

KIC 005025294

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})
005025294-01	OBS	6498.01	5.462694	134.264774	4143.1	3.247	500.2	456.8	0.89	5929	10.38	260.55
005025294-02	OBS	No	5.462686	136.312033	1390.6	4.214	166.5	171.4	0.89	5929	6.21	260.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005025294-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
005025294-02	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.

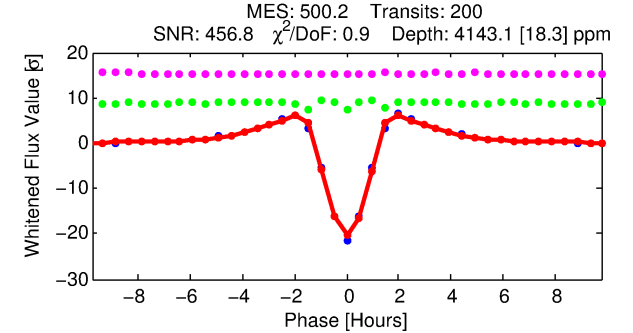
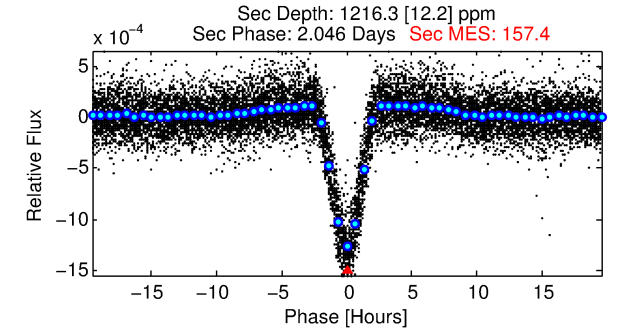
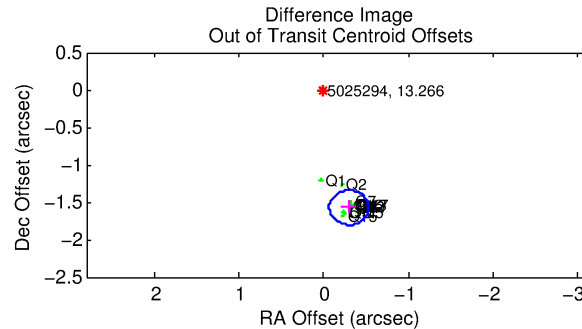
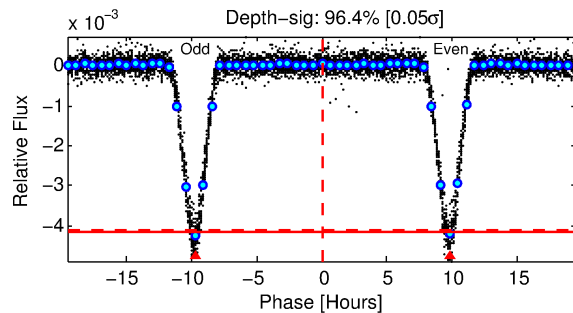
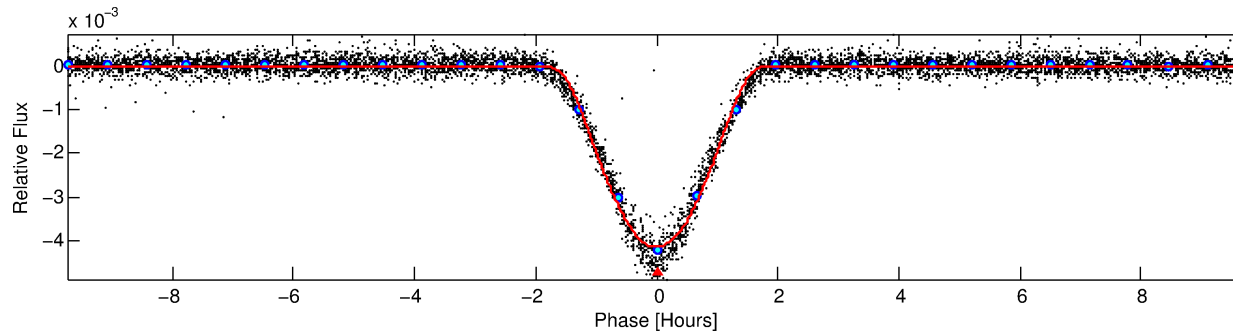
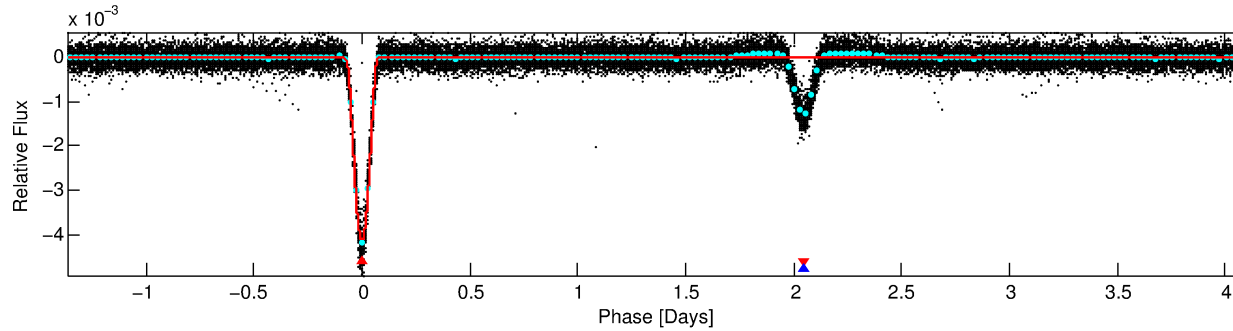
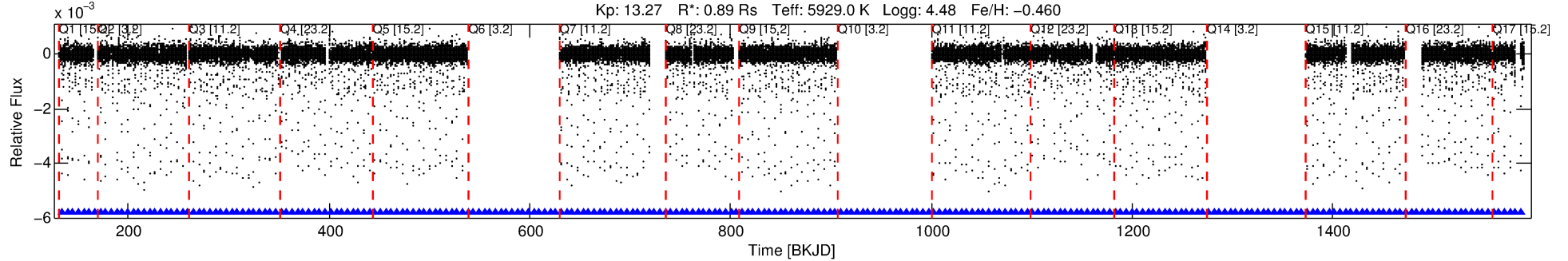
Ephemeris Match Information For 005025294-01

No Significant Match Found

DV One-Page Summary

KIC: 5025294 Candidate: 1 of 2 Period: 5.463 d
KOI: K06498.01 Corr: 0.996

Kp: 13.27 R*: 0.89 Rs Teff: 5929.0 K Logg: 4.48 Fe/H: -0.460



DV Fit Results:

Period = 5.46269 [0.00000] d
Epoch = 134.2648 [0.0001] BKJD
Rp/R* = 0.1072 [0.0090]
a/R* = 6.25 [0.10]
b = 1.00 [0.01]
Seff = 260.55 [90.81]
Teq = 1024 [89] K
Rp = 10.38 [2.92] Re
a = 0.0579 [0.0131] AU
Ag = 20.79 [7.73] [2.56σ]
Teff = 3382 [169] K [12.35σ]

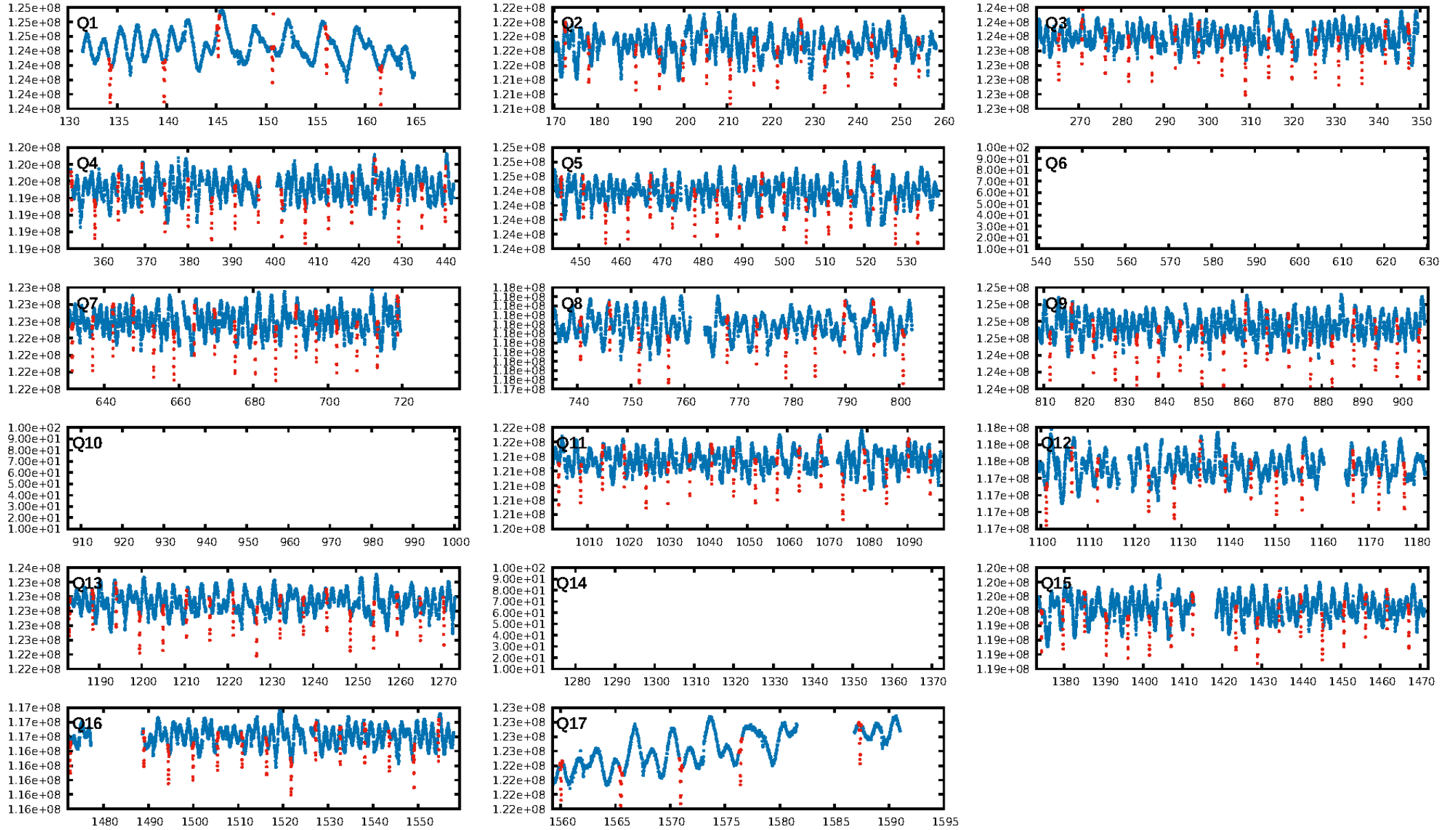
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [189/189]
GhostDiagnostic-chr: 2.326
Centroid-sig: 0.0%
Centroid-so: 1.727 arcsec [98.34σ]
OotOffset-rm: 1.600 arcsec [20.81σ]
KicOffset-rm: 1.955 arcsec [25.62σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

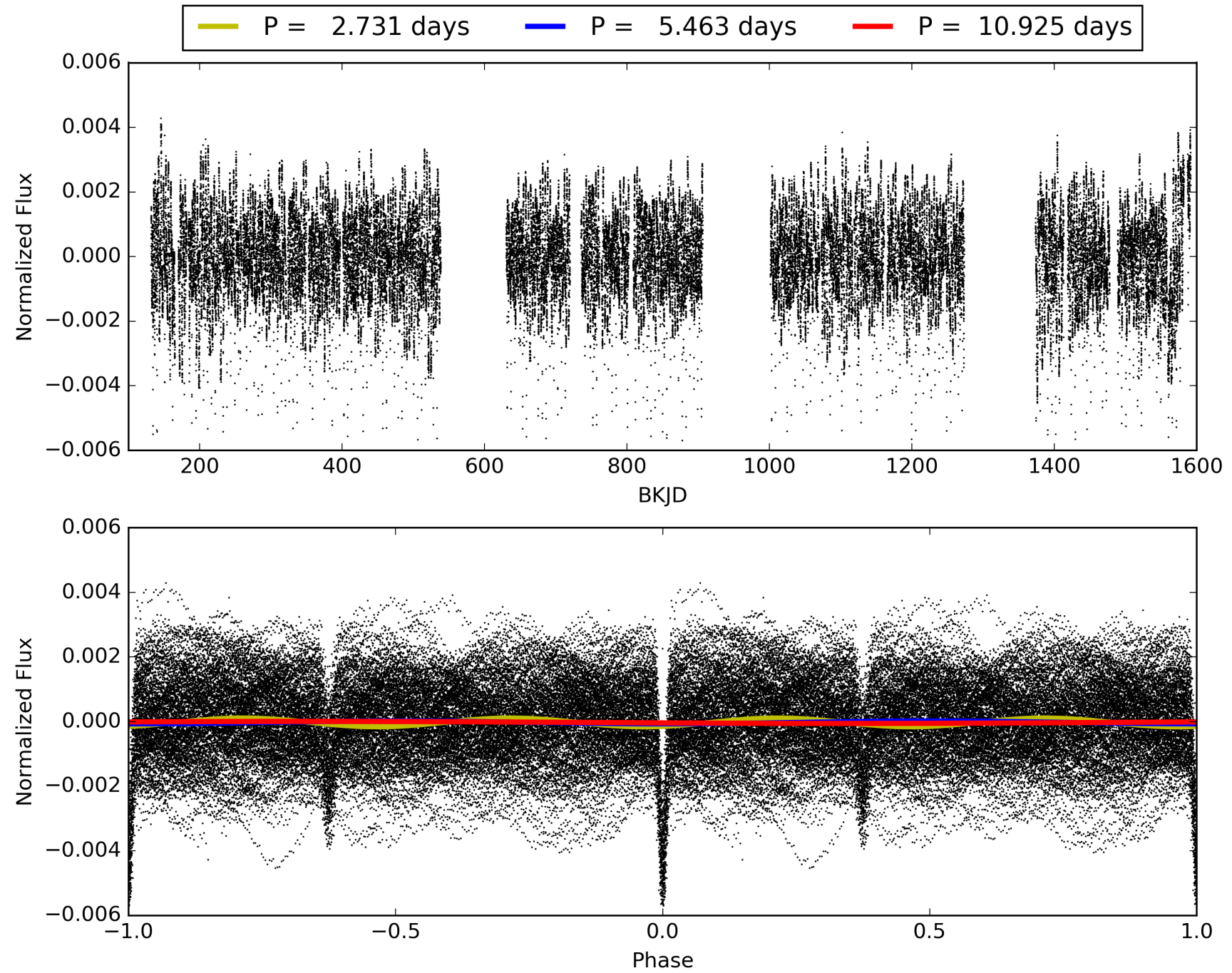
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:41:58 Z

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

TCE 005025294-01, PDC Light Curves

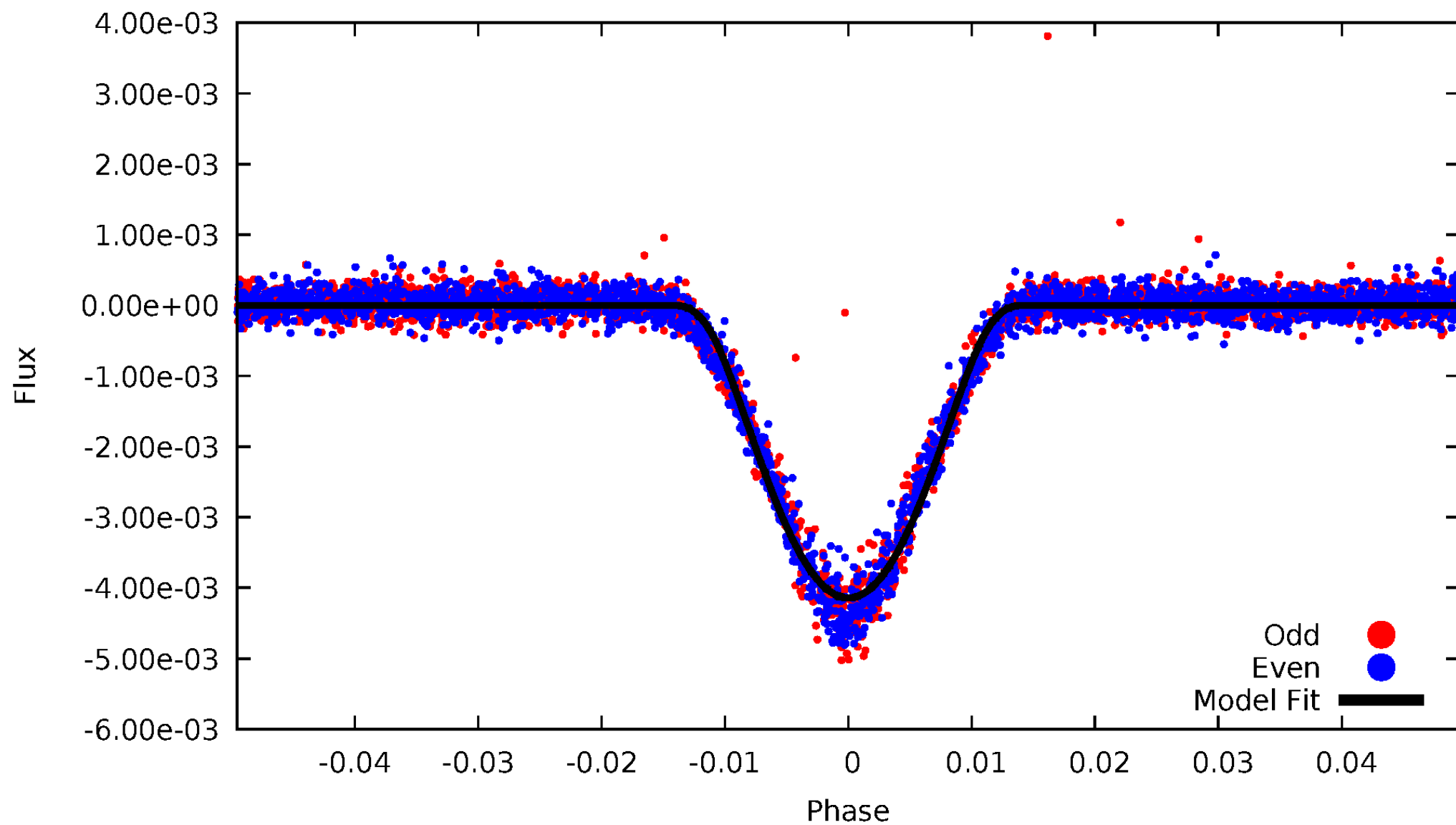


TCE 005025294-01



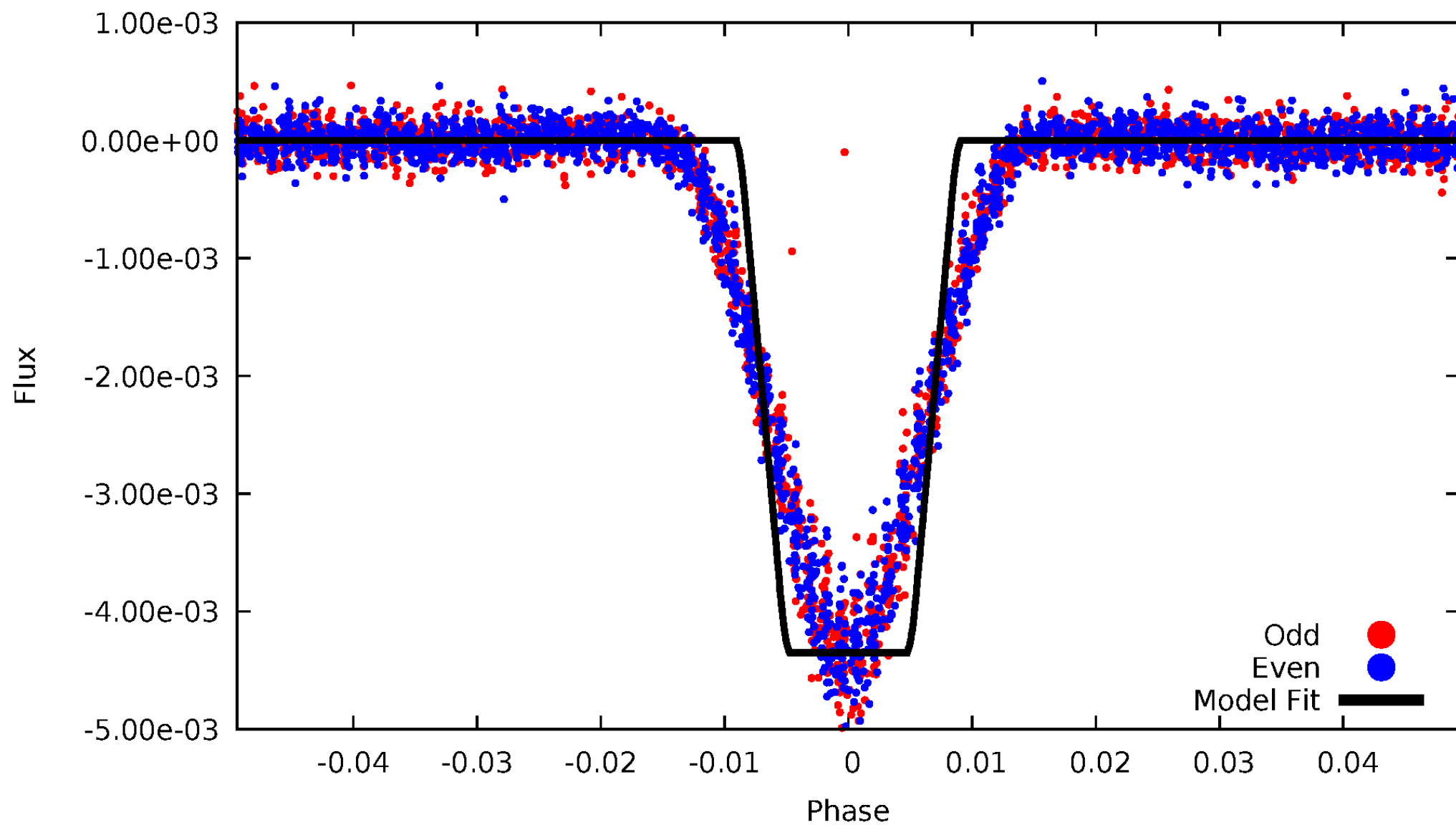
DV Odd/Even

TCE 005025294-01



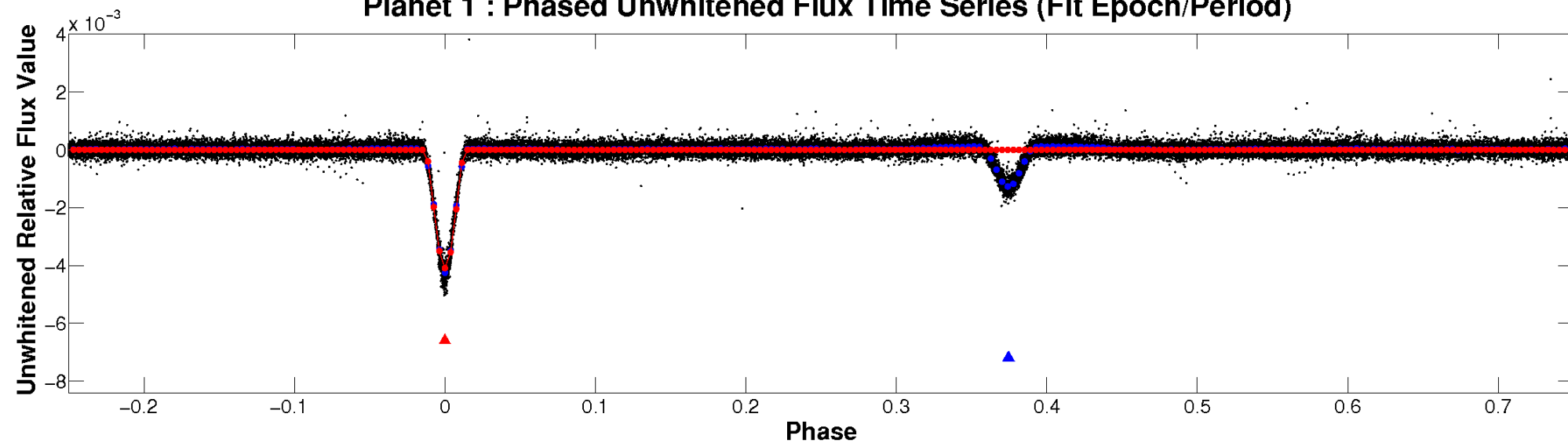
ALT Odd/Even

TCE 005025294-01

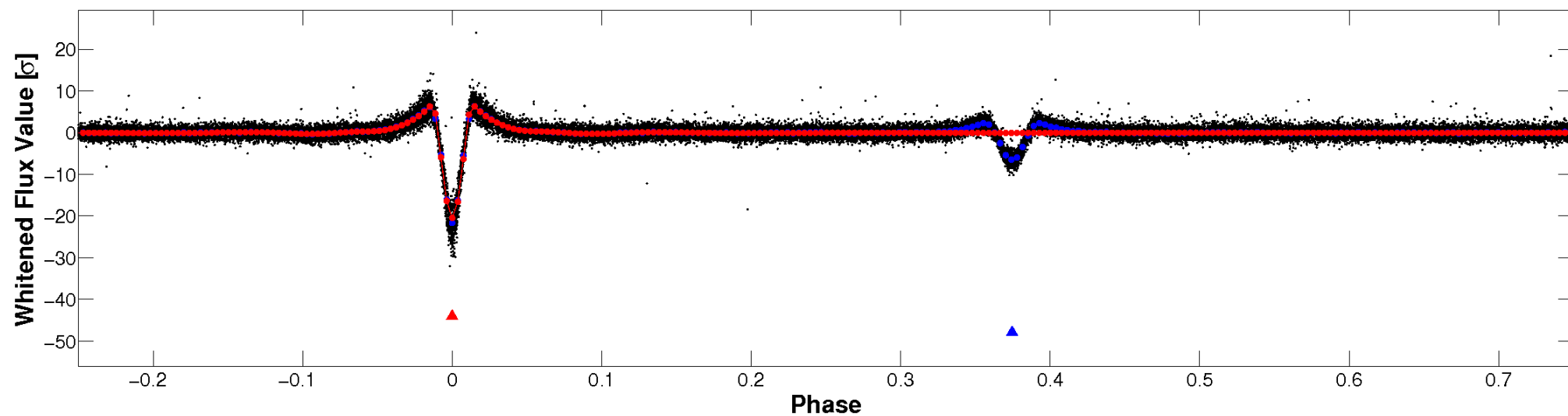


Non-Whitened Vs. Whitened Light Curve

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

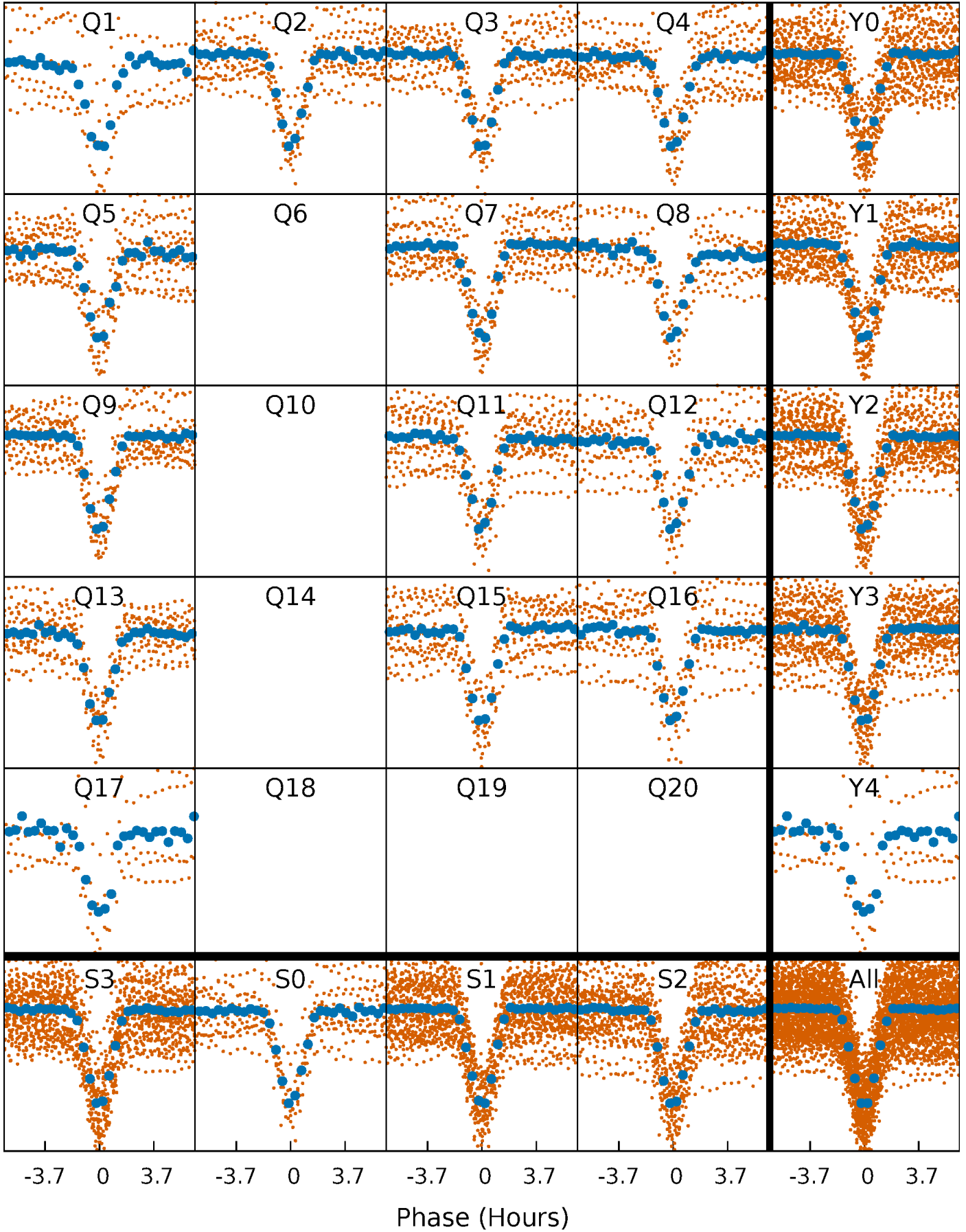


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



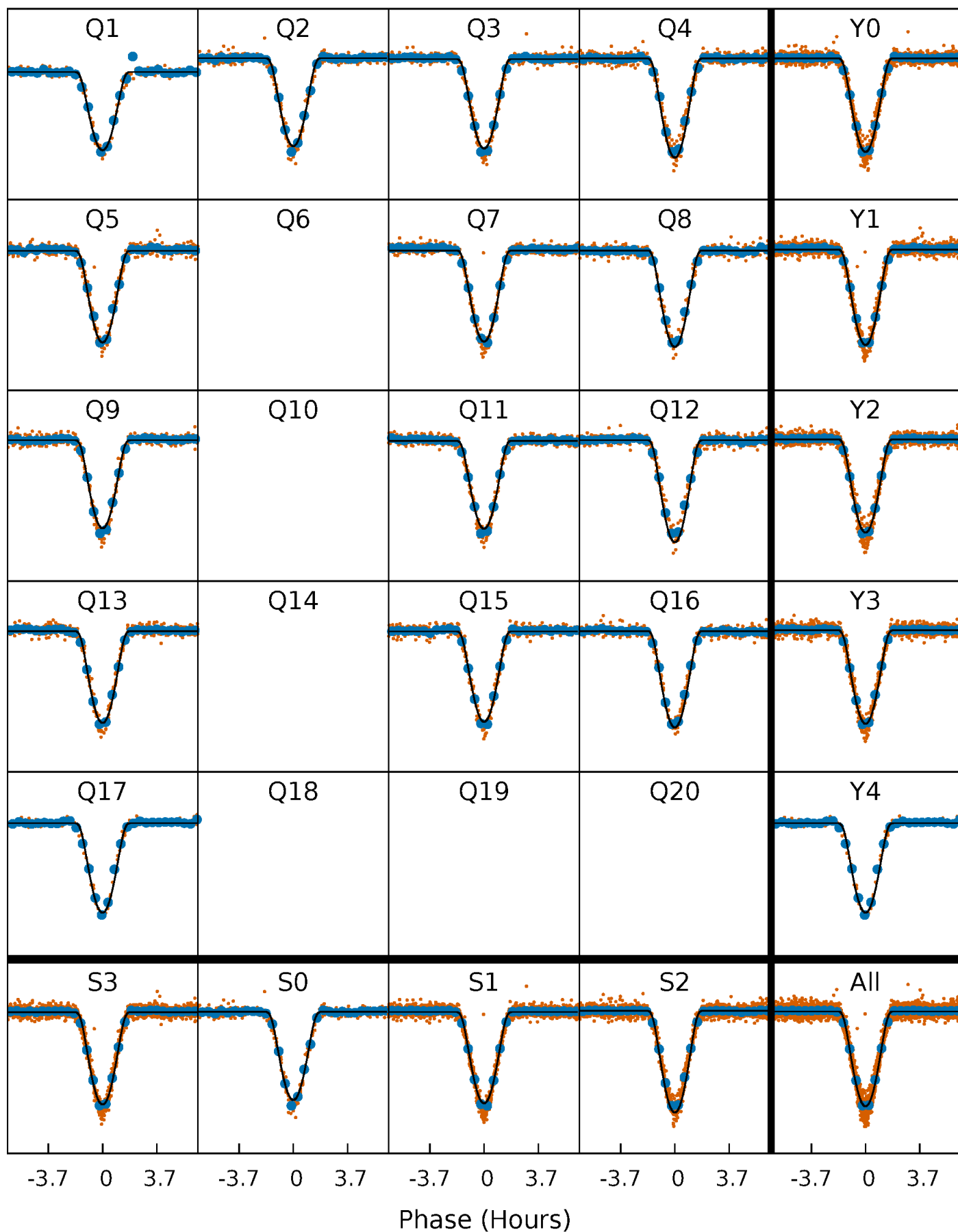
PDC Quarter-Phased Transit Curves

TCE 005025294-01 P= 5.462694 Days $T_0=134.264774$ (BKJD)



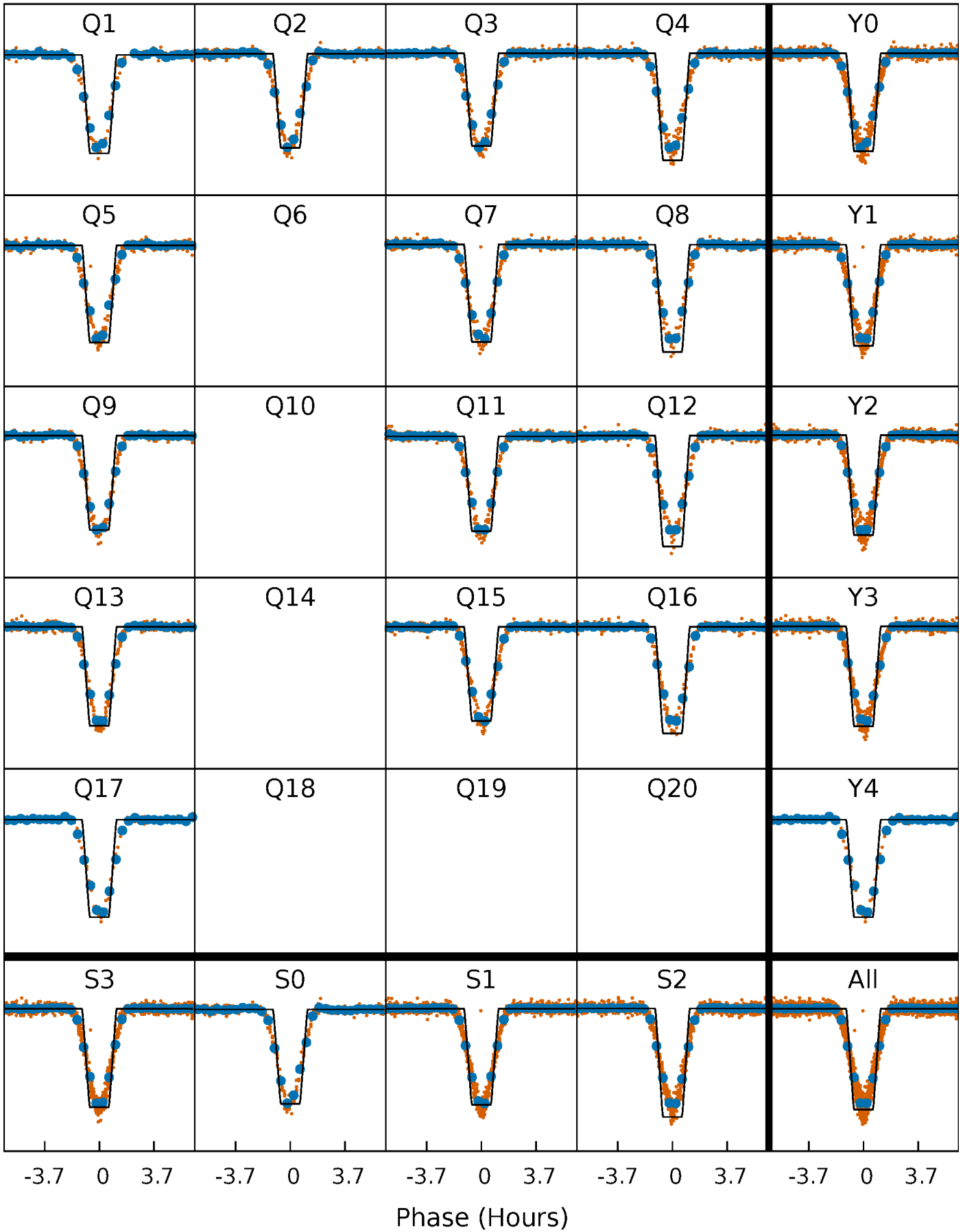
DV Quarter-Phased Transit Curves

TCE 005025294-01 P= 5.462694 Days $T_0=134.264774$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

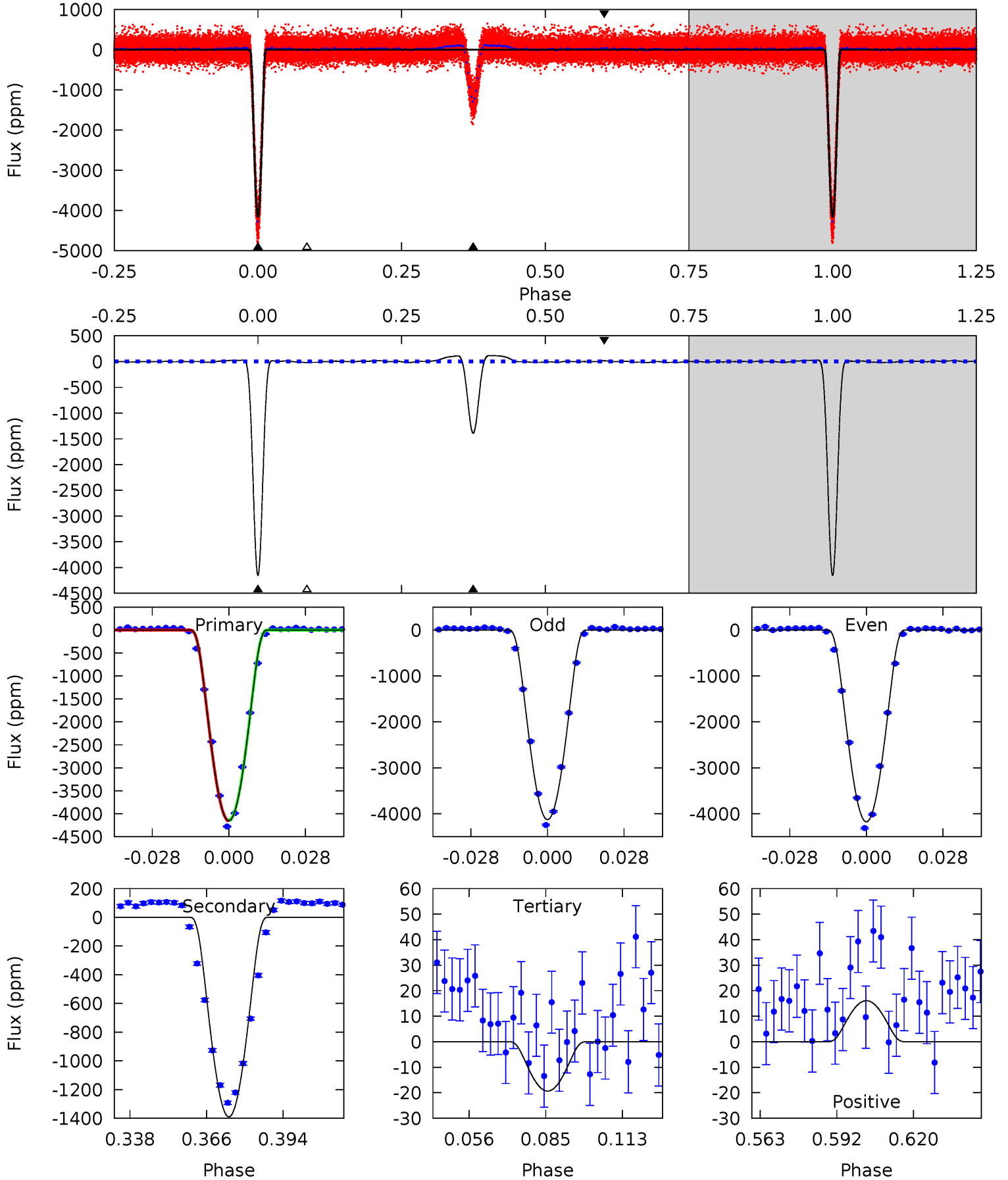
TCE 005025294-01 P= 5.462670 Days $T_0=134.267719$ (BKJD)



DV Model-Shift Uniqueness Test

005025294-01, P = 5.462694 Days, E = 128.802080 Days

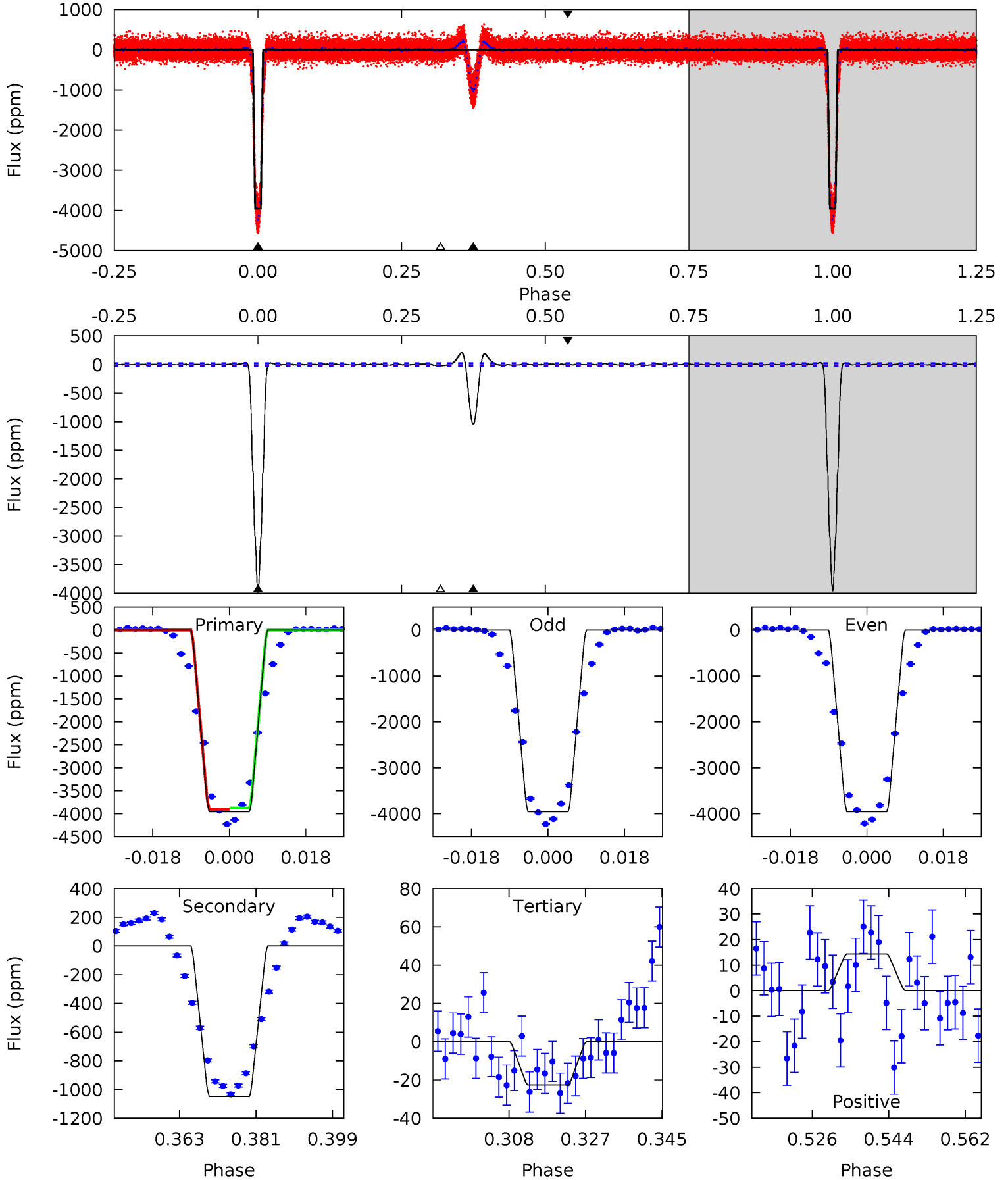
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1037	347.0	4.83	4.02	4.82	2.19	6.69	1032	1033	342.2	343.0	6.15	1.00	0.03	1.32



Alt Model-Shift Uniqueness Test

005025294-01, P = 5.462670 Days, E = 128.805049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
857.3	227.4	4.90	3.12	4.91	2.36	5.62	852.4	854.2	222.5	224.3	0.05	0.99	0.05	2.22



Stellar Parameters For KIC 005025294

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5929^{+159}_{-159}	$4.479^{+0.078}_{-0.182}$	$-0.460^{+0.300}_{-0.300}$	$0.888^{+0.238}_{-0.102}$	$0.867^{+0.106}_{-0.077}$	$1.745^{+0.589}_{-0.816}$
	+3%/-3%	+2%/-4%	+65%/-65%	+27%/-11%	+12%/-9%	+34%/-47%
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 005025294-01 / KOI 6498.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1390 ± 4	$10.64^{+1.65}_{-1.30}$	1448^{+97}_{-68}	3860^{+131}_{-136}	23^{+6}_{-6}
Alt.	-1049 ± 5	$6.54^{+1.18}_{-0.98}$	1443^{+93}_{-65}	4364^{+267}_{-222}	45^{+17}_{-12}

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

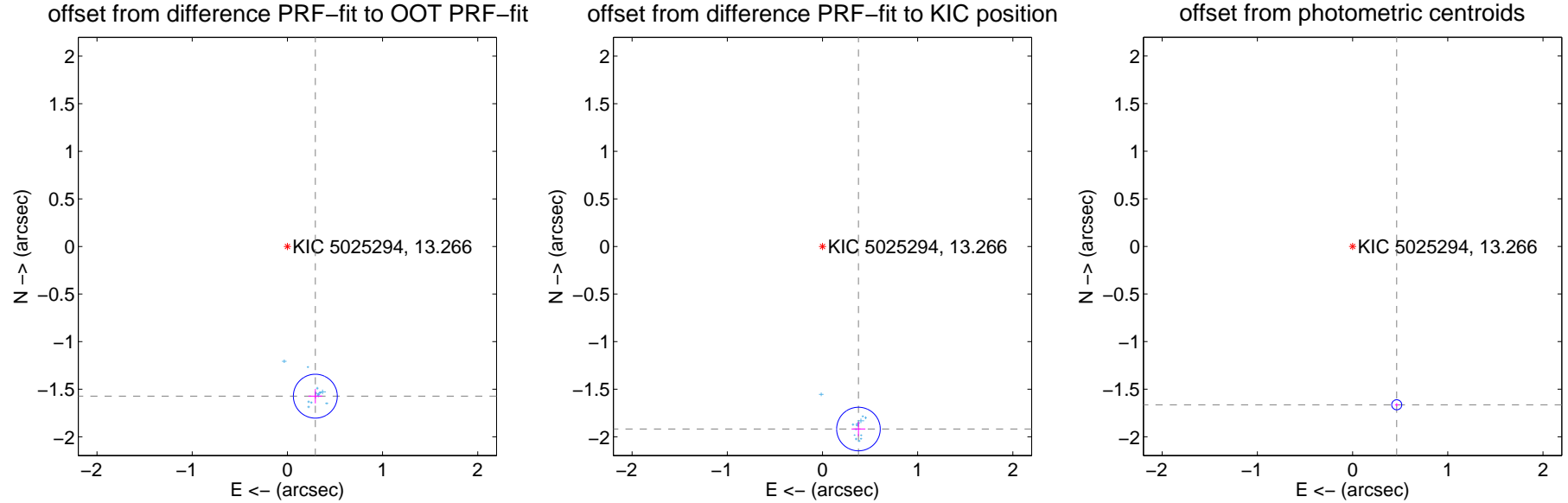
DV Centroid Data

Supplemental centroid analysis for 005025294-01. Kepler magnitude: 13.27. Transit SNR 456.84

There are 14 quarters with good PRF difference image offsets

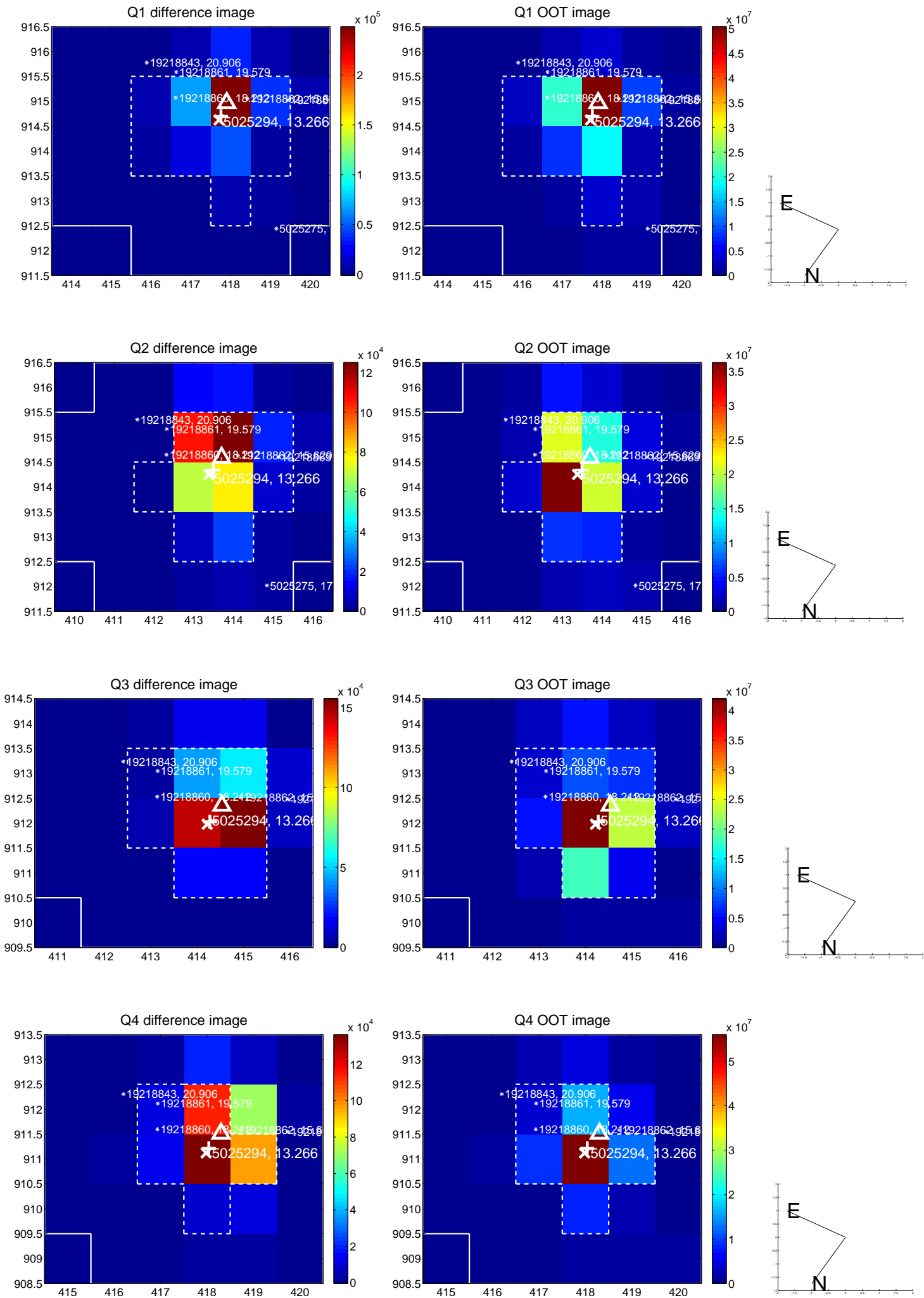
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.600 ± 0.077	20.81	-0.294 ± 0.072	-1.573 ± 0.075
PRF-fit source offset from KIC position	1.955 ± 0.076	25.62	-0.378 ± 0.073	-1.919 ± 0.075
photometric centroid source offset	1.73 ± 0.02	98.34	-0.46 ± 0.02	-1.66 ± 0.02

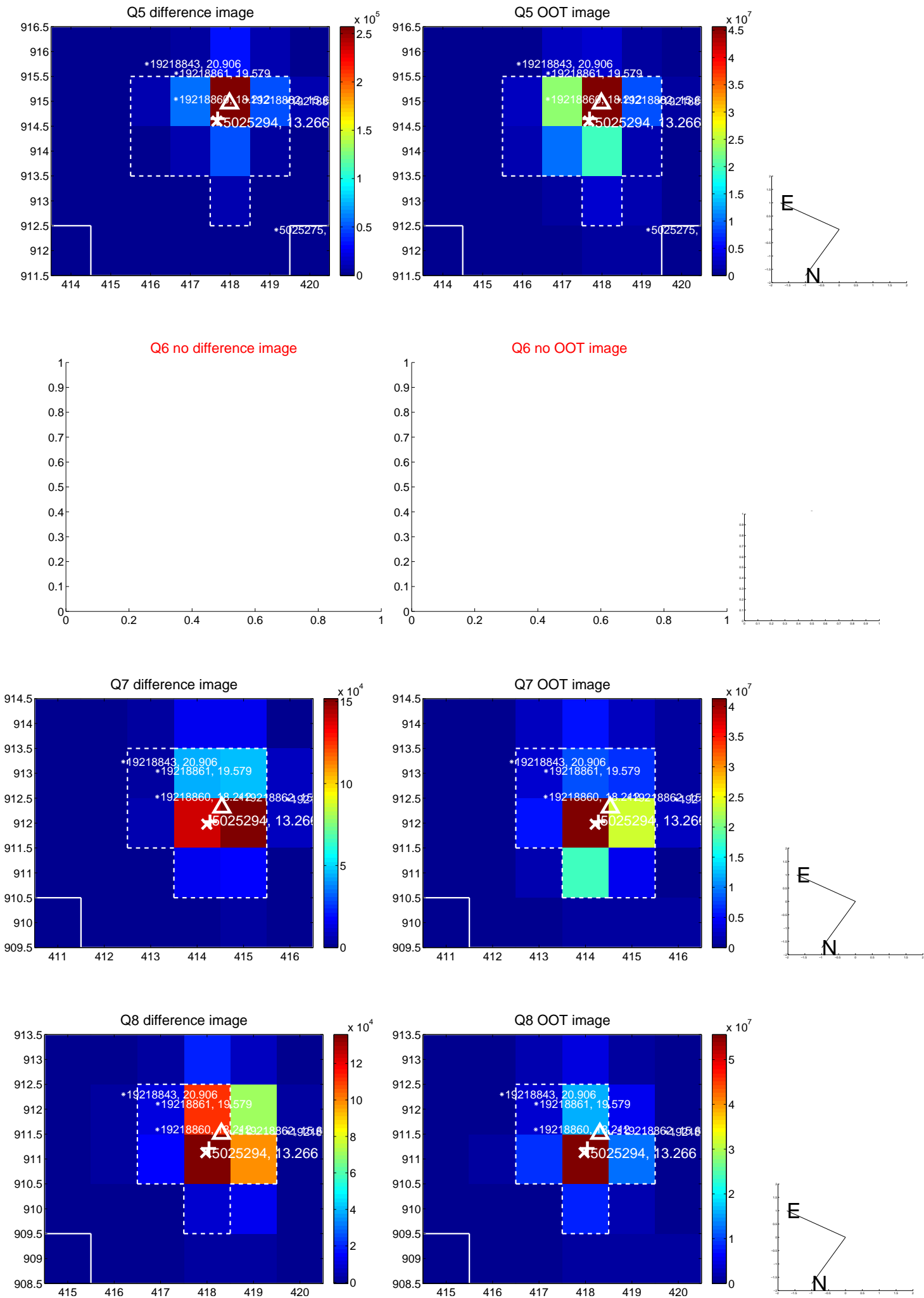


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

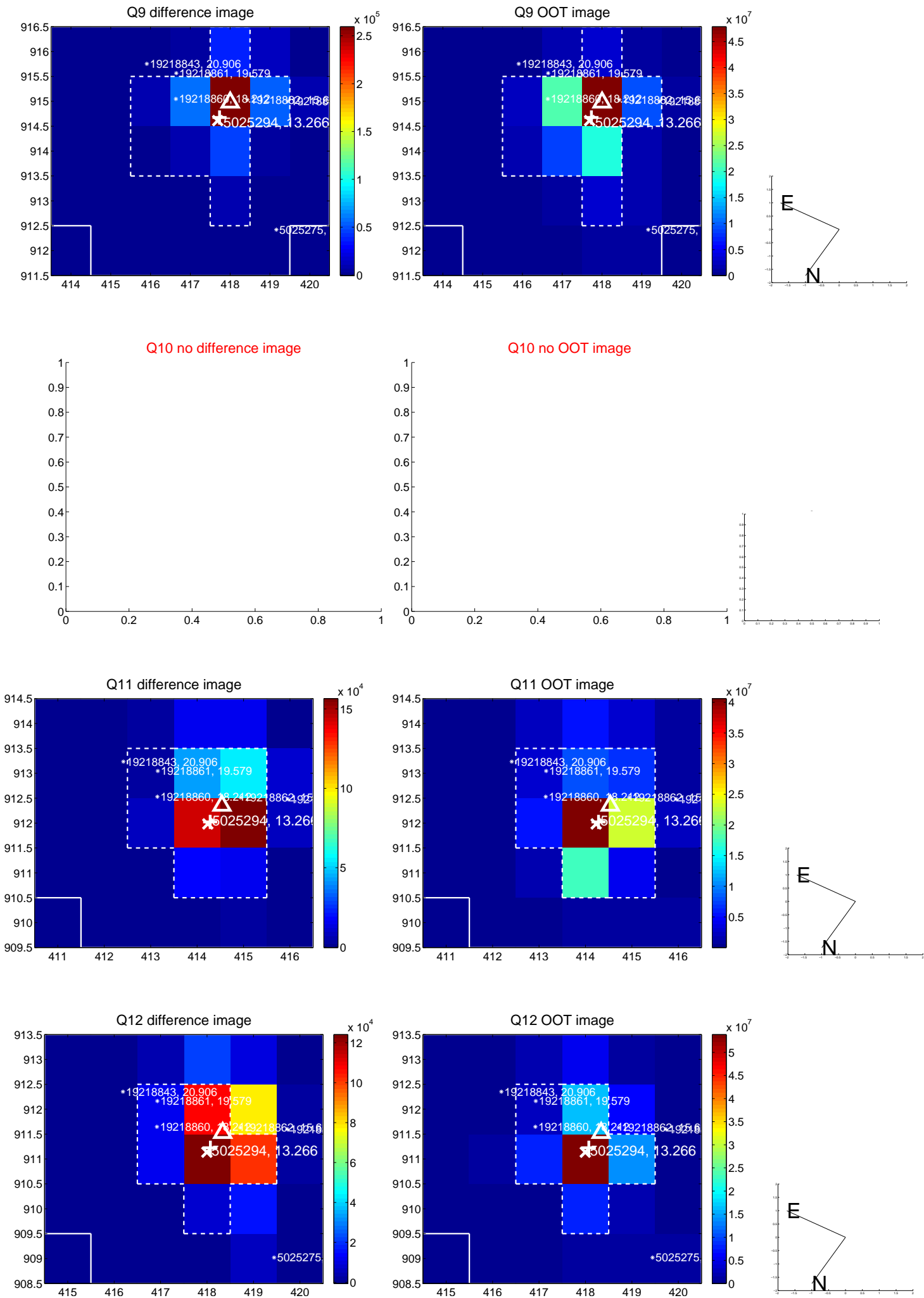
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



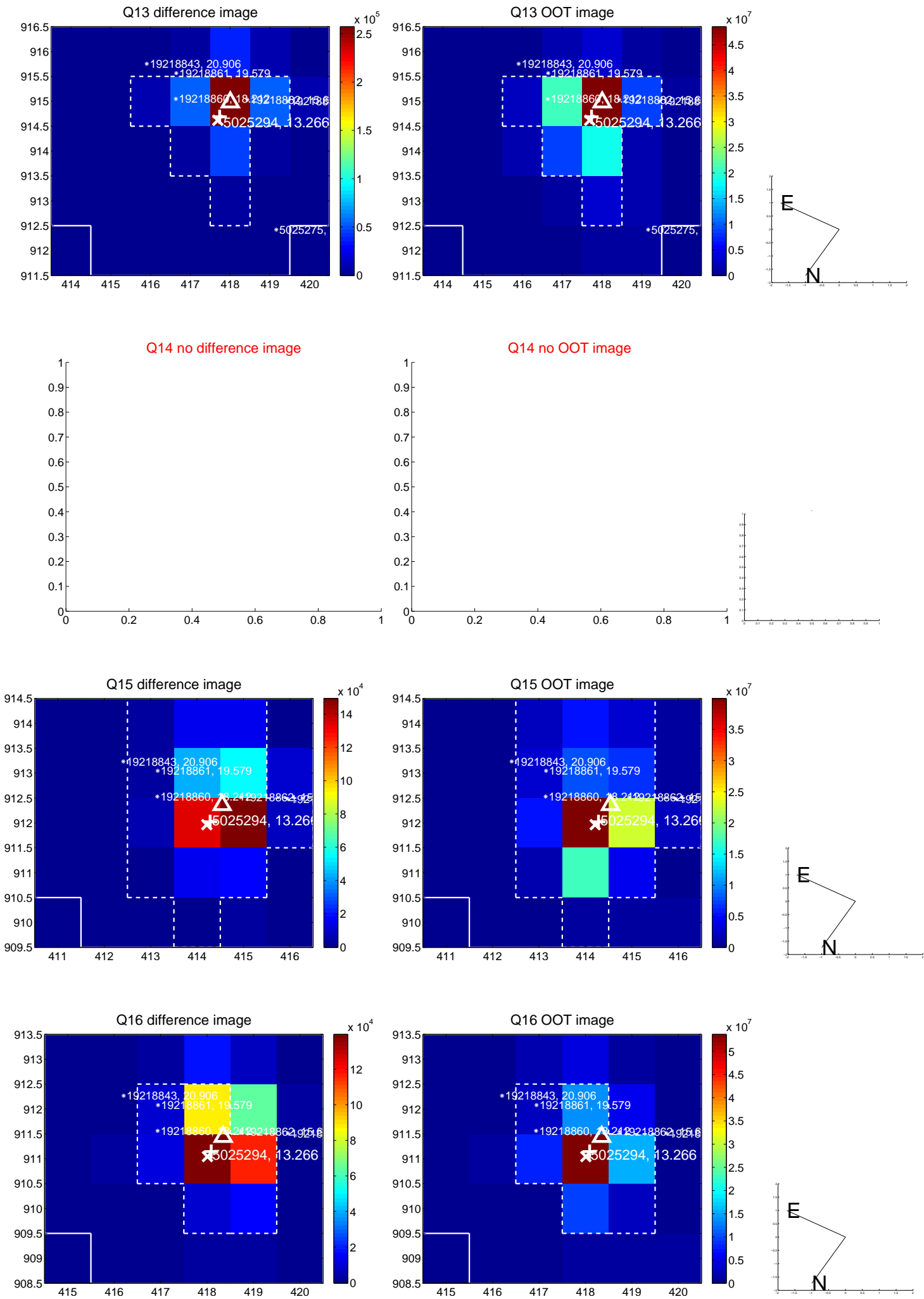
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



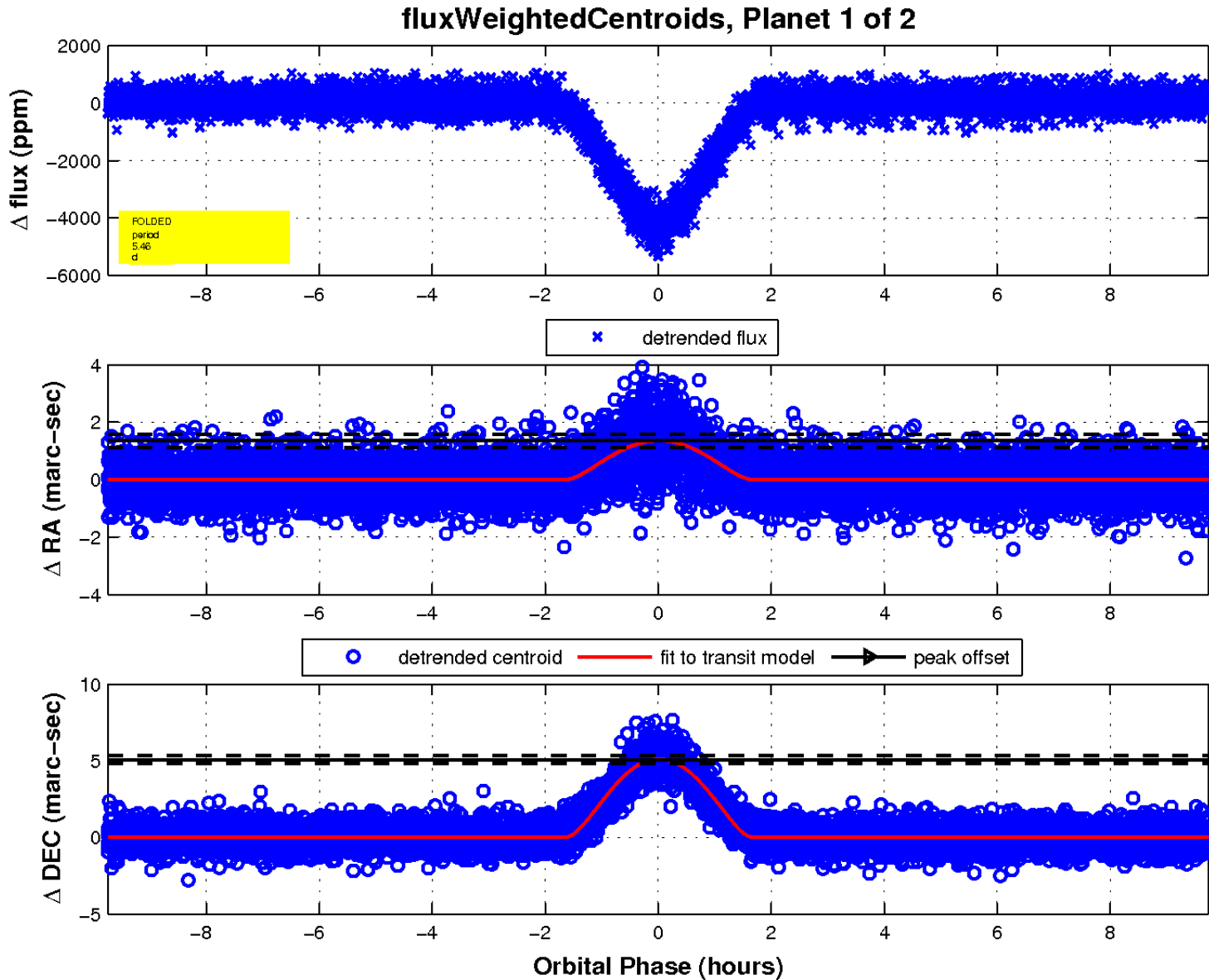
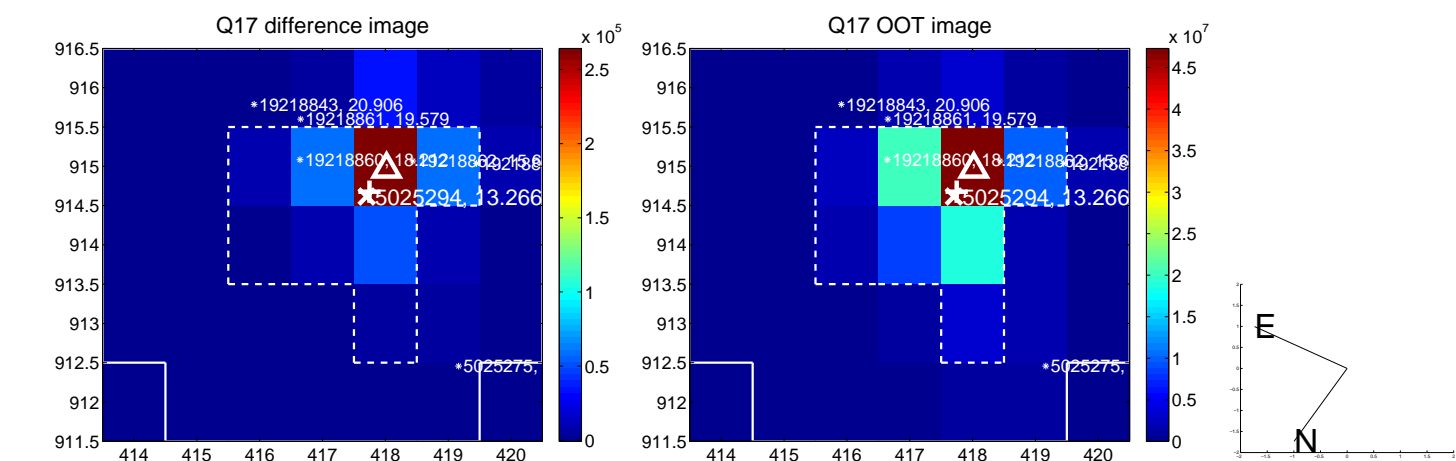
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

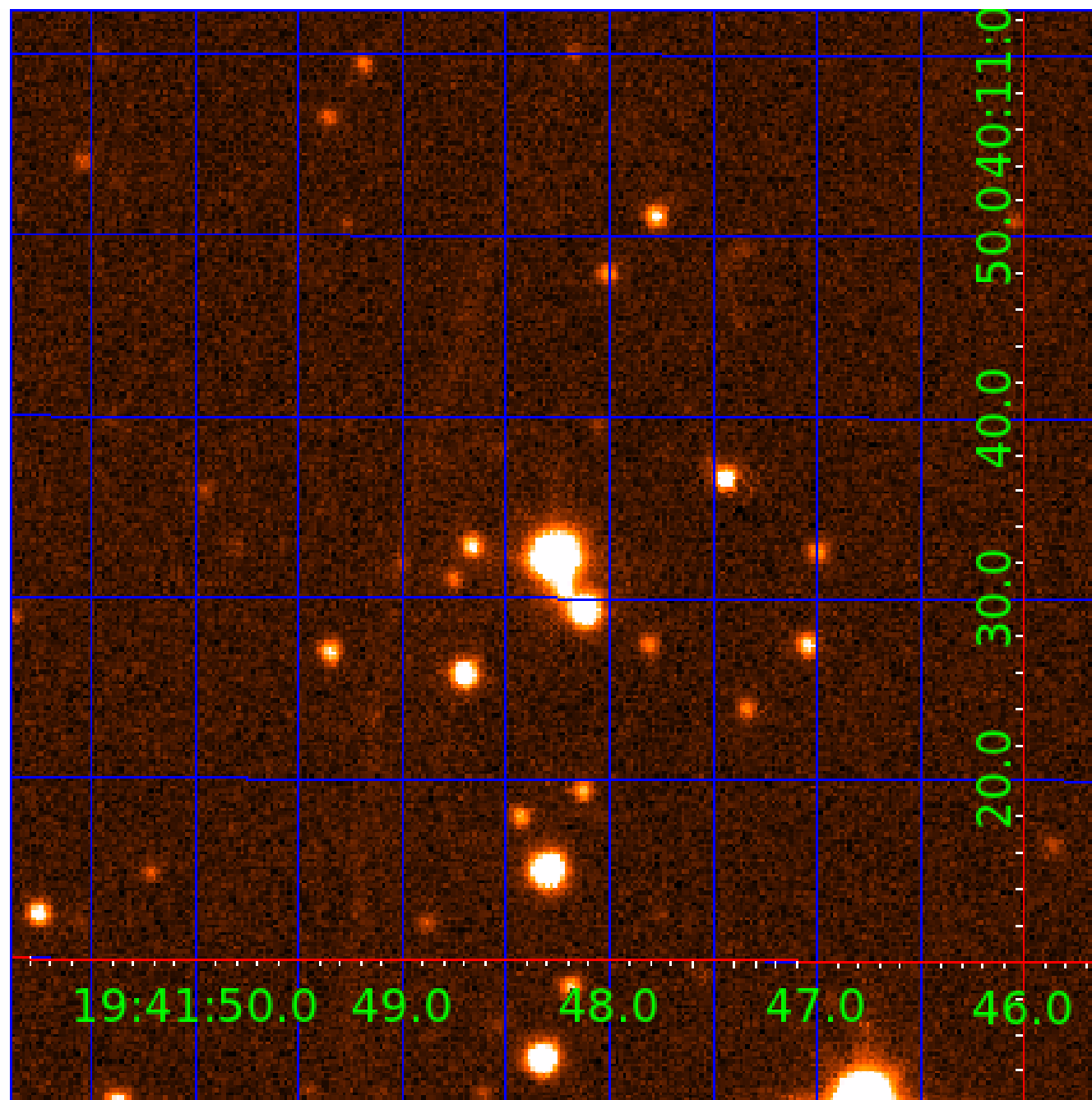


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005025294

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})
005025294-01	OBS	6498.01	5.462694	134.264774	4143.1	3.247	500.2	456.8	0.89	5929	10.38	260.55
005025294-02	OBS	No	5.462686	136.312033	1390.6	4.214	166.5	171.4	0.89	5929	6.21	260.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005025294-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
005025294-02	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.

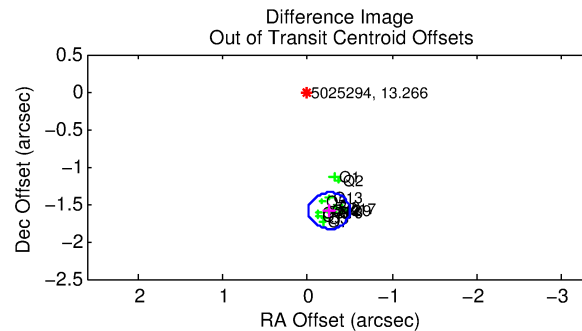
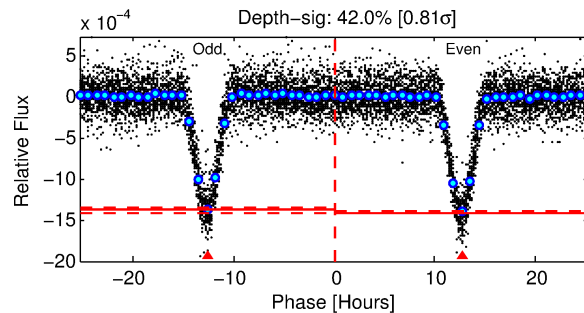
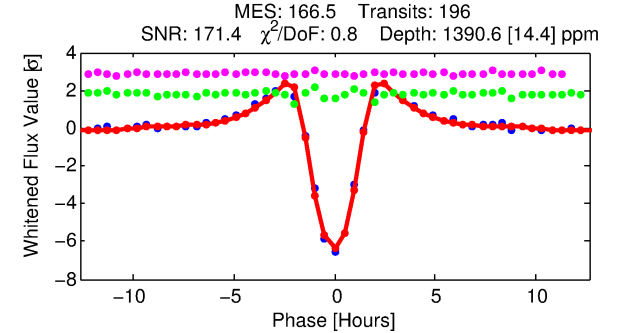
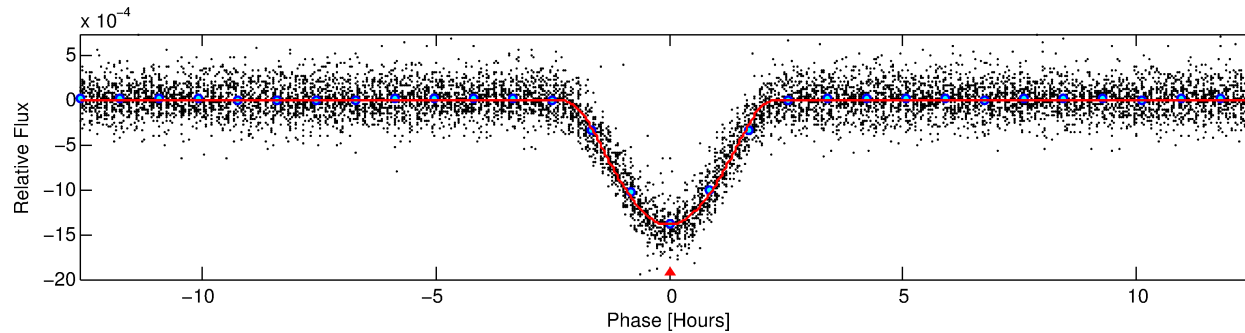
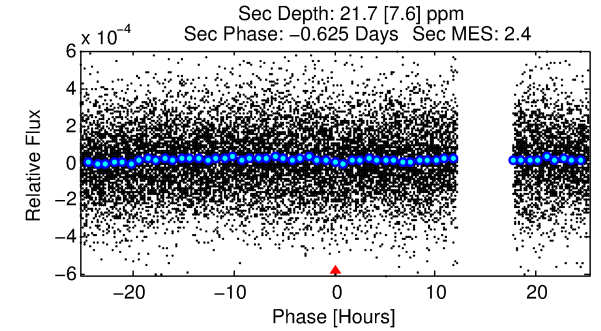
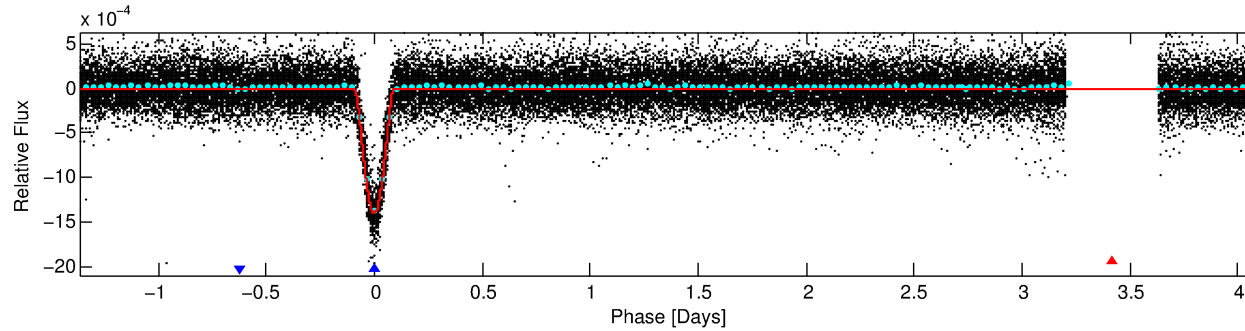
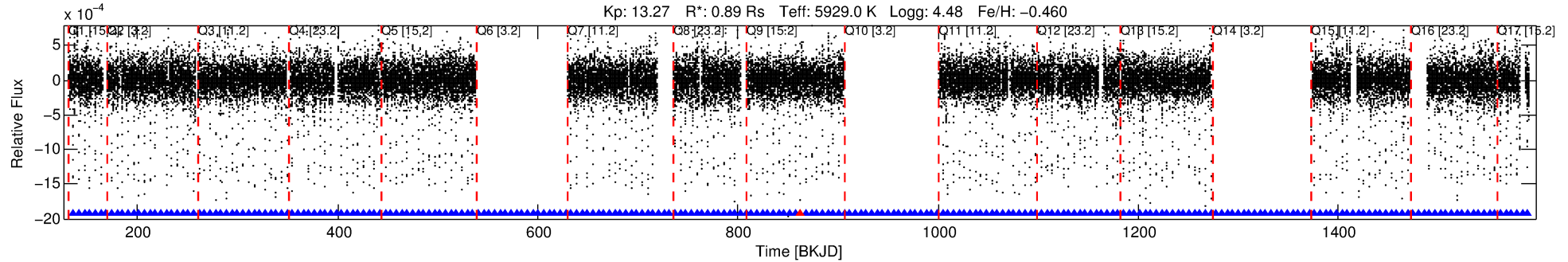
Ephemeris Match Information For 005025294-02

No Significant Match Found

DV One-Page Summary

KIC: 5025294 Candidate: 2 of 2 Period: 5.463 d
KOI: K06498 Corr: No Ephemeris Match

Kp: 13.27 R*: 0.89 Rs Teff: 5929.0 K Logg: 4.48 Fe/H: -0.460



DV Fit Results:

Period = 5.46269 [0.00000] d
Epoch = 136.3120 [0.0004] BKJD
Rp/R* = 0.0641 [0.0100]
a/R* = 3.78 [0.13]
b = 1.00 [0.01]
Seff = 260.55 [90.81]
Teq = 1024 [89] K
Rp = 6.21 [1.93] Re
a = 0.0579 [0.0131] AU
Ag = 1.04 [0.60] [0.07σ]
Teffp = 1599 [192] K [2.71σ]

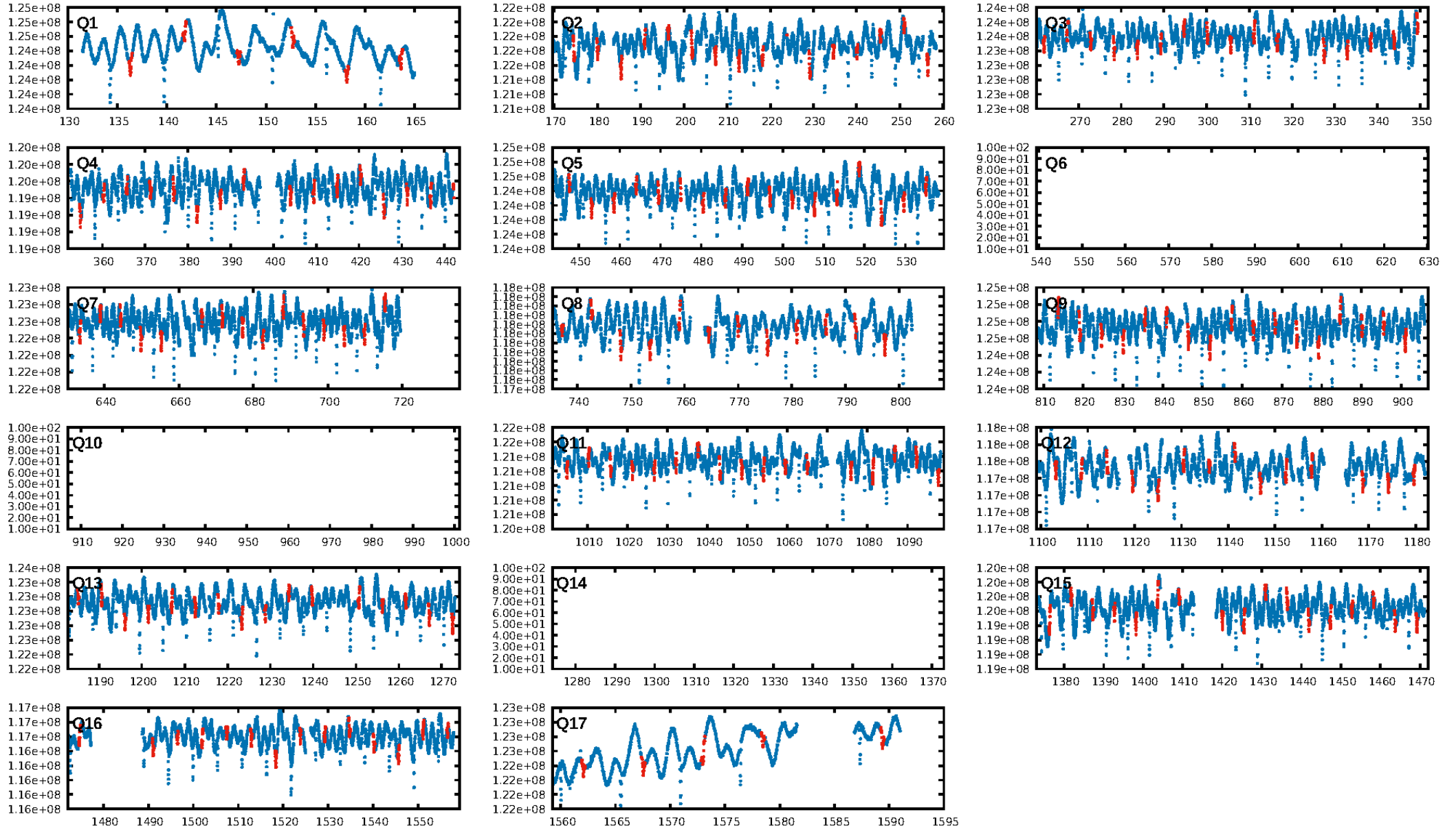
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 96.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [184/185]
GhostDiagnostic-chr: 2.072
Centroid-sig: 0.0%
Centroid-so: 1.657 arcsec [34.55σ]
OotOffset-rm: 1.609 arcsec [19.82σ]
KicOffset-rm: 1.964 arcsec [24.37σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

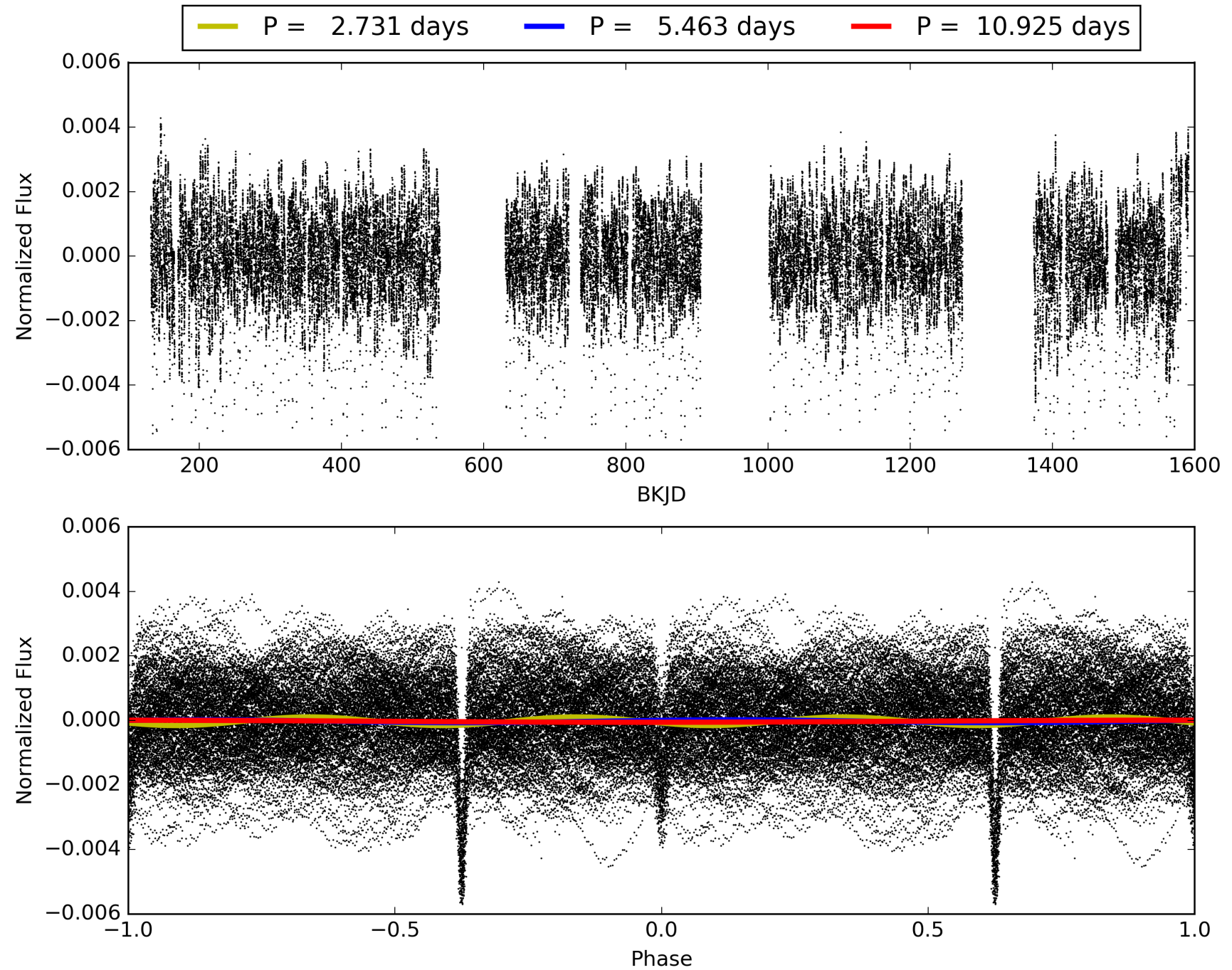
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:42:04 Z

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

TCE 005025294-02, PDC Light Curves

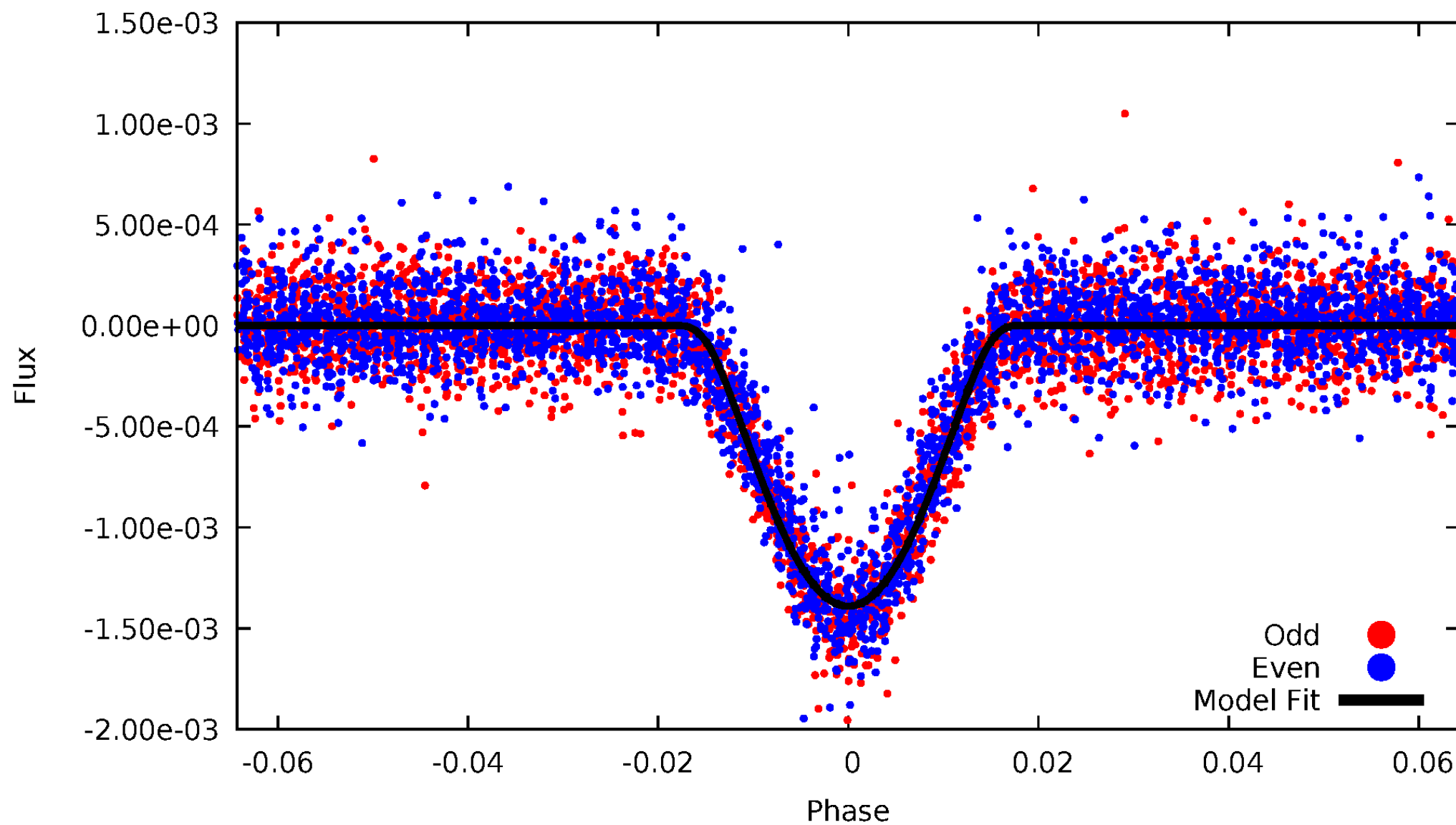


TCE 005025294-02



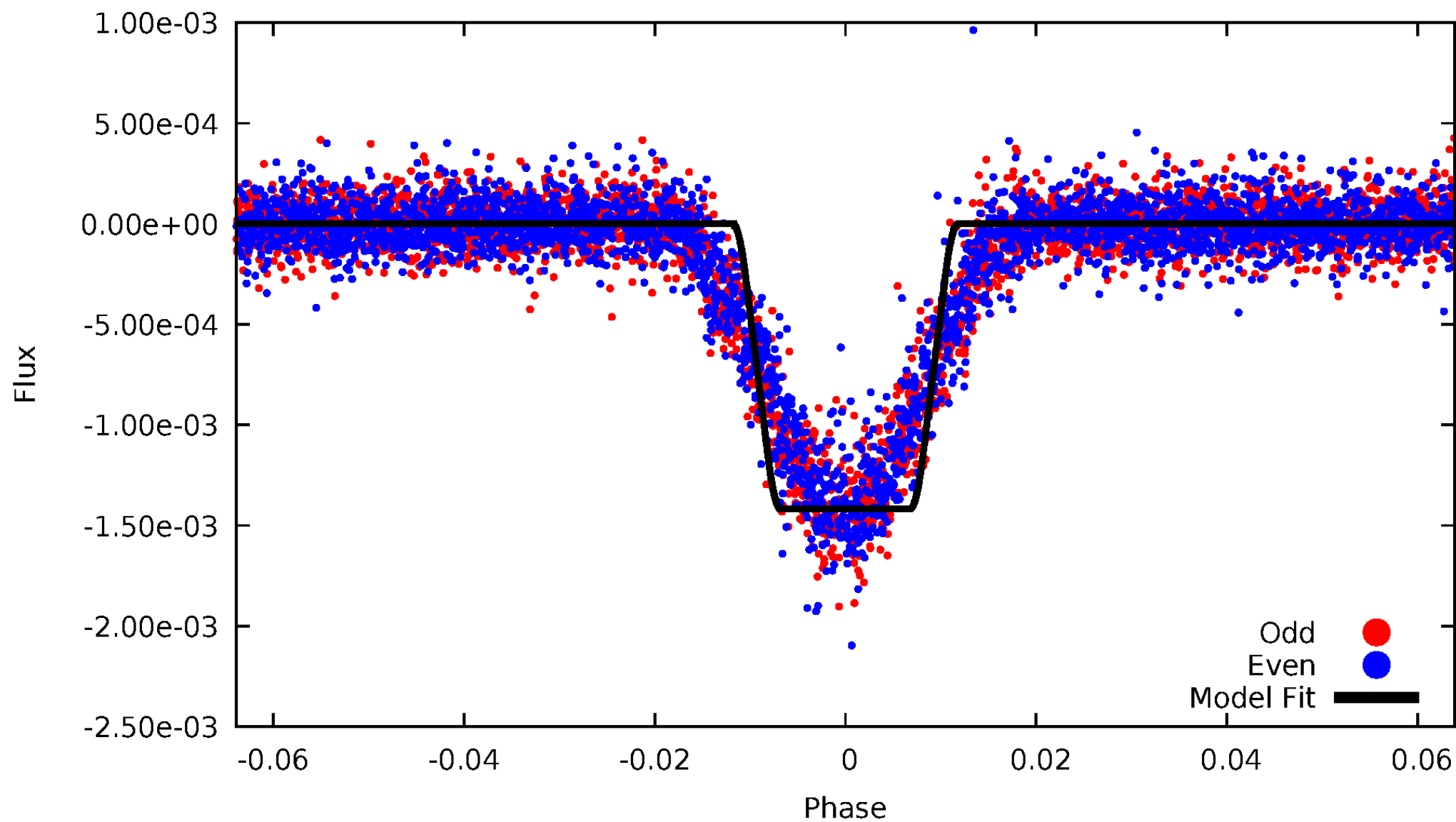
DV Odd/Even

TCE 005025294-02



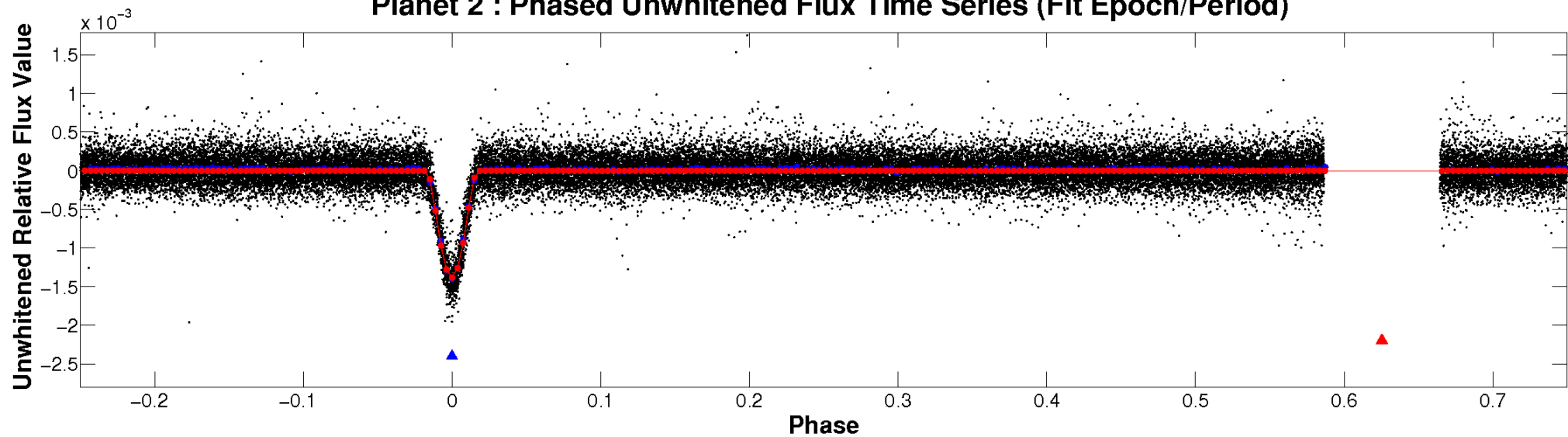
ALT Odd/Even

TCE 005025294-02

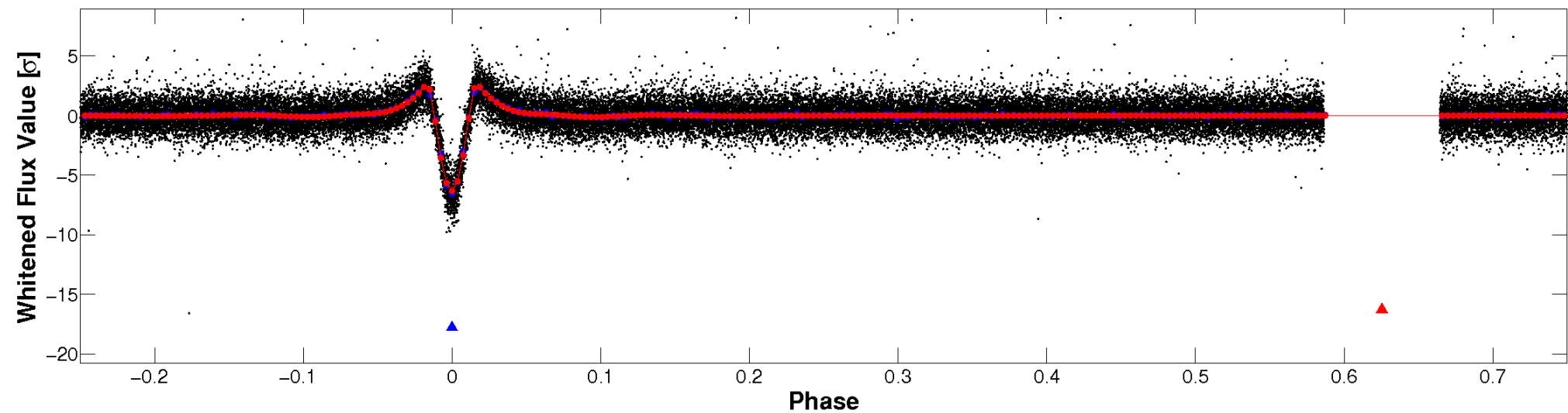


Non-Whitened Vs. Whitened Light Curve

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

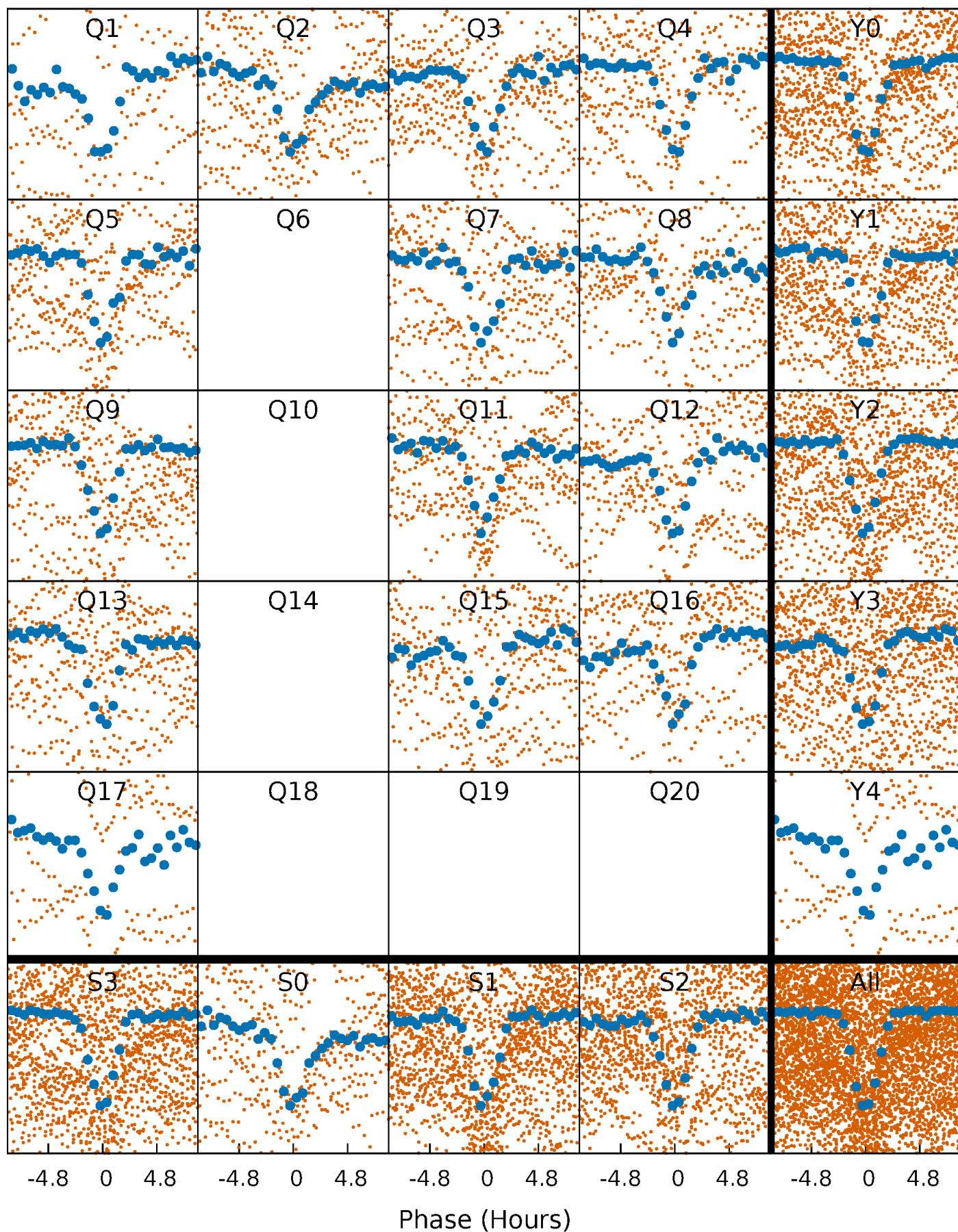


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



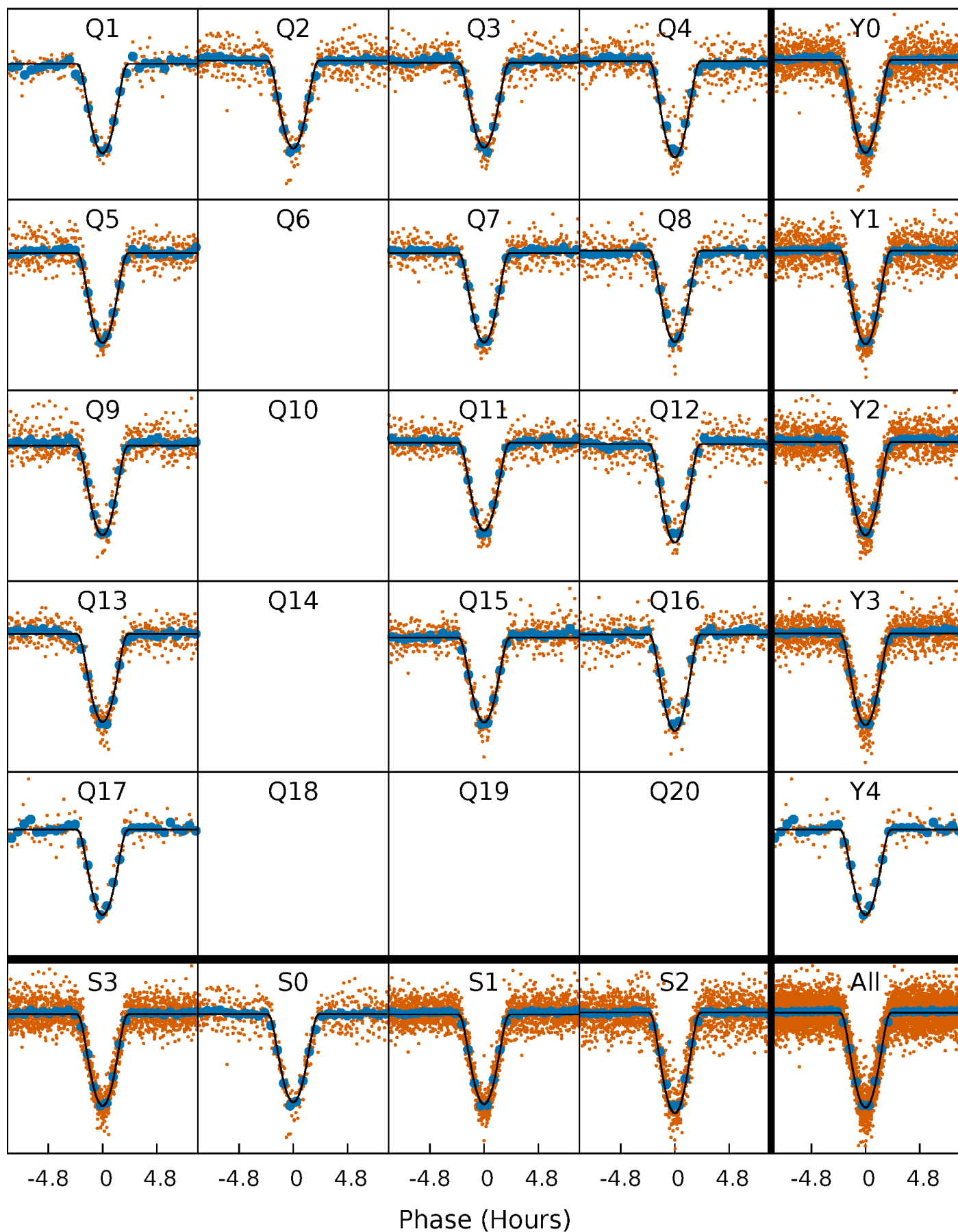
PDC Quarter-Phased Transit Curves

TCE 005025294-02 P= 5.462686 Days $T_0=136.312032$ (BKJD)



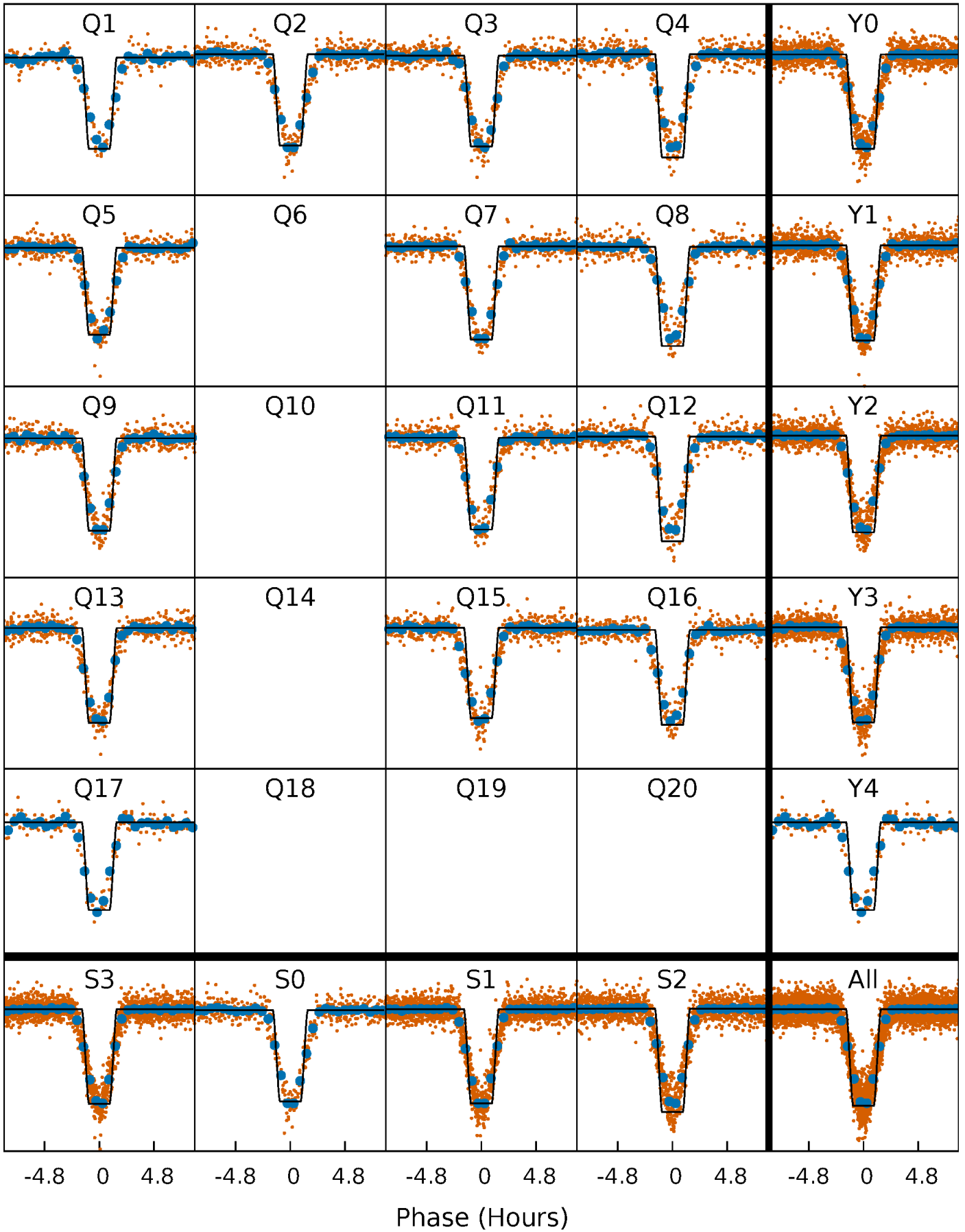
DV Quarter-Phased Transit Curves

TCE 005025294-02 P= 5.462686 Days $T_0=136.312032$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

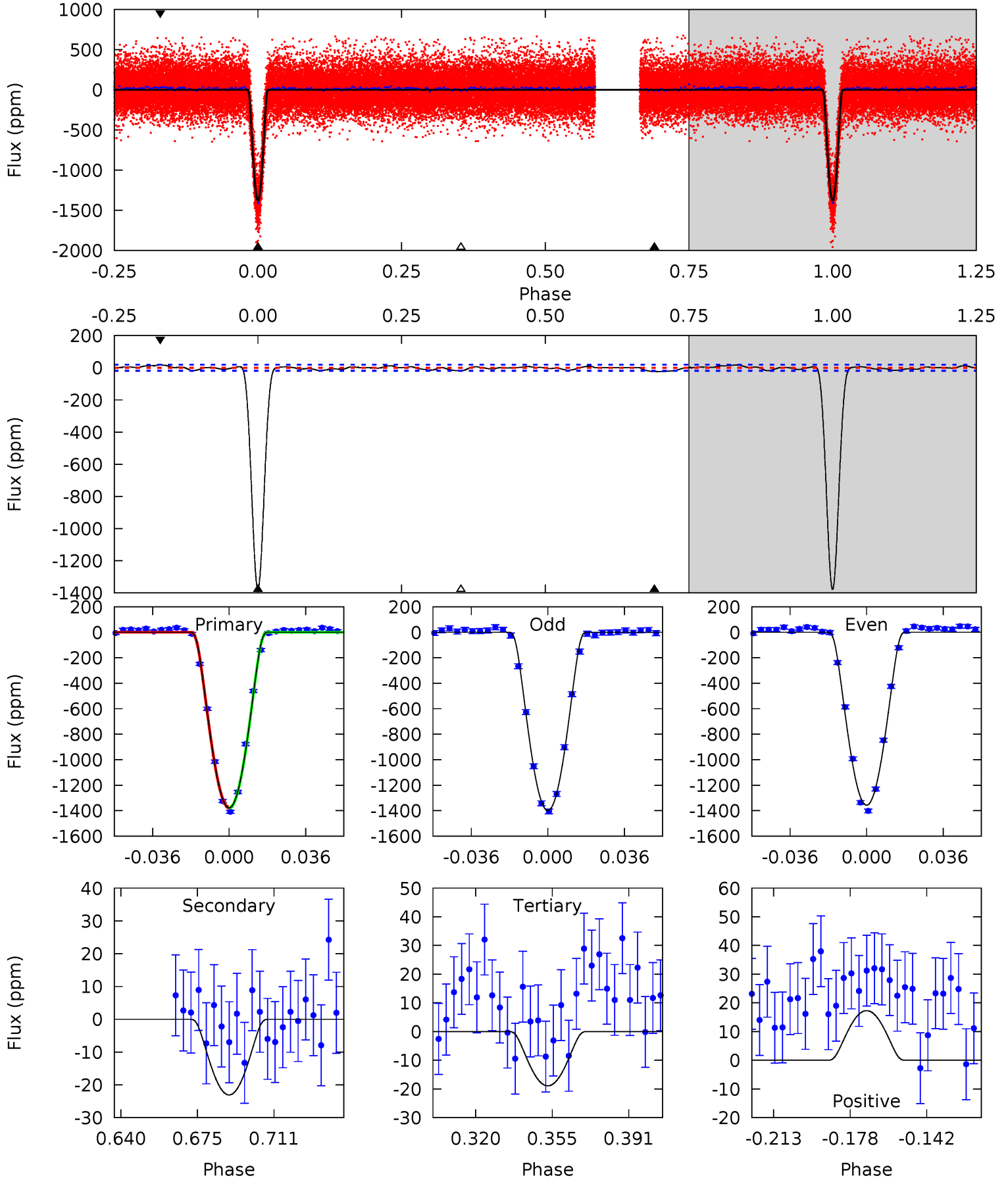
TCE 005025294-02 P= 5.462719 Days $T_0=136.307540$ (BKJD)



DV Model-Shift Uniqueness Test

005025294-02, P = 5.462686 Days, E = 130.849346 Days

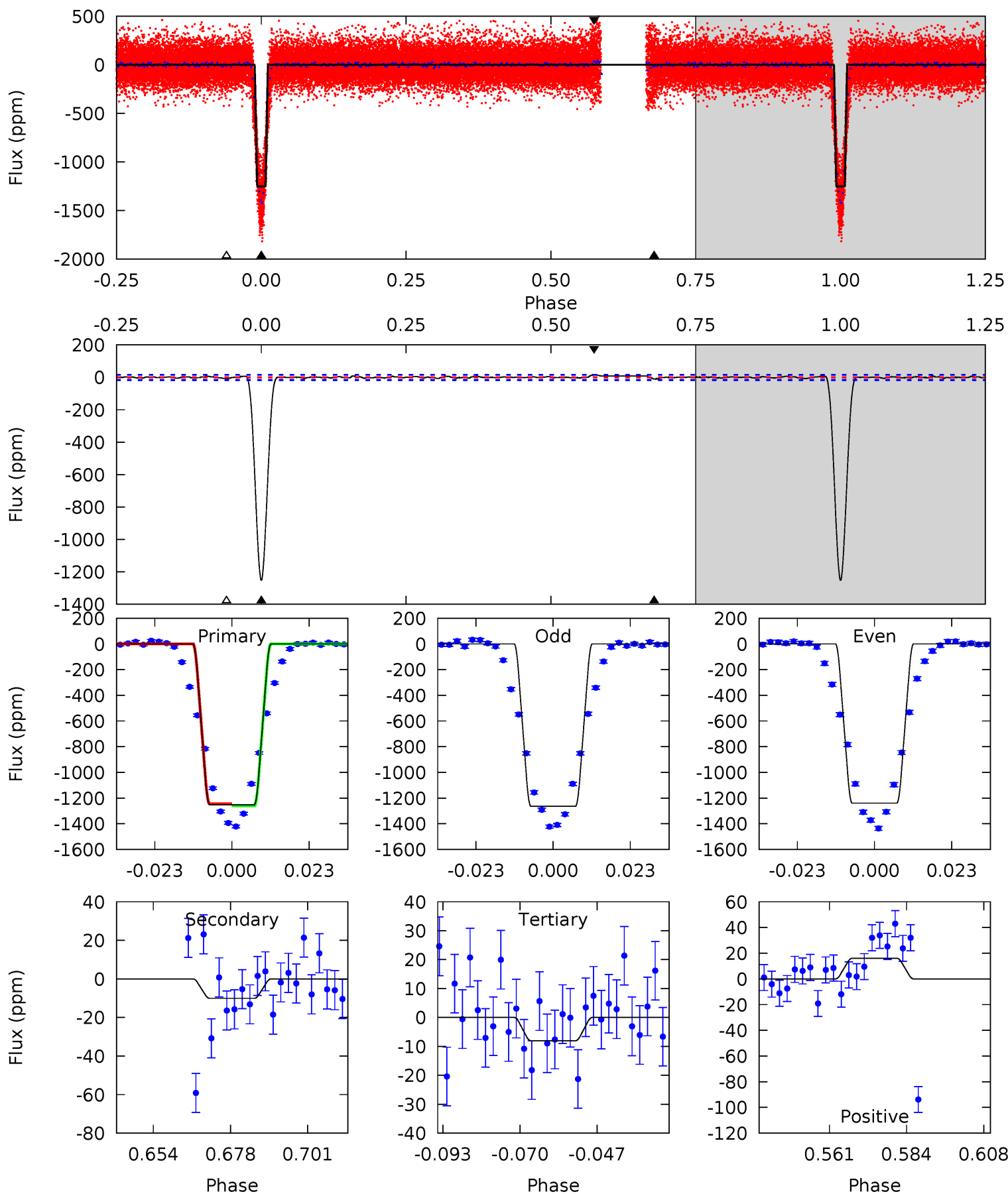
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
345.1	5.78	4.74	4.33	4.78	2.10	1.98	340.3	340.7	1.04	1.45	5.29	1.00	0.01	0.33



Alt Model-Shift Uniqueness Test

005025294-02, P = 5.462719 Days, E = 130.844821 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
378.6	3.05	2.43	4.87	4.86	2.27	1.03	376.2	373.7	0.62	-1.82	3.60	1.00	0.01	2.34



Stellar Parameters For KIC 005025294

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5929^{+159}_{-159}	$4.479^{+0.078}_{-0.182}$	$-0.460^{+0.300}_{-0.300}$	$0.888^{+0.238}_{-0.102}$	$0.867^{+0.106}_{-0.077}$	$1.745^{+0.589}_{-0.816}$
	+3%/-3%	+2%/-4%	+65%/-65%	+27%/-11%	+12%/-9%	+34%/-47%
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 005025294-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-23 ± 4	$6.46^{+1.32}_{-1.10}$	1454^{+101}_{-73}	2371^{+147}_{-141}	$1.002^{+0.509}_{-0.331}$
Alt.	-10 ± 3	$3.78^{+1.16}_{-1.04}$	1444^{+106}_{-67}	2457^{+287}_{-246}	$1.219^{+1.406}_{-0.548}$

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

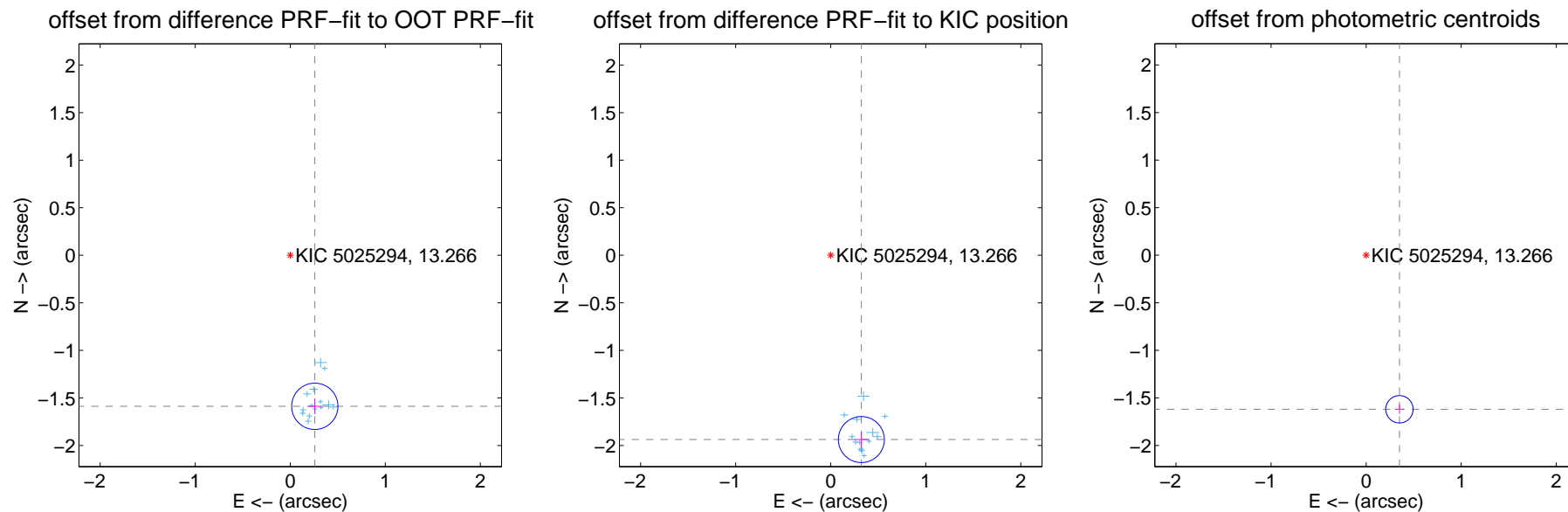
DV Centroid Data

Supplemental centroid analysis for 005025294-02. Kepler magnitude: 13.27. Transit SNR 171.45

There are 14 quarters with good PRF difference image offsets

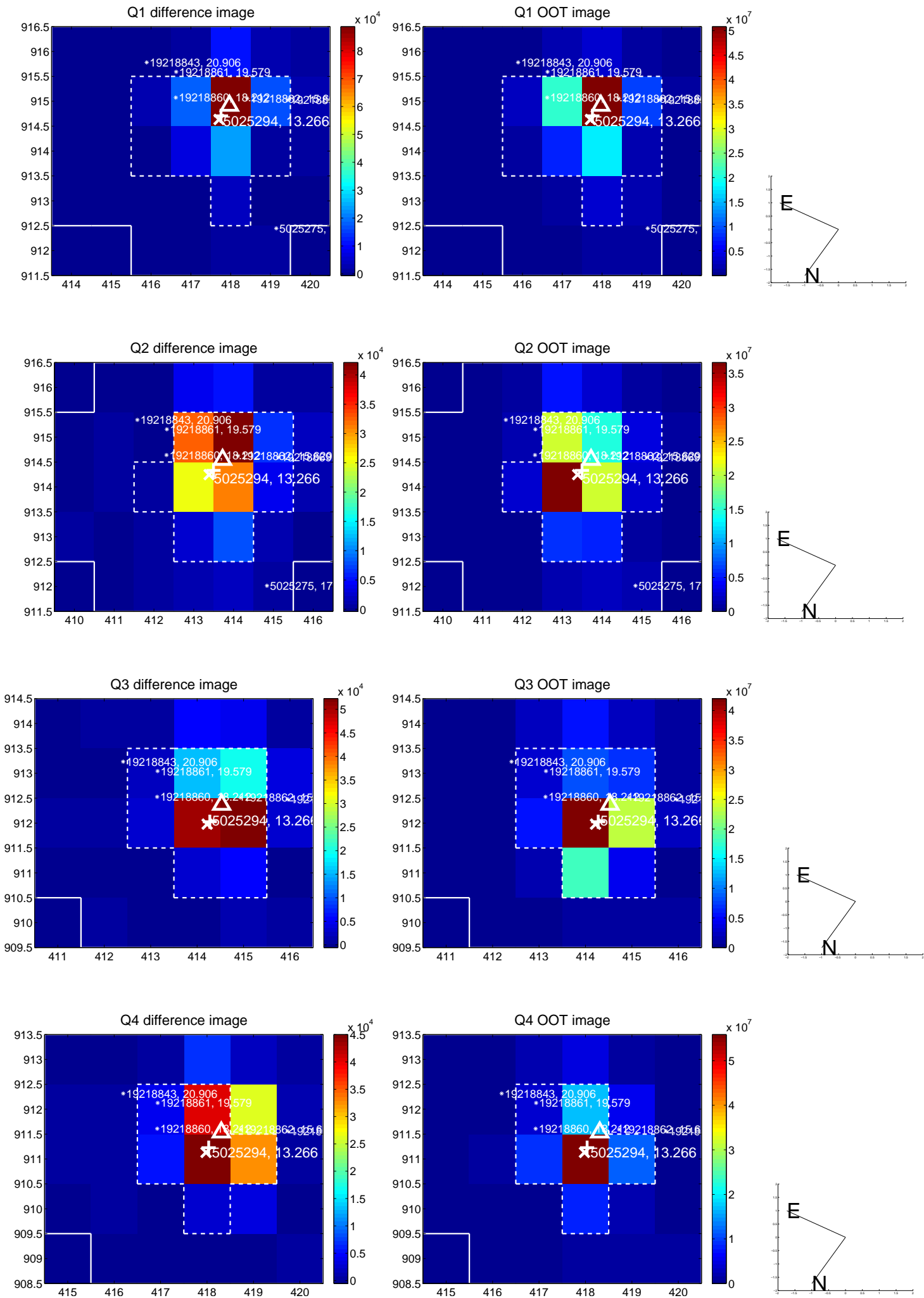
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.609 ± 0.081	19.82	-0.258 ± 0.071	-1.588 ± 0.082
PRF-fit source offset from KIC position	1.964 ± 0.081	24.37	-0.322 ± 0.072	-1.938 ± 0.081
photometric centroid source offset	1.66 ± 0.05	34.55	-0.35 ± 0.05	-1.62 ± 0.05

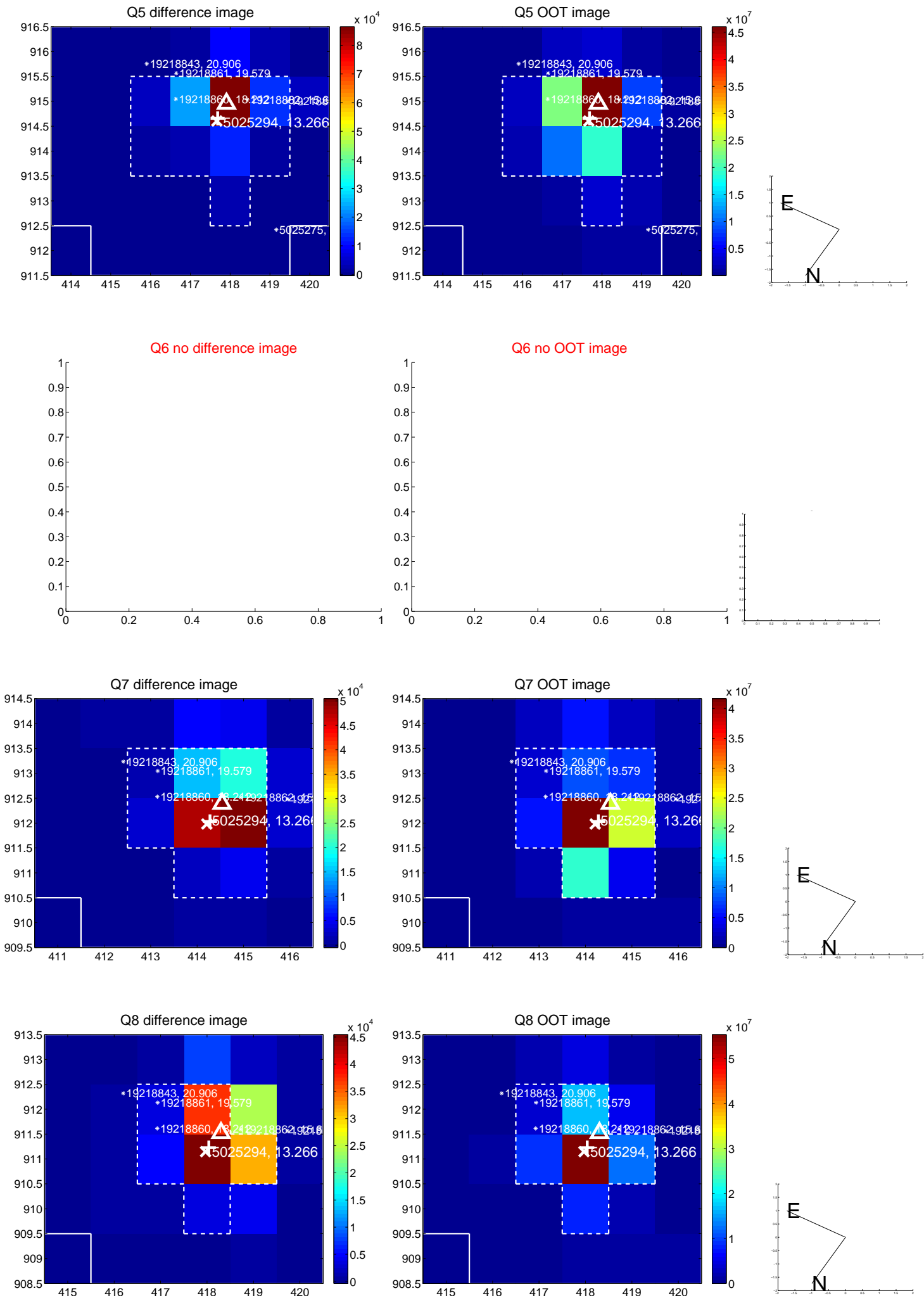


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

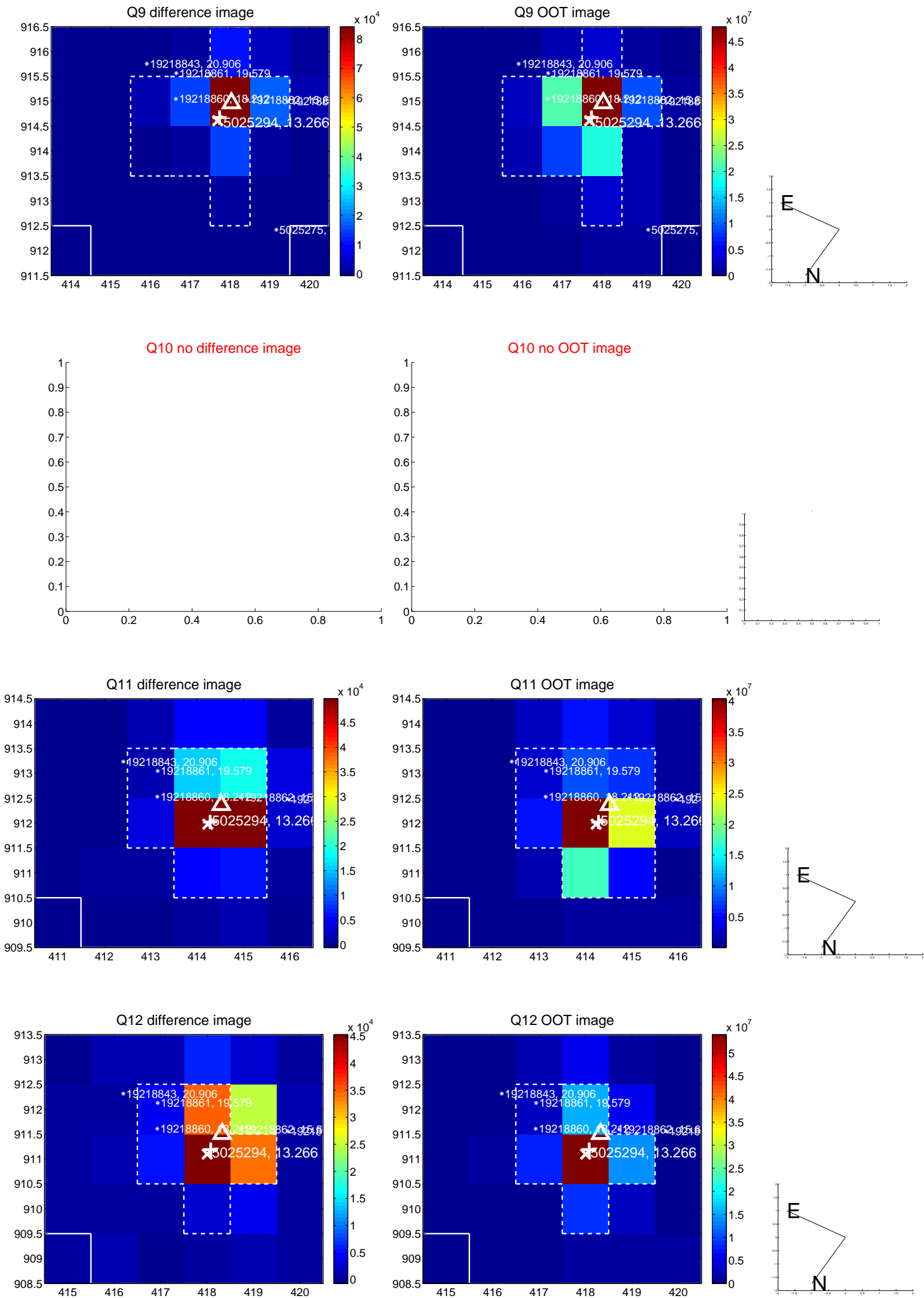
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



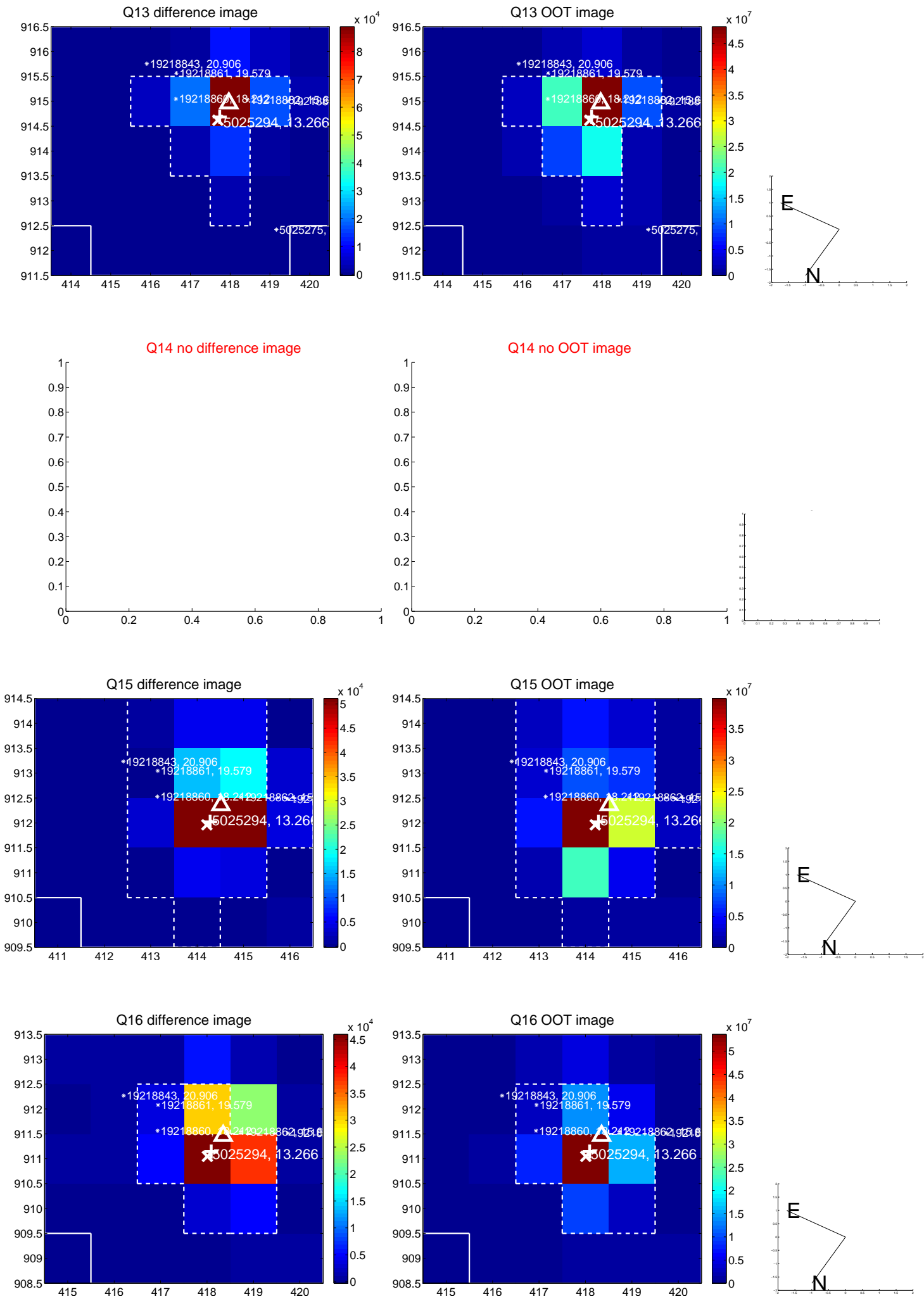
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



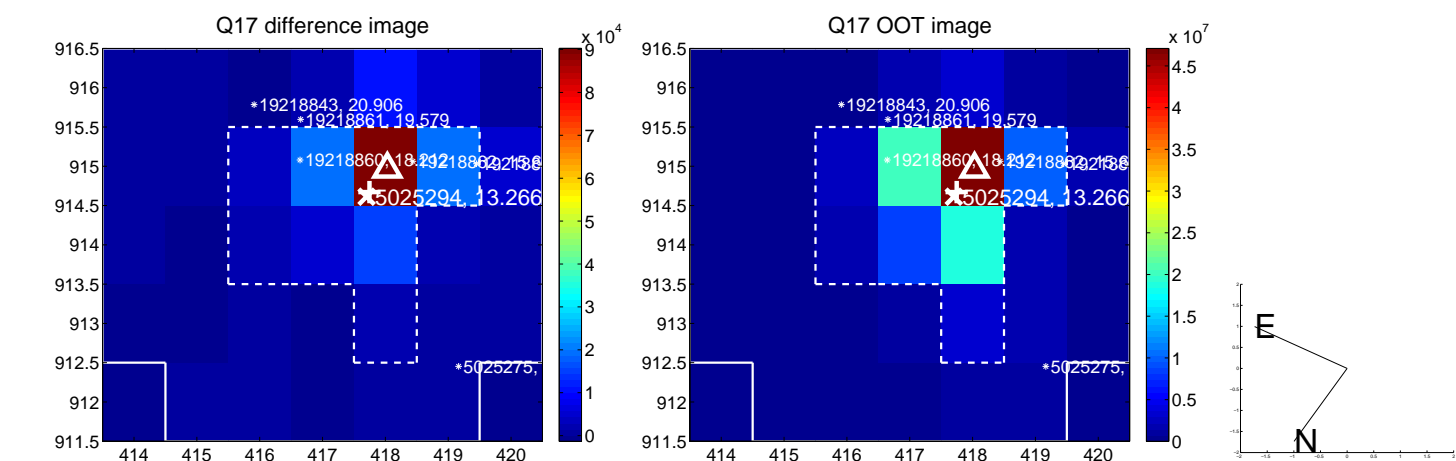
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



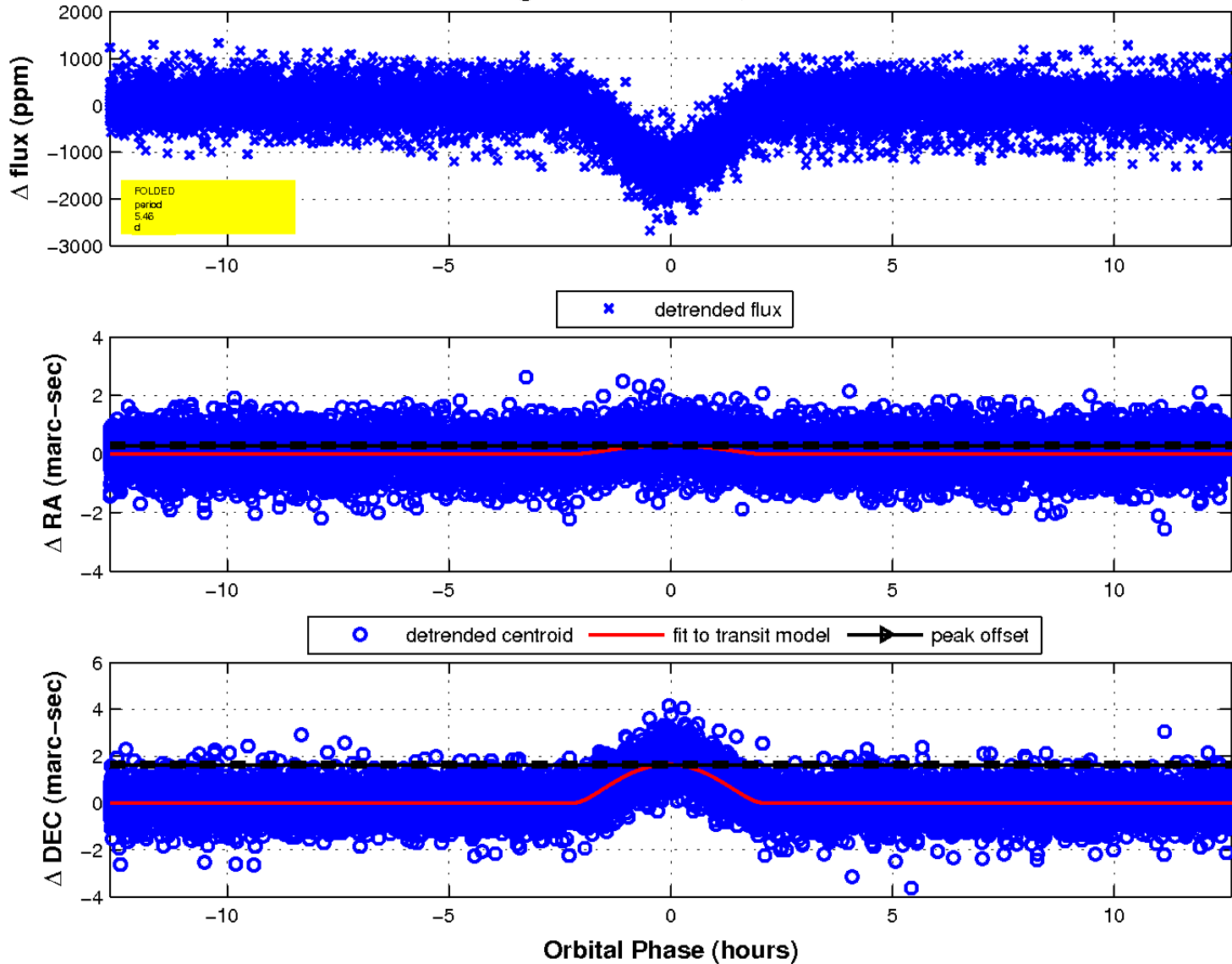
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

