

KIC 007830684

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})
007830684-01	OBS	No	0.968750	131.579524	270.7	2.472	11.4	12.8	2.19	7399	4.16	26294.80
007830684-02	OBS	No	0.645852	131.558346	344.2	2.198	10.8	13.2	2.19	7399	4.35	45148.35
007830684-03	OBS	No	0.645846	131.888277	90.8	2.000	9.7	-1.0	2.19	7399	2.12	45148.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830684-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007830684-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007830684-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

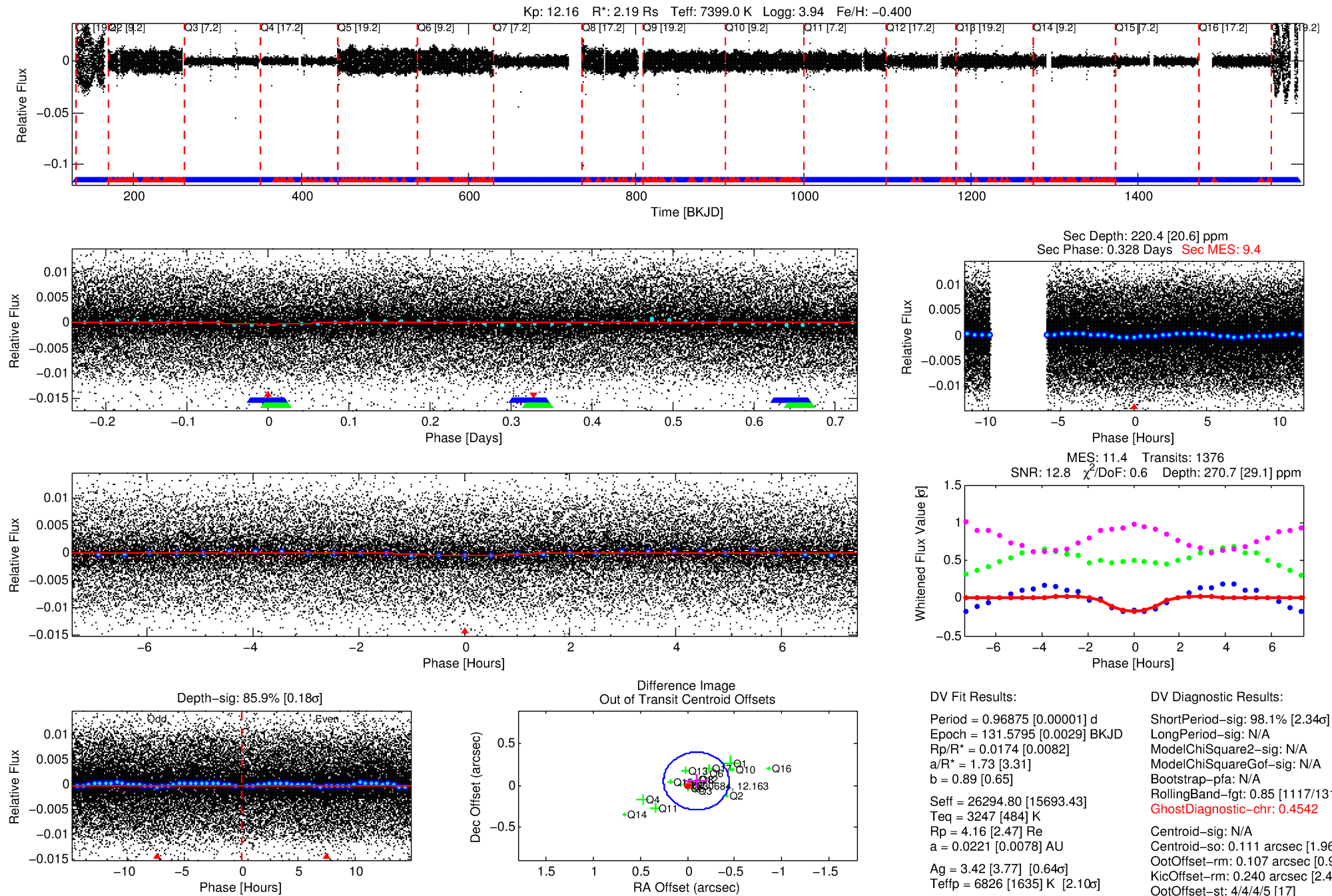
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830684-01

No Significant Match Found

DV One-Page Summary

KIC: 7830684 Candidate: 1 of 3 Period: 0.969 d



DV Fit Results:

Period = 0.96875 [0.00001] d
Epoch = 131.5795 [0.0029] BKJD
Rp/R* = 0.0174 [0.0082]
a/R* = 1.73 [3.31]
b = 0.89 [0.65]
Seff = 26294.80 [15693.43]
Teq = 3247 [484] K
Rp = 4.16 [2.47] Re
a = 0.0221 [0.0078] AU
Ag = 3.42 [3.77] [0.64σ]
Teffp = 6826 [1635] K [2.10σ]

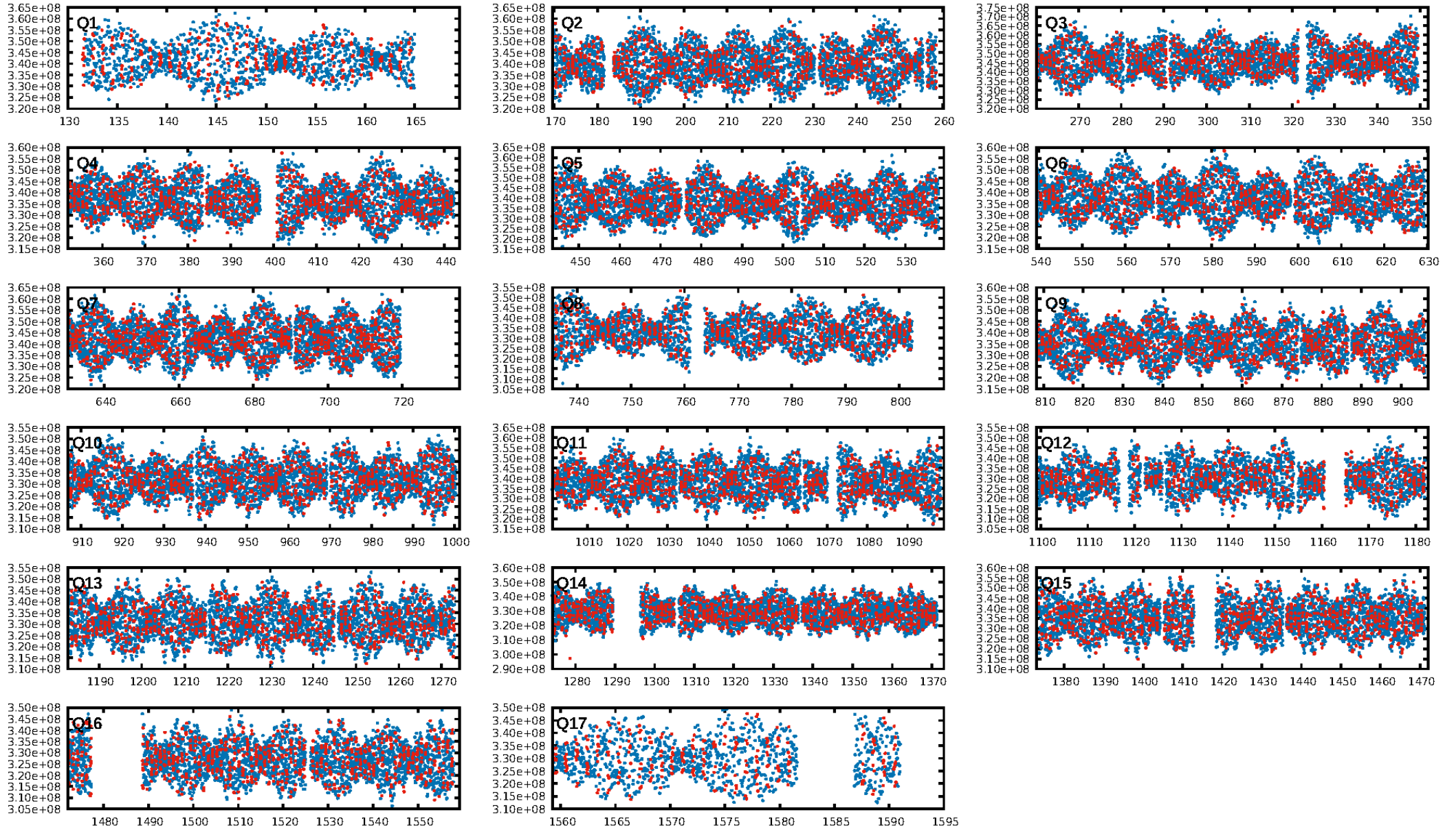
DV Diagnostic Results:

ShortPeriod-sig: 98.1% [2.34σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.85 [1117/1314]
GhostDiagnostic-chr: 0.4542
Centroid-sig: N/A
Centroid-so: 0.111 arcsec [1.96σ]
OotOffset-rm: 0.107 arcsec [0.92σ]
KicOffset-rm: 0.240 arcsec [2.42σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 0.00 [0/17]

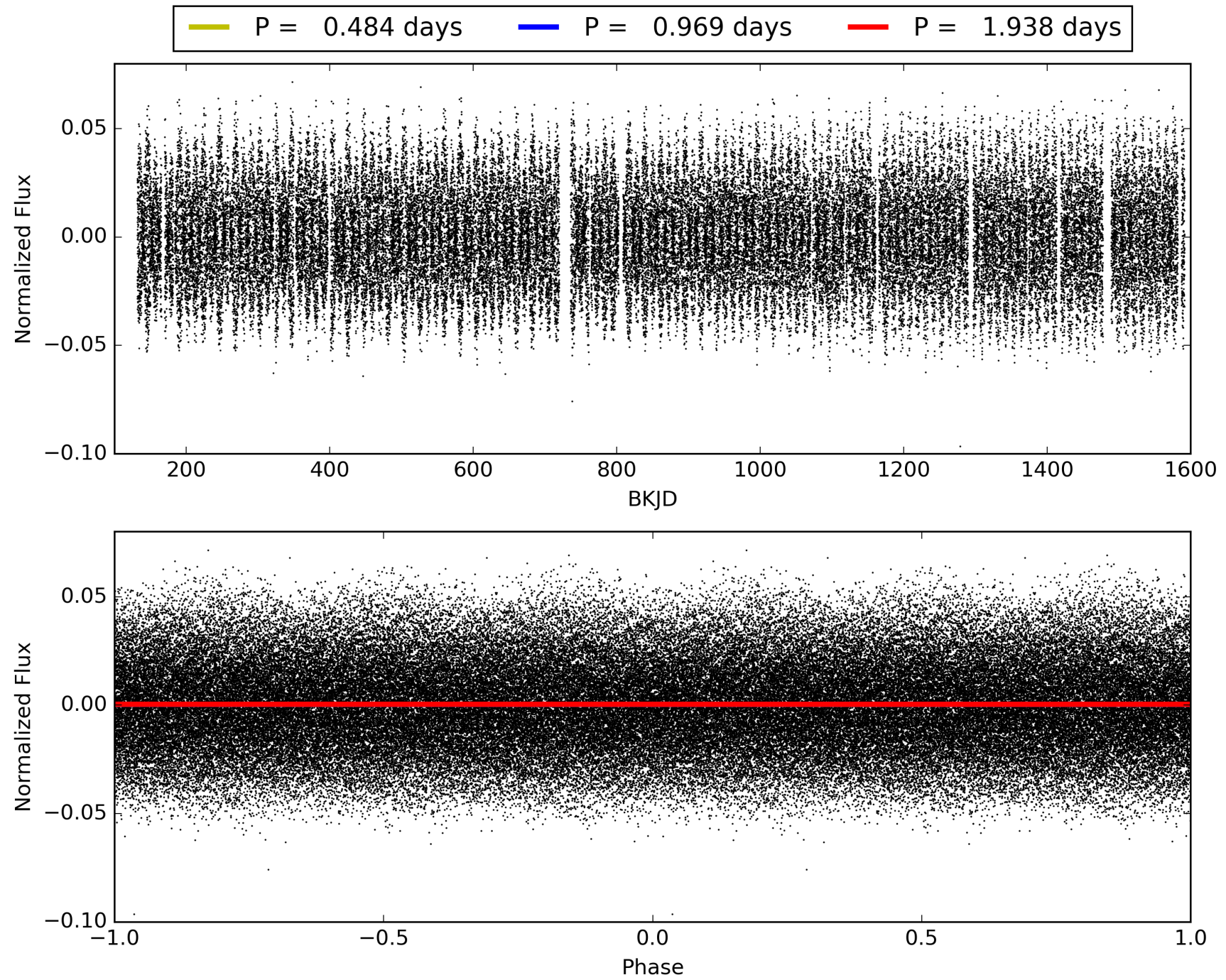
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:33:53 Z

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

TCE 007830684-01, PDC Light Curves

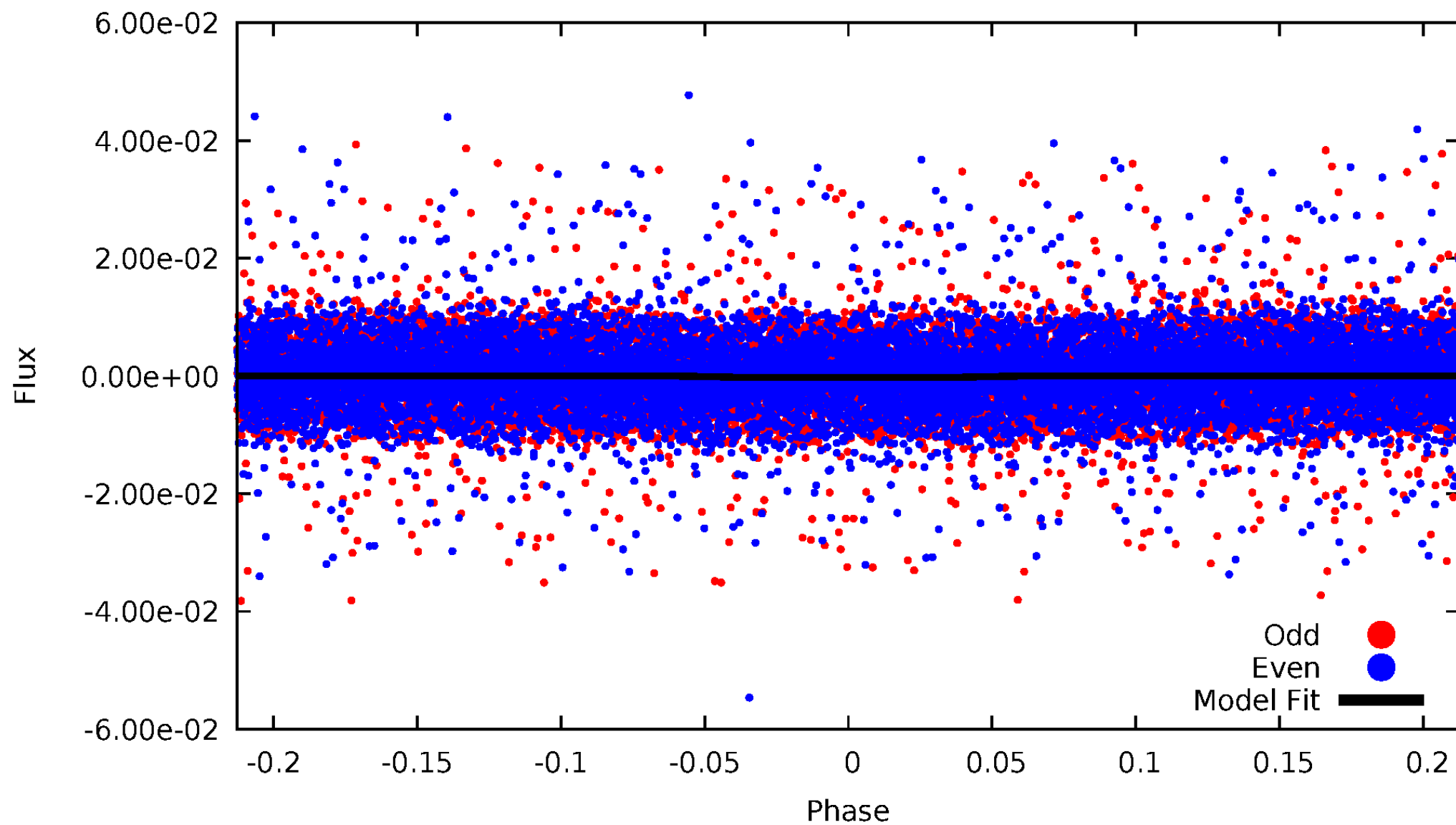


TCE 007830684-01



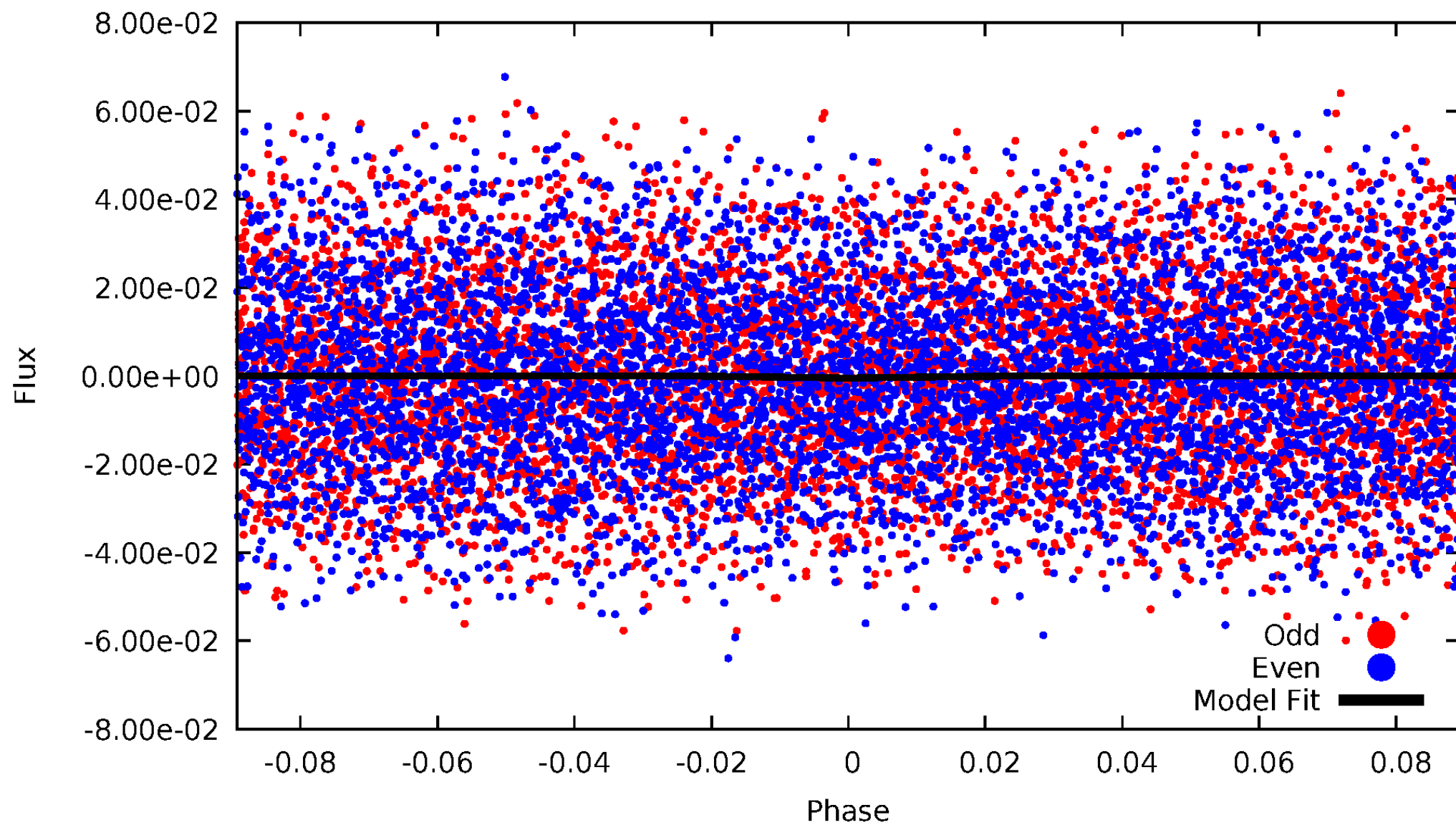
DV Odd/Even

TCE 007830684-01



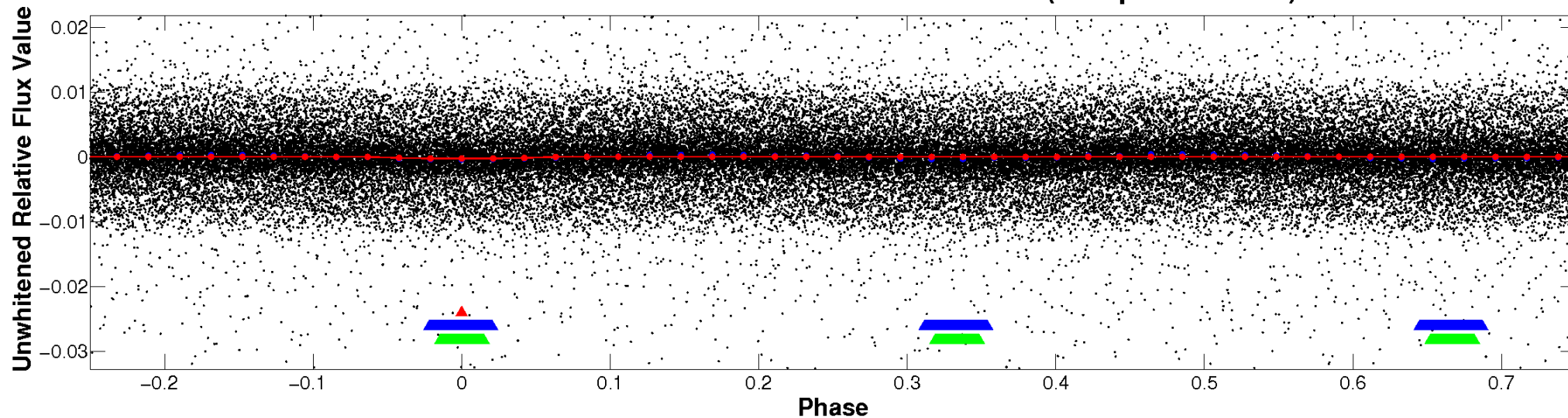
ALT Odd/Even

TCE 007830684-01

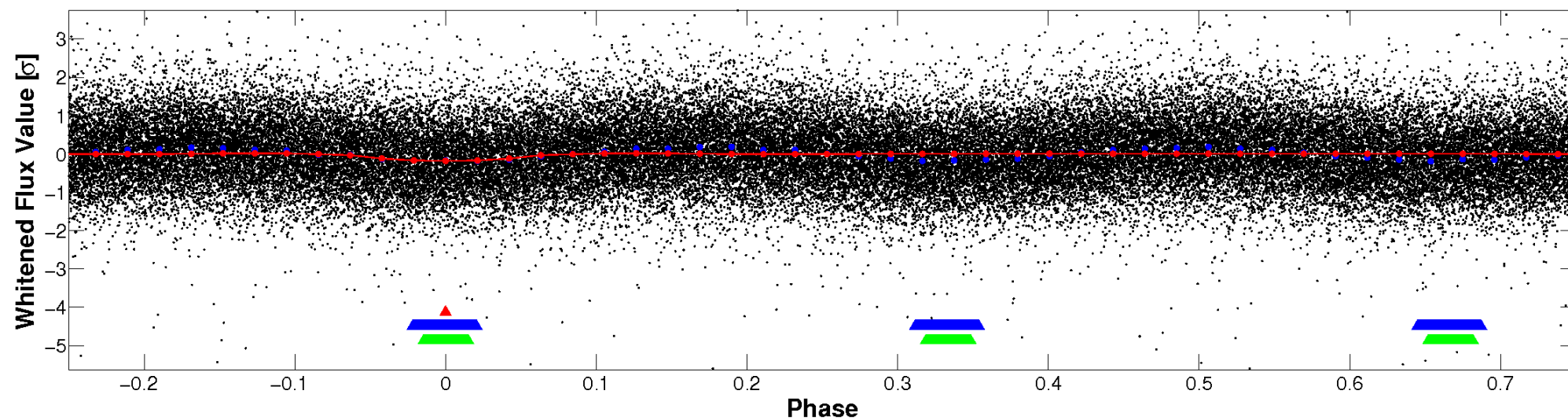


Non-Whitened Vs. Whitened Light Curve

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

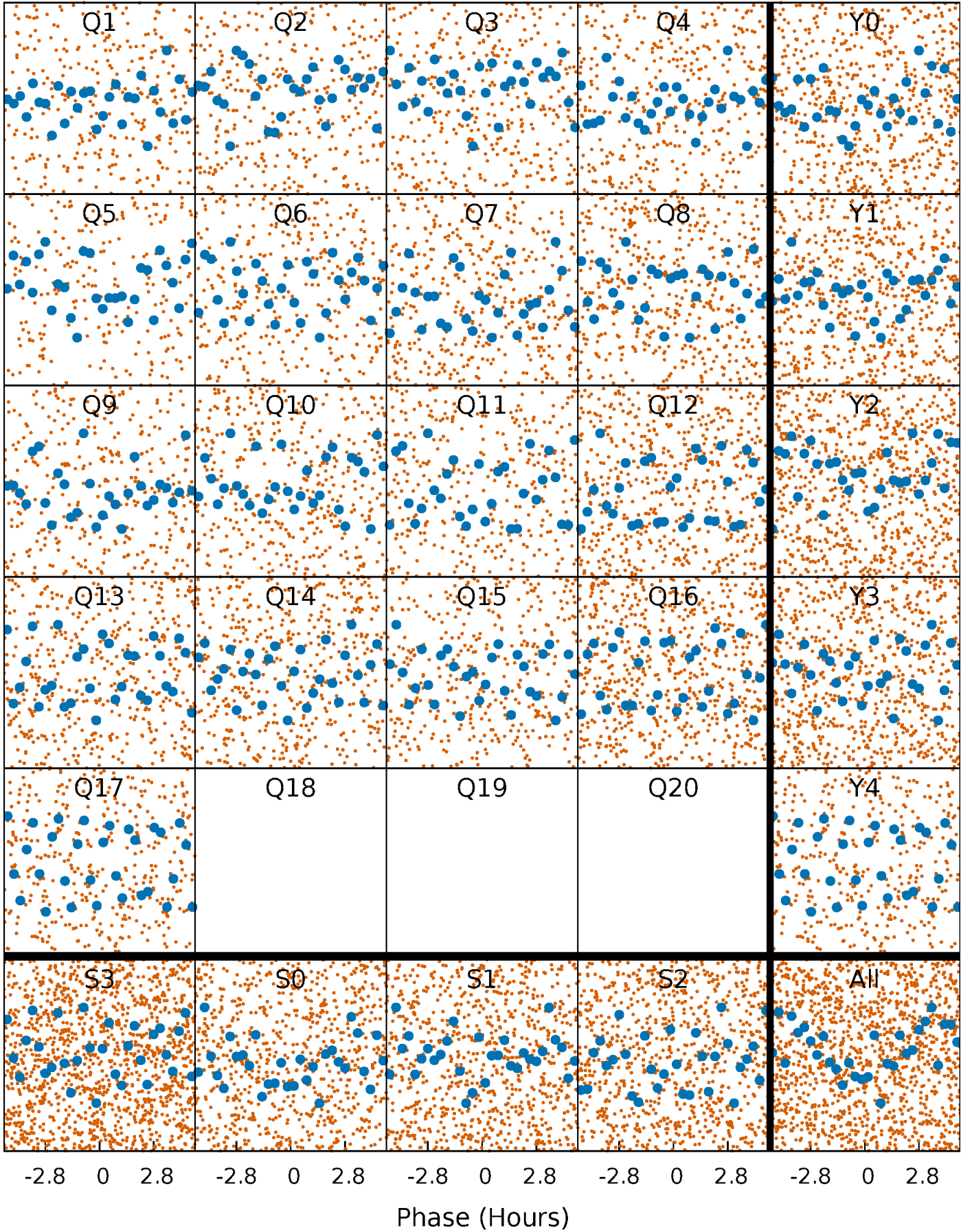


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



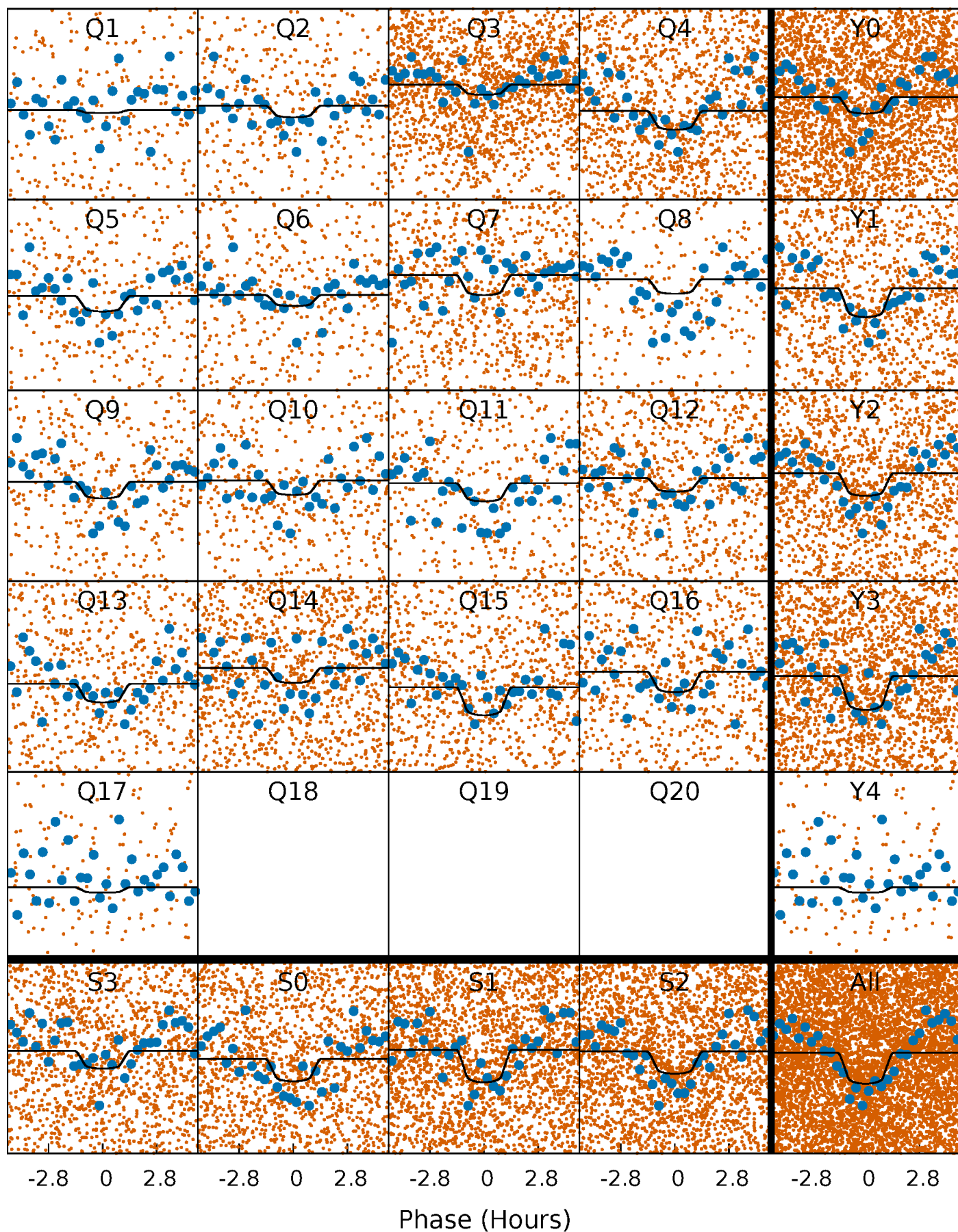
PDC Quarter-Phased Transit Curves

TCE 007830684-01 P= 0.968750 Days $T_0=131.579524$ (BKJD)



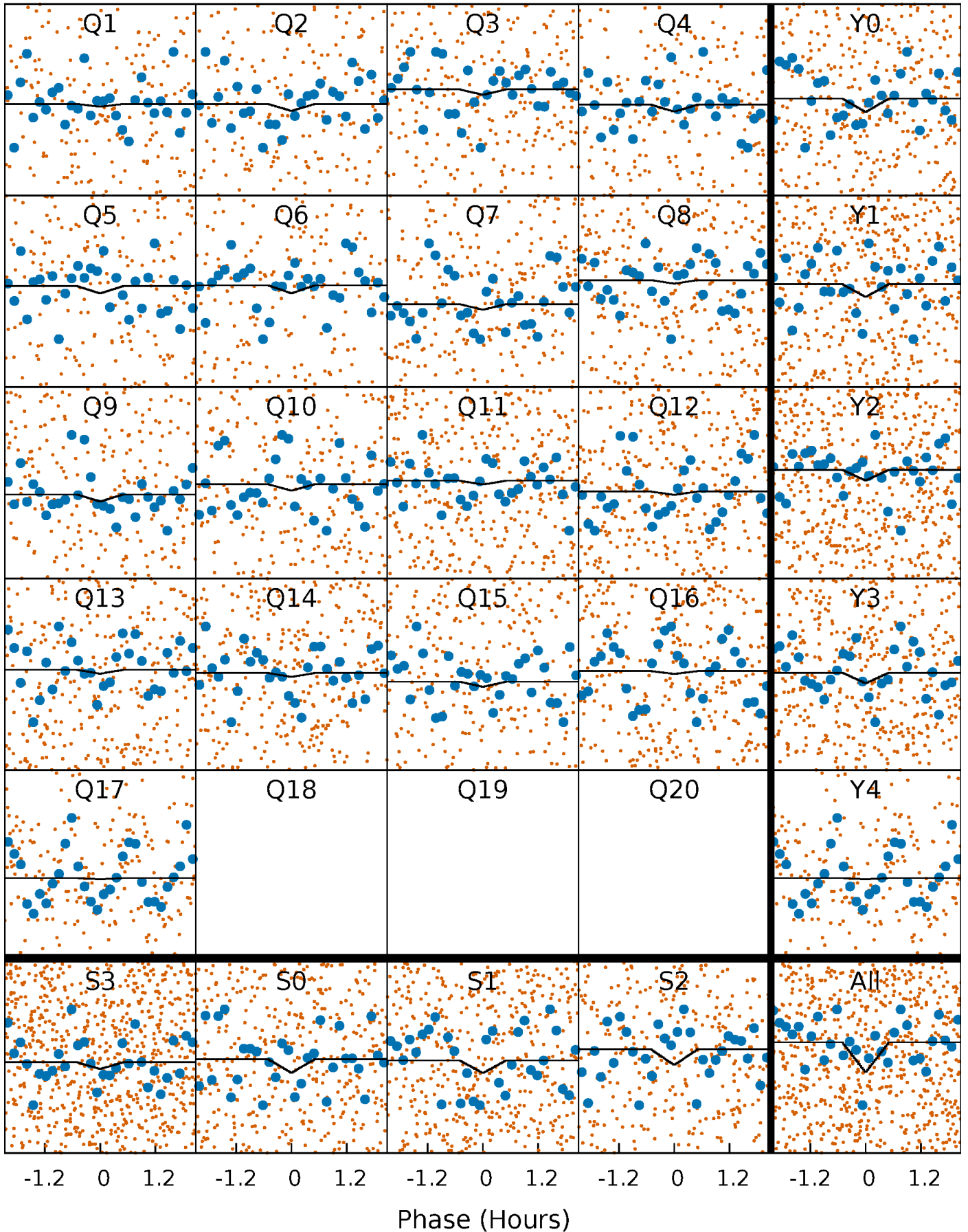
DV Quarter-Phased Transit Curves

TCE 007830684-01 P= 0.968750 Days $T_0=131.579524$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

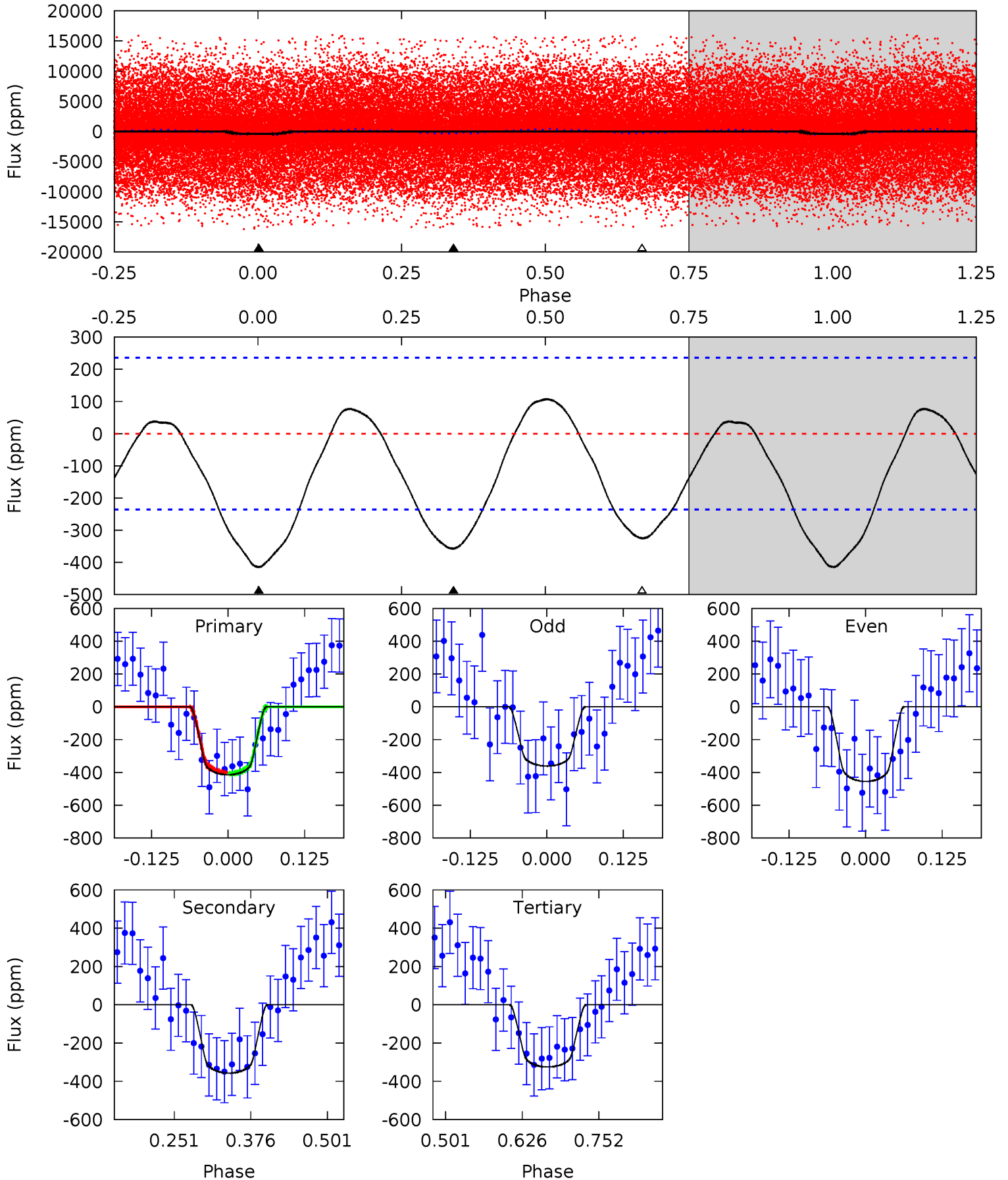
TCE 007830684-01 P= 0.968757 Days $T_0=131.561907$ (BKJD)



DV Model-Shift Uniqueness Test

007830684-01, P = 0.968750 Days, E = 130.610774 Days

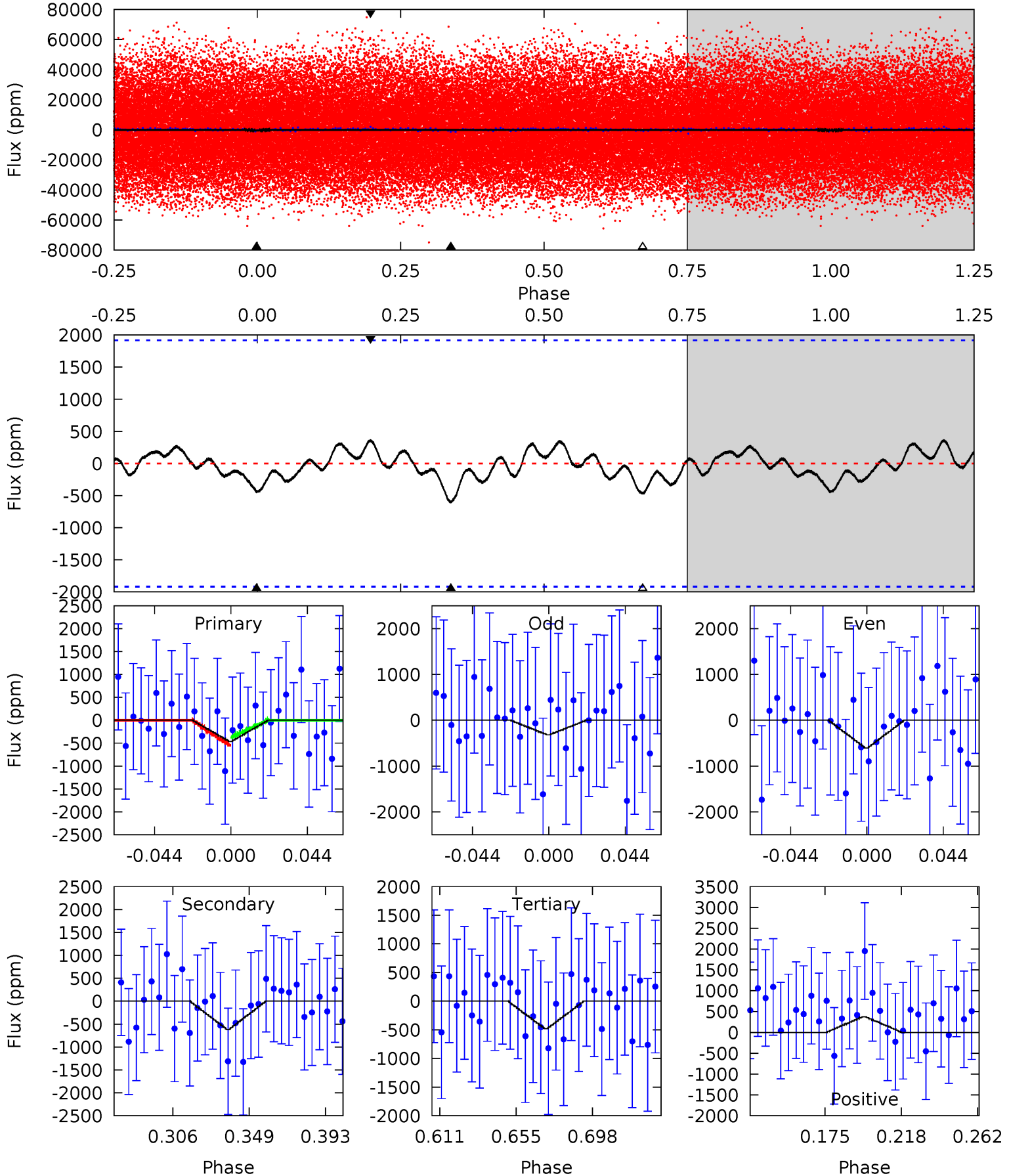
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.94	6.85	6.23	0	4.52	1.53	2.73	1.72	7.94	0.62	6.85	0.90	1.19	0.21	0.08



Alt Model-Shift Uniqueness Test

007830684-01, P = 0.968757 Days, E = 130.593150 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.14	1.52	1.19	0.93	4.74	2.02	0.45	-0.05	0.21	0.34	0.59	0.36	0.33	0.38	0.21



Stellar Parameters For KIC 007830684

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7399^{+233}_{-311}	$3.944^{+0.338}_{-0.135}$	$-0.400^{+0.250}_{-0.300}$	$2.187^{+0.530}_{-0.795}$	$1.532^{+0.209}_{-0.339}$	$0.206^{+0.467}_{-0.081}$
	+3%/-4%	+9%/-3%	+62%/-75%	+24%/-36%	+14%/-22%	+226%/-39%
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 007830684-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-357 ± 52	$3.84^{+2.06}_{-1.83}$	4408^{+383}_{-404}	7565^{+4089}_{-1510}	$6.390^{+17.319}_{-3.625}$
Alt.	-617 ± 405	$4.90^{+2.19}_{-1.92}$	4440^{+347}_{-449}	7689^{+3662}_{-2223}	$6.399^{+14.427}_{-4.614}$

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

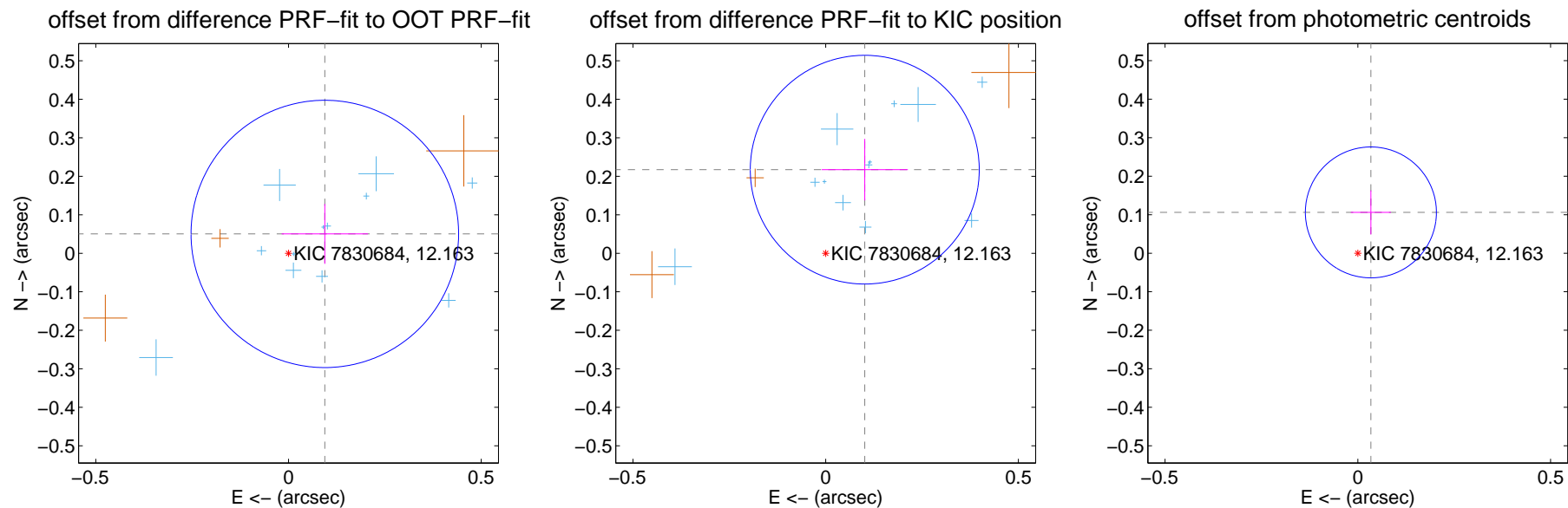
DV Centroid Data

Supplemental centroid analysis for 007830684-01. Kepler magnitude: 12.16. Transit SNR 12.79

There are 13 quarters with good PRF difference image offsets

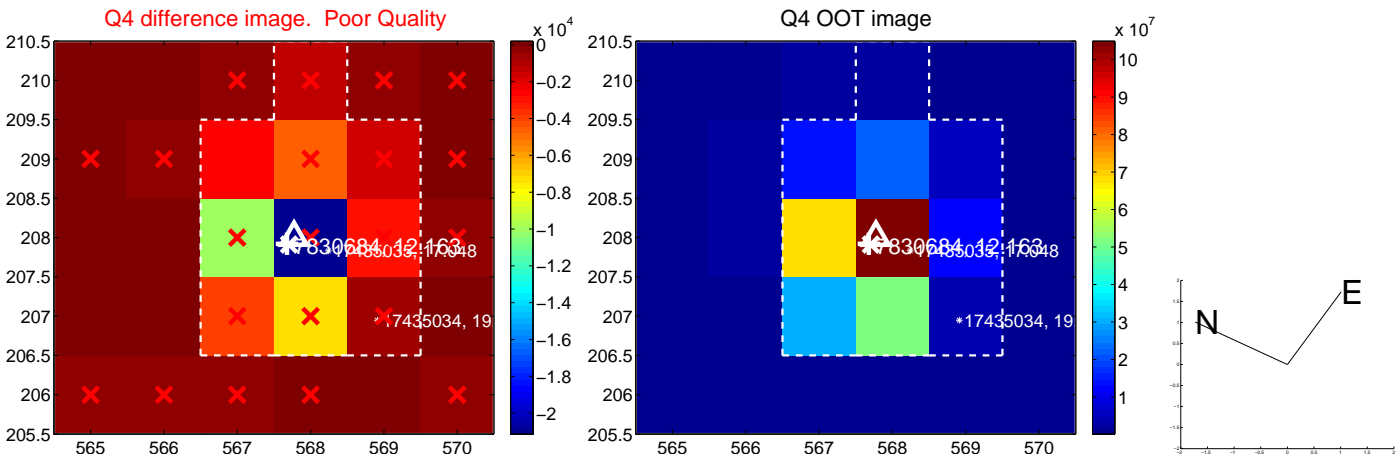
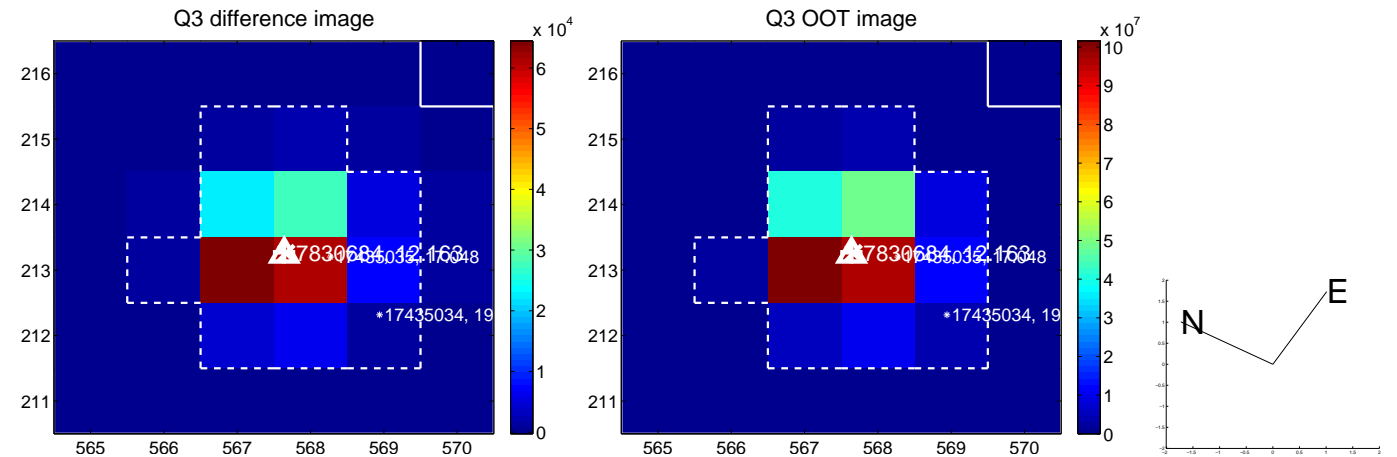
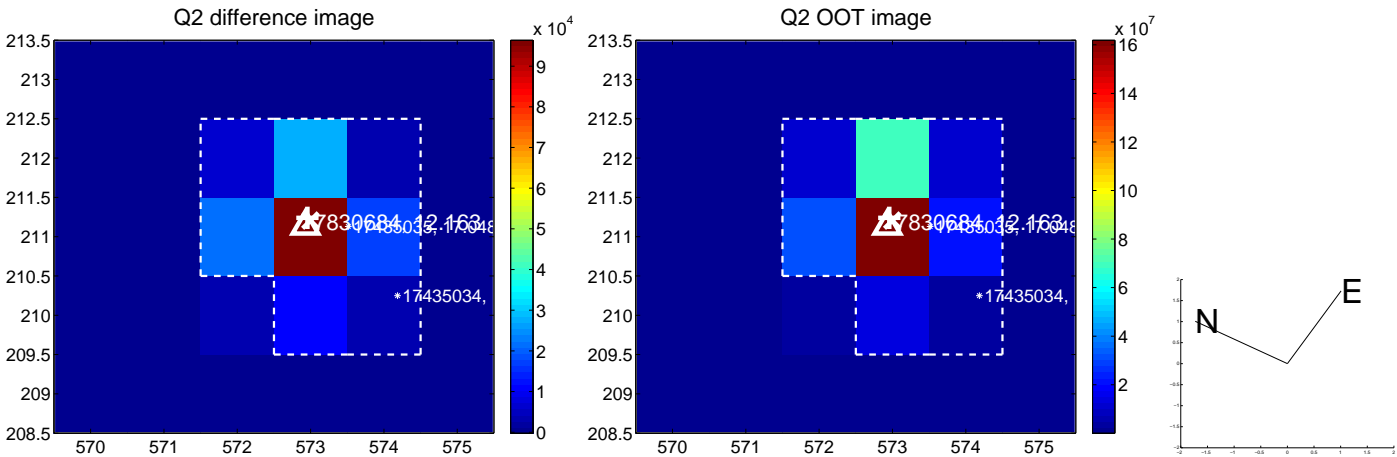
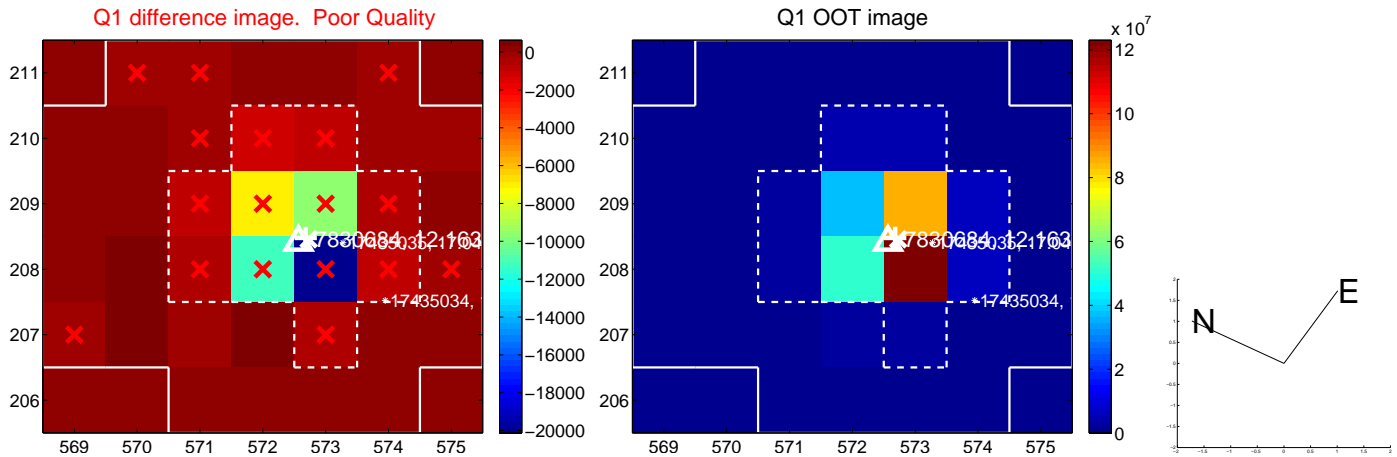
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.107 ± 0.116	0.92	-0.094 ± 0.112	0.050 ± 0.078
PRF-fit source offset from KIC position	0.240 ± 0.099	2.42	-0.101 ± 0.112	0.217 ± 0.080
photometric centroid source offset	0.11 ± 0.06	1.96	-0.03 ± 0.05	0.11 ± 0.06

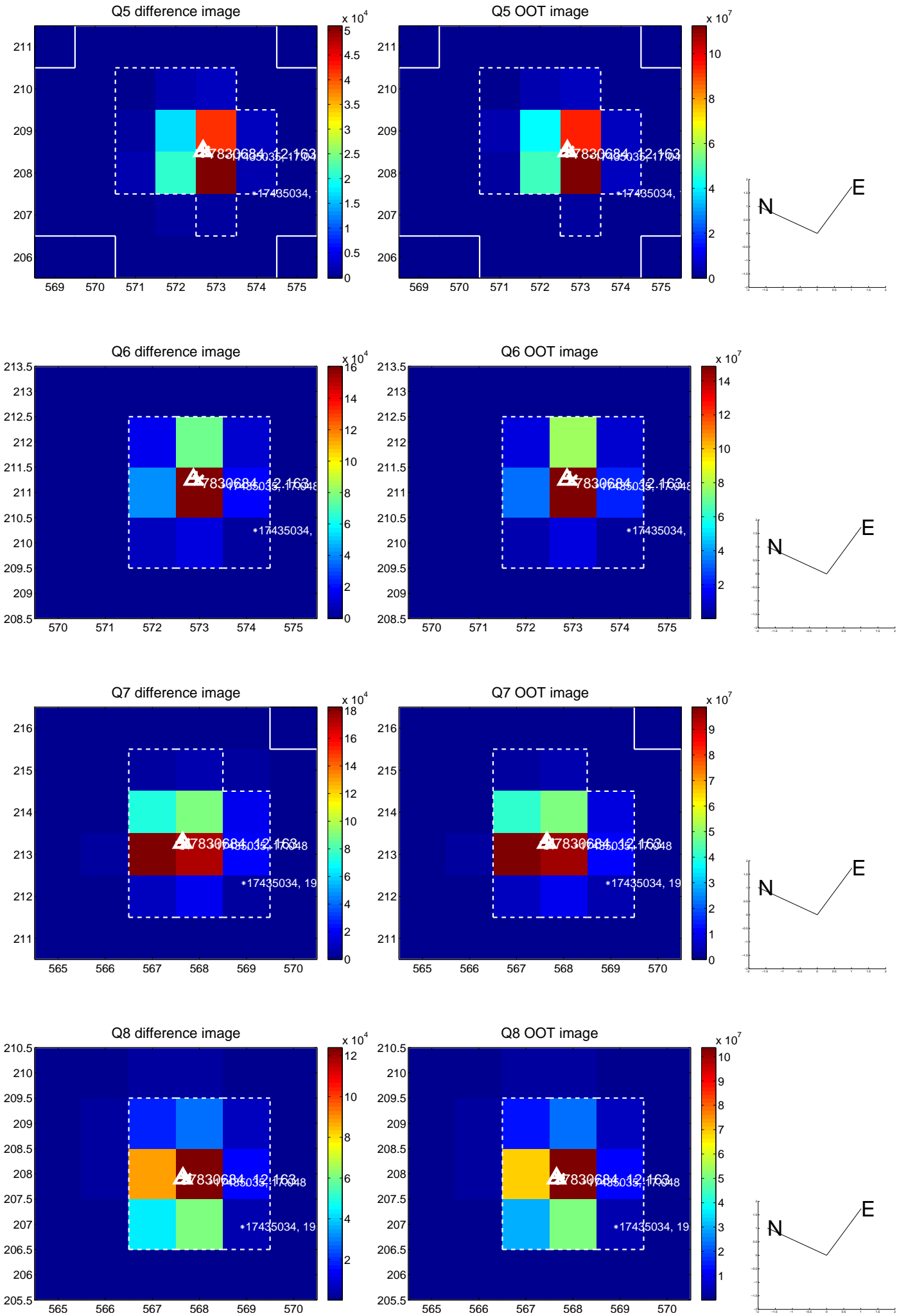


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

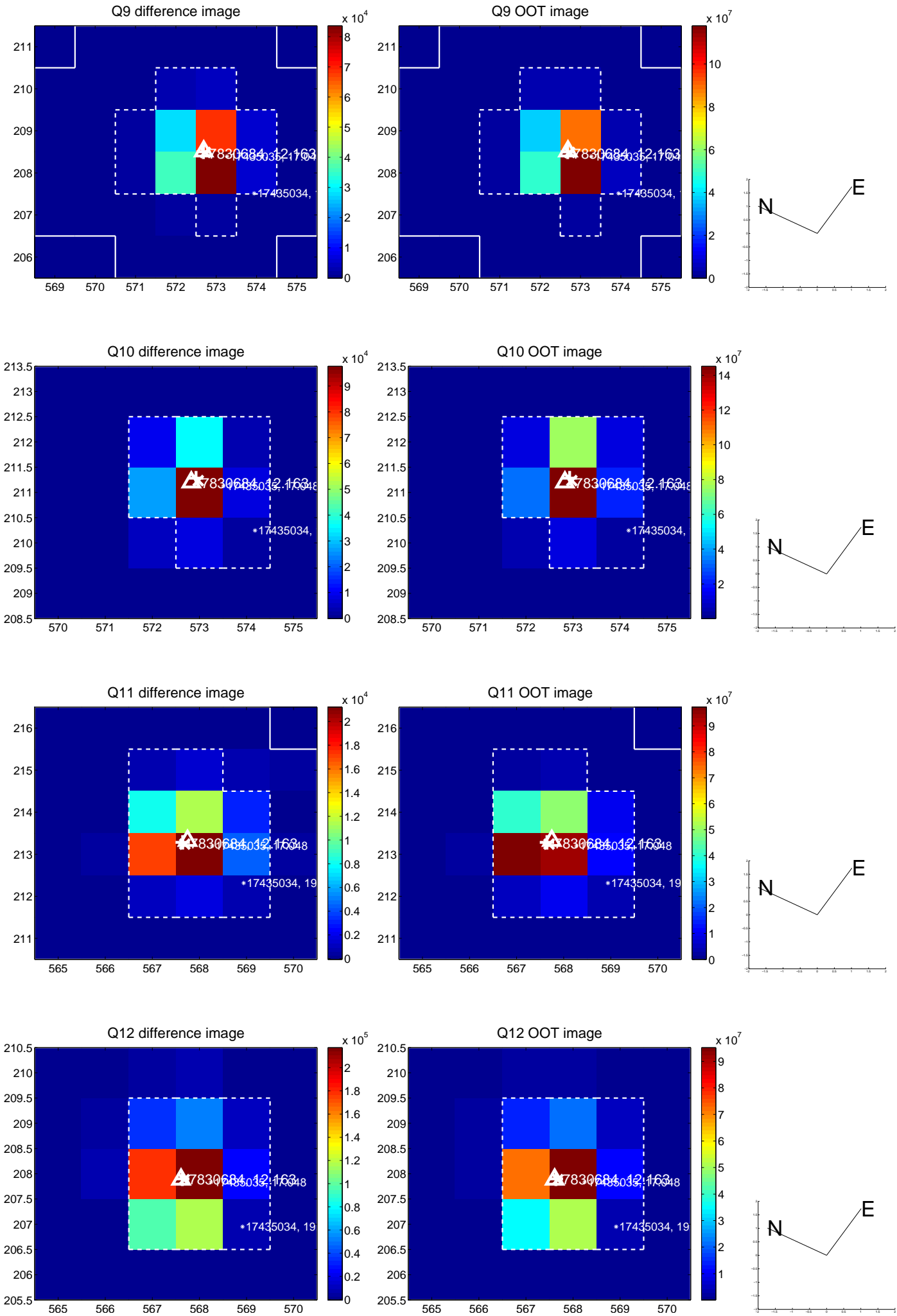
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



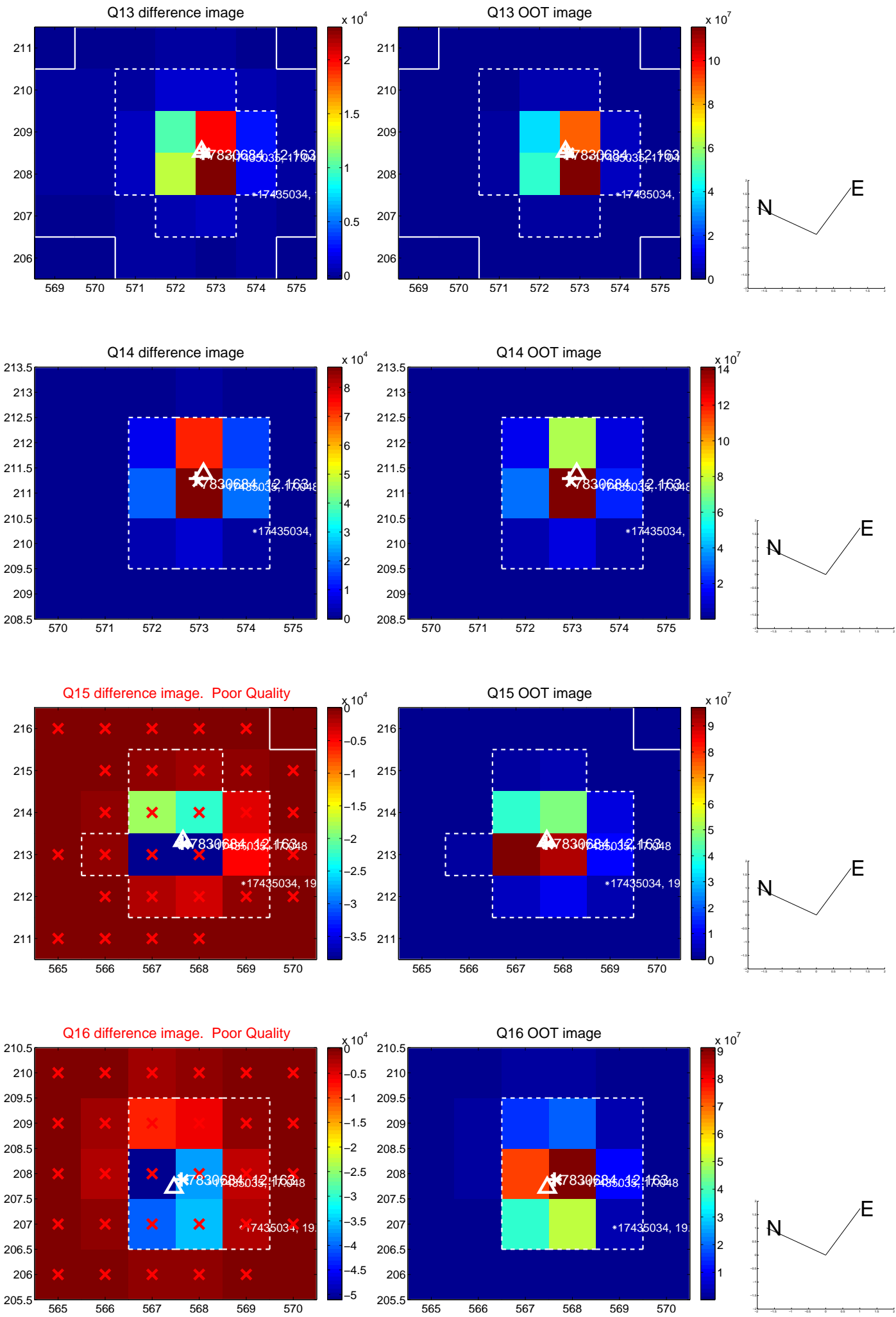
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

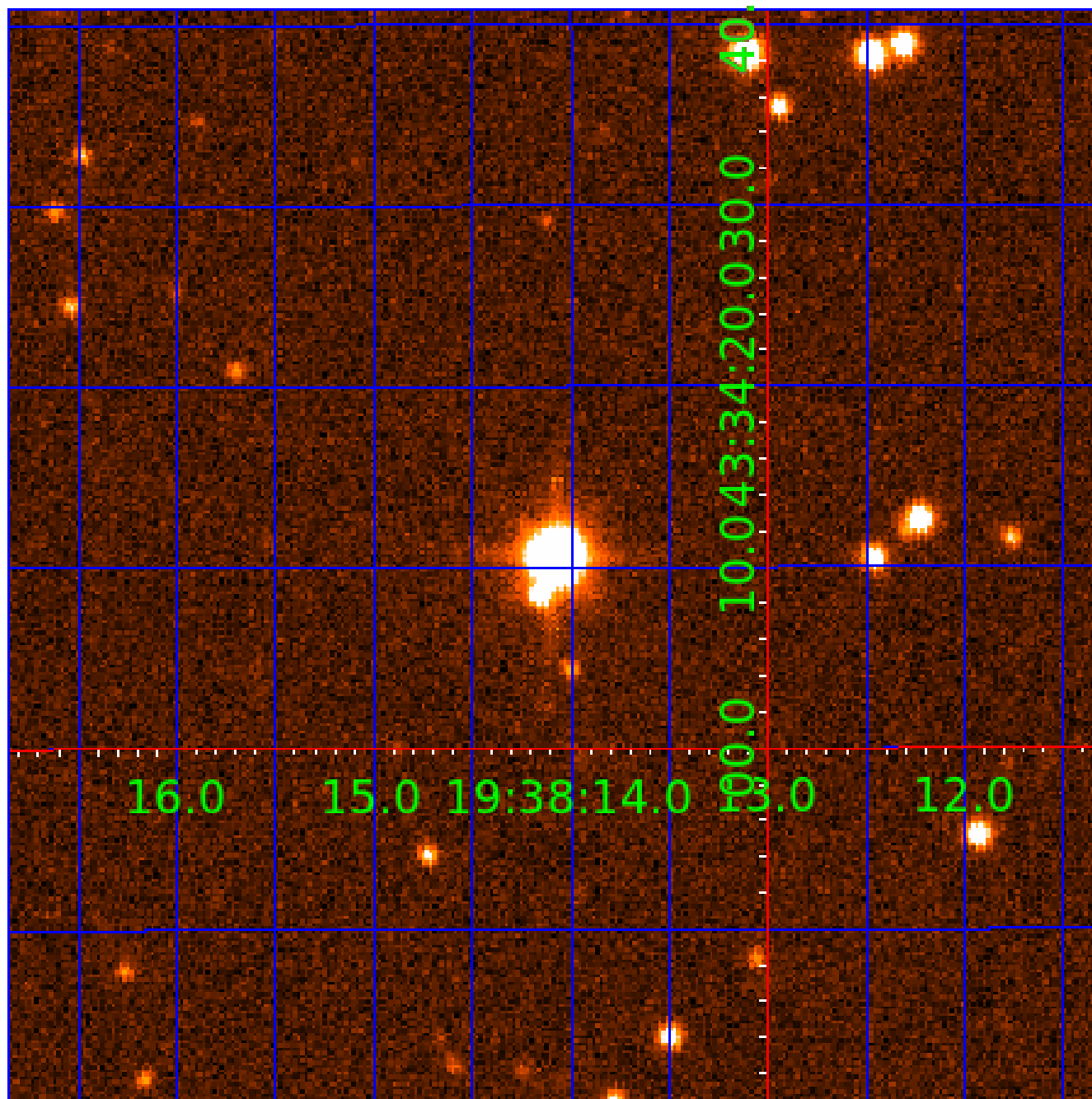


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830684

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})
007830684-01	OBS	No	0.968750	131.579524	270.7	2.472	11.4	12.8	2.19	7399	4.16	26294.80
007830684-02	OBS	No	0.645852	131.558346	344.2	2.198	10.8	13.2	2.19	7399	4.35	45148.35
007830684-03	OBS	No	0.645846	131.888277	90.8	2.000	9.7	-1.0	2.19	7399	2.12	45148.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830684-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007830684-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007830684-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

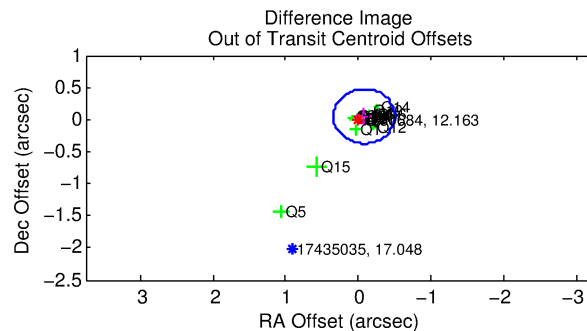
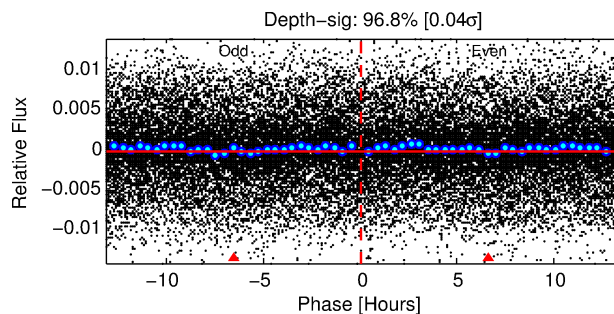
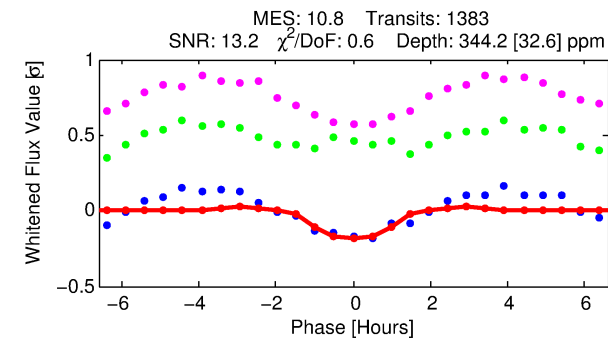
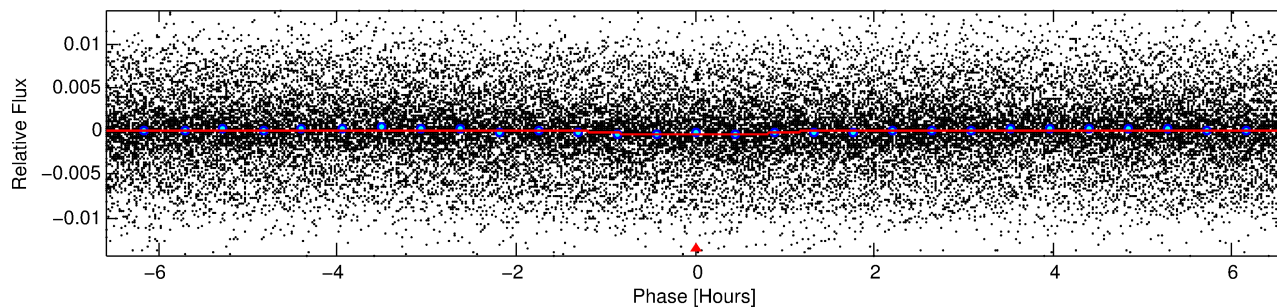
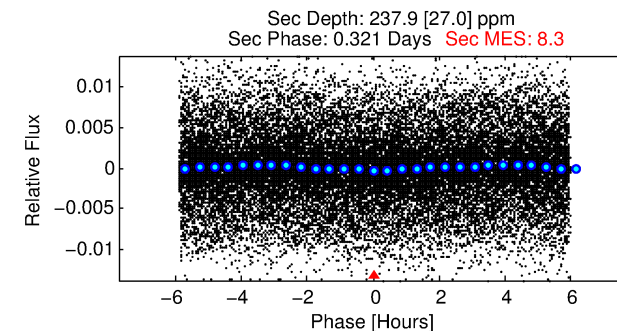
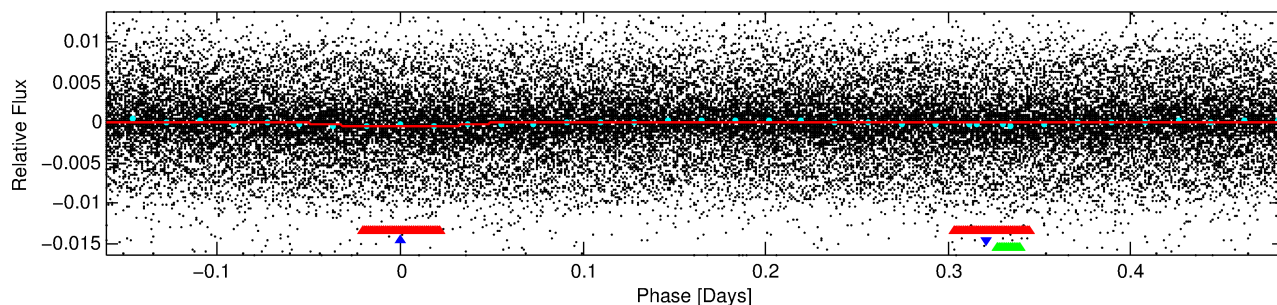
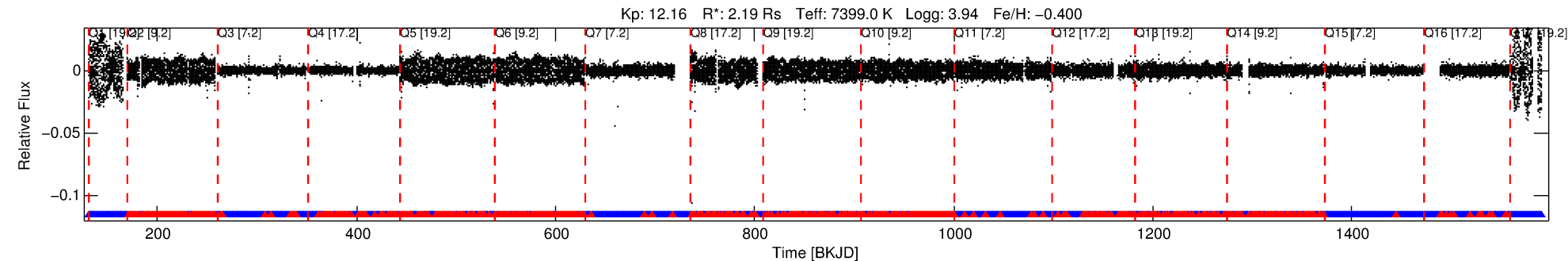
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830684-02

No Significant Match Found

DV One-Page Summary

KIC: 7830684 Candidate: 2 of 3 Period: 0.646 d



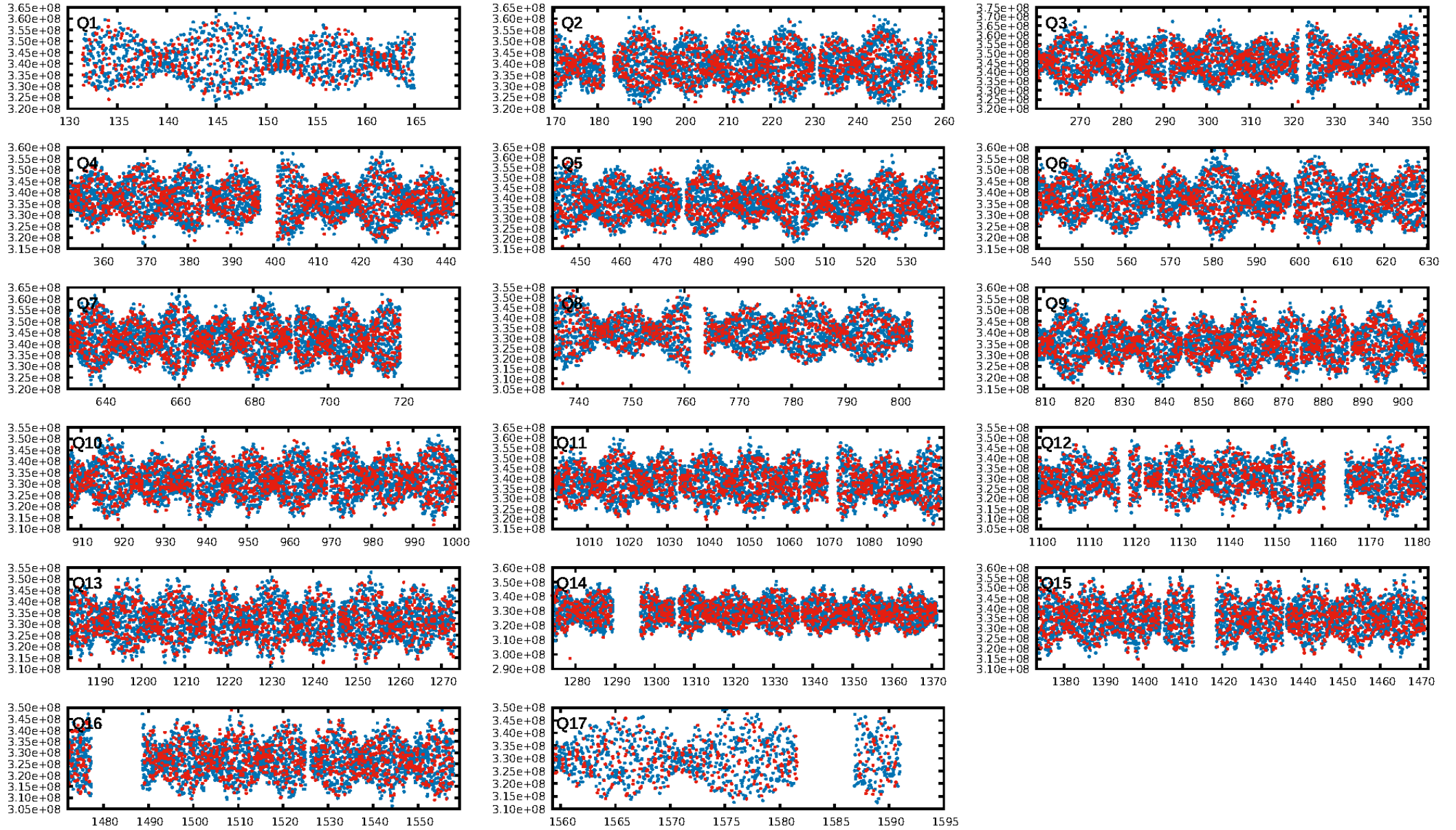
DV Fit Results:

Period = 0.64585 [0.00001] d
Epoch = 131.5583 [0.0024] BKJD
Rp/R* = 0.0182 [0.0140]
a/R* = 1.85 [6.11]
b = 0.70 [3.42]
Seff = 45148.35 [26945.73]
Teq = 3717 [555] K
Rp = 4.35 [3.70] Re
a = 0.0169 [0.0060] AU
Ag = 1.97 [3.24] [0.30σ]
Teff = 6804 [2641] K [1.14σ]

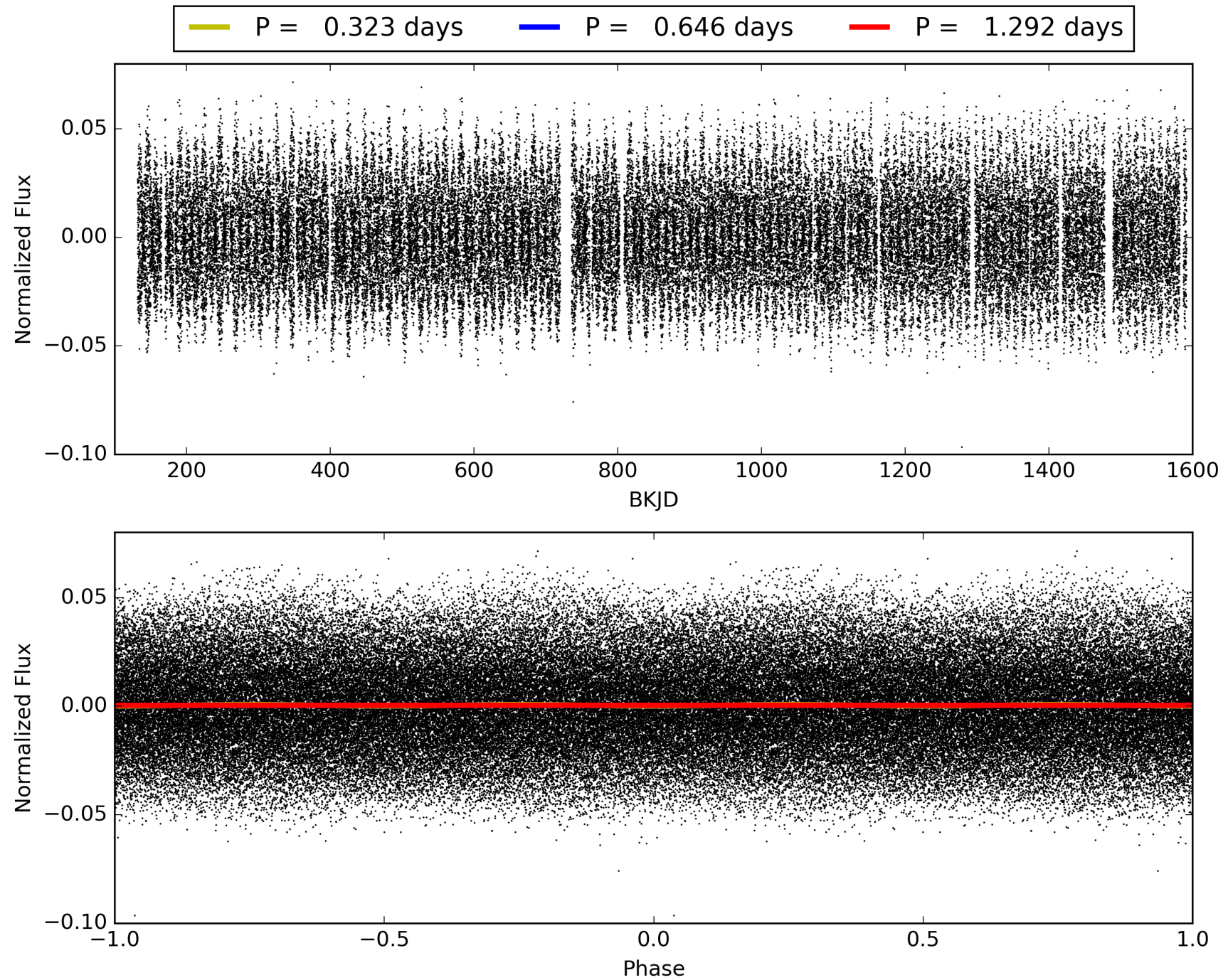
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 98.1% [2.34σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.56 [741/1322]
GhostDiagnostic-chr: 1.96
Centroid-sig: N/A
Centroid-so: 0.117 arcsec [3.33σ]
OotOffset-rm: 0.091 arcsec [0.65σ]
KicOffset-rm: 0.210 arcsec [1.54σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007830684-02, PDC Light Curves

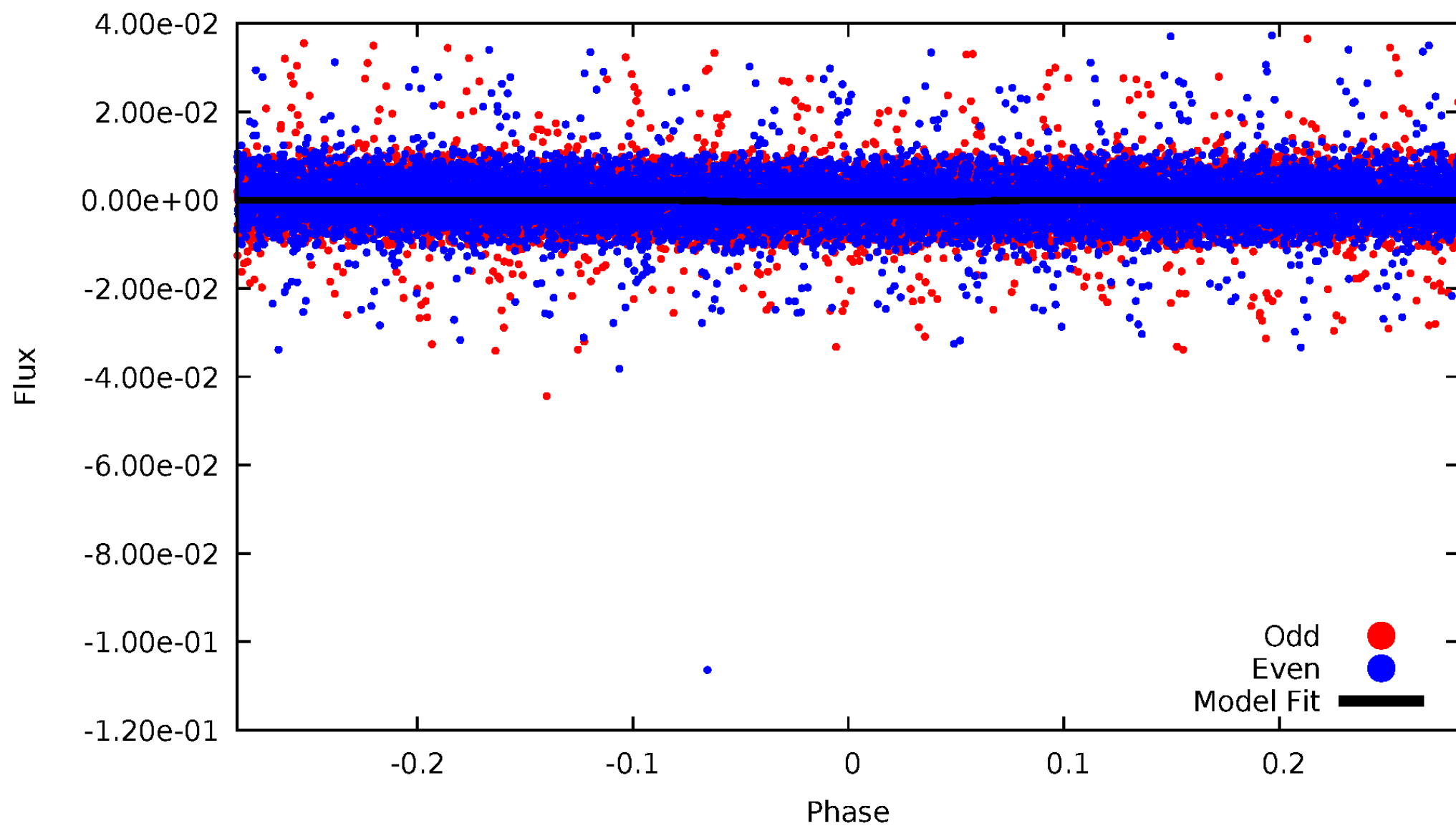


TCE 007830684-02



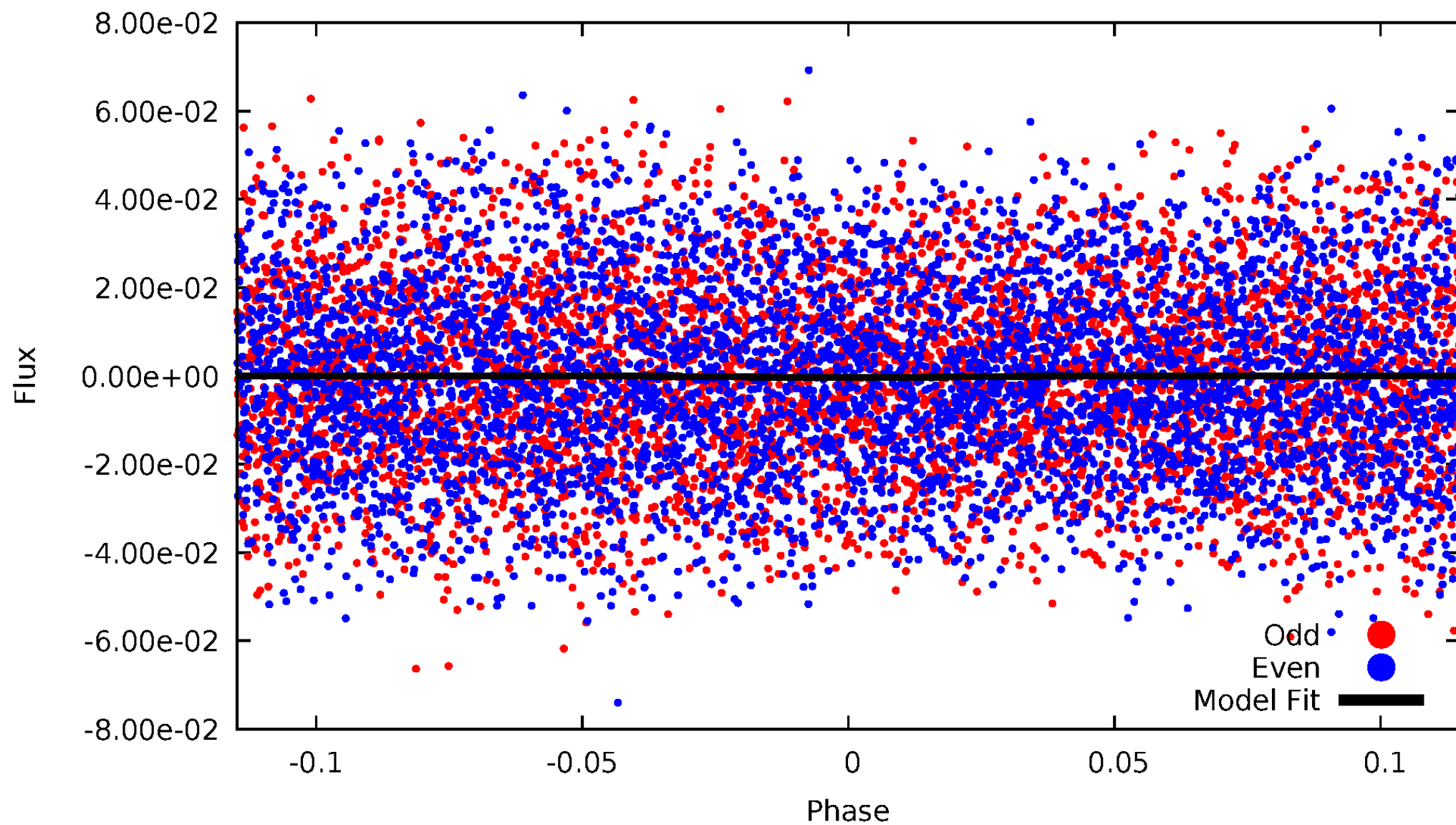
DV Odd/Even

TCE 007830684-02



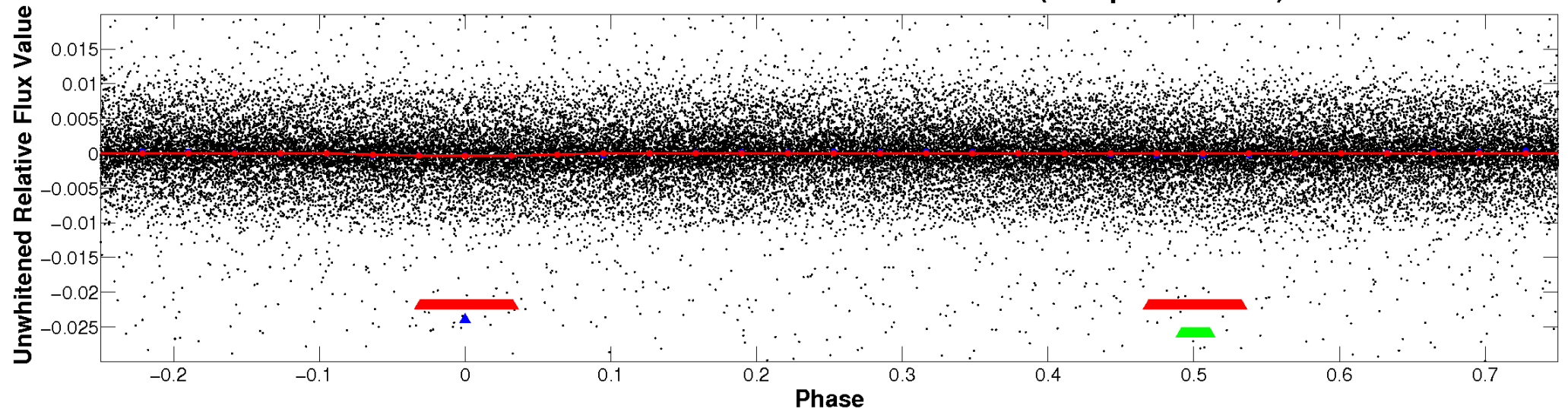
ALT Odd/Even

TCE 007830684-02

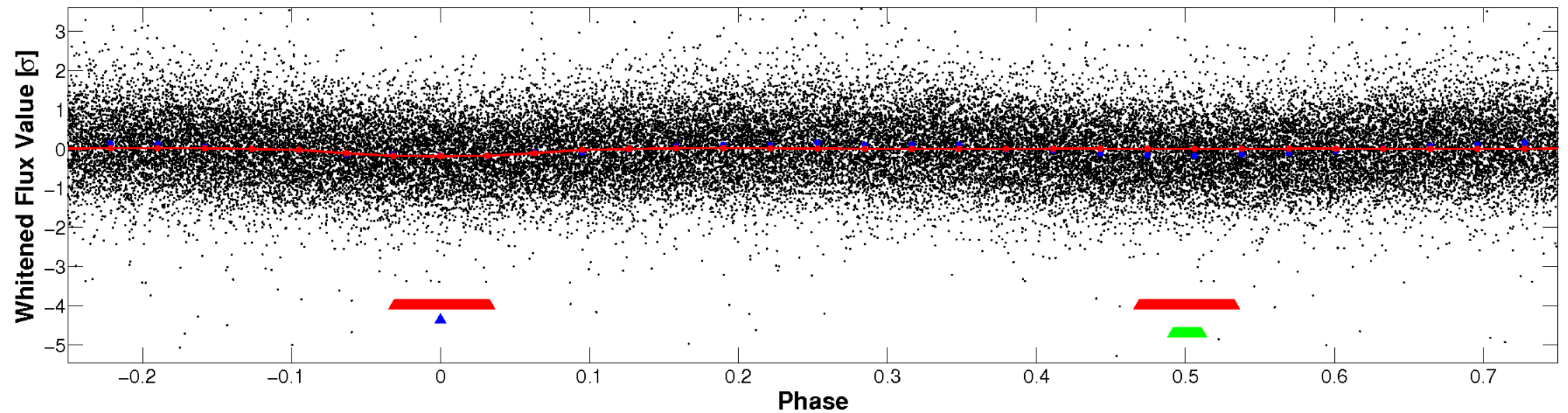


Non-Whitened Vs. Whitened Light Curve

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

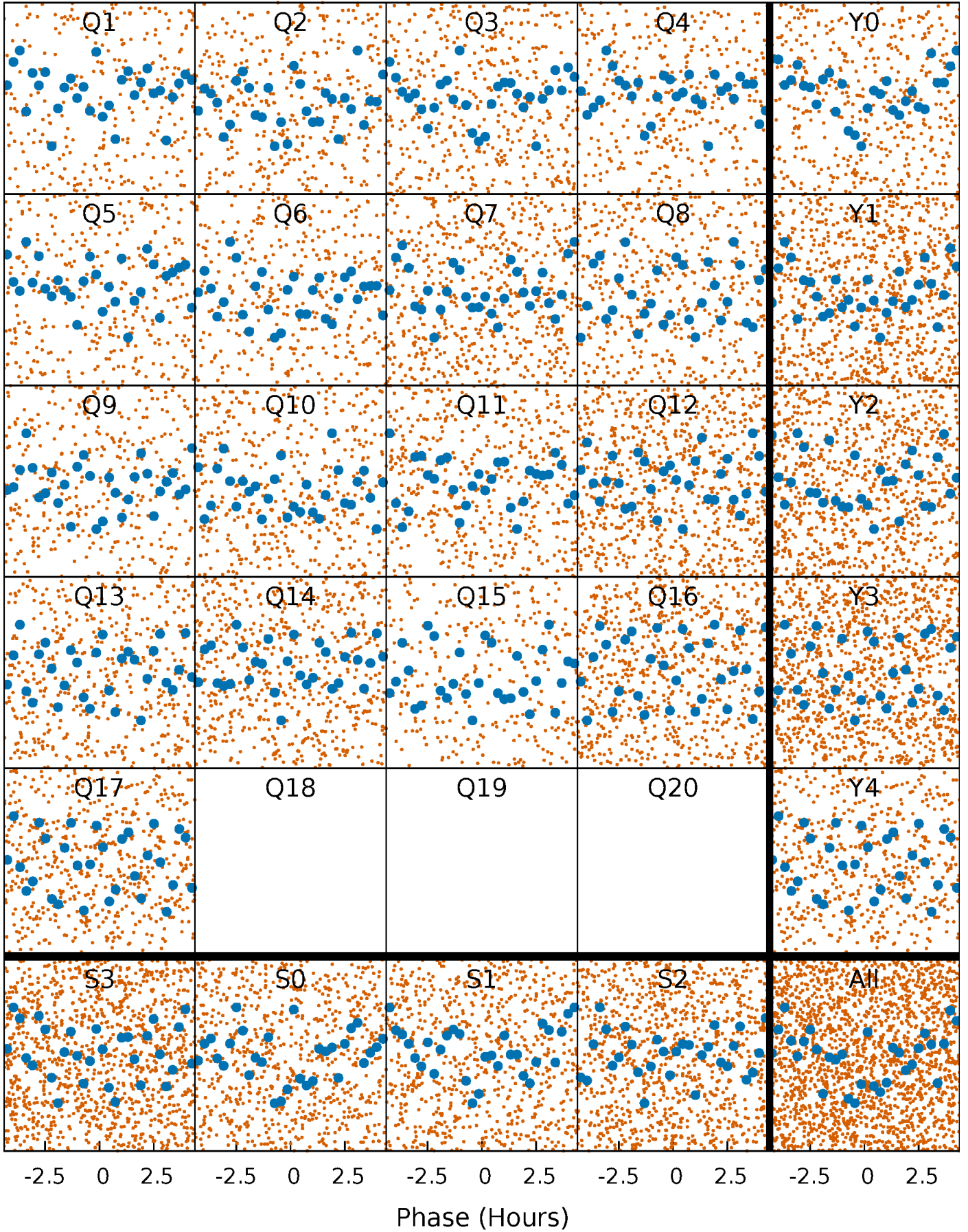


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



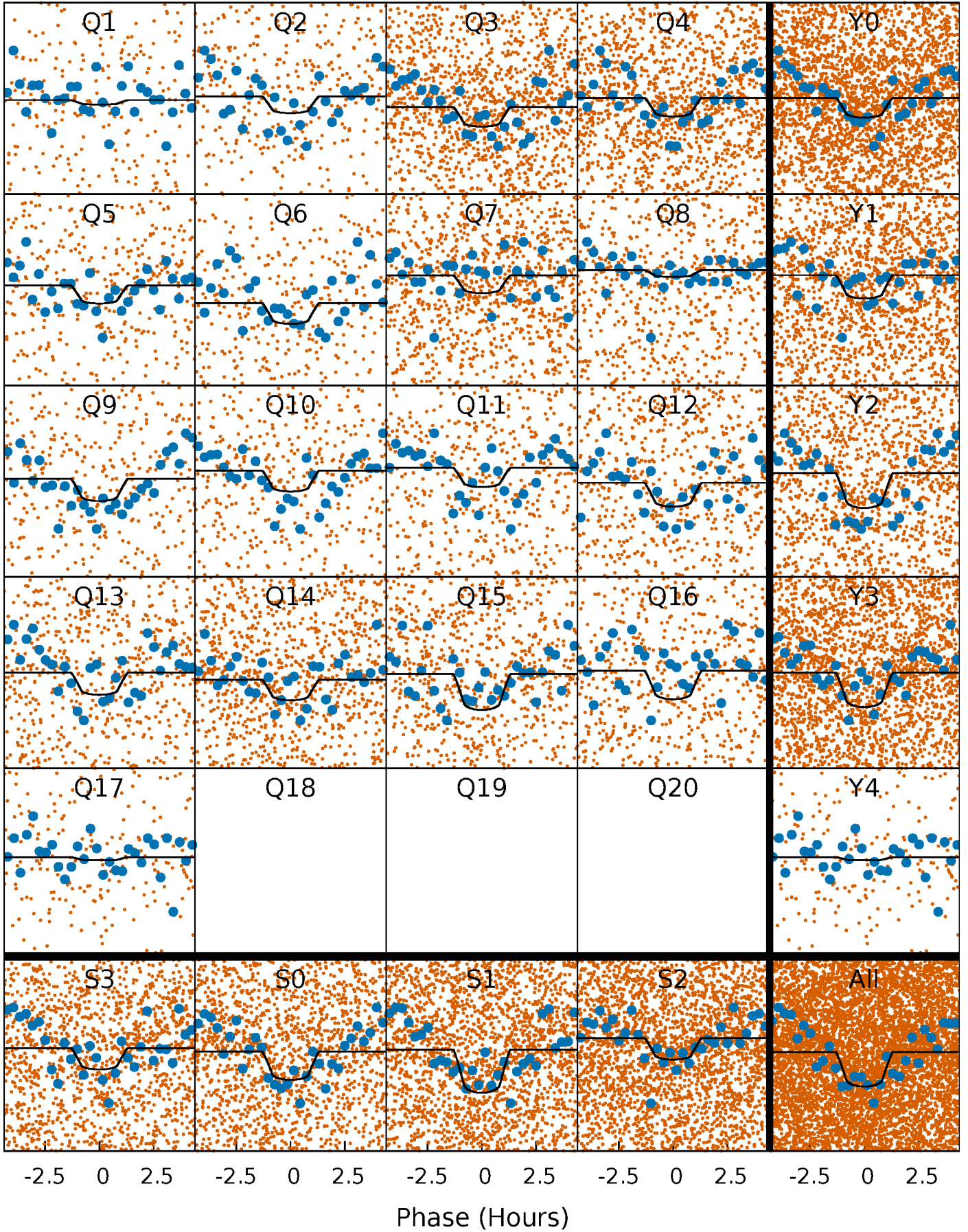
PDC Quarter-Phased Transit Curves

TCE 007830684-02 P= 0.645852 Days $T_0=131.558346$ (BKJD)



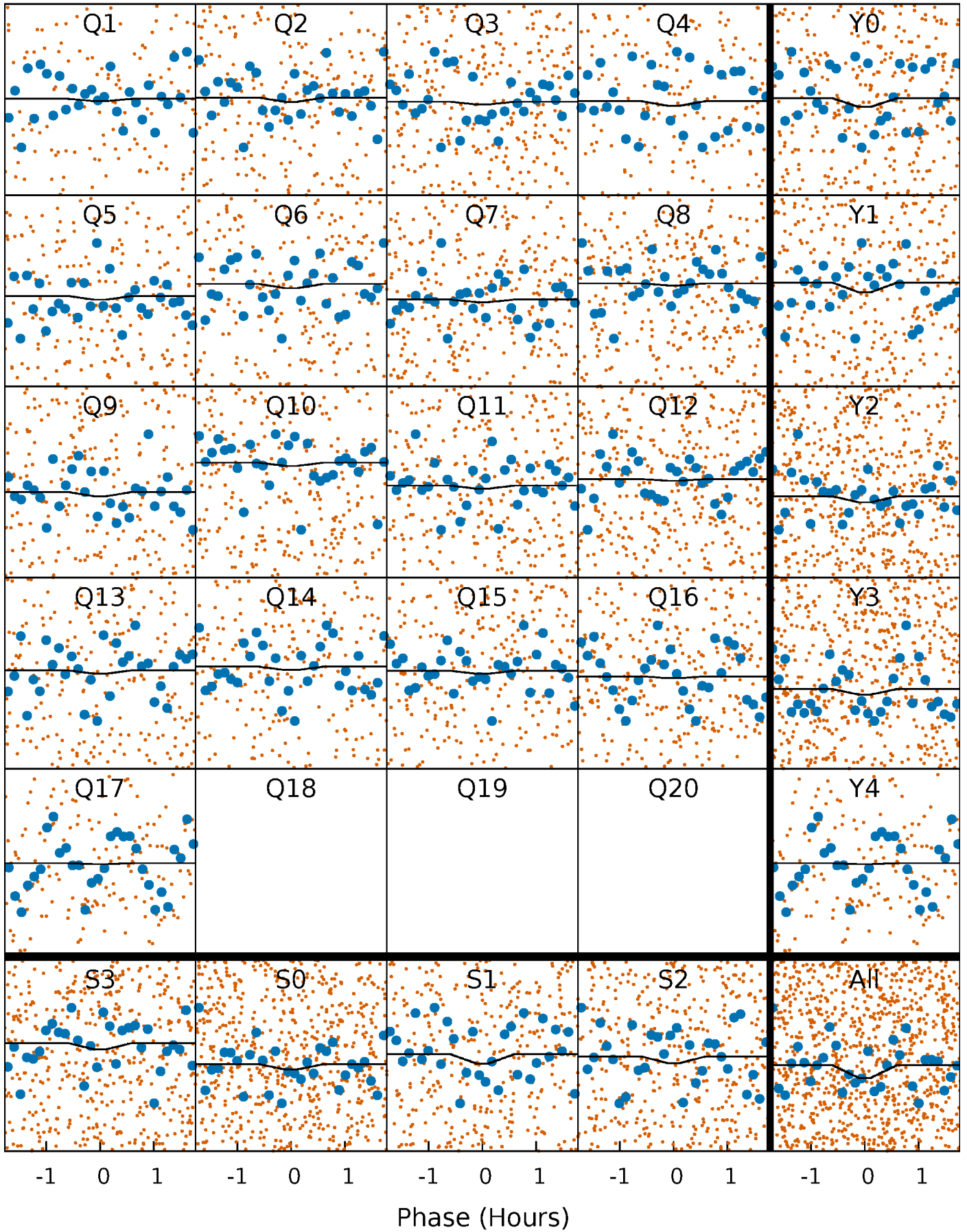
DV Quarter-Phased Transit Curves

TCE 007830684-02 $P = 0.645852$ Days $T_0 = 131.558346$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

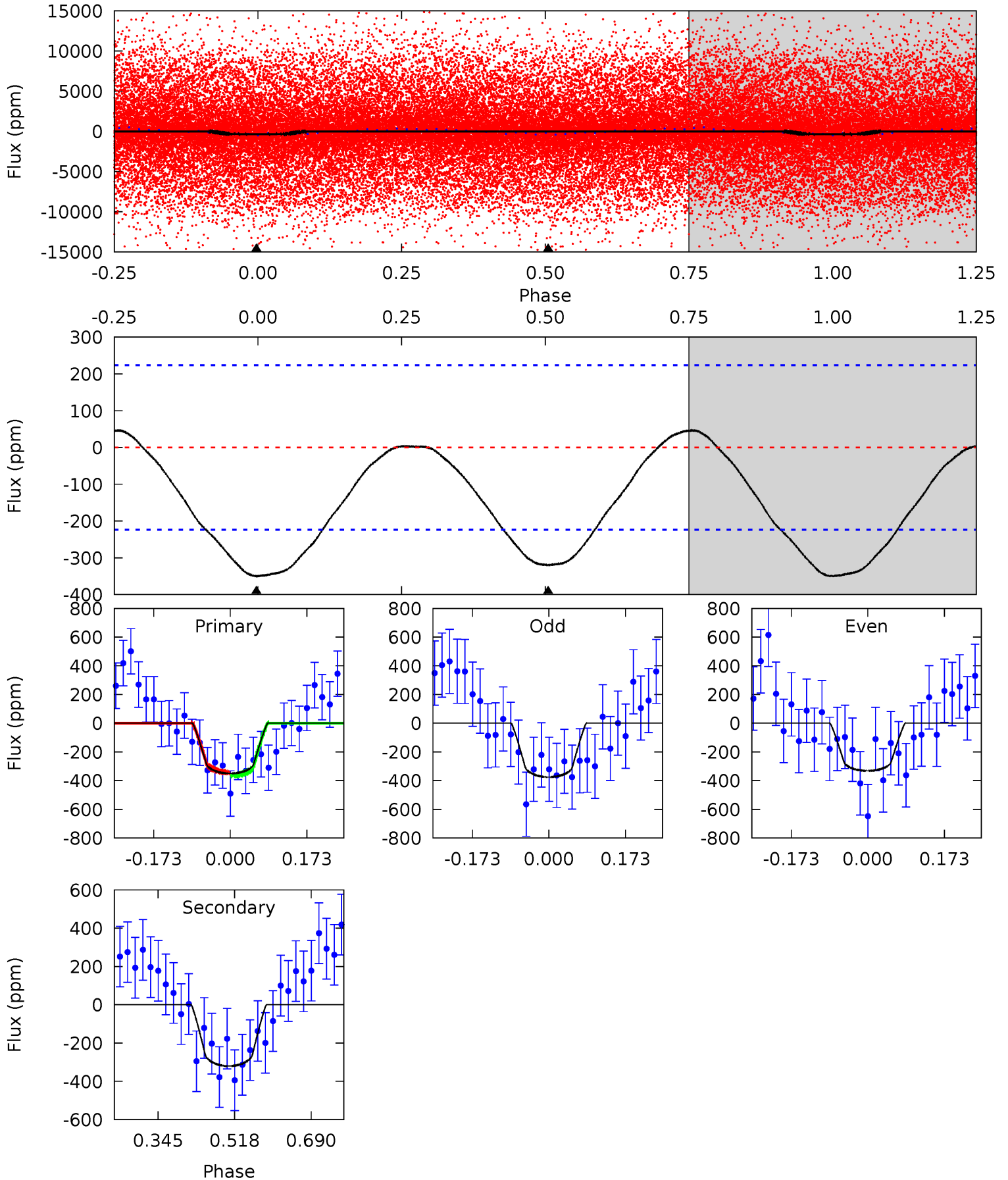
TCE 007830684-02 P= 0.645846 Days $T_0=131.549208$ (BKJD)



DV Model-Shift Uniqueness Test

007830684-02, P = 0.645852 Days, E = 131.558346 Days

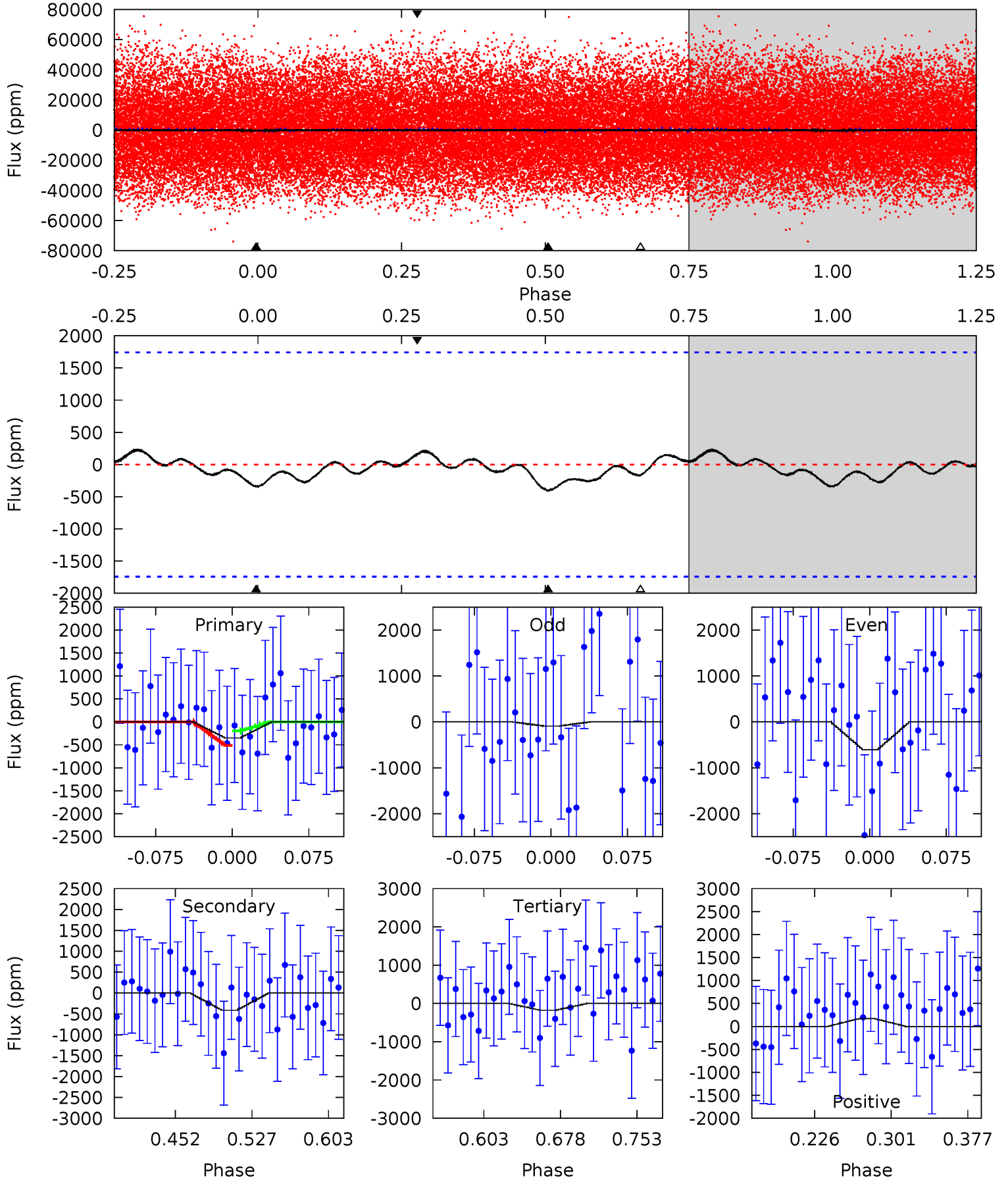
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.96	6.36	0	0	4.45	1.36	0.64	6.96	6.96	6.36	6.36	0.43	1.10	0.12	0.22



Alt Model-Shift Uniqueness Test

007830684-02, P = 0.645846 Days, E = 131.549208 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.93	1.10	0.47	0.46	4.62	1.78	0.30	0.46	0.47	0.63	0.64	0.68	0.86	0.37	0.42



Stellar Parameters For KIC 007830684

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7399^{+233}_{-311}	$3.944^{+0.338}_{-0.135}$	$-0.400^{+0.250}_{-0.300}$	$2.187^{+0.530}_{-0.795}$	$1.532^{+0.209}_{-0.339}$	$0.206^{+0.467}_{-0.081}$
	+3%/-4%	+9%/-3%	+62%/-75%	+24%/-36%	+14%/-22%	+226%/-39%
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 007830684-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-320 ± 50	$4.17^{+3.17}_{-2.40}$	5075^{+397}_{-501}	6875^{+6194}_{-1894}	$2.750^{+12.924}_{-1.830}$
Alt.	-415 ± 377	$4.57^{+3.42}_{-2.69}$	5058^{+419}_{-509}	6644^{+7053}_{-3188}	$2.464^{+14.491}_{-2.083}$

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

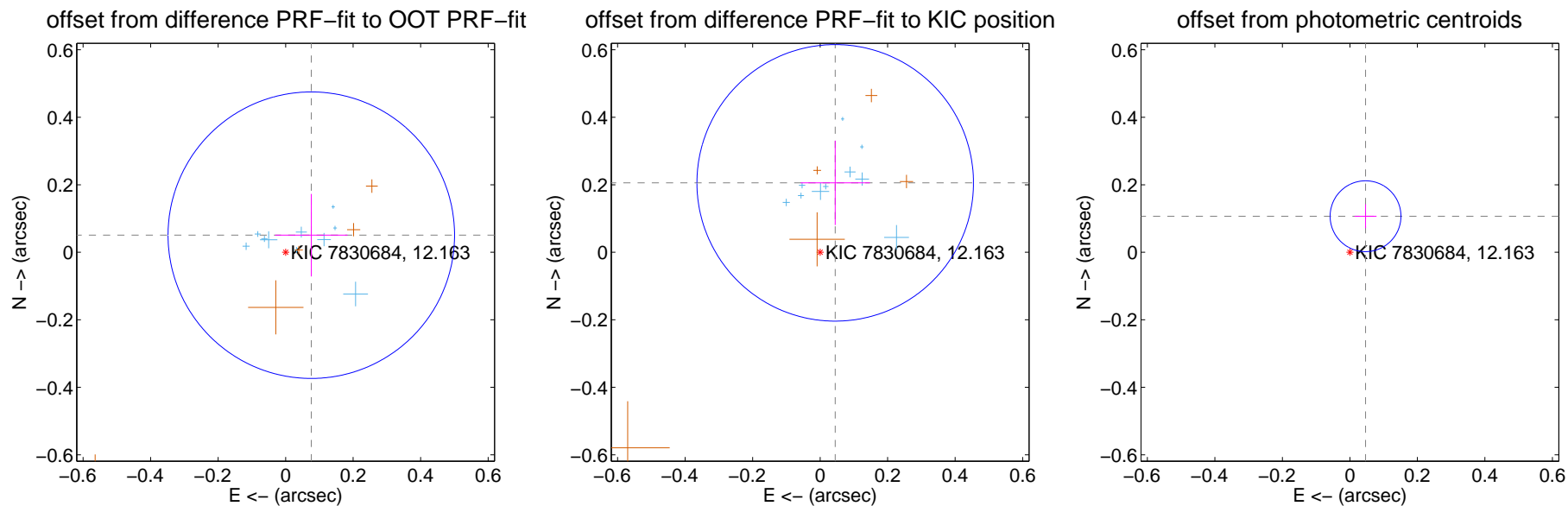
DV Centroid Data

Supplemental centroid analysis for 007830684-02. Kepler magnitude: 12.16. Transit SNR 13.16

There are 10 quarters with good PRF difference image offsets

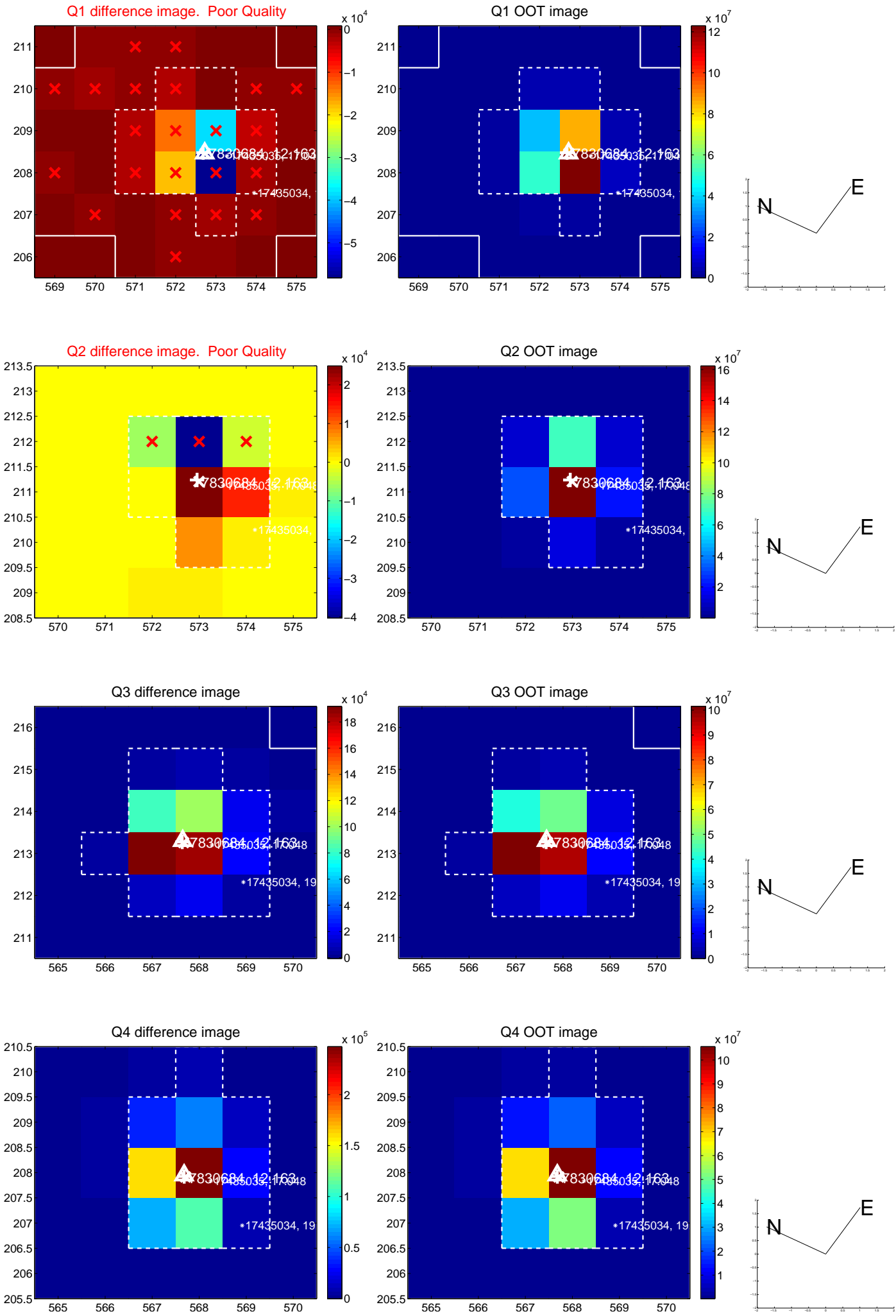
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.091 ± 0.141	0.65	-0.076 ± 0.107	0.051 ± 0.122
PRF-fit source offset from KIC position	0.210 ± 0.137	1.54	-0.045 ± 0.102	0.206 ± 0.125
photometric centroid source offset	0.12 ± 0.03	3.33	-0.05 ± 0.03	0.11 ± 0.04

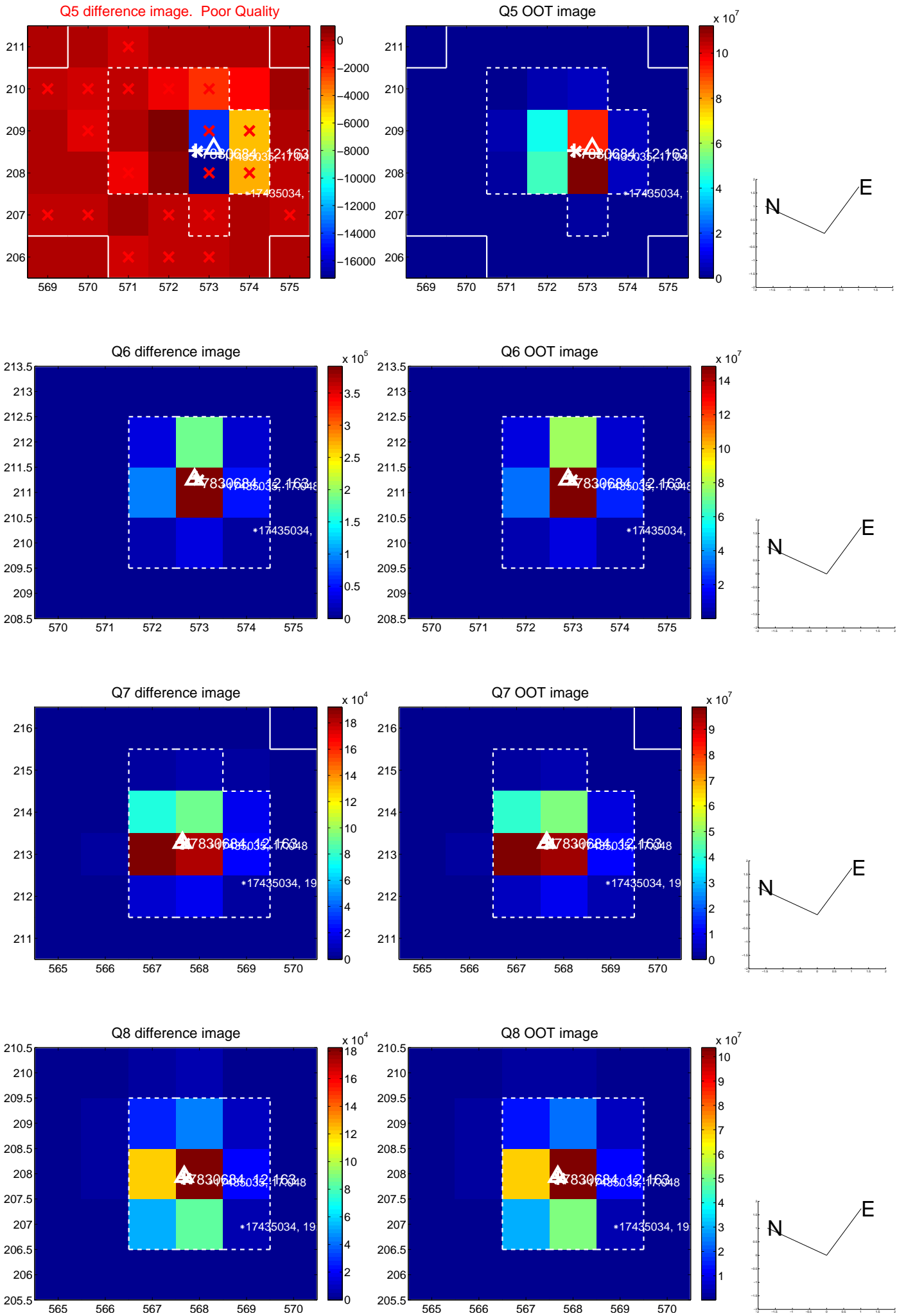


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

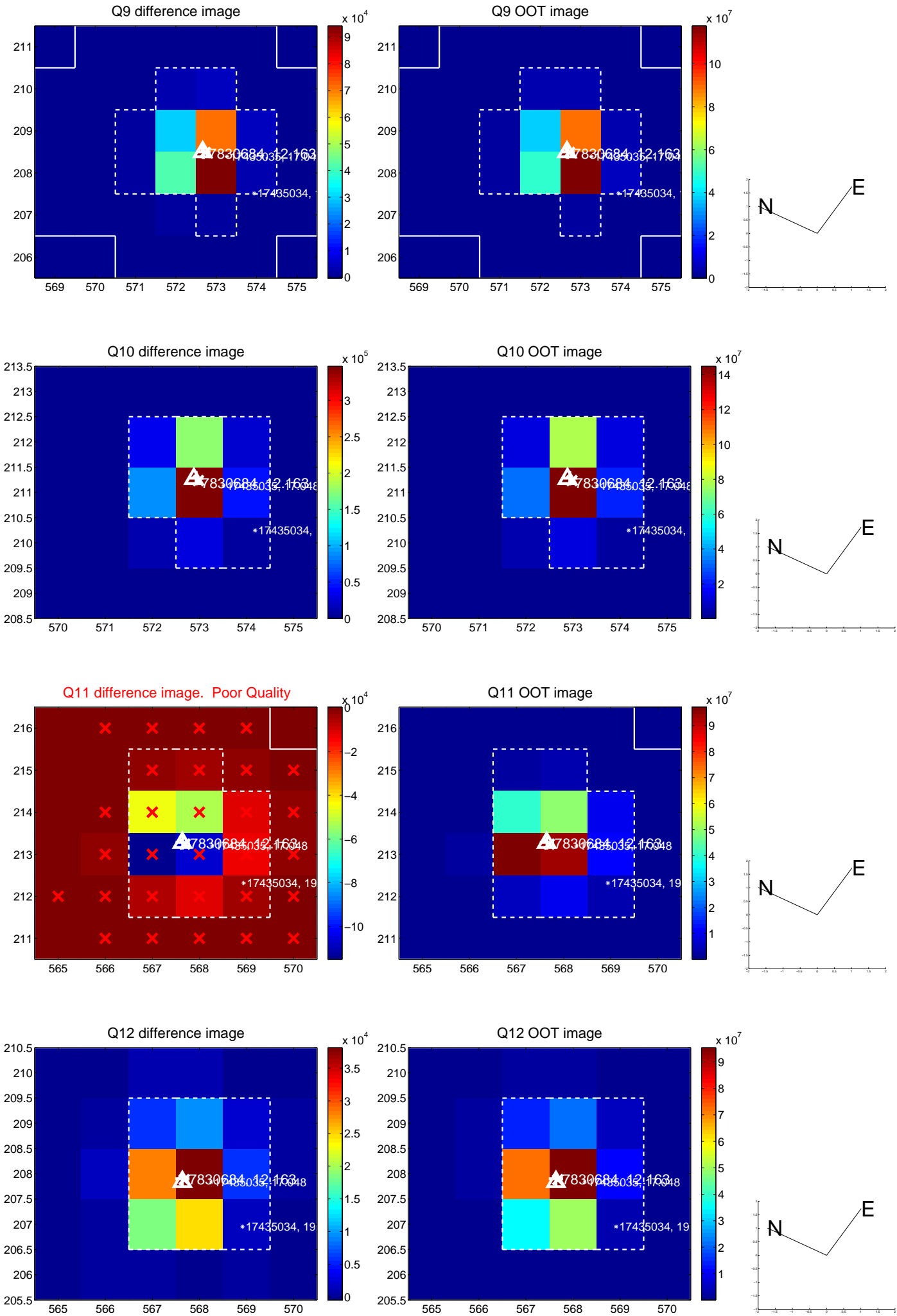
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



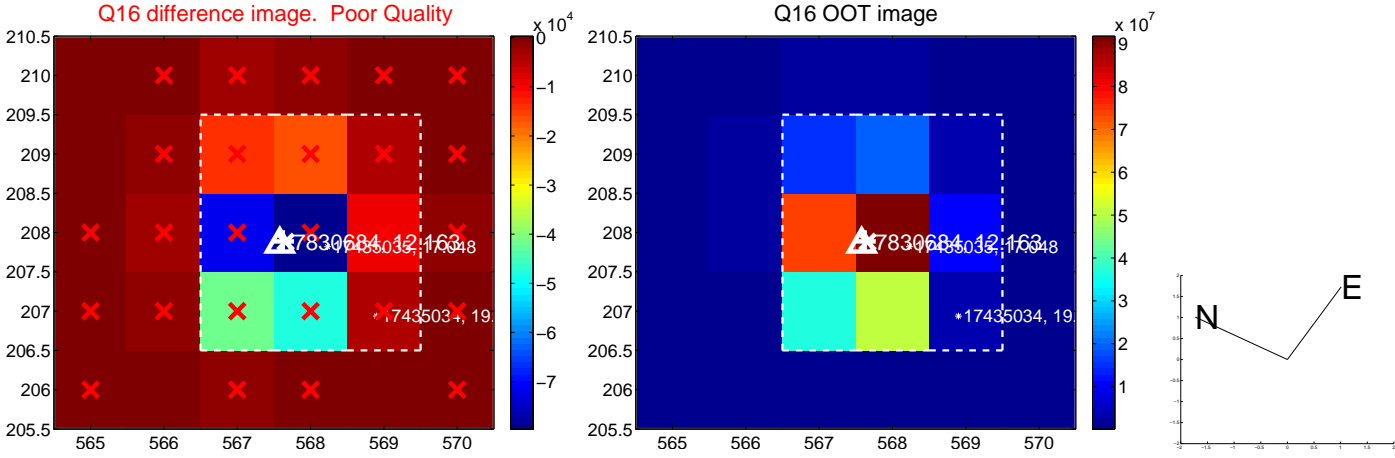
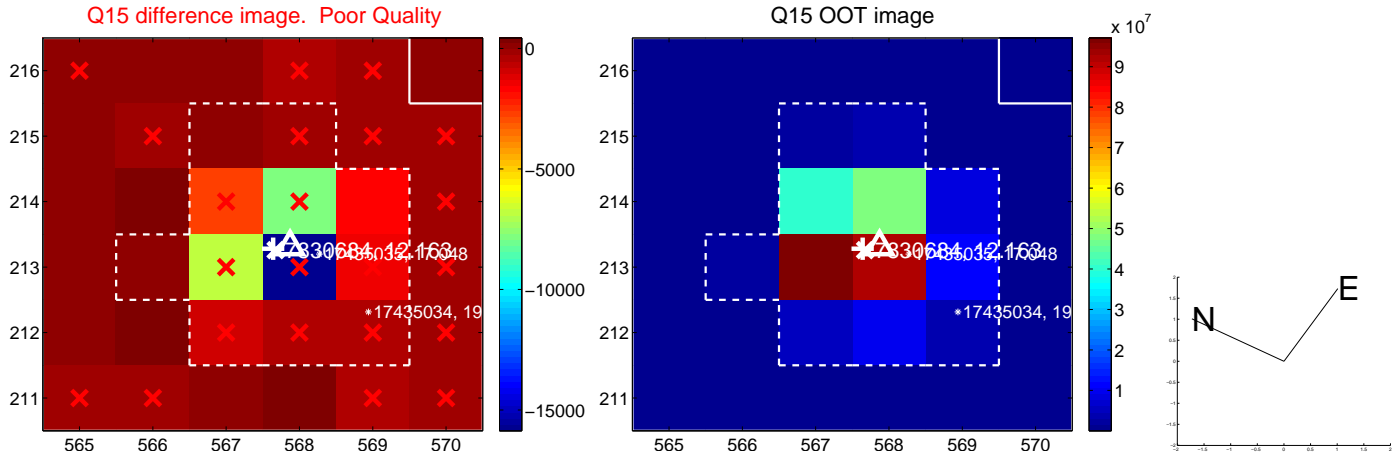
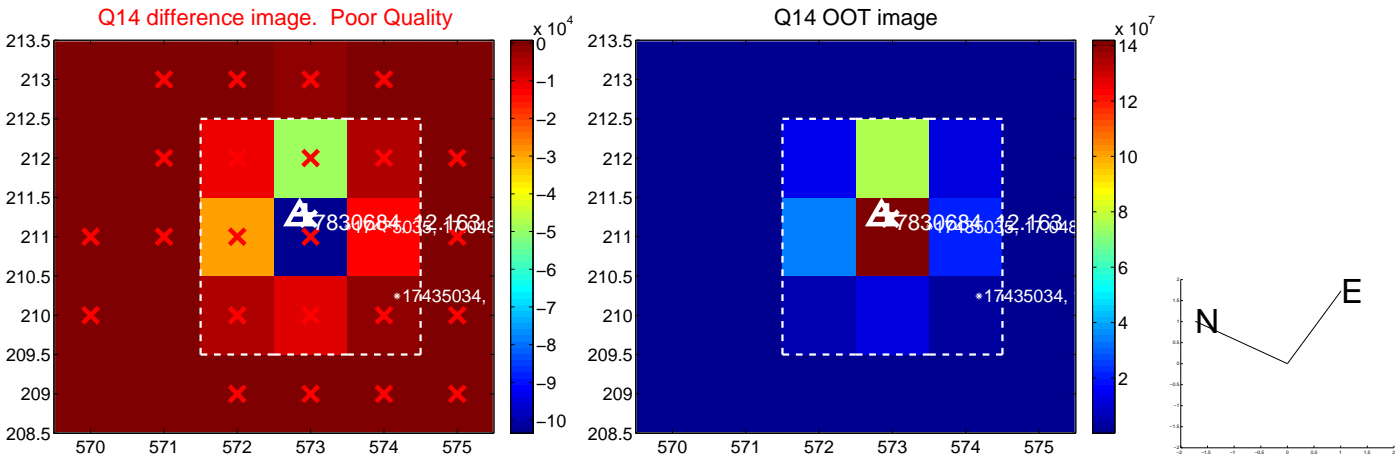
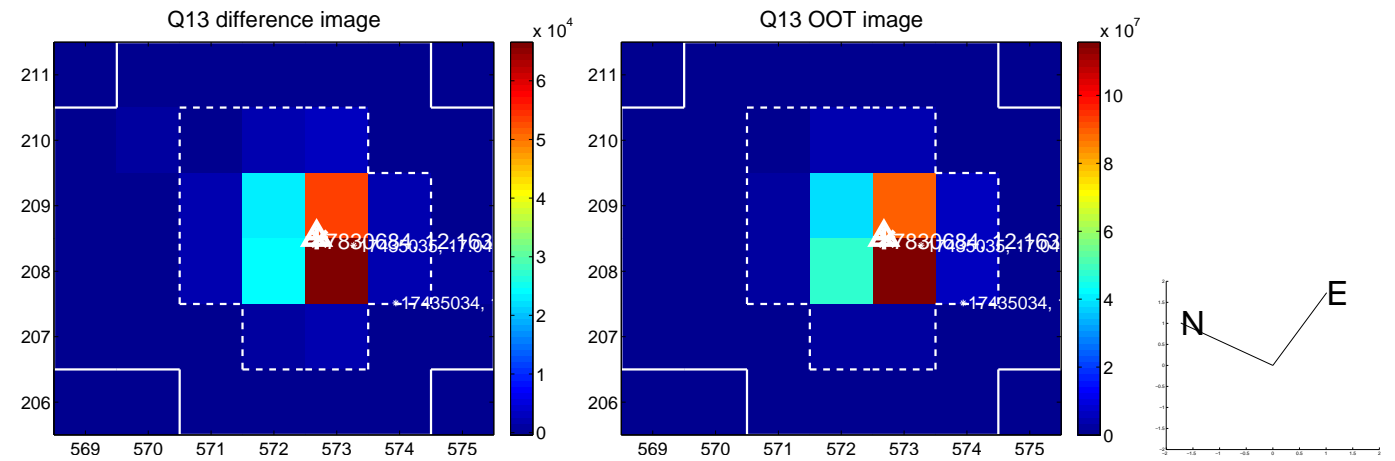
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



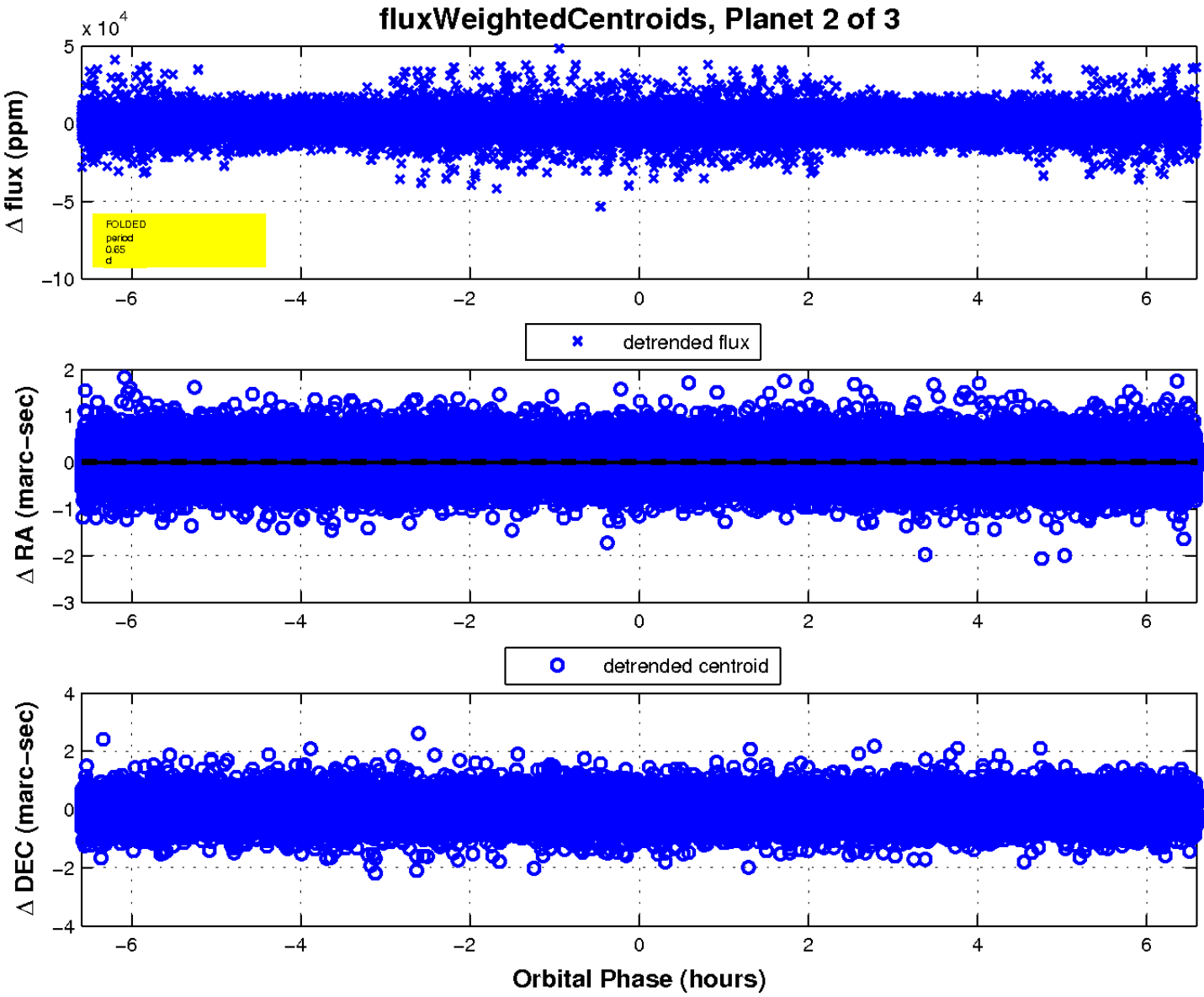
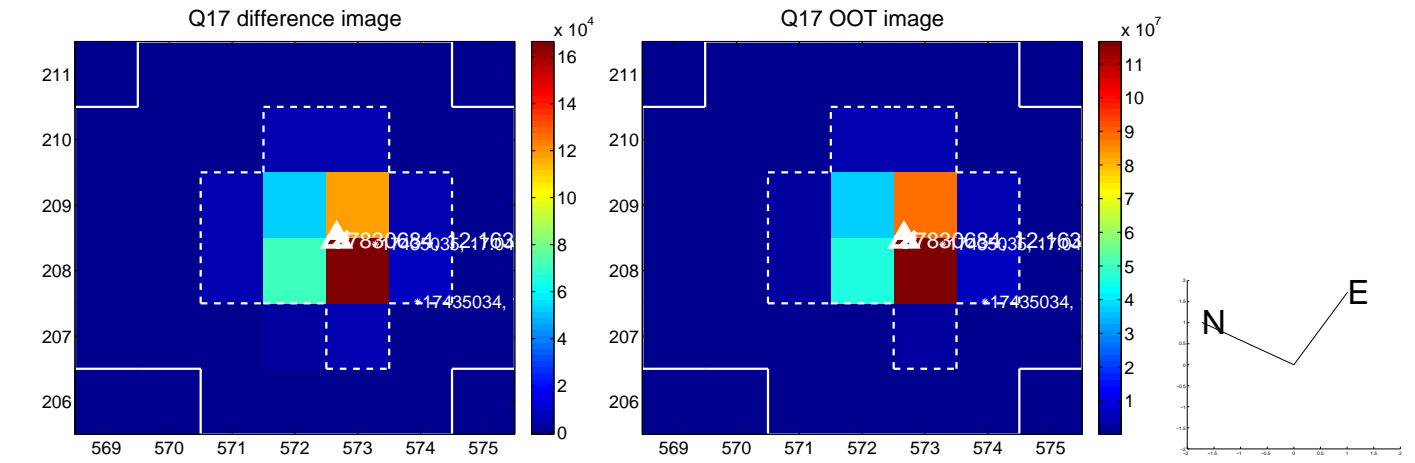
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

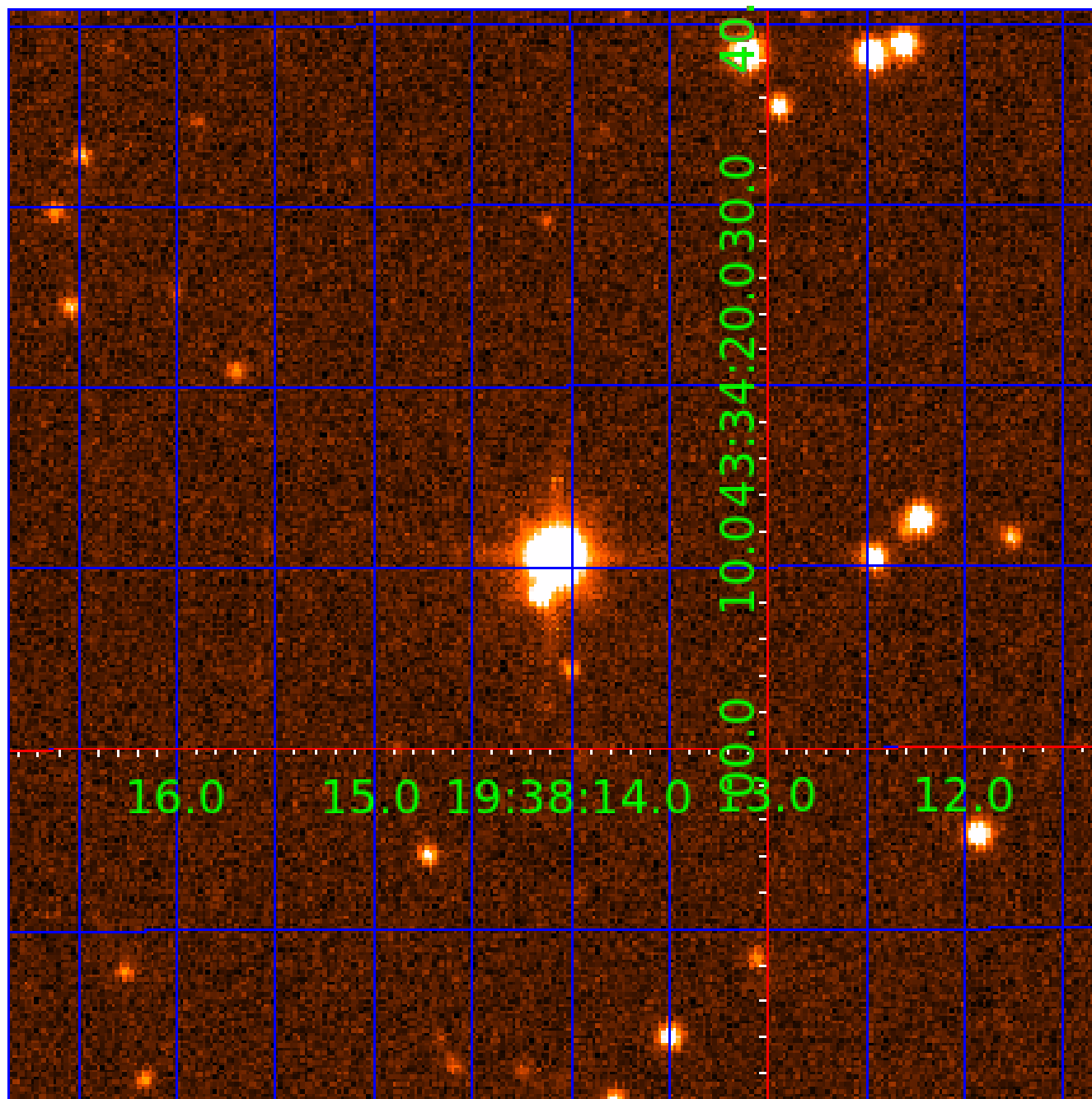


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830684

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})
007830684-01	OBS	No	0.968750	131.579524	270.7	2.472	11.4	12.8	2.19	7399	4.16	26294.80
007830684-02	OBS	No	0.645852	131.558346	344.2	2.198	10.8	13.2	2.19	7399	4.35	45148.35
007830684-03	OBS	No	0.645846	131.888277	90.8	2.000	9.7	-1.0	2.19	7399	2.12	45148.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830684-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007830684-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007830684-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

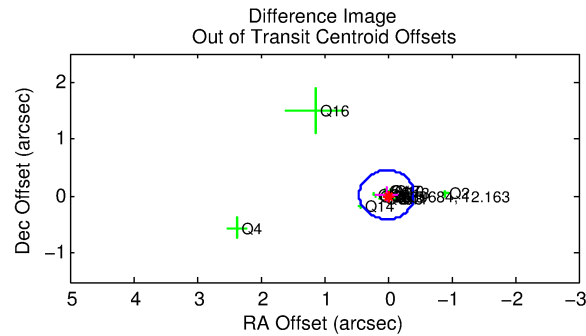
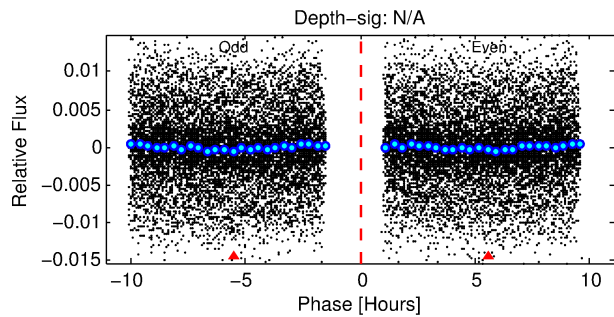
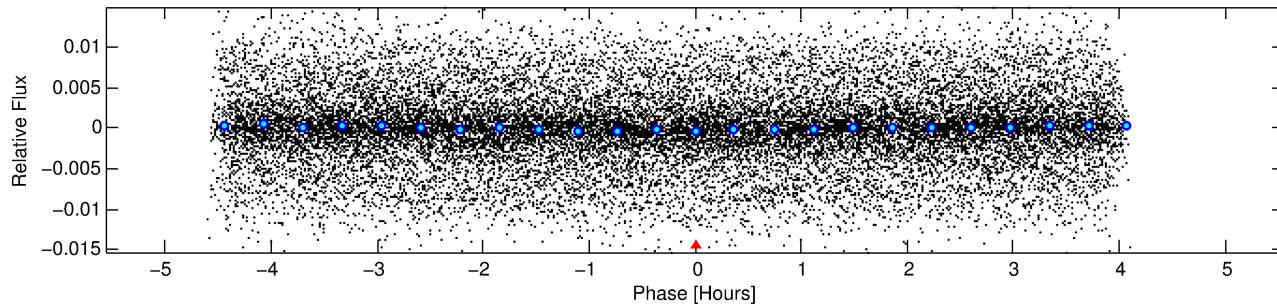
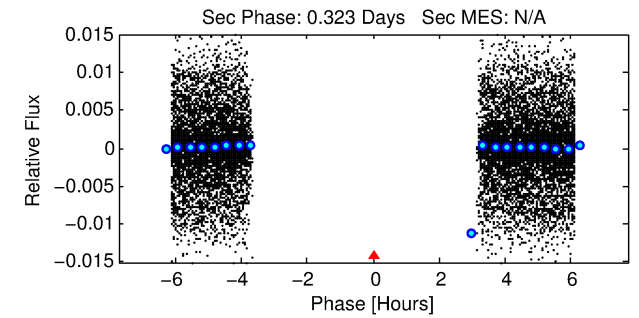
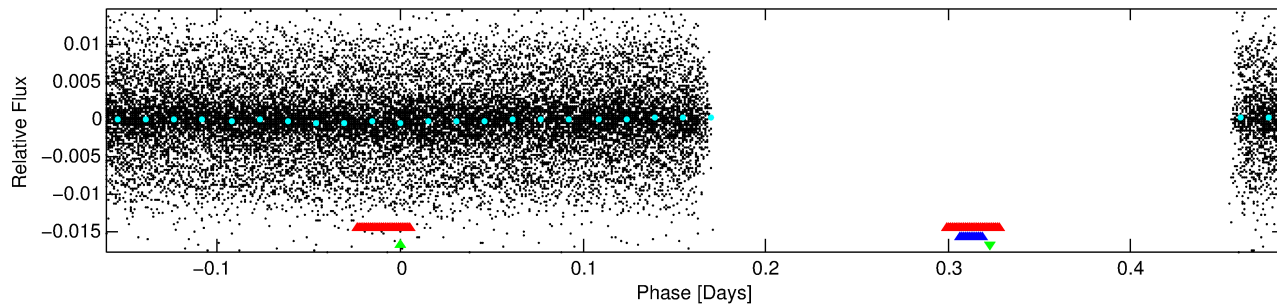
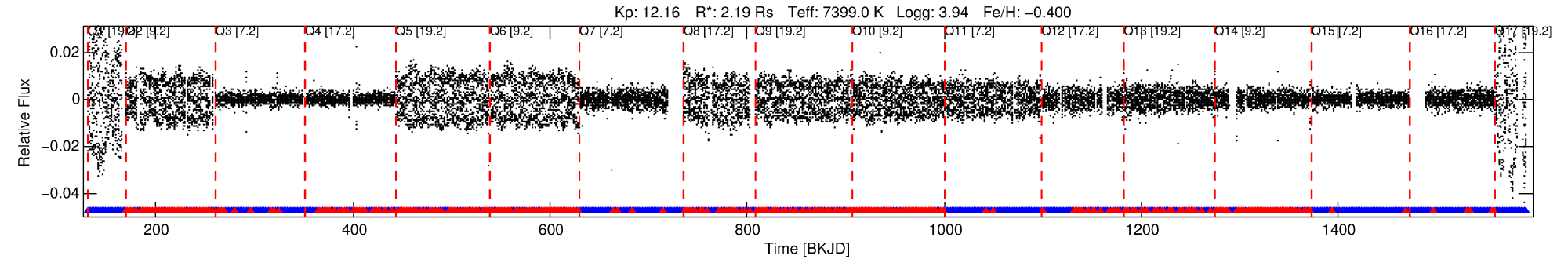
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830684-03

No Significant Match Found

DV One-Page Summary

KIC: 7830684 Candidate: 3 of 3 Period: 0.646 d



TPS TCE Results:

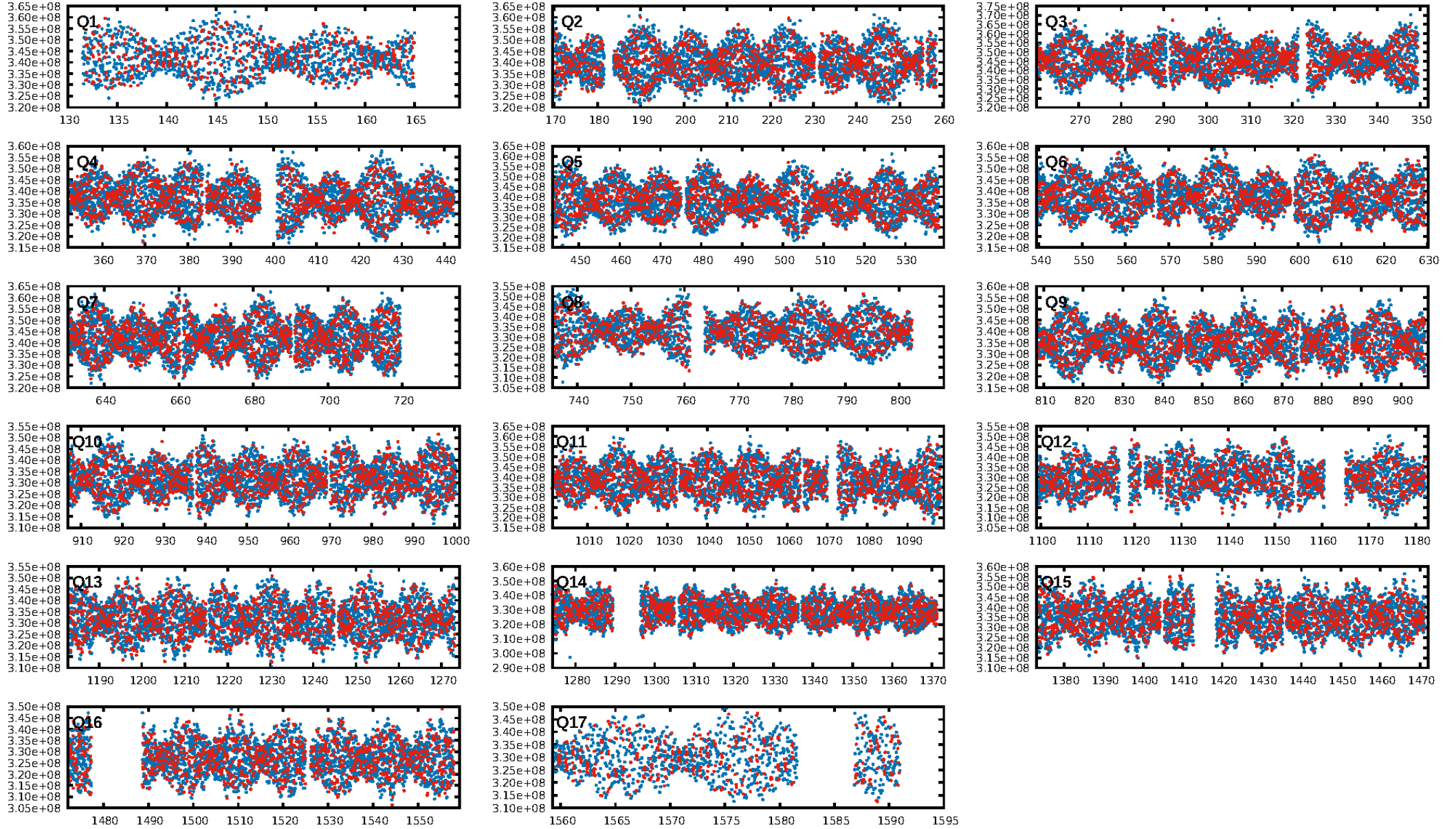
Period = 0.64585 d
Epoch = 131.8883 BKJD

DV fit results are unavailable

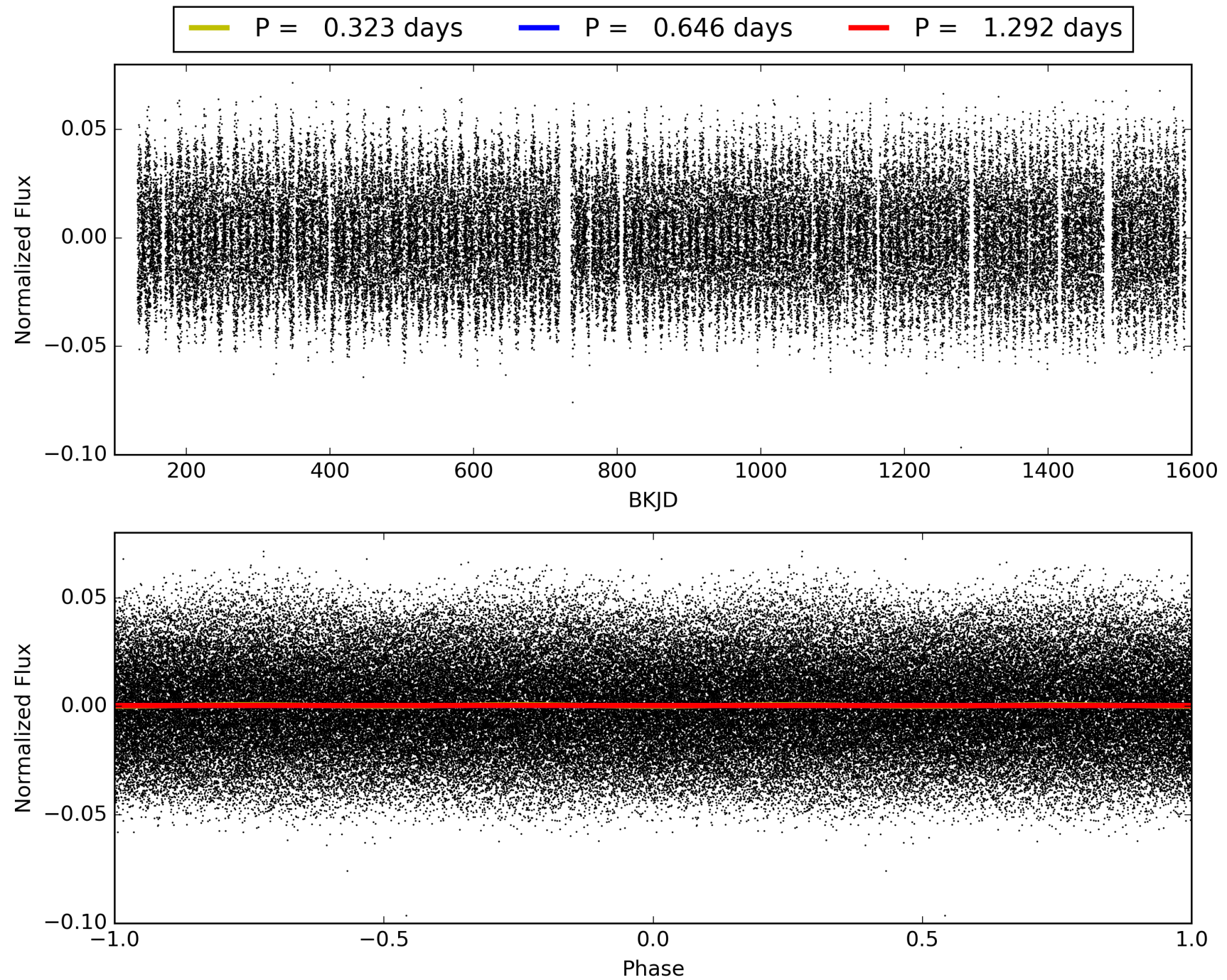
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.61 [805/1323]
GhostDiagnostic-chr: 1.046
Centroid-sig: N/A
Centroid-so: 0.154 arcsec [4.52σ]
OotOffset-rm: 0.033 arcsec [0.23σ]
KicOffset-rm: 0.203 arcsec [1.74σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007830684-03, PDC Light Curves

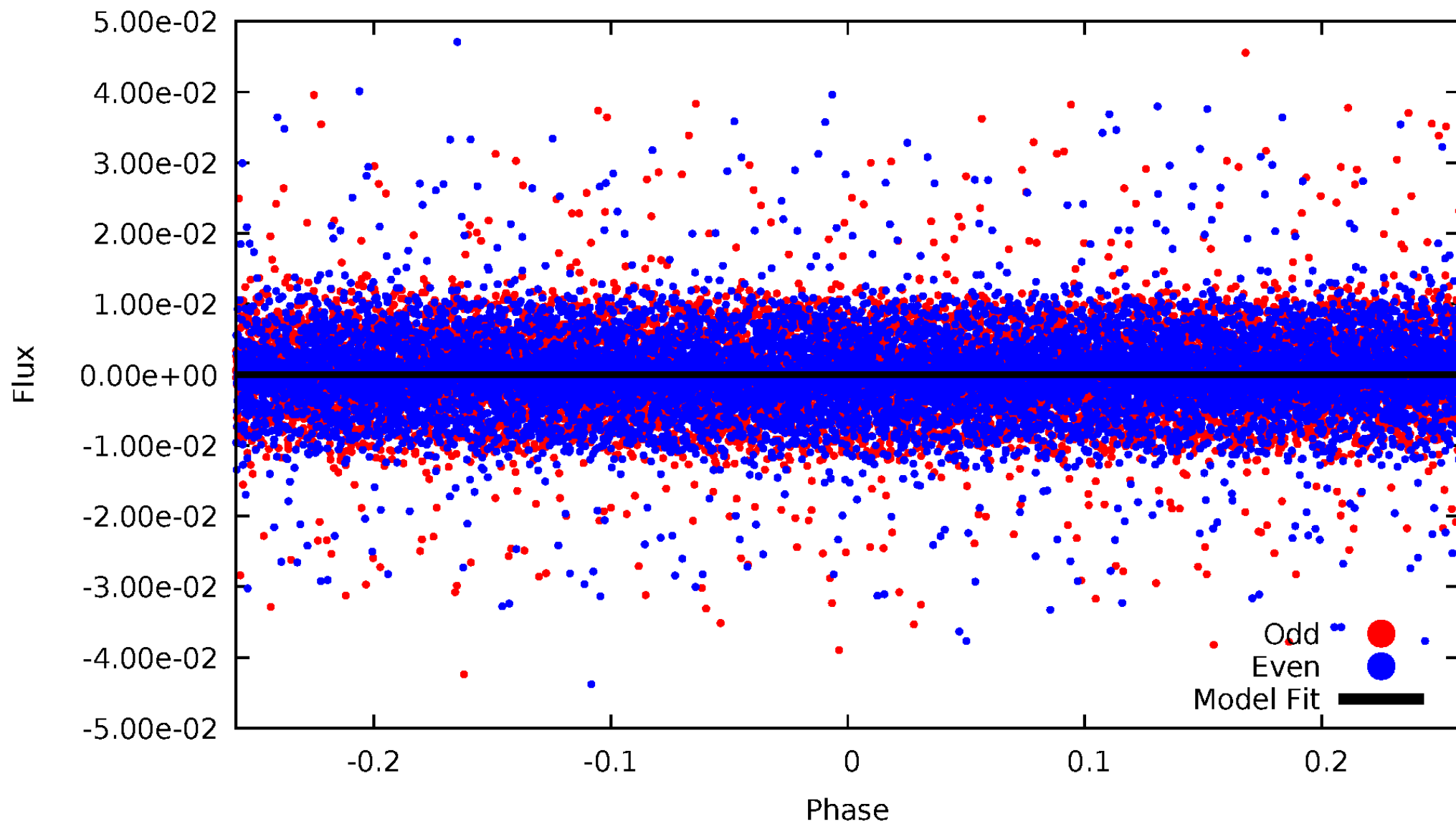


TCE 007830684-03



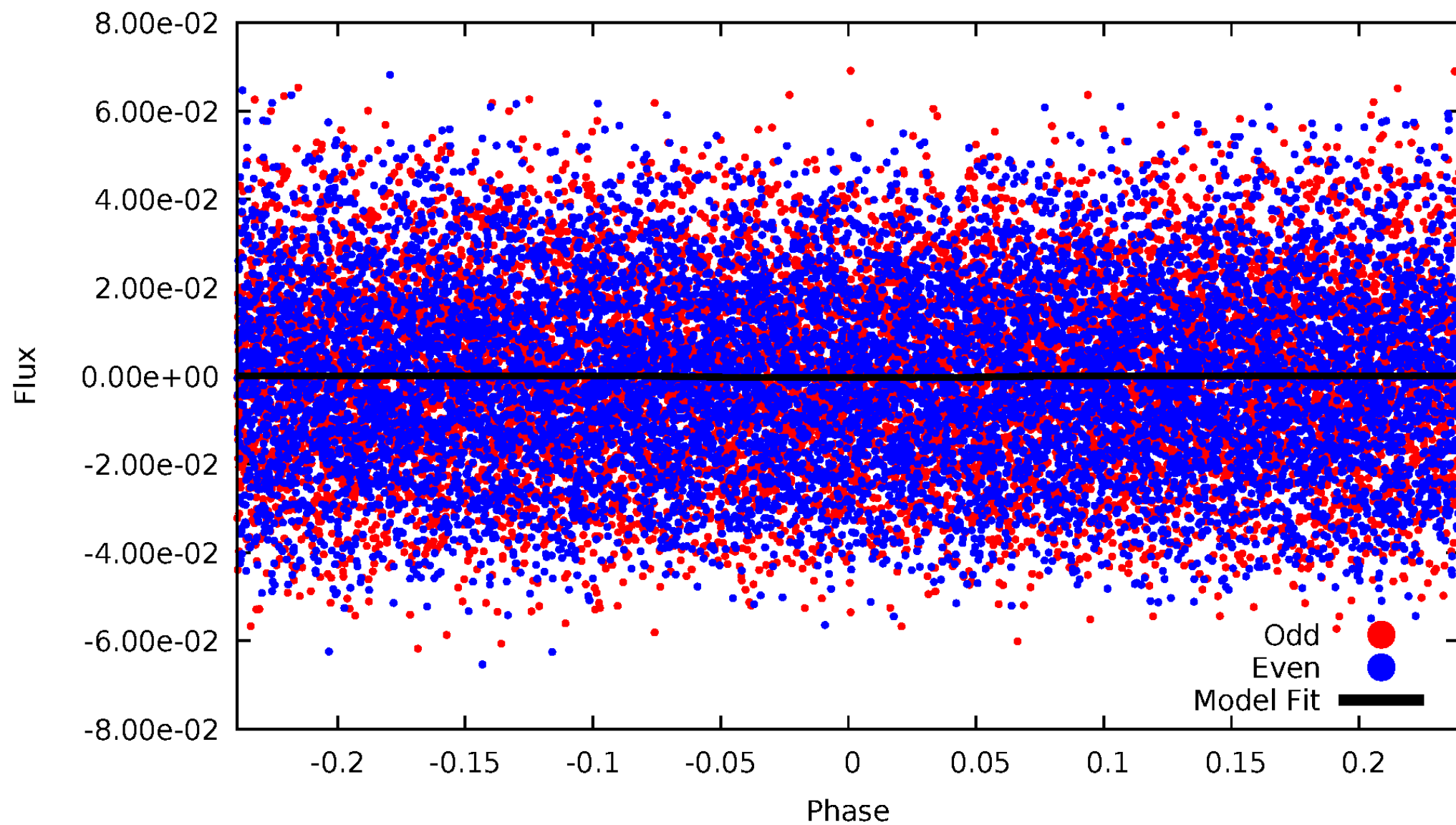
DV Odd/Even

TCE 007830684-03



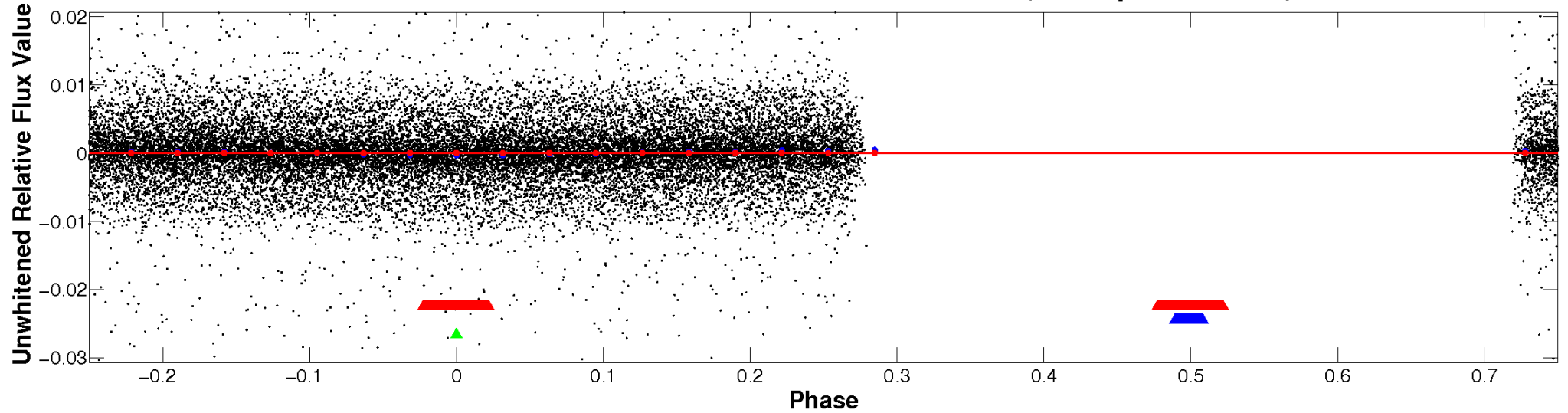
ALT Odd/Even

TCE 007830684-03

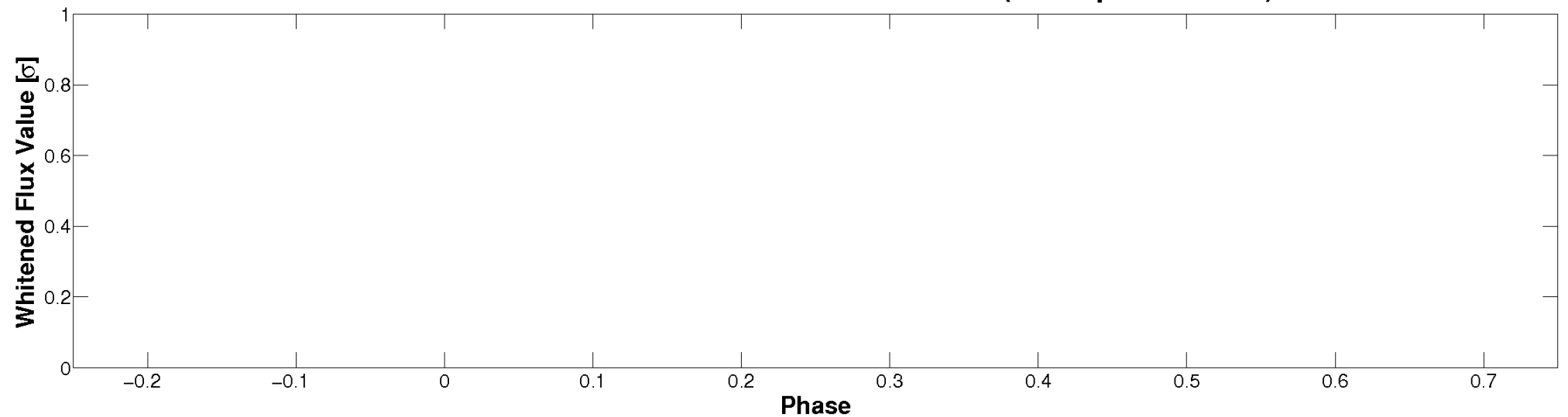


Non-Whitened Vs. Whitened Light Curve

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

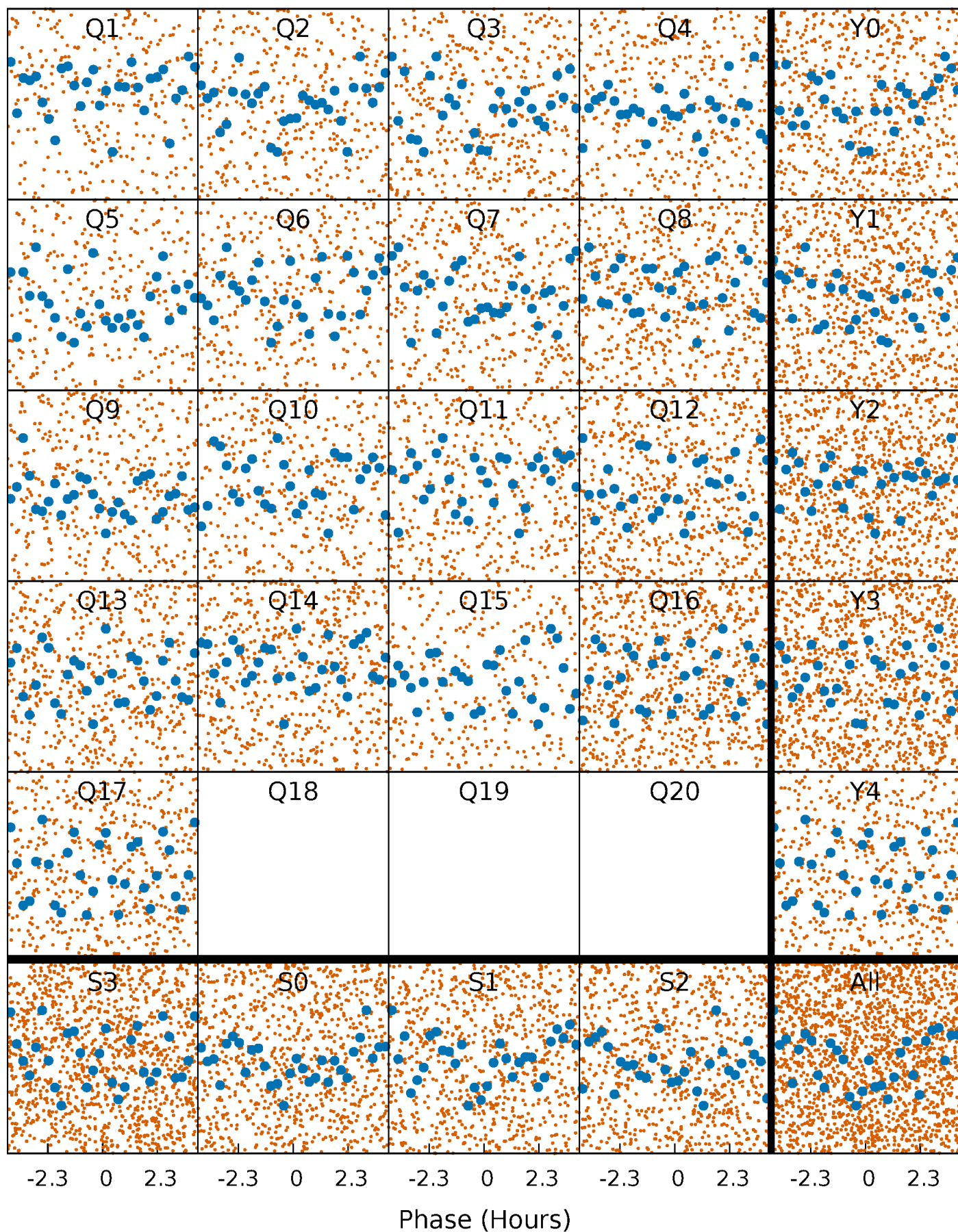


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



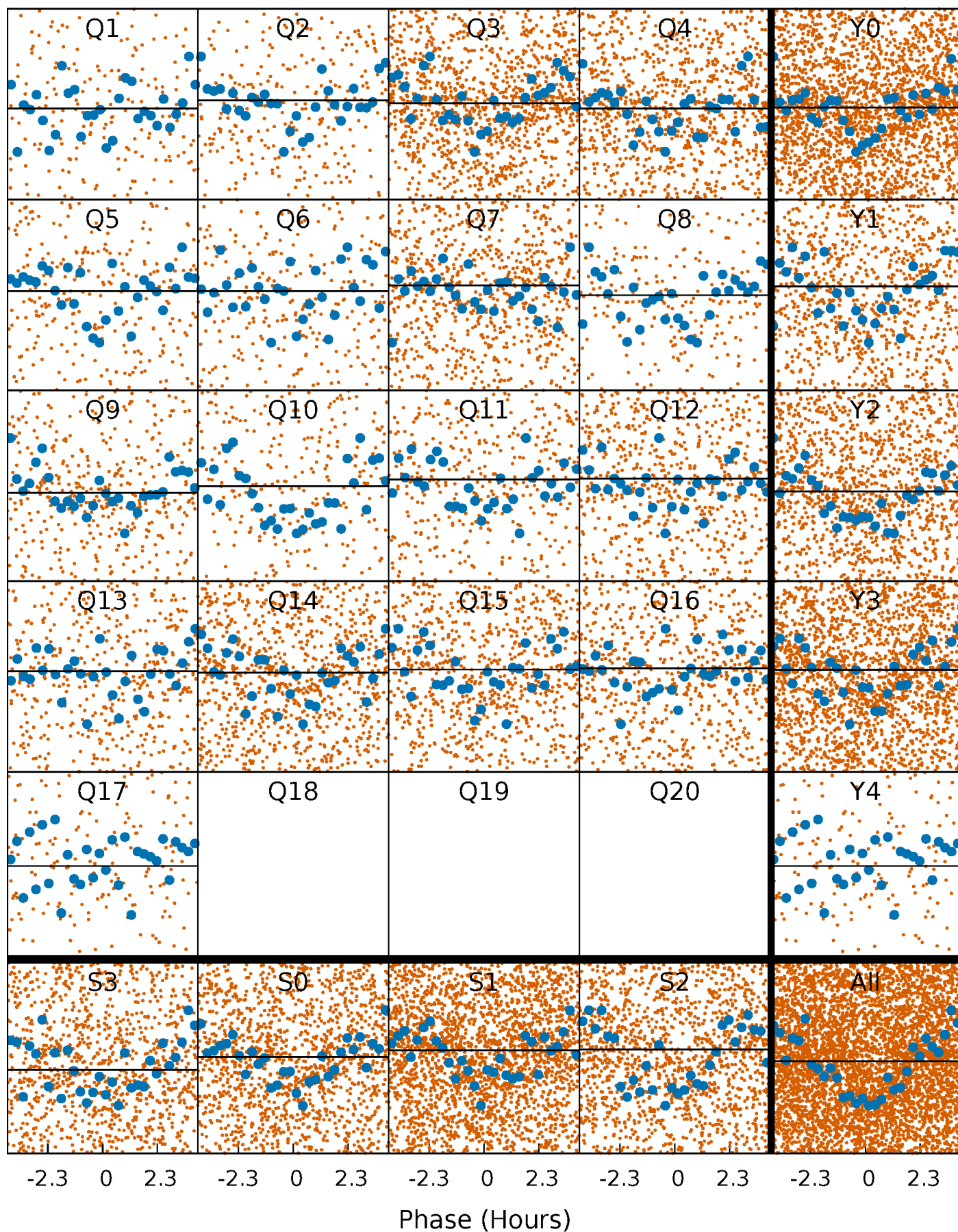
PDC Quarter-Phased Transit Curves

TCE 007830684-03 P= 0.645846 Days $T_0=131.888277$ (BKJD)



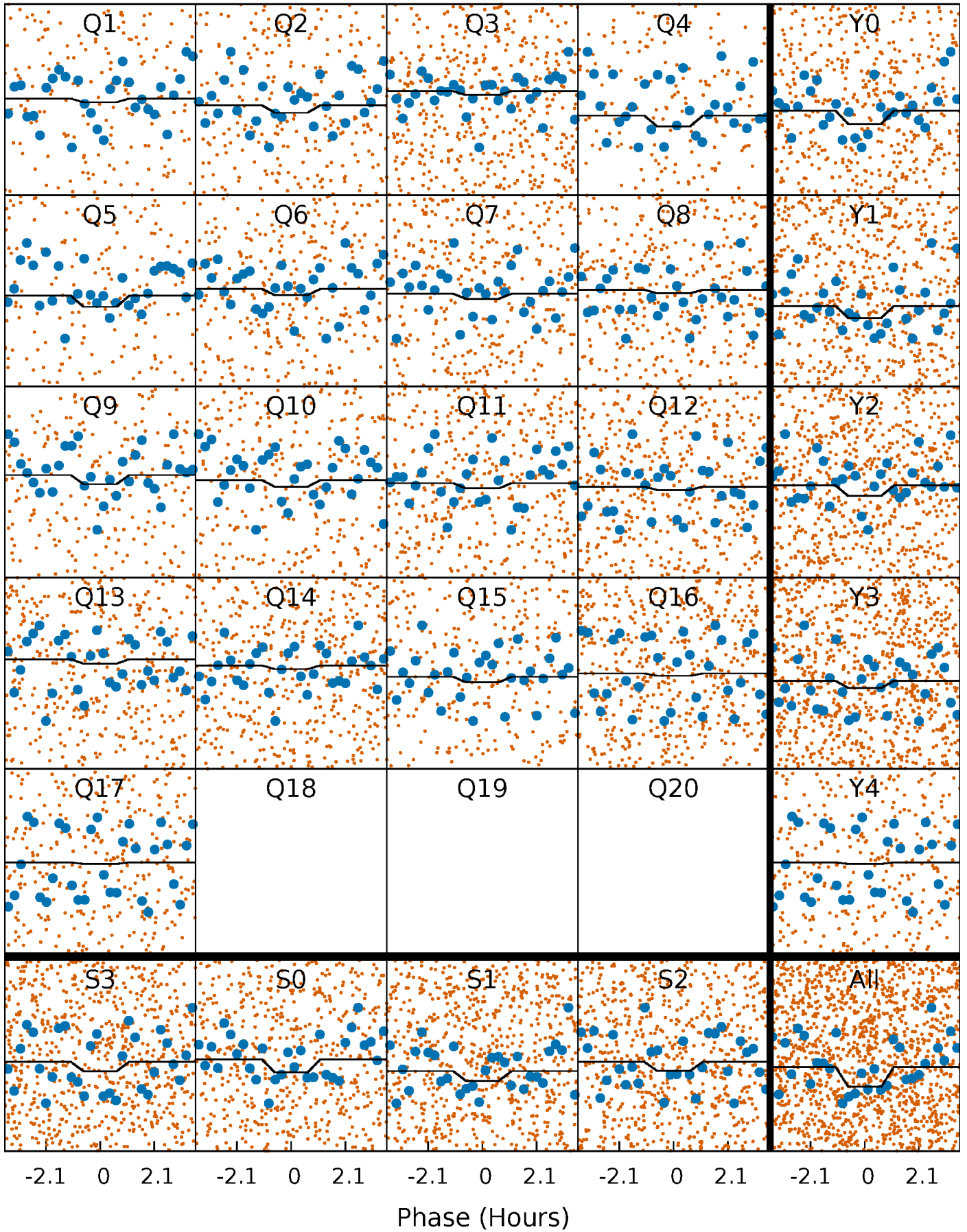
DV Quarter-Phased Transit Curves

TCE 007830684-03 P= 0.645846 Days $T_0=131.888277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

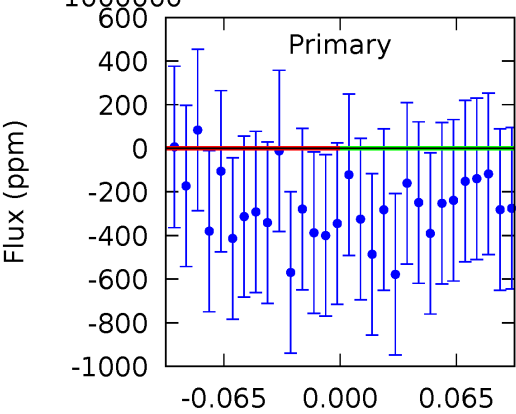
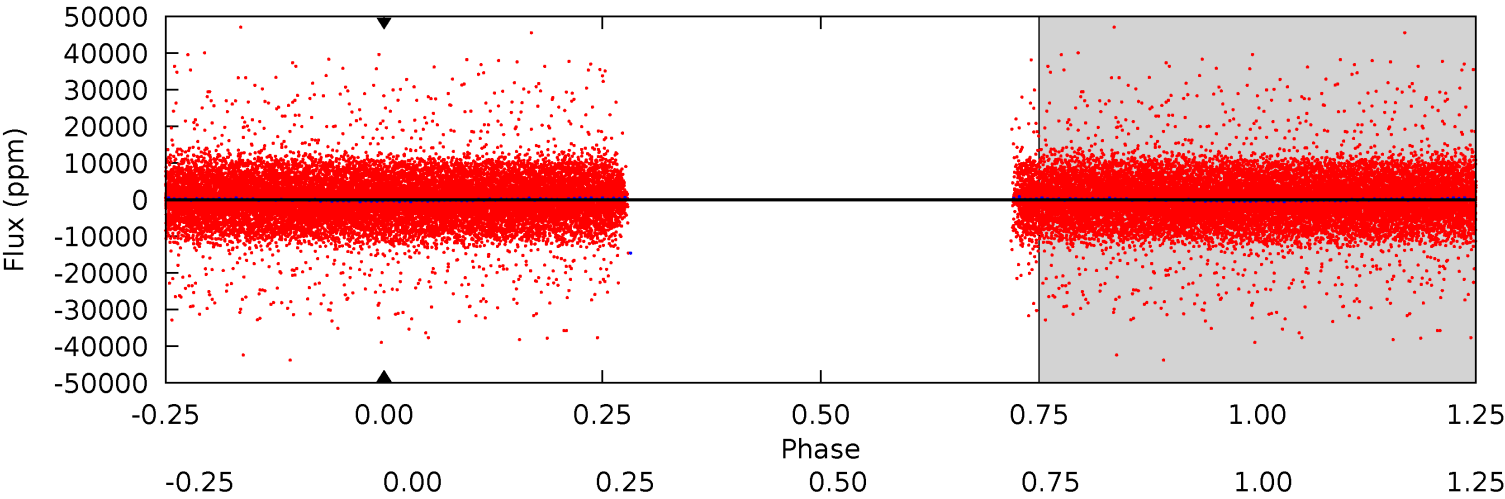
TCE 007830684-03 P= 0.645846 Days $T_0=131.897678$ (BKJD)



DV Model-Shift Uniqueness Test

007830684-03, P = 0.645846 Days, E = 131.242431 Days

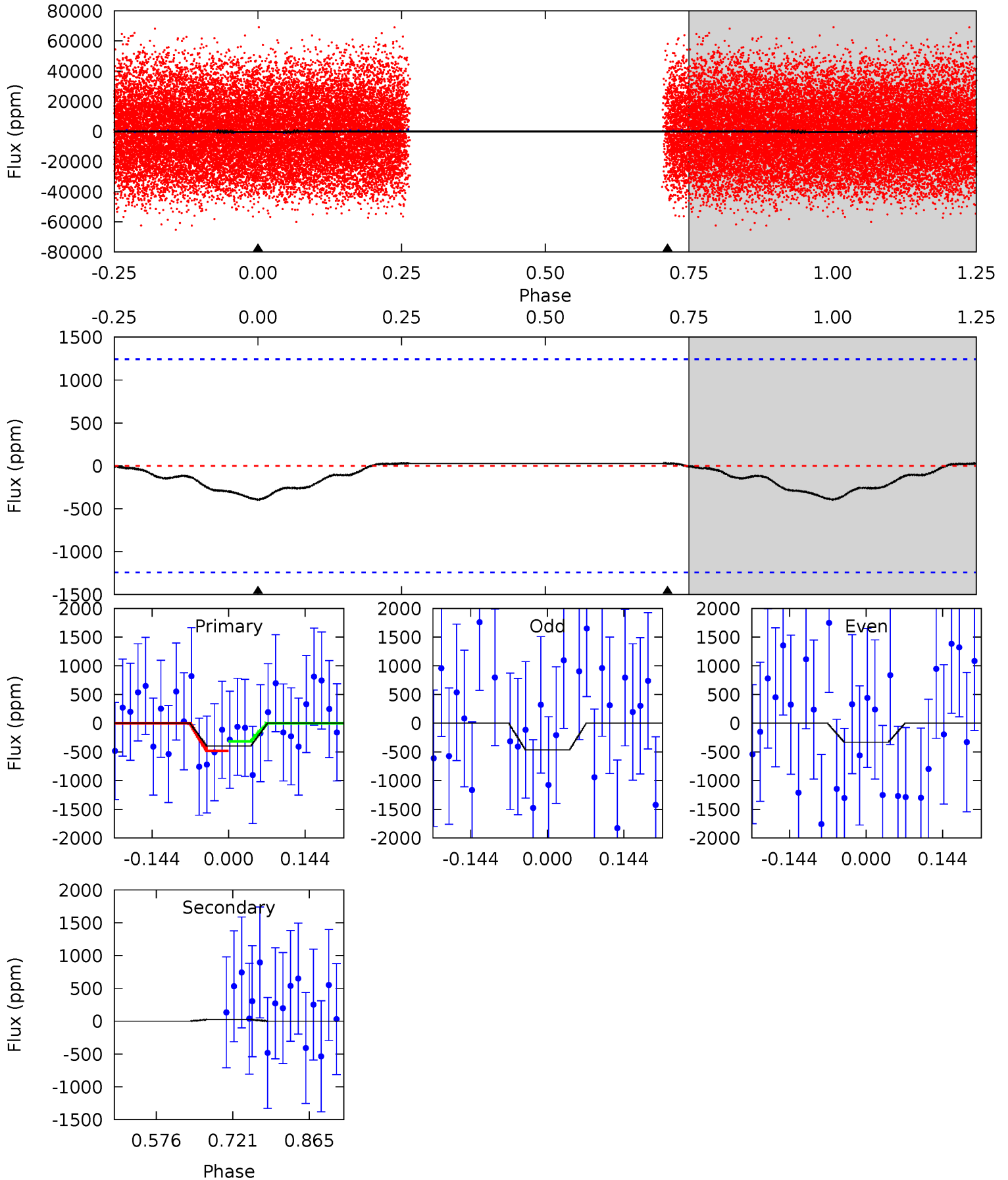
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007830684-03, P = 0.645846 Days, E = 131.251832 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.44	-0.09	0	0	4.49	1.46	0.19	1.44	1.44	-0.09	-0.09	0.24	1.00	0.08	0.30



Stellar Parameters For KIC 007830684

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7399^{+233}_{-311}	$3.944^{+0.338}_{-0.135}$	$-0.400^{+0.250}_{-0.300}$	$2.187^{+0.530}_{-0.795}$	$1.532^{+0.209}_{-0.339}$	$0.206^{+0.467}_{-0.081}$
	+3%/-4%	+9%/-3%	+62%/-75%	+24%/-36%	+14%/-22%	+226%/-39%
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 007830684-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$16.47^{+17.98}_{-11.65}$	5072^{+419}_{-525}	4783^{+42900}_{-35011}	$0.809^{+127.842}_{-72.747}$
Alt.	25 ± 277	$16.84^{+19.07}_{-12.27}$	5081^{+398}_{-503}	-4365^{+1074}_{-752}	$-0.008^{+0.230}_{-0.334}$

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 $A_{obs} \gg 1.0$

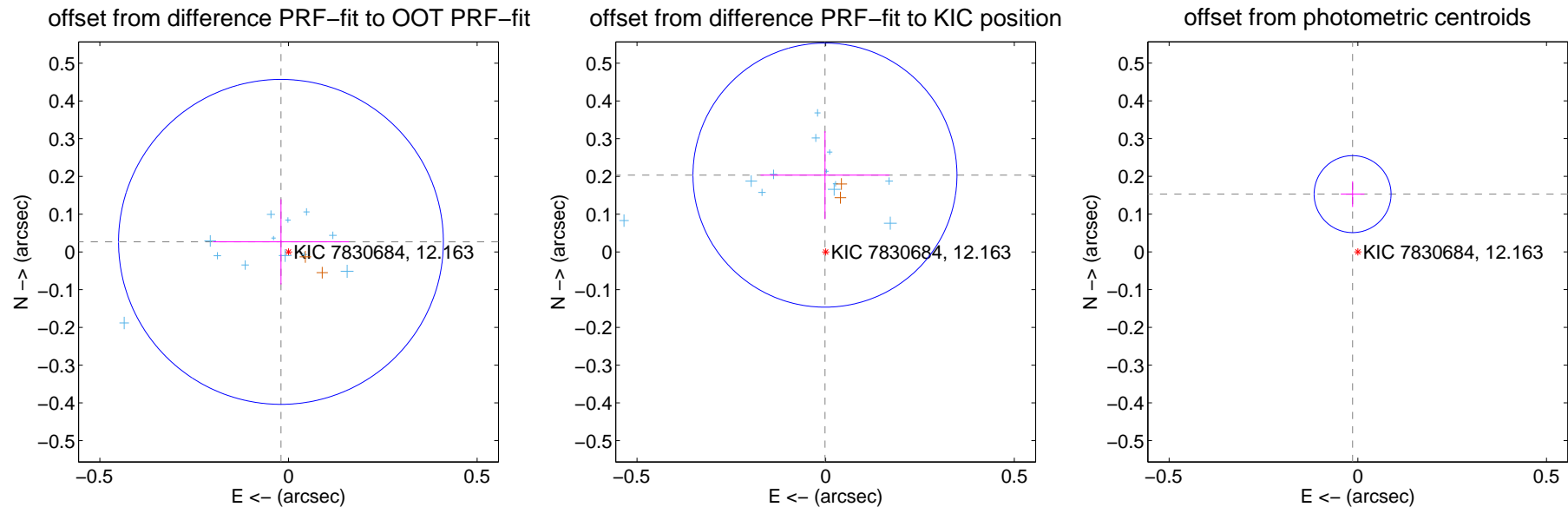
DV Centroid Data

Supplemental centroid analysis for 007830684-03. Kepler magnitude: 12.16. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

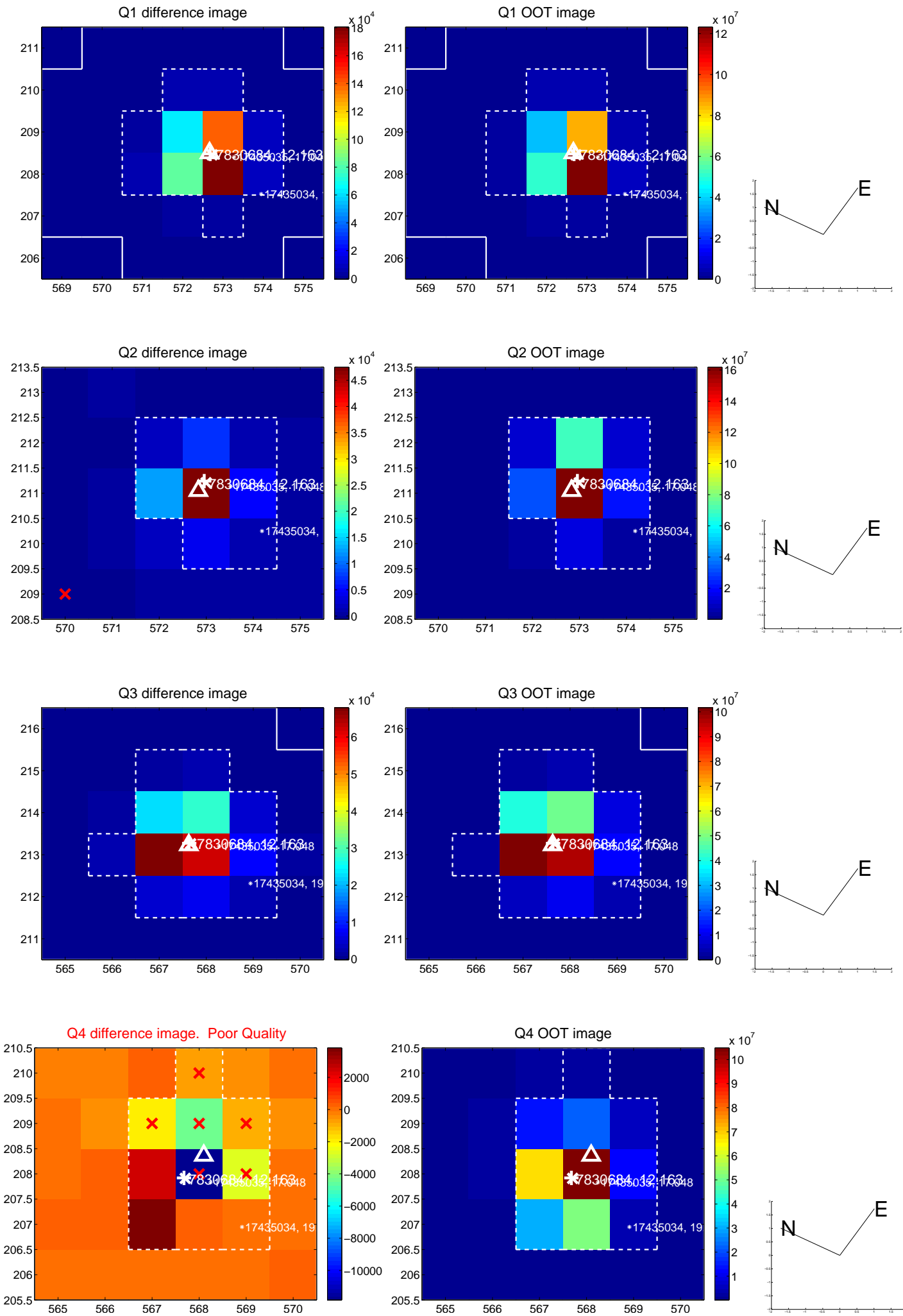
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.143	0.23	0.020 ± 0.180	0.027 ± 0.113
PRF-fit source offset from KIC position	0.203 ± 0.117	1.74	0.002 ± 0.171	0.203 ± 0.117
photometric centroid source offset	0.15 ± 0.03	4.52	0.01 ± 0.03	0.15 ± 0.03

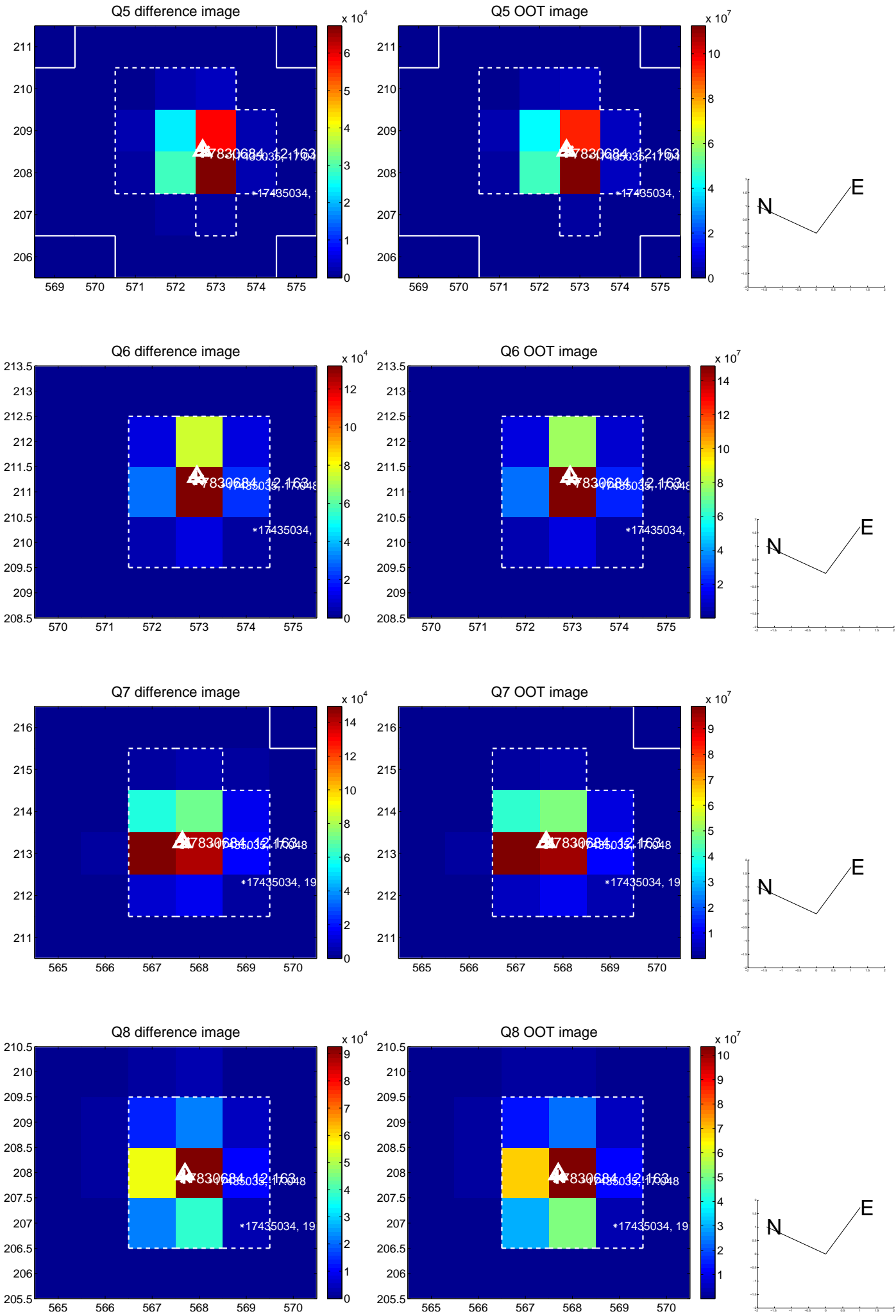


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

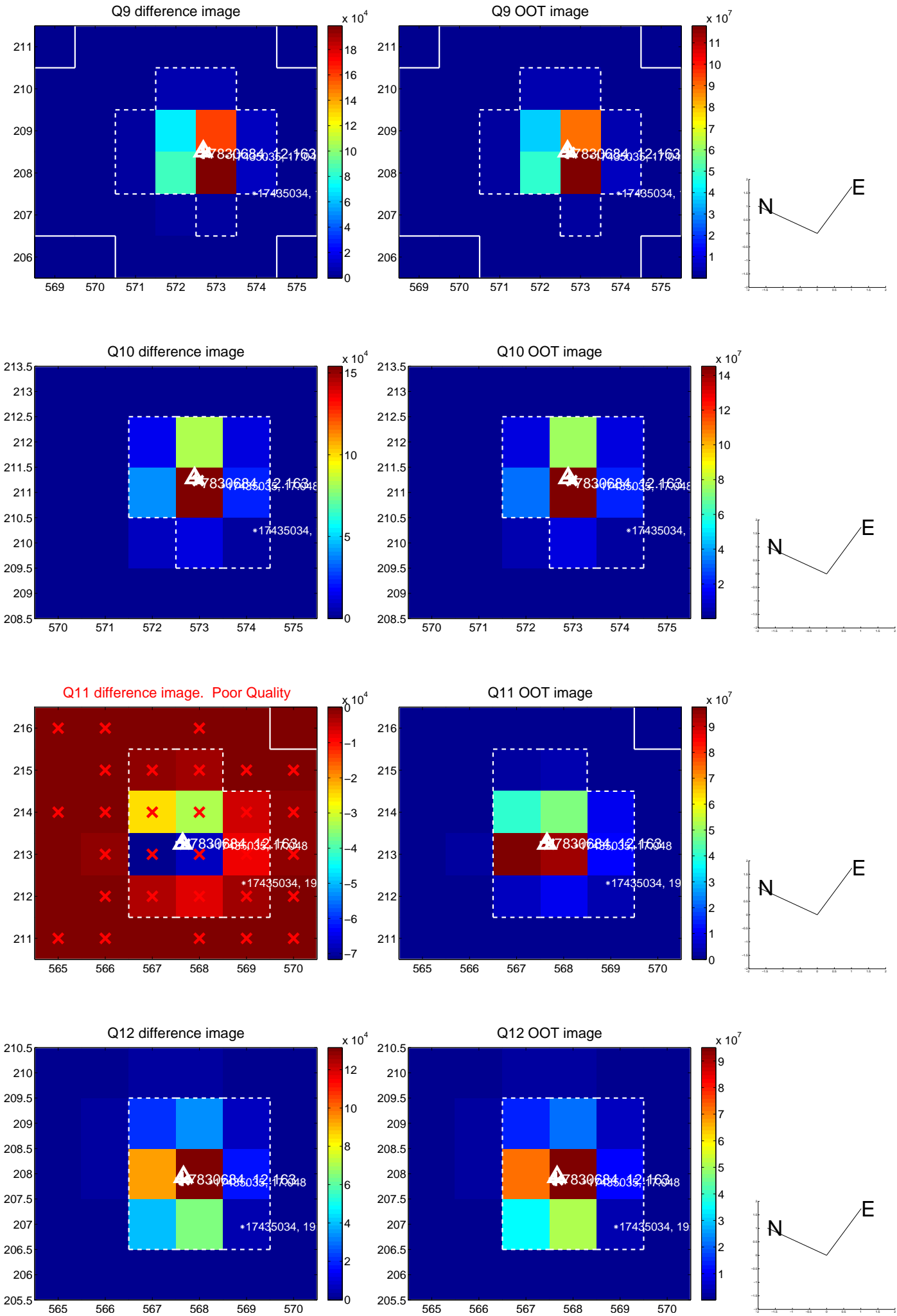
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



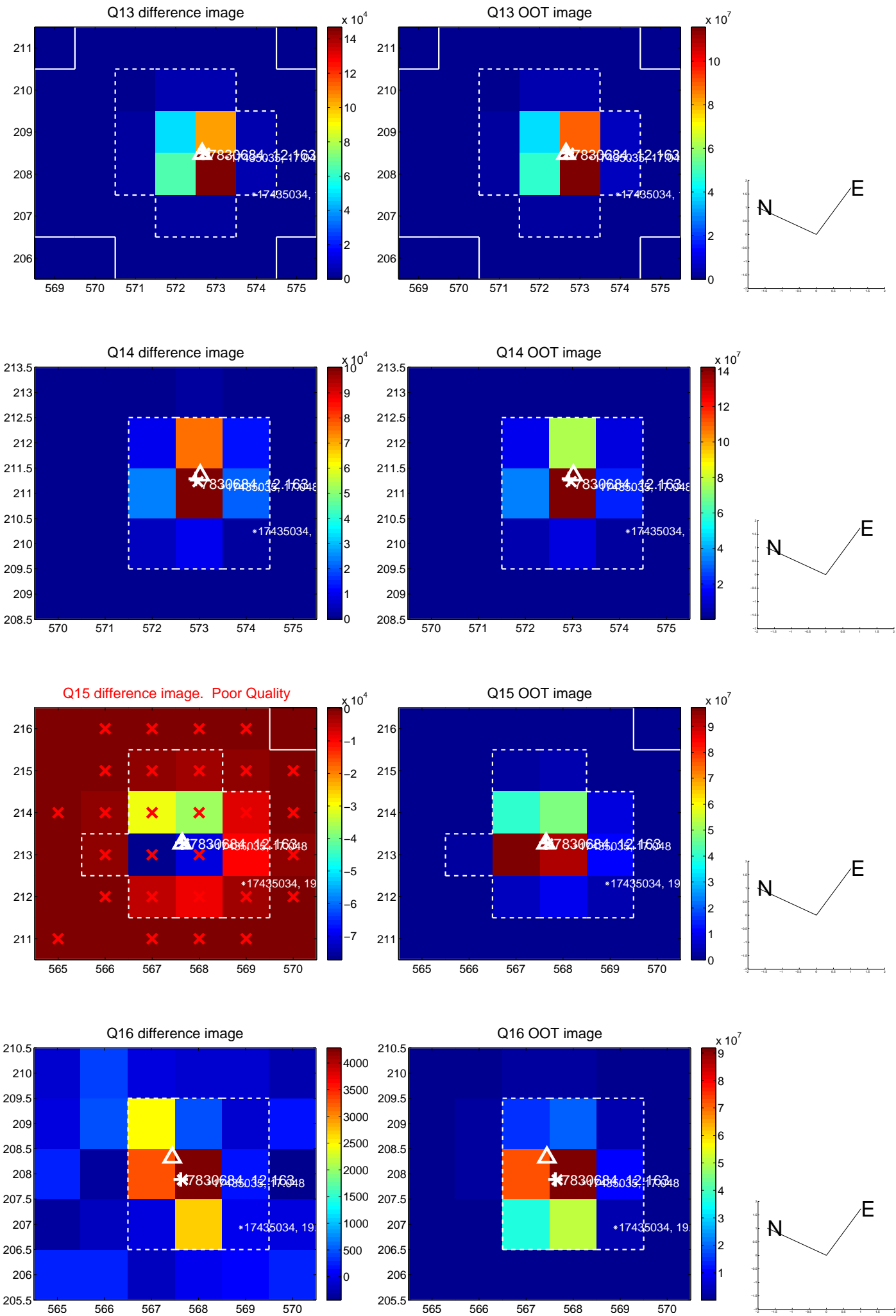
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



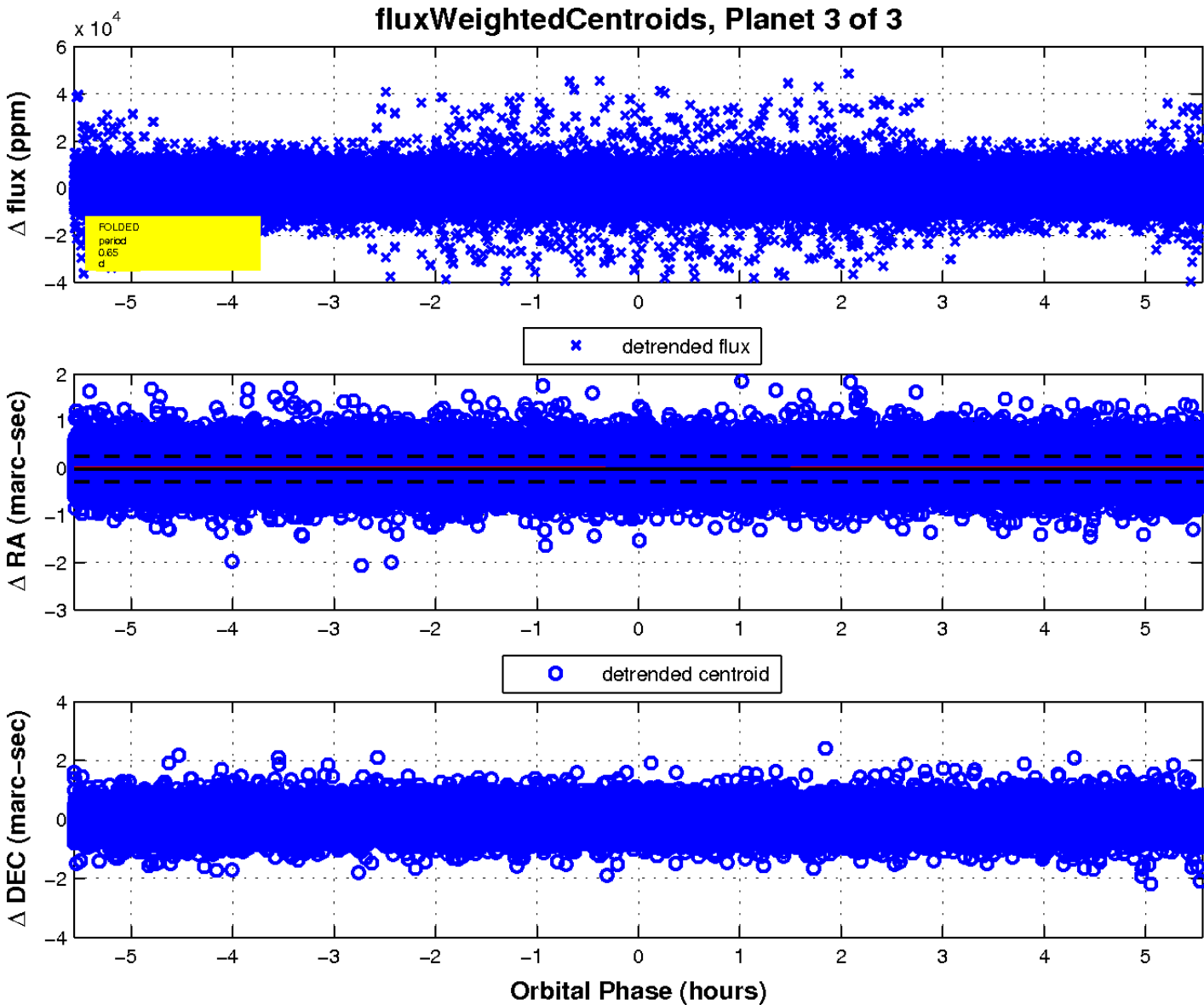
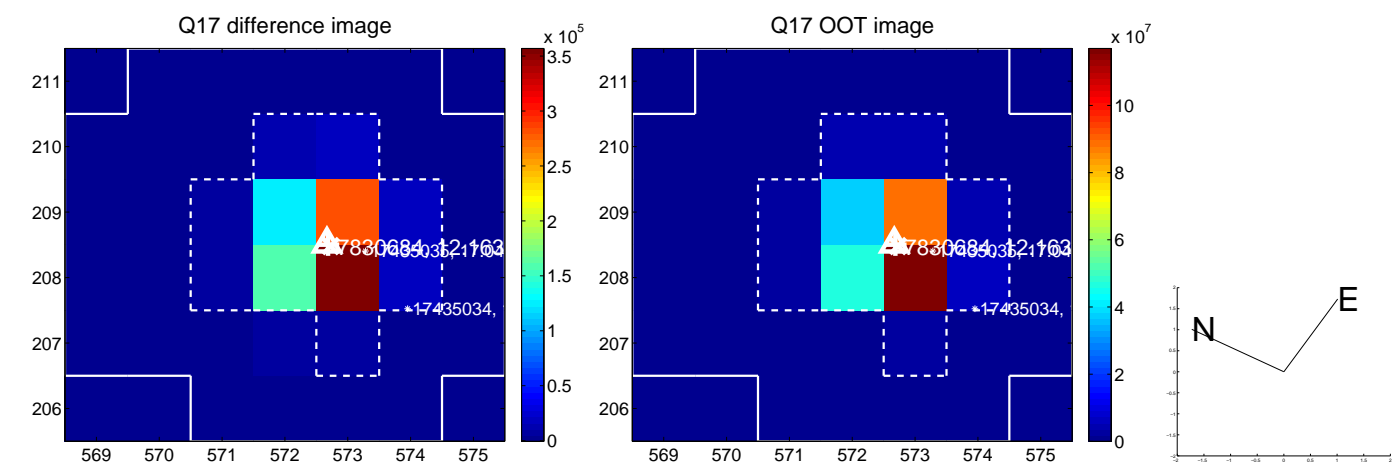
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

