

KIC 002717483

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})
002717483-01	OBS	No	2.426127	132.323590	181.0	11.350	10.0	9.6	1.84	7281	3.14	5255.74
002717483-02	OBS	No	0.808766	132.263045	217.5	9.705	10.1	13.1	1.84	7281	3.49	22738.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002717483-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
002717483-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET

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

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

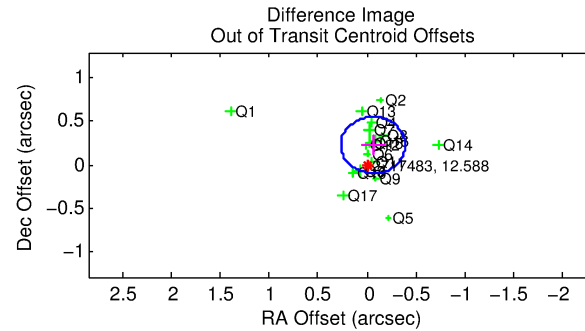
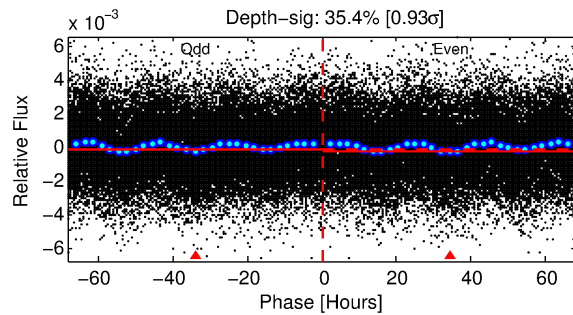
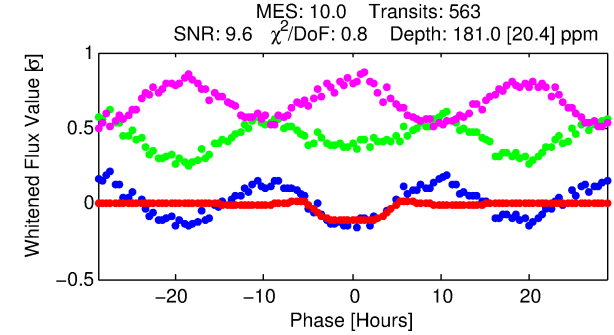
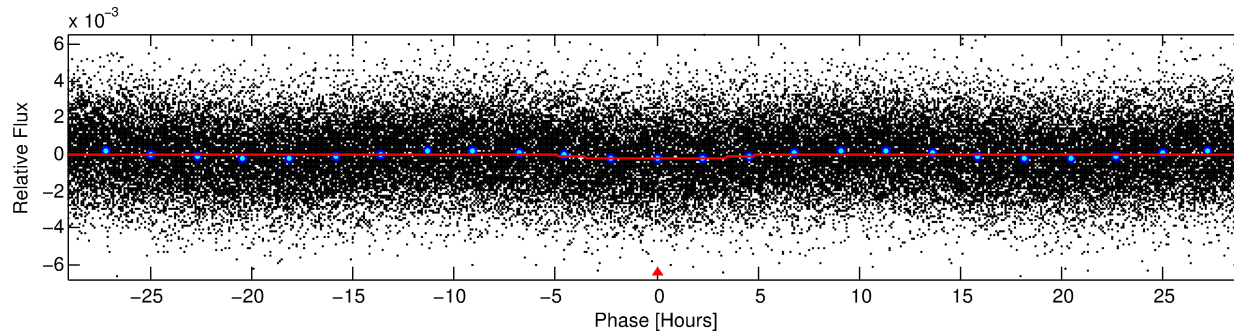
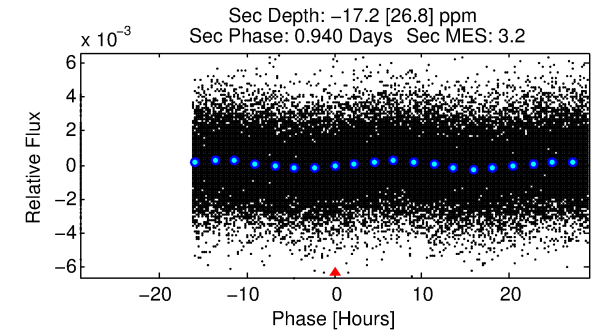
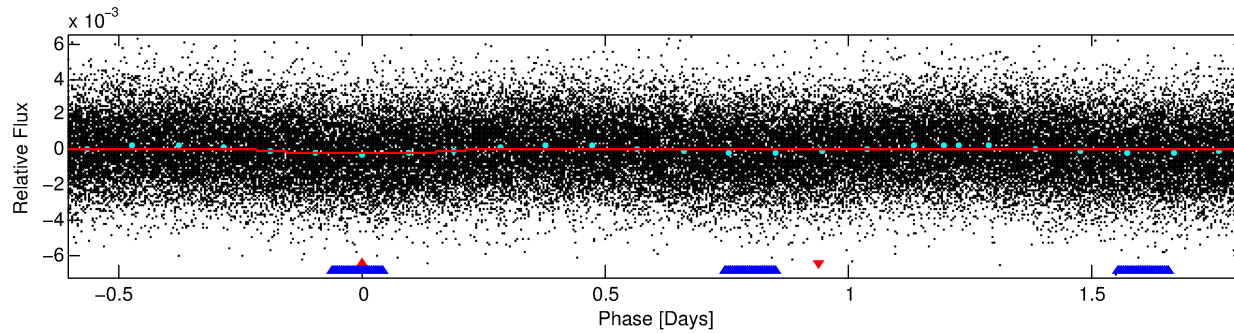
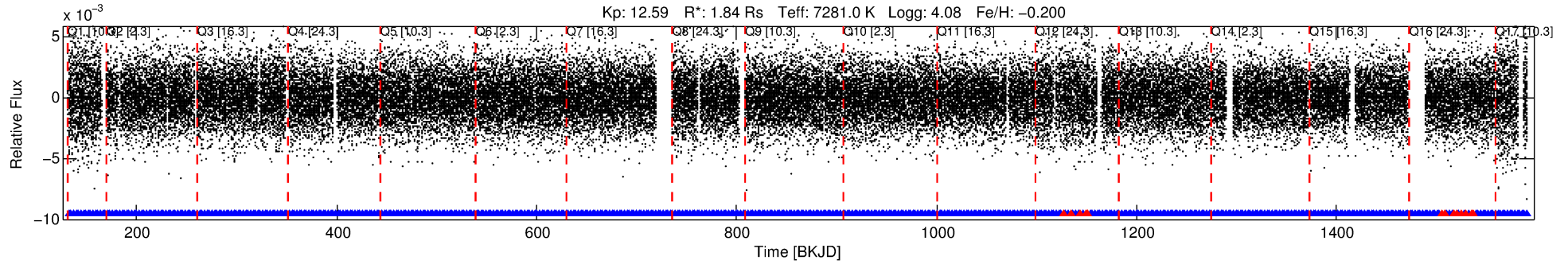
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002717483-01

No Significant Match Found

DV One-Page Summary

KIC: 2717483 Candidate: 1 of 2 Period: 2.426 d



DV Fit Results:

Period = 2.42613 [0.00007] d
Epoch = 132.3236 [0.0207] BKJD
Rp/R* = 0.0156 [0.0012]
a/R* = 1.10 [0.05]
b = 0.97 [0.02]
Seff = 5255.74 [2068.25]
Teq = 2171 [214] K
Rp = 3.14 [0.97] Re
a = 0.0403 [0.0100] AU
Ag = N/A
Teffp = N/A

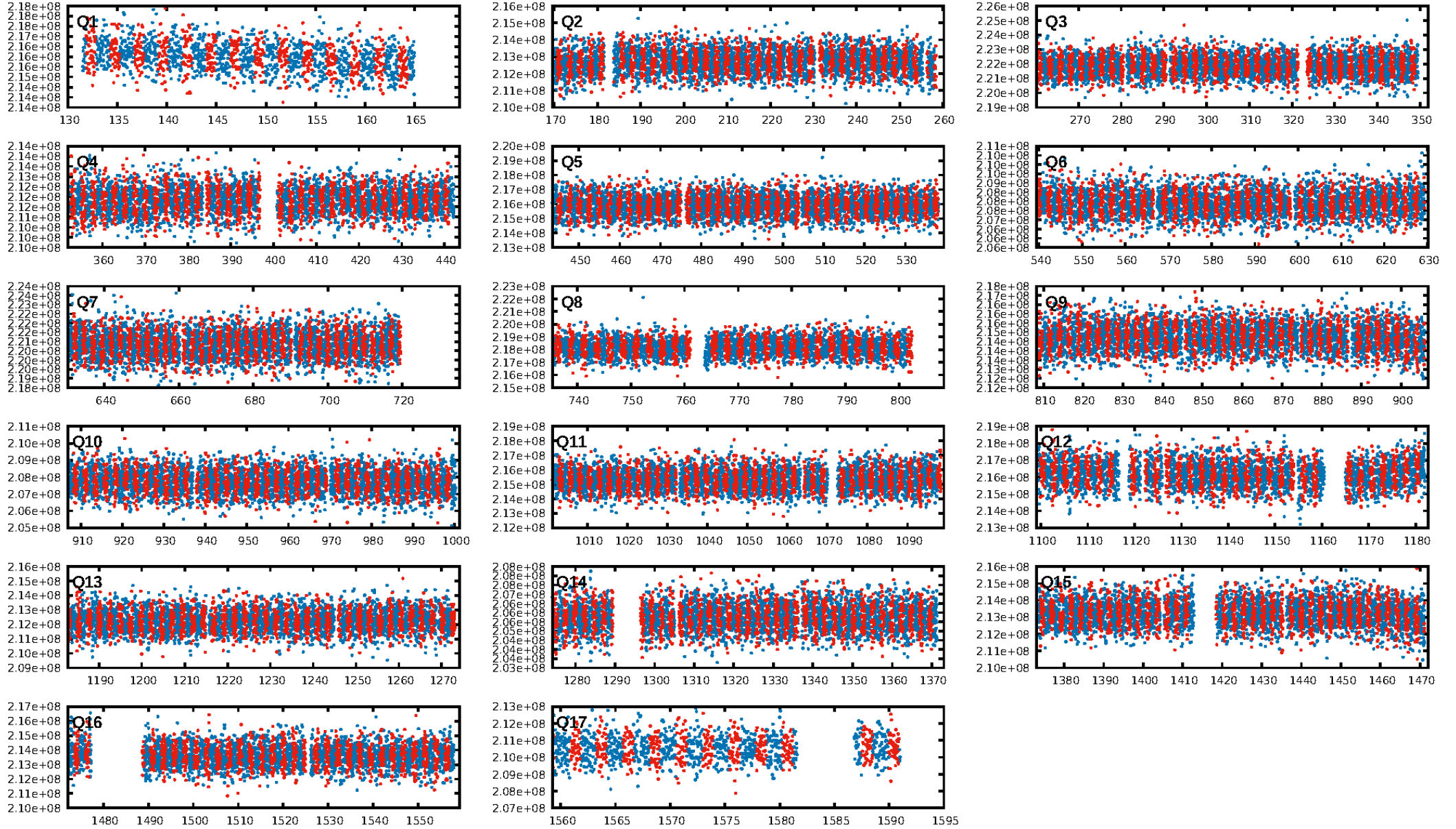
DV Diagnostic Results:

ShortPeriod-sig: 99.1% [2.60σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [525/538]
GhostDiagnostic-chr: 0.7833
Centroid-sig: 4.9%
Centroid-so: 0.068 arcsec [0.49σ]
OotOffset-rm: 0.233 arcsec [2.14σ]
KicOffset-rm: 0.245 arcsec [2.33σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

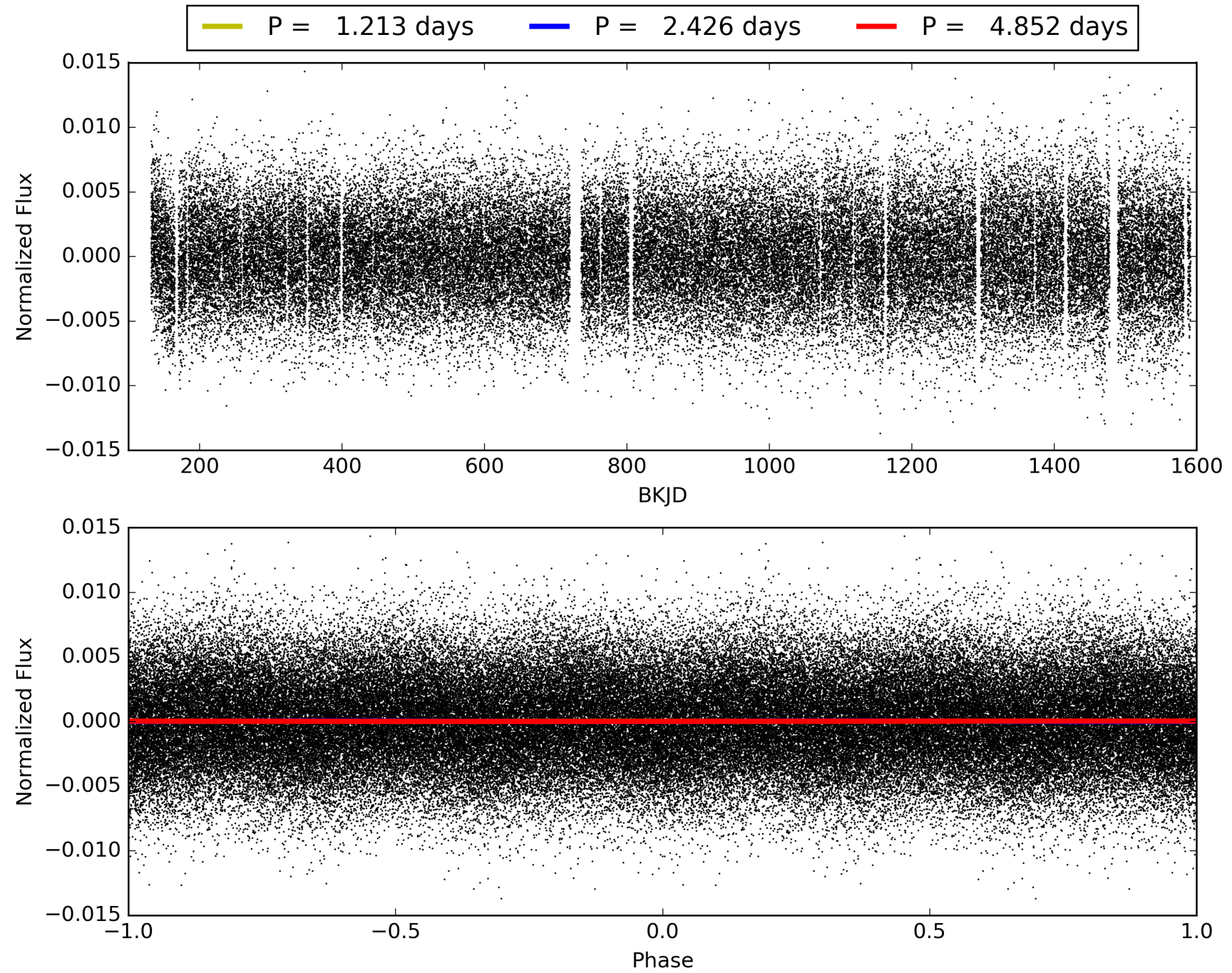
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:52:51 Z

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

TCE 002717483-01, PDC Light Curves

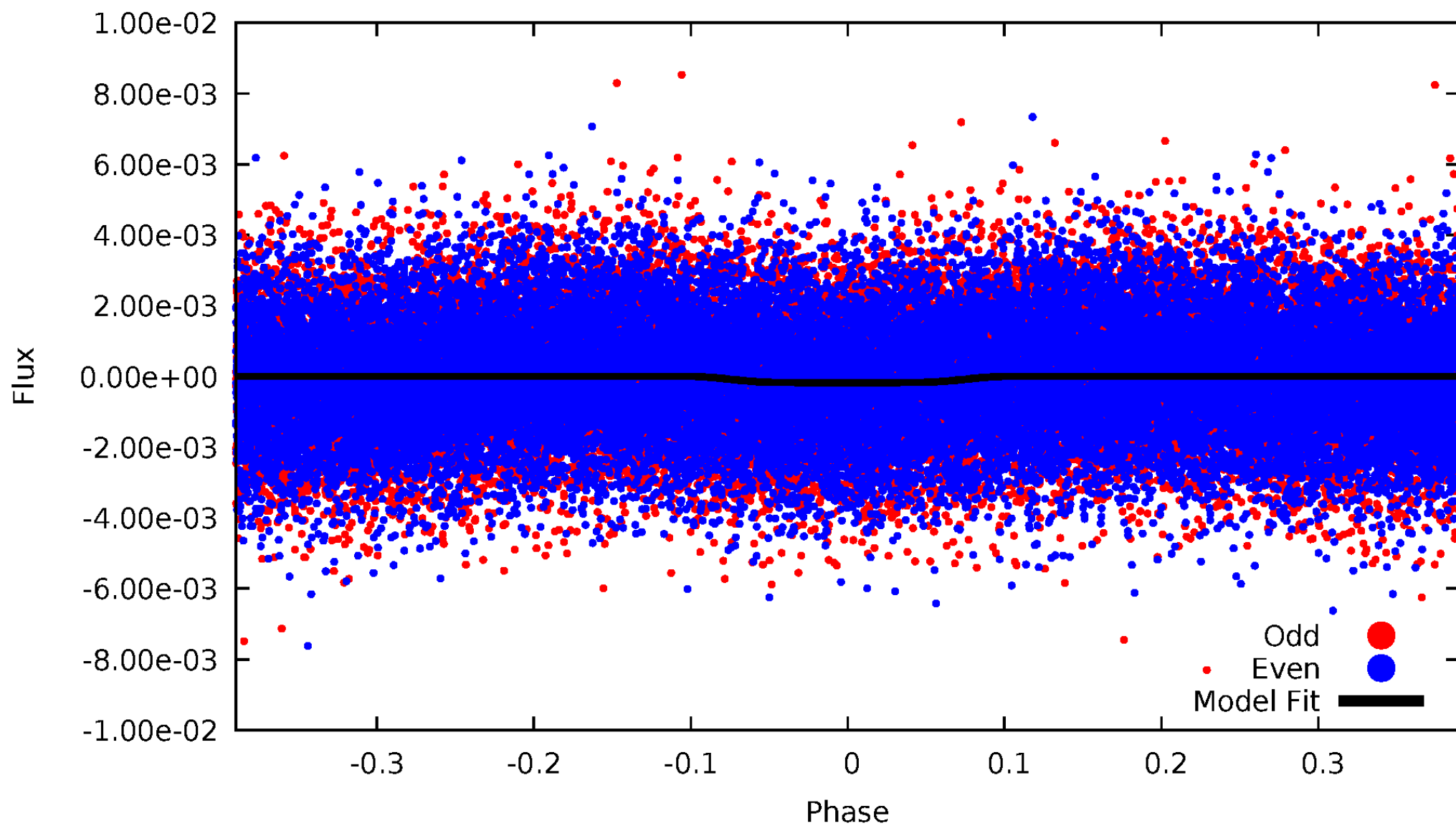


TCE 002717483-01



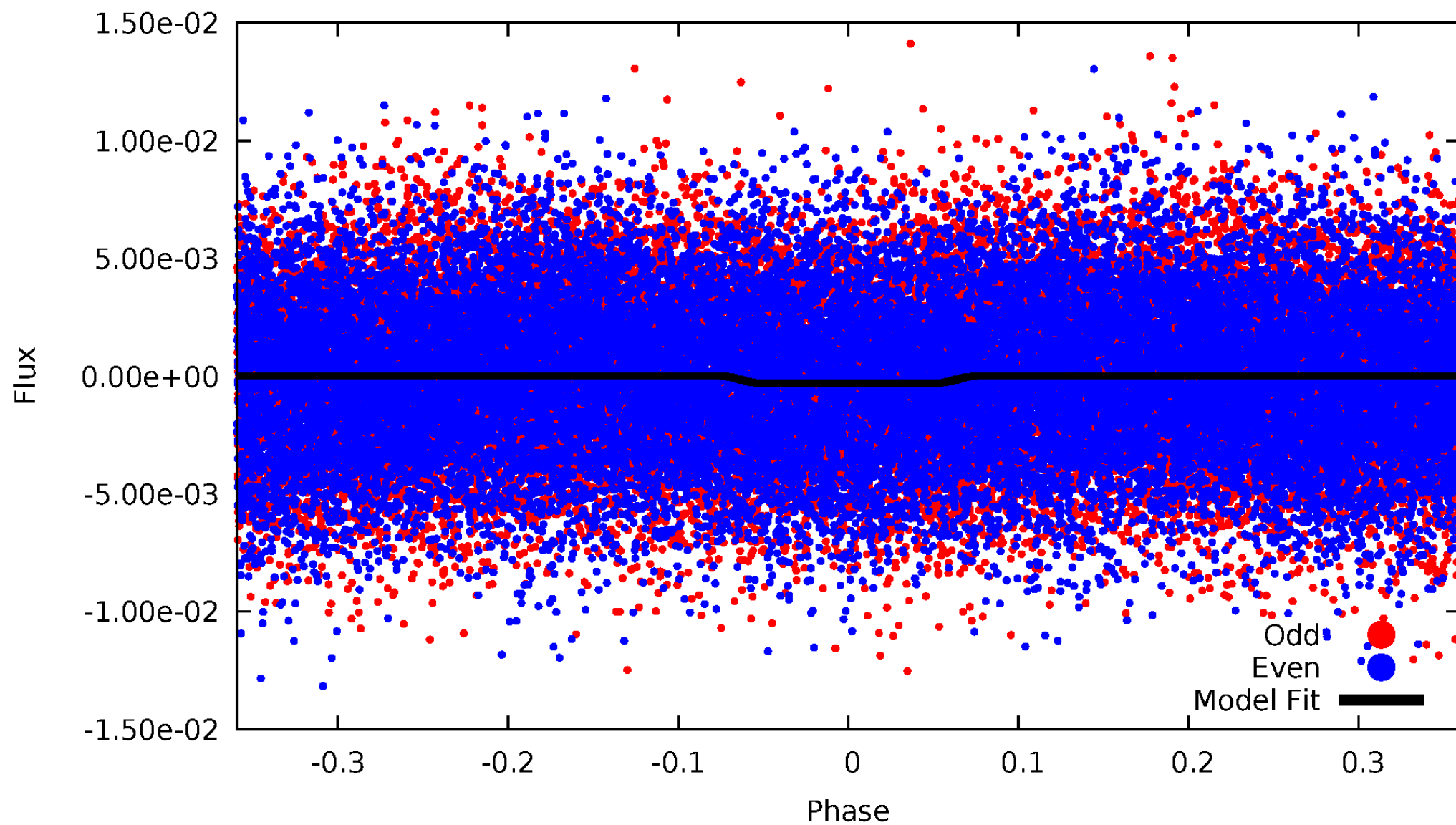
DV Odd/Even

TCE 002717483-01



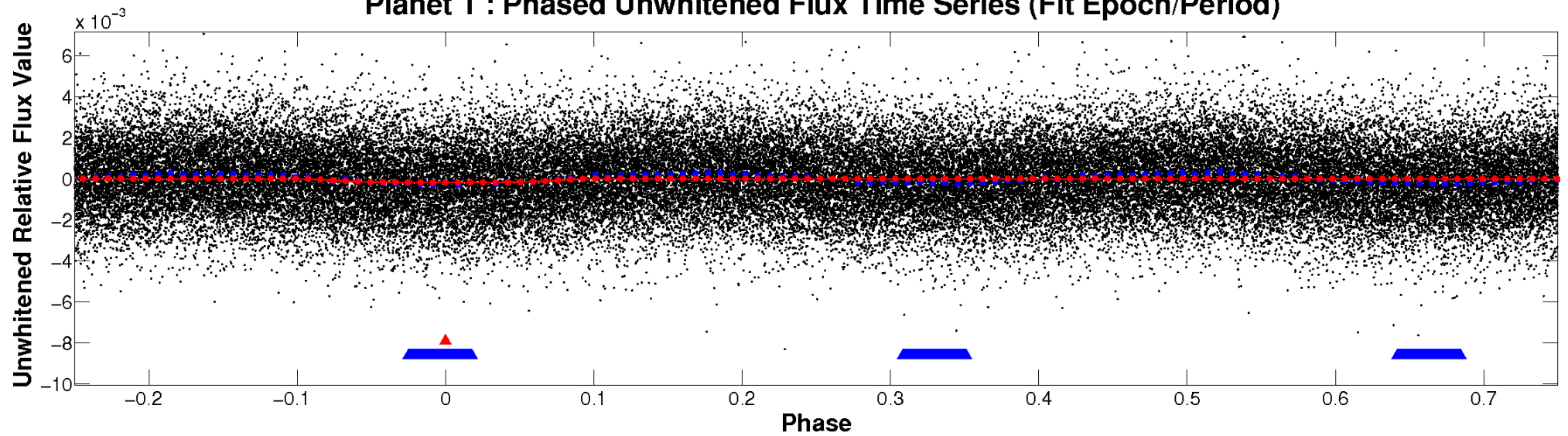
ALT Odd/Even

TCE 002717483-01

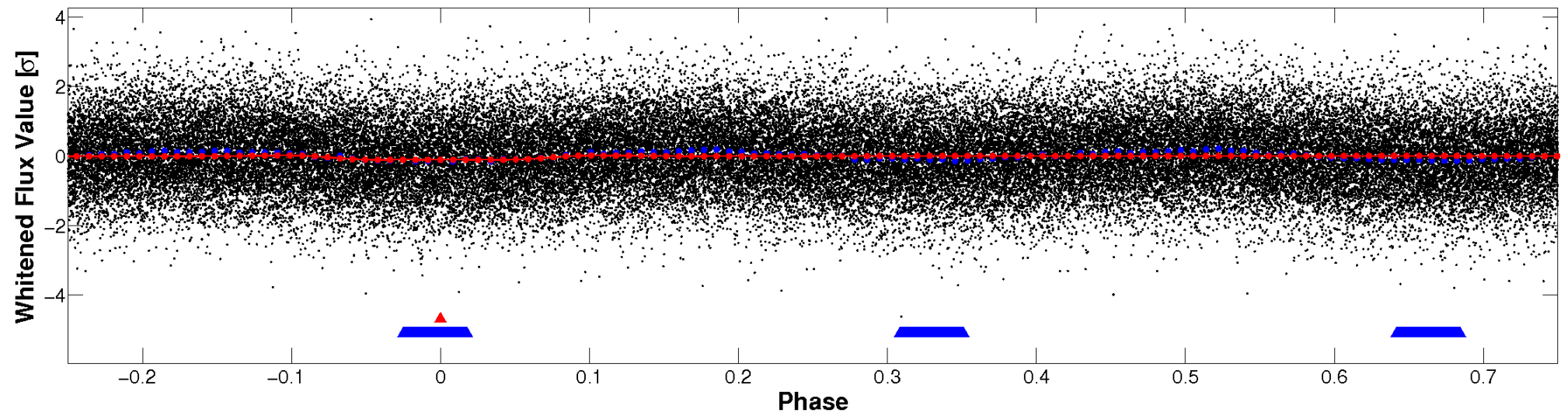


Non-Whitened Vs. Whitened Light Curve

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

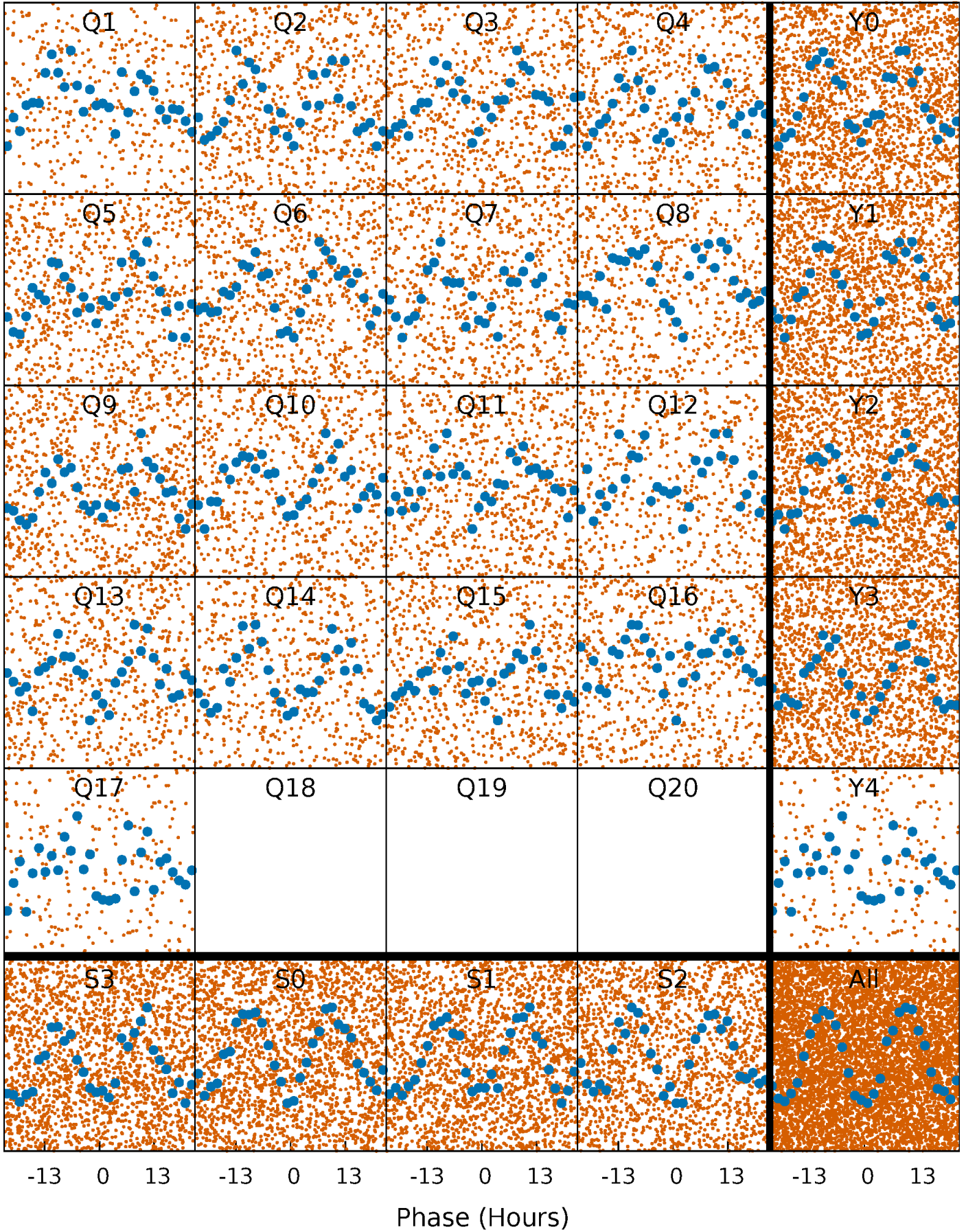


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



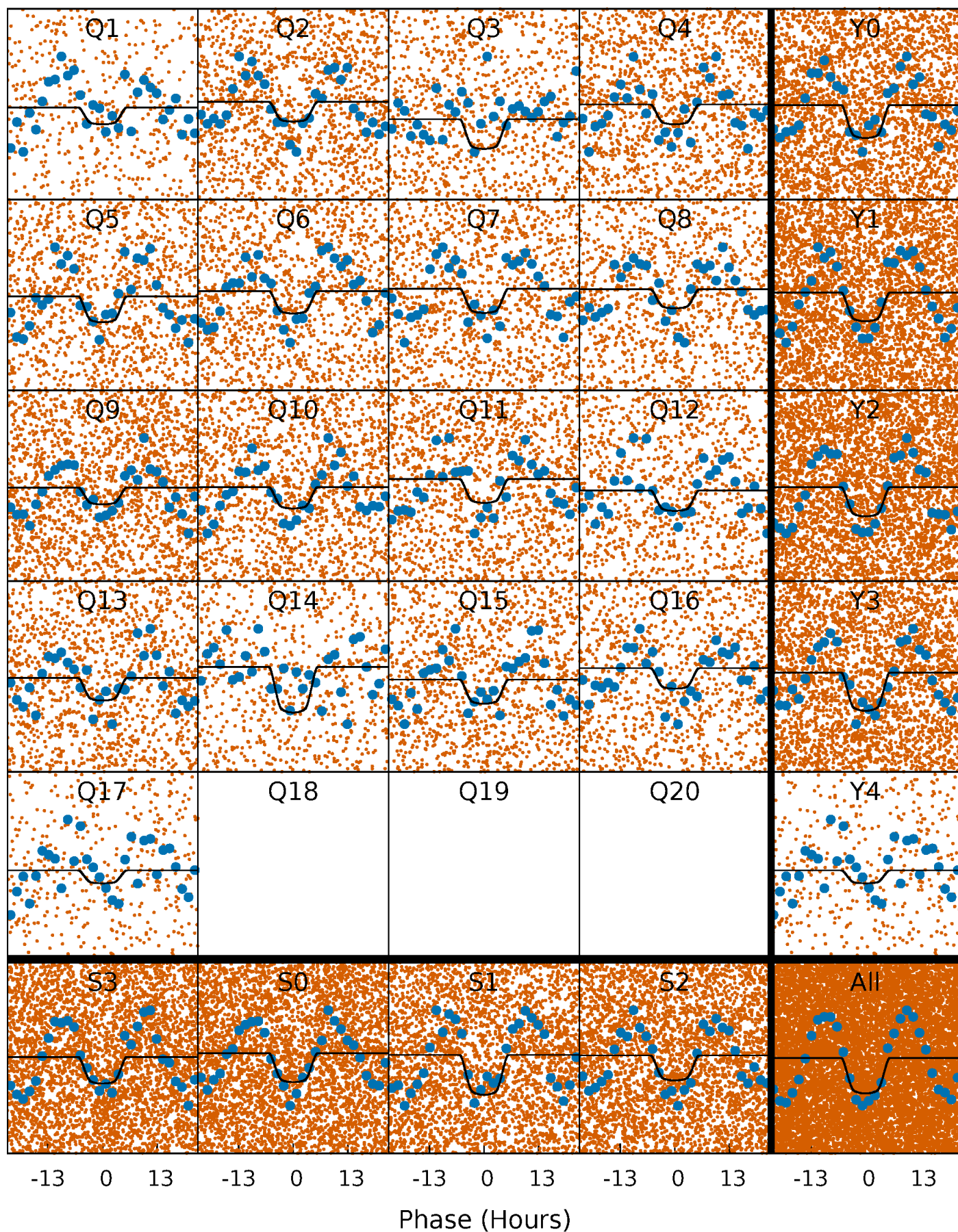
PDC Quarter-Phased Transit Curves

TCE 002717483-01 P= 2.426127 Days $T_0=132.323590$ (BKJD)



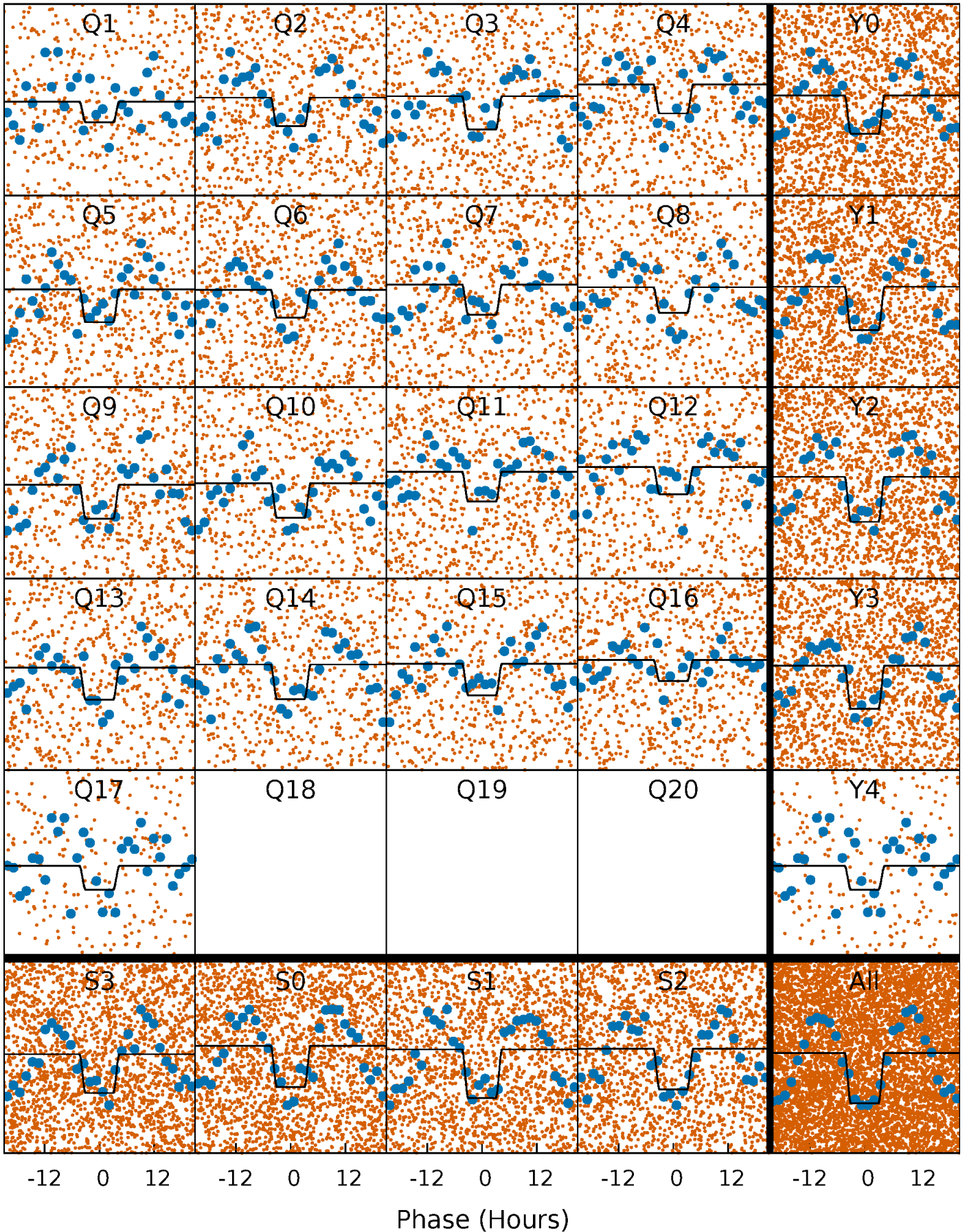
DV Quarter-Phased Transit Curves

TCE 002717483-01 P= 2.426127 Days $T_0=132.323590$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

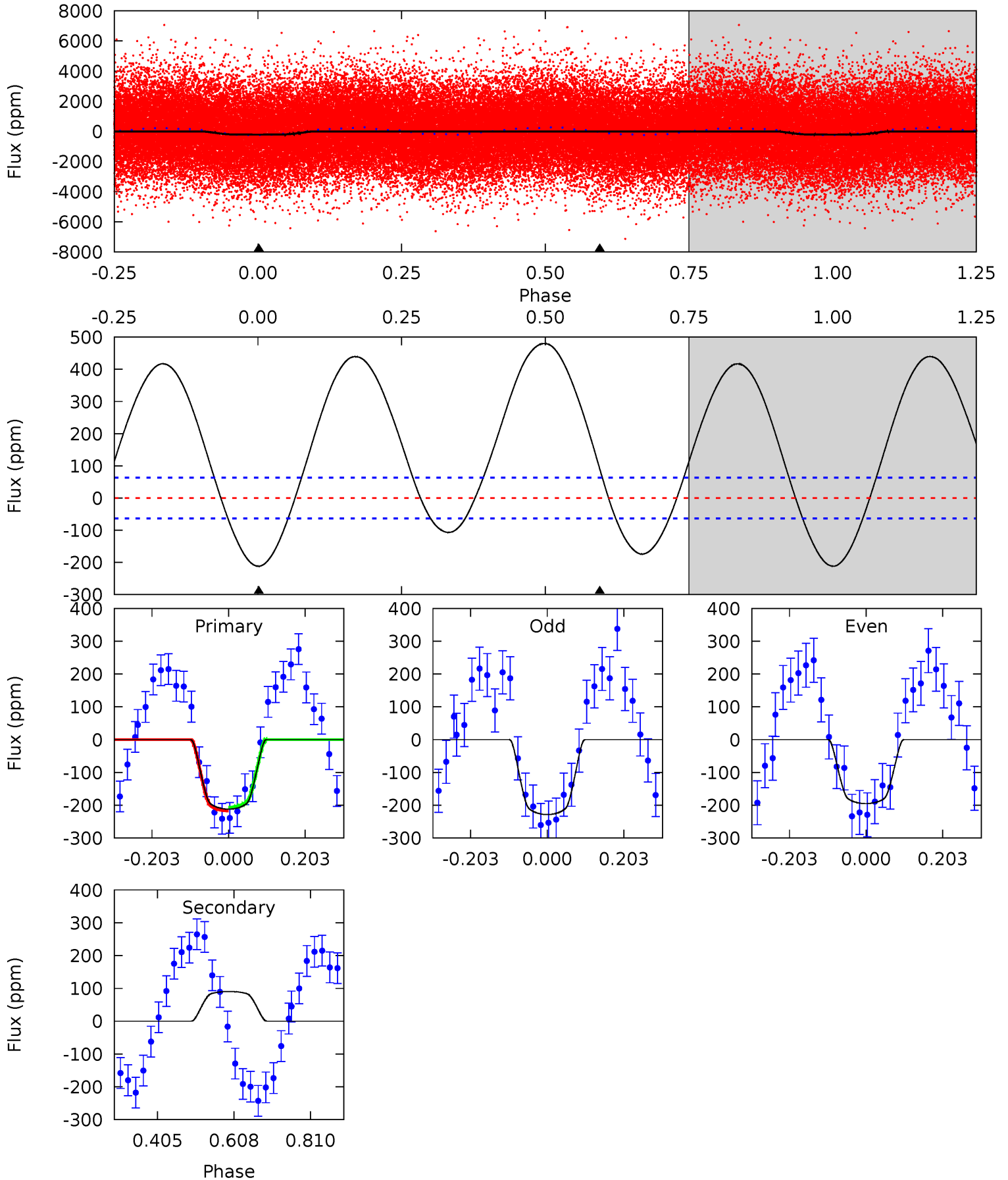
TCE 002717483-01 P= 2.426152 Days $T_0=132.316638$ (BKJD)



DV Model-Shift Uniqueness Test

002717483-01, P = 2.426127 Days, E = 129.897463 Days

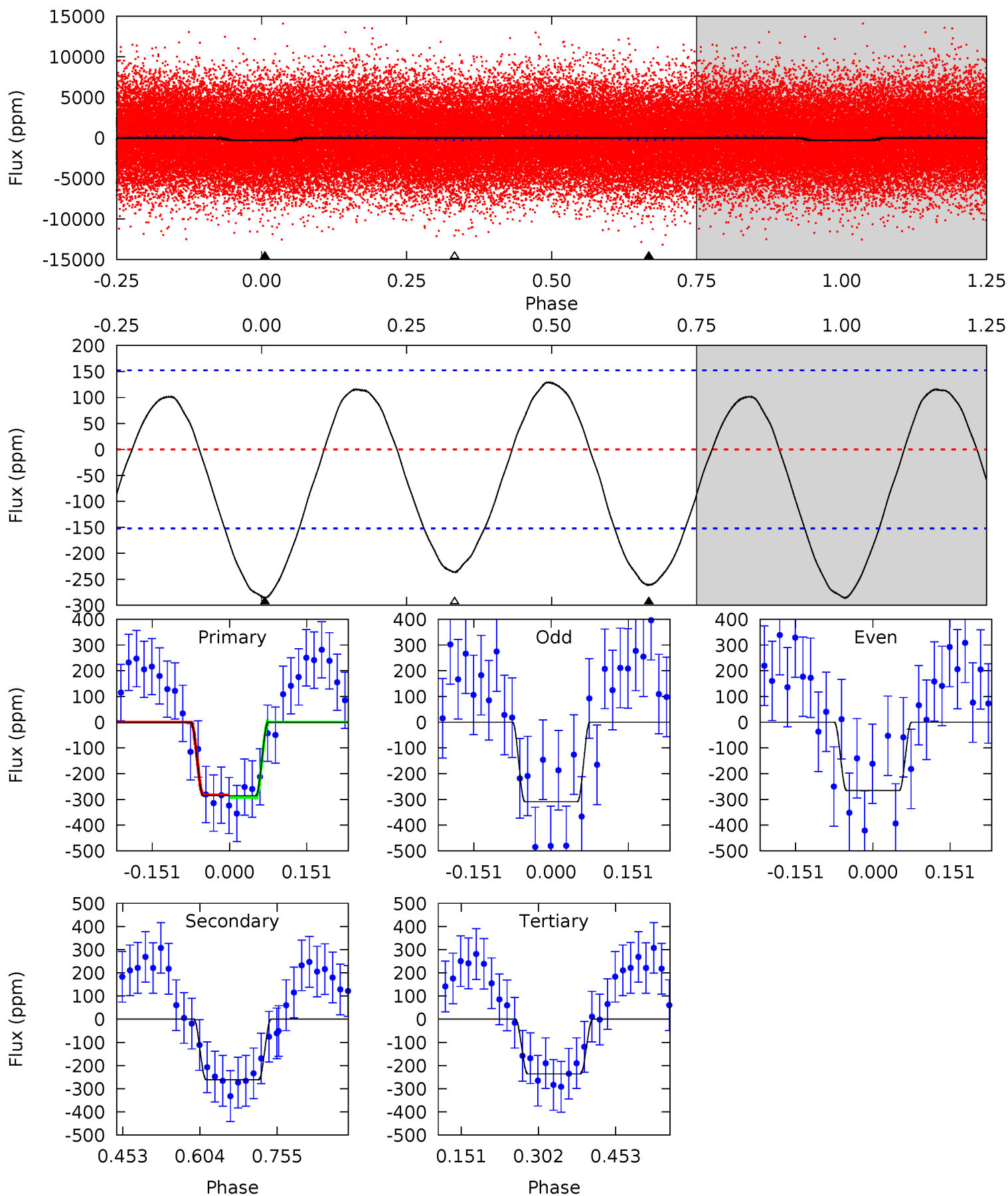
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	-6.28	0	0	4.41	1.27	10.6	14.7	14.7	-6.28	-6.28	1.16	1.24	0.69	0.37



Alt Model-Shift Uniqueness Test

002717483-01, P = 2.426152 Days, E = 129.890486 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	7.67	6.95	0	4.48	1.44	3.82	1.46	8.40	0.73	7.67	0.64	1.20	0.31	0.16



Stellar Parameters For KIC 002717483

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7281^{+228}_{-304}	$4.079^{+0.193}_{-0.175}$	$-0.200^{+0.250}_{-0.350}$	$1.842^{+0.547}_{-0.448}$	$1.483^{+0.211}_{-0.257}$	$0.334^{+0.374}_{-0.166}$
	+3%/-4%	+5%/-4%	+125%/-175%	+30%/-24%	+14%/-17%	+112%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002717483-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	90 ± 14	$3.15^{+0.55}_{-0.50}$	3027^{+222}_{-226}	-5660^{+325}_{-348}	$-8.077^{+2.299}_{-3.461}$
Alt.	-261 ± 34	$3.48^{+0.63}_{-0.50}$	3024^{+238}_{-232}	6886^{+483}_{-403}	19^{+7}_{-5}

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

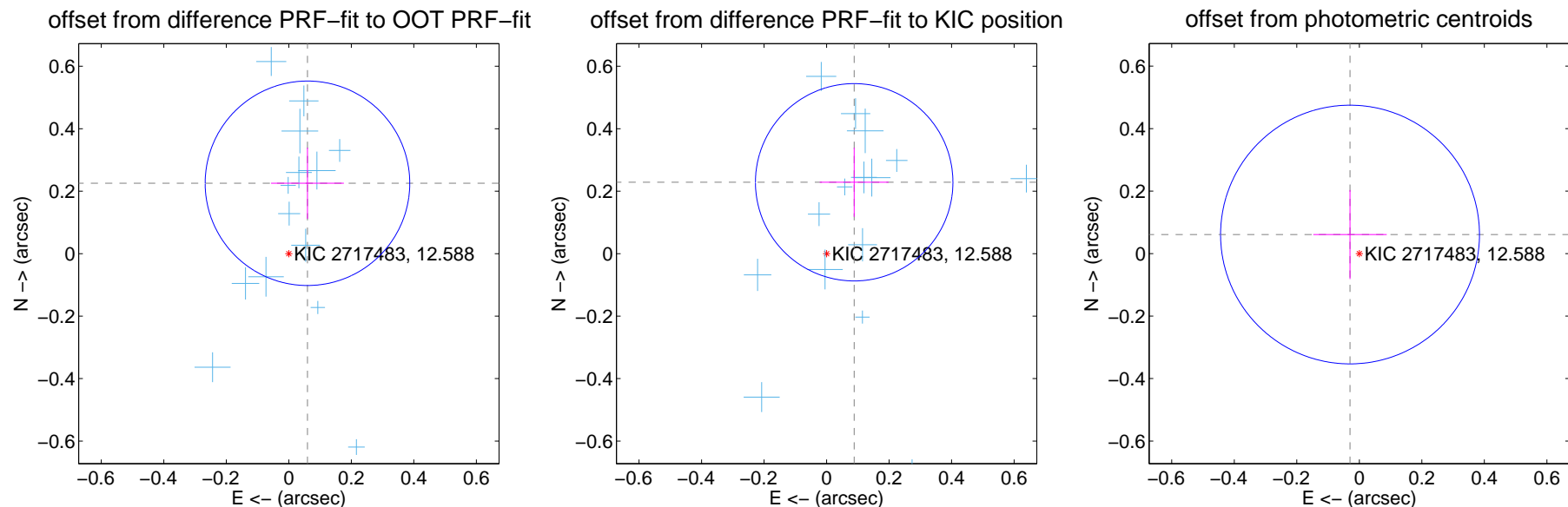
DV Centroid Data

Supplemental centroid analysis for 002717483-01. Kepler magnitude: 12.59. Transit SNR 9.64

There are 17 quarters with good PRF difference image offsets

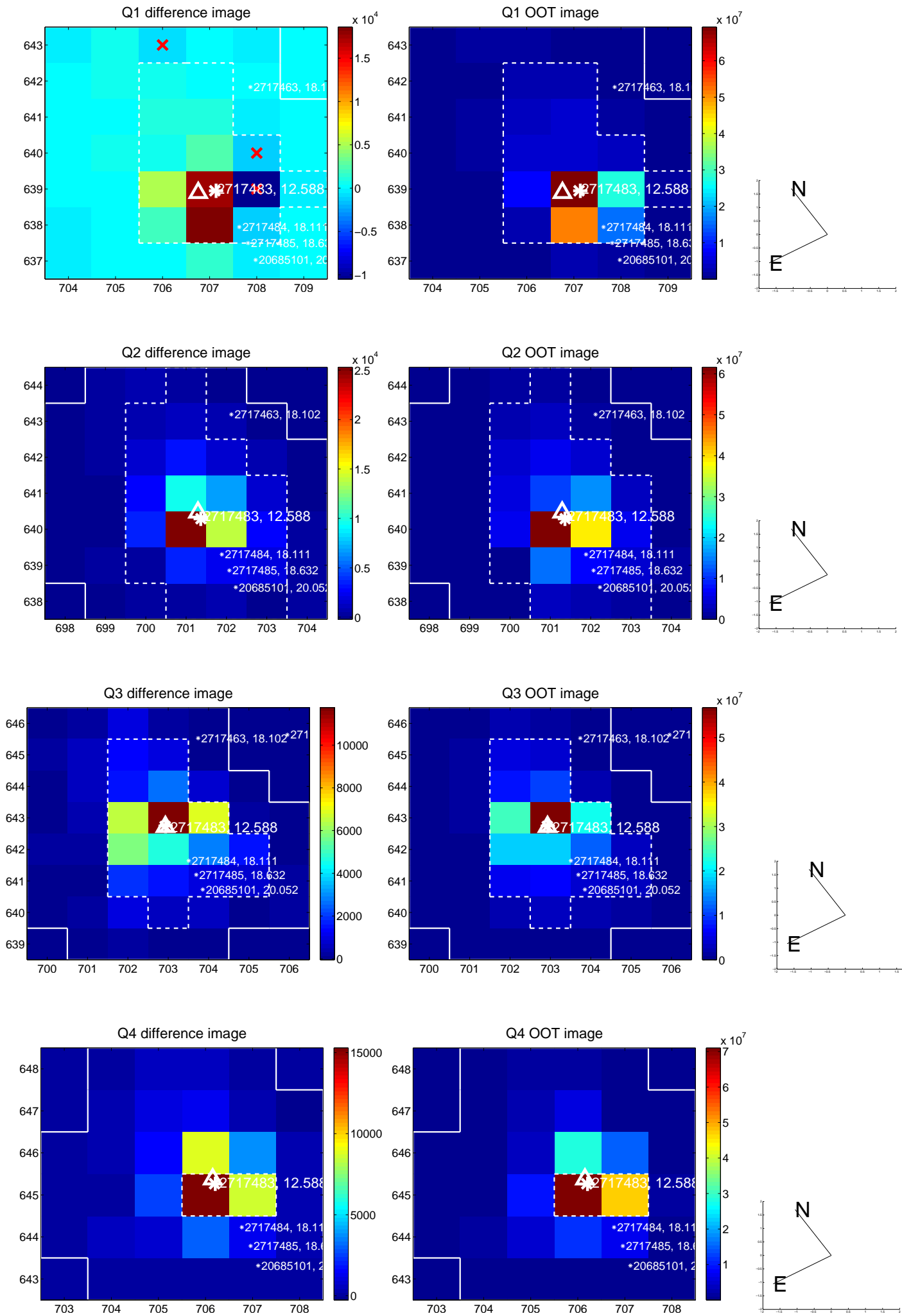
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.233 ± 0.109	2.14	-0.060 ± 0.117	0.225 ± 0.114
PRF-fit source offset from KIC position	0.245 ± 0.105	2.33	-0.088 ± 0.110	0.229 ± 0.111
photometric centroid source offset	0.07 ± 0.14	0.49	0.03 ± 0.12	0.06 ± 0.14

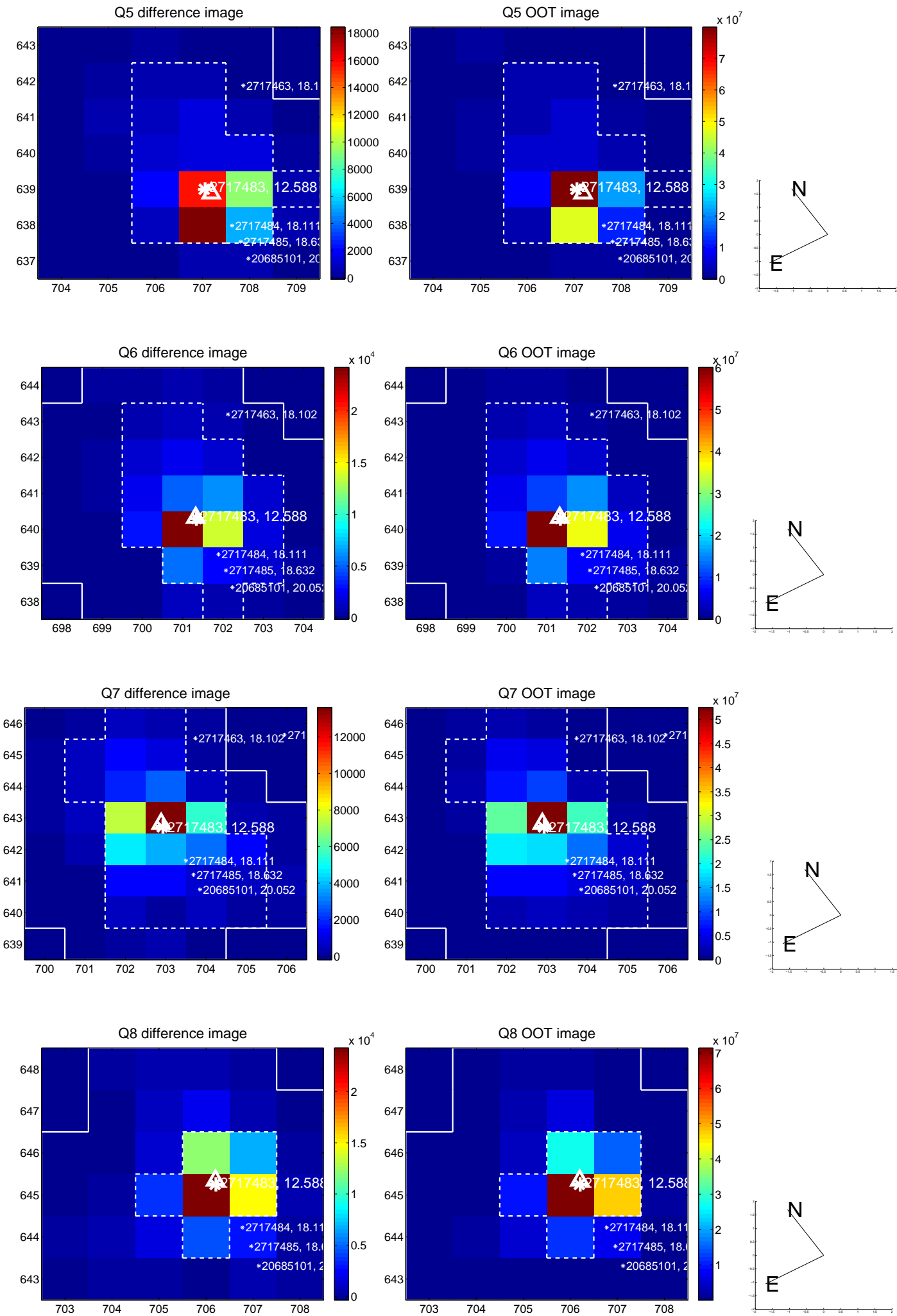


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

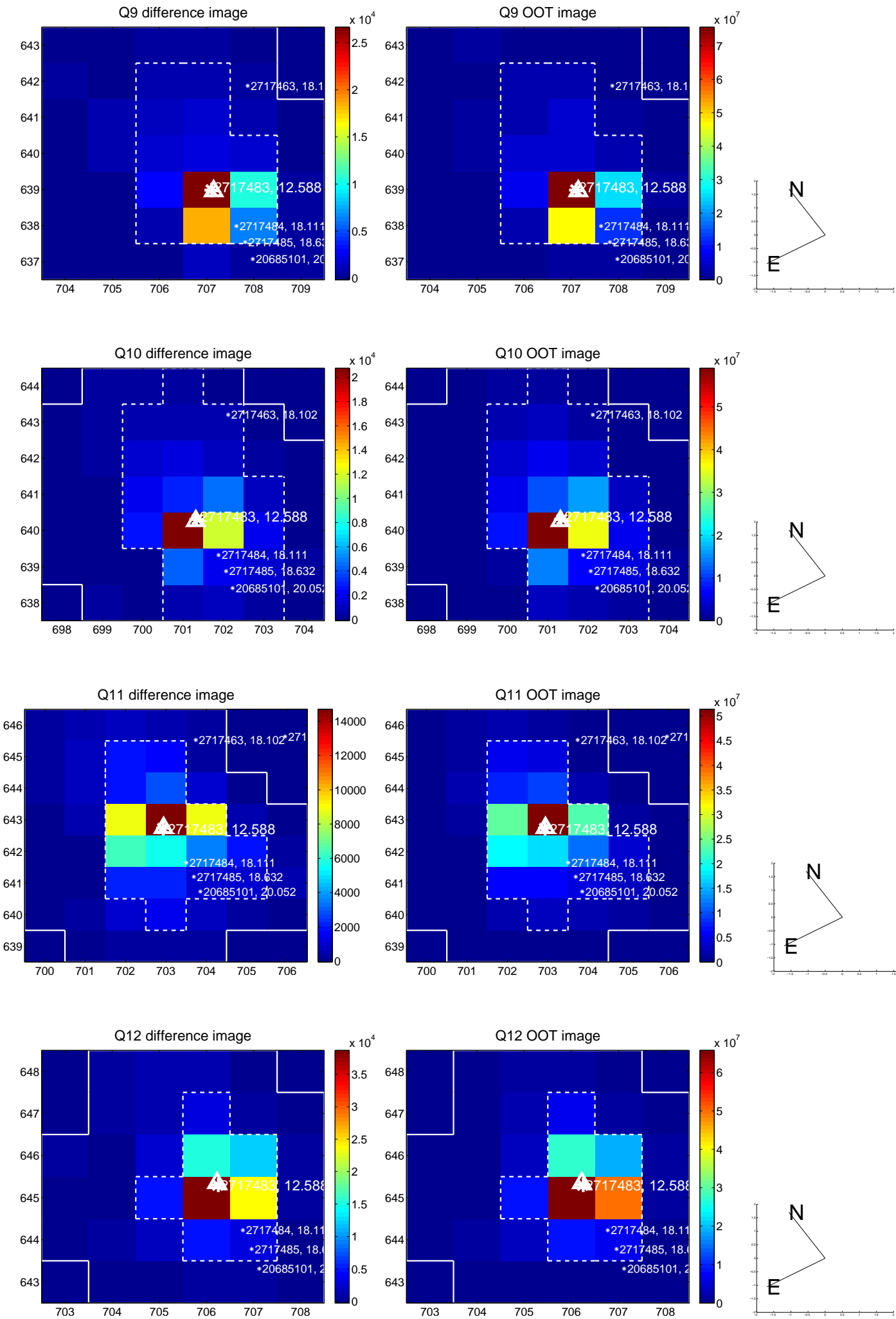
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



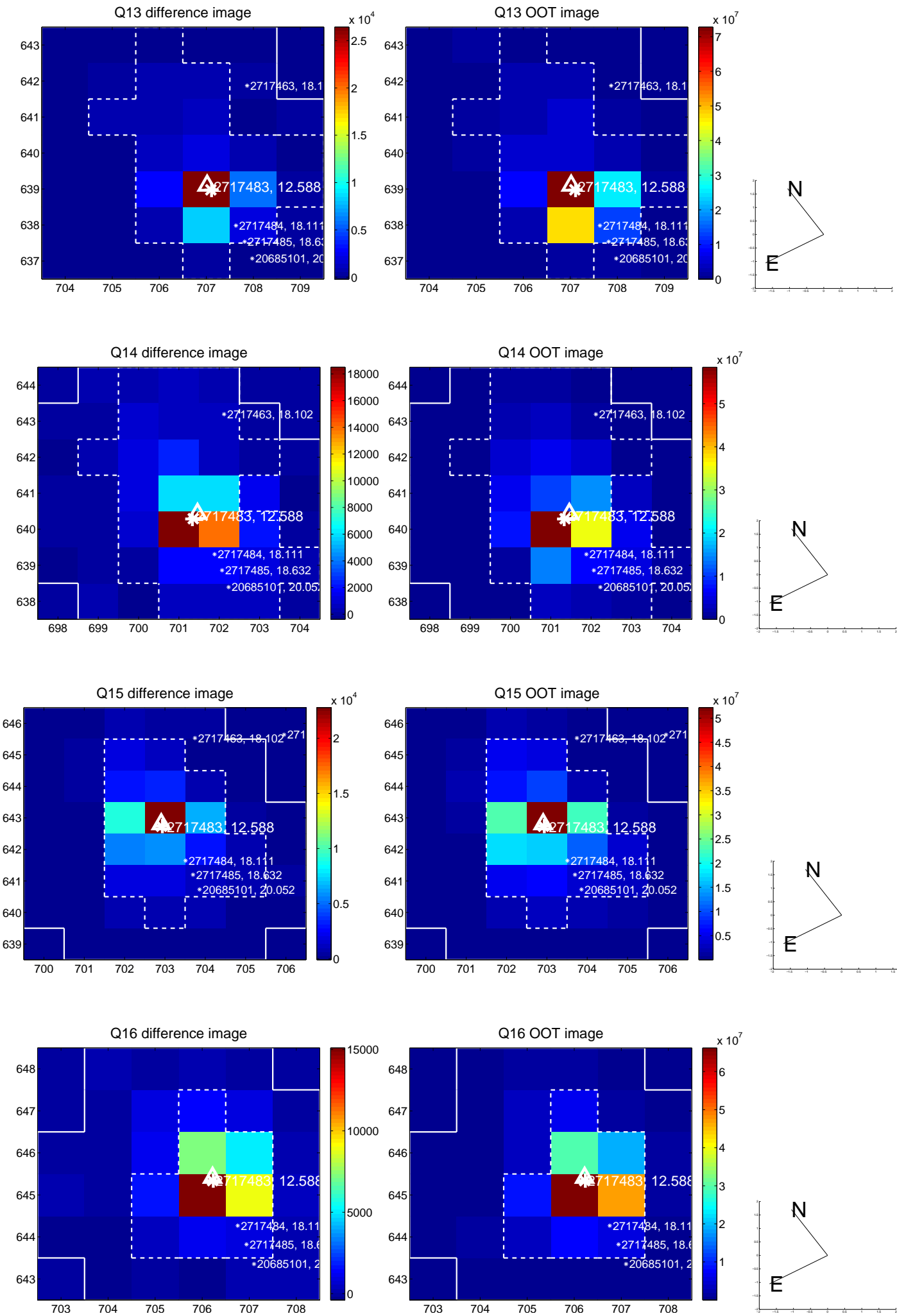
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



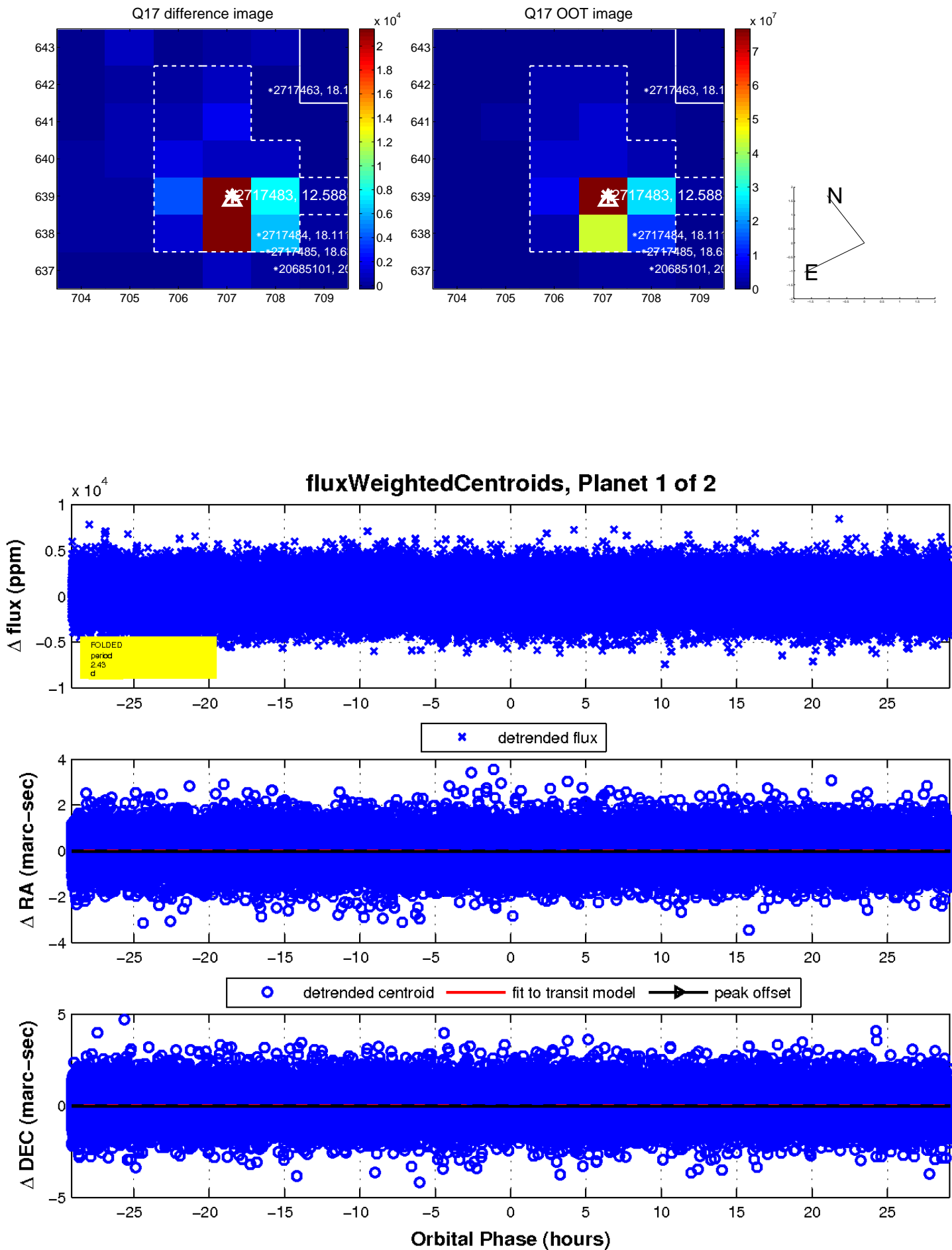
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



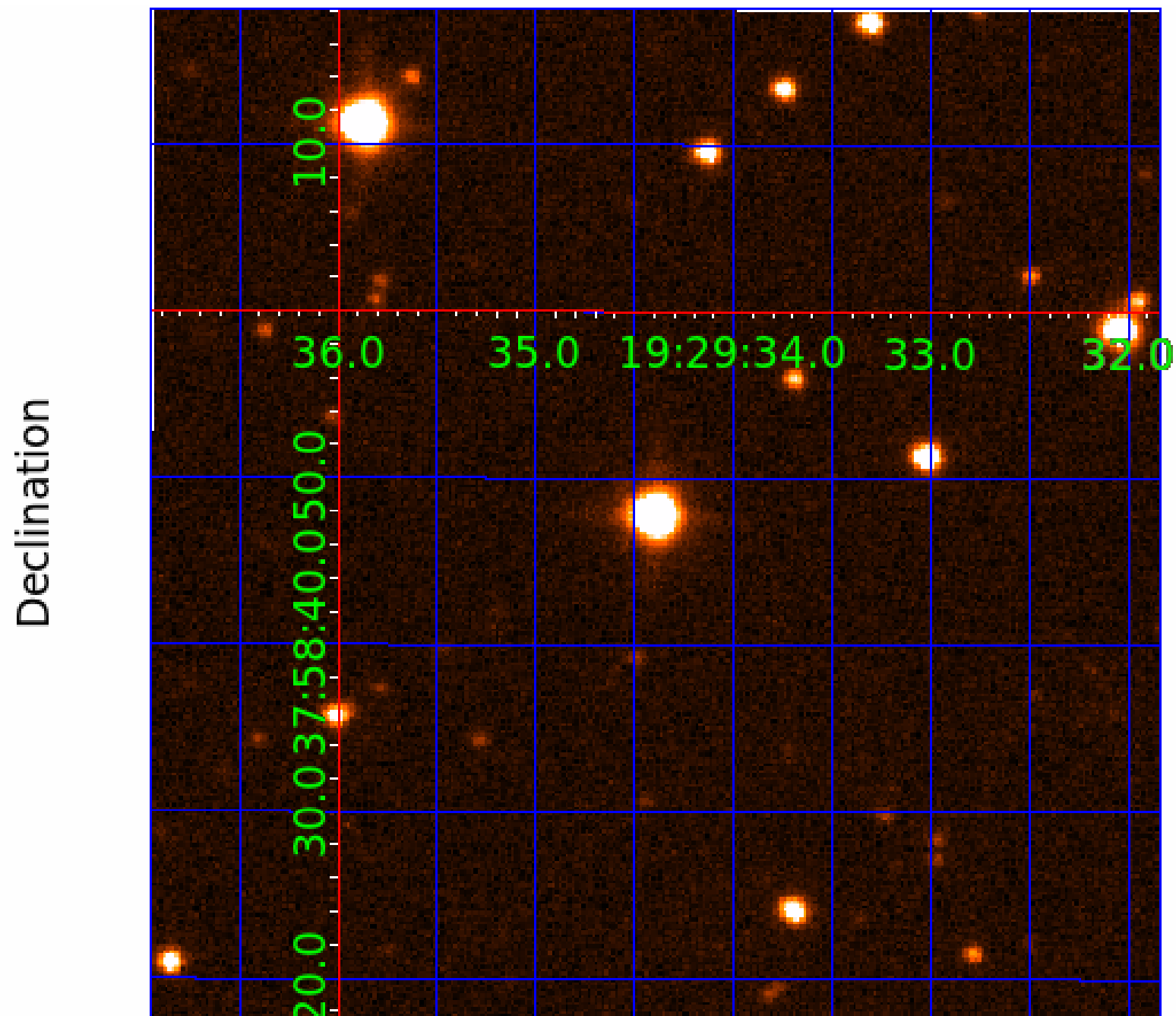
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 002717483

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})
002717483-01	OBS	No	2.426127	132.323590	181.0	11.350	10.0	9.6	1.84	7281	3.14	5255.74
002717483-02	OBS	No	0.808766	132.263045	217.5	9.705	10.1	13.1	1.84	7281	3.49	22738.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002717483-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
002717483-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET

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

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

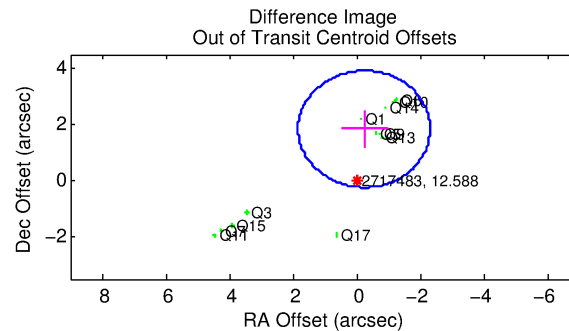
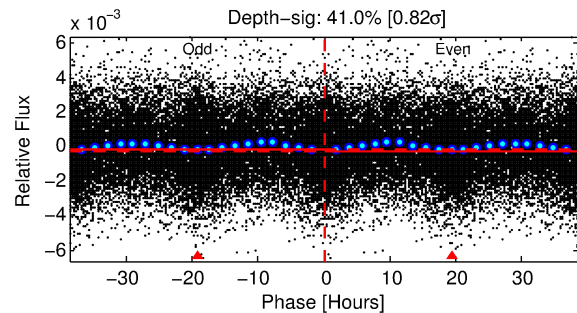
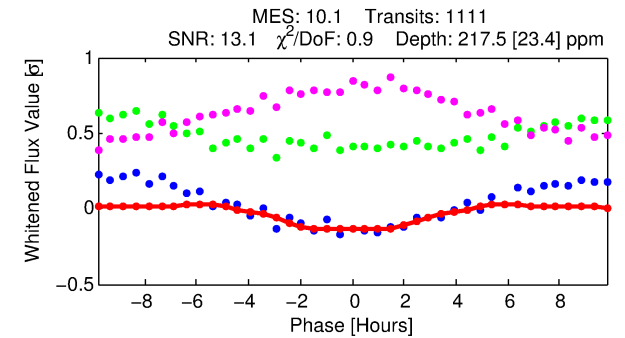
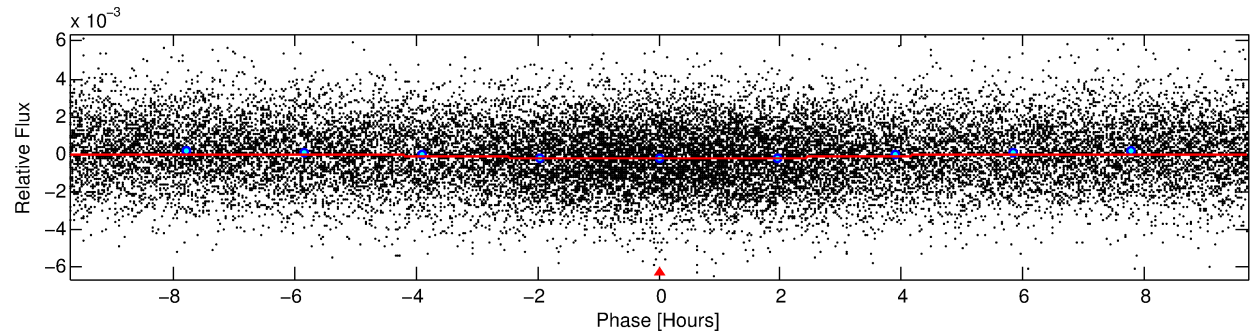
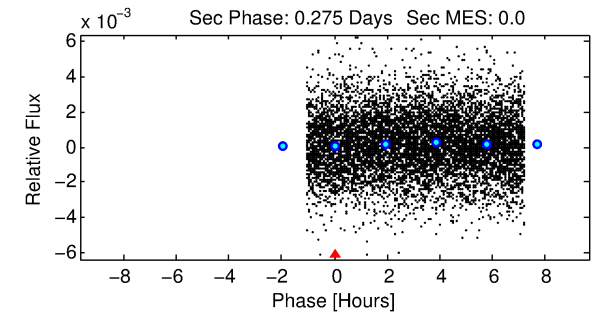
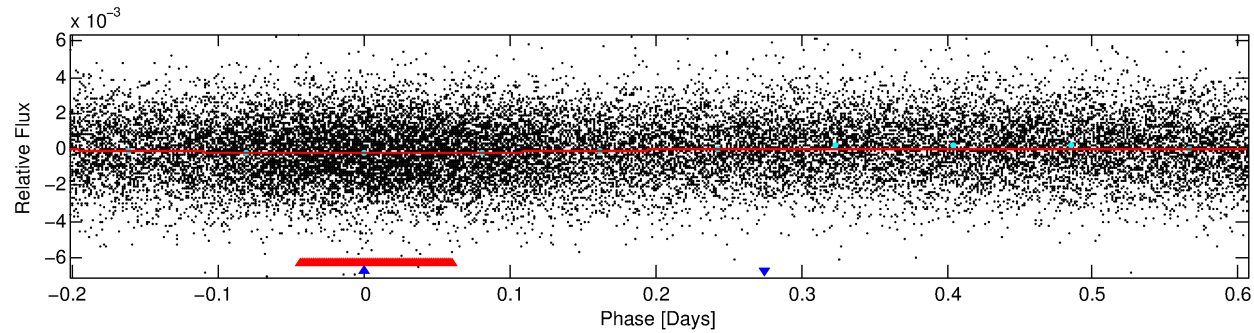
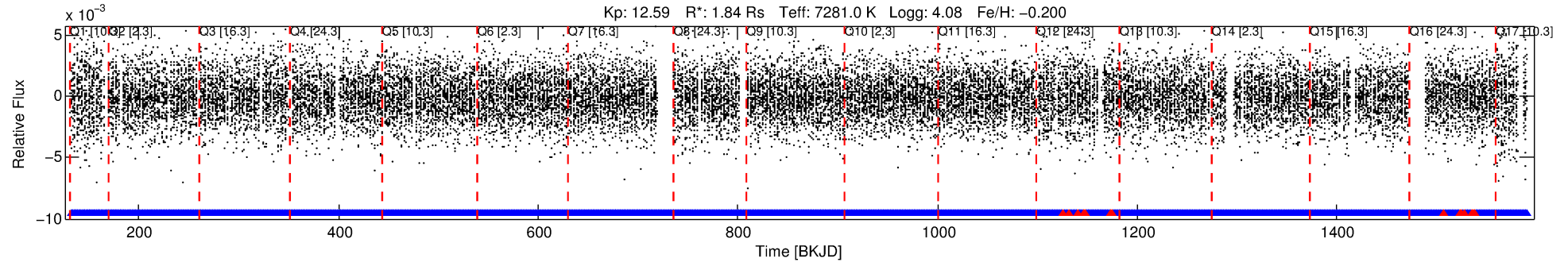
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002717483-02

No Significant Match Found

DV One-Page Summary

KIC: 2717483 Candidate: 2 of 2 Period: 0.809 d



DV Fit Results:

Period = 0.80877 [0.00002] d
Epoch = 132.2630 [0.0135] BKJD
Rp/R* = 0.0174 [0.0012]
a/R* = 1.01 [0.00]
b = 0.98 [0.01]
Seff = 22738.10 [8947.93]
Teff = 3131 [308] K
Rp = 3.49 [1.06] Re
a = 0.0194 [0.0048] AU
Ag = N/A
Teffp = N/A

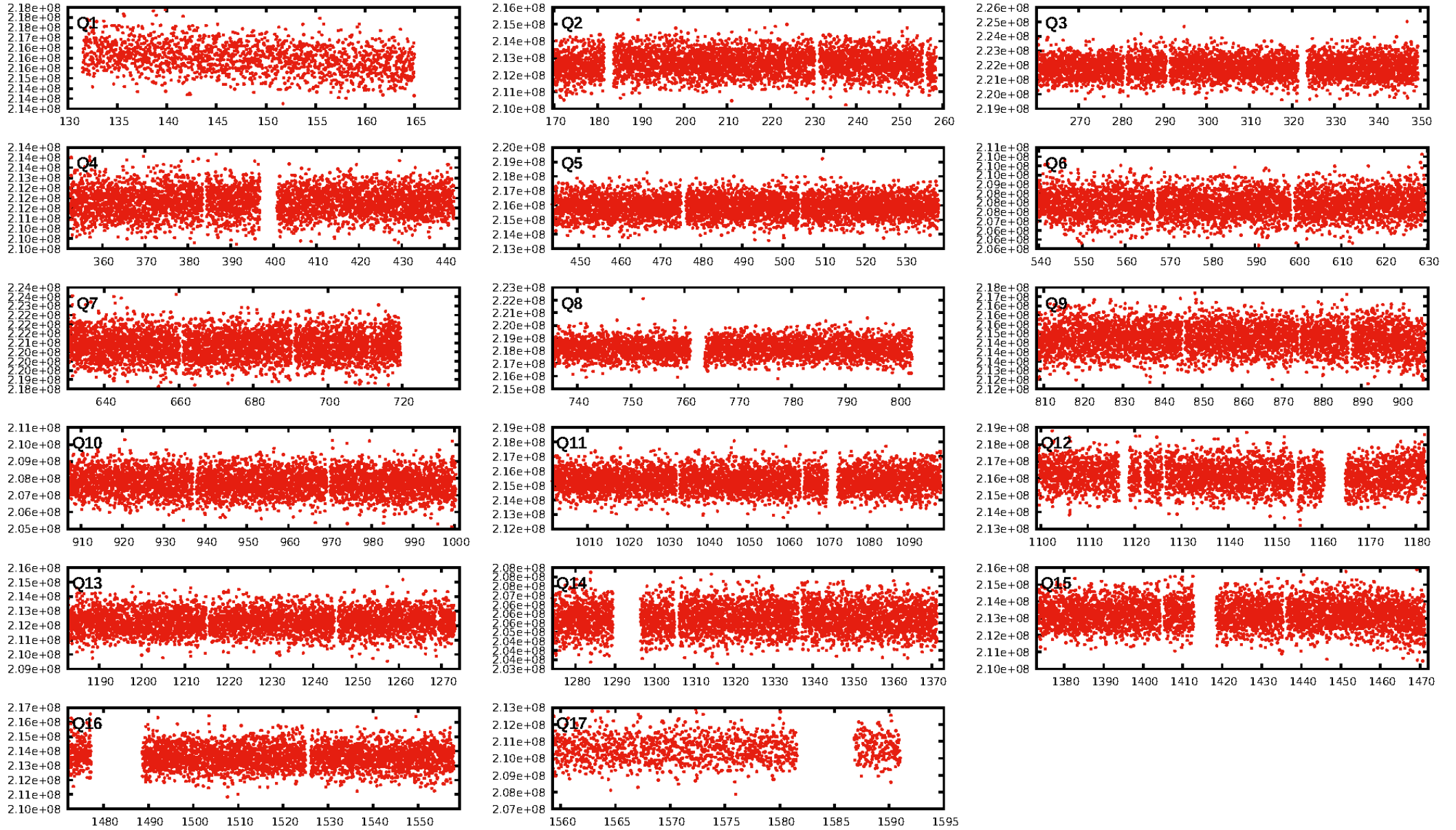
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.1% [2.60σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1046/1061]
GhostDiagnostic-chr: 1.252
Centroid-sig: 1.5%
Centroid-so: 0.079 arcsec [1.16σ]
OotOffset-rm: 1.853 arcsec [2.68σ]
KicOffset-rm: 1.828 arcsec [2.89σ]
OotOffset-st: 3/4/0/5 [12]
KicOffset-st: 3/4/0/5 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [17/17]

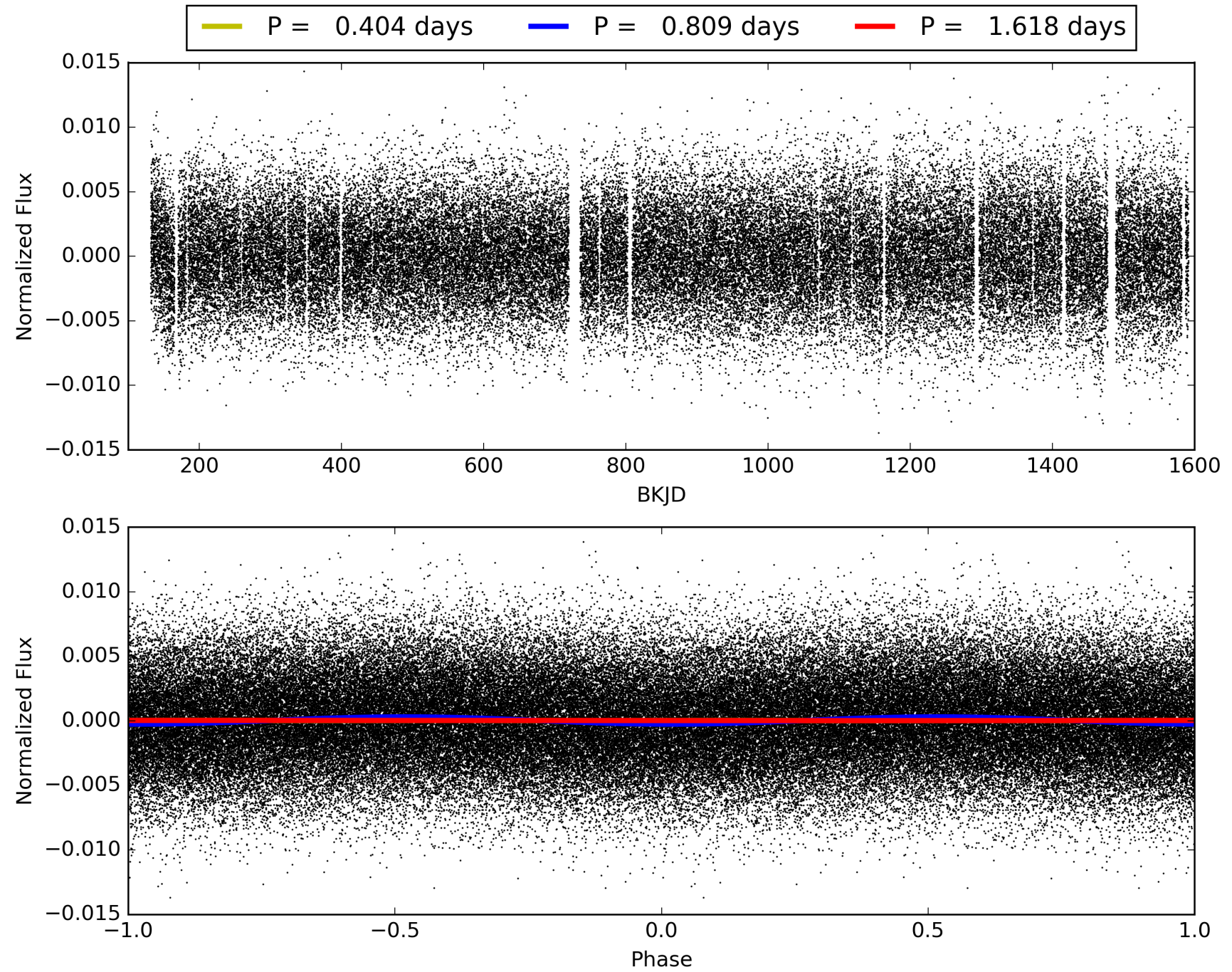
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:53:08 Z

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

TCE 002717483-02, PDC Light Curves

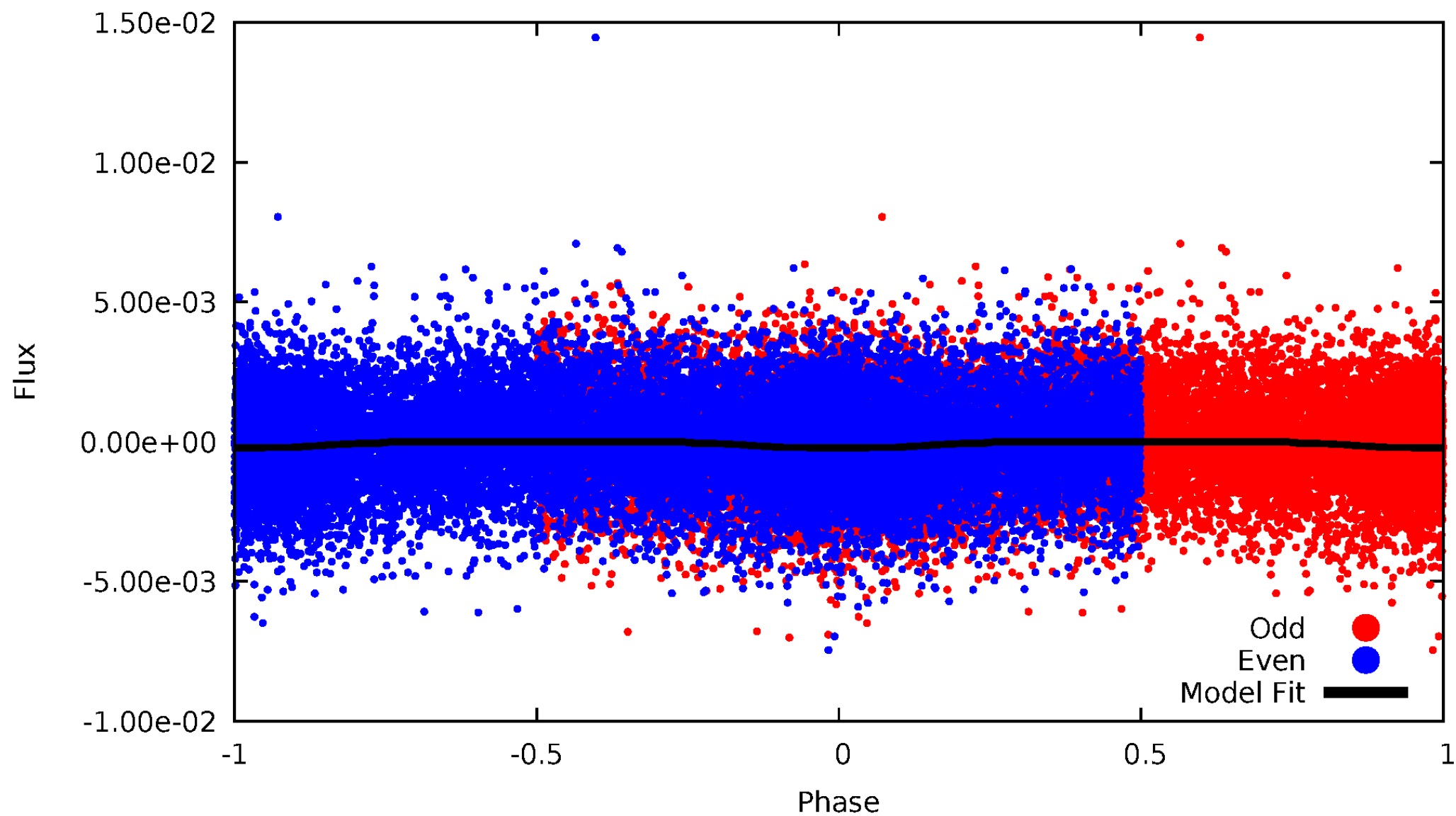


TCE 002717483-02



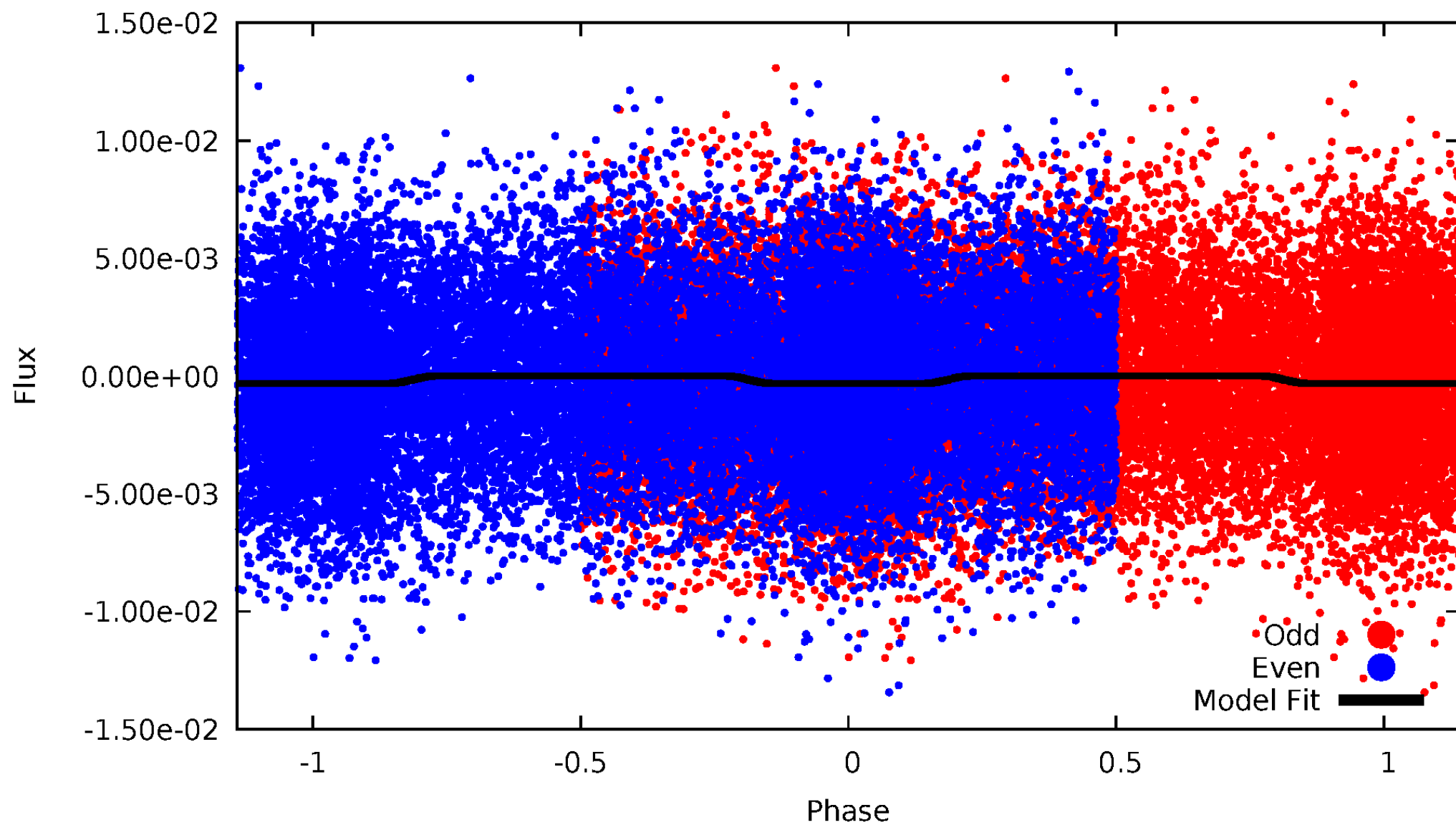
DV Odd/Even

TCE 002717483-02



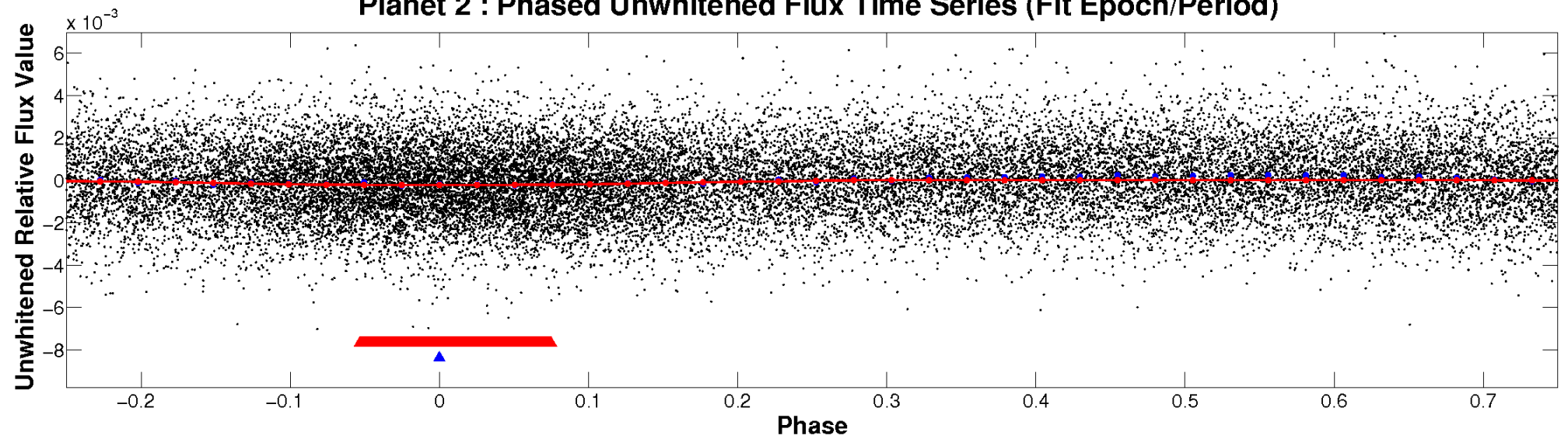
ALT Odd/Even

TCE 002717483-02

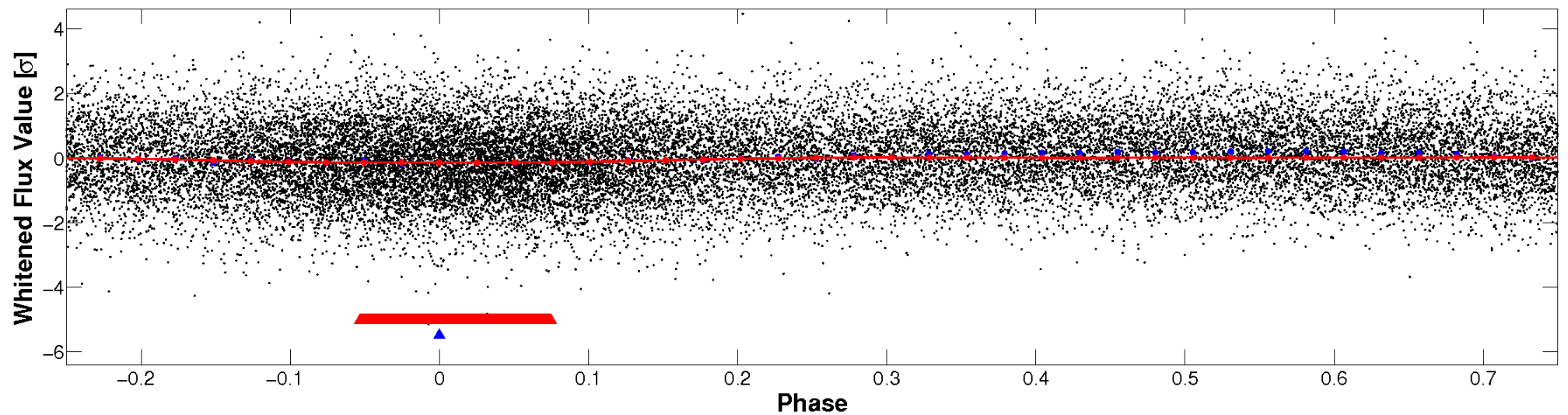


Non-Whitened Vs. Whitened Light Curve

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

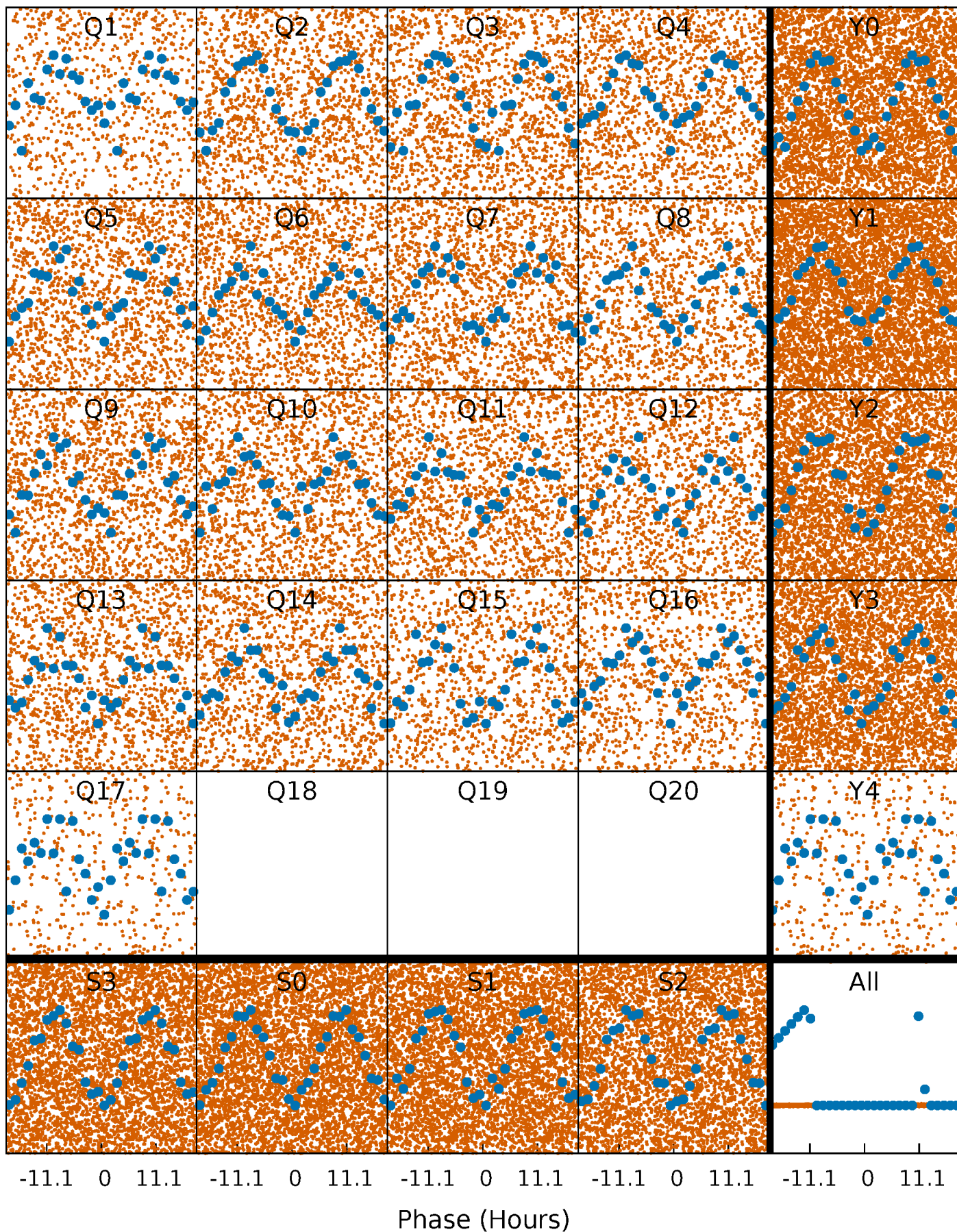


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



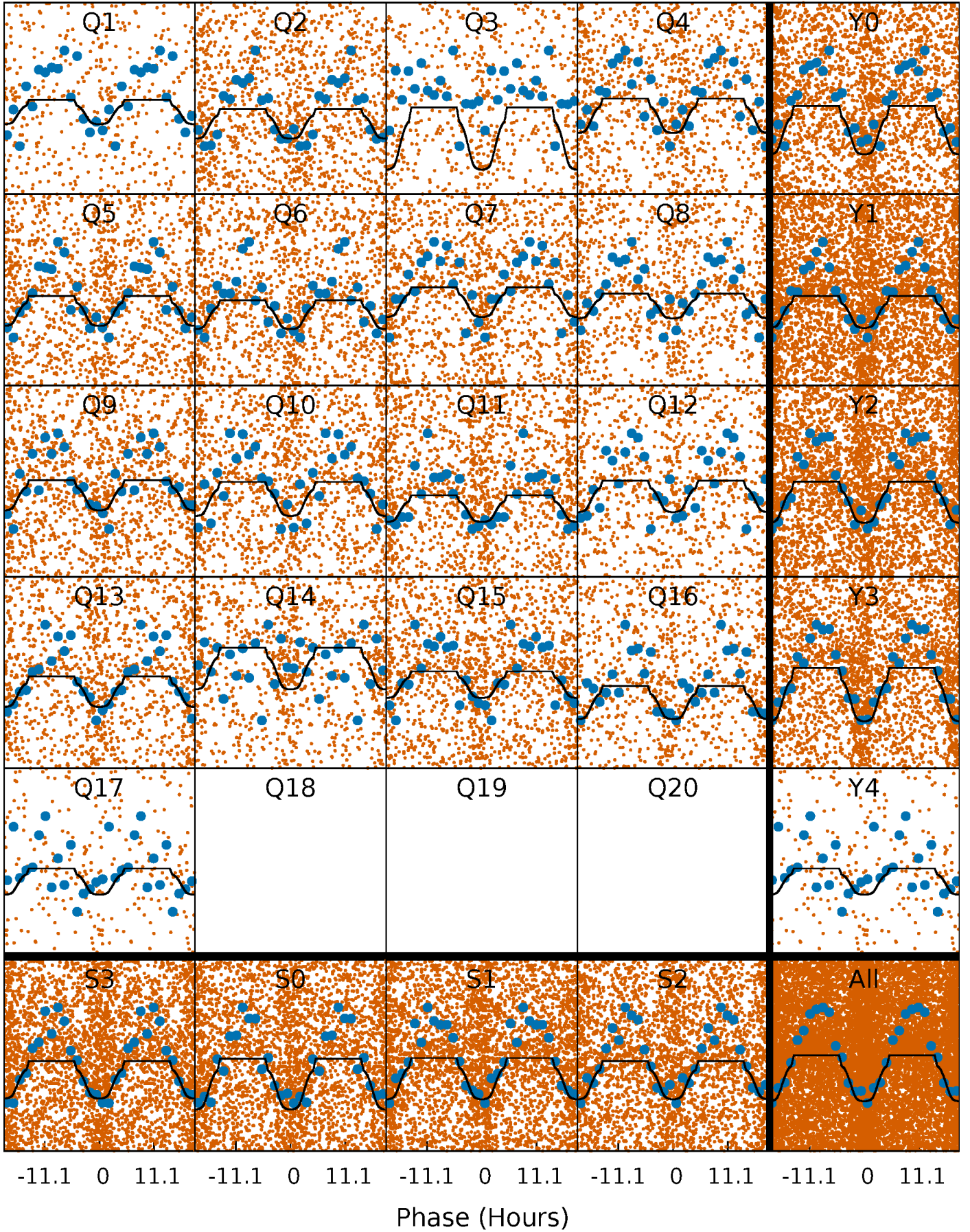
PDC Quarter-Phased Transit Curves

TCE 002717483-02 P= 0.808766 Days $T_0=132.263045$ (BKJD)



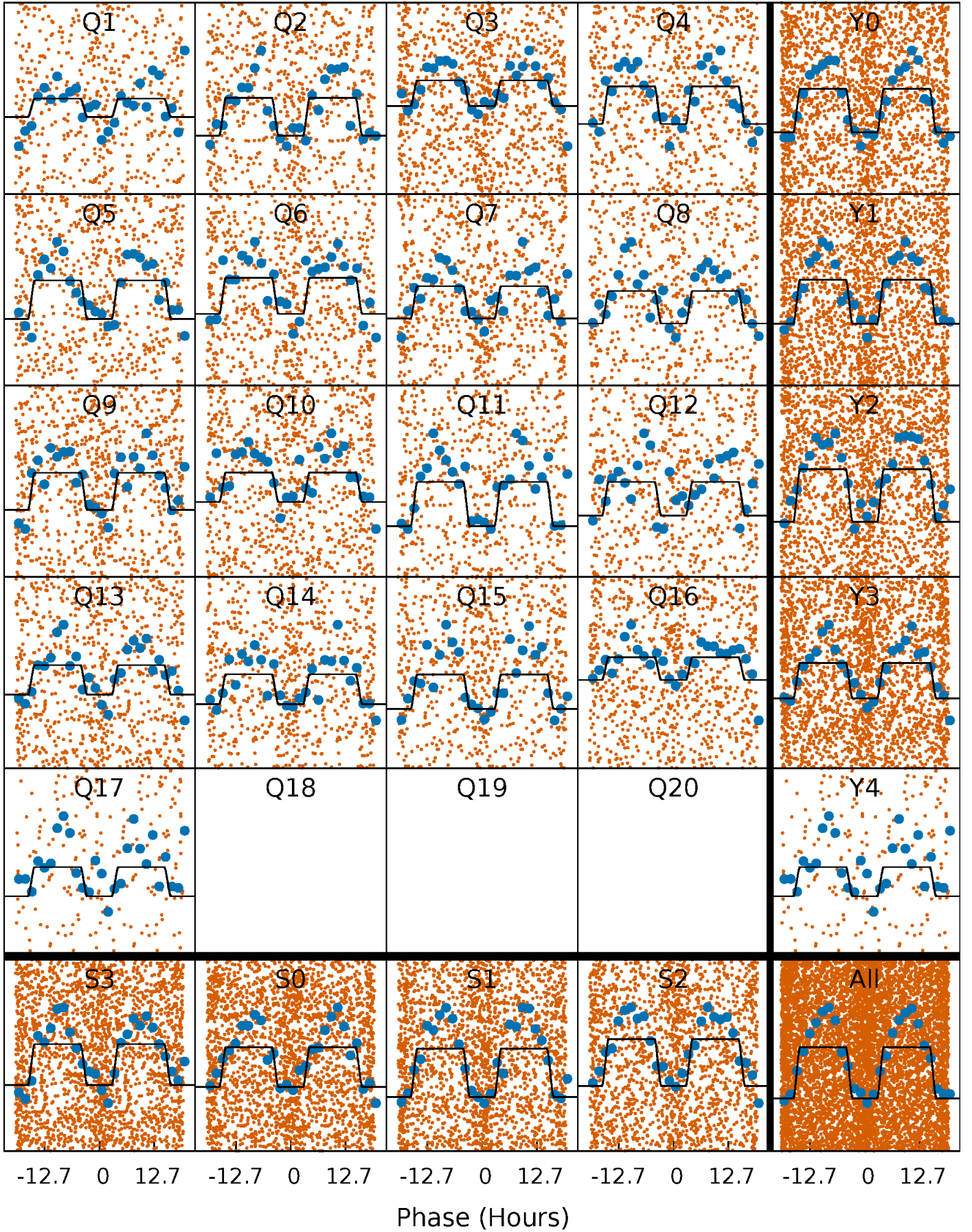
DV Quarter-Phased Transit Curves

TCE 002717483-02 $P = 0.808766$ Days $T_0 = 132.263045$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

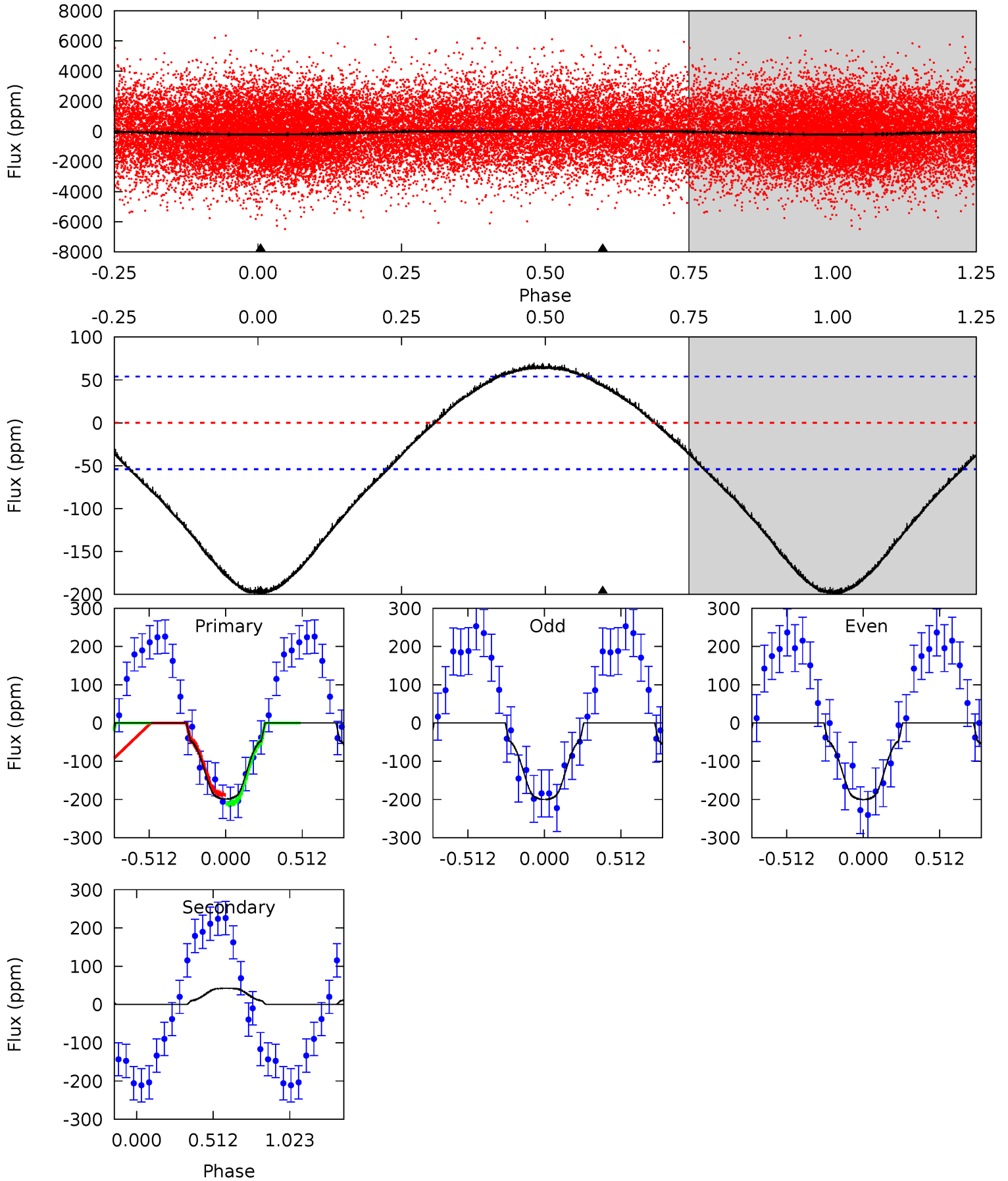
TCE 002717483-02 P= 0.808733 Days $T_0=132.292700$ (BKJD)



DV Model-Shift Uniqueness Test

002717483-02, P = 0.808766 Days, E = 131.454279 Days

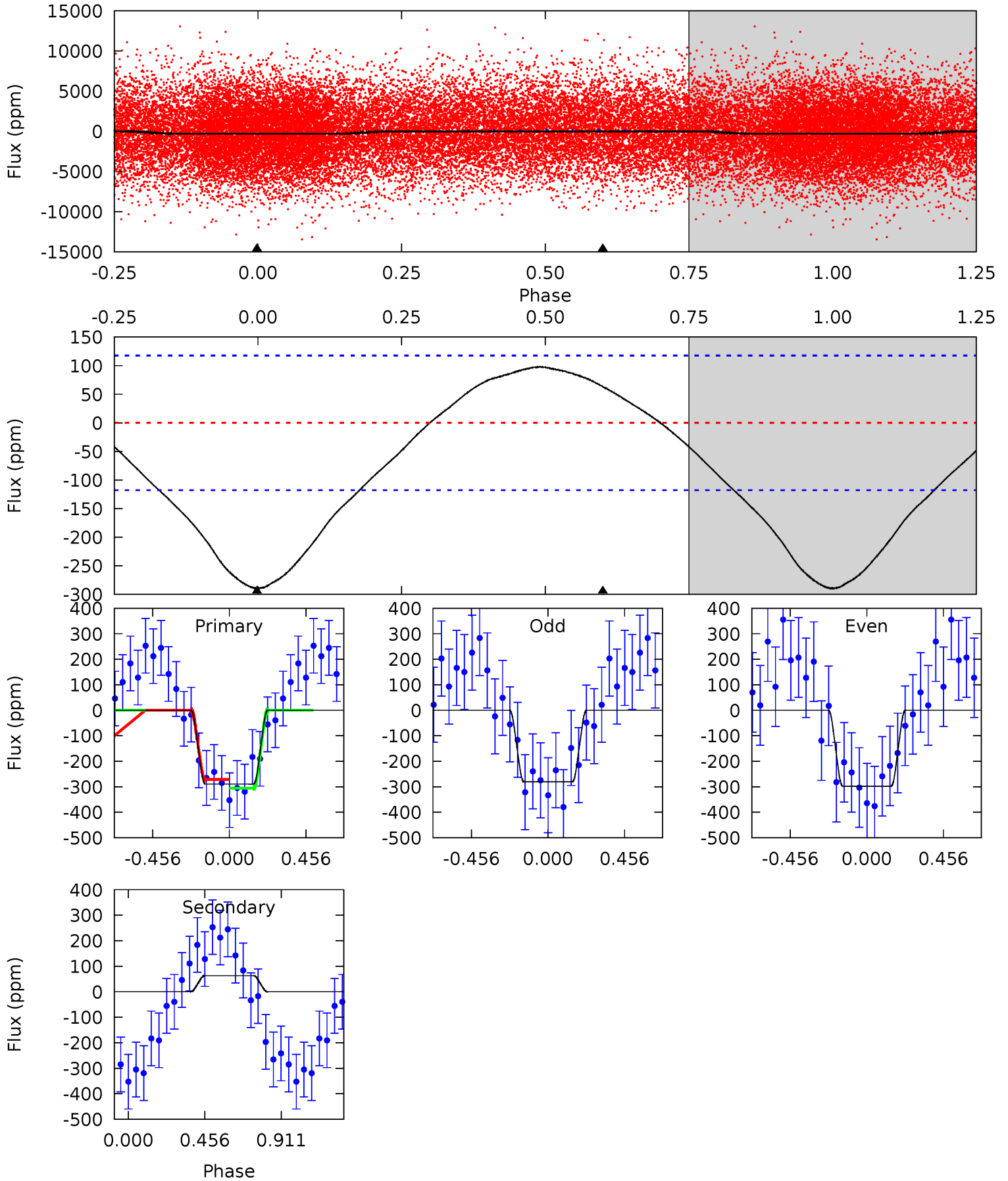
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	-3.31	0	0	4.21	0.66	1.70	15.5	15.5	-3.31	-3.31	0.00	1.07	0.26	0.98



Alt Model-Shift Uniqueness Test

002717483-02, P = 0.808733 Days, E = 131.483967 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	-2.27	0	0	4.24	0.75	1.15	10.4	10.4	-2.27	-2.27	0.32	1.03	0.25	0.62



Stellar Parameters For KIC 002717483

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7281^{+228}_{-304}	$4.079^{+0.193}_{-0.175}$	$-0.200^{+0.250}_{-0.350}$	$1.842^{+0.547}_{-0.448}$	$1.483^{+0.211}_{-0.257}$	$0.334^{+0.374}_{-0.166}$
	+3%/-4%	+5%/-4%	+125%/-175%	+30%/-24%	+14%/-17%	+112%/-50%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002717483-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	43 ± 13	$3.44^{+0.64}_{-0.48}$	4353^{+343}_{-320}	-4898^{+296}_{-293}	$-0.710^{+0.268}_{-0.328}$
Alt.	63 ± 28	$3.50^{+0.62}_{-0.46}$	4371^{+335}_{-323}	-5165^{+513}_{-444}	$-0.960^{+0.485}_{-0.671}$

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

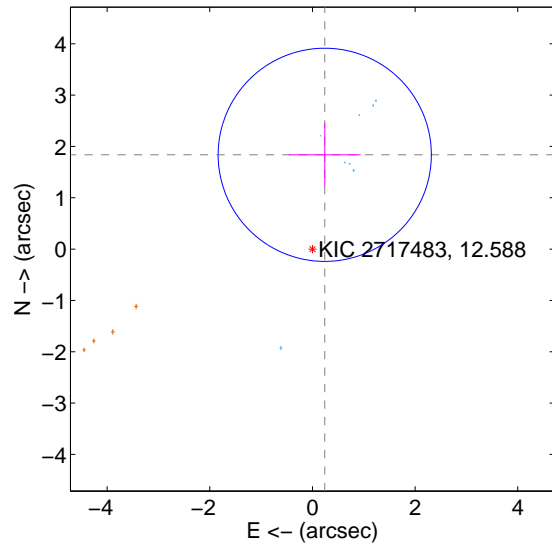
Supplemental centroid analysis for 002717483-02. Kepler magnitude: 12.59. Transit SNR 13.06

There are 8 quarters with good PRF difference image offsets

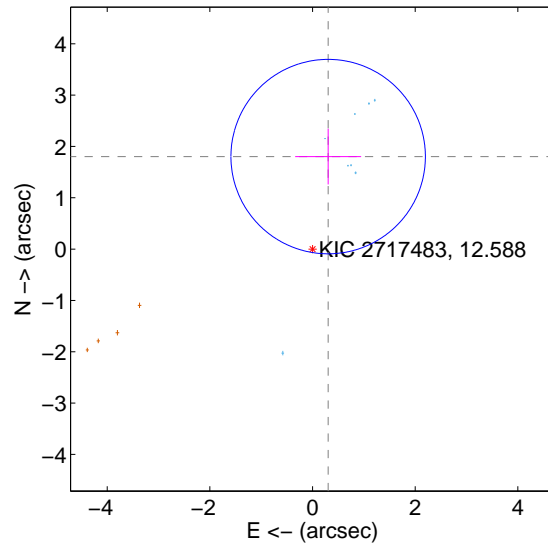
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.853 ± 0.692	2.68	-0.240 ± 0.701	1.837 ± 0.614
PRF-fit source offset from KIC position	1.828 ± 0.632	2.89	-0.305 ± 0.644	1.803 ± 0.543
photometric centroid source offset	0.08 ± 0.07	1.16	-0.07 ± 0.06	0.04 ± 0.08

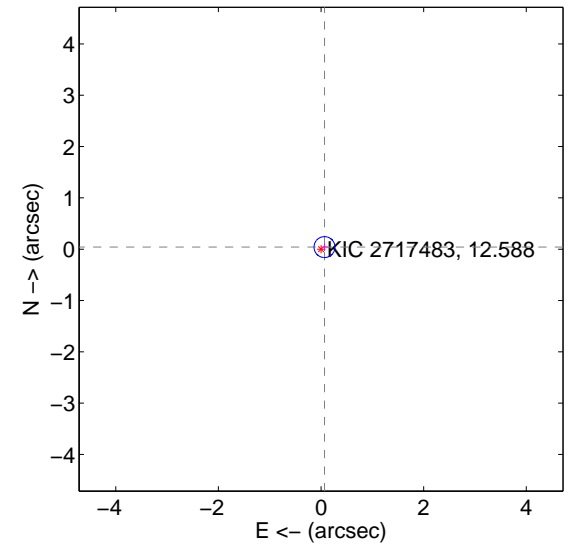
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

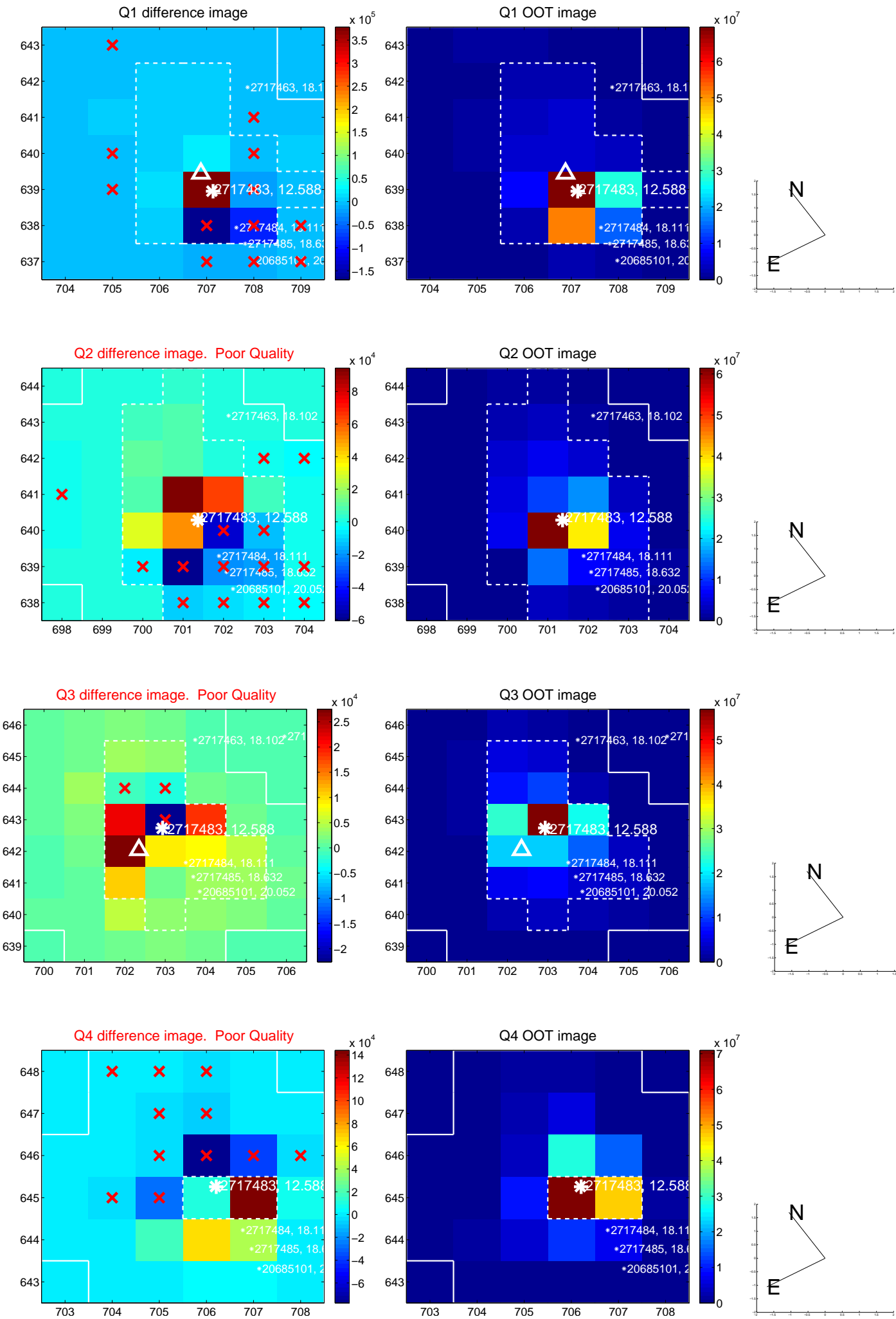


offset from photometric centroids

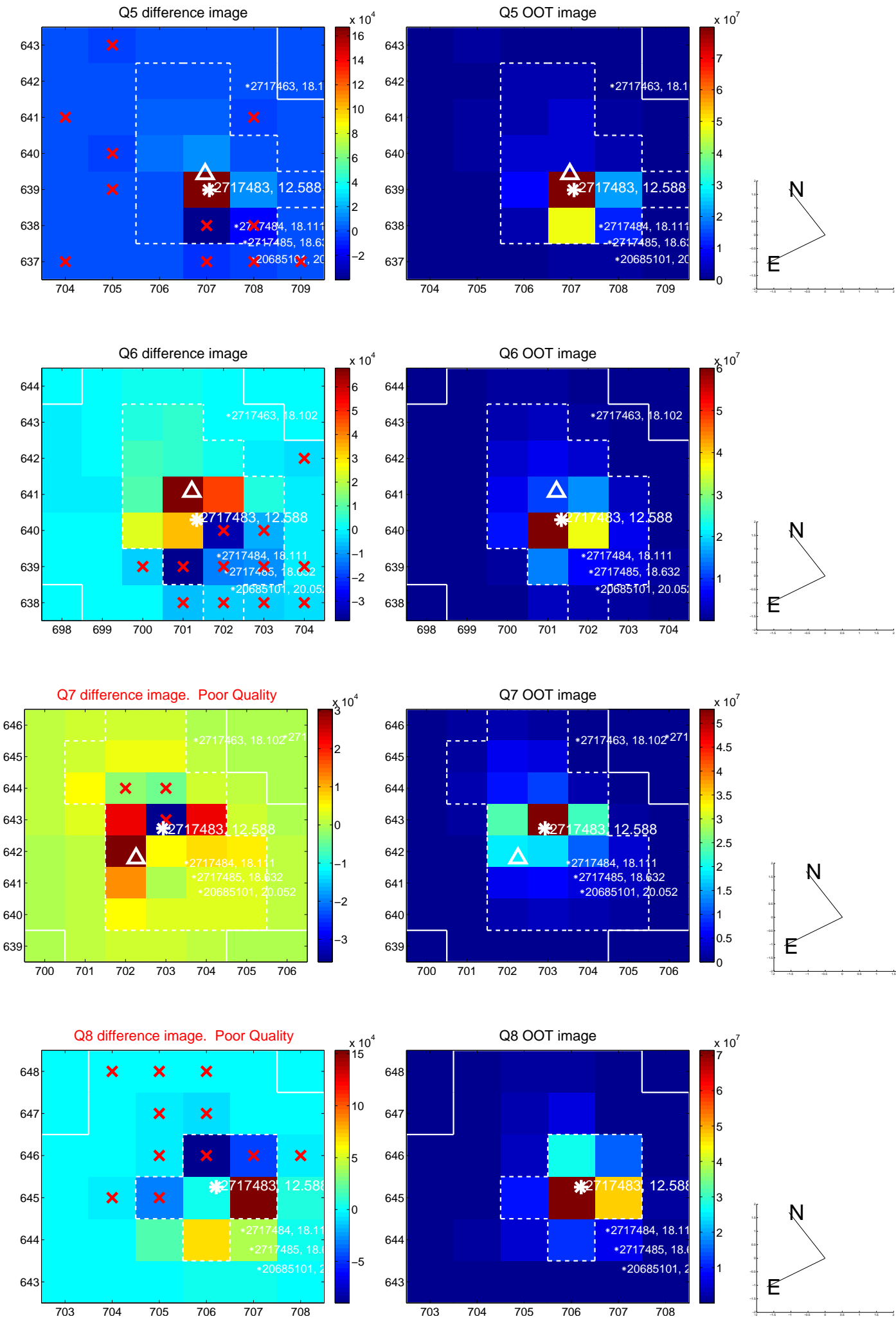


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

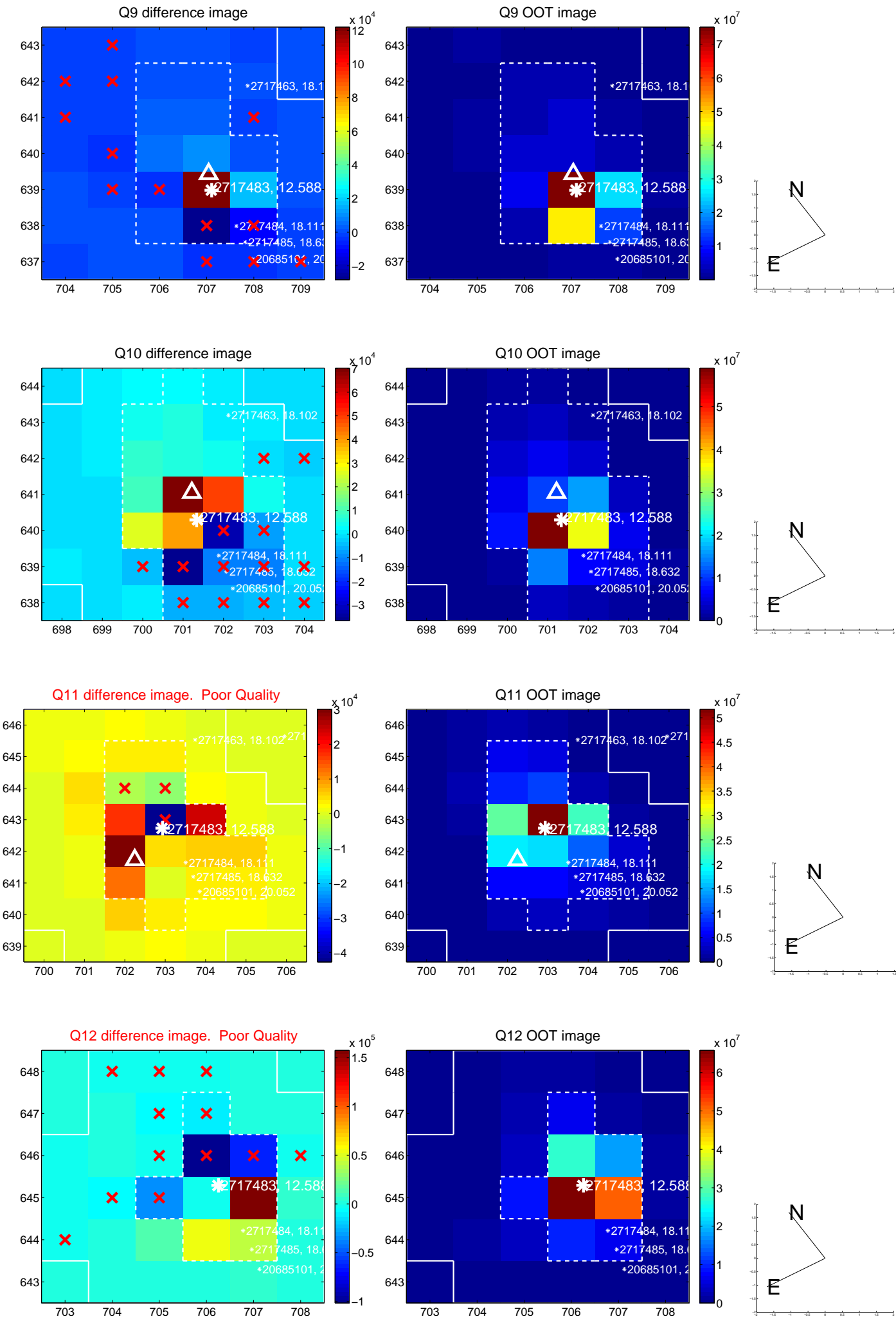
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



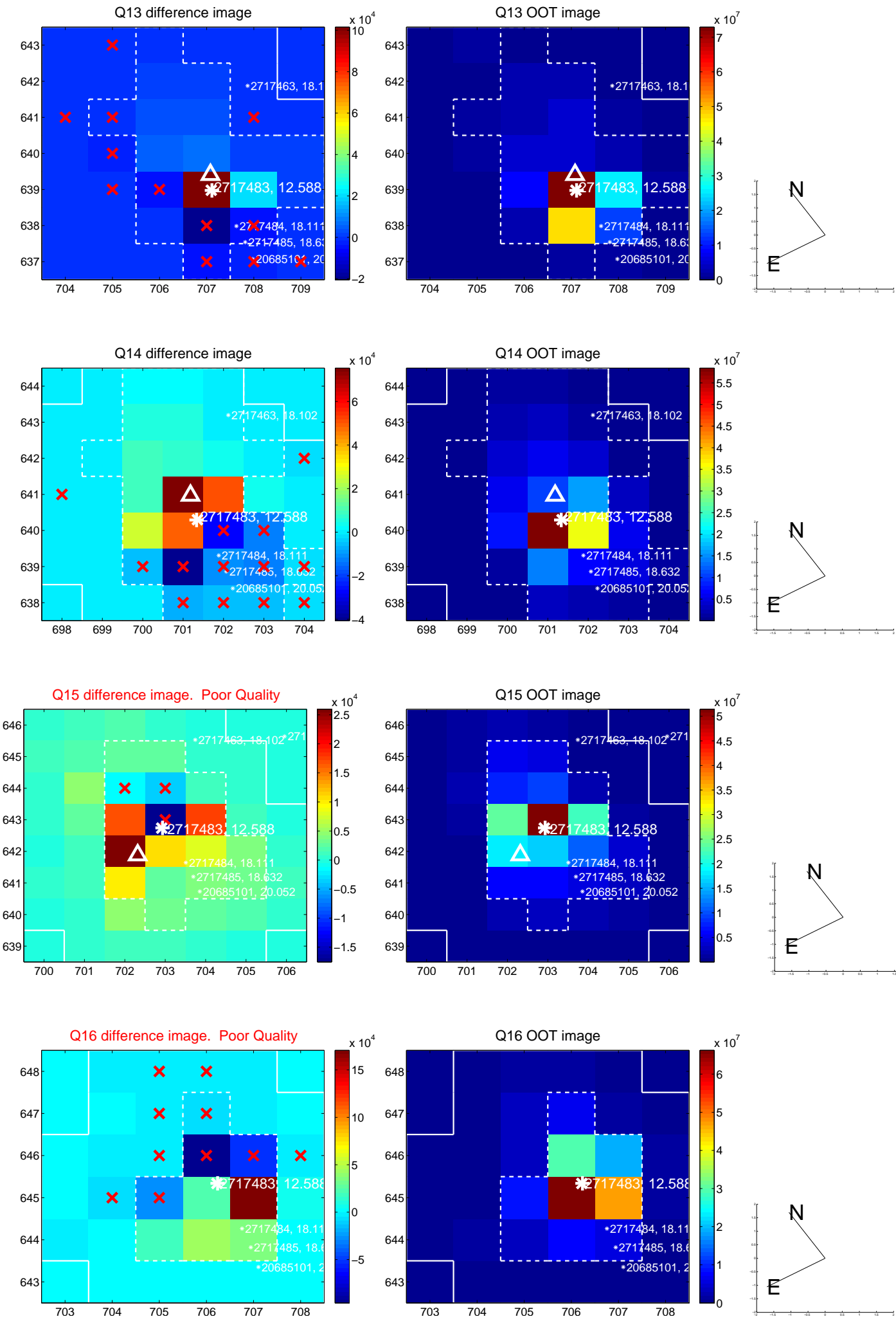
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



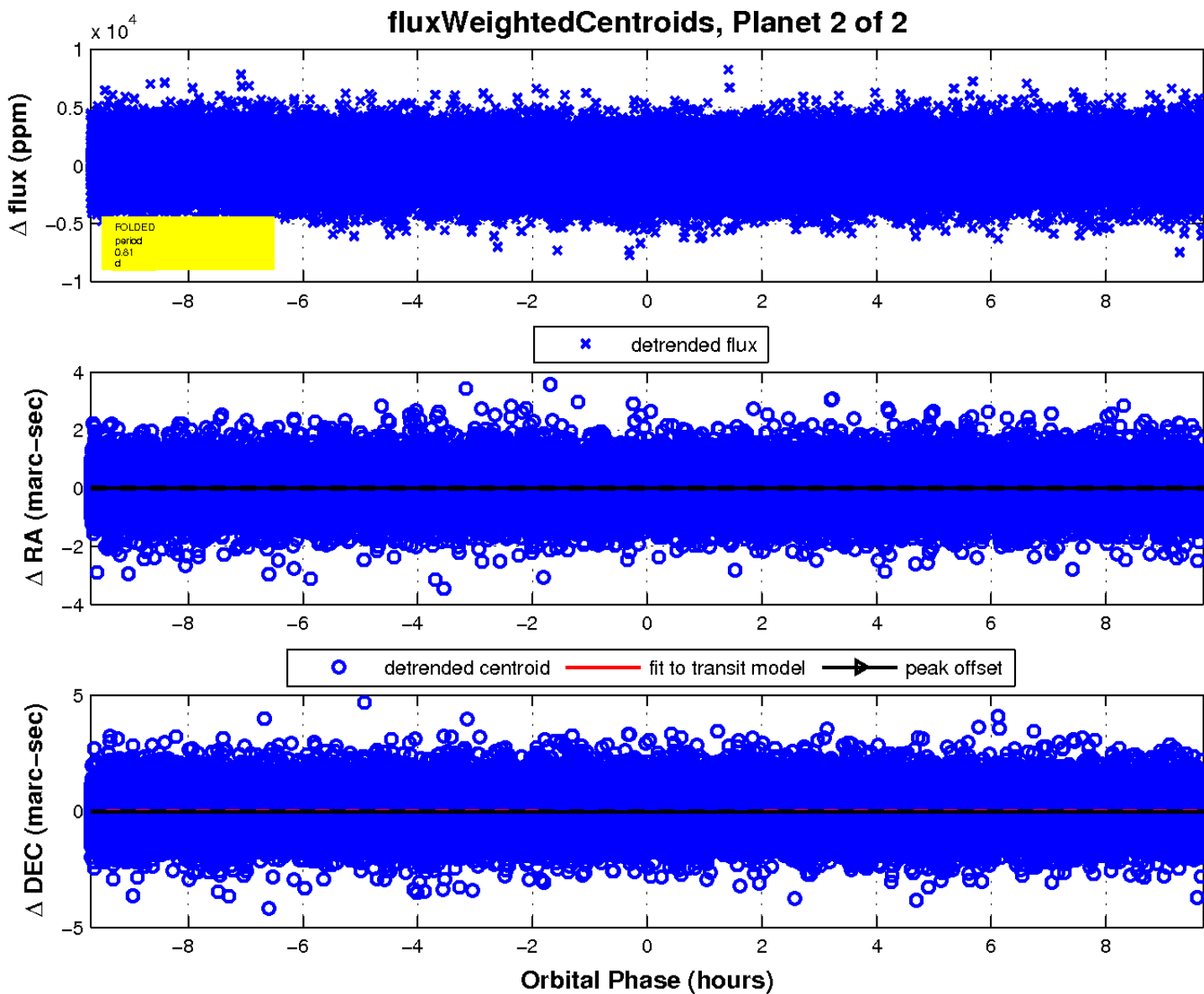
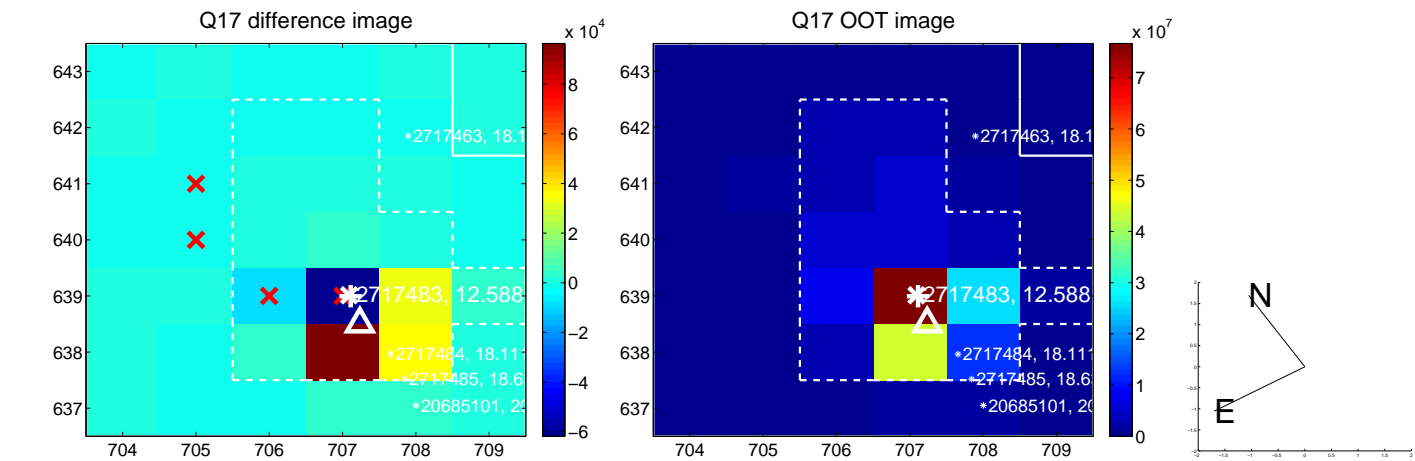
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

