

KIC 008892910

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})
008892910-01	OBS	0132.01	10.810133	132.951610	6150.5	4.480	734.4	728.9	1.28	6211	14.24	222.92
008892910-02	OBS	No	10.810262	138.351392	132.5	3.636	17.0	18.1	1.28	6211	1.75	222.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008892910-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
008892910-02	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.

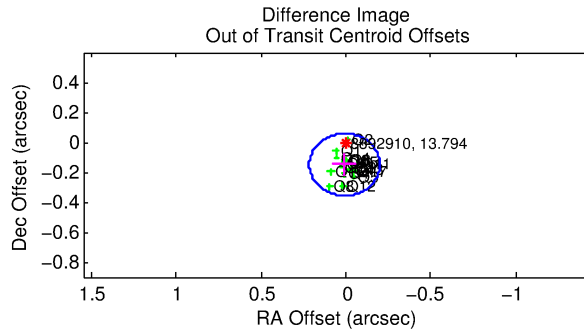
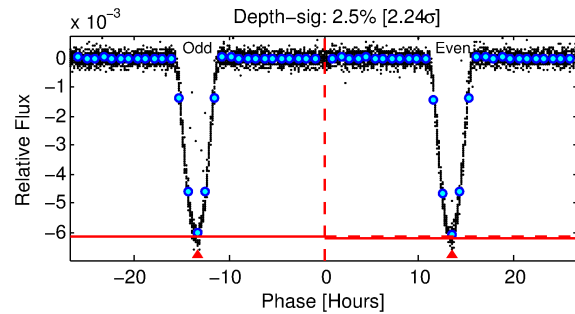
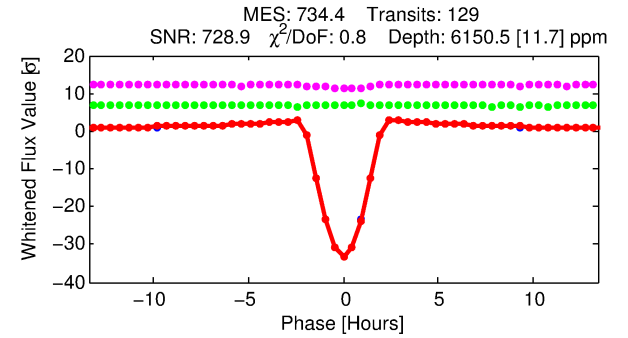
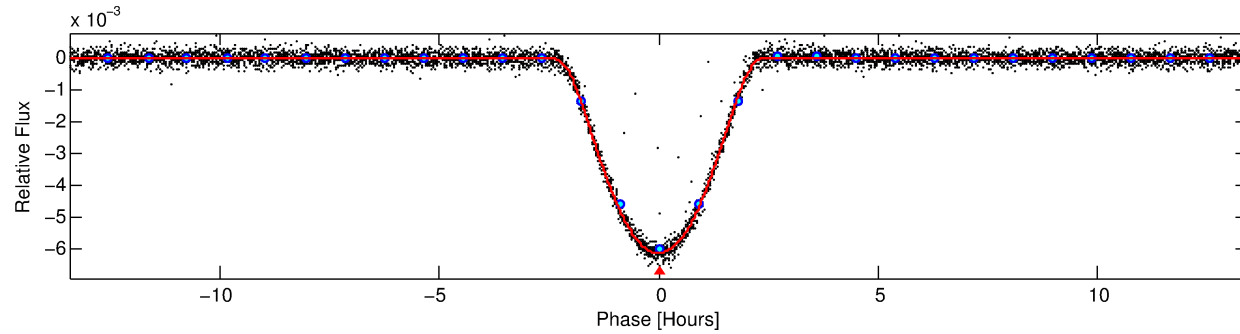
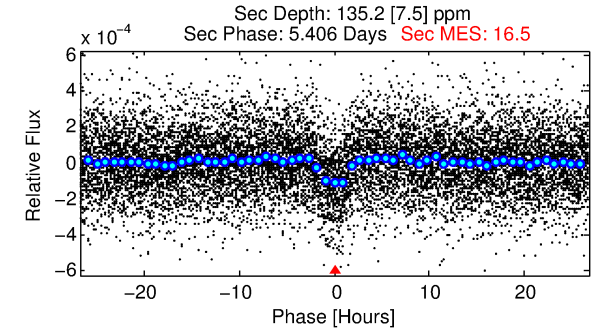
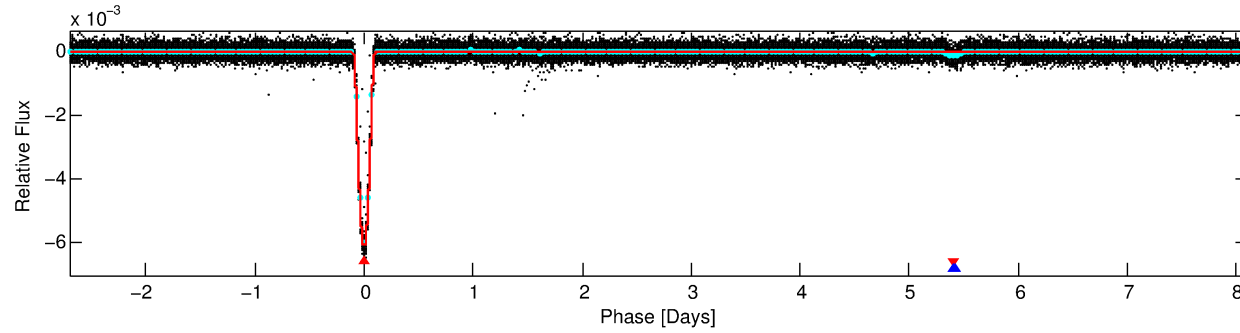
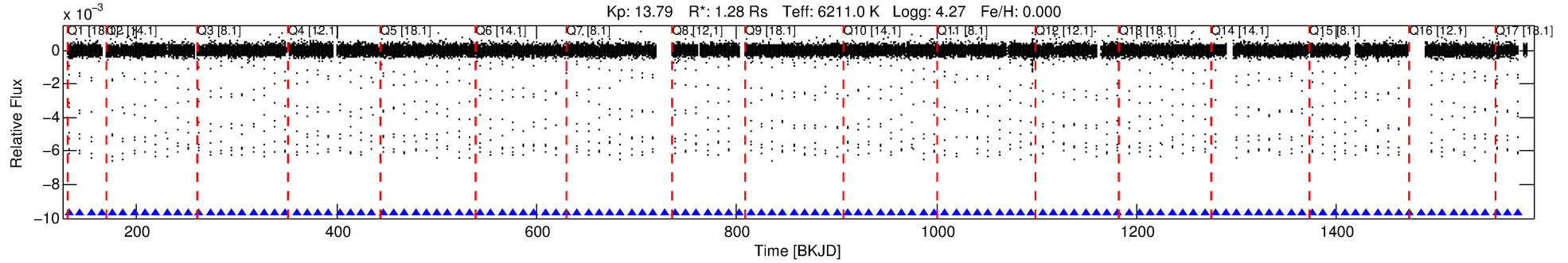
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008892910-01

No Significant Match Found

DV One-Page Summary

KIC: 8892910 Candidate: 1 of 2 Period: 10.810 d
KOI: K00132.01 Corr: 0.999



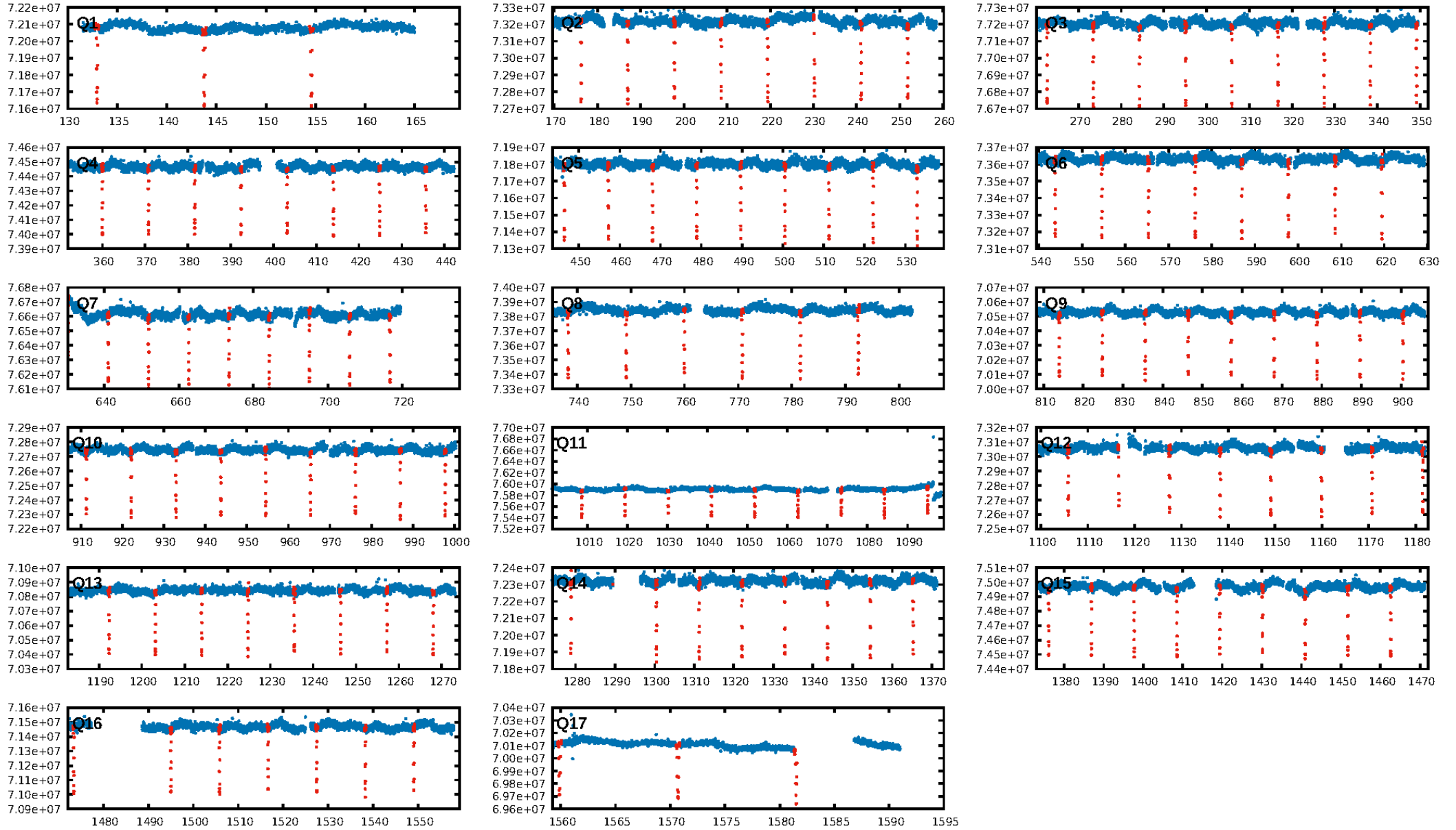
DV Fit Results:

Period = 10.81013 [0.00000] d
Epoch = 132.9516 [0.0001] BKJD
Rp/R* = 0.1016 [0.0020]
a/R* = 10.22 [0.07]
b = 0.95 [0.00]
Seff = 222.92 [84.91]
Teq = 985 [94] K
Rp = 14.24 [4.39] Re
a = 0.0993 [0.0249] AU
Ag = 3.62 [1.30] [2.01 σ]
Teffp = 2101 [83] K [8.89 σ]

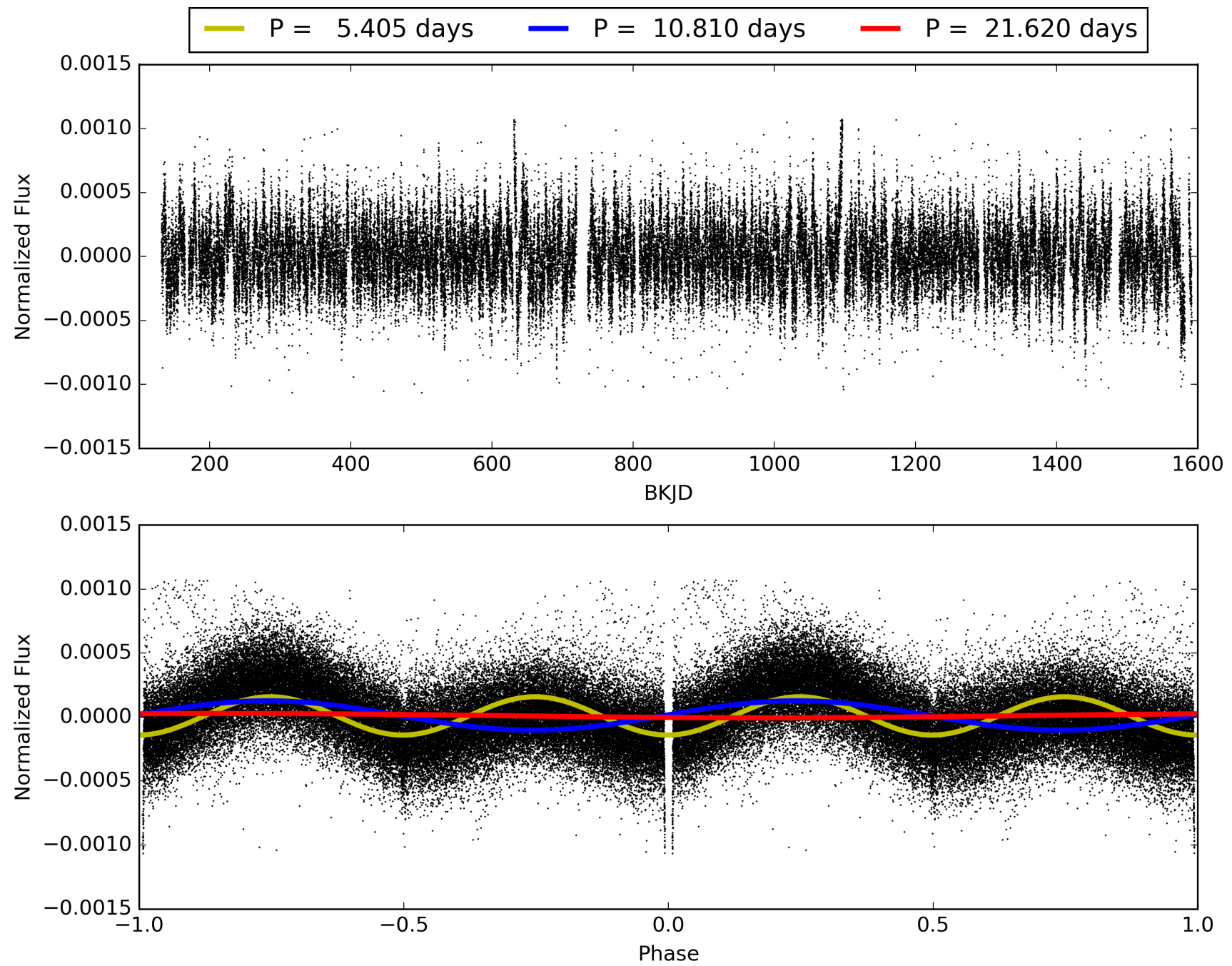
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: 69.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [123/123]
GhostDiagnostic-chr: 6.42
Centroid-sig: 0.0%
Centroid-so: 0.239 arcsec [15.38 σ]
OotOffset-rm: 0.150 arcsec [2.17 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.209 arcsec [3.07 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008892910-01, PDC Light Curves

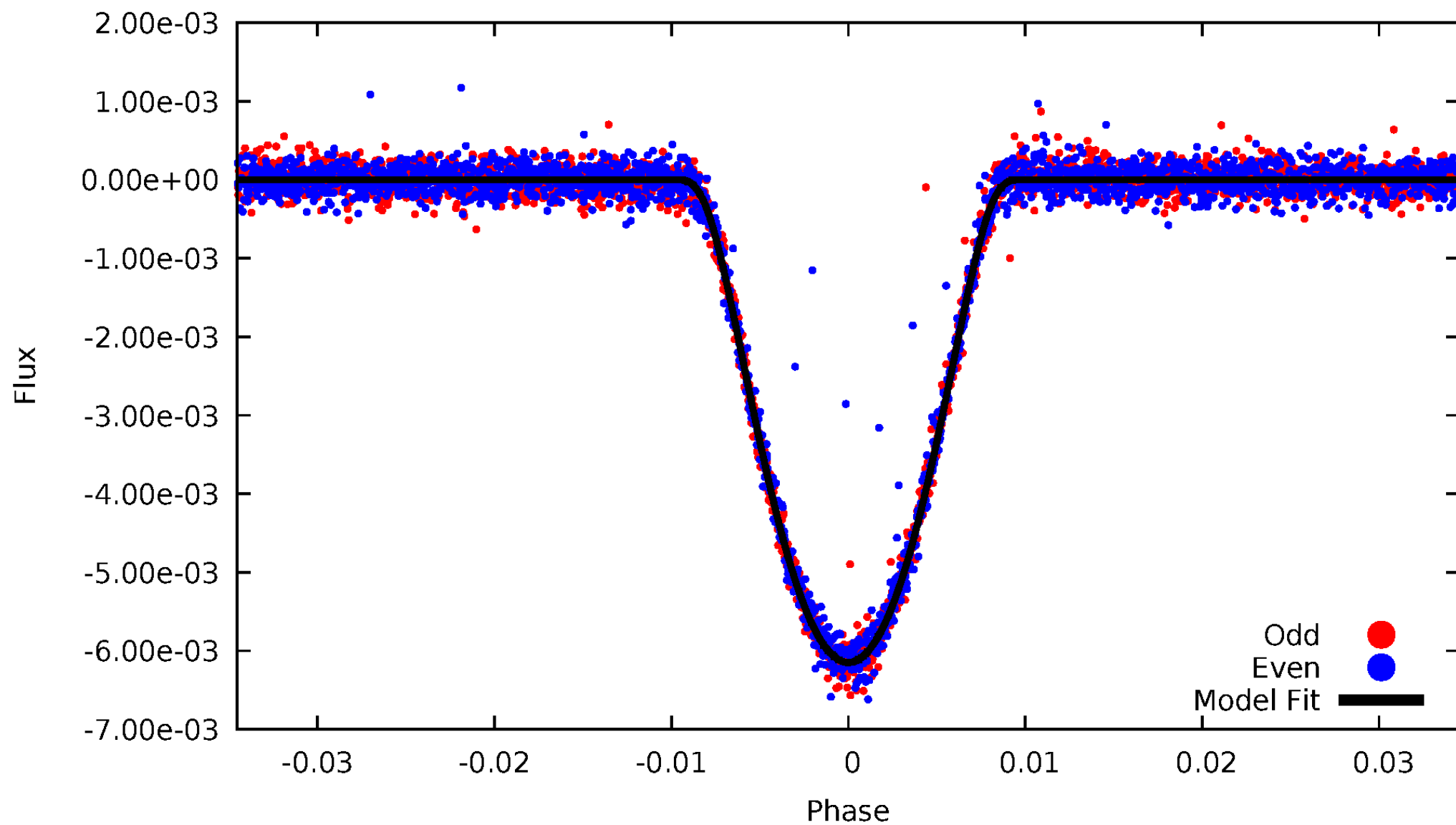


TCE 008892910-01



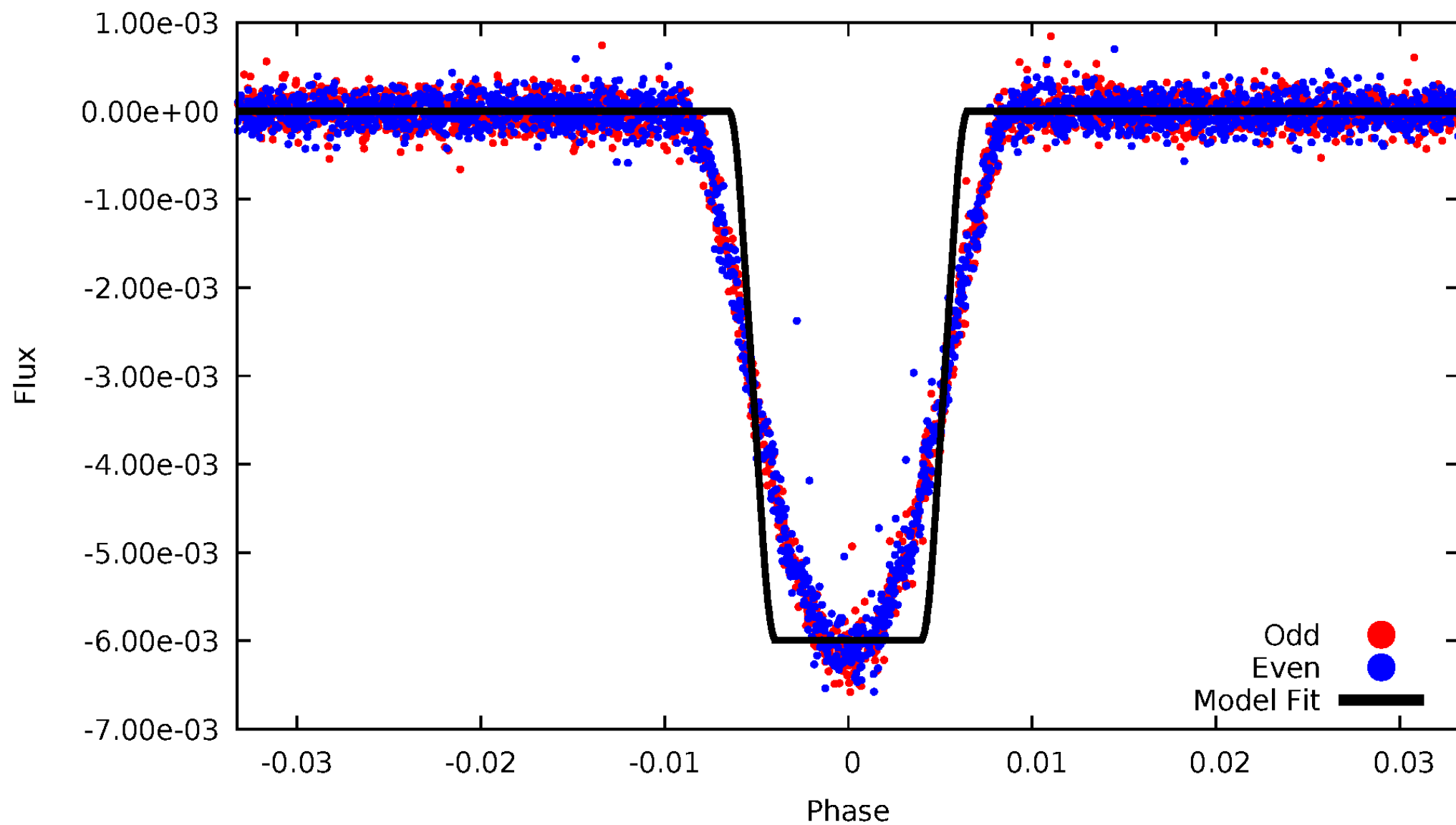
DV Odd/Even

TCE 008892910-01

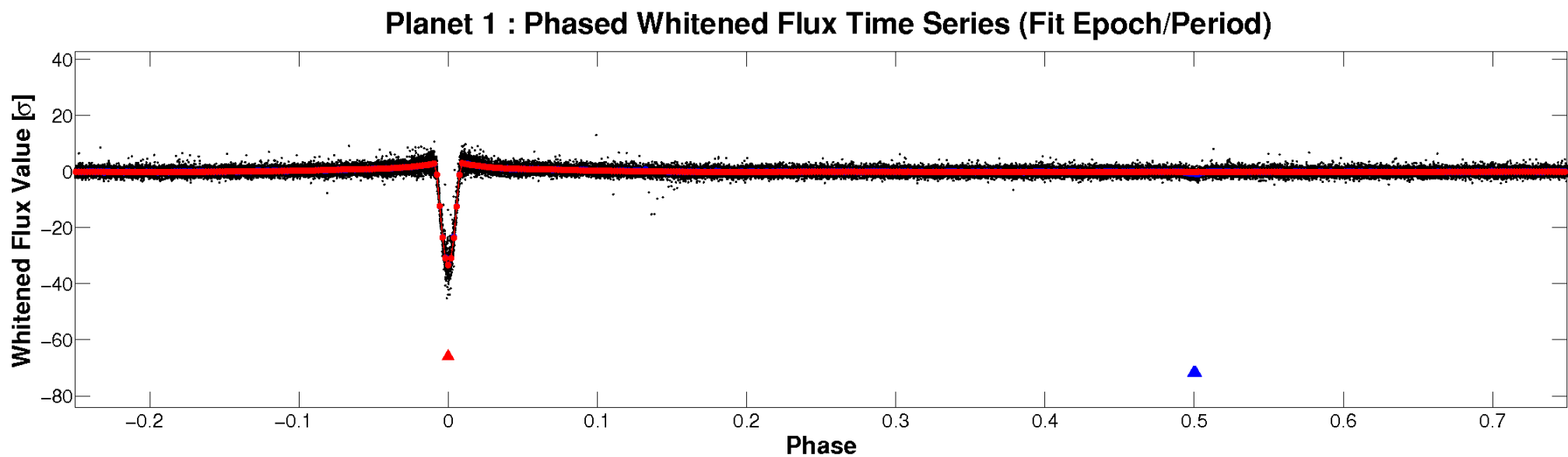
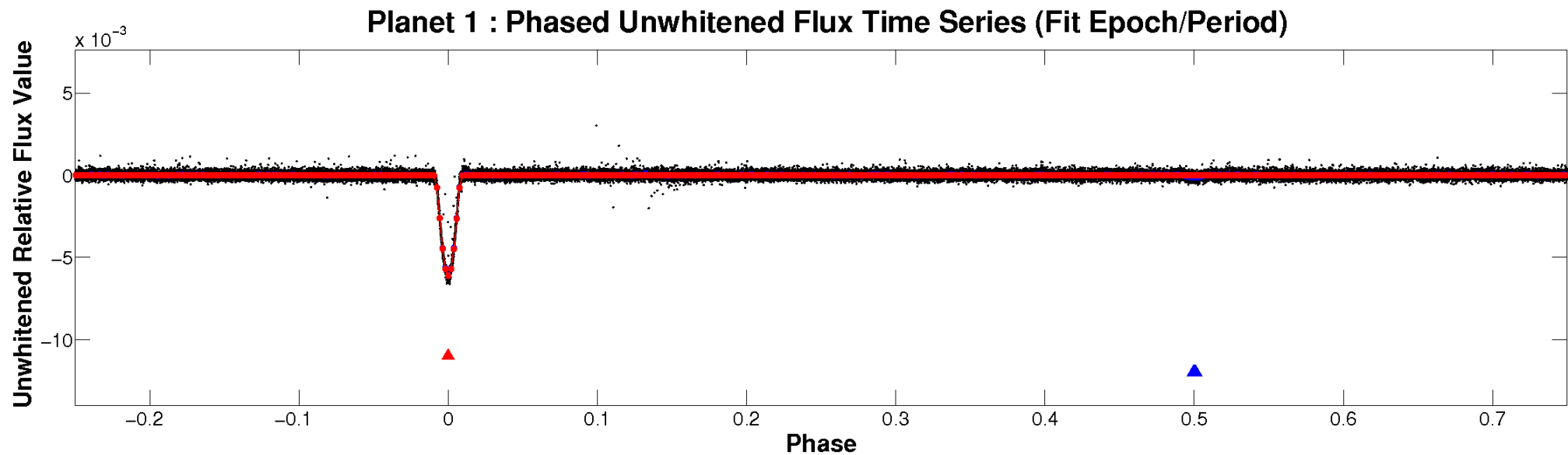


ALT Odd/Even

TCE 008892910-01

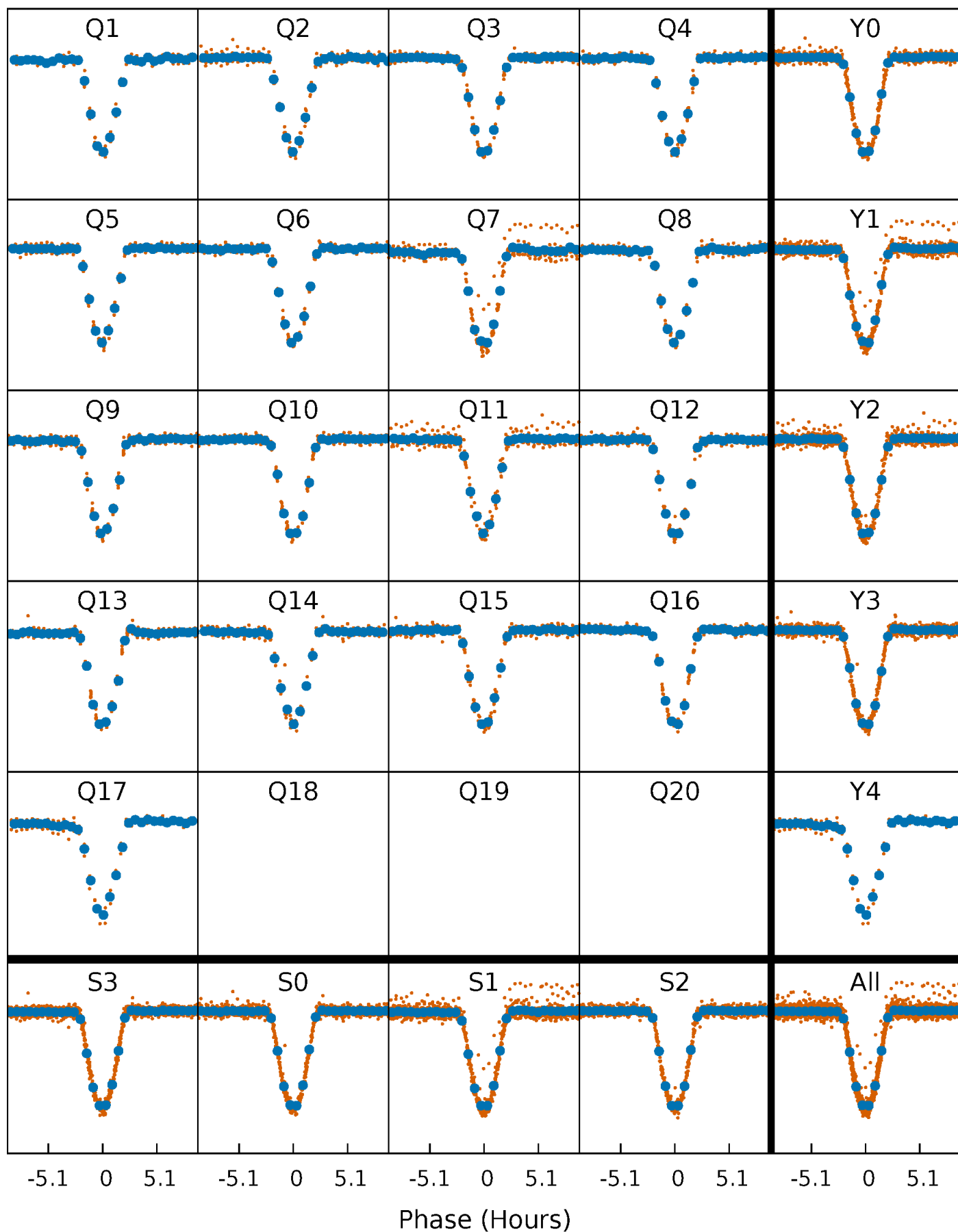


Non-Whitened Vs. Whitened Light Curve



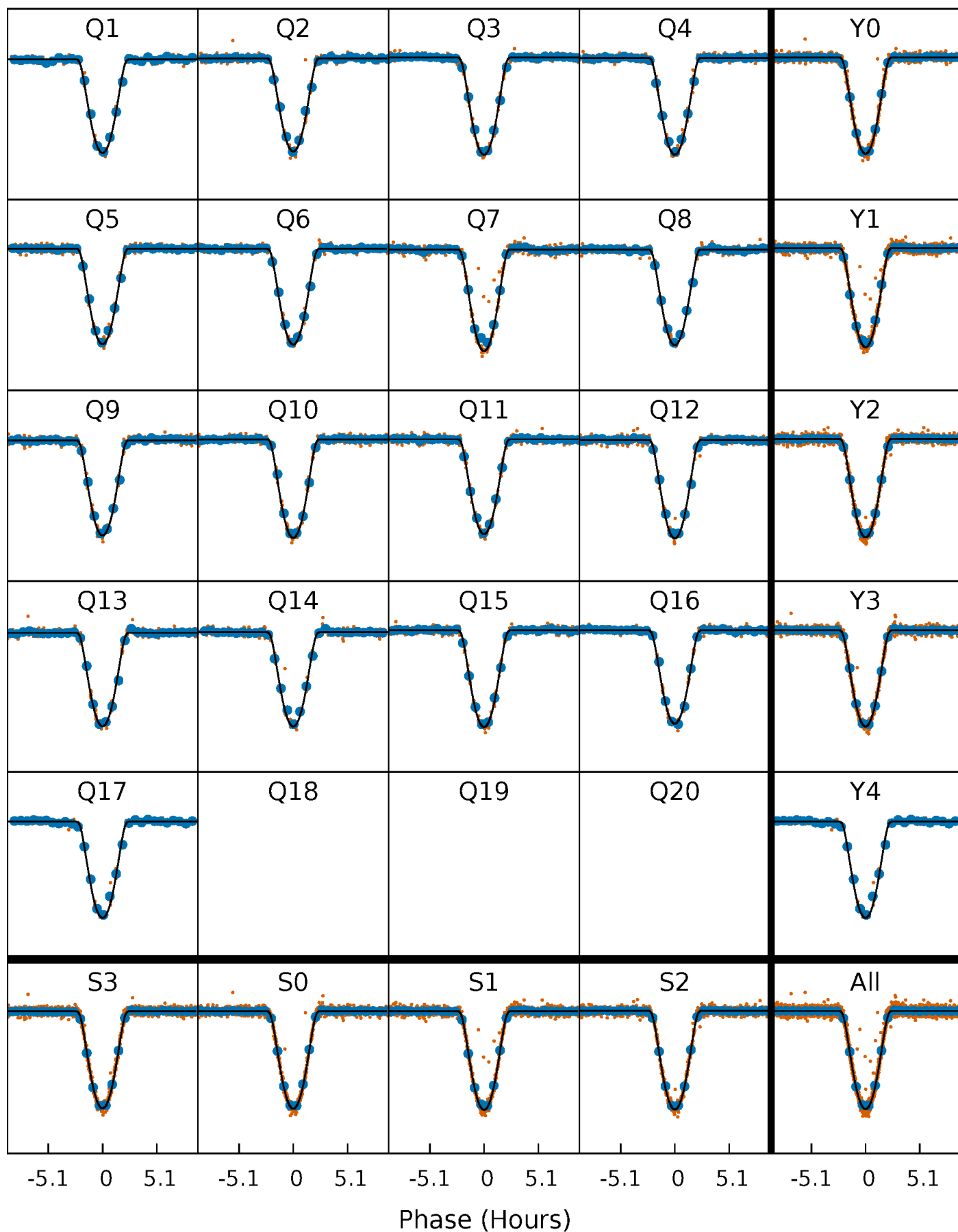
PDC Quarter-Phased Transit Curves

TCE 008892910-01 P= 10.810133 Days $T_0=132.951610$ (BKJD)



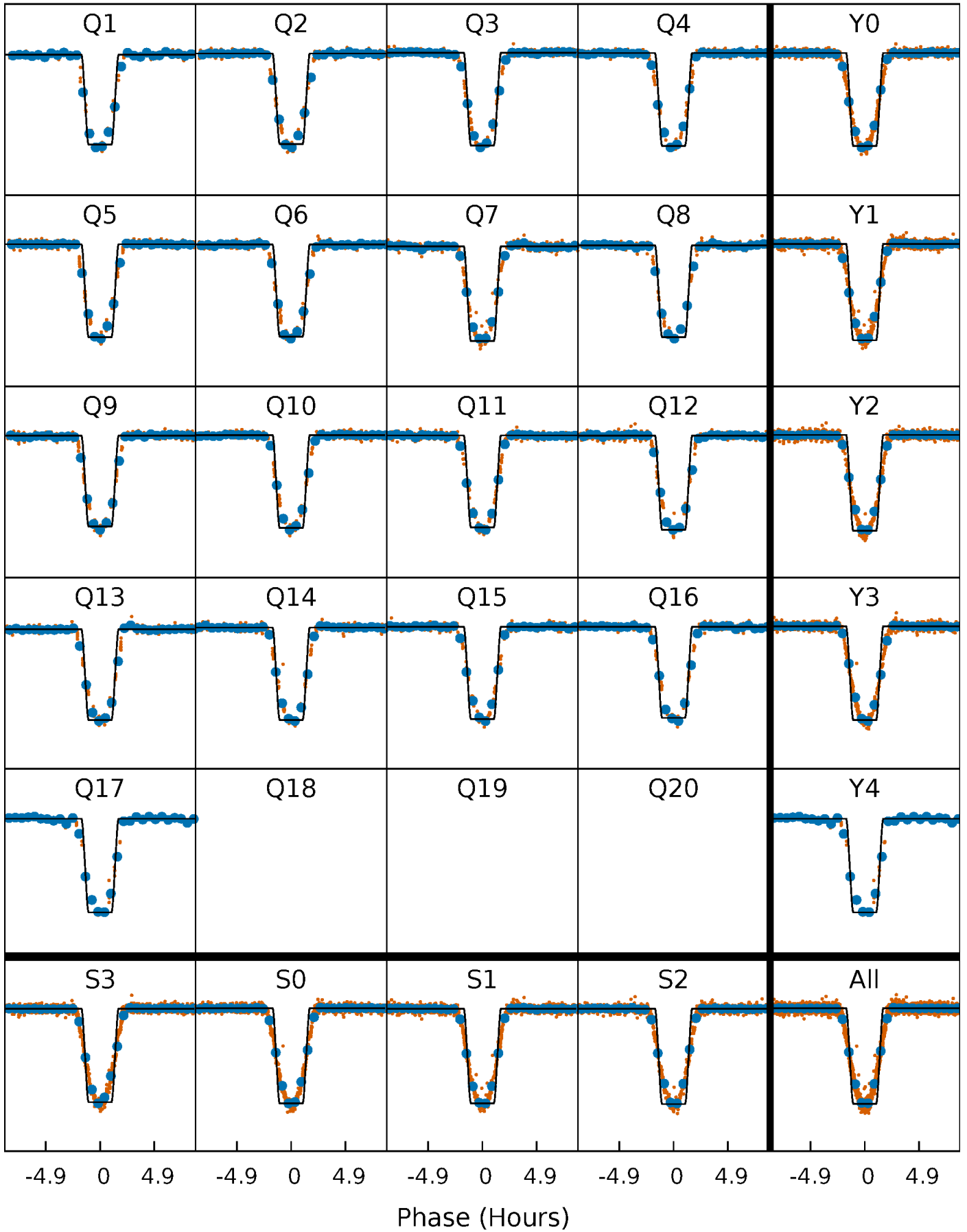
DV Quarter-Phased Transit Curves

TCE 008892910-01 P= 10.810133 Days $T_0=132.951610$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

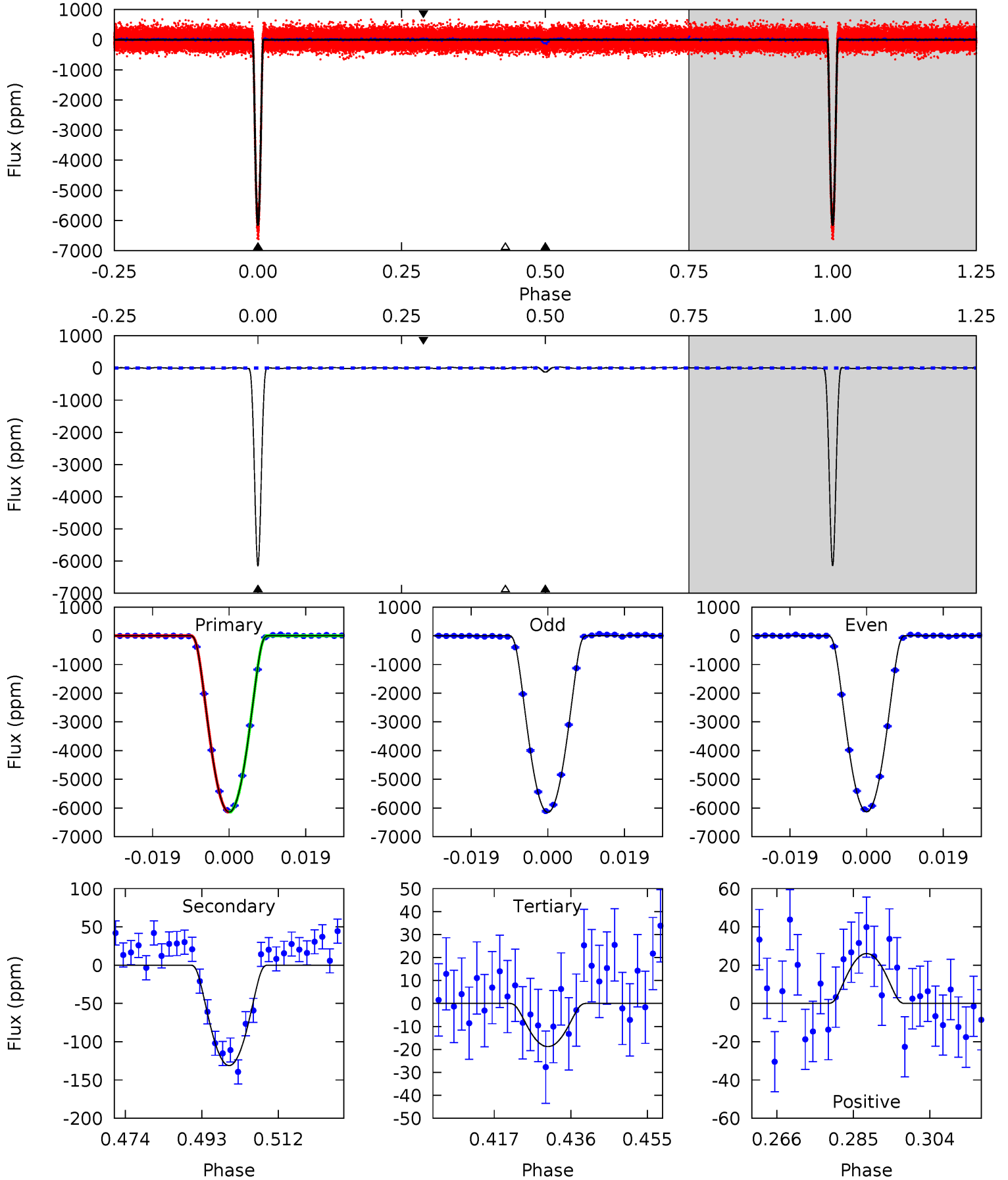
TCE 008892910-01 P= 10.810086 Days $T_0=132.954635$ (BKJD)



DV Model-Shift Uniqueness Test

008892910-01, P = 10.810133 Days, E = 122.141477 Days

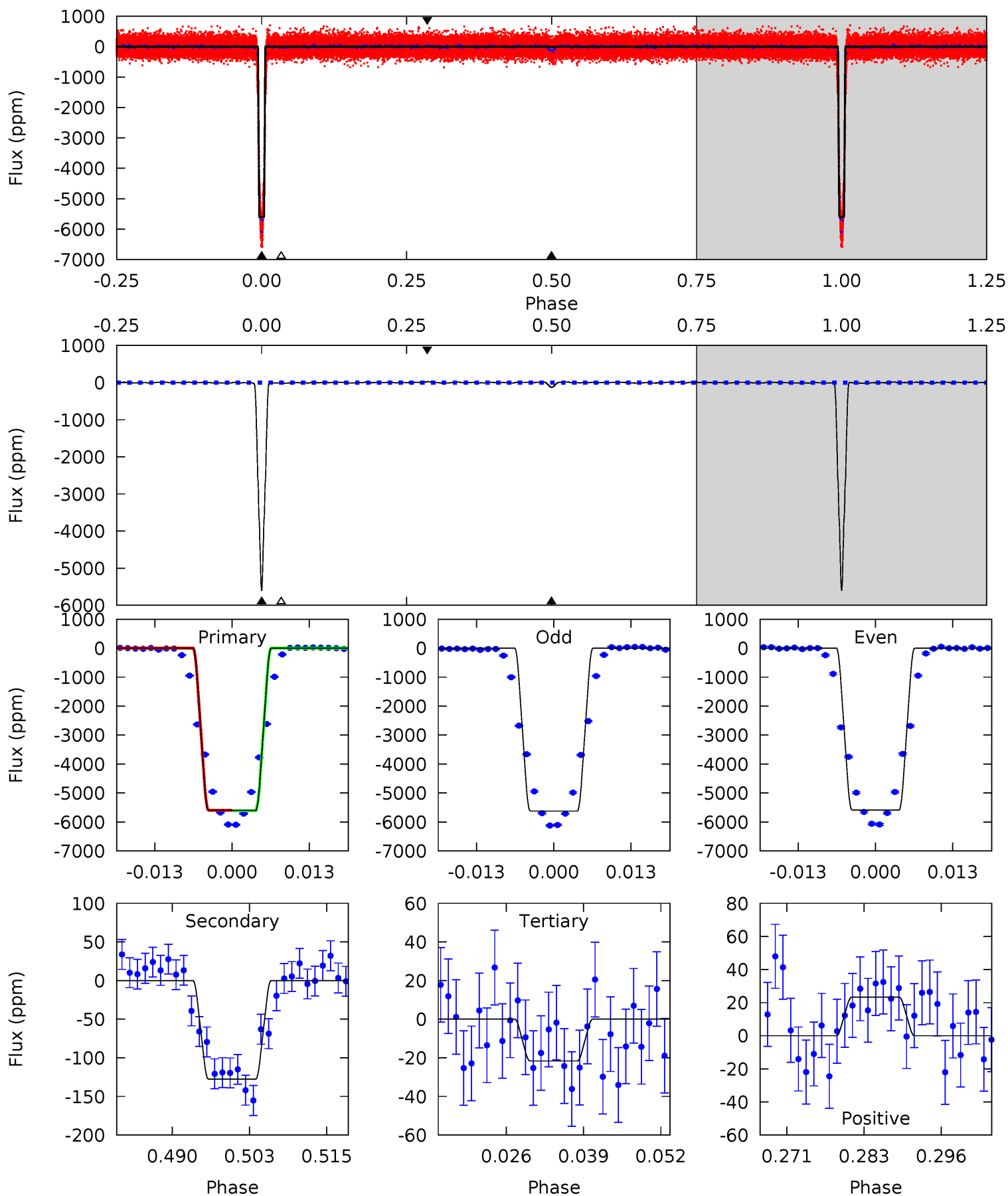
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1350	28.8	4.13	5.73	4.90	2.35	1.92	1346	1345	24.7	23.1	2.07	0.99	0.00	0.42



Alt Model-Shift Uniqueness Test

008892910-01, P = 10.810086 Days, E = 122.144549 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
930.6	21.2	3.60	3.87	4.98	2.49	1.32	927.0	926.7	17.6	17.4	3.05	1.00	0.00	1.57



Stellar Parameters For KIC 008892910

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6211^{+167}_{-223}	$4.269^{+0.153}_{-0.187}$	$0.000^{+0.250}_{-0.300}$	$1.284^{+0.395}_{-0.230}$	$1.114^{+0.189}_{-0.142}$	$0.741^{+0.552}_{-0.360}$
	+3%/-4%	+4%/-4%	+inf%/-inf%	+31%/-18%	+17%/-13%	+74%/-49%
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 008892910-01 / KOI 0132.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-131 ± 5	$14.26^{+2.32}_{-1.57}$	1378^{+98}_{-90}	2790^{+47}_{-57}	$3.493^{+0.896}_{-0.802}$
Alt.	-128 ± 6	$10.88^{+1.73}_{-1.21}$	1376^{+100}_{-86}	3006^{+62}_{-70}	$5.805^{+1.454}_{-1.335}$

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

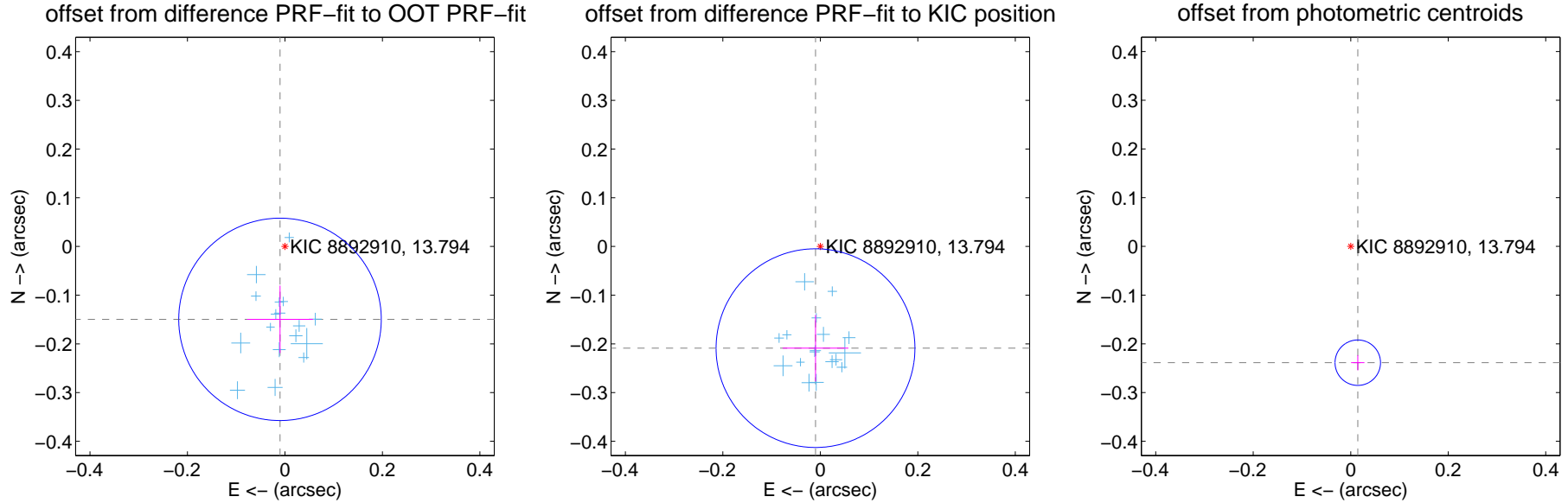
DV Centroid Data

Supplemental centroid analysis for 008892910-01. Kepler magnitude: 13.79. Transit SNR 728.91

There are 17 quarters with good PRF difference image offsets

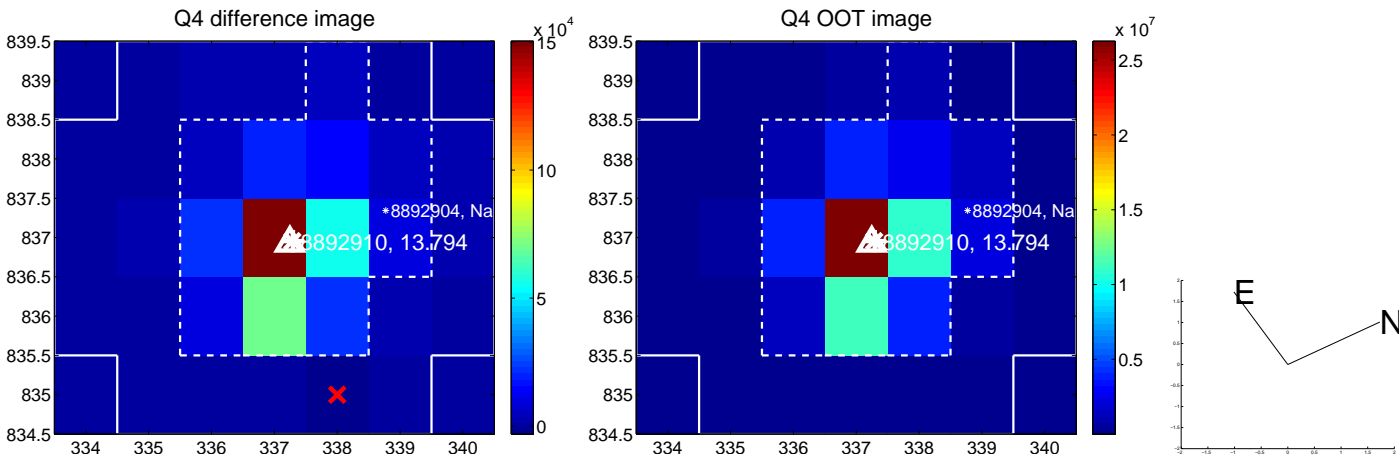
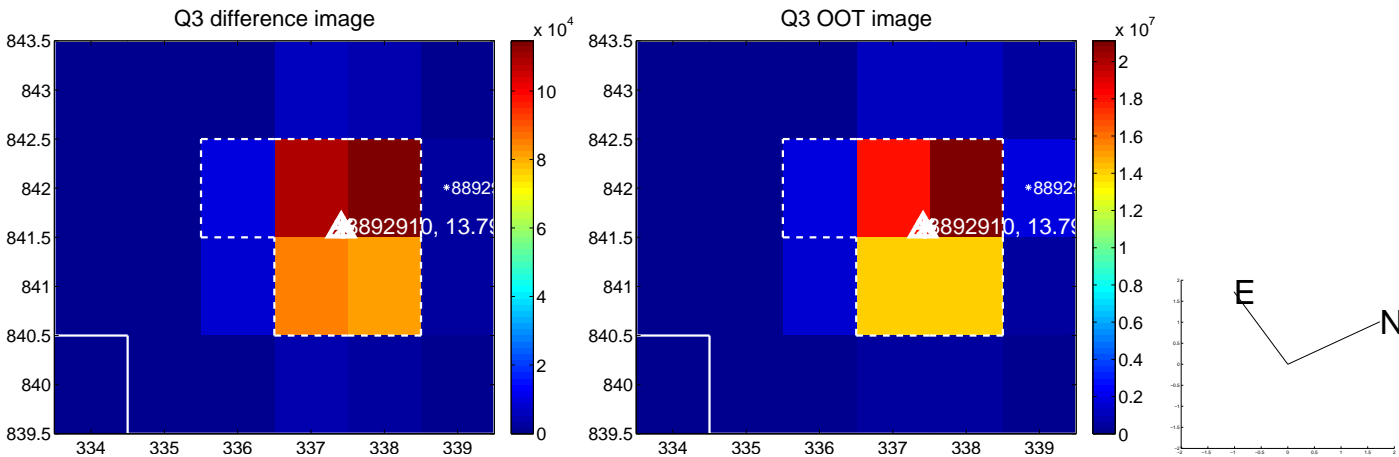
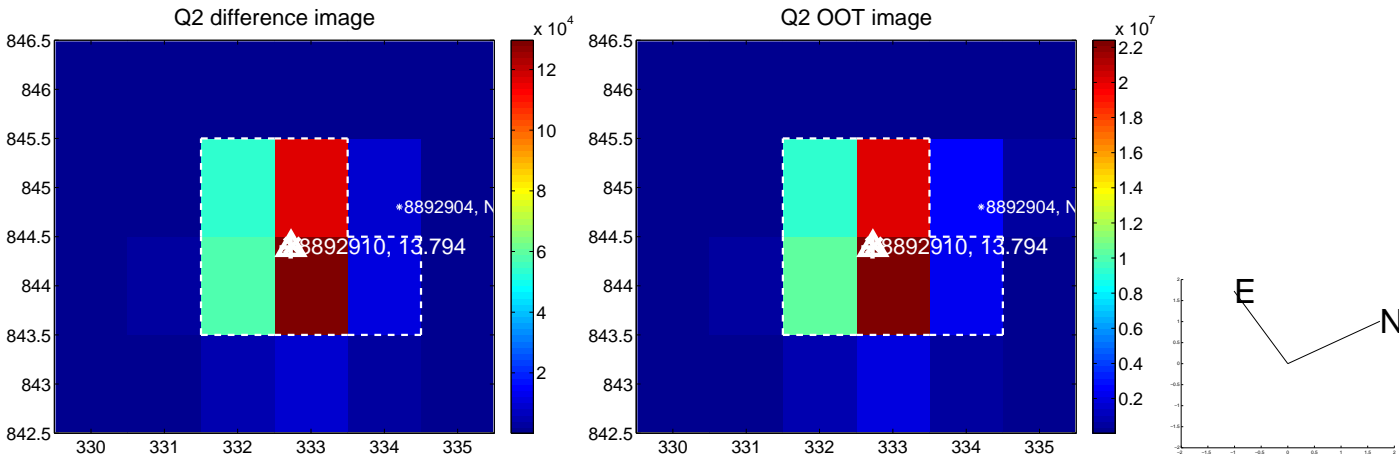
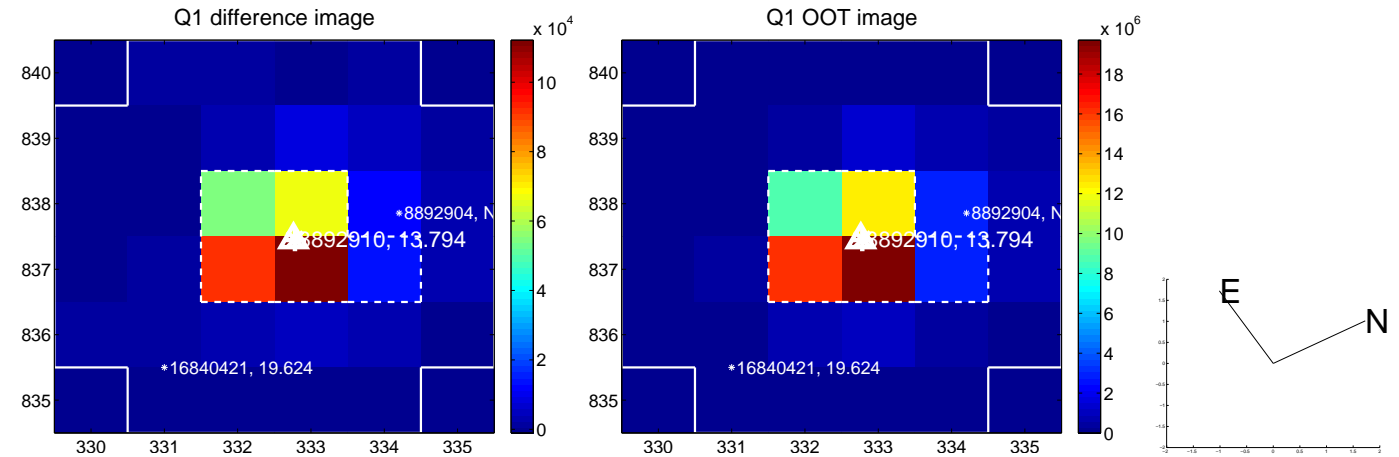
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.150 ± 0.069	2.17	0.010 ± 0.068	-0.150 ± 0.069
PRF-fit source offset from KIC position	0.209 ± 0.068	3.07	0.010 ± 0.067	-0.209 ± 0.068
photometric centroid source offset	0.24 ± 0.02	15.38	-0.01 ± 0.01	-0.24 ± 0.02

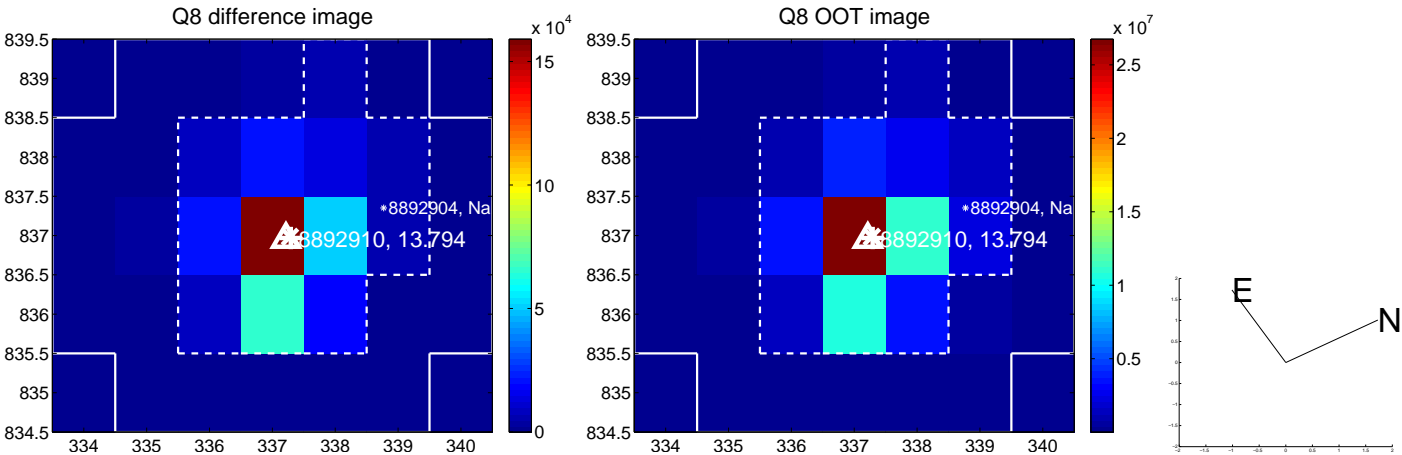
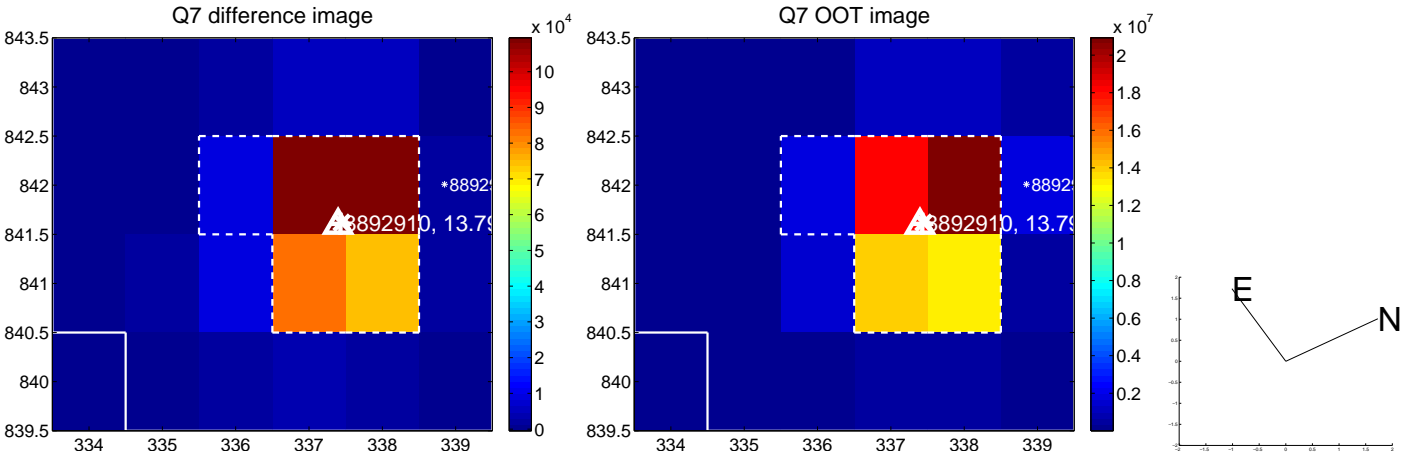
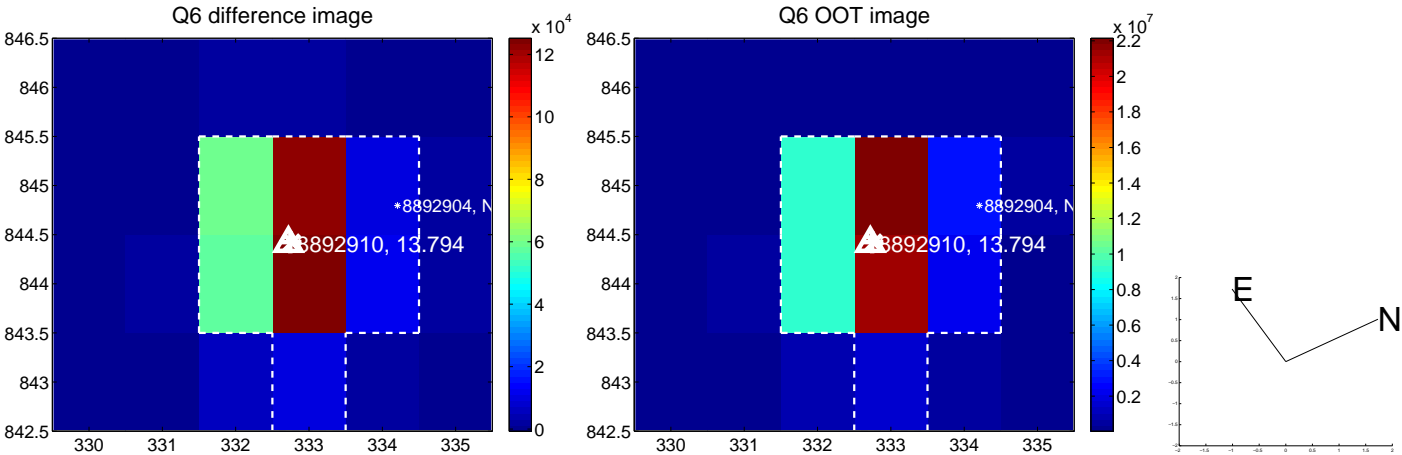
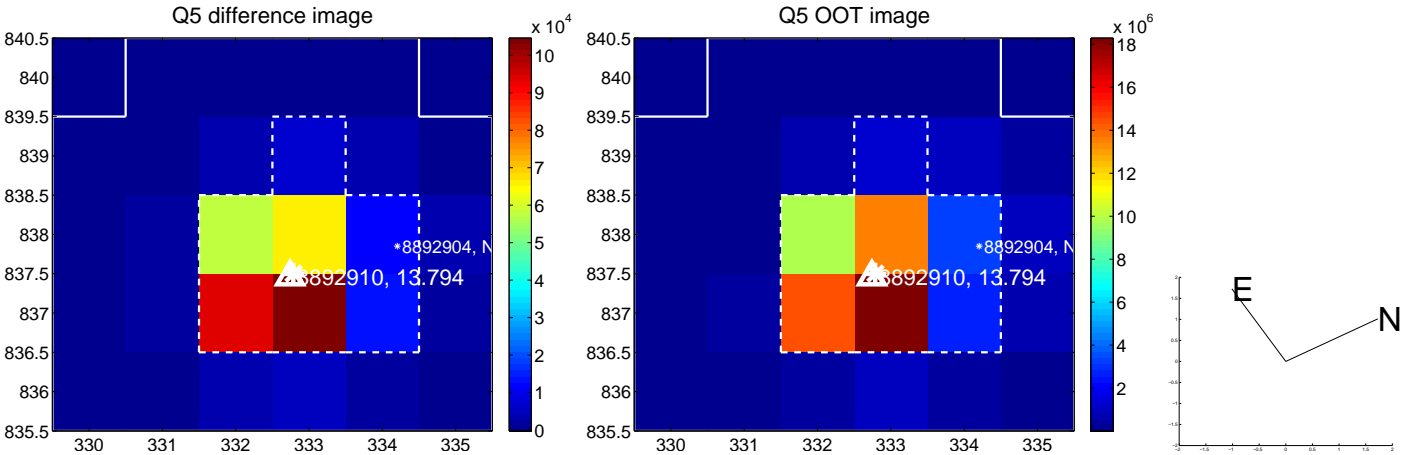


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

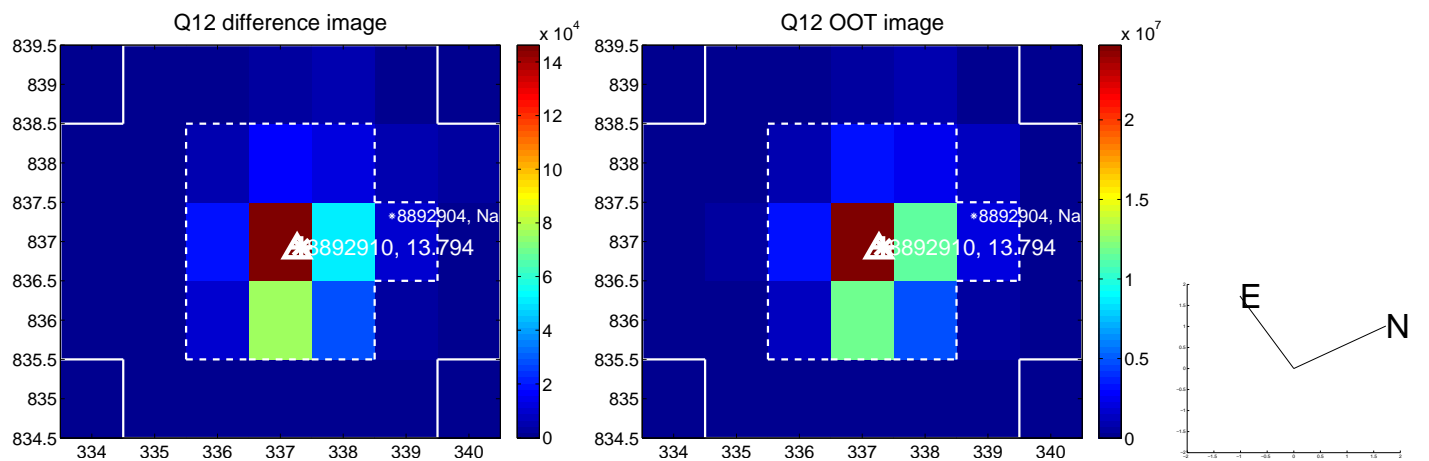
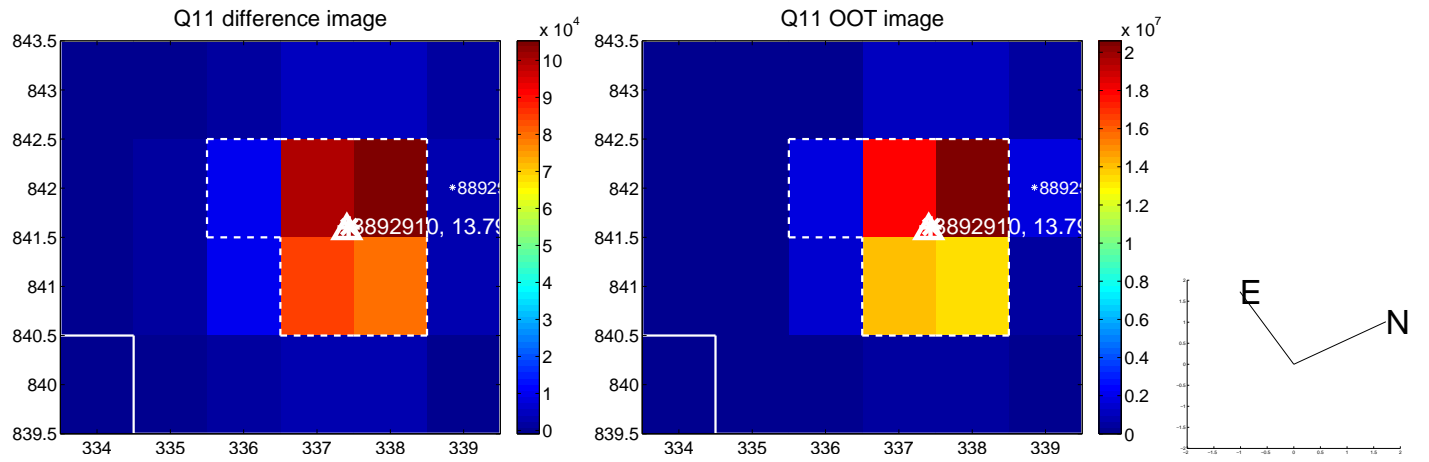
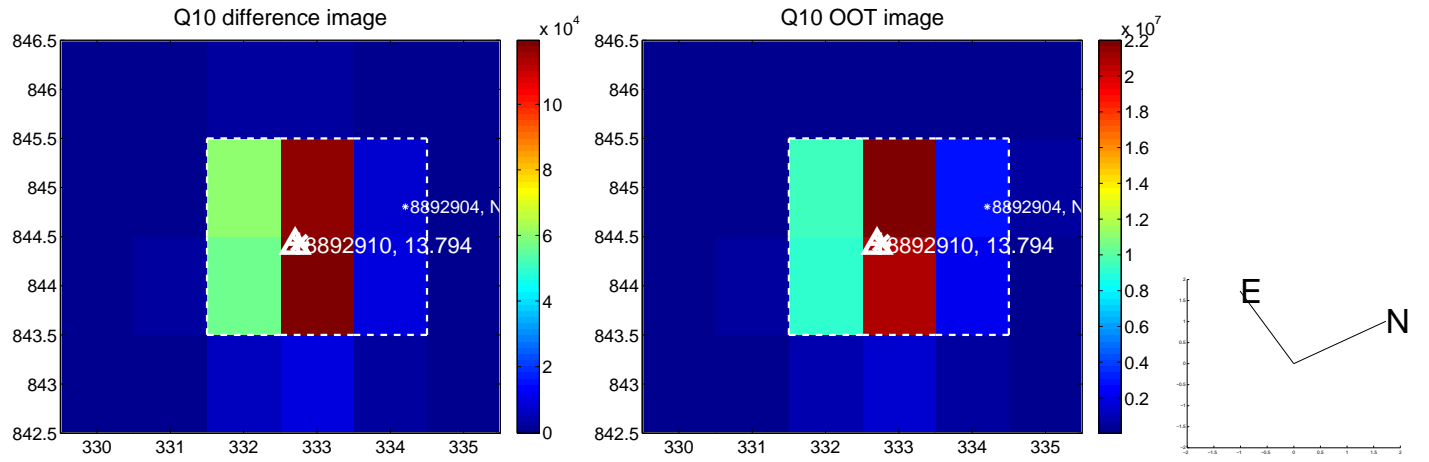
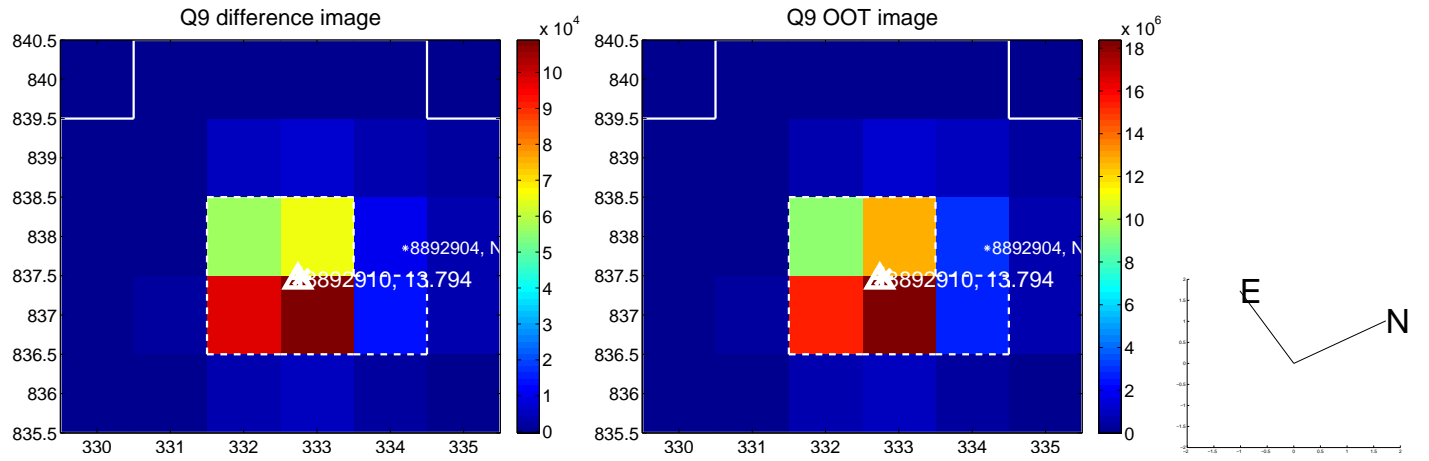
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



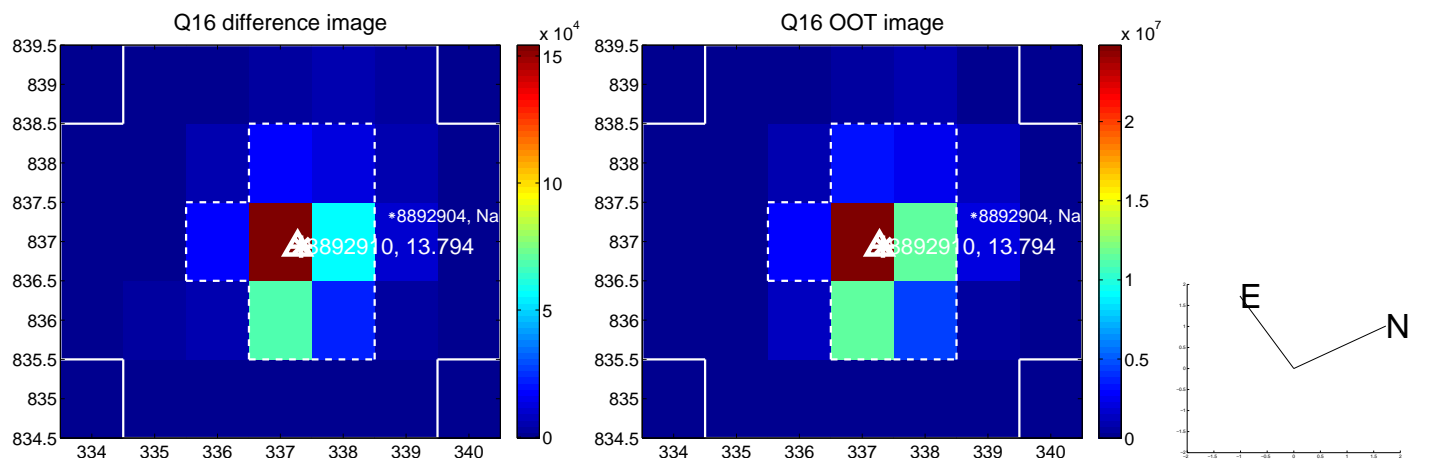
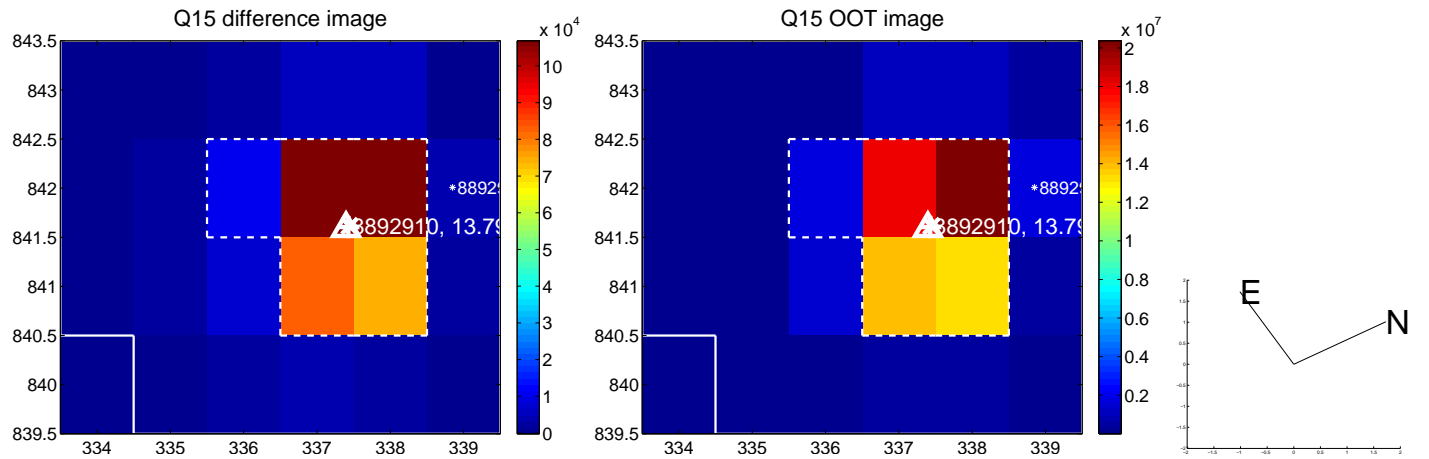
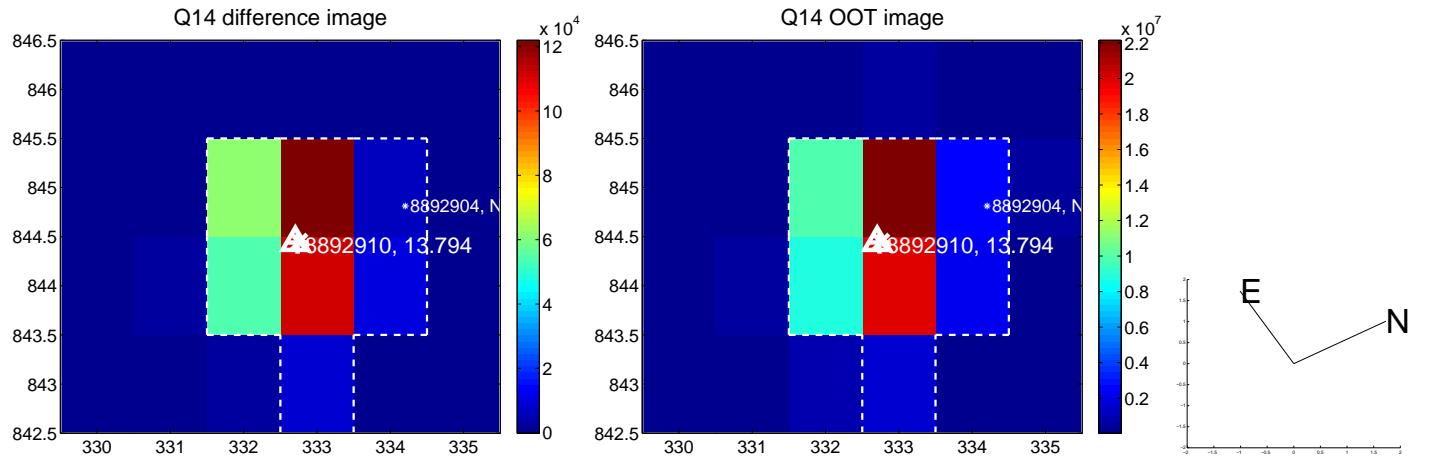
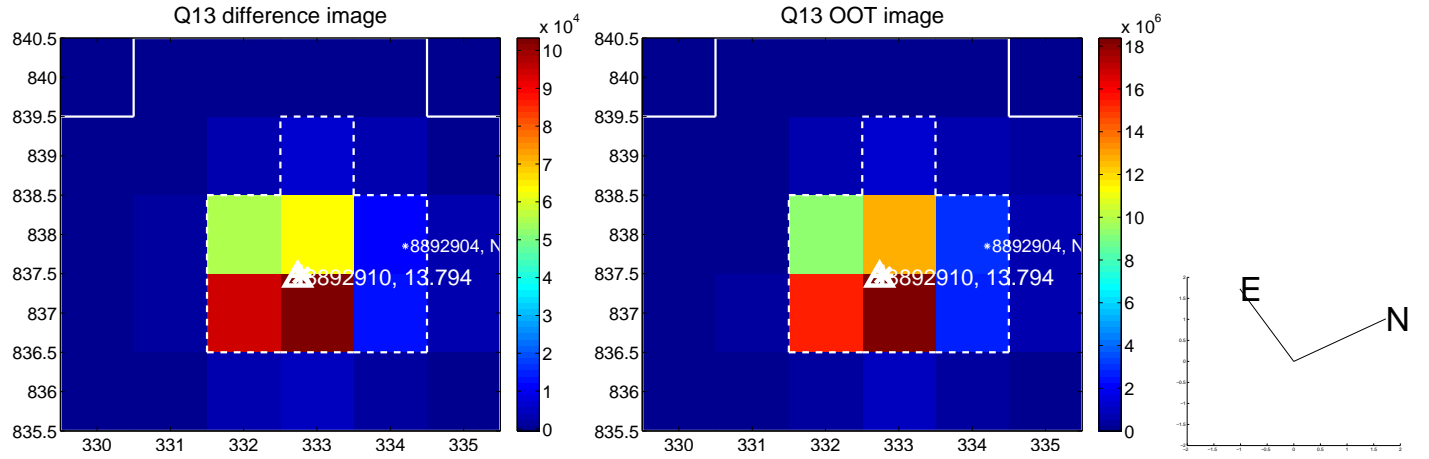
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



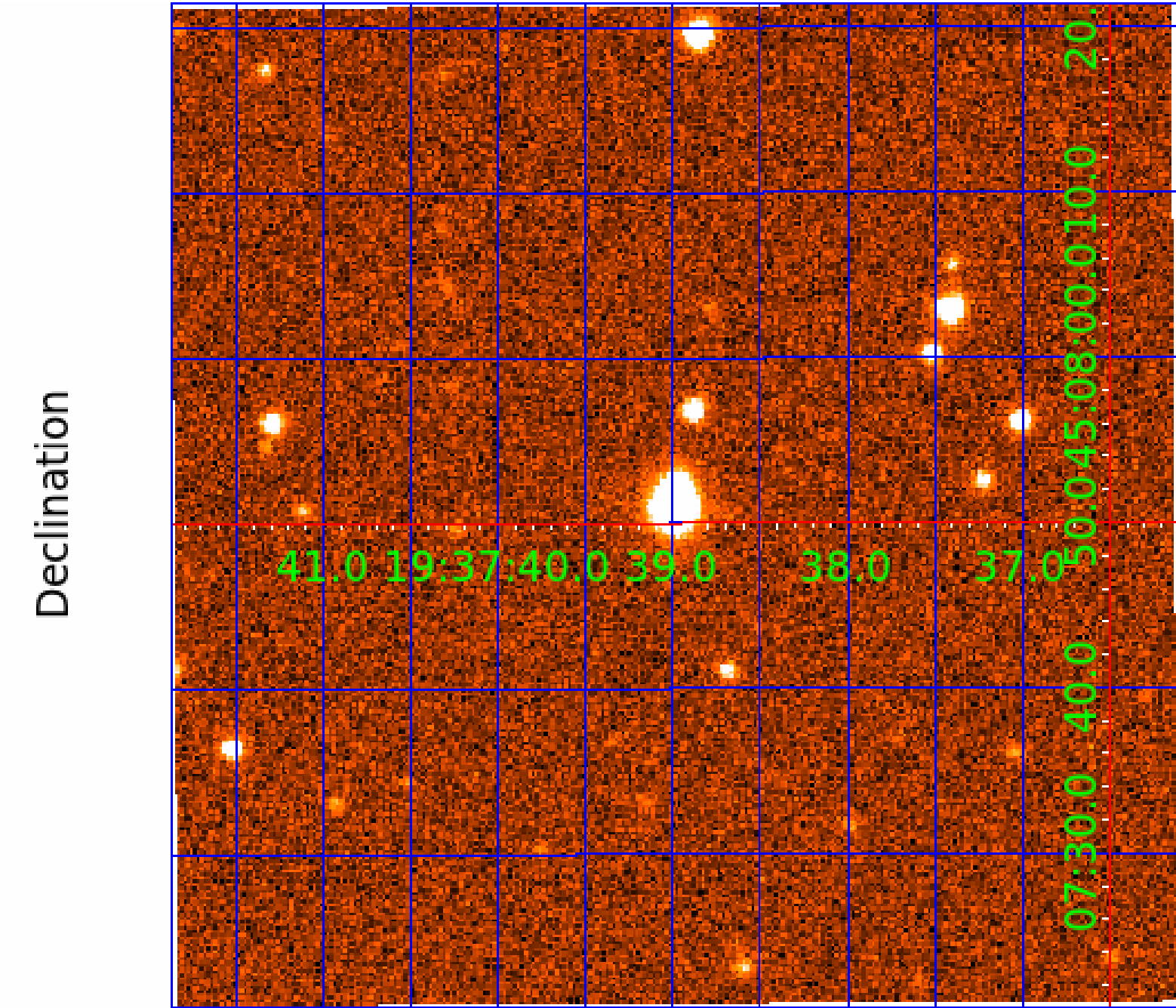
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008892910

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})
008892910-01	OBS	0132.01	10.810133	132.951610	6150.5	4.480	734.4	728.9	1.28	6211	14.24	222.92
008892910-02	OBS	No	10.810262	138.351392	132.5	3.636	17.0	18.1	1.28	6211	1.75	222.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008892910-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
008892910-02	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.

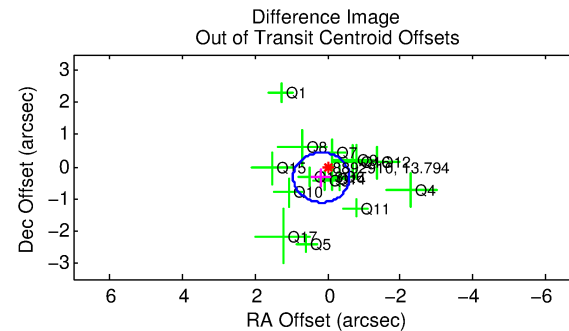
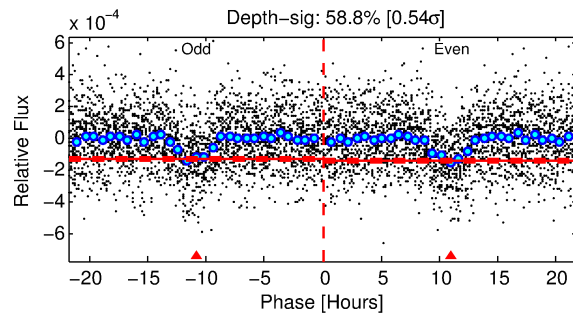
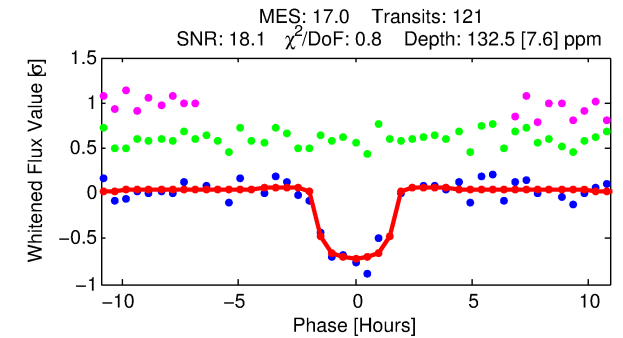
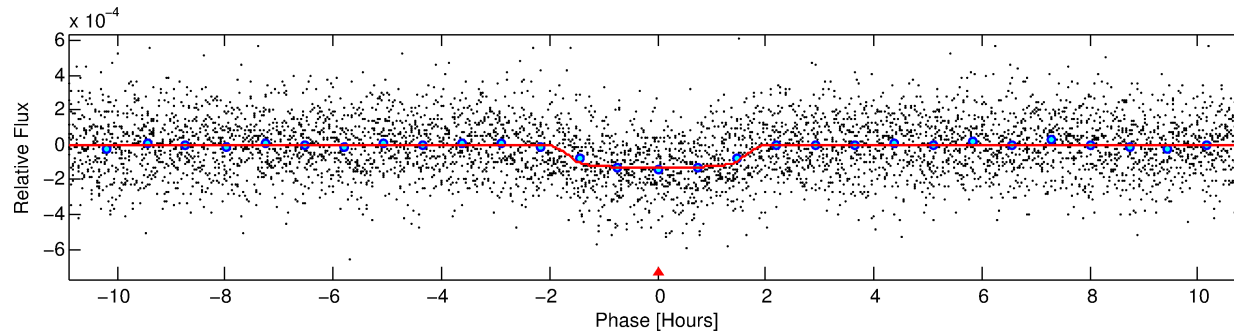
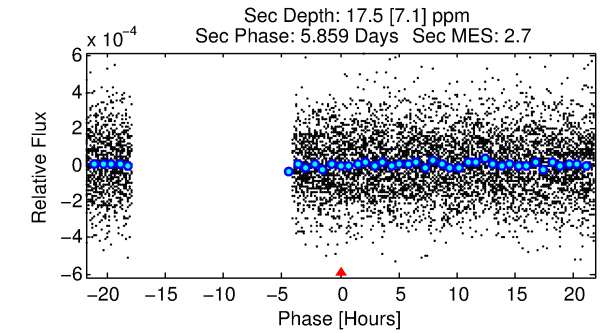
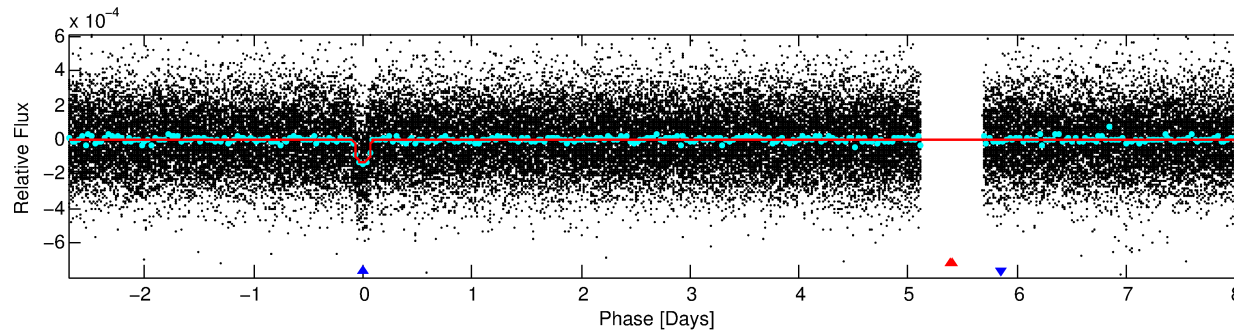
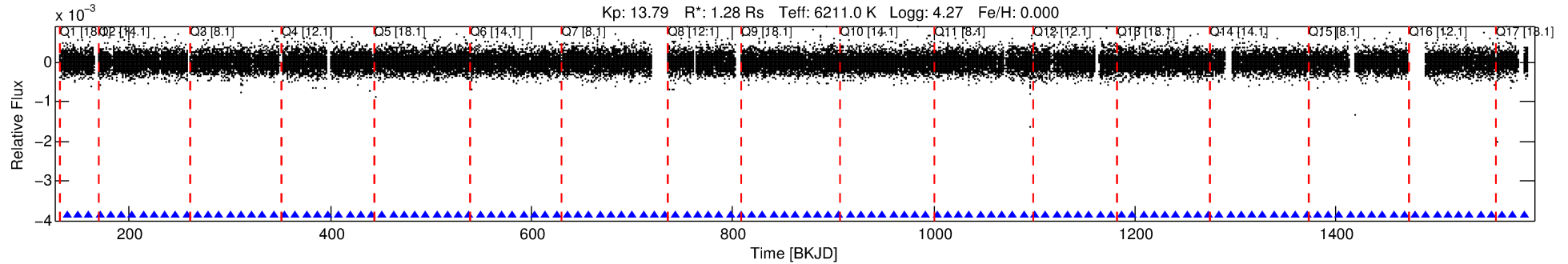
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008892910-02

No Significant Match Found

DV One-Page Summary

KIC: 8892910 Candidate: 2 of 2 Period: 10.810 d
KOI: K00132 Corr: No Ephemeris Match



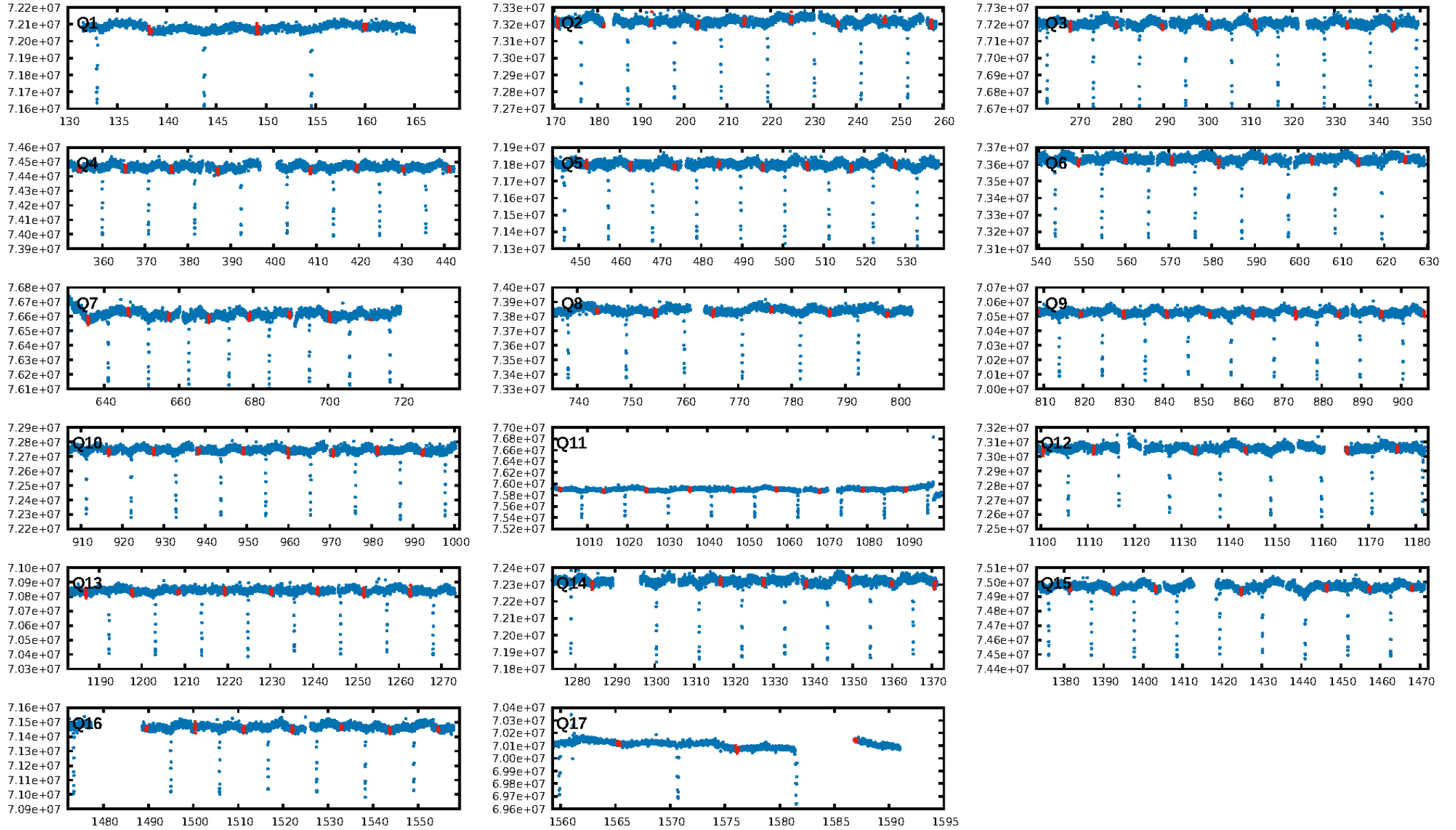
DV Fit Results:

Period = 10.81026 [0.00005] d
Epoch = 138.3514 [0.0040] BKJD
Rp/R* = 0.0125 [0.0029]
a/R* = 10.21 [12.35]
b = 0.91 [0.24]
Seff = 222.91 [84.91]
Teq = 985 [94] K
Rp = 1.75 [0.67] Re
a = 0.0993 [0.0249] AU
Ag = 30.96 [21.85] [1.37σ]
Teffp = 3593 [564] K [4.56σ]

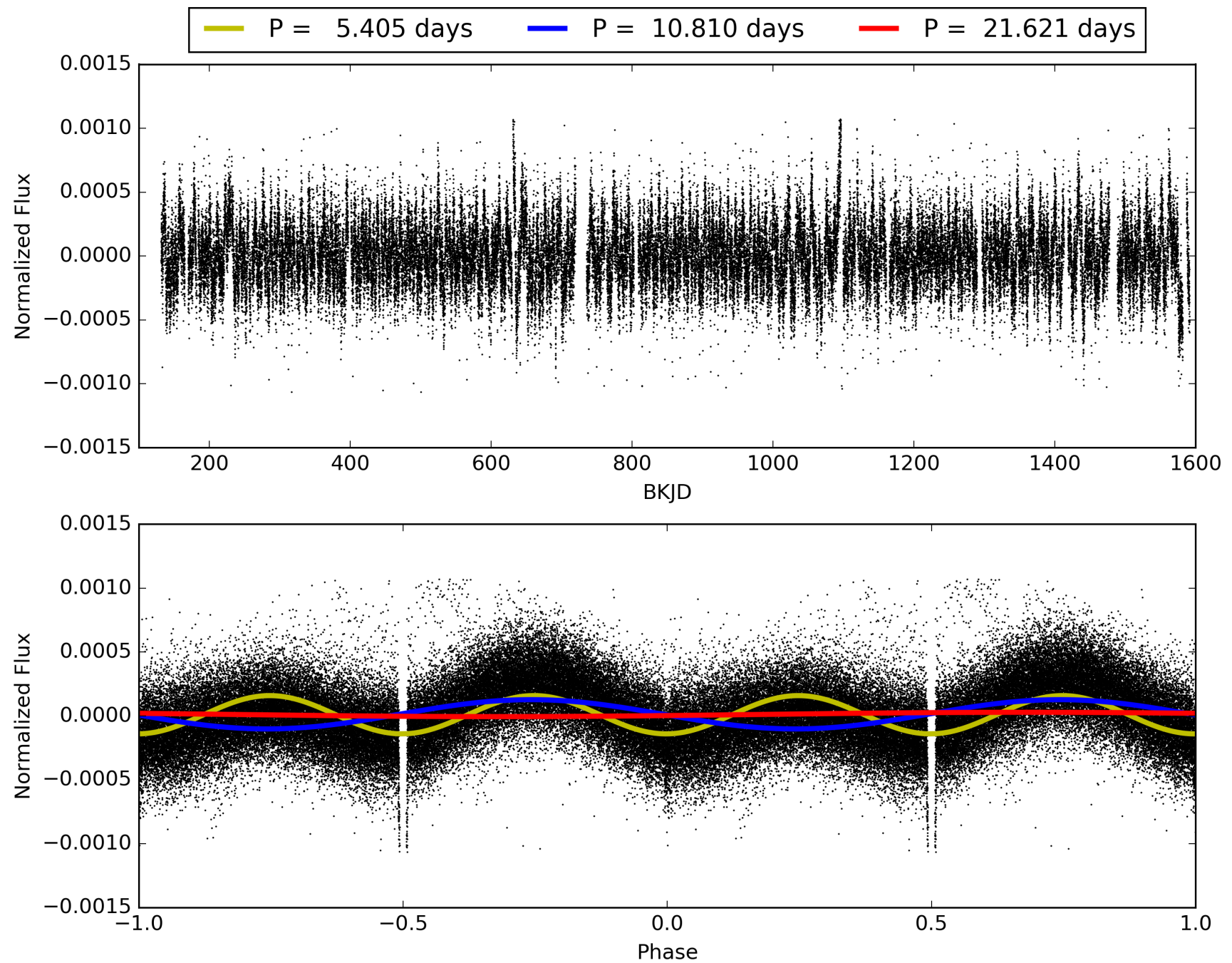
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.28e-63
RollingBand-fgt: 1.00 [115/115]
GhostDiagnostic-chr: 1.563
Centroid-sig: 94.2%
Centroid-so: 0.130 arcsec [0.20σ]
OotOffset-rm: 0.380 arcsec [1.47σ]
KicOffset-rm: 0.432 arcsec [1.67σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008892910-02, PDC Light Curves

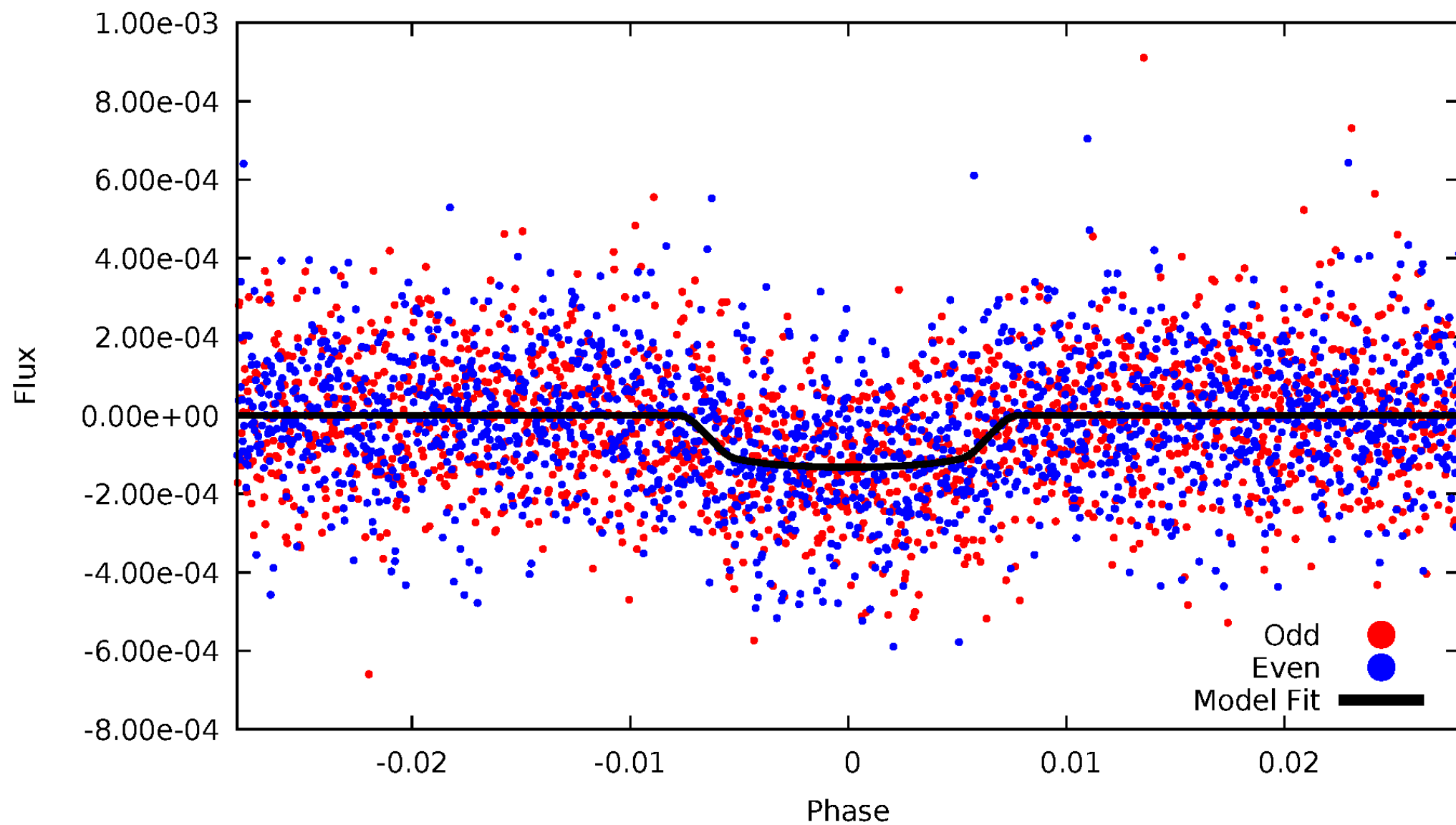


TCE 008892910-02



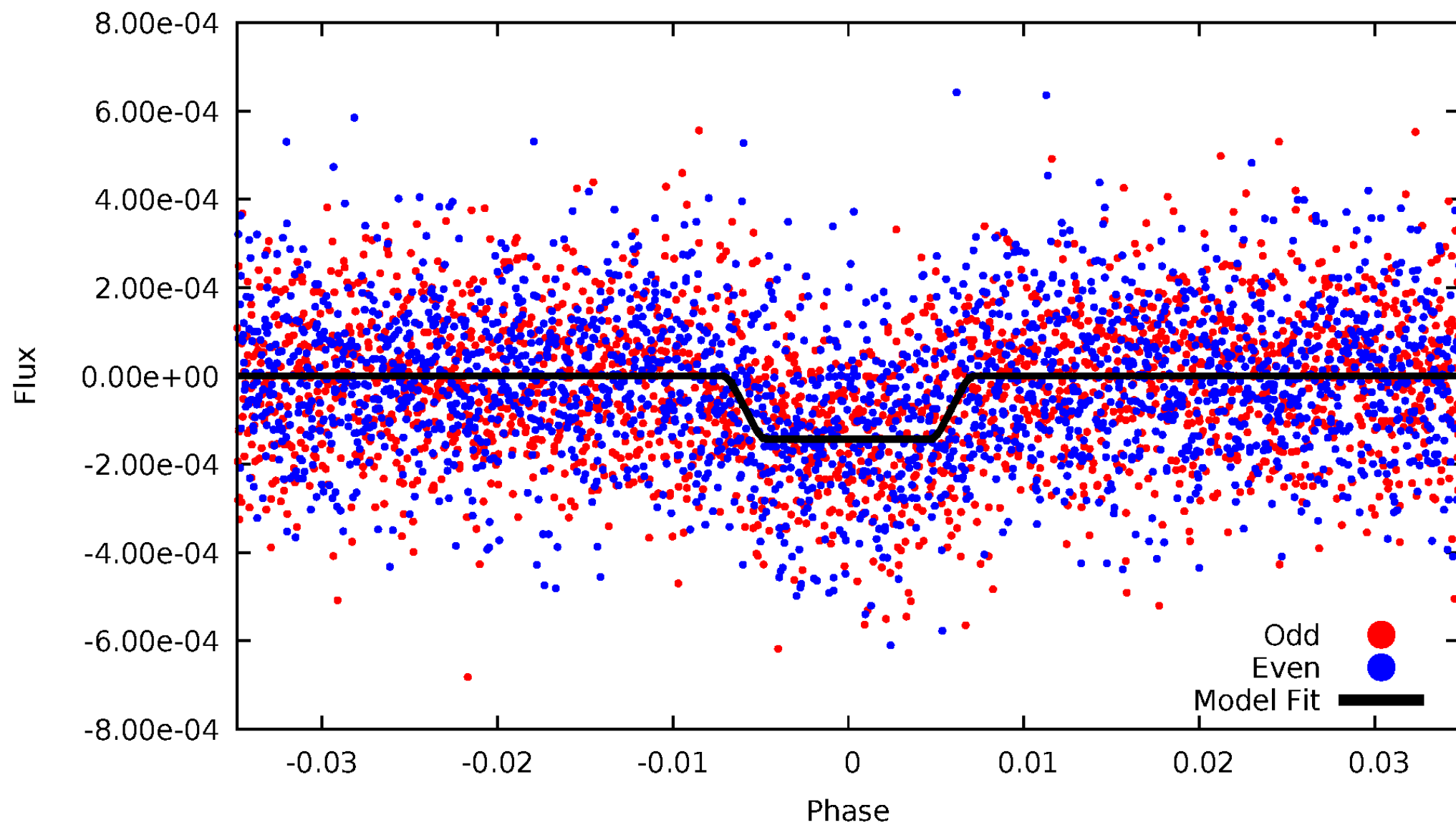
DV Odd/Even

TCE 008892910-02



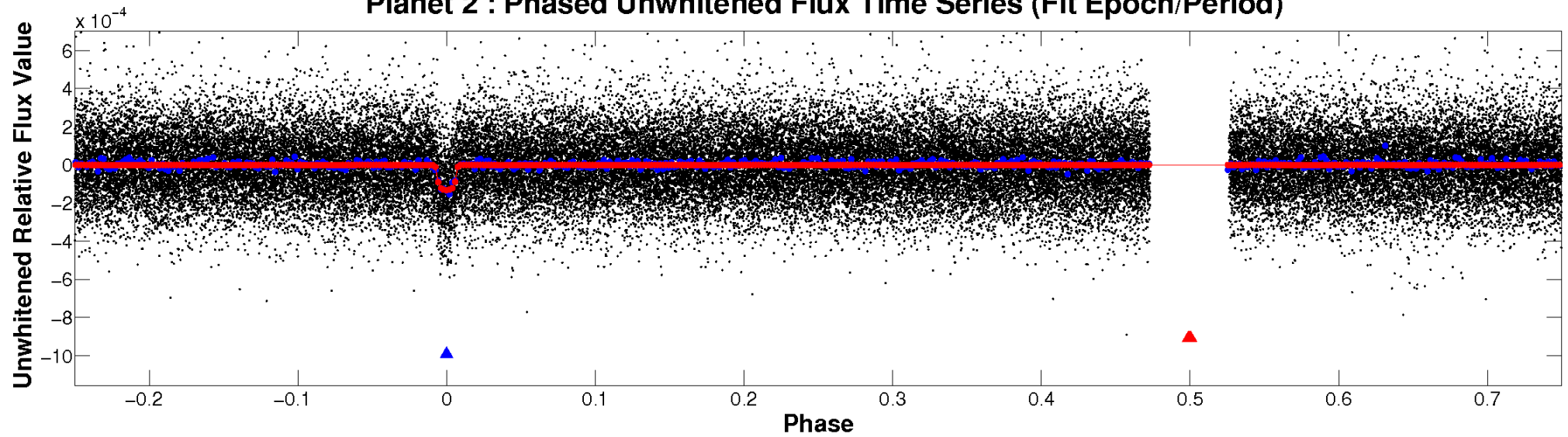
ALT Odd/Even

TCE 008892910-02

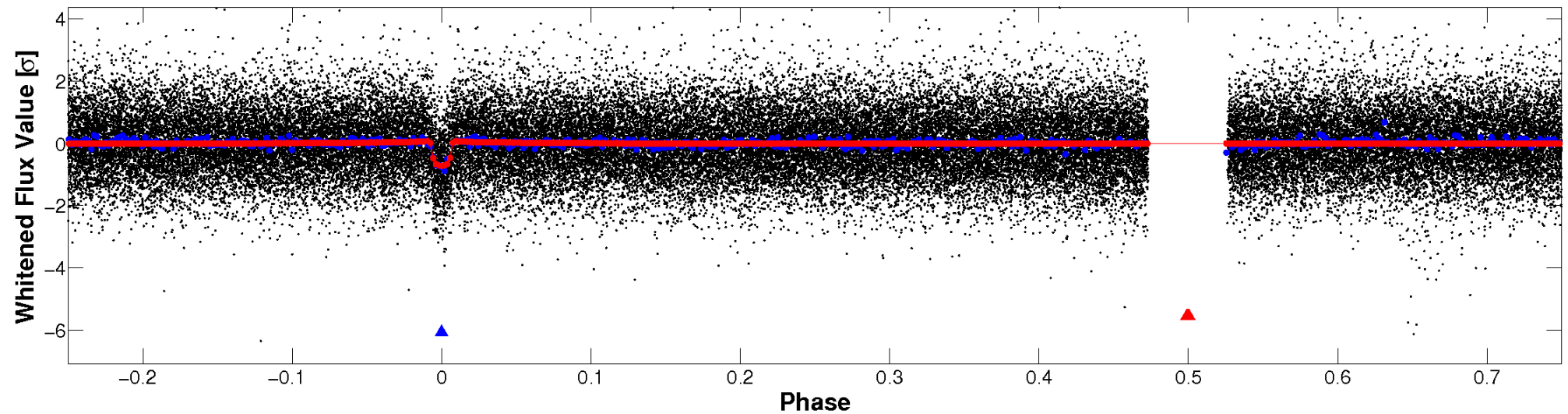


Non-Whitened Vs. Whitened Light Curve

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

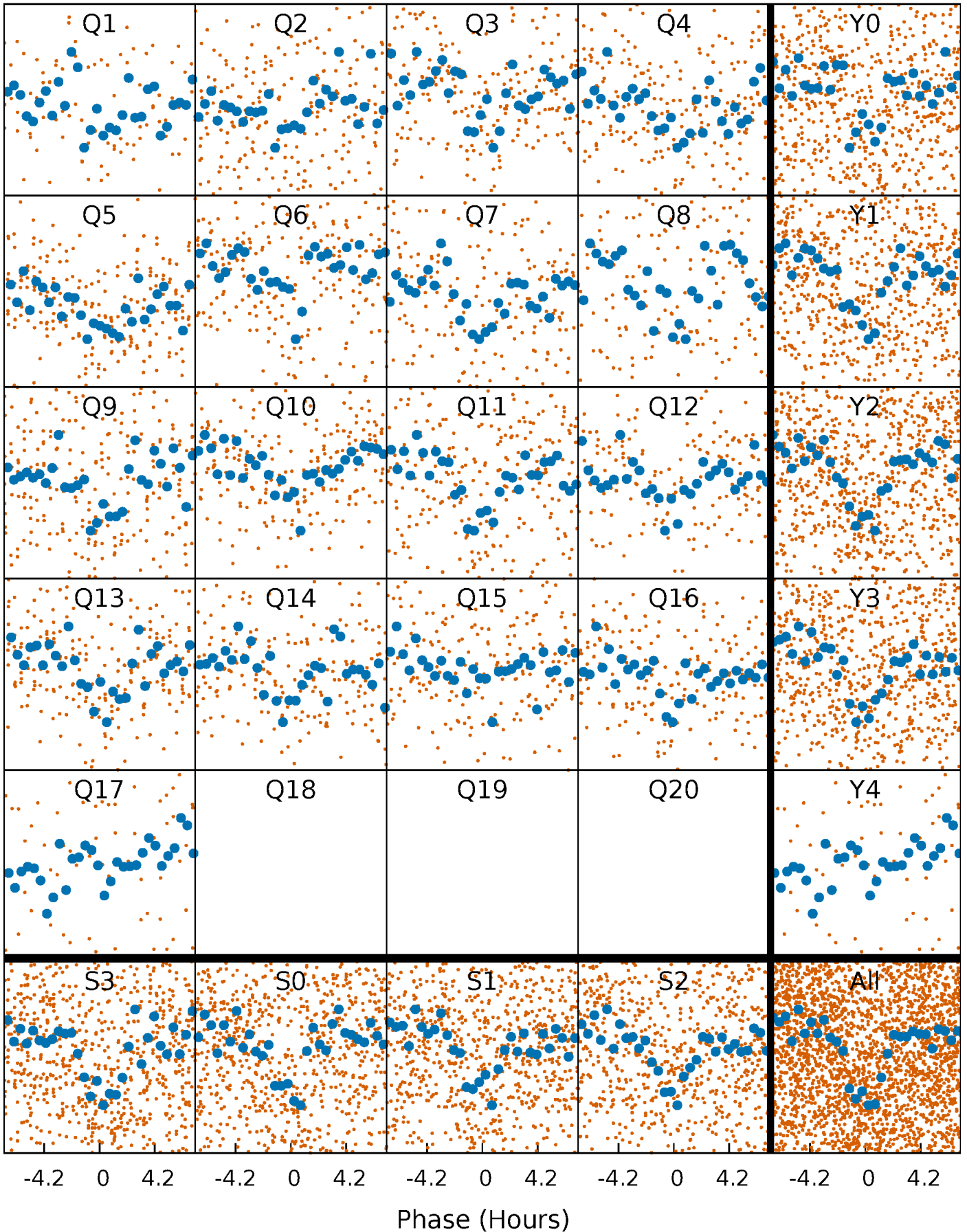


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



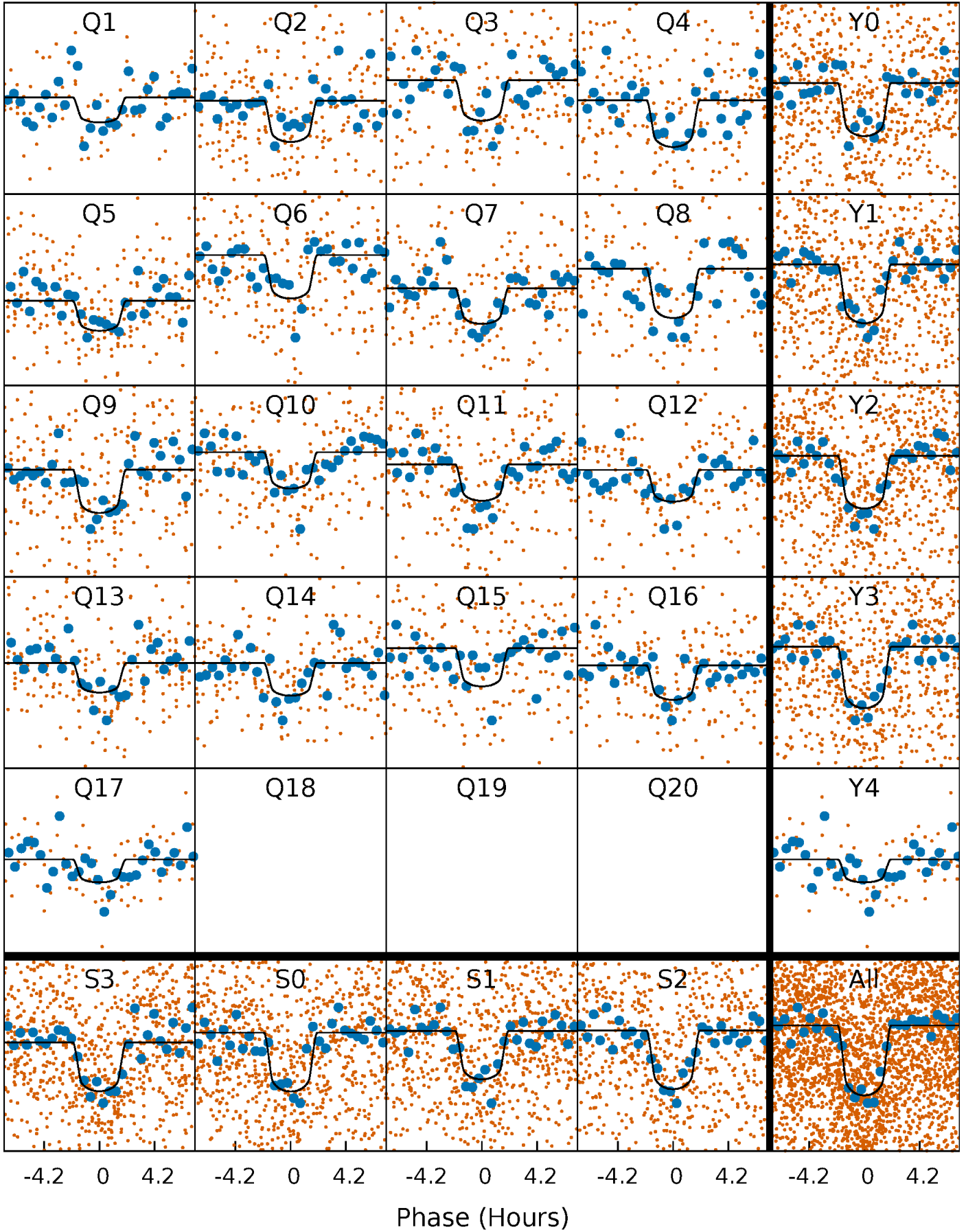
PDC Quarter-Phased Transit Curves

TCE 008892910-02 P= 10.810262 Days $T_0=138.351392$ (BKJD)



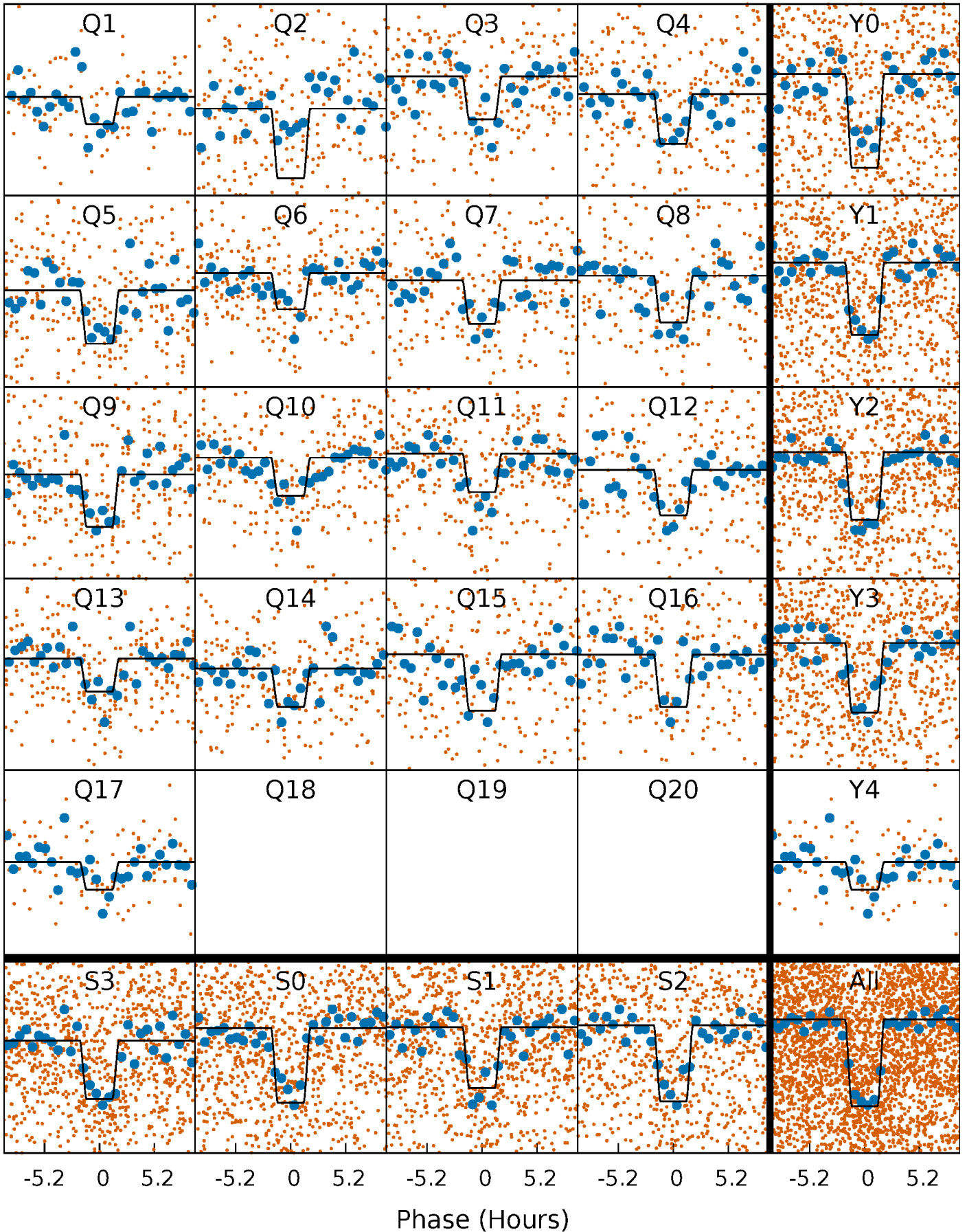
DV Quarter-Phased Transit Curves

TCE 008892910-02 P= 10.810262 Days $T_0=138.351392$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

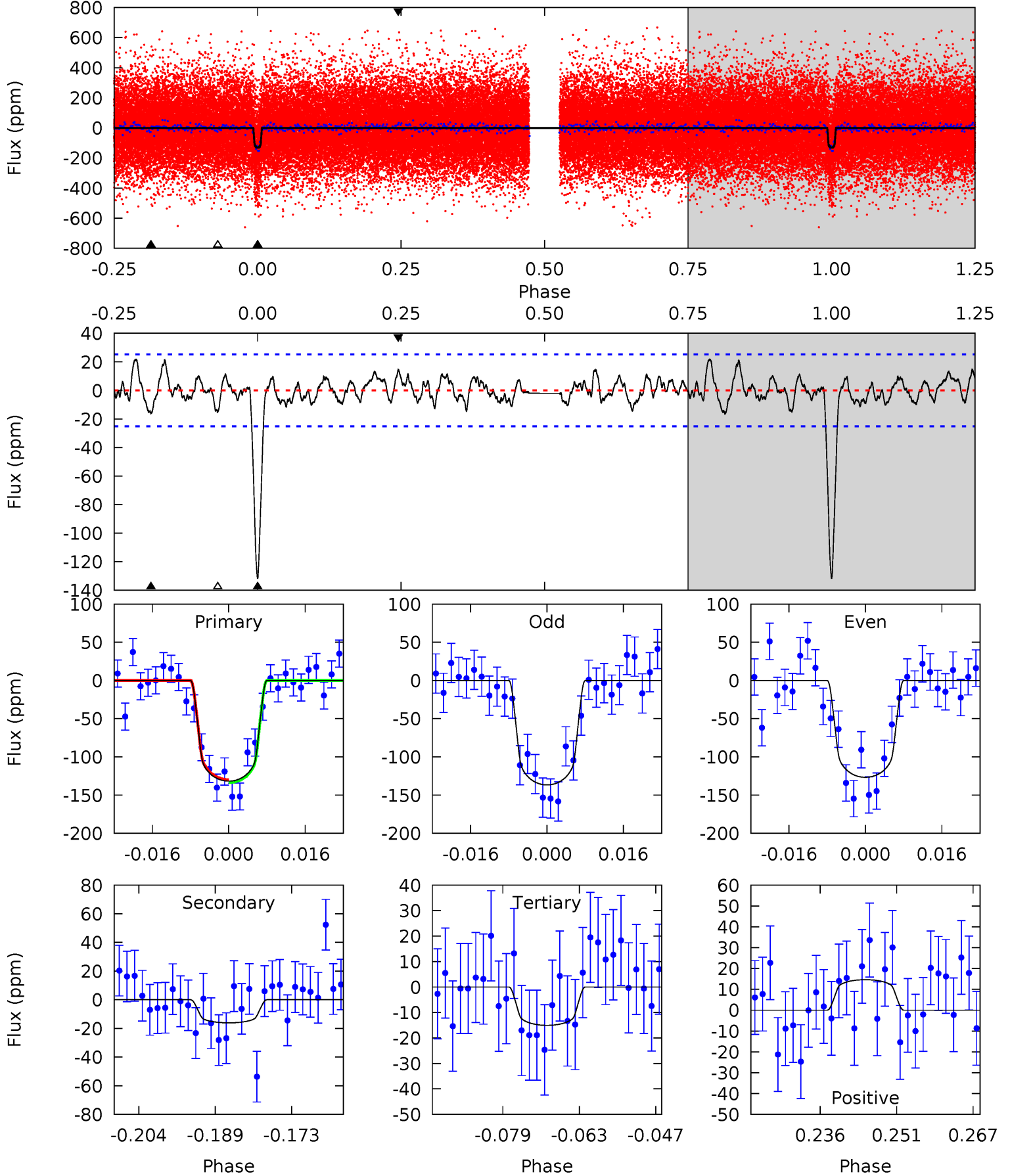
TCE 008892910-02 P= 10.810273 Days $T_0=138.346938$ (BKJD)



DV Model-Shift Uniqueness Test

008892910-02, P = 10.810262 Days, E = 127.541130 Days

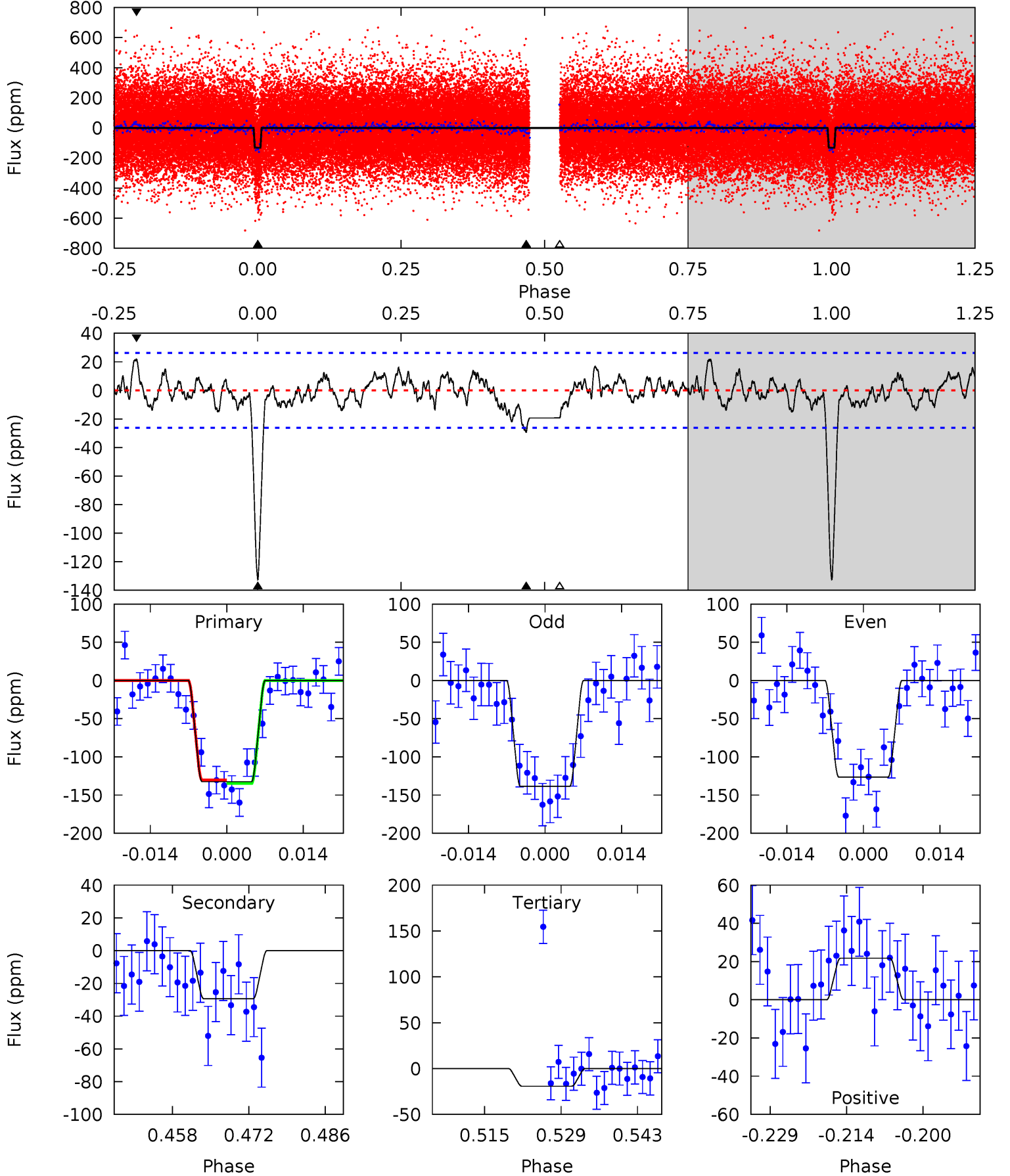
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	3.17	2.96	2.87	4.94	2.42	1.30	22.9	23.0	0.21	0.29	0.98	0.99	0.14	0.36



Alt Model-Shift Uniqueness Test

008892910-02, P = 10.810273 Days, E = 127.536665 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	5.54	3.65	4.11	4.96	2.45	1.39	21.4	20.9	1.89	1.43	1.16	0.99	0.14	0.40



Stellar Parameters For KIC 008892910

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6211^{+167}_{-223}	$4.269^{+0.153}_{-0.187}$	$0.000^{+0.250}_{-0.300}$	$1.284^{+0.395}_{-0.230}$	$1.114^{+0.189}_{-0.142}$	$0.741^{+0.552}_{-0.360}$
	+3%/-4%	+4%/-4%	+inf%/-inf%	+31%/-18%	+17%/-13%	+74%/-49%
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 008892910-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 5	$1.78^{+0.52}_{-0.45}$	1380^{+96}_{-86}	3854^{+428}_{-339}	27^{+24}_{-12}
Alt.	-29 ± 5	$1.68^{+0.51}_{-0.40}$	1371^{+101}_{-89}	4372^{+498}_{-364}	57^{+41}_{-24}

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 $A_{obs} \gg 1.0$

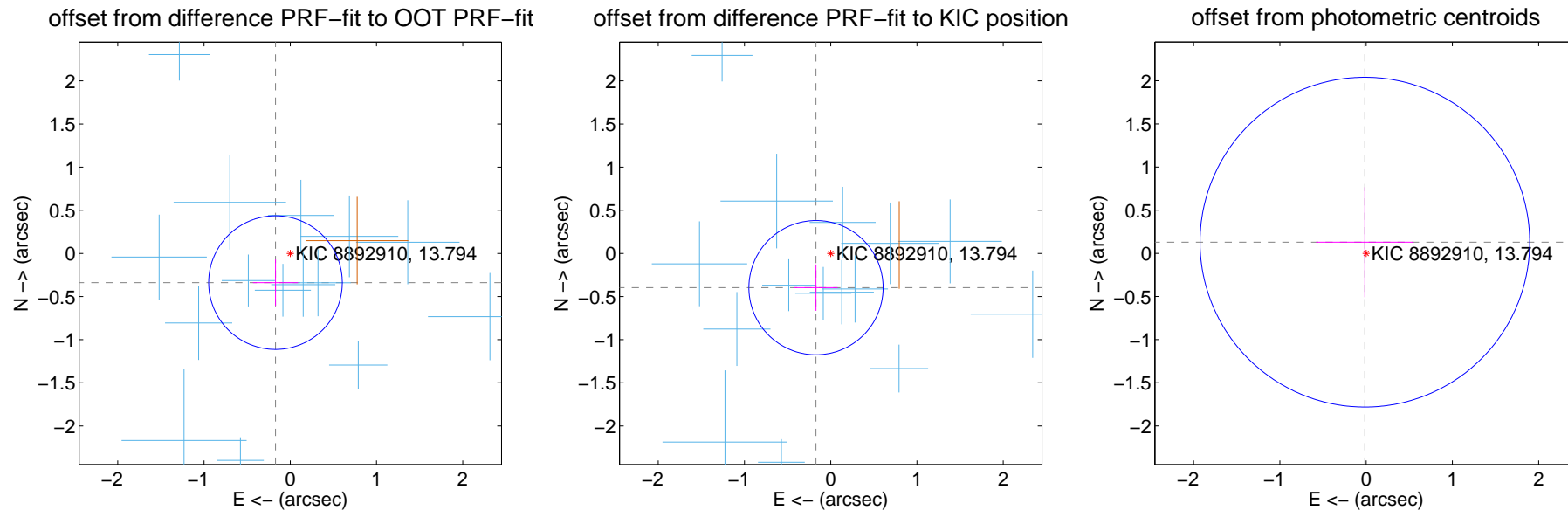
DV Centroid Data

Supplemental centroid analysis for 008892910-02. Kepler magnitude: 13.79. Transit SNR 18.12

There are 15 quarters with good PRF difference image offsets

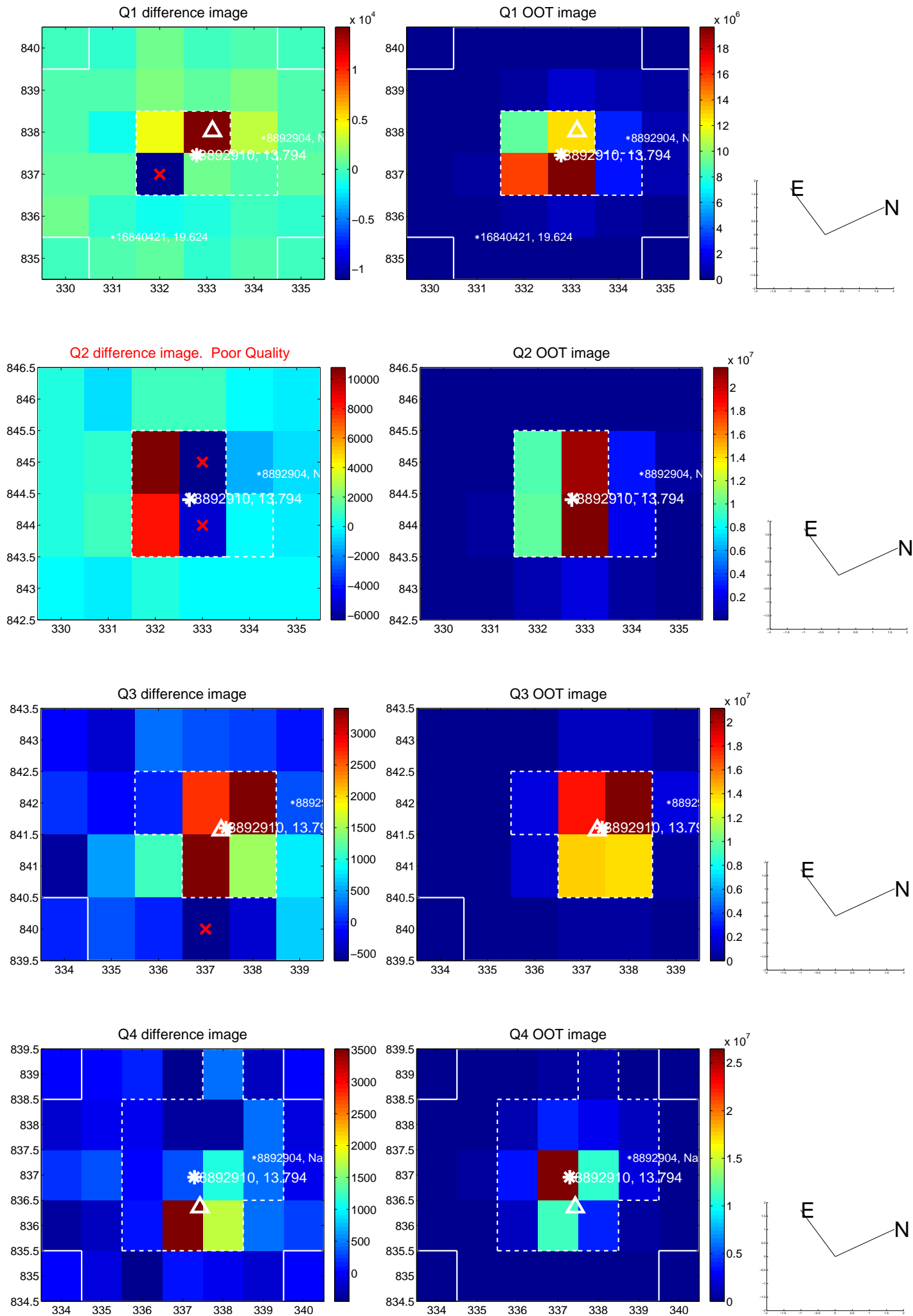
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.380 ± 0.258	1.47	0.171 ± 0.262	-0.339 ± 0.269
PRF-fit source offset from KIC position	0.432 ± 0.259	1.67	0.171 ± 0.252	-0.397 ± 0.268
photometric centroid source offset	0.13 ± 0.64	0.20	0.01 ± 0.57	0.13 ± 0.64

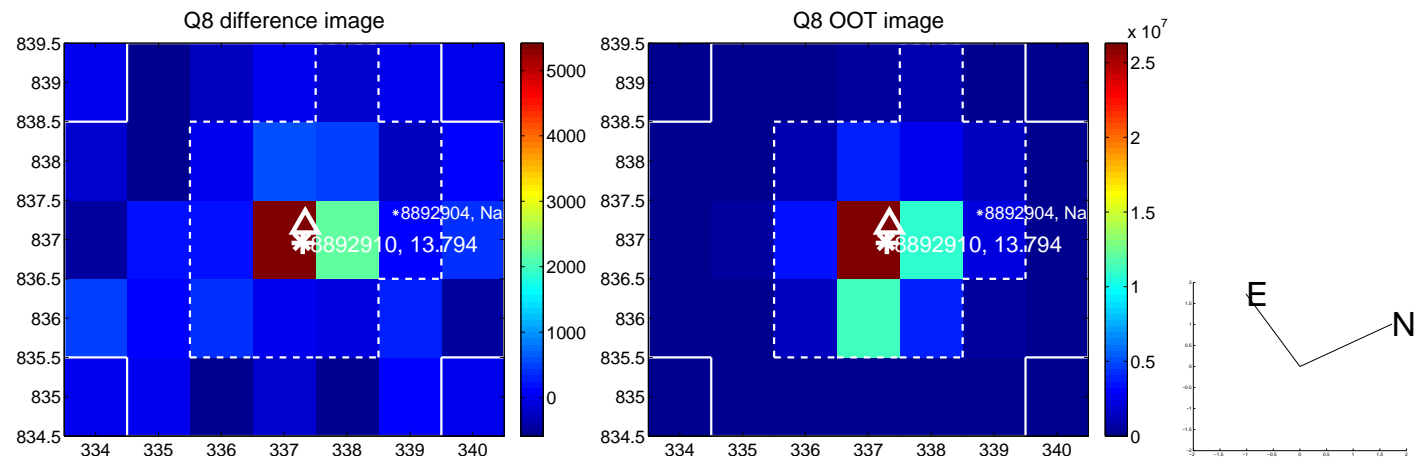
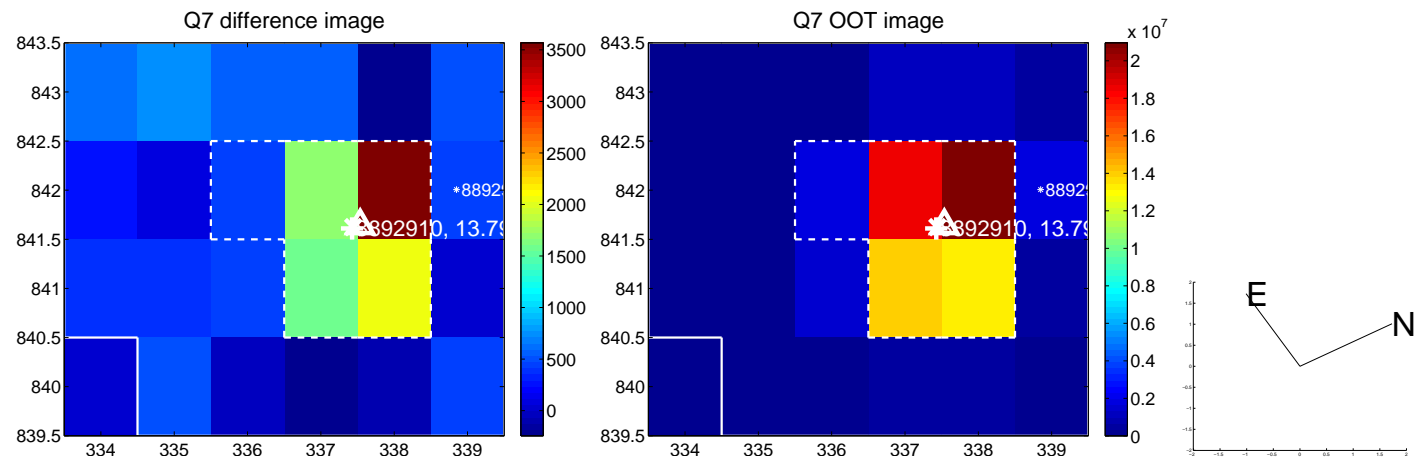
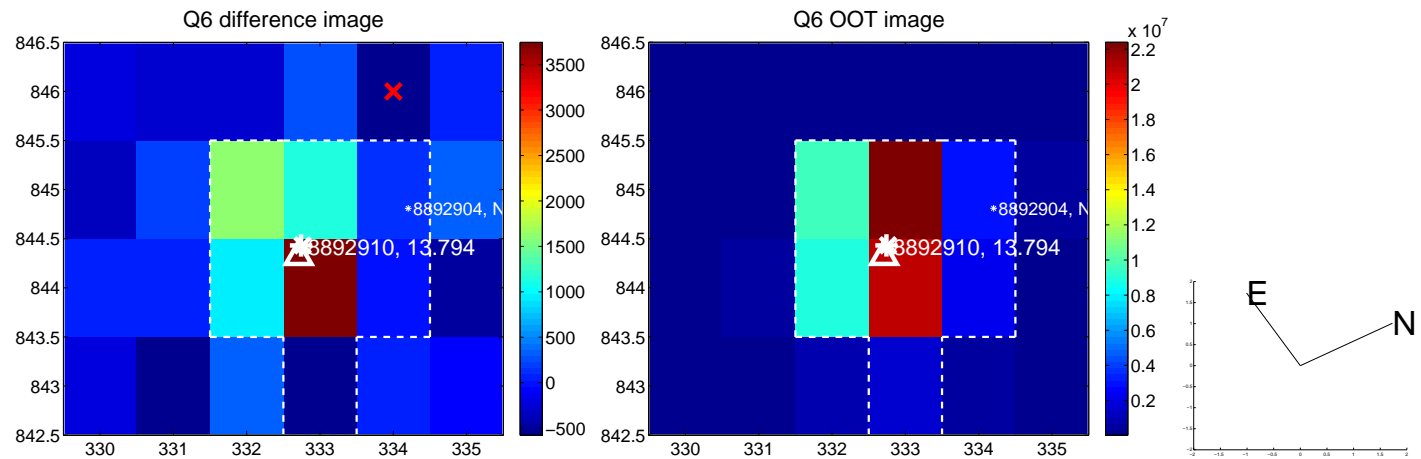
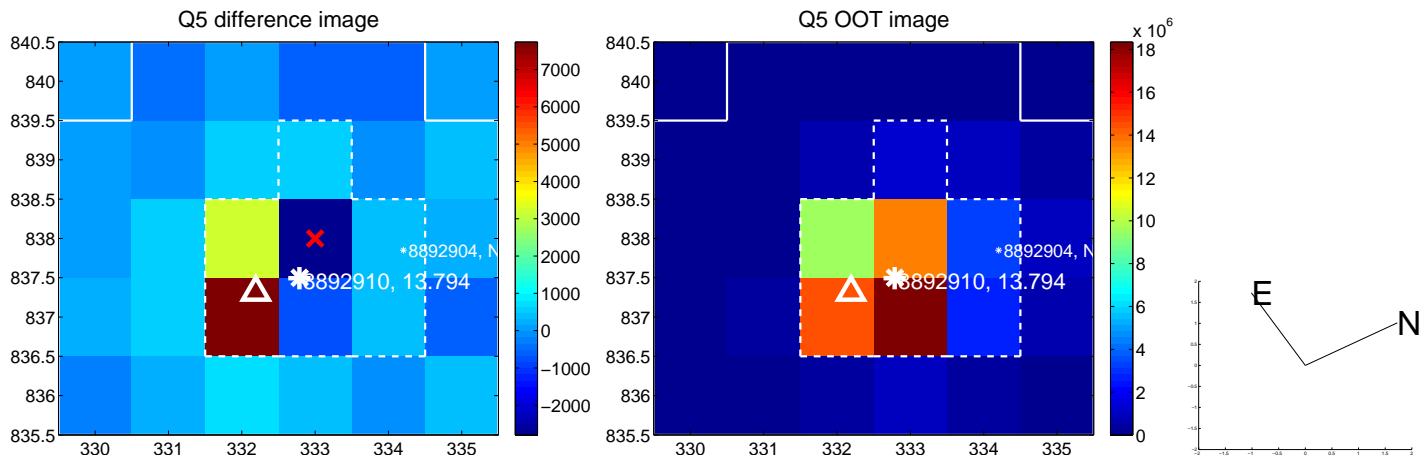


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

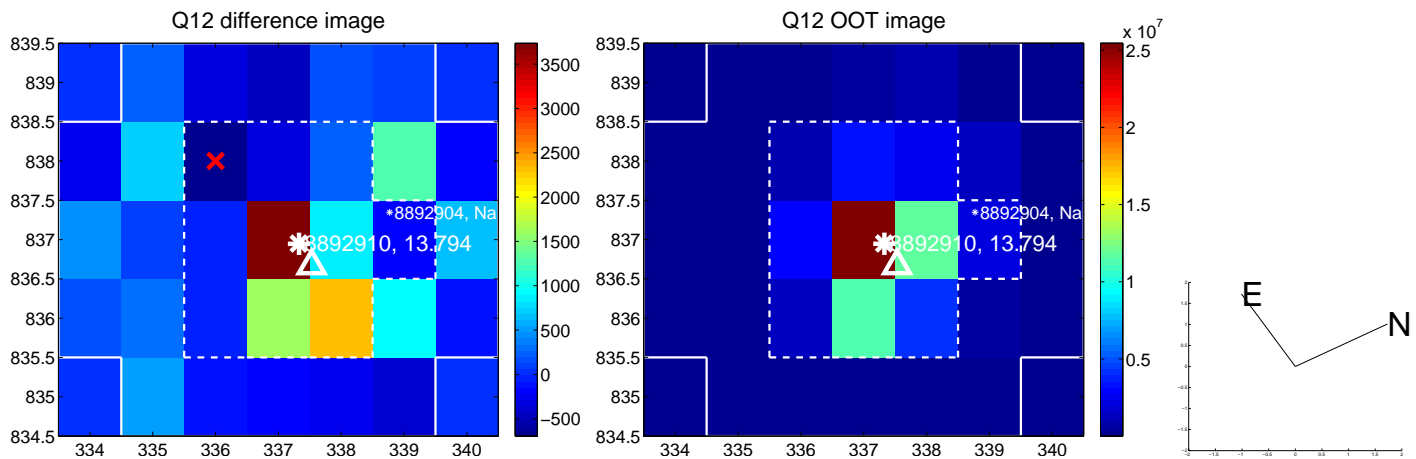
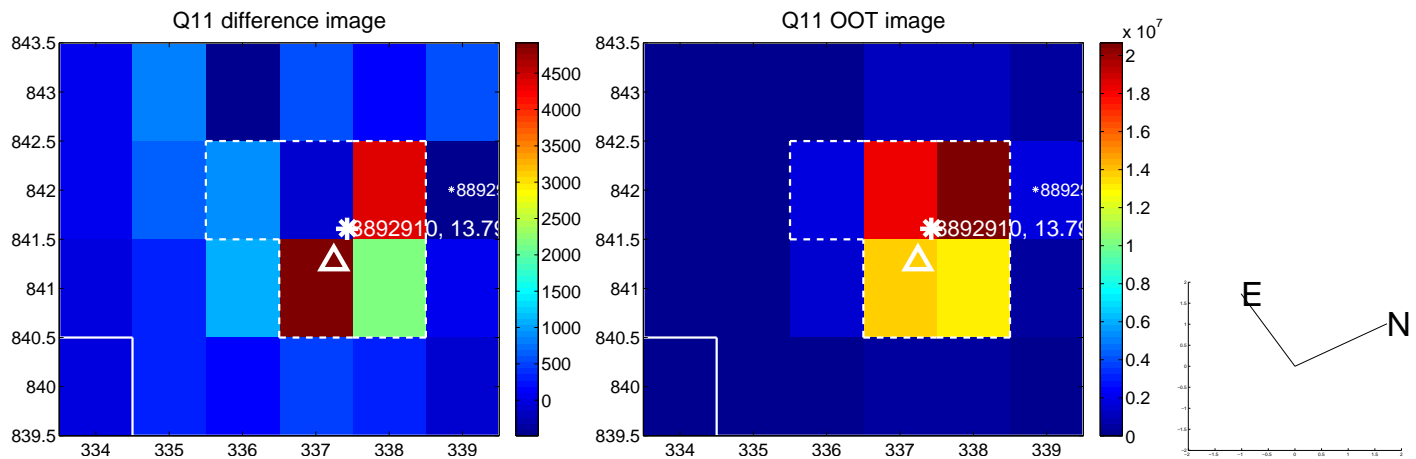
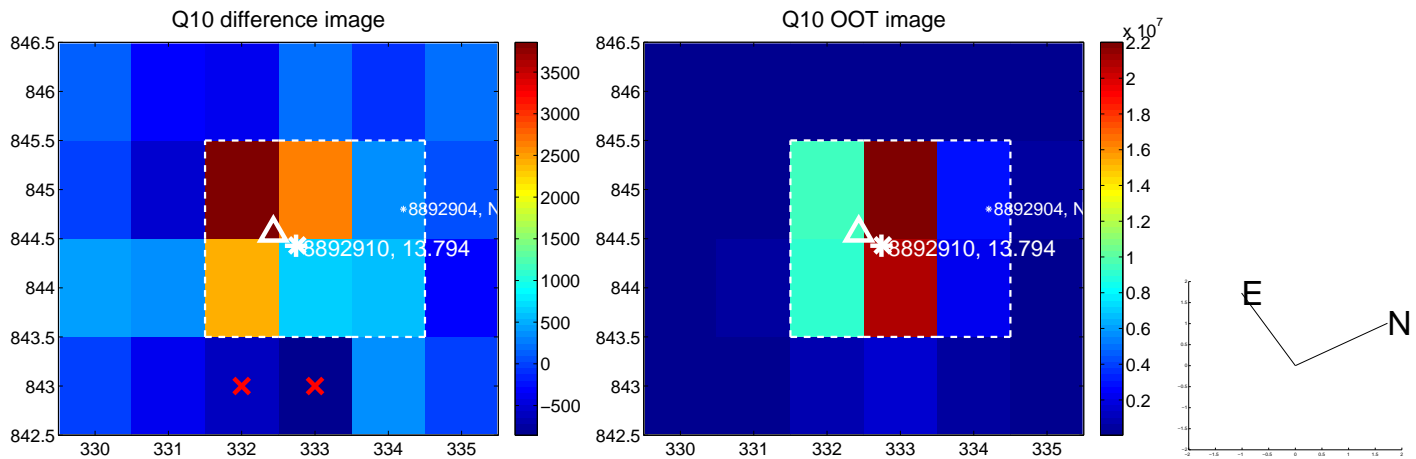
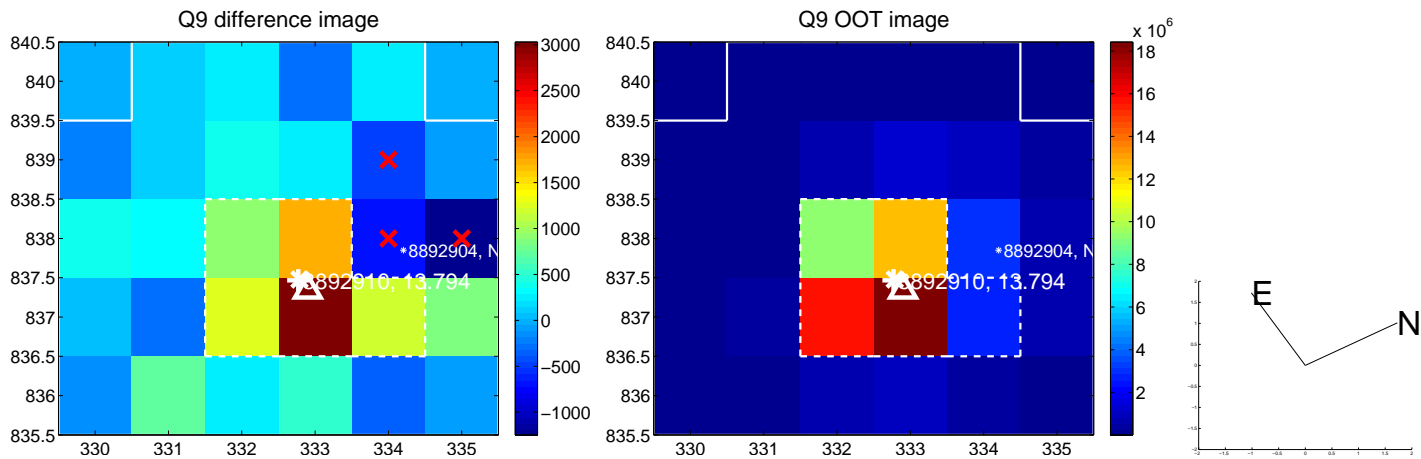
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



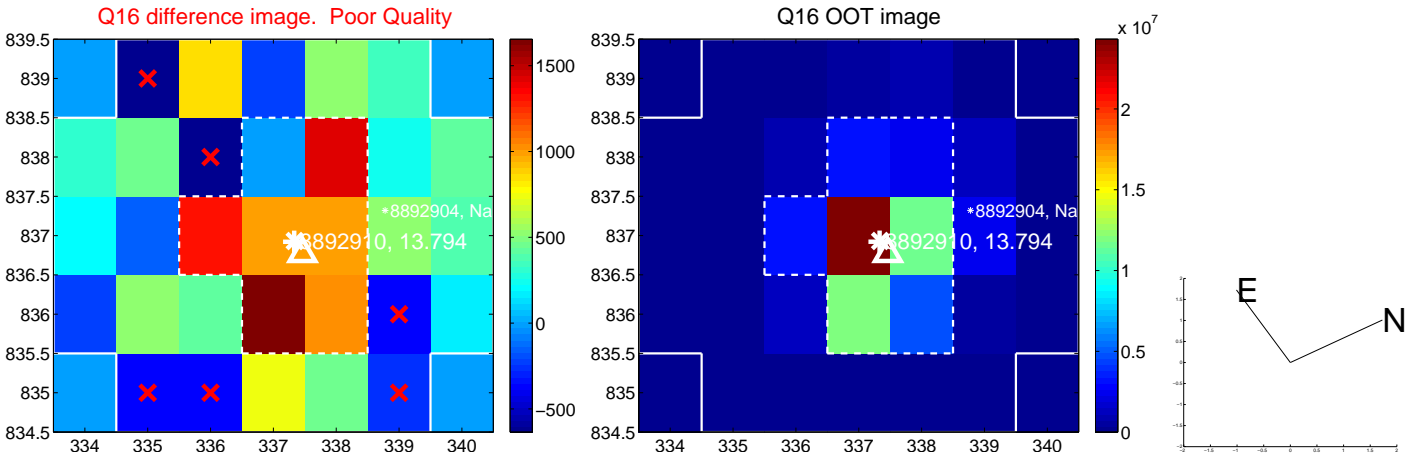
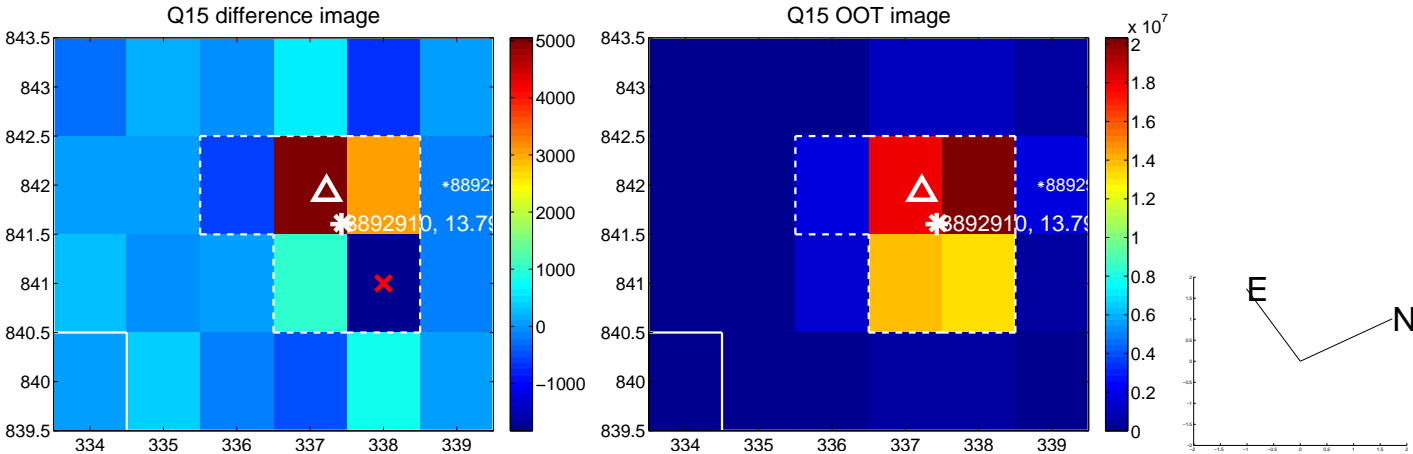
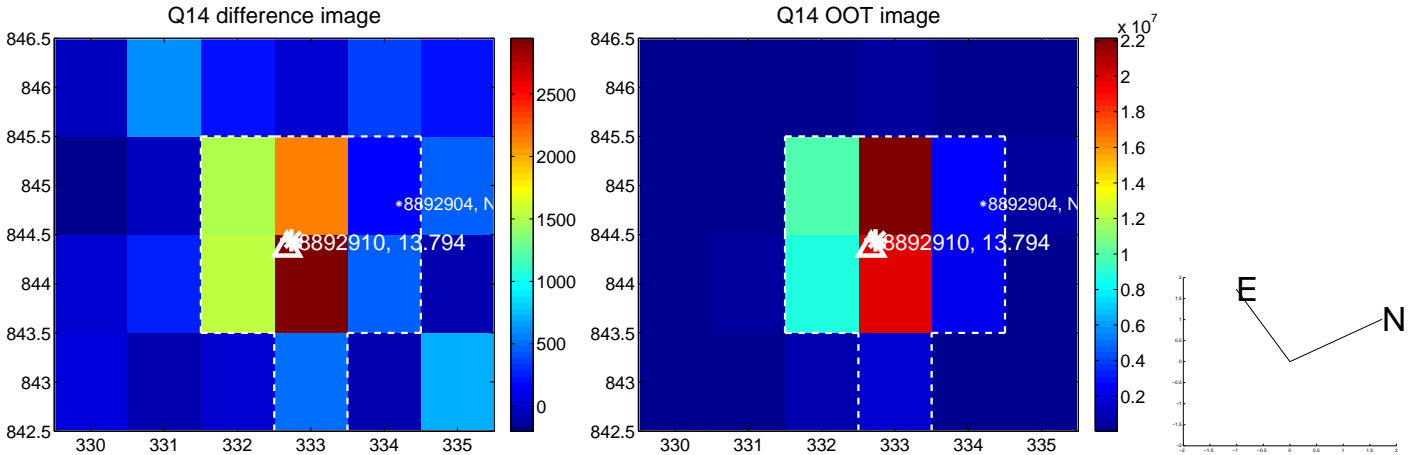
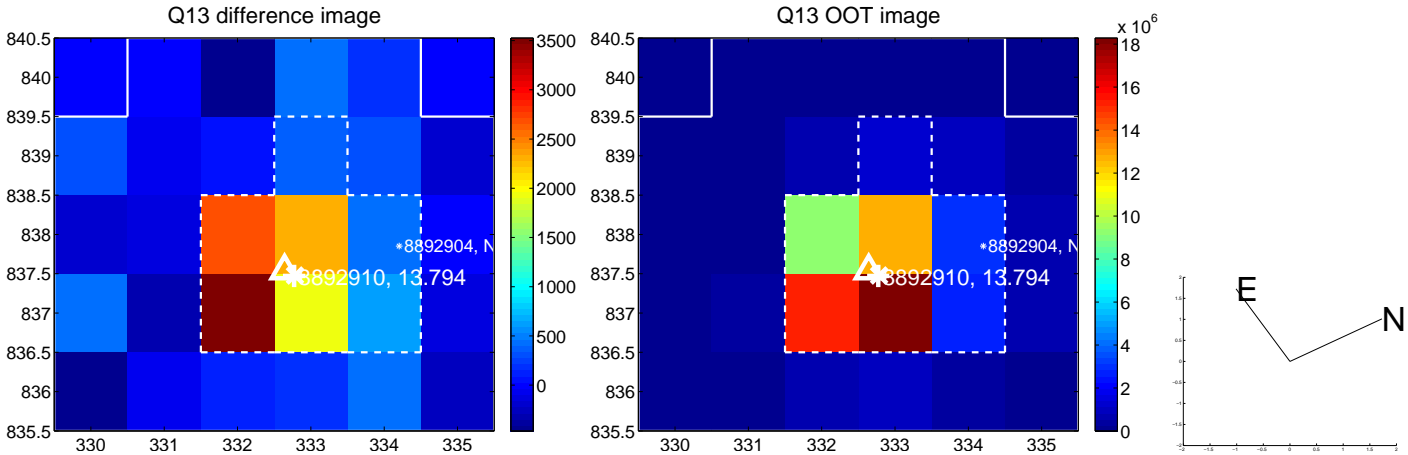
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

