

KIC 009636283

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})
009636283-01	OBS	No	0.649467	131.808264	57.9	1.825	13.8	10.0	2.47	7994	2.18	68132.98
009636283-02	OBS	No	0.649447	132.045937	112.5	0.878	7.9	9.8	2.47	7994	3.09	68135.77
009636283-03	OBS	No	0.811354	132.293548	79.9	9.736	7.5	9.0	2.47	7994	2.23	50639.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009636283-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009636283-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
009636283-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

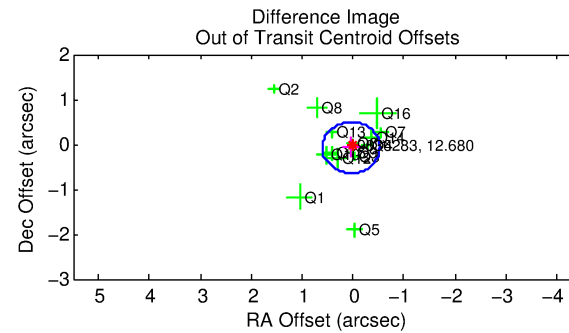
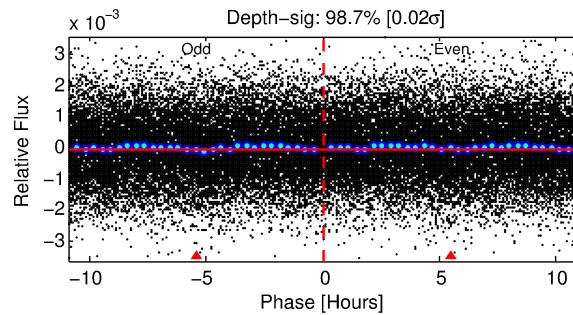
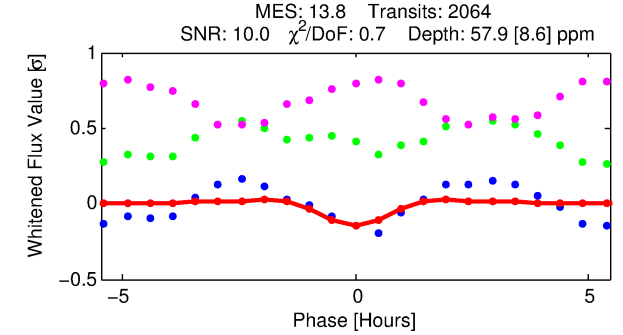
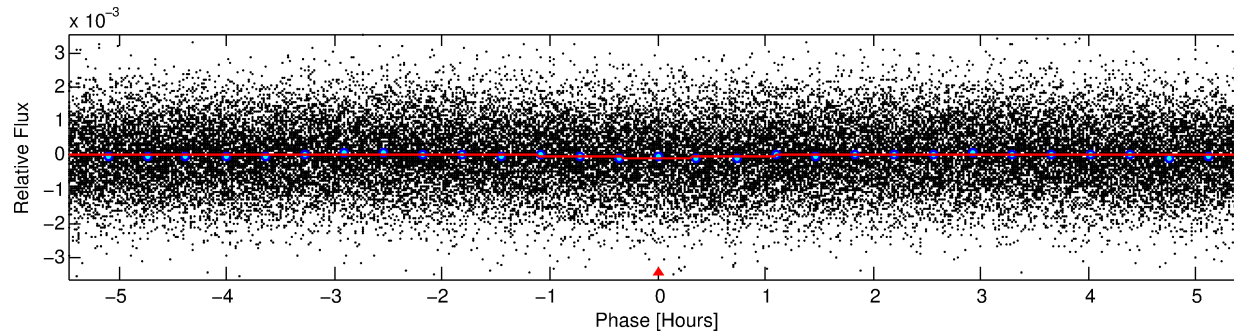
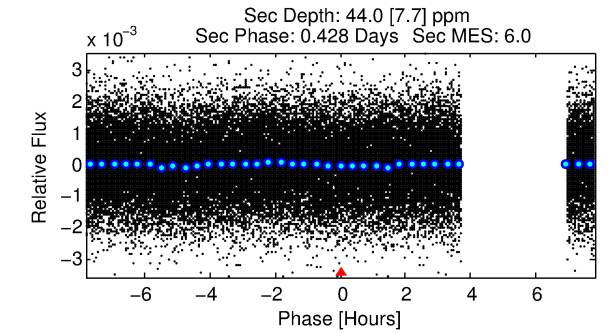
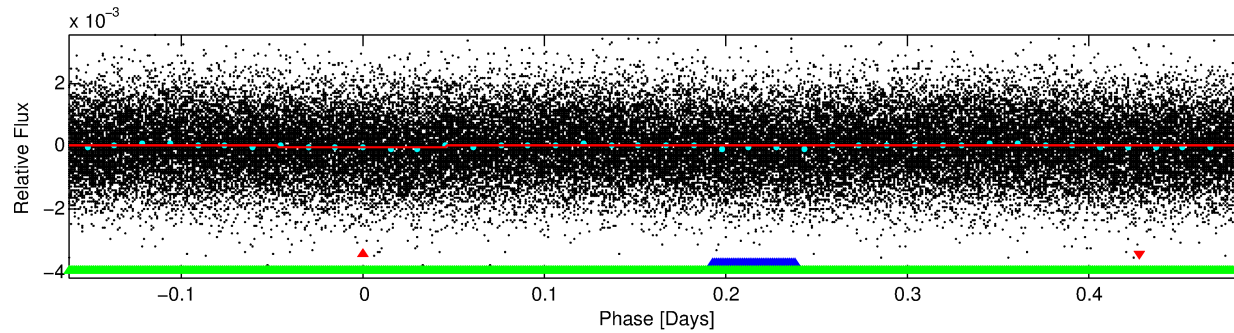
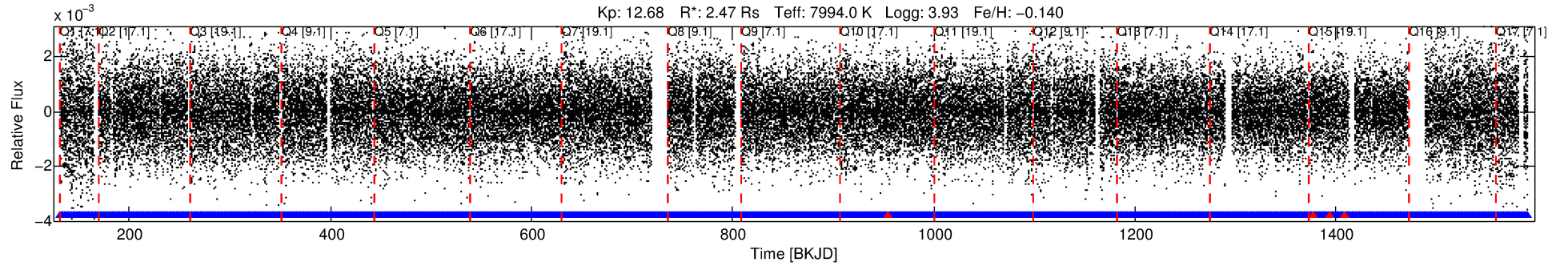
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009636283-01

No Significant Match Found

DV One-Page Summary

KIC: 9636283 Candidate: 1 of 3 Period: 0.649 d



DV Fit Results:

Period = 0.64947 [0.00001] d
Epoch = 131.8083 [0.0029] BKJD
Rp/R* = 0.0081 [0.0061]
a/R* = 1.58 [4.37]
b = 0.89 [1.07]
Seff = 68132.98 [32824.17]
Teq = 4120 [496] K
Rp = 2.18 [1.80] Re
a = 0.0181 [0.0053] AU
Ag = 1.67 [2.66] [0.25σ]
Teffp = 7239 [2787] K [1.10σ]

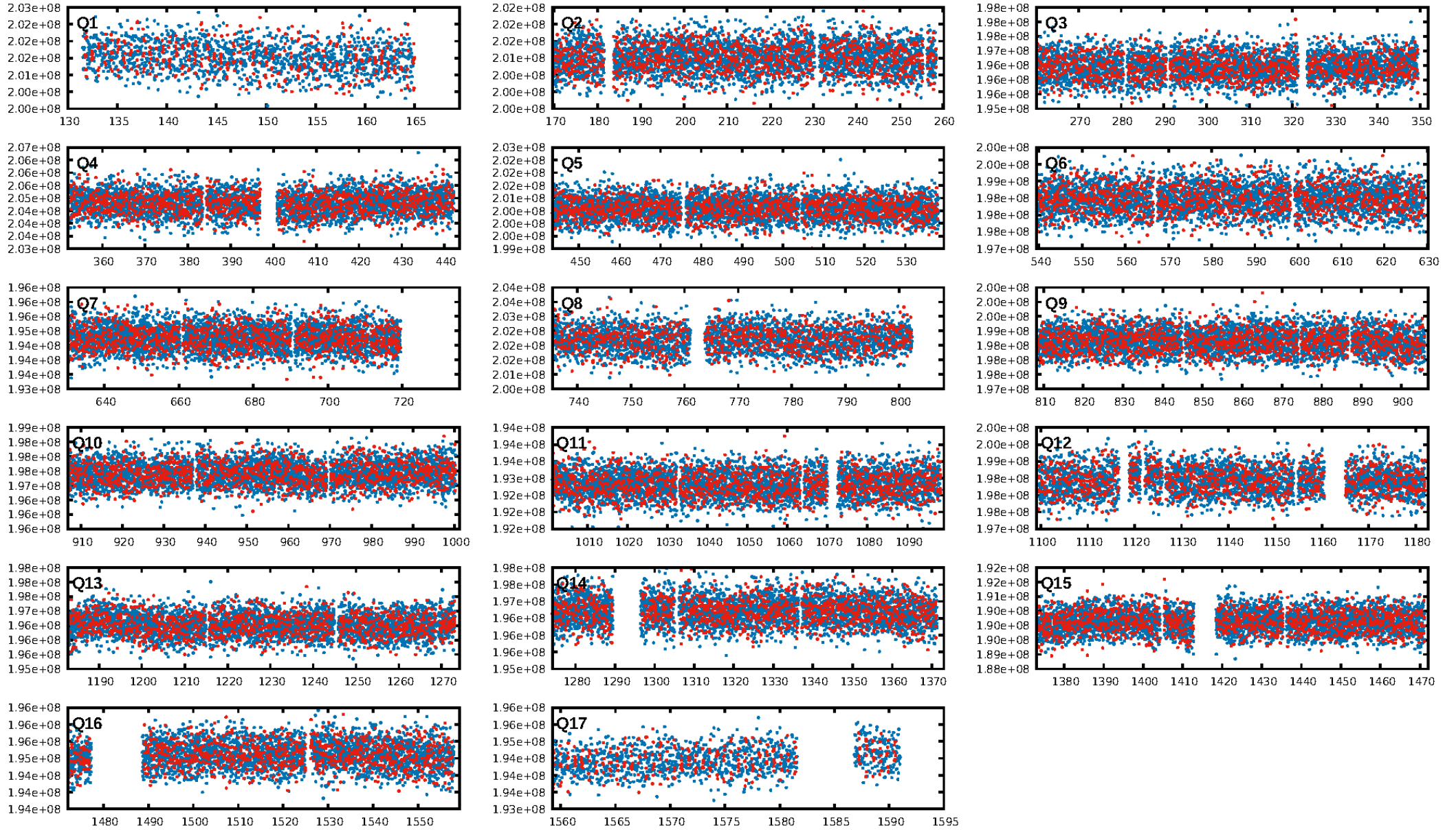
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 30.5% [0.39σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1967/1971]
GhostDiagnostic-chr: 2.686
Centroid-sig: 9.7%
Centroid-so: 0.248 arcsec [0.97σ]
OotOffset-rm: 0.084 arcsec [0.44σ]
KicOffset-rm: 0.064 arcsec [0.40σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 0.00 [0/17]

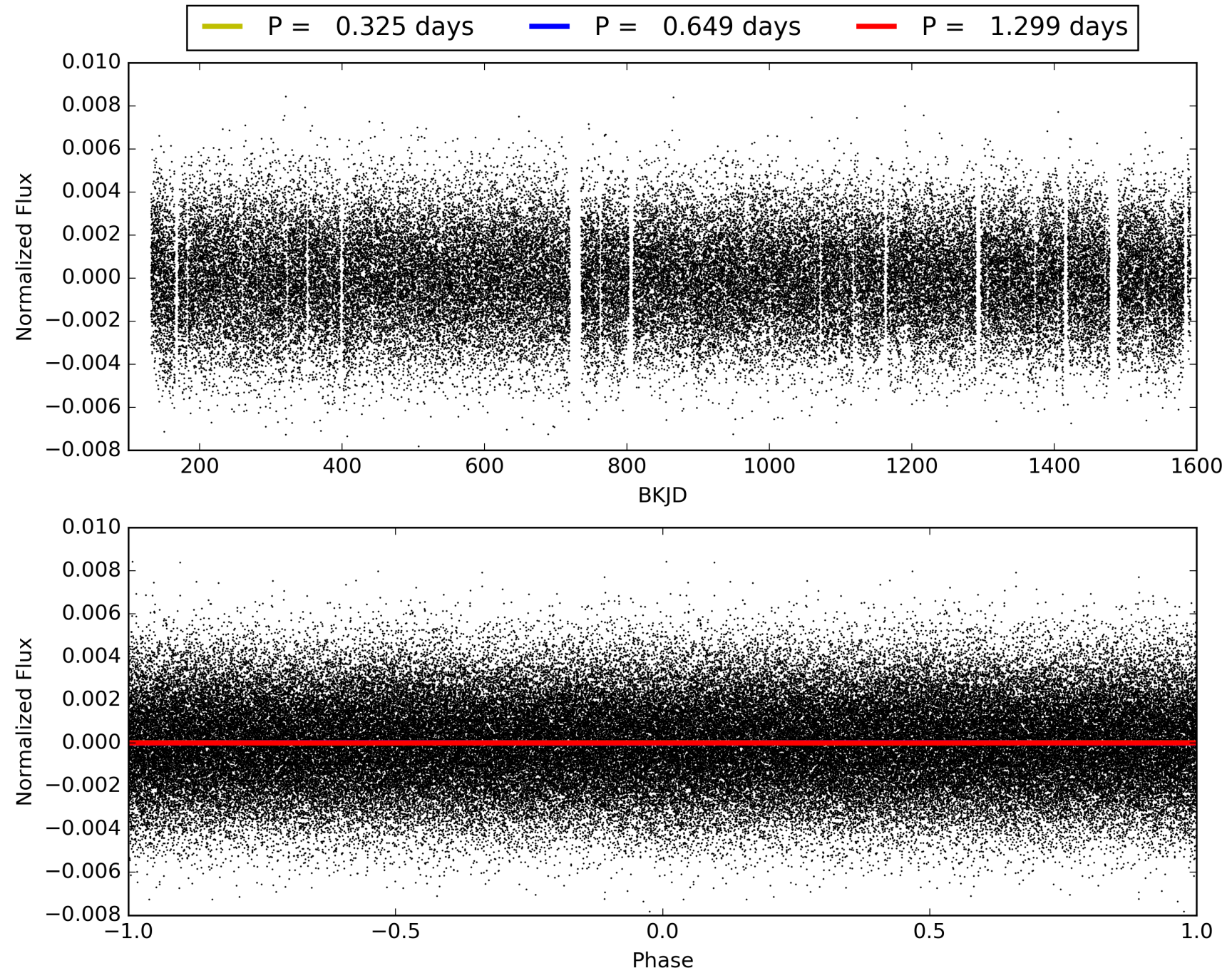
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:28:26 Z

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

TCE 009636283-01, PDC Light Curves

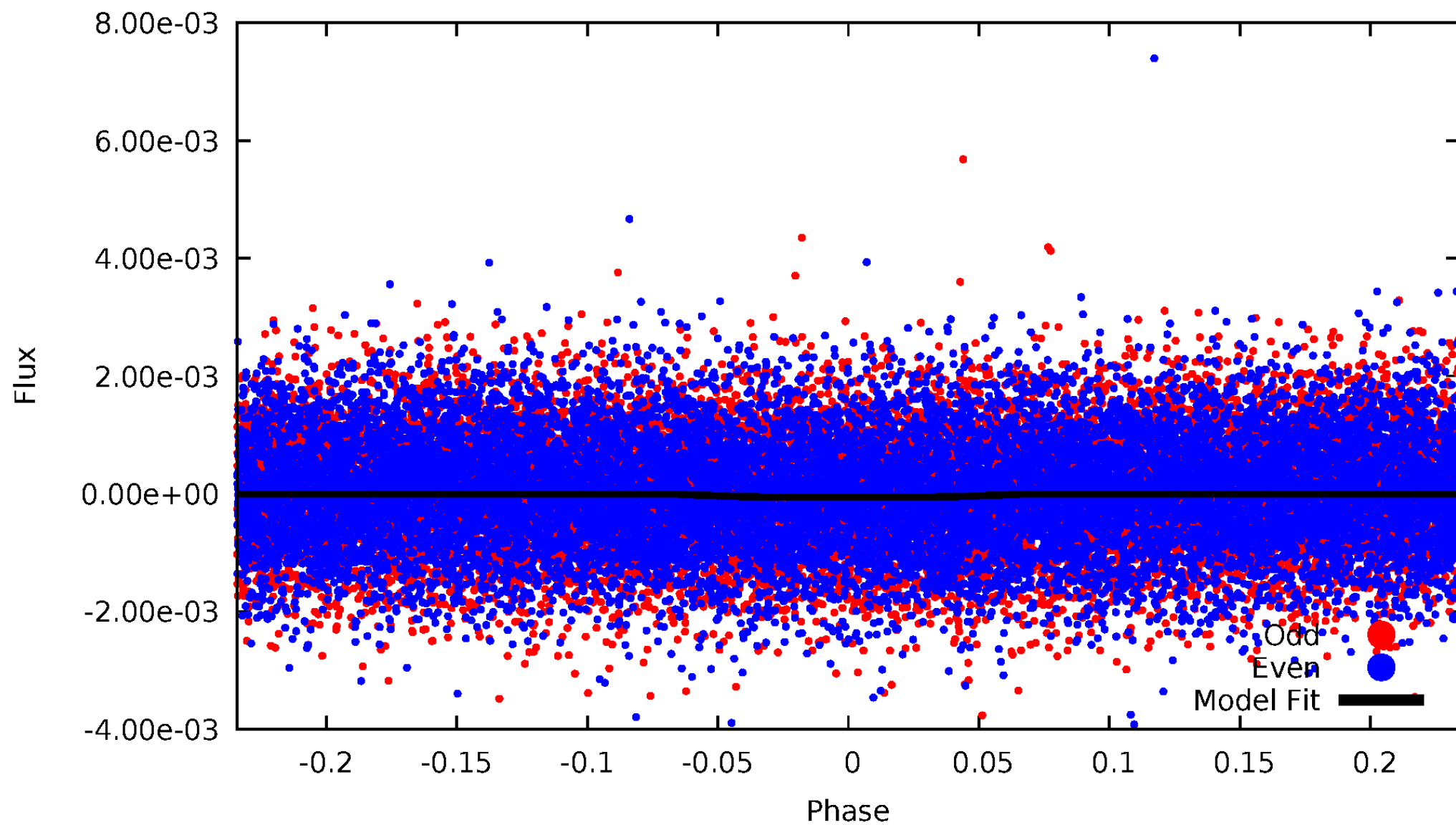


TCE 009636283-01



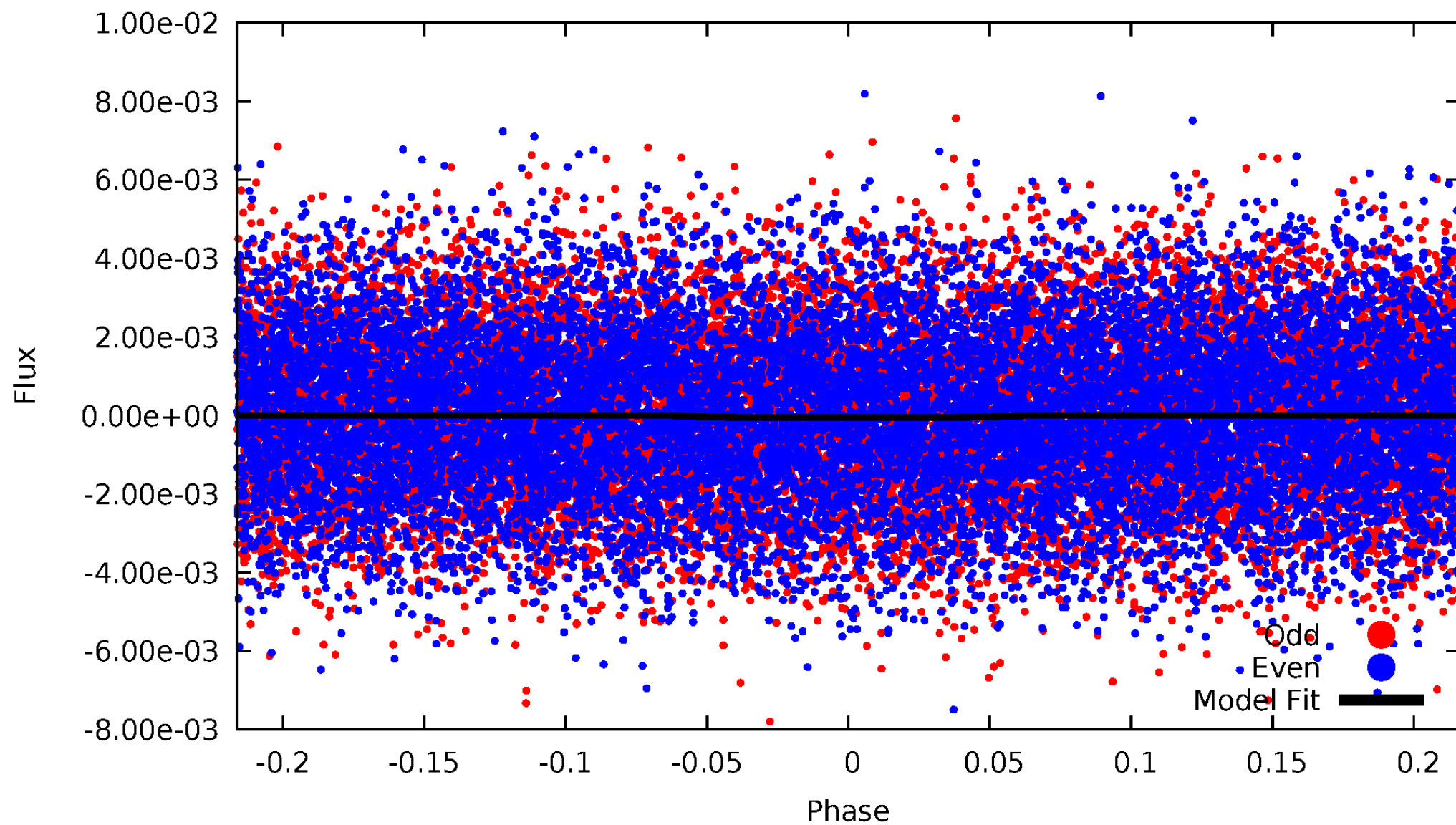
DV Odd/Even

TCE 009636283-01



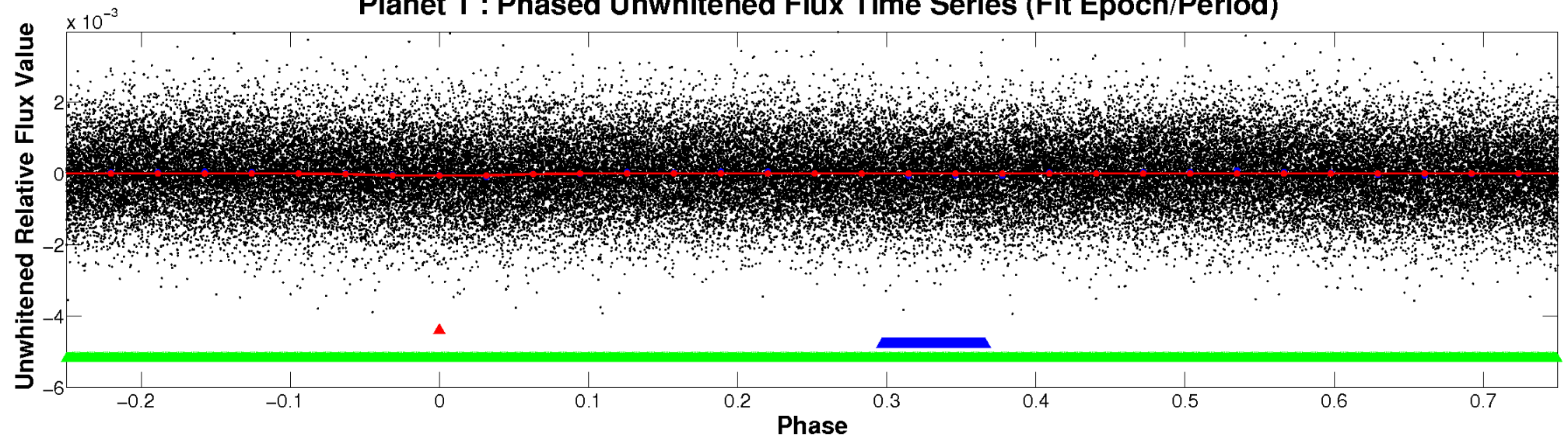
ALT Odd/Even

TCE 009636283-01

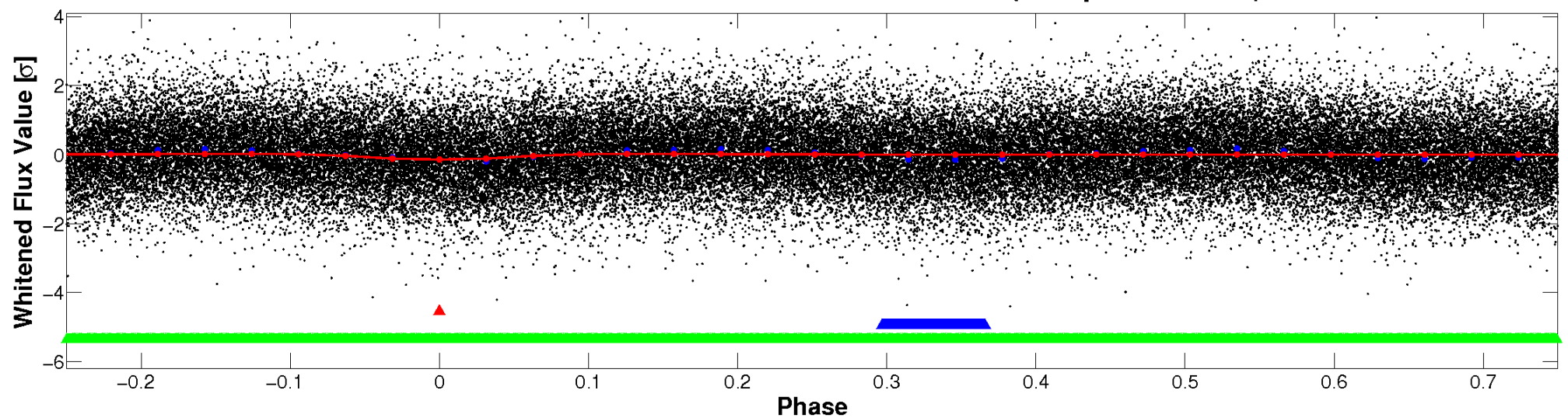


Non-Whitened Vs. Whitened Light Curve

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

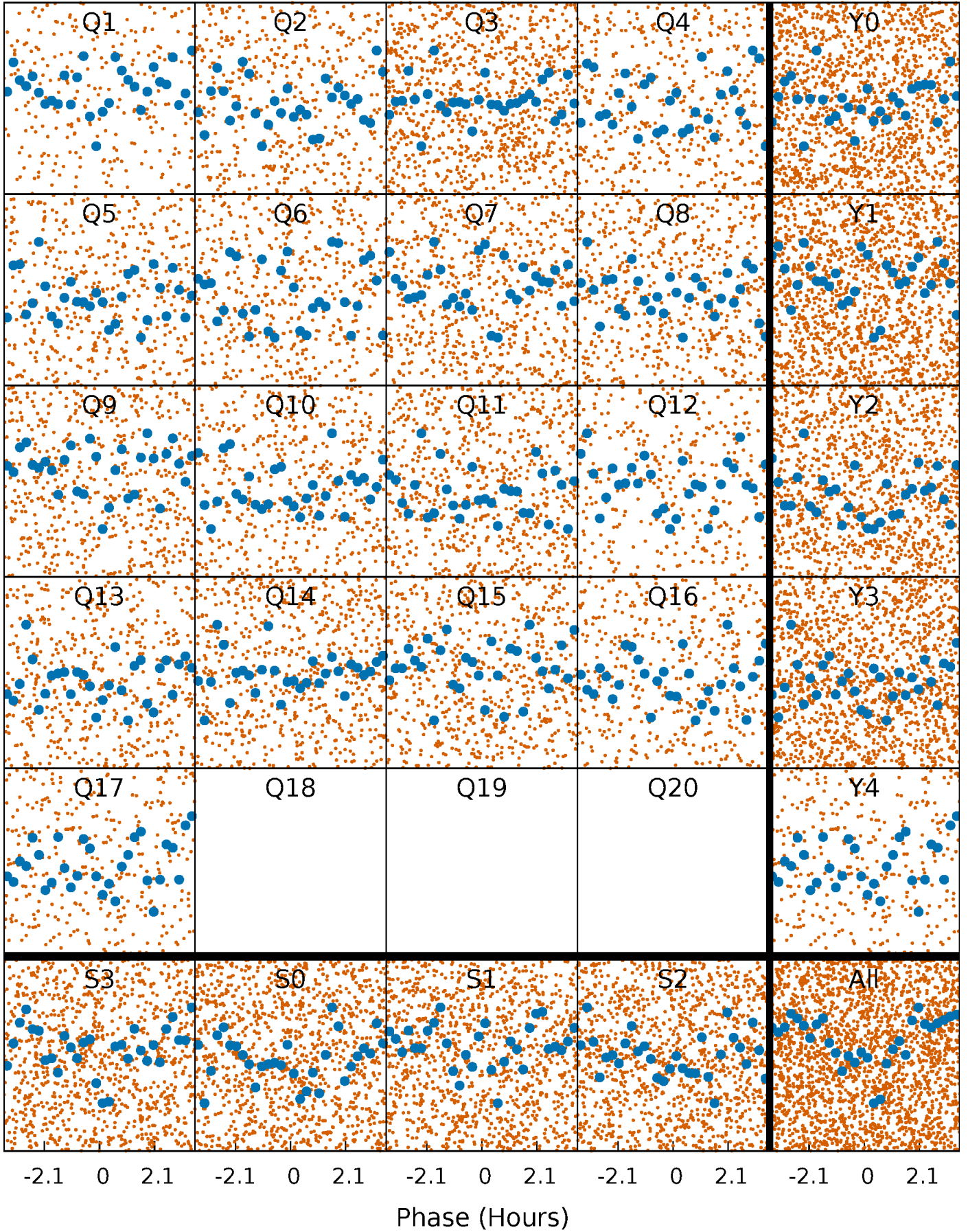


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



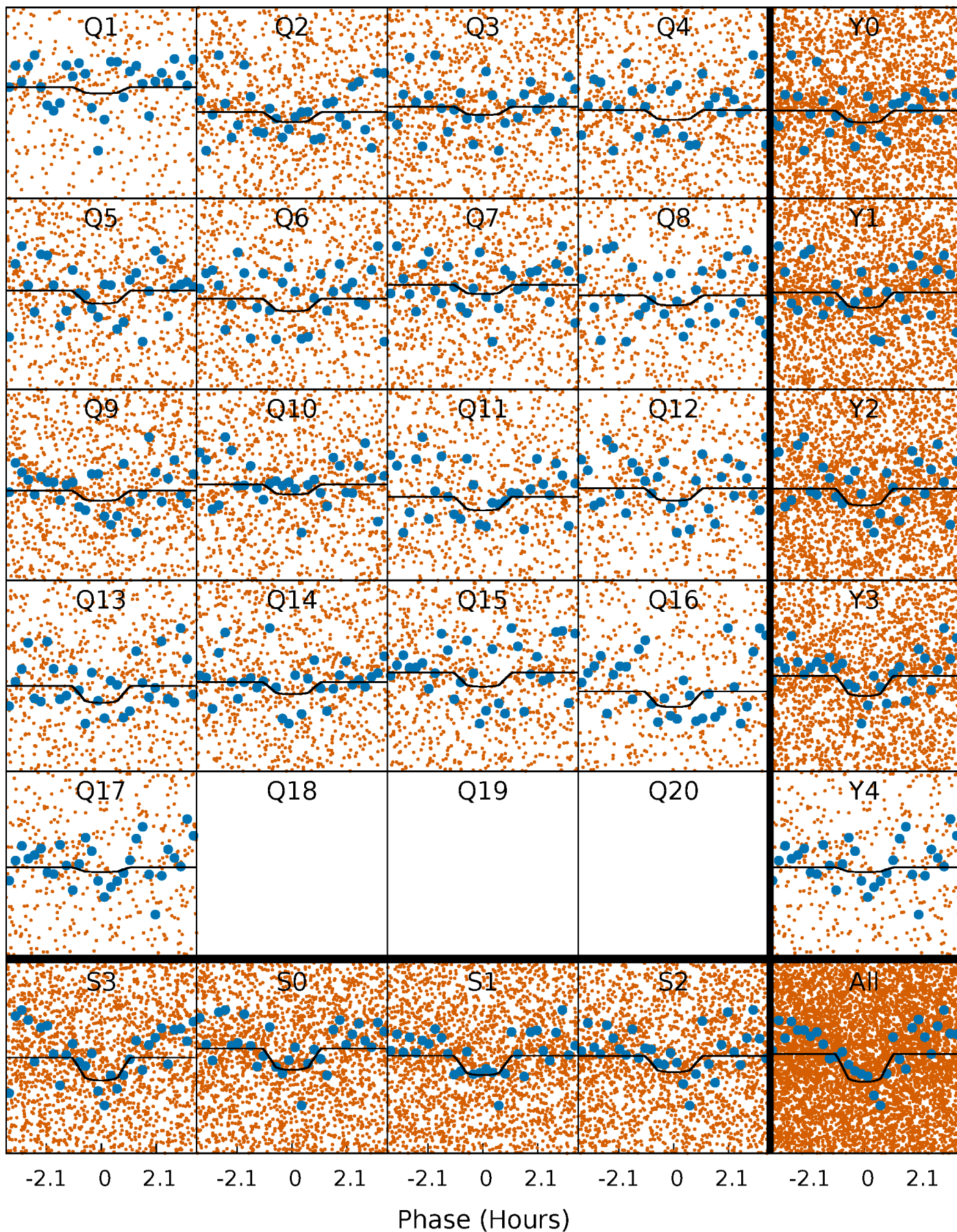
PDC Quarter-Phased Transit Curves

TCE 009636283-01 $P = 0.649467$ Days $T_0 = 131.808264$ (BKJD)



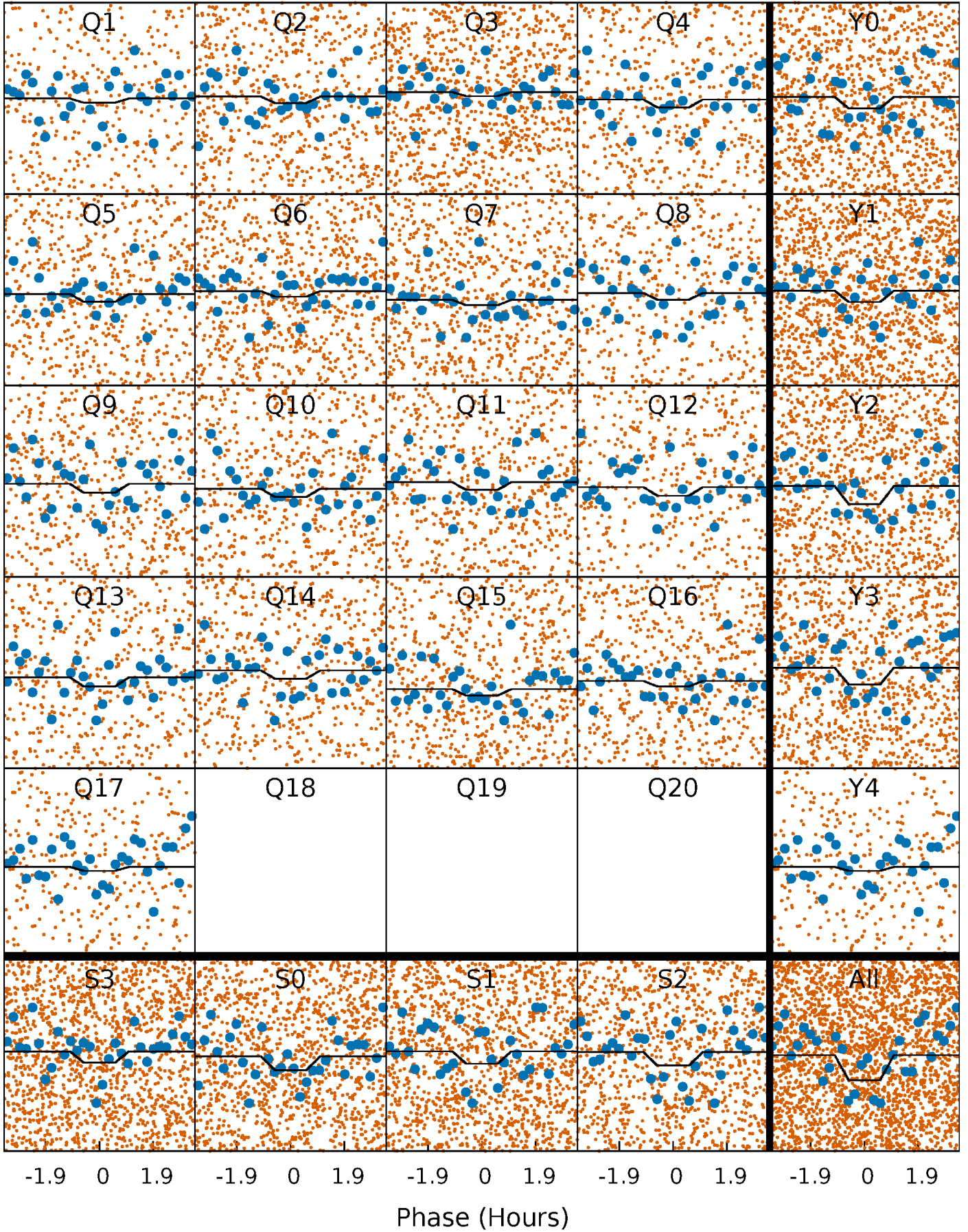
DV Quarter-Phased Transit Curves

TCE 009636283-01 P= 0.649467 Days $T_0=131.808264$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

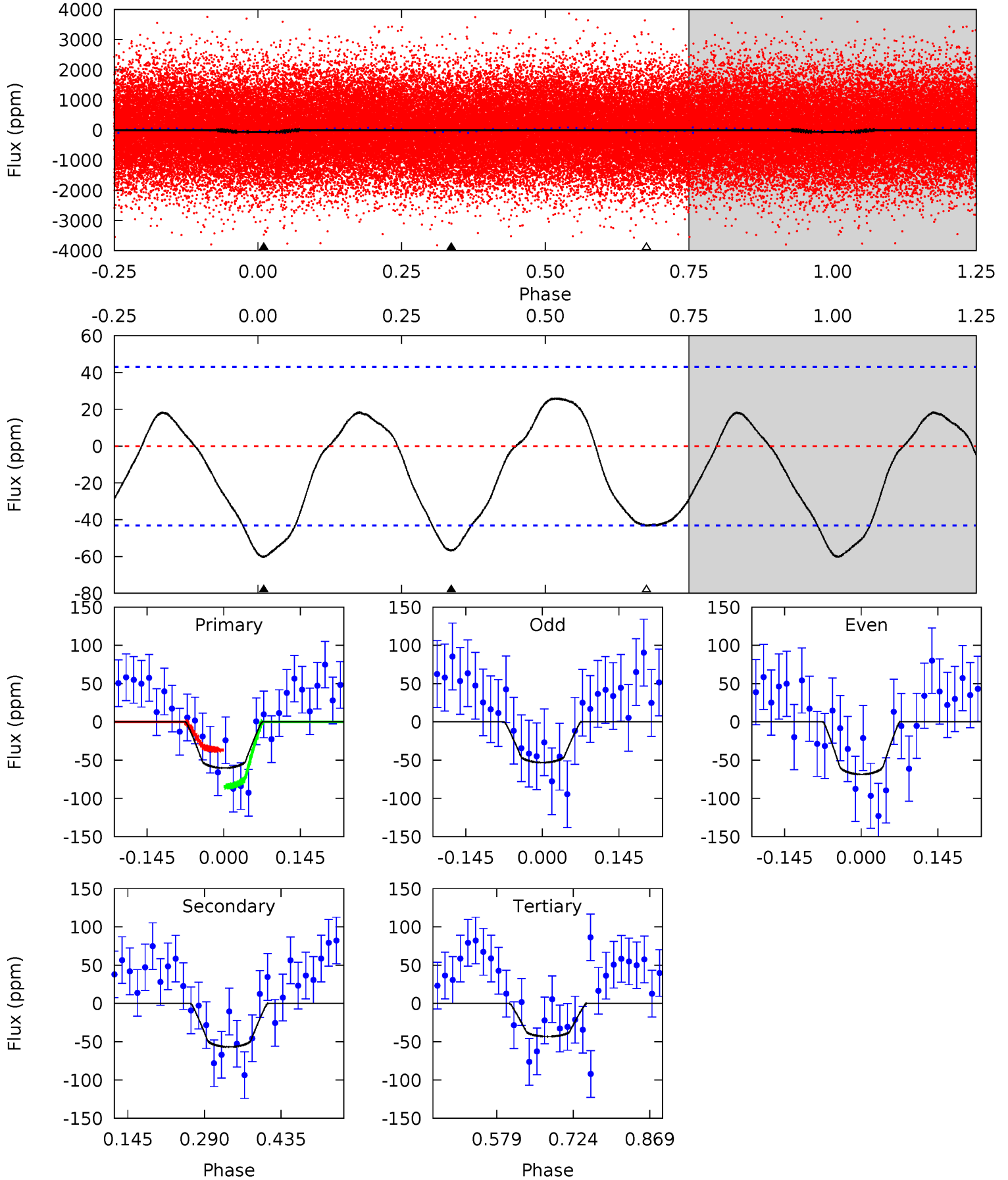
TCE 009636283-01 P= 0.649472 Days $T_0=131.807708$ (BKJD)



DV Model-Shift Uniqueness Test

009636283-01, P = 0.649467 Days, E = 131.158797 Days

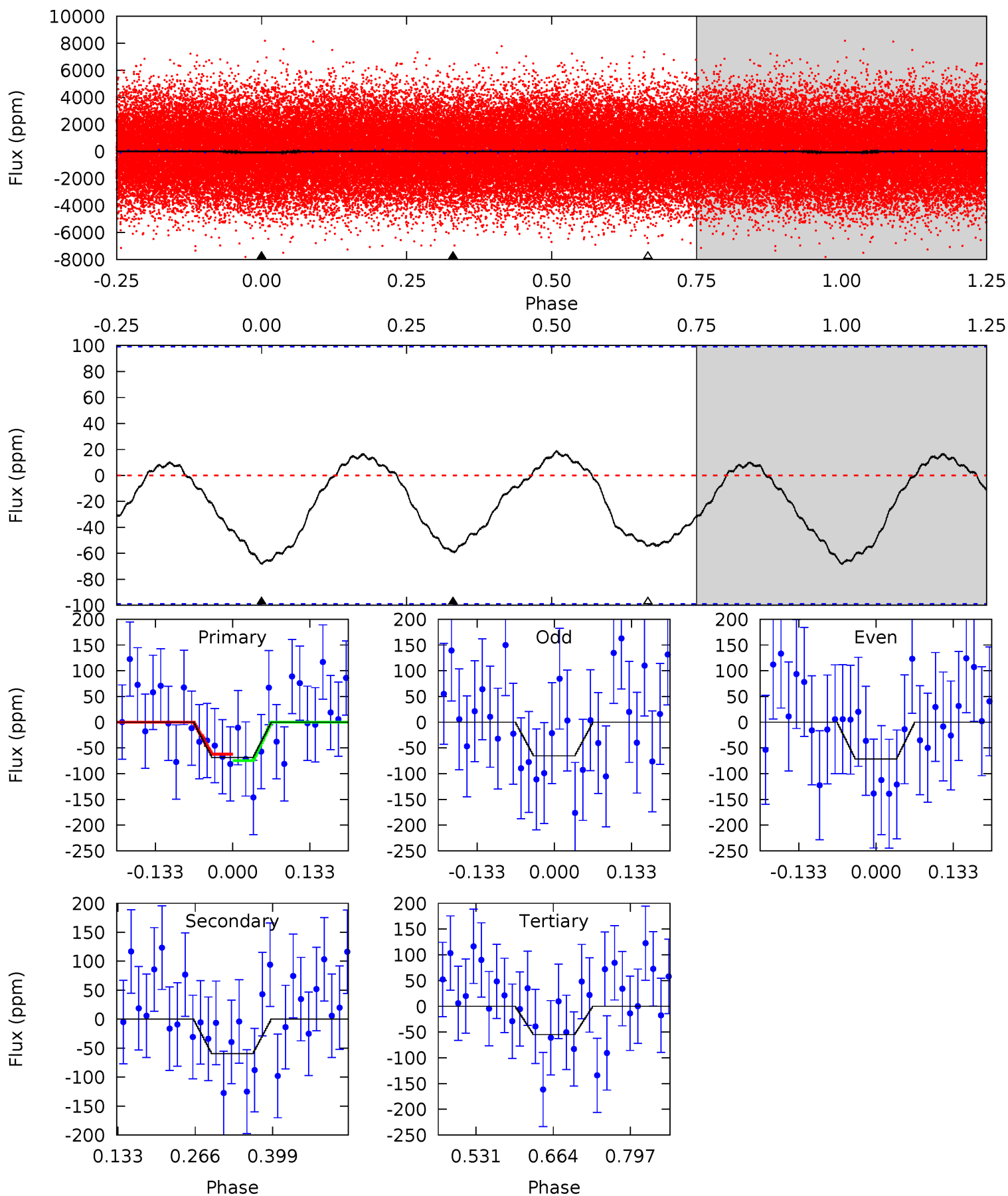
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.26	5.90	4.50	0	4.49	1.46	2.65	1.77	6.26	1.40	5.90	0.80	0.97	0.30	2.47



Alt Model-Shift Uniqueness Test

009636283-01, P = 0.649472 Days, E = 131.158236 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.10	2.70	2.49	0	4.50	1.50	1.15	0.61	3.10	0.21	2.70	0.14	0.90	0.22	0.29



Stellar Parameters For KIC 009636283

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7994^{+223}_{-335}	$3.926^{+0.259}_{-0.130}$	$-0.140^{+0.200}_{-0.300}$	$2.473^{+0.428}_{-0.795}$	$1.883^{+0.127}_{-0.381}$	$0.175^{+0.293}_{-0.059}$
	+3%/-4%	+7%/-3%	+143%/-214%	+17%/-32%	+7%/-20%	+167%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009636283-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-57 ± 10	$2.35^{+1.71}_{-1.37}$	5678^{+393}_{-447}	6807^{+5883}_{-2057}	$1.901^{+8.135}_{-1.292}$
Alt.	-59 ± 22	$2.15^{+1.66}_{-1.20}$	5695^{+360}_{-473}	7081^{+6180}_{-2327}	$2.108^{+8.717}_{-1.490}$

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 $A_{obs} \gg 1.0$

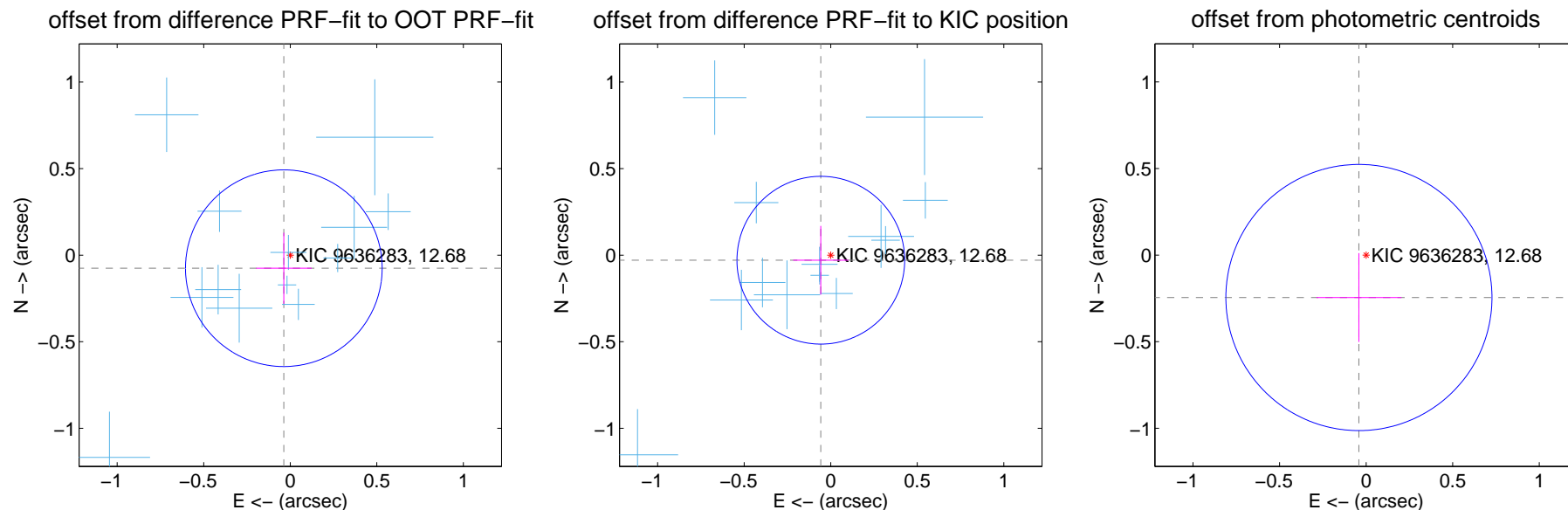
DV Centroid Data

Supplemental centroid analysis for 009636283-01. Kepler magnitude: 12.68. Transit SNR 10.04

There are 15 quarters with good PRF difference image offsets

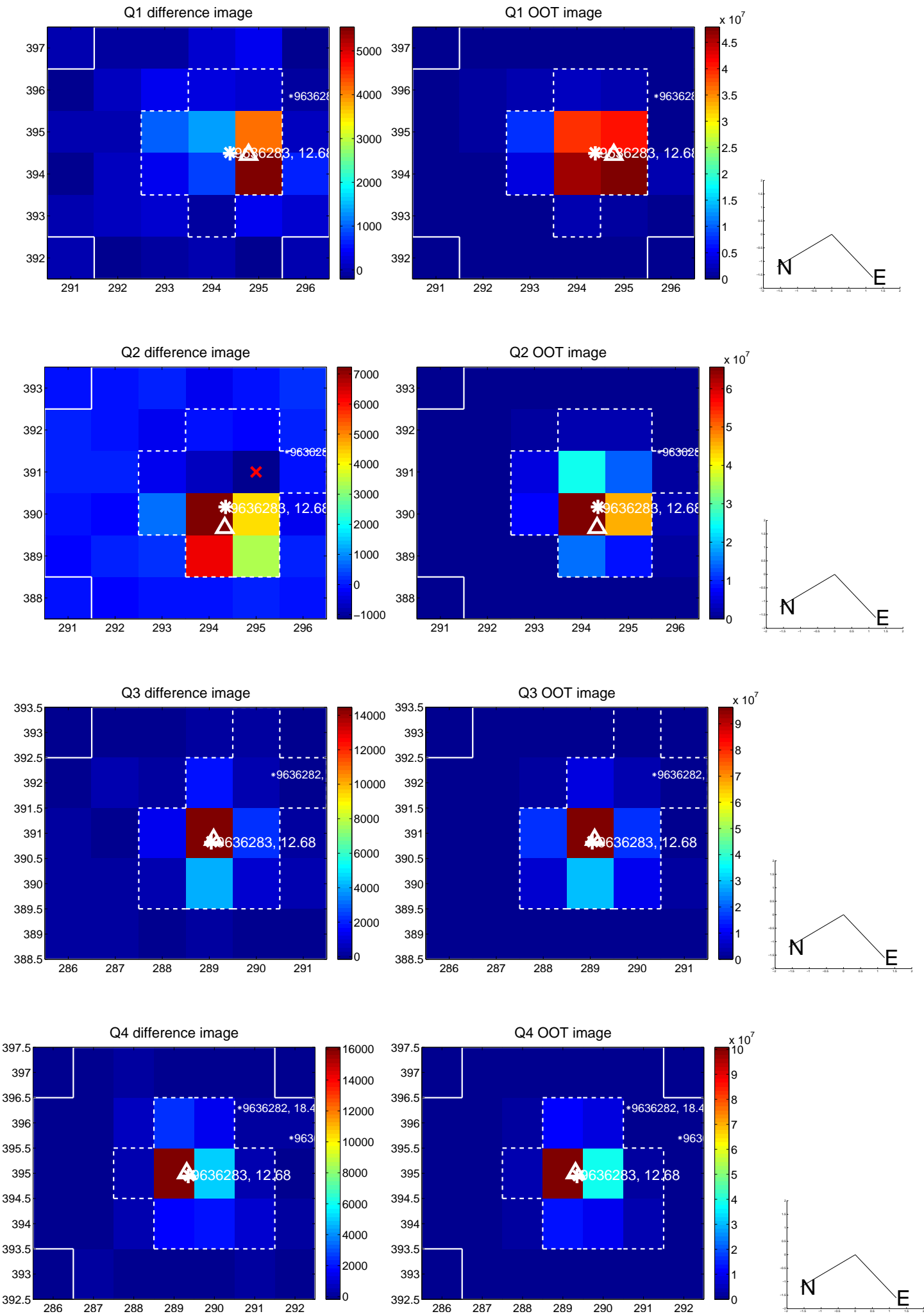
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.084 ± 0.189	0.44	0.037 ± 0.160	-0.075 ± 0.205
PRF-fit source offset from KIC position	0.064 ± 0.161	0.40	0.057 ± 0.160	-0.029 ± 0.198
photometric centroid source offset	0.25 ± 0.26	0.97	0.04 ± 0.25	-0.24 ± 0.26

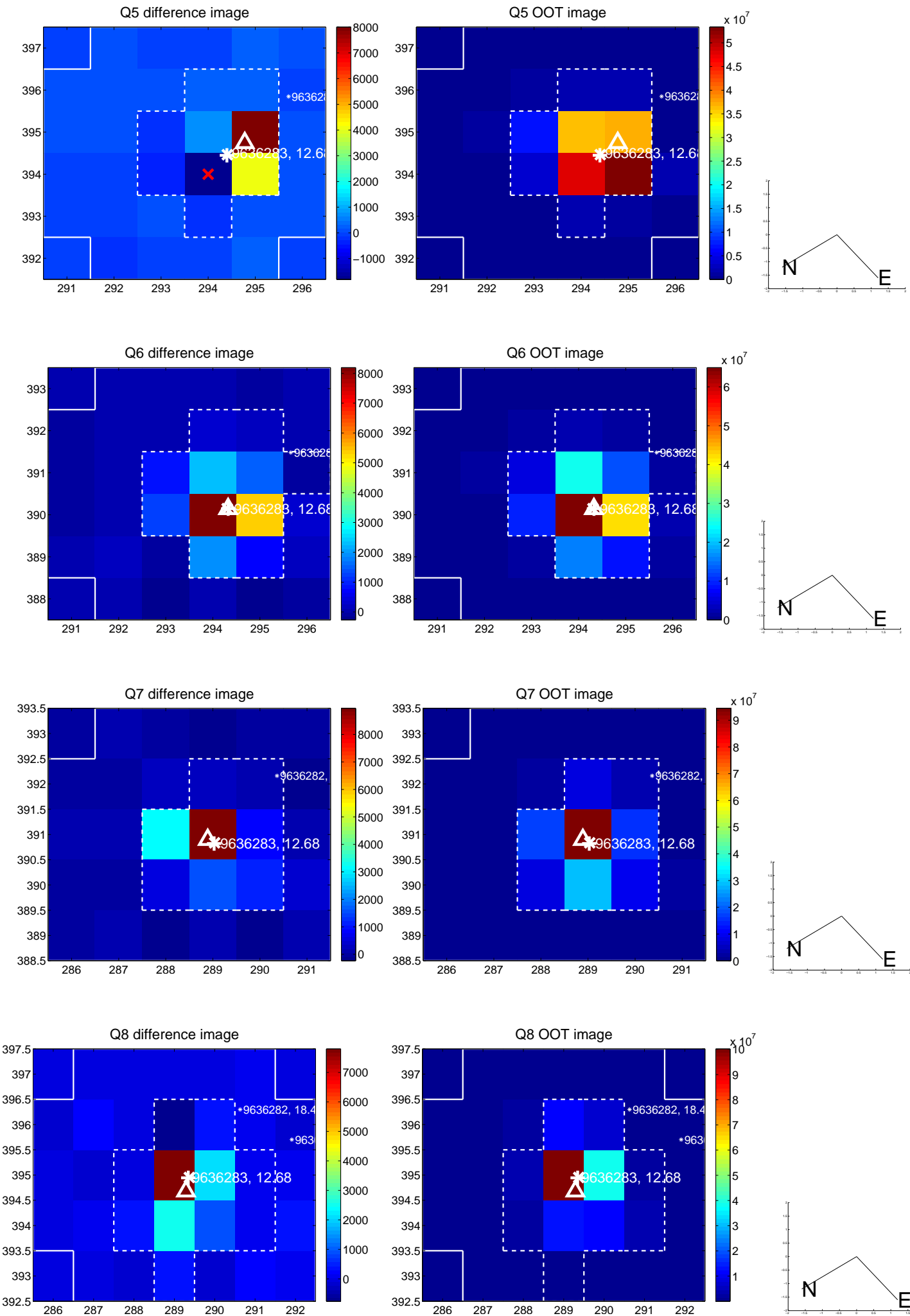


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

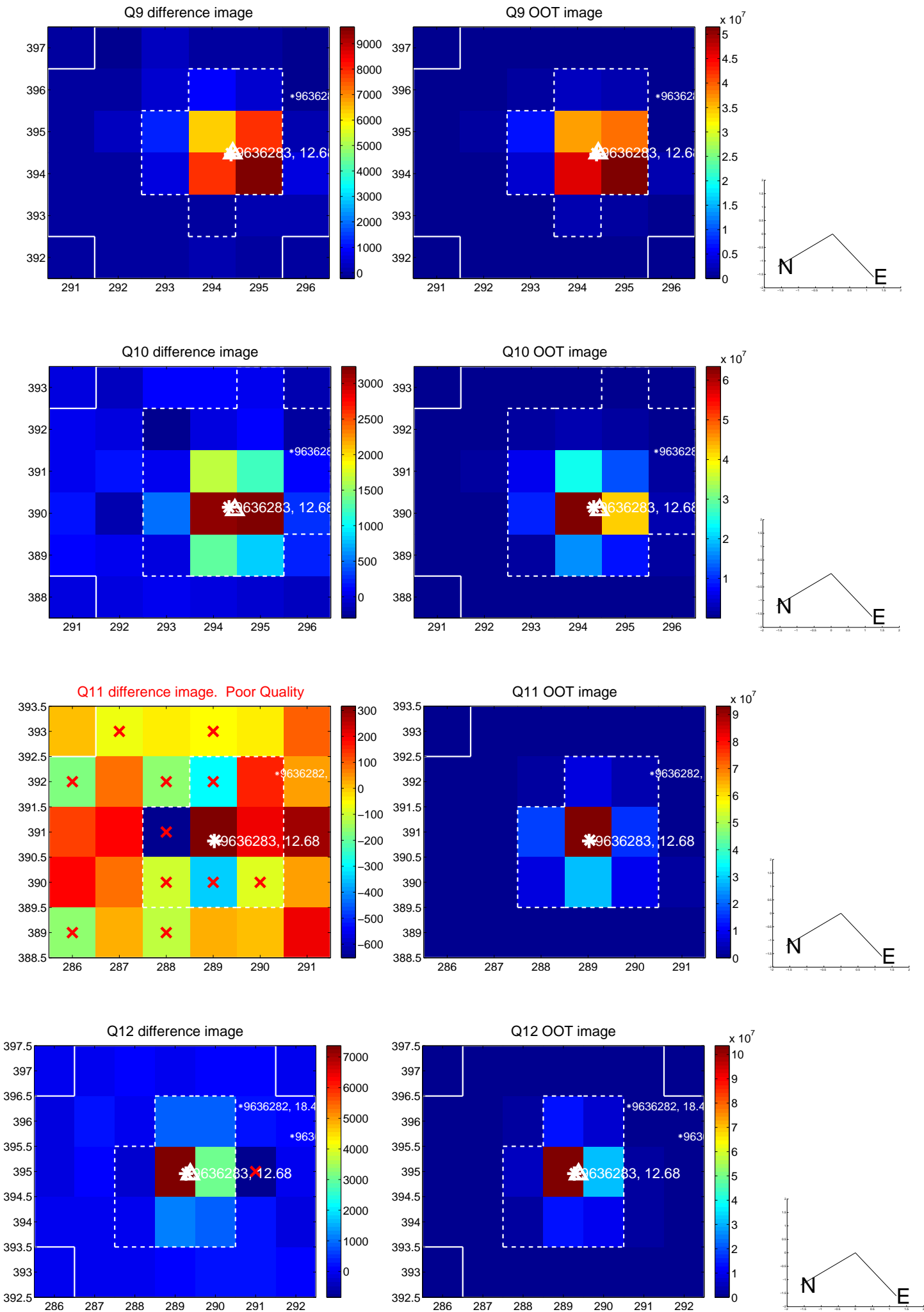
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



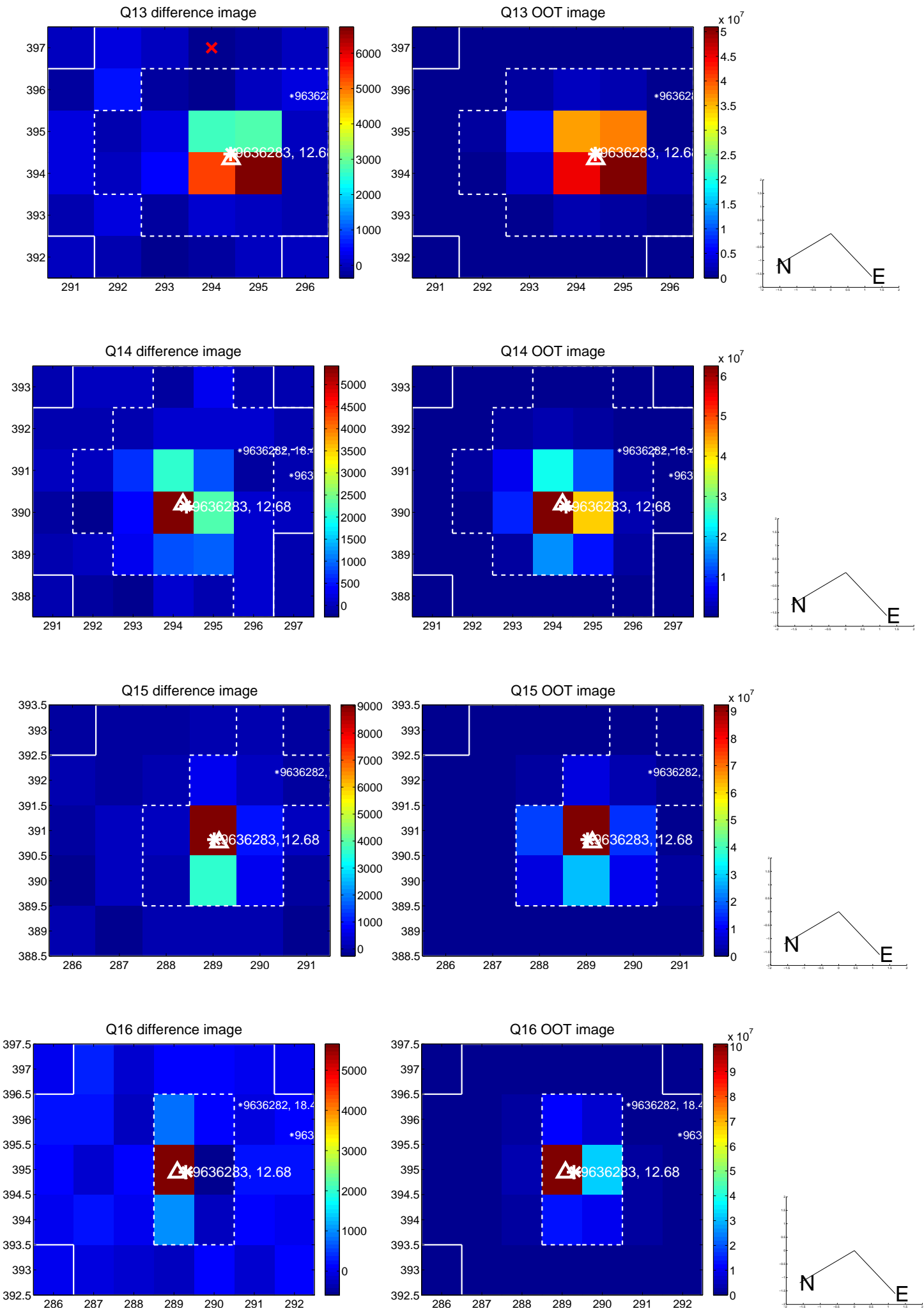
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



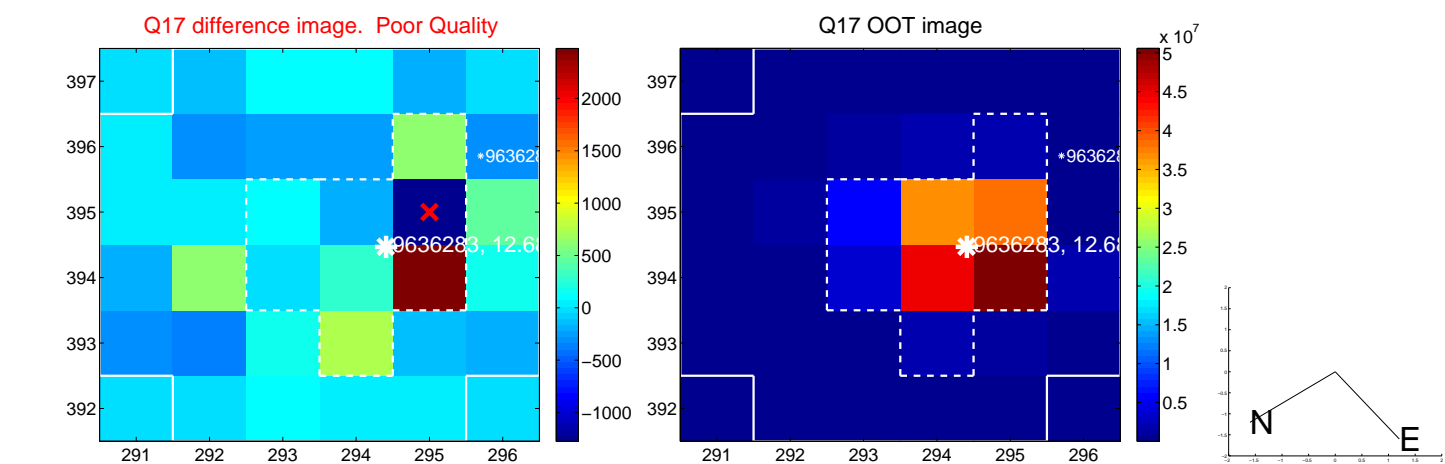
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



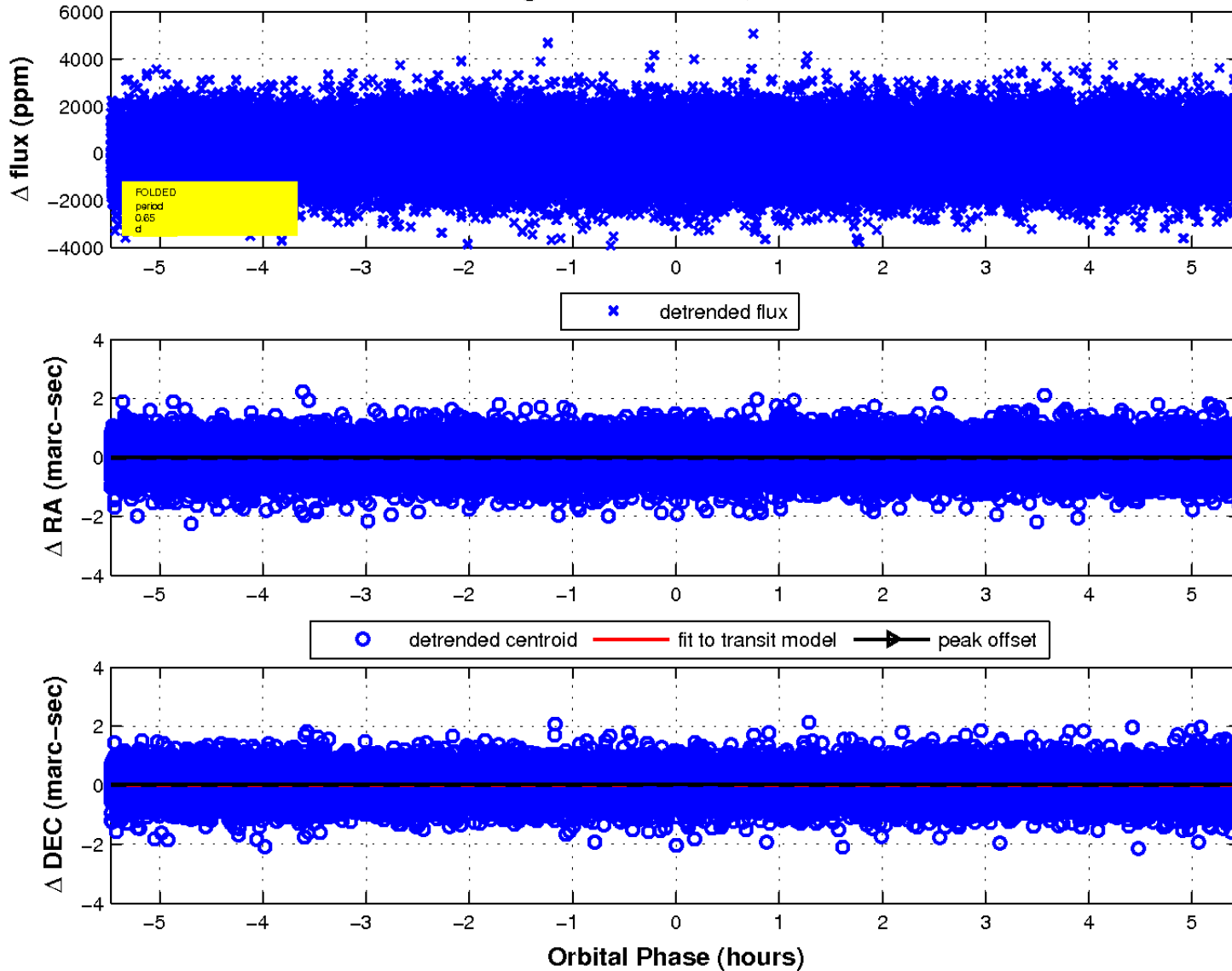
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

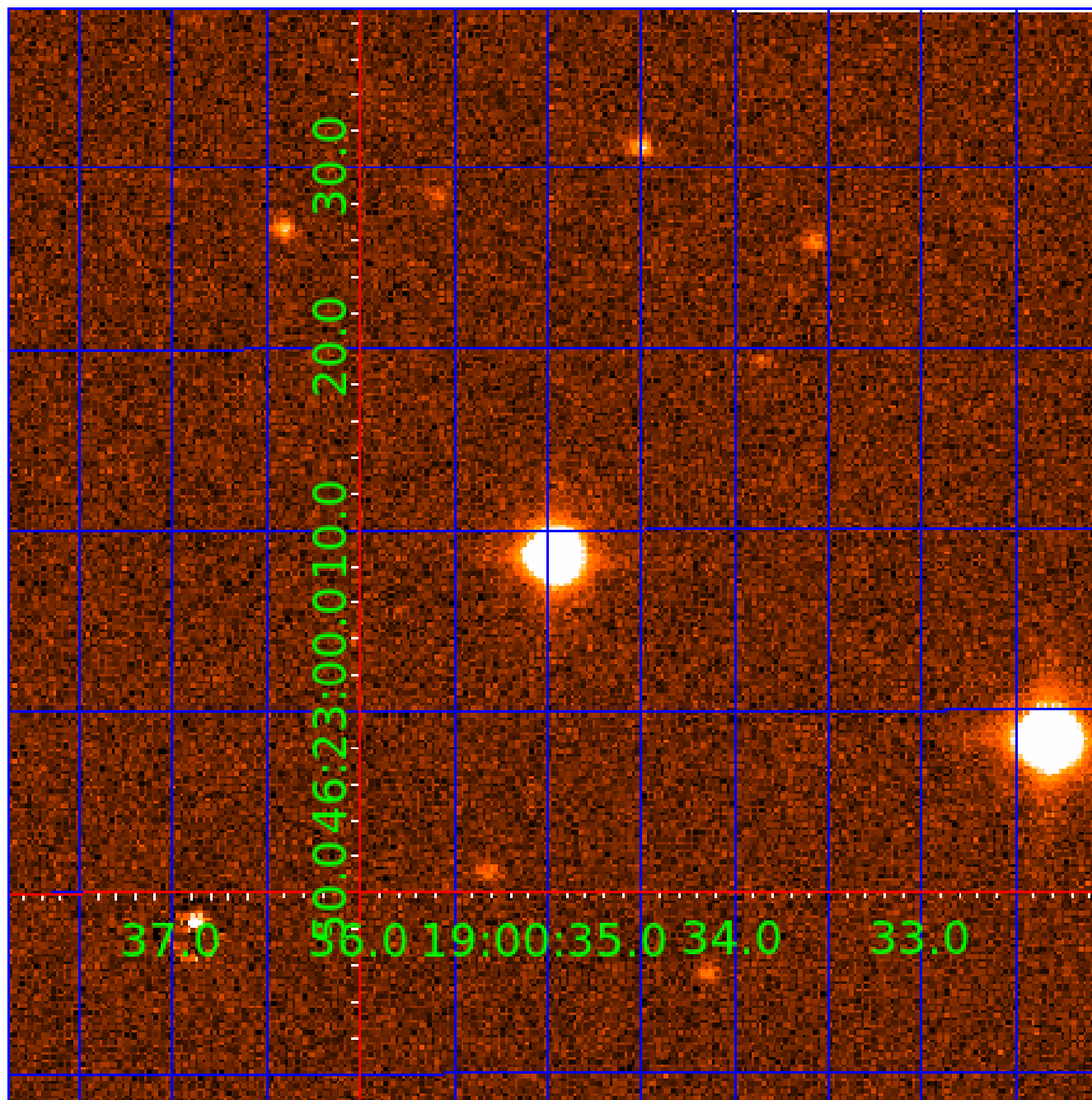


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 009636283

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})
009636283-01	OBS	No	0.649467	131.808264	57.9	1.825	13.8	10.0	2.47	7994	2.18	68132.98
009636283-02	OBS	No	0.649447	132.045937	112.5	0.878	7.9	9.8	2.47	7994	3.09	68135.77
009636283-03	OBS	No	0.811354	132.293548	79.9	9.736	7.5	9.0	2.47	7994	2.23	50639.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009636283-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009636283-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
009636283-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

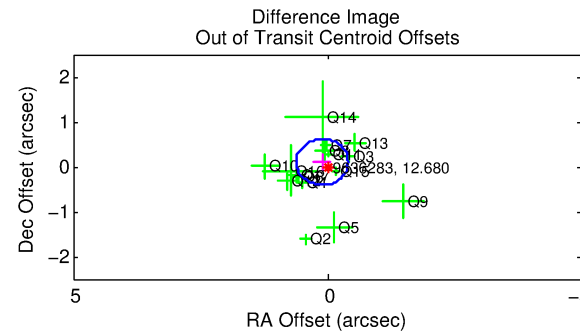
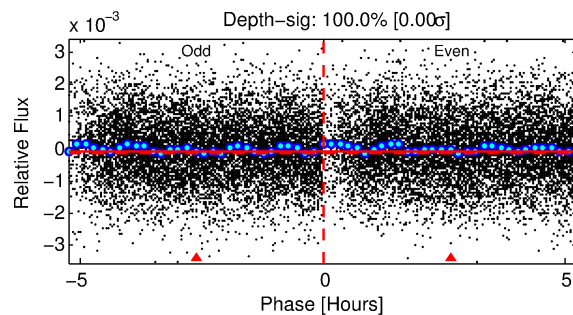
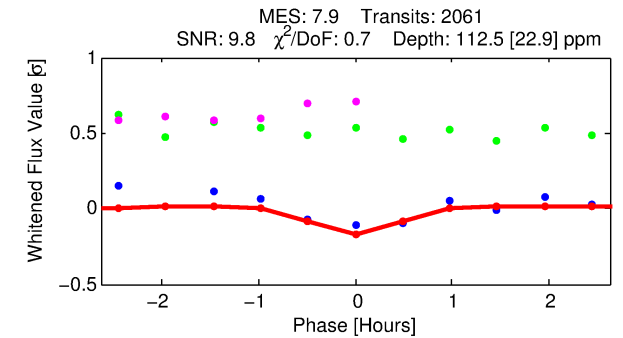
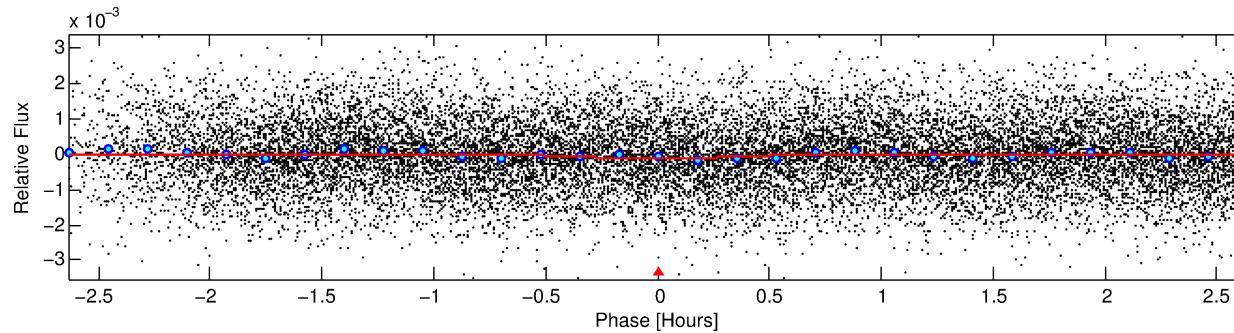
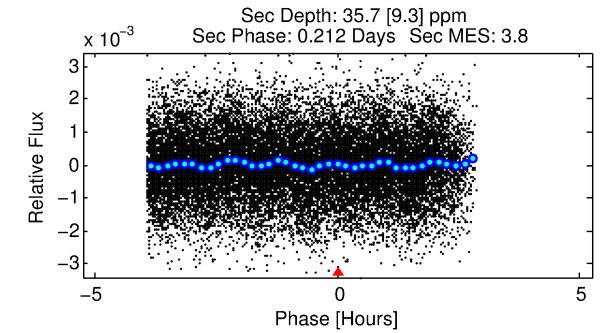
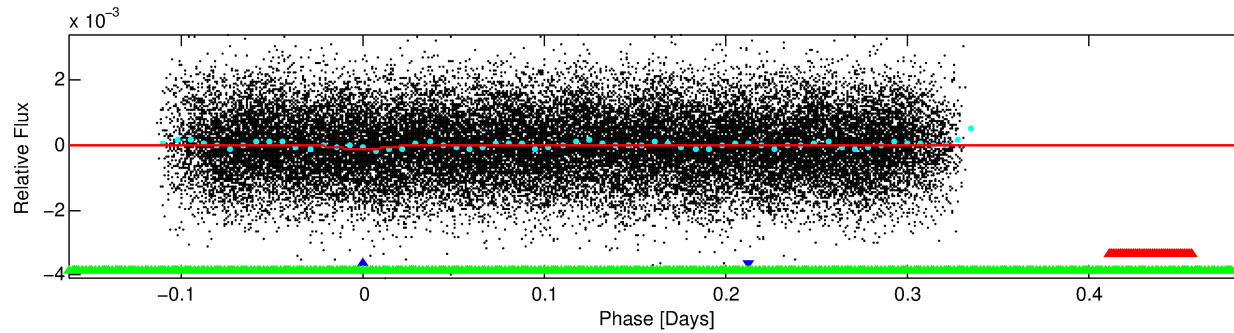
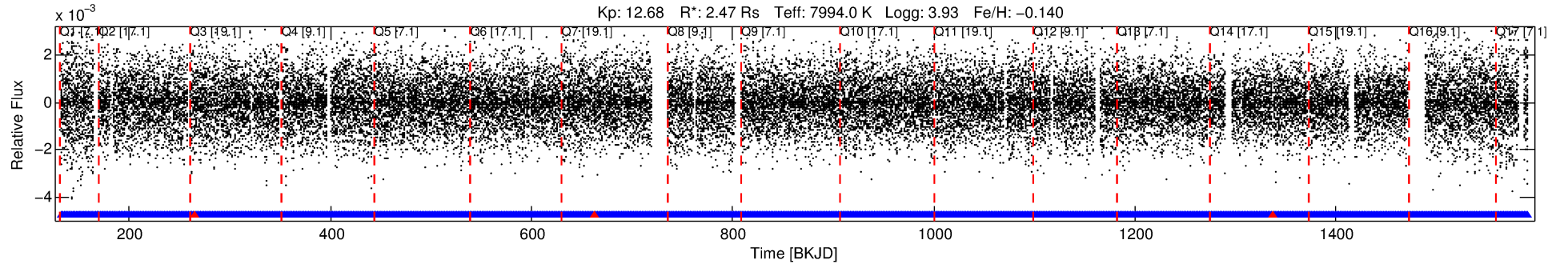
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009636283-02

No Significant Match Found

DV One-Page Summary

KIC: 9636283 Candidate: 2 of 3 Period: 0.649 d



DV Fit Results:

Period = 0.64945 [0.00001] d
Epoch = 132.0459 [0.0020] BKJD
Rp/R* = 0.0114 [0.0048]
a/R* = 2.77 [6.00]
b = 0.90 [0.54]
Seff = 68135.77 [32825.52]
Teq = 4120 [496] K
Rp = 3.09 [1.64] Re
a = 0.0181 [0.0053] AU
Ag = 0.68 [0.67] [-0.48σ]
Teffp = 5780 [1304] K [1.19σ]

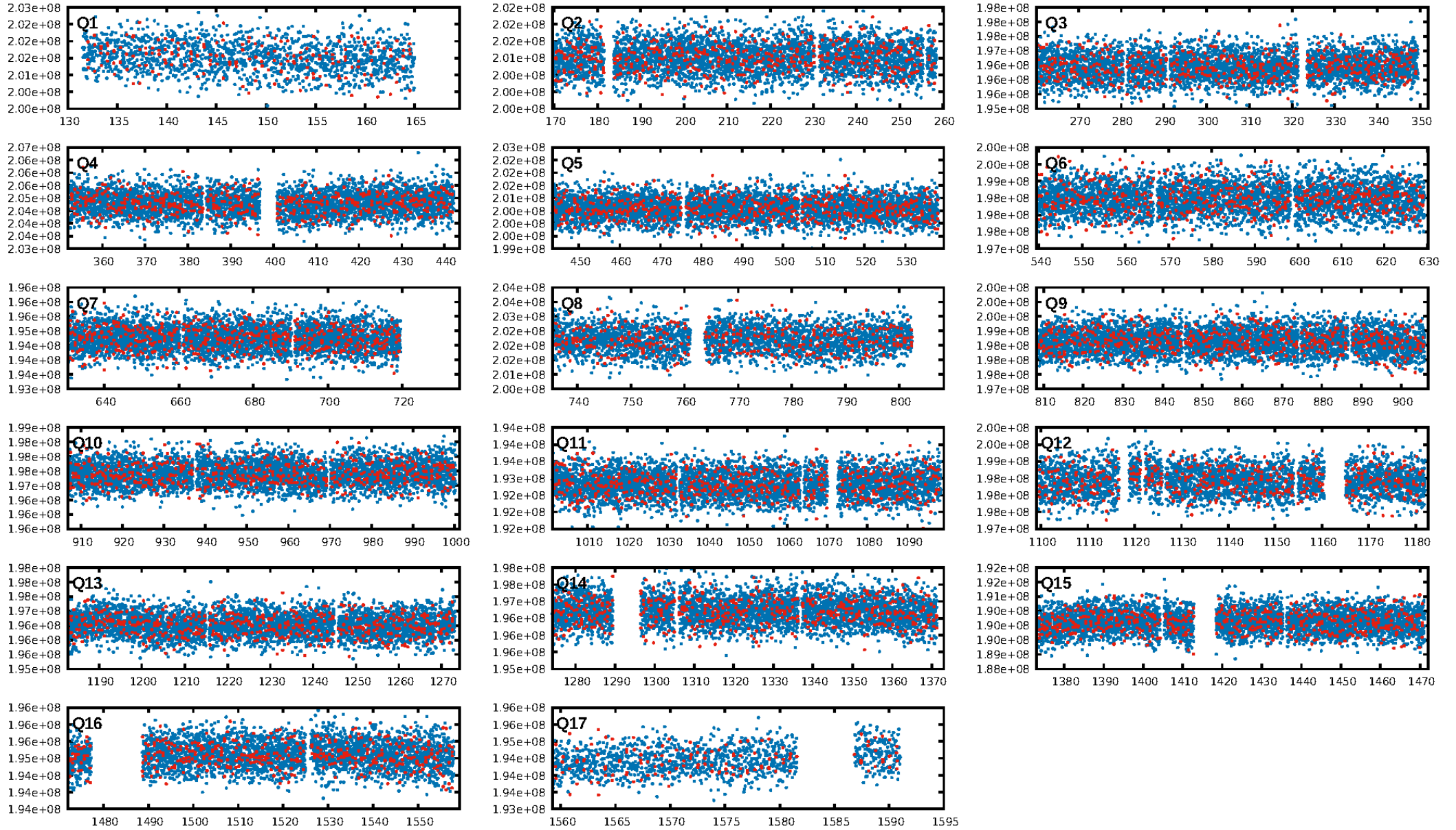
DV Diagnostic Results:

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 [1965/1968]
GhostDiagnostic-chr: 4.711
Centroid-sig: 31.0%
Centroid-so: 0.191 arcsec [0.99σ]
OotOffset-rm: 0.148 arcsec [0.87σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.193 arcsec [1.16σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 0.00 [0/17]

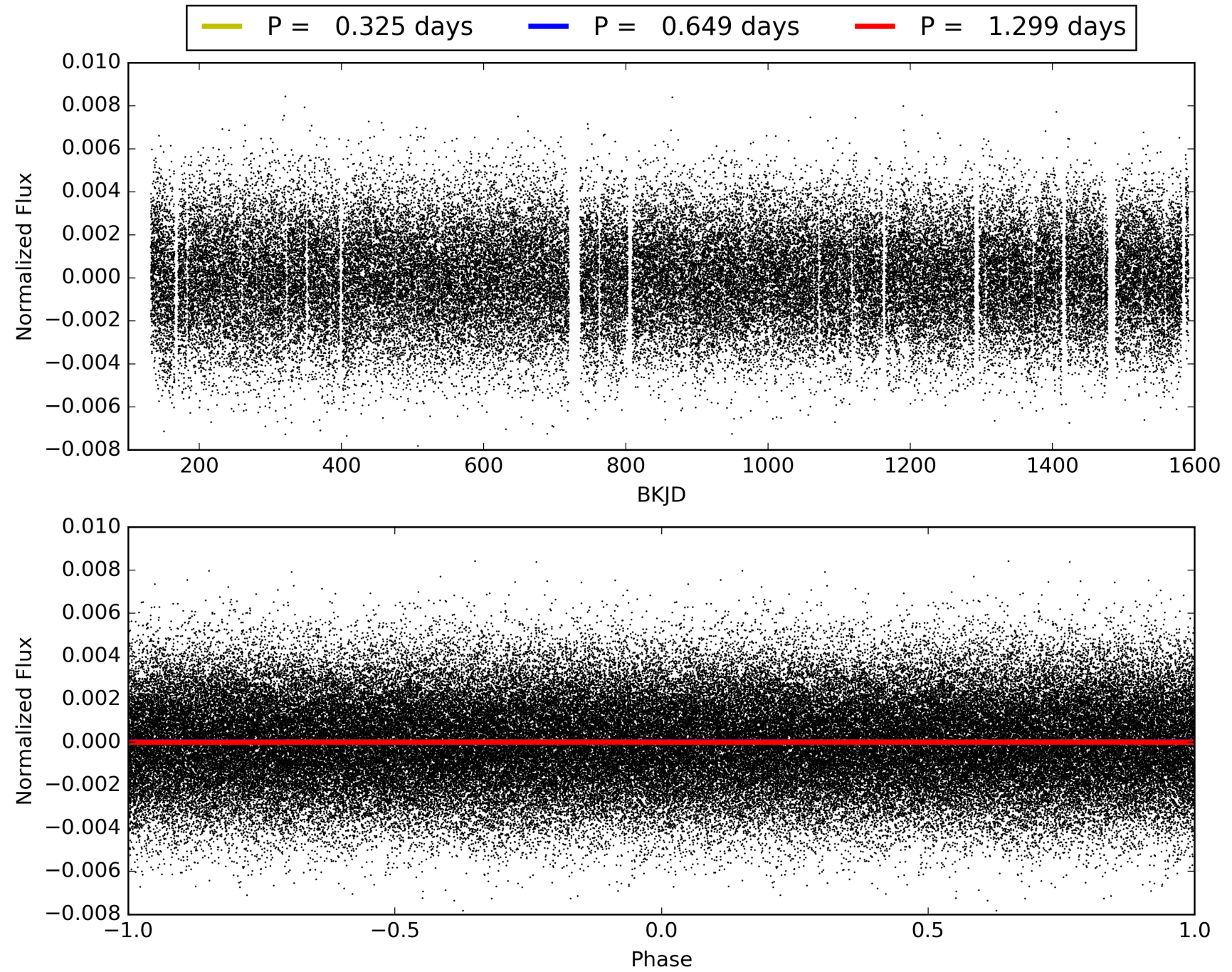
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:28:37 Z

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

TCE 009636283-02, PDC Light Curves

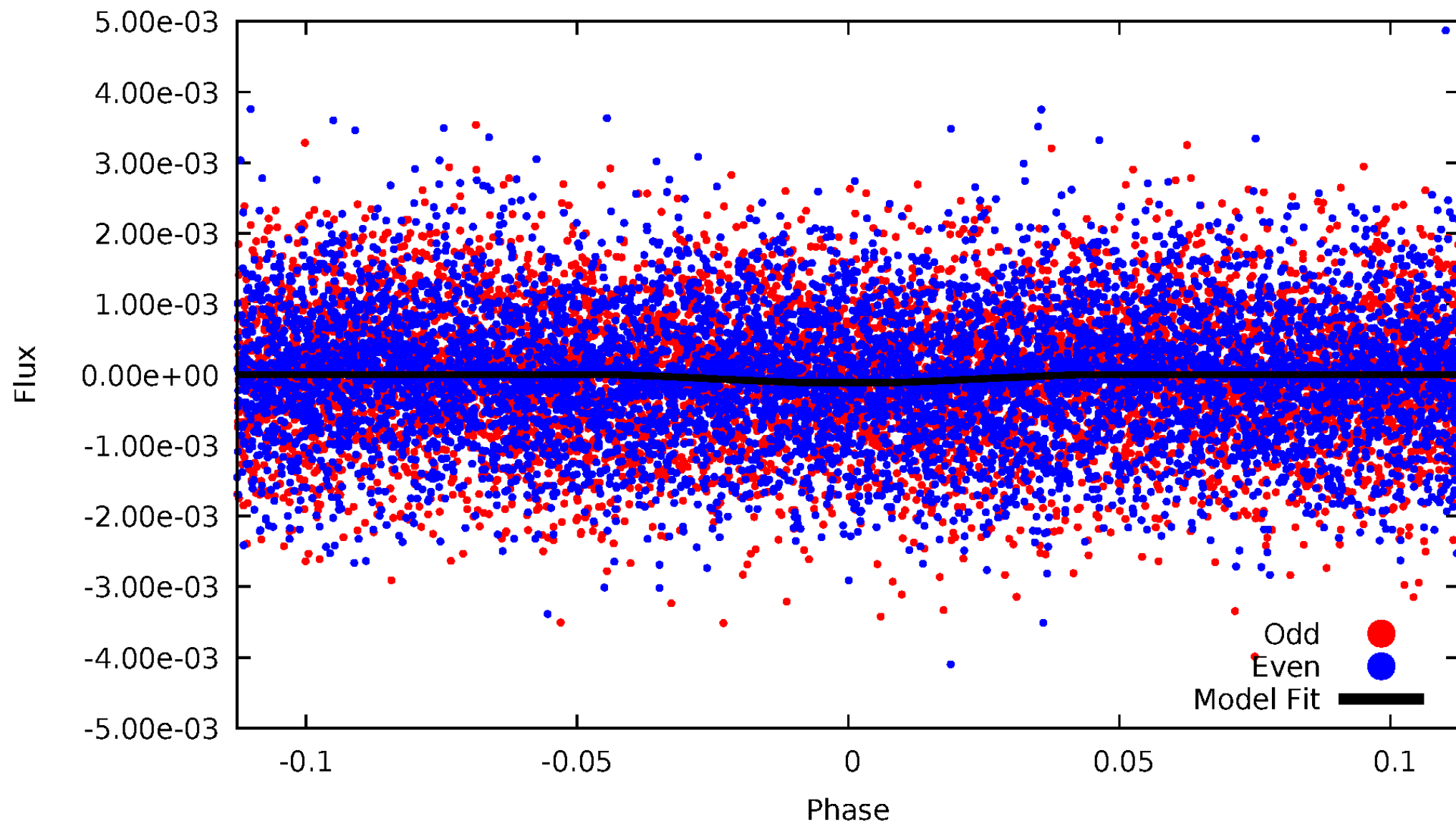


TCE 009636283-02



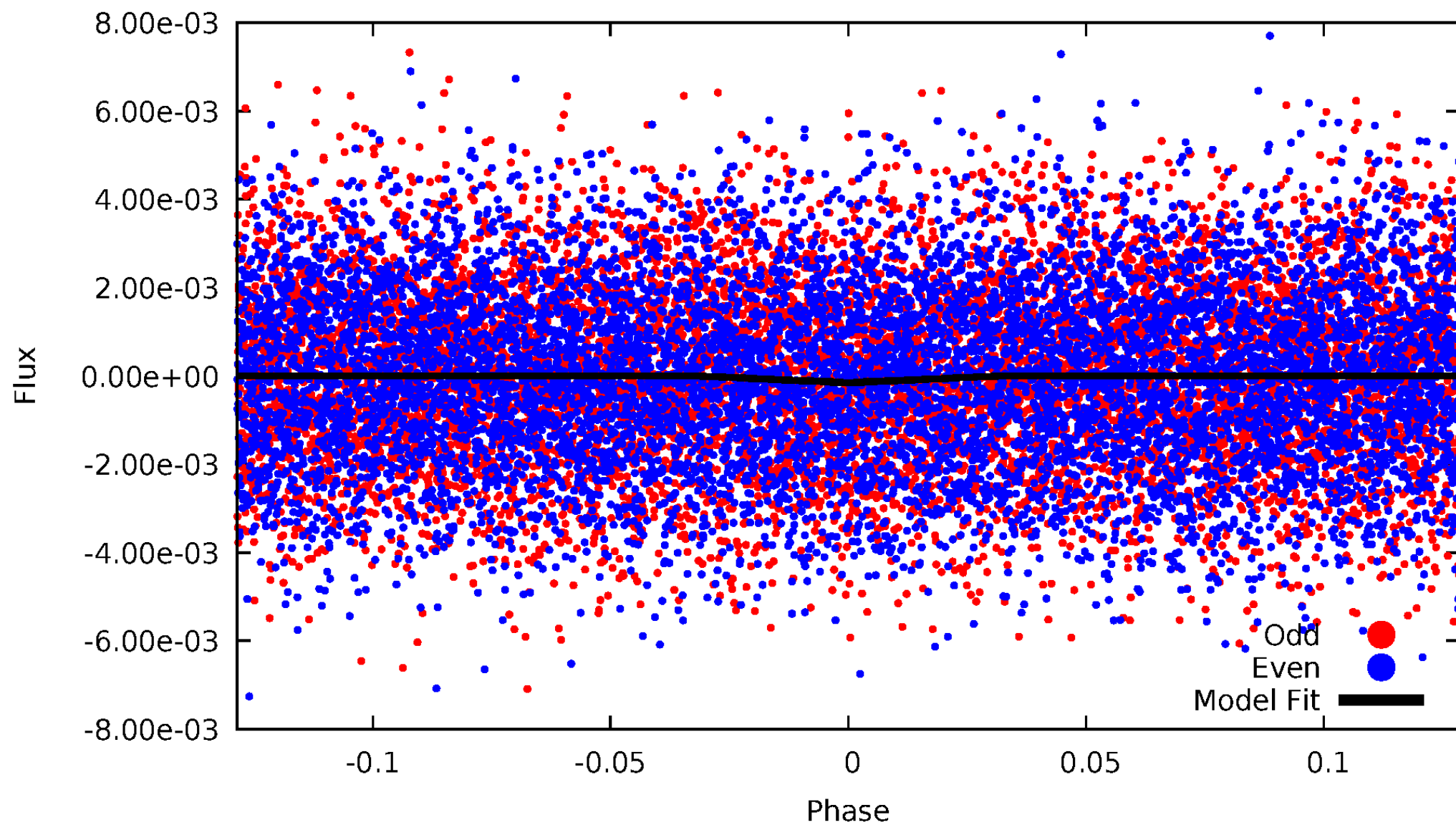
DV Odd/Even

TCE 009636283-02



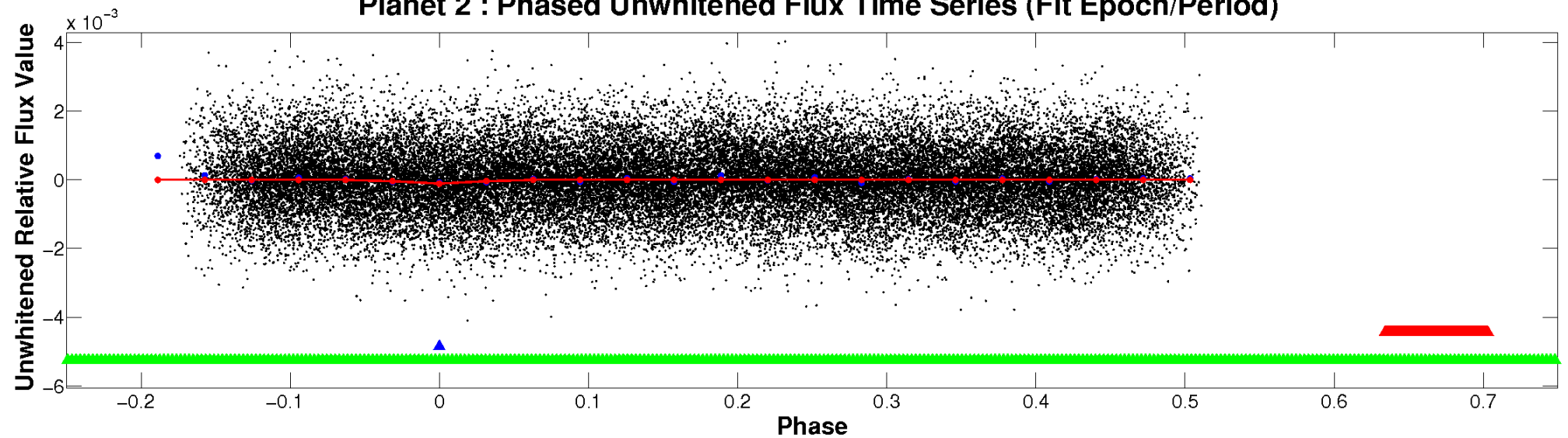
ALT Odd/Even

TCE 009636283-02

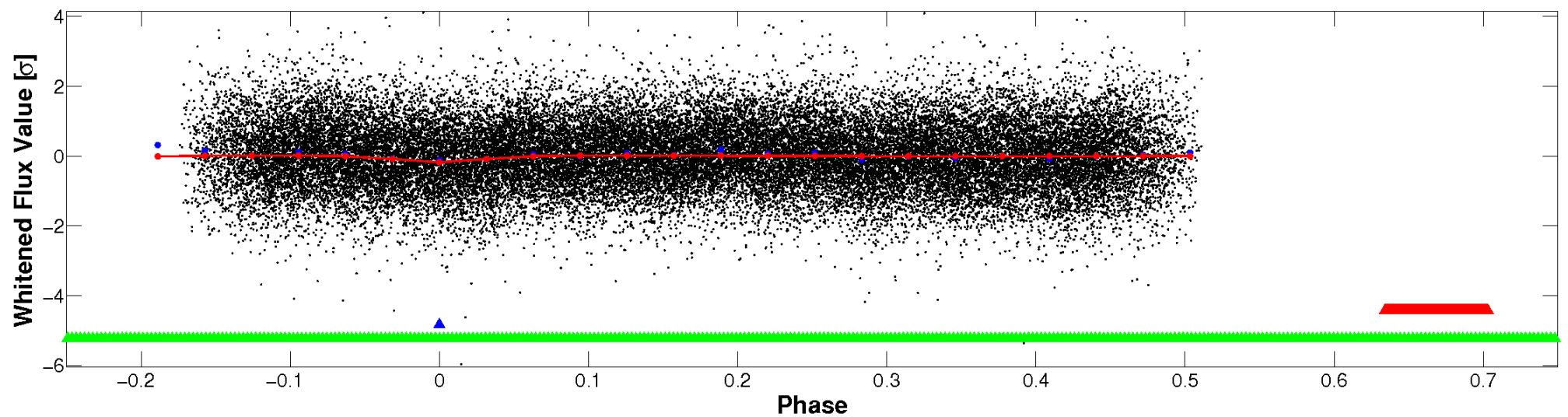


Non-Whitened Vs. Whitened Light Curve

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

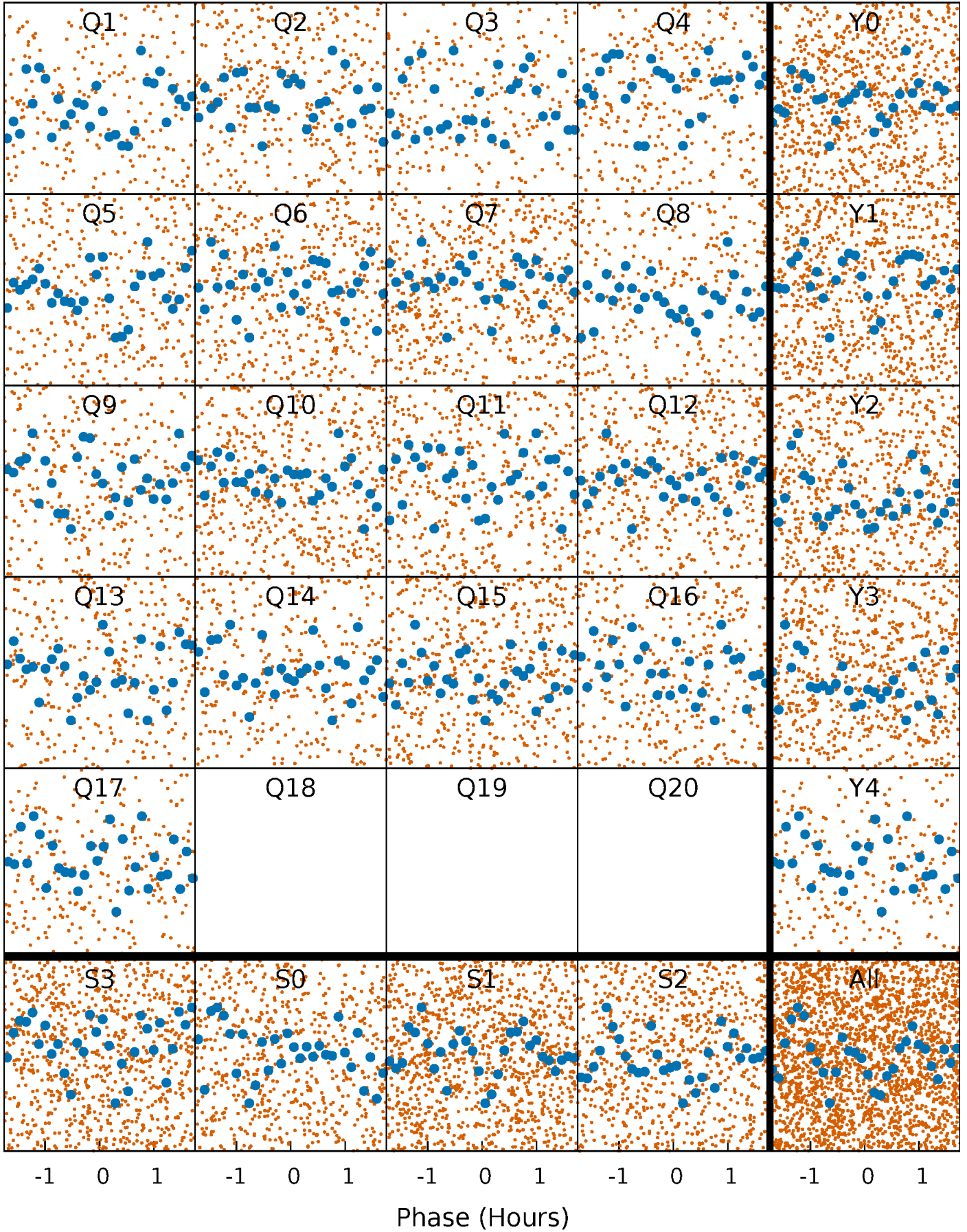


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



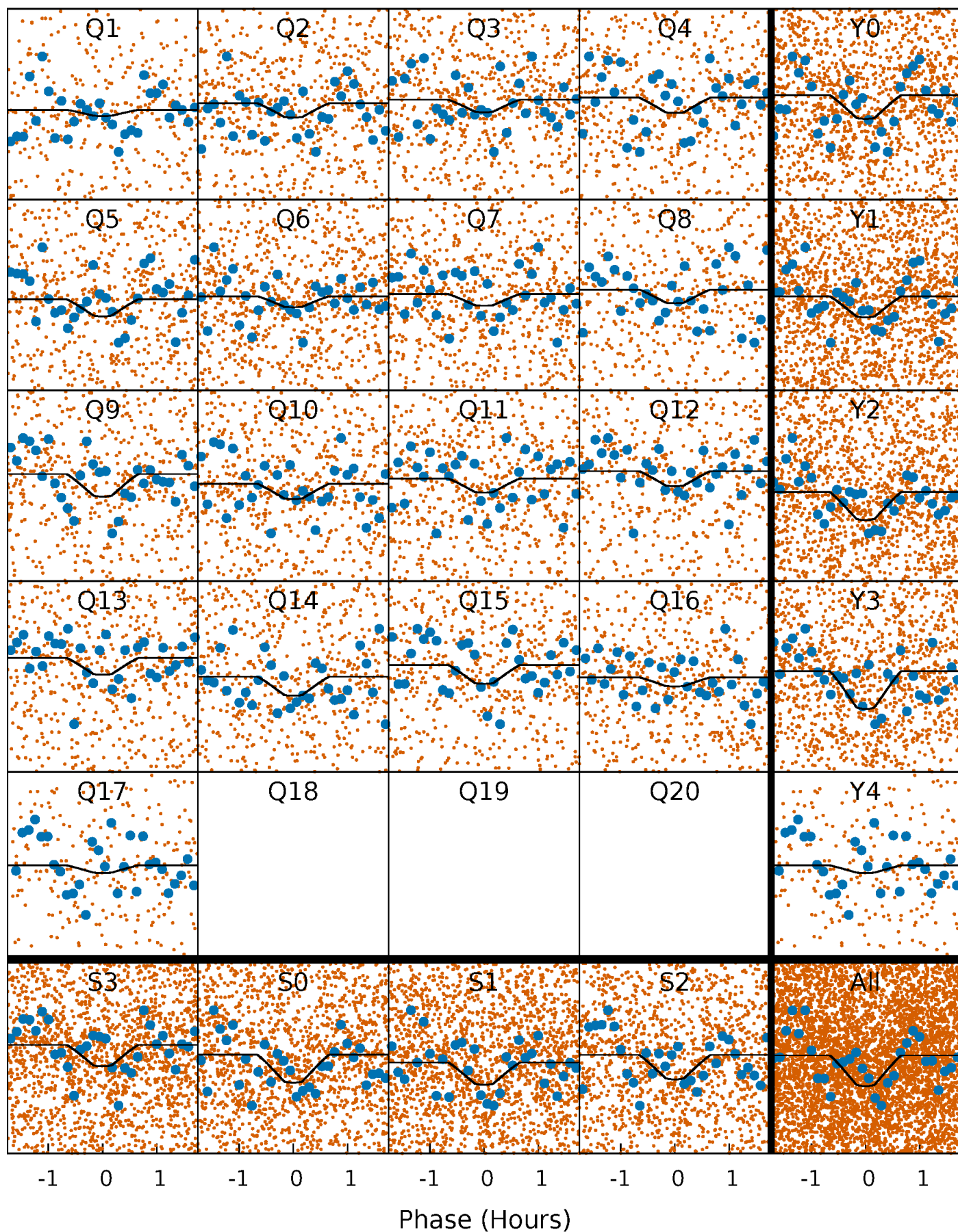
PDC Quarter-Phased Transit Curves

TCE 009636283-02 P= 0.649447 Days $T_0=132.045937$ (BKJD)



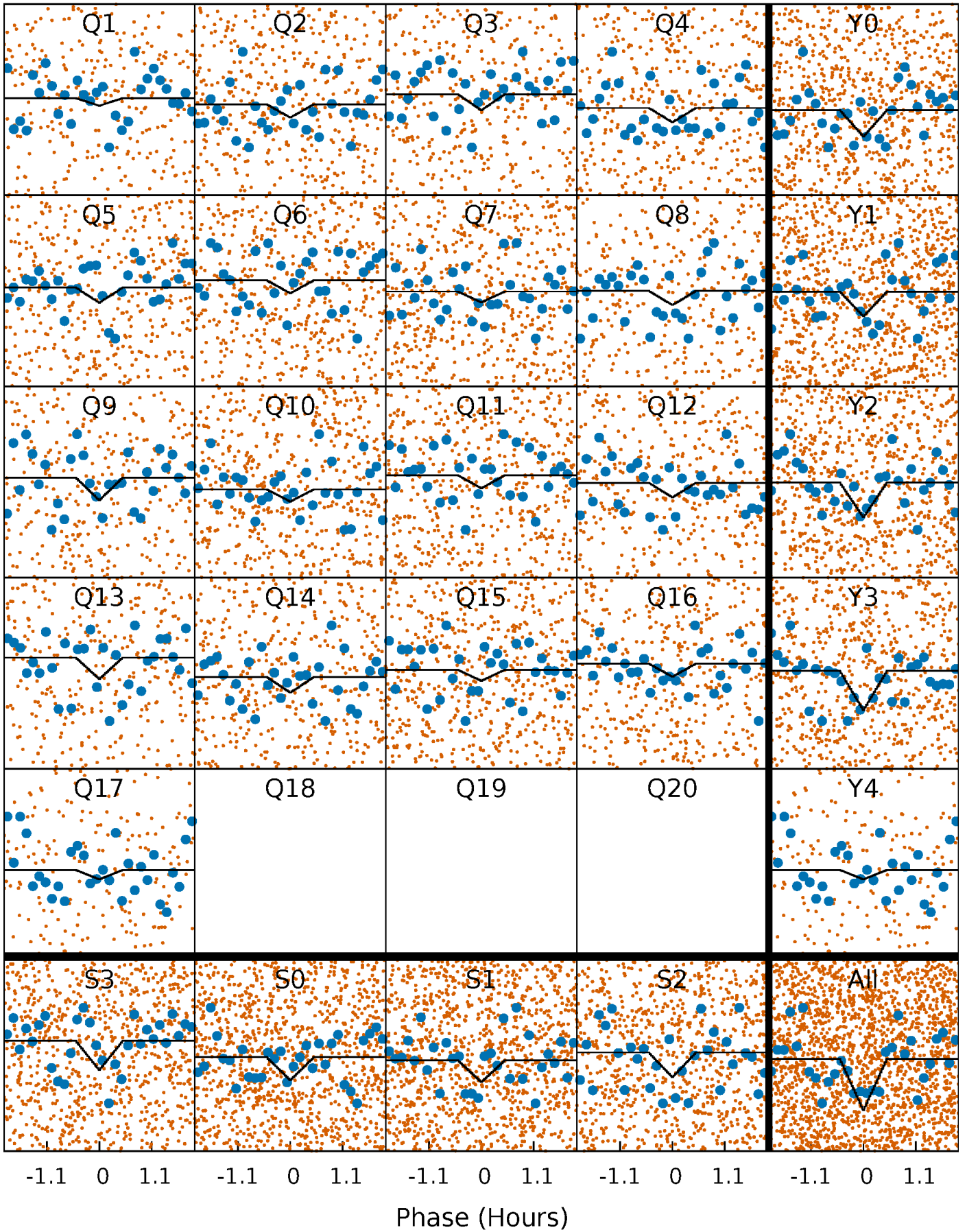
DV Quarter-Phased Transit Curves

TCE 009636283-02 $P = 0.649447$ Days $T_0 = 132.045937$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

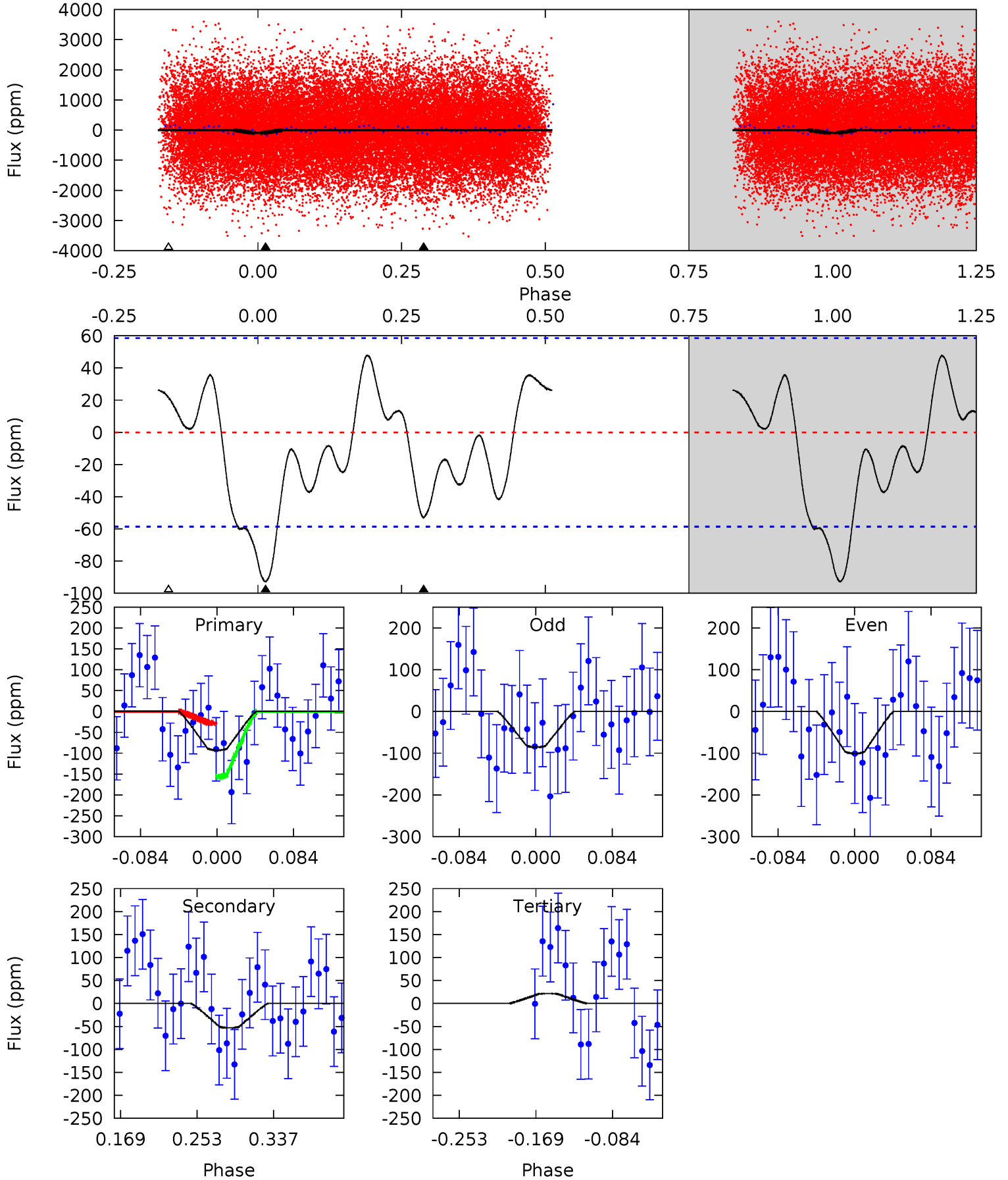
TCE 009636283-02 P= 0.649455 Days $T_0=132.046971$ (BKJD)



DV Model-Shift Uniqueness Test

009636283-02, P = 0.649447 Days, E = 131.396490 Days

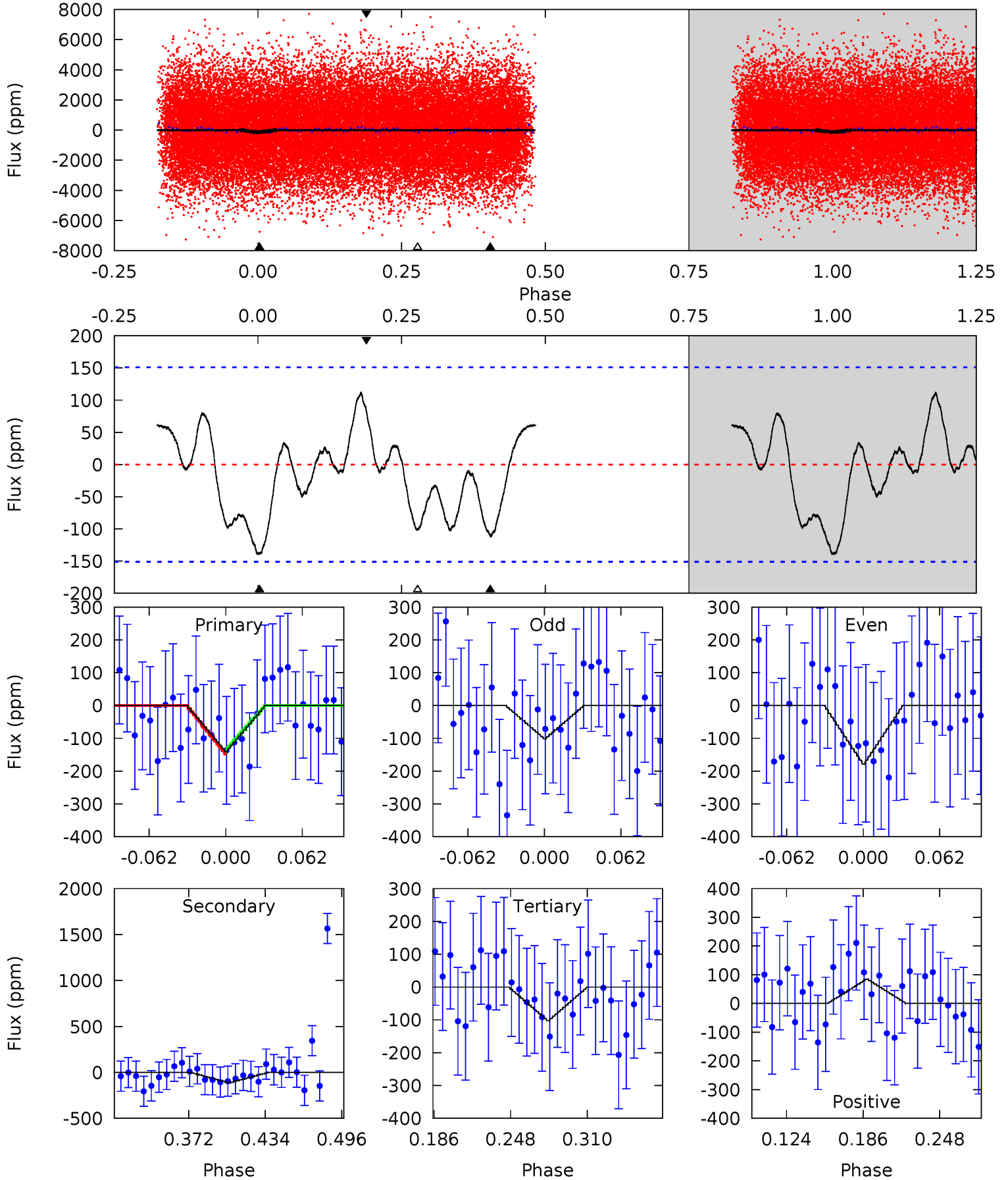
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.30	4.17	-1.69	0	4.60	1.73	1.96	8.99	7.30	5.86	4.17	0.60	1.00	0.34	4.97



Alt Model-Shift Uniqueness Test

009636283-02, P = 0.649455 Days, E = 131.397516 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.32	3.49	3.17	2.61	4.66	1.87	1.62	1.16	1.71	0.32	0.88	1.19	1.16	0.45	0.23



Stellar Parameters For KIC 009636283

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7994^{+223}_{-335}	$3.926^{+0.259}_{-0.130}$	$-0.140^{+0.200}_{-0.300}$	$2.473^{+0.428}_{-0.795}$	$1.883^{+0.127}_{-0.381}$	$0.175^{+0.293}_{-0.059}$
	+3%/-4%	+7%/-3%	+143%/-214%	+17%/-32%	+7%/-20%	+167%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009636283-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-53 ± 13	$2.92^{+1.46}_{-1.21}$	5683^{+374}_{-442}	5640^{+2377}_{-1418}	$1.049^{+2.051}_{-0.570}$
Alt.	-113 ± 32	$3.11^{+1.33}_{-1.24}$	5691^{+369}_{-474}	6949^{+3012}_{-1385}	$2.026^{+3.990}_{-1.083}$

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

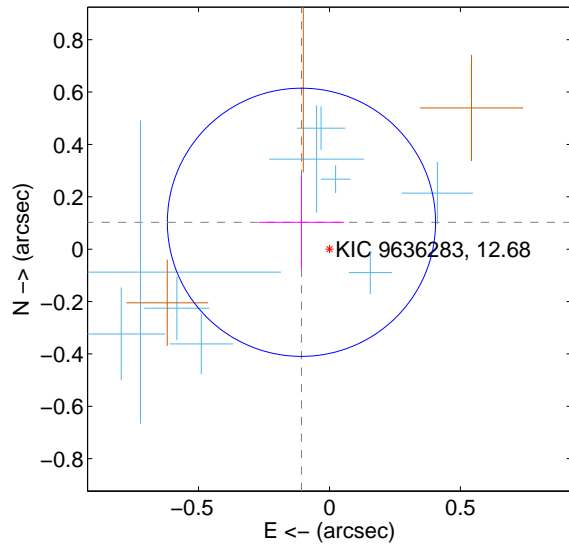
Supplemental centroid analysis for 009636283-02. Kepler magnitude: 12.68. Transit SNR 9.82

There are 11 quarters with good PRF difference image offsets

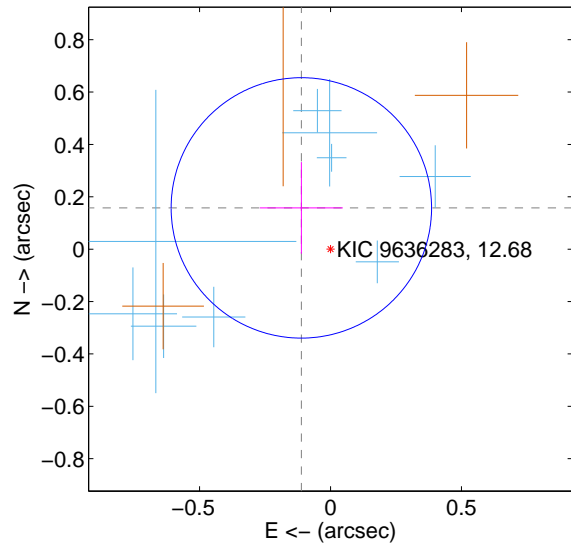
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.148 ± 0.171	0.87	0.107 ± 0.163	0.103 ± 0.179
PRF-fit source offset from KIC position	0.193 ± 0.166	1.16	0.111 ± 0.159	0.158 ± 0.175
photometric centroid source offset	0.19 ± 0.19	0.99	0.11 ± 0.19	0.15 ± 0.20

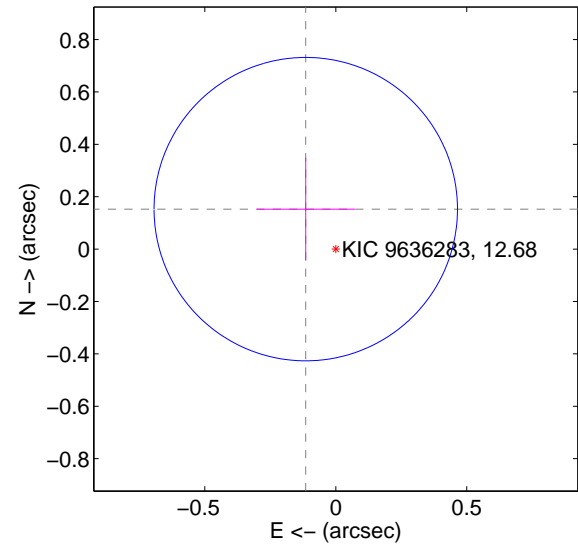
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

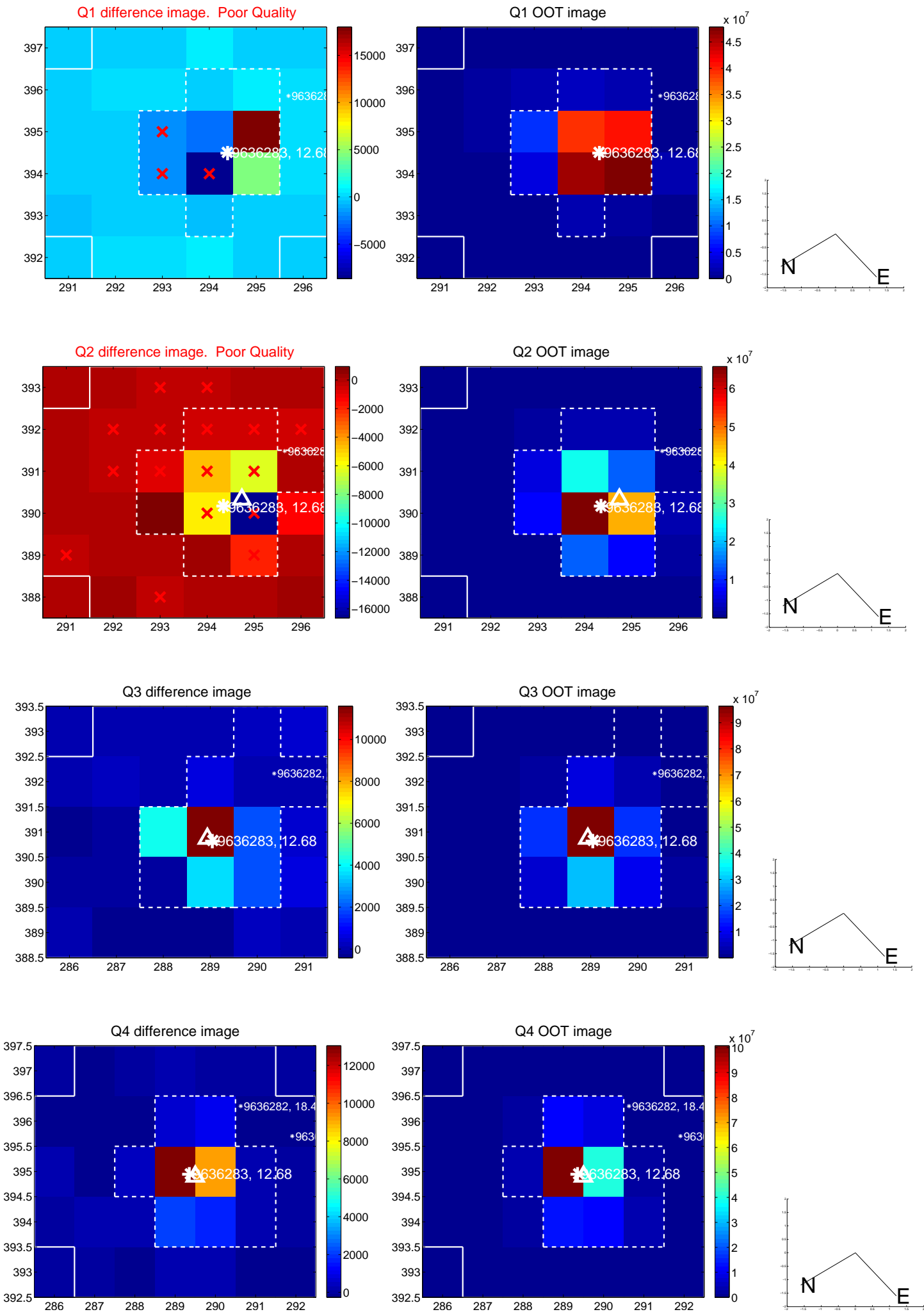


offset from photometric centroids

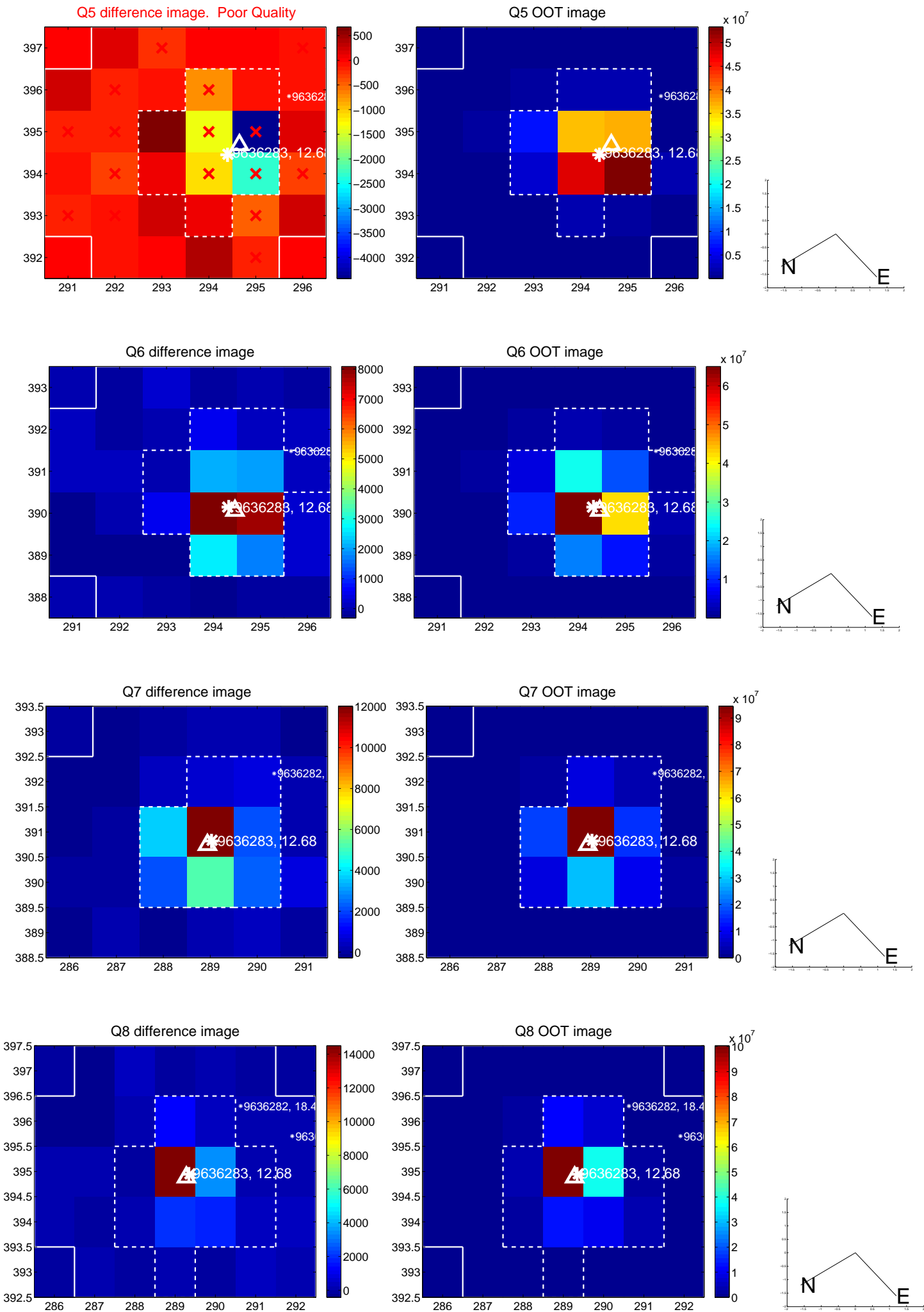


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

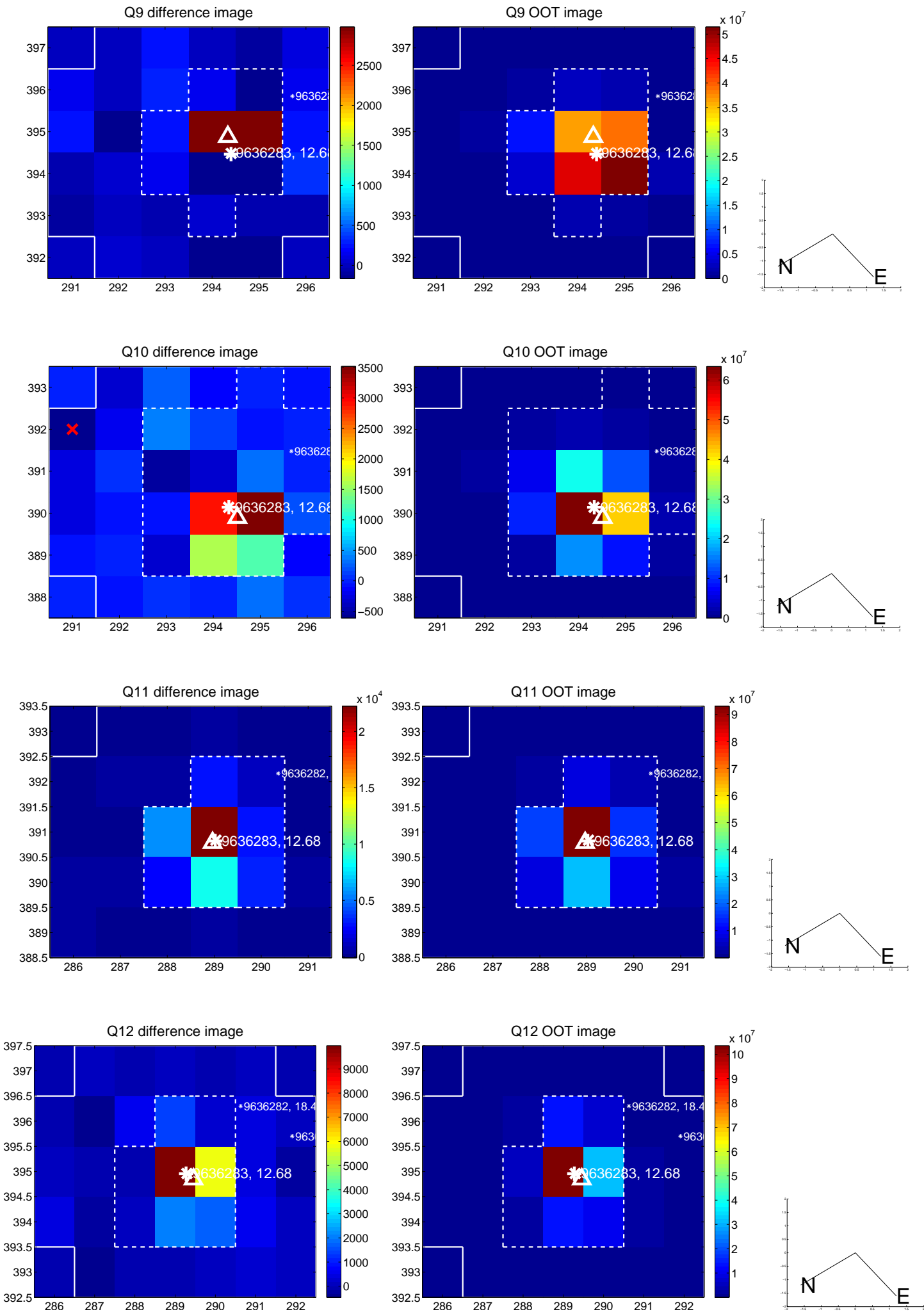
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



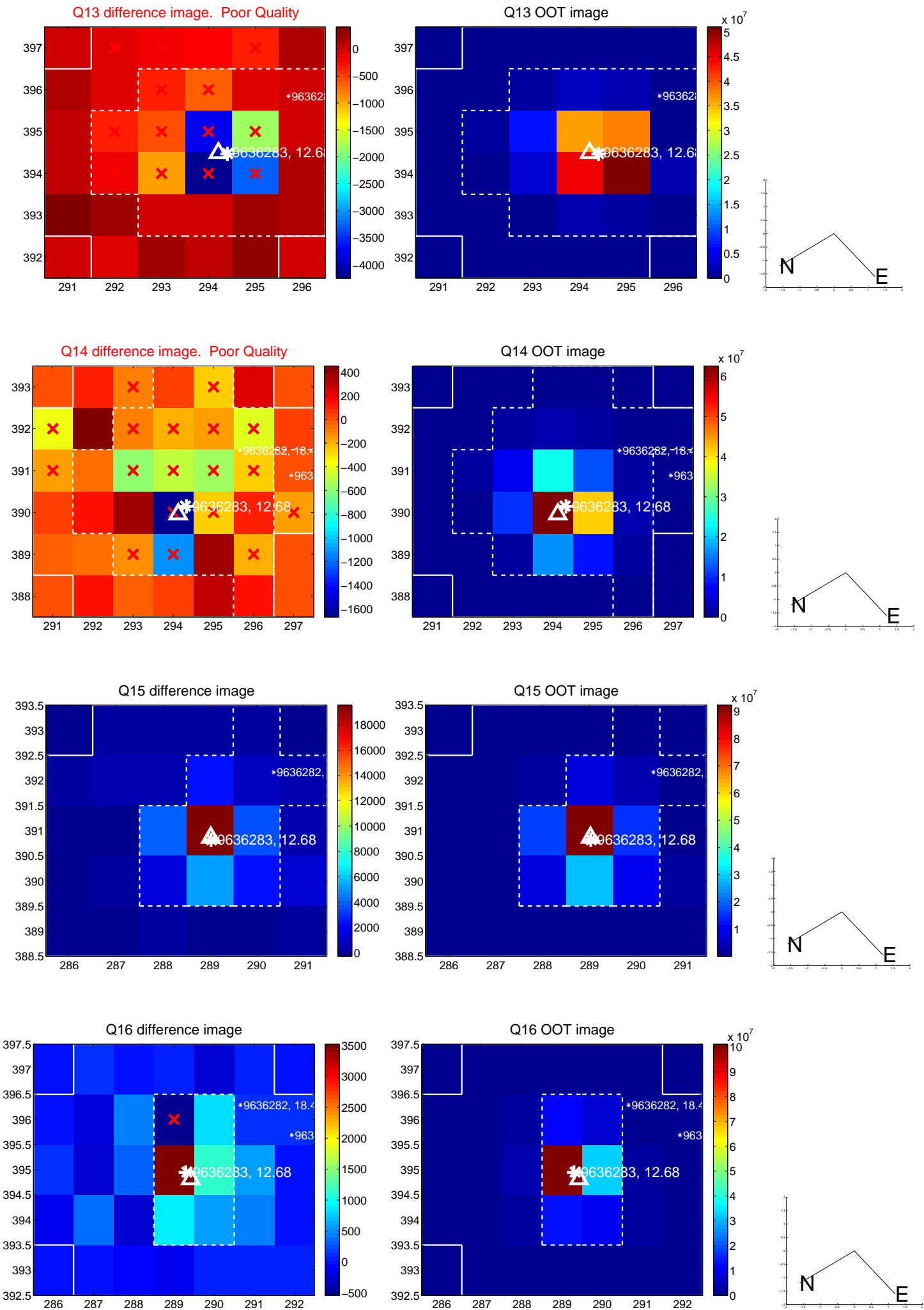
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



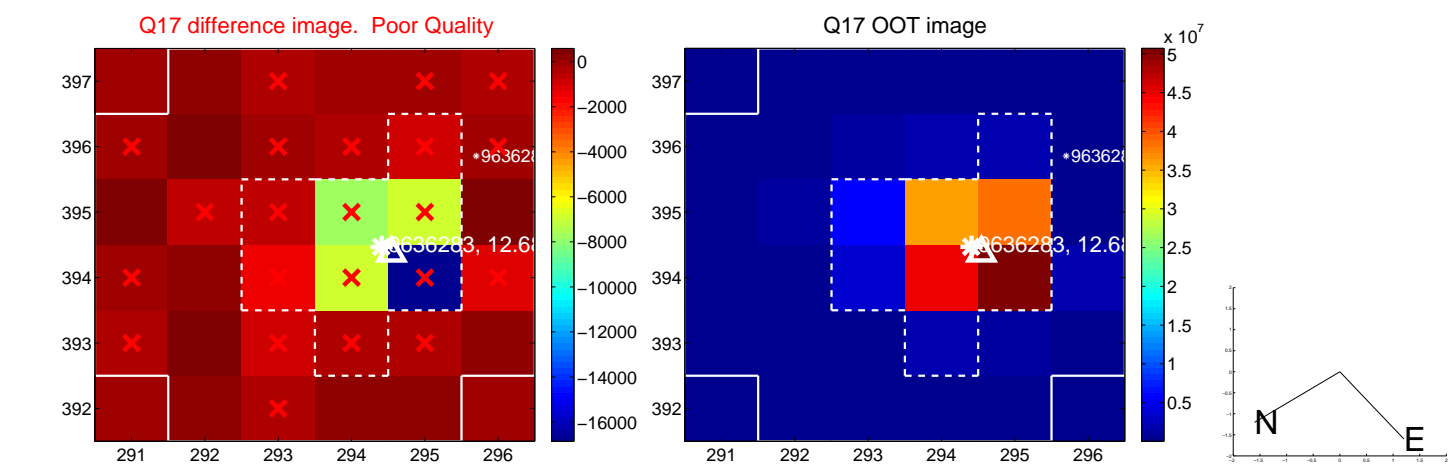
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



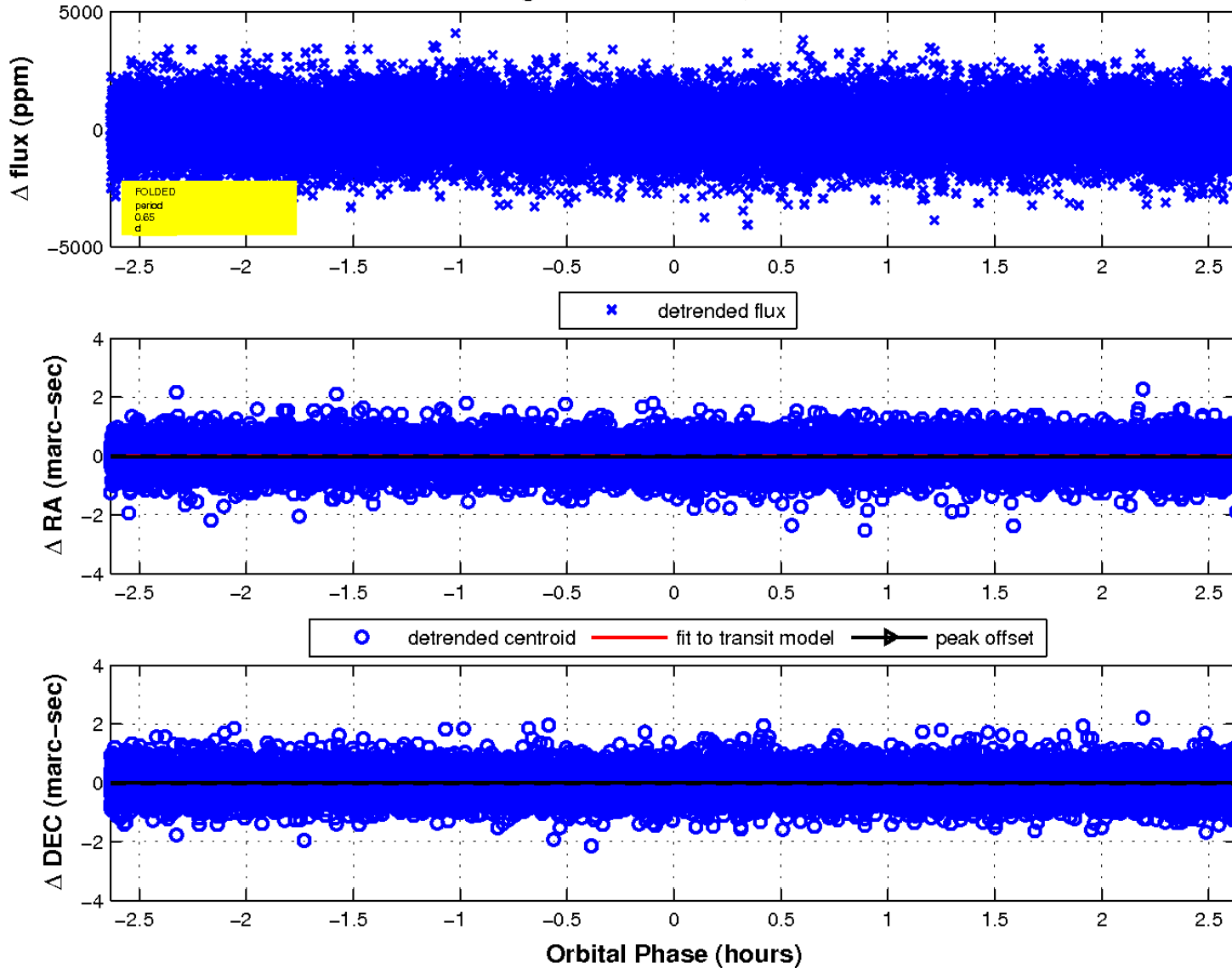
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

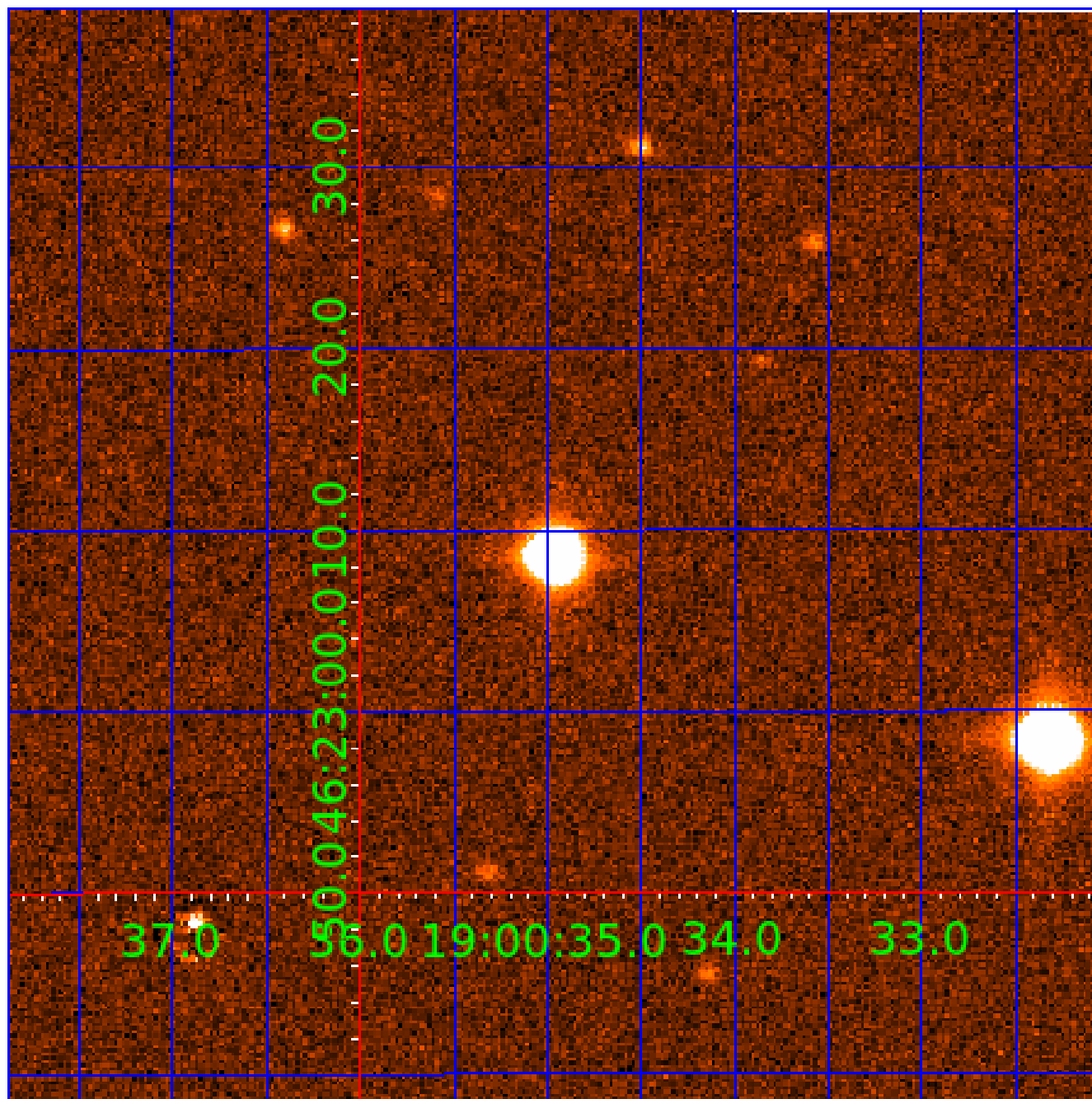


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 009636283

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})
009636283-01	OBS	No	0.649467	131.808264	57.9	1.825	13.8	10.0	2.47	7994	2.18	68132.98
009636283-02	OBS	No	0.649447	132.045937	112.5	0.878	7.9	9.8	2.47	7994	3.09	68135.77
009636283-03	OBS	No	0.811354	132.293548	79.9	9.736	7.5	9.0	2.47	7994	2.23	50639.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009636283-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
009636283-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
009636283-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

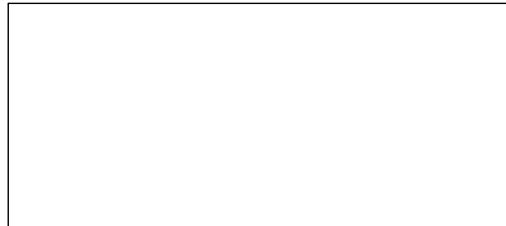
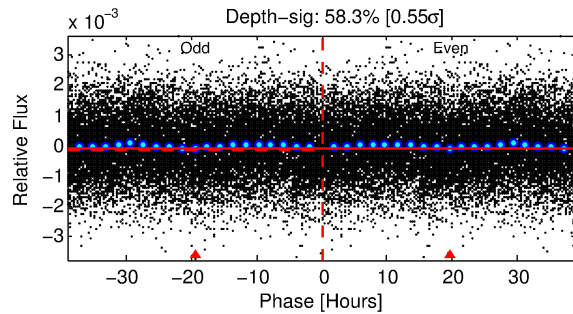
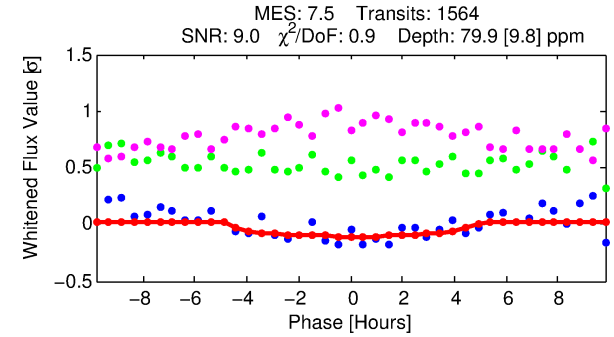
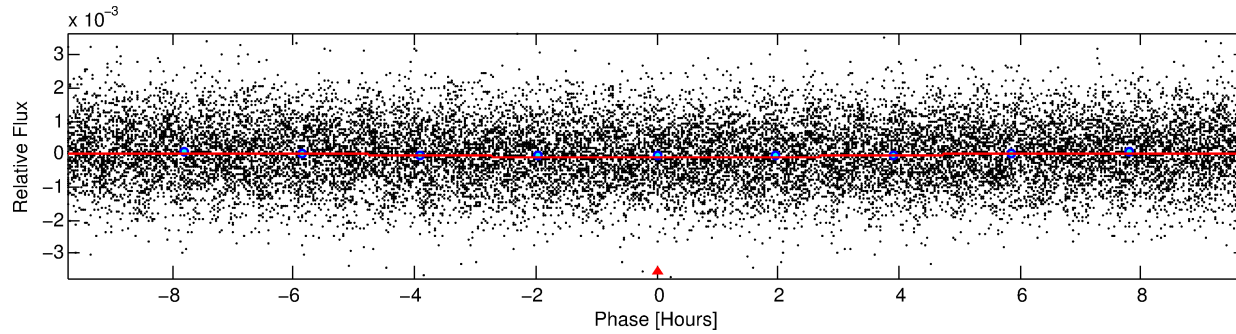
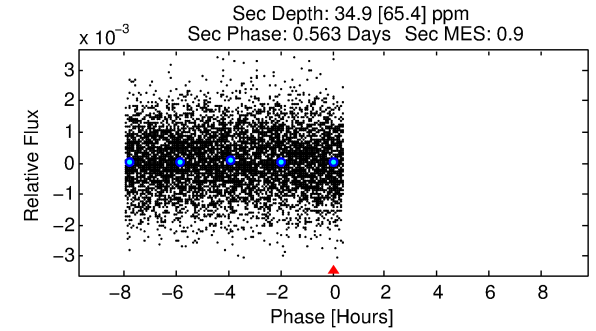
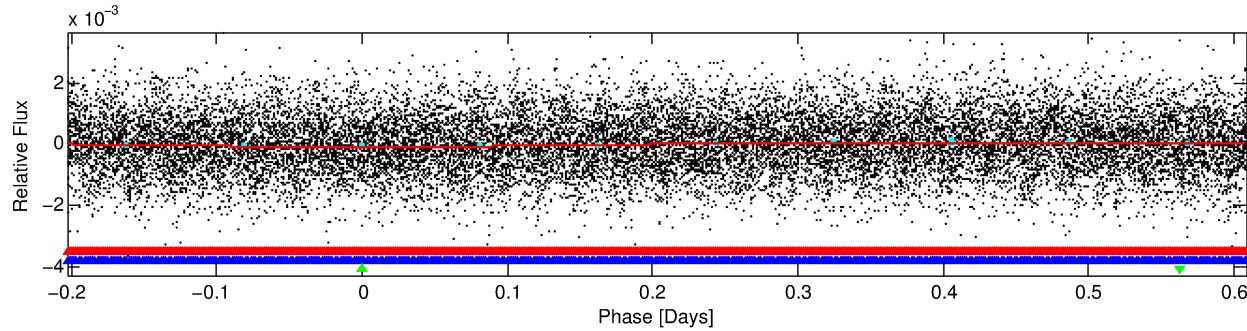
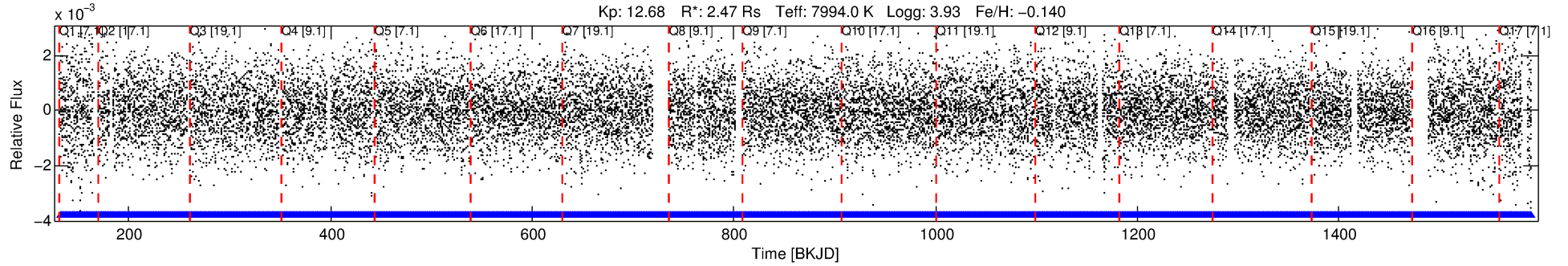
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009636283-03

No Significant Match Found

DV One-Page Summary

KIC: 9636283 Candidate: 3 of 3 Period: 0.811 d



DV Fit Results:

Period = 0.81135 [0.00002] d
Epoch = 132.2935 [0.0120] BKJD
Rp/R* = 0.0083 [0.0061]
a/R* = 1.00 [0.02]
b = 0.05 [90.16]
Seff = 50639.15 [24396.24]
Teq = 3825 [461] K
Rp = 2.23 [1.79] Re
a = 0.0210 [0.0061] AU
Ag = 1.70 [4.12] [0.17σ]
Teffp = 6755 [4029] K [0.72σ]

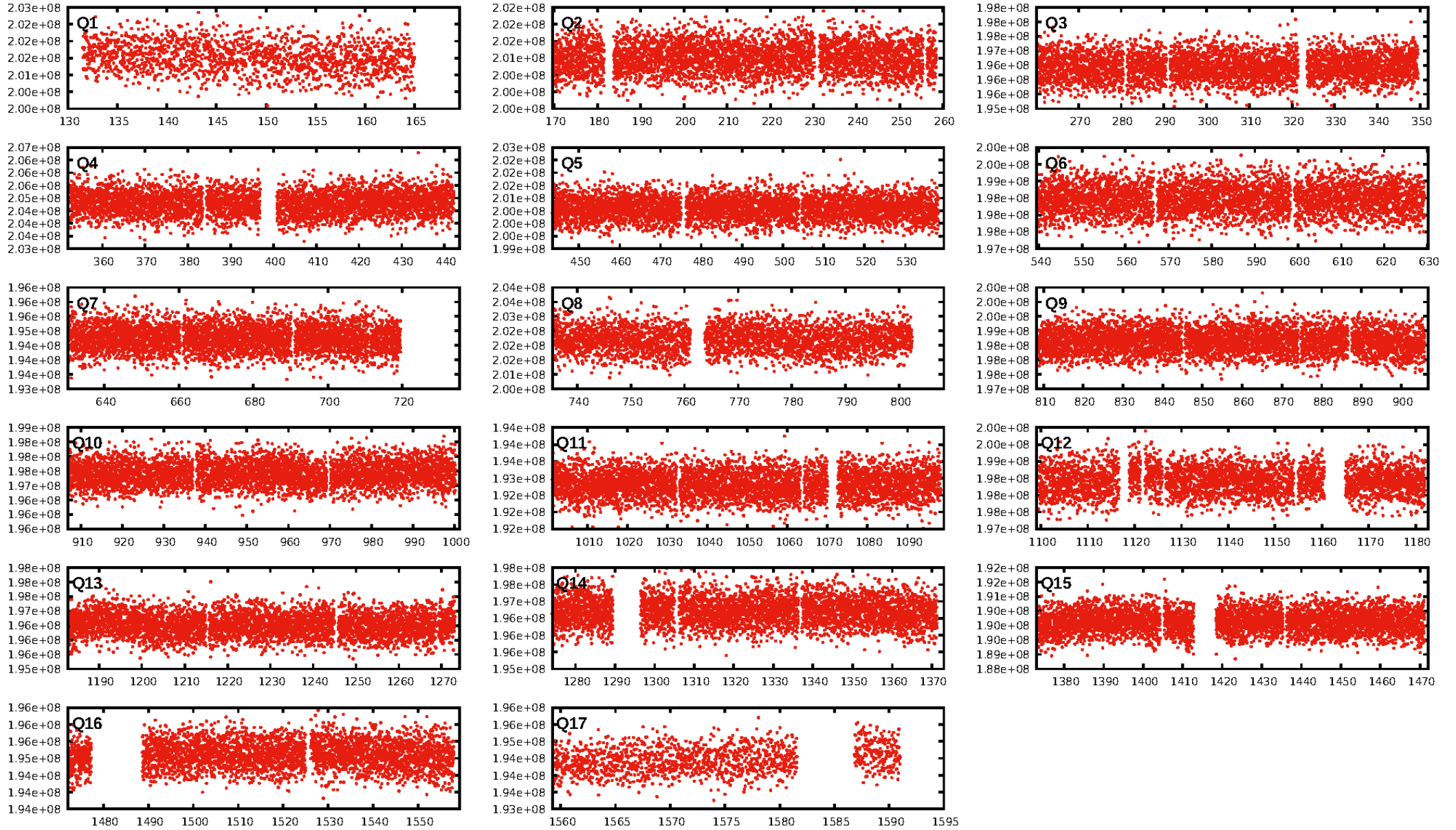
DV Diagnostic Results:

ShortPeriod-sig: 30.5% [0.39σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1489/1489]
GhostDiagnostic-chr: 2.25
Centroid-sig: 0.0%
Centroid-so: 0.212 arcsec [2.16σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/17]

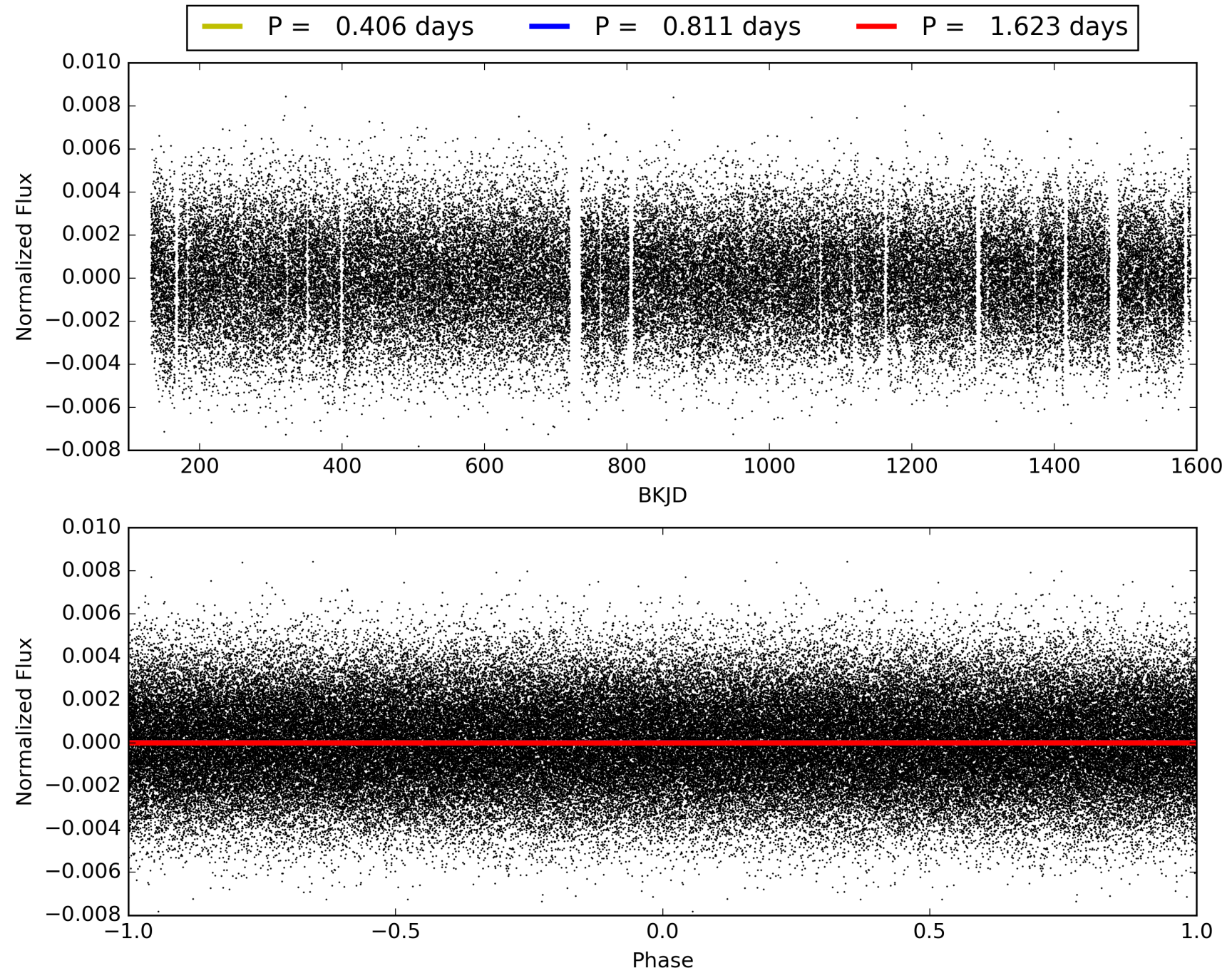
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:28:50 Z

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

TCE 009636283-03, PDC Light Curves

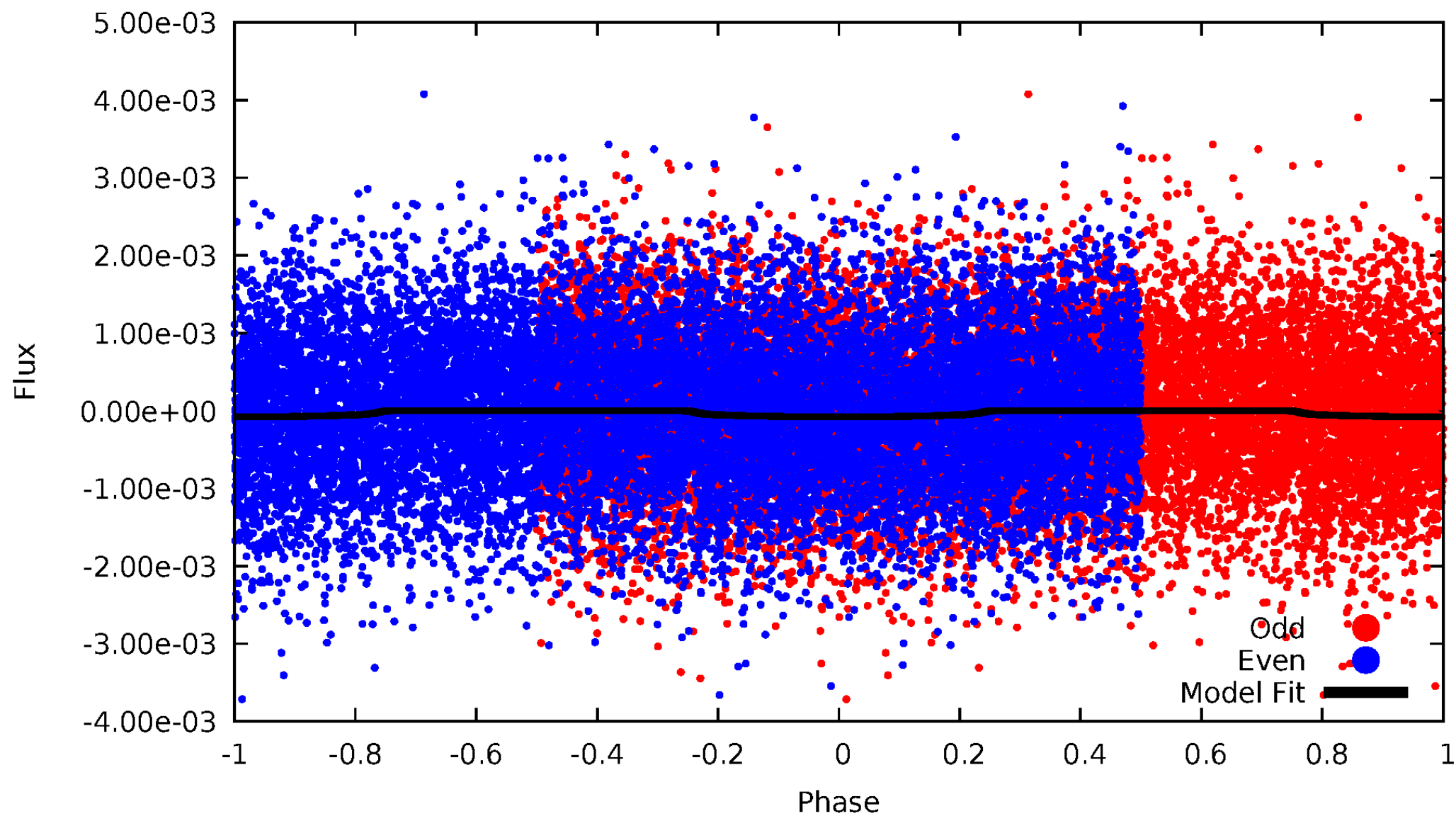


TCE 009636283-03



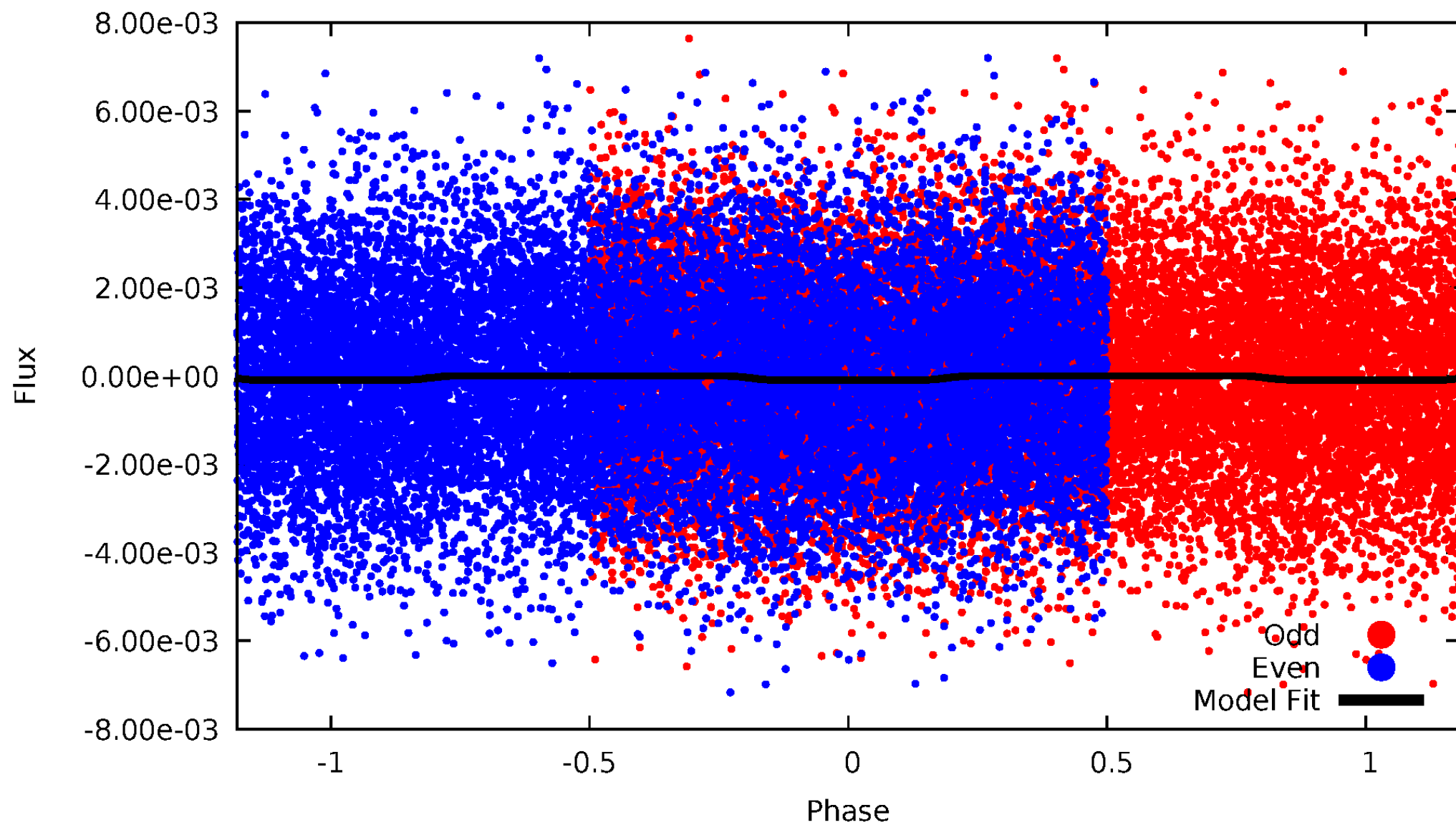
DV Odd/Even

TCE 009636283-03



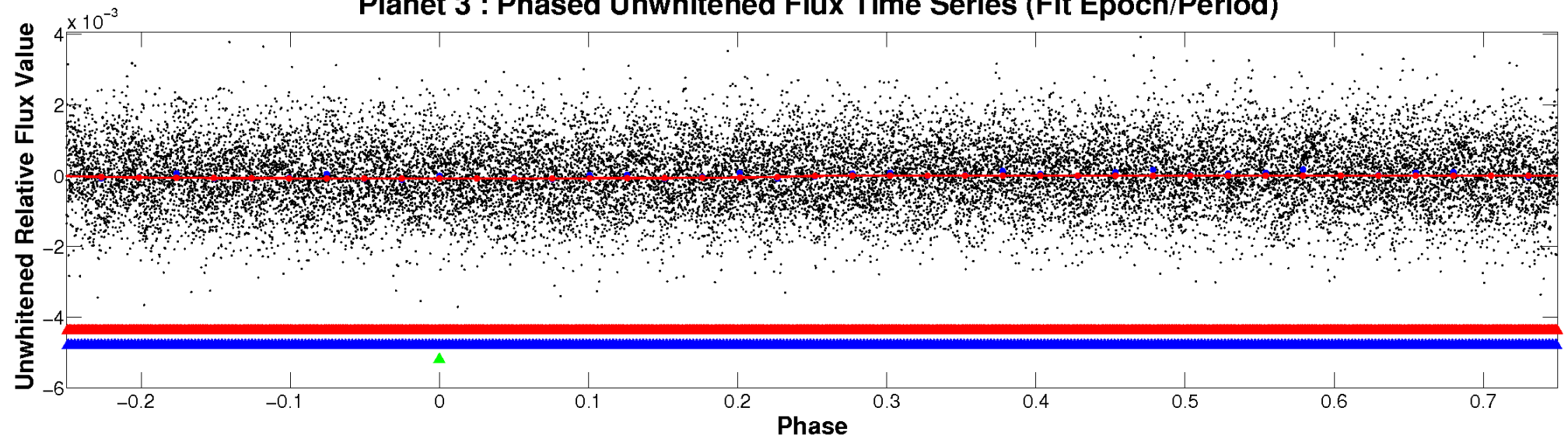
ALT Odd/Even

TCE 009636283-03

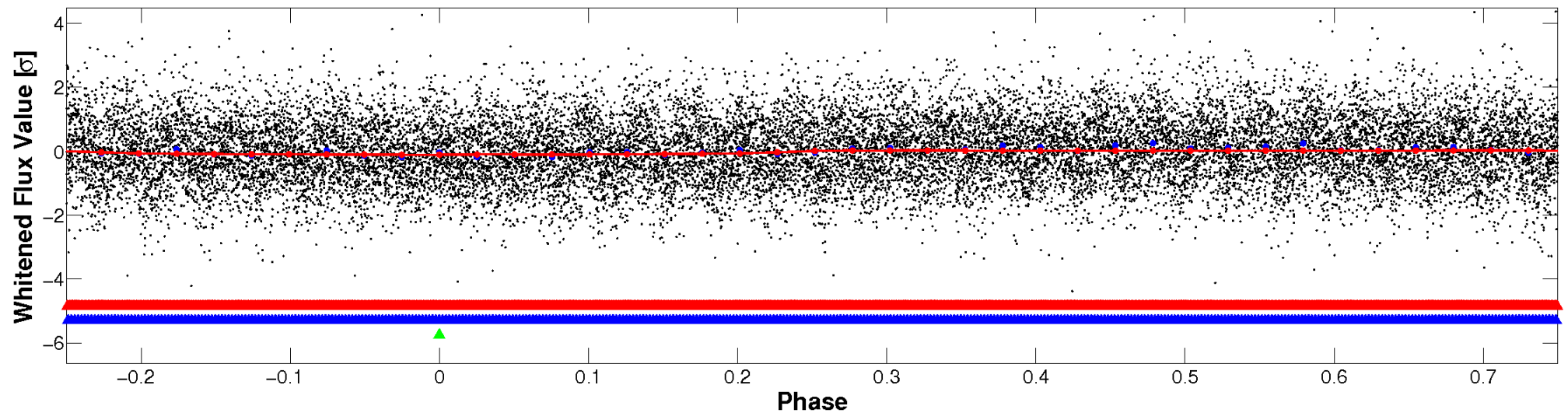


Non-Whitened Vs. Whitened Light Curve

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

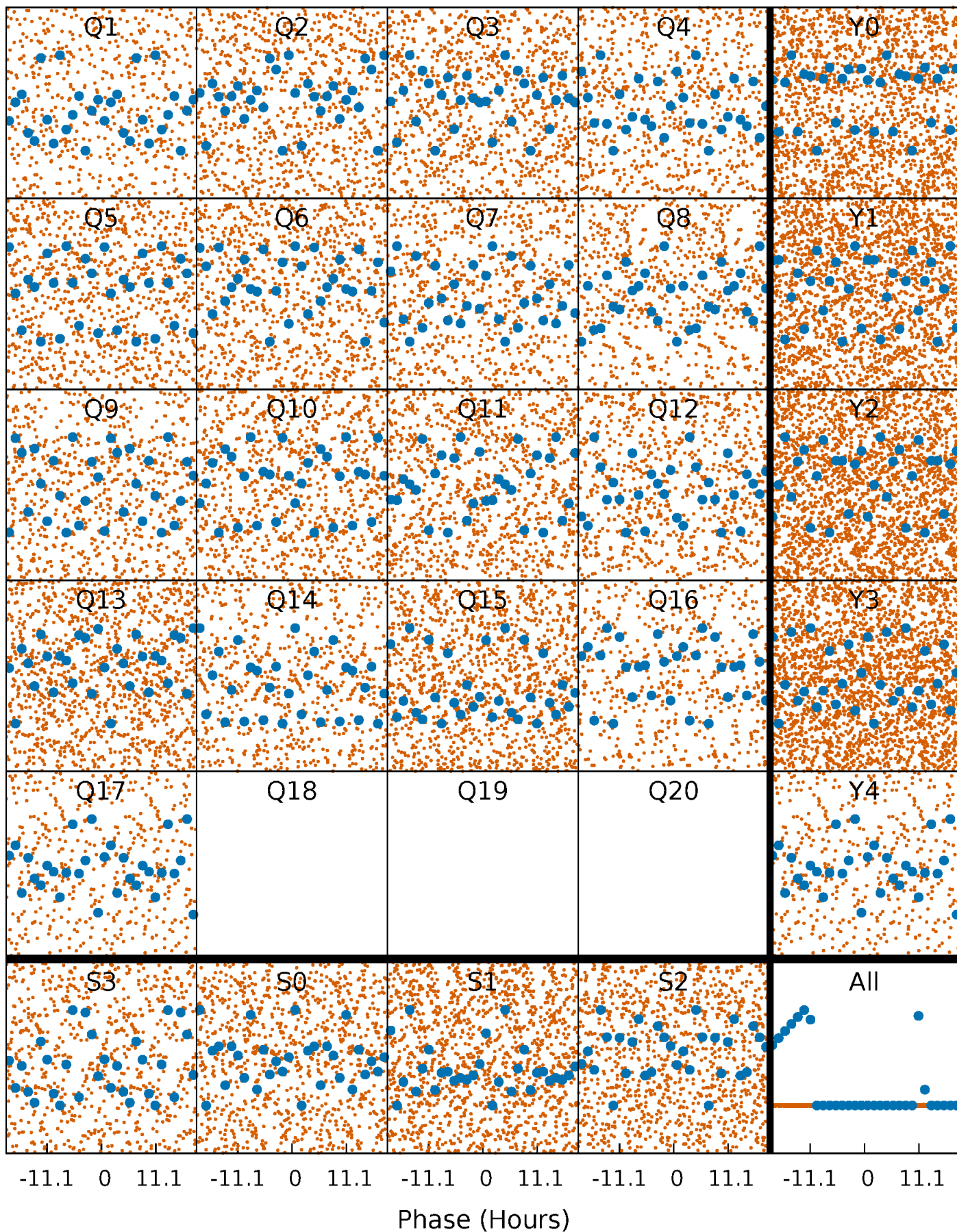


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



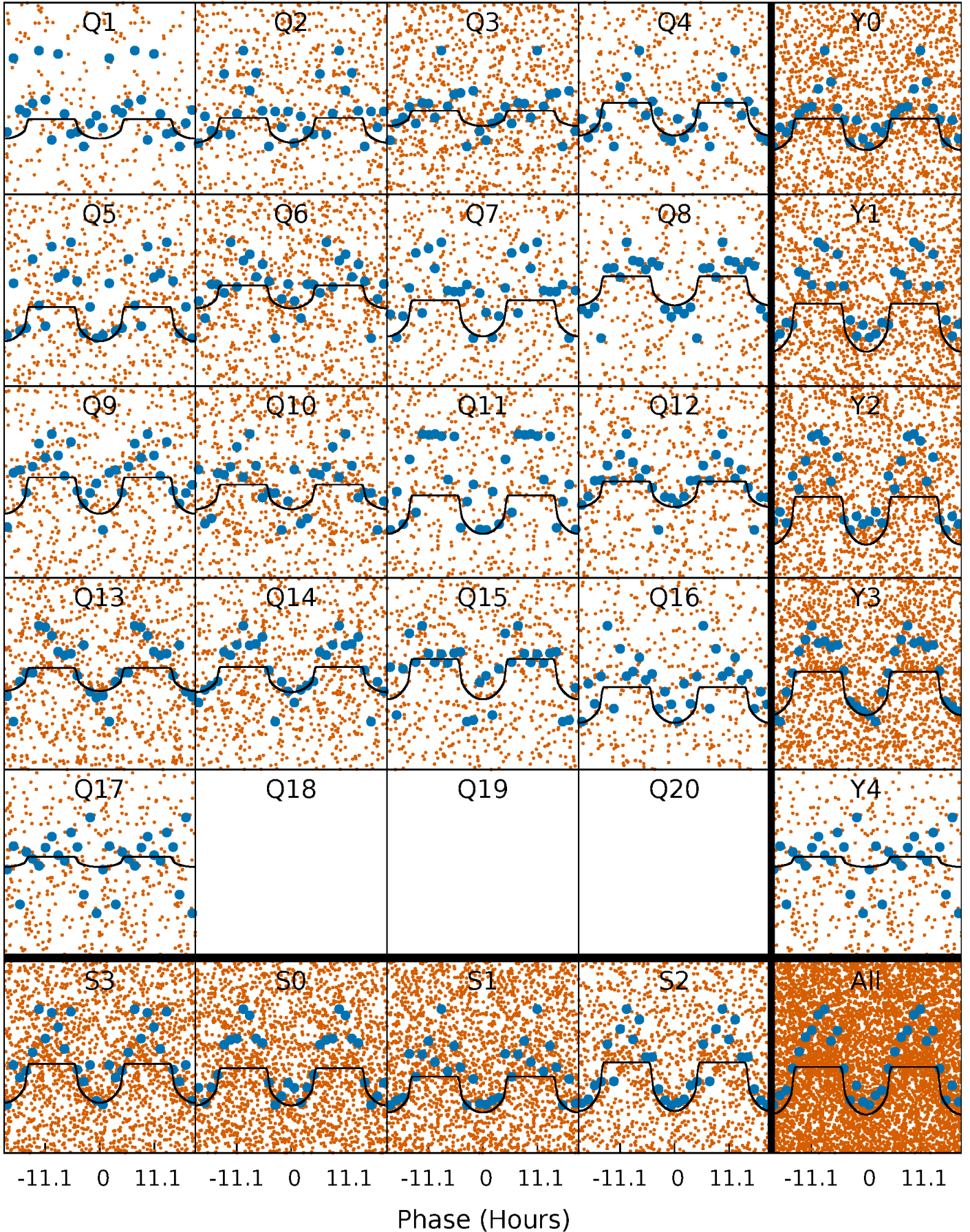
PDC Quarter-Phased Transit Curves

TCE 009636283-03 P= 0.811354 Days $T_0=132.293548$ (BKJD)



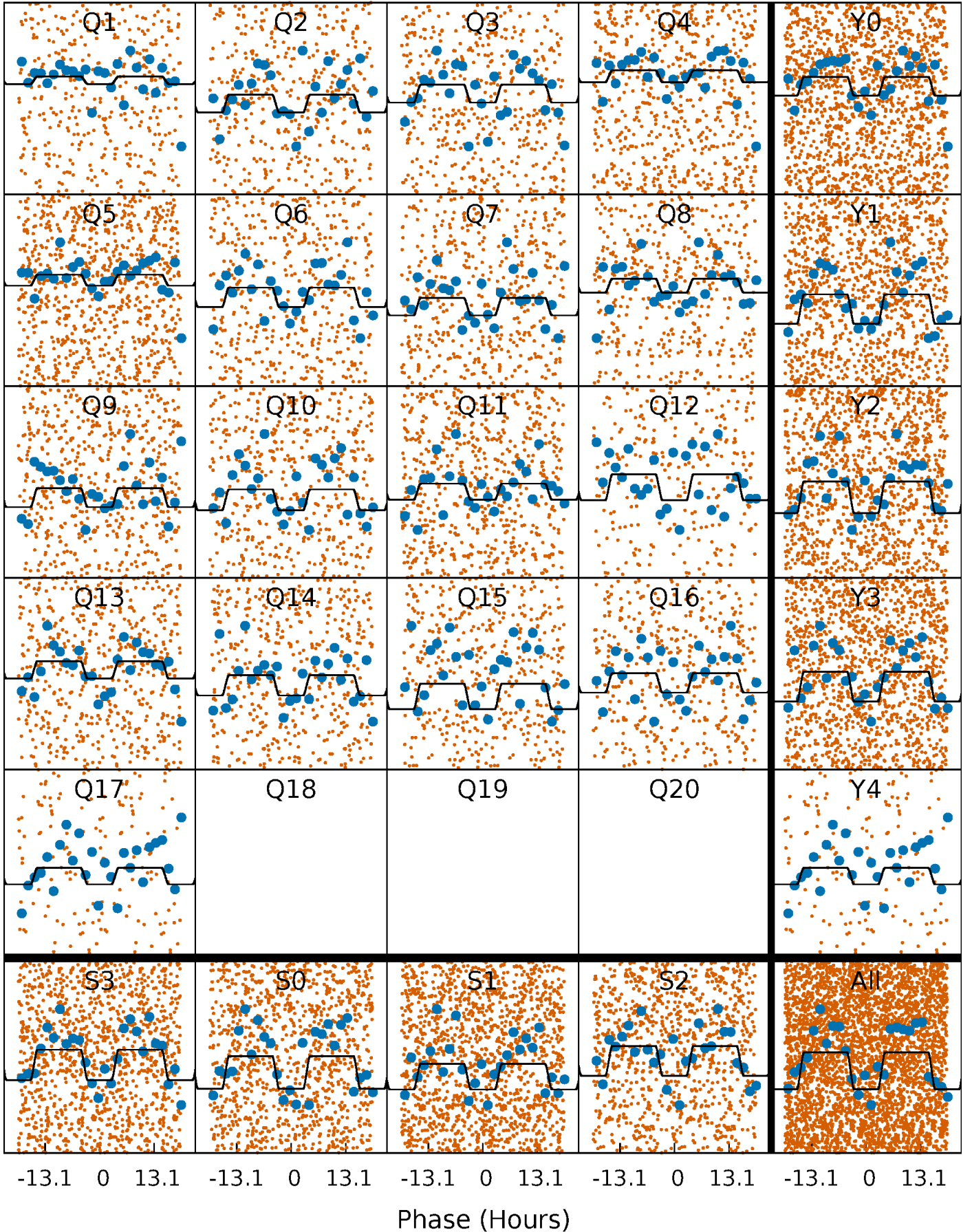
DV Quarter-Phased Transit Curves

TCE 009636283-03 P= 0.811354 Days $T_0=132.293548$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

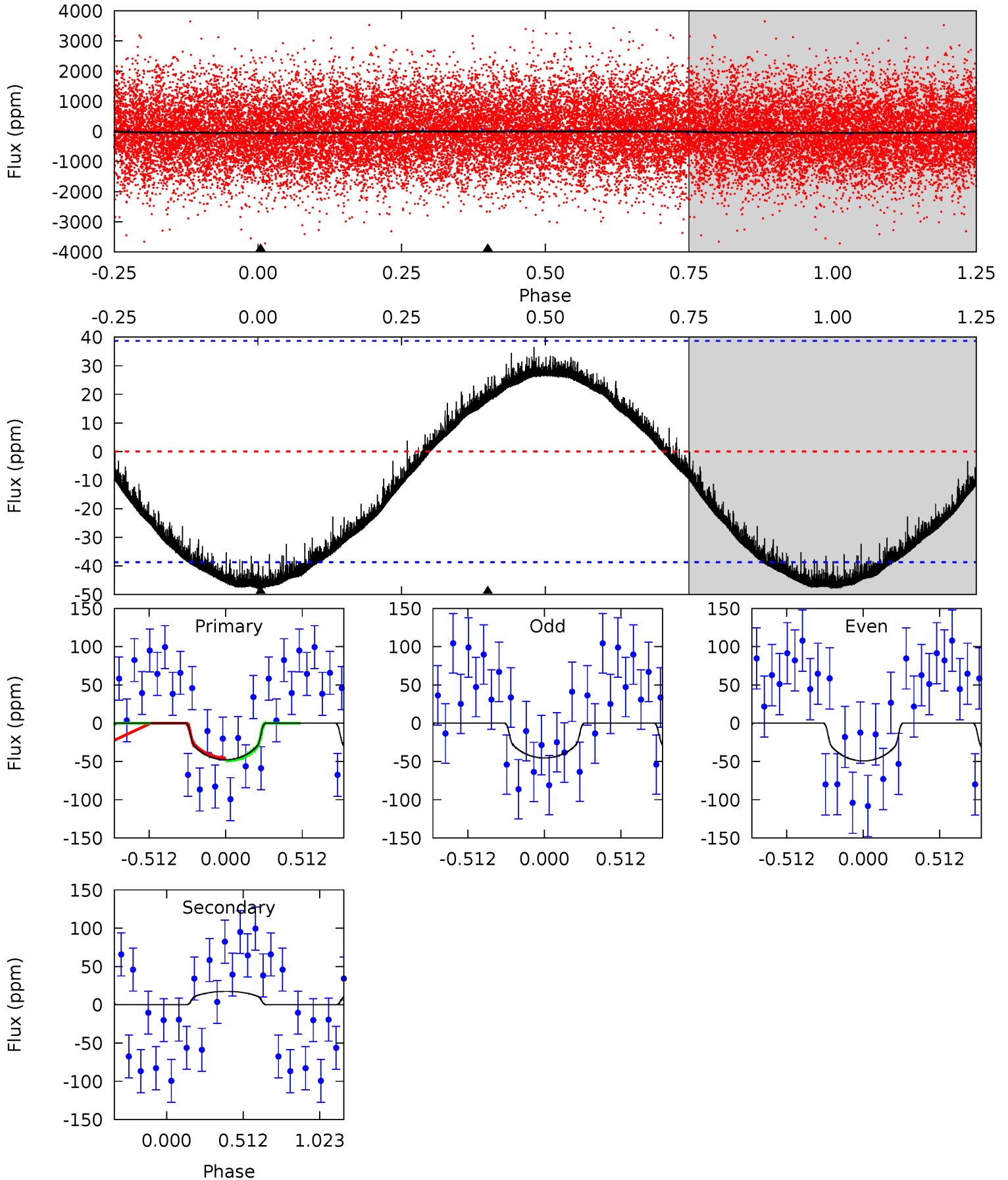
TCE 009636283-03 $P = 0.811371$ Days $T_0 = 132.285712$ (BKJD)



DV Model-Shift Uniqueness Test

009636283-03, P = 0.811354 Days, E = 131.482194 Days

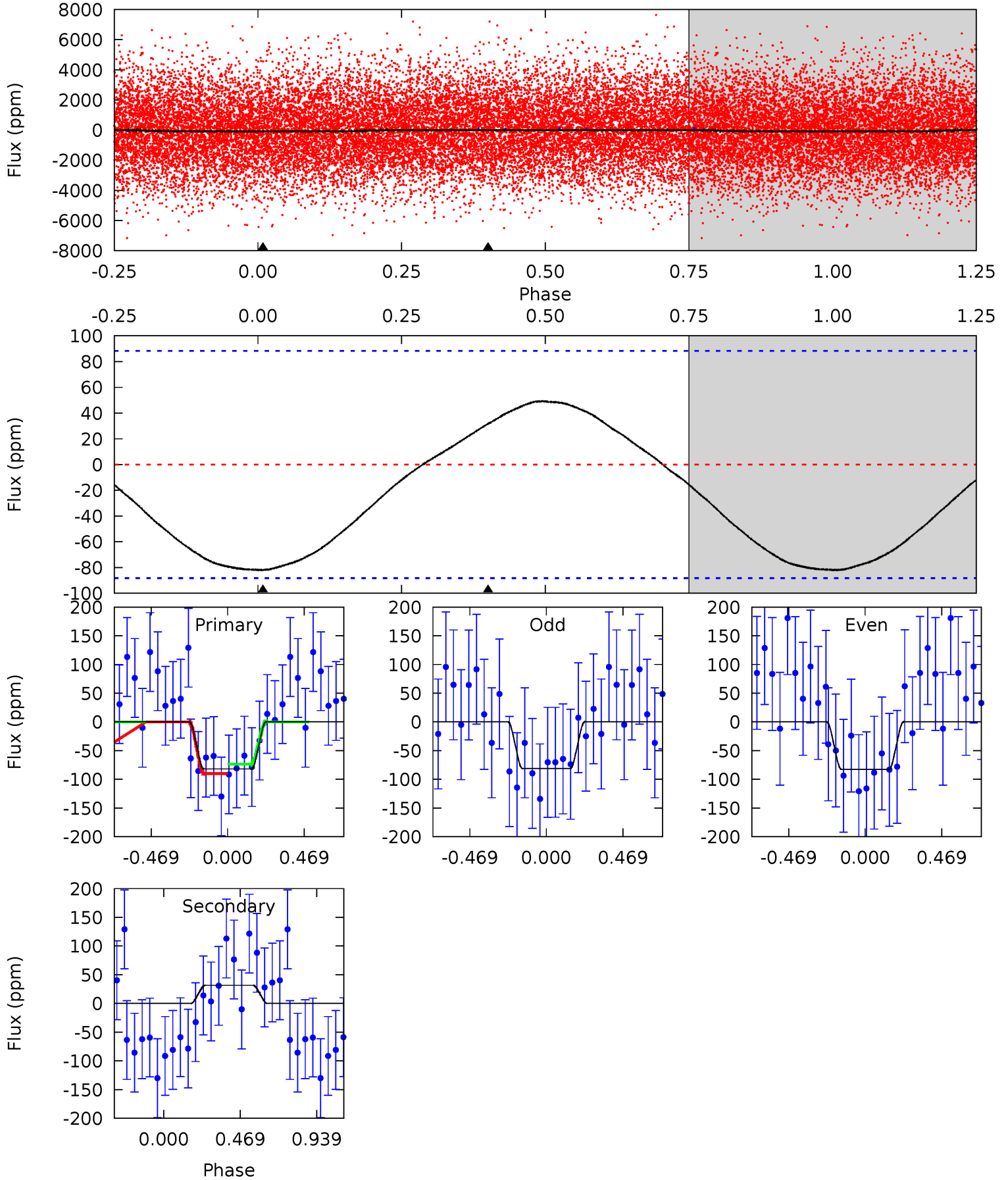
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.20	-1.91	0	0	4.21	0.66	0.70	5.20	5.20	-1.91	-1.91	0.22	-6.06	0.43	0.21



Alt Model-Shift Uniqueness Test

009636283-03, P = 0.811371 Days, E = 131.474341 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.93	-1.51	0	0	4.23	0.72	0.50	3.93	3.93	-1.51	-1.51	0.03	0.76	0.37	0.39



Stellar Parameters For KIC 009636283

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7994^{+223}_{-335}	$3.926^{+0.259}_{-0.130}$	$-0.140^{+0.200}_{-0.300}$	$2.473^{+0.428}_{-0.795}$	$1.883^{+0.127}_{-0.381}$	$0.175^{+0.293}_{-0.059}$
	+3%/-4%	+7%/-3%	+143%/-214%	+17%/-32%	+7%/-20%	+167%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009636283-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	18 ± 9	$2.33^{+1.49}_{-1.30}$	5265^{+360}_{-442}	-5674^{+791}_{-2603}	$-0.702^{+0.500}_{-3.131}$
Alt.	32 ± 21	$2.47^{+1.70}_{-1.27}$	5293^{+349}_{-419}	-6158^{+1230}_{-3192}	$-1.047^{+0.833}_{-4.372}$

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 $A_{obs} \gg 1.0$

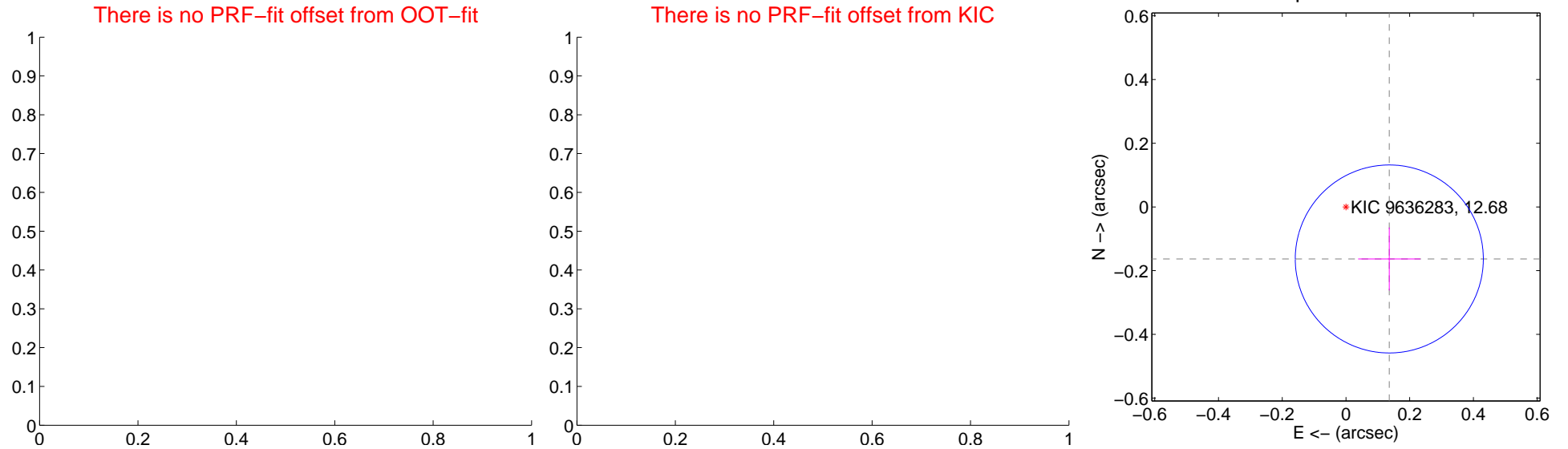
DV Centroid Data

Supplemental centroid analysis for 009636283-03. Kepler magnitude: 12.68. Transit SNR 8.97

There are 0 quarters with good PRF difference image offsets

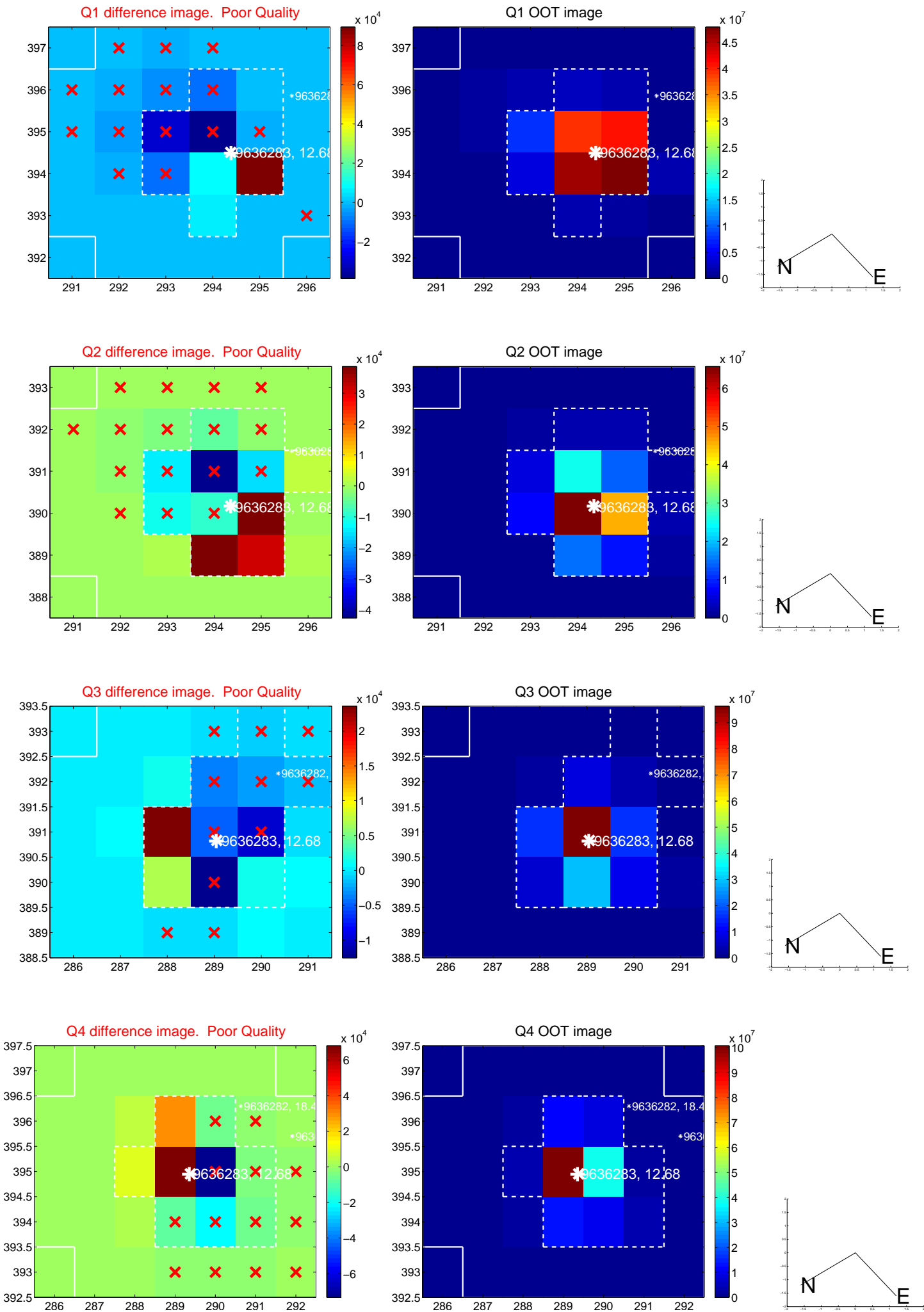
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	0.21 ± 0.10	2.16	-0.14 ± 0.10	-0.16 ± 0.10

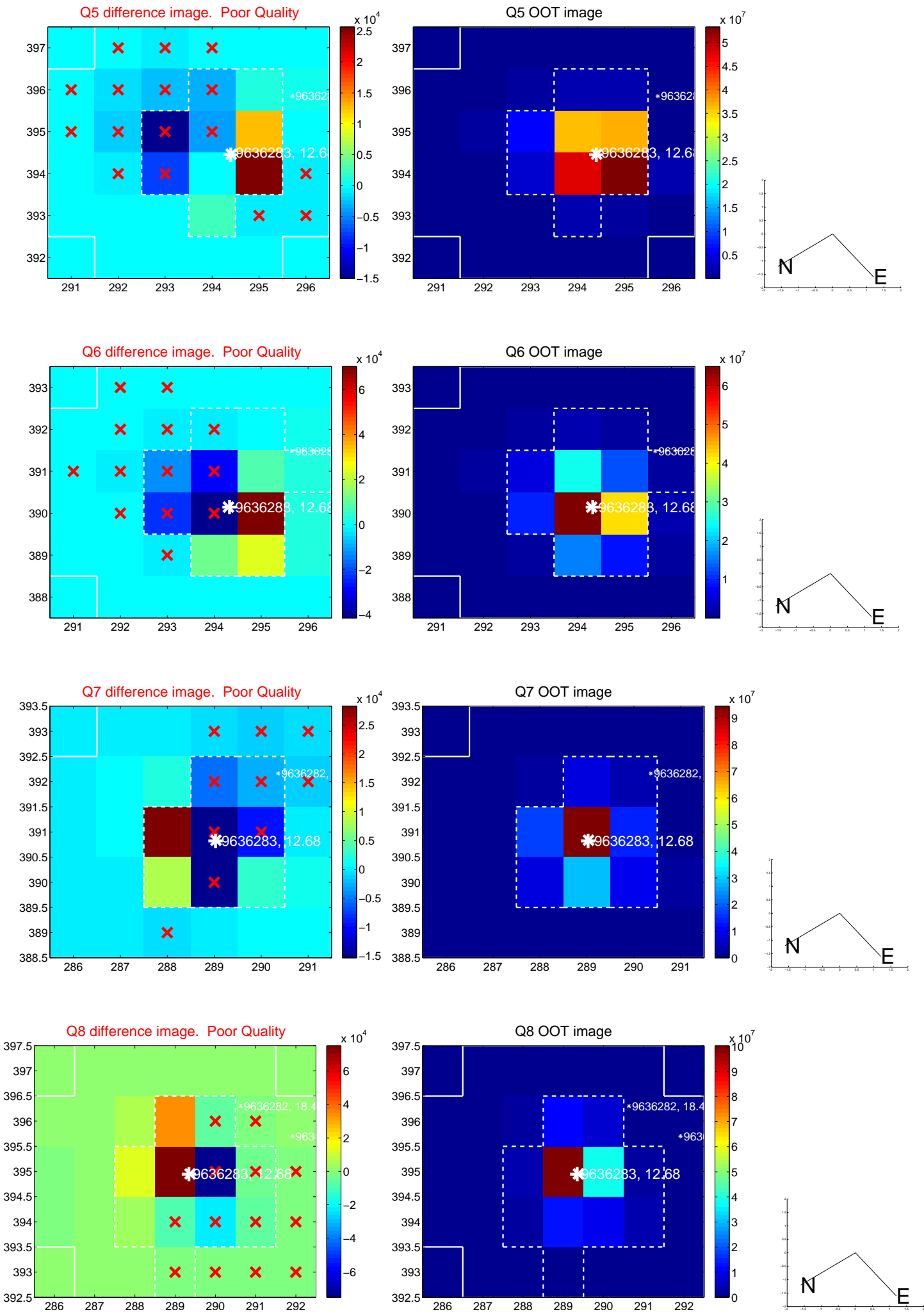


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

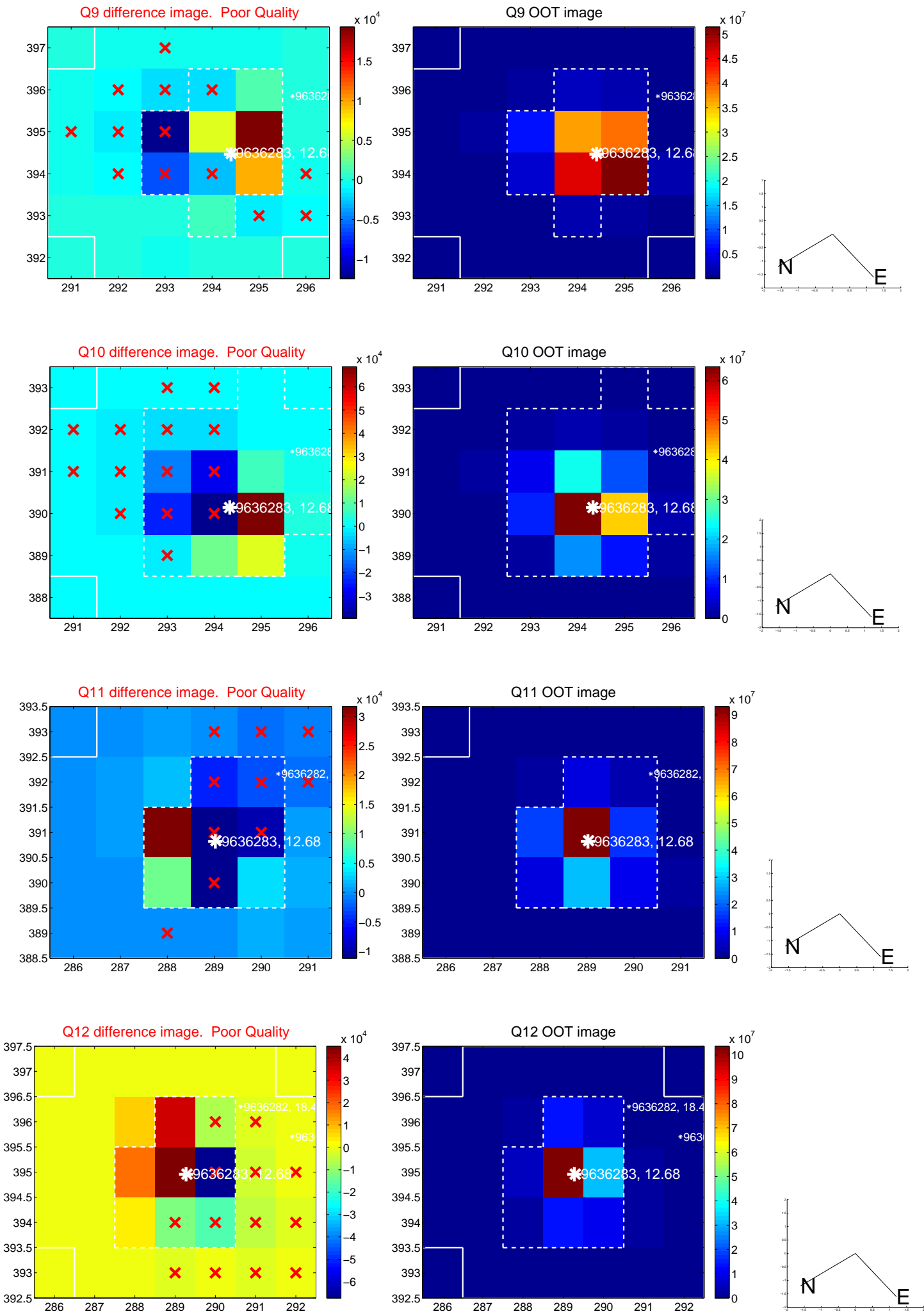
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



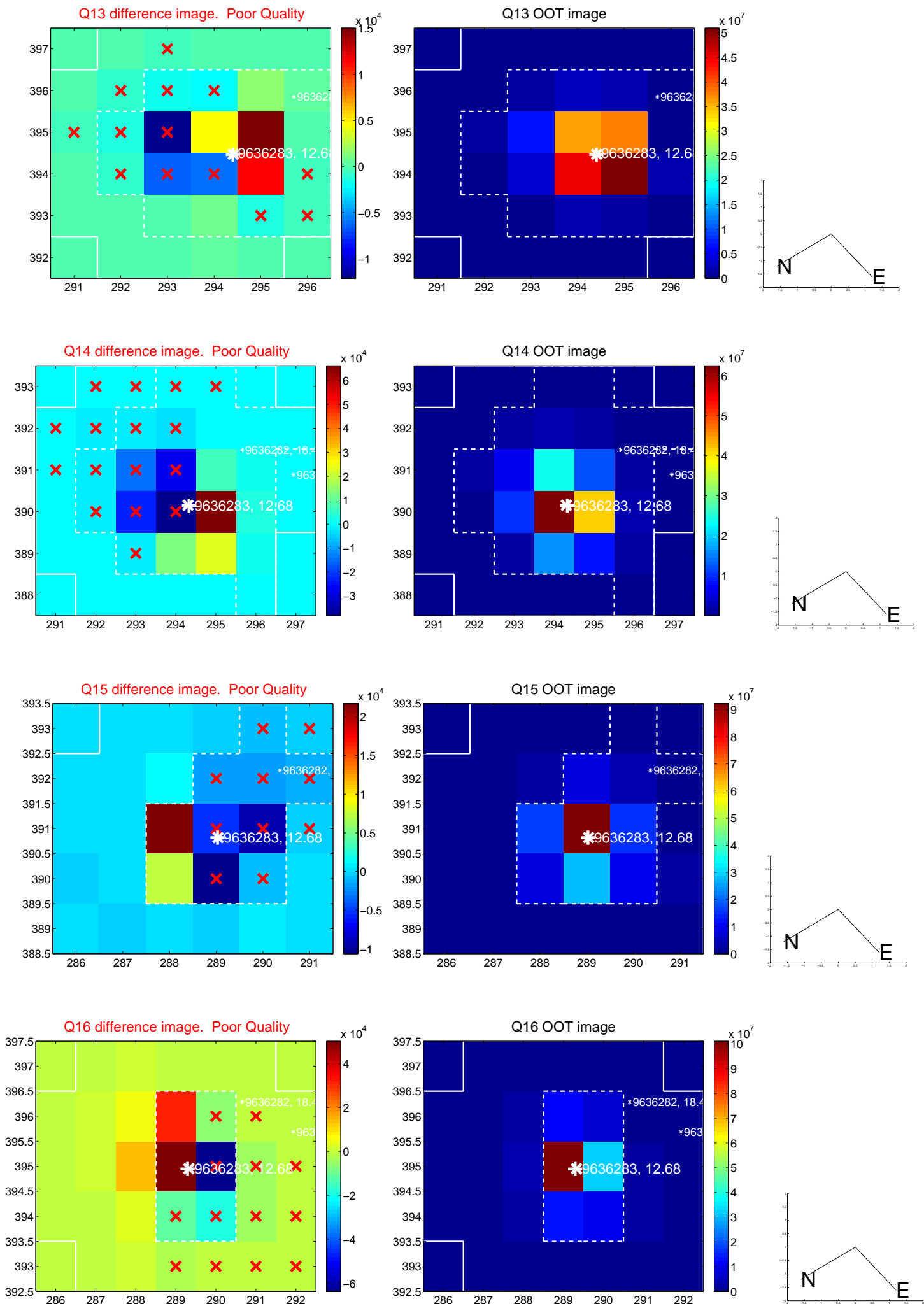
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



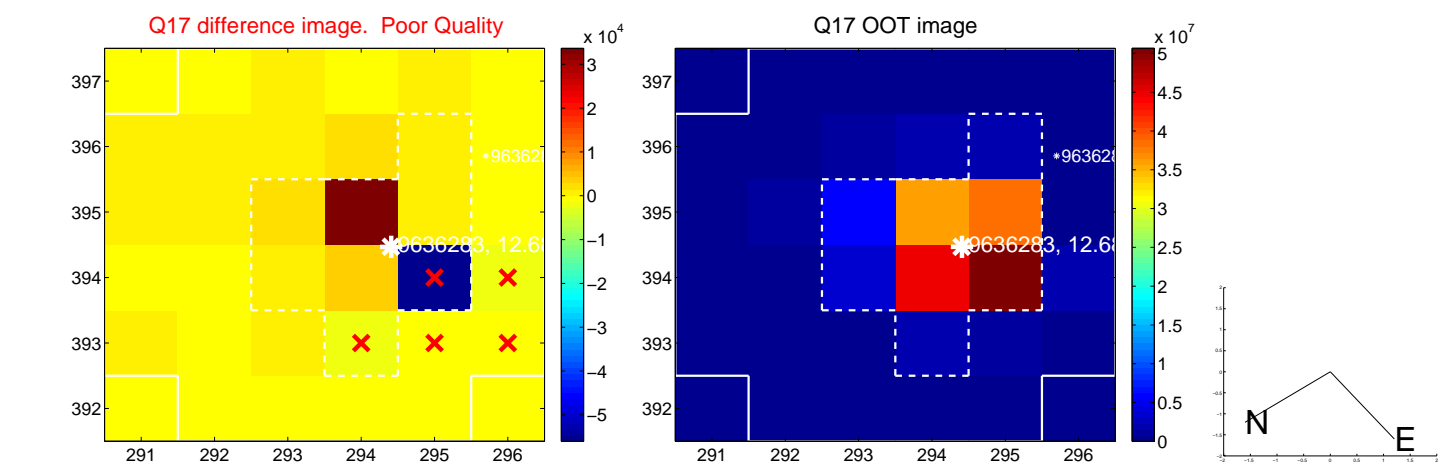
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



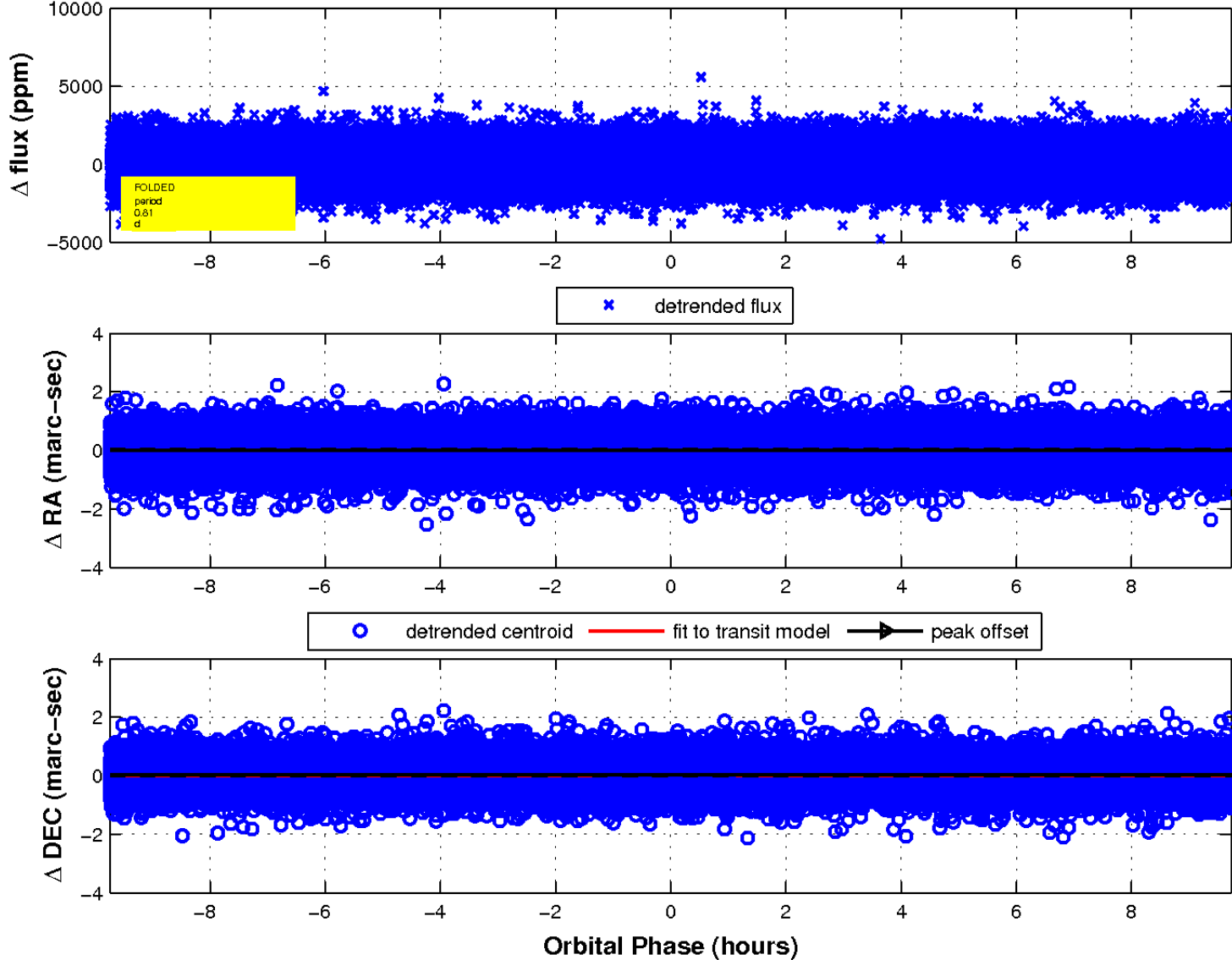
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

