

KIC 006026438

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})
006026438-01	OBS	2045.01	5.476629	135.708621	623.9	2.624	25.4	27.6	0.71	4650	2.09	71.21
006026438-02	OBS	2045.02	24.209898	141.469770	463.4	4.553	11.5	11.7	0.71	4650	1.67	9.82
006026438-03	OBS	2045.03	16.934557	137.260588	367.6	3.487	8.7	9.8	0.71	4650	1.54	15.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006026438-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006026438-02	OBS	FP	0.40	0	0	1	0	CENT_UNRESOLVED_OFFSET
006026438-03	OBS	PC	0.99	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.

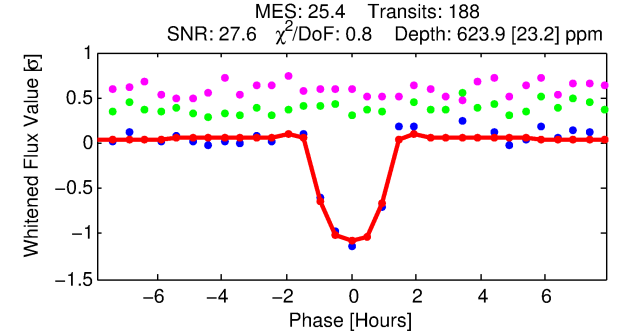
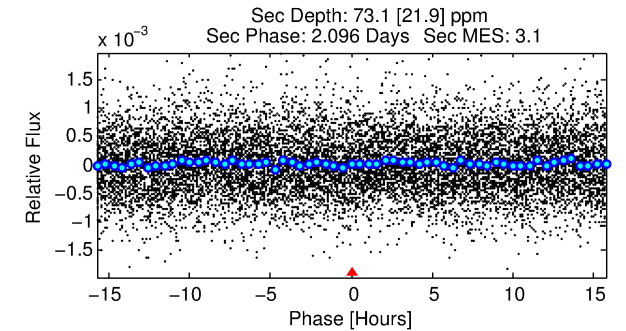
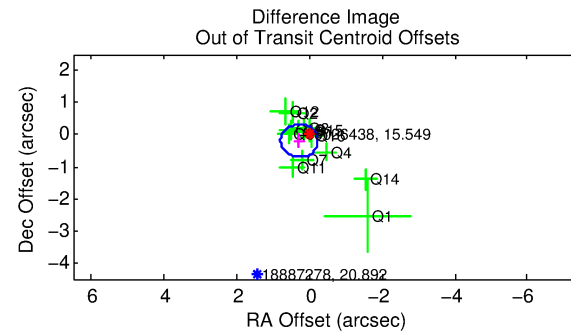
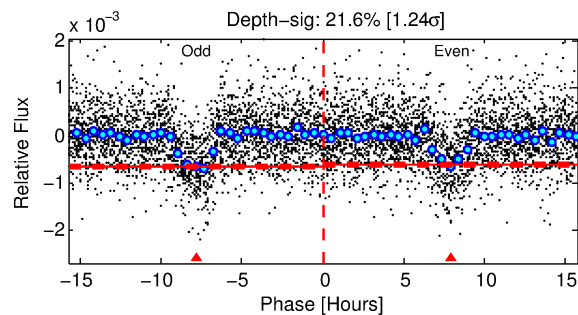
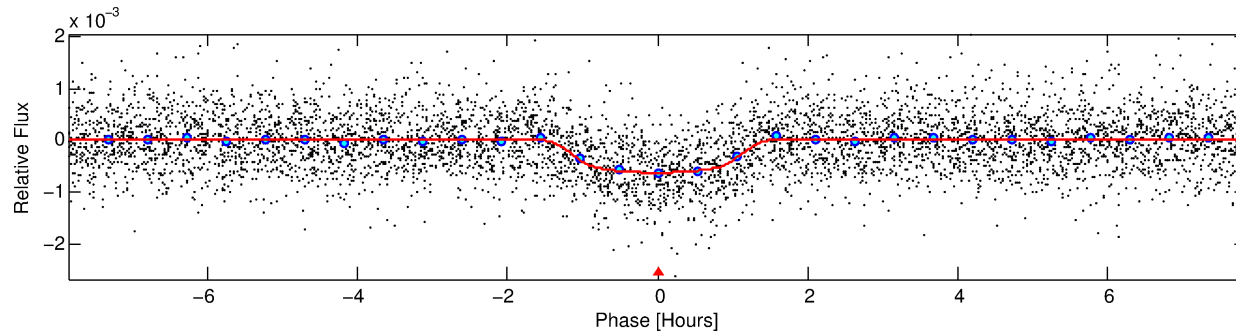
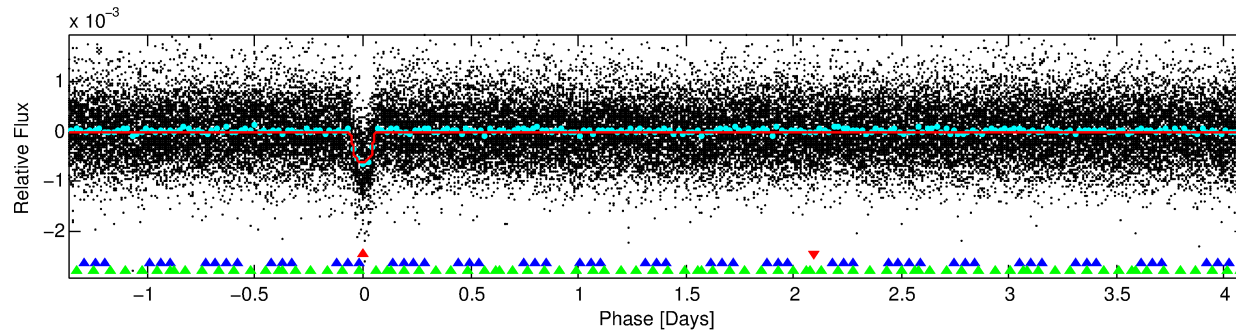
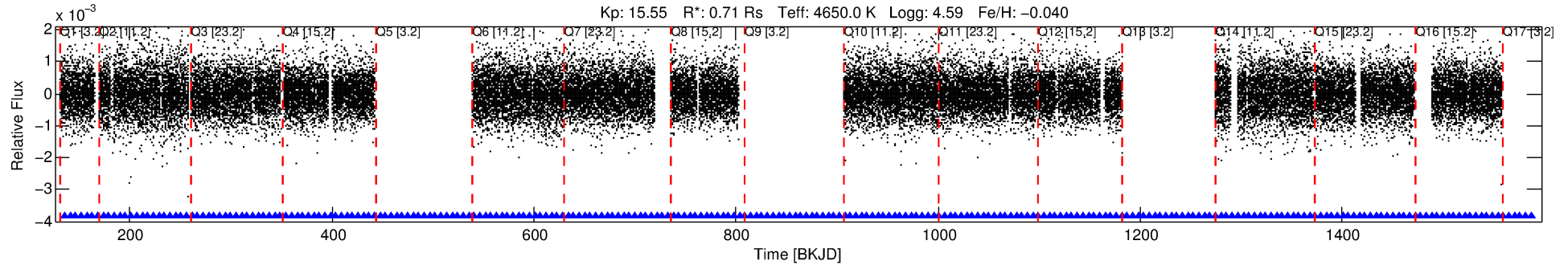
Ephemeris Match Information For 006026438-01

No Significant Match Found

DV One-Page Summary

KIC: 6026438 Candidate: 1 of 3 Period: 5.477 d
KOI: K02045.01 Name: Kepler-354b Corr: 0.972

Kp: 15.55 R*: 0.71 Rs Teff: 4650.0 K Logg: 4.59 Fe/H: -0.040



DV Fit Results:

Period = 5.47663 [0.00001] d
Epoch = 135.7086 [0.0016] BKJD
Rp/R* = 0.0271 [0.0070]
a/R* = 8.89 [7.94]
b = 0.86 [0.27]
Seff = 71.21 [10.81]
Teq = 741 [28] K
Rp = 2.09 [0.57] Re
a = 0.0541 [0.0037] AU
Ag = 26.98 [16.30] [1.59σ]
Teffp = 2610 [397] K [4.69σ]

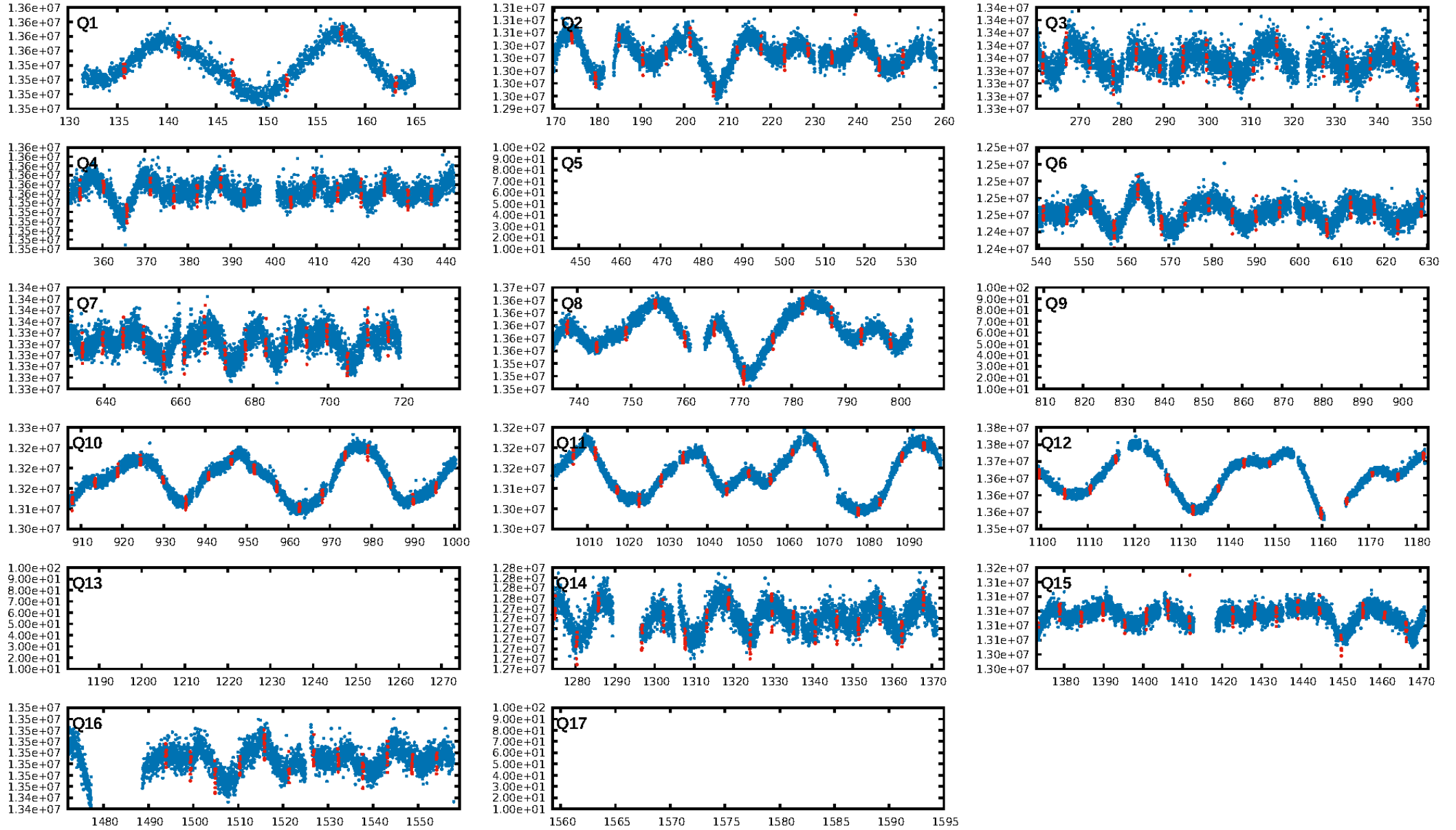
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [63.00σ]
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.02e-138
RollingBand-fgt: 1.00 [182/182]
GhostDiagnostic-chr: 4.208
Centroid-sig: 77.1%
Centroid-so: 0.095 arcsec [0.21σ]
OotOffset-rm: 0.341 arcsec [1.99σ]
KicOffset-rm: 0.373 arcsec [2.06σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

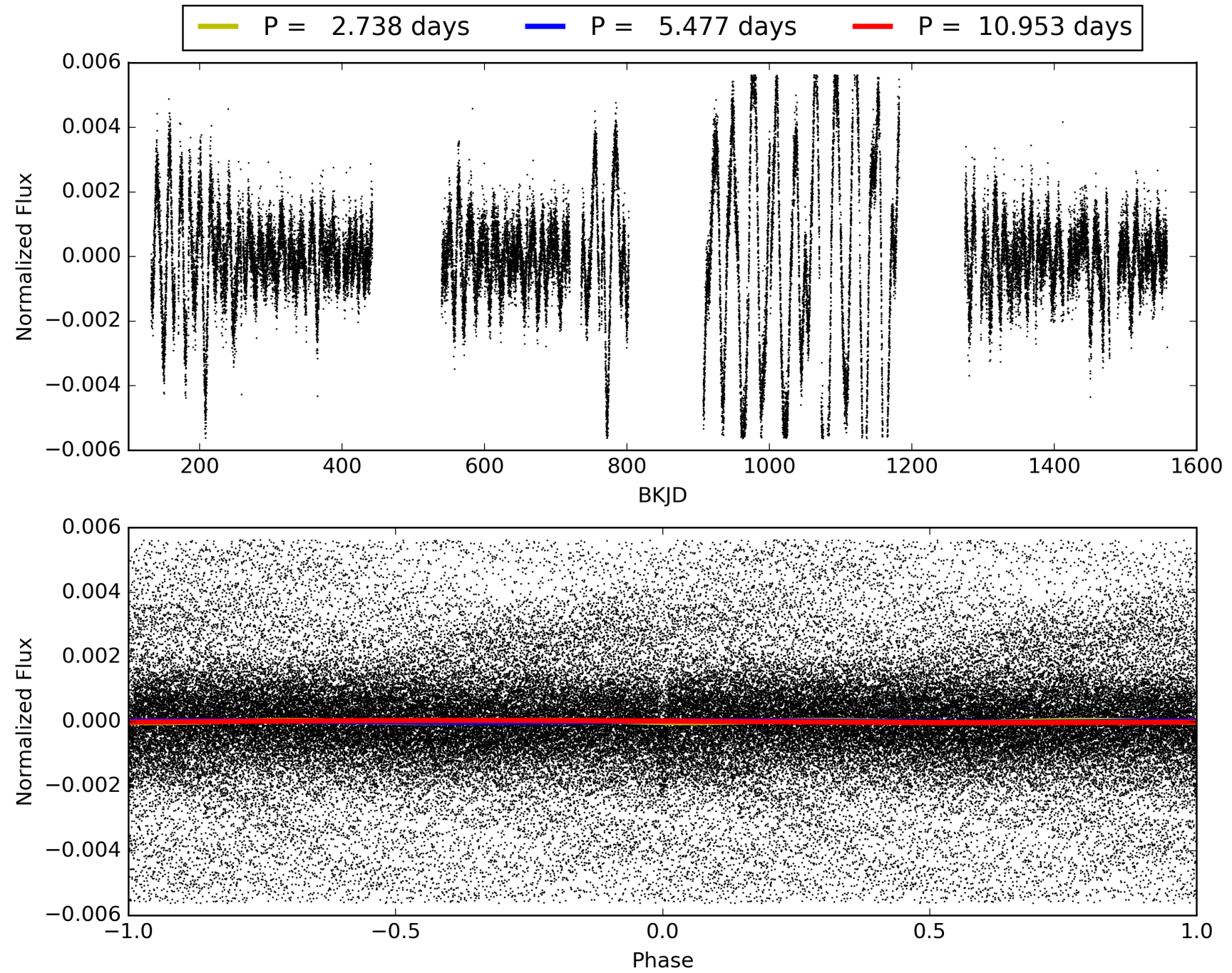
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:01:40 Z

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

TCE 006026438-01, PDC Light Curves

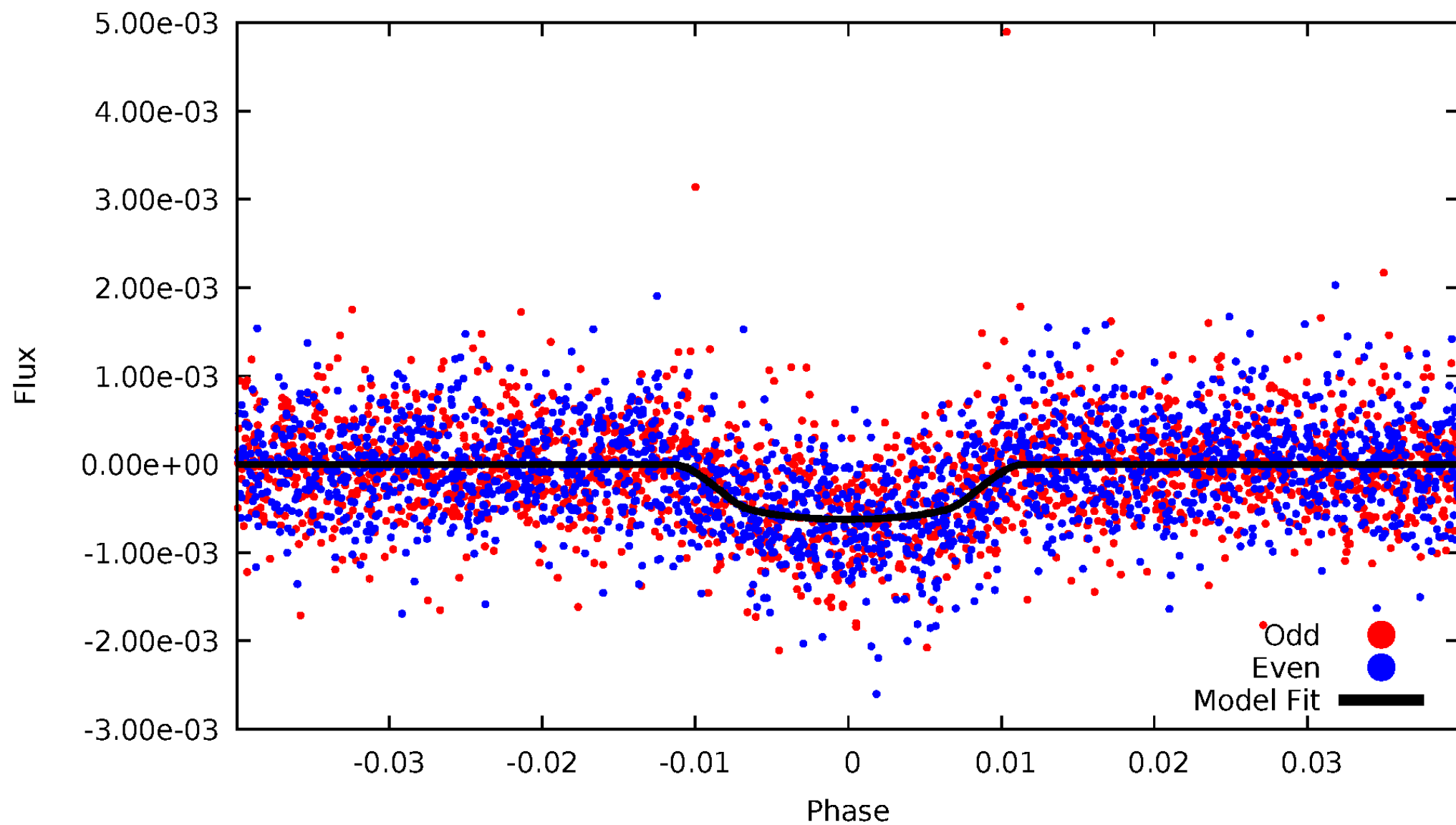


TCE 006026438-01



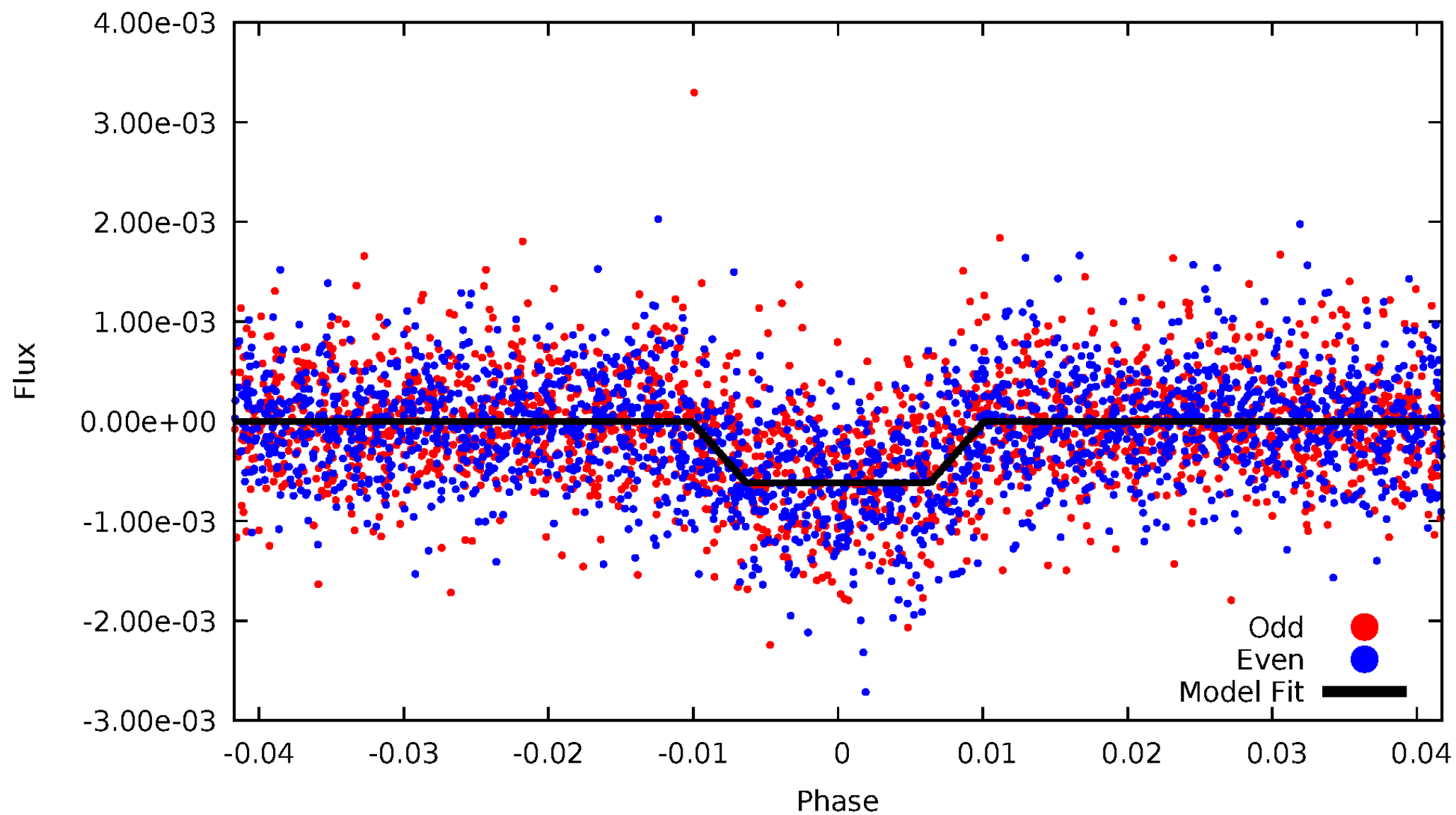
DV Odd/Even

TCE 006026438-01



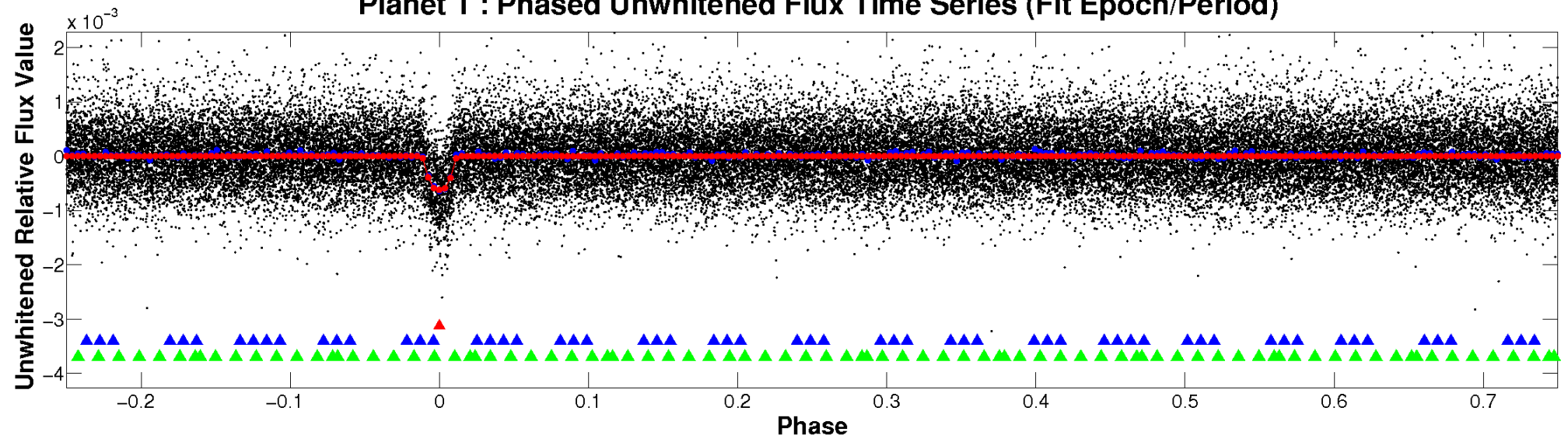
ALT Odd/Even

TCE 006026438-01

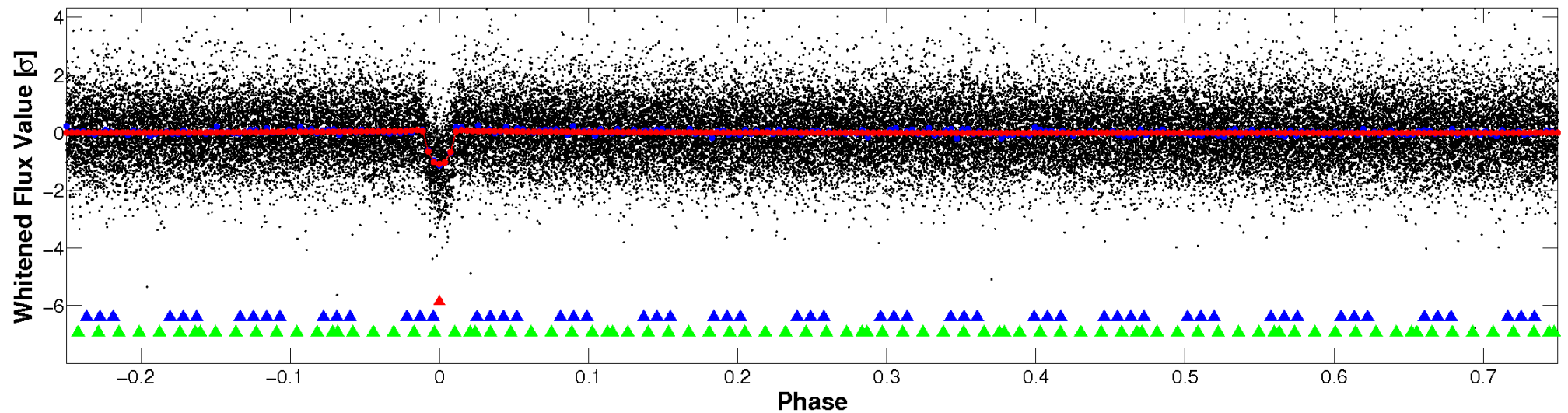


Non-Whitened Vs. Whitened Light Curve

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

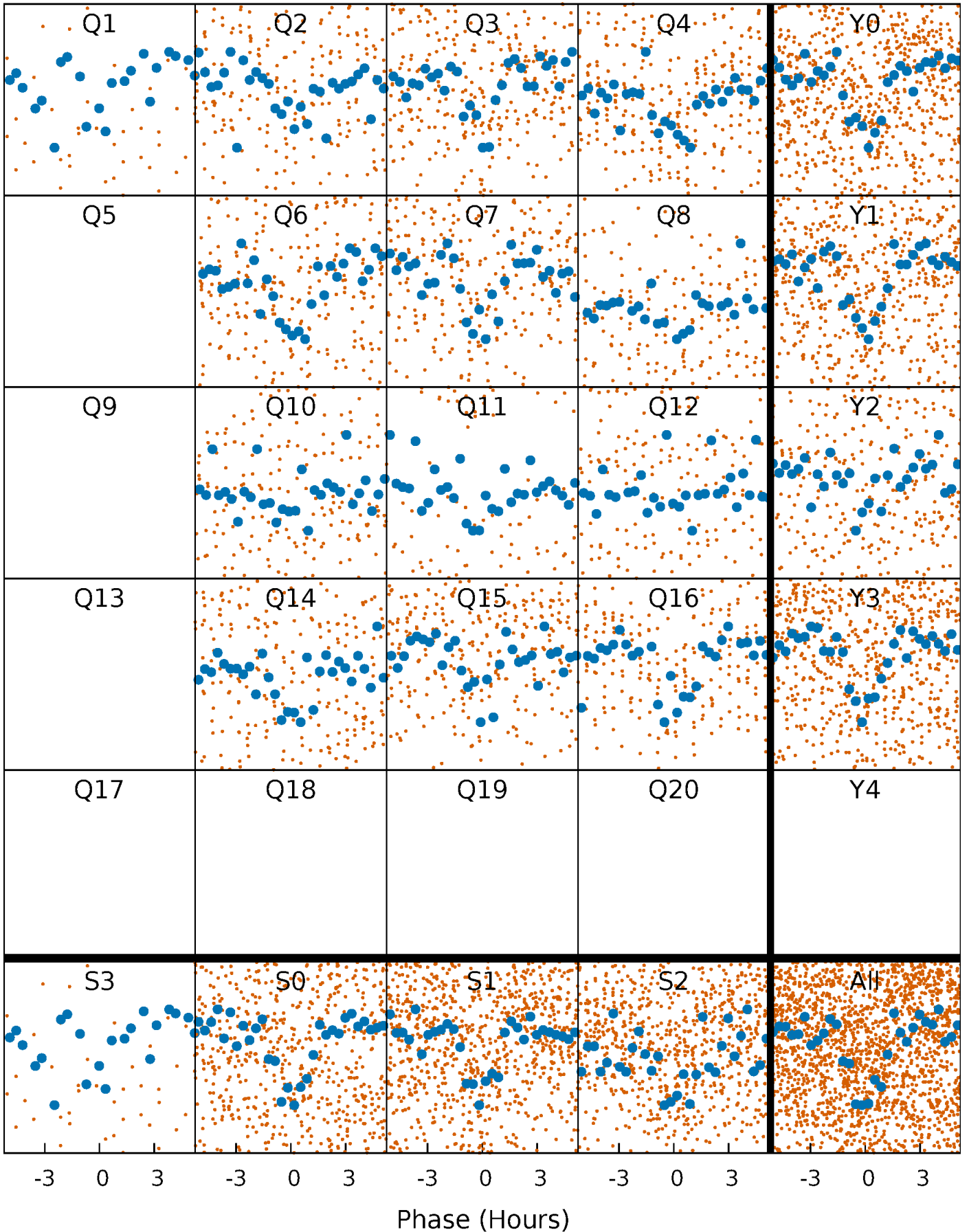


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



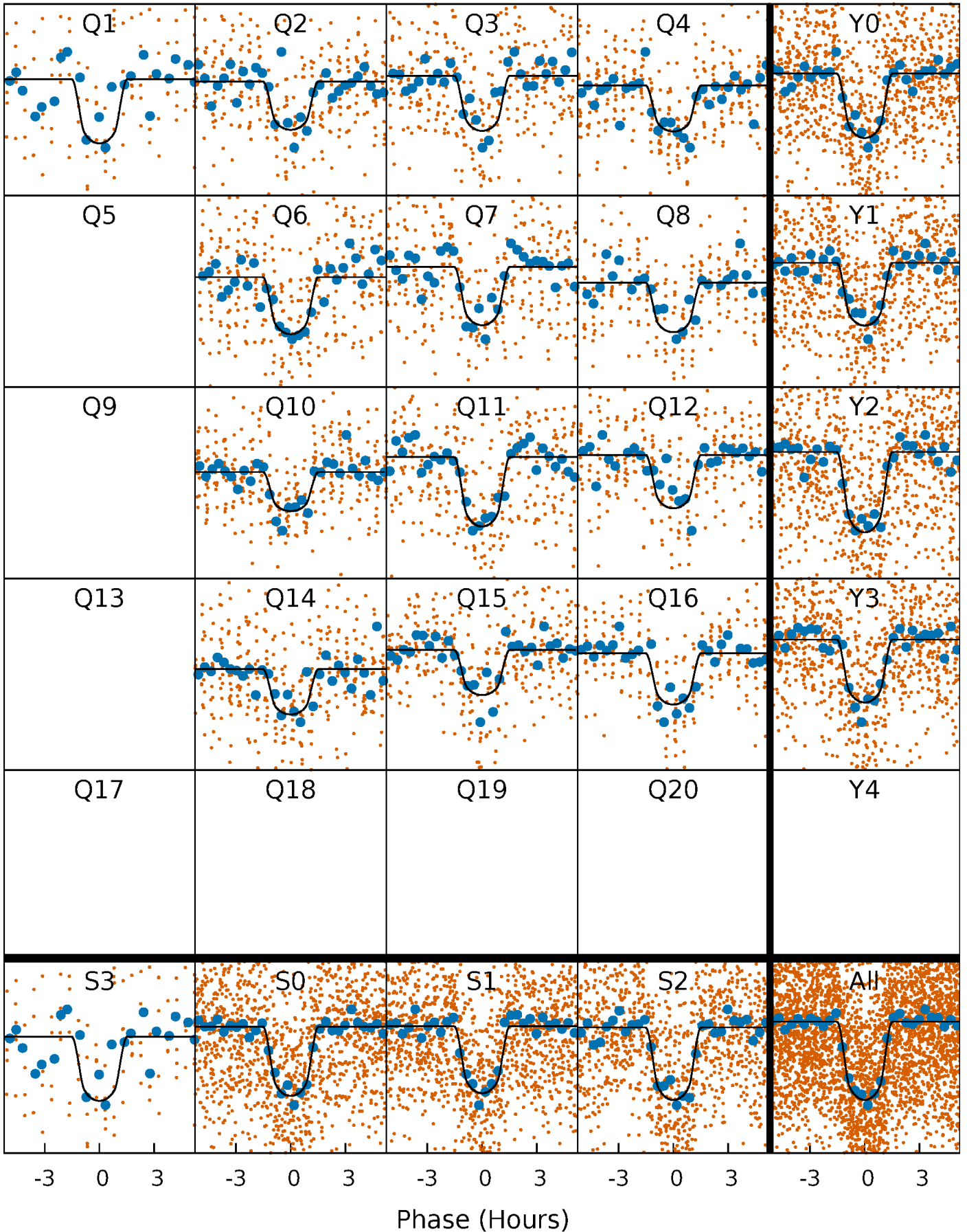
PDC Quarter-Phased Transit Curves

TCE 006026438-01 P= 5.476629 Days $T_0=135.708621$ (BKJD)



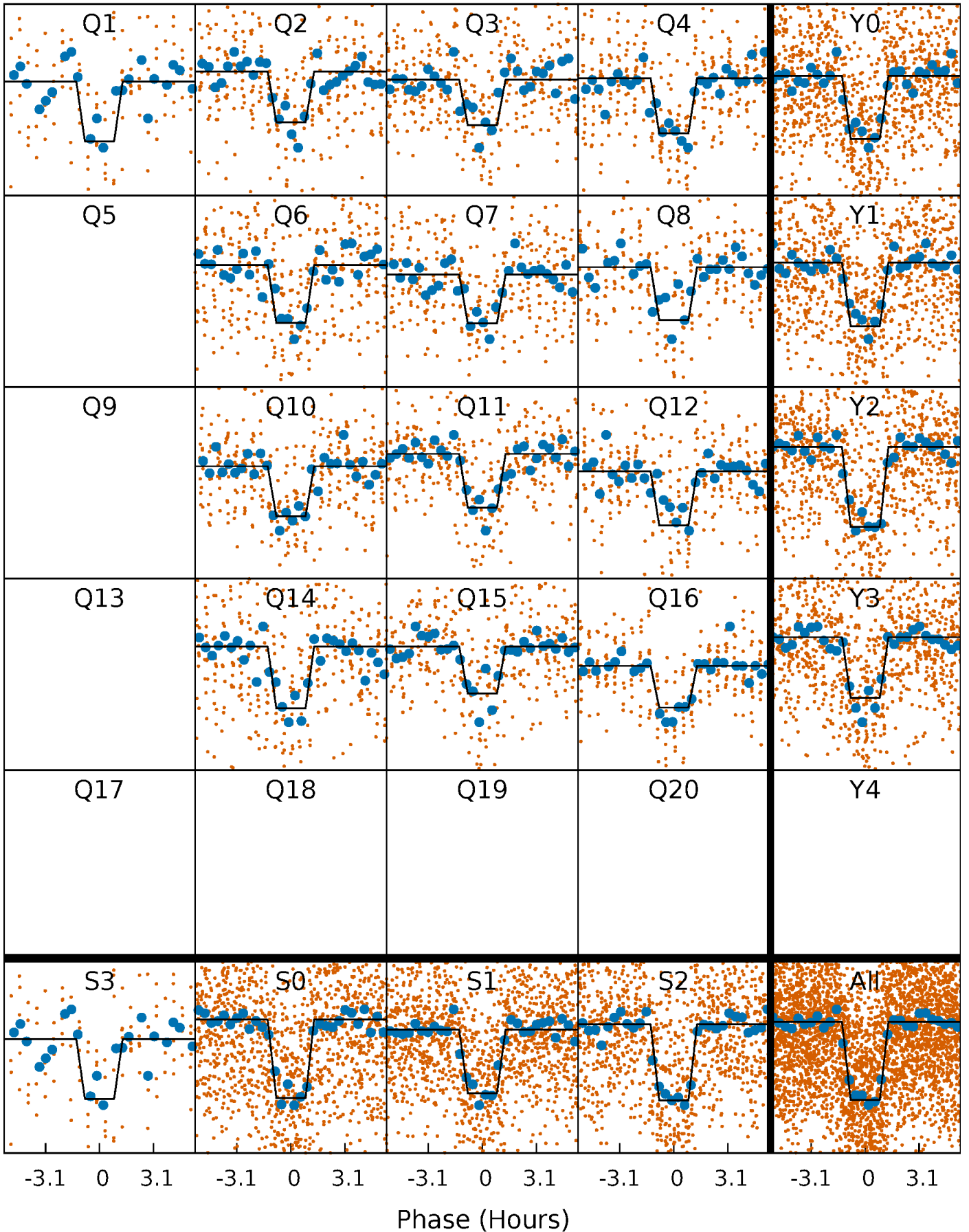
DV Quarter-Phased Transit Curves

TCE 006026438-01 P= 5.476629 Days $T_0=135.708621$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

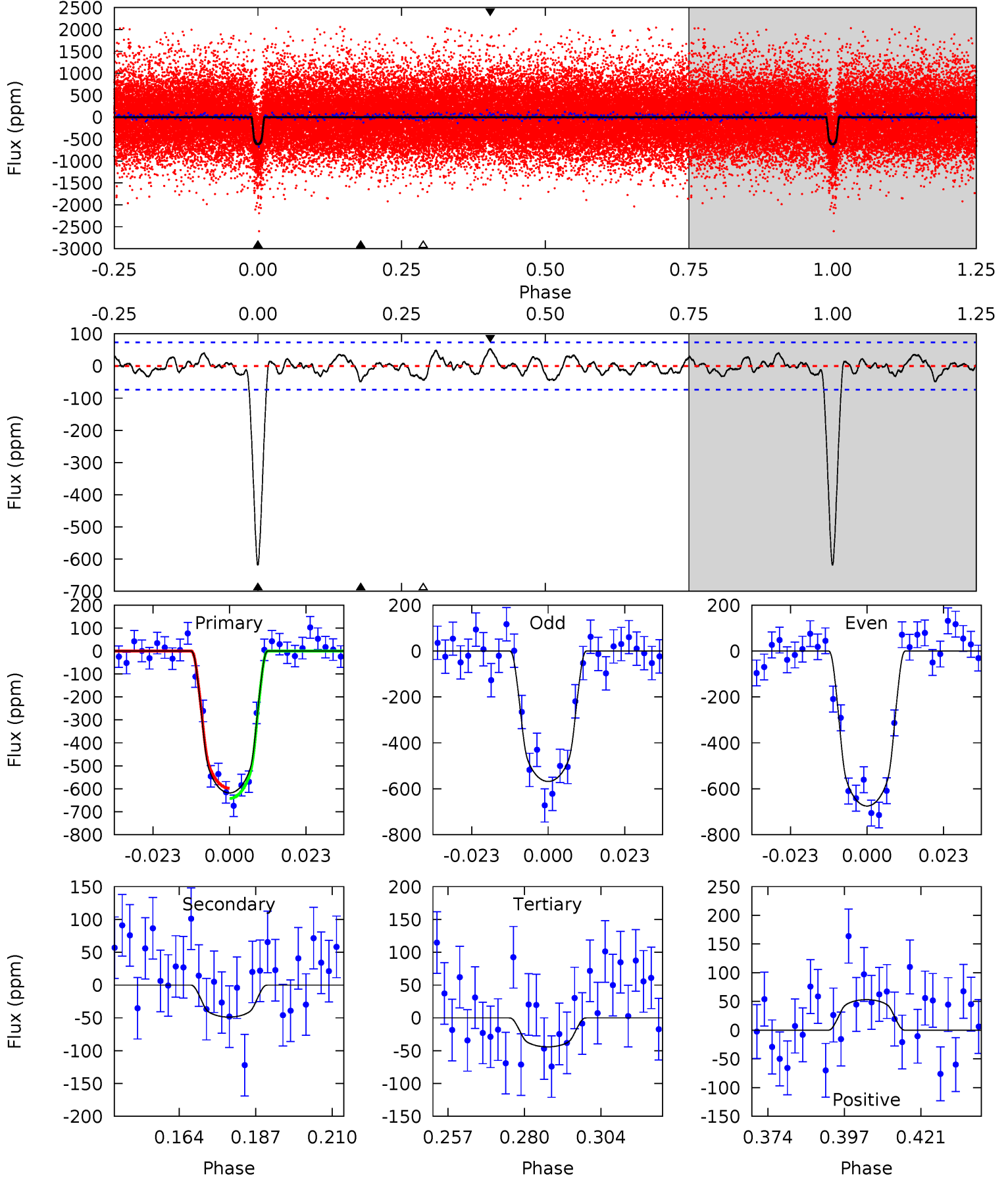
TCE 006026438-01 P= 5.476640 Days $T_0=135.708065$ (BKJD)



DV Model-Shift Uniqueness Test

006026438-01, P = 5.476629 Days, E = 130.231992 Days

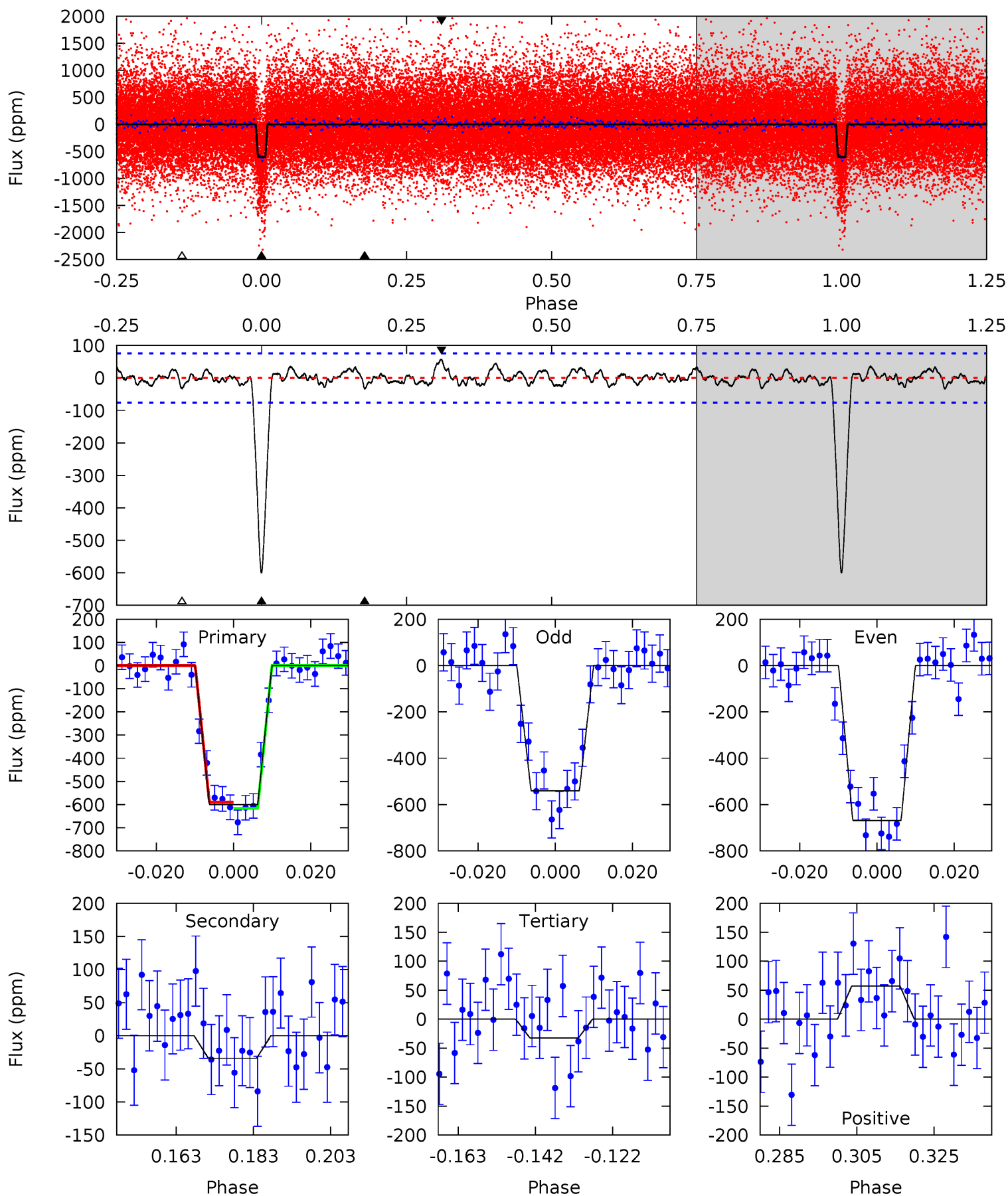
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.8	3.23	2.92	3.51	4.86	2.27	1.26	37.9	37.3	0.31	-0.29	3.54	1.01	0.08	1.48



Alt Model-Shift Uniqueness Test

006026438-01, P = 5.476640 Days, E = 130.231425 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.8	2.19	2.10	3.70	4.89	2.32	1.04	36.7	35.1	0.09	-1.50	4.15	1.07	0.09	0.85



Stellar Parameters For KIC 006026438

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4650^{+125}_{-139}	$4.589^{+0.048}_{-0.028}$	$-0.040^{+0.300}_{-0.300}$	$0.706^{+0.046}_{-0.061}$	$0.704^{+0.070}_{-0.058}$	$2.824^{+0.657}_{-0.300}$
	+3%/-3%	+1%/-1%	+750%/-750%	+7%/-9%	+10%/-8%	+23%/-11%
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 006026438-01 / KOI 2045.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-49 ± 15	$2.08^{+0.58}_{-0.56}$	1032^{+32}_{-37}	2943^{+332}_{-245}	18^{+18}_{-8}
Alt.	-34 ± 15	$1.87^{+0.53}_{-0.49}$	1029^{+33}_{-34}	2880^{+334}_{-282}	15^{+16}_{-8}

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

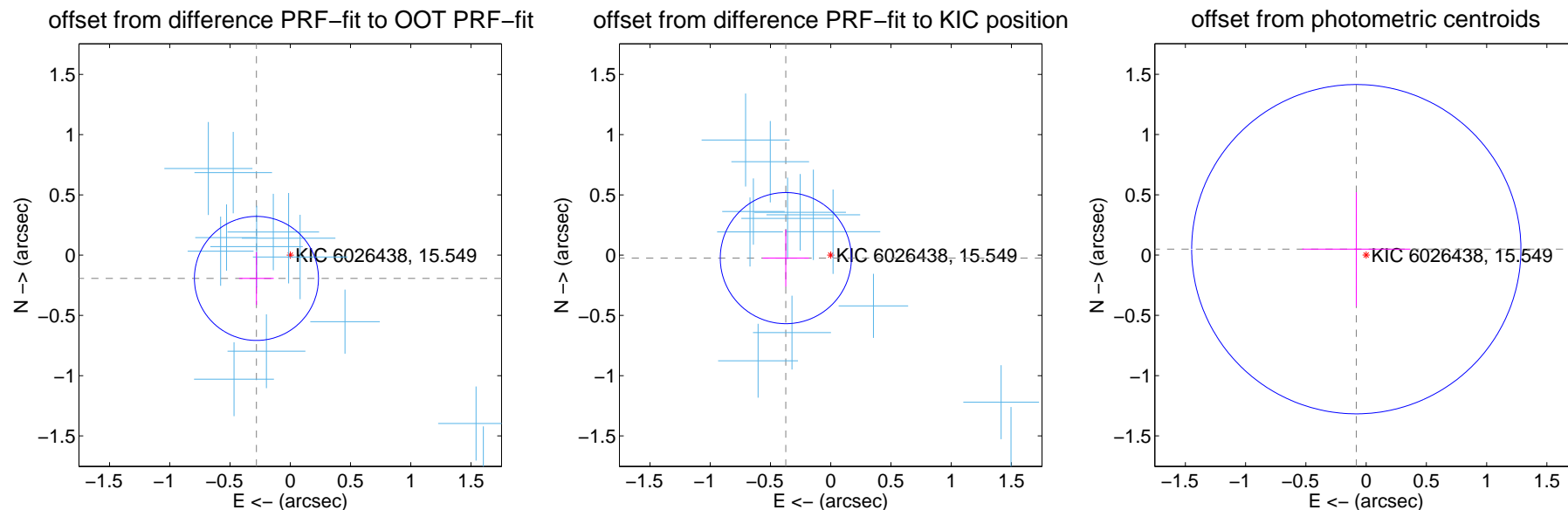
DV Centroid Data

Supplemental centroid analysis for 006026438-01. Kepler magnitude: 15.55. Transit SNR 27.62

There are 13 quarters with good PRF difference image offsets

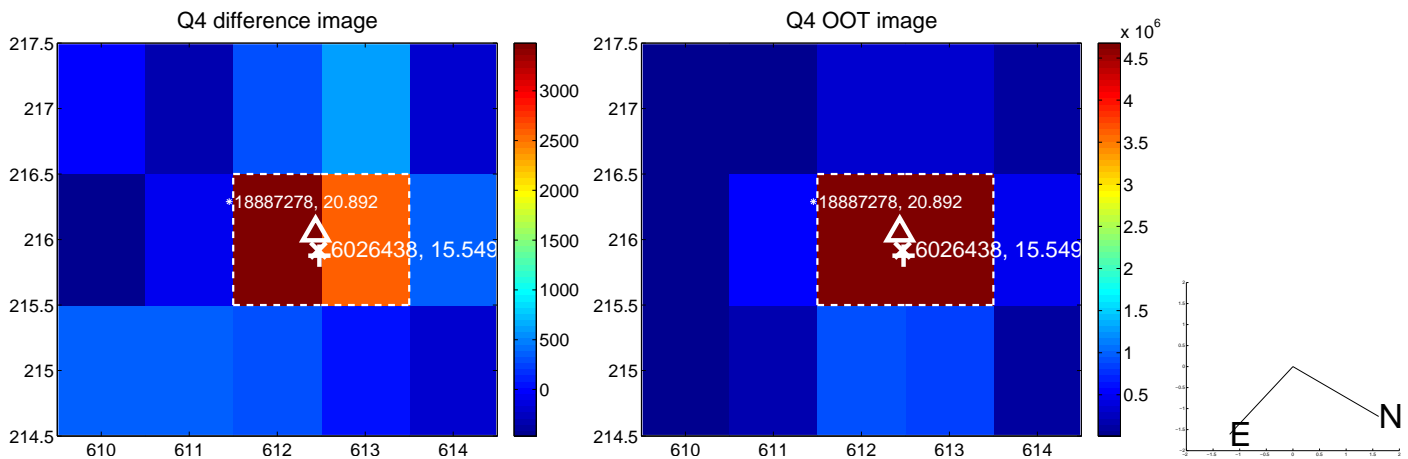
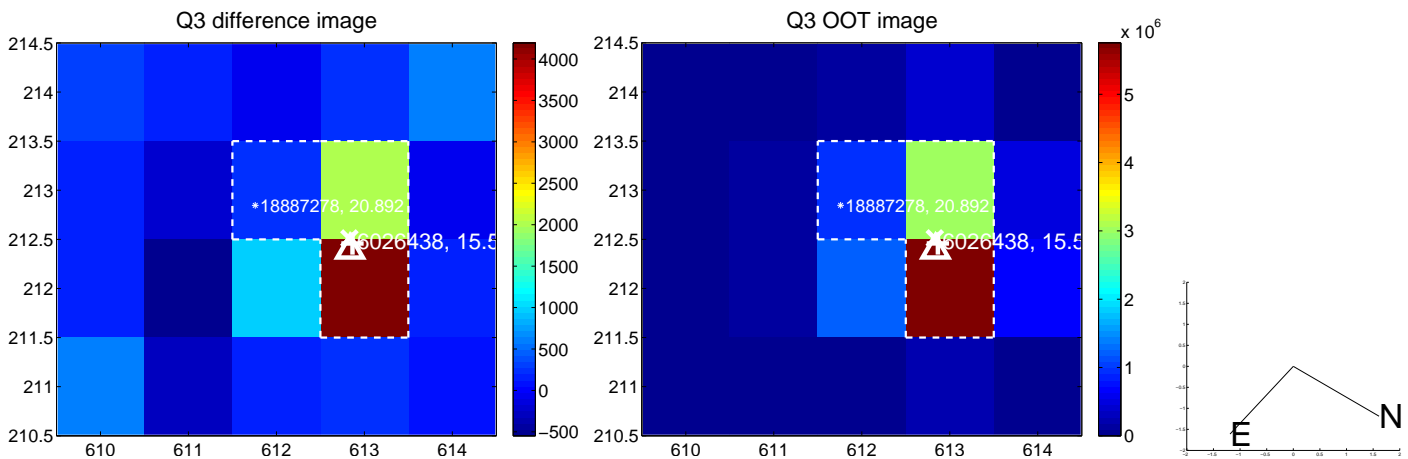
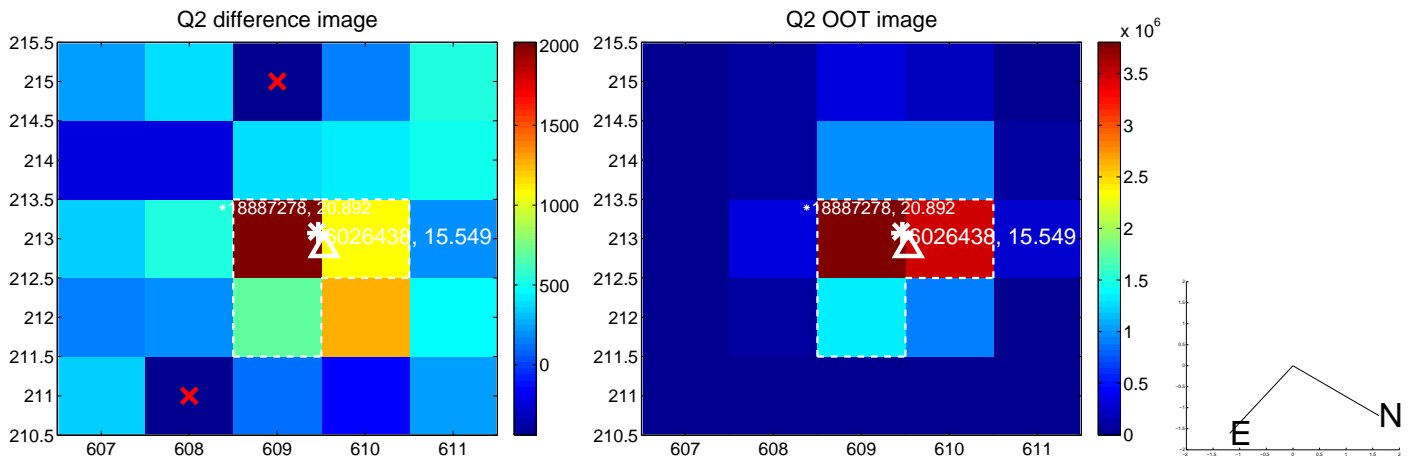
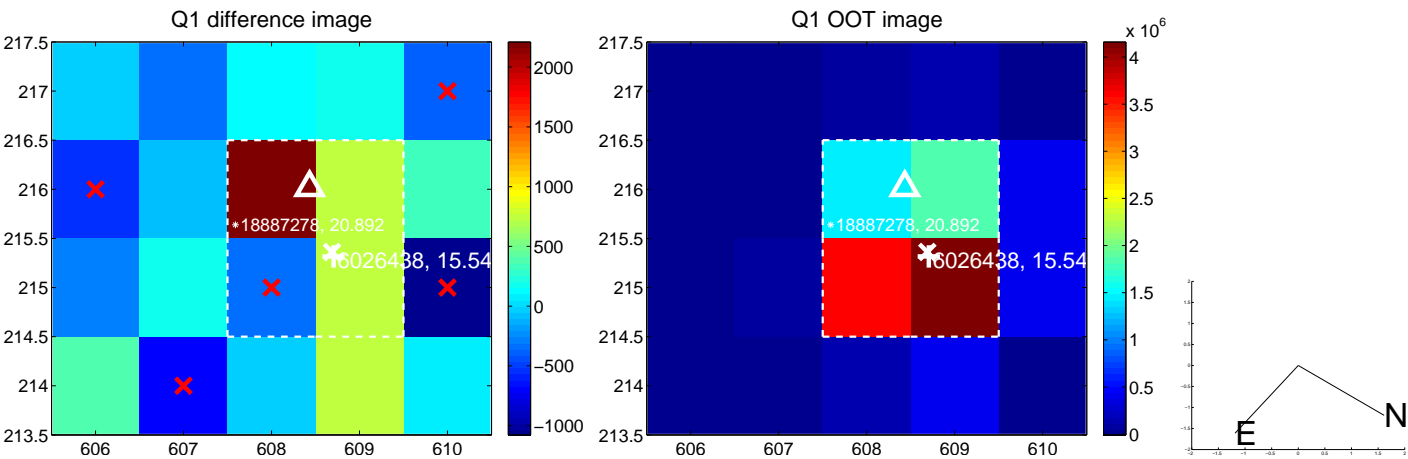
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.341 ± 0.172	1.99	0.281 ± 0.143	-0.193 ± 0.219
PRF-fit source offset from KIC position	0.373 ± 0.181	2.06	0.373 ± 0.192	-0.025 ± 0.236
photometric centroid source offset	0.10 ± 0.46	0.21	0.08 ± 0.45	0.05 ± 0.47

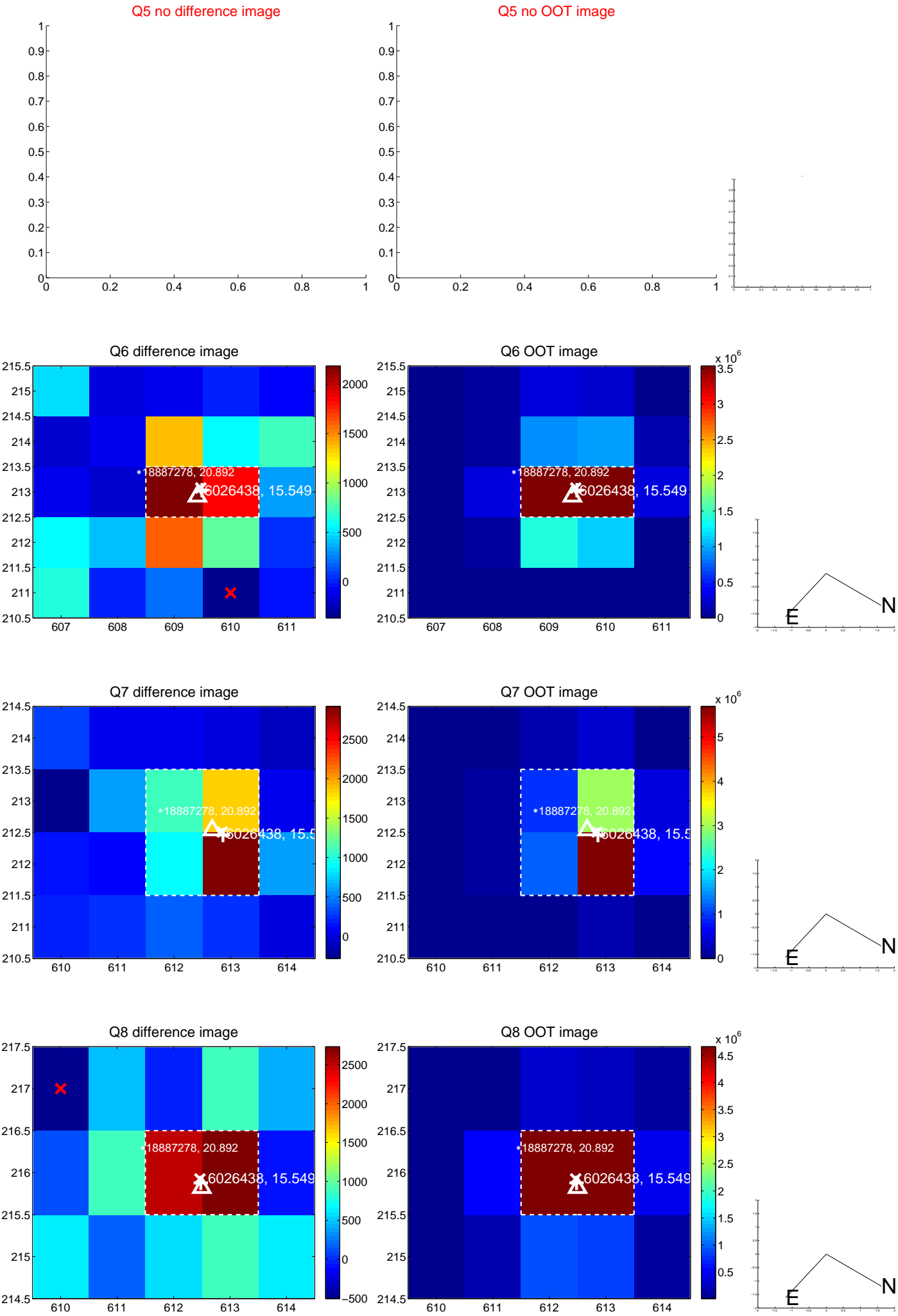


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

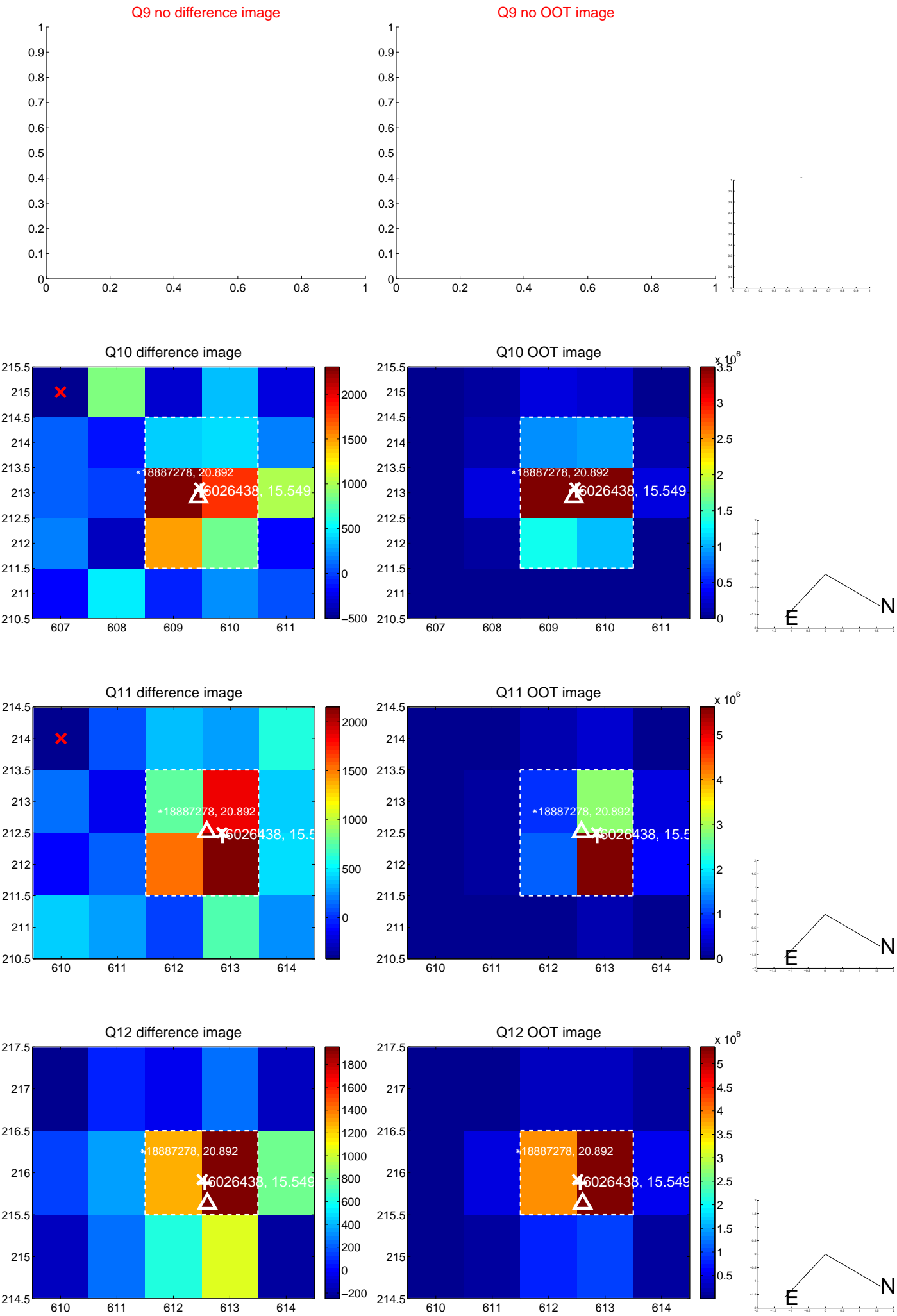
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



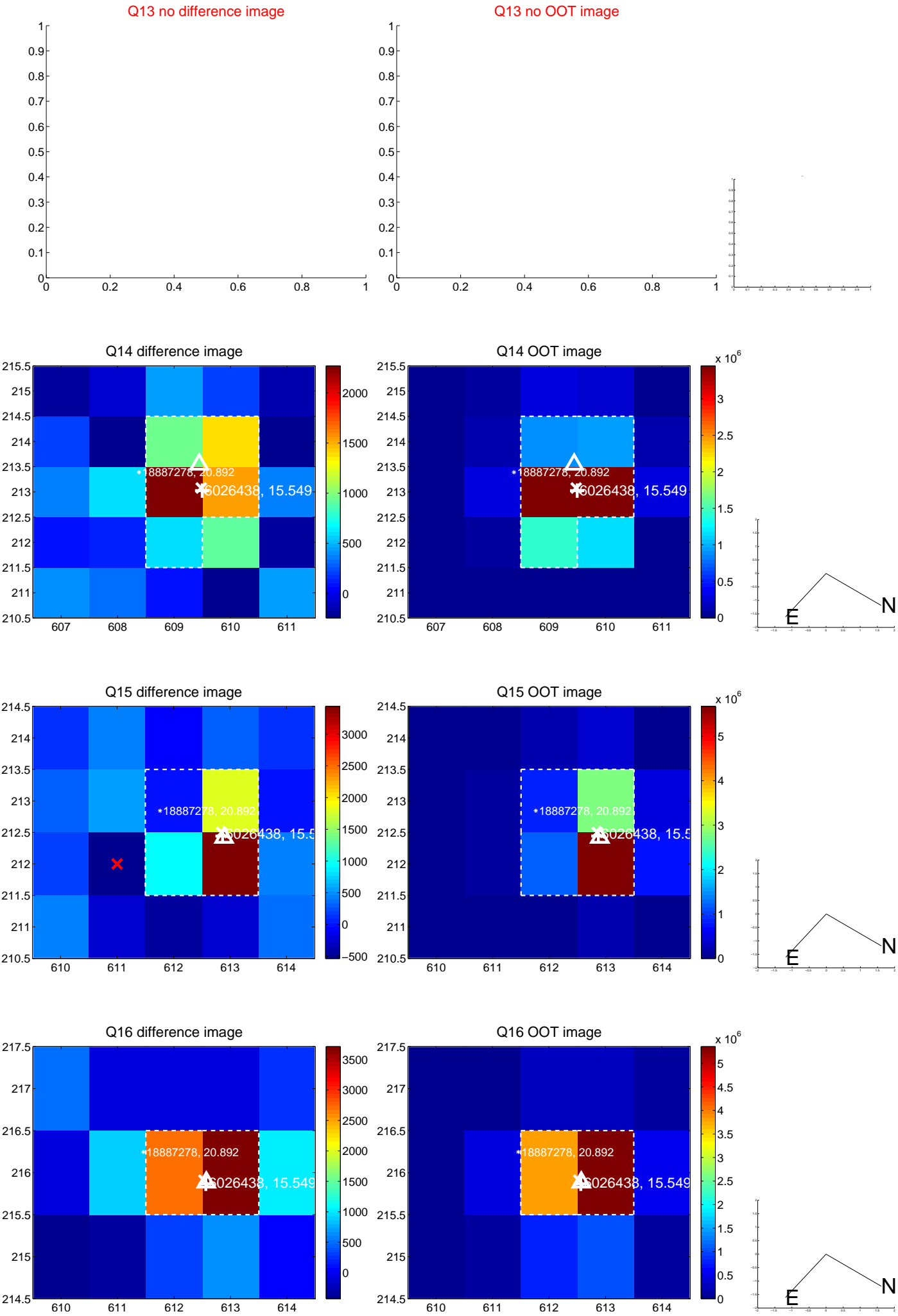
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



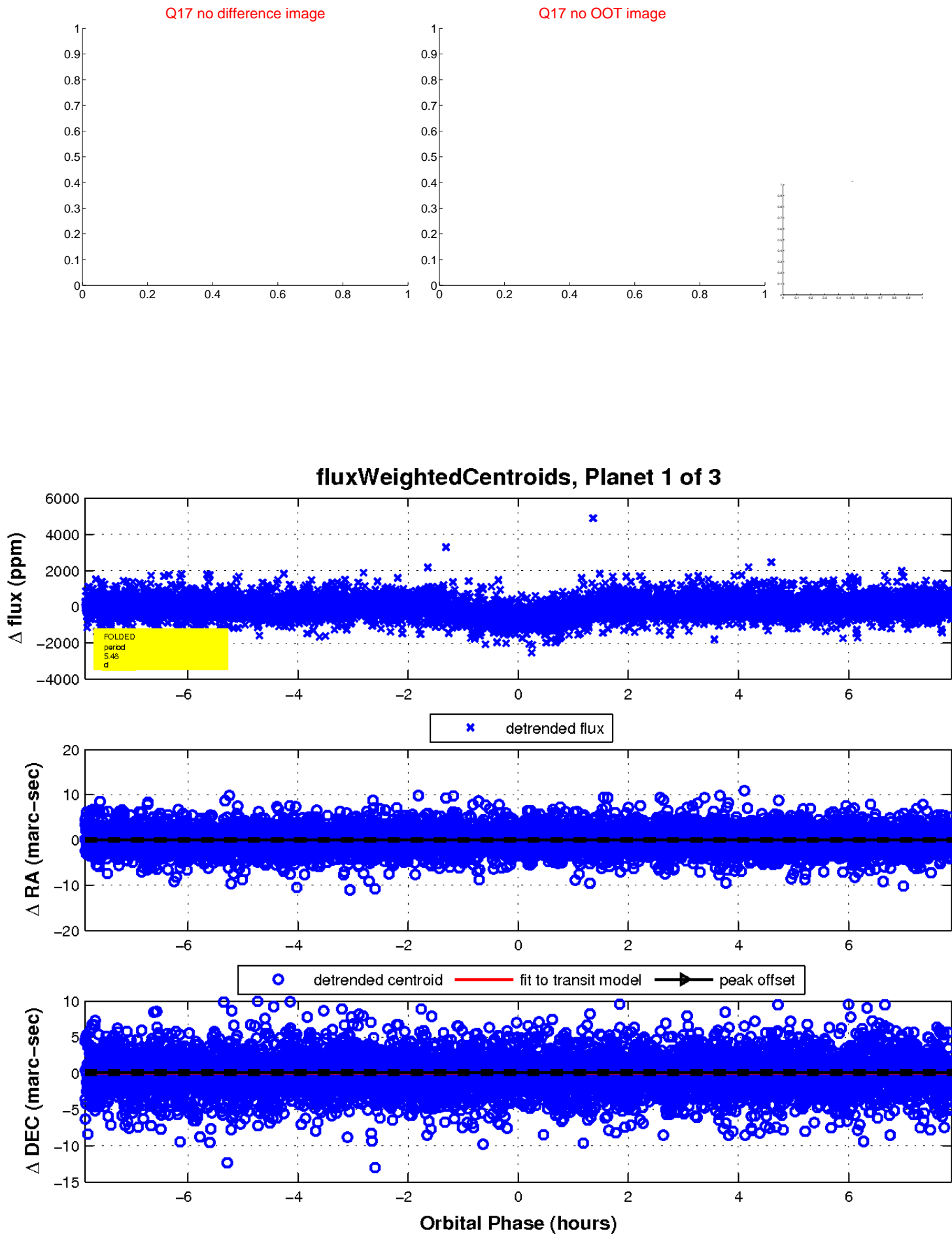
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

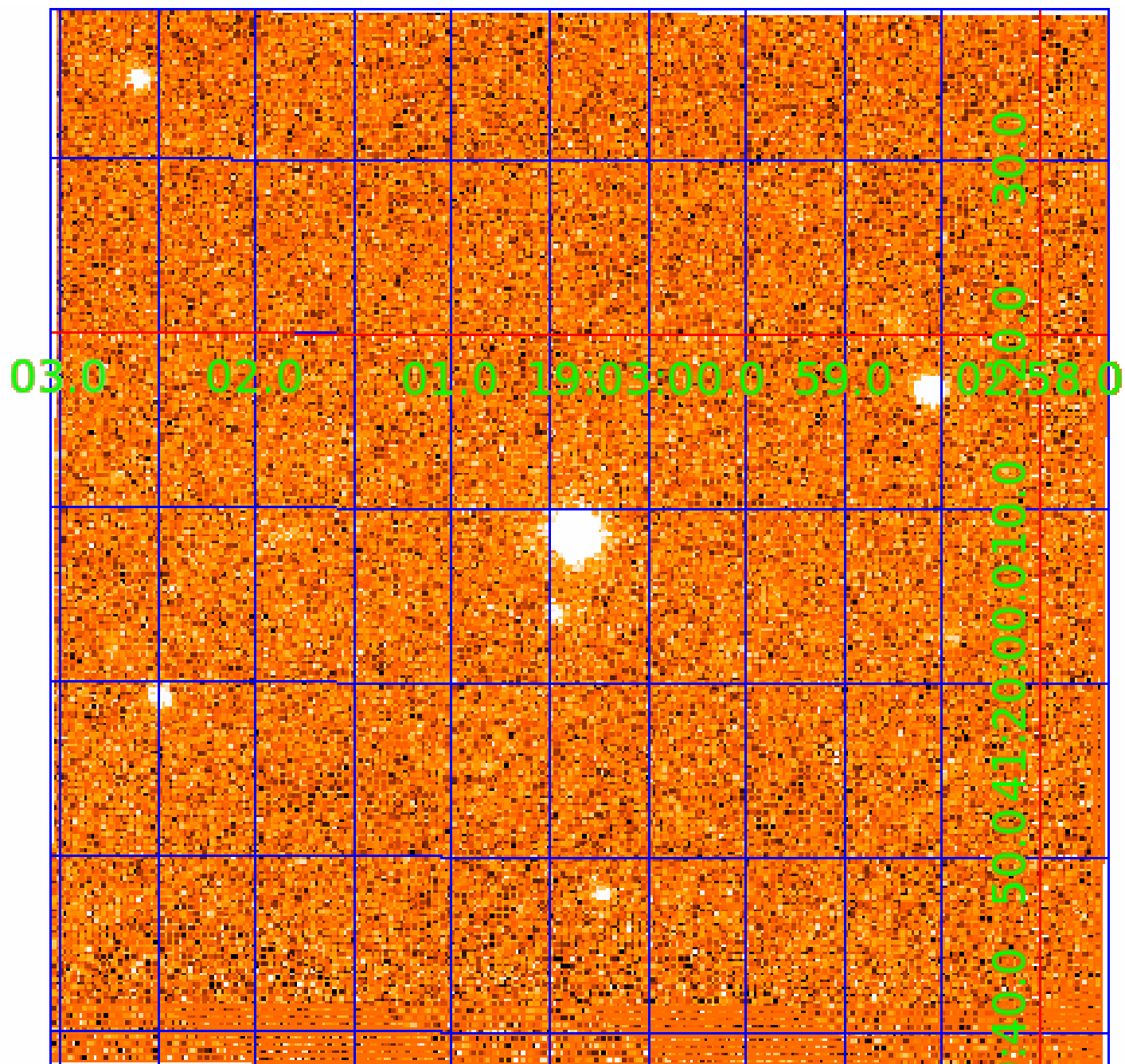


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006026438

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})
006026438-01	OBS	2045.01	5.476629	135.708621	623.9	2.624	25.4	27.6	0.71	4650	2.09	71.21
006026438-02	OBS	2045.02	24.209898	141.469770	463.4	4.553	11.5	11.7	0.71	4650	1.67	9.82
006026438-03	OBS	2045.03	16.934557	137.260588	367.6	3.487	8.7	9.8	0.71	4650	1.54	15.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006026438-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006026438-02	OBS	FP	0.40	0	0	1	0	CENT_UNRESOLVED_OFFSET
006026438-03	OBS	PC	0.99	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.

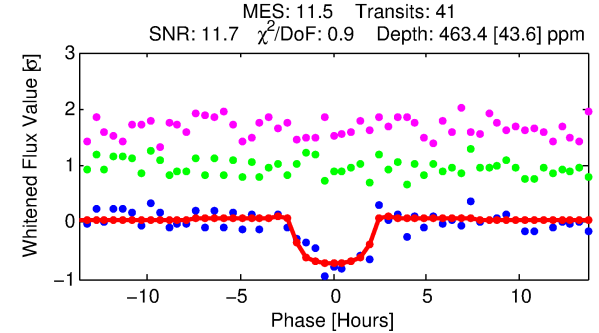
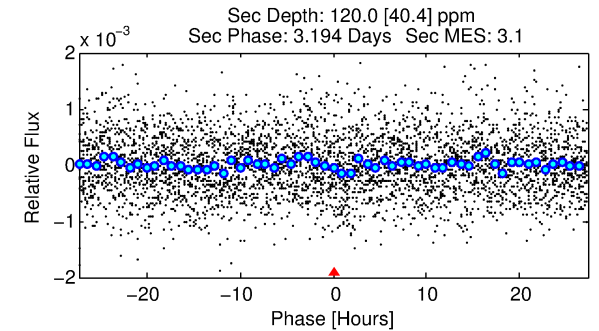
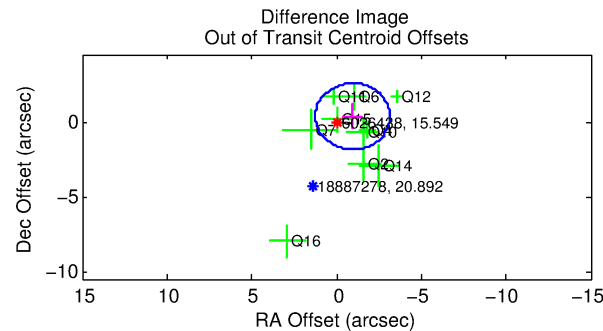
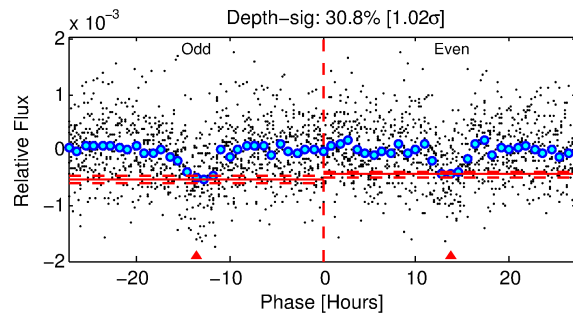
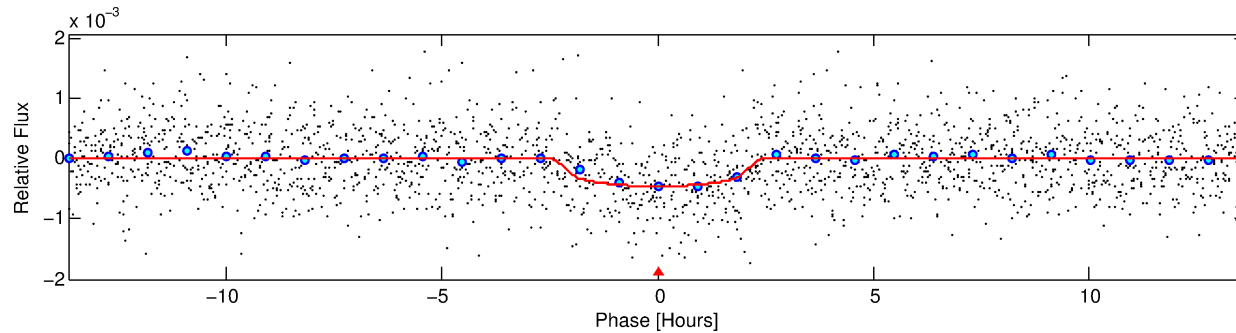
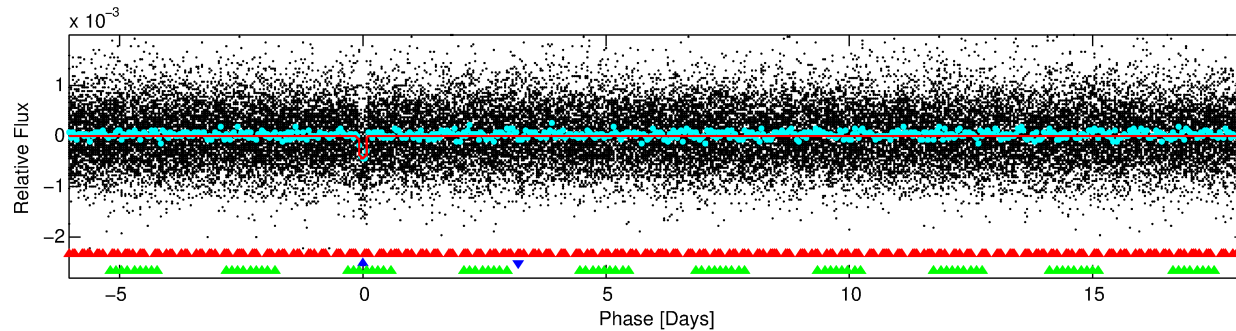
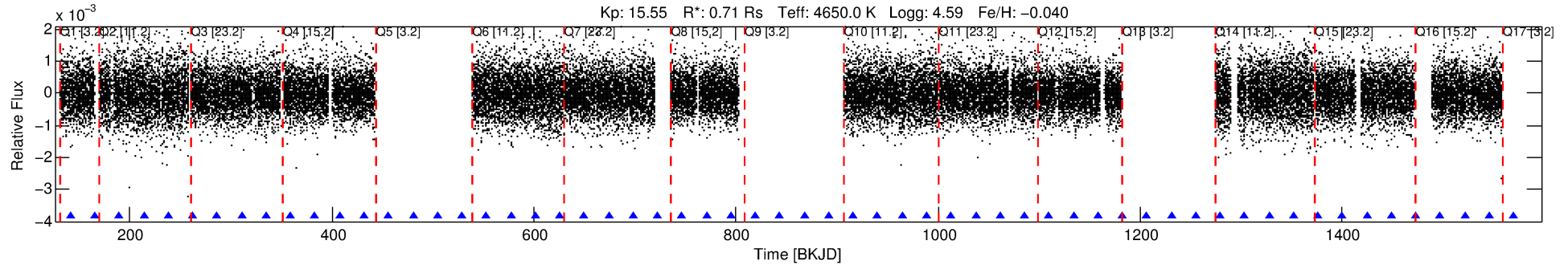
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006026438-02

No Significant Match Found

DV One-Page Summary

KIC: 6026438 Candidate: 2 of 3 Period: 24.210 d
KOI: K02045.02 Name: Kepler-354d Corr: 0.942



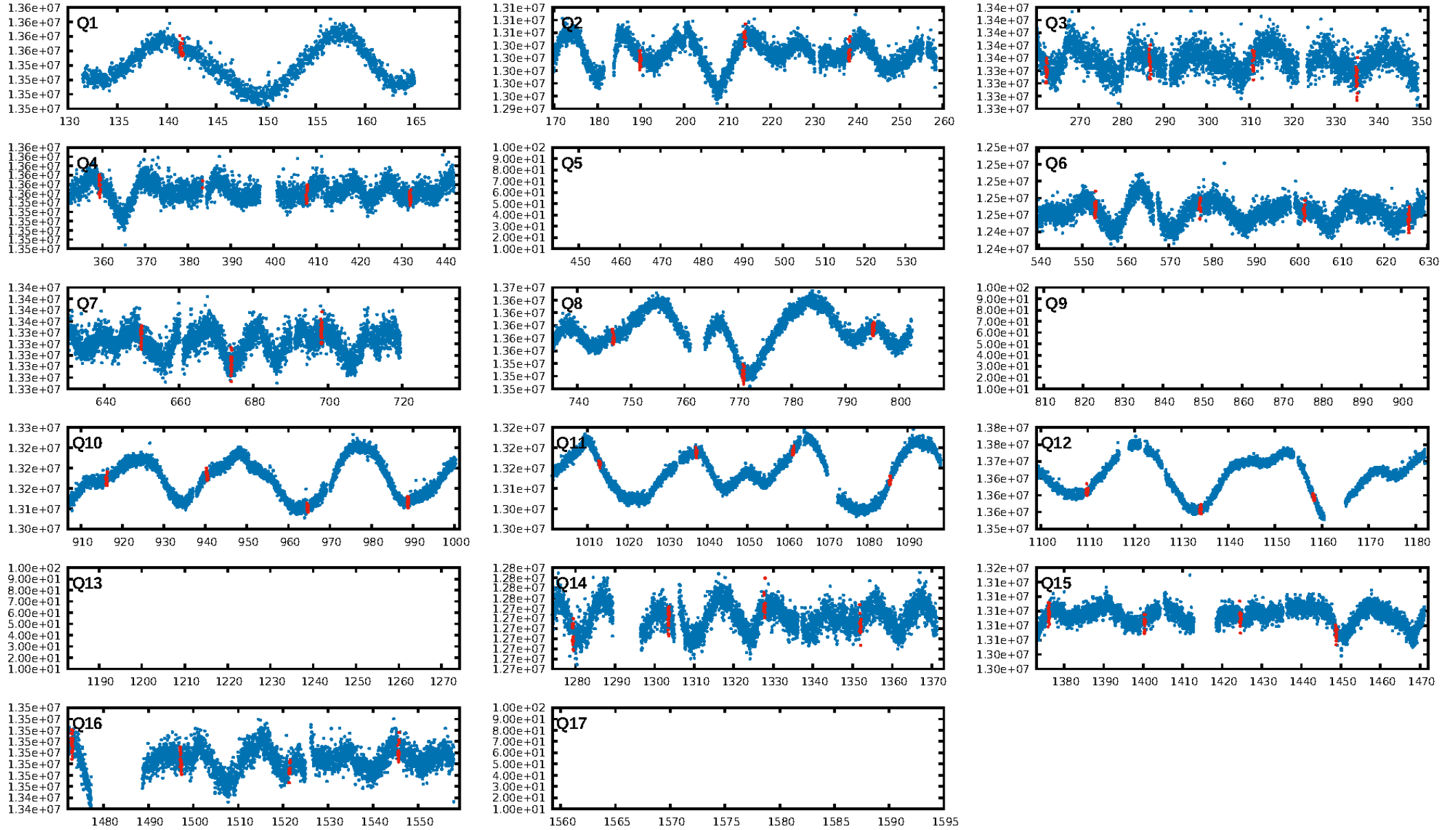
DV Fit Results:

Period = 24.20990 [0.00022] d
Epoch = 141.4698 [0.0077] BKJD
Rp/R* = 0.0217 [0.0158]
a/R* = 27.67 [66.27]
b = 0.76 [1.36]
Seff = 9.82 [1.49]
Teq = 451 [17] K
Rp = 1.67 [1.22] Re
a = 0.1458 [0.0100] AU
Ag = 502.79 [752.55] [0.67 σ]
Teffp = 3304 [1238] K [2.30 σ]

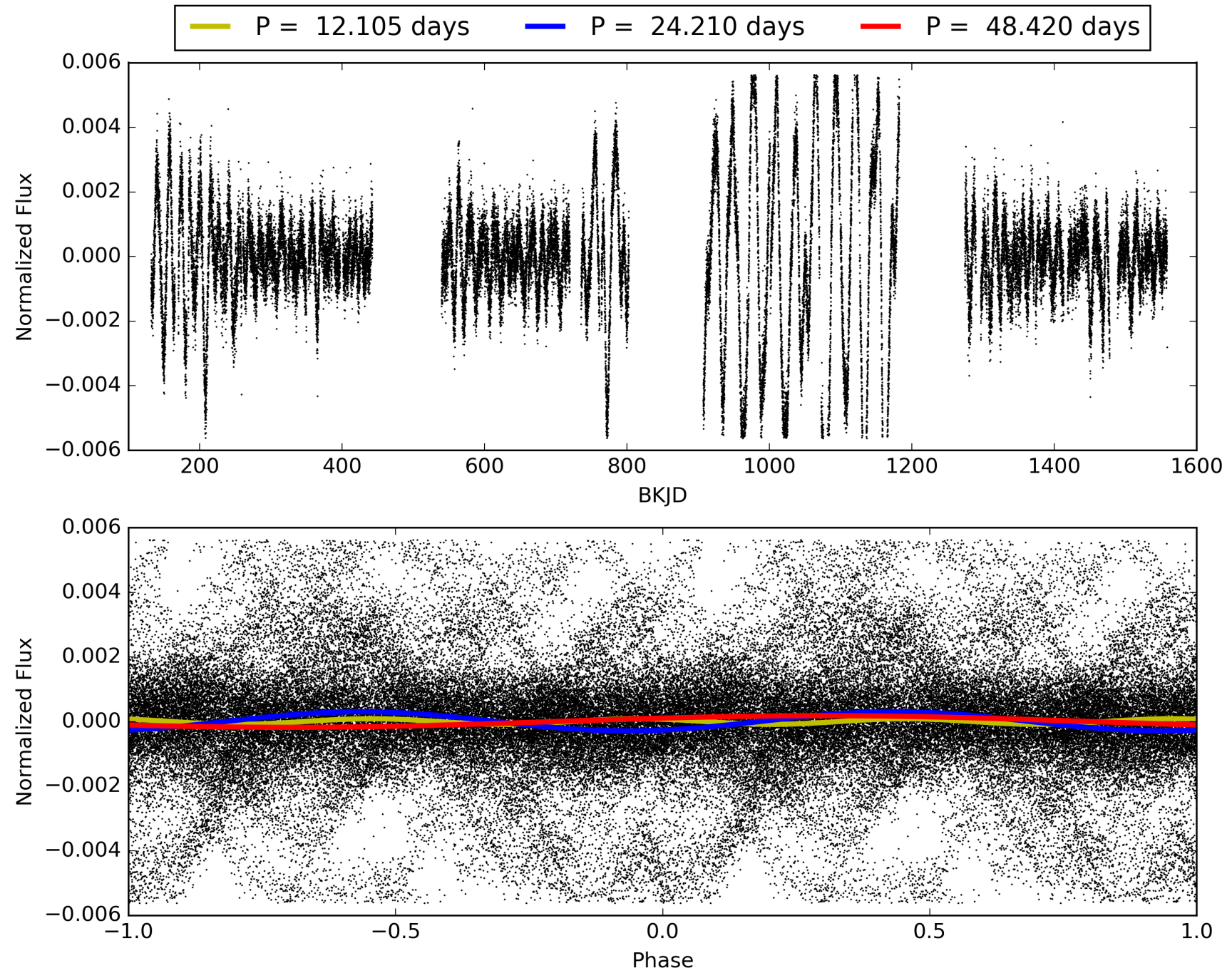
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [30.45 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.79e-29
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 1.406
Centroid-sig: 6.2%
Centroid-so: 1.349 arcsec [1.44 σ]
OotOffset-rm: 1.010 arcsec [1.37 σ]
KicOffset-rm: 0.984 arcsec [1.14 σ]
OotOffset-st: 4/3/3/0 [10]
KicOffset-st: 4/3/3/0 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.92 [12/13]

TCE 006026438-02, PDC Light Curves

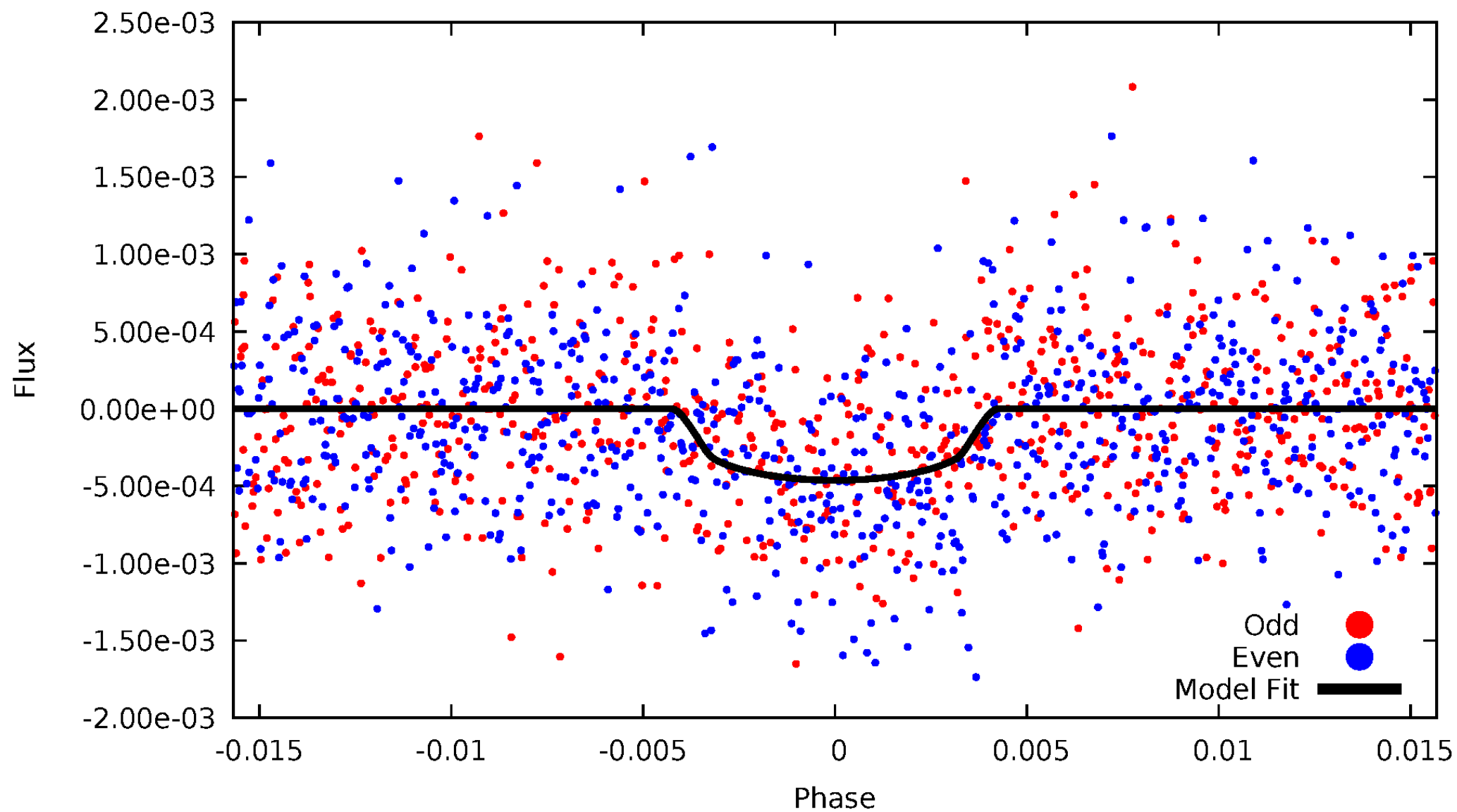


TCE 006026438-02



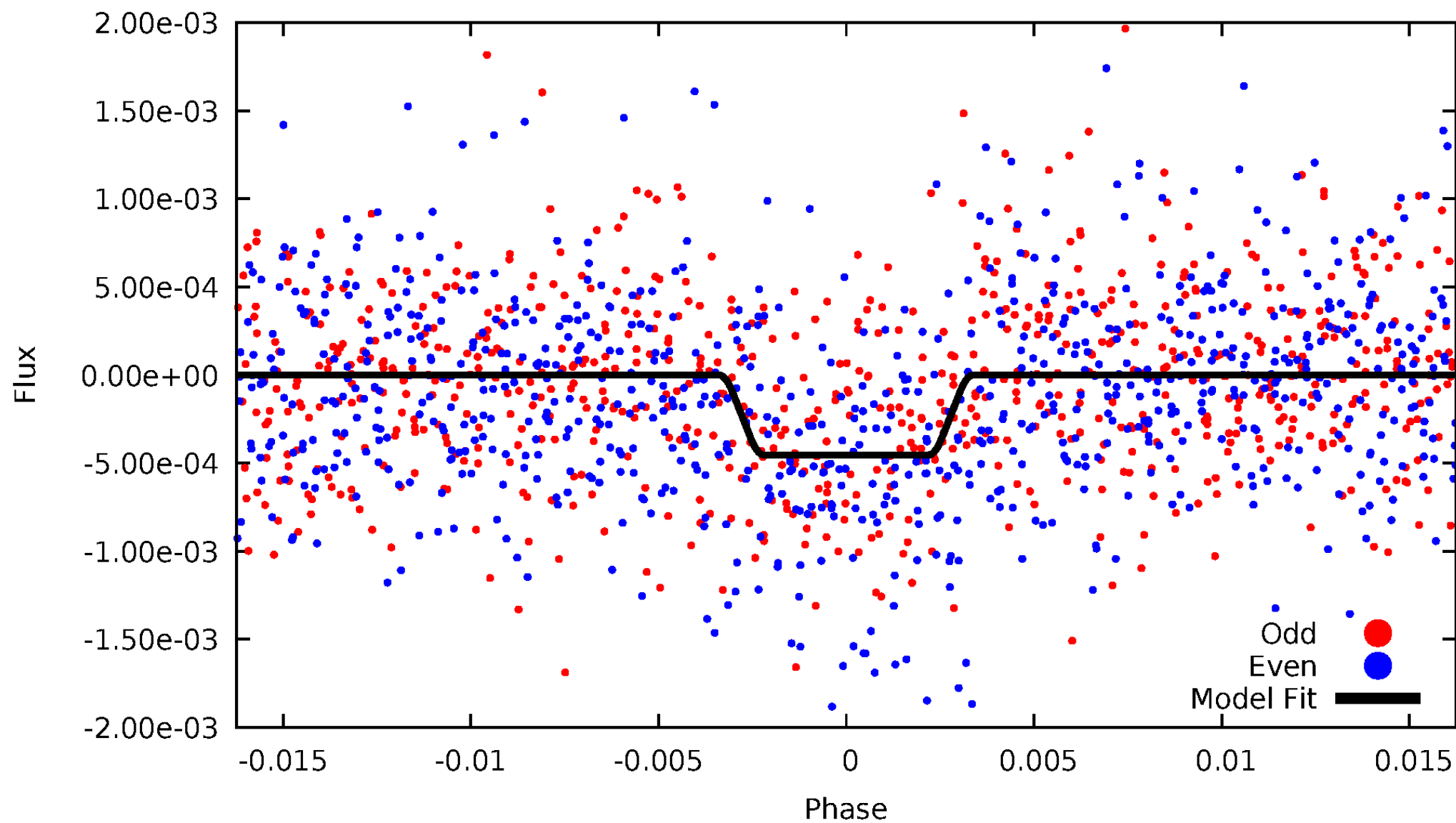
DV Odd/Even

TCE 006026438-02



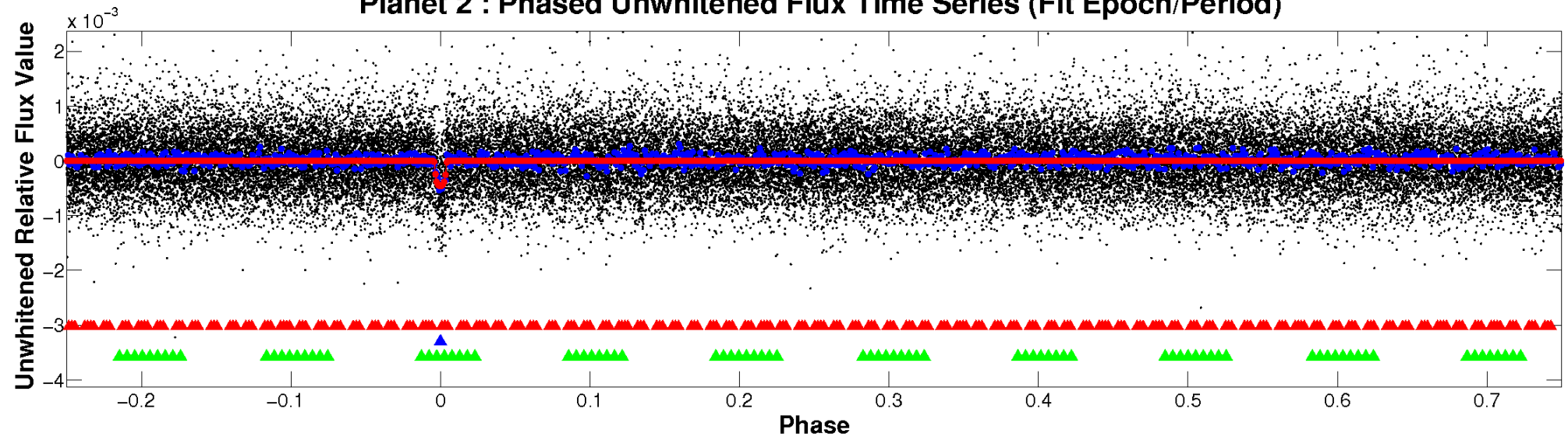
ALT Odd/Even

TCE 006026438-02

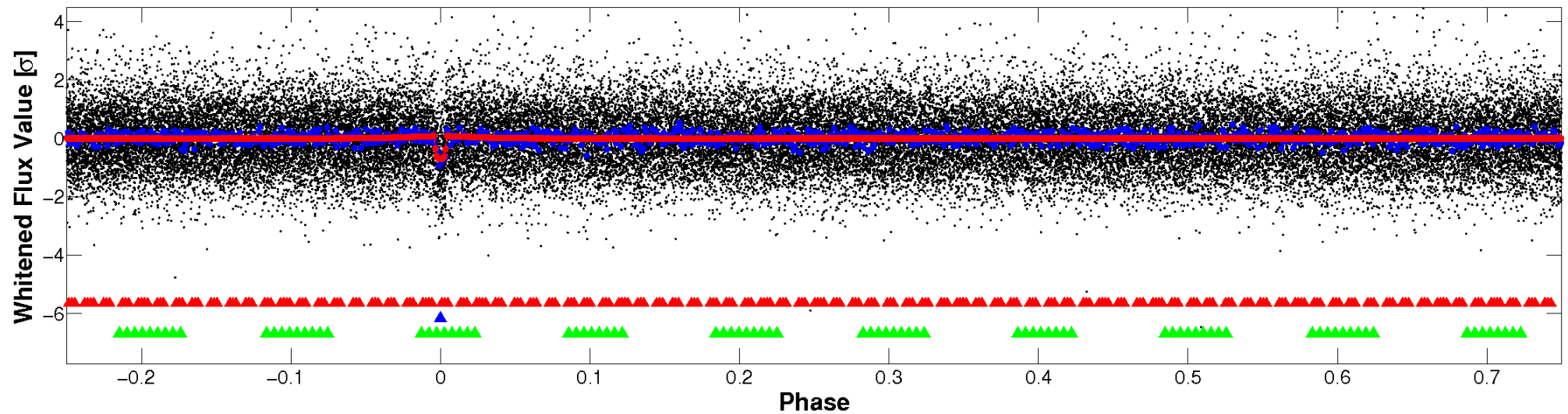


Non-Whitened Vs. Whitened Light Curve

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

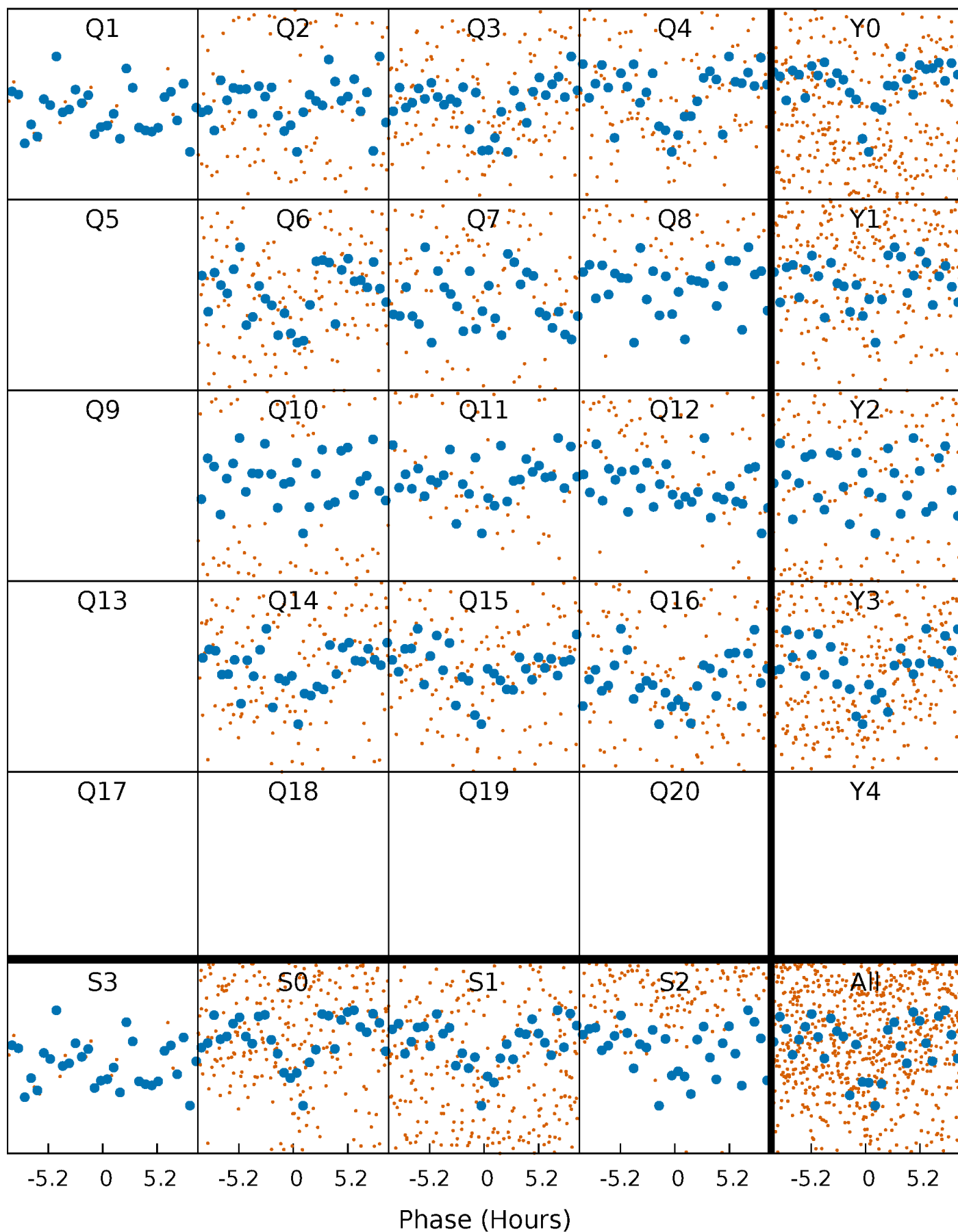


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



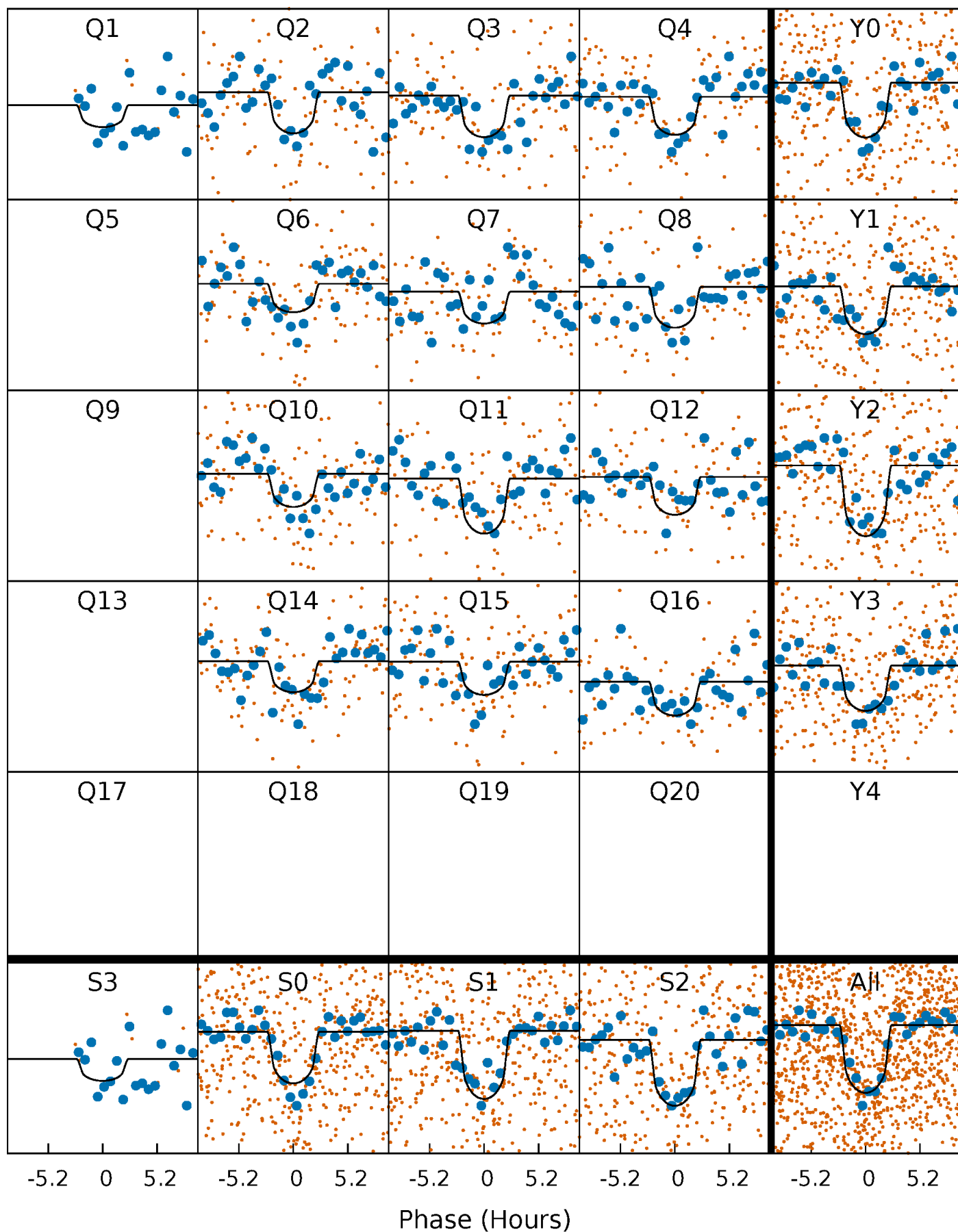
PDC Quarter-Phased Transit Curves

TCE 006026438-02 P= 24.209898 Days $T_0=141.469770$ (BKJD)



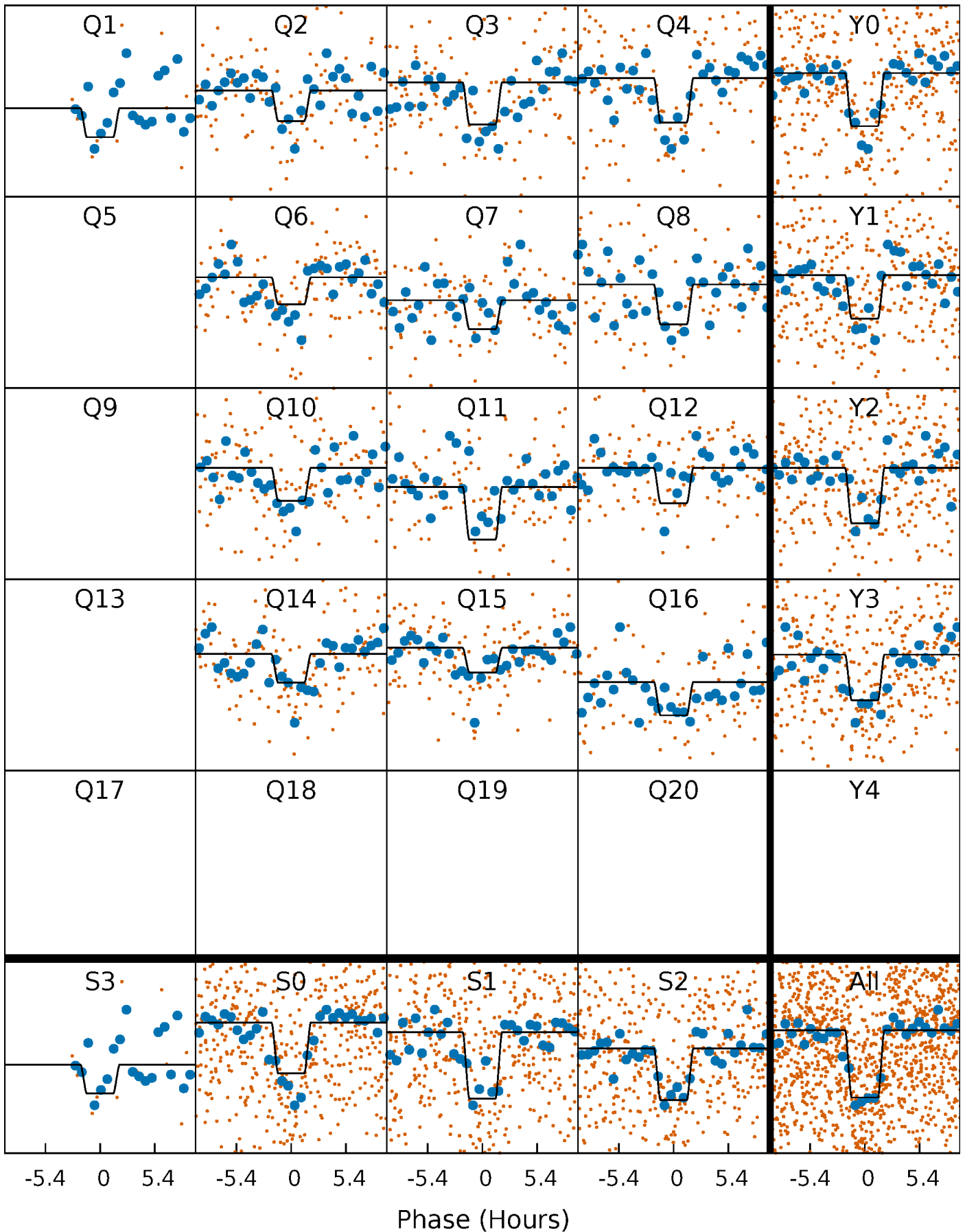
DV Quarter-Phased Transit Curves

TCE 006026438-02 P= 24.209898 Days $T_0=141.469770$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

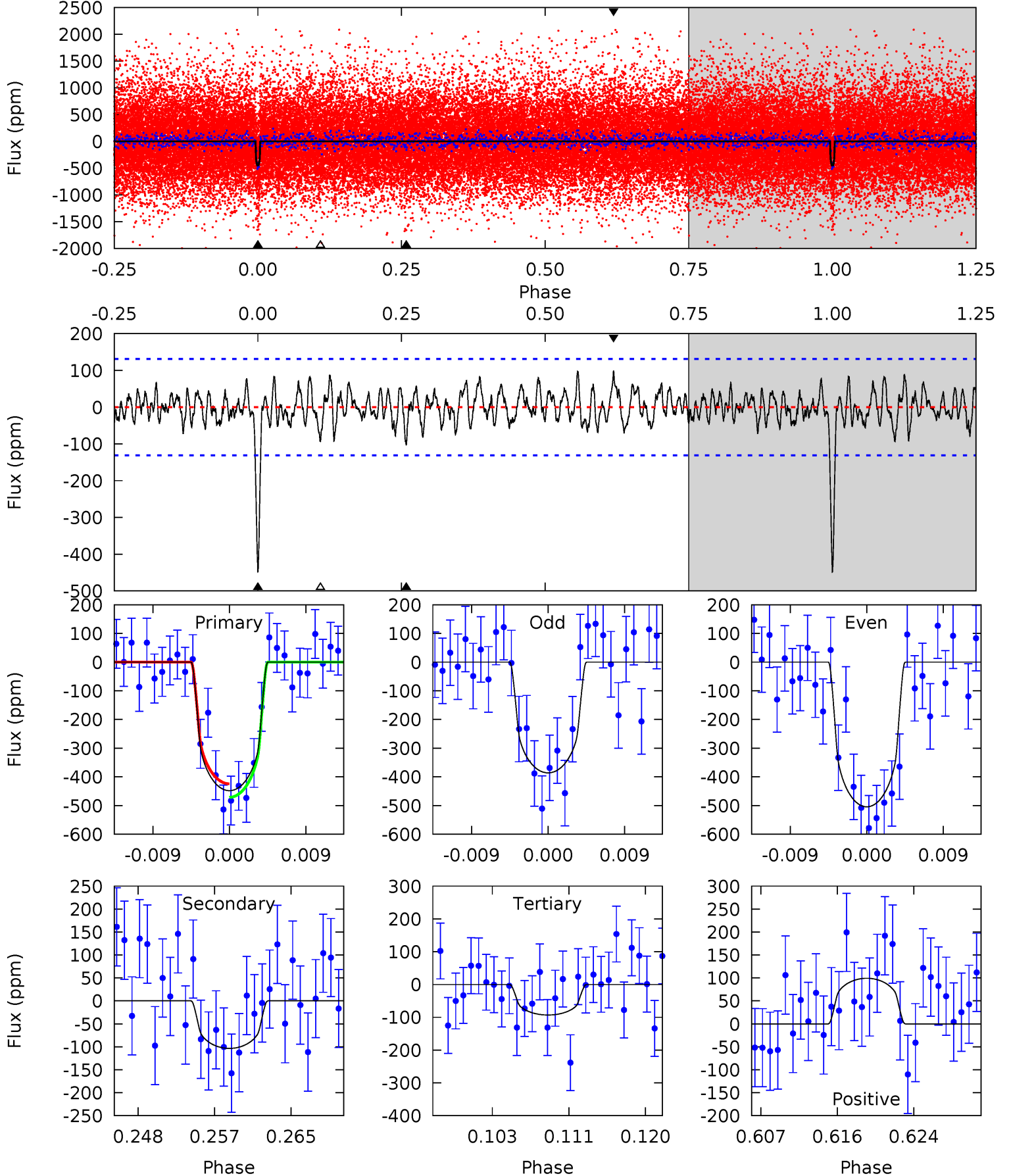
TCE 006026438-02 P= 24.209922 Days $T_0=141.476425$ (BKJD)



DV Model-Shift Uniqueness Test

006026438-02, P = 24.209898 Days, E = 117.259872 Days

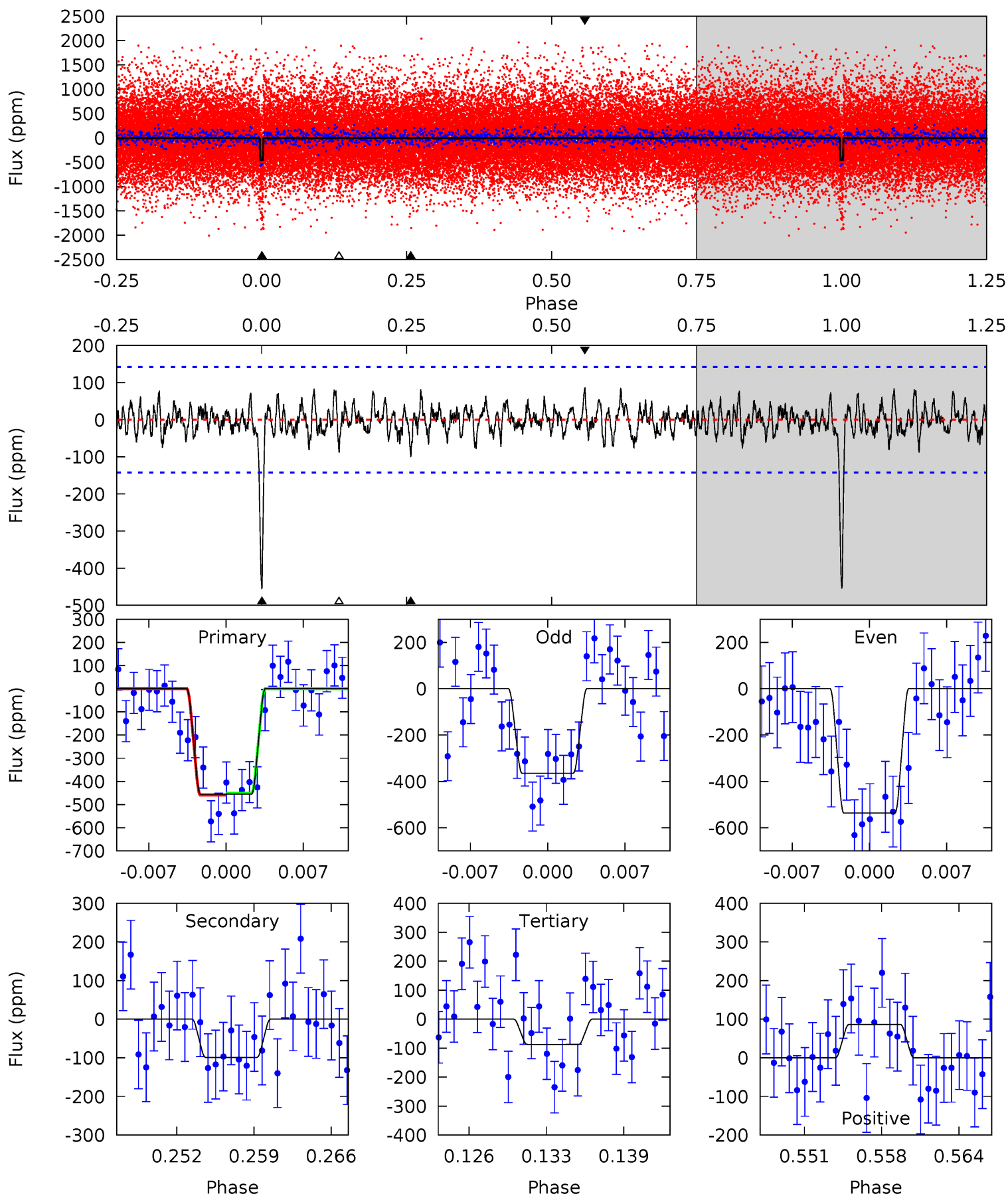
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	3.99	3.59	3.82	5.06	2.63	1.34	13.7	13.4	0.40	0.16	2.28	1.05	0.18	0.91



Alt Model-Shift Uniqueness Test

006026438-02, P = 24.209922 Days, E = 117.266503 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	3.55	3.14	3.10	5.10	2.71	1.06	13.1	13.2	0.41	0.44	3.08	0.92	0.16	0.17



Stellar Parameters For KIC 006026438

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4650^{+125}_{-139}	$4.589^{+0.048}_{-0.028}$	$-0.040^{+0.300}_{-0.300}$	$0.706^{+0.046}_{-0.061}$	$0.704^{+0.070}_{-0.058}$	$2.824^{+0.657}_{-0.300}$
	+3%/-3%	+1%/-1%	+750%/-750%	+7%/-9%	+10%/-8%	+23%/-11%
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 006026438-02 / KOI 2045.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-103 ± 26	$1.75^{+1.15}_{-1.02}$	628^{+20}_{-20}	3477^{+1332}_{-498}	395^{+1951}_{-255}
Alt.	-99 ± 28	$1.82^{+1.11}_{-1.05}$	628^{+20}_{-20}	3399^{+1163}_{-445}	349^{+1480}_{-218}

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

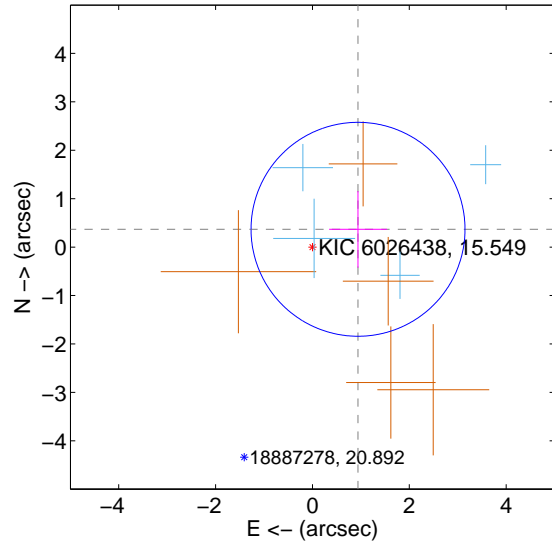
Supplemental centroid analysis for 006026438-02. Kepler magnitude: 15.55. Transit SNR 11.70

There are 4 quarters with good PRF difference image offsets

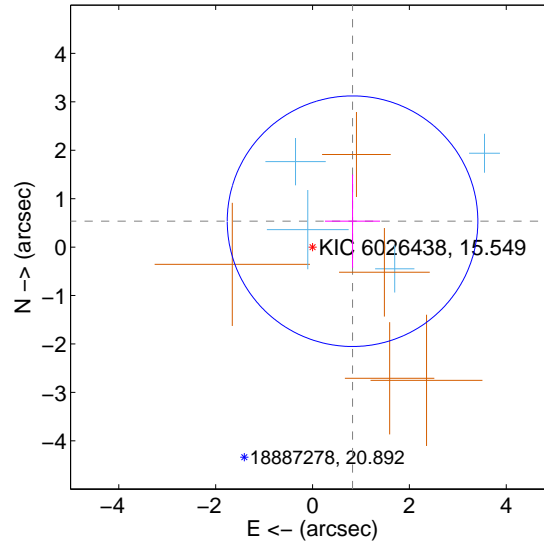
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.010 ± 0.736	1.37	-0.941 ± 0.597	0.368 ± 0.791
PRF-fit source offset from KIC position	0.984 ± 0.862	1.14	-0.826 ± 0.569	0.535 ± 0.961
photometric centroid source offset	1.35 ± 0.94	1.44	-1.26 ± 0.93	0.47 ± 0.99

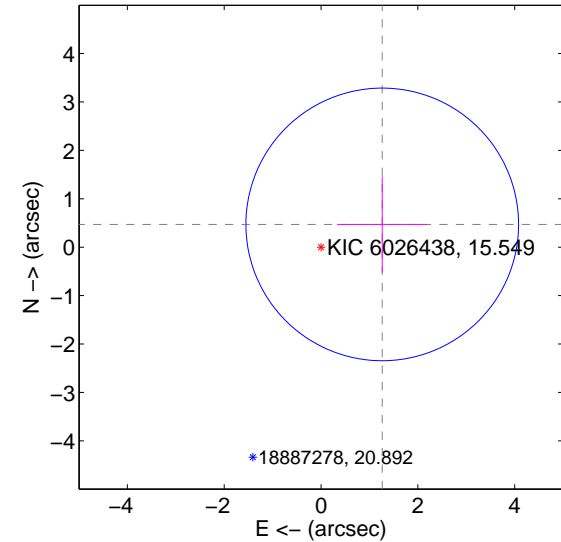
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

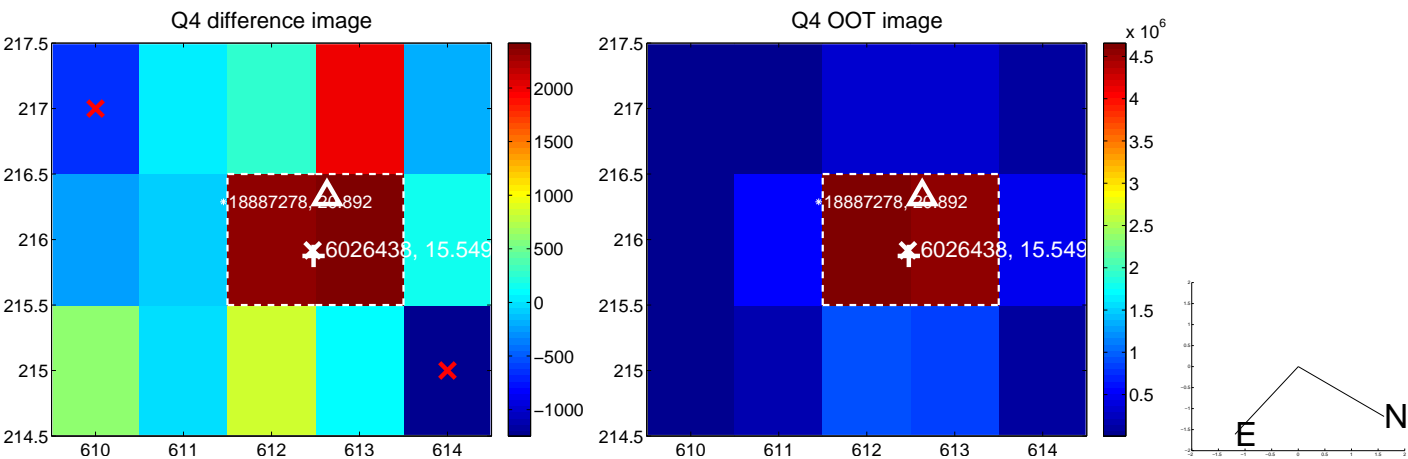
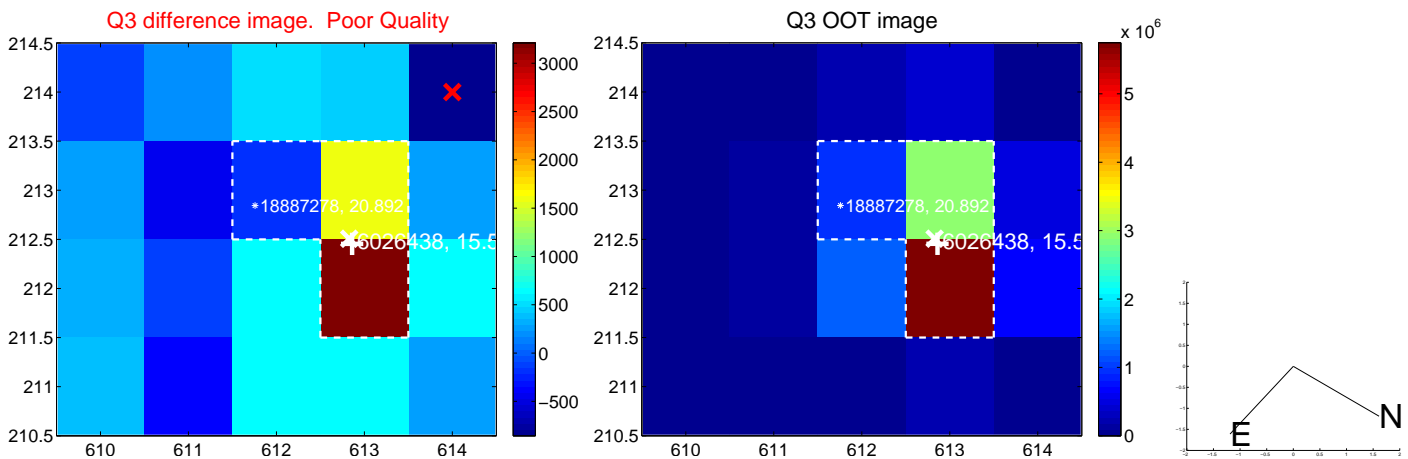
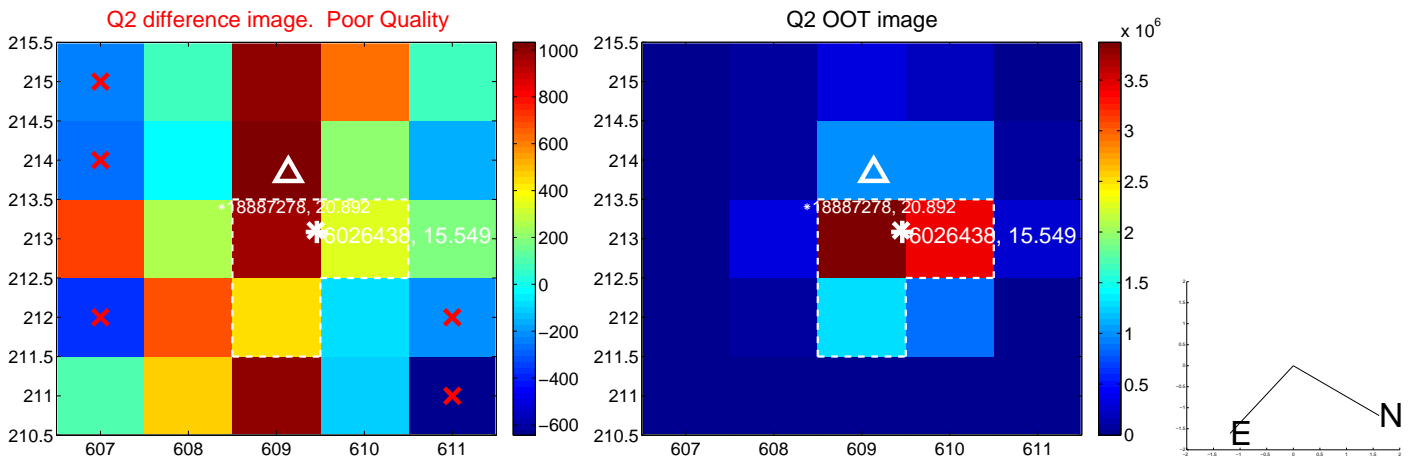
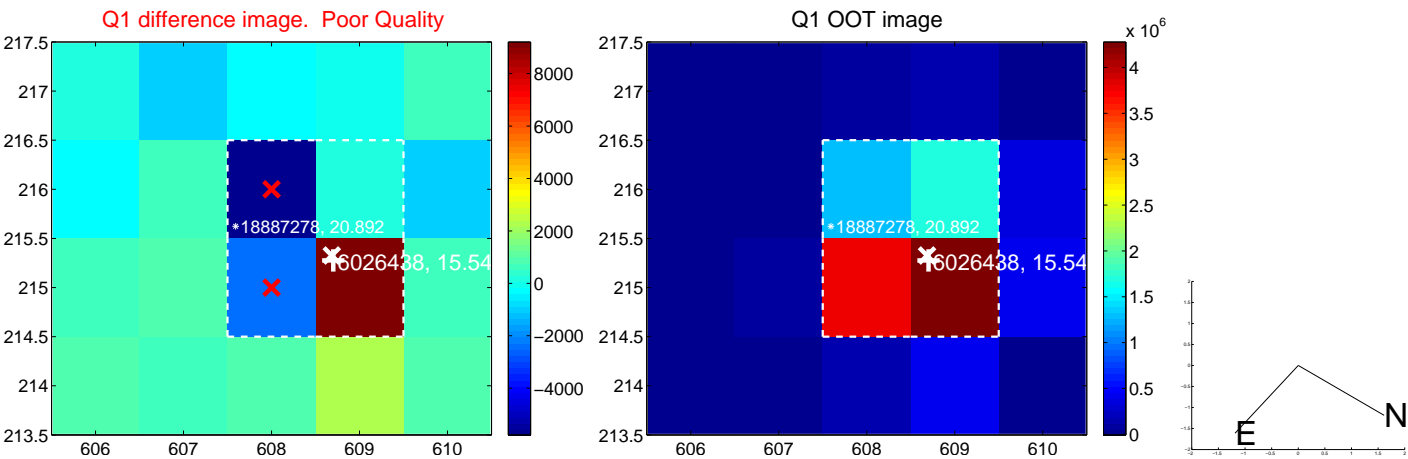


offset from photometric centroids

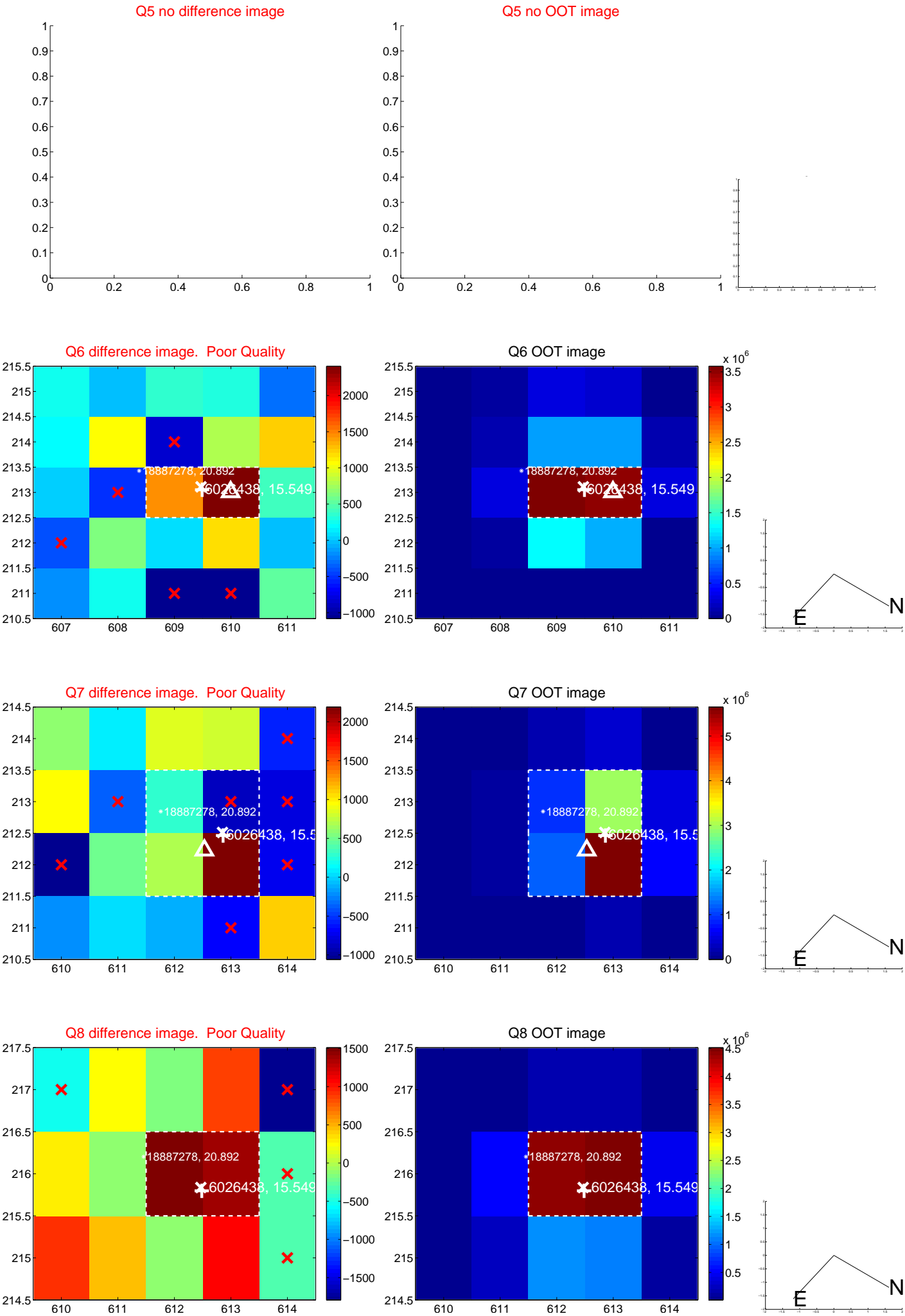


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

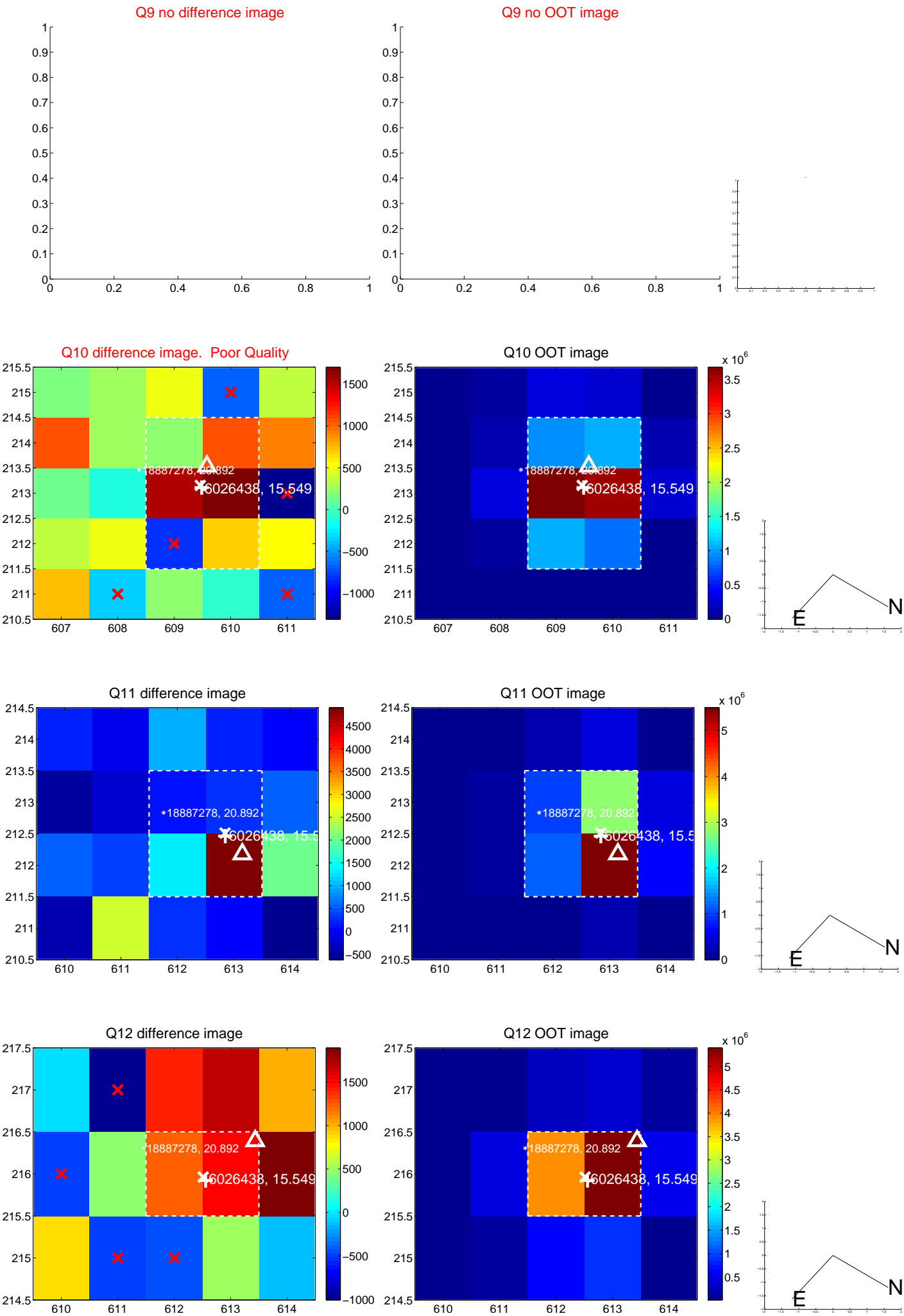
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



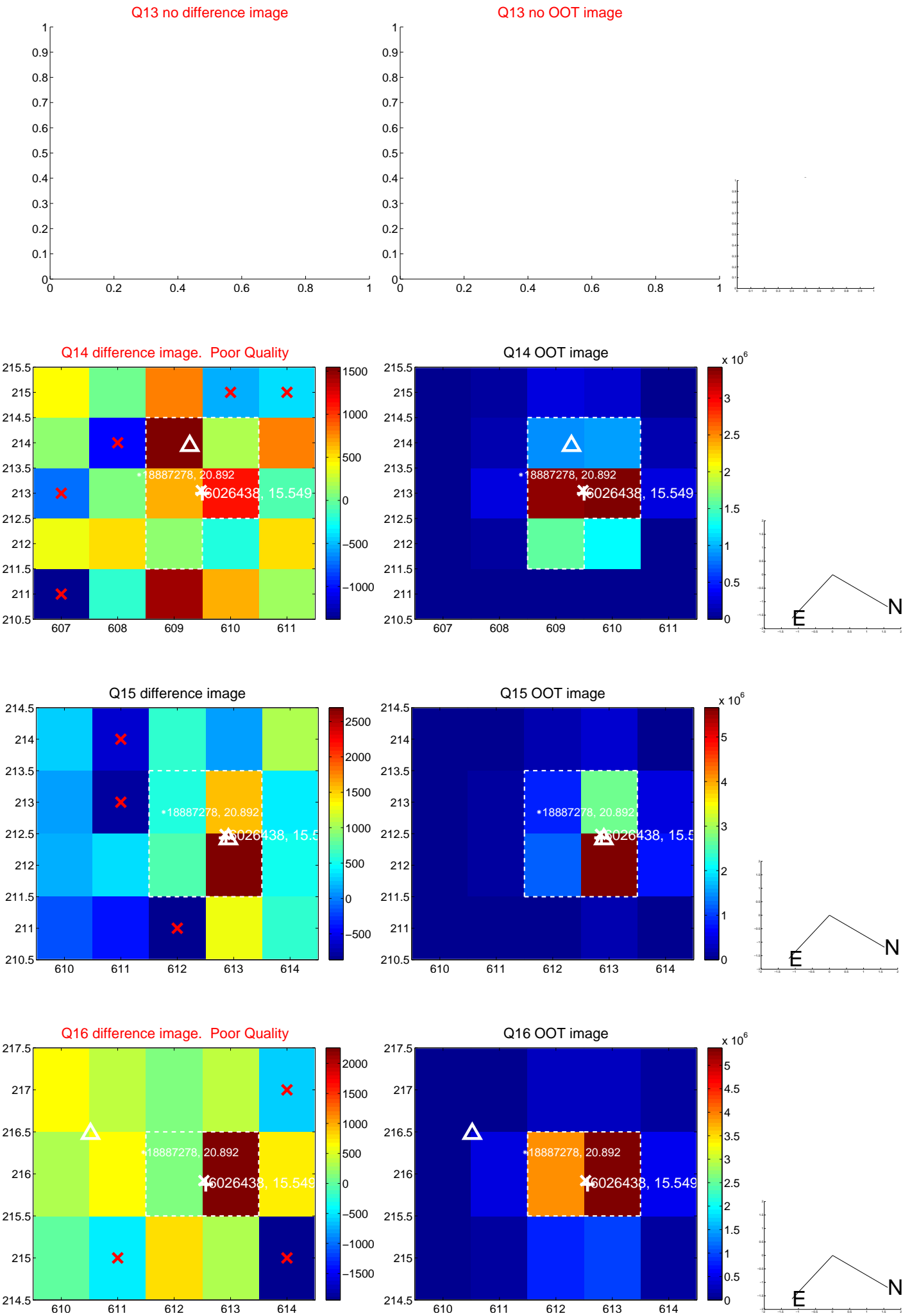
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



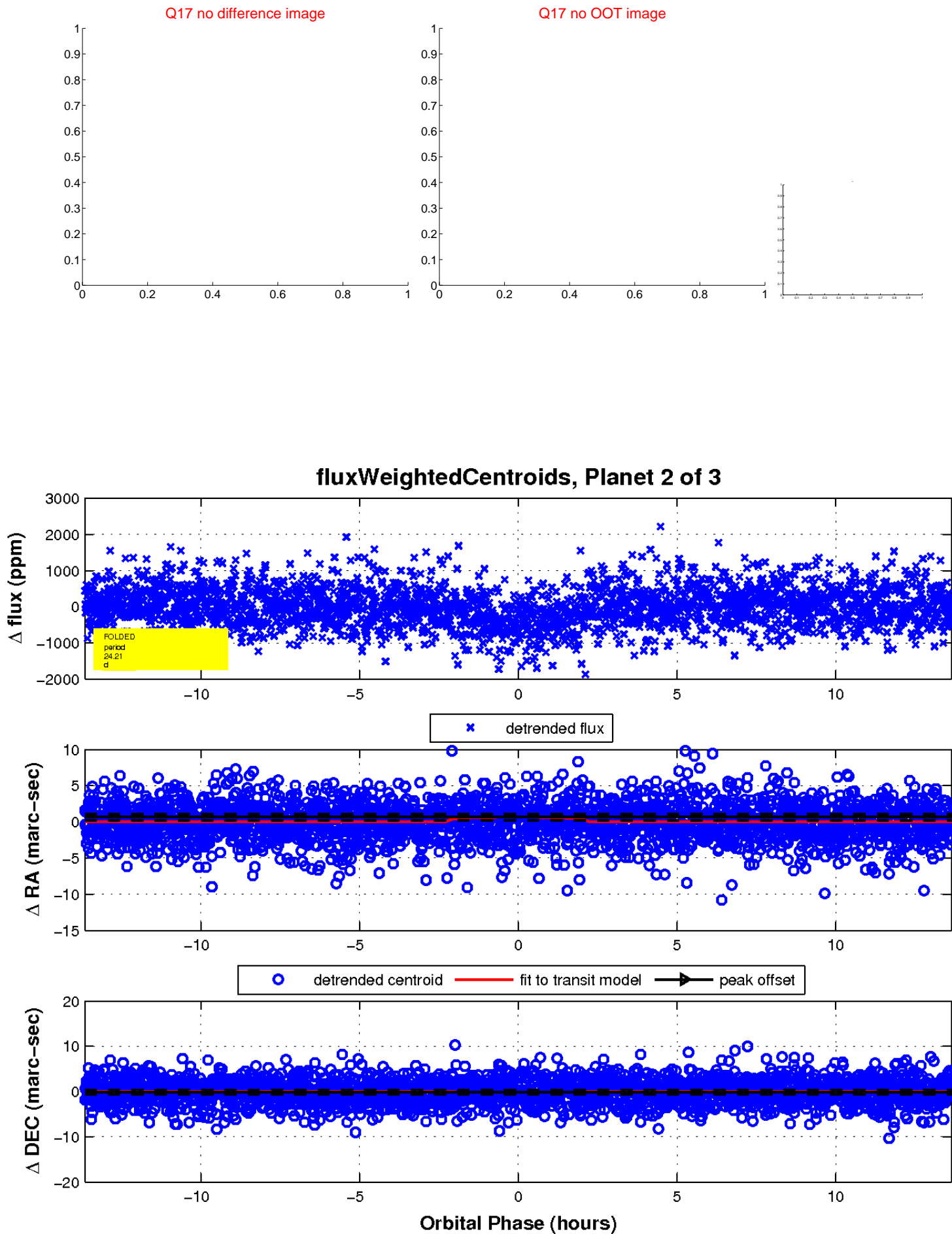
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

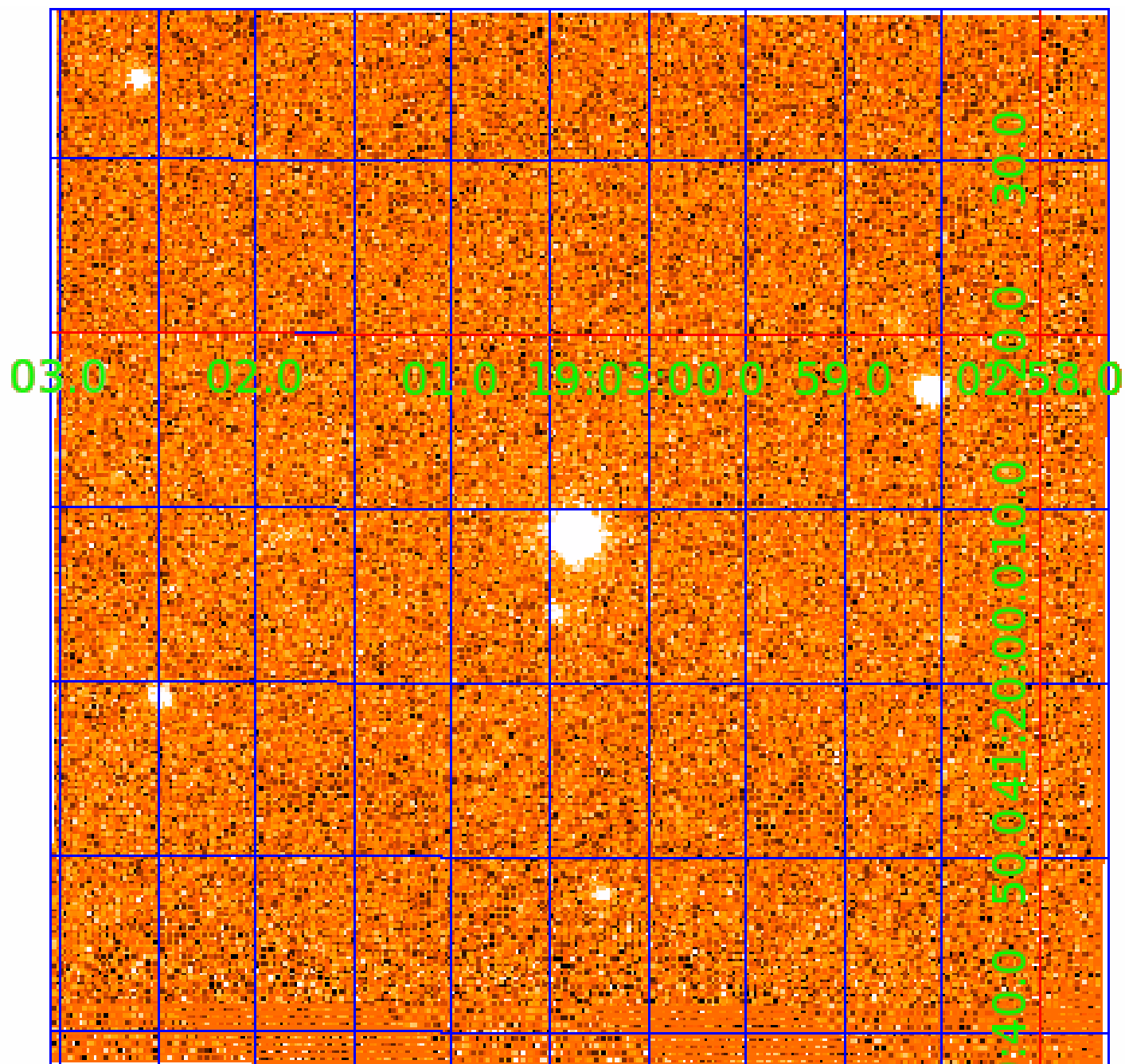


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006026438

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})
006026438-01	OBS	2045.01	5.476629	135.708621	623.9	2.624	25.4	27.6	0.71	4650	2.09	71.21
006026438-02	OBS	2045.02	24.209898	141.469770	463.4	4.553	11.5	11.7	0.71	4650	1.67	9.82
006026438-03	OBS	2045.03	16.934557	137.260588	367.6	3.487	8.7	9.8	0.71	4650	1.54	15.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006026438-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006026438-02	OBS	FP	0.40	0	0	1	0	CENT_UNRESOLVED_OFFSET
006026438-03	OBS	PC	0.99	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.

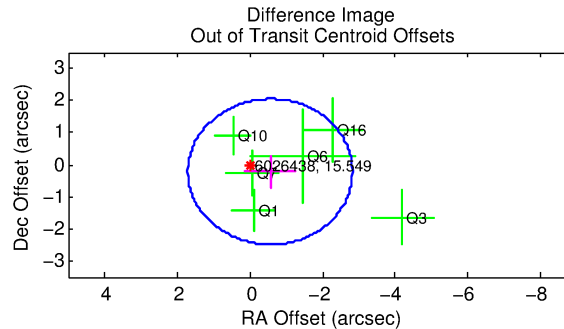
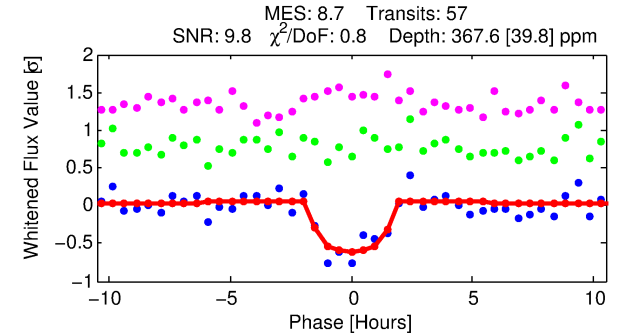
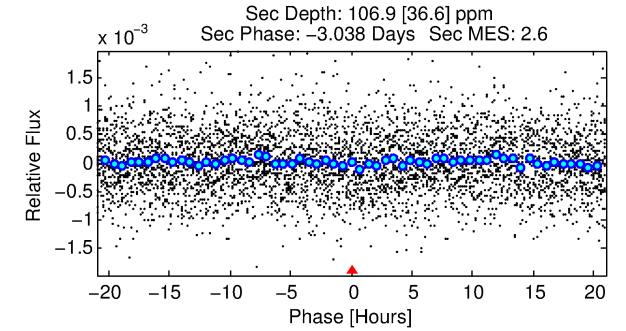
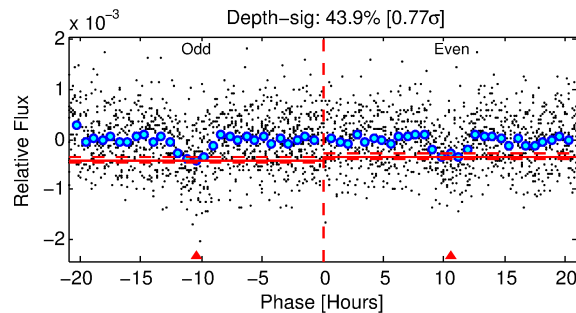
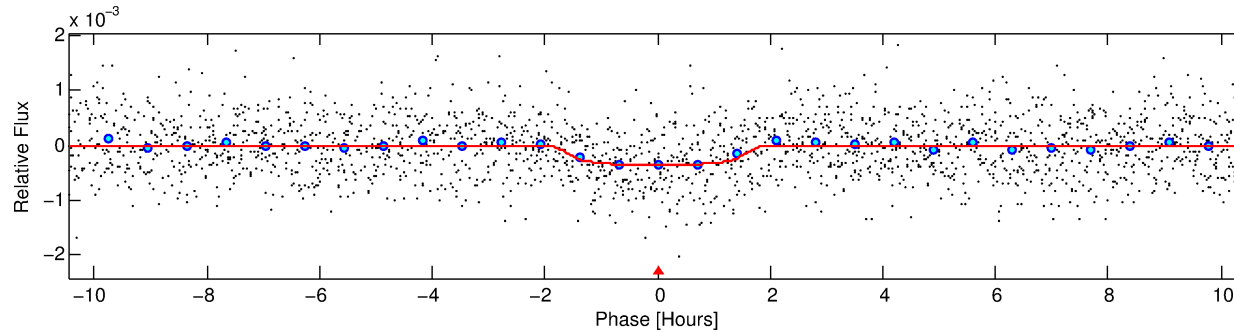
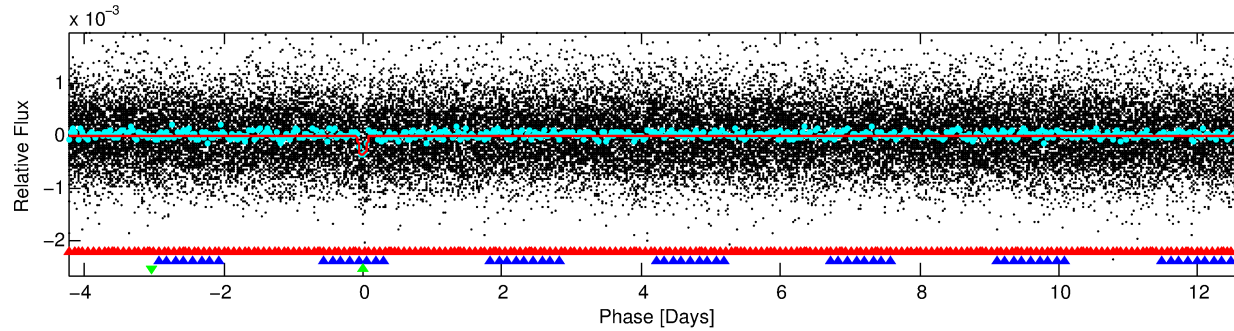
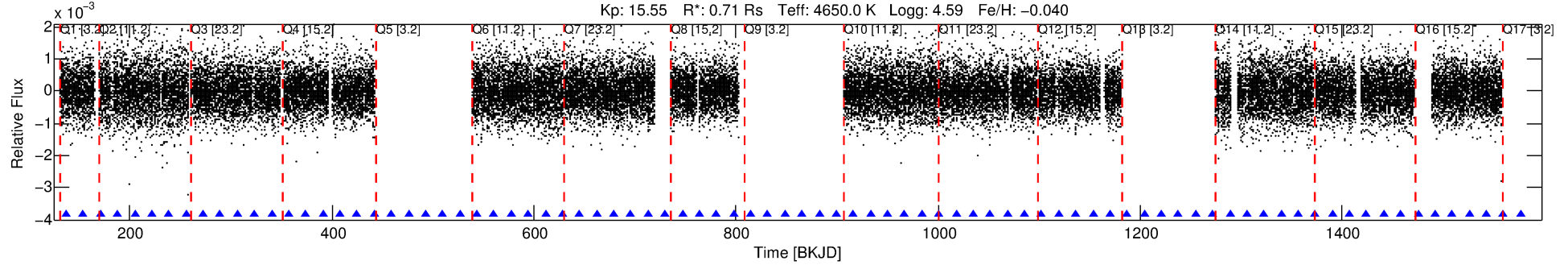
Ephemeris Match Information For 006026438-03

No Significant Match Found

DV One-Page Summary

KIC: 6026438 Candidate: 3 of 3 Period: 16.935 d
KOI: K02045.03 Name: Kepler-354c Corr: 0.955

Kp: 15.55 R*: 0.71 Rs Teff: 4650.0 K Logg: 4.59 Fe/H: -0.040



DV Fit Results:

Period = 16.93456 [0.00015] d
Epoch = 137.2606 [0.0070] BKJD
Rp/R* = 0.0200 [0.0181]
a/R* = 22.64 [69.58]
b = 0.82 [1.29]
Seff = 15.81 [2.40]
Teq = 508 [19] K
Rp = 1.54 [1.40] Re
a = 0.1149 [0.0079] AU
Ag = 326.43 [600.15] [0.54σ]
Teffp = 3341 [1537] K [1.84σ]

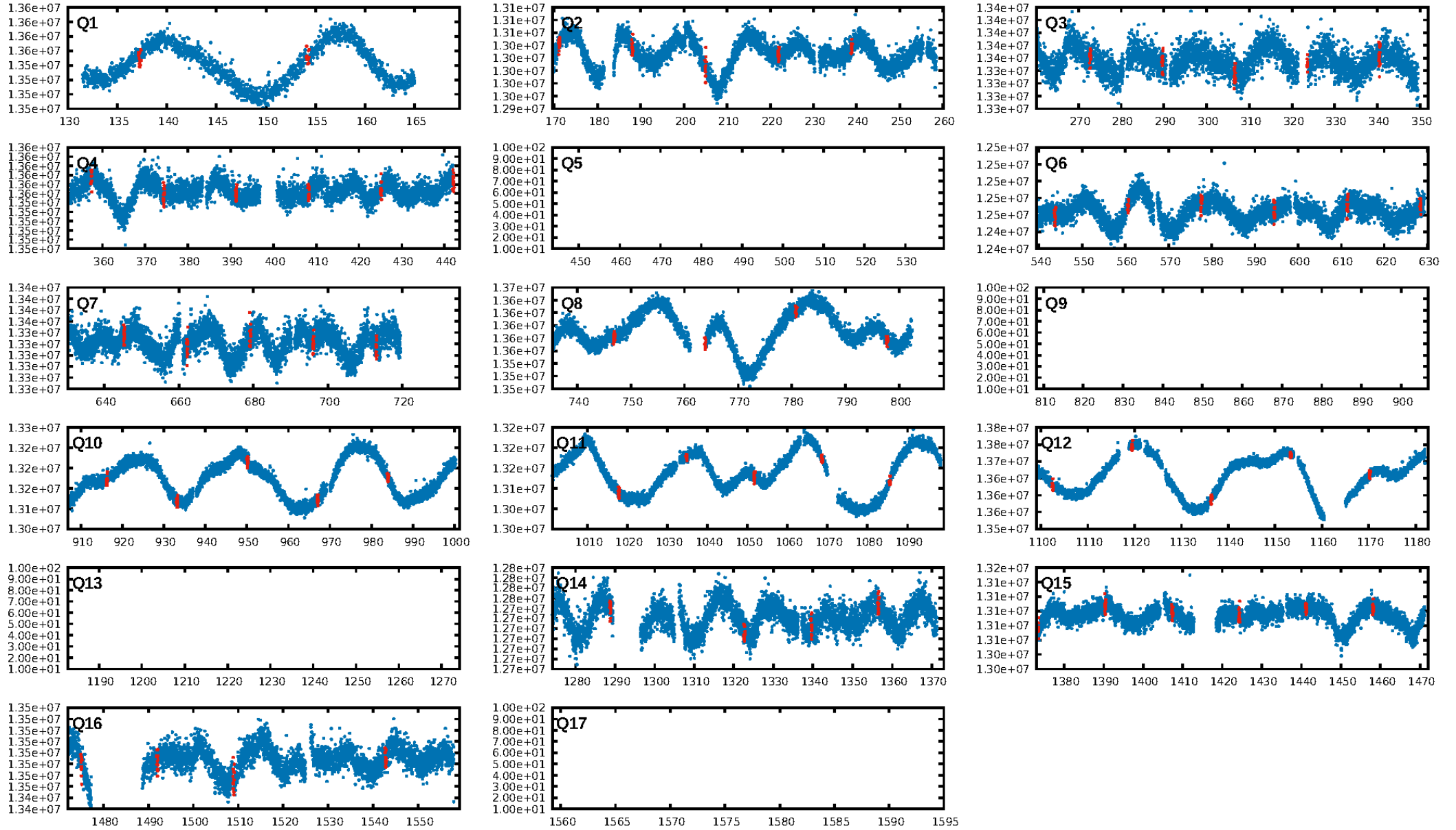
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [63.00σ]
LongPeriod-sig: 100.0% [30.45σ]
ModelChiSquare2-sig: 98.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.47e-18
RollingBand-fgt: 1.00 [55/55]
GhostDiagnostic-chr: 10.62
Centroid-sig: 82.7%
Centroid-so: 0.572 arcsec [0.47σ]
OotOffset-rm: 0.602 arcsec [0.80σ]
OotOffset-st: 2/2/1/1 [6]
KicOffset-rm: 0.459 arcsec [0.61σ]
KicOffset-st: 2/2/1/1 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 1.00 [13/13]

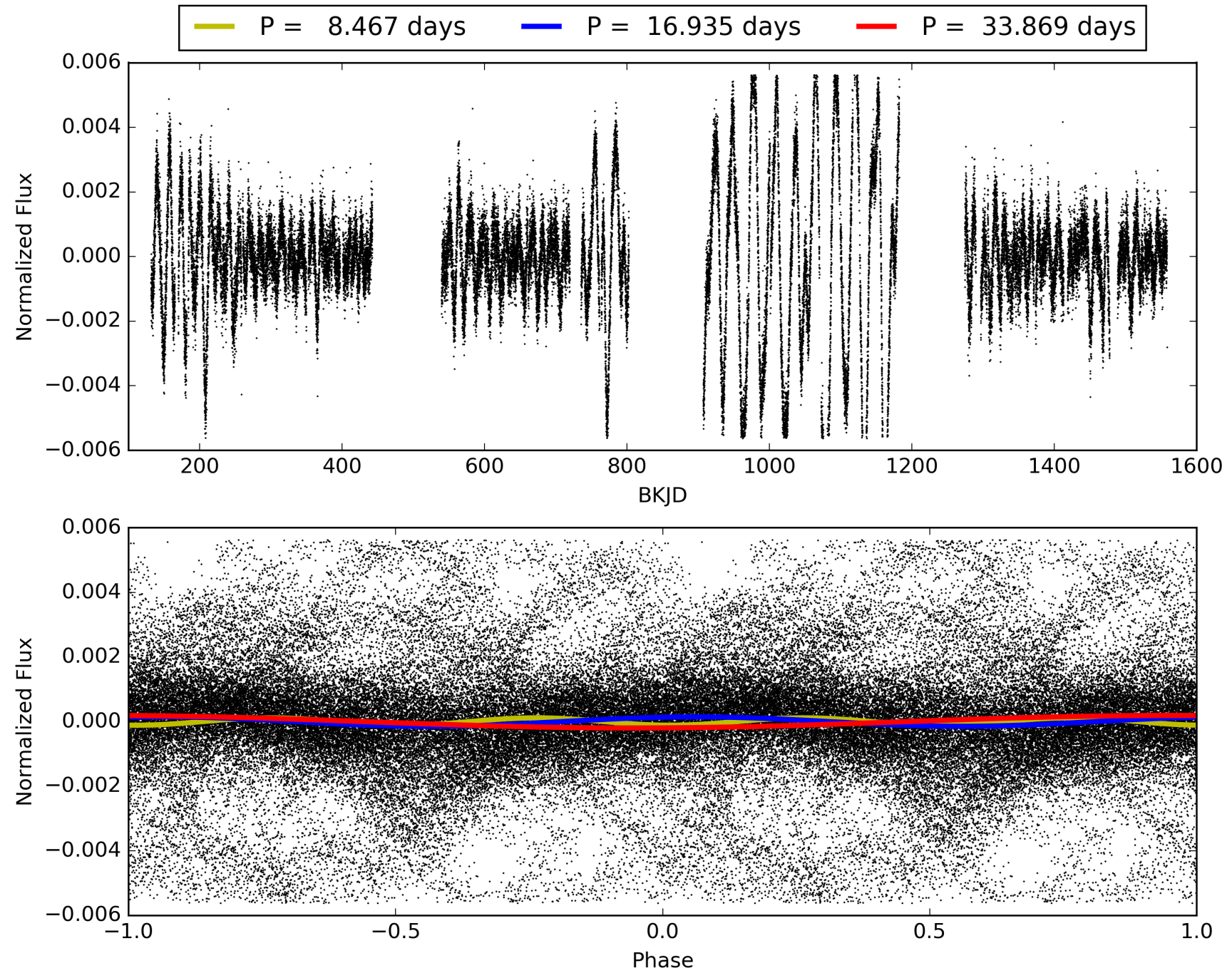
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:01:52 Z

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

TCE 006026438-03, PDC Light Curves

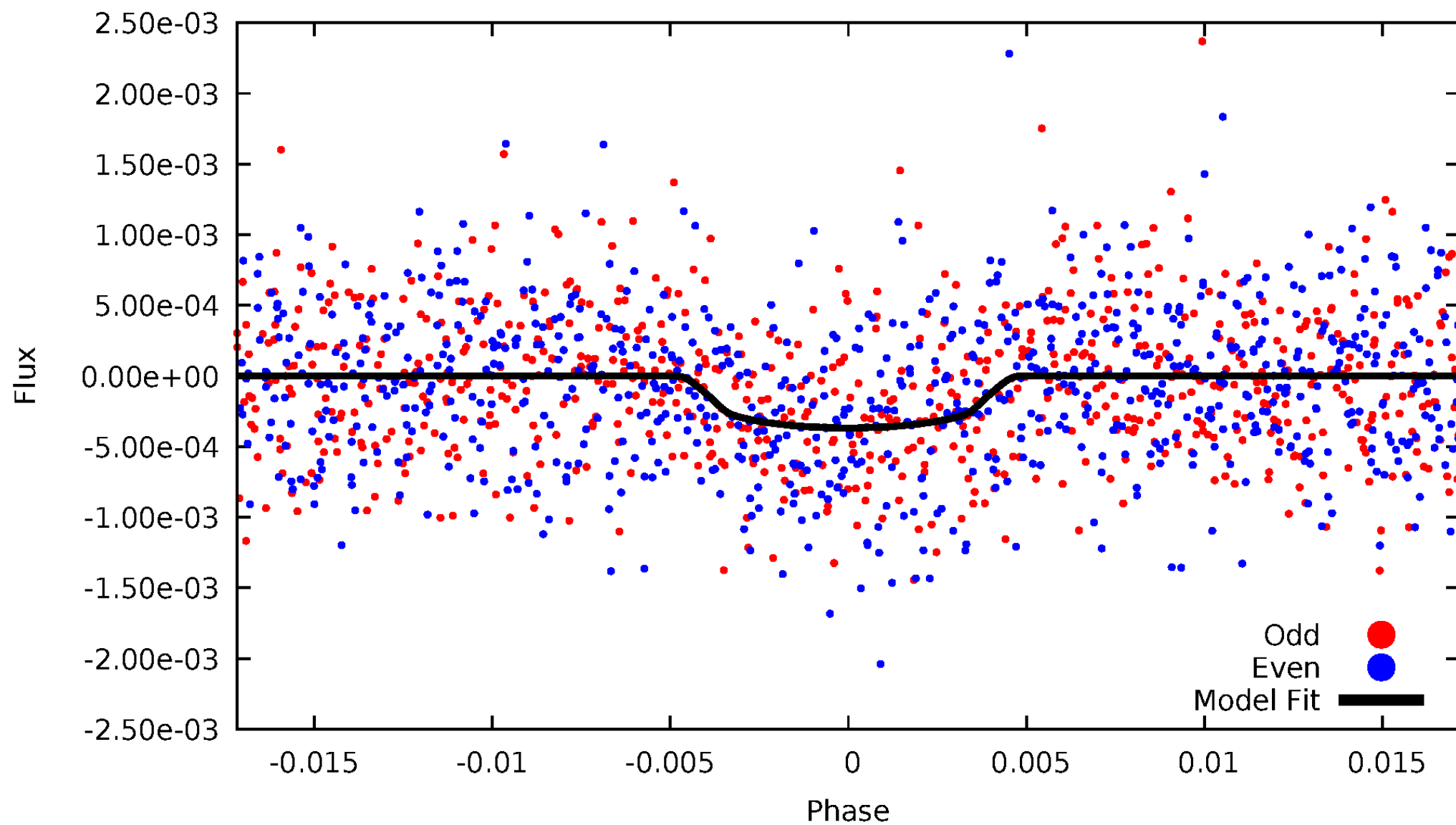


TCE 006026438-03



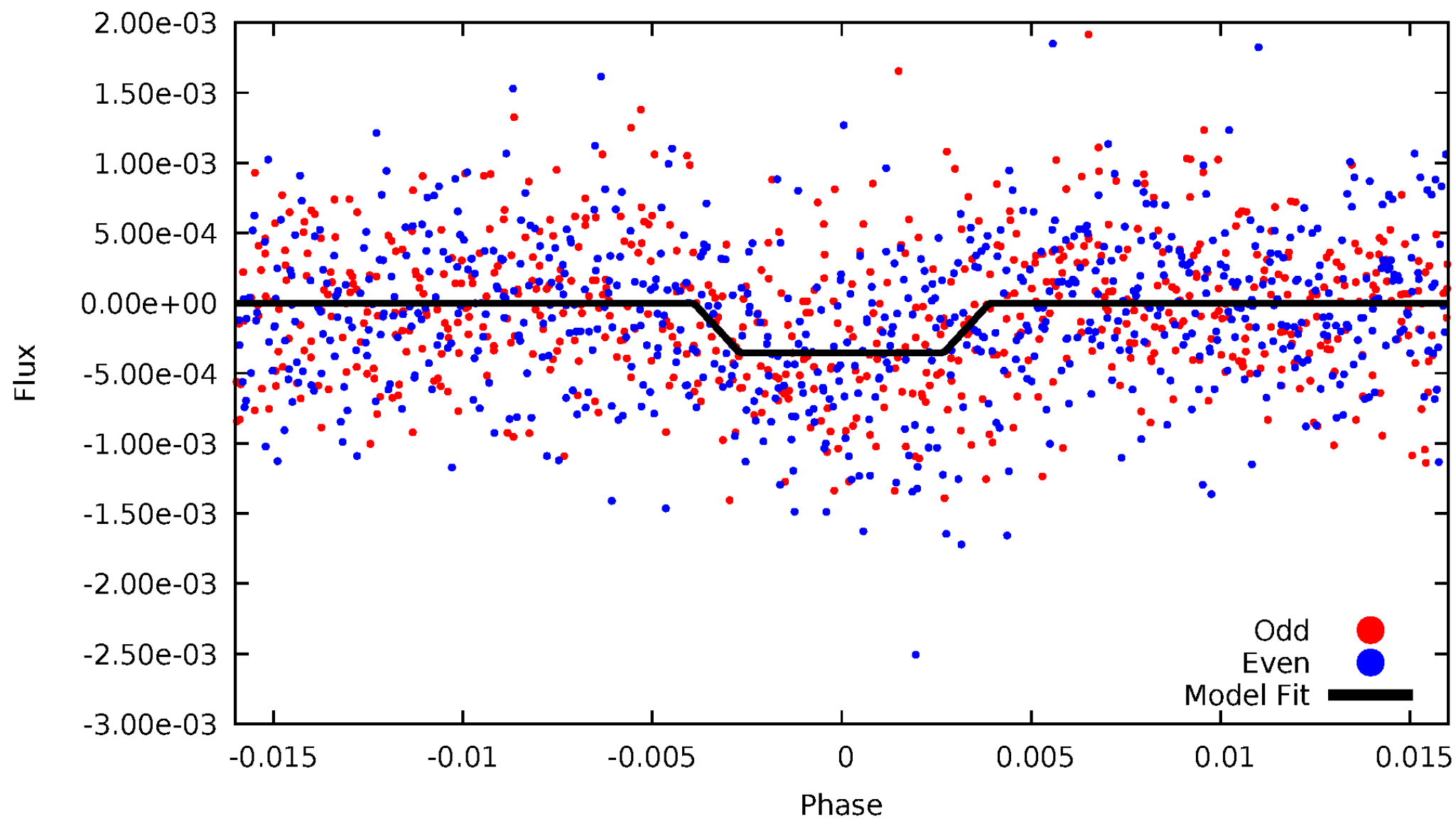
DV Odd/Even

TCE 006026438-03



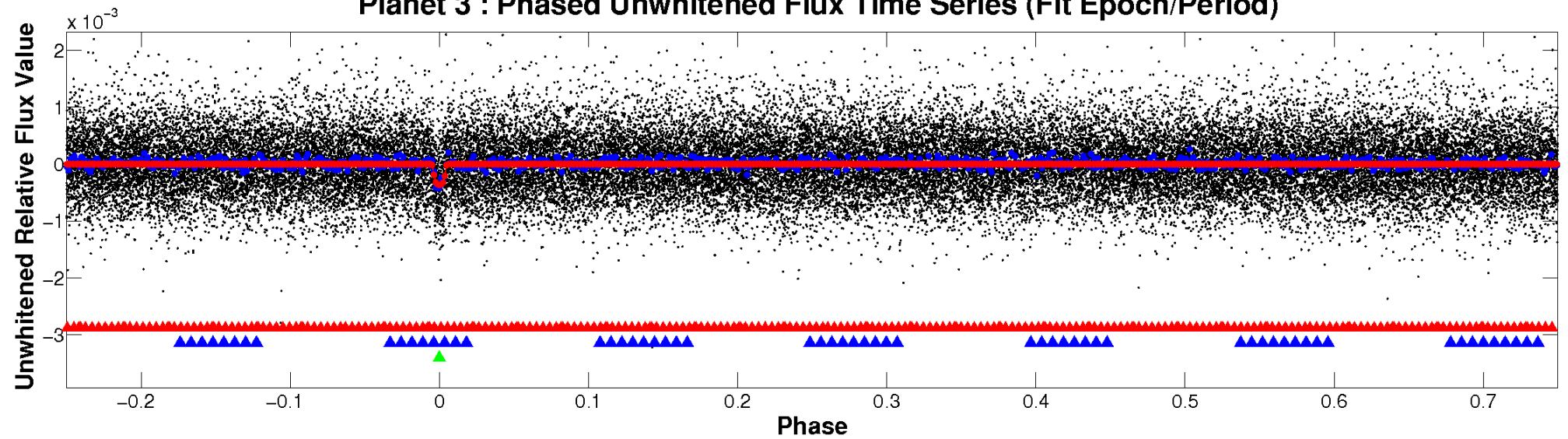
ALT Odd/Even

TCE 006026438-03

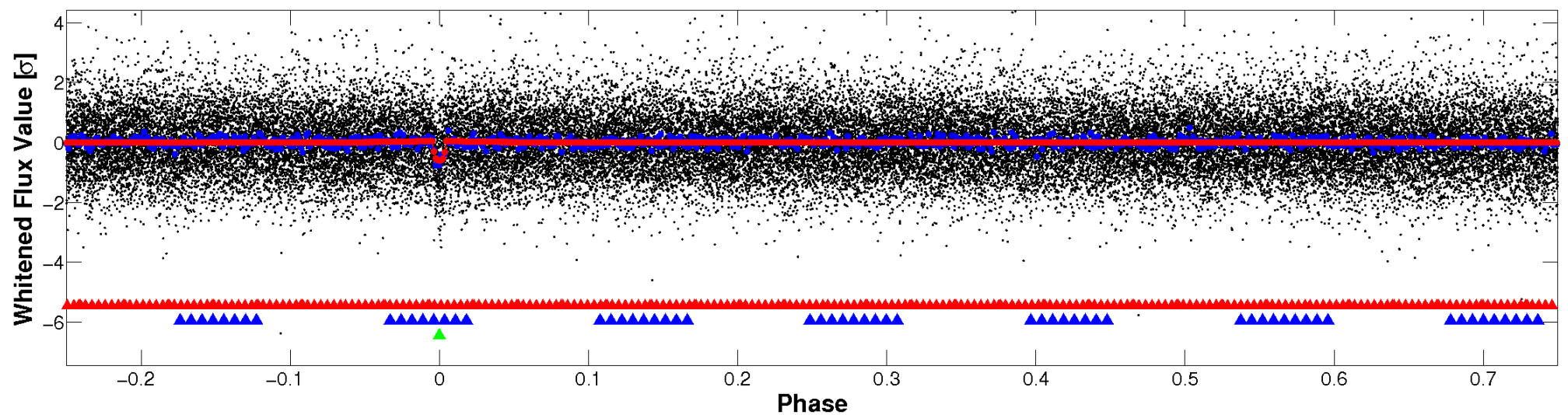


Non-Whitened Vs. Whitened Light Curve

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

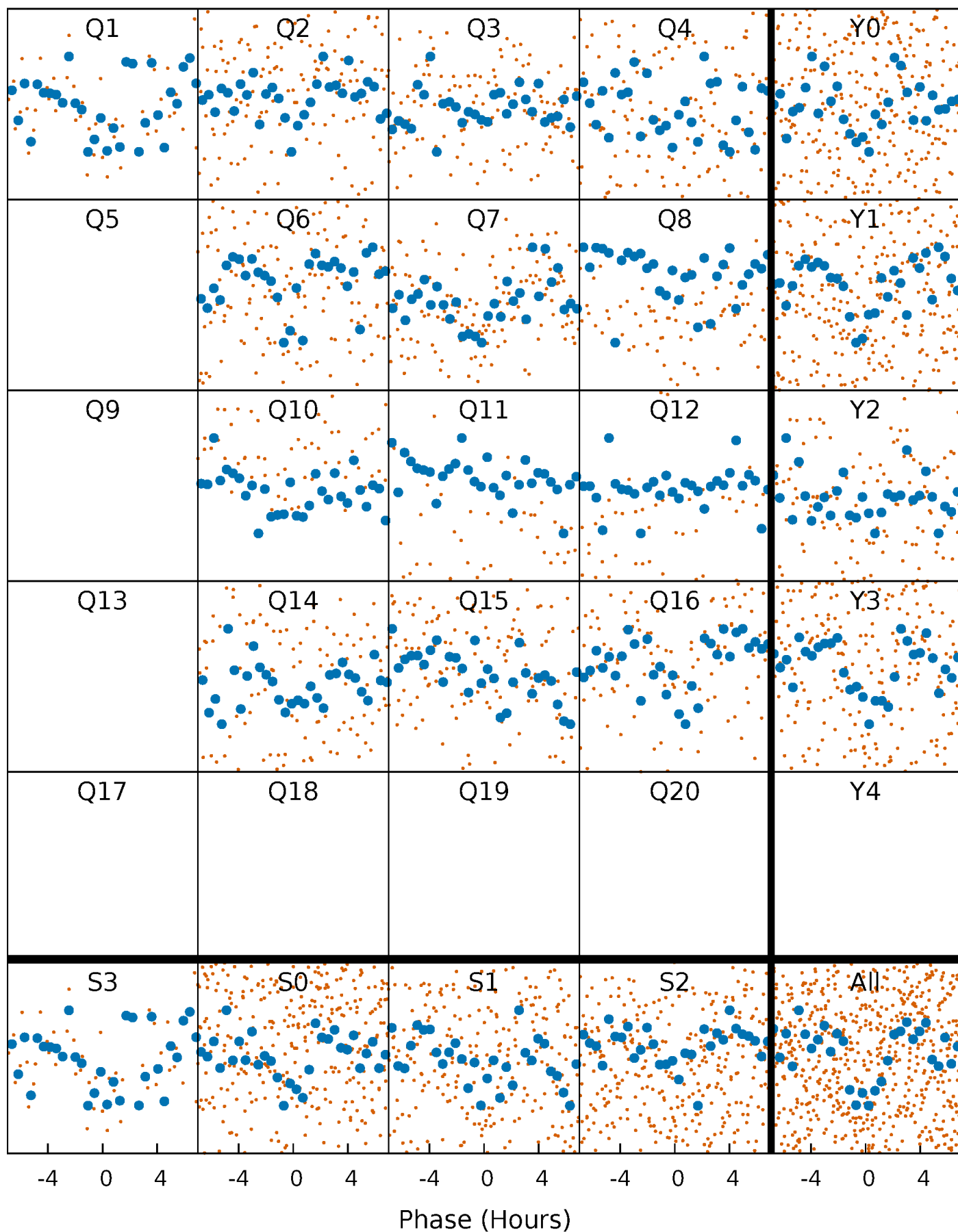


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



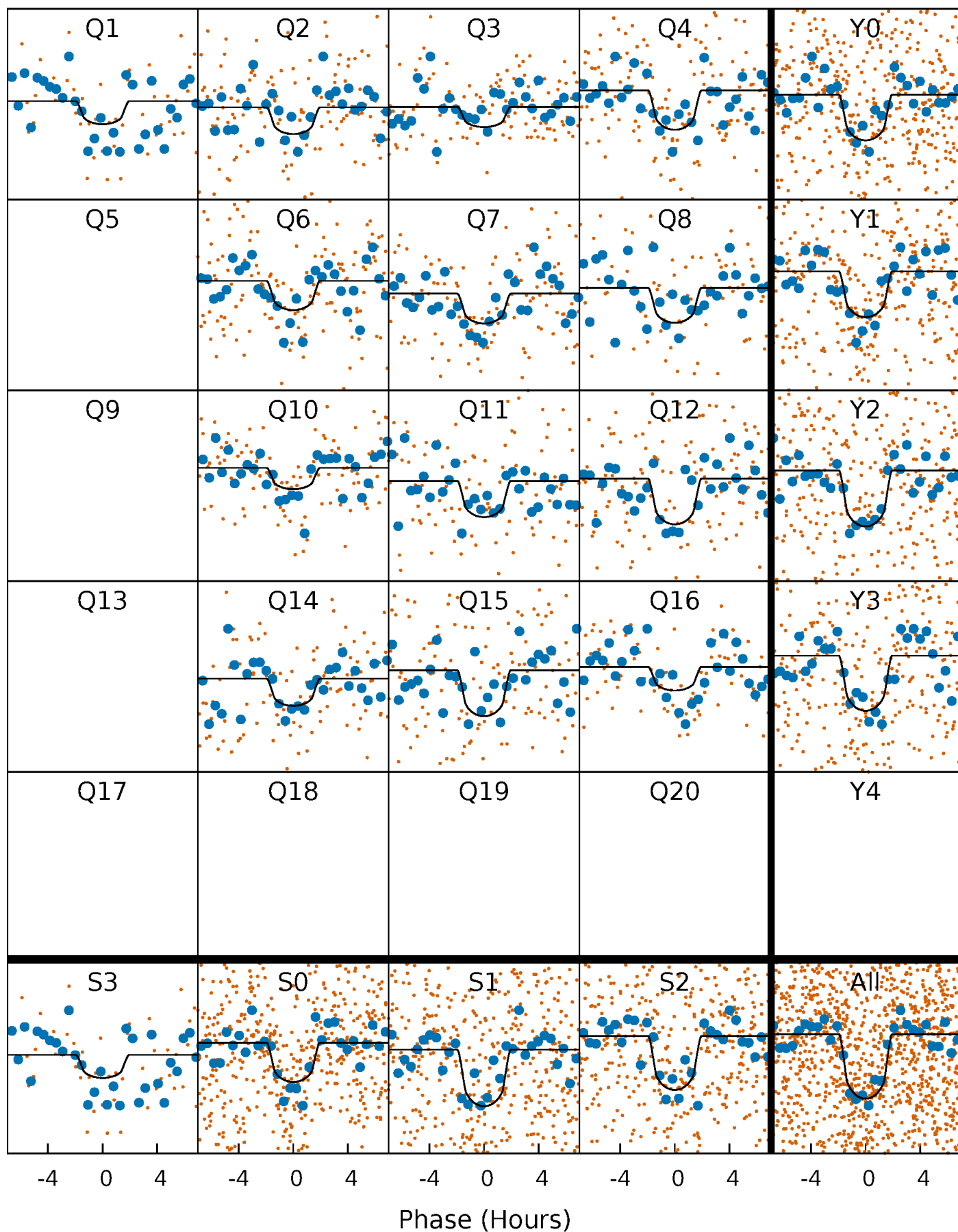
PDC Quarter-Phased Transit Curves

TCE 006026438-03 P= 16.934557 Days $T_0=137.260588$ (BKJD)



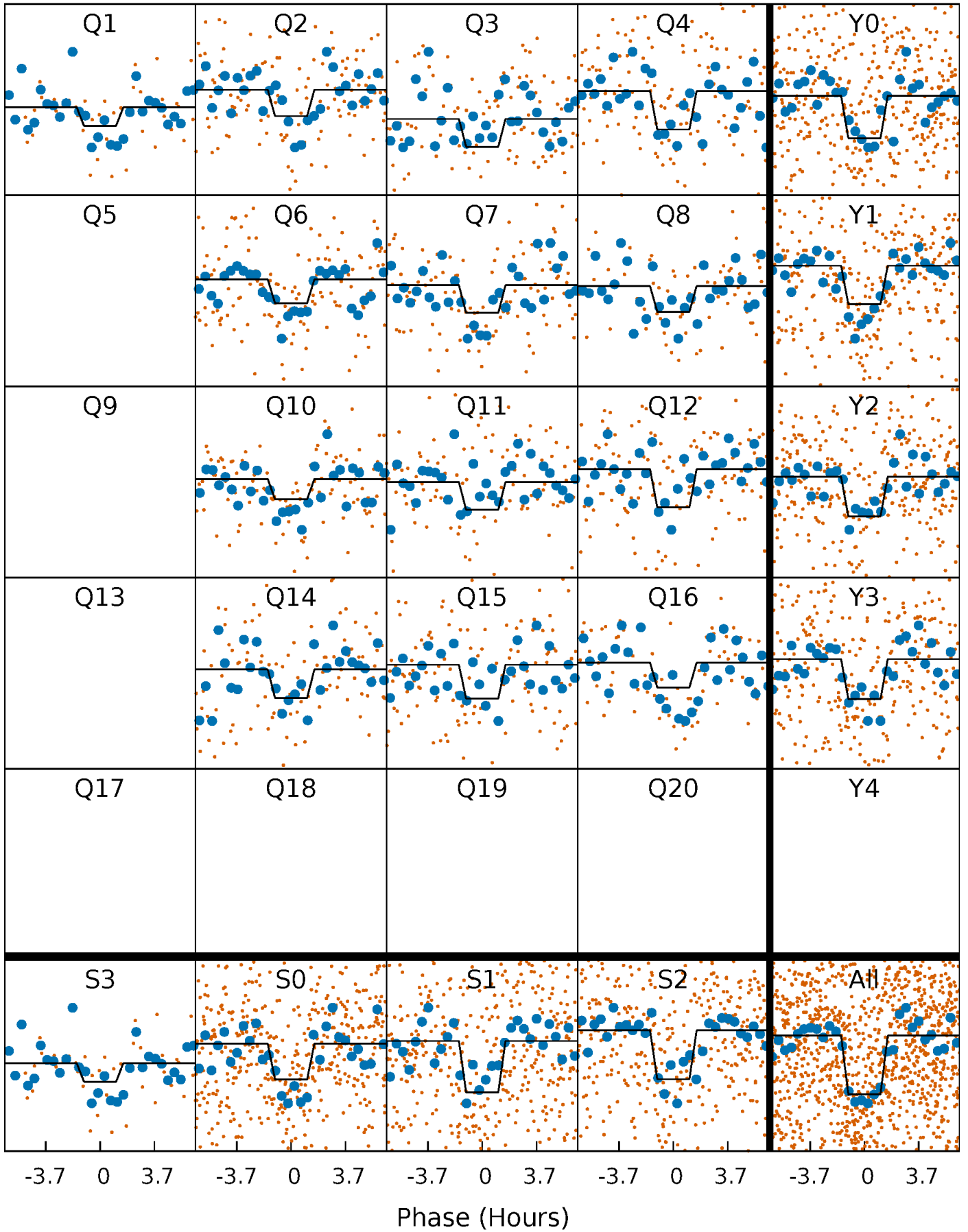
DV Quarter-Phased Transit Curves

TCE 006026438-03 P= 16.934557 Days $T_0=137.260588$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

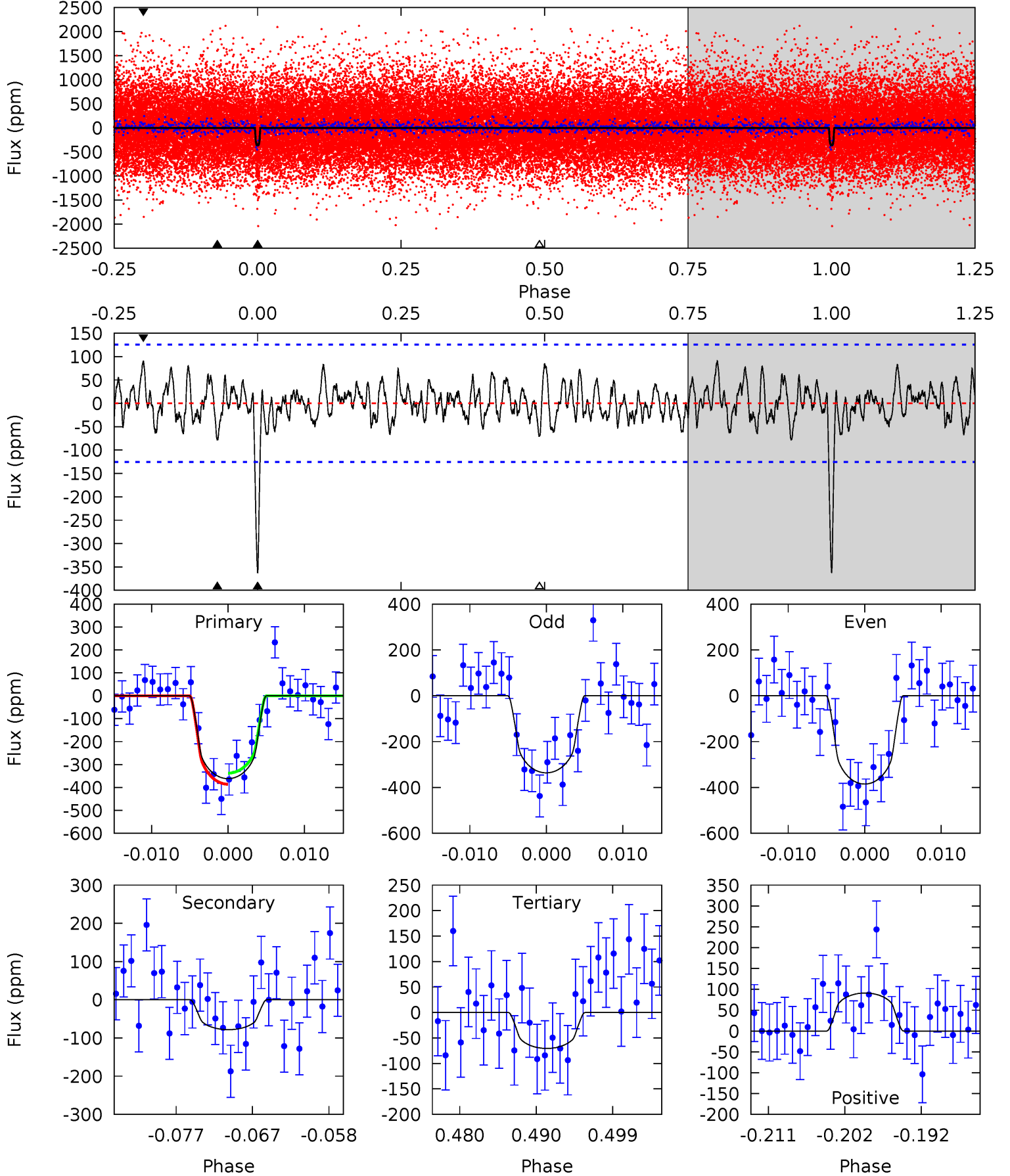
TCE 006026438-03 P= 16.934877 Days $T_0=137.241501$ (BKJD)



DV Model-Shift Uniqueness Test

006026438-03, P = 16.934557 Days, E = 120.326031 Days

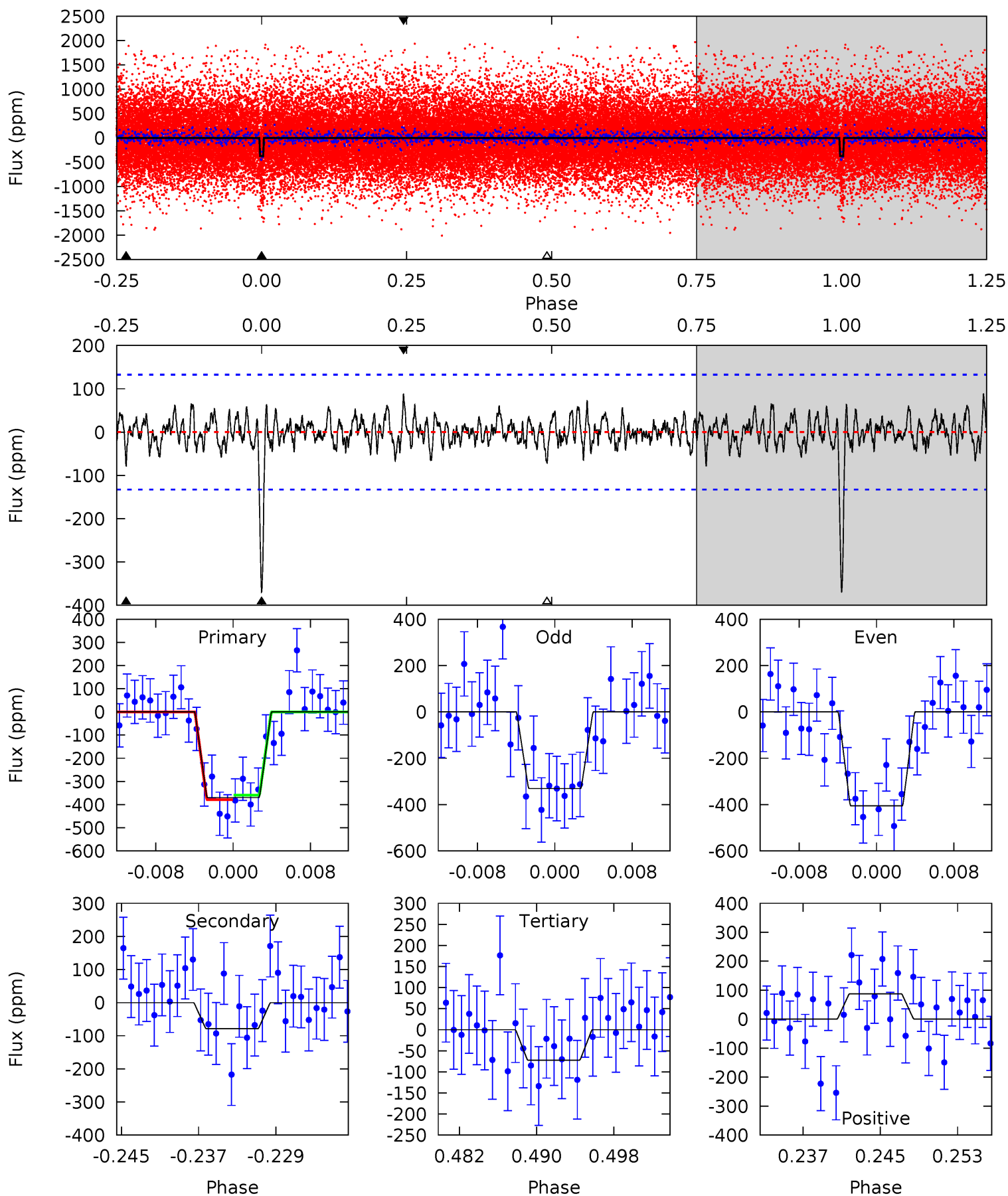
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	3.14	2.83	3.65	5.03	2.59	1.25	11.7	10.8	0.31	-0.51	0.98	1.06	0.20	0.97



Alt Model-Shift Uniqueness Test

006026438-03, P = 16.934877 Days, E = 120.306624 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	3.01	2.76	3.36	5.07	2.66	0.98	11.4	10.8	0.25	-0.35	1.44	0.89	0.19	0.37



Stellar Parameters For KIC 006026438

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4650^{+125}_{-139}	$4.589^{+0.048}_{-0.028}$	$-0.040^{+0.300}_{-0.300}$	$0.706^{+0.046}_{-0.061}$	$0.704^{+0.070}_{-0.058}$	$2.824^{+0.657}_{-0.300}$
	+3%/-3%	+1%/-1%	+750%/-750%	+7%/-9%	+10%/-8%	+23%/-11%
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 006026438-03 / KOI 2045.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-78 ± 25	$1.78^{+1.36}_{-1.06}$	707^{+23}_{-25}	3293^{+1218}_{-508}	169^{+907}_{-114}
Alt.	-79 ± 26	$1.70^{+1.37}_{-1.00}$	707^{+22}_{-22}	3331^{+1149}_{-518}	188^{+863}_{-132}

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 $A_{obs} \gg 1.0$

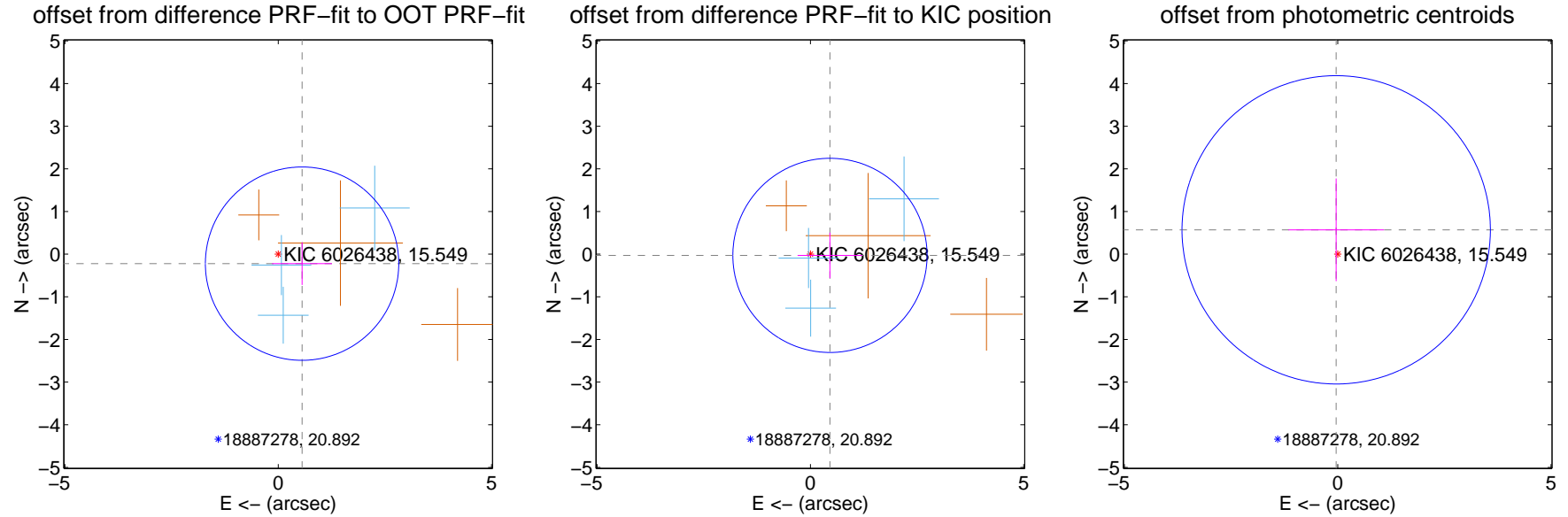
DV Centroid Data

Supplemental centroid analysis for 006026438-03. Kepler magnitude: 15.55. Transit SNR 9.78

There are 3 quarters with good PRF difference image offsets

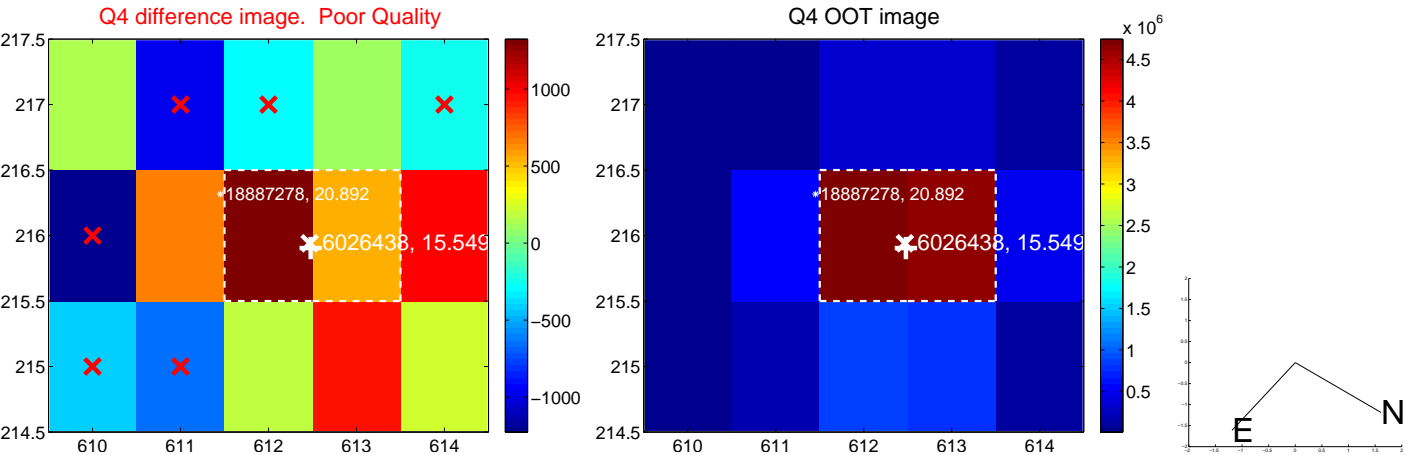
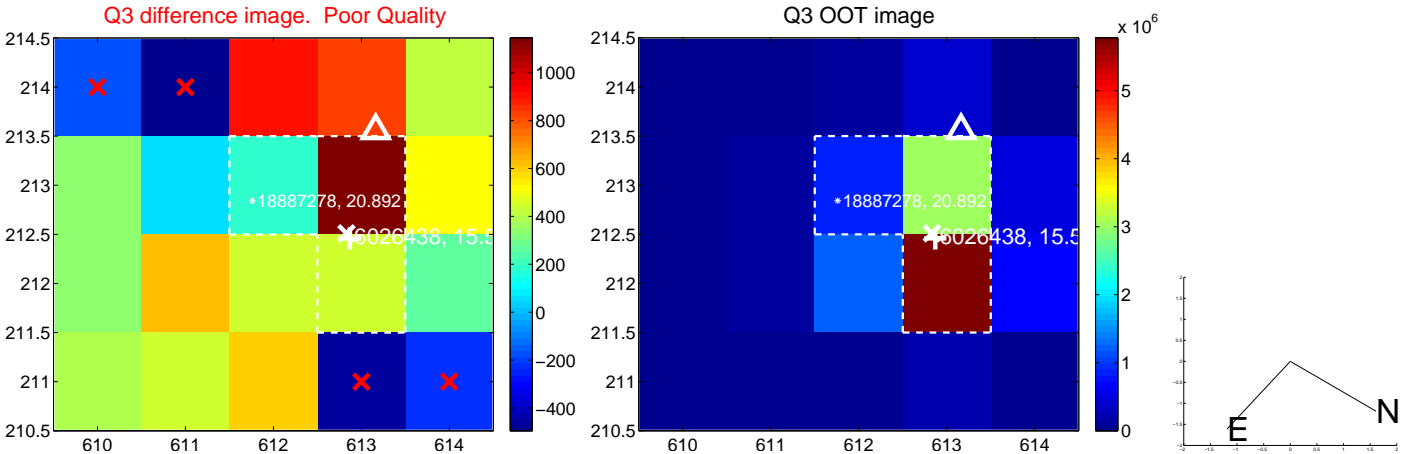
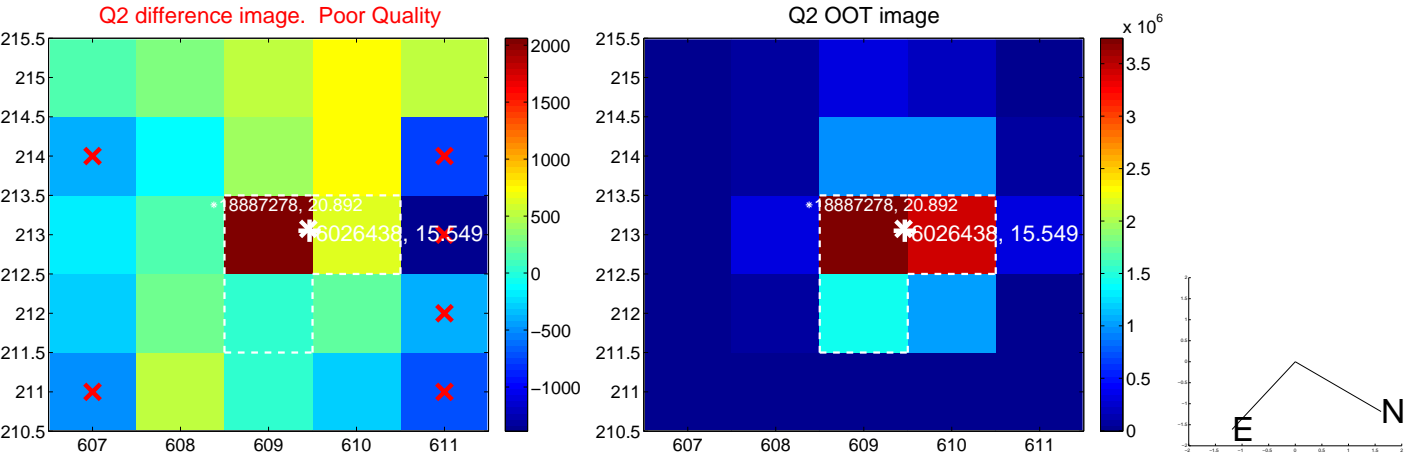
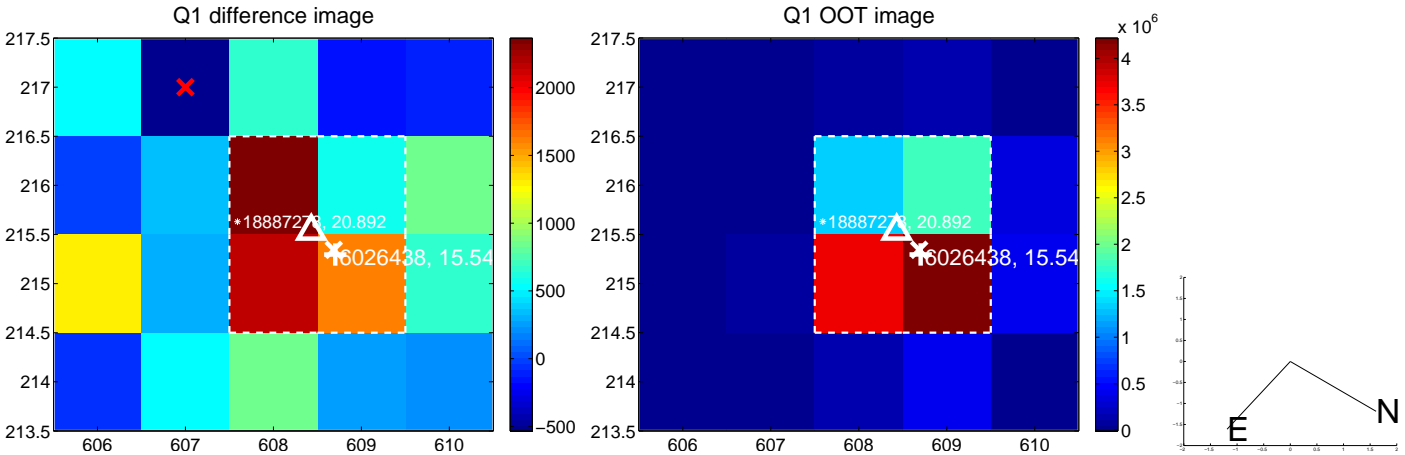
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.602 ± 0.756	0.80	-0.559 ± 0.702	-0.222 ± 0.499
PRF-fit source offset from KIC position	0.459 ± 0.759	0.61	-0.458 ± 0.760	-0.029 ± 0.533
photometric centroid source offset	0.57 ± 1.20	0.47	0.04 ± 1.12	0.57 ± 1.21

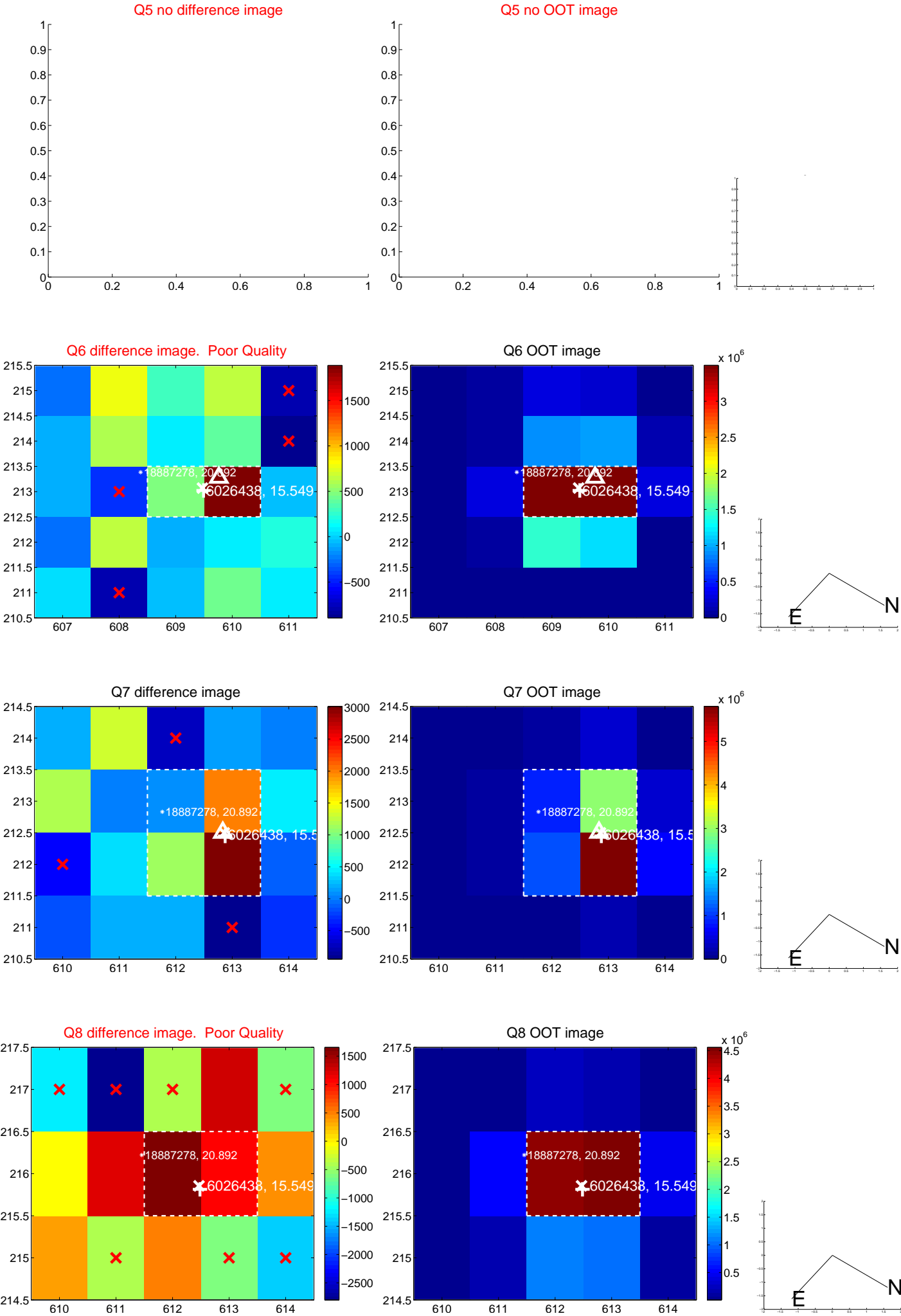


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

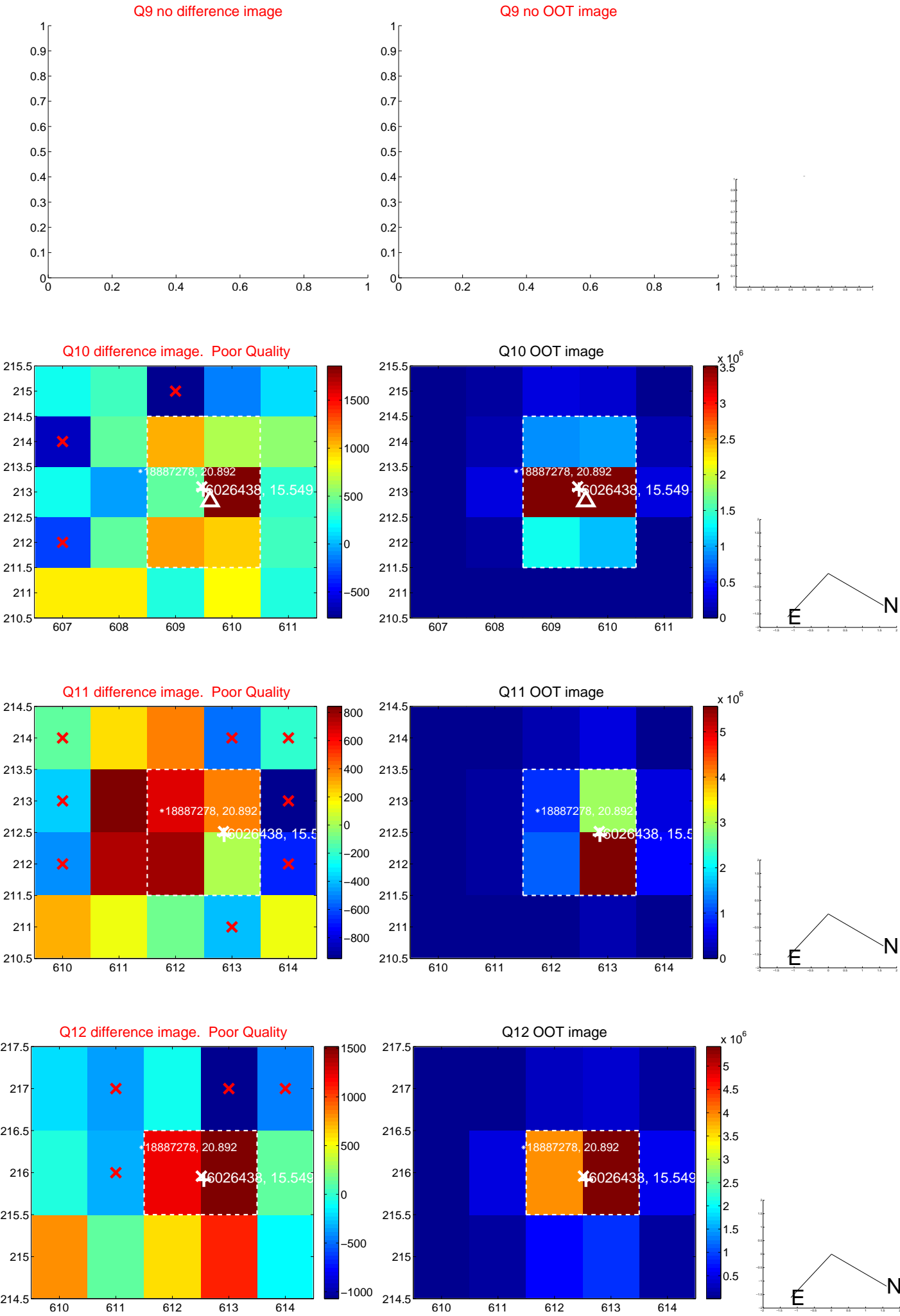
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



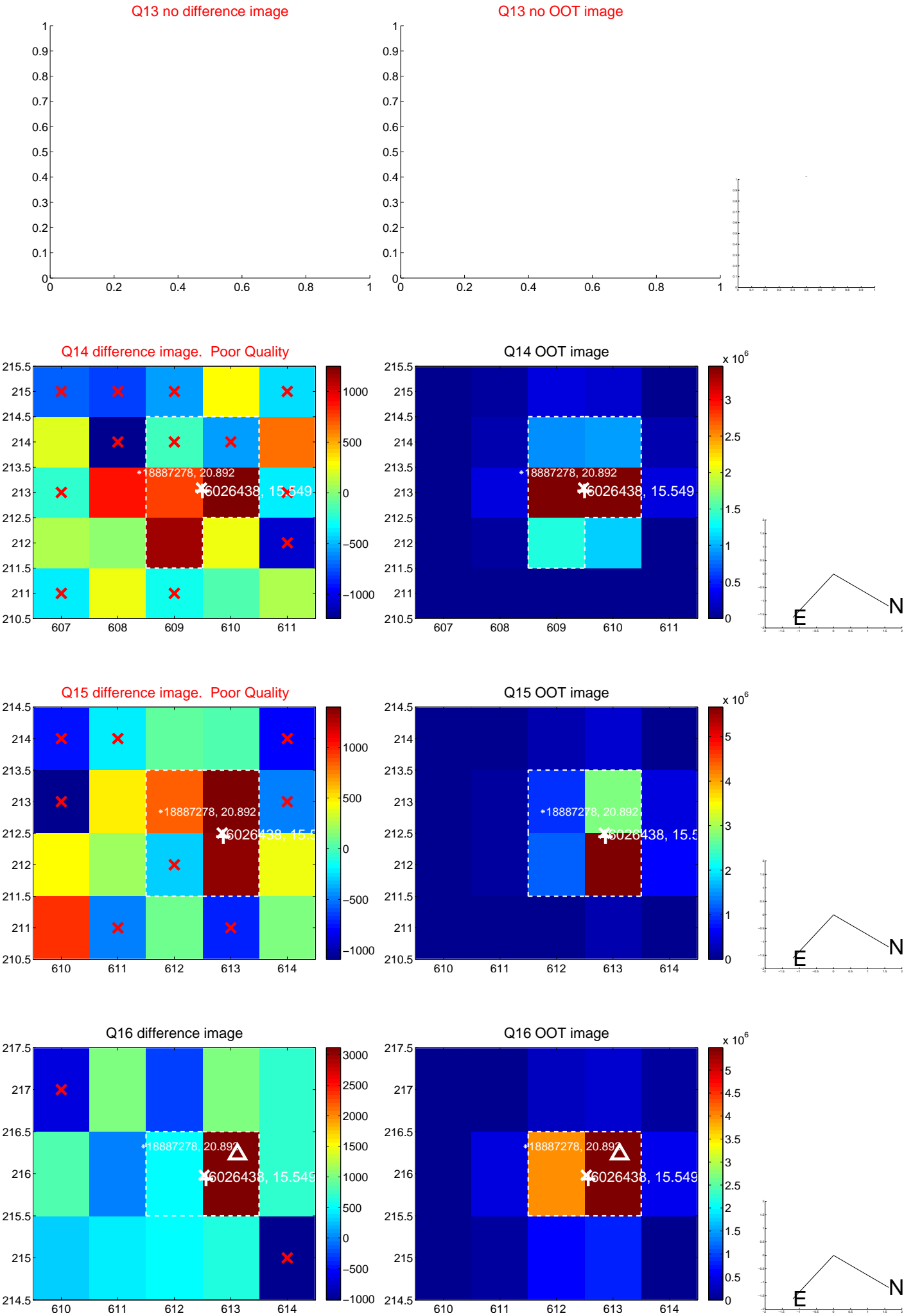
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



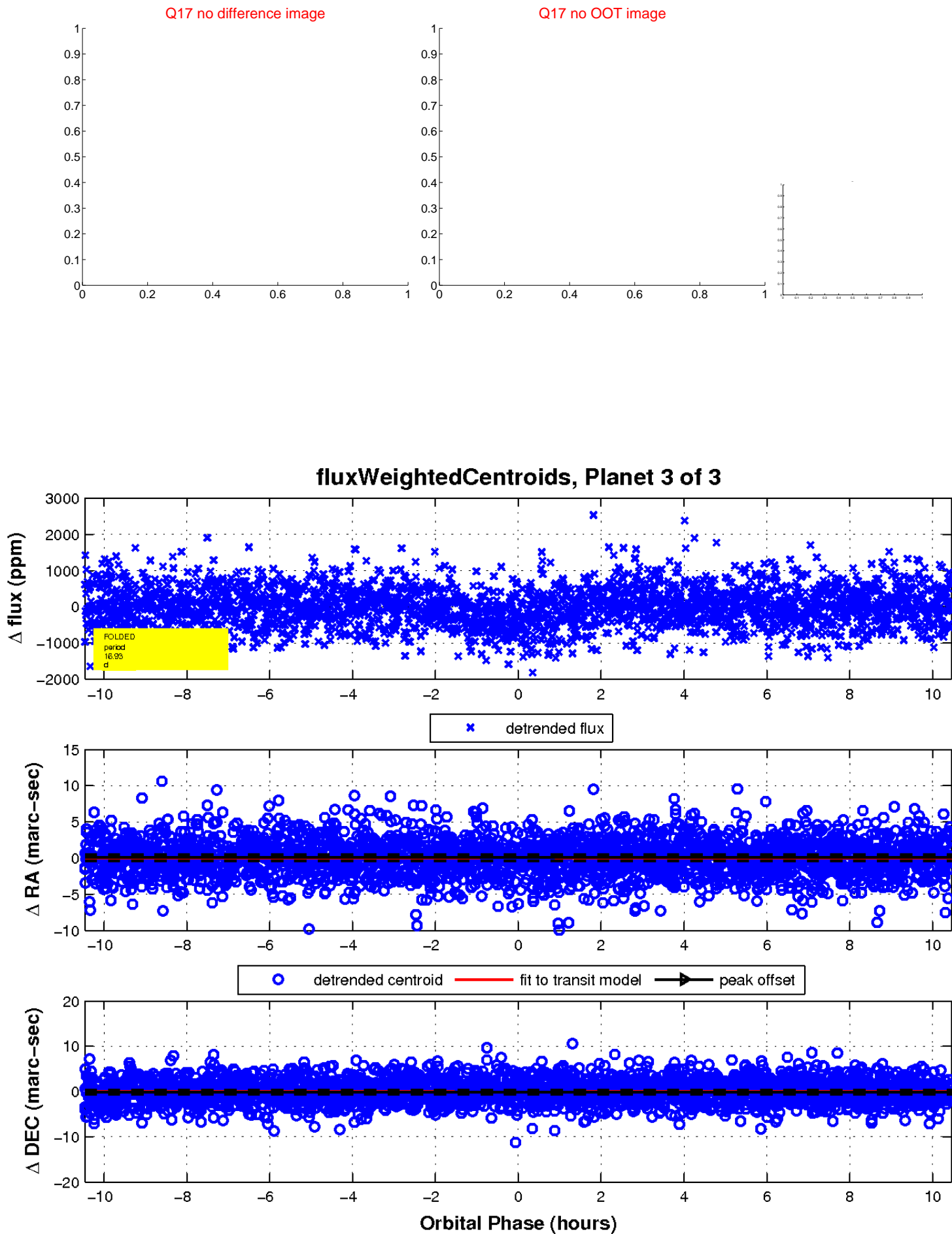
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

