

KIC 011708238

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})
011708238-01	OBS	No	0.888293	131.736105	138.5	3.258	11.8	11.5	1.79	8087	2.43	26670.59
011708238-02	OBS	No	0.888316	132.032166	132.2	2.644	12.5	11.1	1.79	8087	2.21	26669.69
011708238-03	OBS	No	1.222684	132.711106	316.2	5.401	10.5	10.1	1.79	8087	4.28	17418.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011708238-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011708238-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
011708238-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

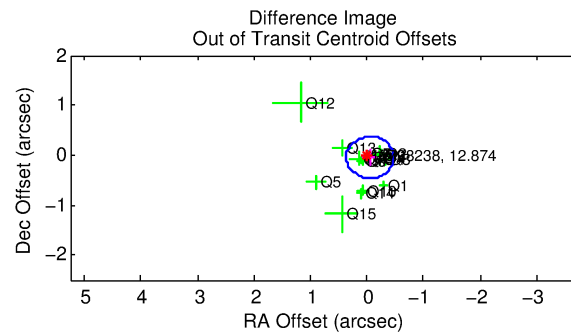
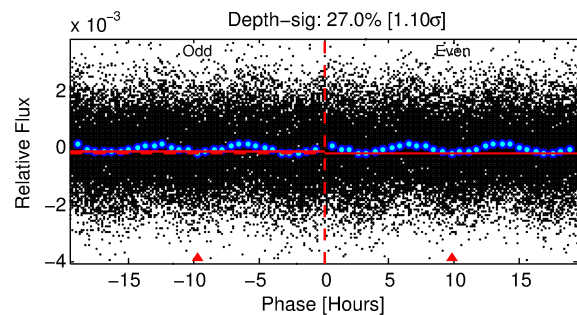
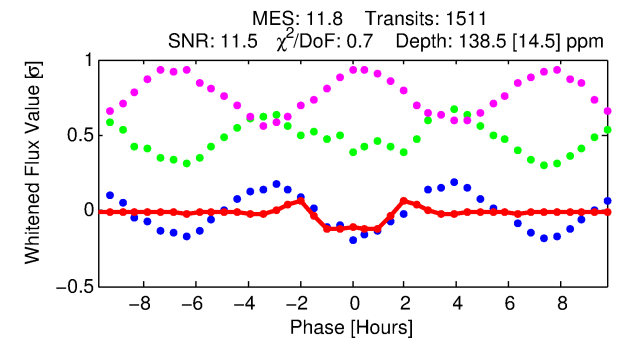
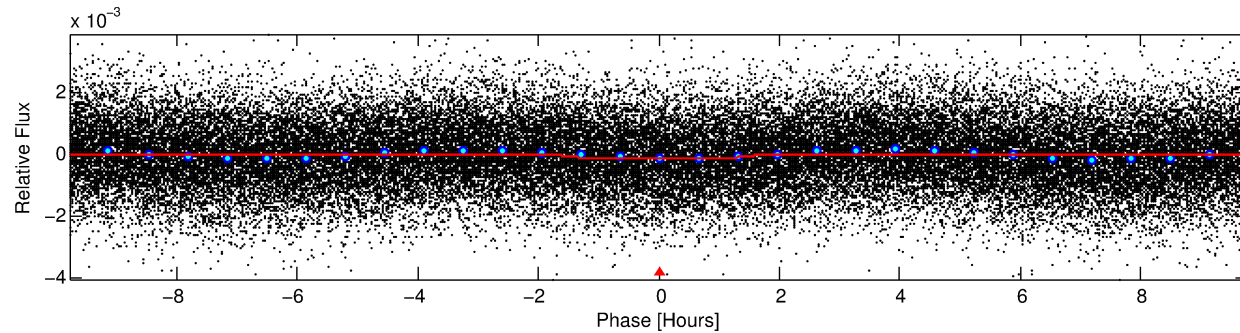
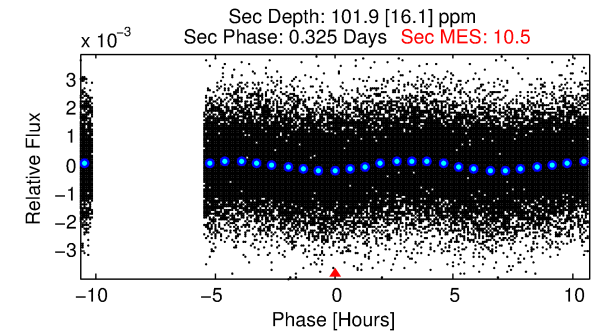
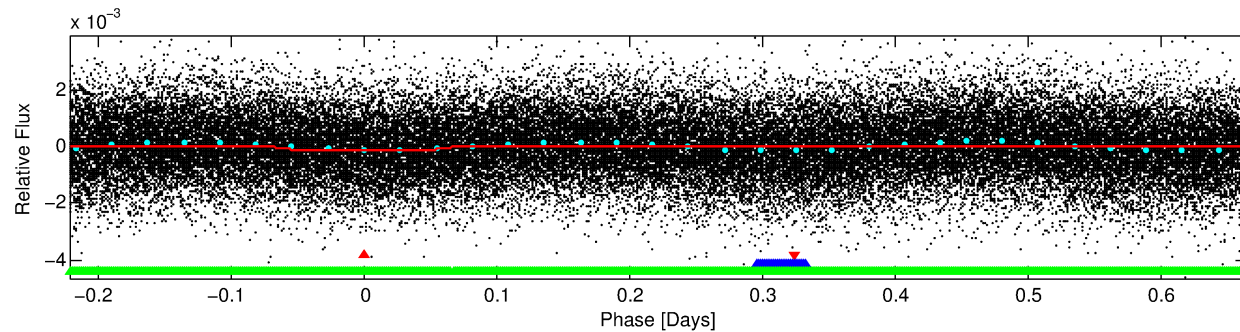
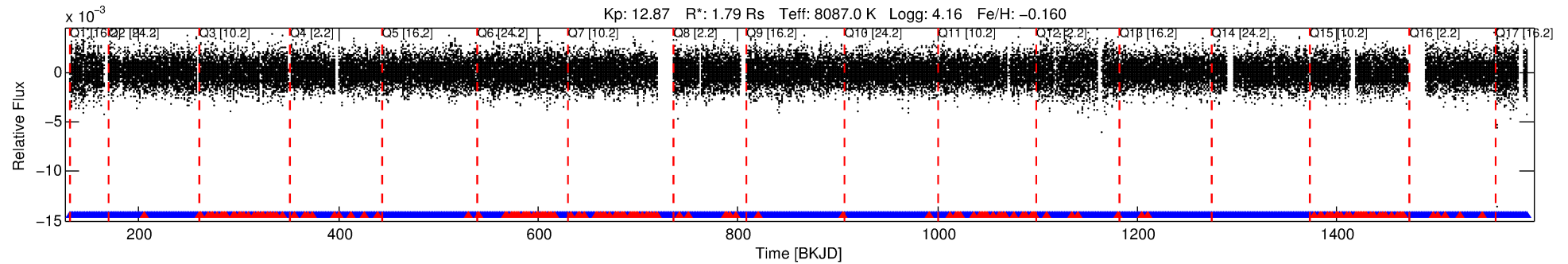
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011708238-01

No Significant Match Found

DV One-Page Summary

KIC: 11708238 Candidate: 1 of 3 Period: 0.888 d



DV Fit Results:

Period = 0.88829 [0.00001] d
Epoch = 131.7361 [0.0022] BKJD
Rp/R* = 0.0124 [0.0039]
a/R* = 1.37 [1.21]
b = 0.89 [0.45]
Seff = 26670.59 [9583.72]
Teq = 3259 [293] K
Rp = 2.43 [0.98] Re
a = 0.0215 [0.0047] AU
Ag = 4.37 [3.12] [1.08σ]
Teffp = 7283 [1203] K [3.25σ]

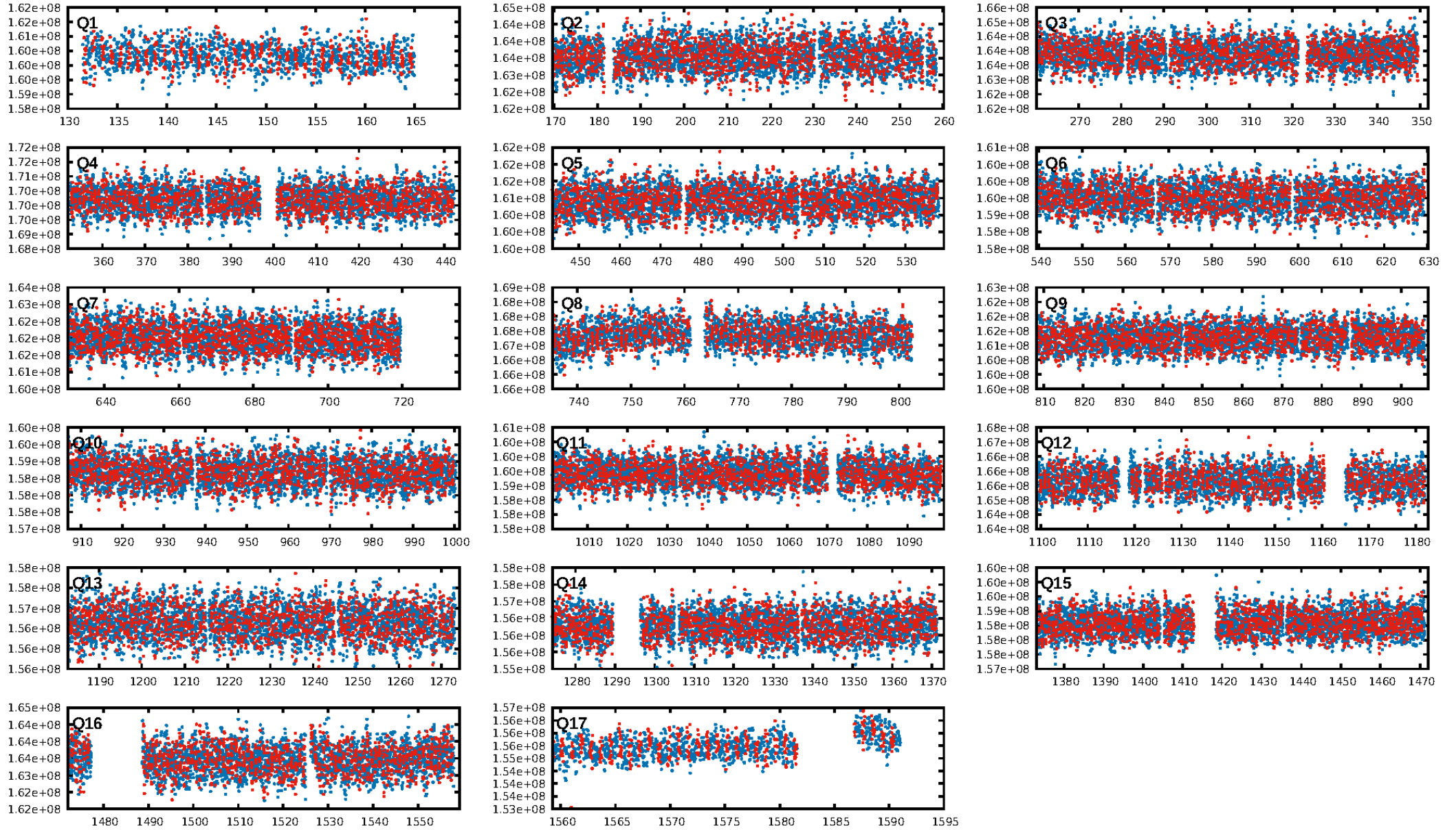
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.87 [1261/1442]
GhostDiagnostic-chr: 1.084
Centroid-sig: N/A
Centroid-so: 0.553 arcsec [4.16σ]
OotOffset-rm: 0.069 arcsec [0.49σ]
KicOffset-rm: 0.214 arcsec [1.66σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 0.00 [0/17]

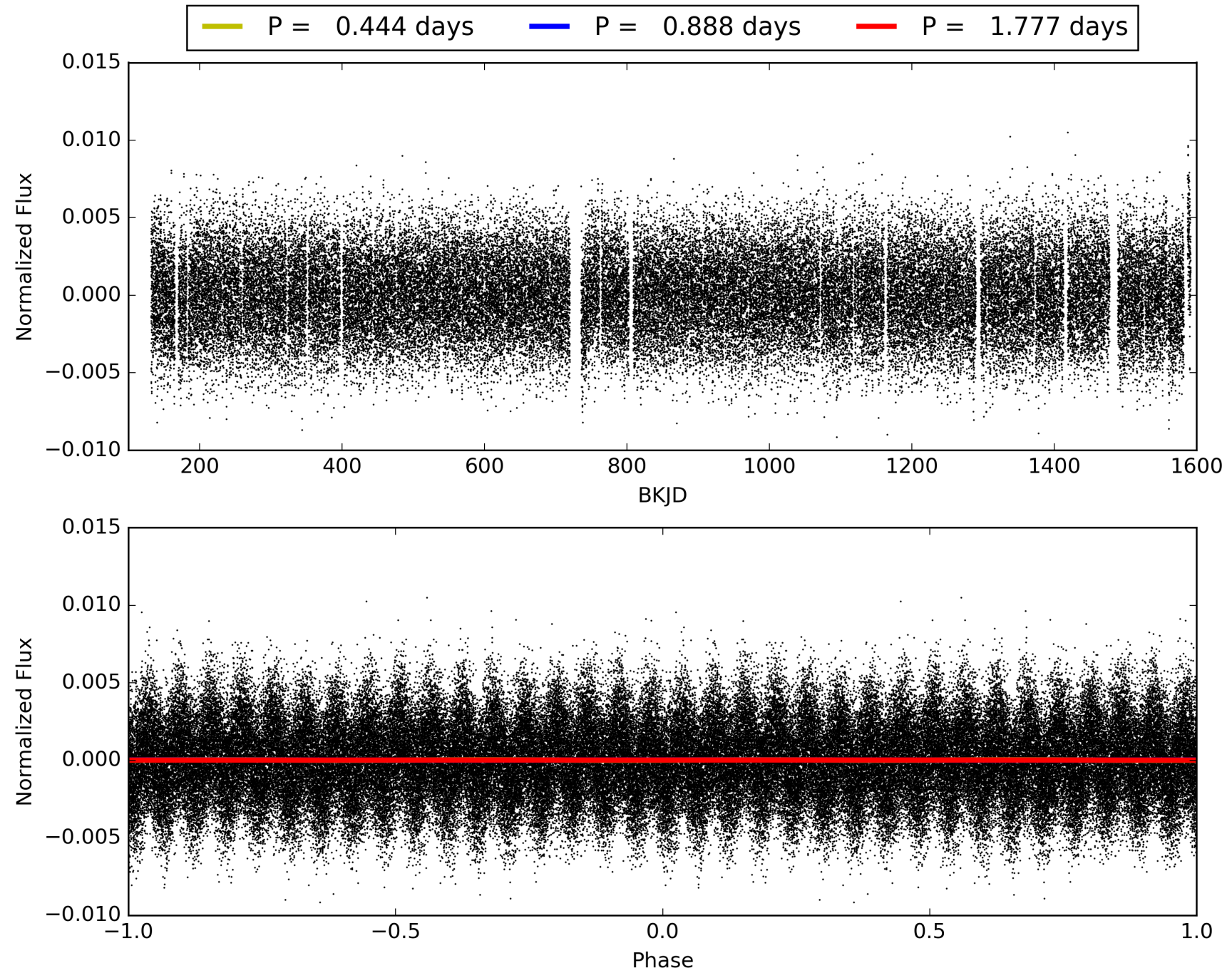
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:56:53 Z

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

TCE 011708238-01, PDC Light Curves

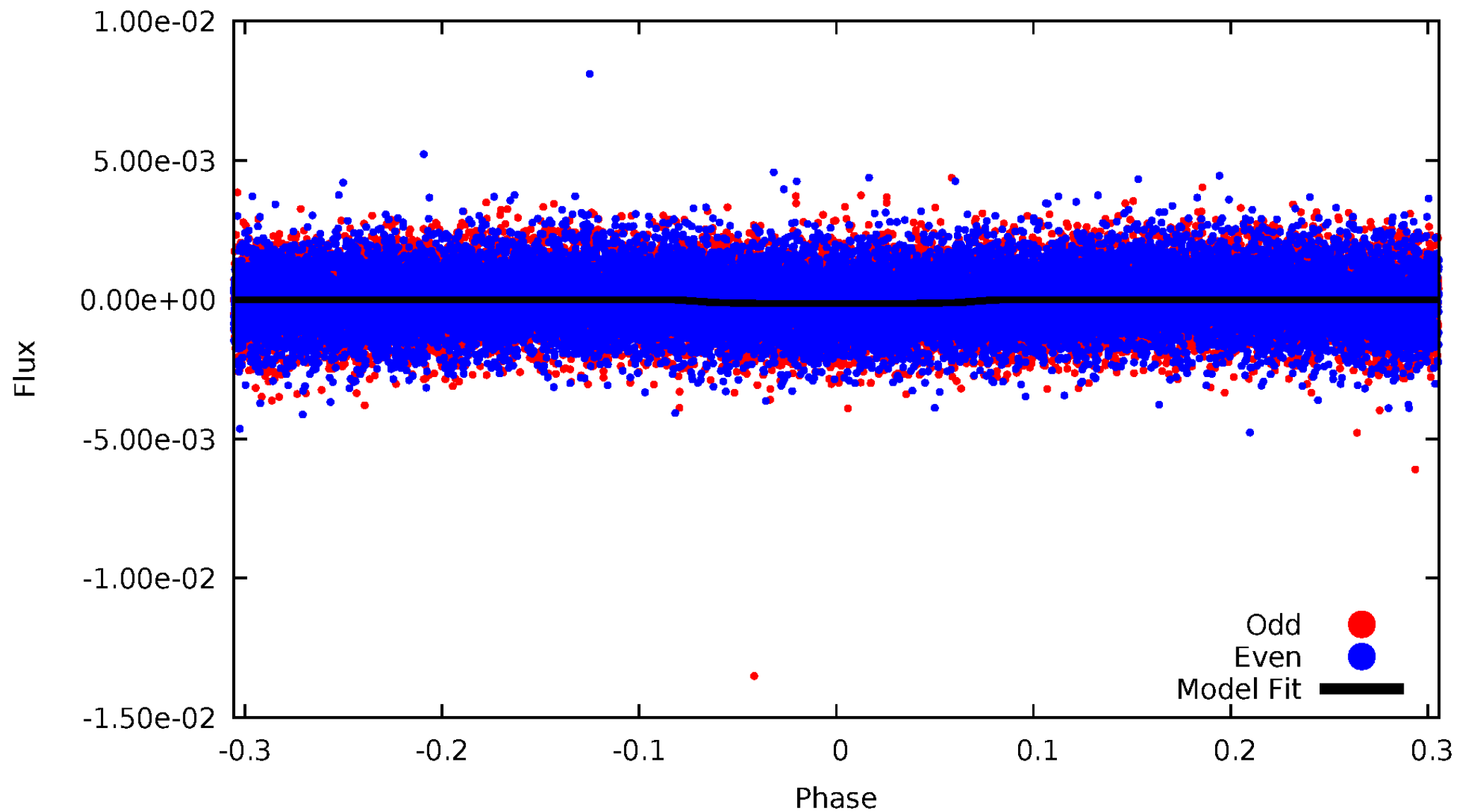


TCE 011708238-01



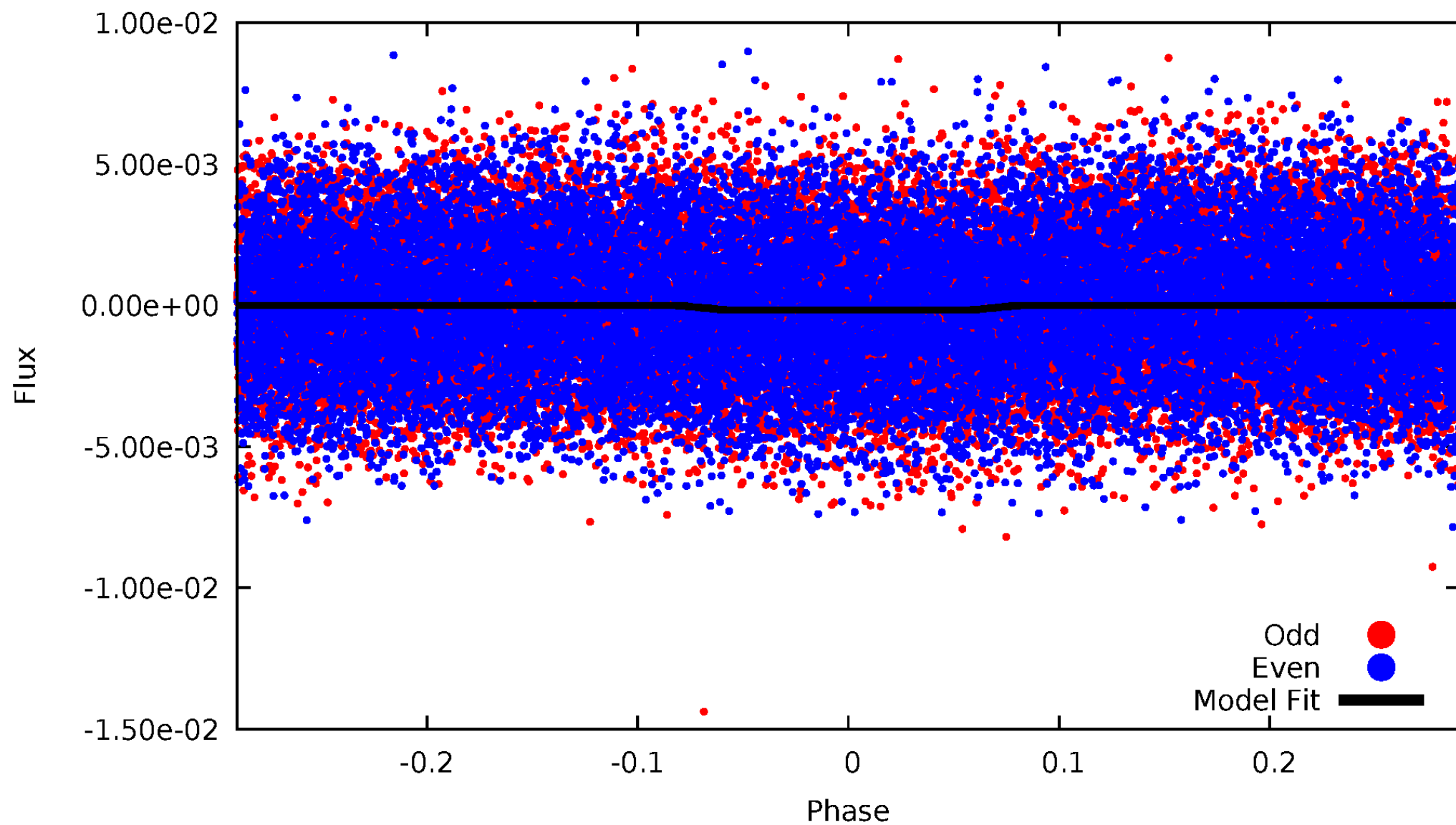
DV Odd/Even

TCE 011708238-01



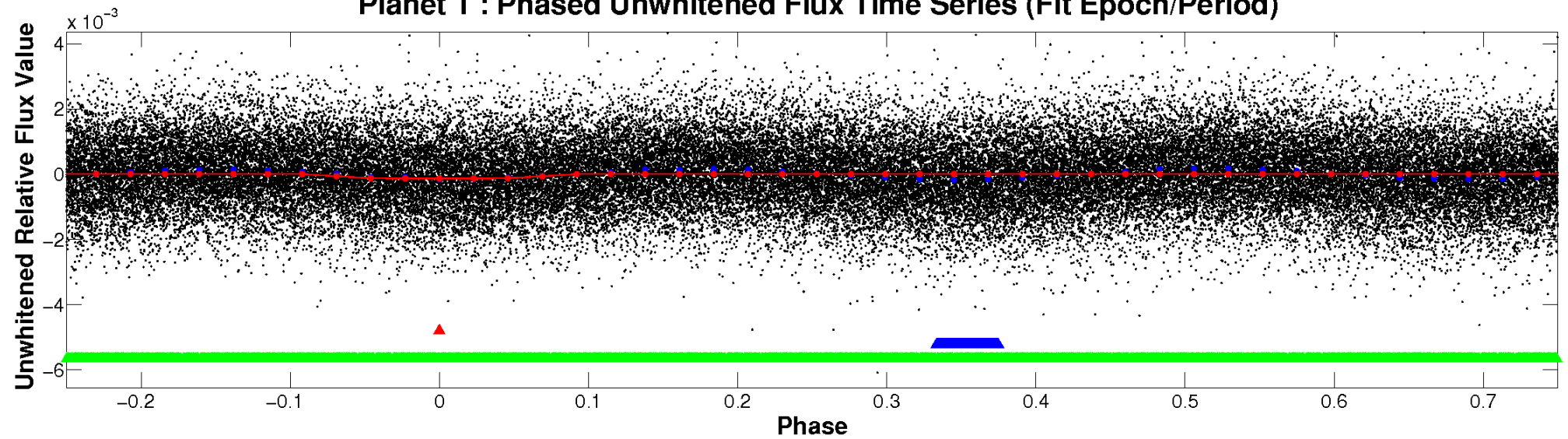
ALT Odd/Even

TCE 011708238-01

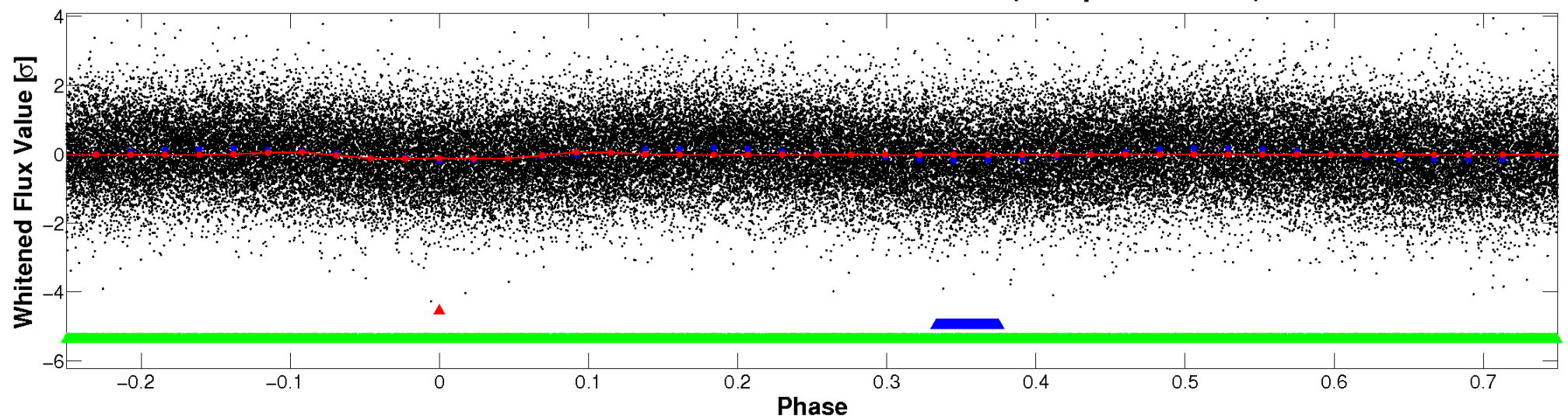


Non-Whitened Vs. Whitened Light Curve

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

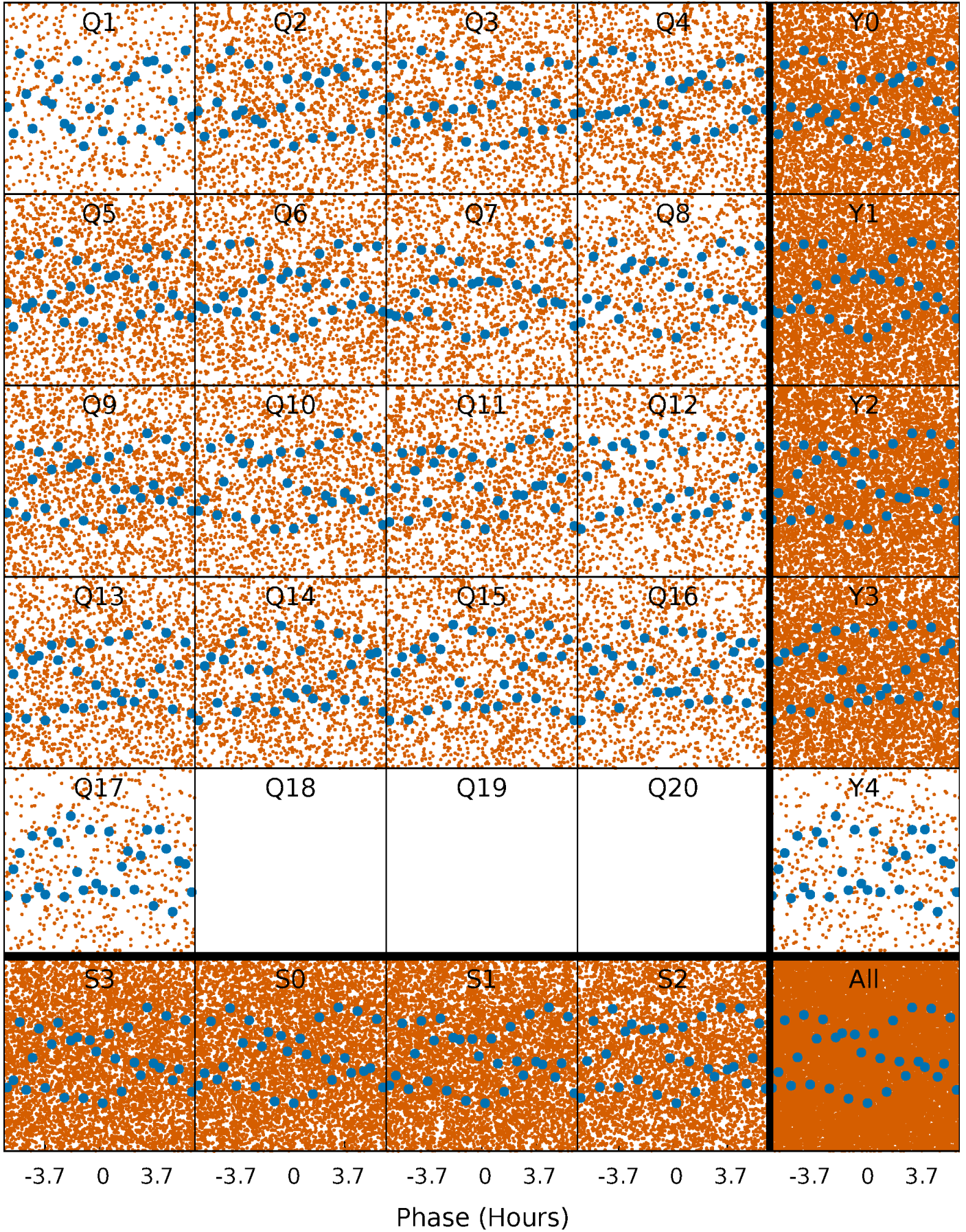


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



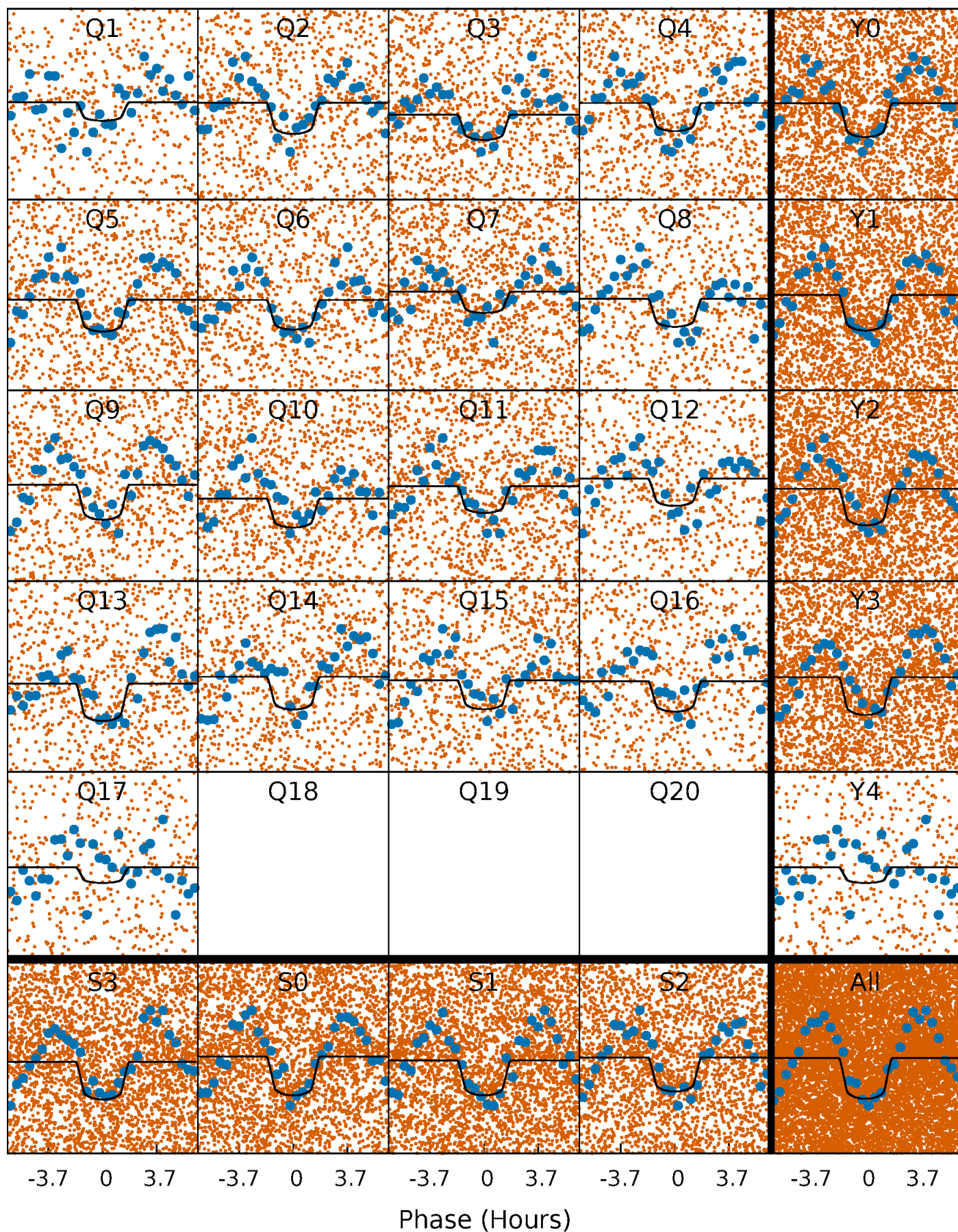
PDC Quarter-Phased Transit Curves

TCE 011708238-01 P= 0.888293 Days $T_0=131.736105$ (BKJD)



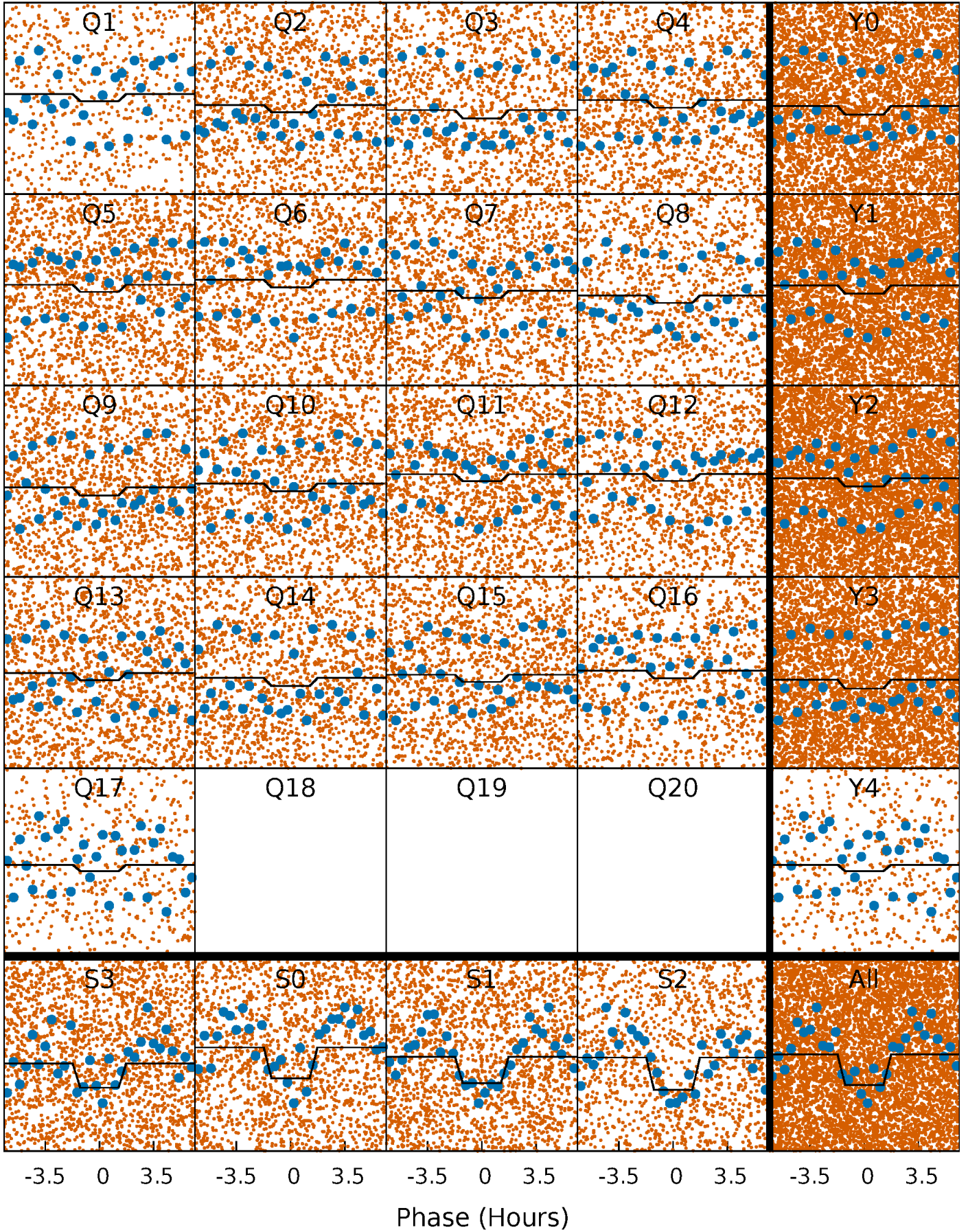
DV Quarter-Phased Transit Curves

TCE 011708238-01 P= 0.888293 Days $T_0=131.736105$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

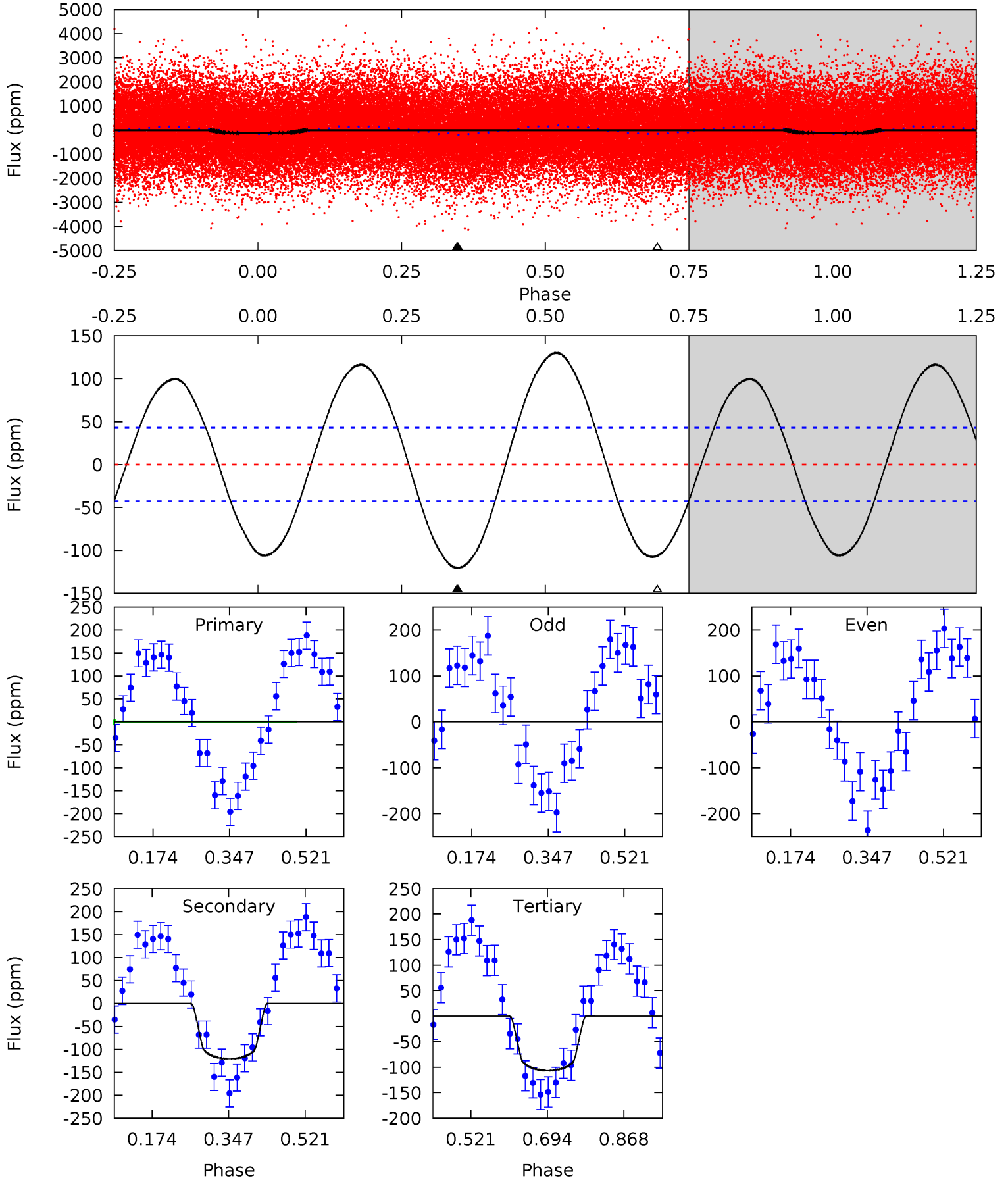
TCE 011708238-01 P= 0.888314 Days $T_0=131.726674$ (BKJD)



DV Model-Shift Uniqueness Test

011708238-01, P = 0.888293 Days, E = 130.847812 Days

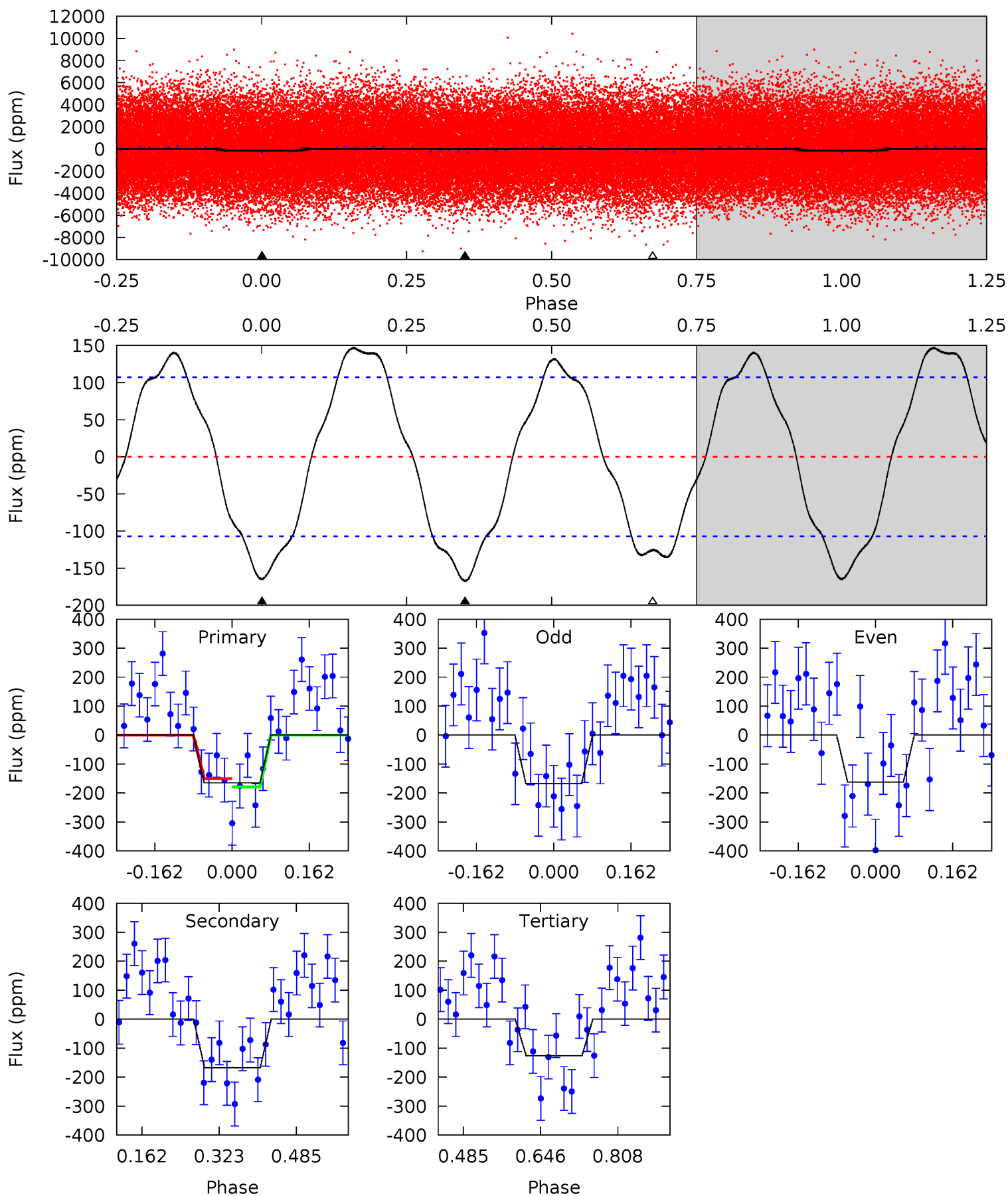
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	12.6	11.1	0	4.45	1.36	8.02	1.48	12.6	1.48	12.6	0.15	0.90	0.52	2.26



Alt Model-Shift Uniqueness Test

011708238-01, P = 0.888314 Days, E = 130.838360 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.86	6.96	5.25	0	4.46	1.40	4.06	1.62	6.86	1.71	6.96	0.10	0.98	0.47	0.59



Stellar Parameters For KIC 011708238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8087^{+225}_{-338}	$4.155^{+0.130}_{-0.174}$	$-0.160^{+0.200}_{-0.350}$	$1.791^{+0.464}_{-0.338}$	$1.670^{+0.177}_{-0.266}$	$0.409^{+0.269}_{-0.190}$
	+3%/-4%	+3%/-4%	+125%/-219%	+26%/-19%	+11%/-16%	+66%/-47%
Source	KIC0	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 011708238-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-121 ± 10	$2.47^{+0.86}_{-0.76}$	4558^{+354}_{-278}	7261^{+1926}_{-1059}	$4.878^{+5.636}_{-2.181}$
Alt.	-167 ± 24	$2.52^{+0.85}_{-0.75}$	4565^{+307}_{-287}	8022^{+2036}_{-1331}	$6.616^{+6.481}_{-3.066}$

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 $A_{obs} \gg 1.0$

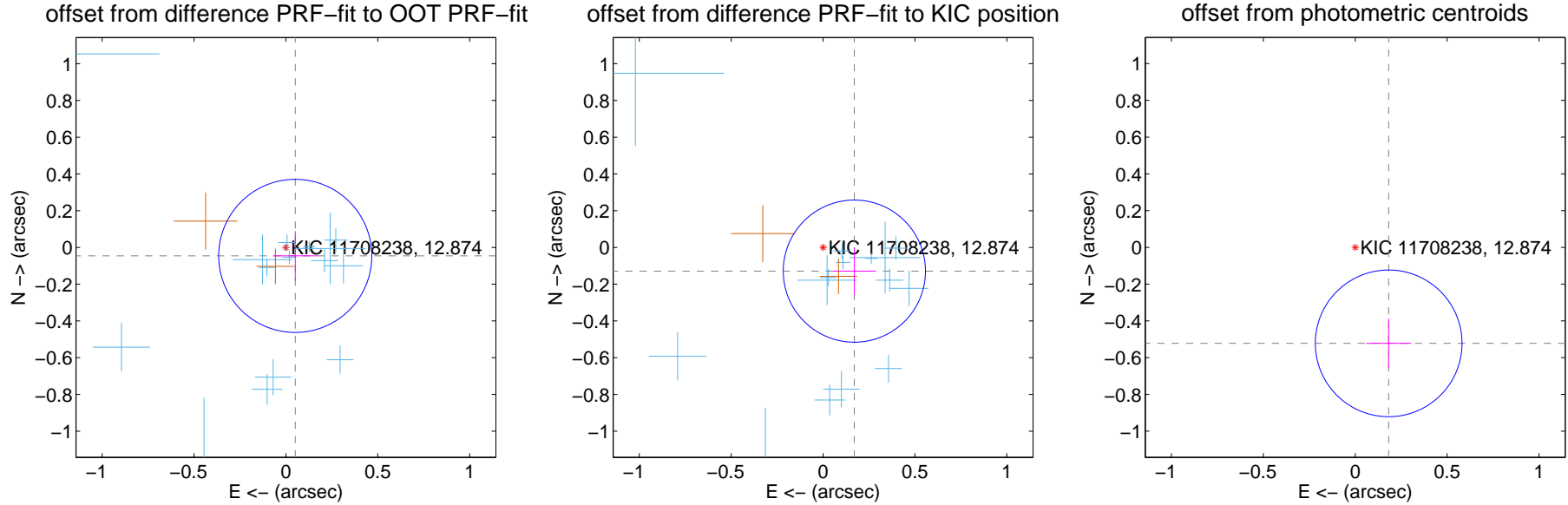
DV Centroid Data

Supplemental centroid analysis for 011708238-01. Kepler magnitude: 12.87. Transit SNR 11.55

There are 15 quarters with good PRF difference image offsets

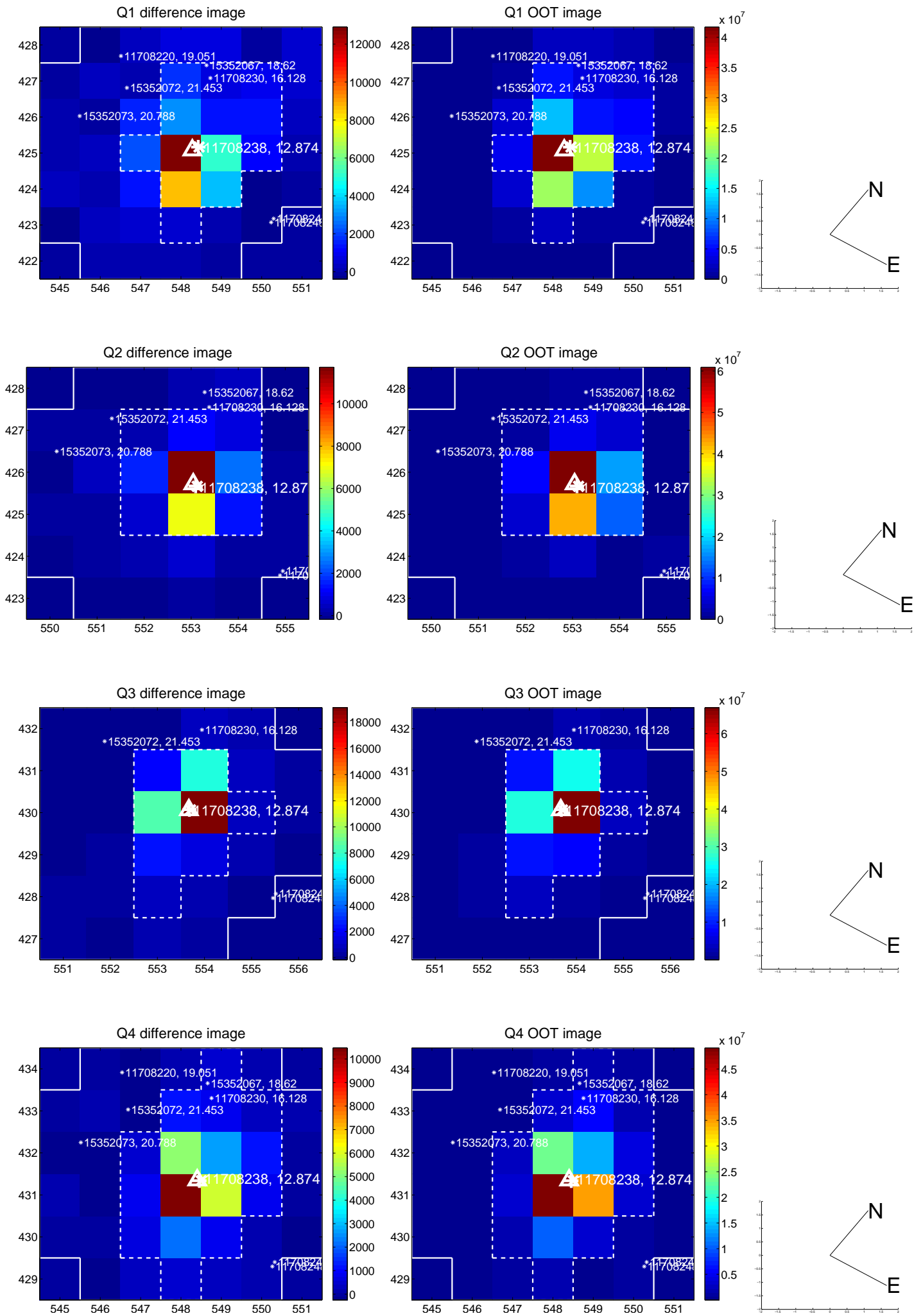
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.139	0.49	-0.051 ± 0.120	-0.046 ± 0.135
PRF-fit source offset from KIC position	0.214 ± 0.129	1.66	-0.170 ± 0.118	-0.129 ± 0.129
photometric centroid source offset	0.55 ± 0.13	4.16	-0.18 ± 0.12	-0.52 ± 0.13

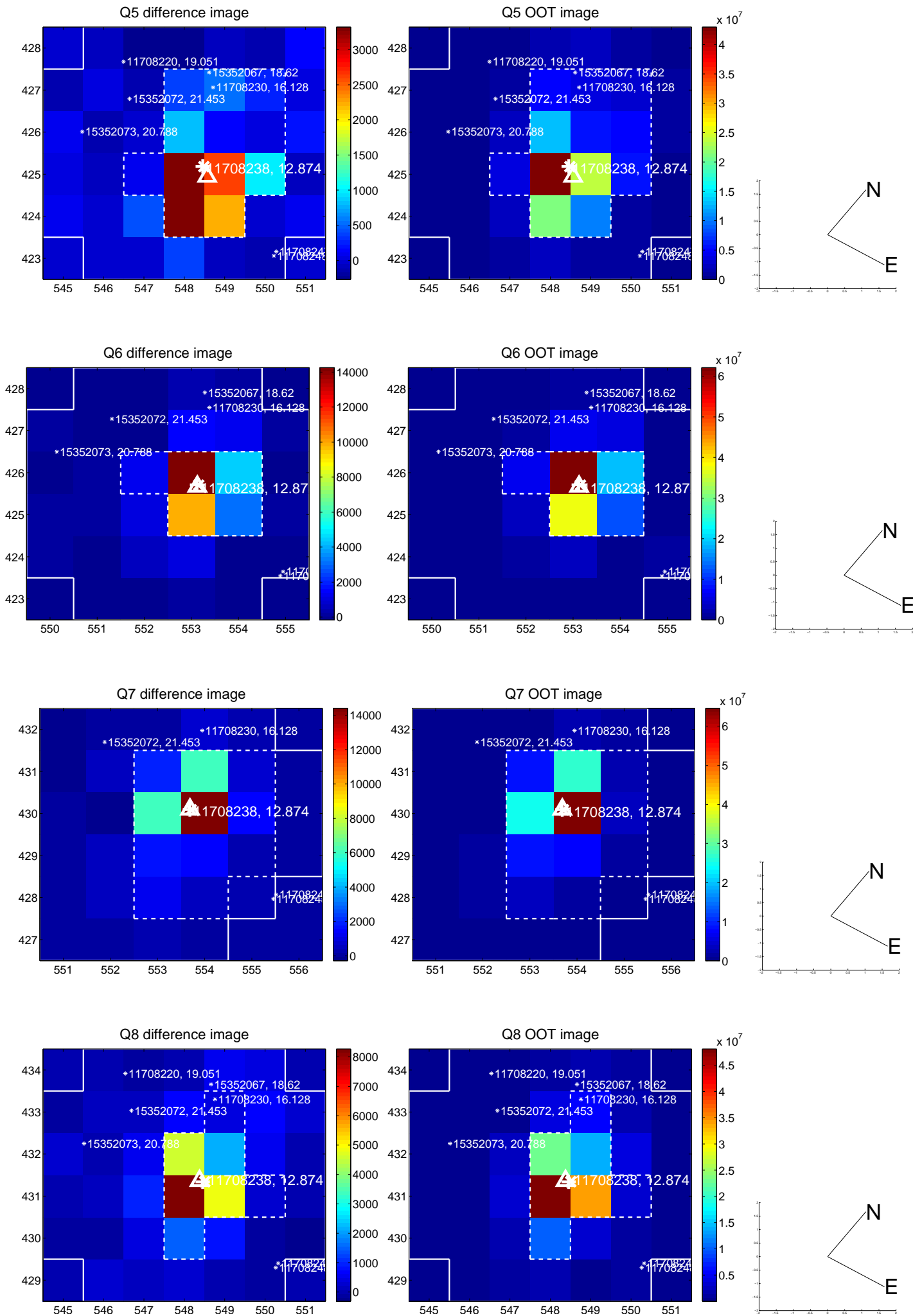


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

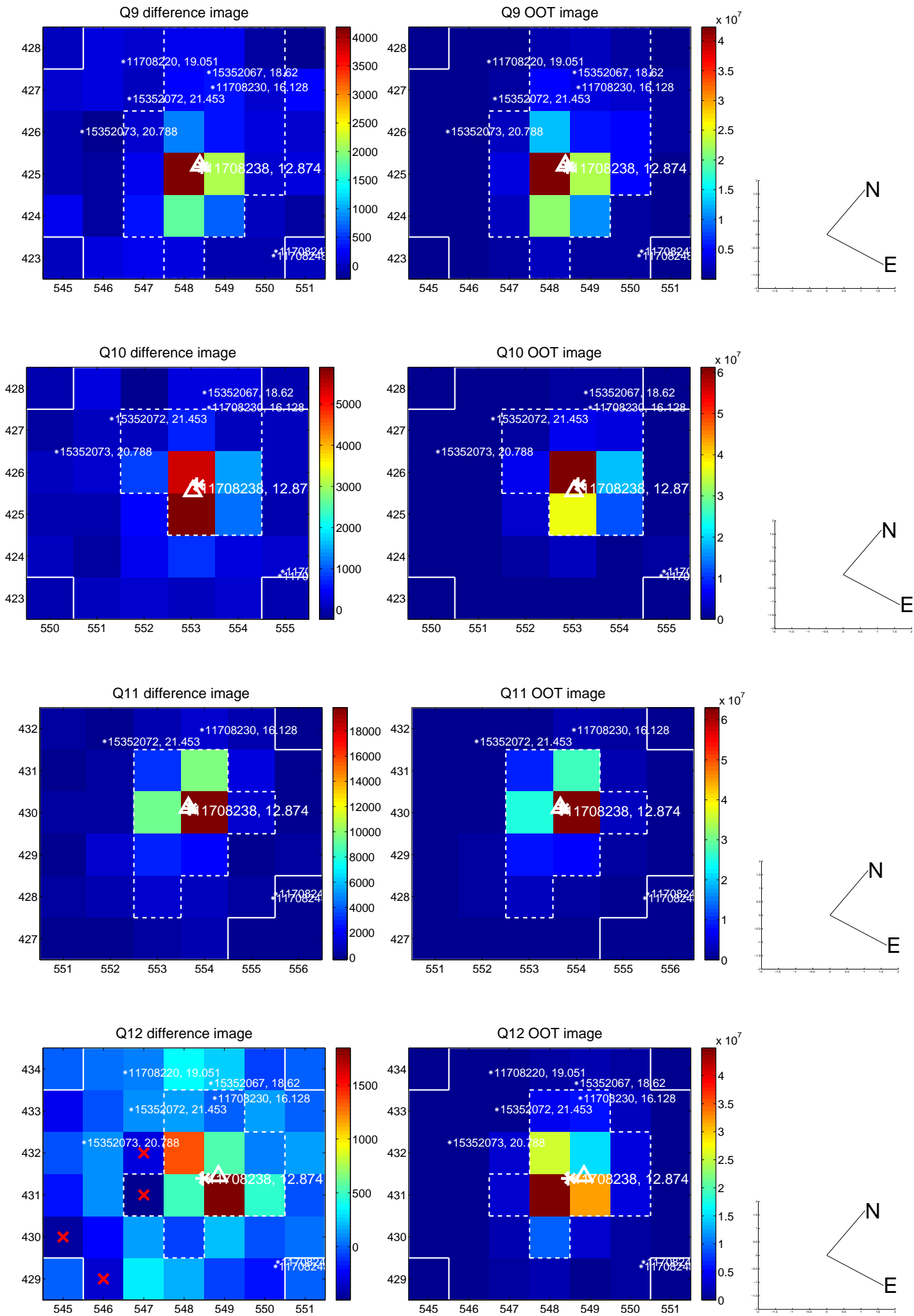
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



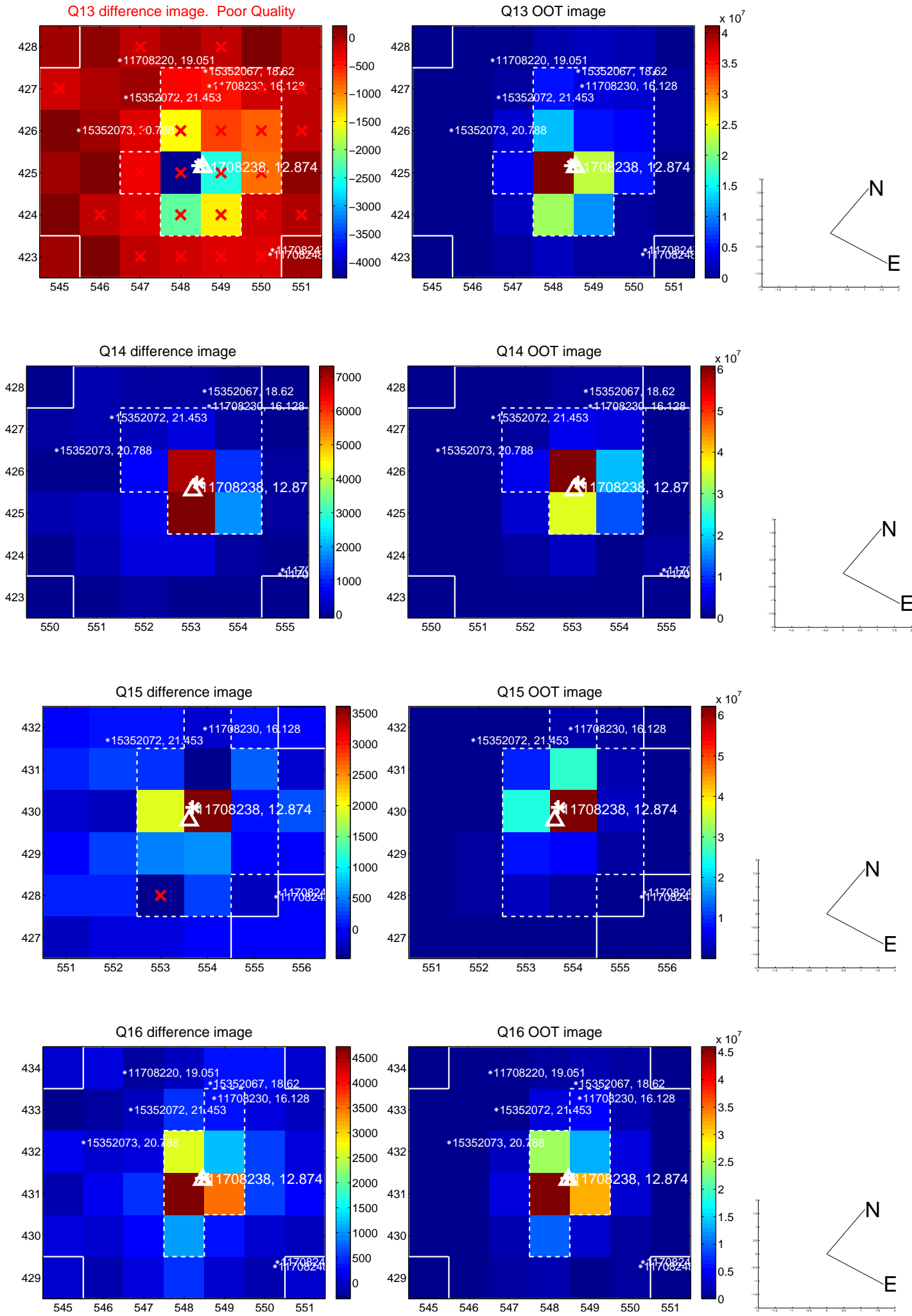
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



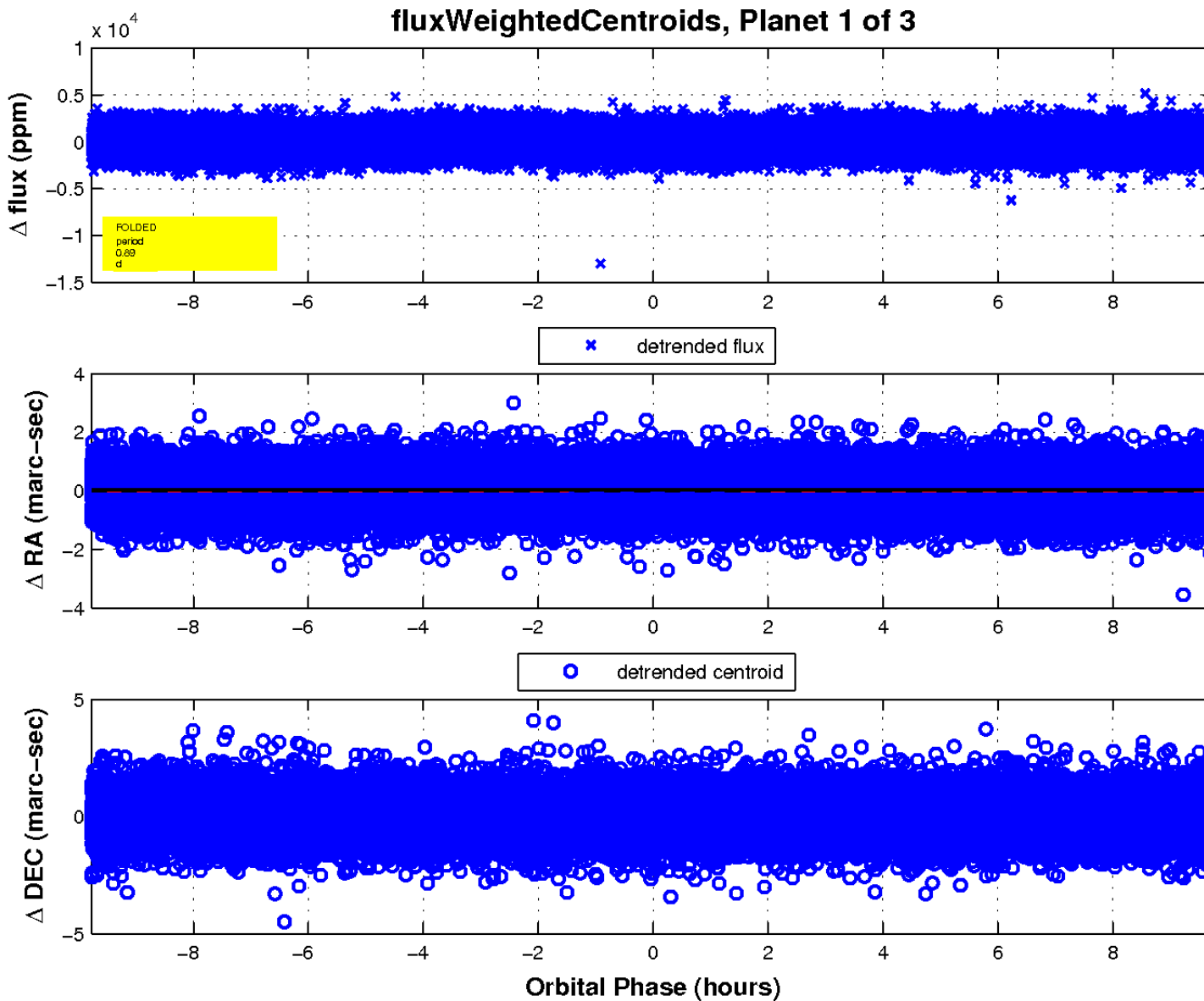
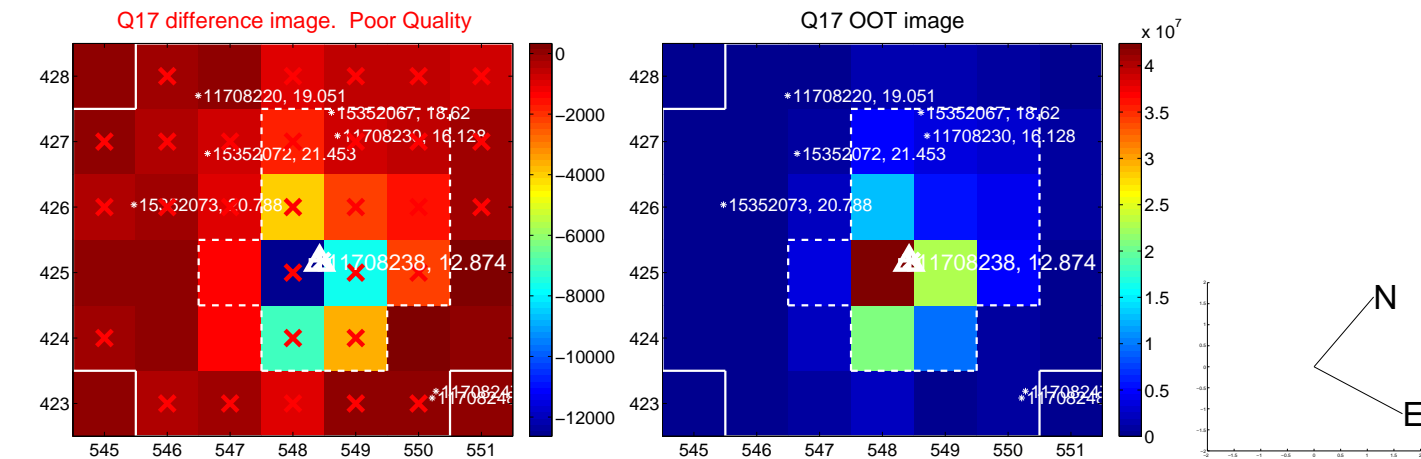
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

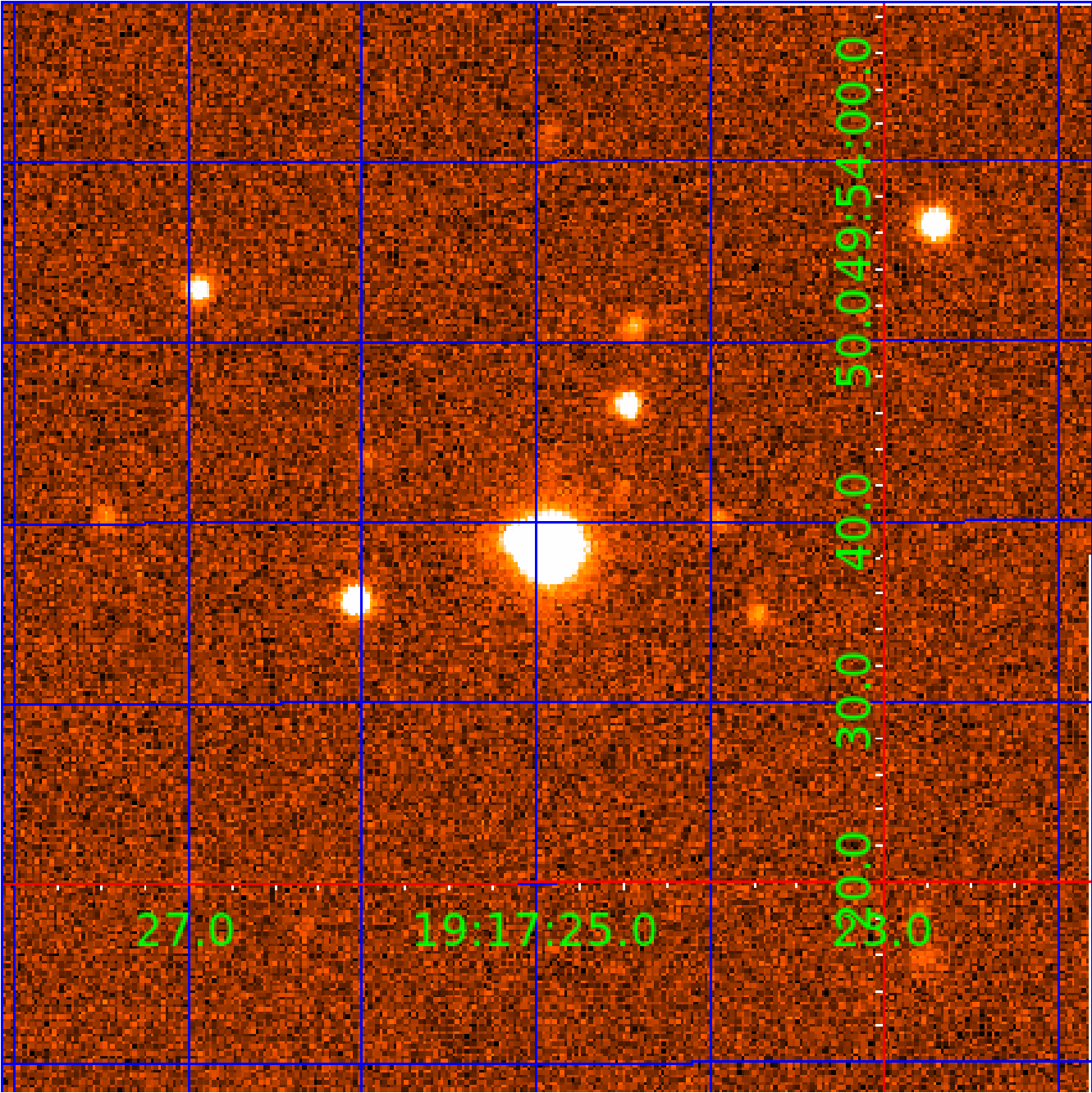


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011708238

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})
011708238-01	OBS	No	0.888293	131.736105	138.5	3.258	11.8	11.5	1.79	8087	2.43	26670.59
011708238-02	OBS	No	0.888316	132.032166	132.2	2.644	12.5	11.1	1.79	8087	2.21	26669.69
011708238-03	OBS	No	1.222684	132.711106	316.2	5.401	10.5	10.1	1.79	8087	4.28	17418.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011708238-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011708238-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
011708238-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

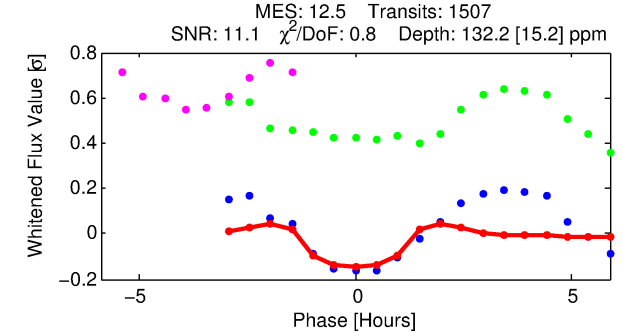
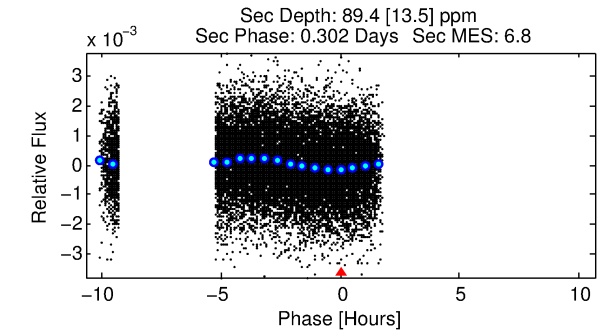
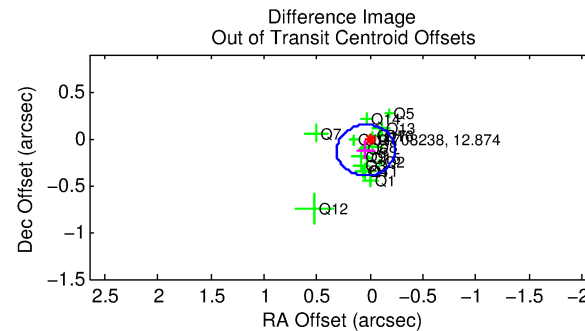
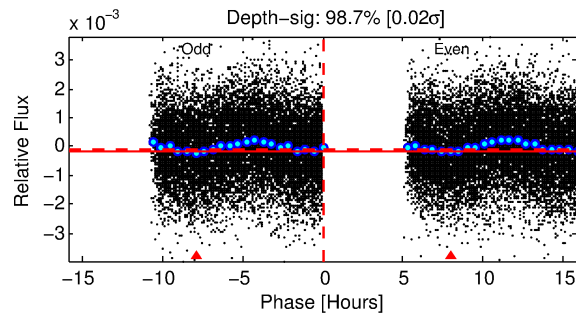
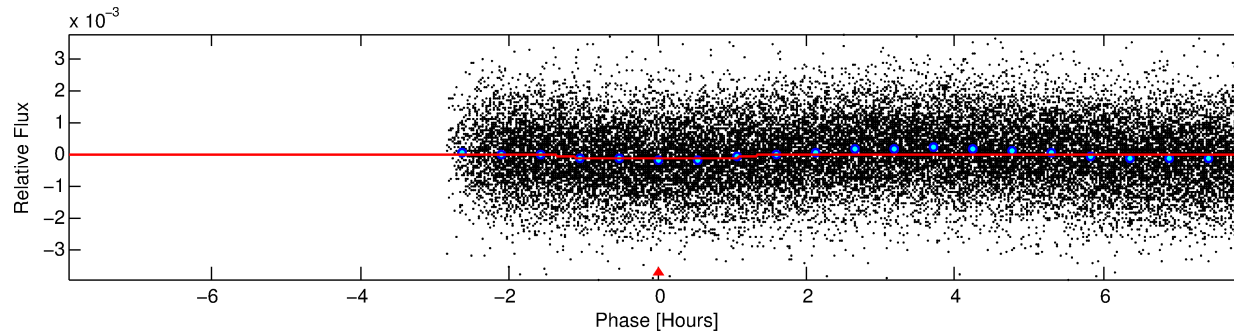
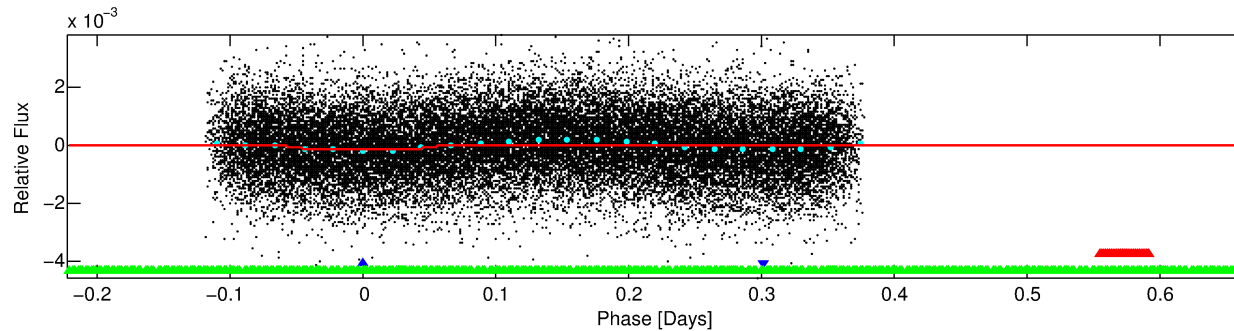
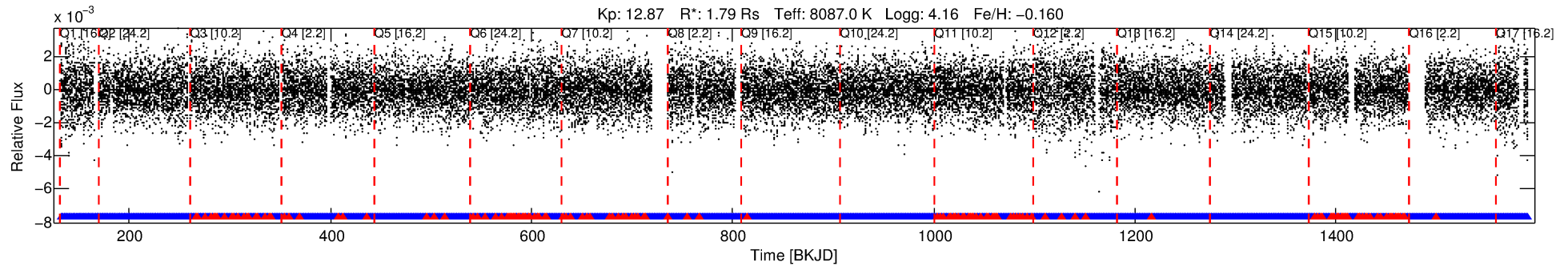
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011708238-02

No Significant Match Found

DV One-Page Summary

KIC: 11708238 Candidate: 2 of 3 Period: 0.888 d



DV Fit Results:

Period = 0.88832 [0.00001] d
Epoch = 132.0322 [0.0025] BKJD
Rp/R* = 0.0113 [0.0063]
a/R* = 2.05 [5.07]
b = 0.70 [2.41]
Seff = 26669.69 [9583.39]
Teq = 3259 [293] K
Rp = 2.21 [1.36] Re
a = 0.0215 [0.0047] AU
Ag = 4.66 [5.44] [0.67 σ]
Teffp = 7400 [2101] K [1.95 σ]

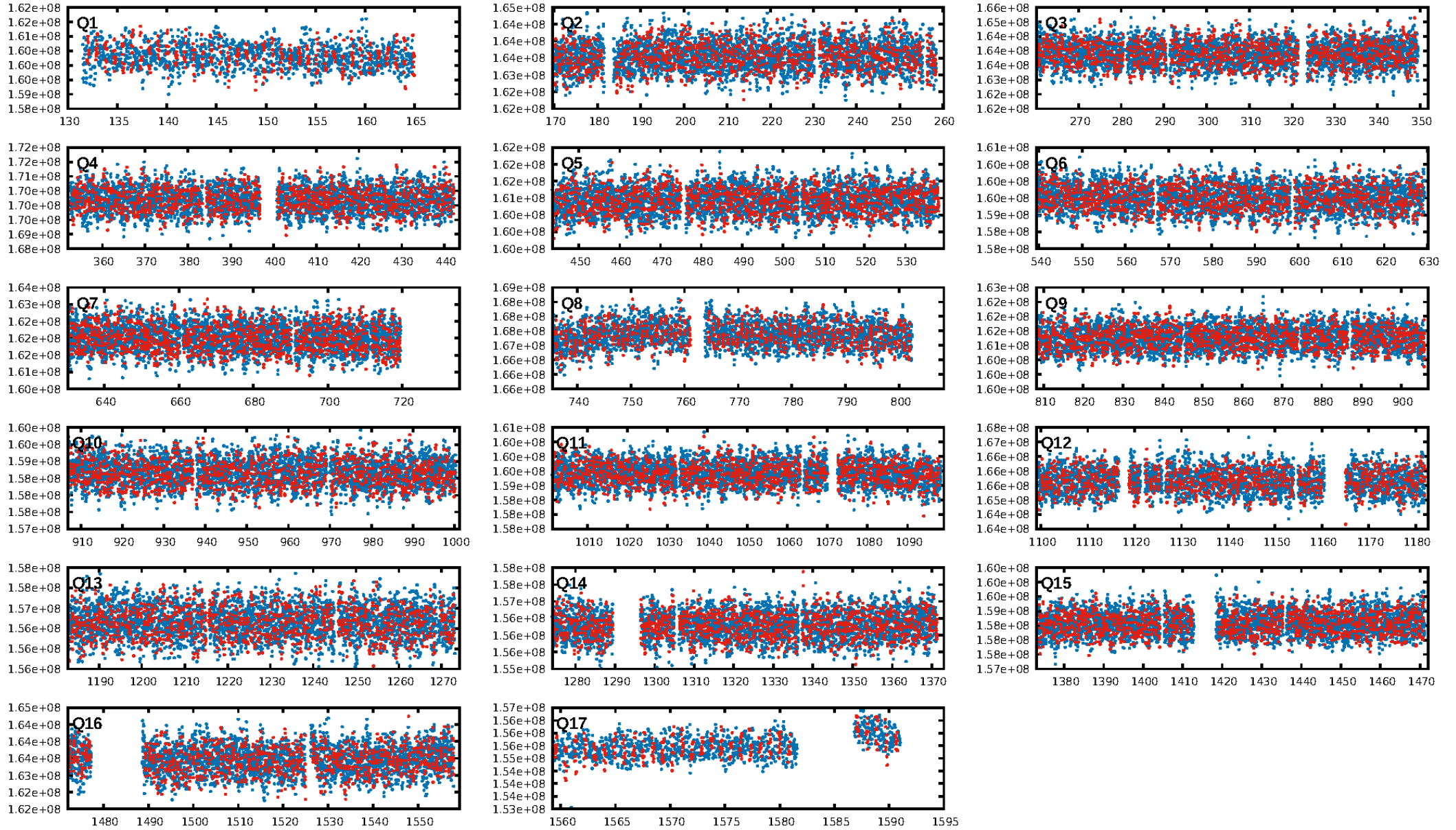
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 81.8% [1.33 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [1286/1439]
GhostDiagnostic-chr: 1.271
Centroid-sig: N/A
Centroid-so: 0.323 arcsec [2.16 σ]
OotOffset-rm: 0.131 arcsec [1.44 σ]
KicOffset-rm: 0.226 arcsec [2.81 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.00 [0/17]

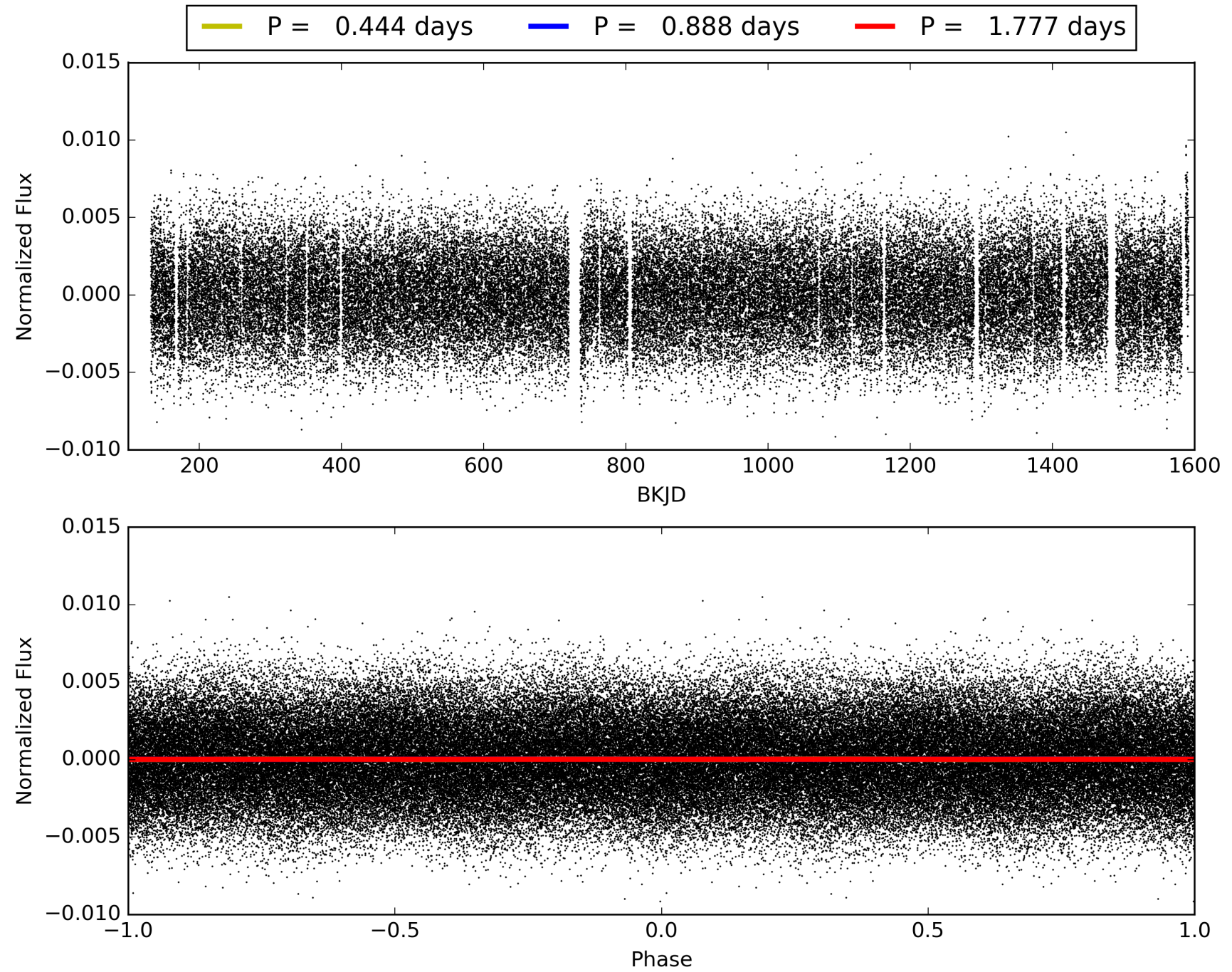
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:57:05 Z

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

TCE 011708238-02, PDC Light Curves

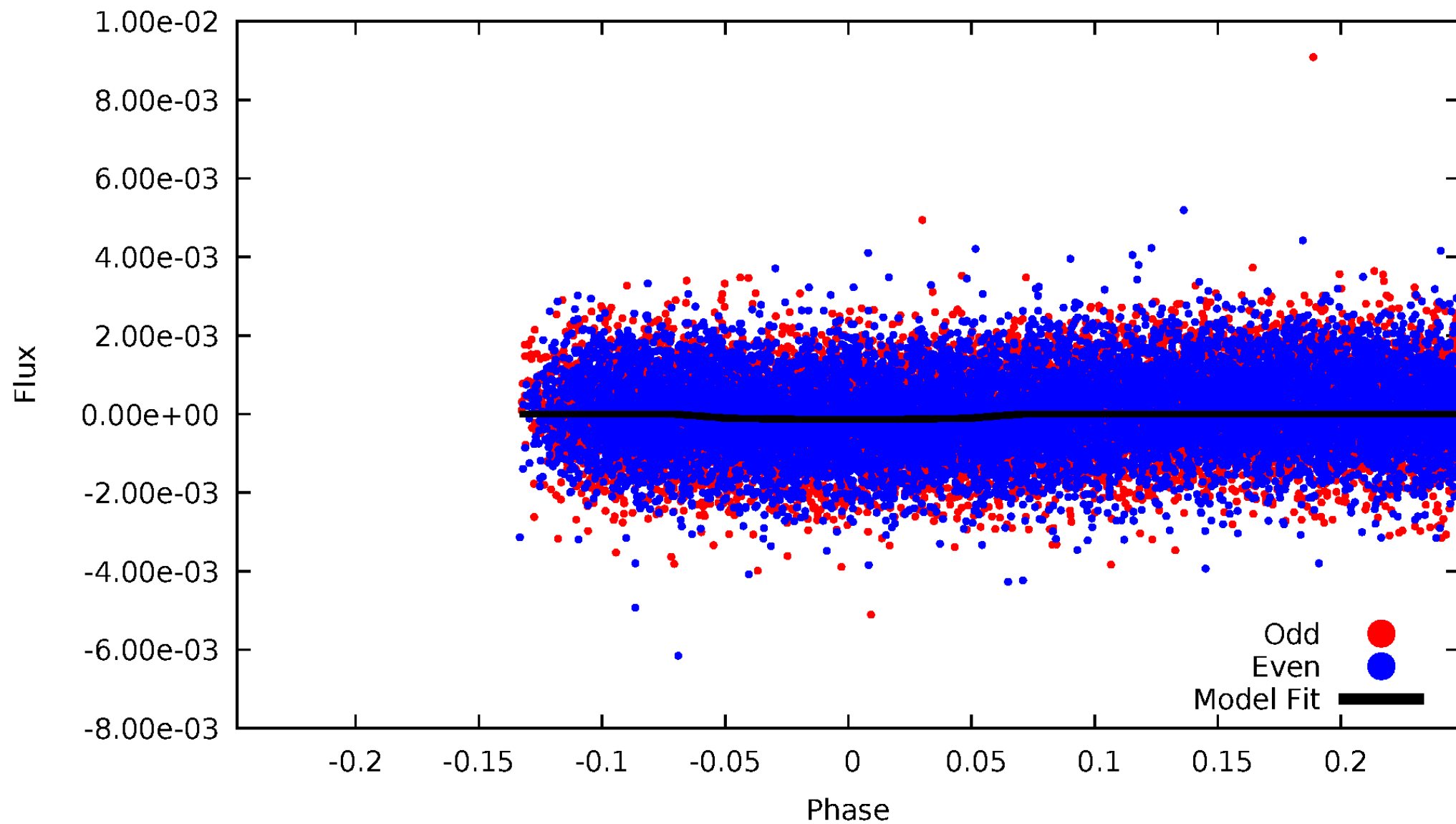


TCE 011708238-02



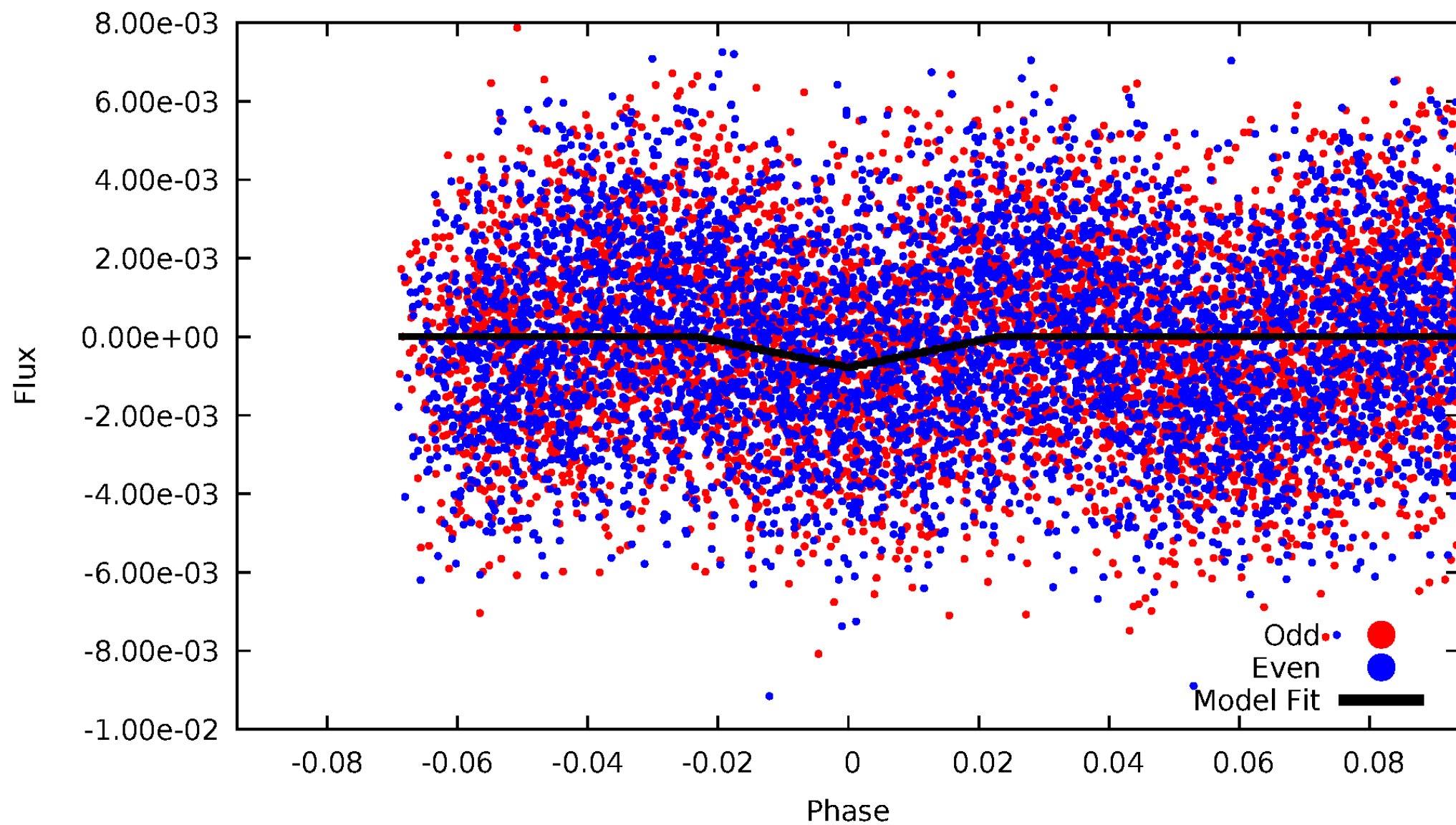
DV Odd/Even

TCE 011708238-02



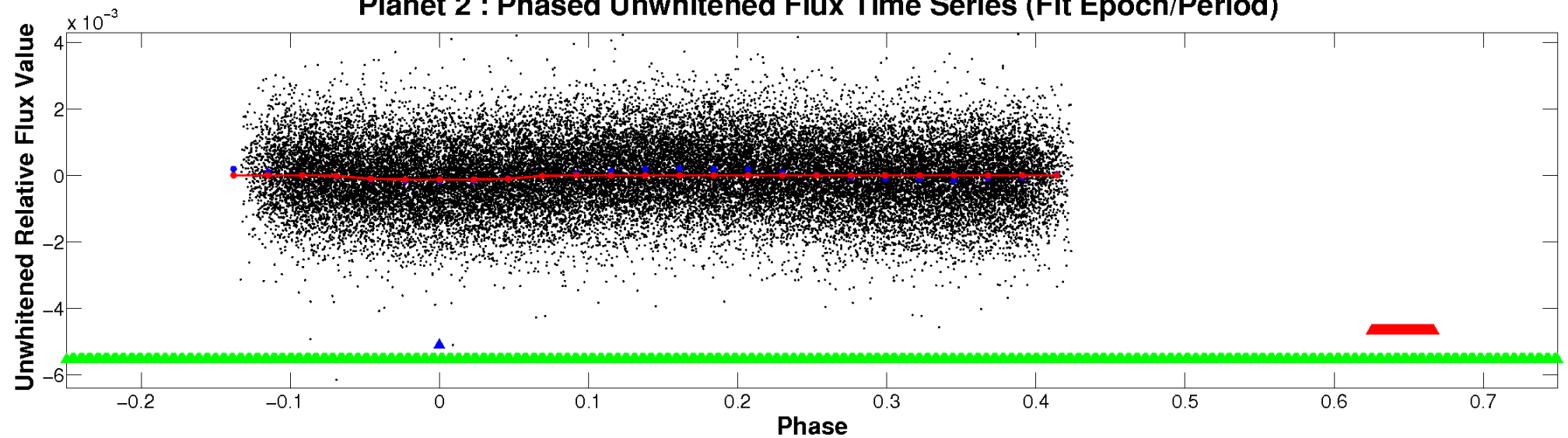
ALT Odd/Even

TCE 011708238-02

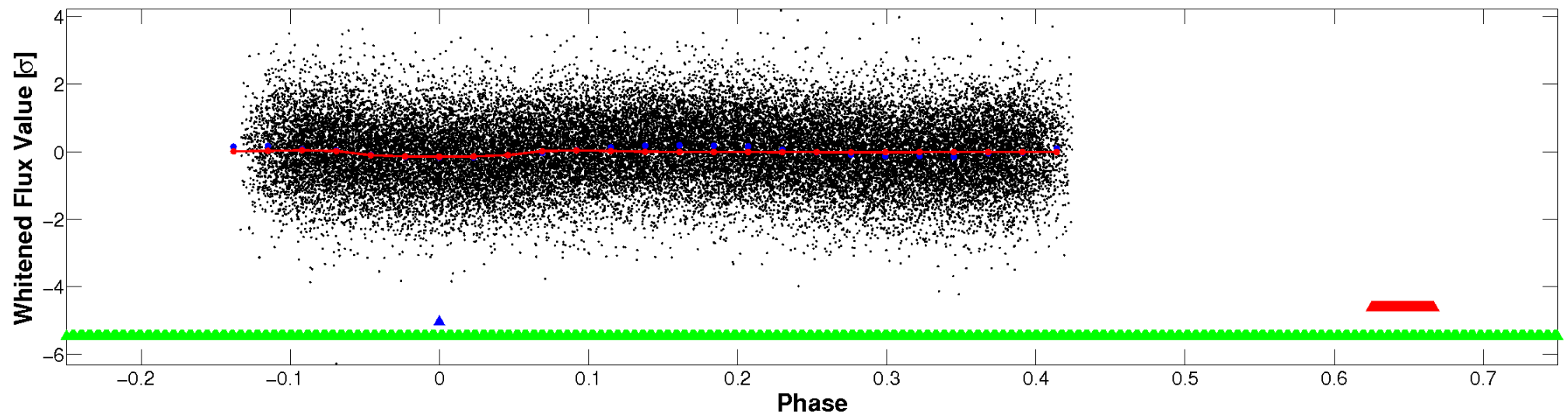


Non-Whitened Vs. Whitened Light Curve

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

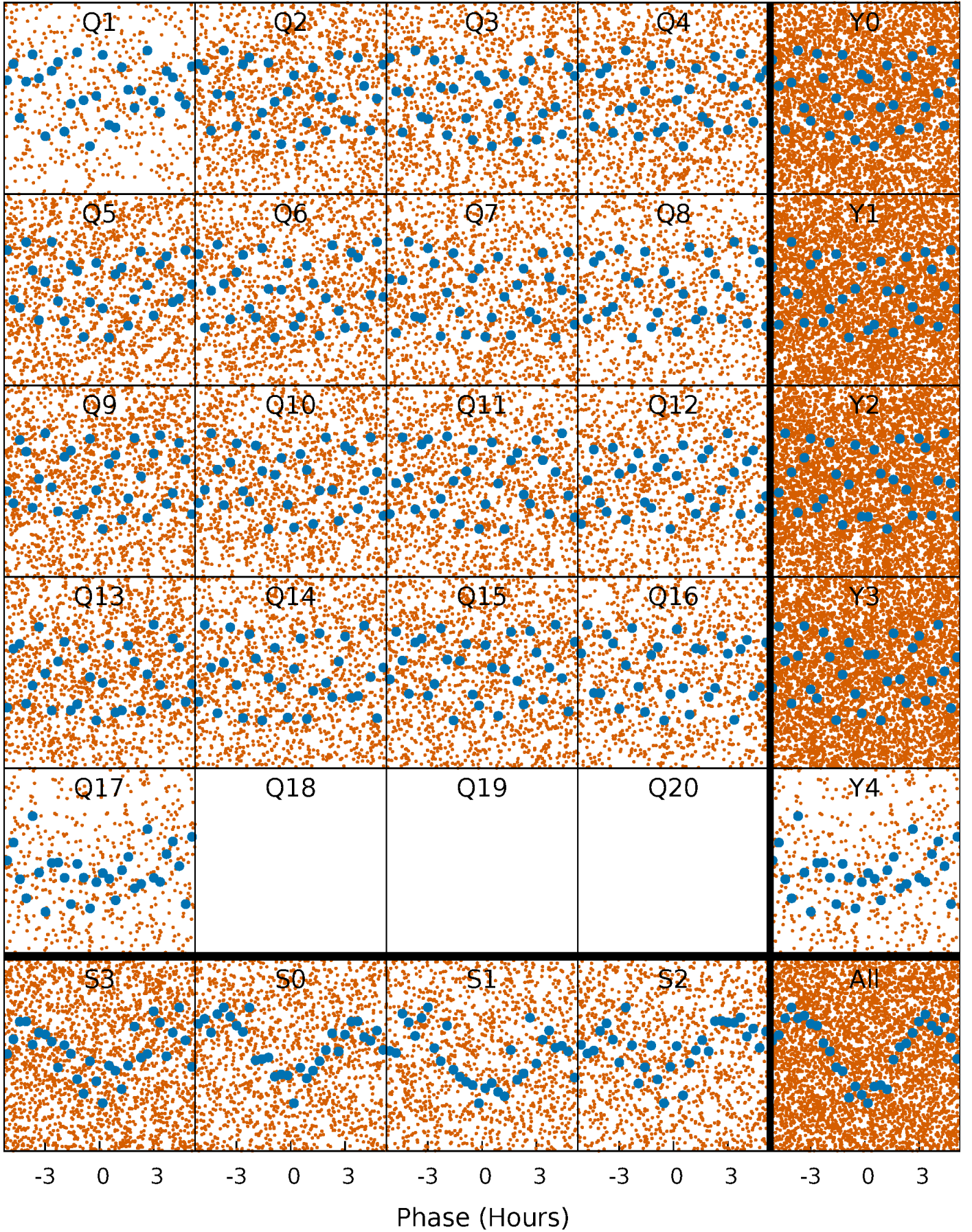


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



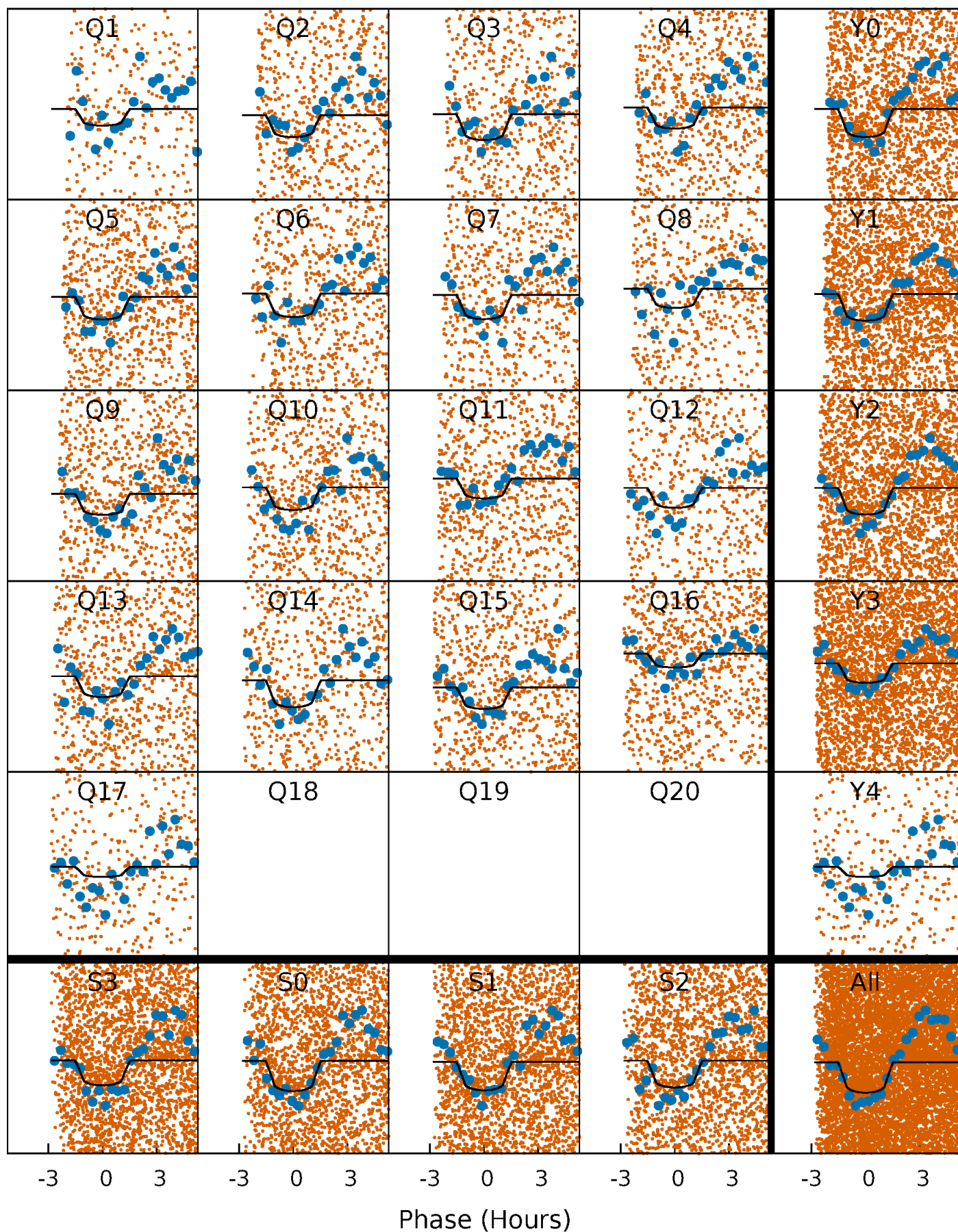
PDC Quarter-Phased Transit Curves

TCE 011708238-02 P= 0.888316 Days $T_0=132.032166$ (BKJD)



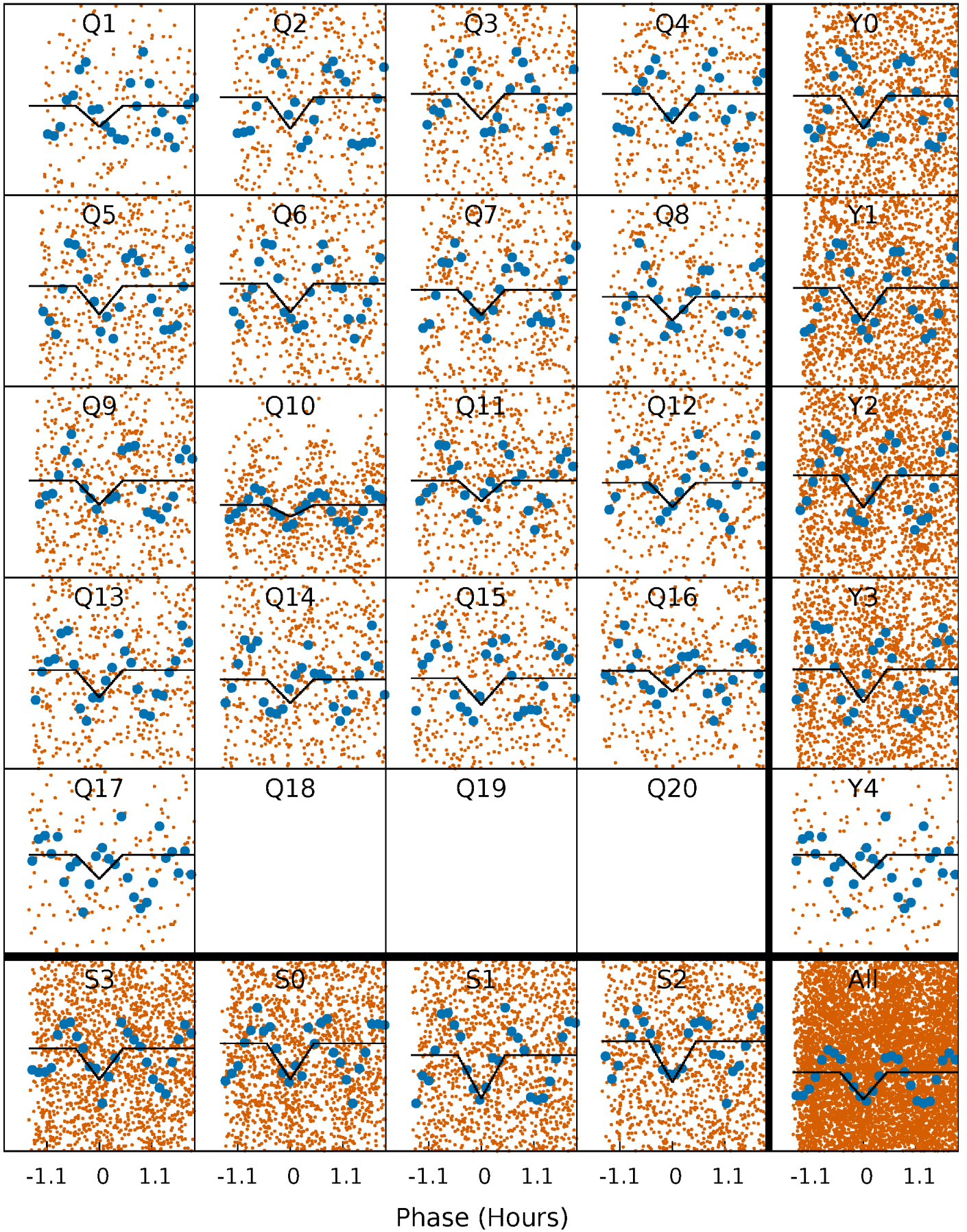
DV Quarter-Phased Transit Curves

TCE 011708238-02 P= 0.888316 Days $T_0=132.032166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

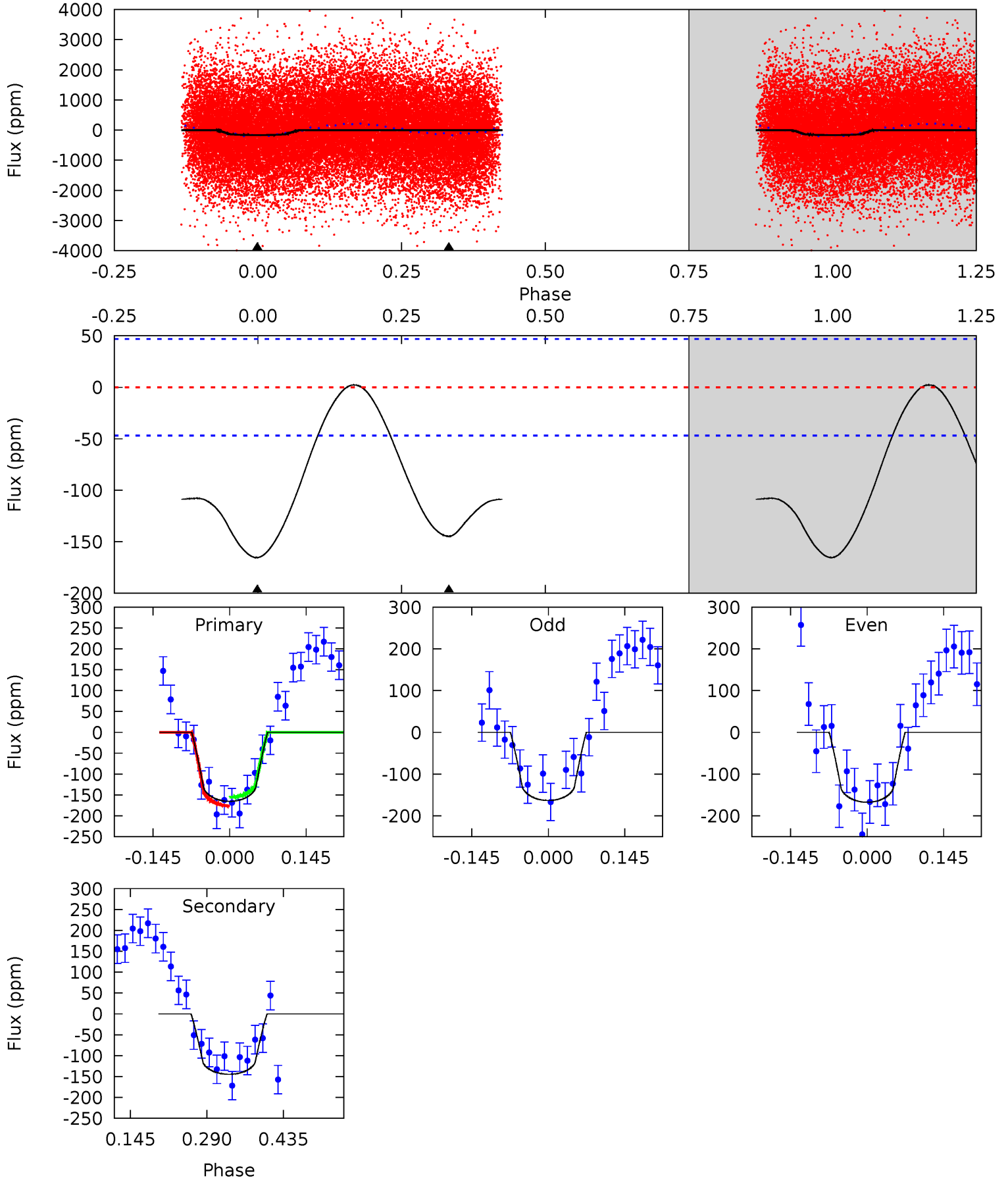
TCE 011708238-02 P= 0.888302 Days $T_0=131.998194$ (BKJD)



DV Model-Shift Uniqueness Test

011708238-02, P = 0.888316 Days, E = 131.143850 Days

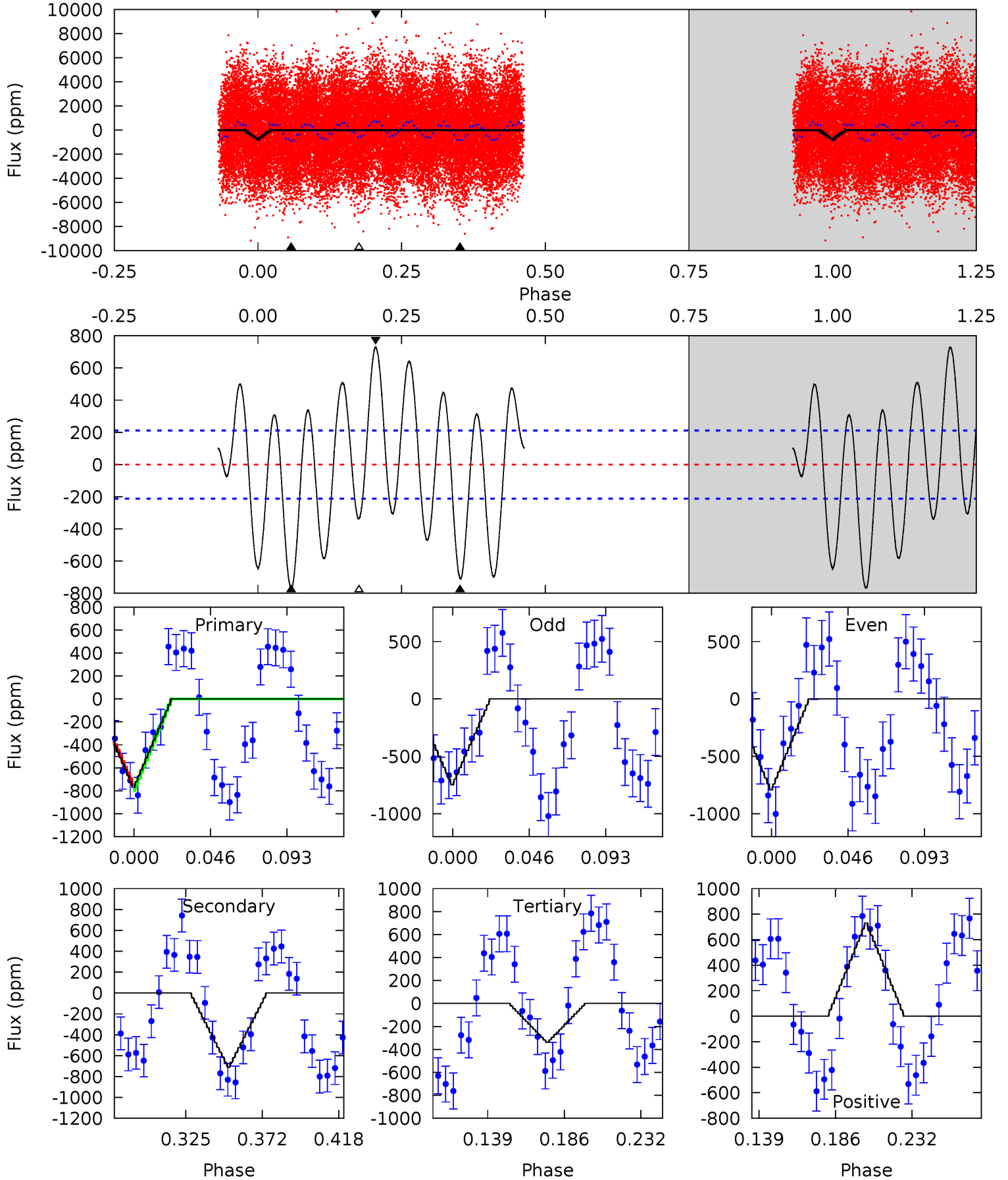
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	13.9	0	0	4.49	1.46	0.28	15.8	15.8	13.9	13.9	0.20	1.17	0.01	0.98



Alt Model-Shift Uniqueness Test

011708238-02, P = 0.888302 Days, E = 131.109892 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	15.9	7.57	16.3	4.72	1.99	8.94	9.63	0.87	8.31	-0.45	0.52	0.92	0.49	0.61



Stellar Parameters For KIC 011708238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8087^{+225}_{-338}	$4.155^{+0.130}_{-0.174}$	$-0.160^{+0.200}_{-0.350}$	$1.791^{+0.464}_{-0.338}$	$1.670^{+0.177}_{-0.266}$	$0.409^{+0.269}_{-0.190}$
	+3%/-4%	+3%/-4%	+125%/-219%	+26%/-19%	+11%/-16%	+66%/-47%
Source	KIC0	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 011708238-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-145 ± 10	$2.16^{+1.41}_{-1.16}$	4551^{+336}_{-268}	8272^{+7102}_{-2075}	$7.585^{+27.903}_{-4.724}$
Alt.	-712 ± 45	$5.53^{+1.58}_{-1.35}$	4571^{+324}_{-304}	7684^{+1430}_{-999}	$5.882^{+4.310}_{-2.331}$

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

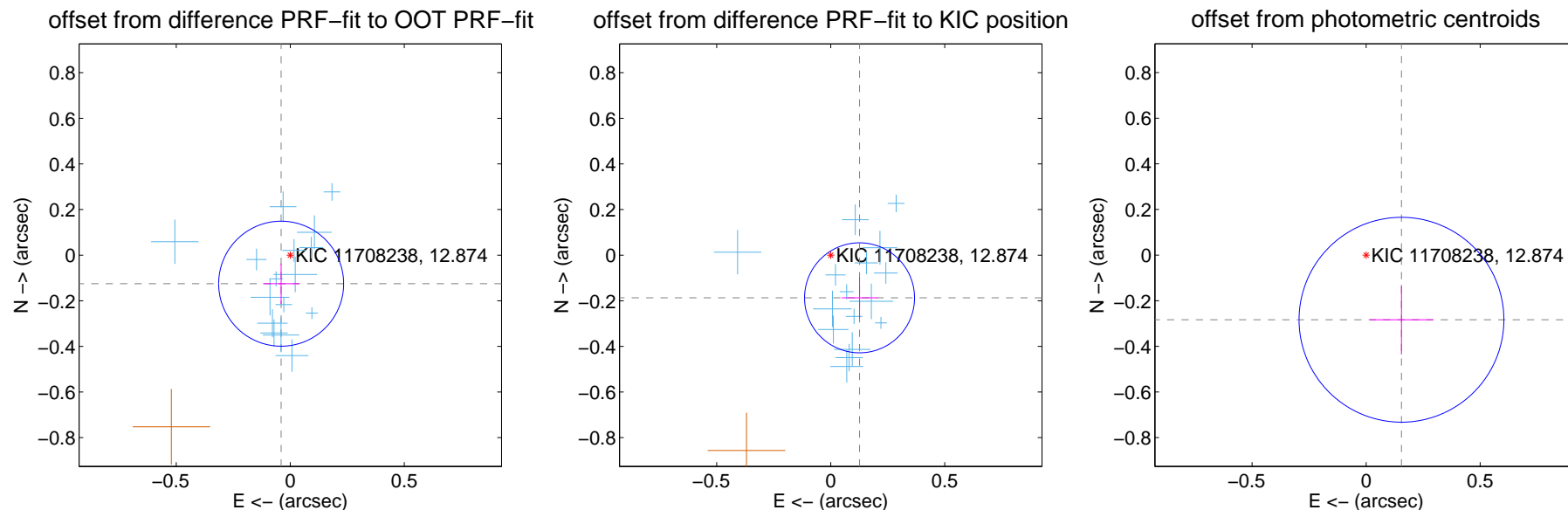
DV Centroid Data

Supplemental centroid analysis for 011708238-02. Kepler magnitude: 12.87. Transit SNR 11.12

There are 16 quarters with good PRF difference image offsets

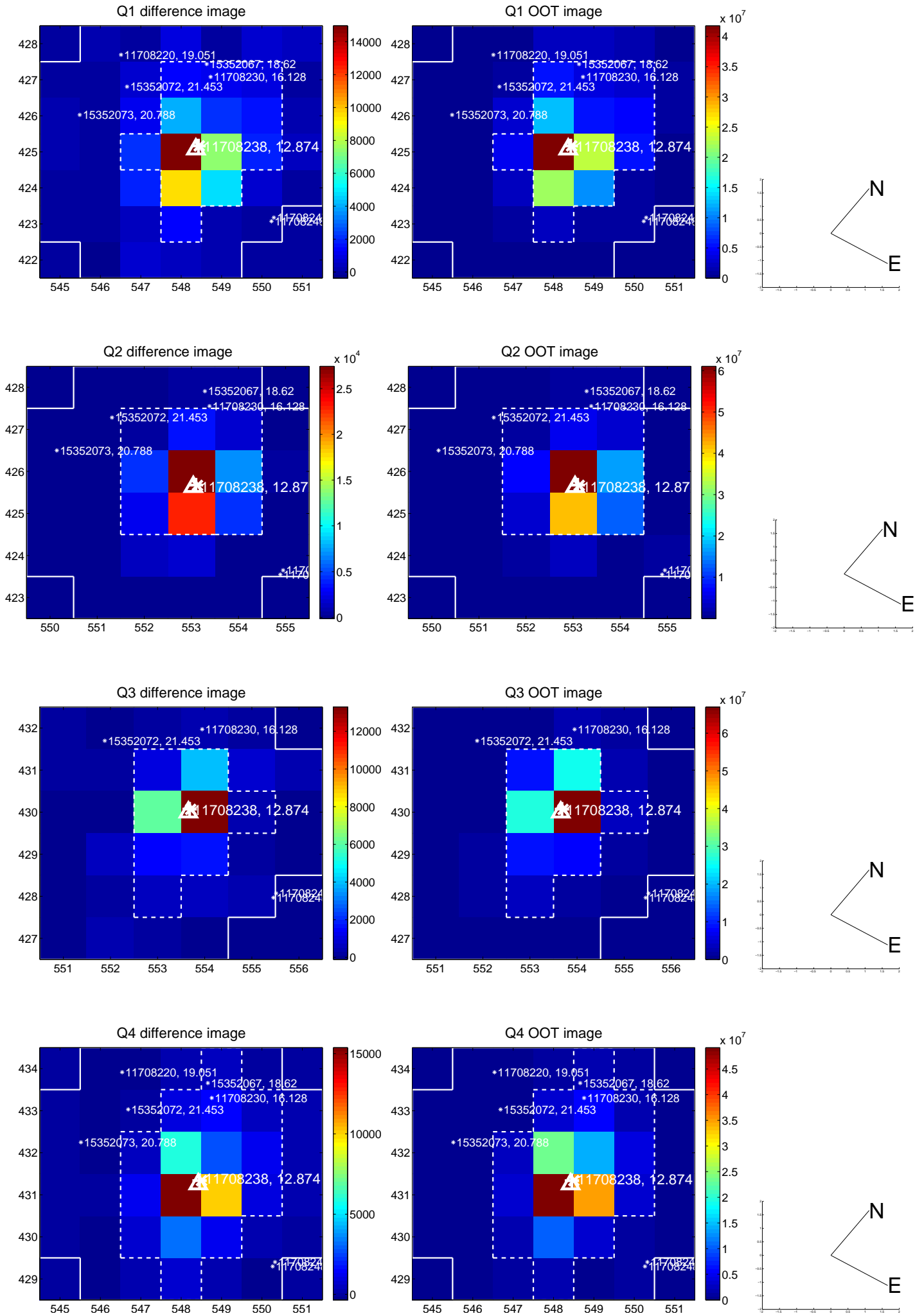
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.131 ± 0.091	1.44	0.040 ± 0.079	-0.125 ± 0.089
PRF-fit source offset from KIC position	0.226 ± 0.080	2.81	-0.126 ± 0.079	-0.187 ± 0.090
photometric centroid source offset	0.32 ± 0.15	2.16	-0.15 ± 0.14	-0.28 ± 0.15

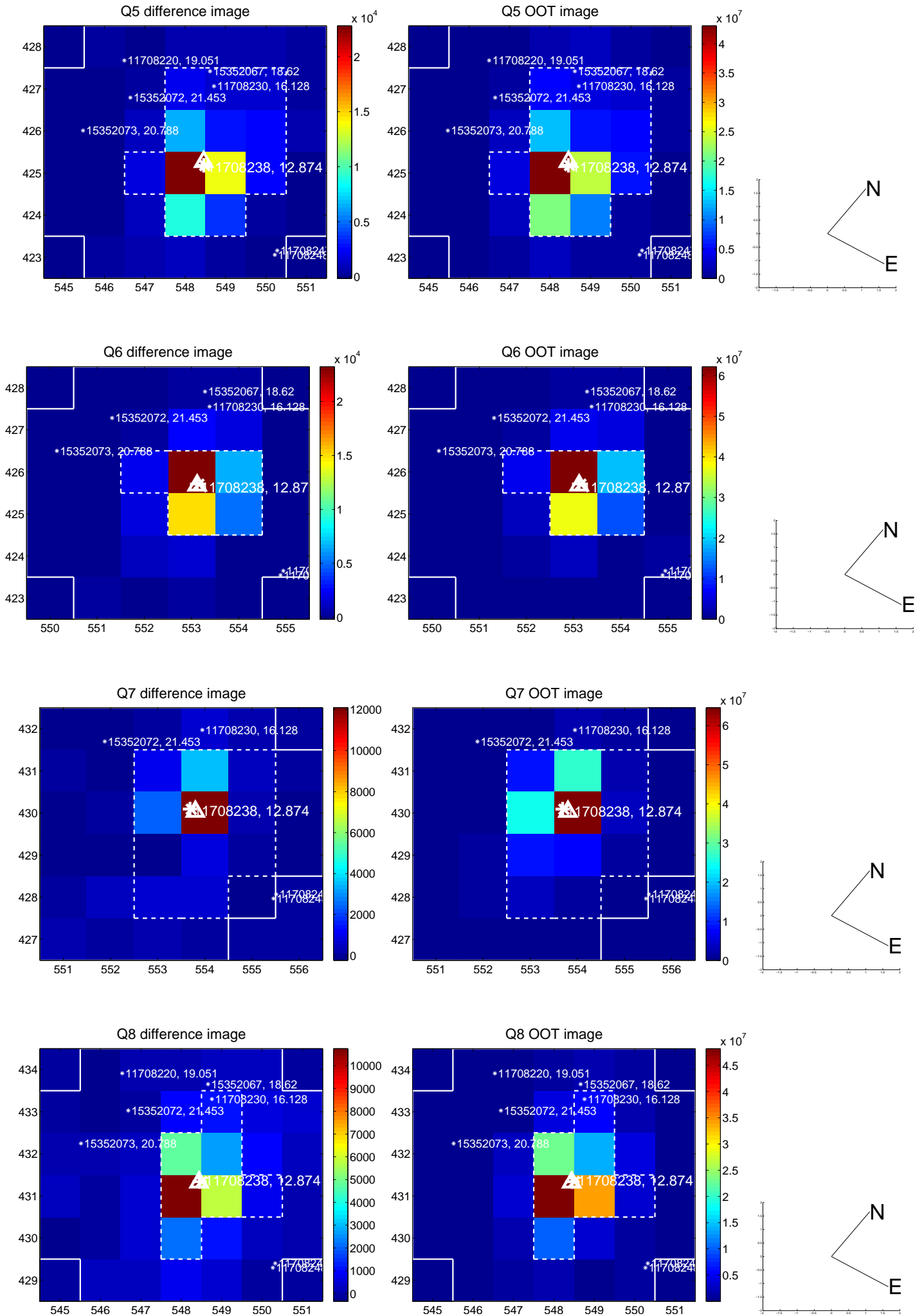


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

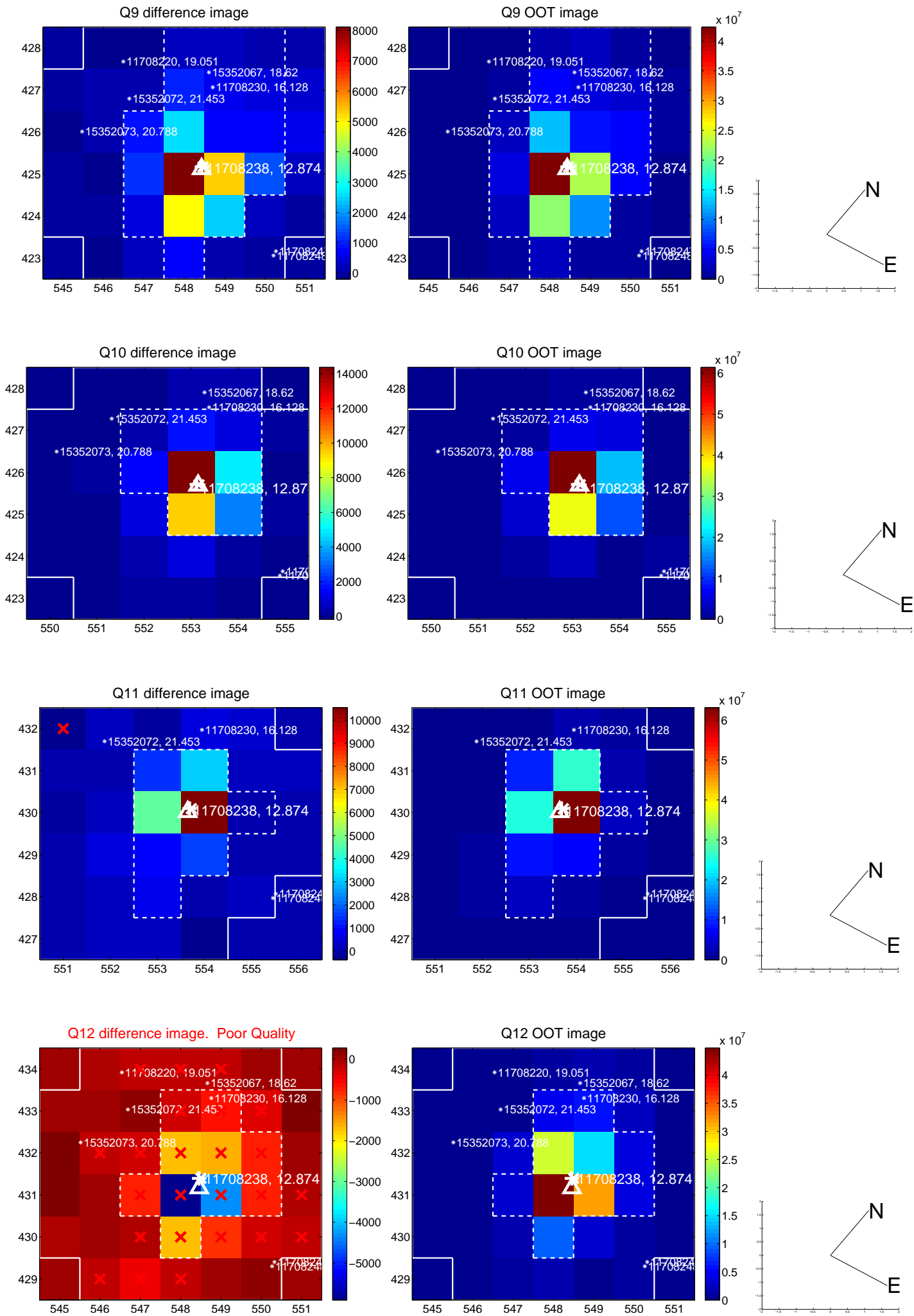
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



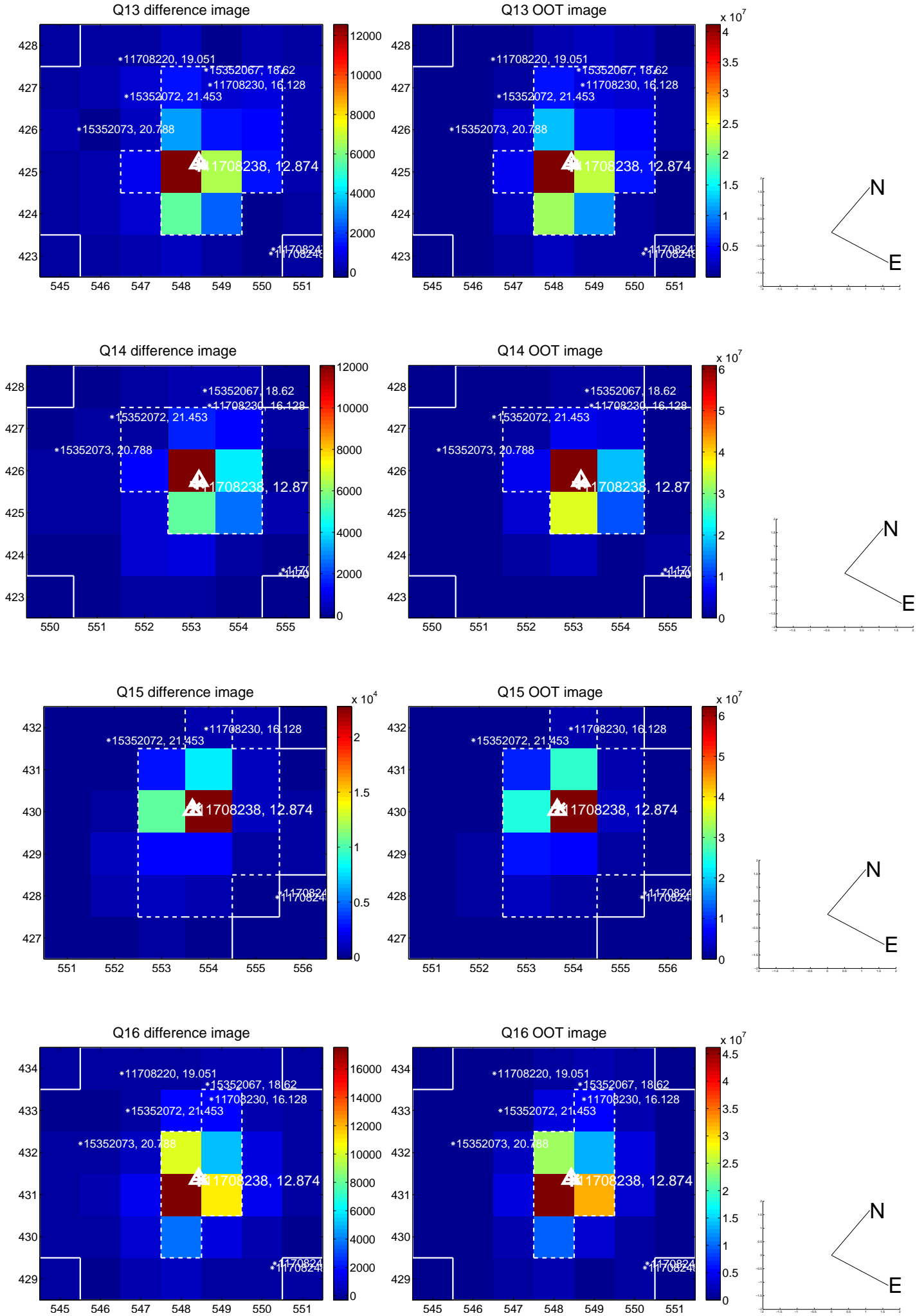
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



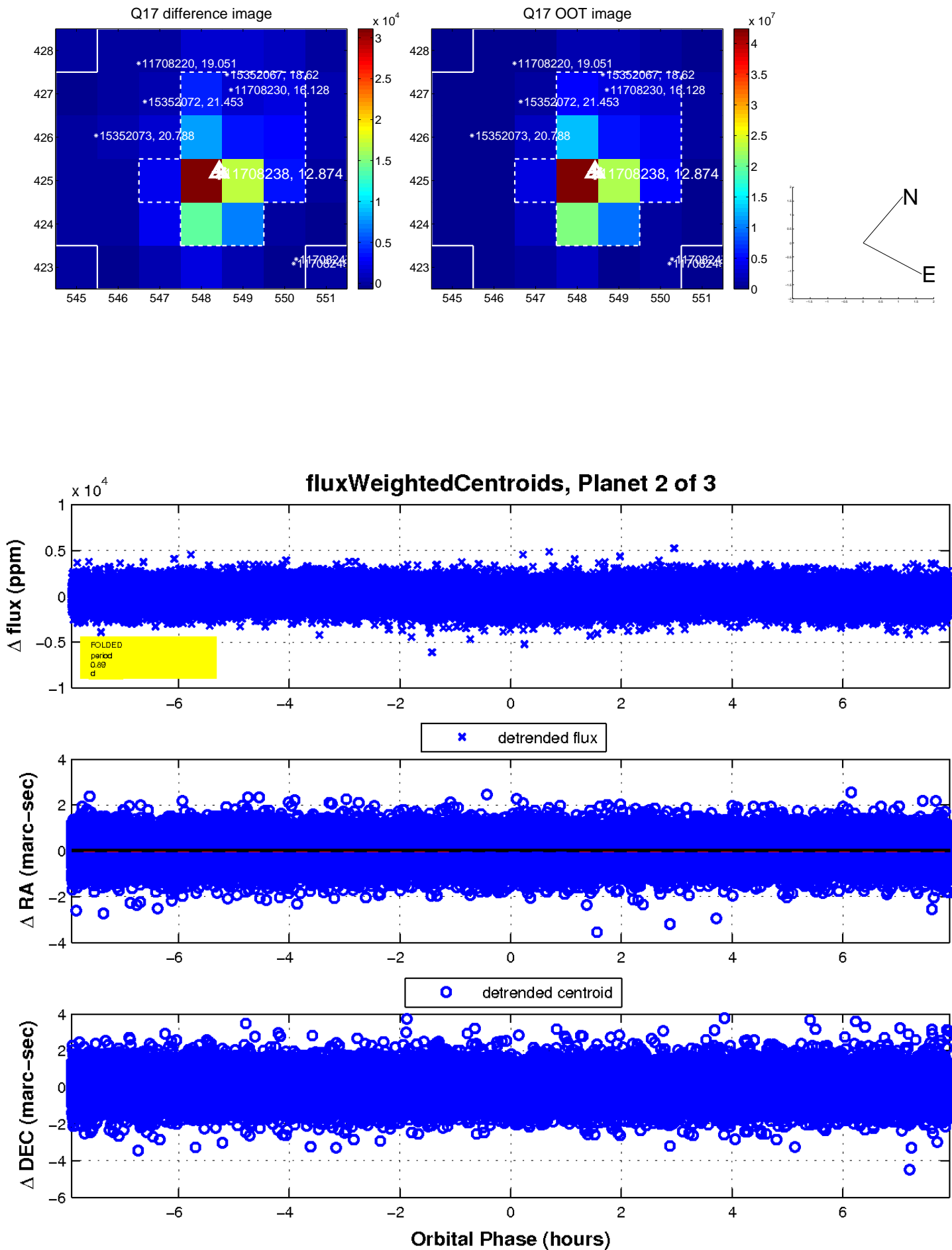
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

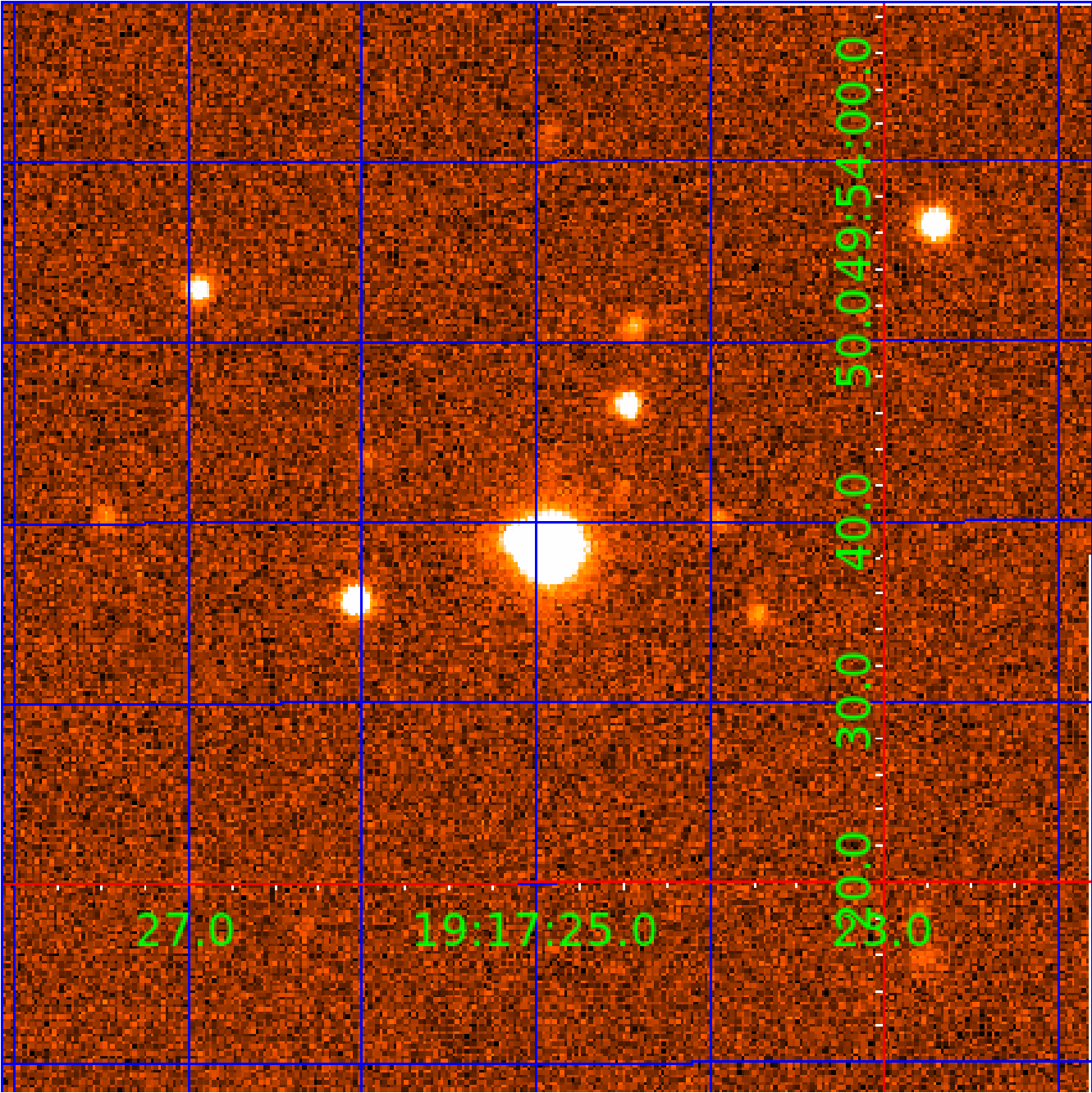


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011708238

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})
011708238-01	OBS	No	0.888293	131.736105	138.5	3.258	11.8	11.5	1.79	8087	2.43	26670.59
011708238-02	OBS	No	0.888316	132.032166	132.2	2.644	12.5	11.1	1.79	8087	2.21	26669.69
011708238-03	OBS	No	1.222684	132.711106	316.2	5.401	10.5	10.1	1.79	8087	4.28	17418.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011708238-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011708238-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
011708238-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

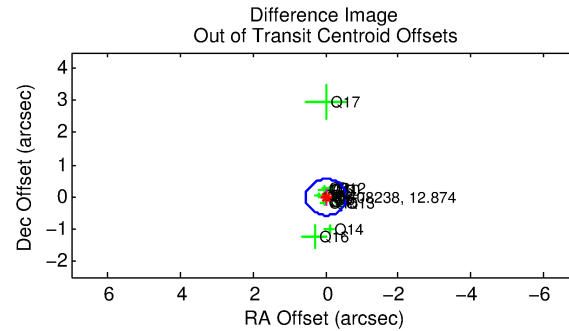
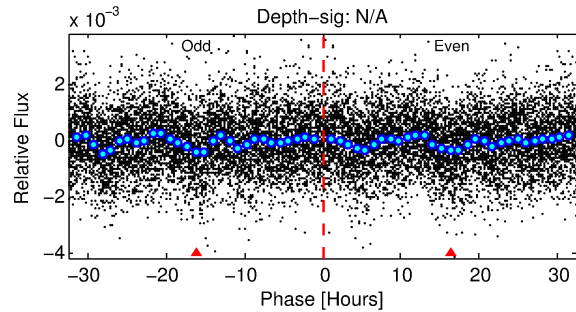
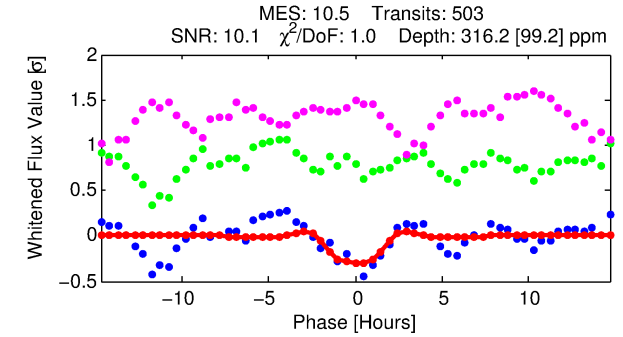
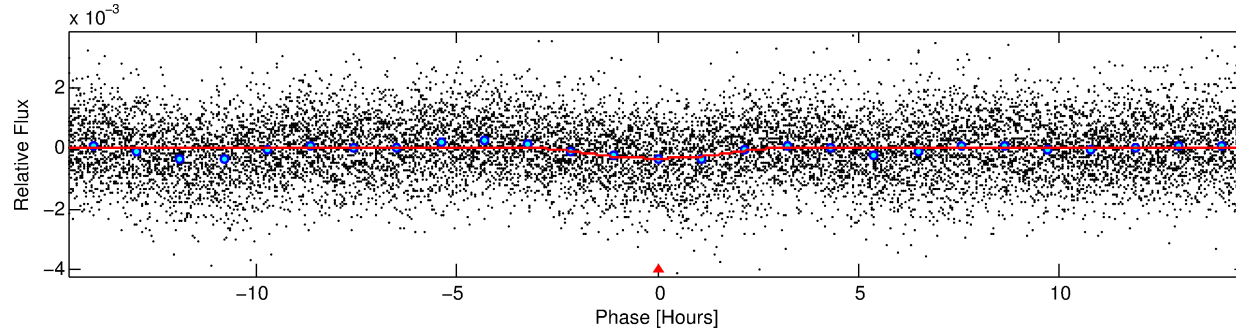
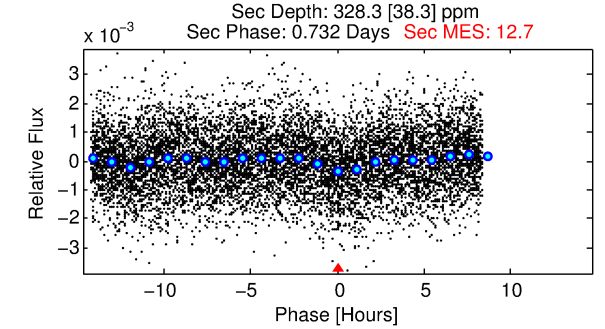
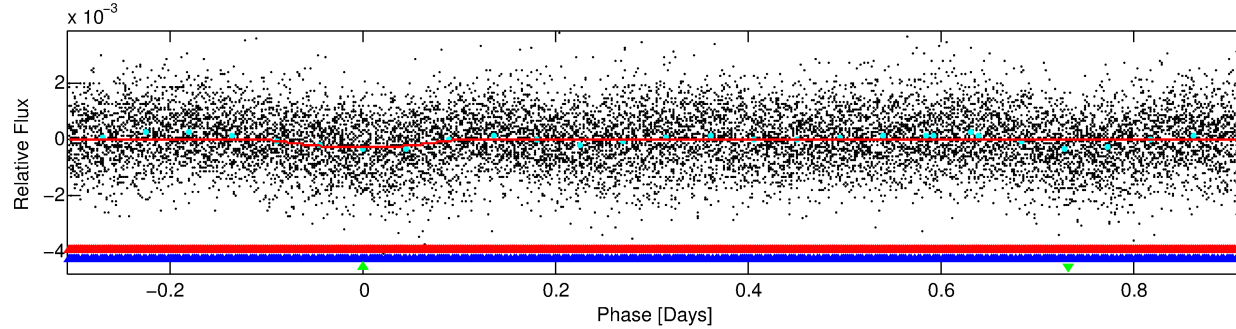
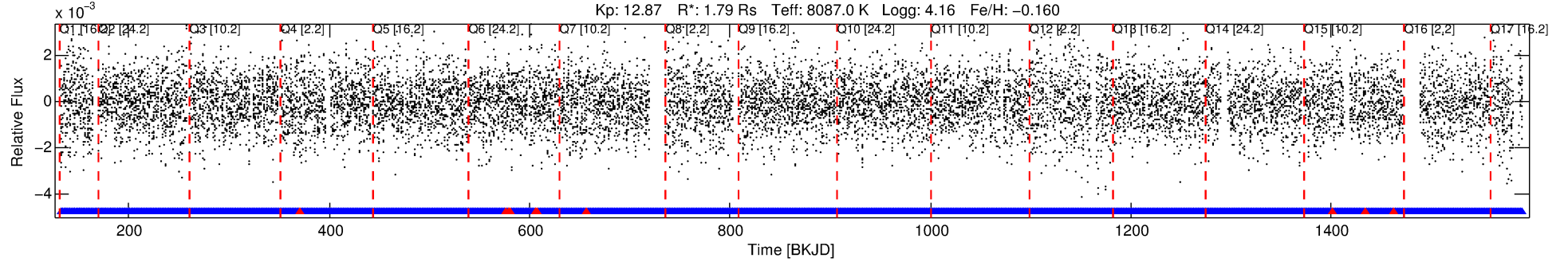
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011708238-03

No Significant Match Found

DV One-Page Summary

KIC: 11708238 Candidate: 3 of 3 Period: 1.223 d



DV Fit Results:

Period = 1.22268 [0.00002] d
Epoch = 132.7111 [0.0075] BKJD
Rp/R* = 0.0219 [0.0066]
a/R* = 1.11 [0.04]
b = 0.98 [0.02]
Seff = 17418.96 [6259.27]
Teq = 2929 [263] K
Rp = 4.28 [1.70] Re
a = 0.0266 [0.0058] AU
Ag = 6.95 [4.81] [1.24σ]
Teffp = 7355 [1170] K [3.69σ]

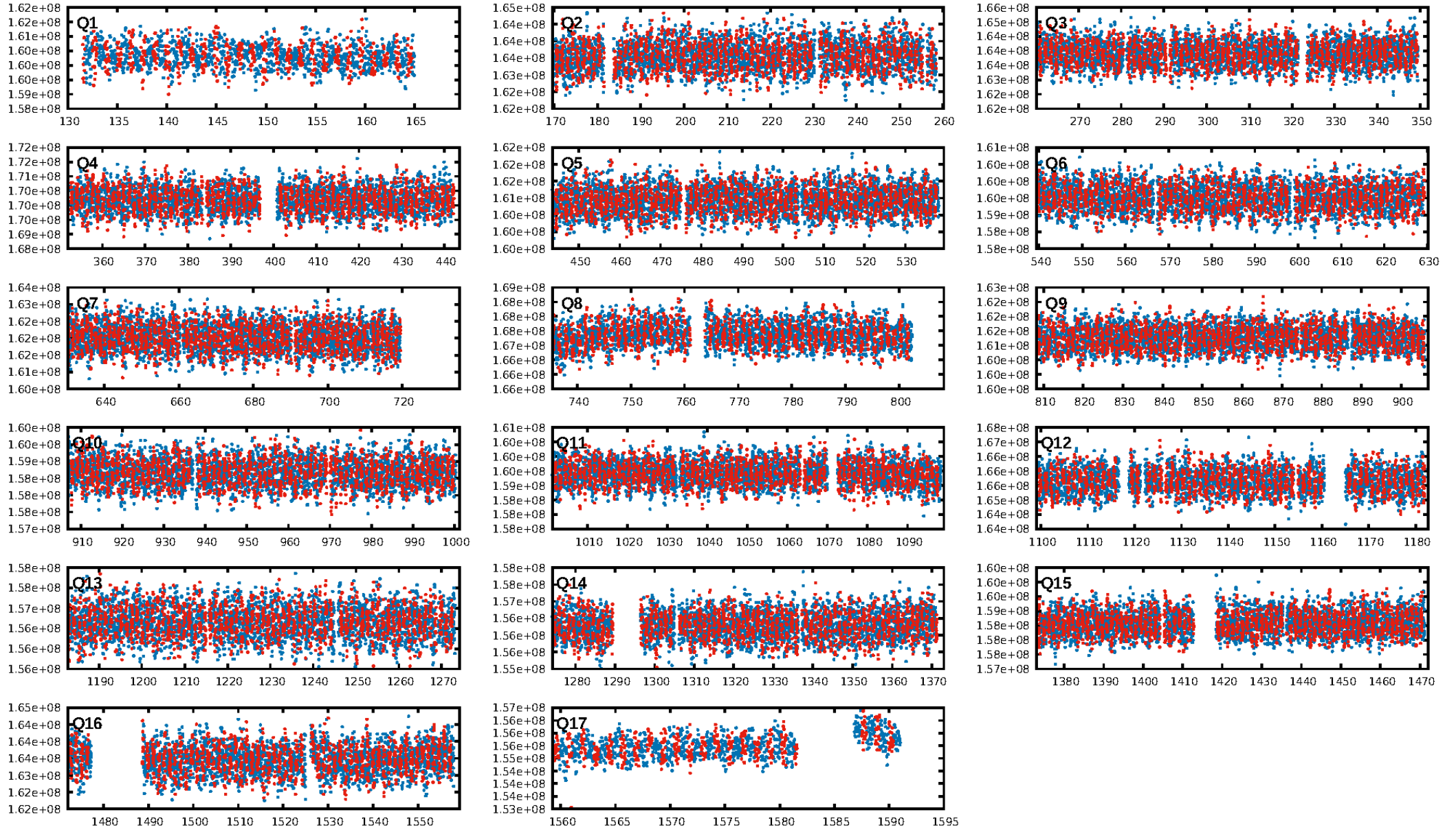
DV Diagnostic Results:

ShortPeriod-sig: 81.8% [1.33σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [471/481]
GhostDiagnostic-chr: 1.338
Centroid-sig: N/A
Centroid-so: 0.217 arcsec [3.09σ]
OotOffset-rm: 0.020 arcsec [0.11σ]
KicOffset-rm: 0.167 arcsec [1.38σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.00 [0/17]

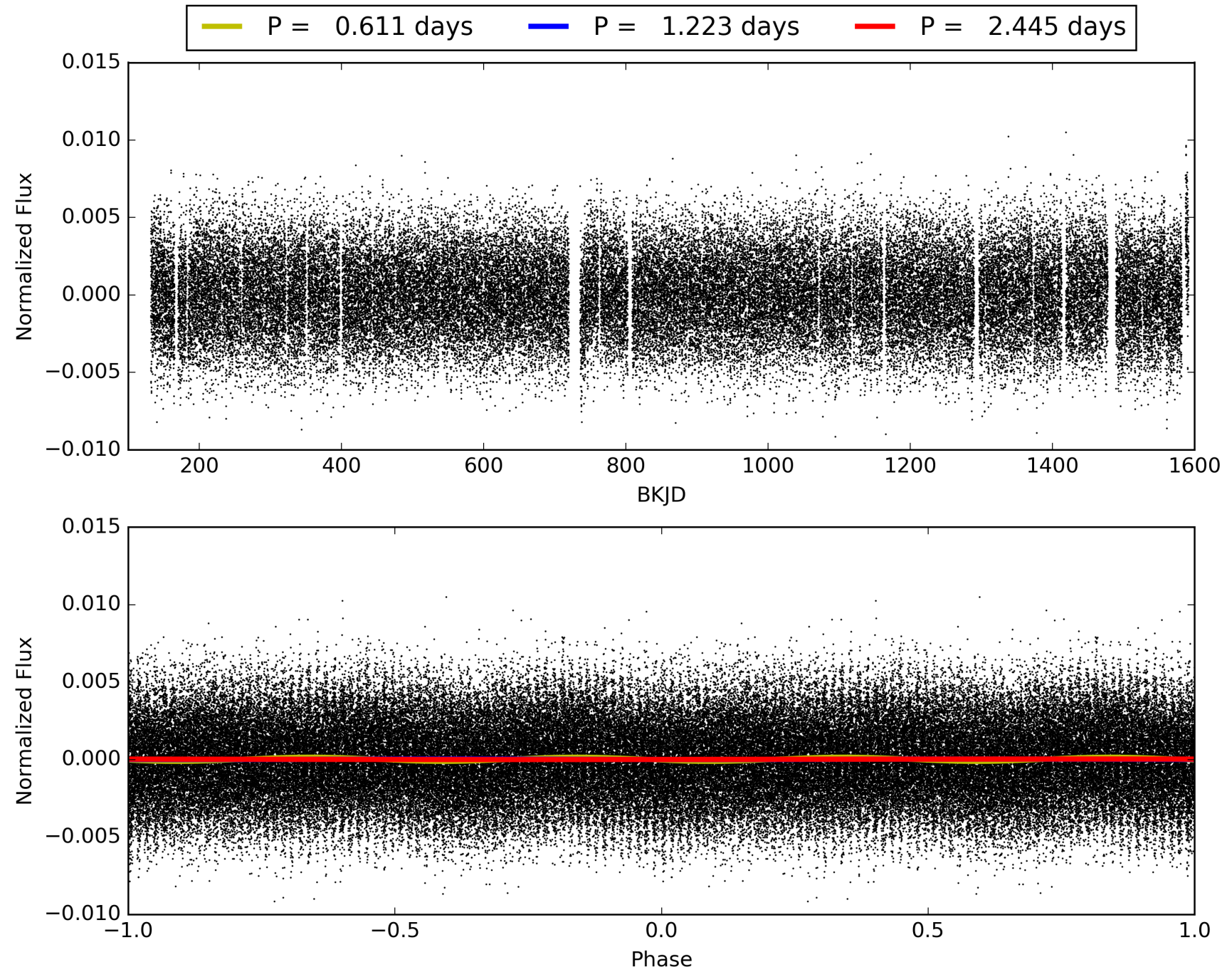
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:57:14 Z

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

TCE 011708238-03, PDC Light Curves

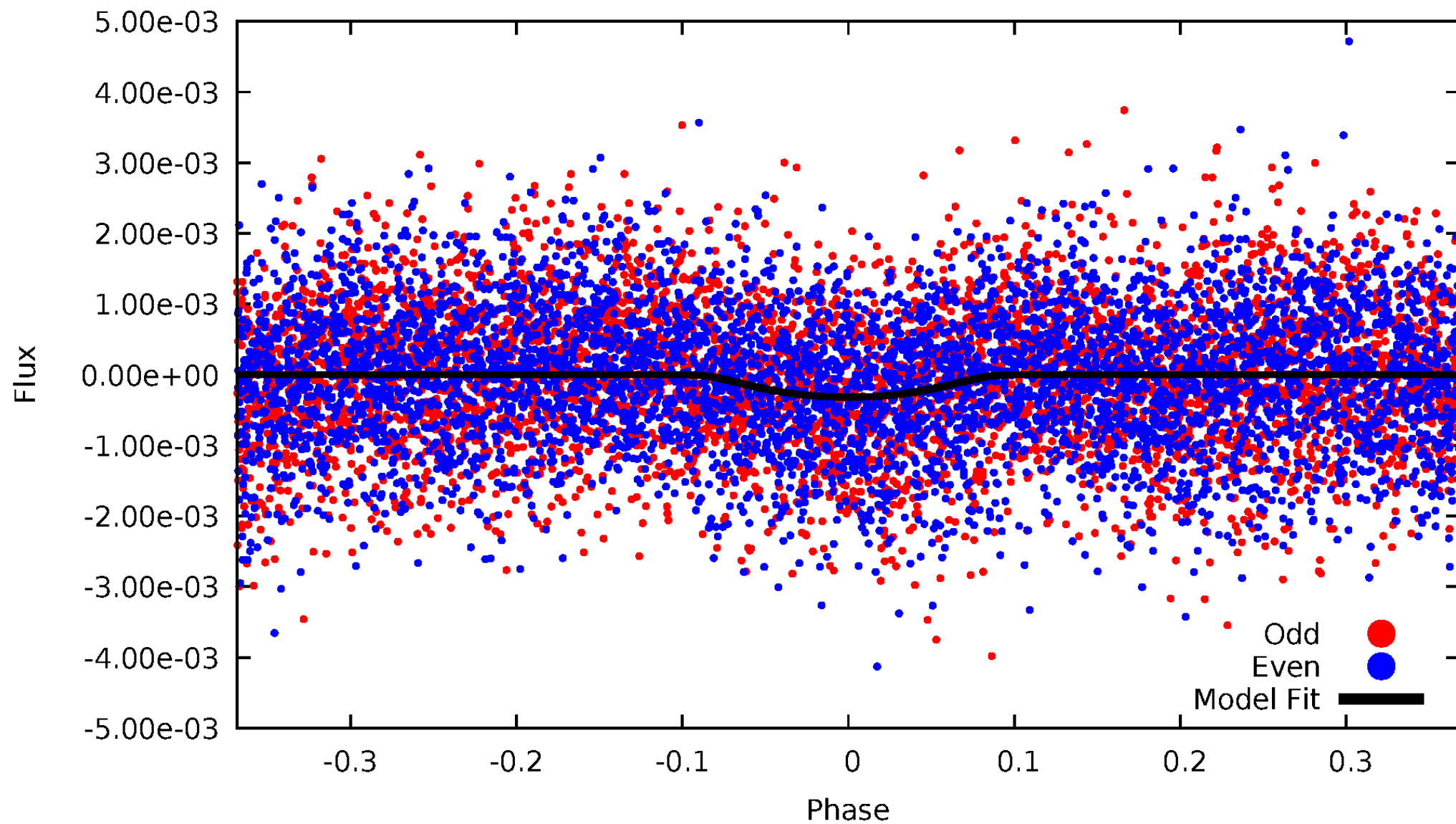


TCE 011708238-03



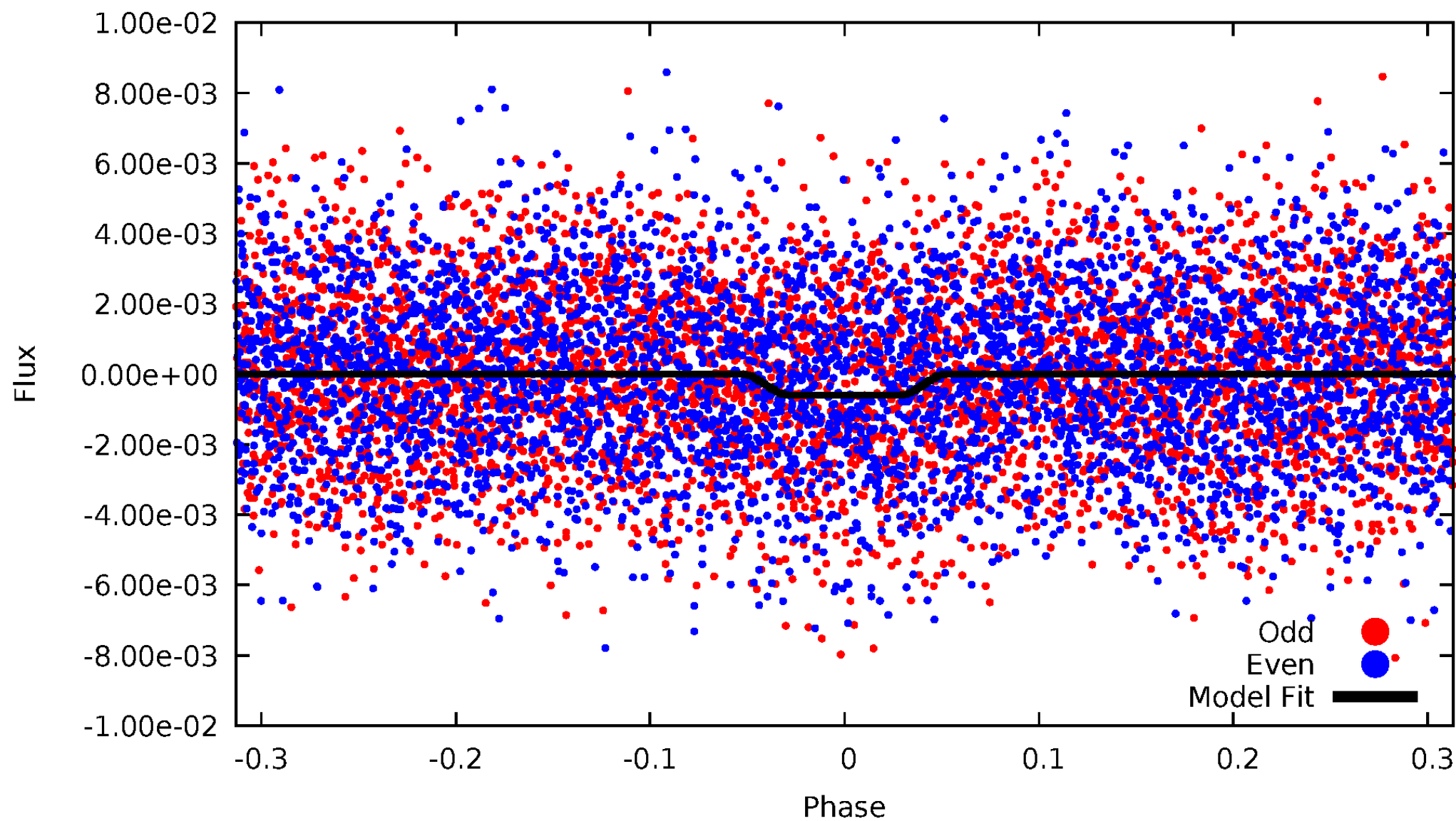
DV Odd/Even

TCE 011708238-03



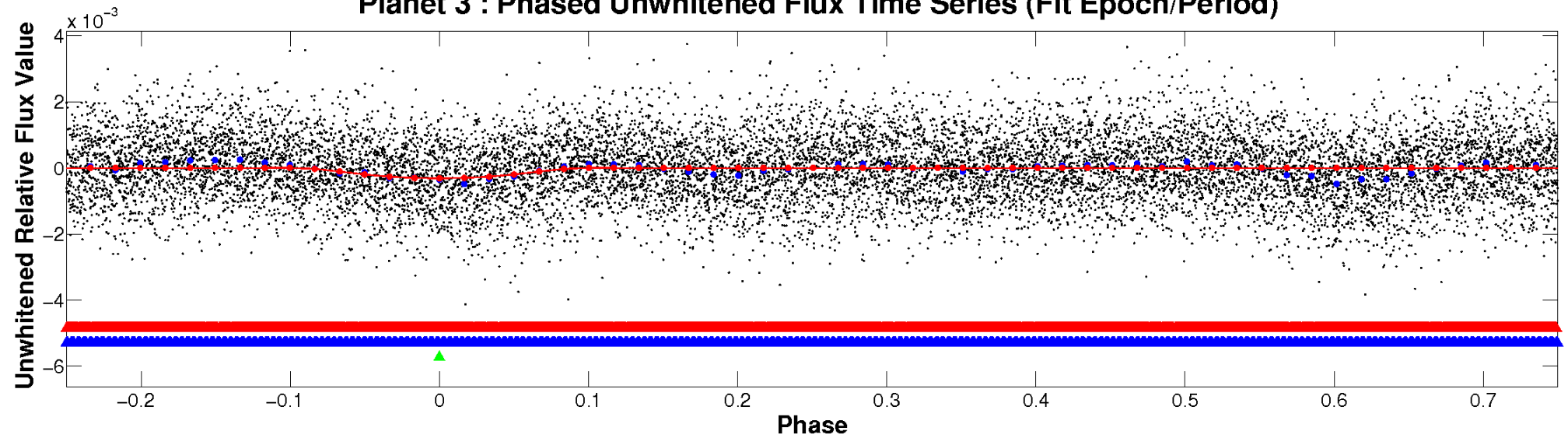
ALT Odd/Even

TCE 011708238-03

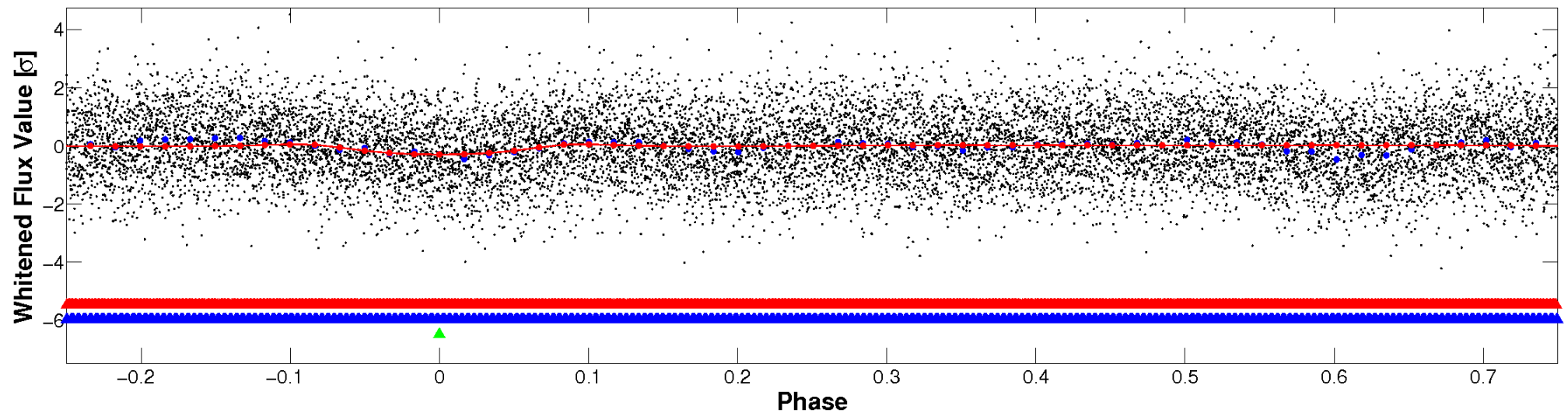


Non-Whitened Vs. Whitened Light Curve

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

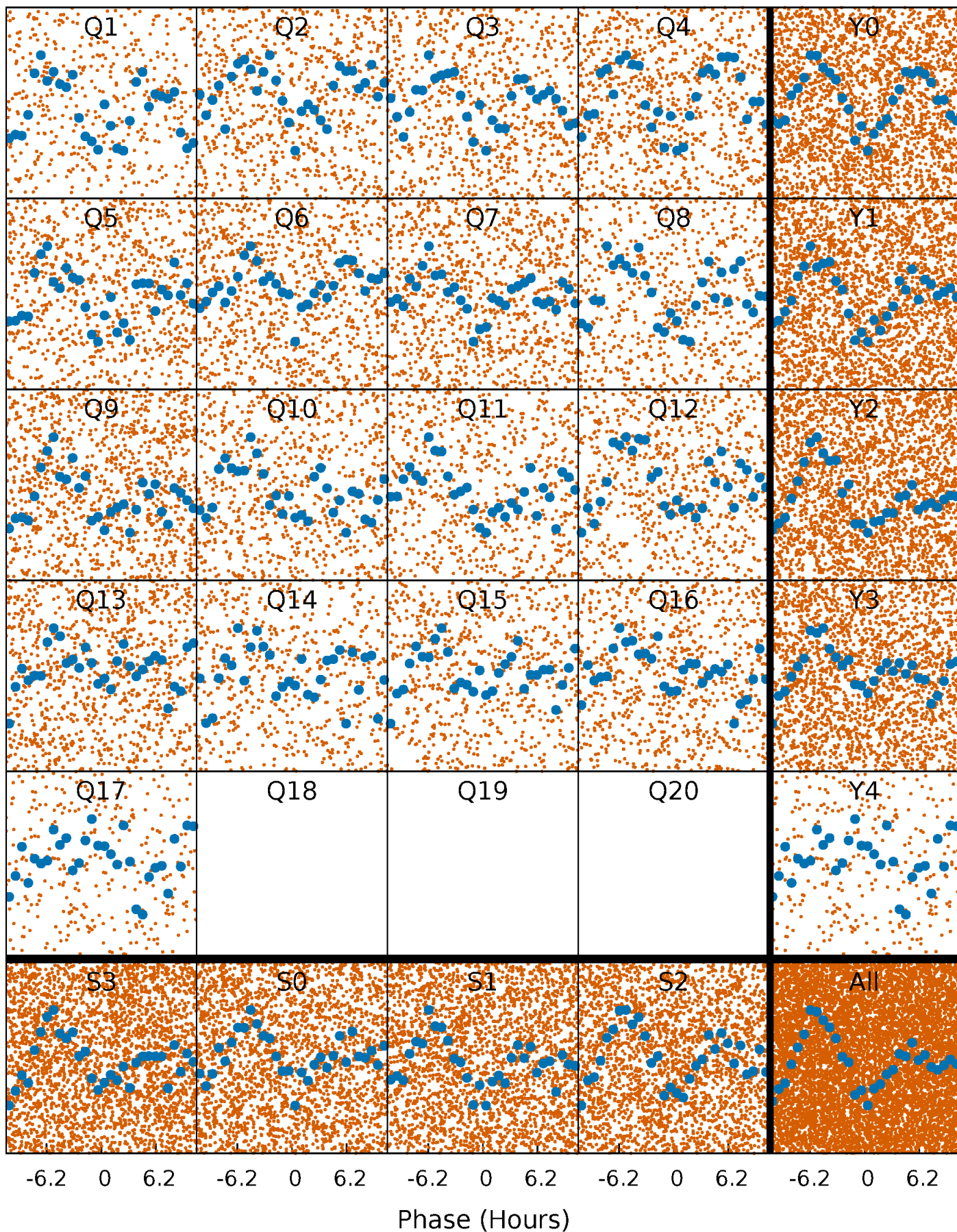


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



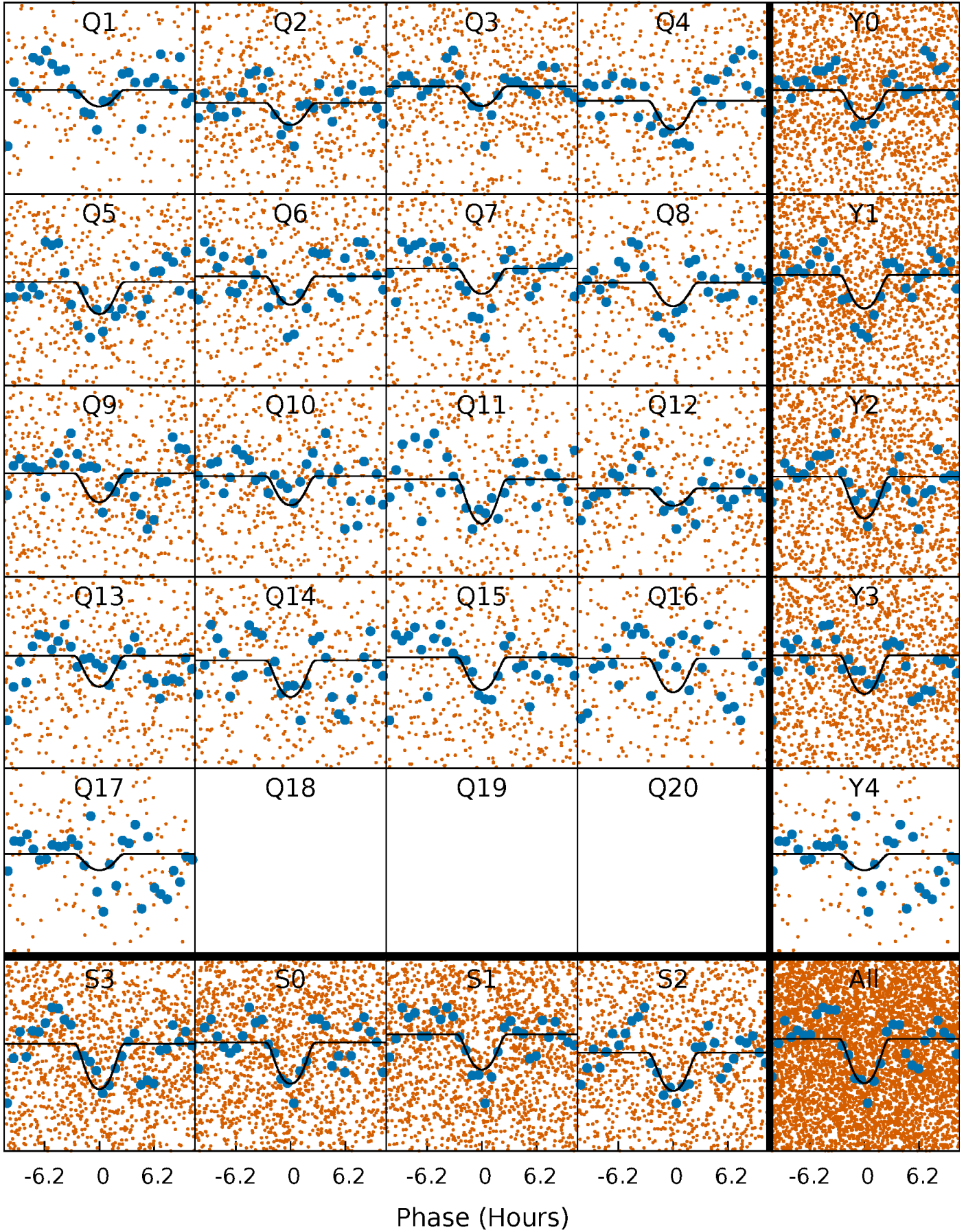
PDC Quarter-Phased Transit Curves

TCE 011708238-03 P= 1.222684 Days $T_0=132.711106$ (BKJD)



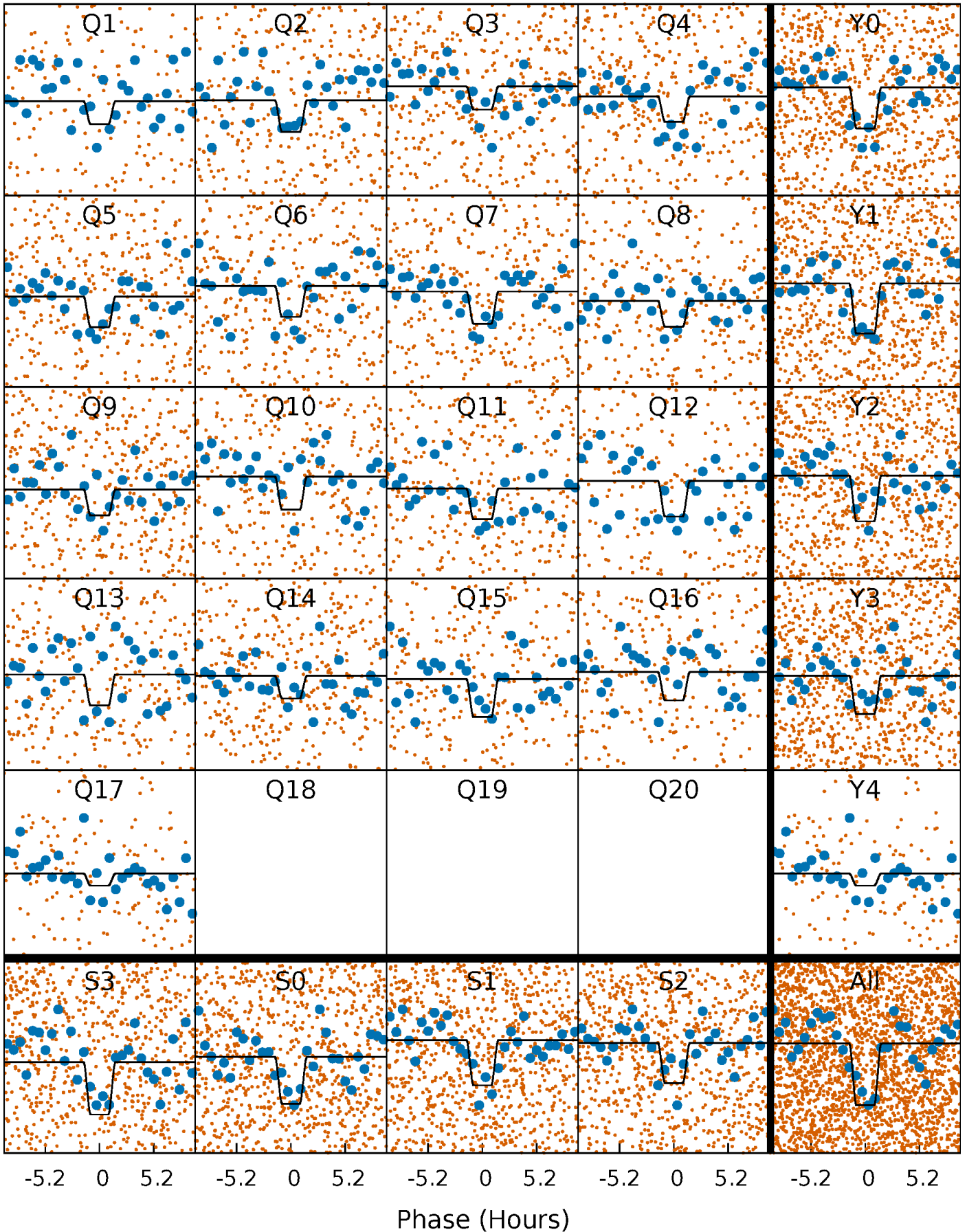
DV Quarter-Phased Transit Curves

TCE 011708238-03 P= 1.222684 Days $T_0=132.711106$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

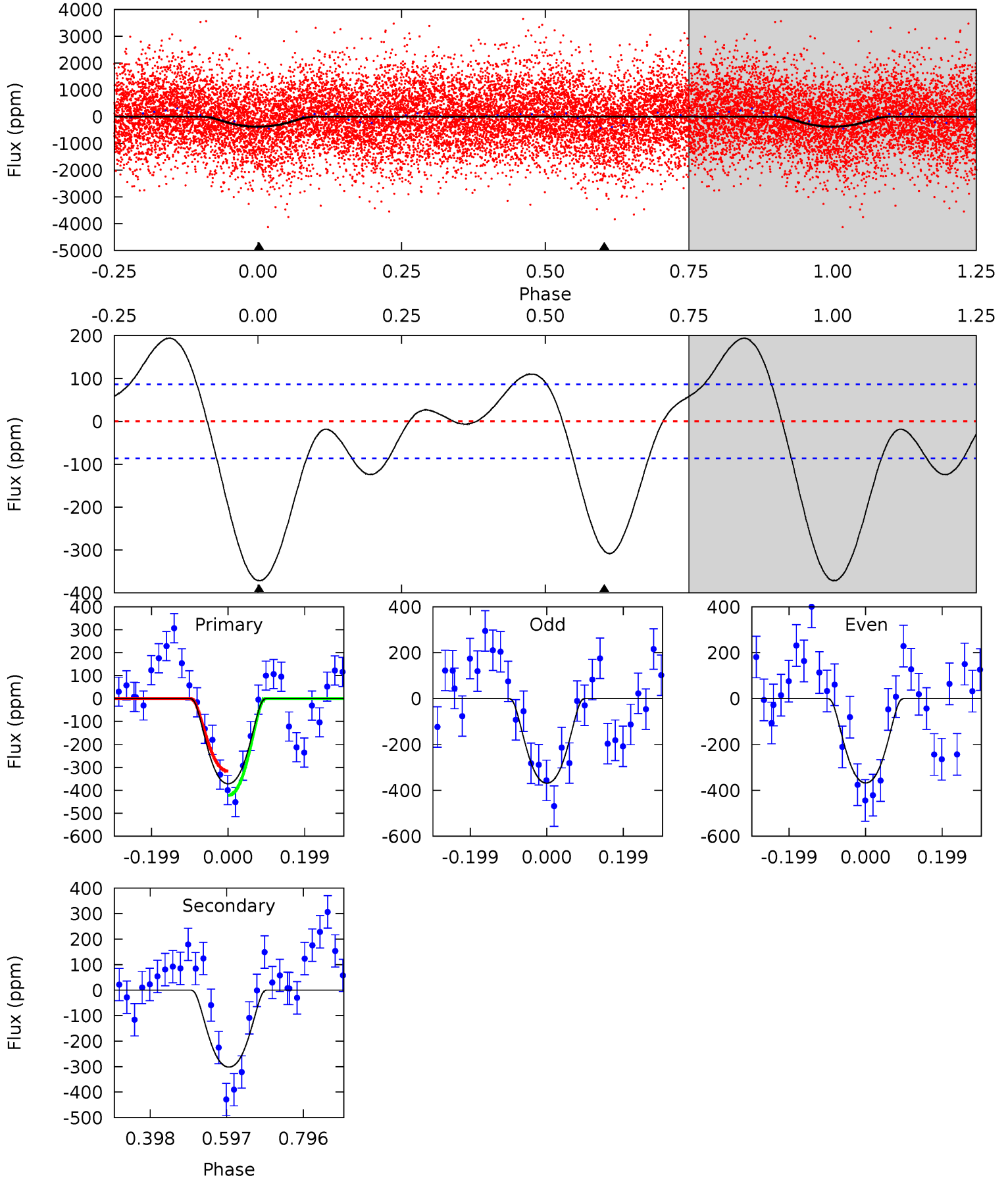
TCE 011708238-03 P= 1.222697 Days $T_0=132.706885$ (BKJD)



DV Model-Shift Uniqueness Test

011708238-03, P = 1.222684 Days, E = 131.488422 Days

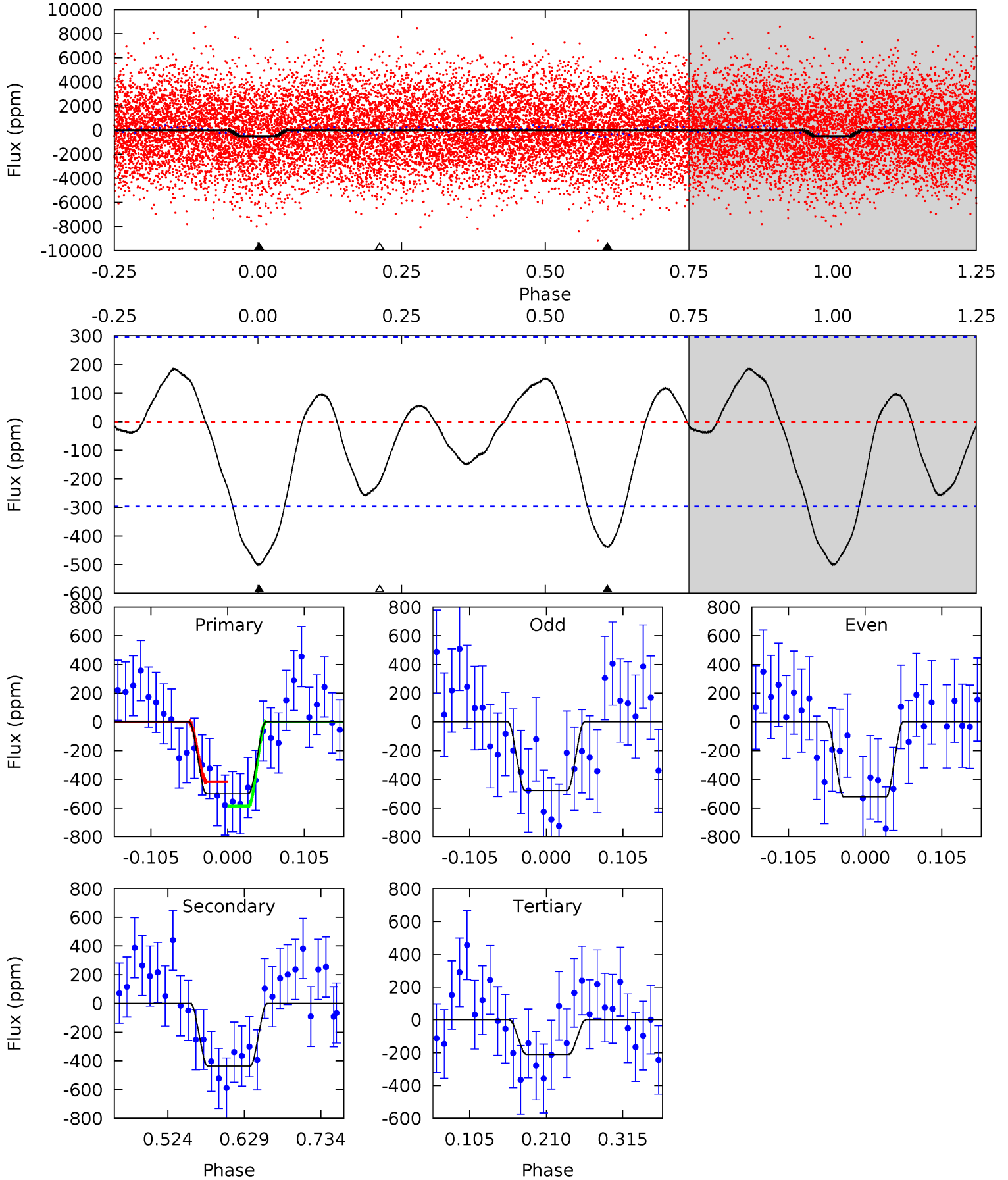
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	15.4	0	0	4.42	1.28	2.28	19.0	19.0	15.4	15.4	0.03	-0.00	0.34	2.71



Alt Model-Shift Uniqueness Test

011708238-03, P = 1.222697 Days, E = 131.484188 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.67	6.71	3.24	0	4.55	1.62	1.76	4.44	7.67	3.47	6.71	0.34	0.84	0.27	1.29



Stellar Parameters For KIC 011708238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8087^{+225}_{-338}	$4.155^{+0.130}_{-0.174}$	$-0.160^{+0.200}_{-0.350}$	$1.791^{+0.464}_{-0.338}$	$1.670^{+0.177}_{-0.266}$	$0.409^{+0.269}_{-0.190}$
	+3%/-4%	+3%/-4%	+125%/-219%	+26%/-19%	+11%/-16%	+66%/-47%
Source	KIC0	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 011708238-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-302 ± 20	$4.28^{+1.55}_{-1.40}$	4089^{+298}_{-251}	6958^{+1899}_{-1043}	$6.183^{+7.782}_{-2.774}$
Alt.	-437 ± 65	$4.82^{+1.48}_{-1.42}$	4093^{+287}_{-252}	7163^{+1743}_{-867}	$7.134^{+7.336}_{-3.030}$

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 $A_{obs} \gg 1.0$

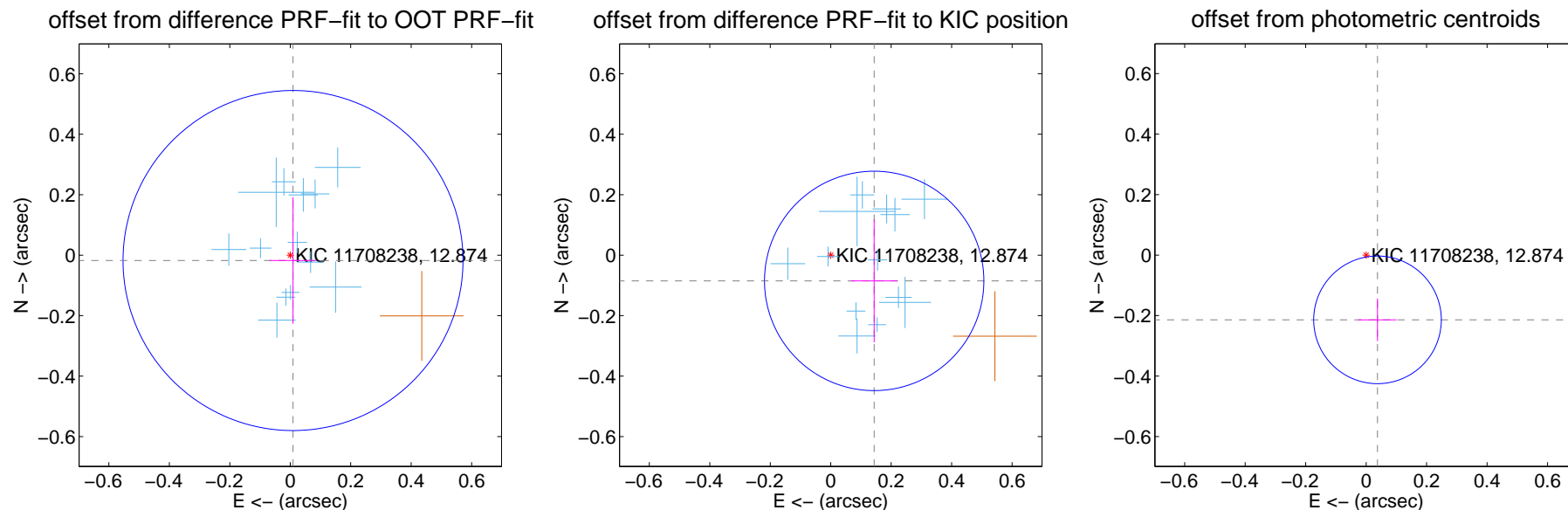
DV Centroid Data

Supplemental centroid analysis for 011708238-03. Kepler magnitude: 12.87. Transit SNR 10.06

There are 14 quarters with good PRF difference image offsets

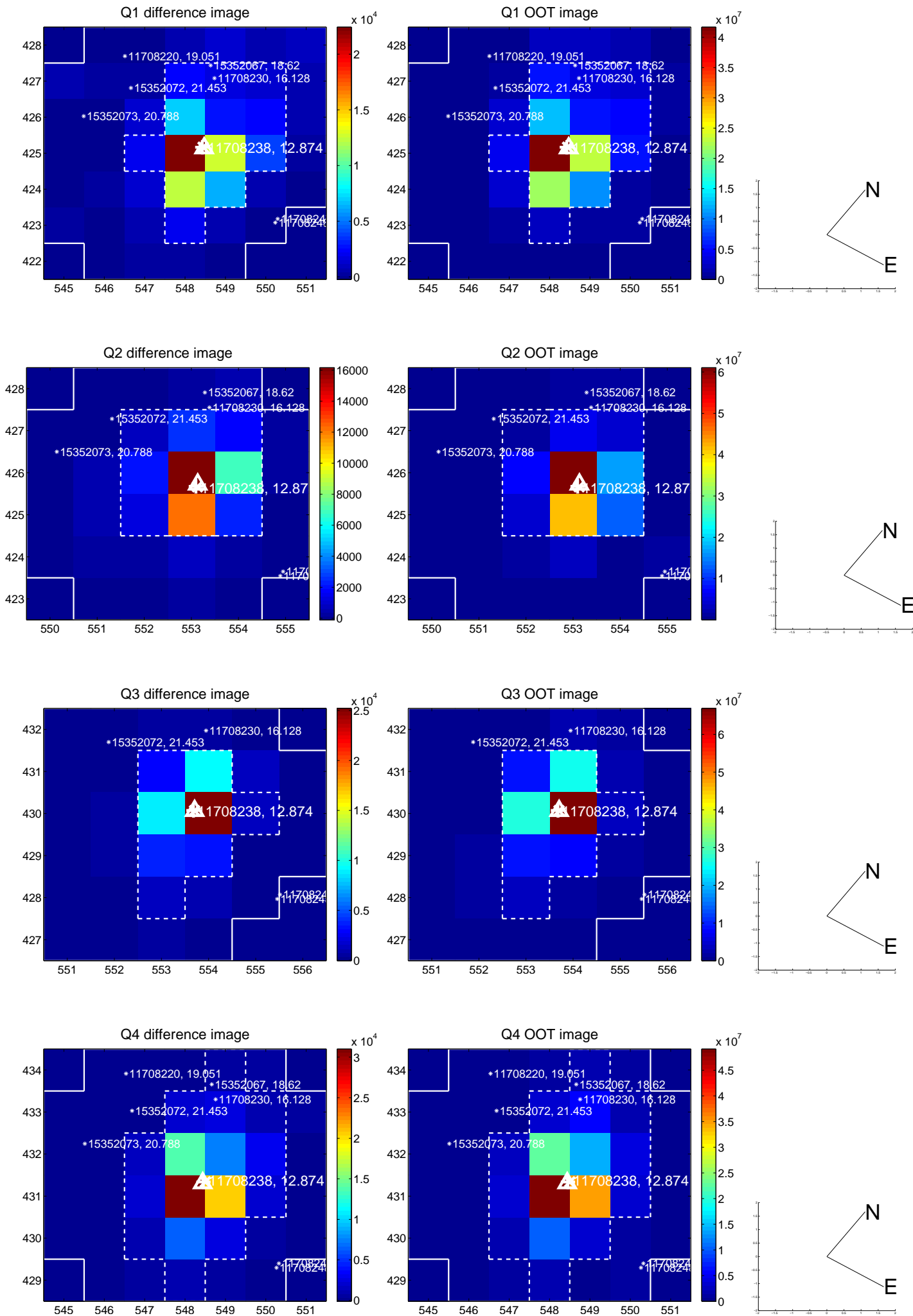
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.020 ± 0.187	0.11	-0.009 ± 0.077	-0.018 ± 0.209
PRF-fit source offset from KIC position	0.167 ± 0.121	1.38	-0.144 ± 0.077	-0.085 ± 0.203
photometric centroid source offset	0.22 ± 0.07	3.09	-0.04 ± 0.06	-0.21 ± 0.07

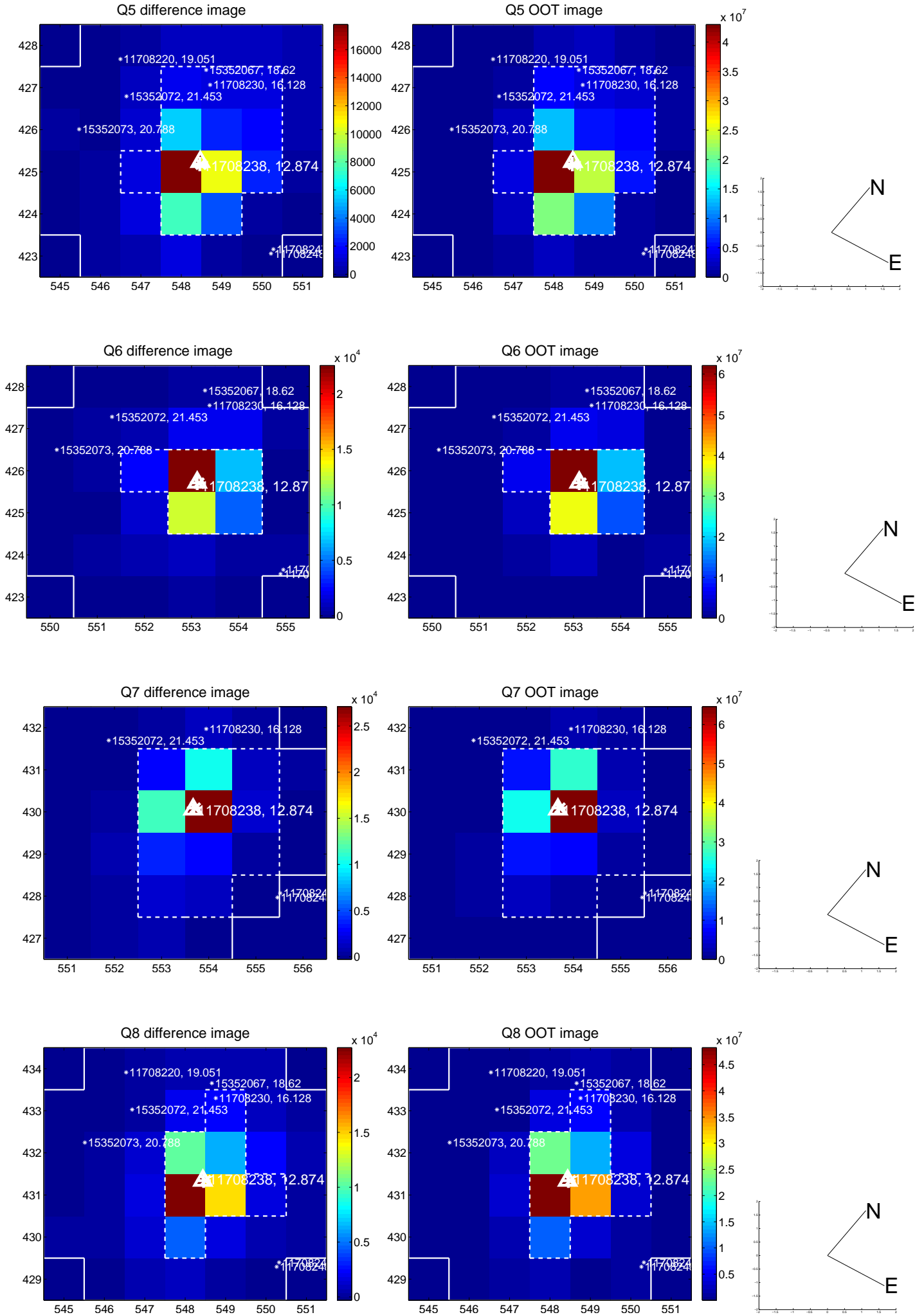


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

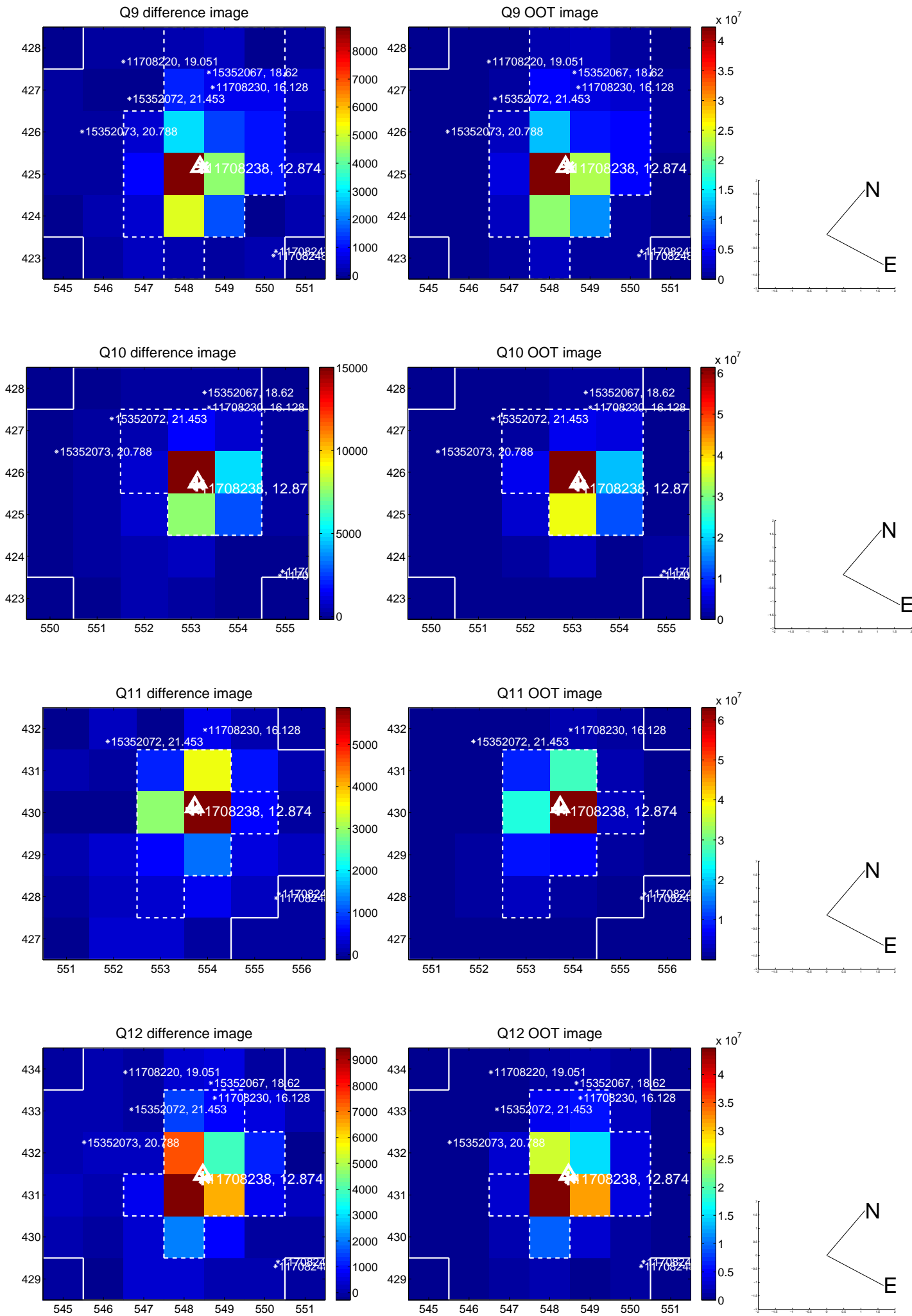
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



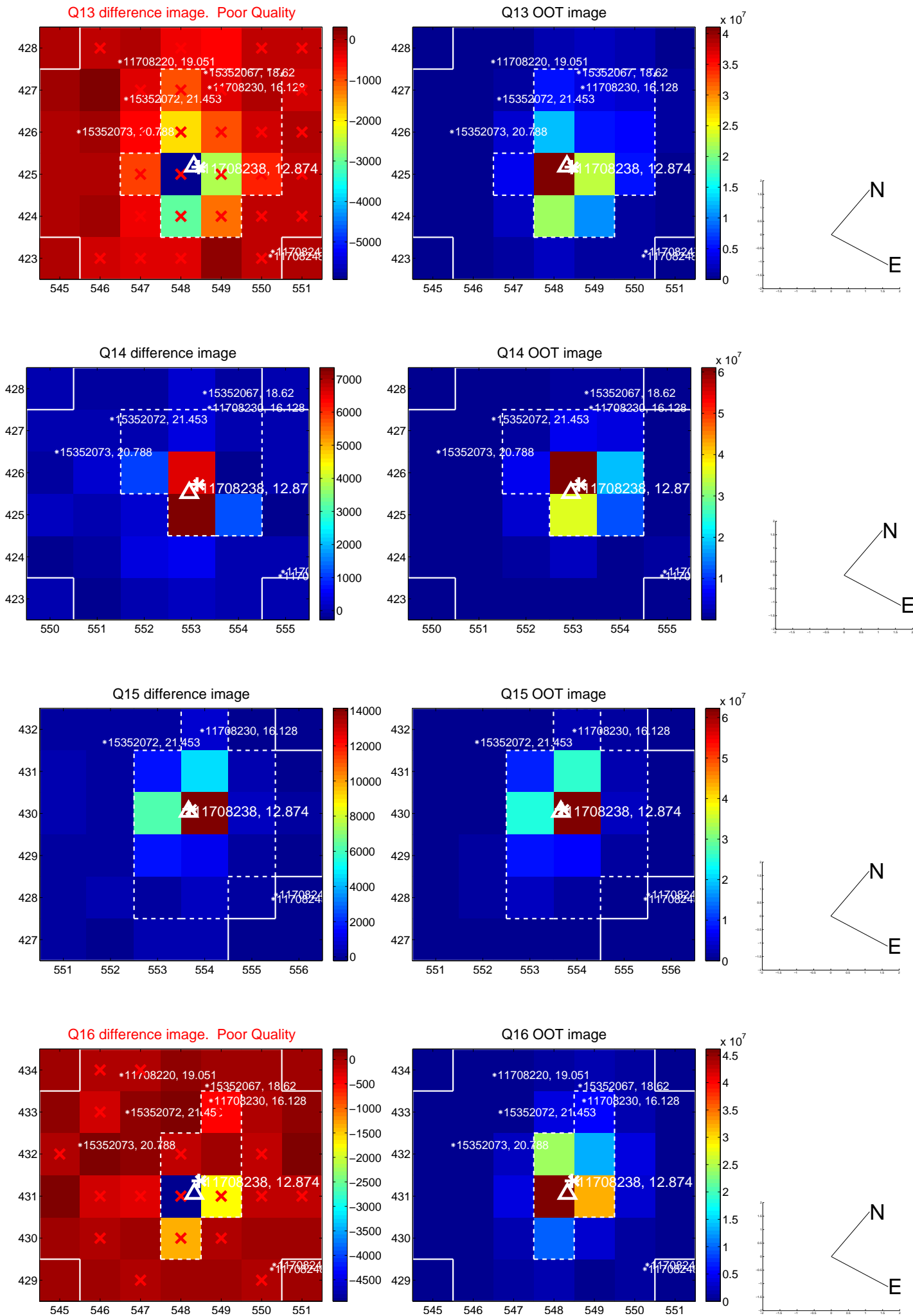
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



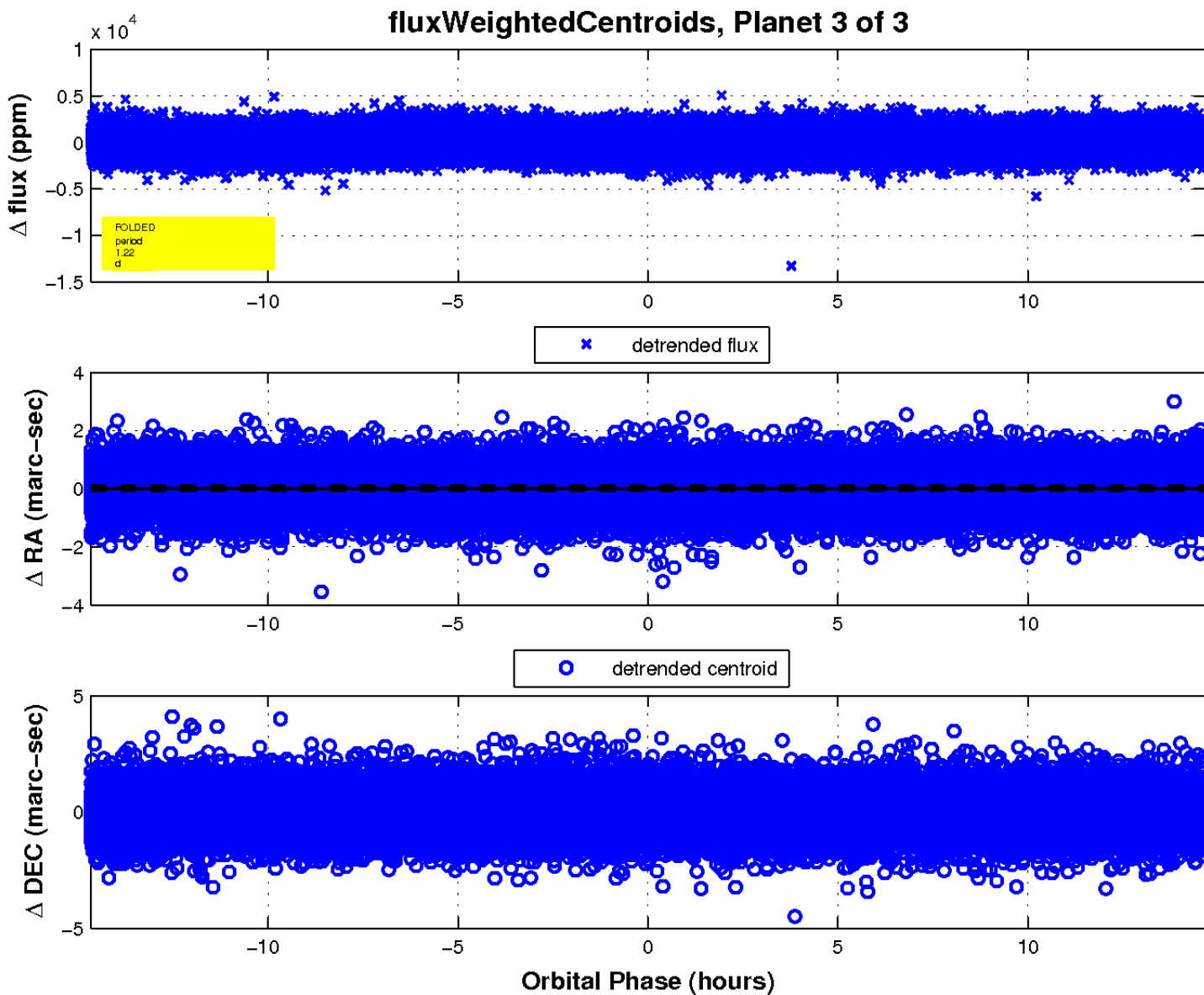
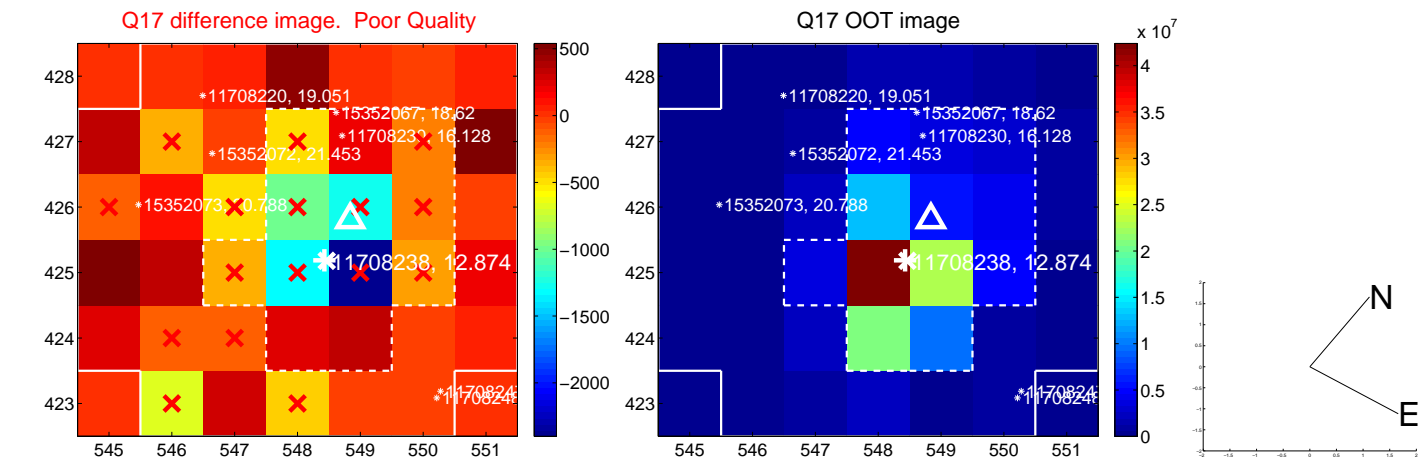
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

