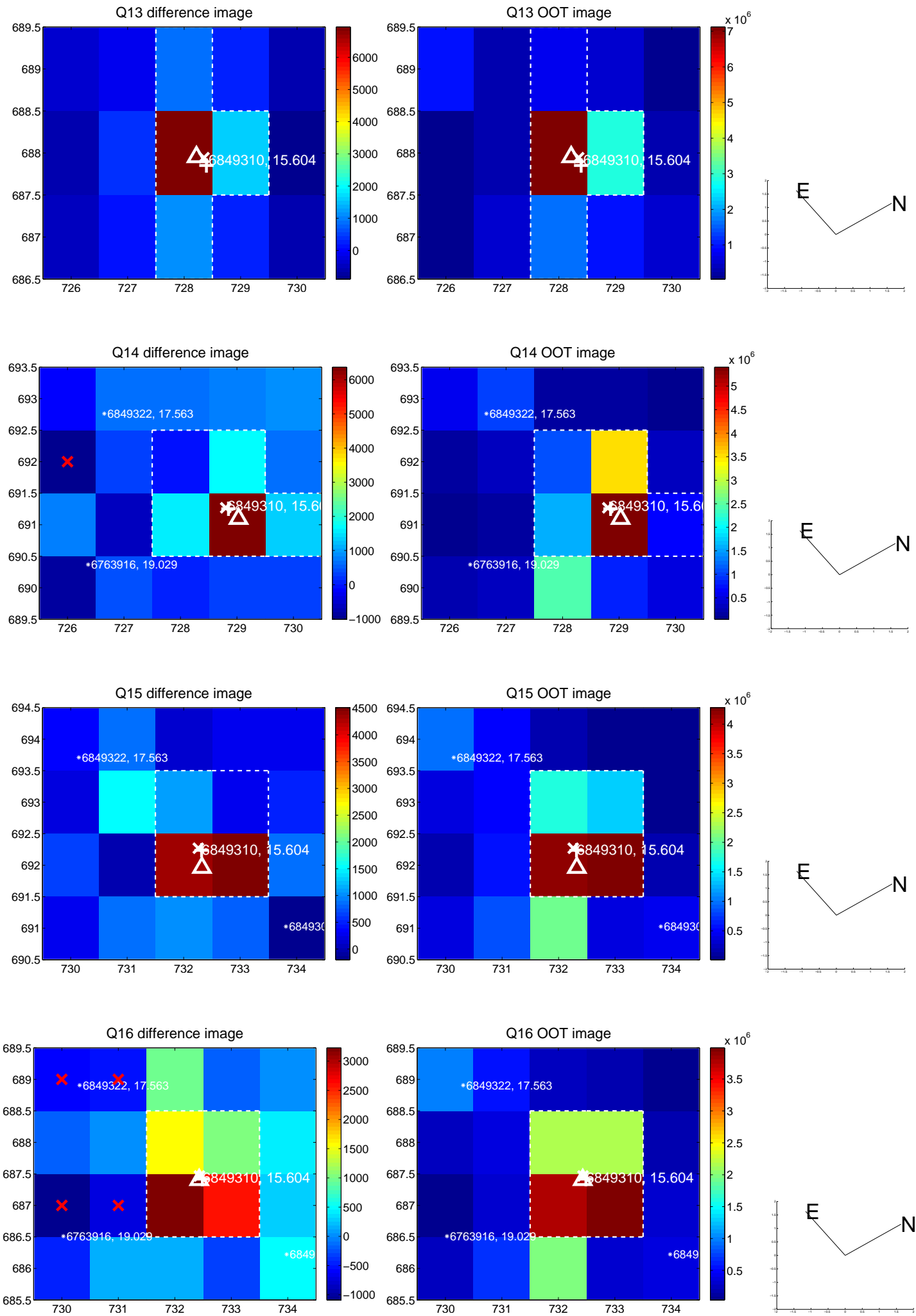
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



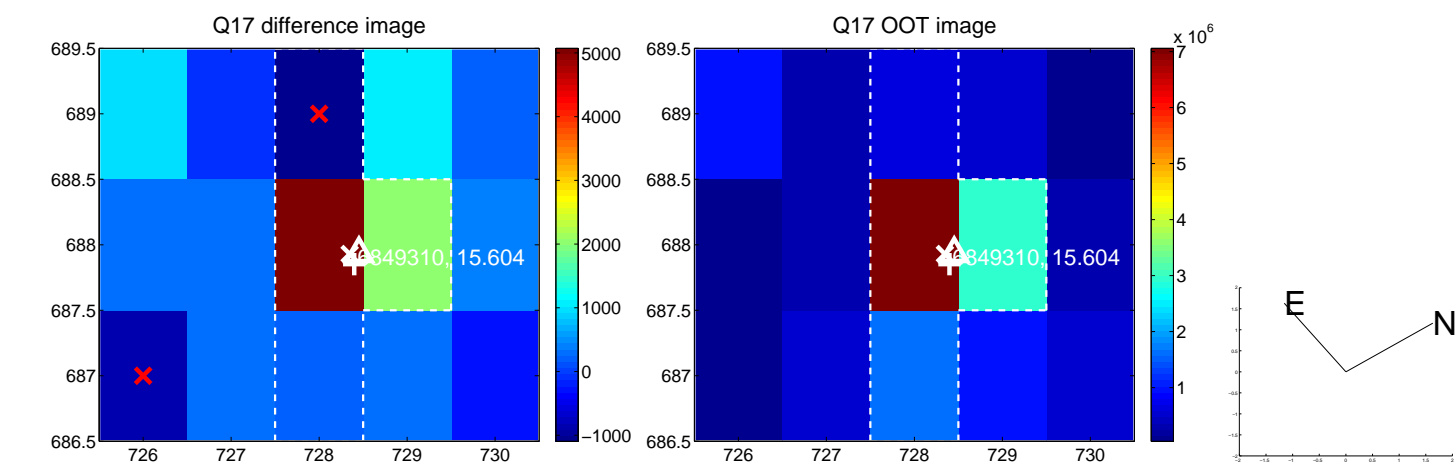
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



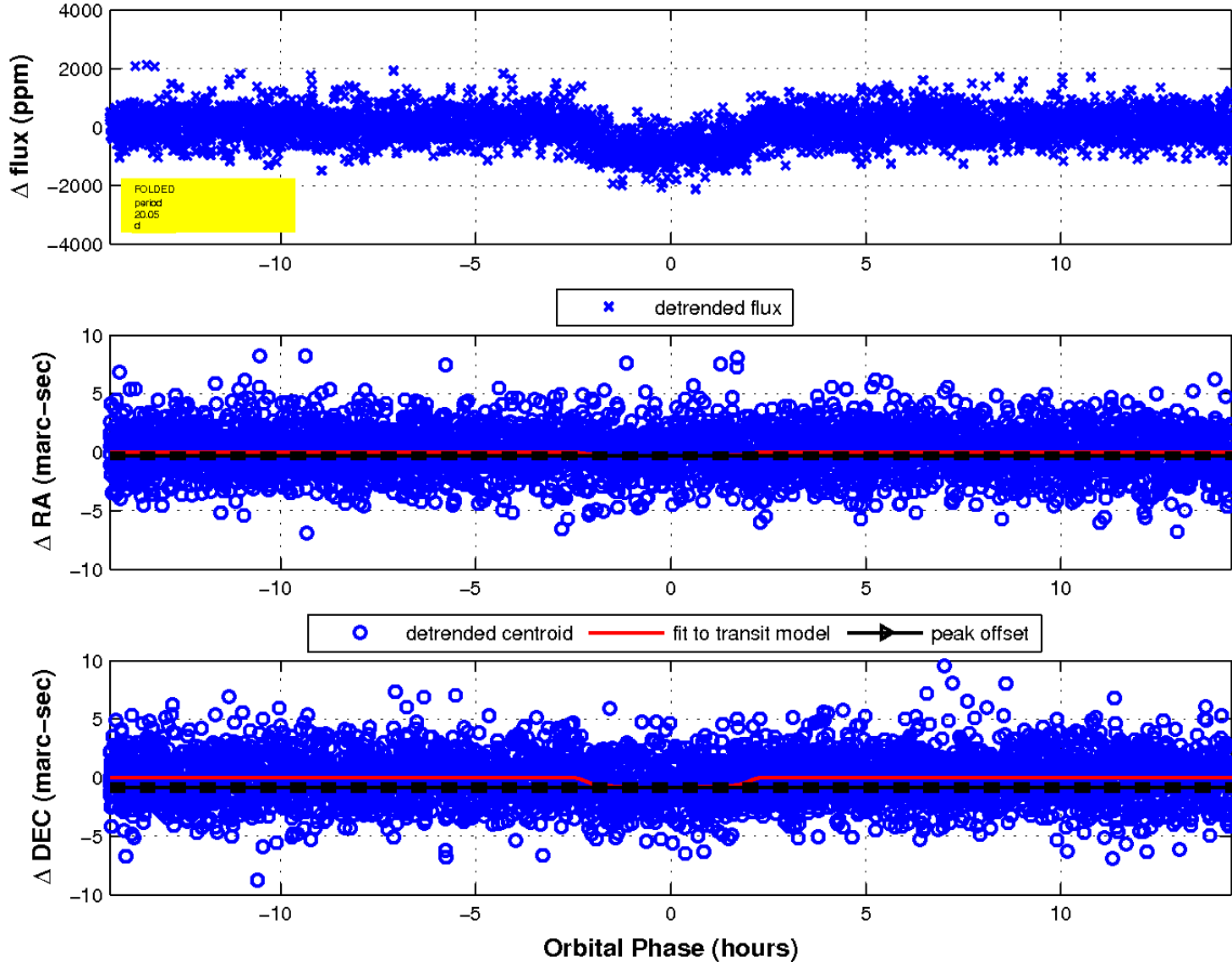
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

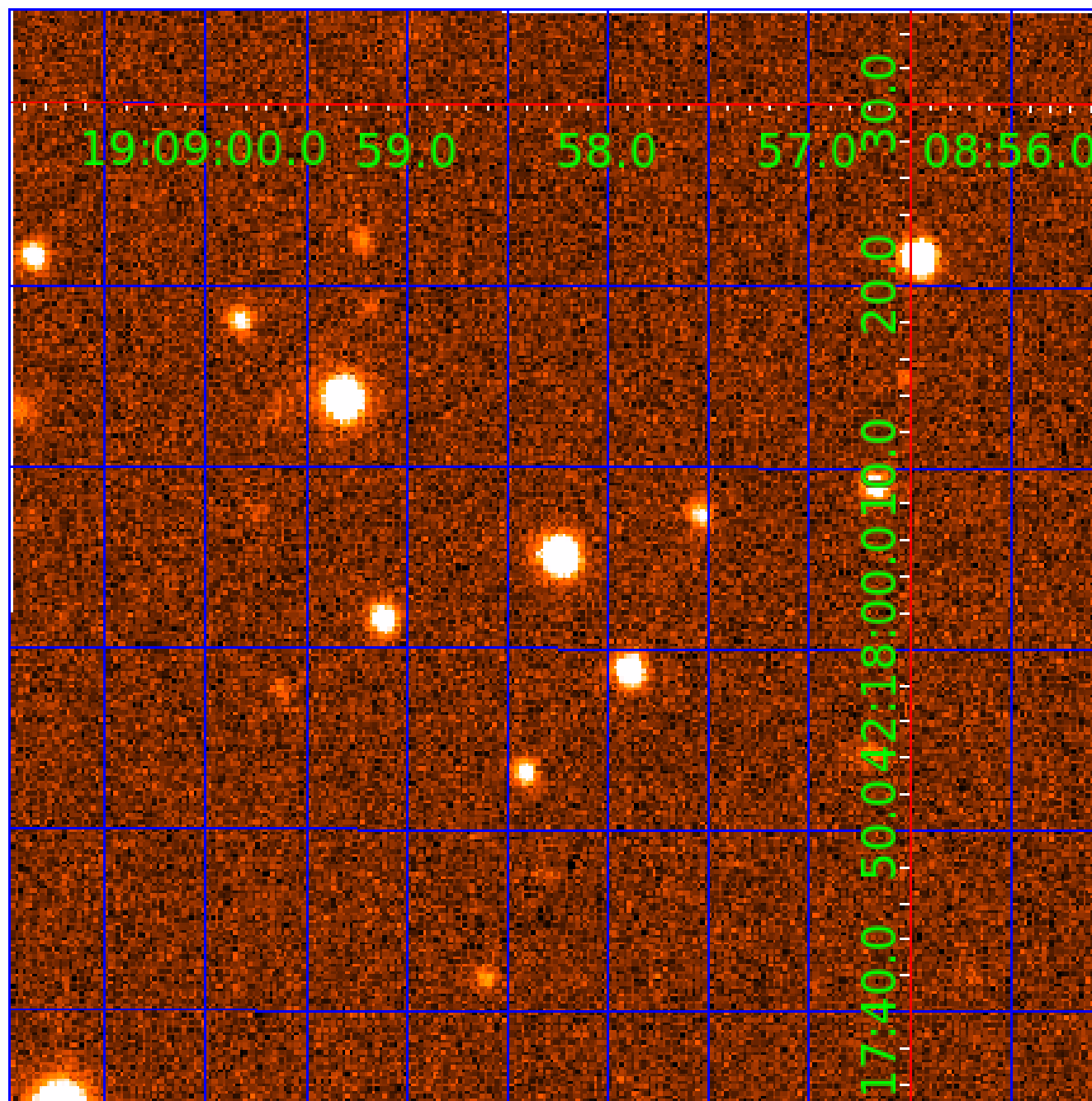


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 006849310

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})
006849310-01	OBS	0864.01	4.311772	134.772153	1136.7	2.796	68.7	77.7	0.93	5527	3.32	275.44
006849310-02	OBS	0864.02	20.050492	147.985385	809.9	4.796	29.4	31.2	0.93	5527	3.09	35.49
006849310-03	OBS	0864.03	9.767366	137.740457	654.2	1.986	17.3	20.9	0.93	5527	3.33	92.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006849310-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006849310-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006849310-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

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

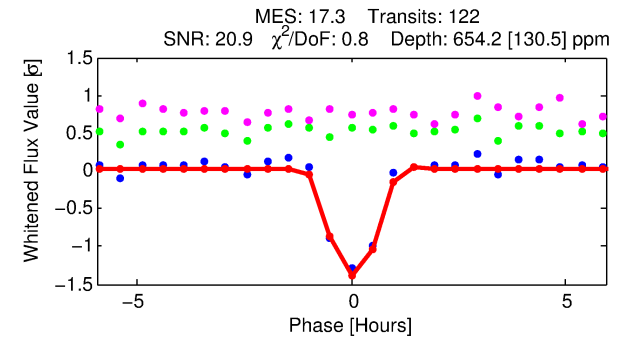
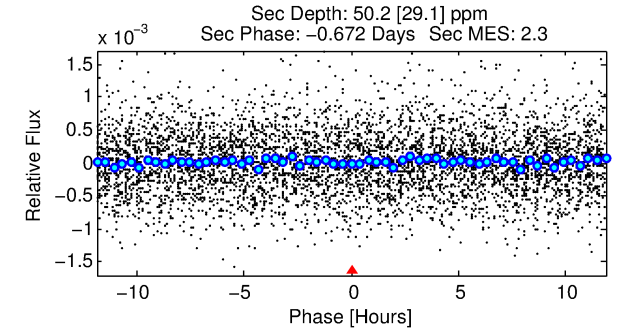
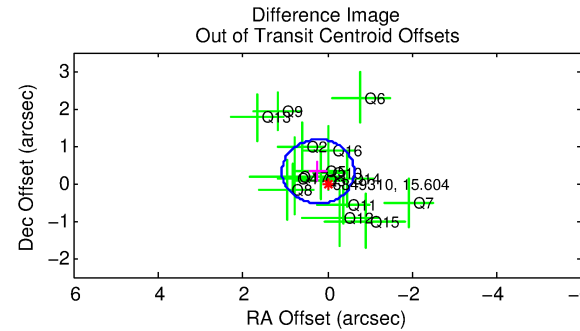
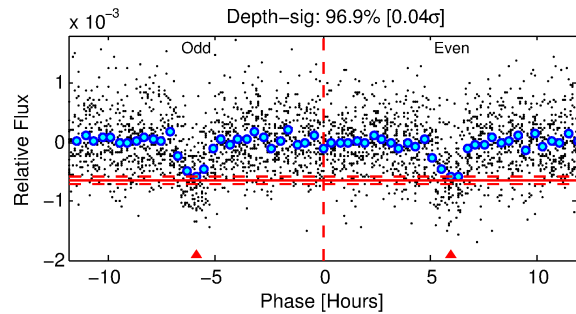
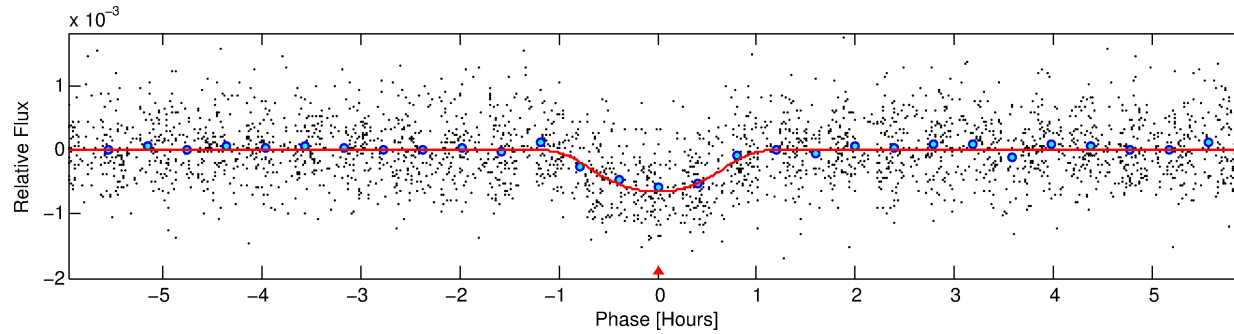
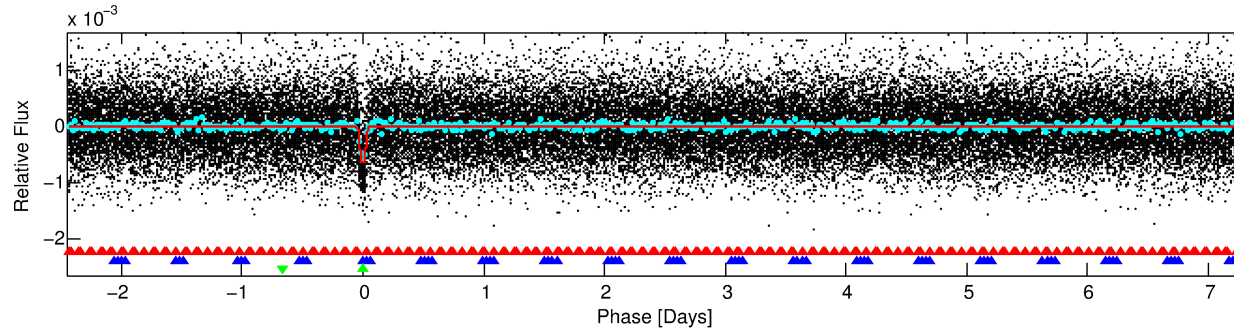
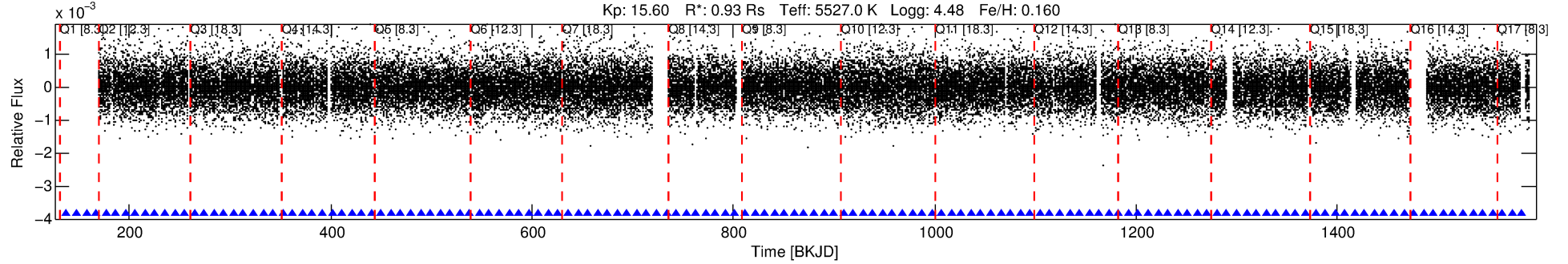
Ephemeris Match Information For 006849310-03

No Significant Match Found

DV One-Page Summary

KIC: 6849310 Candidate: 3 of 3 Period: 9.767 d
KOI: K00864.03 Name: Kepler-244c Corr: 0.857

Kp: 15.60 R*: 0.93 Rs Teff: 5527.0 K Logg: 4.48 Fe/H: 0.160



DV Fit Results:

Period = 9.76737 [0.00003] d
Epoch = 137.7405 [0.0025] BKJD
Rp/R* = 0.0329 [0.0097]
a/R* = 13.19 [3.18]
b = 0.97 [0.03]
Seff = 92.58 [18.52]
Teq = 791 [40] K
Rp = 3.33 [1.07] Re
a = 0.0881 [0.0105] AU
Ag = 19.32 [16.42] [1.12σ]
Teffp = 2564 [532] K [3.32σ]

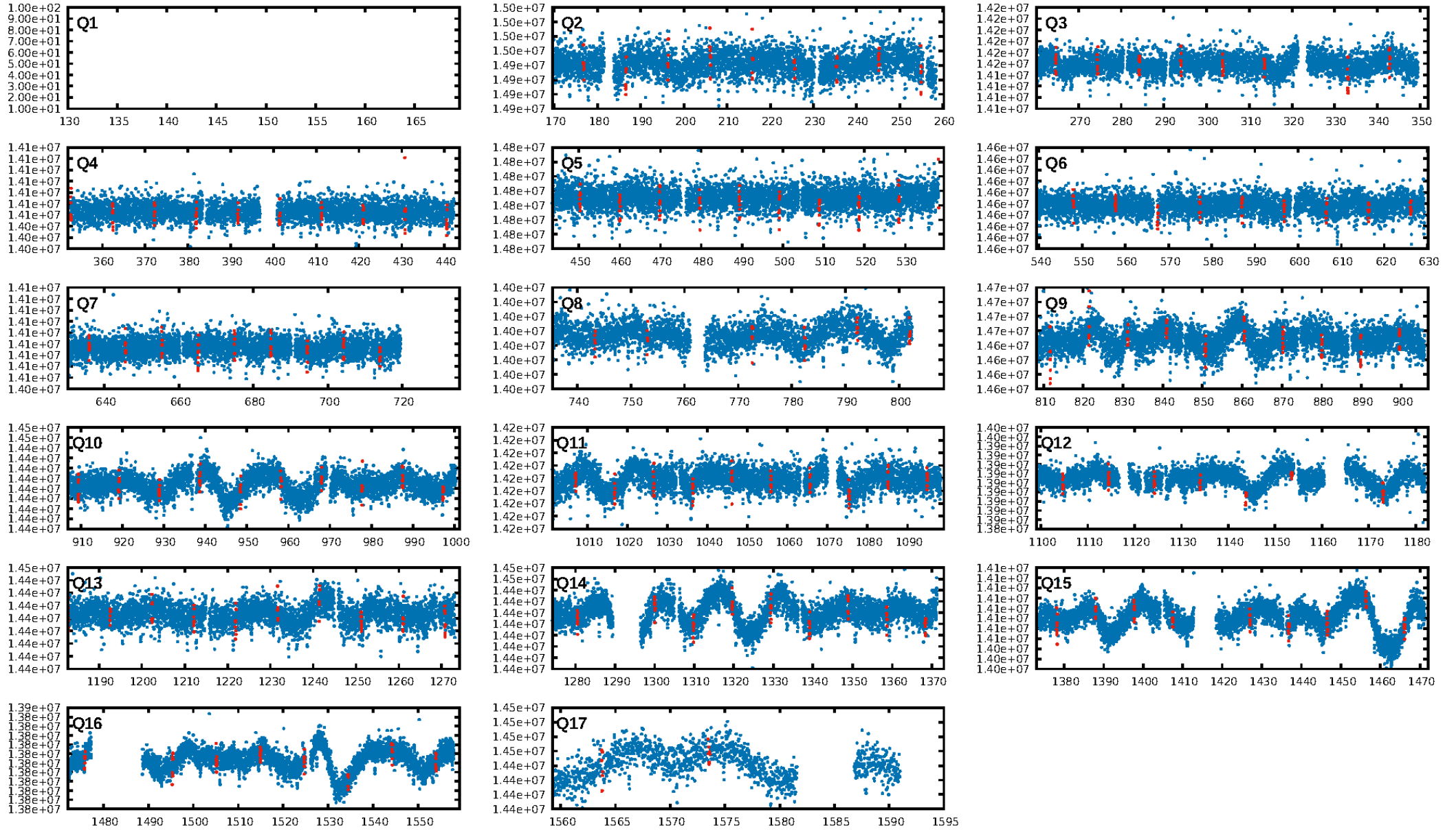
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.18σ]
LongPeriod-sig: 100.0% [47.54σ]
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.63e-65
RollingBand-fgt: 1.00 [120/120]
GhostDiagnostic-chr: 1.684
Centroid-sig: 7.3%
Centroid-so: 0.245 arcsec [0.49σ]
OotOffset-rm: 0.389 arcsec [1.37σ]
KicOffset-rm: 0.356 arcsec [1.42σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [16/16]

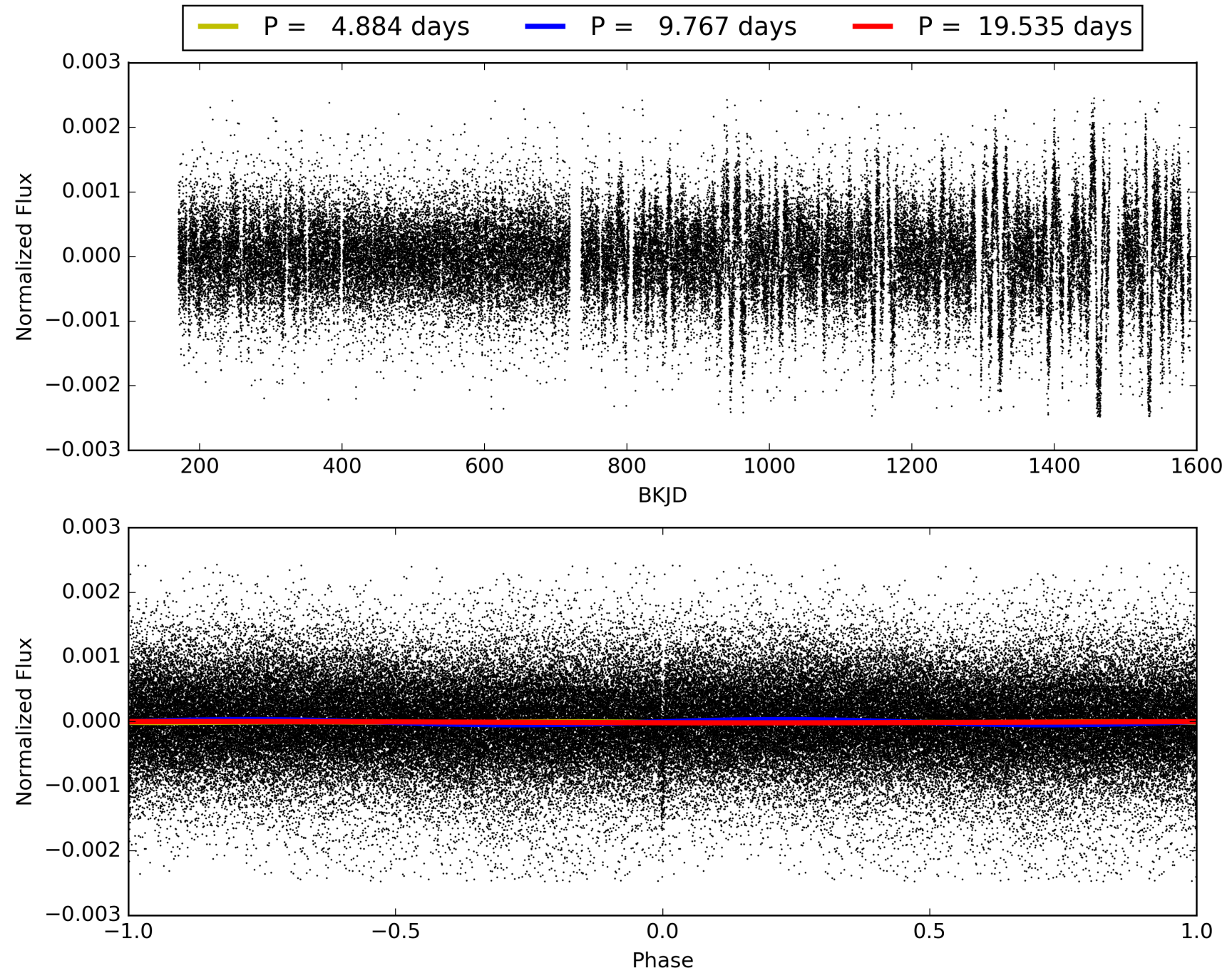
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:47:49 Z

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

TCE 006849310-03, PDC Light Curves

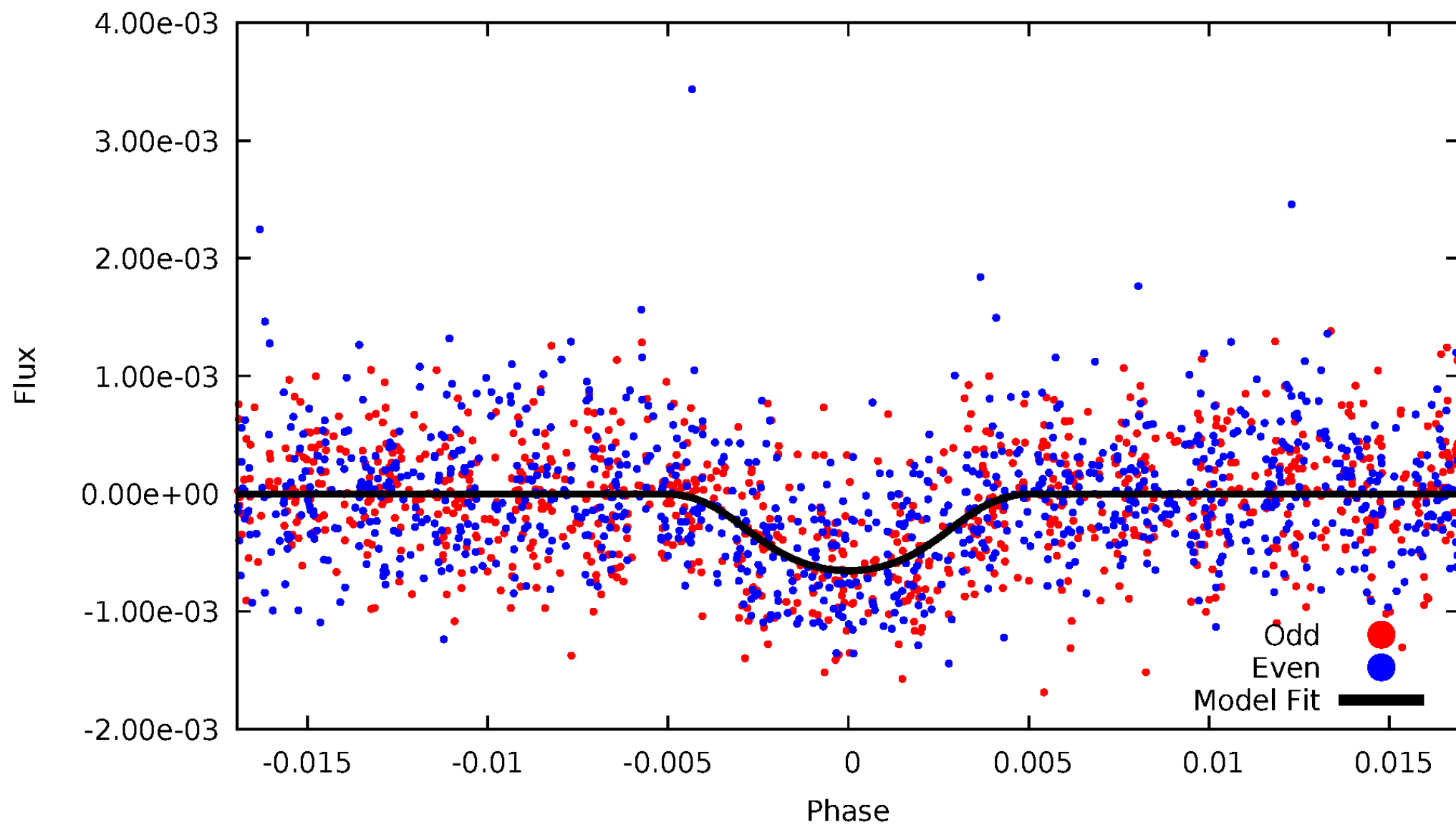


TCE 006849310-03



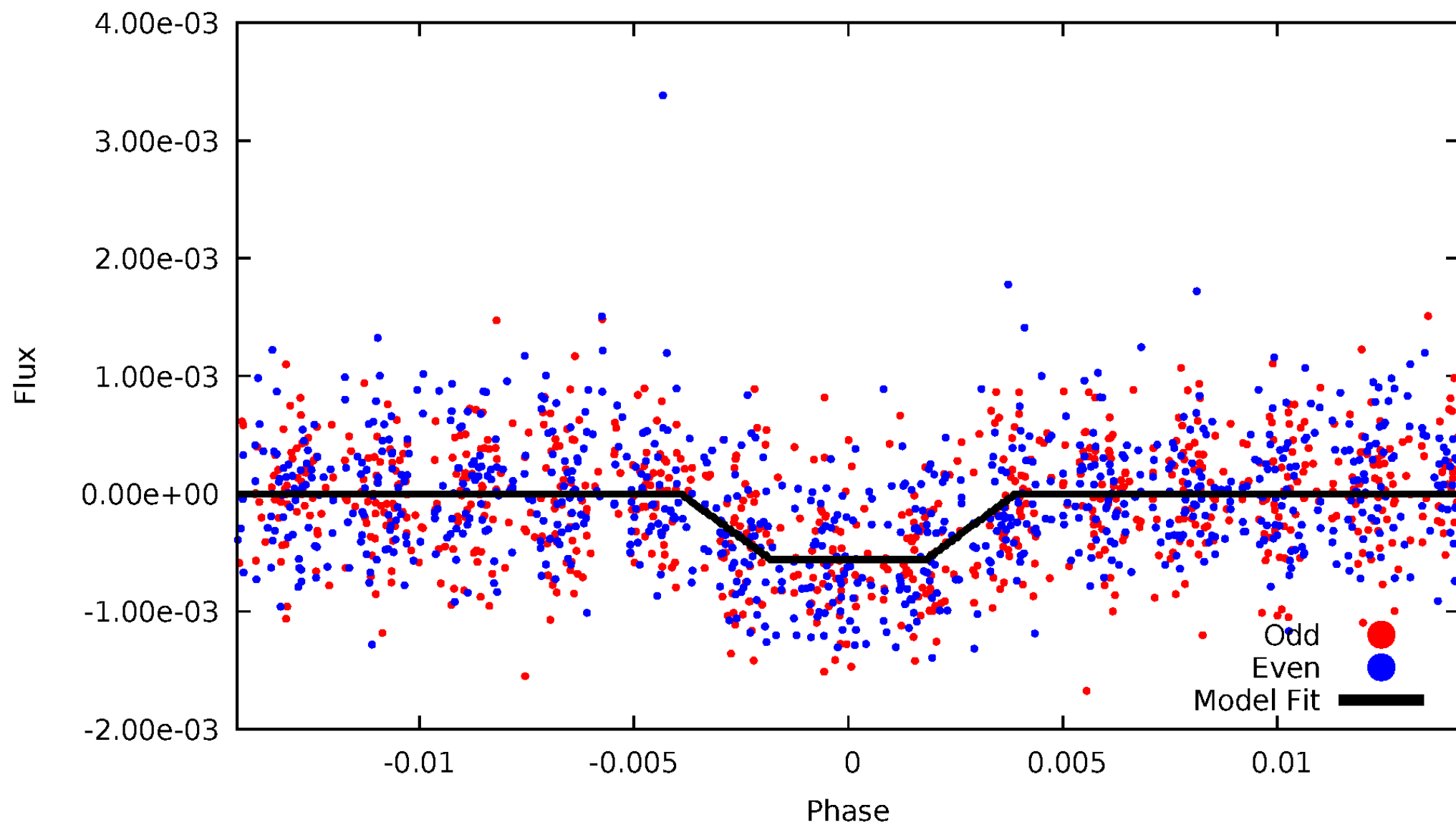
DV Odd/Even

TCE 006849310-03



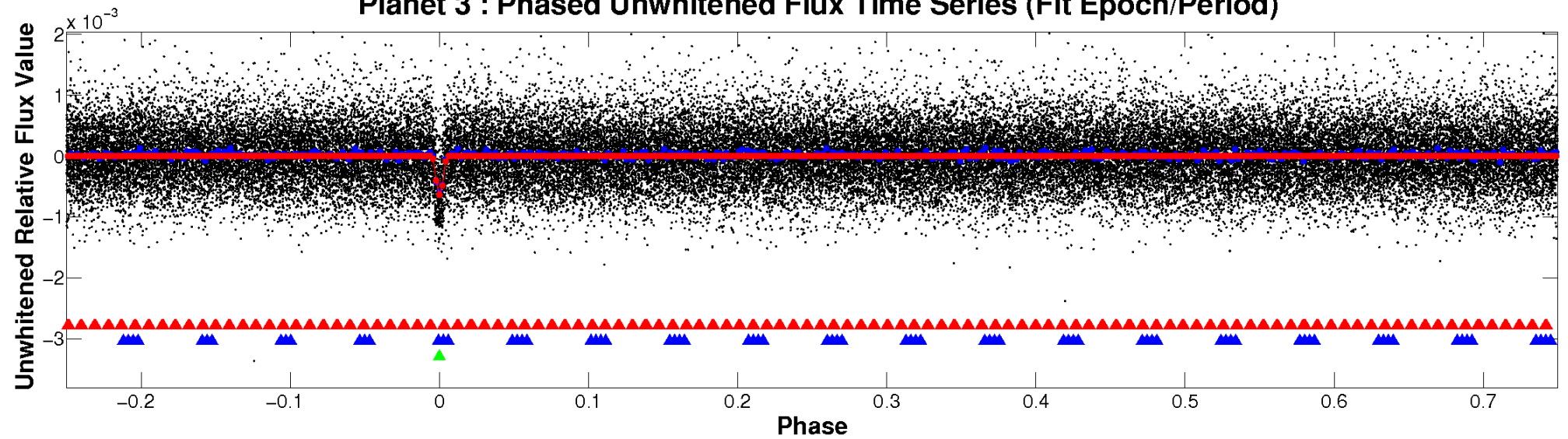
ALT Odd/Even

TCE 006849310-03

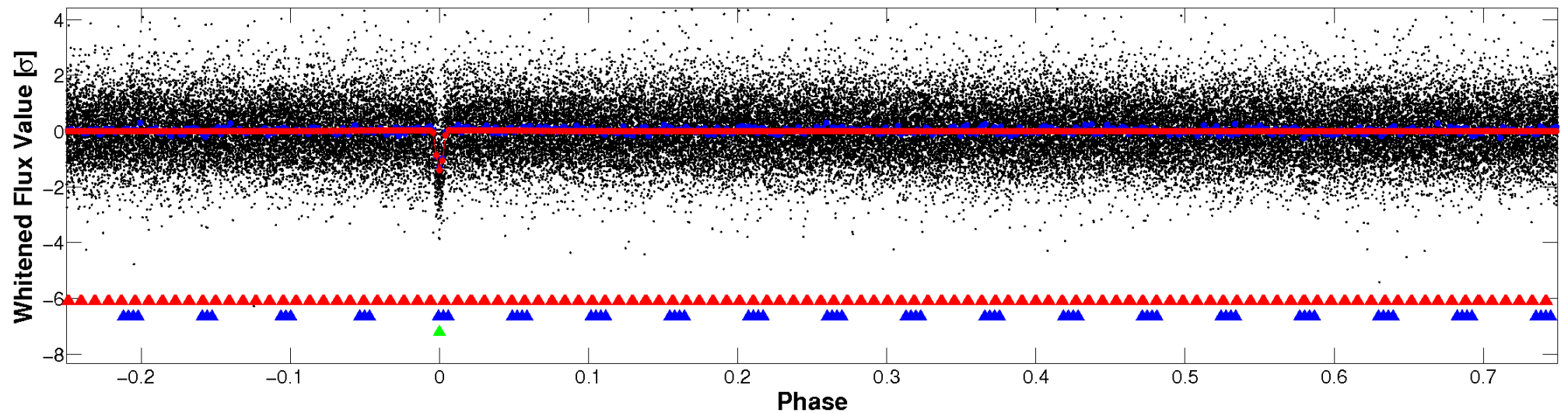


Non-Whitened Vs. Whitened Light Curve

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

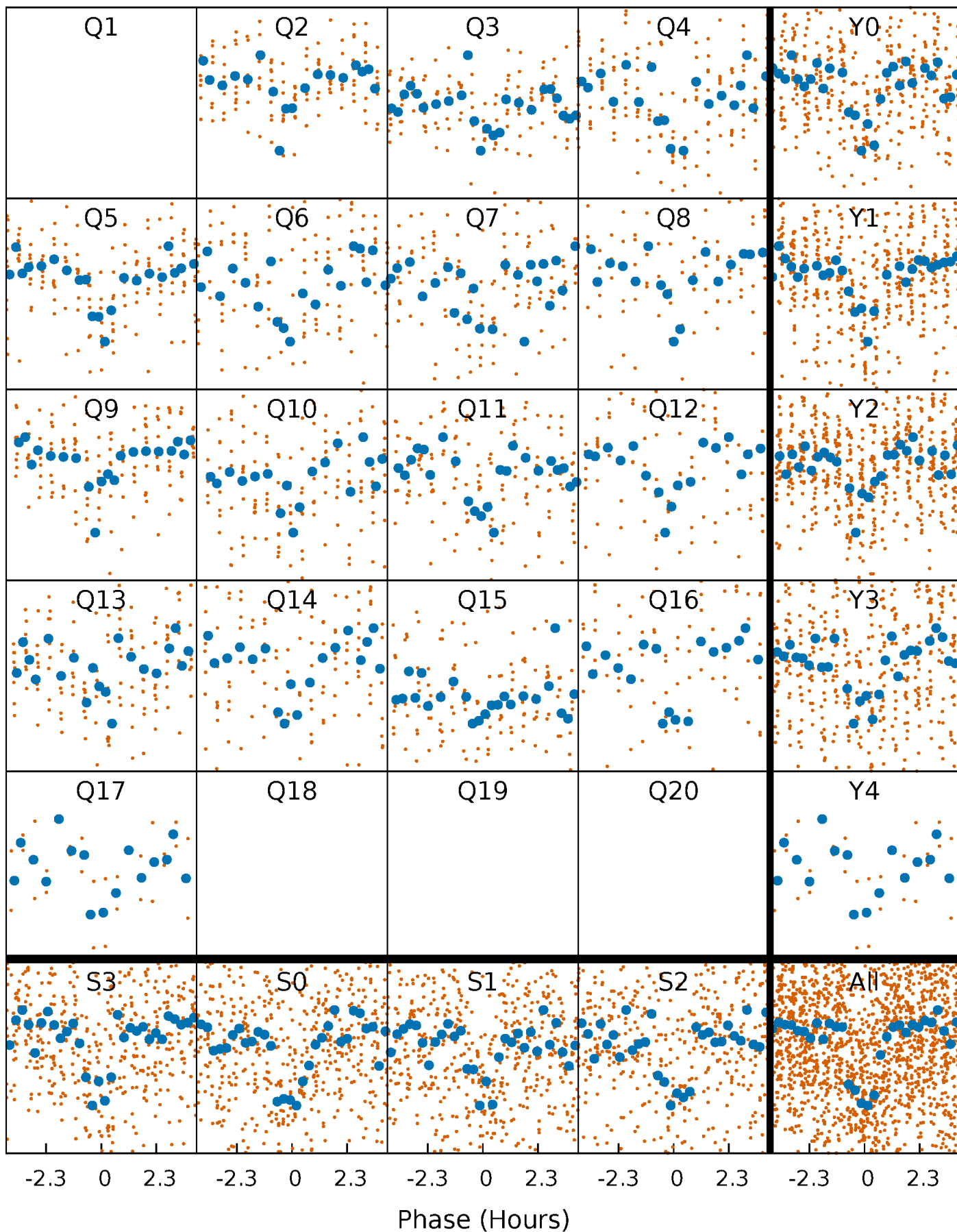


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



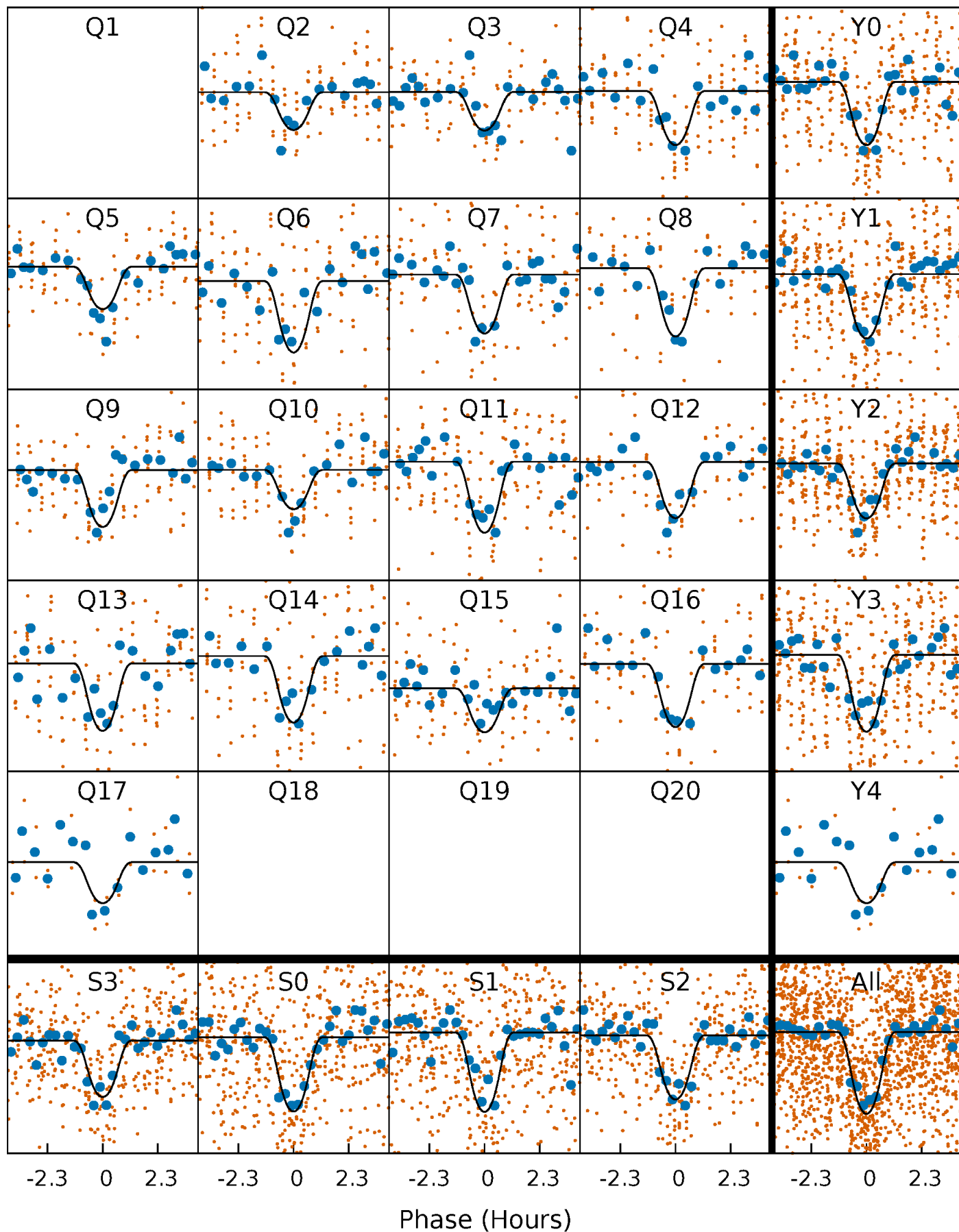
PDC Quarter-Phased Transit Curves

TCE 006849310-03 P= 9.767366 Days $T_0=137.740457$ (BKJD)



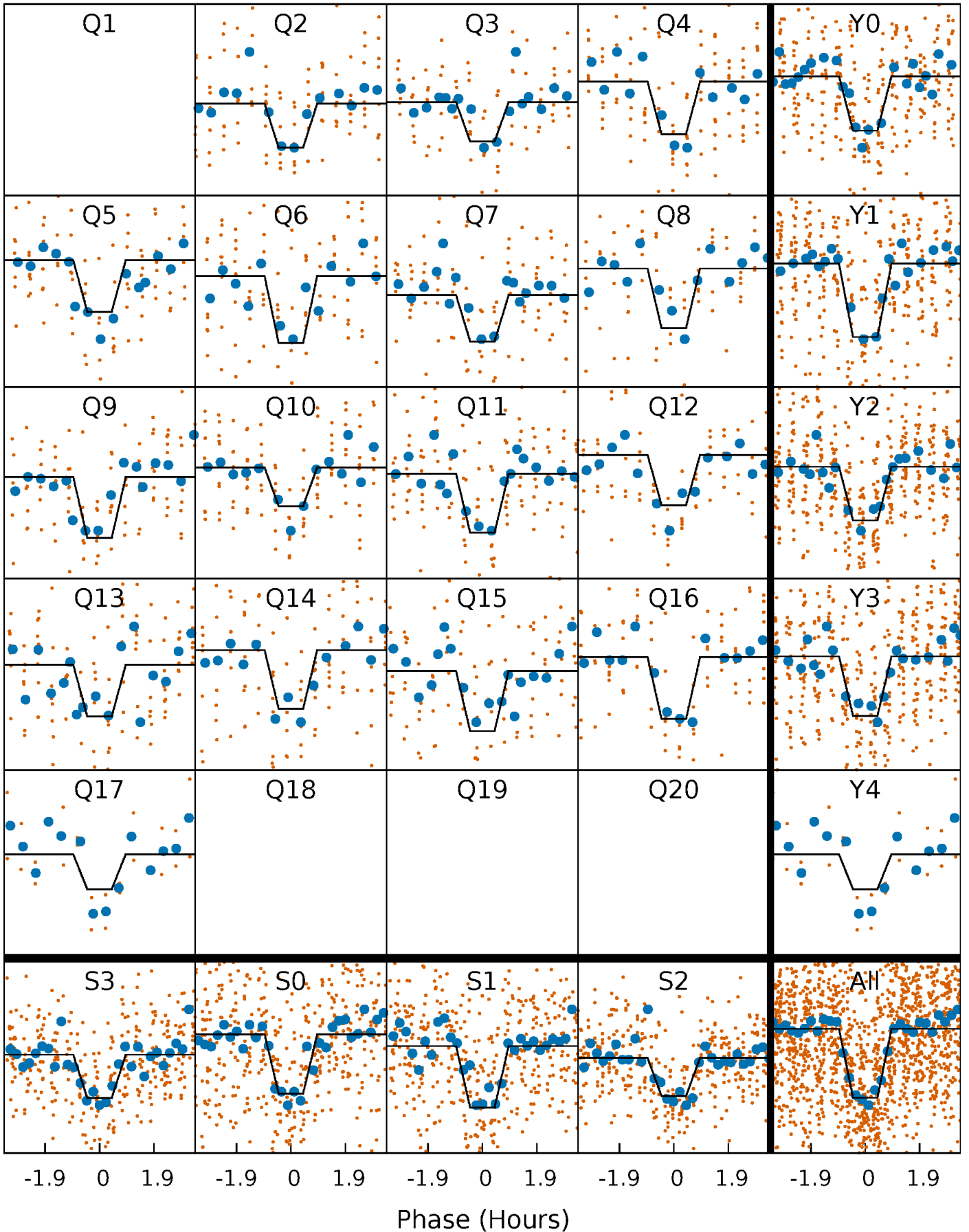
DV Quarter-Phased Transit Curves

TCE 006849310-03 P= 9.767366 Days $T_0=137.740457$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

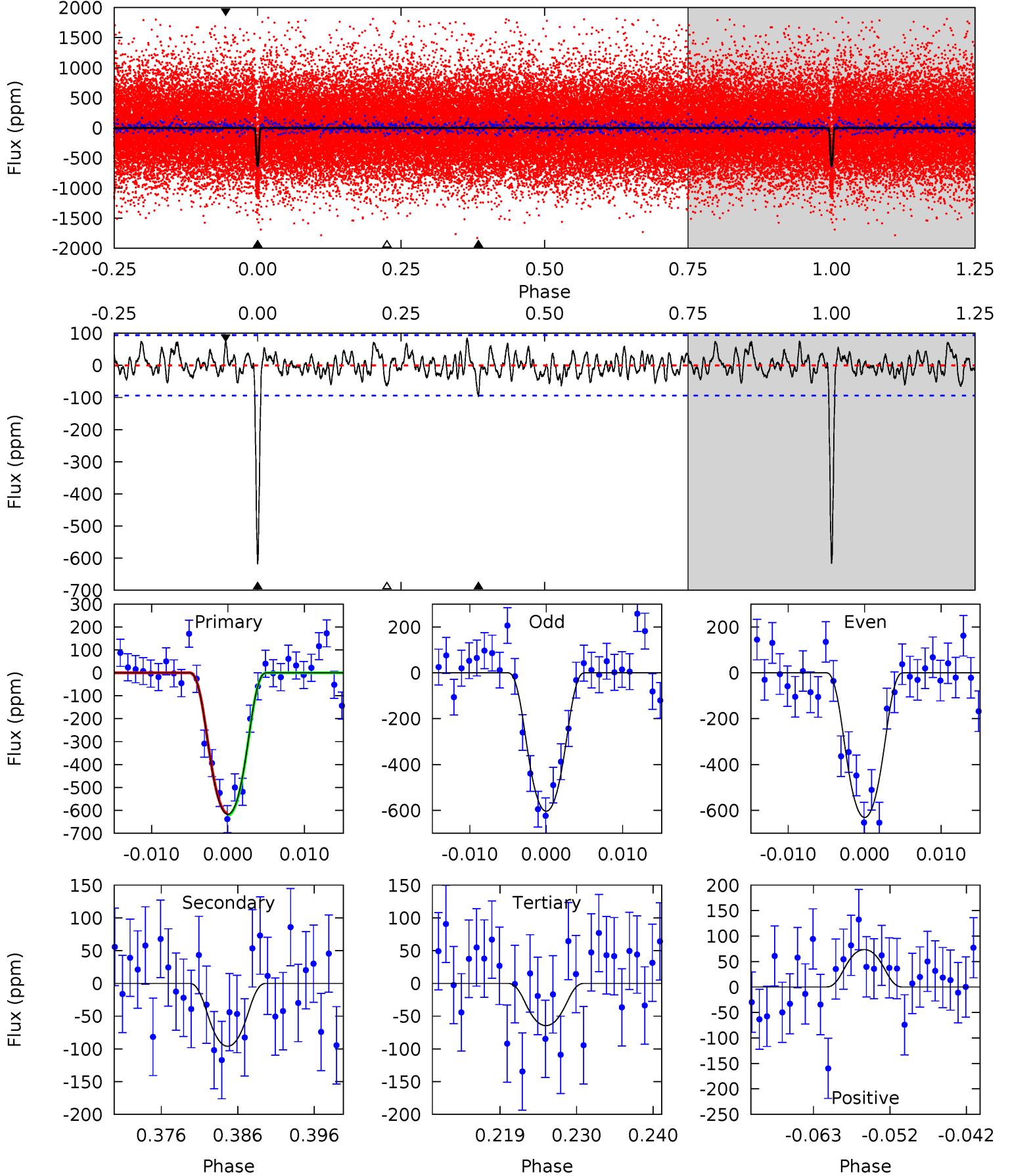
TCE 006849310-03 P= 9.767354 Days $T_0=137.740631$ (BKJD)



DV Model-Shift Uniqueness Test

006849310-03, P = 9.767366 Days, E = 137.740457 Days

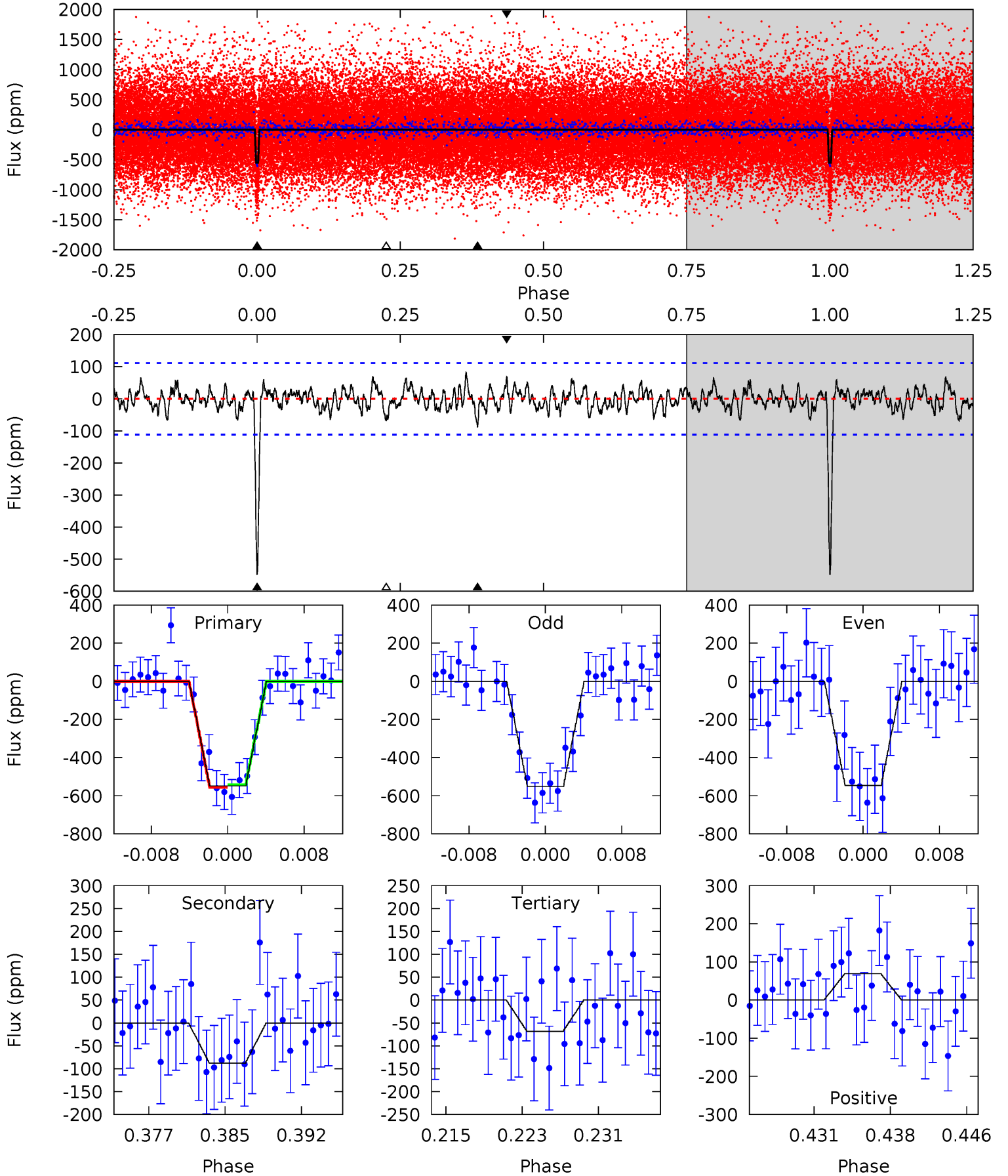
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.9	5.12	3.44	3.93	5.02	2.56	1.48	29.5	29.0	1.68	1.20	0.73	0.96	0.12	0.18



Alt Model-Shift Uniqueness Test

006849310-03, P = 9.767354 Days, E = 137.740631 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.9	3.99	3.12	3.14	5.08	2.67	1.20	21.8	21.8	0.88	0.85	0.11	0.95	0.13	0.30



Stellar Parameters For KIC 006849310

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5527^{+74}_{-83}	$4.484^{+0.040}_{-0.112}$	$0.160^{+0.150}_{-0.150}$	$0.927^{+0.115}_{-0.062}$	$0.956^{+0.044}_{-0.059}$	$1.690^{+0.289}_{-0.520}$
	+1%/-2%	+1%/-2%	+94%/-94%	+12%/-7%	+5%/-6%	+17%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006849310-03 / KOI 0864.03

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-96 ± 19	$3.40^{+1.11}_{-1.05}$	1116^{+42}_{-30}	3475^{+466}_{-274}	35^{+38}_{-16}
Alt.	-88 ± 22	$2.40^{+1.04}_{-1.03}$	1115^{+38}_{-30}	3856^{+849}_{-466}	65^{+126}_{-35}

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

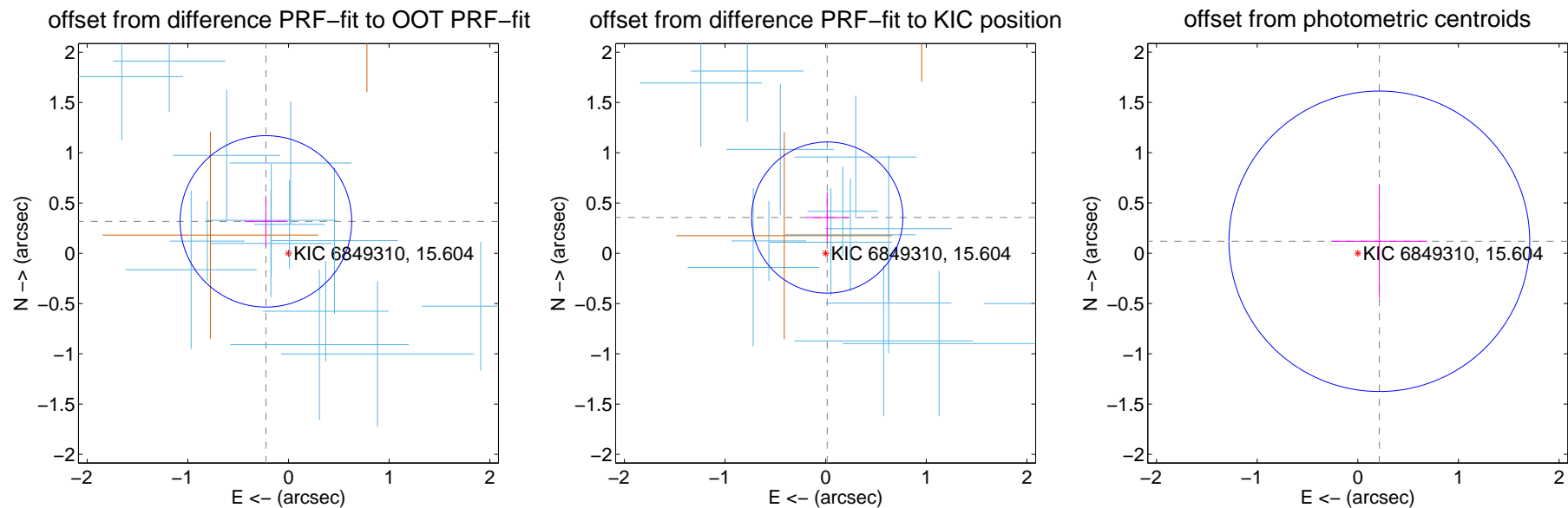
DV Centroid Data

Supplemental centroid analysis for 006849310-03. Kepler magnitude: 15.60. Transit SNR 20.85

There are 14 quarters with good PRF difference image offsets

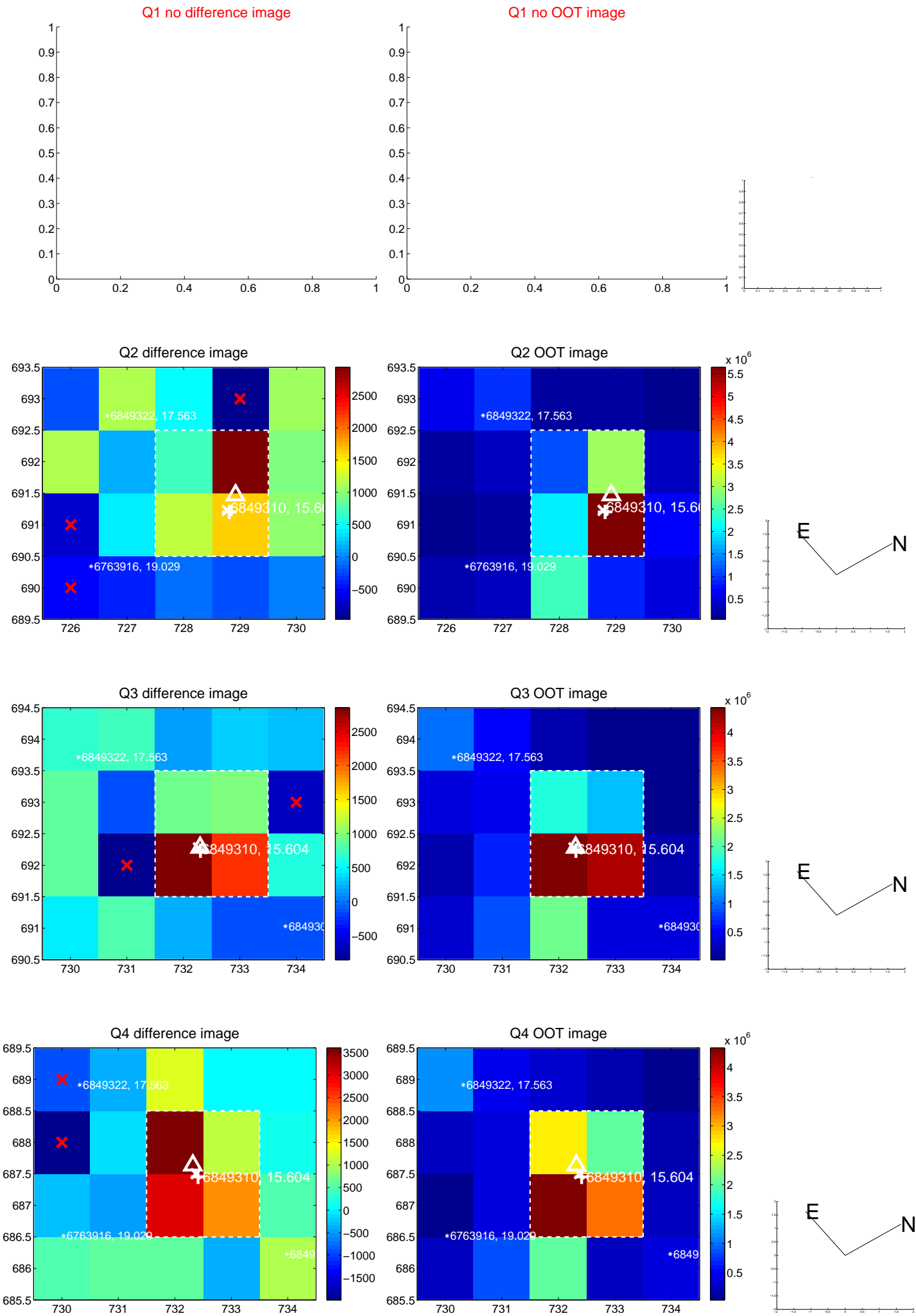
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.389 ± 0.284	1.37	0.224 ± 0.214	0.317 ± 0.255
PRF-fit source offset from KIC position	0.356 ± 0.251	1.42	-0.016 ± 0.212	0.355 ± 0.251
photometric centroid source offset	0.24 ± 0.50	0.49	-0.21 ± 0.48	0.12 ± 0.56

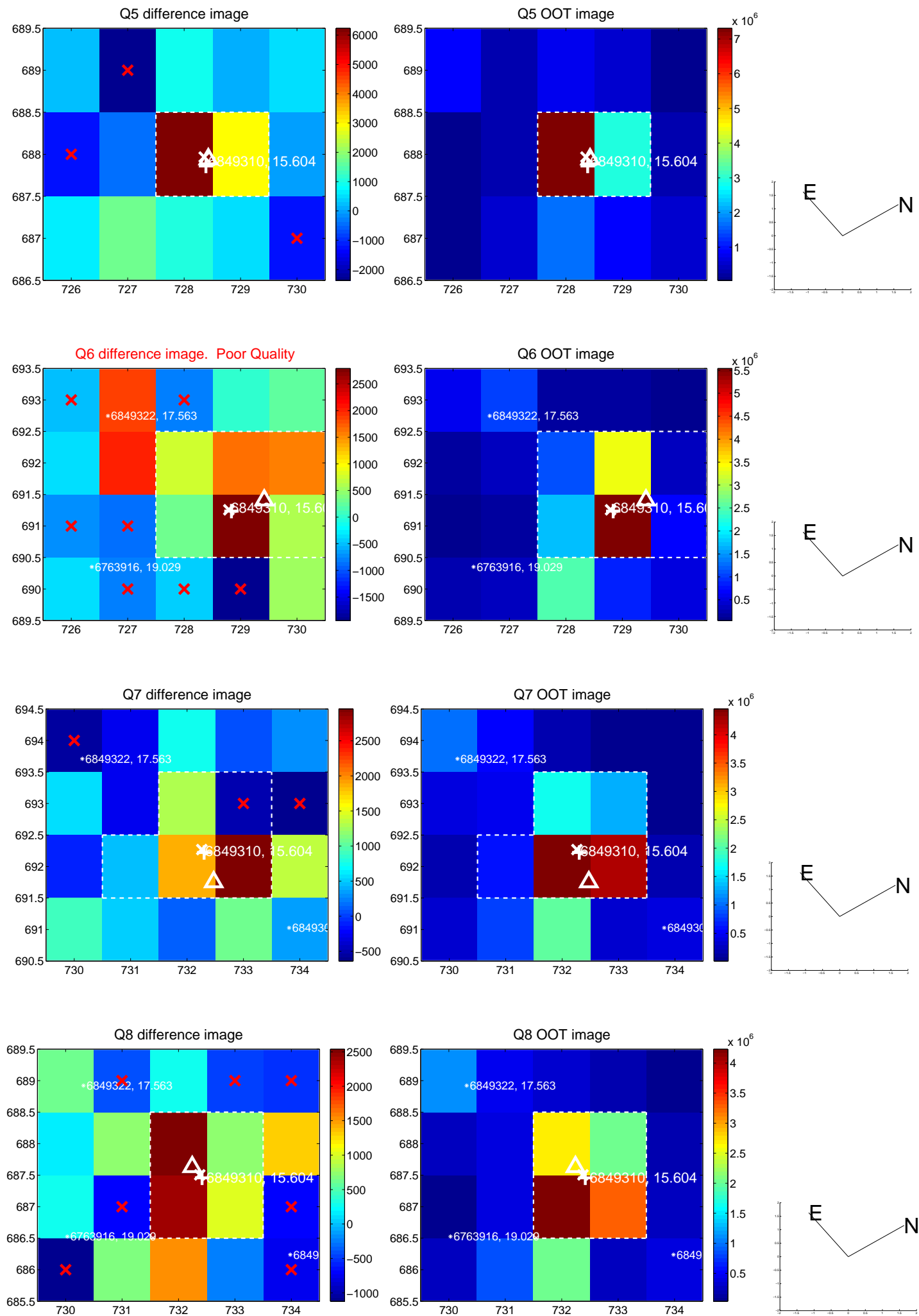


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

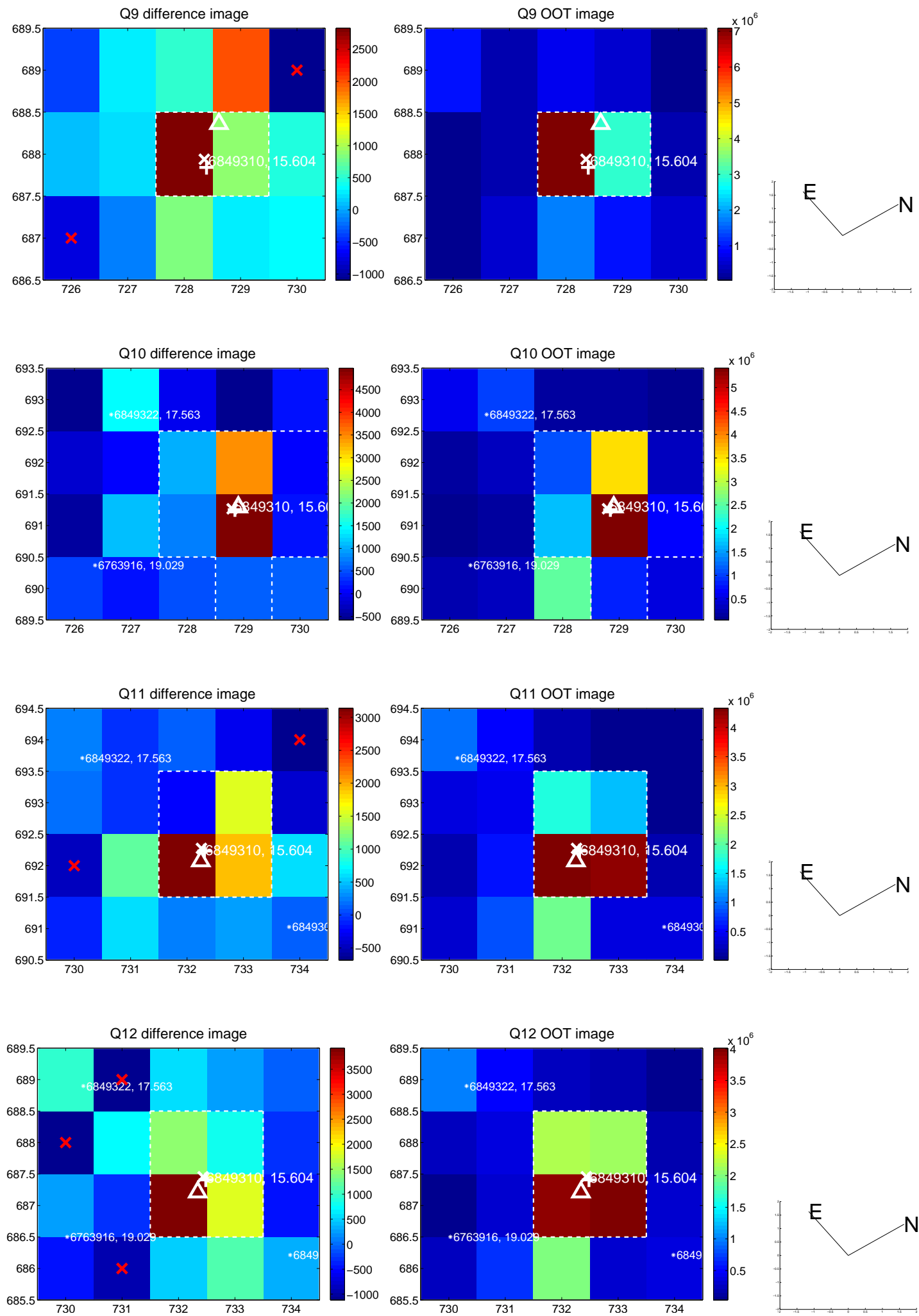
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



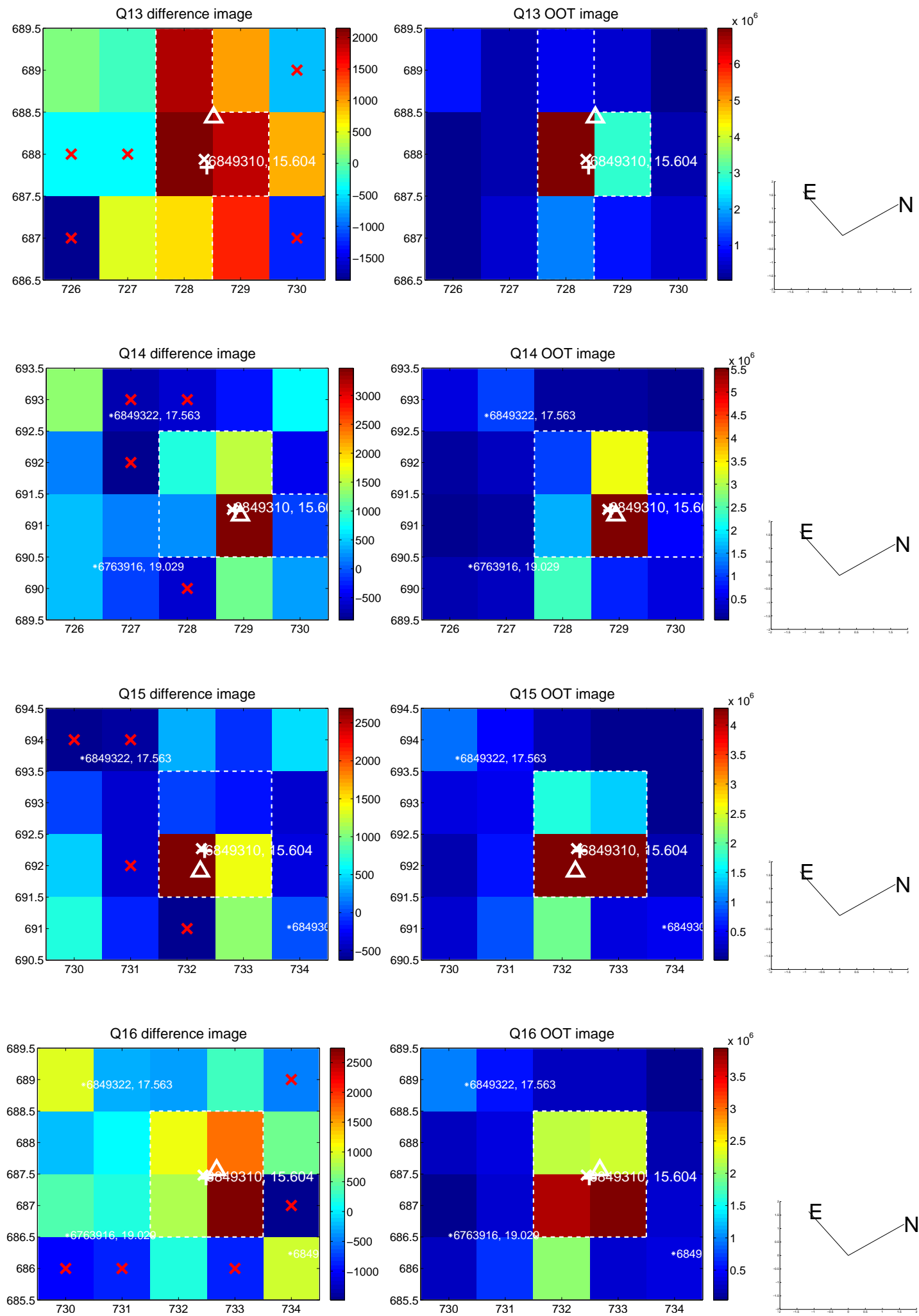
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



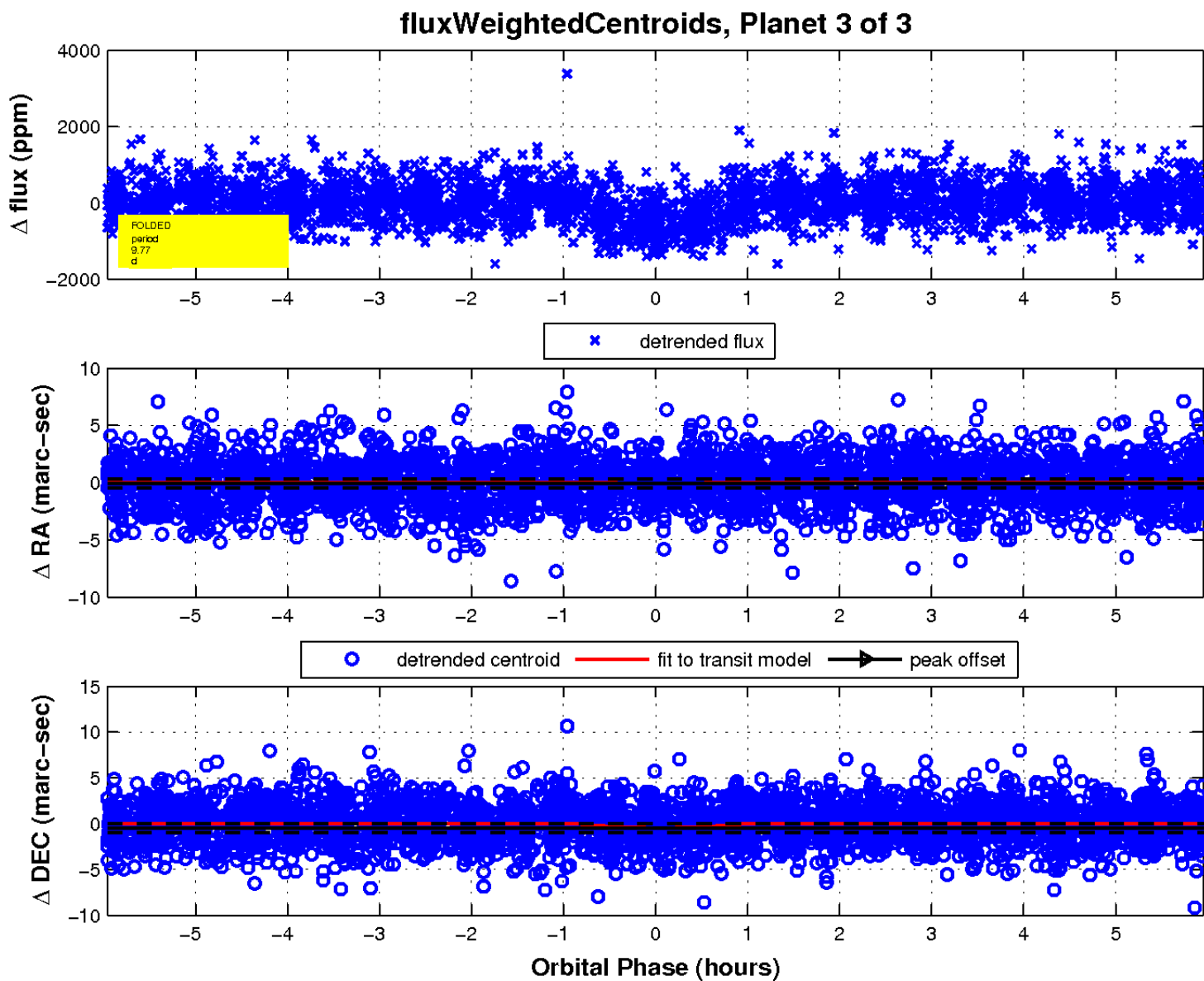
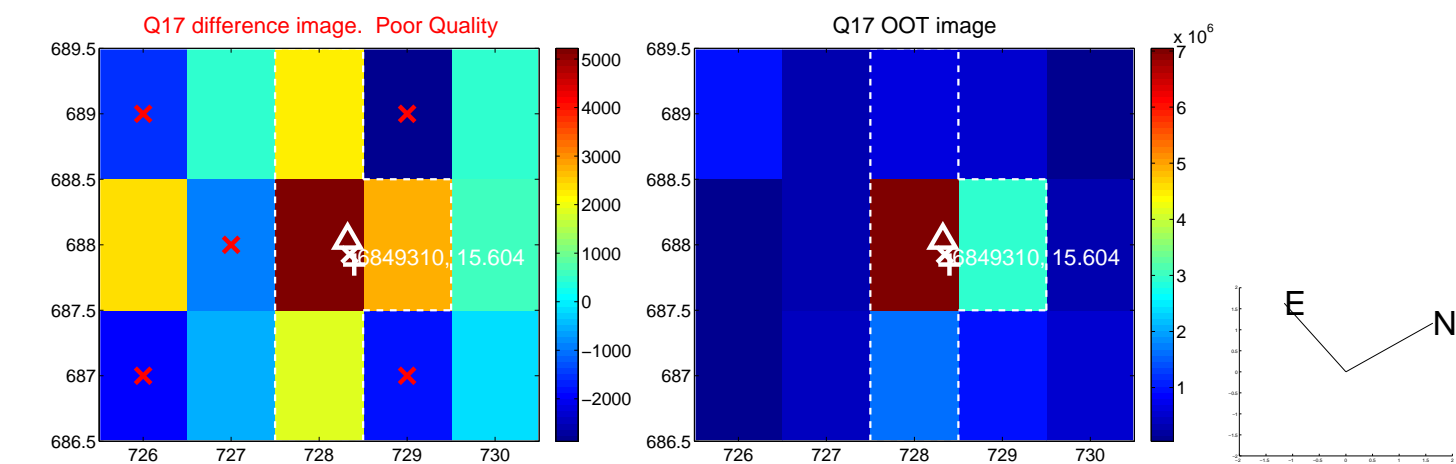
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

