

KIC 008780205

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})
008780205-01	OBS	No	0.582549	131.908792	19.8	4.362	8.4	4.8	1.22	6446	0.59	12701.41
008780205-02	OBS	No	10.915298	142.263413	1341.3	1.301	12.1	14.4	1.22	6446	4.52	255.22
008780205-03	OBS	No	13.525686	132.051918	2029.2	2.091	15.0	27.0	1.22	6446	5.54	191.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008780205-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008780205-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV
008780205-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

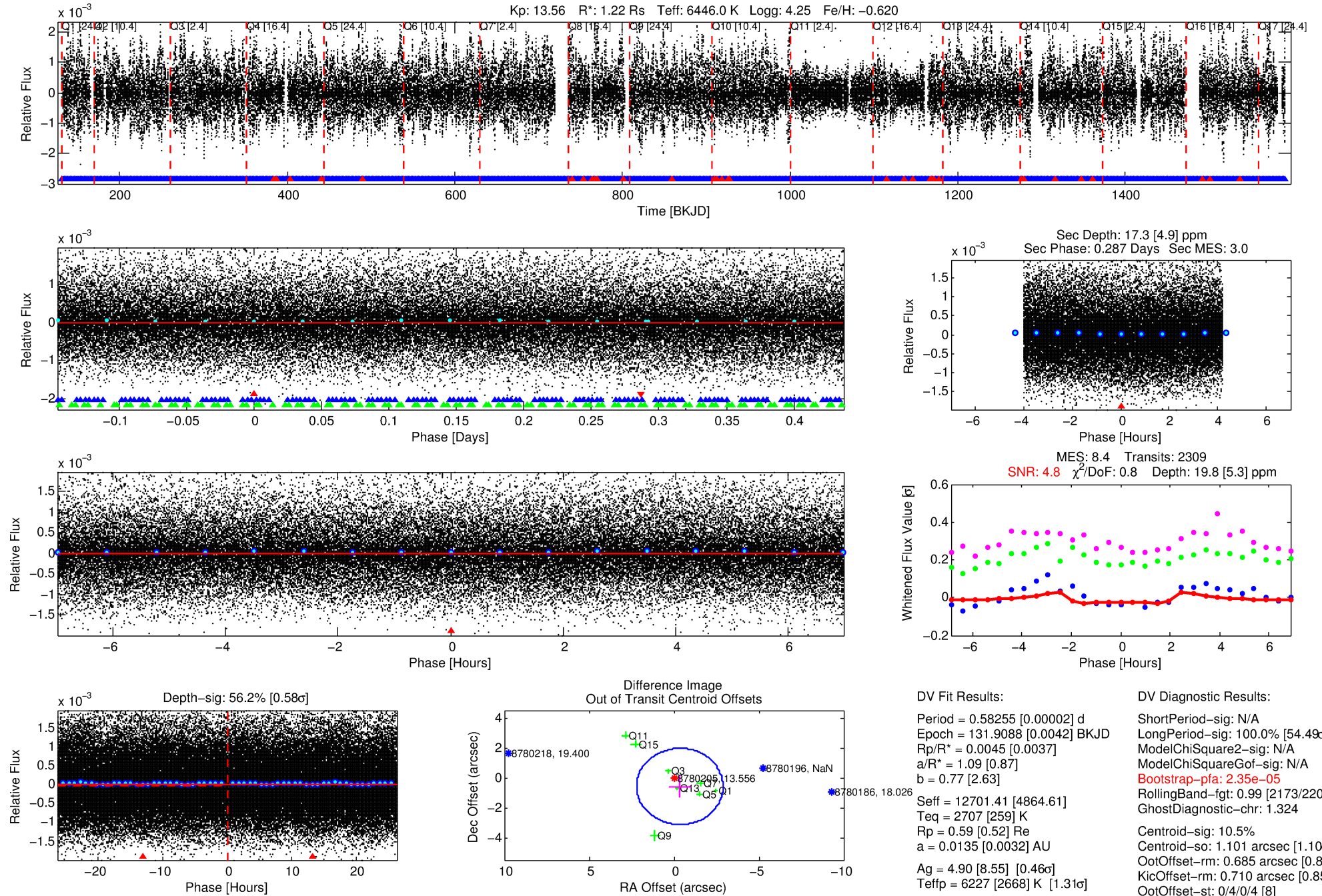
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008780205-01

No Significant Match Found

DV One-Page Summary

KIC: 8780205 Candidate: 1 of 3 Period: 0.583 d



DV Fit Results:

Period = 0.58255 [0.00002] d
Epoch = 131.9088 [0.0042] BKJD
Rp/R* = 0.0045 [0.0037]
a/R* = 1.09 [0.87]
b = 0.77 [2.63]
Seff = 12701.41 [4864.61]
Teff = 2707 [259] K
Rp = 0.59 [0.52] Re
a = 0.0135 [0.0032] AU
Ag = 4.90 [8.55] [0.46σ]
Teffp = 6227 [2668] K [1.31σ]

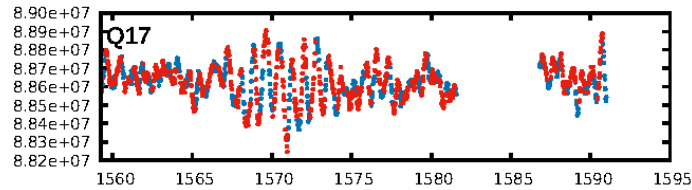
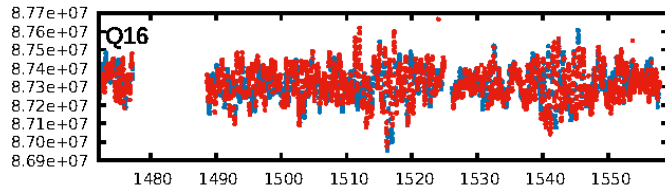
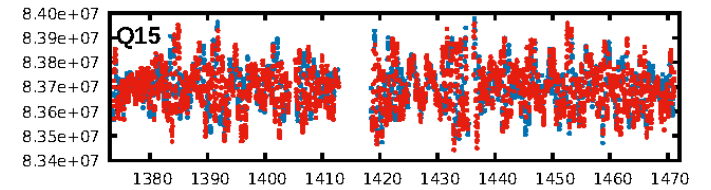
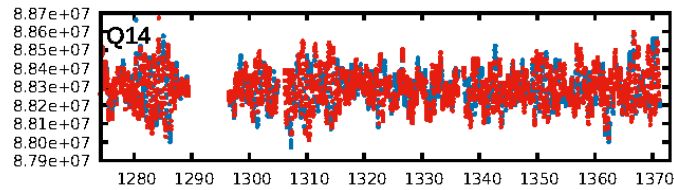
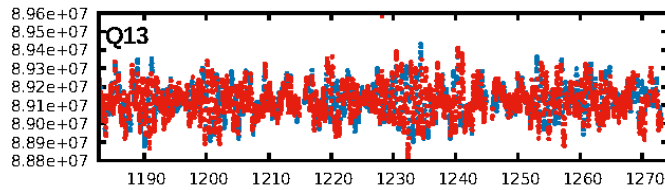
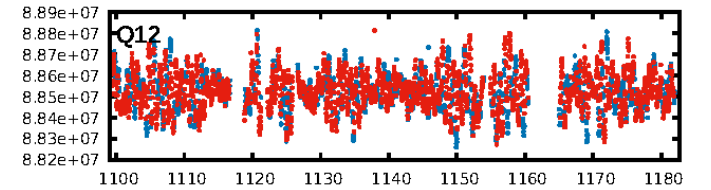
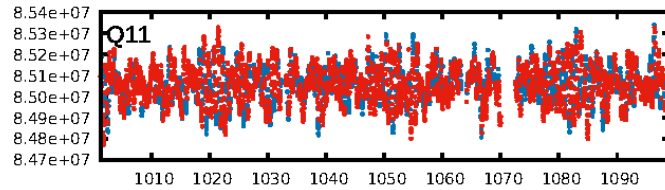
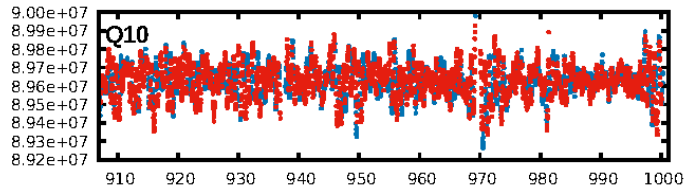
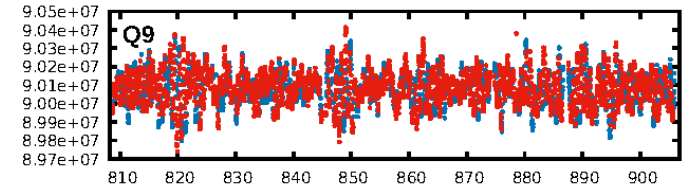
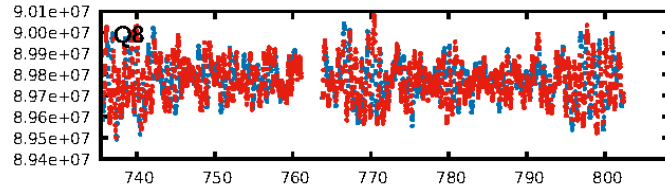
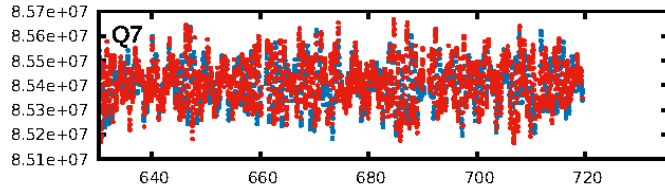
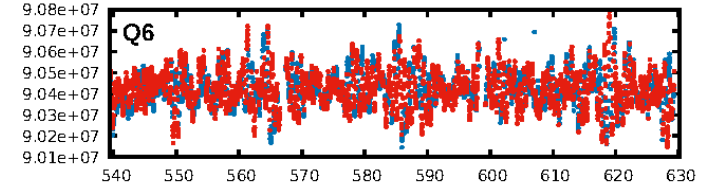
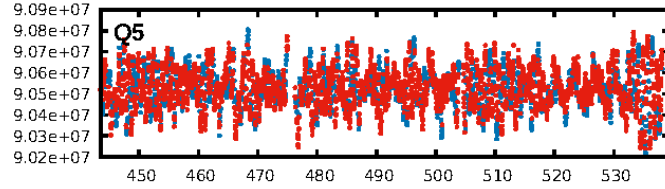
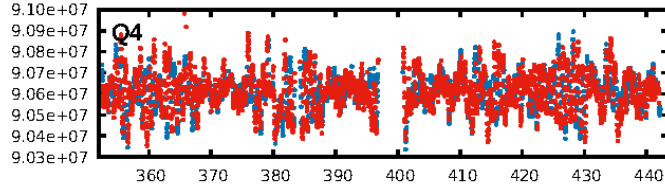
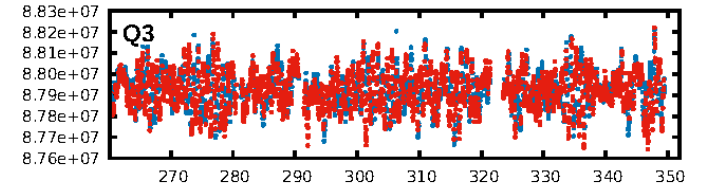
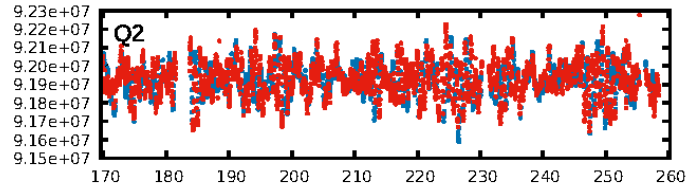
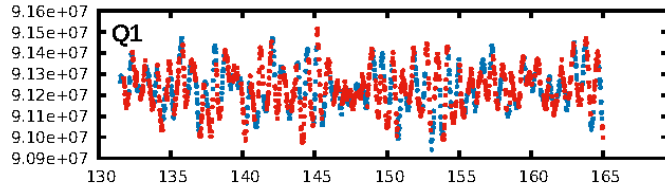
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [54.49σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.35e-05
RollingBand-fgt: 0.99 [2173/2206]
GhostDiagnostic-chr: 1.324
Centroid-sig: 10.5%
Centroid-so: 1.101 arcsec [1.10σ]
OotOffset-rm: 0.685 arcsec [0.81σ]
KicOffset-rm: 0.710 arcsec [0.85σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 1.00 [17/17]

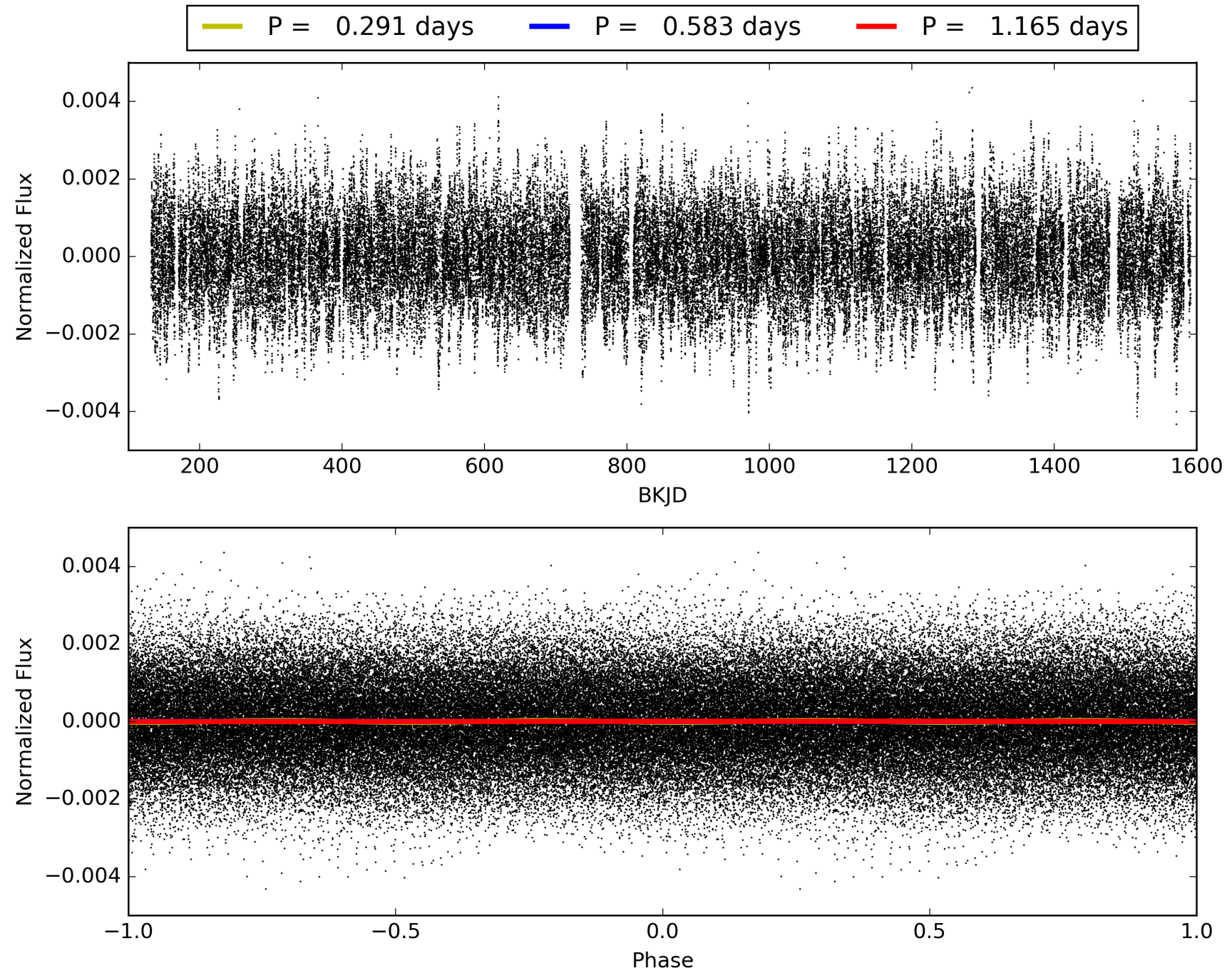
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:15:28 Z

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

TCE 008780205-01, PDC Light Curves

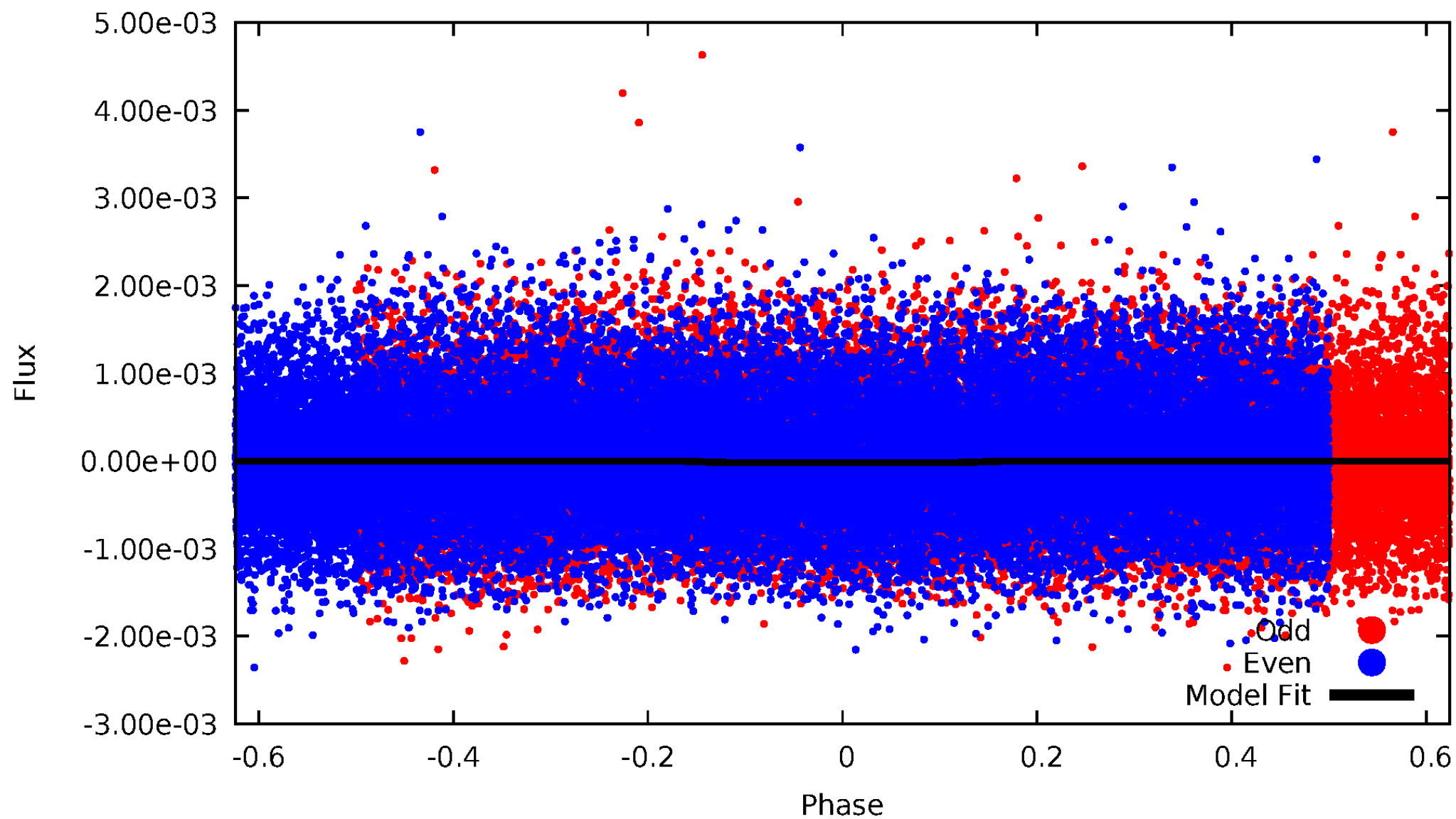


TCE 008780205-01



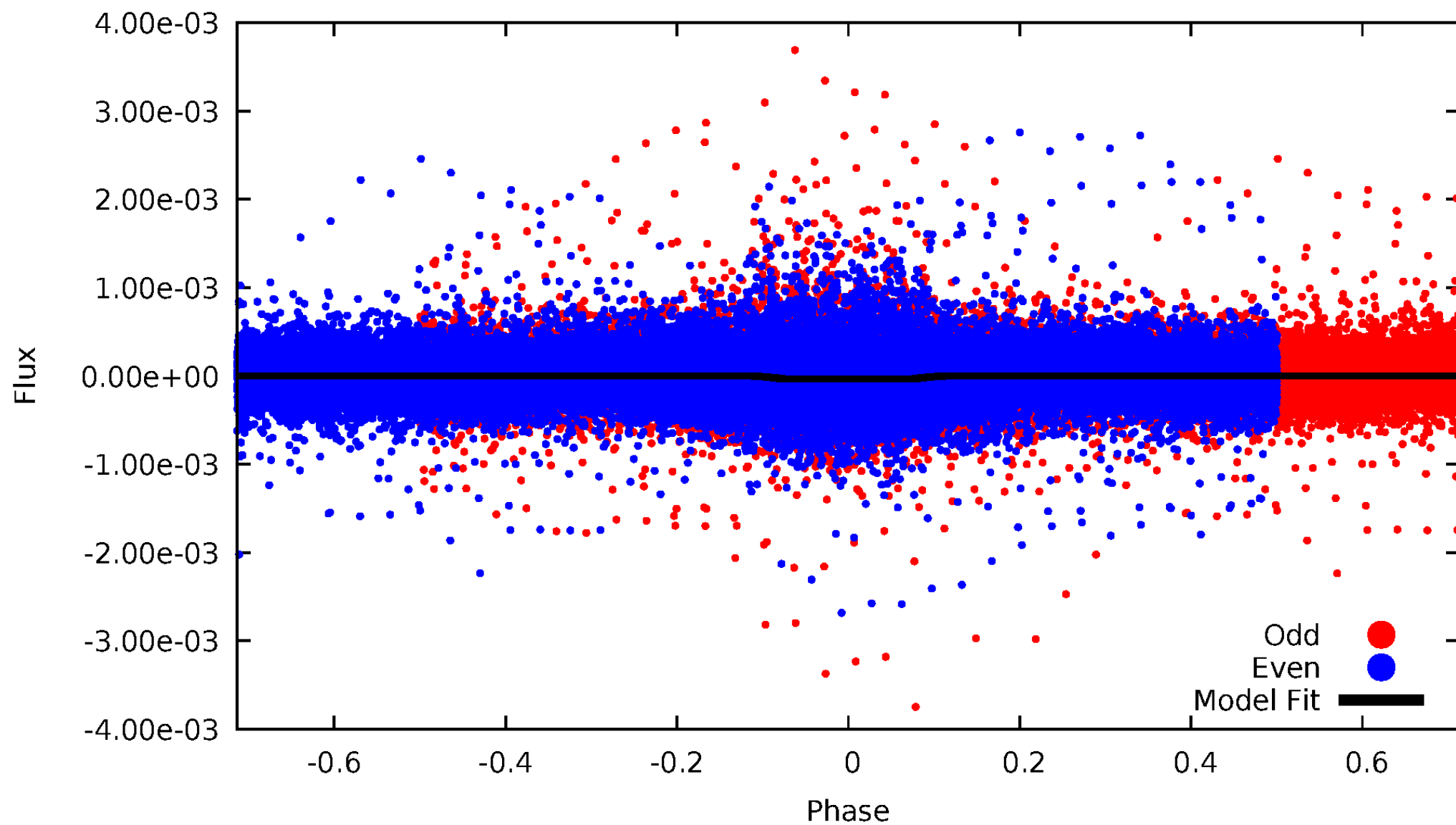
DV Odd/Even

TCE 008780205-01



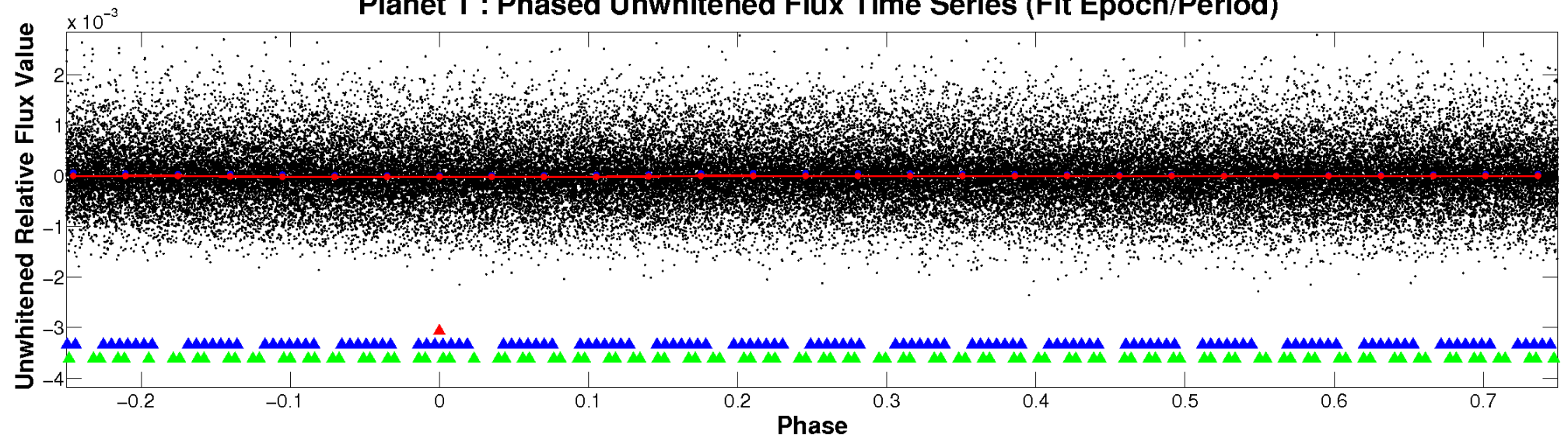
ALT Odd/Even

TCE 008780205-01

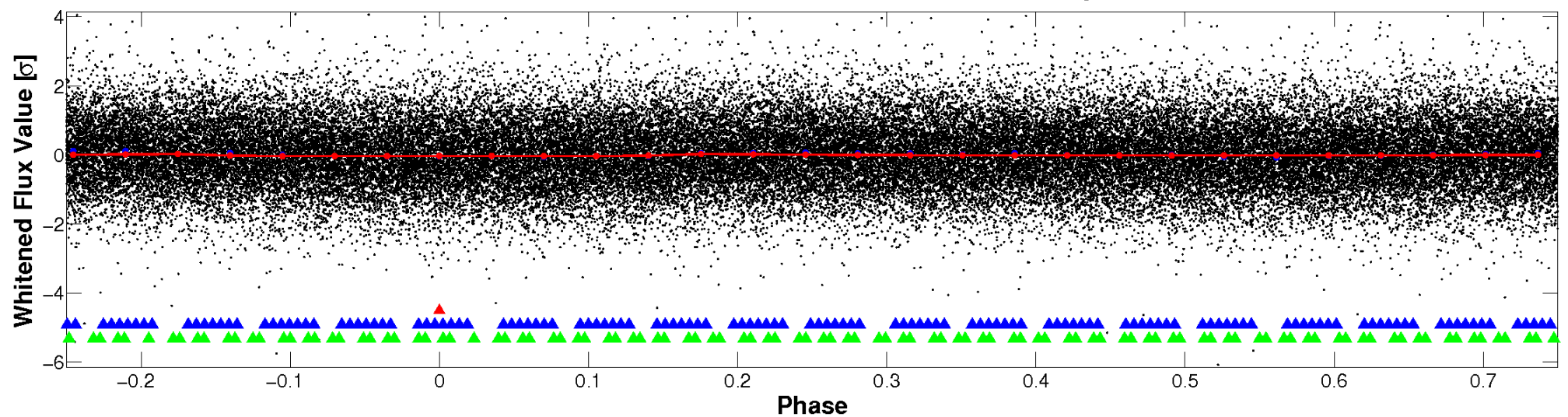


Non-Whitened Vs. Whitened Light Curve

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

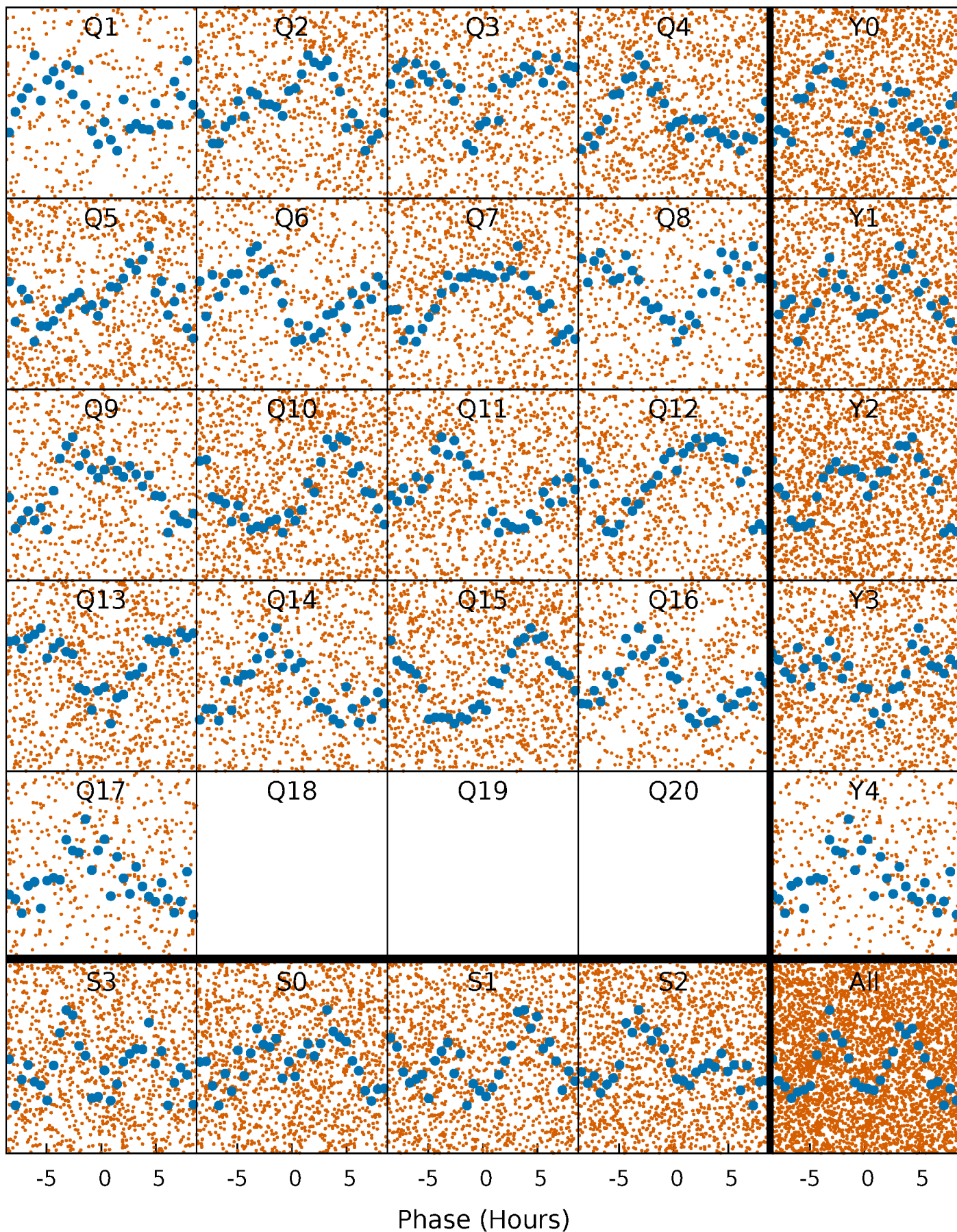


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



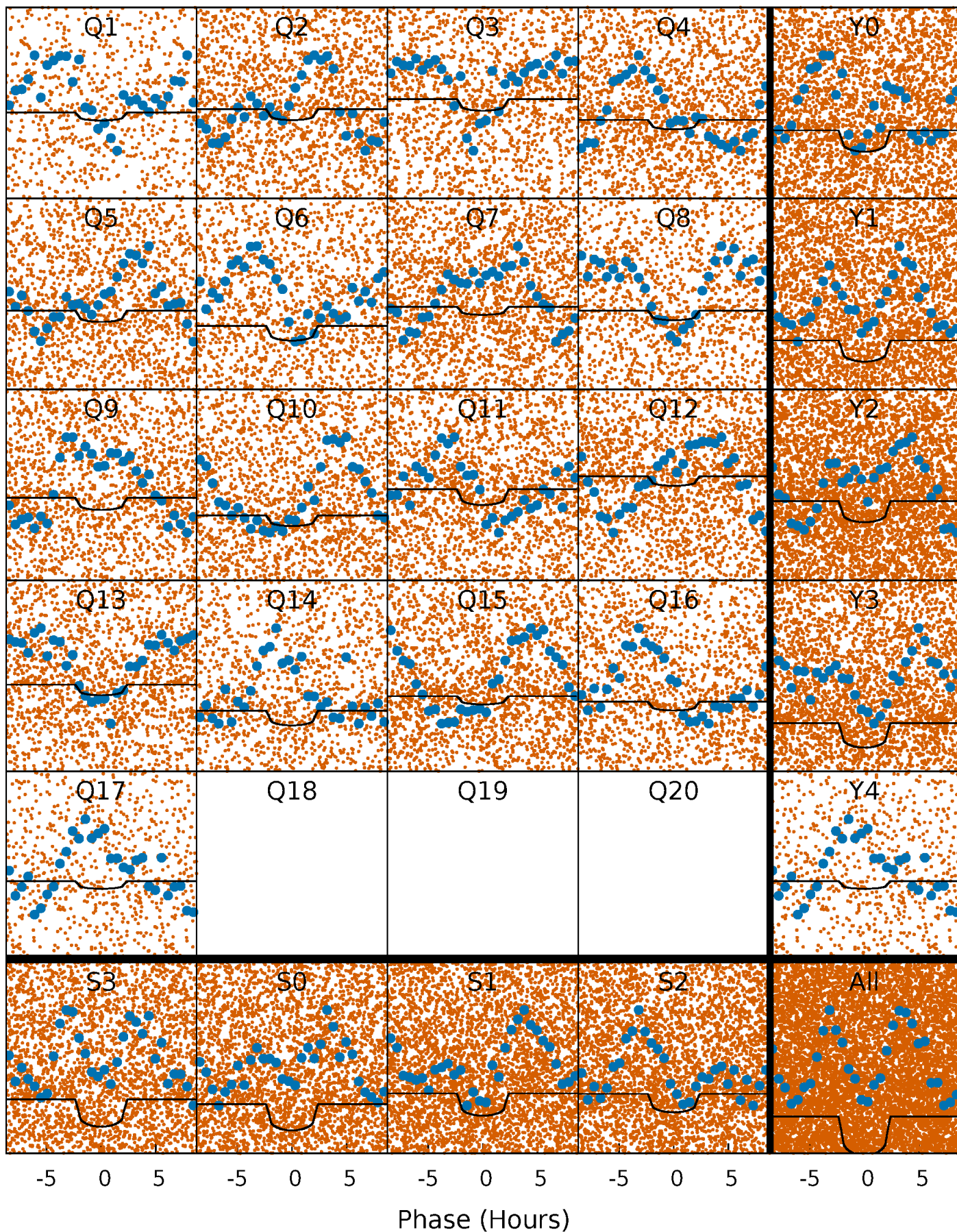
PDC Quarter-Phased Transit Curves

TCE 008780205-01 P= 0.582549 Days $T_0=131.908792$ (BKJD)



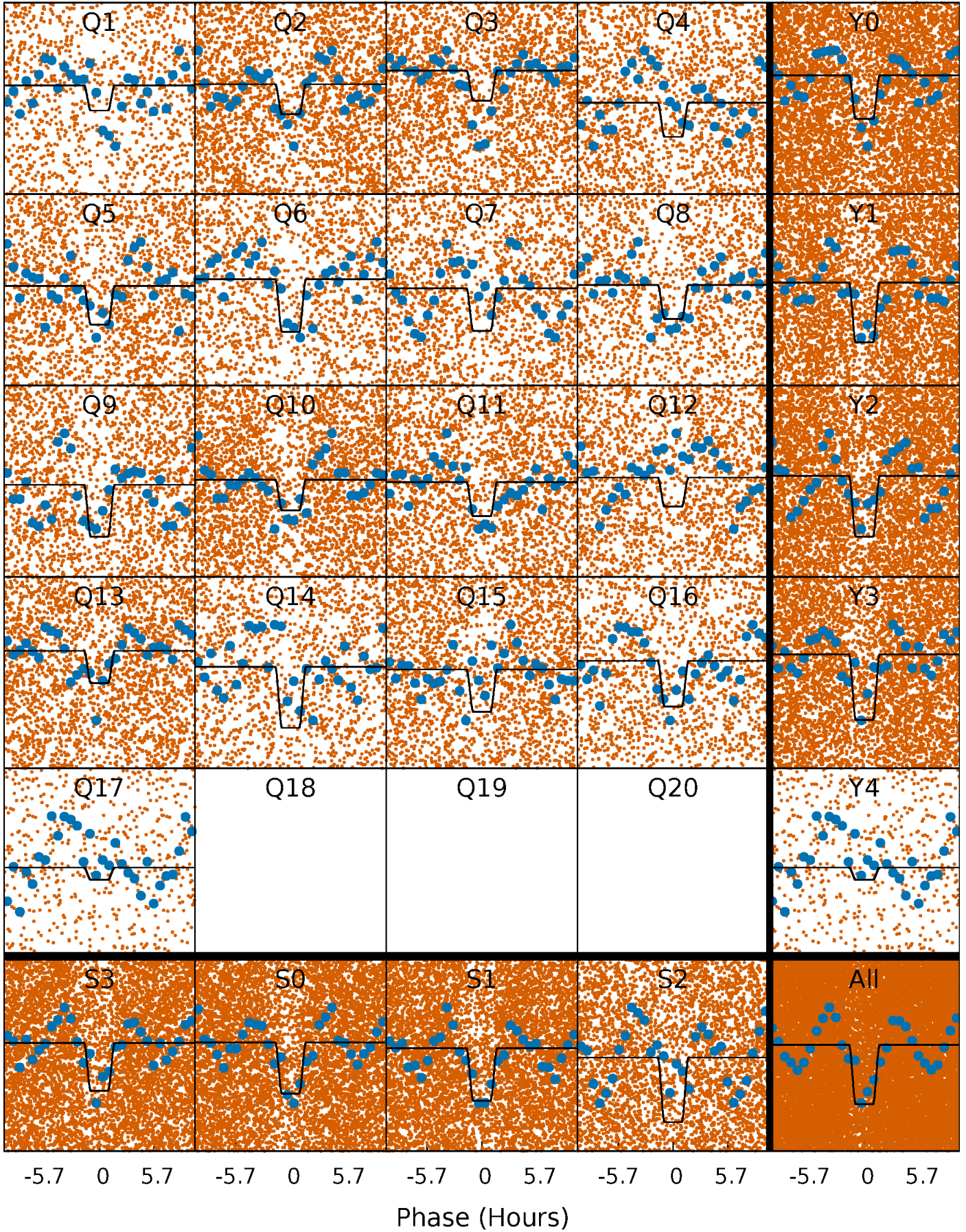
DV Quarter-Phased Transit Curves

TCE 008780205-01 P= 0.582549 Days $T_0=131.908792$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

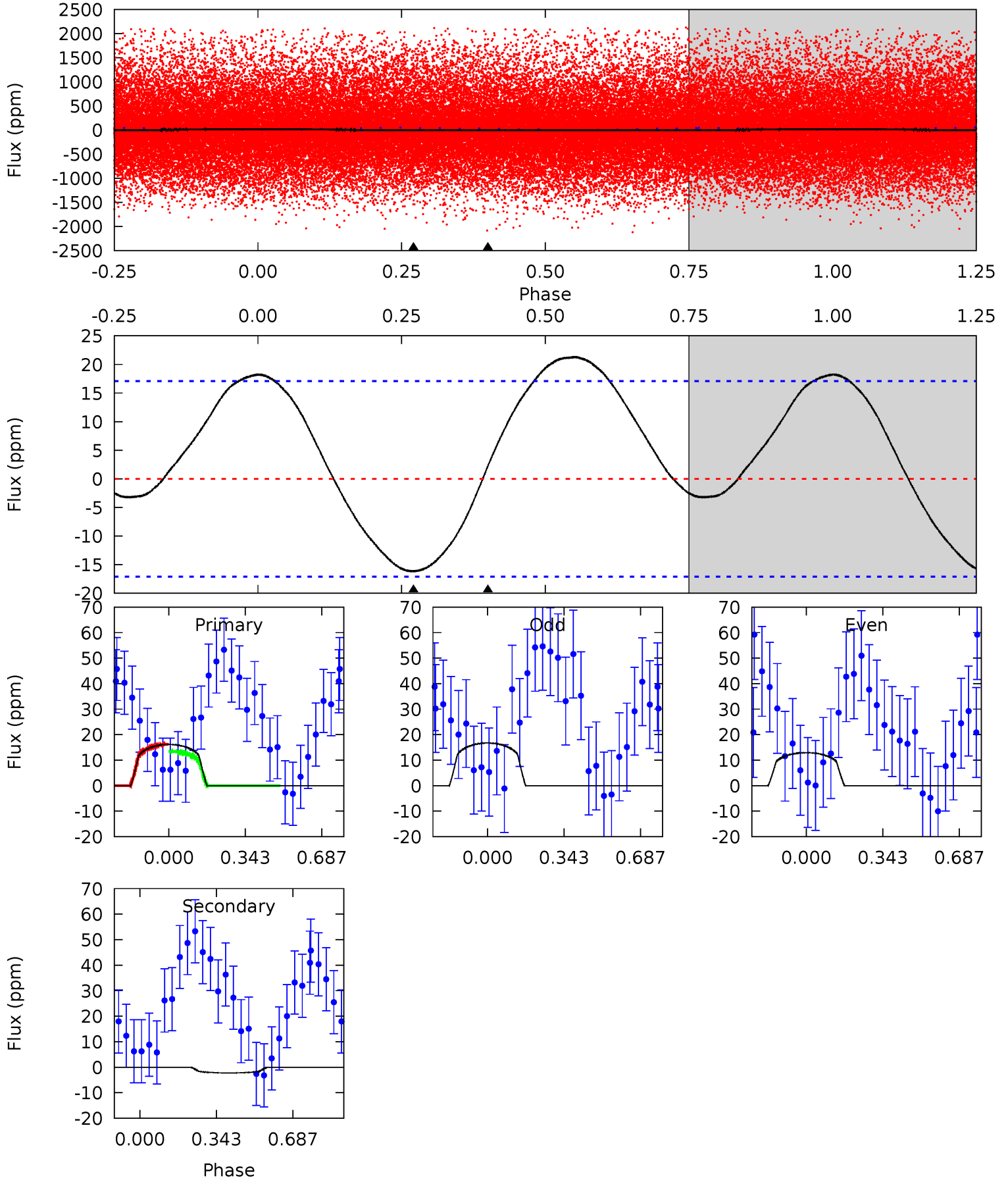
TCE 008780205-01 P= 0.582600 Days $T_0=131.866292$ (BKJD)



DV Model-Shift Uniqueness Test

008780205-01, P = 0.582549 Days, E = 131.326243 Days

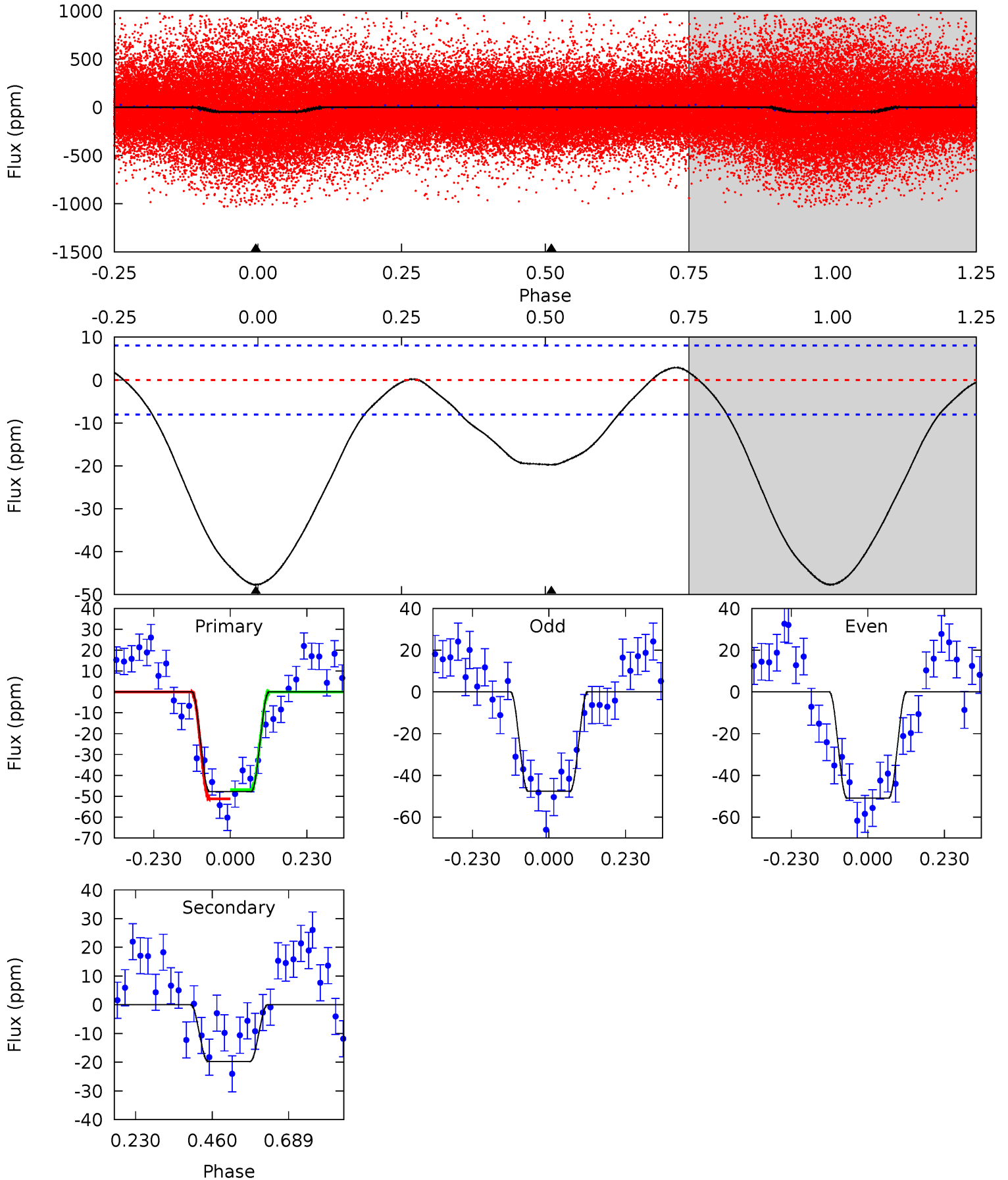
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.07	-0.56	0	0	4.30	0.95	1.27	4.07	4.07	-0.56	-0.56	0.48	-3.08	0.57	0.34



Alt Model-Shift Uniqueness Test

008780205-01, P = 0.582600 Days, E = 131.283692 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	10.8	0	0	4.39	1.20	0.80	26.0	26.0	10.8	10.8	0.87	0.51	0.06	1.20



Stellar Parameters For KIC 008780205

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6446^{+175}_{-213}	$4.247^{+0.204}_{-0.167}$	$-0.620^{+0.300}_{-0.300}$	$1.220^{+0.323}_{-0.264}$	$0.957^{+0.135}_{-0.098}$	$0.743^{+0.708}_{-0.367}$
	+3%/-3%	+5%/-4%	+48%/-48%	+26%/-22%	+14%/-10%	+95%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008780205-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	2 ± 4	$0.66^{+0.47}_{-0.36}$	3745^{+275}_{-252}	-4049^{+1681}_{-1548}	$-0.334^{+0.617}_{-2.476}$
Alt.	-20 ± 2	$0.83^{+0.48}_{-0.48}$	3751^{+262}_{-229}	5297^{+3098}_{-1090}	$2.894^{+13.254}_{-1.774}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

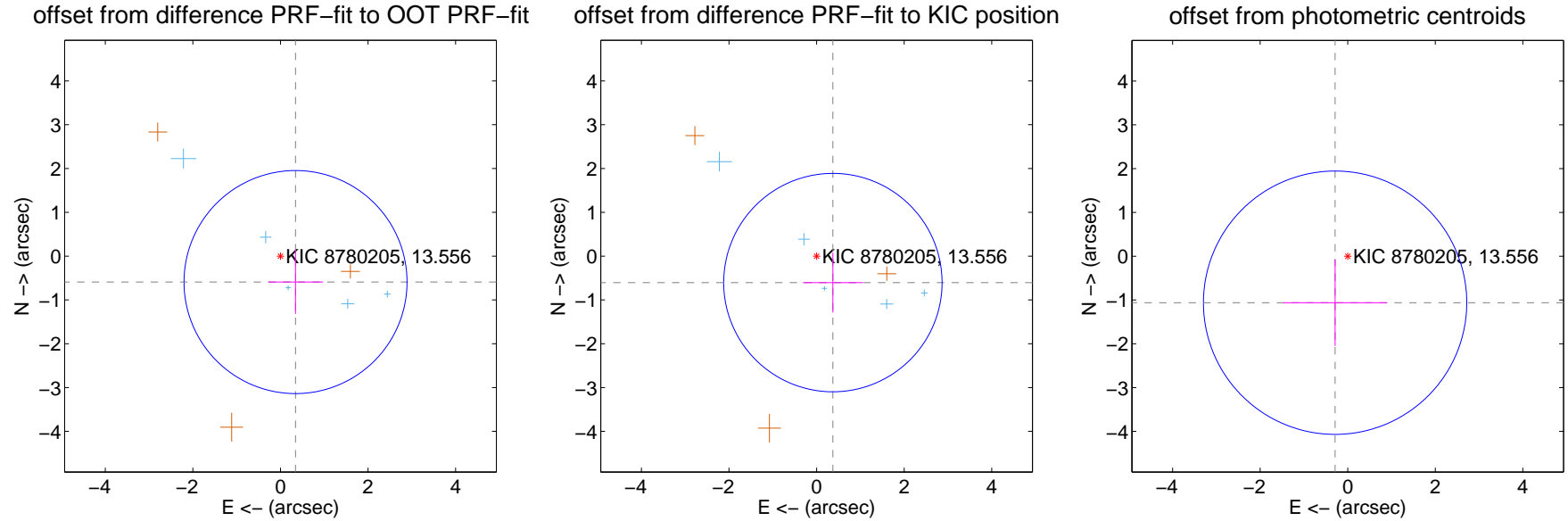
DV Centroid Data

Supplemental centroid analysis for 008780205-01. Kepler magnitude: 13.56. Transit SNR 4.77

There are 5 quarters with good PRF difference image offsets

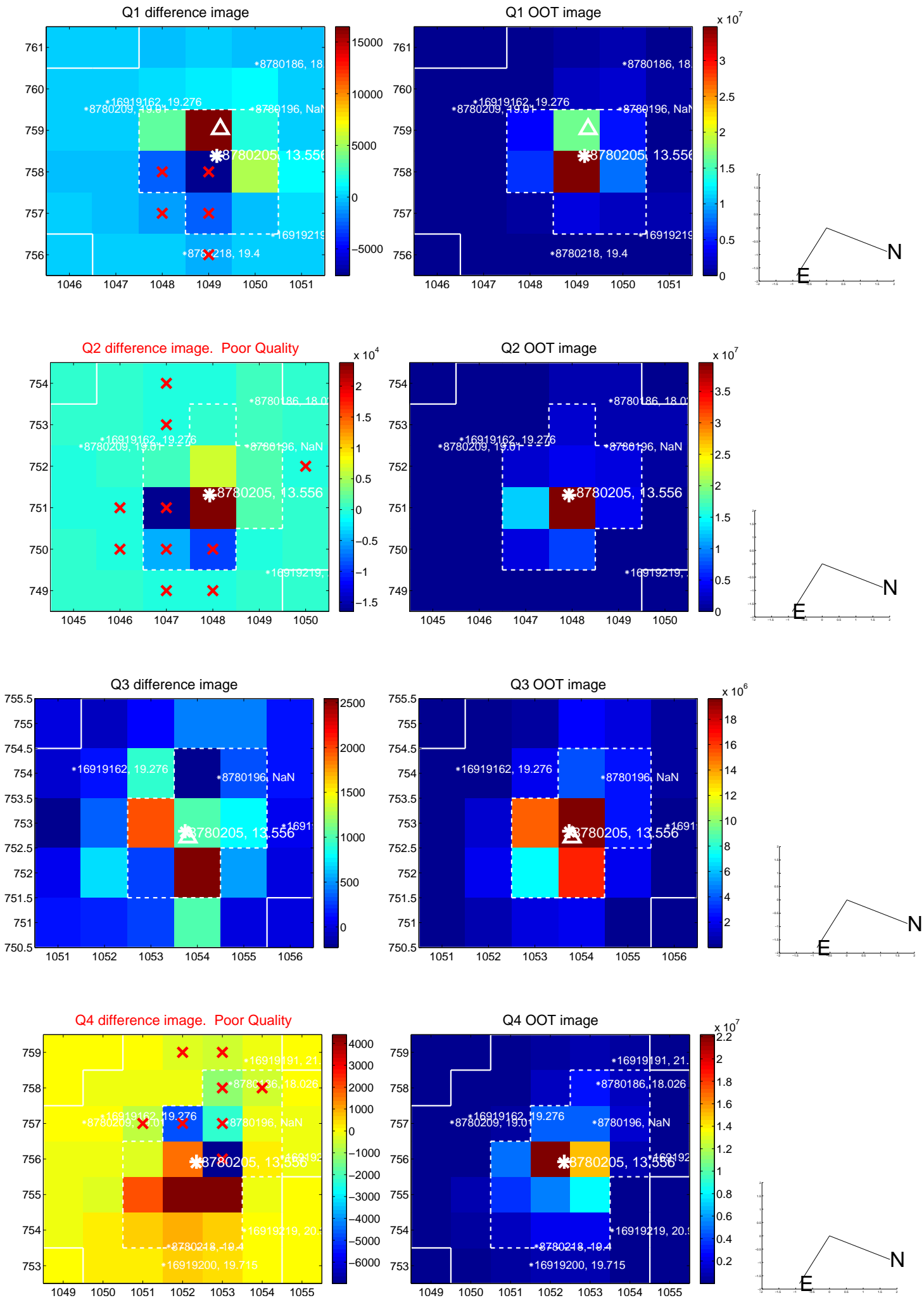
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.685 ± 0.849	0.81	-0.344 ± 0.627	-0.592 ± 0.729
PRF-fit source offset from KIC position	0.710 ± 0.831	0.85	-0.372 ± 0.685	-0.604 ± 0.683
photometric centroid source offset	1.10 ± 1.00	1.10	0.29 ± 1.19	-1.06 ± 0.99

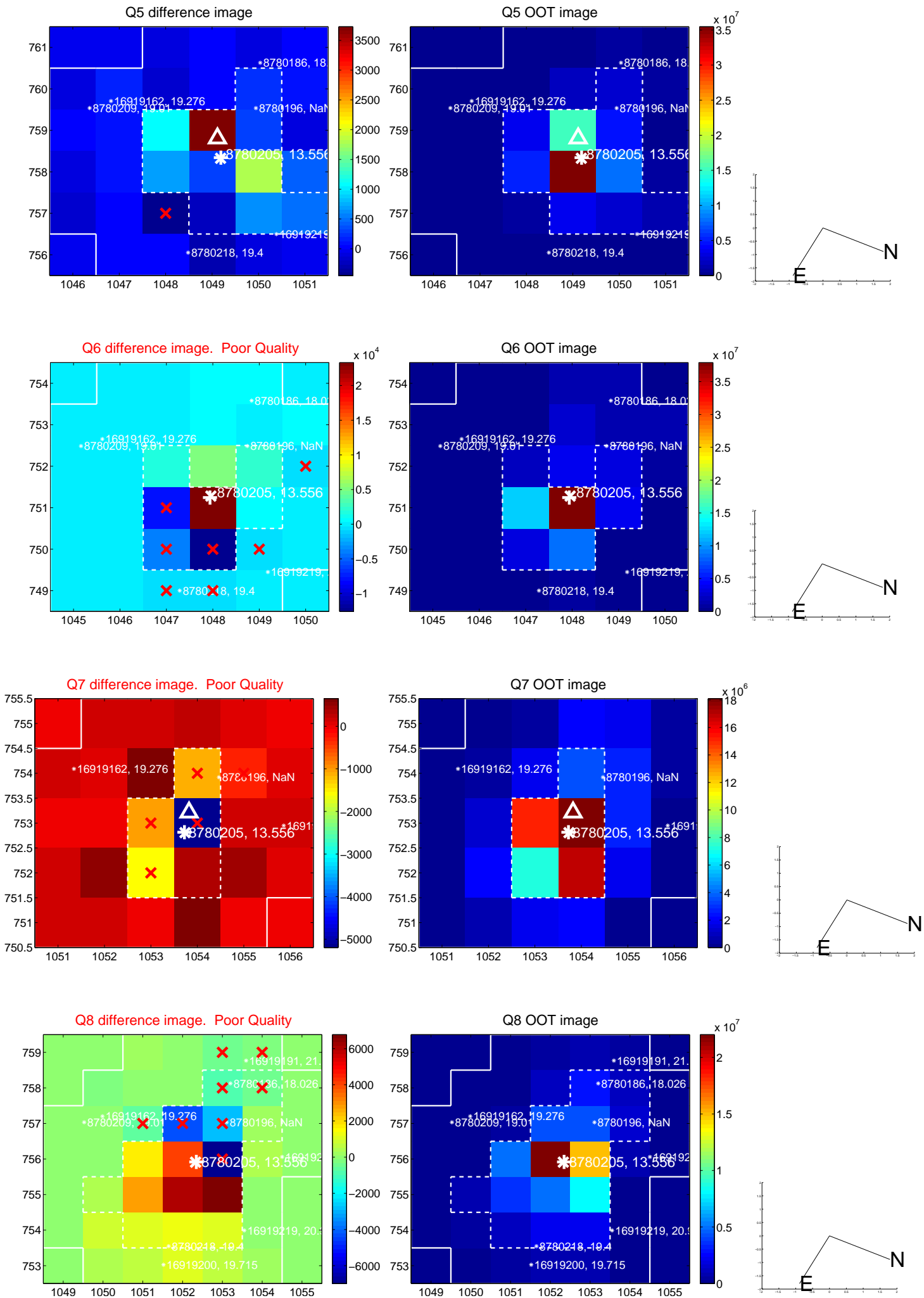


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

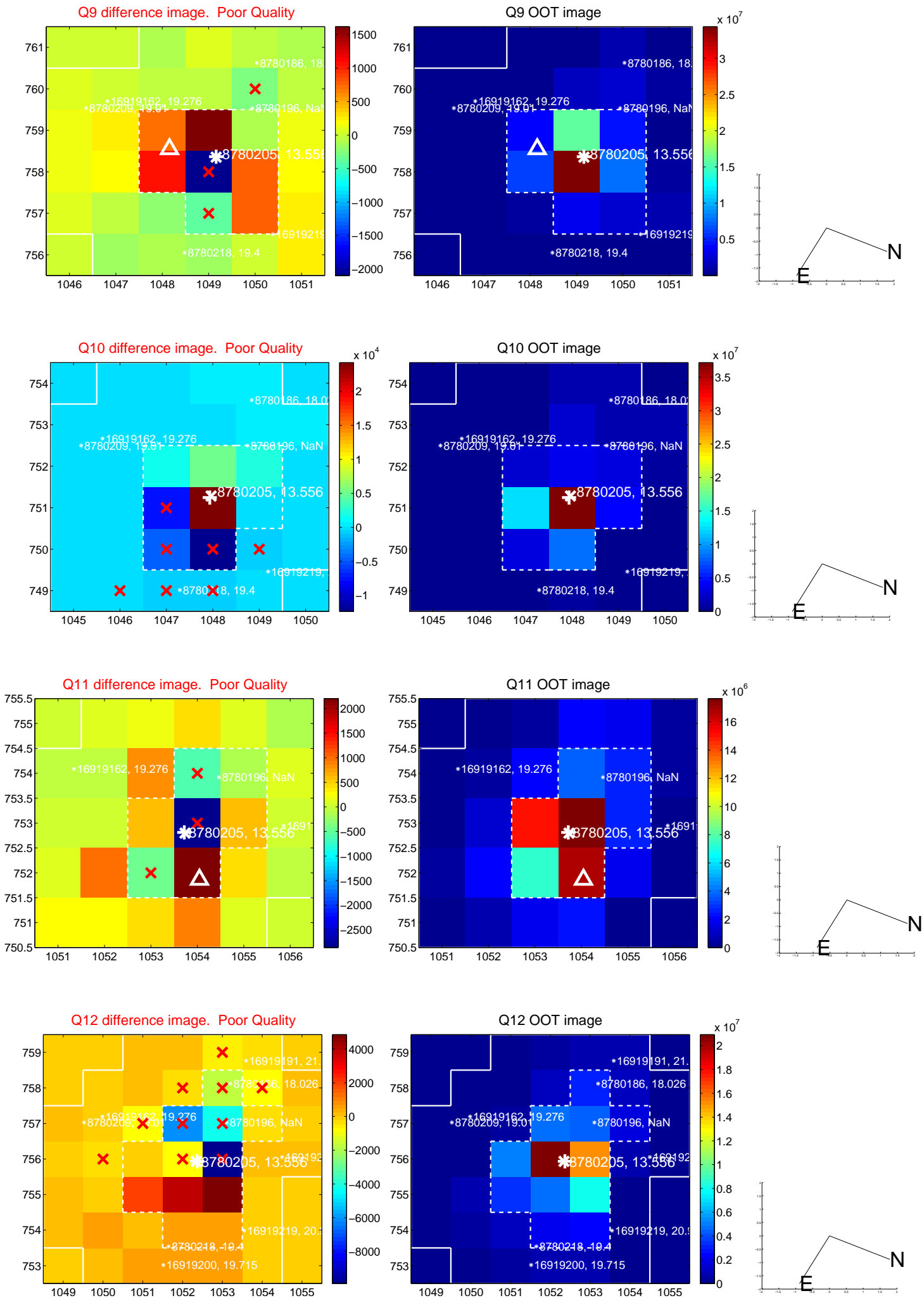
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



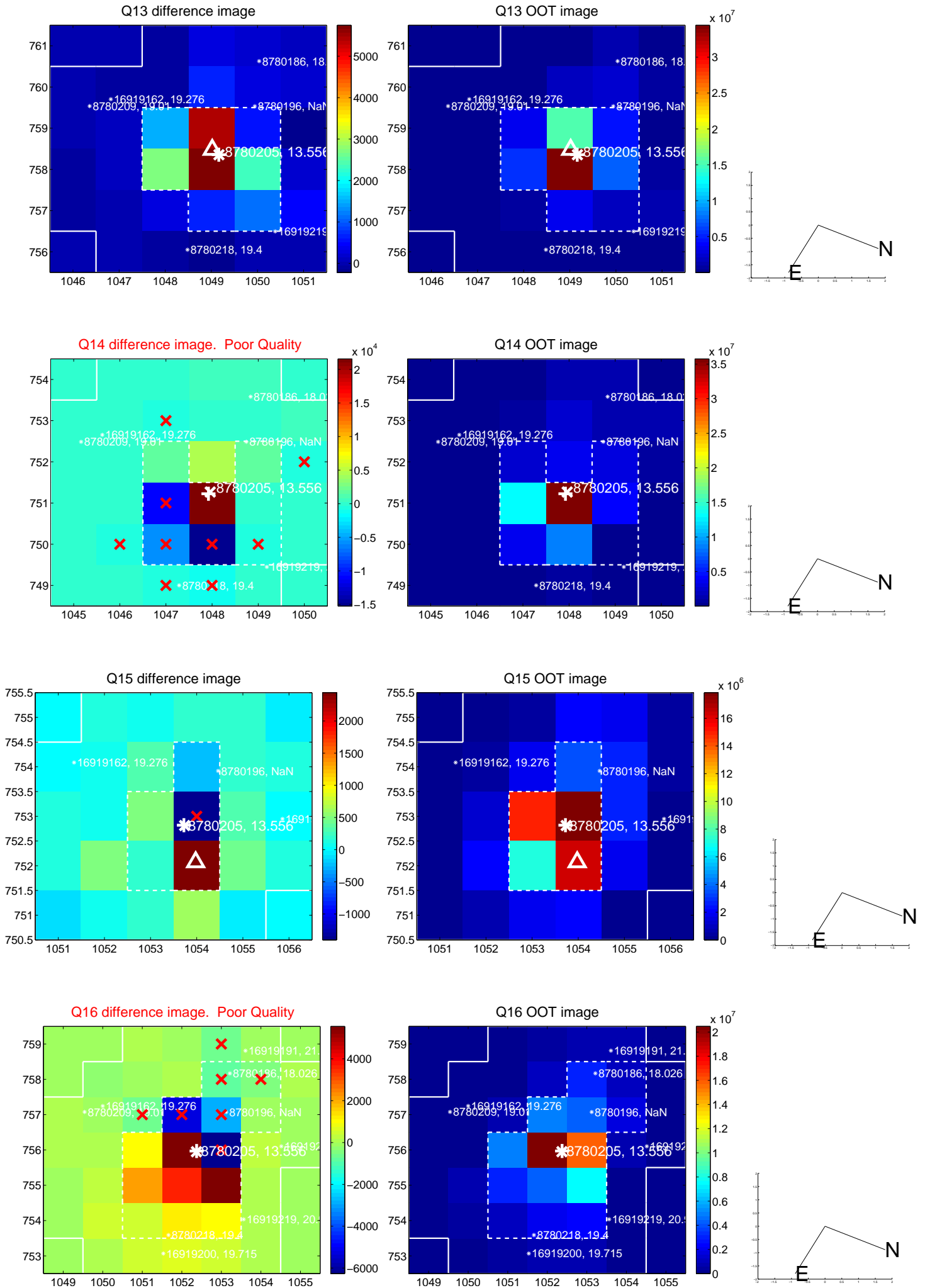
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



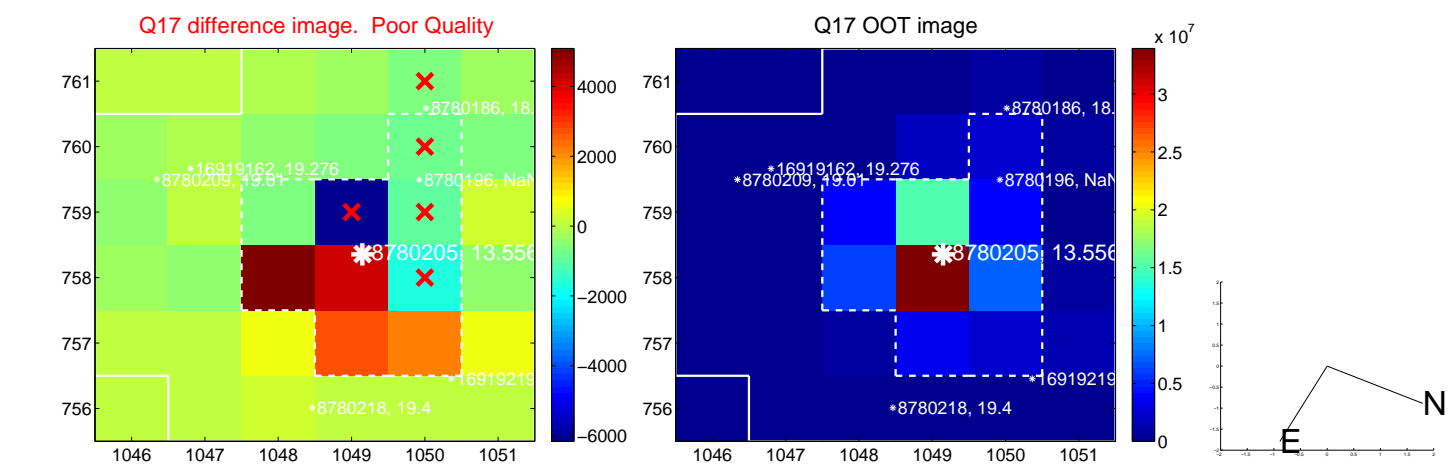
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



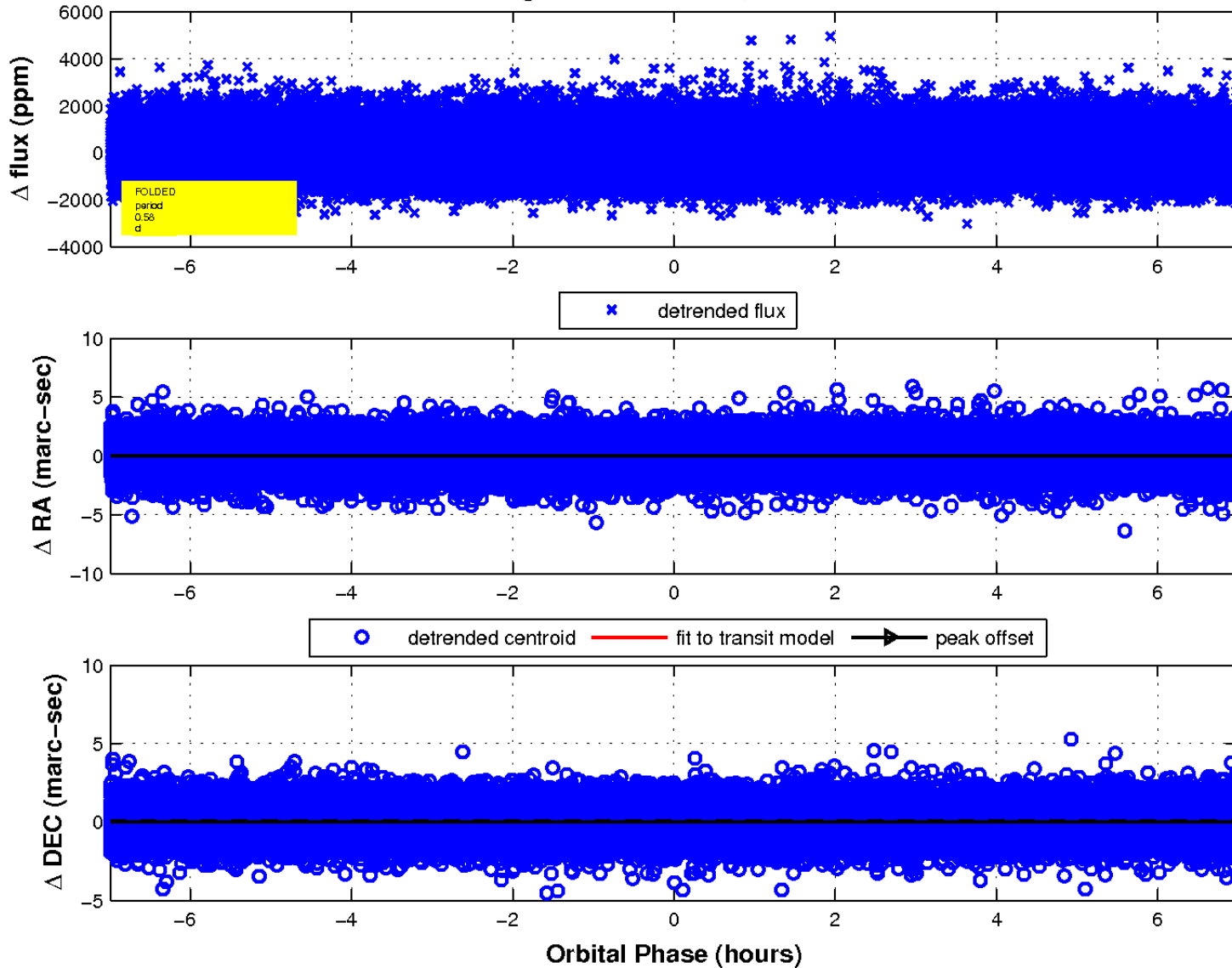
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



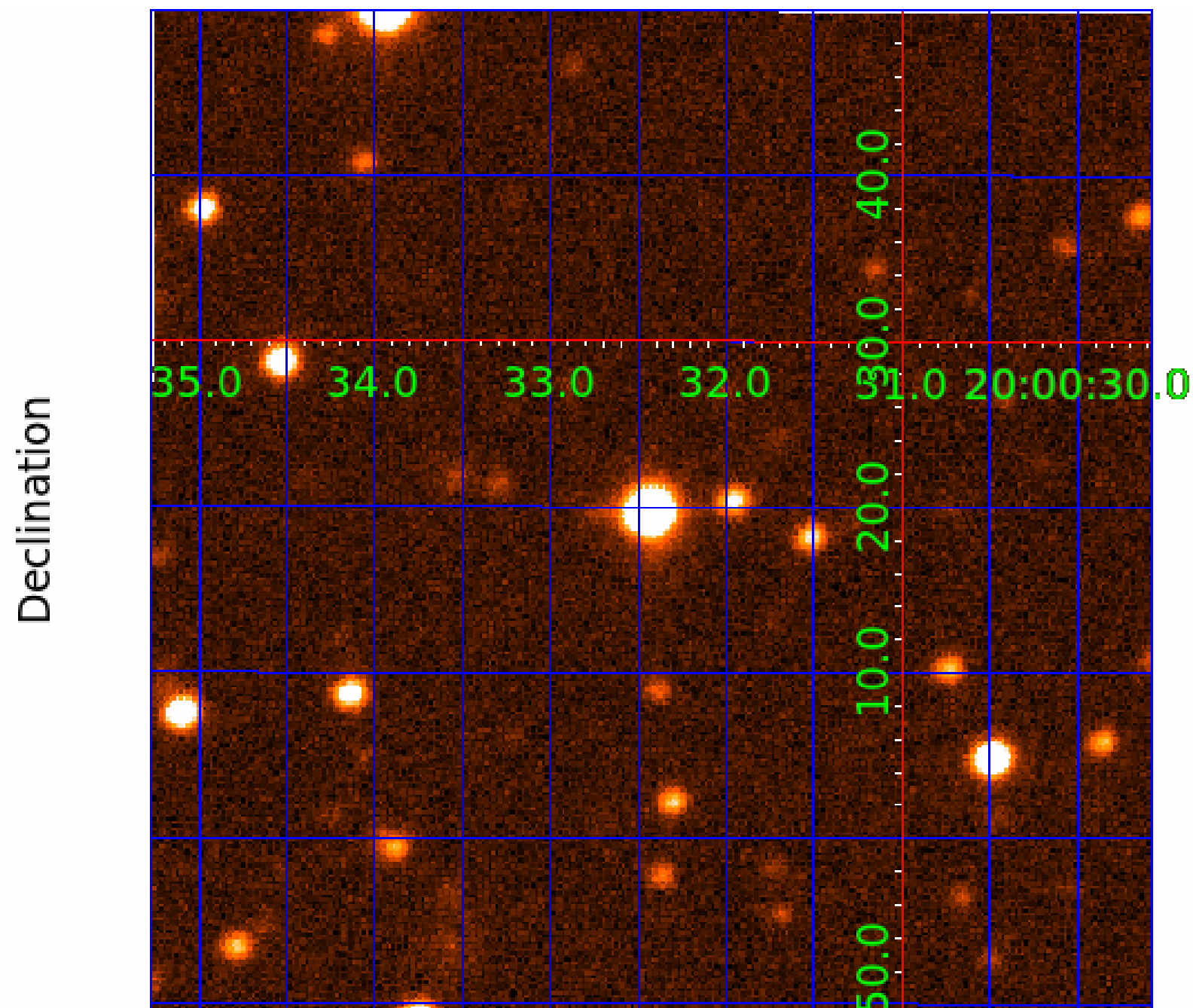
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 008780205

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})
008780205-01	OBS	No	0.582549	131.908792	19.8	4.362	8.4	4.8	1.22	6446	0.59	12701.41
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008780205-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008780205-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV
008780205-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

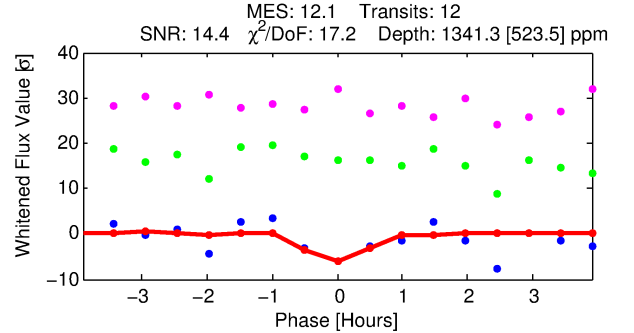
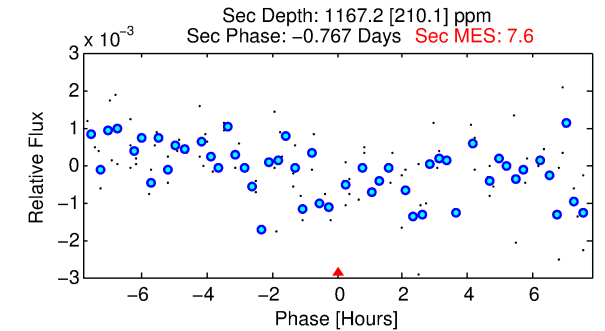
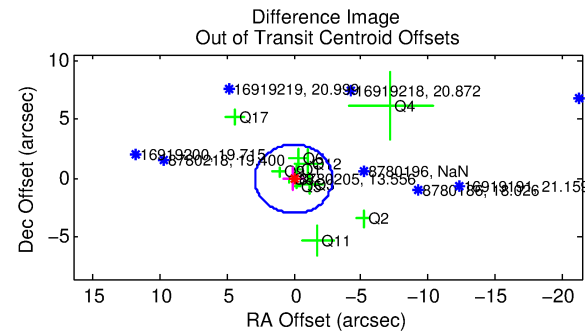
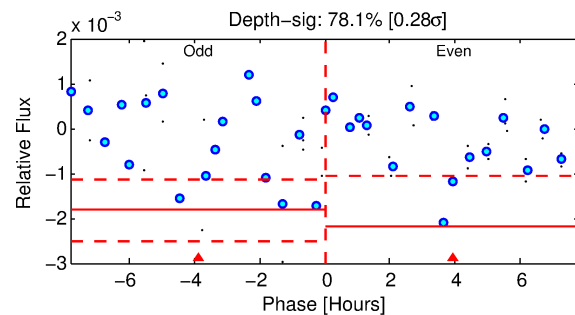
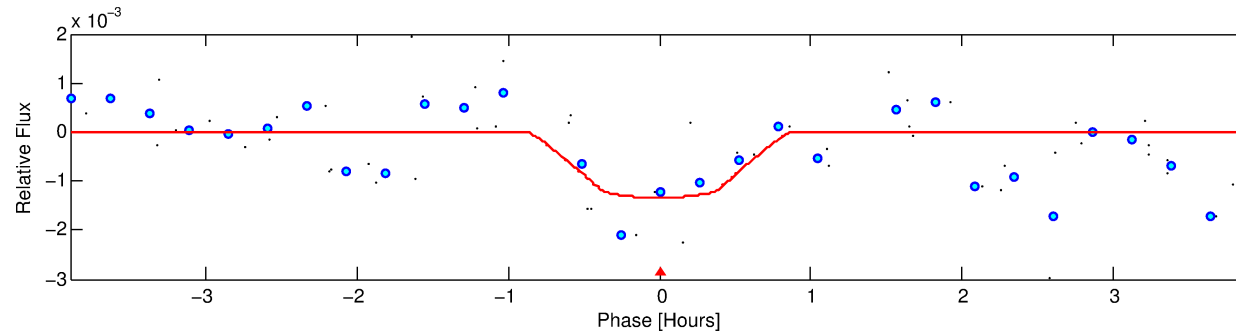
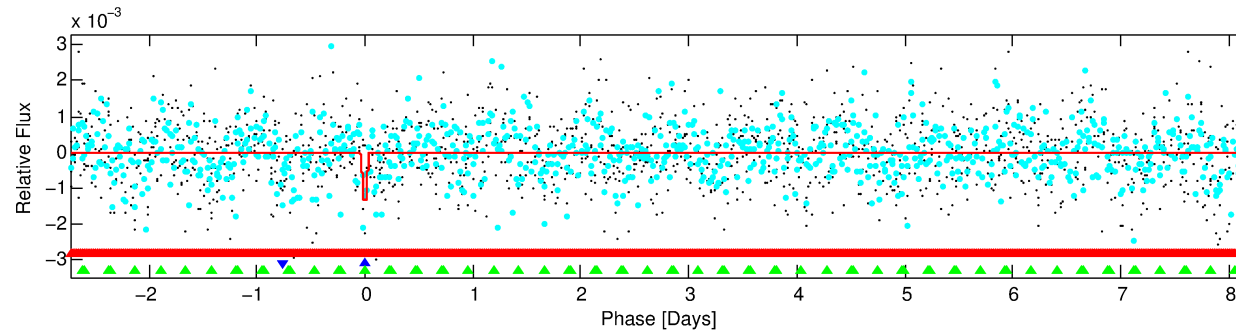
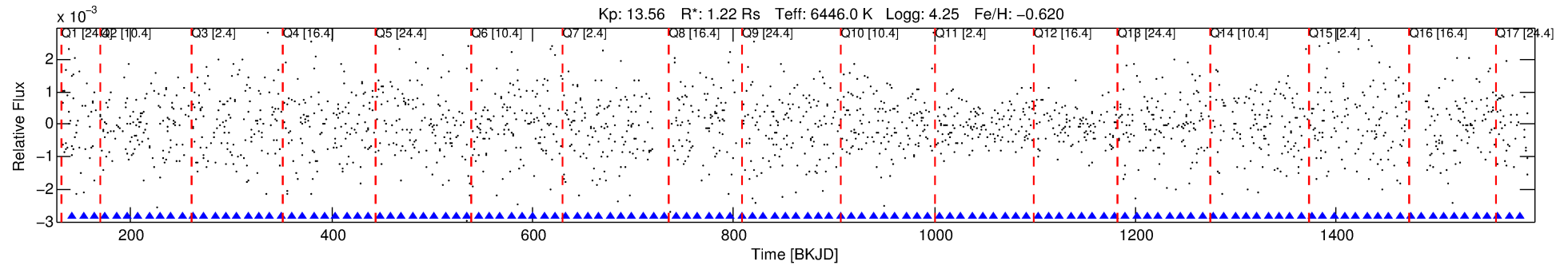
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008780205-02

No Significant Match Found

DV One-Page Summary

KIC: 8780205 Candidate: 2 of 3 Period: 10.915 d



DV Fit Results:

Period = 10.91530 [0.00024] d
Epoch = 142.2634 [0.0147] BKJD
Rp/R* = 0.0339 [0.2113]
a/R* = 66.25 [2100.15]
b = 0.04 [902.57]
Seff = 255.22 [97.75]
Teq = 1019 [98] K
Rp = 4.52 [28.16] Re
a = 0.0950 [0.0224] AU
Ag = 284.02 [3540.78] [0.08 σ]
Teffp = 6469 [20154] K [0.27 σ]

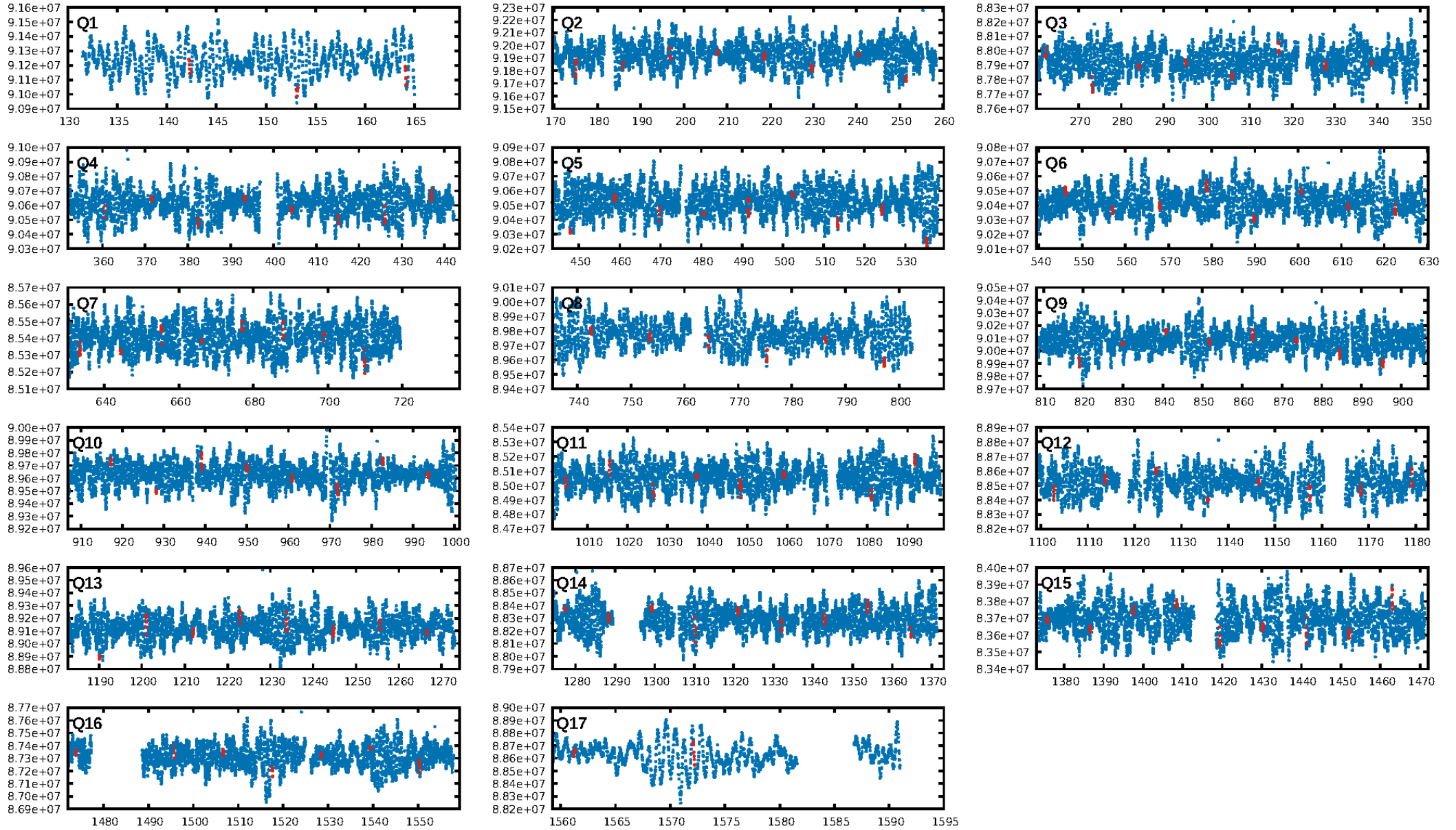
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [54.49 σ]
LongPeriod-sig: 100.0% [25.44 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 4.96e-08
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 0.5824
Centroid-sig: 0.0%
Centroid-so: 0.521 arcsec [3.94 σ]
OotOffset-rm: 0.050 arcsec [0.05 σ]
KicOffset-rm: 0.029 arcsec [0.03 σ]
OotOffset-st: 2/2/3/4 [11]
KicOffset-st: 2/2/3/4 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 0.00 [0/17]

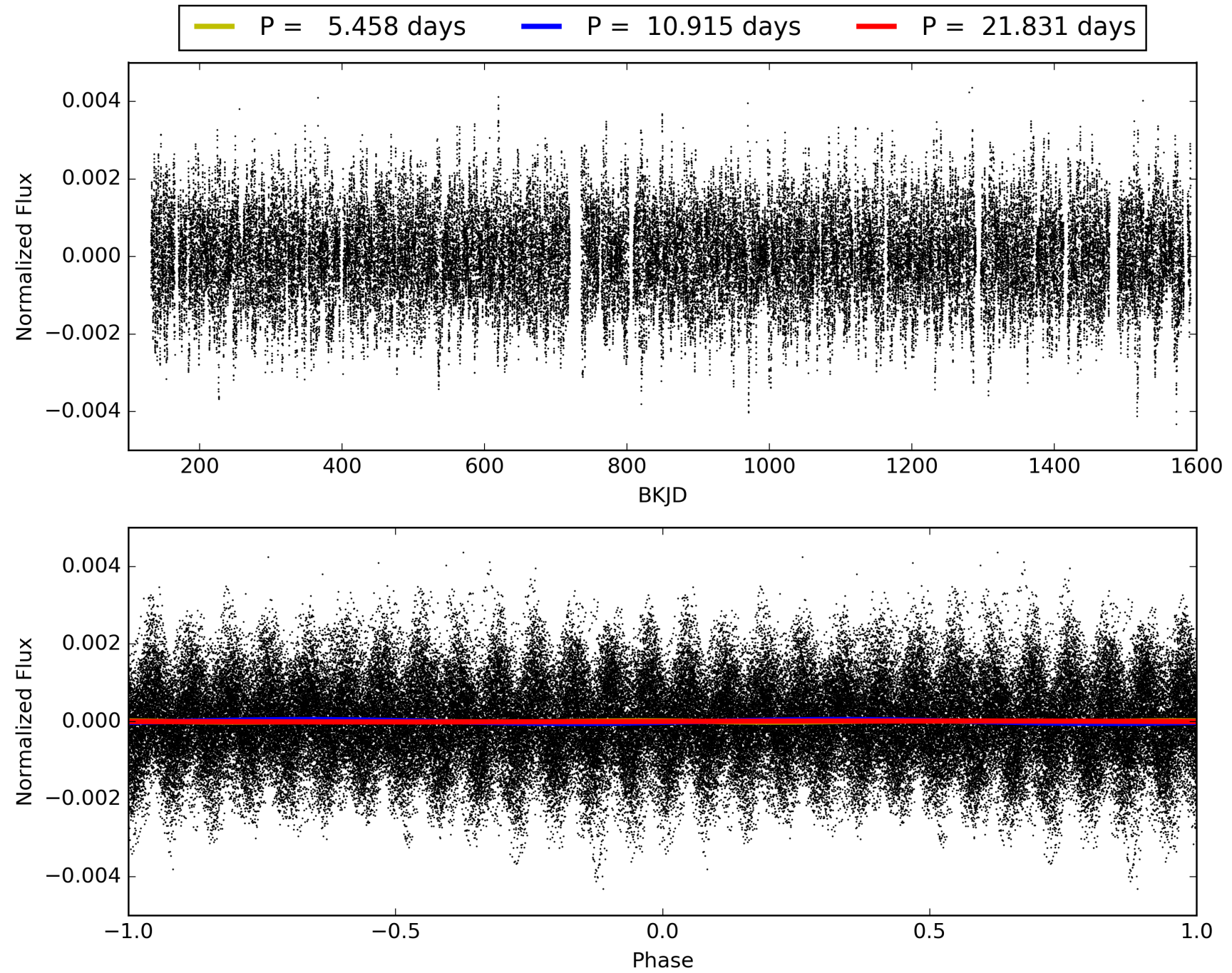
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:15:40 Z

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

TCE 008780205-02, PDC Light Curves

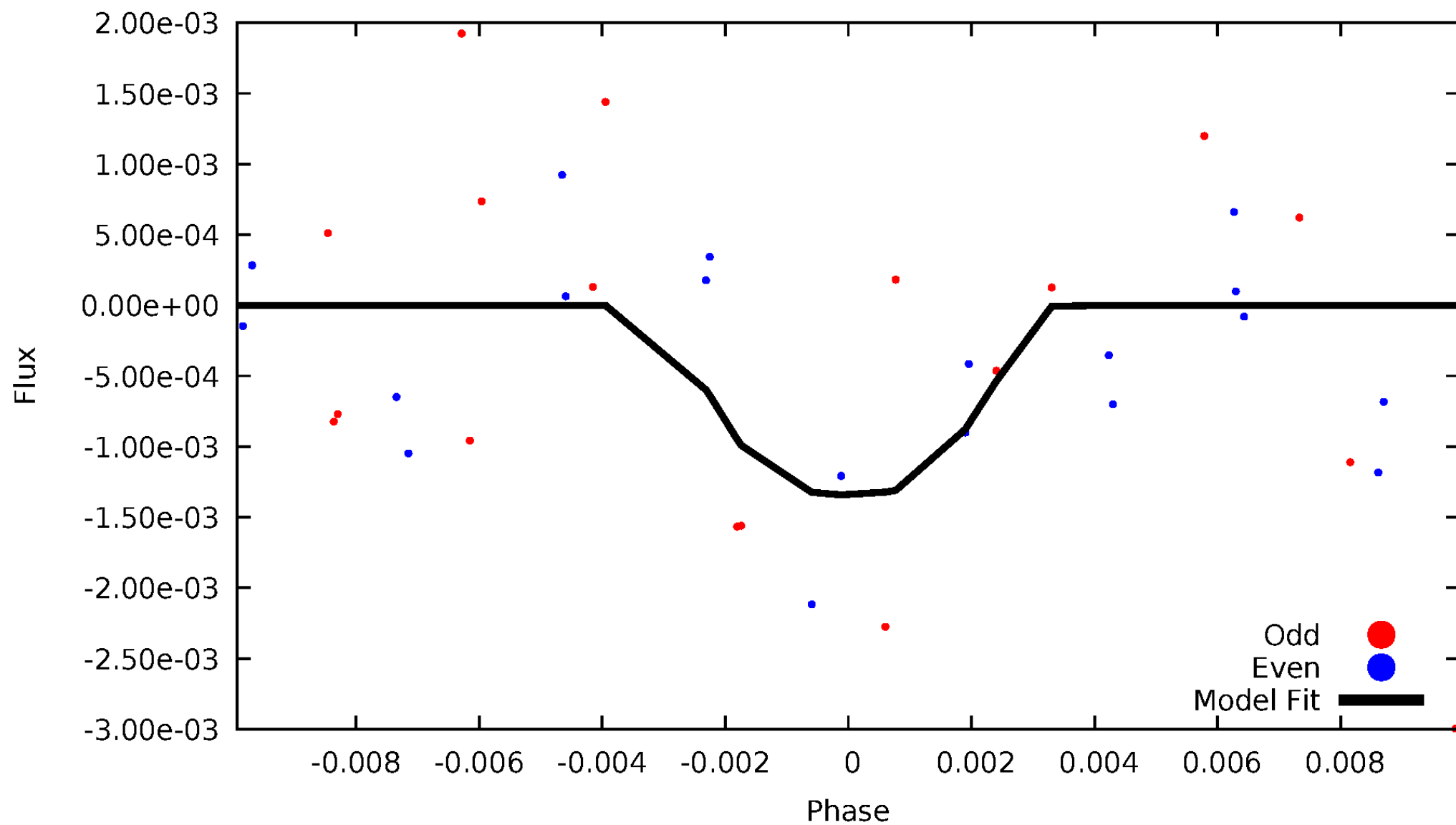


TCE 008780205-02



DV Odd/Even

TCE 008780205-02

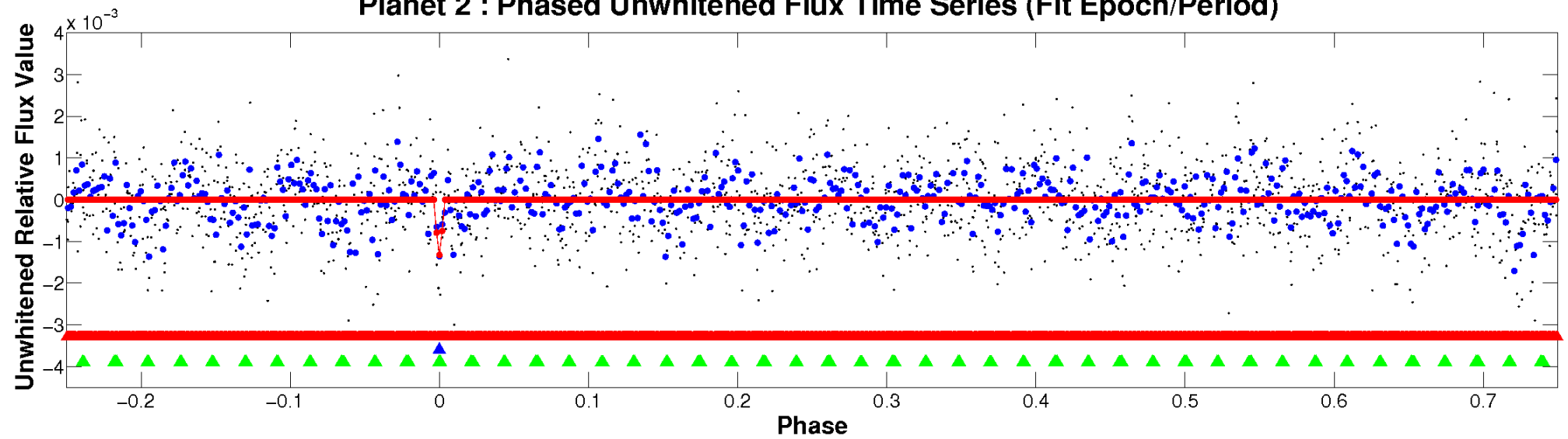


ALT Odd/Even

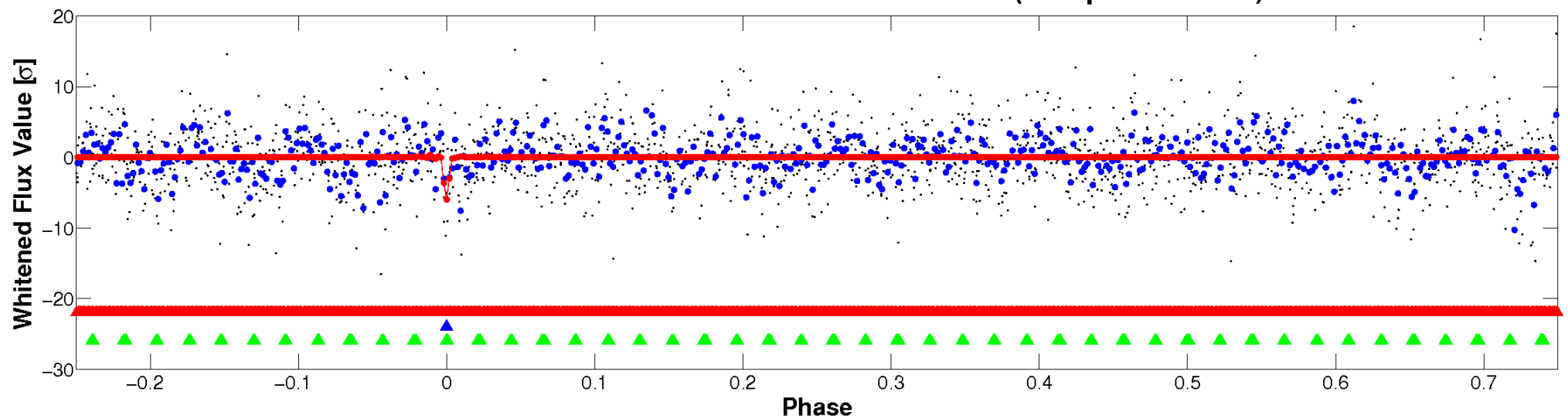
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

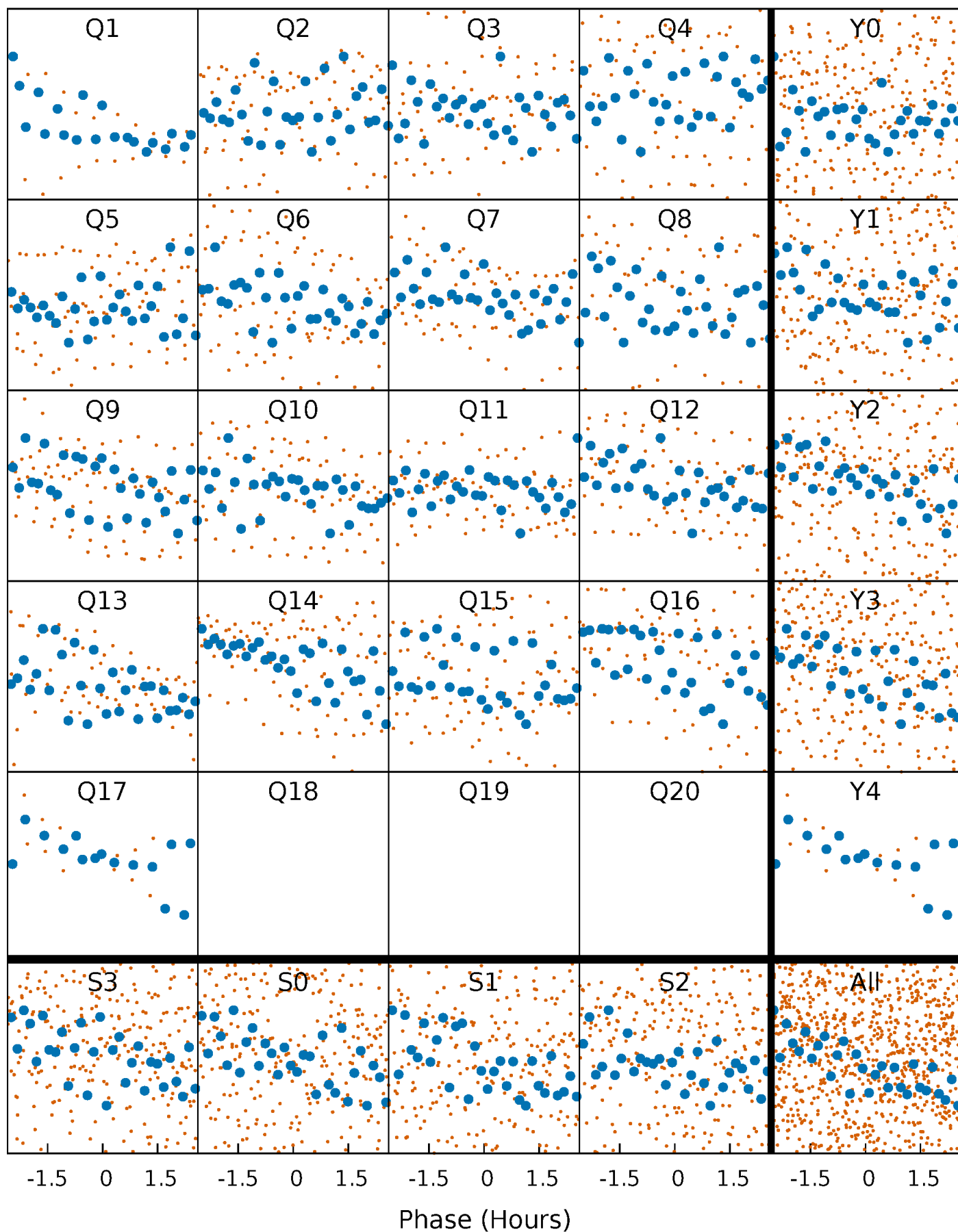


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



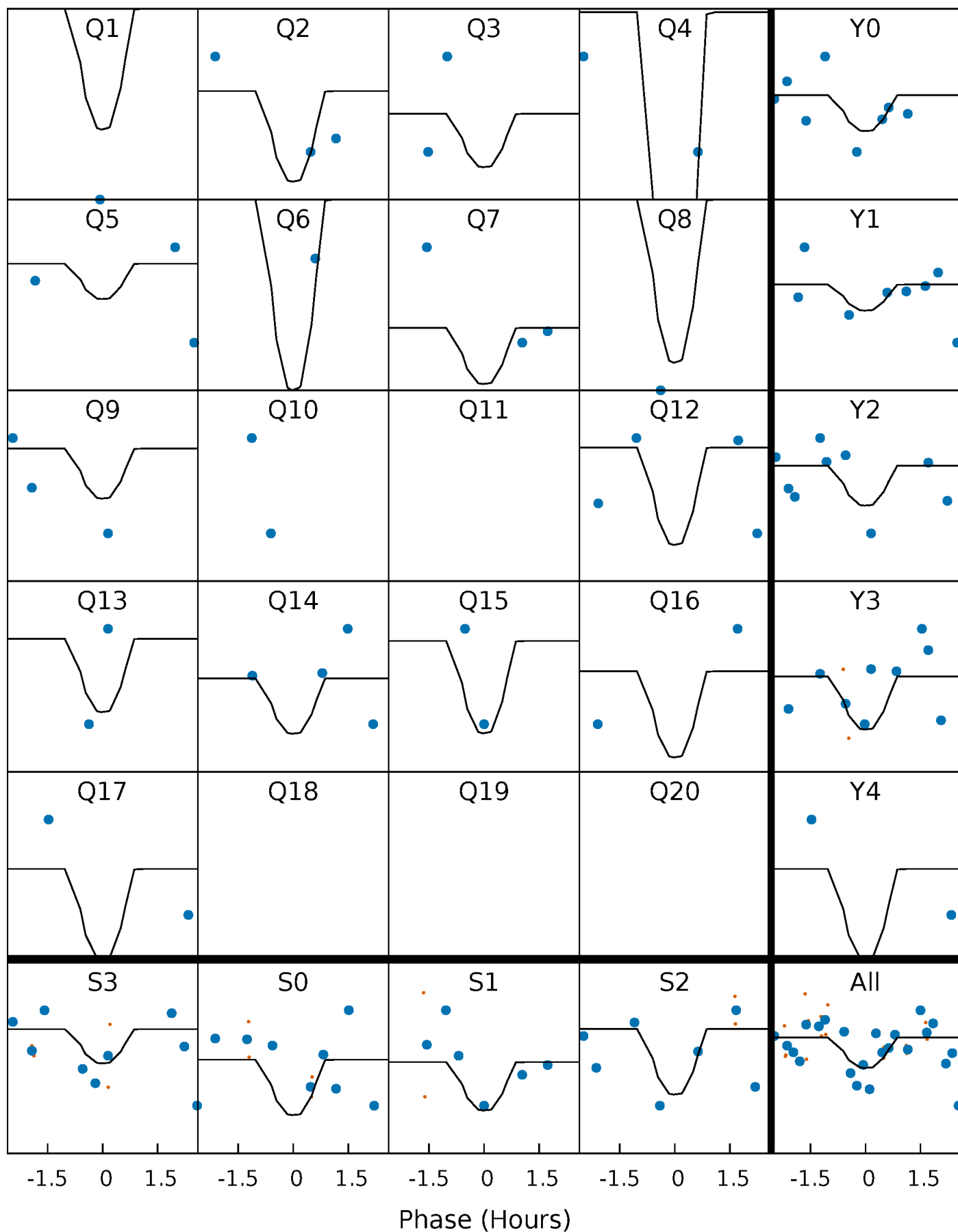
PDC Quarter-Phased Transit Curves

TCE 008780205-02 P= 10.915298 Days $T_0=142.263413$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008780205-02 P= 10.915298 Days $T_0=142.263413$ (BKJD)

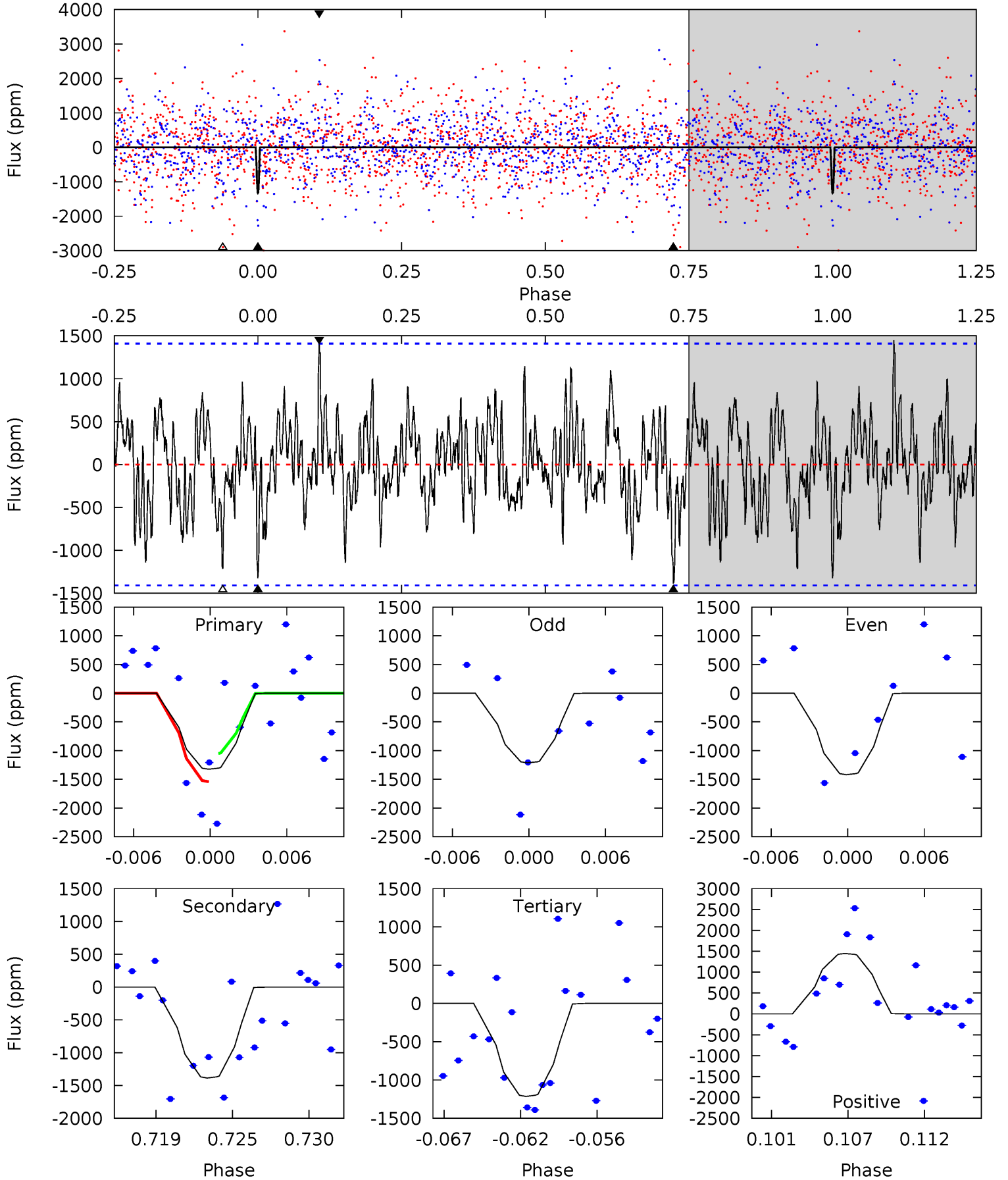


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008780205-02, P = 10.915298 Days, E = 131.348115 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.83	5.05	4.43	5.27	5.14	2.77	1.58	0.40	-0.44	0.63	-0.22	0.40	0	0.51	0.90



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008780205

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6446^{+175}_{-213}	$4.247^{+0.204}_{-0.167}$	$-0.620^{+0.300}_{-0.300}$	$1.220^{+0.323}_{-0.264}$	$0.957^{+0.135}_{-0.098}$	$0.743^{+0.708}_{-0.367}$
	+3%/-3%	+5%/-4%	+48%/-48%	+26%/-22%	+14%/-10%	+95%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008780205-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1387 ± 274	$20.21^{+22.21}_{-14.12}$	1416^{+105}_{-103}	3561^{+2201}_{-711}	16^{+164}_{-13}
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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

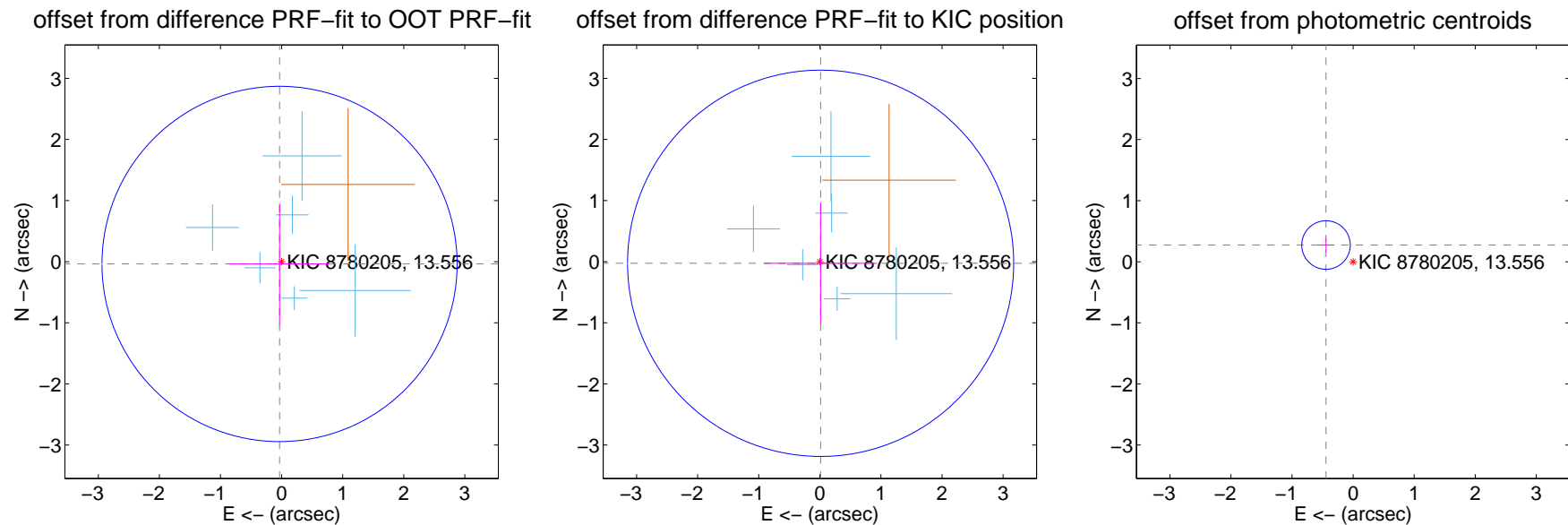
DV Centroid Data

Supplemental centroid analysis for 008780205-02. Kepler magnitude: 13.56. Transit SNR 14.44

There are 6 quarters with good PRF difference image offsets

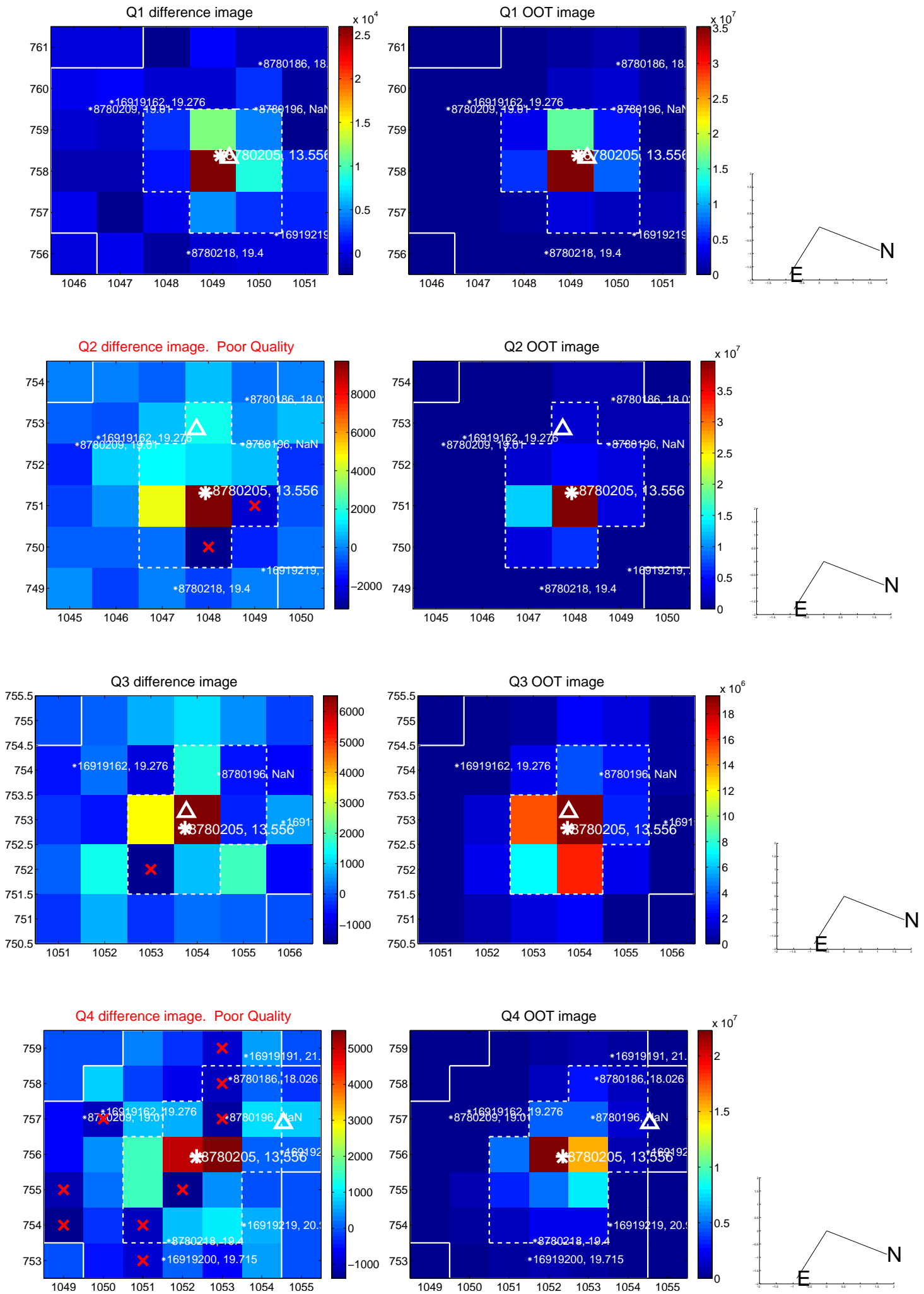
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.050 ± 0.969	0.05	0.033 ± 0.820	-0.037 ± 0.989
PRF-fit source offset from KIC position	0.029 ± 1.054	0.03	-0.013 ± 0.924	-0.026 ± 0.997
photometric centroid source offset	0.52 ± 0.13	3.94	0.44 ± 0.14	0.27 ± 0.12

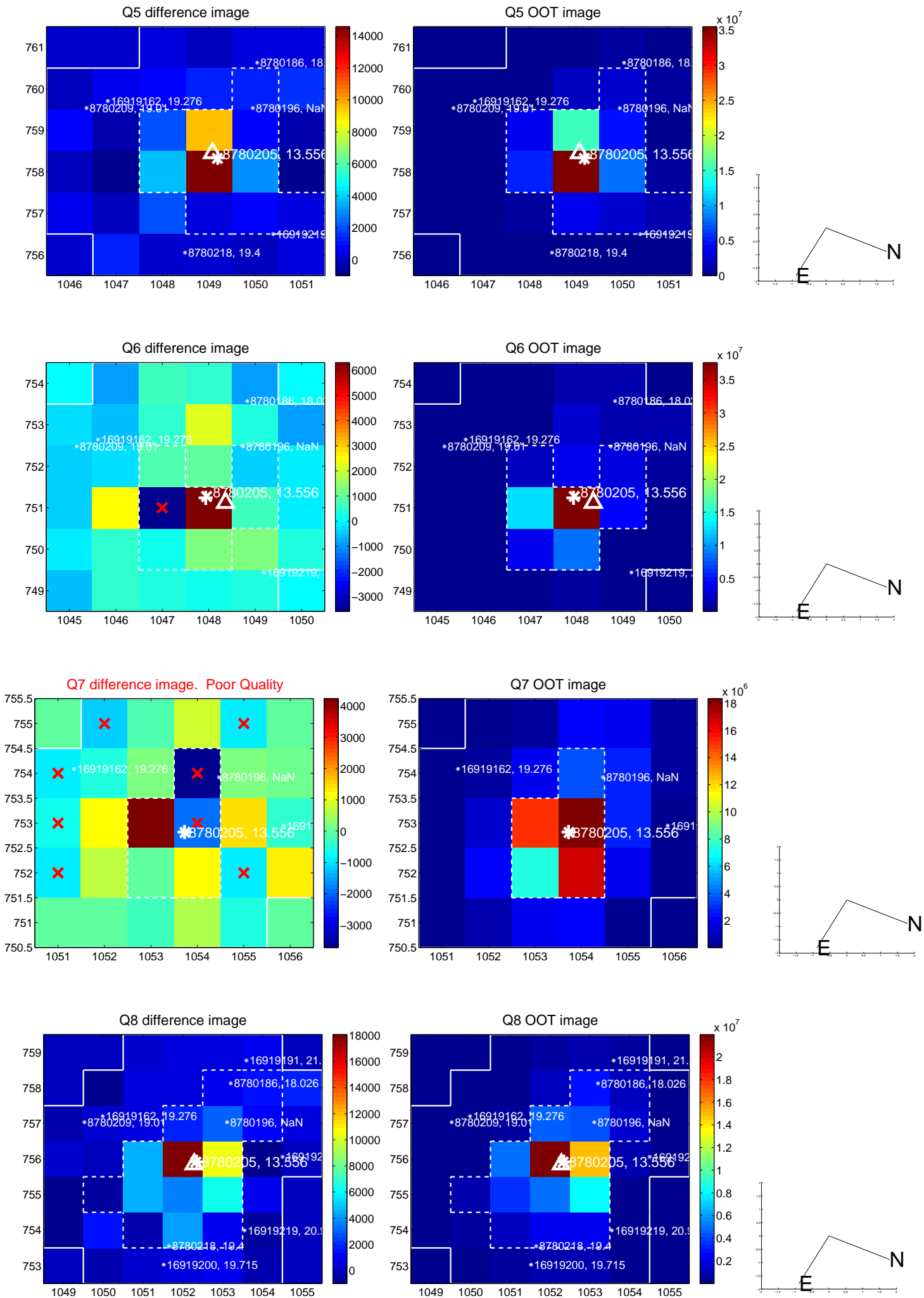


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

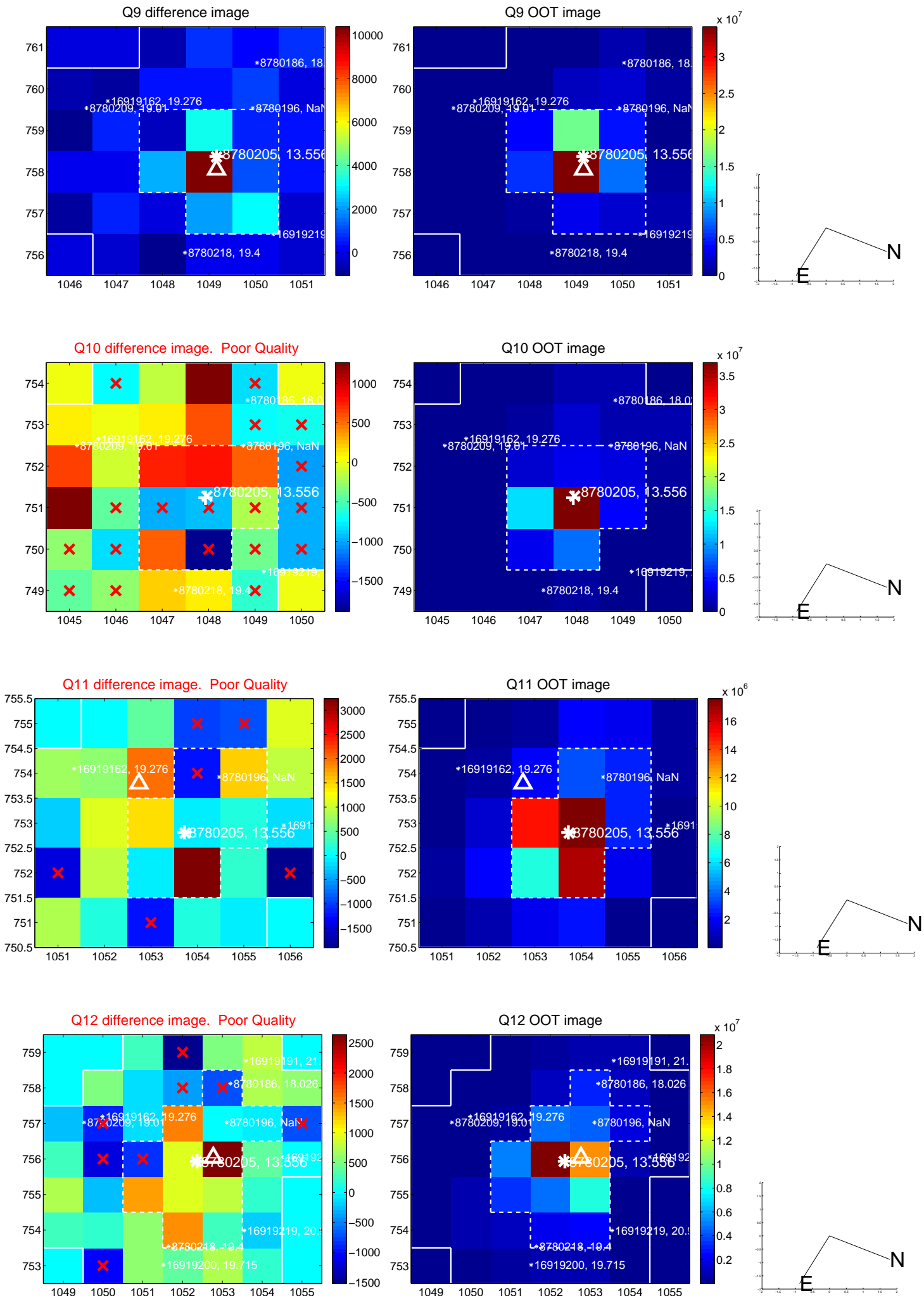
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



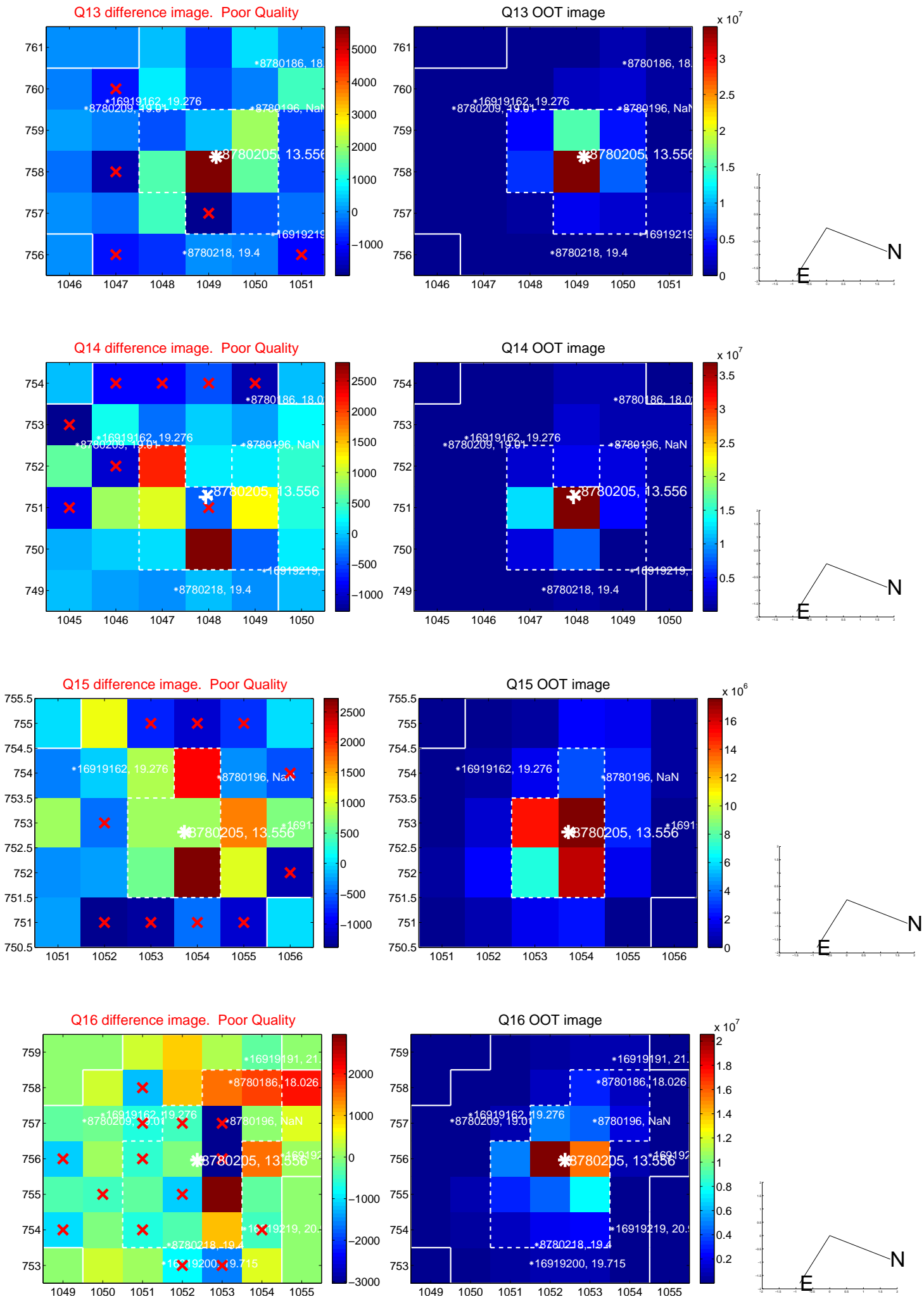
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



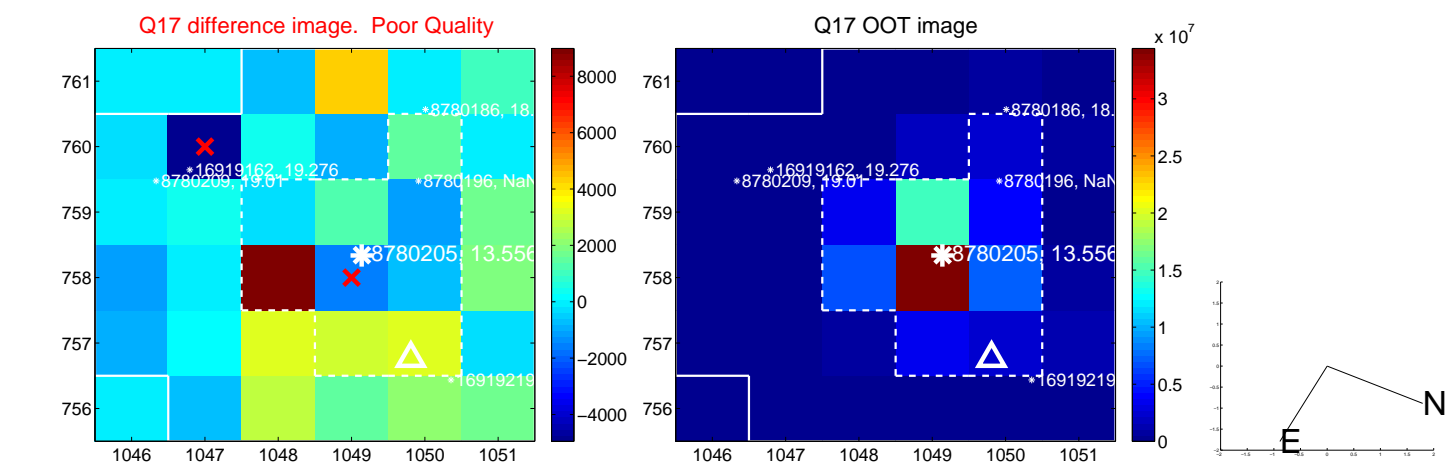
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



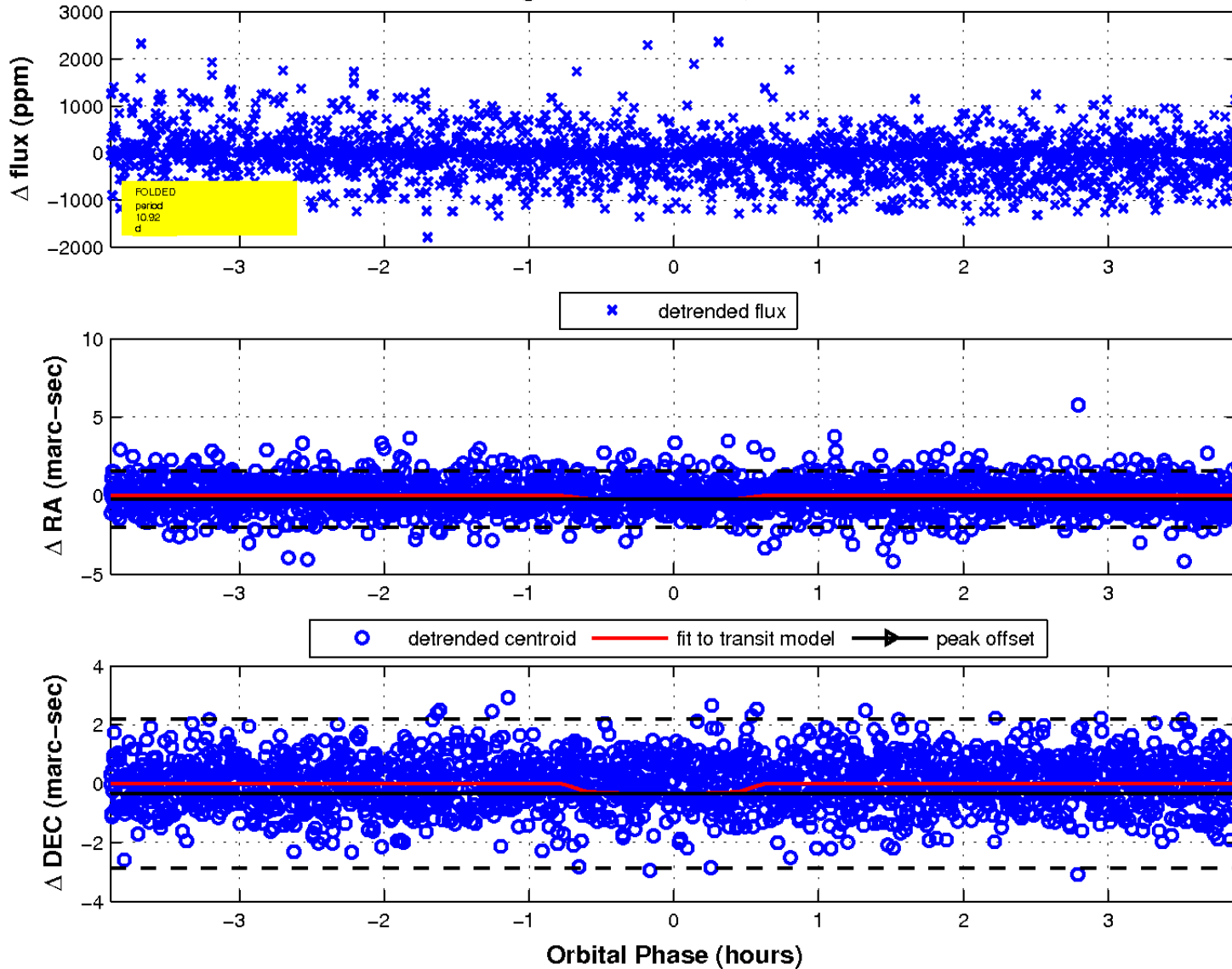
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



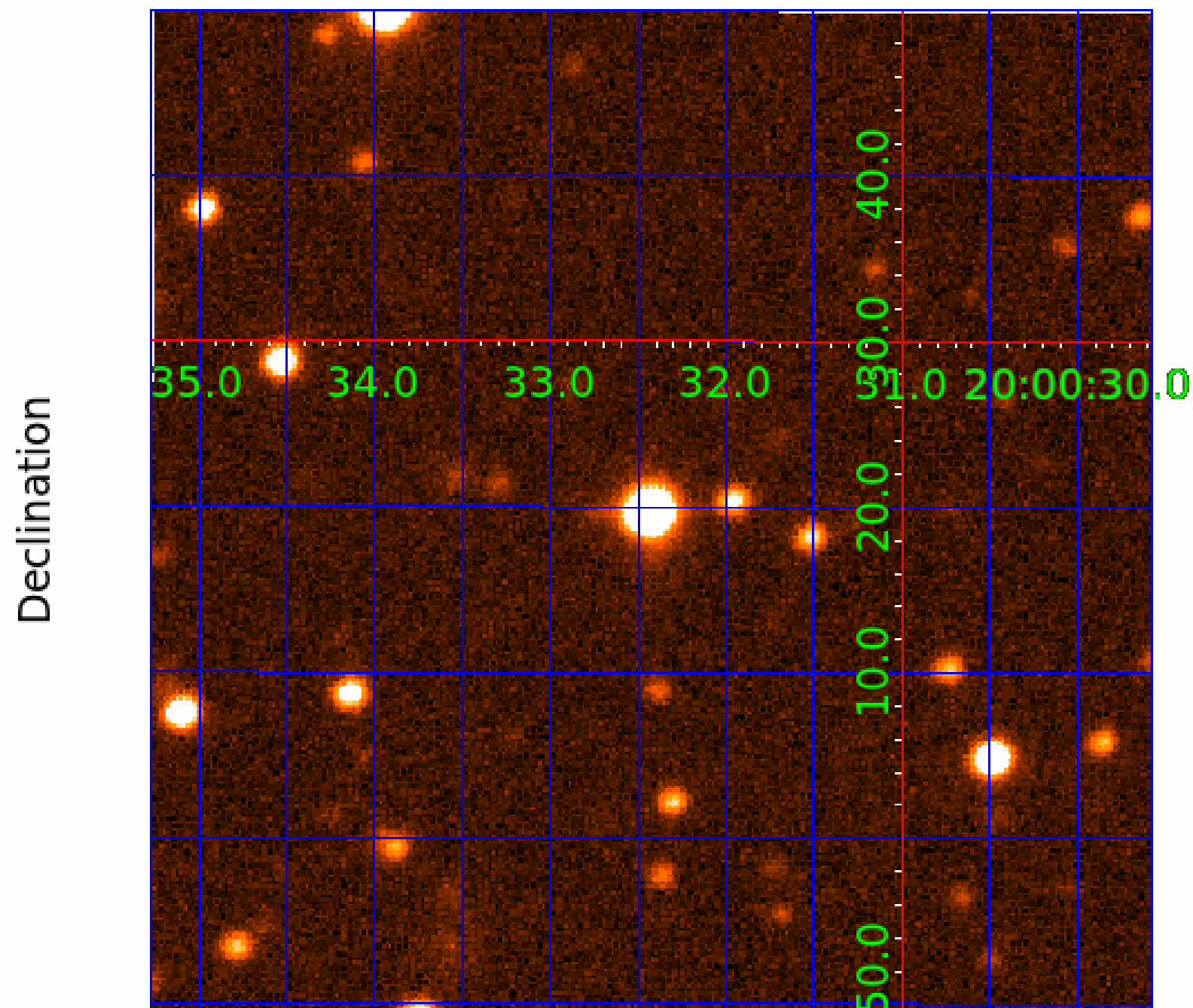
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 3



UKIRT Image



KIC 008780205

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})
008780205-01	OBS	No	0.582549	131.908792	19.8	4.362	8.4	4.8	1.22	6446	0.59	12701.41
008780205-02	OBS	No	10.915298	142.263413	1341.3	1.301	12.1	14.4	1.22	6446	4.52	255.22
008780205-03	OBS	No	13.525686	132.051918	2029.2	2.091	15.0	27.0	1.22	6446	5.54	191.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008780205-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008780205-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV
008780205-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

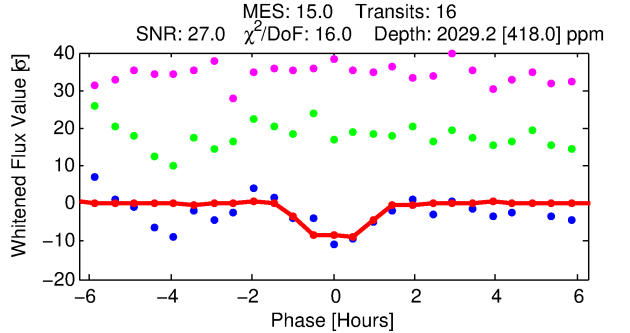
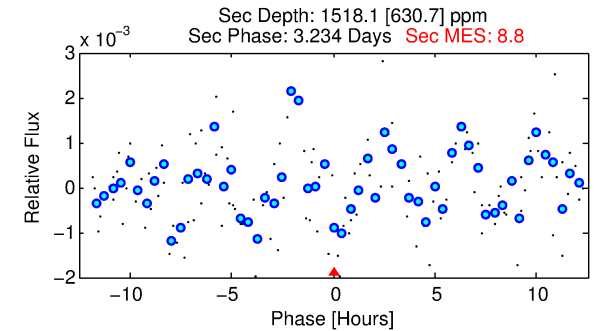
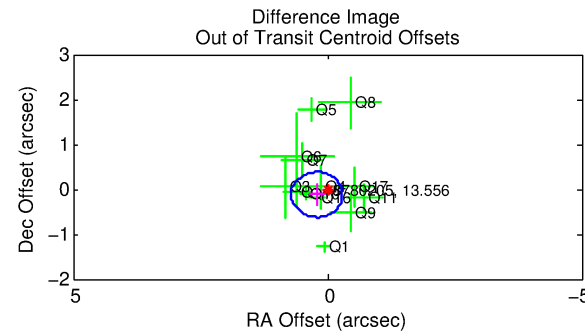
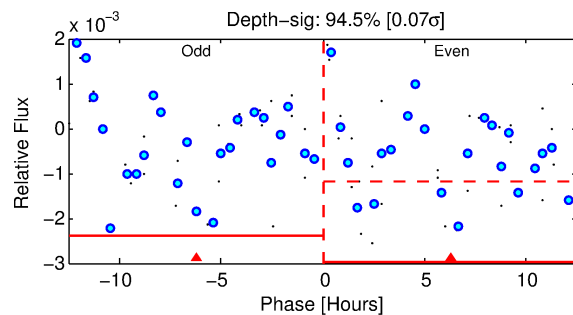
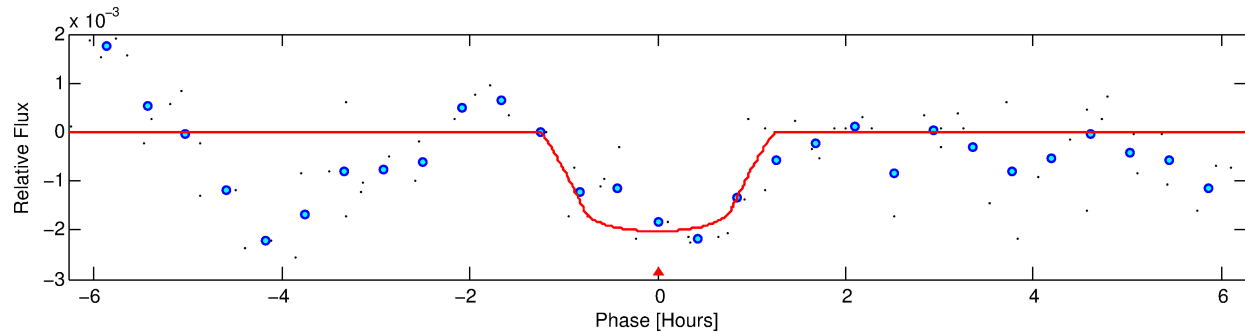
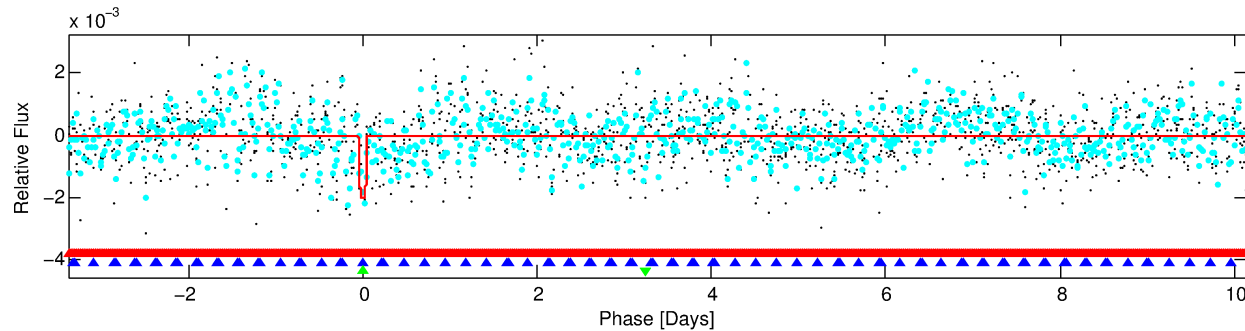
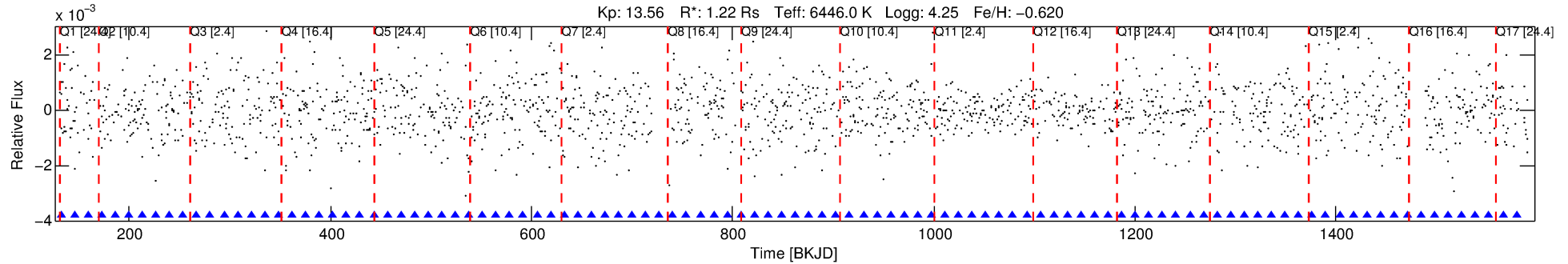
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008780205-03

No Significant Match Found

DV One-Page Summary

KIC: 8780205 Candidate: 3 of 3 Period: 13.526 d



DV Fit Results:

Period = 13.52569 [0.00014] d
Epoch = 132.0519 [0.0077] BKJD
Rp/R* = 0.0416 [0.1117]
a/R* = 51.47 [722.67]
b = 0.00 [4849.36]
Seff = 191.76 [73.44]
Teq = 949 [91] K
Rp = 5.54 [14.95] Re
a = 0.1096 [0.0259] AU
Ag = 327.08 [1766.69] [0.18 σ]
Teffp = 6239 [8409] K [0.63 σ]

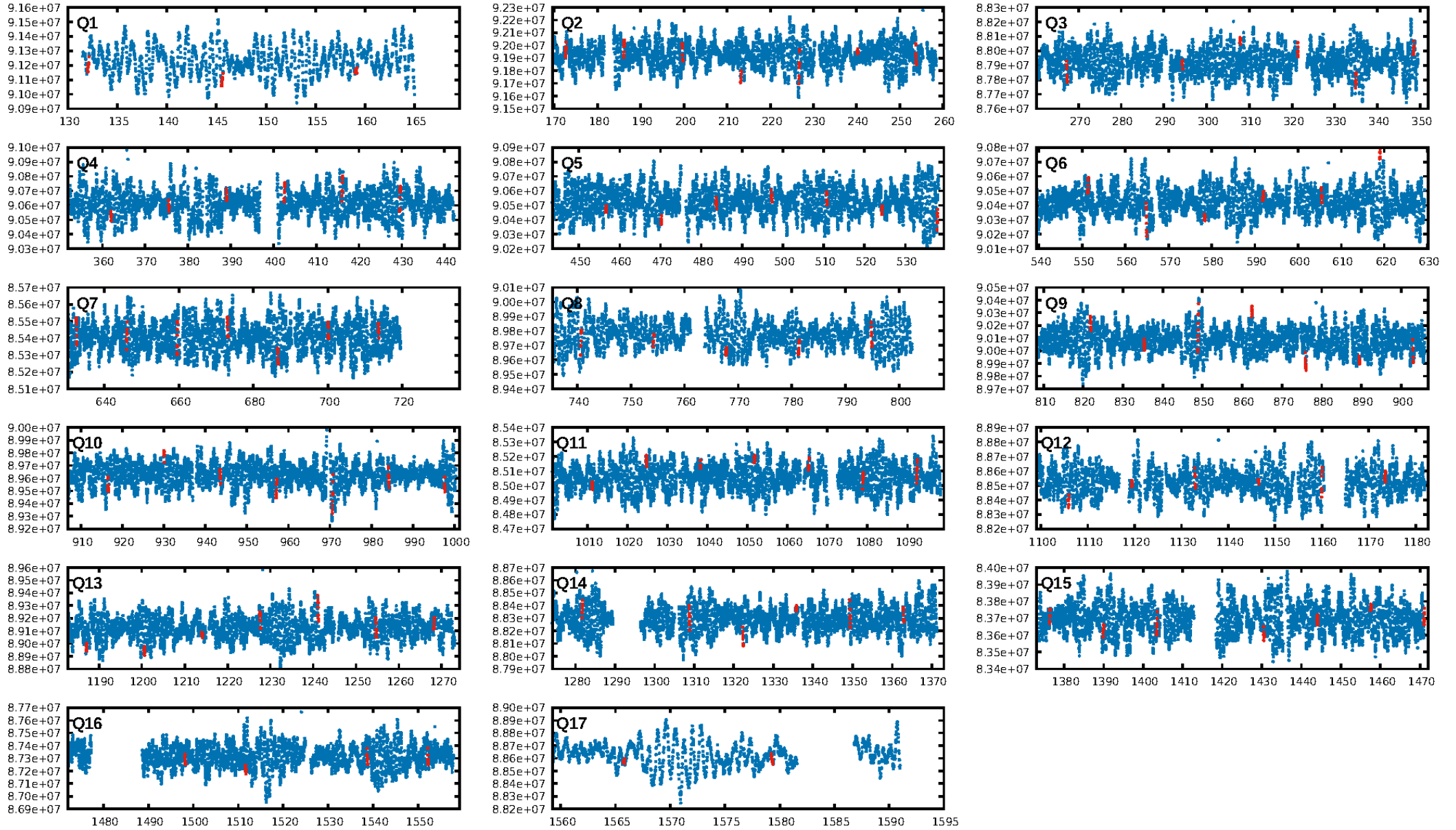
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [25.44 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.8%
Bootstrap-pfa: 1.47e-08
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 0.8961
Centroid-sig: 69.2%
Centroid-so: 0.297 arcsec [3.78 σ]
OotOffset-rm: 0.245 arcsec [1.46 σ]
KicOffset-rm: 0.258 arcsec [1.27 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.00 [0/17]

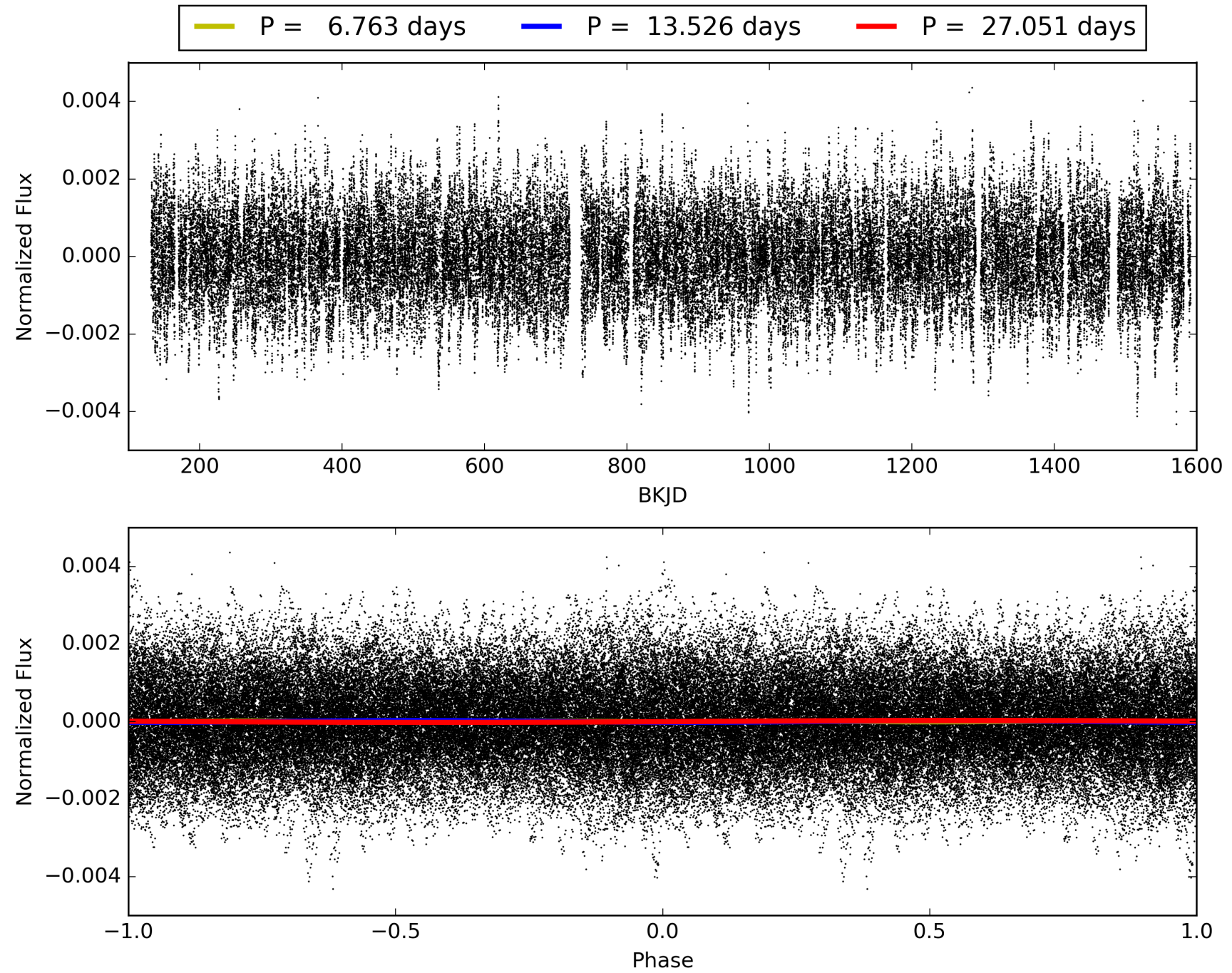
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:15:42 Z

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

TCE 008780205-03, PDC Light Curves

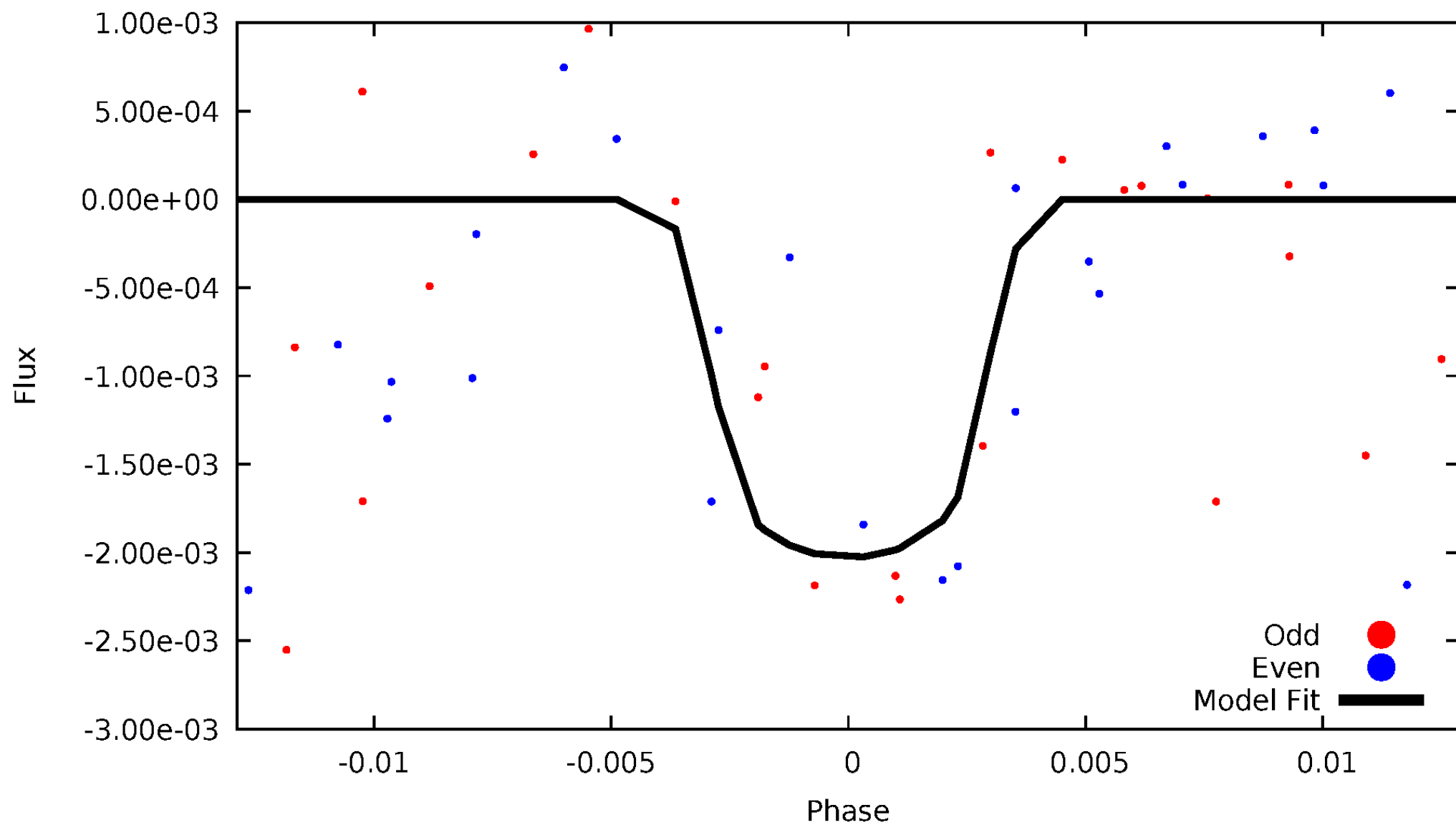


TCE 008780205-03



DV Odd/Even

TCE 008780205-03

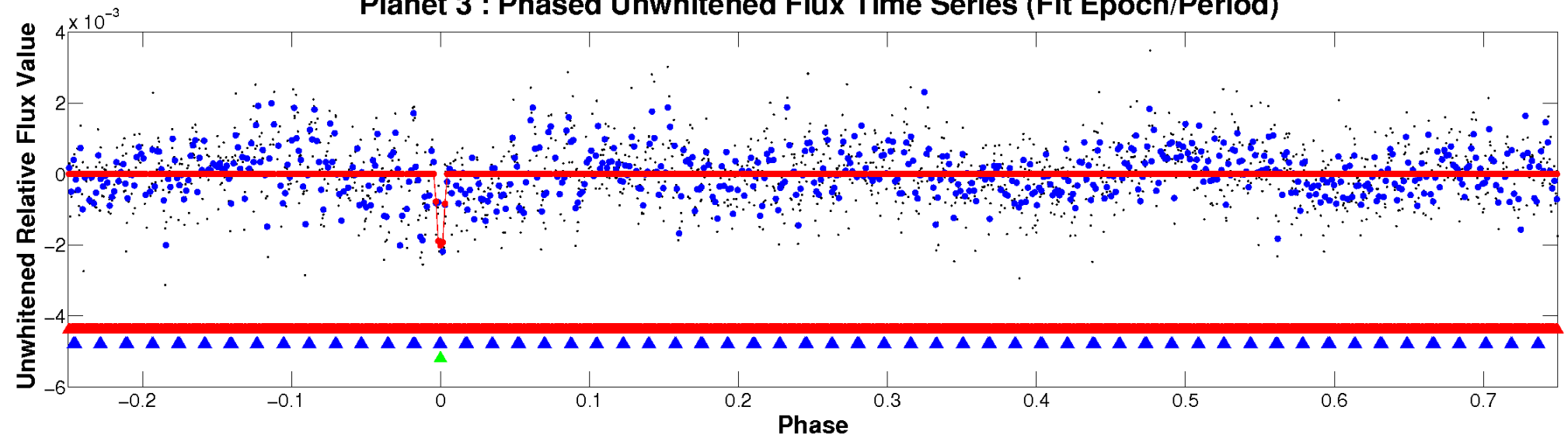


ALT Odd/Even

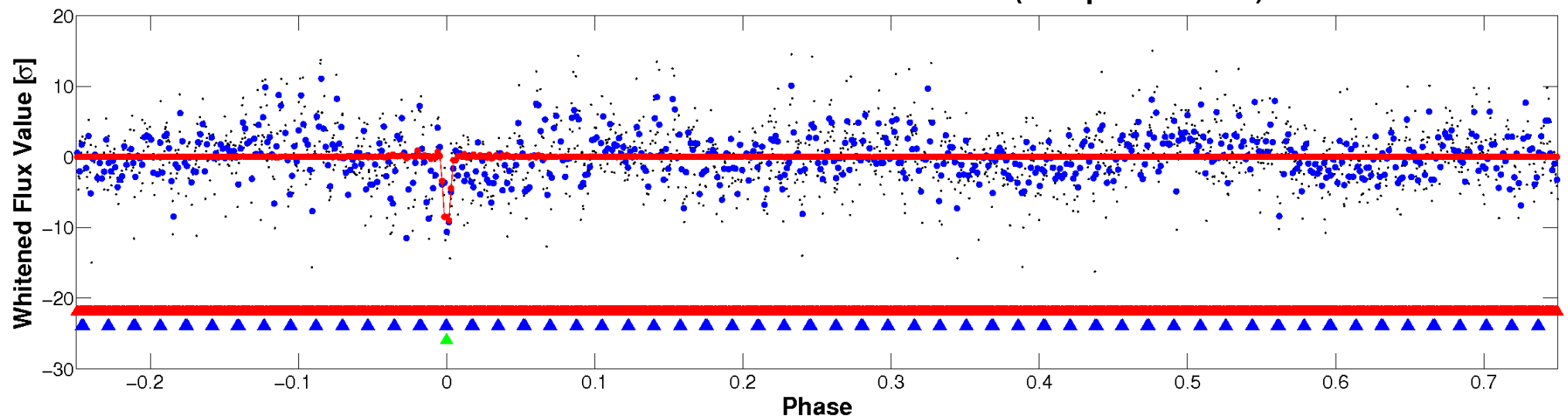
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

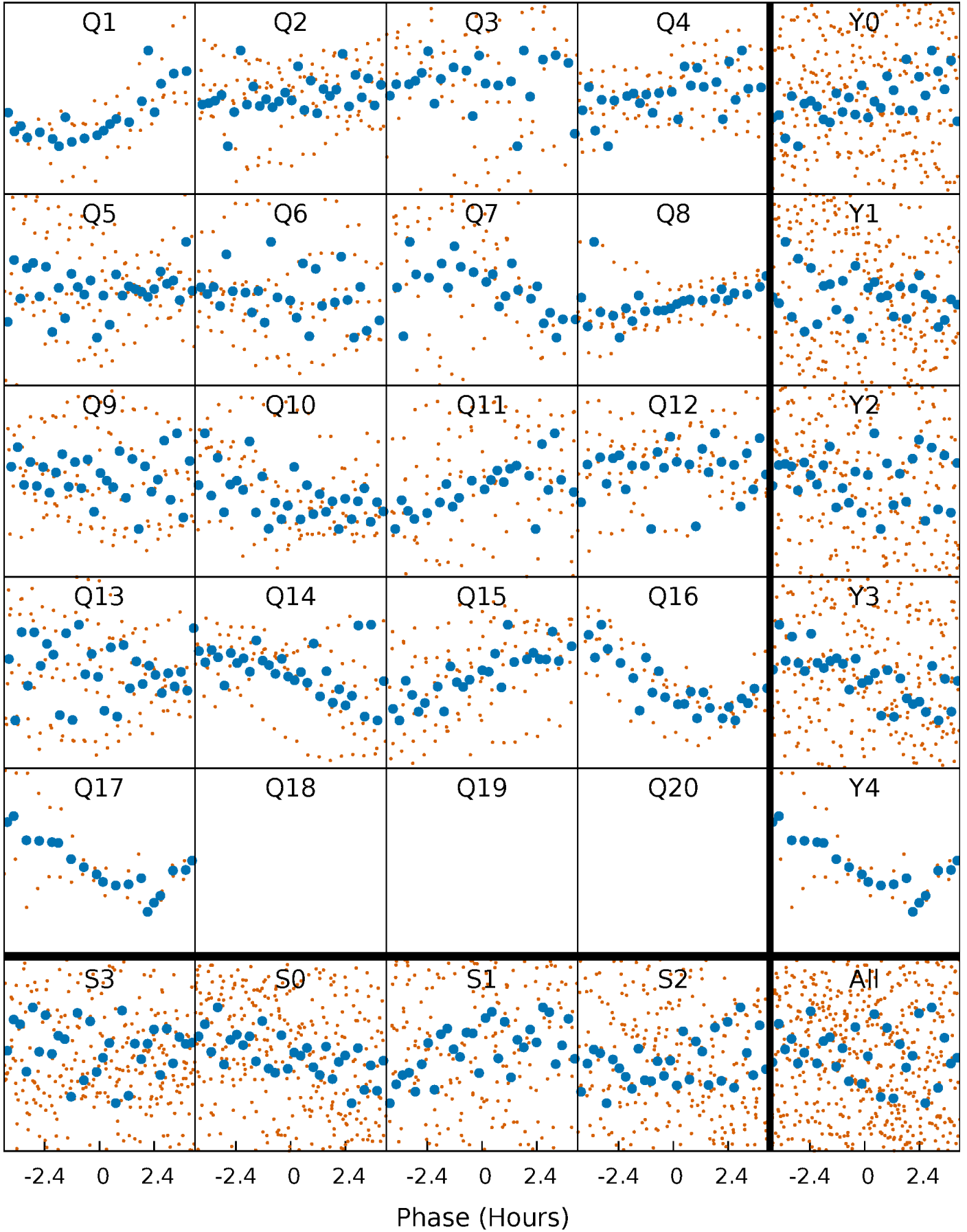


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



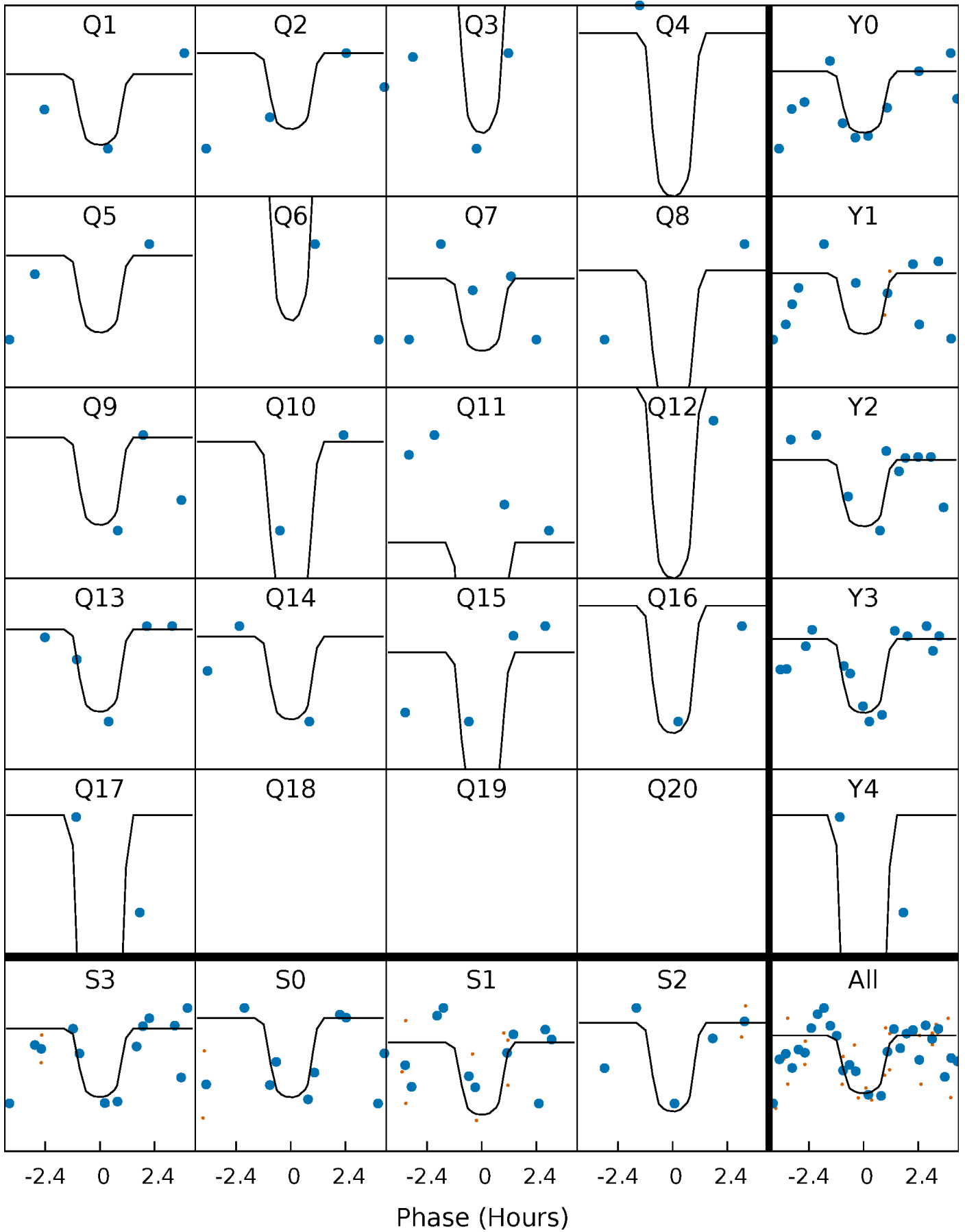
PDC Quarter-Phased Transit Curves

TCE 008780205-03 P= 13.525686 Days $T_0=132.051918$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008780205-03 P= 13.525686 Days $T_0=132.051918$ (BKJD)

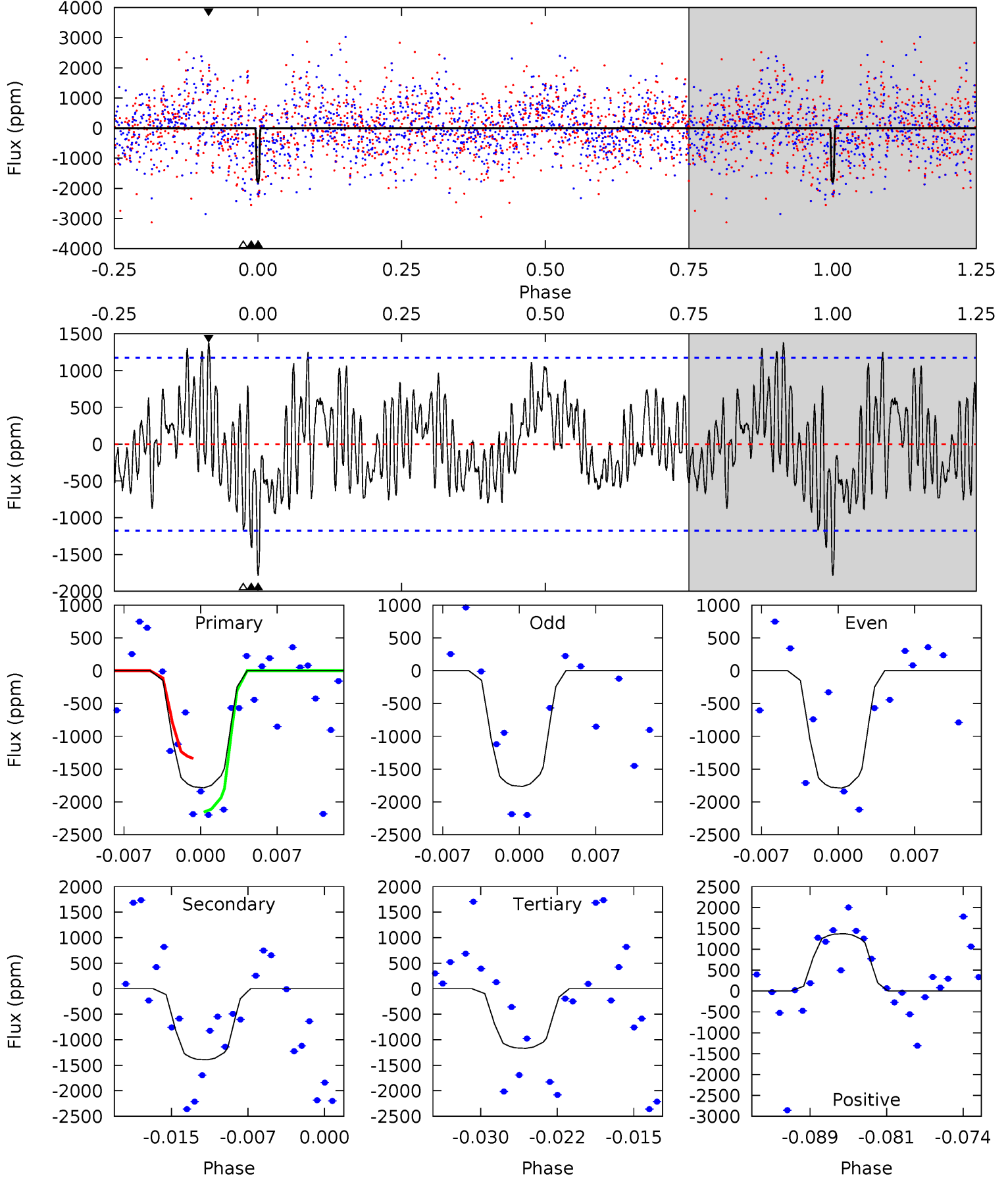


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008780205-03, P = 13.525686 Days, E = 118.526232 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.72	6.03	5.06	5.94	5.08	2.68	2.04	2.66	1.78	0.97	0.09	0.06	0	0.43	1.70



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008780205

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6446^{+175}_{-213}	$4.247^{+0.204}_{-0.167}$	$-0.620^{+0.300}_{-0.300}$	$1.220^{+0.323}_{-0.264}$	$0.957^{+0.135}_{-0.098}$	$0.743^{+0.708}_{-0.367}$
	+3%/-3%	+5%/-4%	+48%/-48%	+26%/-22%	+14%/-10%	+95%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008780205-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1394 ± 231	$12.64^{+12.47}_{-8.93}$	1320^{+97}_{-103}	4265^{+3169}_{-889}	59^{+584}_{-44}
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 $A_{obs} \gg 1.0$

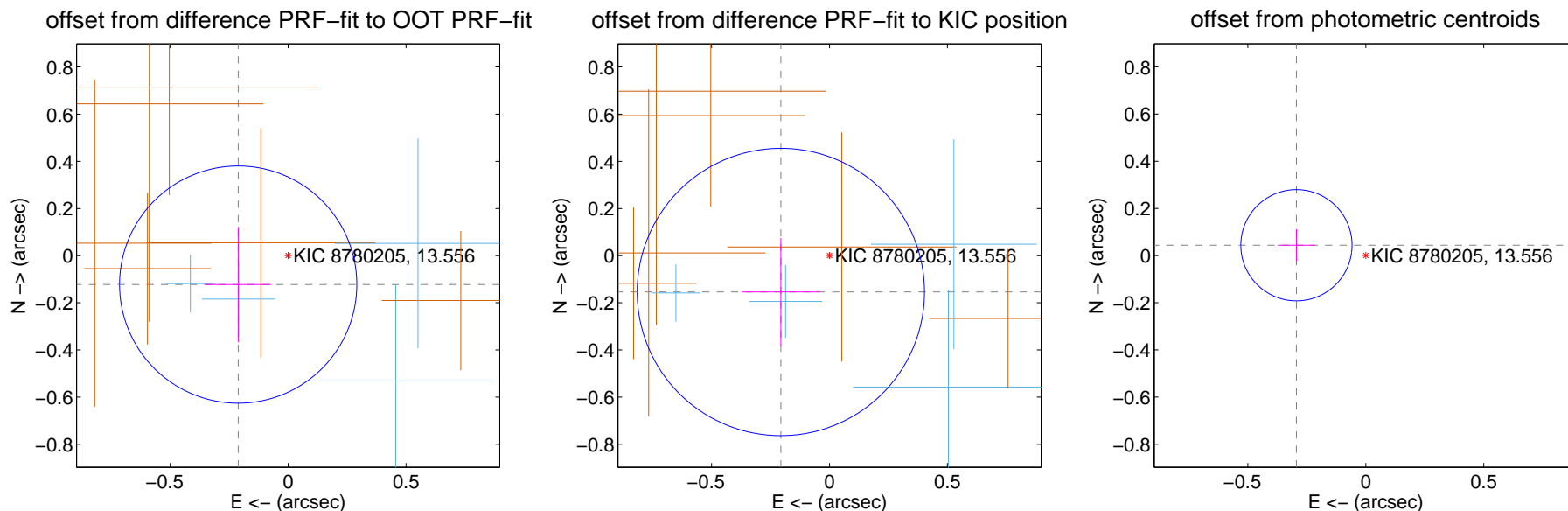
DV Centroid Data

Supplemental centroid analysis for 008780205-03. Kepler magnitude: 13.56. Transit SNR 26.96

There are 7 quarters with good PRF difference image offsets

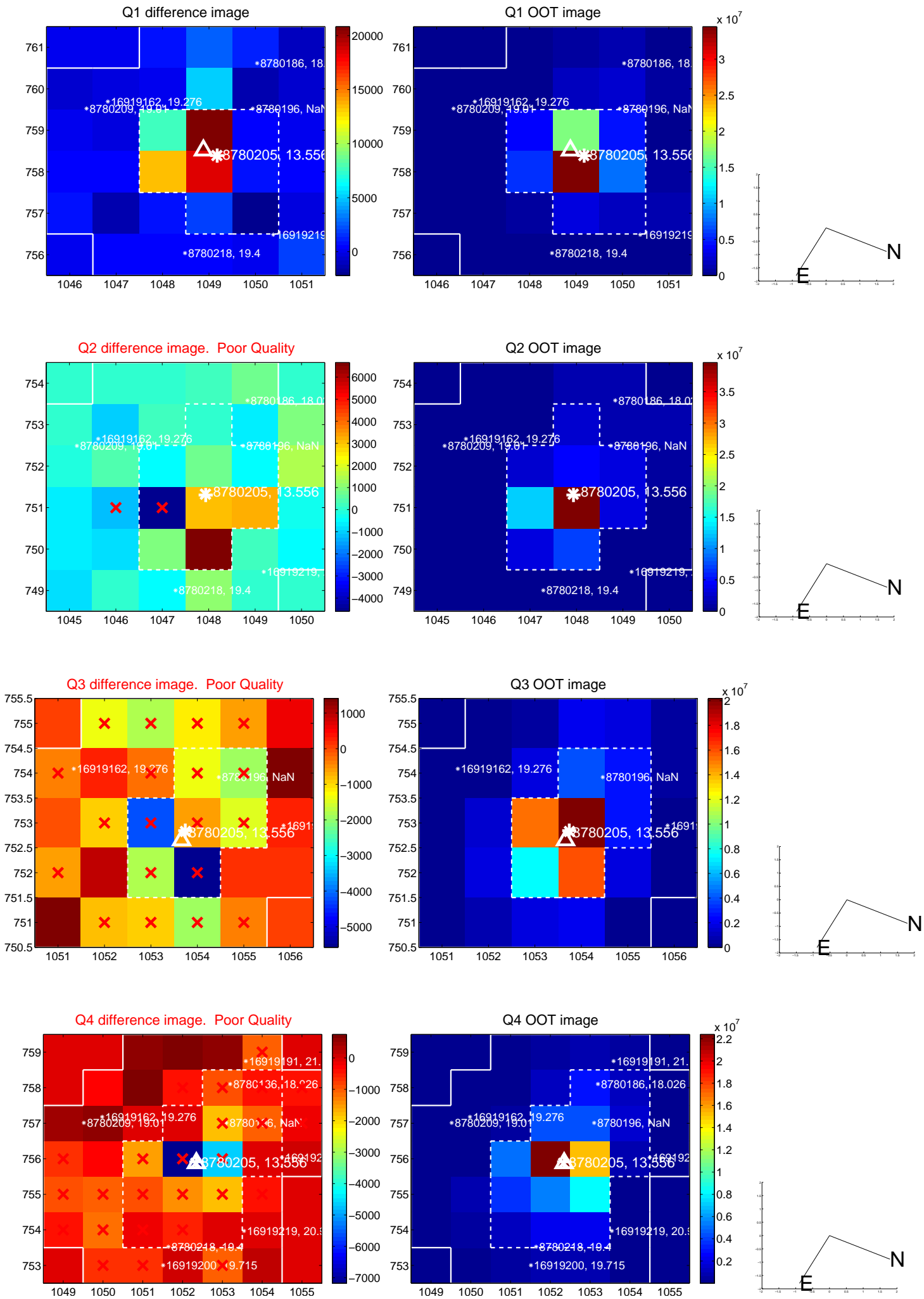
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.245 ± 0.168	1.46	0.212 ± 0.141	-0.123 ± 0.244
PRF-fit source offset from KIC position	0.258 ± 0.203	1.27	0.206 ± 0.166	-0.154 ± 0.229
photometric centroid source offset	0.30 ± 0.08	3.78	0.29 ± 0.08	0.04 ± 0.07

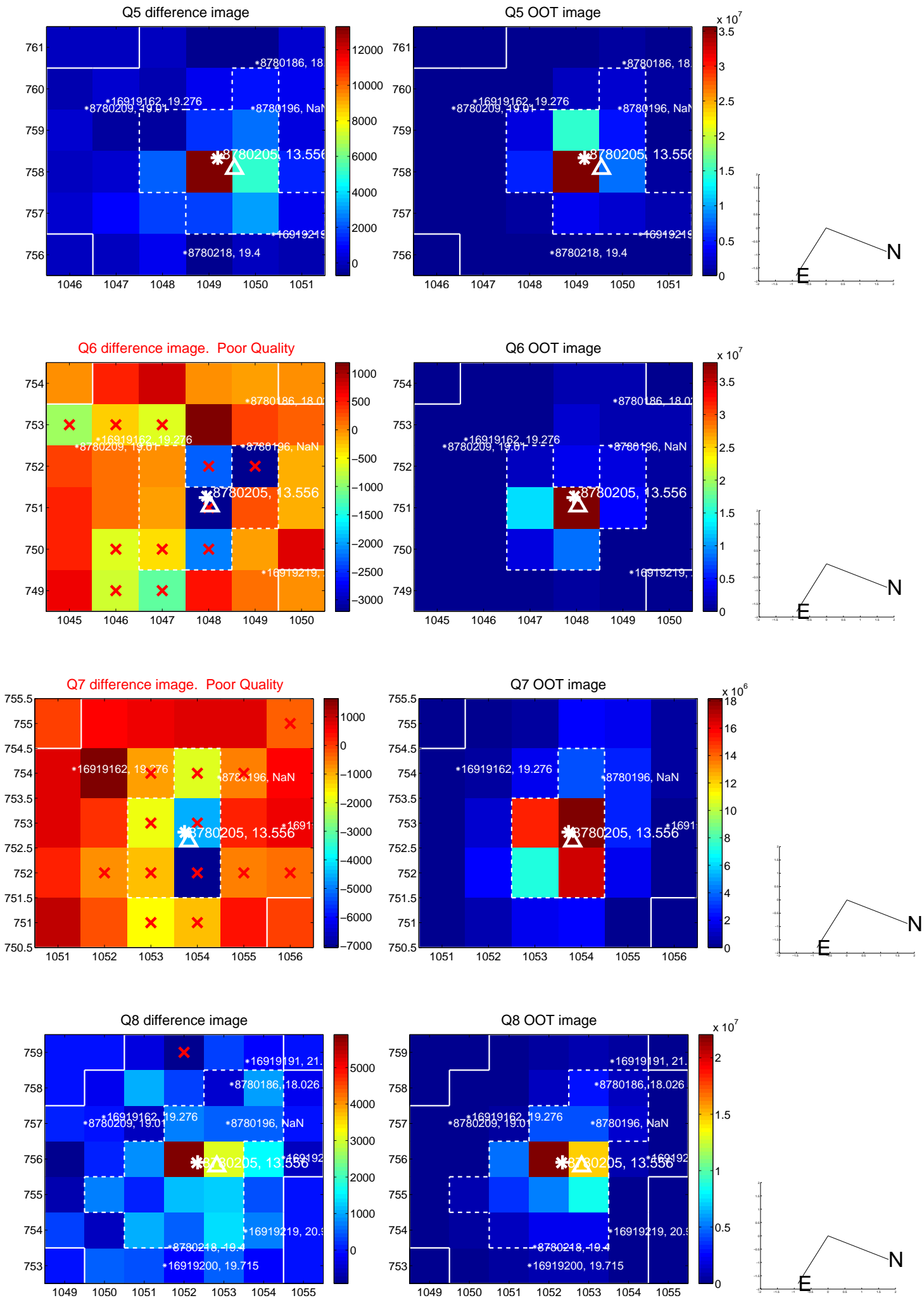


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

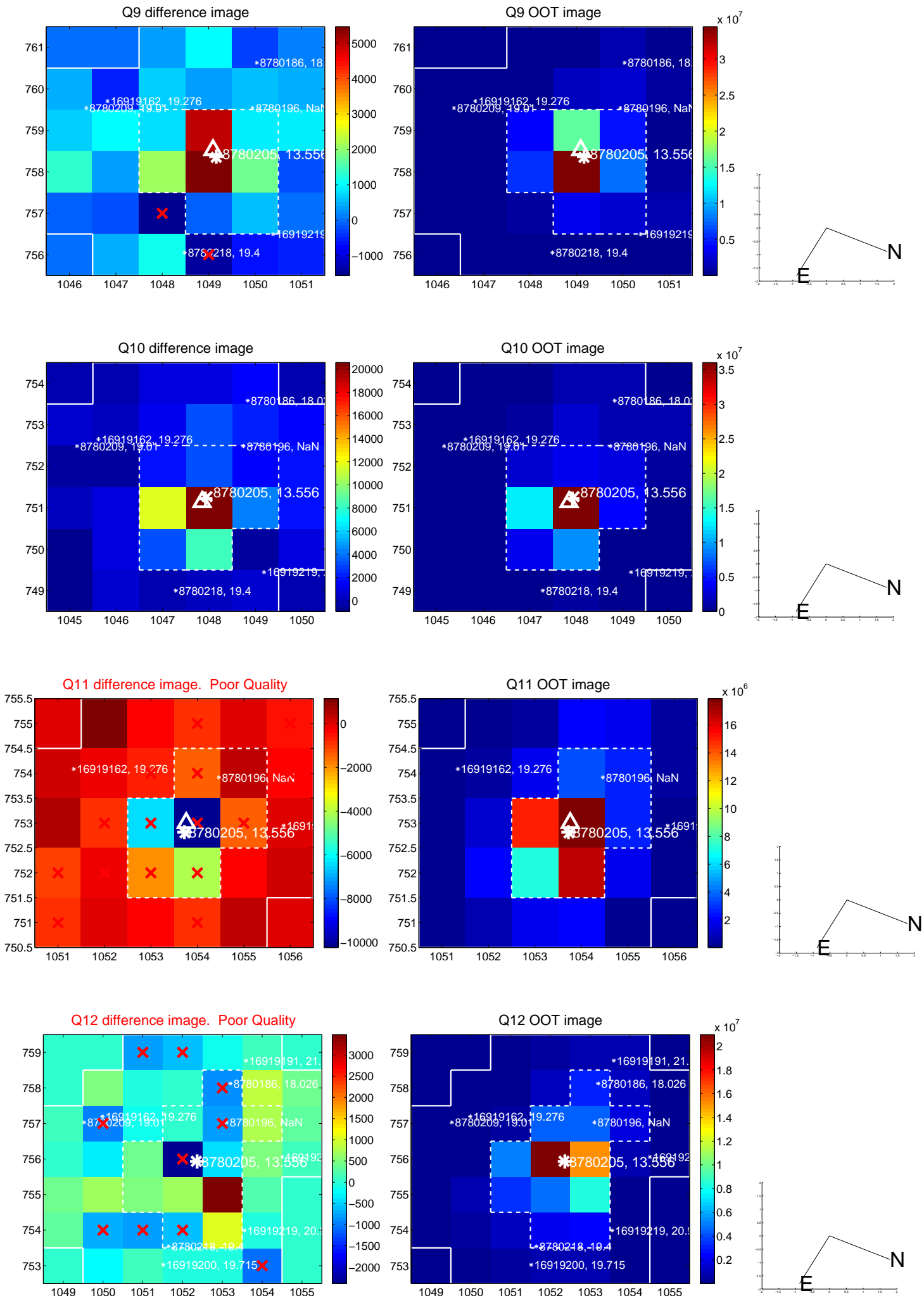
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



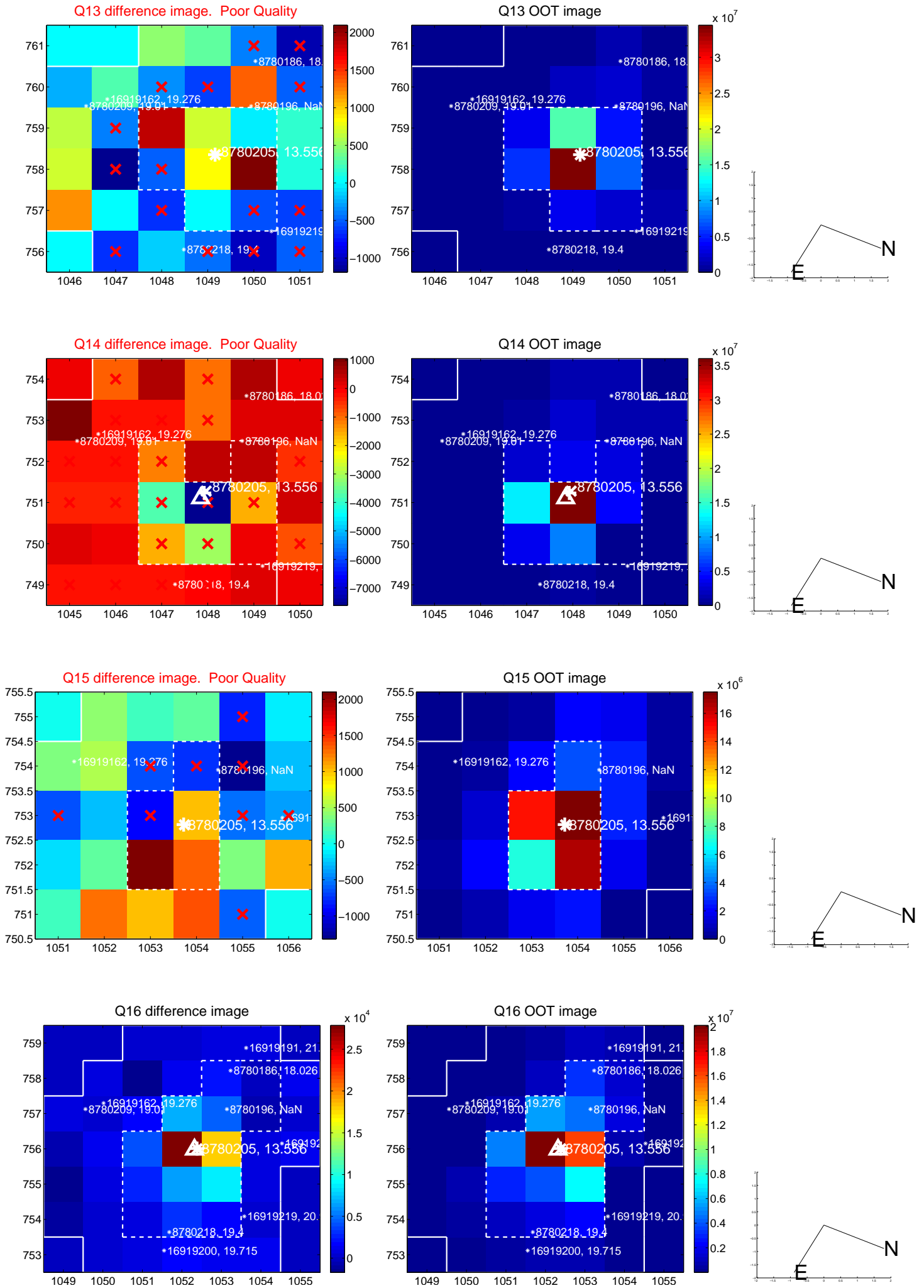
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



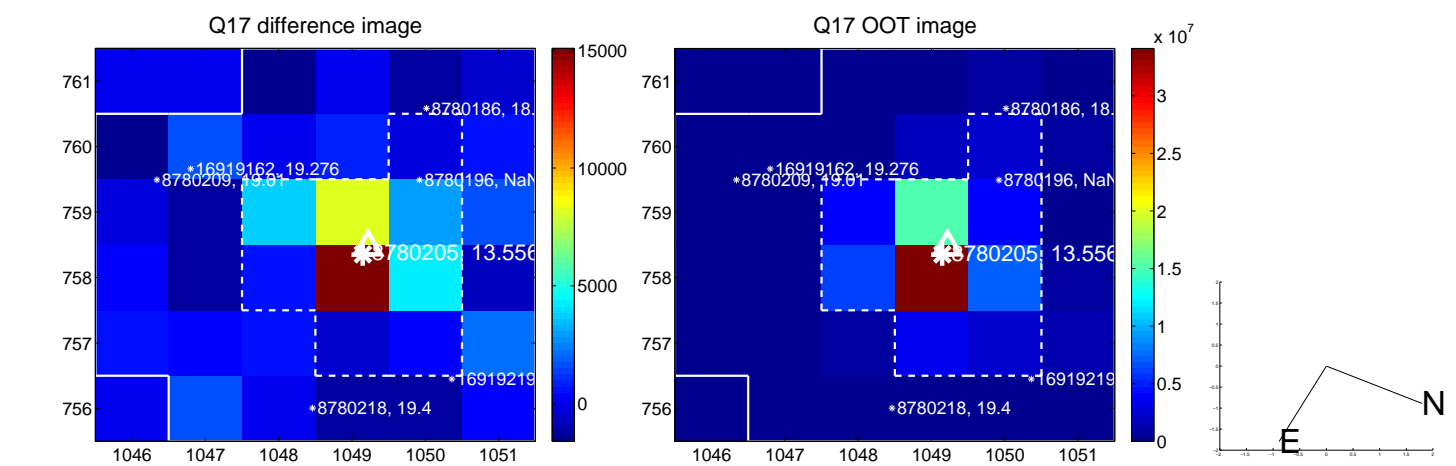
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



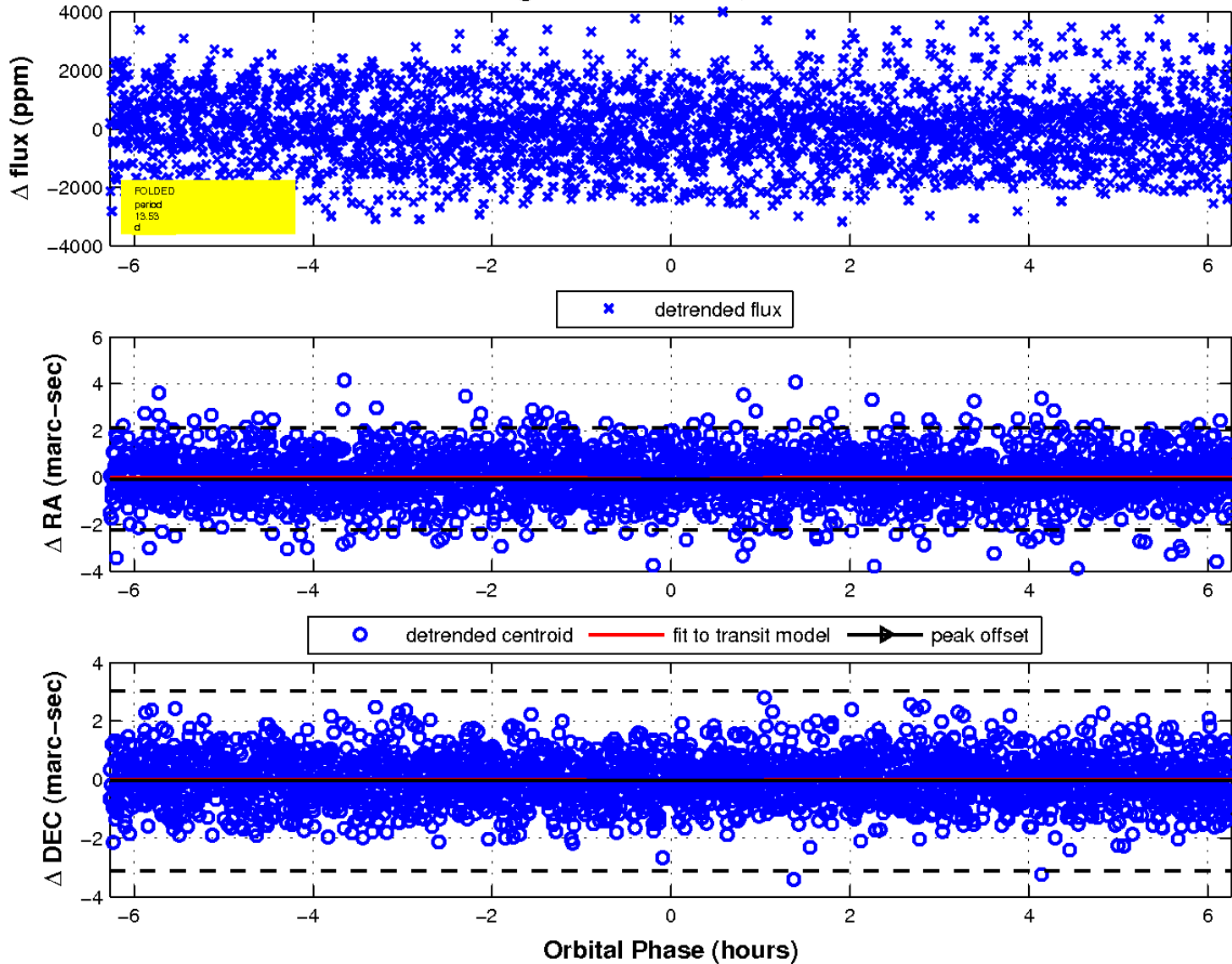
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

