

KIC 005095269

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})
005095269-01	OBS	6518.01	18.611952	133.866834	124575.0	4.242	8921.6	6030.5	1.17	6492	60.83	112.07
005095269-02	OBS	No	18.611662	133.918882	301.0	45.383	11.6	15.6	1.17	6492	3.95	112.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005095269-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED
005095269-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—RESIDUAL_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.

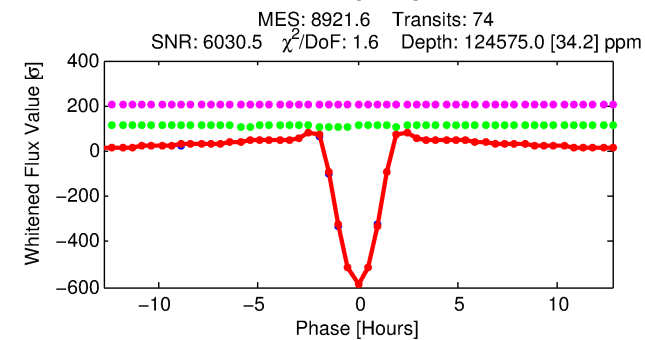
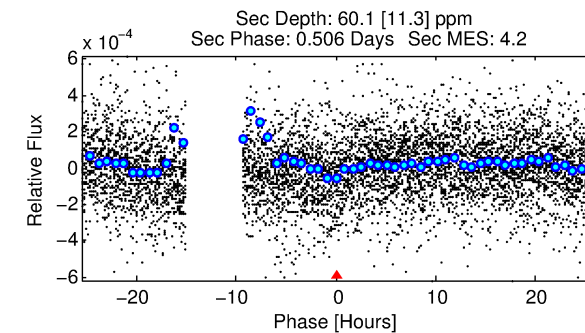
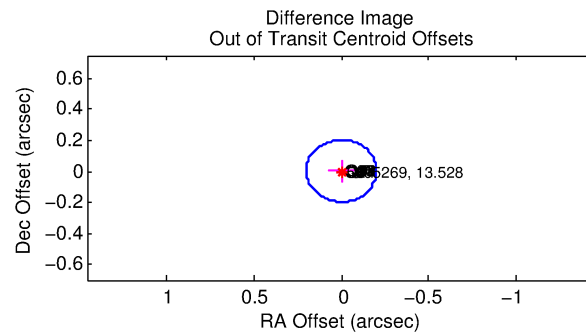
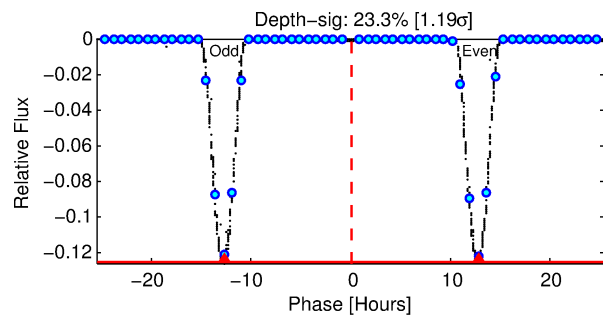
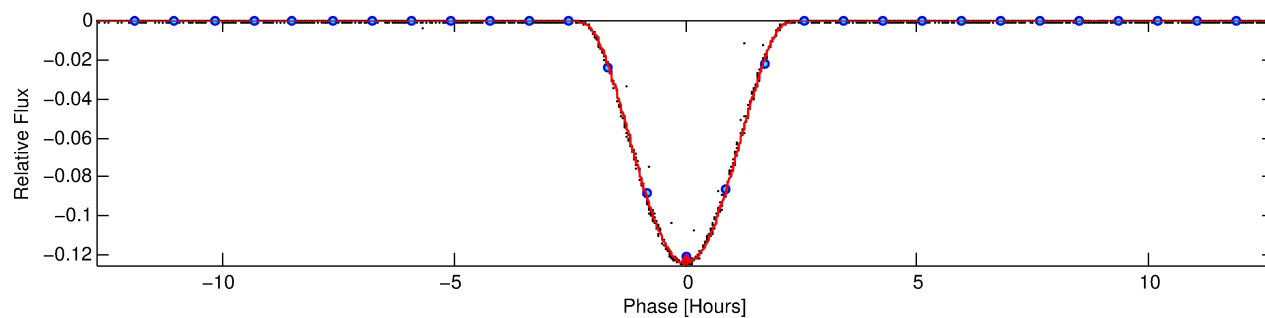
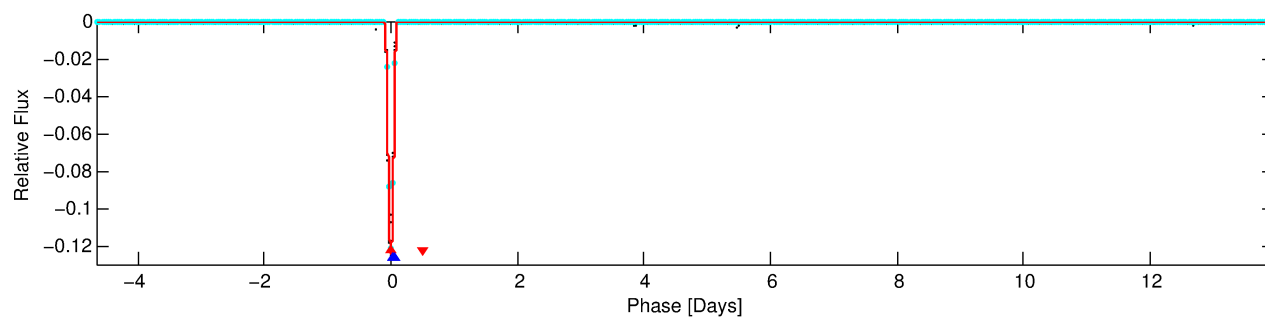
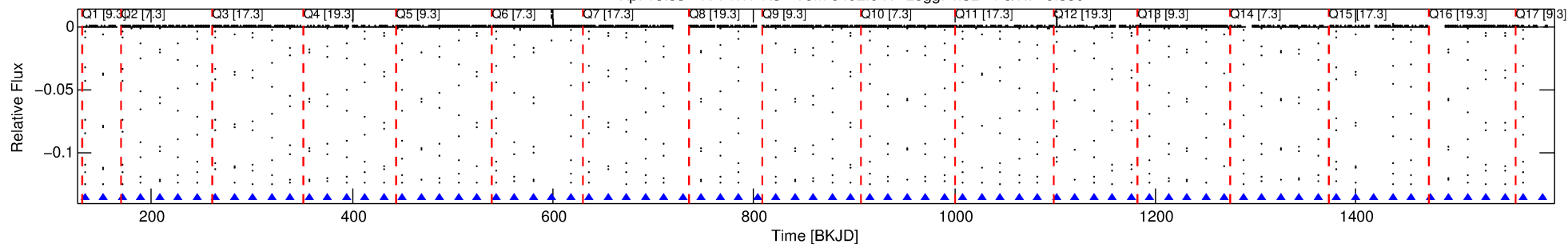
Ephemeris Match Information For 005095269-01

No Significant Match Found

DV One-Page Summary

KIC: 5095269 Candidate: 1 of 2 Period: 18.612 d
KOI: K06518.01 Corr: 0.997

Kp: 13.53 R*: 1.17 Rs Teff: 6492.0 K Logg: 4.32 Fe/H: -0.380



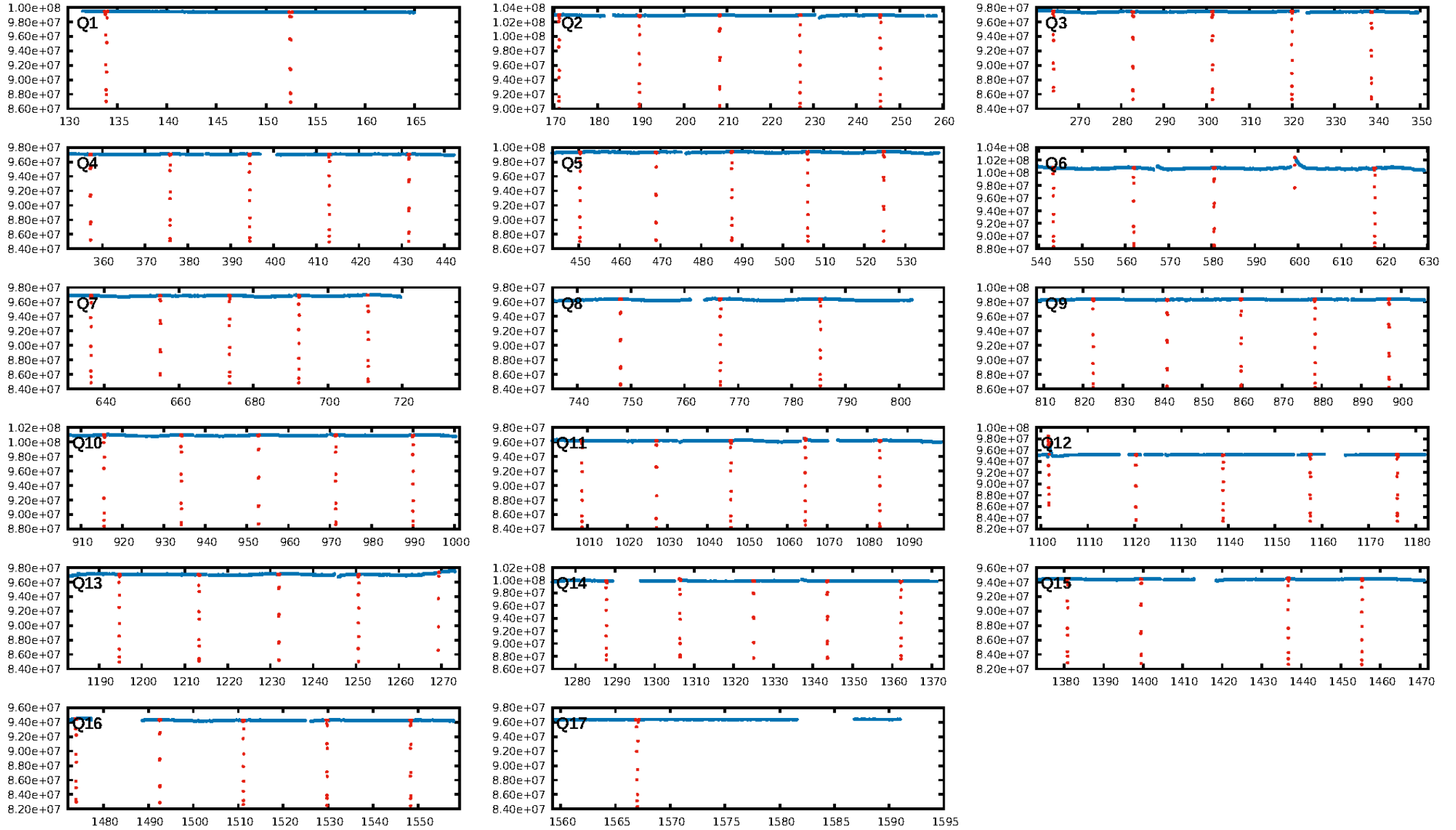
DV Fit Results:

Period = 18.61195 [0.00000] d
Epoch = 133.8668 [0.0000] BKJD
Rp/R* = 0.4765 [0.0128]
a/R* = 39.19 [0.06]
b = 0.90 [0.02]
Seff = 112.07 [42.28]
Teff = 830 [78] K
Rp = 60.83 [17.96] Re
a = 0.1394 [0.0344] AU
Ag = 0.17 [0.07] [-11.66σ]
Teffp = 828 [47] K [-0.02σ]

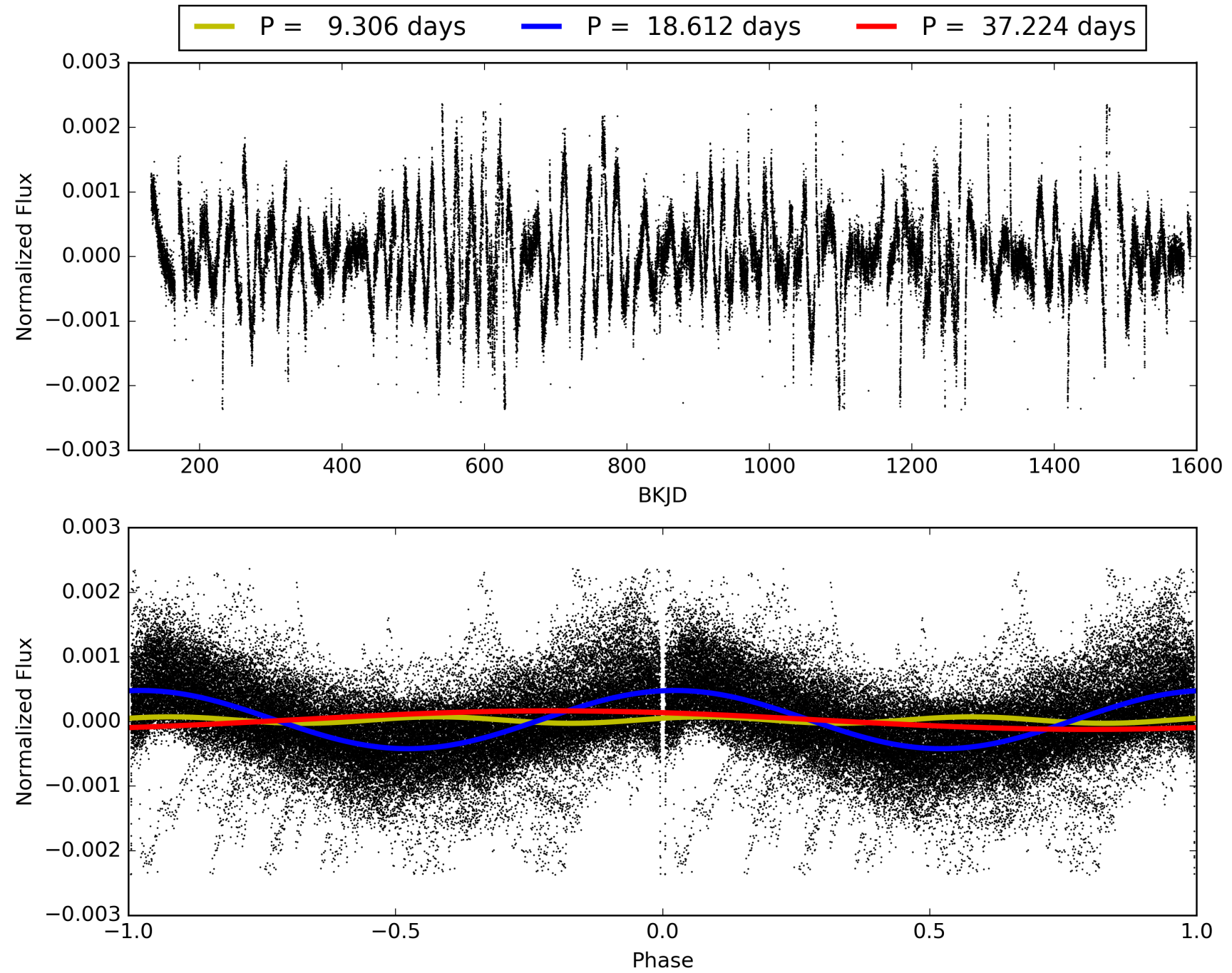
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 11.3%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [71/71]
GhostDiagnostic-chr: 6.354
Centroid-sig: 0.0%
Centroid-so: 0.157 arcsec [156.04σ]
OotOffset-rm: 0.004 arcsec [0.06σ]
KicOffset-rm: 0.176 arcsec [2.62σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 005095269-01, PDC Light Curves

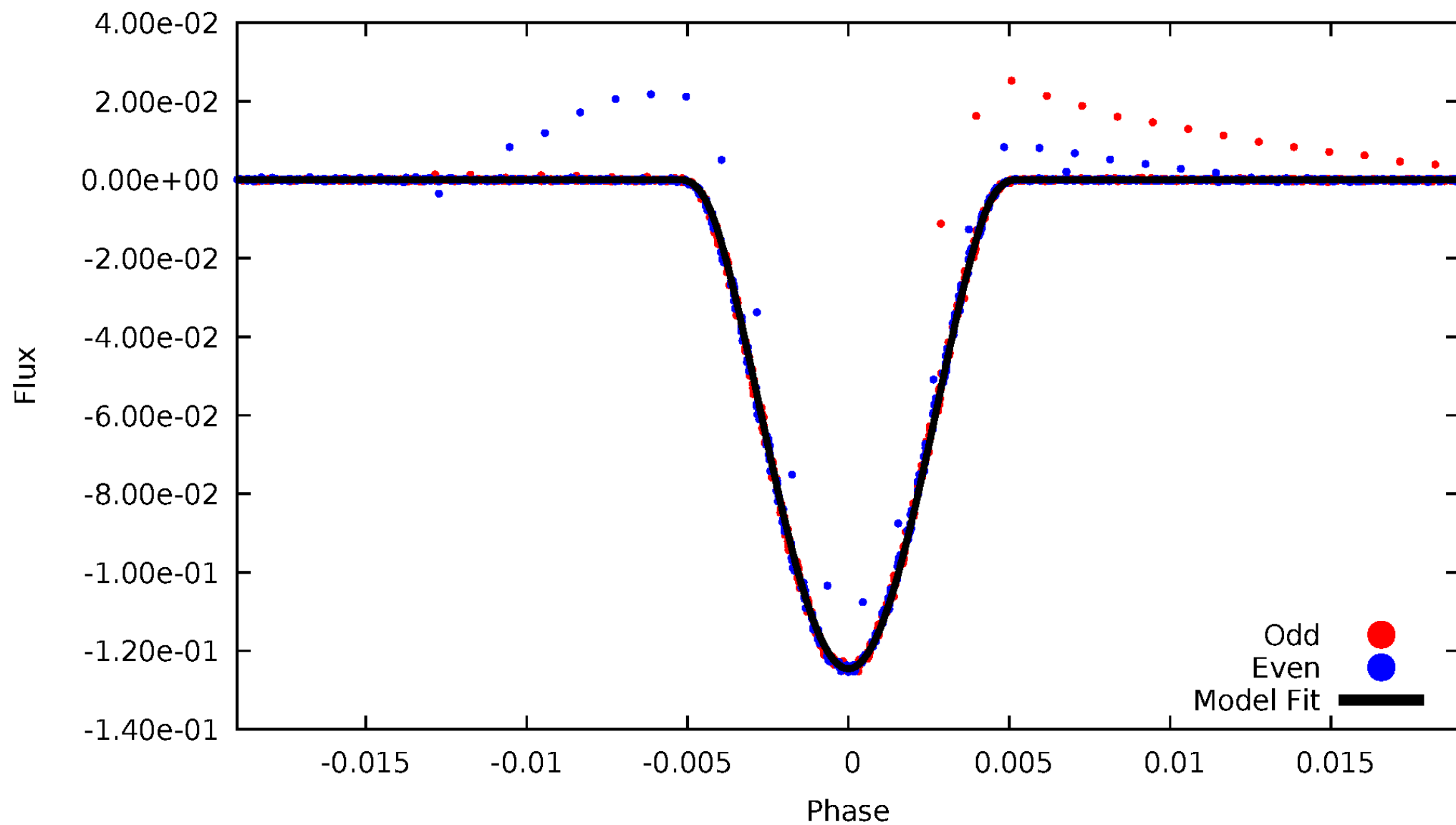


TCE 005095269-01



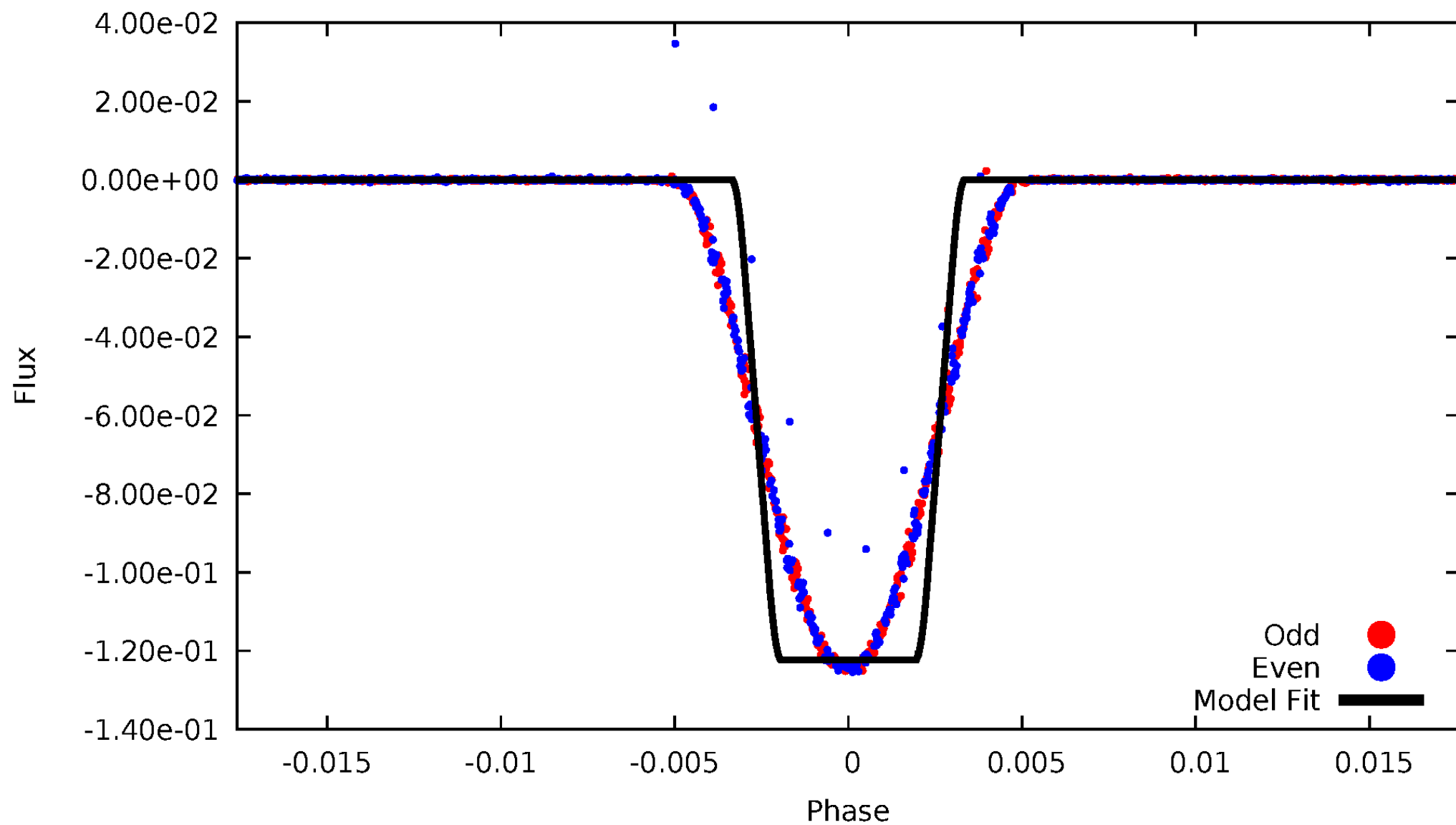
DV Odd/Even

TCE 005095269-01



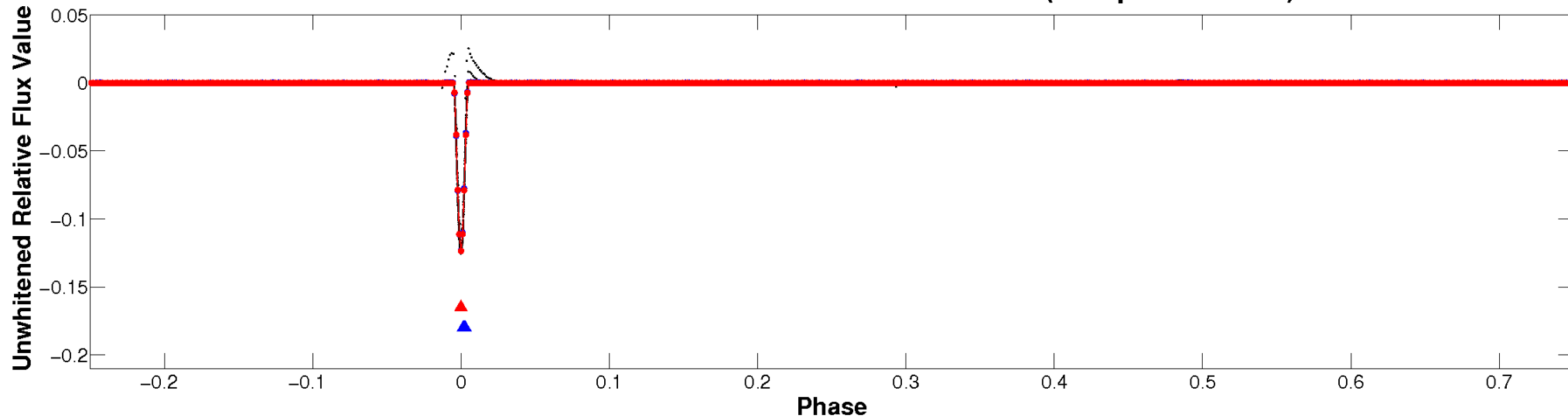
ALT Odd/Even

TCE 005095269-01

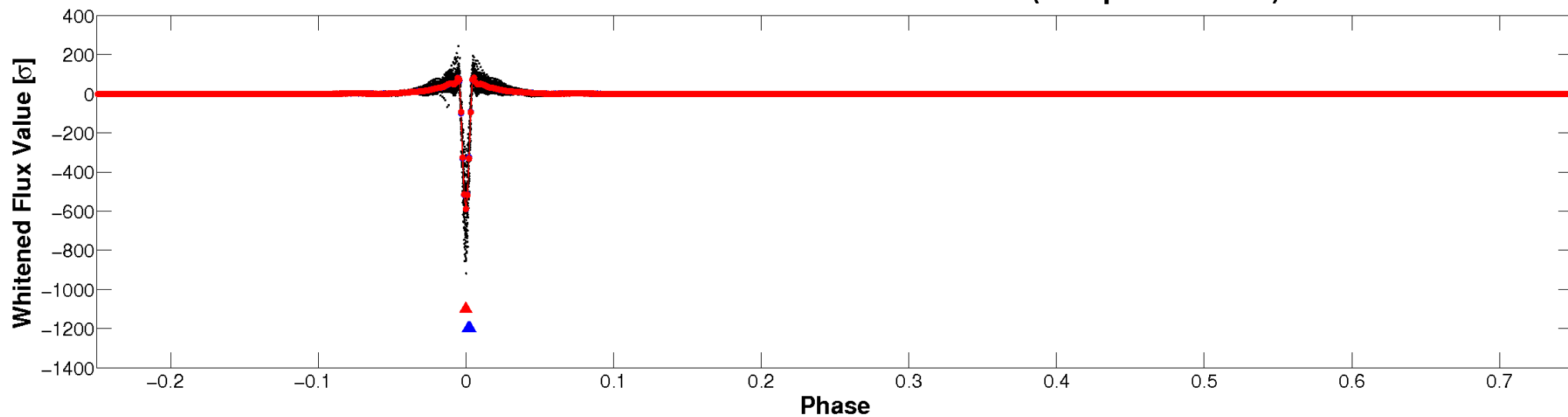


Non-Whitened Vs. Whitened Light Curve

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

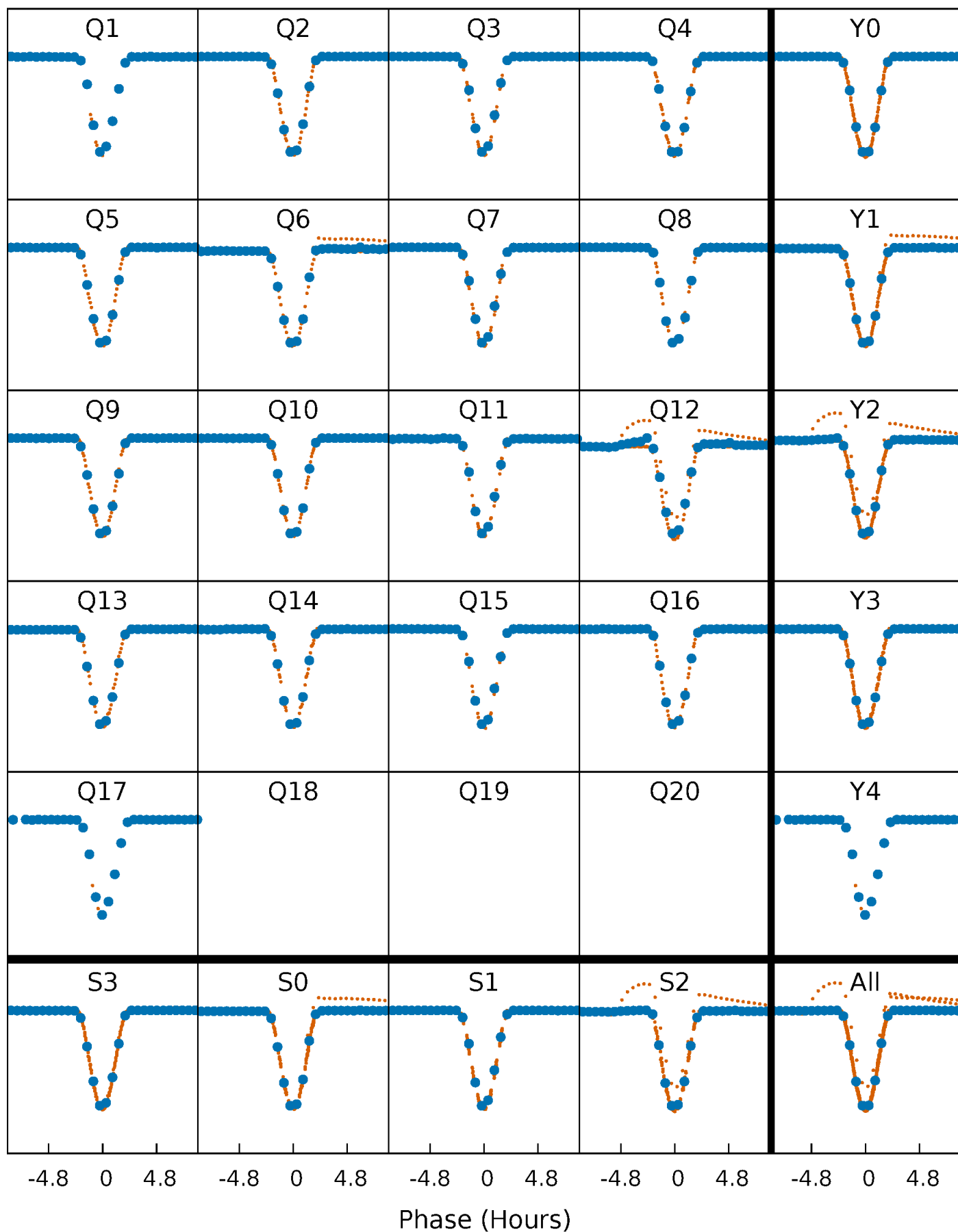


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



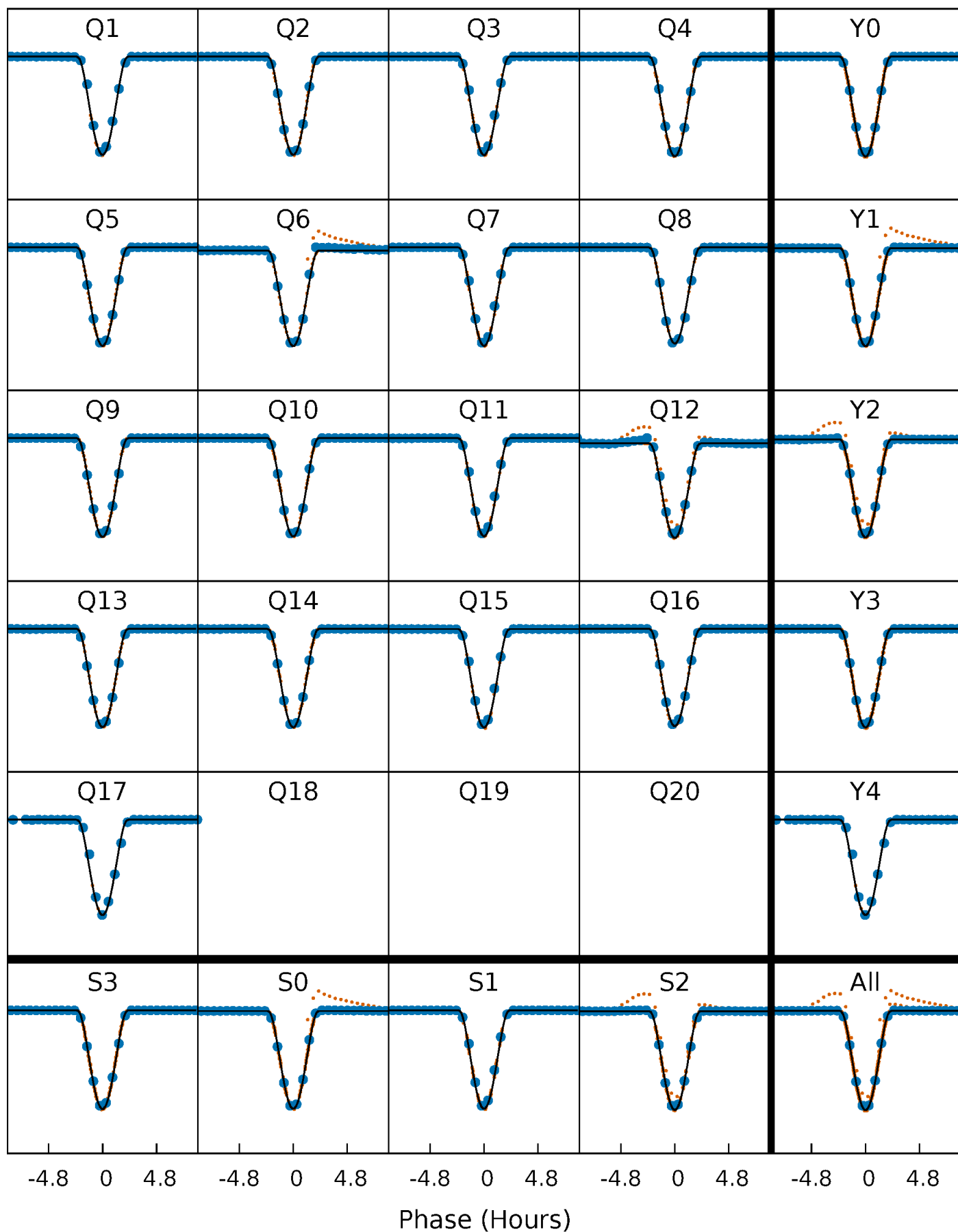
PDC Quarter-Phased Transit Curves

TCE 005095269-01 P= 18.611952 Days $T_0=133.866834$ (BKJD)



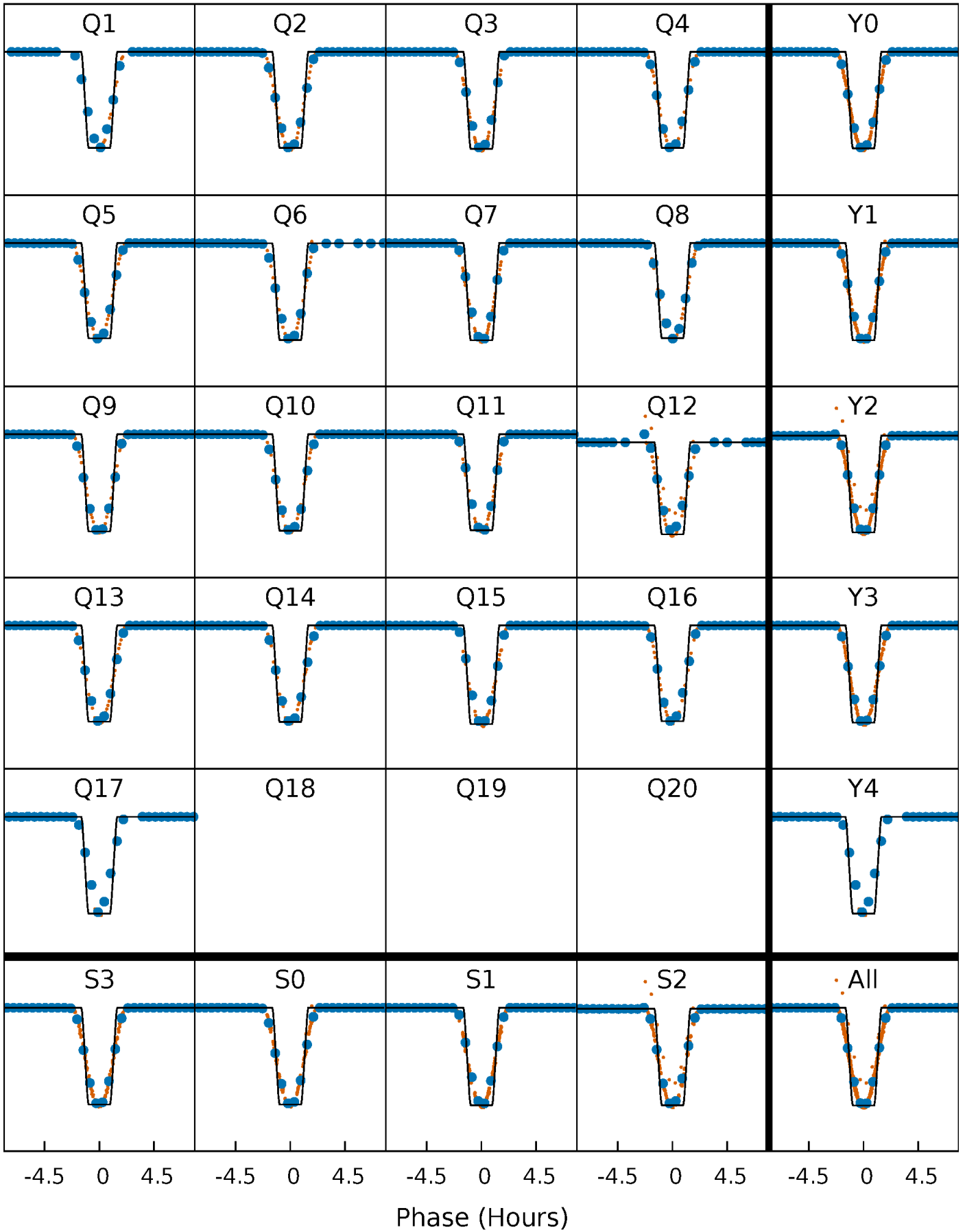
DV Quarter-Phased Transit Curves

TCE 005095269-01 P= 18.611952 Days $T_0=133.866834$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

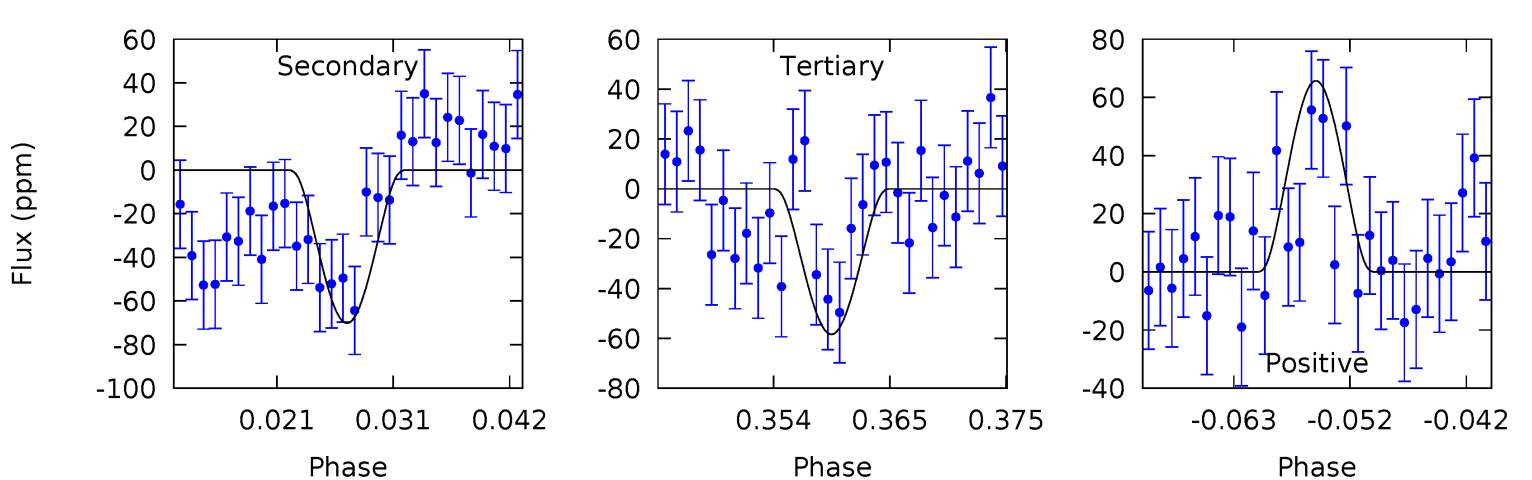
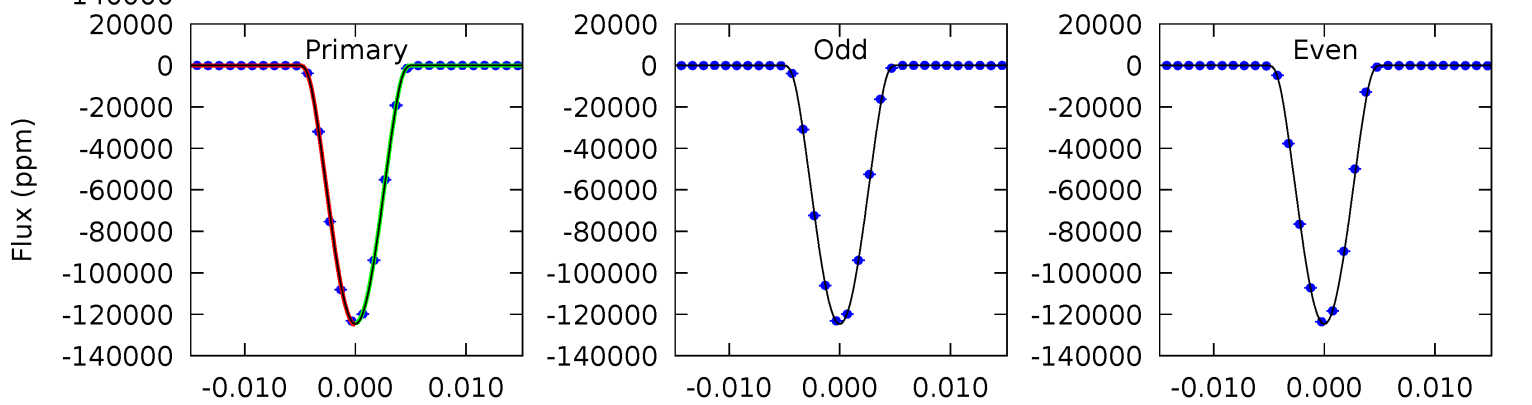
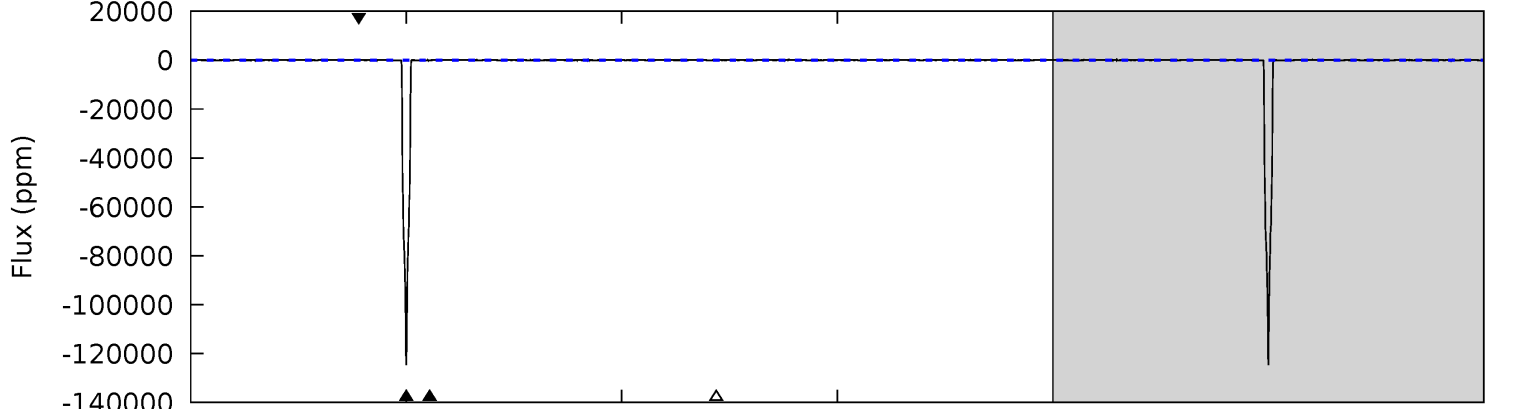
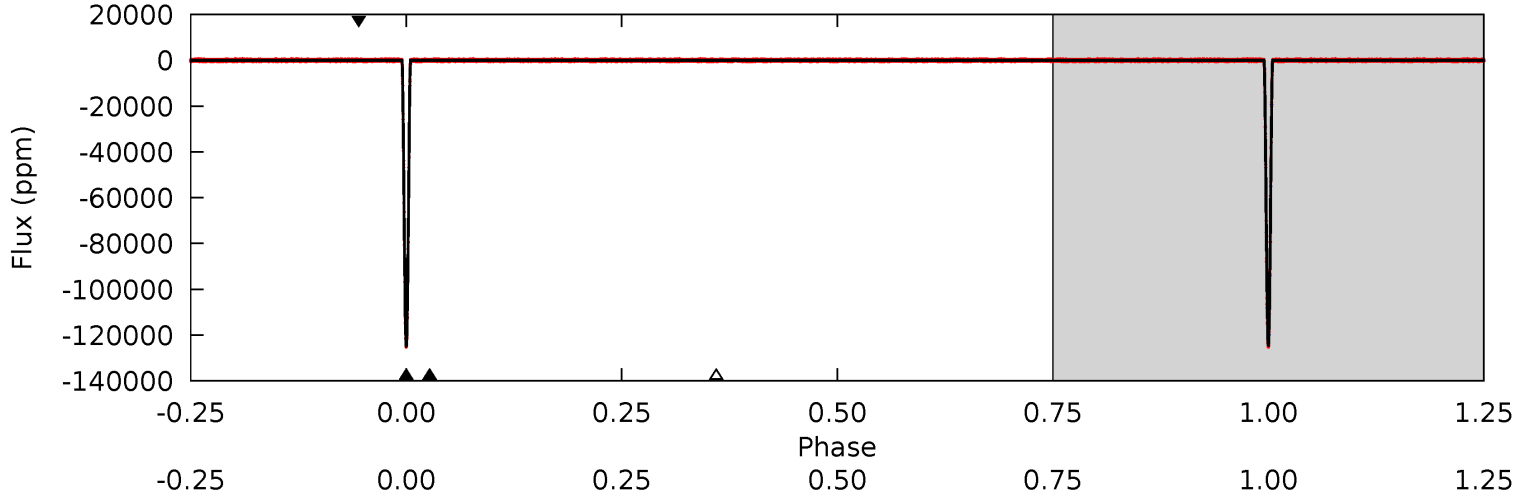
TCE 005095269-01 P= 18.611910 Days $T_0=133.867959$ (BKJD)



DV Model-Shift Uniqueness Test

005095269-01, P = 18.611952 Days, E = 115.254882 Days

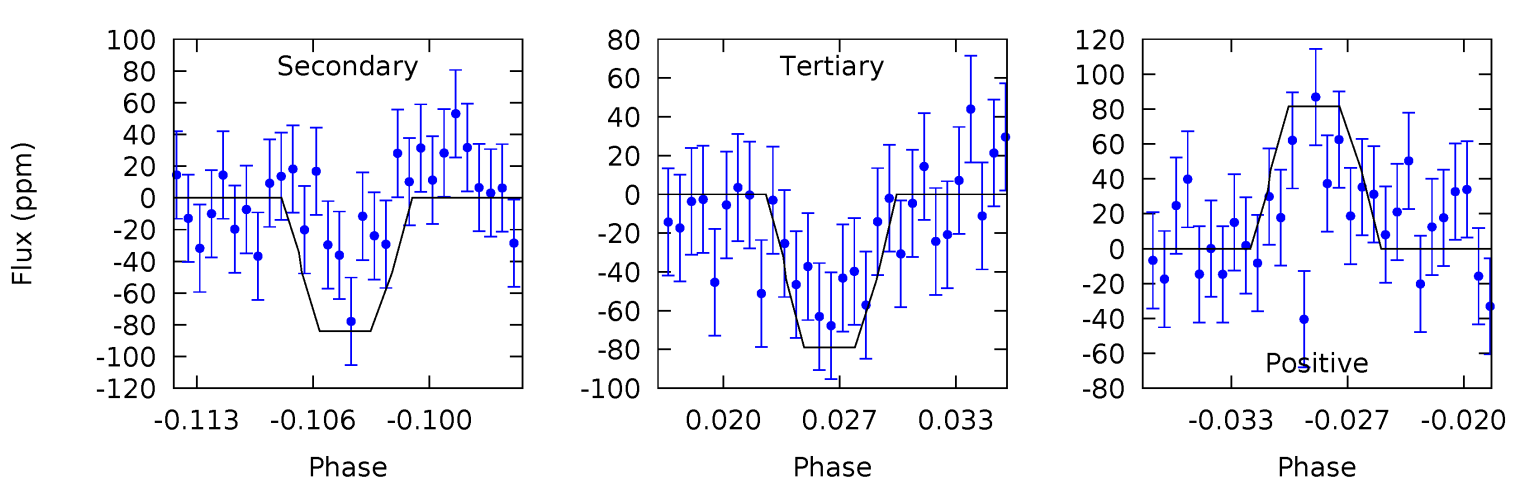
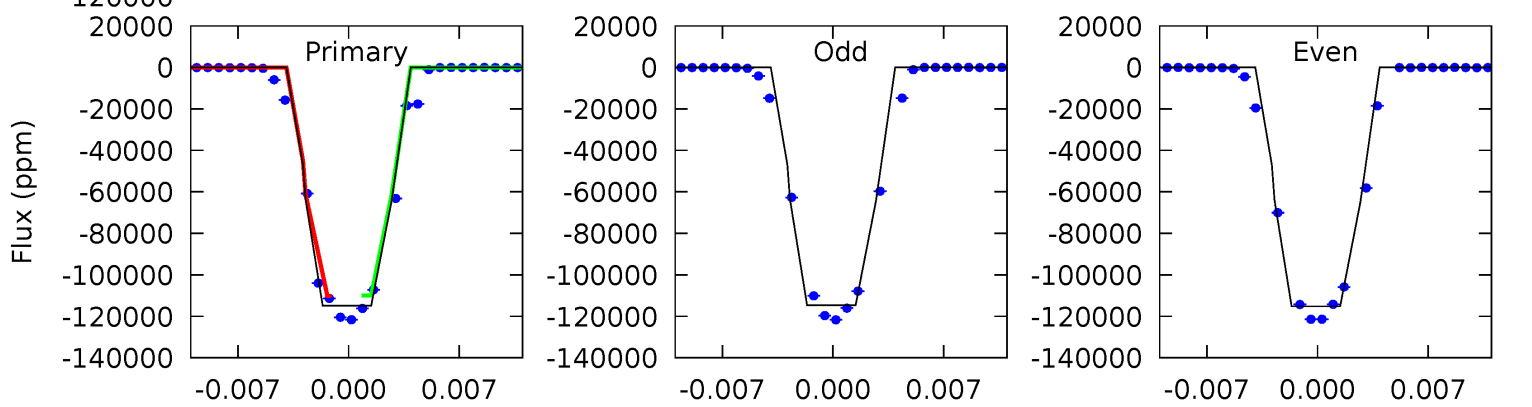
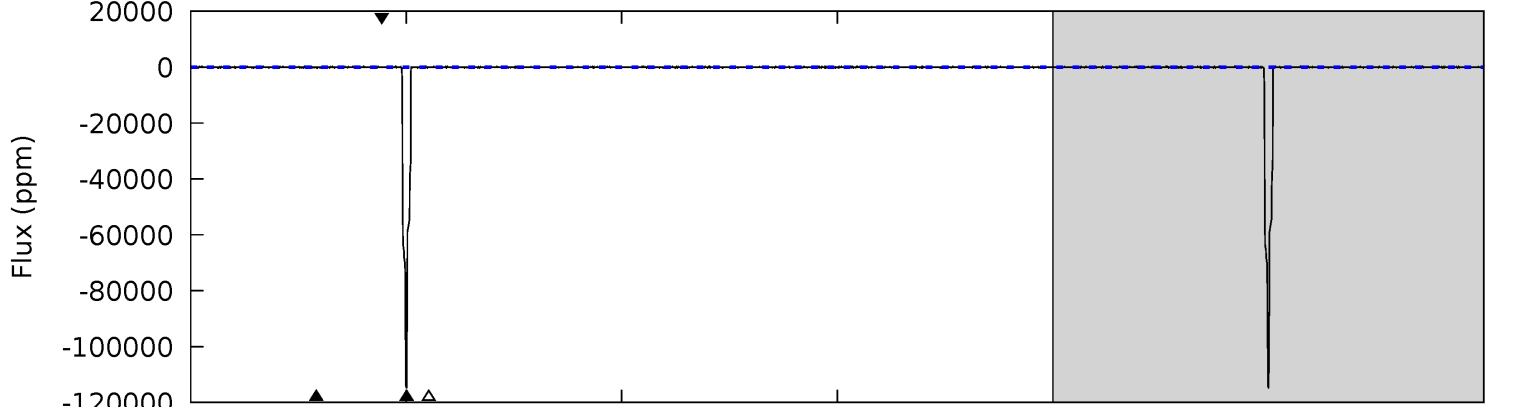
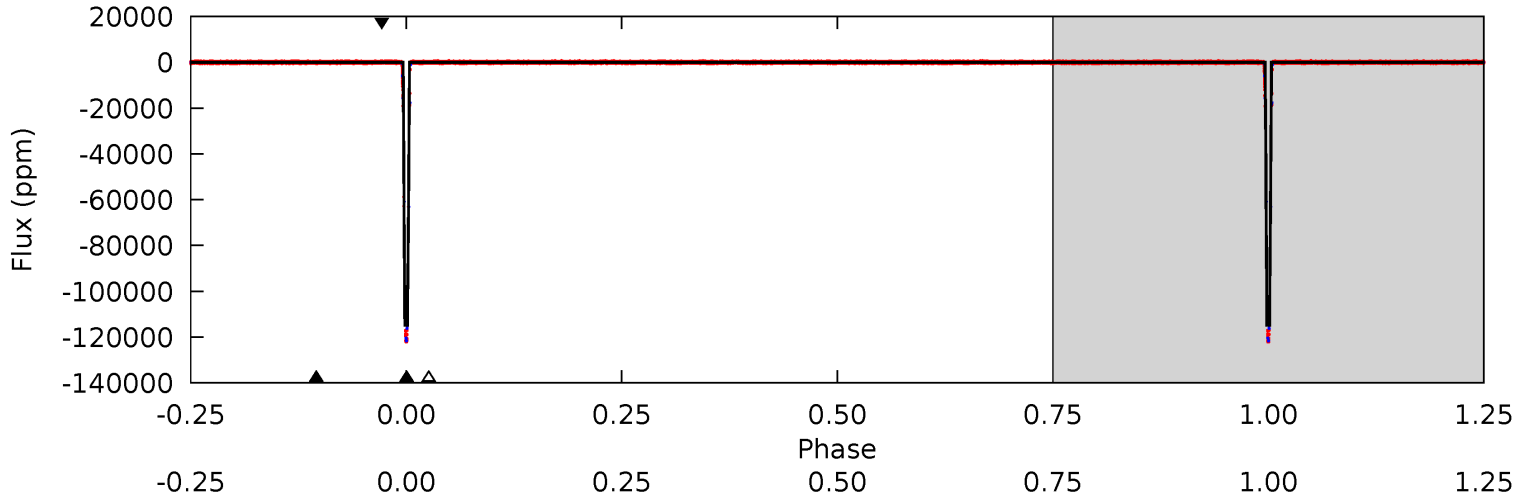
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12164	6.85	5.70	6.41	5.02	2.56	1.92	12158	12158	1.15	0.43	0.02	0.99	0.00	0



Alt Model-Shift Uniqueness Test

005095269-01, P = 18.611910 Days, E = 115.256049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5264	3.85	3.62	3.73	5.10	2.71	1.06	5260	5260	0.24	0.12	13.0	0.99	0.00	0



Stellar Parameters For KIC 005095269

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6492^{+162}_{-194}	$4.320^{+0.105}_{-0.195}$	$-0.380^{+0.250}_{-0.300}$	$1.170^{+0.344}_{-0.185}$	$1.041^{+0.160}_{-0.117}$	$0.914^{+0.520}_{-0.453}$
	+2%/-3%	+2%/-5%	+66%/-79%	+29%/-16%	+15%/-11%	+57%/-50%
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 005095269-01 / KOI 6518.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-70 ± 10	$61.78^{+10.92}_{-5.97}$	1168^{+88}_{-63}	-1779^{+135}_{-117}	$0.193^{+0.056}_{-0.054}$
Alt.	-84 ± 22	$45.32^{+7.54}_{-4.70}$	1169^{+93}_{-70}	1795^{+135}_{-3210}	$0.421^{+0.164}_{-0.127}$

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

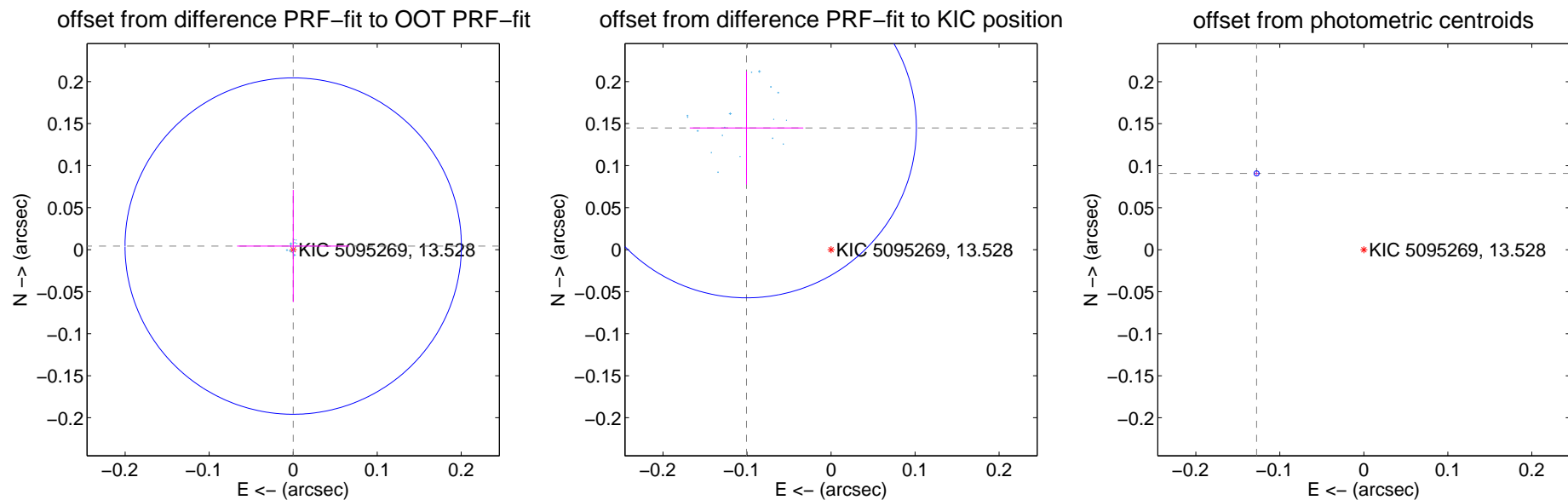
DV Centroid Data

Supplemental centroid analysis for 005095269-01. Kepler magnitude: 13.53. Transit SNR 6030.55

There are 17 quarters with good PRF difference image offsets

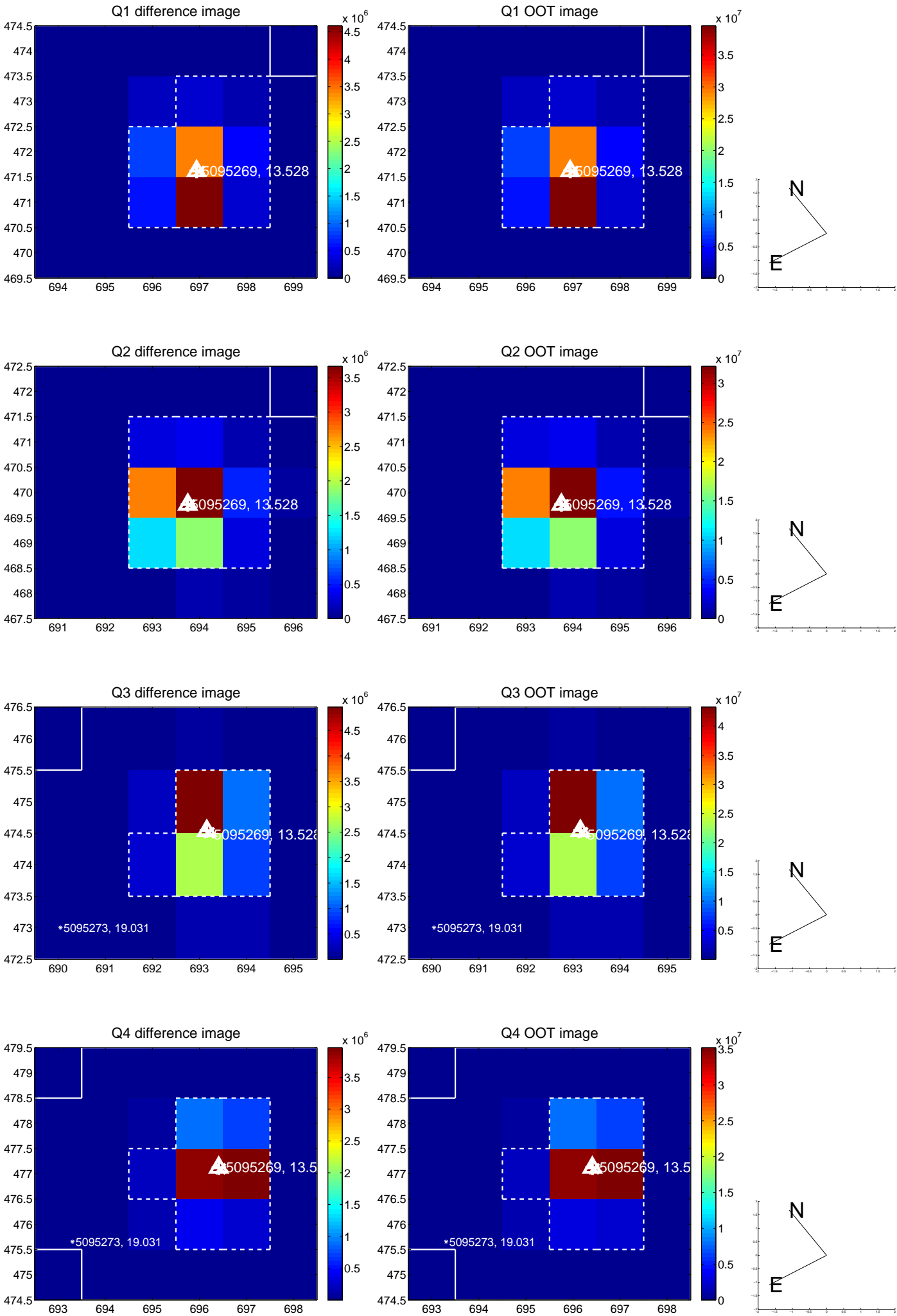
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.004 ± 0.067	0.06	-0.000 ± 0.067	0.004 ± 0.067
PRF-fit source offset from KIC position	0.176 ± 0.067	2.62	0.101 ± 0.068	0.145 ± 0.067
photometric centroid source offset	0.16 ± 0.00	156.04	0.13 ± 0.00	0.09 ± 0.00

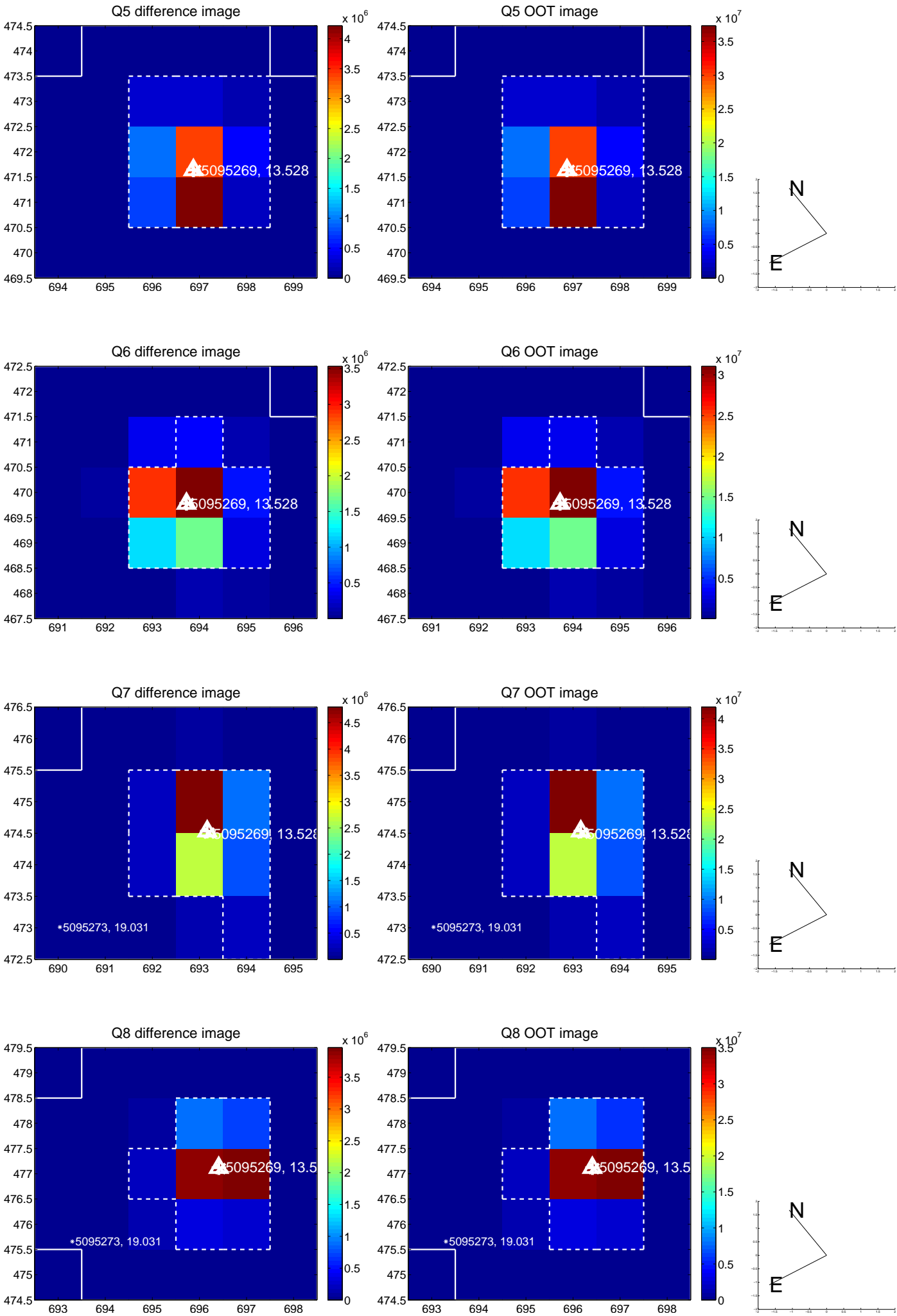


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

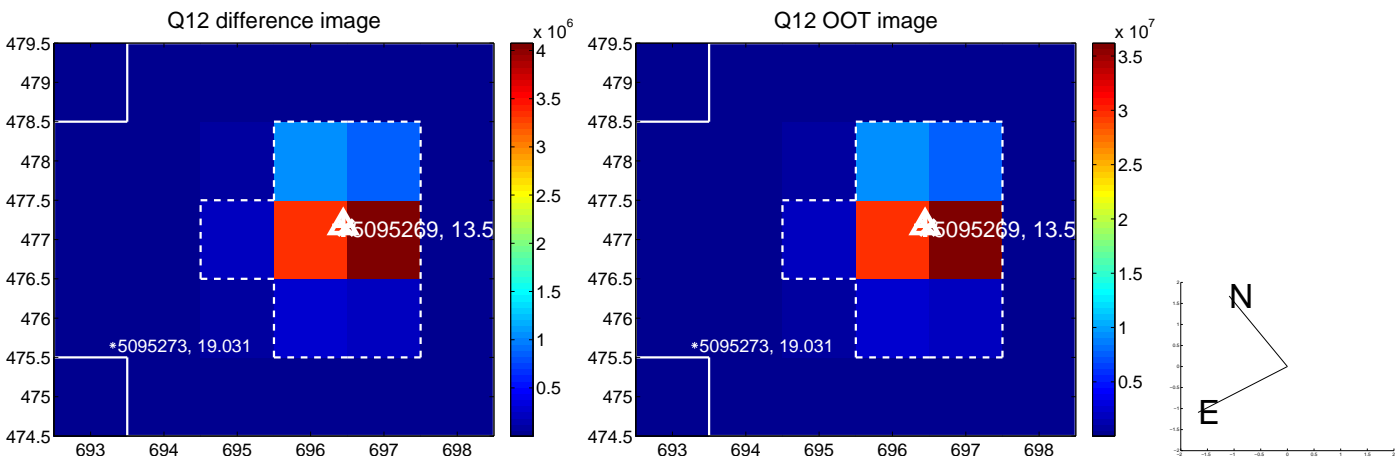
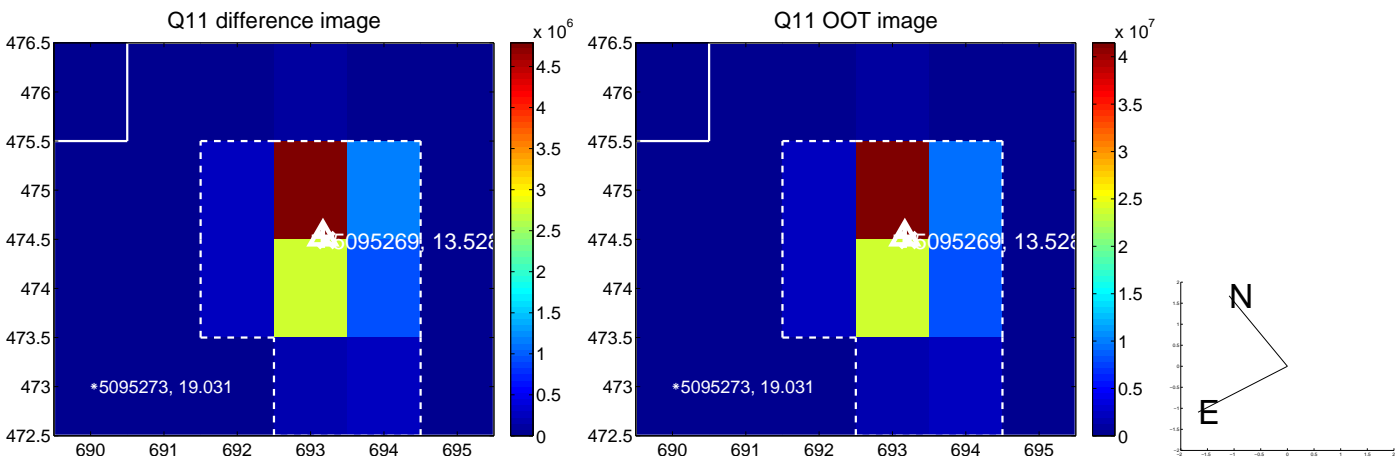
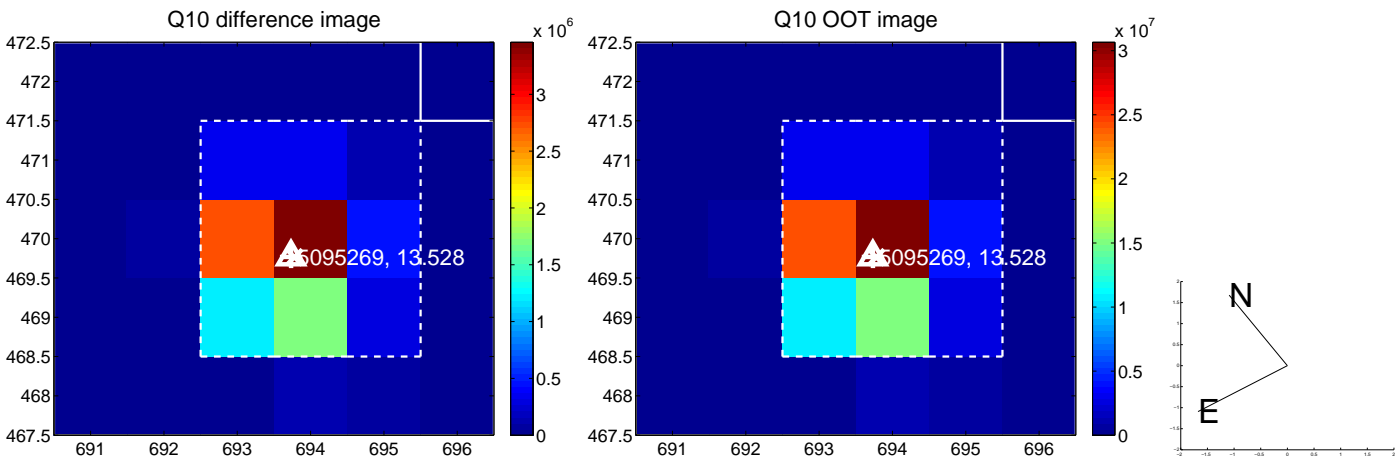
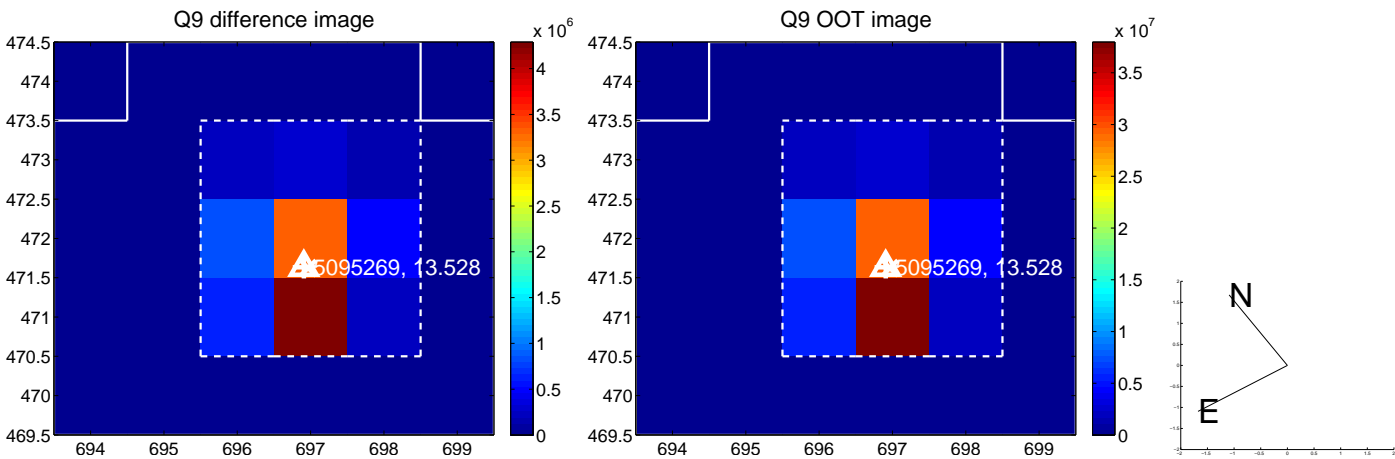
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



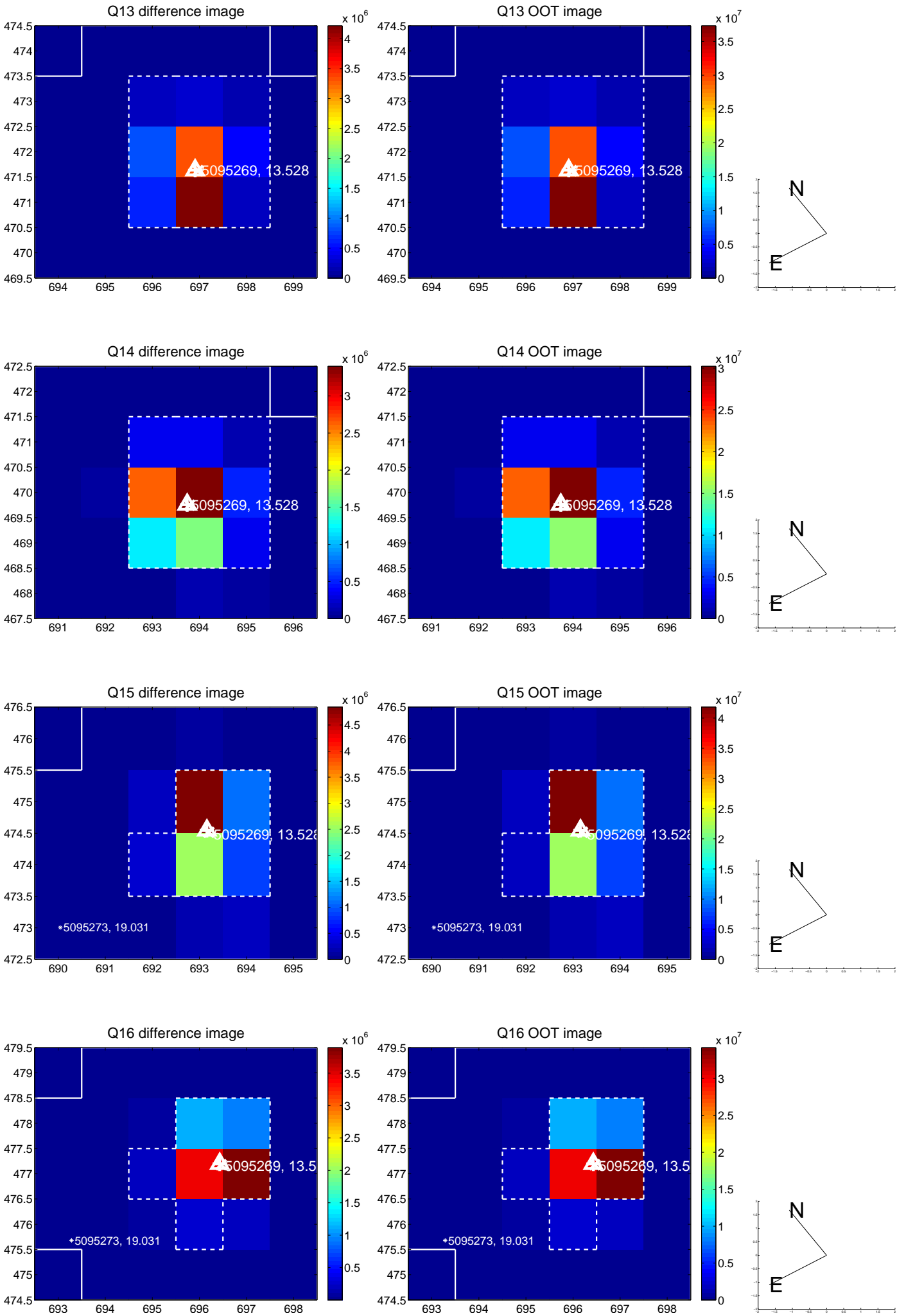
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



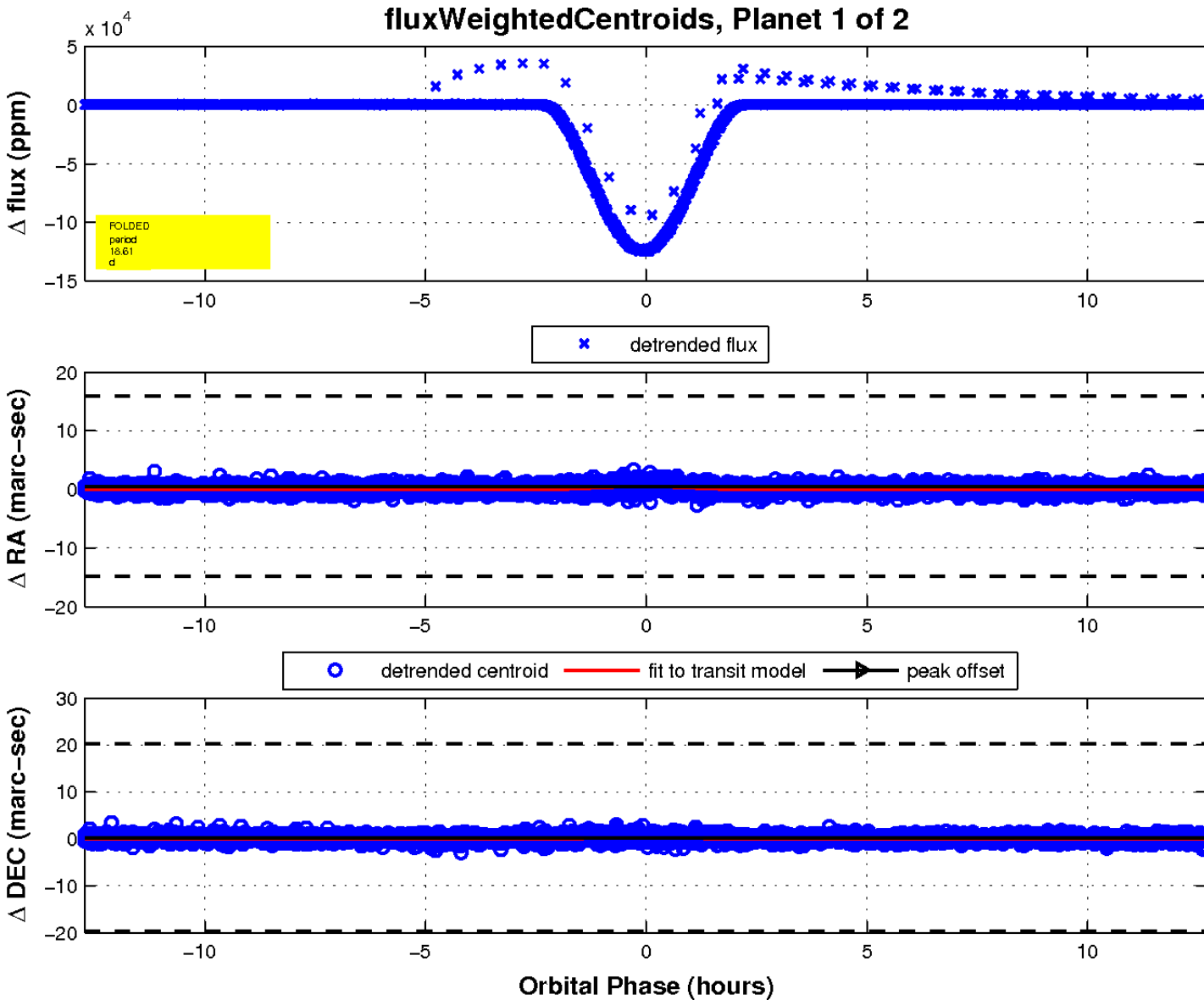
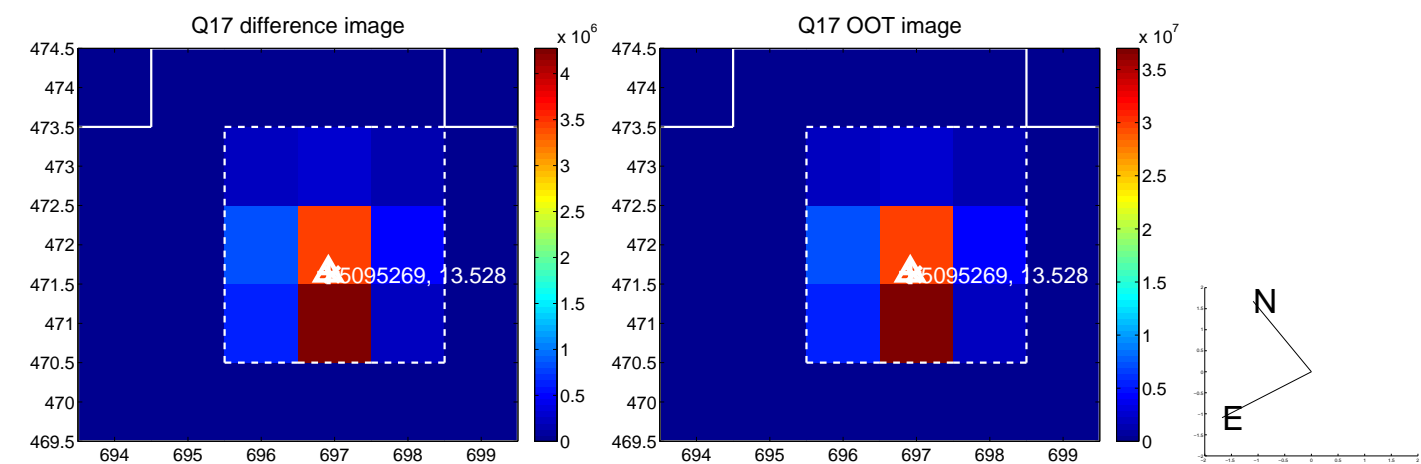
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



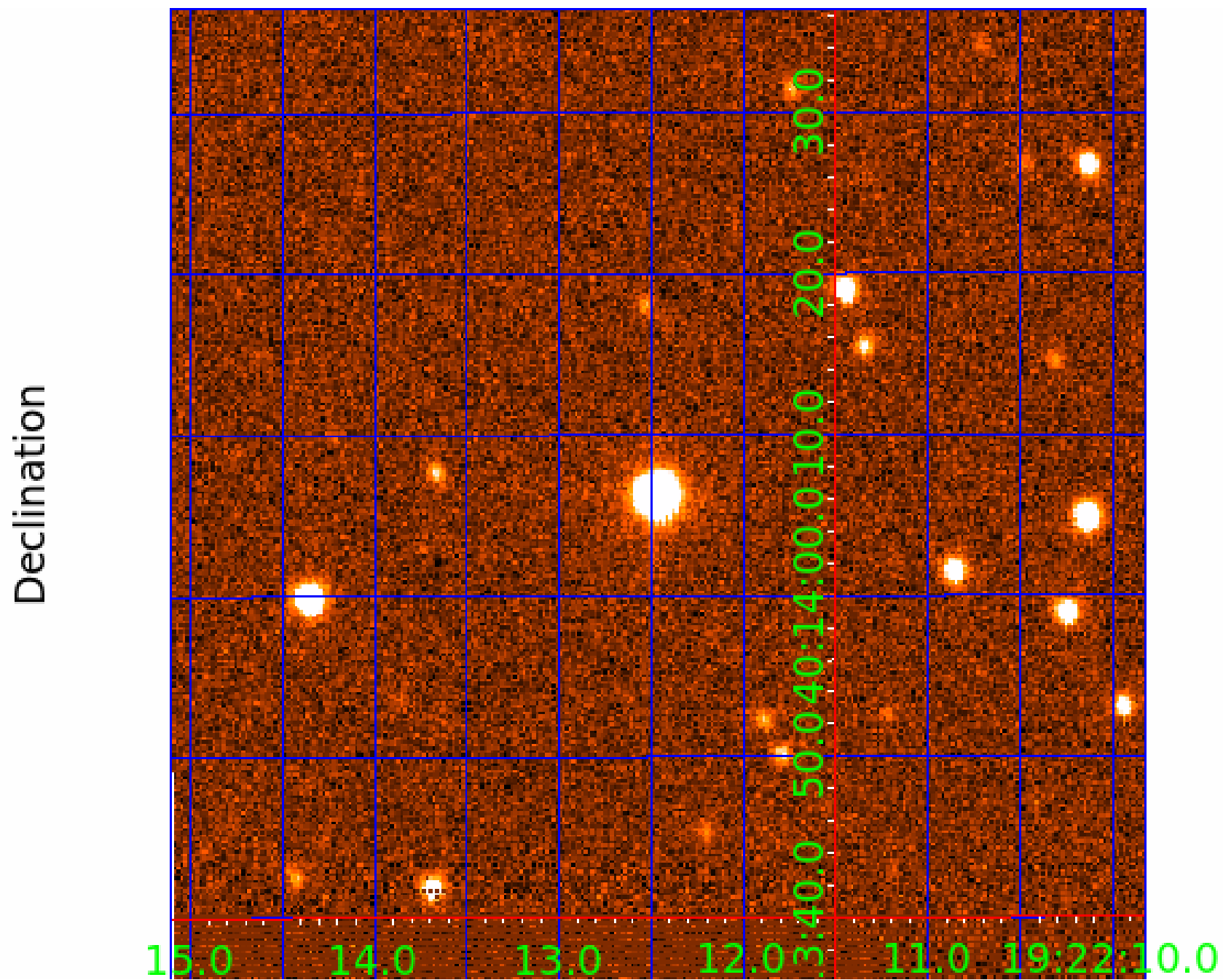
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005095269

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})
005095269-01	OBS	6518.01	18.611952	133.866834	124575.0	4.242	8921.6	6030.5	1.17	6492	60.83	112.07
005095269-02	OBS	No	18.611662	133.918882	301.0	45.383	11.6	15.6	1.17	6492	3.95	112.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005095269-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED
005095269-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—RESIDUAL_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.

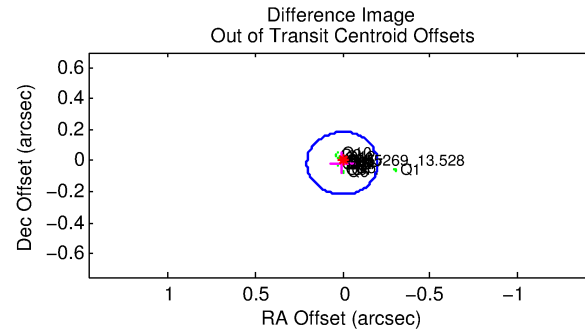
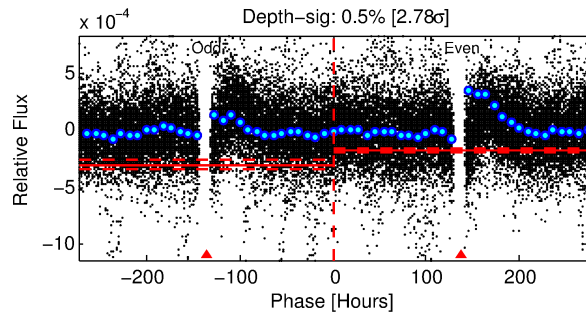
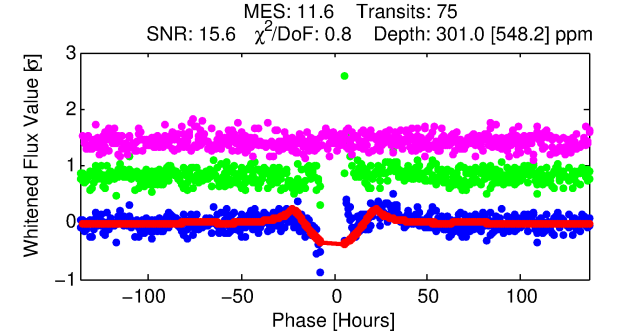
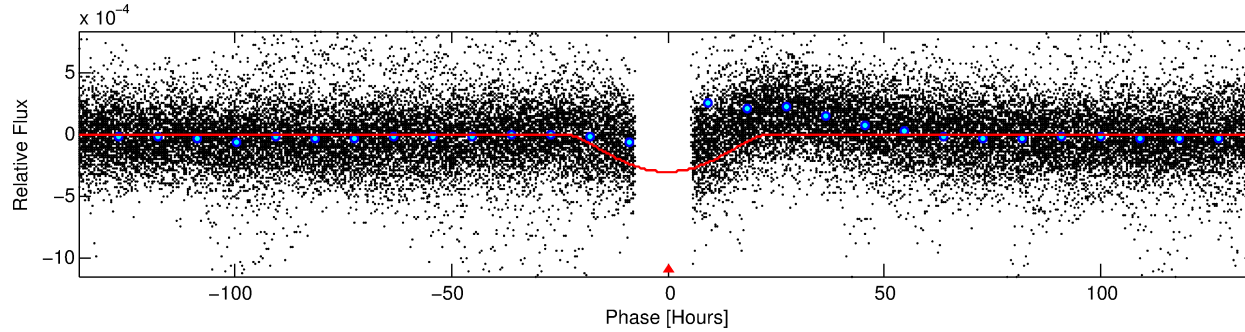
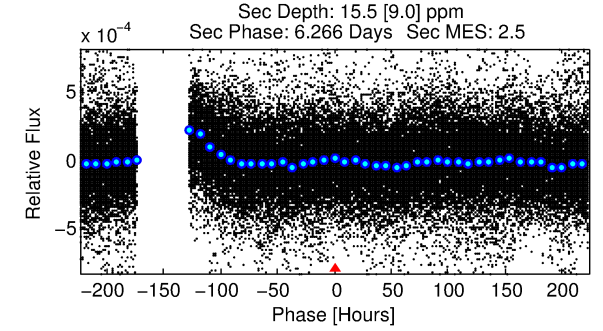
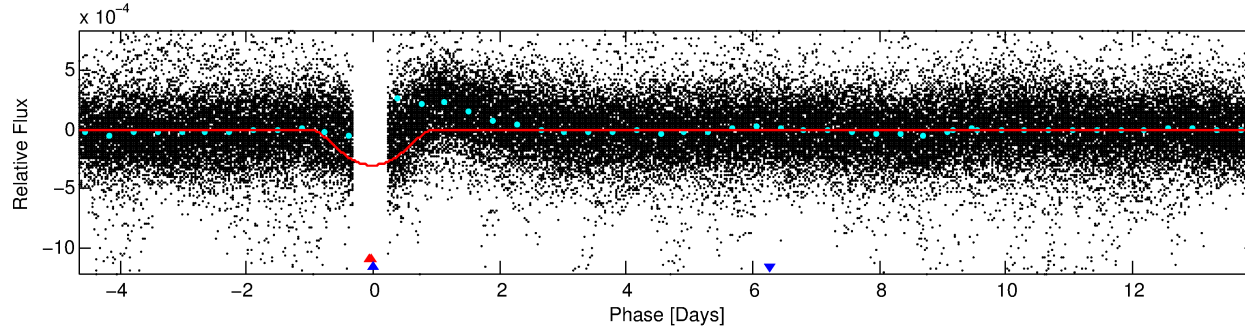
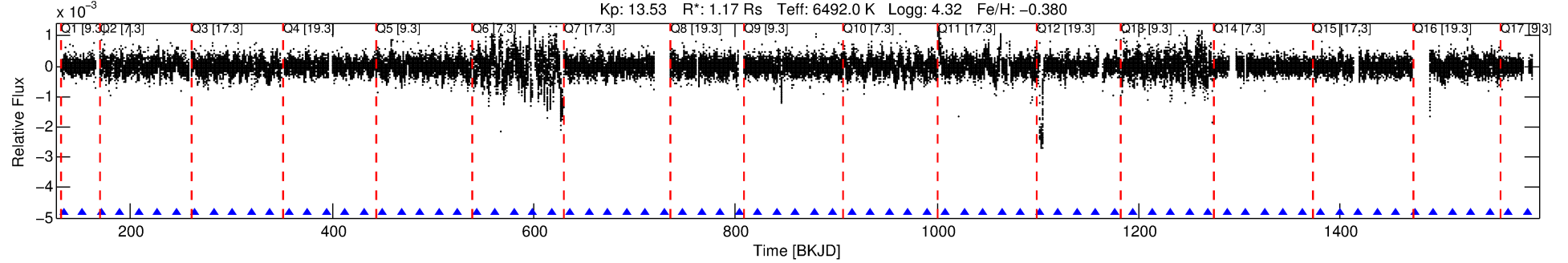
Ephemeris Match Information For 005095269-02

No Significant Match Found

DV One-Page Summary

KIC: 5095269 Candidate: 2 of 2 Period: 18.612 d
KOI: K06518 Corr: No Ephemeris Match

Kp: 13.53 R*: 1.17 Rs Teff: 6492.0 K Logg: 4.32 Fe/H: -0.380



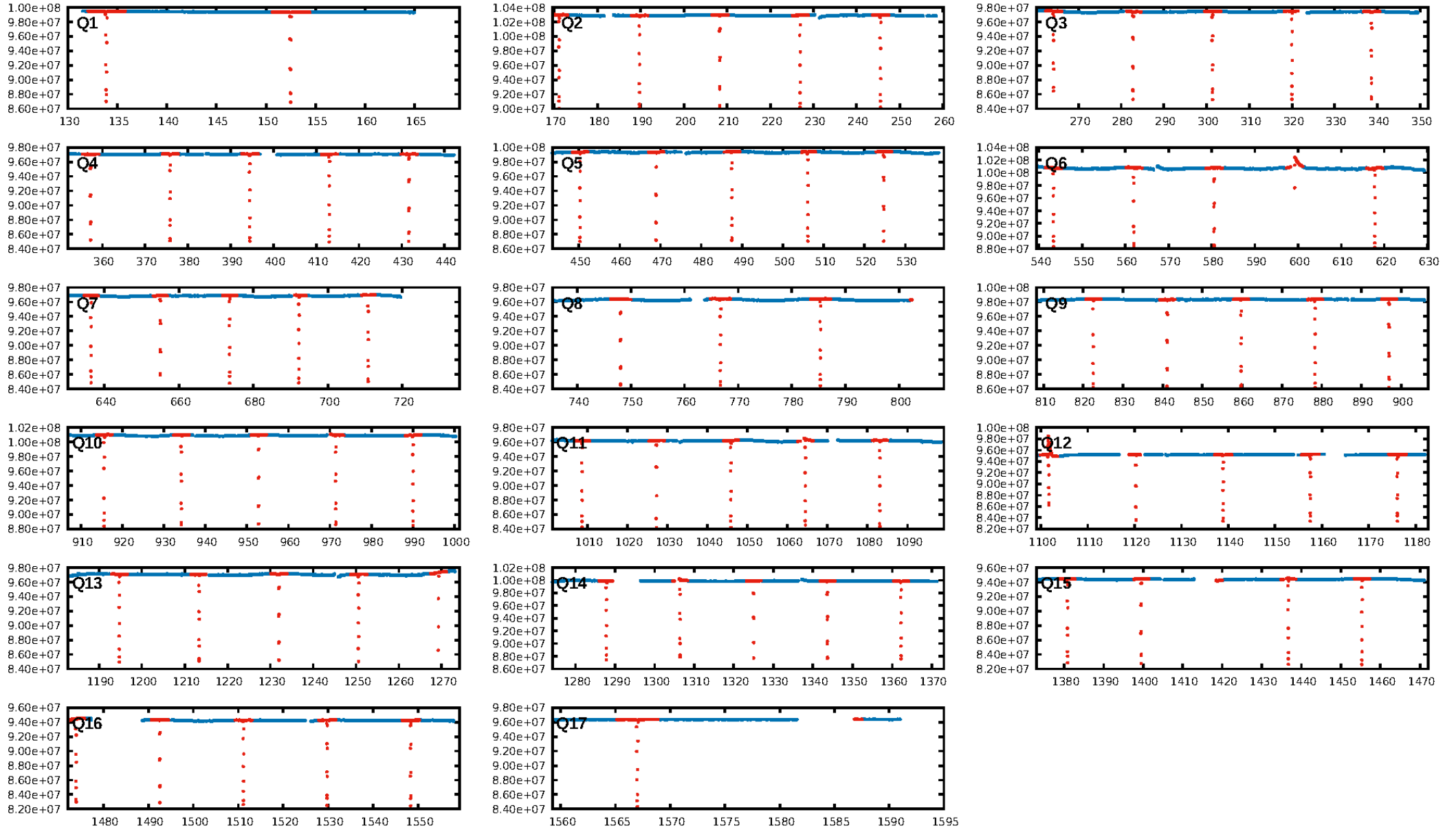
DV Fit Results:

Period = 18.61166 [0.00060] d
Epoch = 133.9189 [0.0258] BKJD
Rp/R* = 0.0310 [0.0266]
a/R* = 1.28 [0.07]
b = 1.00 [0.08]
Seff = 112.07 [42.28]
Teff = 830 [78] K
Rp = 3.95 [3.59] Re
a = 0.1394 [0.0344] AU
Ag = 10.58 [19.56] [0.49σ]
Teffp = 2313 [1052] K [1.41σ]

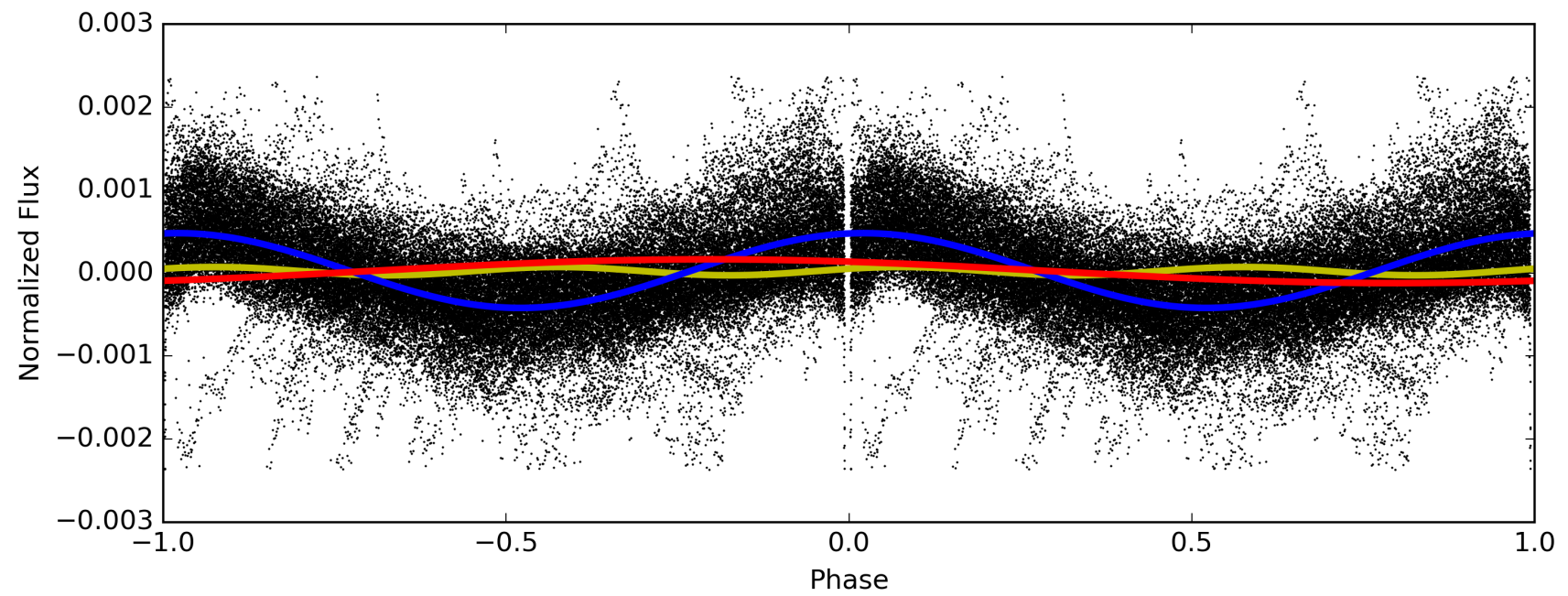
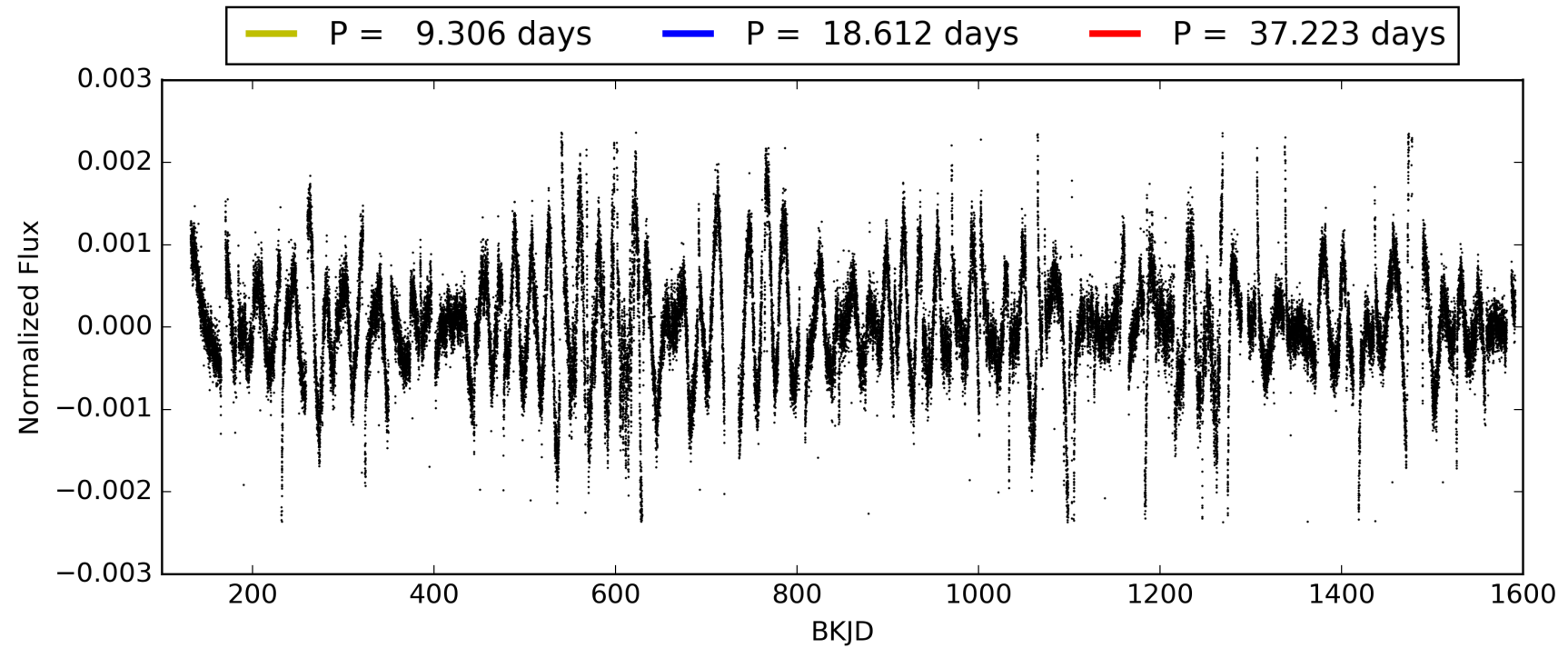
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 83.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.80e-29
RollingBand-fgt: 1.00 [72/72]
GhostDiagnostic-chr: 1.595
Centroid-sig: 2.3%
Centroid-so: 0.354 arcsec [2.30σ]
OotOffset-rm: 0.016 arcsec [0.24σ]
KicOffset-rm: 0.171 arcsec [2.49σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 005095269-02, PDC Light Curves

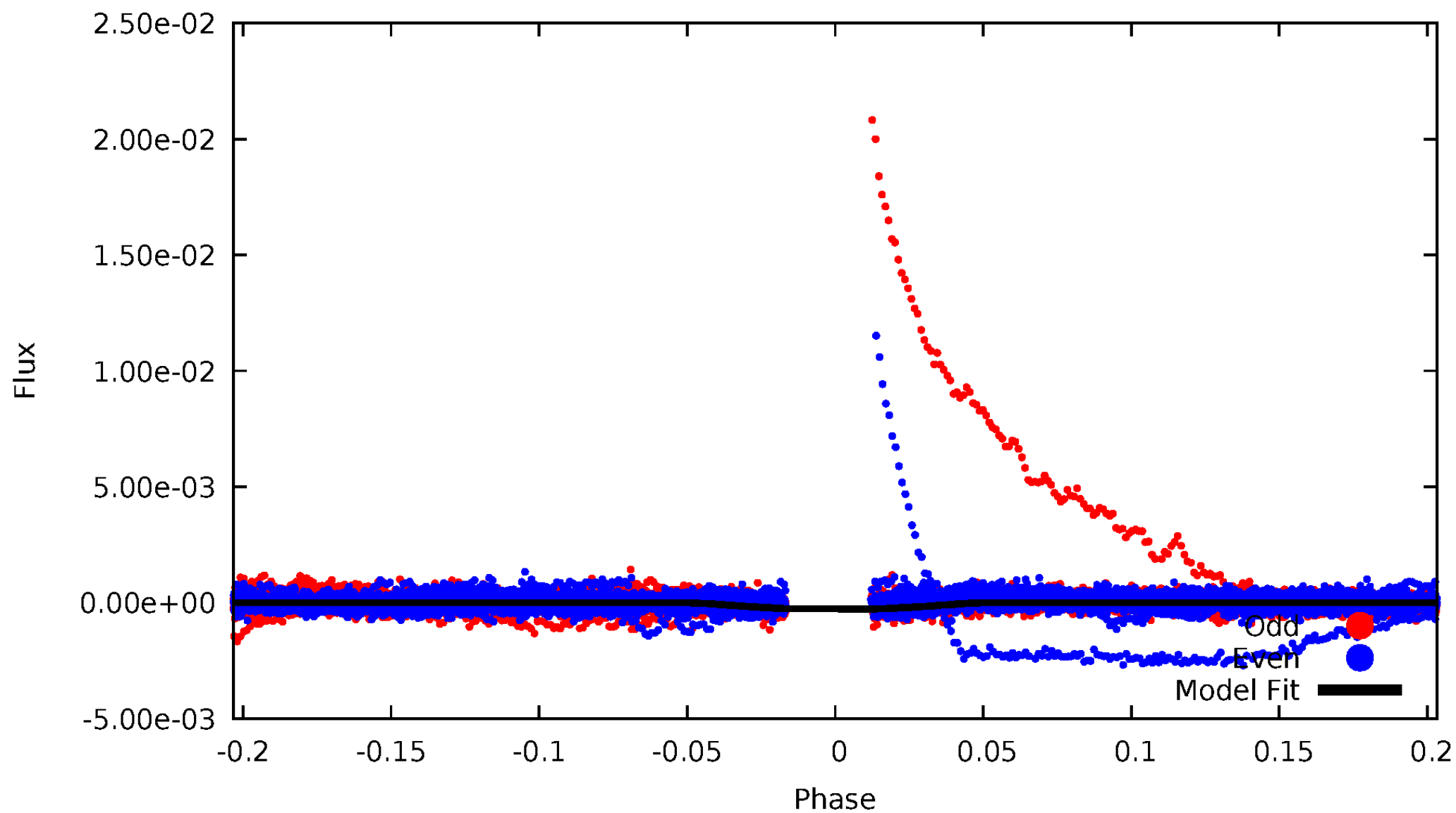


TCE 005095269-02



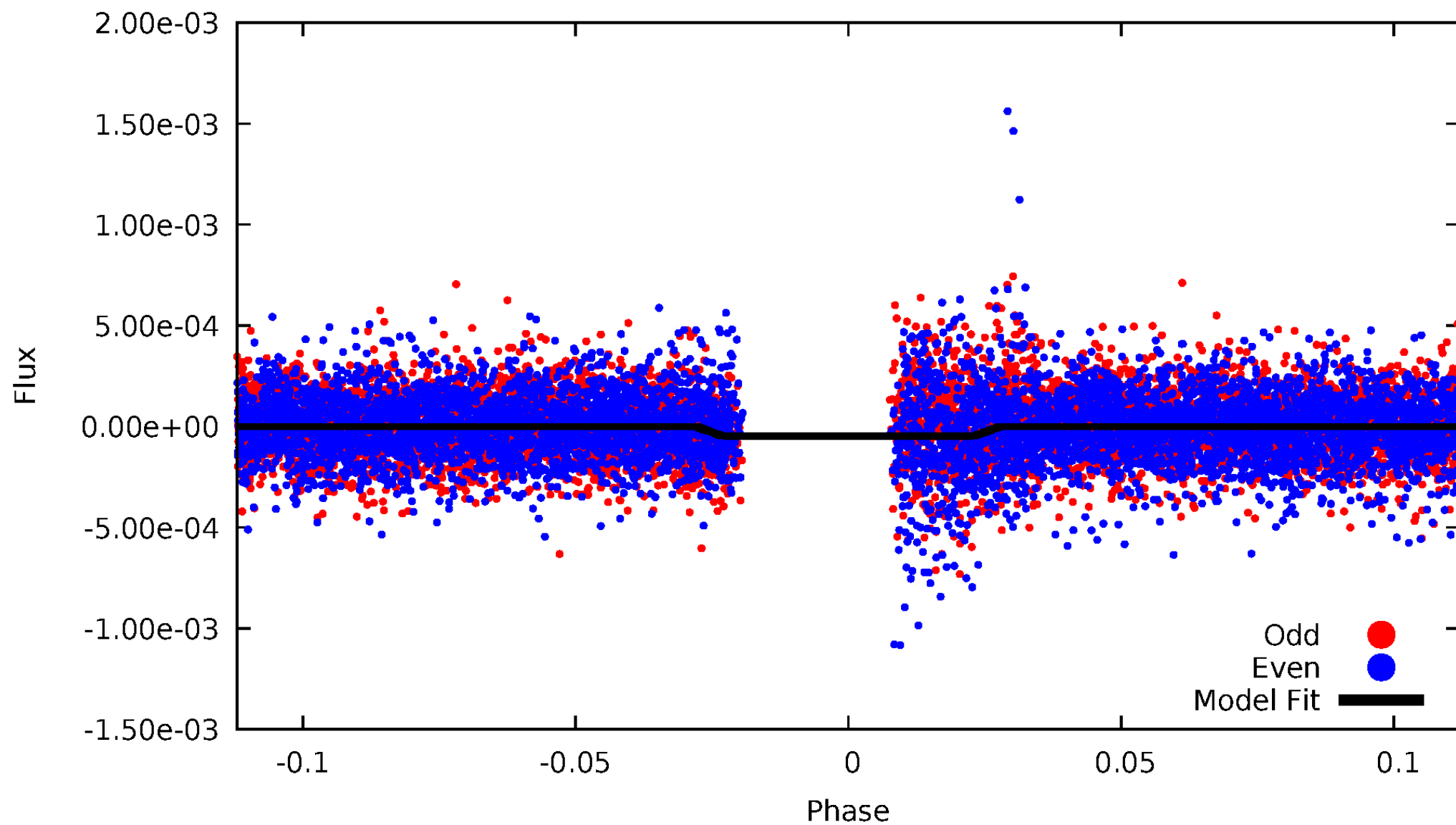
DV Odd/Even

TCE 005095269-02



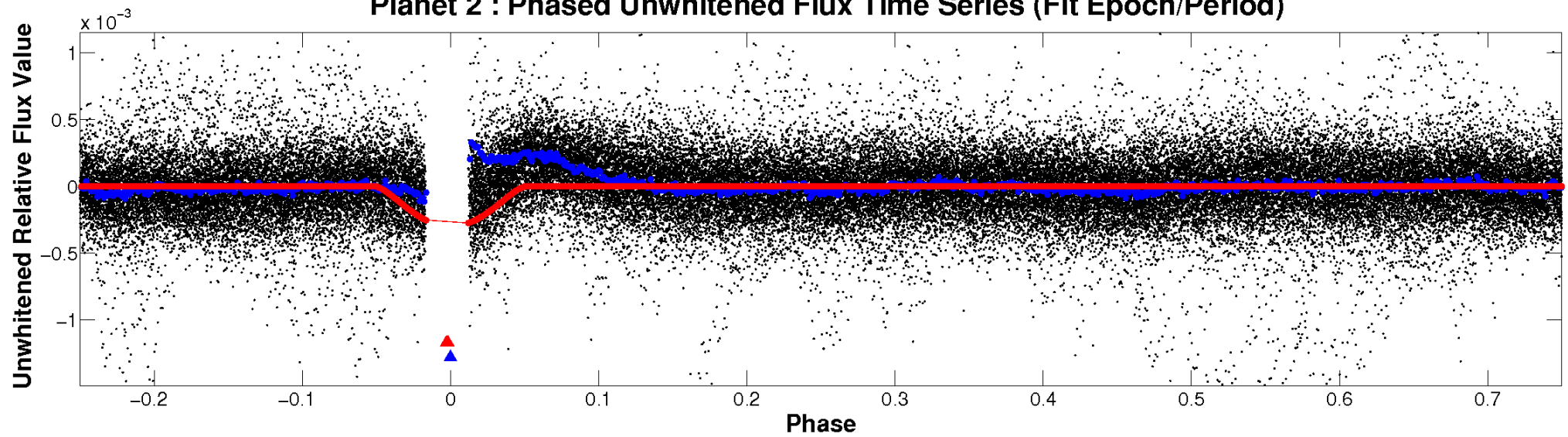
ALT Odd/Even

TCE 005095269-02

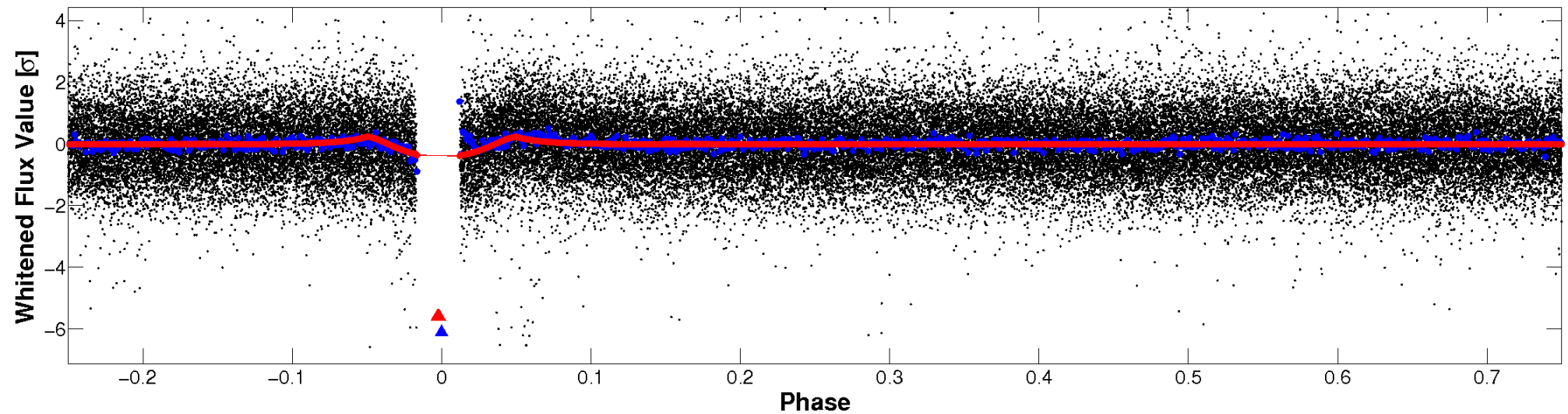


Non-Whitened Vs. Whitened Light Curve

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

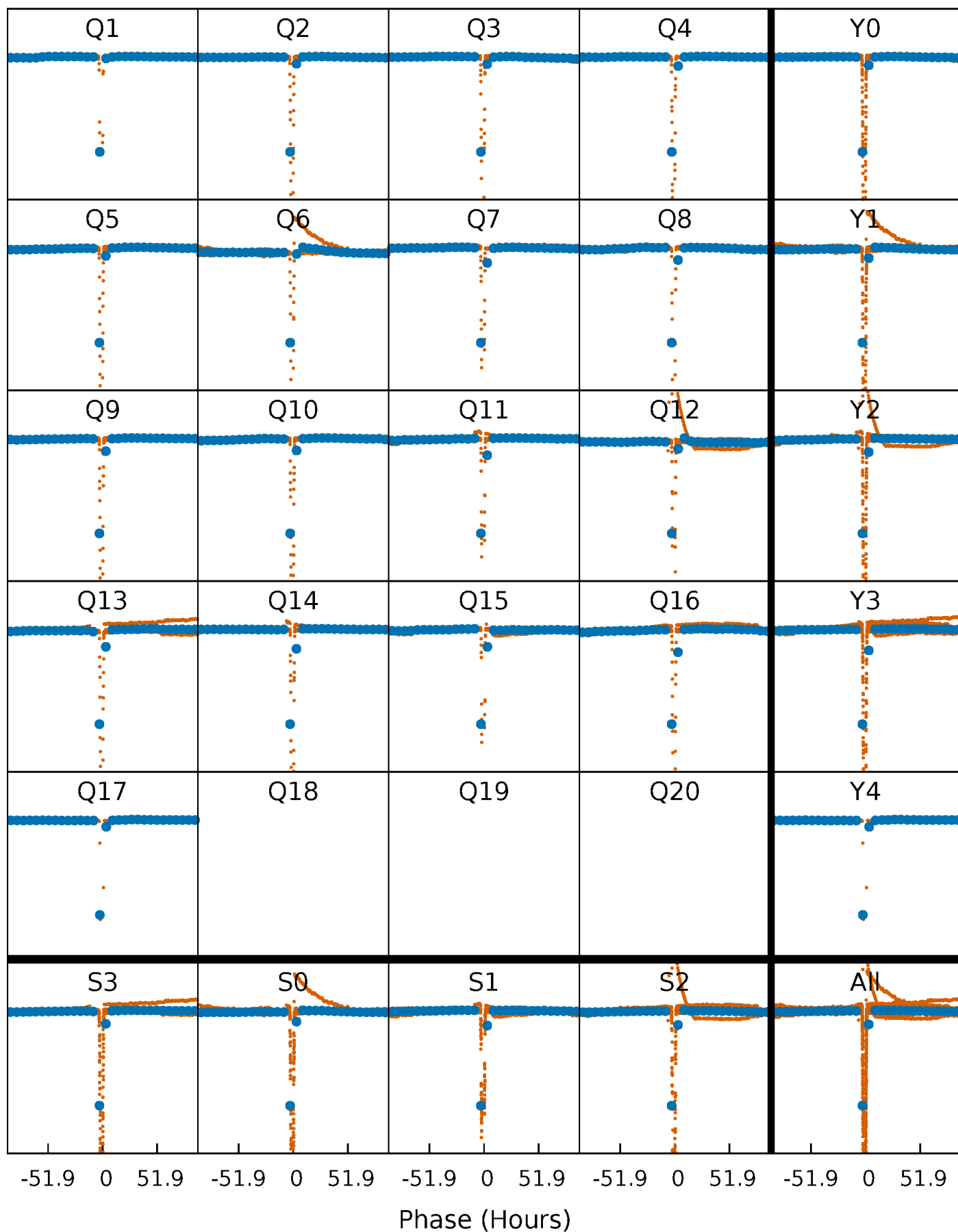


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



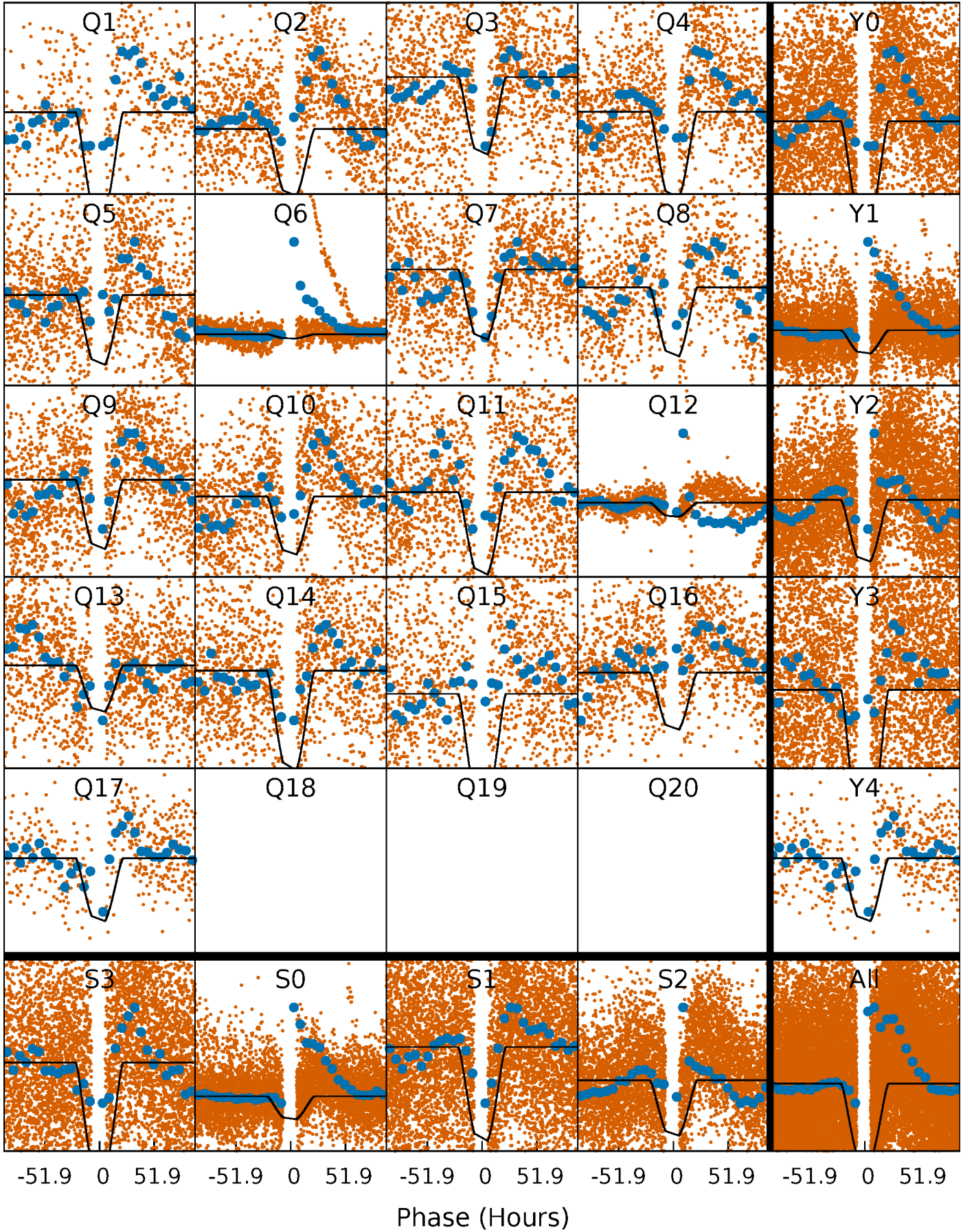
PDC Quarter-Phased Transit Curves

TCE 005095269-02 P= 18.611662 Days $T_0=133.918882$ (BKJD)



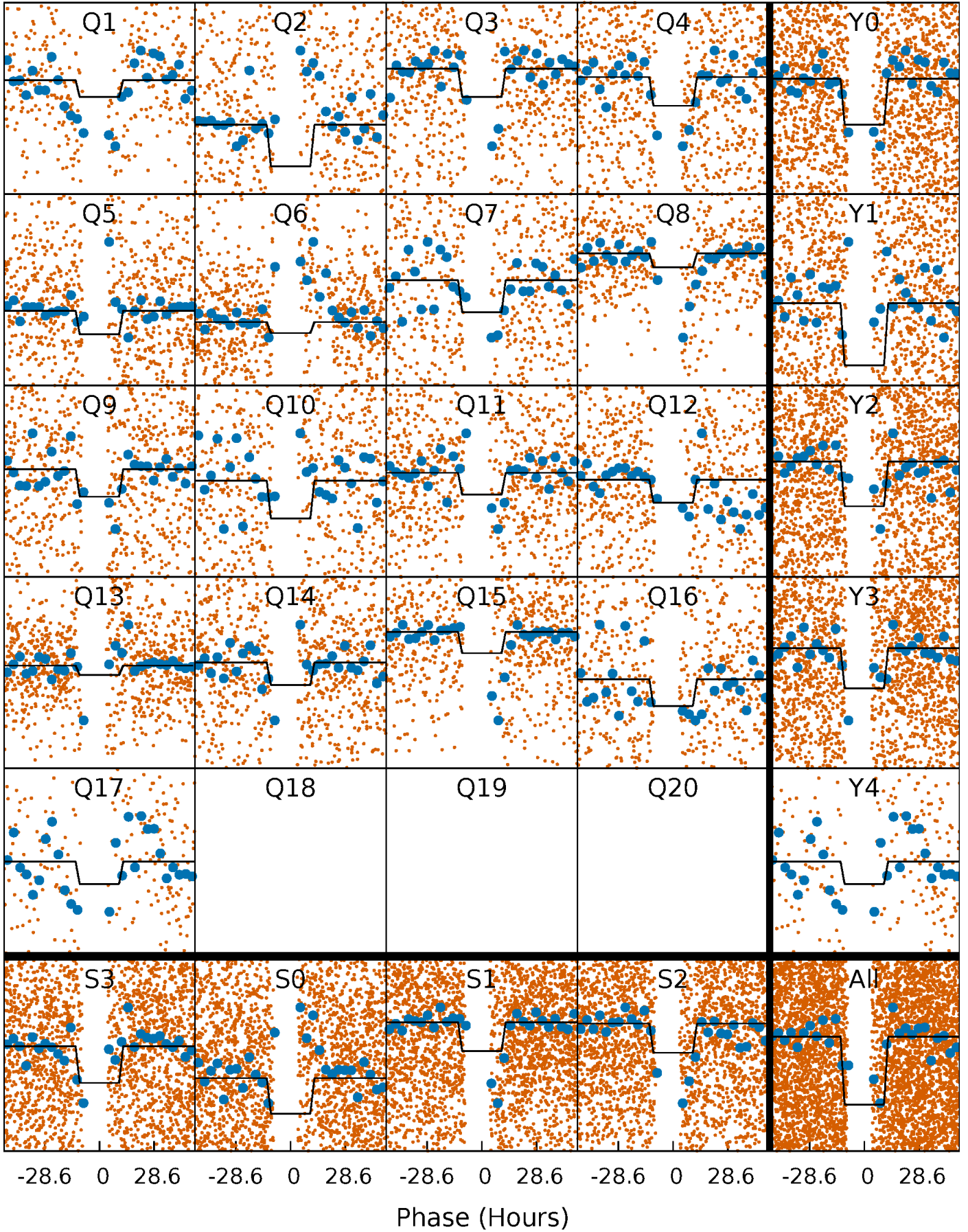
DV Quarter-Phased Transit Curves

TCE 005095269-02 P= 18.611662 Days $T_0=133.918882$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

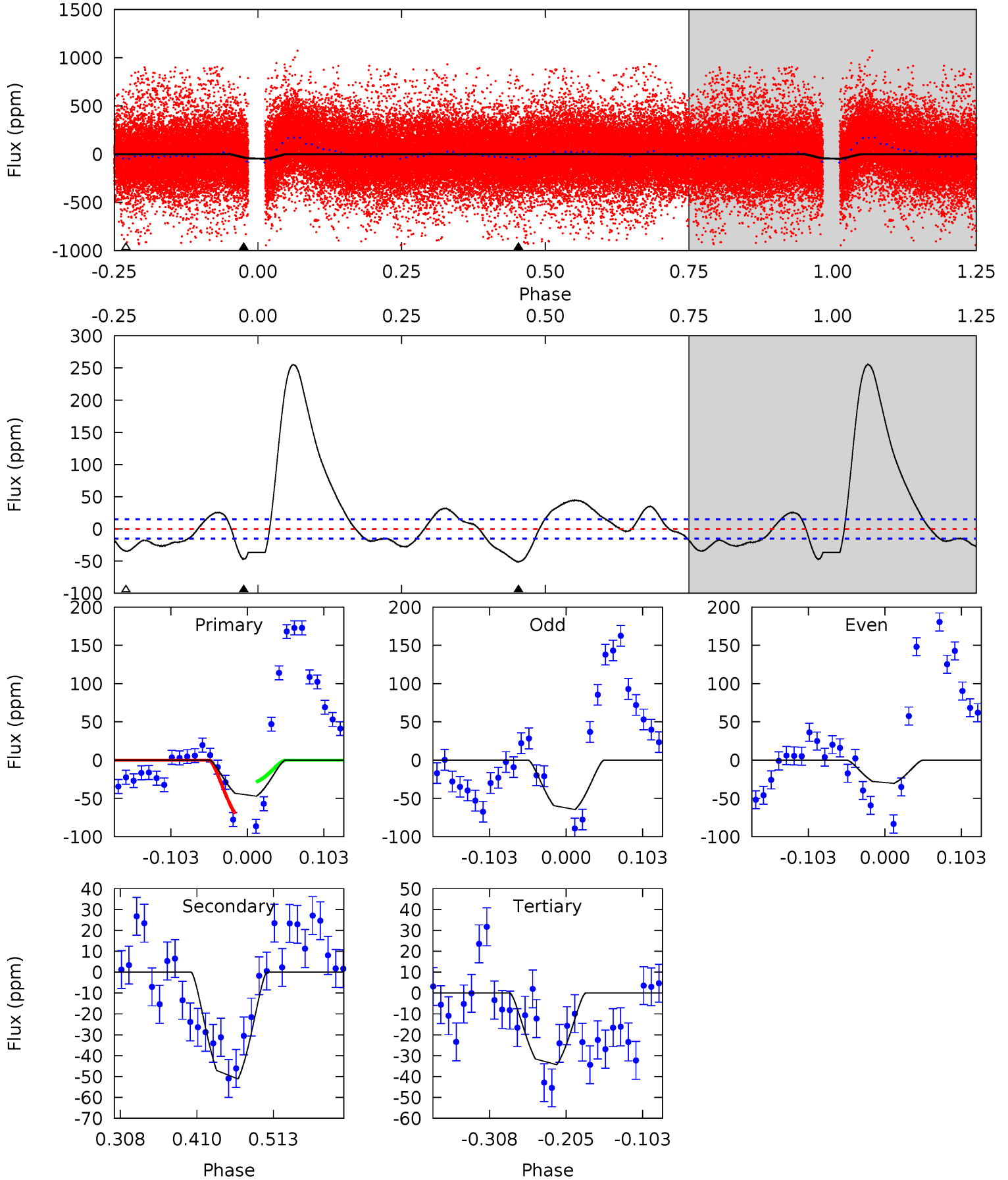
TCE 005095269-02 P= 18.612690 Days $T_0=133.947718$ (BKJD)



DV Model-Shift Uniqueness Test

005095269-02, P = 18.611662 Days, E = 115.307220 Days

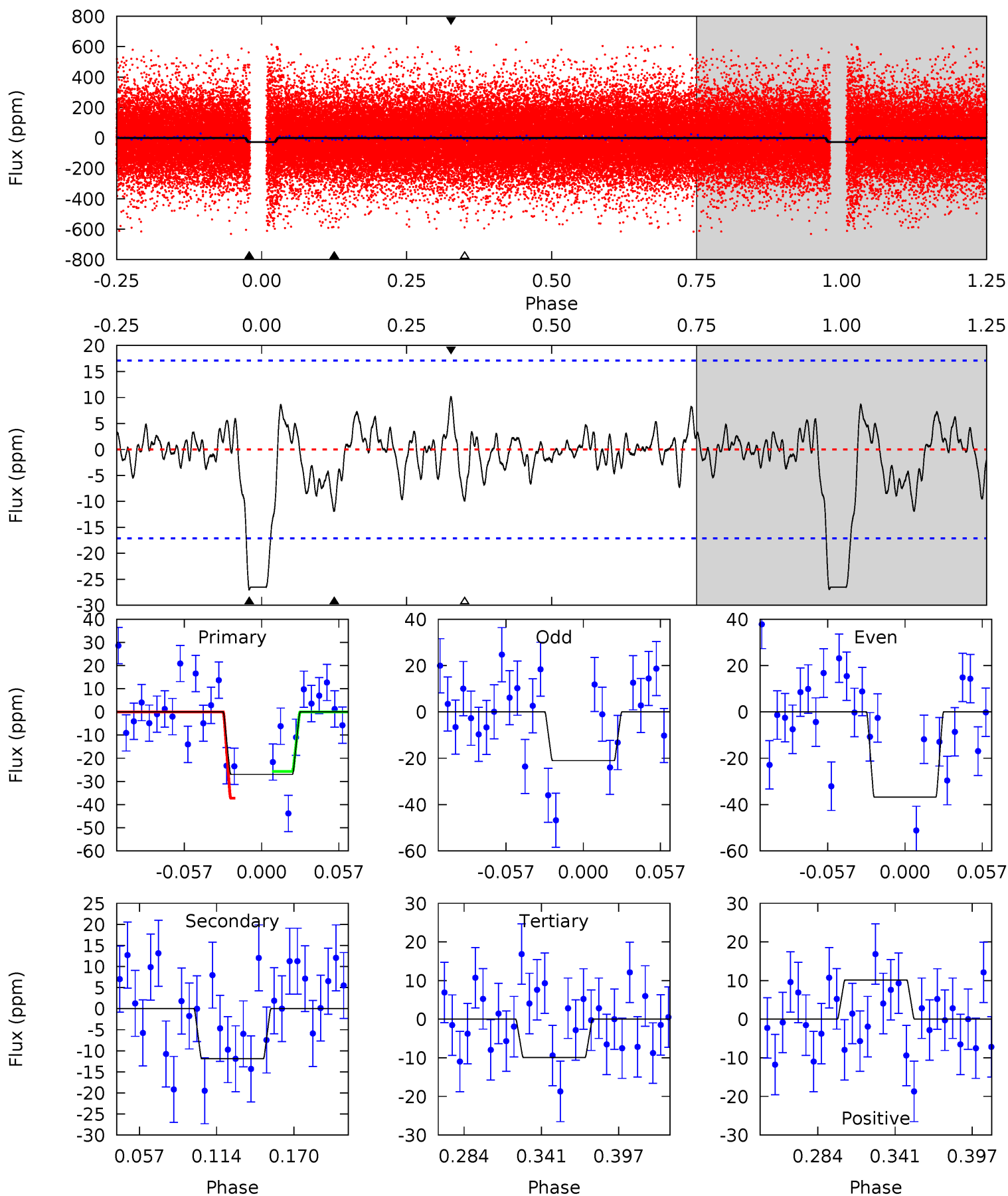
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	15.5	10.4	0	4.56	1.63	13.6	3.86	14.2	5.10	15.5	5.10	-4.32	0.83	6.03



Alt Model-Shift Uniqueness Test

005095269-02, P = 18.612690 Days, E = 115.335028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.38	3.26	2.72	2.78	4.68	1.91	0.82	4.66	4.60	0.54	0.48	2.17	0.70	0.27	1.44



Stellar Parameters For KIC 005095269

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6492^{+162}_{-194}	$4.320^{+0.105}_{-0.195}$	$-0.380^{+0.250}_{-0.300}$	$1.170^{+0.344}_{-0.185}$	$1.041^{+0.160}_{-0.117}$	$0.914^{+0.520}_{-0.453}$
	+2%/-3%	+2%/-5%	+66%/-79%	+29%/-16%	+15%/-11%	+57%/-50%
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 005095269-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 3	$4.43^{+3.33}_{-2.72}$	1173^{+82}_{-63}	3493^{+1326}_{-550}	28^{+164}_{-20}
Alt.	-12 ± 4	$2.71^{+2.67}_{-1.83}$	1166^{+80}_{-65}	3185^{+1418}_{-573}	17^{+140}_{-13}

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

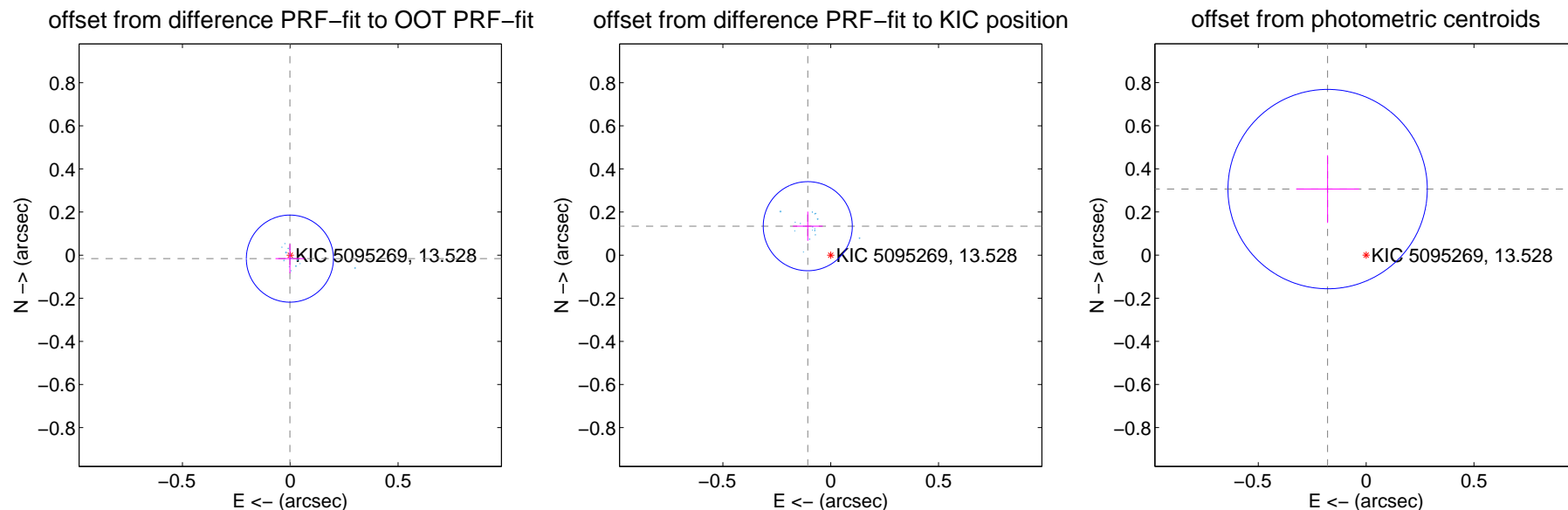
DV Centroid Data

Supplemental centroid analysis for 005095269-02. Kepler magnitude: 13.53. Transit SNR 15.64

There are 17 quarters with good PRF difference image offsets

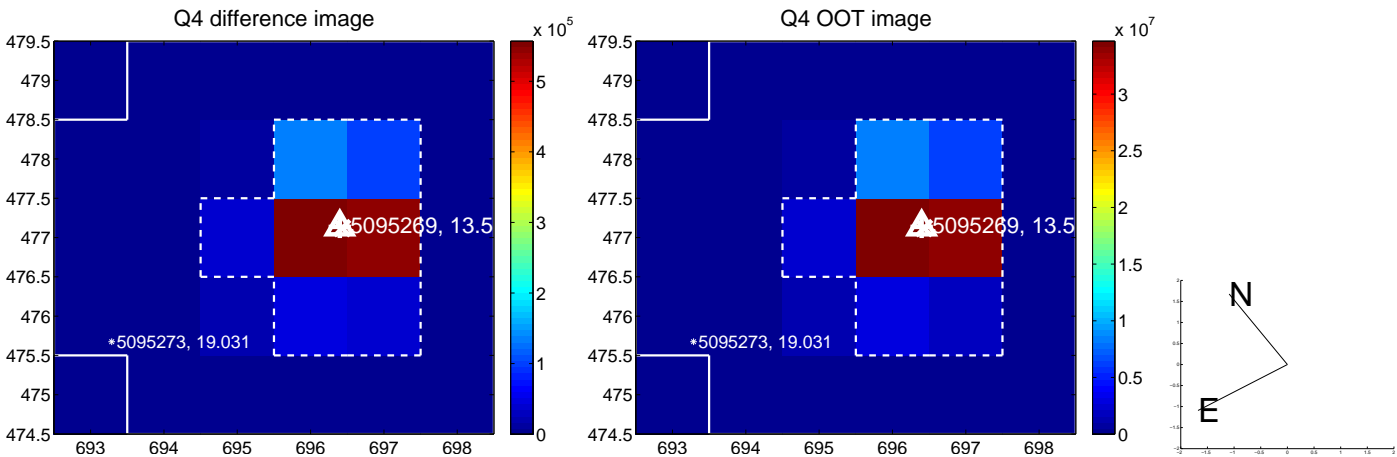
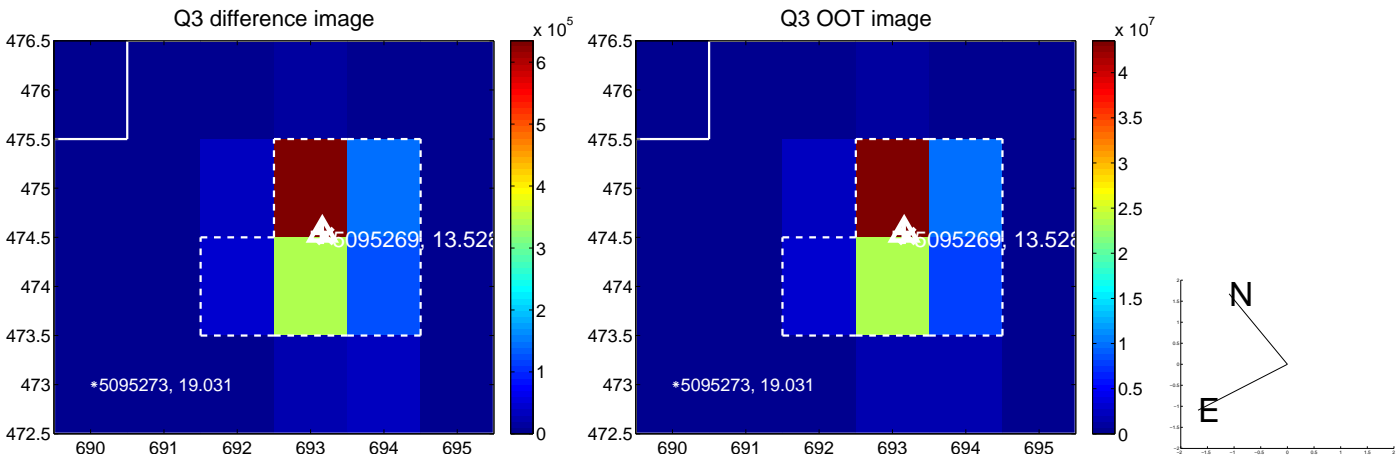
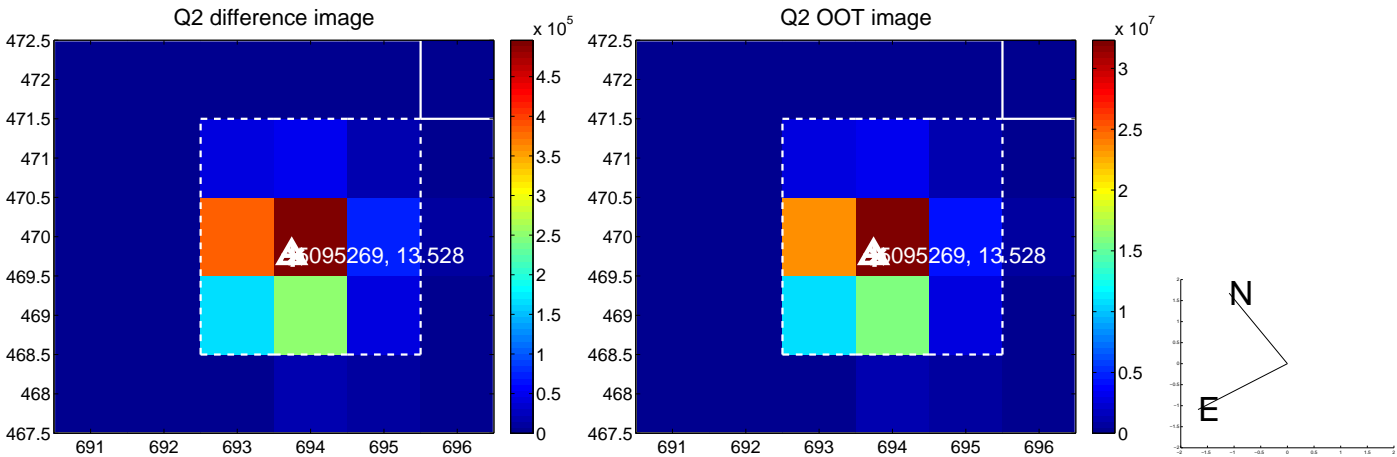
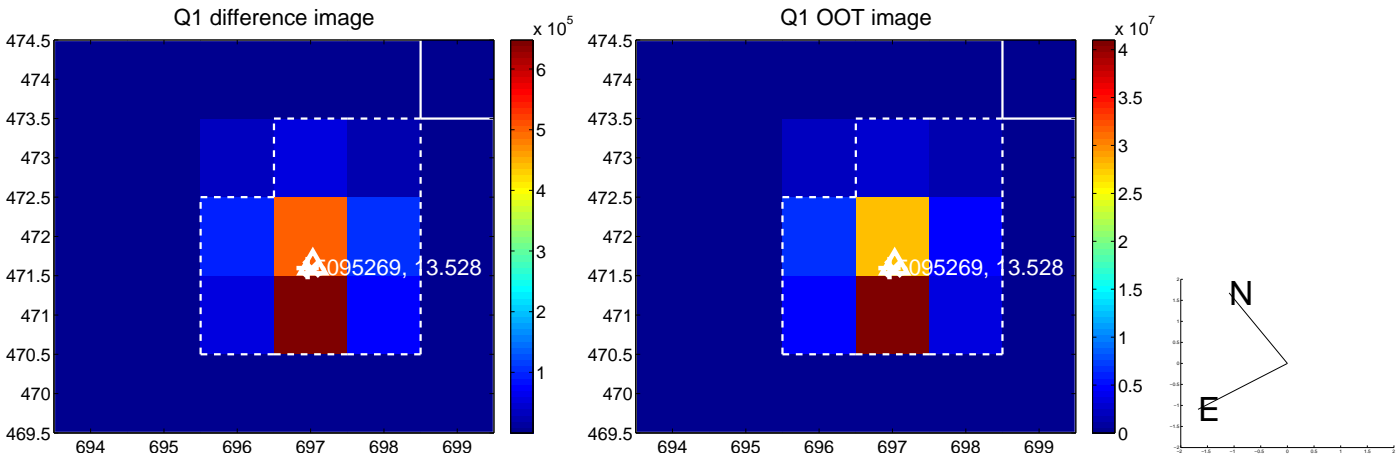
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.067	0.24	0.002 ± 0.067	-0.016 ± 0.067
PRF-fit source offset from KIC position	0.171 ± 0.069	2.49	0.106 ± 0.069	0.134 ± 0.068
photometric centroid source offset	0.35 ± 0.15	2.30	0.18 ± 0.15	0.31 ± 0.16

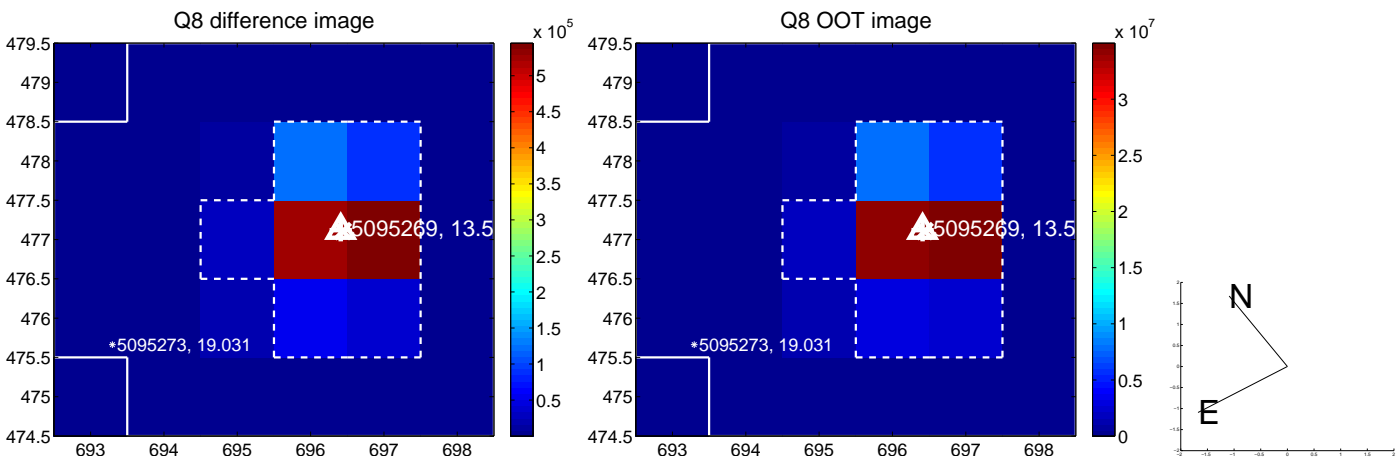
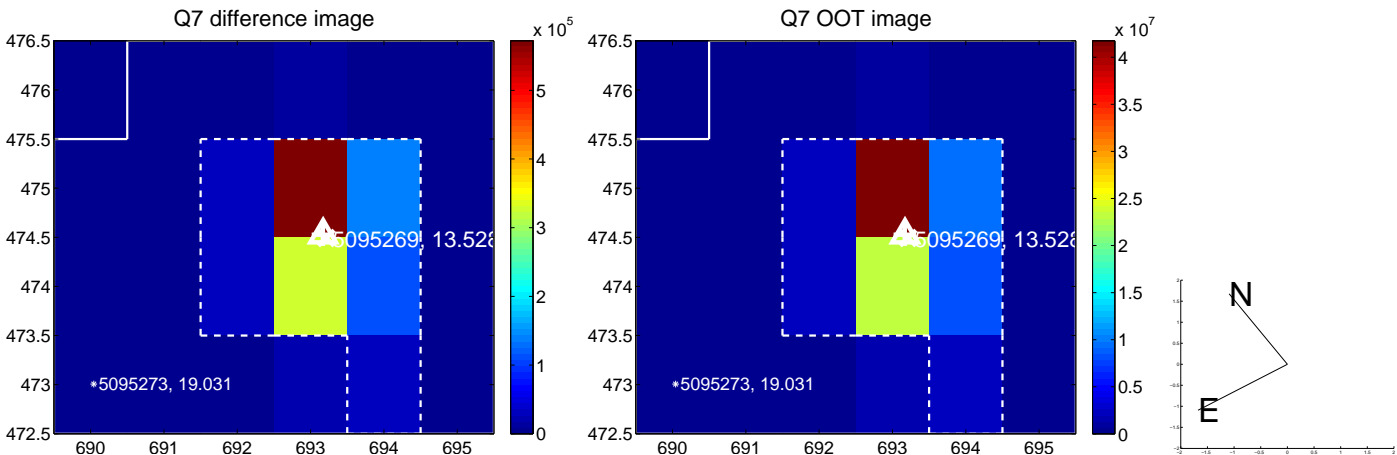
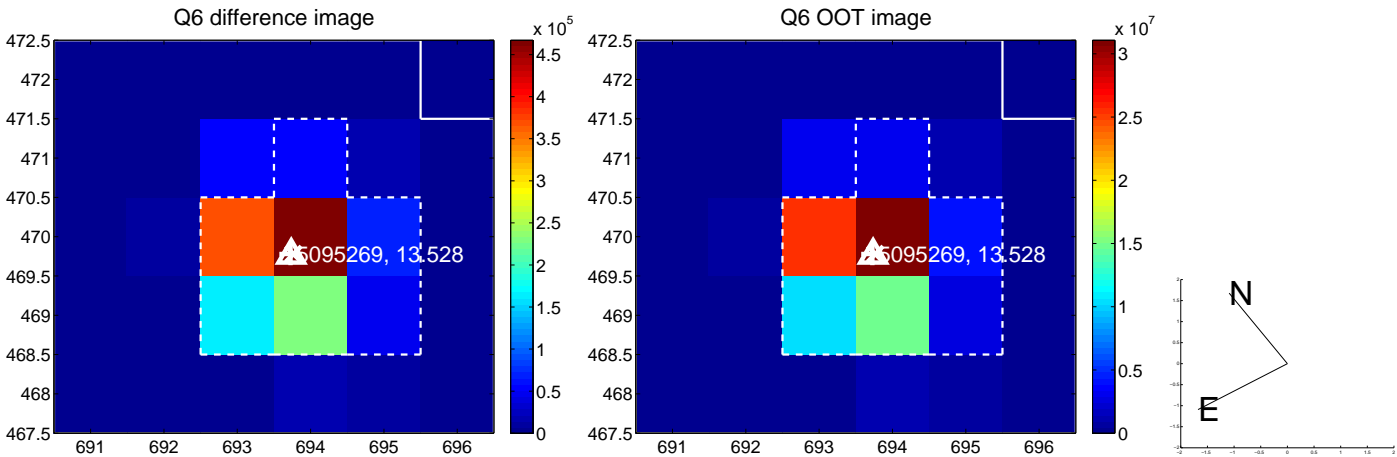
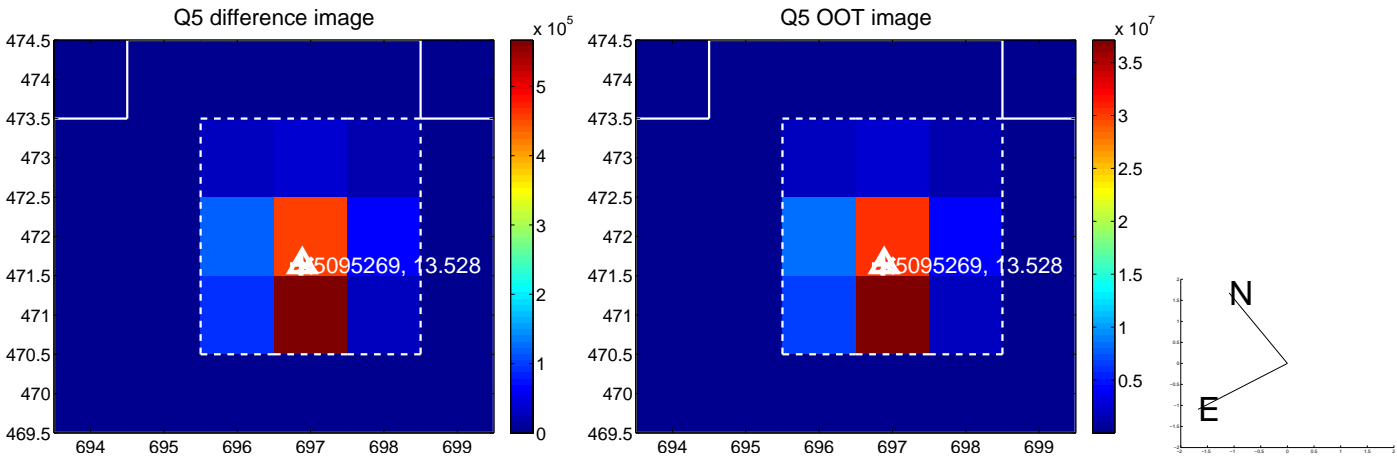


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

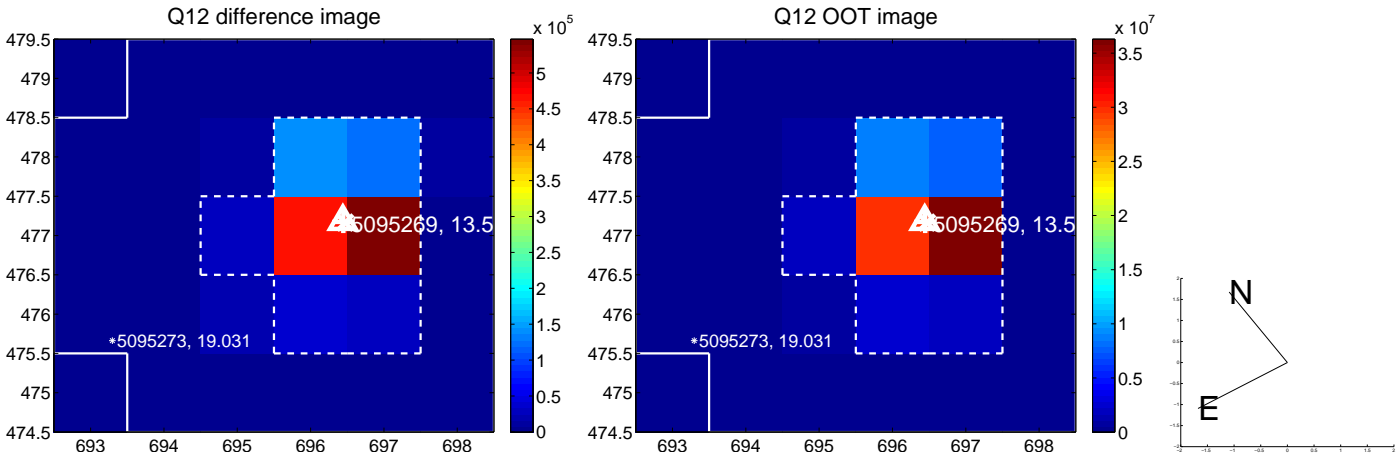
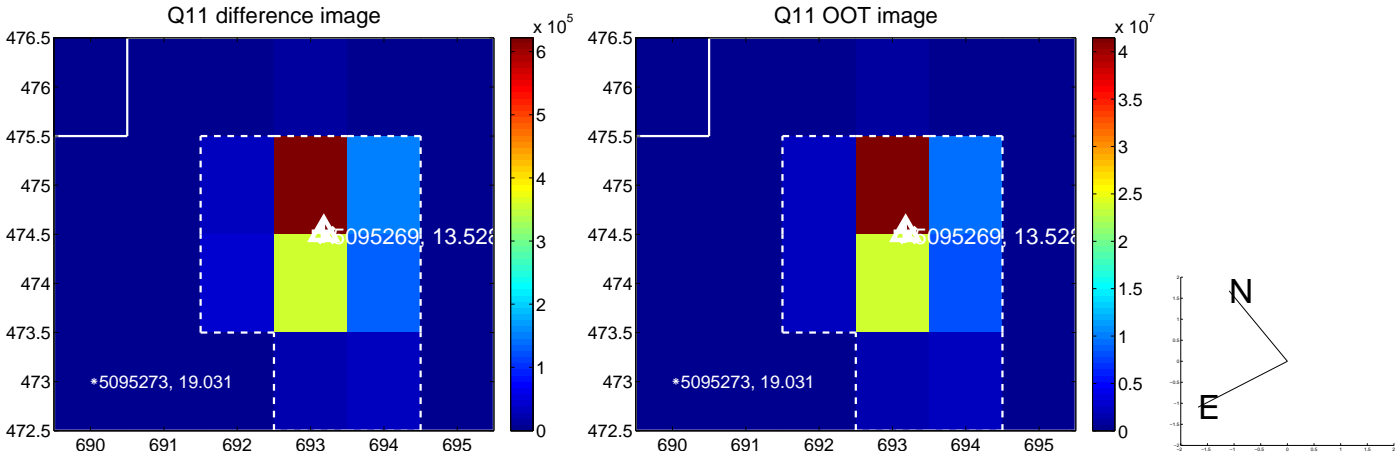
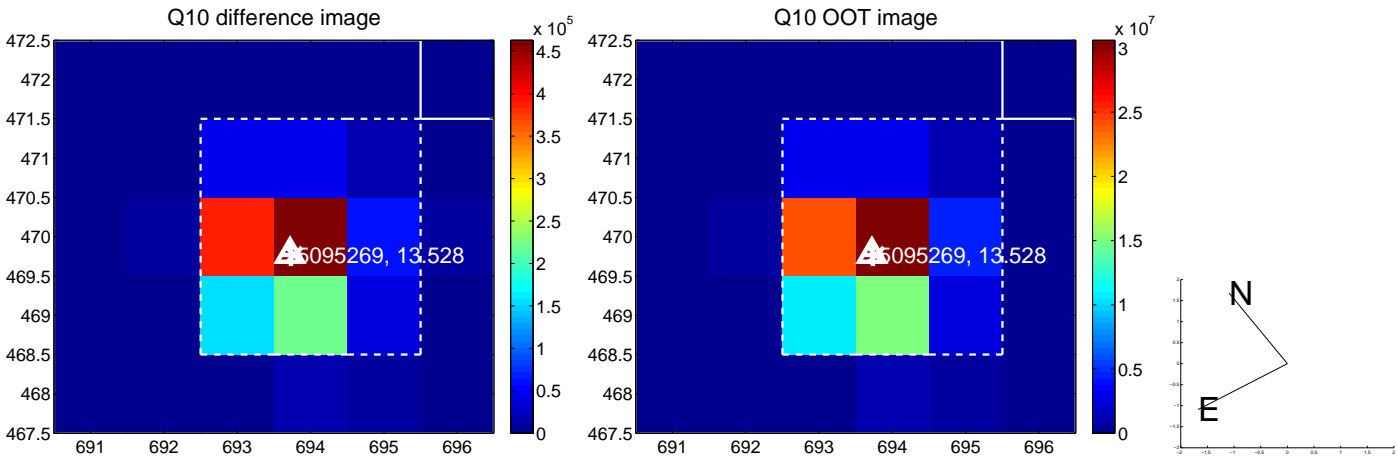
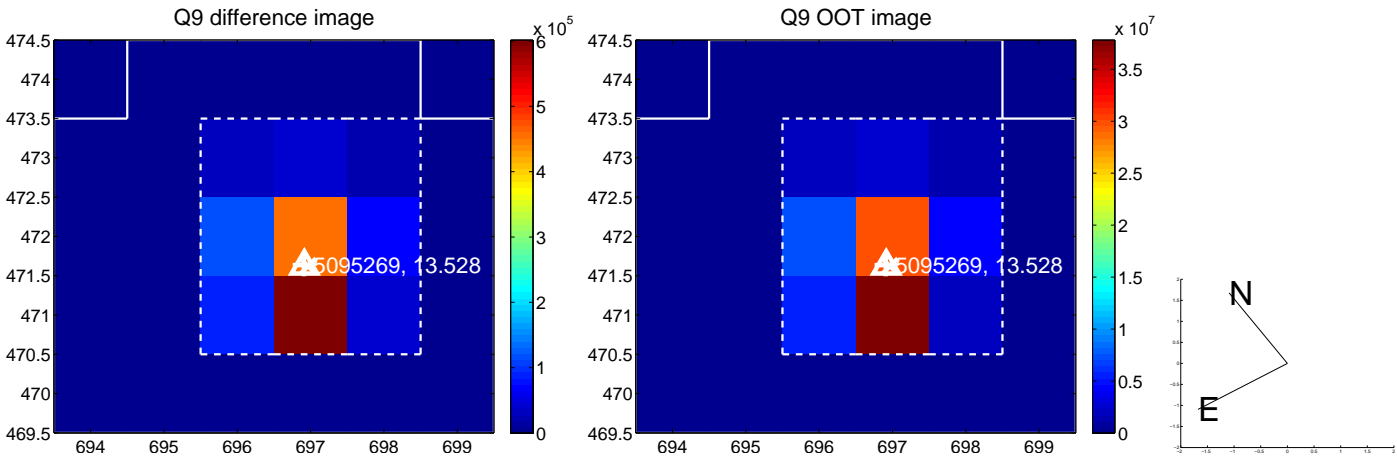
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



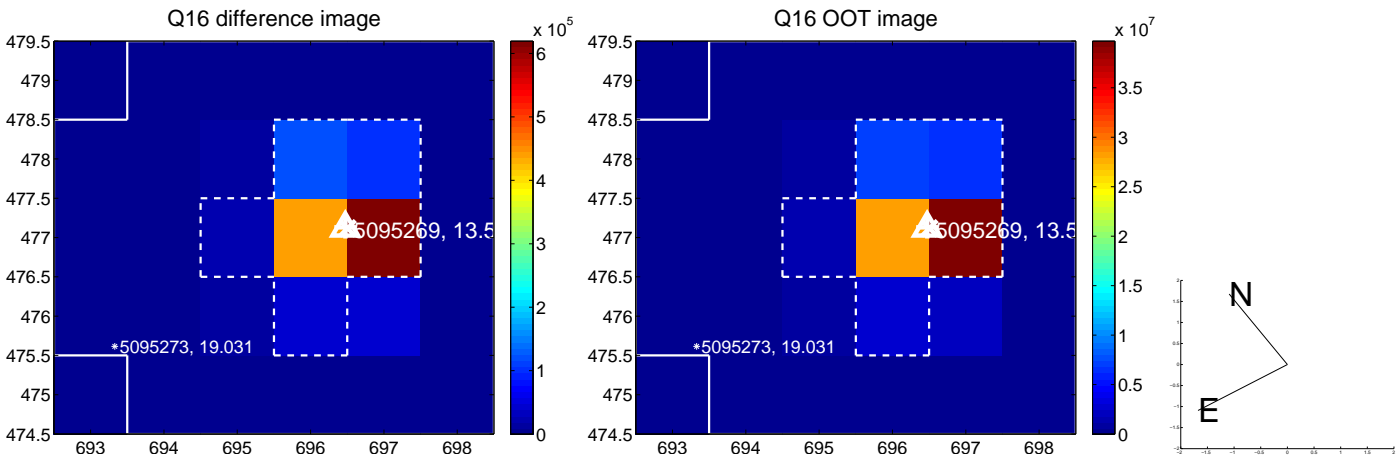
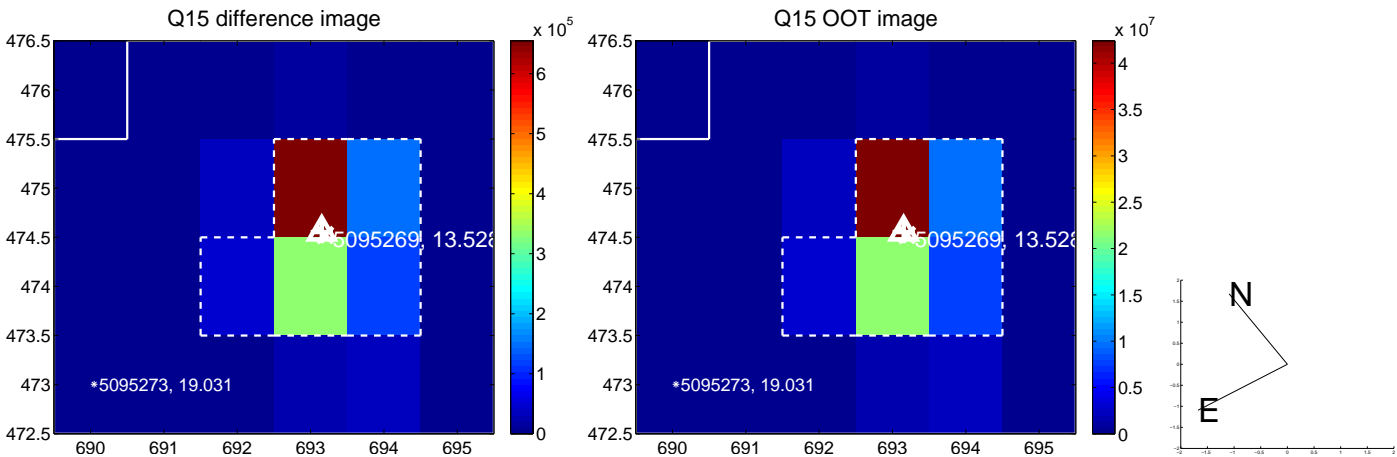
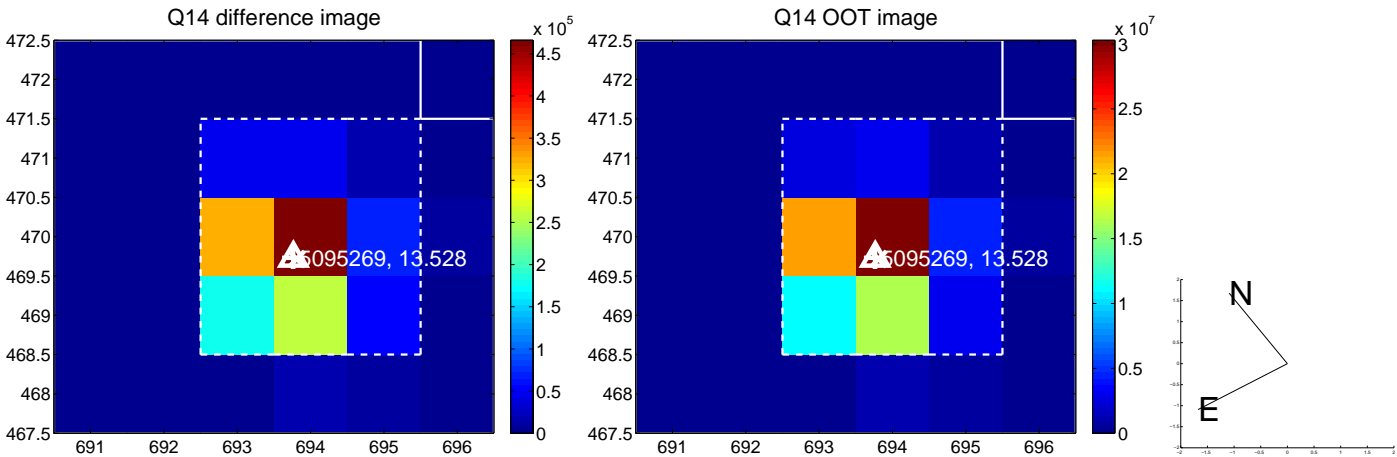
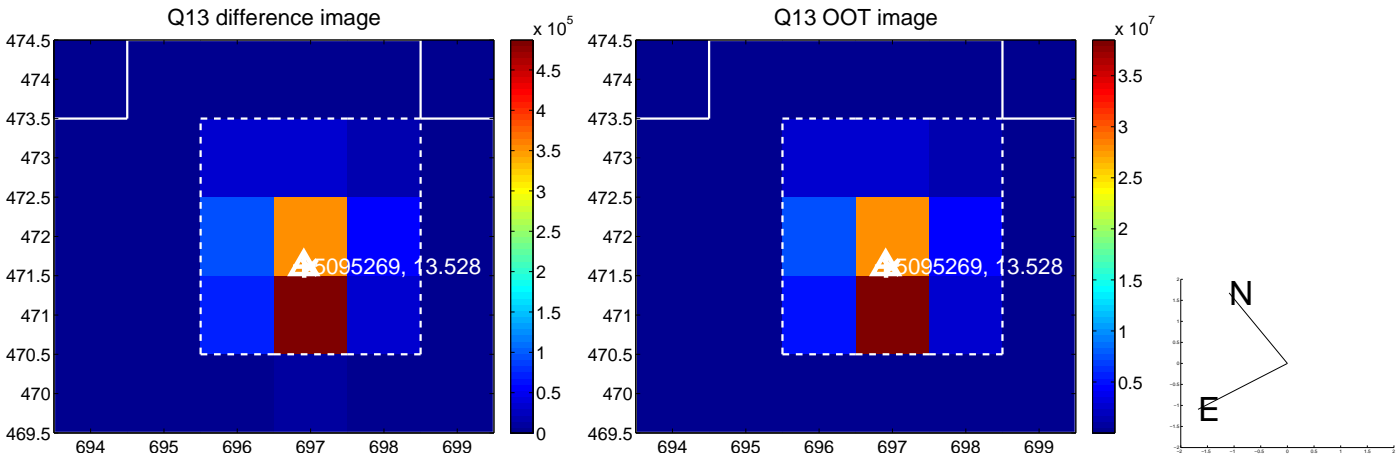
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



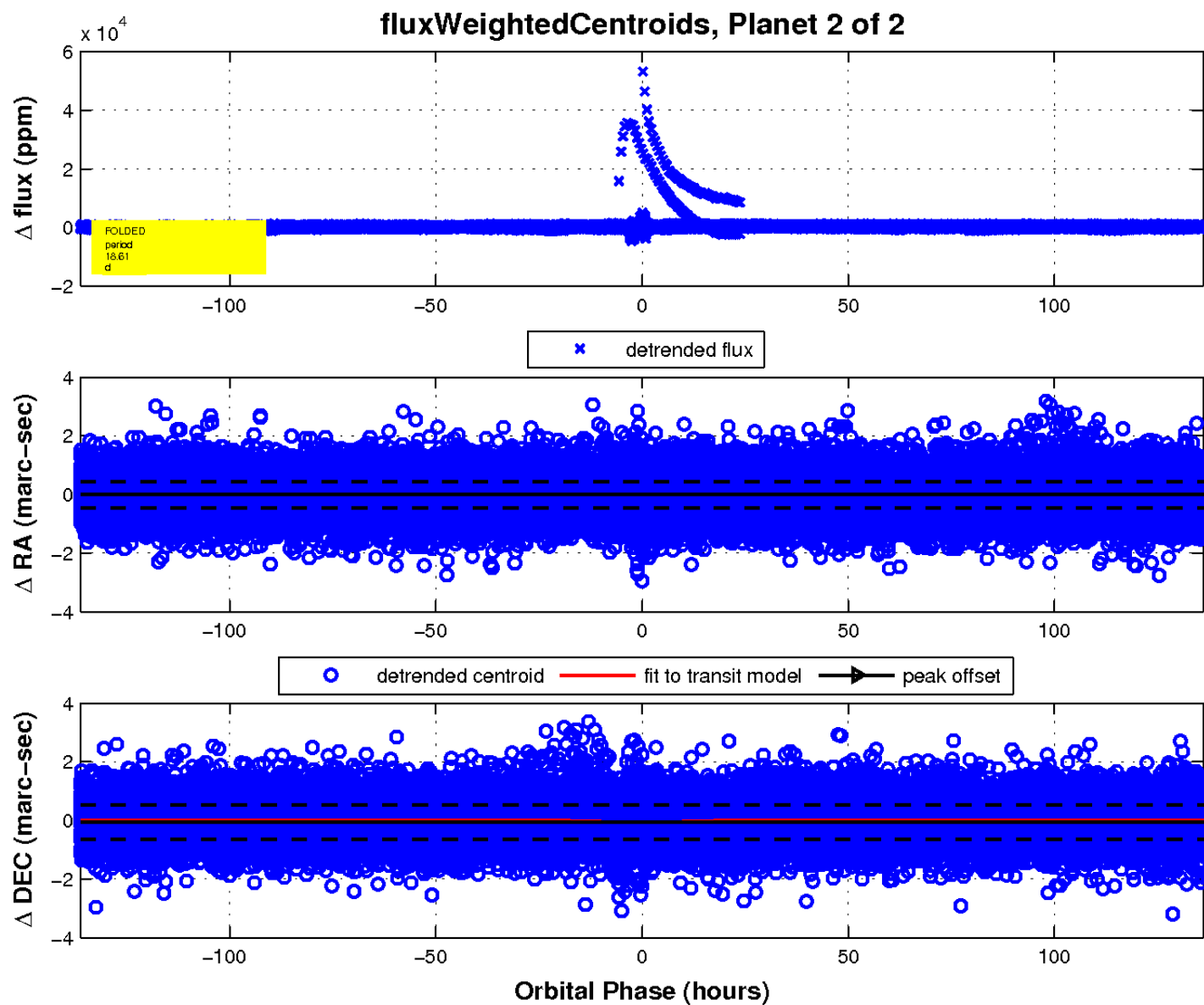
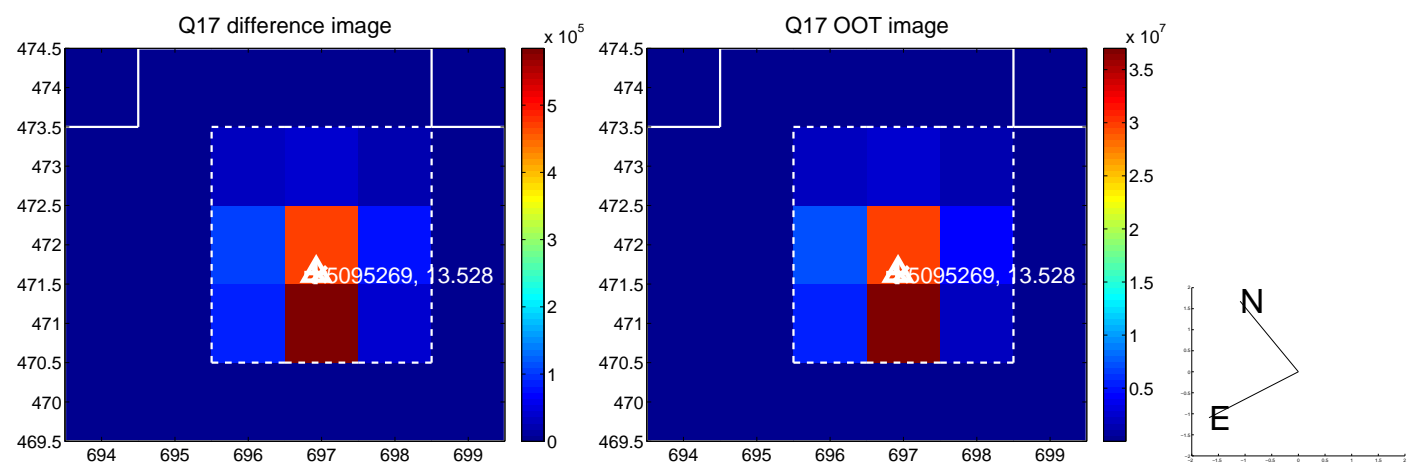
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

