

KIC 006185496

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})
006185496-01	OBS	2858.01	0.949260	132.018955	264.7	1.400	16.6	20.1	0.79	4904	1.57	1076.95
006185496-02	OBS	No	0.949253	131.543512	274.2	1.224	16.5	19.9	0.79	4904	1.61	1076.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006185496-01	OBS	FP	0.00	0	0	1	0	MOD_SEC_DV—MOD_SEC_ALT—PLANET_PERIOD_IS_HALF_ALT—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
006185496-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—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.

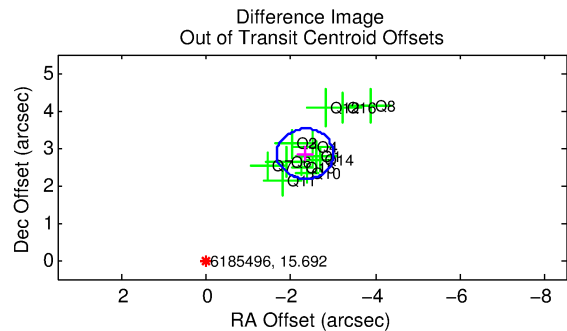
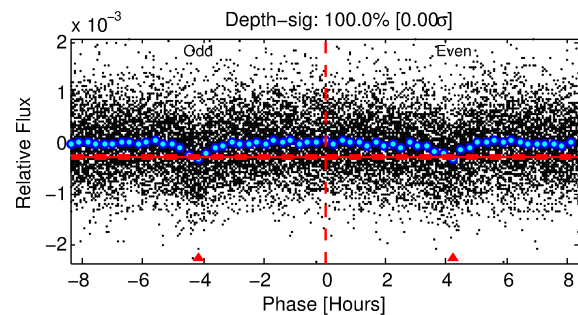
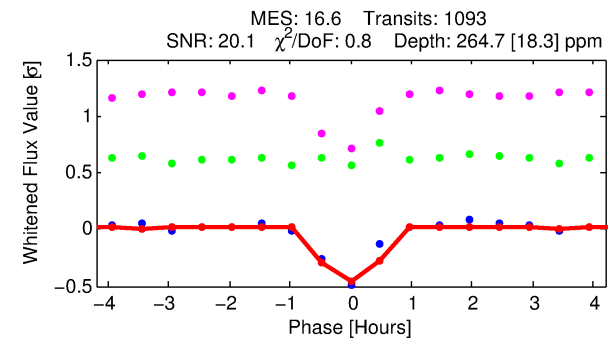
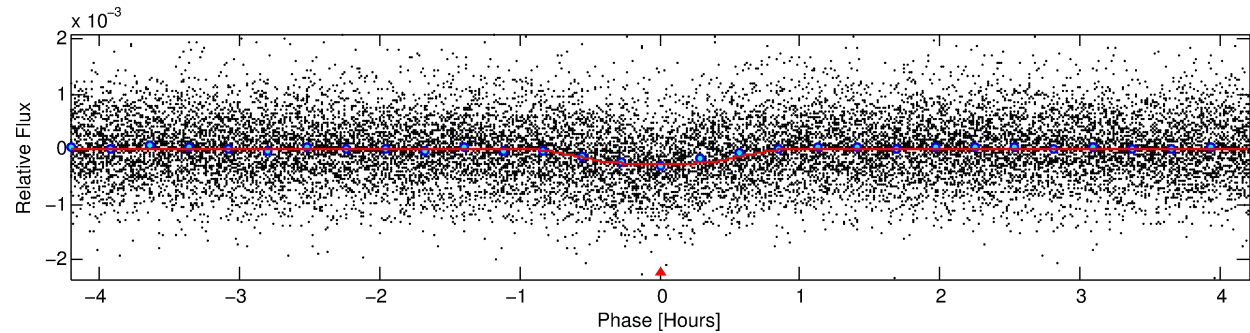
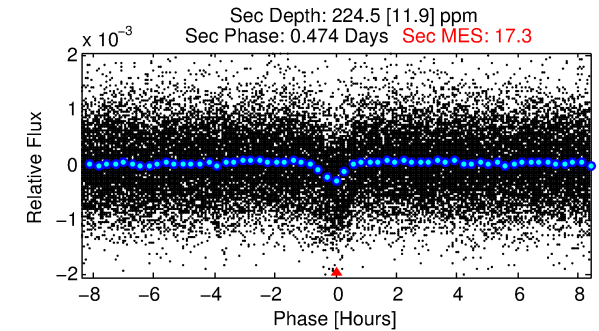
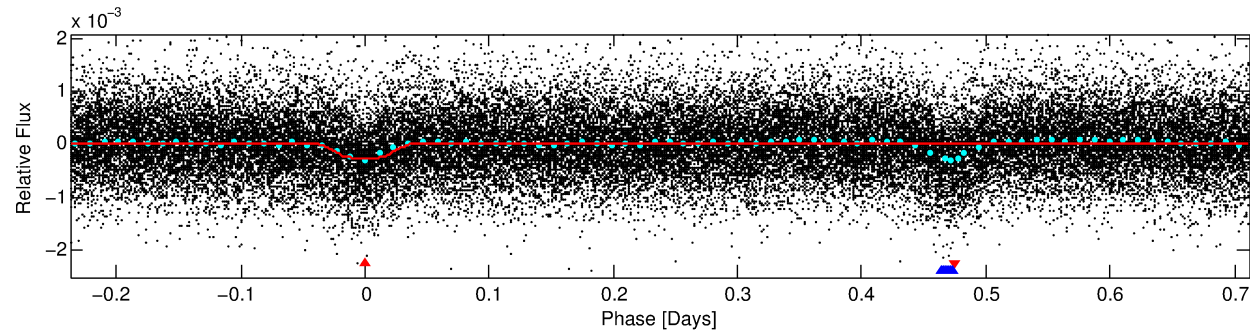
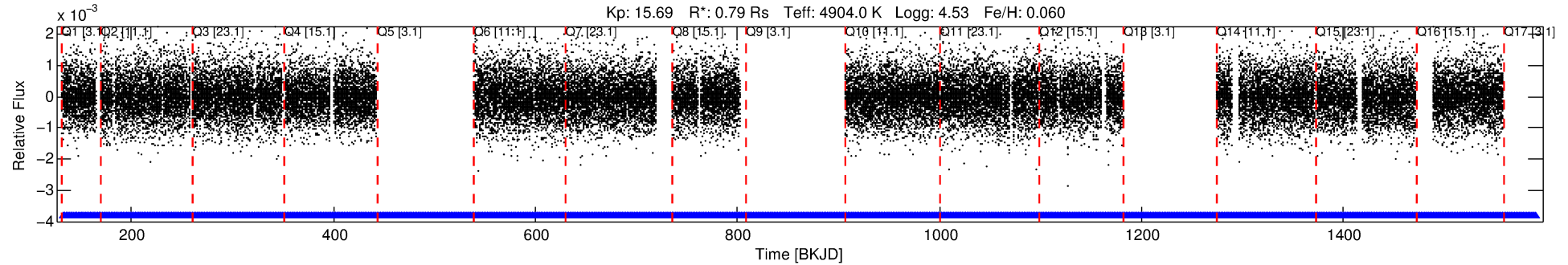
Ephemeris Match Information For 006185496-01

No Significant Match Found

DV One-Page Summary

KIC: 6185496 Candidate: 1 of 2 Period: 0.949 d
KOI: K02858 Corr: No Ephemeris Match

Kp: 15.69 R*: 0.79 Rs Teff: 4904.0 K Logg: 4.53 Fe/H: 0.060



DV Fit Results:

Period = 0.94926 [0.00000] d
Epoch = 132.0190 [0.0010] BKJD
Rp/R* = 0.0183 [0.0096]
a/R* = 2.64 [4.56]
b = 0.90 [0.44]
Seff = 1076.96 [187.99]
Teq = 1461 [64] K
Rp = 1.57 [0.84] Re
a = 0.0172 [0.0015] AU
Ag = 14.85 [15.67] [0.88σ]
Teff = 4434 [1168] K [2.54σ]

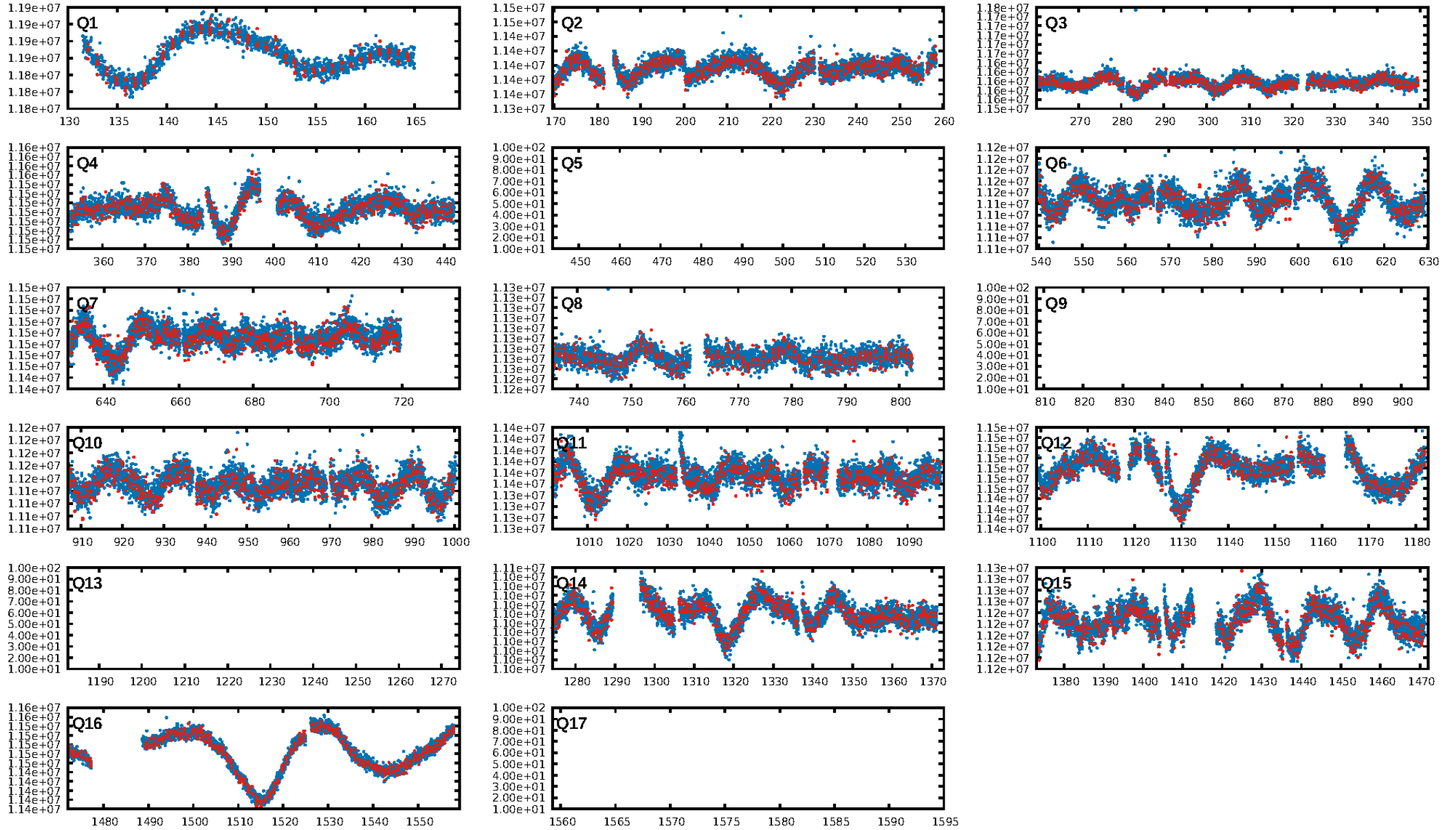
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.82e-61
RollingBand-fgt: 1.00 [1058/1058]
GhostDiagnostic-chr: 1.702
Centroid-sig: 0.0%
Centroid-so: 6.289 arcsec [8.62σ]
OotOffset-rm: 3.684 arcsec [16.48σ]
KicOffset-rm: 3.726 arcsec [17.33σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

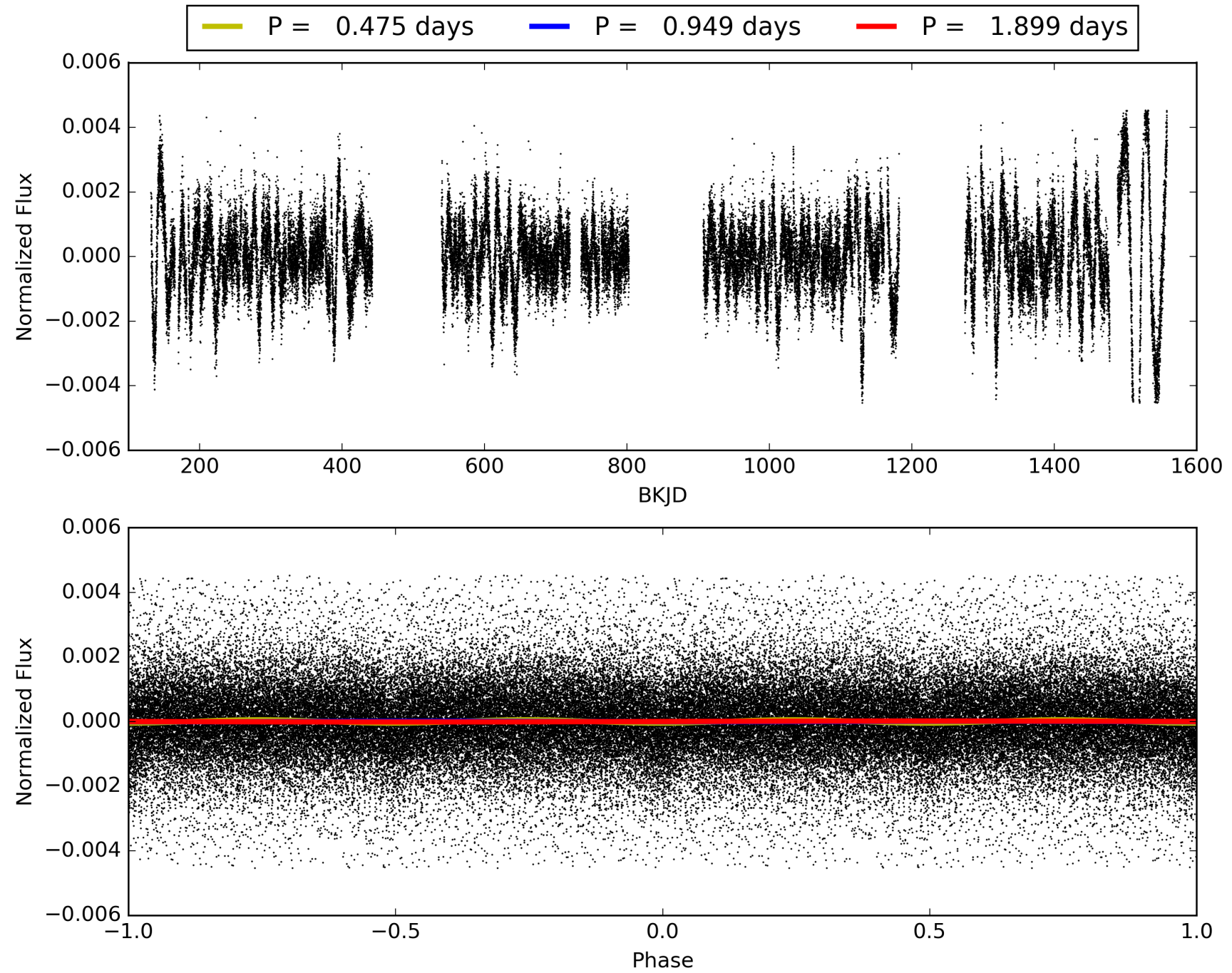
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:45:36 Z

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

TCE 006185496-01, PDC Light Curves

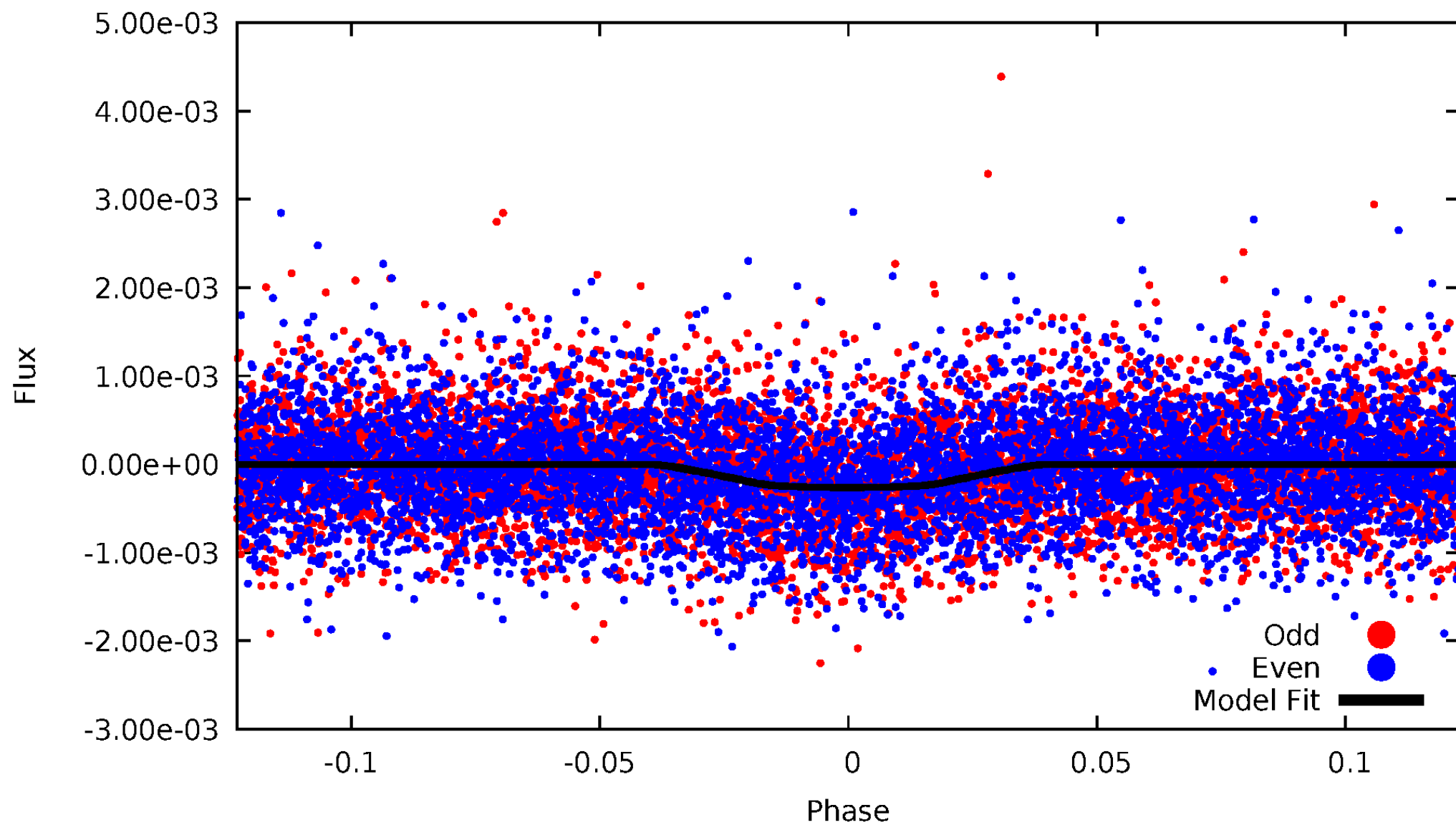


TCE 006185496-01



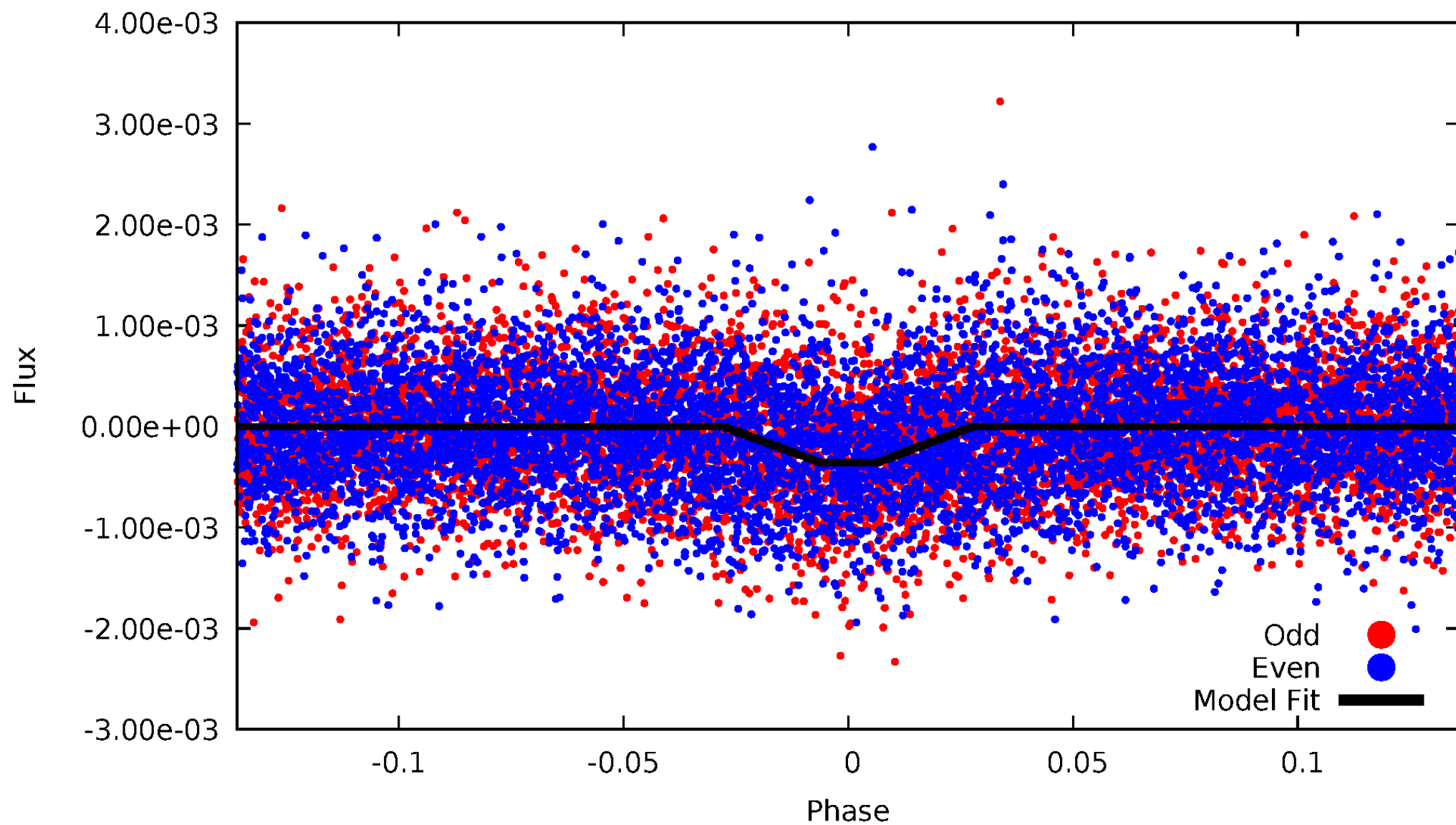
DV Odd/Even

TCE 006185496-01

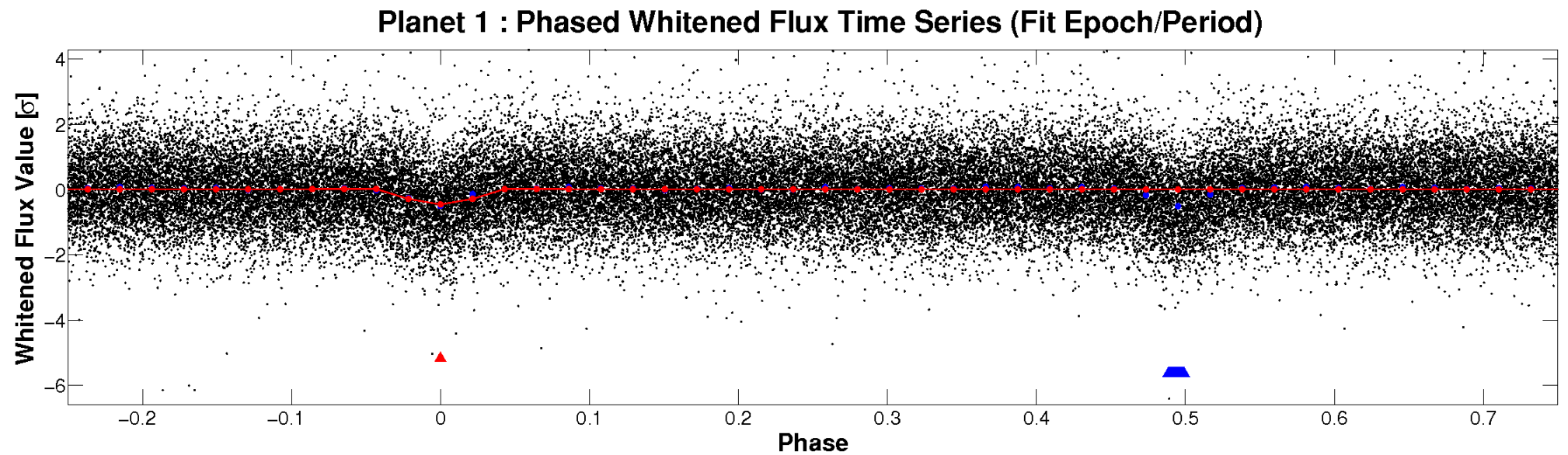
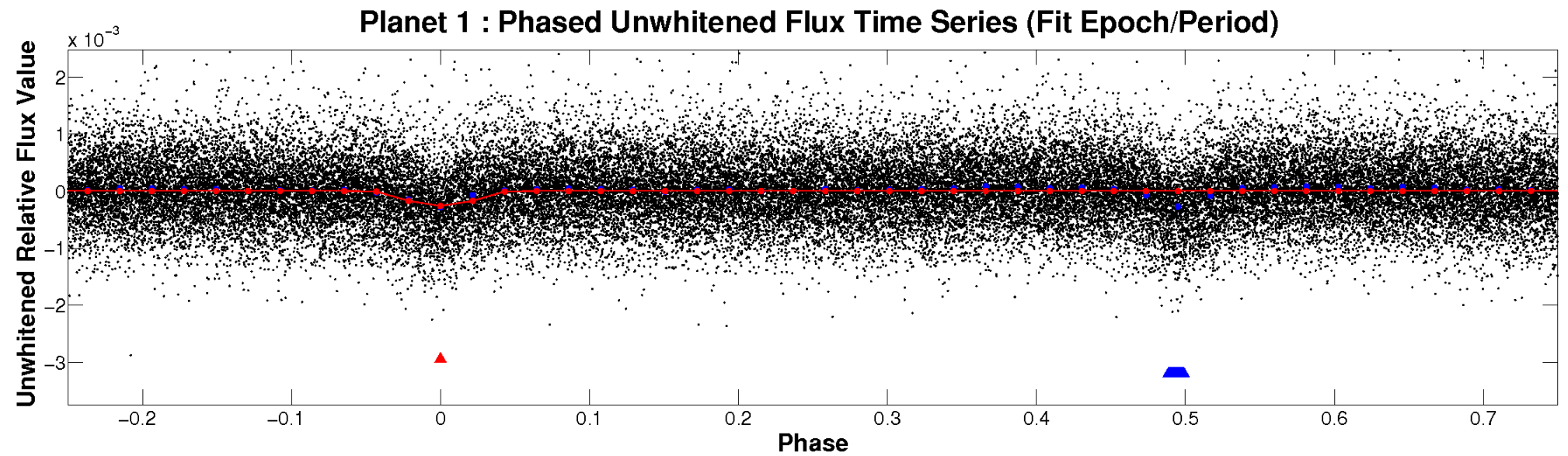


ALT Odd/Even

TCE 006185496-01

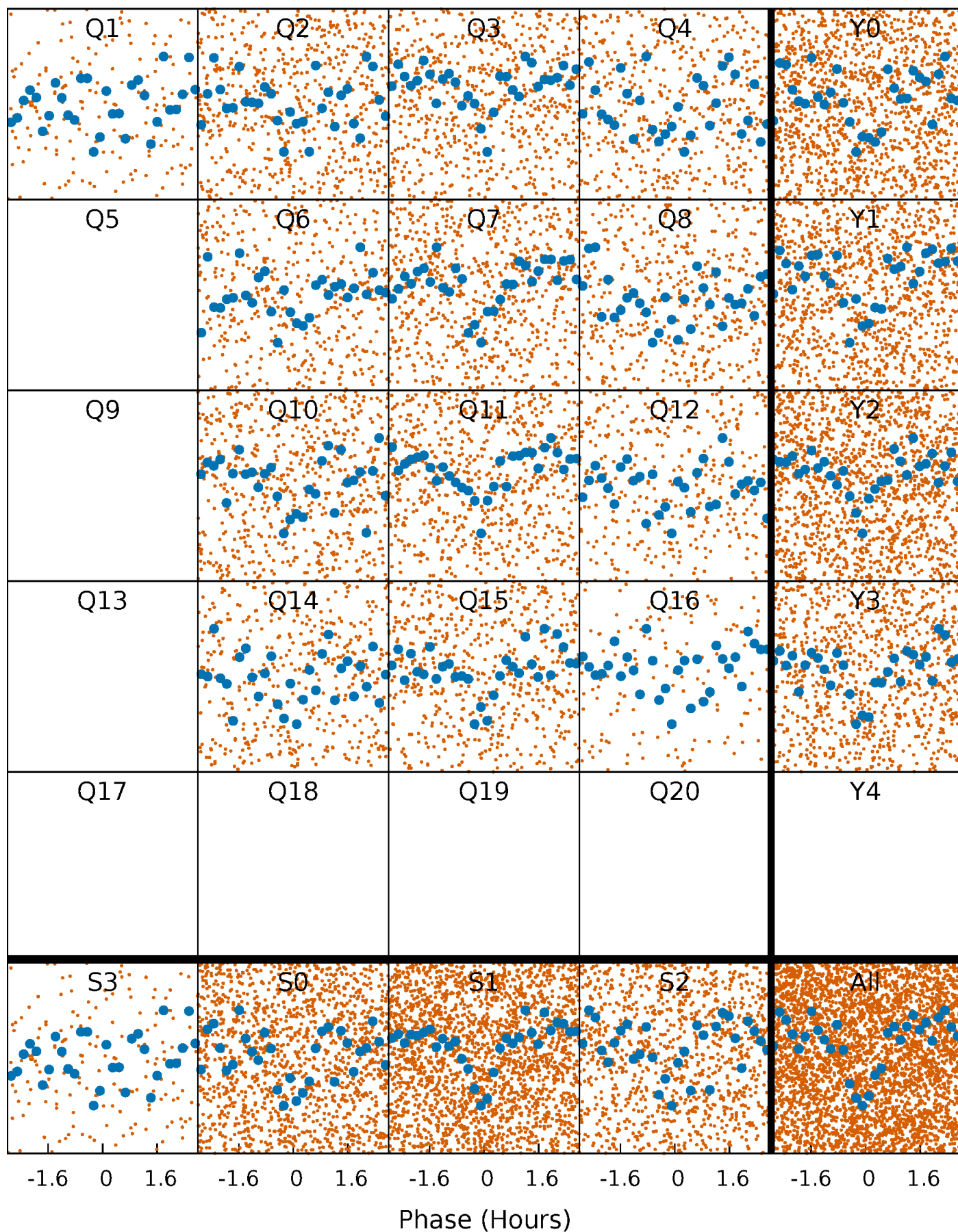


Non-Whitened Vs. Whitened Light Curve



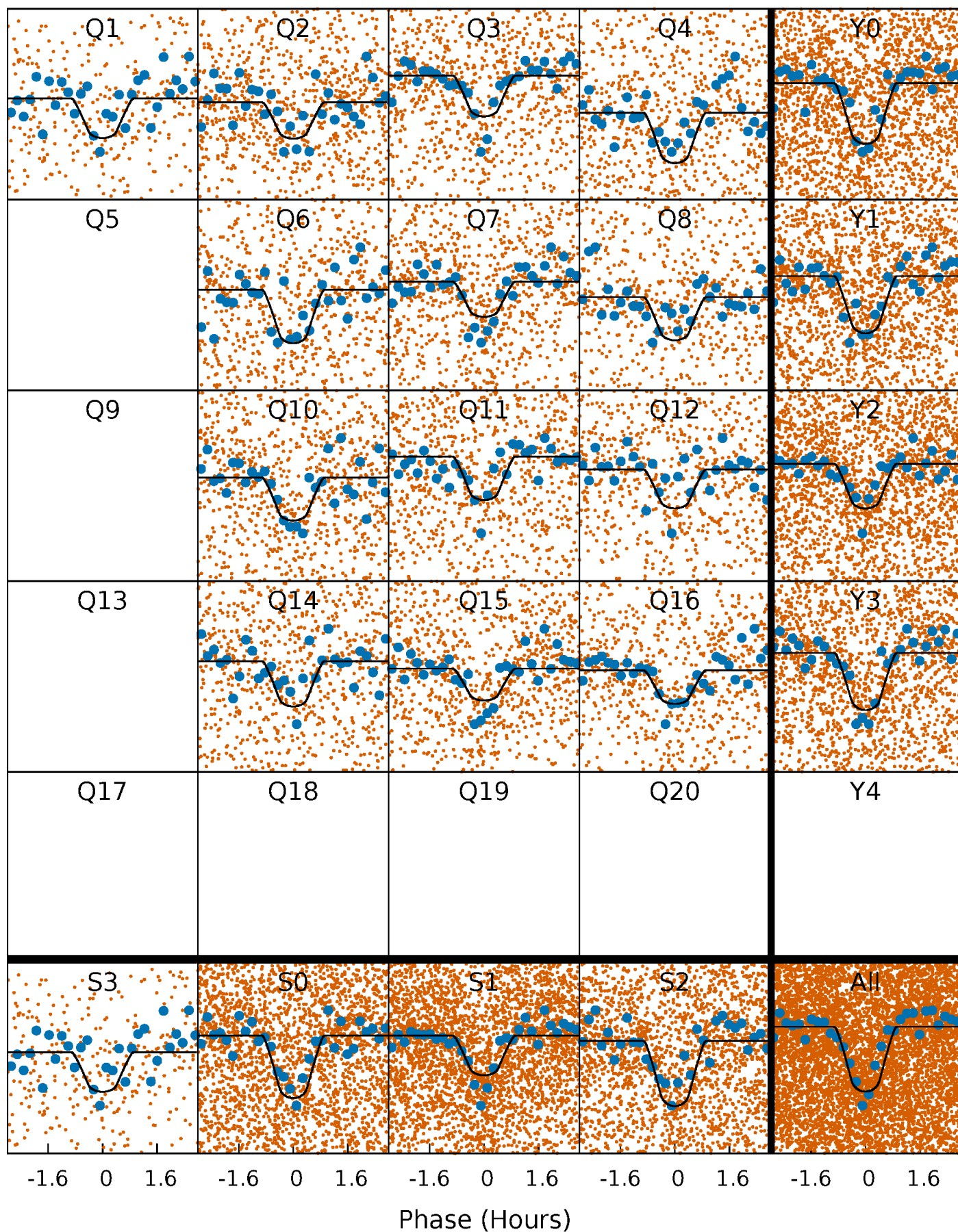
PDC Quarter-Phased Transit Curves

TCE 006185496-01 P= 0.949260 Days $T_0=132.018955$ (BKJD)



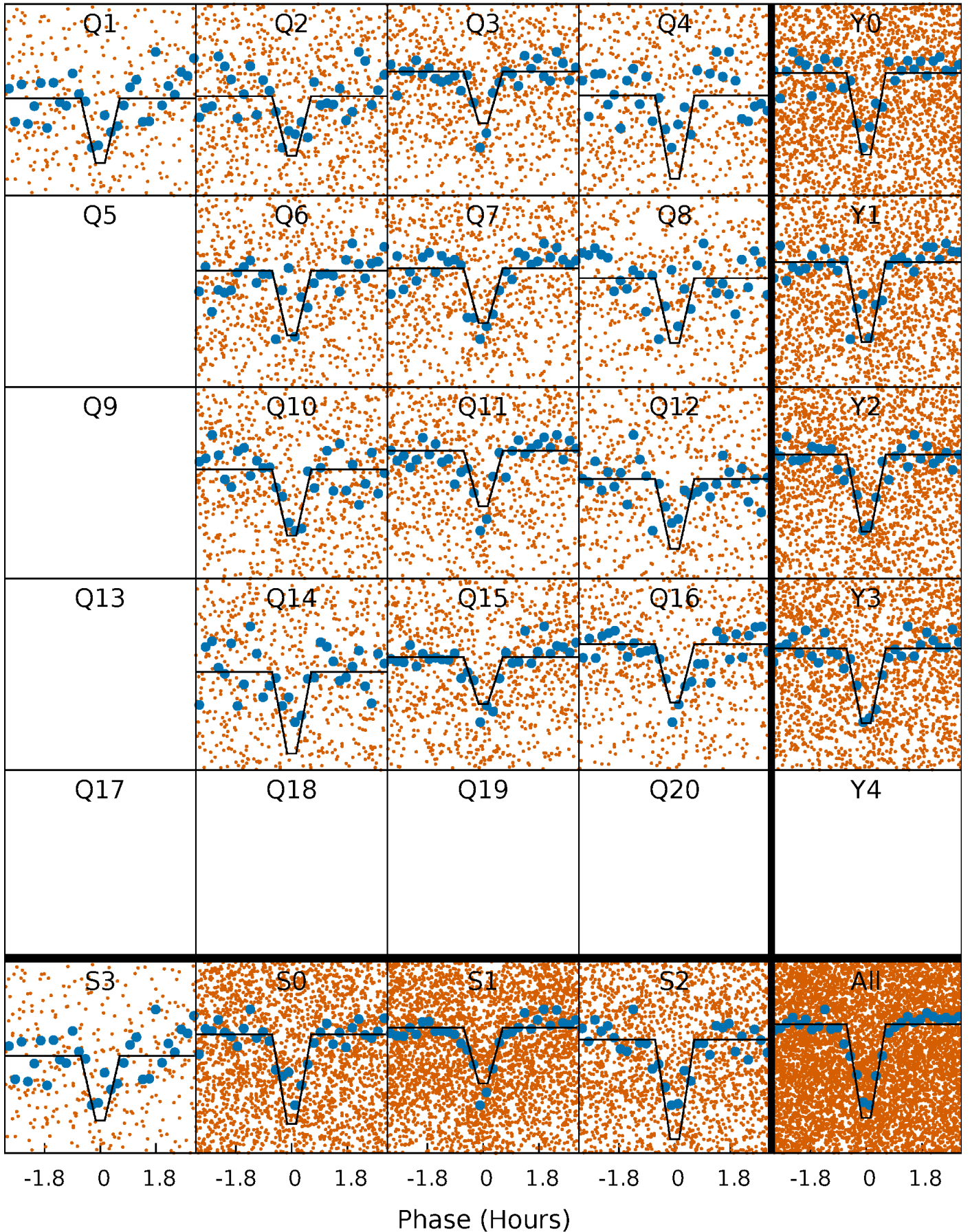
DV Quarter-Phased Transit Curves

TCE 006185496-01 P= 0.949260 Days $T_0=132.018955$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

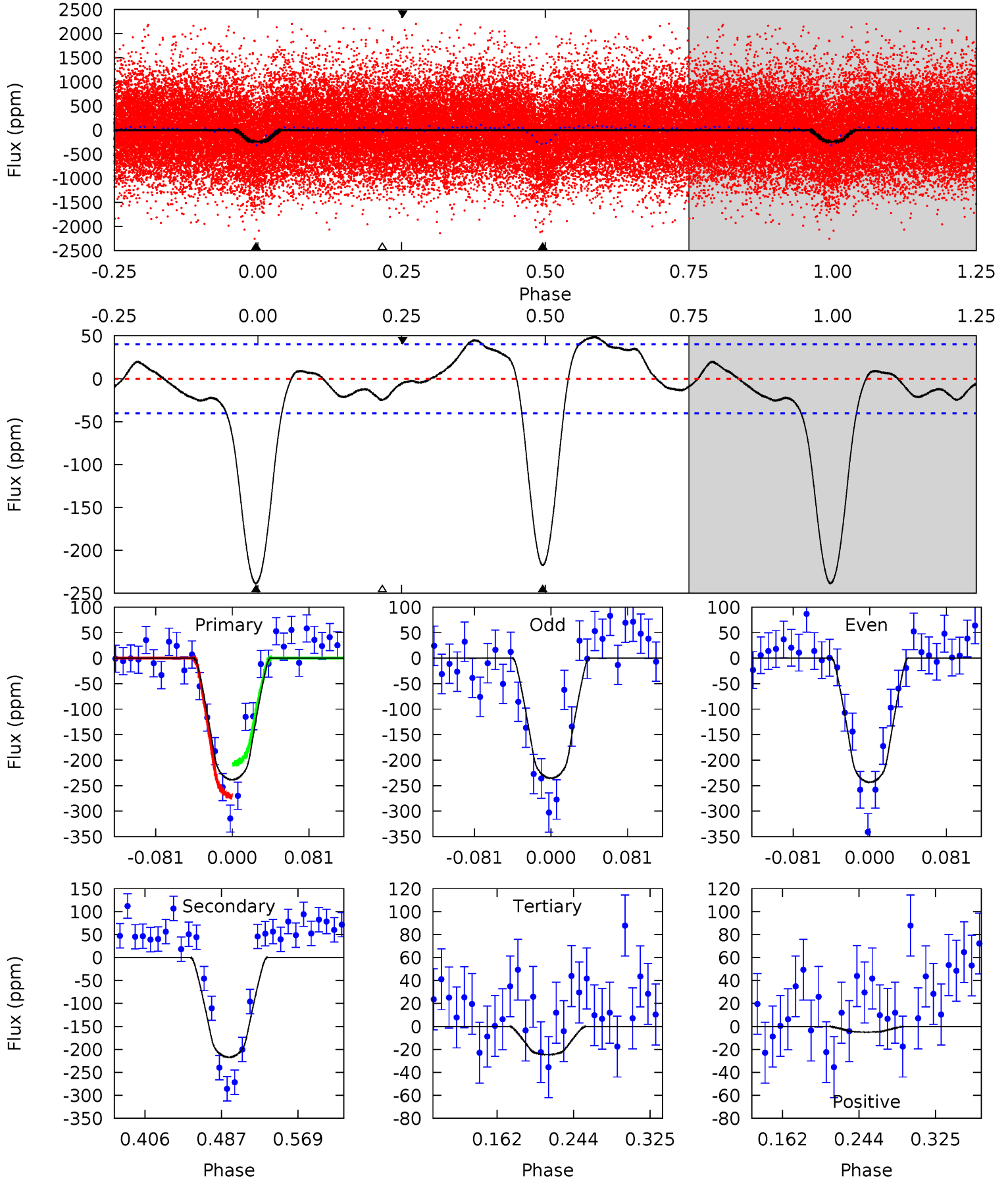
TCE 006185496-01 P= 0.949256 Days $T_0=132.019373$ (BKJD)



DV Model-Shift Uniqueness Test

006185496-01, P = 0.949260 Days, E = 131.069695 Days

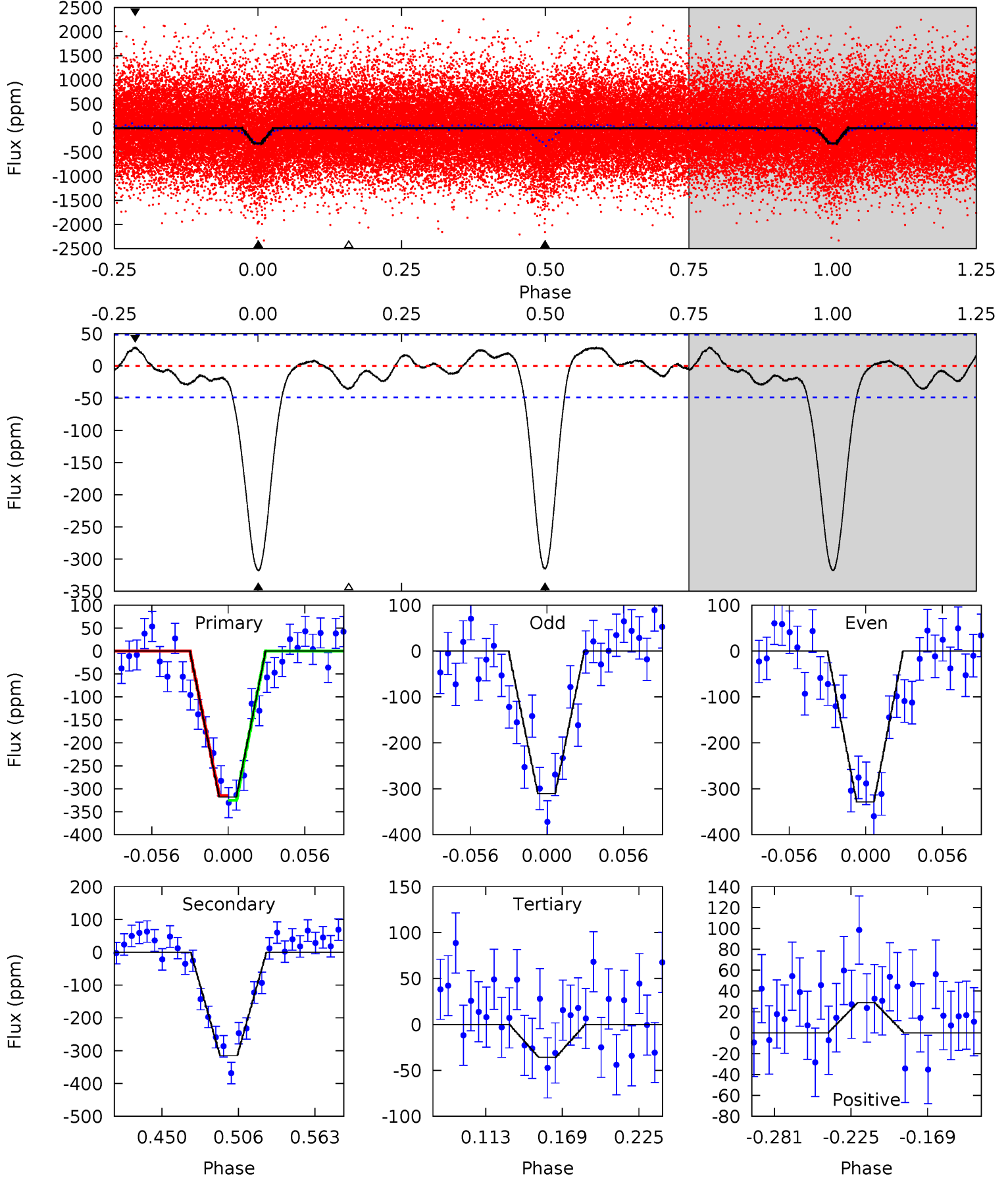
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	24.9	2.82	-0.57	4.61	1.74	2.47	24.5	27.9	22.1	25.5	0.46	0.97	0.17	3.68



Alt Model-Shift Uniqueness Test

006185496-01, P = 0.949256 Days, E = 131.070117 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	30.3	3.43	2.76	4.68	1.91	1.50	27.1	27.8	26.8	27.5	0.85	0.91	0.08	0.51



Stellar Parameters For KIC 006185496

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4904^{+145}_{-145}	$4.527^{+0.072}_{-0.048}$	$0.060^{+0.250}_{-0.300}$	$0.786^{+0.056}_{-0.077}$	$0.758^{+0.076}_{-0.055}$	$2.199^{+0.663}_{-0.355}$
	+3%/-3%	+2%/-1%	+417%/-500%	+7%/-10%	+10%/-7%	+30%/-16%
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 006185496-01 / KOI 2858.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-217 ± 9	$1.58^{+0.80}_{-0.78}$	2040^{+74}_{-82}	4474^{+1550}_{-660}	14^{+40}_{-8}
Alt.	-315 ± 10	$1.63^{+0.77}_{-0.74}$	2034^{+75}_{-79}	4760^{+1476}_{-712}	19^{+43}_{-10}

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

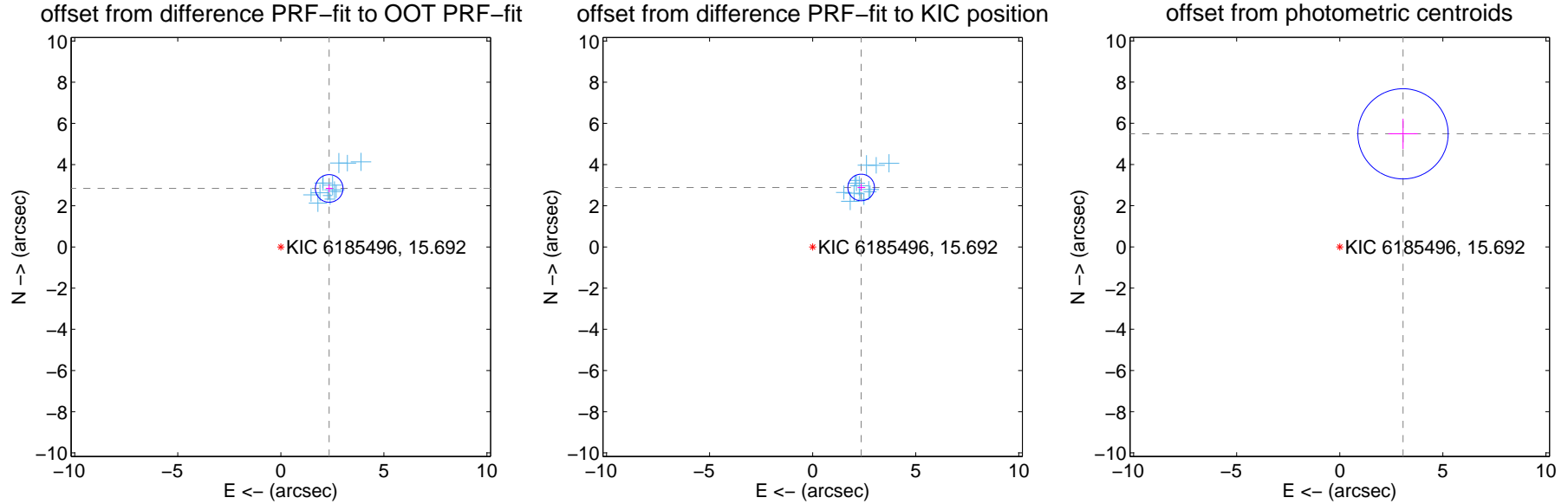
DV Centroid Data

Supplemental centroid analysis for 006185496-01. Kepler magnitude: 15.69. Transit SNR 20.08

There are 13 quarters with good PRF difference image offsets

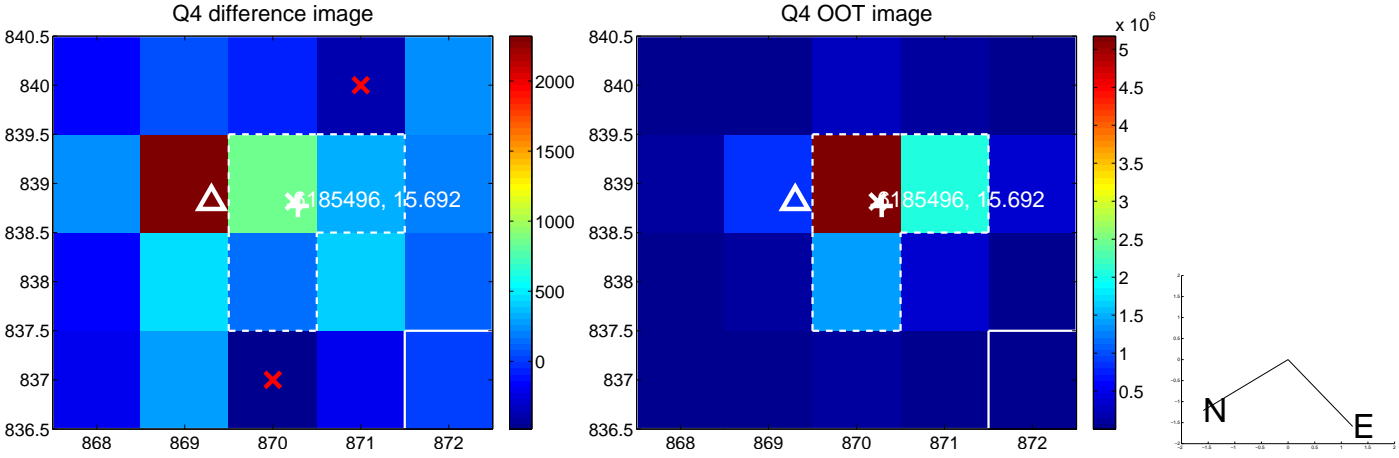
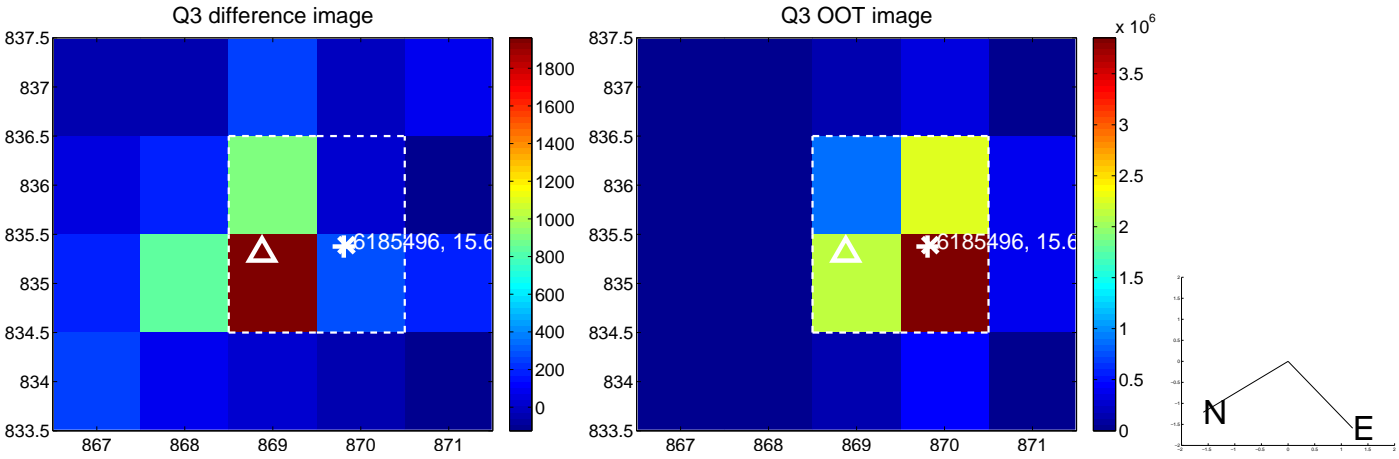
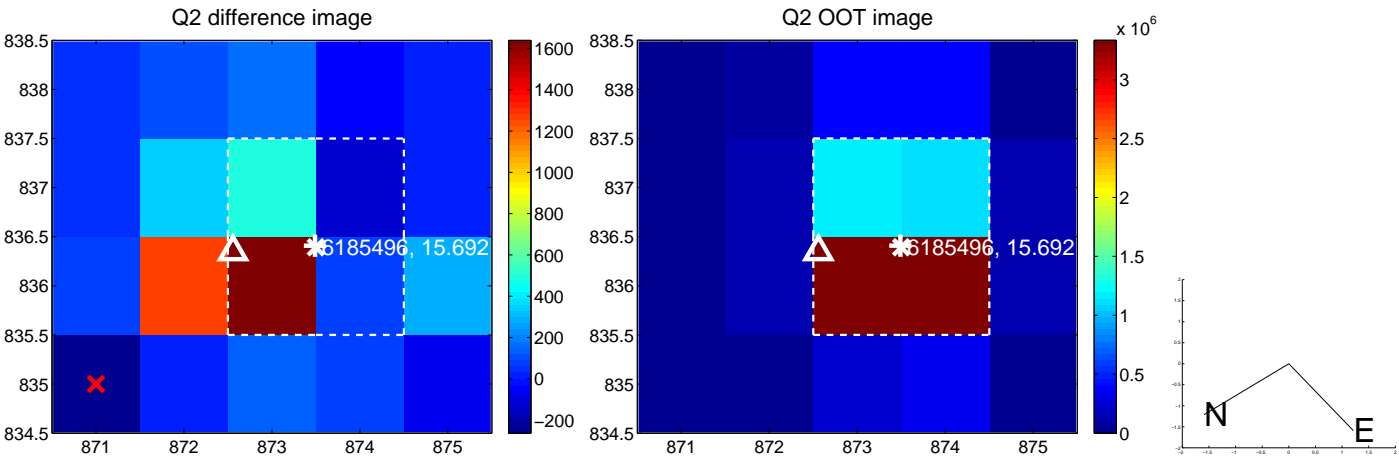
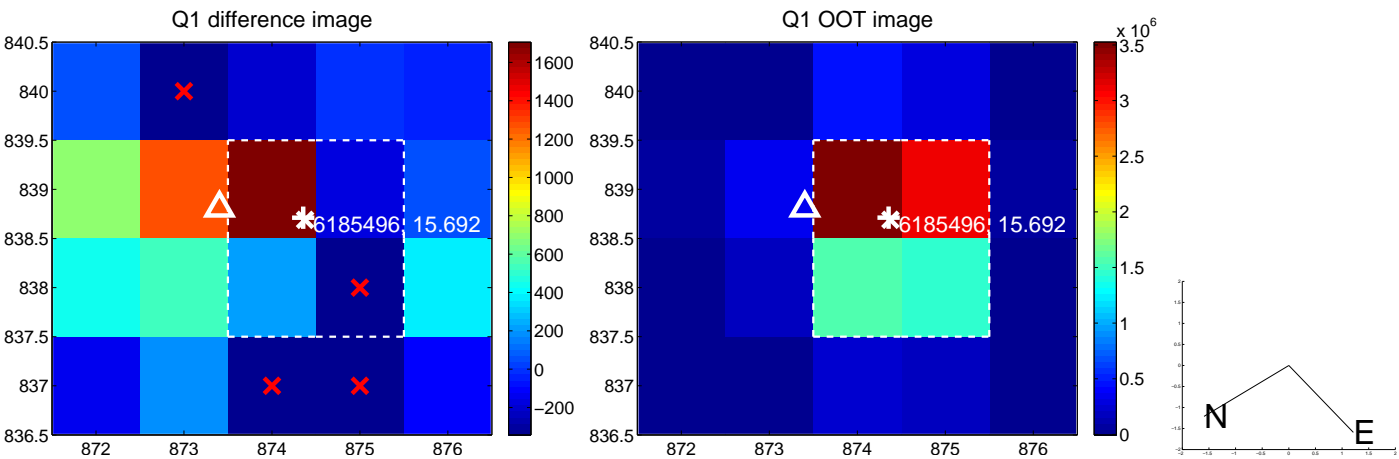
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.684 ± 0.223	16.48	-2.344 ± 0.166	2.842 ± 0.186
PRF-fit source offset from KIC position	3.726 ± 0.215	17.33	-2.353 ± 0.170	2.888 ± 0.173
photometric centroid source offset	6.29 ± 0.73	8.62	-3.07 ± 0.71	5.49 ± 0.74

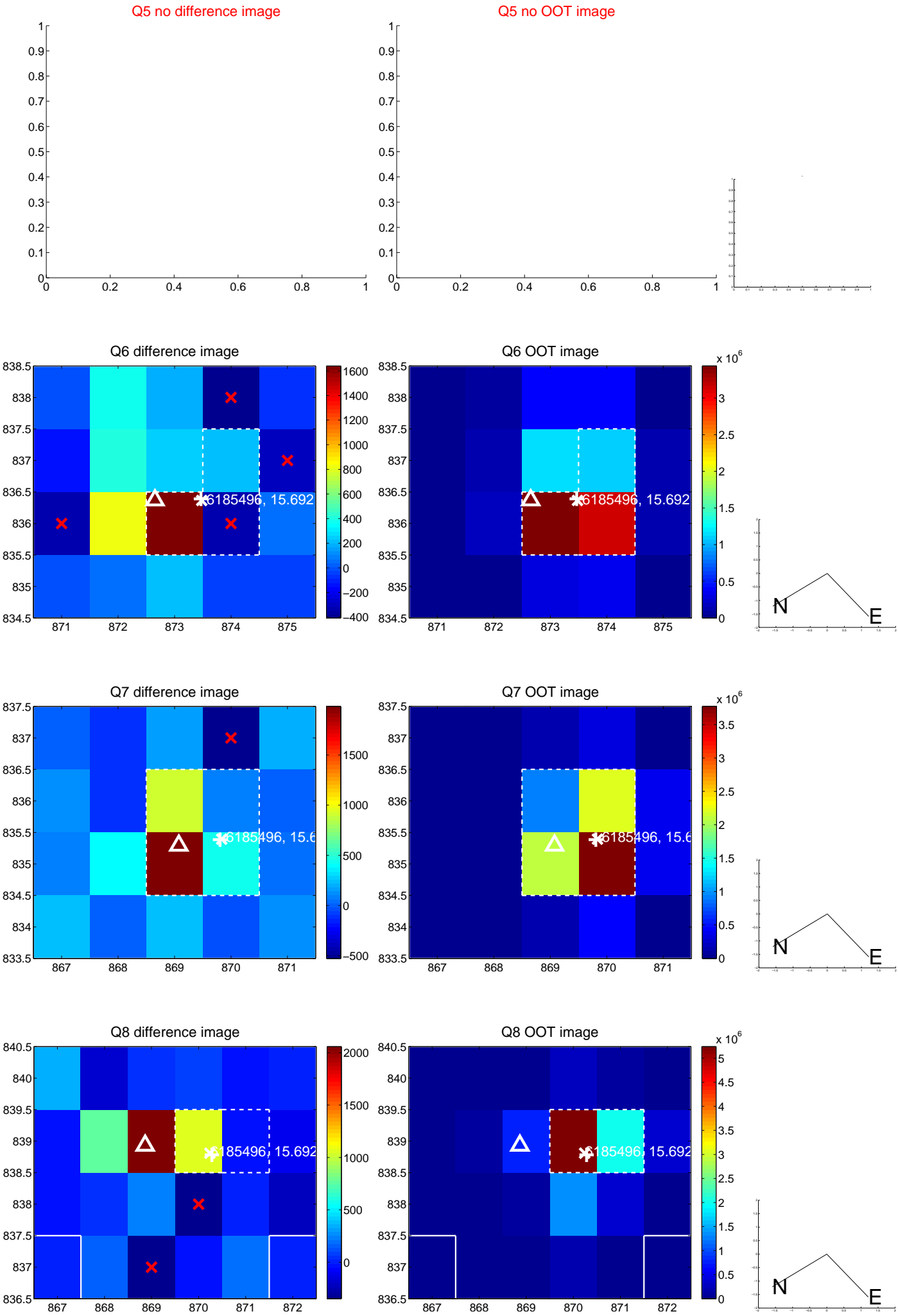


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

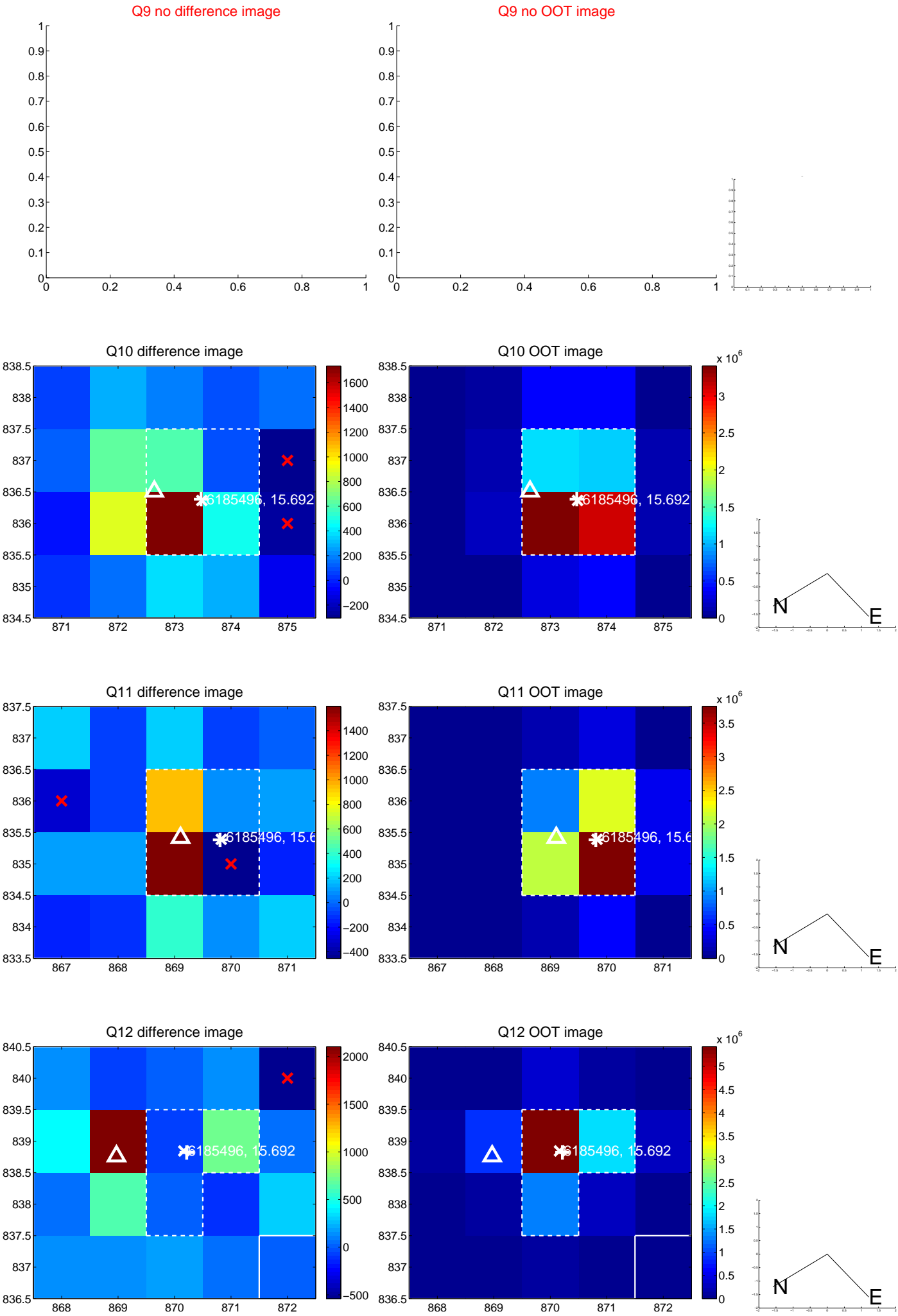
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



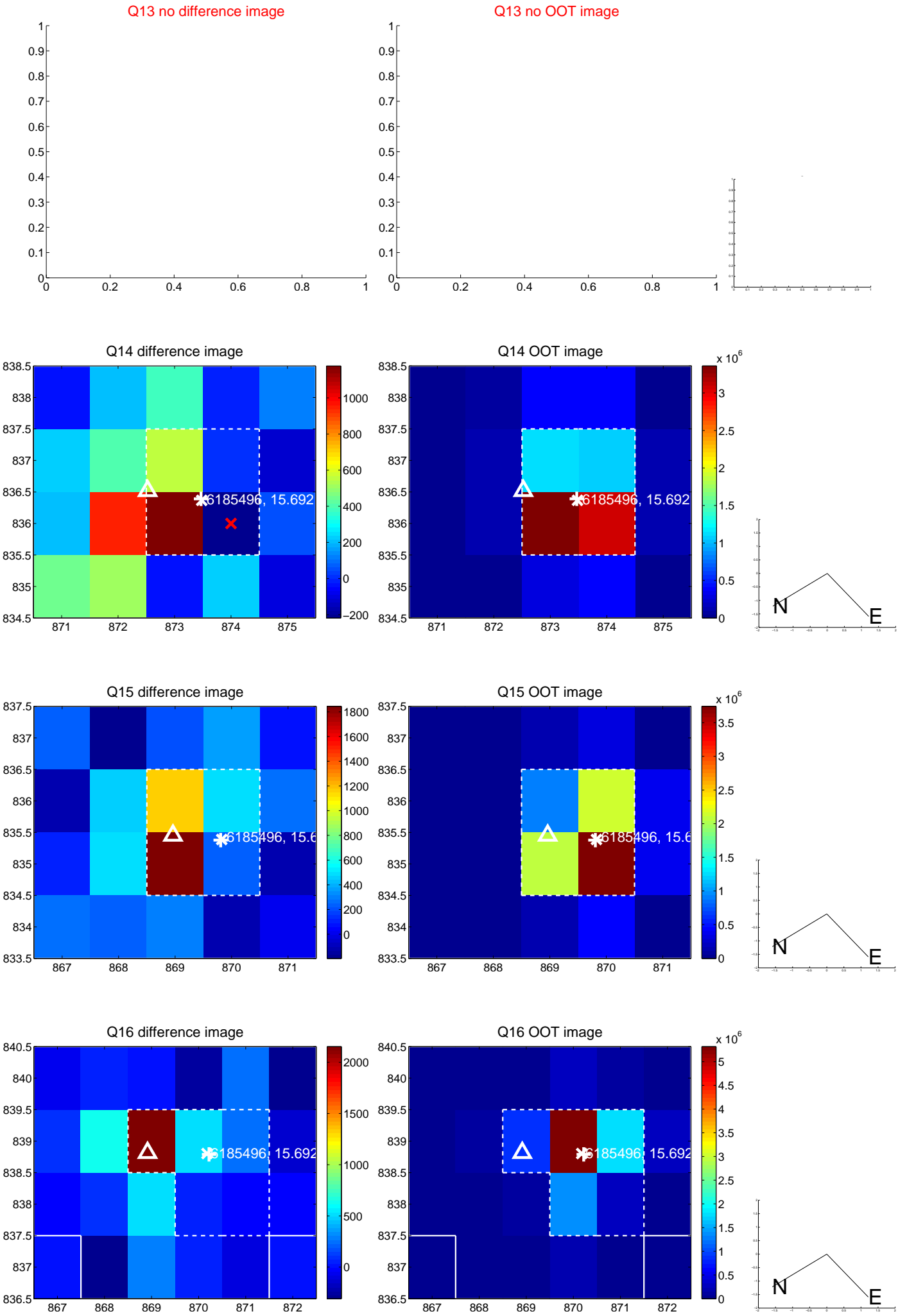
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



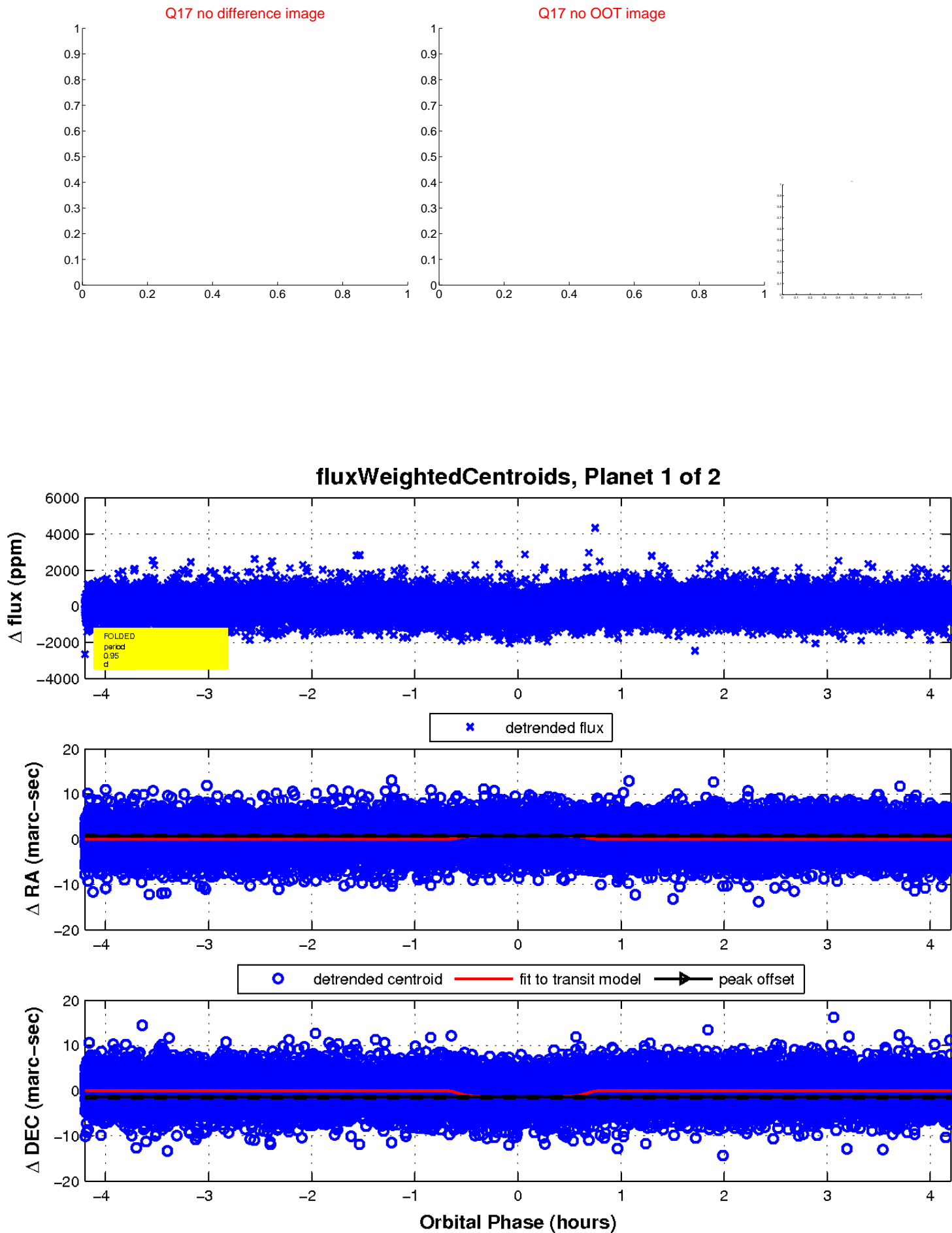
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

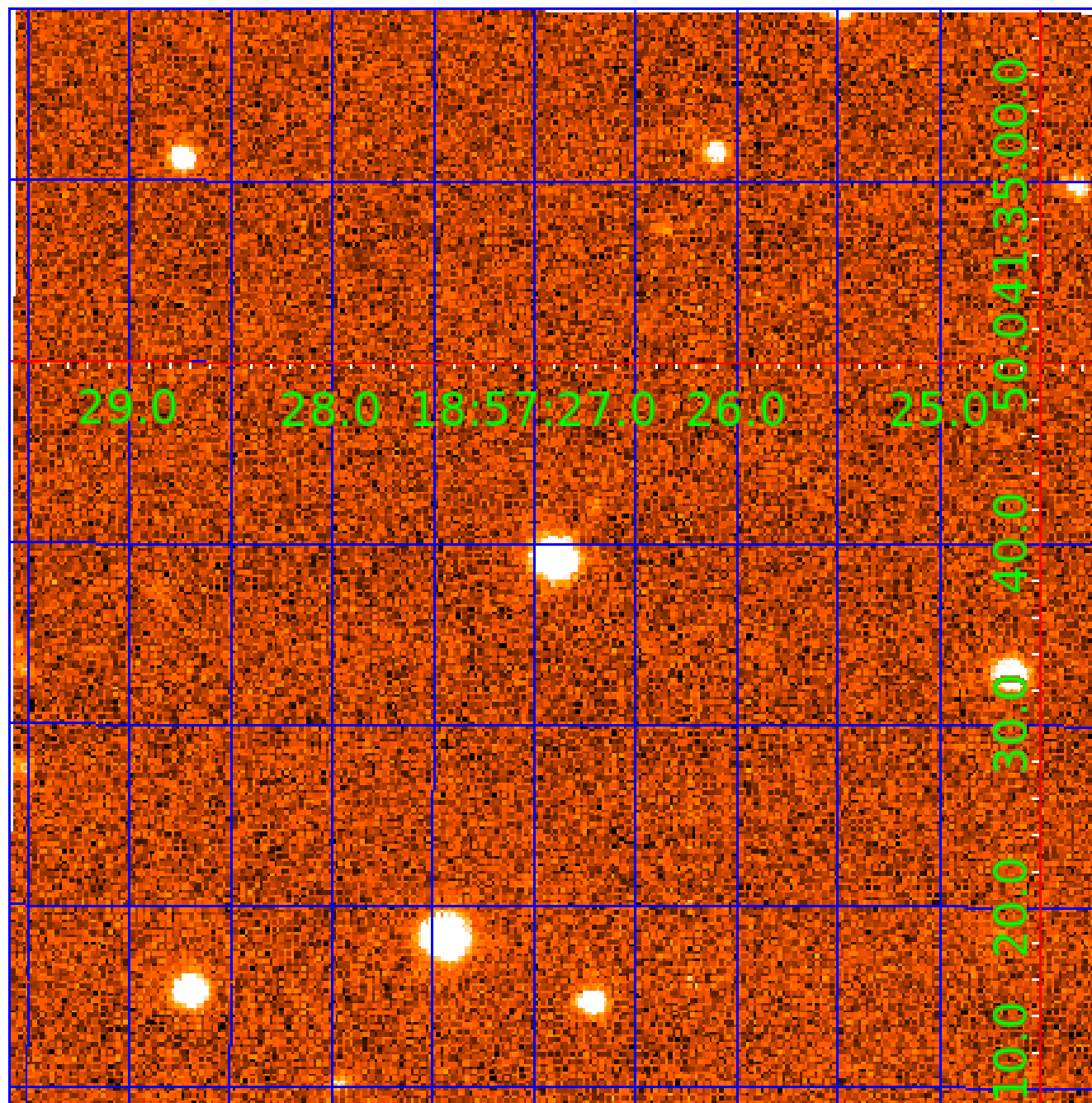


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006185496

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})
006185496-01	OBS	2858.01	0.949260	132.018955	264.7	1.400	16.6	20.1	0.79	4904	1.57	1076.95
006185496-02	OBS	No	0.949253	131.543512	274.2	1.224	16.5	19.9	0.79	4904	1.61	1076.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006185496-01	OBS	FP	0.00	0	0	1	0	MOD_SEC_DV—MOD_SEC_ALT—PLANET_PERIOD_IS_HALF_ALT—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
006185496-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—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.

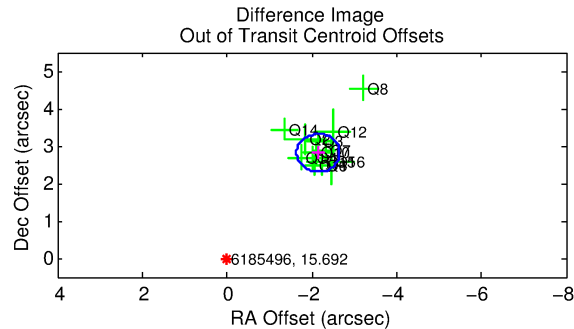
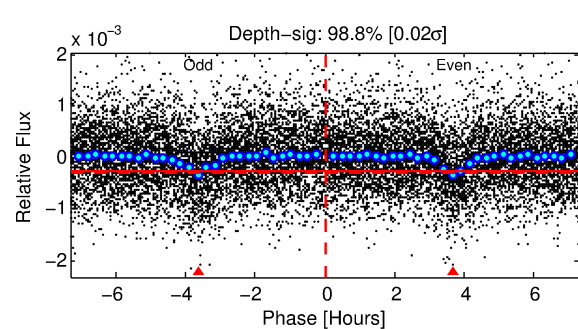
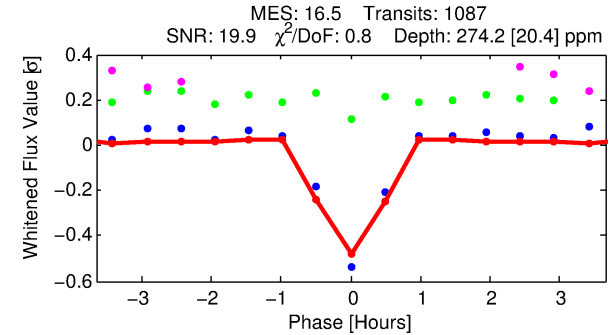
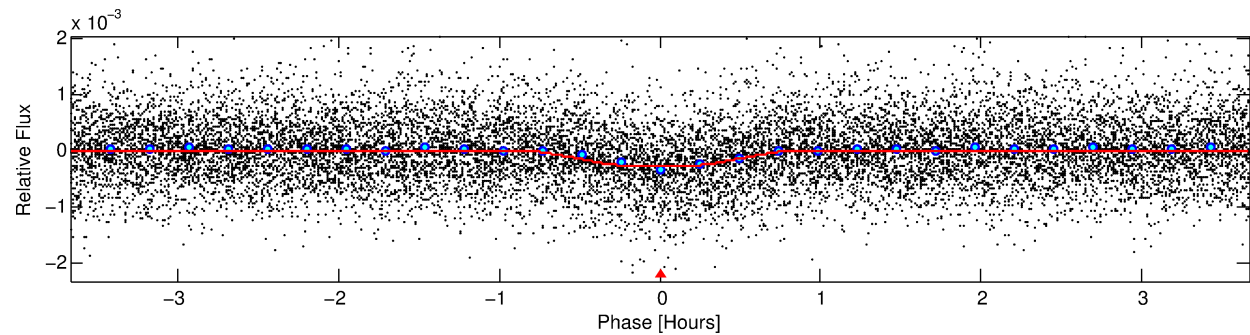
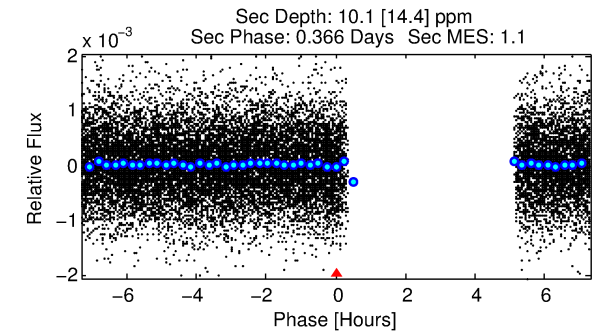
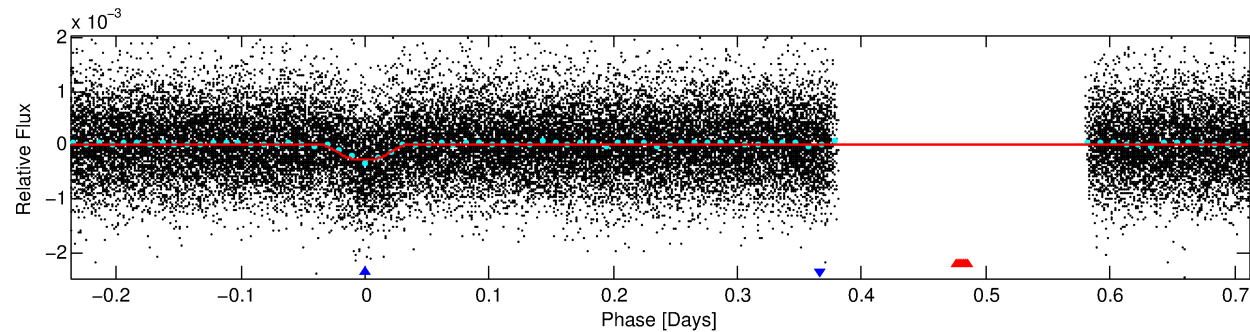
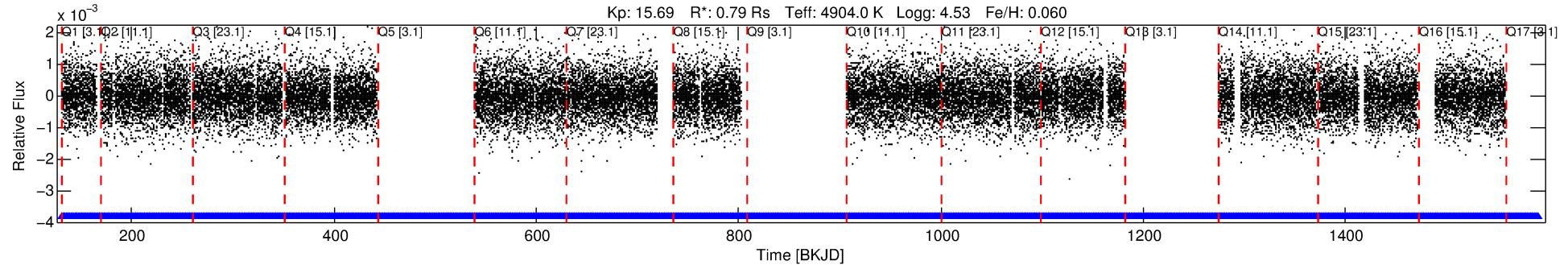
Ephemeris Match Information For 006185496-02

No Significant Match Found

DV One-Page Summary

KIC: 6185496 Candidate: 2 of 2 Period: 0.949 d
KOI: K02858 Corr: No Ephemeris Match

Kp: 15.69 R*: 0.79 Rs Teff: 4904.0 K Logg: 4.53 Fe/H: 0.060



DV Fit Results:

Period = 0.94925 [0.00000] d
Epoch = 131.5435 [0.0010] BKJD
Rp/R* = 0.0187 [0.0105]
a/R* = 2.97 [5.69]
b = 0.90 [0.47]
Seff = 1076.97 [187.99]
Teq = 1461 [64] K
Rp = 1.61 [0.92] Re
a = 0.0172 [0.0015] AU
Ag = 0.64 [1.16] [-0.31σ]
Teffp = 2019 [921] K [0.60σ]

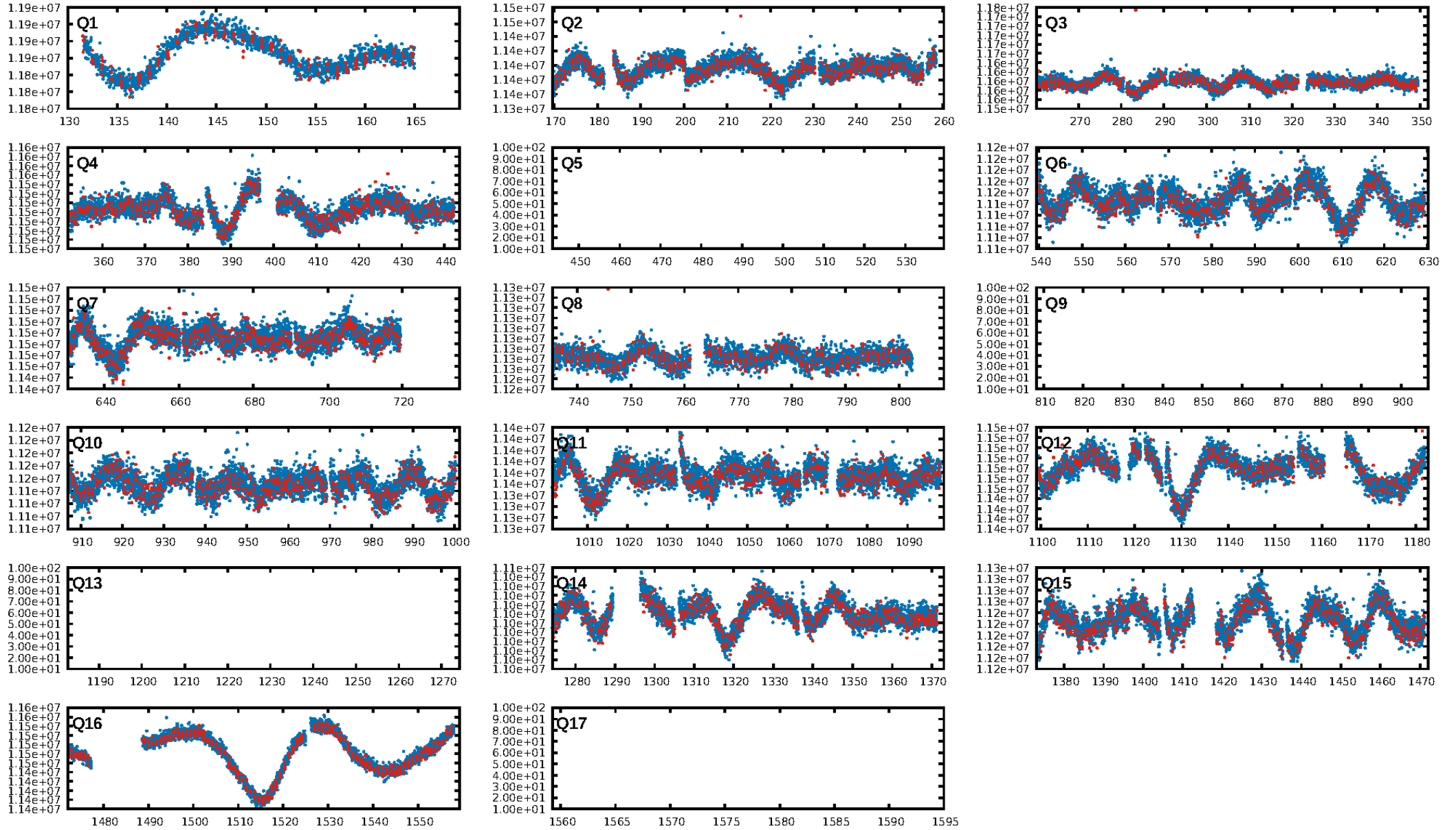
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.14e-60
RollingBand-fgt: 1.00 [1051/1051]
GhostDiagnostic-chr: 1.079
Centroid-sig: 0.0%
Centroid-so: 6.131 arcsec [8.09σ]
OotOffset-rm: 3.539 arcsec [20.91σ]
KicOffset-rm: 3.575 arcsec [22.55σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

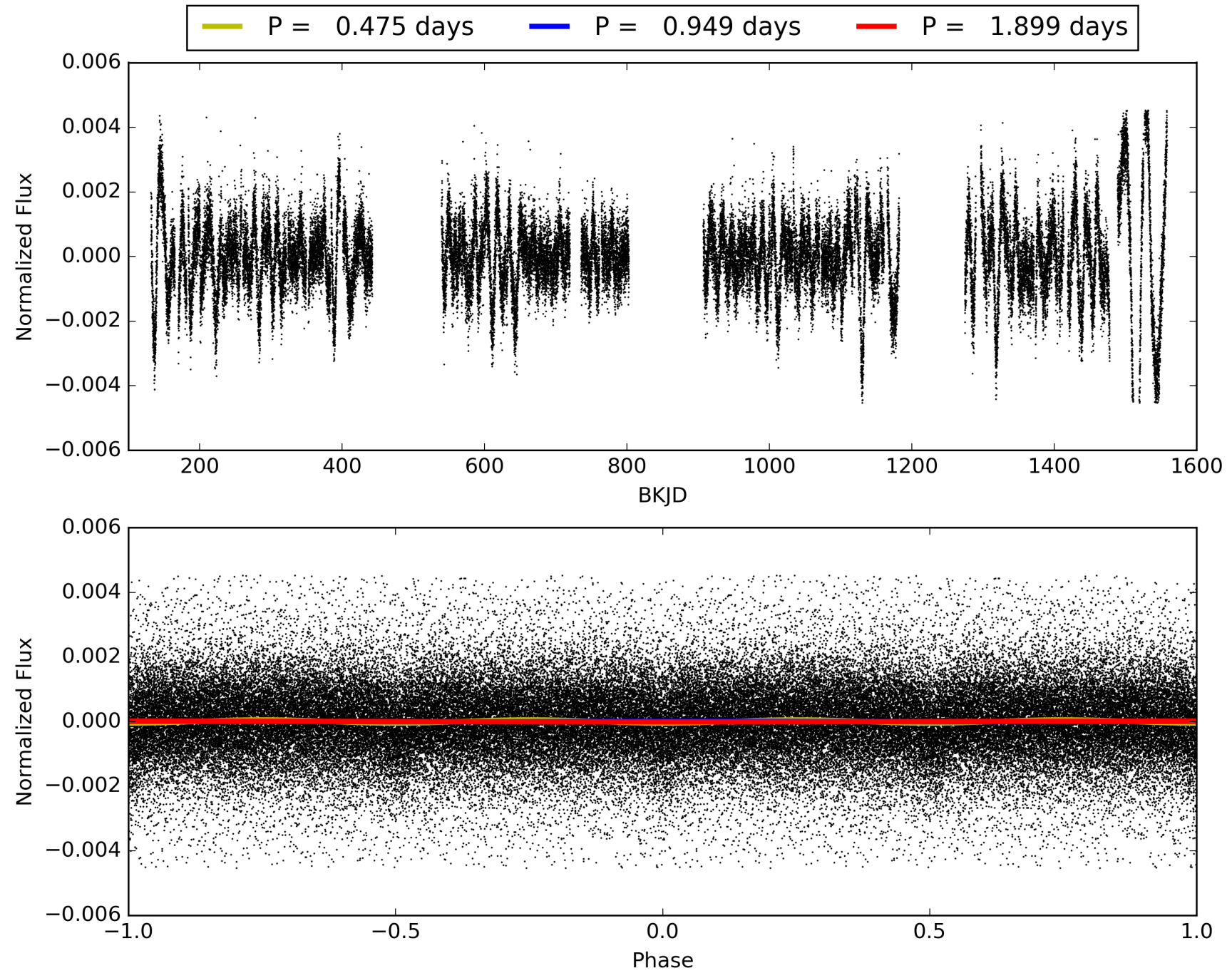
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:45:44 Z

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

TCE 006185496-02, PDC Light Curves

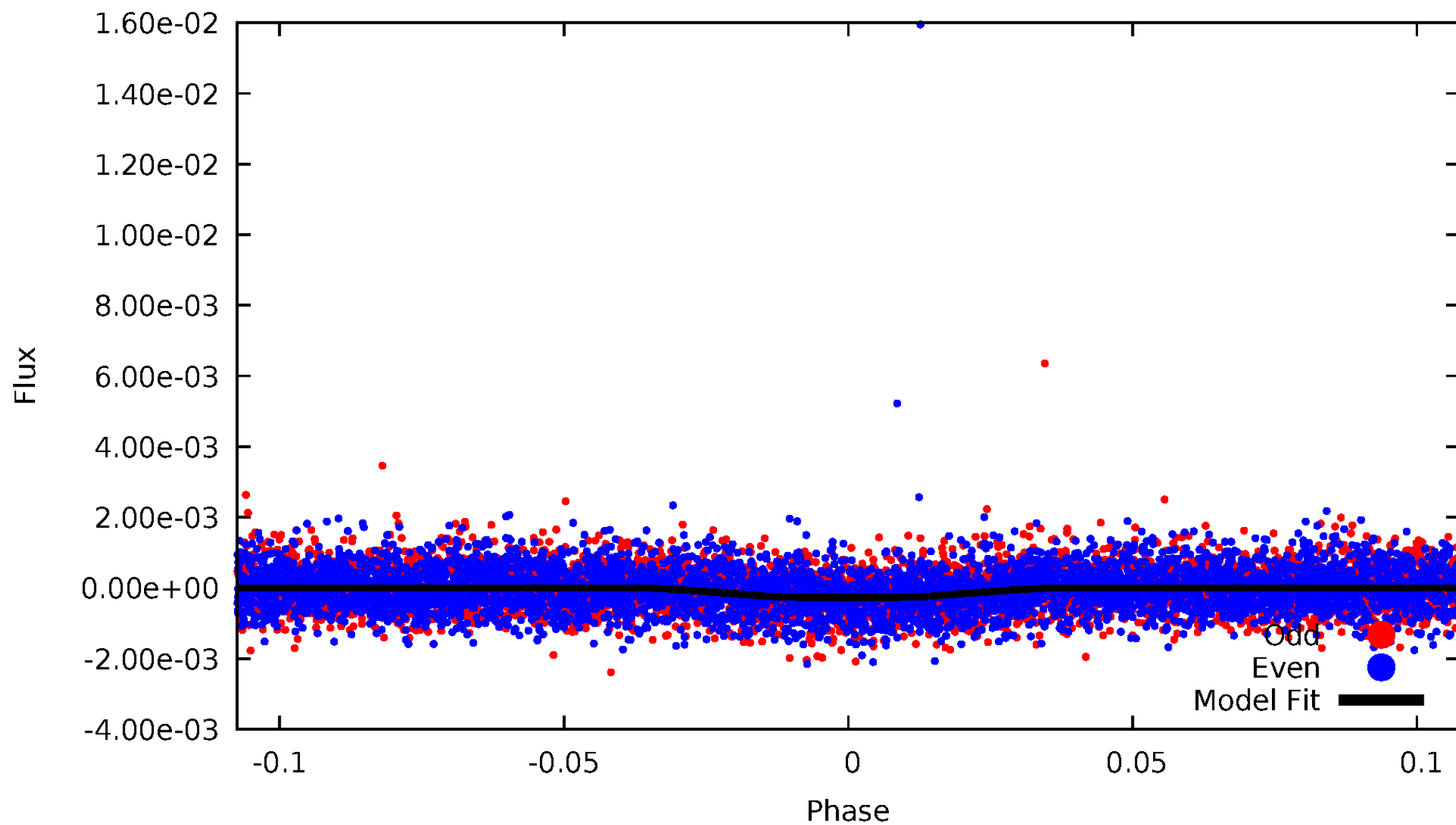


TCE 006185496-02



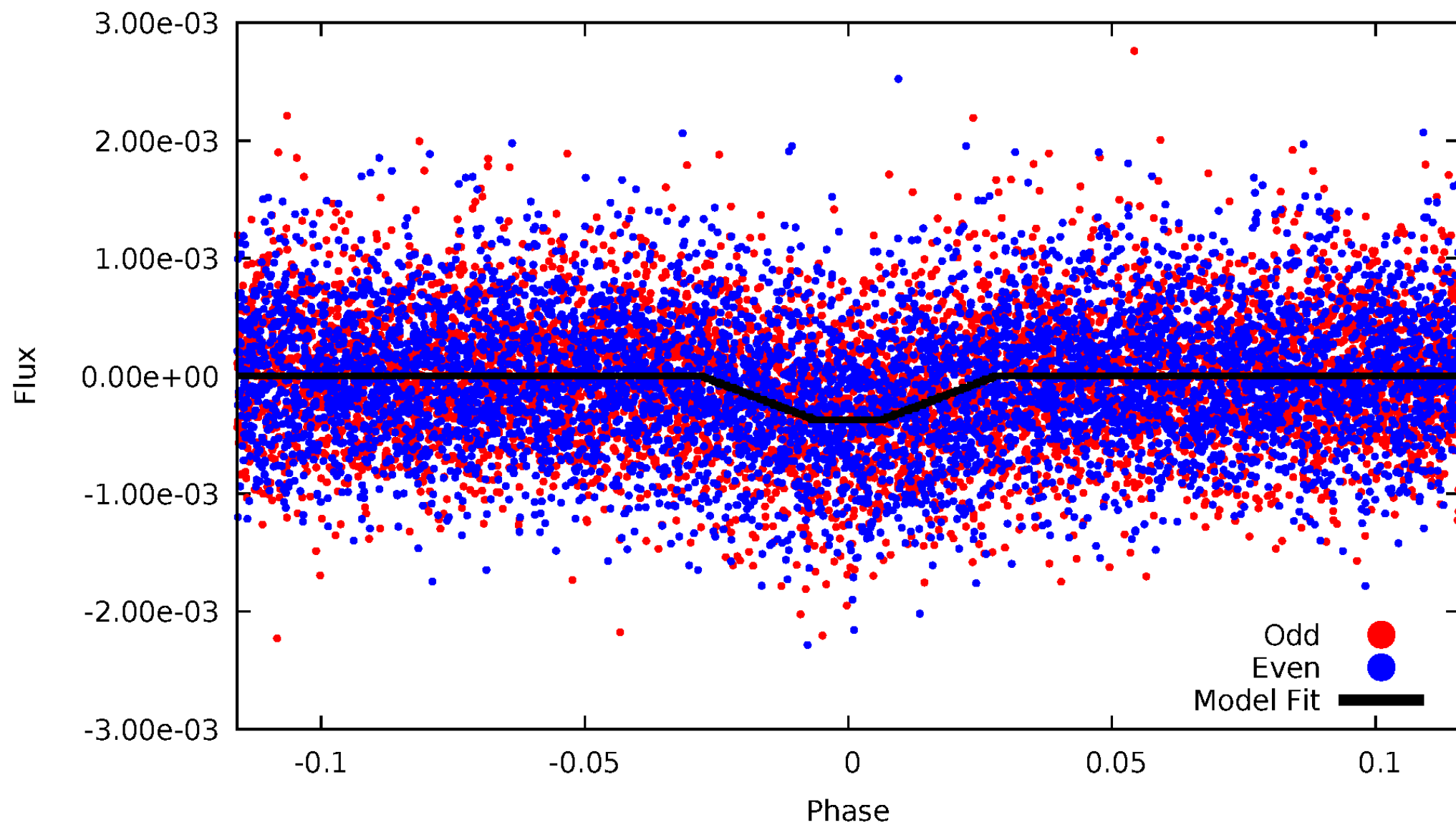
DV Odd/Even

TCE 006185496-02



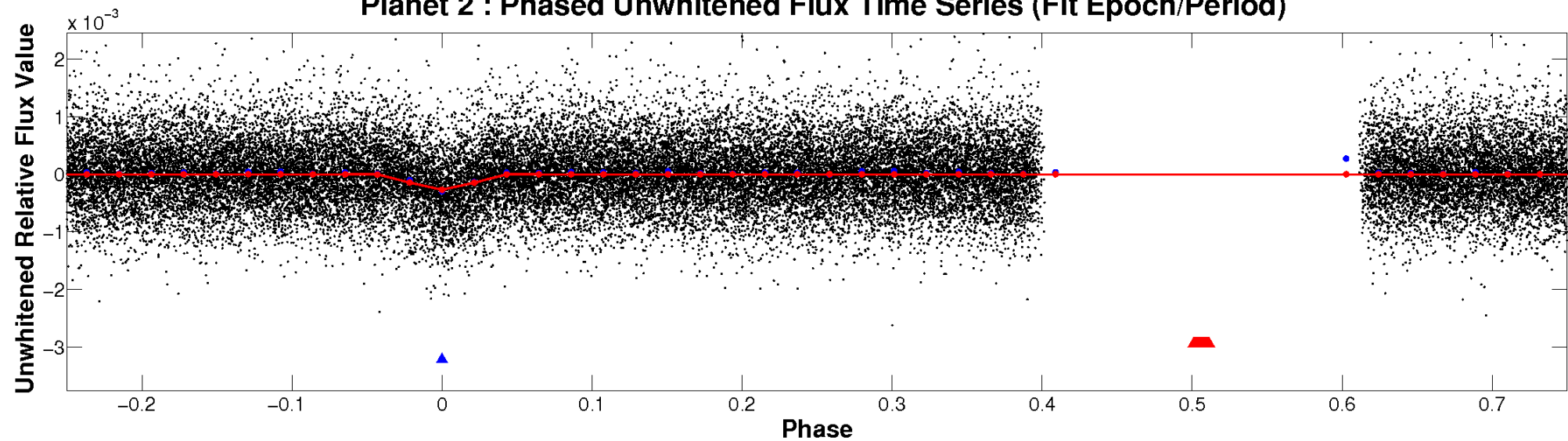
ALT Odd/Even

TCE 006185496-02

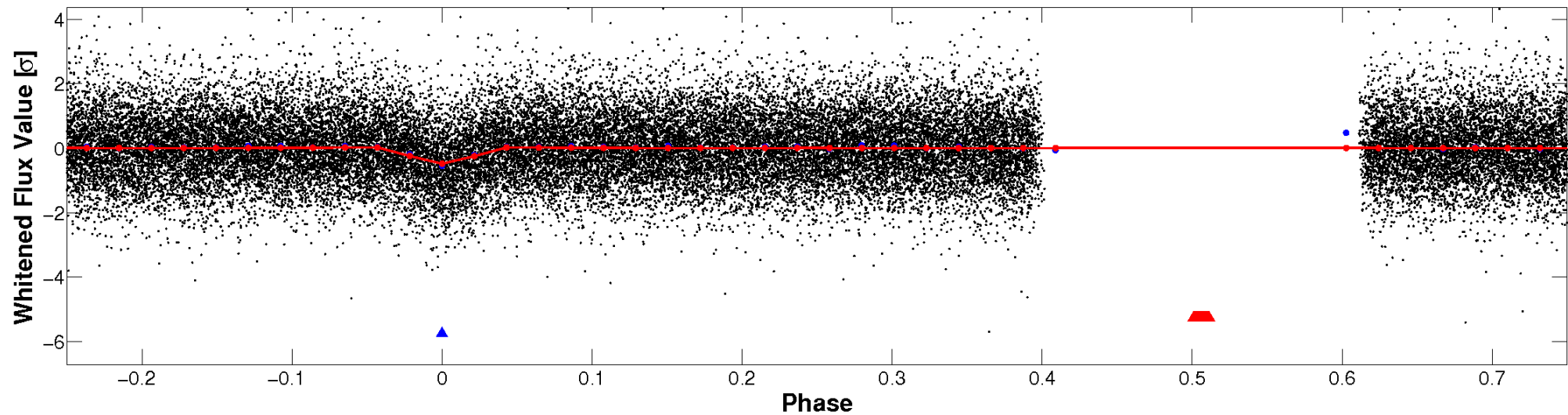


Non-Whitened Vs. Whitened Light Curve

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

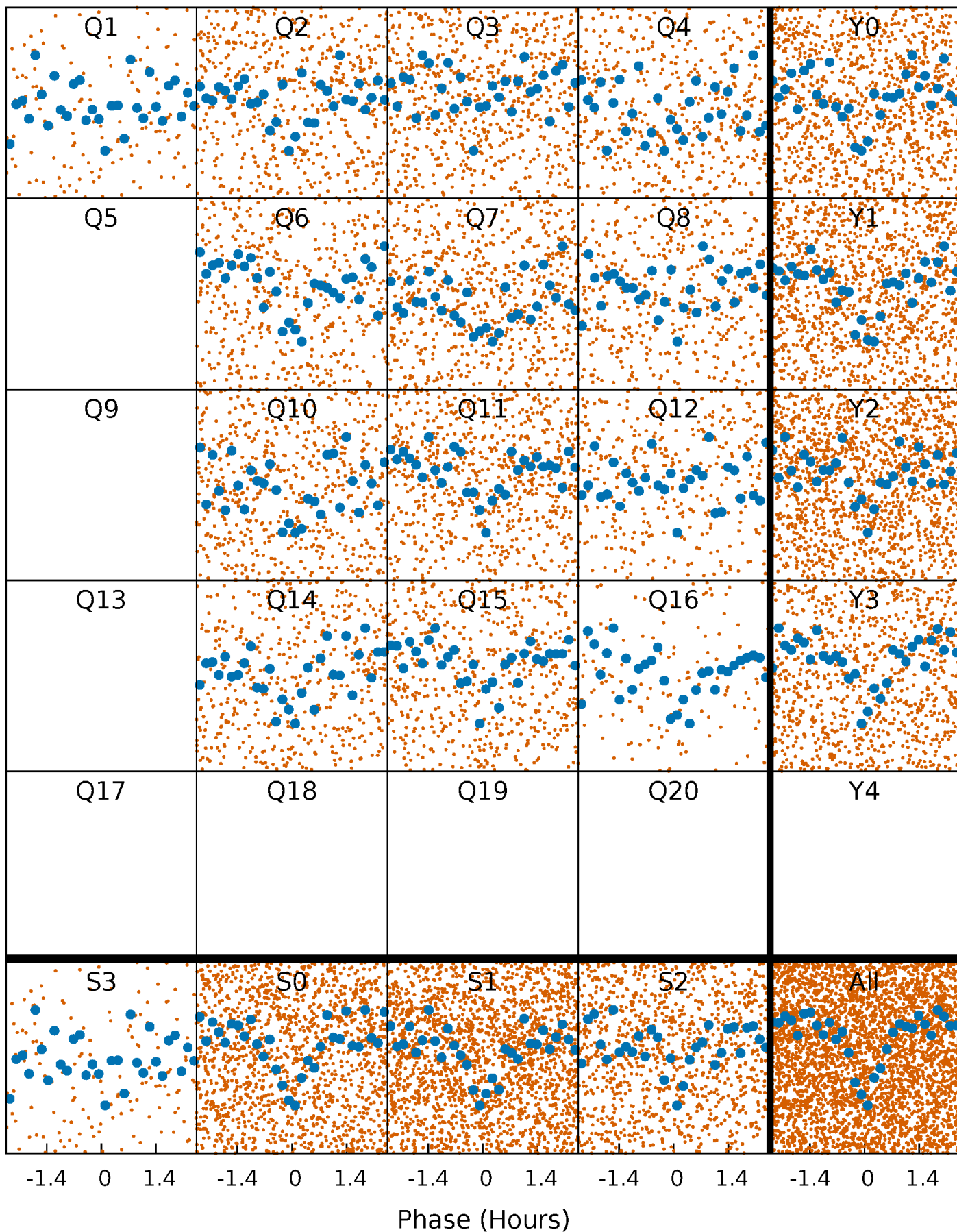


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



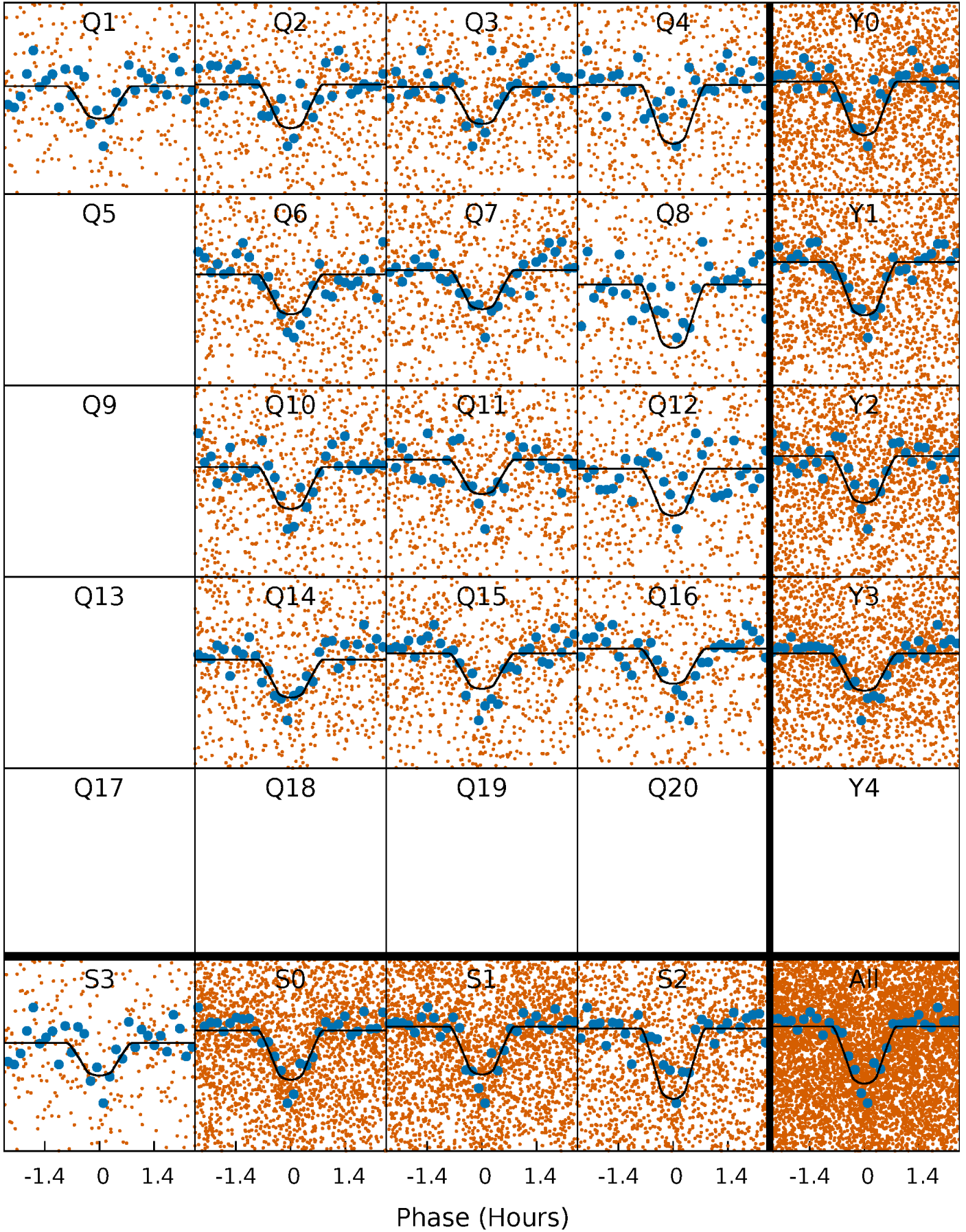
PDC Quarter-Phased Transit Curves

TCE 006185496-02 P= 0.949253 Days $T_0=131.543512$ (BKJD)



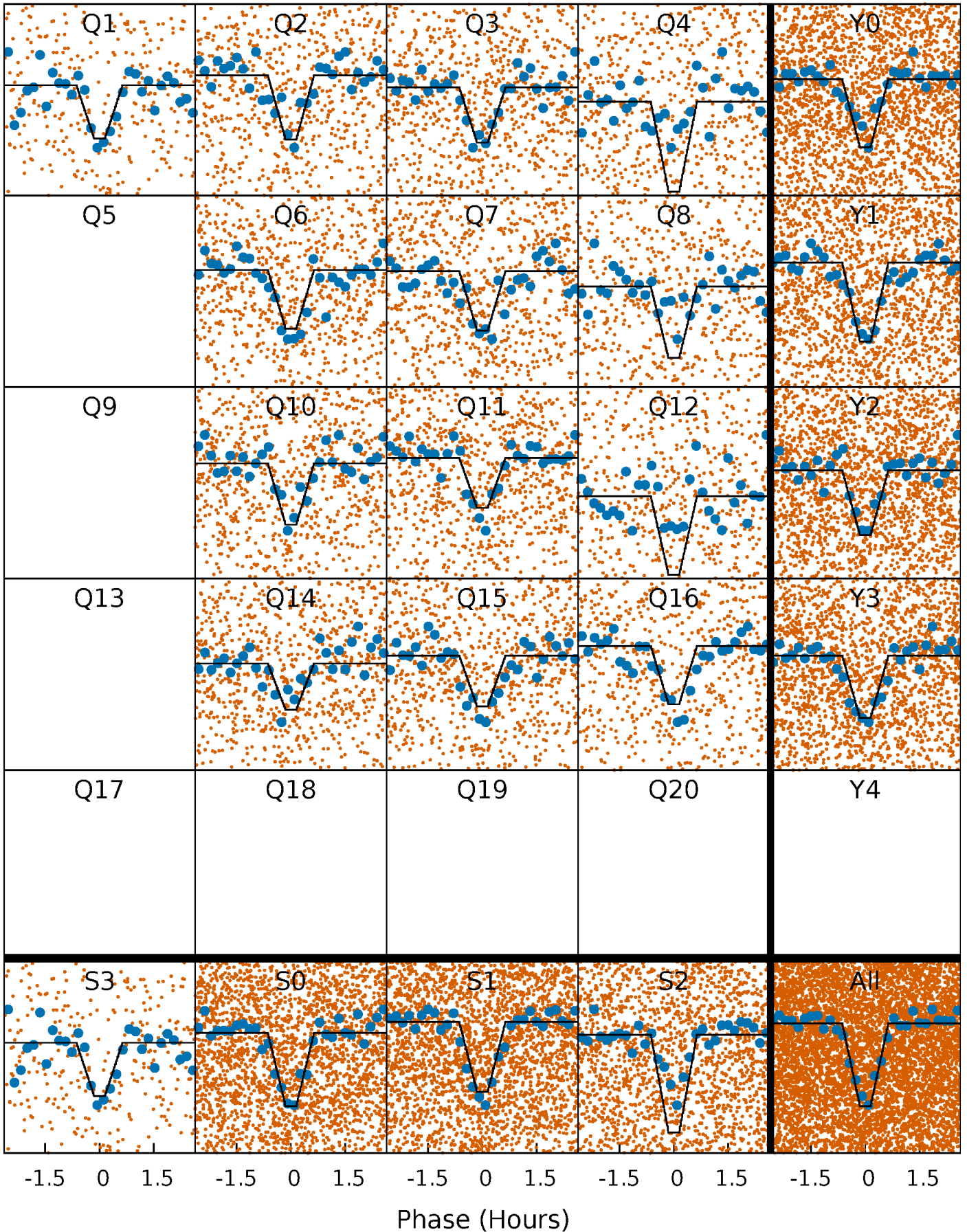
DV Quarter-Phased Transit Curves

TCE 006185496-02 P= 0.949253 Days $T_0=131.543512$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

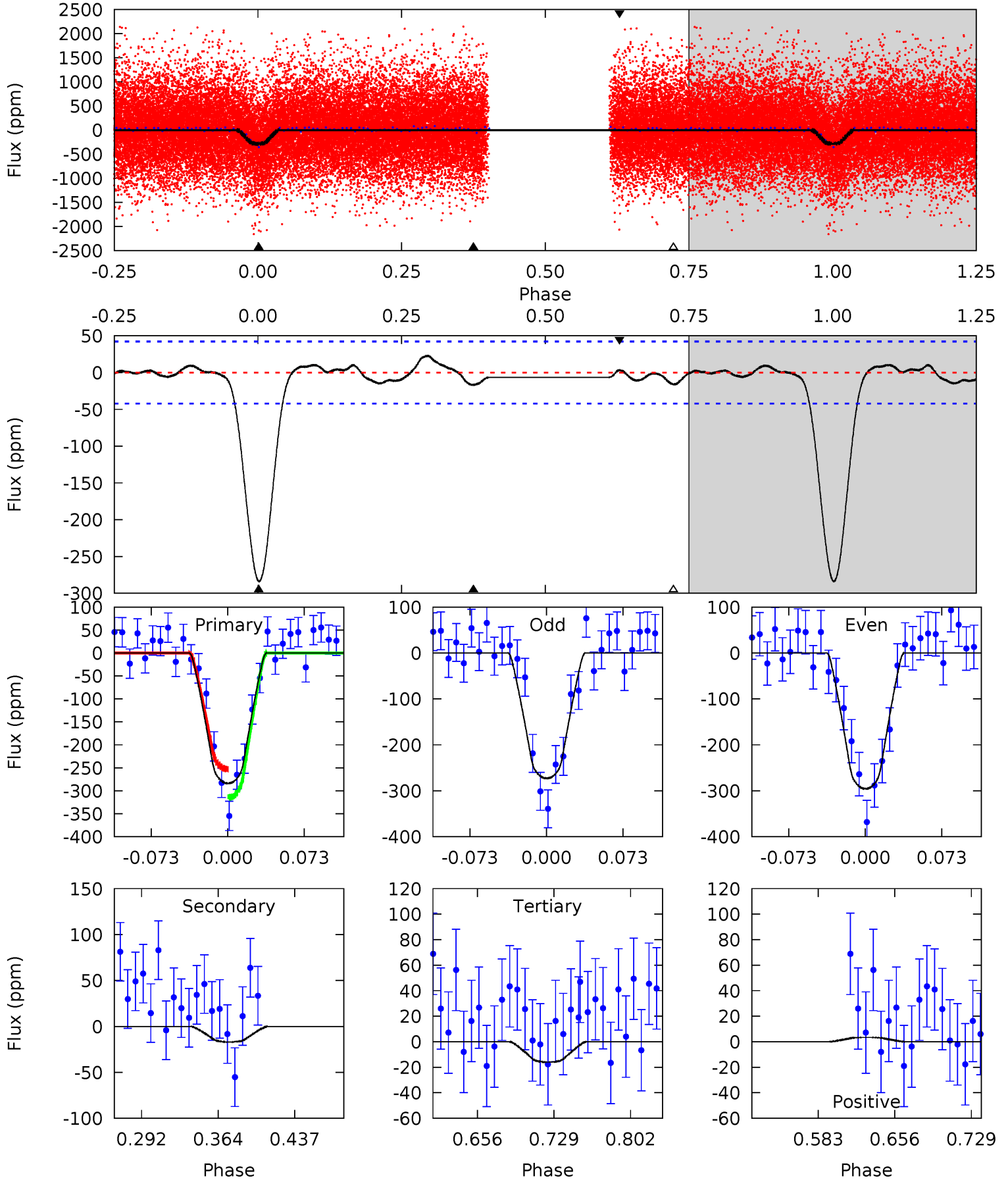
TCE 006185496-02 P= 0.949256 Days $T_0=131.543767$ (BKJD)



DV Model-Shift Uniqueness Test

006185496-02, P = 0.949253 Days, E = 130.594259 Days

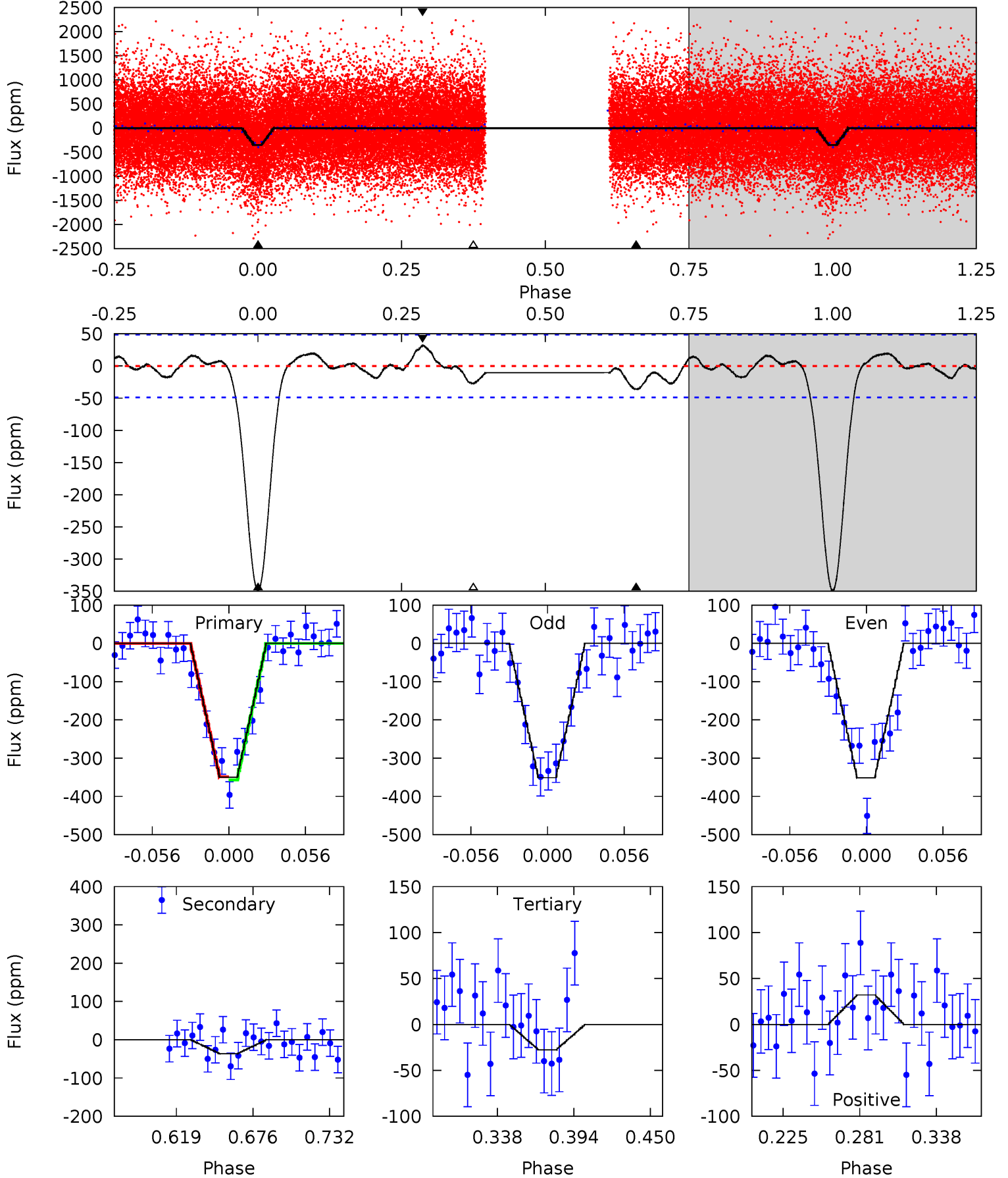
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.2	1.86	1.76	0.37	4.63	1.79	0.88	29.4	30.8	0.11	1.49	1.25	0.94	0.07	3.40



Alt Model-Shift Uniqueness Test

006185496-02, P = 0.949256 Days, E = 130.594511 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.6	3.51	2.66	3.09	4.68	1.91	1.22	30.9	30.5	0.85	0.42	0.02	1.02	0.08	0.40



Stellar Parameters For KIC 006185496

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4904^{+145}_{-145}	$4.527^{+0.072}_{-0.048}$	$0.060^{+0.250}_{-0.300}$	$0.786^{+0.056}_{-0.077}$	$0.758^{+0.076}_{-0.055}$	$2.199^{+0.663}_{-0.355}$
	+3%/-3%	+2%/-1%	+417%/-500%	+7%/-10%	+10%/-7%	+30%/-16%
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 006185496-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 9	$1.72^{+0.84}_{-0.84}$	2037^{+68}_{-78}	2695^{+807}_{-4593}	$0.877^{+3.267}_{-0.604}$
Alt.	-37 ± 10	$1.69^{+0.85}_{-0.86}$	2034^{+70}_{-75}	3152^{+890}_{-477}	$2.148^{+6.273}_{-1.311}$

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

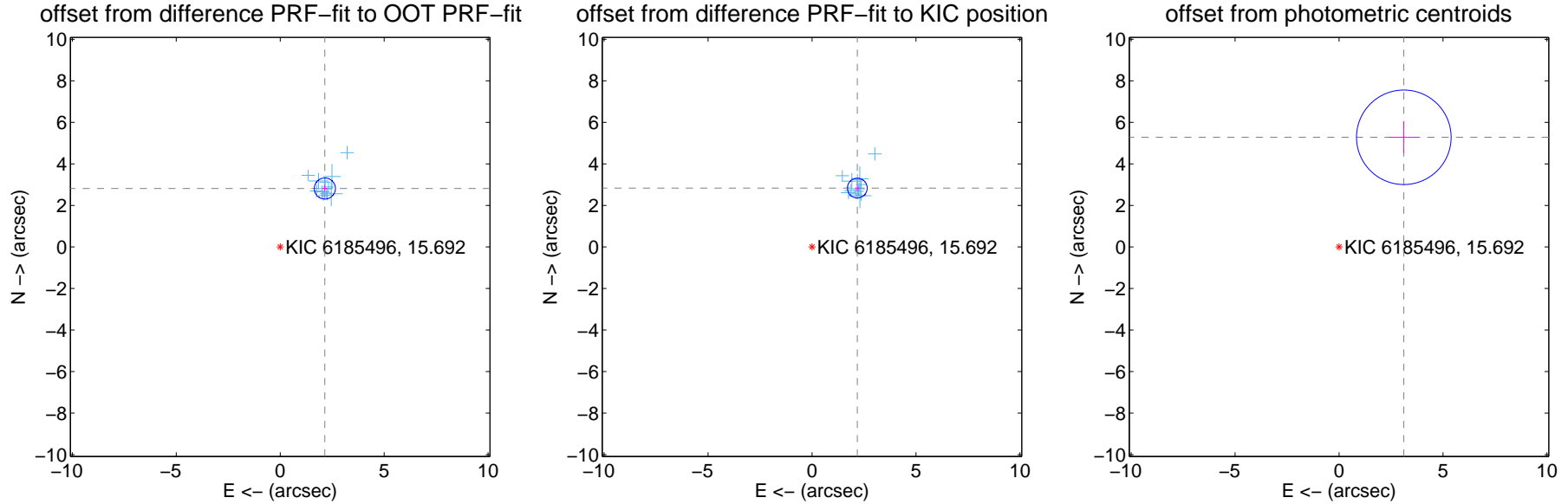
DV Centroid Data

Supplemental centroid analysis for 006185496-02. Kepler magnitude: 15.69. Transit SNR 19.93

There are 13 quarters with good PRF difference image offsets

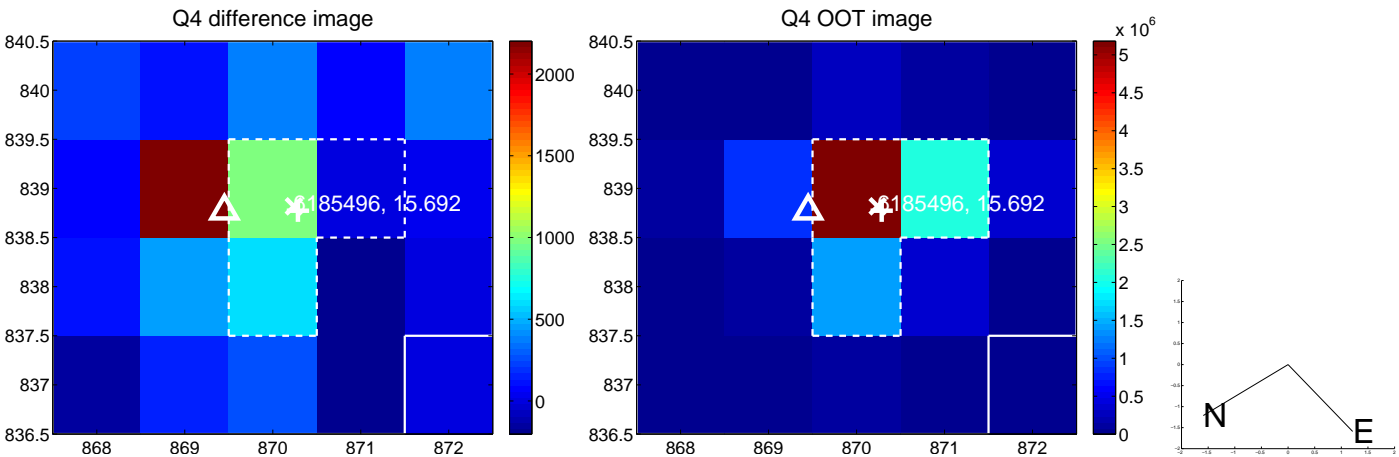
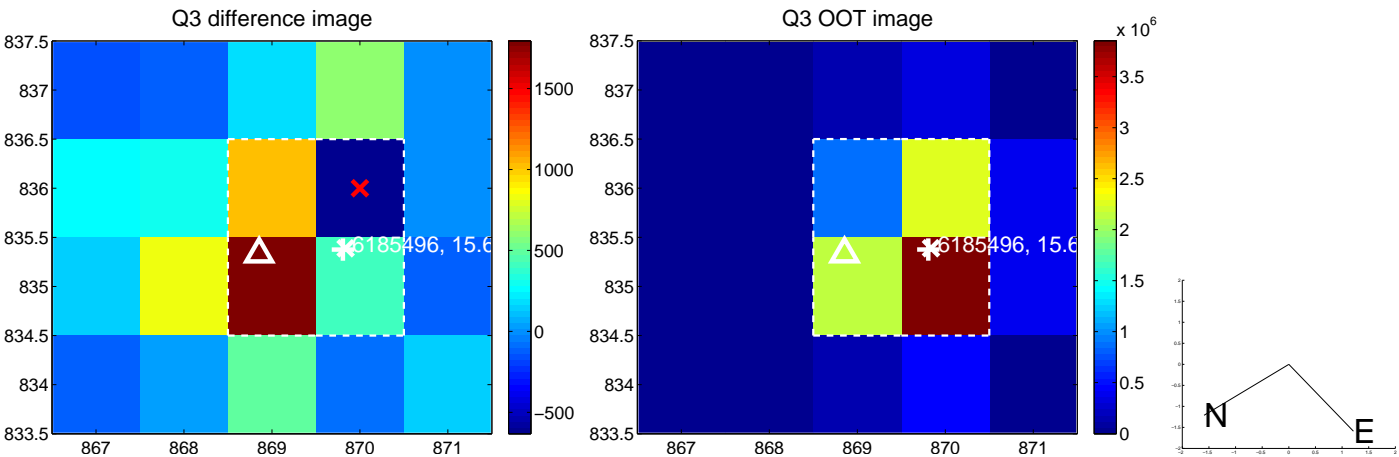
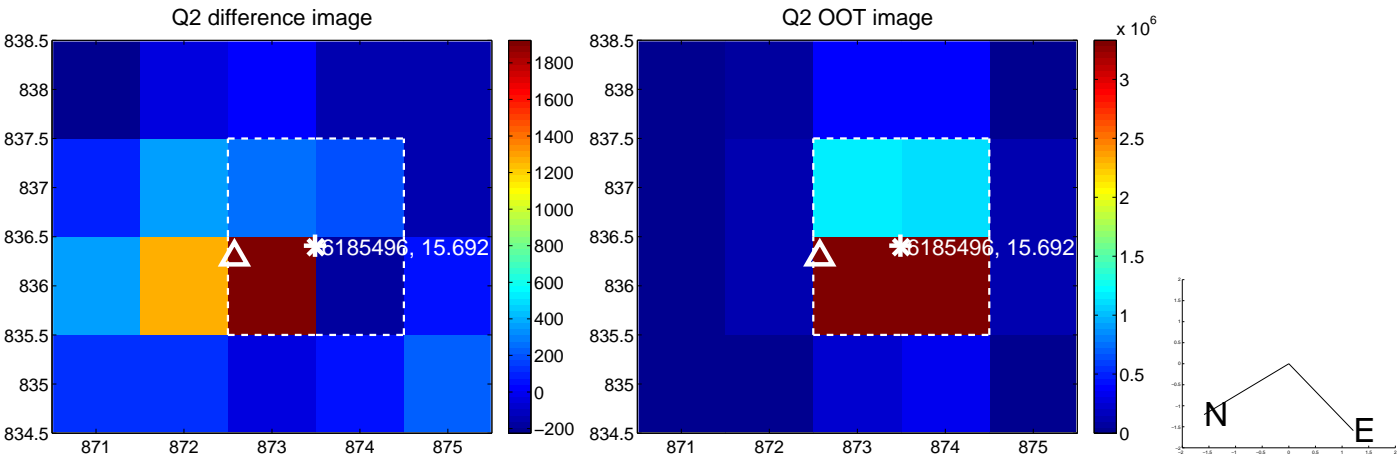
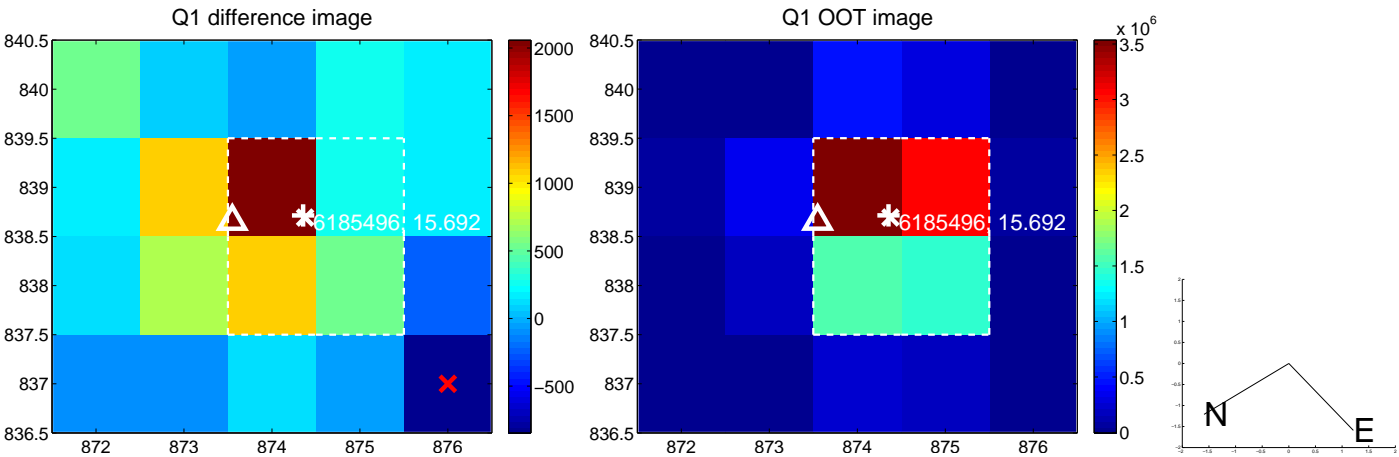
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.539 ± 0.169	20.91	-2.147 ± 0.129	2.814 ± 0.161
PRF-fit source offset from KIC position	3.575 ± 0.159	22.55	-2.179 ± 0.119	2.835 ± 0.155
photometric centroid source offset	6.13 ± 0.76	8.09	-3.12 ± 0.73	5.28 ± 0.77

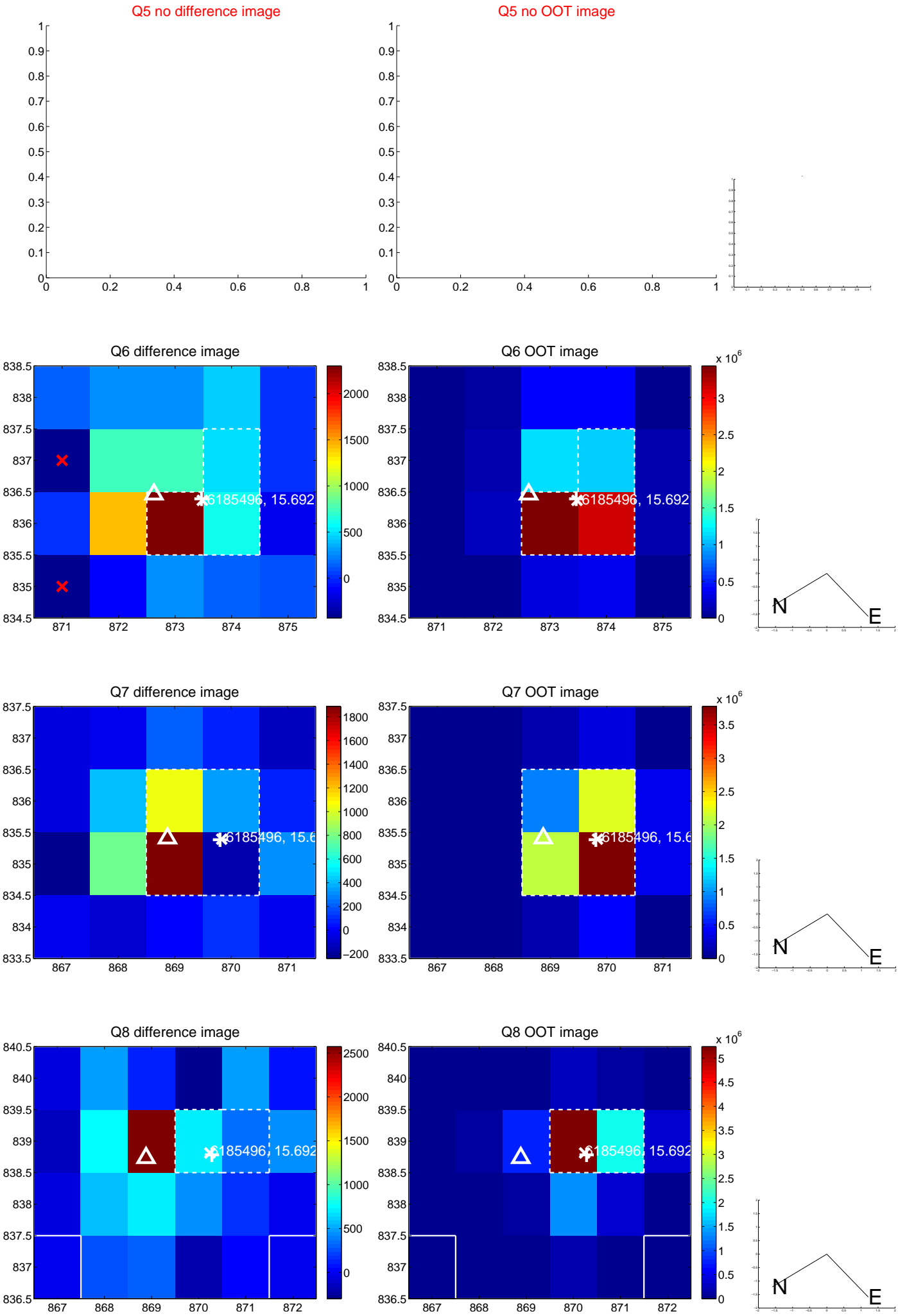


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

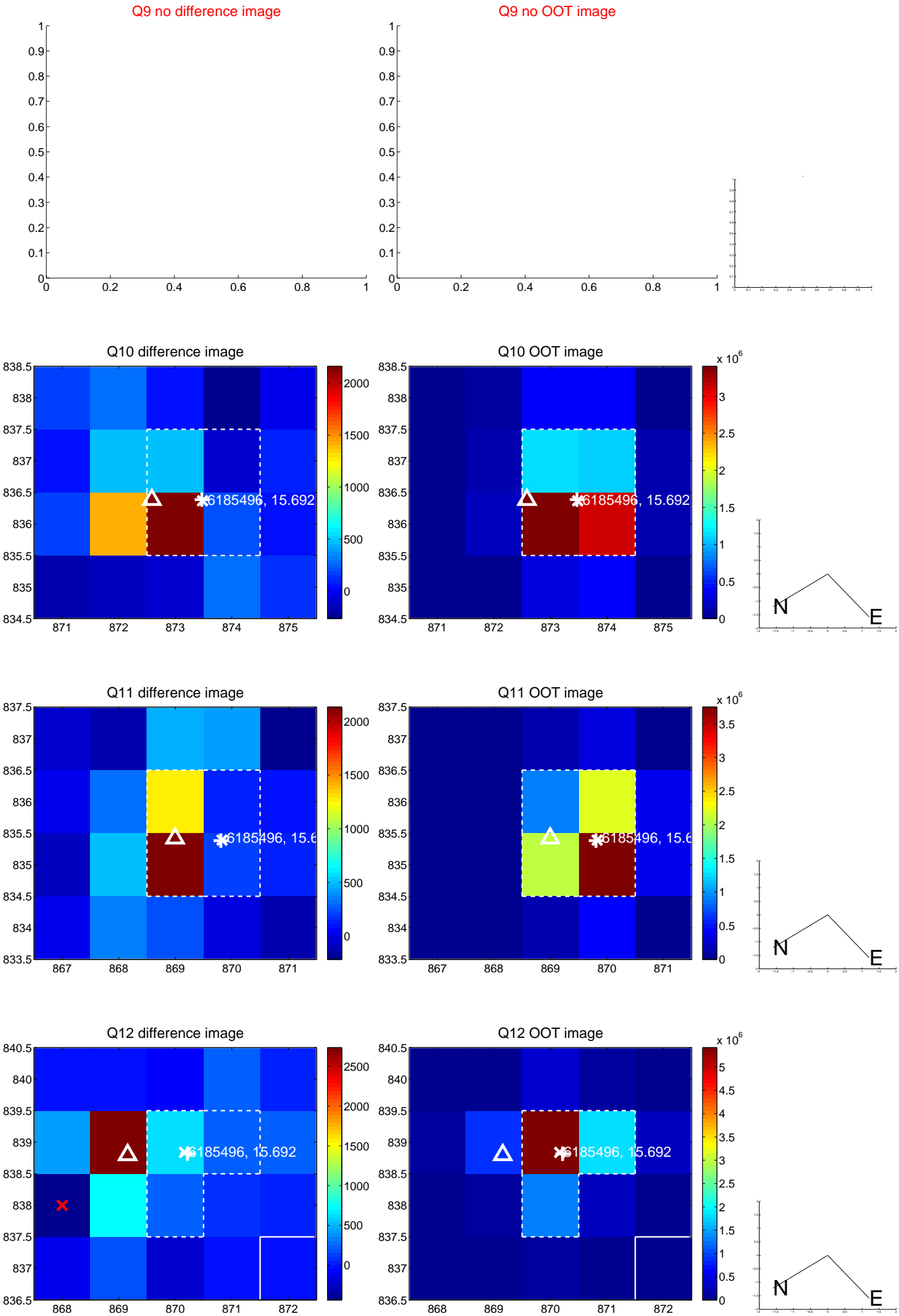
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



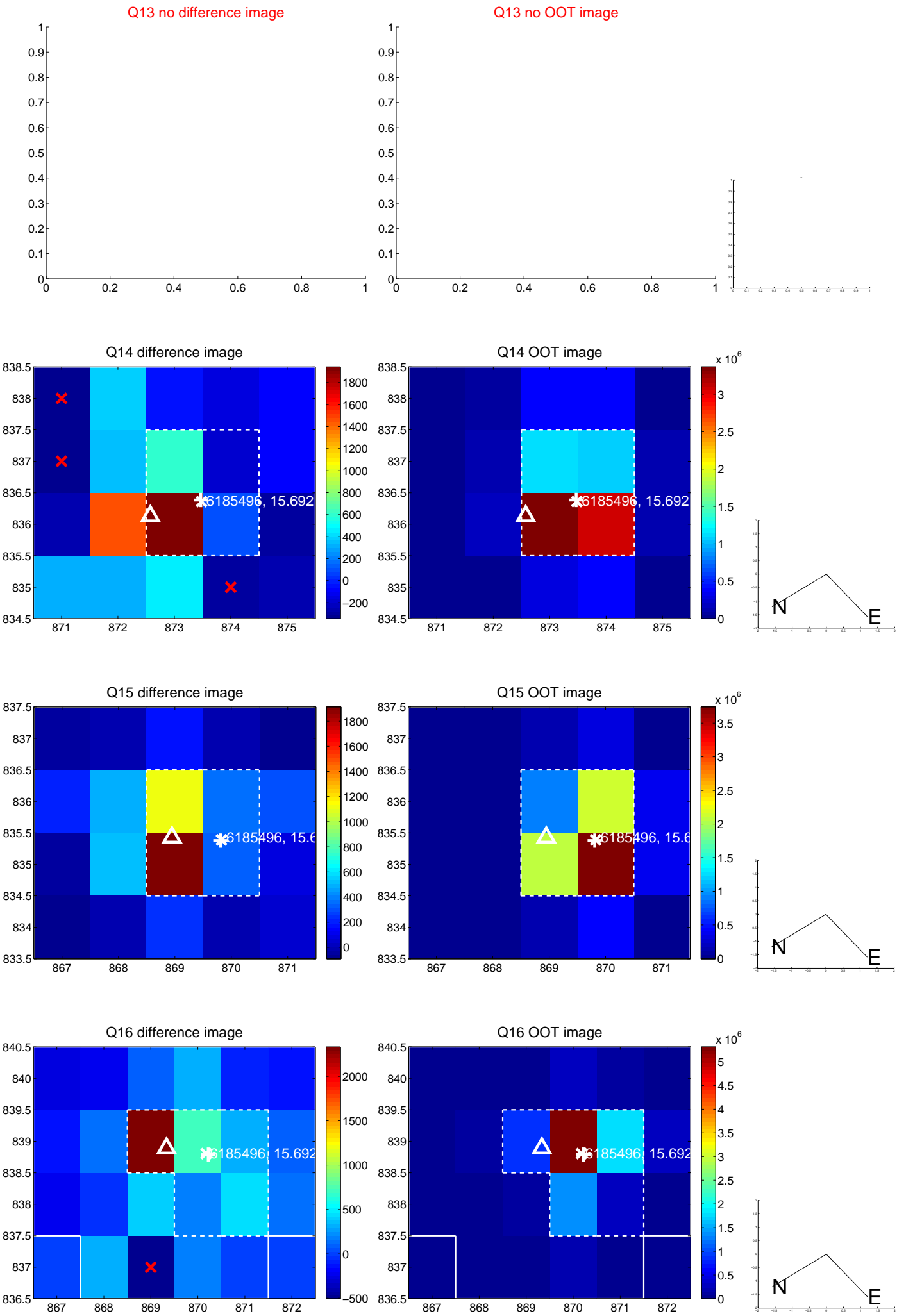
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



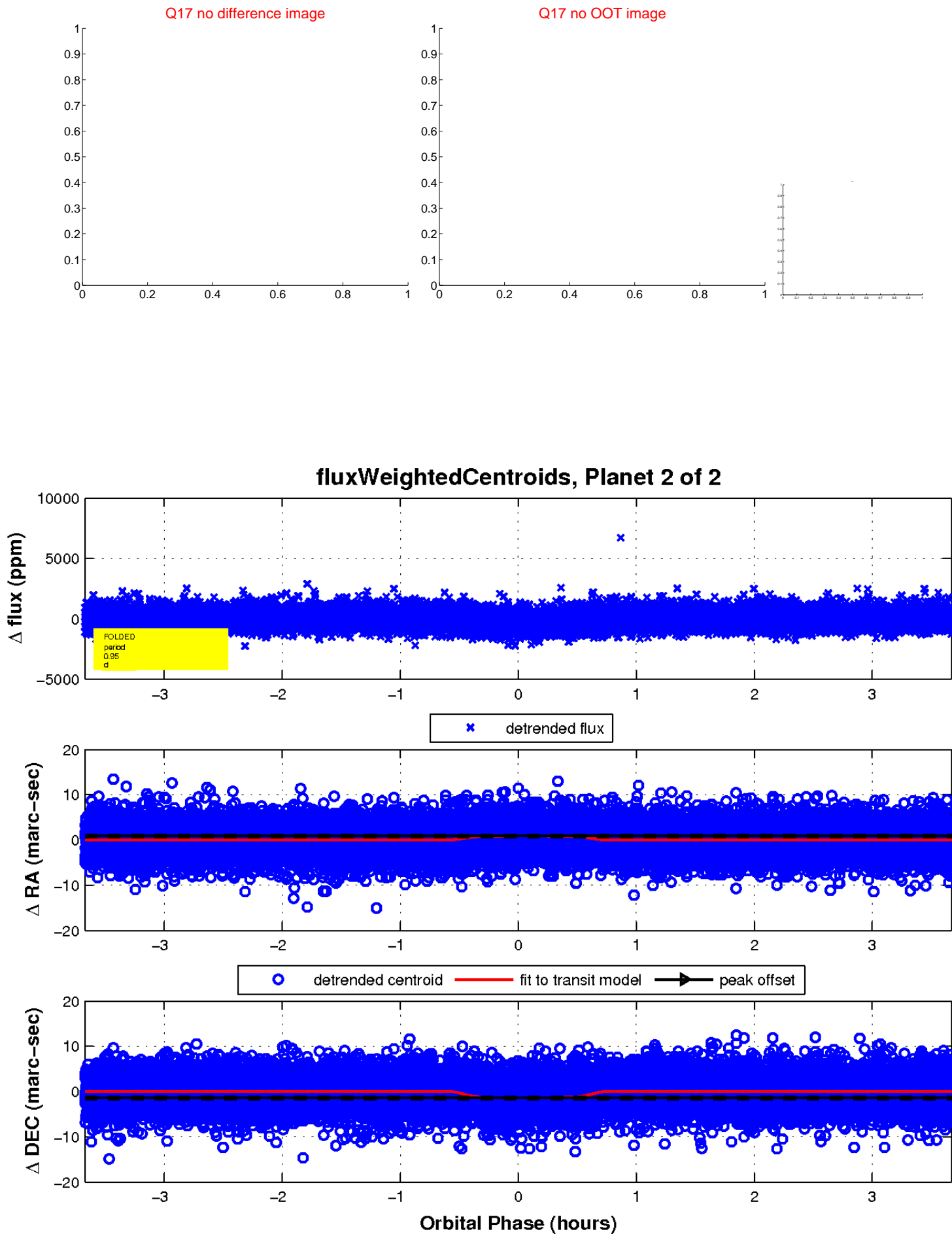
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

