

KIC 006025466

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})
006025466-01	OBS	No	1.127708	132.098190	517.9	2.806	20.6	22.8	1.01	6022	2.61	2725.39
006025466-02	OBS	No	1.128037	131.858646	378.4	8.877	15.0	6.2	1.01	6022	2.09	2724.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025466-01	OBS	FP	0.00	1	0	0	0	LPP_DV
006025466-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

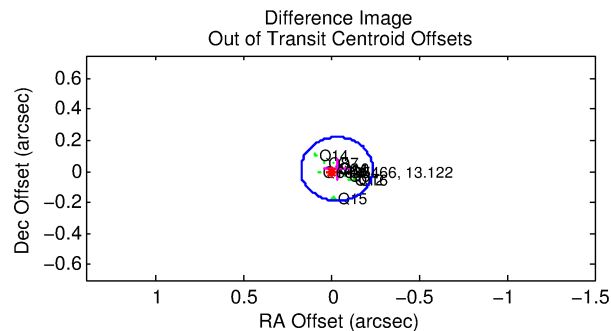
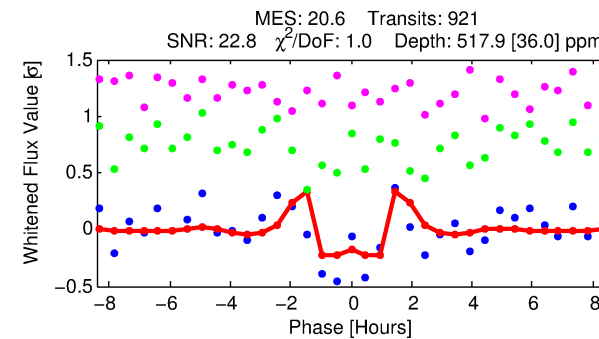
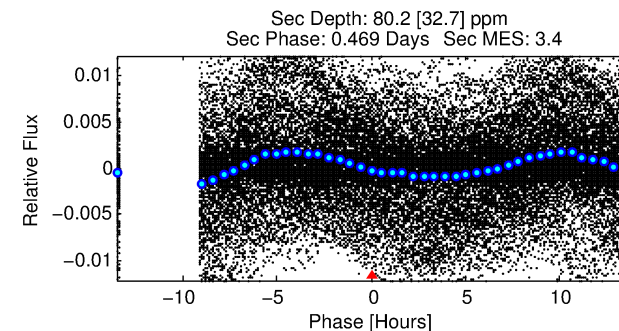
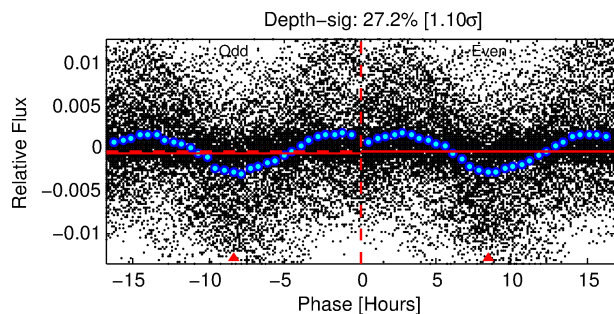
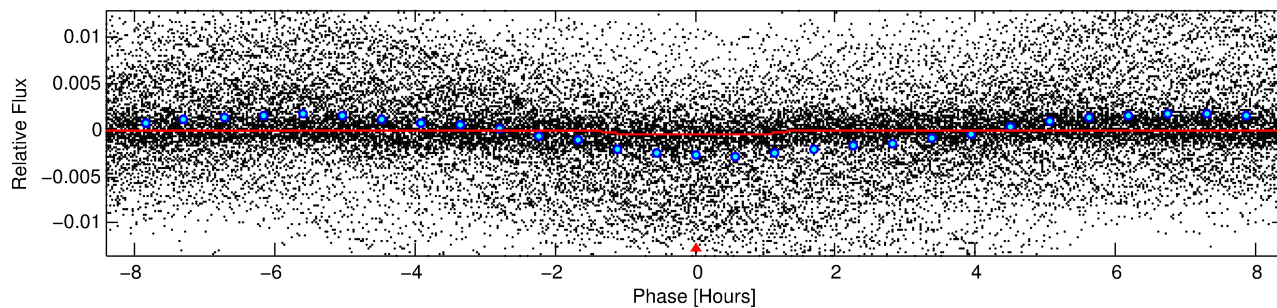
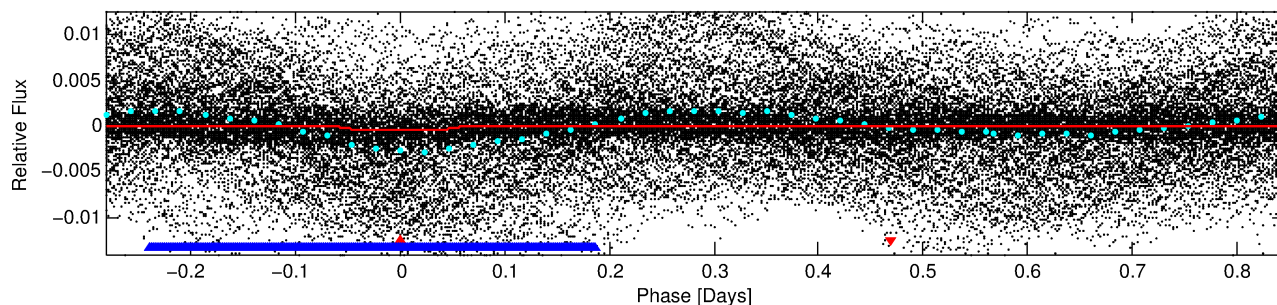
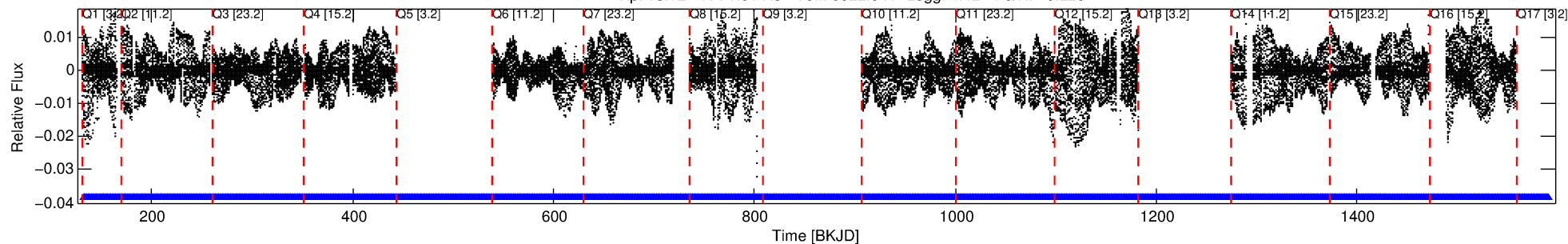
Ephemeris Match Information For 006025466-01

No Significant Match Found

DV One-Page Summary

KIC: 6025466 Candidate: 1 of 2 Period: 1.128 d

Kp: 13.12 R*: 1.01 Rs Teff: 6022.0 K Logg: 4.42 Fe/H: -0.220



DV Fit Results:

Period = 1.12771 [0.00000] d
Epoch = 132.0982 [0.0007] BKJD
Rp/R* = 0.0237 [0.0024]
a/R* = 1.98 [0.64]
b = 0.85 [0.14]
Seff = 2725.40 [1046.59]
Teq = 1842 [177] K
Rp = 2.61 [0.79] Re
a = 0.0210 [0.0052] AU
Ag = 2.86 [1.67] [1.12σ]
Teffp = 3704 [435] K [3.97σ]

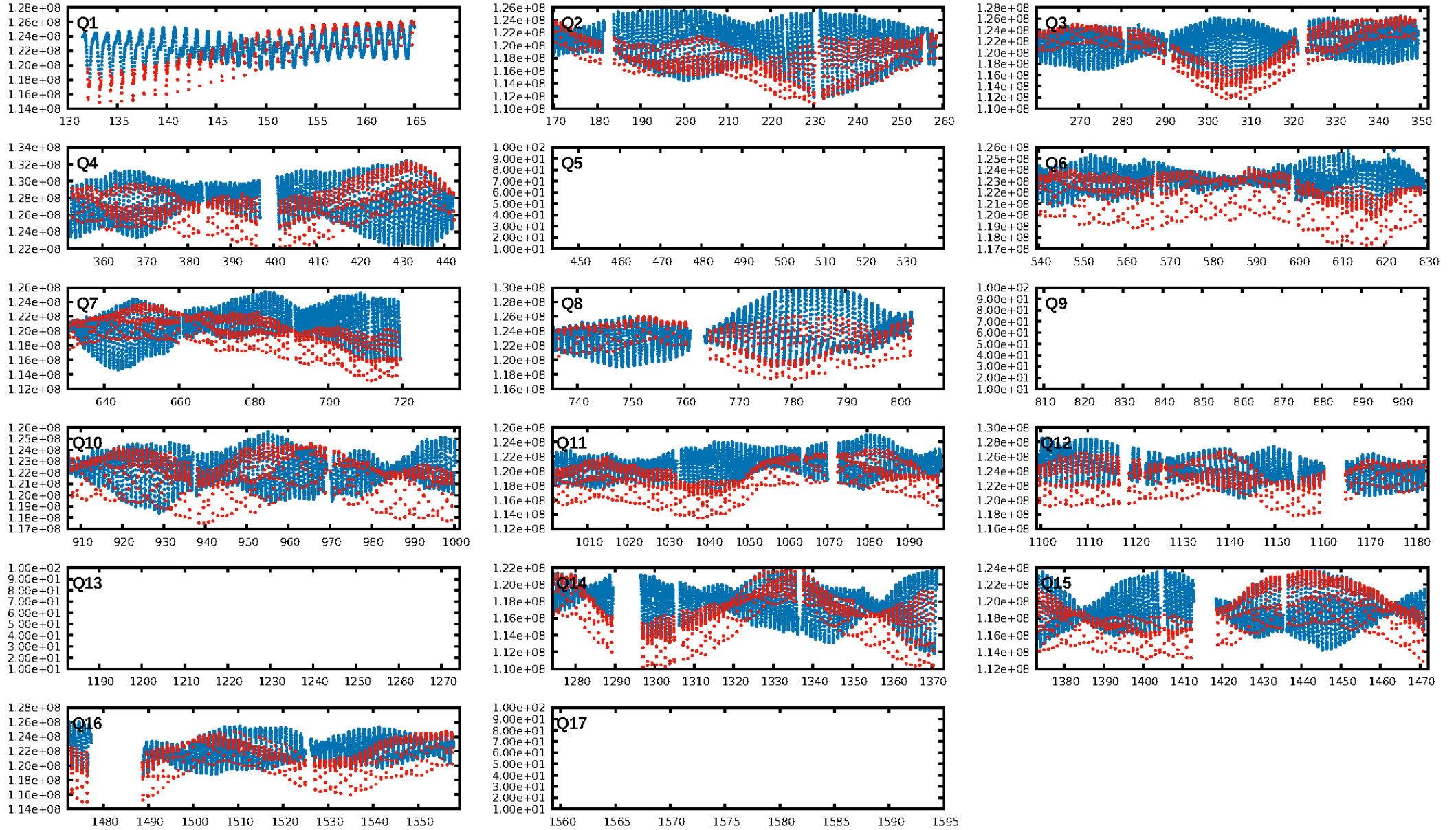
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [891/891]
GhostDiagnostic-chr: 0.6383
Centroid-sig: 0.0%
Centroid-so: 0.188 arcsec [2.28σ]
OotOffset-rm: 0.035 arcsec [0.52σ]
KicOffset-rm: 0.195 arcsec [2.80σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.00 [0/13]

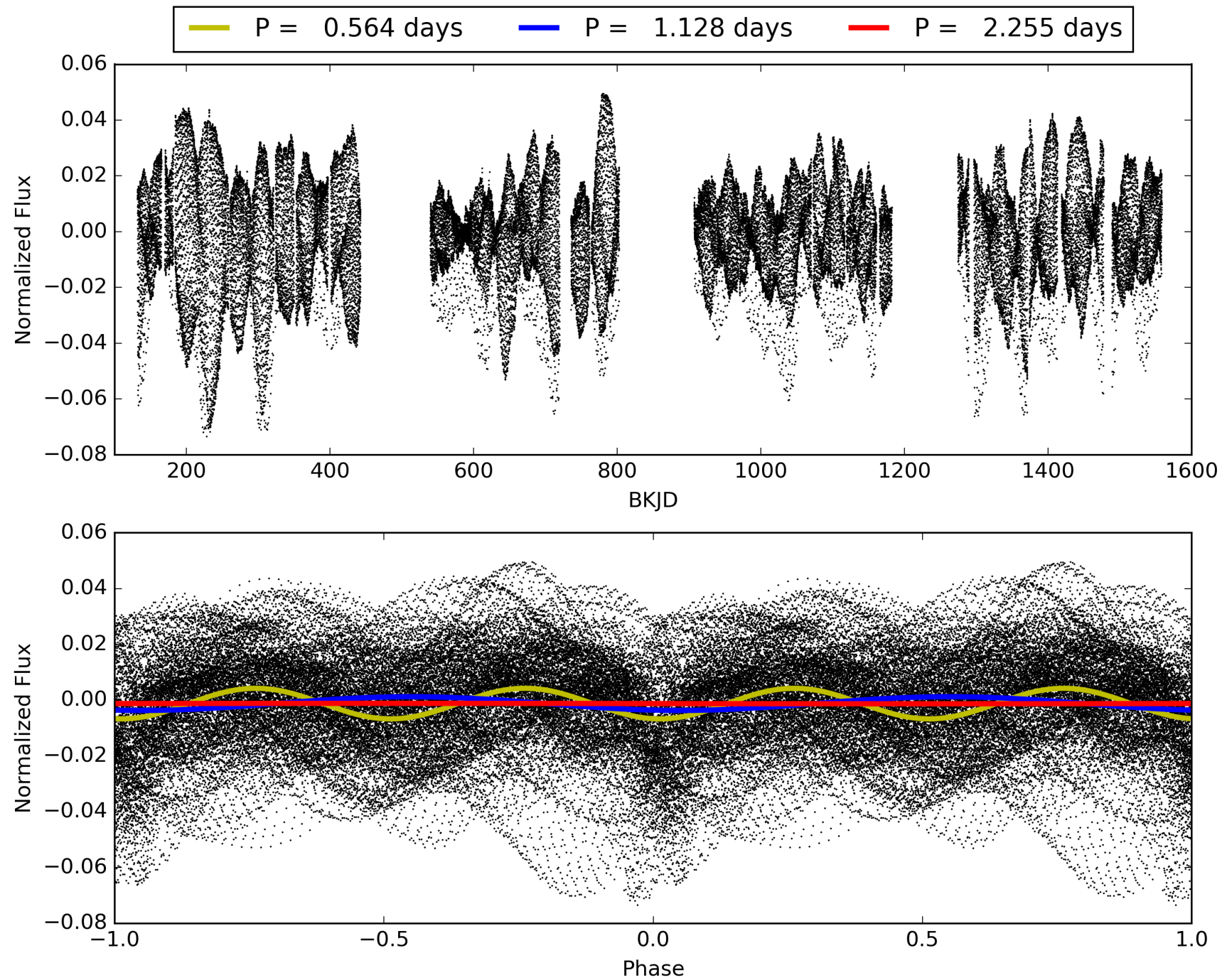
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:17:56 Z

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

TCE 006025466-01, PDC Light Curves

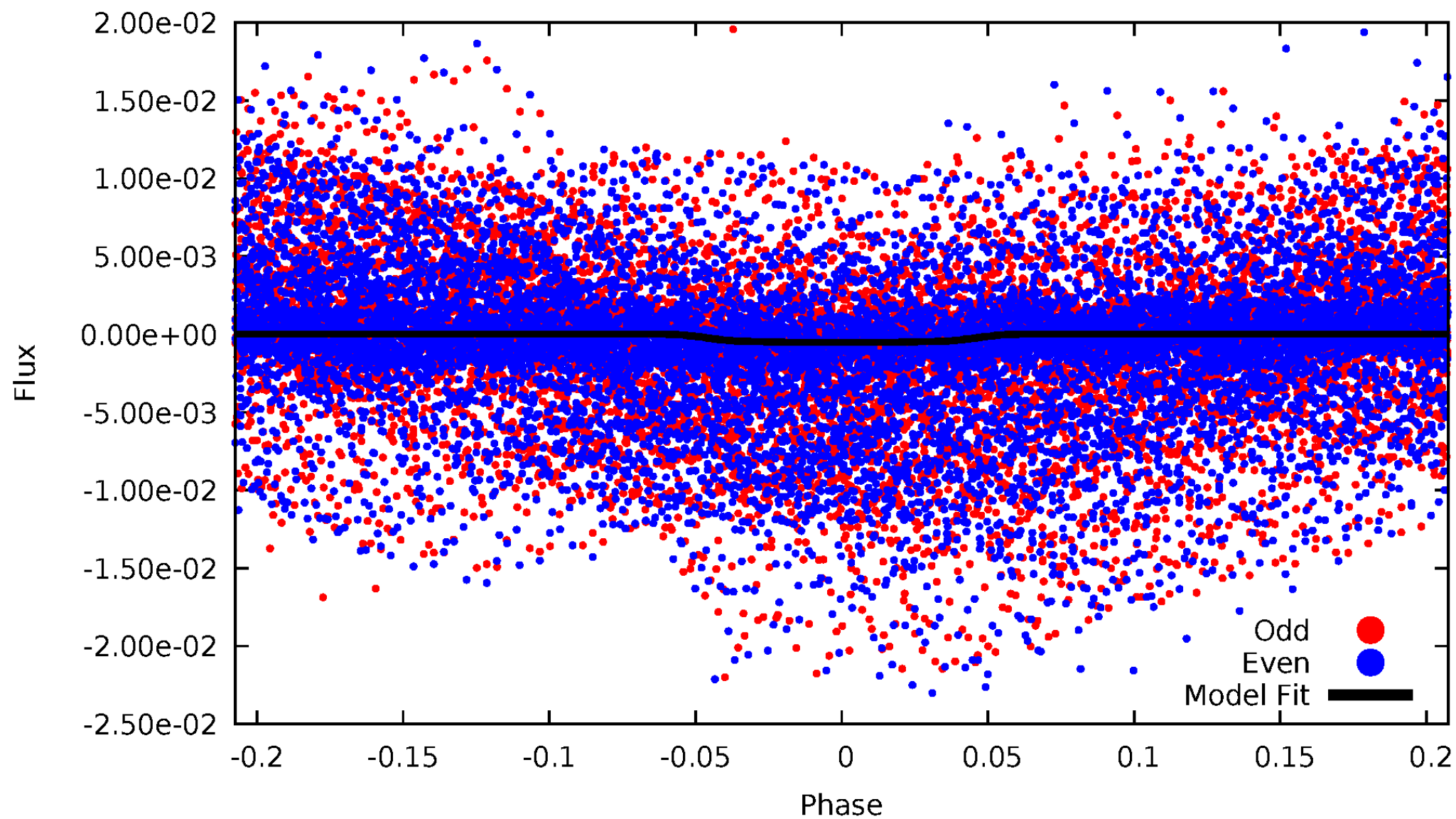


TCE 006025466-01



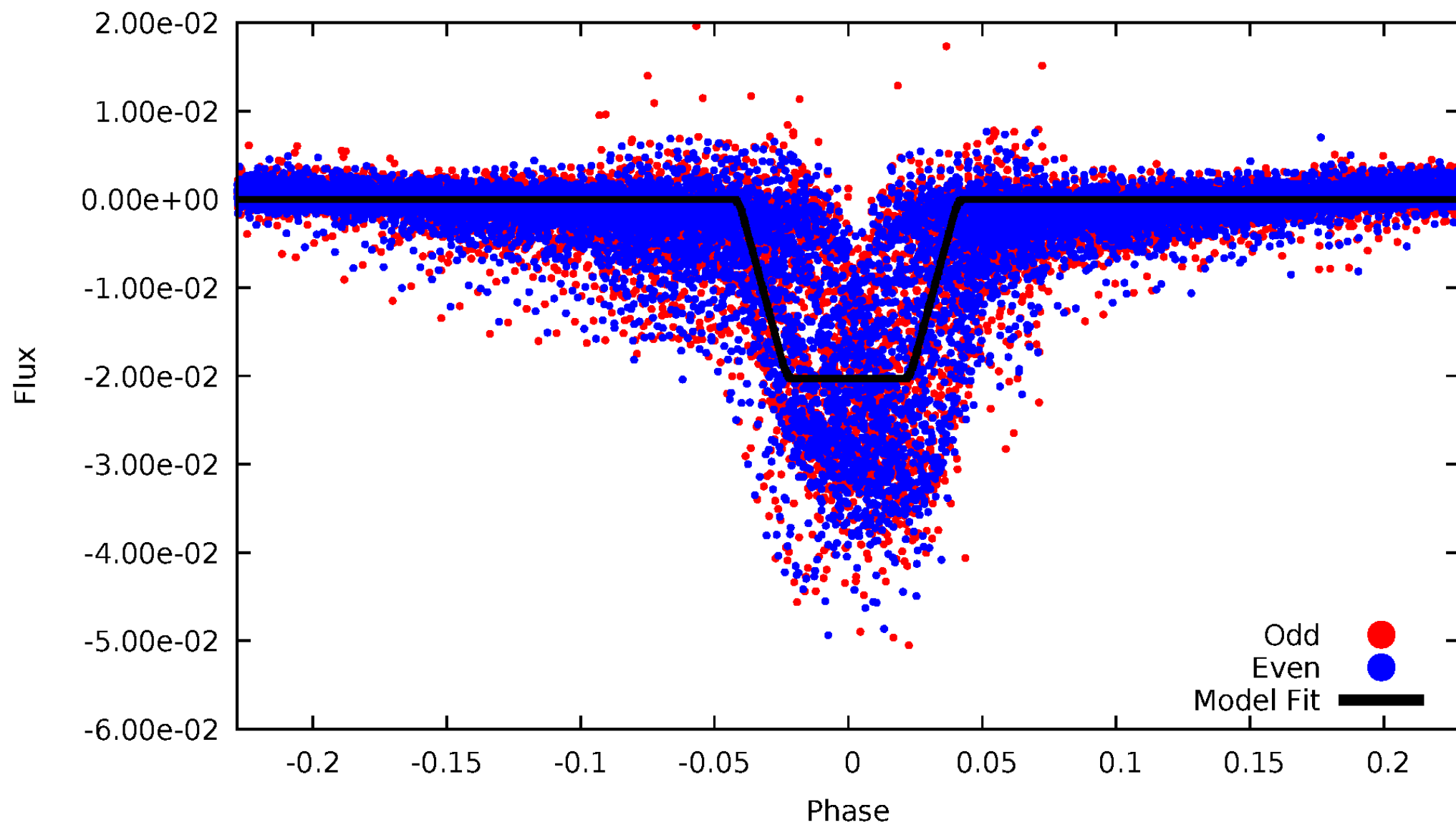
DV Odd/Even

TCE 006025466-01



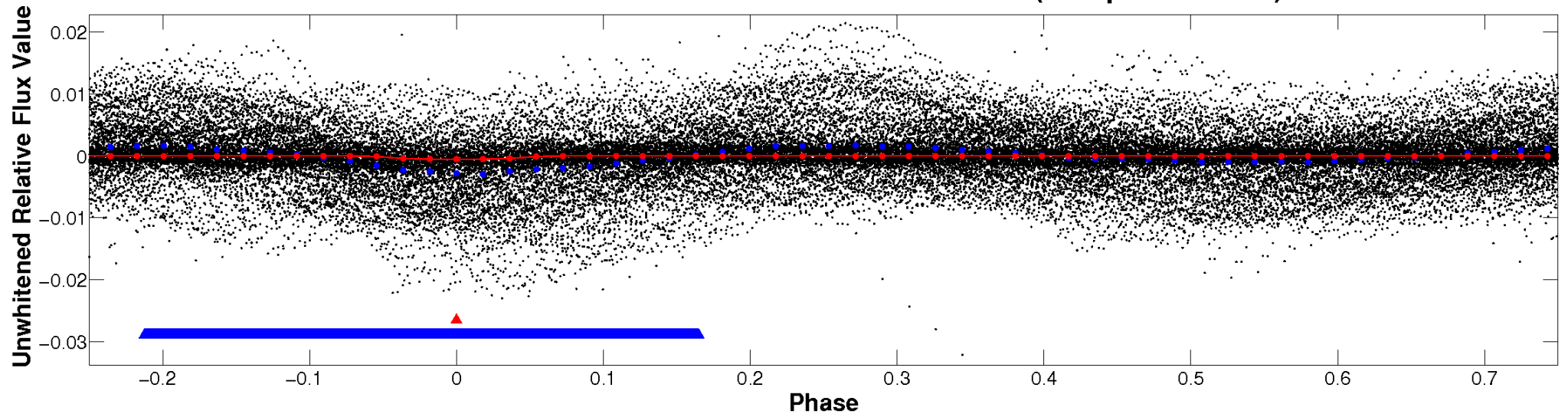
ALT Odd/Even

TCE 006025466-01

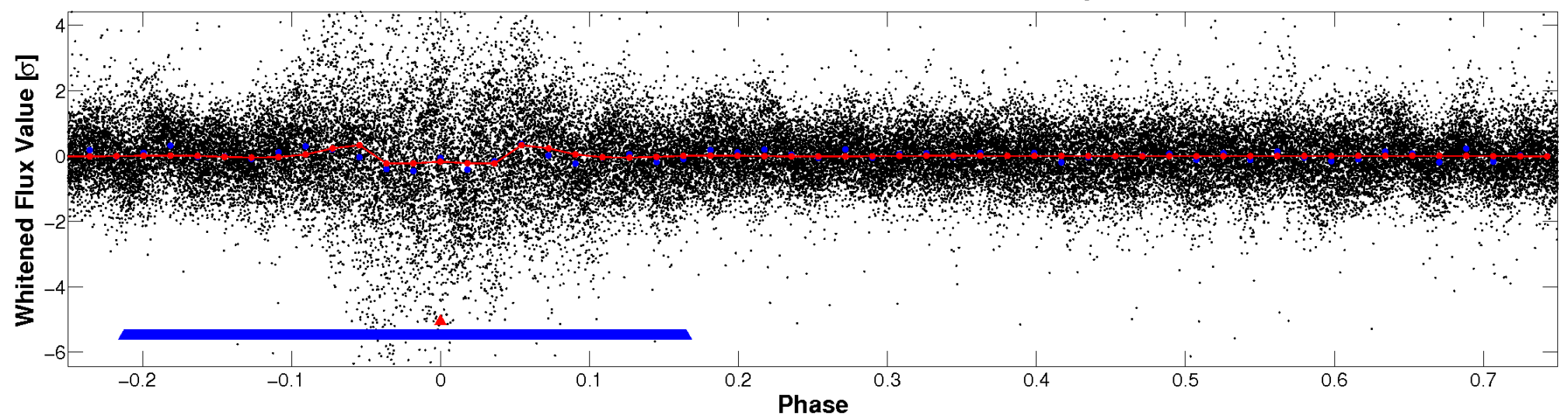


Non-Whitened Vs. Whitened Light Curve

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

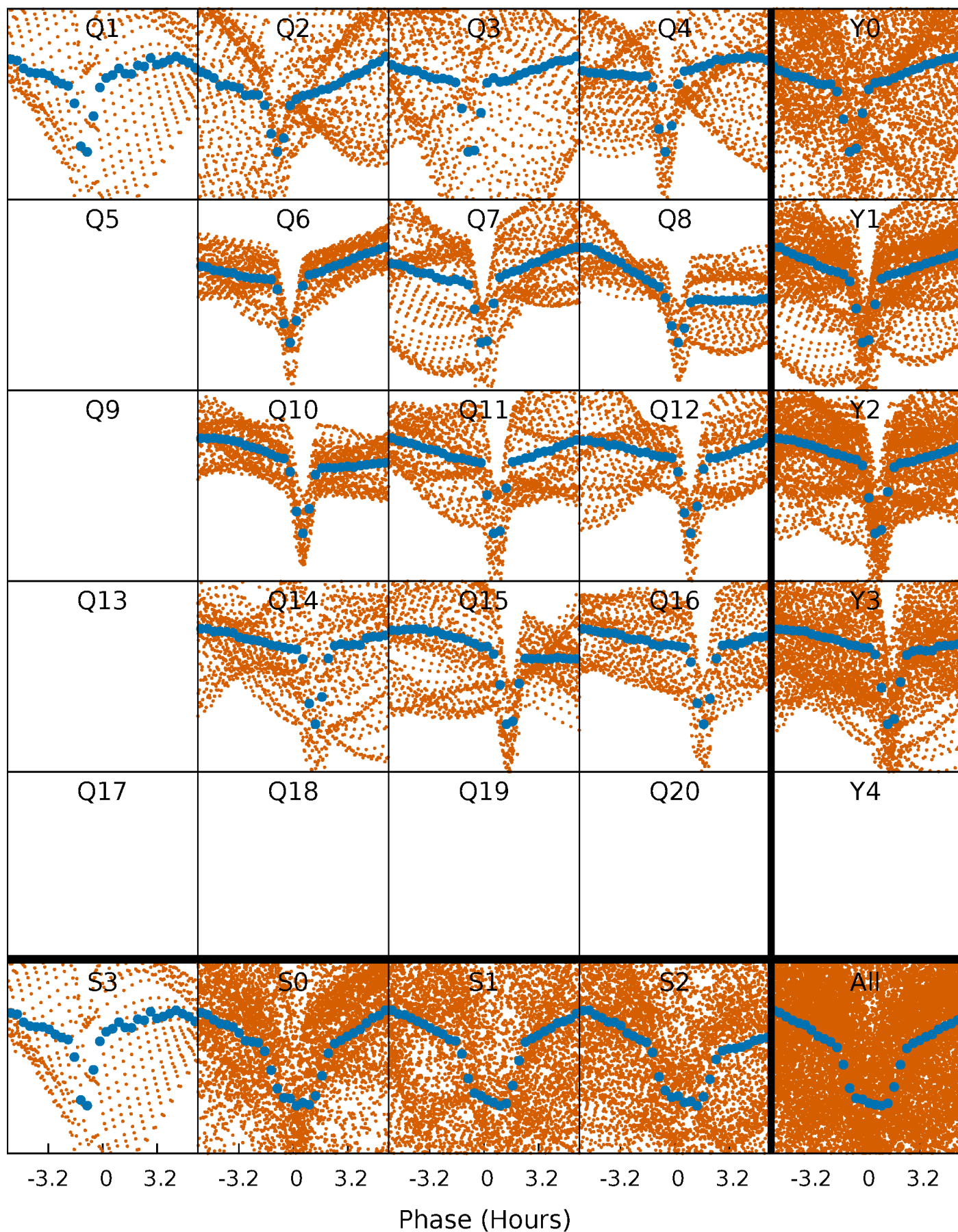


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



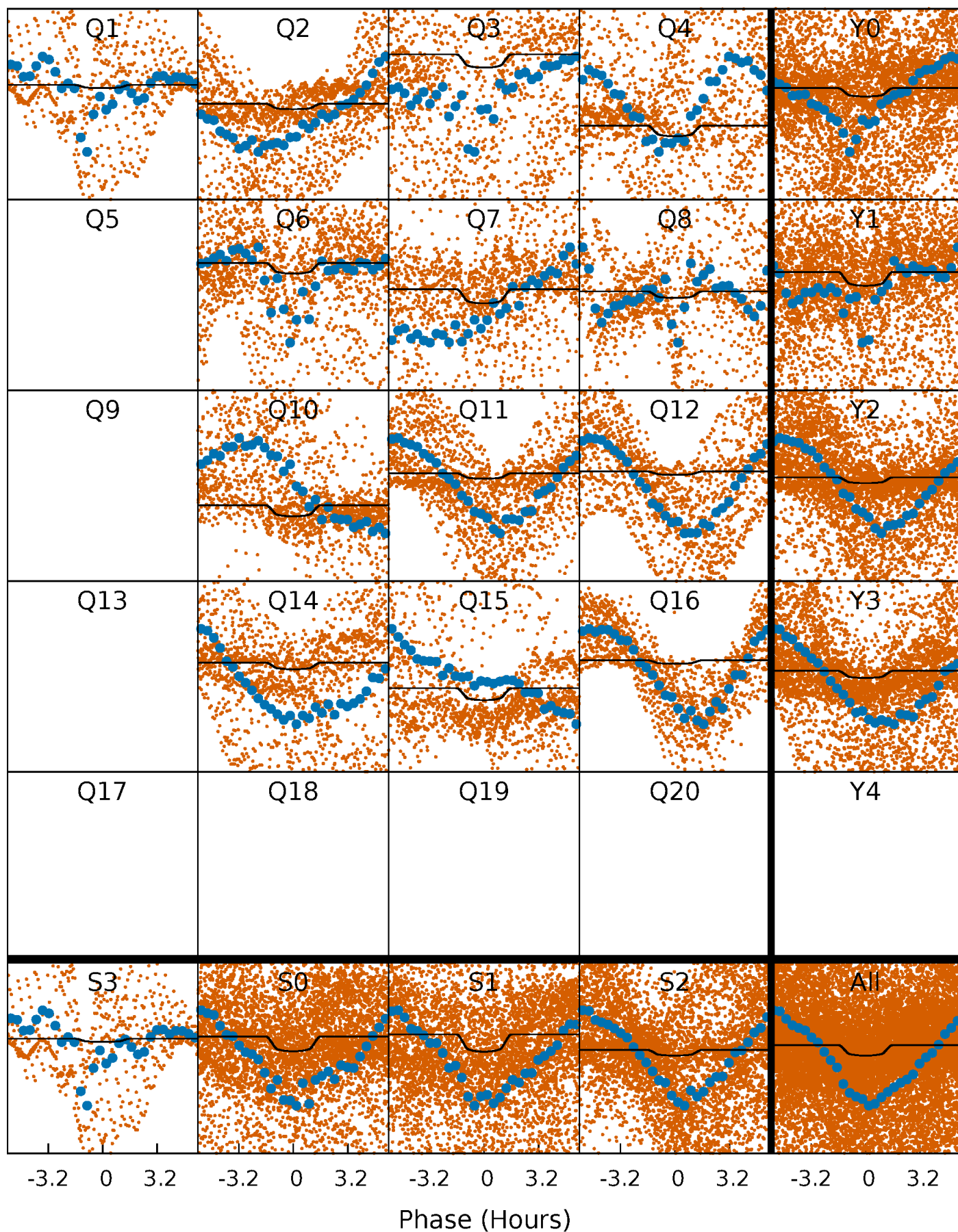
PDC Quarter-Phased Transit Curves

TCE 006025466-01 P= 1.127708 Days $T_0=132.098190$ (BKJD)



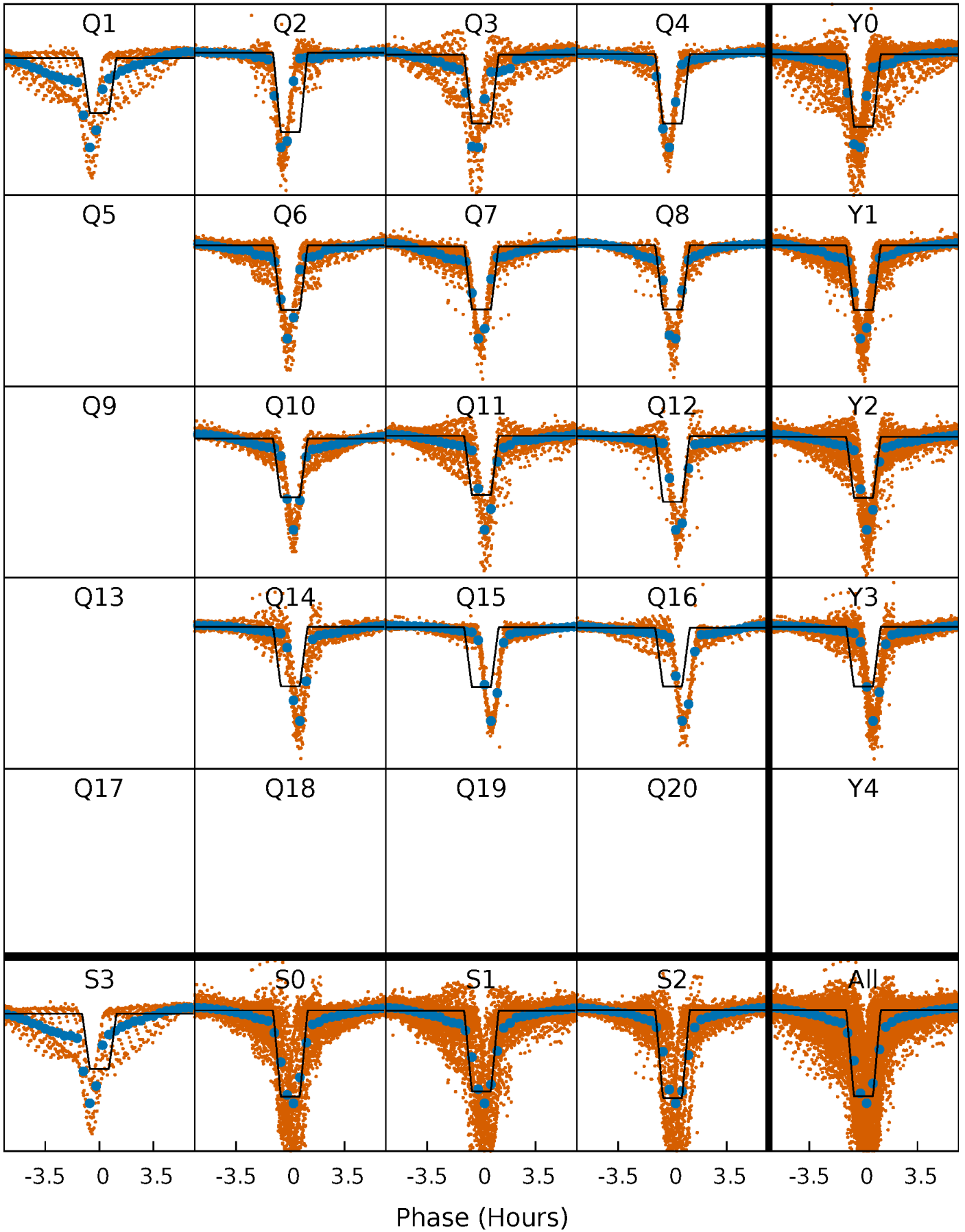
DV Quarter-Phased Transit Curves

TCE 006025466-01 P= 1.127708 Days $T_0=132.098190$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

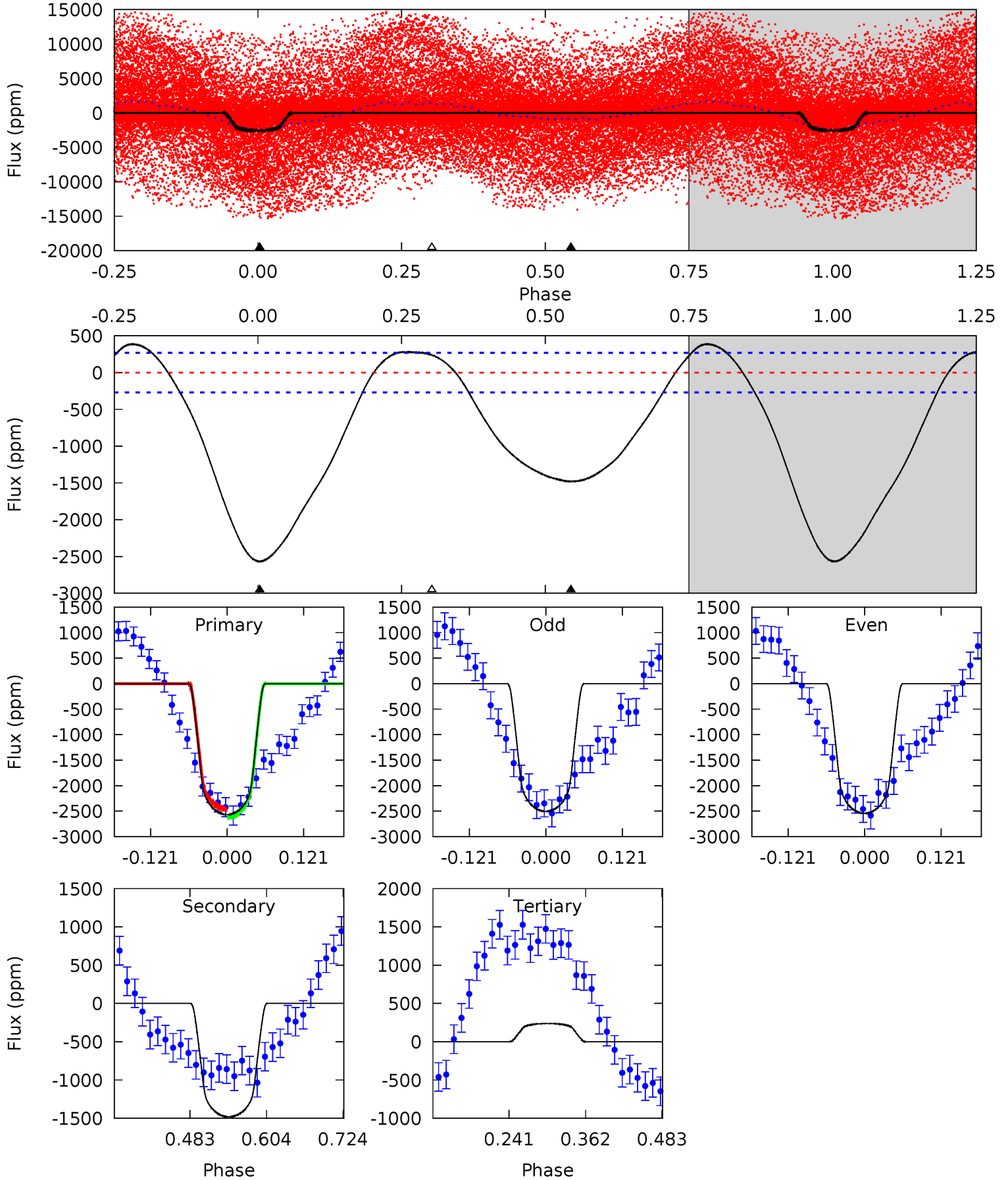
TCE 006025466-01 P= 1.127757 Days $T_0=132.075850$ (BKJD)



DV Model-Shift Uniqueness Test

006025466-01, P = 1.127708 Days, E = 130.970482 Days

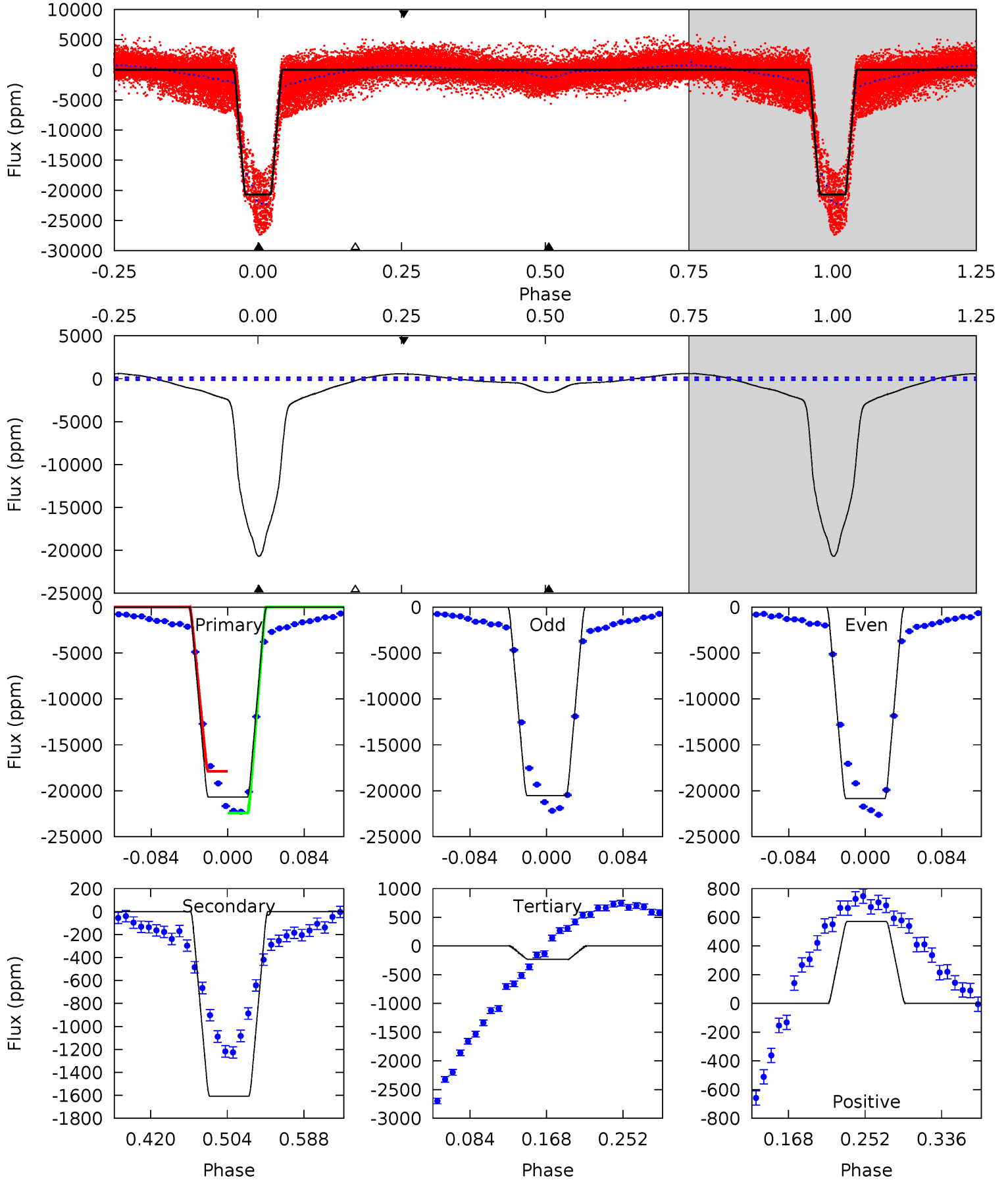
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.1	24.9	-4.01	0	4.53	1.55	7.00	47.1	43.1	28.9	24.9	0.33	1.79	0.13	1.34



Alt Model-Shift Uniqueness Test

006025466-01, P = 1.127757 Days, E = 130.948093 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
582.5	45.3	6.57	16.1	4.60	1.73	17.7	575.9	566.4	38.7	29.2	4.50	1.05	0.03	0



Stellar Parameters For KIC 006025466

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6022^{+162}_{-180}	$4.417^{+0.101}_{-0.203}$	$-0.220^{+0.300}_{-0.300}$	$1.011^{+0.288}_{-0.133}$	$0.974^{+0.143}_{-0.117}$	$1.326^{+0.519}_{-0.683}$
	+3%/-3%	+2%/-5%	+136%/-136%	+28%/-13%	+15%/-12%	+39%/-52%
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 006025466-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1481 ± 60	$2.67^{+0.48}_{-0.37}$	2602^{+176}_{-145}	7810^{+638}_{-531}	50^{+16}_{-14}
Alt.	-1609 ± 36	$15.95^{+2.51}_{-1.43}$	2604^{+172}_{-143}	3500^{+74}_{-78}	$1.534^{+0.281}_{-0.353}$

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 $A_{obs} \gg 1.0$

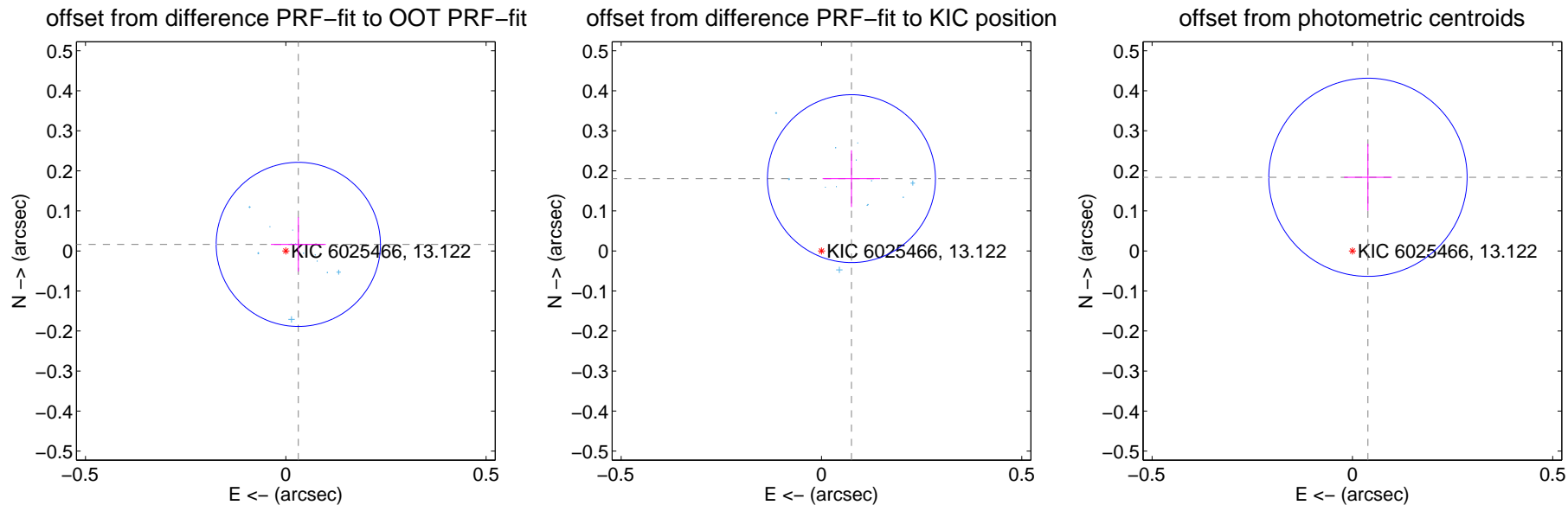
DV Centroid Data

Supplemental centroid analysis for 006025466-01. Kepler magnitude: 13.12. Transit SNR 22.76

There are 13 quarters with good PRF difference image offsets

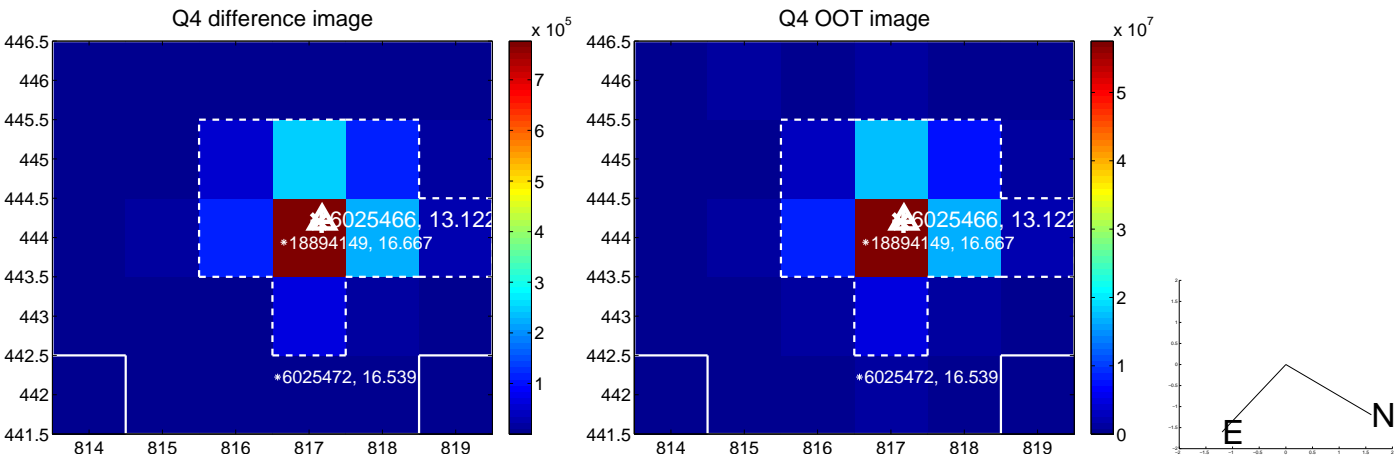
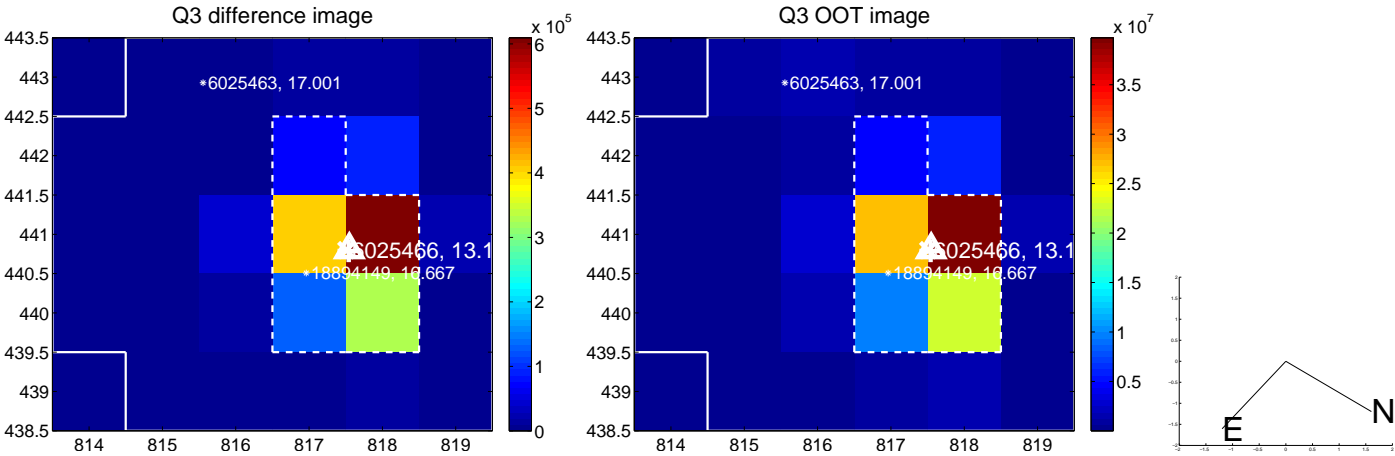
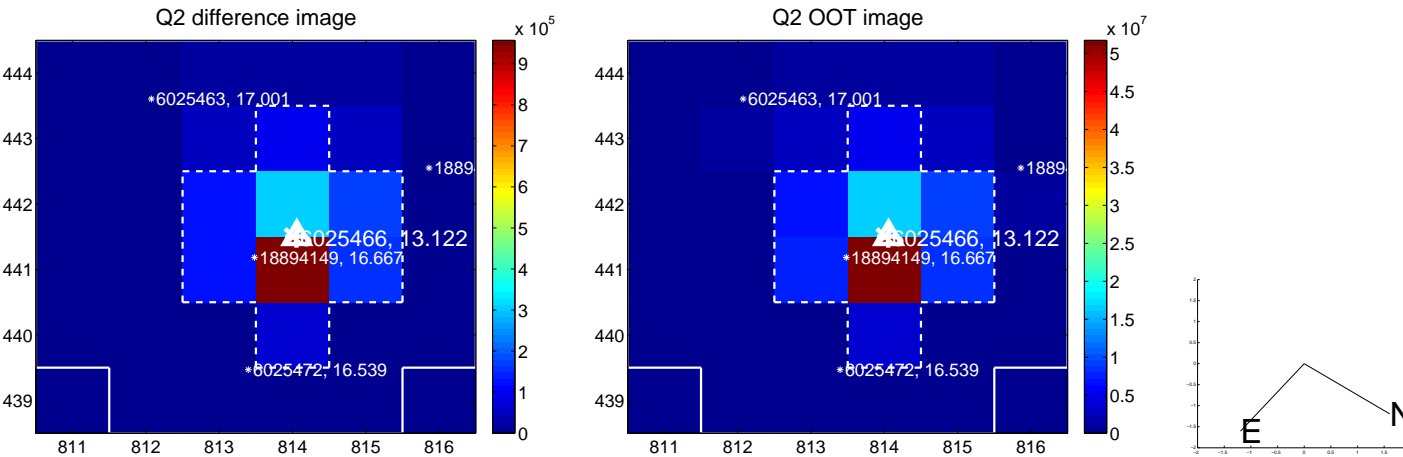
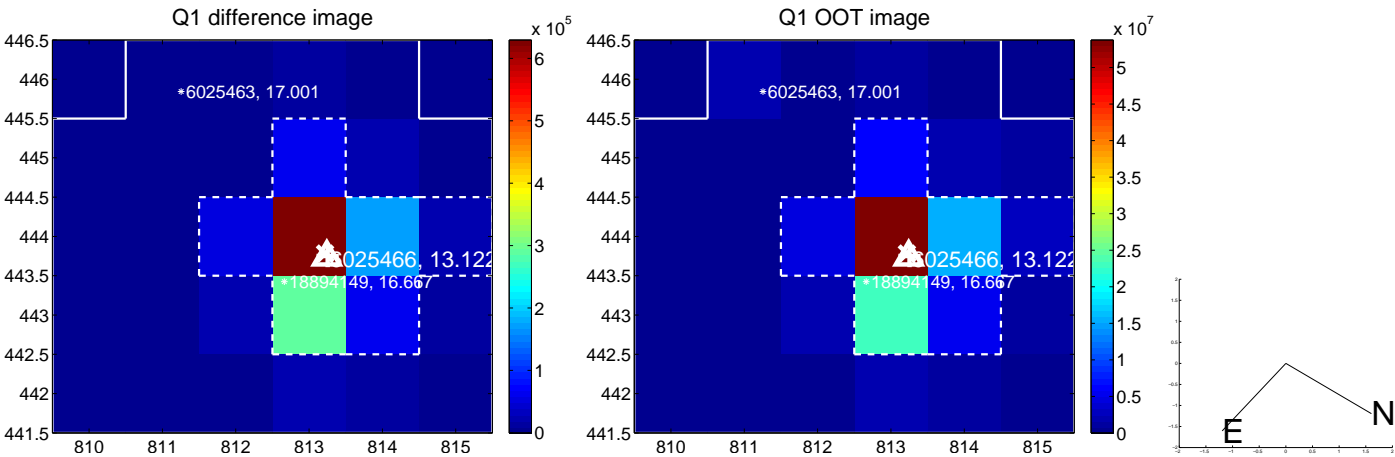
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.035 ± 0.068	0.52	-0.031 ± 0.068	0.016 ± 0.068
PRF-fit source offset from KIC position	0.195 ± 0.070	2.80	-0.075 ± 0.072	0.181 ± 0.071
photometric centroid source offset	0.19 ± 0.08	2.28	-0.04 ± 0.06	0.18 ± 0.08

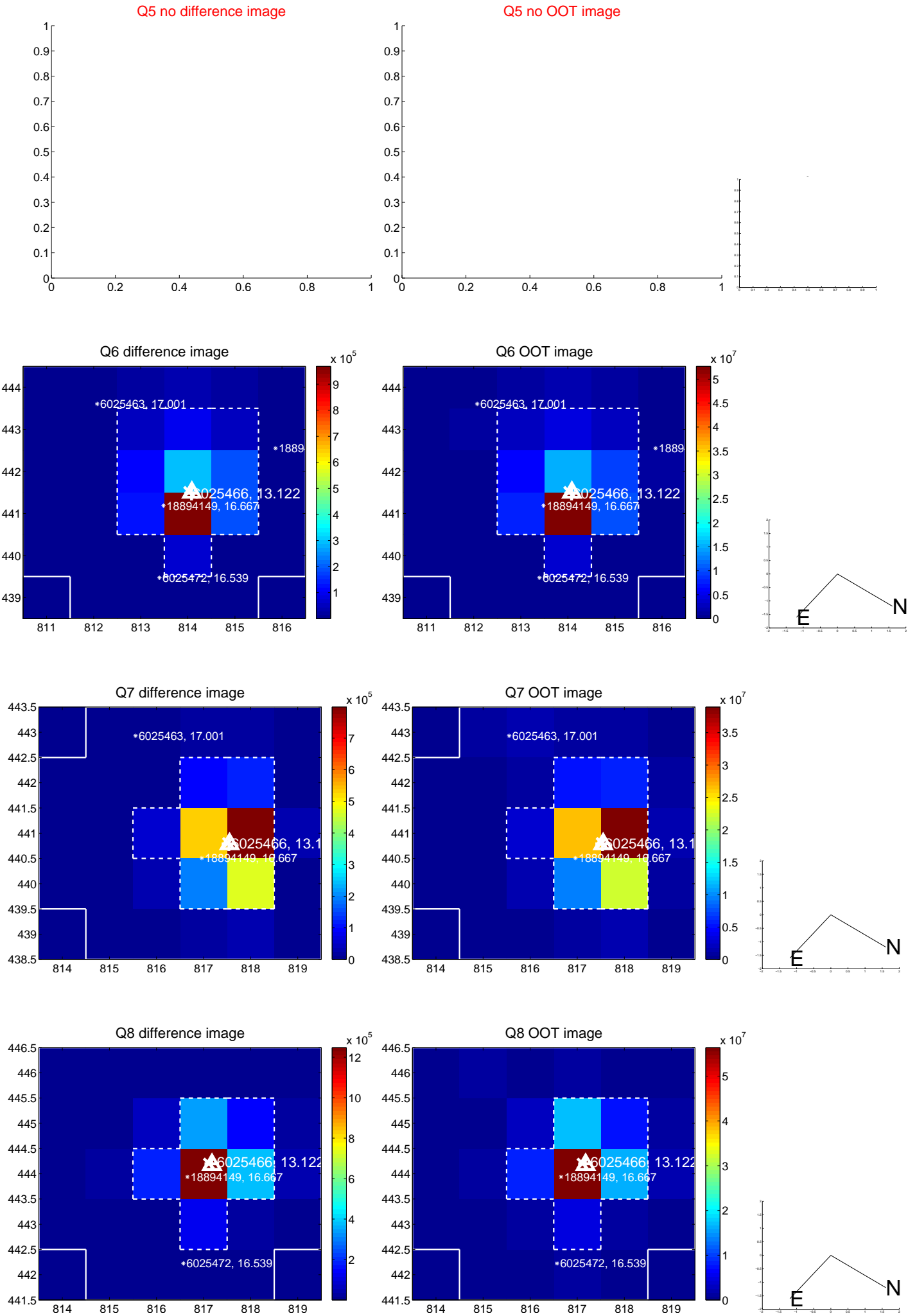


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

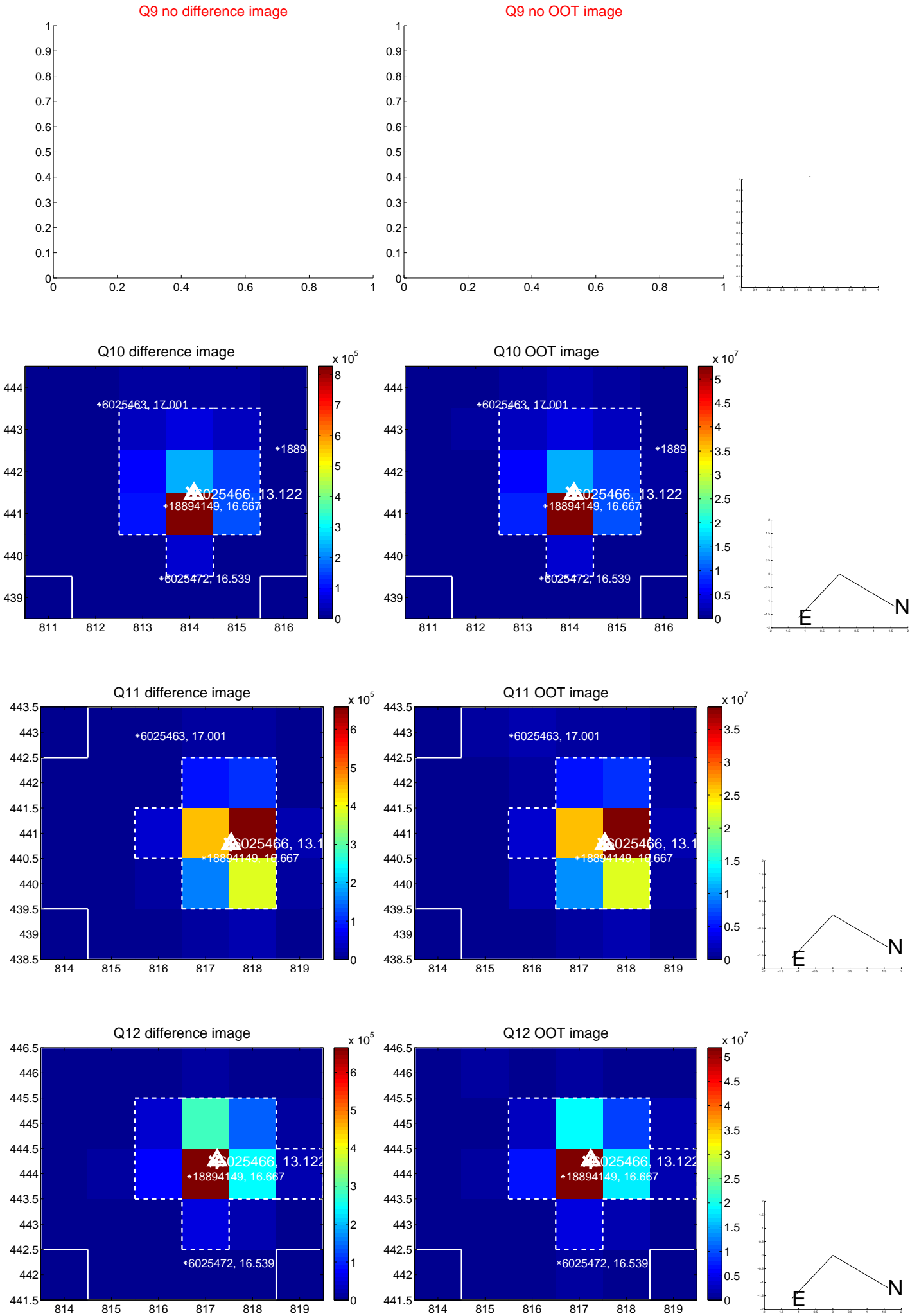
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



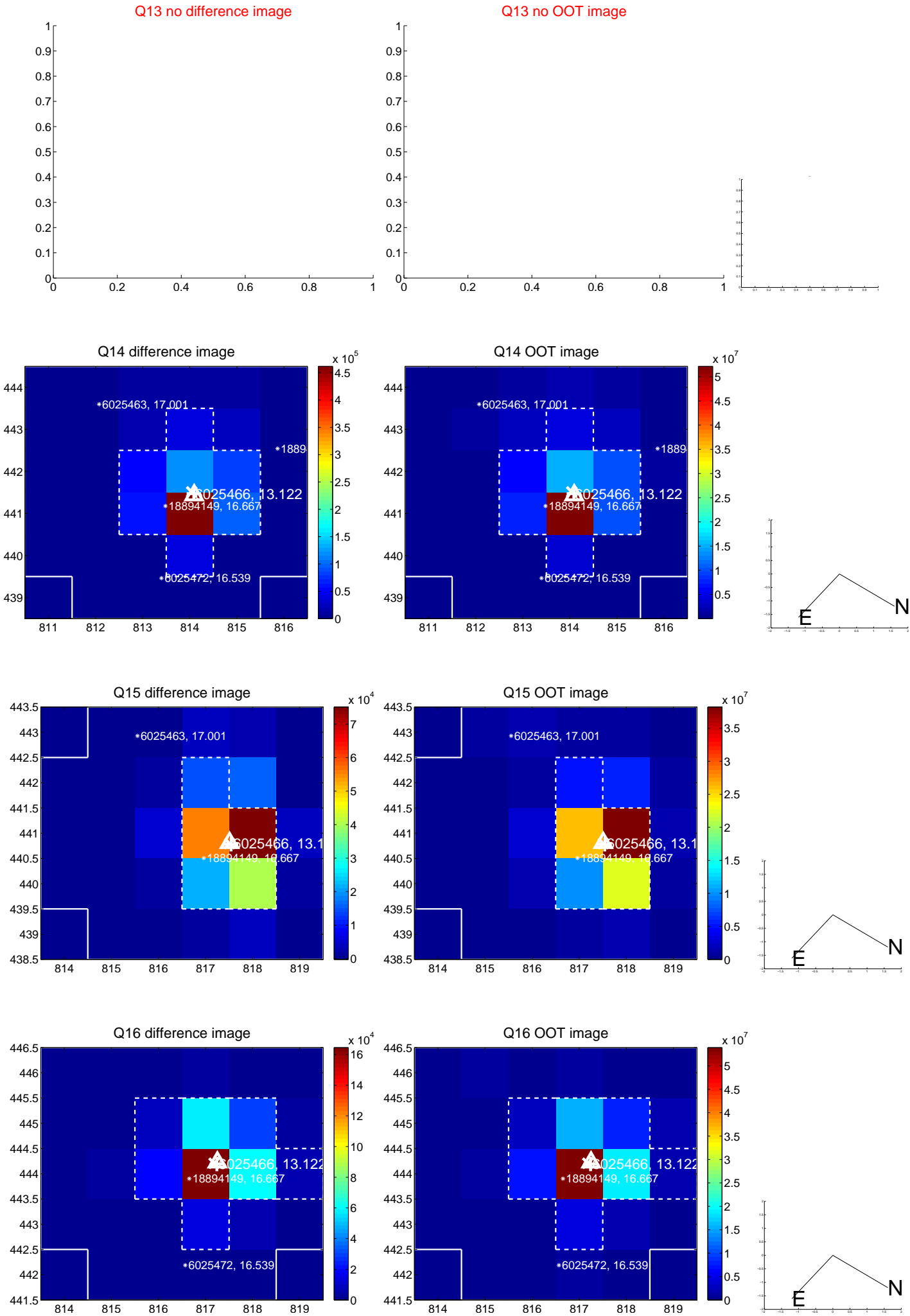
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



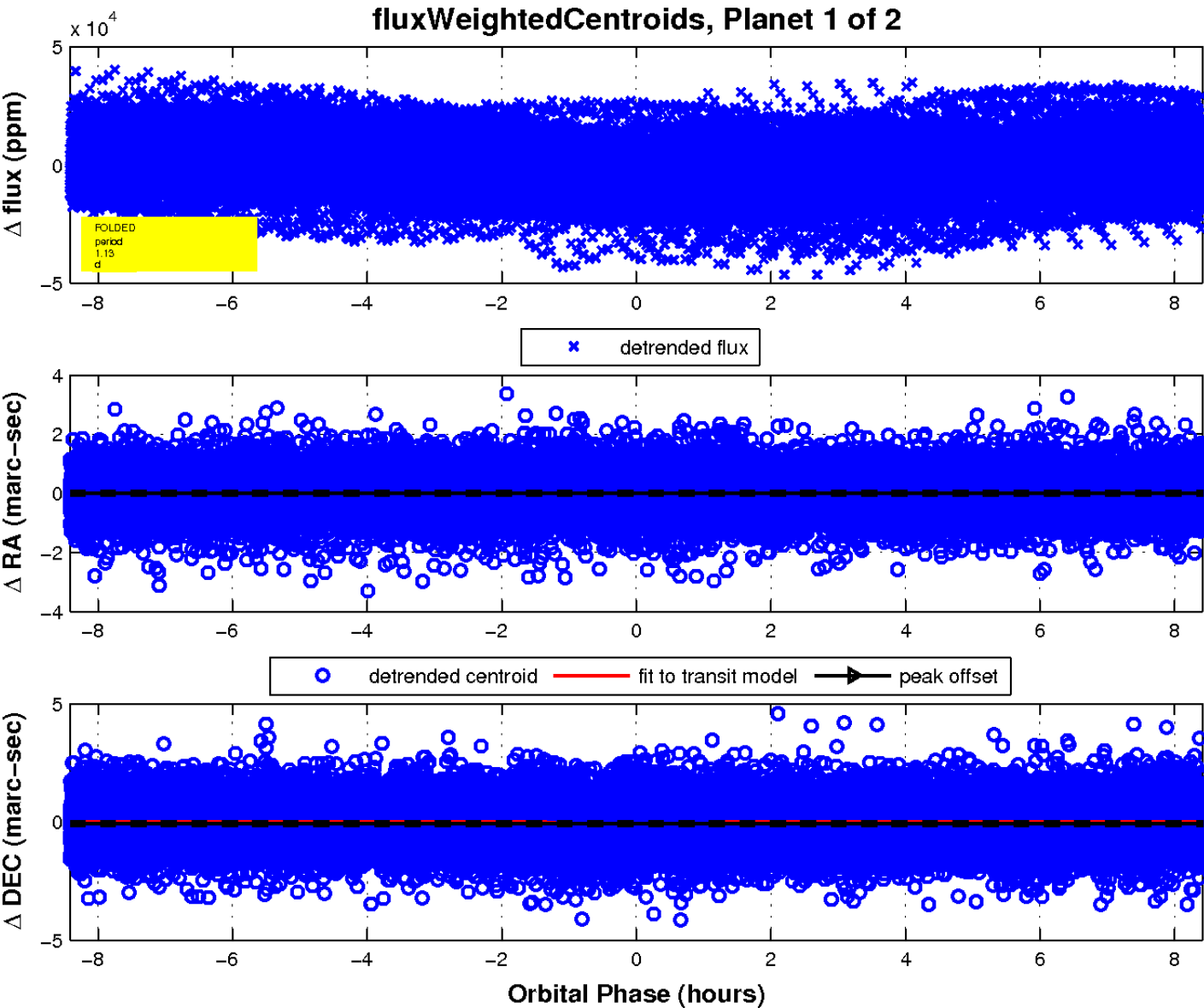
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

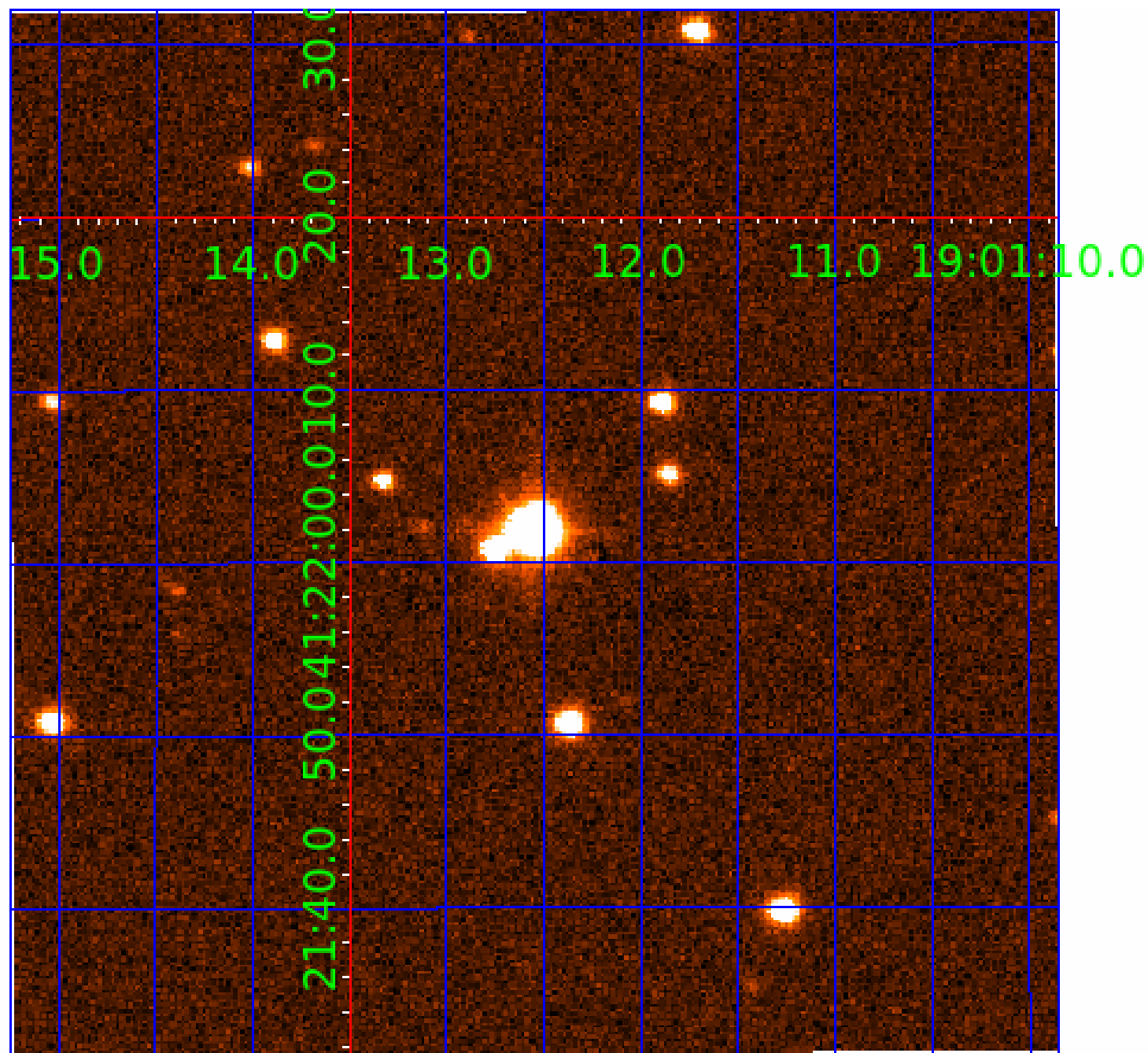


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006025466

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})
006025466-01	OBS	No	1.127708	132.098190	517.9	2.806	20.6	22.8	1.01	6022	2.61	2725.39
006025466-02	OBS	No	1.128037	131.858646	378.4	8.877	15.0	6.2	1.01	6022	2.09	2724.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006025466-01	OBS	FP	0.00	1	0	0	0	LPP_DV
006025466-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

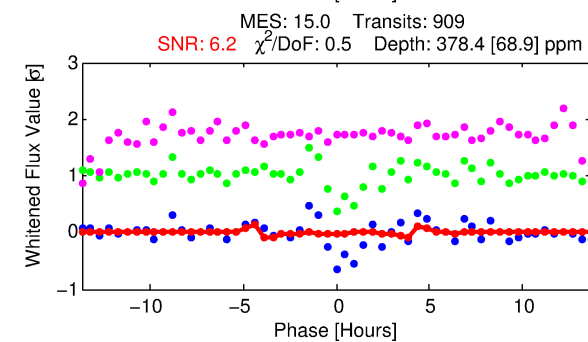
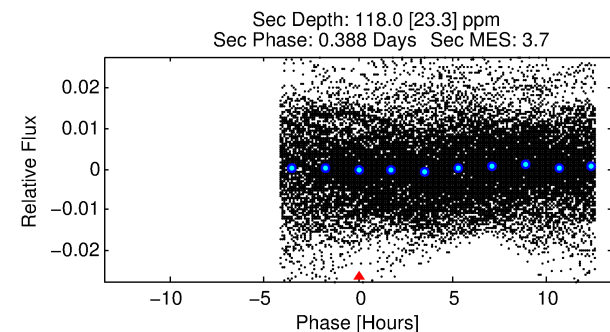
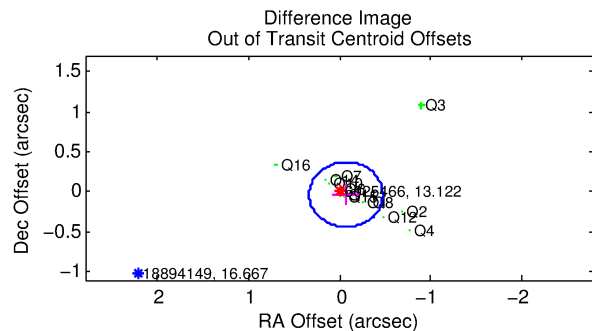
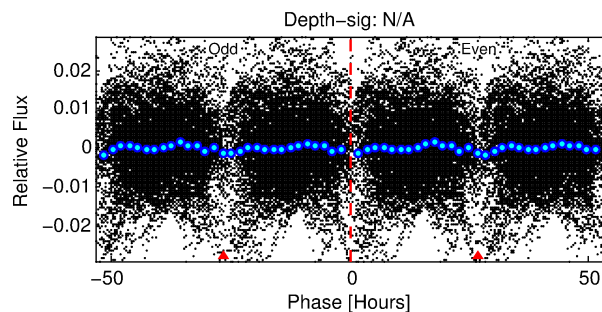
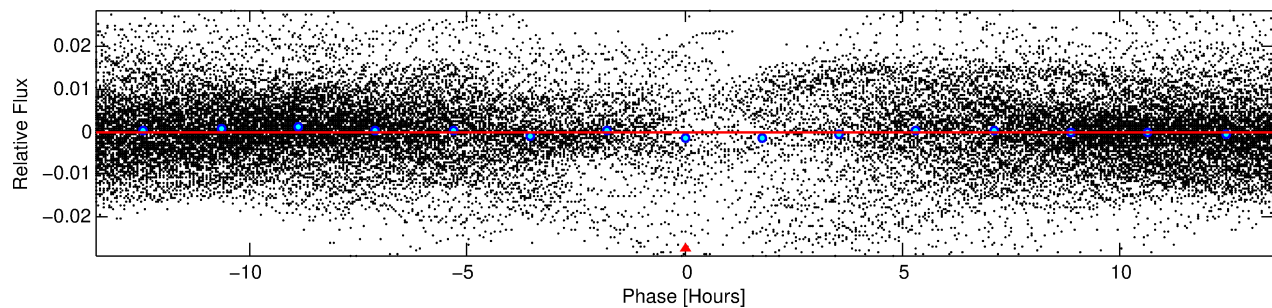
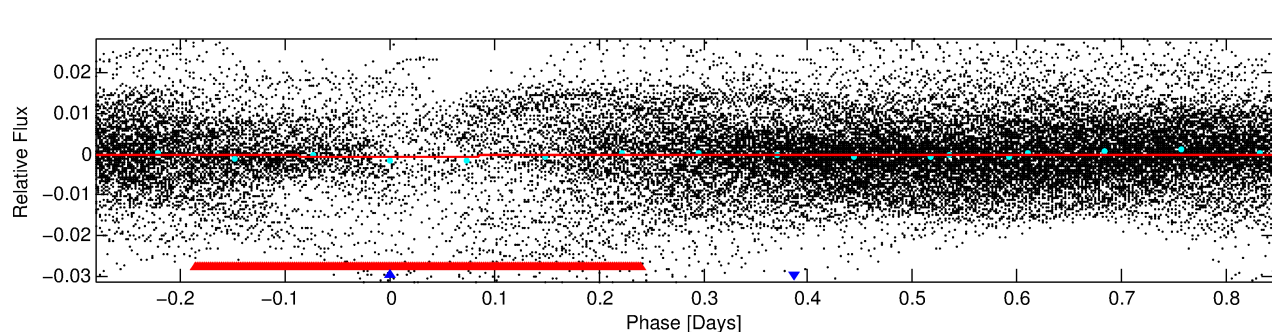
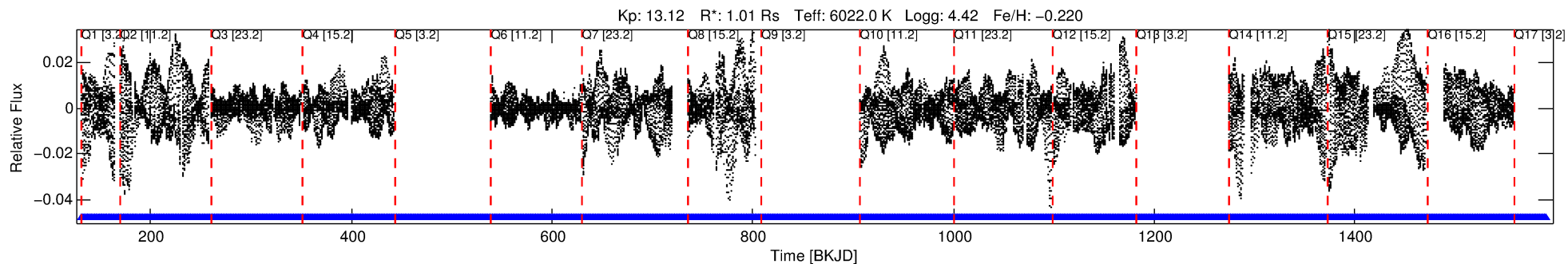
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006025466-02

No Significant Match Found

DV One-Page Summary

KIC: 6025466 Candidate: 2 of 2 Period: 1.128 d



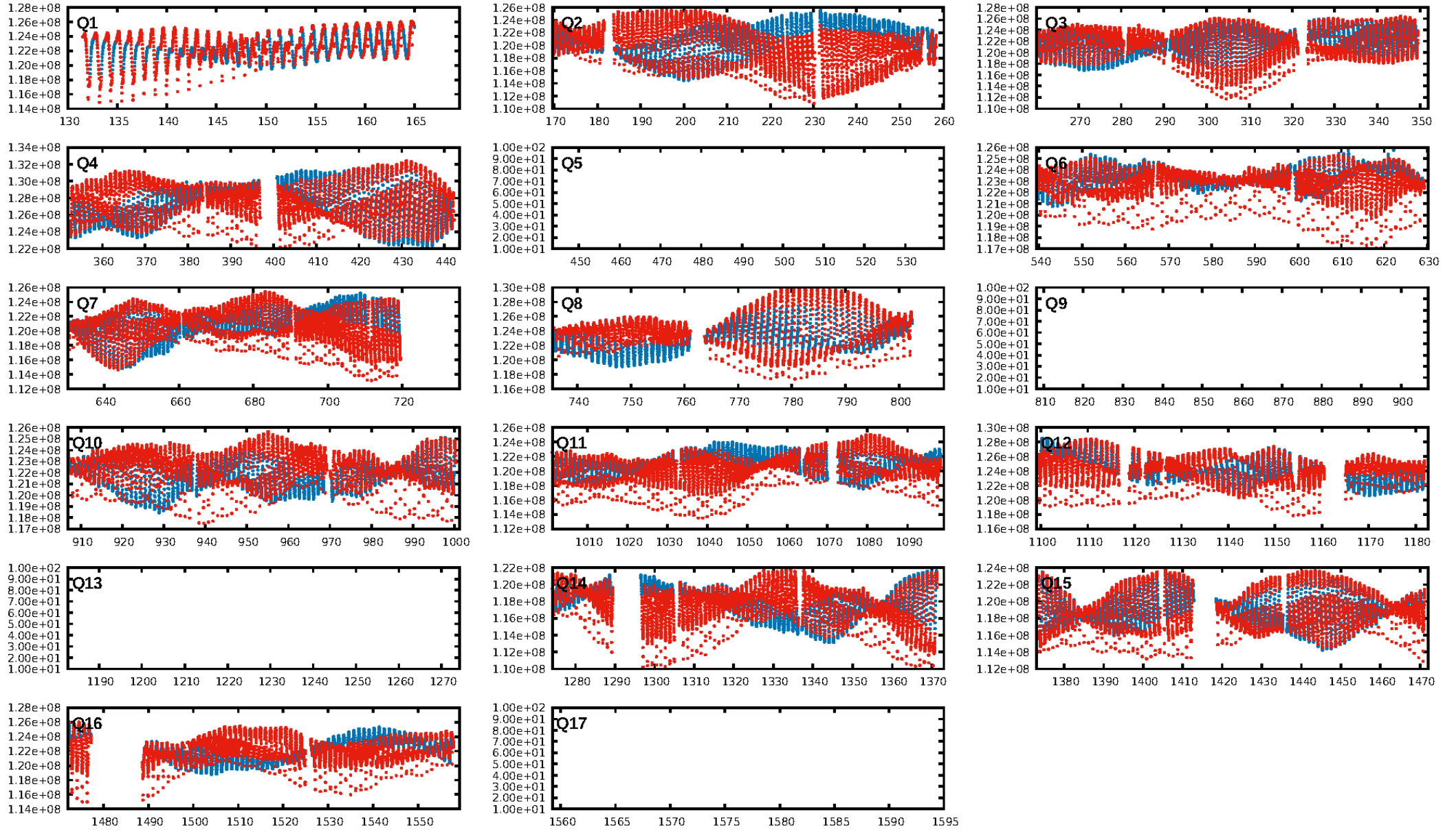
DV Fit Results:

Period = 1.12804 [0.00001] d
Epoch = 131.8586 [0.0017] BKJD
Rp/R* = 0.0190 [0.0025]
a/R* = 1.12 [0.08]
b = 0.68 [0.27]
Seff = 2724.34 [1046.18]
Teq = 1842 [177] K
Rp = 2.09 [0.66] Re
a = 0.0210 [0.0052] AU
Ag = 6.57 [3.22] [1.73σ]
Teffp = 4559 [397] K [6.25σ]

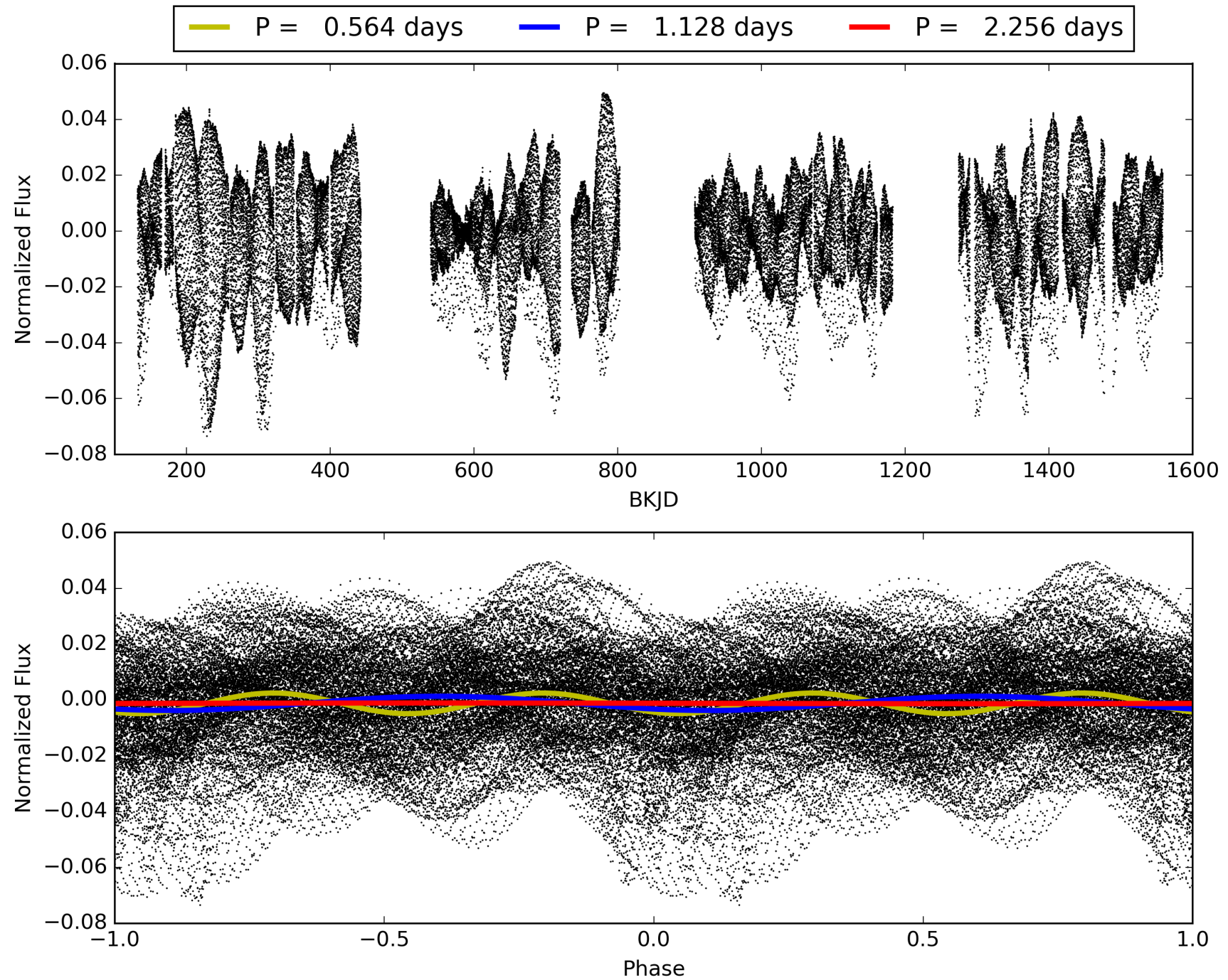
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [879/879]
GhostDiagnostic-chr: 0.9631
Centroid-sig: 0.0%
Centroid-so: 0.198 arcsec [2.52σ]
OotOffset-rm: 0.079 arcsec [0.58σ]
KicOffset-rm: 0.146 arcsec [1.24σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 0.00 [0/13]

TCE 006025466-02, PDC Light Curves

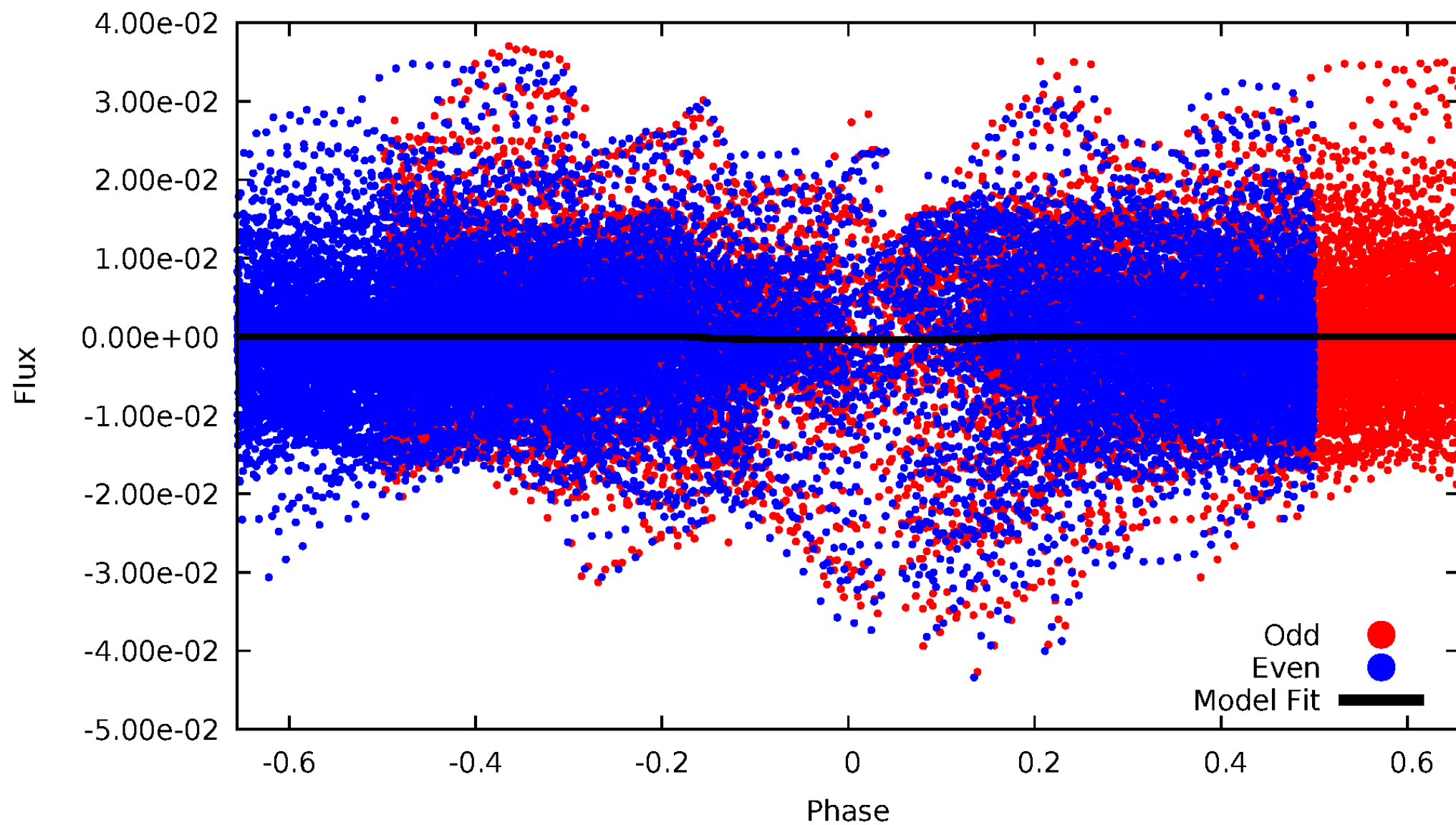


TCE 006025466-02



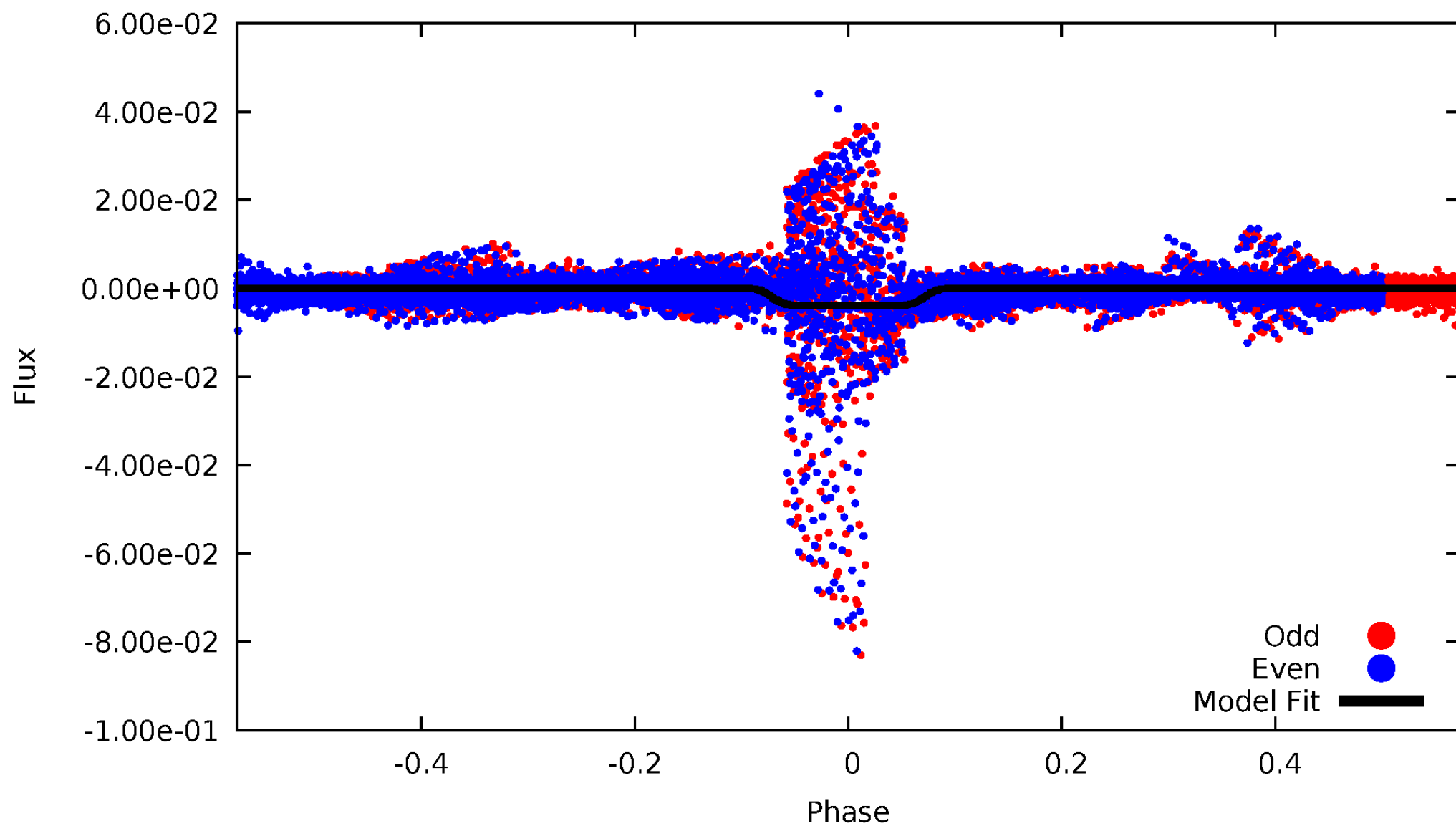
DV Odd/Even

TCE 006025466-02



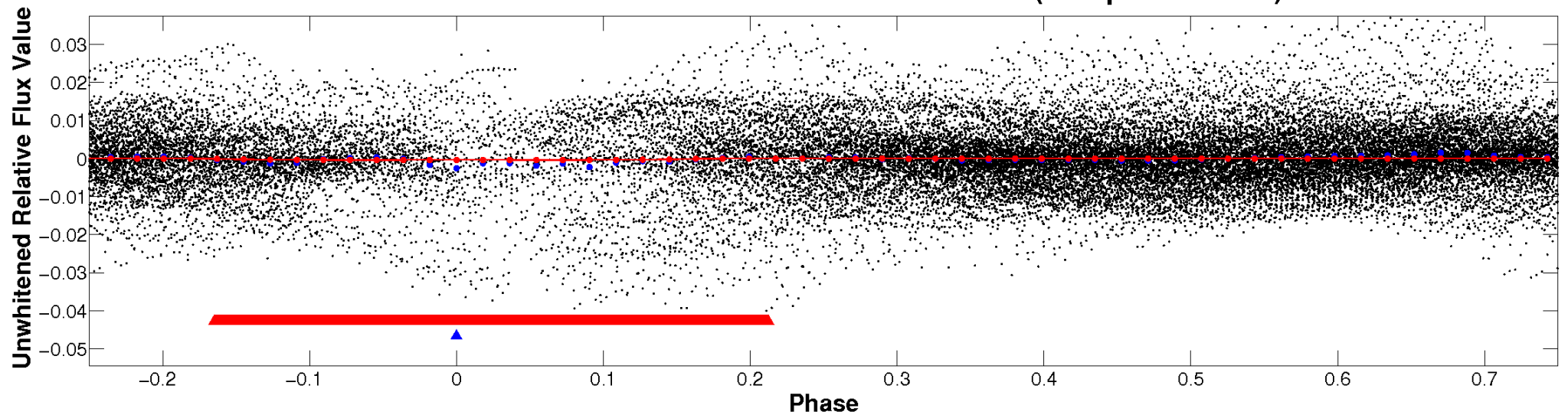
ALT Odd/Even

TCE 006025466-02

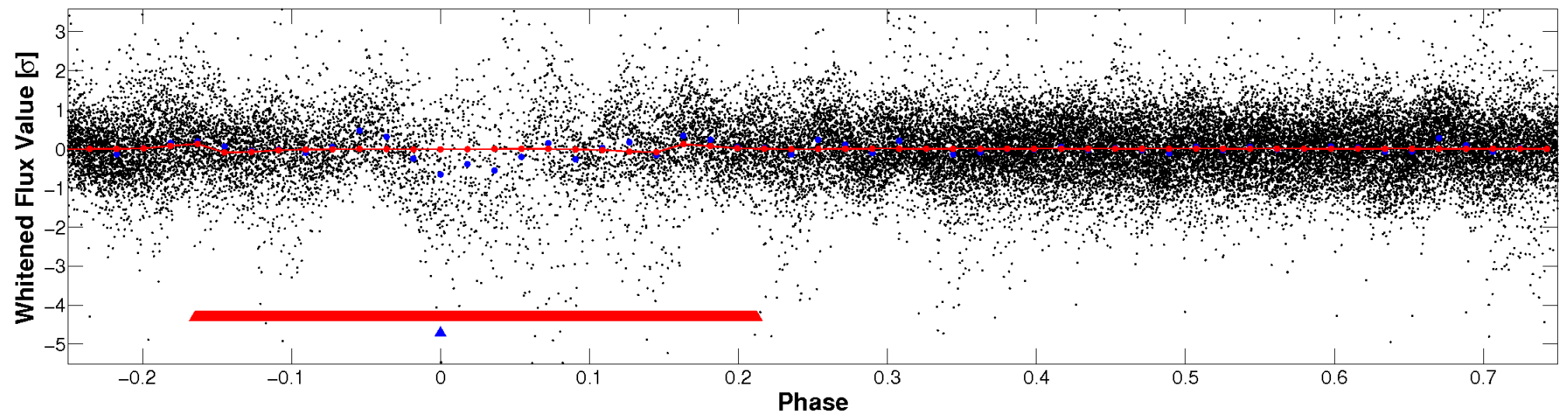


Non-Whitened Vs. Whitened Light Curve

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

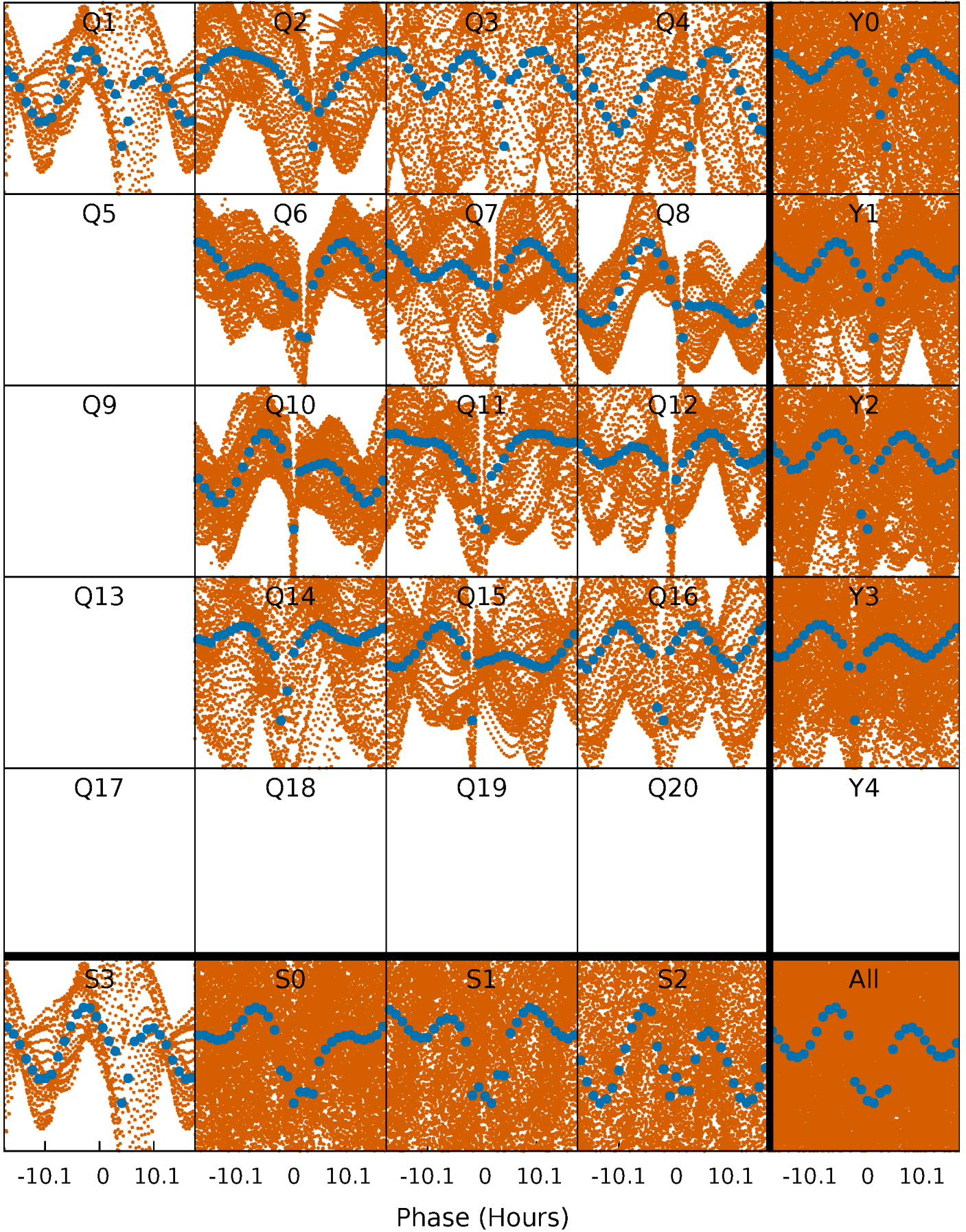


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



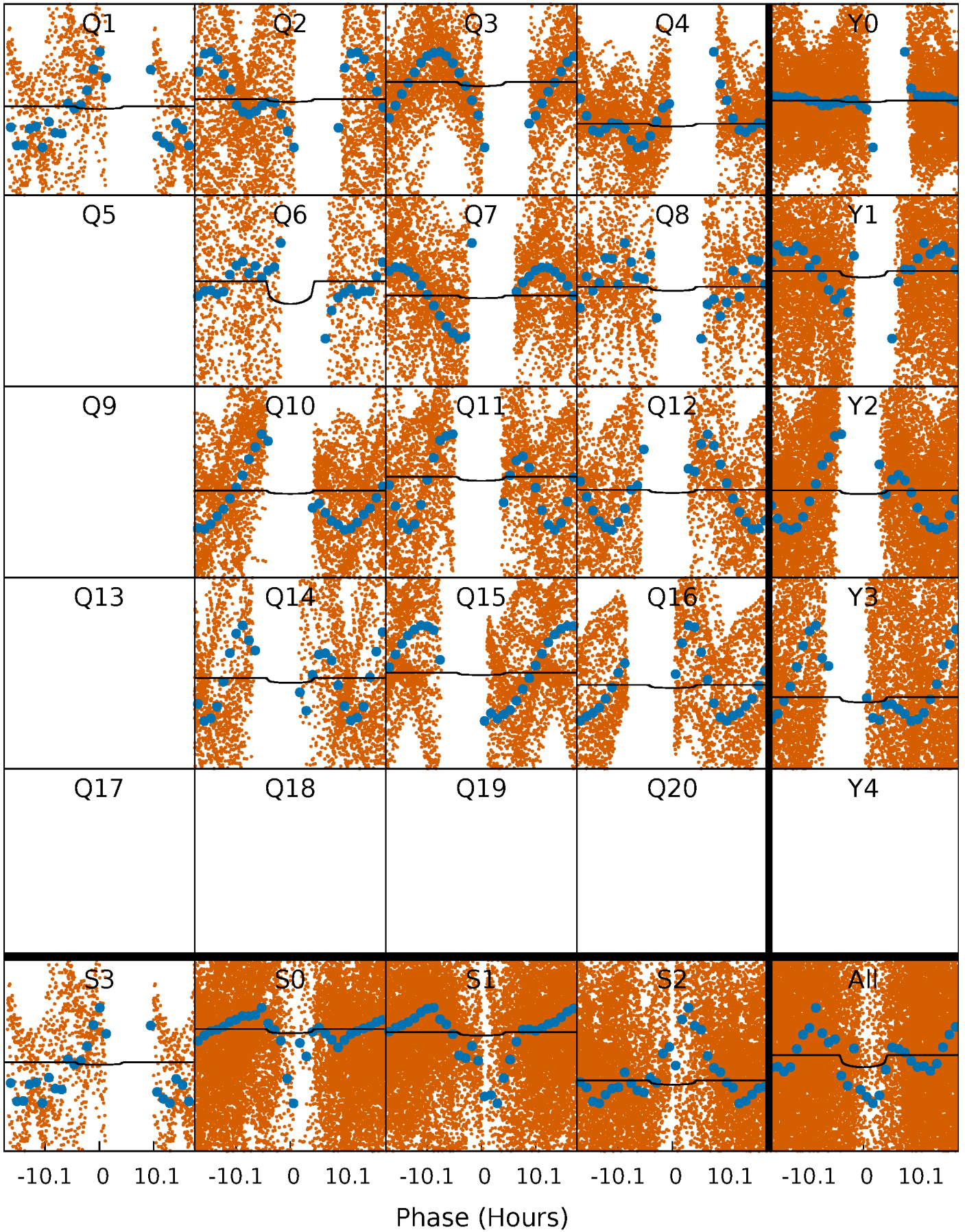
PDC Quarter-Phased Transit Curves

TCE 006025466-02 P= 1.128037 Days $T_0=131.858646$ (BKJD)



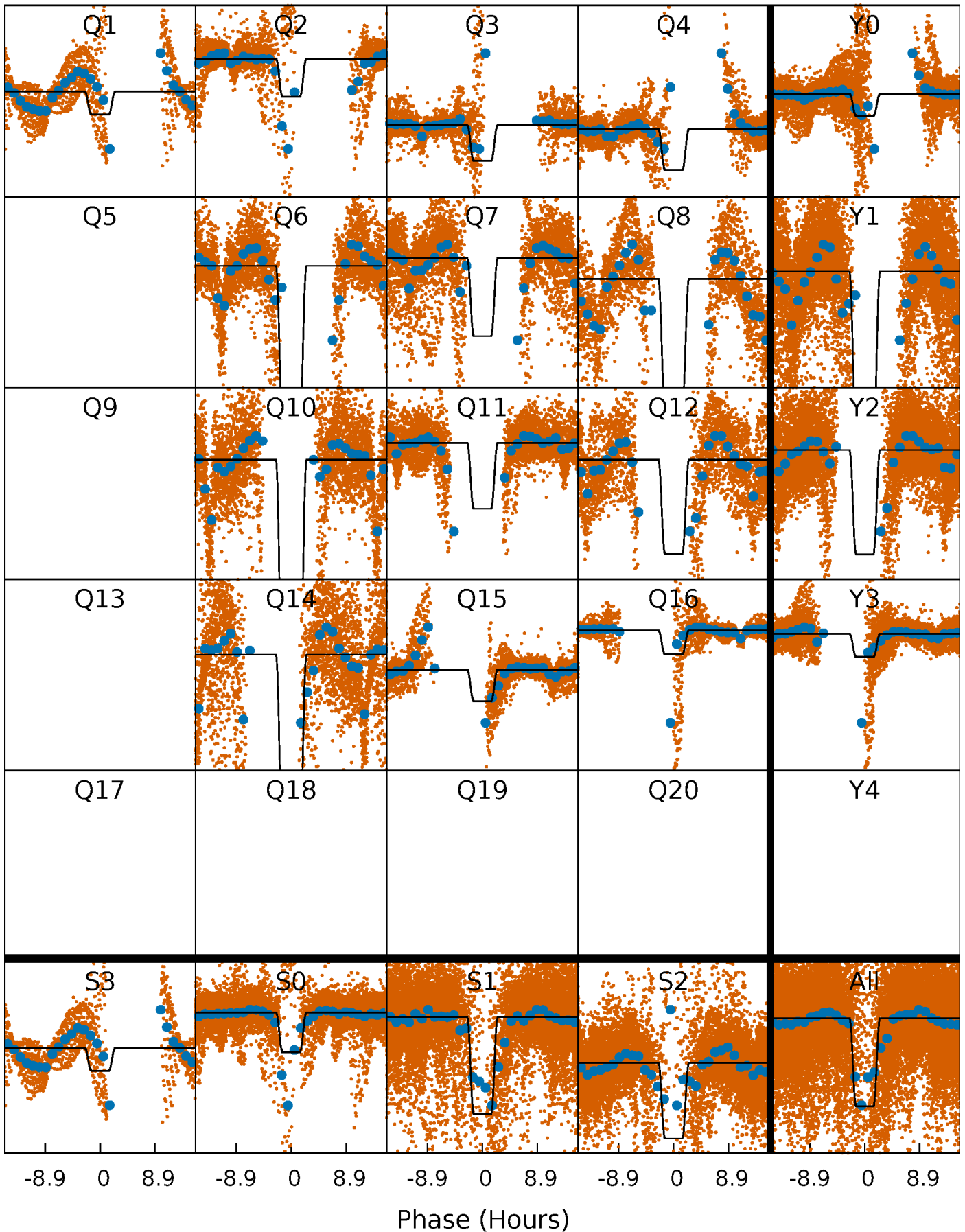
DV Quarter-Phased Transit Curves

TCE 006025466-02 $P = 1.128037$ Days $T_0 = 131.858646$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

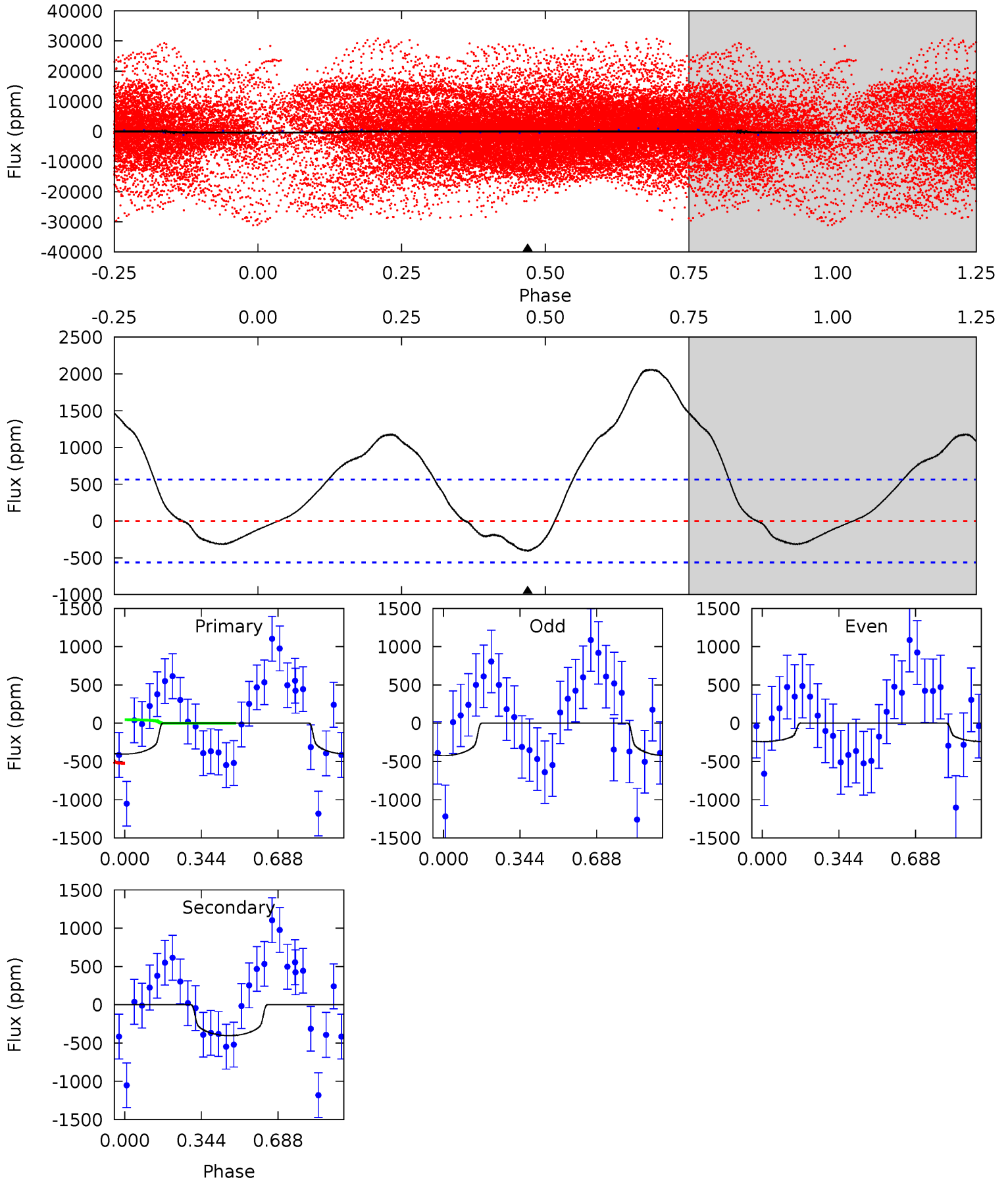
TCE 006025466-02 P= 1.128045 Days $T_0=131.863172$ (BKJD)



DV Model-Shift Uniqueness Test

006025466-02, P = 1.128037 Days, E = 130.730609 Days

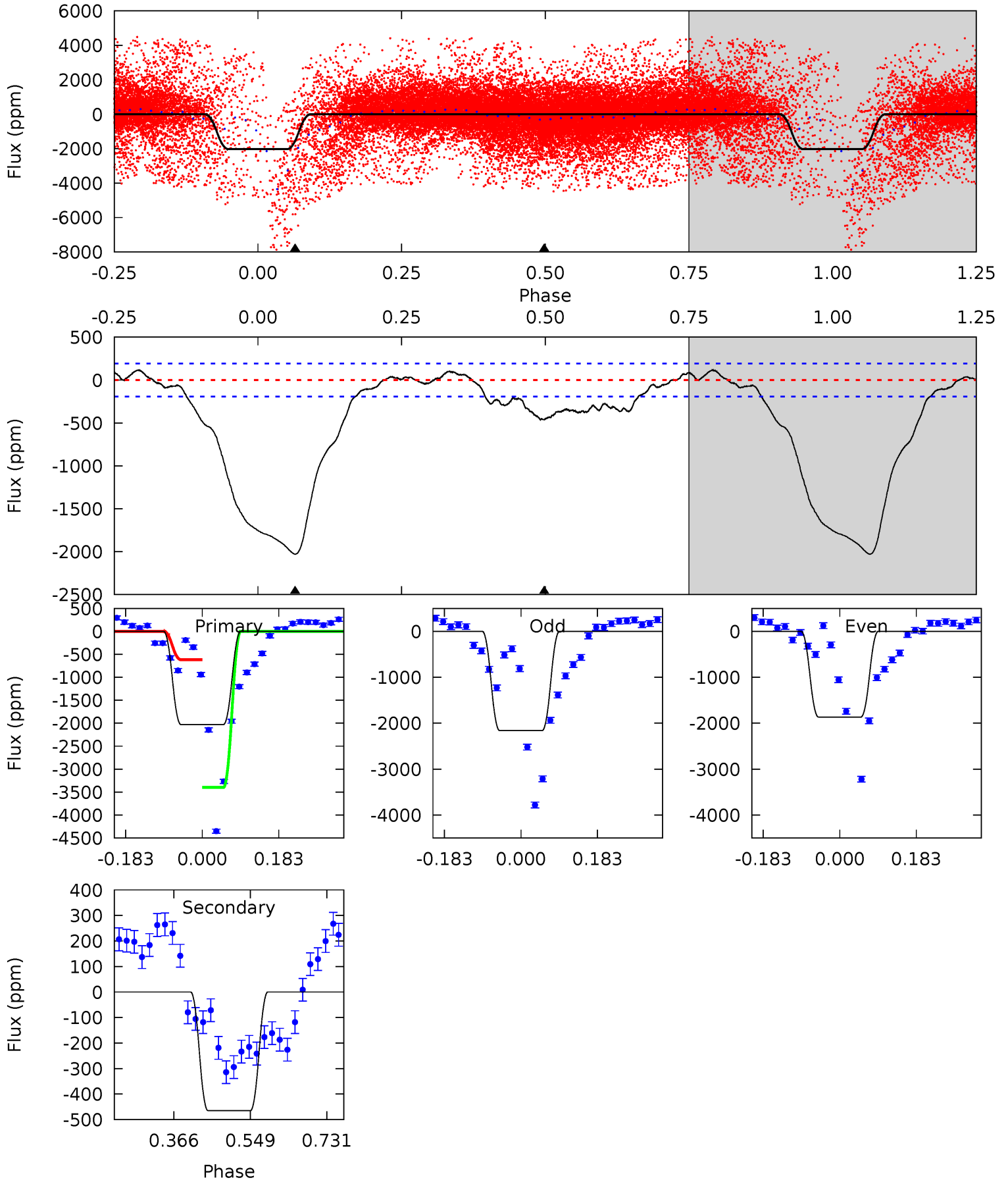
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.08	3.08	0	0	4.30	0.95	2.13	3.08	3.08	3.08	3.08	0.70	5.77	0.84	2.09



Alt Model-Shift Uniqueness Test

006025466-02, P = 1.128045 Days, E = 130.735127 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.7	10.7	0	0	4.44	1.33	1.38	46.7	46.7	10.7	10.7	3.43	1.25	0.05	0



Stellar Parameters For KIC 006025466

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6022^{+162}_{-180}	$4.417^{+0.101}_{-0.203}$	$-0.220^{+0.300}_{-0.300}$	$1.011^{+0.288}_{-0.133}$	$0.974^{+0.143}_{-0.117}$	$1.326^{+0.519}_{-0.683}$
	+3%/-3%	+2%/-5%	+136%/-136%	+28%/-13%	+15%/-12%	+39%/-52%
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 006025466-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-403 ± 131	$2.15^{+0.43}_{-0.34}$	2606^{+191}_{-142}	6091^{+783}_{-640}	20^{+11}_{-8}
Alt.	-465 ± 43	$6.91^{+1.14}_{-0.73}$	2602^{+193}_{-135}	3818^{+121}_{-129}	$2.336^{+0.585}_{-0.606}$

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

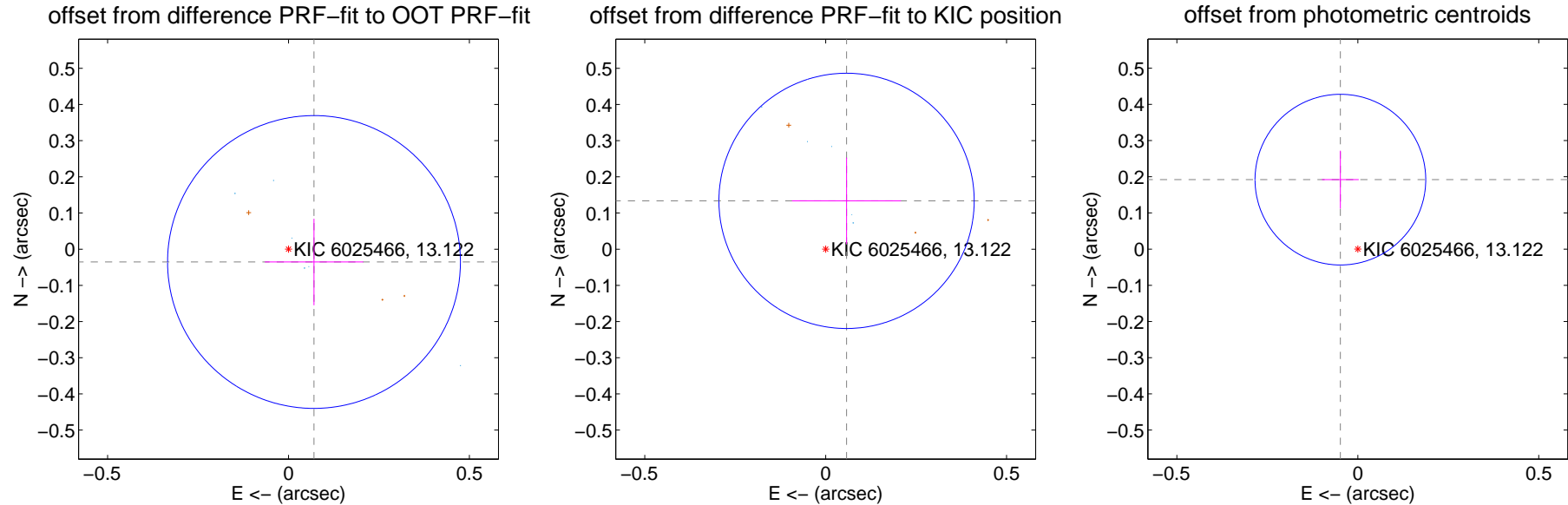
DV Centroid Data

Supplemental centroid analysis for 006025466-02. Kepler magnitude: 13.12. Transit SNR 6.17

There are 9 quarters with good PRF difference image offsets

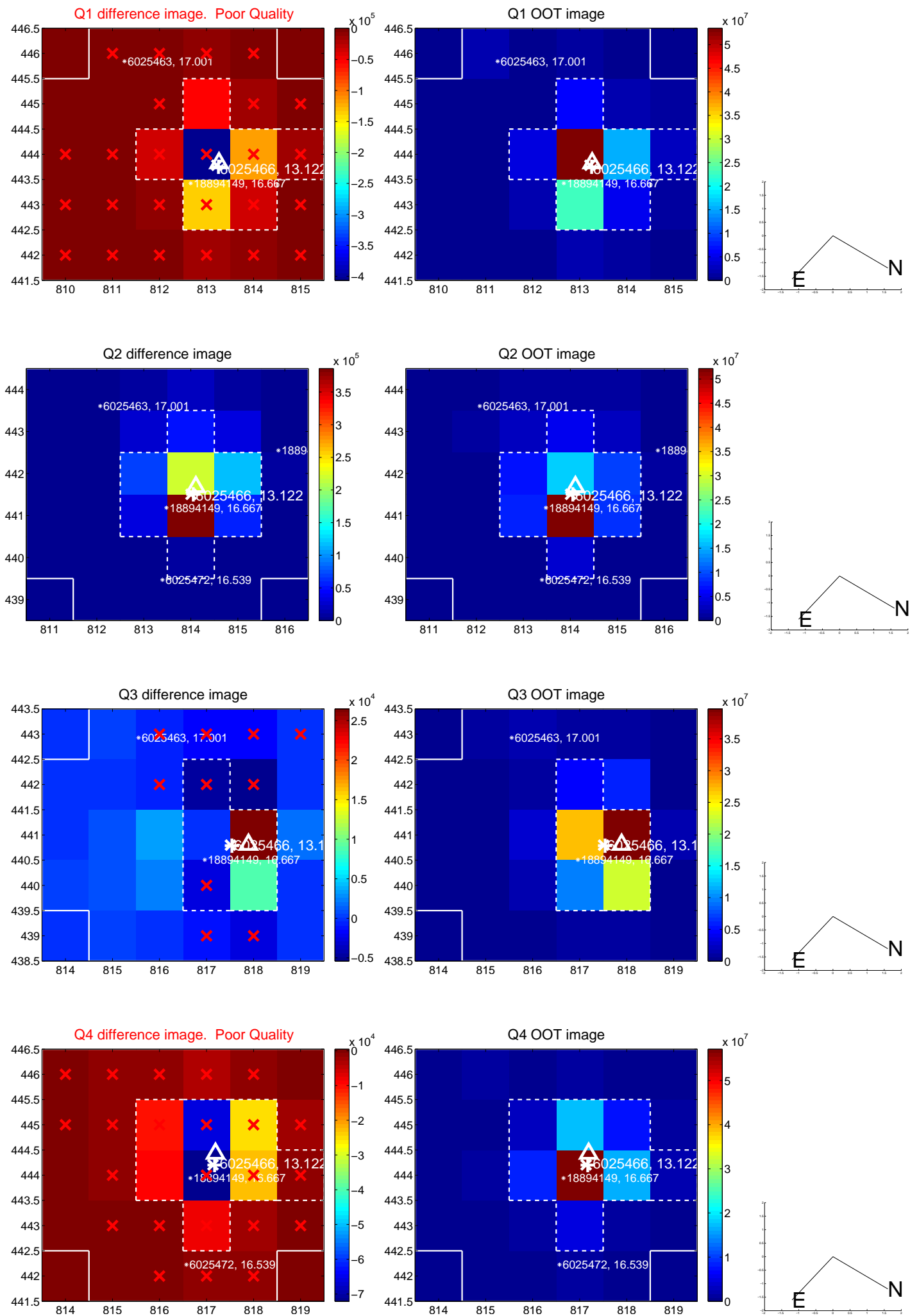
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.079 ± 0.135	0.58	-0.070 ± 0.136	-0.035 ± 0.120
PRF-fit source offset from KIC position	0.146 ± 0.118	1.24	-0.058 ± 0.151	0.134 ± 0.119
photometric centroid source offset	0.20 ± 0.08	2.52	0.05 ± 0.05	0.19 ± 0.08

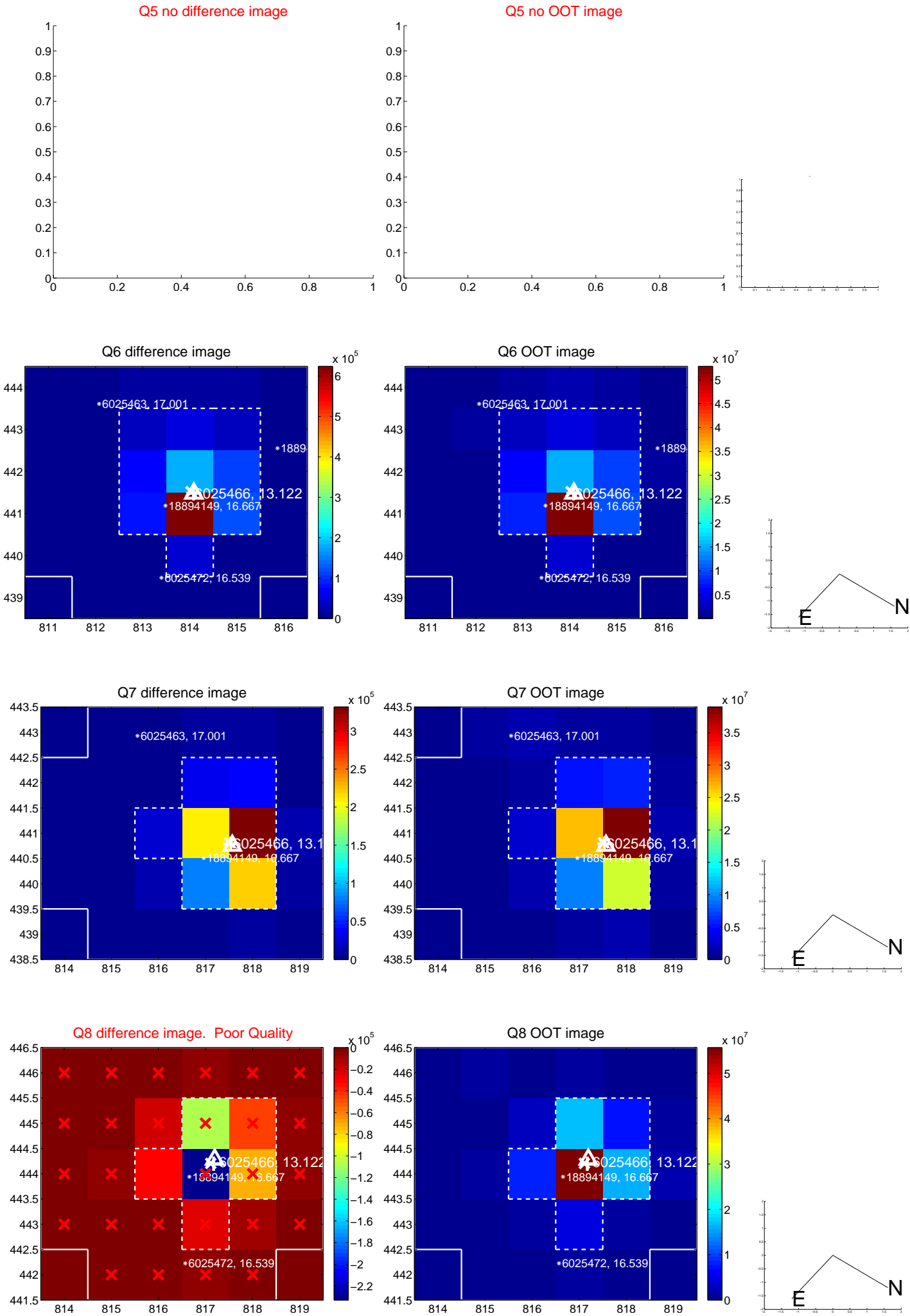


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

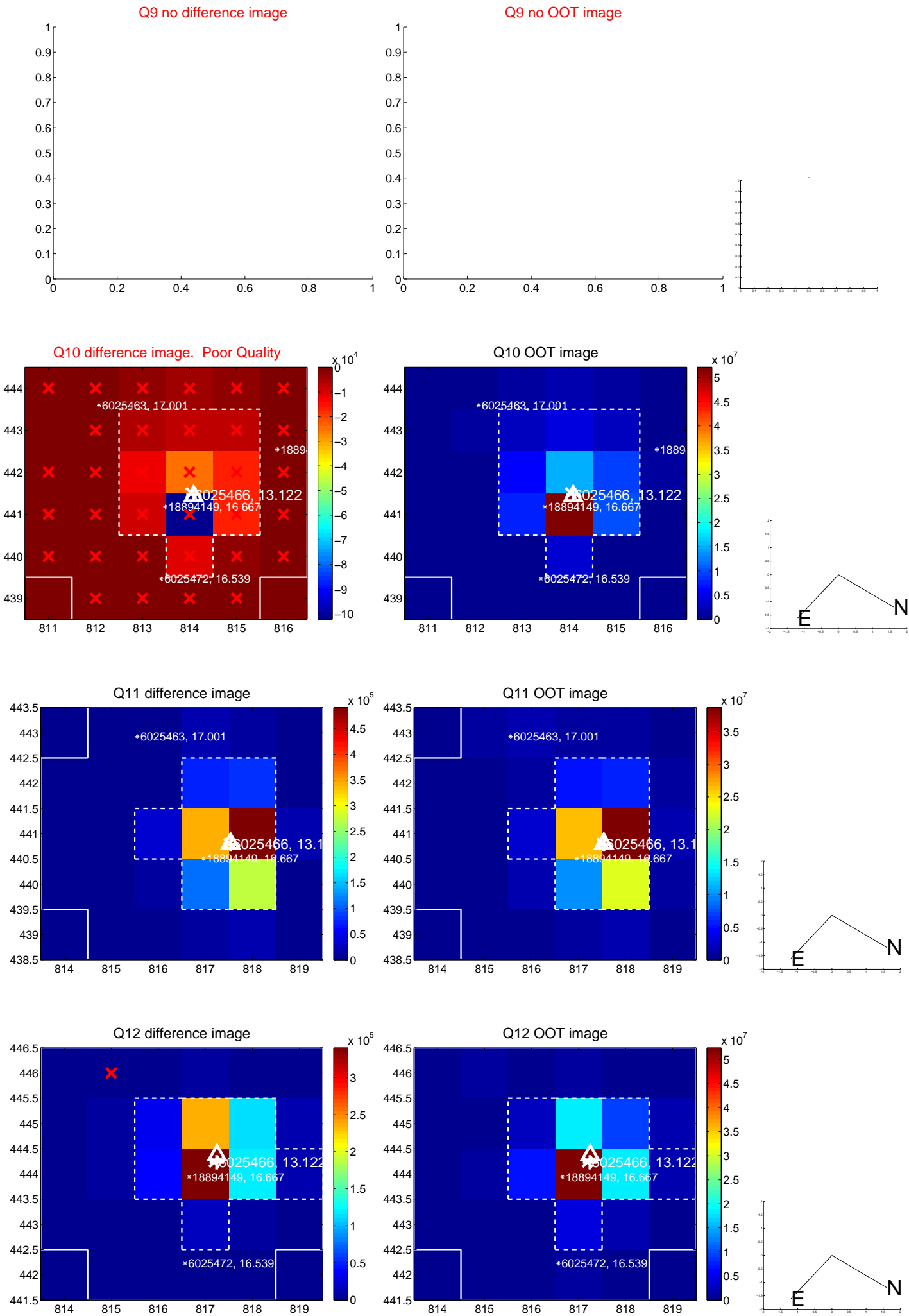
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



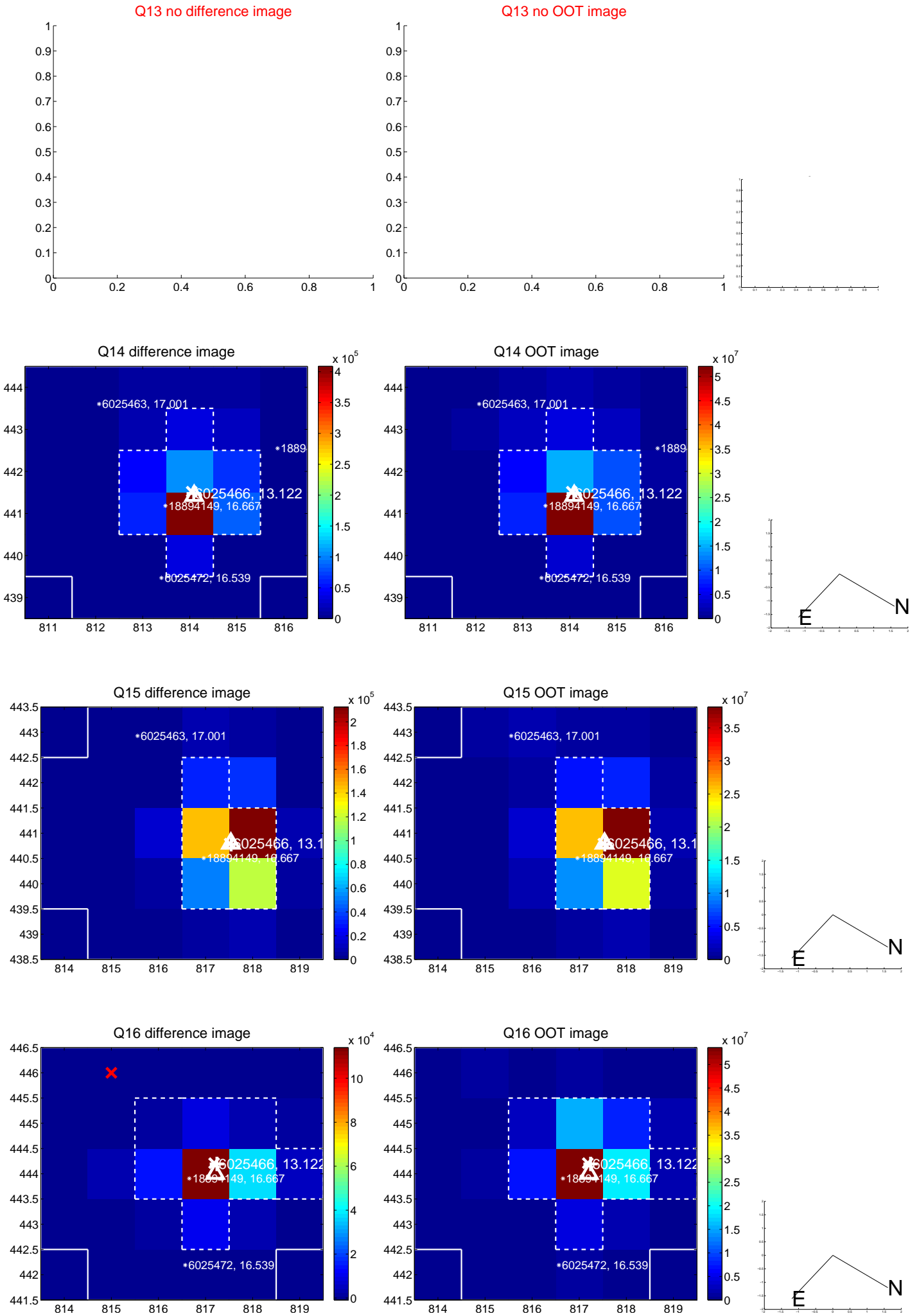
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



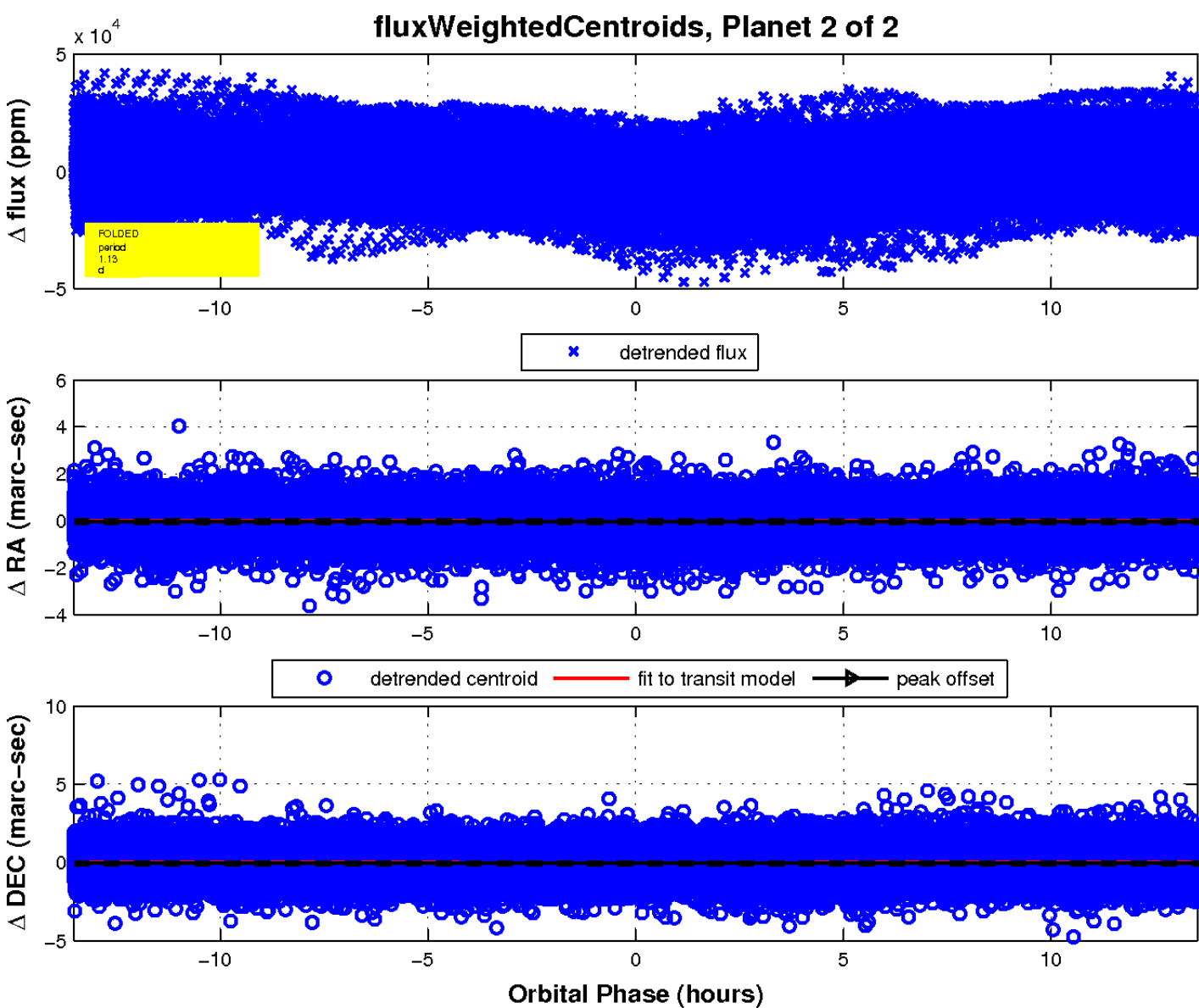
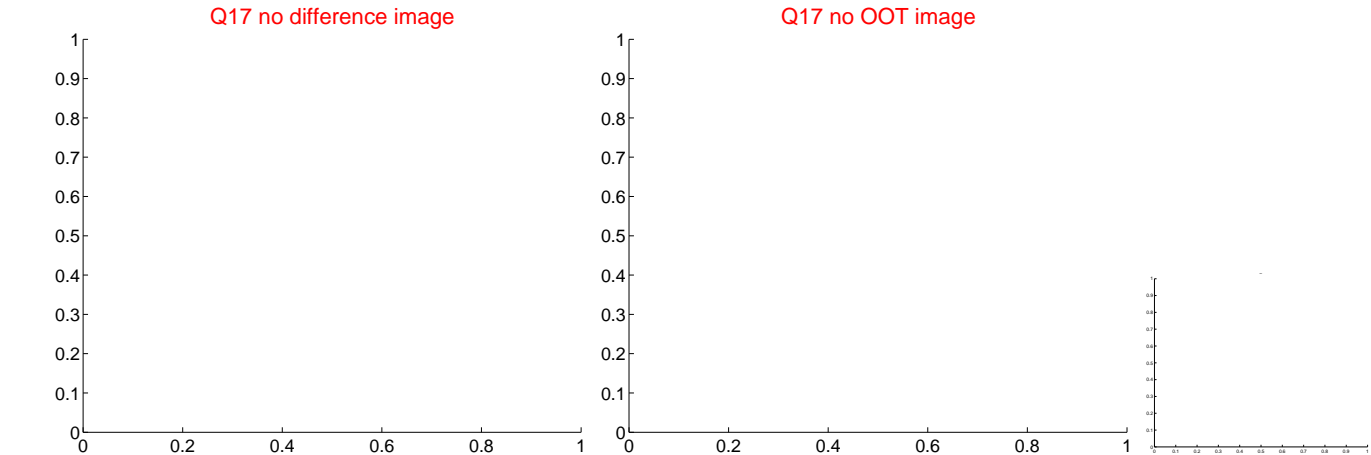
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

