

KIC 006267425

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})
006267425-01	OBS	0848.01	3.166457	134.007287	4549.7	2.884	126.3	130.6	0.70	4968	8.98	196.44
006267425-02	OBS	No	3.166458	132.420155	382.8	2.447	14.5	15.5	0.70	4968	1.65	196.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006267425-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
006267425-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

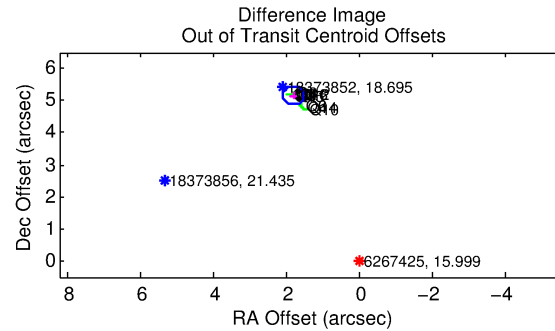
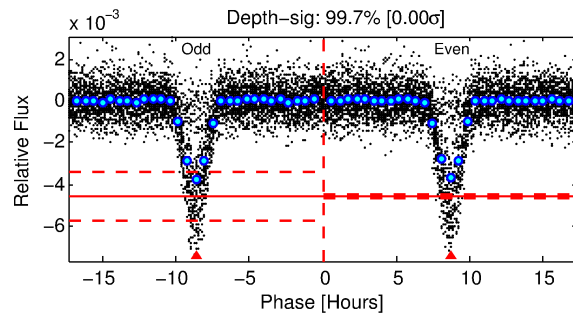
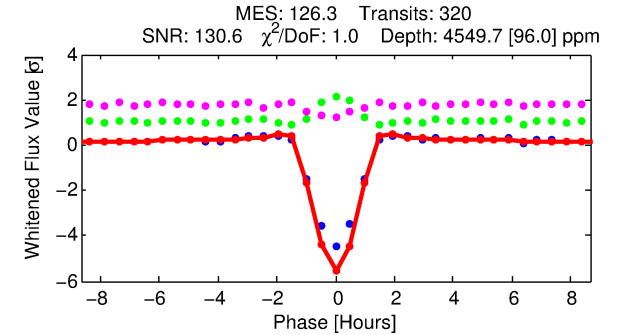
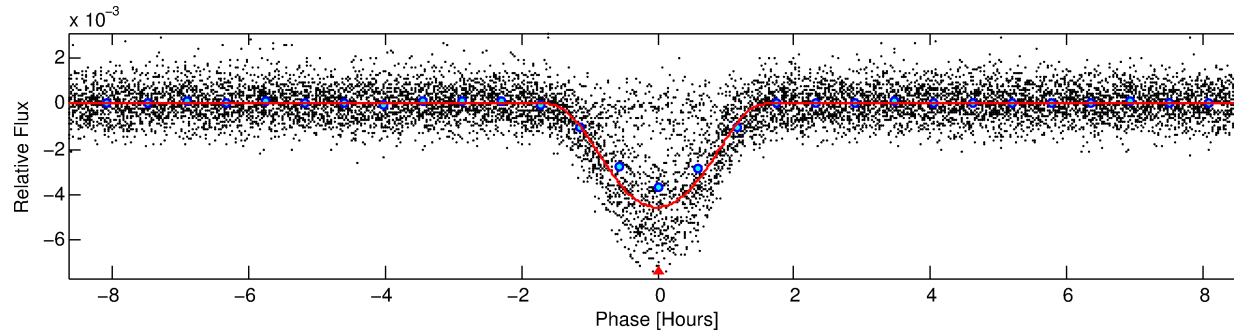
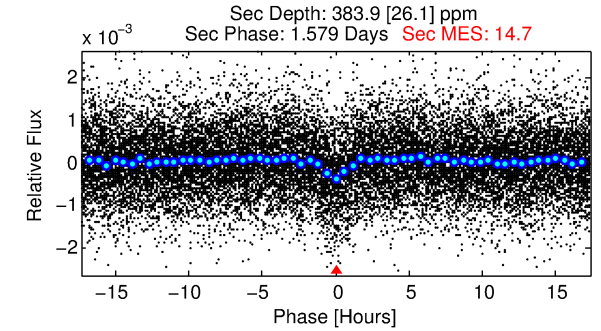
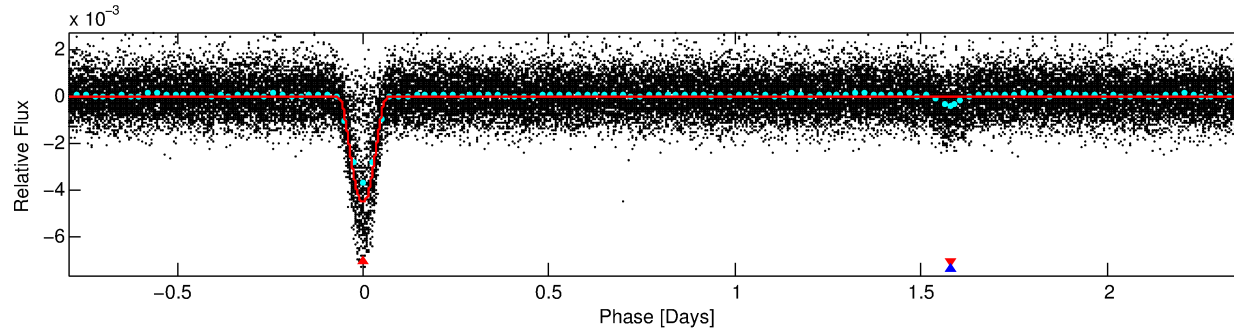
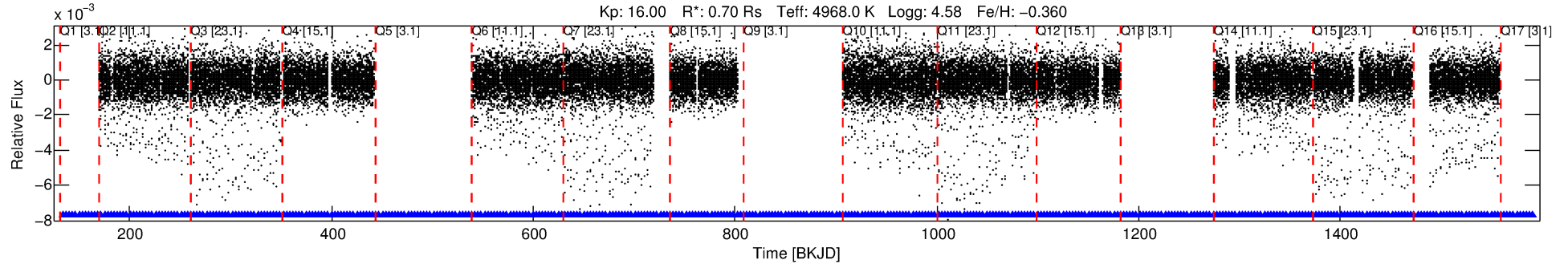
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006267425-01

No Significant Match Found

DV One-Page Summary

KIC: 6267425 Candidate: 1 of 2 Period: 3.166 d
KOI: K00848.01 Corr: 0.960



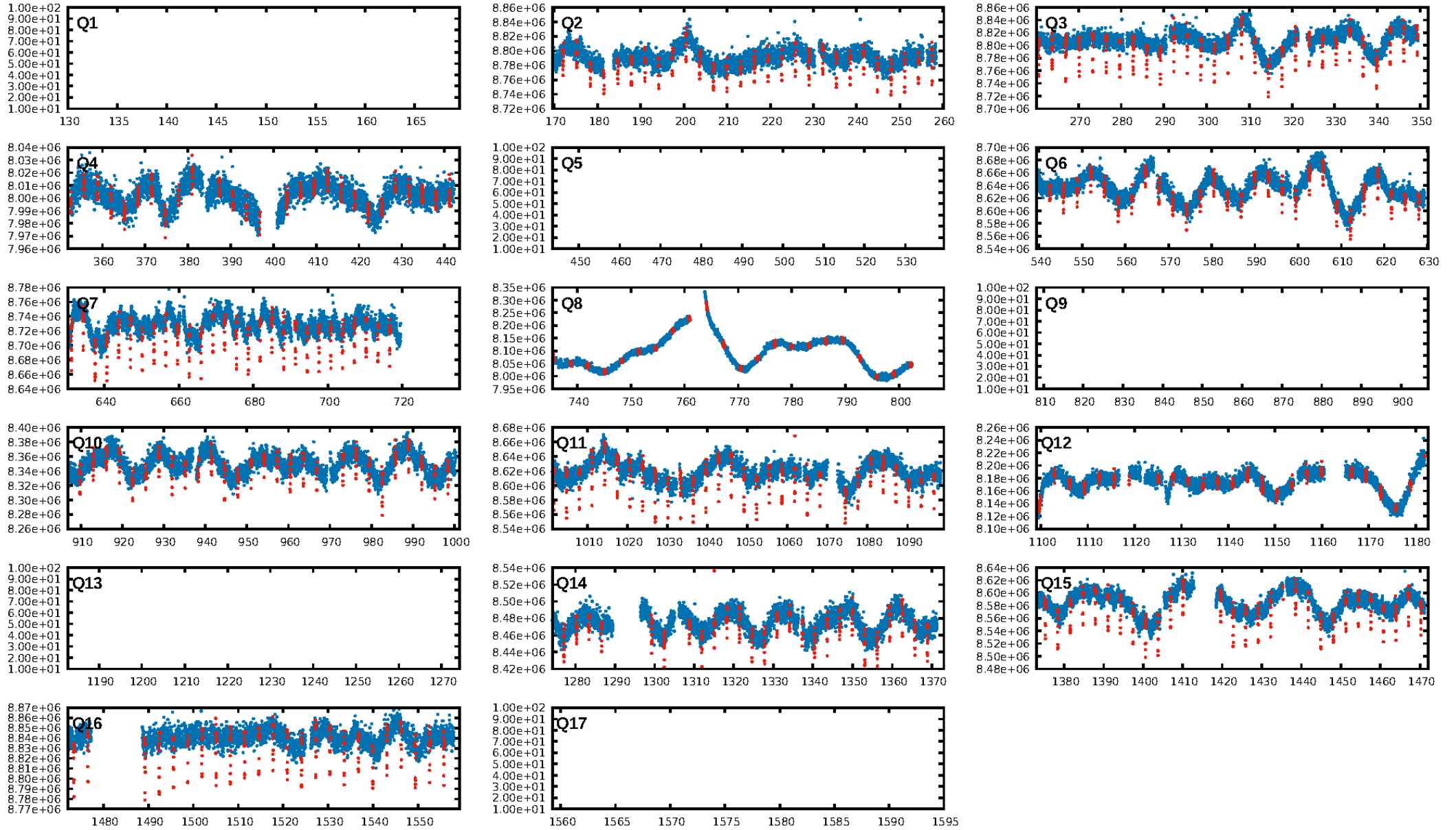
DV Fit Results:

Period = 3.16646 [0.00000] d
Epoch = 134.0073 [0.0003] BKJD
Rp/R* = 0.1170 [0.0428]
a/R* = 4.34 [0.26]
b = 1.00 [0.06]
Seff = 196.44 [34.95]
Teq = 955 [42] K
Rp = 8.98 [3.41] Re
a = 0.0371 [0.0033] AU
Ag = 3.60 [2.69] [0.97 σ]
Teff = 2033 [379] K [2.83 σ]

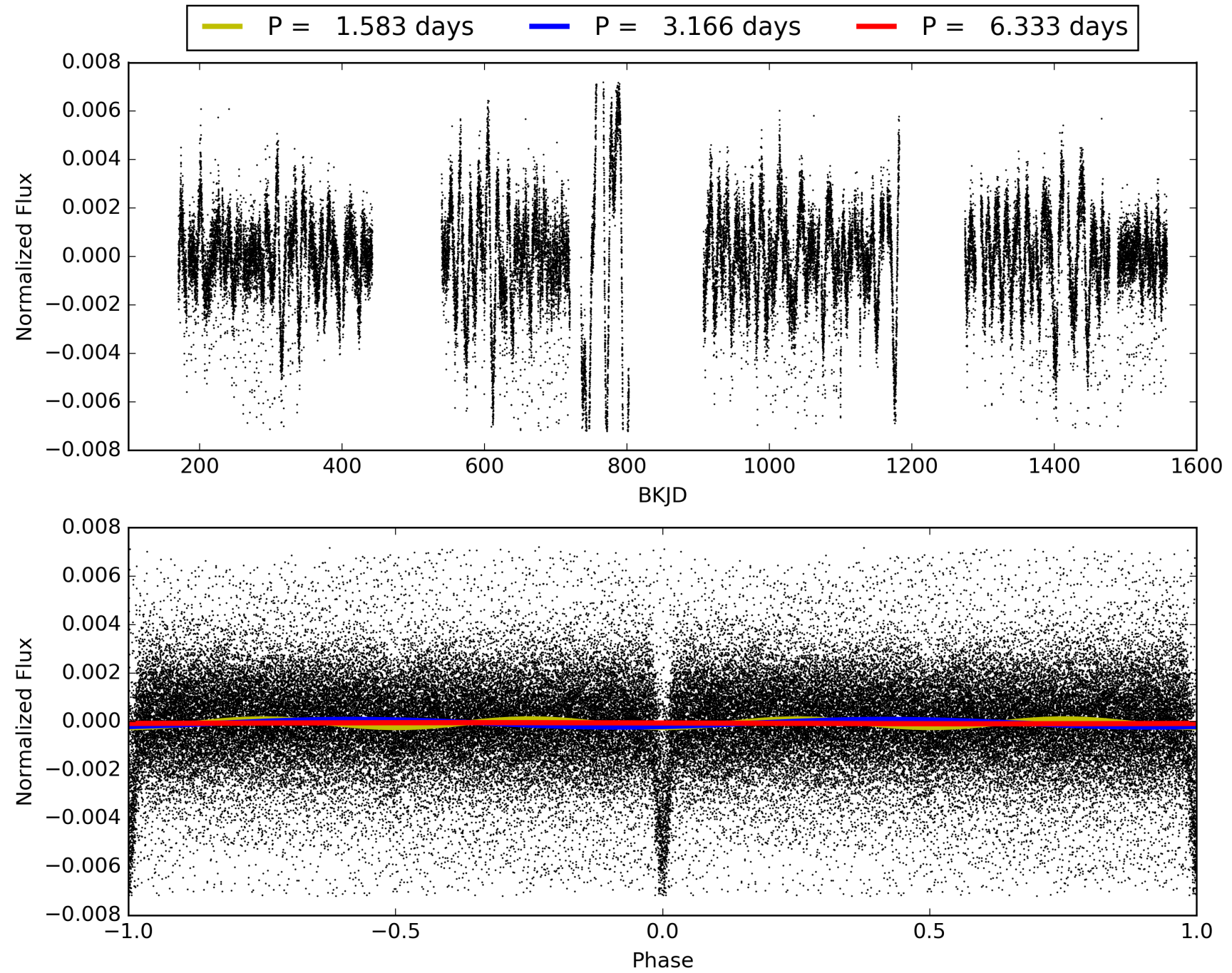
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [320/320]
GhostDiagnostic-chr: -0.4134
Centroid-sig: 0.0%
Centroid-so: 21.376 arcsec [240.01 σ]
OotOffset-rm: 5.464 arcsec [57.24 σ]
KicOffset-rm: 5.752 arcsec [63.67 σ]
OotOffset-st: 4/4/4/0 [12]
KicOffset-st: 4/4/4/0 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

TCE 006267425-01, PDC Light Curves

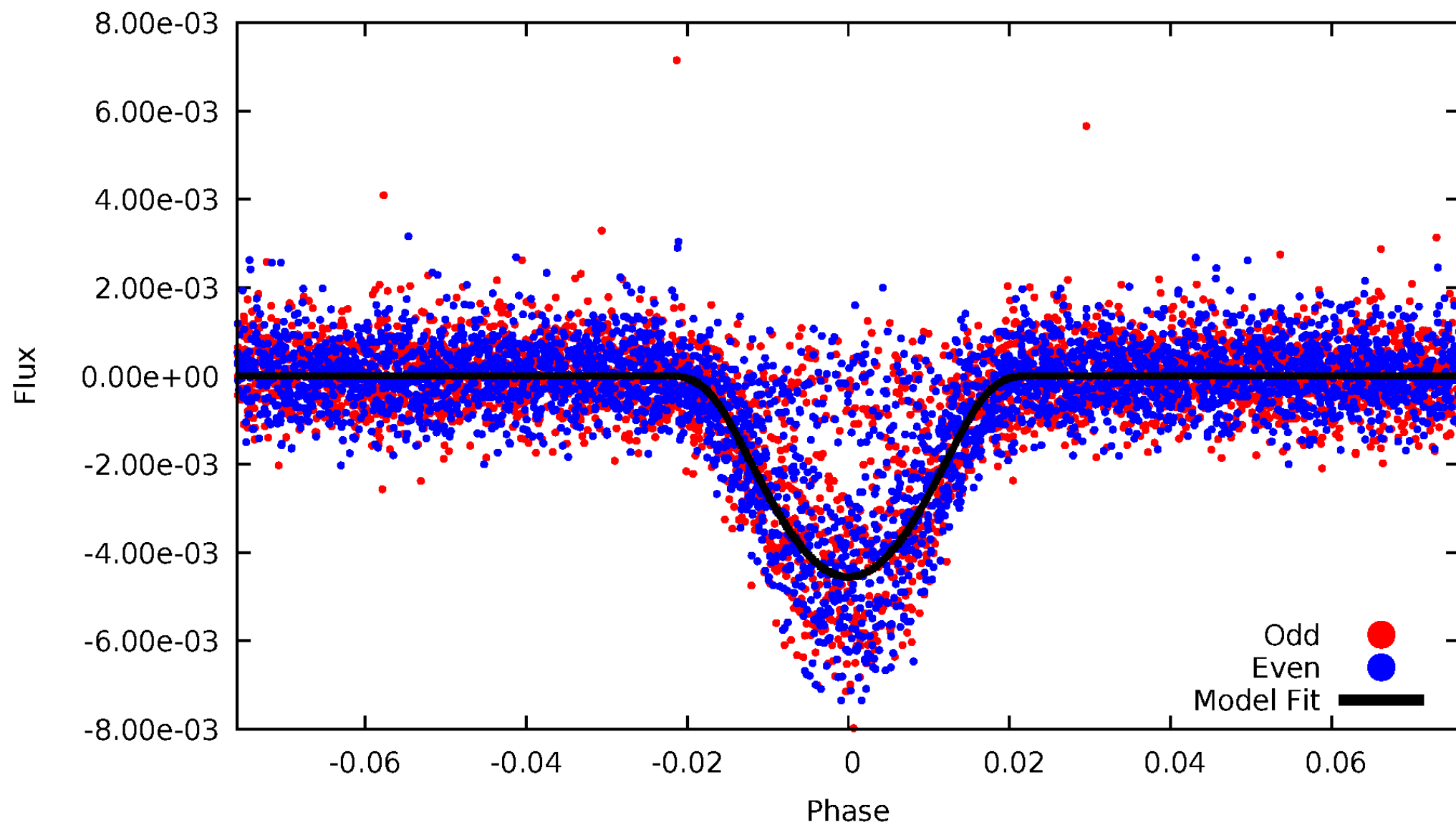


TCE 006267425-01



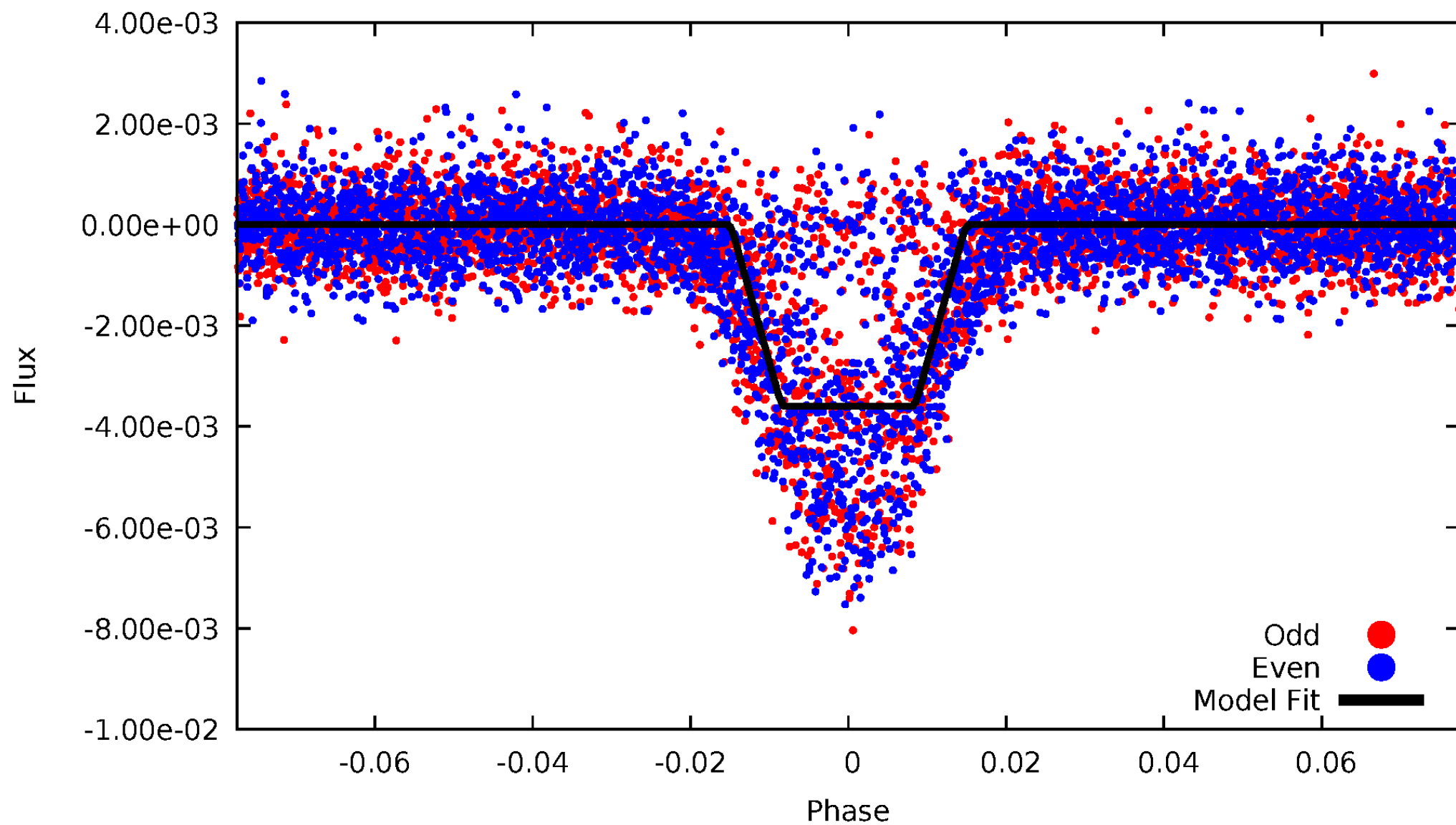
DV Odd/Even

TCE 006267425-01

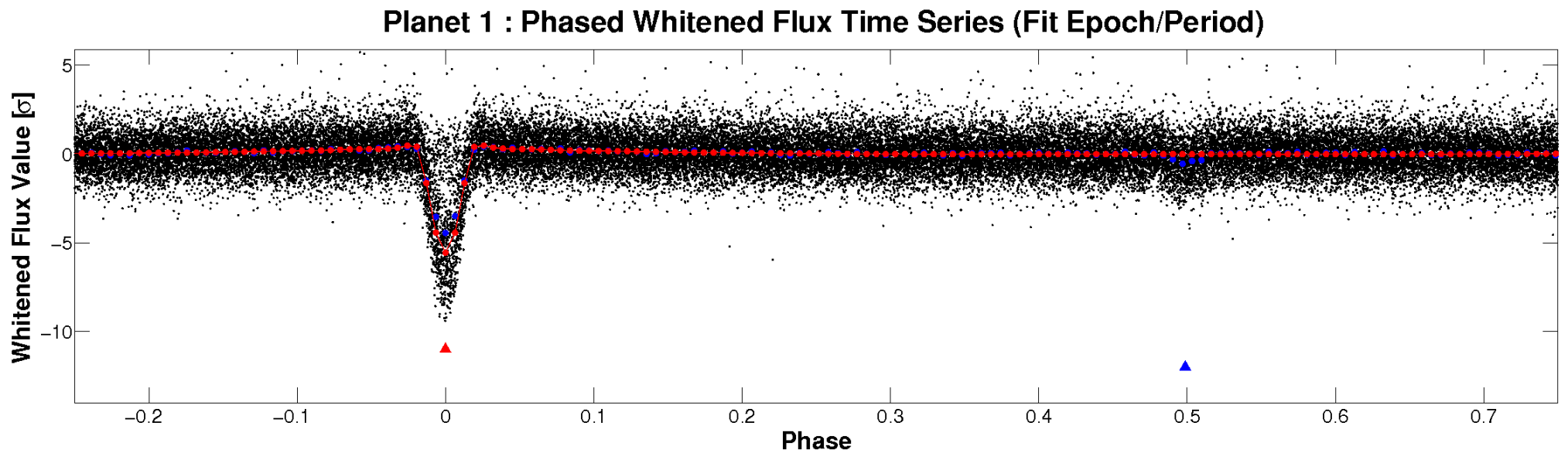
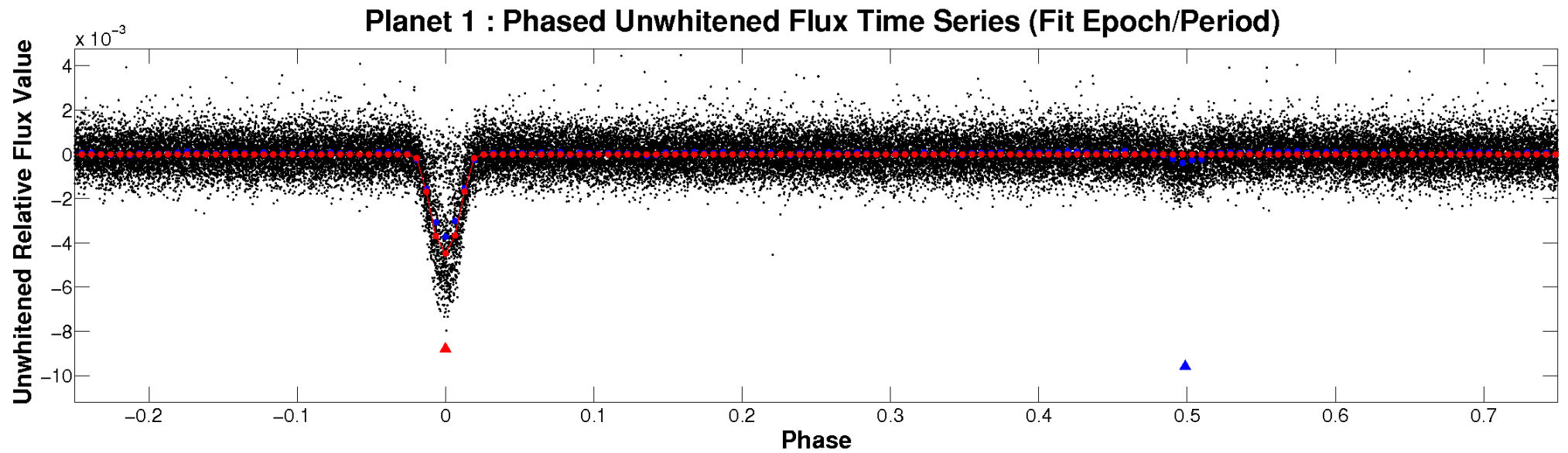


ALT Odd/Even

TCE 006267425-01

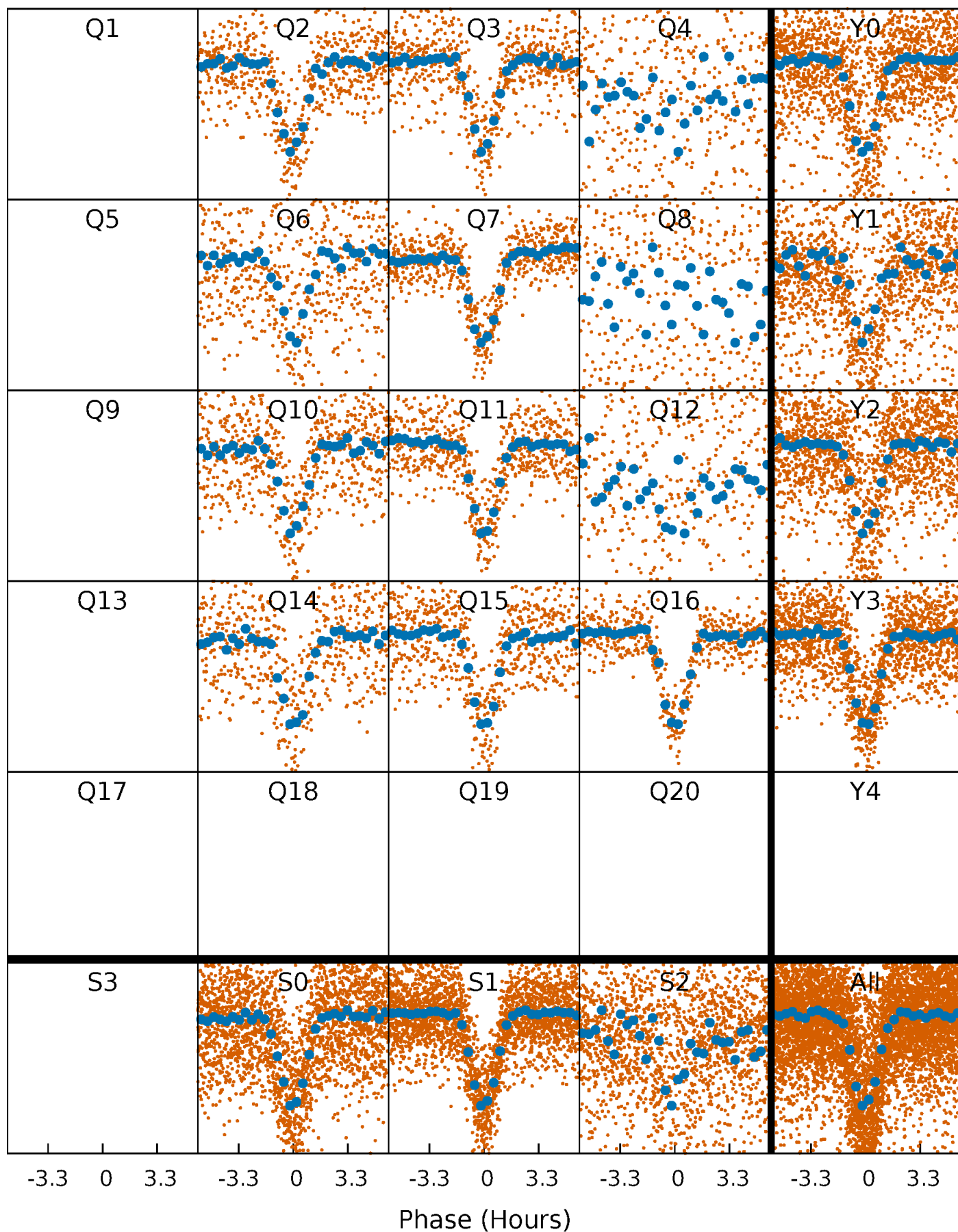


Non-Whitened Vs. Whitened Light Curve



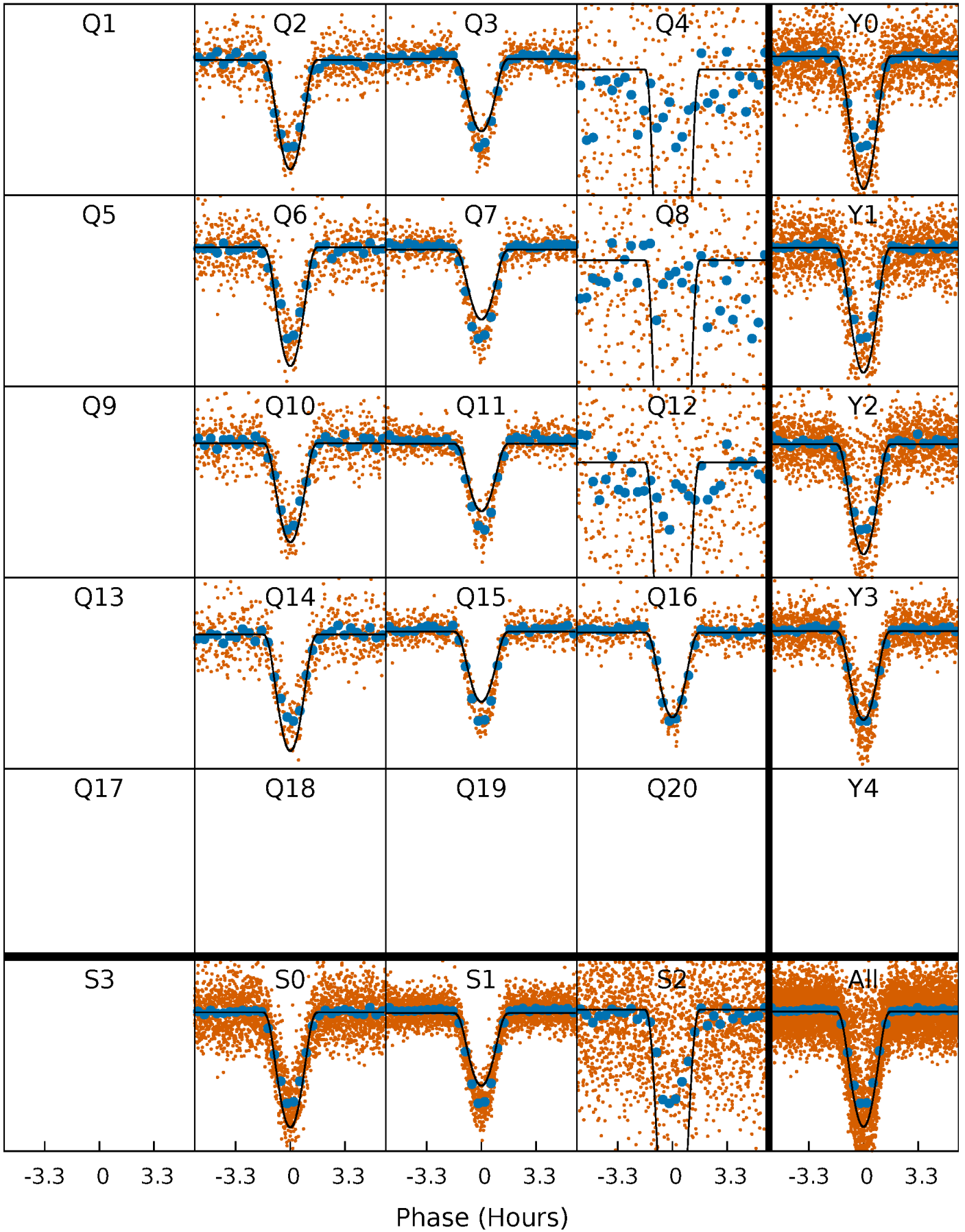
PDC Quarter-Phased Transit Curves

TCE 006267425-01 P= 3.166457 Days $T_0=134.007287$ (BKJD)



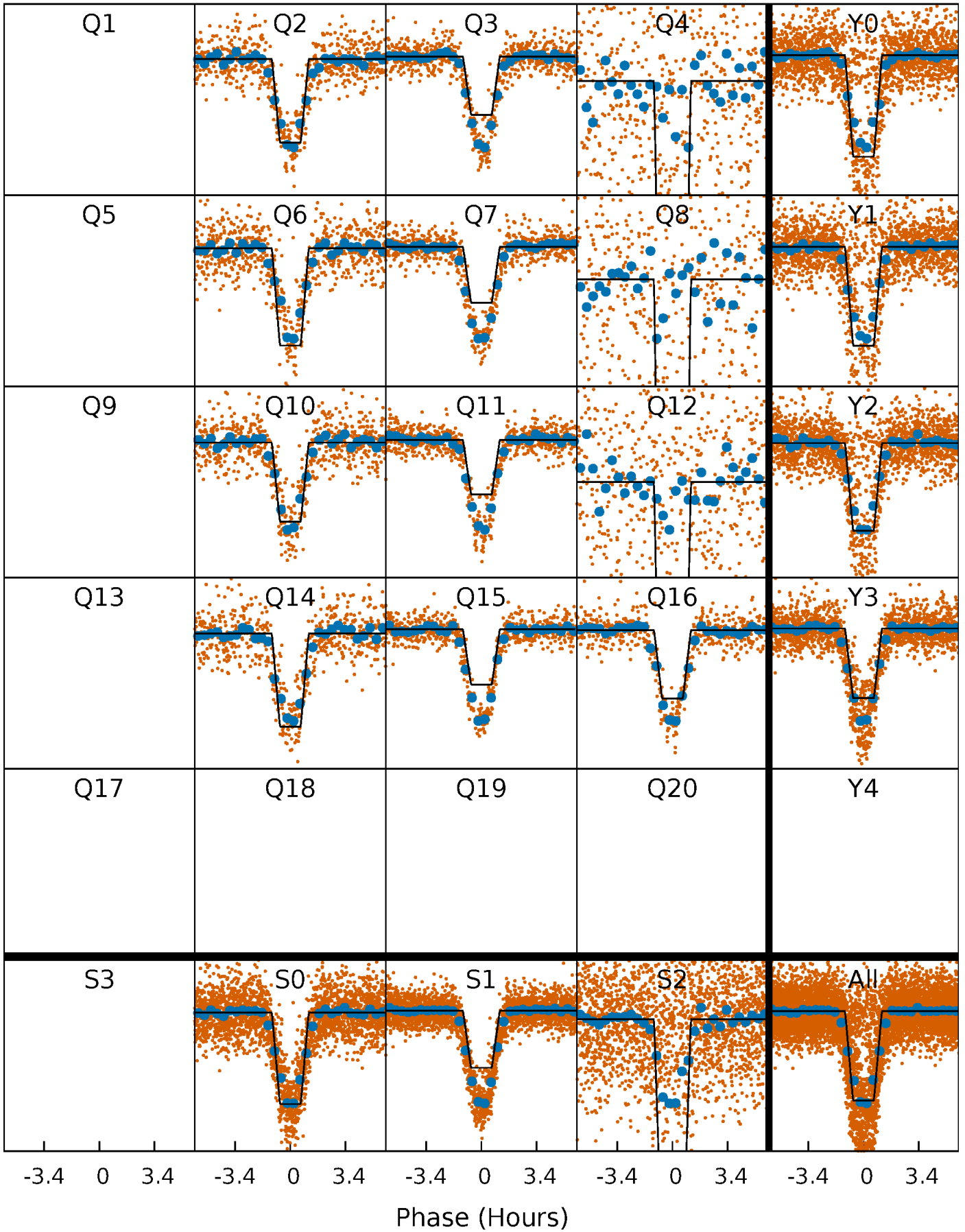
DV Quarter-Phased Transit Curves

TCE 006267425-01 P= 3.166457 Days $T_0=134.007287$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

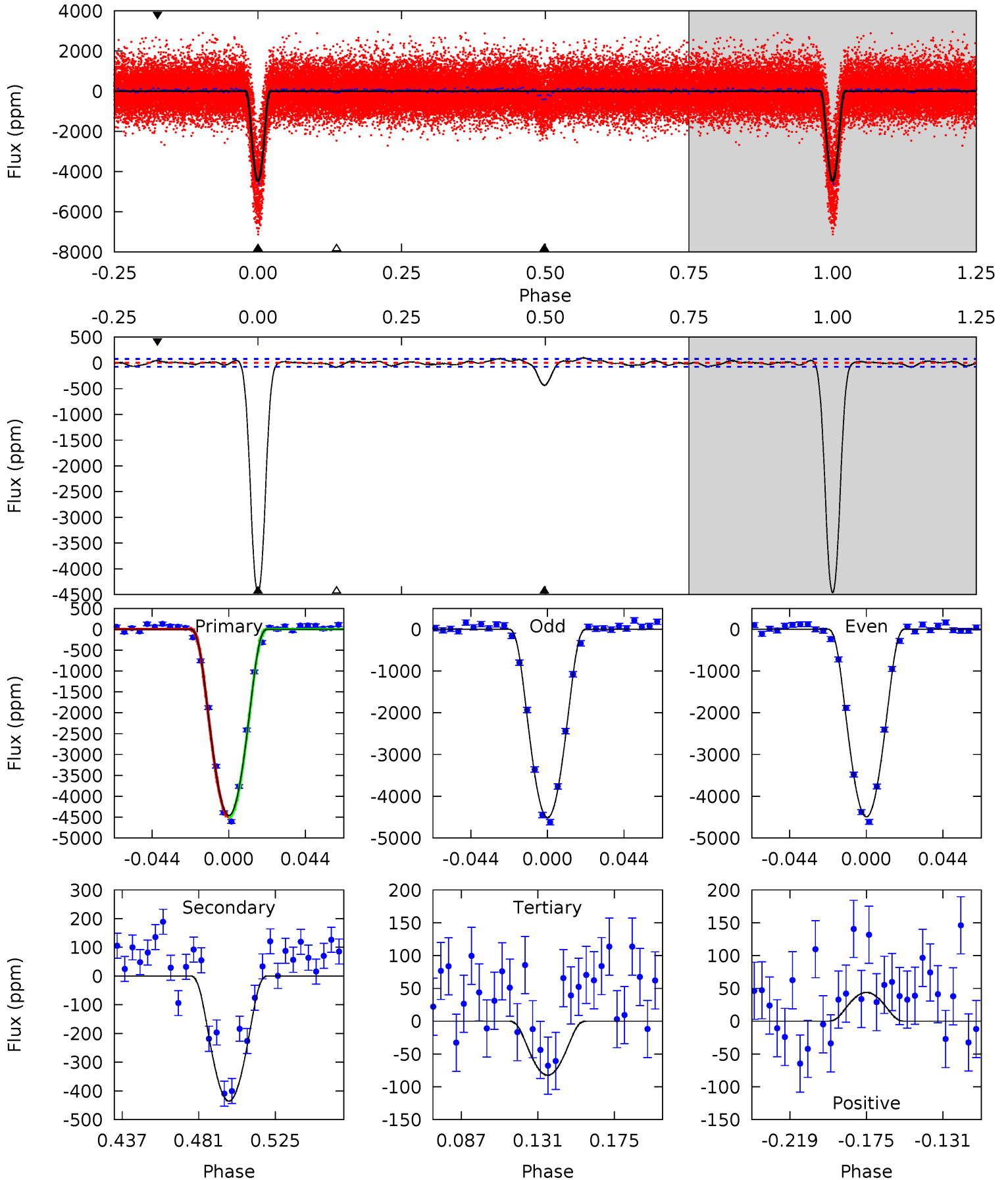
TCE 006267425-01 P= 3.166473 Days $T_0=134.003242$ (BKJD)



DV Model-Shift Uniqueness Test

006267425-01, P = 3.166457 Days, E = 134.007287 Days

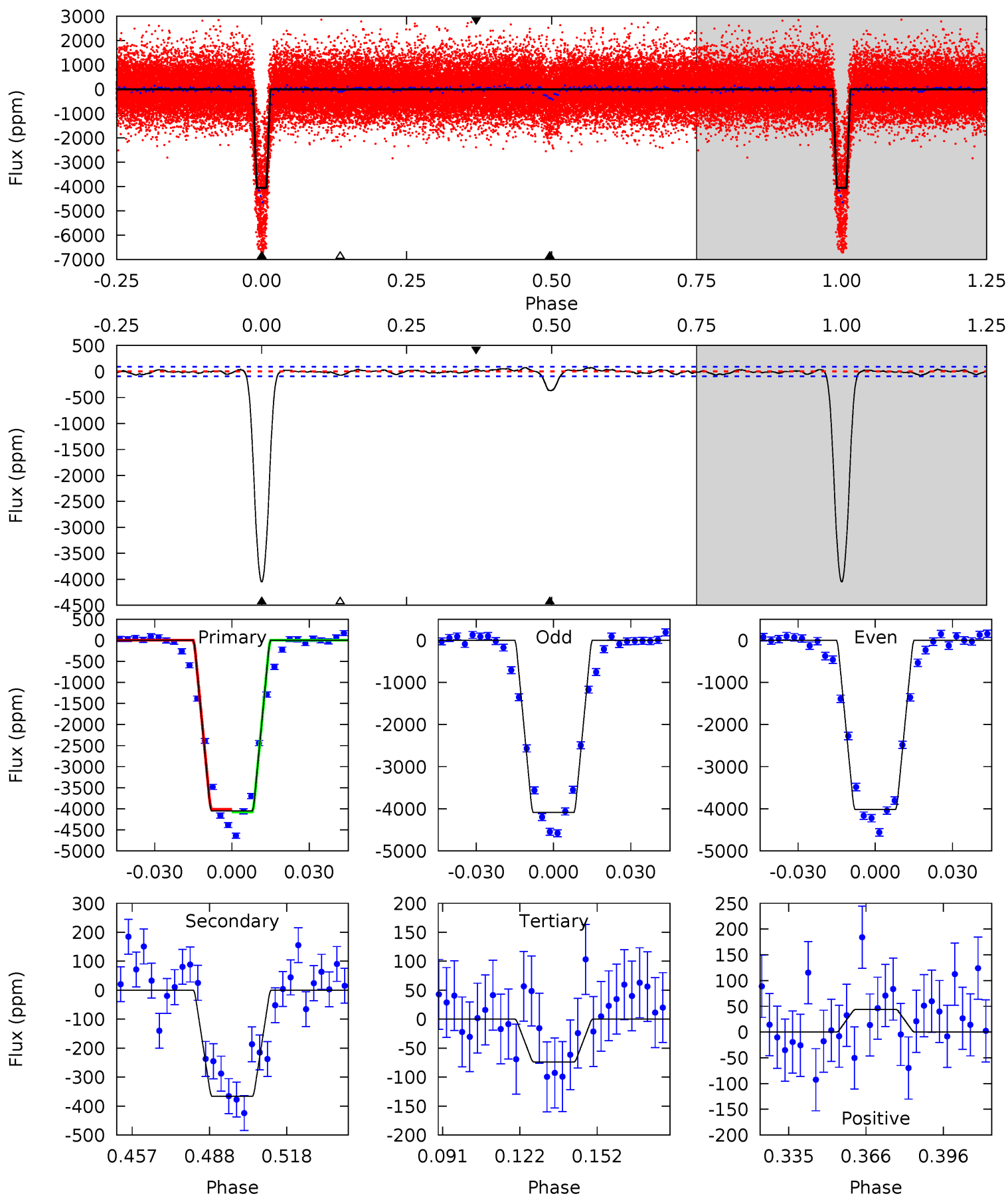
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
280.3	27.4	5.18	2.75	4.74	2.02	2.12	275.1	277.5	22.2	24.6	0.53	0.91	0.02	0.49



Alt Model-Shift Uniqueness Test

006267425-01, P = 3.166473 Days, E = 134.003242 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
211.1	19.1	3.84	2.29	4.81	2.16	1.48	207.3	208.9	15.2	16.8	1.98	0.90	0.02	1.59



Stellar Parameters For KIC 006267425

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4968^{+151}_{-136}	$4.575^{+0.072}_{-0.044}$	$-0.360^{+0.350}_{-0.300}$	$0.704^{+0.065}_{-0.072}$	$0.680^{+0.093}_{-0.043}$	$2.744^{+0.822}_{-0.440}$
	+3%/-3%	+2%/-1%	+97%/-83%	+9%/-10%	+14%/-6%	+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 006267425-01 / KOI 0848.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-435 ± 16	$9.12^{+3.56}_{-3.49}$	1332^{+45}_{-55}	2753^{+442}_{-237}	$4.023^{+6.549}_{-1.950}$
Alt.	-366 ± 19	$4.90^{+3.29}_{-2.80}$	1329^{+48}_{-52}	3225^{+1012}_{-437}	12^{+52}_{-8}

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

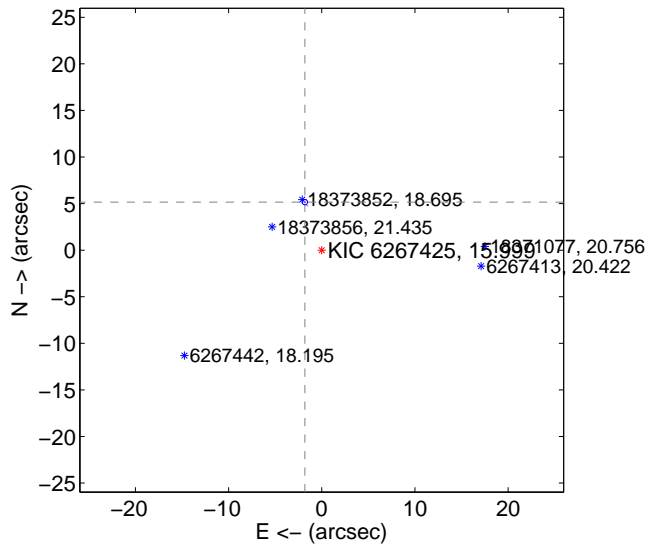
Supplemental centroid analysis for 006267425-01. Kepler magnitude: 16.00. Transit SNR 130.56

There are 12 quarters with good PRF difference image offsets

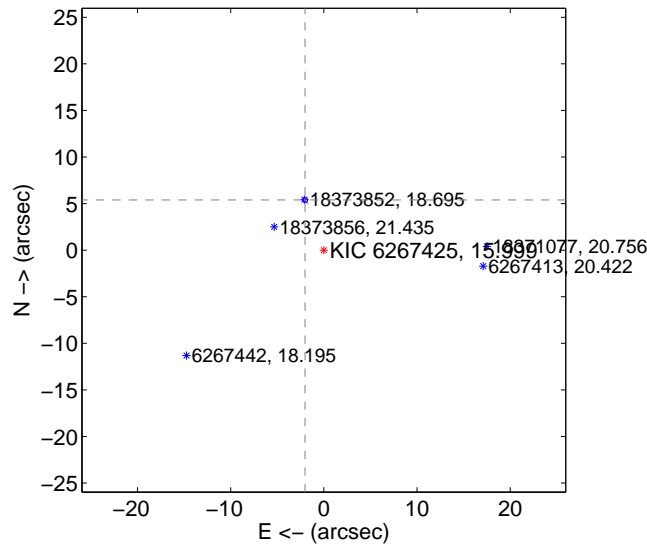
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.464 \pm 0.095	57.24	1.814 \pm 0.081	5.154 \pm 0.088
PRF-fit source offset from KIC position	5.752 \pm 0.090	63.67	2.020 \pm 0.076	5.385 \pm 0.085
photometric centroid source offset	21.38 \pm 0.09	240.01	5.02 \pm 0.08	20.78 \pm 0.09

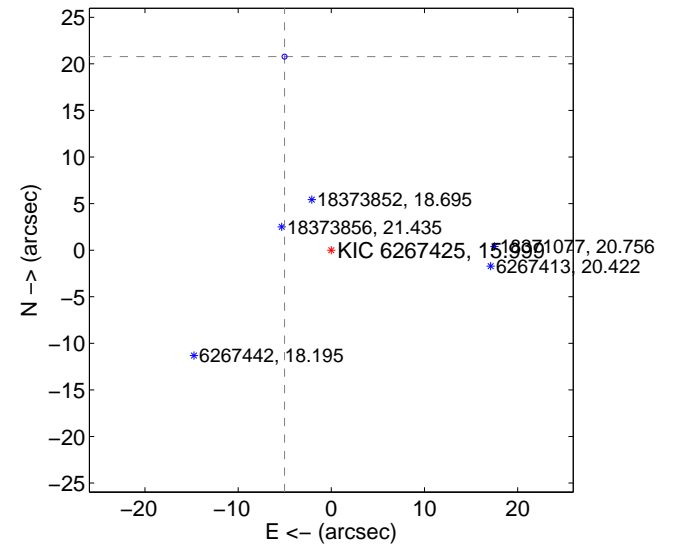
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

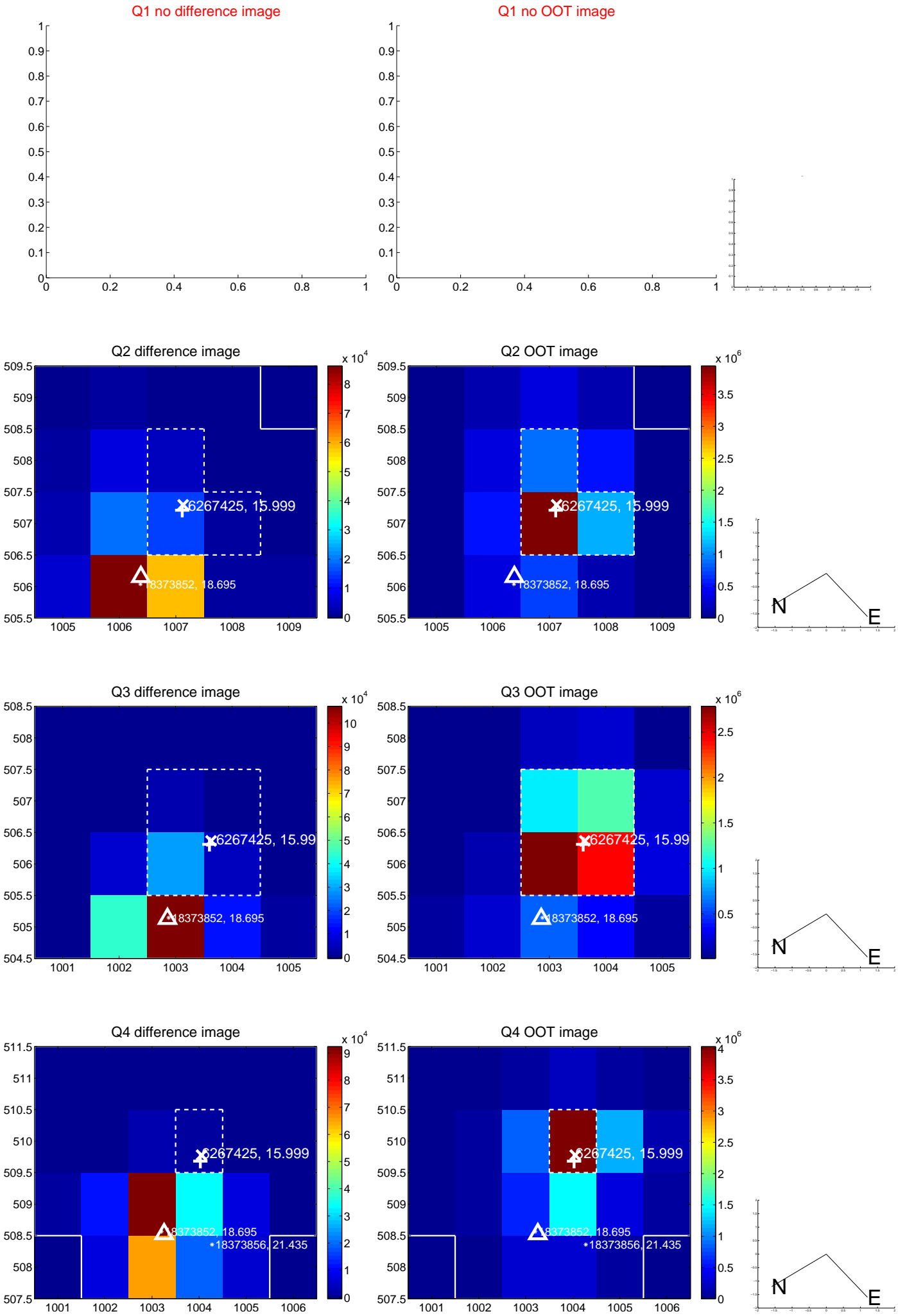


offset from photometric centroids

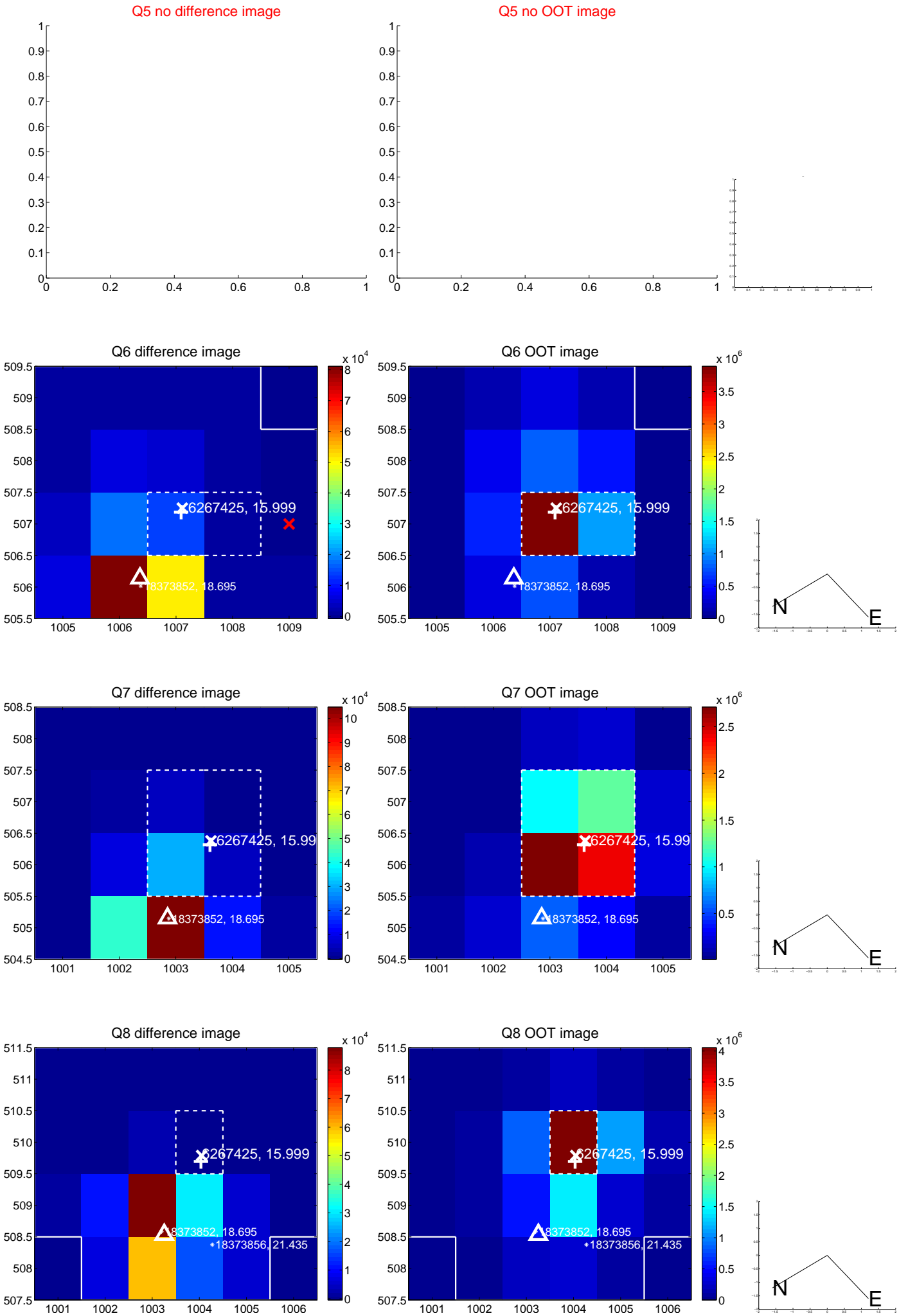


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

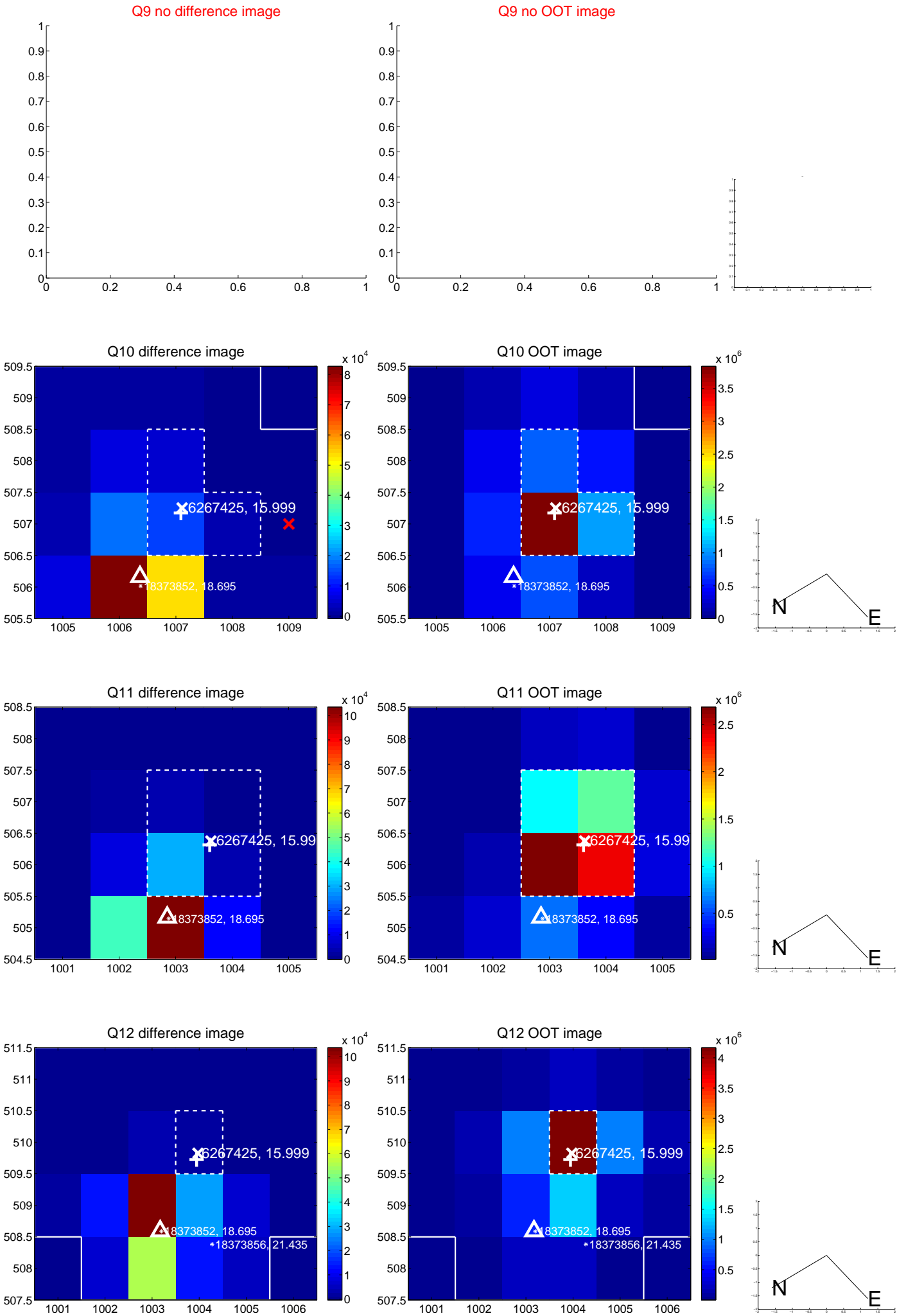
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



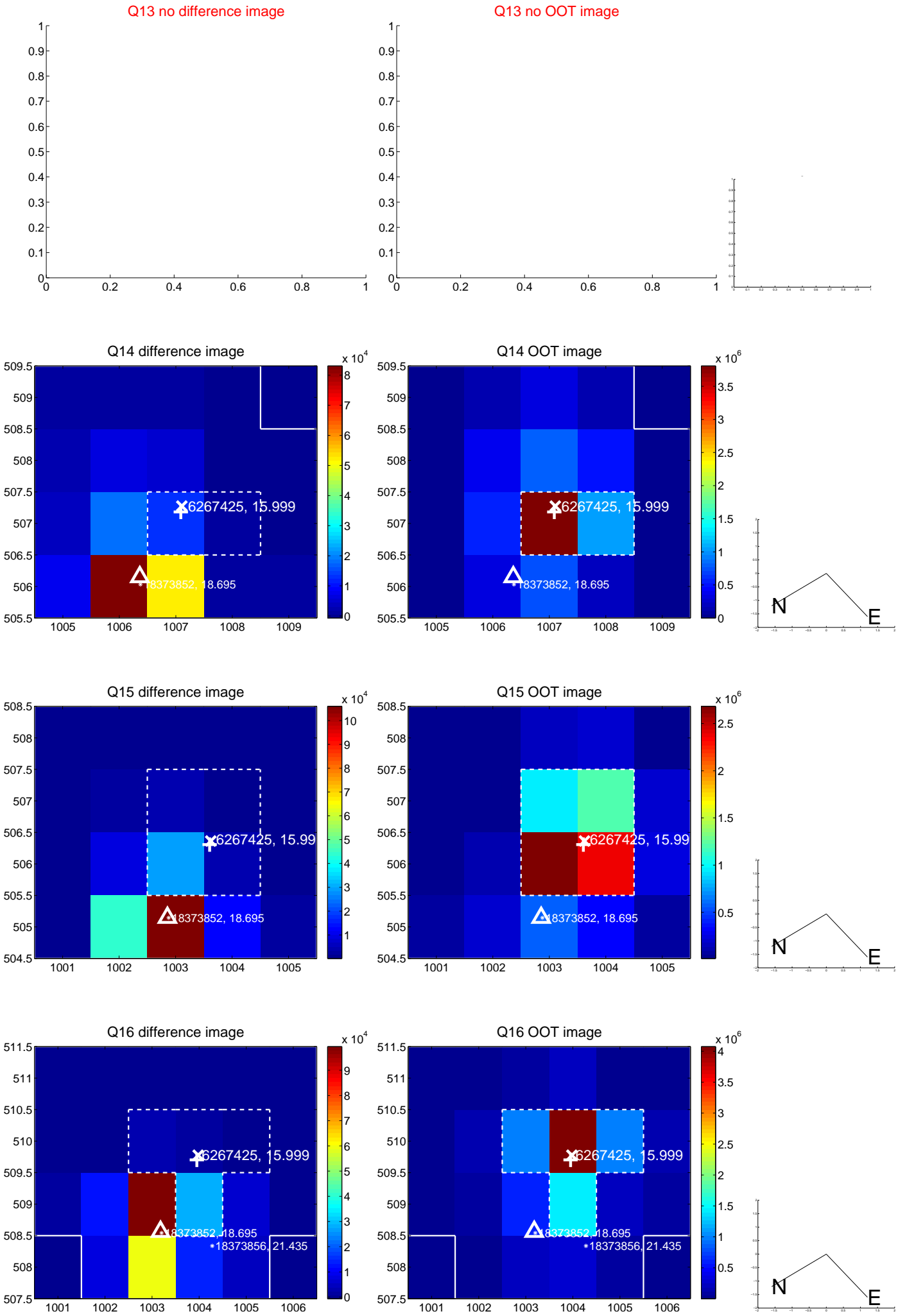
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



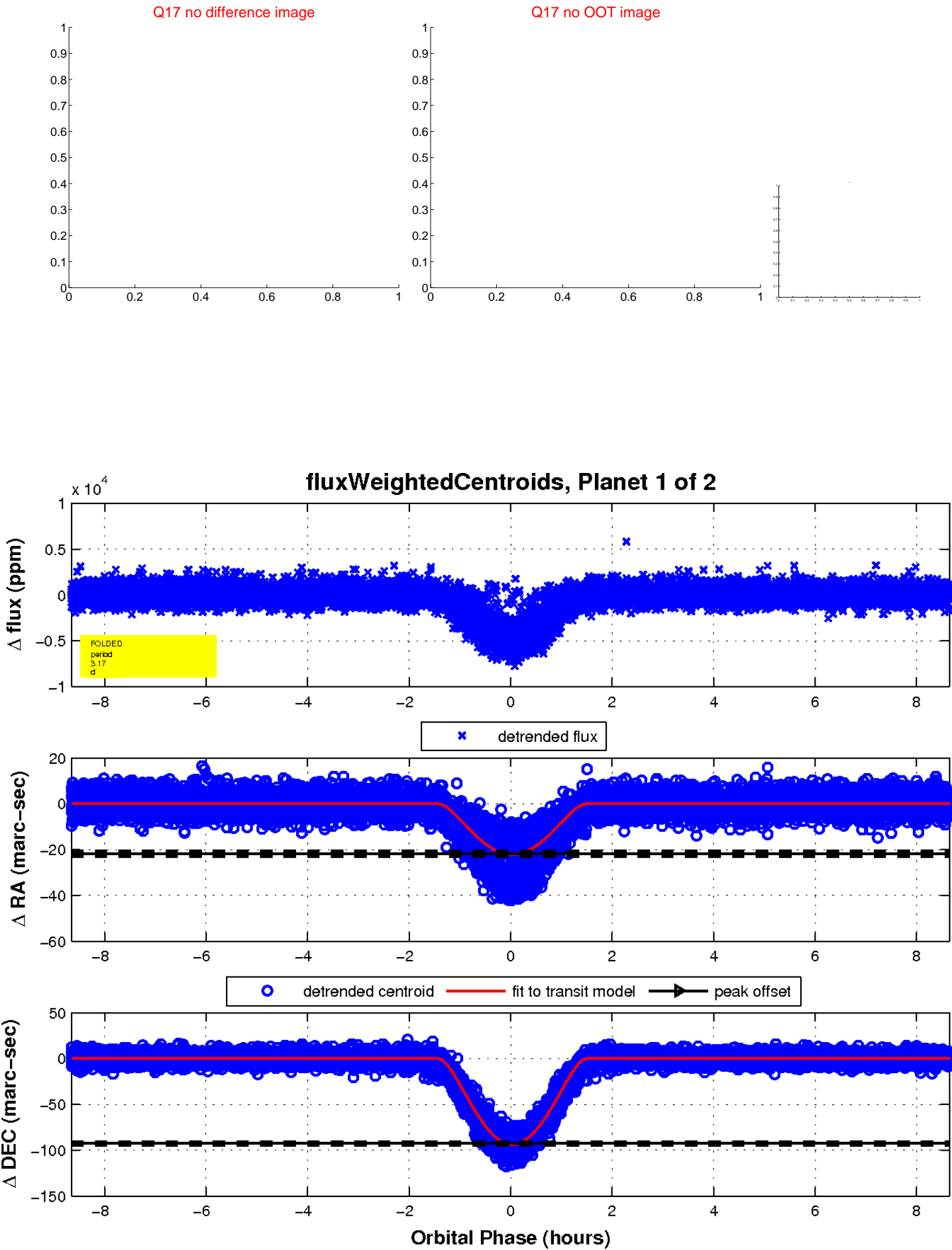
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

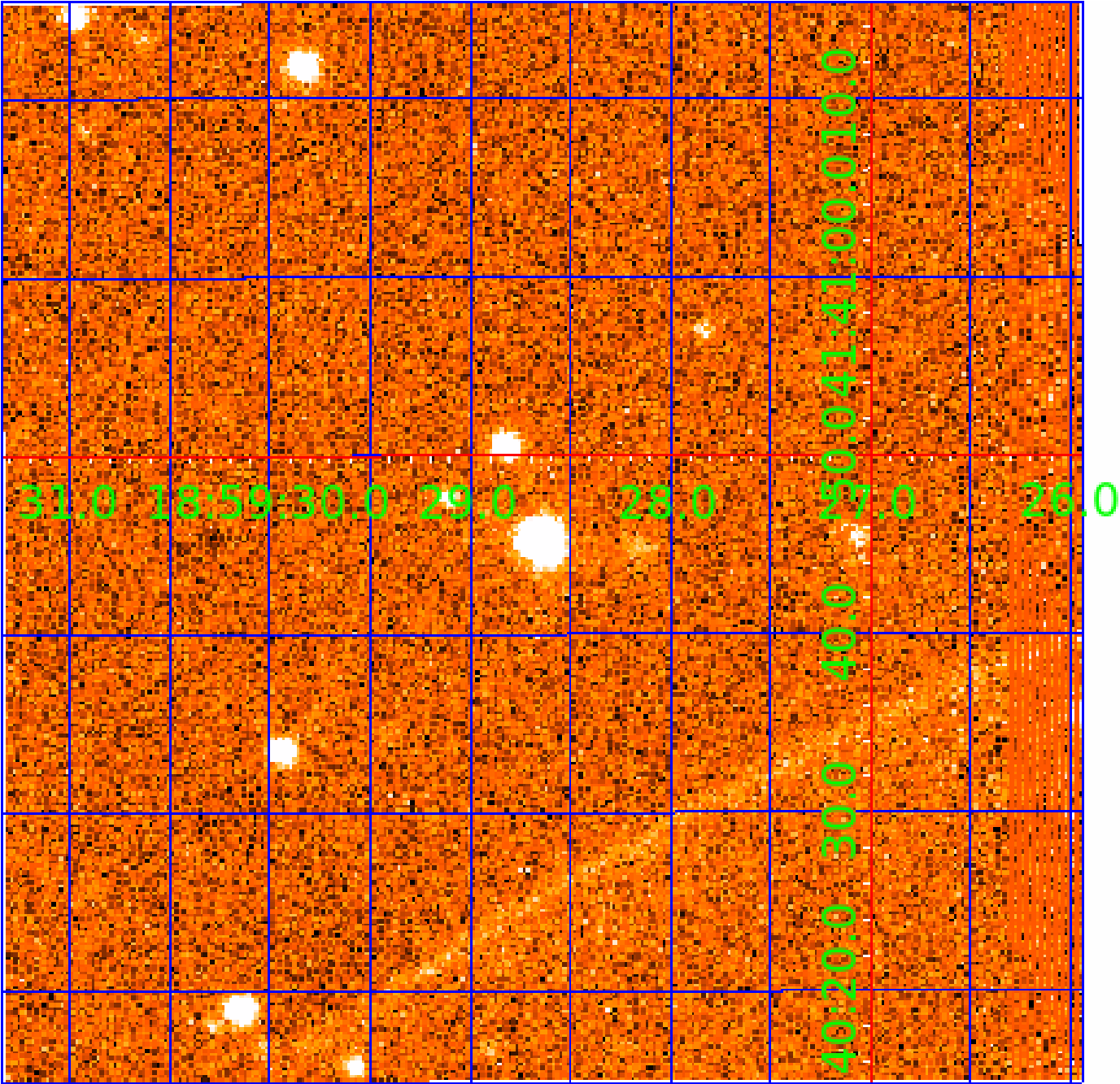


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006267425

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})
006267425-01	OBS	0848.01	3.166457	134.007287	4549.7	2.884	126.3	130.6	0.70	4968	8.98	196.44
006267425-02	OBS	No	3.166458	132.420155	382.8	2.447	14.5	15.5	0.70	4968	1.65	196.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006267425-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
006267425-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST

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.

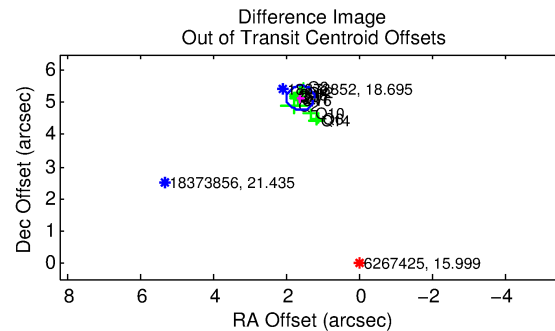
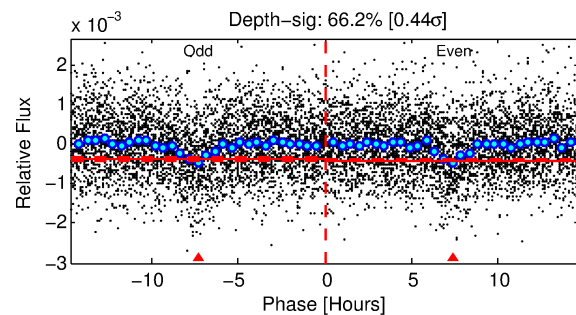
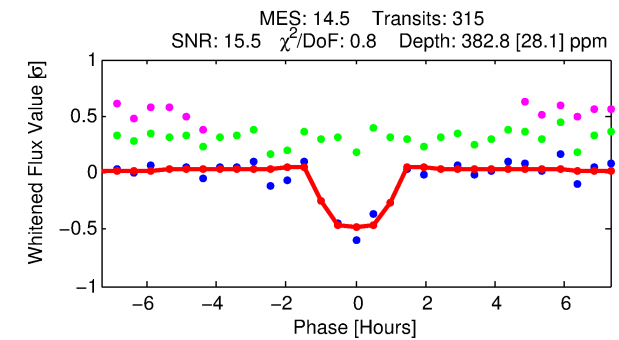
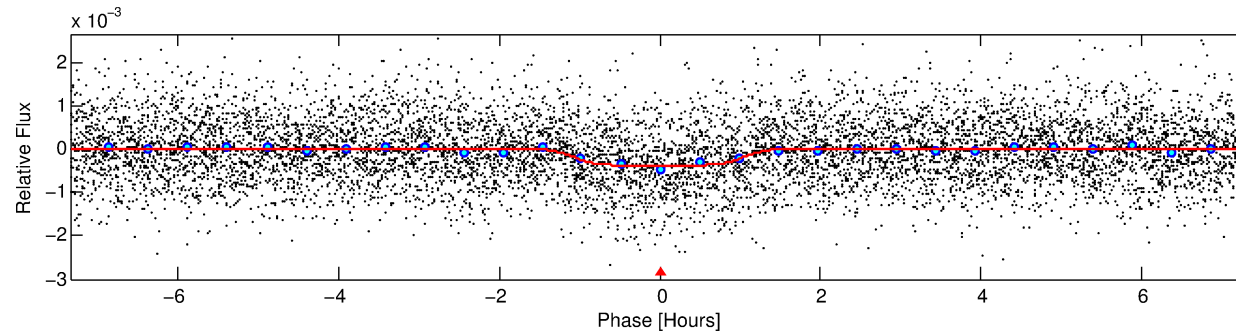
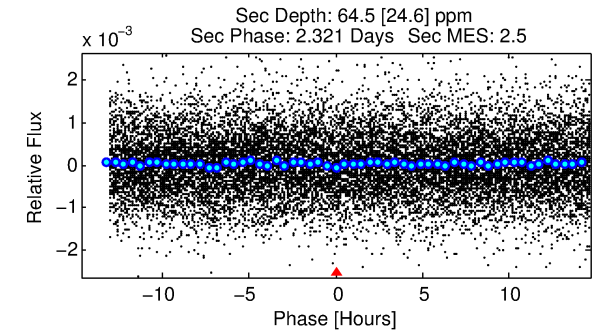
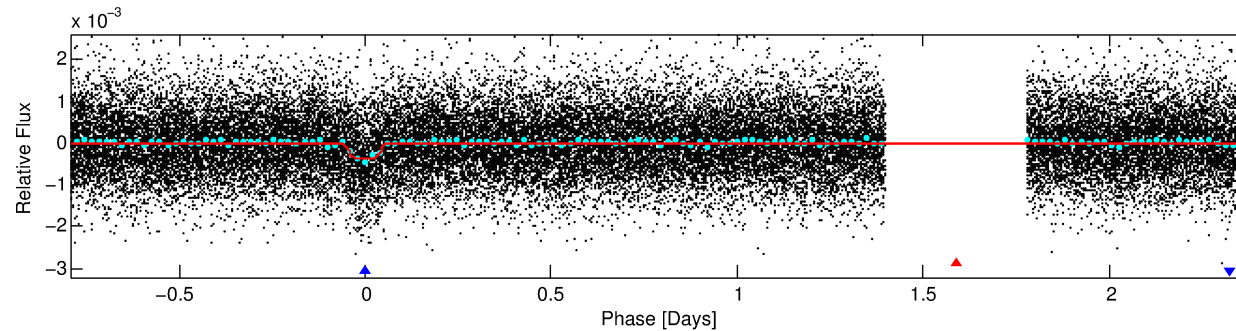
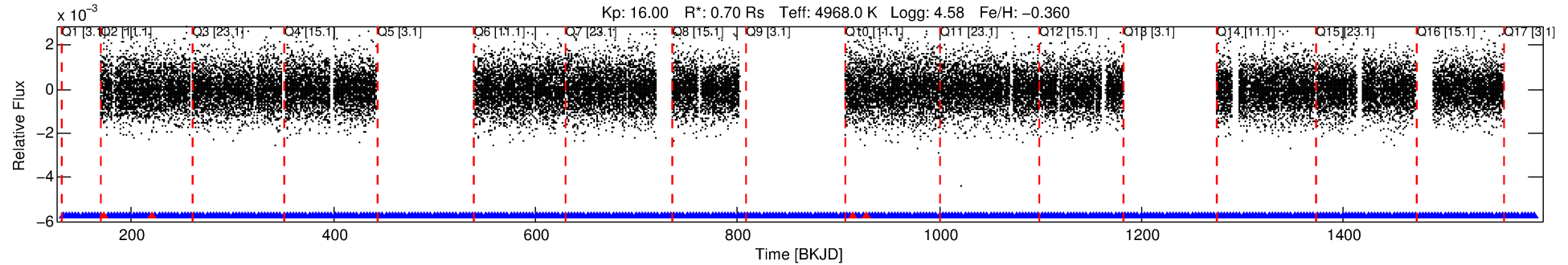
Ephemeris Match Information For 006267425-02

No Significant Match Found

DV One-Page Summary

KIC: 6267425 Candidate: 2 of 2 Period: 3.166 d
KOI: K00848 Corr: No Ephemeris Match

Kp: 16.00 R*: 0.70 Rs Teff: 4968.0 K Logg: 4.58 Fe/H: -0.360



DV Fit Results:

Period = 3.16646 [0.00001] d
Epoch = 132.4202 [0.0024] BKJD
Rp/R* = 0.0215 [0.0093]
a/R* = 5.12 [8.37]
b = 0.89 [0.43]
Seff = 196.44 [34.95]
Teq = 955 [42] K
Rp = 1.65 [0.73] Re
a = 0.0371 [0.0033] AU
Ag = 17.99 [17.21] [0.99σ]
Teff = 3040 [726] K [2.87σ]

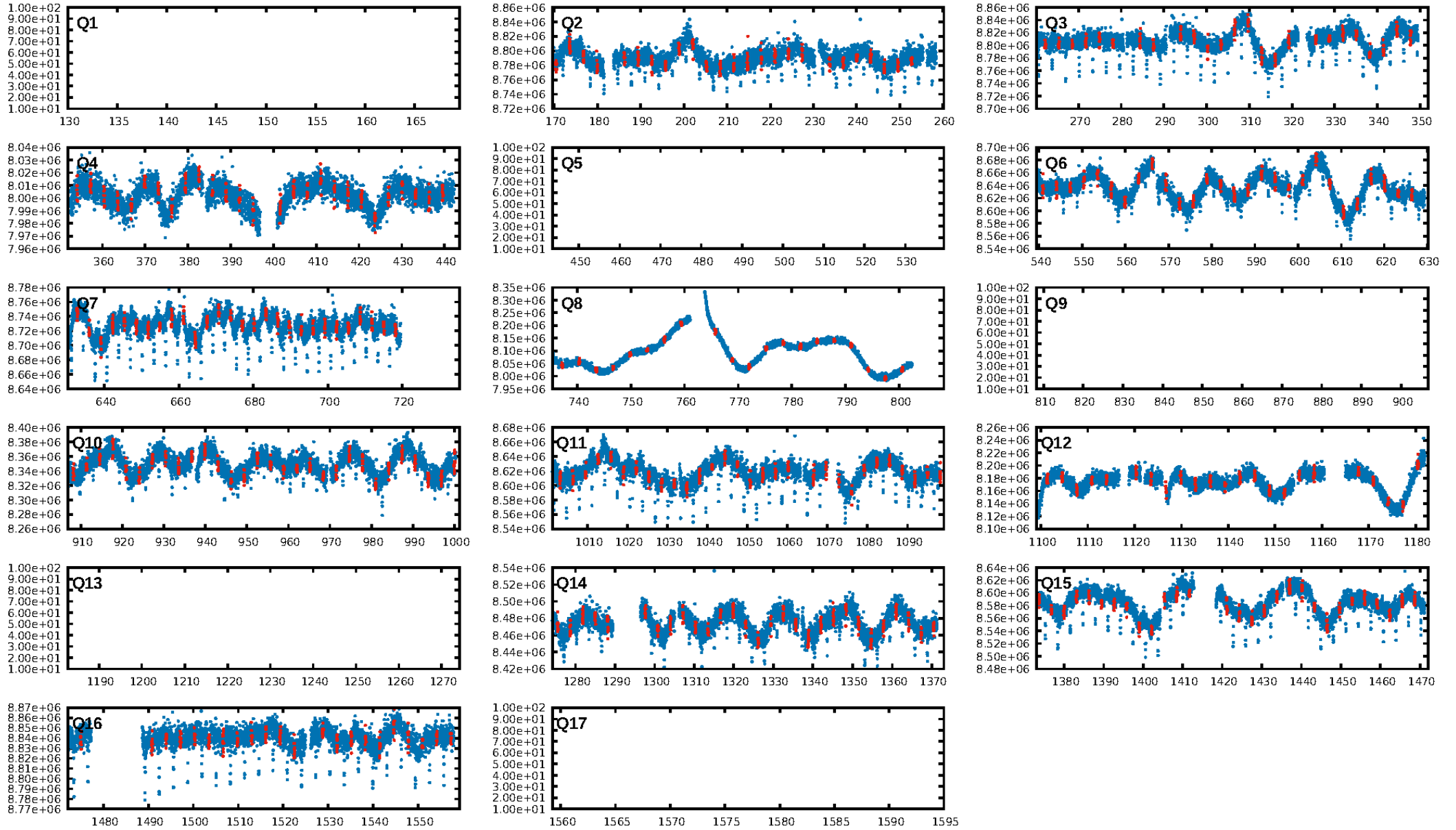
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.87e-44
RollingBand-fgt: 0.99 [311/315]
GhostDiagnostic-chr: -0.2289
Centroid-sig: 0.0%
Centroid-so: 17.440 arcsec [19.19σ]
OotOffset-rm: 5.392 arcsec [42.57σ]
KicOffset-rm: 5.671 arcsec [49.03σ]
OotOffset-st: 4/4/4/0 [12]
KicOffset-st: 4/4/4/0 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

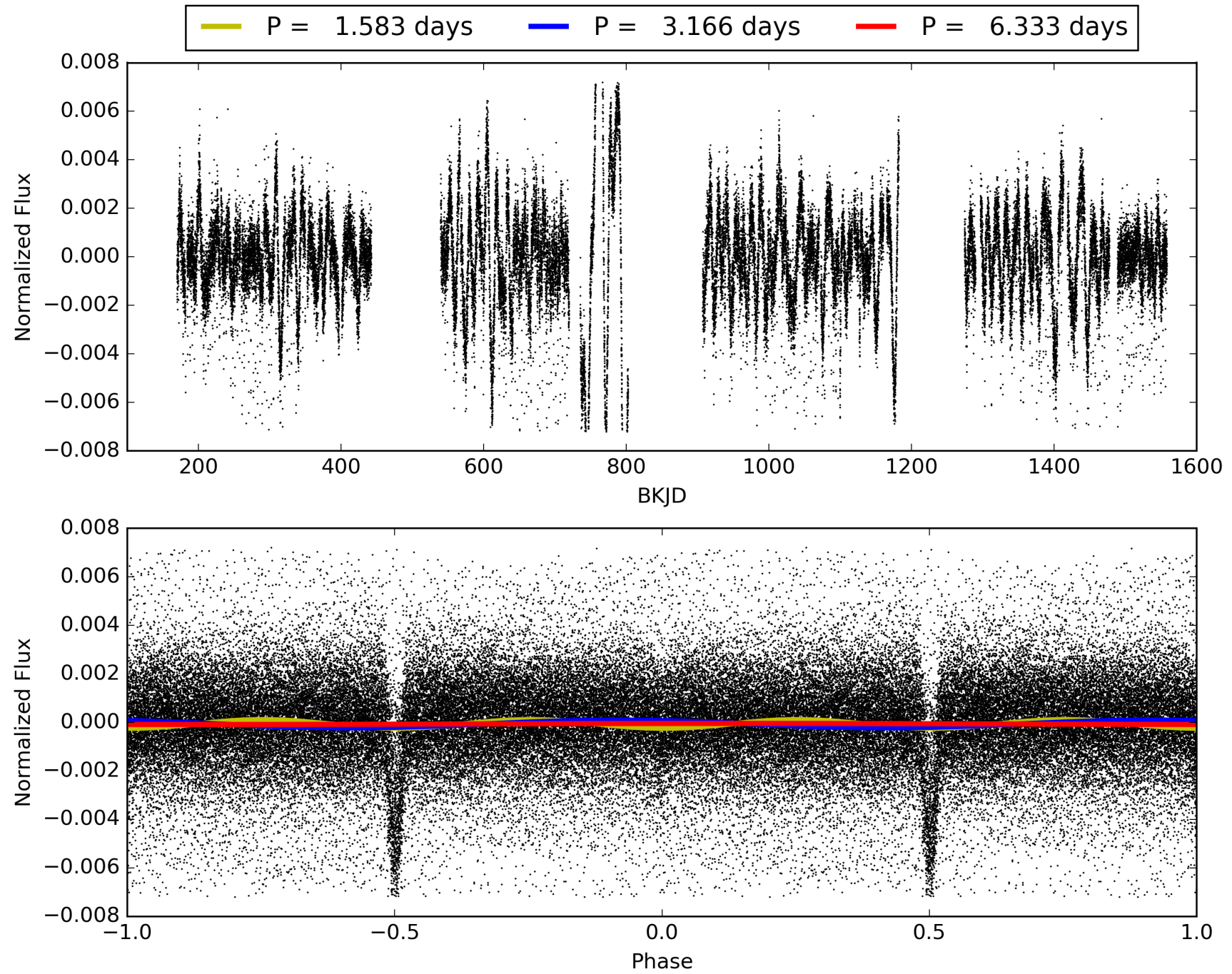
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:53:17 Z

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

TCE 006267425-02, PDC Light Curves

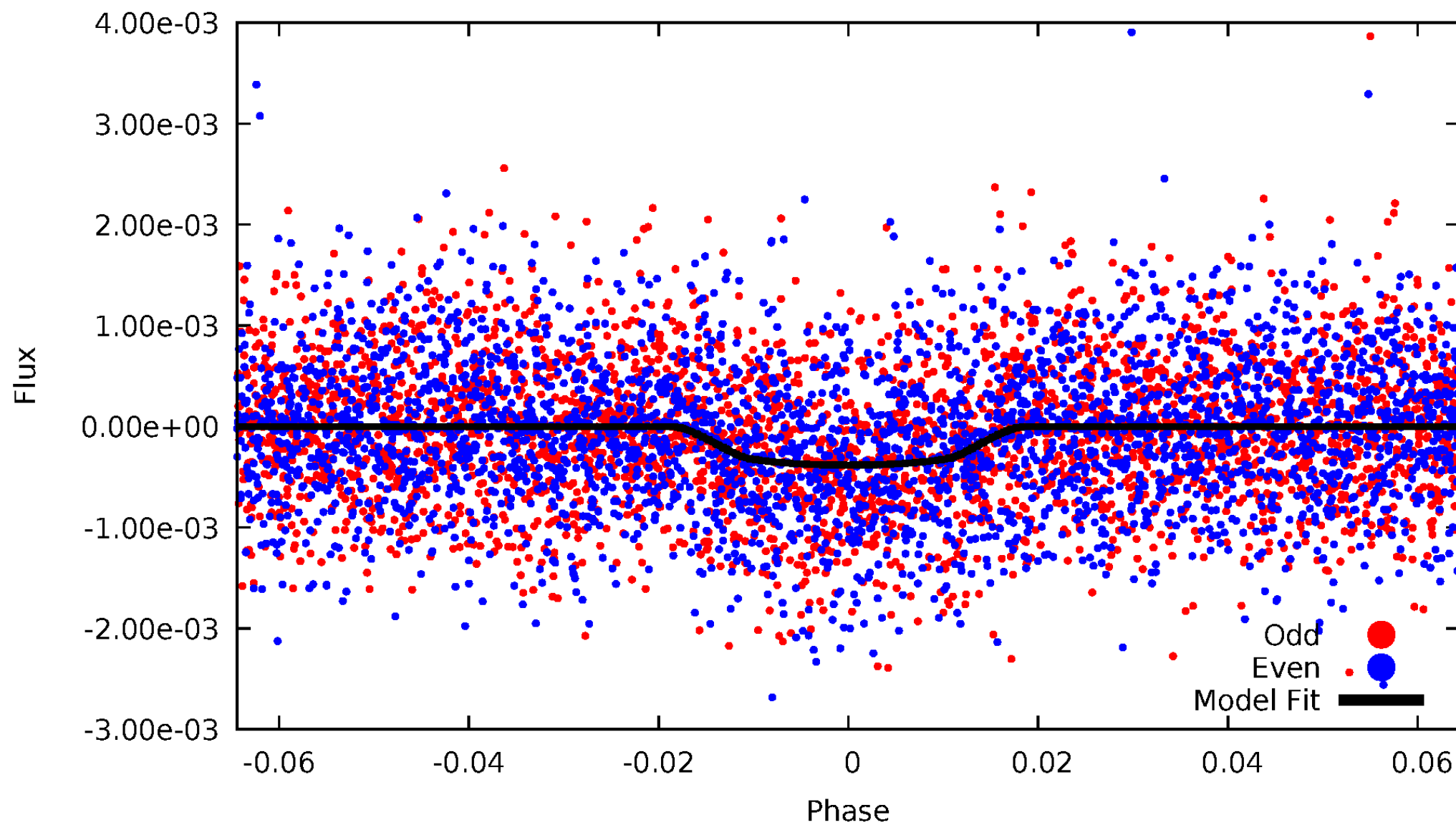


TCE 006267425-02



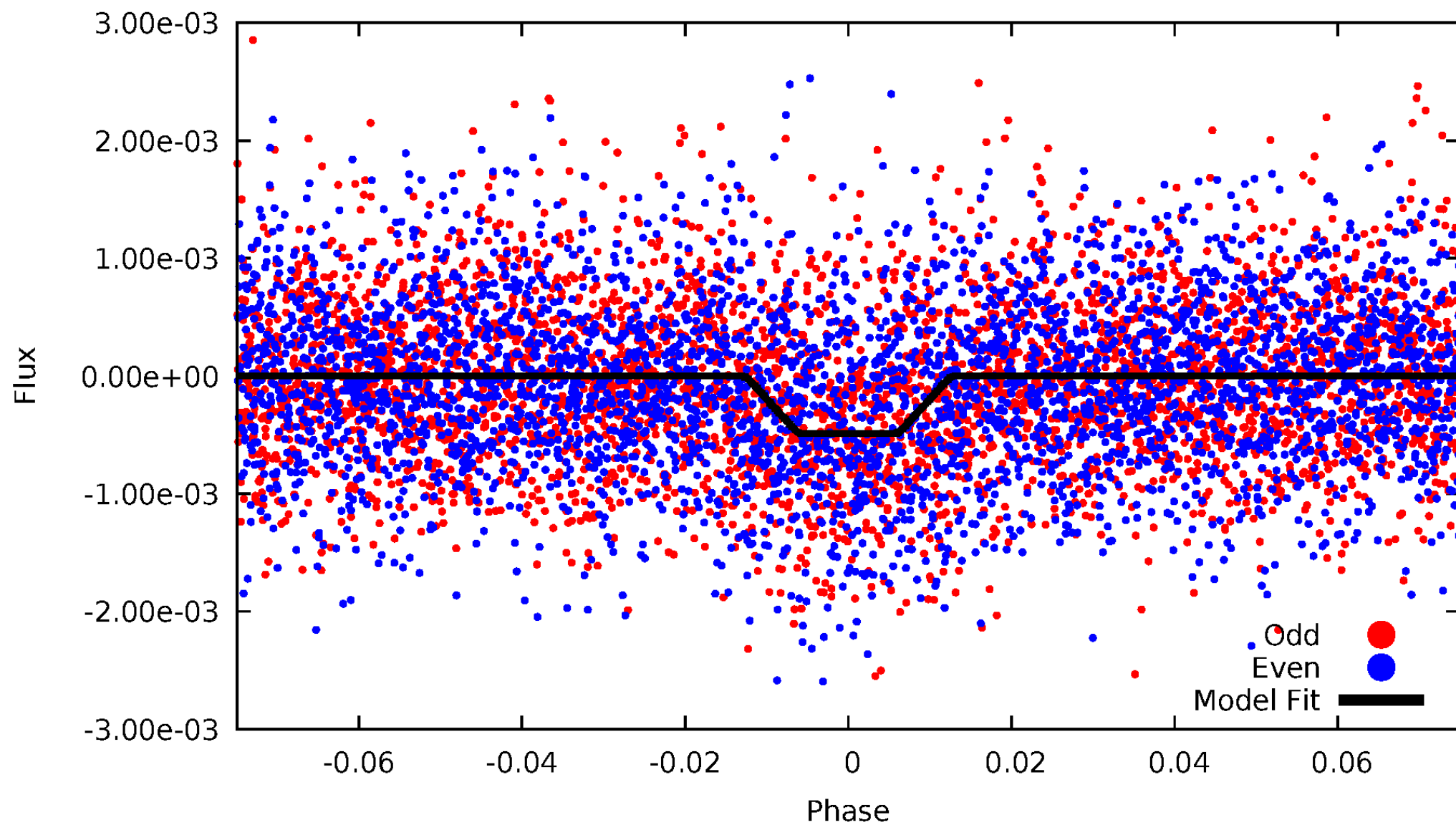
DV Odd/Even

TCE 006267425-02



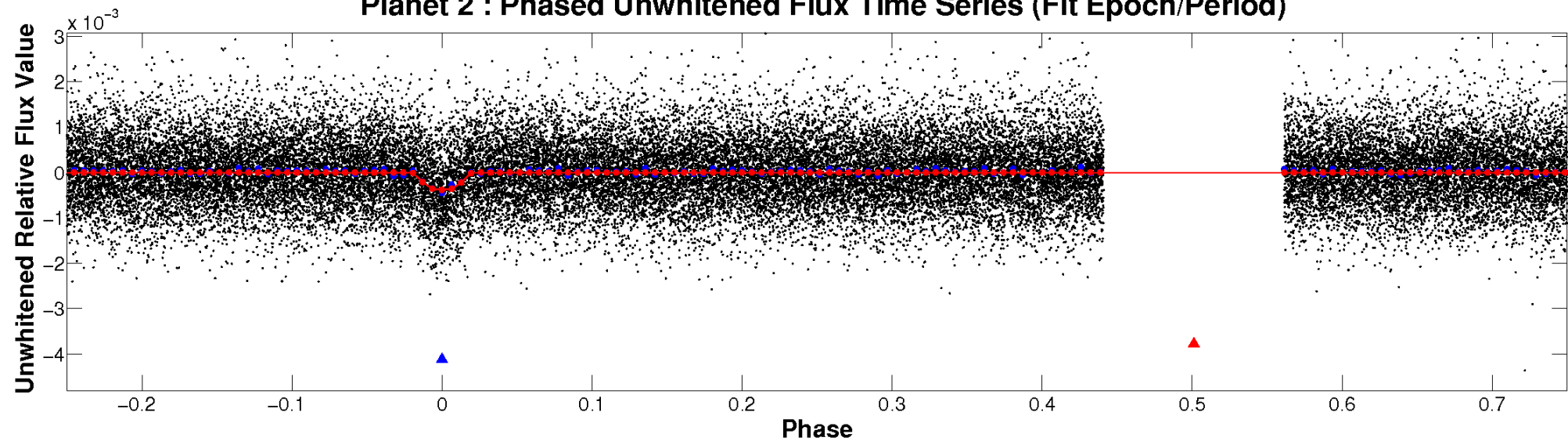
ALT Odd/Even

TCE 006267425-02

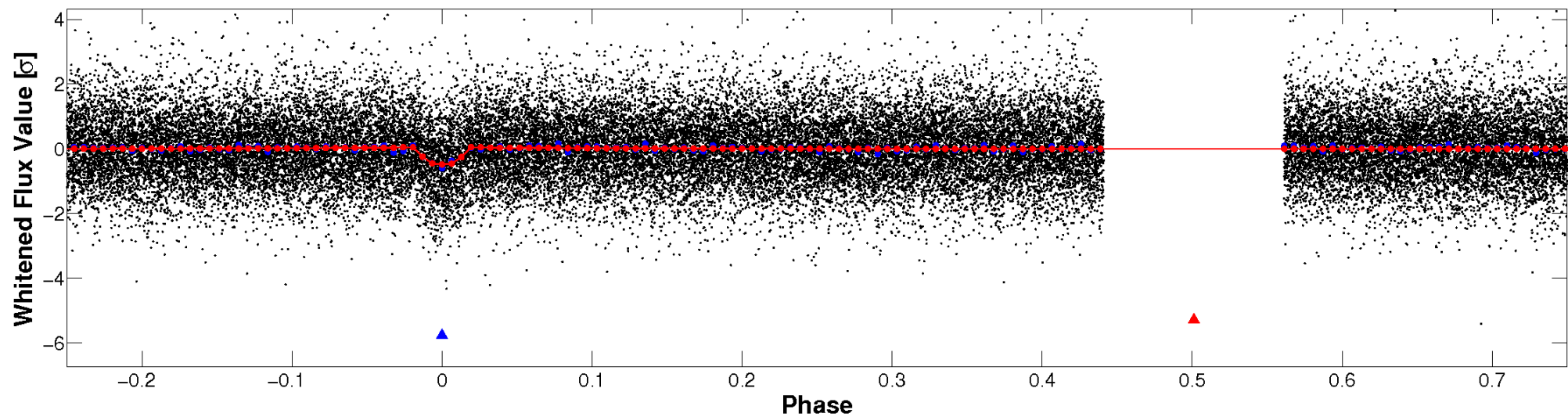


Non-Whitened Vs. Whitened Light Curve

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

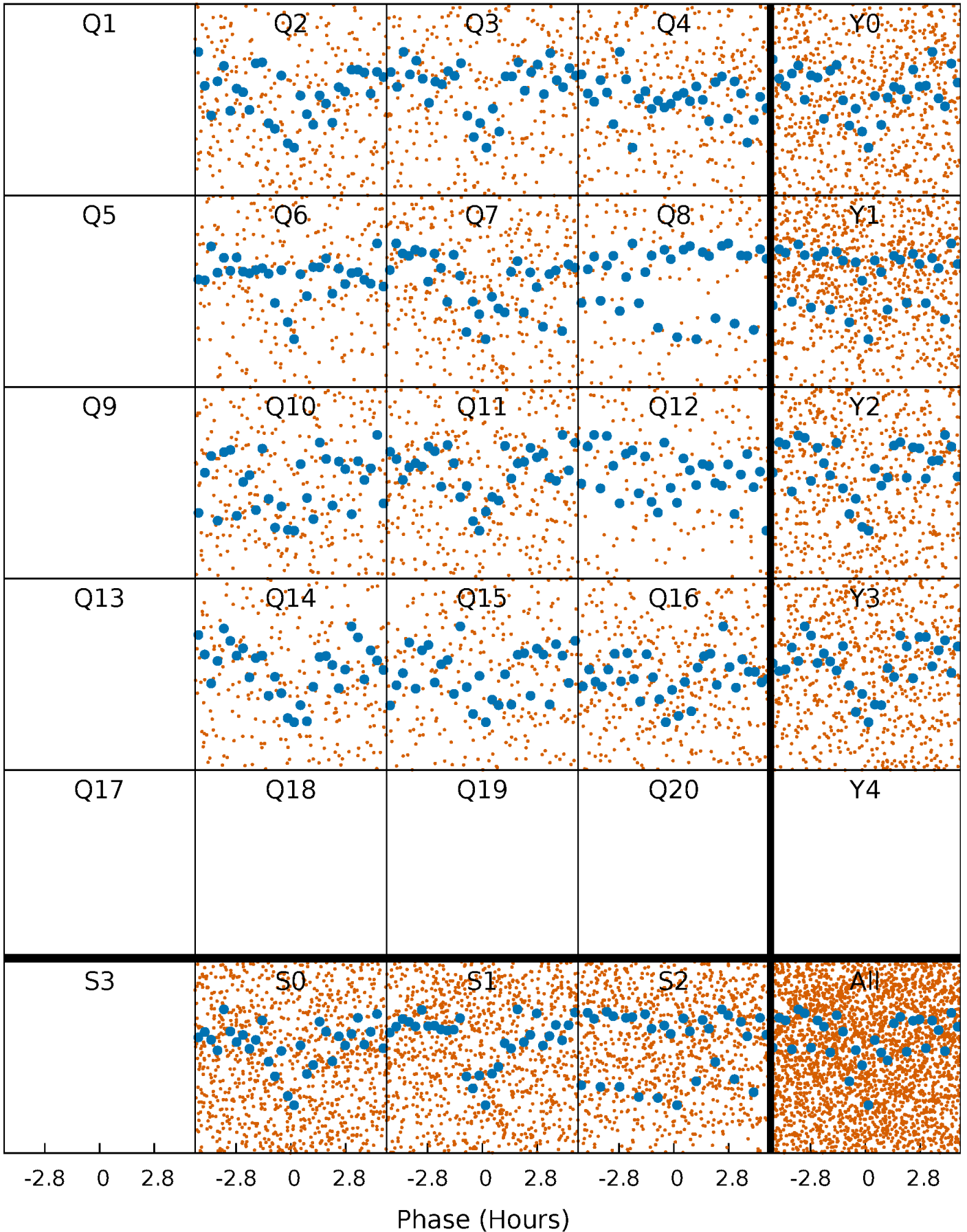


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



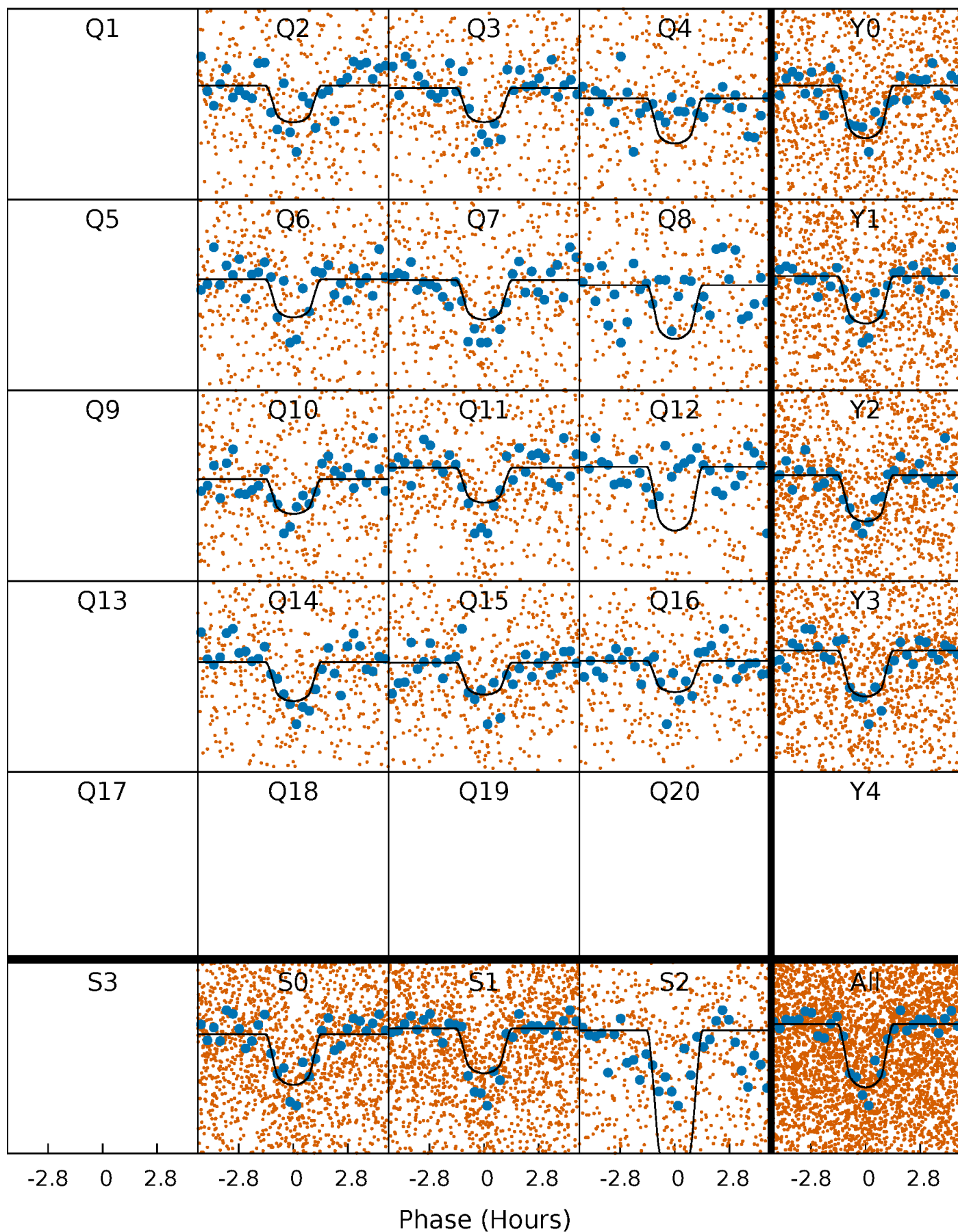
PDC Quarter-Phased Transit Curves

TCE 006267425-02 P= 3.166458 Days $T_0=132.420155$ (BKJD)



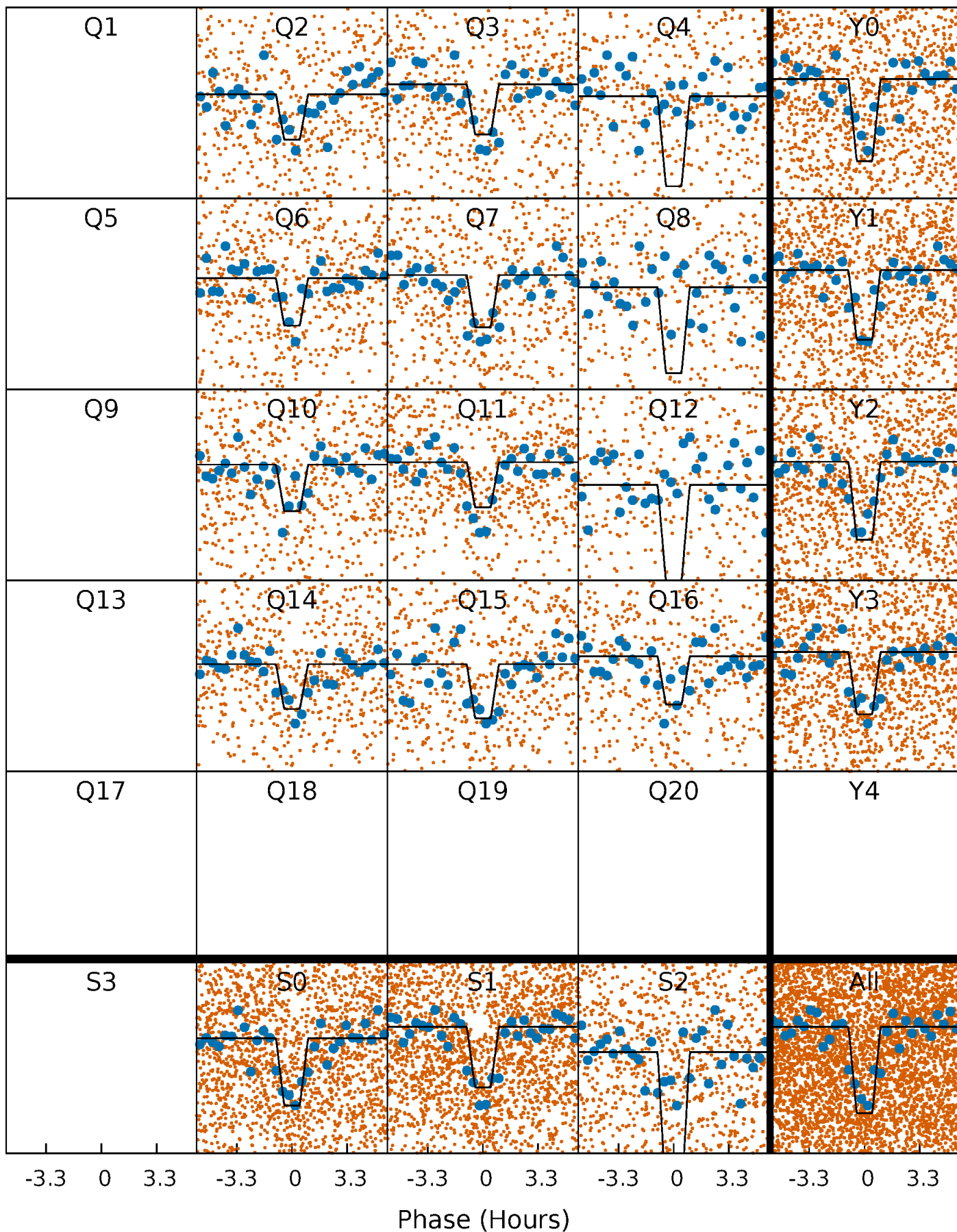
DV Quarter-Phased Transit Curves

TCE 006267425-02 P= 3.166458 Days $T_0=132.420155$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

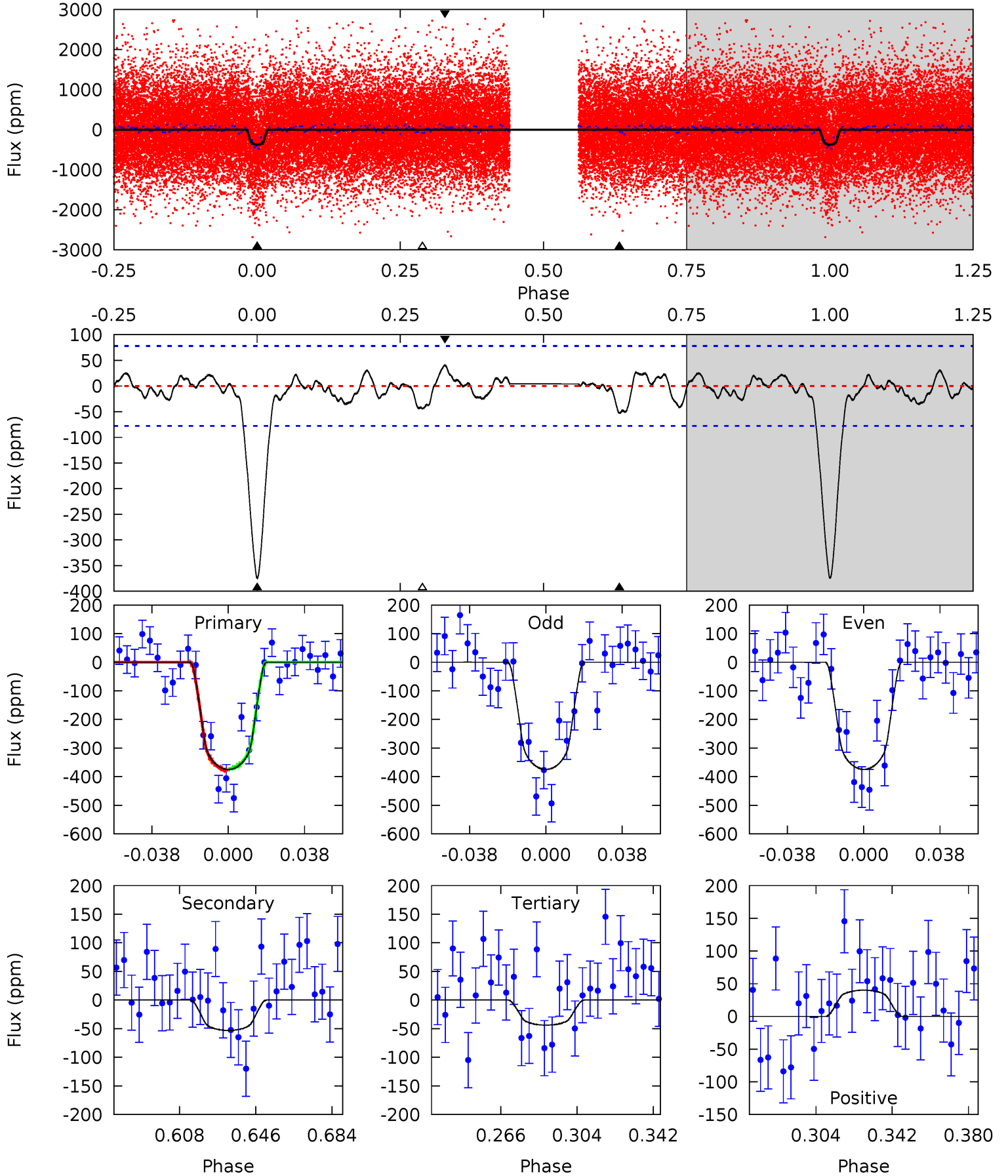
TCE 006267425-02 P= 3.166473 Days $T_0=132.416476$ (BKJD)



DV Model-Shift Uniqueness Test

006267425-02, P = 3.166458 Days, E = 132.420155 Days

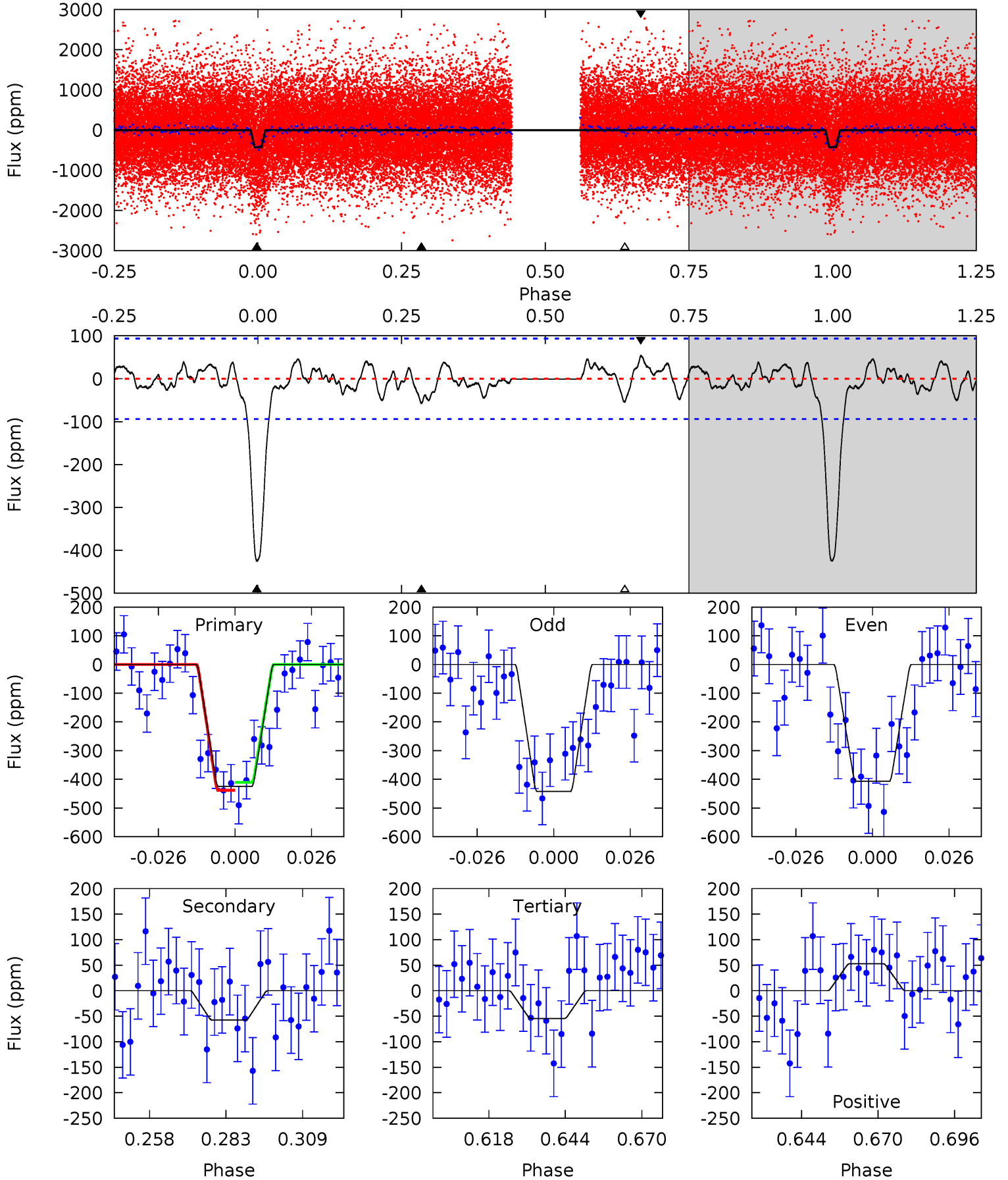
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	3.26	2.68	2.46	4.76	2.07	1.07	20.3	20.5	0.57	0.80	0.01	1.01	0.10	0.15



Alt Model-Shift Uniqueness Test

006267425-02, P = 3.166473 Days, E = 132.416476 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.9	2.97	2.80	2.73	4.84	2.23	1.17	19.1	19.2	0.16	0.24	0.89	0.96	0.11	0.72



Stellar Parameters For KIC 006267425

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4968^{+151}_{-136}	$4.575^{+0.072}_{-0.044}$	$-0.360^{+0.350}_{-0.300}$	$0.704^{+0.065}_{-0.072}$	$0.680^{+0.093}_{-0.043}$	$2.744^{+0.822}_{-0.440}$
	+3%/-3%	+2%/-1%	+97%/-83%	+9%/-10%	+14%/-6%	+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 006267425-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-53 ± 16	$1.65^{+0.72}_{-0.69}$	1327^{+47}_{-46}	3347^{+694}_{-398}	15^{+32}_{-8}
Alt.	-58 ± 19	$1.70^{+0.76}_{-0.67}$	1328^{+51}_{-51}	3360^{+627}_{-390}	15^{+28}_{-8}

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

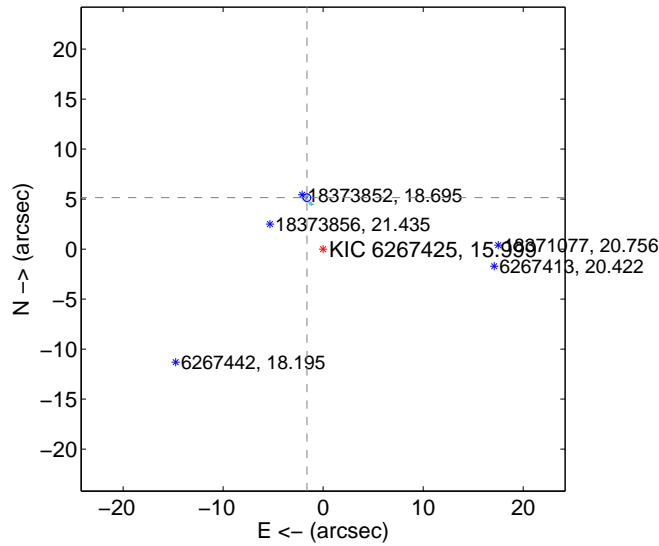
Supplemental centroid analysis for 006267425-02. Kepler magnitude: 16.00. Transit SNR 15.49

There are 12 quarters with good PRF difference image offsets

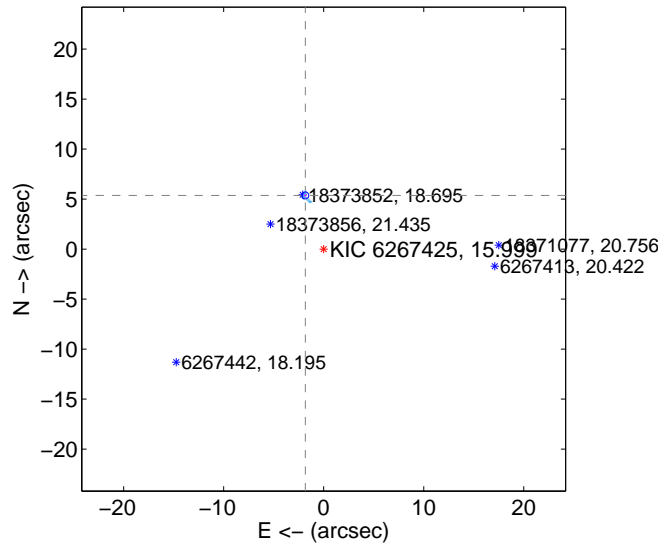
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.392 \pm 0.127	42.57	1.620 \pm 0.092	5.143 \pm 0.118
PRF-fit source offset from KIC position	5.671 \pm 0.116	49.03	1.838 \pm 0.087	5.365 \pm 0.108
photometric centroid source offset	17.44 \pm 0.91	19.19	6.35 \pm 0.79	16.24 \pm 0.93

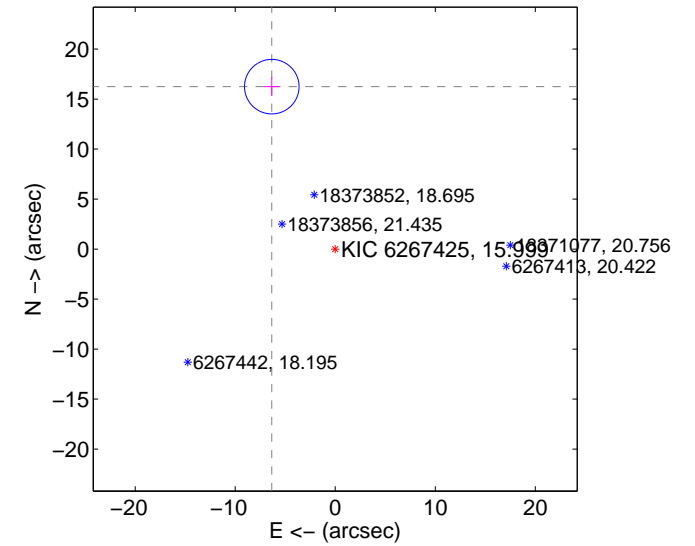
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

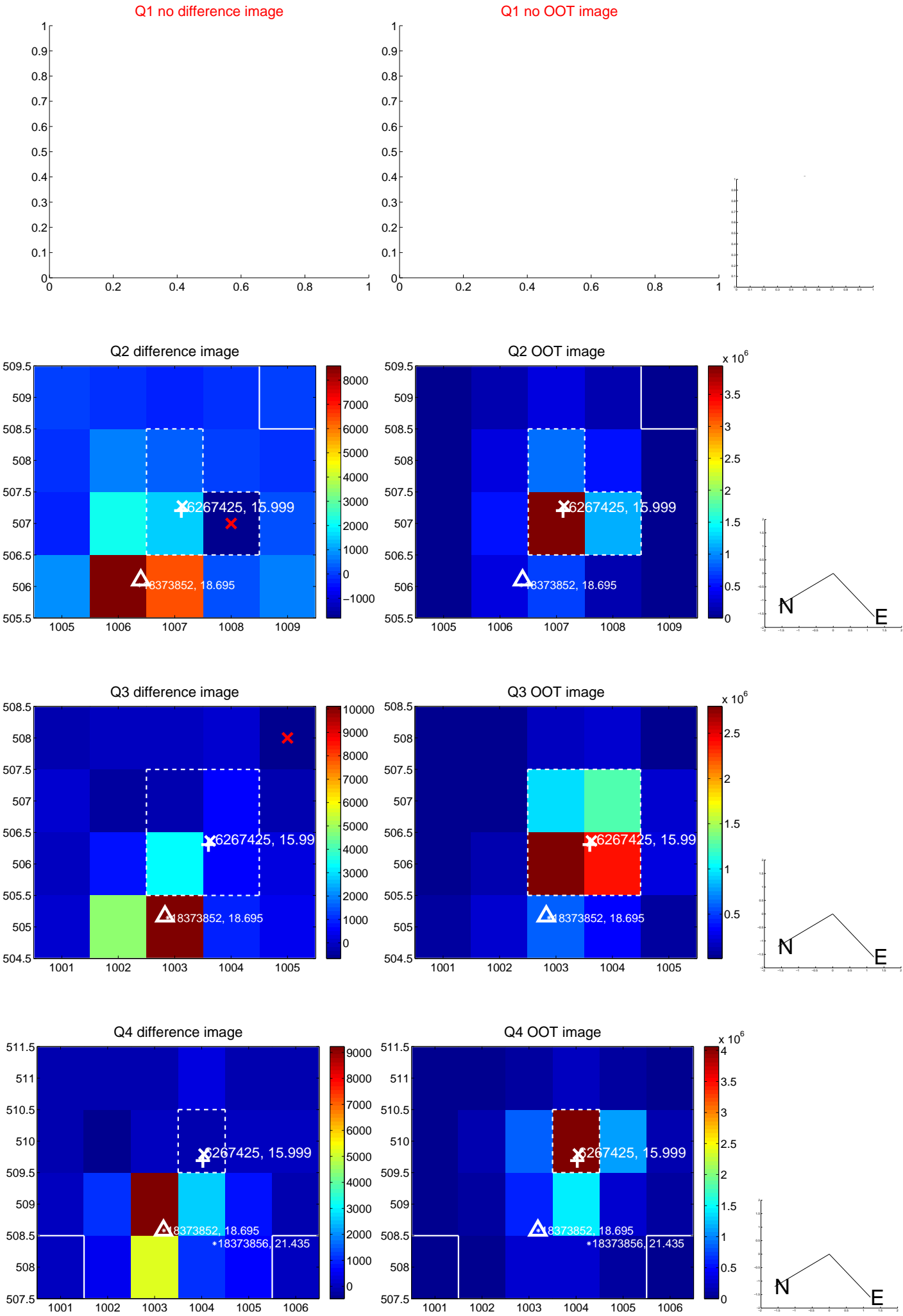


offset from photometric centroids

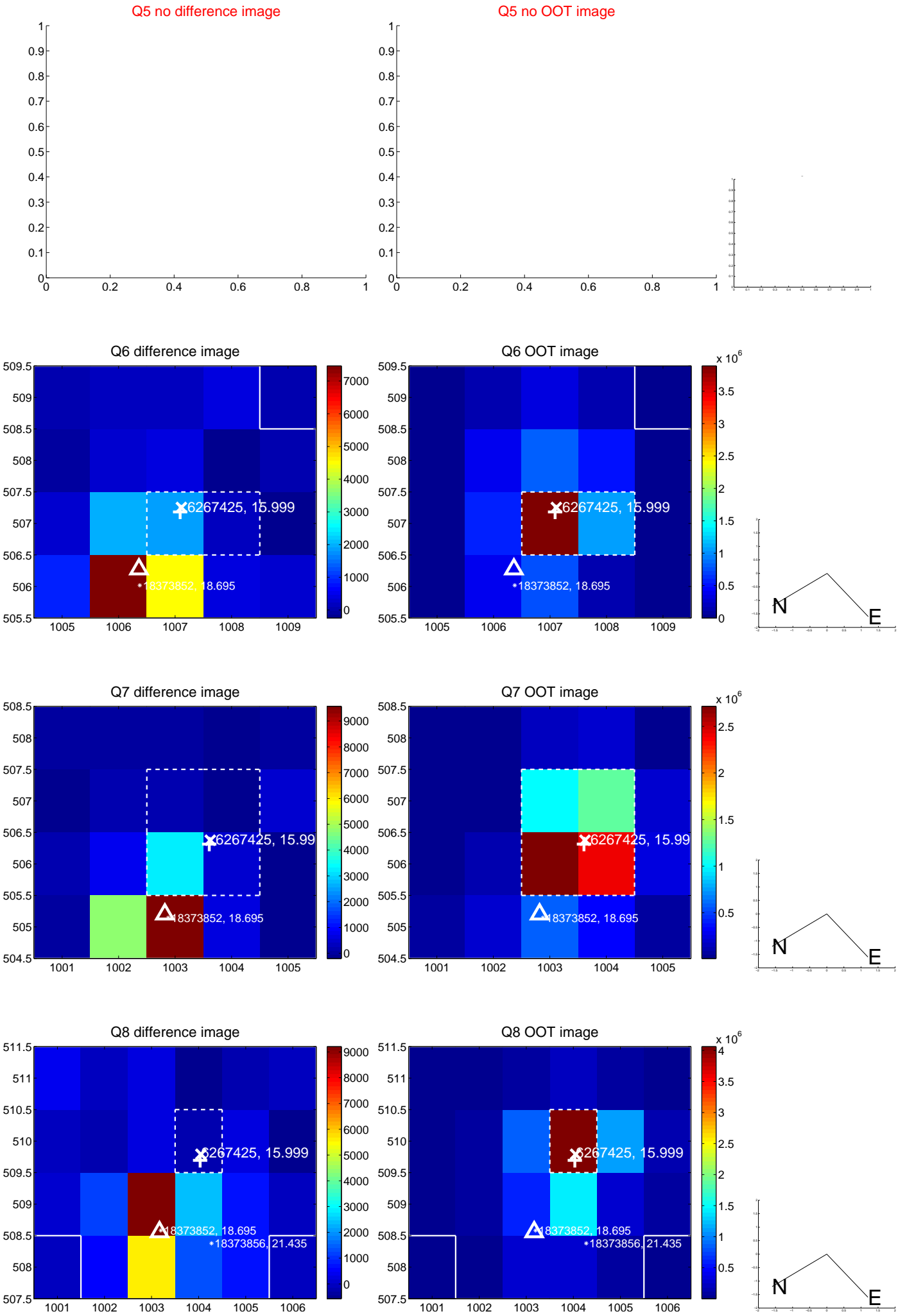


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

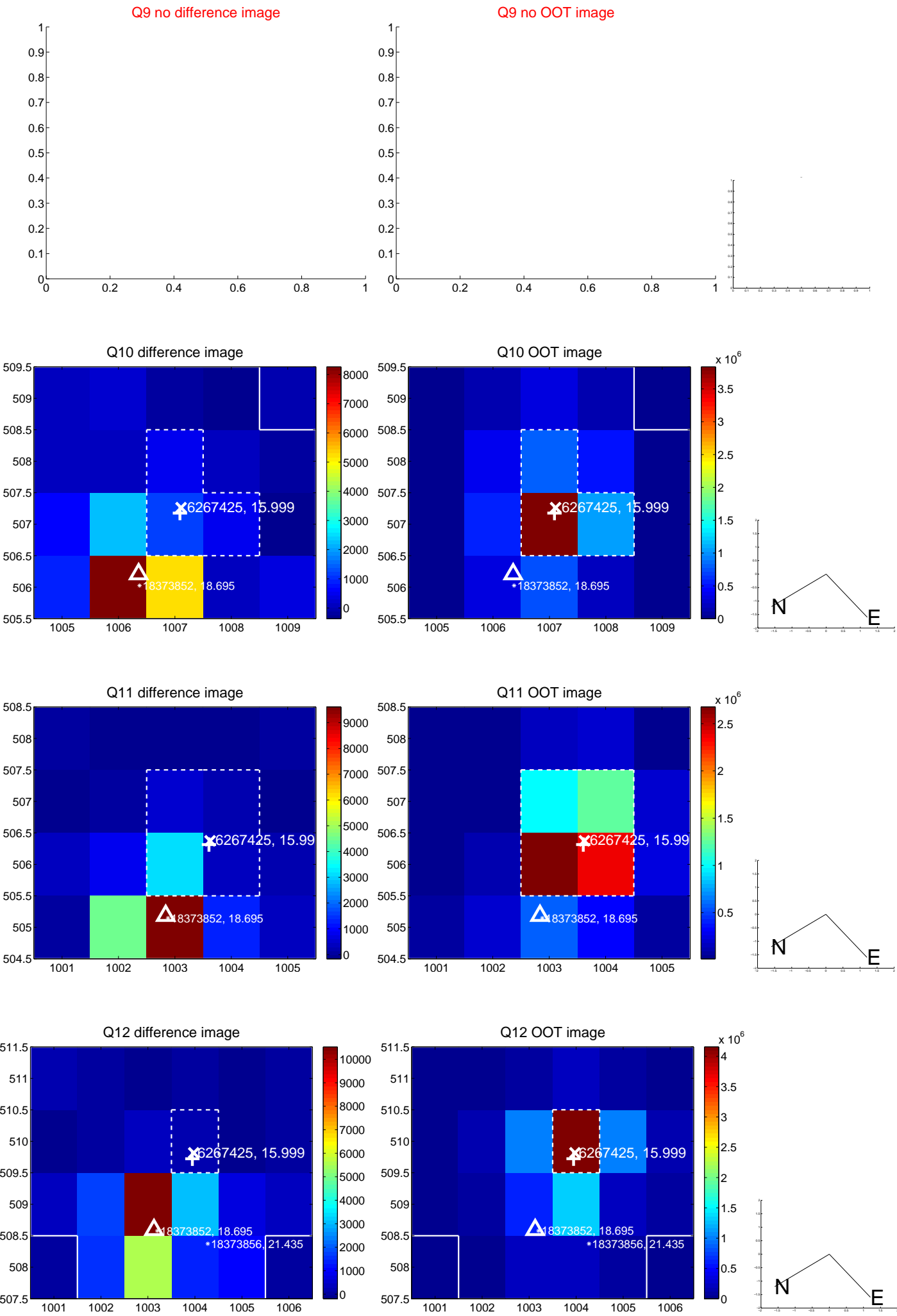
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



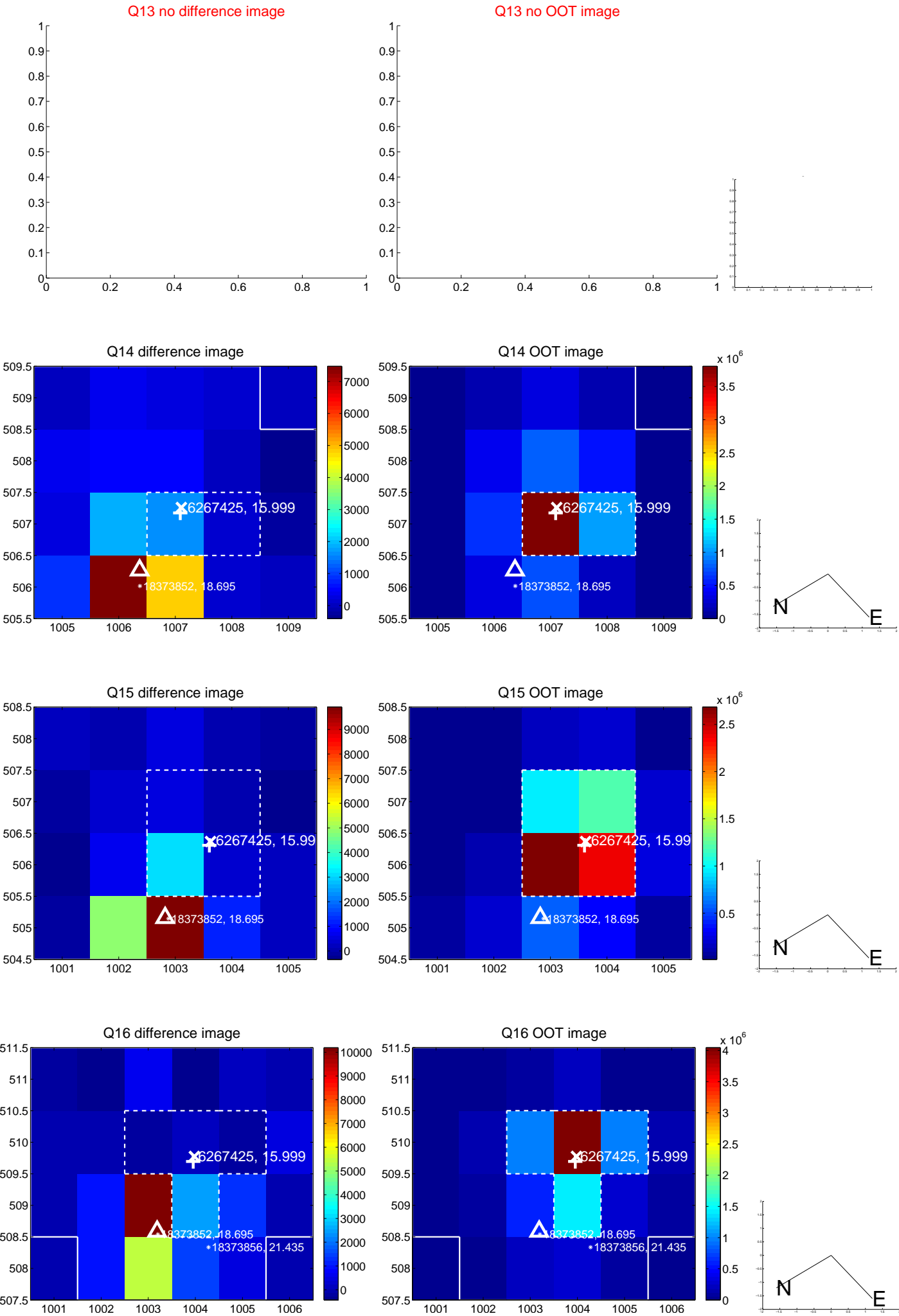
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



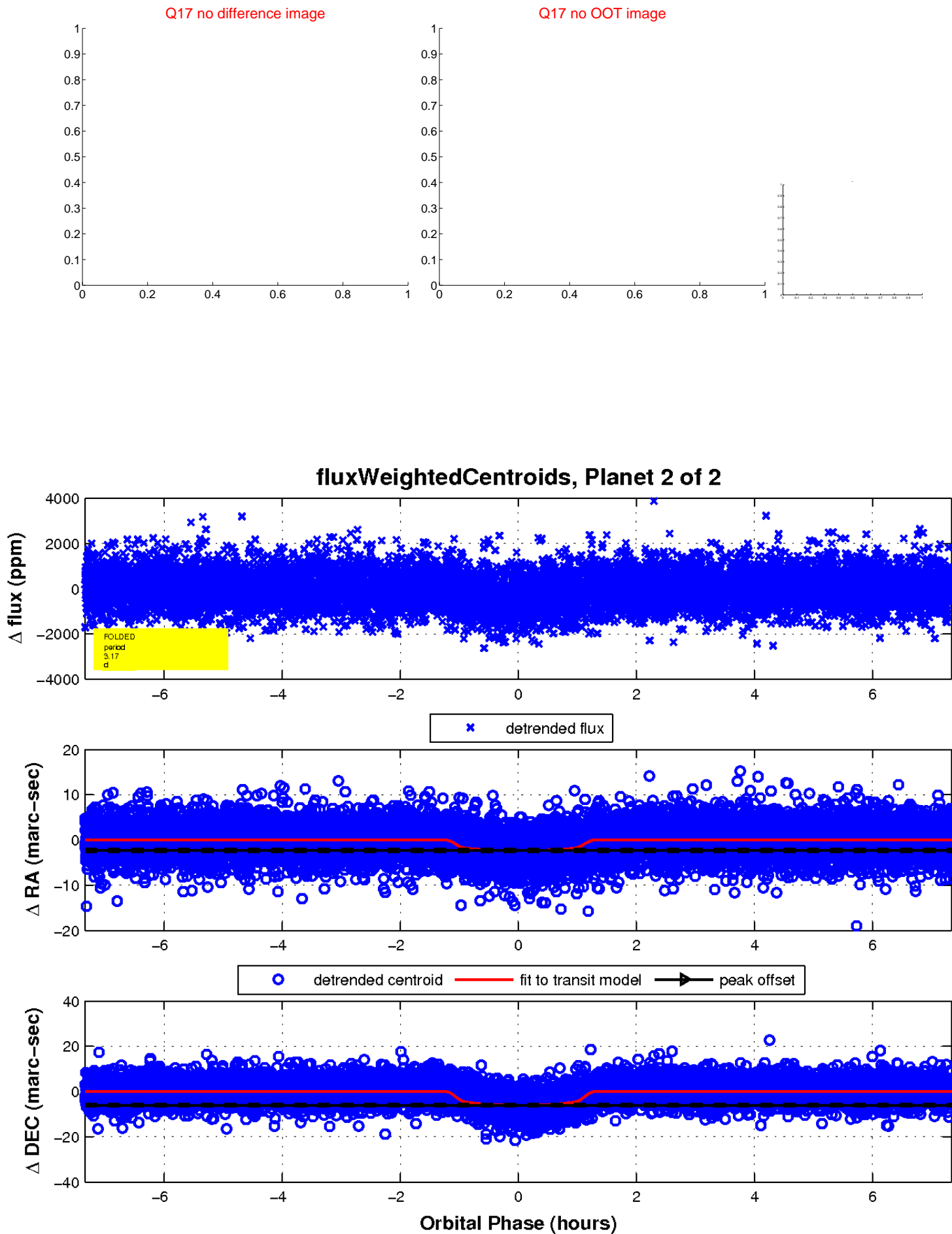
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

