

KIC 006290411

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})
006290411-01	OBS	No	1.720533	132.278098	86.8	6.297	13.2	15.0	2.25	7492	2.34	12052.05
006290411-02	OBS	No	1.720532	133.134642	87.2	5.960	13.5	15.0	2.25	7492	2.14	12052.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006290411-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006290411-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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.

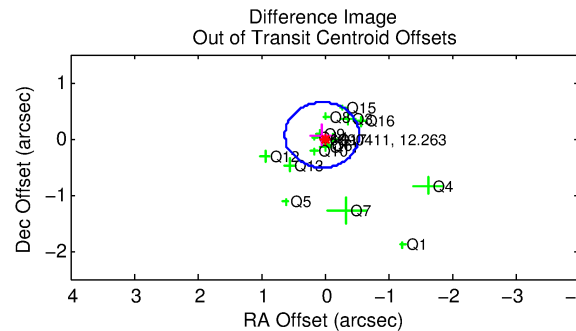
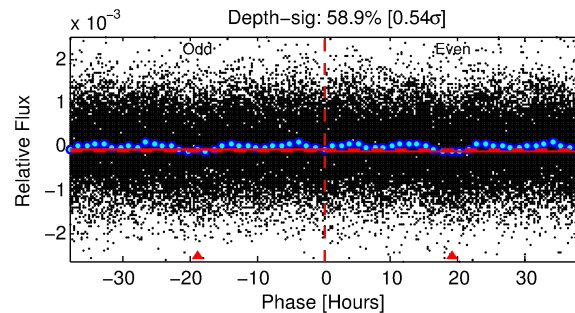
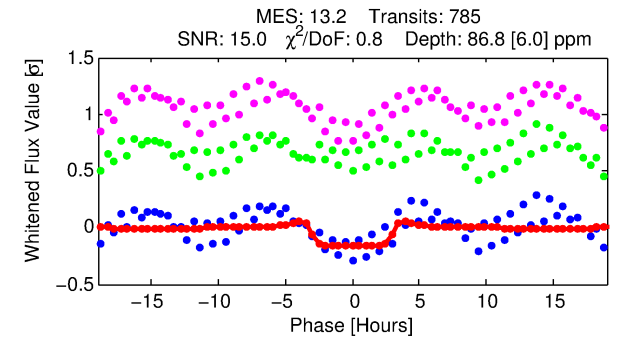
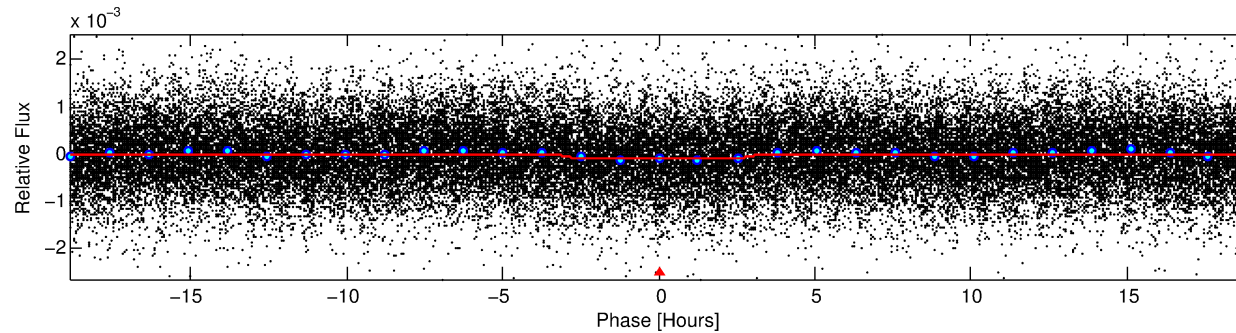
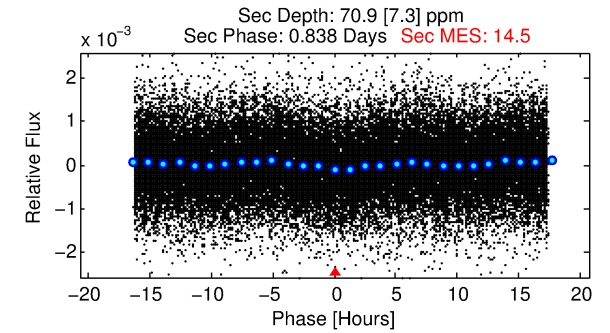
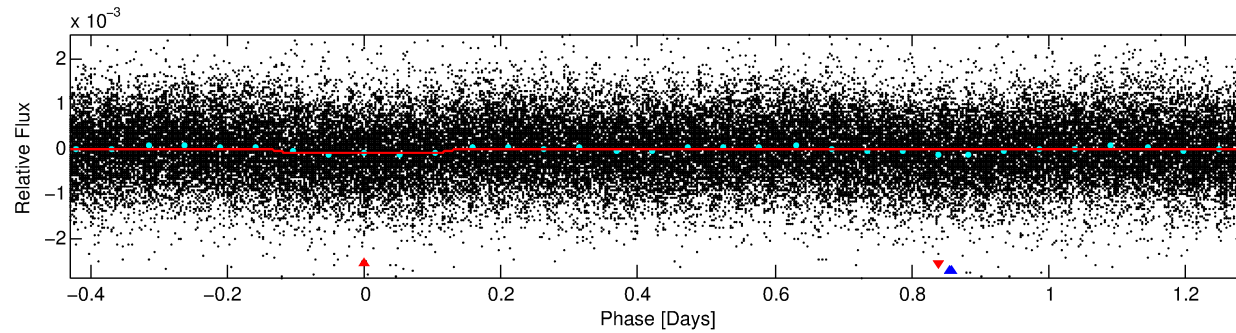
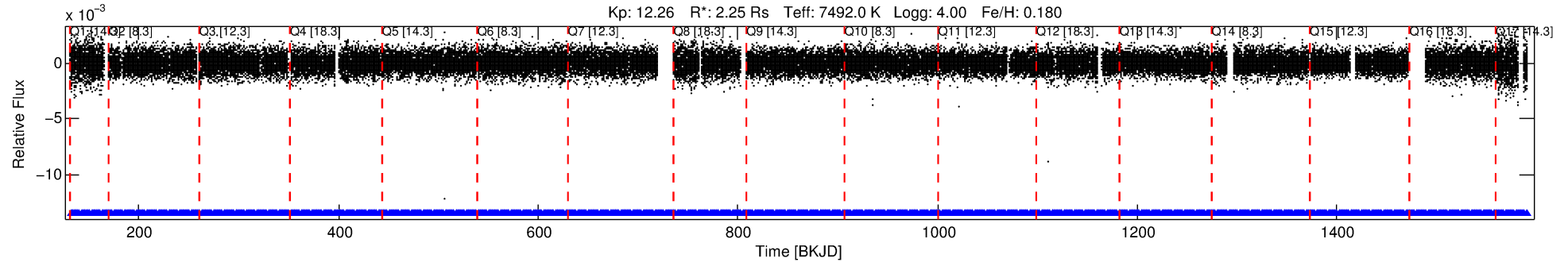
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006290411-01

No Significant Match Found

DV One-Page Summary

KIC: 6290411 Candidate: 1 of 2 Period: 1.721 d



DV Fit Results:

Period = 1.72053 [0.00001] d
Epoch = 132.2781 [0.0043] BKJD
Rp/R* = 0.0095 [0.0033]
a/R* = 1.49 [1.87]
b = 0.84 [0.84]
Seff = 12052.05 [4550.20]
Teff = 2672 [252] K
Rp = 2.34 [1.01] Re
a = 0.0344 [0.0076] AU
Ag = 8.45 [6.63] [1.12σ]
Teffp = 7042 [1290] K [3.33σ]

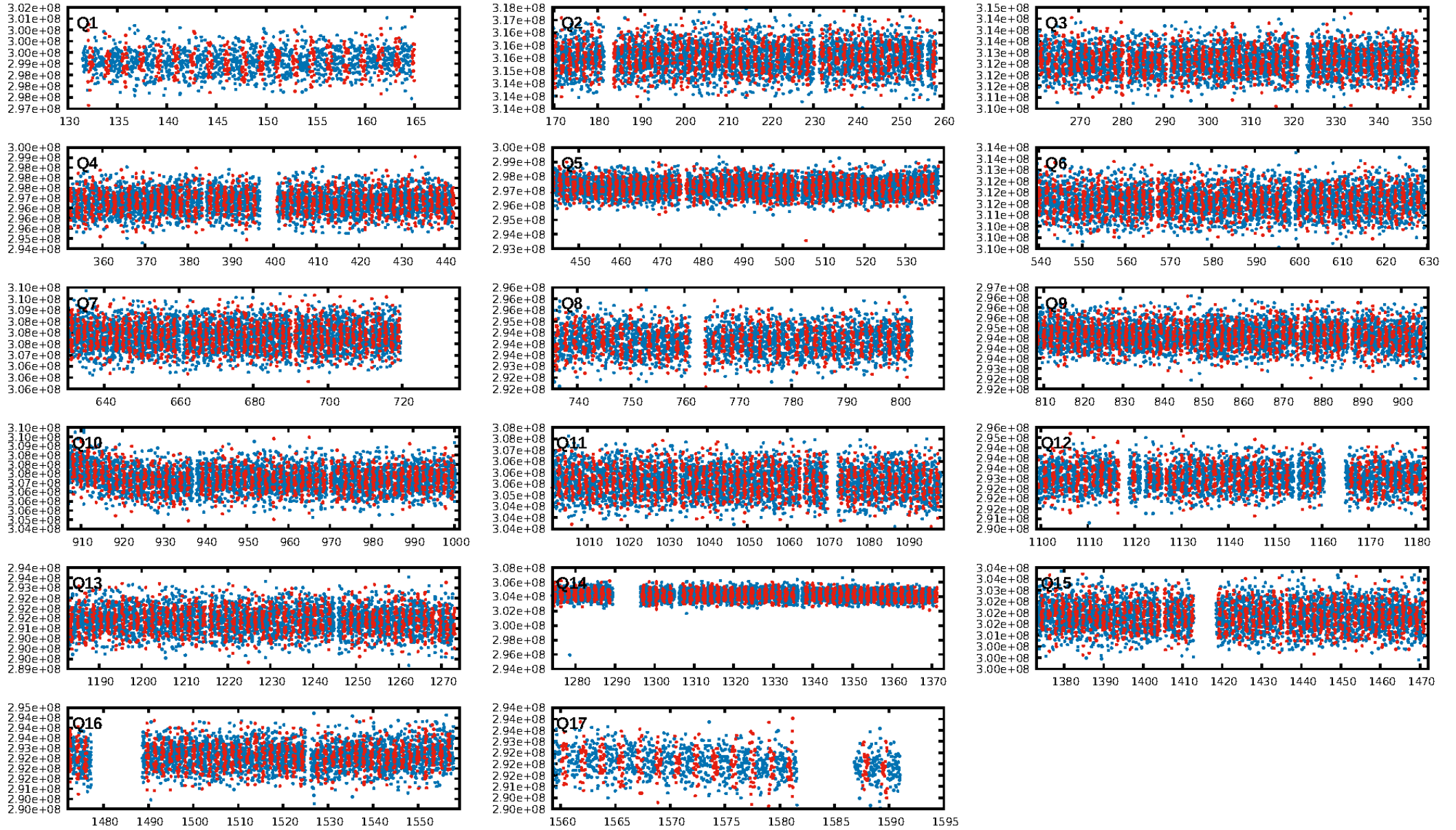
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.18e-37
RollingBand-fgt: 1.00 [750/750]
GhostDiagnostic-chr: 7.779
Centroid-sig: 95.1%
Centroid-so: 0.325 arcsec [2.62σ]
OotOffset-rm: 0.077 arcsec [0.39σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-rm: 0.153 arcsec [0.82σ]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

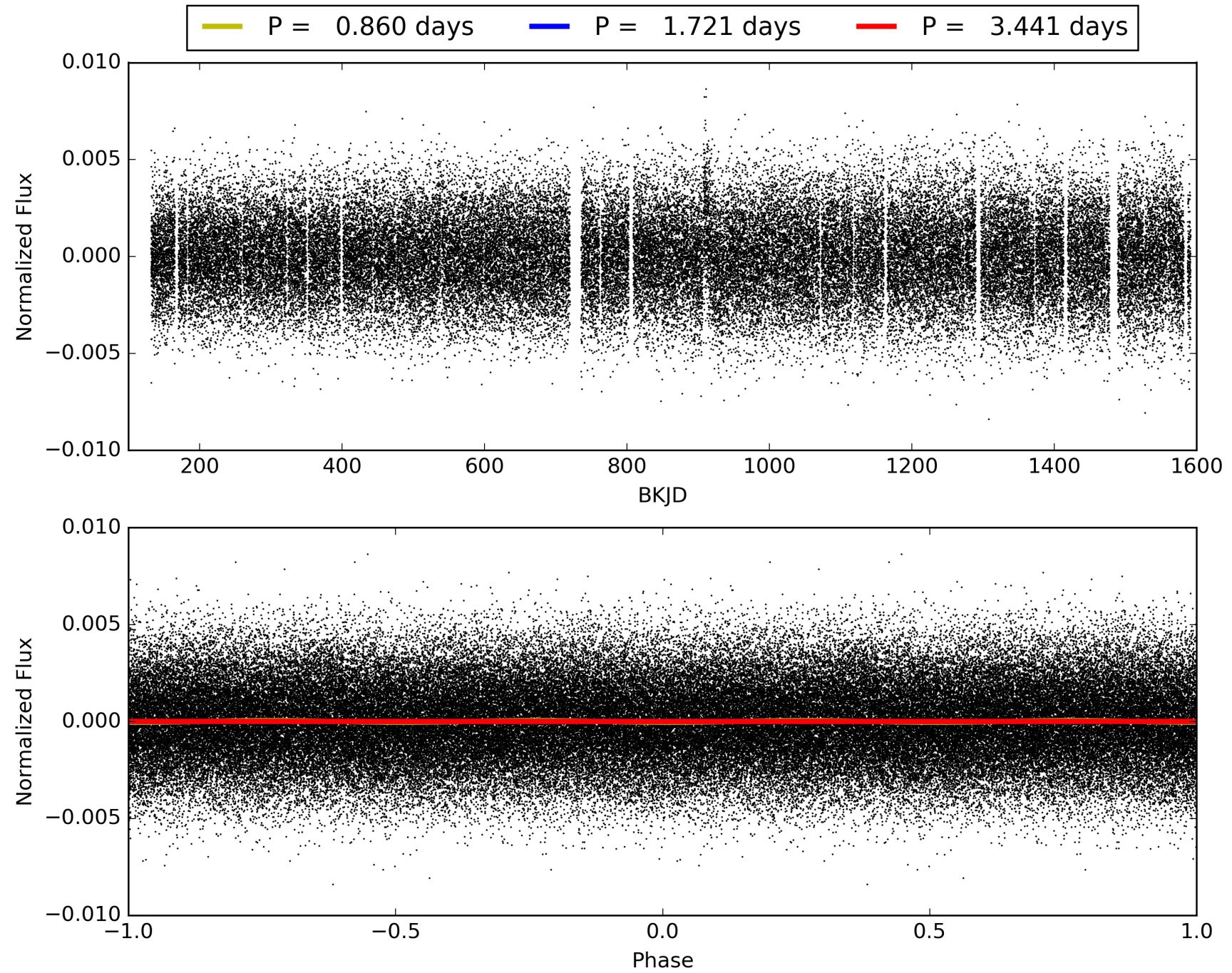
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:54:10 Z

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

TCE 006290411-01, PDC Light Curves

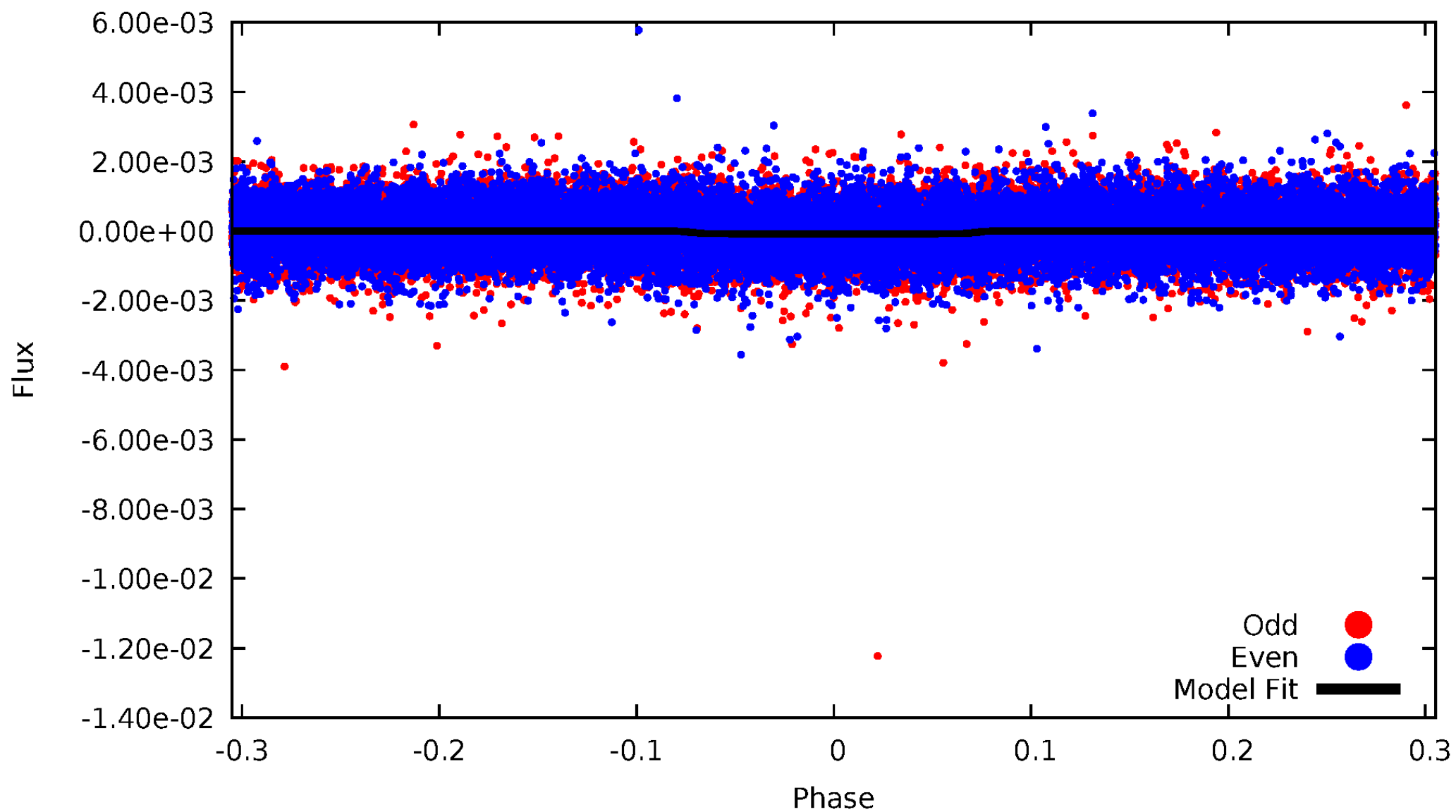


TCE 006290411-01



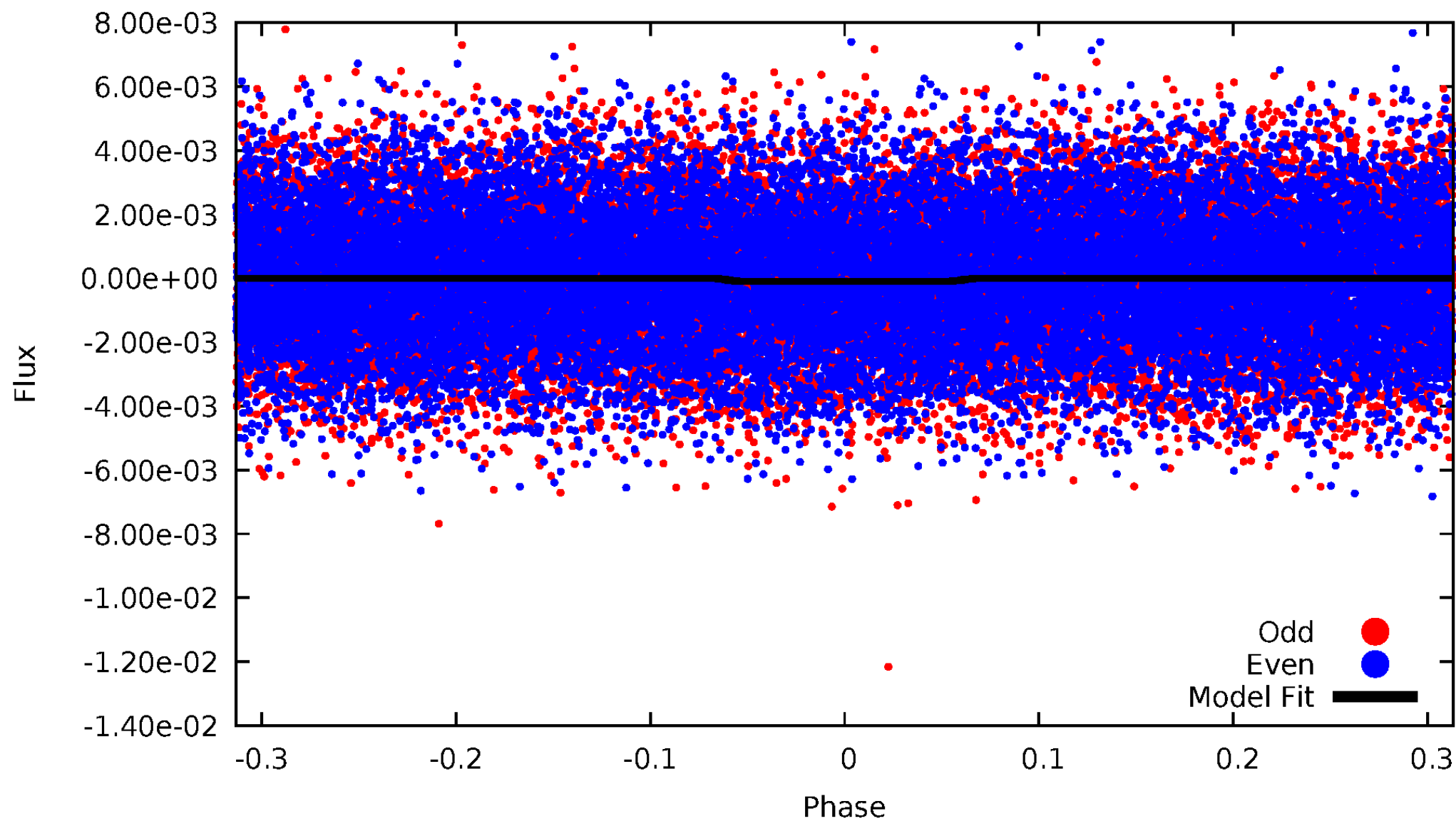
DV Odd/Even

TCE 006290411-01

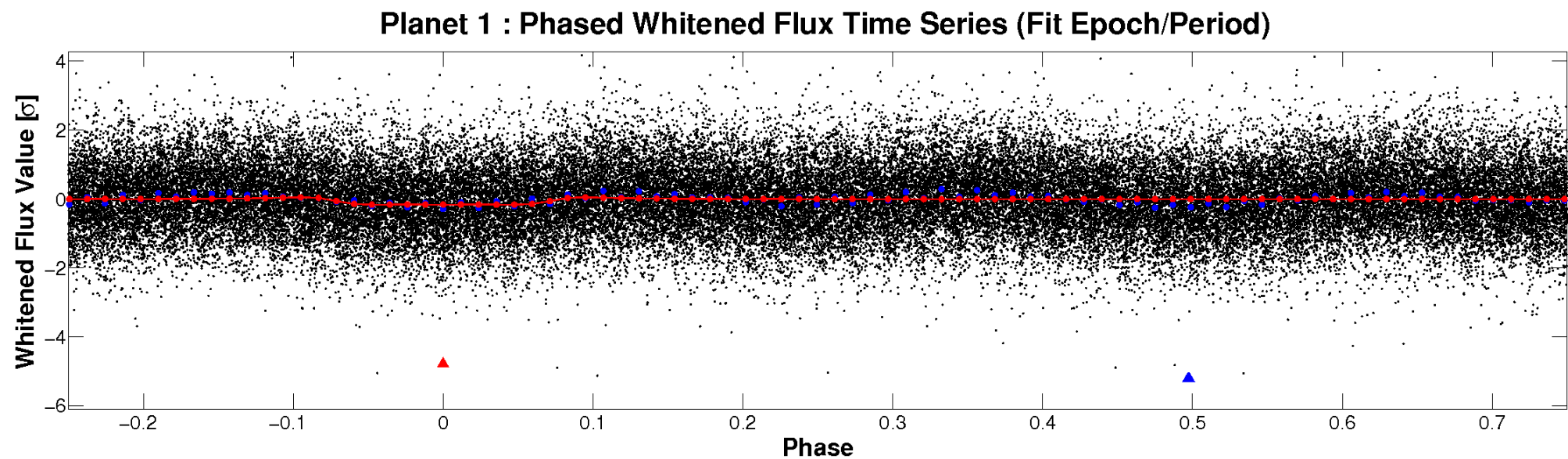
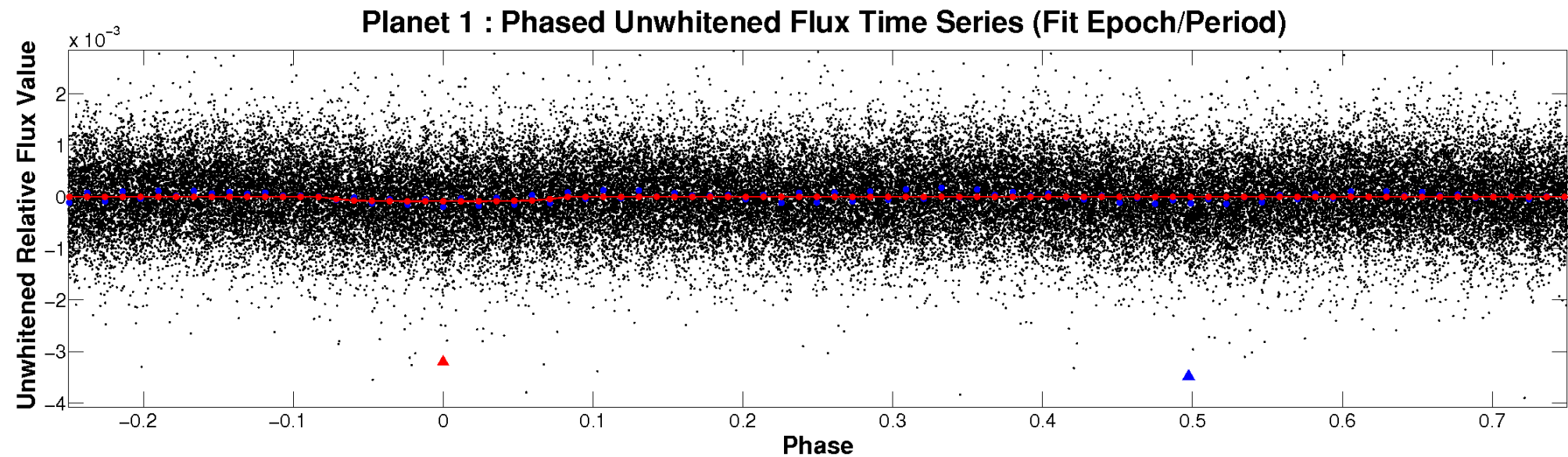


ALT Odd/Even

TCE 006290411-01

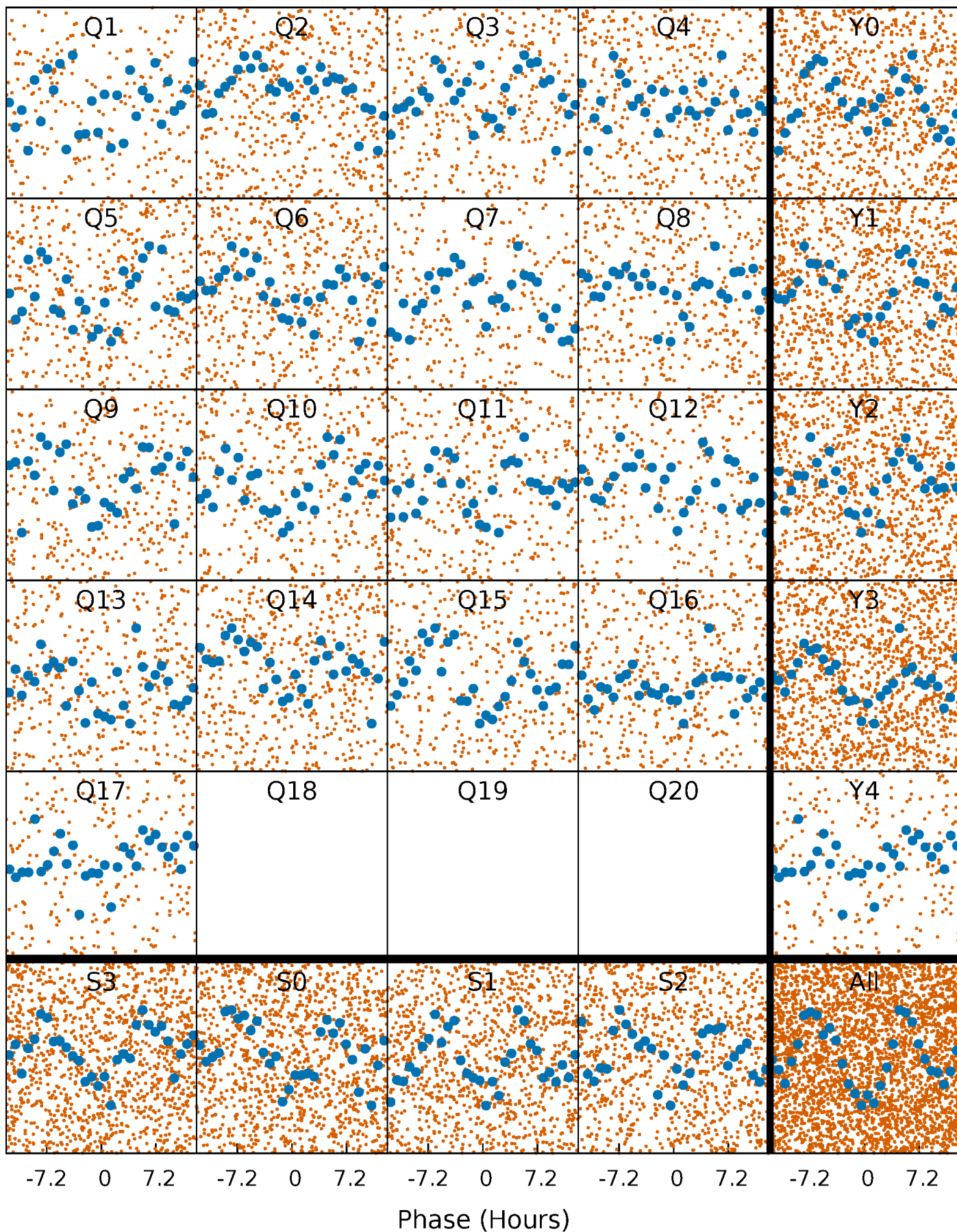


Non-Whitened Vs. Whitened Light Curve



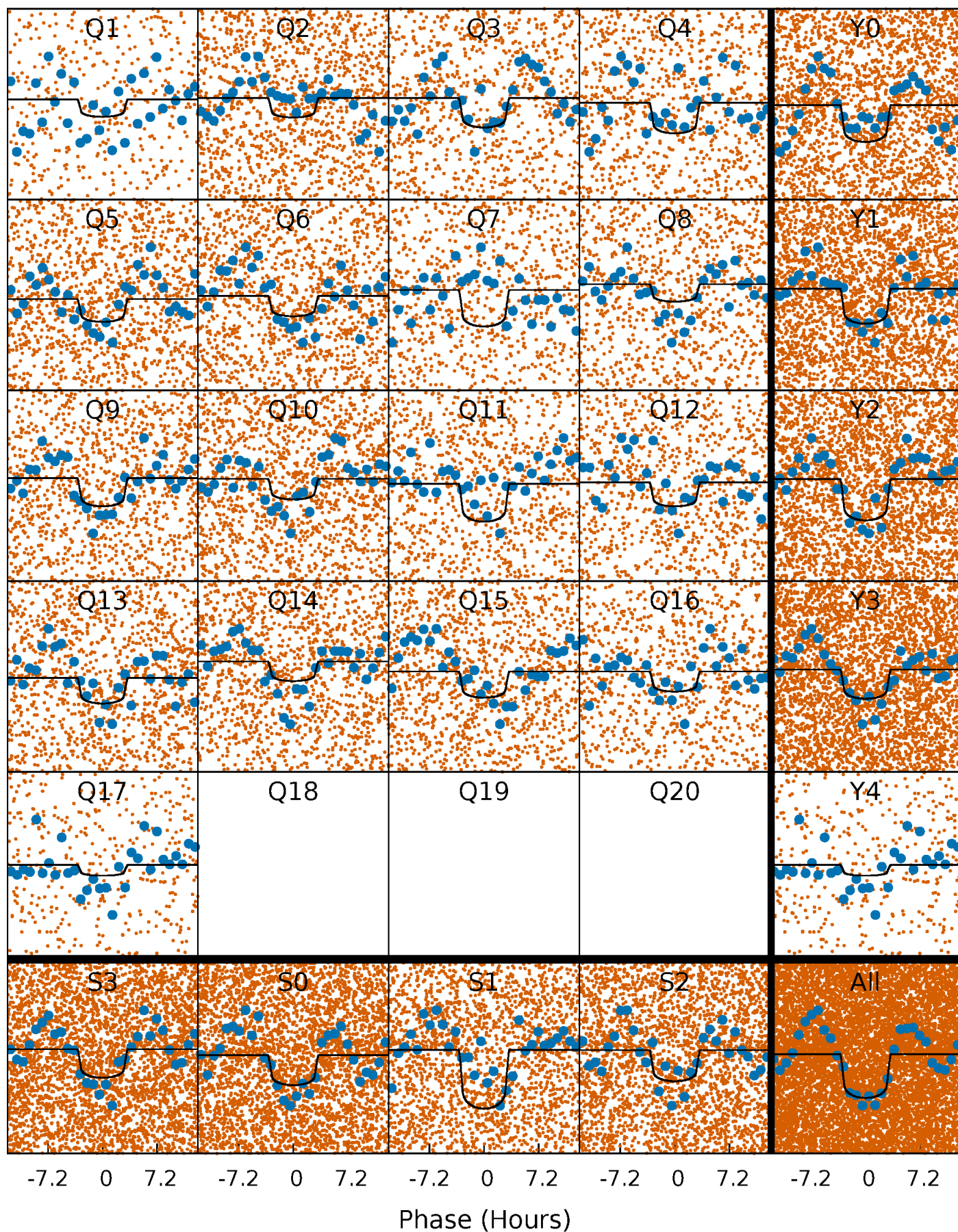
PDC Quarter-Phased Transit Curves

TCE 006290411-01 P= 1.720533 Days $T_0=132.278098$ (BKJD)



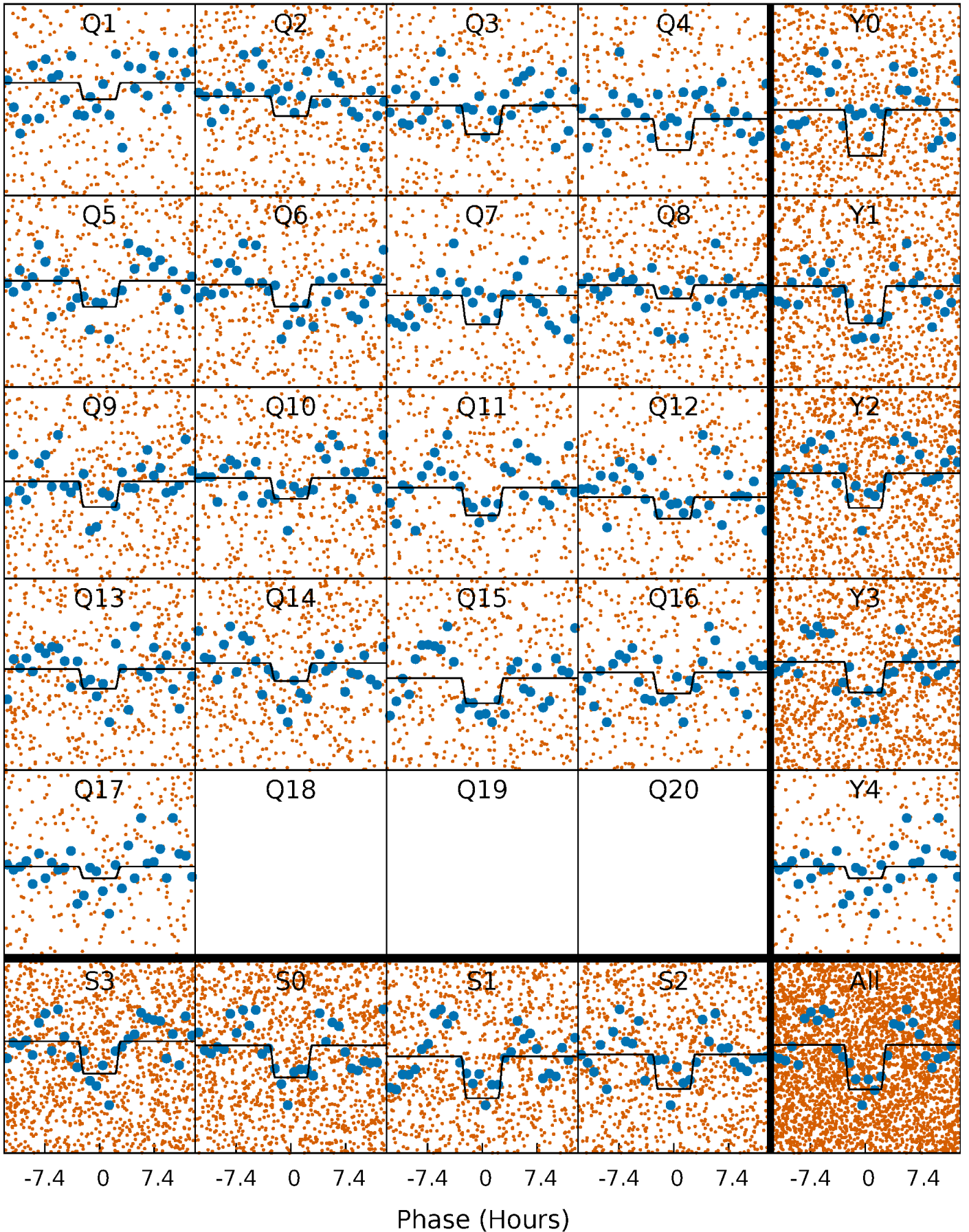
DV Quarter-Phased Transit Curves

TCE 006290411-01 P= 1.720533 Days $T_0=132.278098$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

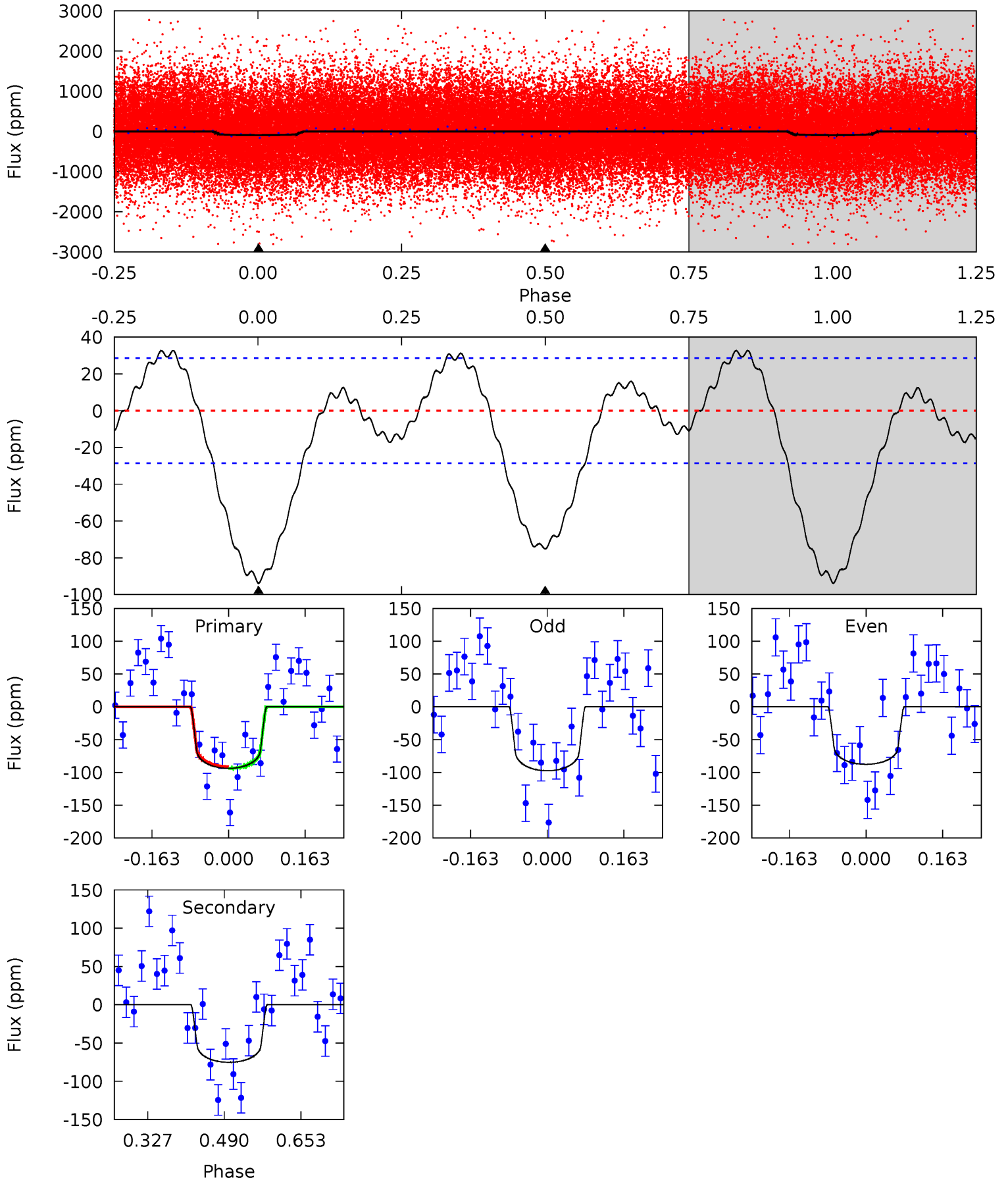
TCE 006290411-01 P= 1.720533 Days $T_0=132.277867$ (BKJD)



DV Model-Shift Uniqueness Test

006290411-01, P = 1.720533 Days, E = 130.557565 Days

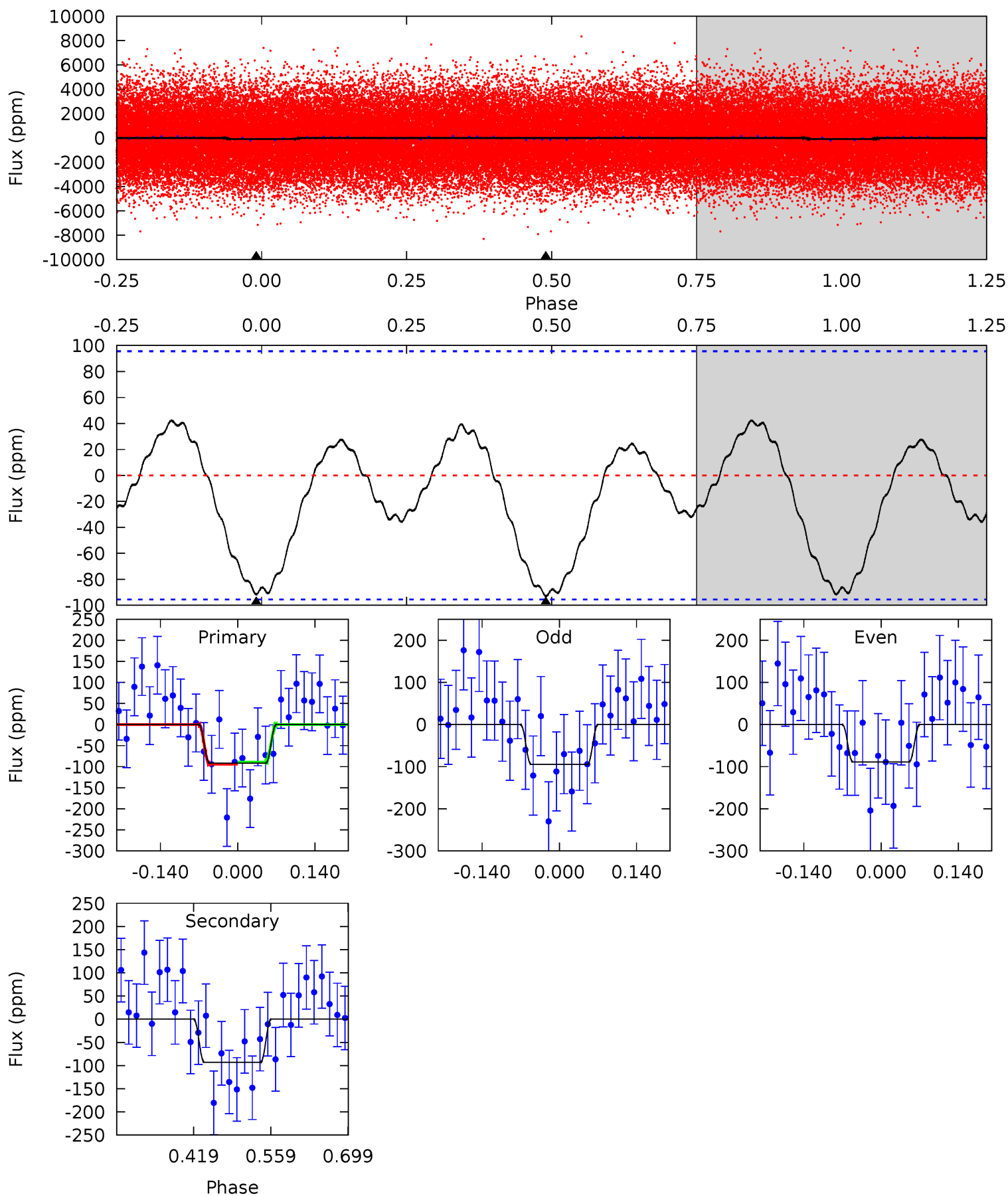
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	11.7	0	0	4.46	1.39	2.20	14.6	14.6	11.7	11.7	0.77	0.97	0.26	0.20



Alt Model-Shift Uniqueness Test

006290411-01, P = 1.720533 Days, E = 130.557334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.31	4.37	0	0	4.49	1.48	1.08	4.31	4.31	4.37	4.37	0.14	1.01	0.31	0.11



Stellar Parameters For KIC 006290411

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7492^{+206}_{-335}	$3.998^{+0.187}_{-0.153}$	$0.180^{+0.150}_{-0.400}$	$2.249^{+0.566}_{-0.566}$	$1.836^{+0.158}_{-0.342}$	$0.227^{+0.232}_{-0.099}$
	+3%/-4%	+5%/-4%	+83%/-222%	+25%/-25%	+9%/-19%	+102%/-43%
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 006290411-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-75 ± 6	$2.28^{+0.89}_{-0.89}$	3688^{+263}_{-262}	7050^{+2334}_{-1225}	$9.364^{+15.913}_{-4.635}$
Alt.	-93 ± 21	$2.46^{+0.90}_{-0.86}$	3703^{+273}_{-274}	7173^{+2379}_{-1202}	$10.000^{+14.543}_{-5.029}$

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 $A_{obs} \gg 1.0$

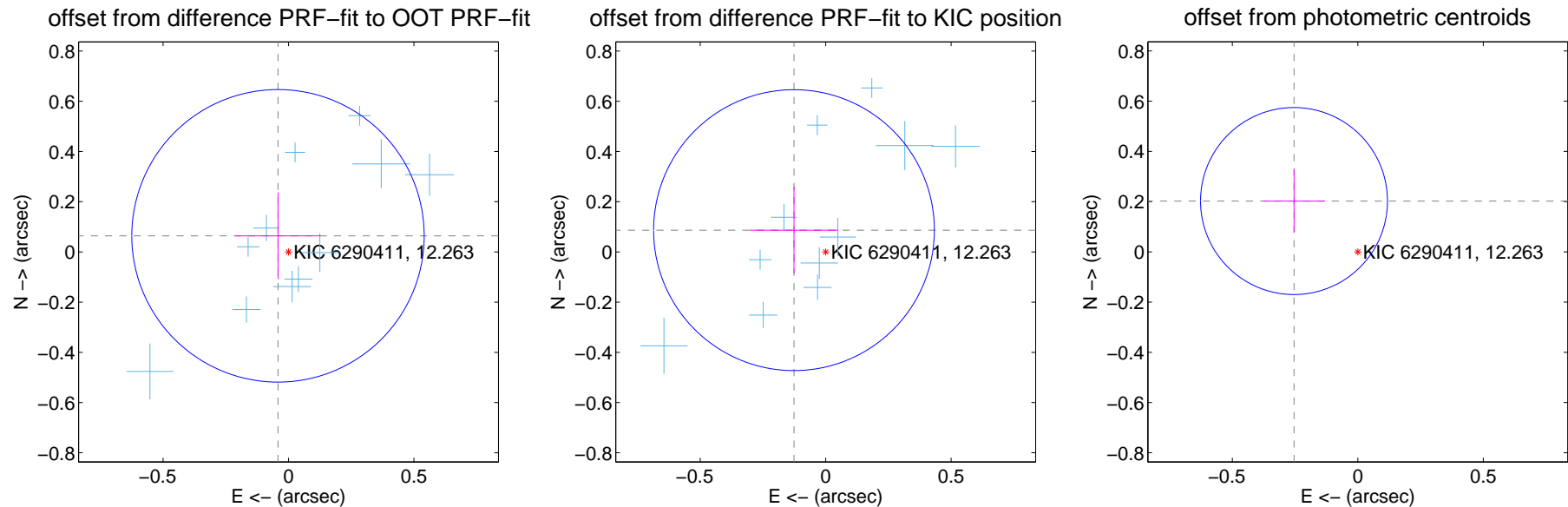
DV Centroid Data

Supplemental centroid analysis for 006290411-01. Kepler magnitude: 12.26. Transit SNR 14.97

There are 15 quarters with good PRF difference image offsets

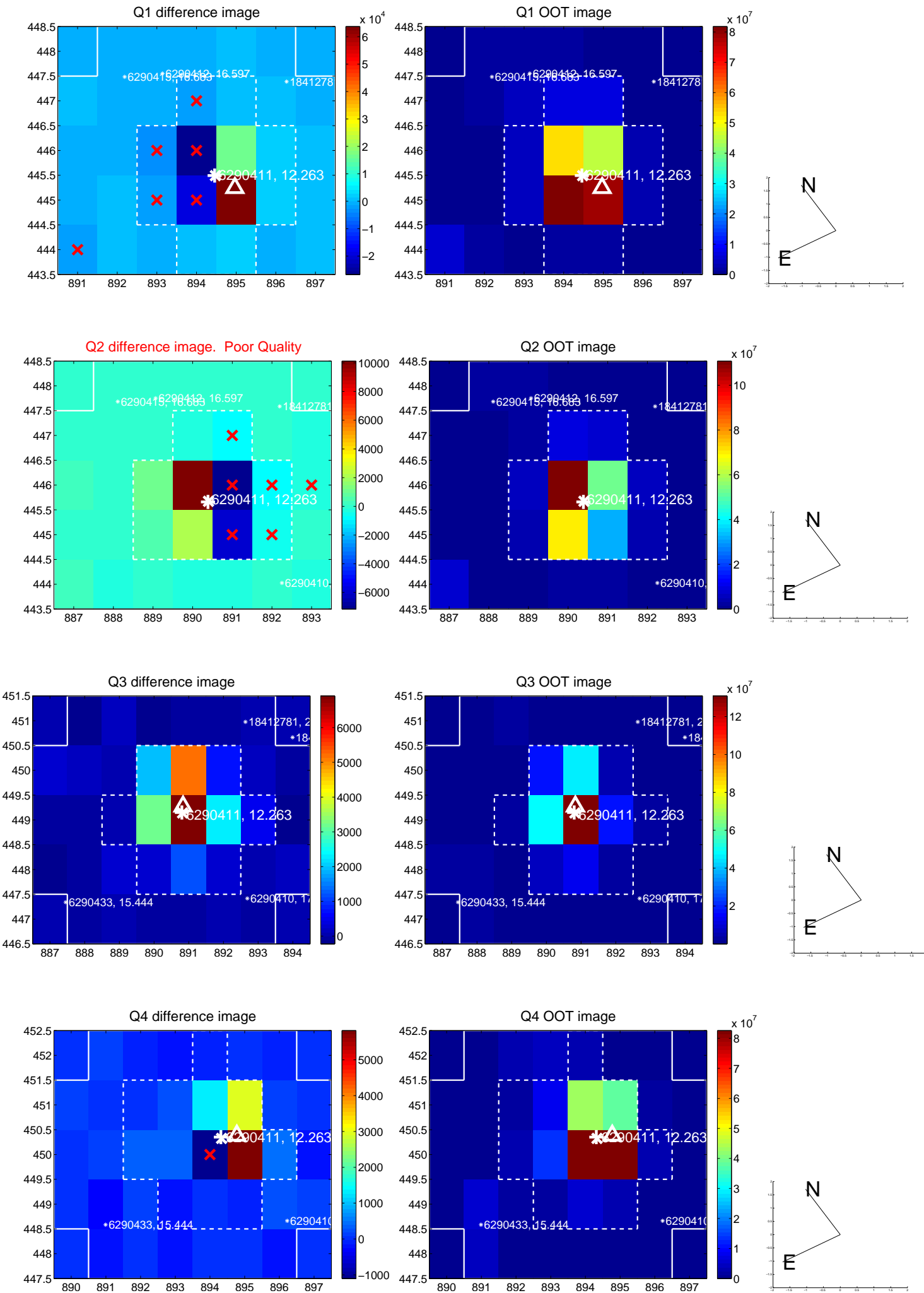
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.077 ± 0.194	0.39	0.042 ± 0.169	0.064 ± 0.172
PRF-fit source offset from KIC position	0.153 ± 0.187	0.82	0.126 ± 0.176	0.087 ± 0.172
photometric centroid source offset	0.32 ± 0.12	2.62	0.25 ± 0.12	0.20 ± 0.13

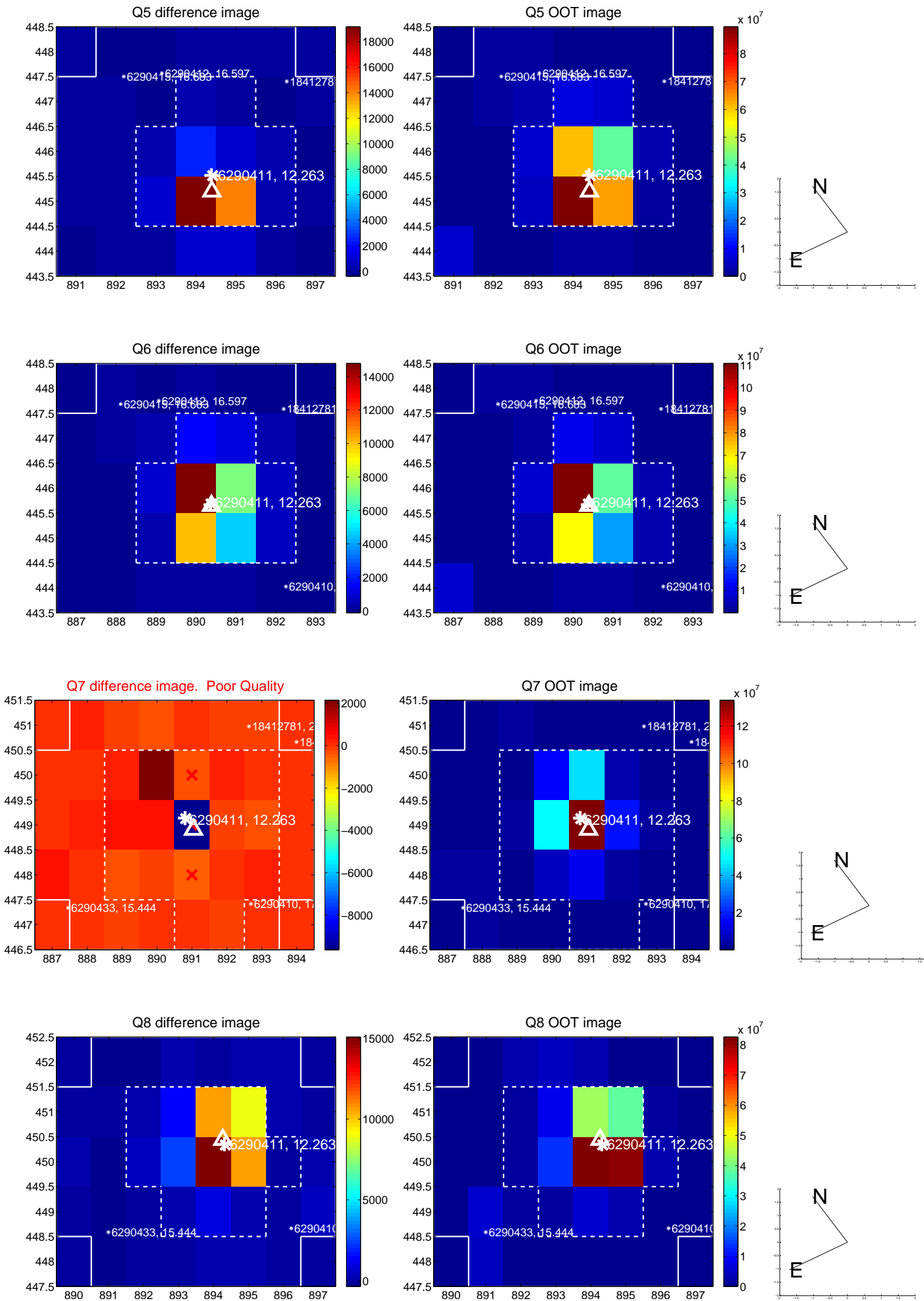


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

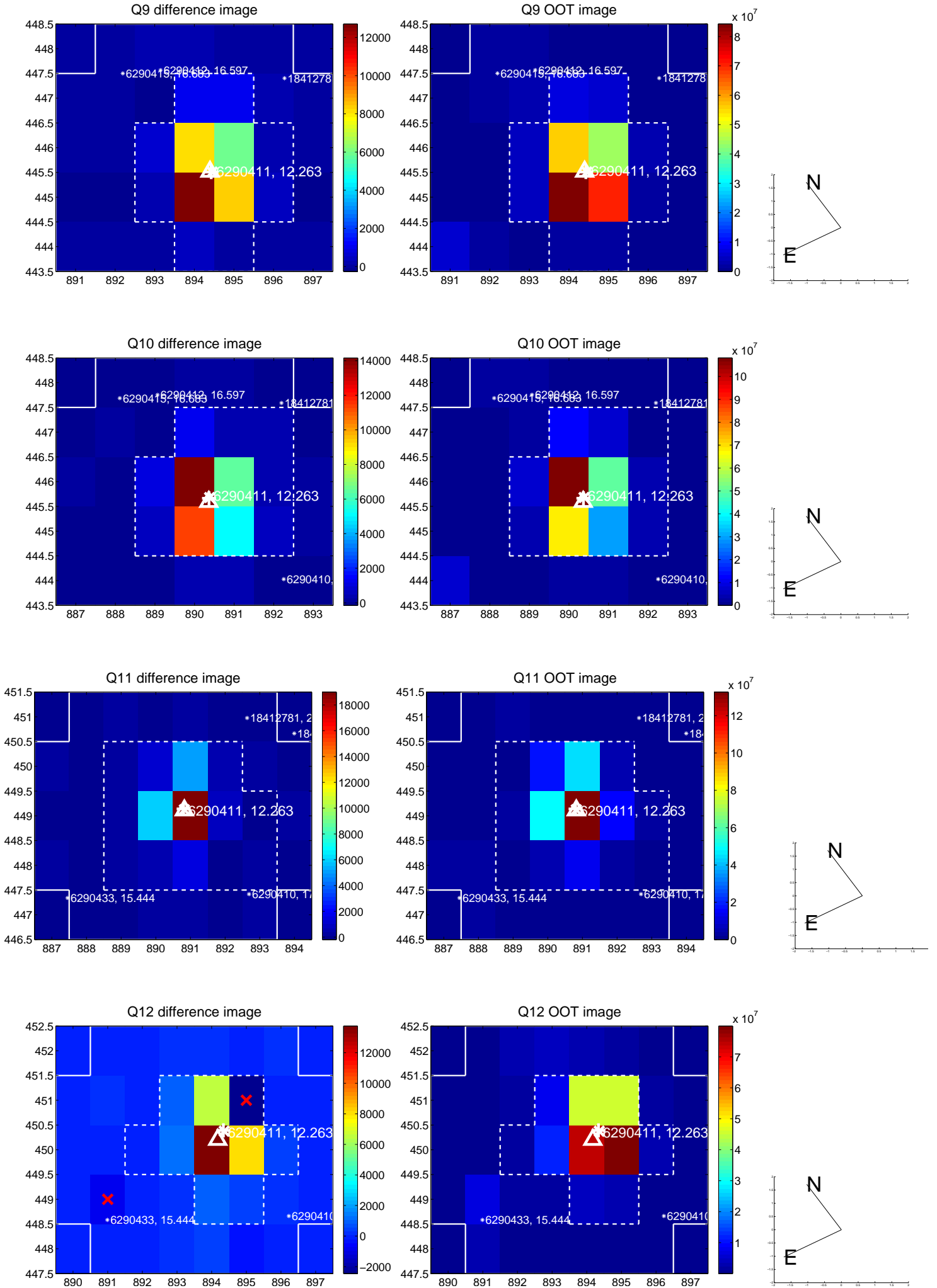
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



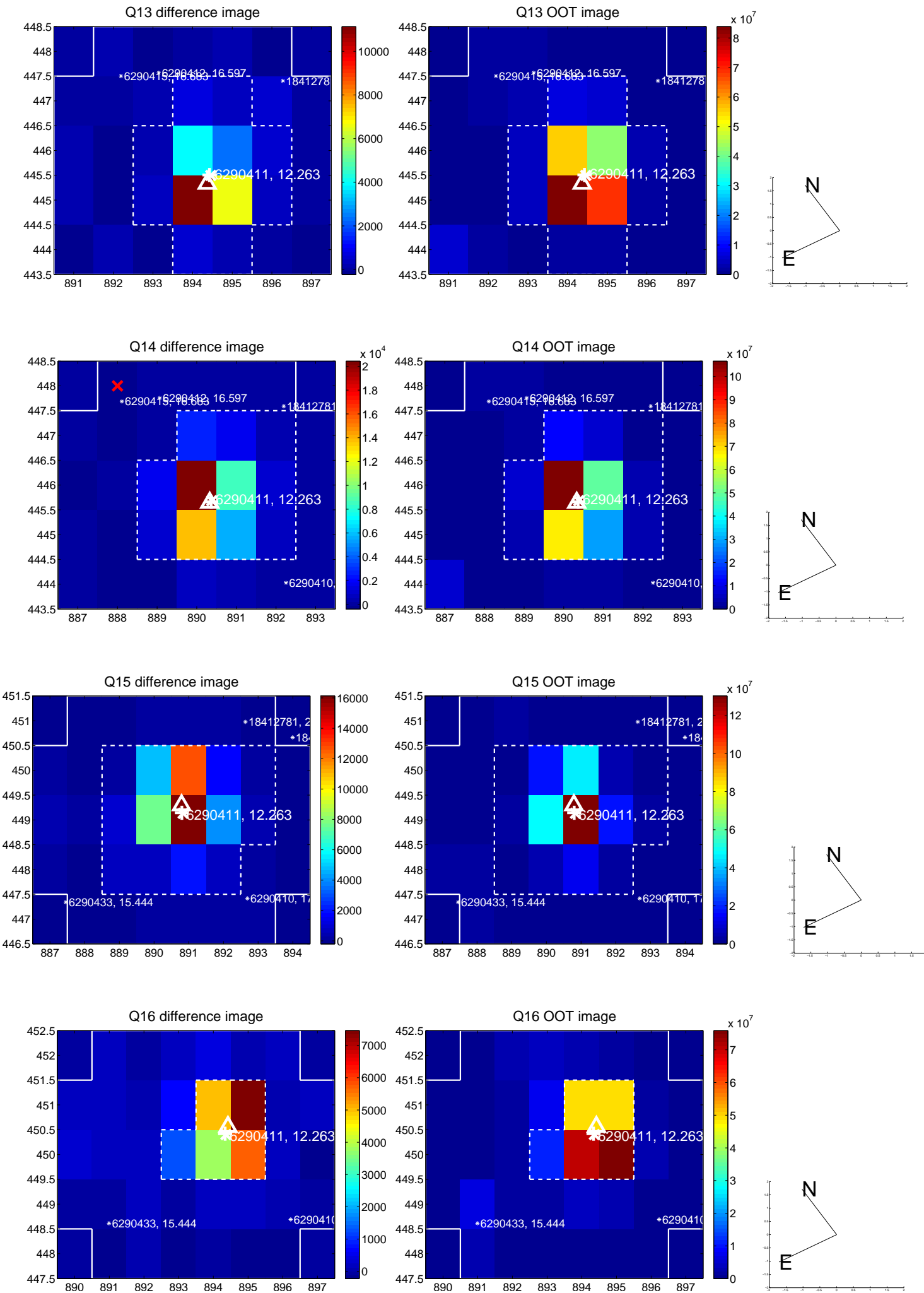
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

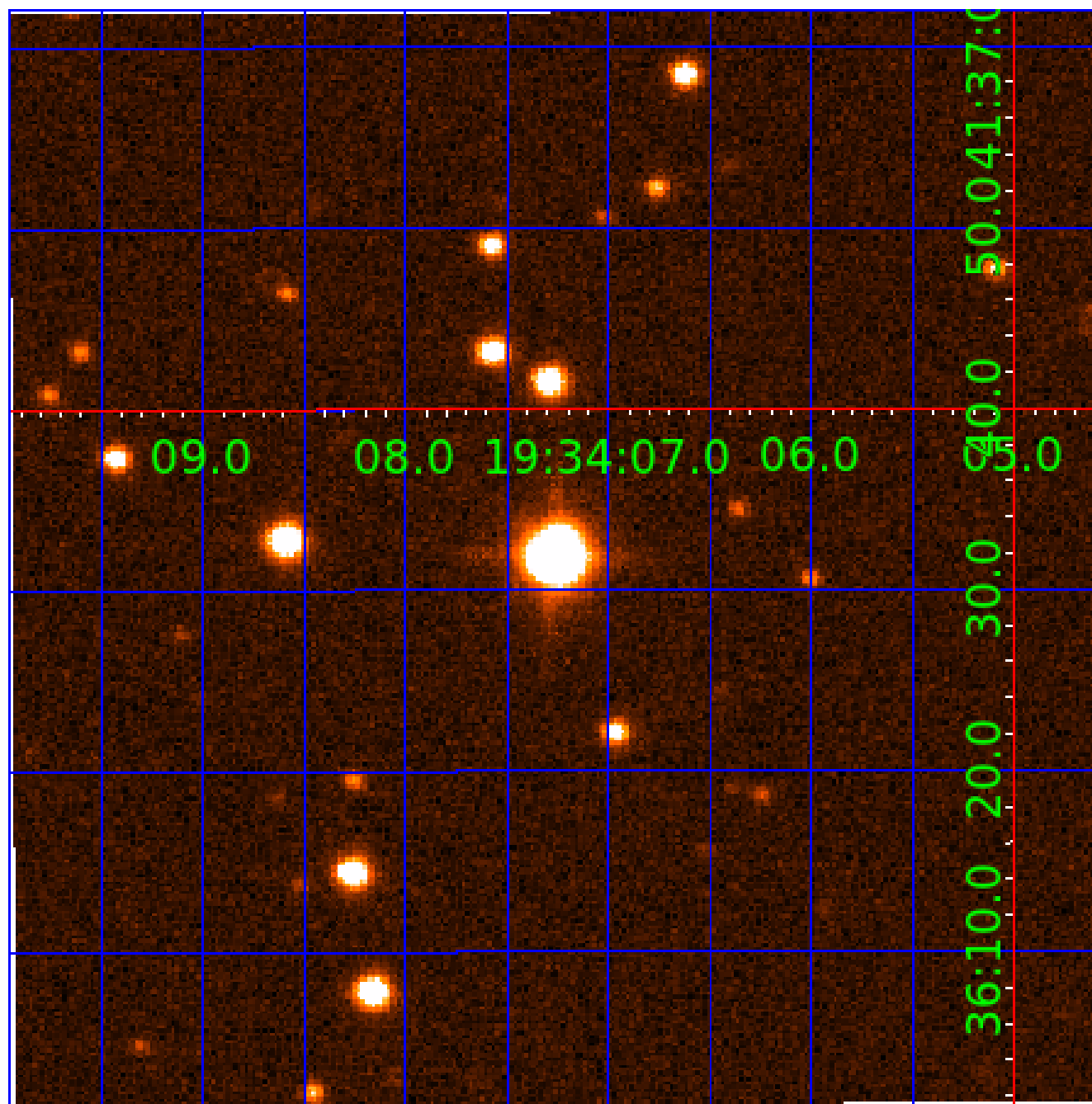


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006290411

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})
006290411-01	OBS	No	1.720533	132.278098	86.8	6.297	13.2	15.0	2.25	7492	2.34	12052.05
006290411-02	OBS	No	1.720532	133.134642	87.2	5.960	13.5	15.0	2.25	7492	2.14	12052.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006290411-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006290411-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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.

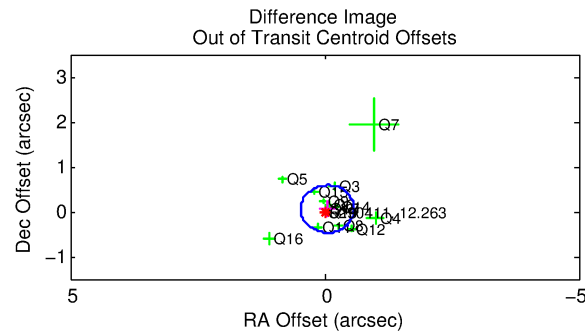
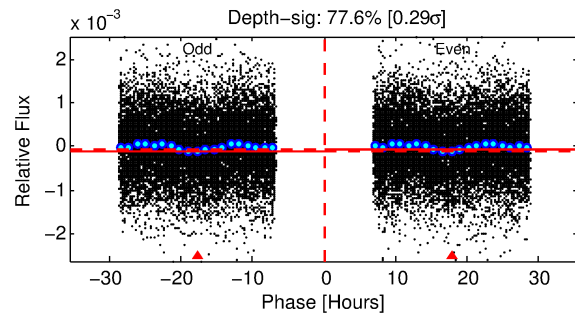
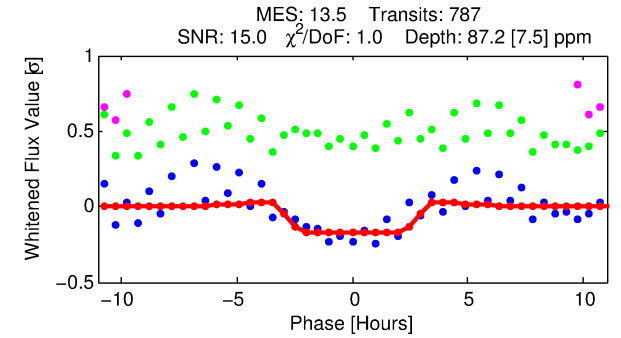
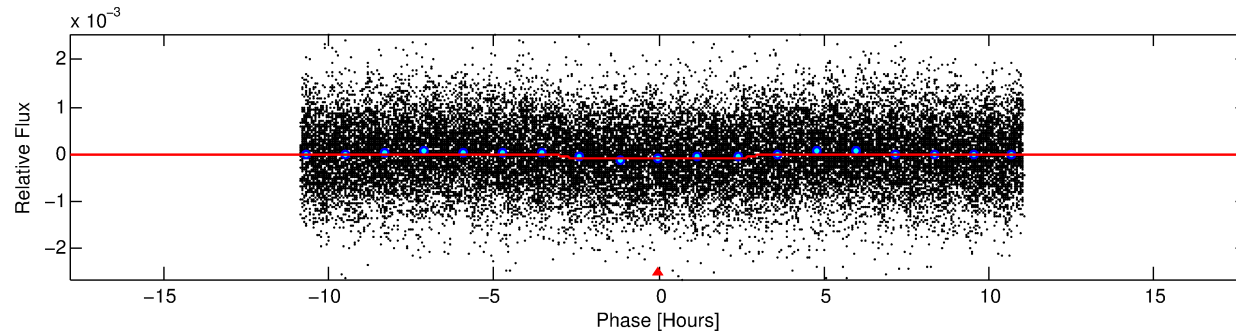
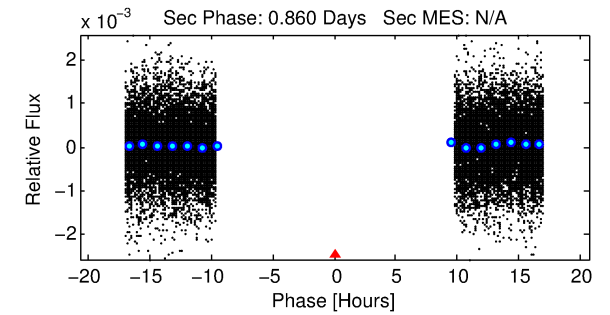
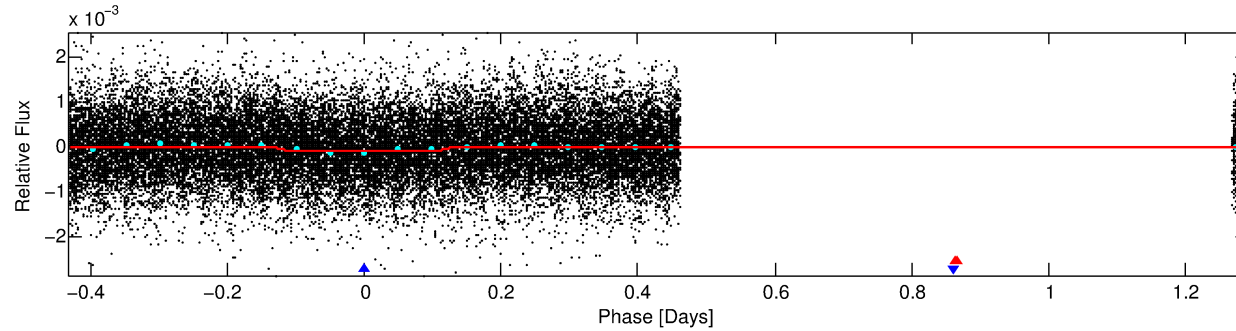
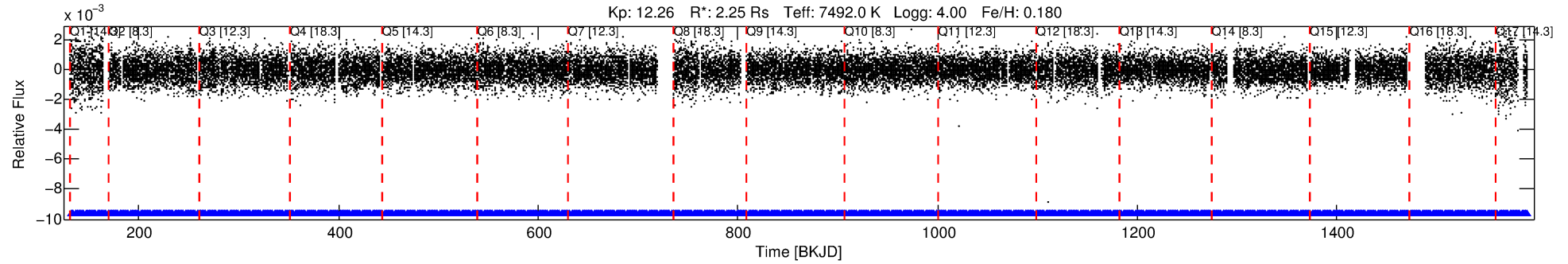
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006290411-02

No Significant Match Found

DV One-Page Summary

KIC: 6290411 Candidate: 2 of 2 Period: 1.721 d



DV Fit Results:

Period = 1.72053 [0.00002] d
Epoch = 133.1346 [0.0050] BKJD
Rp/R* = 0.0087 [0.0060]
a/R* = 2.25 [7.54]
b = 0.24 [16.46]
Seff = 12052.07 [4550.20]
Teq = 2672 [252] K
Rp = 2.14 [1.57] Re
a = 0.0344 [0.0076] AU

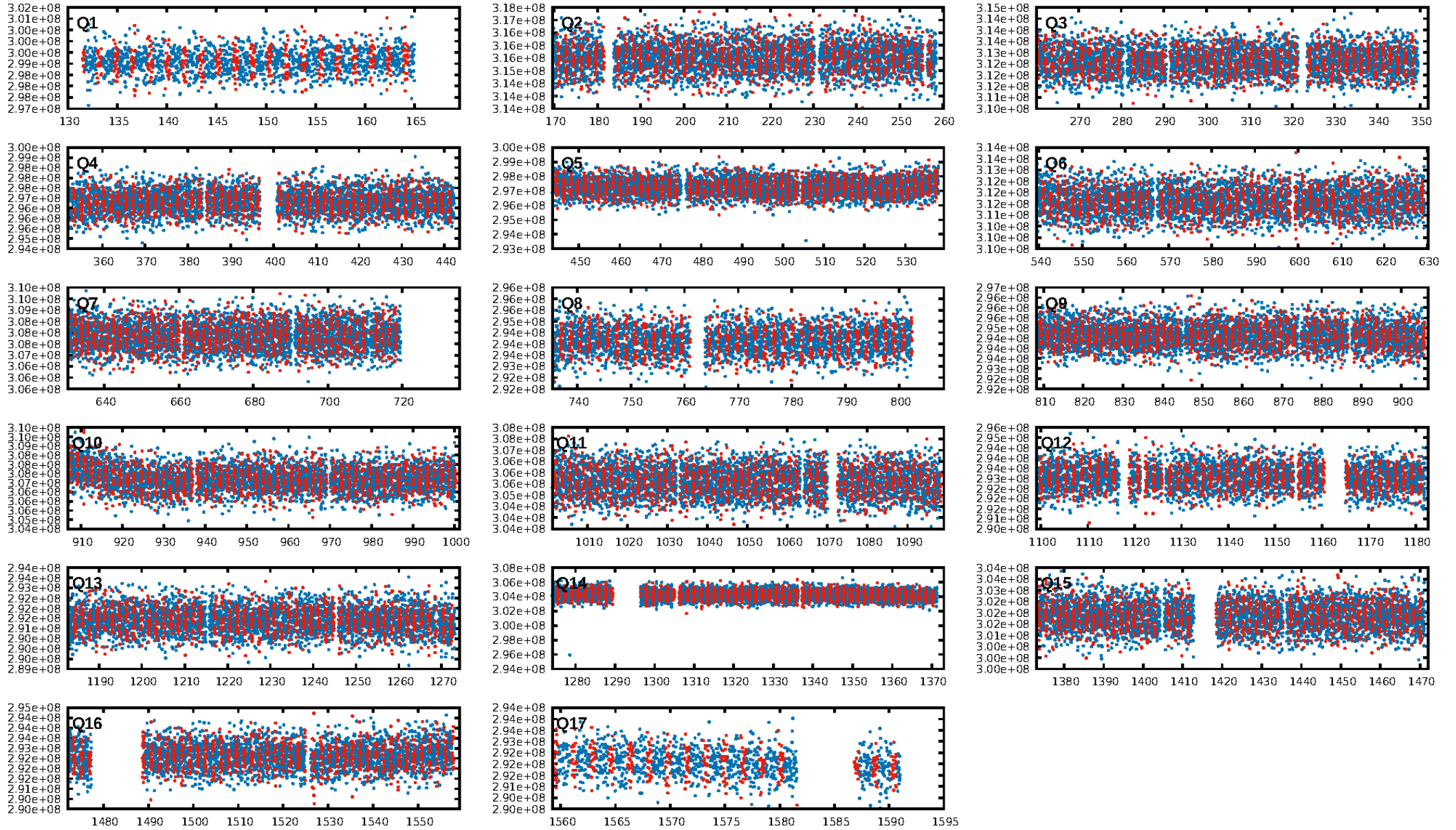
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.44e-39
RollingBand-fgt: 1.00 [751/751]
GhostDiagnostic-chr: 1.558
Centroid-sig: 55.4%
Centroid-so: 0.220 arcsec [1.74σ]
OotOffset-rm: 0.078 arcsec [0.45σ]
KicOffset-rm: 0.098 arcsec [0.65σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

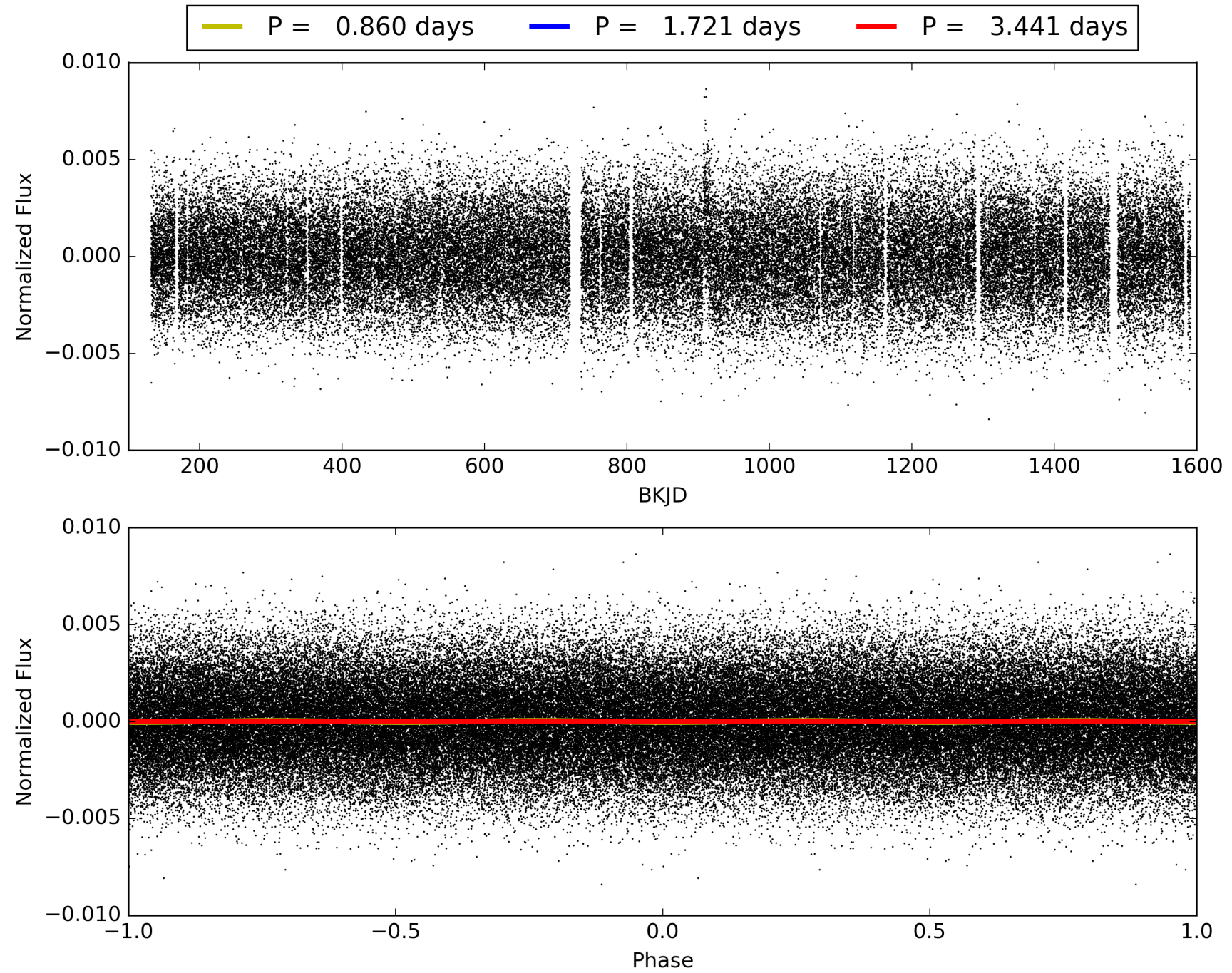
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:54:22 Z

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

TCE 006290411-02, PDC Light Curves

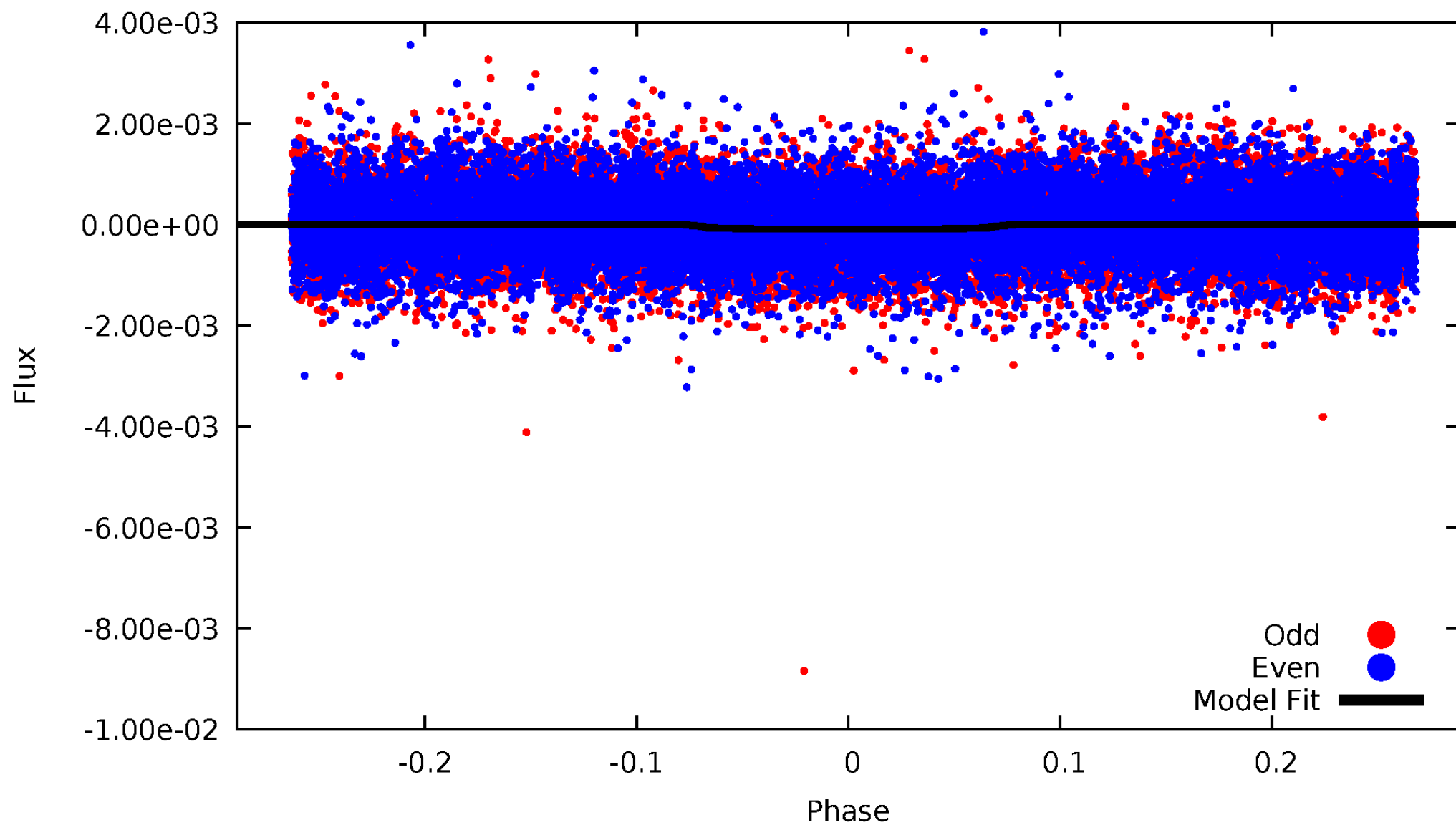


TCE 006290411-02



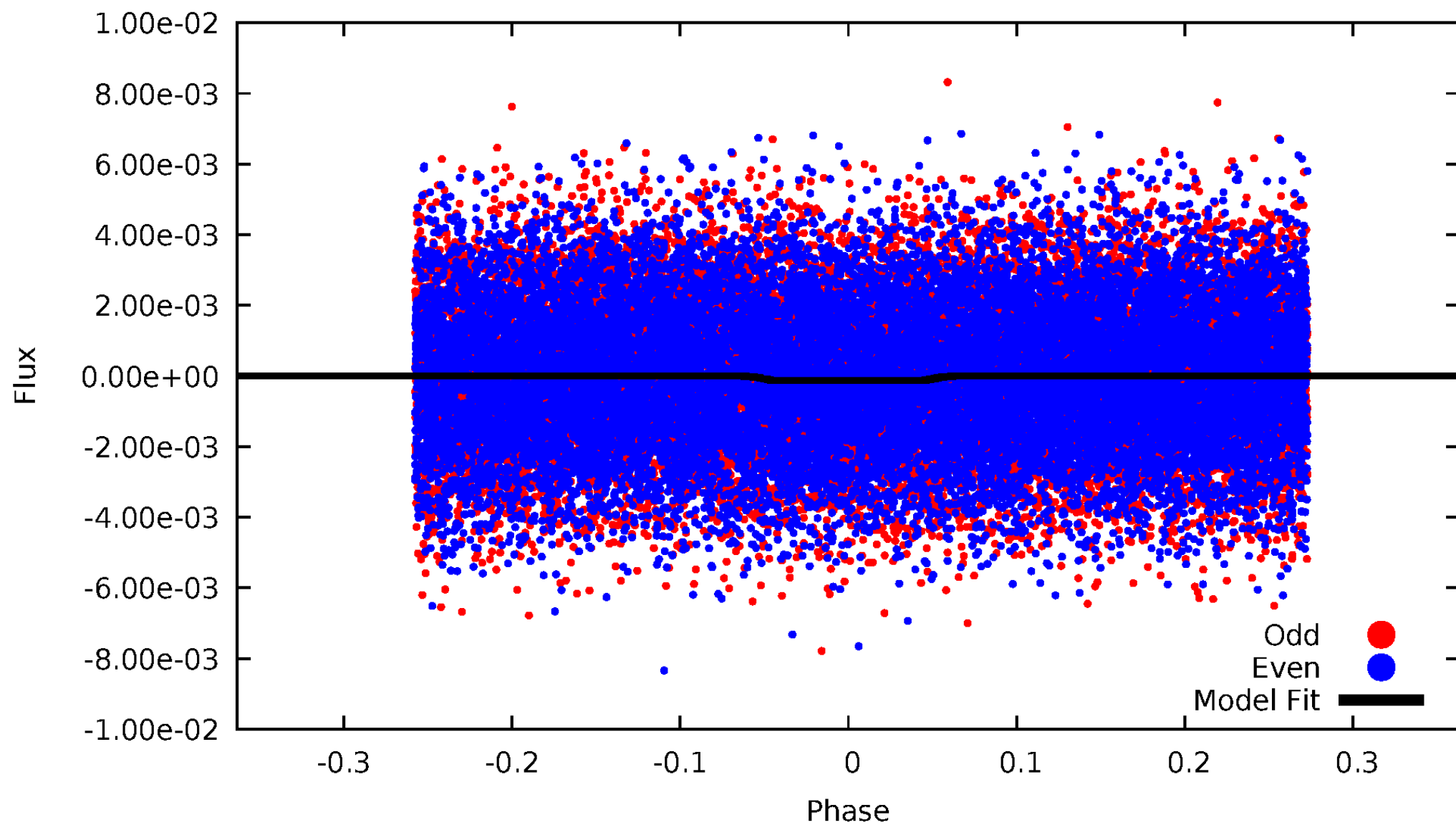
DV Odd/Even

TCE 006290411-02



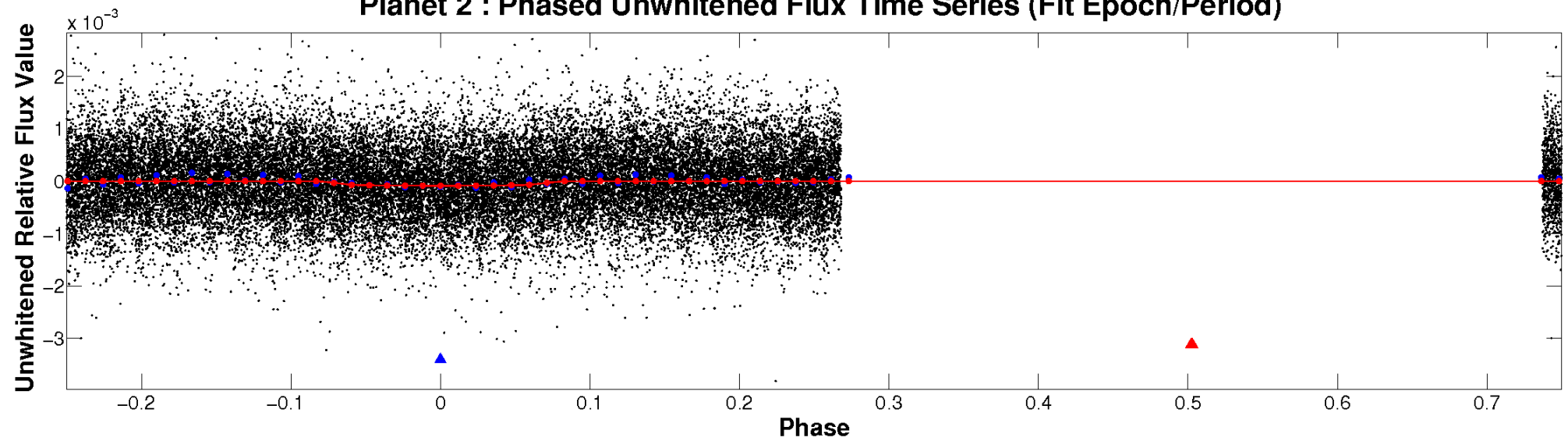
ALT Odd/Even

TCE 006290411-02

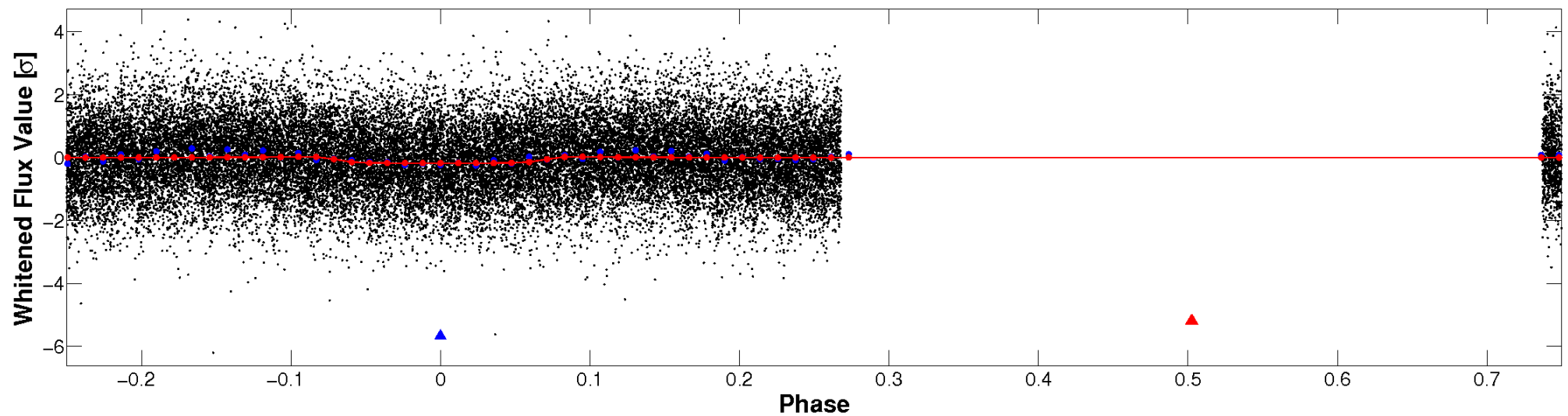


Non-Whitened Vs. Whitened Light Curve

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

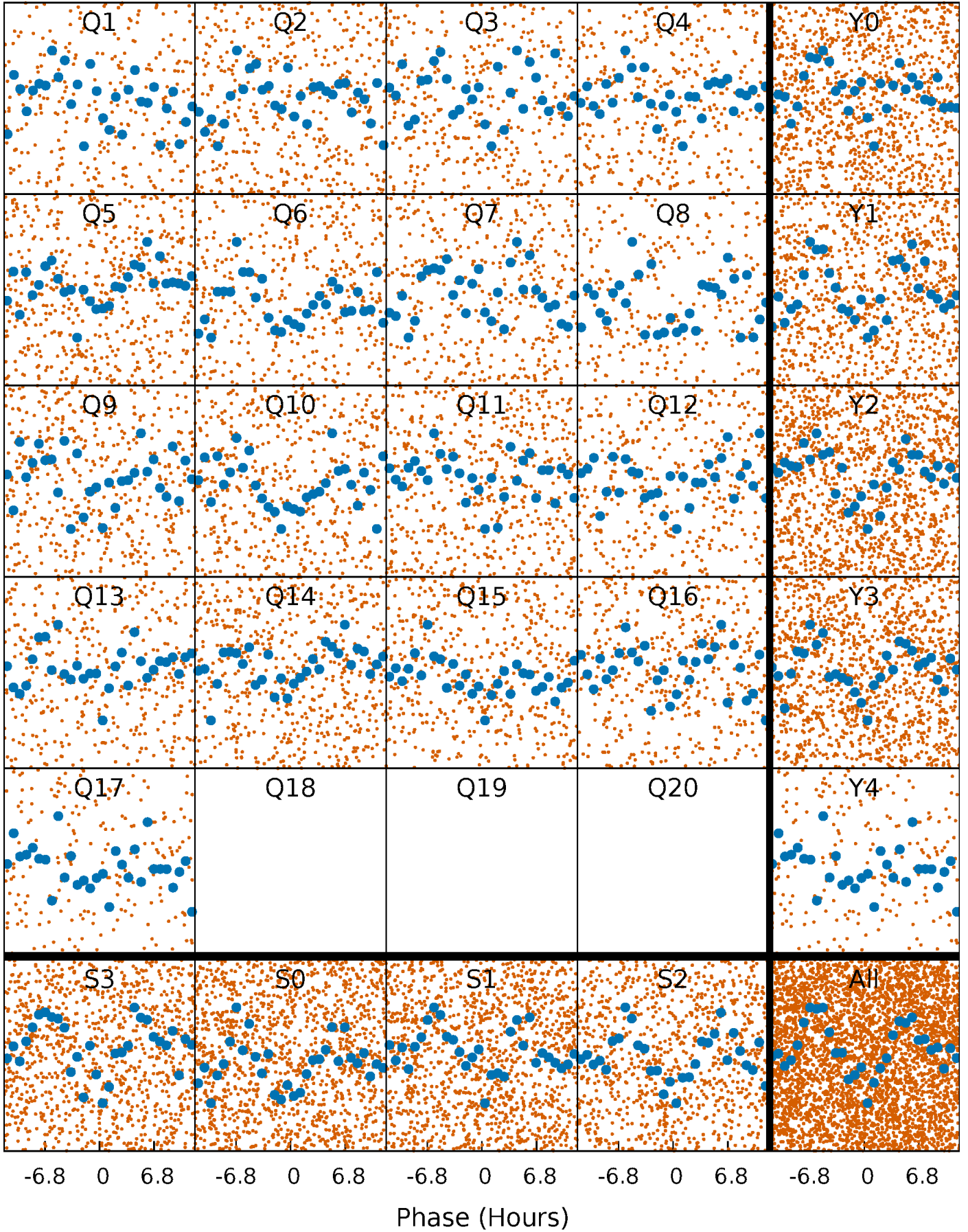


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



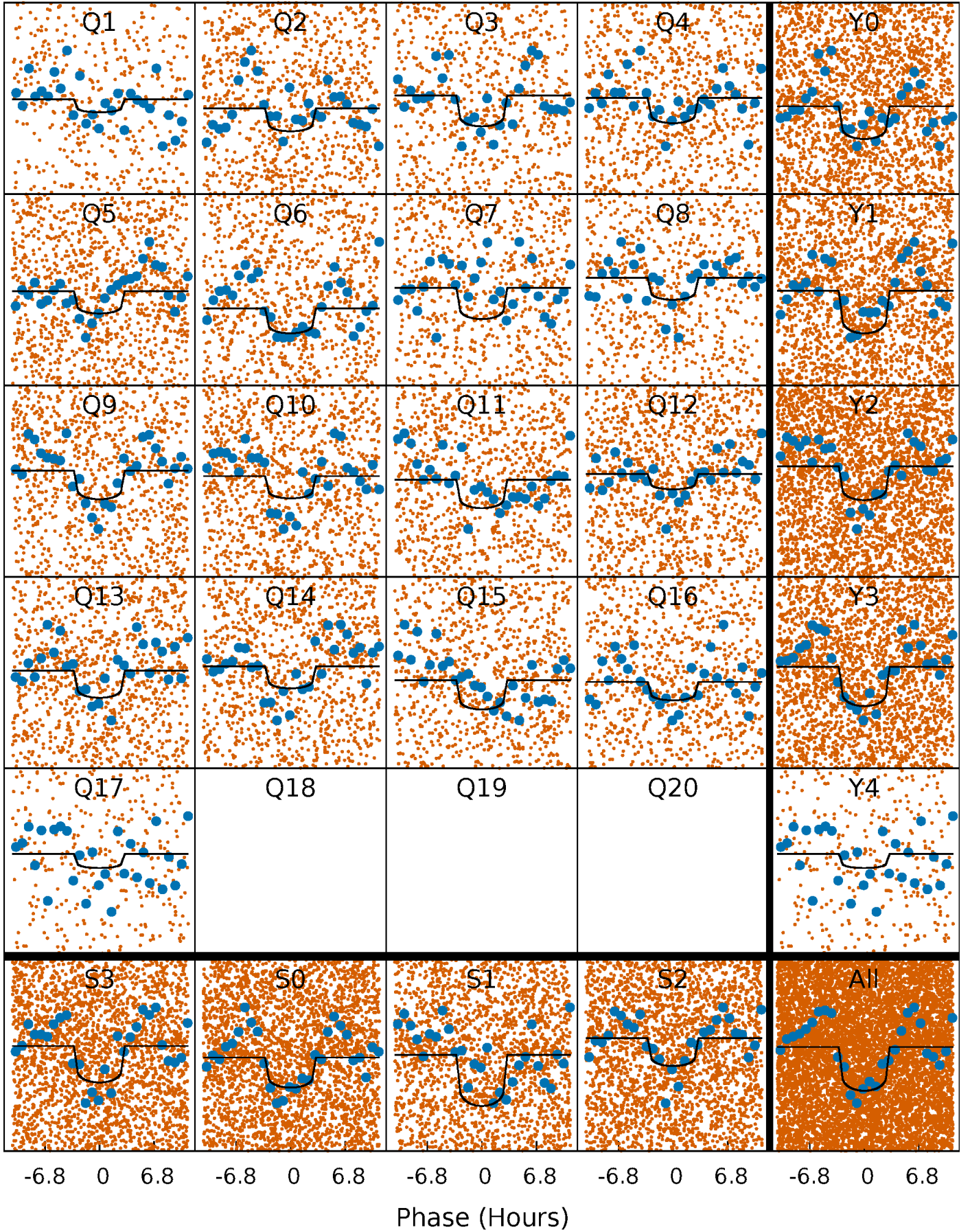
PDC Quarter-Phased Transit Curves

TCE 006290411-02 P= 1.720532 Days $T_0=133.134642$ (BKJD)



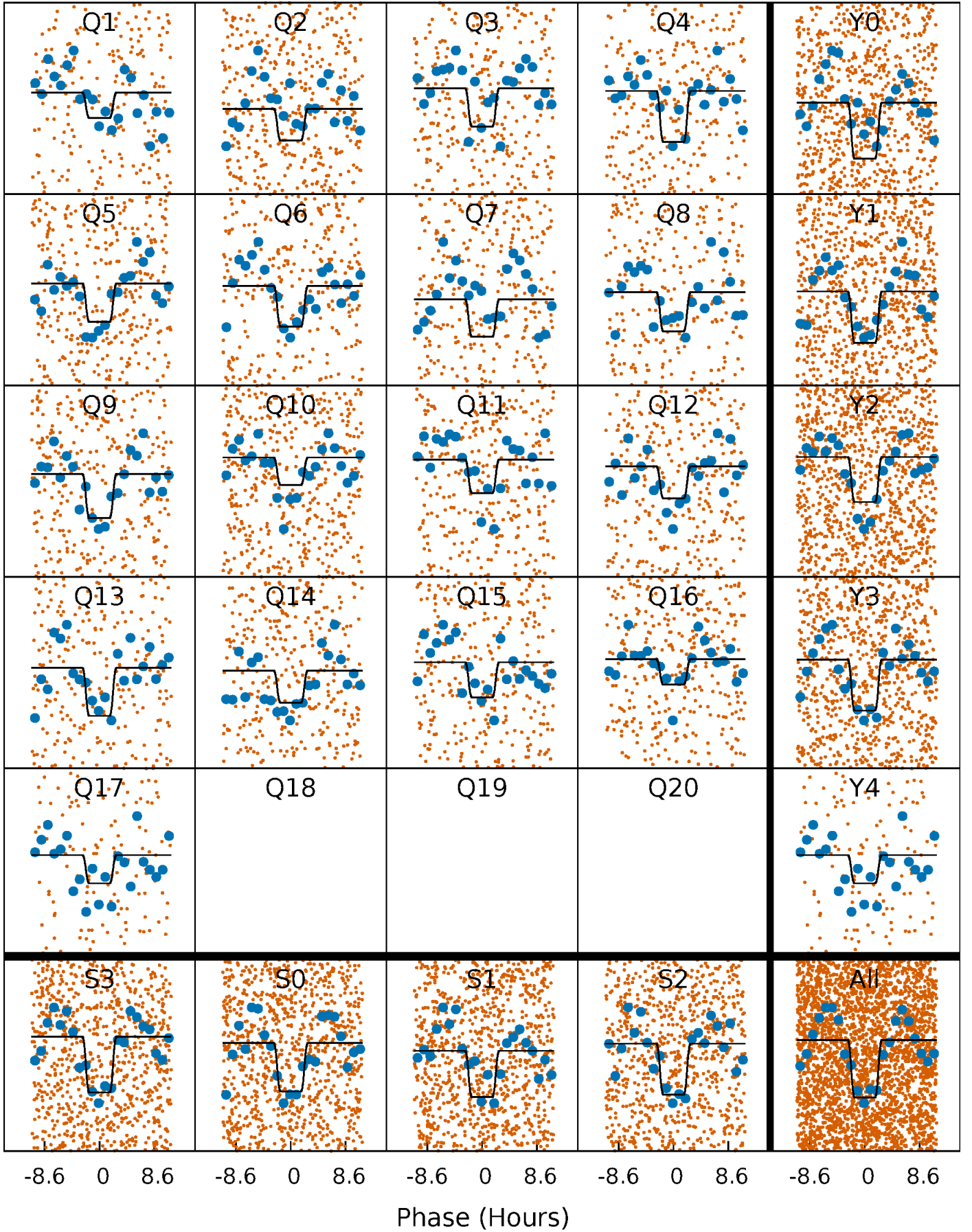
DV Quarter-Phased Transit Curves

TCE 006290411-02 P= 1.720532 Days $T_0=133.134642$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

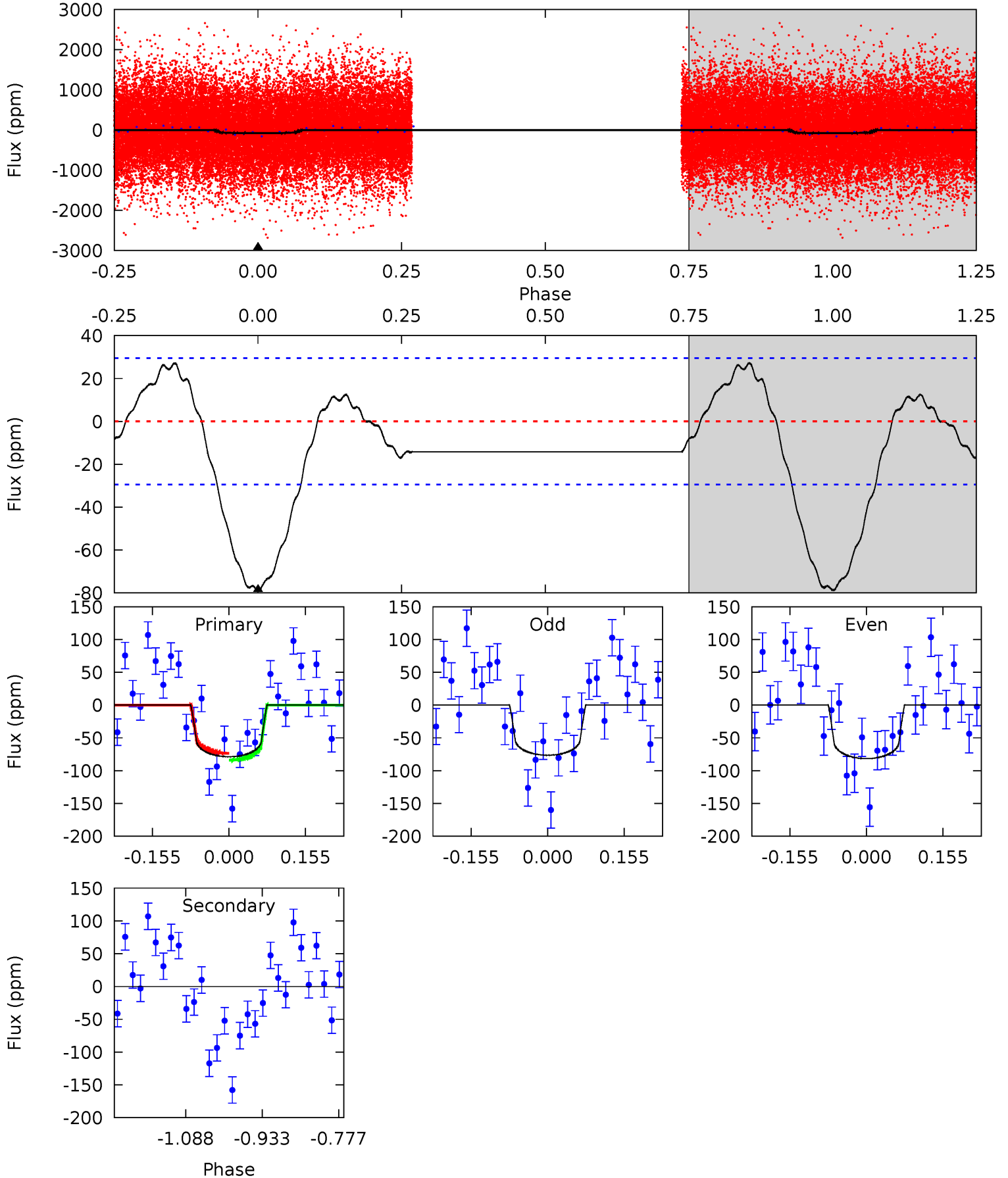
TCE 006290411-02 P= 1.720533 Days $T_0=133.125397$ (BKJD)



DV Model-Shift Uniqueness Test

006290411-02, P = 1.720532 Days, E = 131.414110 Days

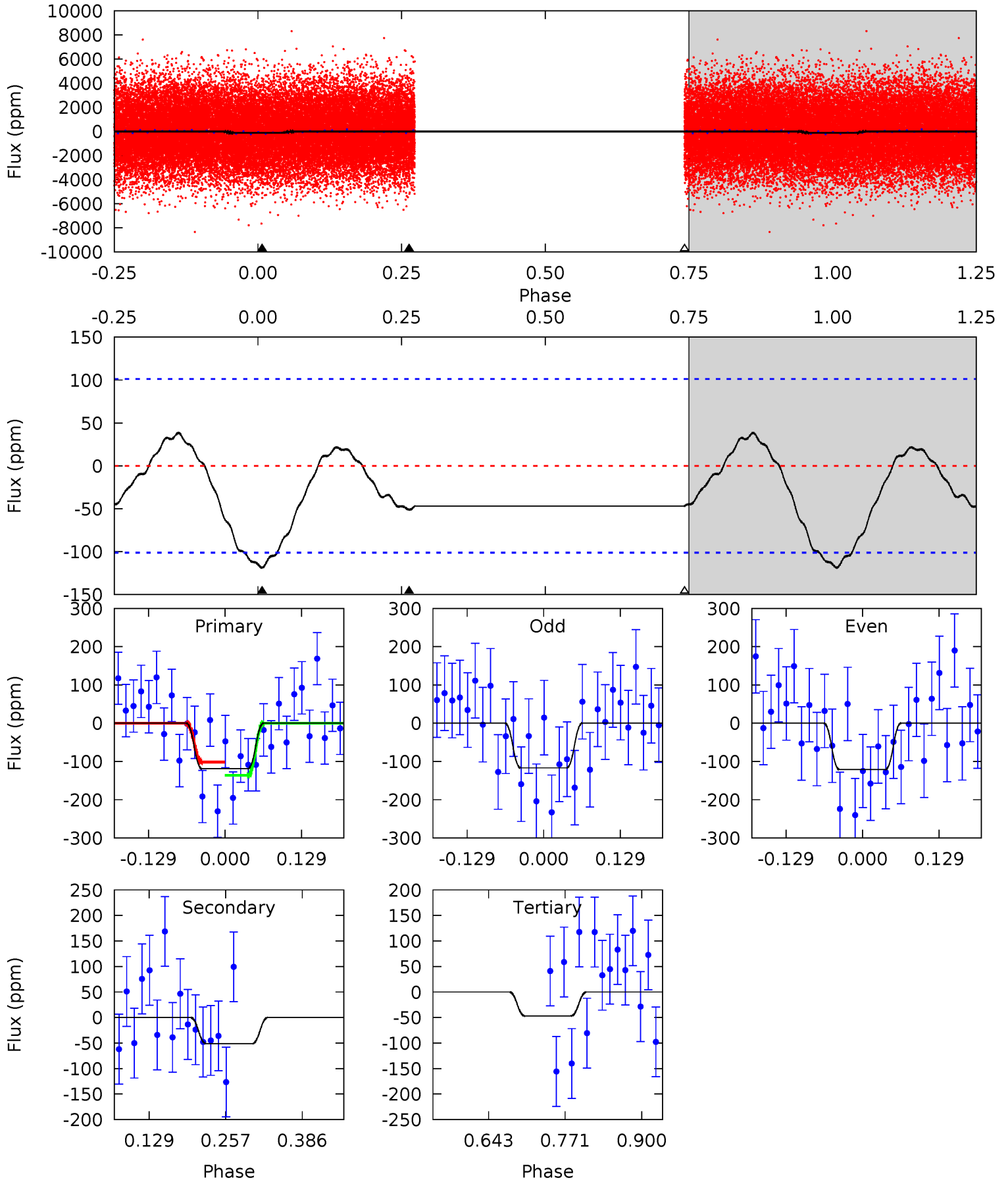
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	0	0	0	4.47	1.42	1.89	11.9	11.9	0	0	0.39	0.99	0.26	0.79



Alt Model-Shift Uniqueness Test

006290411-02, P = 1.720533 Days, E = 131.404864 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.30	2.28	2.09	0	4.51	1.52	1.27	3.20	5.30	0.19	2.28	0.09	1.09	0.24	0.77



Stellar Parameters For KIC 006290411

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7492^{+206}_{-335}	$3.998^{+0.187}_{-0.153}$	$0.180^{+0.150}_{-0.400}$	$2.249^{+0.566}_{-0.566}$	$1.836^{+0.158}_{-0.342}$	$0.227^{+0.232}_{-0.099}$
	+3%/-4%	+5%/-4%	+83%/-222%	+25%/-25%	+9%/-19%	+102%/-43%
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 006290411-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 7	$2.19^{+1.40}_{-1.21}$	3701^{+267}_{-280}	-3453^{+7541}_{-1280}	$0.011^{+1.188}_{-1.291}$
Alt.	-51 ± 22	$2.81^{+1.47}_{-1.47}$	3703^{+253}_{-263}	5690^{+2781}_{-1253}	$4.172^{+13.357}_{-2.677}$

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 $A_{obs} \gg 1.0$

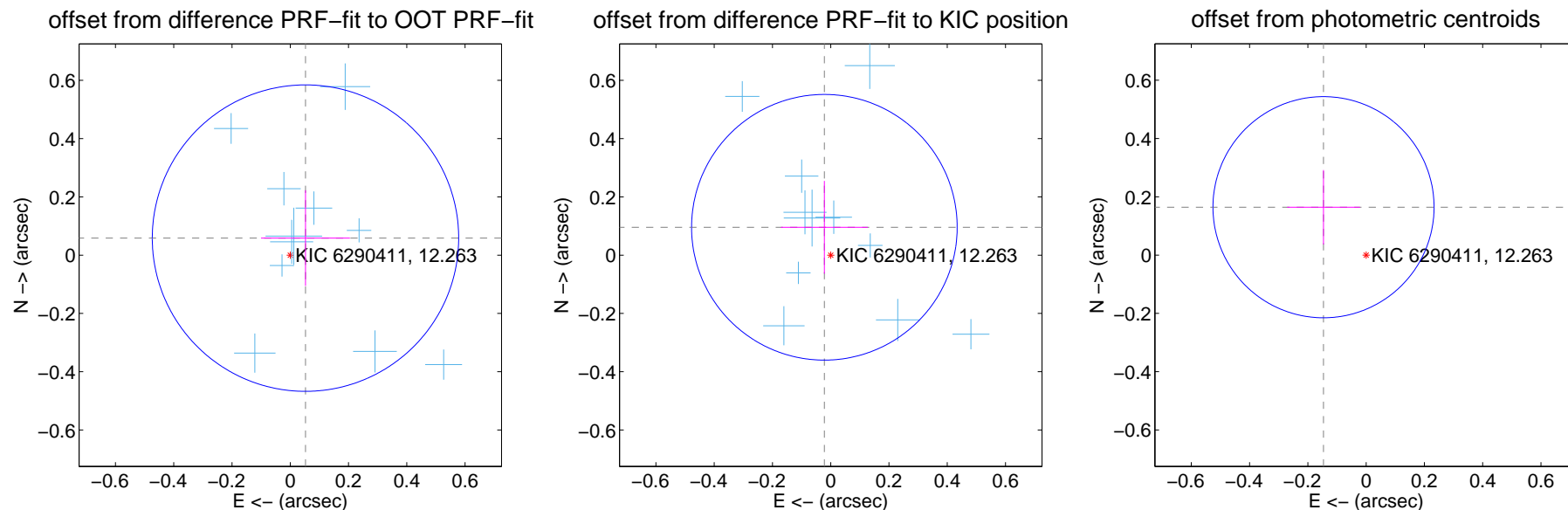
DV Centroid Data

Supplemental centroid analysis for 006290411-02. Kepler magnitude: 12.26. Transit SNR 15.01

There are 14 quarters with good PRF difference image offsets

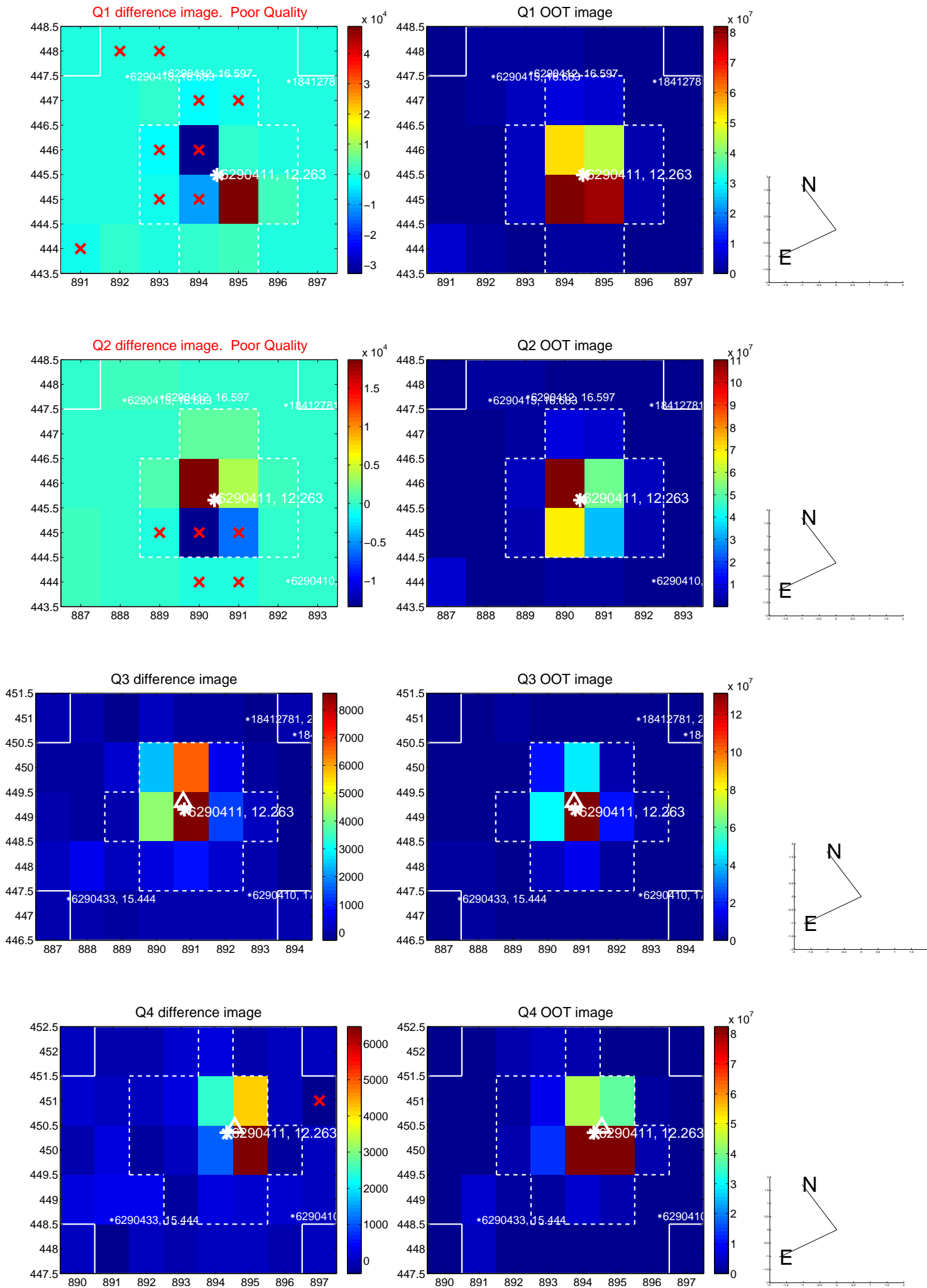
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.078 ± 0.175	0.45	-0.052 ± 0.153	0.058 ± 0.164
PRF-fit source offset from KIC position	0.098 ± 0.152	0.65	0.022 ± 0.149	0.096 ± 0.159
photometric centroid source offset	0.22 ± 0.13	1.74	0.15 ± 0.13	0.16 ± 0.13

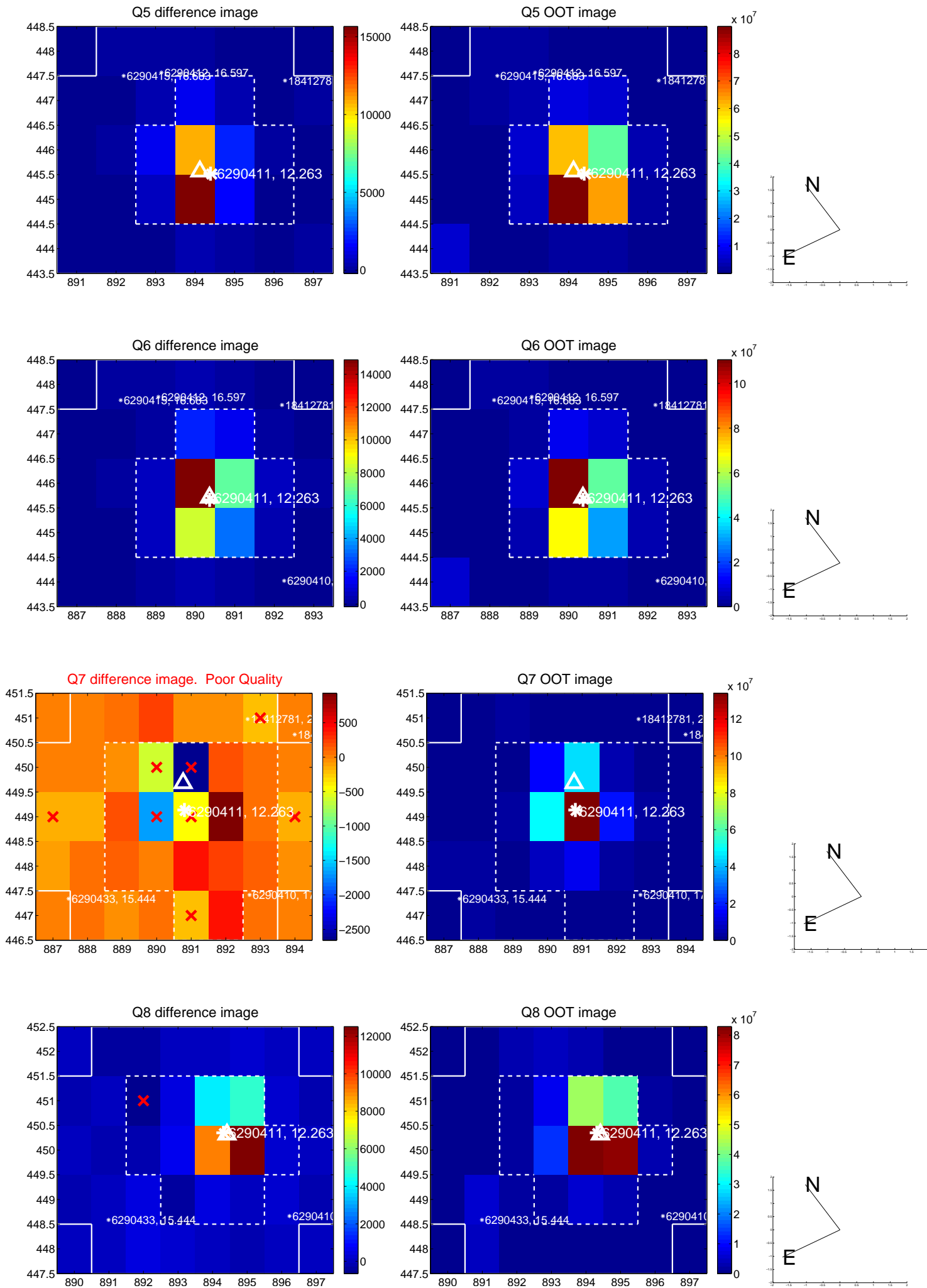


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

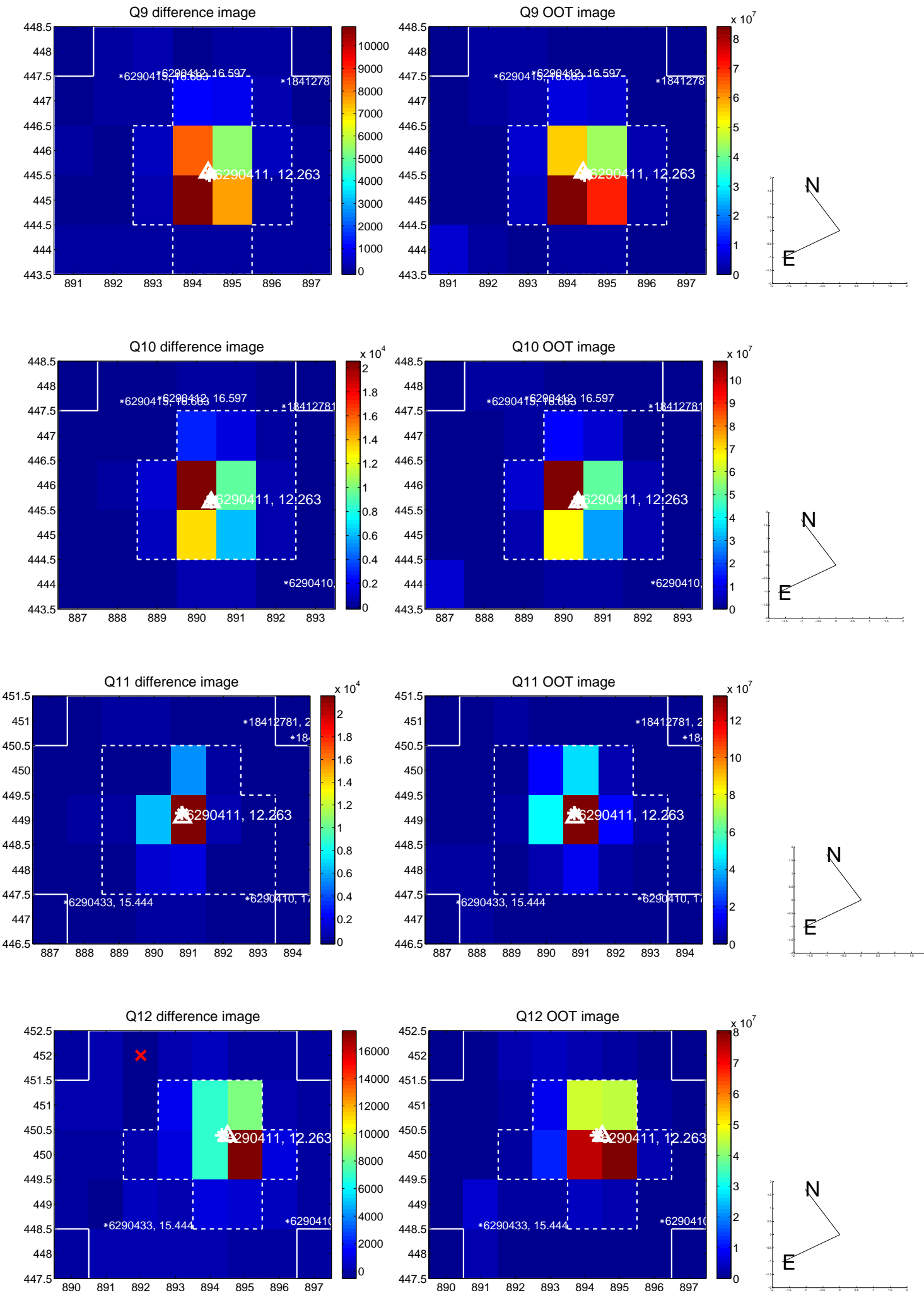
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



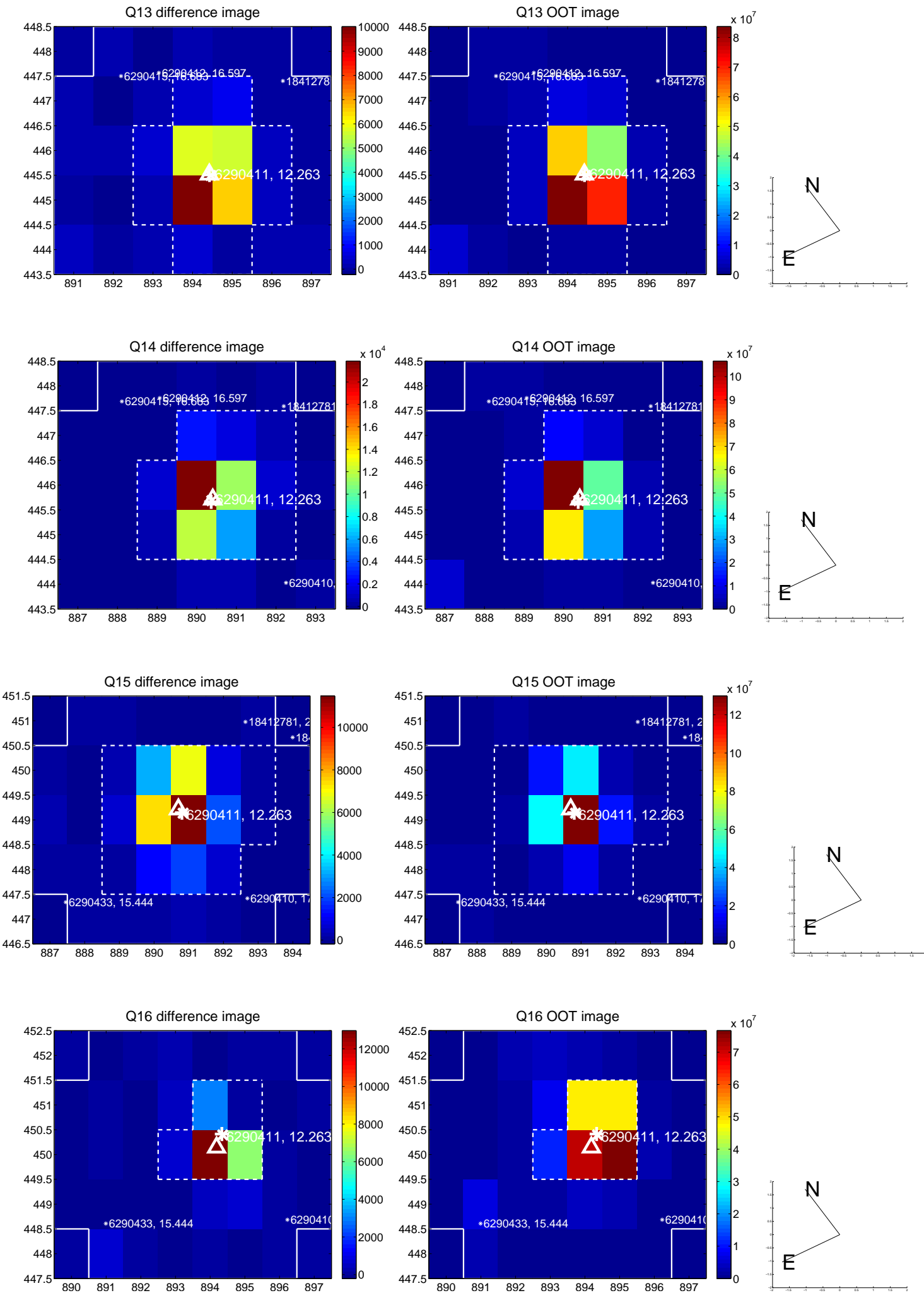
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

