

KIC 003341934

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})
003341934-01	OBS	6327.01	18.839488	137.769534	182720.8	5.628	5111.9	3793.7	1.02	6208	45.24	68.68
003341934-02	OBS	No	18.839479	147.610161	22737.8	9.953	664.8	667.6	1.02	6208	25.28	68.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003341934-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
003341934-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

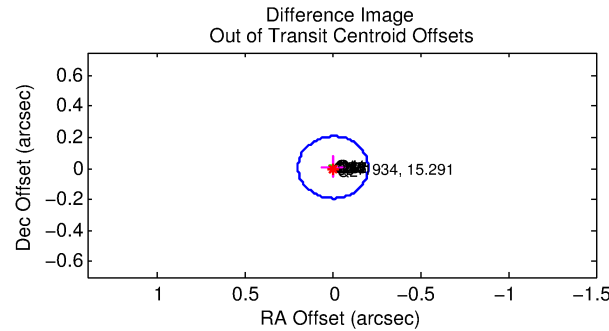
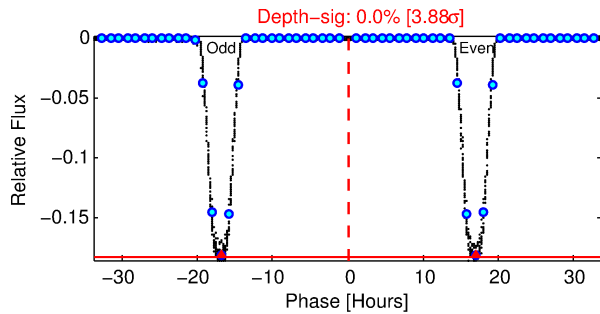
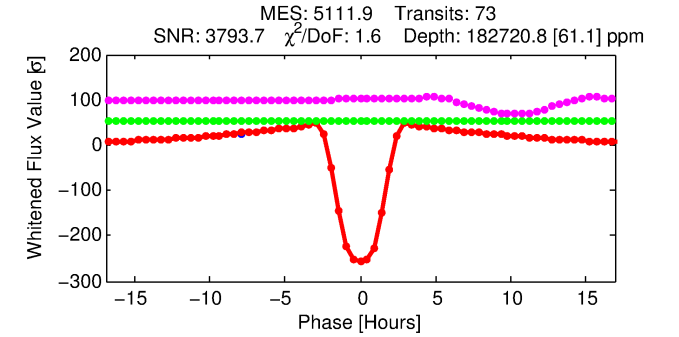
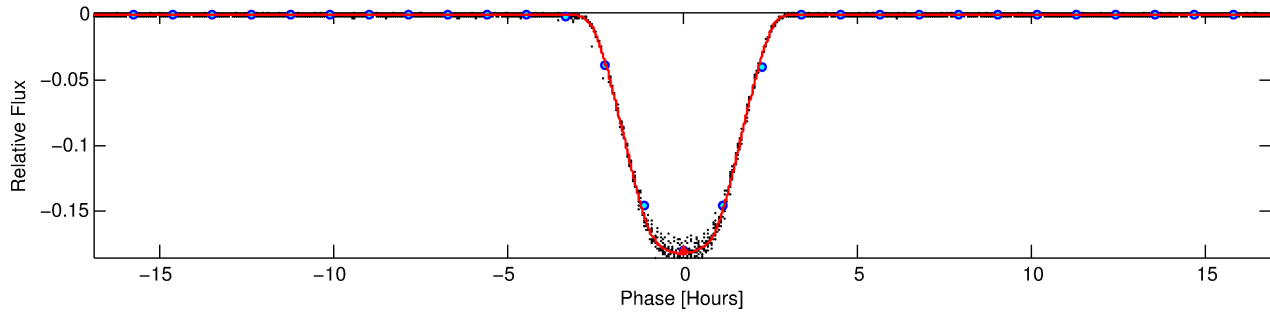
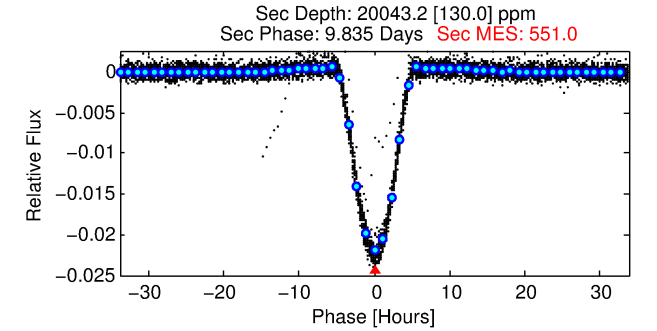
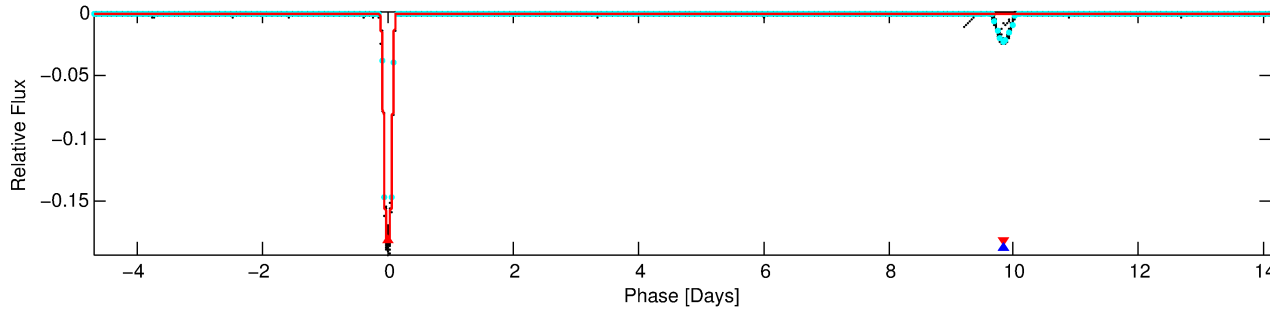
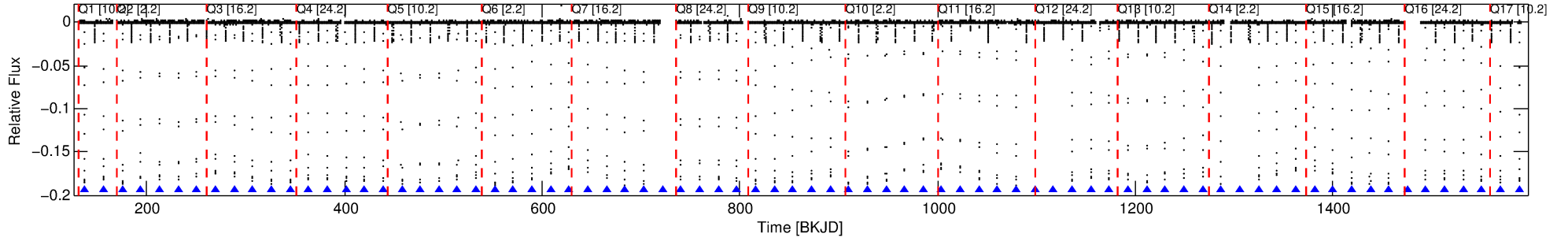
Ephemeris Match Information For 003341934-01

No Significant Match Found

DV One-Page Summary

KIC: 3341934 Candidate: 1 of 2 Period: 18.839 d
KOI: K06327.01 Corr: 1.000

Kp: 15.29 R*: 1.02 Rs Teff: 6208.0 K Logg: 4.45 Fe/H: -0.120



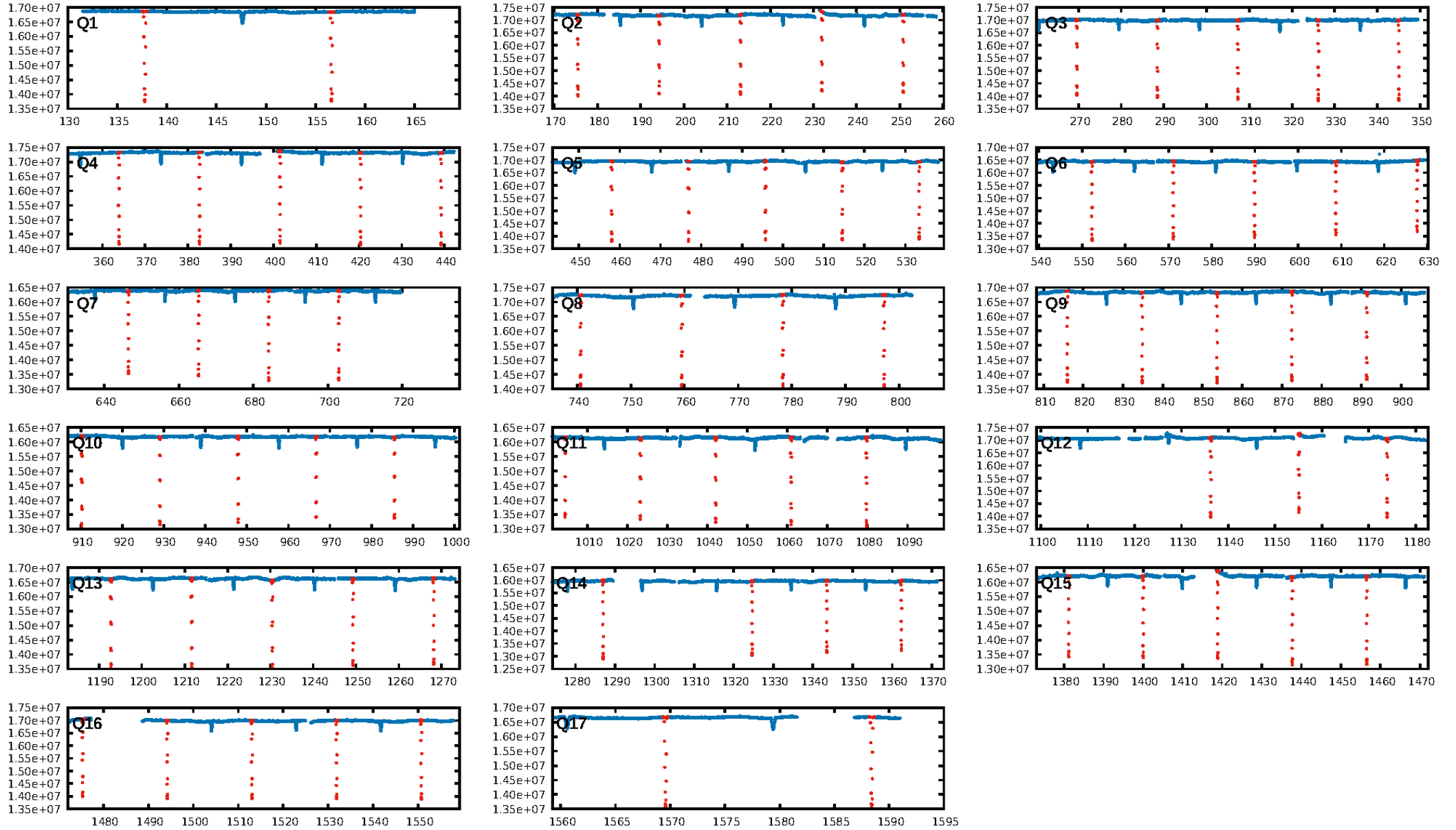
DV Fit Results:

Period = 18.83949 [0.00000] d
Epoch = 137.7695 [0.0000] BKJD
Rp/R* = 0.4049 [0.0001]
a/R* = 34.28 [0.02]
b = 0.42 [0.00]
Seff = 68.68 [28.81]
Teq = 734 [77] K
Rp = 45.24 [14.67] Re
a = 0.1425 [0.0388] AU
Ag = 109.46 [43.33] [2.50σ]
Teffp = 3671 [128] K [19.68σ]

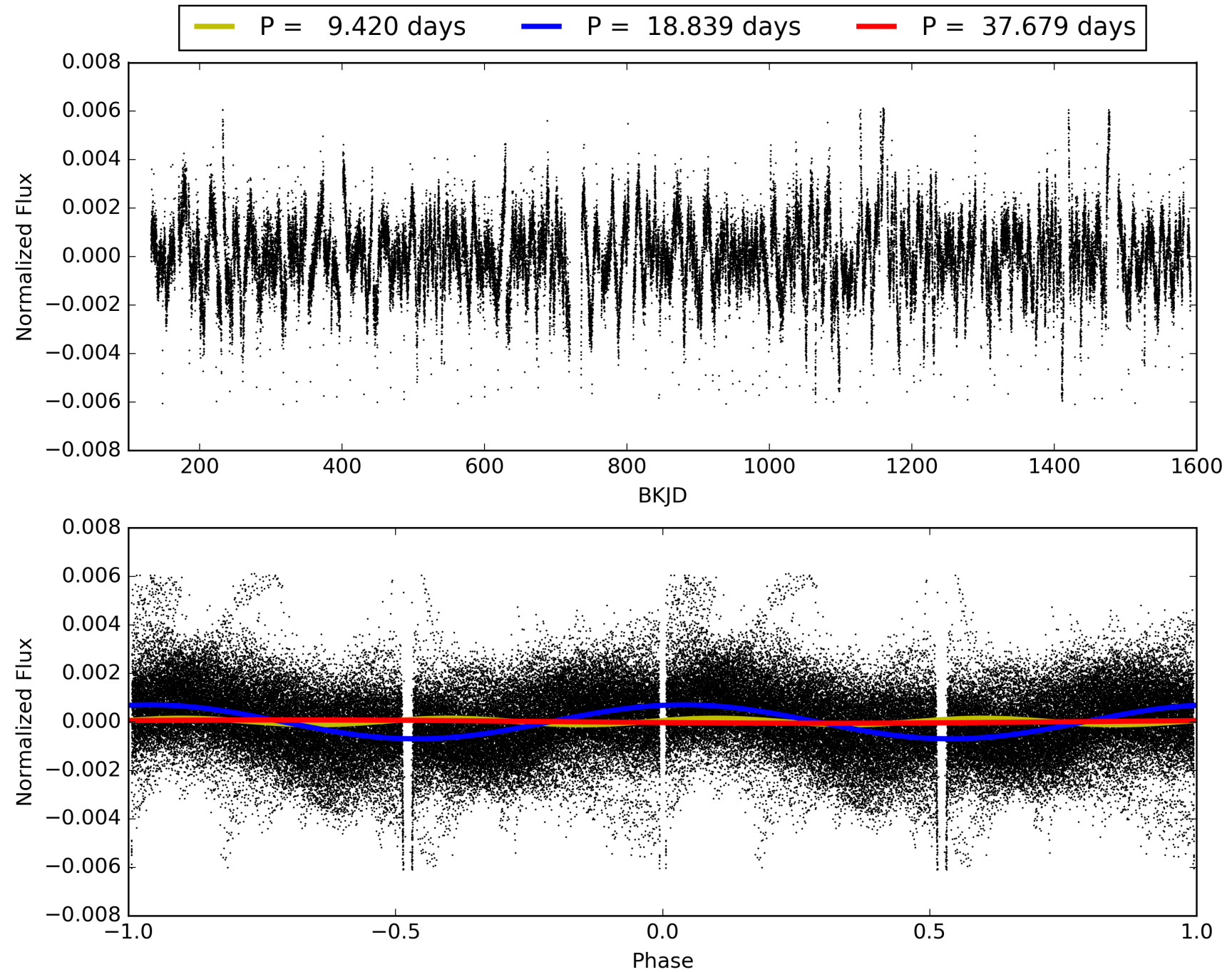
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 78.4%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [69/69]
GhostDiagnostic-chr: 3.232
Centroid-sig: 0.0%
Centroid-so: 0.152 arcsec [64.96σ]
OotOffset-rm: 0.007 arcsec [0.11σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.133 arcsec [1.95σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003341934-01, PDC Light Curves

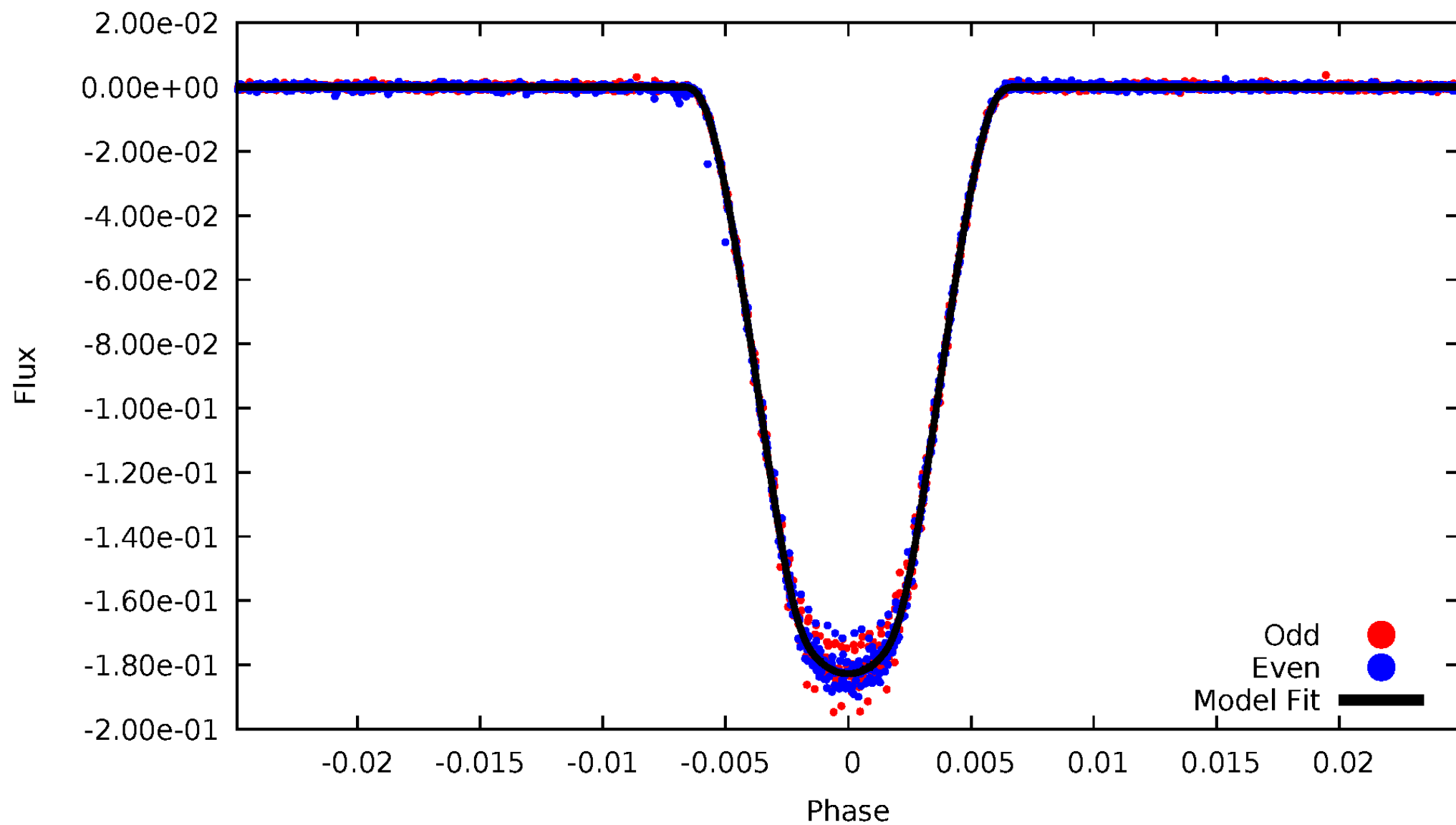


TCE 003341934-01



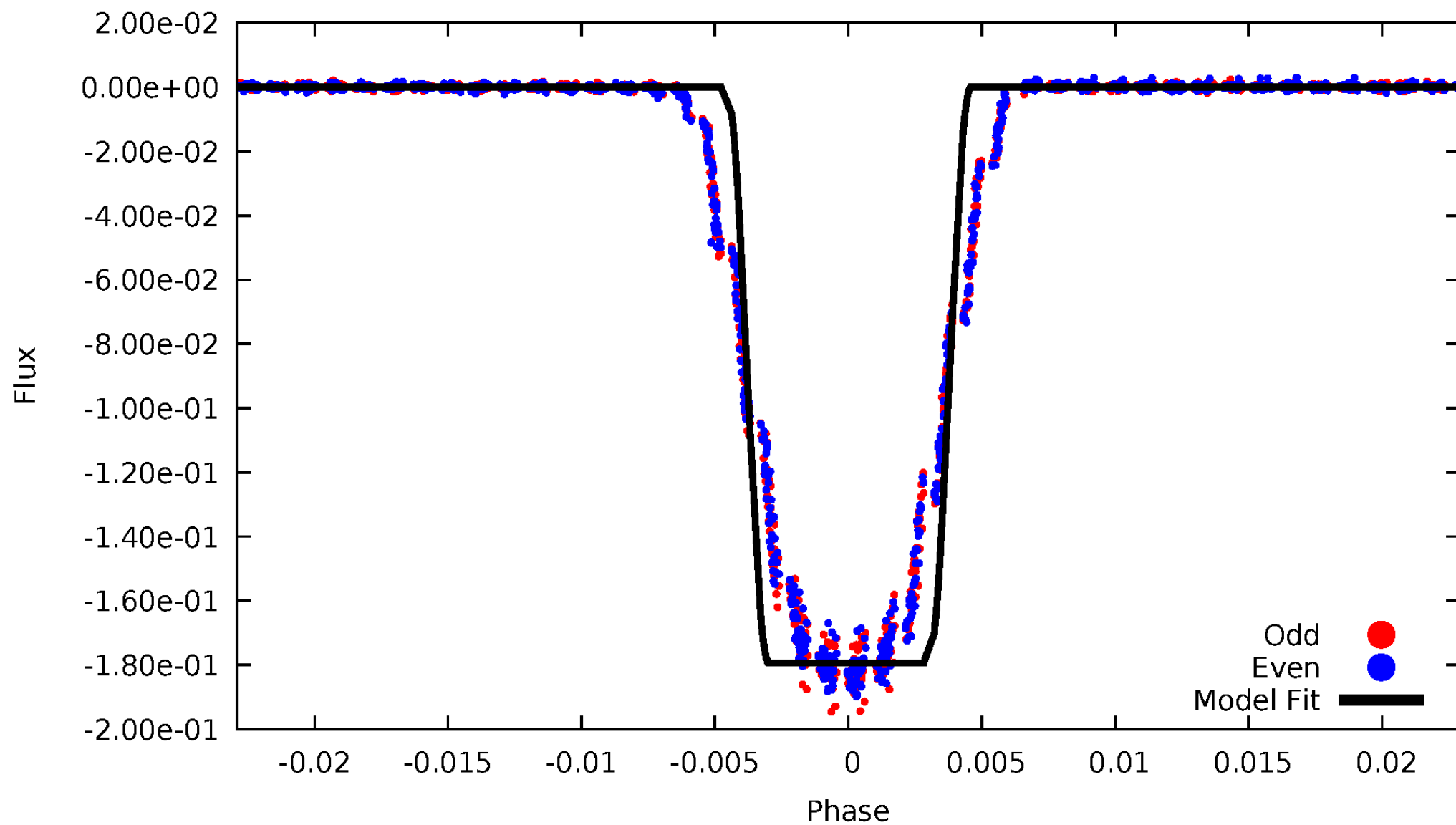
DV Odd/Even

TCE 003341934-01



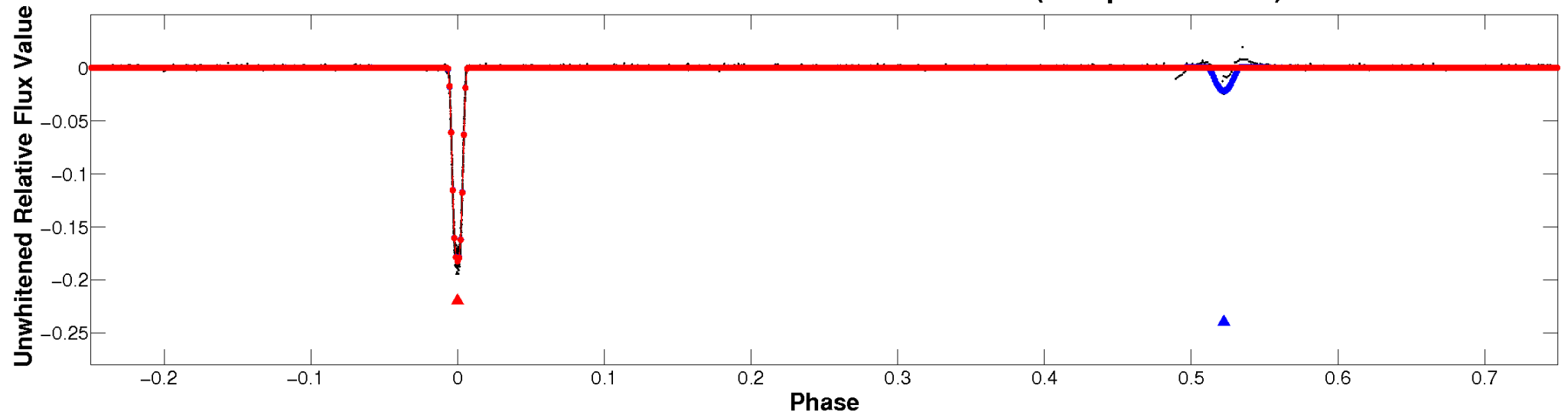
ALT Odd/Even

TCE 003341934-01

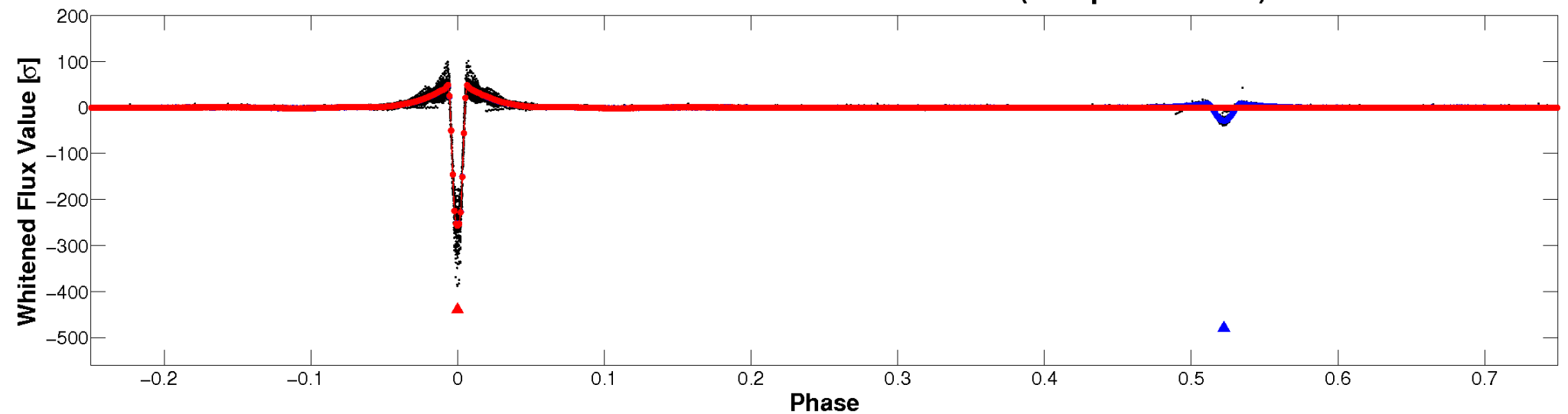


Non-Whitened Vs. Whitened Light Curve

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

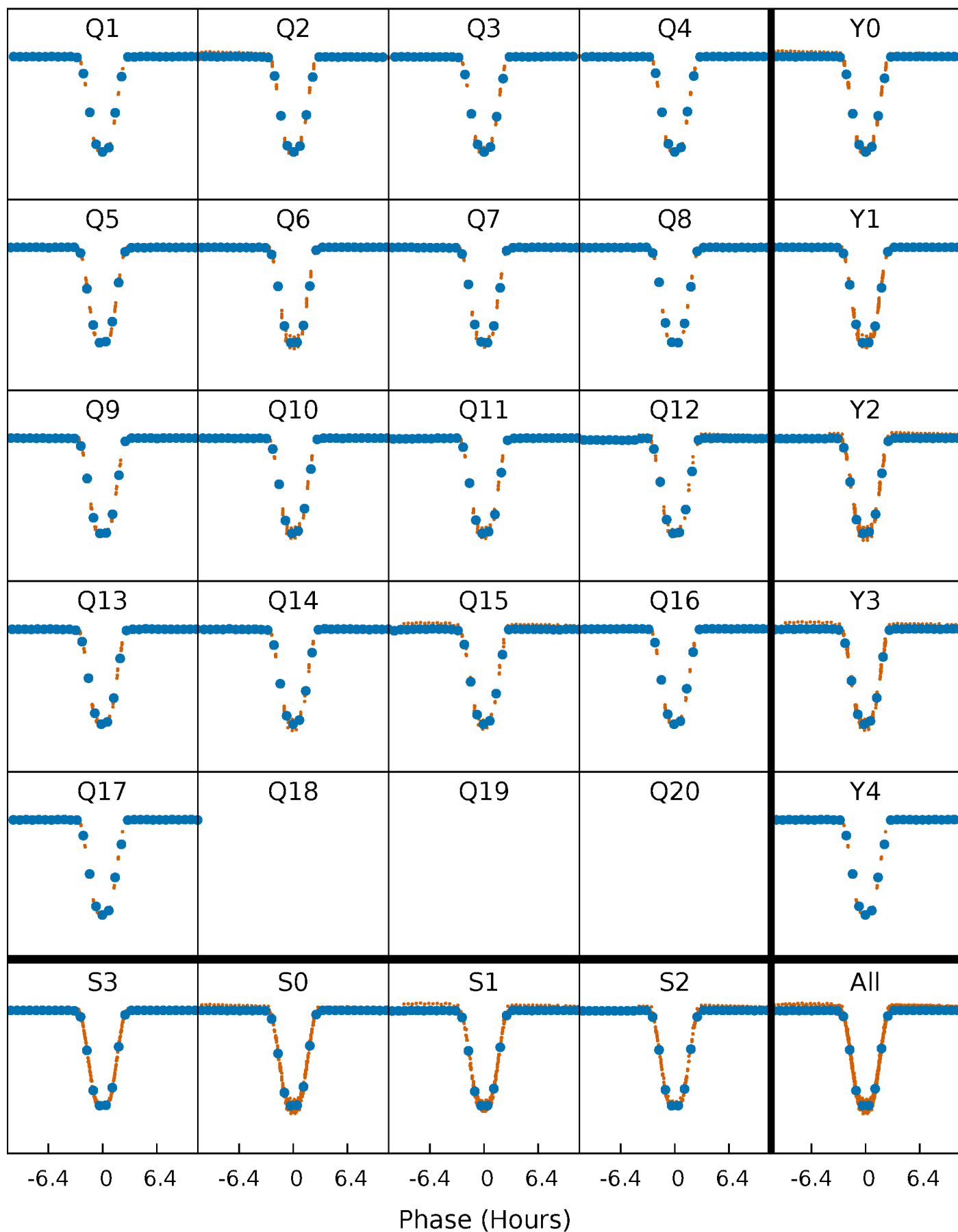


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



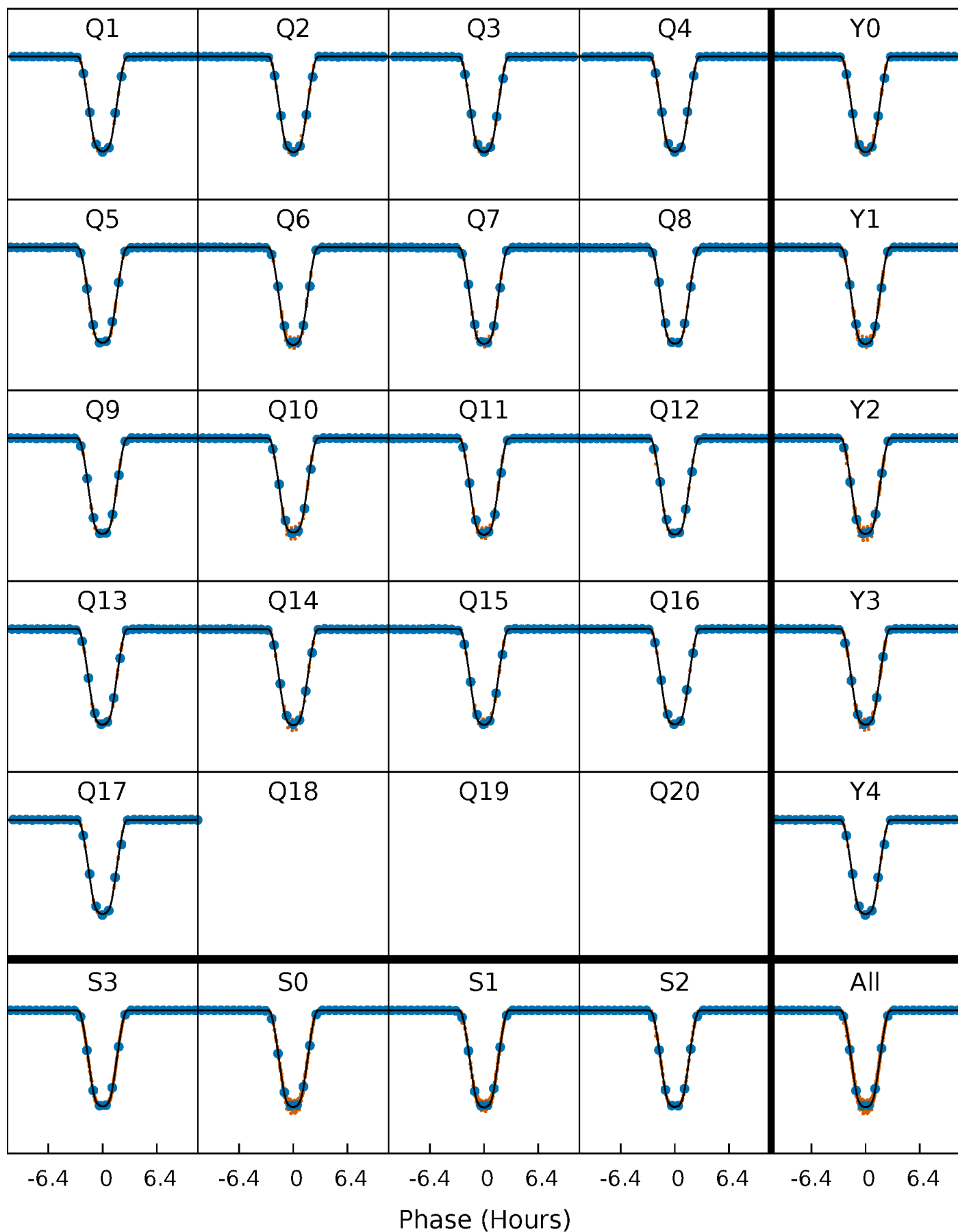
PDC Quarter-Phased Transit Curves

TCE 003341934-01 P= 18.839488 Days $T_0=137.769534$ (BKJD)



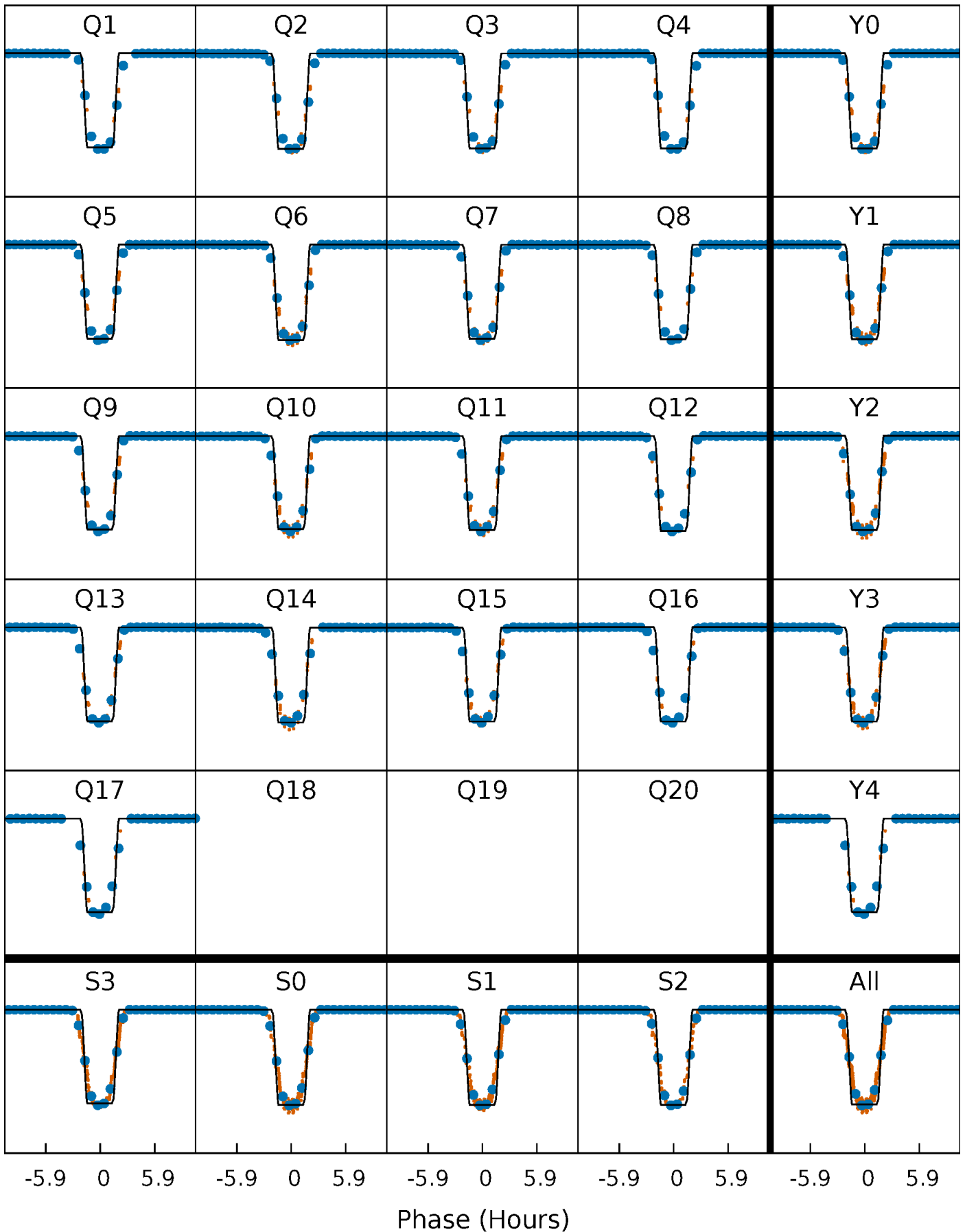
DV Quarter-Phased Transit Curves

TCE 003341934-01 P= 18.839488 Days $T_0=137.769534$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

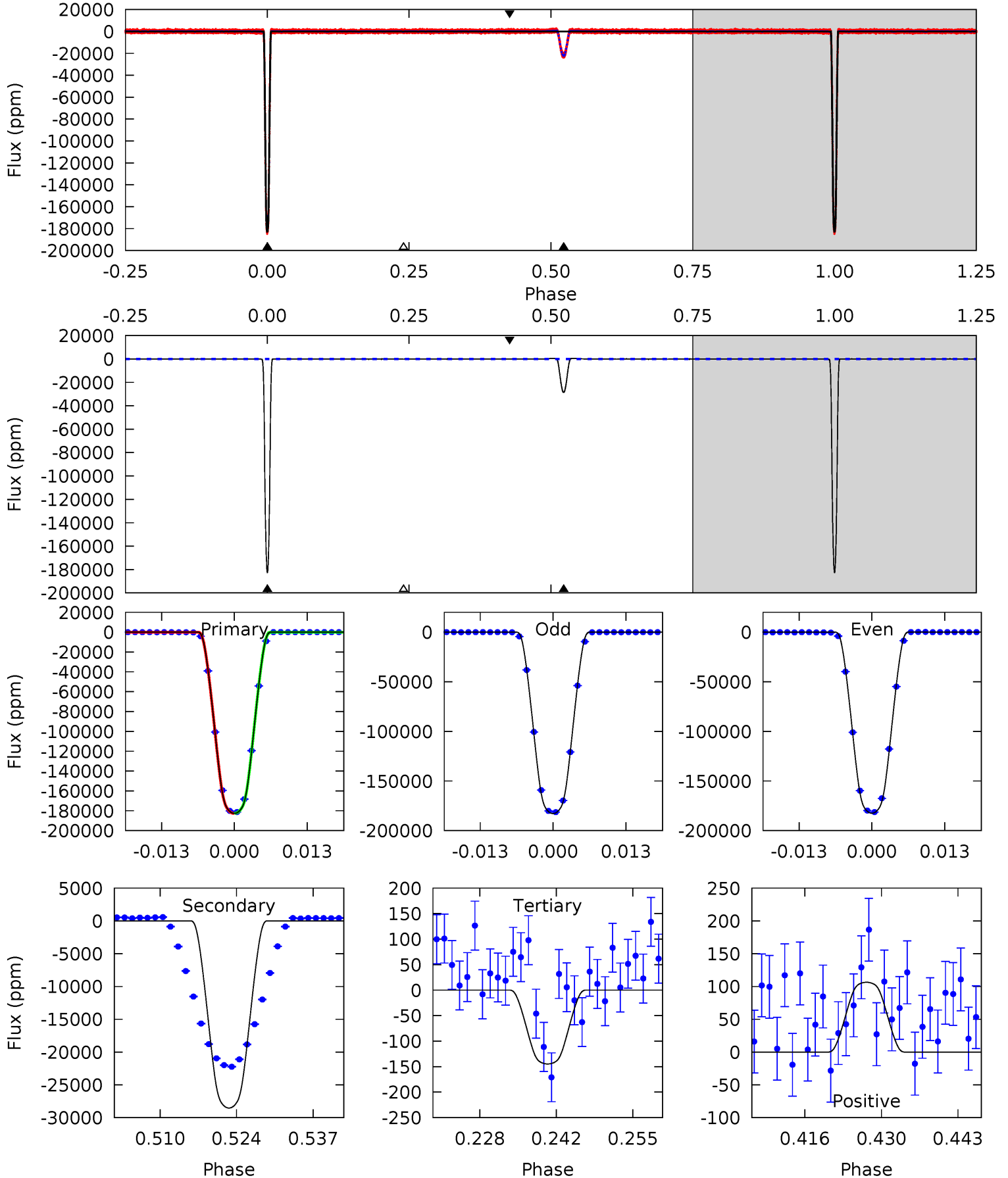
TCE 003341934-01 P= 18.839639 Days $T_0=137.763964$ (BKJD)



DV Model-Shift Uniqueness Test

003341934-01, P = 18.839488 Days, E = 118.930046 Days

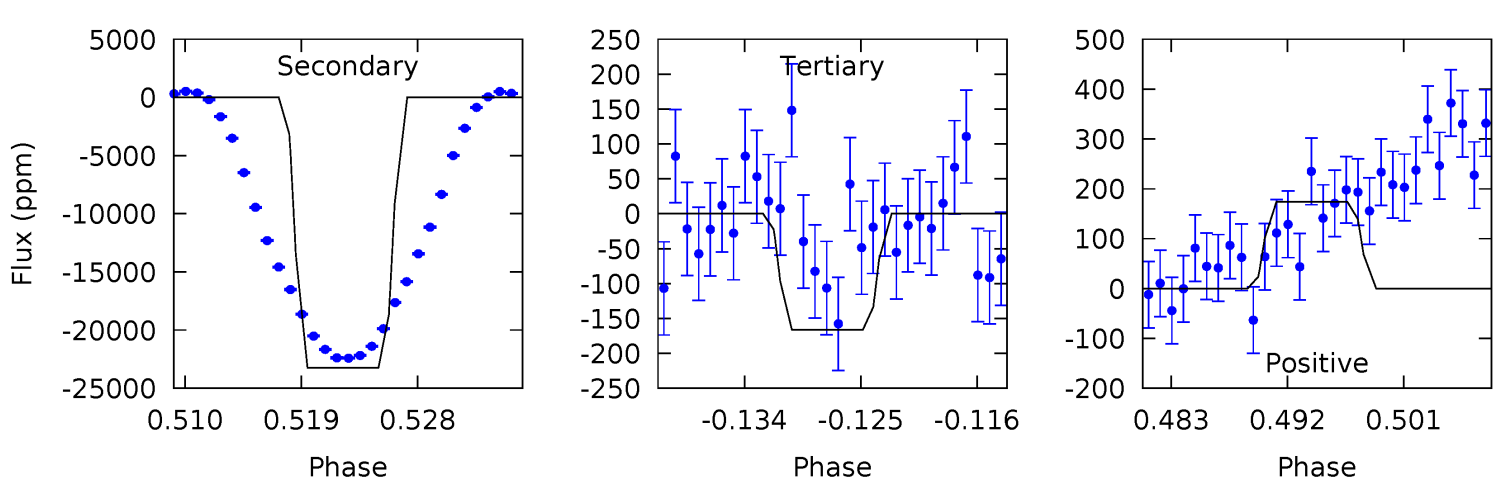
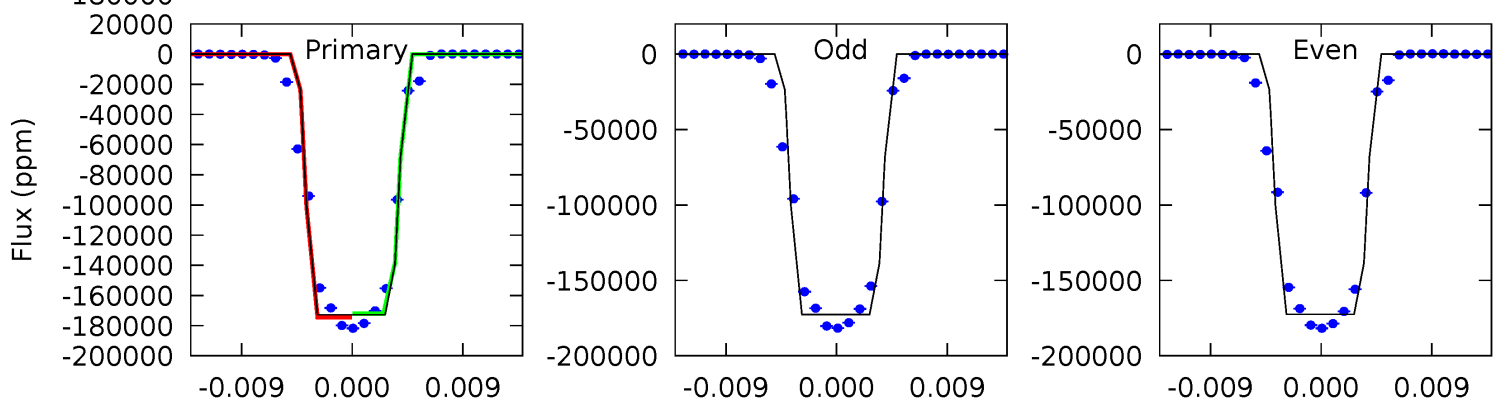
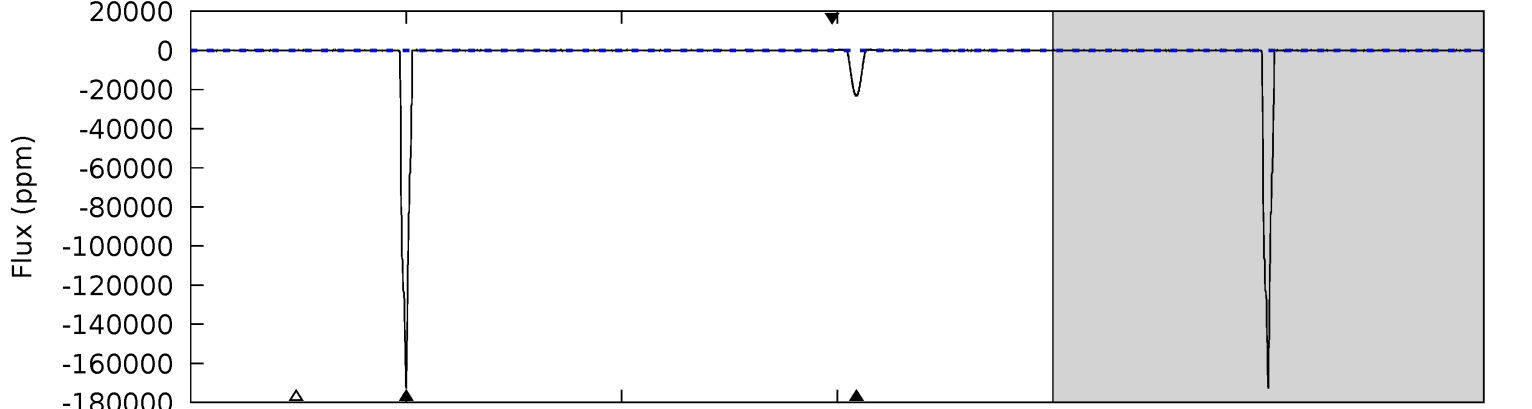
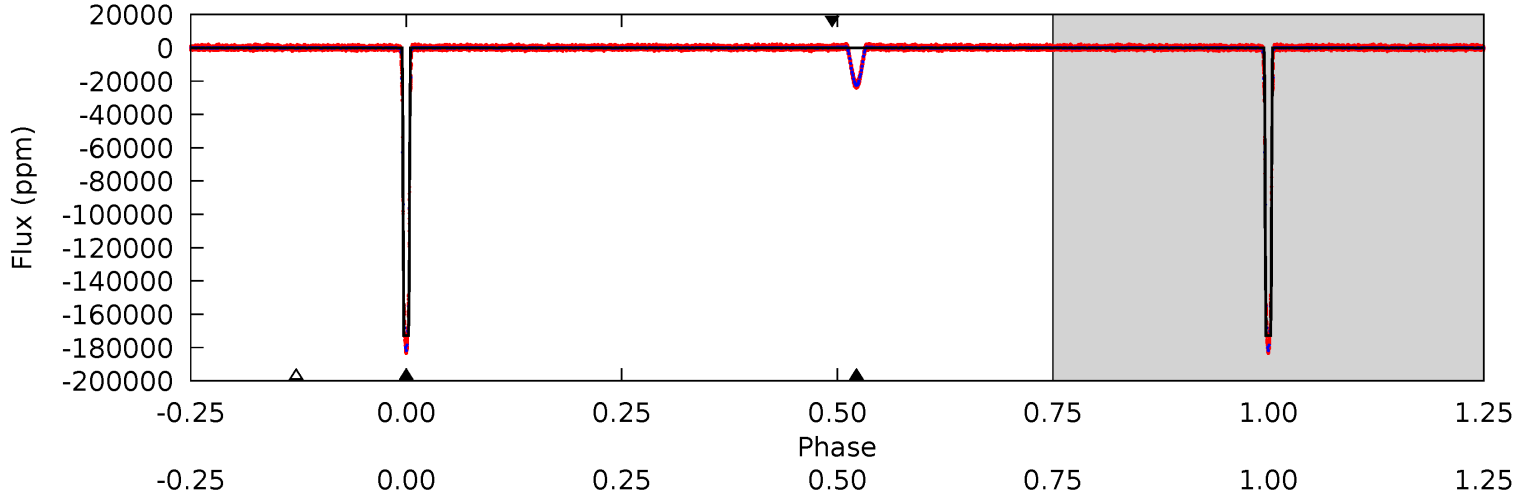
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8254	1289	6.54	4.81	4.97	2.47	4.29	8248	8249	1283	1284	6.68	1.00	0.00	0



Alt Model-Shift Uniqueness Test

003341934-01, P = 18.839639 Days, E = 118.924325 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4110	552.8	3.96	4.13	5.05	2.61	3.70	4106	4105	548.9	548.7	2.50	1.00	0.00	0



Stellar Parameters For KIC 003341934

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6208^{+172}_{-216}	$4.454^{+0.054}_{-0.216}$	$-0.120^{+0.250}_{-0.350}$	$1.024^{+0.332}_{-0.111}$	$1.086^{+0.153}_{-0.153}$	$1.423^{+0.408}_{-0.753}$
	+3%/-3%	+1%/-5%	+208%/-292%	+32%/-11%	+14%/-14%	+29%/-53%
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 003341934-01 / KOI 6327.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28531 ± 22	$46.19^{+8.61}_{-3.51}$	1047^{+79}_{-48}	4281^{+84}_{-112}	150^{+22}_{-39}
Alt.	-23242 ± 42	$48.62^{+8.01}_{-4.03}$	1048^{+77}_{-50}	4050^{+85}_{-96}	112^{+15}_{-28}

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 $A_{obs} \gg 1.0$

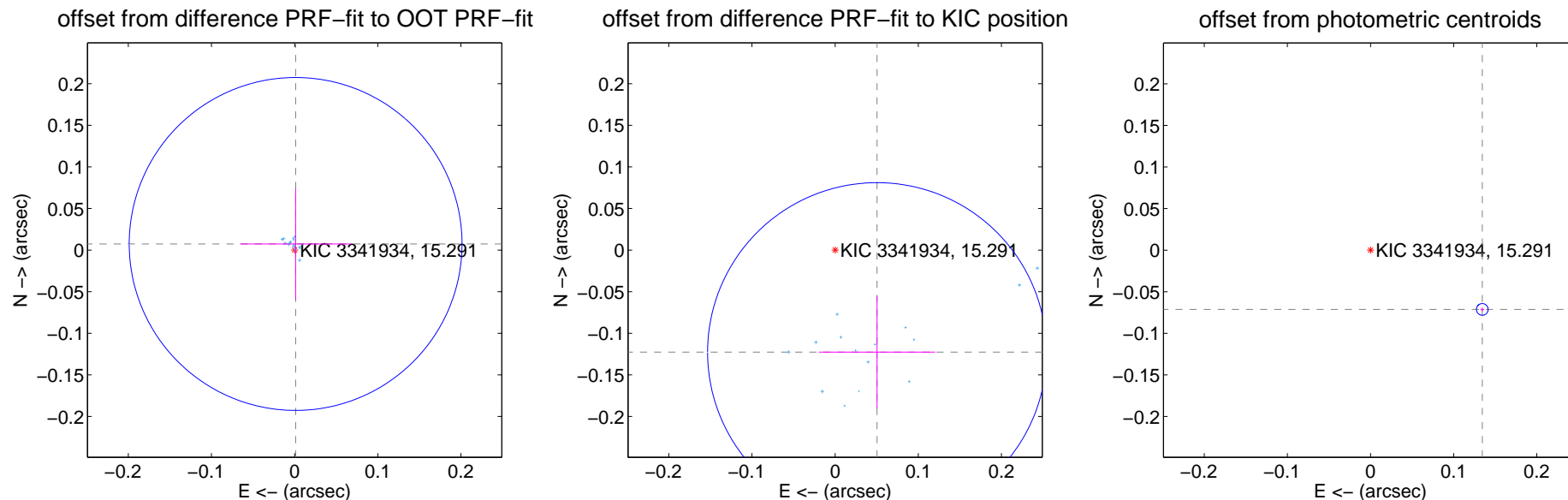
DV Centroid Data

Supplemental centroid analysis for 003341934-01. Kepler magnitude: 15.29. Transit SNR 3793.69

There are 17 quarters with good PRF difference image offsets

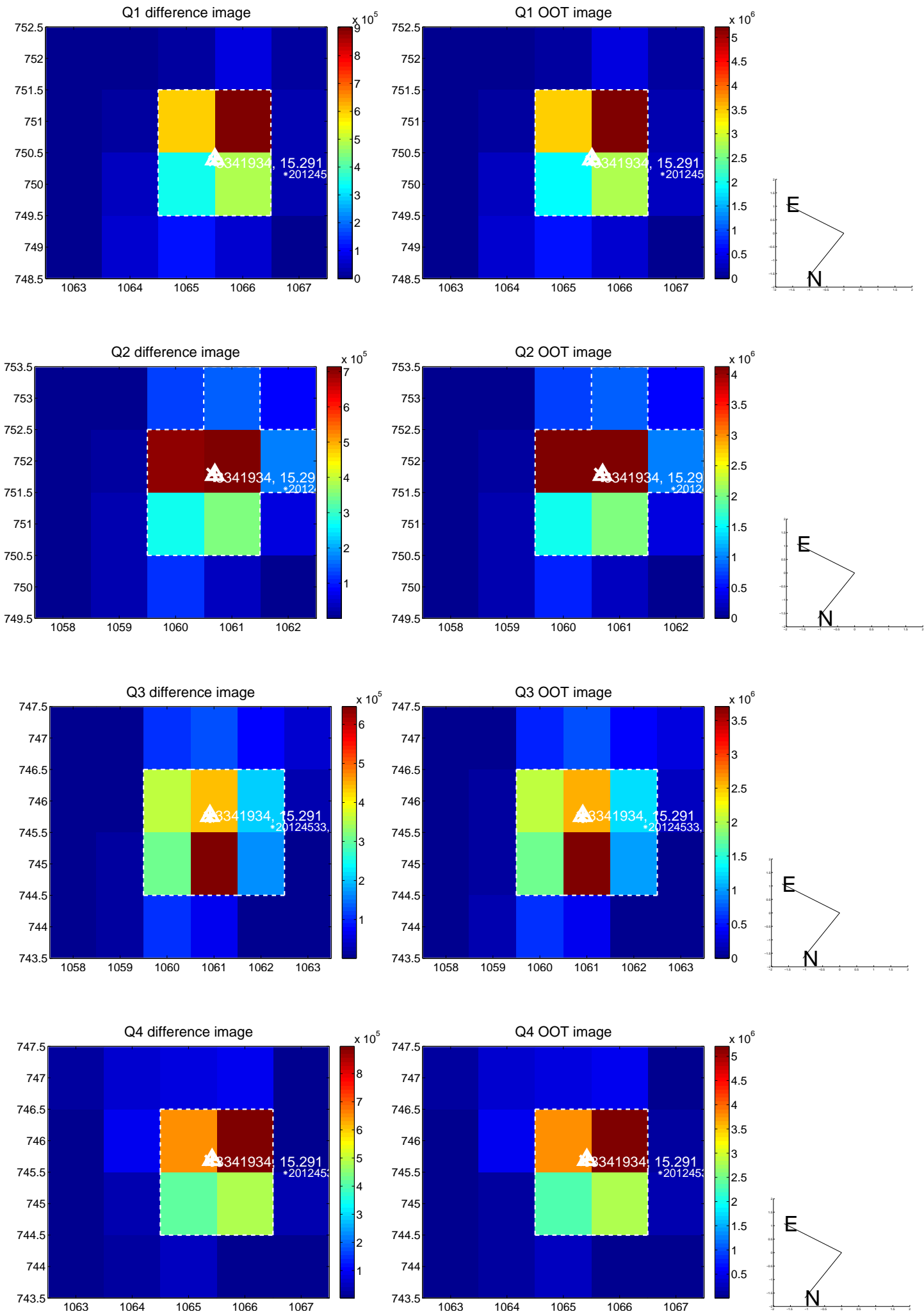
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.007 ± 0.067	0.11	-0.001 ± 0.067	0.007 ± 0.067
PRF-fit source offset from KIC position	0.133 ± 0.068	1.95	-0.050 ± 0.070	-0.123 ± 0.068
photometric centroid source offset	0.15 ± 0.00	64.96	-0.13 ± 0.00	-0.07 ± 0.00

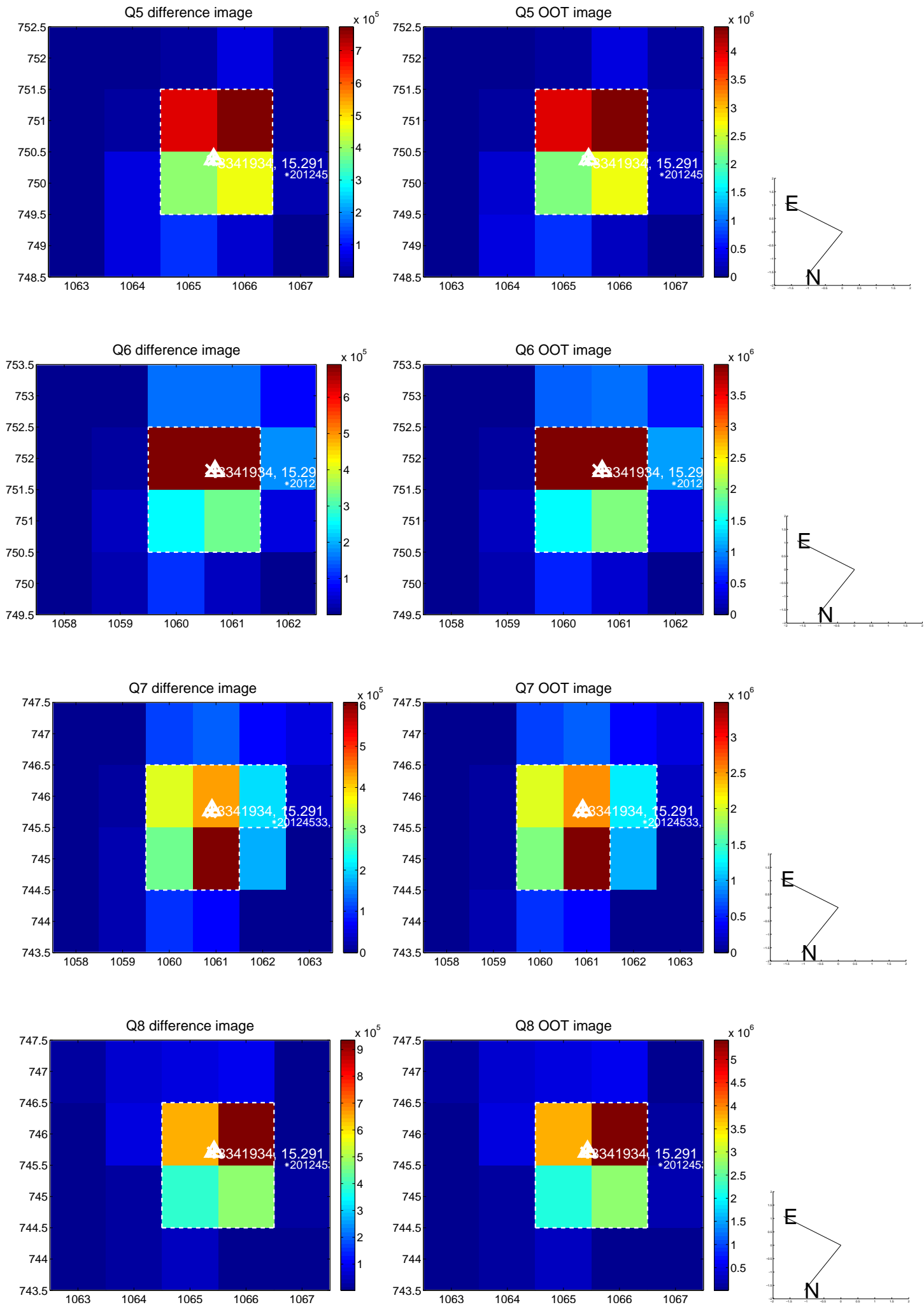


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

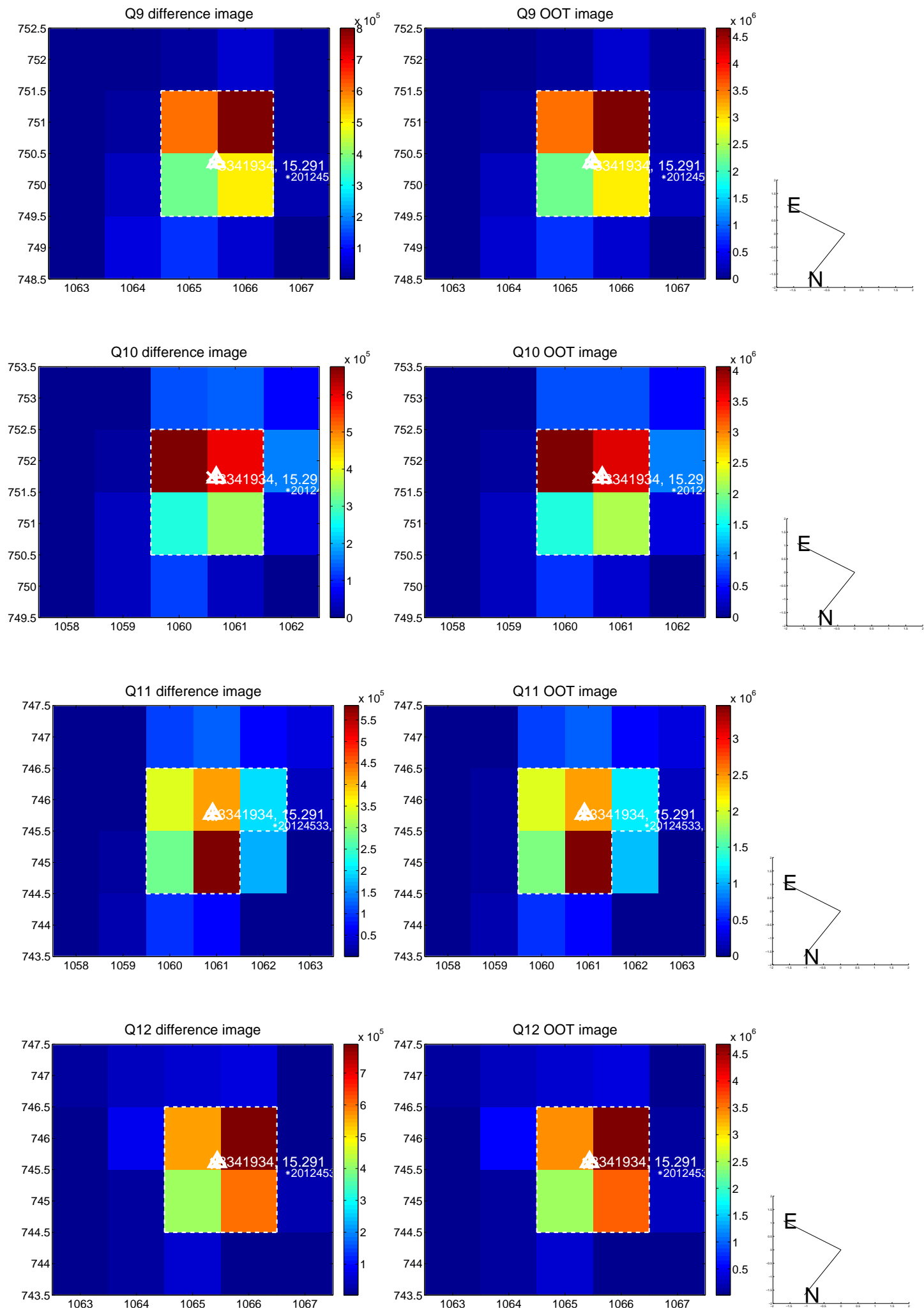
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



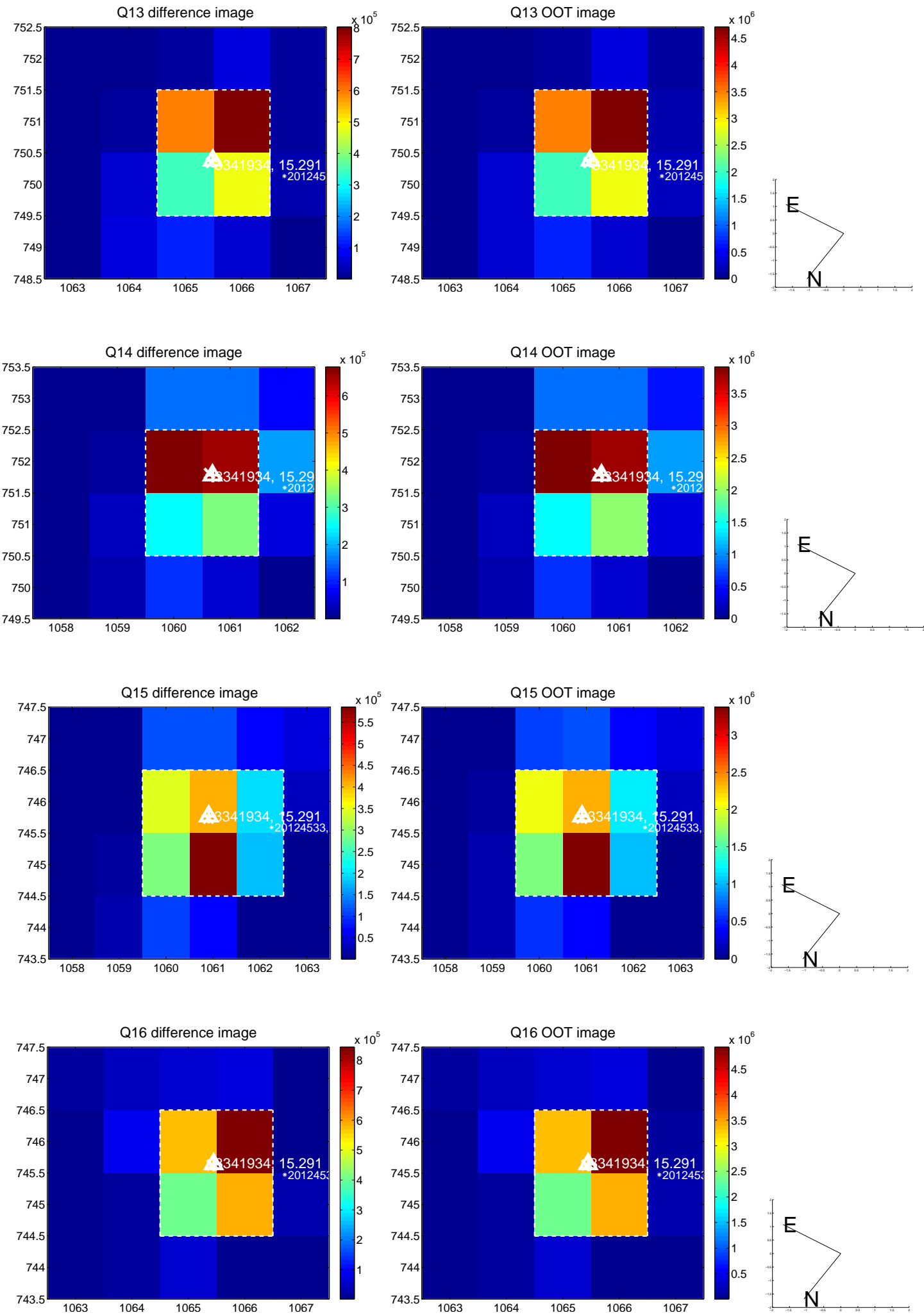
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



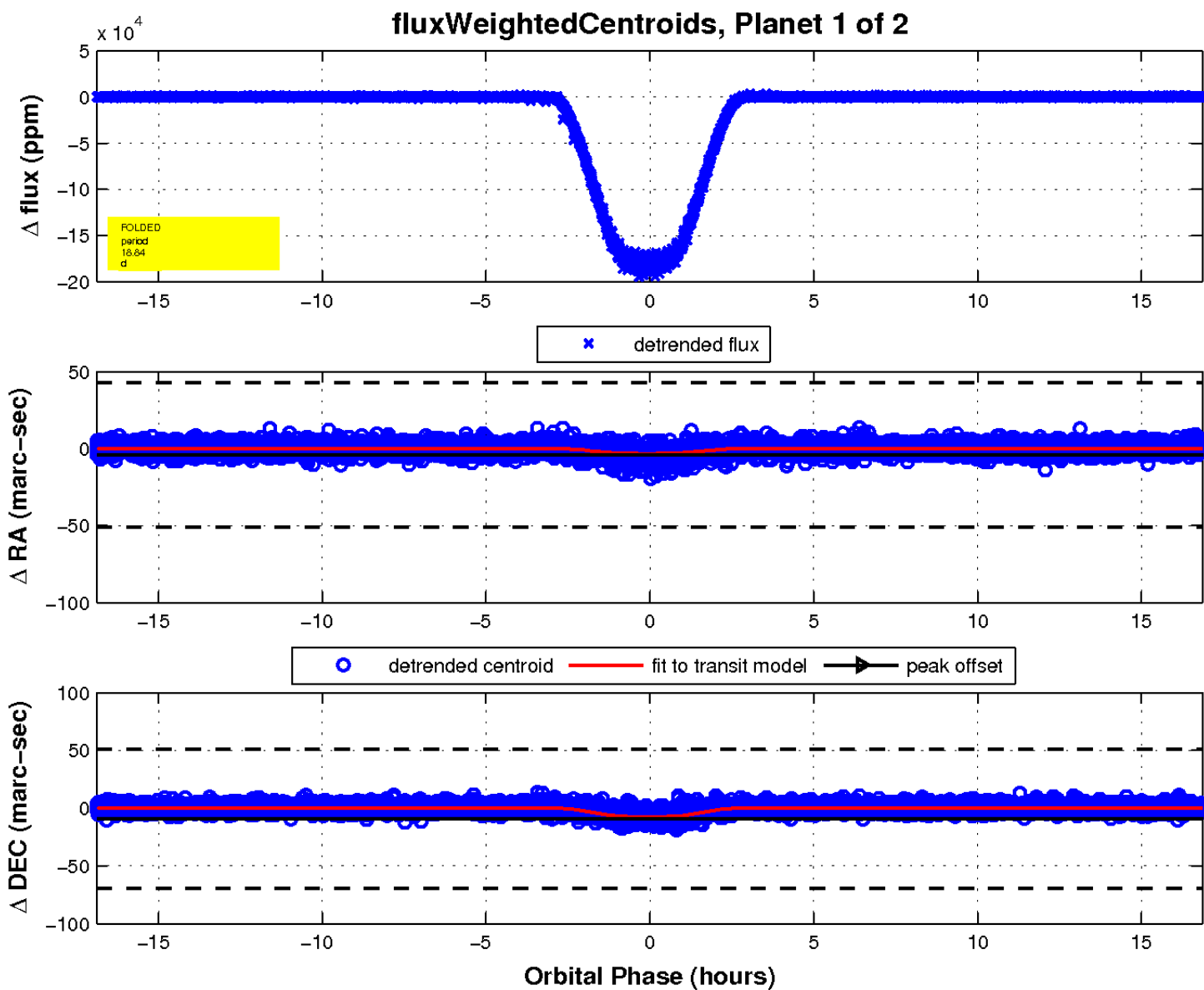
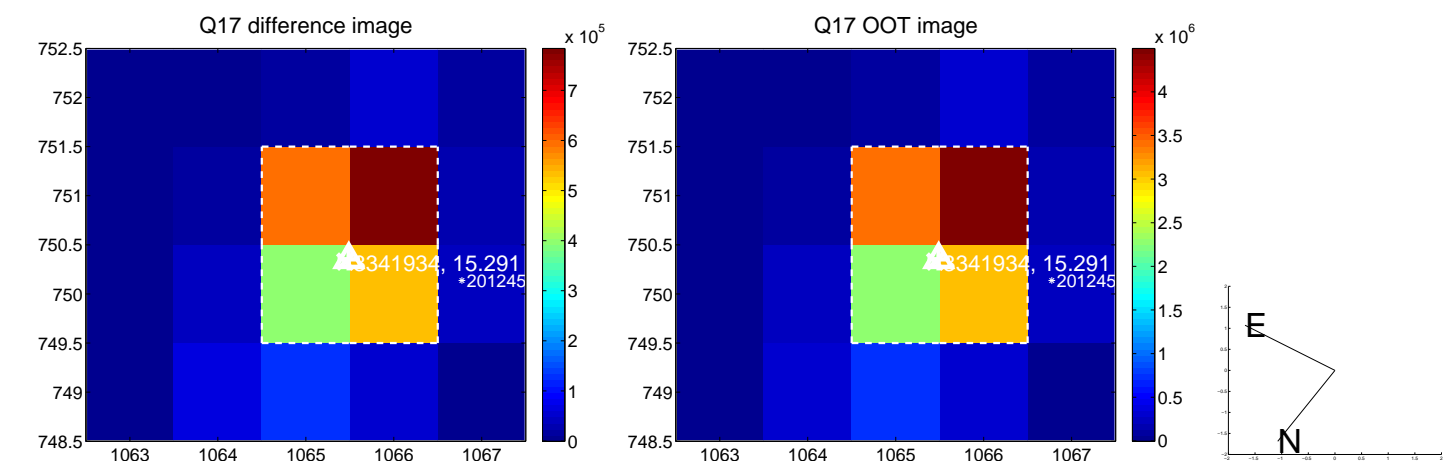
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

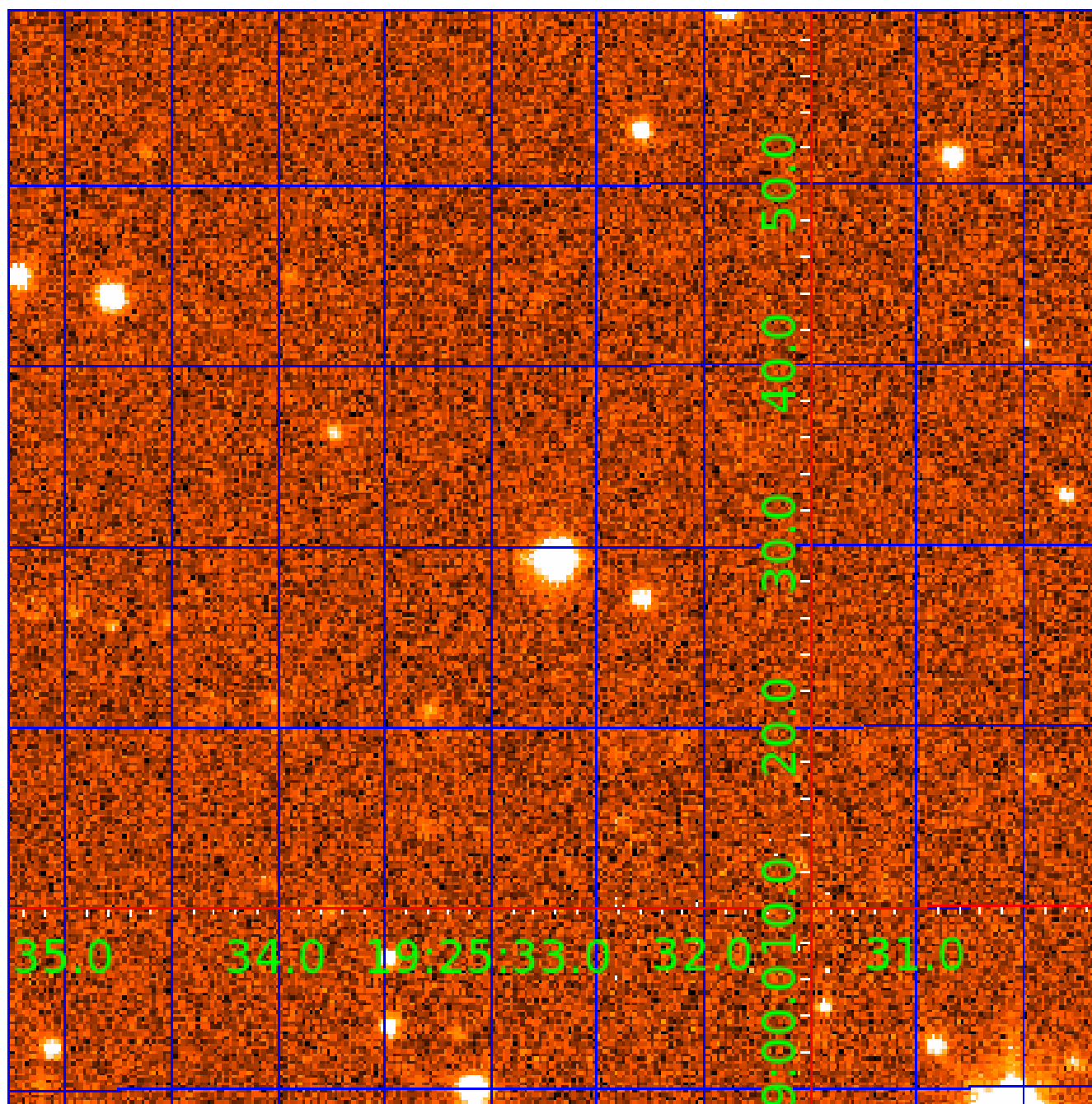


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003341934

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})
003341934-01	OBS	6327.01	18.839488	137.769534	182720.8	5.628	5111.9	3793.7	1.02	6208	45.24	68.68
003341934-02	OBS	No	18.839479	147.610161	22737.8	9.953	664.8	667.6	1.02	6208	25.28	68.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003341934-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
003341934-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

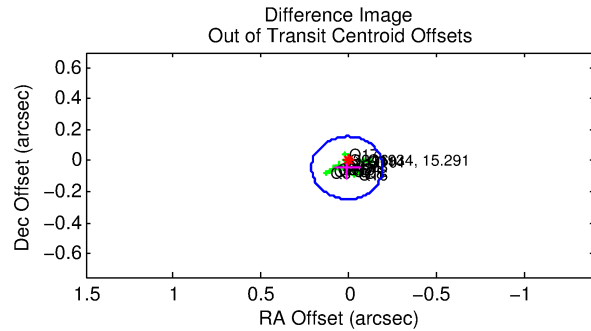
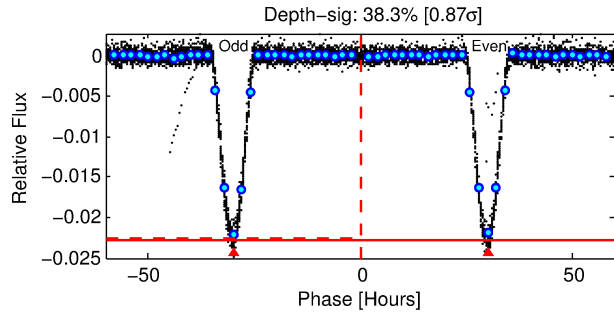
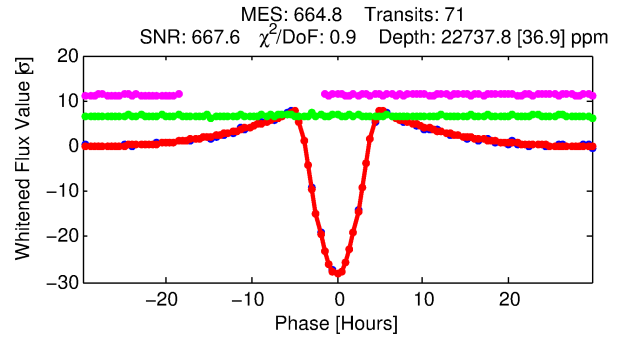
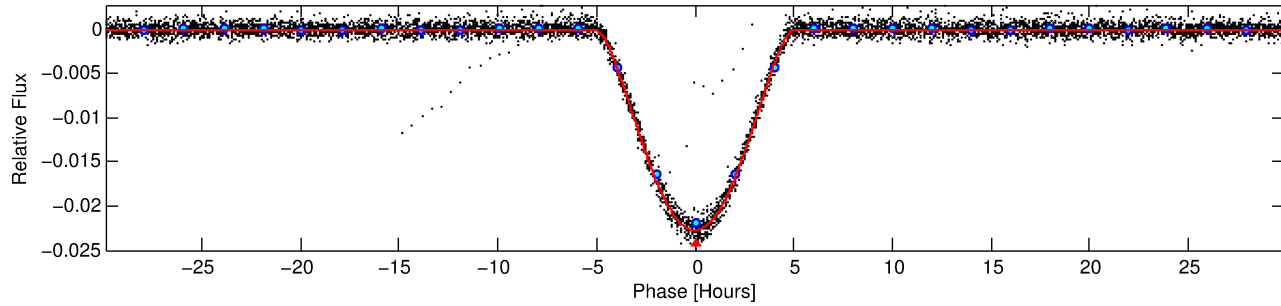
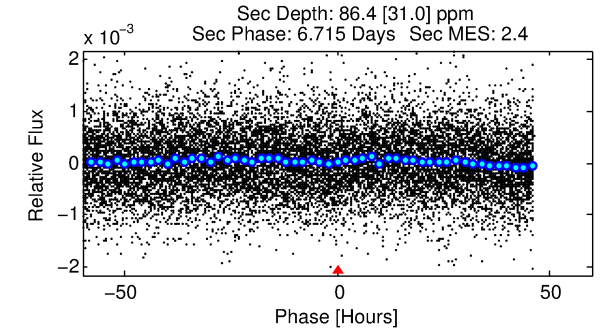
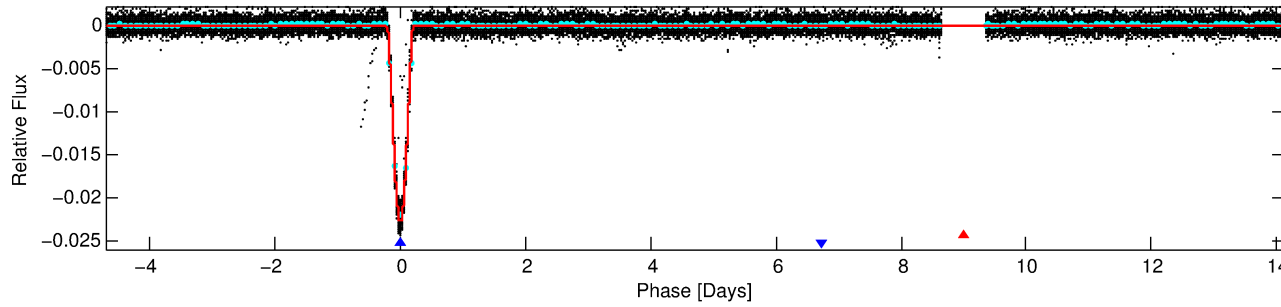
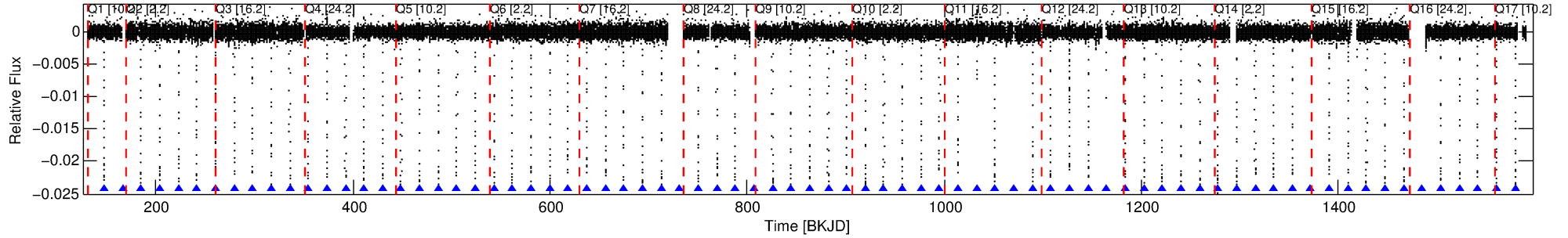
Ephemeris Match Information For 003341934-02

No Significant Match Found

DV One-Page Summary

KIC: 3341934 Candidate: 2 of 2 Period: 18.839 d
KOI: K06327 Corr: No Ephemeris Match

Kp: 15.29 R*: 1.02 Rs Teff: 6208.0 K Logg: 4.45 Fe/H: -0.120



DV Fit Results:

Period = 18.83948 [0.00001] d
Epoch = 147.6102 [0.0003] BKJD
Rp/R* = 0.2262 [0.0126]
a/R* = 10.71 [0.07]
b = 0.98 [0.02]
Seff = 68.68 [28.81]
Teff = 734 [77] K
Rp = 25.28 [8.32] Re
a = 0.1425 [0.0388] AU
Ag = 1.51 [0.82] [0.62σ]
Teffp = 1258 [126] K [3.55σ]

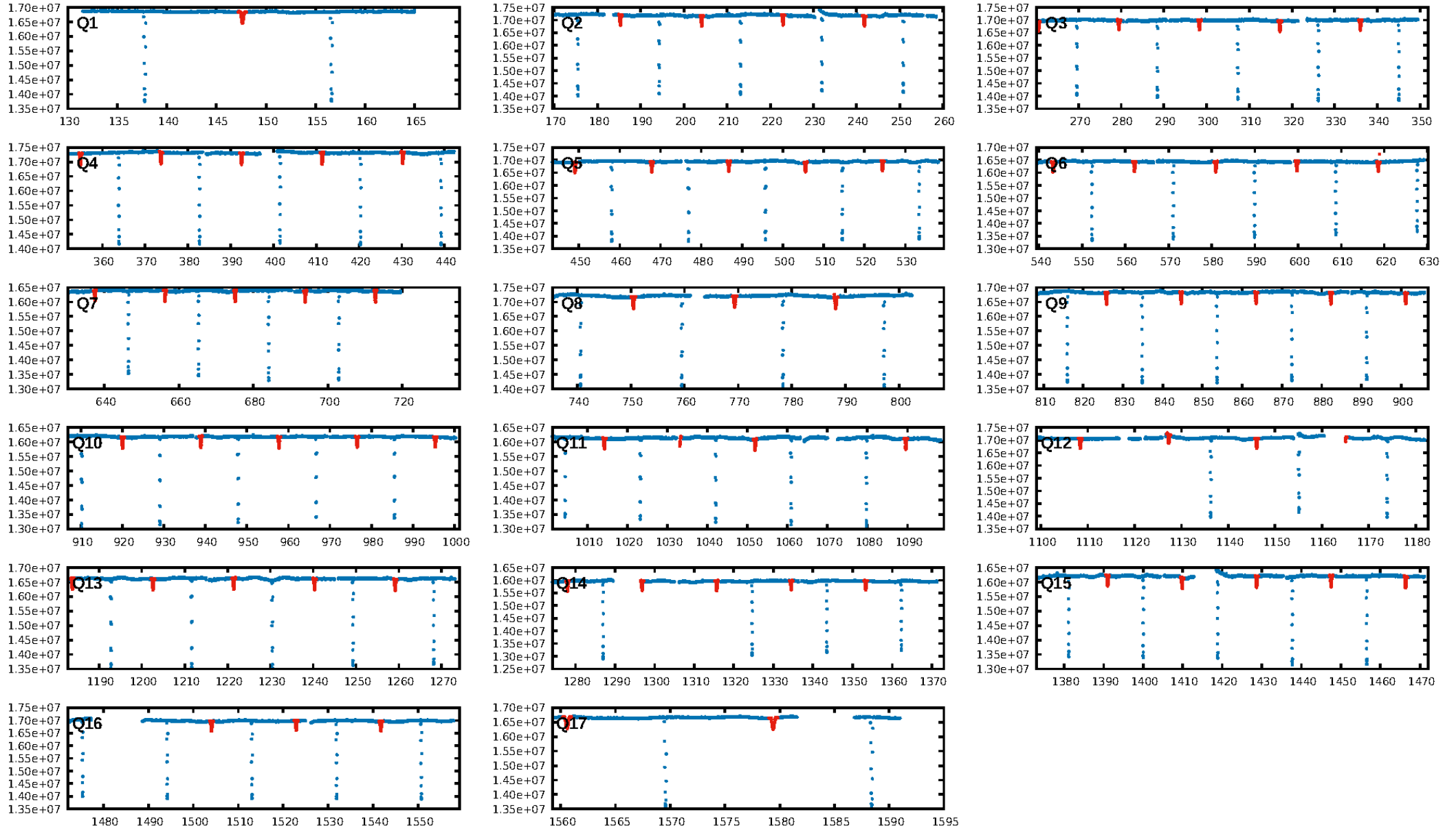
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [68/68]
GhostDiagnostic-chr: 3.299
Centroid-sig: 0.0%
Centroid-so: 0.232 arcsec [14.99σ]
OotOffset-rm: 0.047 arcsec [0.70σ]
KicOffset-rm: 0.185 arcsec [2.71σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

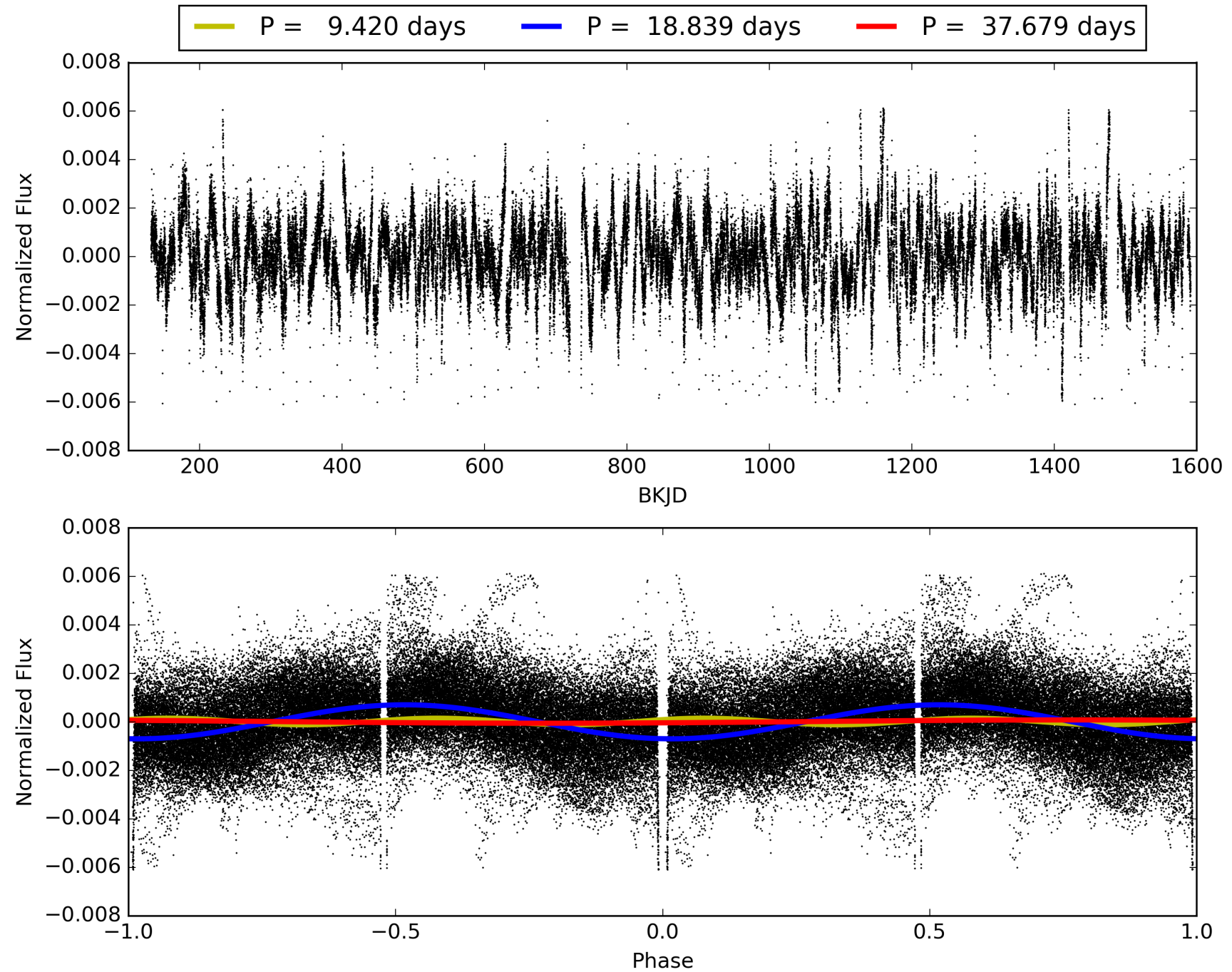
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:12:40 Z

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

TCE 003341934-02, PDC Light Curves

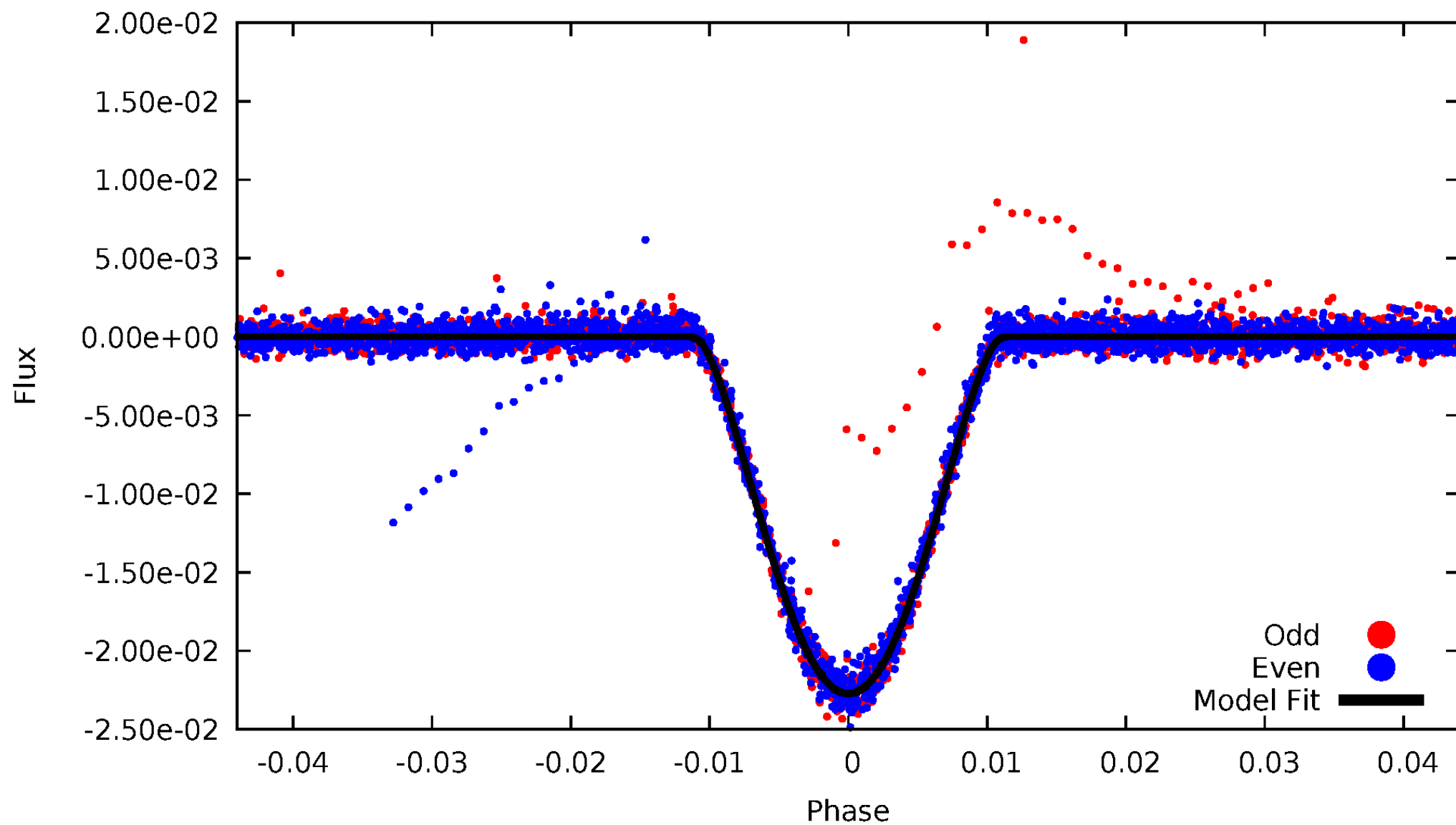


TCE 003341934-02



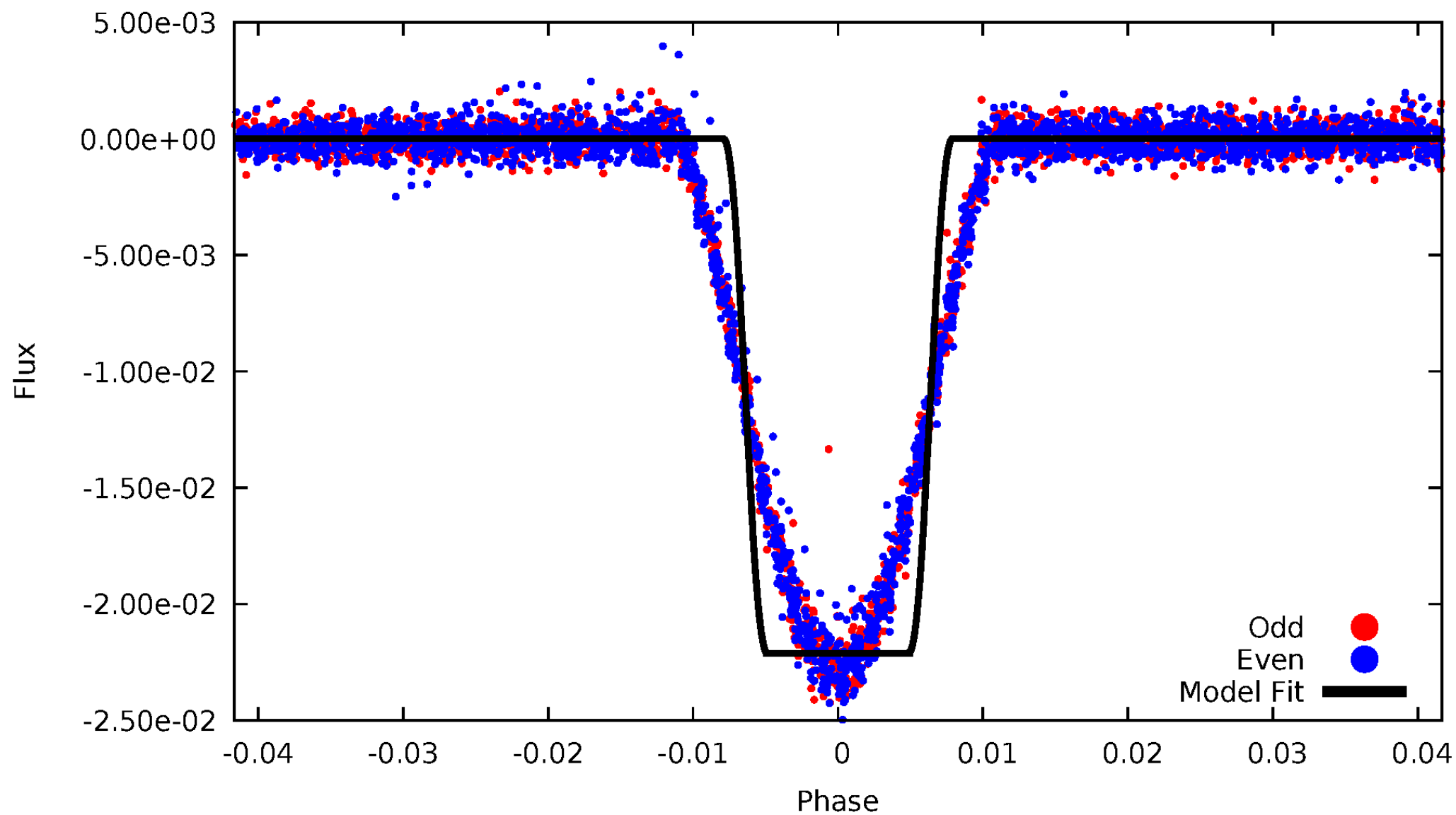
DV Odd/Even

TCE 003341934-02



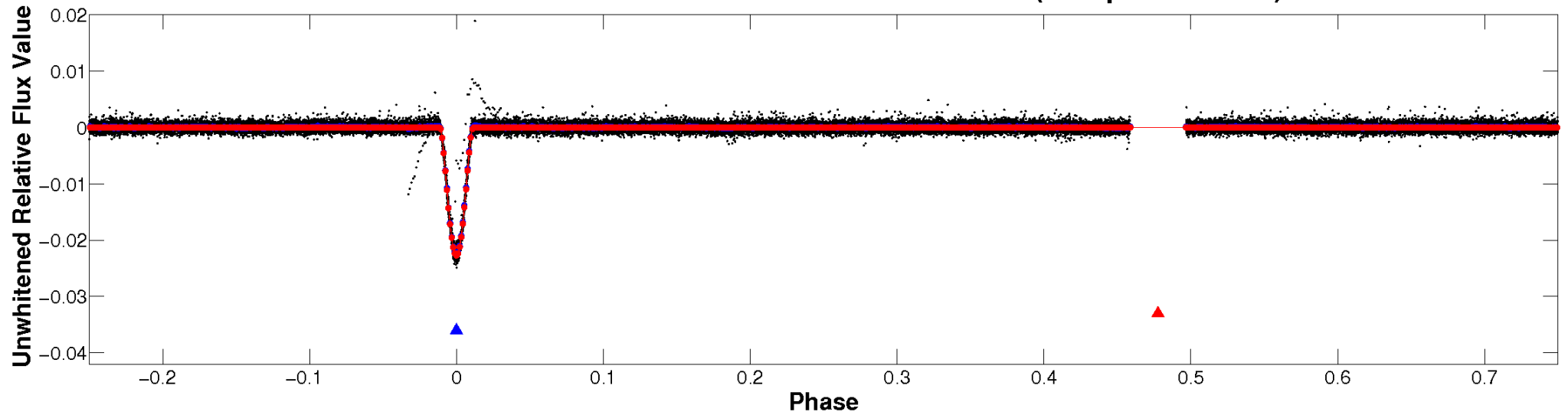
ALT Odd/Even

TCE 003341934-02

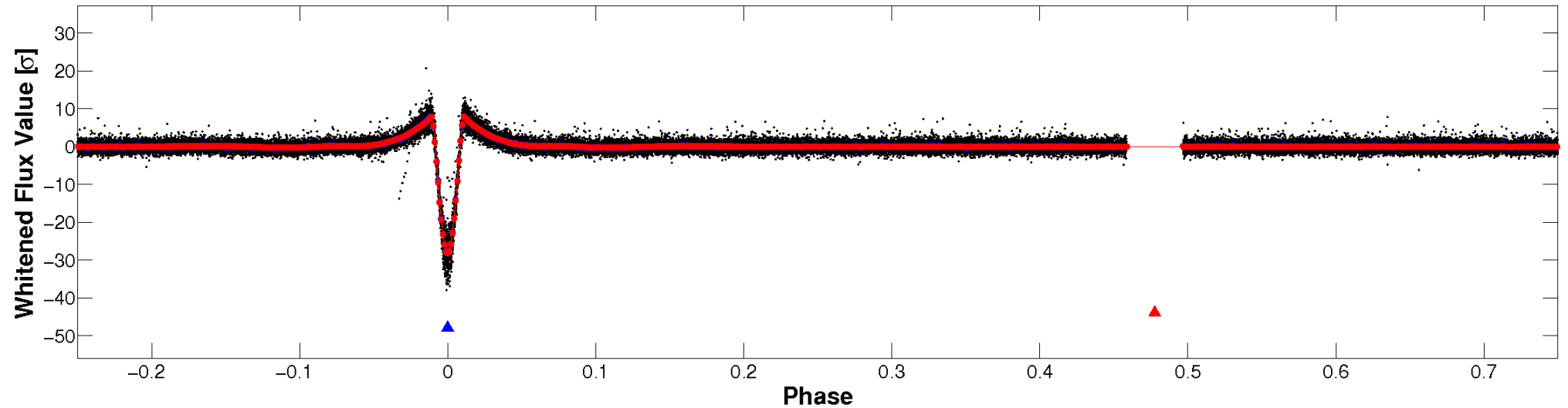


Non-Whitened Vs. Whitened Light Curve

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

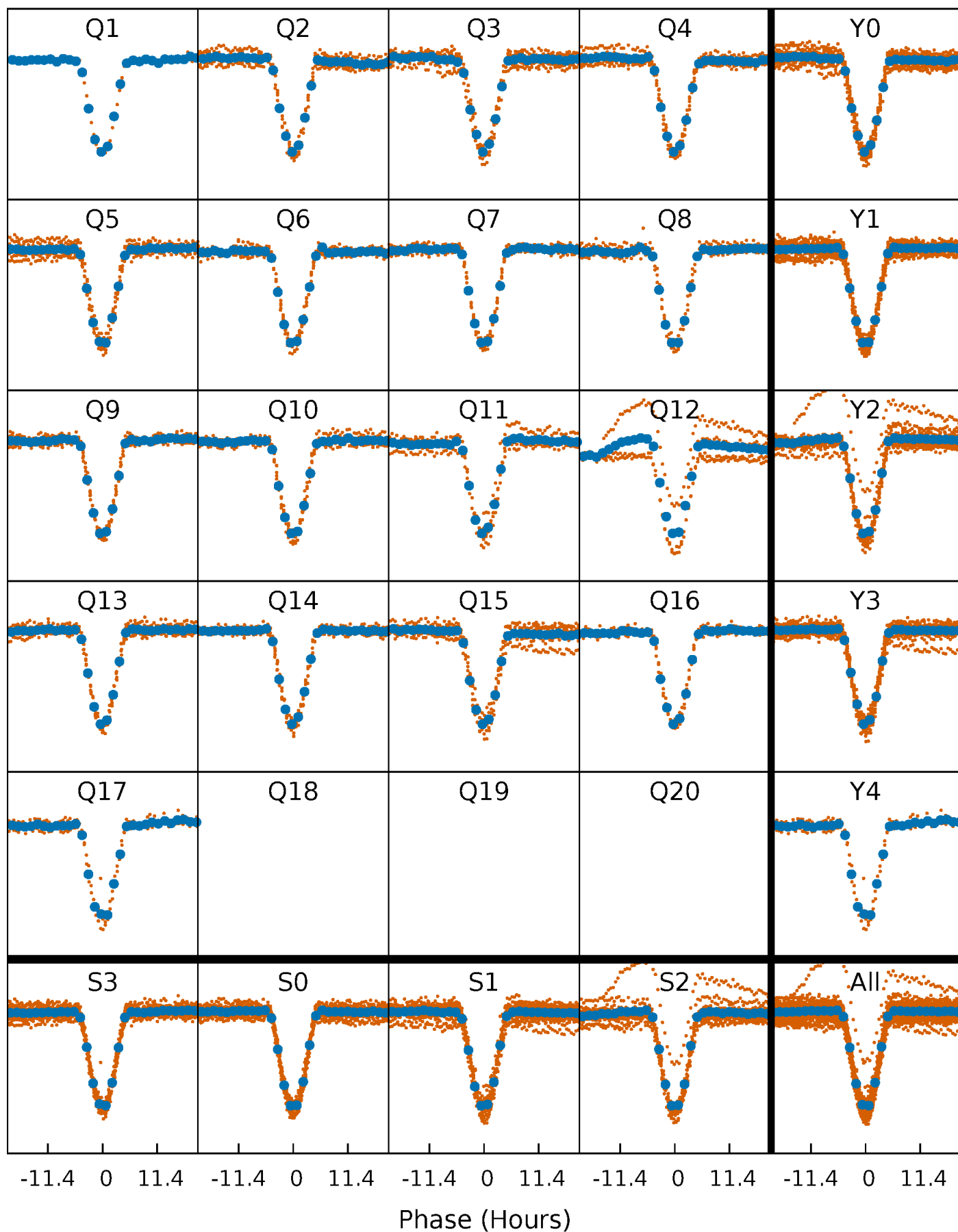


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



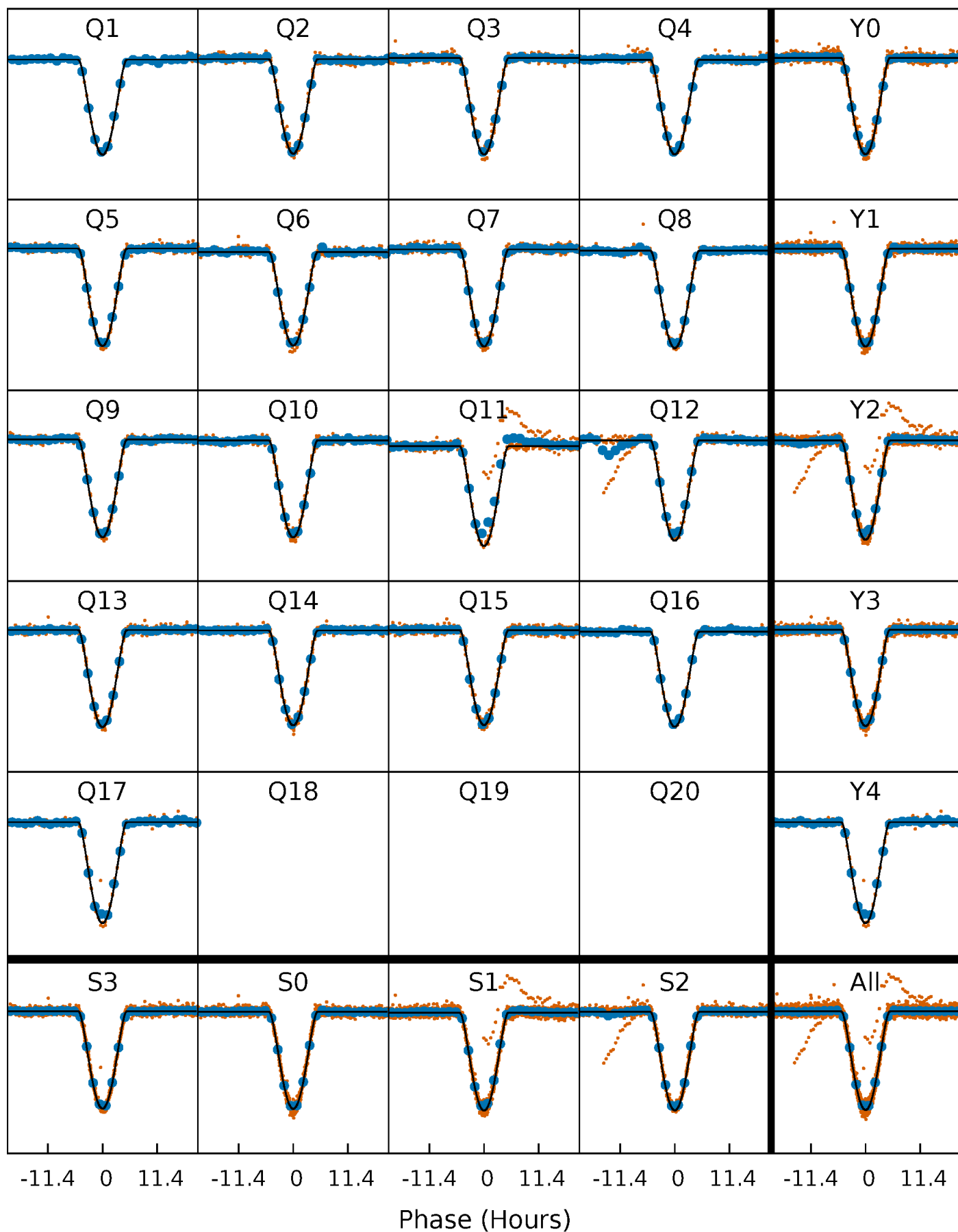
PDC Quarter-Phased Transit Curves

TCE 003341934-02 P= 18.839479 Days $T_0=147.610161$ (BKJD)



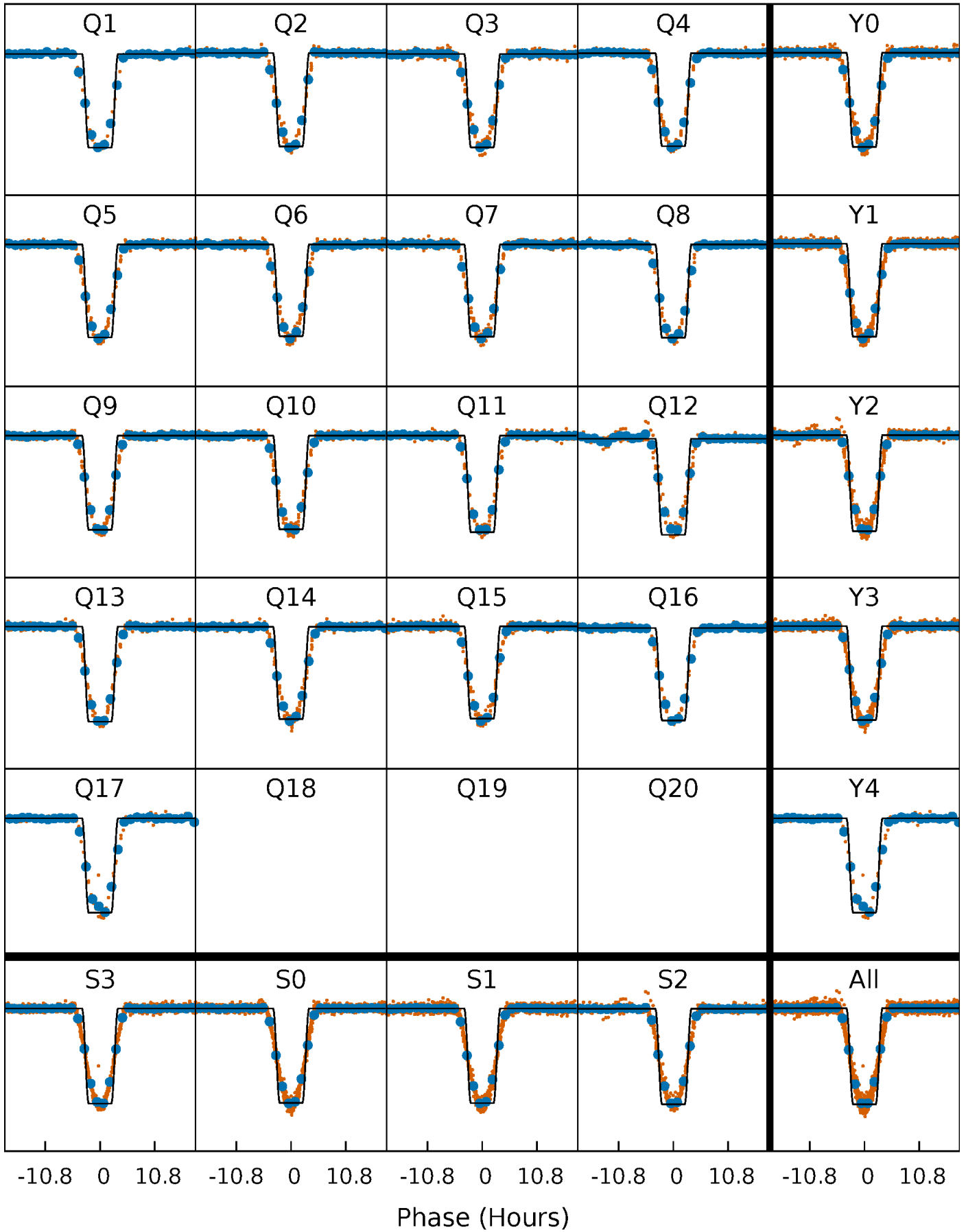
DV Quarter-Phased Transit Curves

TCE 003341934-02 P= 18.839479 Days $T_0=147.610161$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

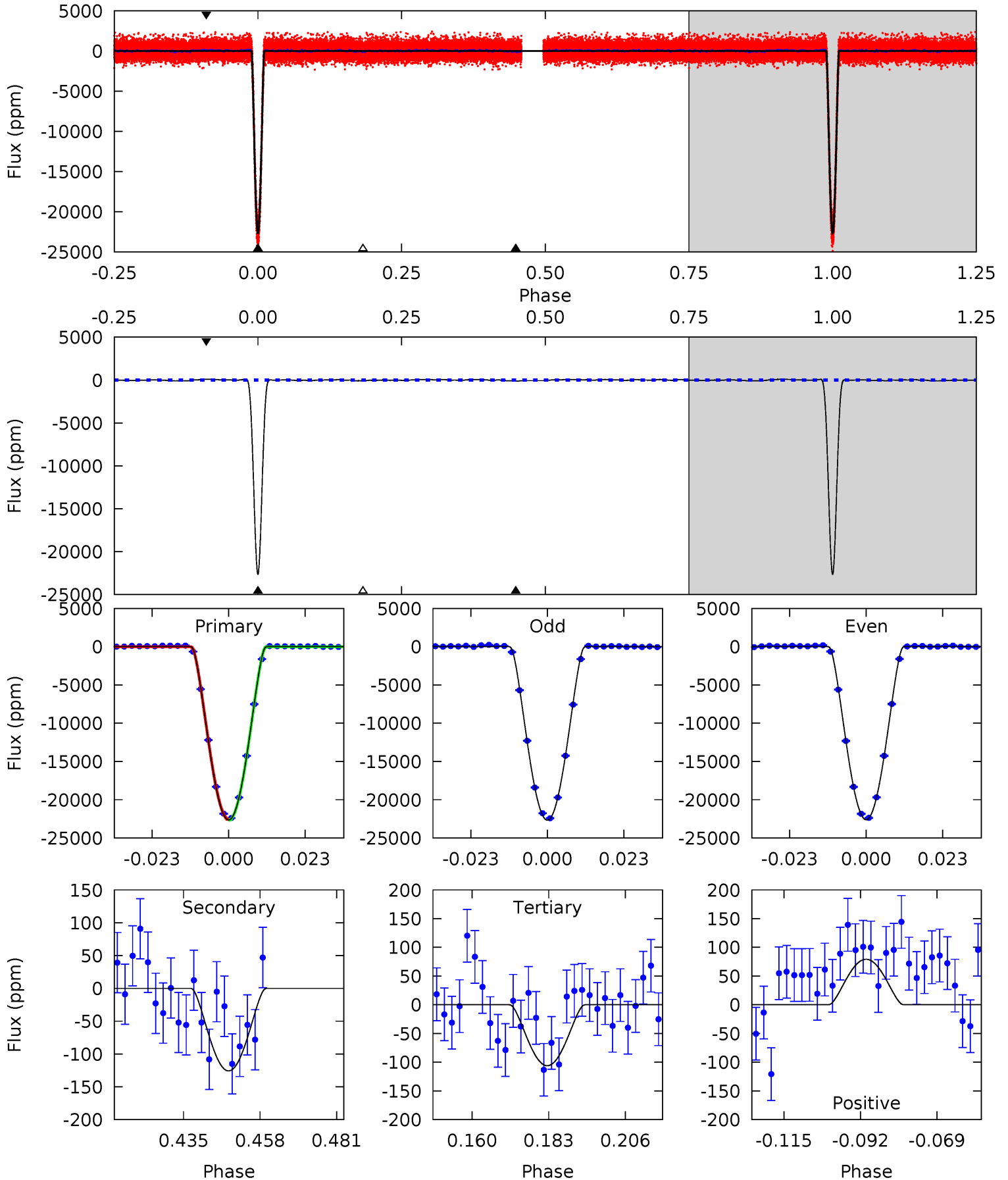
TCE 003341934-02 P= 18.839349 Days $T_0=147.615086$ (BKJD)



DV Model-Shift Uniqueness Test

003341934-02, P = 18.839479 Days, E = 128.770682 Days

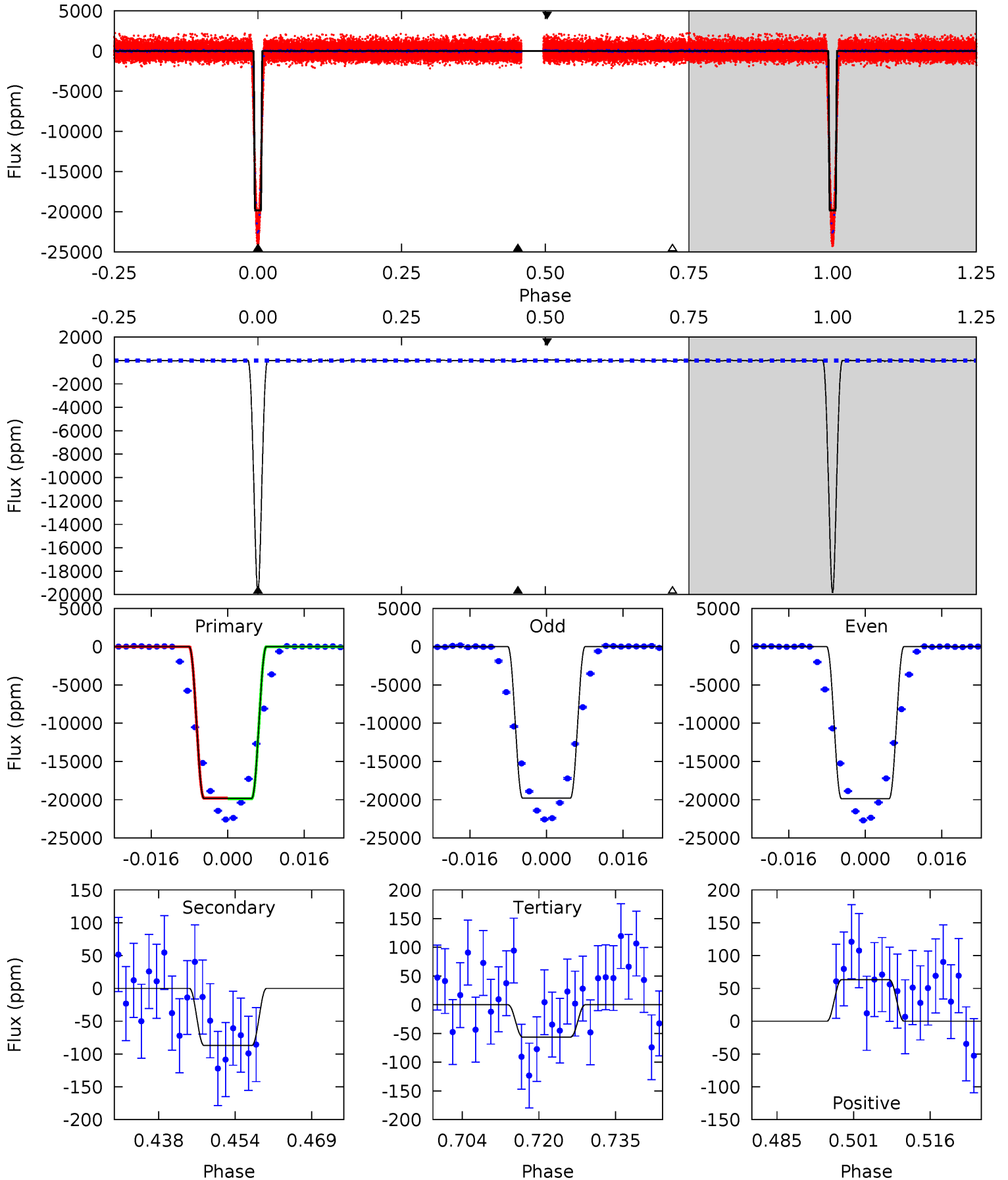
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1513	8.41	7.09	5.30	4.86	2.28	2.63	1506	1508	1.32	3.11	2.08	0.98	0.00	3.29



Alt Model-Shift Uniqueness Test

003341934-02, P = 18.839349 Days, E = 128.775737 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1181	5.19	3.36	3.76	4.94	2.42	1.19	1177	1177	1.83	1.43	1.92	1.00	0.00	2.23



Stellar Parameters For KIC 003341934

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6208^{+172}_{-216}	$4.454^{+0.054}_{-0.216}$	$-0.120^{+0.250}_{-0.350}$	$1.024^{+0.332}_{-0.111}$	$1.086^{+0.153}_{-0.153}$	$1.423^{+0.408}_{-0.753}$
	+3%/-3%	+1%/-5%	+208%/-292%	+32%/-11%	+14%/-14%	+29%/-53%
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 003341934-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-126 ± 15	$26.08^{+5.14}_{-2.77}$	1049^{+80}_{-54}	2253^{+62}_{-62}	$1.975^{+0.550}_{-0.544}$
Alt.	-87 ± 17	$17.19^{+3.11}_{-1.97}$	1045^{+81}_{-52}	2400^{+87}_{-95}	$3.133^{+1.202}_{-1.002}$

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 $A_{obs} \gg 1.0$

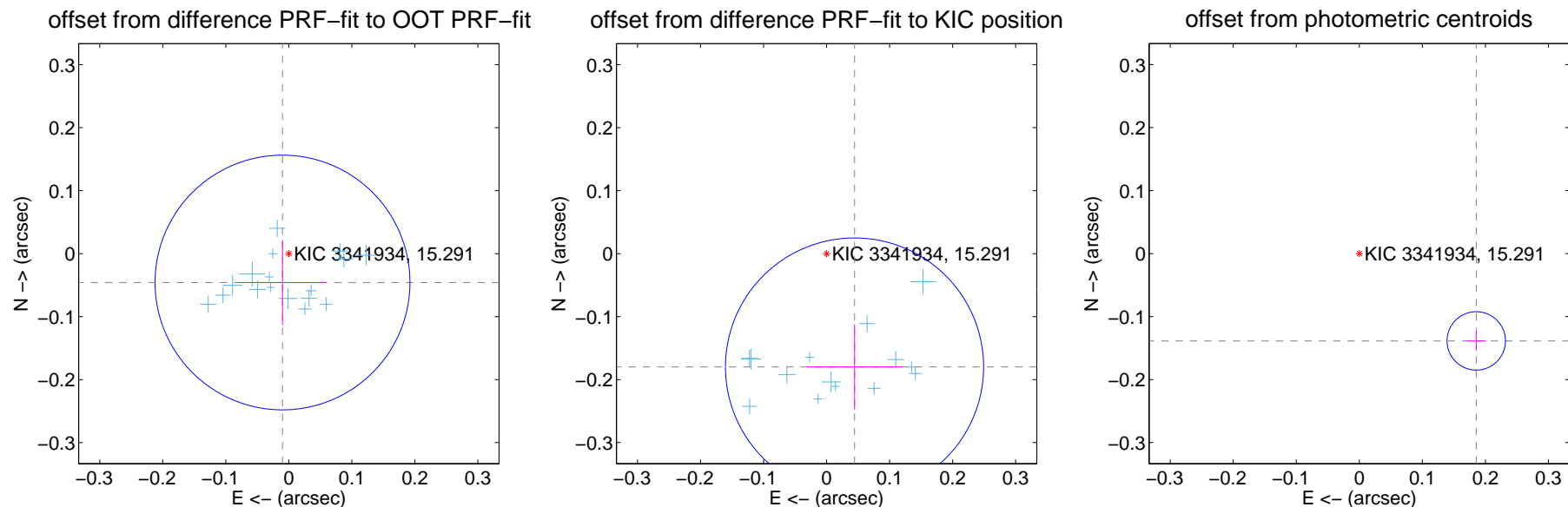
DV Centroid Data

Supplemental centroid analysis for 003341934-02. Kepler magnitude: 15.29. Transit SNR 667.57

There are 17 quarters with good PRF difference image offsets

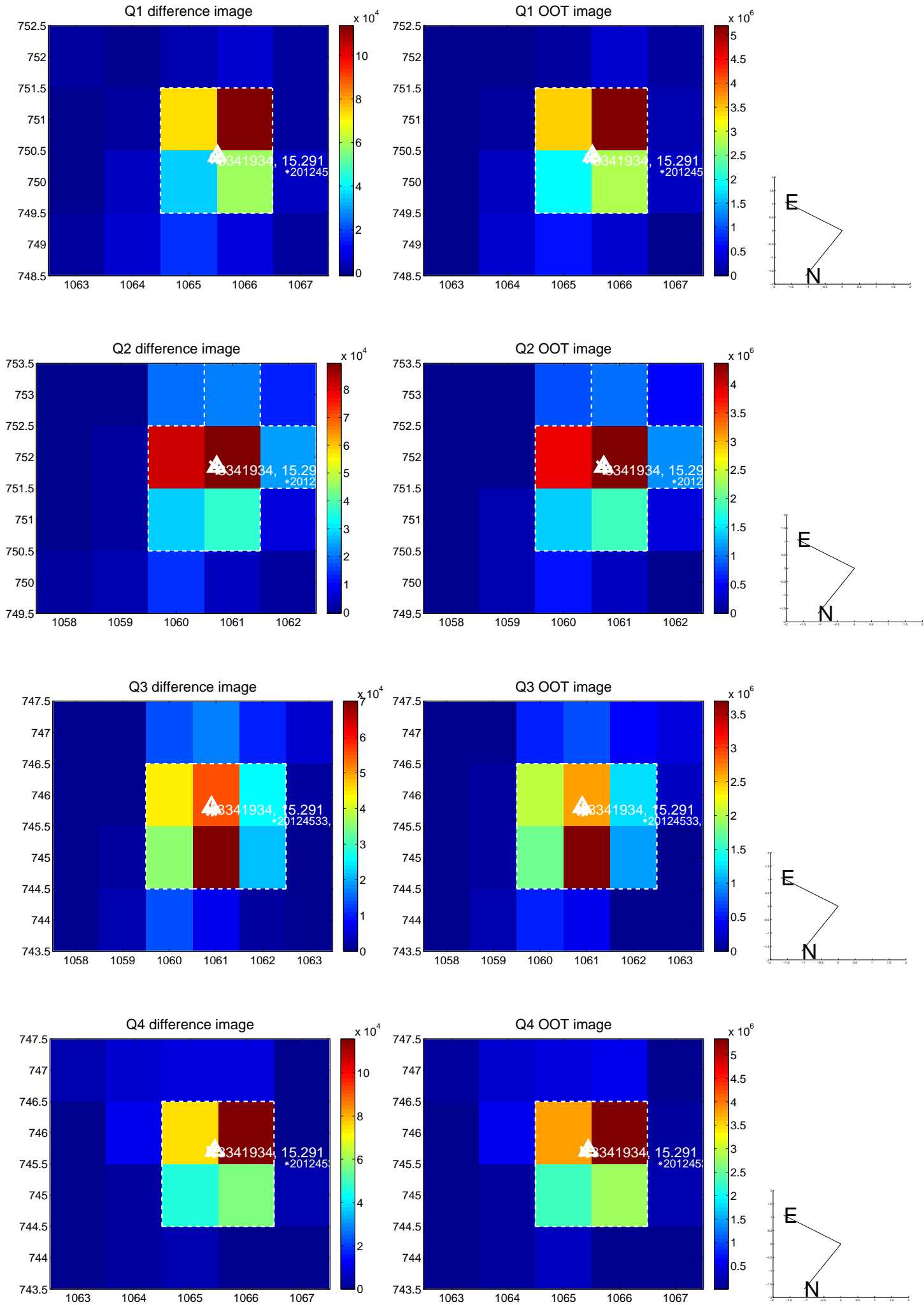
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.047 ± 0.067	0.70	0.010 ± 0.069	-0.046 ± 0.067
PRF-fit source offset from KIC position	0.185 ± 0.068	2.71	-0.044 ± 0.075	-0.180 ± 0.068
photometric centroid source offset	0.23 ± 0.02	14.99	-0.19 ± 0.02	-0.14 ± 0.02

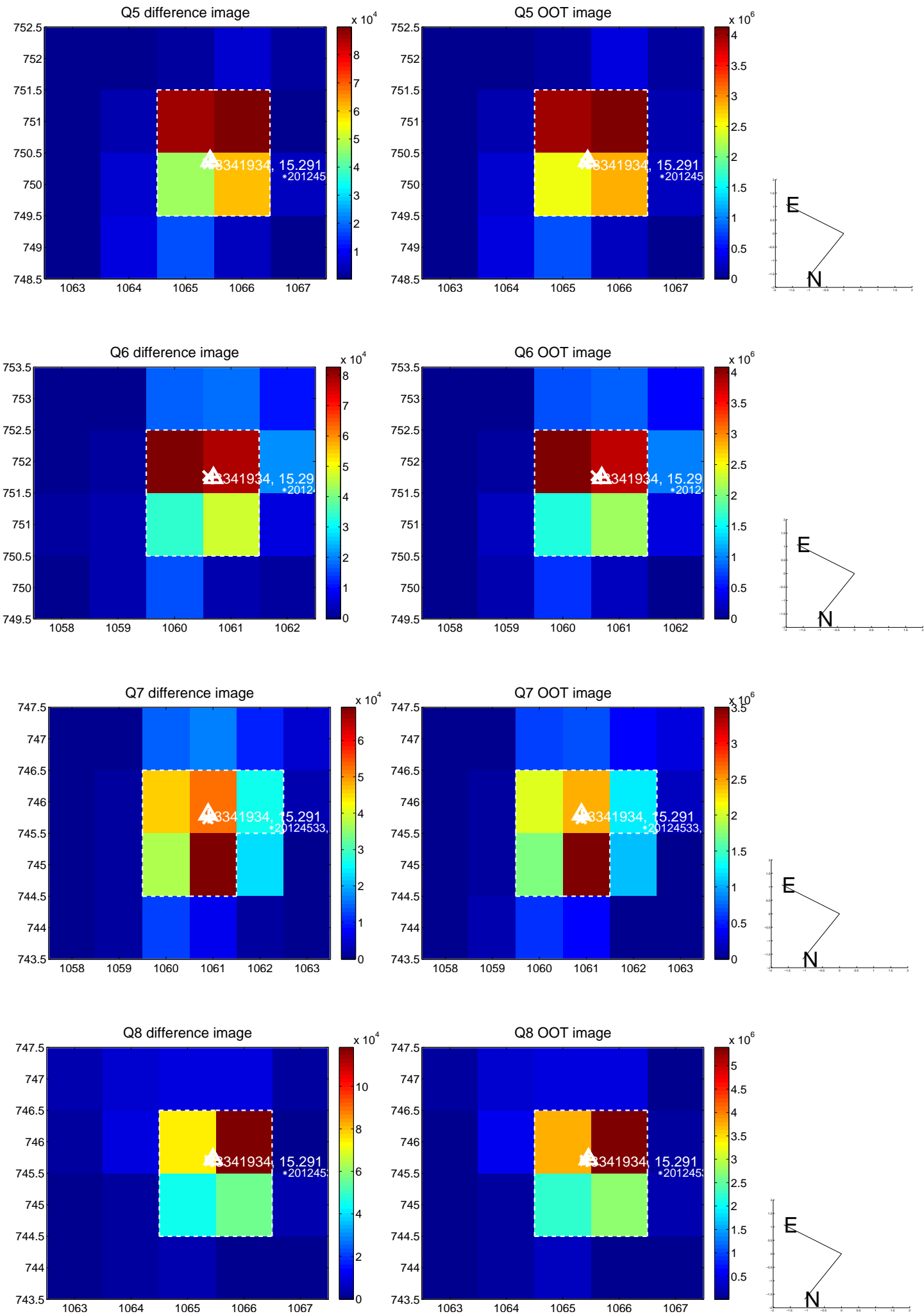


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

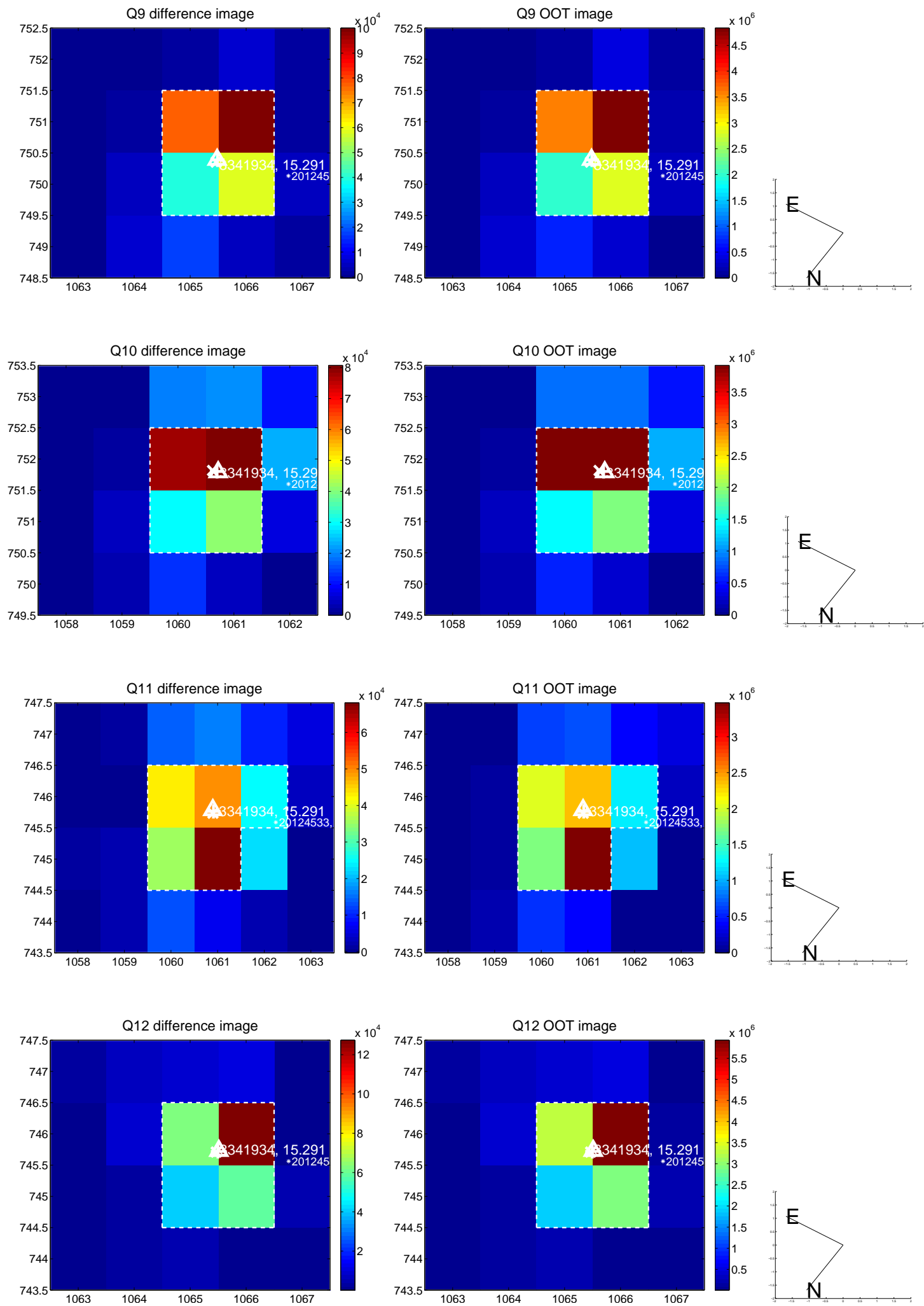
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



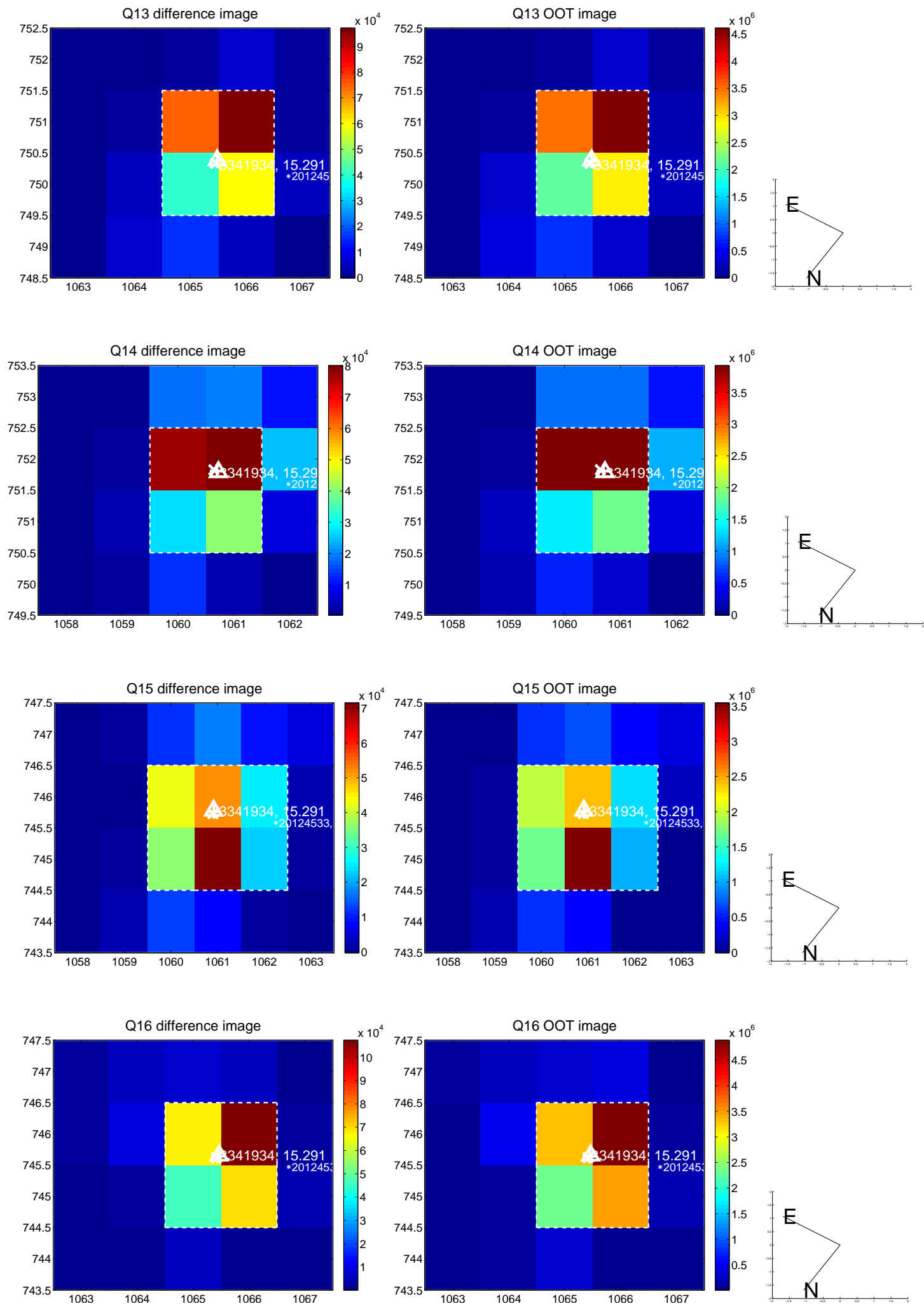
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



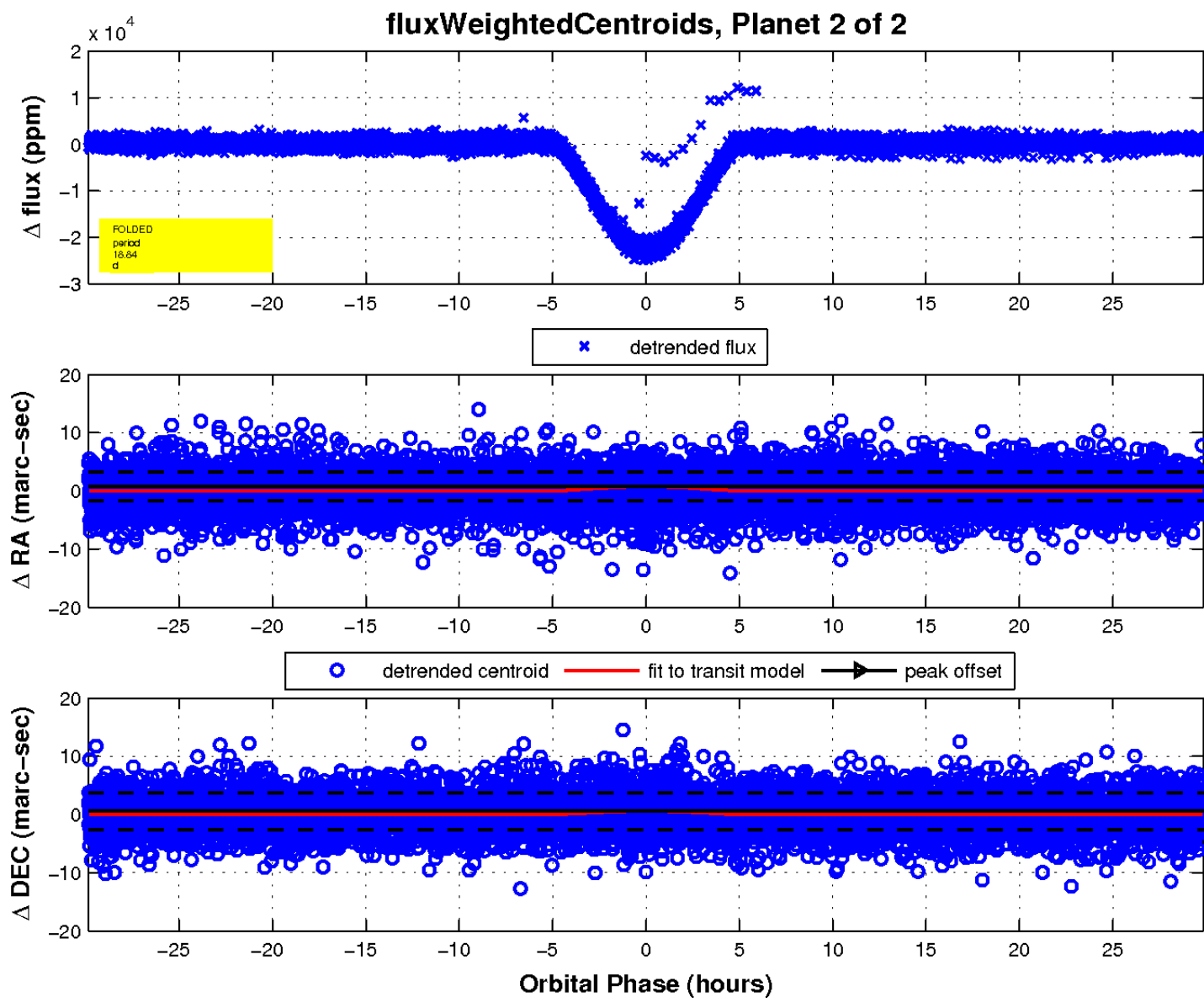
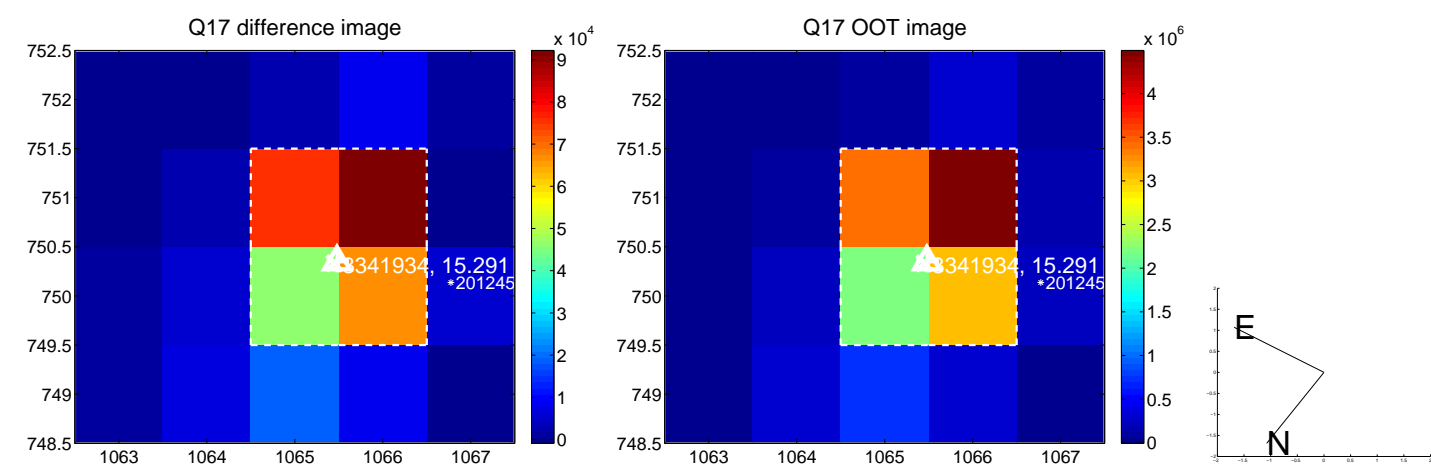
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

