

KIC 008127778

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})
008127778-01	OBS	No	0.968765	131.757027	106.9	3.000	9.1	-1.0	2.21	9051	2.33	47677.98
008127778-02	OBS	No	0.968711	132.144883	12.5	4.915	8.6	5.0	2.21	9051	0.81	47681.51
008127778-06	OBS	No	35.945755	149.544146	287.9	2.671	8.9	7.6	2.21	9051	4.33	385.25
008127778-07	OBS	No	36.482035	163.232924	314.9	2.575	7.5	8.4	2.21	9051	4.54	377.72
008127778-08	OBS	No	33.146778	162.680087	107.4	1.438	8.2	2.7	2.21	9051	2.53	429.23
008127778-09	OBS	No	33.147882	162.920468	250.2	1.882	8.4	5.4	2.21	9051	3.97	429.21
008127778-10	OBS	No	19.729039	138.427754	148.6	5.000	8.8	-1.0	2.21	9051	2.75	857.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127778-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008127778-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008127778-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
008127778-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
008127778-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

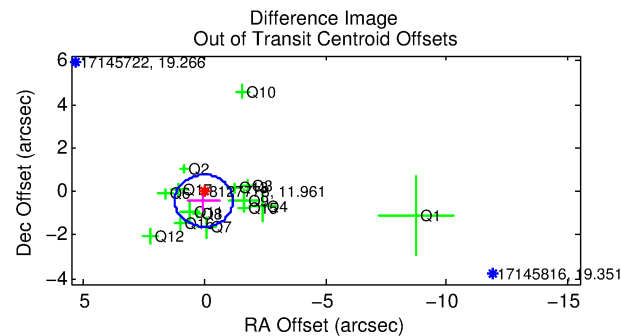
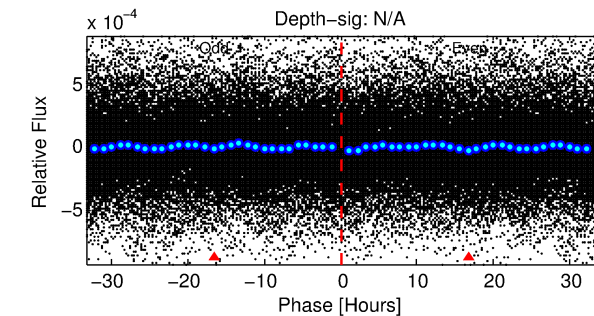
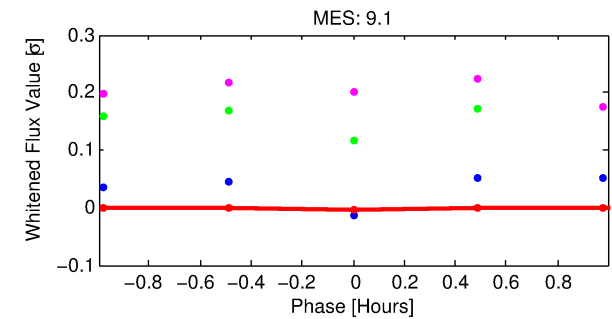
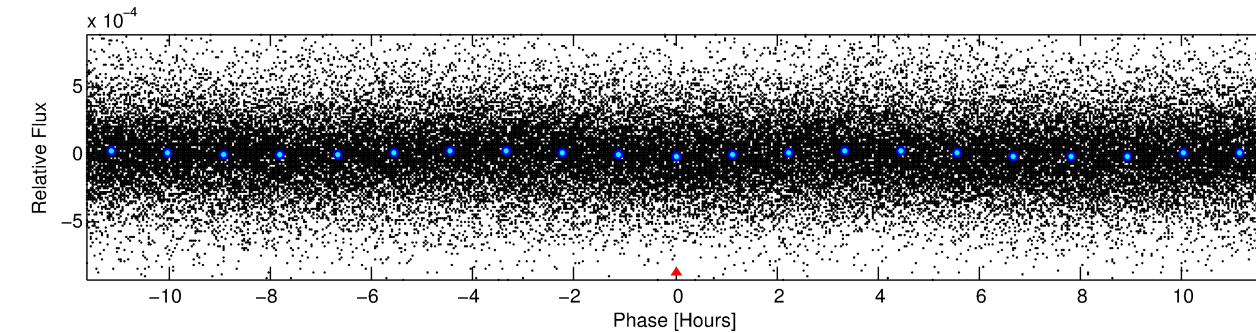
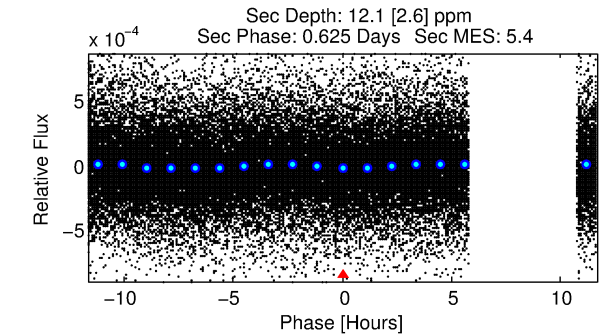
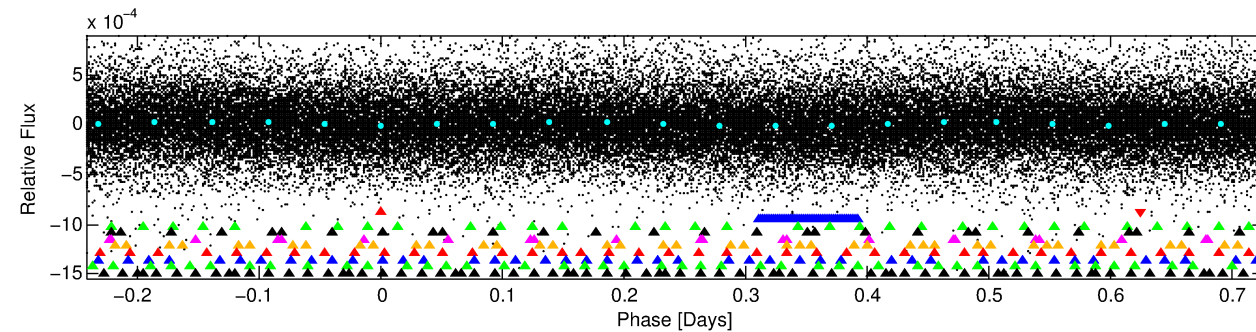
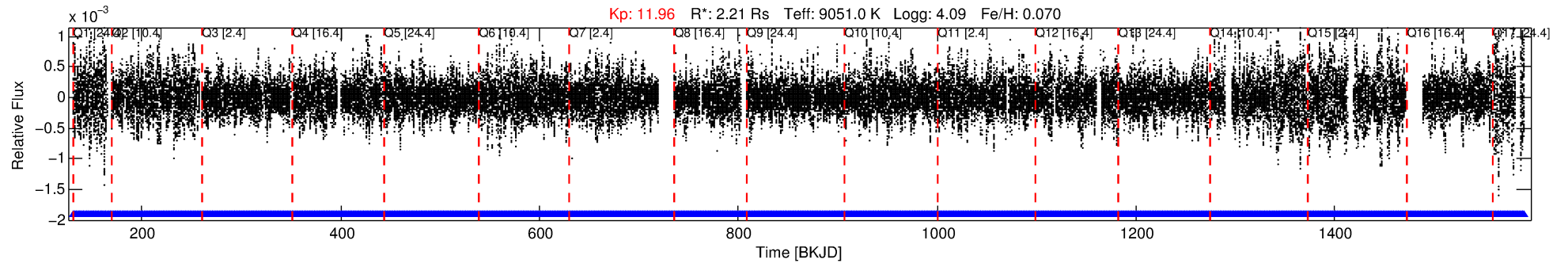
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127778-01

No Significant Match Found

DV One-Page Summary

KIC: 8127778 Candidate: 1 of 10 Period: 0.969 d



TPS TCE Results:

Period = 0.96876 d
Epoch = 131.7570 BKJD

DV fit results are unavailable

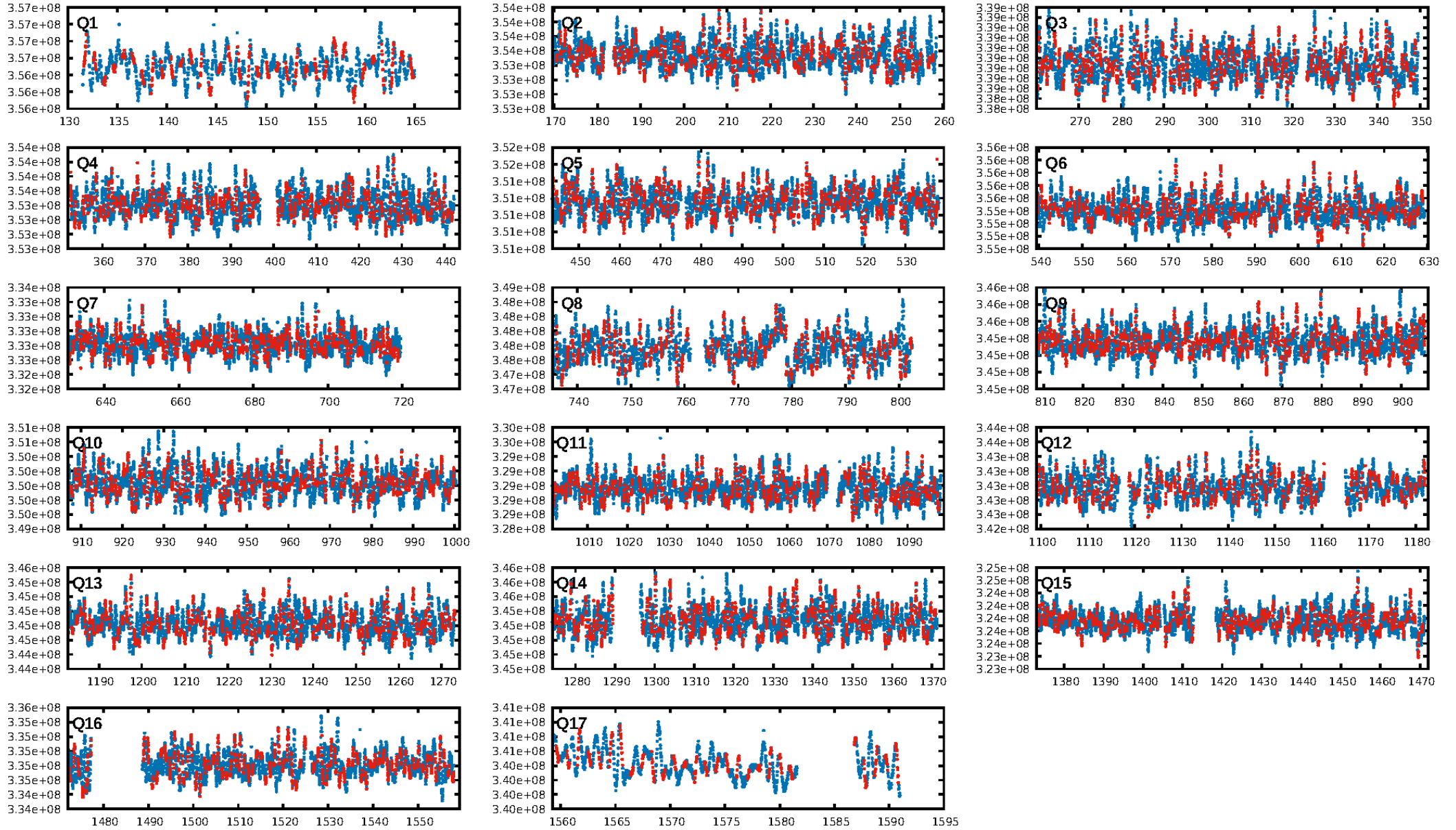
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [77.22 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1325/1325]
GhostDiagnostic-chr: 3.099
Centroid-sig: N/A
Centroid-so: 1.758 arcsec [3.01 σ]
OotOffset-rm: 0.425 arcsec [1.07 σ]
KicOffset-rm: 0.607 arcsec [1.58 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.40 [6/15]
DiffImageOverlap-fno: 0.00 [0/17]

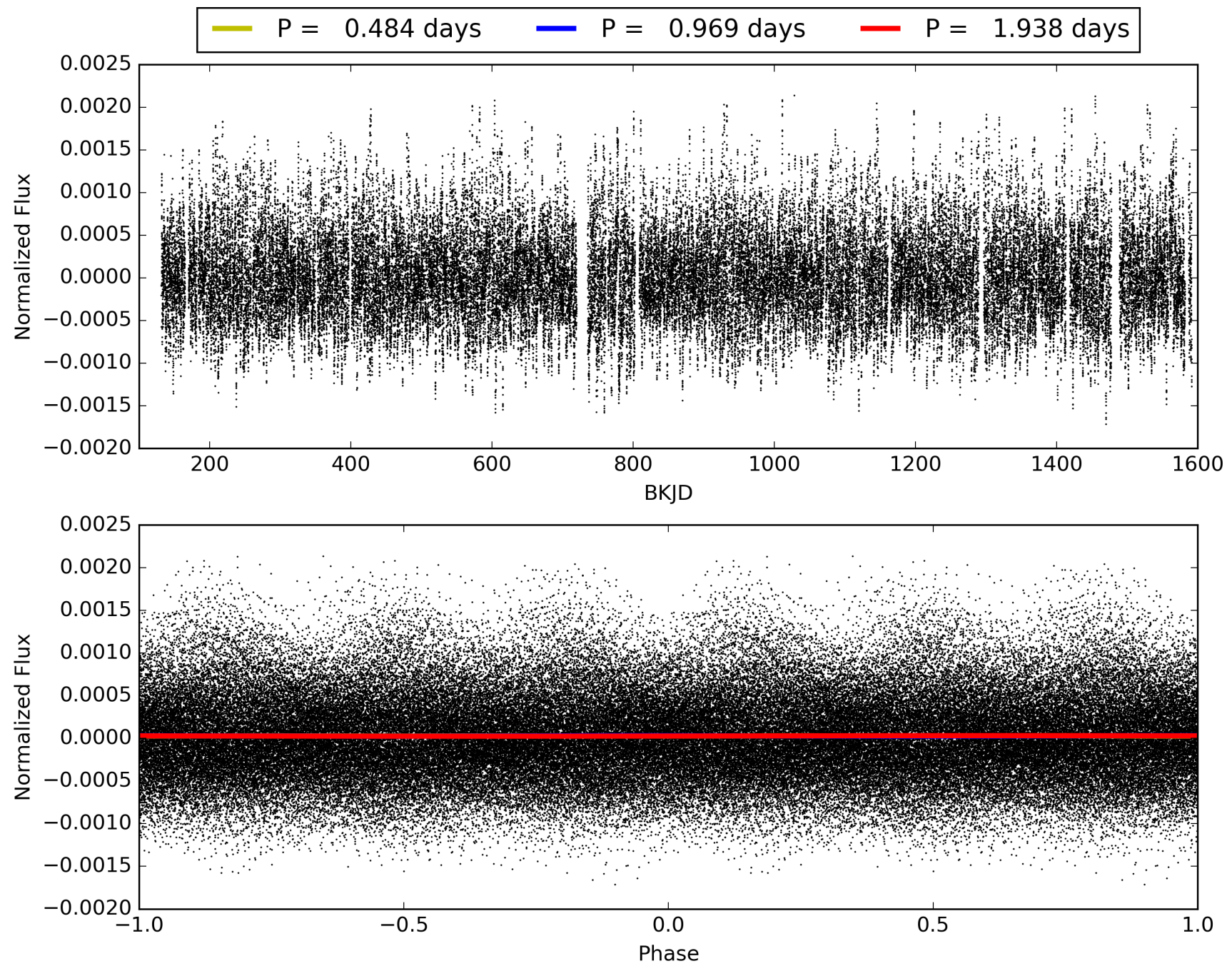
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008127778-01, PDC Light Curves

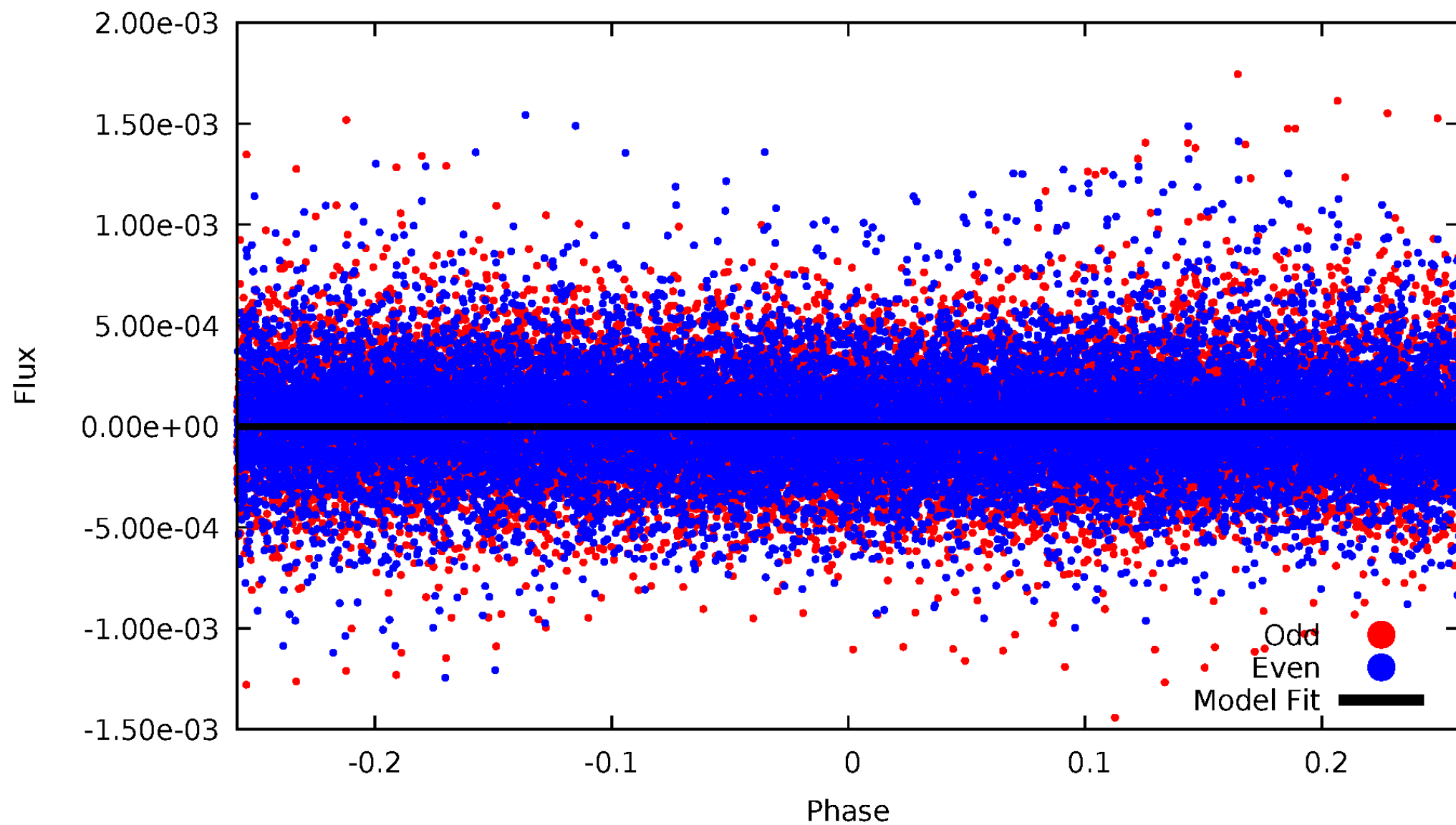


TCE 008127778-01



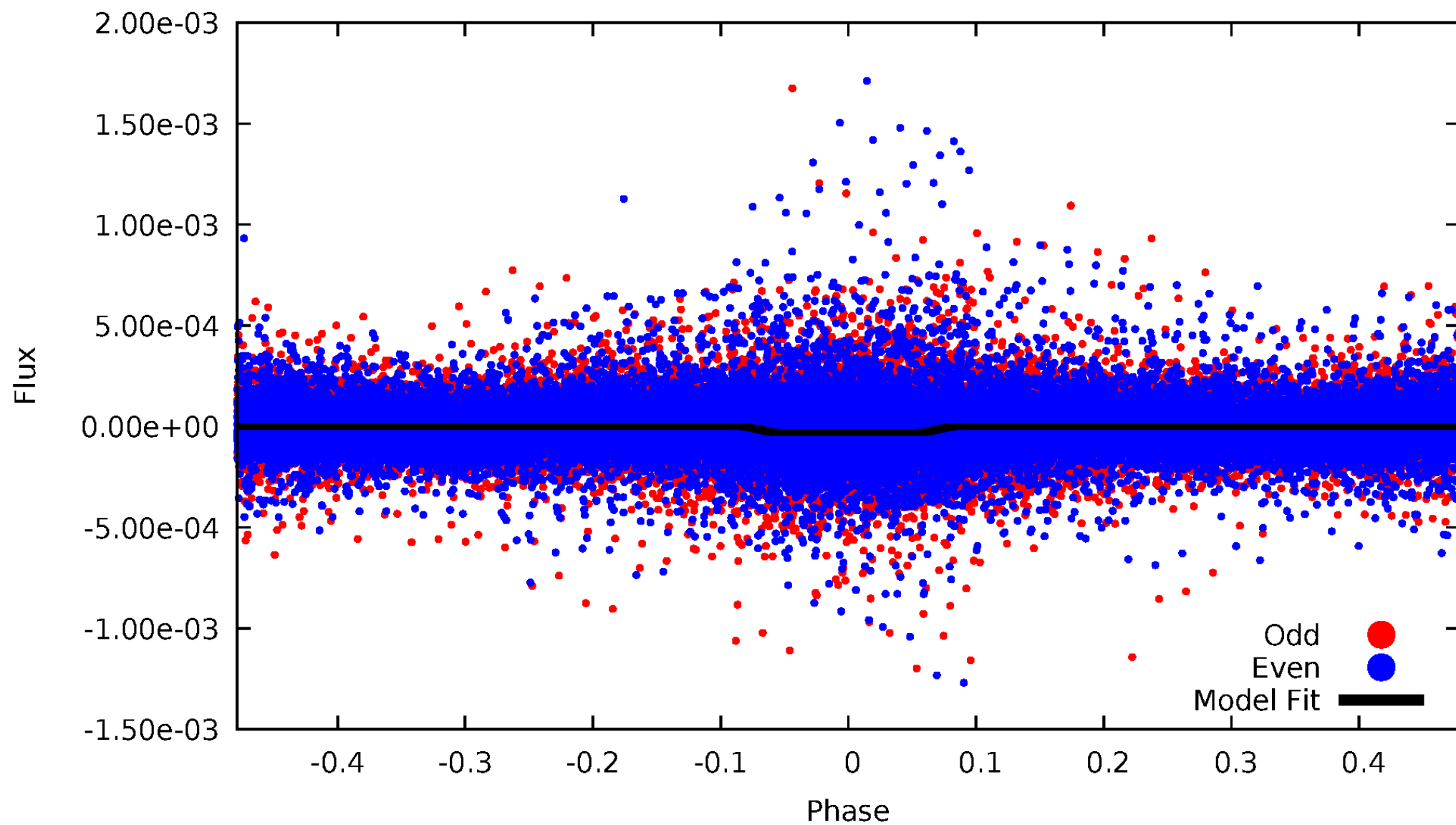
DV Odd/Even

TCE 008127778-01

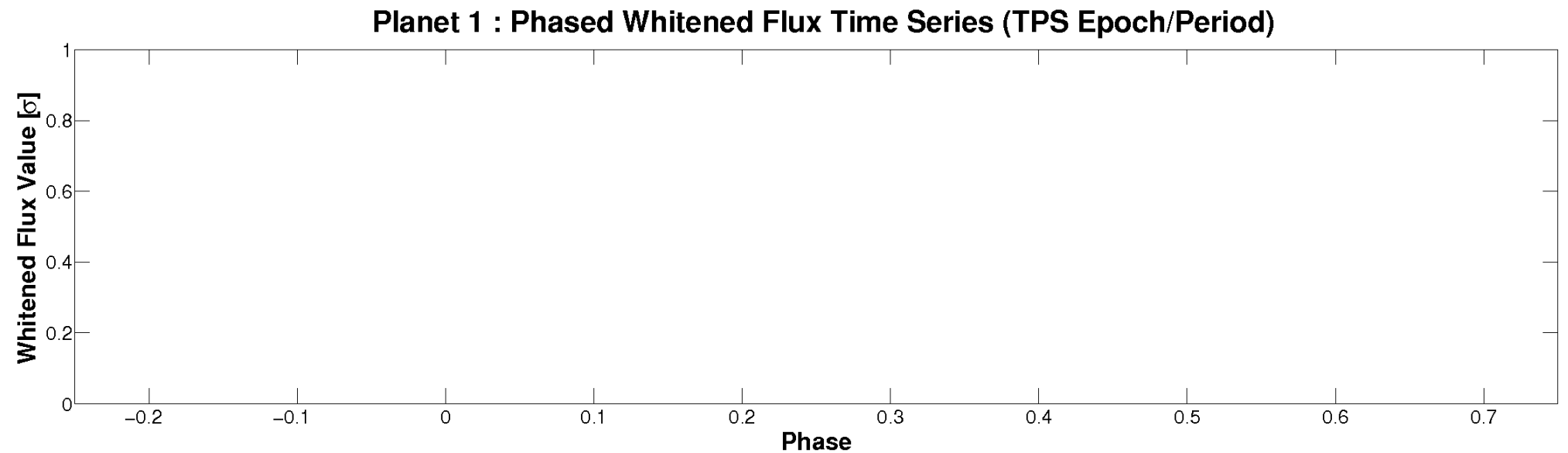
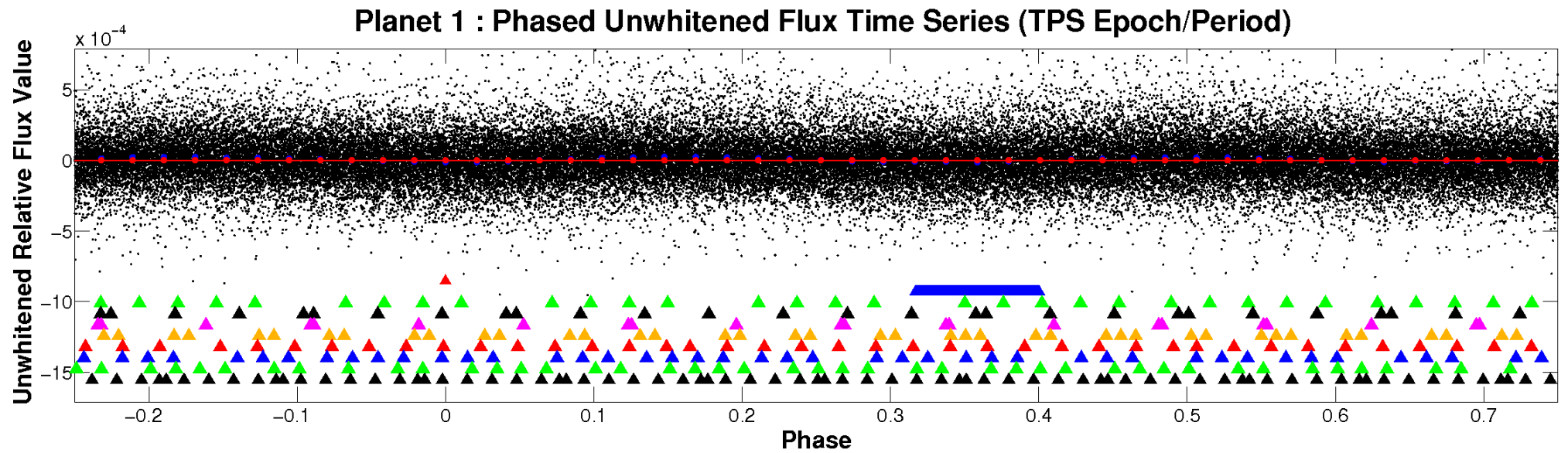


ALT Odd/Even

TCE 008127778-01

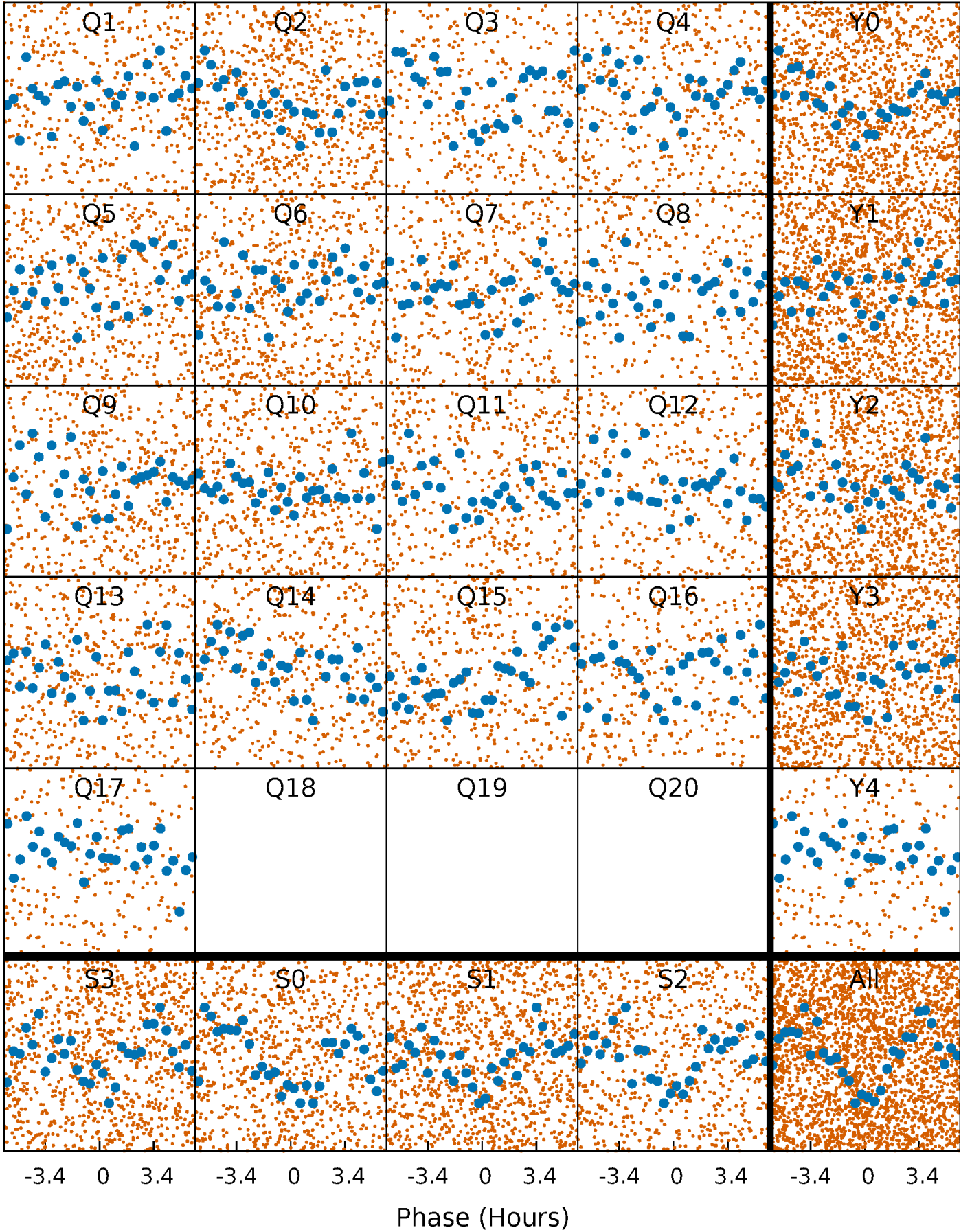


Non-Whitened Vs. Whitened Light Curve



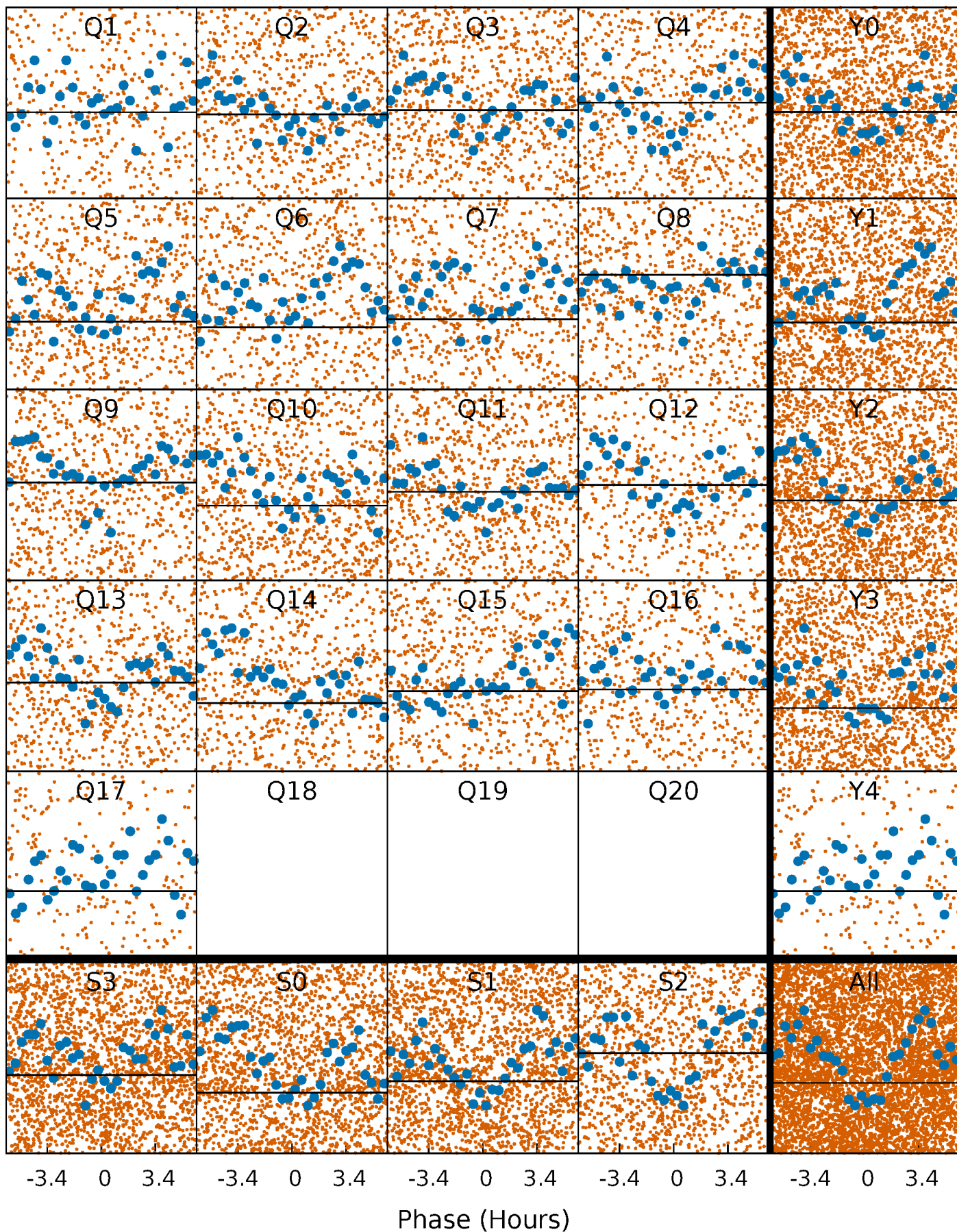
PDC Quarter-Phased Transit Curves

TCE 008127778-01 P= 0.968765 Days $T_0=131.757027$ (BKJD)



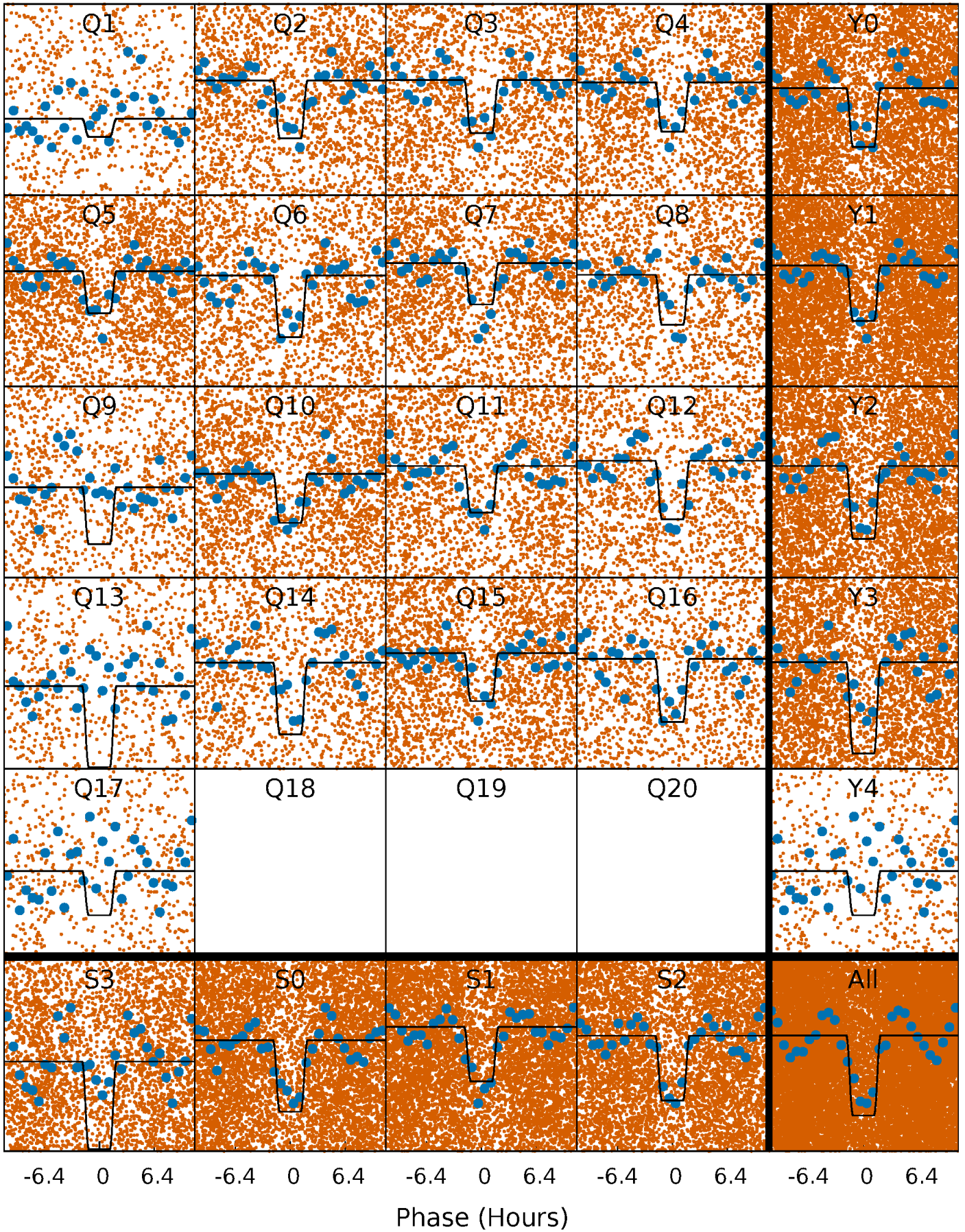
DV Quarter-Phased Transit Curves

TCE 008127778-01 P= 0.968765 Days $T_0=131.757027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

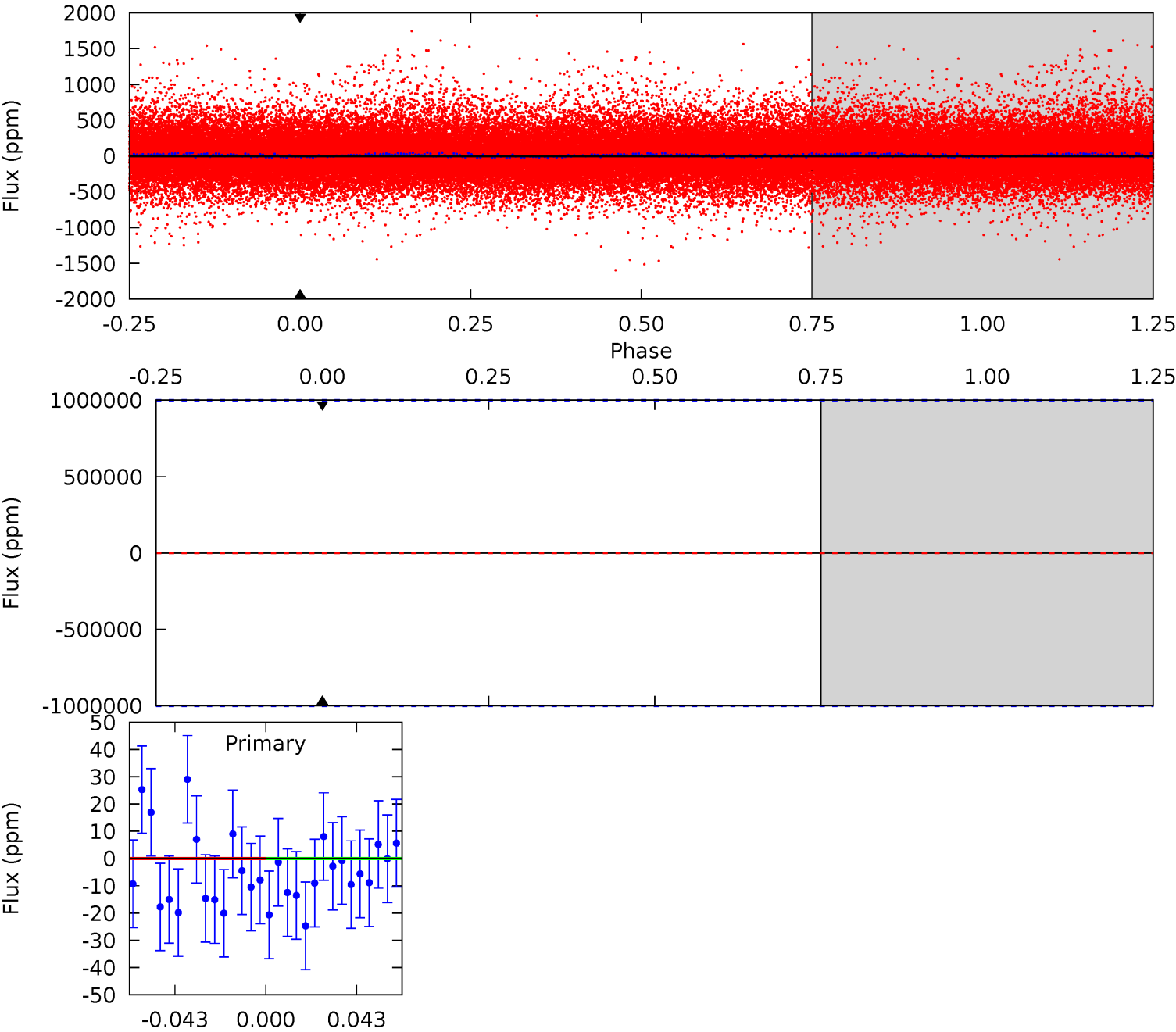
TCE 008127778-01 P= 0.968765 Days $T_0=131.752916$ (BKJD)



DV Model-Shift Uniqueness Test

008127778-01, P = 0.968765 Days, E = 130.788262 Days

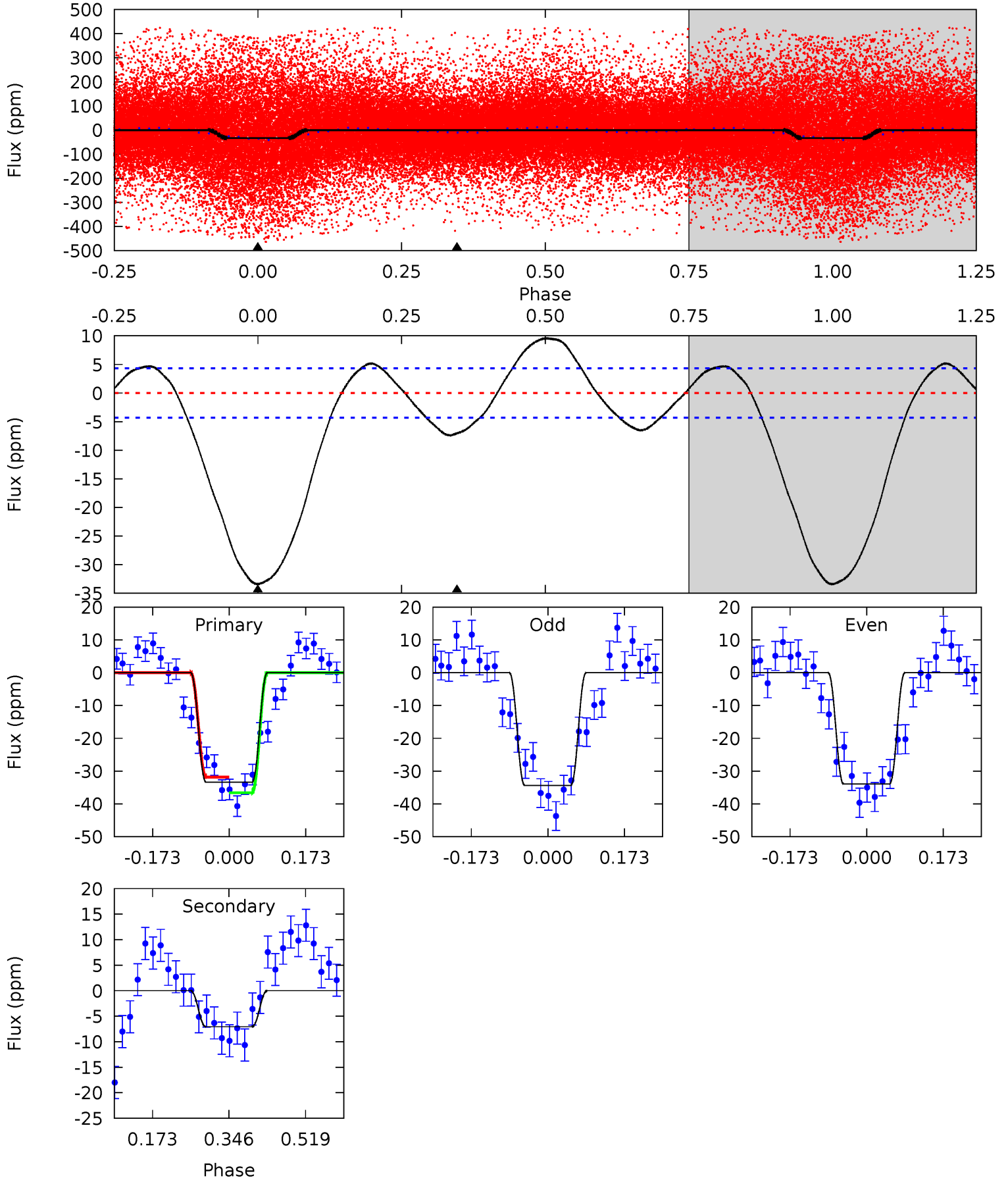
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008127778-01, P = 0.968765 Days, E = 130.784151 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.4	7.25	0	0	4.45	1.36	4.75	34.4	34.4	7.25	7.25	0.25	0.77	0.22	2.49



Stellar Parameters For KIC 008127778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9051^{+251}_{-466}	$4.086^{+0.144}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.210^{+0.719}_{-0.588}$	$2.170^{+0.372}_{-0.605}$	$0.283^{+0.268}_{-0.139}$
	+3%/-5%	+4%/-4%	+214%/-929%	+33%/-27%	+17%/-28%	+95%/-49%
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 008127778-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$16.87^{+20.55}_{-12.37}$	5249^{+433}_{-360}	6366^{+92047}_{-59844}	$1.829^{+301.218}_{-155.369}$
Alt.	-7 ± 1	$16.62^{+17.63}_{-11.66}$	5249^{+456}_{-389}	-4223^{+379}_{-293}	$0.009^{+0.084}_{-0.007}$

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 $A_{obs} \gg 1.0$

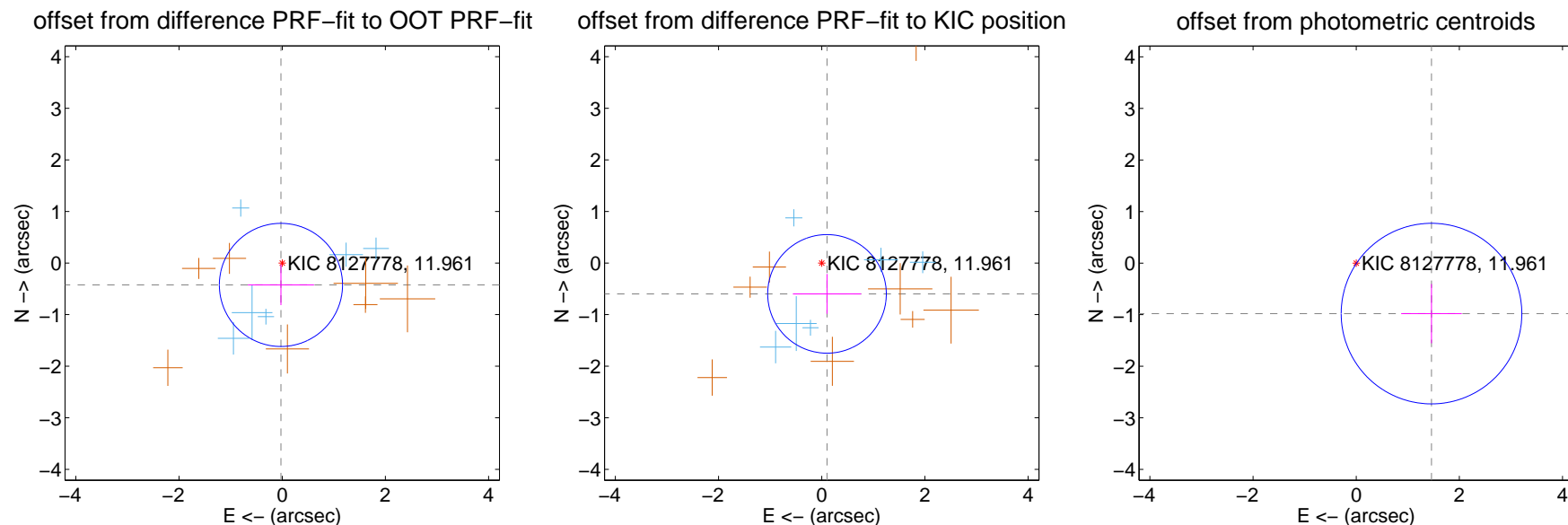
DV Centroid Data

Supplemental centroid analysis for 008127778-01. **Kepler magnitude: 11.96.** Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

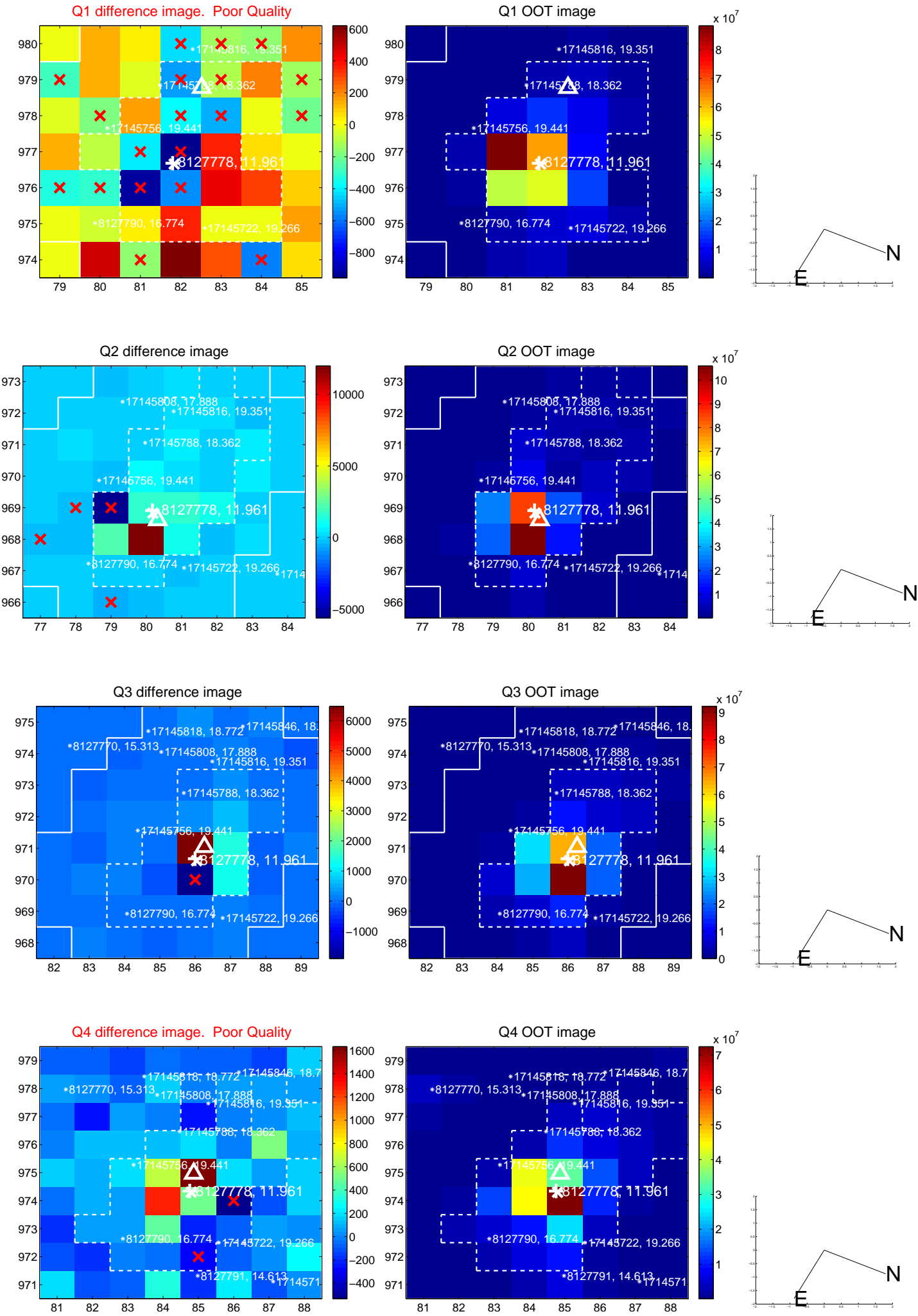
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.425 ± 0.398	1.07	0.025 ± 0.642	-0.424 ± 0.393
PRF-fit source offset from KIC position	0.607 ± 0.383	1.58	-0.102 ± 0.661	-0.598 ± 0.386
photometric centroid source offset	1.76 ± 0.58	3.01	-1.46 ± 0.59	-0.98 ± 0.57

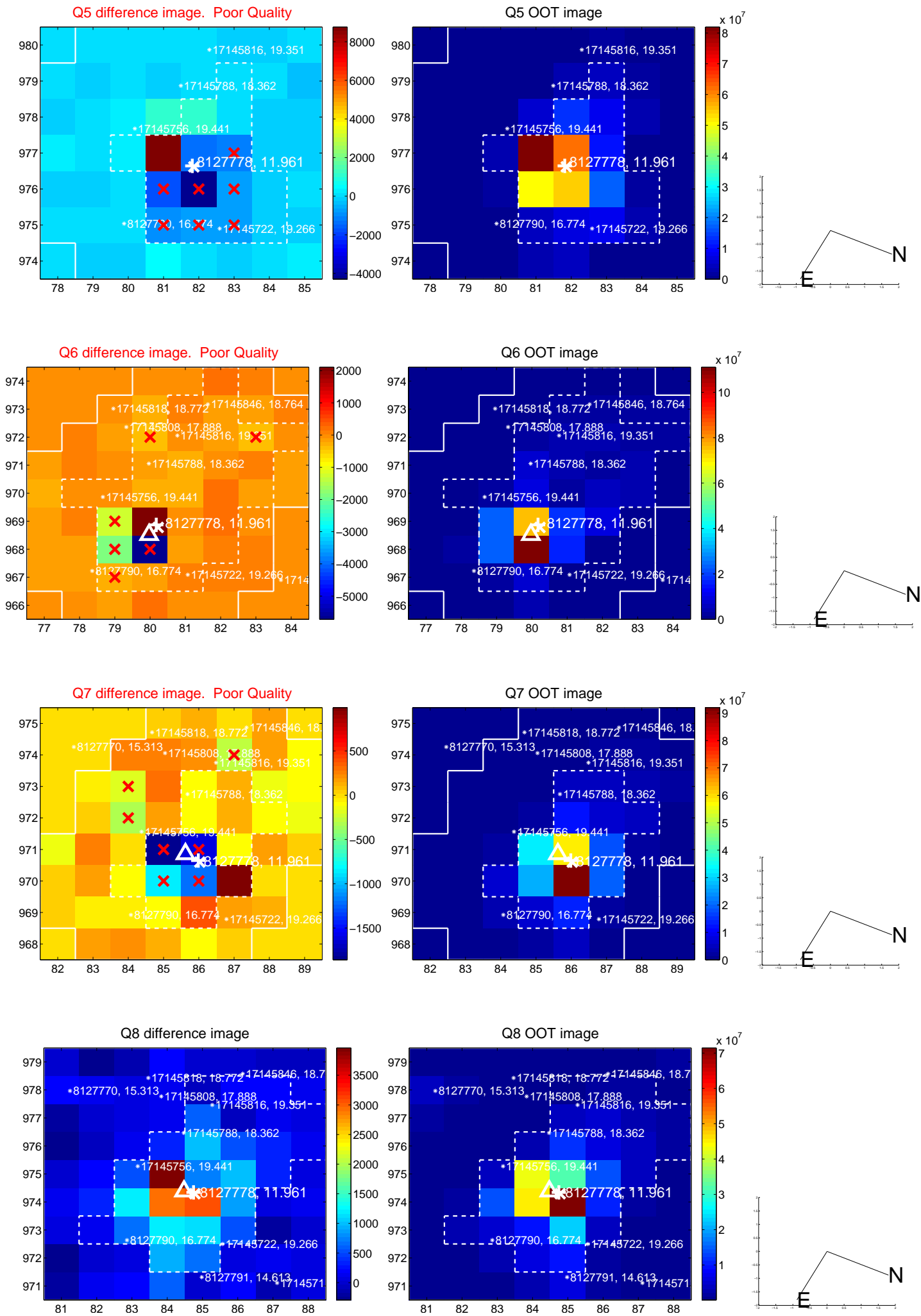


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

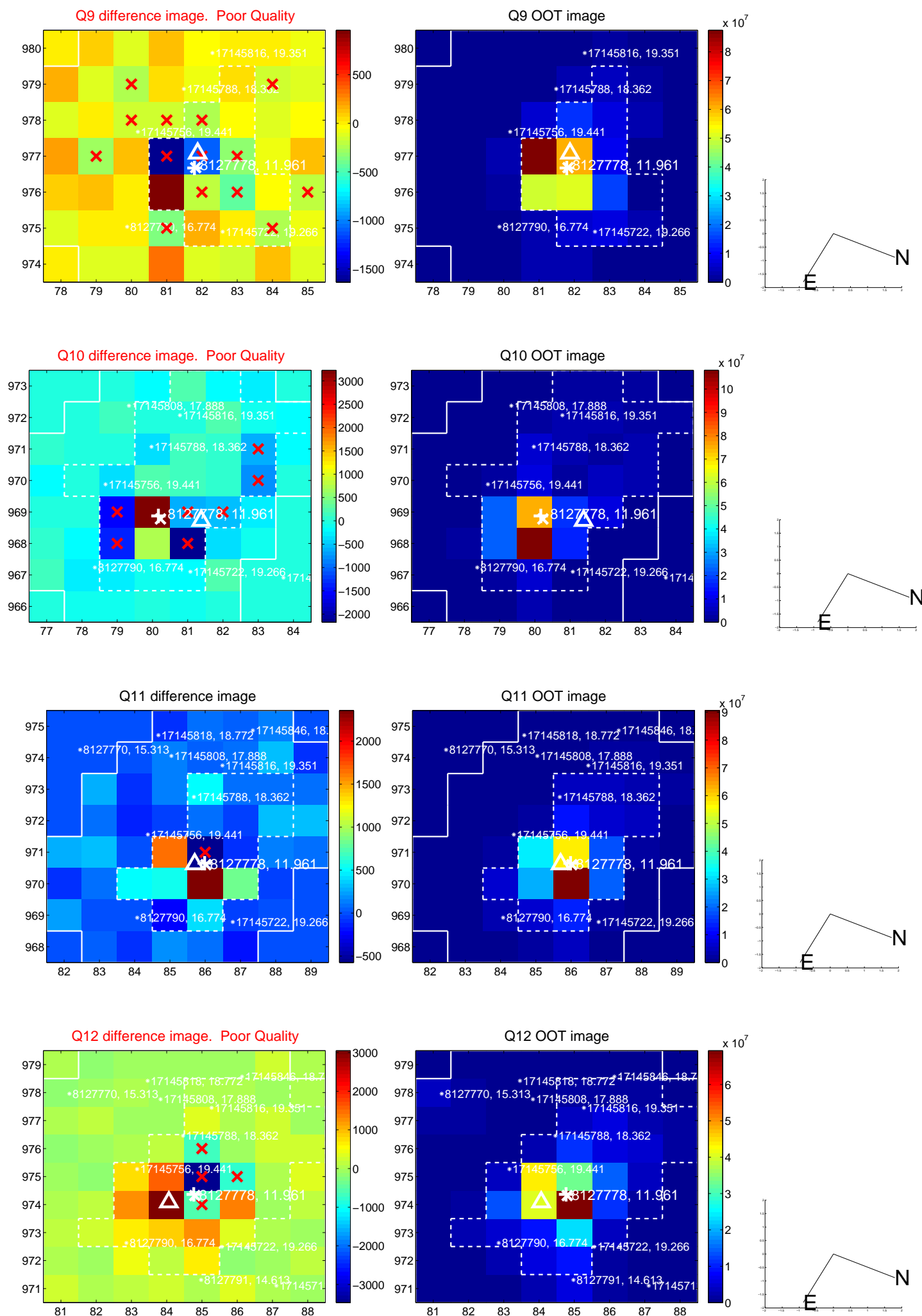
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



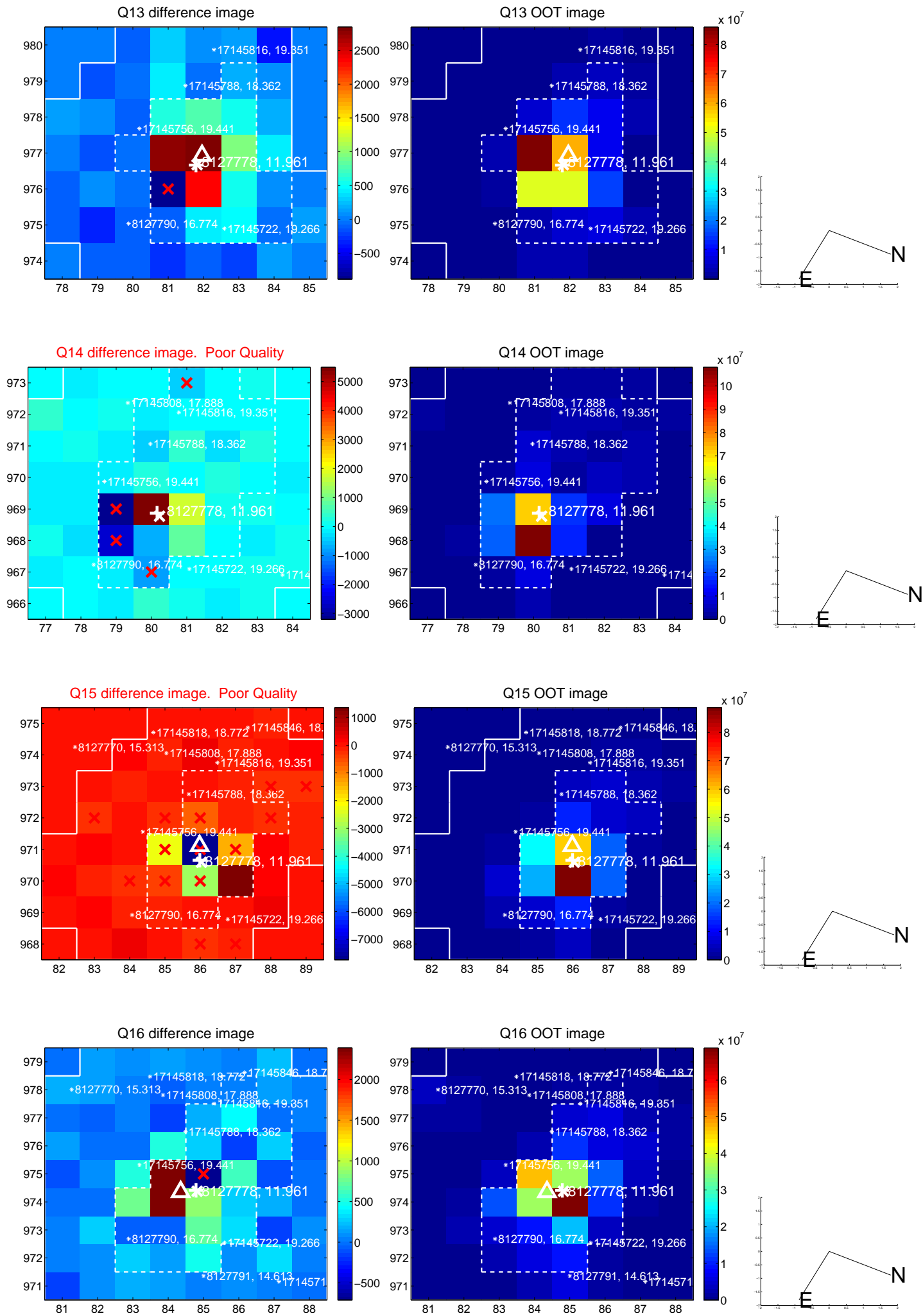
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



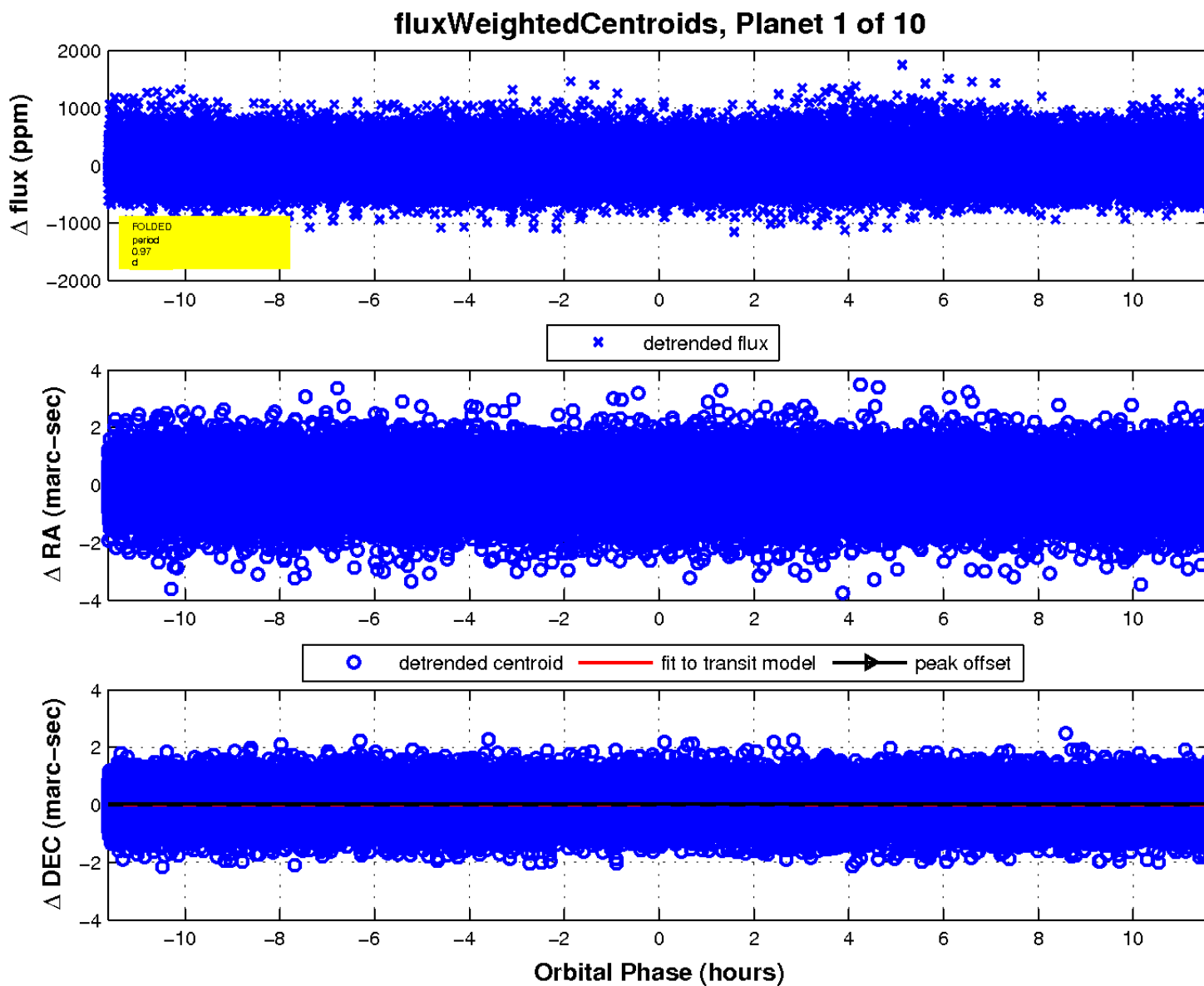
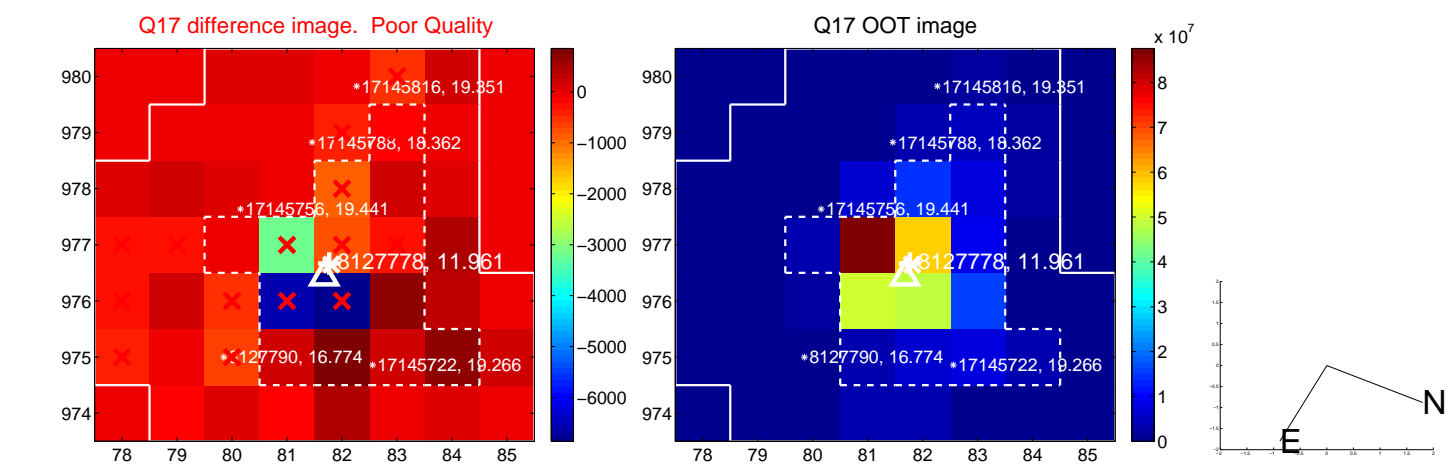
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



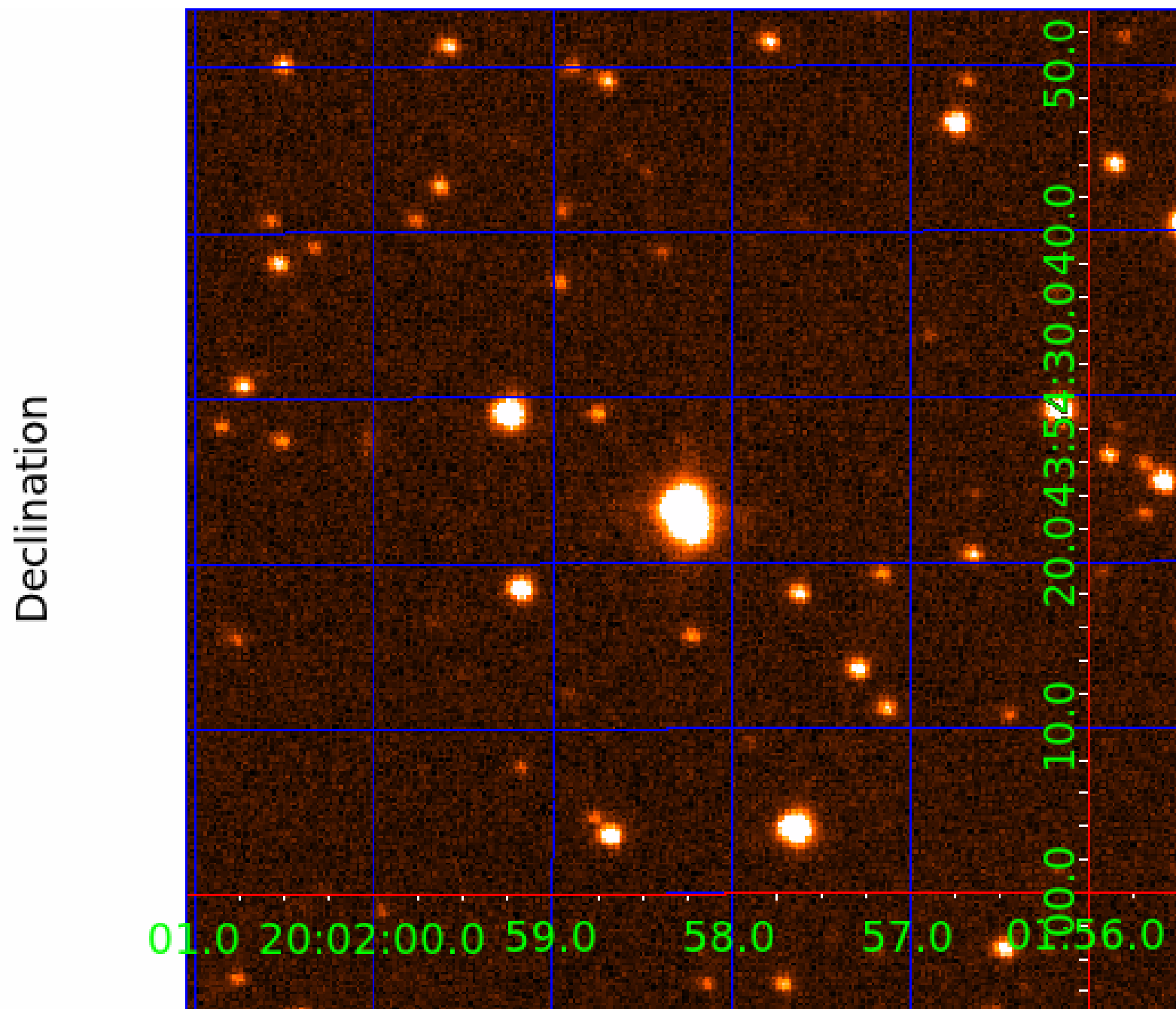
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008127778

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})
008127778-01	OBS	No	0.968765	131.757027	106.9	3.000	9.1	-1.0	2.21	9051	2.33	47677.98
008127778-02	OBS	No	0.968711	132.144883	12.5	4.915	8.6	5.0	2.21	9051	0.81	47681.51
008127778-06	OBS	No	35.945755	149.544146	287.9	2.671	8.9	7.6	2.21	9051	4.33	385.25
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127778-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008127778-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008127778-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
008127778-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
008127778-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

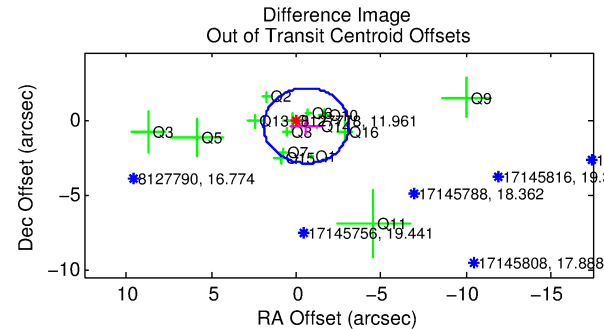
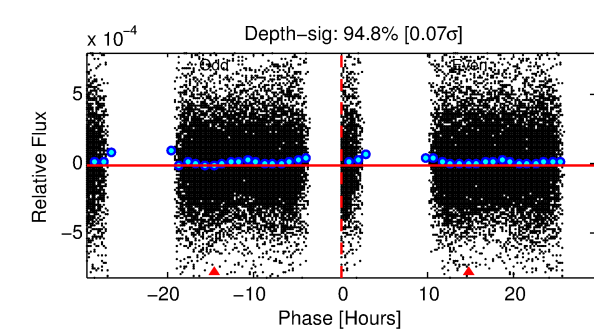
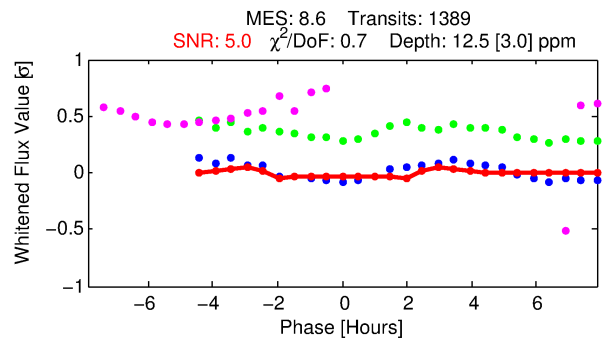
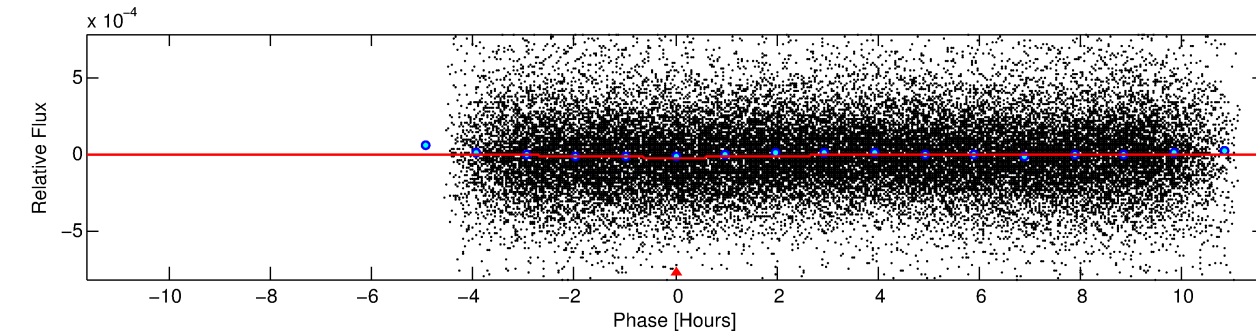
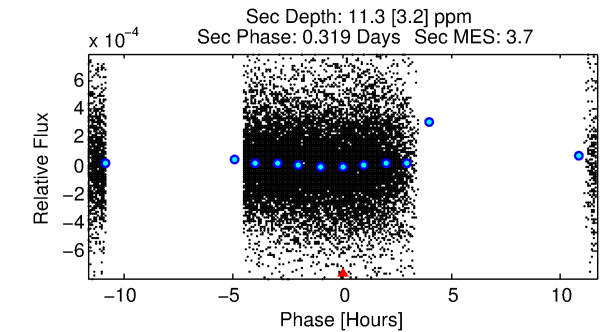
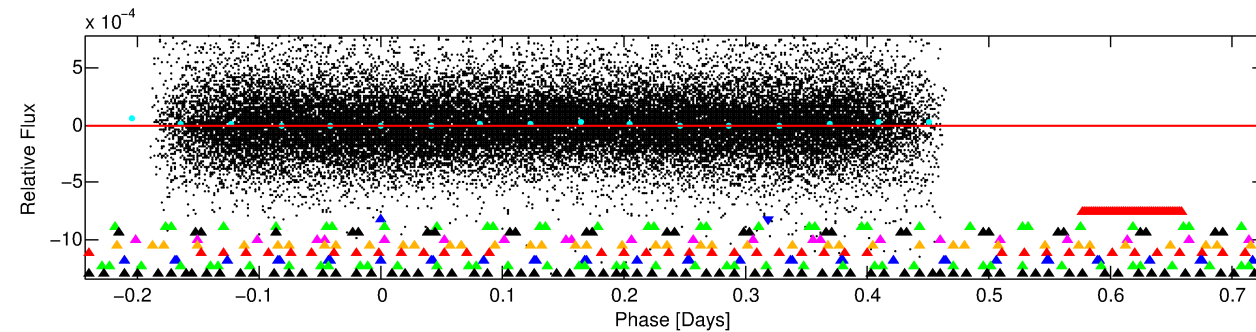
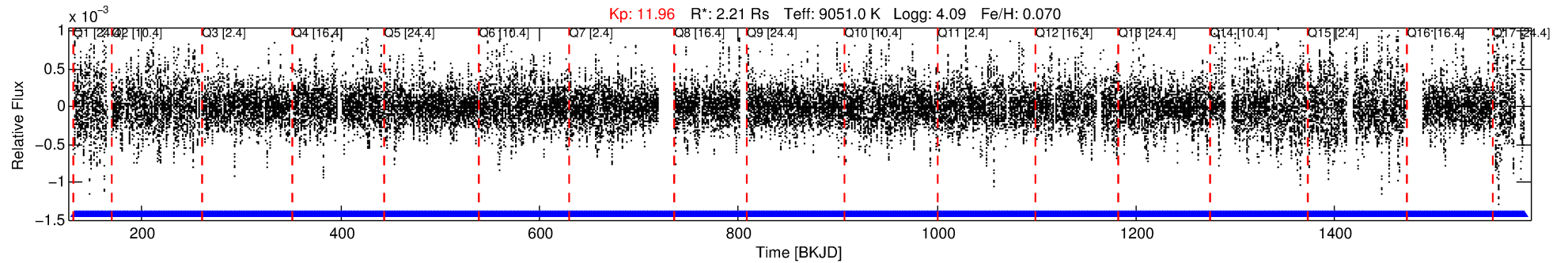
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127778-02

No Significant Match Found

DV One-Page Summary

KIC: 8127778 Candidate: 2 of 10 Period: 0.969 d



DV Fit Results:

Period = 0.96871 [0.00002] d
Epoch = 132.1449 [0.0039] BKJD
Rp/R* = 0.0034 [0.0008]
a/R* = 1.50 [1.05]
b = 0.50 [1.90]
Seff = 47681.51 [19217.92]
Teff = 3768 [380] K
Rp = 0.81 [0.32] Re
a = 0.0248 [0.0063] AU
Ag = 5.76 [3.63] [1.31σ]
Teffp = 9025 [1275] K [3.95σ]

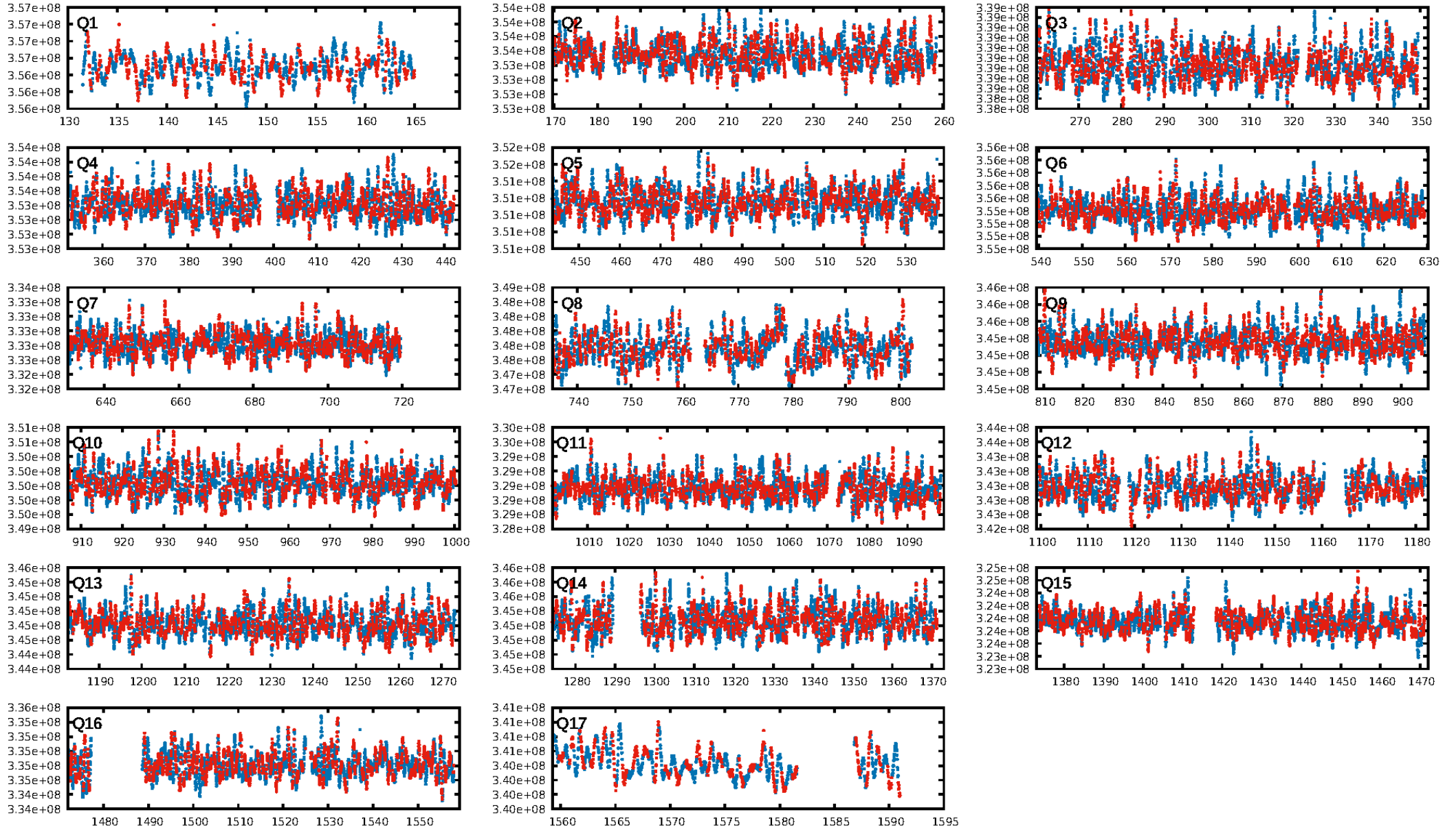
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1326/1326]
GhostDiagnostic-chr: -6.102
Centroid-sig: N/A
Centroid-so: 0.715 arcsec [0.51σ]
OotOffset-rm: 0.716 arcsec [0.85σ]
KicOffset-rm: 1.066 arcsec [1.19σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.00 [0/17]

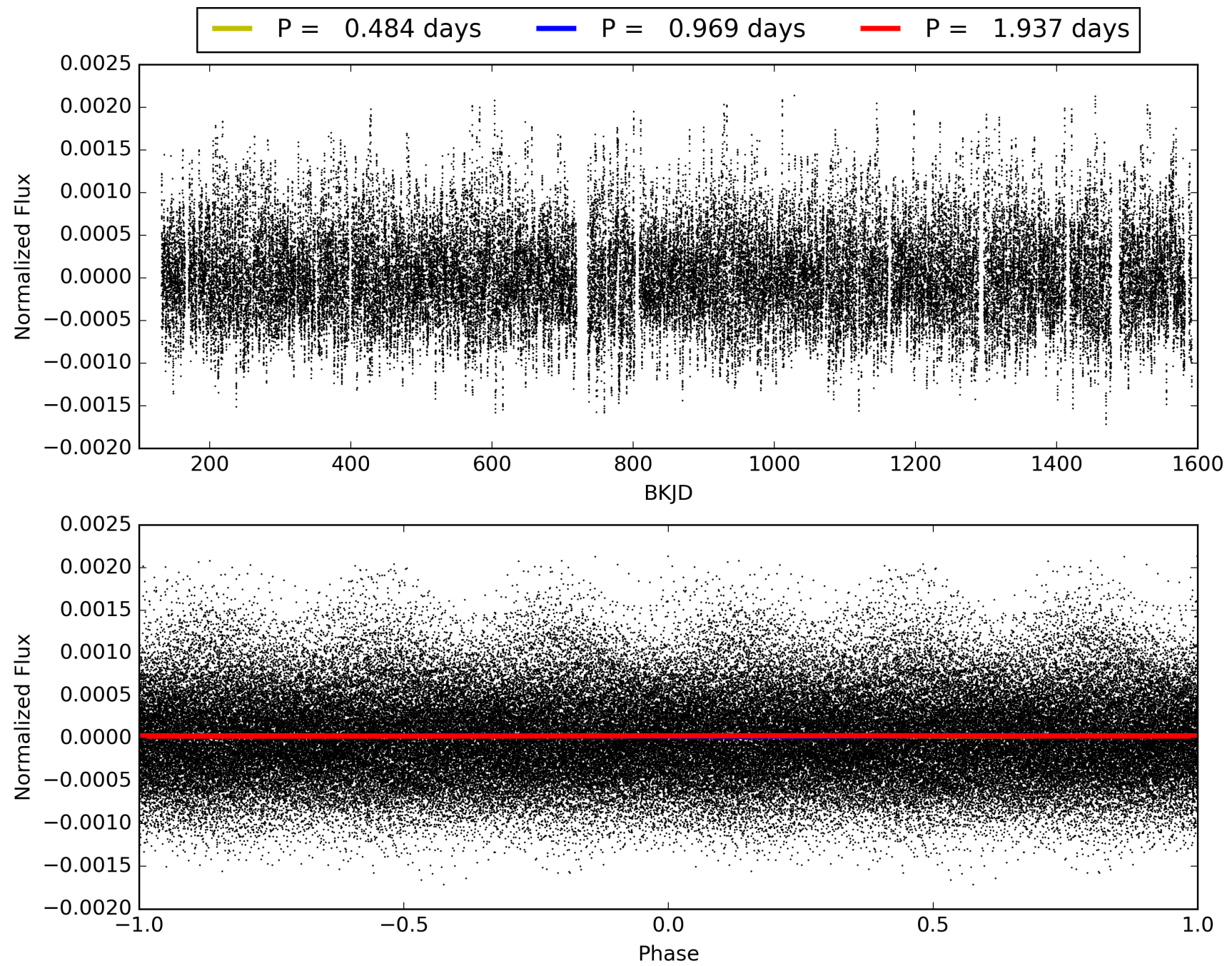
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:09:15 Z

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

TCE 008127778-02, PDC Light Curves

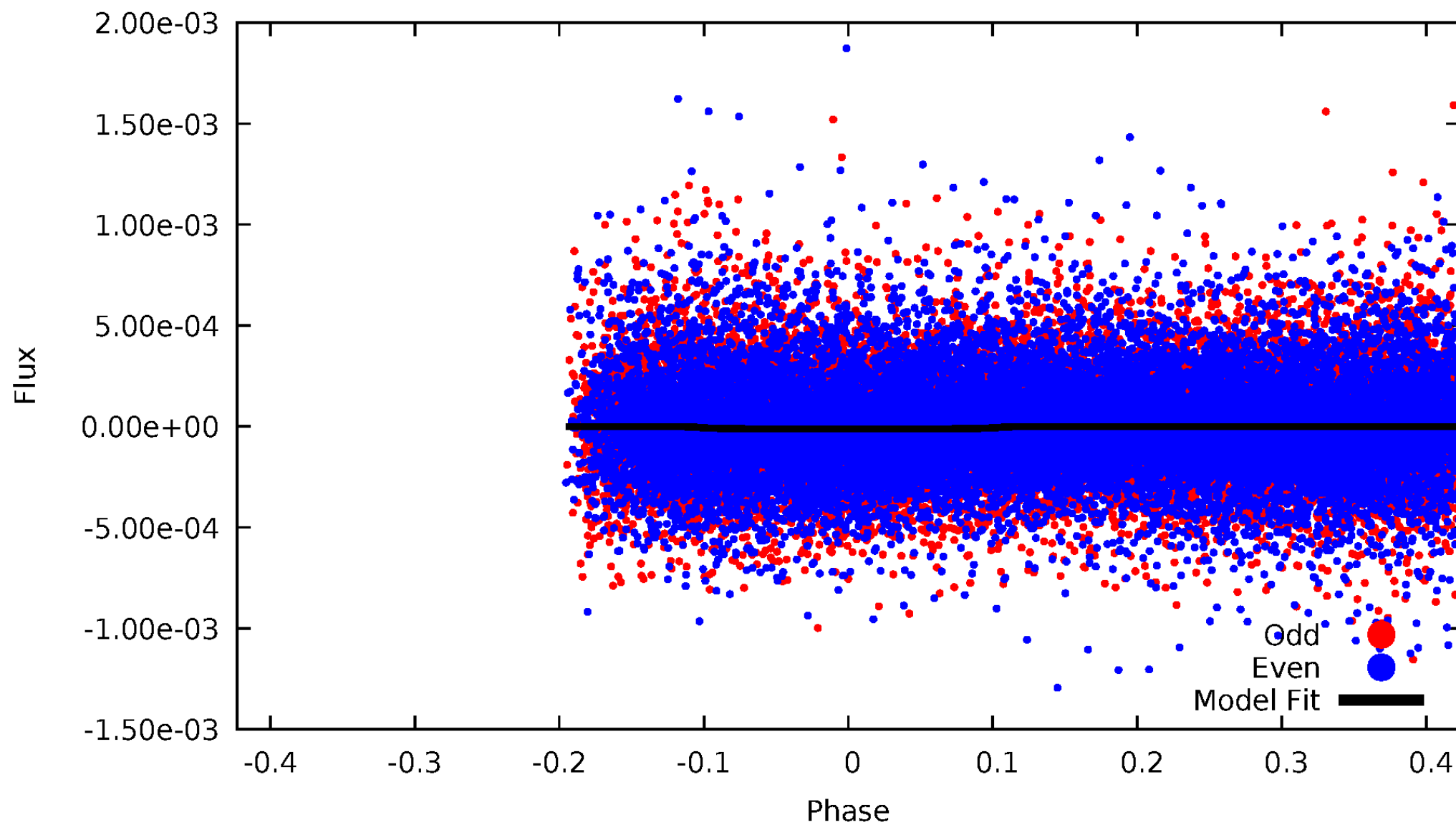


TCE 008127778-02



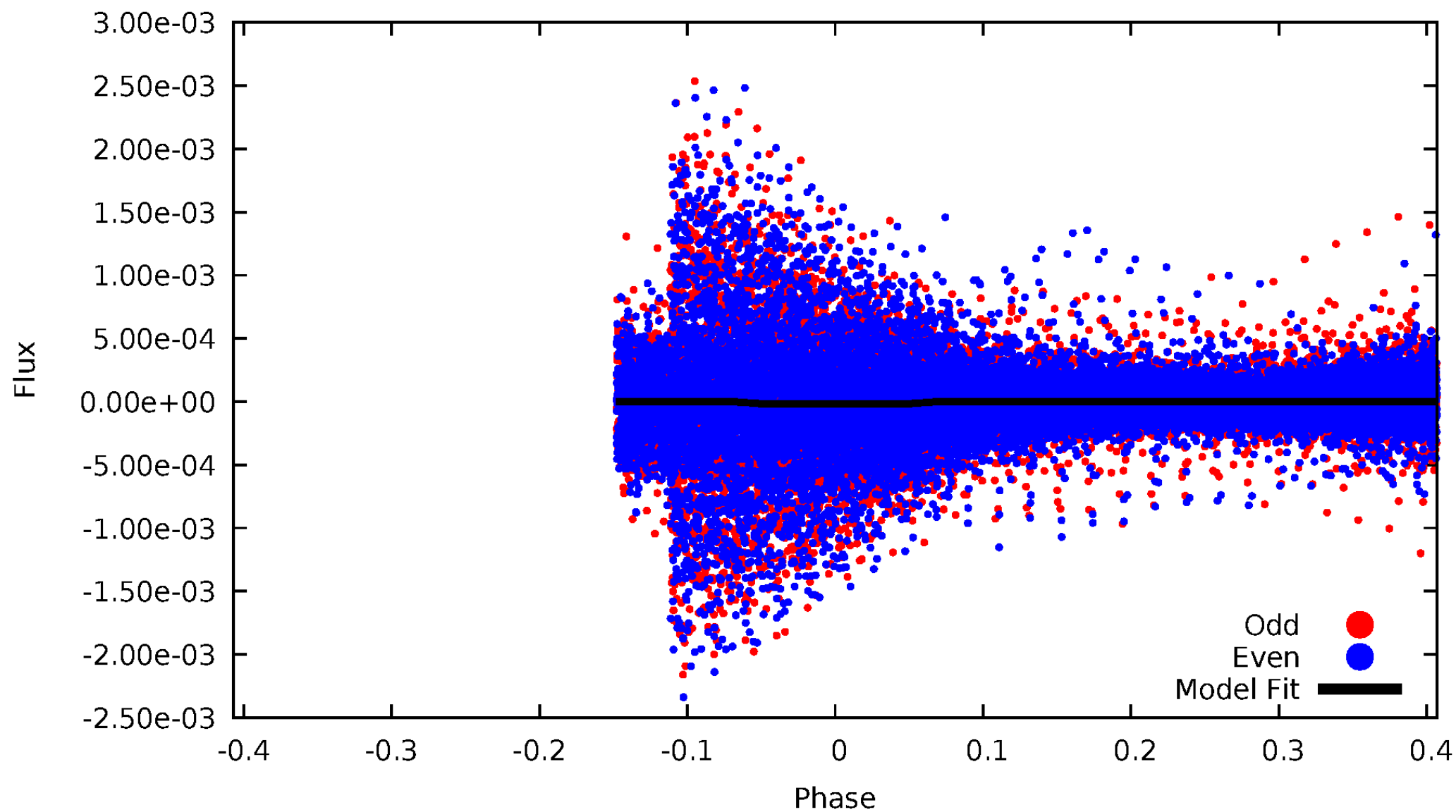
DV Odd/Even

TCE 008127778-02



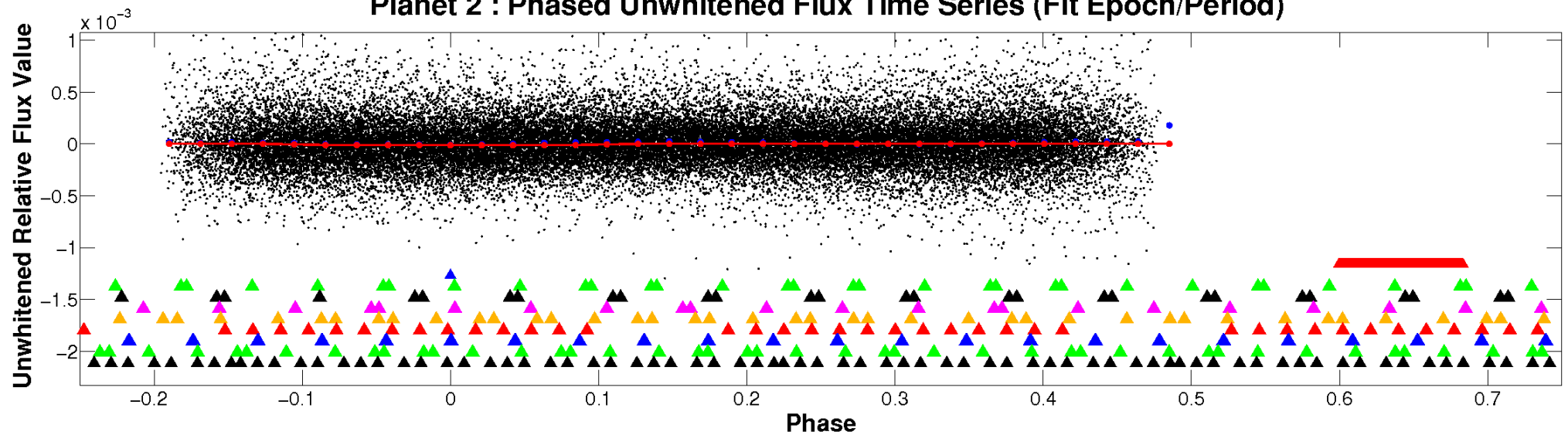
ALT Odd/Even

TCE 008127778-02

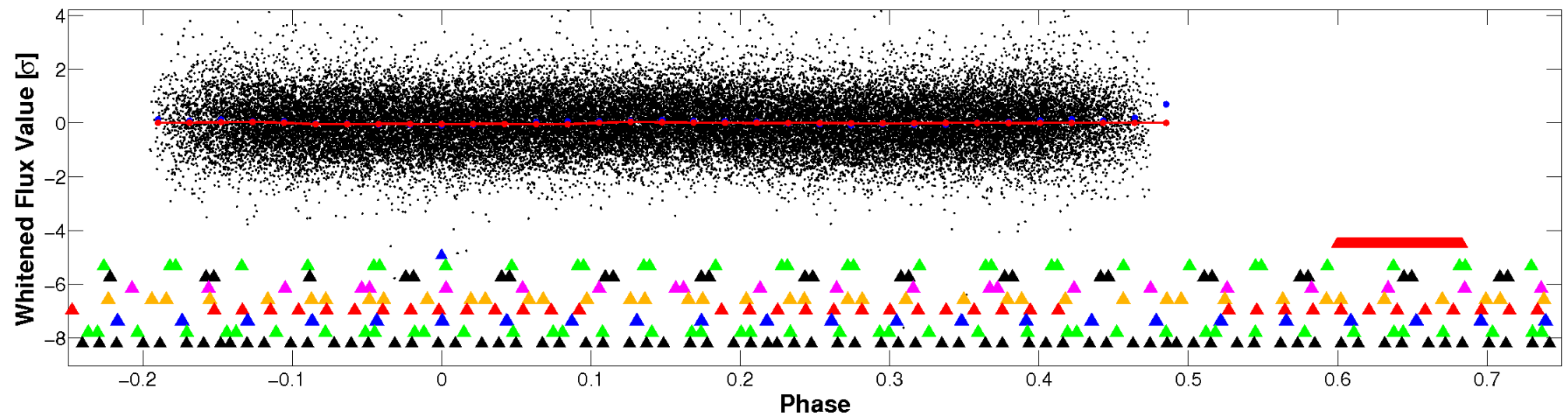


Non-Whitened Vs. Whitened Light Curve

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

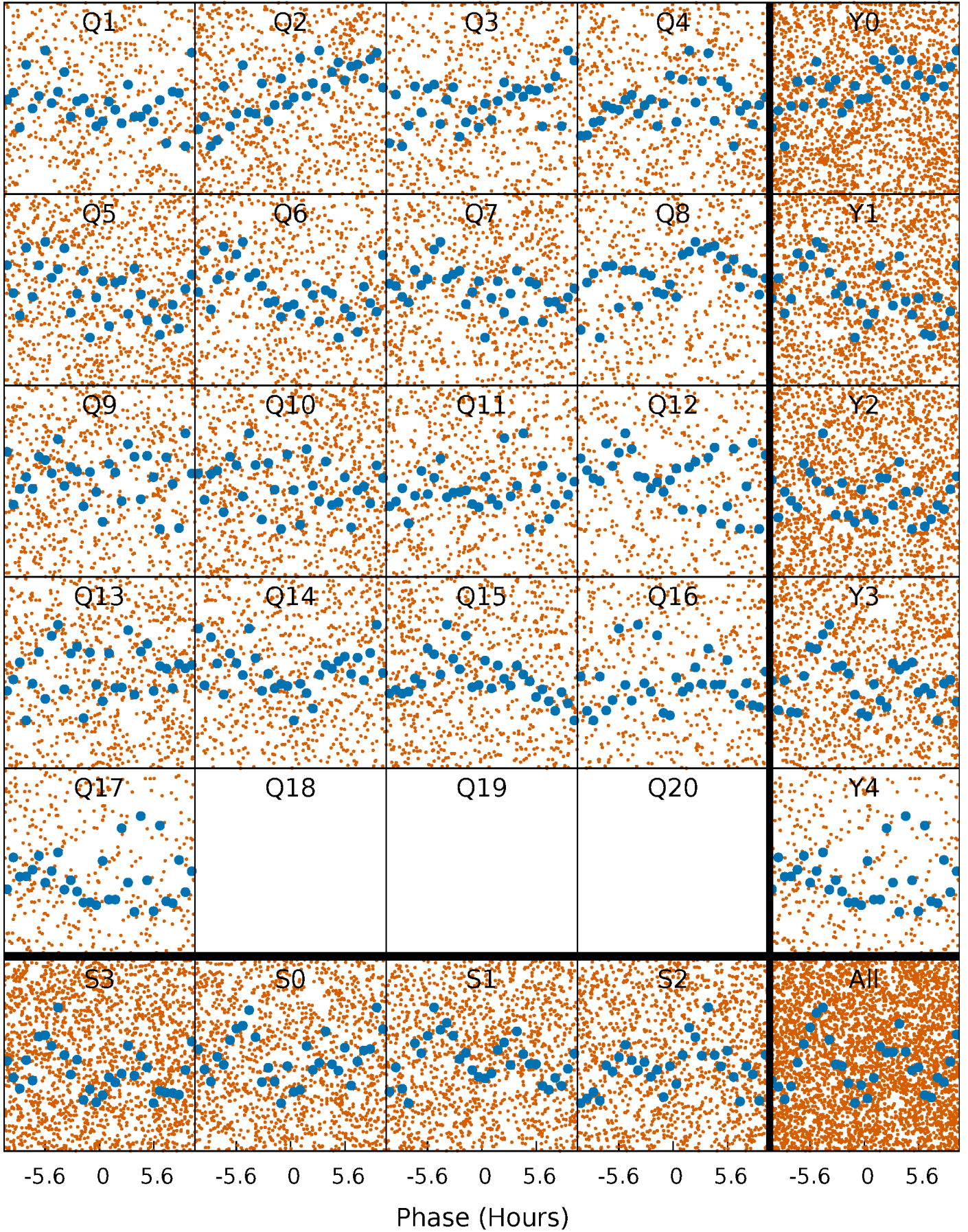


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



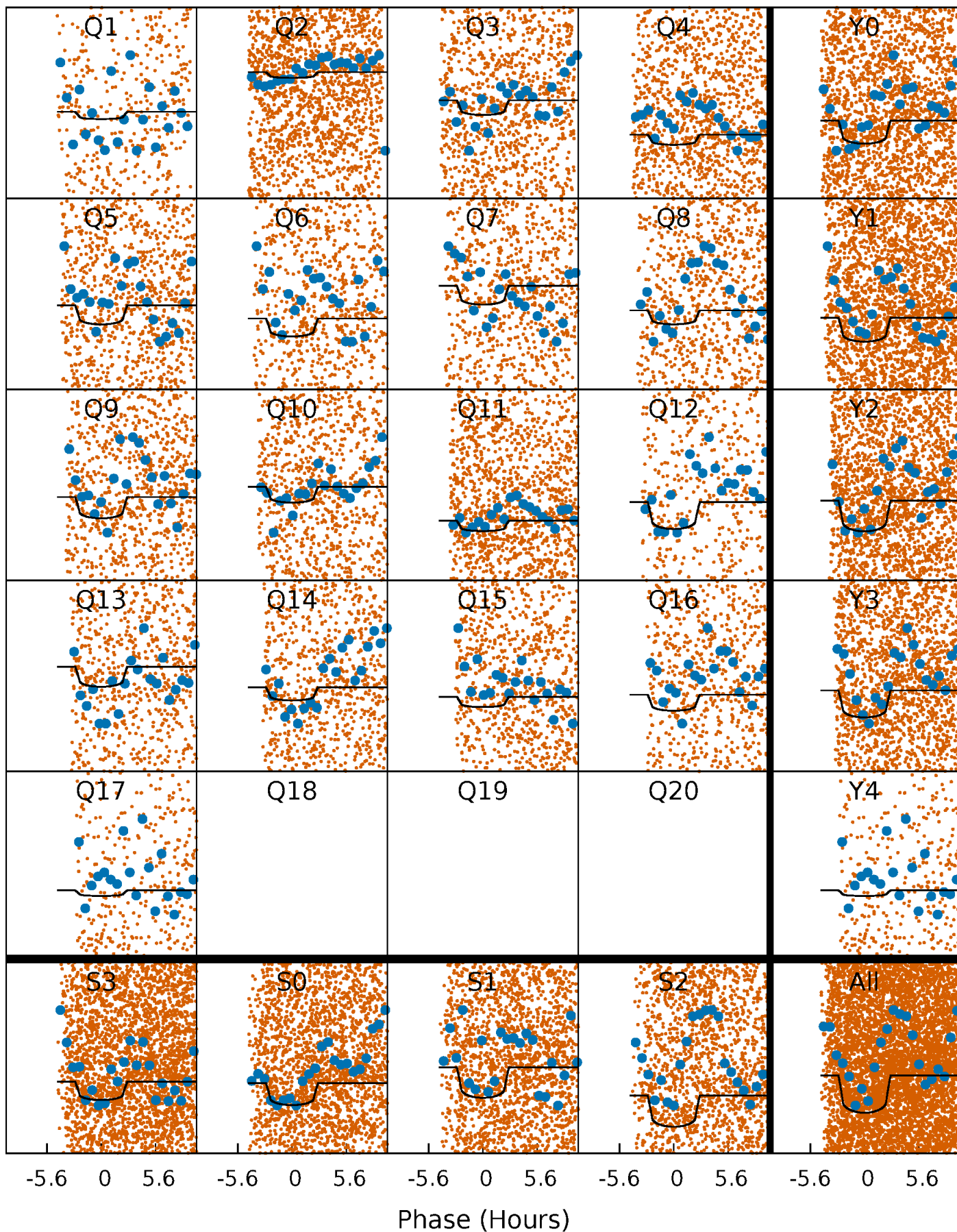
PDC Quarter-Phased Transit Curves

TCE 008127778-02 P= 0.968711 Days $T_0=132.144883$ (BKJD)



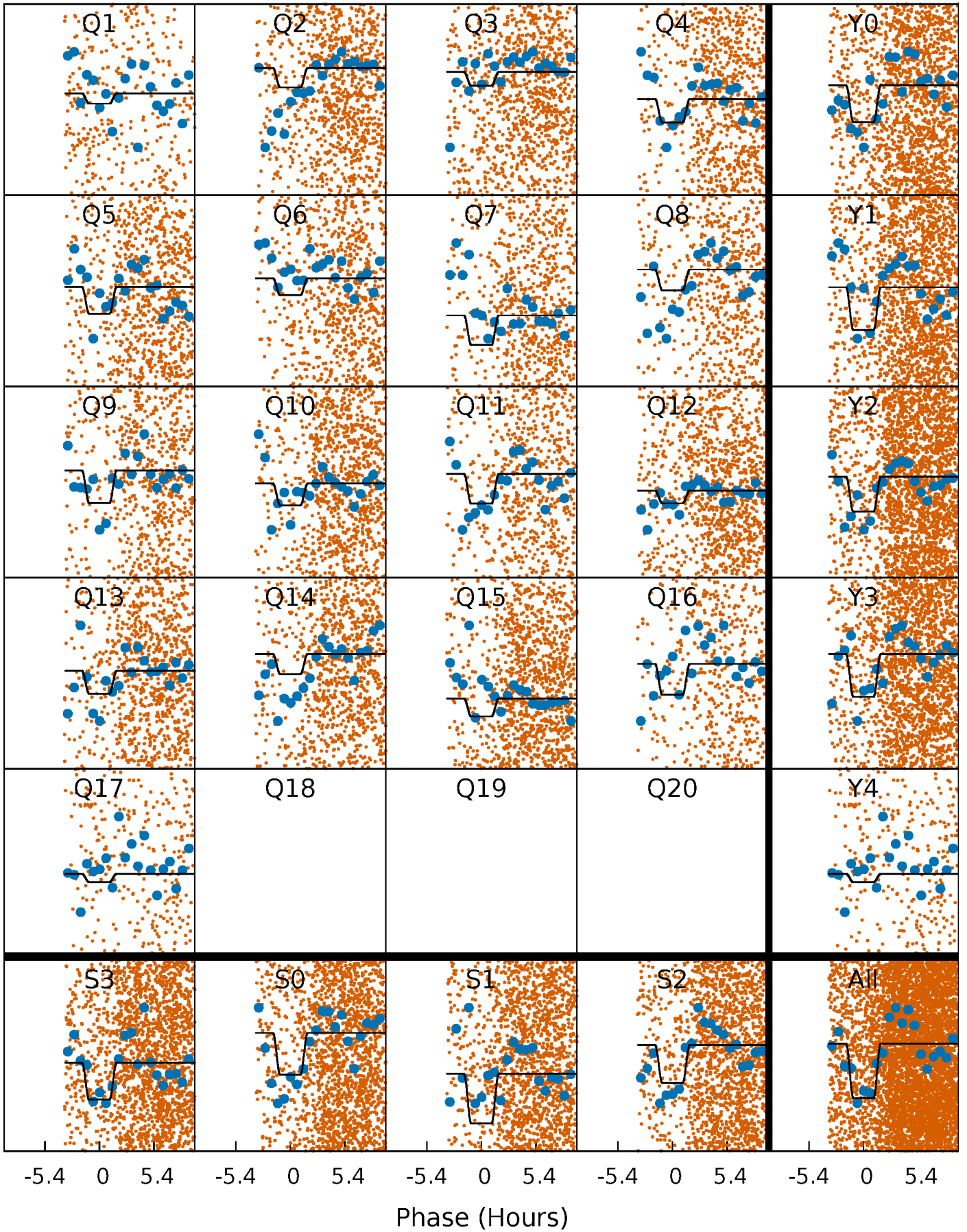
DV Quarter-Phased Transit Curves

TCE 008127778-02 P= 0.968711 Days $T_0=132.144883$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

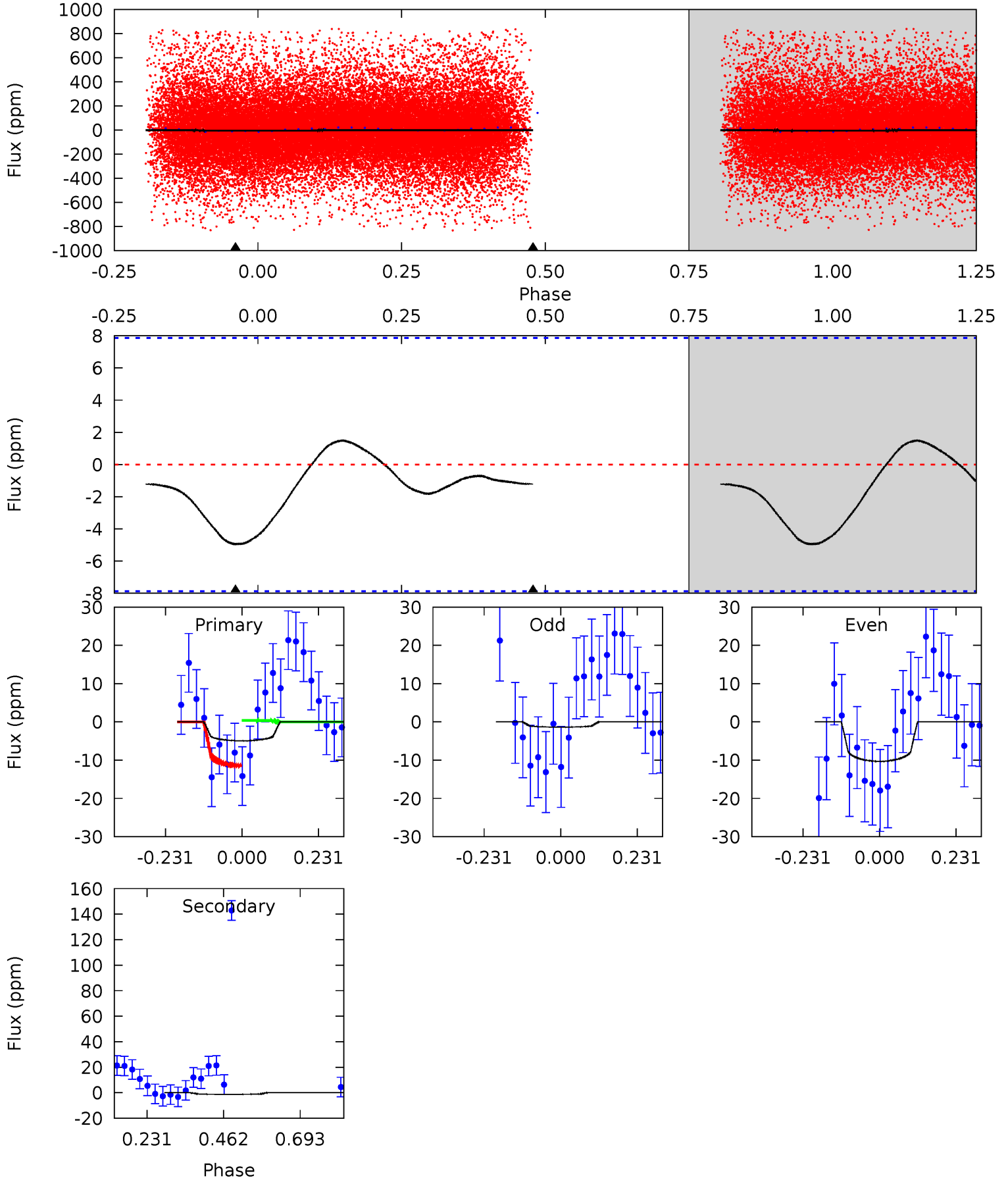
TCE 008127778-02 $P = 0.968765$ Days $T_0 = 132.098113$ (BKJD)



DV Model-Shift Uniqueness Test

008127778-02, P = 0.968711 Days, E = 131.176172 Days

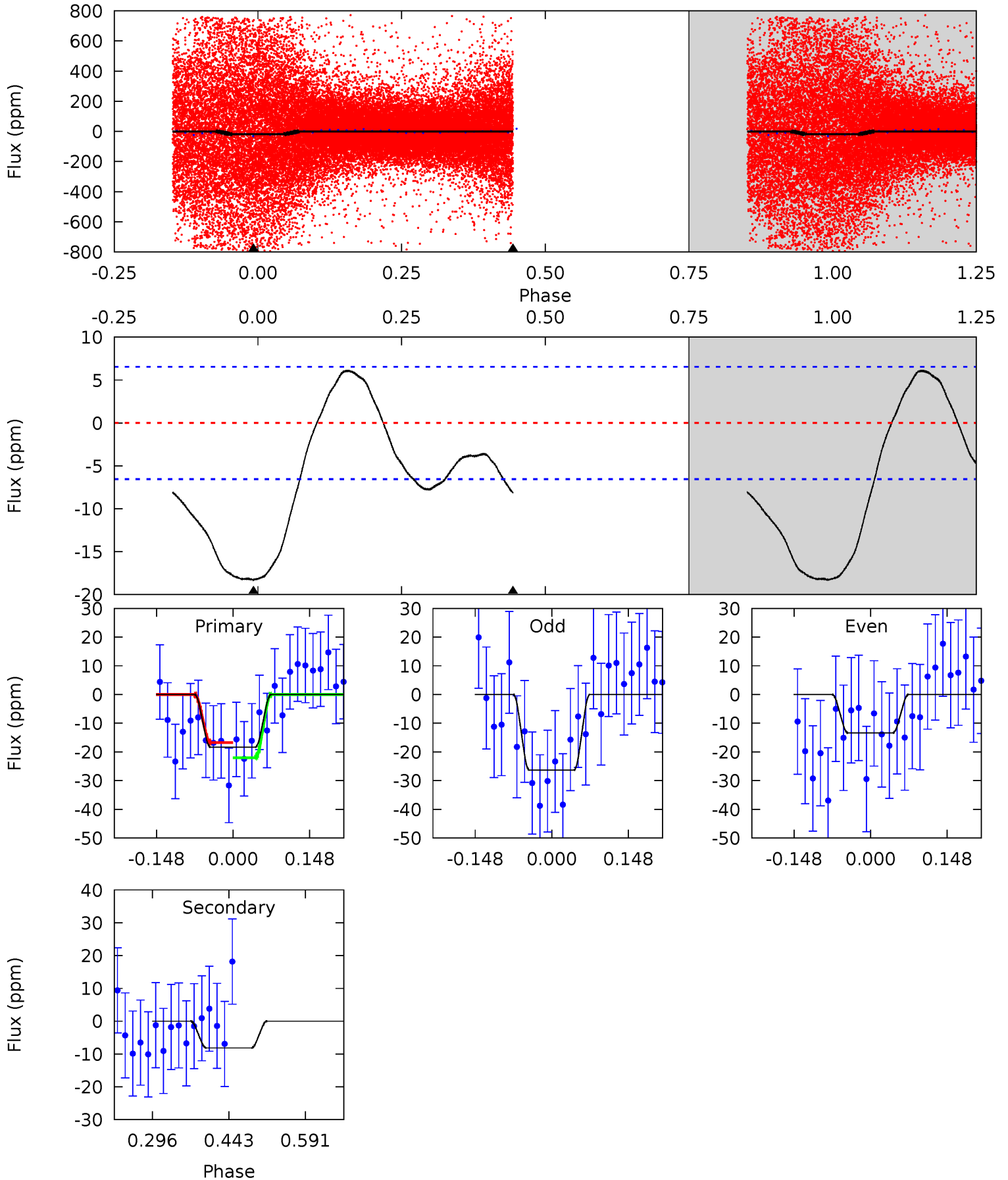
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.76	0.68	0	0	4.39	1.20	0.30	2.76	2.76	0.68	0.68	2.49	0.04	0.23	2.73



Alt Model-Shift Uniqueness Test

008127778-02, P = 0.968765 Days, E = 131.129348 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	5.59	0	0	4.48	1.45	3.50	12.6	12.6	5.59	5.59	3.67	0.66	0.25	1.08



Stellar Parameters For KIC 008127778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9051^{+251}_{-466}	$4.086^{+0.144}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.210^{+0.719}_{-0.588}$	$2.170^{+0.372}_{-0.605}$	$0.283^{+0.268}_{-0.139}$
	+3%/-5%	+4%/-4%	+214%/-929%	+33%/-27%	+17%/-28%	+95%/-49%
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 008127778-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 2	$0.81^{+0.25}_{-0.21}$	5279^{+393}_{-389}	4323^{+1672}_{-9126}	$0.575^{+1.081}_{-0.791}$
Alt.	-8 ± 1	$1.03^{+0.27}_{-0.23}$	5285^{+389}_{-428}	6724^{+1053}_{-786}	$2.477^{+1.668}_{-0.911}$

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

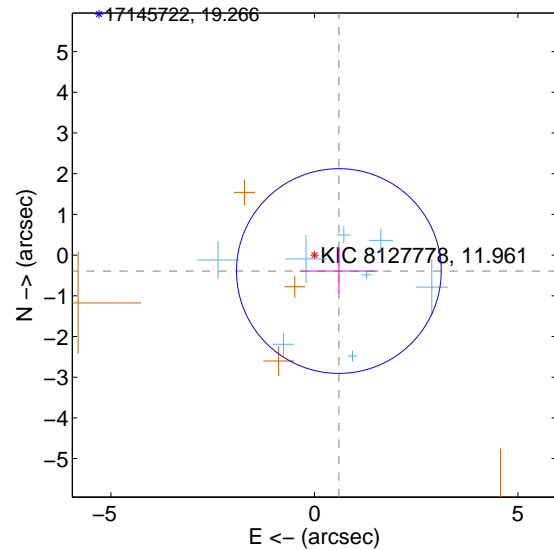
Supplemental centroid analysis for 008127778-02. **Kepler magnitude: 11.96.** Transit SNR 4.98

There are 8 quarters with good PRF difference image offsets

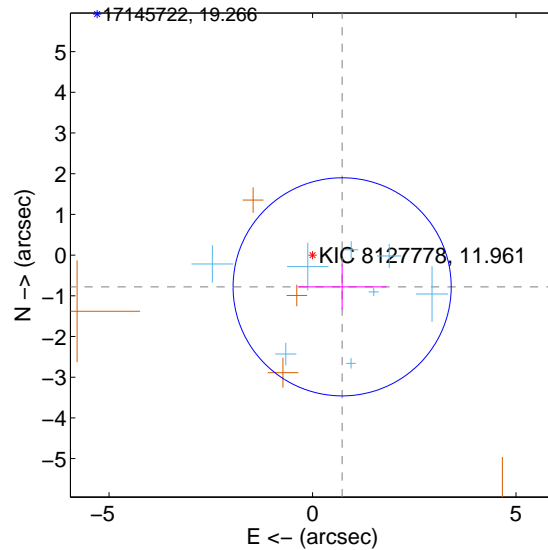
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.716 ± 0.838	0.85	-0.600 ± 0.962	-0.392 ± 0.551
PRF-fit source offset from KIC position	1.066 ± 0.893	1.19	-0.727 ± 1.091	-0.780 ± 0.551
photometric centroid source offset	0.72 ± 1.41	0.51	0.02 ± 1.38	0.71 ± 1.41

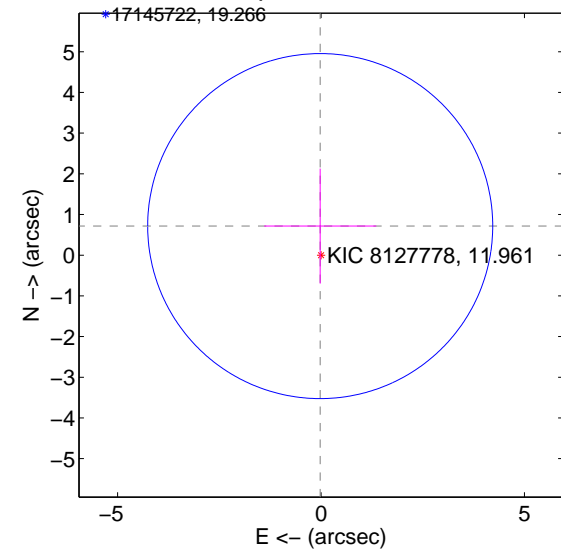
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

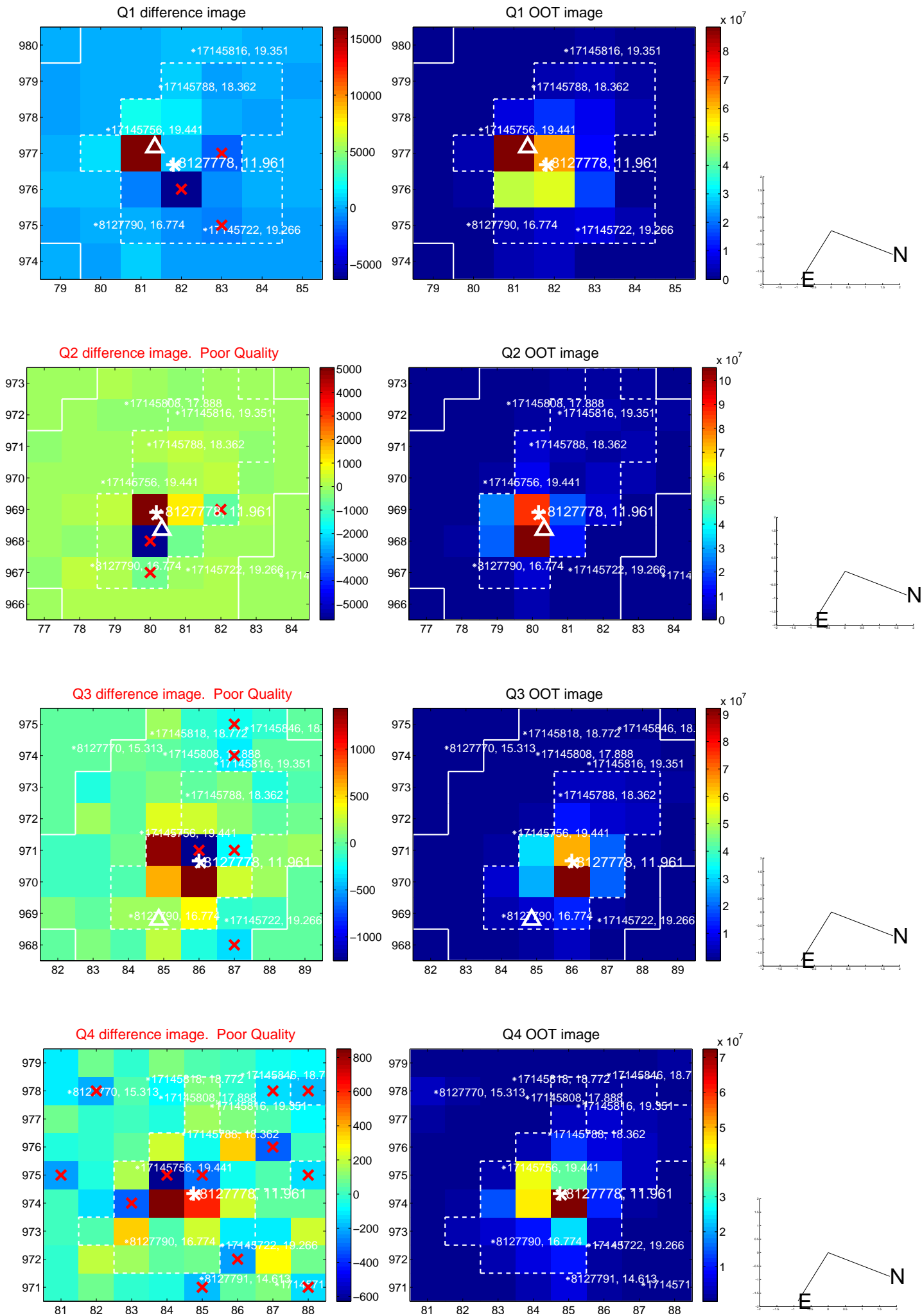


offset from photometric centroids

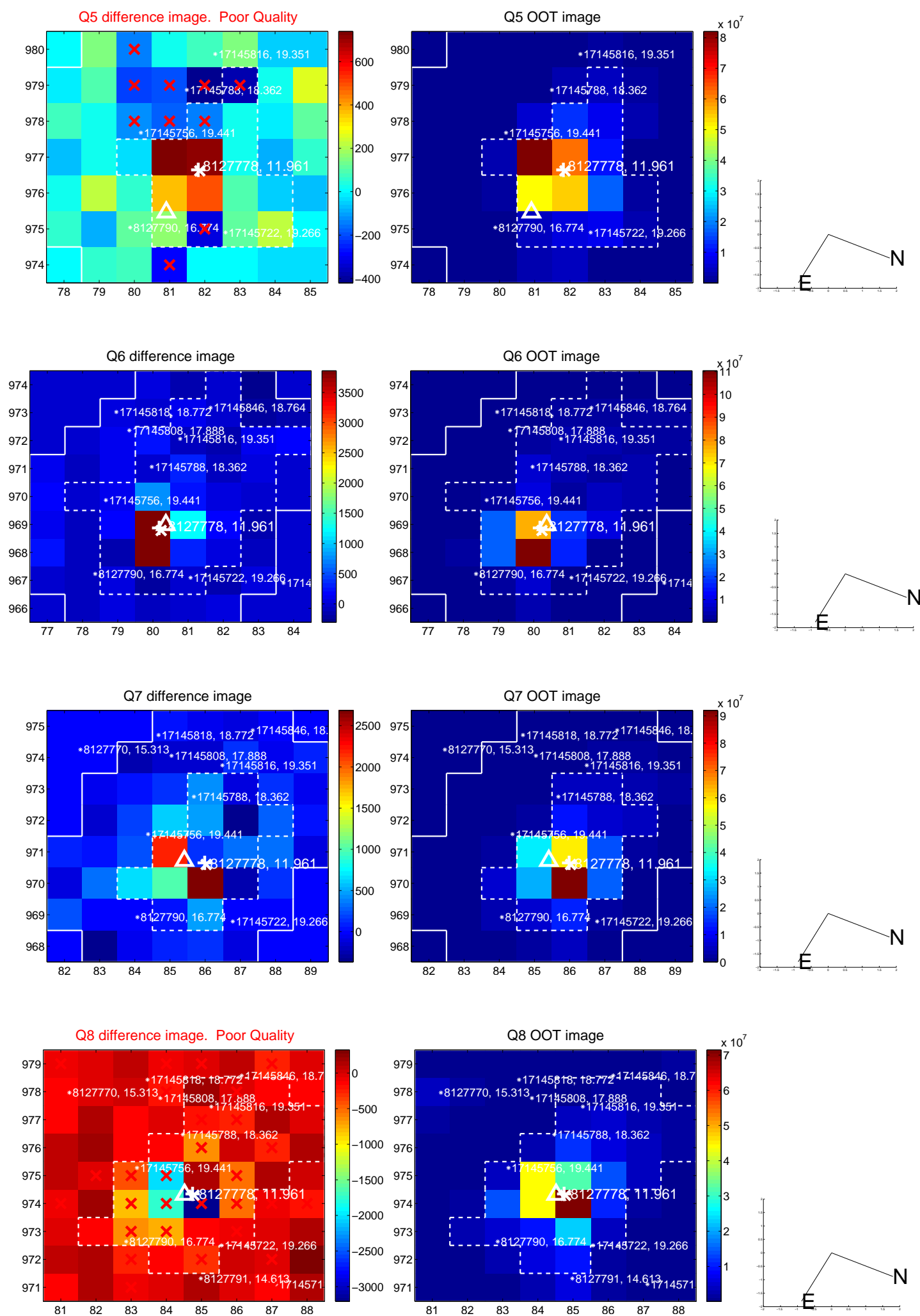


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

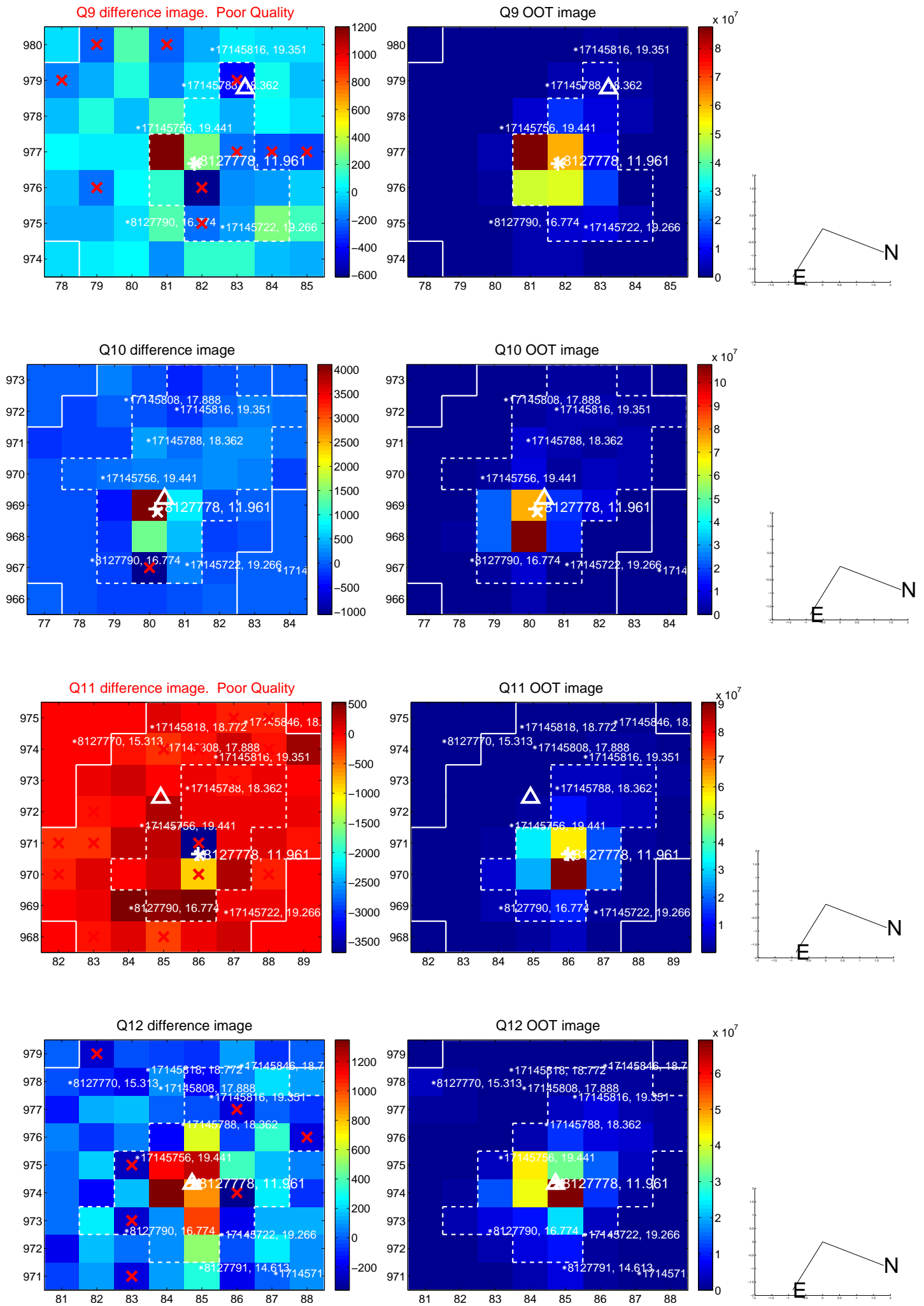
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



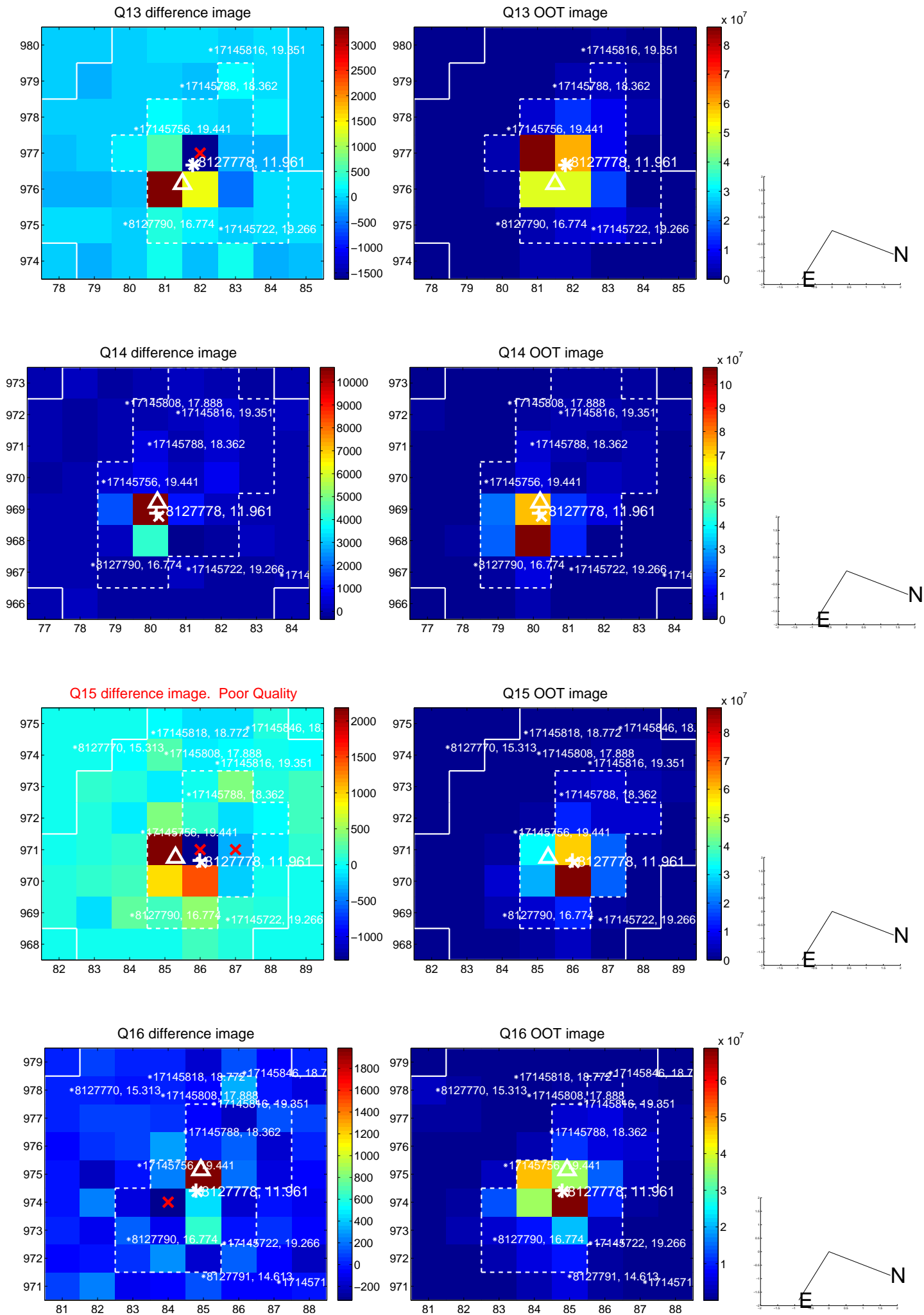
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



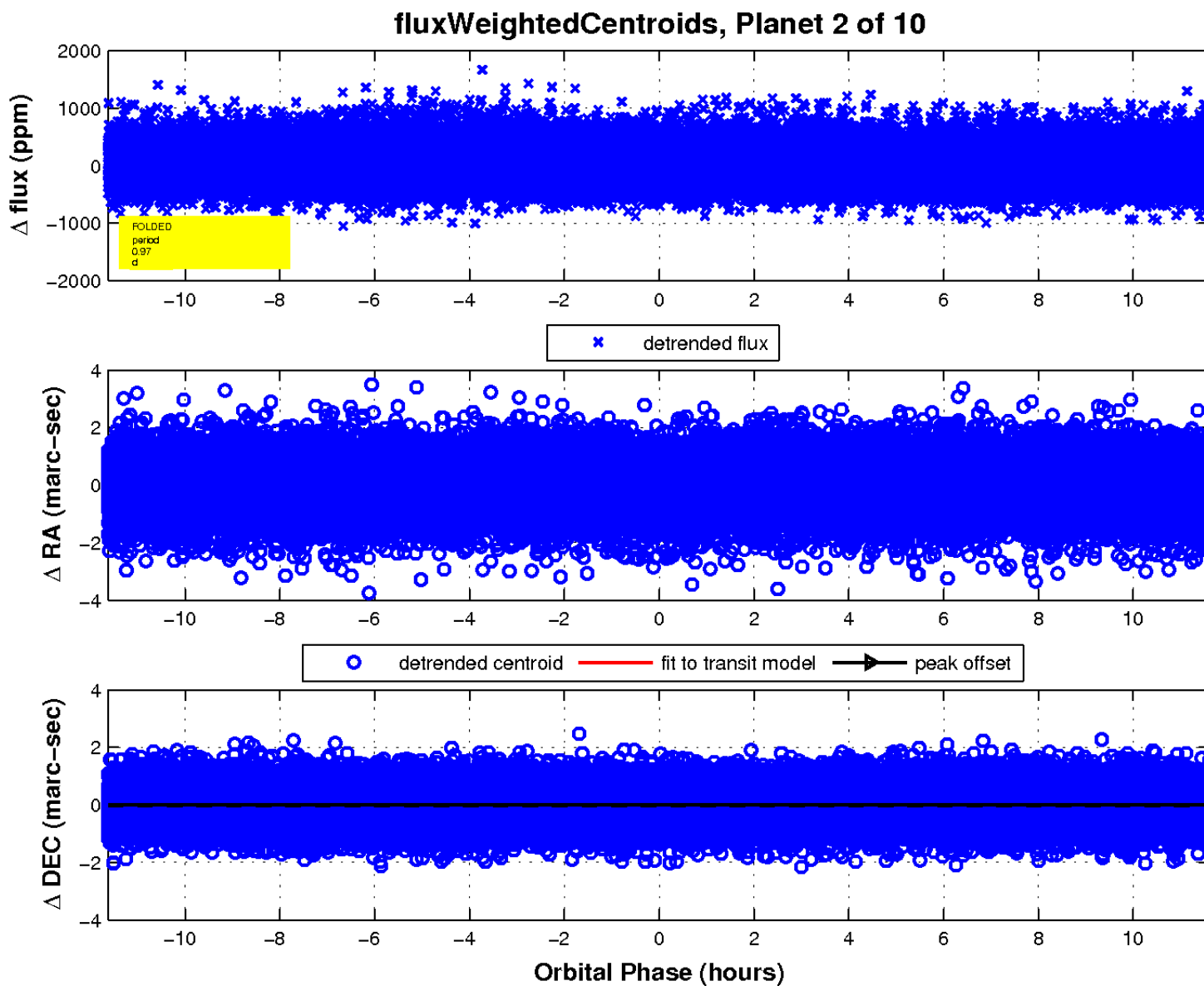
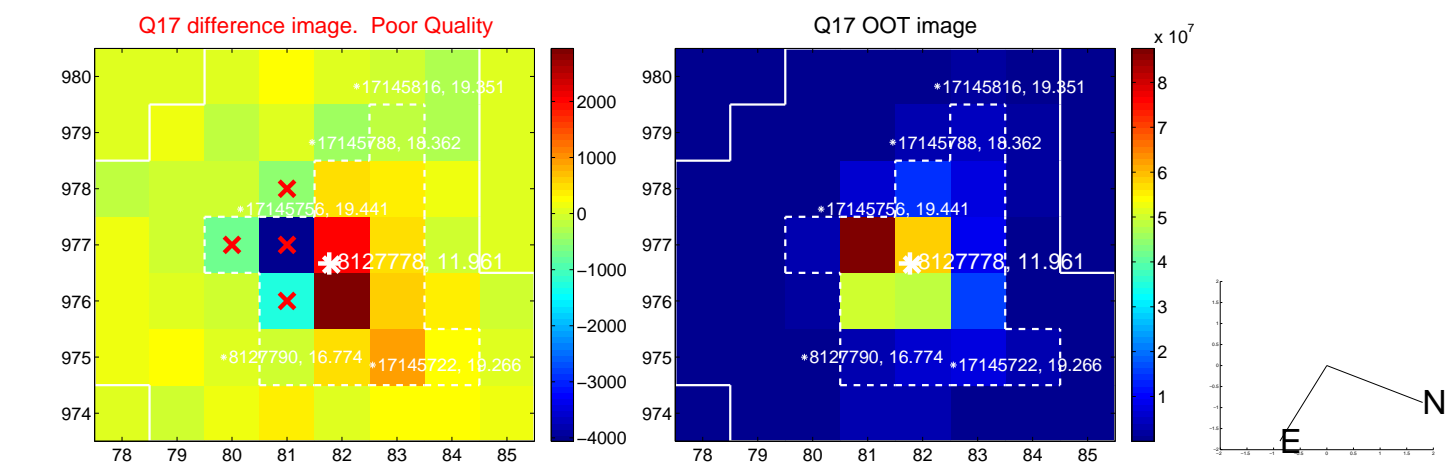
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

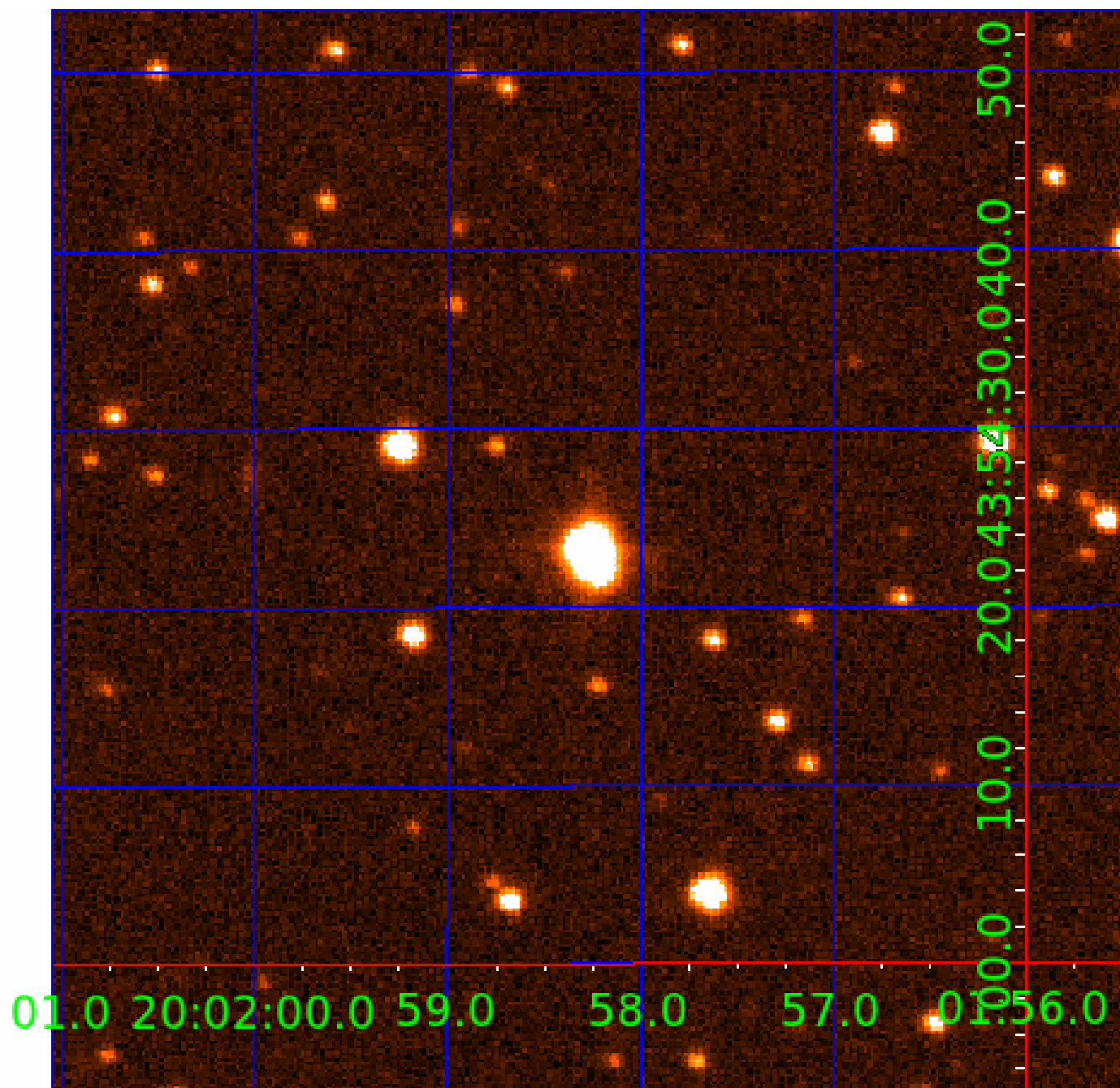


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008127778

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})
008127778-01	OBS	No	0.968765	131.757027	106.9	3.000	9.1	-1.0	2.21	9051	2.33	47677.98
008127778-02	OBS	No	0.968711	132.144883	12.5	4.915	8.6	5.0	2.21	9051	0.81	47681.51
008127778-06	OBS	No	35.945755	149.544146	287.9	2.671	8.9	7.6	2.21	9051	4.33	385.25
008127778-07	OBS	No	36.482035	163.232924	314.9	2.575	7.5	8.4	2.21	9051	4.54	377.72
008127778-08	OBS	No	33.146778	162.680087	107.4	1.438	8.2	2.7	2.21	9051	2.53	429.23
008127778-09	OBS	No	33.147882	162.920468	250.2	1.882	8.4	5.4	2.21	9051	3.97	429.21
008127778-10	OBS	No	19.729039	138.427754	148.6	5.000	8.8	-1.0	2.21	9051	2.75	857.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127778-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008127778-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008127778-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
008127778-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
008127778-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

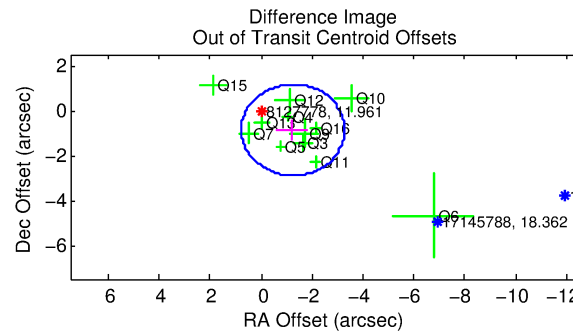
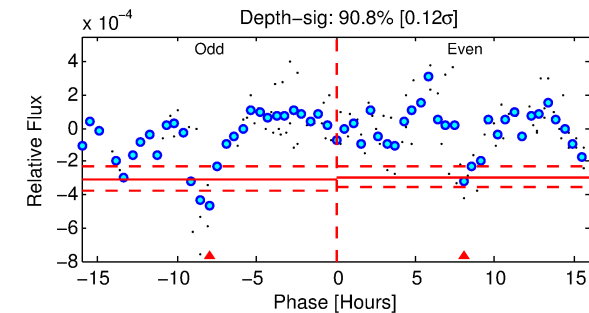
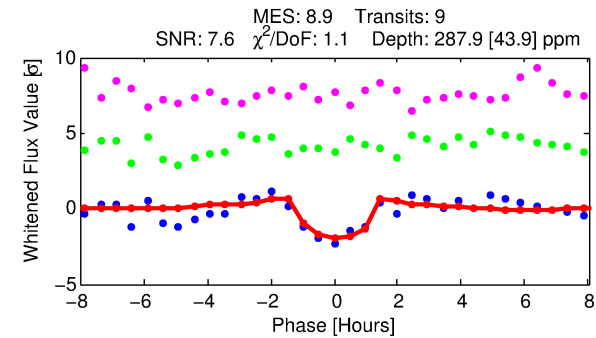
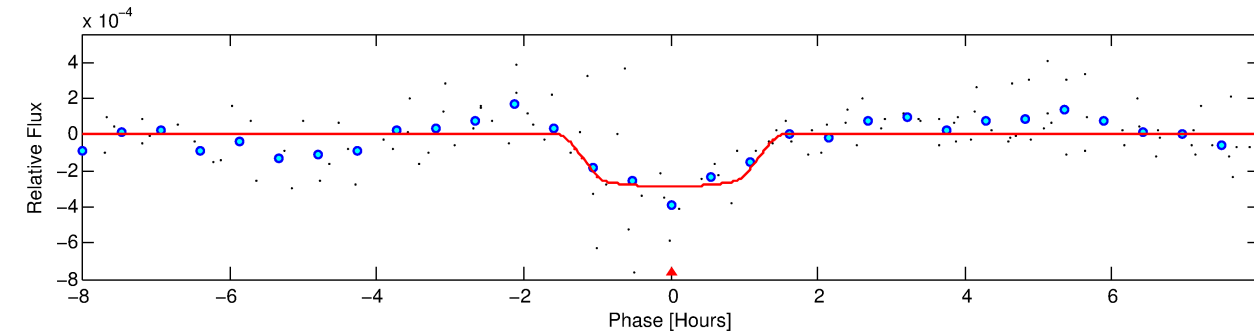
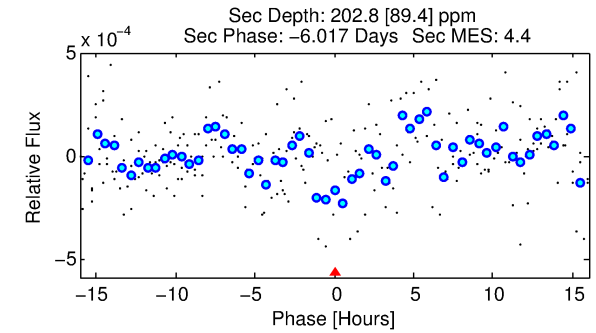
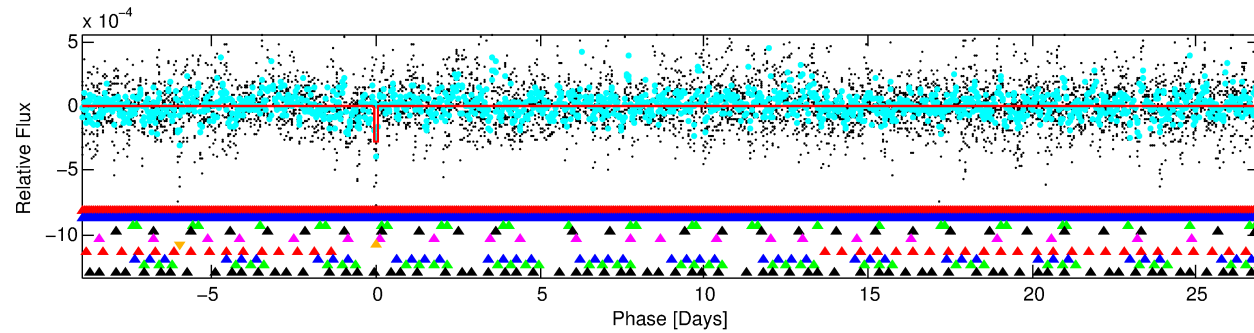
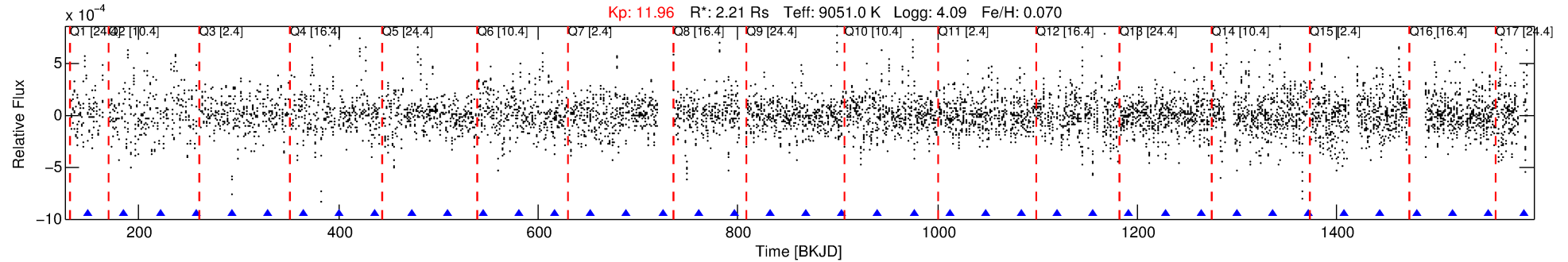
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127778-06

No Significant Match Found

DV One-Page Summary

KIC: 8127778 Candidate: 6 of 10 Period: 35.946 d



DV Fit Results:

Period = 35.94575 [0.00029] d
Epoch = 149.5441 [0.0072] BKJD
Rp/R* = 0.0179 [0.0082]
a/R* = 48.78 [153.59]
b = 0.90 [0.67]
Self = 385.25 [155.28]
Teff = 1130 [114] K
Rp = 4.33 [2.43] Re
a = 0.2761 [0.0705] AU
Ag = 454.09 [486.46] [0.93σ]
Teffp = 8063 [2085] K [3.32σ]

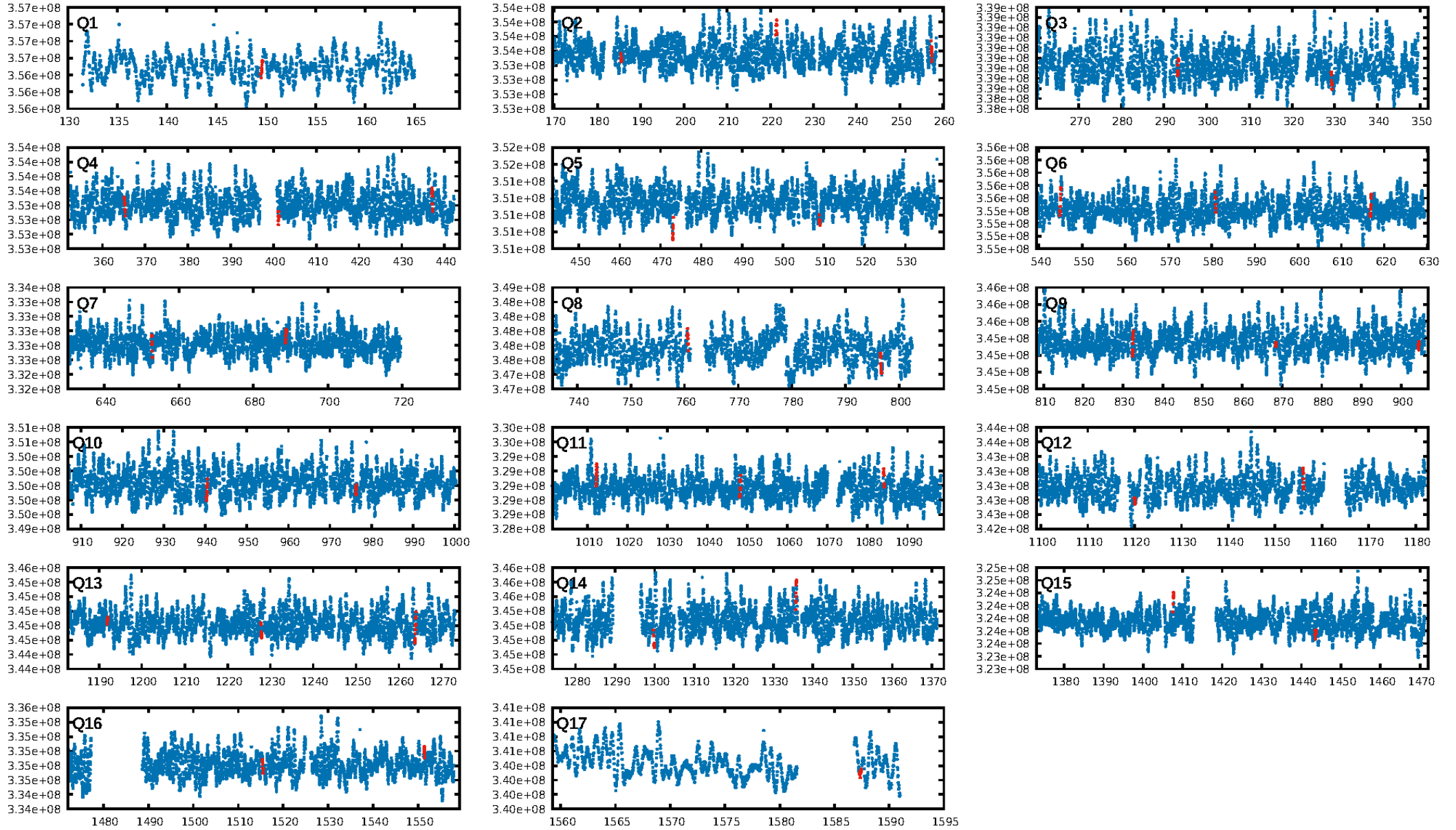
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.55σ]
LongPeriod-sig: 99.9% [3.47σ]
ModelChiSquare2-sig: 2.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.4307
Centroid-sig: N/A
Centroid-so: 0.579 arcsec [1.29σ]
OotOffset-rm: 1.520 arcsec [2.24σ]
KicOffset-rm: 1.692 arcsec [2.70σ]
OotOffset-st: 2/4/3/3 [12]
KicOffset-st: 2/4/3/3 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 0.00 [0/16]

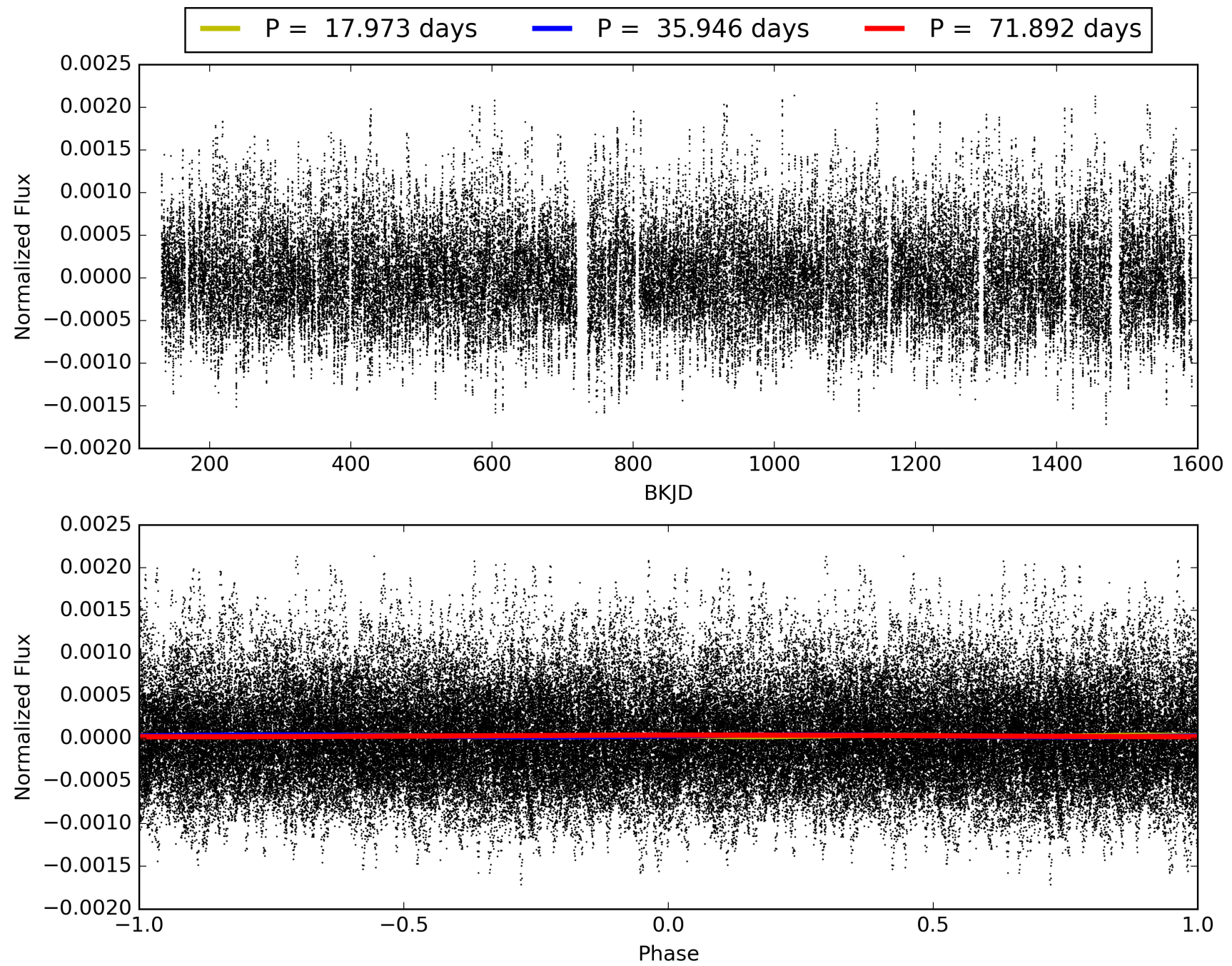
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:09:33 Z

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

TCE 008127778-06, PDC Light Curves

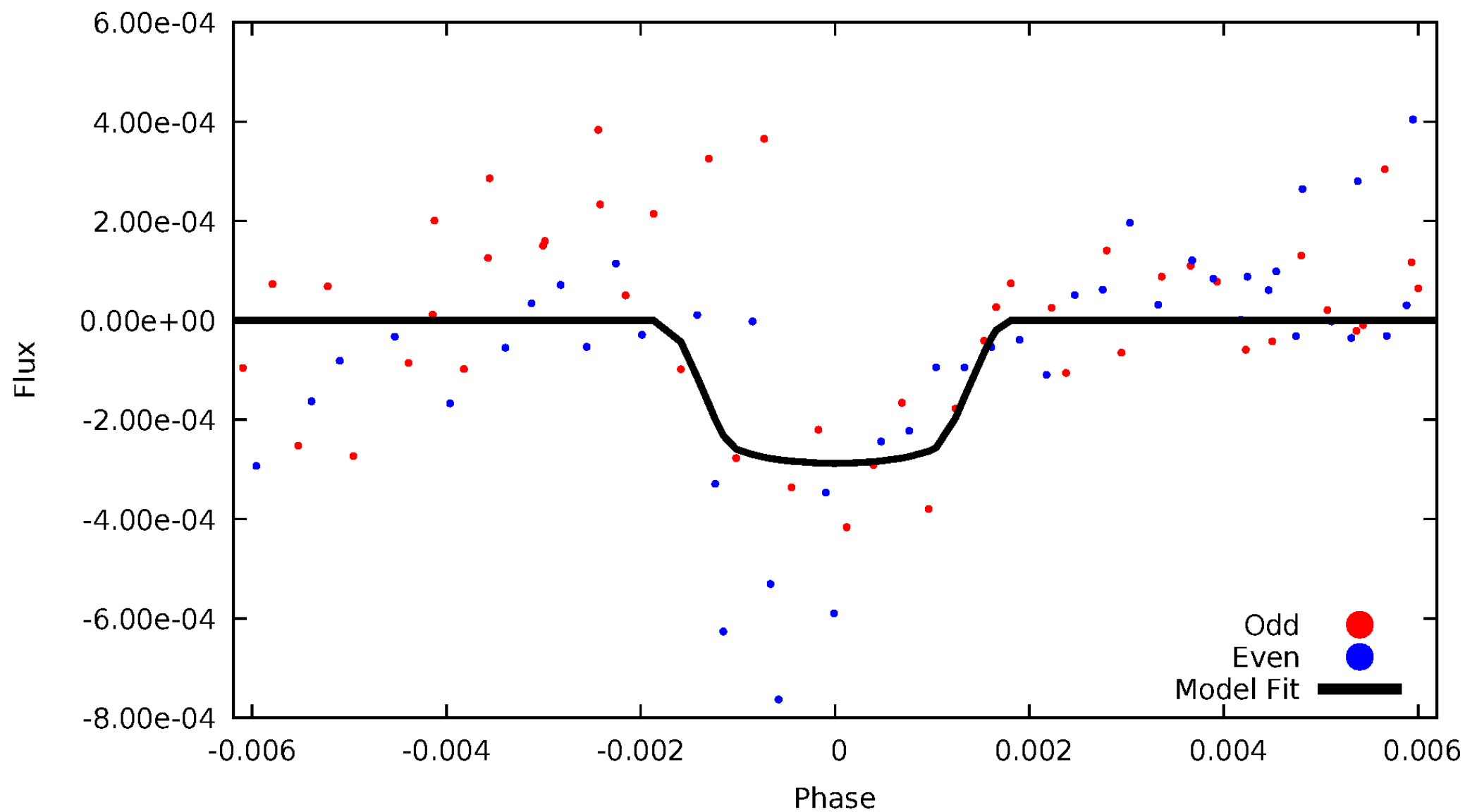


TCE 008127778-06



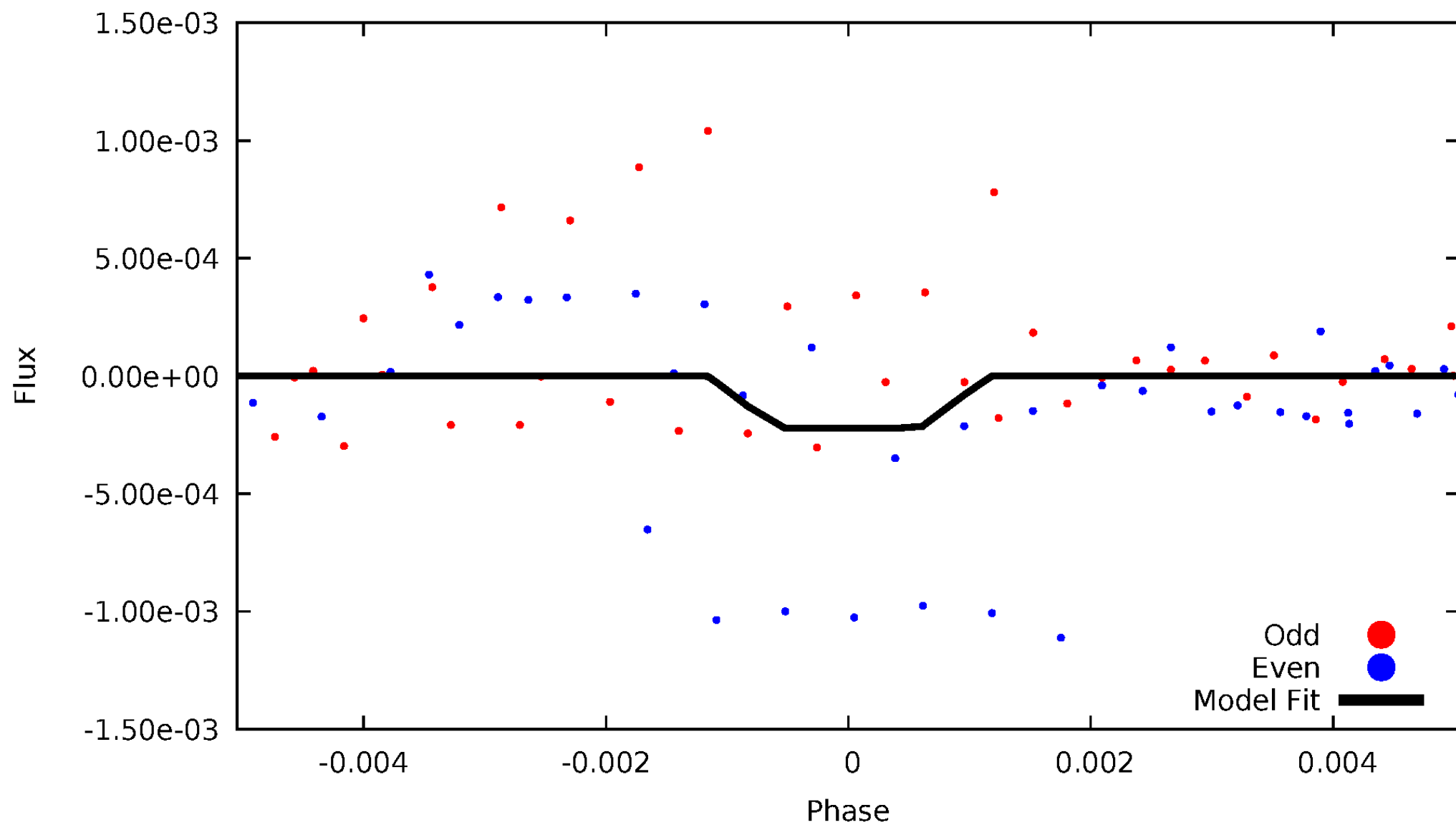
DV Odd/Even

TCE 008127778-06



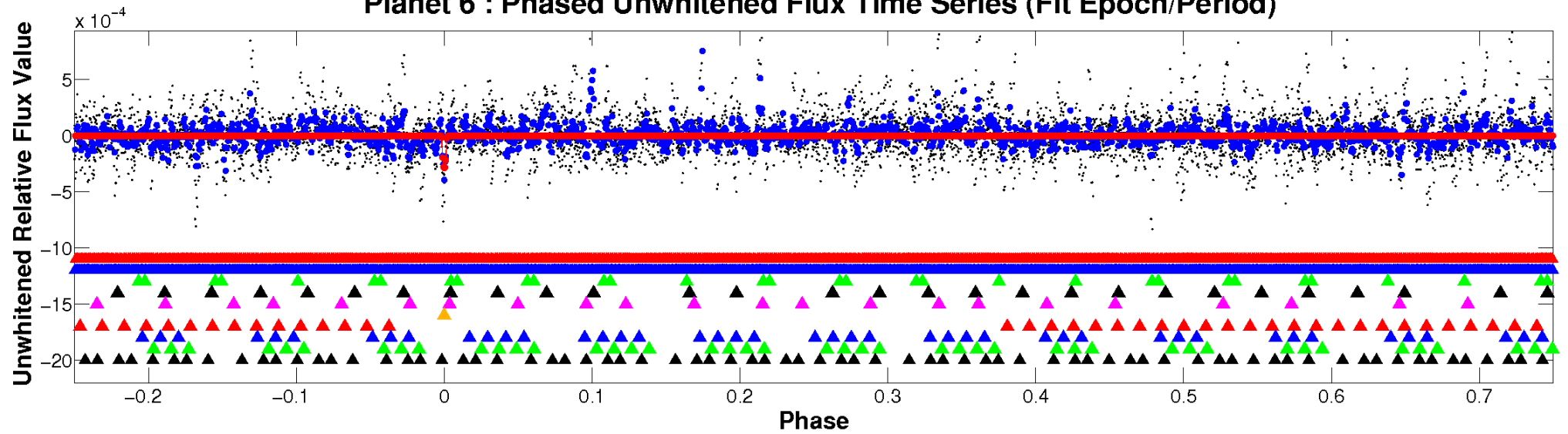
ALT Odd/Even

TCE 008127778-06

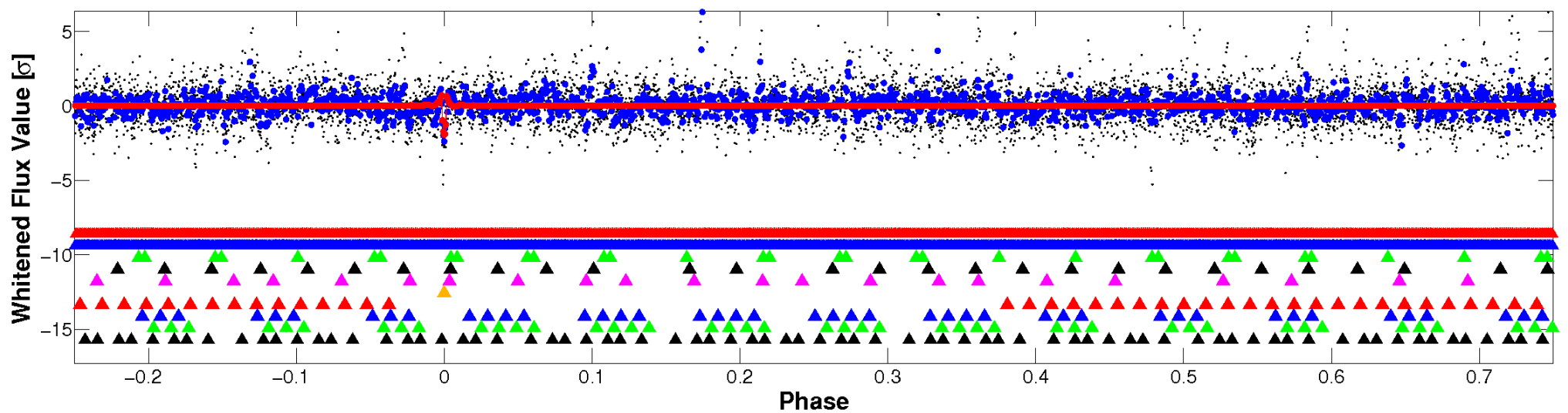


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

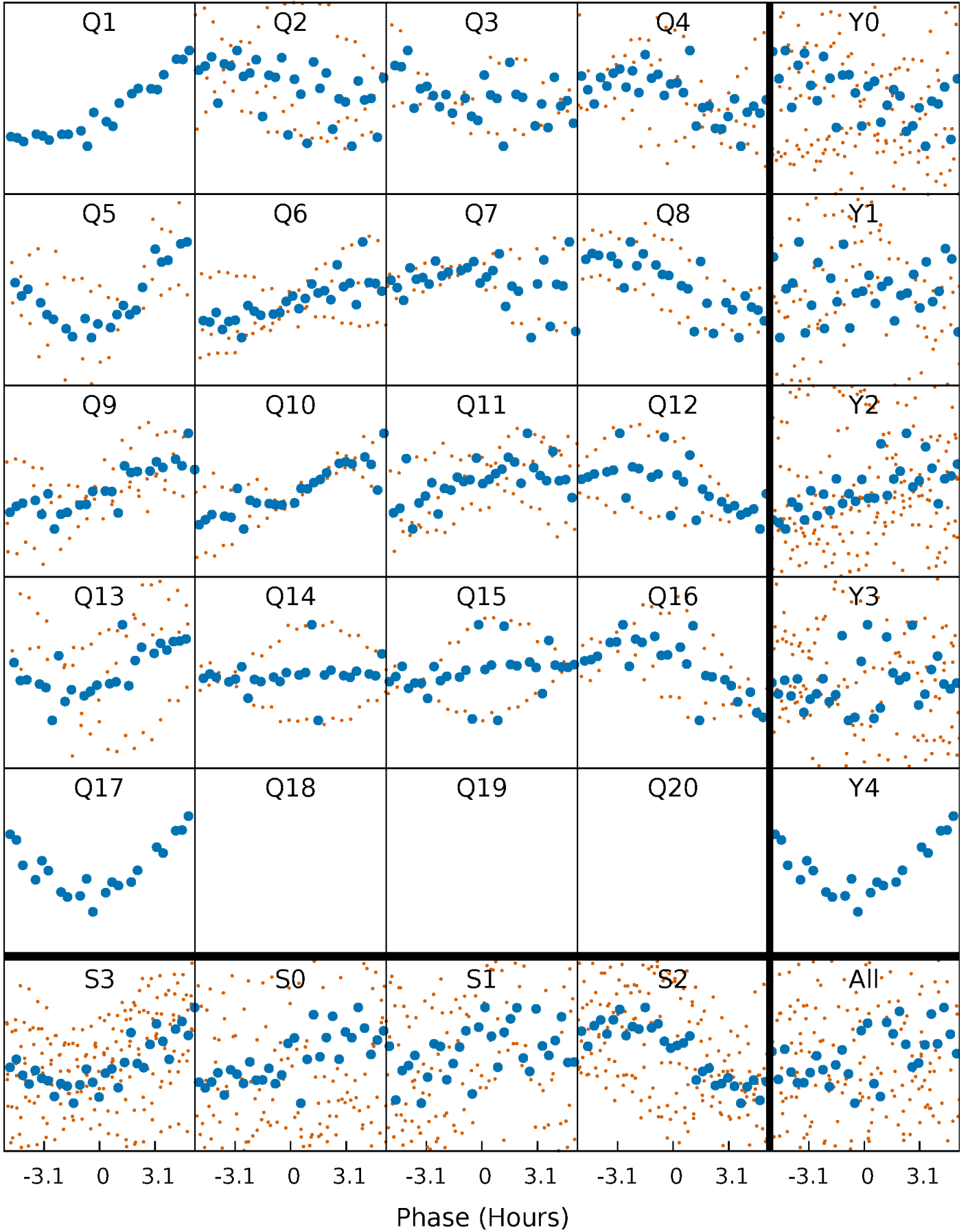


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



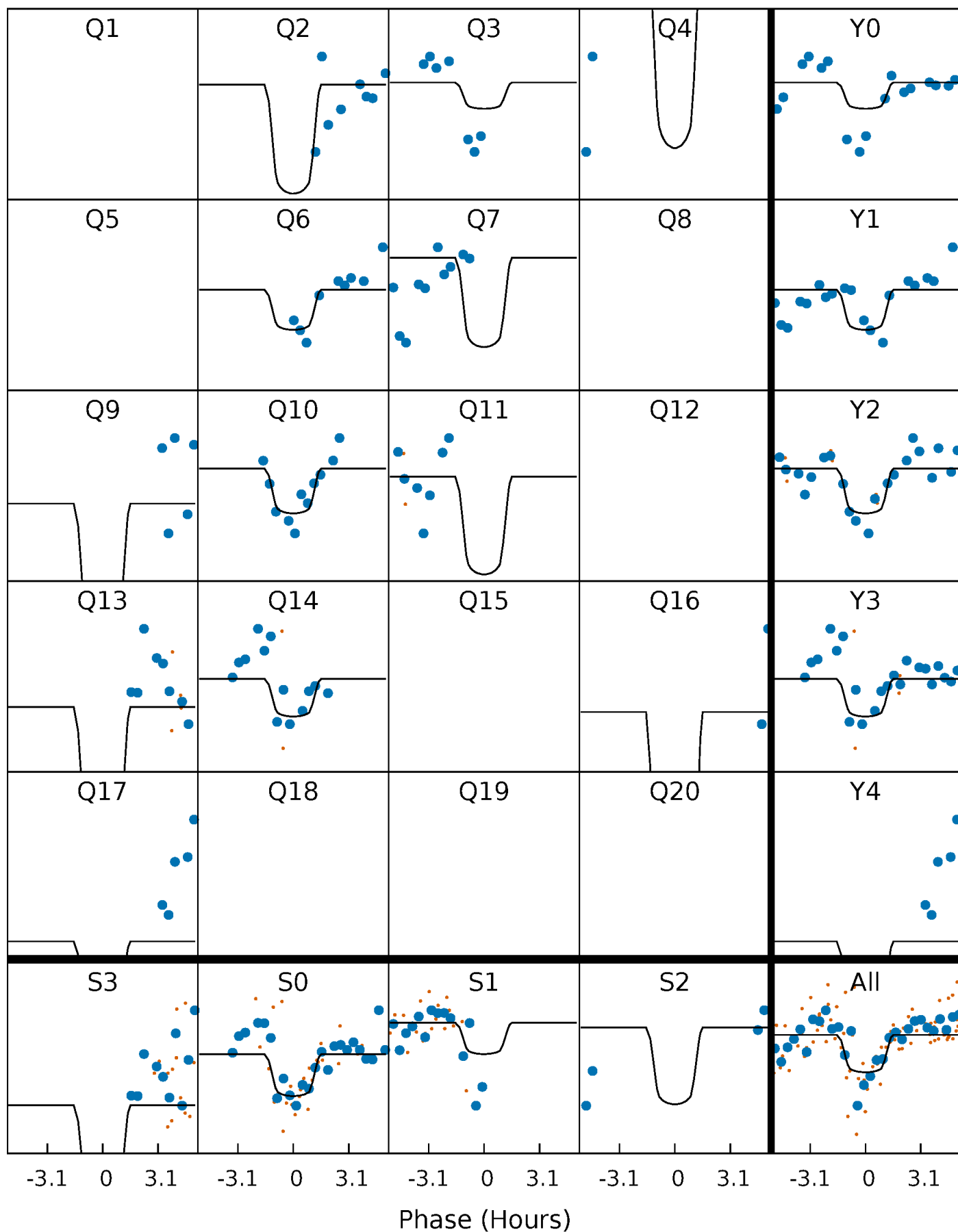
PDC Quarter-Phased Transit Curves

TCE 008127778-06 P= 35.945755 Days $T_0=149.544146$ (BKJD)



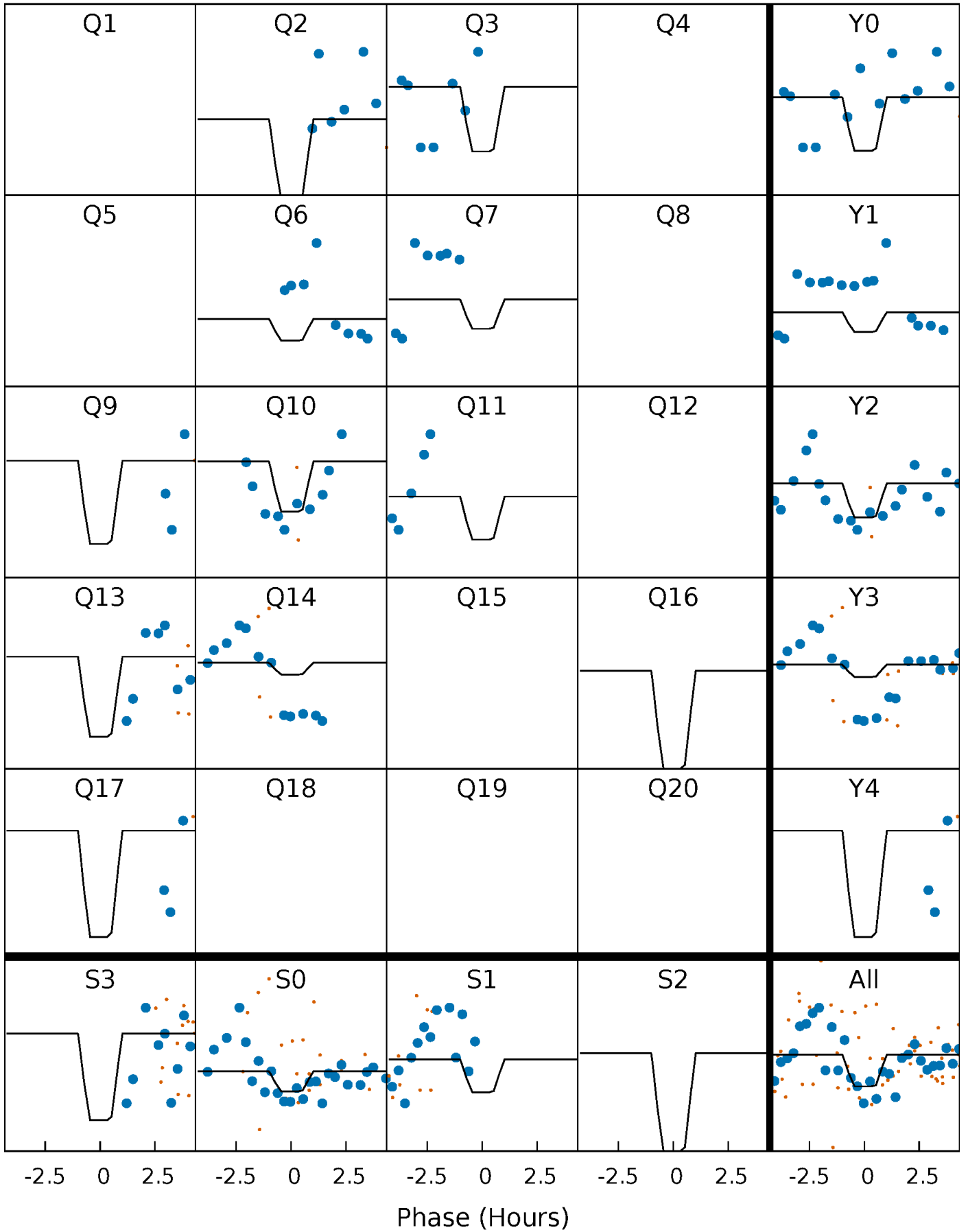
DV Quarter-Phased Transit Curves

TCE 008127778-06 P= 35.945755 Days $T_0=149.544146$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

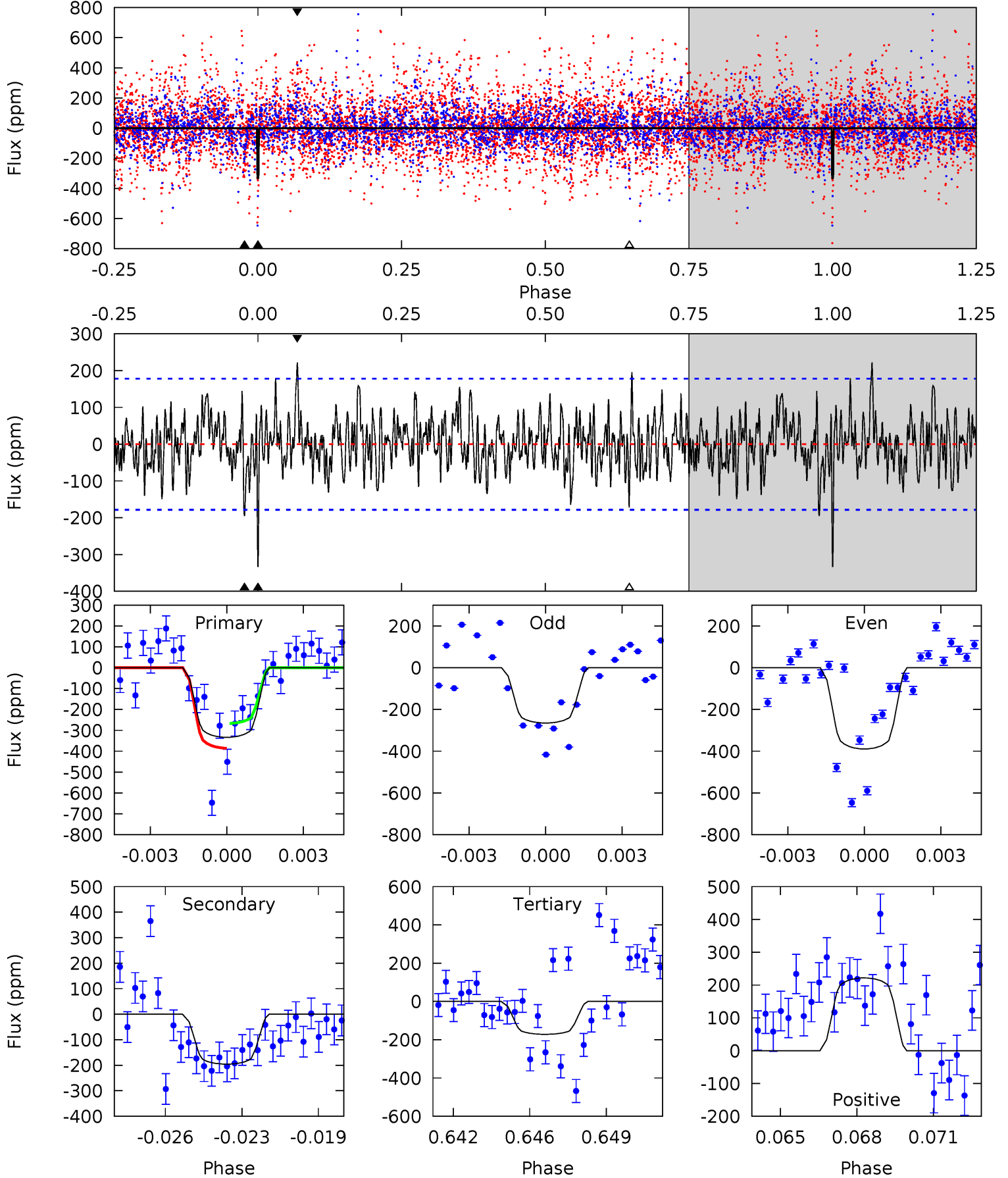
TCE 008127778-06 P= 35.945929 Days $T_0=149.553792$ (BKJD)



DV Model-Shift Uniqueness Test

008127778-06, P = 35.945755 Days, E = 113.598391 Days

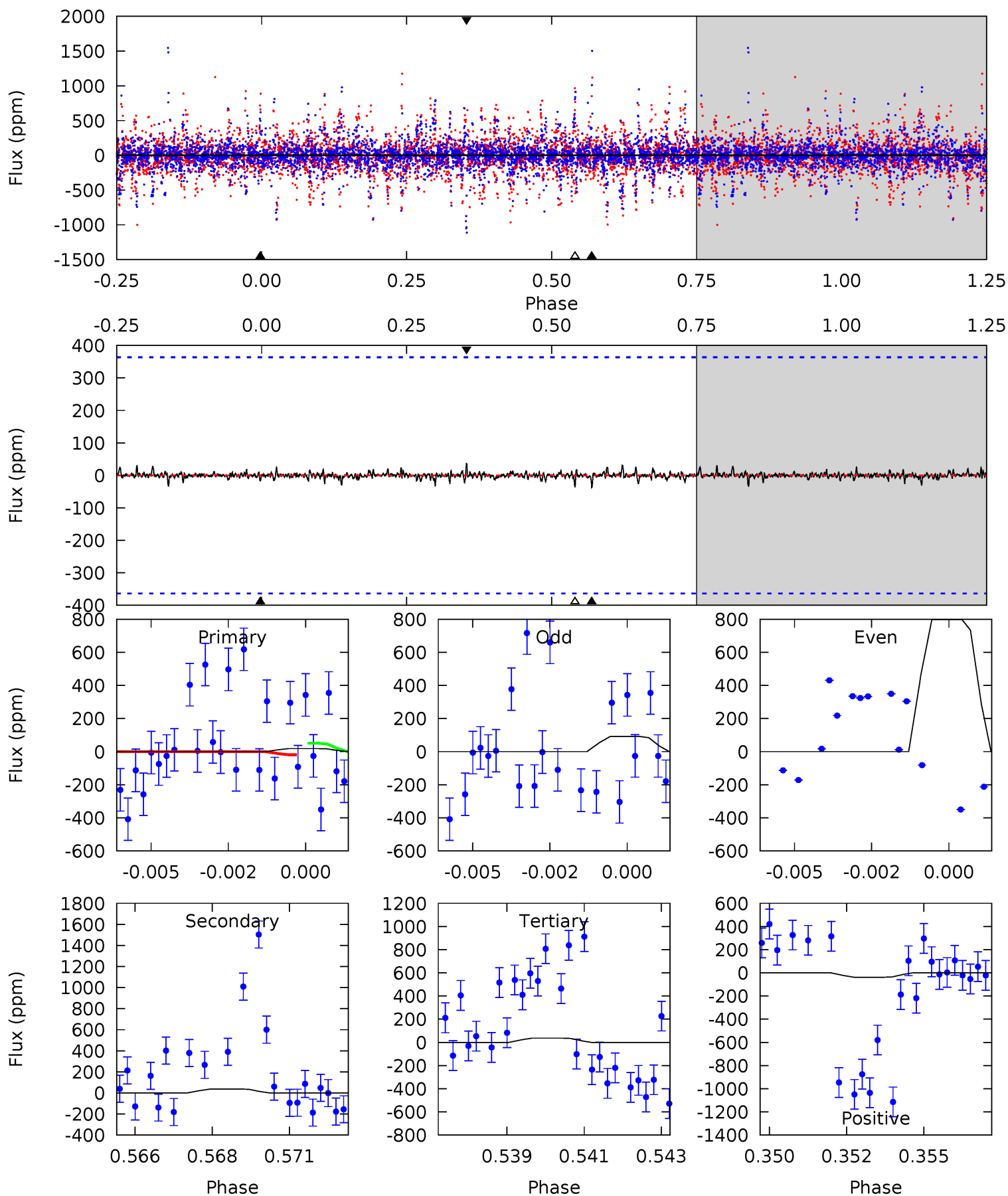
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.80	5.75	5.05	6.52	5.24	2.94	1.71	4.76	3.28	0.71	-0.77	1.72	0.69	0.40	1.77



Alt Model-Shift Uniqueness Test

008127778-06, P = 35.945929 Days, E = 113.607863 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.26	0.54	0.54	0.55	5.30	3.05	0.09	-0.28	-0.29	0.01	-0.01	4.73	1.22	0.50	0.23



Stellar Parameters For KIC 008127778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9051^{+251}_{-466}	$4.086^{+0.144}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.210^{+0.719}_{-0.588}$	$2.170^{+0.372}_{-0.605}$	$0.283^{+0.268}_{-0.139}$
	+3%/-5%	+4%/-4%	+214%/-929%	+33%/-27%	+17%/-28%	+95%/-49%
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 008127778-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-196 ± 34	$4.23^{+2.31}_{-1.86}$	1574^{+123}_{-116}	7698^{+3530}_{-1515}	443^{+929}_{-248}
Alt.	-37 ± 69	$3.64^{+2.09}_{-1.74}$	1575^{+129}_{-115}	5122^{+3021}_{-10443}	86^{+432}_{-187}

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 $A_{obs} \gg 1.0$

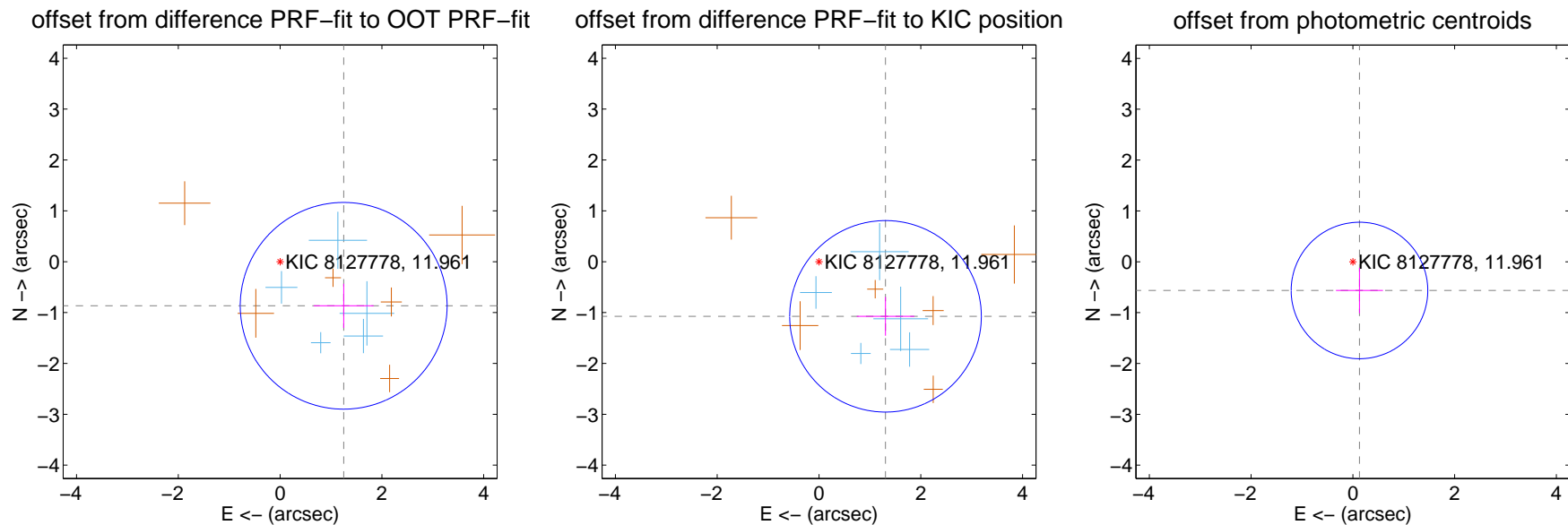
DV Centroid Data

Supplemental centroid analysis for 008127778-06. **Kepler magnitude: 11.96.** Transit SNR 7.65

There are 5 quarters with good PRF difference image offsets

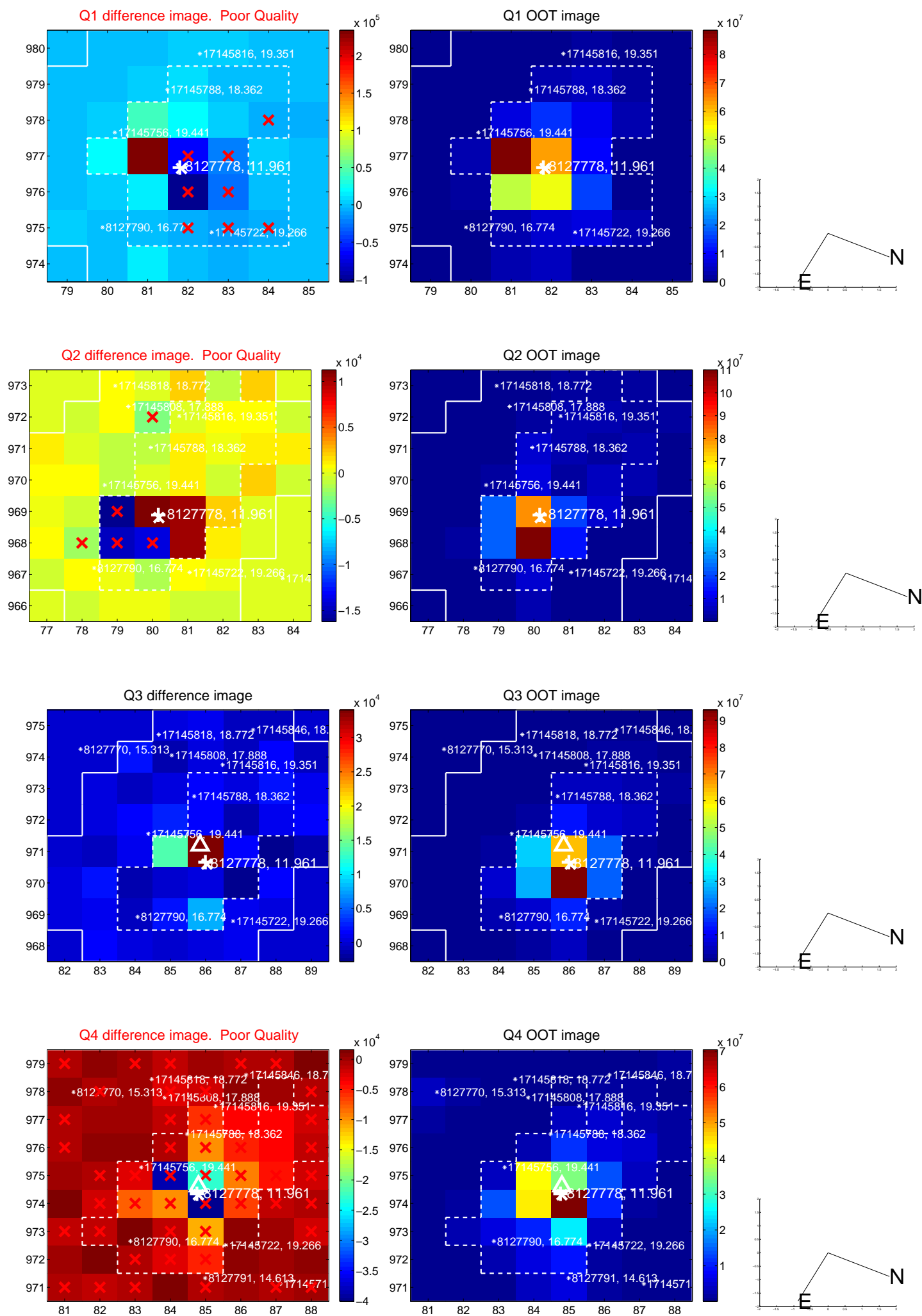
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.520 ± 0.677	2.24	-1.249 ± 0.587	-0.867 ± 0.434
PRF-fit source offset from KIC position	1.692 ± 0.627	2.70	-1.307 ± 0.566	-1.074 ± 0.381
photometric centroid source offset	0.58 ± 0.45	1.29	-0.13 ± 0.46	-0.56 ± 0.45

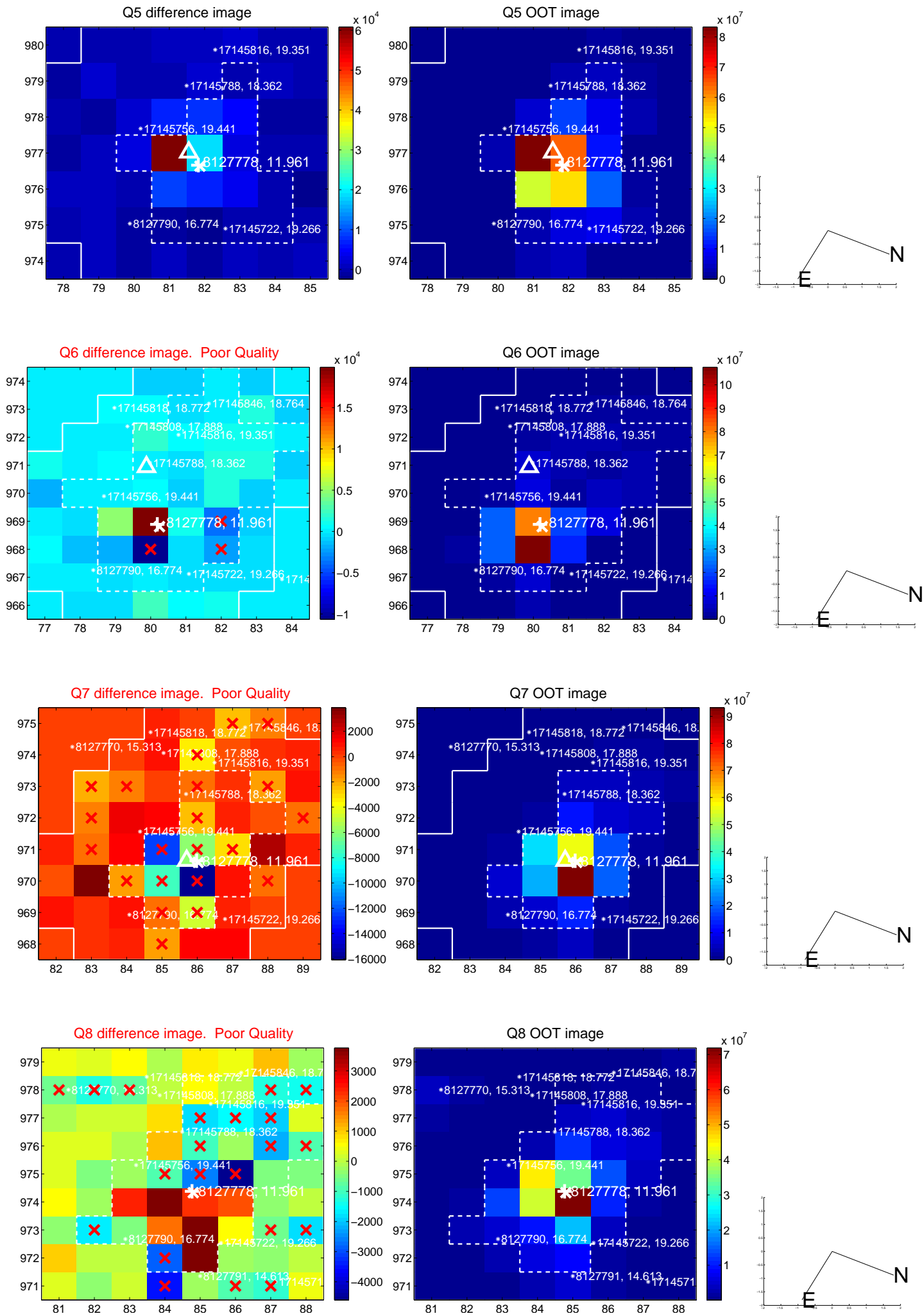


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

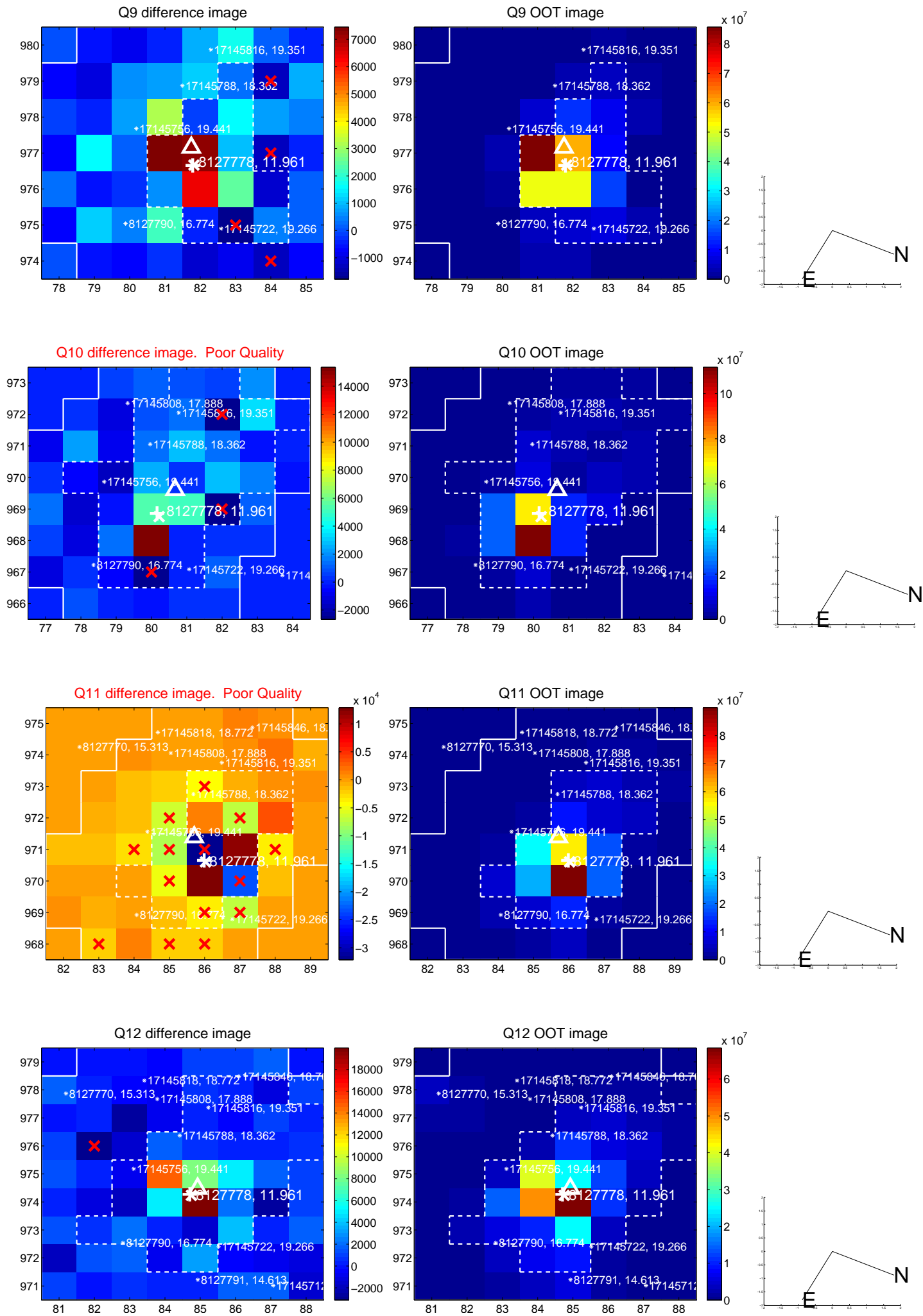
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



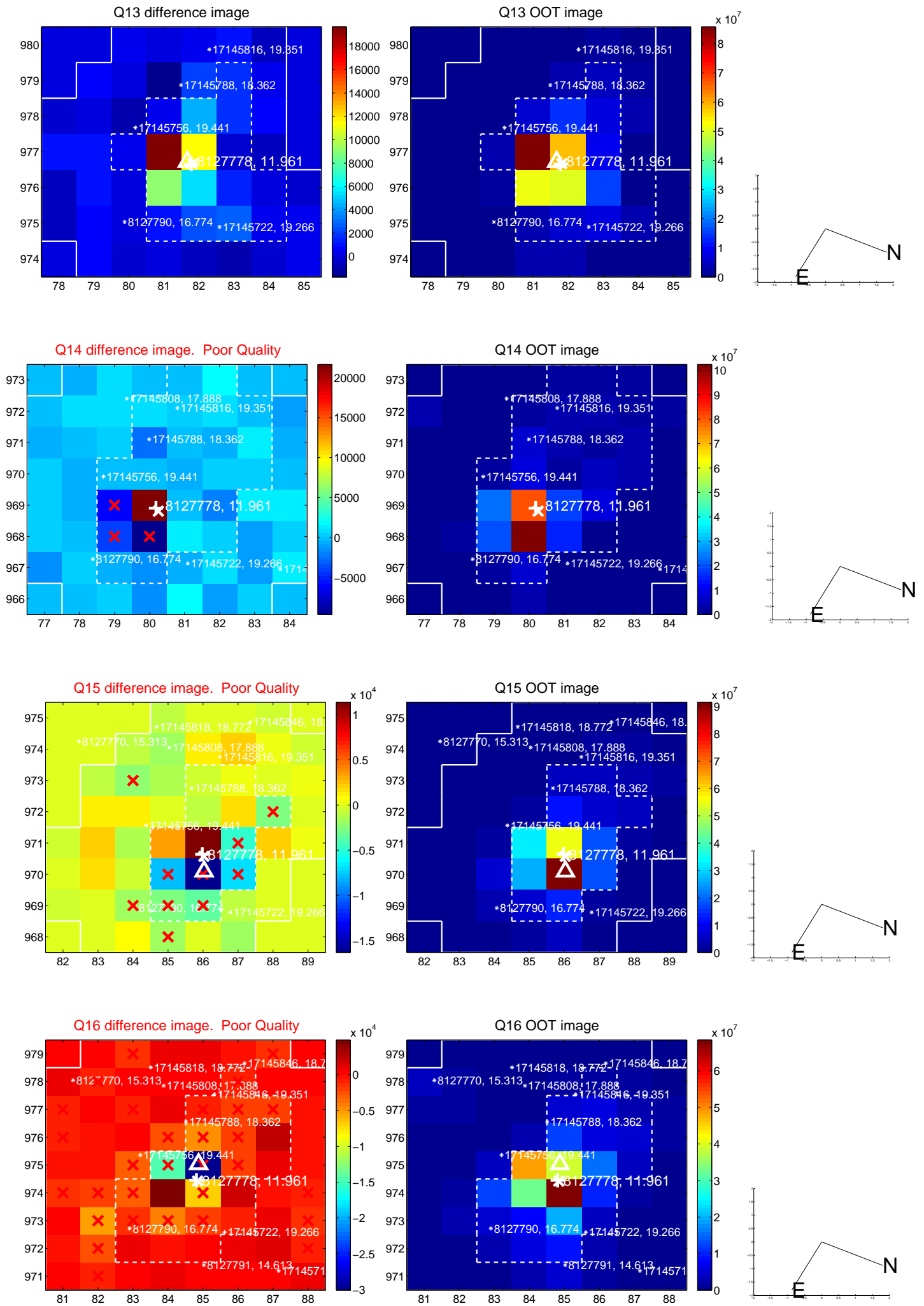
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



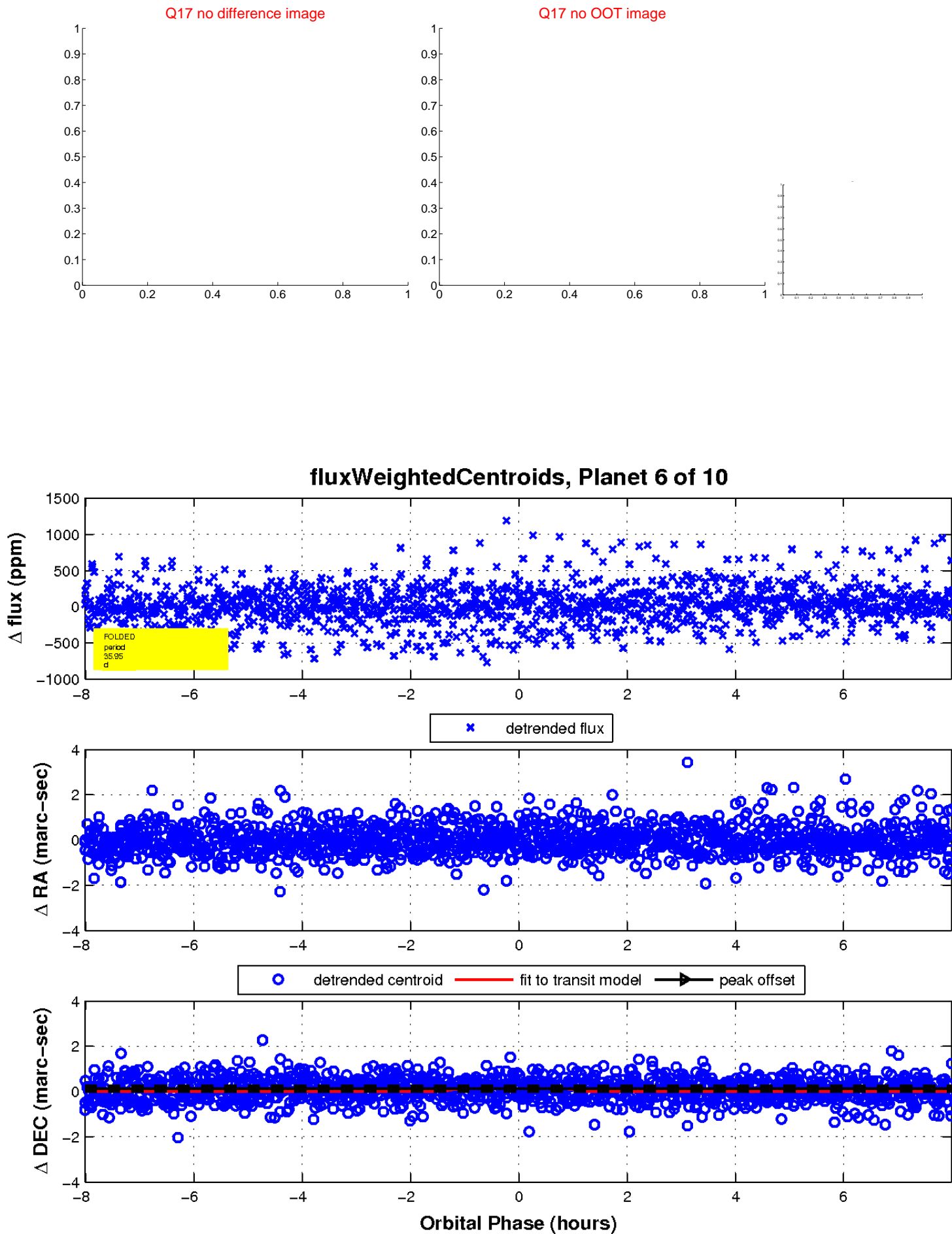
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



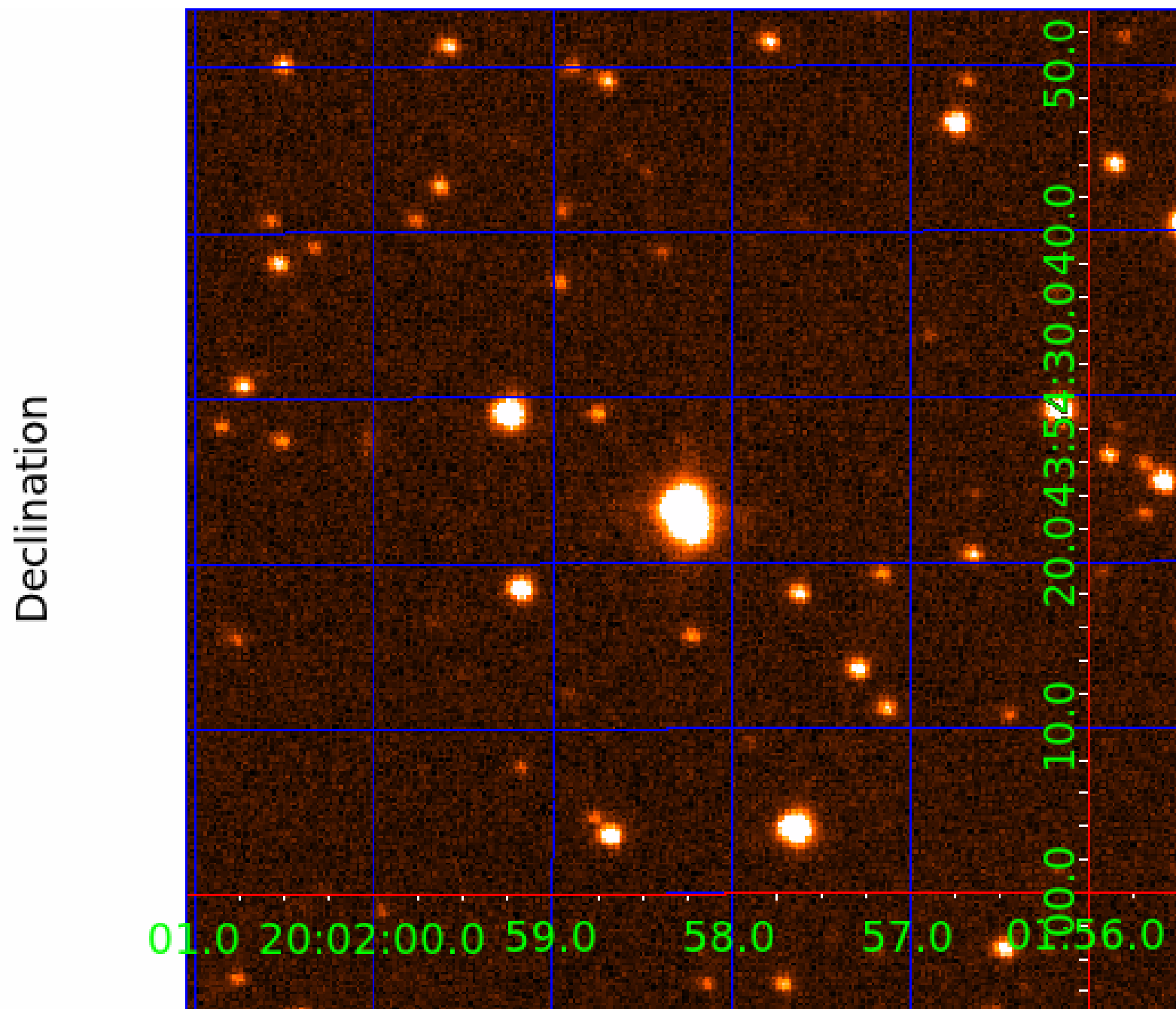
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008127778

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})
008127778-01	OBS	No	0.968765	131.757027	106.9	3.000	9.1	-1.0	2.21	9051	2.33	47677.98
008127778-02	OBS	No	0.968711	132.144883	12.5	4.915	8.6	5.0	2.21	9051	0.81	47681.51
008127778-06	OBS	No	35.945755	149.544146	287.9	2.671	8.9	7.6	2.21	9051	4.33	385.25
008127778-07	OBS	No	36.482035	163.232924	314.9	2.575	7.5	8.4	2.21	9051	4.54	377.72
008127778-08	OBS	No	33.146778	162.680087	107.4	1.438	8.2	2.7	2.21	9051	2.53	429.23
008127778-09	OBS	No	33.147882	162.920468	250.2	1.882	8.4	5.4	2.21	9051	3.97	429.21
008127778-10	OBS	No	19.729039	138.427754	148.6	5.000	8.8	-1.0	2.21	9051	2.75	857.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127778-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008127778-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008127778-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
008127778-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
008127778-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

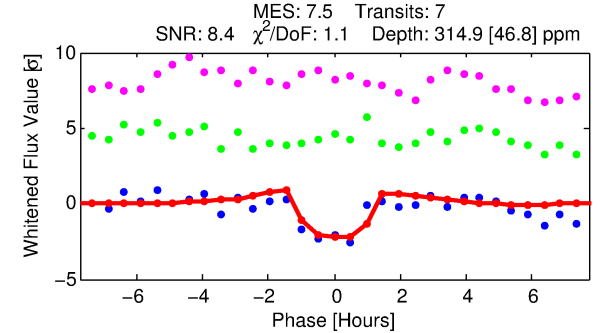
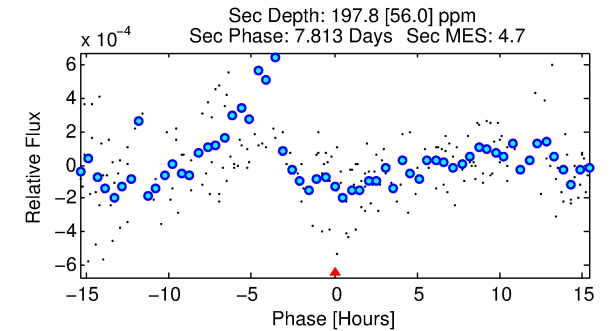
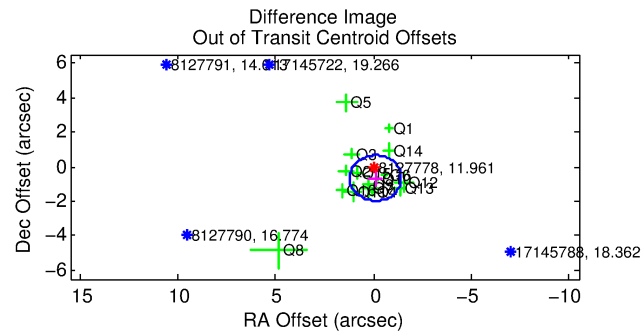
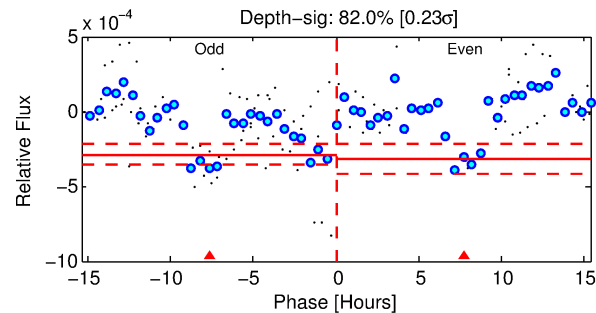
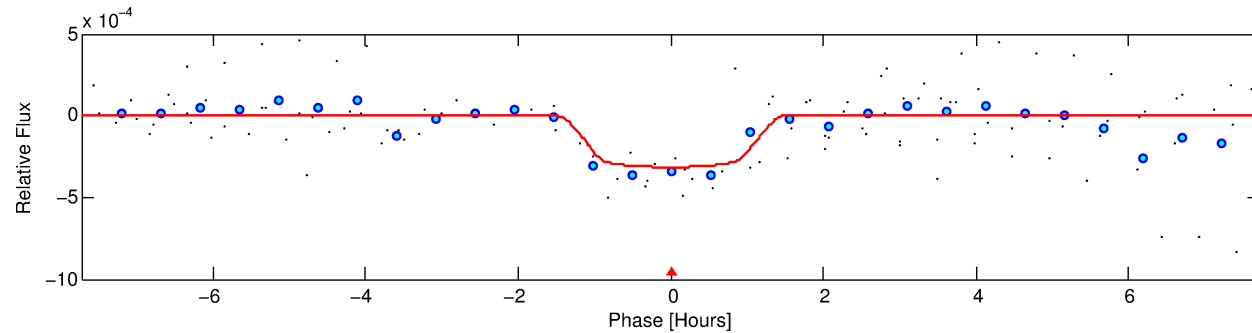
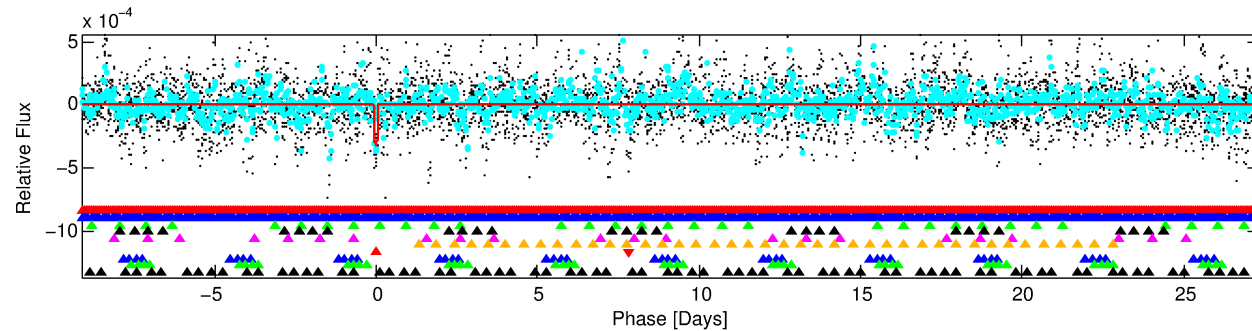
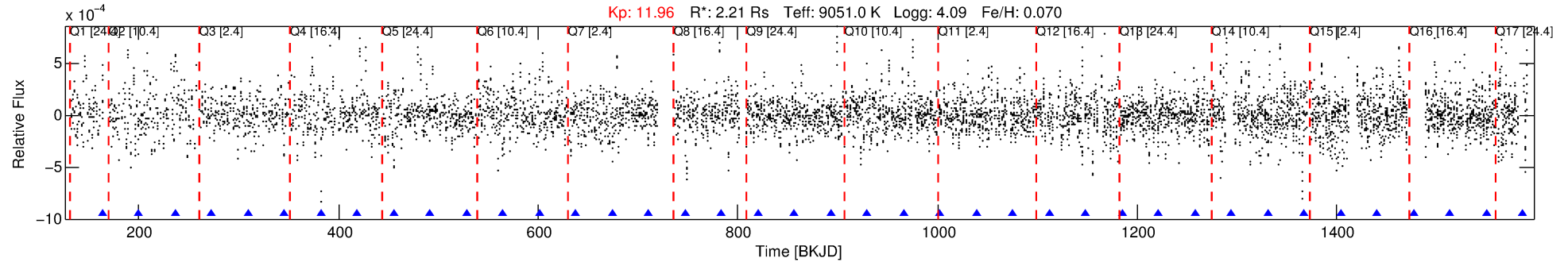
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127778-07

No Significant Match Found

DV One-Page Summary

KIC: 8127778 Candidate: 7 of 10 Period: 36.482 d



DV Fit Results:

Period = 36.48204 [0.00064] d
Epoch = 163.2329 [0.0079] BKJD
Rp/R* = 0.0188 [0.0109]
a/R* = 51.01 [210.56]
b = 0.90 [0.85]
Seff = 377.72 [152.24]
Teq = 1124 [113] K
Rp = 4.53 [3.02] Re
a = 0.2788 [0.0712] AU
Ag = 411.37 [513.07] [0.80 σ]
Teffp = 7827 [2379] K [2.81 σ]

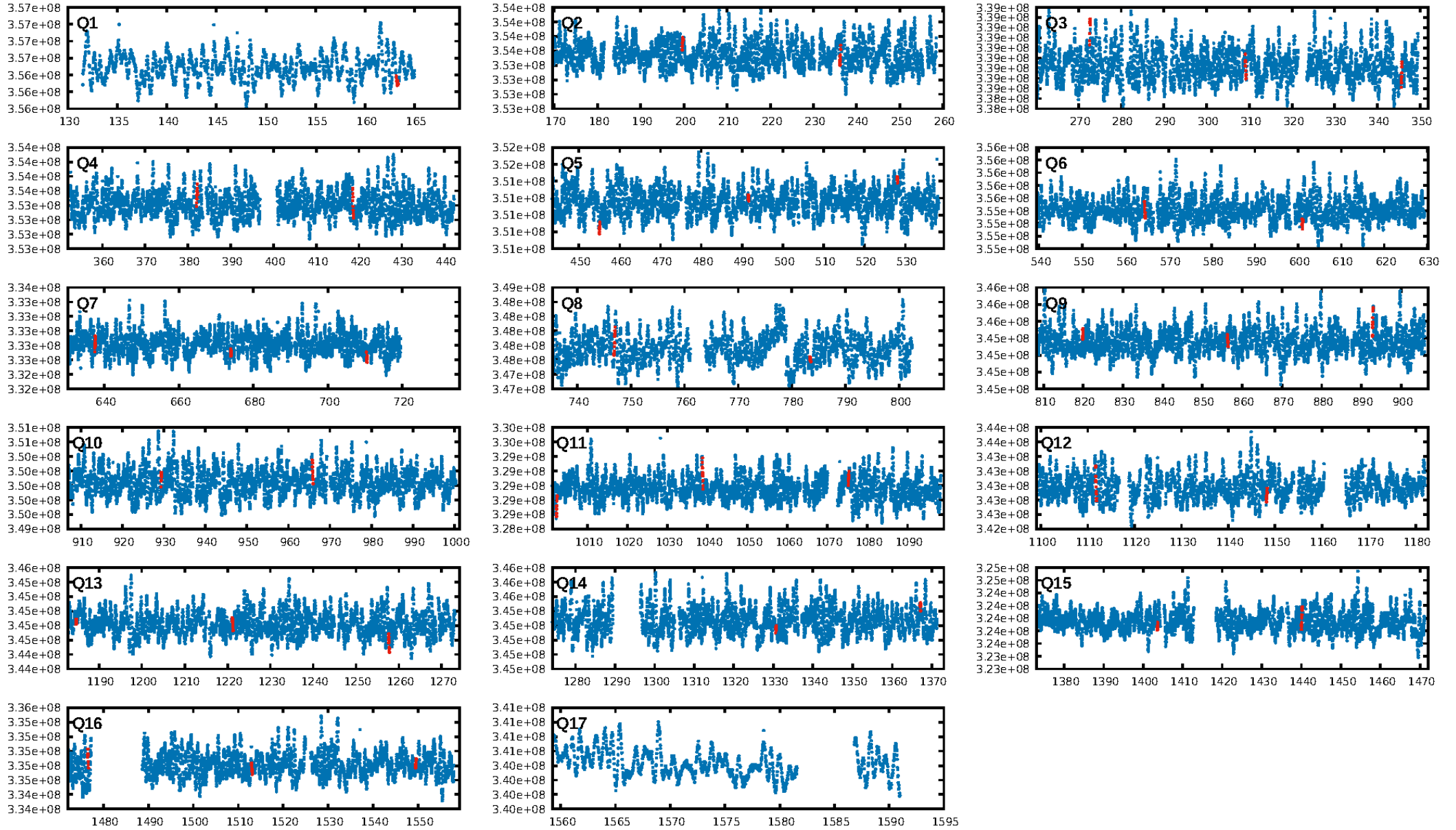
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.47 σ]
LongPeriod-sig: 100.0% [41.38 σ]
ModelChiSquare2-sig: 91.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.264
Centroid-sig: N/A
Centroid-so: 0.213 arcsec [0.50 σ]
OotOffset-rm: 0.663 arcsec [1.51 σ]
KicOffset-rm: 1.000 arcsec [2.75 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 0.00 [0/16]

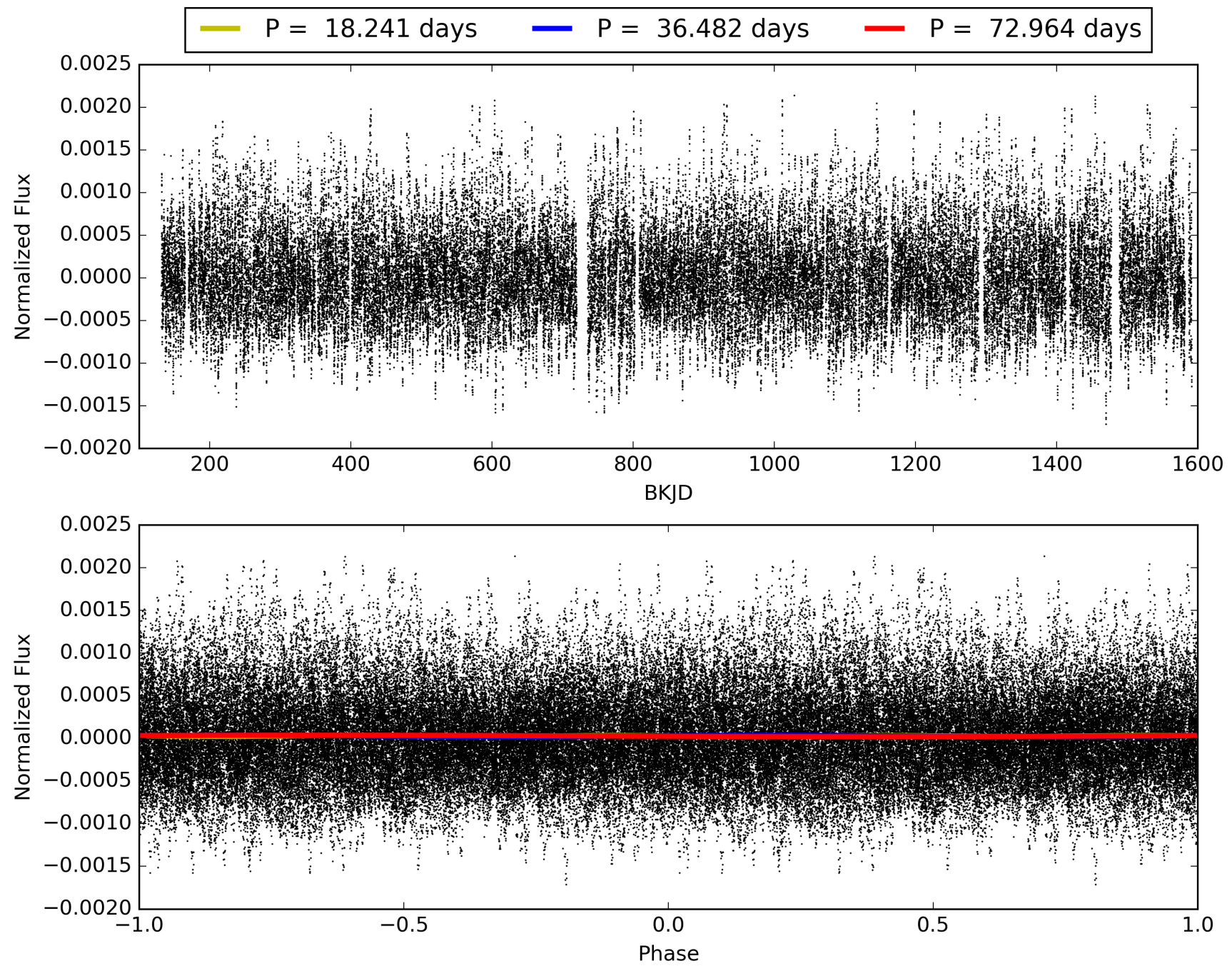
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:09:36 Z

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

TCE 008127778-07, PDC Light Curves

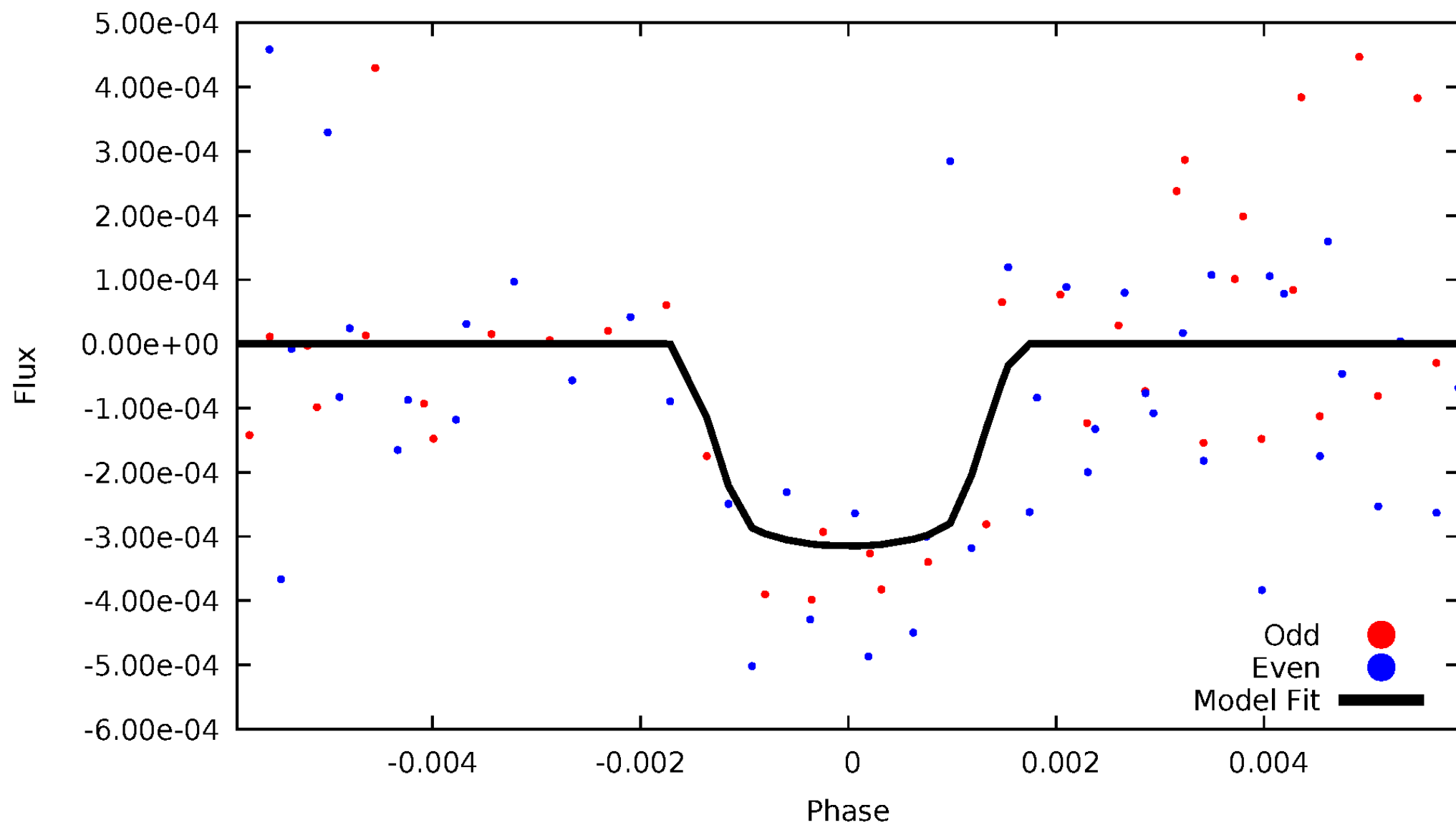


TCE 008127778-07



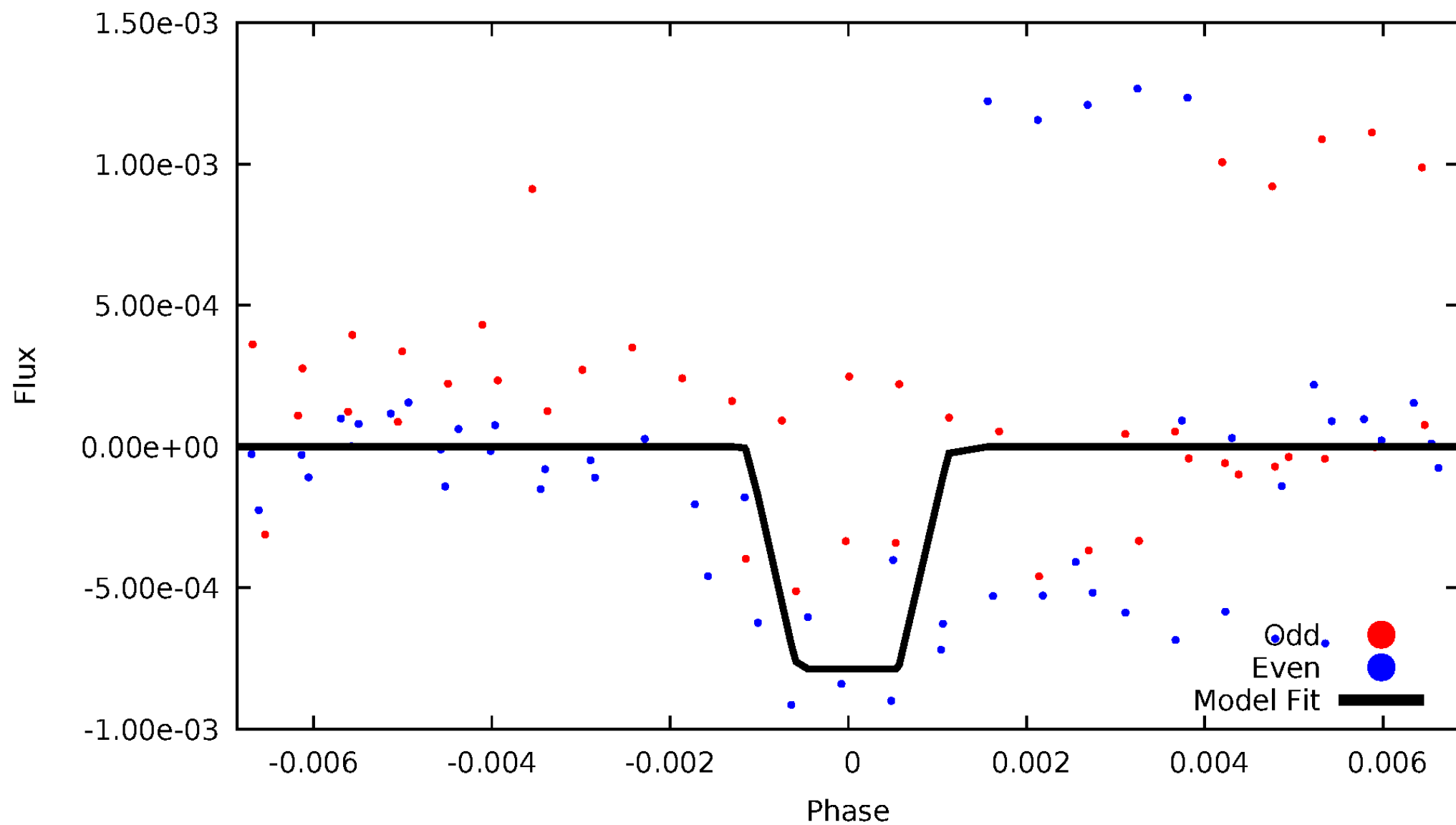
DV Odd/Even

TCE 008127778-07



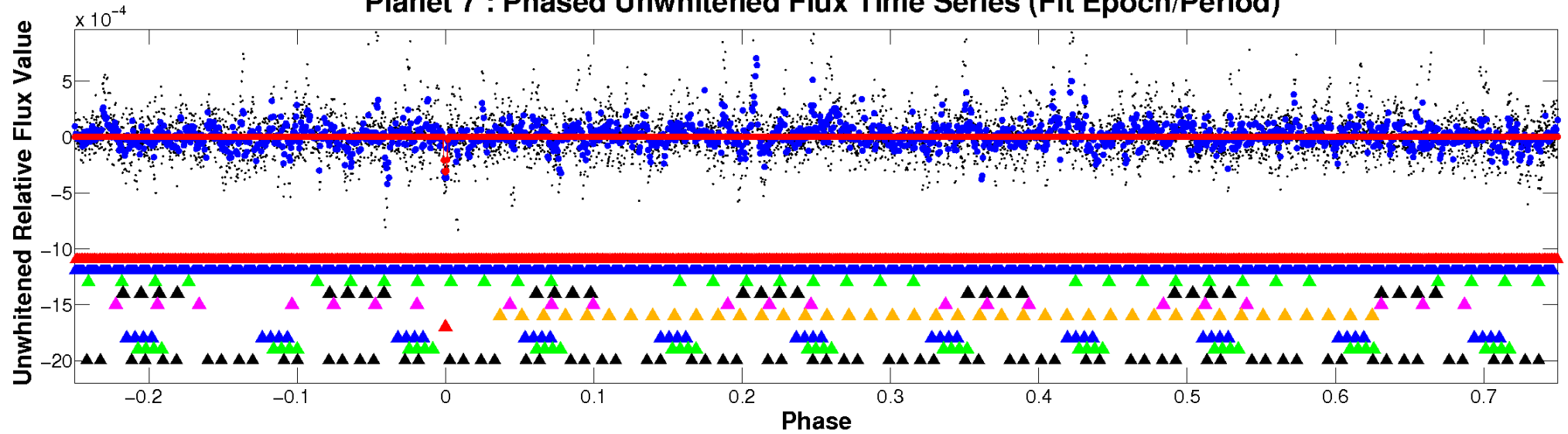
ALT Odd/Even

TCE 00812778-07

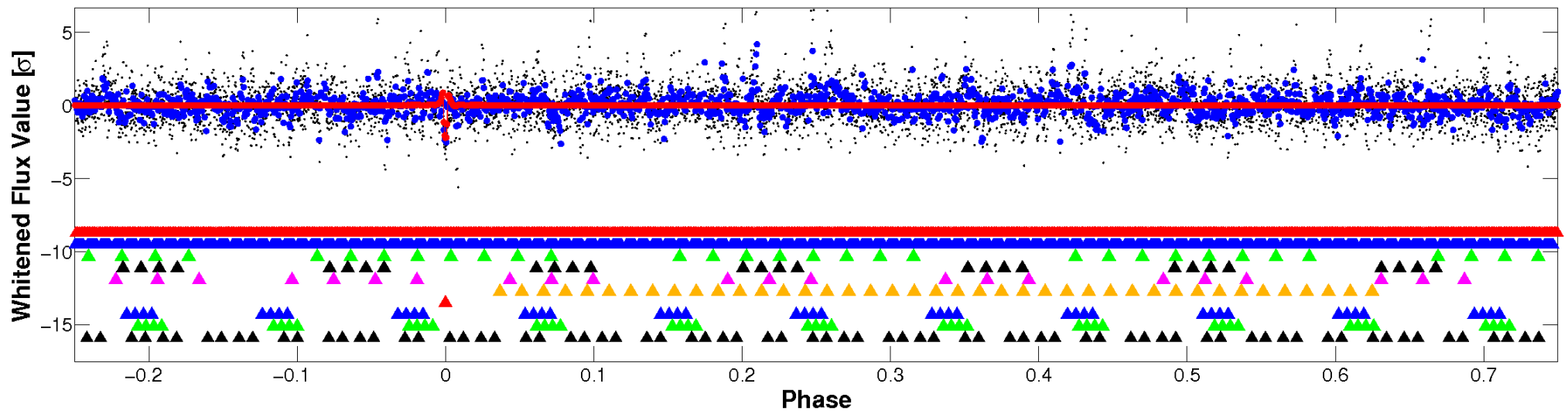


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

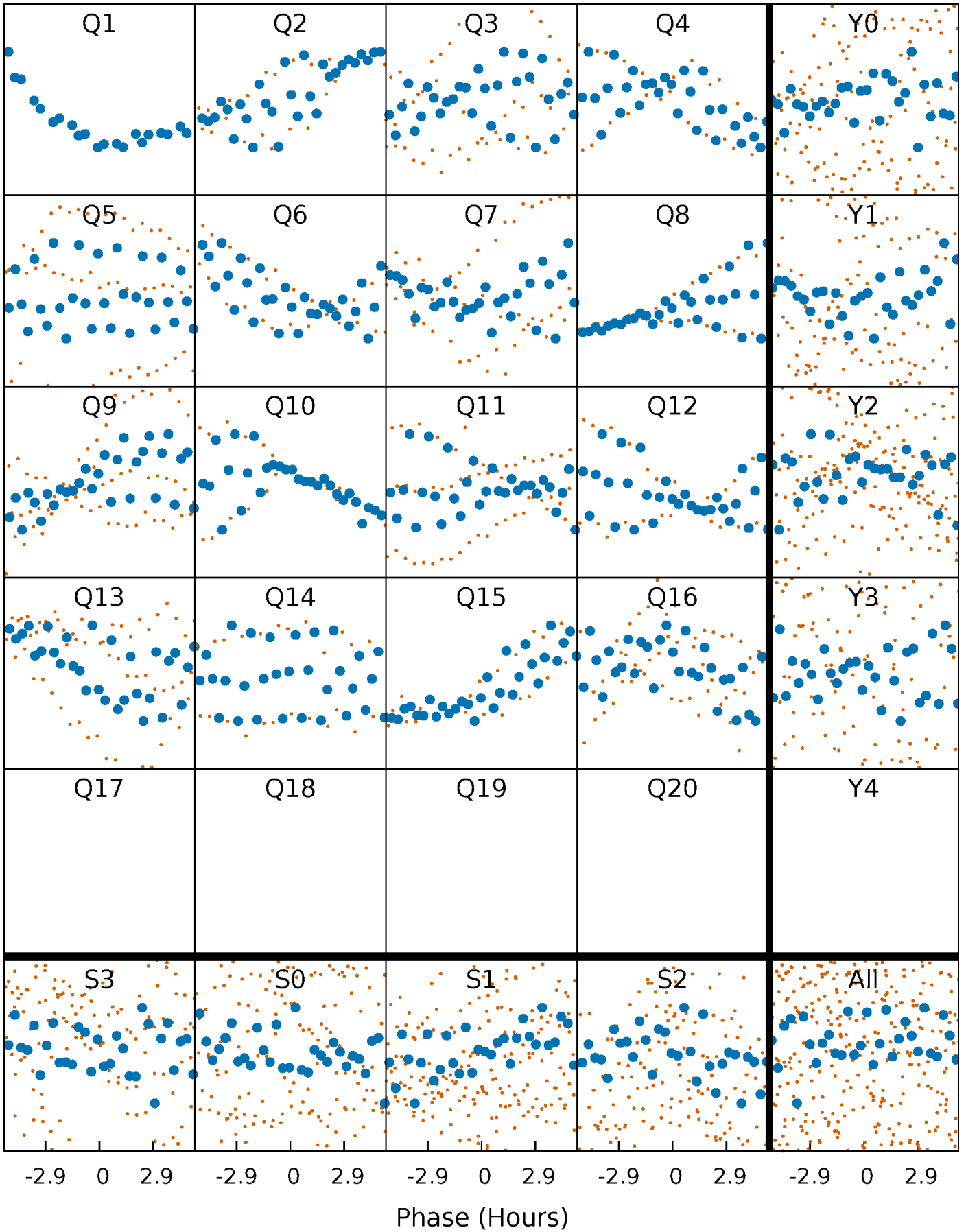


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



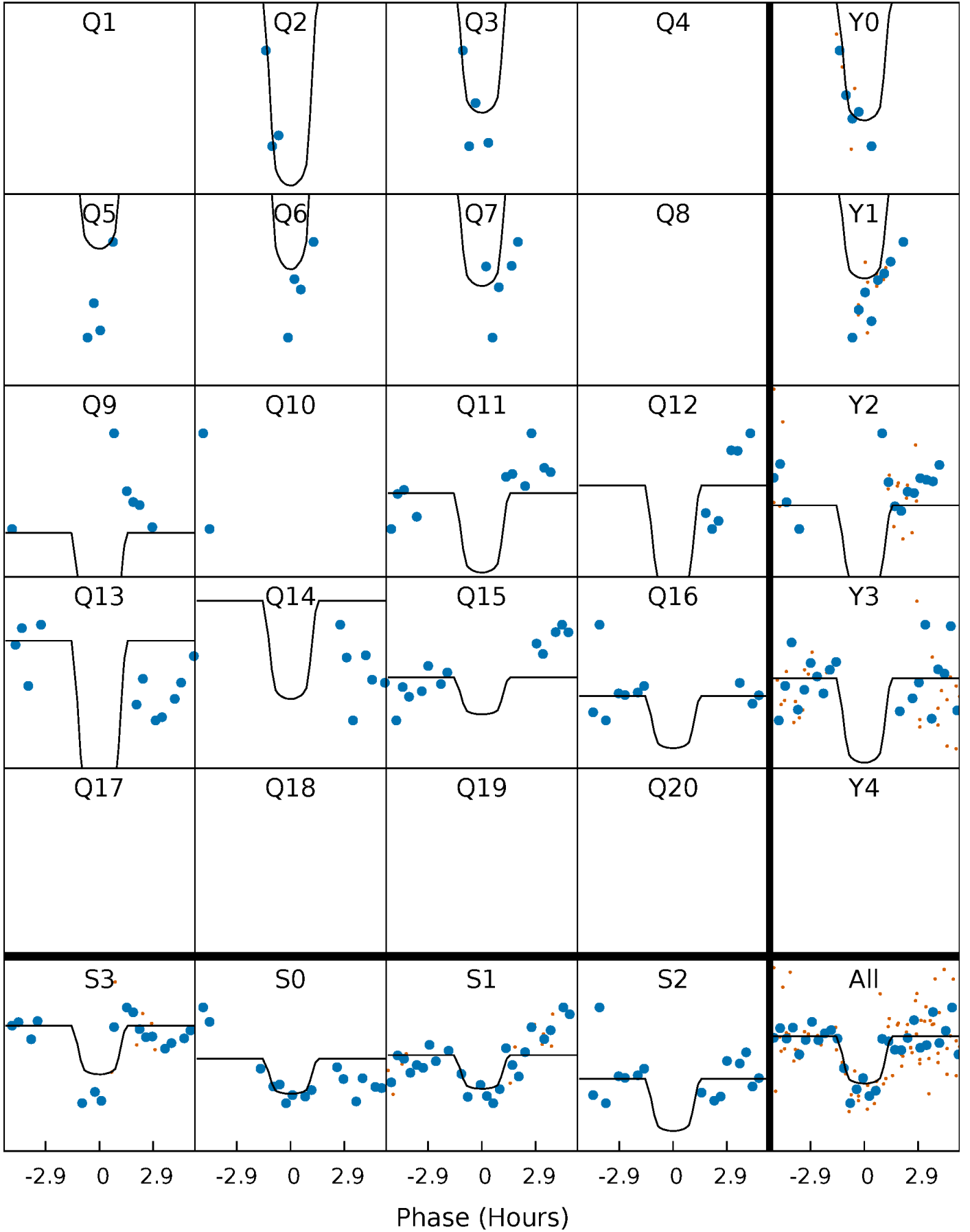
PDC Quarter-Phased Transit Curves

TCE 008127778-07 P= 36.482035 Days $T_0=163.232924$ (BKJD)



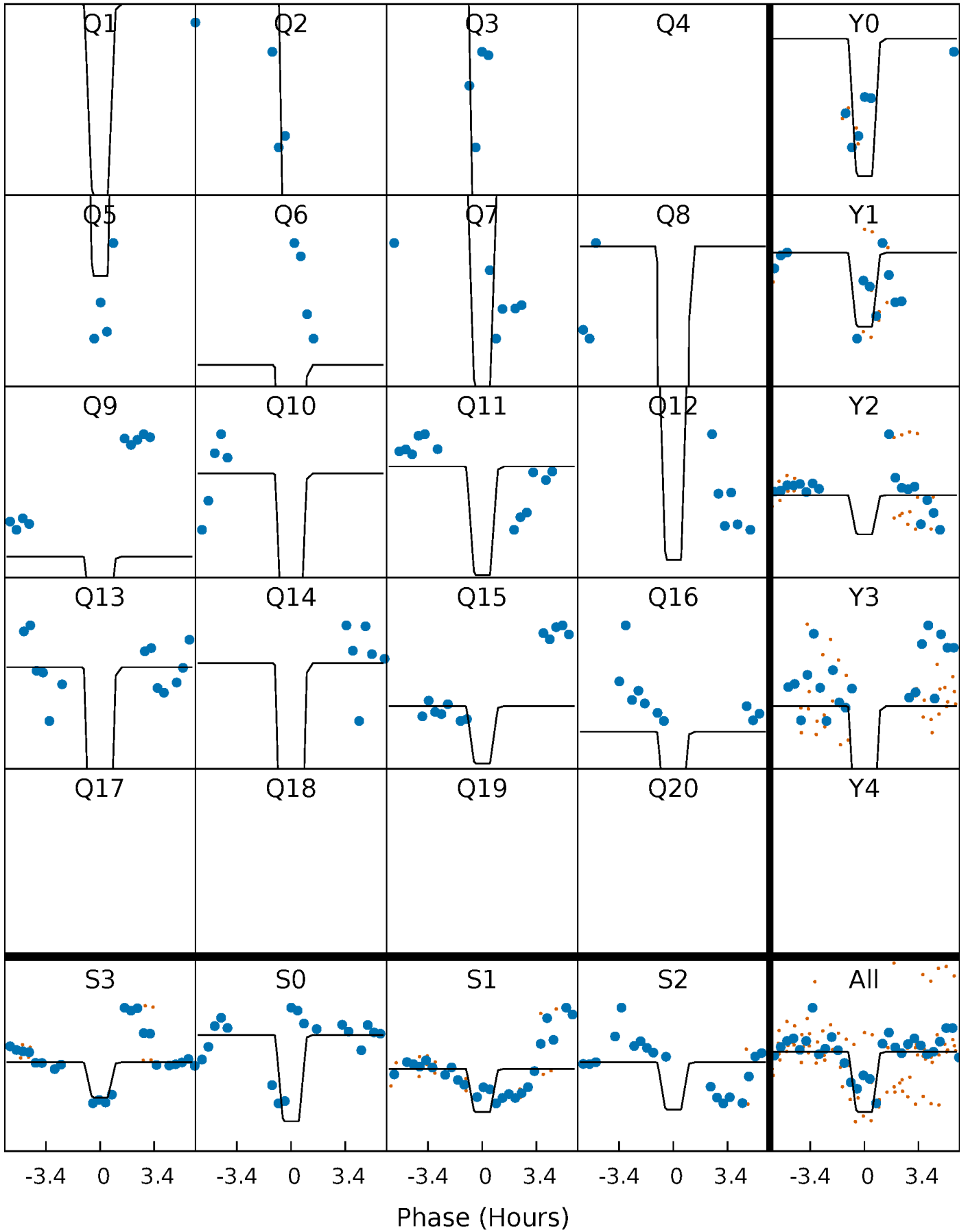
DV Quarter-Phased Transit Curves

TCE 008127778-07 P= 36.482035 Days $T_0=163.232924$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

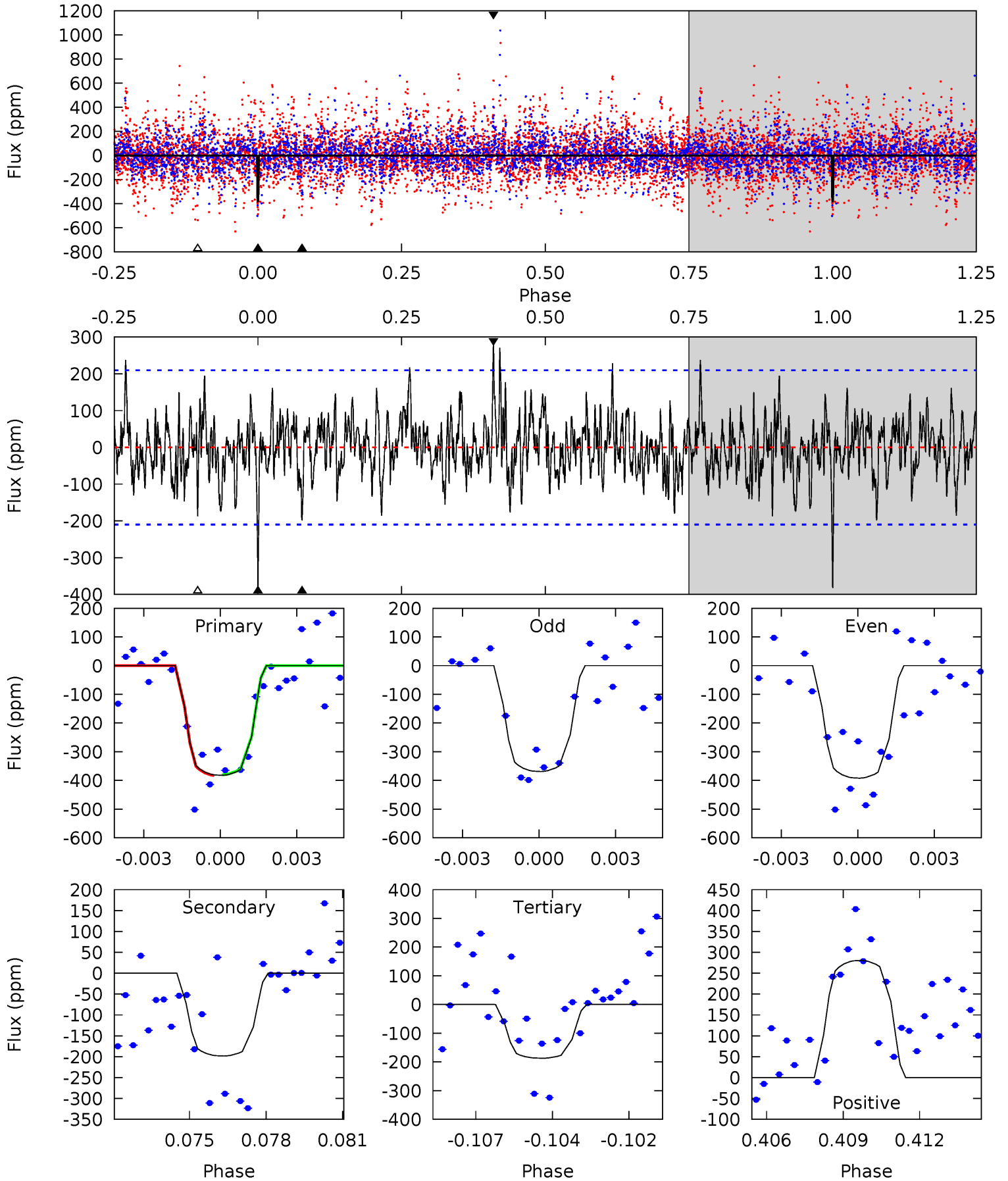
TCE 008127778-07 $P = 36.481130$ Days $T_0 = 163.229650$ (BKJD)



DV Model-Shift Uniqueness Test

008127778-07, P = 36.482035 Days, E = 126.750889 Days

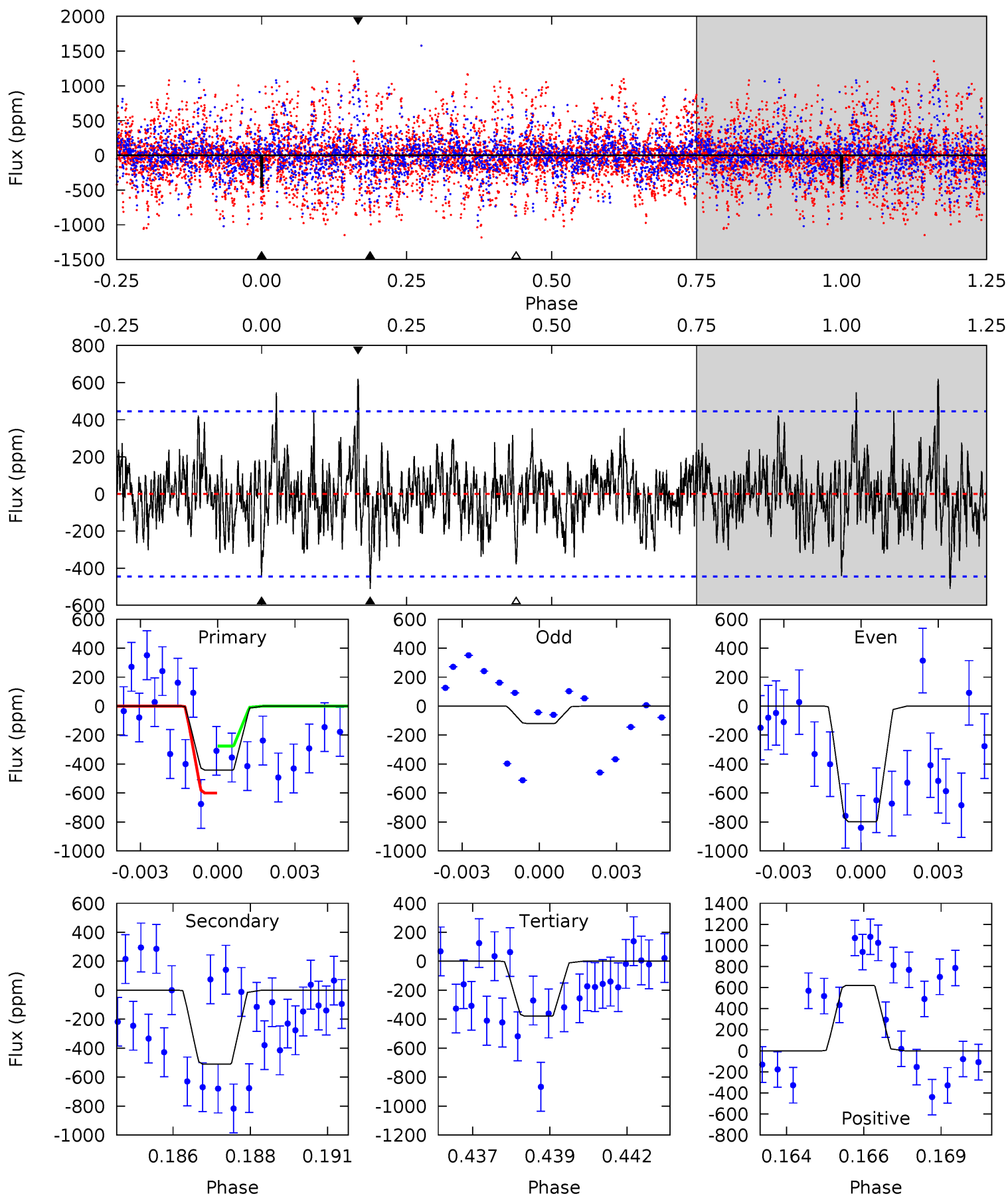
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.59	4.98	4.70	7.04	5.26	2.98	1.67	4.89	2.55	0.28	-2.06	0.28	0.68	0.42	0.04



Alt Model-Shift Uniqueness Test

008127778-07, $P = 36.481130$ Days, $E = 126.748520$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.24	6.05	4.49	7.36	5.27	3.00	1.52	0.75	-2.11	1.56	-1.31	3.63	0.96	0.55	1.94



Stellar Parameters For KIC 008127778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9051^{+251}_{-466}	$4.086^{+0.144}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.210^{+0.719}_{-0.588}$	$2.170^{+0.372}_{-0.605}$	$0.283^{+0.268}_{-0.139}$
	+3%/-5%	+4%/-4%	+214%/-929%	+33%/-27%	+17%/-28%	+95%/-49%
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 008127778-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-198 ± 40	$4.74^{+2.96}_{-2.53}$	1568^{+120}_{-115}	7252^{+5013}_{-1536}	365^{+1391}_{-224}
Alt.	-510 ± 84	$6.65^{+3.07}_{-2.57}$	1575^{+125}_{-118}	7869^{+3153}_{-1466}	473^{+836}_{-253}

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

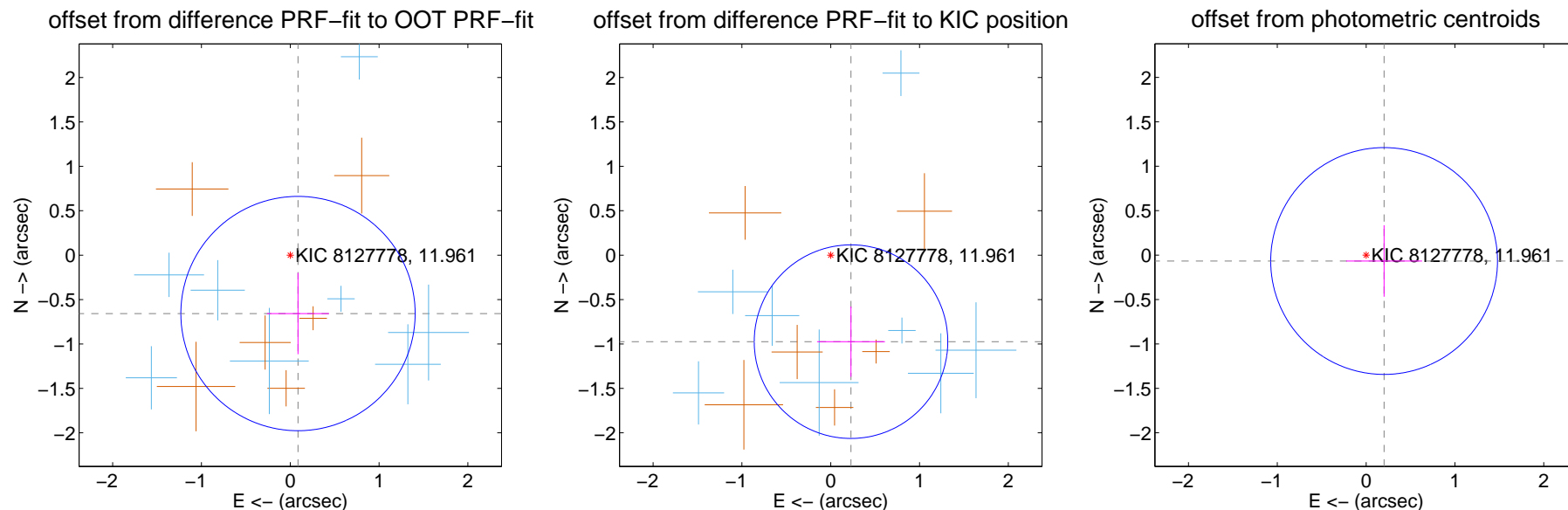
DV Centroid Data

Supplemental centroid analysis for 008127778-07. **Kepler magnitude: 11.96.** Transit SNR 8.39

There are 8 quarters with good PRF difference image offsets

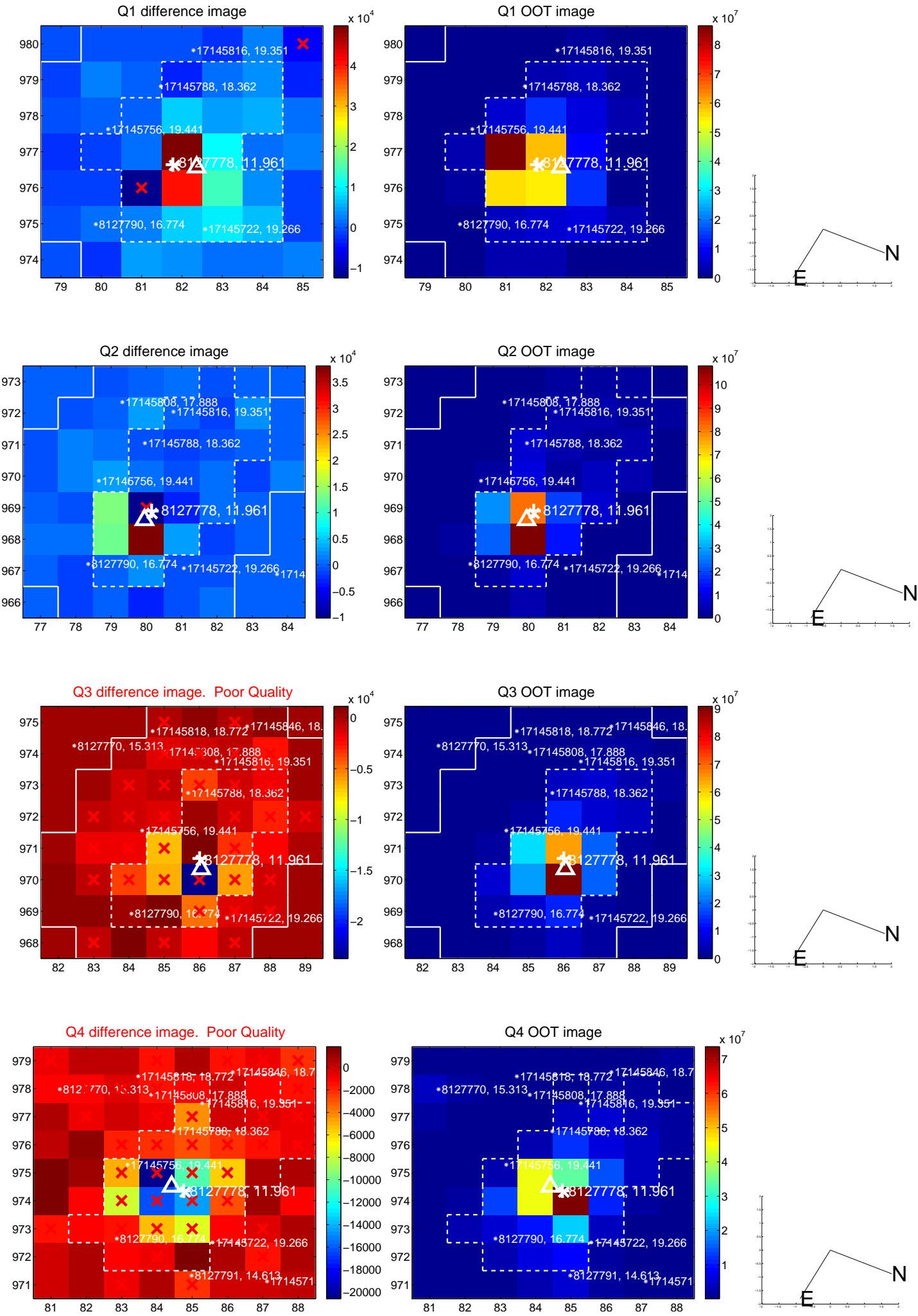
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.663 ± 0.440	1.51	-0.087 ± 0.349	-0.657 ± 0.458
PRF-fit source offset from KIC position	1.000 ± 0.363	2.75	-0.228 ± 0.382	-0.974 ± 0.395
photometric centroid source offset	0.21 ± 0.43	0.50	-0.20 ± 0.43	-0.07 ± 0.40

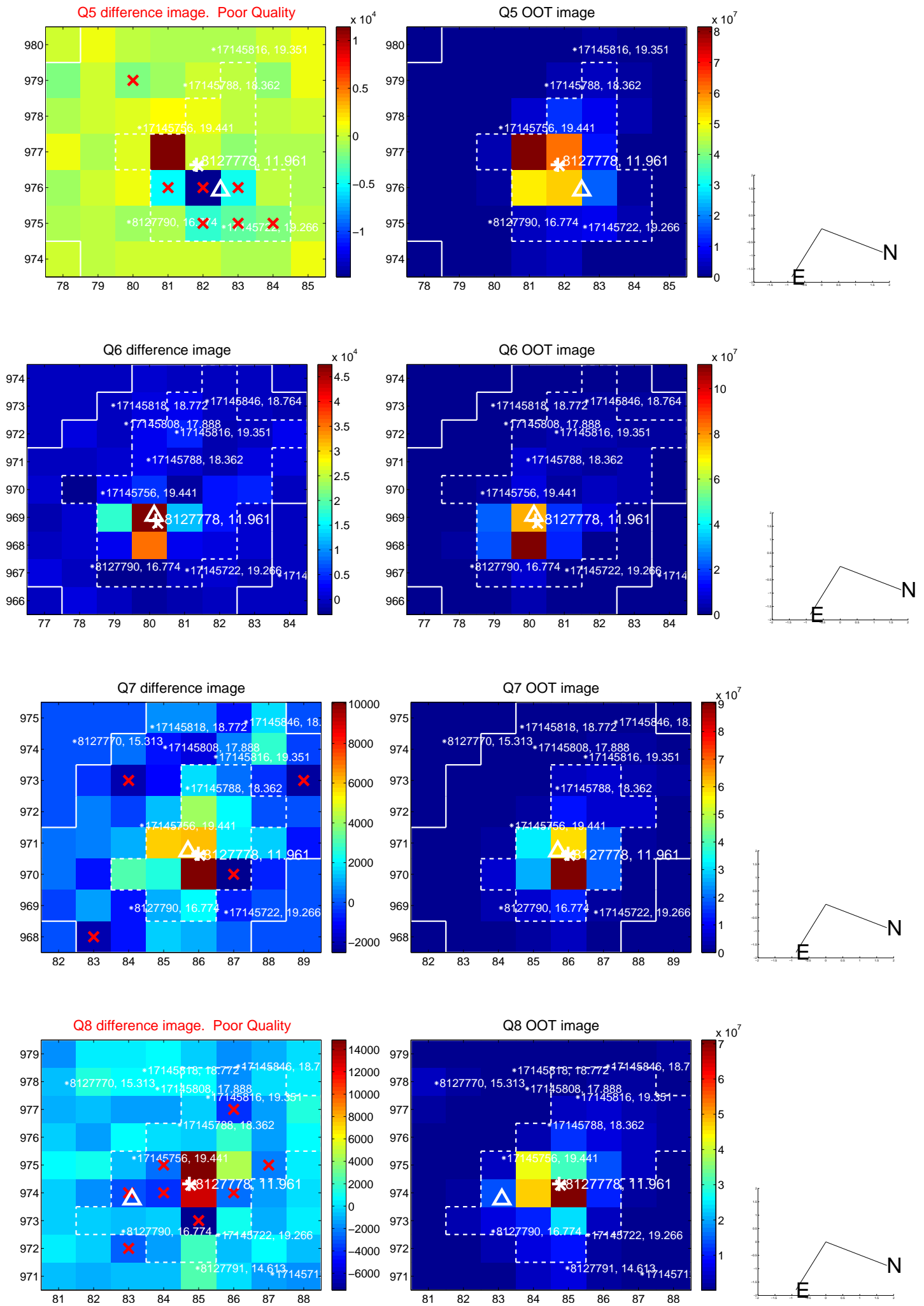


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

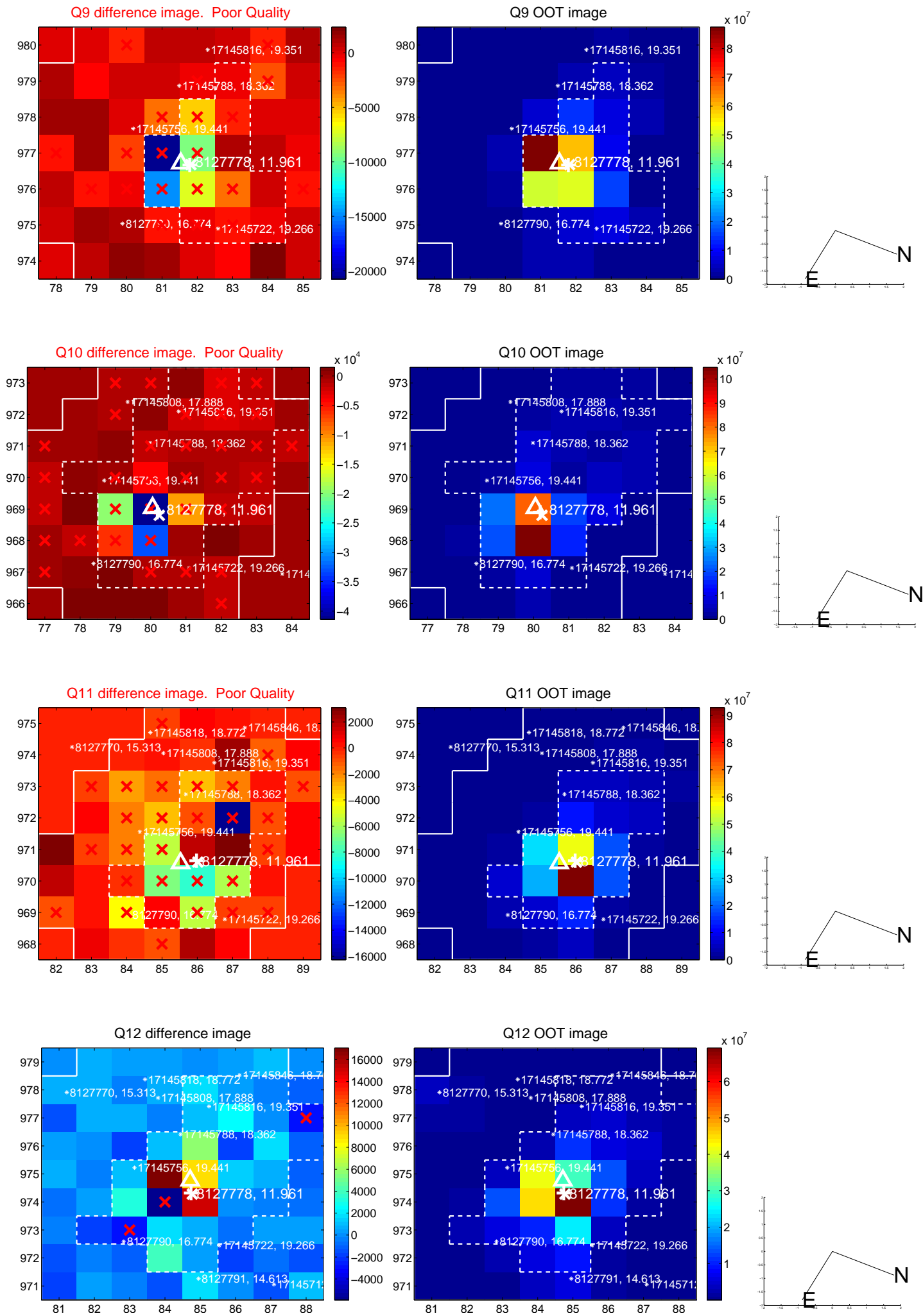
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



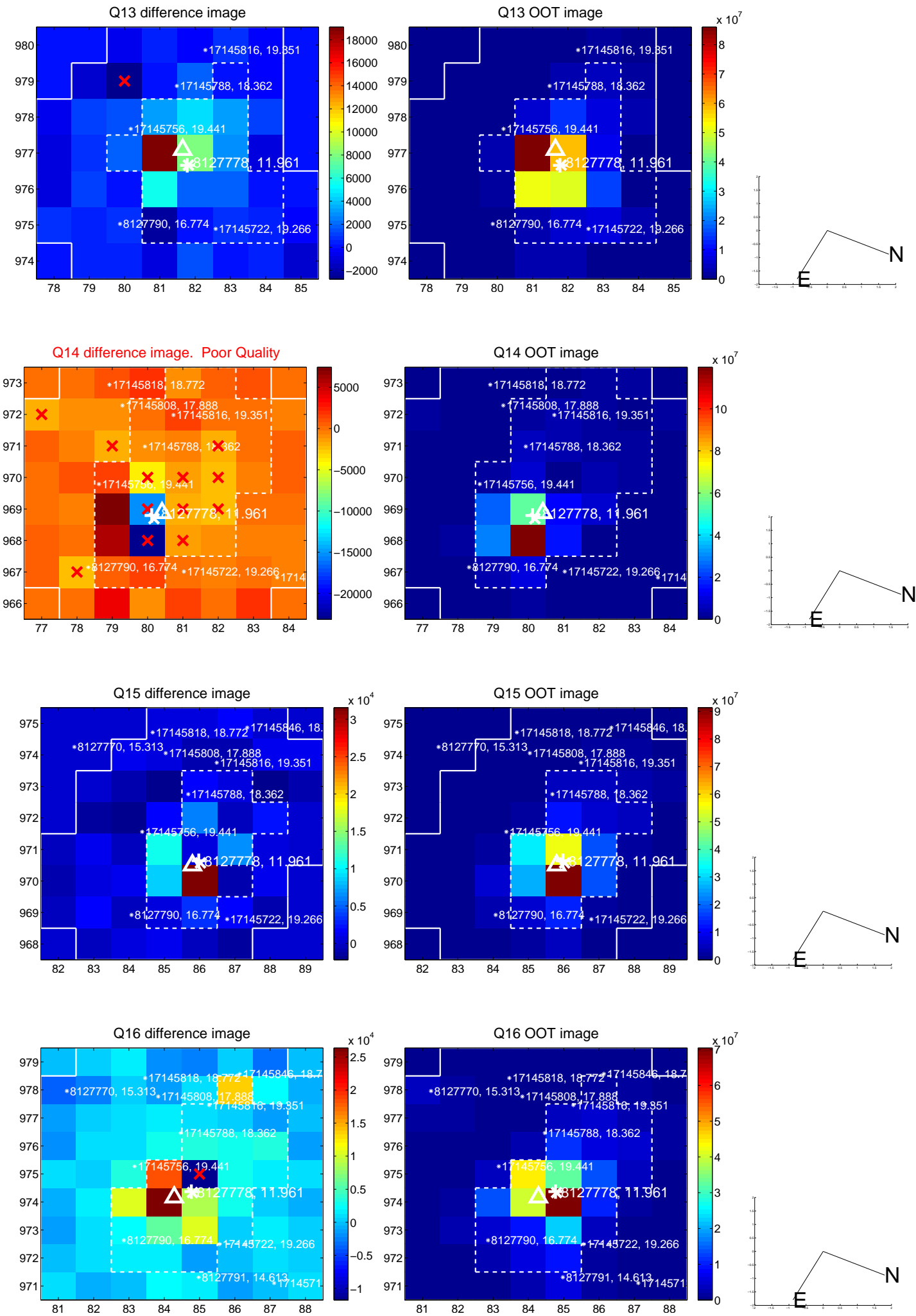
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



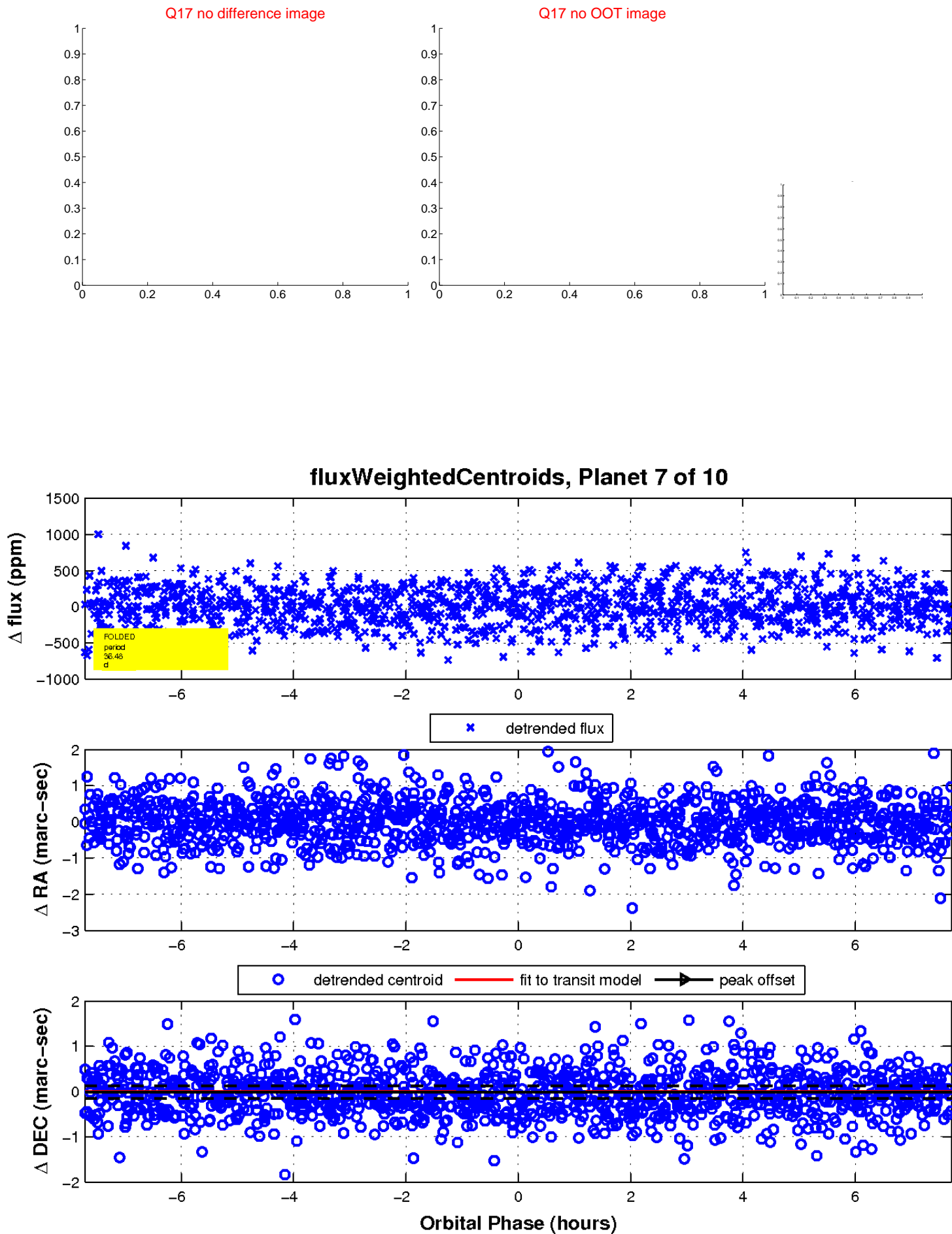
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



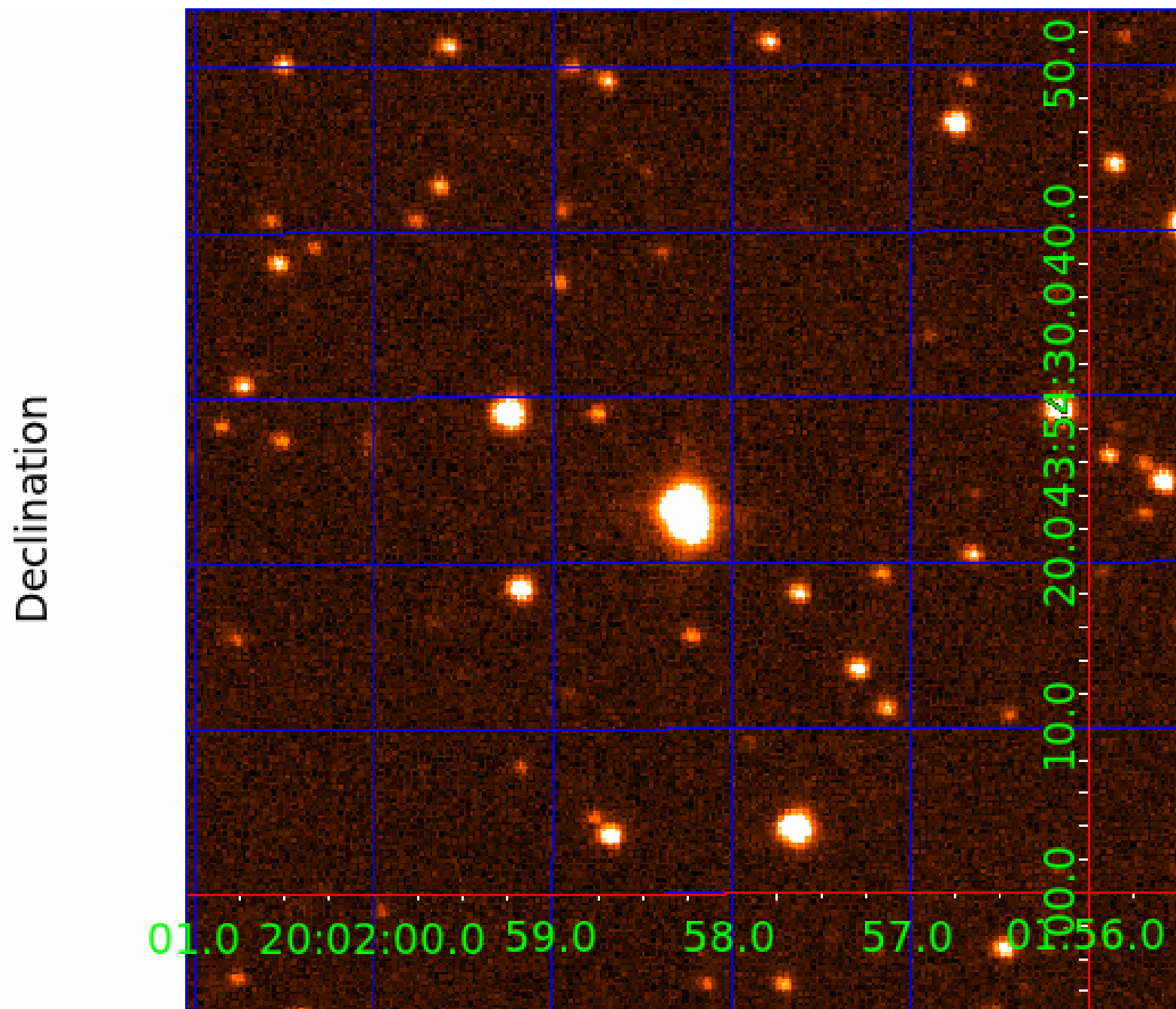
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008127778

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})
008127778-01	OBS	No	0.968765	131.757027	106.9	3.000	9.1	-1.0	2.21	9051	2.33	47677.98
008127778-02	OBS	No	0.968711	132.144883	12.5	4.915	8.6	5.0	2.21	9051	0.81	47681.51
008127778-06	OBS	No	35.945755	149.544146	287.9	2.671	8.9	7.6	2.21	9051	4.33	385.25
008127778-07	OBS	No	36.482035	163.232924	314.9	2.575	7.5	8.4	2.21	9051	4.54	377.72
008127778-08	OBS	No	33.146778	162.680087	107.4	1.438	8.2	2.7	2.21	9051	2.53	429.23
008127778-09	OBS	No	33.147882	162.920468	250.2	1.882	8.4	5.4	2.21	9051	3.97	429.21
008127778-10	OBS	No	19.729039	138.427754	148.6	5.000	8.8	-1.0	2.21	9051	2.75	857.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127778-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008127778-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008127778-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
008127778-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
008127778-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

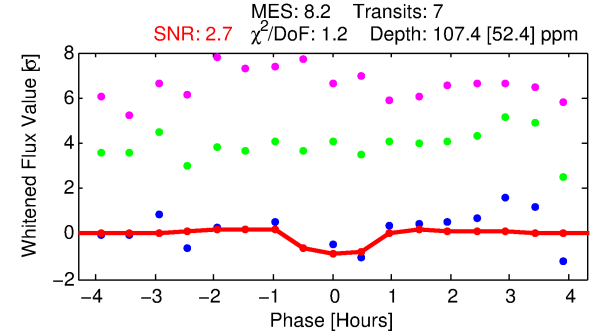
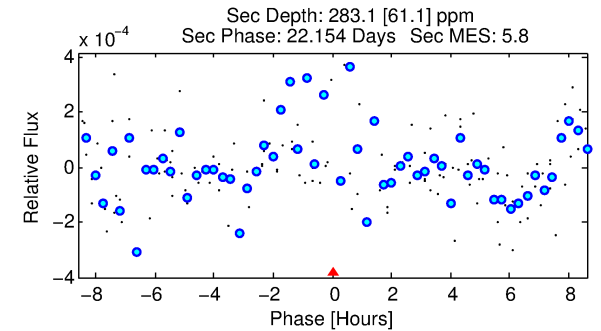
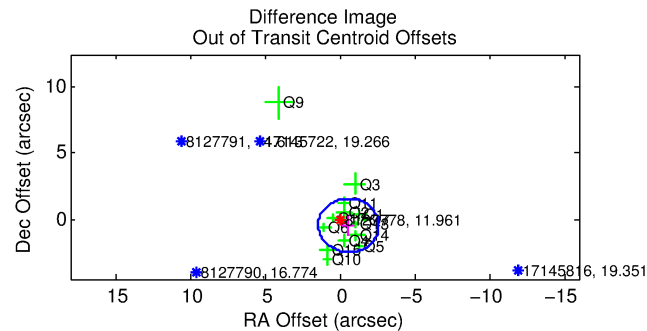
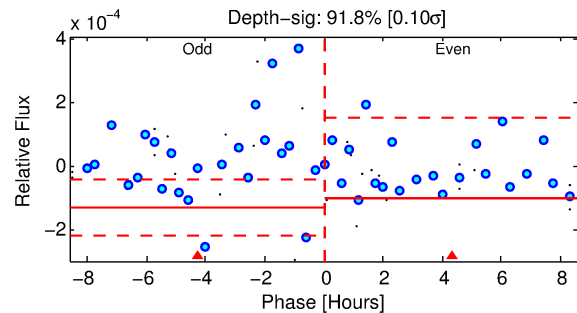
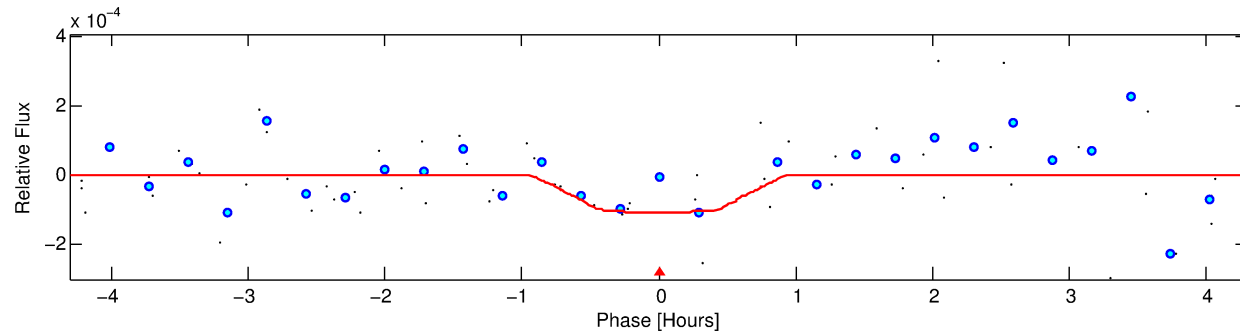
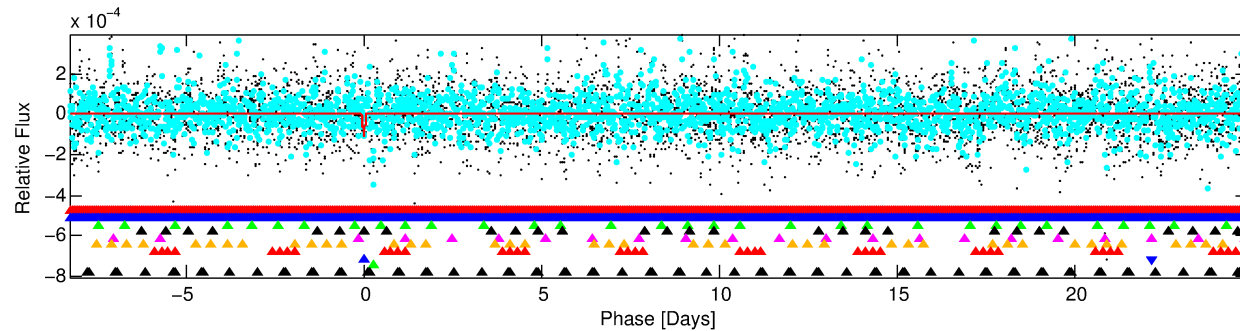
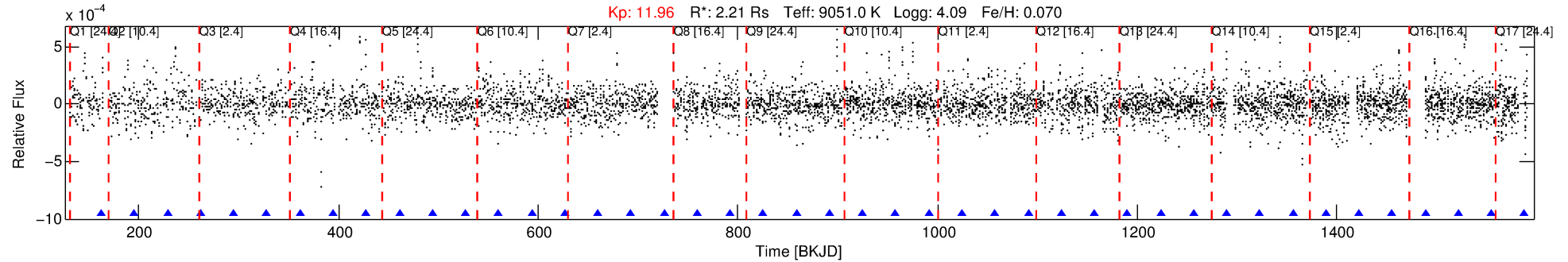
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127778-08

No Significant Match Found

DV One-Page Summary

KIC: 8127778 Candidate: 8 of 10 Period: 33.147 d



DV Fit Results:

Period = 33.14678 [0.00074] d
Epoch = 162.6801 [0.0215] BKJD
Rp/R* = 0.0105 [0.0109]
a/R* = 108.04 [745.73]
b = 0.80 [3.09]
Seff = 429.23 [173.00]
Teq = 1161 [117] K
Rp = 2.53 [2.76] Re
a = 0.2616 [0.0668] AU
Ag = 1660.66 [3521.75] [0.47 σ]
Teffp = 11455 [6021] K [1.7 σ]

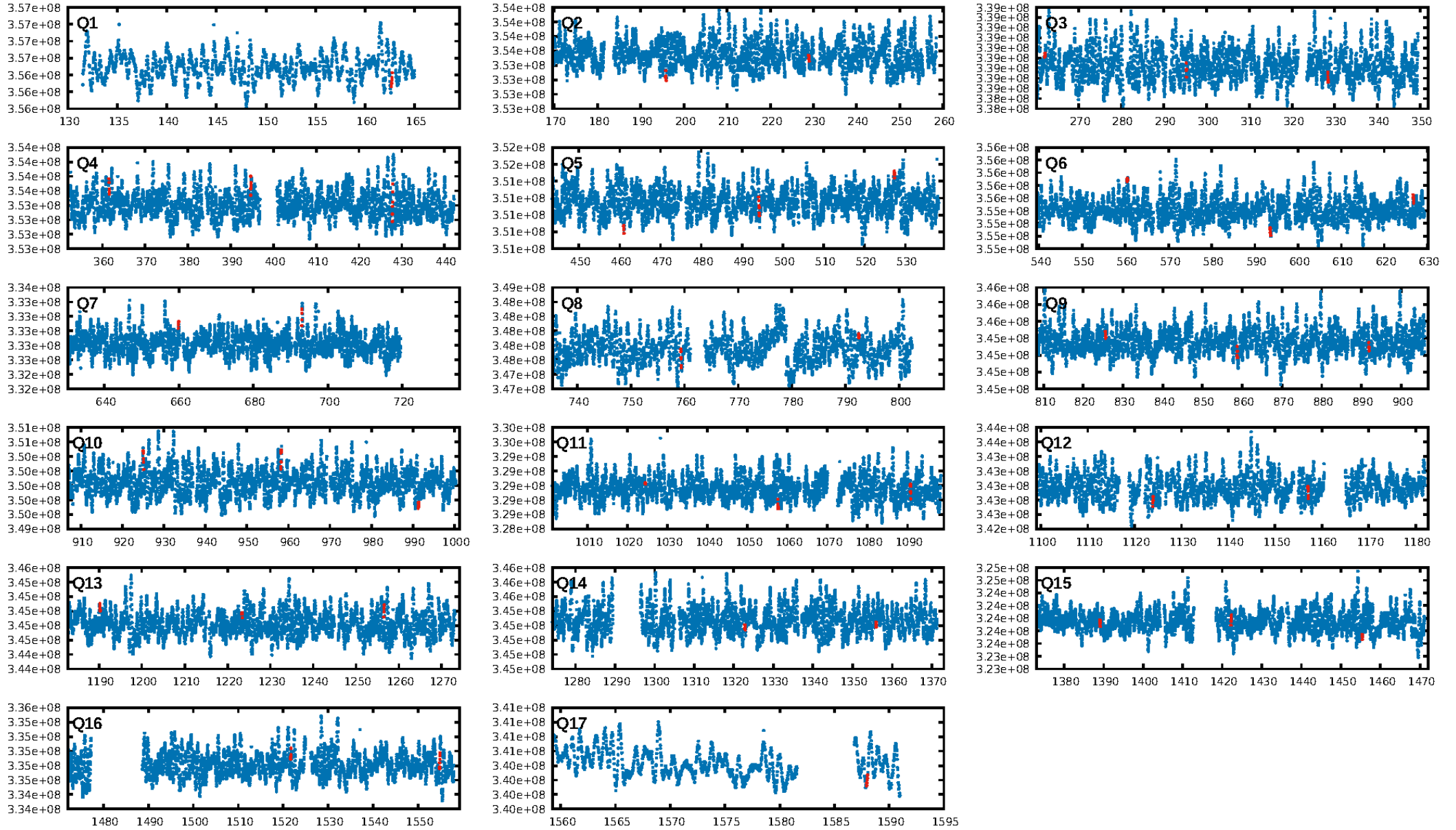
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [61.90 σ]
LongPeriod-sig: 0.9% [0.01 σ]
ModelChiSquare2-sig: 70.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.03525
Centroid-sig: N/A
Centroid-so: 1.074 arcsec [0.77 σ]
OotOffset-rm: 0.740 arcsec [1.10 σ]
KicOffset-rm: 0.938 arcsec [1.22 σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.00 [0/17]

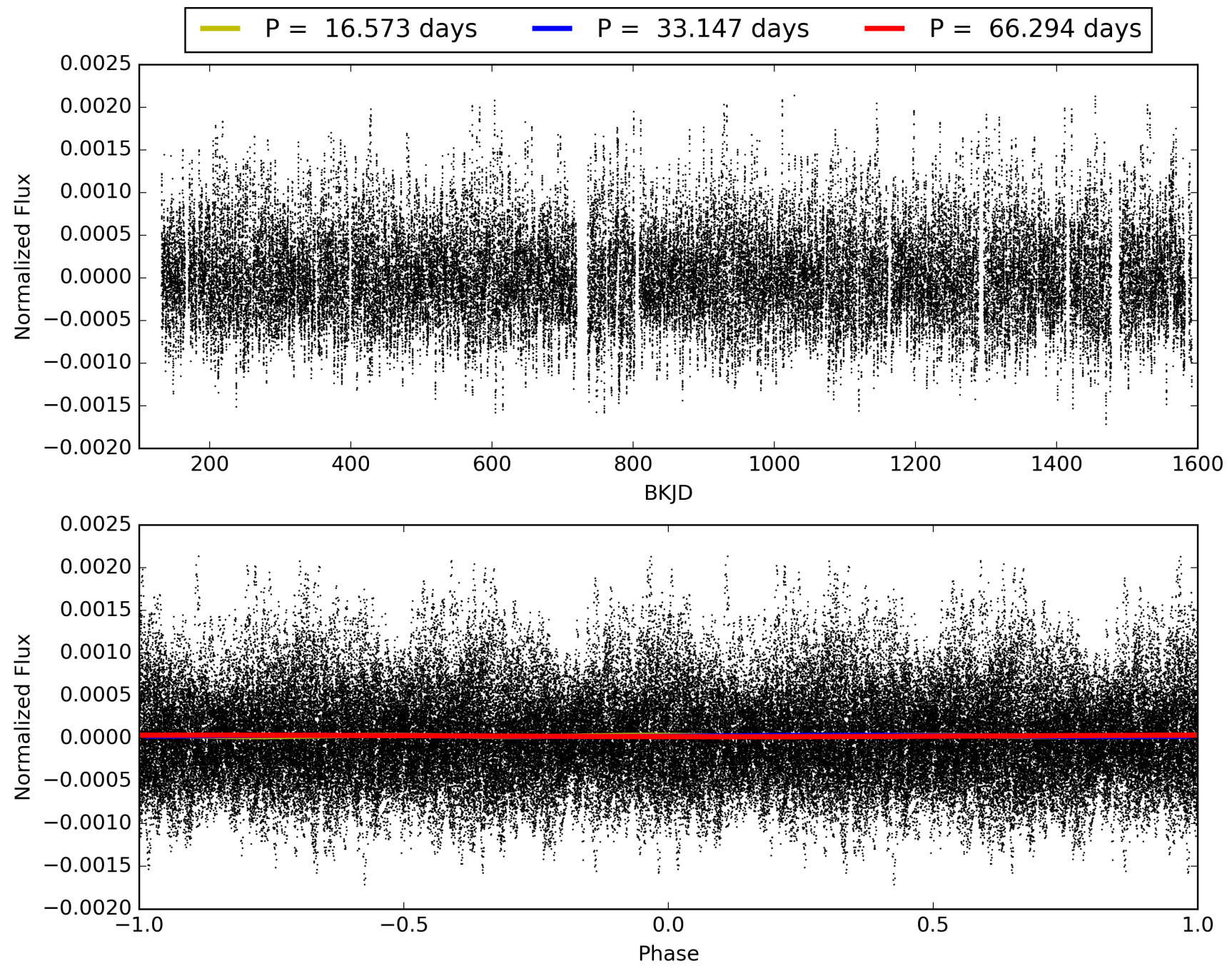
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:09:40 Z

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

TCE 008127778-08, PDC Light Curves

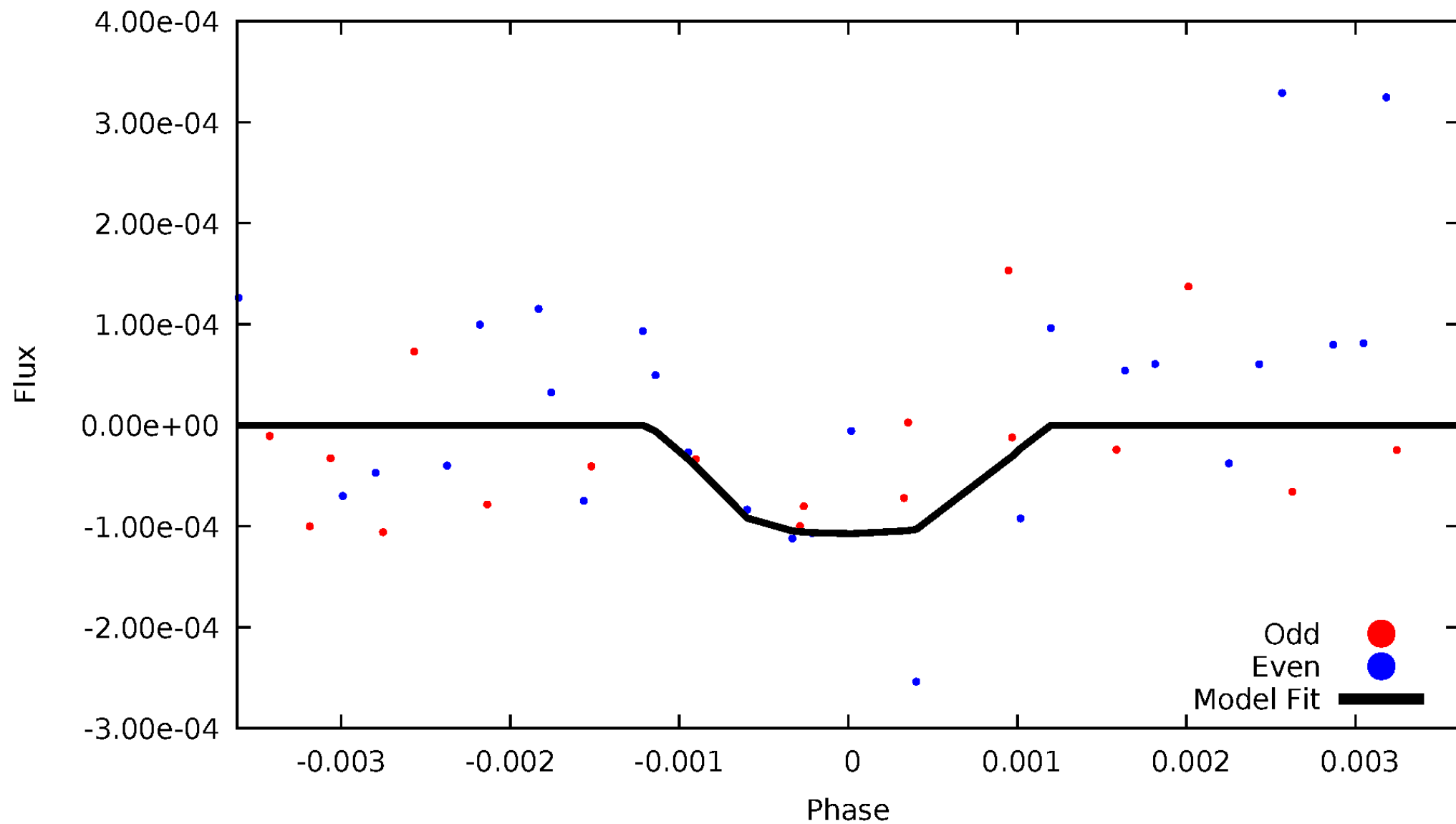


TCE 008127778-08



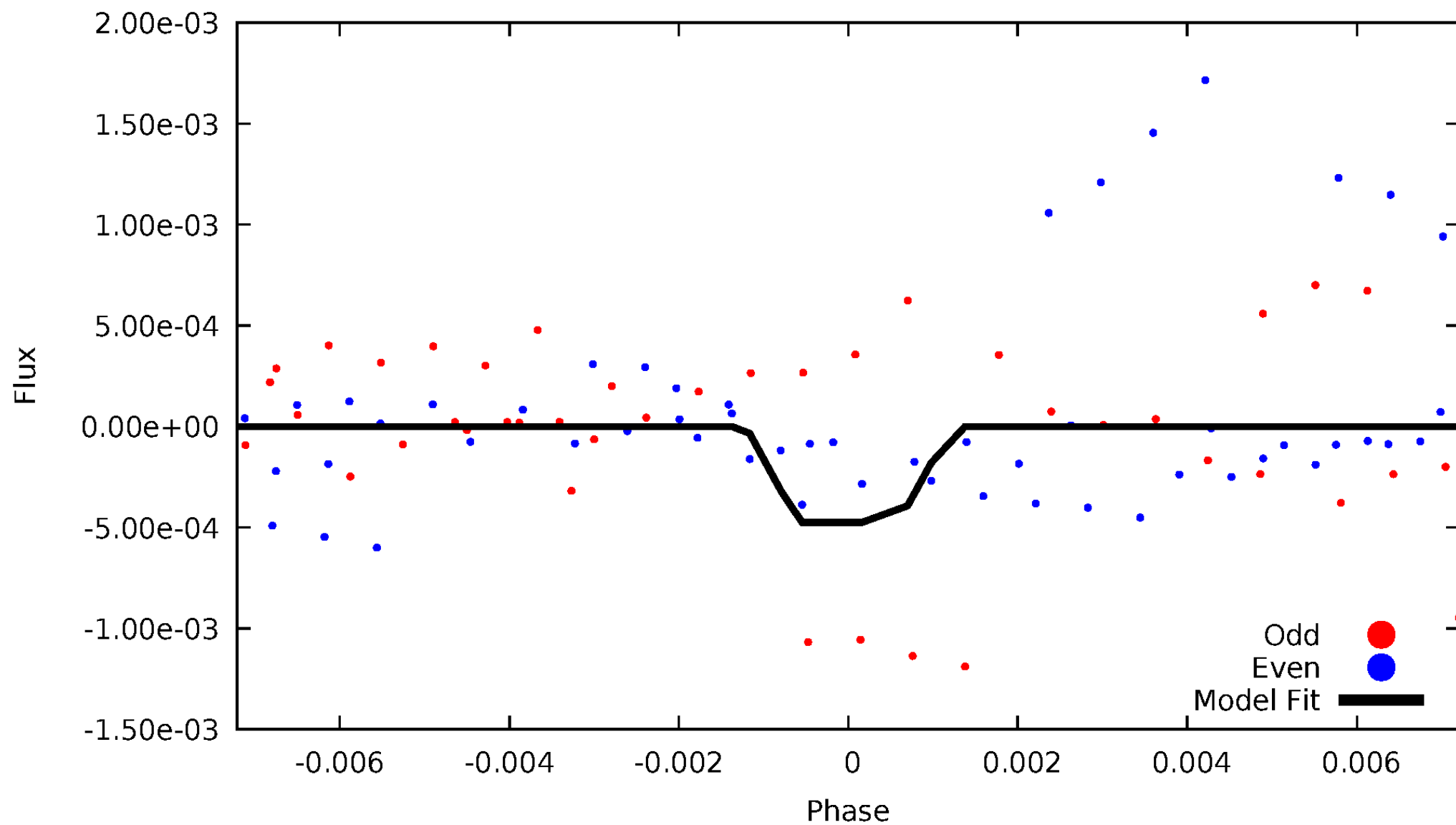
DV Odd/Even

TCE 00812778-08



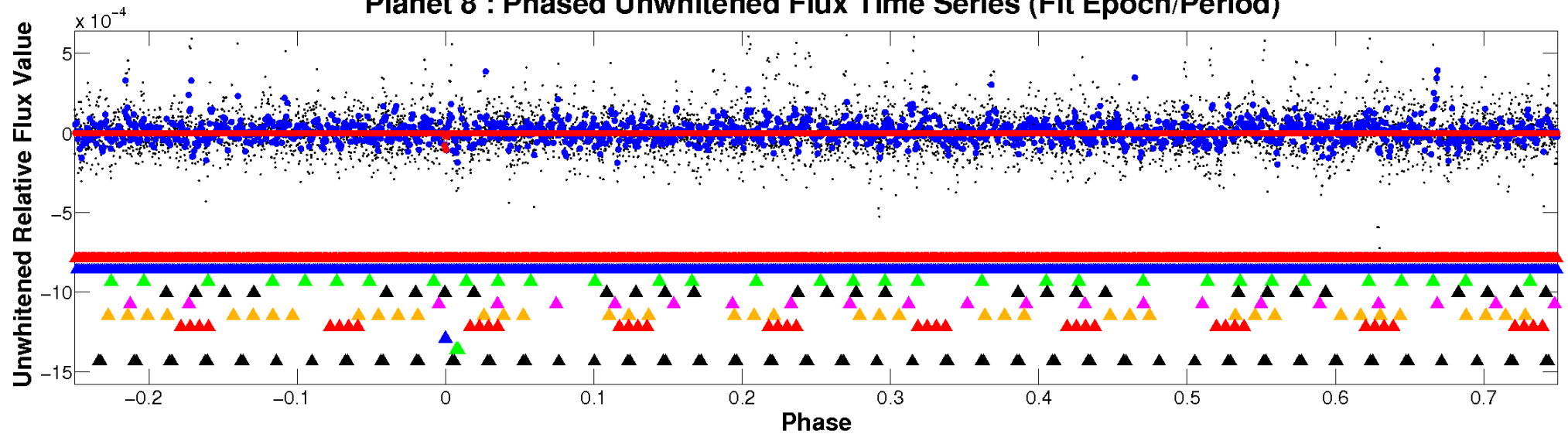
ALT Odd/Even

TCE 008127778-08

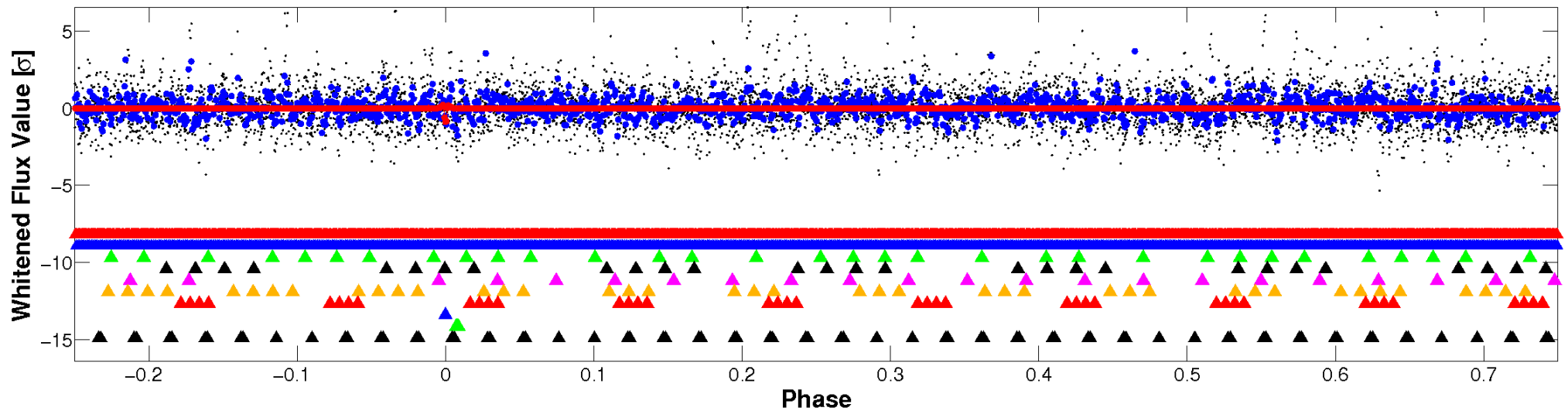


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

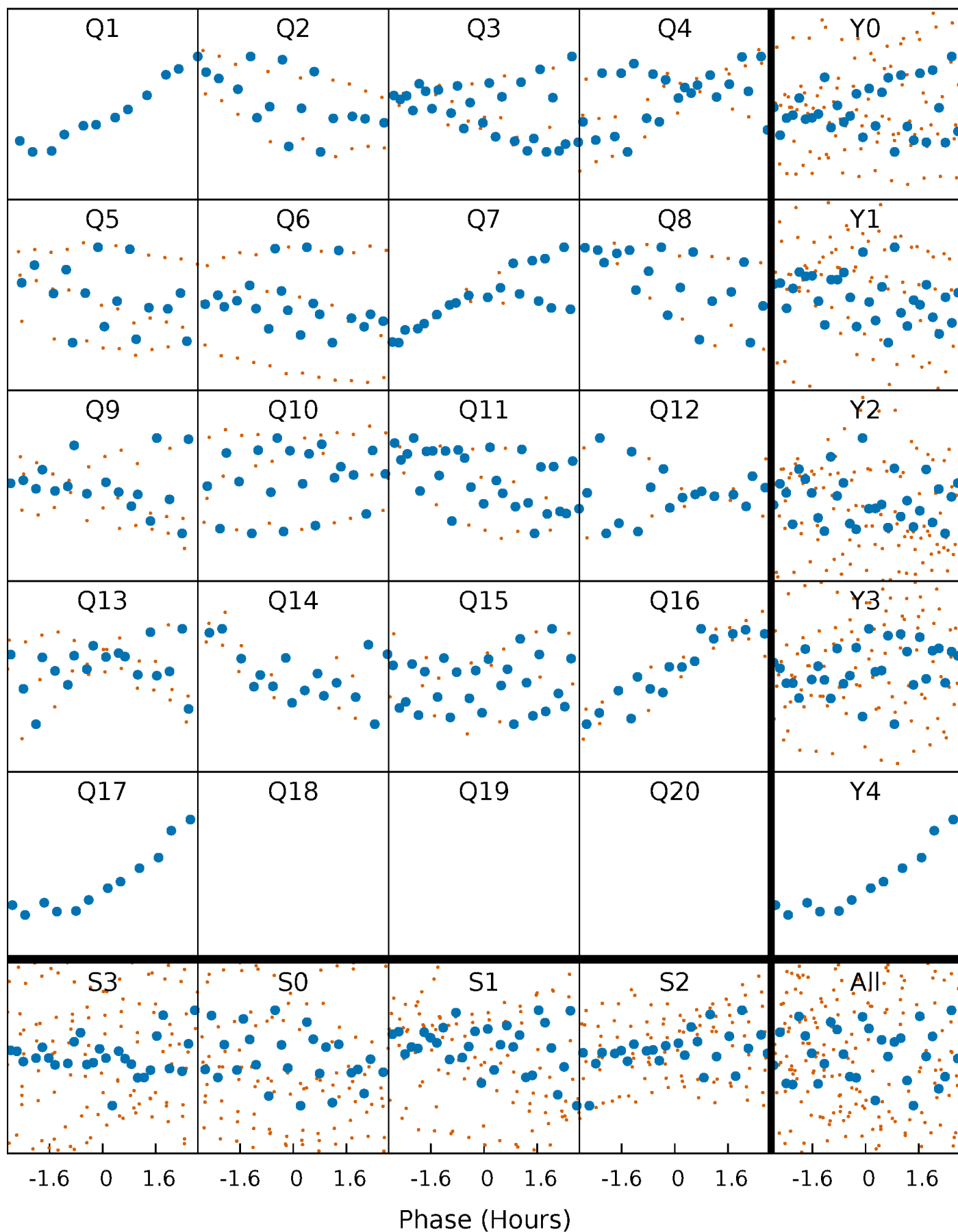


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



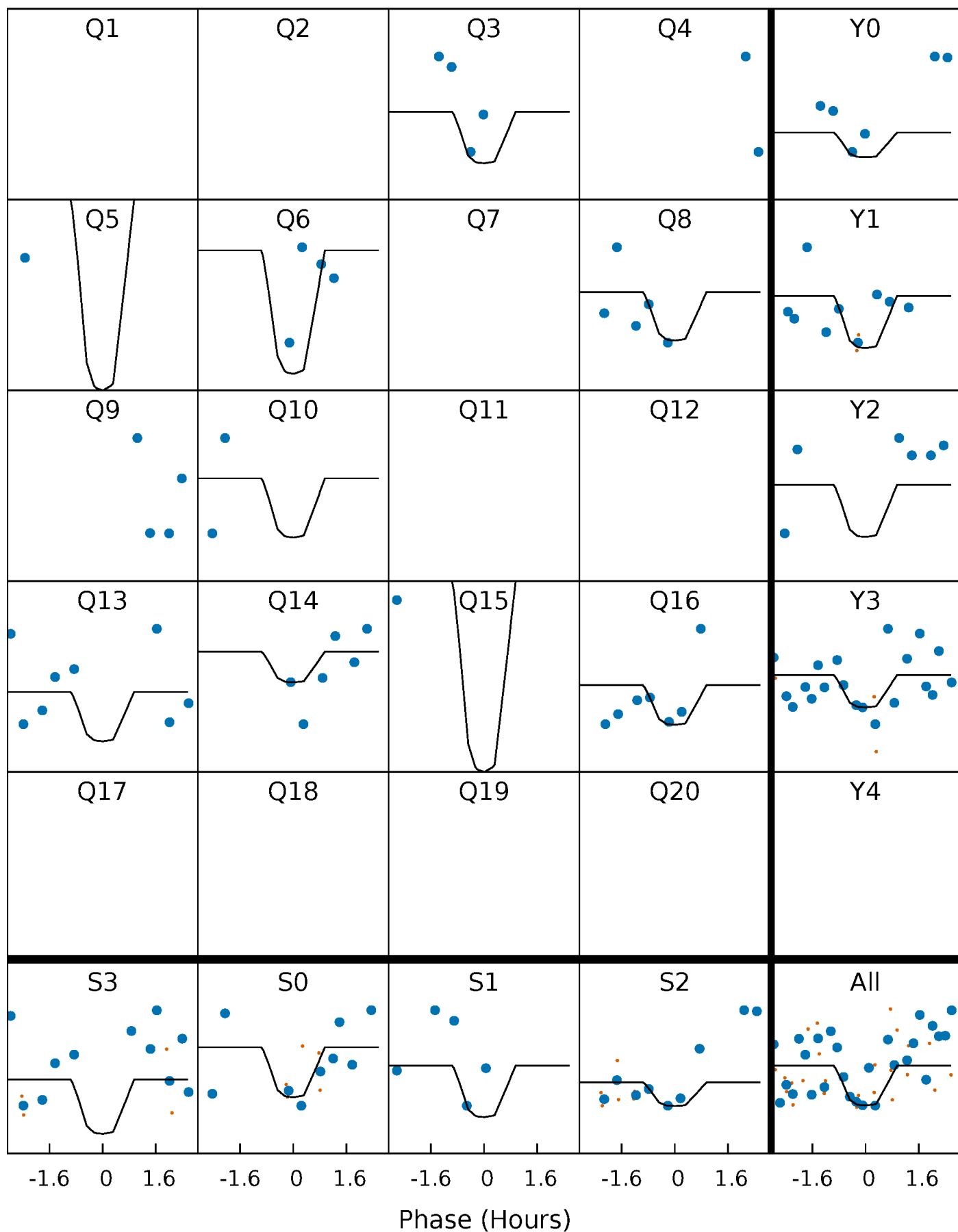
PDC Quarter-Phased Transit Curves

TCE 008127778-08 P= 33.146778 Days $T_0=162.680087$ (BKJD)



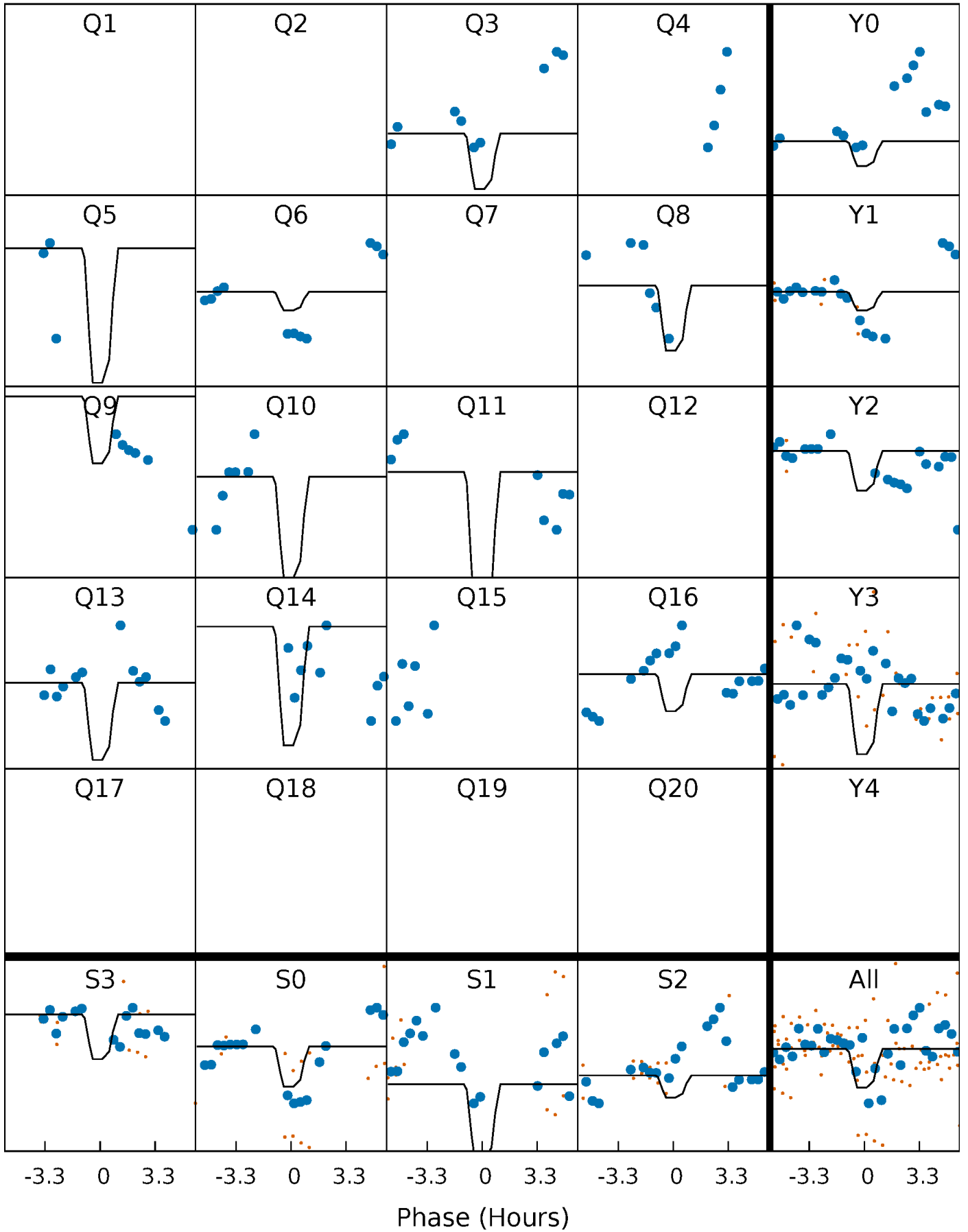
DV Quarter-Phased Transit Curves

TCE 008127778-08 P= 33.146778 Days $T_0=162.680087$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

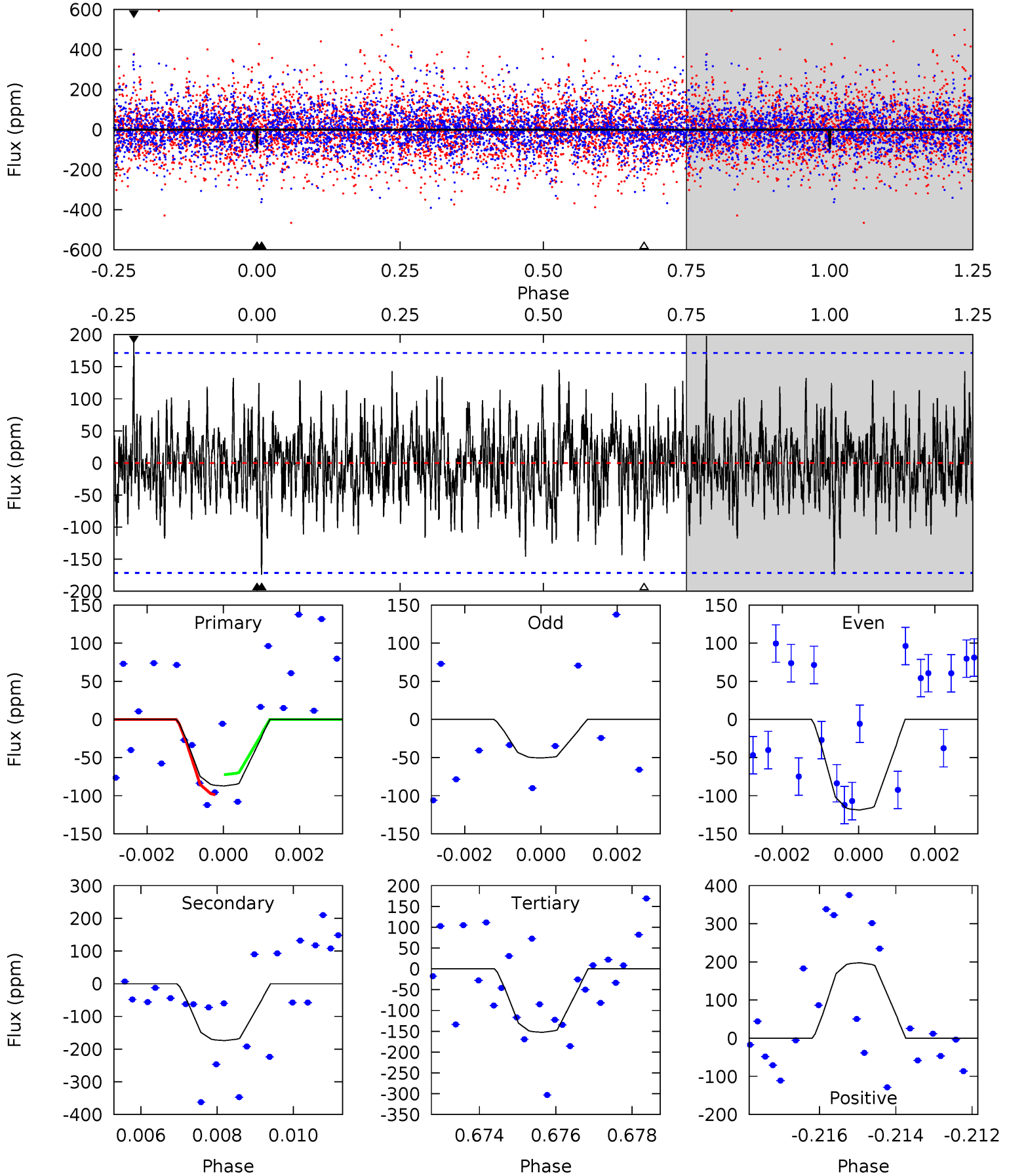
TCE 008127778-08 P= 33.146823 Days $T_0=162.686452$ (BKJD)



DV Model-Shift Uniqueness Test

008127778-08, P = 33.146778 Days, E = 129.533309 Days

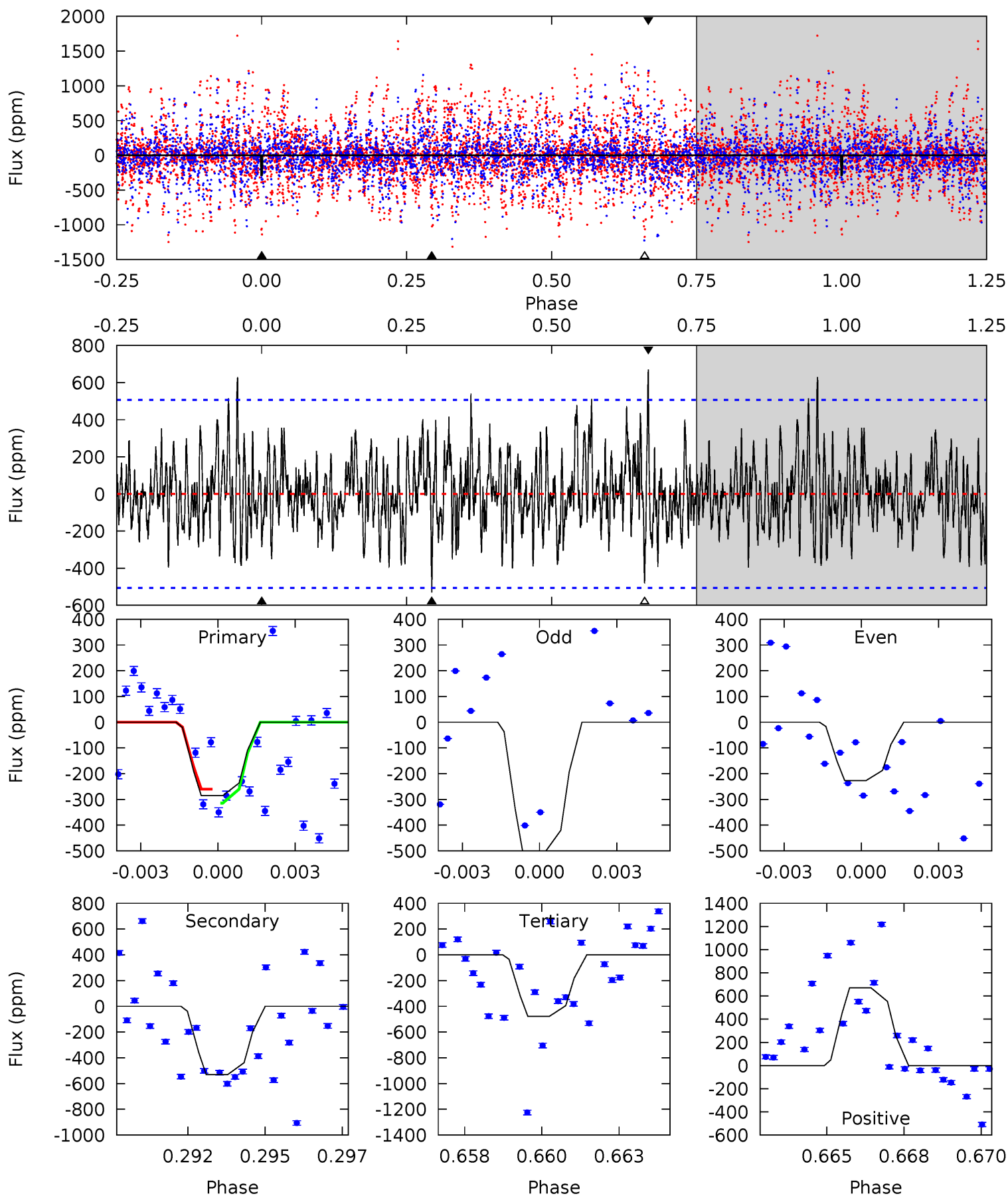
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.71	5.41	4.74	6.15	5.33	3.10	1.41	-2.03	-3.44	0.66	-0.75	1.00	1.45	0.53	0.41



Alt Model-Shift Uniqueness Test

008127778-08, P = 33.146823 Days, E = 129.539629 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.98	5.53	4.99	6.99	5.28	3.02	1.72	-2.01	-4.01	0.54	-1.46	1.39	1.45	0.56	0.29



Stellar Parameters For KIC 008127778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9051^{+251}_{-466}	$4.086^{+0.144}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.210^{+0.719}_{-0.588}$	$2.170^{+0.372}_{-0.605}$	$0.283^{+0.268}_{-0.139}$
	+3%/-5%	+4%/-4%	+214%/-929%	+33%/-27%	+17%/-28%	+95%/-49%
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 008127778-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-174 ± 32	$3.04^{+2.49}_{-1.90}$	1615^{+126}_{-112}	9188^{+13595}_{-2680}	674^{+4193}_{-465}
Alt.	-530 ± 96	$5.31^{+2.64}_{-2.65}$	1624^{+115}_{-115}	9226^{+6299}_{-1980}	677^{+1893}_{-376}

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

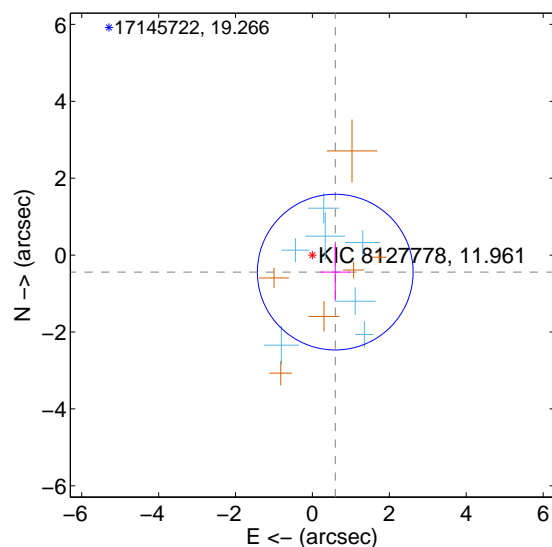
Supplemental centroid analysis for 008127778-08. **Kepler magnitude: 11.96.** Transit SNR 2.70

There are 7 quarters with good PRF difference image offsets

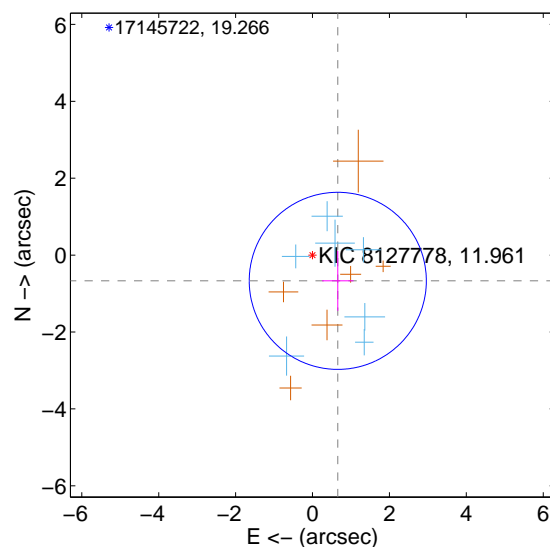
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.740 ± 0.675	1.10	-0.593 ± 0.384	-0.443 ± 0.743
PRF-fit source offset from KIC position	0.938 ± 0.768	1.22	-0.657 ± 0.409	-0.670 ± 0.781
photometric centroid source offset	1.07 ± 1.39	0.77	0.65 ± 1.46	-0.86 ± 1.35

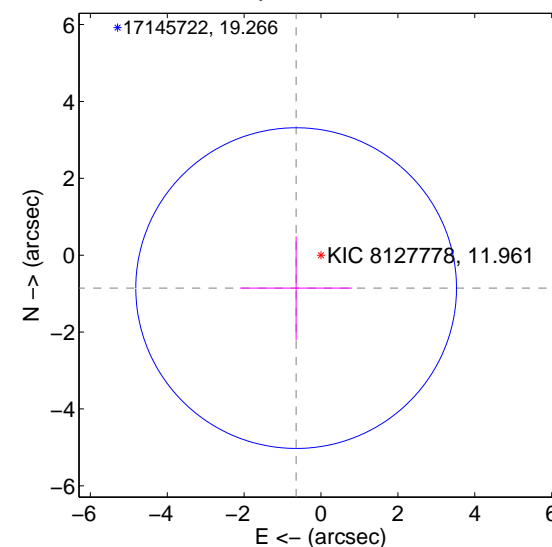
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

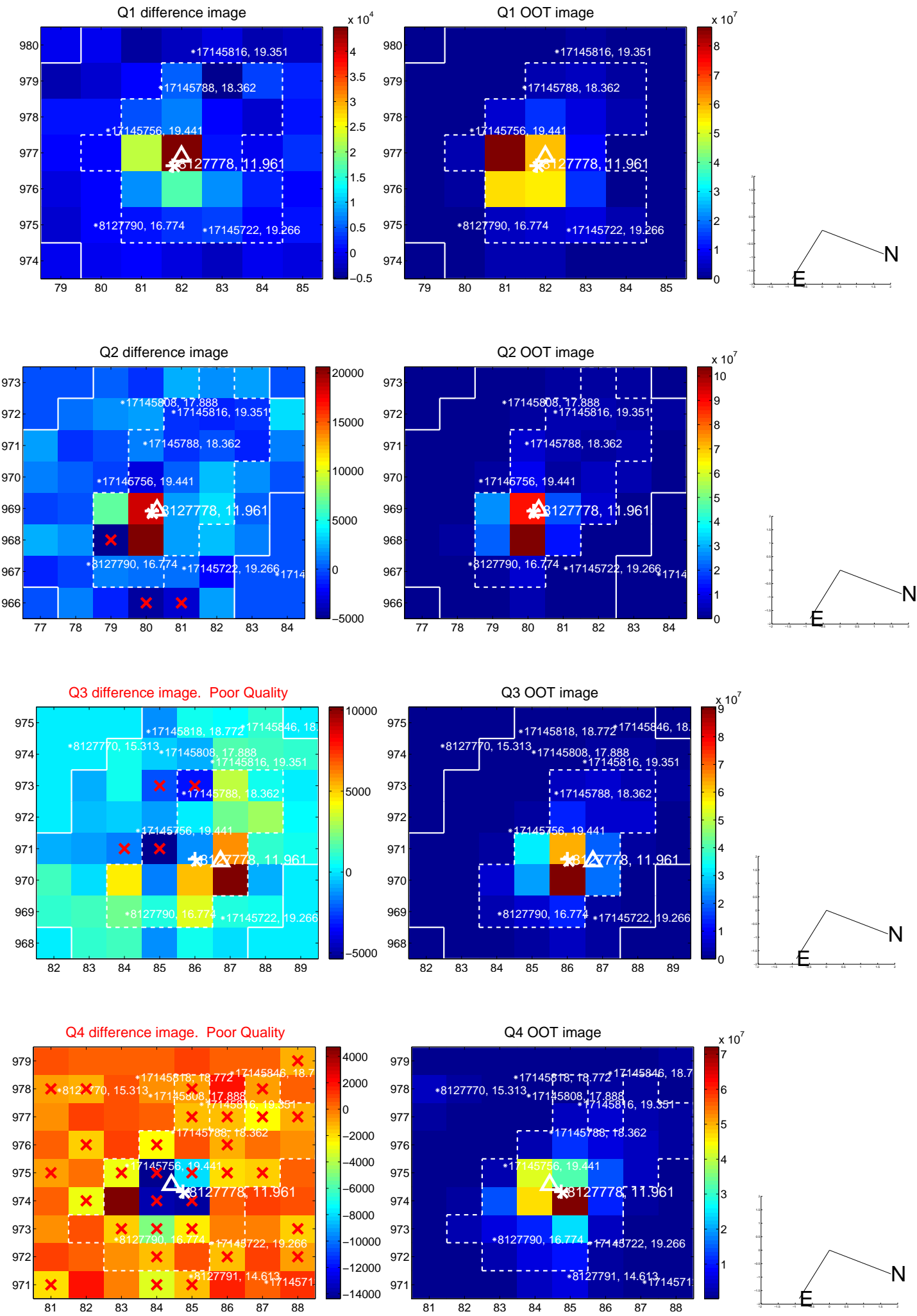


offset from photometric centroids

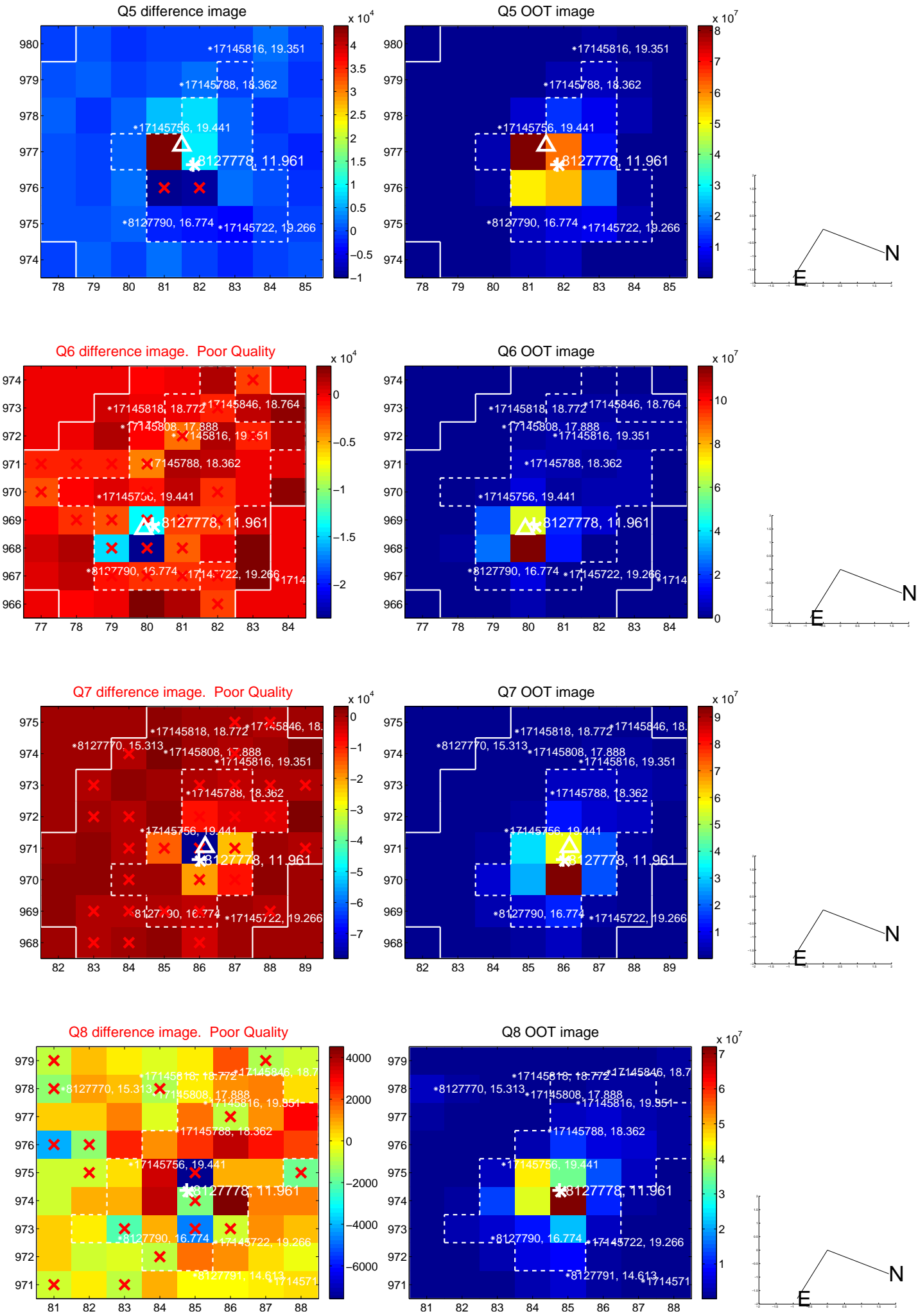


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

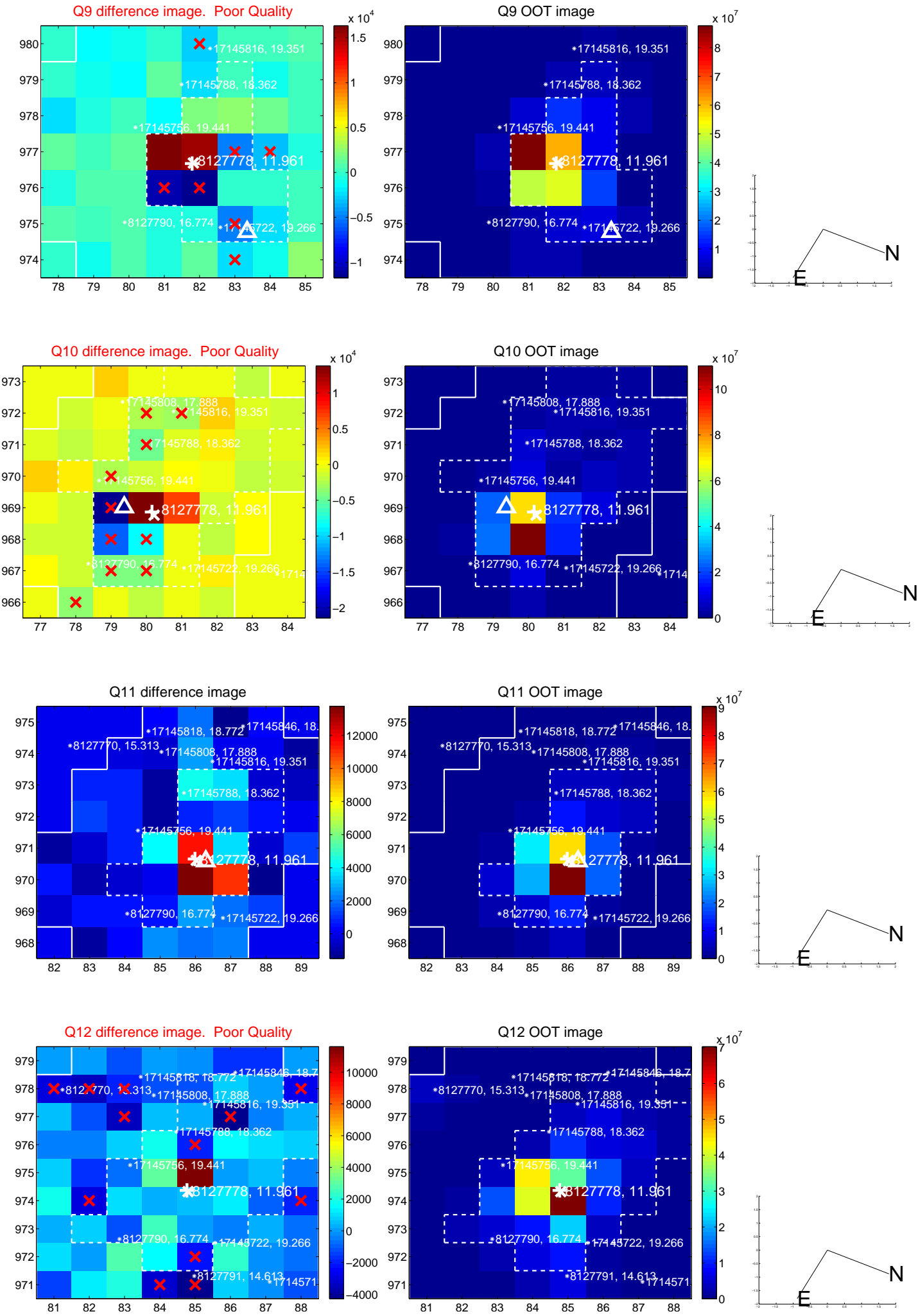
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



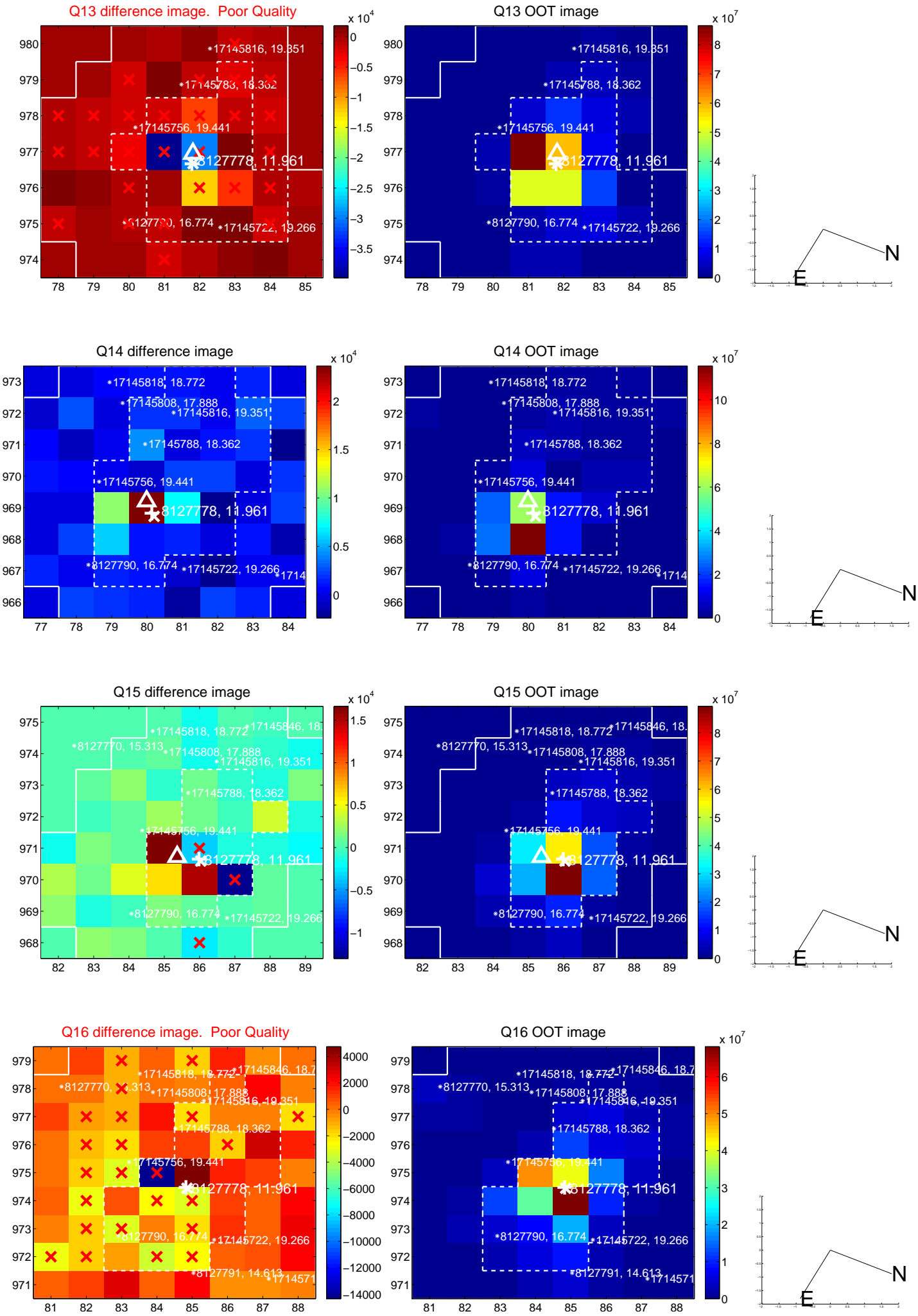
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



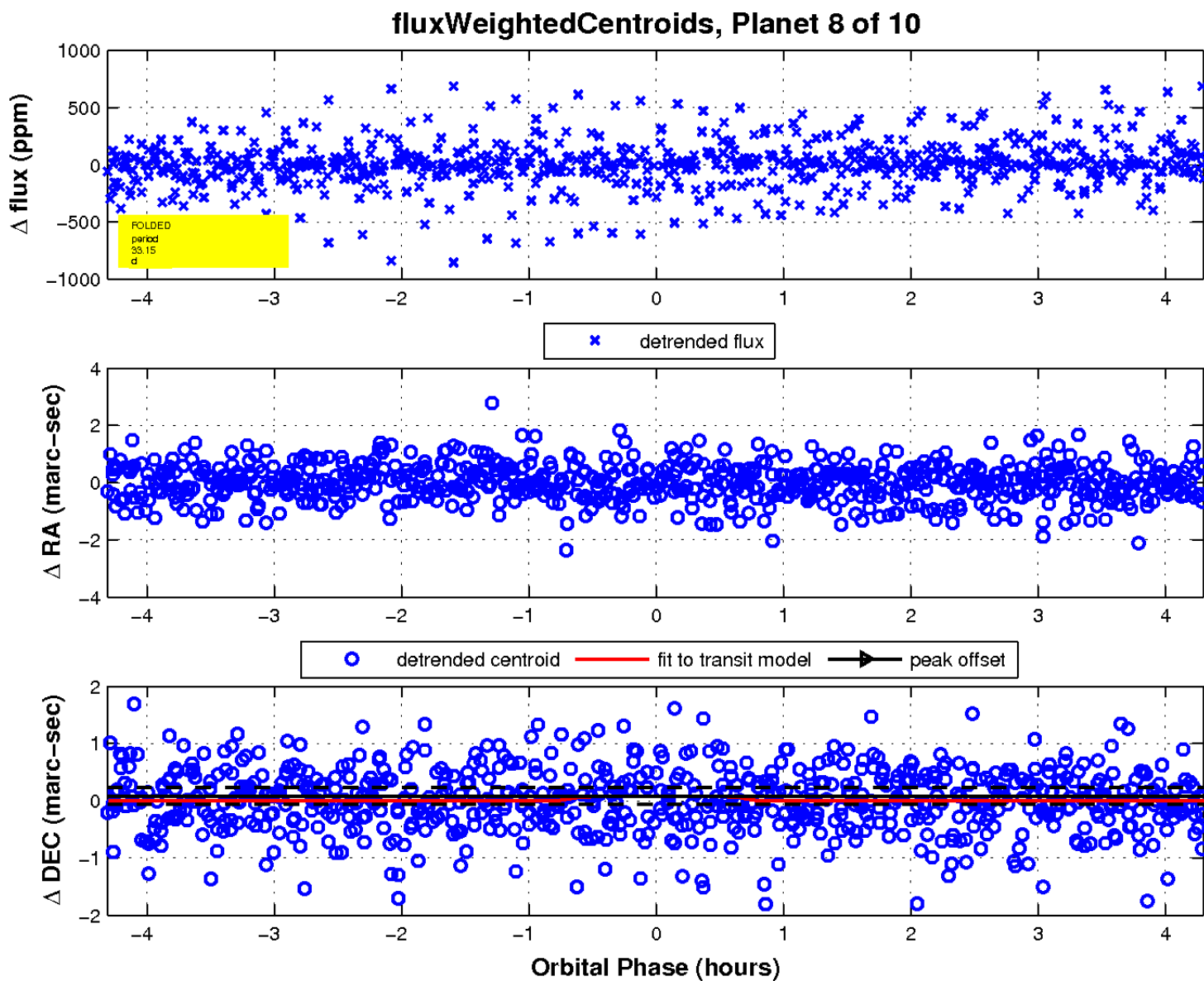
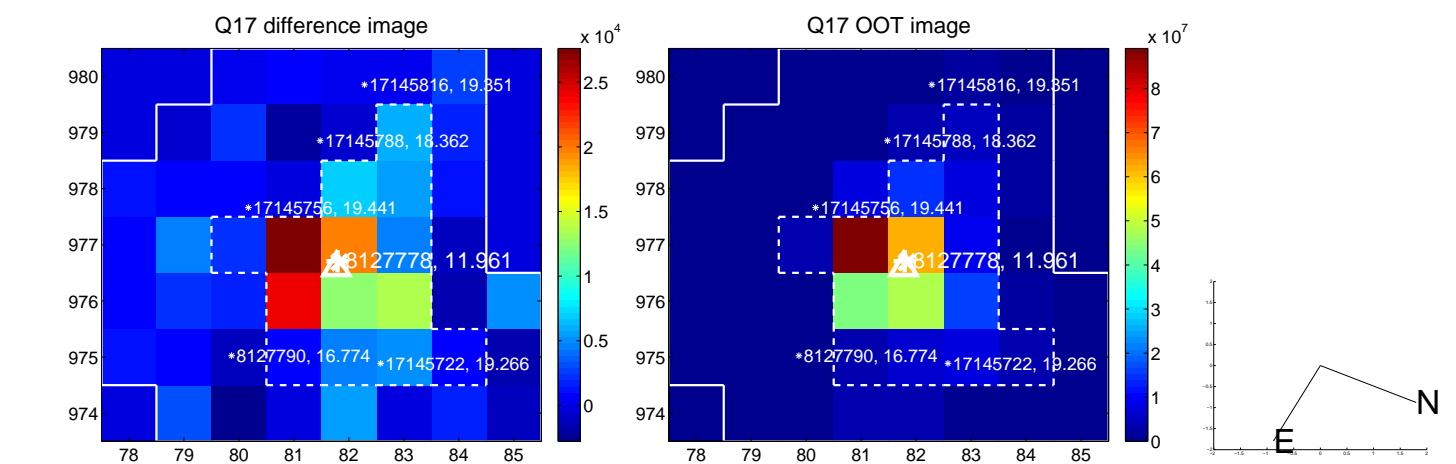
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

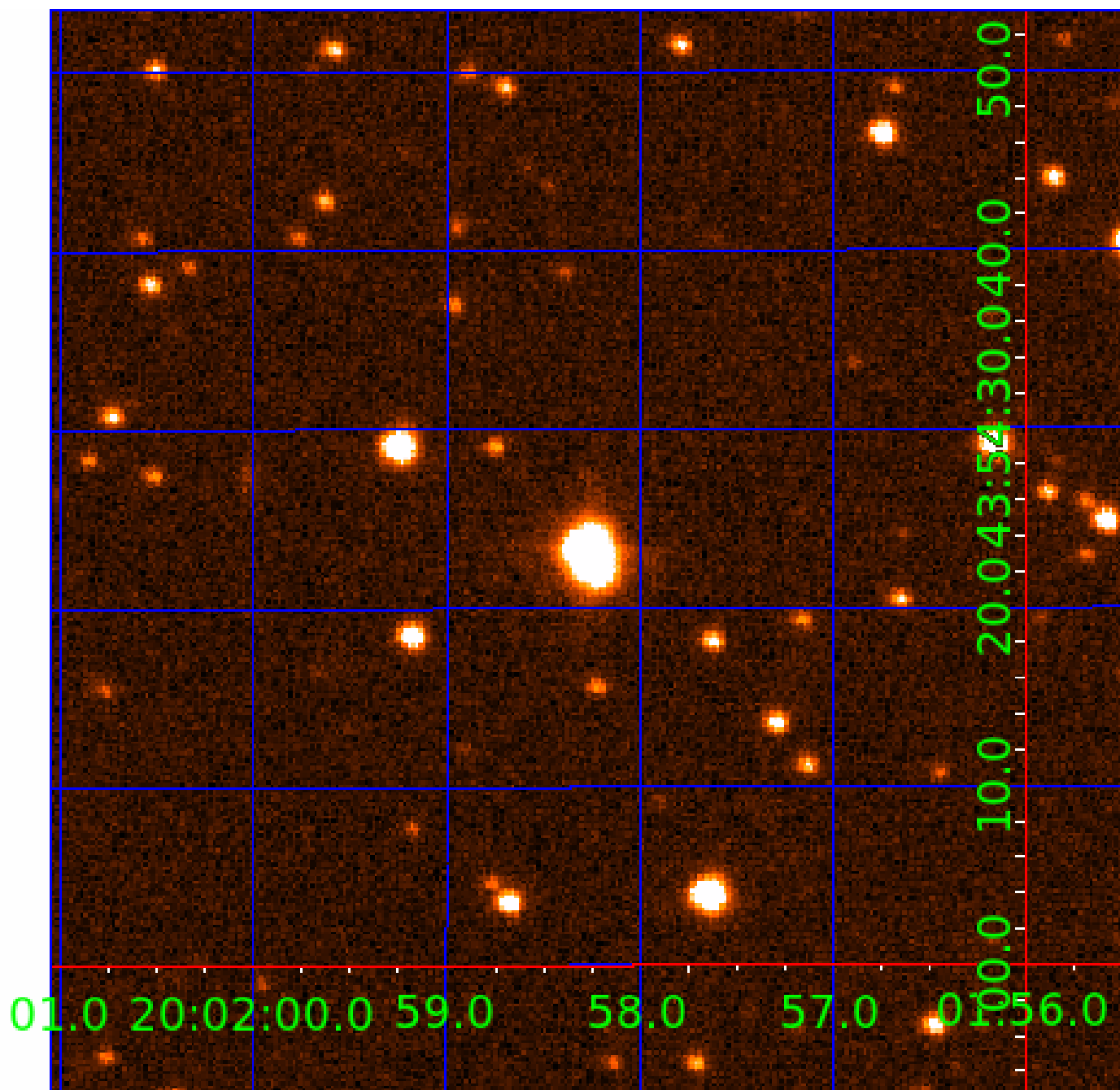


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008127778

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})
008127778-01	OBS	No	0.968765	131.757027	106.9	3.000	9.1	-1.0	2.21	9051	2.33	47677.98
008127778-02	OBS	No	0.968711	132.144883	12.5	4.915	8.6	5.0	2.21	9051	0.81	47681.51
008127778-06	OBS	No	35.945755	149.544146	287.9	2.671	8.9	7.6	2.21	9051	4.33	385.25
008127778-07	OBS	No	36.482035	163.232924	314.9	2.575	7.5	8.4	2.21	9051	4.54	377.72
008127778-08	OBS	No	33.146778	162.680087	107.4	1.438	8.2	2.7	2.21	9051	2.53	429.23
008127778-09	OBS	No	33.147882	162.920468	250.2	1.882	8.4	5.4	2.21	9051	3.97	429.21
008127778-10	OBS	No	19.729039	138.427754	148.6	5.000	8.8	-1.0	2.21	9051	2.75	857.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127778-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008127778-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008127778-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
008127778-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
008127778-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

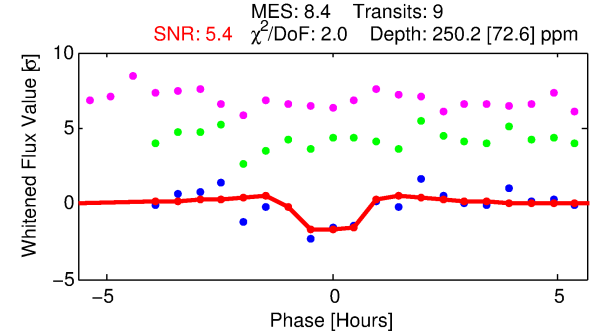
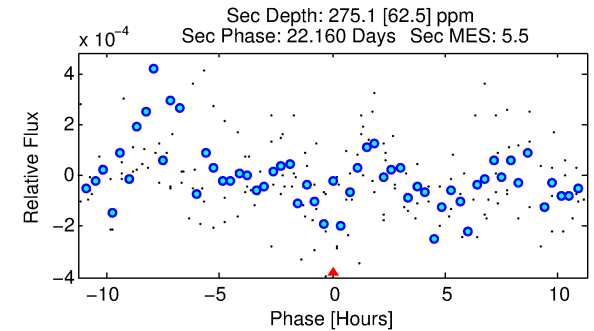
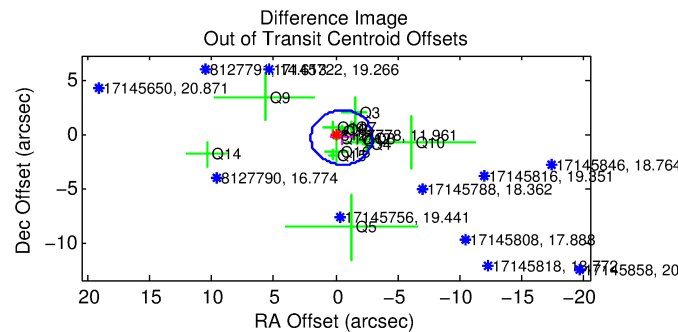
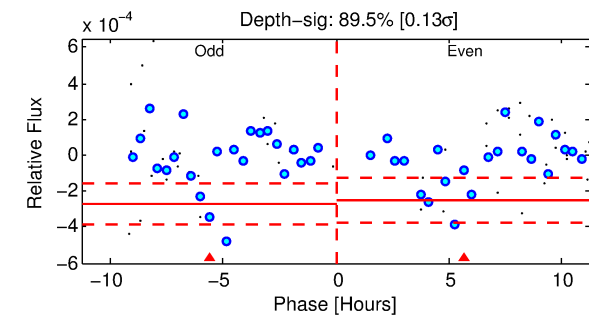
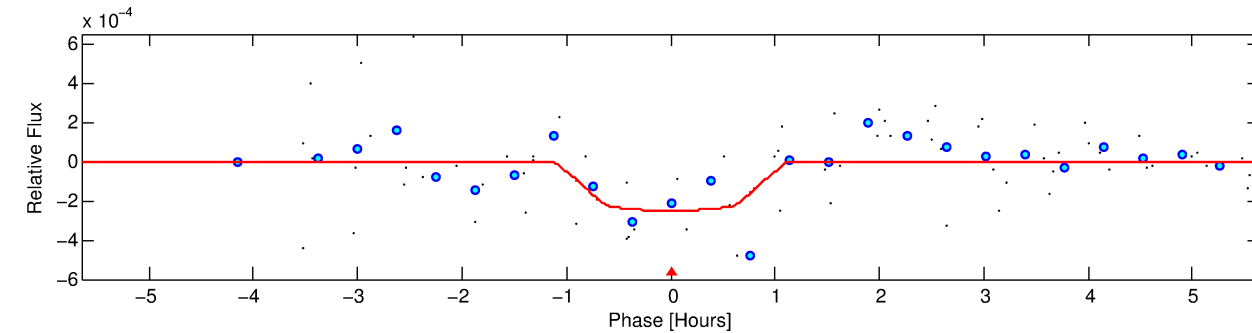
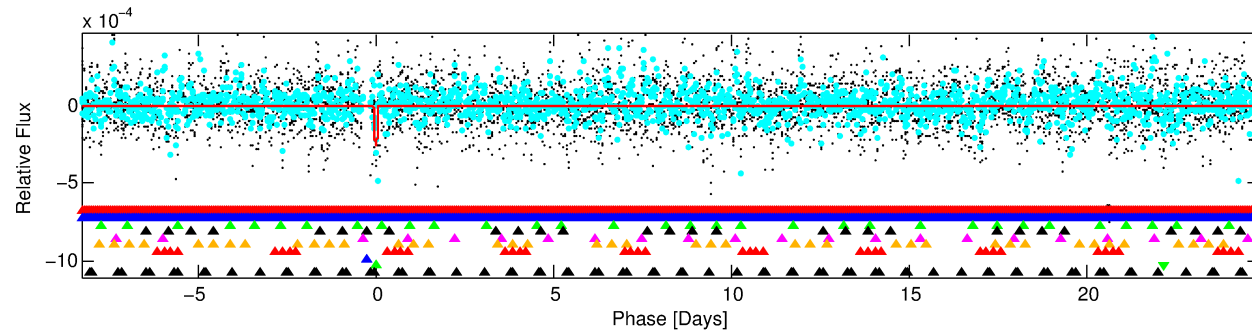
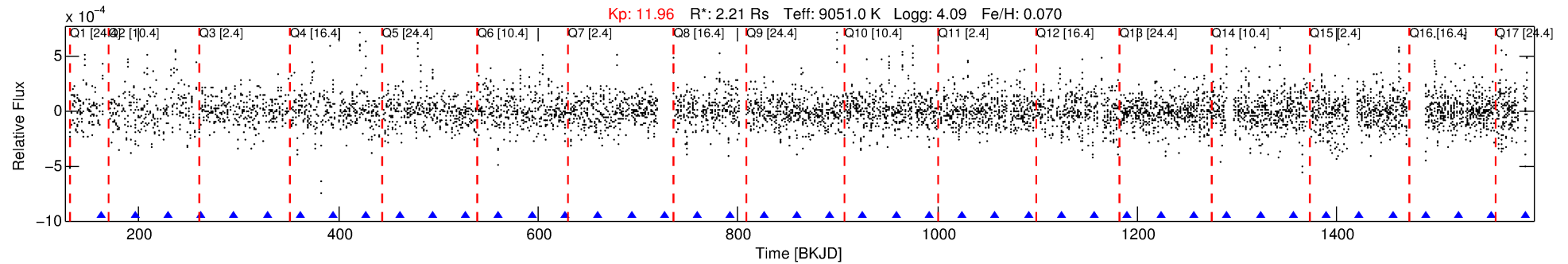
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127778-09

No Significant Match Found

DV One-Page Summary

KIC: 8127778 Candidate: 9 of 10 Period: 33.148 d



DV Fit Results:

Period = 33.14788 [0.00044] d
Epoch = 162.9205 [0.0114] BKJD
Rp/R* = 0.0164 [0.0264]
a/R* = 70.98 [816.95]
b = 0.87 [3.28]
Seff = 429.21 [172.99]
Teq = 1161 [117] K
Rp = 3.97 [6.50] Re
a = 0.2616 [0.0668] AU
Ag = 658.35 [2131.45] [0.31 σ]
Teffp = 9090 [7330] K [1.08 σ]

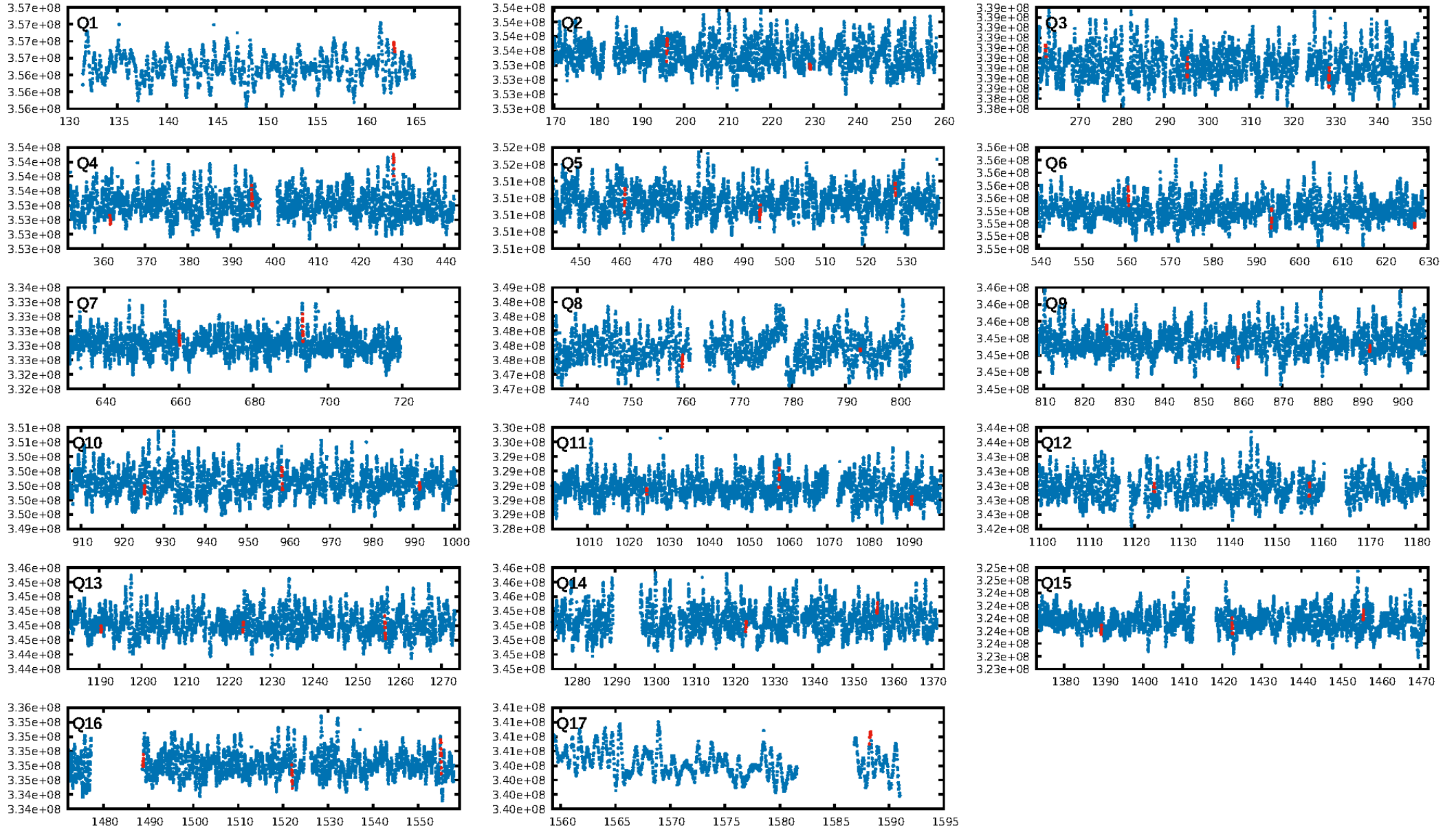
DV Diagnostic Results:

ShortPeriod-sig: 0.9% [0.01 σ]
LongPeriod-sig: 100.0% [20.55 σ]
ModelChiSquare2-sig: 10.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 34.58
Centroid-sig: N/A
Centroid-so: 0.578 arcsec [1.03 σ]
OotOffset-rm: 0.555 arcsec [0.67 σ]
KicOffset-rm: 1.010 arcsec [1.14 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.38 [6/16]
DiffImageOverlap-fno: 0.00 [0/17]

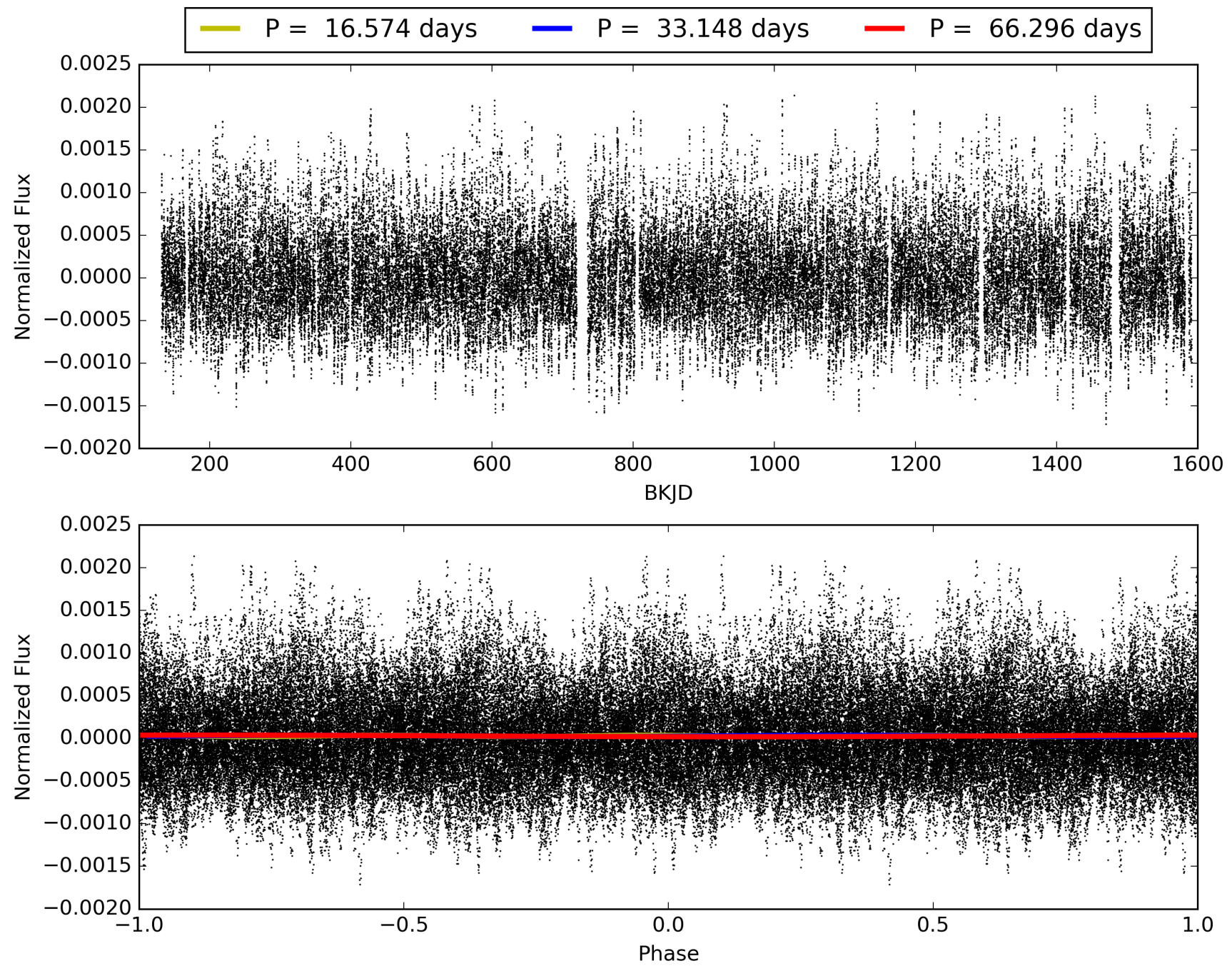
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:09:43 Z

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

TCE 008127778-09, PDC Light Curves

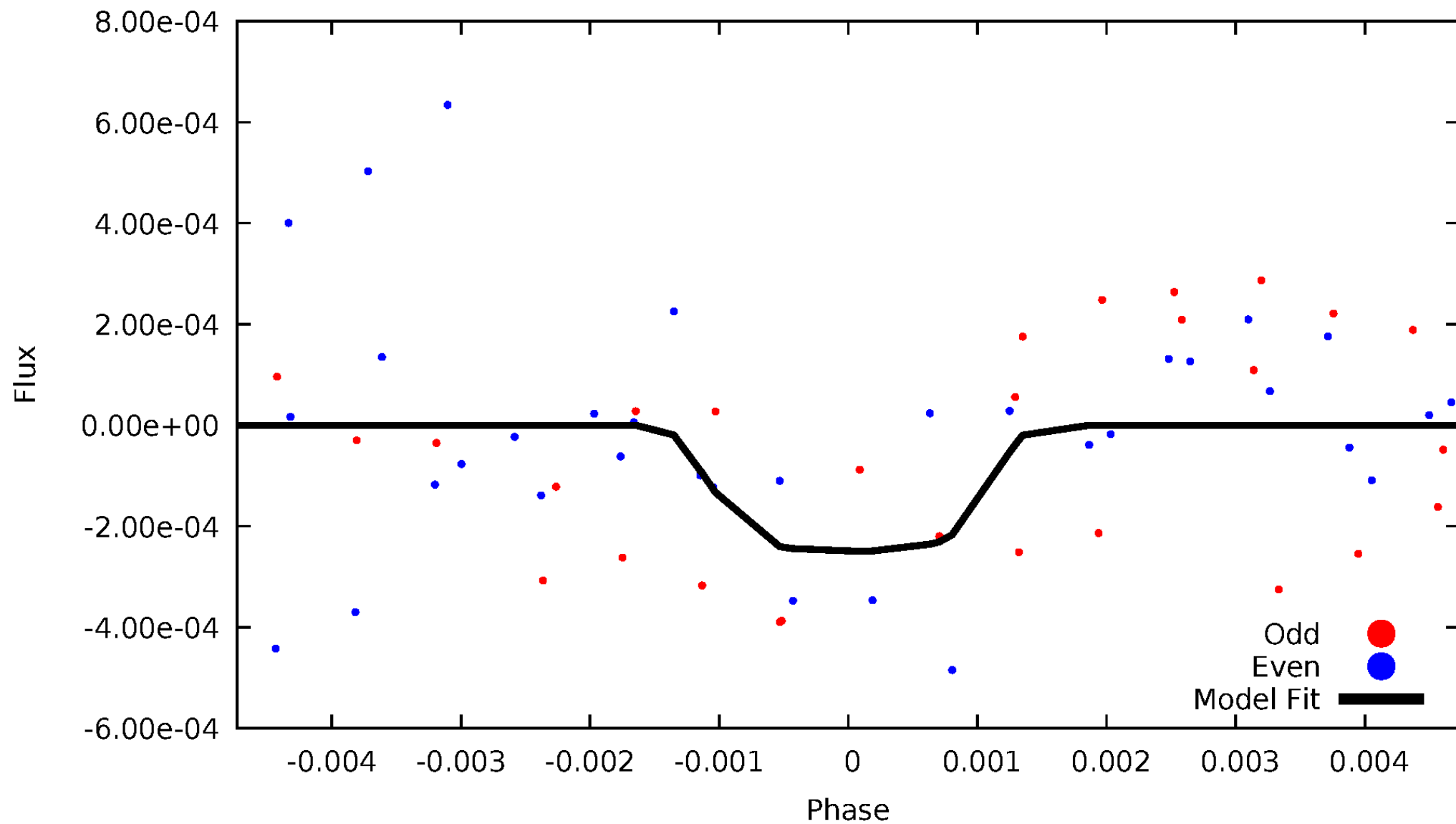


TCE 008127778-09



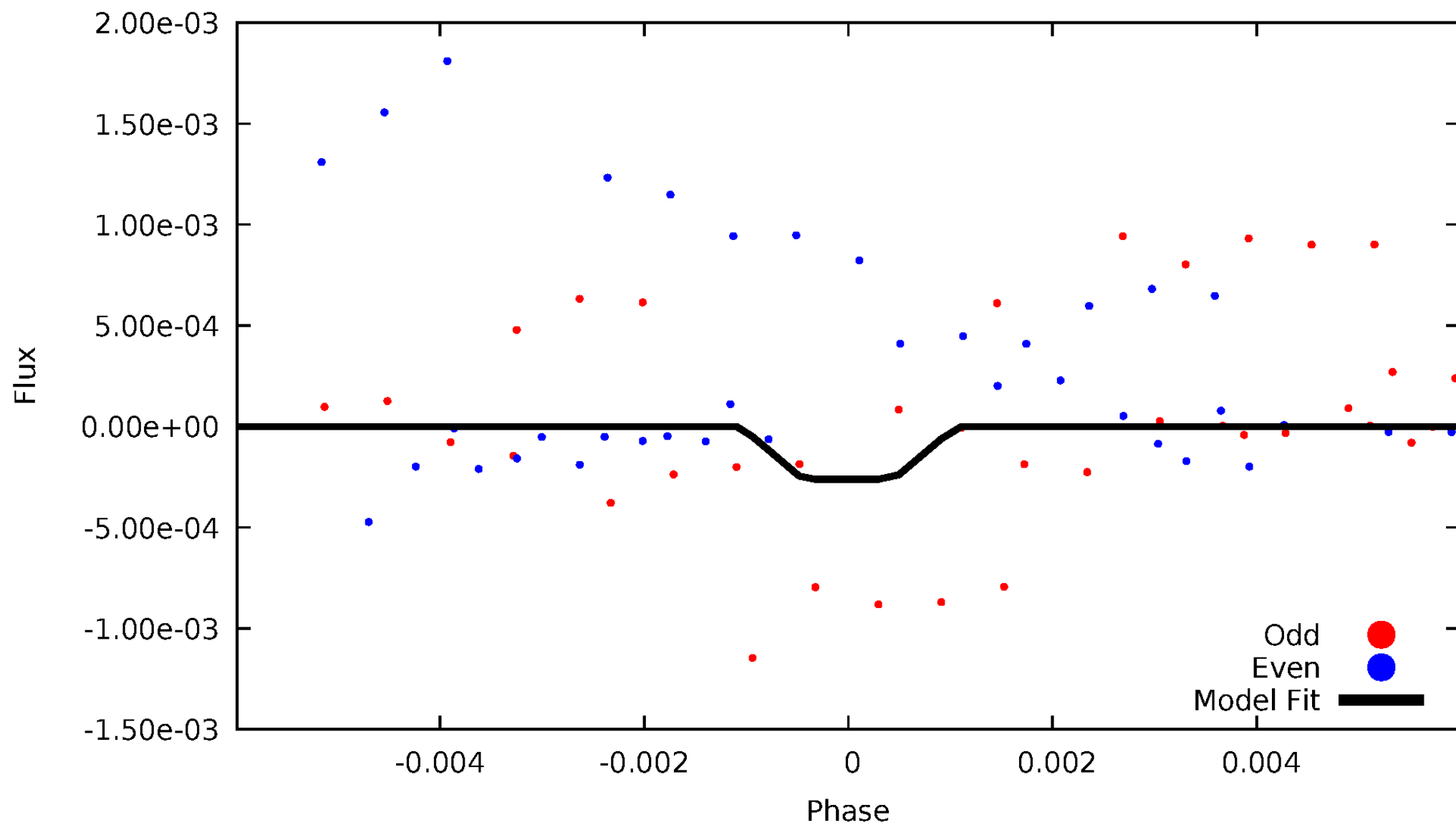
DV Odd/Even

TCE 008127778-09



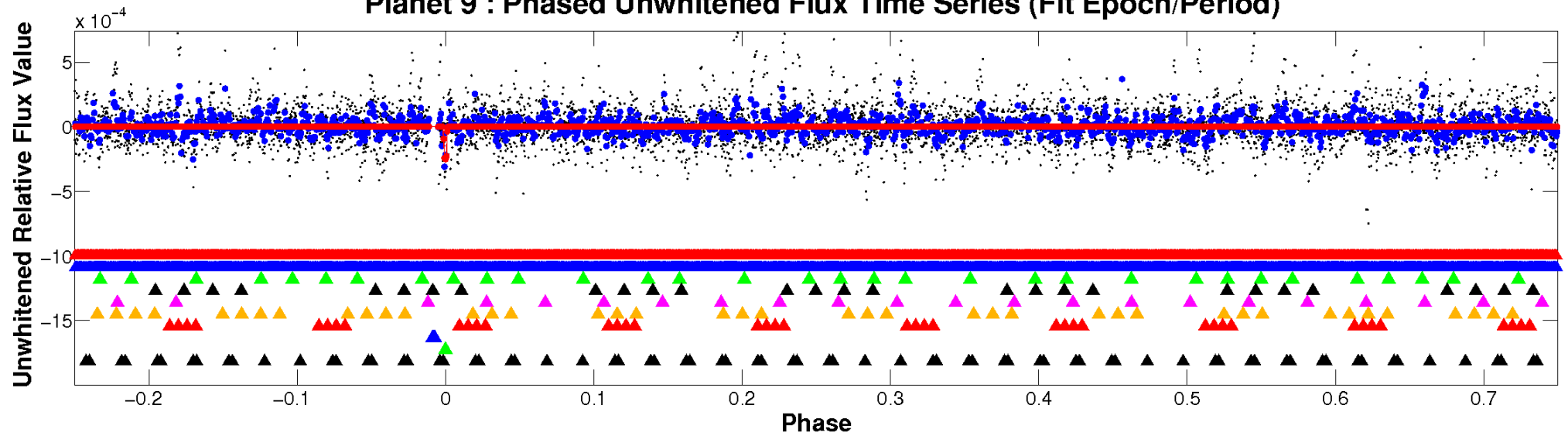
ALT Odd/Even

TCE 00812778-09

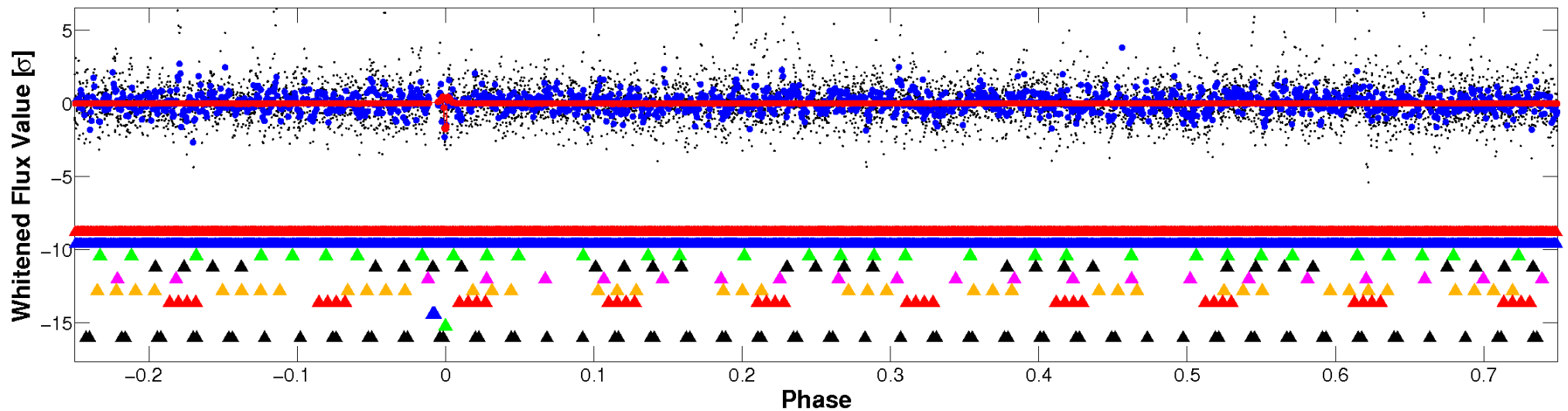


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

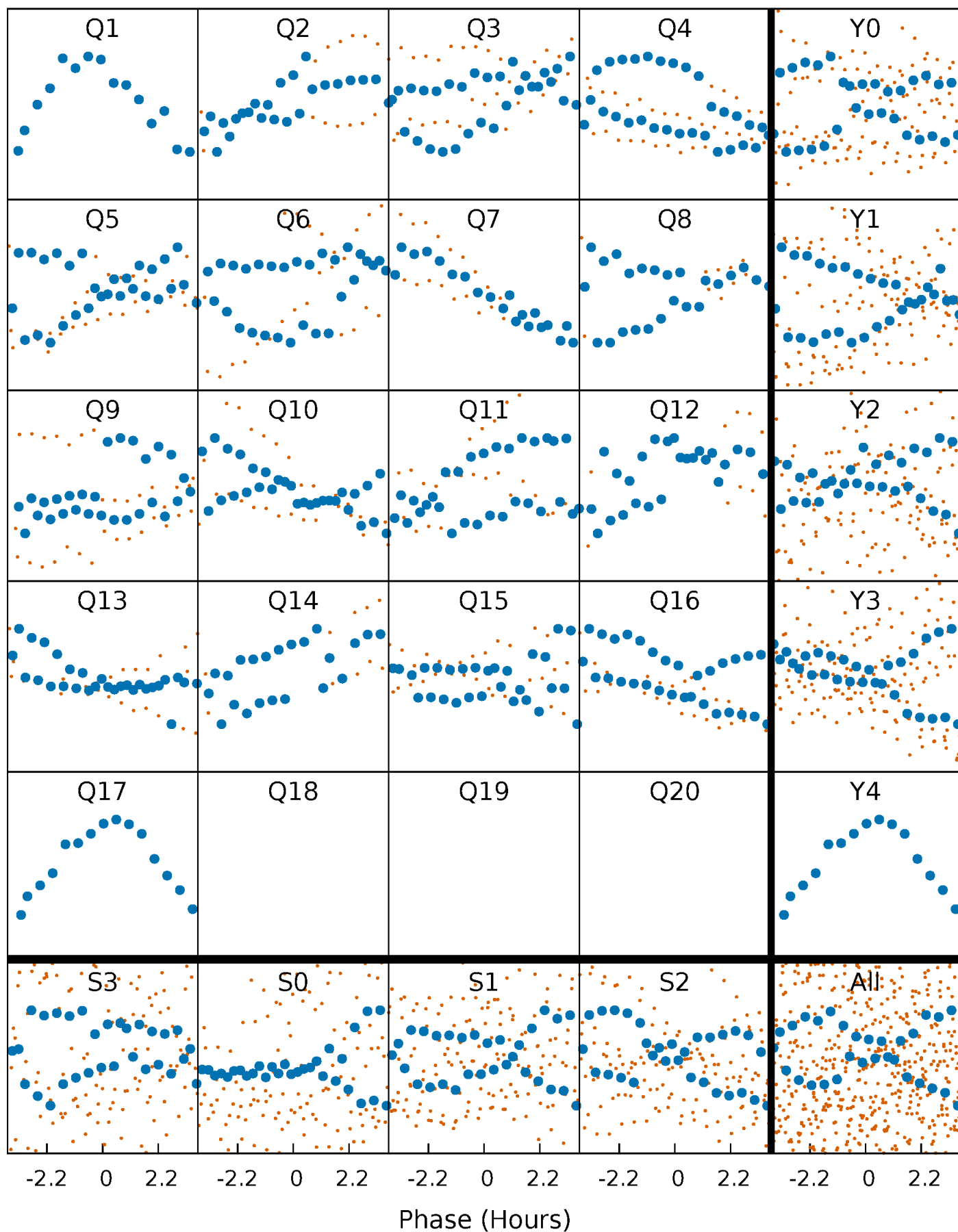


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



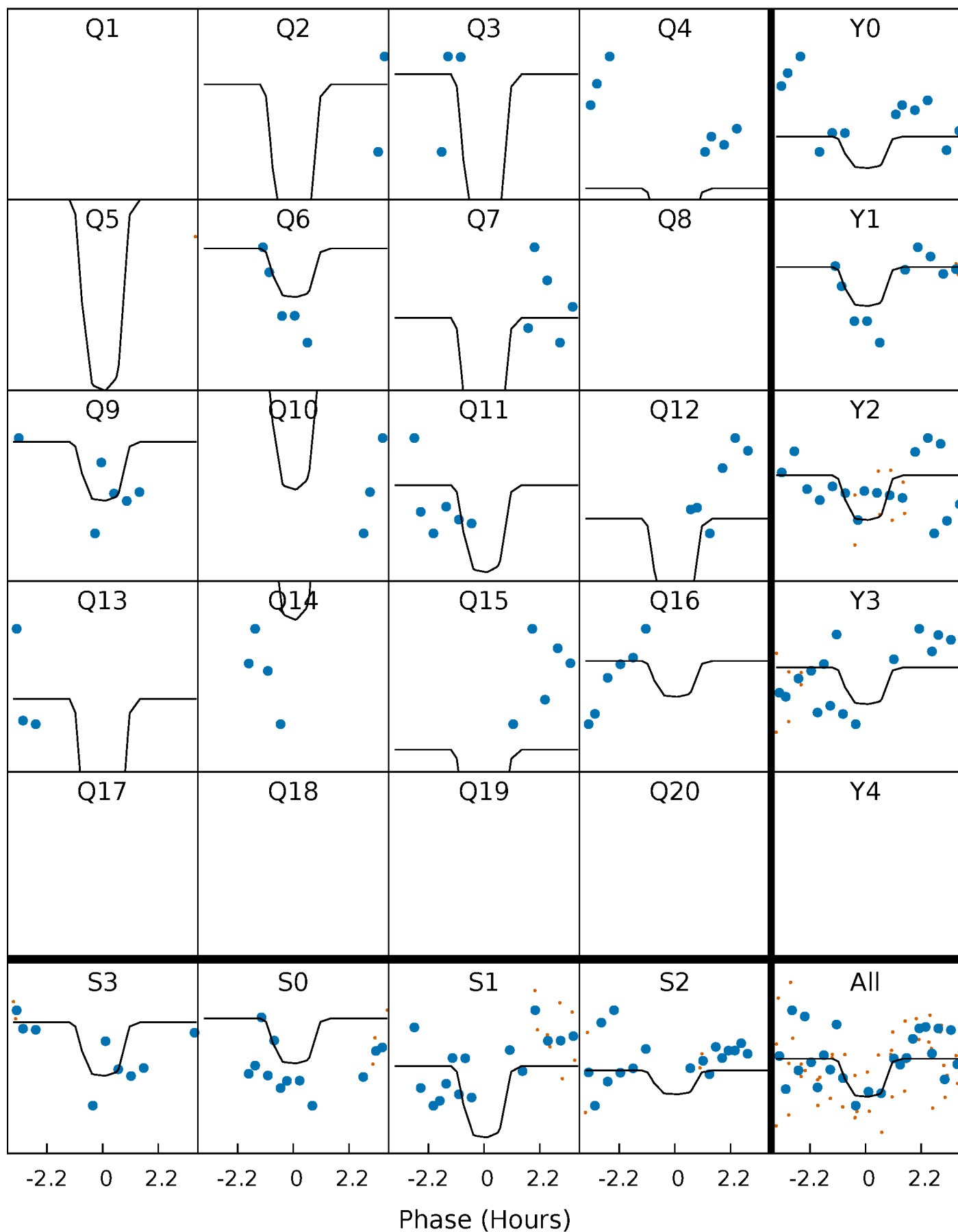
PDC Quarter-Phased Transit Curves

TCE 008127778-09 P= 33.147882 Days $T_0=162.920468$ (BKJD)



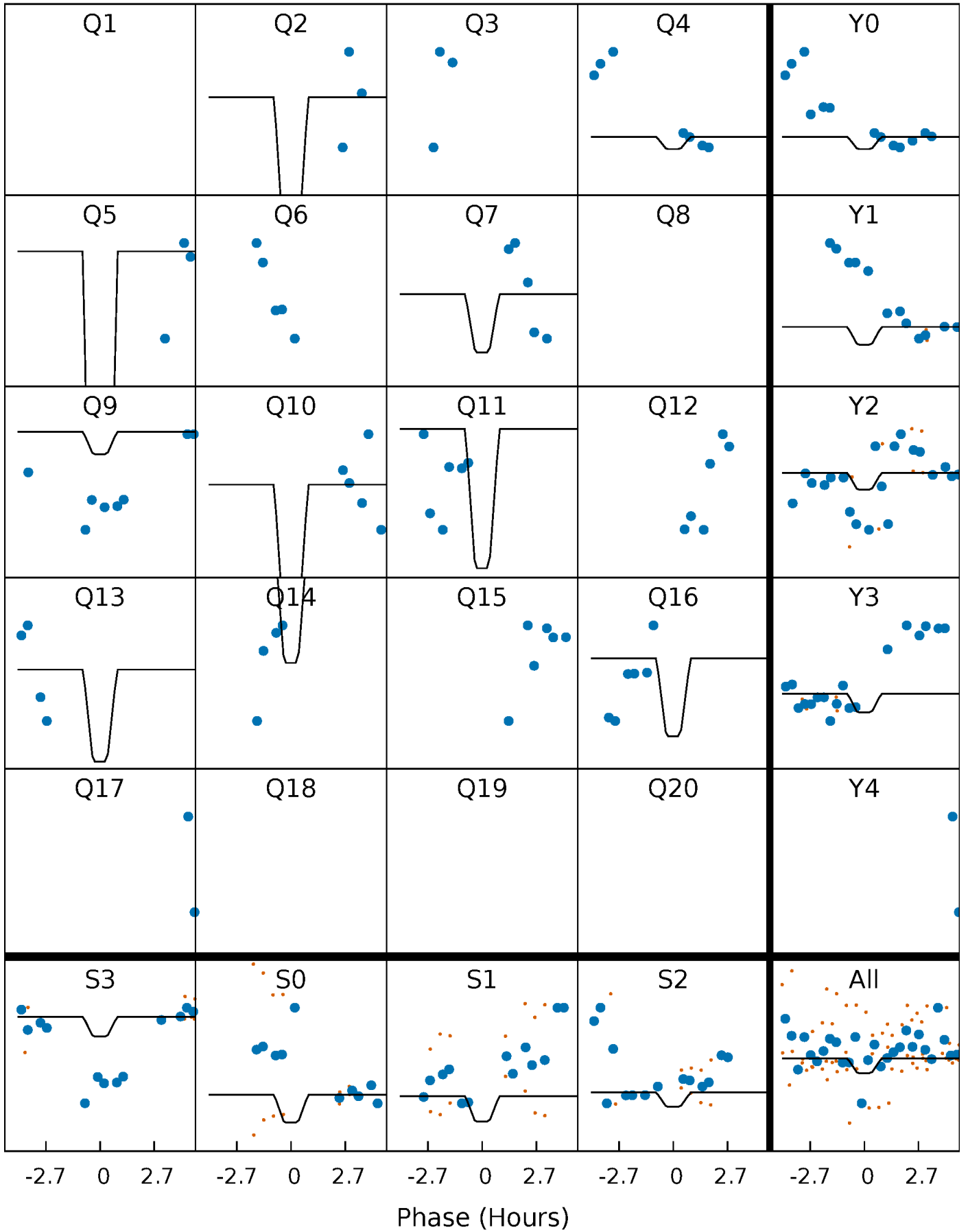
DV Quarter-Phased Transit Curves

TCE 008127778-09 P= 33.147882 Days $T_0=162.920468$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

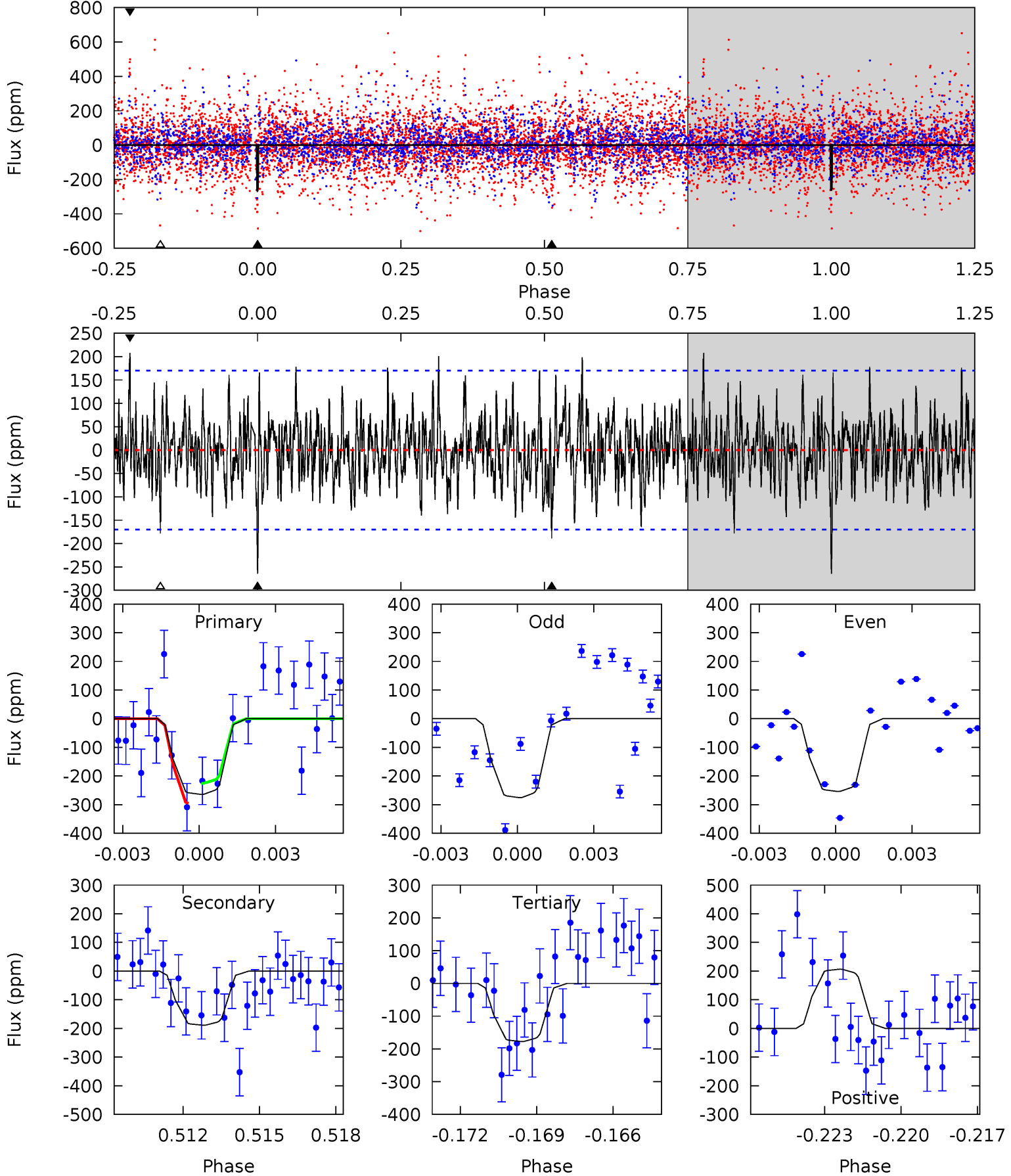
TCE 008127778-09 P= 33.146823 Days $T_0=162.956319$ (BKJD)



DV Model-Shift Uniqueness Test

008127778-09, P = 33.147882 Days, E = 129.772586 Days

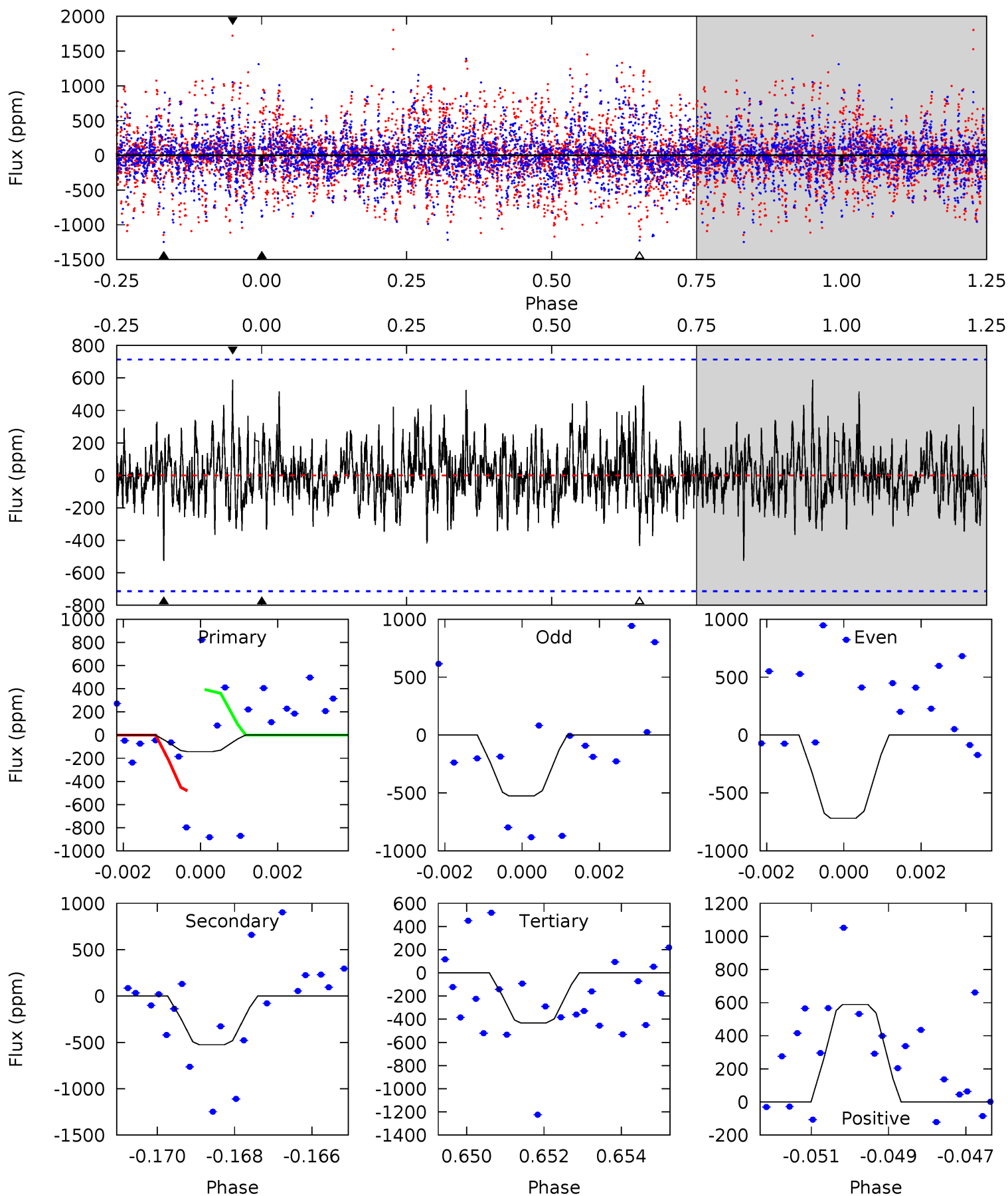
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.18	5.84	5.49	6.39	5.25	2.97	1.75	2.69	1.79	0.35	-0.55	0.34	0.97	0.44	1.08



Alt Model-Shift Uniqueness Test

008127778-09, P = 33.146823 Days, E = 129.809496 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.07	3.93	3.24	4.40	5.34	3.11	1.03	-2.17	-3.33	0.69	-0.47	0.69	1.00	0.53	0.29



Stellar Parameters For KIC 008127778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9051^{+251}_{-466}	$4.086^{+0.144}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.210^{+0.719}_{-0.588}$	$2.170^{+0.372}_{-0.605}$	$0.283^{+0.268}_{-0.139}$
	+3%/-5%	+4%/-4%	+214%/-929%	+33%/-27%	+17%/-28%	+95%/-49%
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 008127778-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-189 ± 32	$6.09^{+5.42}_{-3.93}$	1614^{+132}_{-110}	6213^{+6056}_{-1519}	182^{+1277}_{-131}
Alt.	-526 ± 134	$5.98^{+6.01}_{-4.01}$	1630^{+123}_{-123}	8253^{+13866}_{-2468}	481^{+4101}_{-356}

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

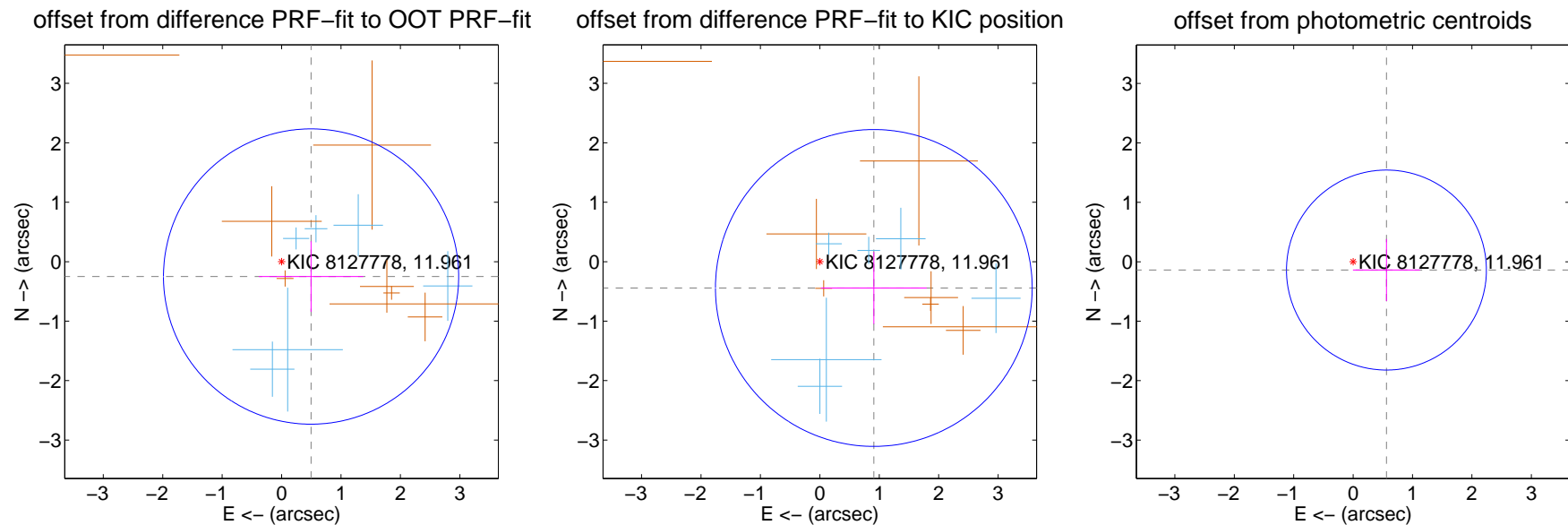
DV Centroid Data

Supplemental centroid analysis for 008127778-09. **Kepler magnitude: 11.96.** Transit SNR 5.39

There are 6 quarters with good PRF difference image offsets

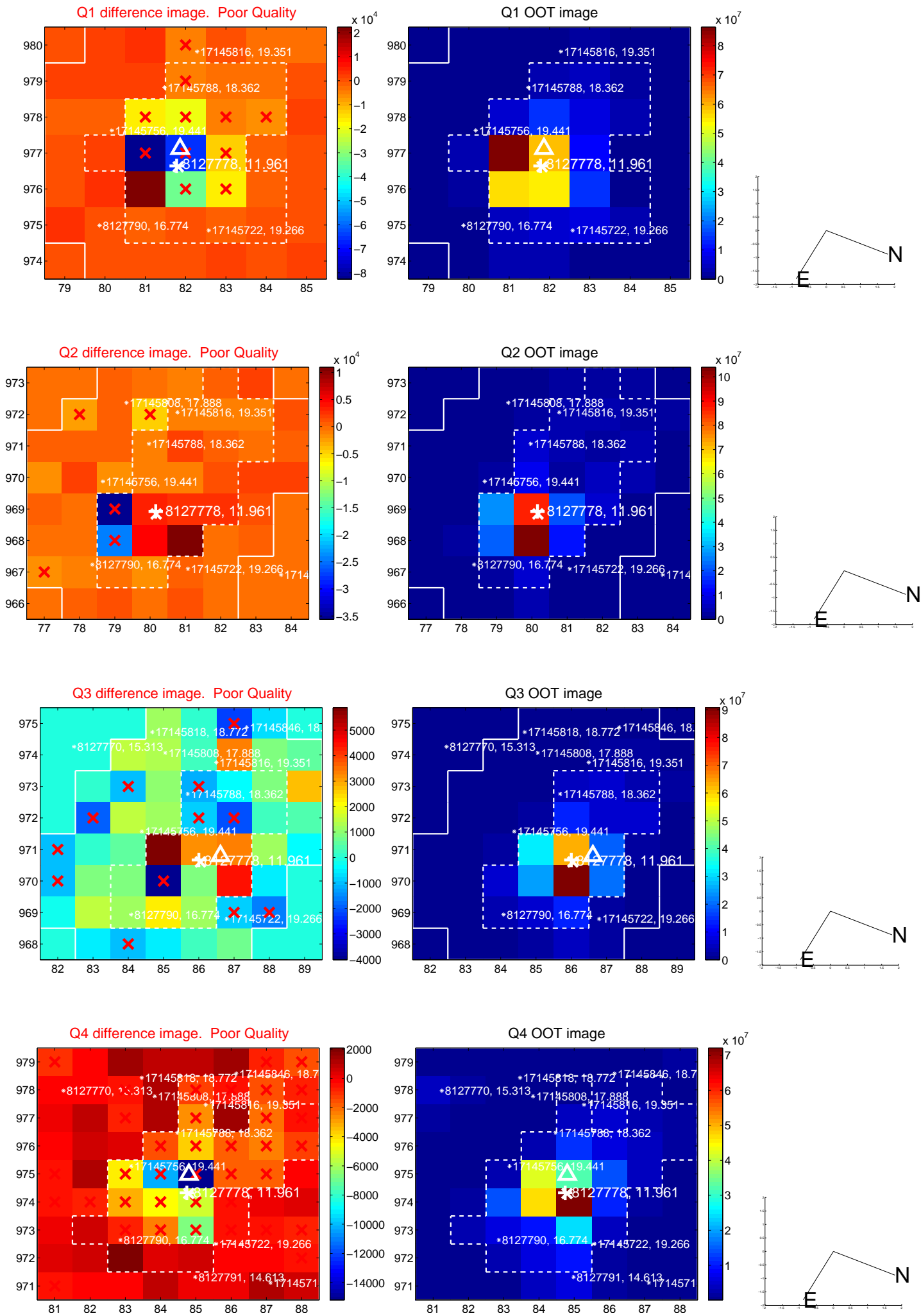
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.555 ± 0.828	0.67	-0.496 ± 0.879	-0.250 ± 0.594
PRF-fit source offset from KIC position	1.010 ± 0.888	1.14	-0.908 ± 0.890	-0.442 ± 0.605
photometric centroid source offset	0.58 ± 0.56	1.03	-0.56 ± 0.56	-0.14 ± 0.52

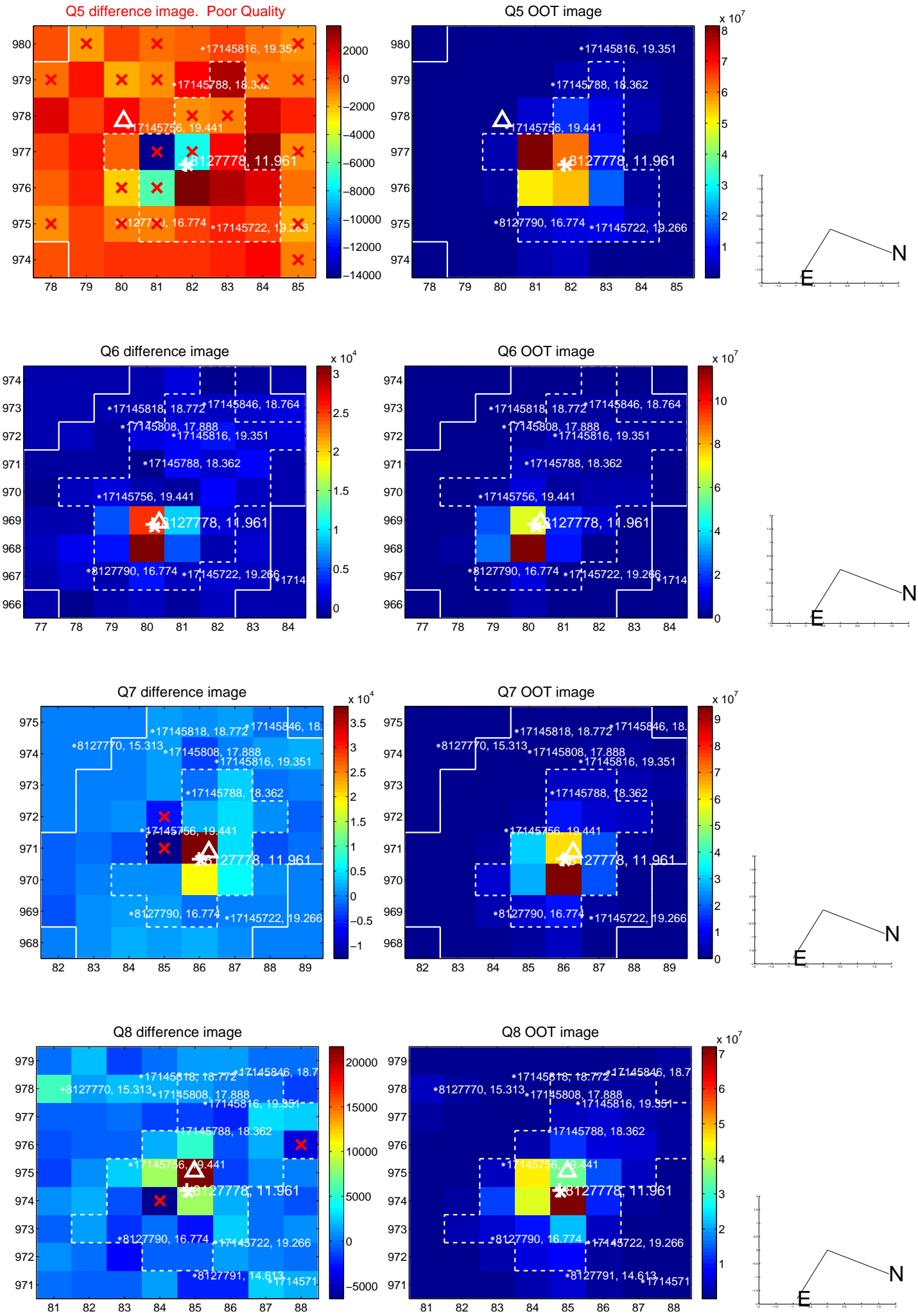


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

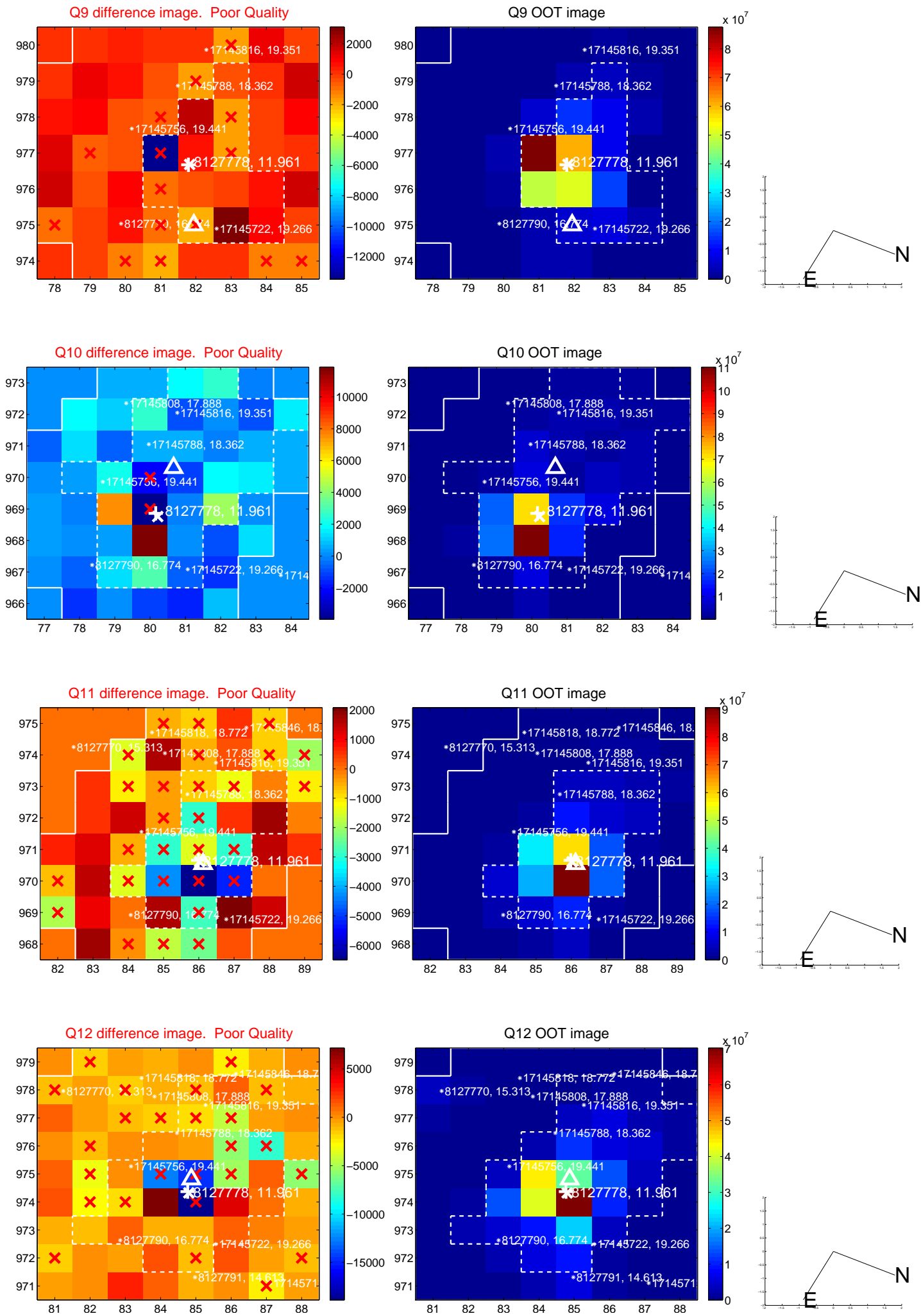
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



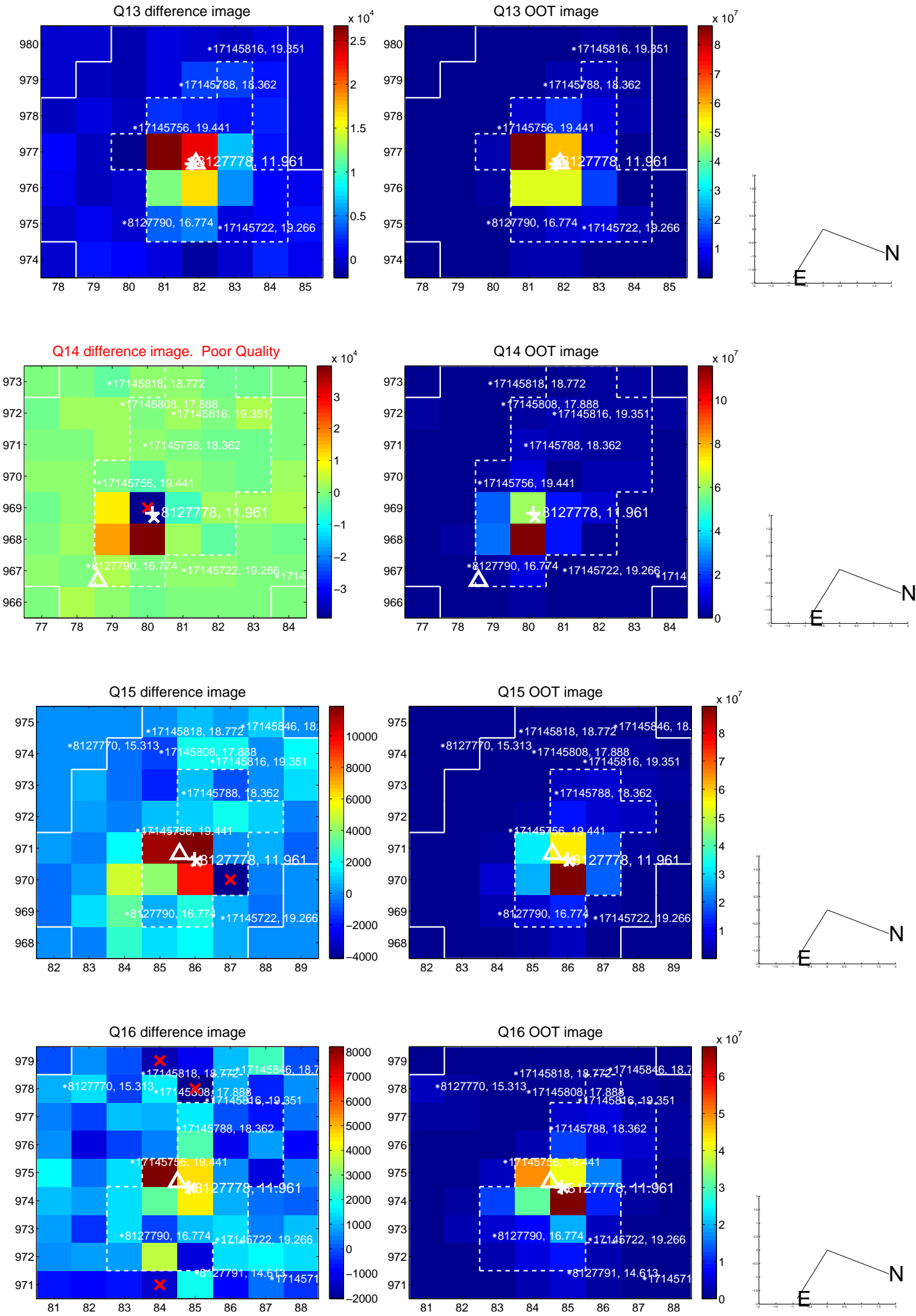
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



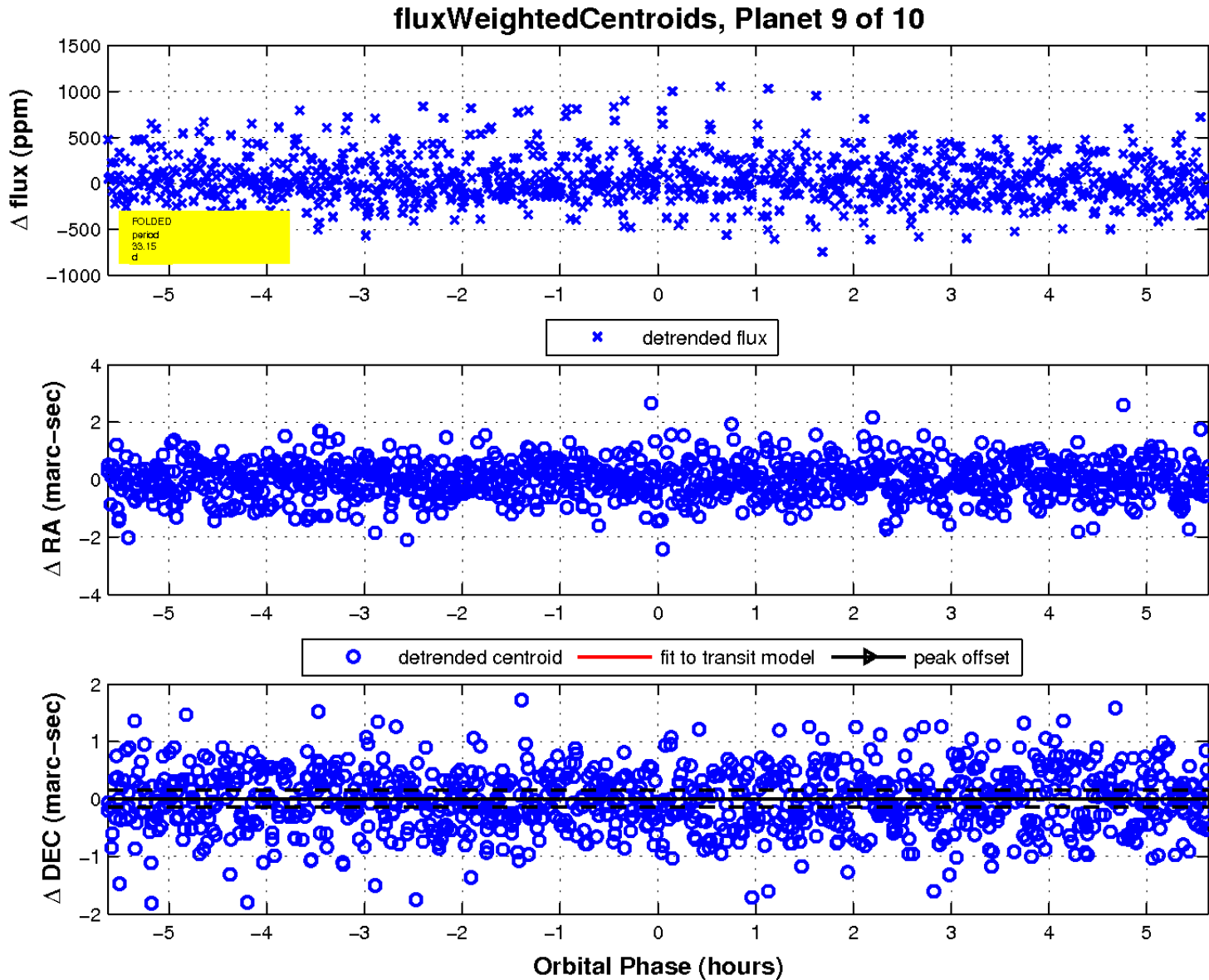
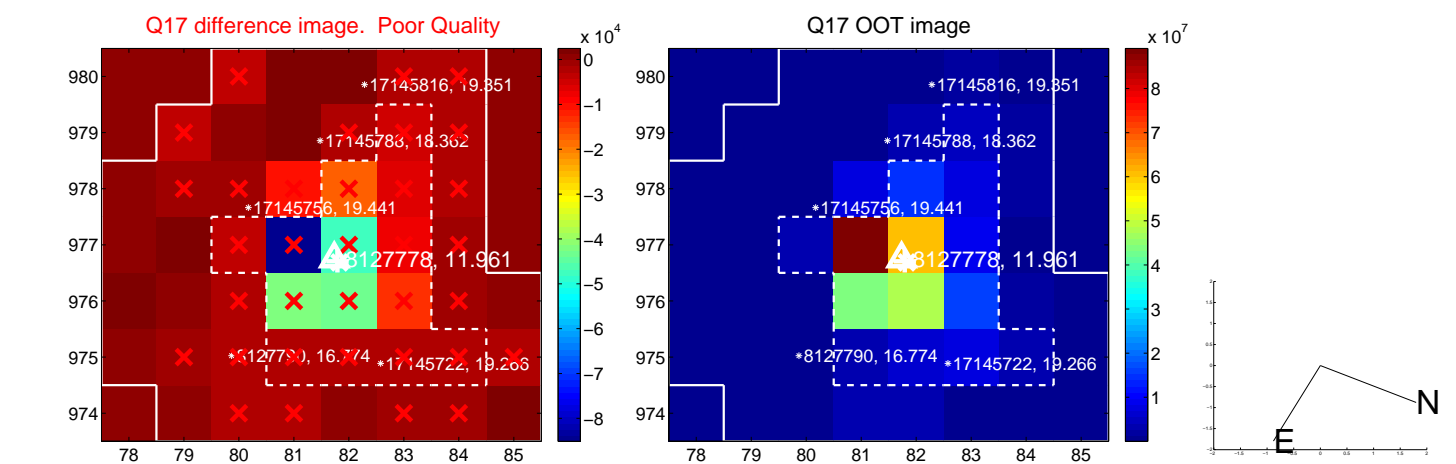
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



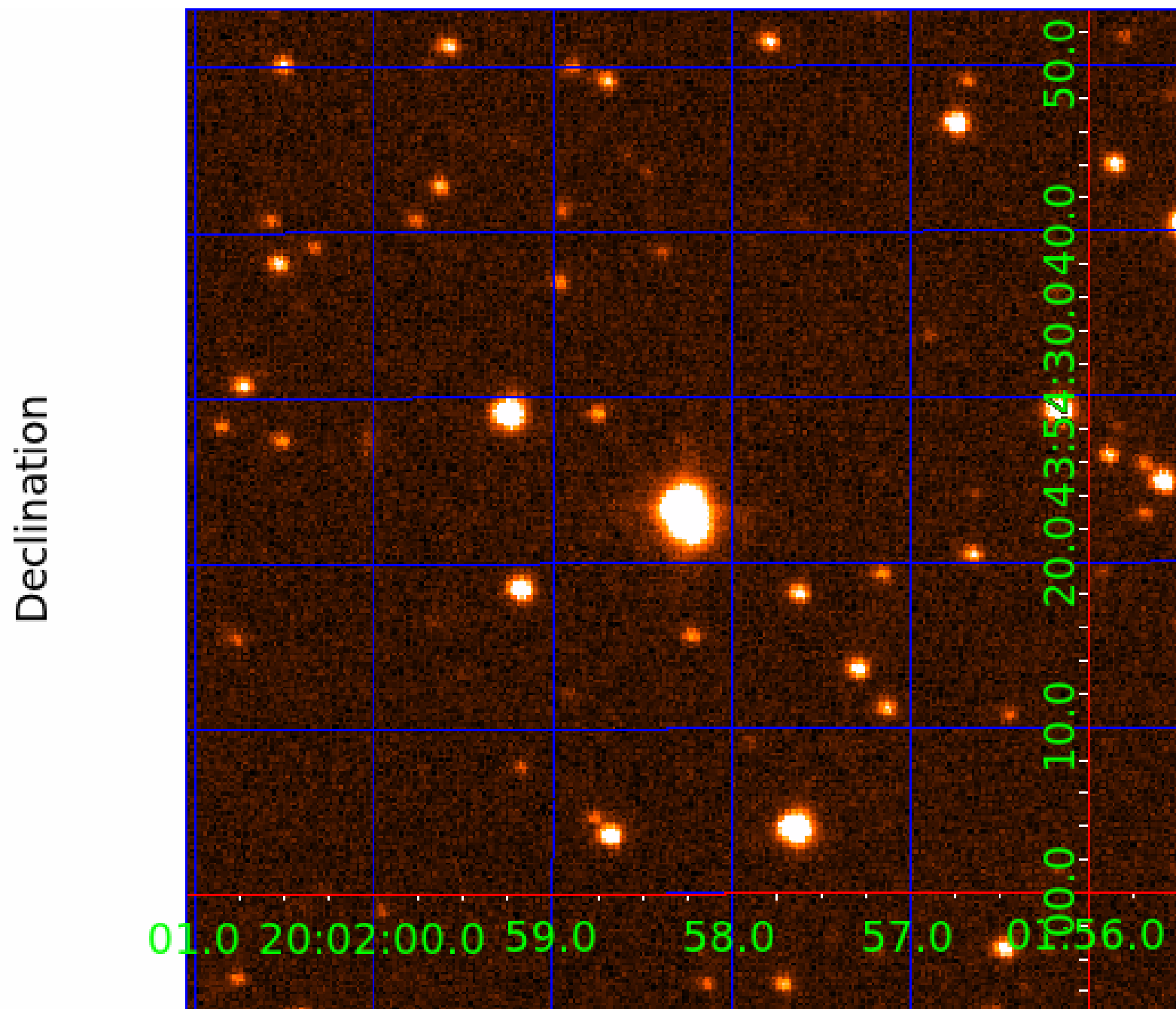
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008127778

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})
008127778-01	OBS	No	0.968765	131.757027	106.9	3.000	9.1	-1.0	2.21	9051	2.33	47677.98
008127778-02	OBS	No	0.968711	132.144883	12.5	4.915	8.6	5.0	2.21	9051	0.81	47681.51
008127778-06	OBS	No	35.945755	149.544146	287.9	2.671	8.9	7.6	2.21	9051	4.33	385.25
008127778-07	OBS	No	36.482035	163.232924	314.9	2.575	7.5	8.4	2.21	9051	4.54	377.72
008127778-08	OBS	No	33.146778	162.680087	107.4	1.438	8.2	2.7	2.21	9051	2.53	429.23
008127778-09	OBS	No	33.147882	162.920468	250.2	1.882	8.4	5.4	2.21	9051	3.97	429.21
008127778-10	OBS	No	19.729039	138.427754	148.6	5.000	8.8	-1.0	2.21	9051	2.75	857.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127778-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_NOFITS
008127778-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008127778-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008127778-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
008127778-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
008127778-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

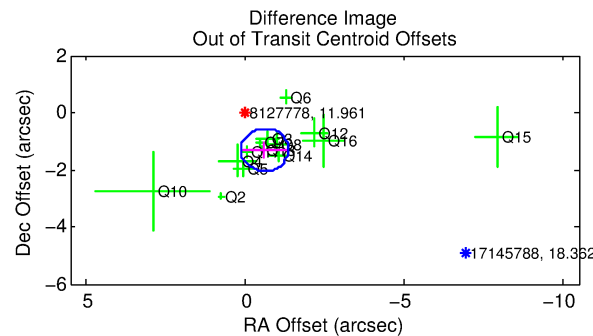
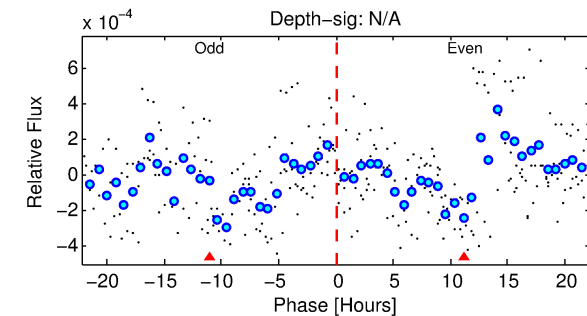
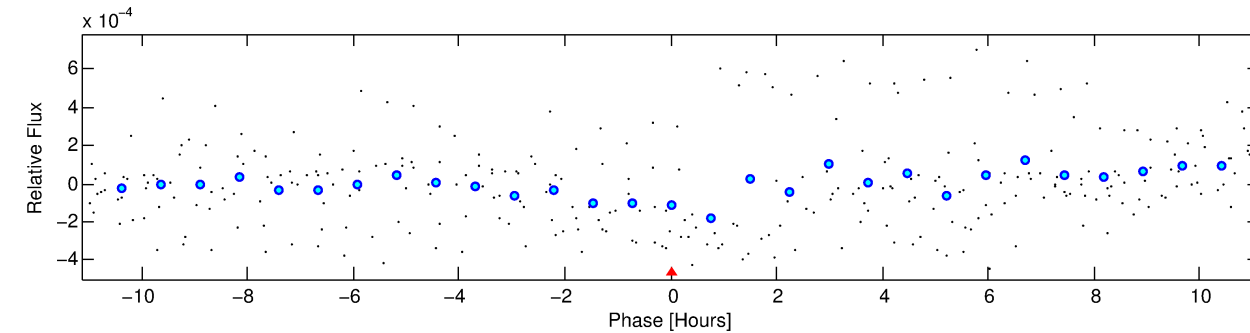
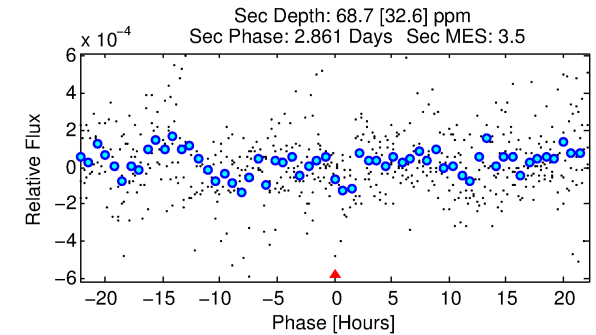
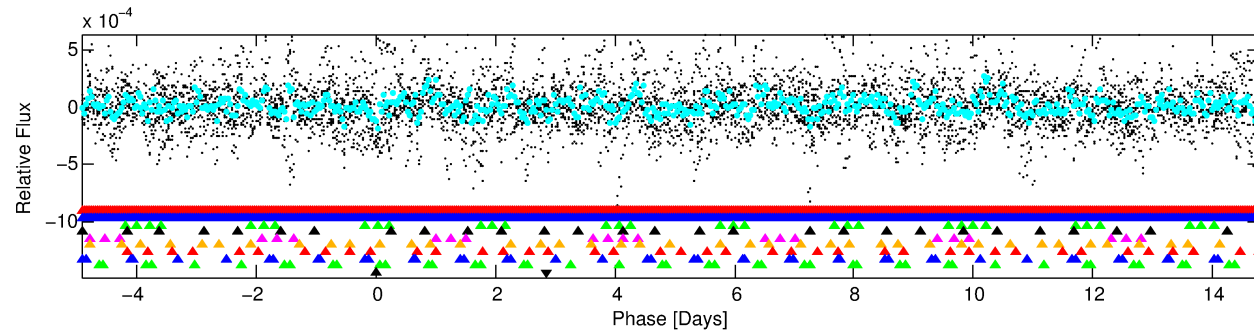
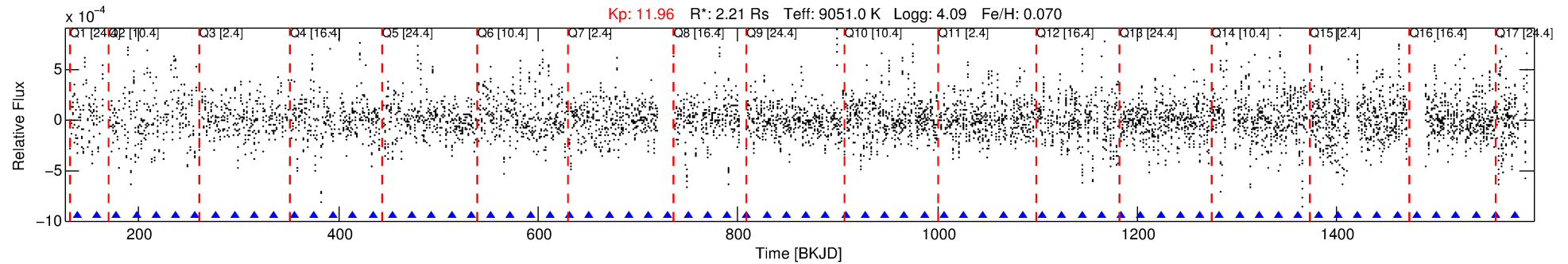
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127778-10

No Significant Match Found

DV One-Page Summary

KIC: 8127778 Candidate: 10 of 10 Period: 19.729 d



TPS TCE Results:

Period = 19.72904 d
Epoch = 138.4278 BKJD

DV fit results are unavailable

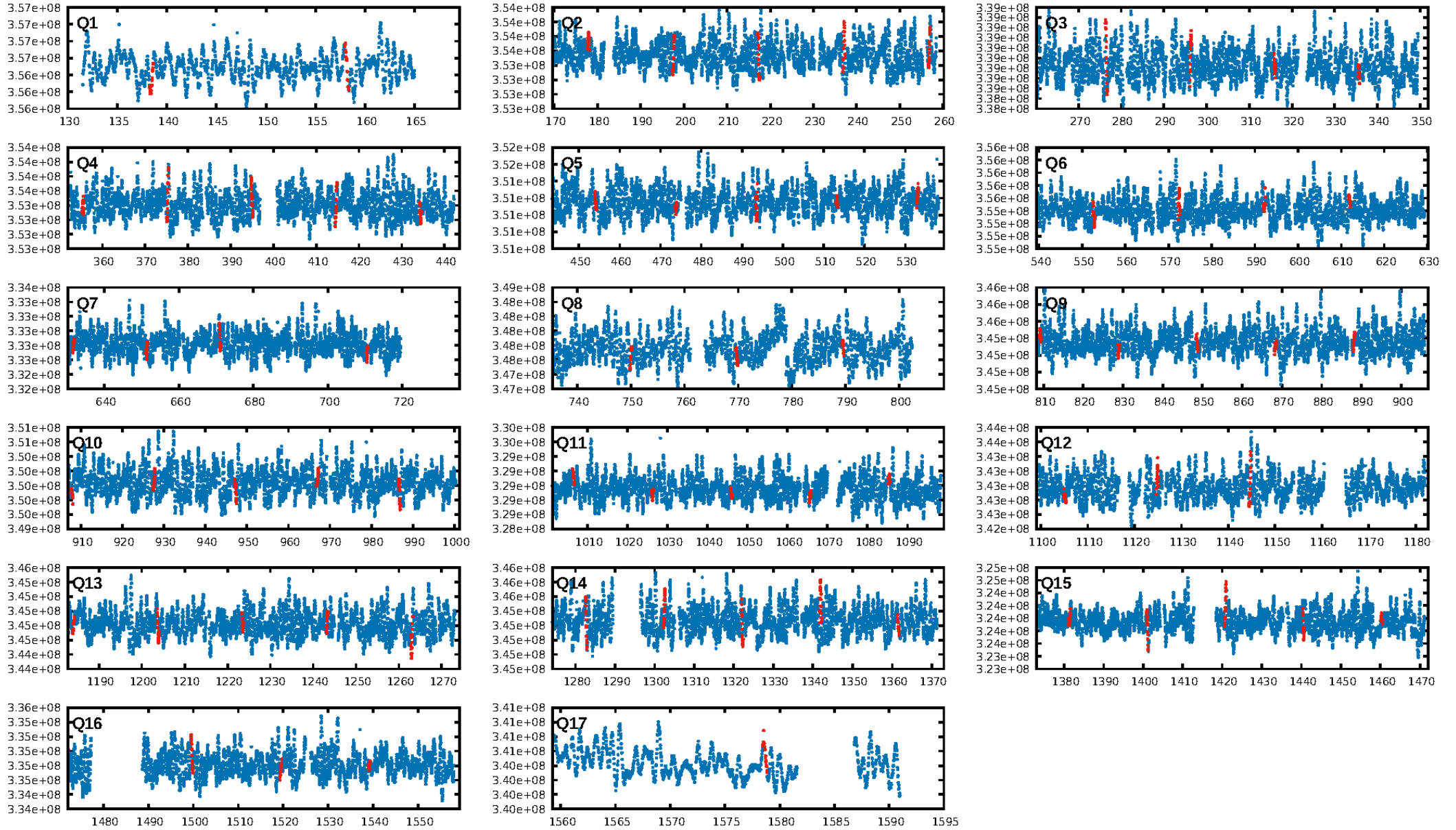
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [77.22 σ]
LongPeriod-sig: 100.0% [61.90 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 18.6
Centroid-sig: N/A
Centroid-so: 0.282 arcsec [0.92 σ]
OotOffset-rm: 1.441 arcsec [5.81 σ]
KicOffset-rm: 1.620 arcsec [6.90 σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 0.00 [0/17]

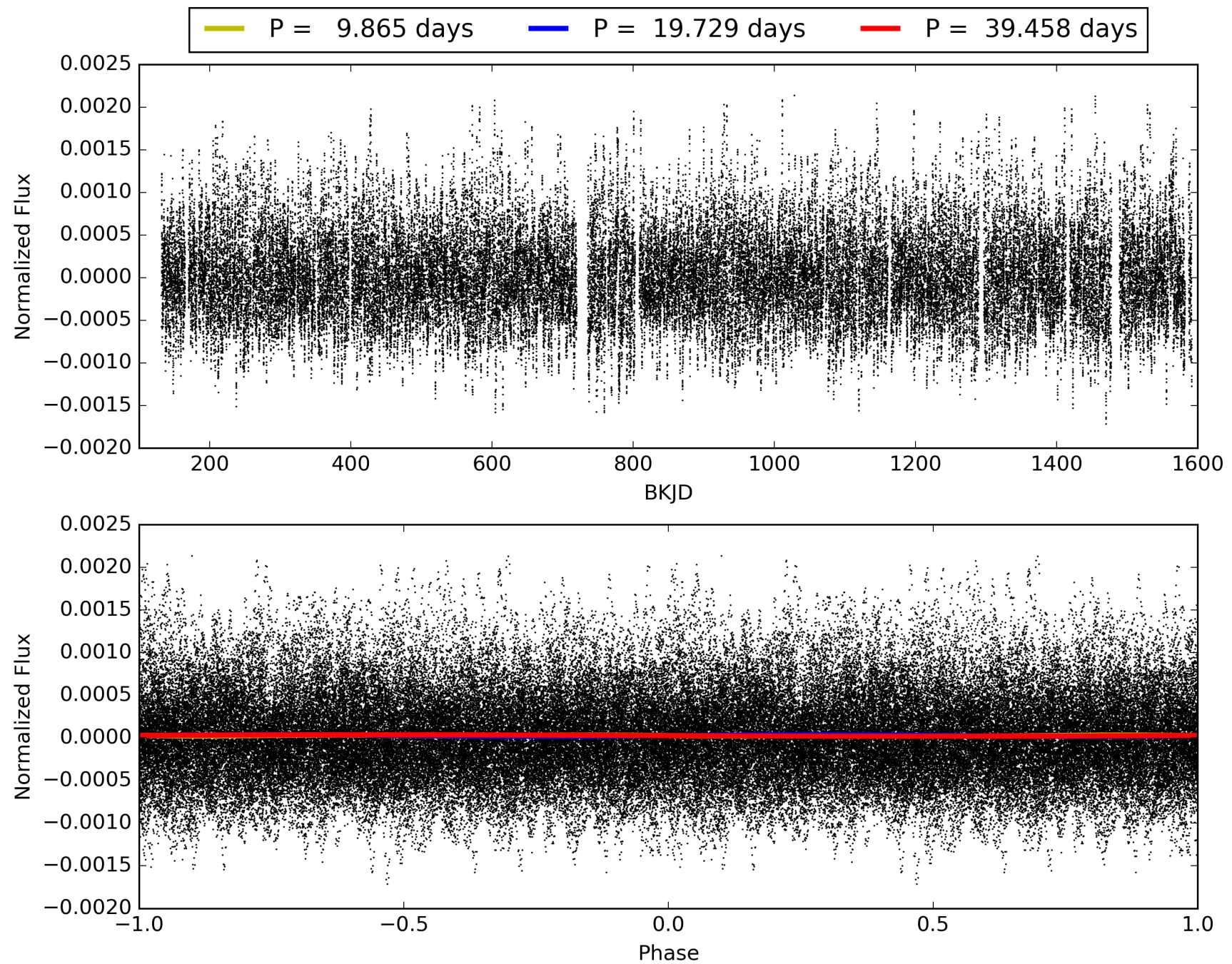
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:09:46 Z

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

TCE 008127778-10, PDC Light Curves

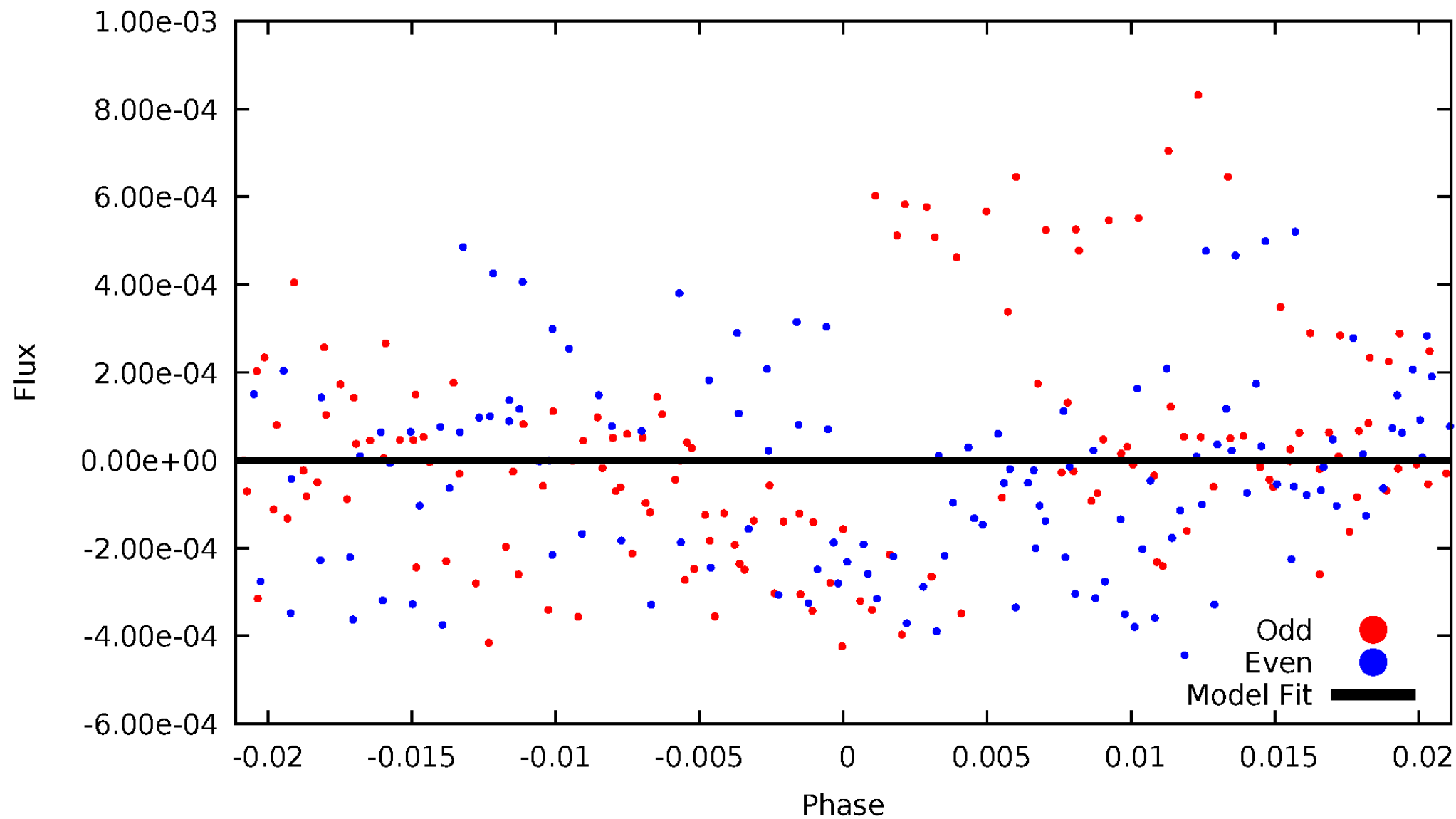


TCE 008127778-10



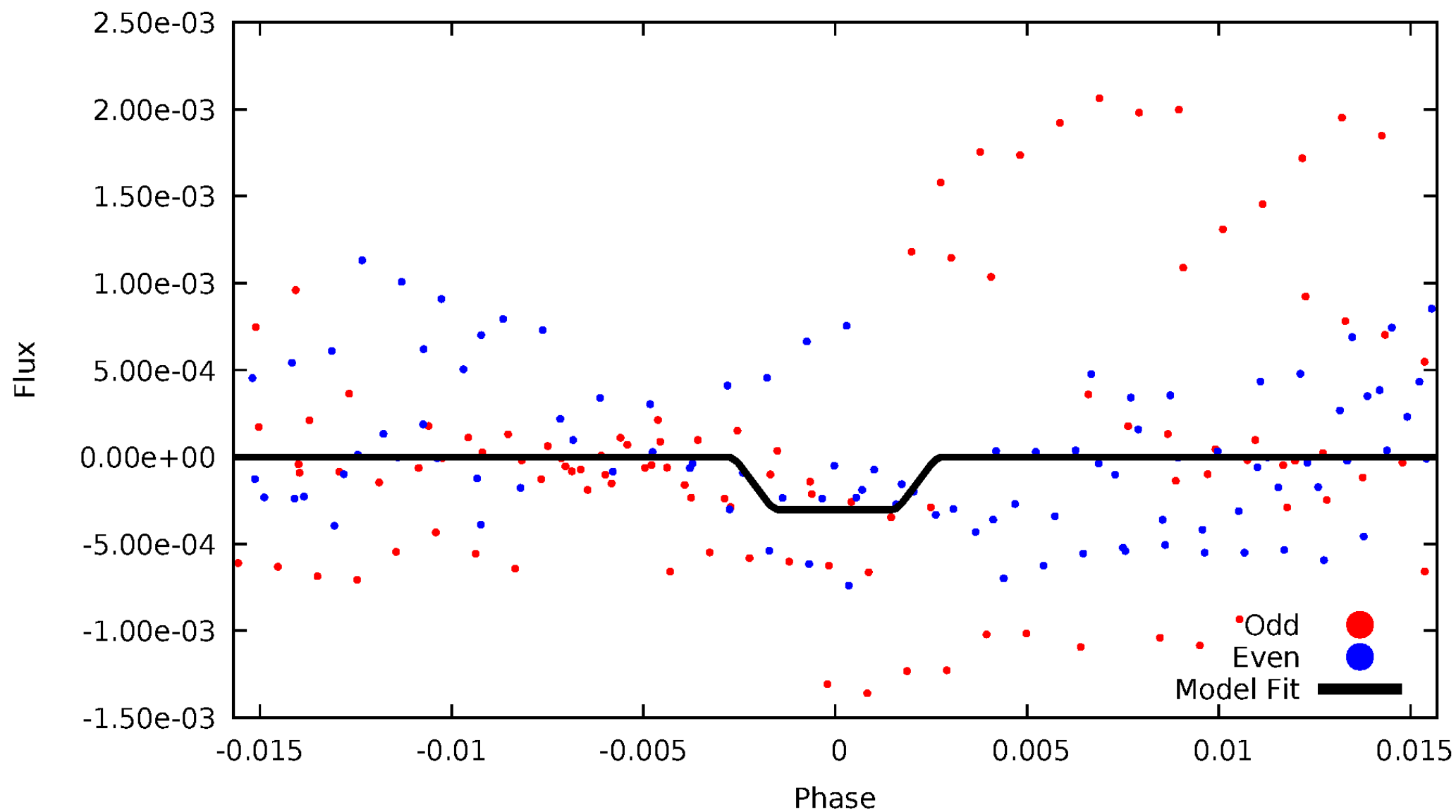
DV Odd/Even

TCE 00812778-10



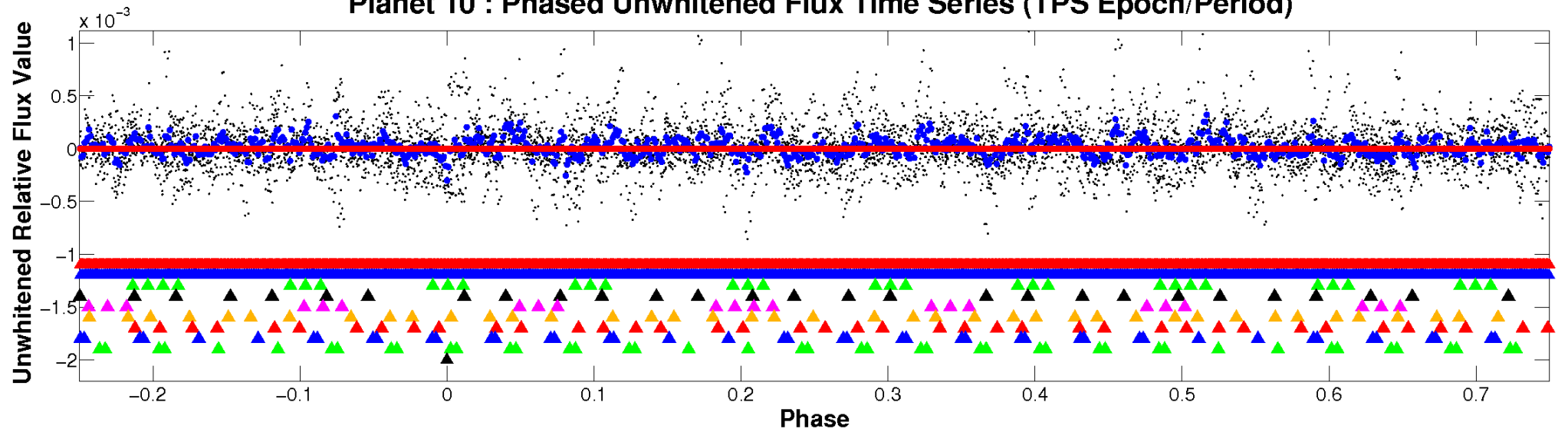
ALT Odd/Even

TCE 00812778-10

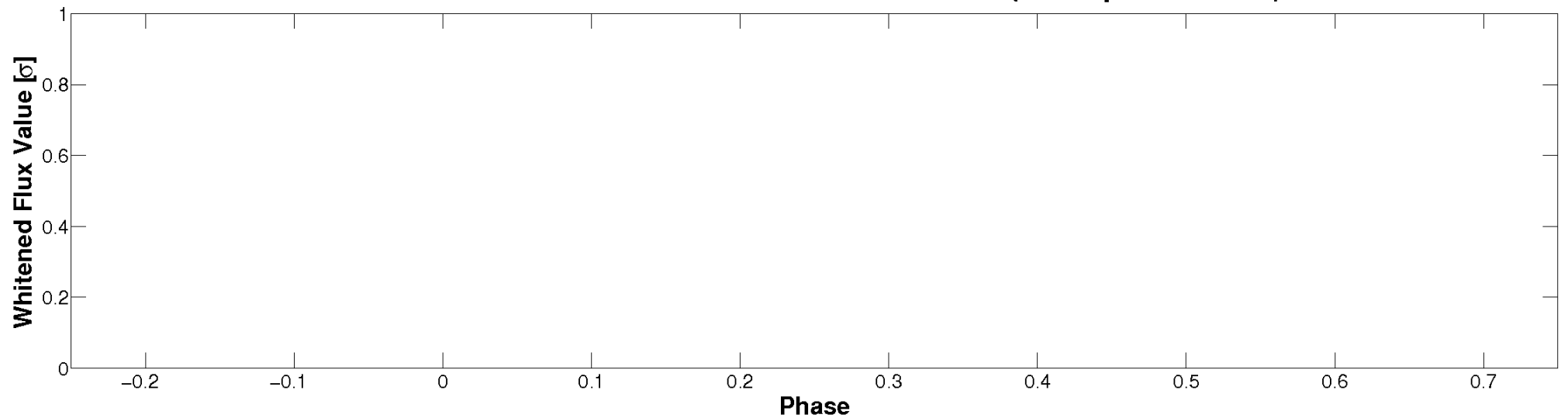


Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

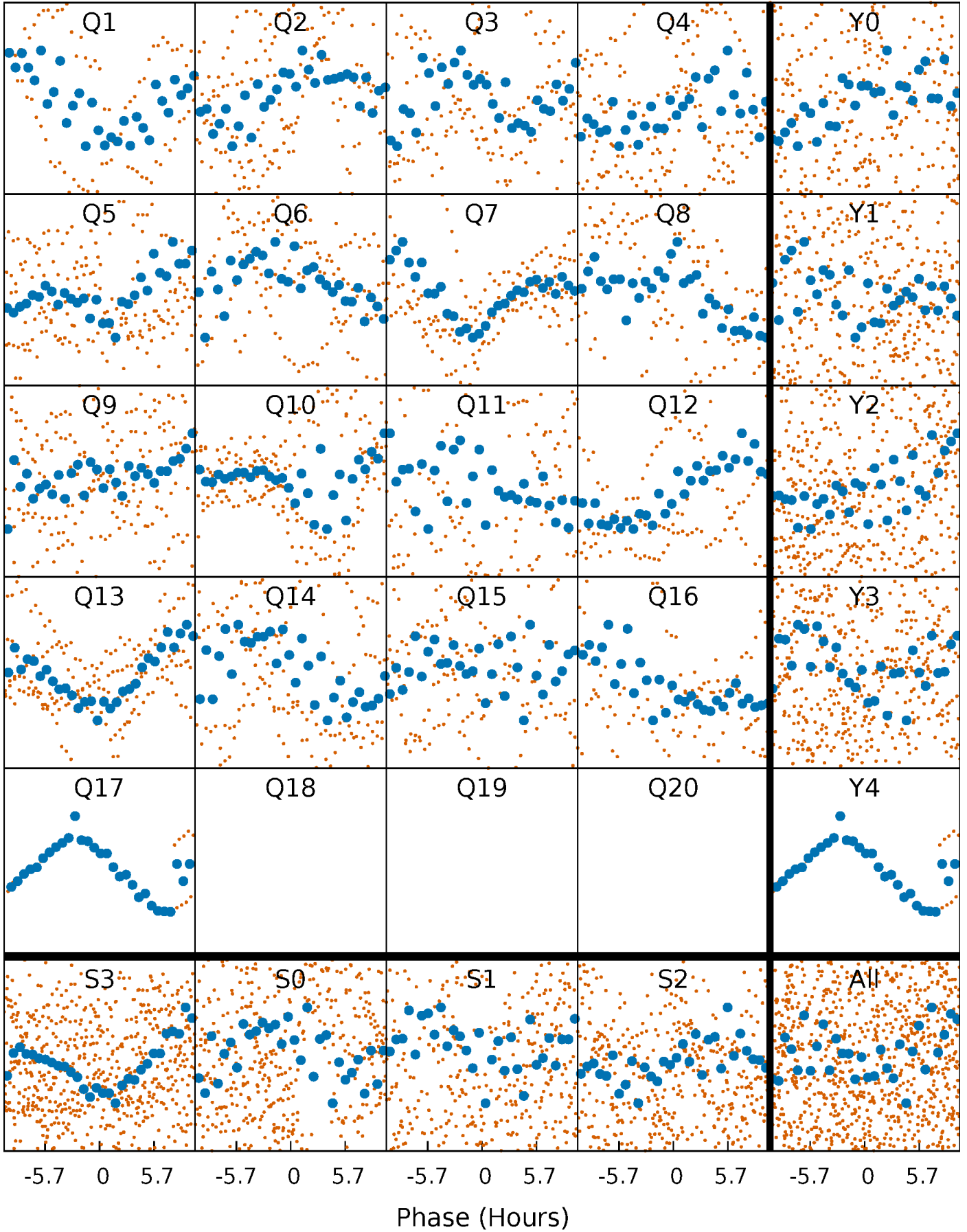


Planet 10 : Phased Whitened Flux Time Series (TPS Epoch/Period)



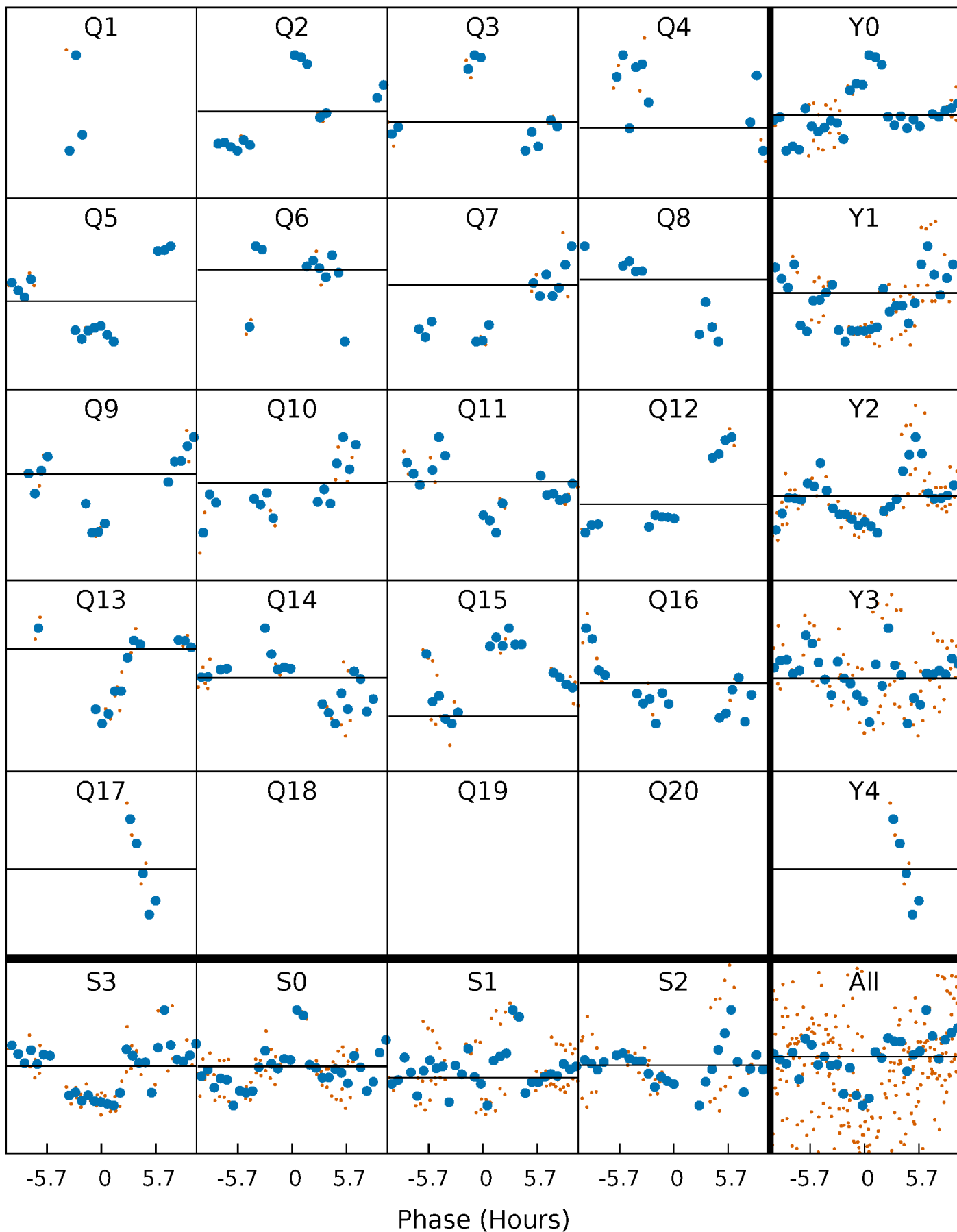
PDC Quarter-Phased Transit Curves

TCE 008127778-10 P= 19.729039 Days $T_0=138.427754$ (BKJD)



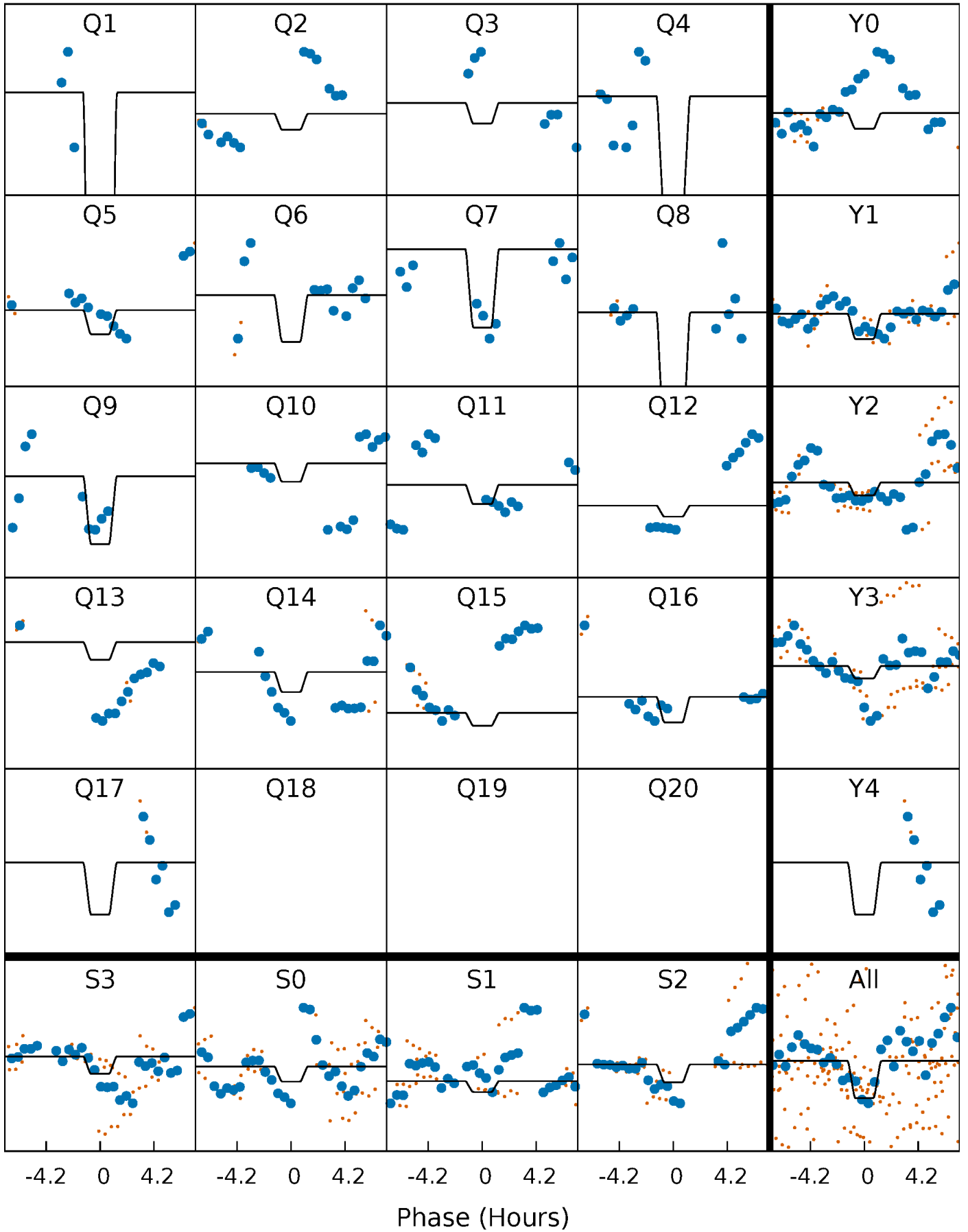
DV Quarter-Phased Transit Curves

TCE 008127778-10 P= 19.729039 Days $T_0=138.427754$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

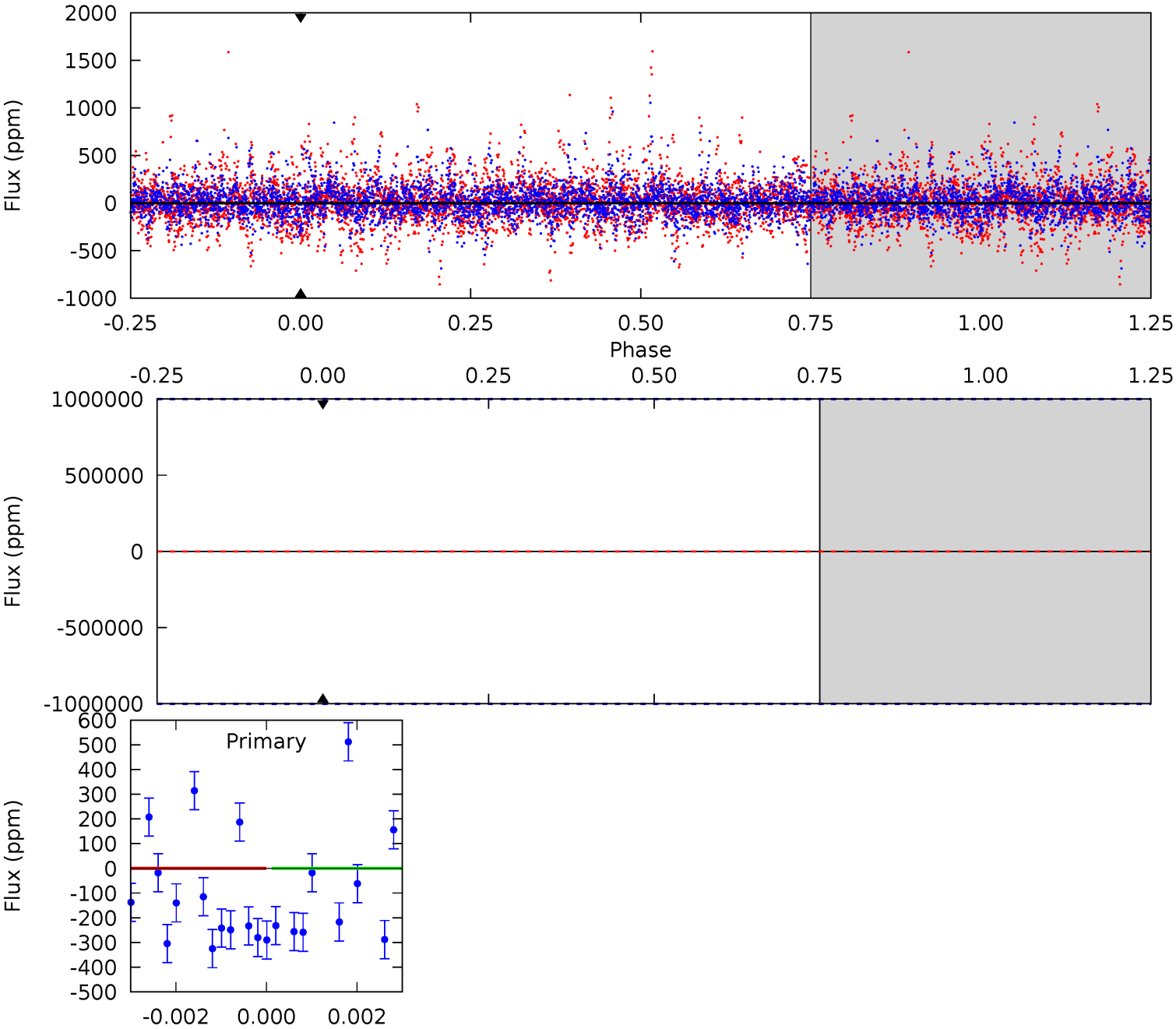
TCE 008127778-10 P= 19.729039 Days $T_0=138.410373$ (BKJD)



DV Model-Shift Uniqueness Test

008127778-10, P = 19.729039 Days, E = 118.698715 Days

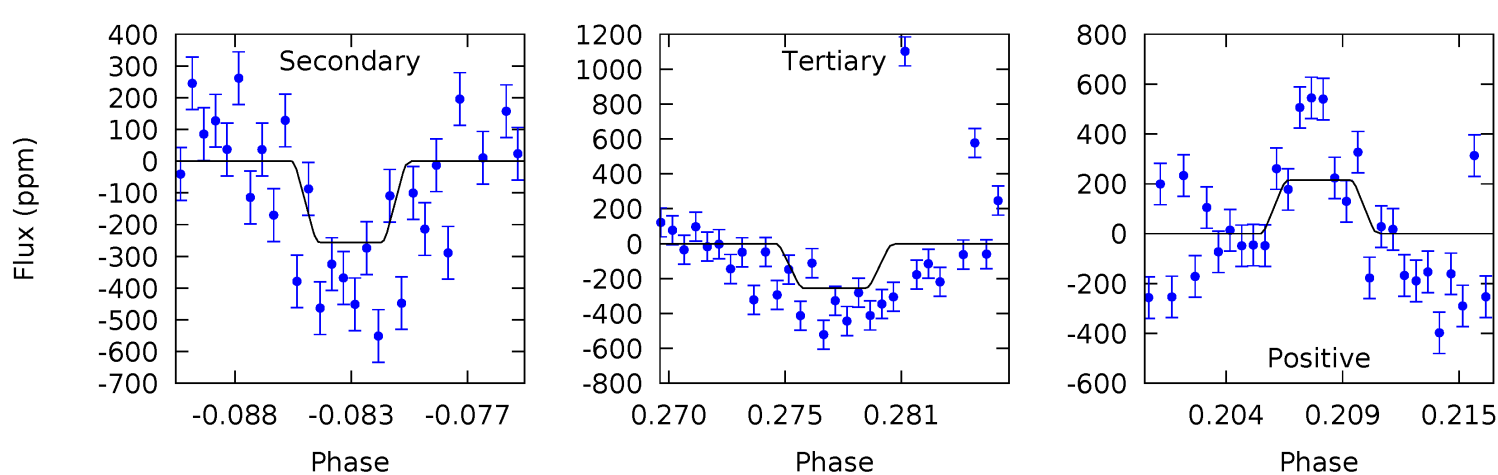
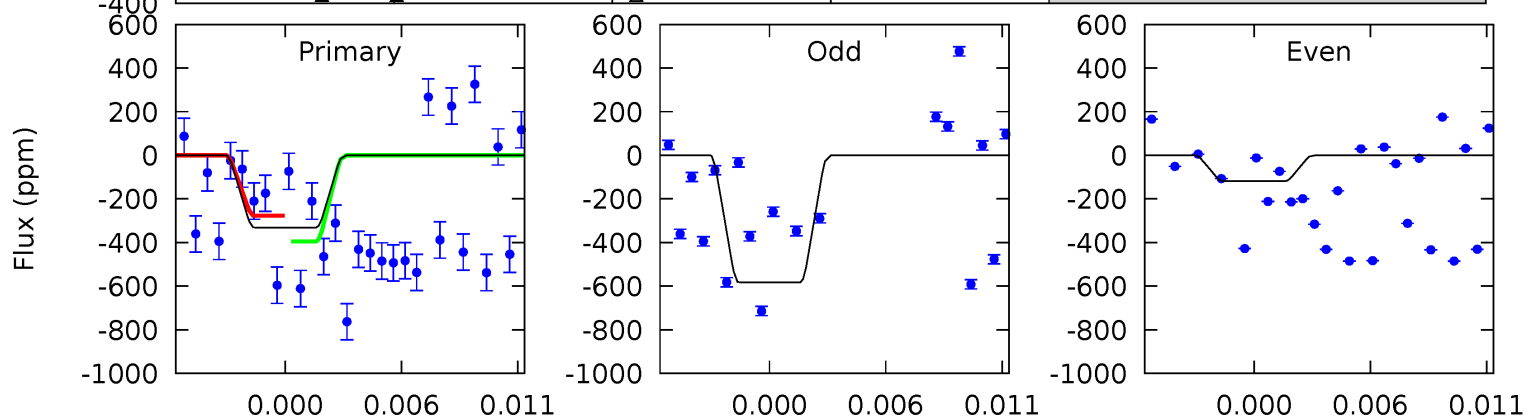
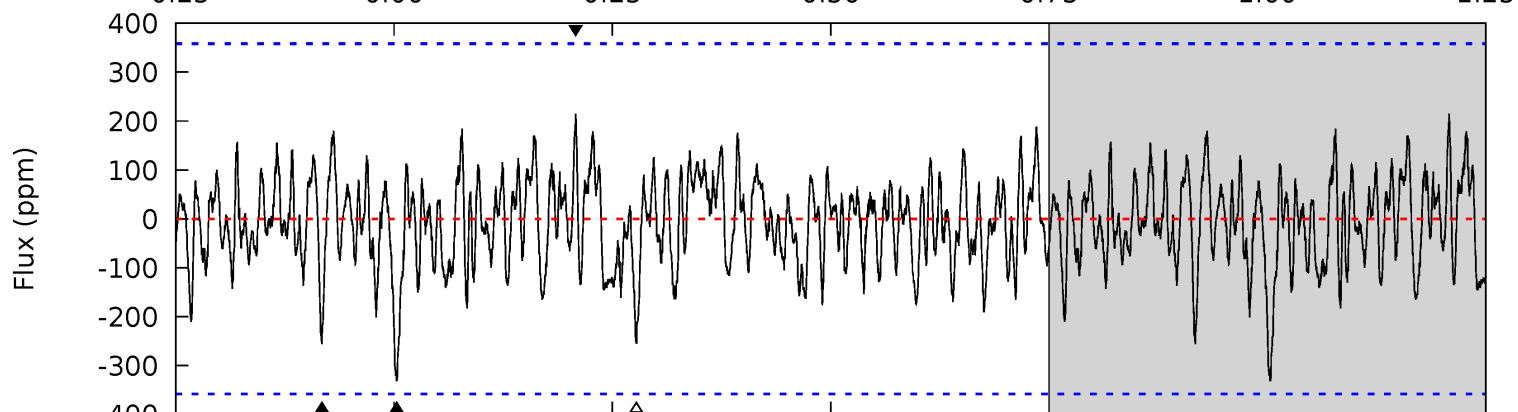
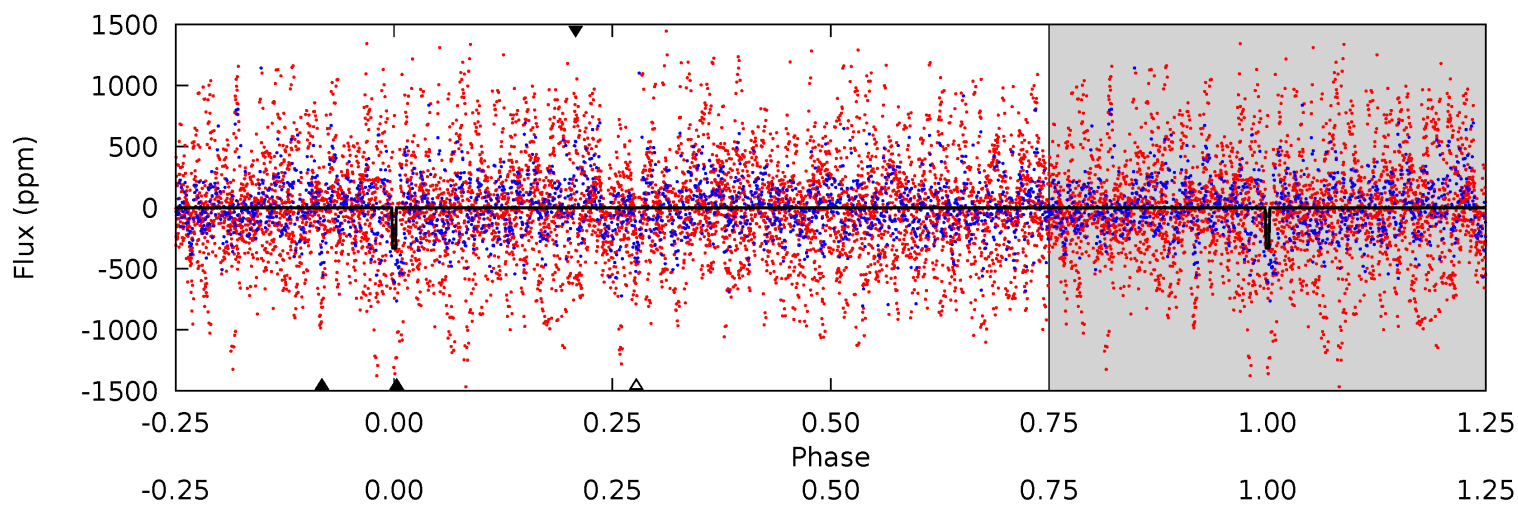
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008127778-10, $P = 19.729039$ Days, $E = 118.681334$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.76	3.68	3.66	3.08	5.14	2.78	1.13	1.10	1.69	0.01	0.60	3.32	1.26	0.39	0.85



Stellar Parameters For KIC 008127778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9051^{+251}_{-466}	$4.086^{+0.144}_{-0.176}$	$0.070^{+0.150}_{-0.650}$	$2.210^{+0.719}_{-0.588}$	$2.170^{+0.372}_{-0.605}$	$0.283^{+0.268}_{-0.139}$
	+3%/-5%	+4%/-4%	+214%/-929%	+33%/-27%	+17%/-28%	+95%/-49%
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 008127778-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$18.02^{+19.94}_{-12.70}$	1932^{+139}_{-147}	3288^{+55126}_{-64912}	$2.509^{+9347.345}_{-10060.279}$
Alt.	-256 ± 70	$18.09^{+17.90}_{-12.41}$	1926^{+152}_{-138}	4178^{+2782}_{-923}	14^{+129}_{-11}

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

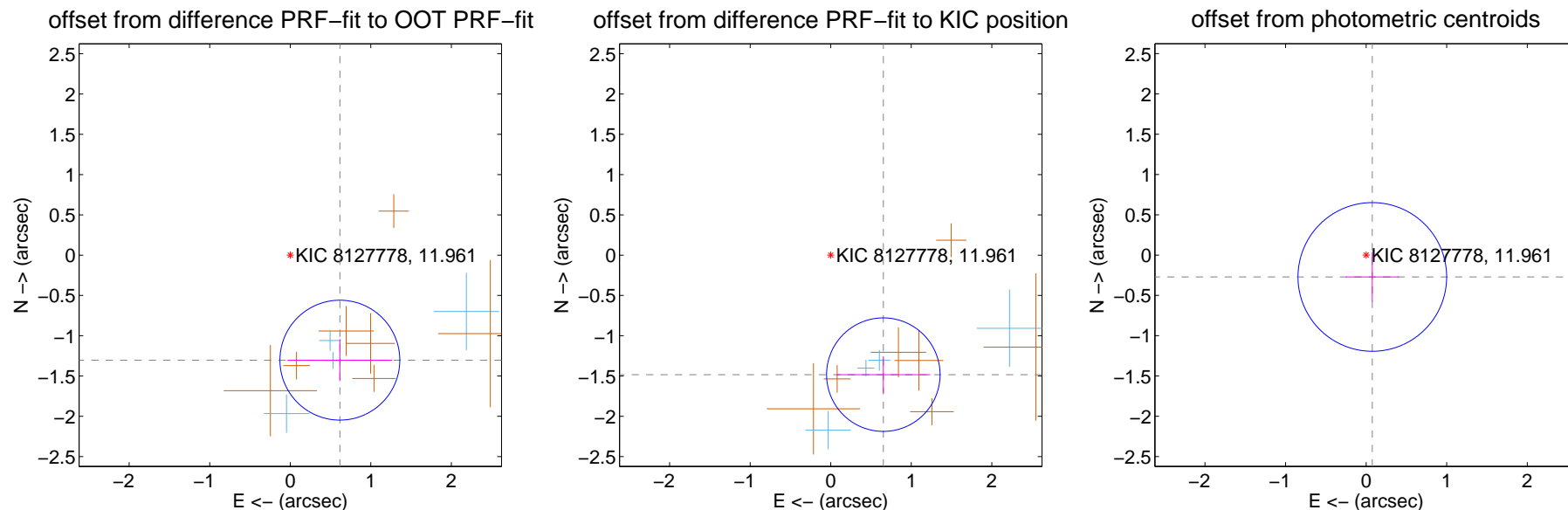
DV Centroid Data

Supplemental centroid analysis for 008127778-10. **Kepler magnitude: 11.96.** Transit SNR -1.00

There are 4 quarters with good PRF difference image offsets

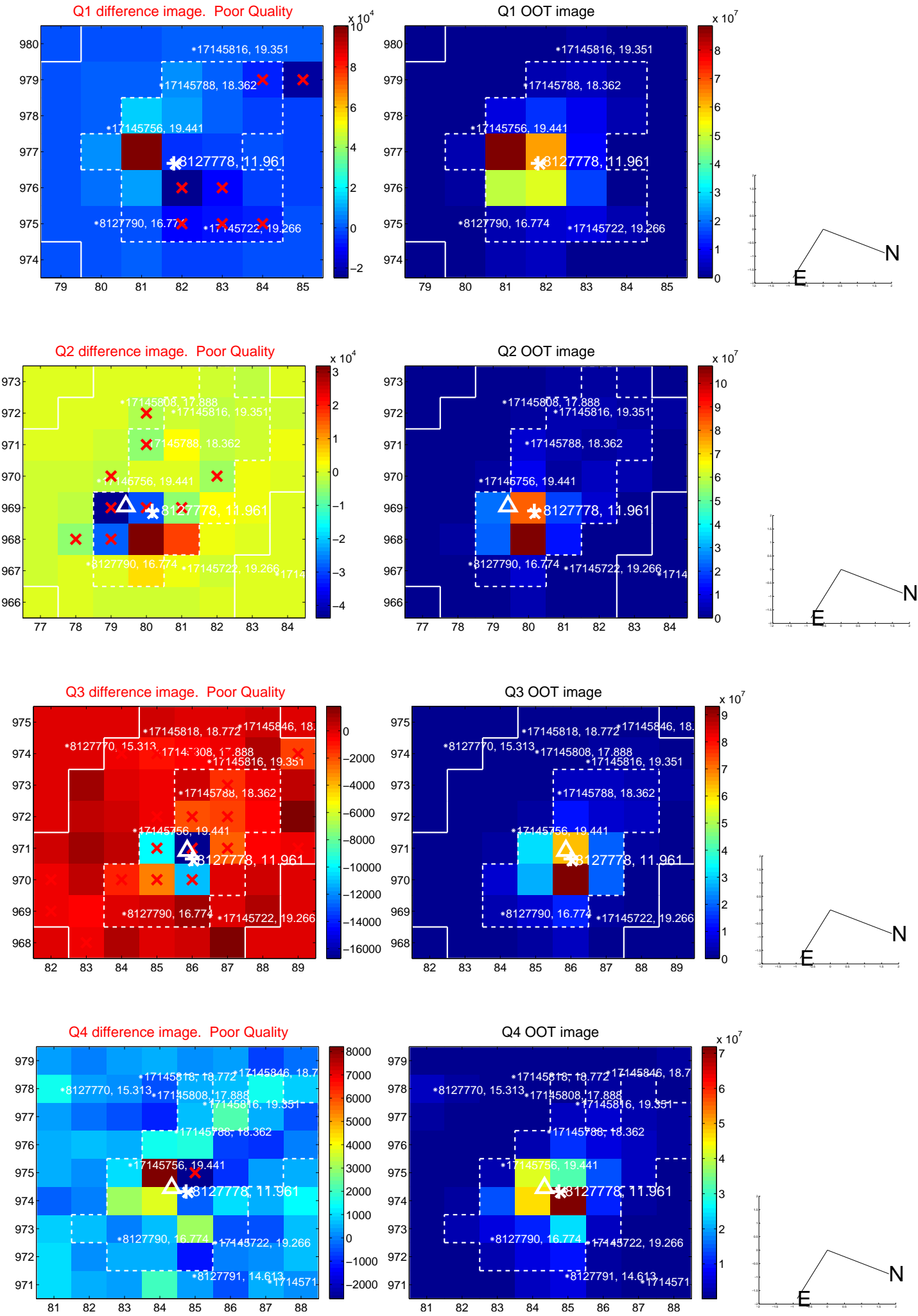
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.441 ± 0.248	5.81	-0.616 ± 0.651	-1.303 ± 0.259
PRF-fit source offset from KIC position	1.620 ± 0.235	6.90	-0.653 ± 0.582	-1.483 ± 0.228
photometric centroid source offset	0.28 ± 0.31	0.92	-0.08 ± 0.33	-0.27 ± 0.31

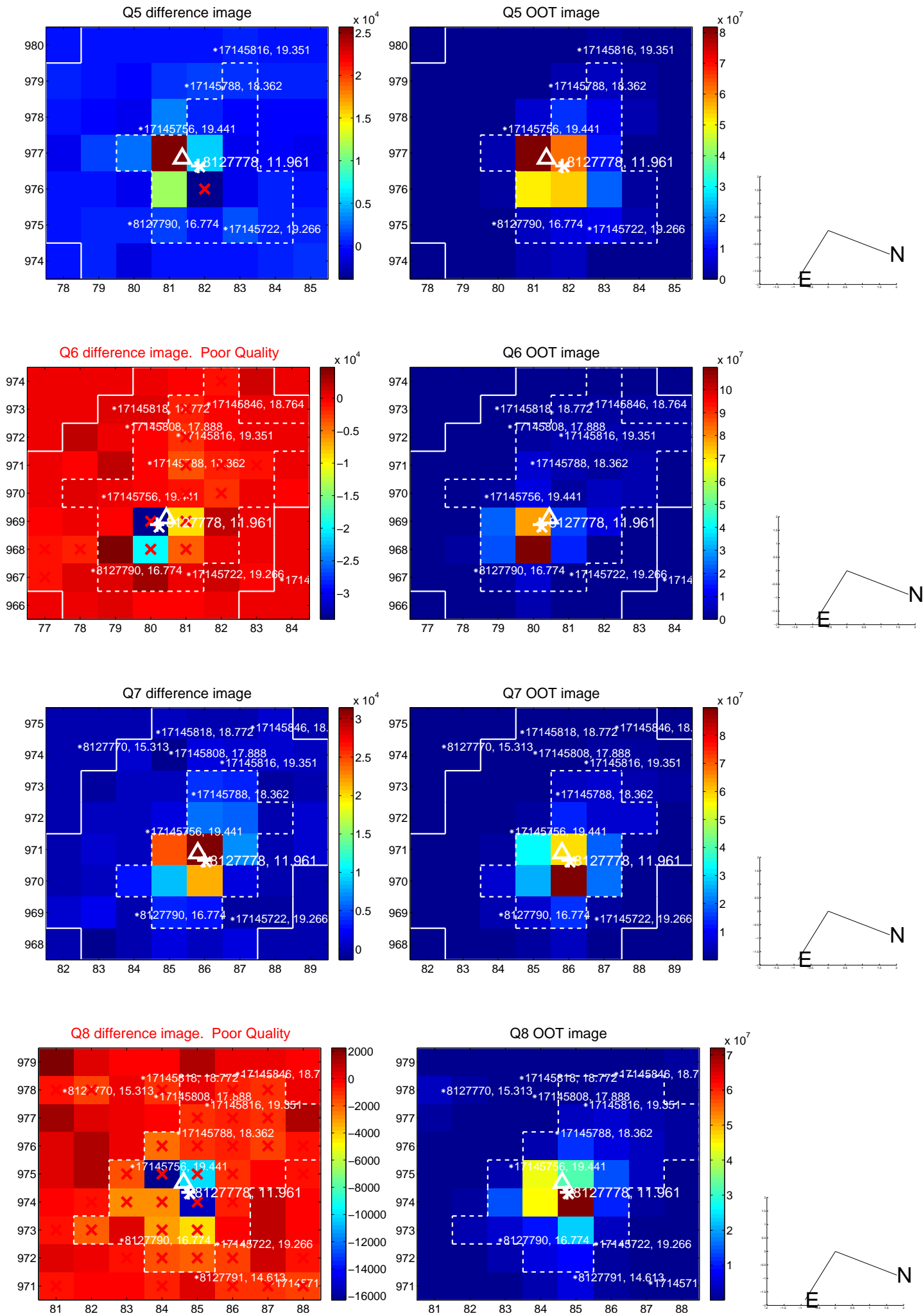


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

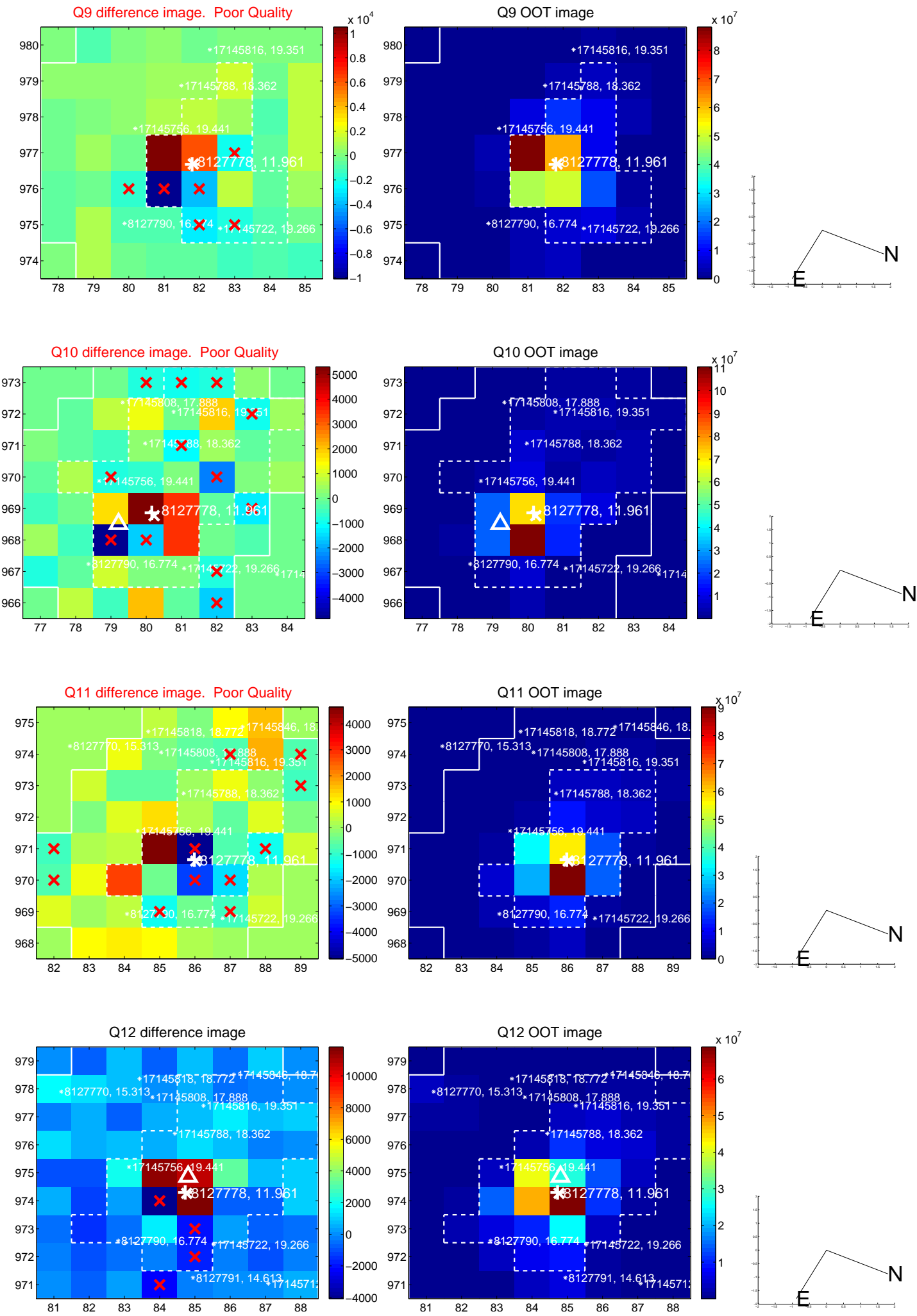
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



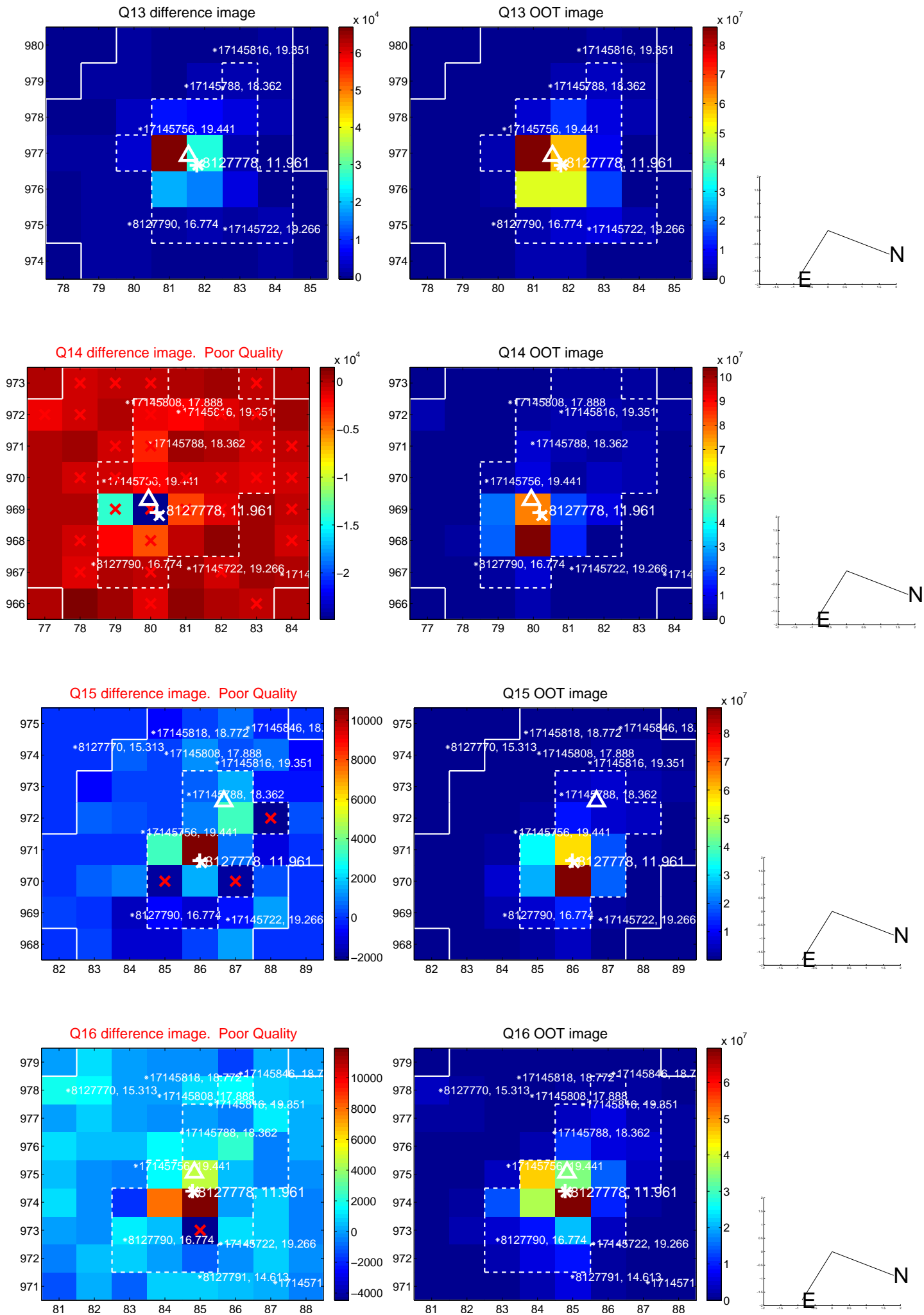
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



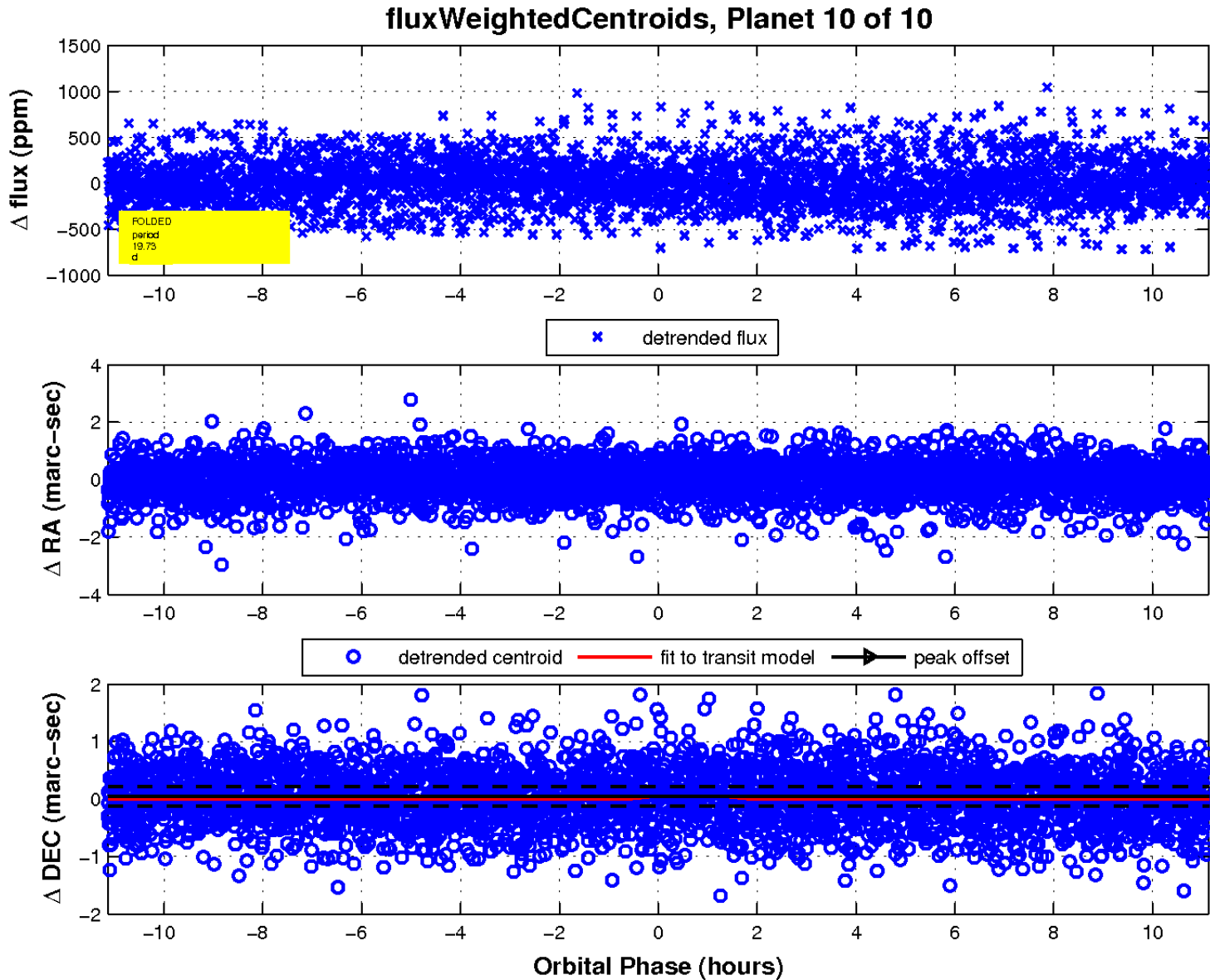
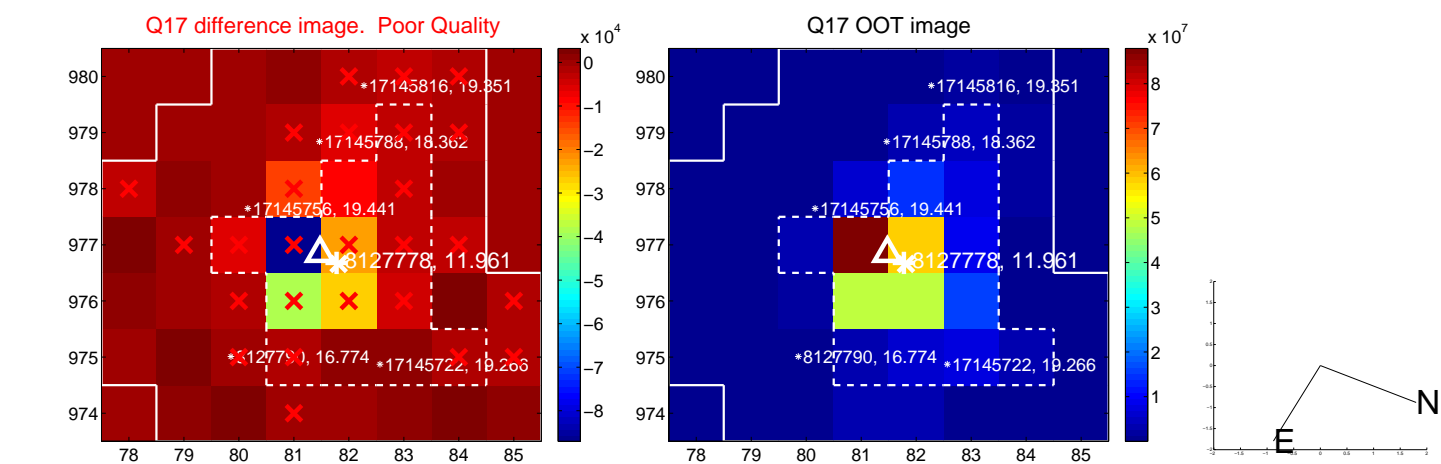
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

