

KIC 009550886

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})
009550886-01	OBS	No	0.507136	131.578551	74.5	0.538	13.8	18.1	2.71	7721	2.51	97409.66
009550886-02	OBS	No	0.507137	131.744613	136.0	0.508	13.1	27.9	2.71	7721	3.34	97409.59
009550886-03	OBS	No	0.507144	131.906748	72.4	1.017	12.5	17.1	2.71	7721	2.46	97407.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009550886-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
009550886-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
009550886-03	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

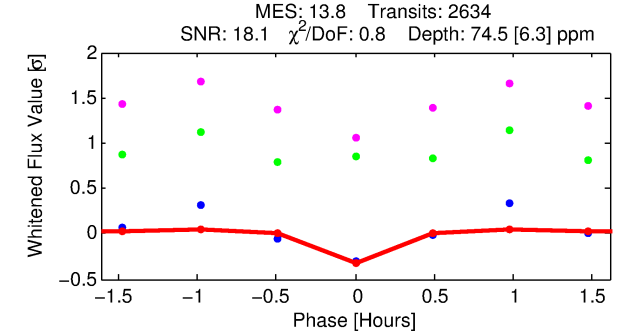
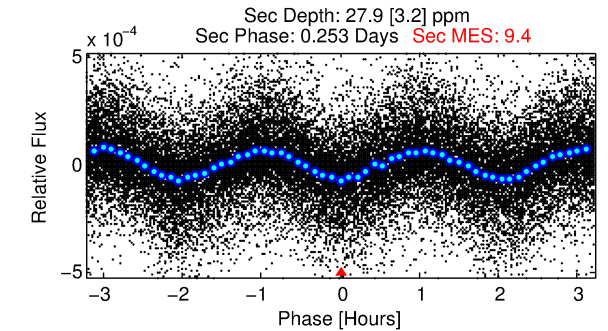
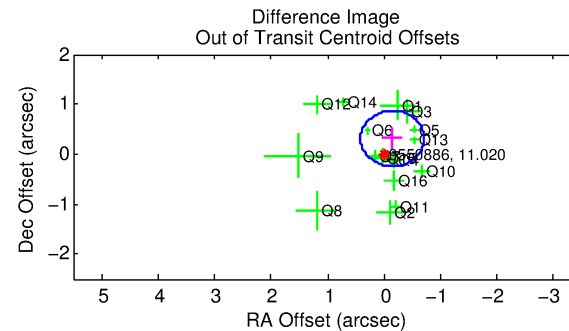
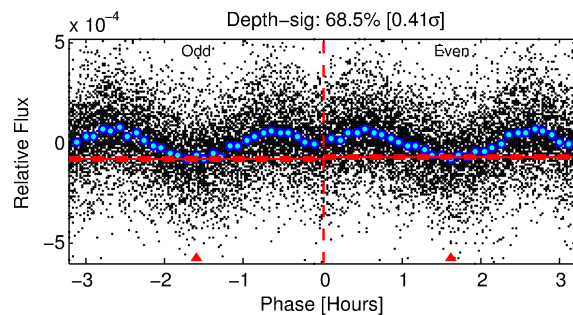
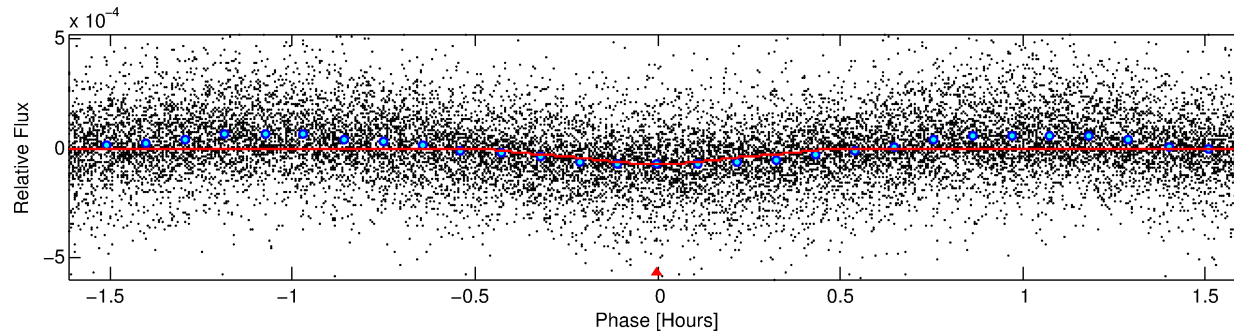
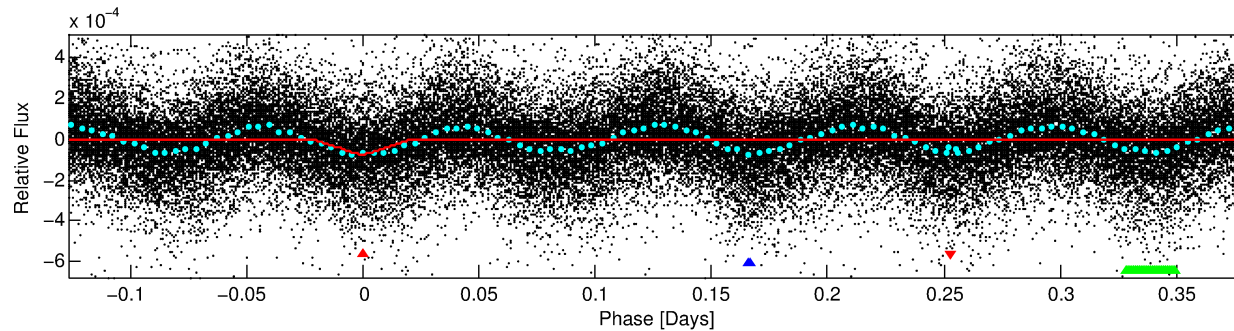
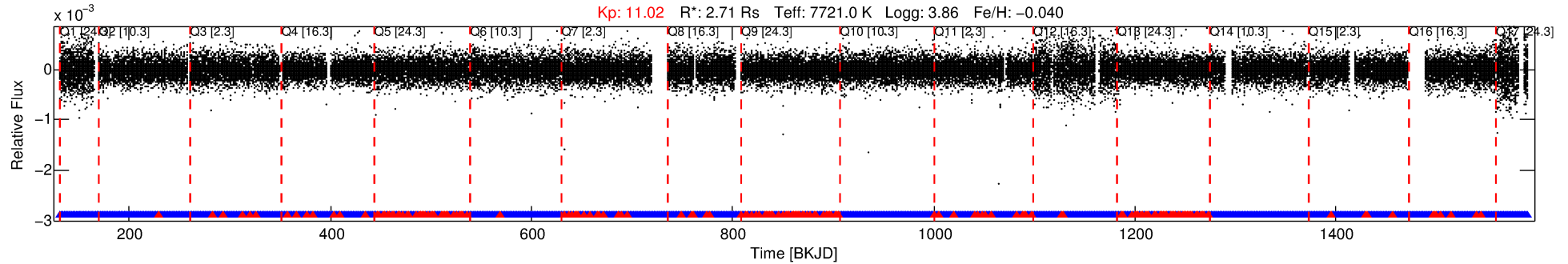
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009550886-01

No Significant Match Found

DV One-Page Summary

KIC: 9550886 Candidate: 1 of 3 Period: 0.507 d



DV Fit Results:

Period = 0.50714 [0.00001] d
Epoch = 131.5786 [0.0006] BKJD
Rp/R* = 0.0085 [0.0017]
a/R* = 6.35 [7.21]
b = 0.50 [1.75]
Seff = 97409.66 [55538.78]
Teq = 4505 [642] K
Rp = 2.51 [1.08] Re
a = 0.0155 [0.0054] AU
Ag = 0.59 [0.40] [-1.03 σ]
Teffp = 6096 [673] K [1.71 σ]

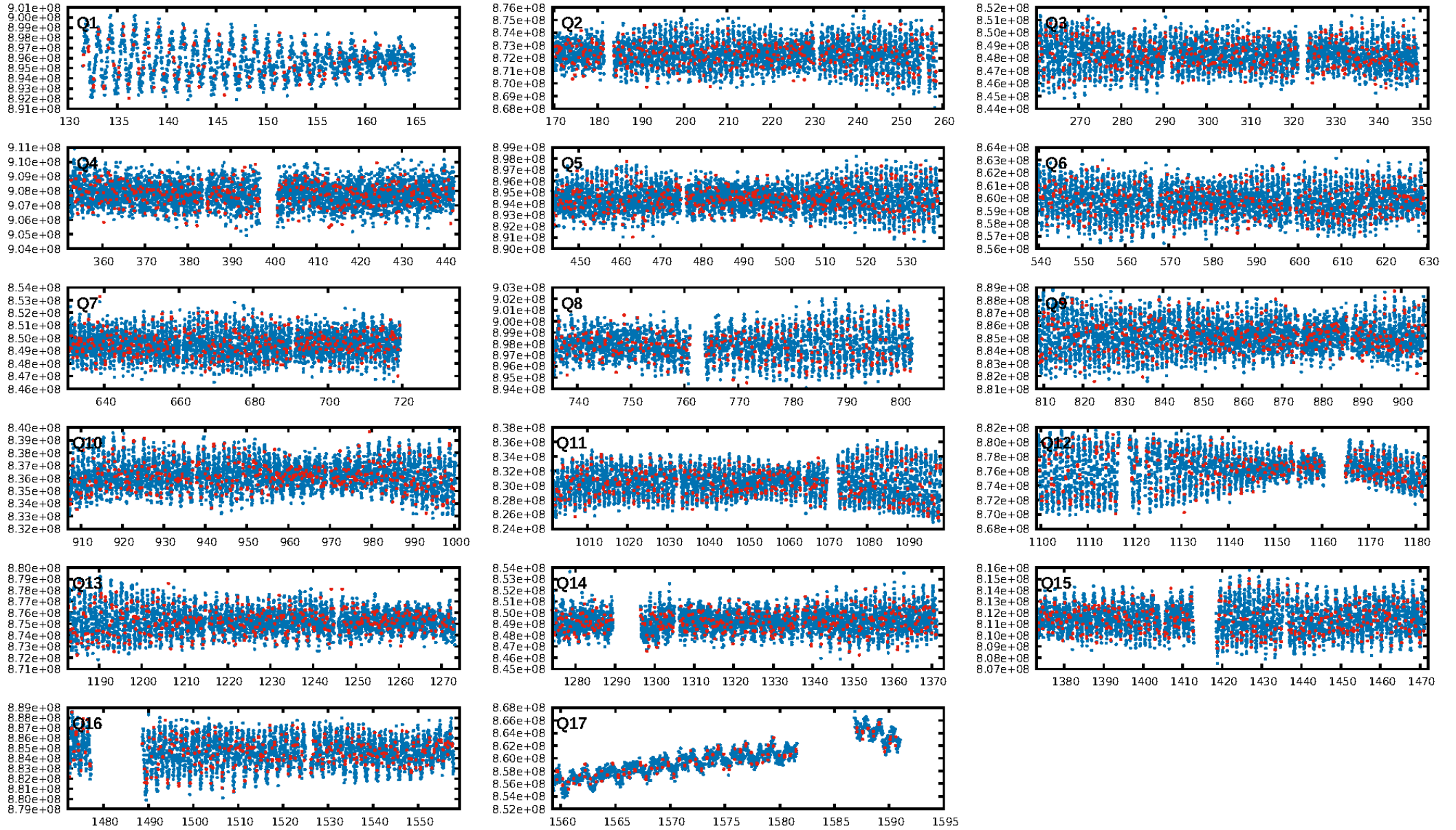
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [2310/2516]
GhostDiagnostic-chr: 11.12
Centroid-sig: N/A
Centroid-so: 0.847 arcsec [3.71 σ]
OotOffset-rm: 0.344 arcsec [1.84 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.571 arcsec [3.21 σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 0.00 [0/17]

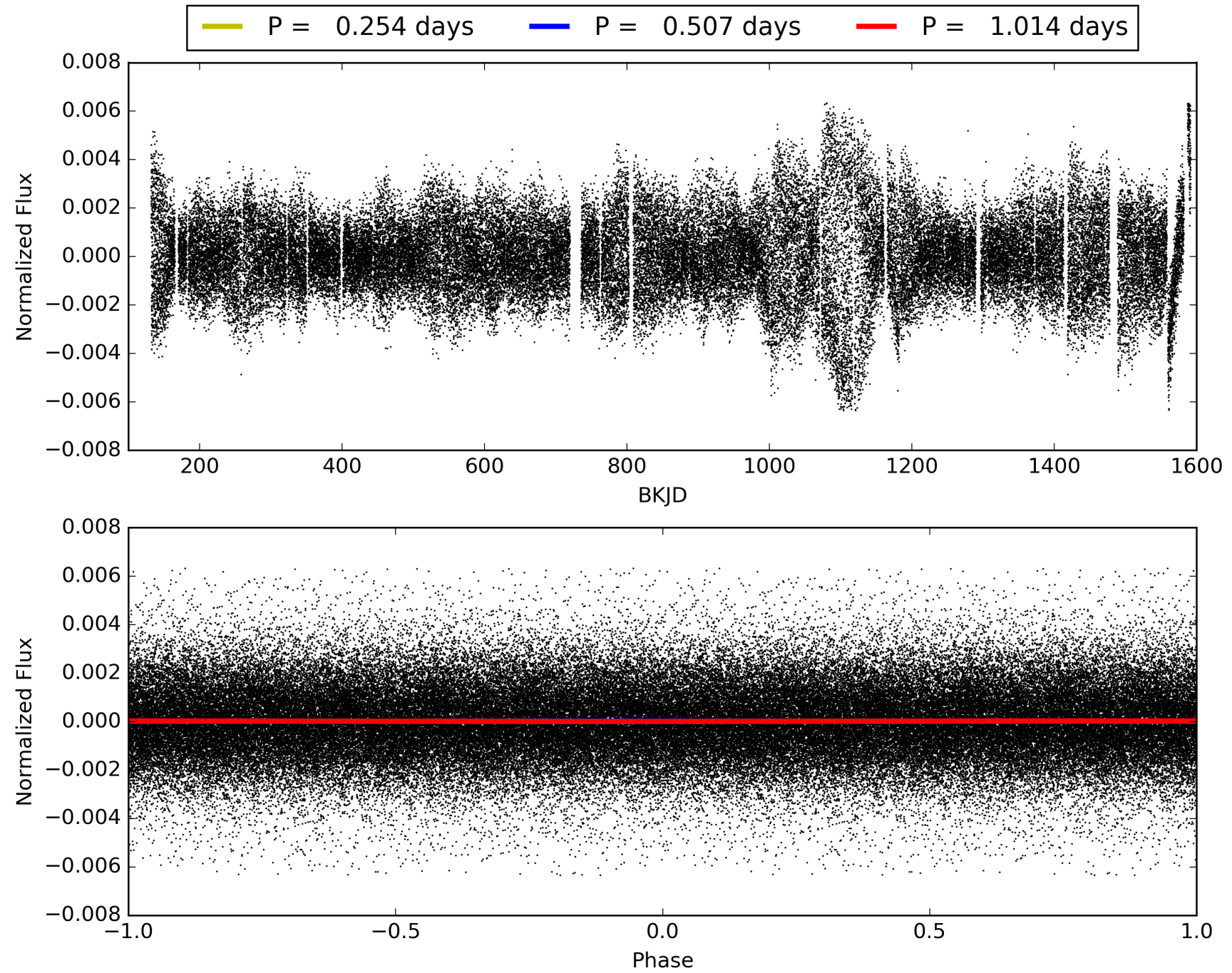
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:10:44 Z

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

TCE 009550886-01, PDC Light Curves

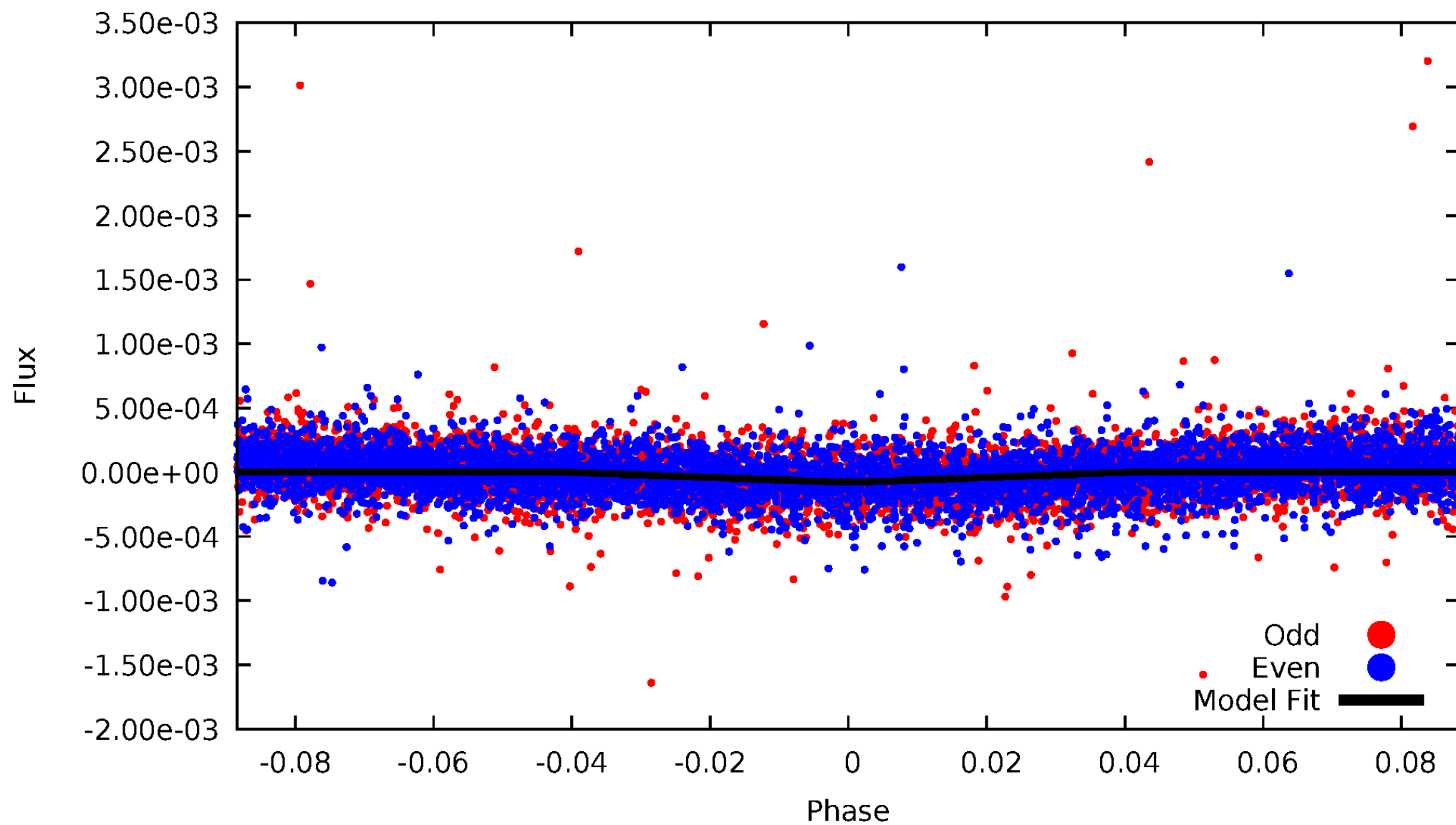


TCE 009550886-01



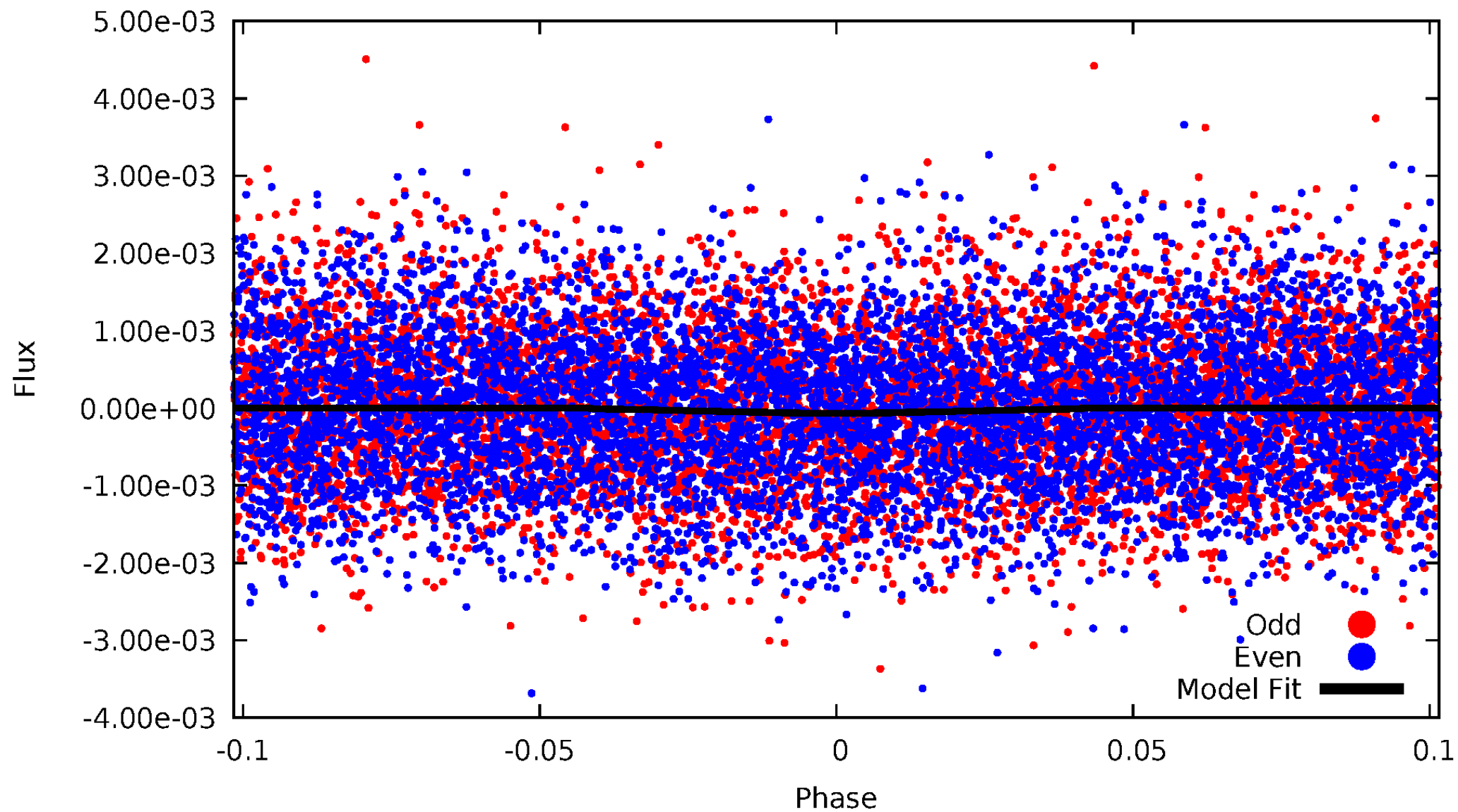
DV Odd/Even

TCE 009550886-01



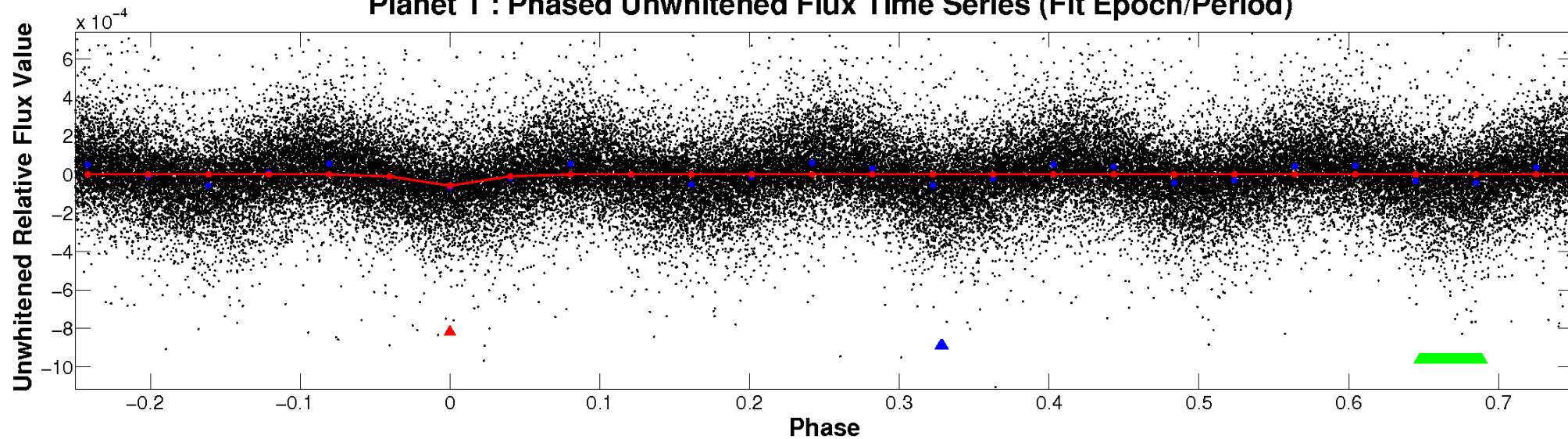
ALT Odd/Even

TCE 009550886-01

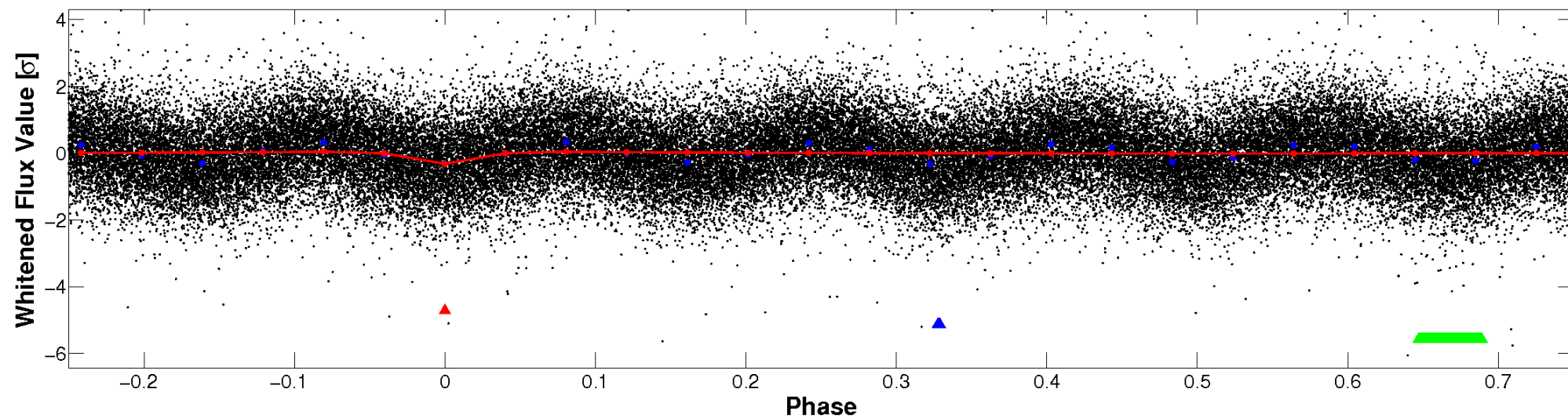


Non-Whitened Vs. Whitened Light Curve

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

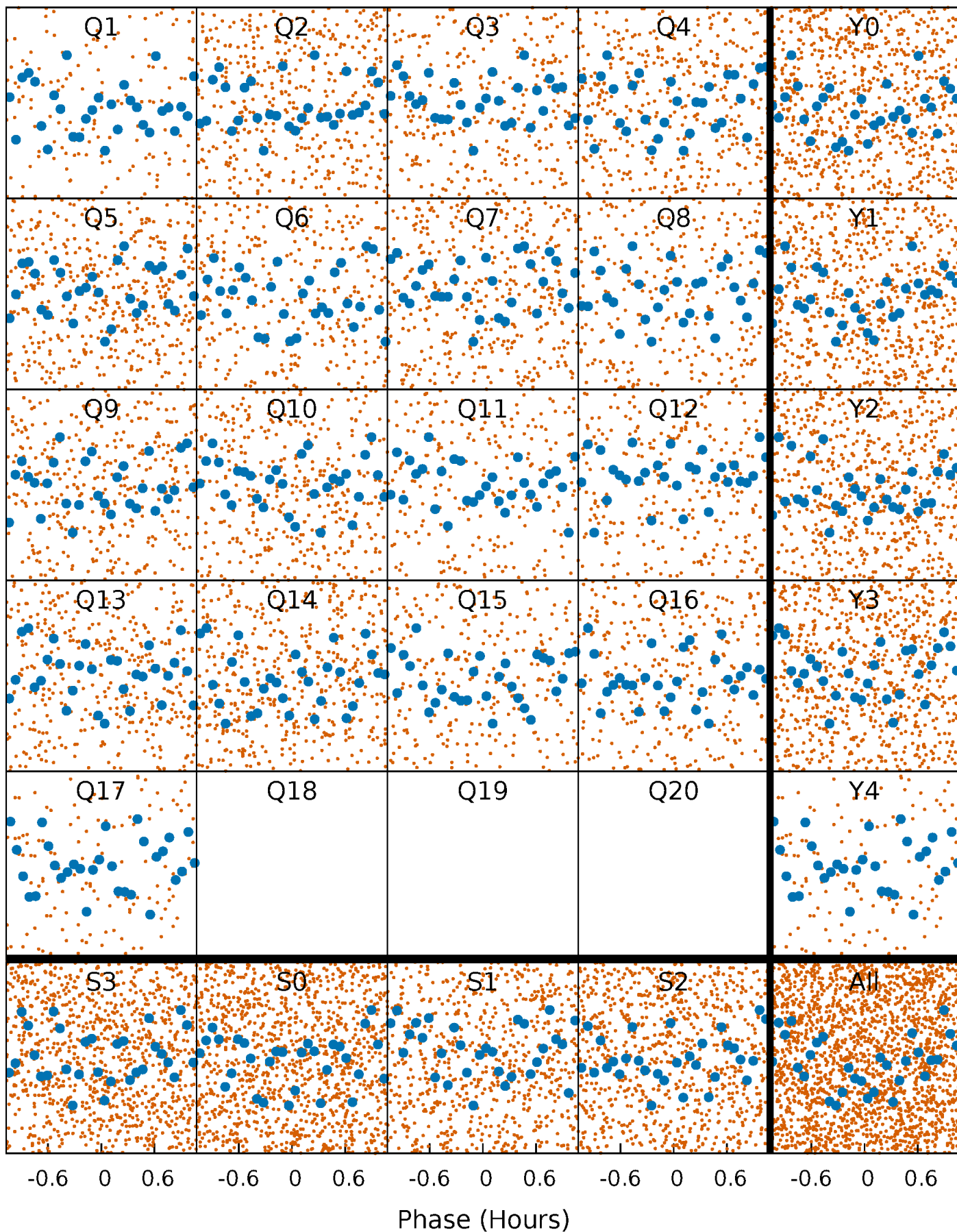


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



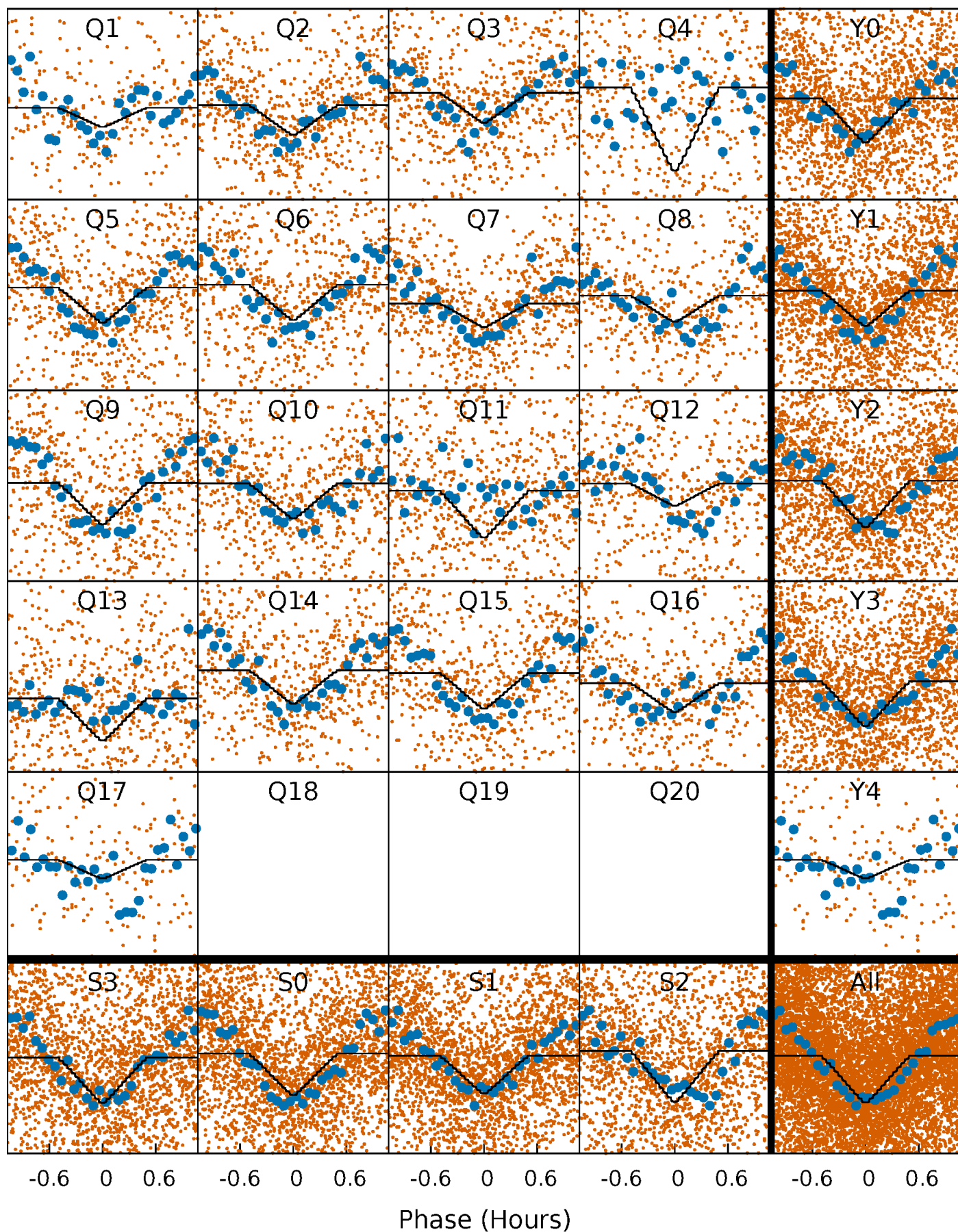
PDC Quarter-Phased Transit Curves

TCE 009550886-01 P= 0.507136 Days $T_0=131.578551$ (BKJD)



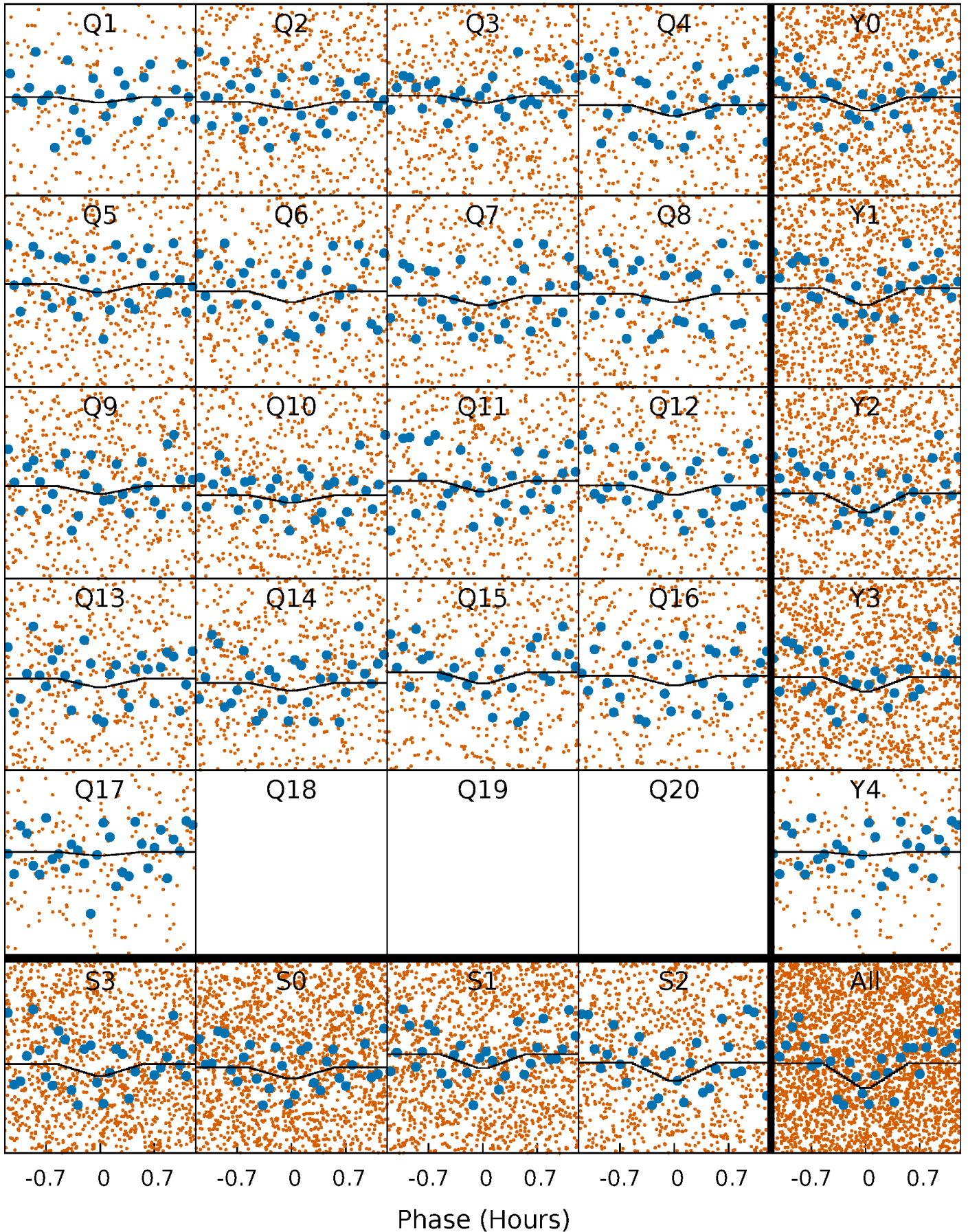
DV Quarter-Phased Transit Curves

TCE 009550886-01 P= 0.507136 Days $T_0=131.578551$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

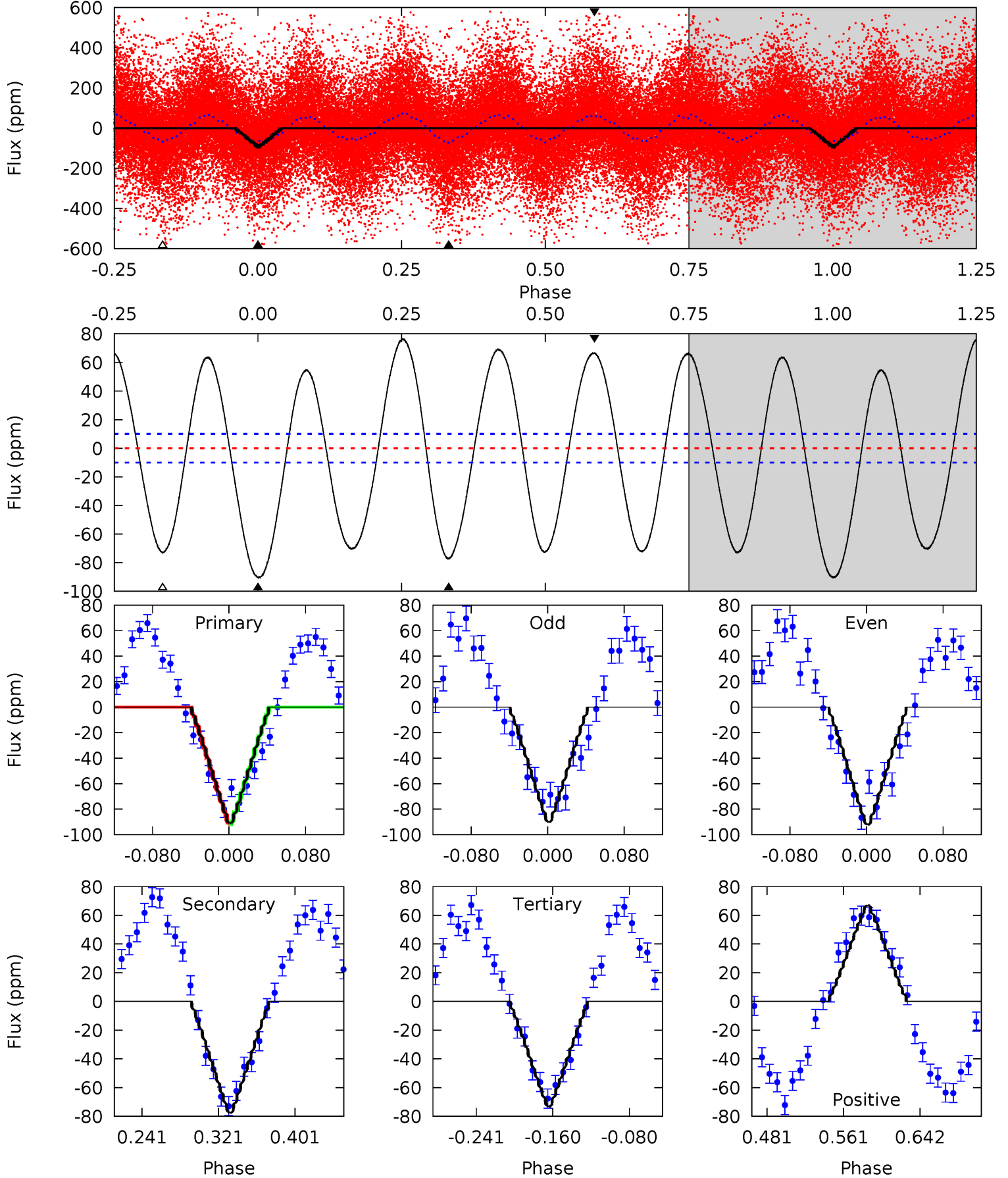
TCE 009550886-01 P= 0.507136 Days $T_0=131.578670$ (BKJD)



DV Model-Shift Uniqueness Test

009550886-01, P = 0.507136 Days, E = 131.071415 Days

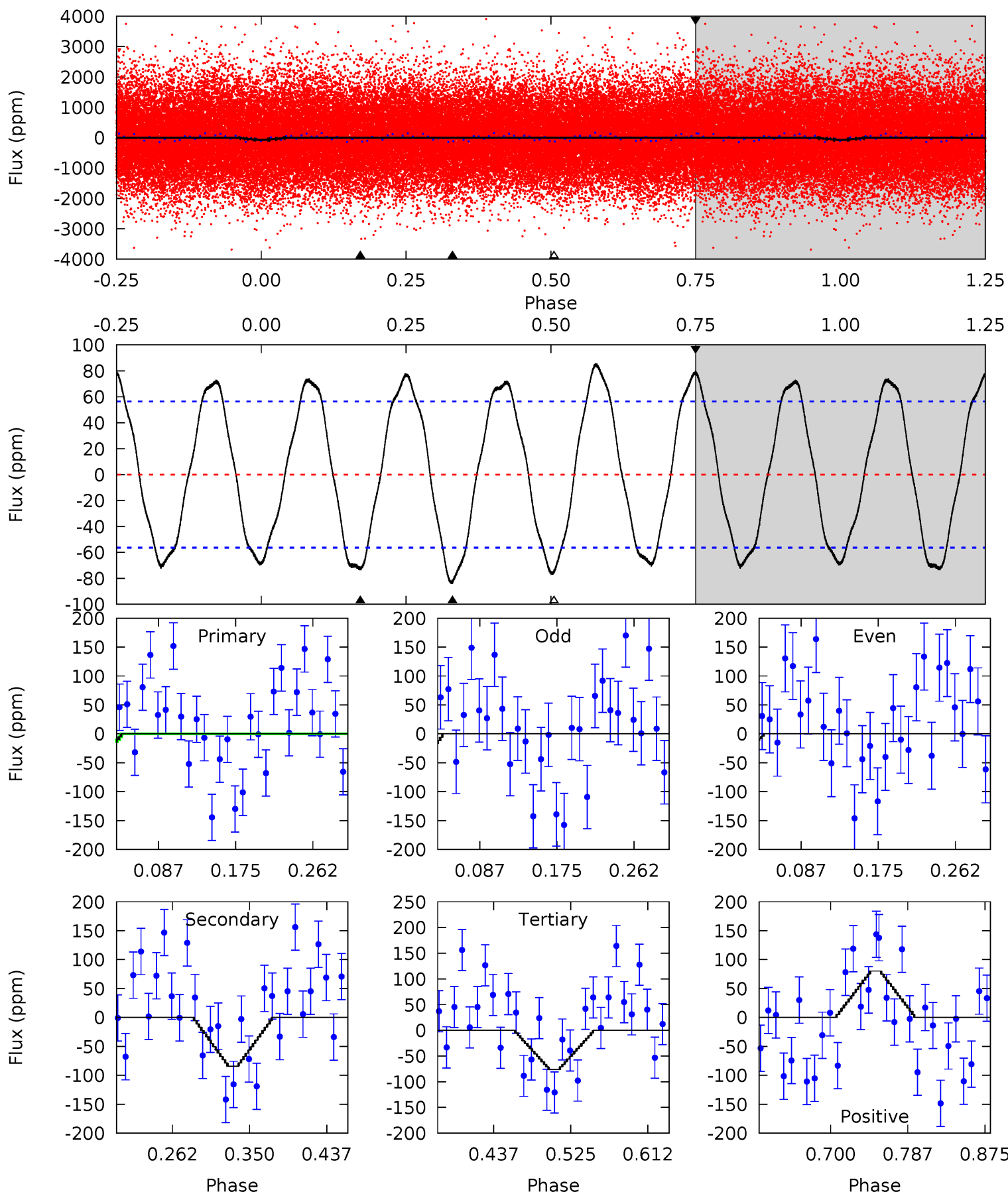
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.8	35.6	33.6	30.7	4.61	1.75	22.7	8.19	11.0	2.00	4.86	0.47	1.06	0.46	0.10



Alt Model-Shift Uniqueness Test

009550886-01, P = 0.507136 Days, E = 131.071534 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.02	6.88	6.22	6.56	4.59	1.71	4.18	-0.21	-0.54	0.65	0.32	1.08	1.44	0.50	0.27



Stellar Parameters For KIC 009550886

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7721^{+211}_{-316}	$3.858^{+0.315}_{-0.105}$	$-0.040^{+0.200}_{-0.350}$	$2.715^{+0.443}_{-1.034}$	$1.938^{+0.105}_{-0.473}$	$0.137^{+0.327}_{-0.046}$
	+3%/-4%	+8%/-3%	+500%/-875%	+16%/-38%	+5%/-24%	+240%/-34%
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 009550886-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-77 ± 2	$2.33^{+0.62}_{-0.57}$	6190^{+407}_{-597}	7473^{+1236}_{-967}	$1.841^{+1.242}_{-0.691}$
Alt.	-84 ± 12	$2.30^{+0.60}_{-0.60}$	6152^{+429}_{-572}	7714^{+1533}_{-931}	$2.059^{+1.548}_{-0.774}$

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 $A_{obs} \gg 1.0$

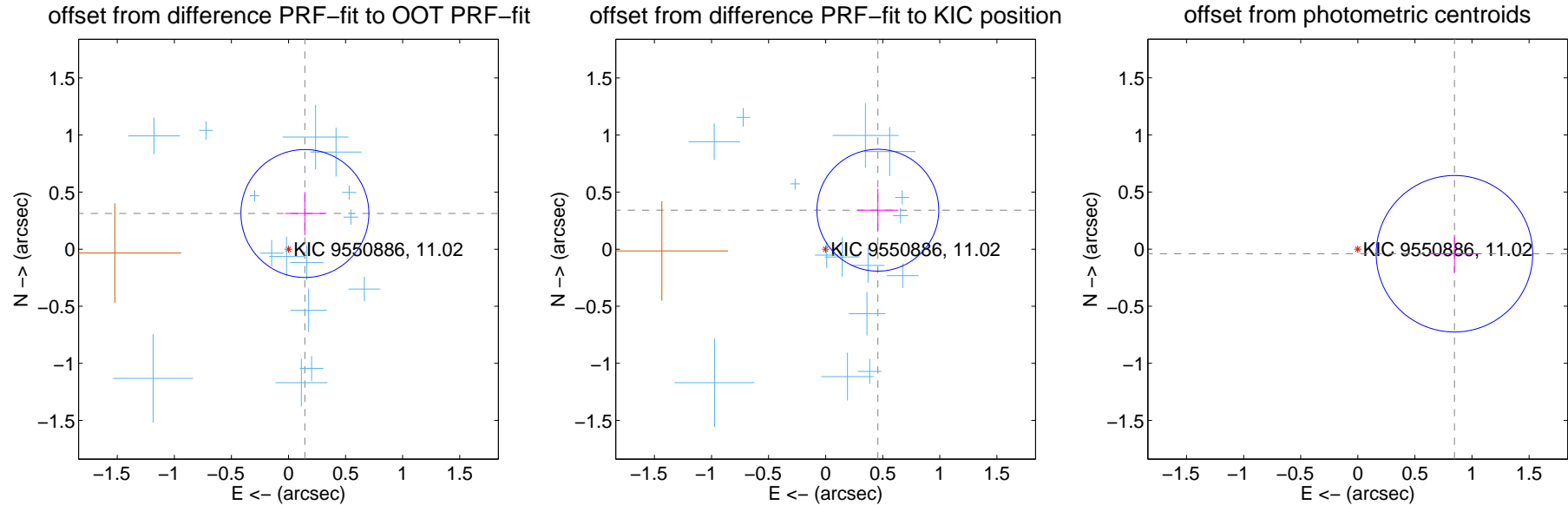
DV Centroid Data

Supplemental centroid analysis for 009550886-01. **Kepler magnitude: 11.02.** Transit SNR 18.07

There are 15 quarters with good PRF difference image offsets

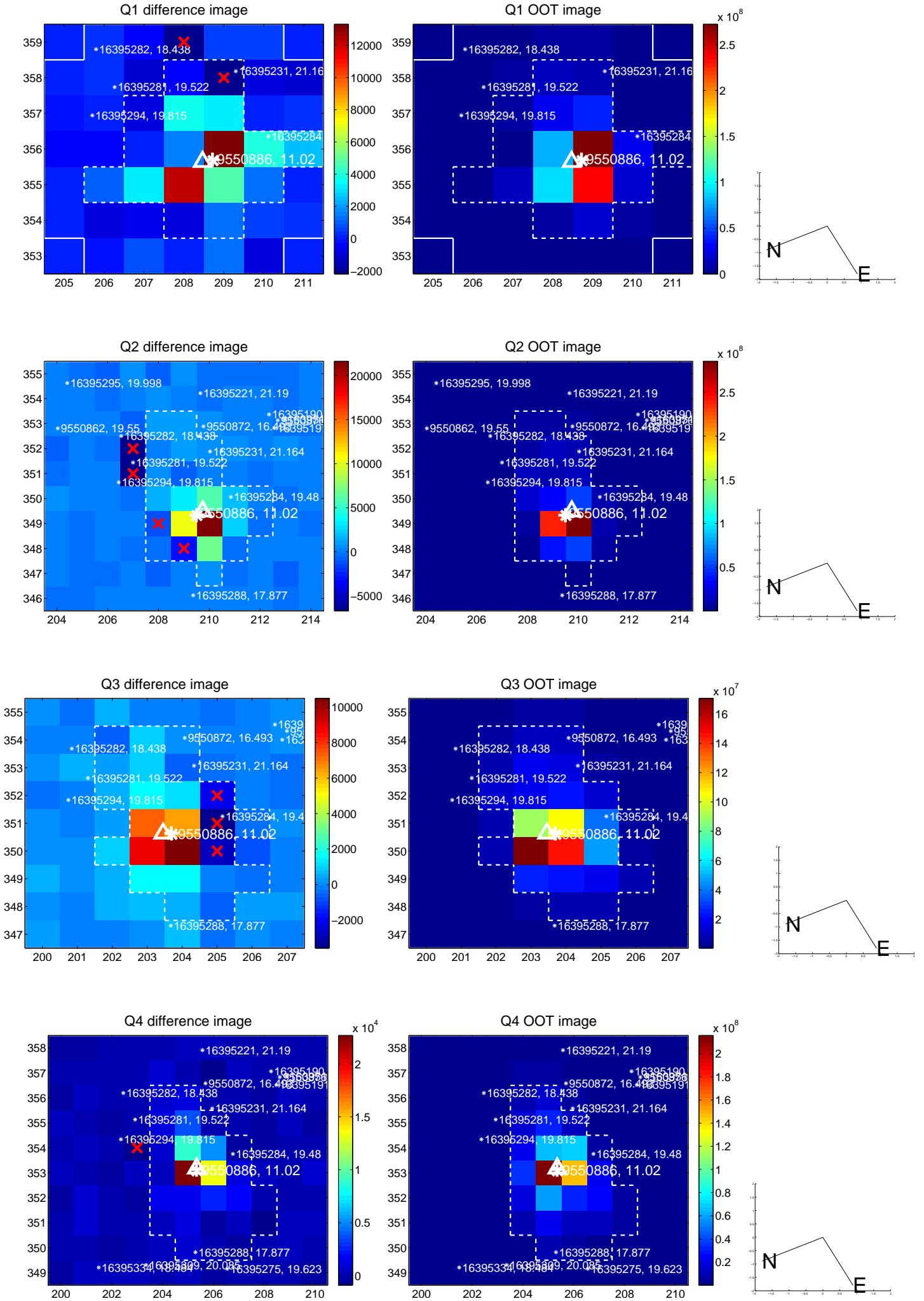
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.344 ± 0.187	1.84	-0.144 ± 0.174	0.313 ± 0.189
PRF-fit source offset from KIC position	0.571 ± 0.178	3.21	-0.457 ± 0.180	0.341 ± 0.189
photometric centroid source offset	0.85 ± 0.23	3.71	-0.85 ± 0.23	-0.04 ± 0.17

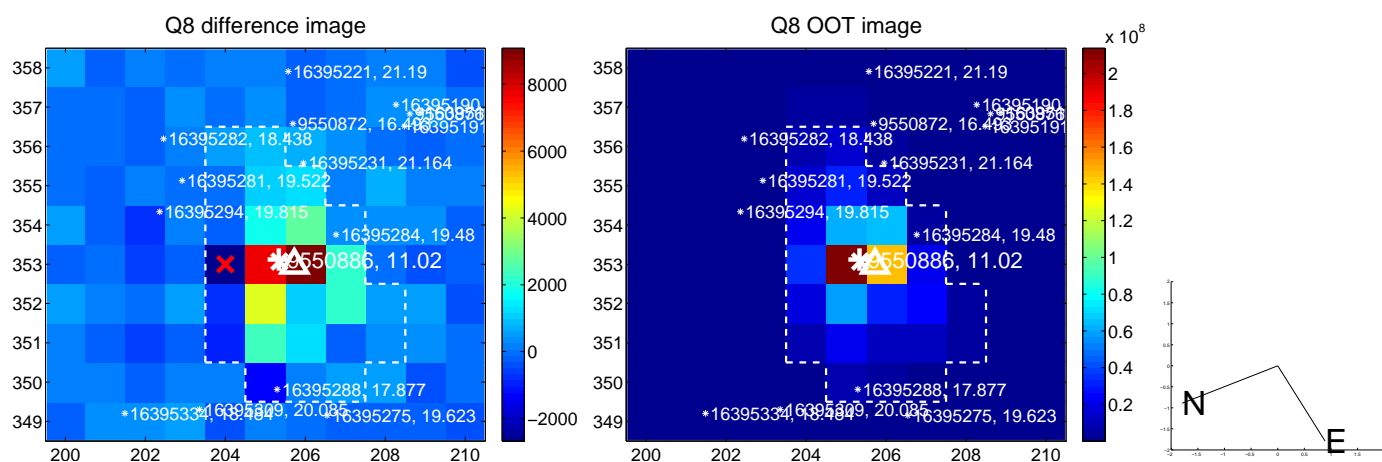
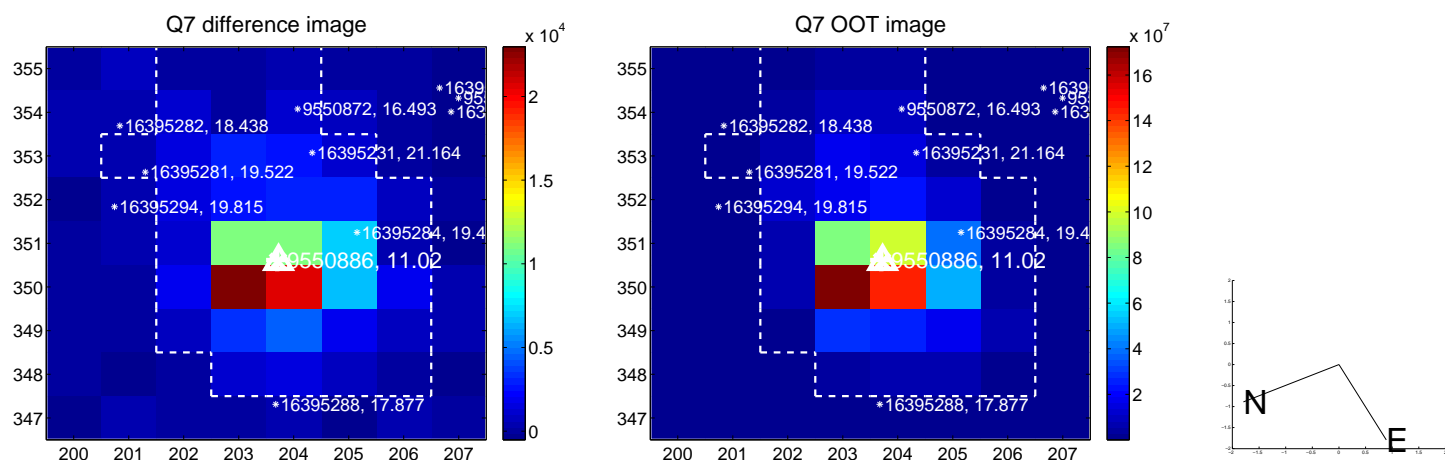
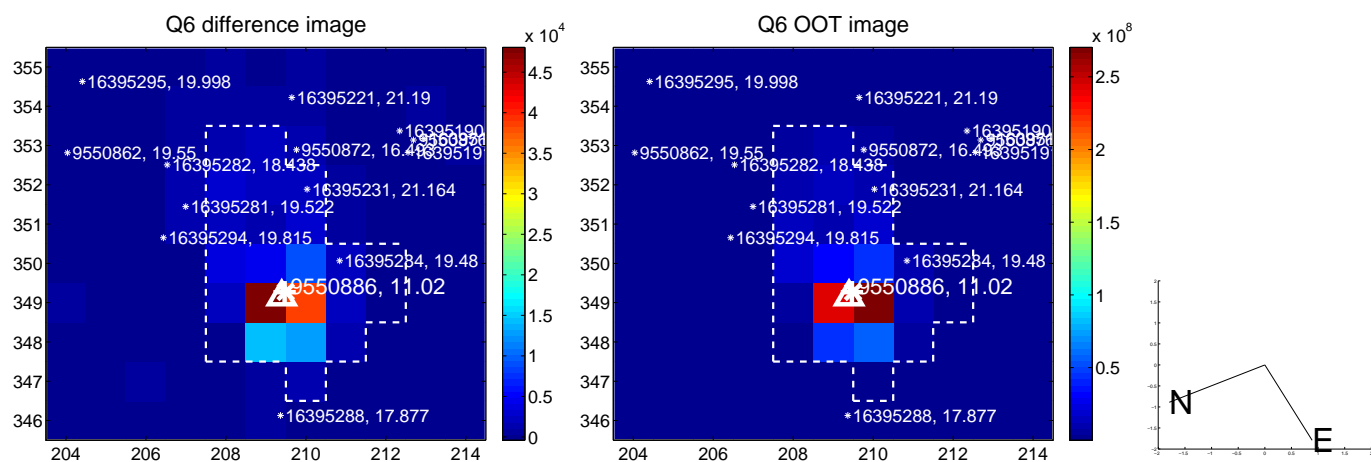
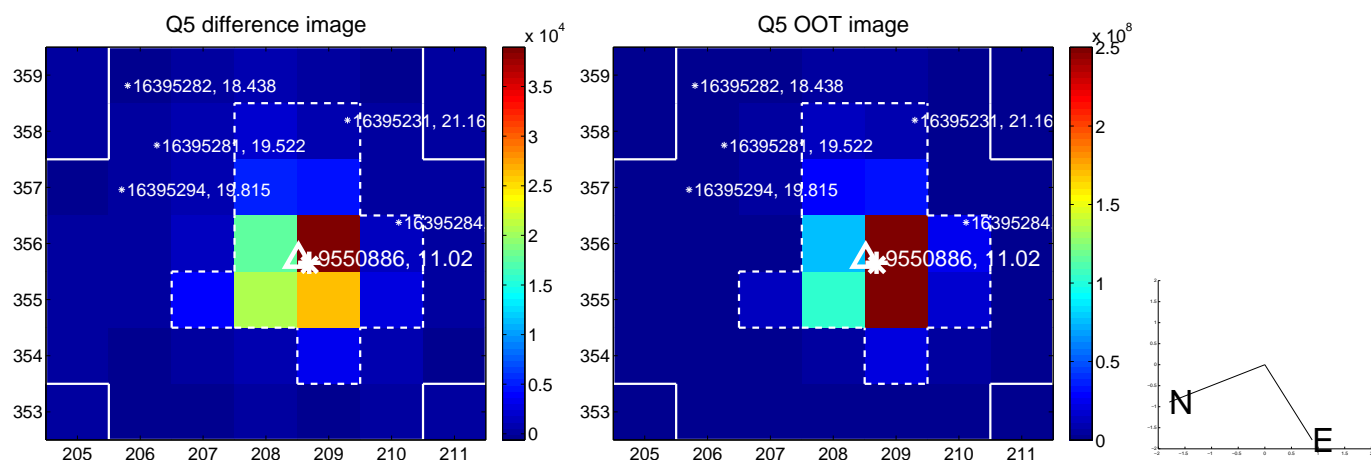


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

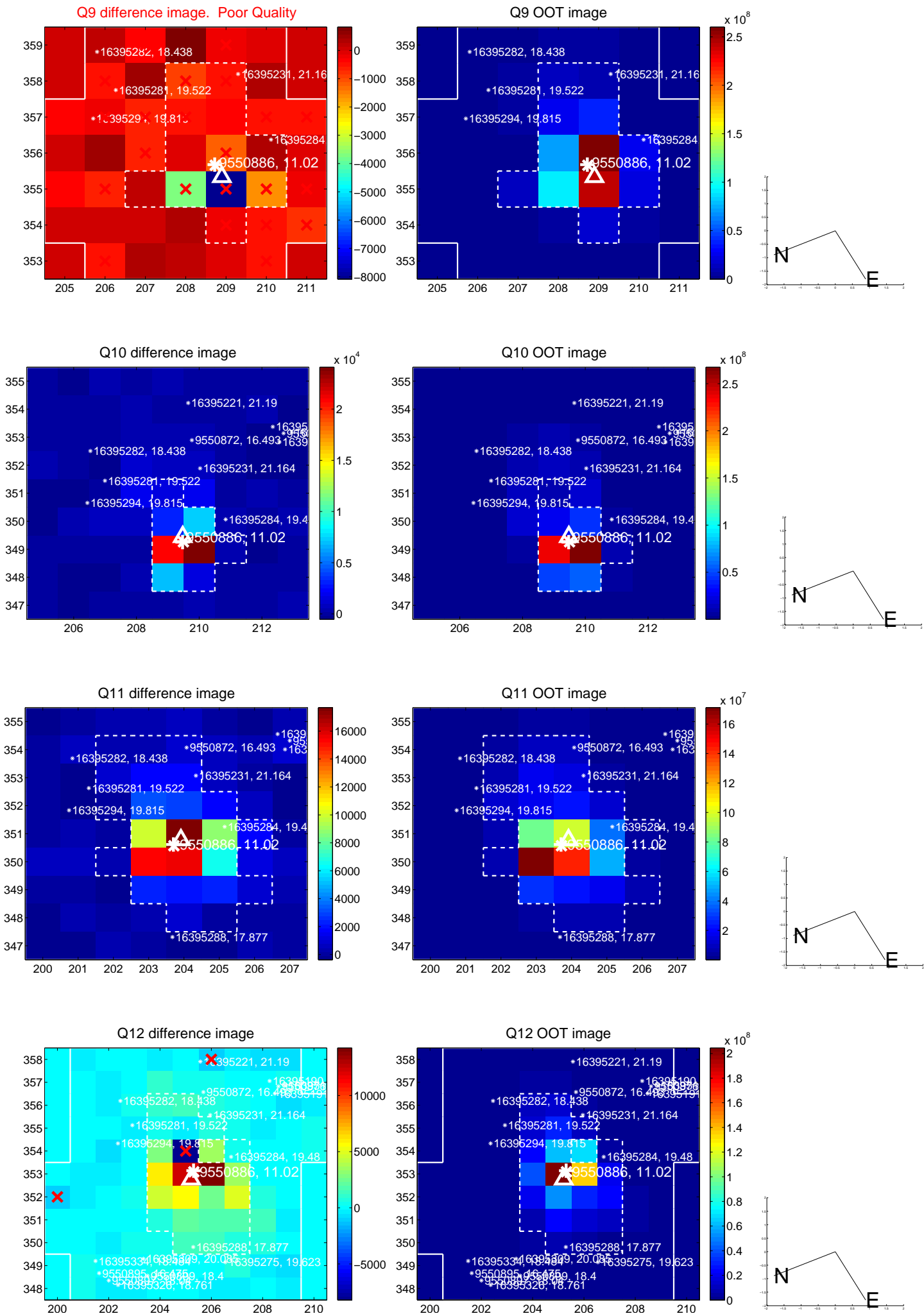
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



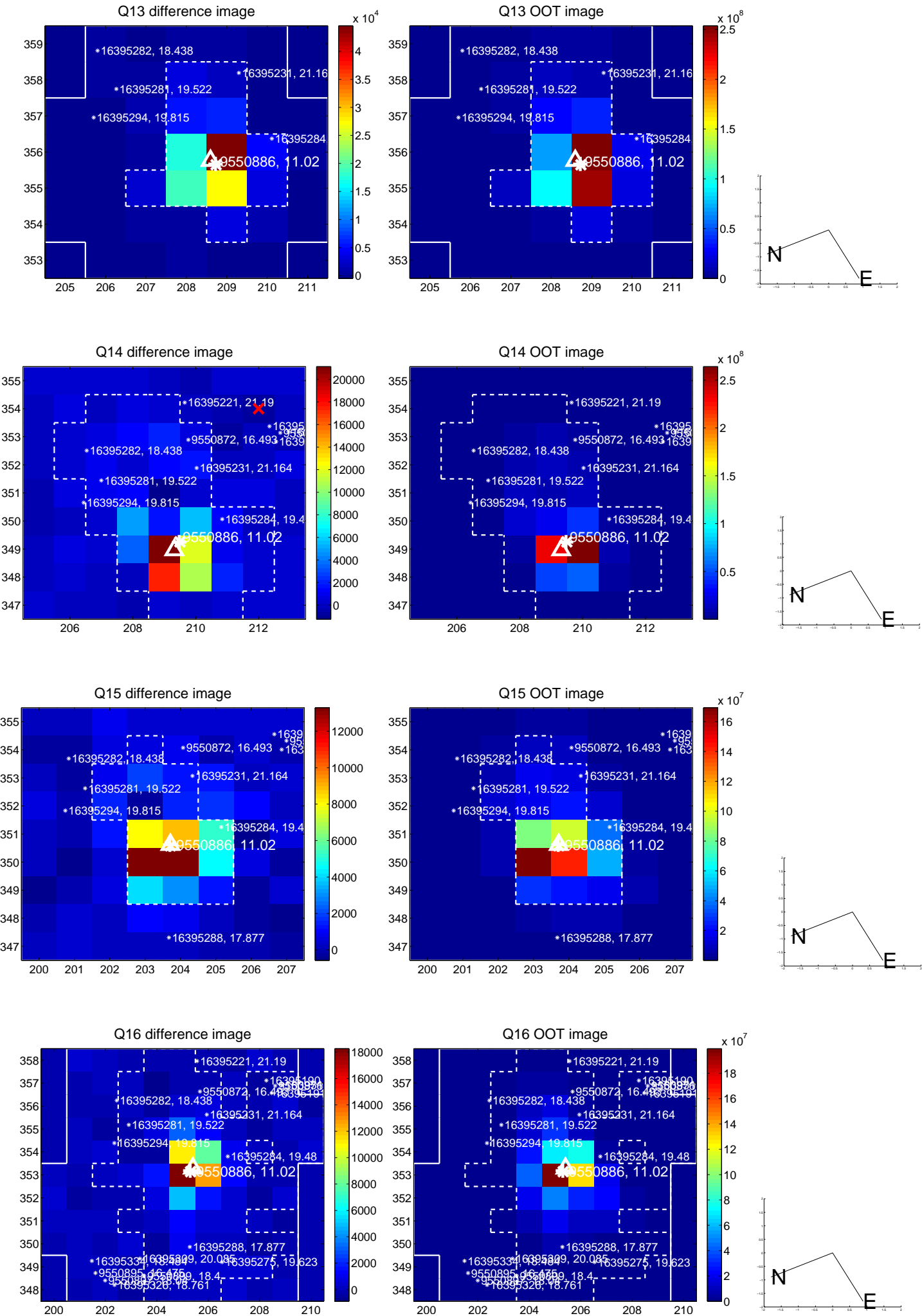
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



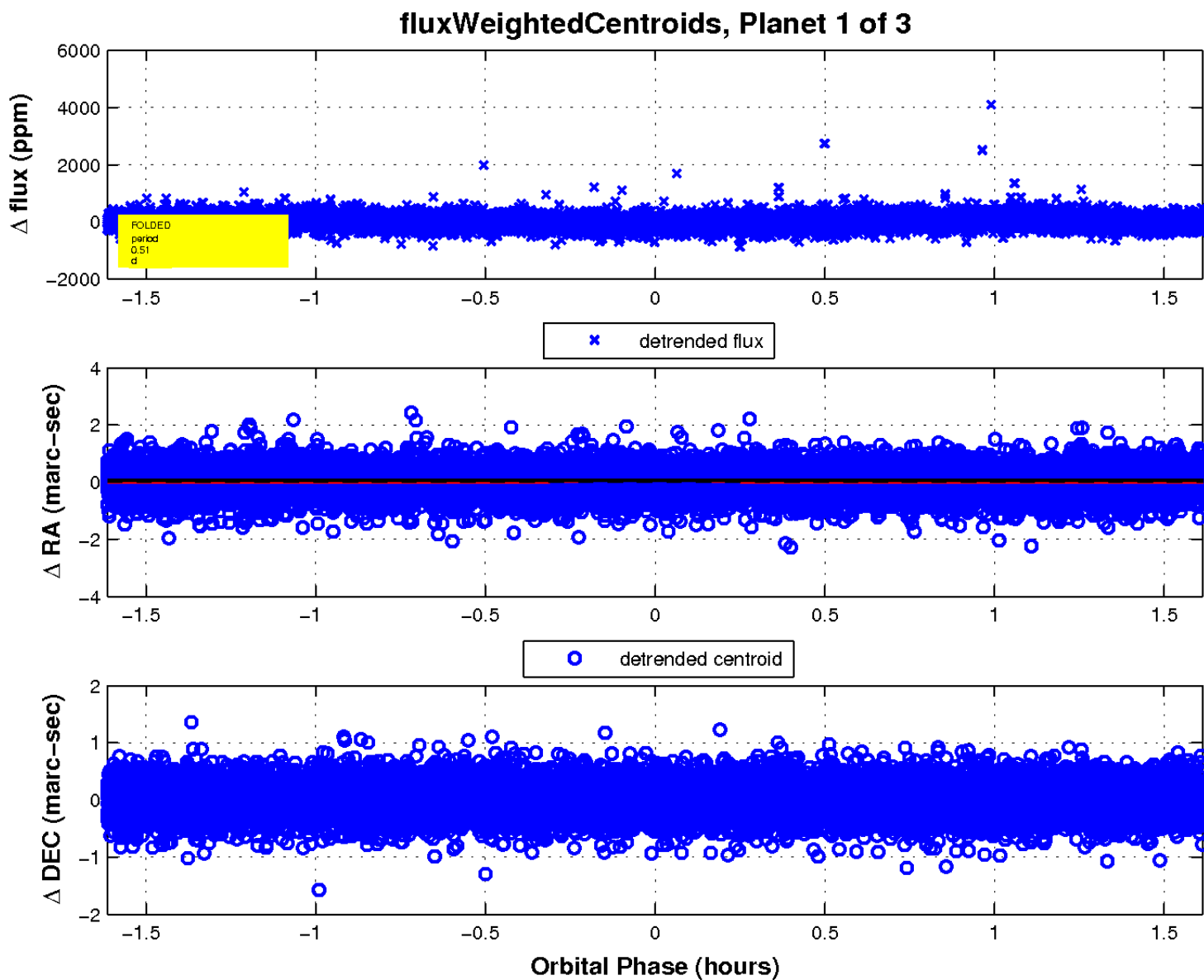
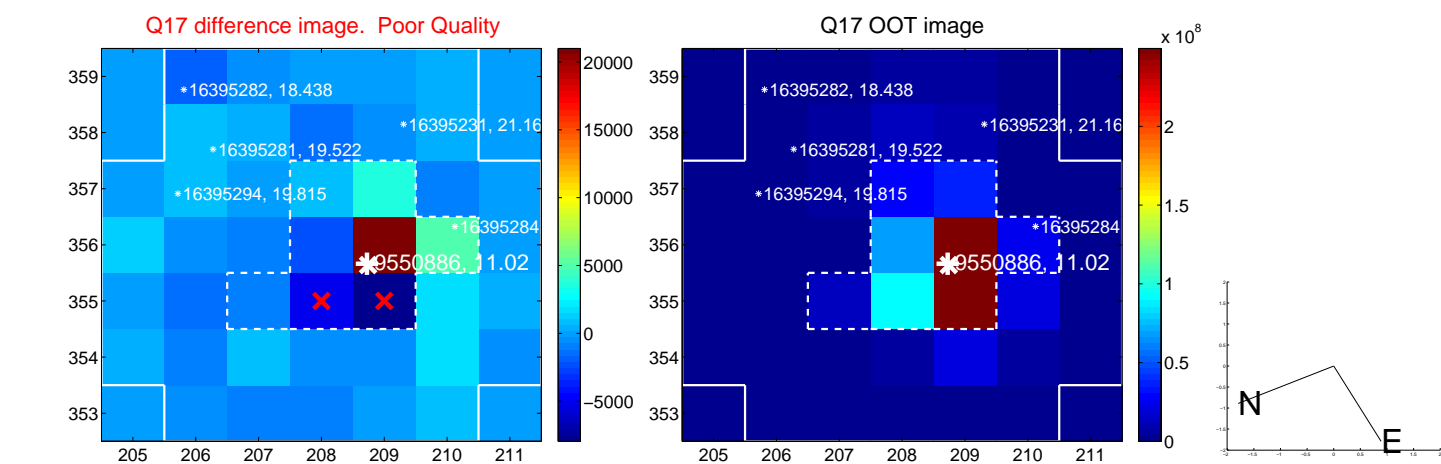
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



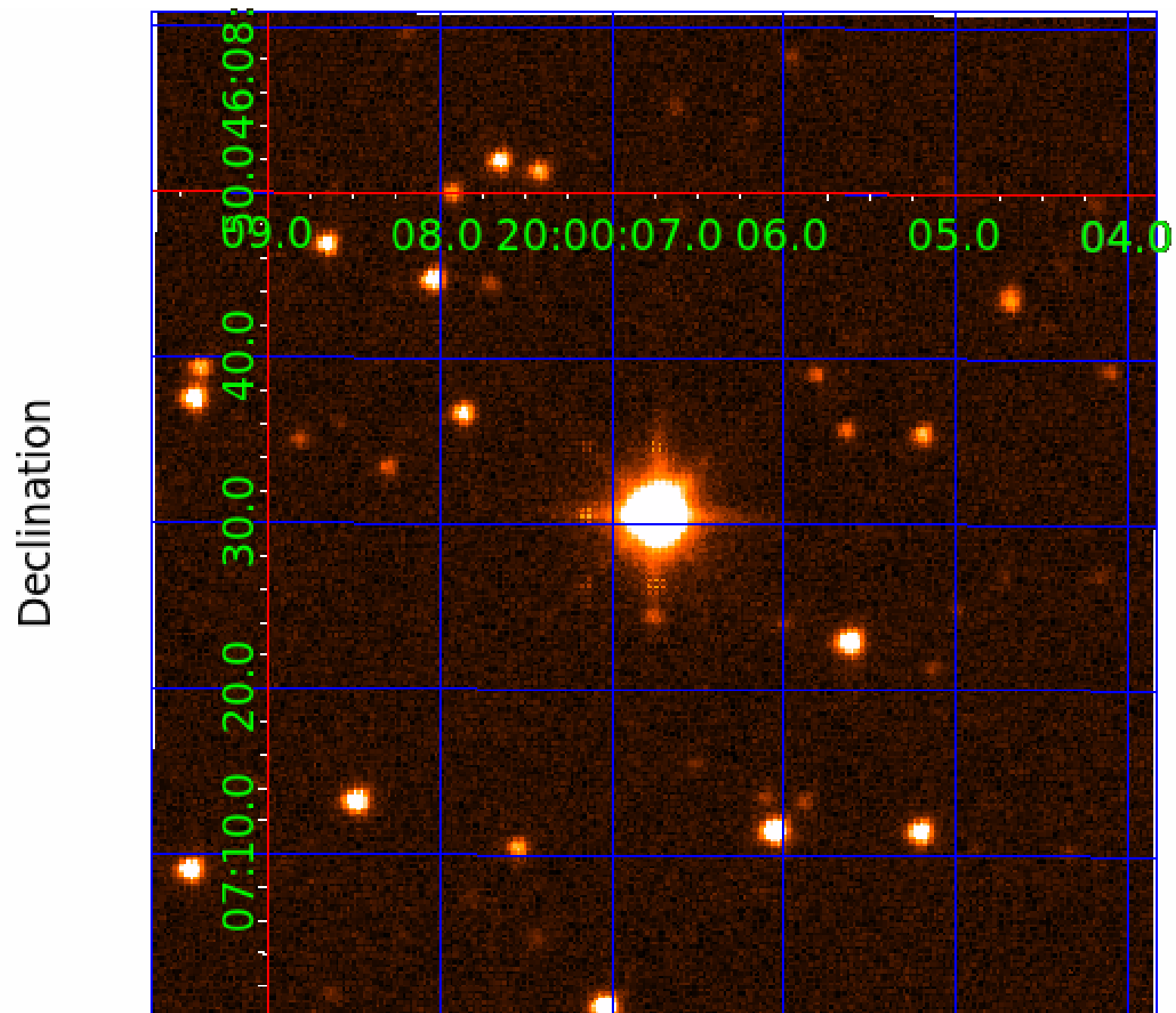
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009550886

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})
009550886-01	OBS	No	0.507136	131.578551	74.5	0.538	13.8	18.1	2.71	7721	2.51	97409.66
009550886-02	OBS	No	0.507137	131.744613	136.0	0.508	13.1	27.9	2.71	7721	3.34	97409.59
009550886-03	OBS	No	0.507144	131.906748	72.4	1.017	12.5	17.1	2.71	7721	2.46	97407.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009550886-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
009550886-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
009550886-03	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

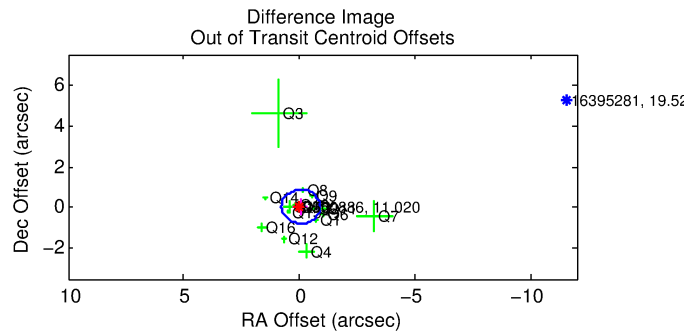
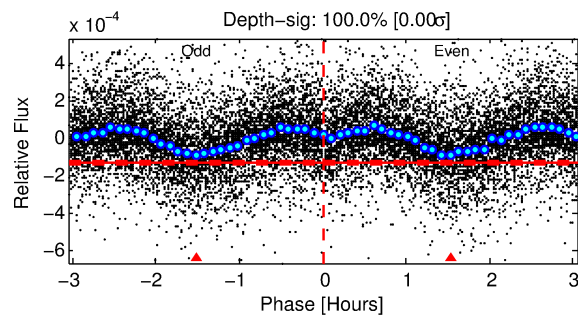
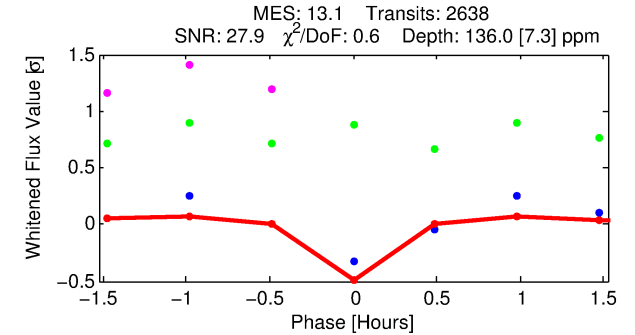
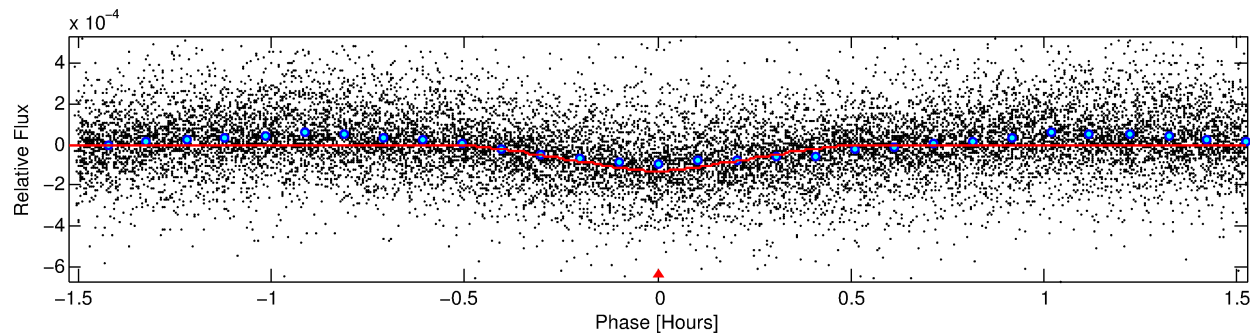
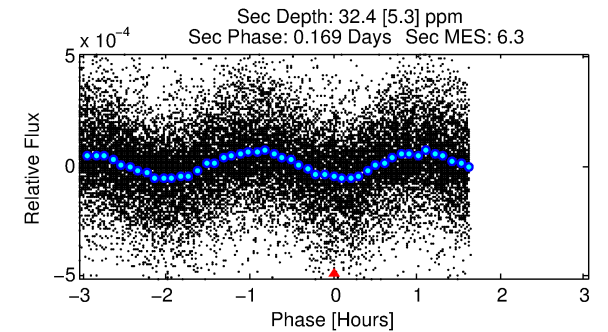
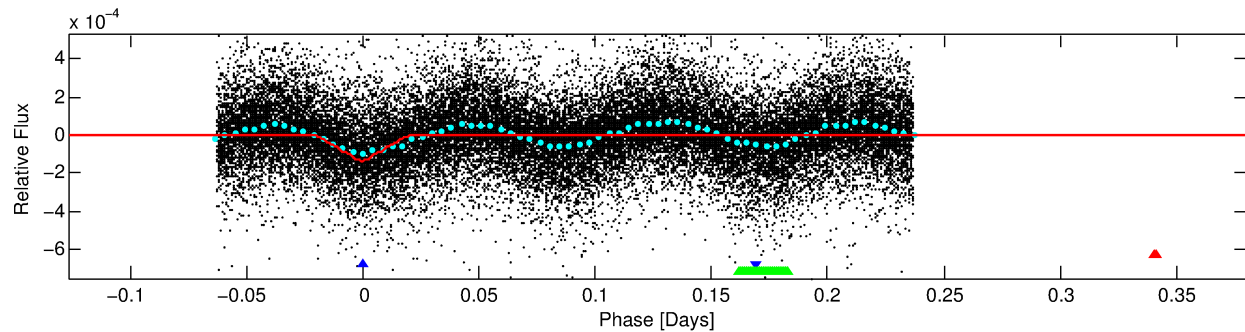
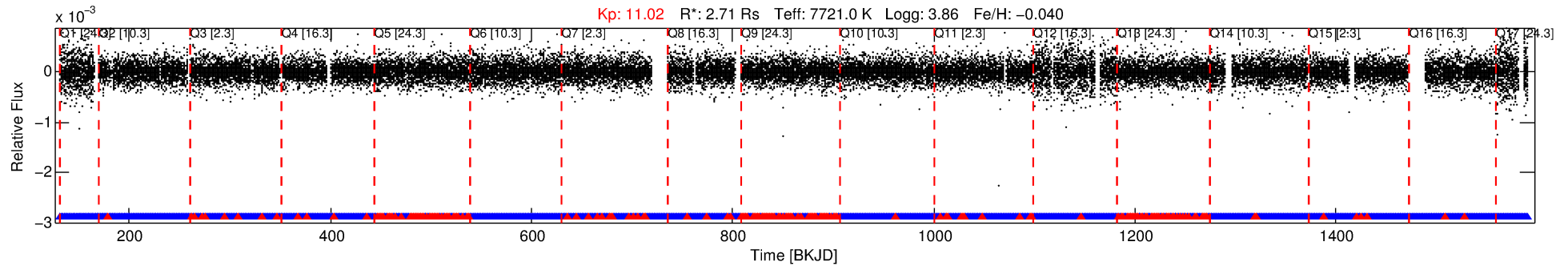
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009550886-02

No Significant Match Found

DV One-Page Summary

KIC: 9550886 Candidate: 2 of 3 Period: 0.507 d



DV Fit Results:

Period = 0.50714 [0.00000] d
Epoch = 131.7446 [0.0003] BKJD
Rp/R* = 0.0113 [0.0040]
a/R* = 7.69 [15.94]
b = 0.10 [20.85]
Seff = 97409.59 [55538.73]
Teq = 4505 [642] K
Rp = 3.34 [1.74] Re
a = 0.0155 [0.0054] AU
Ag = 0.39 [0.35] [-1.75 σ]
Teffp = 5488 [1028] K [0.81 σ]

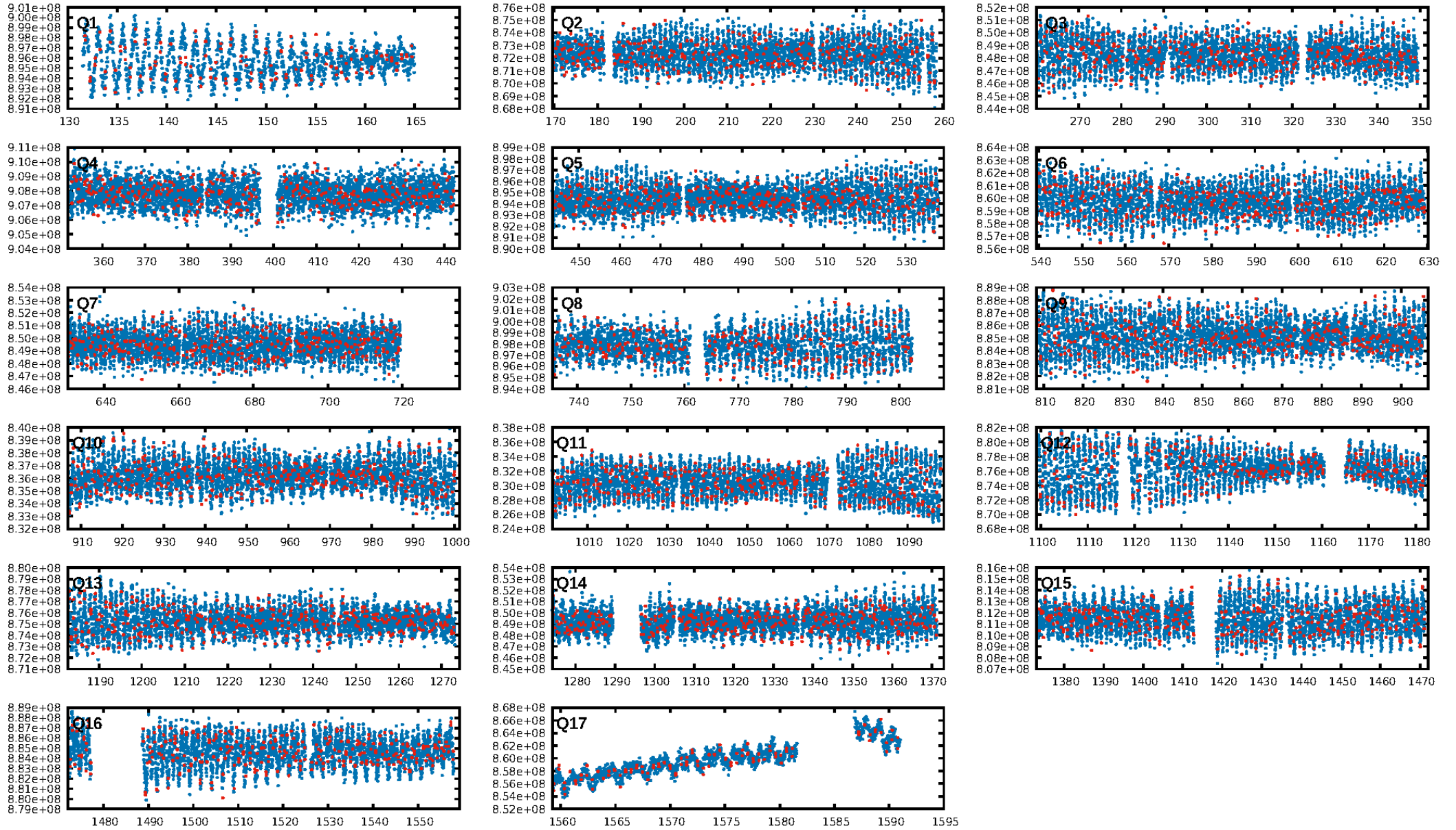
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.91 [2294/2520]
GhostDiagnostic-chr: -4.638
Centroid-sig: N/A
Centroid-so: 0.172 arcsec [1.35 σ]
OotOffset-rm: 0.063 arcsec [0.23 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.183 arcsec [0.71 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.00 [0/17]

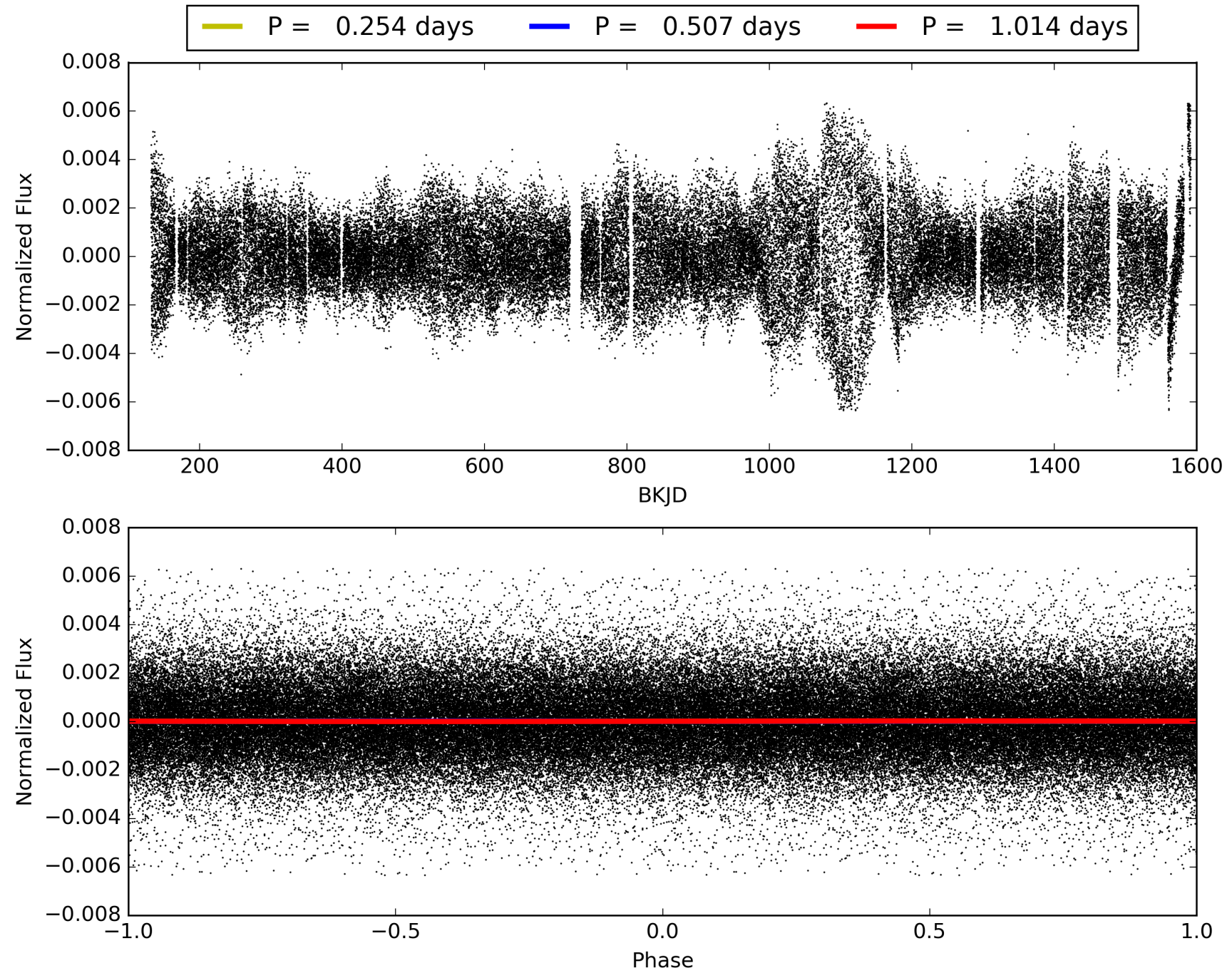
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:10:53 Z

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

TCE 009550886-02, PDC Light Curves

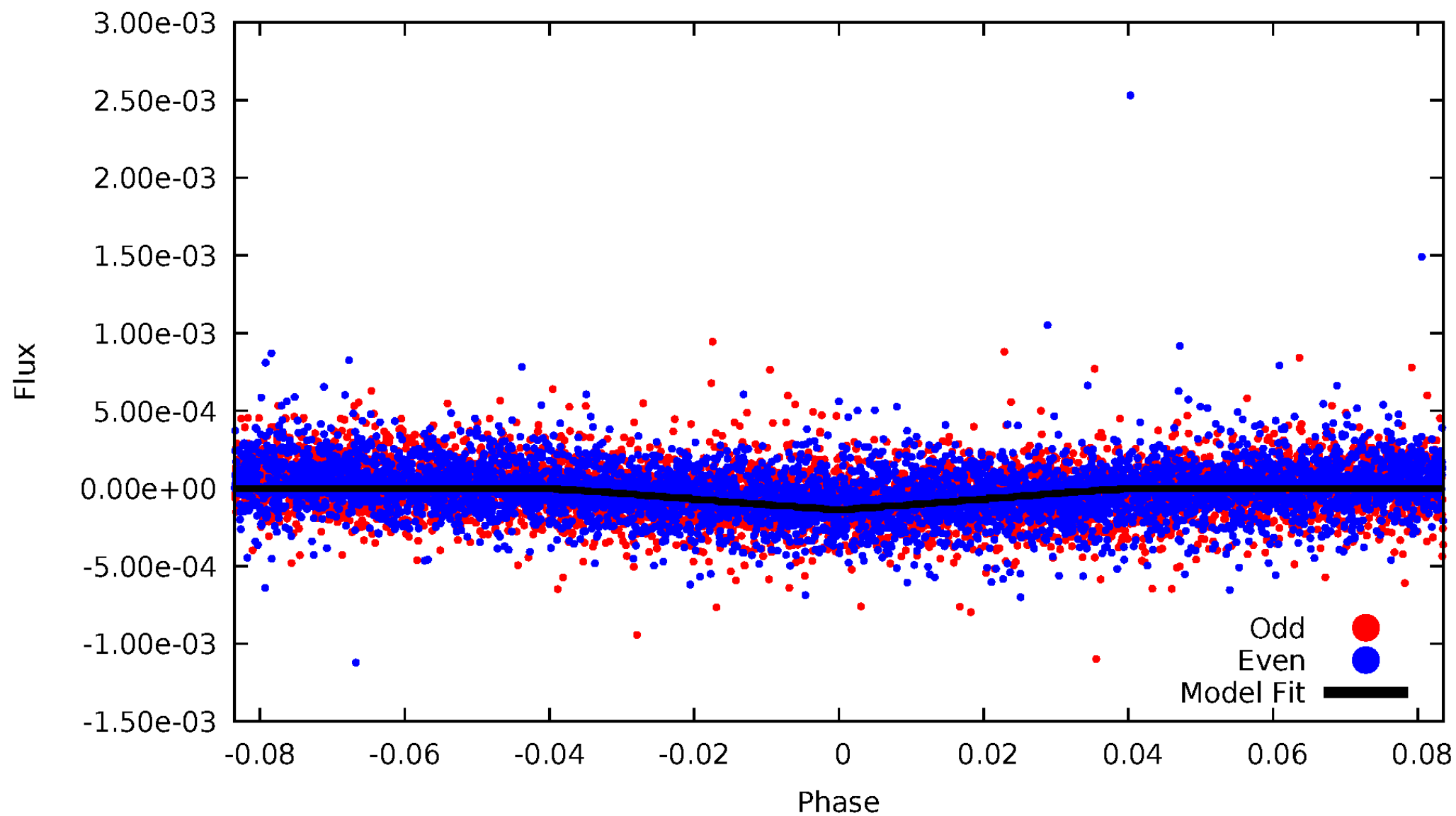


TCE 009550886-02



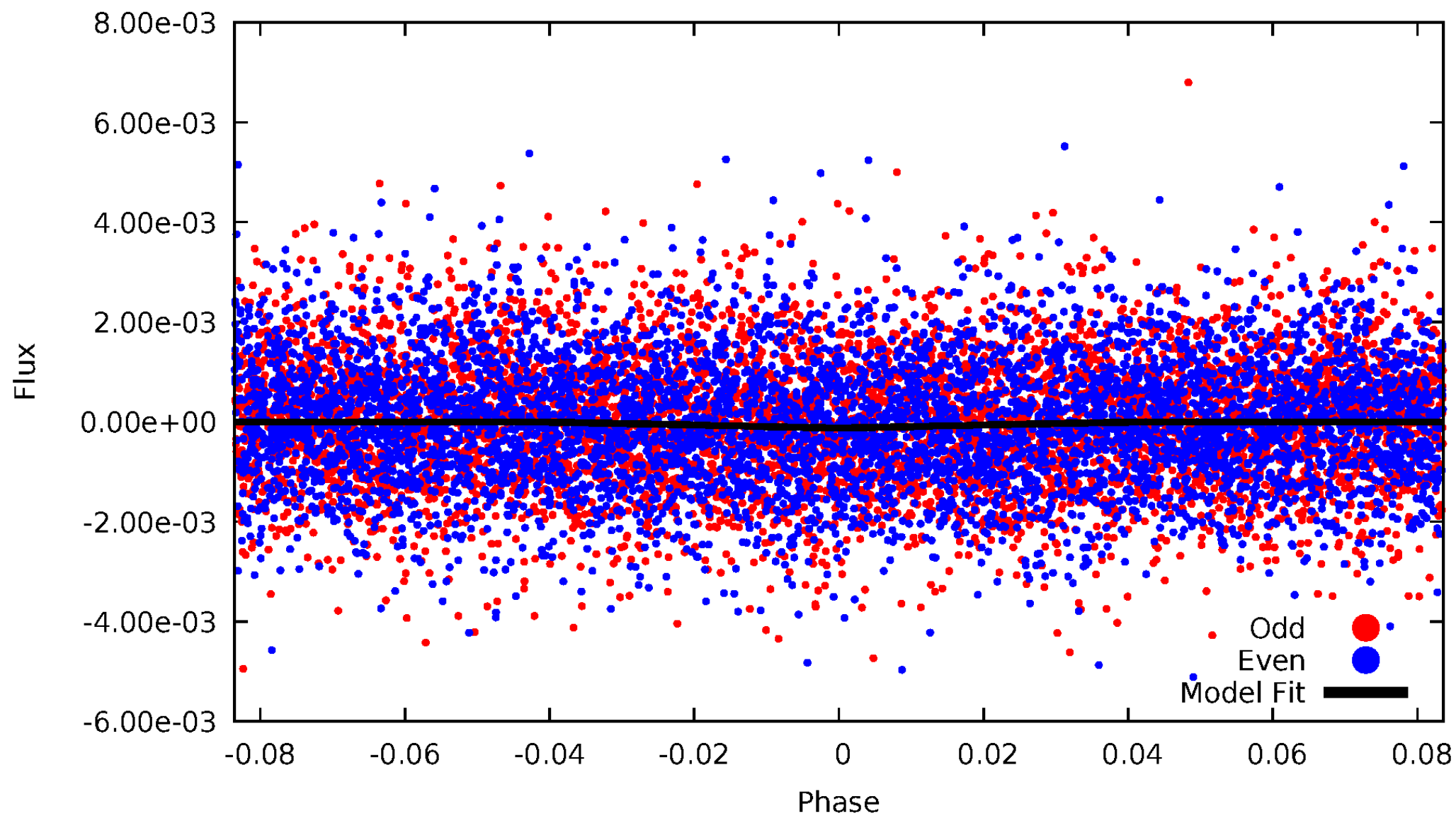
DV Odd/Even

TCE 009550886-02



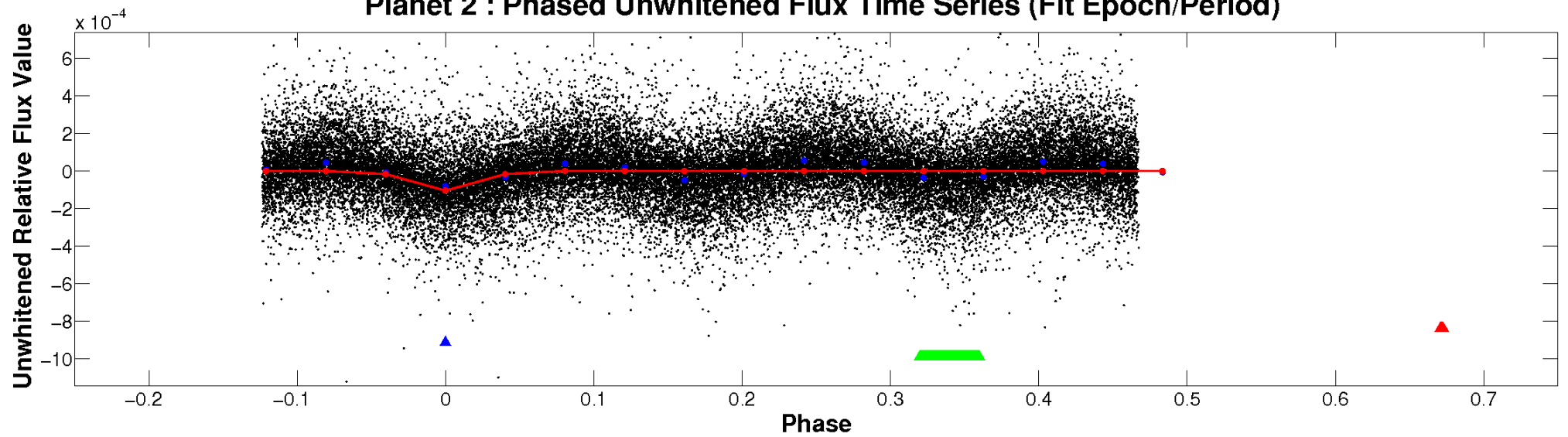
ALT Odd/Even

TCE 009550886-02

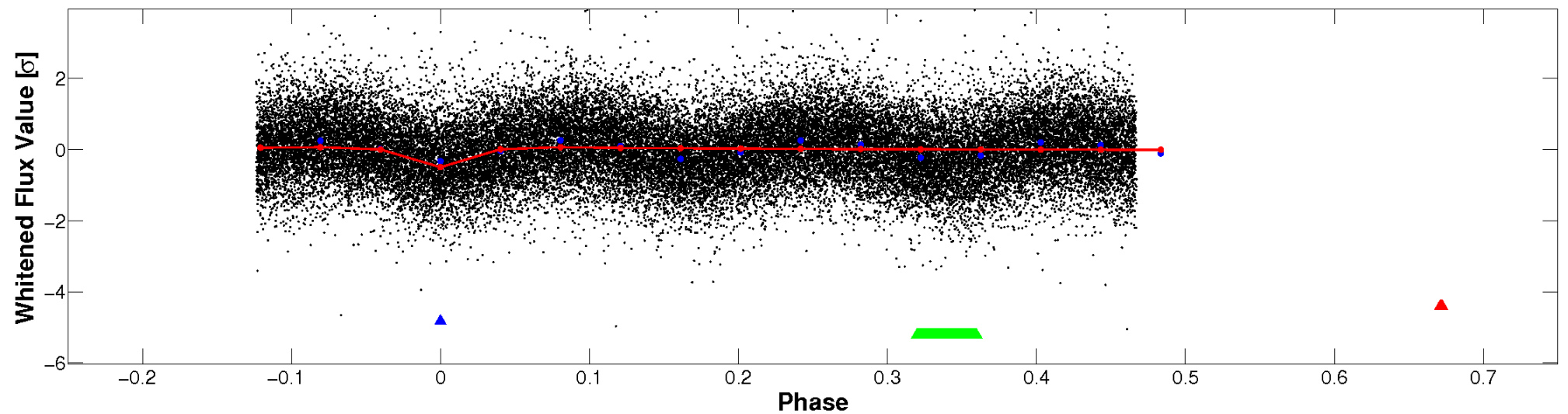


Non-Whitened Vs. Whitened Light Curve

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

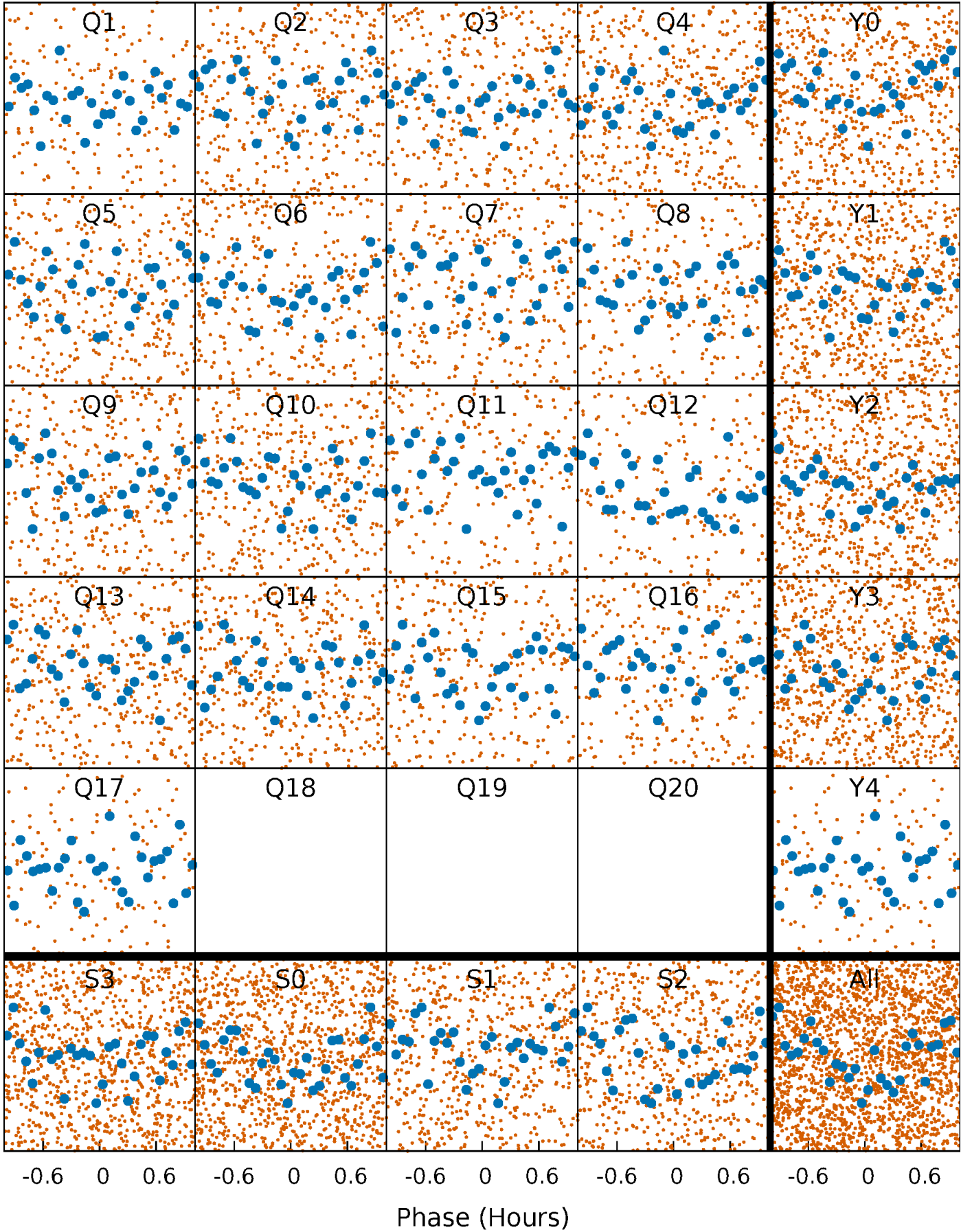


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



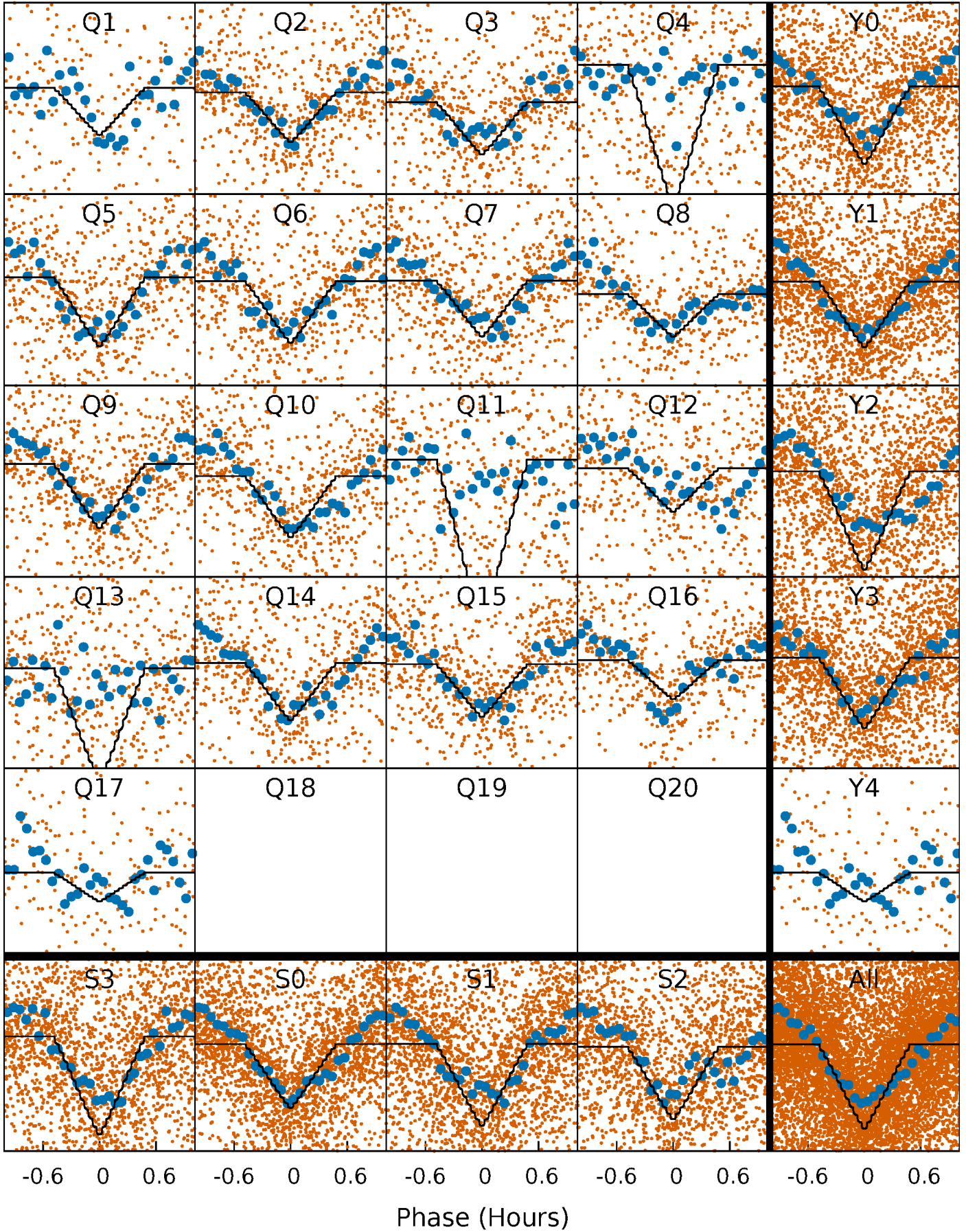
PDC Quarter-Phased Transit Curves

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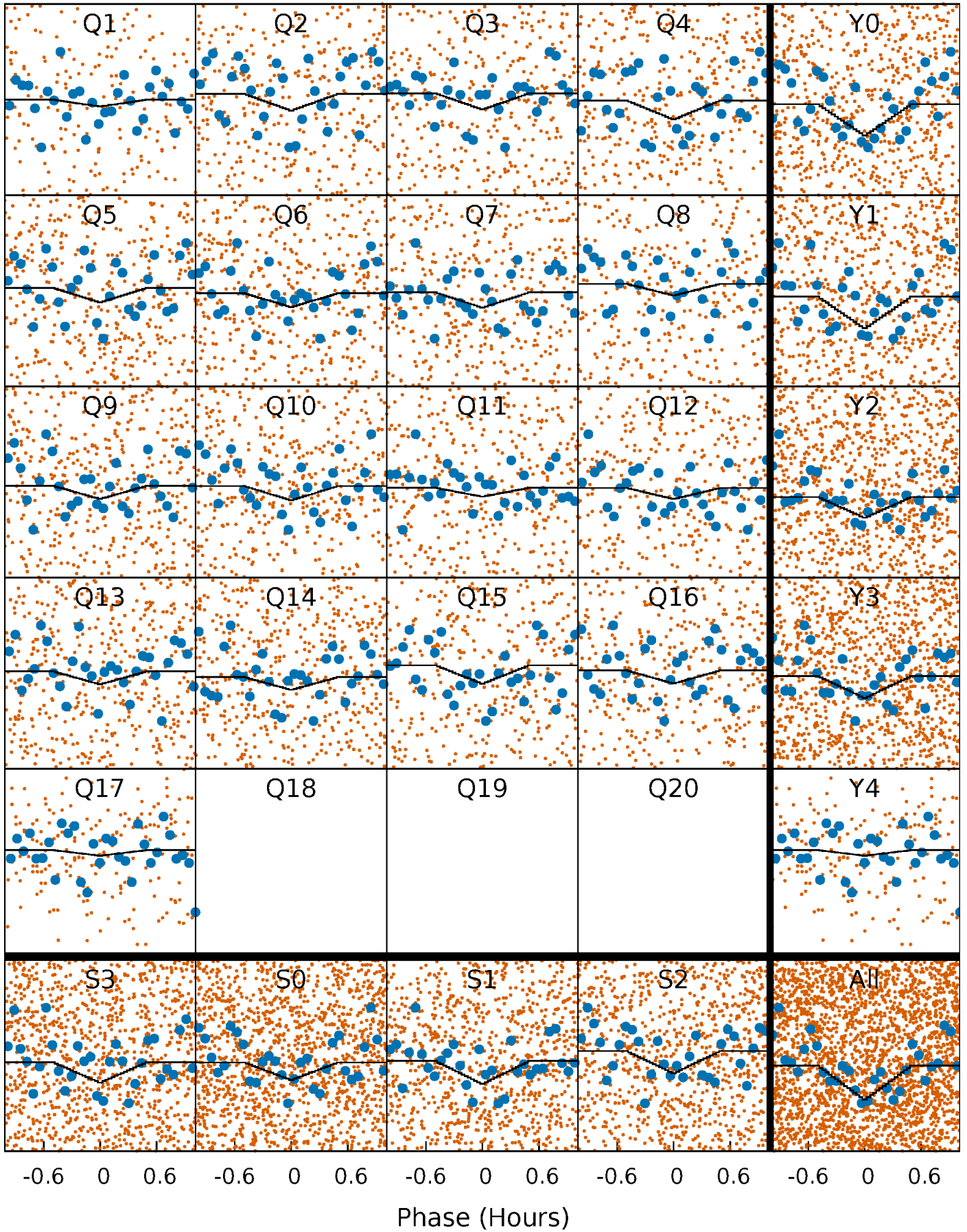
DV Quarter-Phased Transit Curves

TCE 009550886-02 P= 0.507137 Days $T_0=131.744613$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

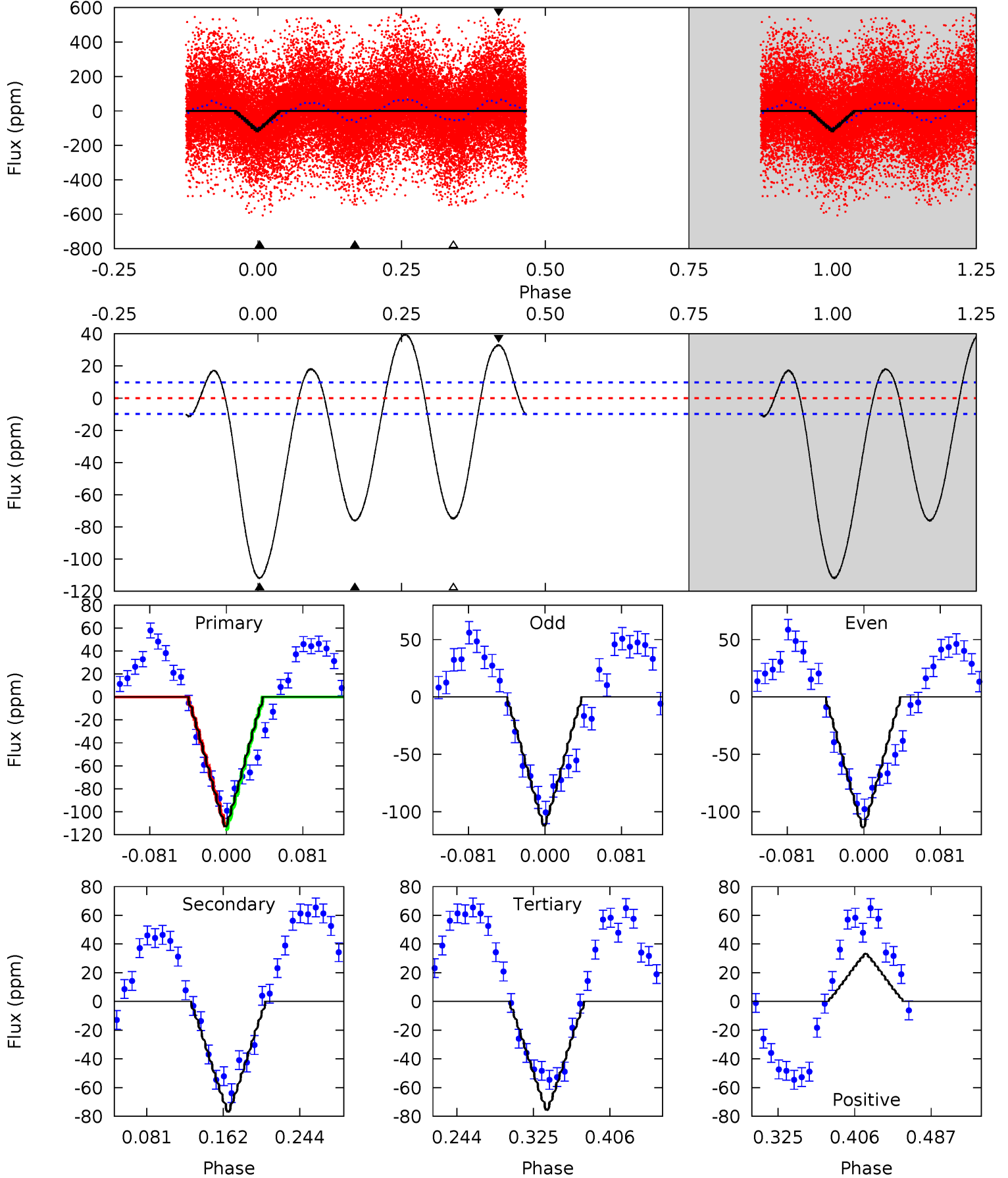
TCE 009550886-02 P= 0.507136 Days $T_0=131.744591$ (BKJD)



DV Model-Shift Uniqueness Test

009550886-02, P = 0.507137 Days, E = 131.237476 Days

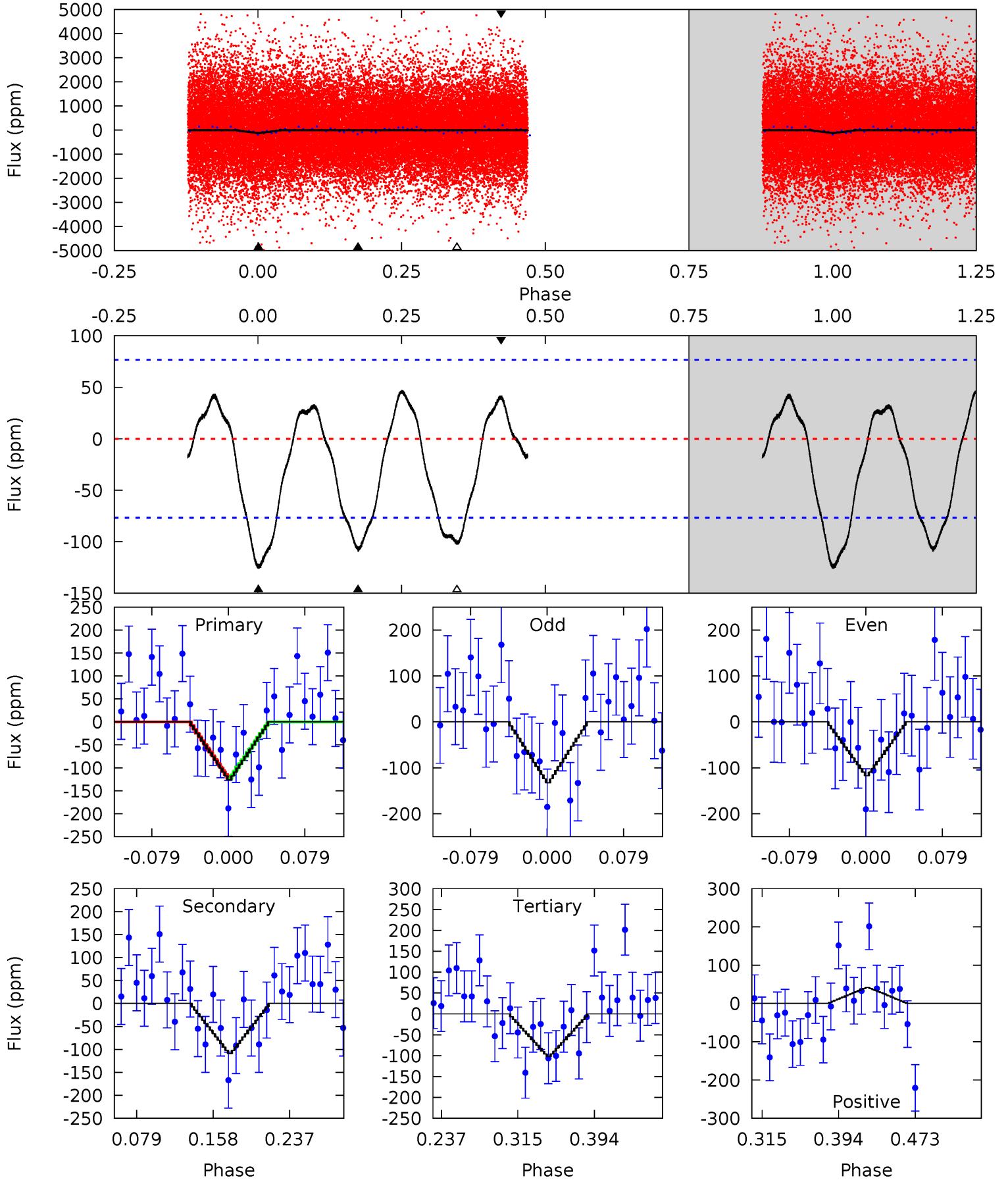
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.3	35.6	35.0	15.4	4.61	1.74	16.4	17.3	36.9	0.57	20.2	0.39	0.96	0.26	1.15



Alt Model-Shift Uniqueness Test

009550886-02, P = 0.507136 Days, E = 131.237455 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.58	6.59	6.19	2.53	4.61	1.76	2.79	1.40	5.06	0.40	4.06	0.46	0.87	0.27	0.02



Stellar Parameters For KIC 009550886

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7721^{+211}_{-316}	$3.858^{+0.315}_{-0.105}$	$-0.040^{+0.200}_{-0.350}$	$2.715^{+0.443}_{-1.034}$	$1.938^{+0.105}_{-0.473}$	$0.137^{+0.327}_{-0.046}$
	+3%/-4%	+8%/-3%	+500%/-875%	+16%/-38%	+5%/-24%	+240%/-34%
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 009550886-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-76 ± 2	$2.98^{+1.29}_{-1.09}$	6145^{+428}_{-579}	6179^{+2254}_{-1374}	$1.091^{+1.635}_{-0.555}$
Alt.	-109 ± 17	$3.10^{+1.30}_{-1.18}$	6156^{+388}_{-609}	6874^{+2414}_{-1426}	$1.492^{+2.297}_{-0.776}$

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 $A_{obs} \gg 1.0$

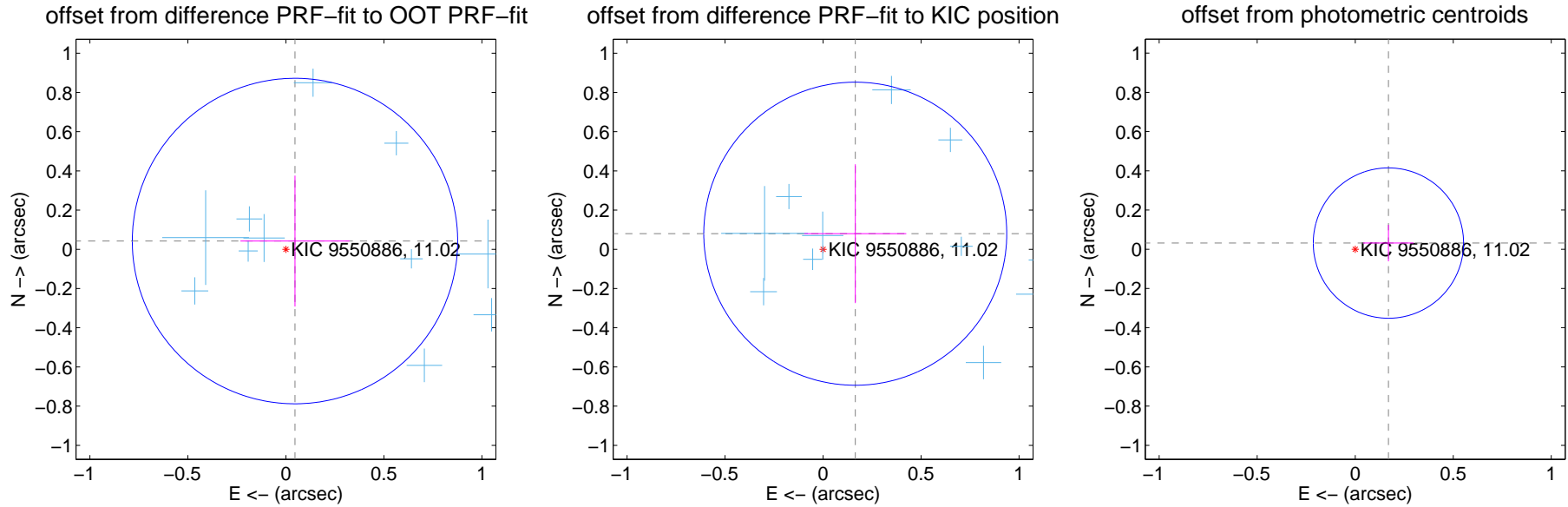
DV Centroid Data

Supplemental centroid analysis for 009550886-02. **Kepler magnitude: 11.02**. Transit SNR 27.86

There are 14 quarters with good PRF difference image offsets

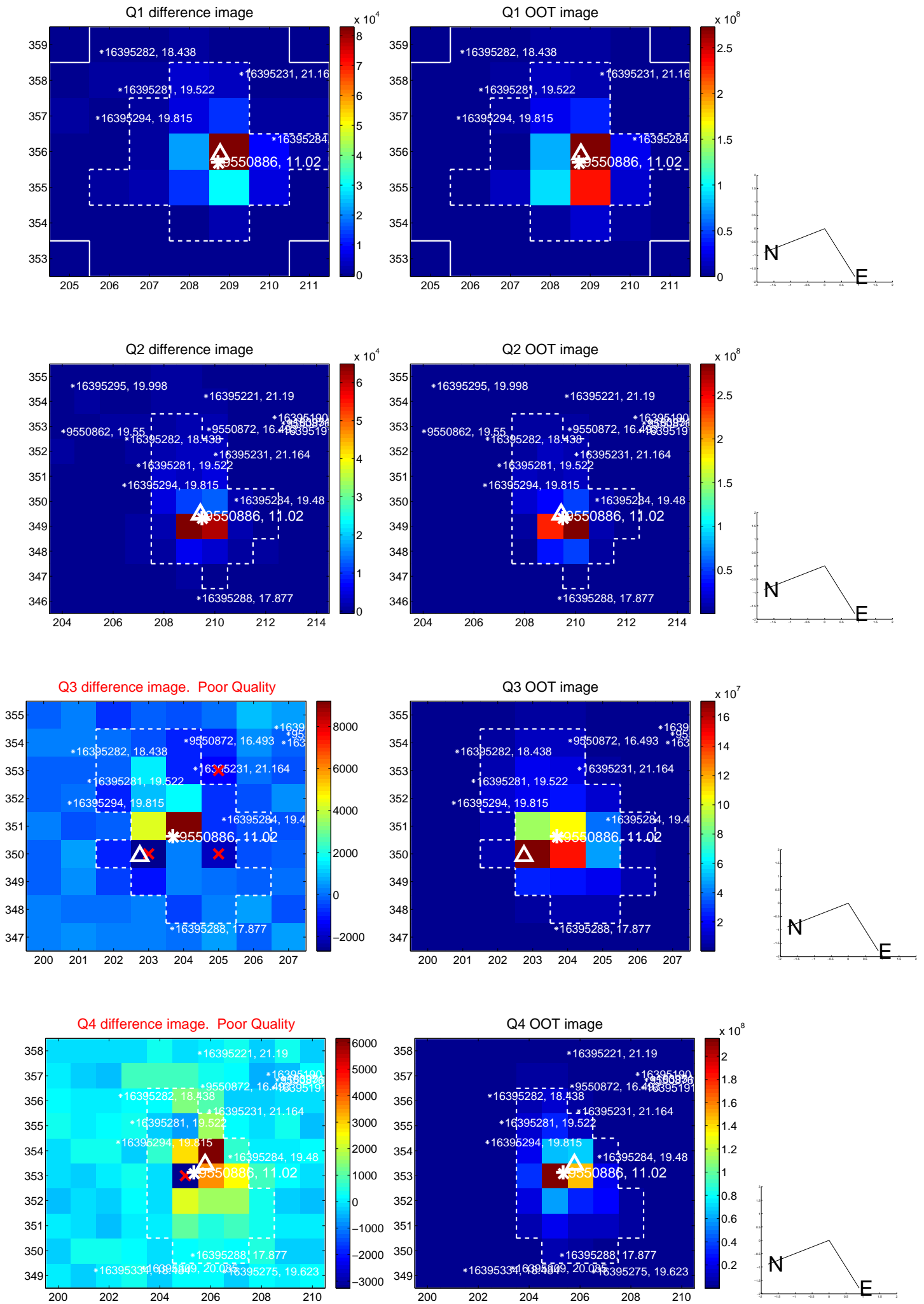
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.063 ± 0.277	0.23	-0.046 ± 0.278	0.042 ± 0.334
PRF-fit source offset from KIC position	0.183 ± 0.258	0.71	-0.164 ± 0.260	0.080 ± 0.354
photometric centroid source offset	0.17 ± 0.13	1.35	-0.17 ± 0.13	0.03 ± 0.09

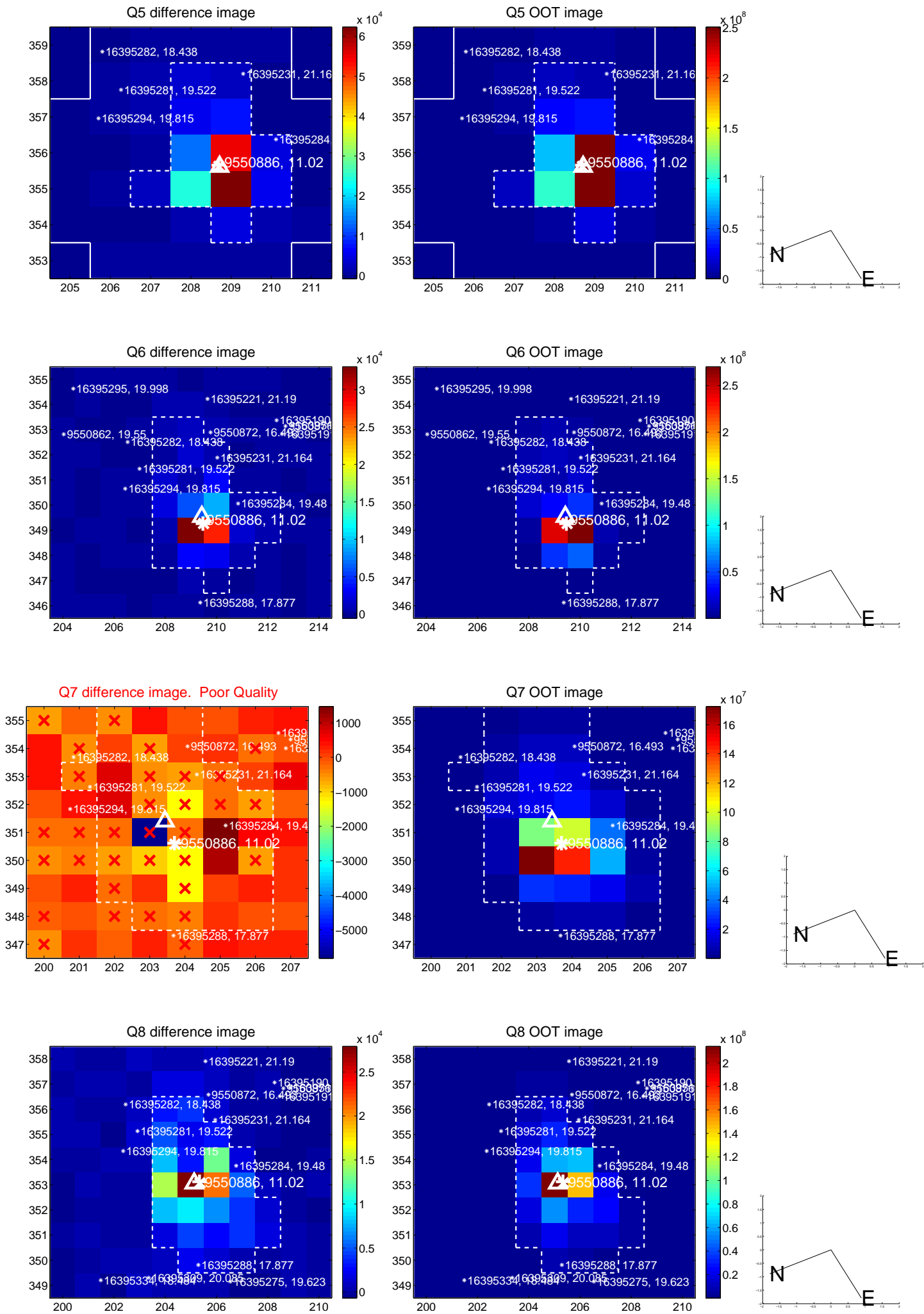


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

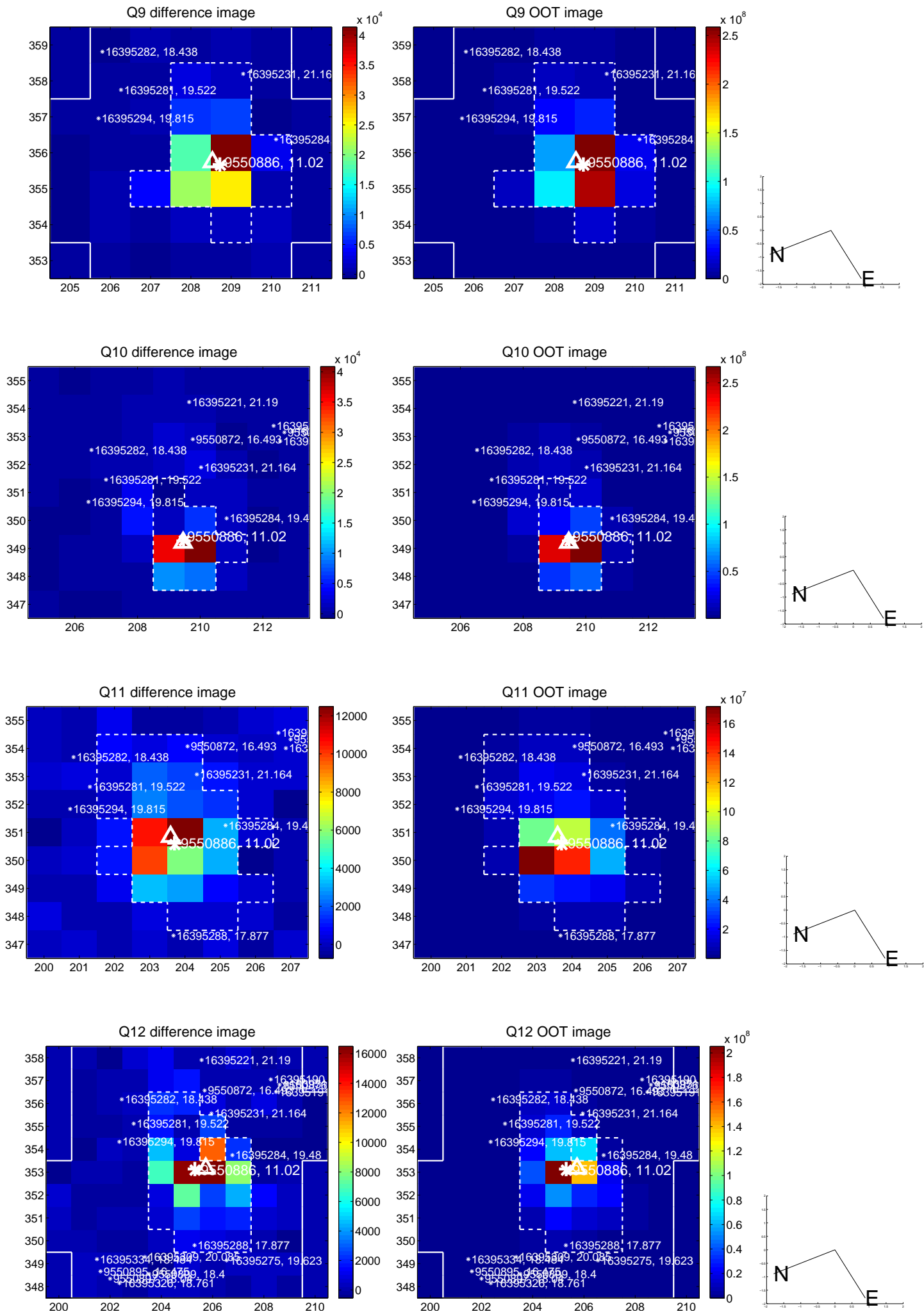
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



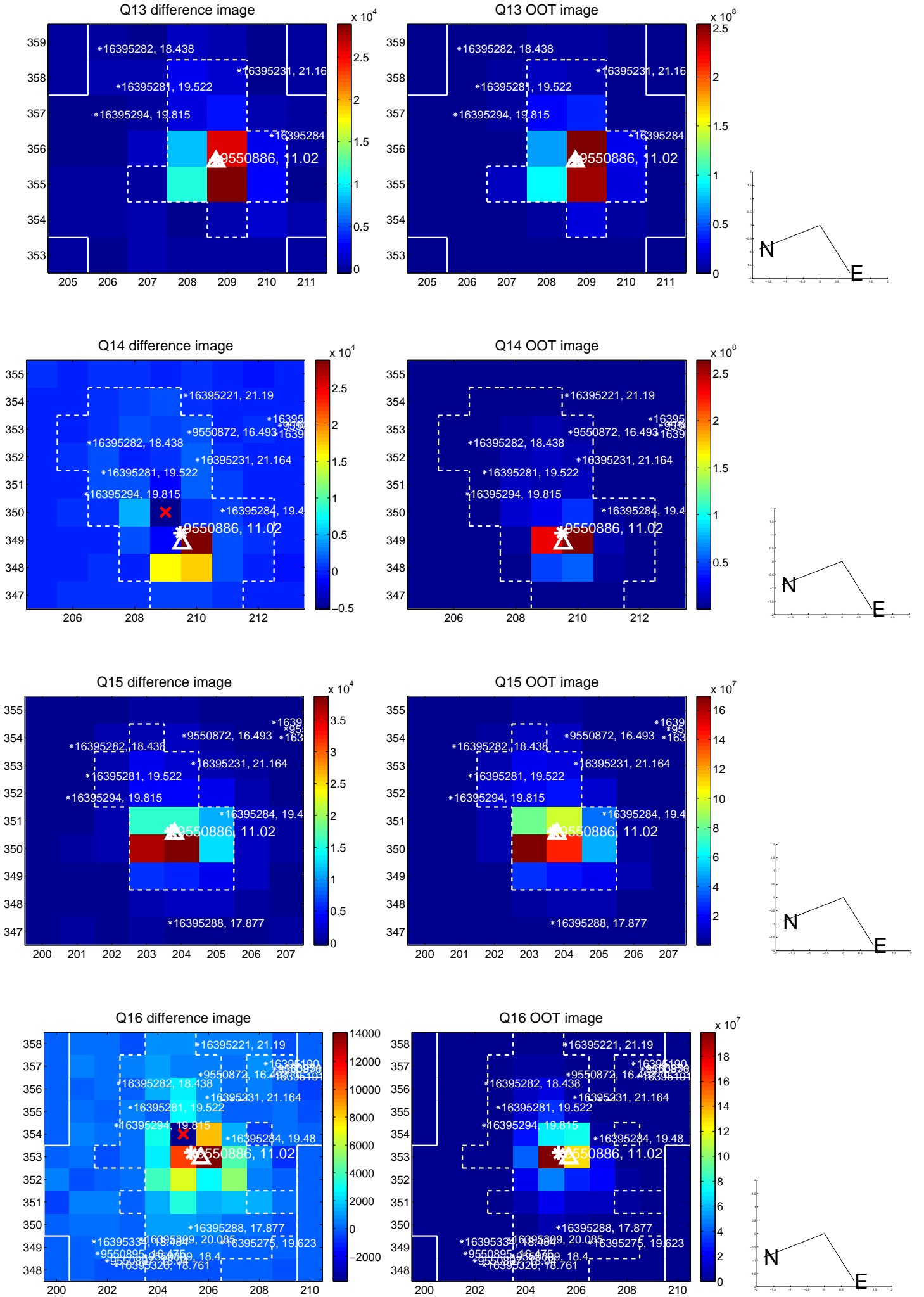
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



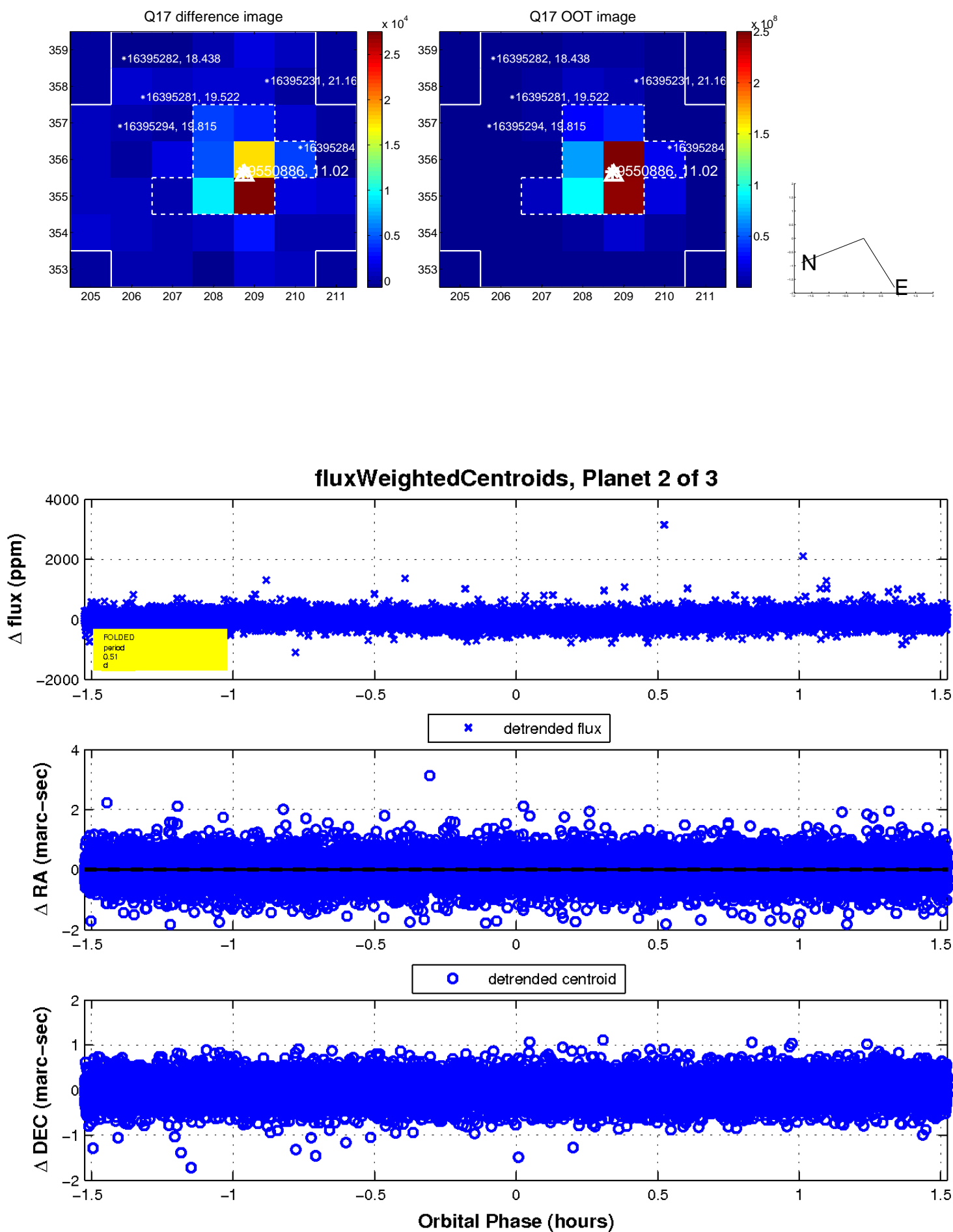
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



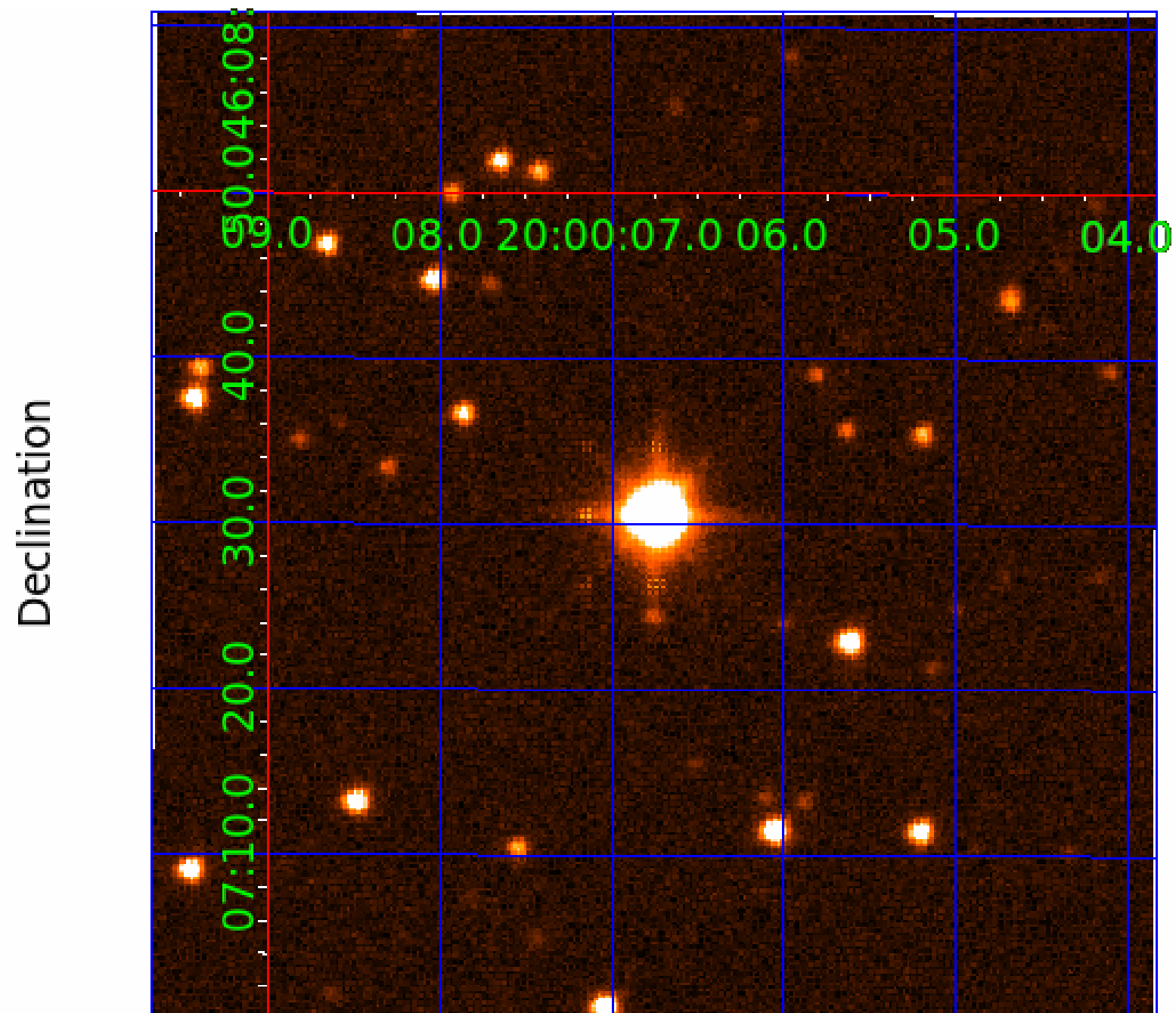
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009550886

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})
009550886-01	OBS	No	0.507136	131.578551	74.5	0.538	13.8	18.1	2.71	7721	2.51	97409.66
009550886-02	OBS	No	0.507137	131.744613	136.0	0.508	13.1	27.9	2.71	7721	3.34	97409.59
009550886-03	OBS	No	0.507144	131.906748	72.4	1.017	12.5	17.1	2.71	7721	2.46	97407.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009550886-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
009550886-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
009550886-03	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

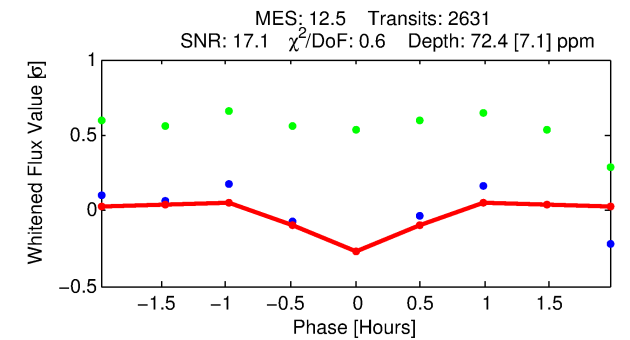
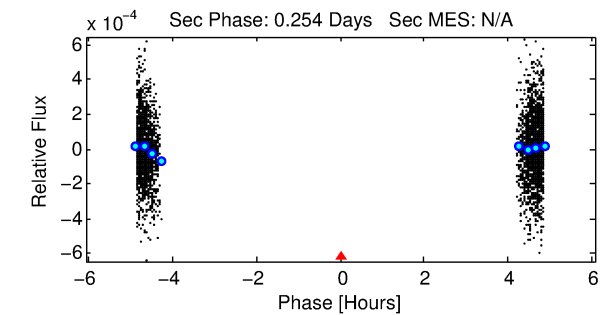
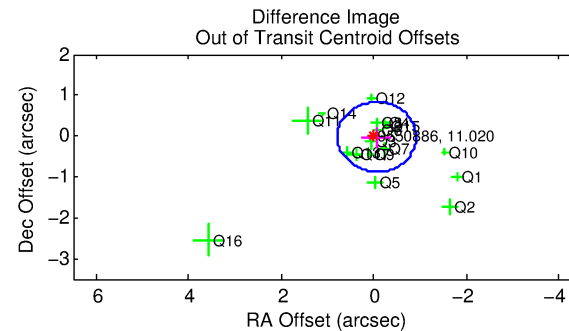
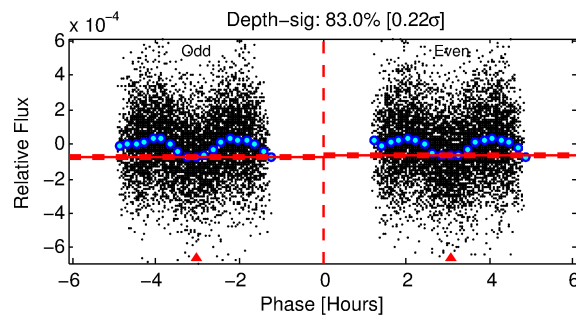
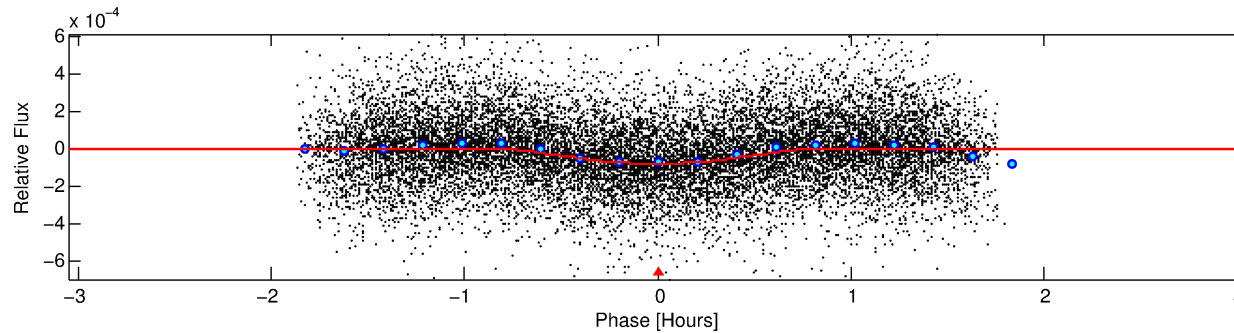
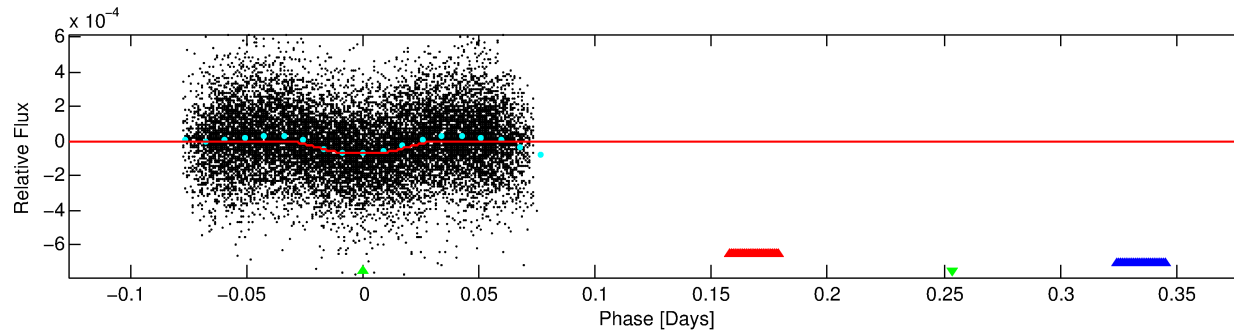
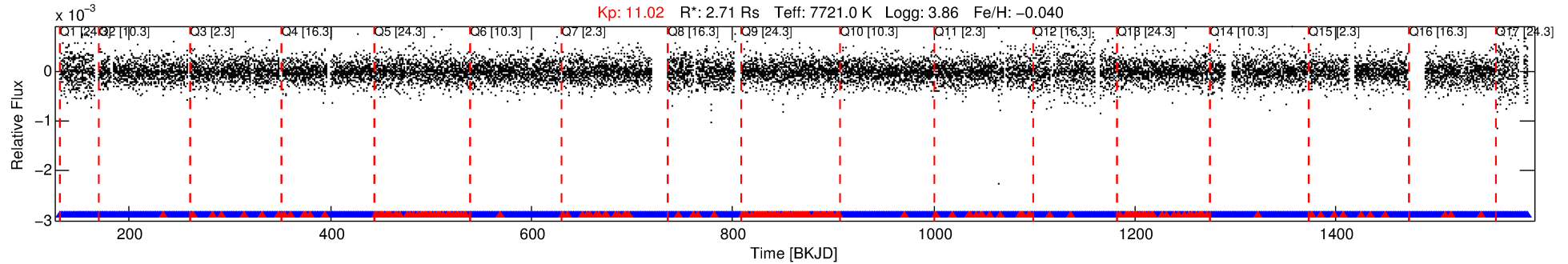
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009550886-03

No Significant Match Found

DV One-Page Summary

KIC: 9550886 Candidate: 3 of 3 Period: 0.507 d



DV Fit Results:

Period = 0.50714 [0.00001] d
Epoch = 131.9067 [0.0007] BKJD
Rp/R* = 0.0083 [0.0013]
a/R* = 3.08 [2.50]
b = 0.64 [0.86]
Seff = 97407.77 [55537.70]
Teq = 4505 [642] K
Rp = 2.46 [1.01] Re
a = 0.0155 [0.0054] AU

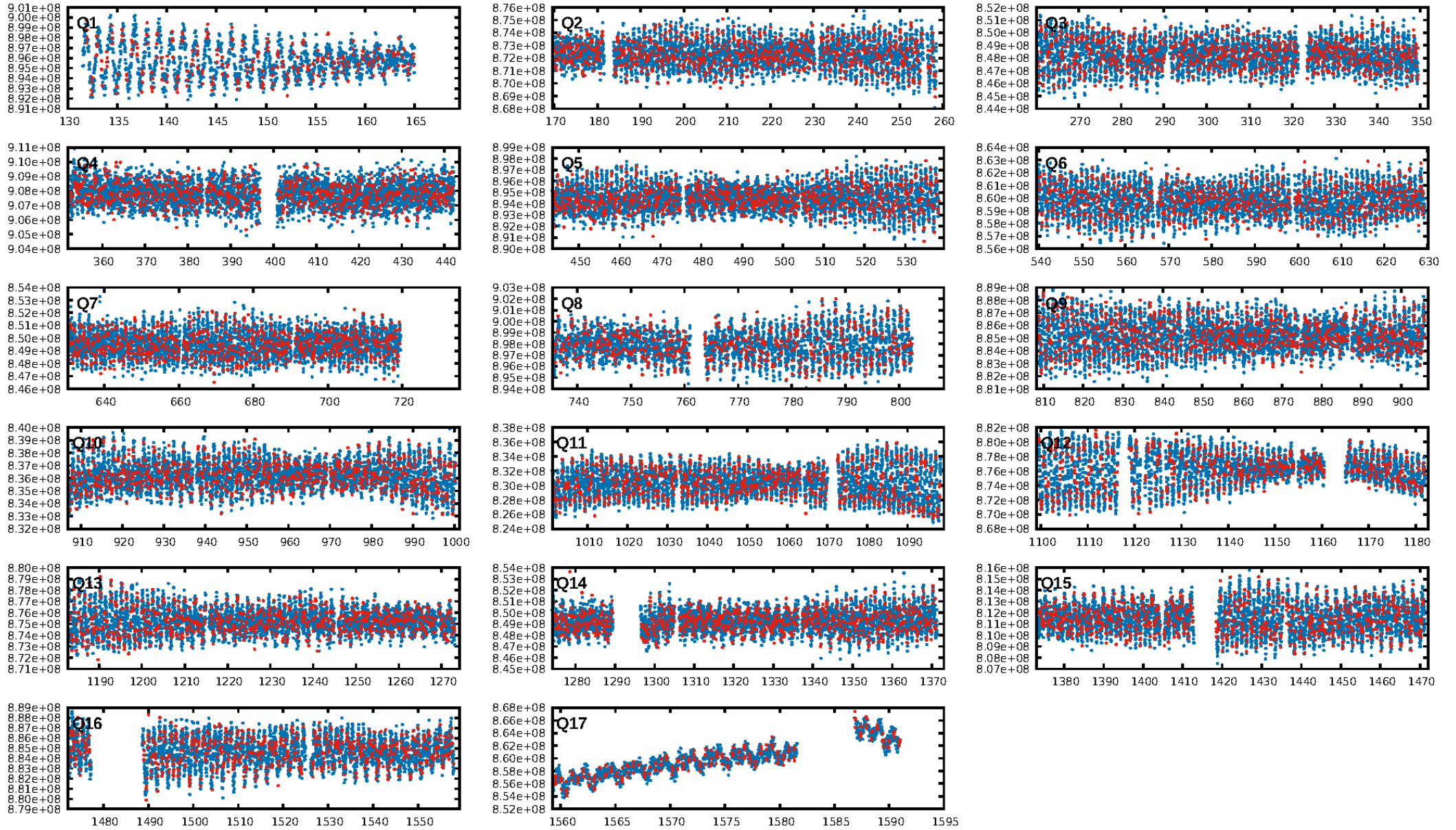
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.91 [2286/2512]
GhostDiagnostic-chr: -17.89
Centroid-sig: N/A
Centroid-so: 0.130 arcsec [1.01 σ]
OotOffset-rm: 0.066 arcsec [0.23 σ]
KicOffset-rm: 0.208 arcsec [0.70 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]

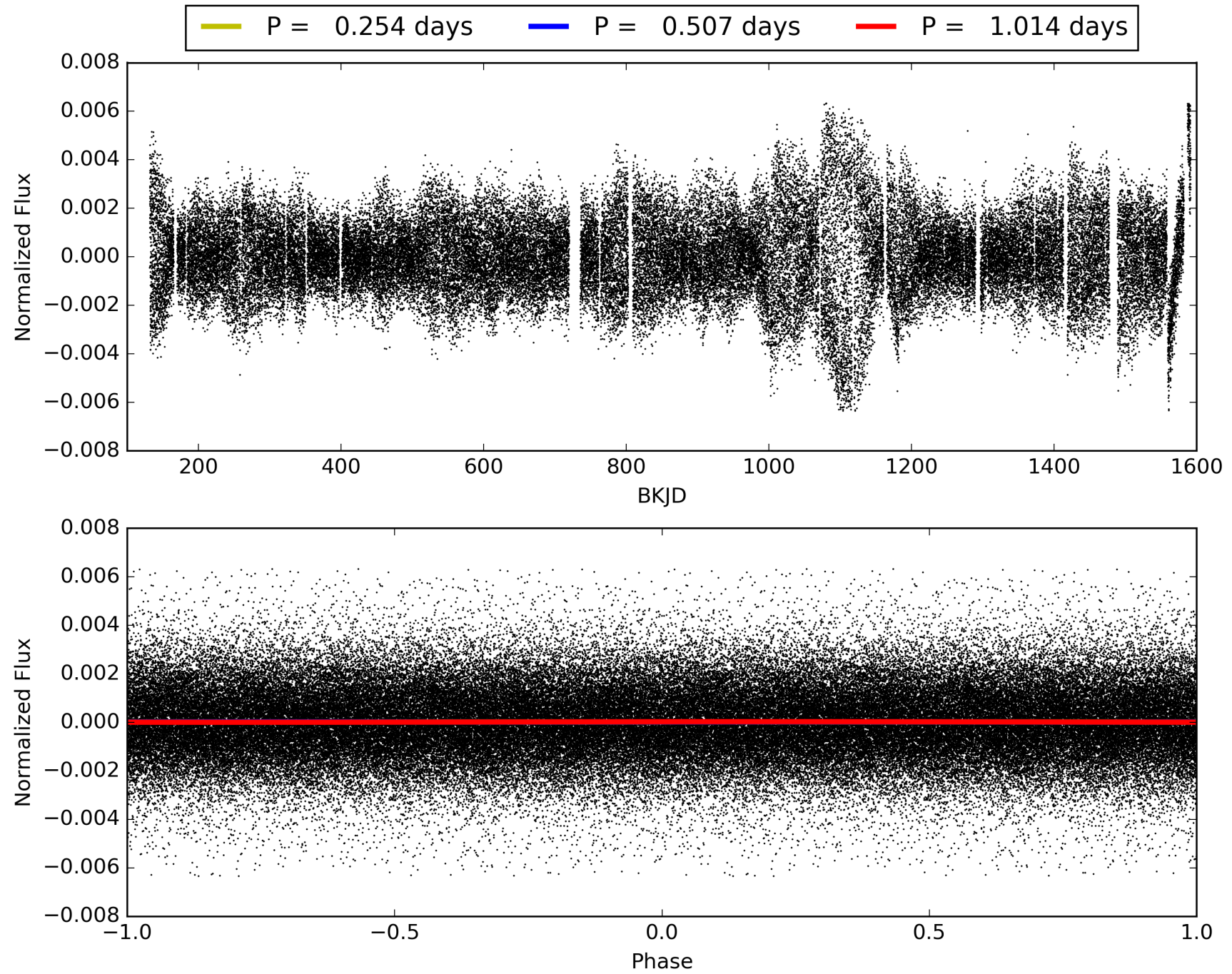
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:11:02 Z

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

TCE 009550886-03, PDC Light Curves

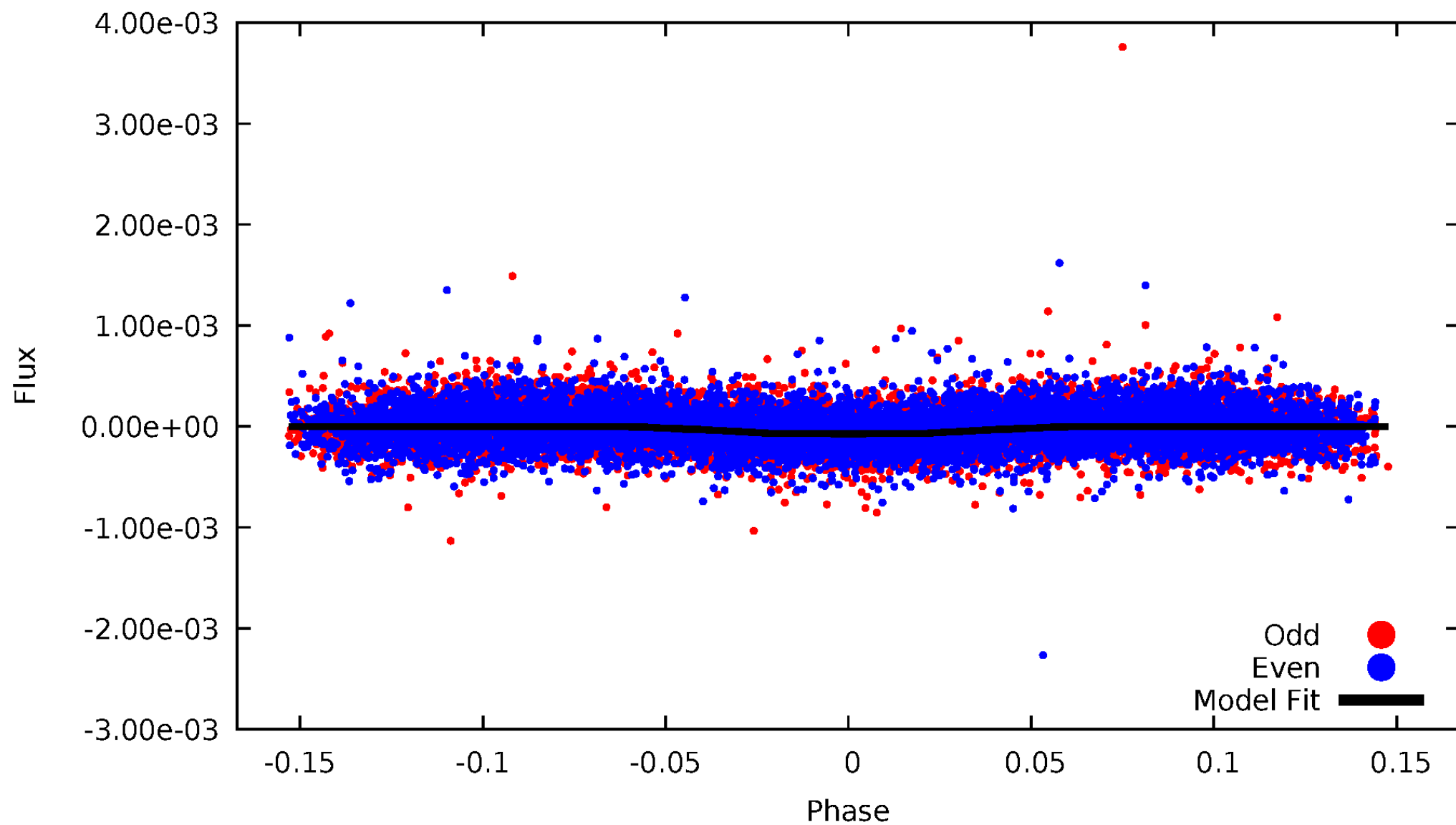


TCE 009550886-03



DV Odd/Even

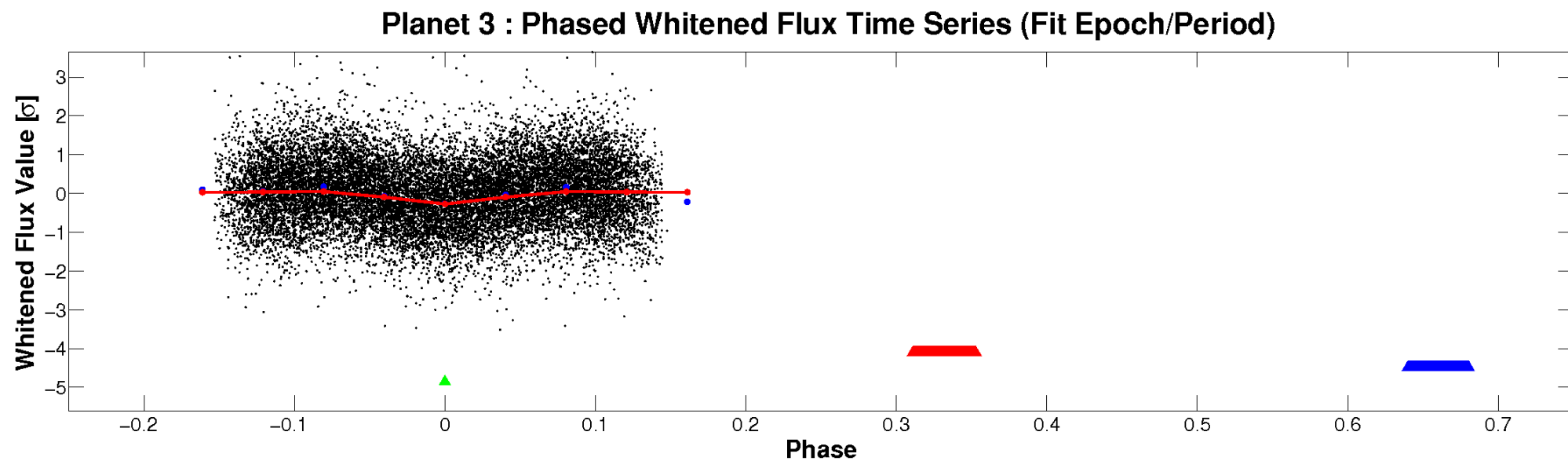
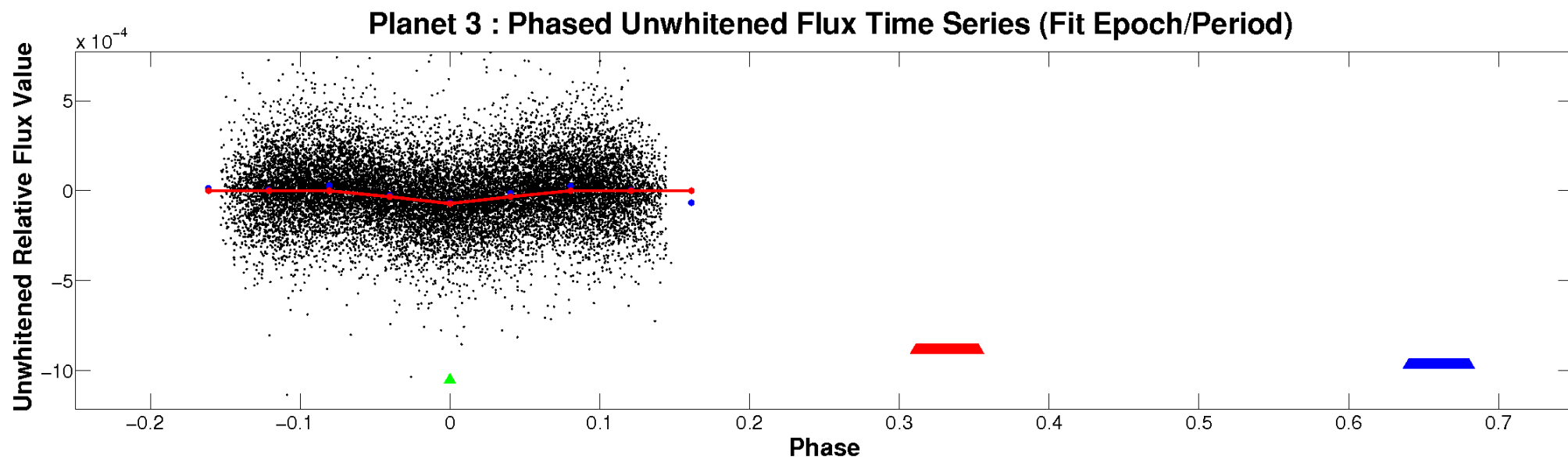
TCE 009550886-03



ALT Odd/Even

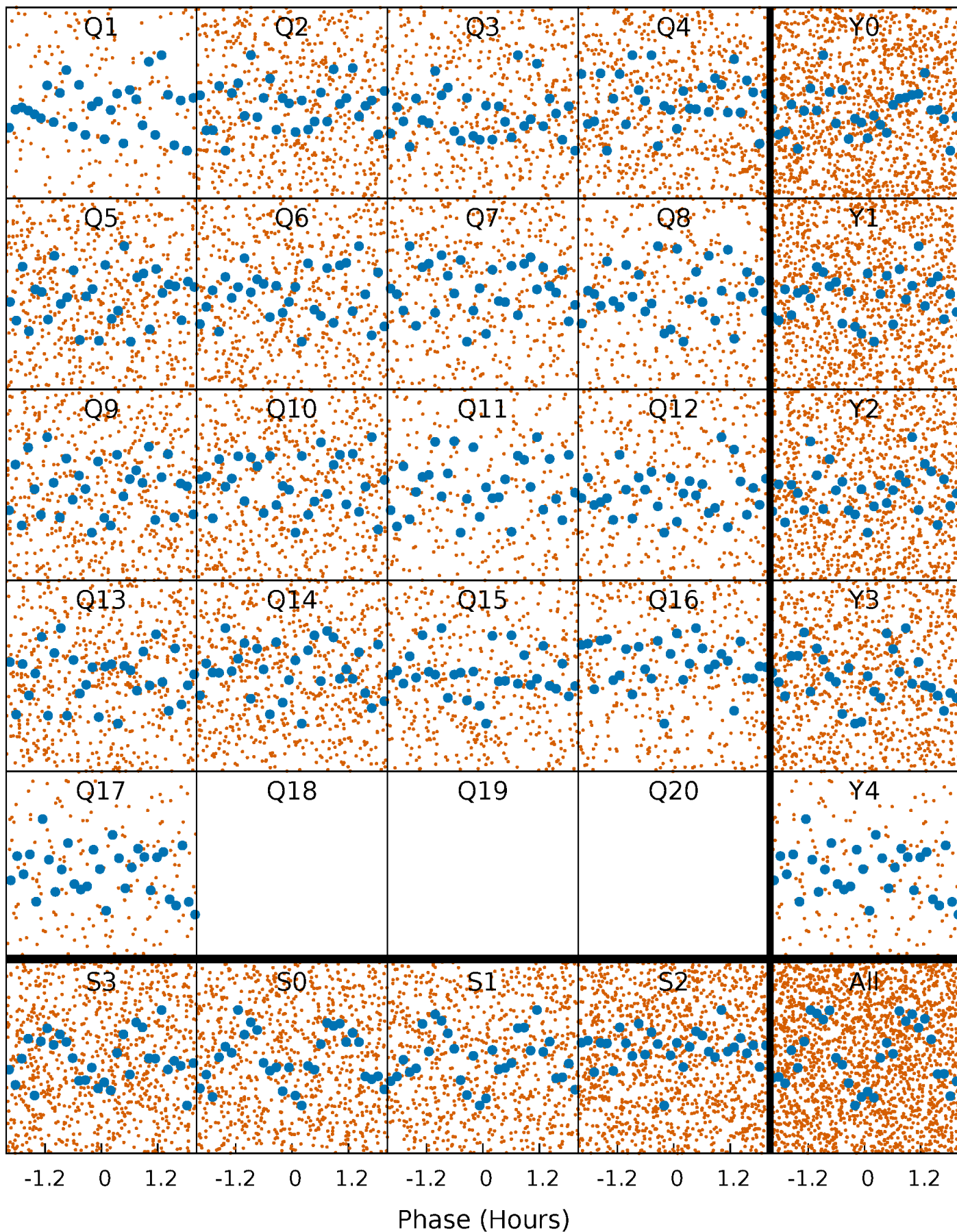
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



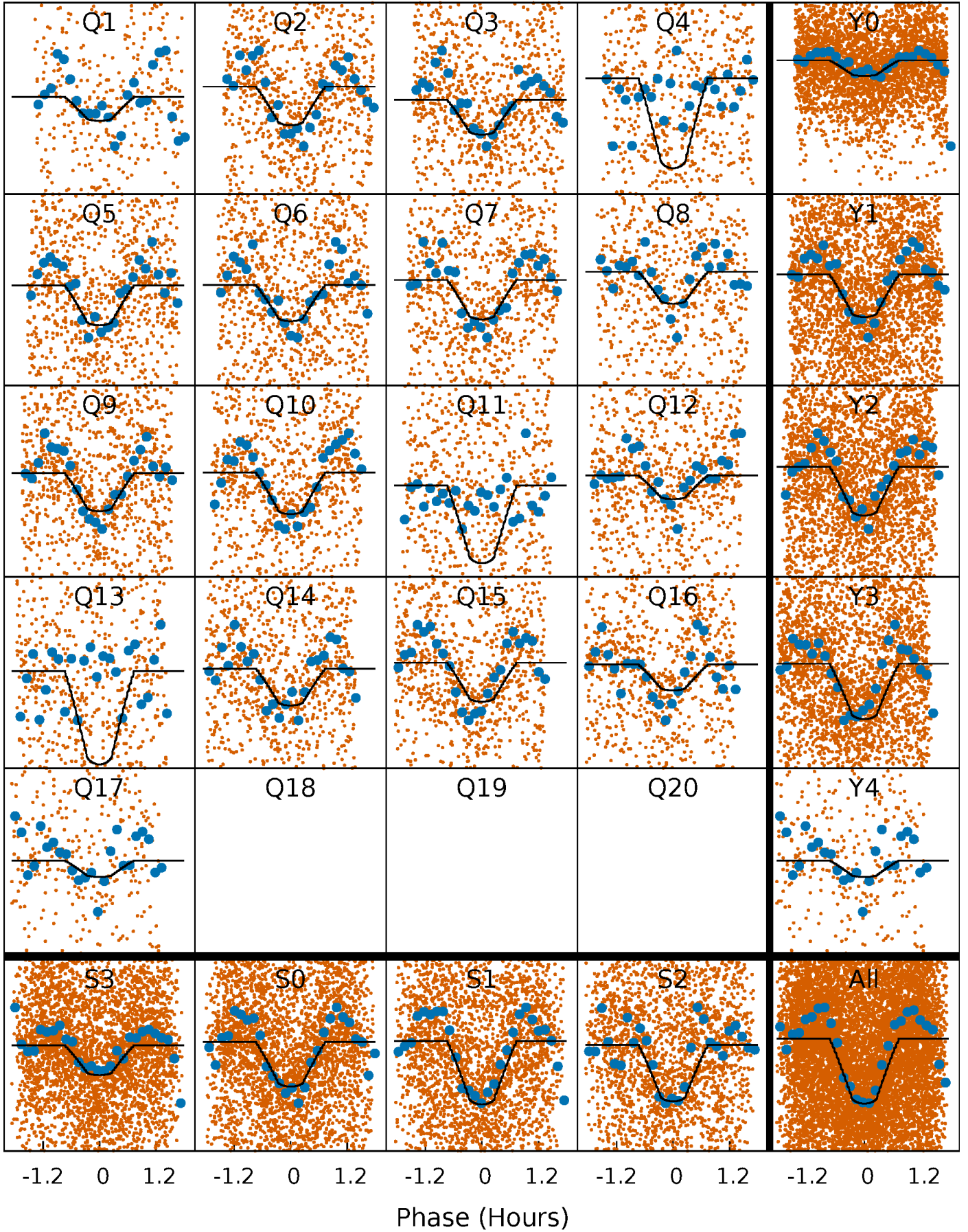
PDC Quarter-Phased Transit Curves

TCE 009550886-03 P= 0.507144 Days $T_0=131.906748$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009550886-03 $P = 0.507144$ Days $T_0 = 131.906748$ (BKJD)

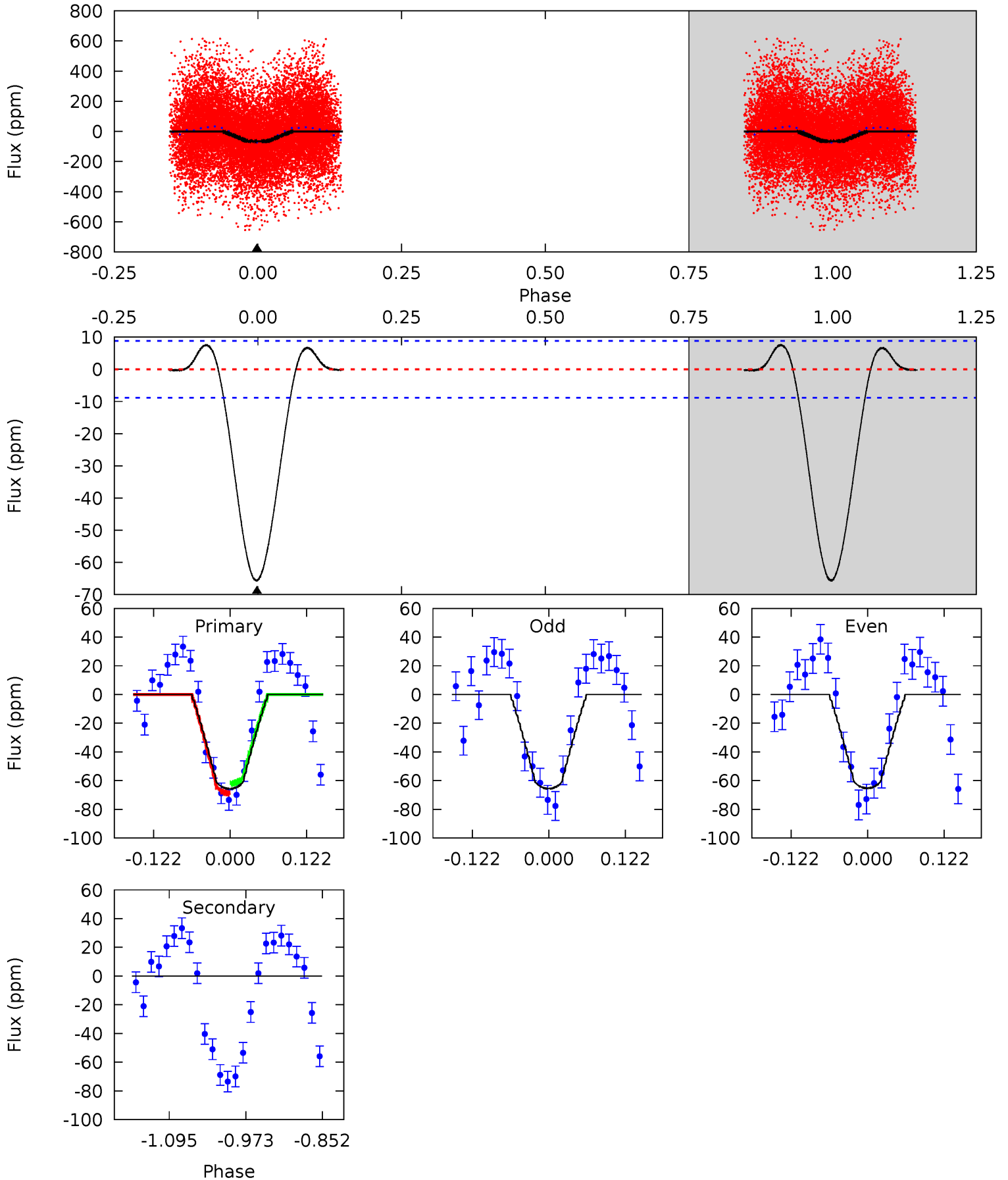


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009550886-03, P = 0.507144 Days, E = 131.399604 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.6	0	0	0	4.52	1.55	0.18	33.6	33.6	0	0	0.09	0.97	0.10	1.79



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009550886

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7721^{+211}_{-316}	$3.858^{+0.315}_{-0.105}$	$-0.040^{+0.200}_{-0.350}$	$2.715^{+0.443}_{-1.034}$	$1.938^{+0.105}_{-0.473}$	$0.137^{+0.327}_{-0.046}$
	+3%/-4%	+8%/-3%	+500%/-875%	+16%/-38%	+5%/-24%	+240%/-34%
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 009550886-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 2	$2.31^{+0.49}_{-0.52}$	6153^{+405}_{-575}	-5030^{+440}_{-327}	$-0.002^{+0.048}_{-0.050}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

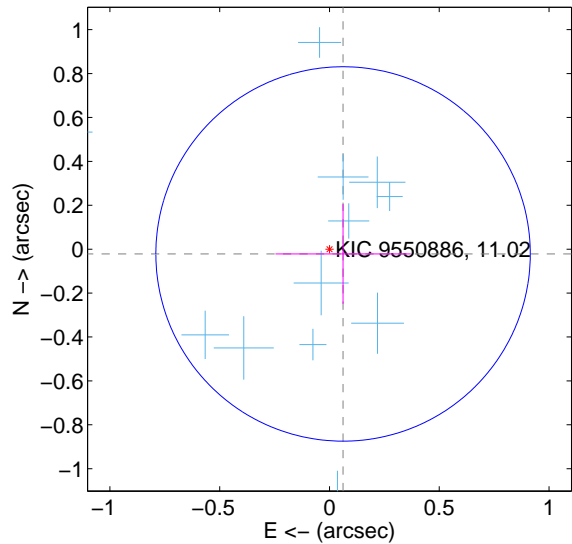
Supplemental centroid analysis for 009550886-03. **Kepler magnitude: 11.02**. Transit SNR 17.12

There are 16 quarters with good PRF difference image offsets

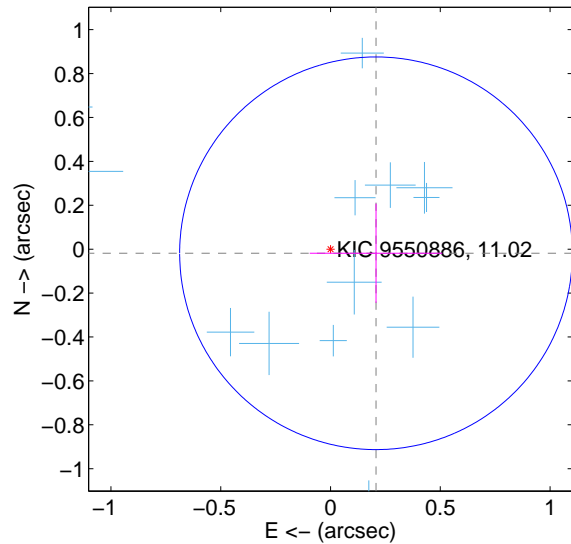
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.284	0.23	-0.062 ± 0.308	-0.022 ± 0.227
PRF-fit source offset from KIC position	0.208 ± 0.298	0.70	-0.207 ± 0.302	-0.019 ± 0.226
photometric centroid source offset	0.13 ± 0.13	1.01	-0.04 ± 0.17	-0.12 ± 0.12

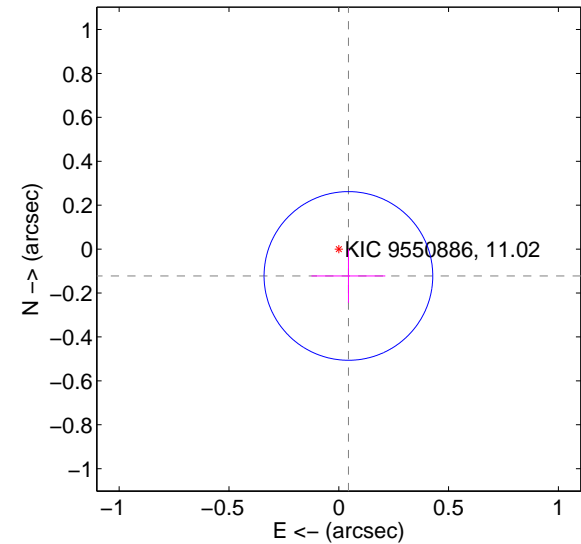
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

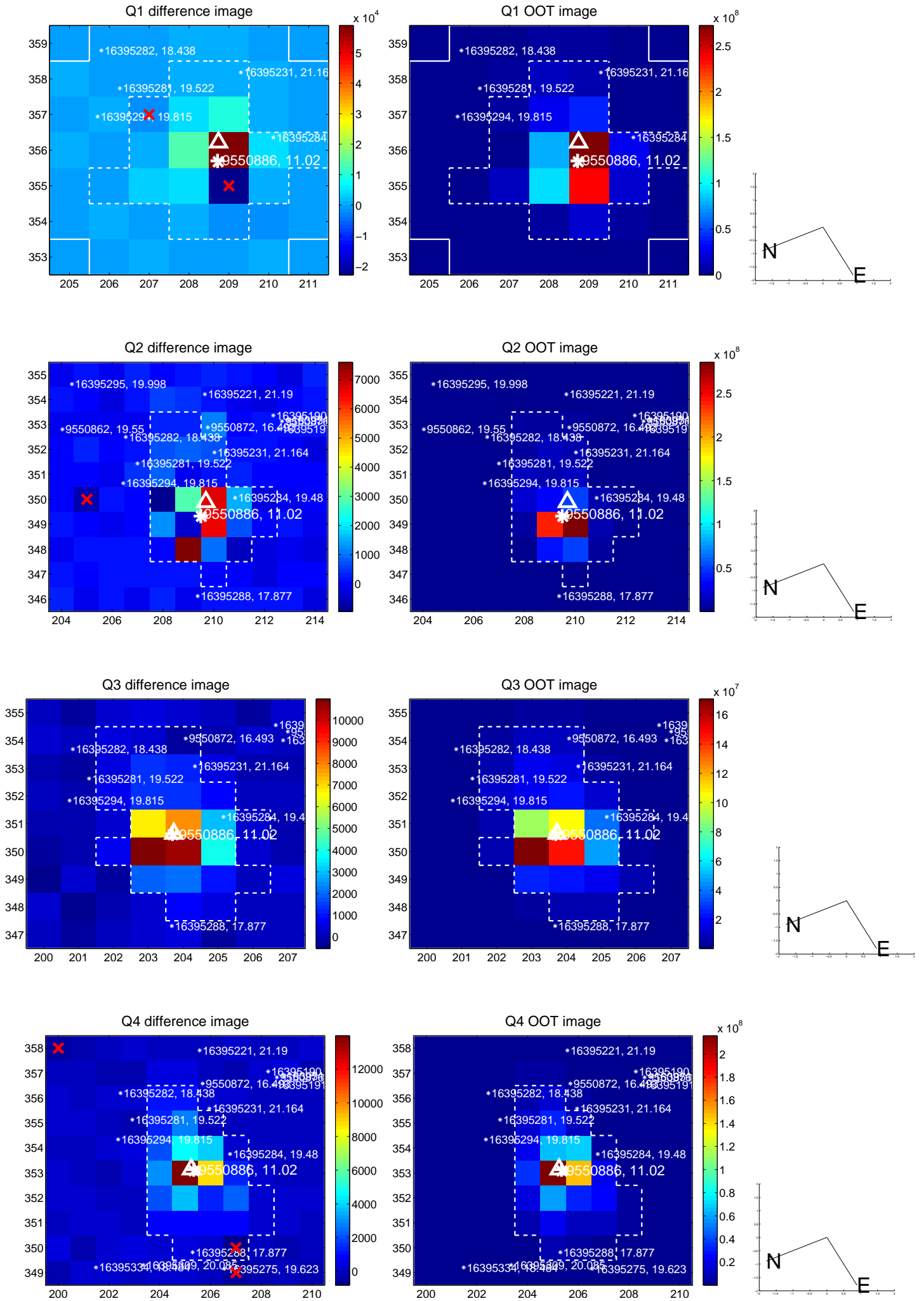


offset from photometric centroids

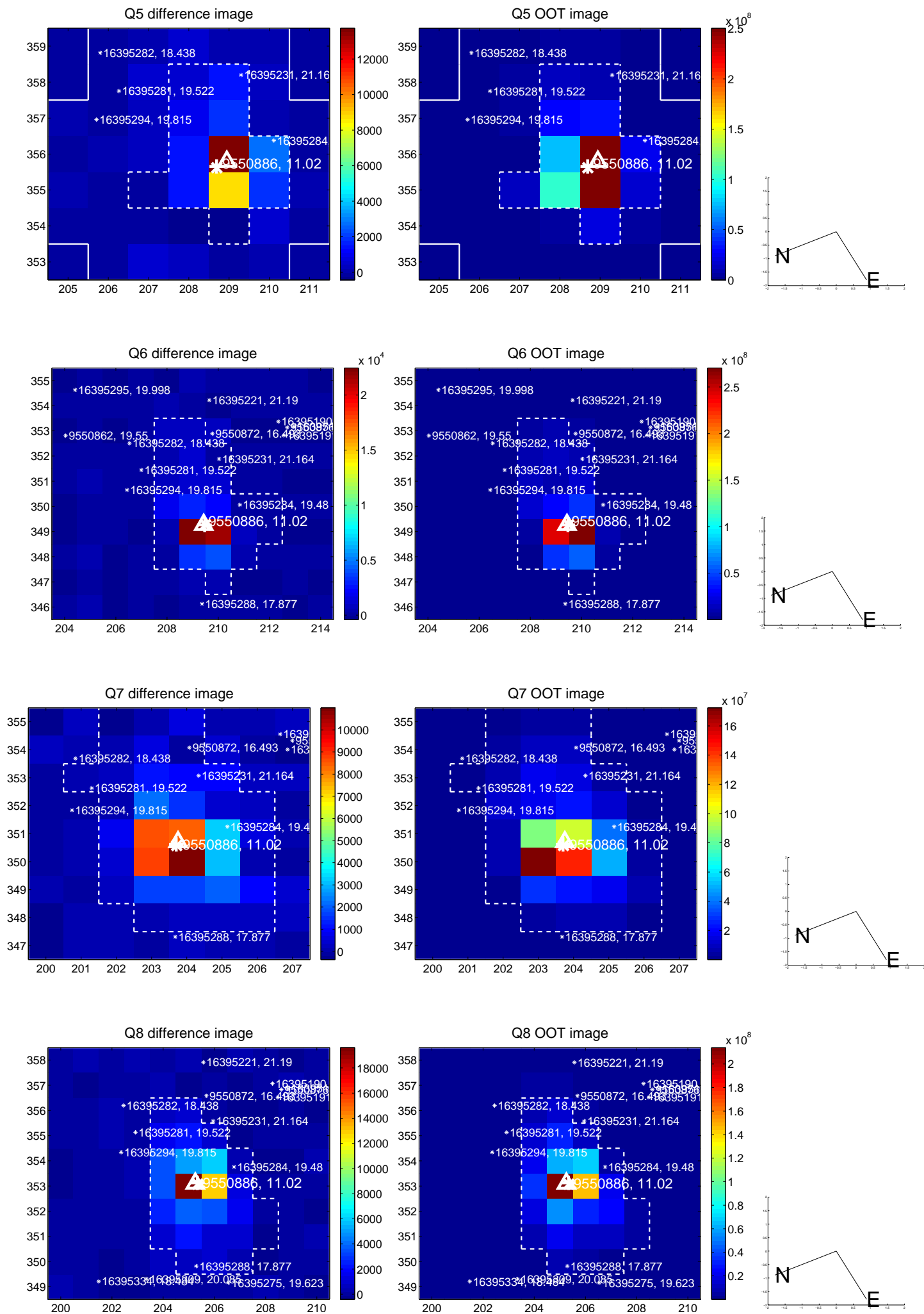


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

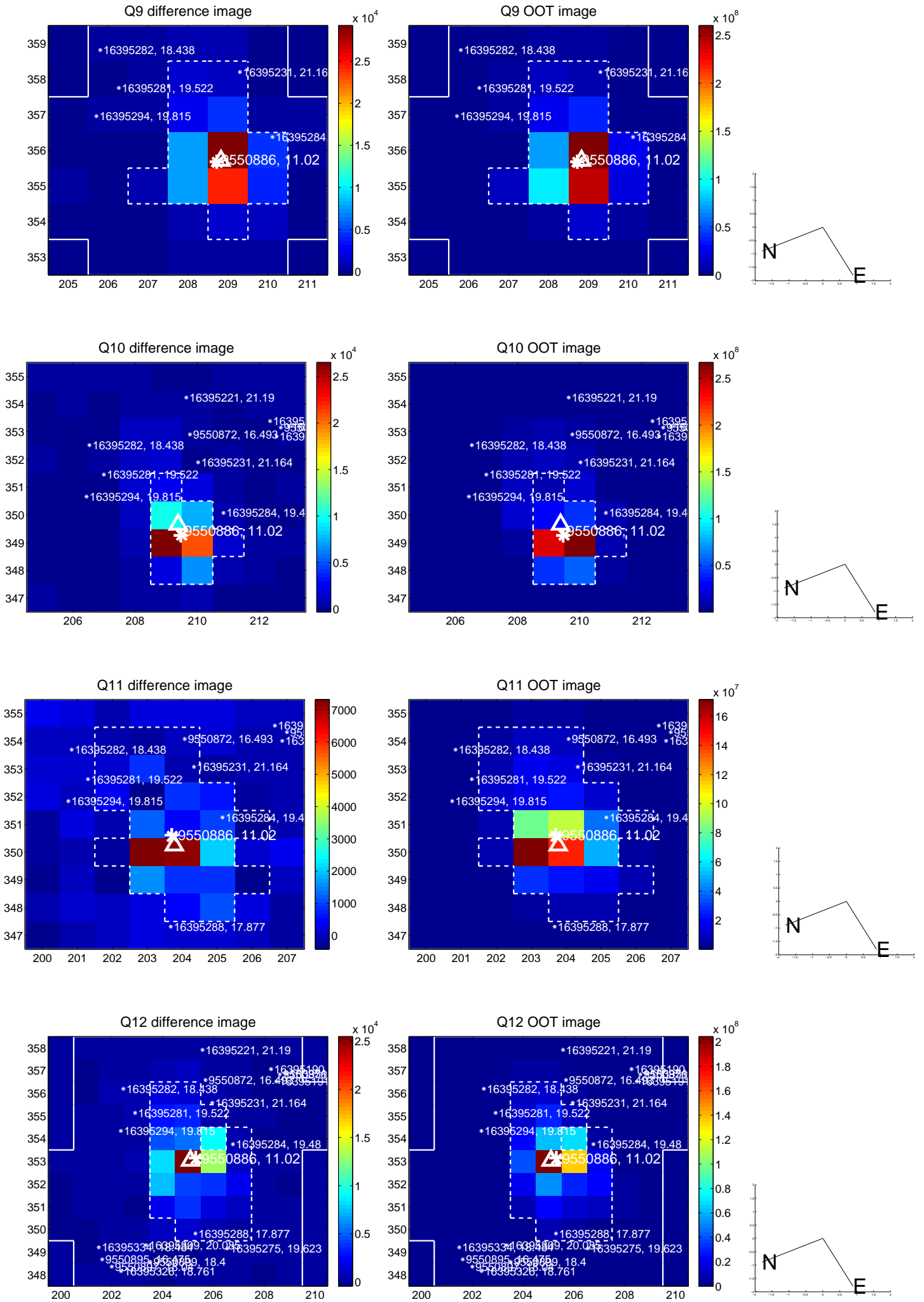
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



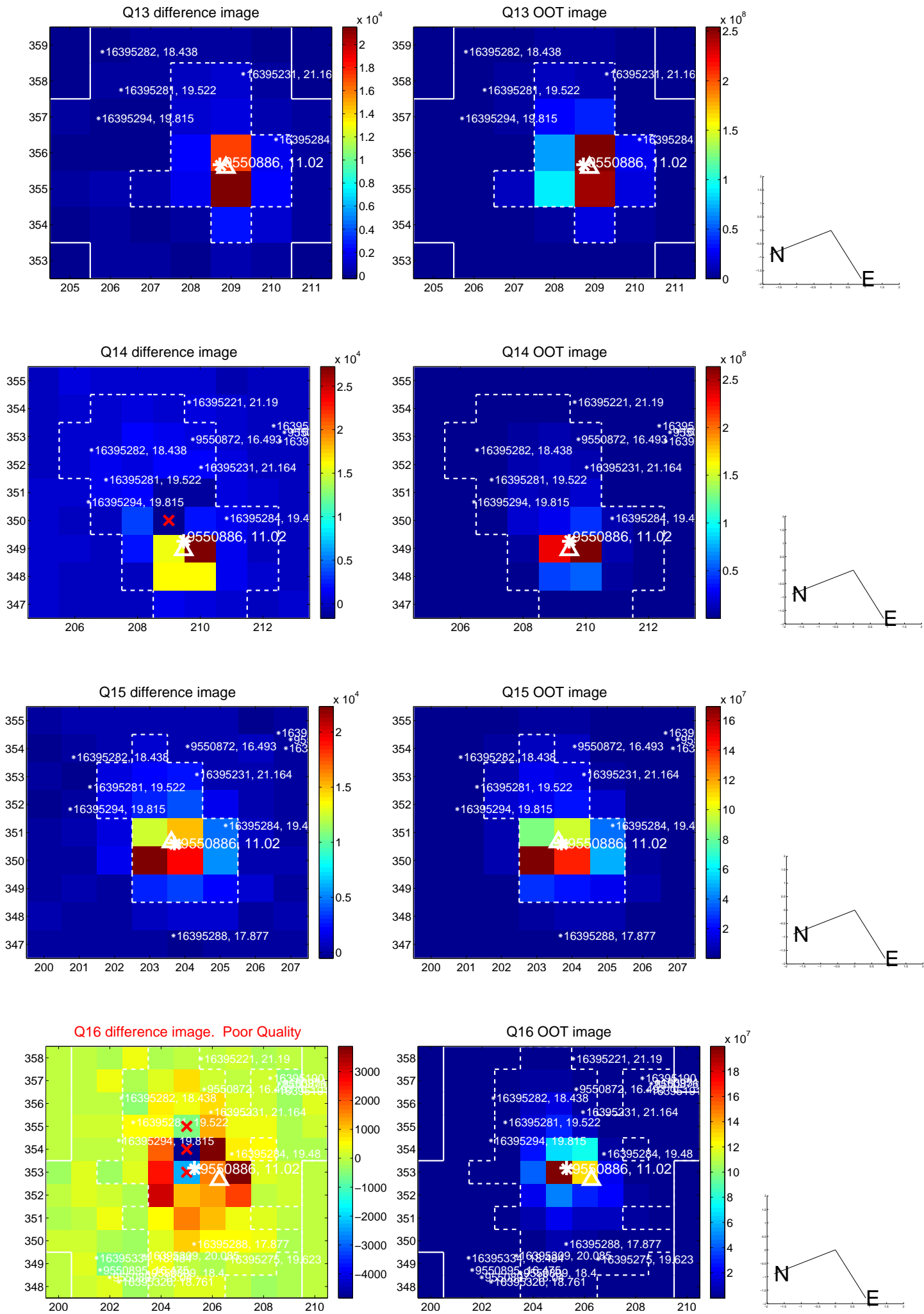
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



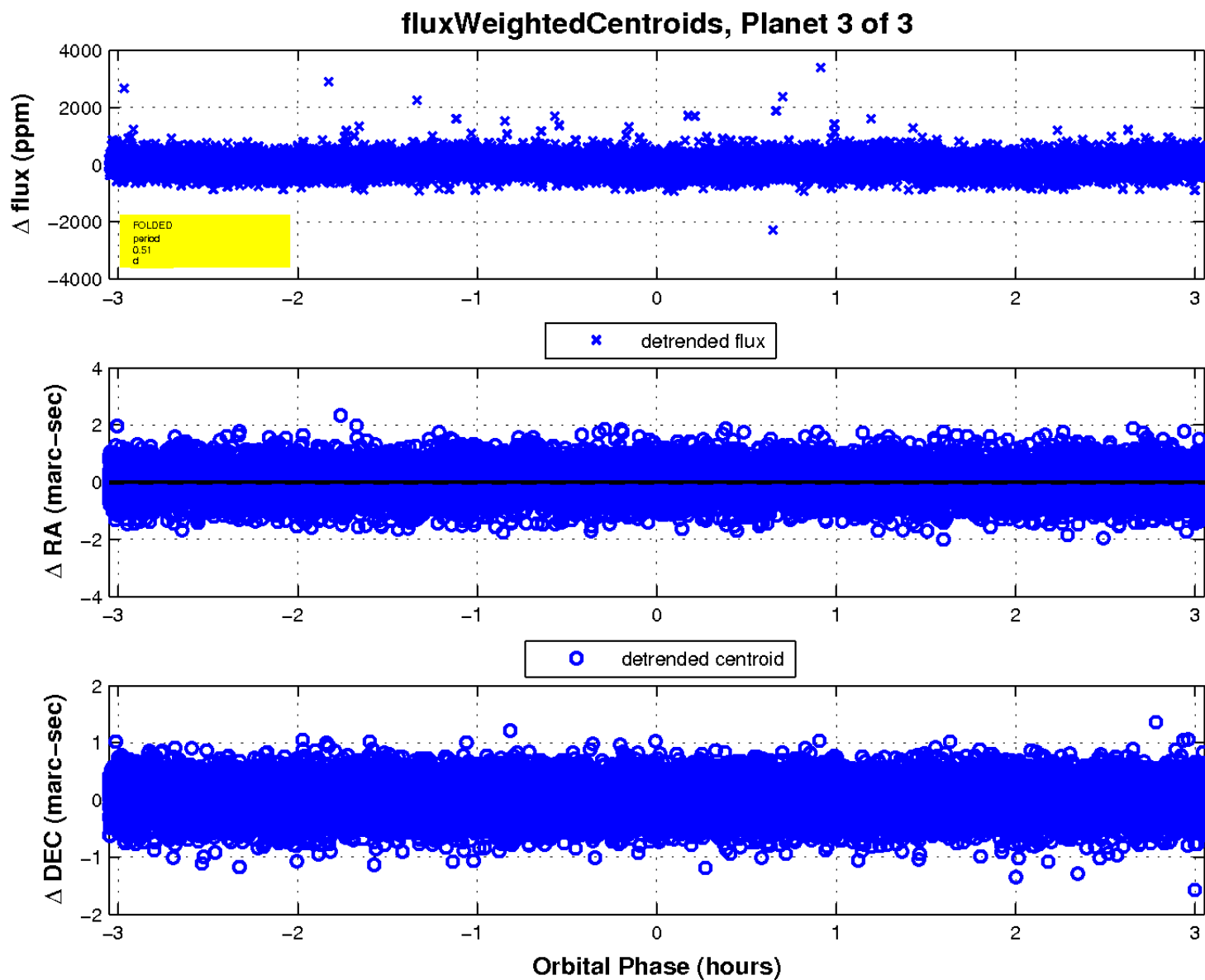
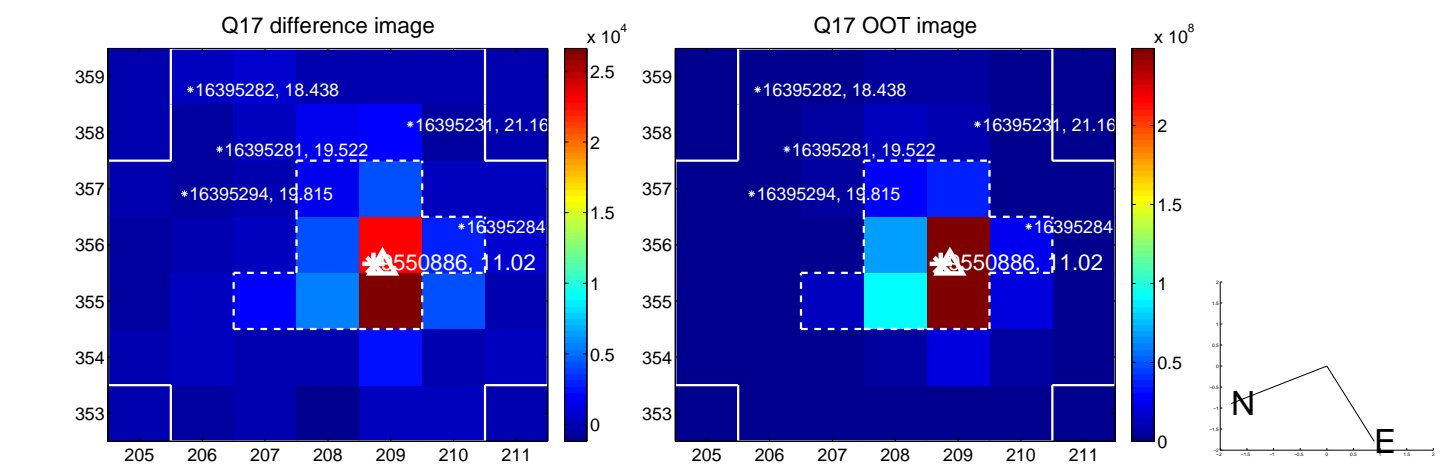
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

