

KIC 005636882

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})
005636882-01	OBS	No	1.255193	132.552587	214.4	5.465	10.7	11.4	2.73	8018	4.65	34550.61
005636882-02	OBS	No	1.255187	131.918381	216.5	5.472	10.8	12.2	2.73	8018	4.12	34550.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005636882-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005636882-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

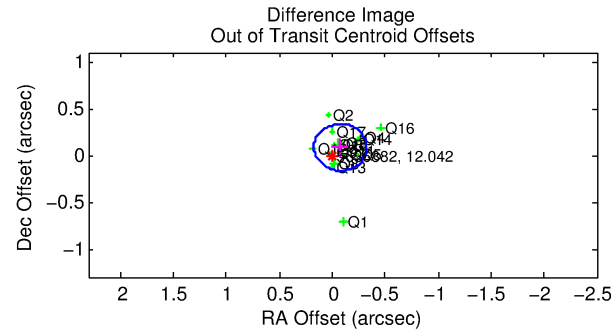
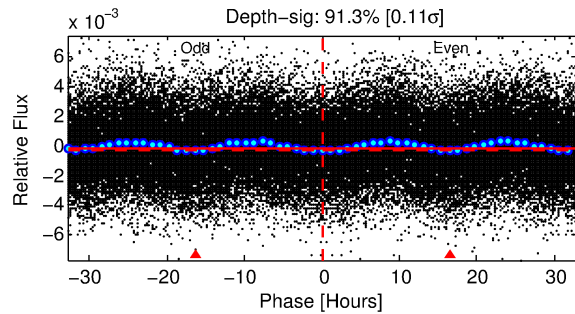
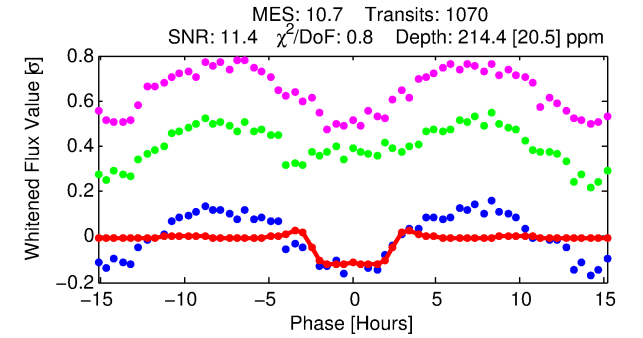
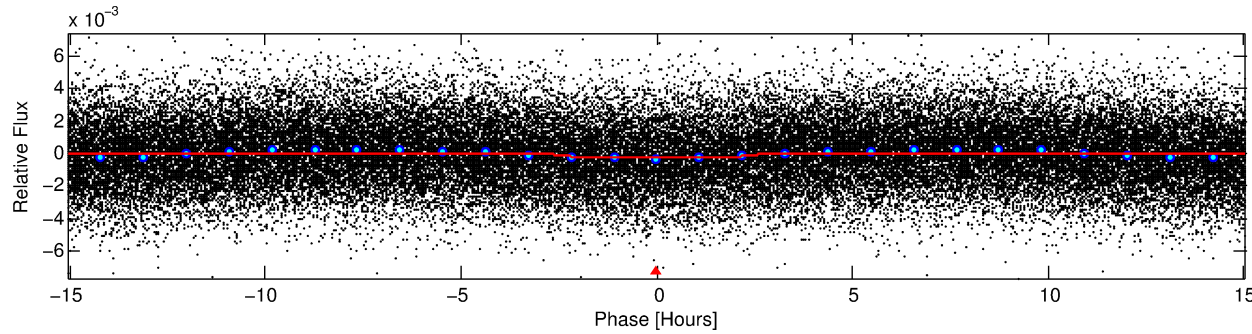
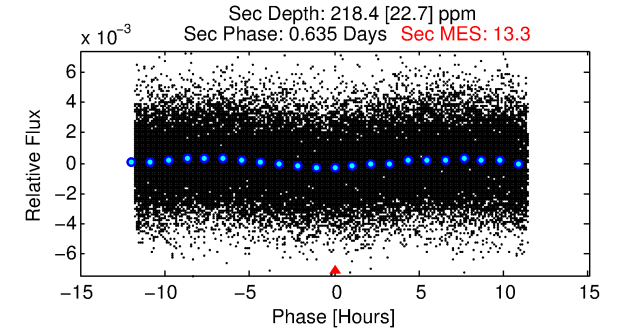
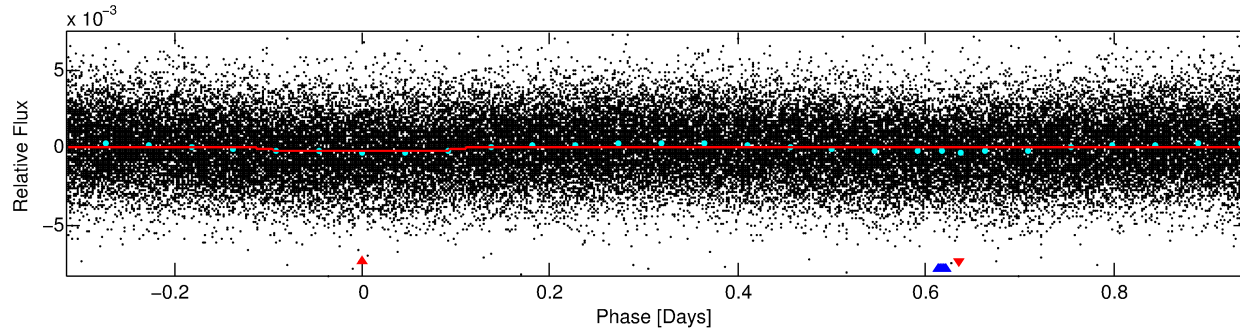
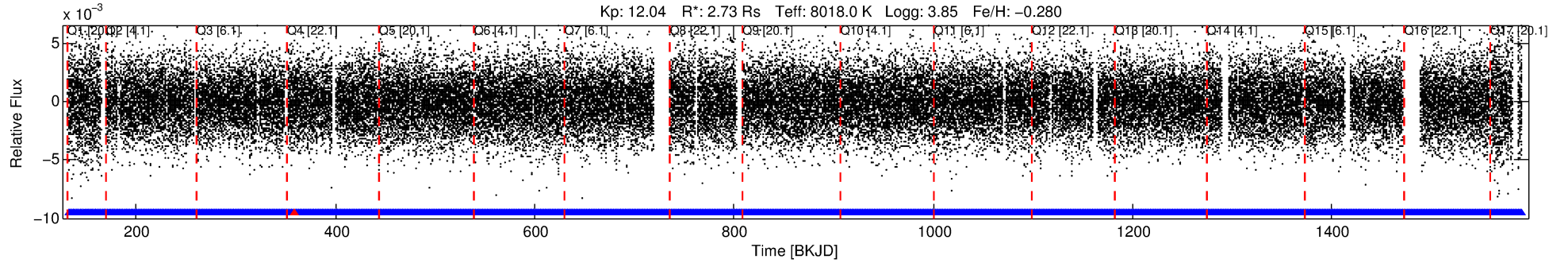
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005636882-01

No Significant Match Found

DV One-Page Summary

KIC: 5636882 Candidate: 1 of 2 Period: 1.255 d



DV Fit Results:

Period = 1.25519 [0.00001] d
Epoch = 132.5526 [0.0048] BKJD
Rp/R* = 0.0156 [0.0038]
a/R* = 1.26 [0.64]
b = 0.90 [0.31]
Seff = 34550.61 [21769.67]
Teff = 3476 [548] K
Rp = 4.65 [2.24] Re
a = 0.0282 [0.0109] AU
Ag = 4.43 [3.46] [0.99σ]
Teffp = 7796 [1013] K [3.75σ]

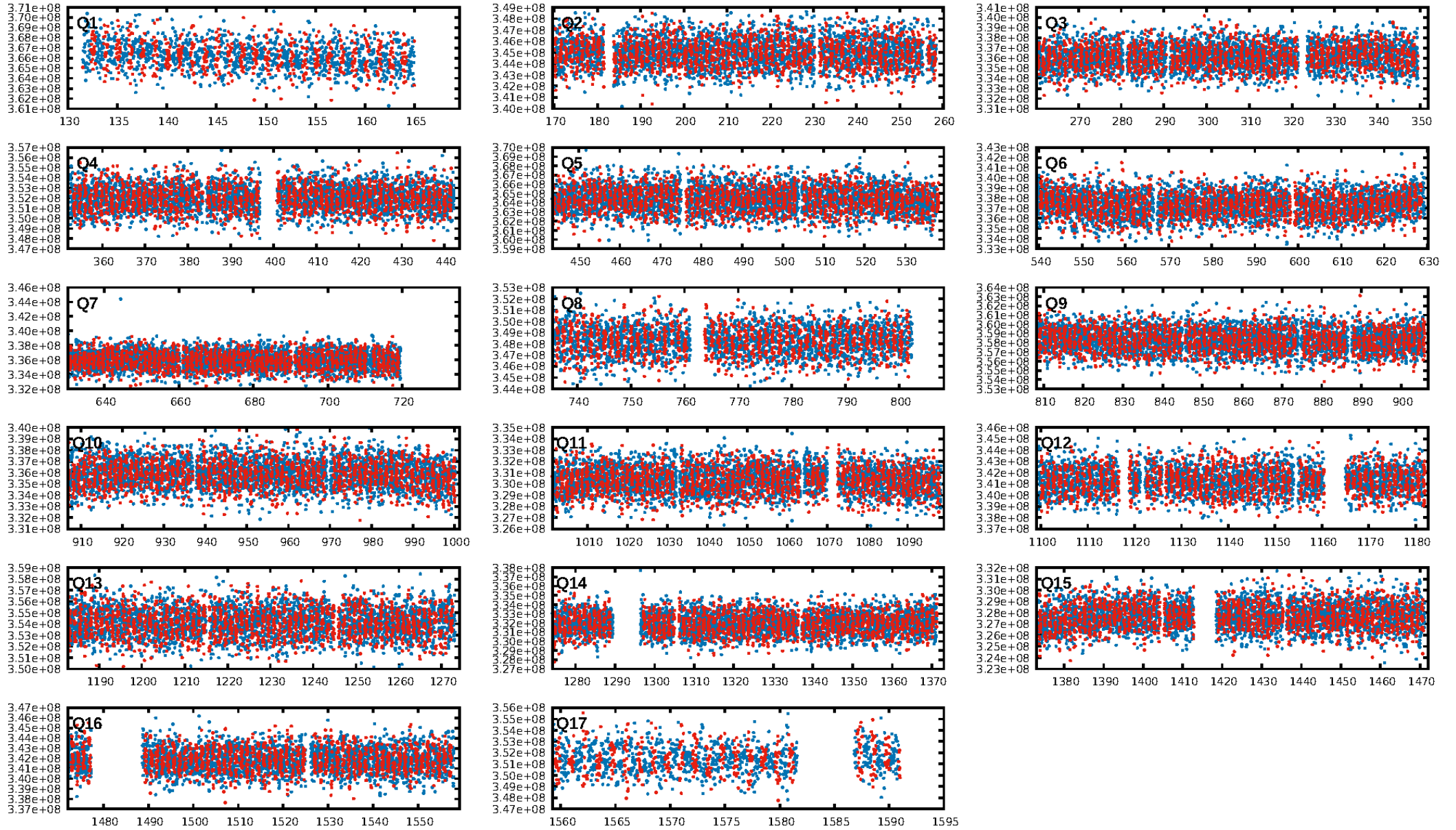
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1021/1022]
GhostDiagnostic-chr: 1.112
Centroid-sig: 0.0%
Centroid-so: 0.107 arcsec [2.03σ]
OotOffset-rm: 0.114 arcsec [1.37σ]
KicOffset-rm: 0.105 arcsec [1.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

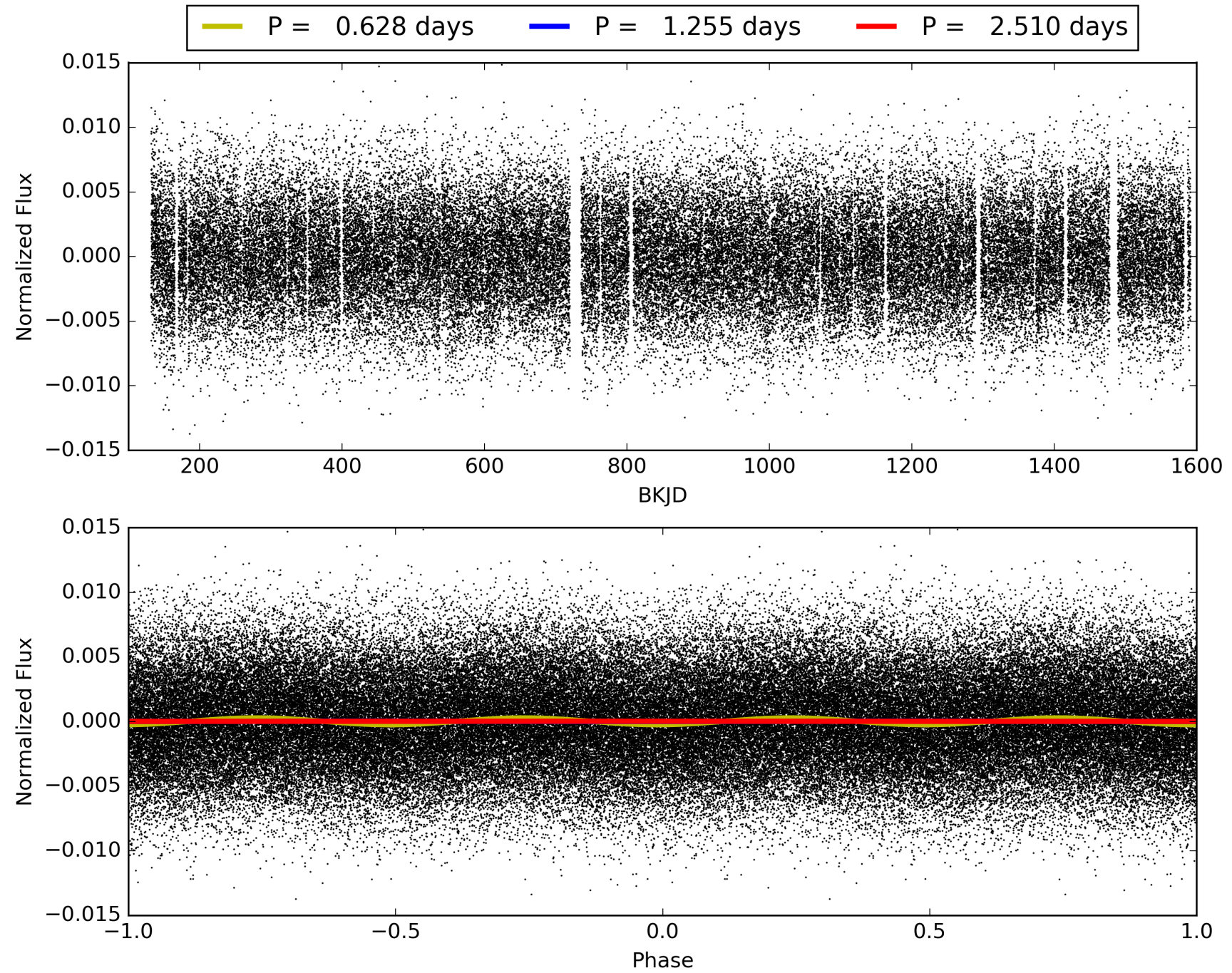
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:53:16 Z

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

TCE 005636882-01, PDC Light Curves

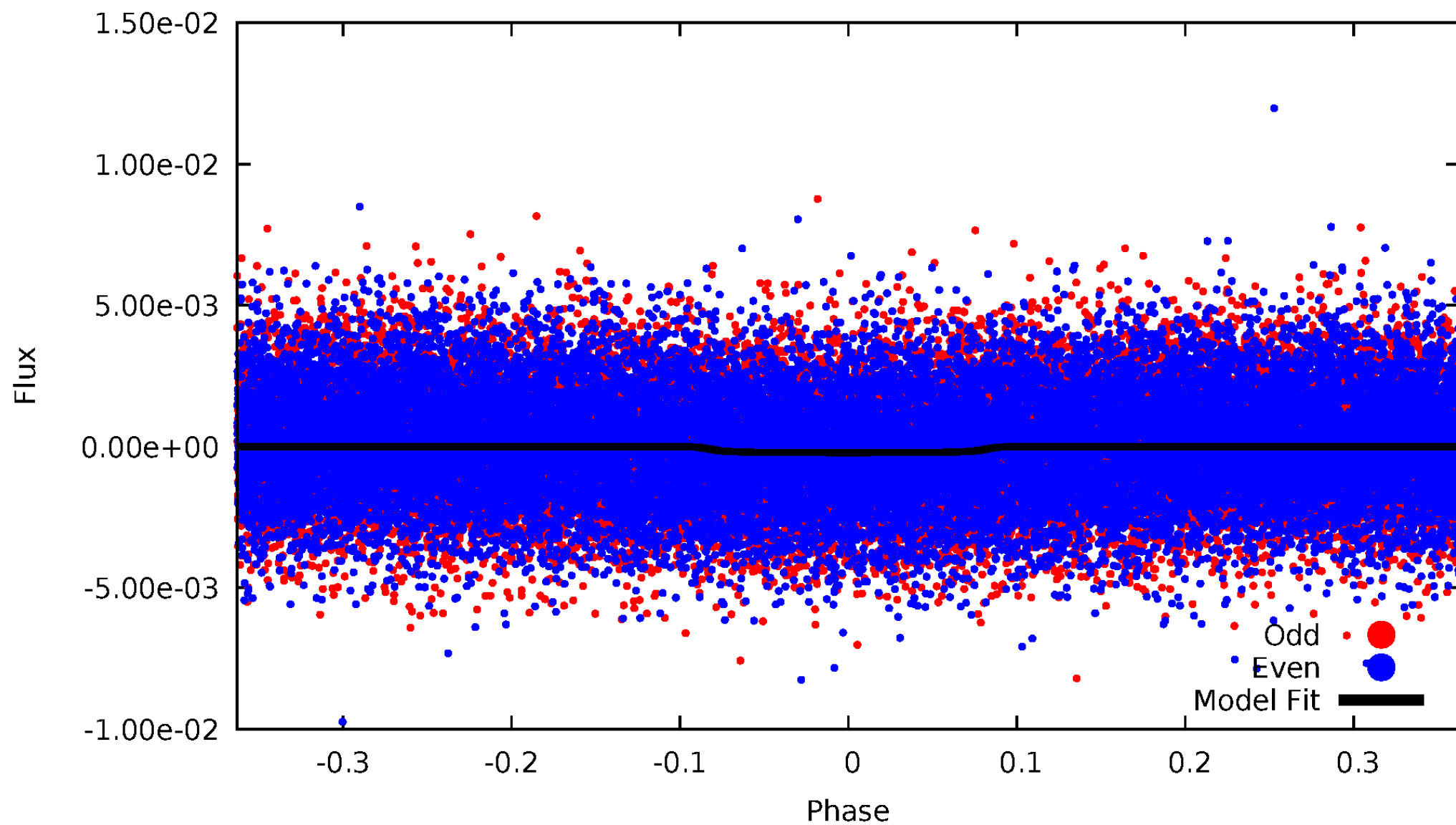


TCE 005636882-01



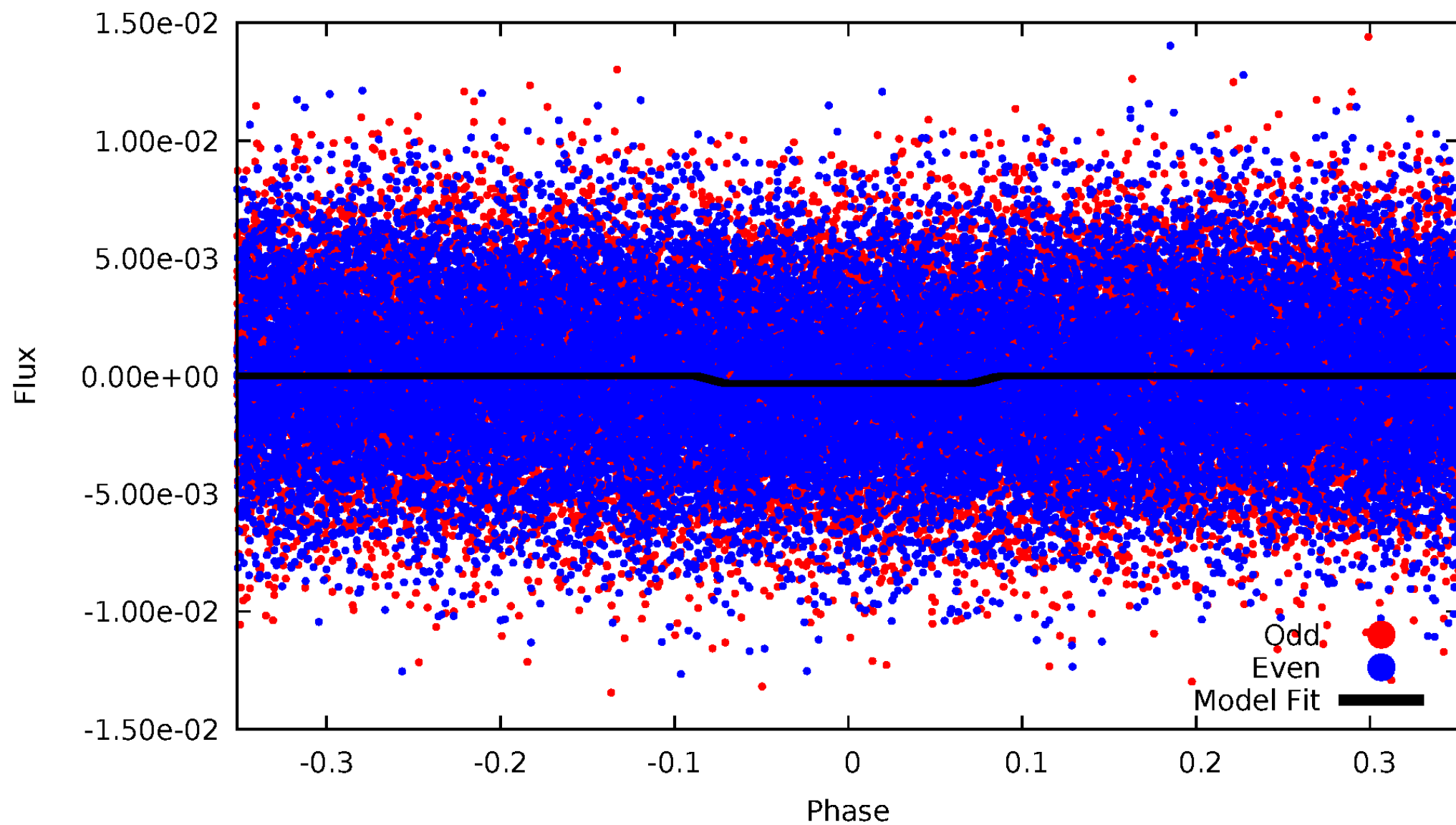
DV Odd/Even

TCE 005636882-01

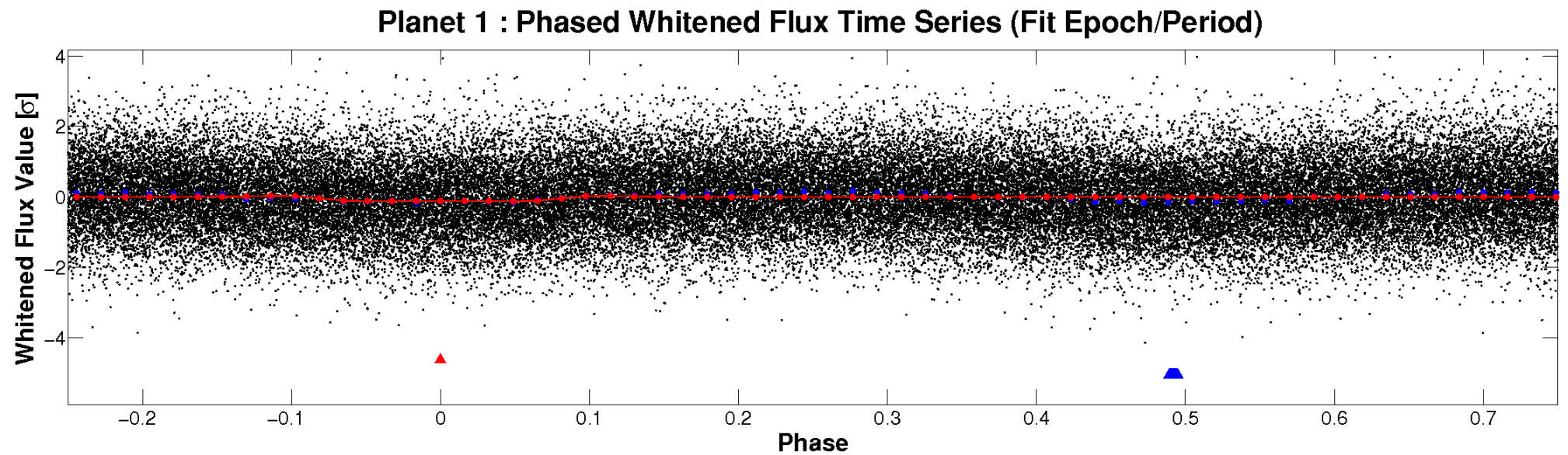
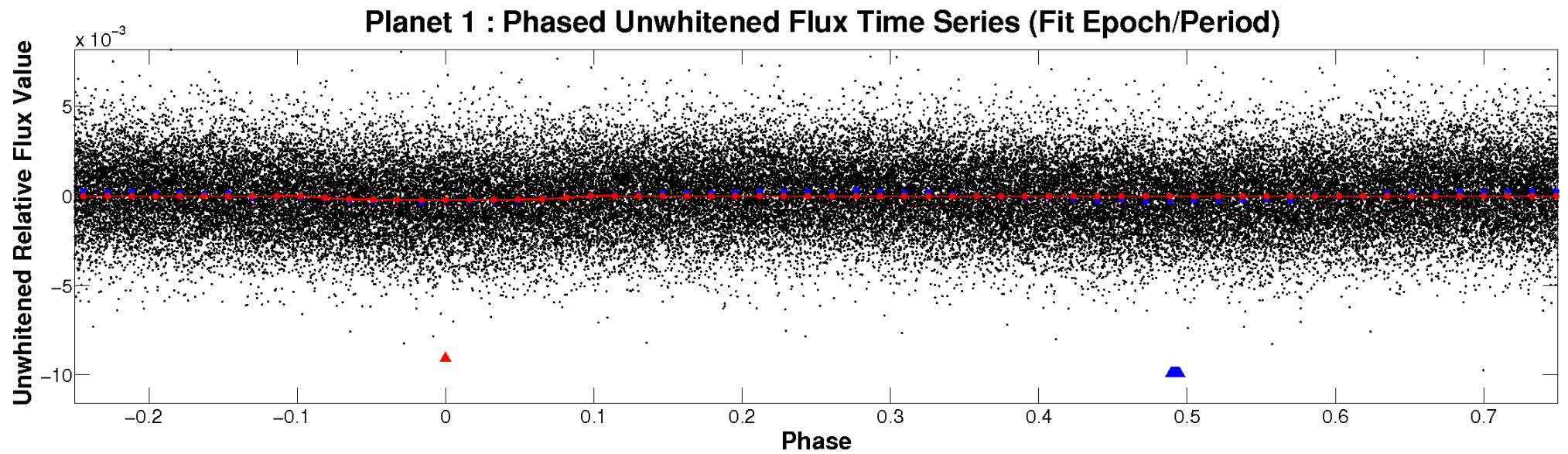


ALT Odd/Even

TCE 005636882-01

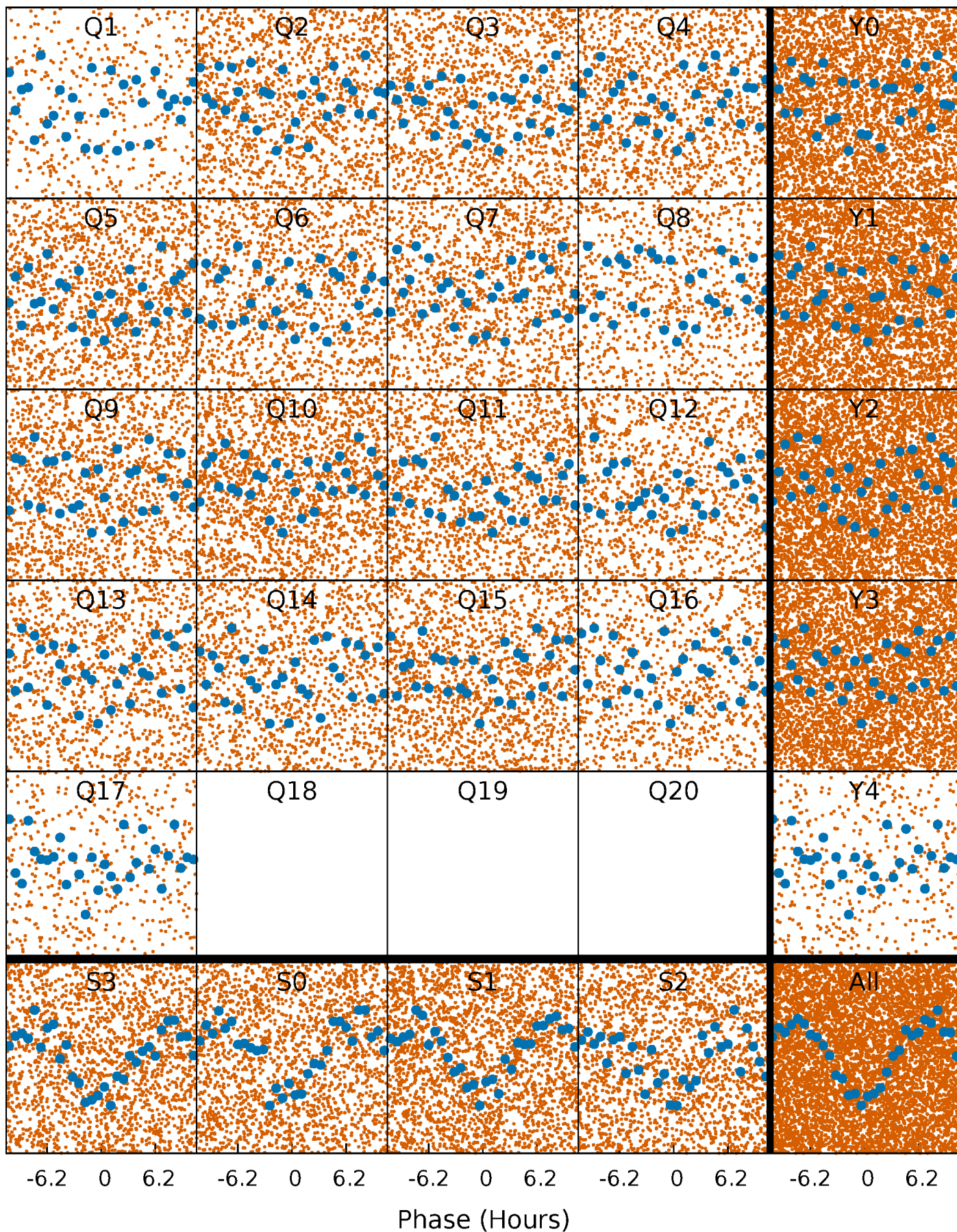


Non-Whitened Vs. Whitened Light Curve



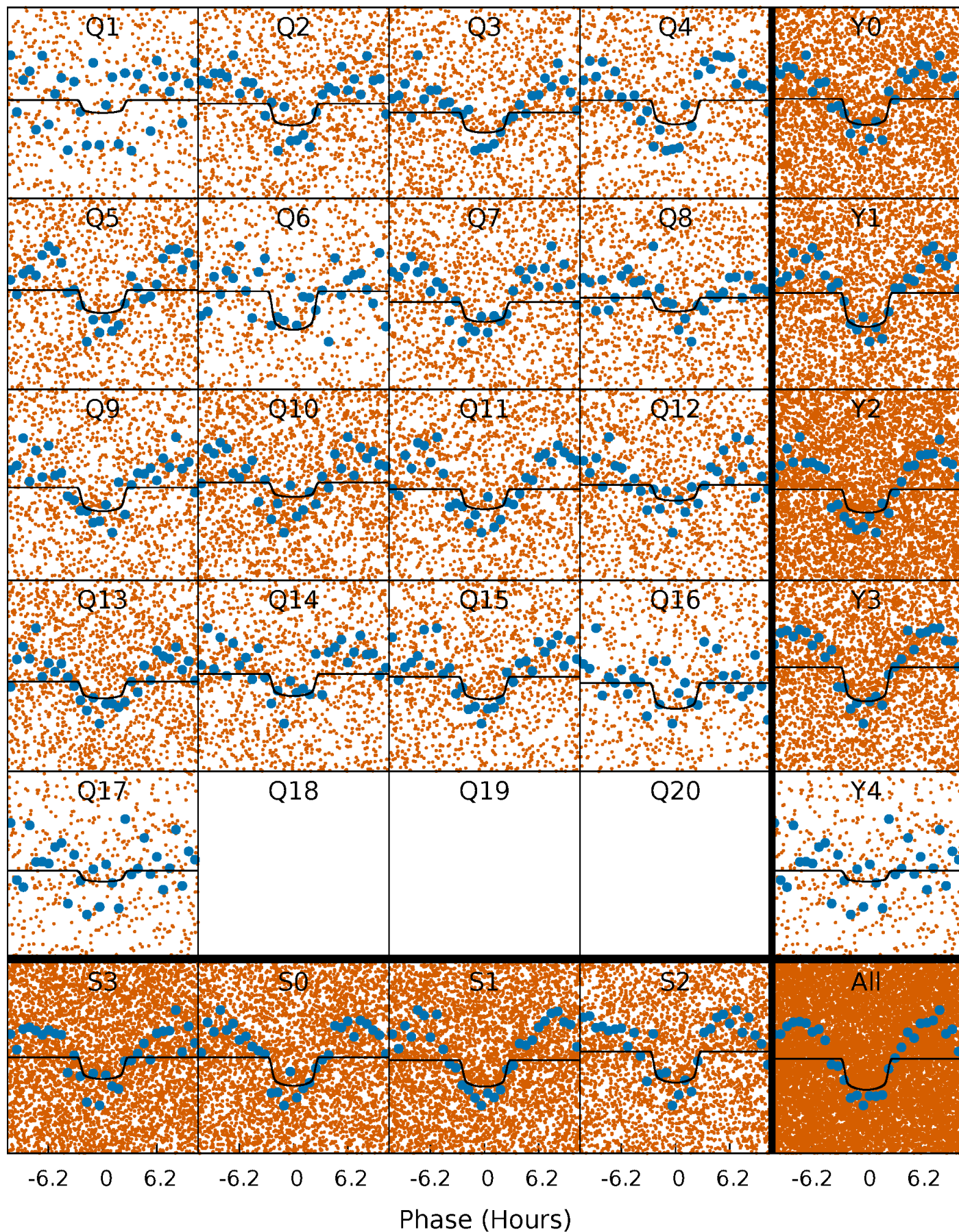
PDC Quarter-Phased Transit Curves

TCE 005636882-01 P= 1.255193 Days $T_0=132.552587$ (BKJD)



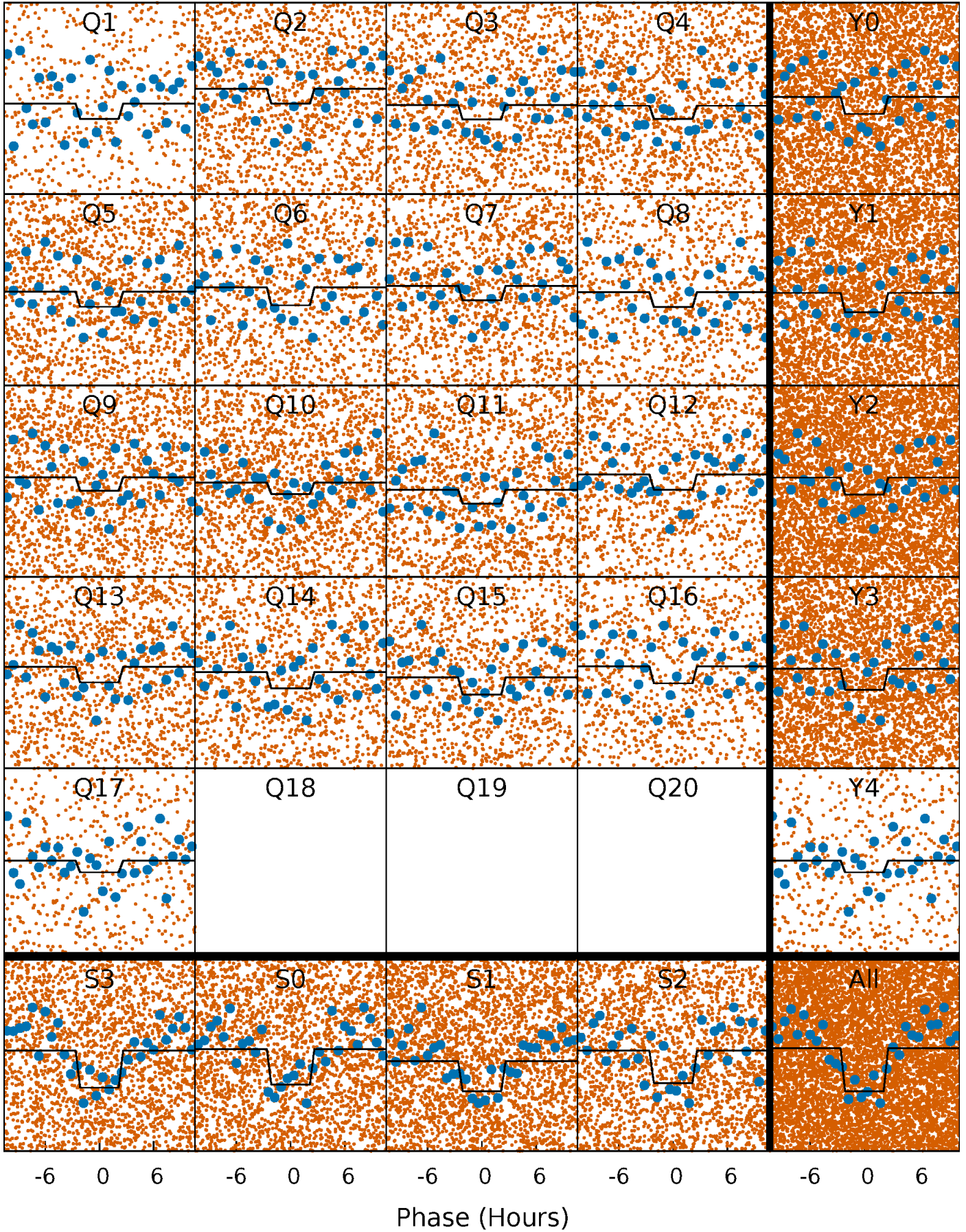
DV Quarter-Phased Transit Curves

TCE 005636882-01 P= 1.255193 Days $T_0=132.552587$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

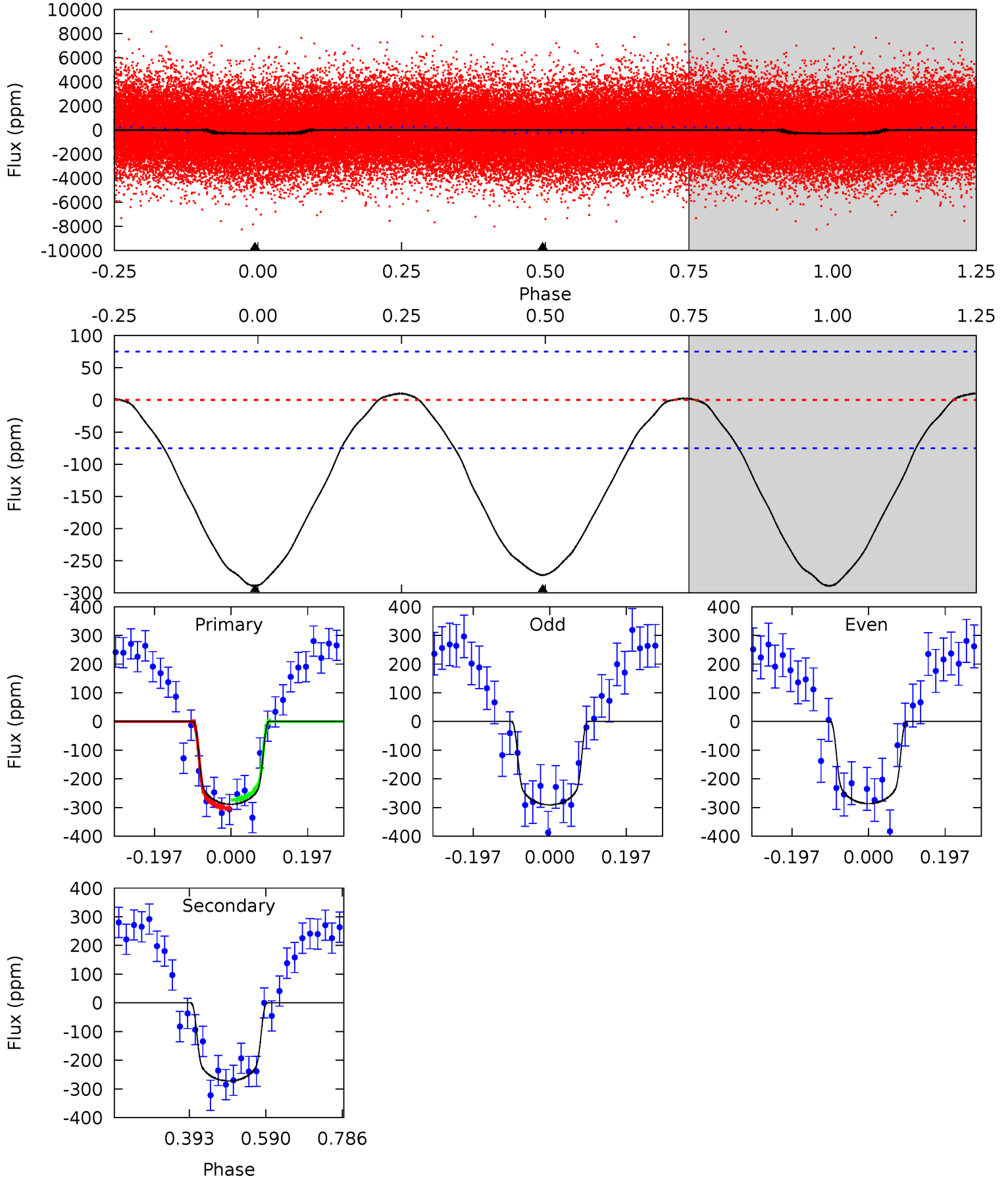
TCE 005636882-01 P= 1.255182 Days $T_0=132.553779$ (BKJD)



DV Model-Shift Uniqueness Test

005636882-01, P = 1.255193 Days, E = 131.297394 Days

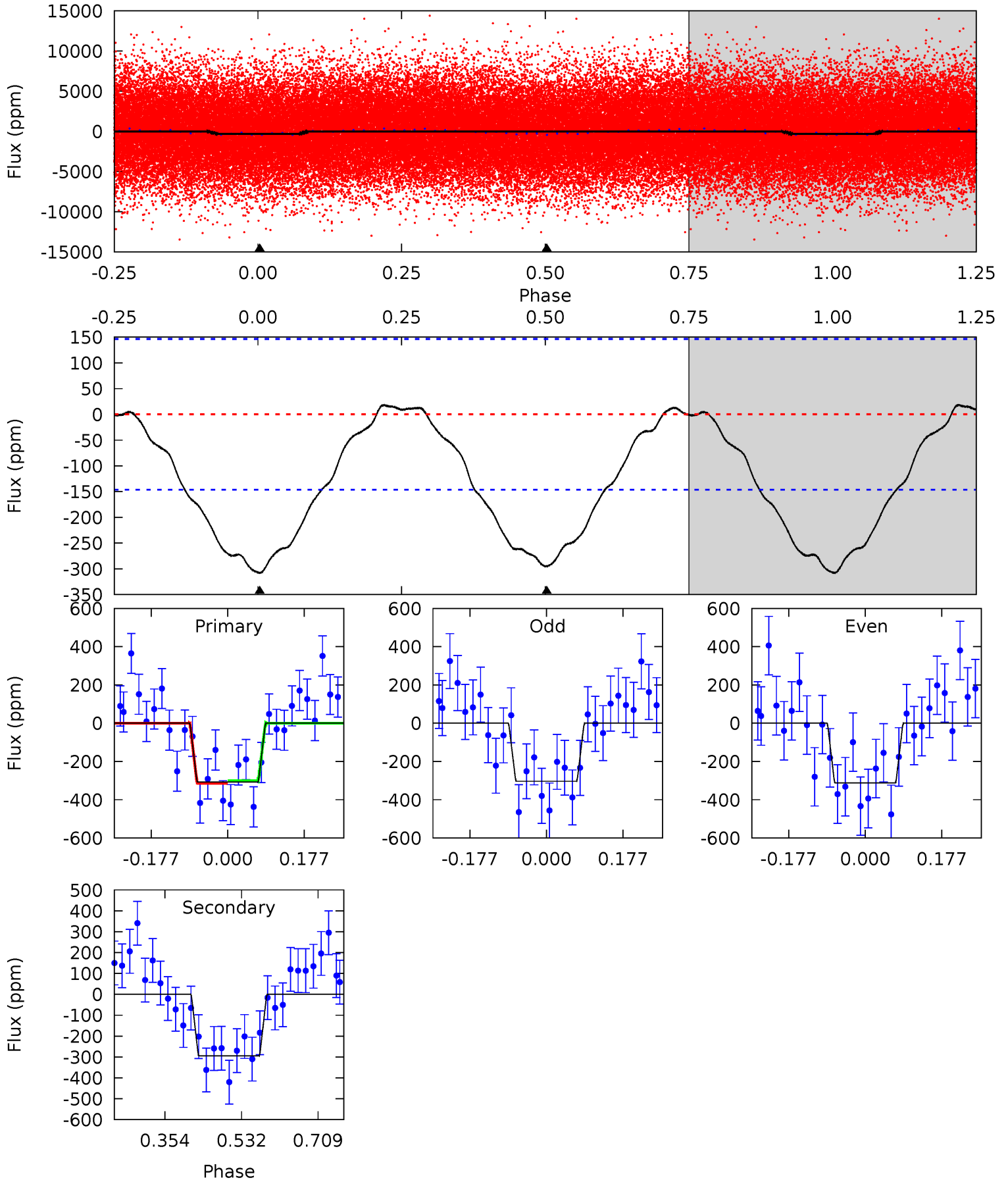
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	16.0	0	0	4.42	1.29	0.51	17.0	17.0	16.0	16.0	0.14	0.97	0.03	0.89



Alt Model-Shift Uniqueness Test

005636882-01, P = 1.255182 Days, E = 131.298597 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.36	8.96	0	0	4.44	1.35	0.62	9.36	9.36	8.96	8.96	0.13	1.03	0.06	0.21



Stellar Parameters For KIC 005636882

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8018^{+223}_{-335}	$3.846^{+0.352}_{-0.088}$	$-0.280^{+0.200}_{-0.300}$	$2.725^{+0.355}_{-1.135}$	$1.902^{+0.077}_{-0.464}$	$0.132^{+0.394}_{-0.036}$
	+3%/-4%	+9%/-2%	+71%/-107%	+13%/-42%	+4%/-24%	+297%/-27%
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 005636882-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-272 ± 17	$4.22^{+1.32}_{-1.27}$	4750^{+311}_{-523}	8236^{+1728}_{-1124}	$6.629^{+6.510}_{-2.828}$
Alt.	-295 ± 33	$4.80^{+1.38}_{-1.26}$	4768^{+287}_{-447}	7775^{+1258}_{-994}	$5.357^{+4.464}_{-2.062}$

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 $A_{obs} \gg 1.0$

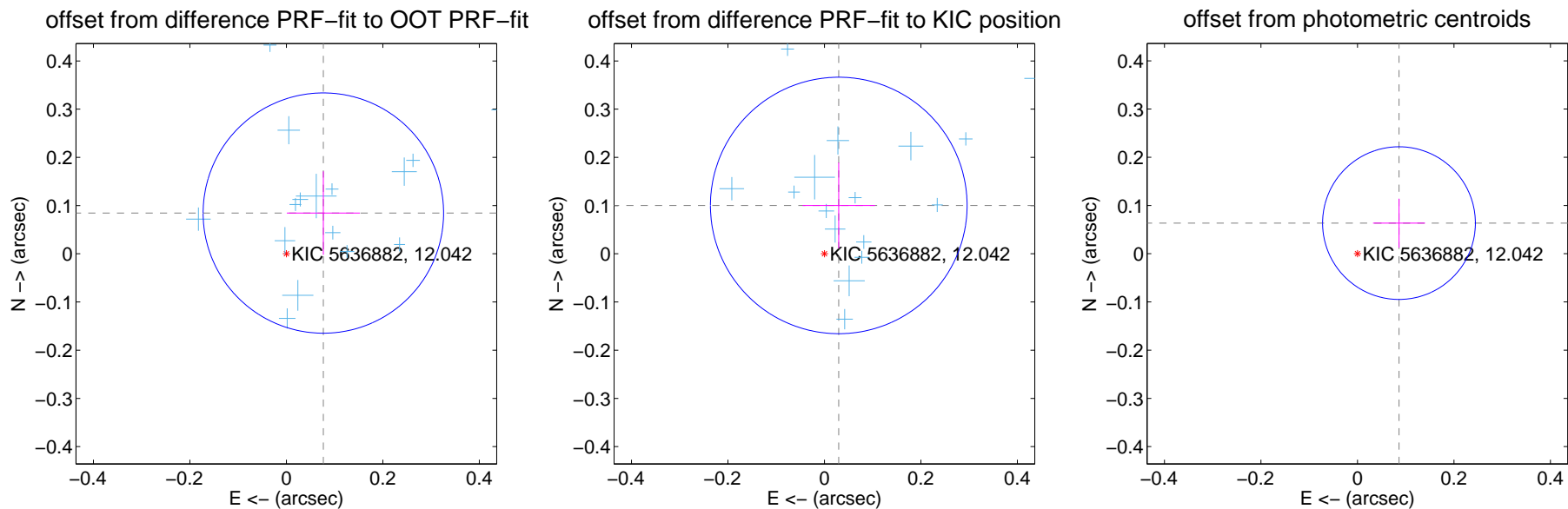
DV Centroid Data

Supplemental centroid analysis for 005636882-01. Kepler magnitude: 12.04. Transit SNR 11.35

There are 17 quarters with good PRF difference image offsets

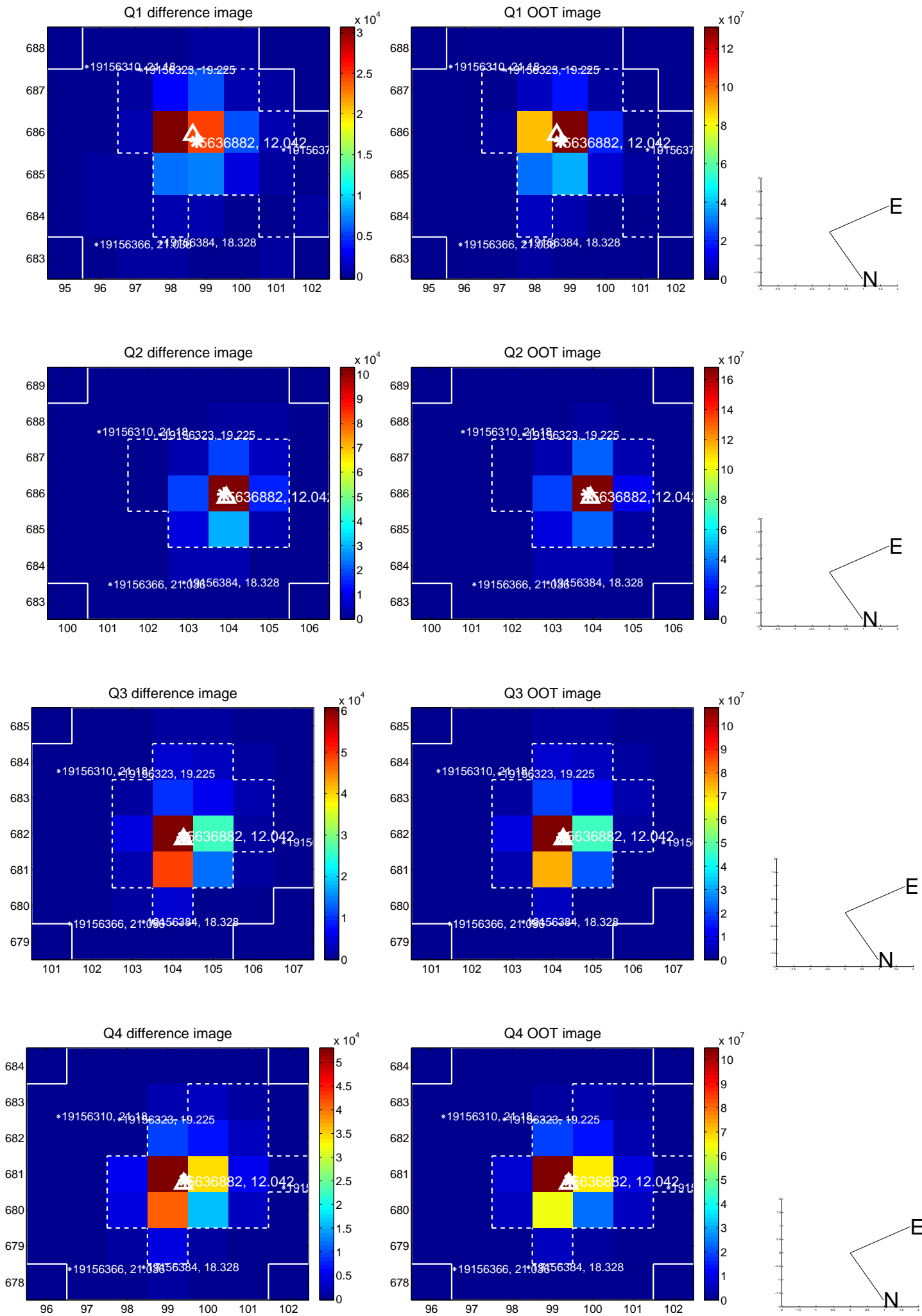
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.114 ± 0.083	1.37	-0.077 ± 0.076	0.084 ± 0.087
PRF-fit source offset from KIC position	0.105 ± 0.089	1.18	-0.030 ± 0.075	0.100 ± 0.089
photometric centroid source offset	0.11 ± 0.05	2.03	-0.09 ± 0.05	0.06 ± 0.05

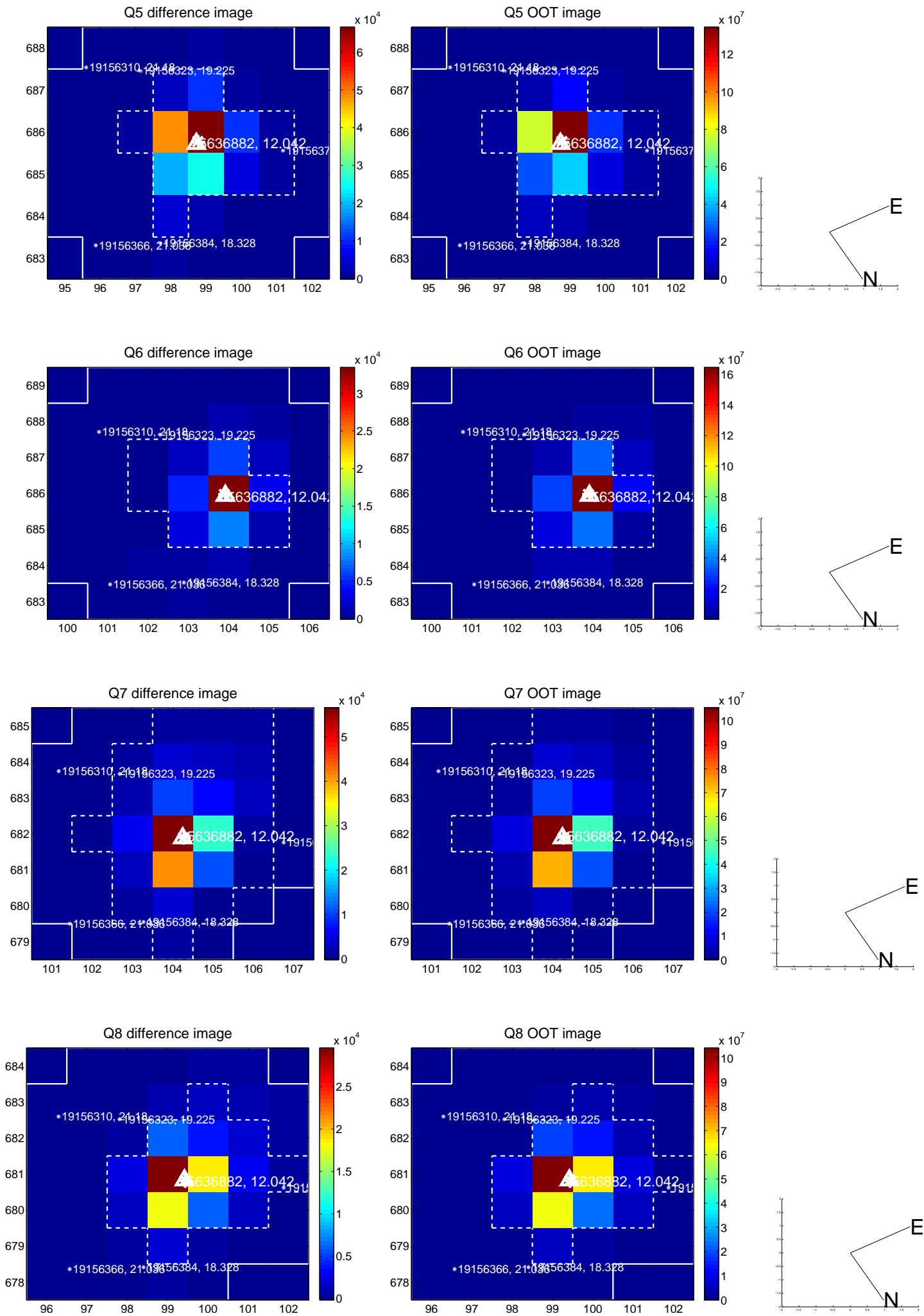


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

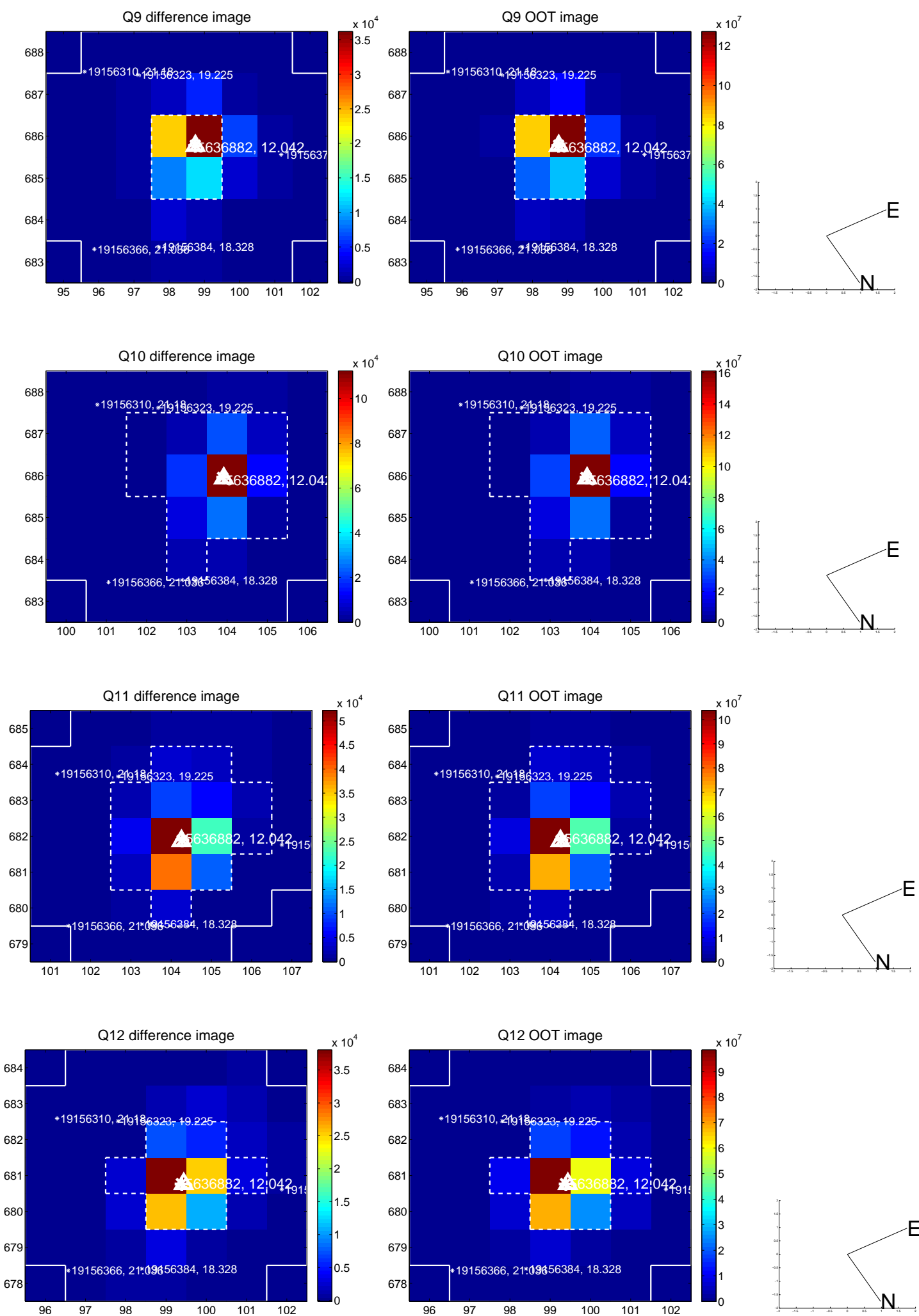
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



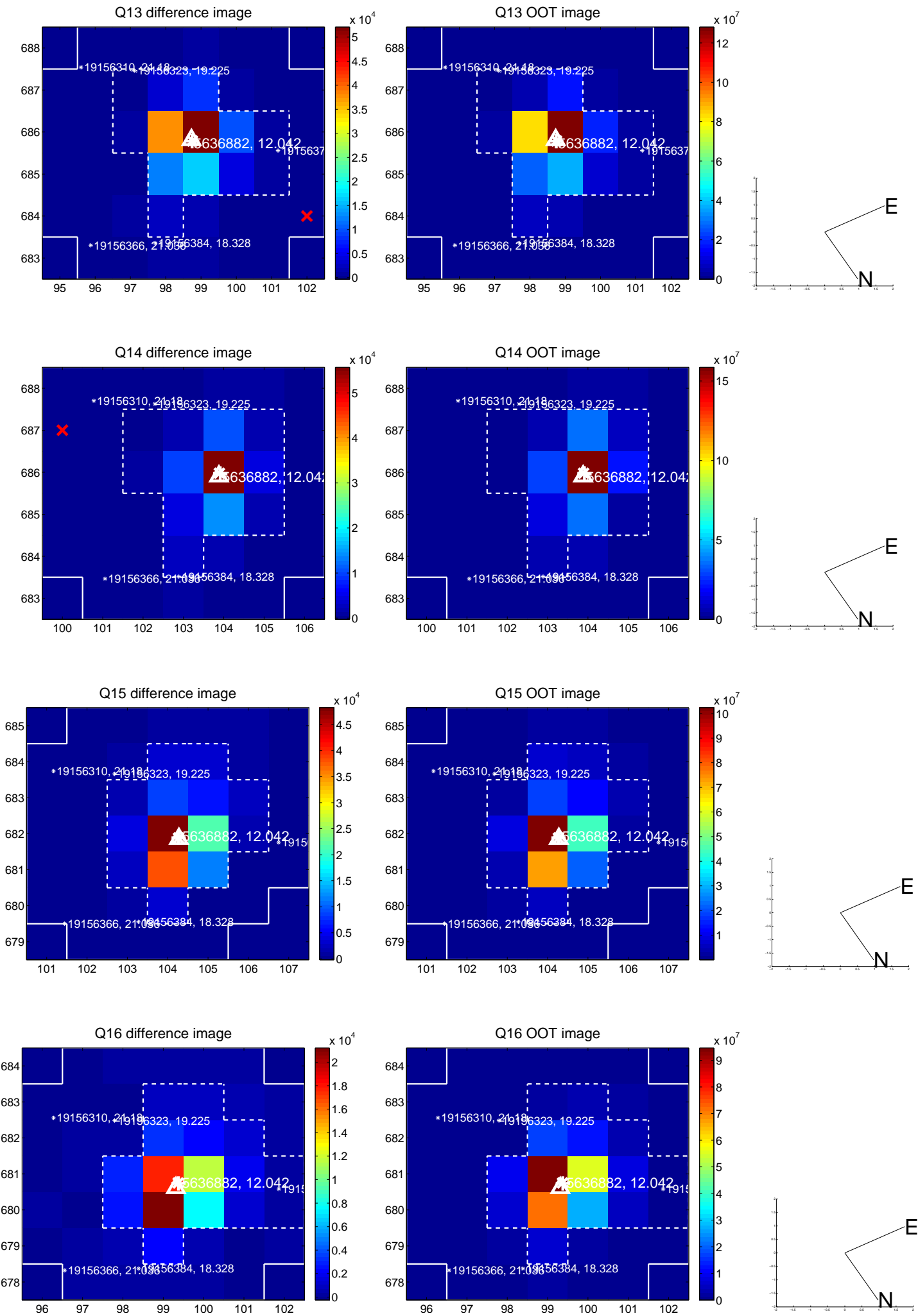
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



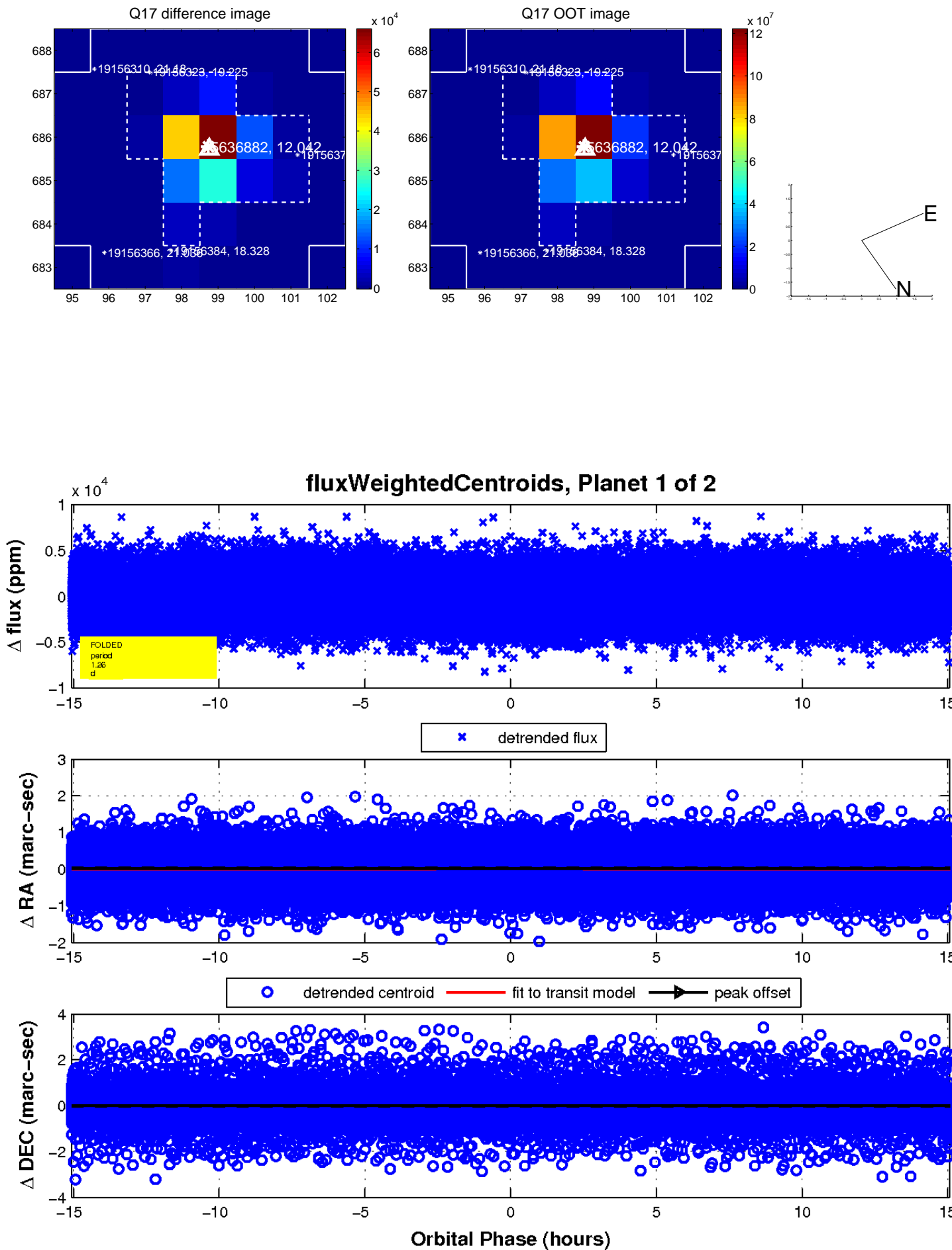
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

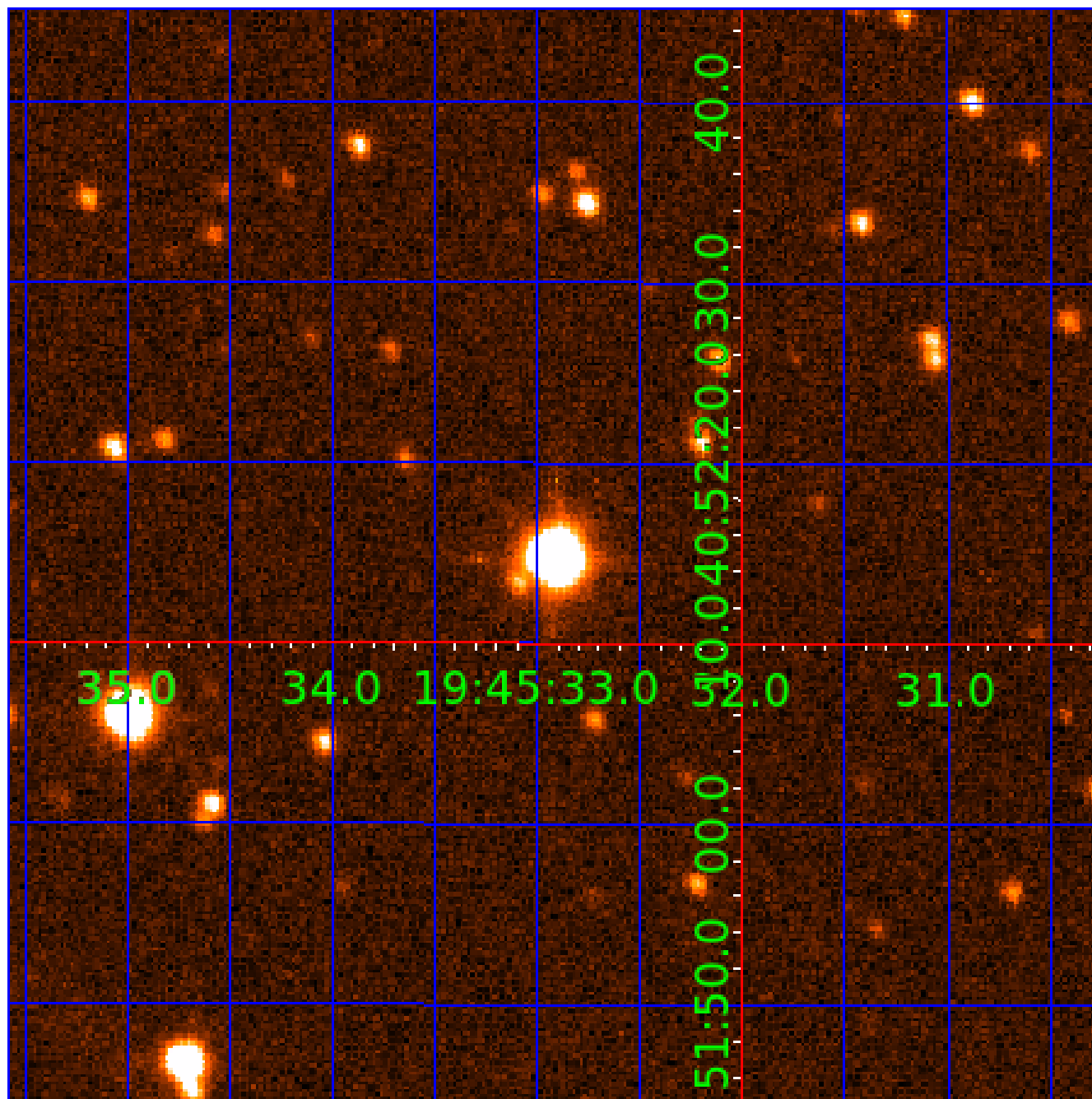


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005636882

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})
005636882-01	OBS	No	1.255193	132.552587	214.4	5.465	10.7	11.4	2.73	8018	4.65	34550.61
005636882-02	OBS	No	1.255187	131.918381	216.5	5.472	10.8	12.2	2.73	8018	4.12	34550.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005636882-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005636882-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

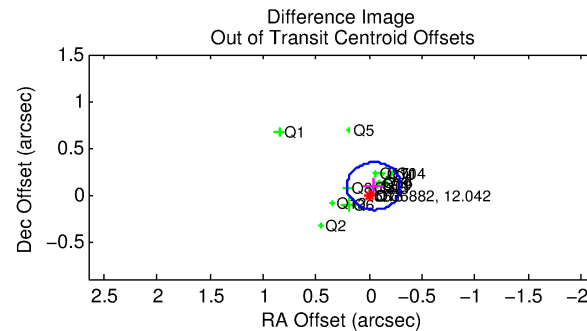
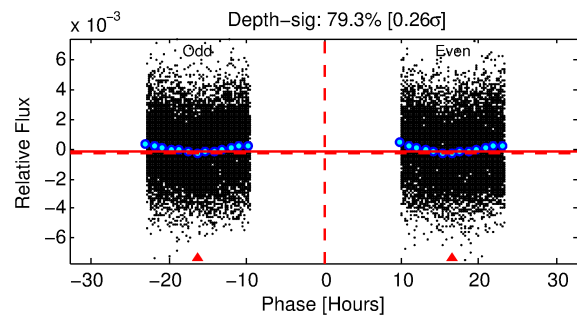
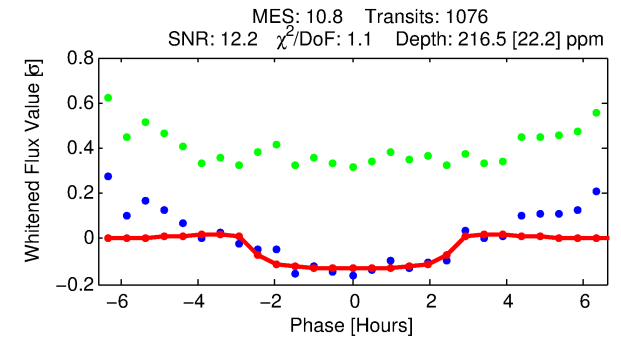
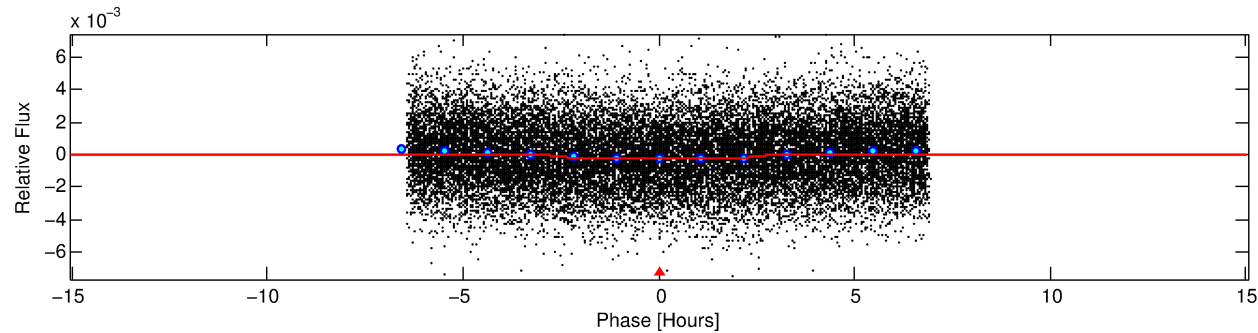
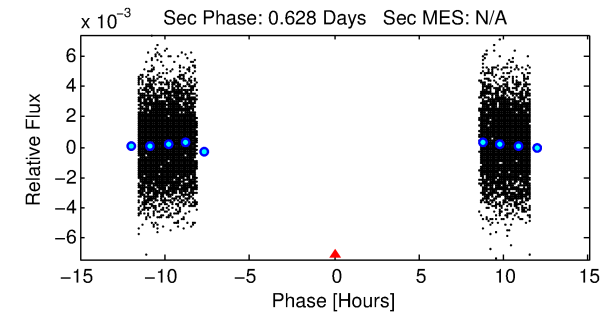
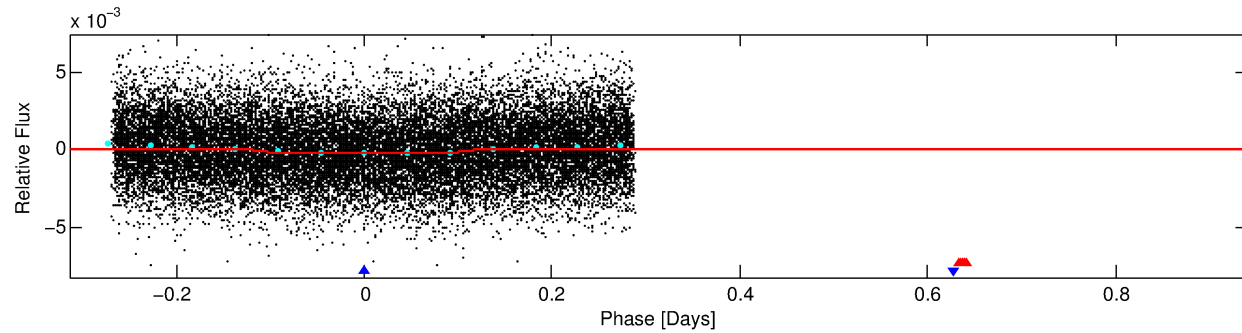
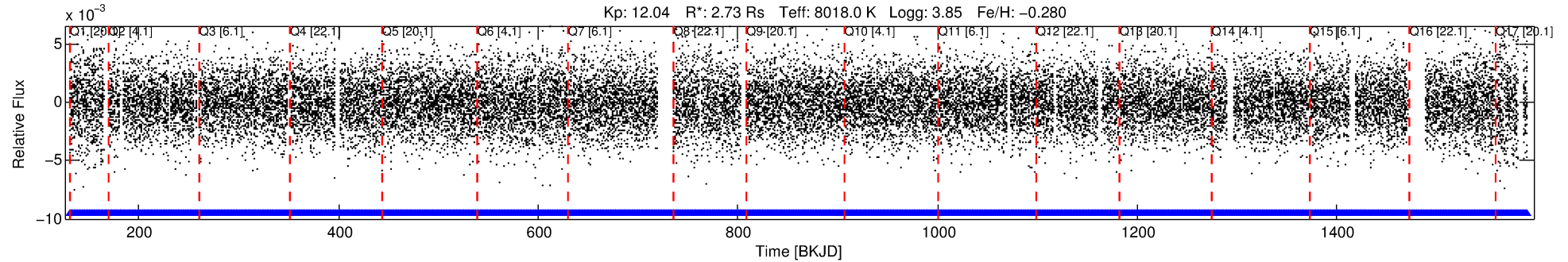
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005636882-02

No Significant Match Found

DV One-Page Summary

KIC: 5636882 Candidate: 2 of 2 Period: 1.255 d



DV Fit Results:

Period = 1.25519 [0.00001] d
Epoch = 131.9184 [0.0053] BKJD
Rp/R* = 0.0139 [0.0203]
a/R* = 1.75 [9.47]
b = 0.44 [14.97]
Seff = 34550.82 [21769.80]
Teq = 3476 [548] K
Rp = 4.12 [6.27] Re
a = 0.0282 [0.0109] AU

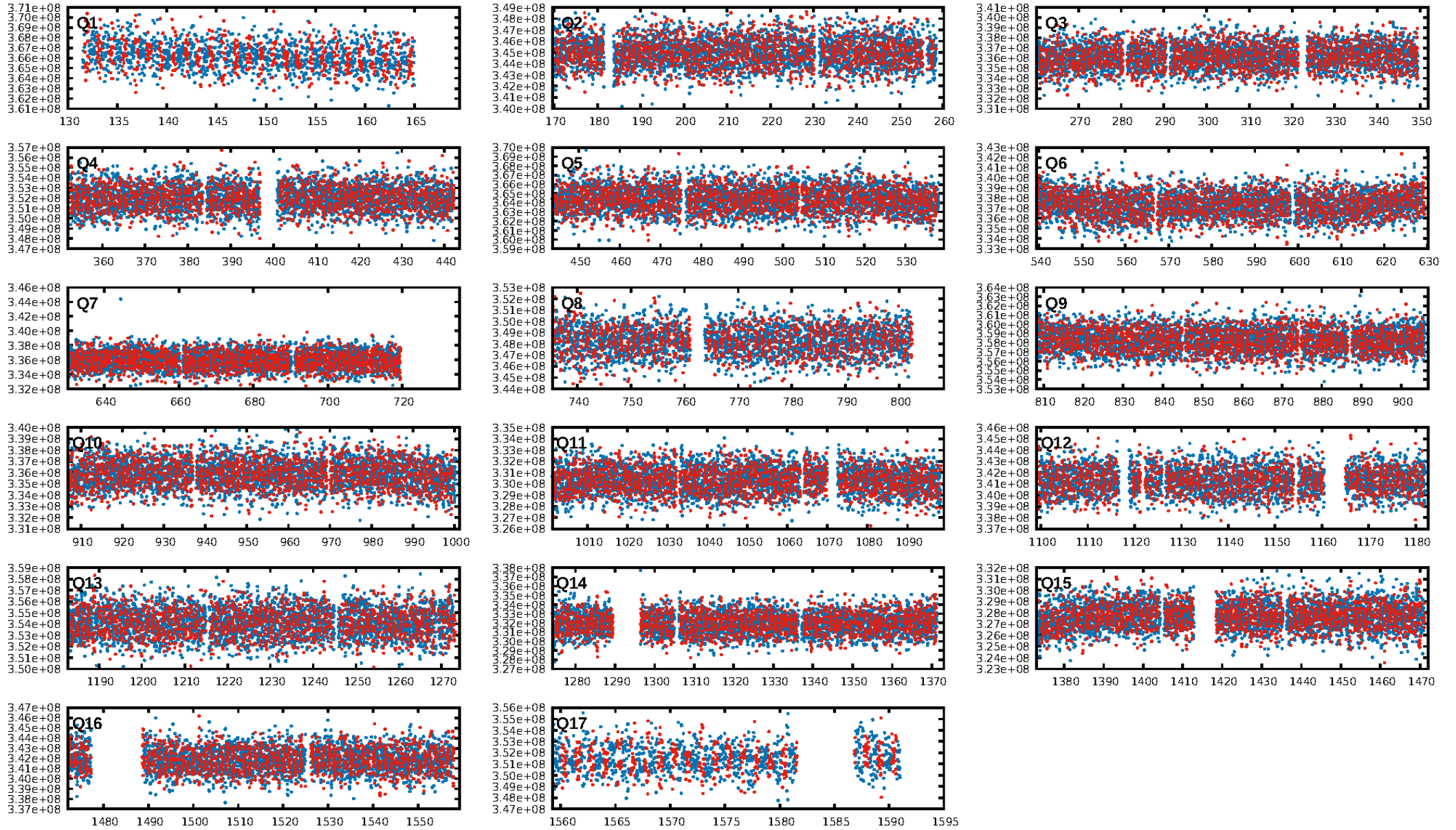
DV Diagnostic Results:

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 [1028/1028]
GhostDiagnostic-chr: 1.002
Centroid-sig: 1.2%
Centroid-so: 0.067 arcsec [1.32σ]
OotOffset-rm: 0.102 arcsec [1.20σ]
KicOffset-rm: 0.100 arcsec [1.14σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

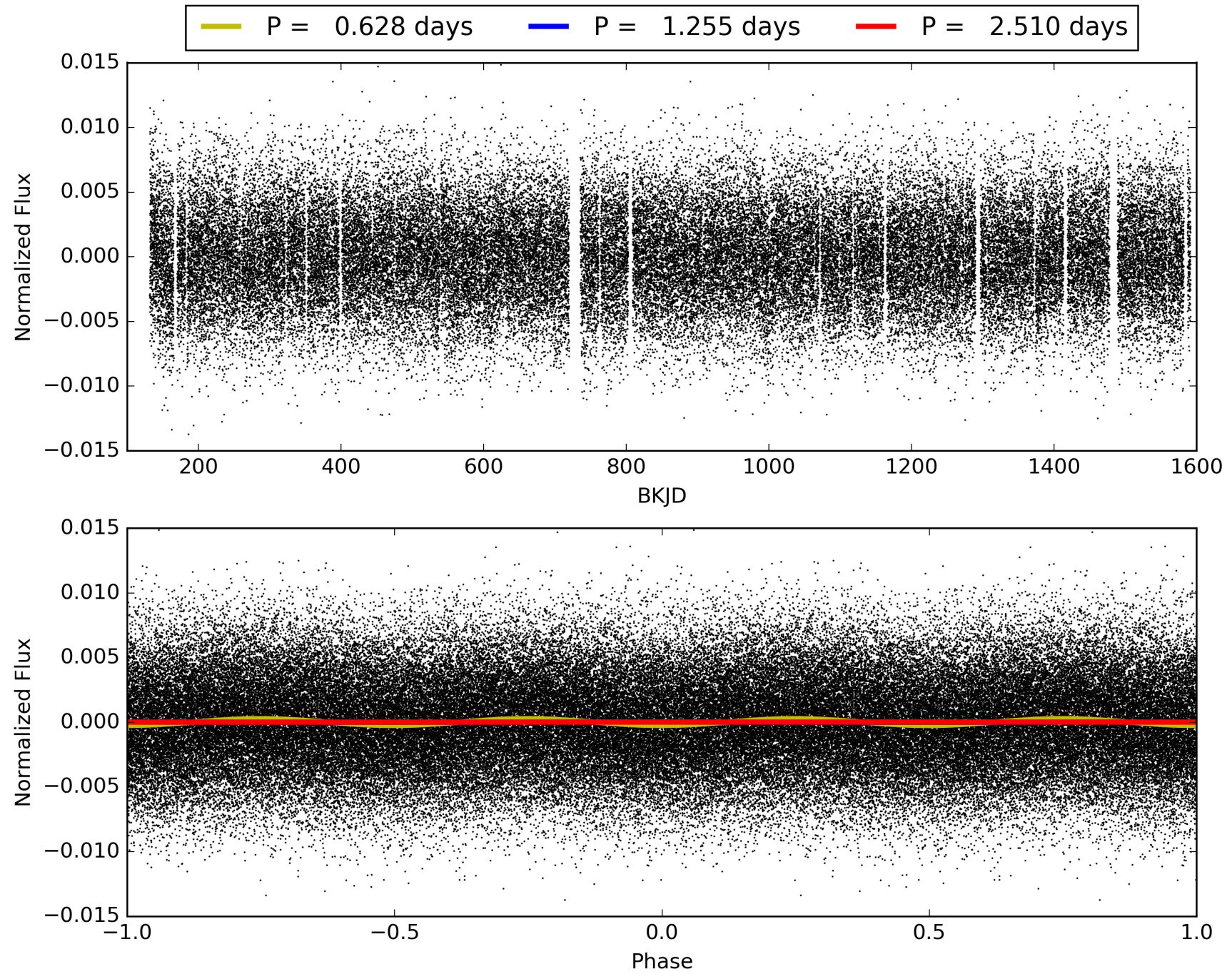
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:53:29 Z

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

TCE 005636882-02, PDC Light Curves

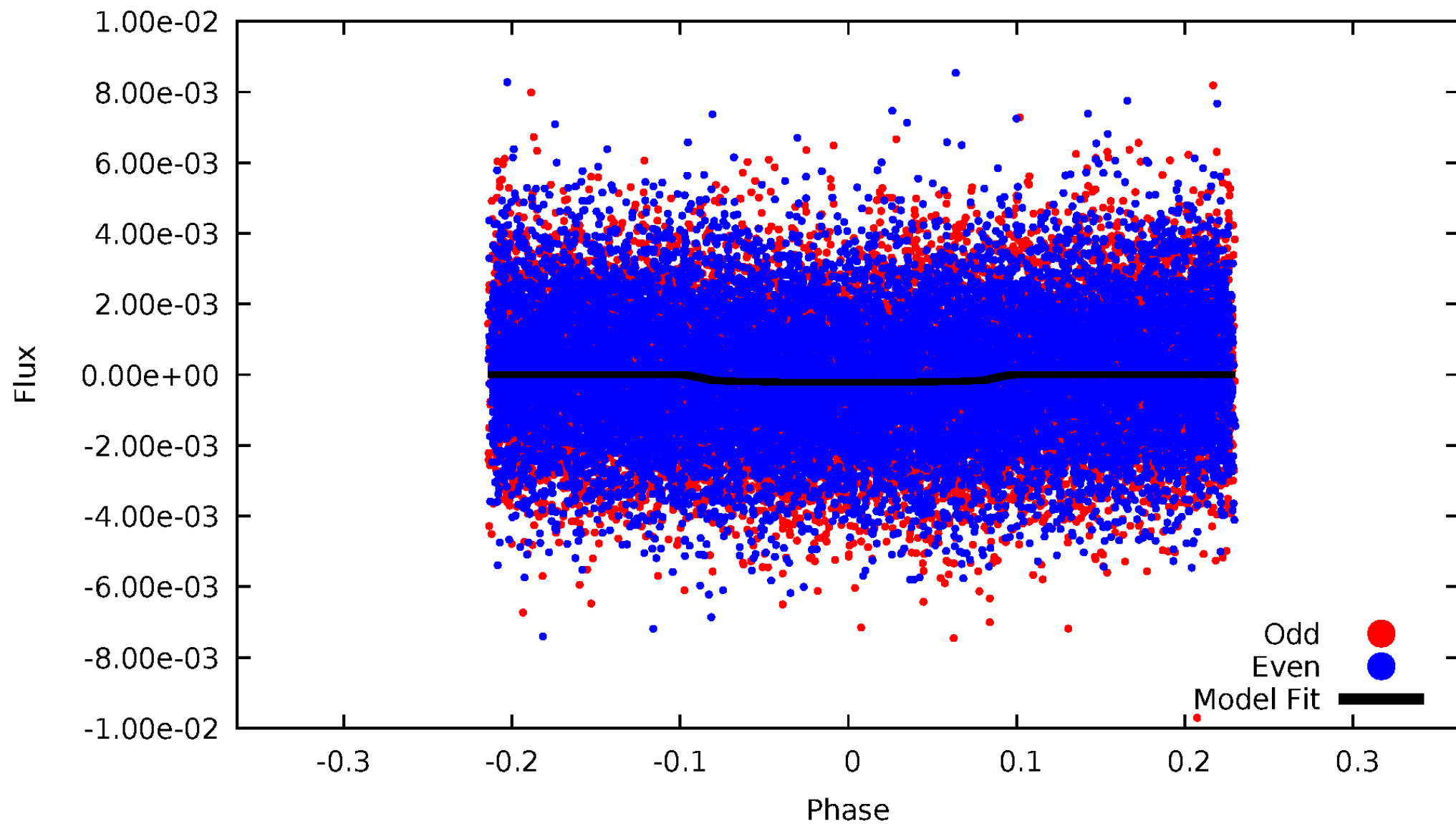


TCE 005636882-02



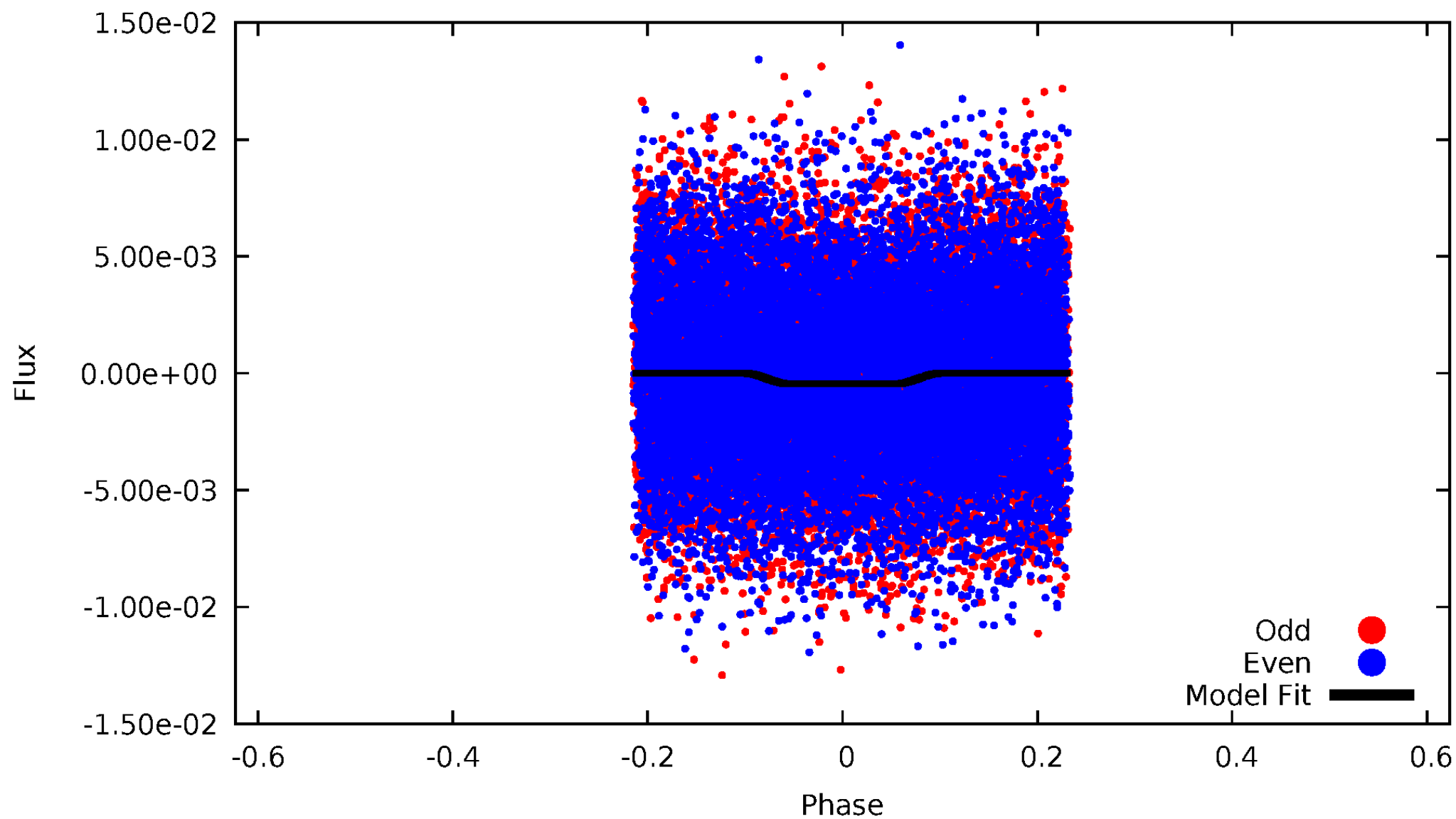
DV Odd/Even

TCE 005636882-02



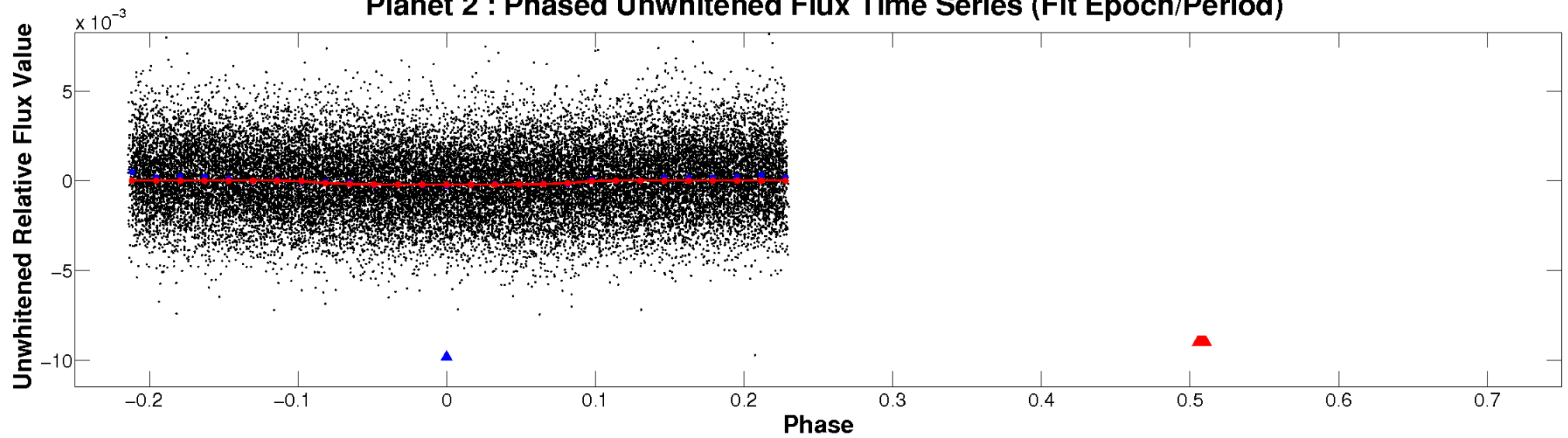
ALT Odd/Even

TCE 005636882-02

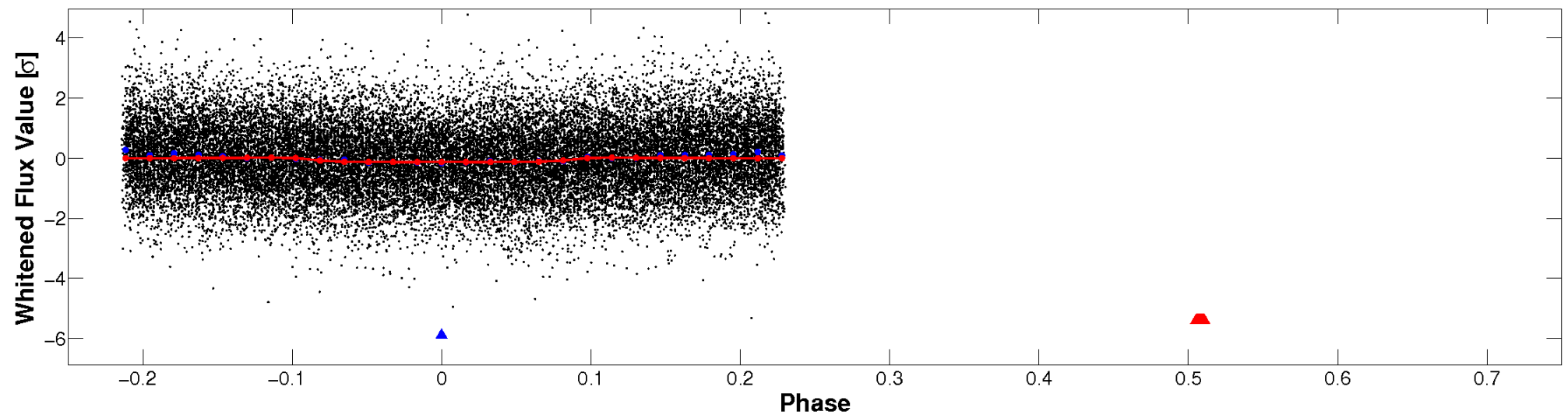


Non-Whitened Vs. Whitened Light Curve

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

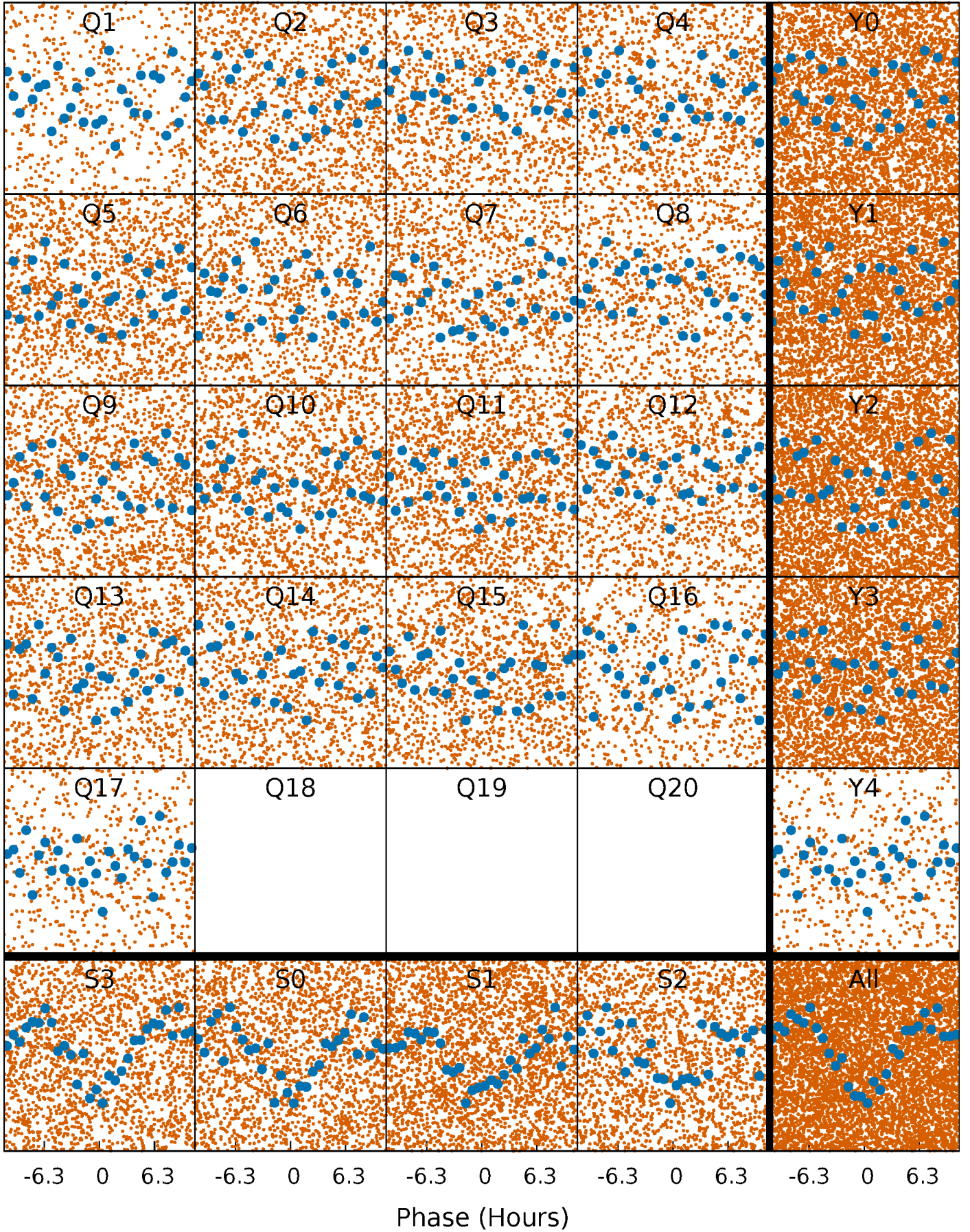


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



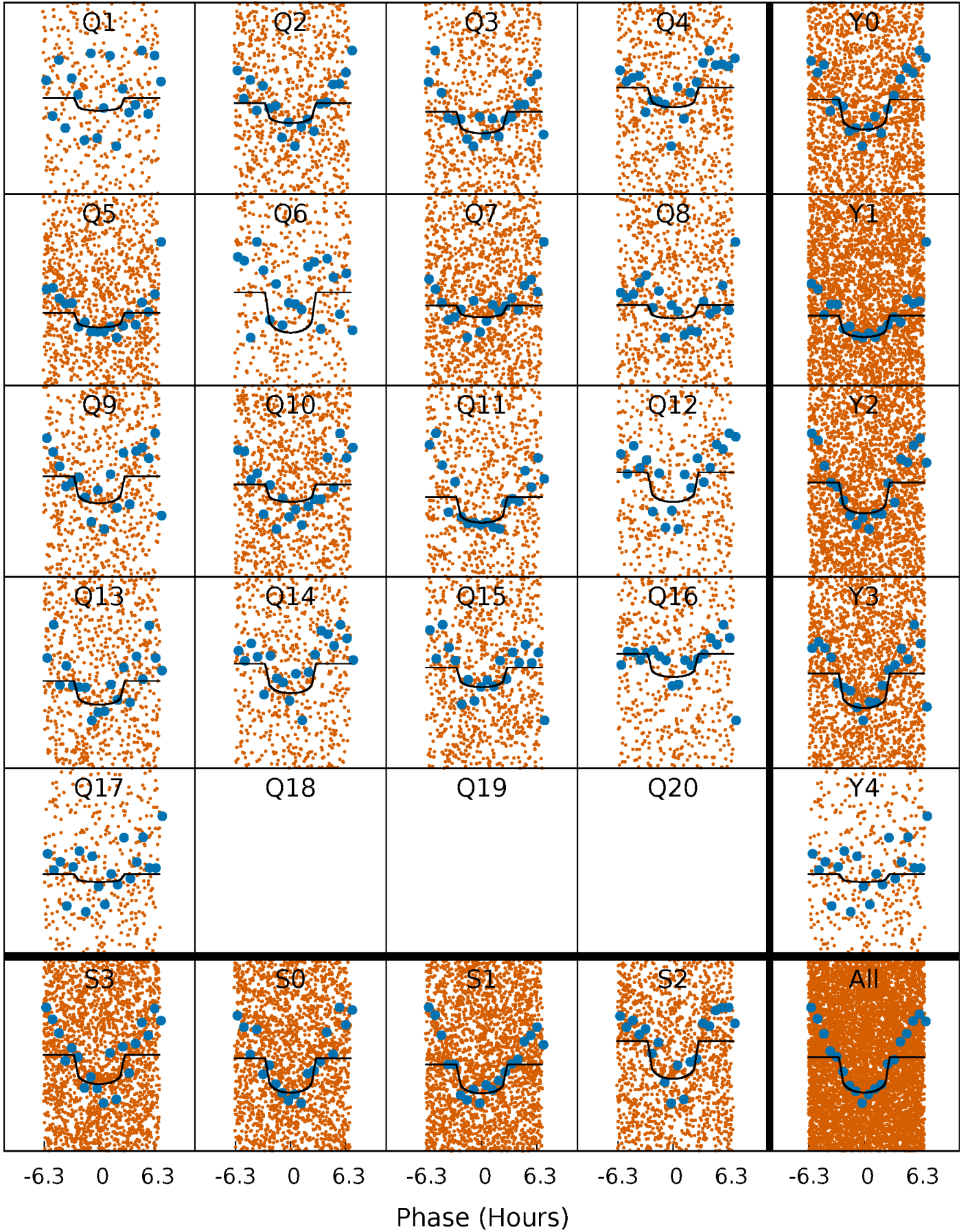
PDC Quarter-Phased Transit Curves

TCE 005636882-02 P= 1.255187 Days $T_0=131.918381$ (BKJD)



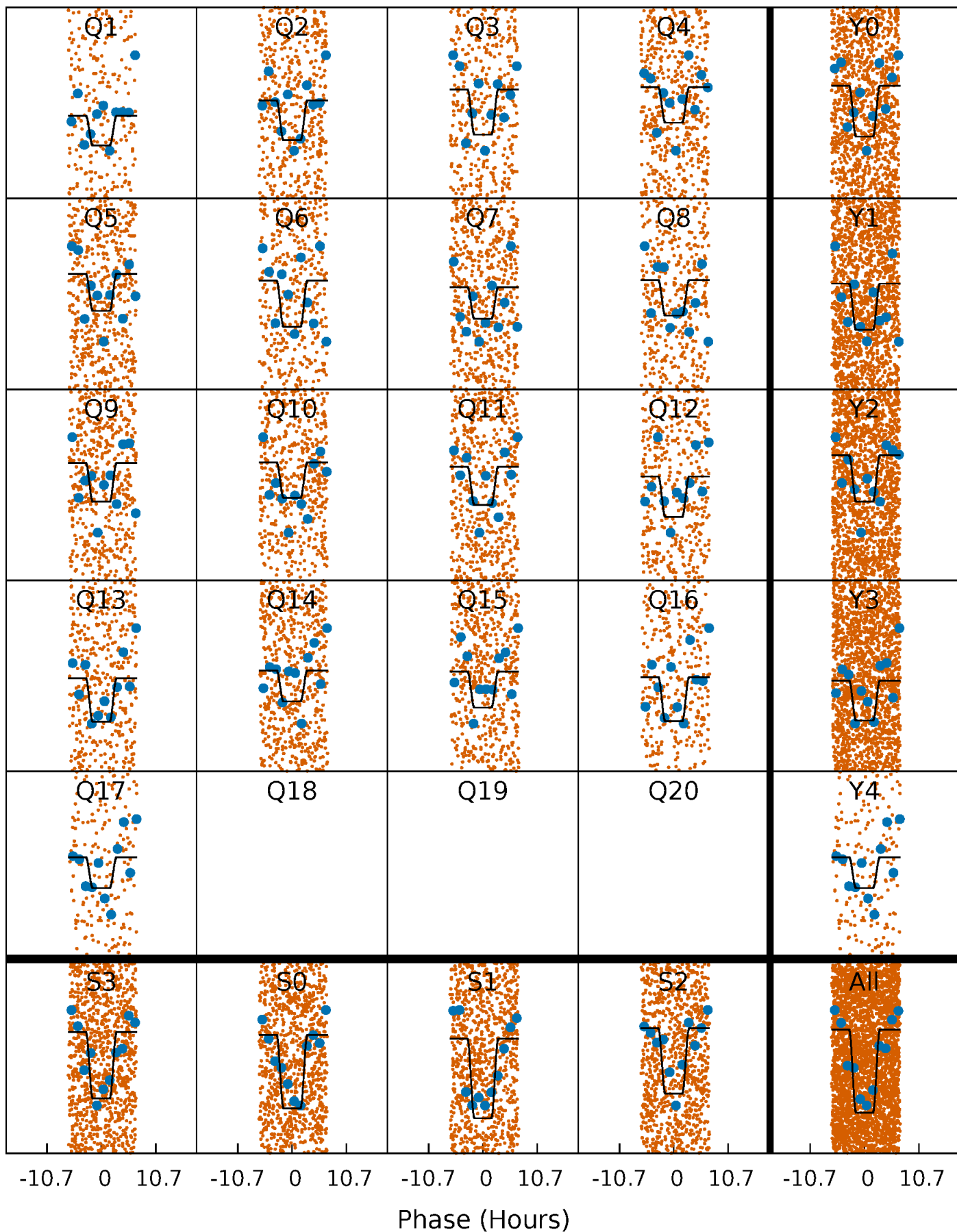
DV Quarter-Phased Transit Curves

TCE 005636882-02 $P = 1.255187$ Days $T_0 = 131.918381$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

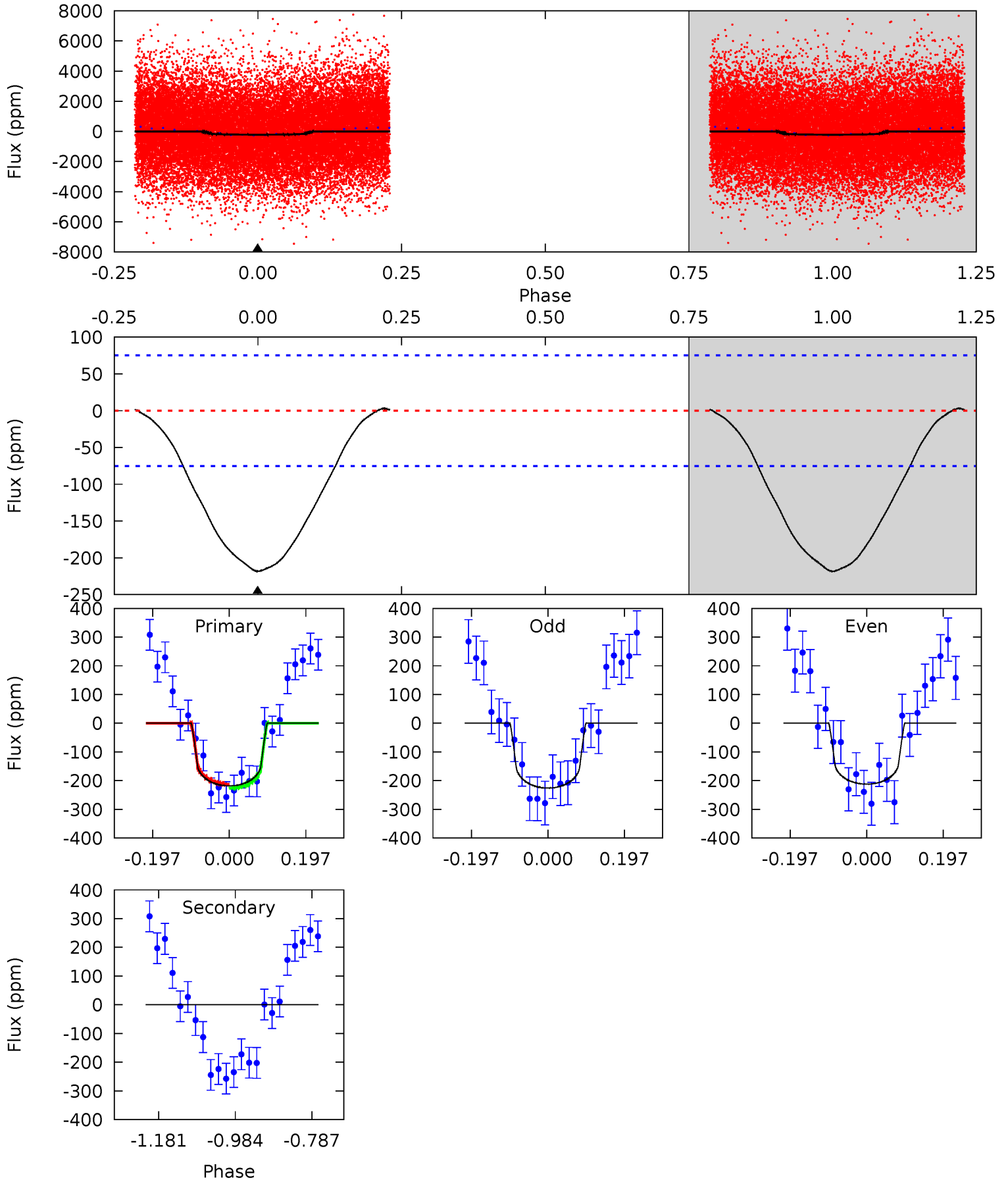
TCE 005636882-02 P= 1.255182 Days $T_0=131.919627$ (BKJD)



DV Model-Shift Uniqueness Test

005636882-02, P = 1.255187 Days, E = 130.663194 Days

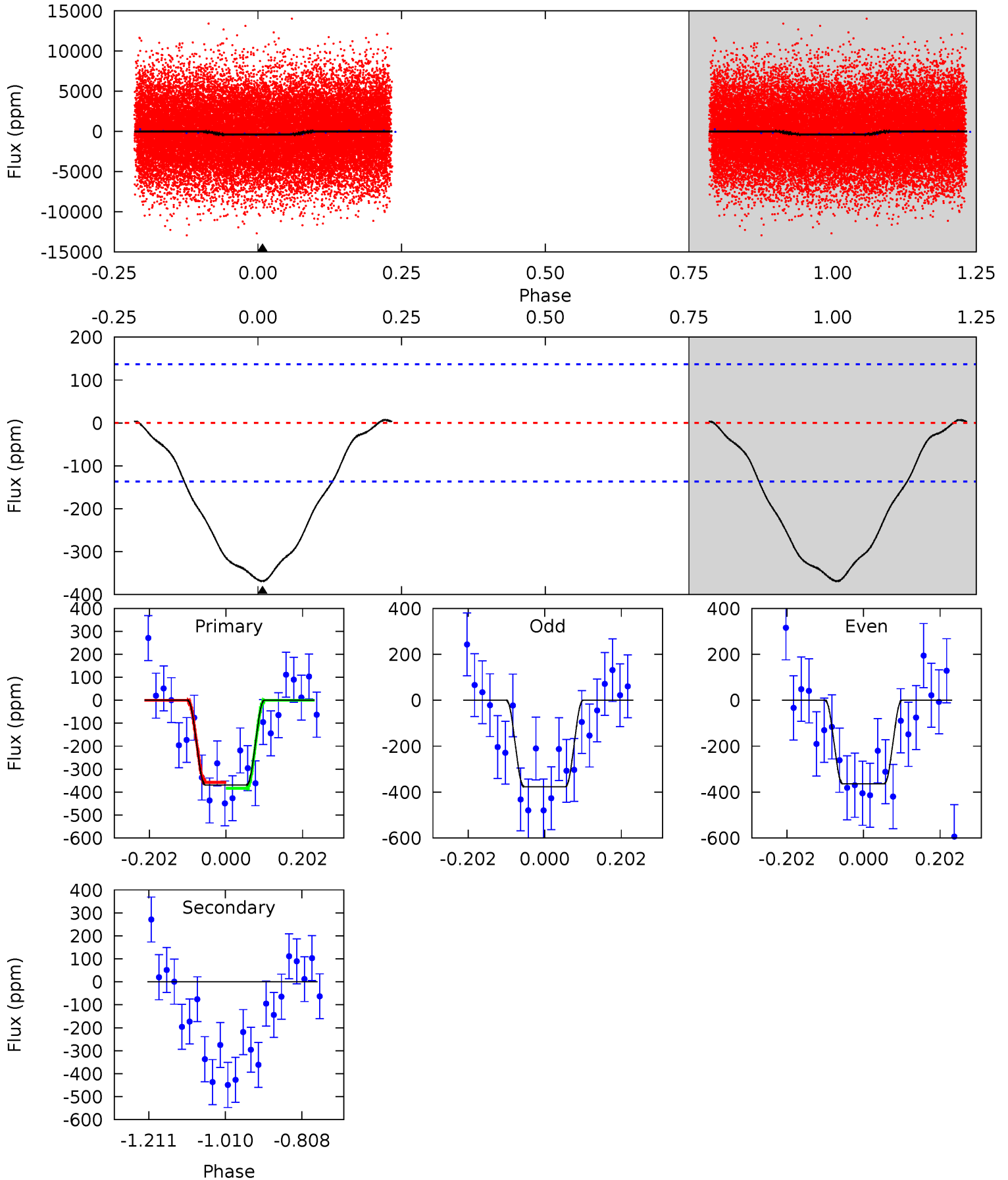
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	0	0	0	4.42	1.29	0.16	12.8	12.8	0	0	0.40	0.99	0.01	0.41



Alt Model-Shift Uniqueness Test

005636882-02, P = 1.255182 Days, E = 130.664445 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	0	0	0	4.42	1.28	0.30	11.9	11.9	0	0	0.20	0.98	0.02	0.42



Stellar Parameters For KIC 005636882

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8018^{+223}_{-335}	$3.846^{+0.352}_{-0.088}$	$-0.280^{+0.200}_{-0.300}$	$2.725^{+0.355}_{-1.135}$	$1.902^{+0.077}_{-0.464}$	$0.132^{+0.394}_{-0.036}$
	+3%/-4%	+9%/-2%	+71%/-107%	+13%/-42%	+4%/-24%	+297%/-27%
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 005636882-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 17	$5.38^{+4.73}_{-3.67}$	4713^{+321}_{-504}	-4031^{+7513}_{-665}	$0.005^{+0.420}_{-0.370}$
Alt.	0 ± 31	$6.46^{+5.44}_{-4.01}$	4736^{+316}_{-482}	-4105^{+7503}_{-836}	$-0.005^{+0.412}_{-0.529}$

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 $A_{obs} \gg 1.0$

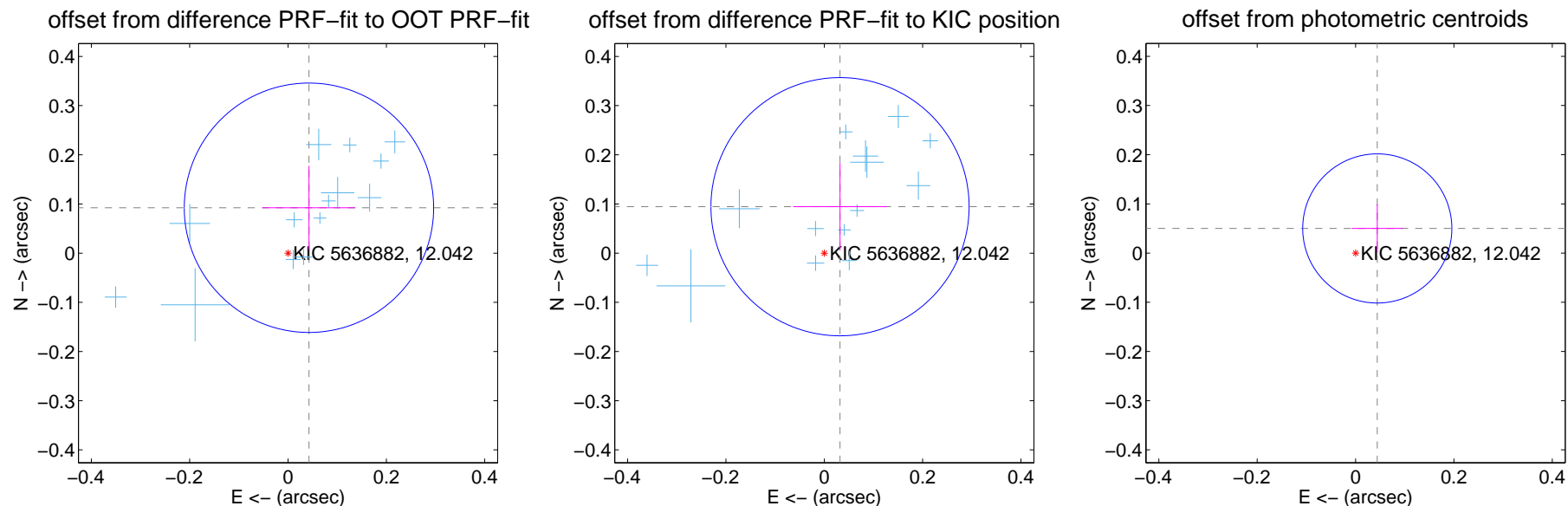
DV Centroid Data

Supplemental centroid analysis for 005636882-02. Kepler magnitude: 12.04. Transit SNR 12.17

There are 17 quarters with good PRF difference image offsets

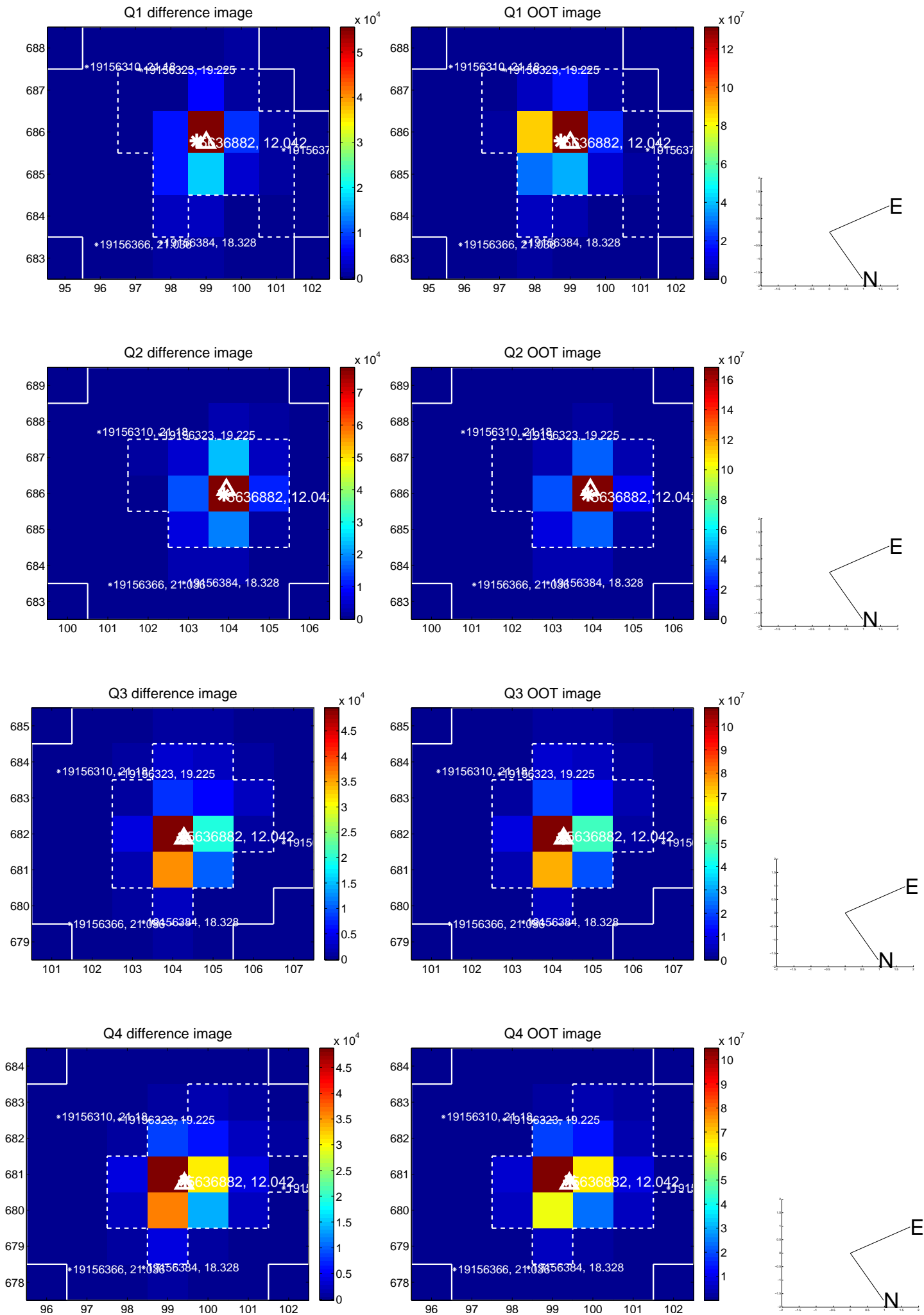
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.102 ± 0.085	1.20	-0.043 ± 0.095	0.092 ± 0.085
PRF-fit source offset from KIC position	0.100 ± 0.088	1.14	-0.032 ± 0.095	0.094 ± 0.089
photometric centroid source offset	0.07 ± 0.05	1.32	-0.04 ± 0.05	0.05 ± 0.05

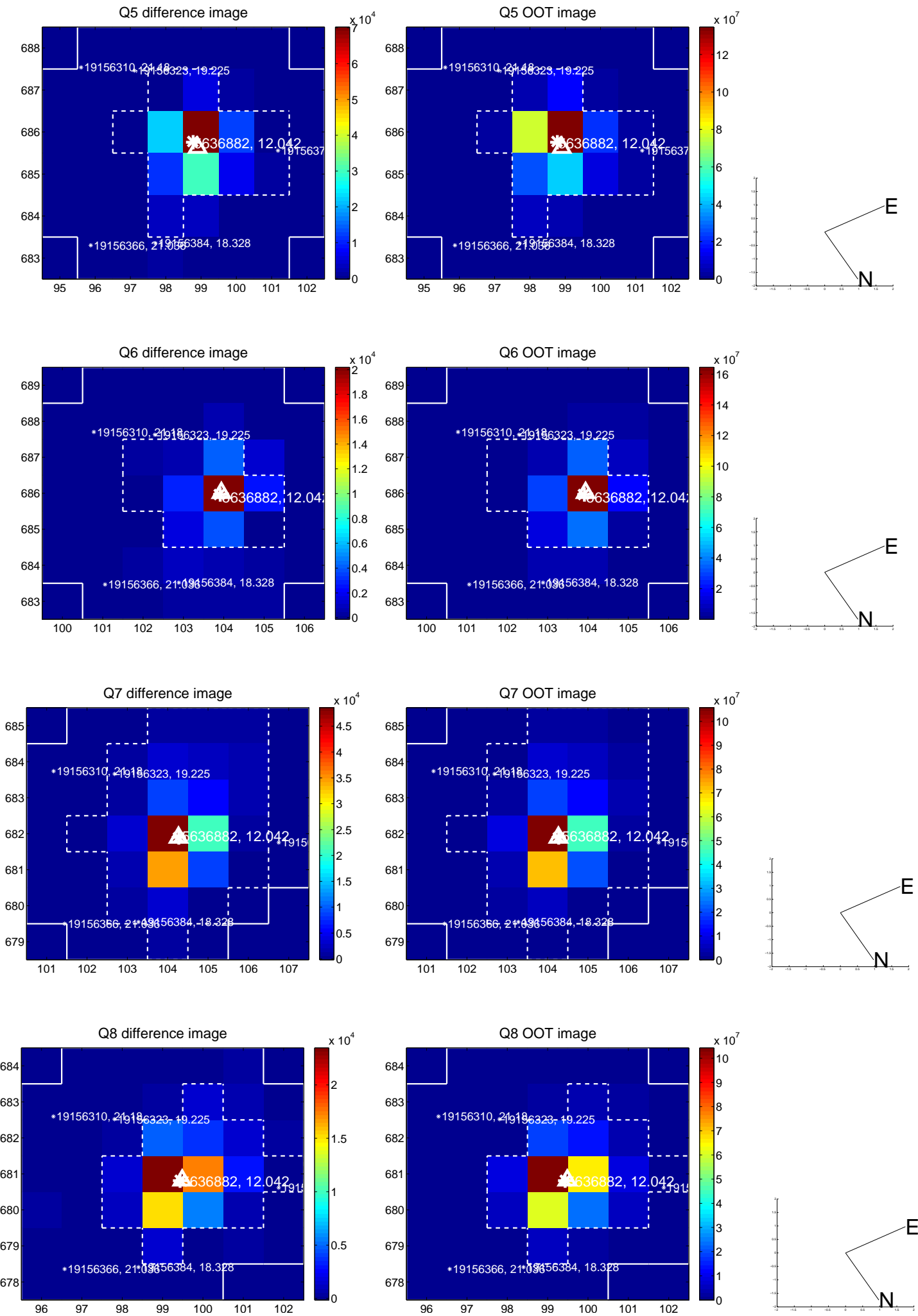


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

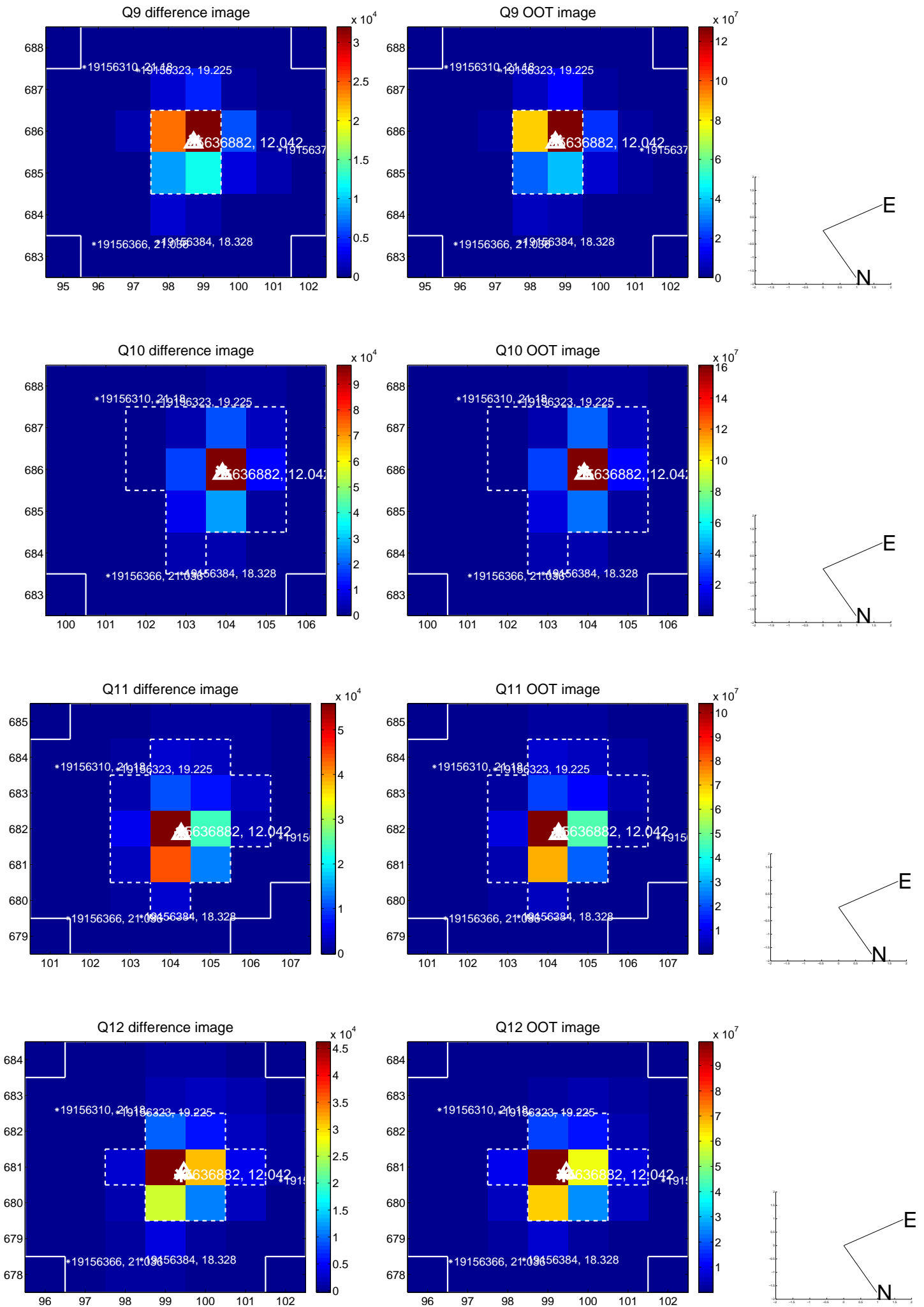
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



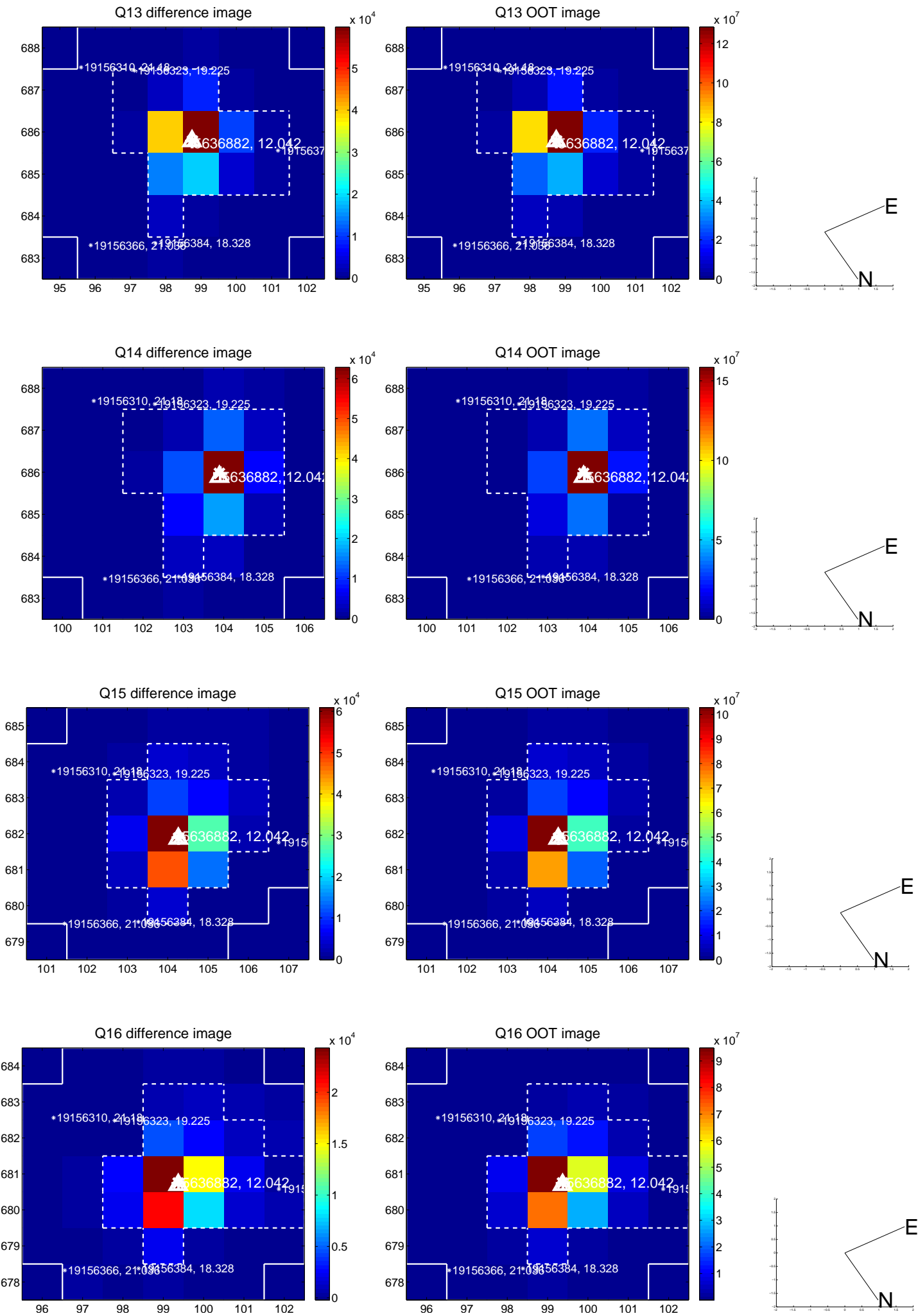
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



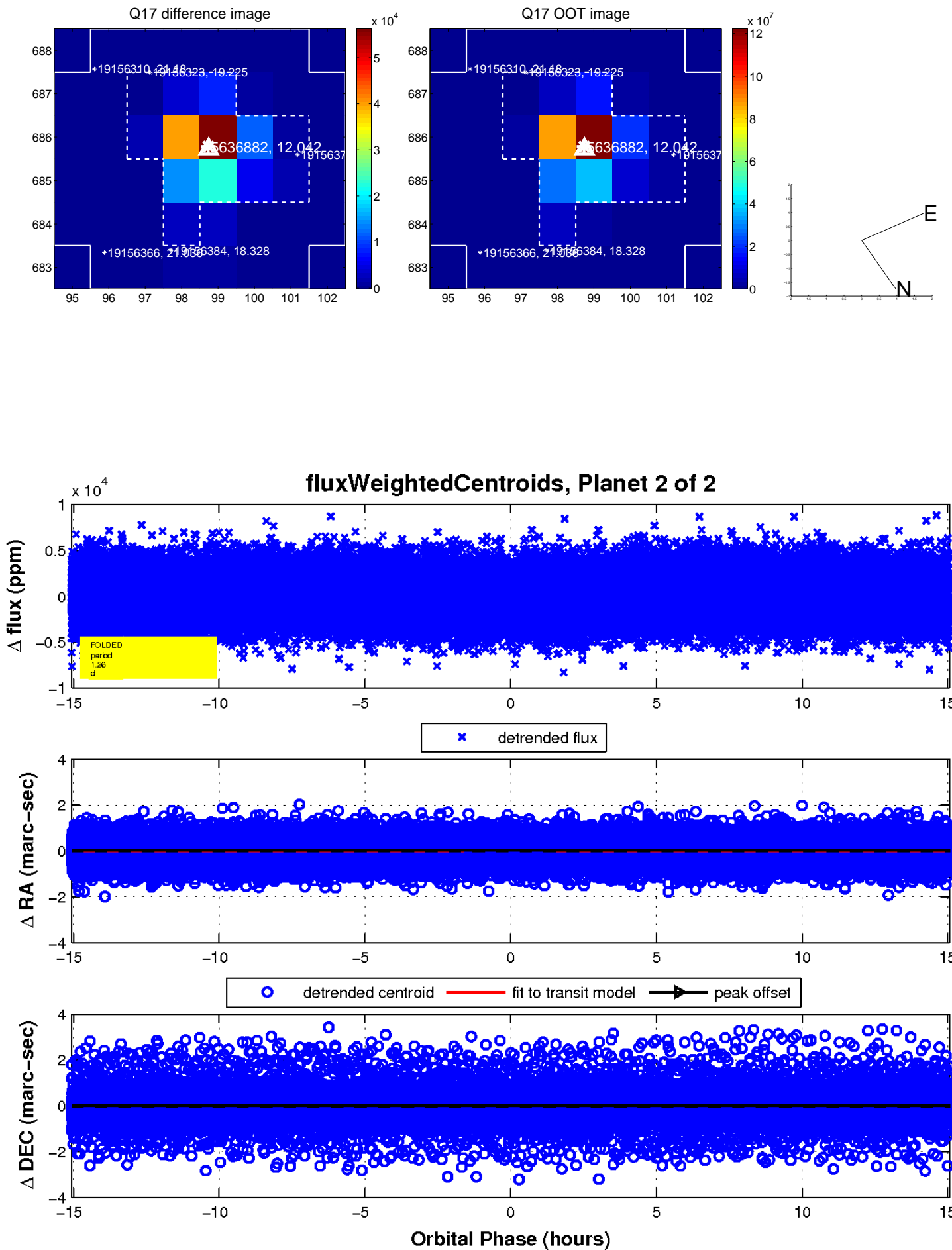
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

