

KIC 008193315

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})
008193315-01	OBS	6988.01	2.623874	134.004754	230339.1	4.572	5698.1	4463.8	1.46	6728	73.96	2432.67
008193315-02	OBS	No	2.623879	132.688277	6969.9	3.000	1264.5	-1.0	1.46	6728	12.31	2432.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008193315-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
008193315-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

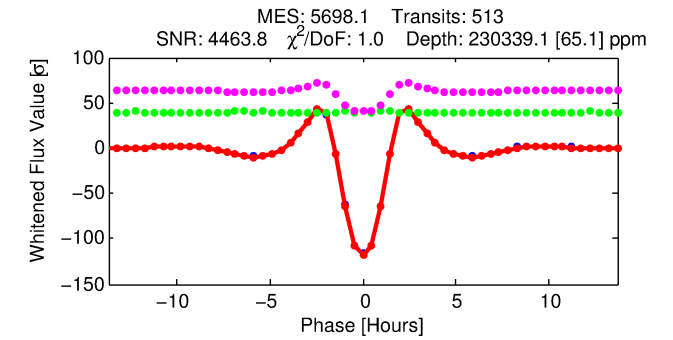
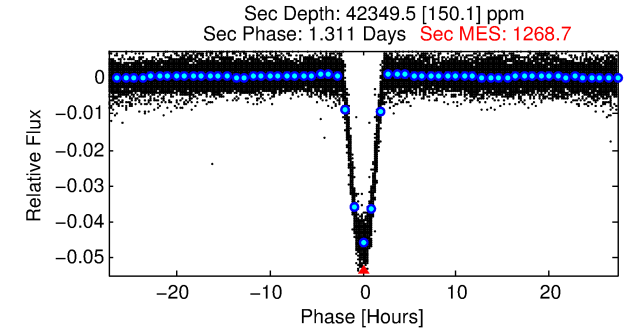
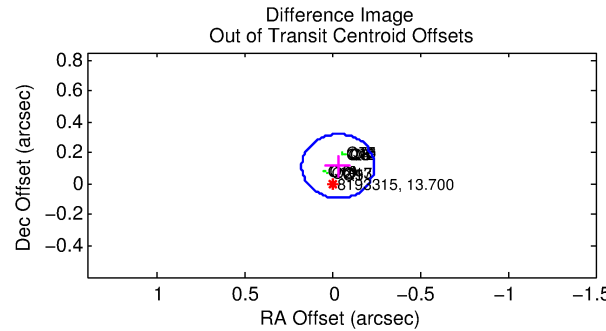
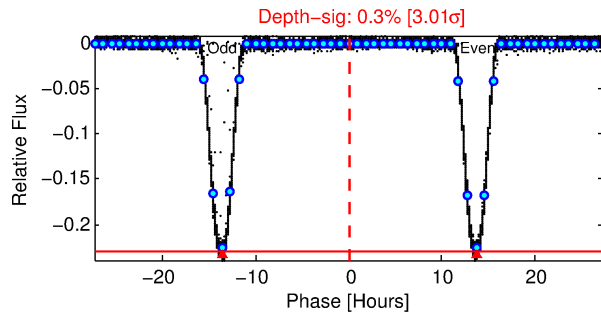
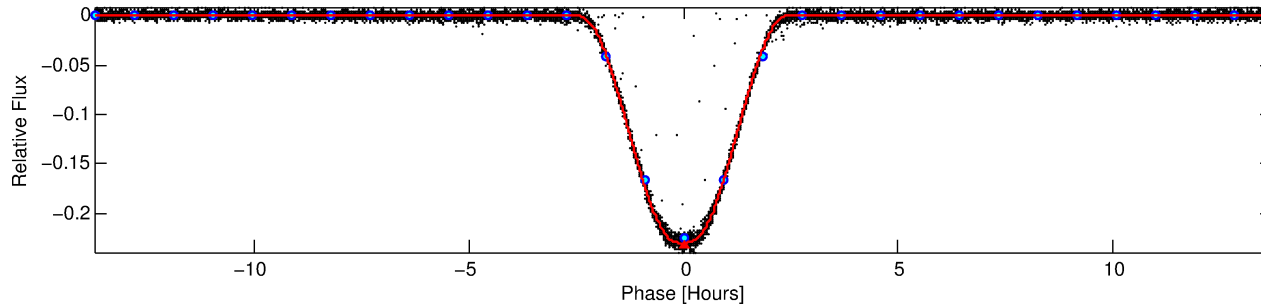
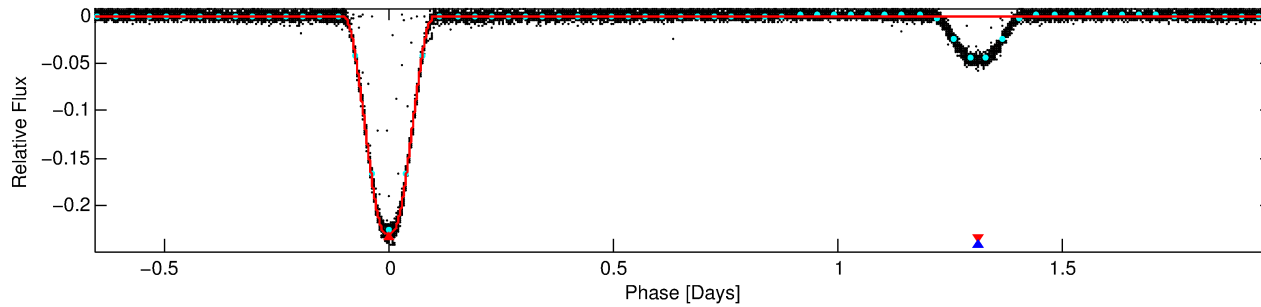
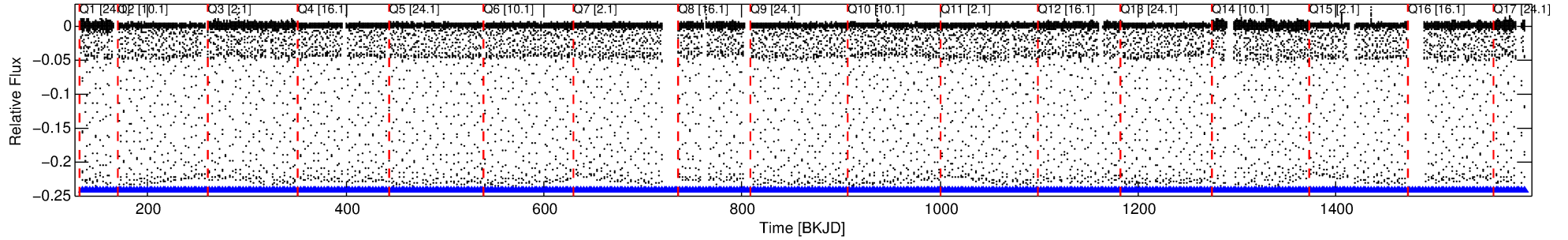
Ephemeris Match Information For 008193315-01

No Significant Match Found

DV One-Page Summary

KIC: 8193315 Candidate: 1 of 2 Period: 2.624 d
KOI: K06988.01 Corr: 0.996

Kp: 13.70 R*: 1.46 Rs Teff: 6728.0 K Logg: 4.21 Fe/H: -0.260



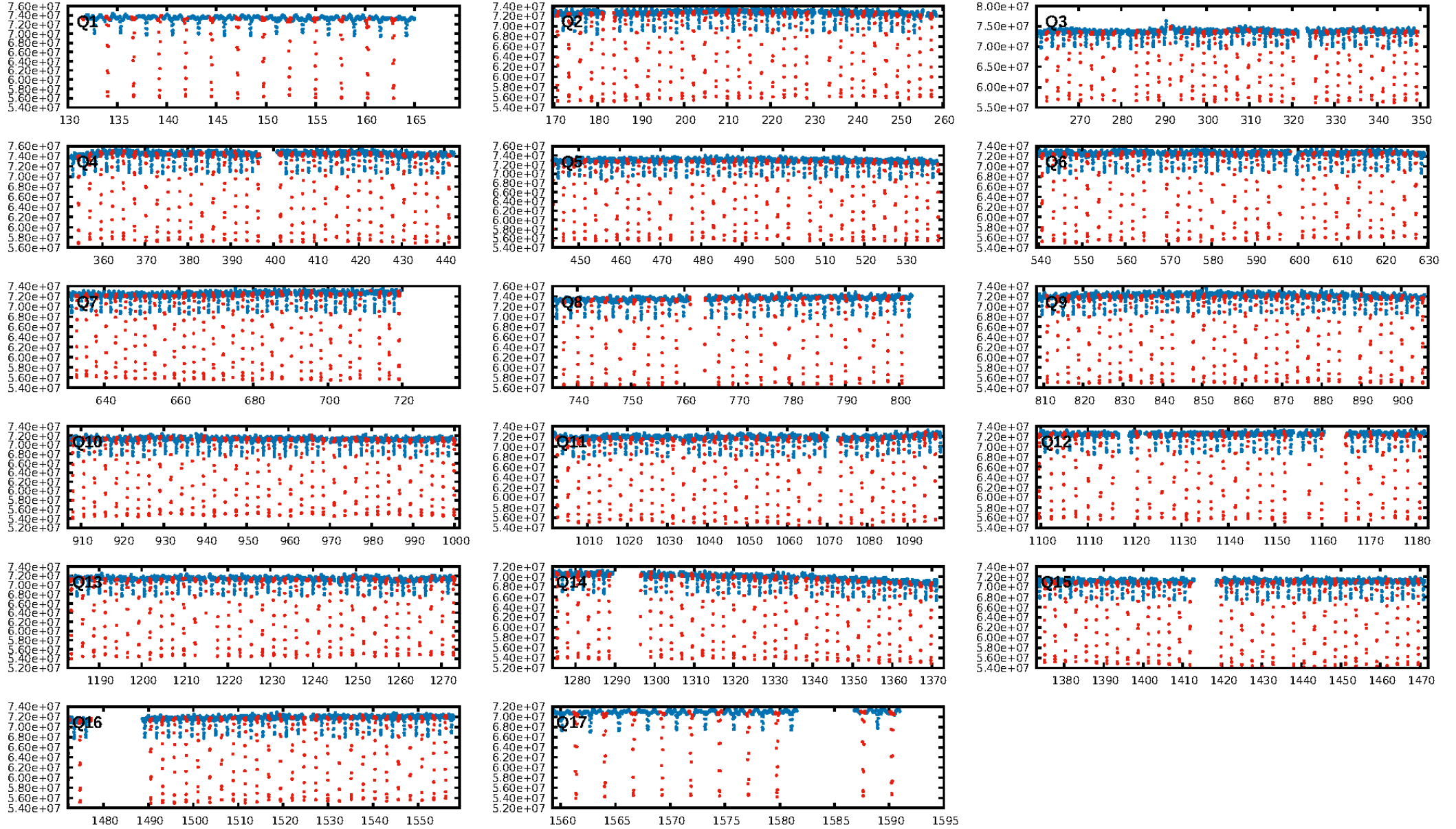
DV Fit Results:

Period = 2.62387 [0.00000] d
Epoch = 134.0048 [0.0000] BKJD
Rp/R* = 0.4642 [0.0001]
a/R* = 6.12 [0.00]
b = 0.49 [0.00]
Seff = 2432.67 [921.88]
Teff = 1791 [170] K
Rp = 73.96 [22.64] Re
a = 0.0401 [0.0099] AU
Ag = 6.85 [2.37] [2.47σ]
Teffp = 4480 [173] K [11.09σ]

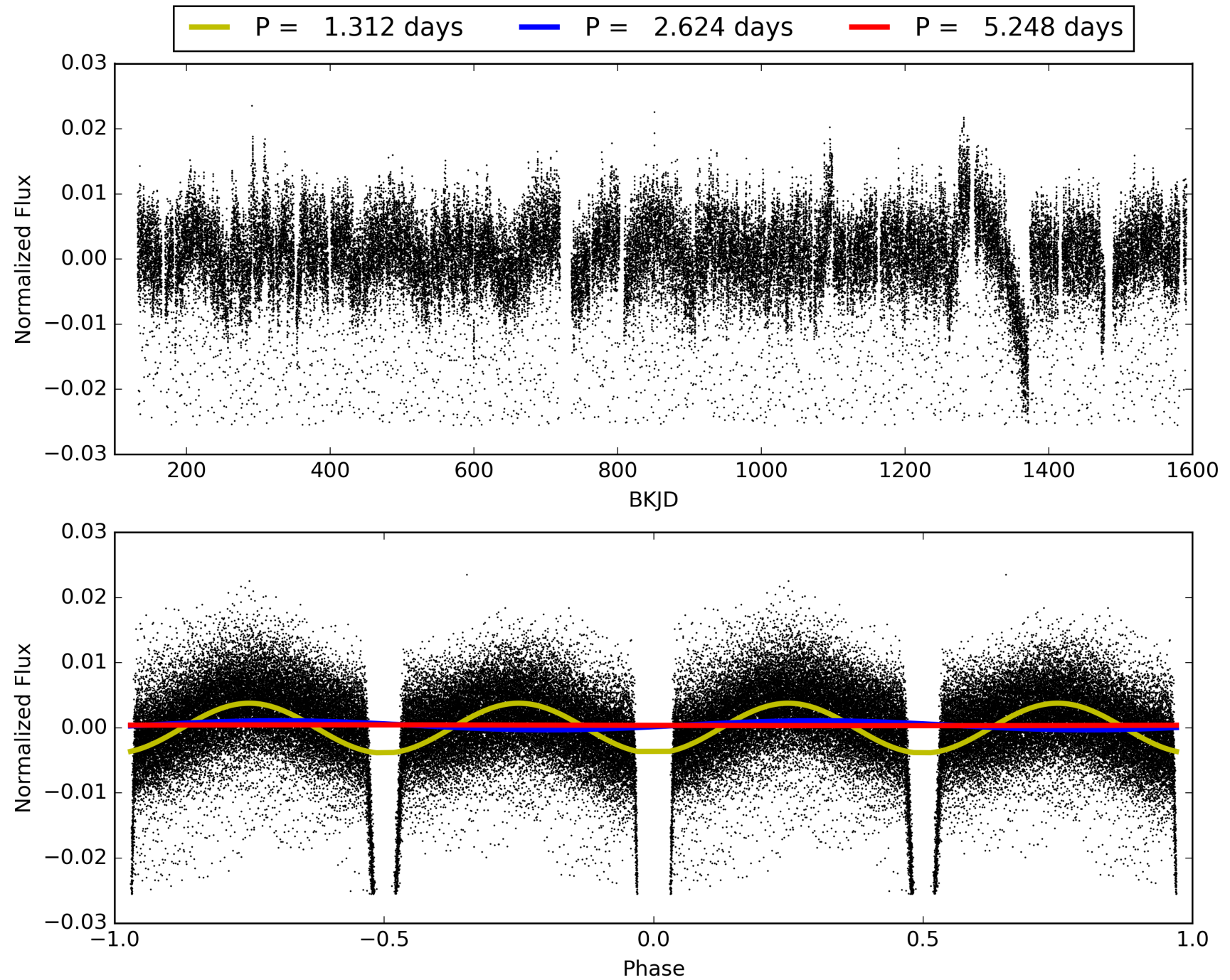
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [491/491]
GhostDiagnostic-chr: 1.733
Centroid-sig: 0.0%
Centroid-so: 0.285 arcsec [551.93σ]
OotOffset-rm: 0.119 arcsec [1.73σ]
KicOffset-rm: 0.048 arcsec [0.71σ]
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]

TCE 008193315-01, PDC Light Curves

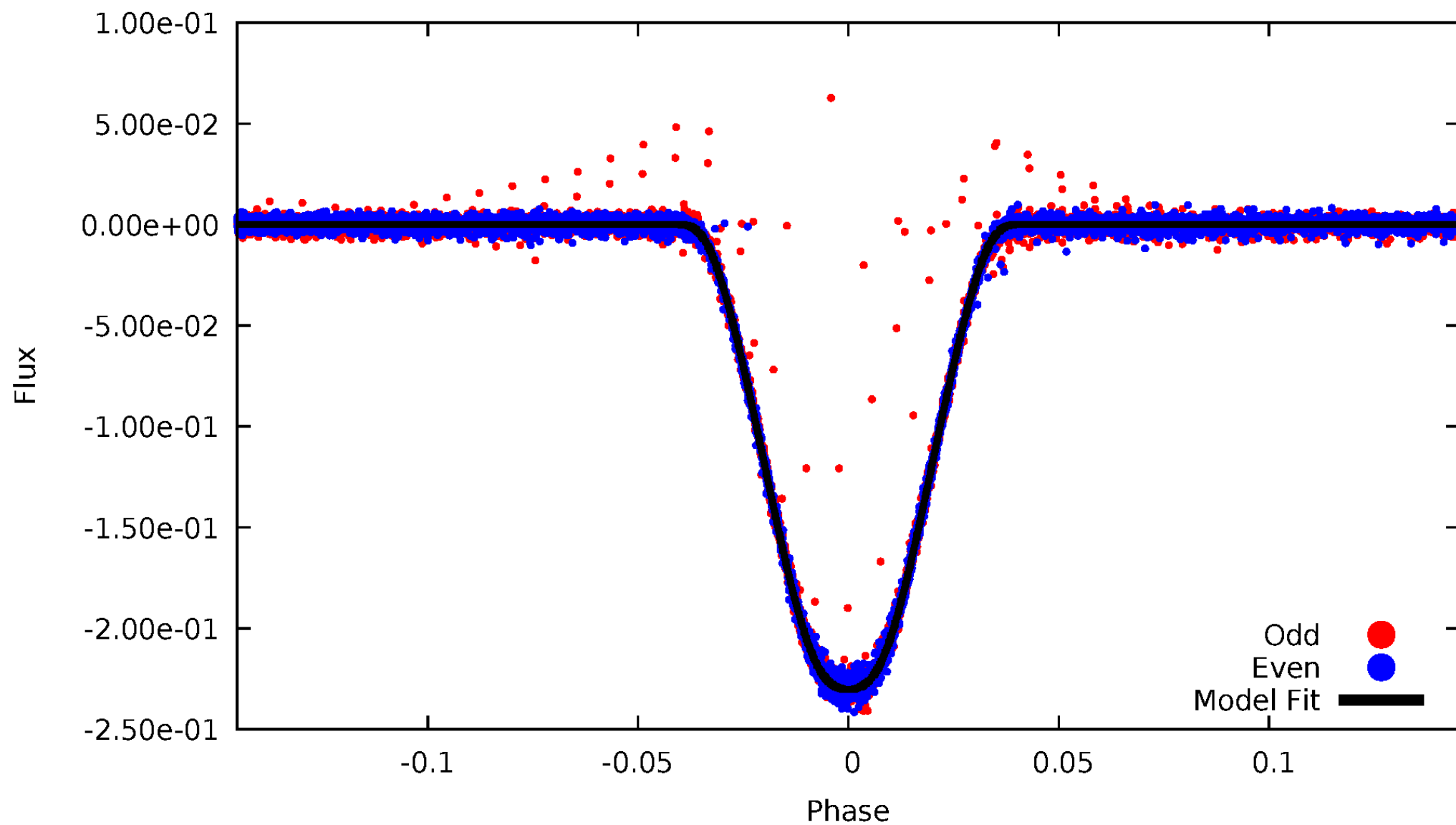


TCE 008193315-01



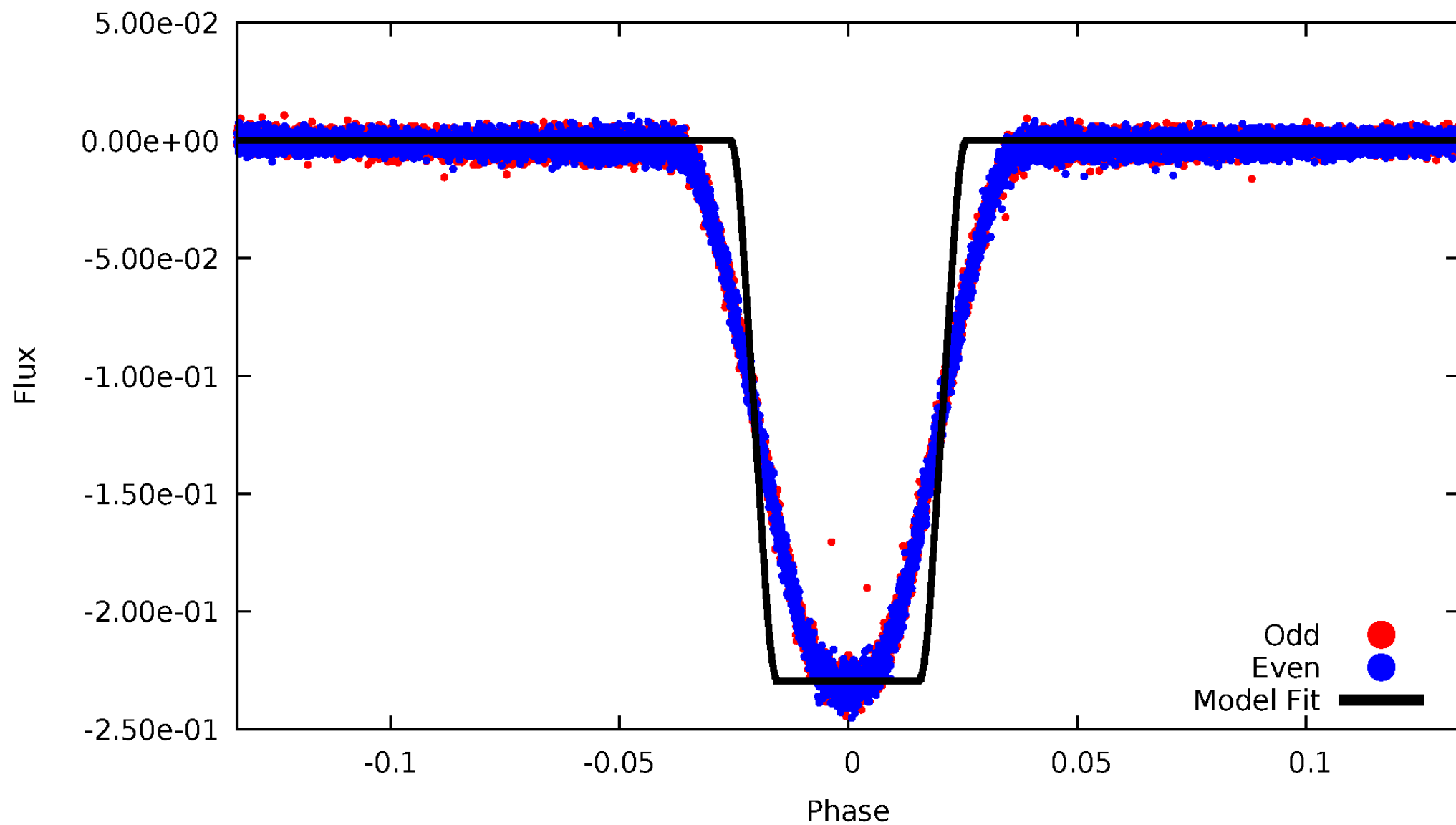
DV Odd/Even

TCE 008193315-01



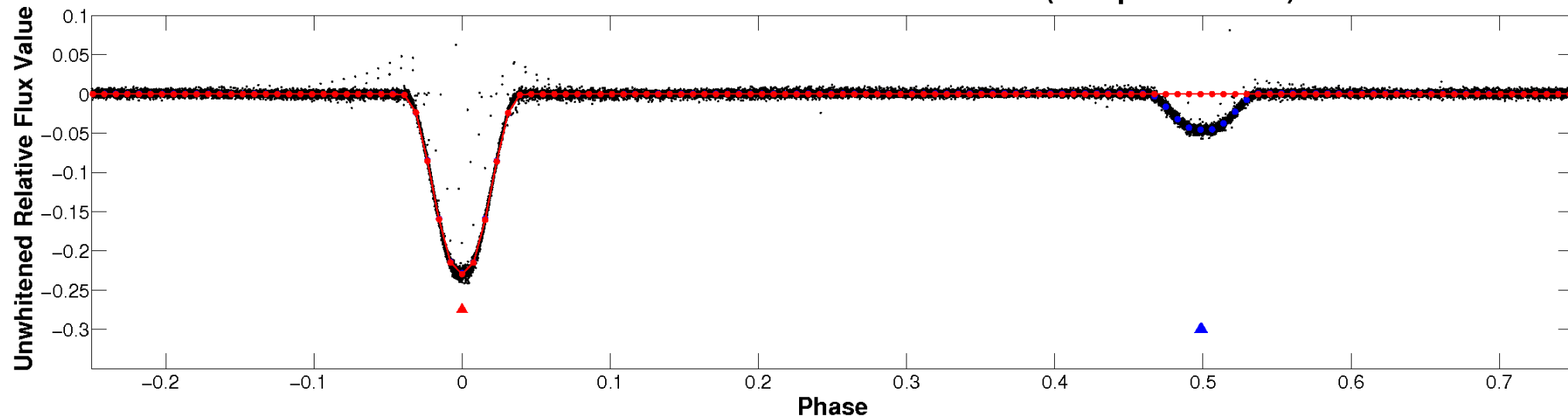
ALT Odd/Even

TCE 008193315-01

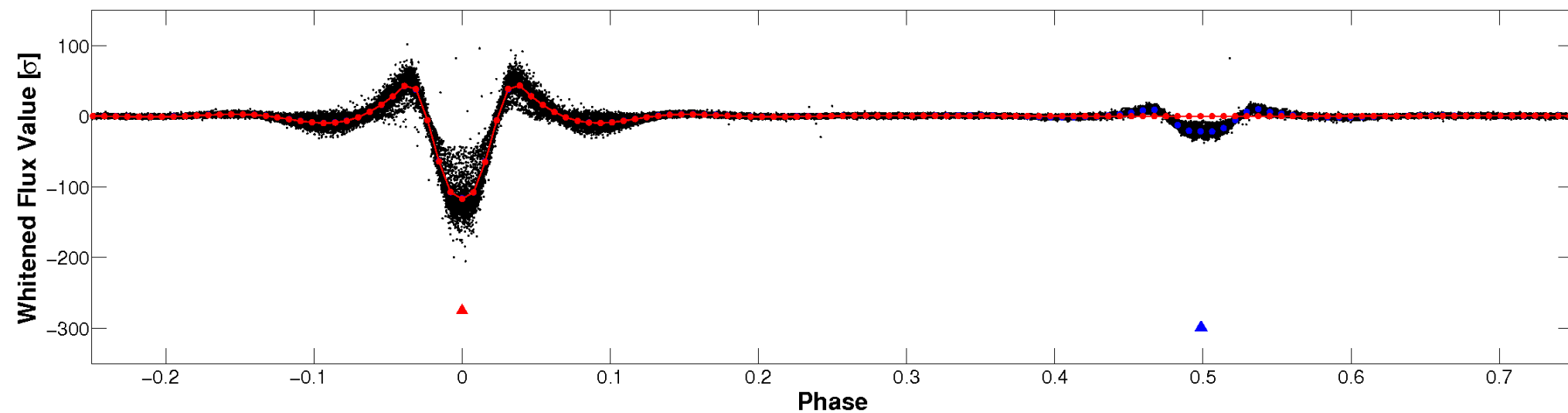


Non-Whitened Vs. Whitened Light Curve

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

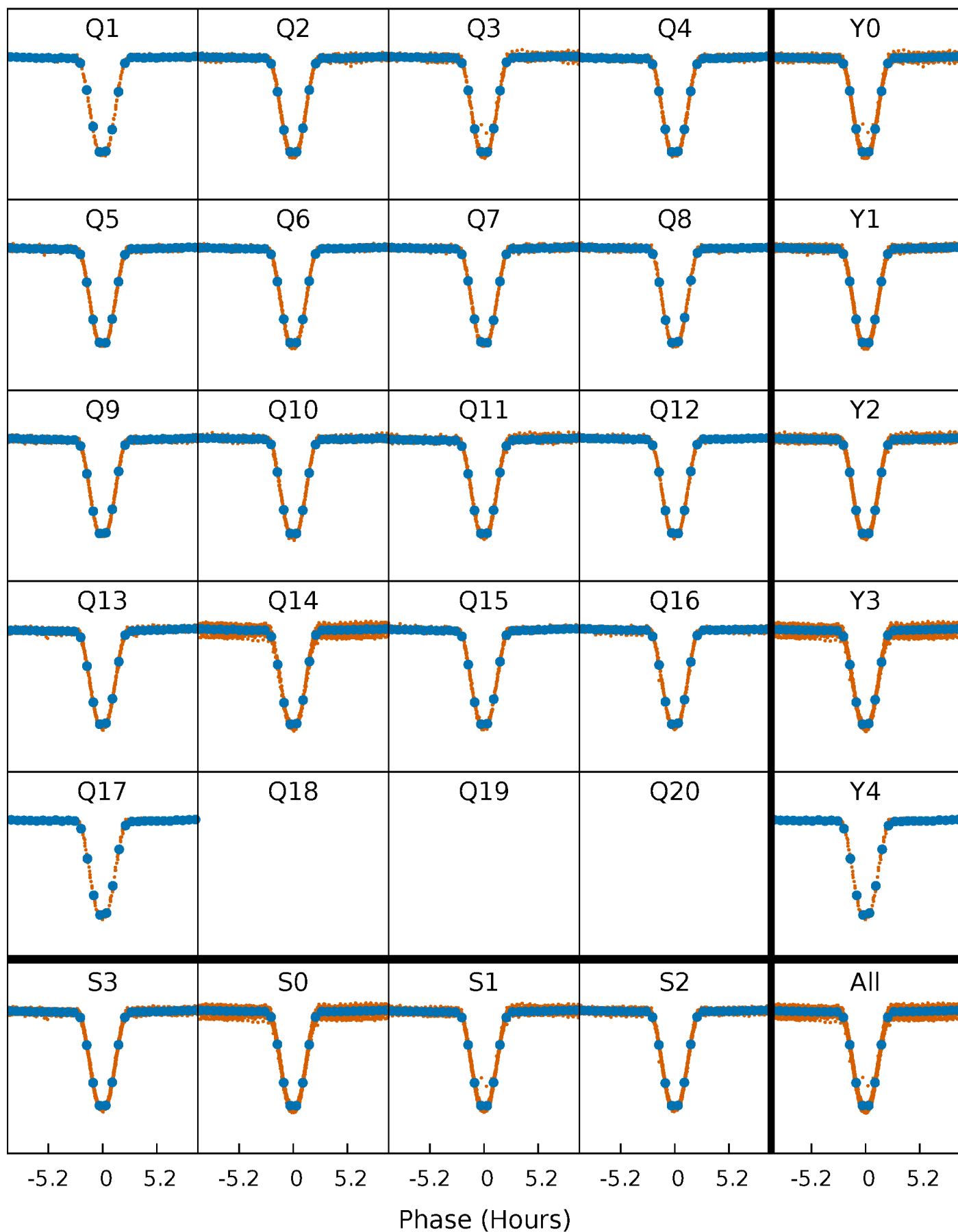


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



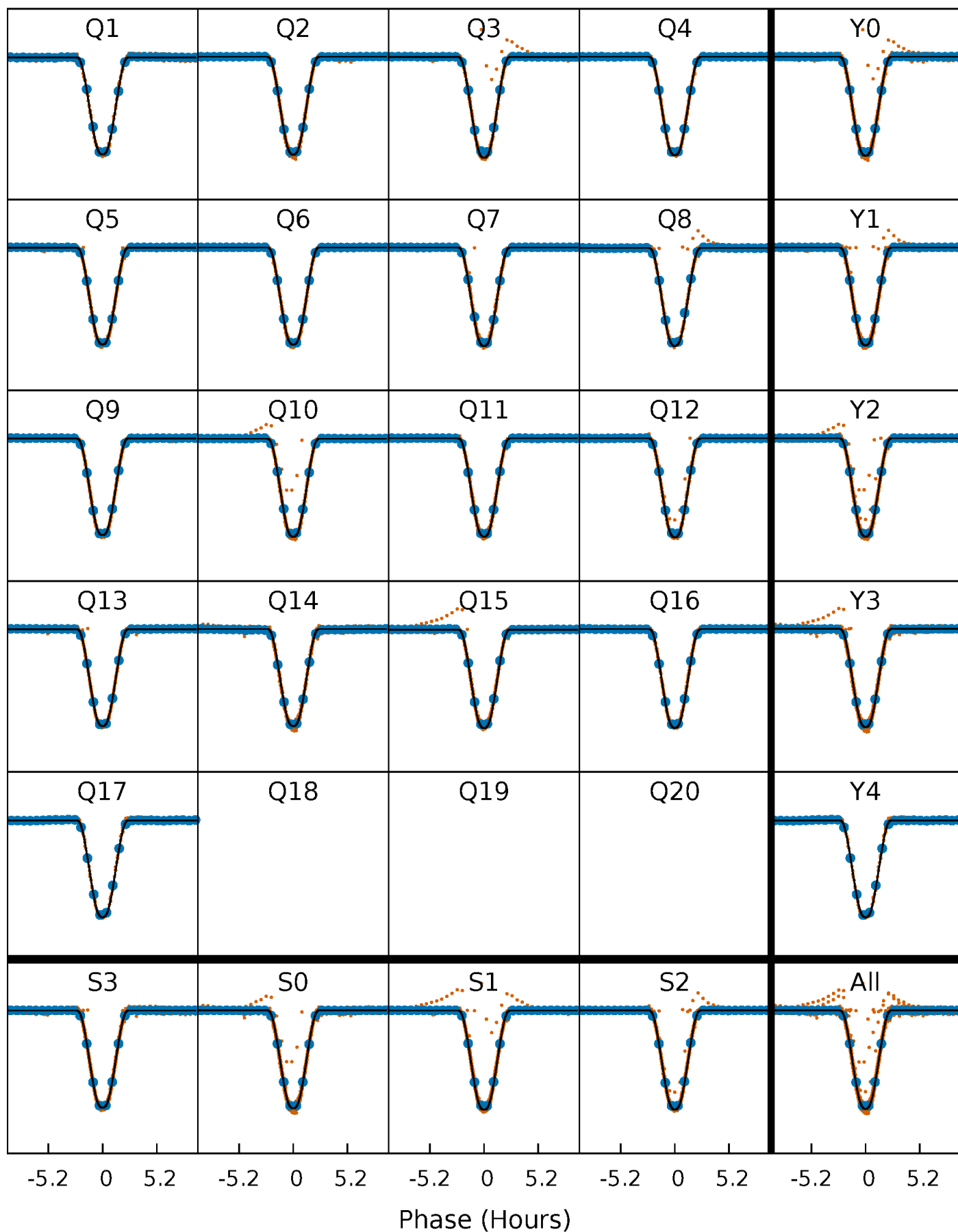
PDC Quarter-Phased Transit Curves

TCE 008193315-01 P= 2.623874 Days $T_0=134.004754$ (BKJD)



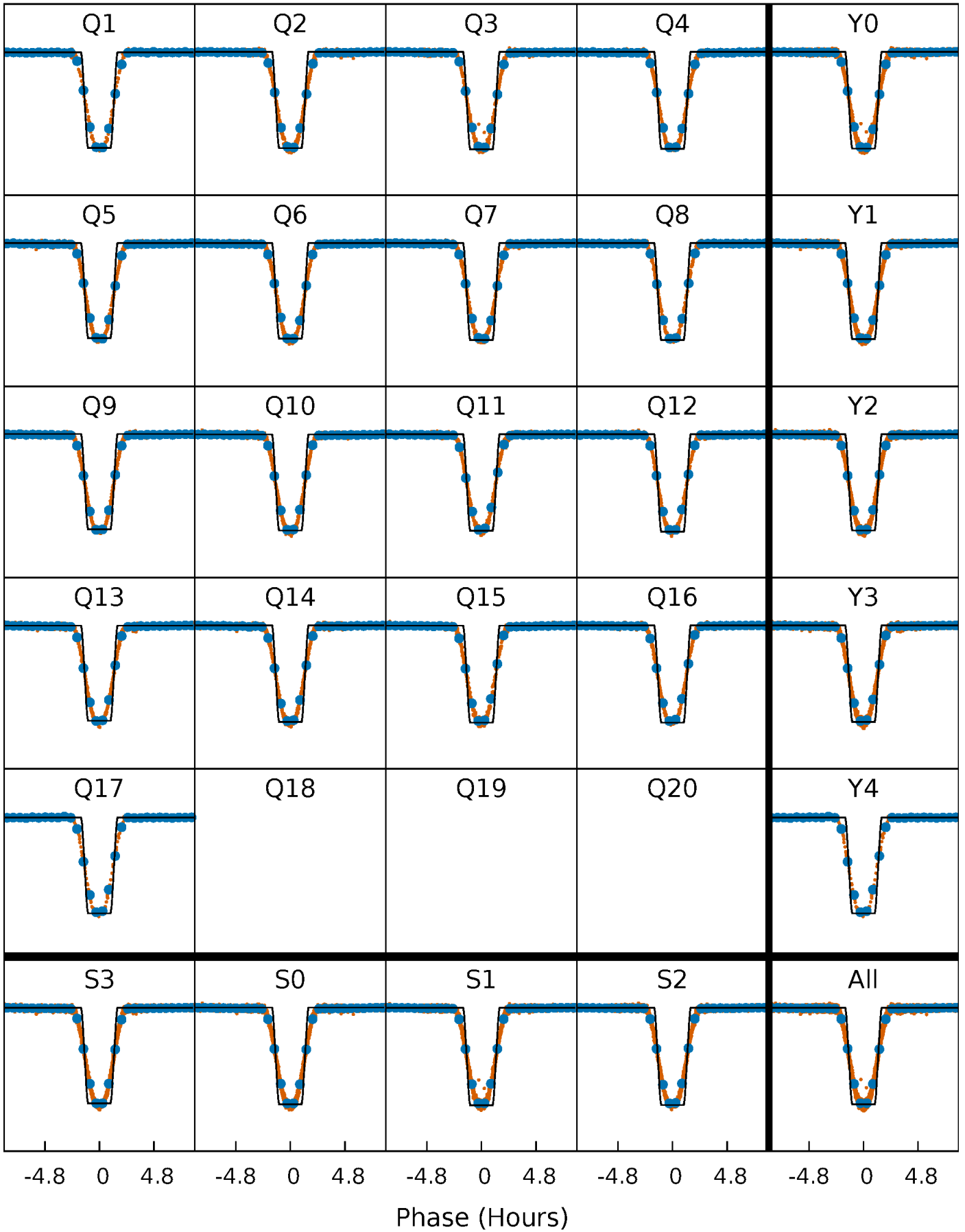
DV Quarter-Phased Transit Curves

TCE 008193315-01 P= 2.623874 Days $T_0=134.004754$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

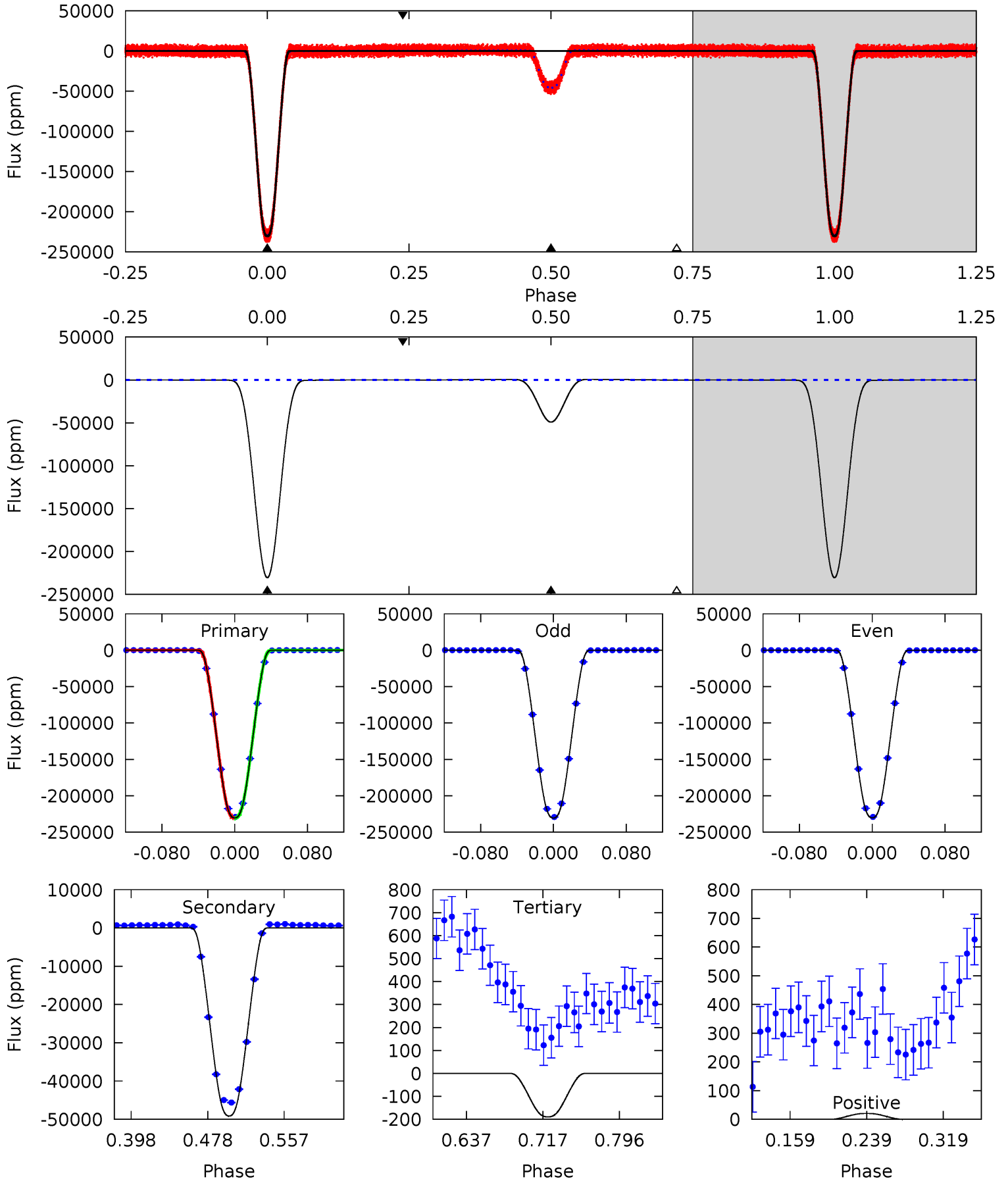
TCE 008193315-01 P= 2.623879 Days $T_0=134.003307$ (BKJD)



DV Model-Shift Uniqueness Test

008193315-01, P = 2.623874 Days, E = 131.380880 Days

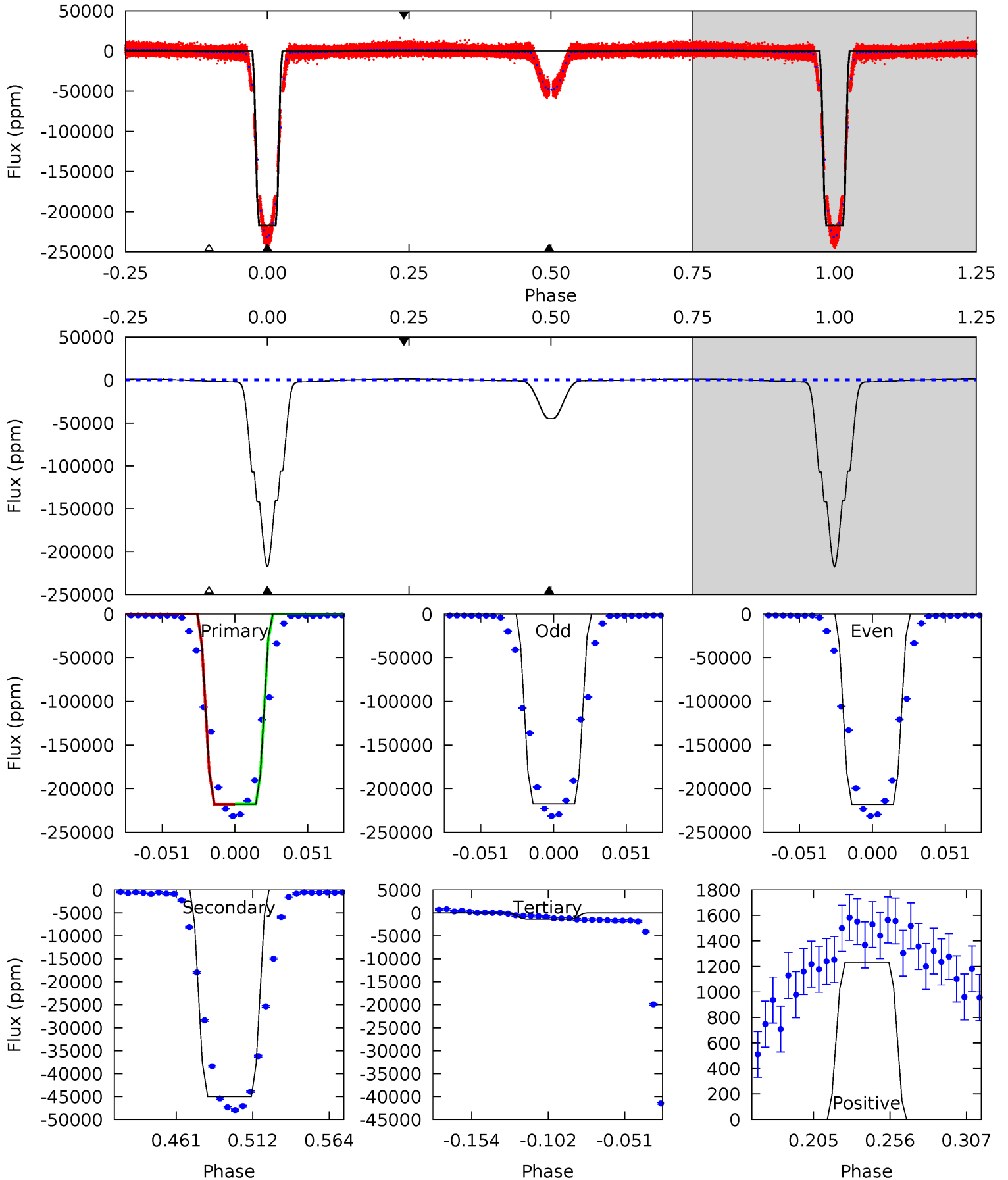
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8155	1739	6.70	0.72	4.61	1.75	8.21	8148	8154	1732	1738	4.64	0.99	0.00	0.58



Alt Model-Shift Uniqueness Test

008193315-01, P = 2.623879 Days, E = 131.379428 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3247	672.7	20.8	18.4	4.70	1.95	14.8	3227	3229	651.8	654.2	4.08	1.00	0.01	3.24



Stellar Parameters For KIC 008193315

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6728^{+189}_{-260}	$4.206^{+0.149}_{-0.182}$	$-0.260^{+0.250}_{-0.300}$	$1.460^{+0.447}_{-0.298}$	$1.257^{+0.182}_{-0.202}$	$0.569^{+0.440}_{-0.291}$
	+3%/-4%	+4%/-4%	+96%/-115%	+31%/-20%	+14%/-16%	+77%/-51%
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 008193315-01 / KOI 6988.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-49148 ± 28	$73.78^{+12.67}_{-7.98}$	2508^{+199}_{-164}	4777^{+103}_{-133}	$8.311^{+1.976}_{-2.057}$
Alt.	-45037 ± 67	$76.30^{+12.31}_{-9.19}$	2507^{+199}_{-180}	4624^{+100}_{-130}	$7.007^{+1.853}_{-1.612}$

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

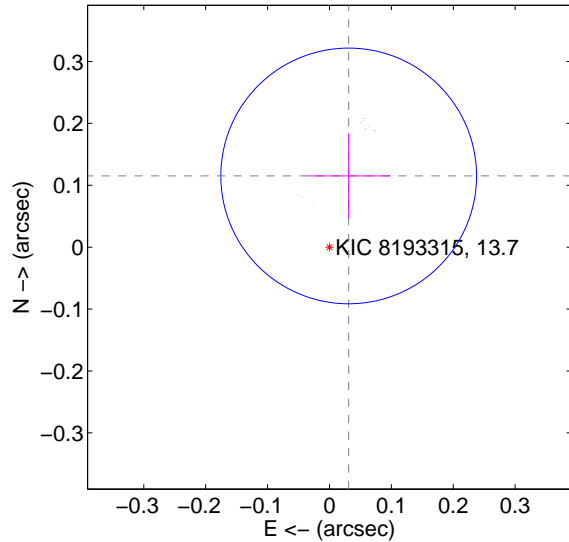
Supplemental centroid analysis for 008193315-01. Kepler magnitude: 13.70. Transit SNR 4463.80

There are 17 quarters with good PRF difference image offsets

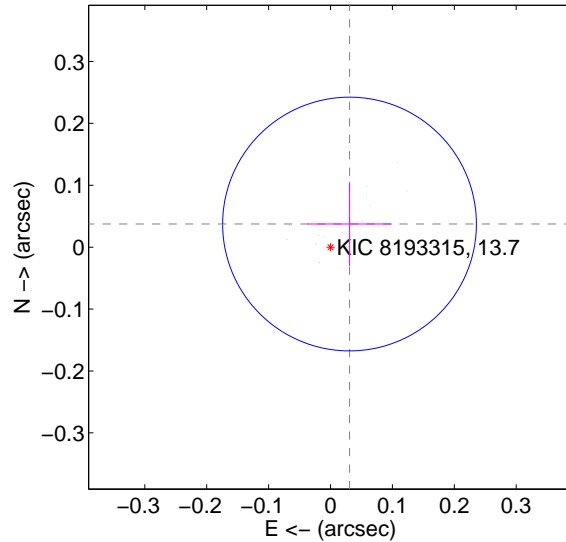
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.119 ± 0.069	1.73	-0.031 ± 0.068	0.115 ± 0.069
PRF-fit source offset from KIC position	0.048 ± 0.068	0.71	-0.031 ± 0.068	0.037 ± 0.068
photometric centroid source offset	0.29 ± 0.00	551.93	0.21 ± 0.00	-0.20 ± 0.00

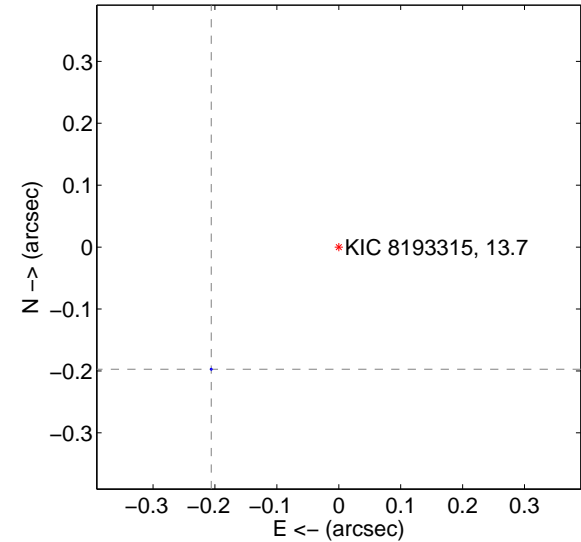
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

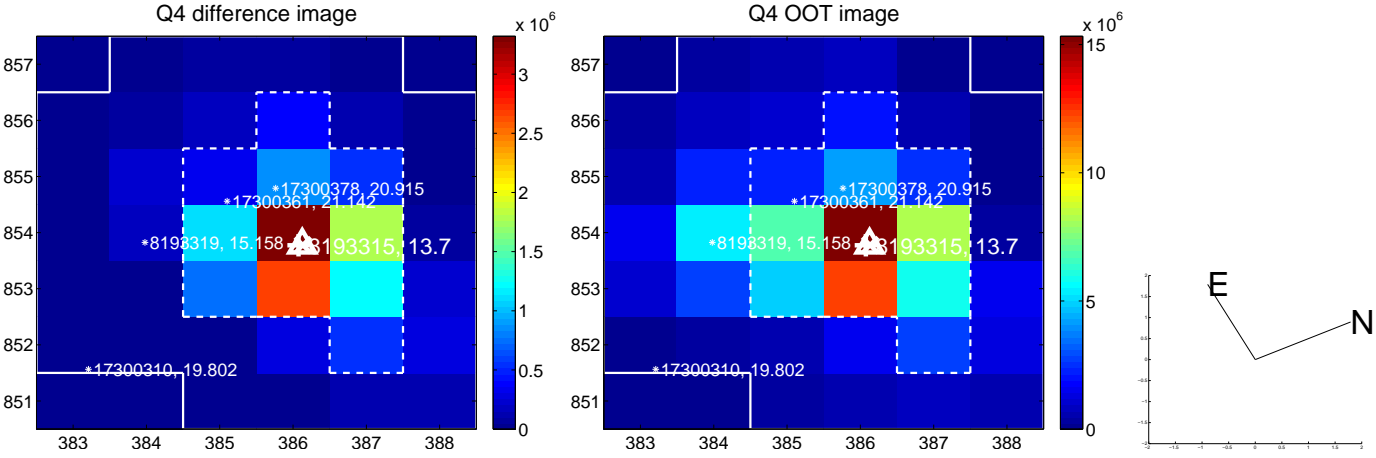
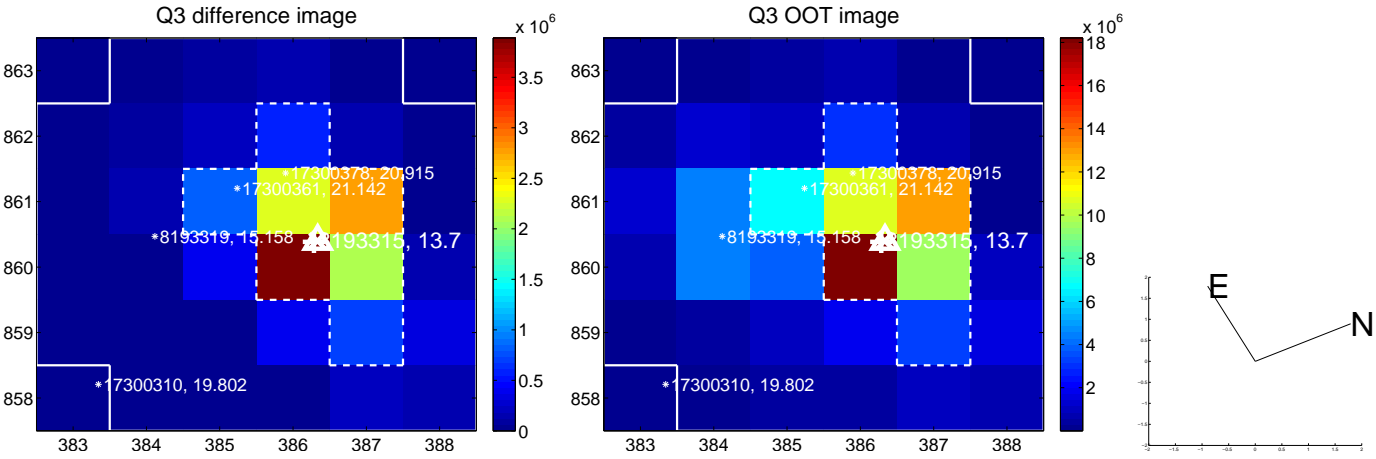
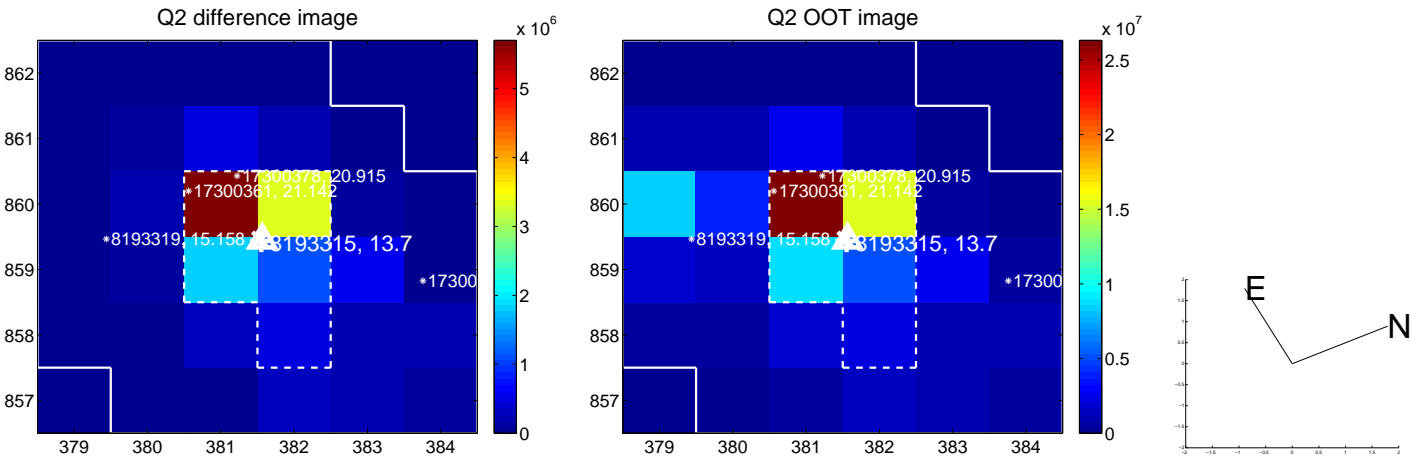
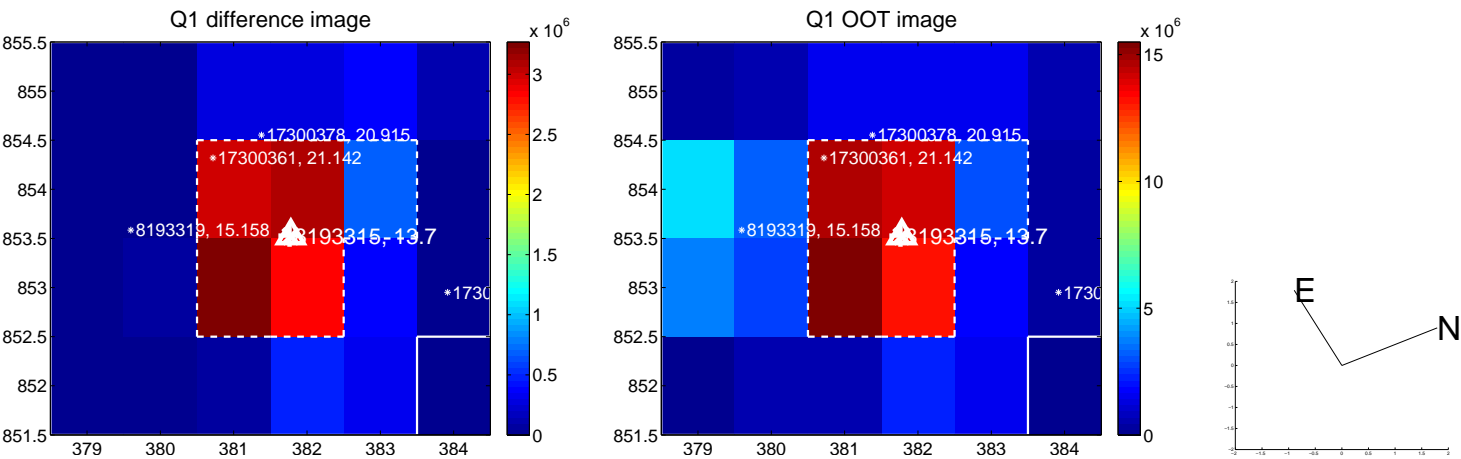


offset from photometric centroids

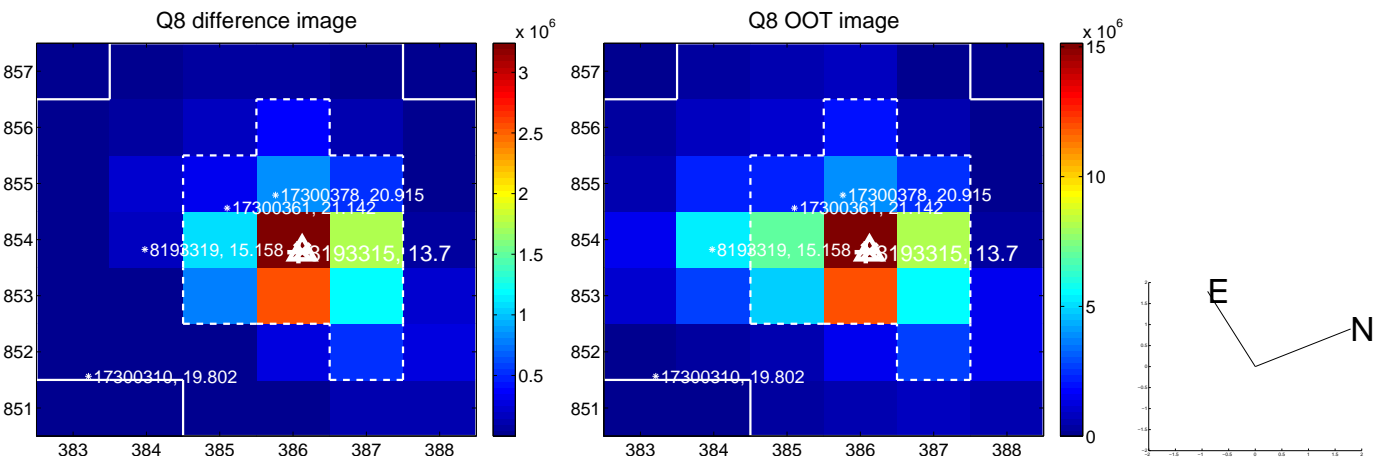
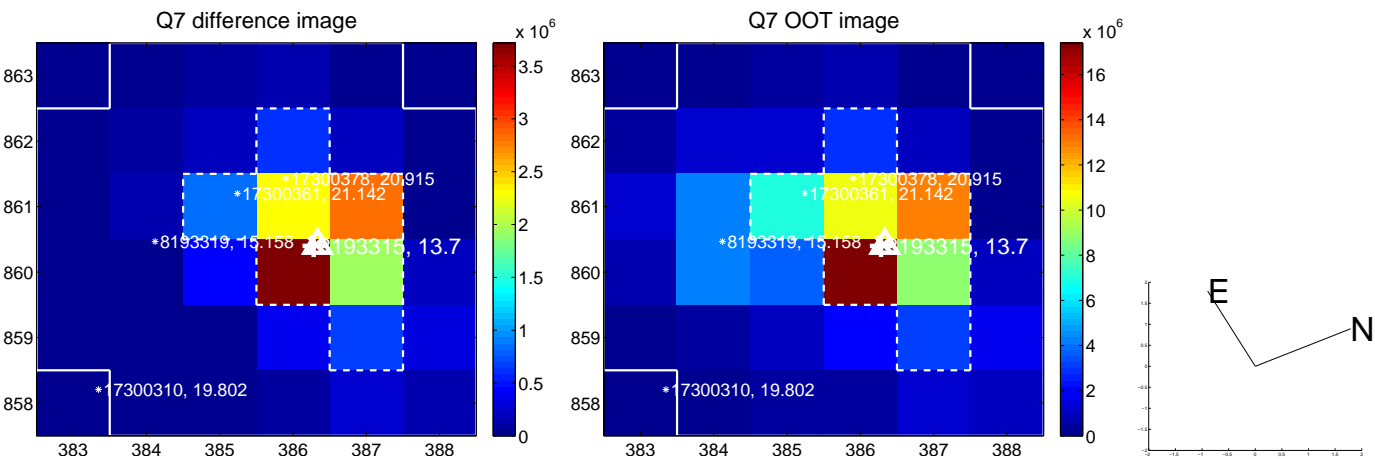
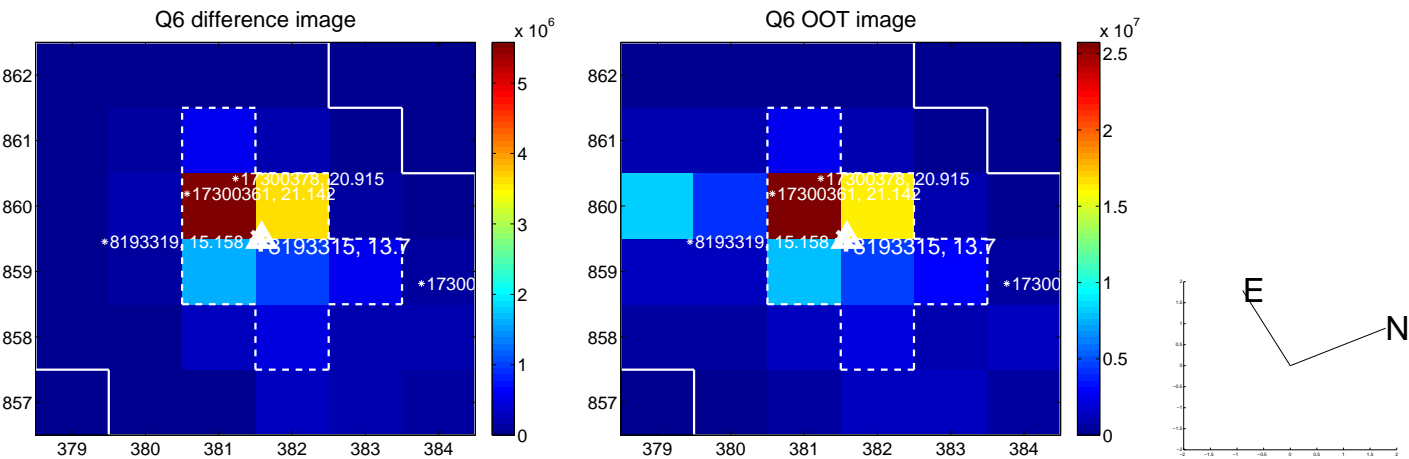
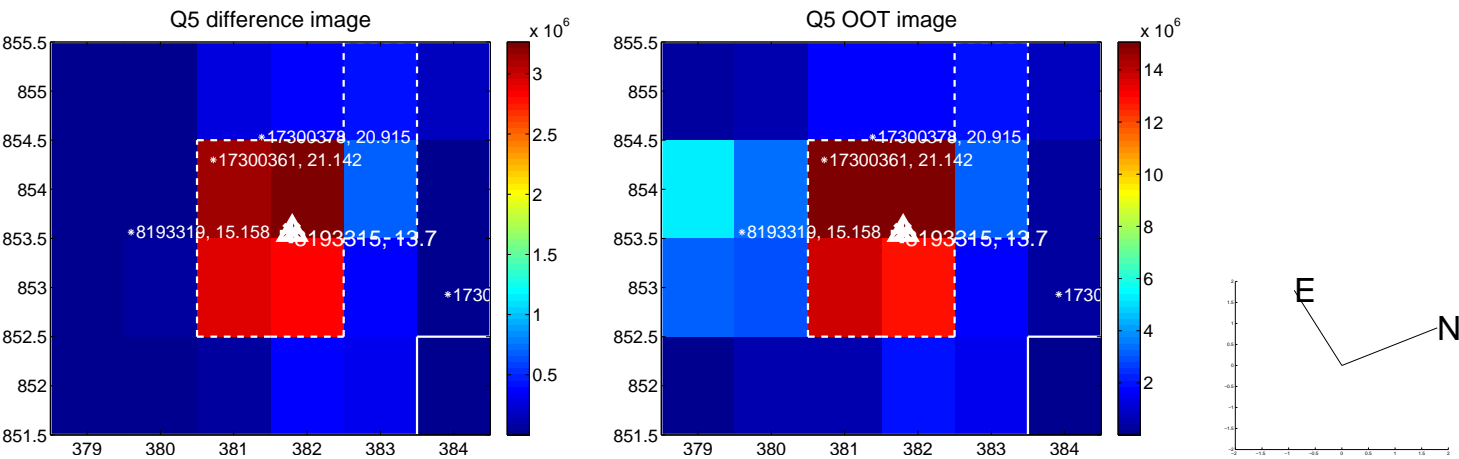


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

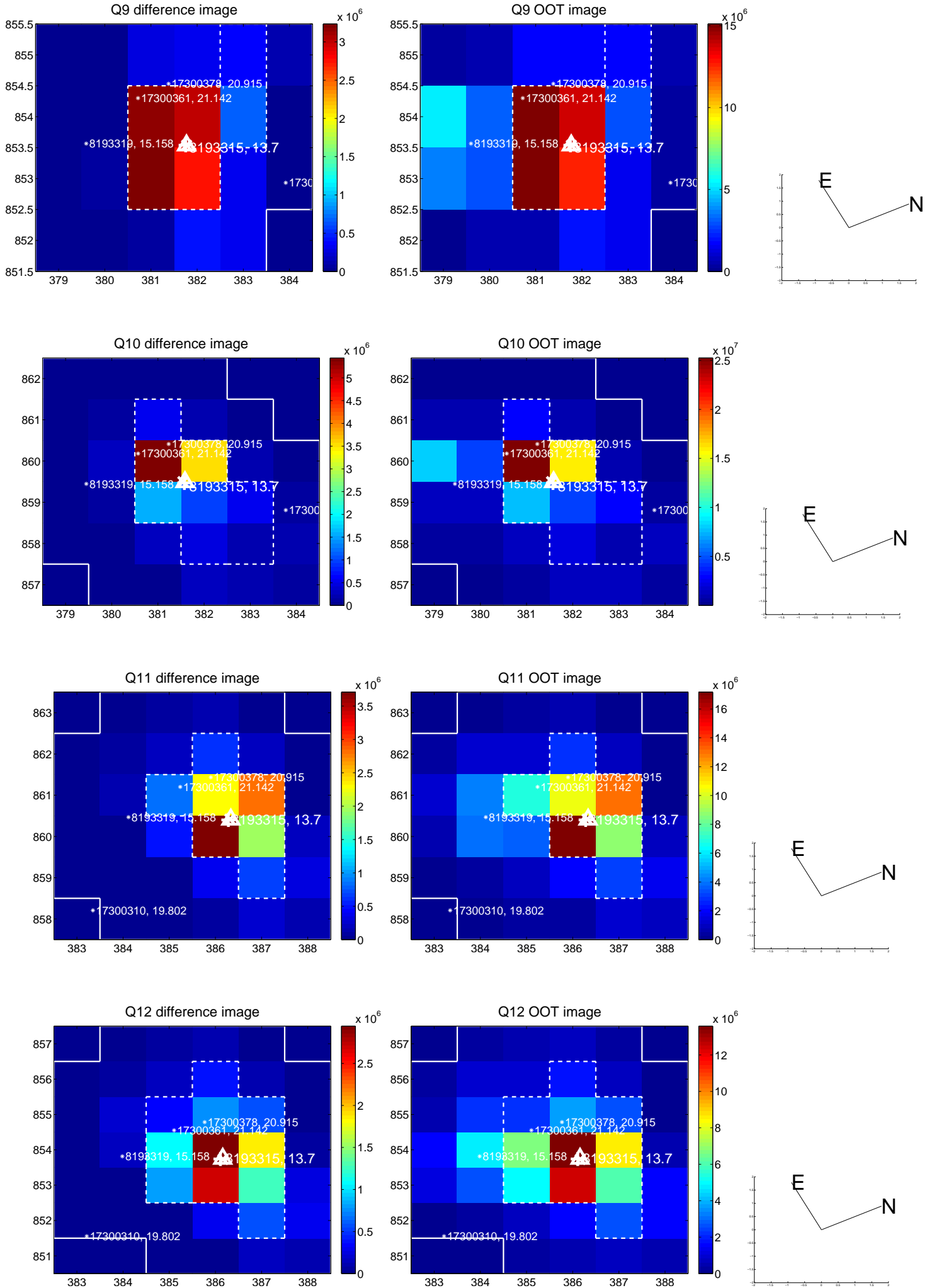
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



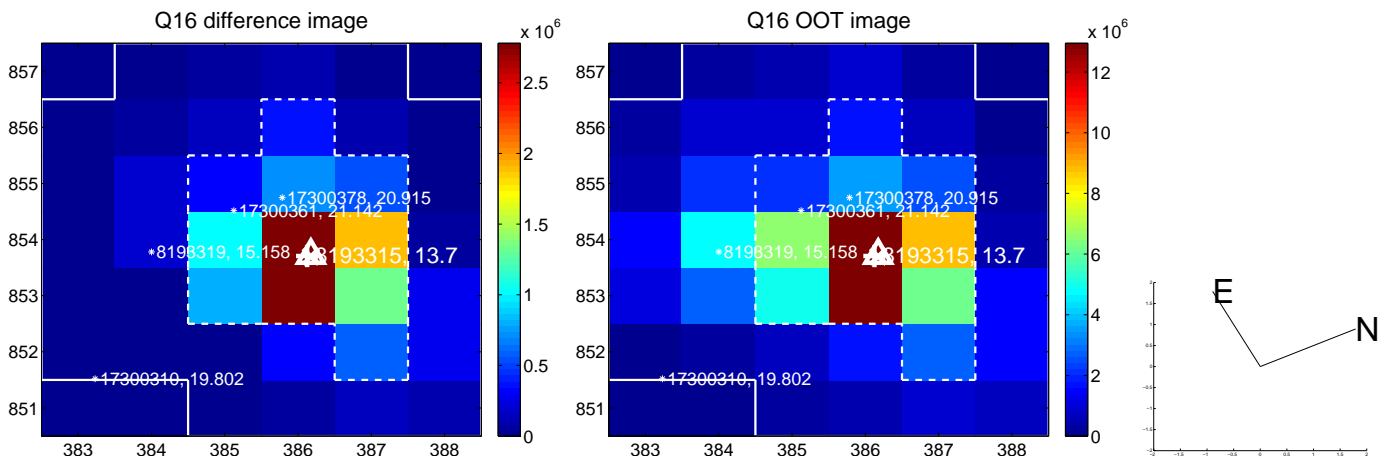
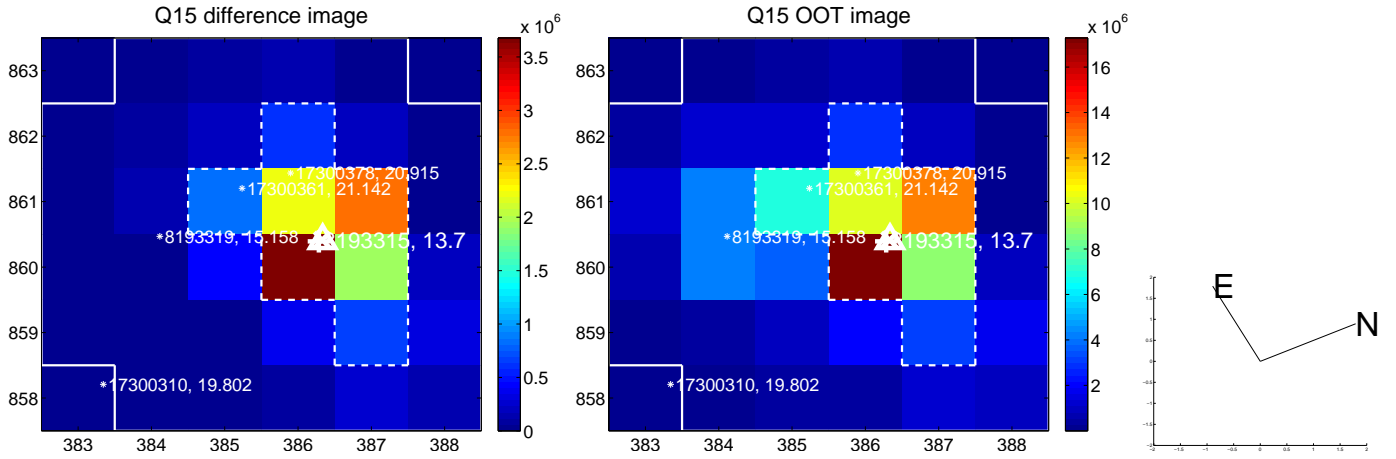
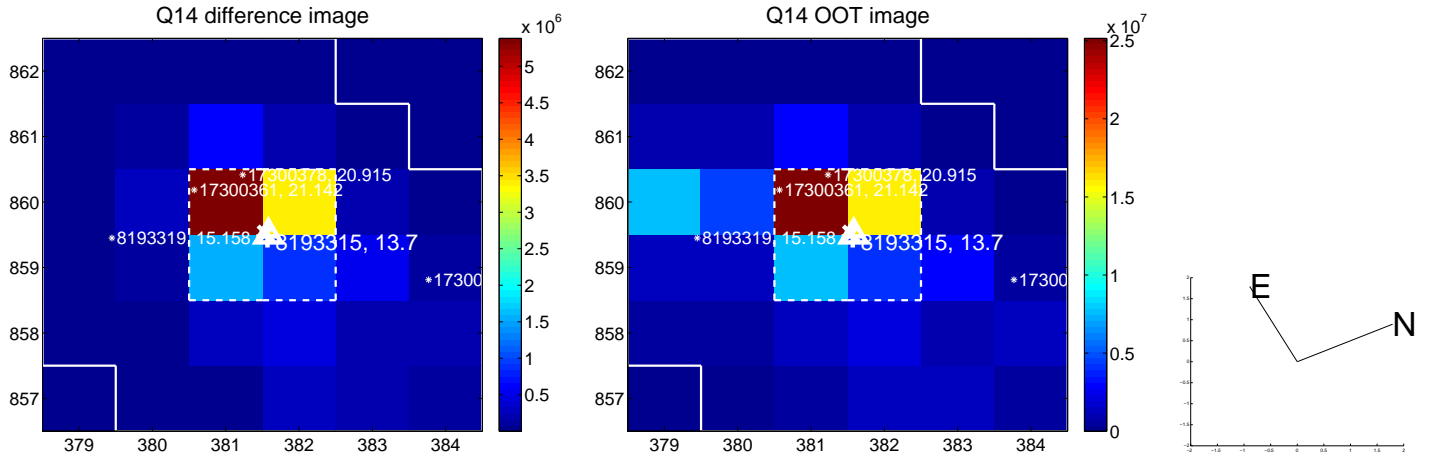
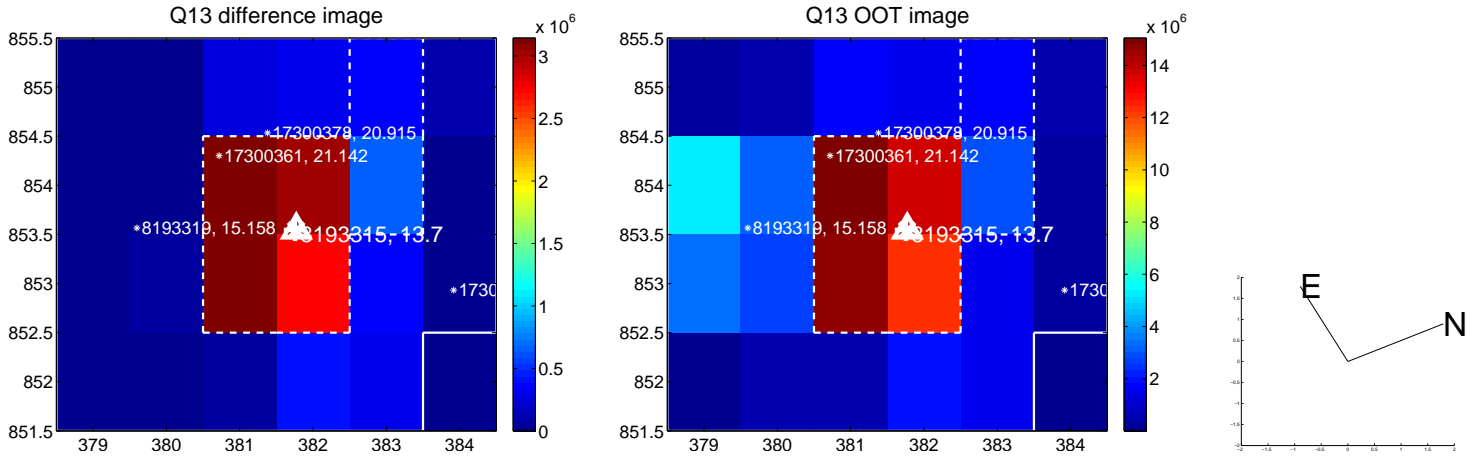
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



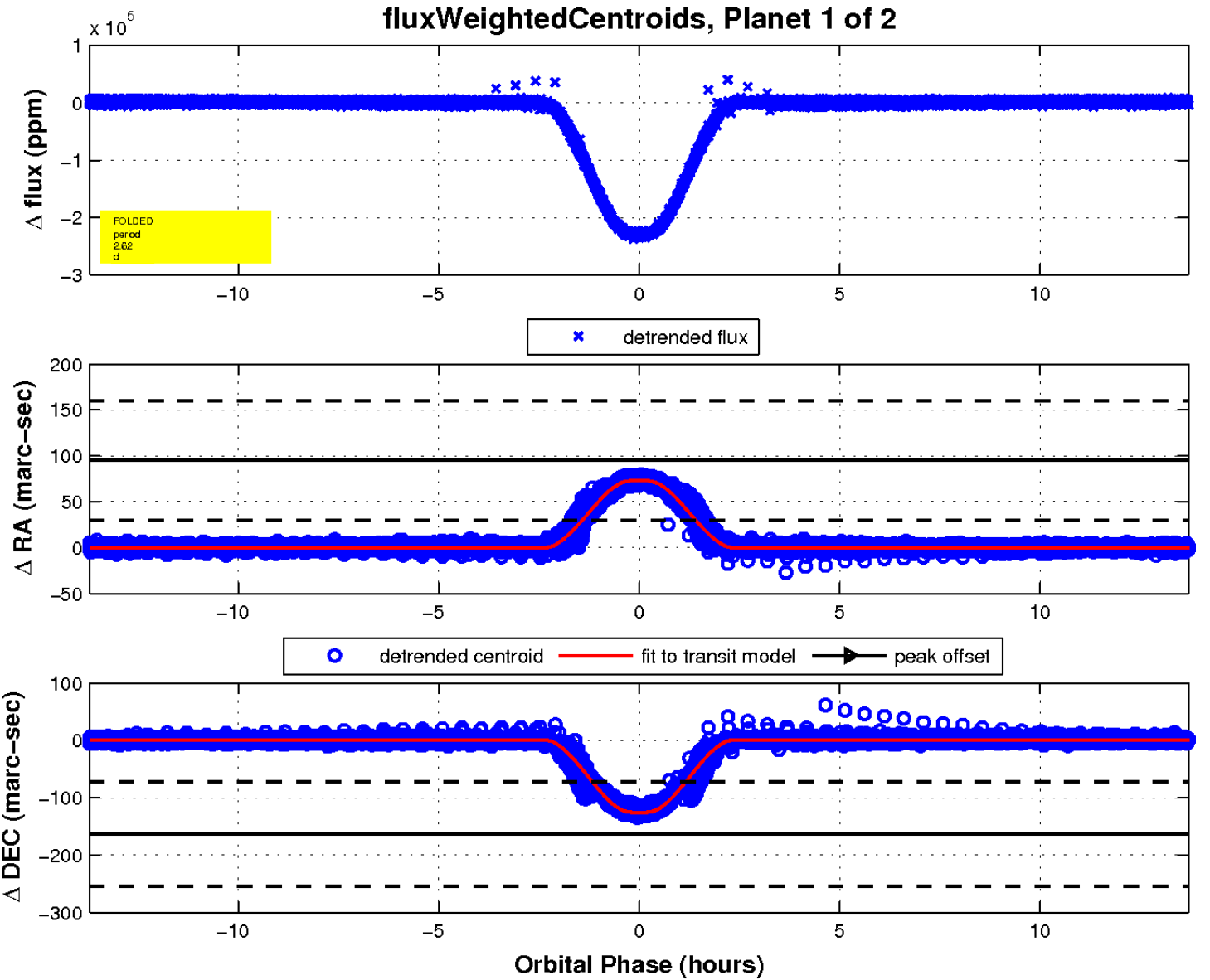
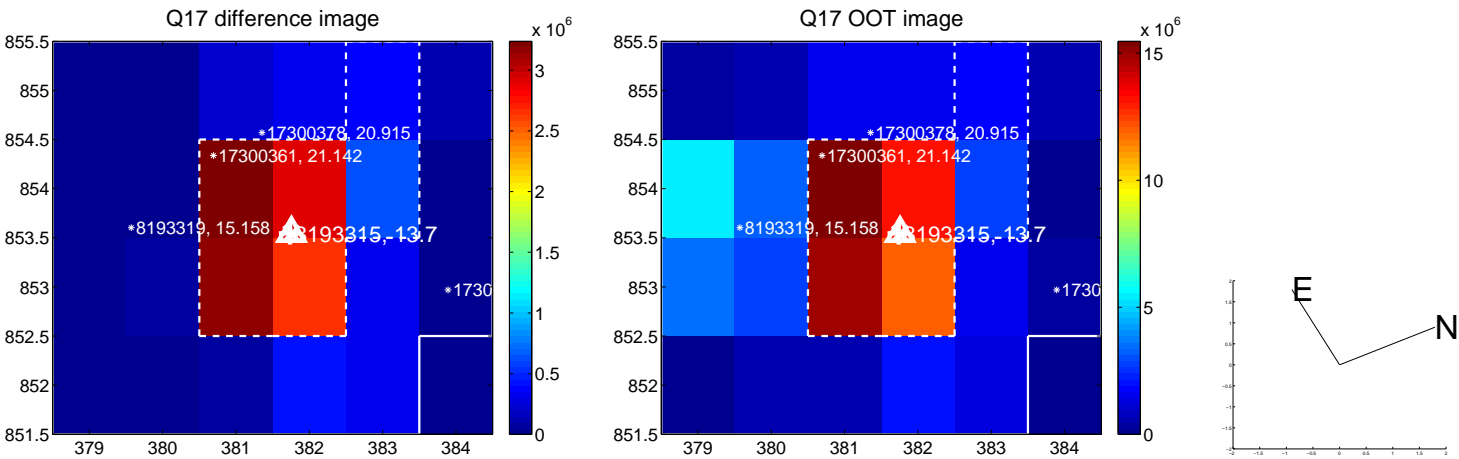
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

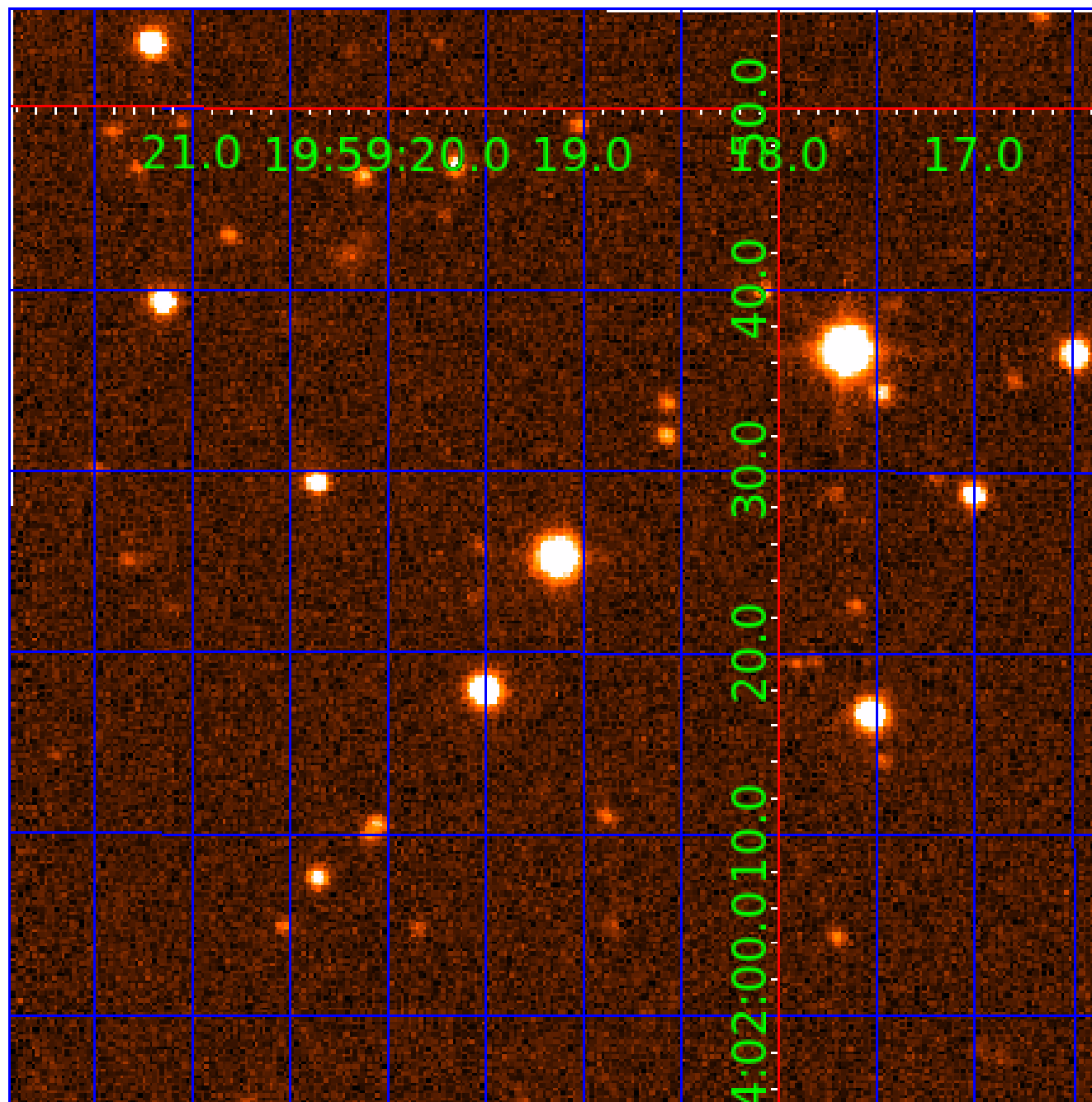


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008193315

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})
008193315-01	OBS	6988.01	2.623874	134.004754	230339.1	4.572	5698.1	4463.8	1.46	6728	73.96	2432.67
008193315-02	OBS	No	2.623879	132.688277	6969.9	3.000	1264.5	-1.0	1.46	6728	12.31	2432.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008193315-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
008193315-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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.

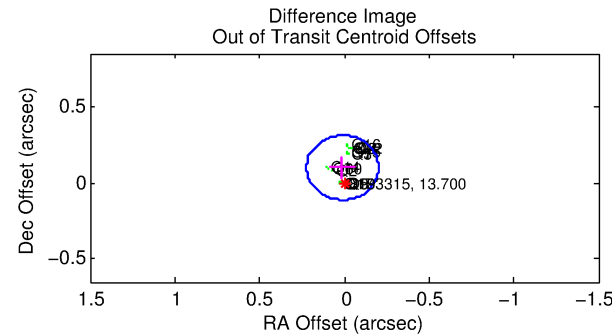
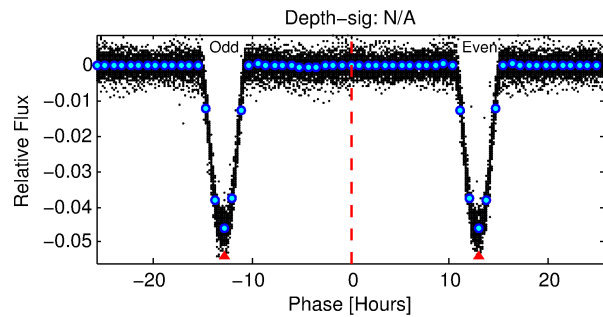
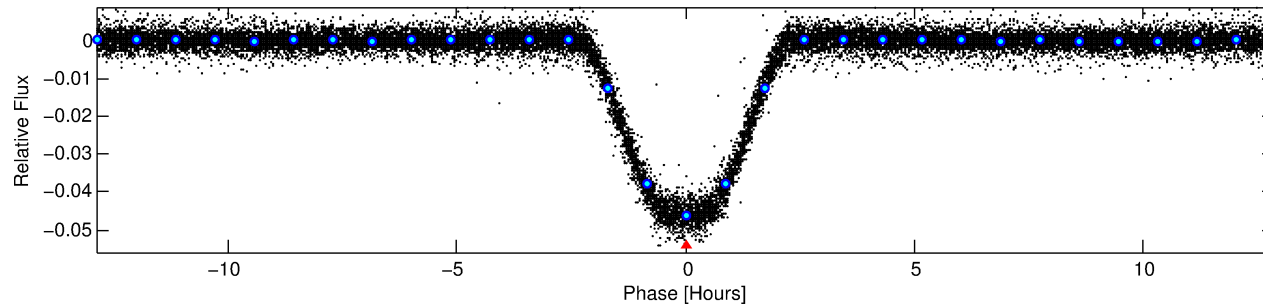
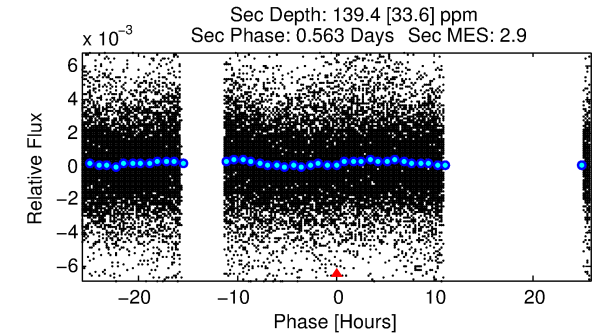
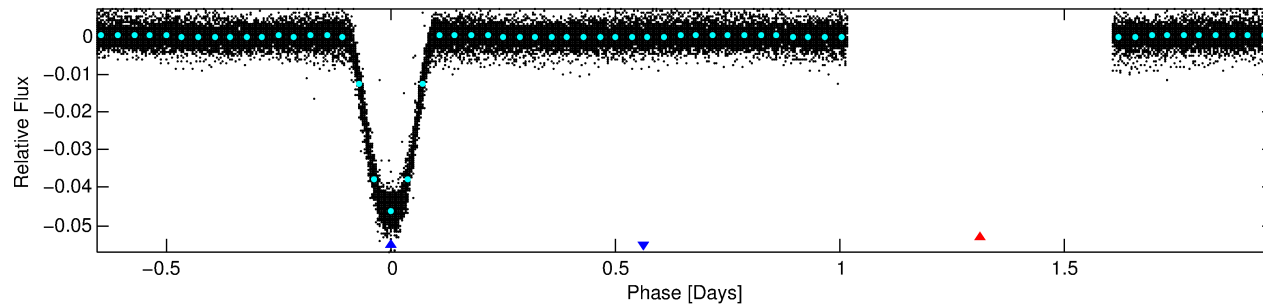
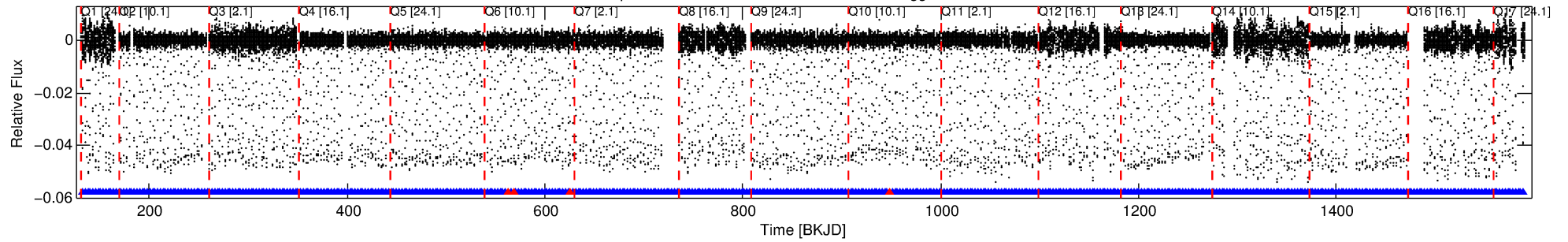
Ephemeris Match Information For 008193315-02

No Significant Match Found

DV One-Page Summary

KIC: 8193315 Candidate: 2 of 2 Period: 2.624 d
KOI: K06988 Corr: No Ephemeris Match

Kp: 13.70 R*: 1.46 Rs Teff: 6728.0 K Logg: 4.21 Fe/H: -0.260



TPS TCE Results:

Period = 2.62388 d
Epoch = 132.6883 BKJD

DV fit results are unavailable

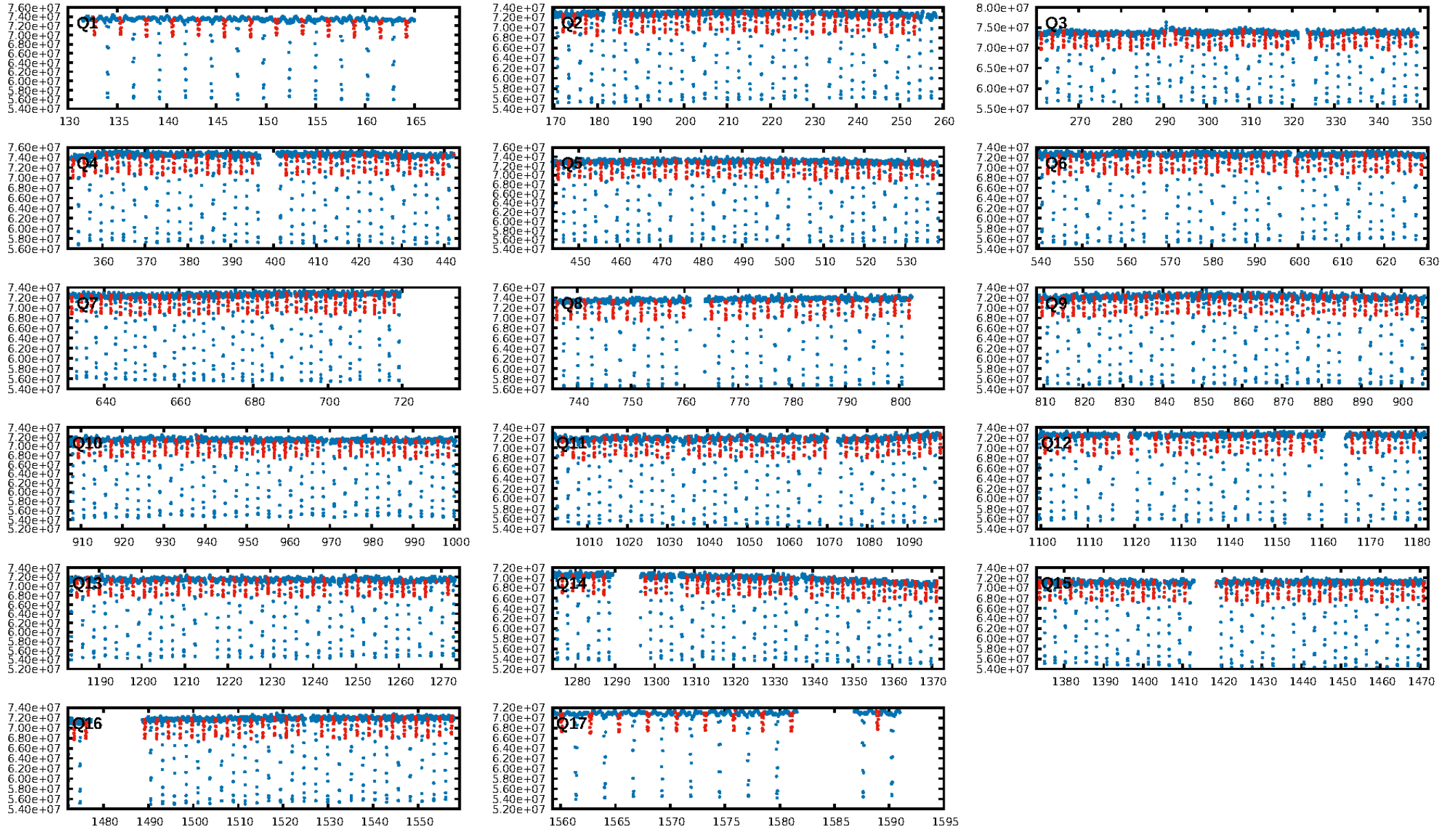
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [483/487]
GhostDiagnostic-chr: 1.51
Centroid-sig: 0.0%
Centroid-so: 0.491 arcsec [268.82 σ]
OotOffset-rm: 0.101 arcsec [1.44 σ]
KicOffset-rm: 0.030 arcsec [0.44 σ]
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]

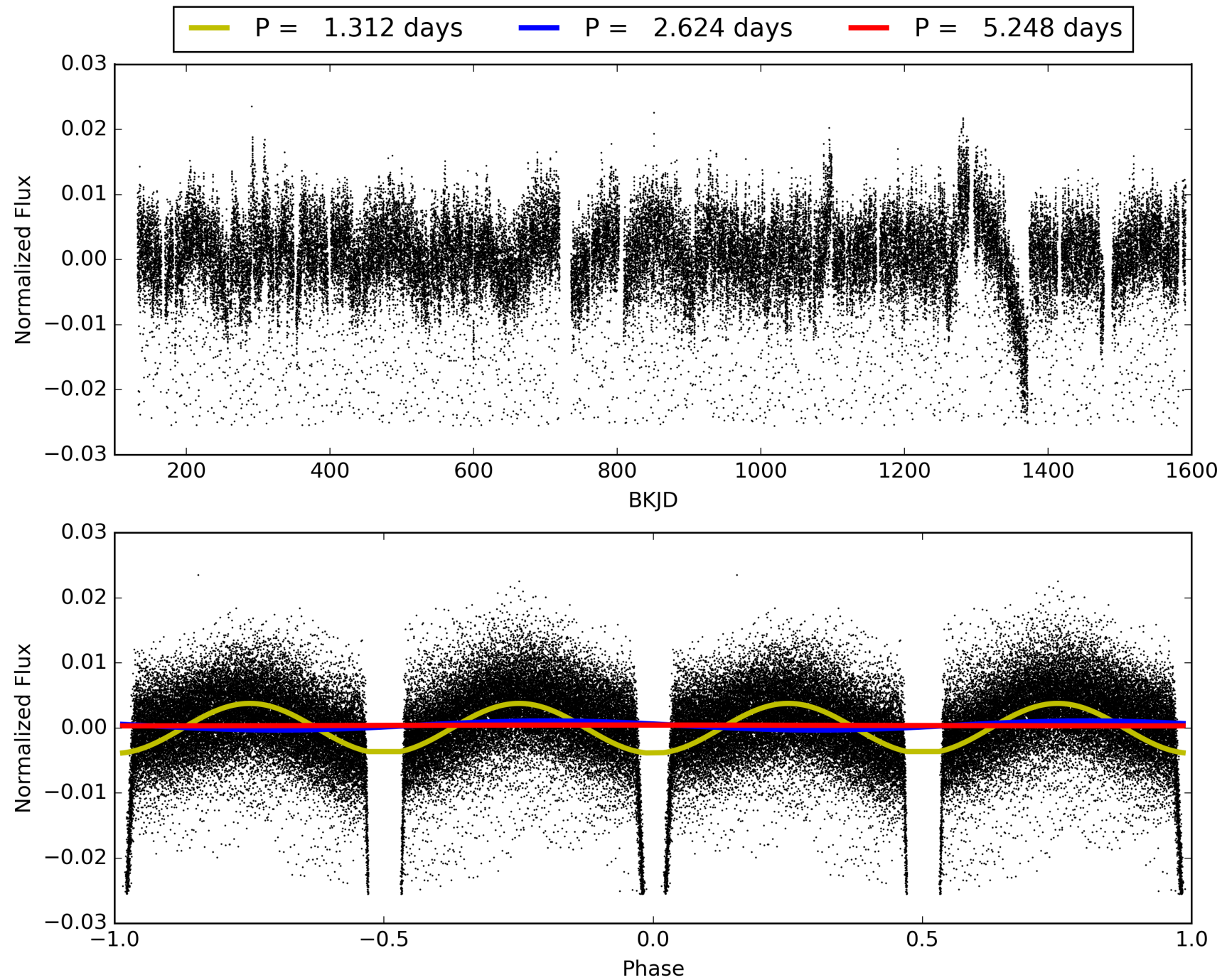
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:55:56 Z

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

TCE 008193315-02, PDC Light Curves

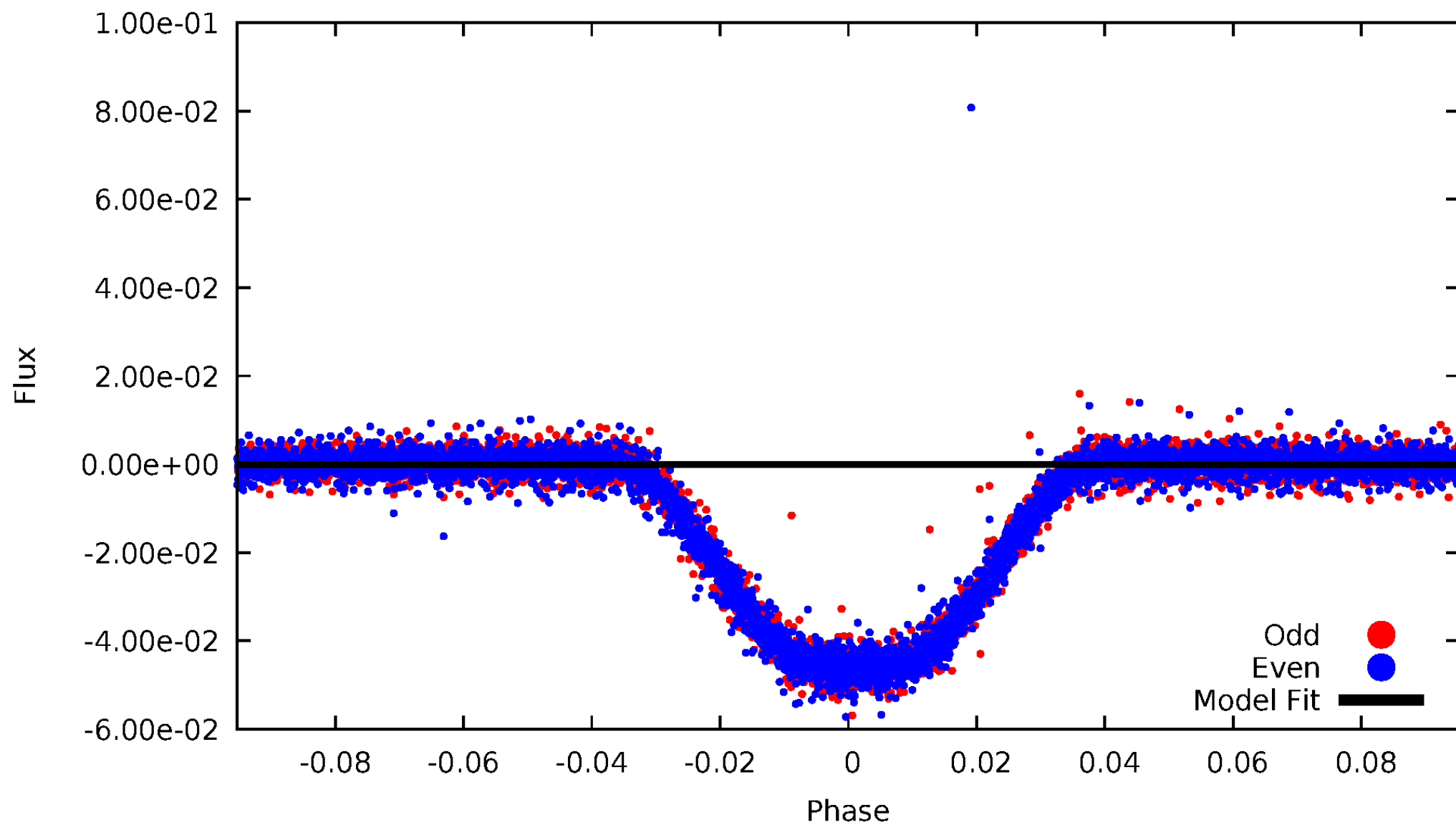


TCE 008193315-02



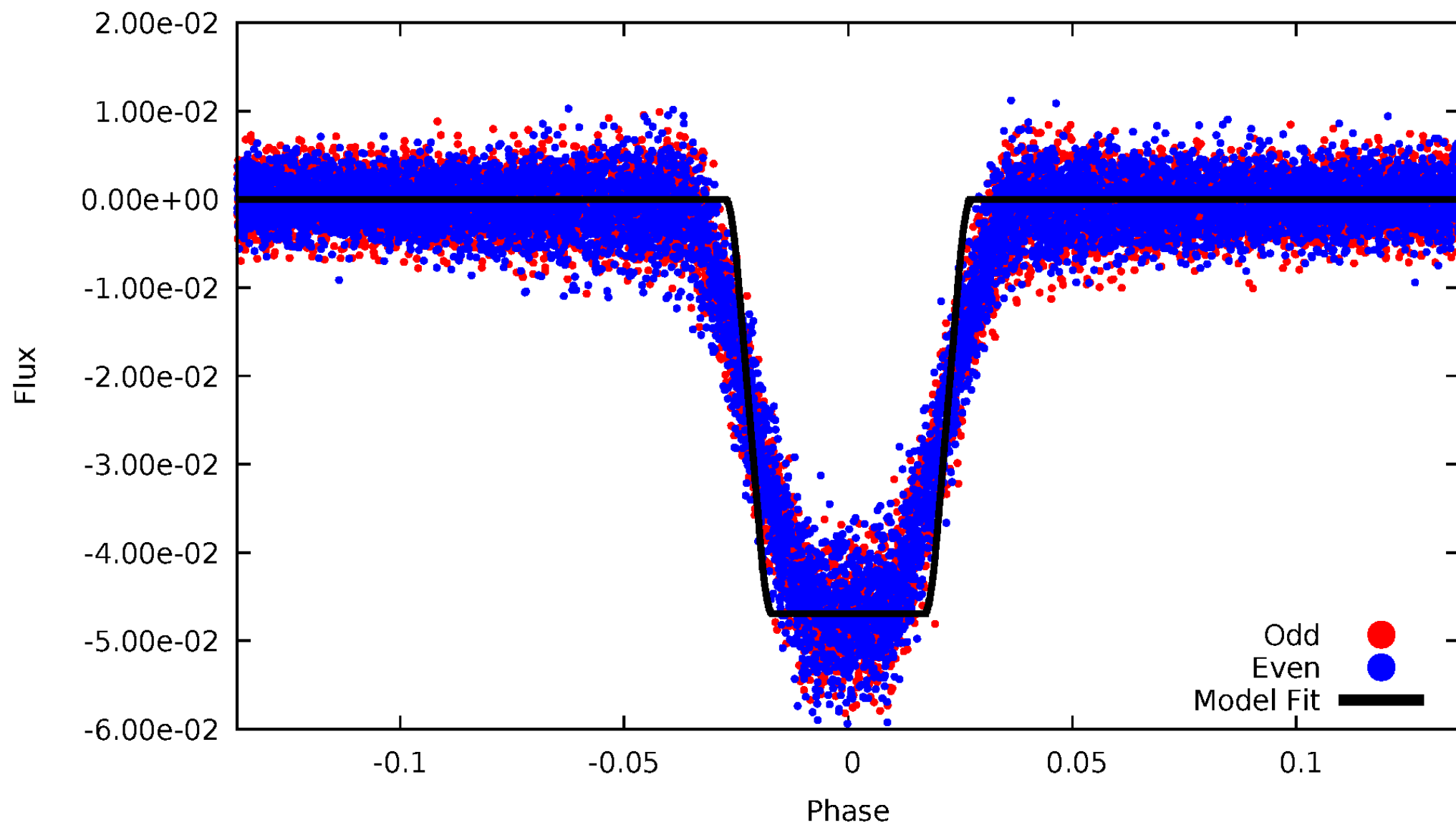
DV Odd/Even

TCE 008193315-02



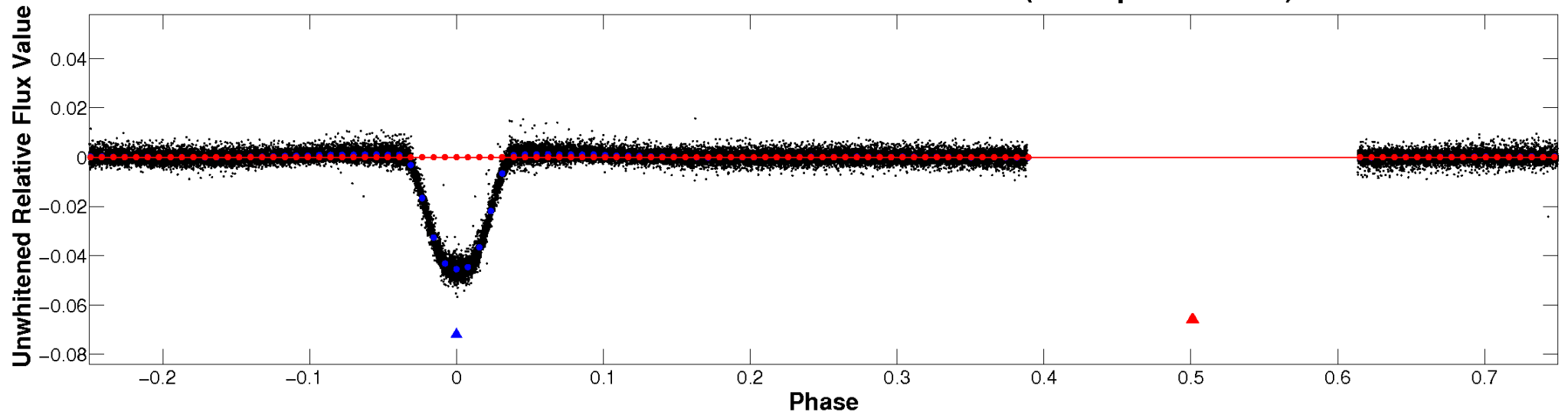
ALT Odd/Even

TCE 008193315-02

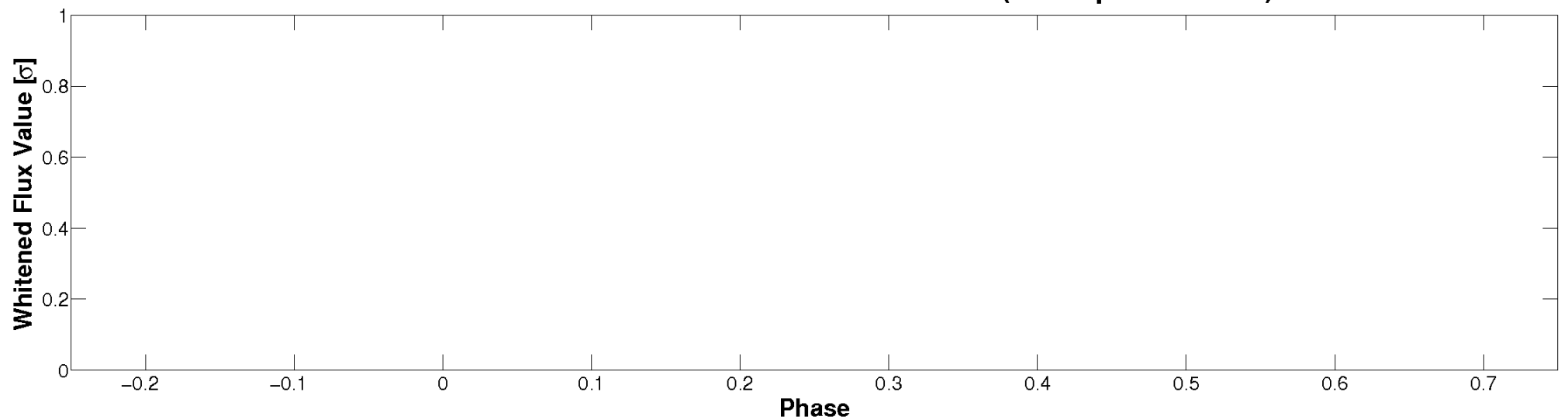


Non-Whitened Vs. Whitened Light Curve

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

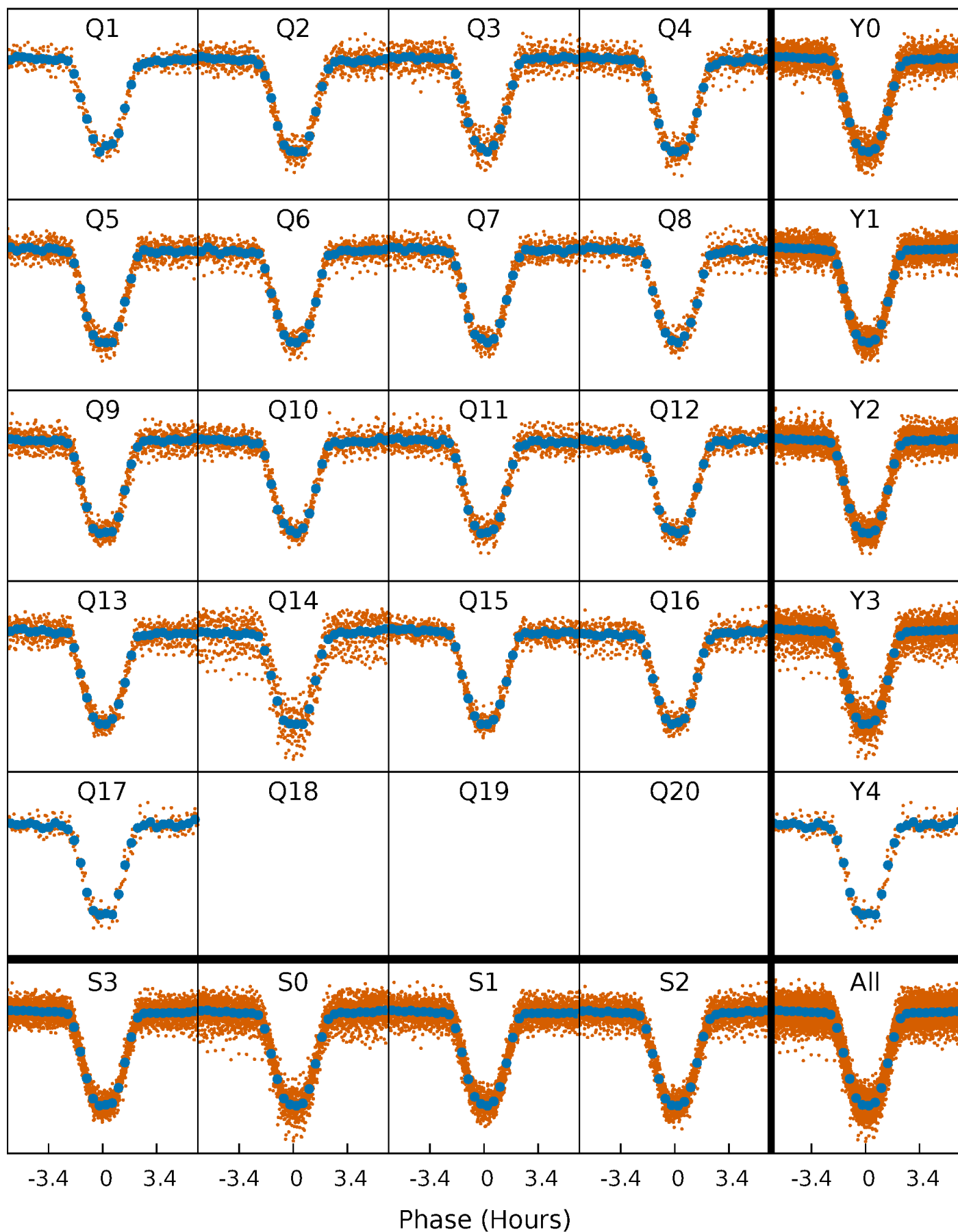


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



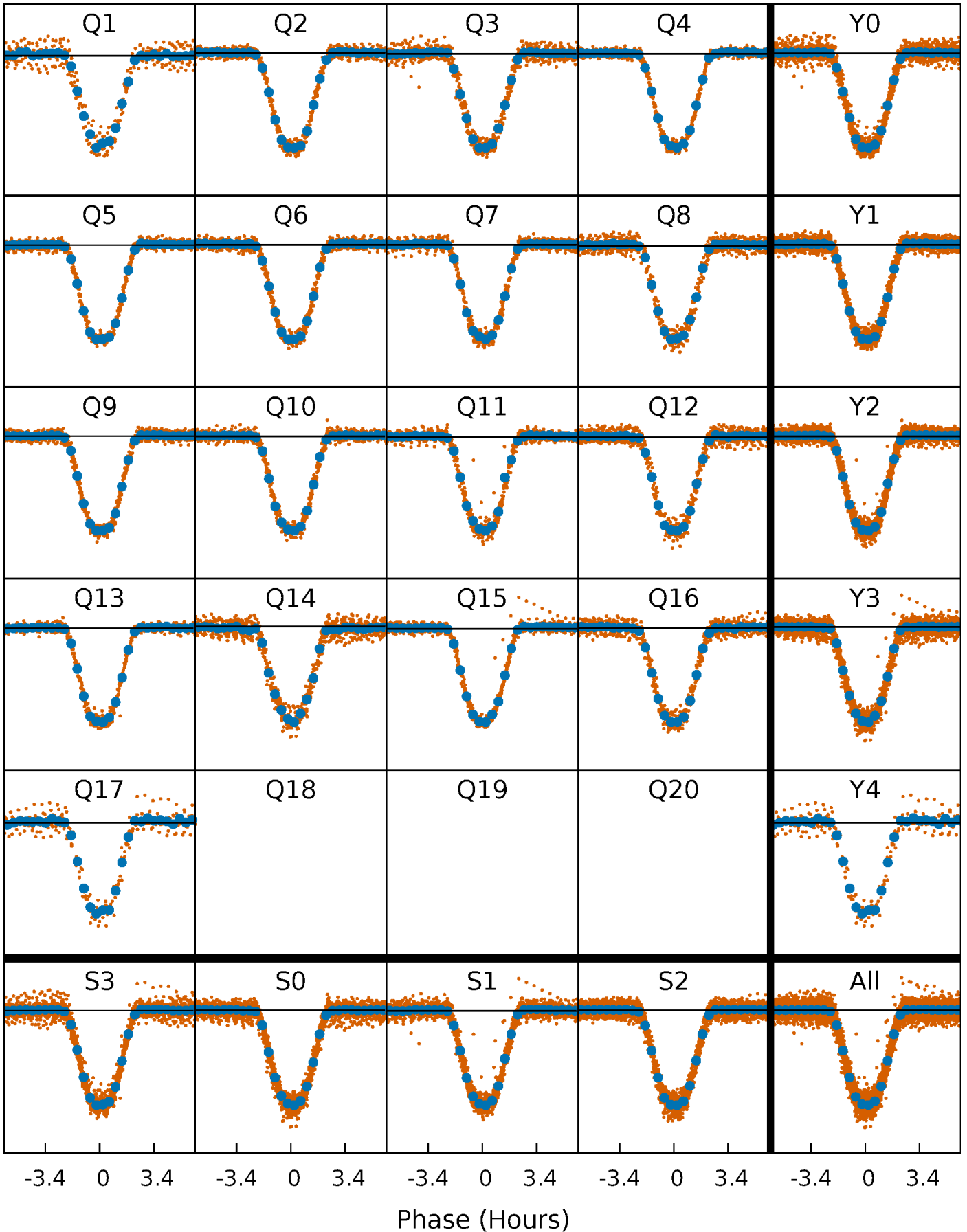
PDC Quarter-Phased Transit Curves

TCE 008193315-02 P= 2.623879 Days $T_0=132.688277$ (BKJD)



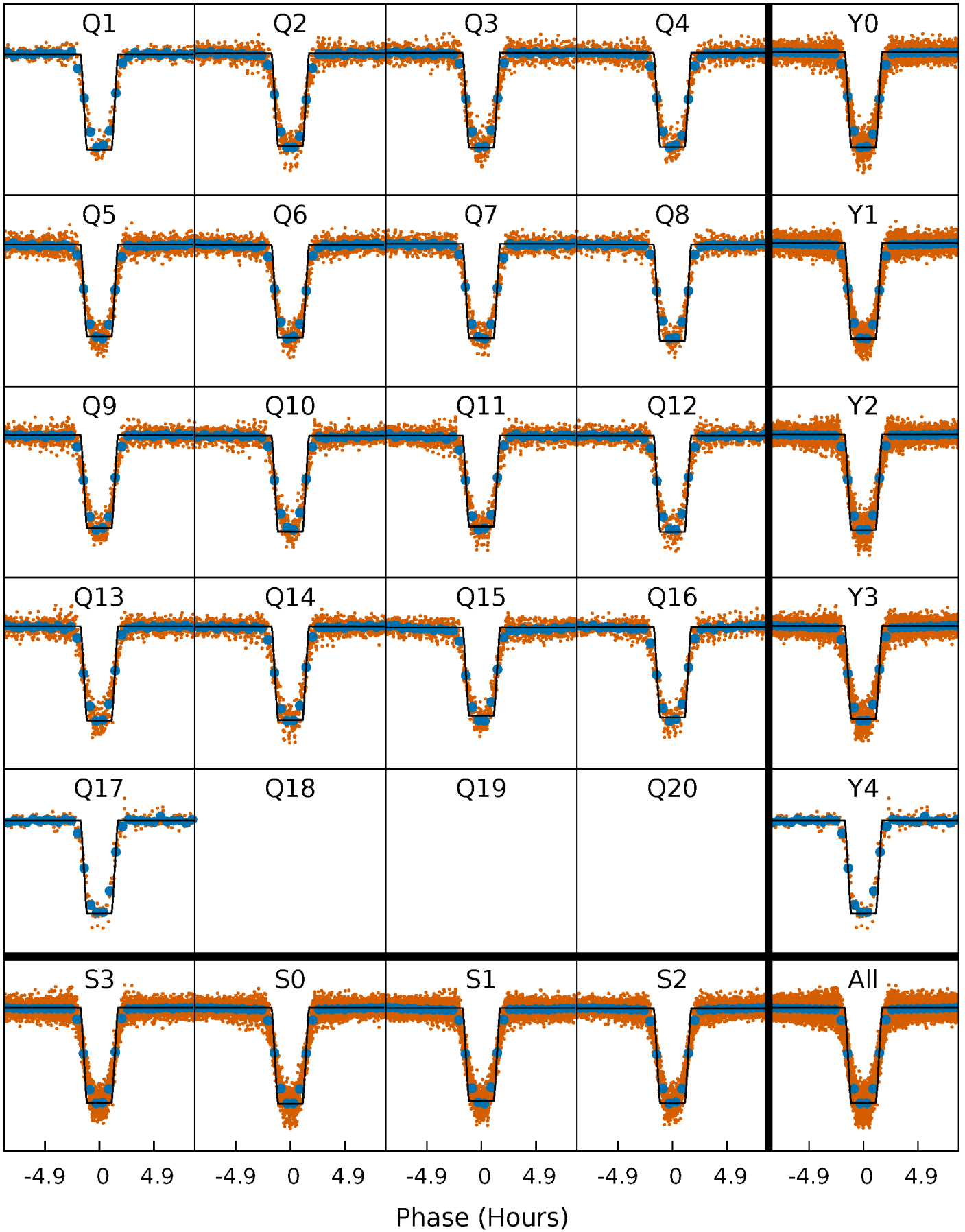
DV Quarter-Phased Transit Curves

TCE 008193315-02 P= 2.623879 Days $T_0=132.688277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

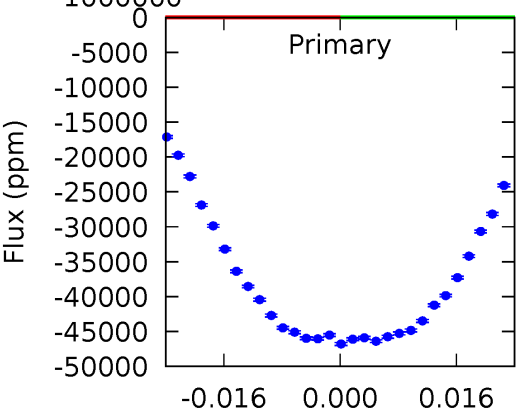
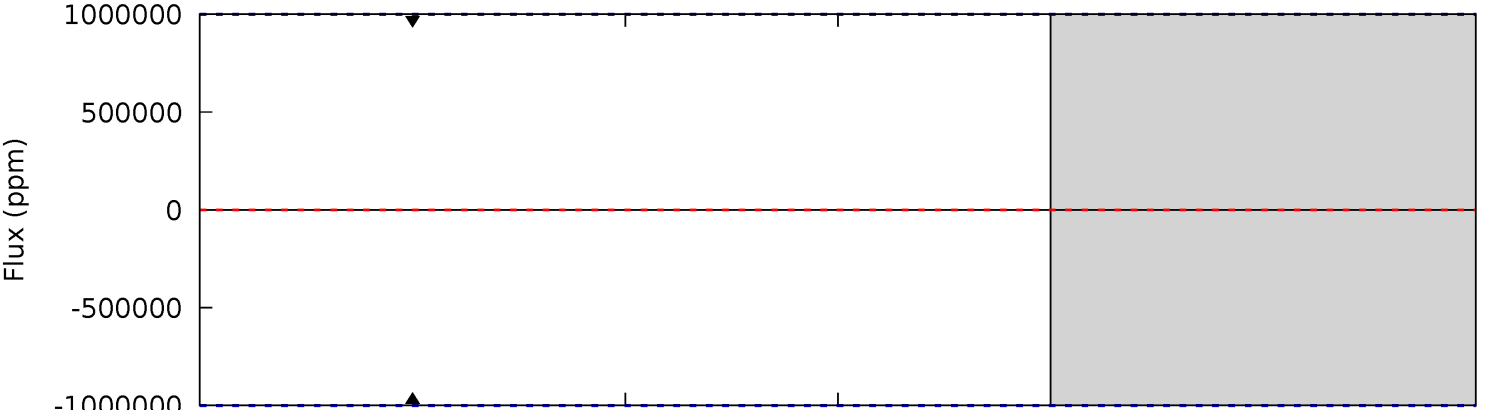
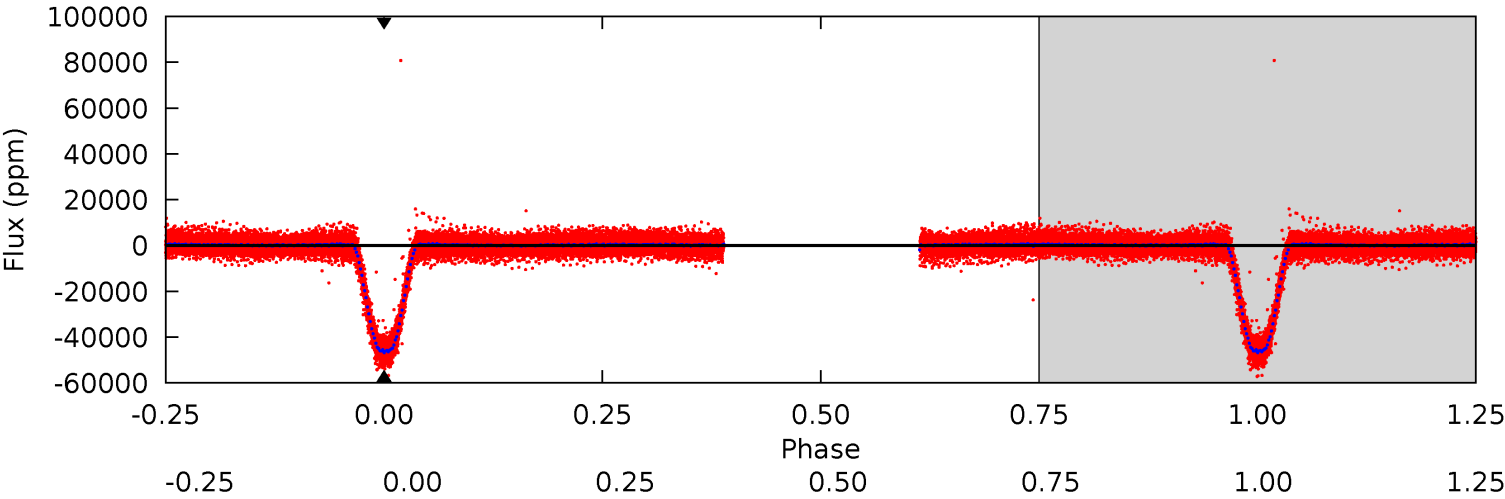
TCE 008193315-02 P= 2.623879 Days $T_0=132.691609$ (BKJD)



DV Model-Shift Uniqueness Test

008193315-02, P = 2.623879 Days, E = 130.064398 Days

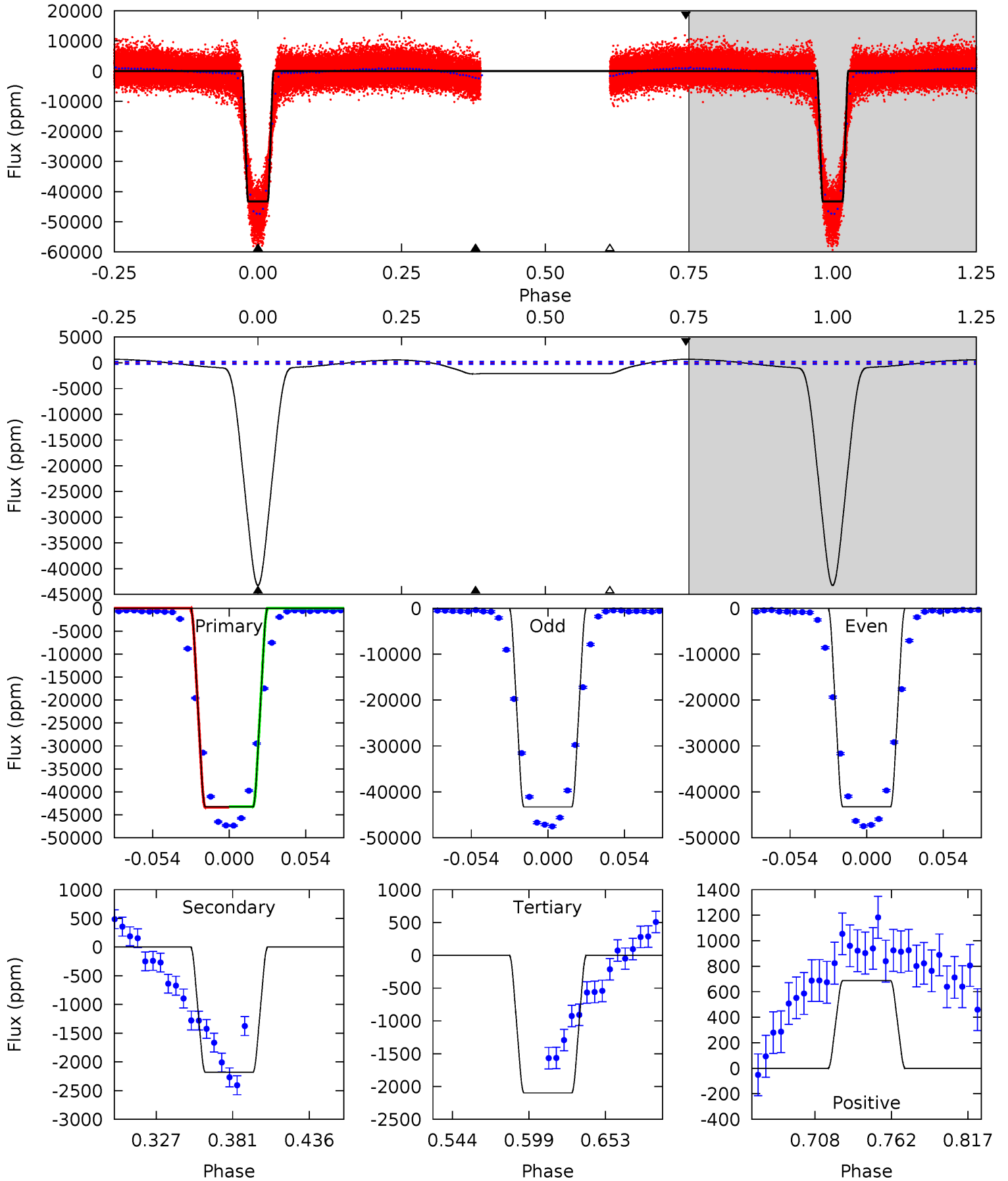
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008193315-02, P = 2.623879 Days, E = 130.067730 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
871.9	43.9	42.3	13.8	4.69	1.92	12.4	829.6	858.1	1.62	30.1	0.26	1.00	0.02	1.43



Stellar Parameters For KIC 008193315

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6728^{+189}_{-260}	$4.206^{+0.149}_{-0.182}$	$-0.260^{+0.250}_{-0.300}$	$1.460^{+0.447}_{-0.298}$	$1.257^{+0.182}_{-0.202}$	$0.569^{+0.440}_{-0.291}$
	+3%/-4%	+4%/-4%	+96%/-115%	+31%/-20%	+14%/-16%	+77%/-51%
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 008193315-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$17.31^{+14.71}_{-11.31}$	2507^{+176}_{-161}	-3102^{+20226}_{-15835}	$-0.331^{+417.050}_{-537.017}$
Alt.	-2179 ± 50	$34.85^{+17.64}_{-15.32}$	2495^{+178}_{-152}	3424^{+826}_{-509}	$1.594^{+3.379}_{-0.886}$

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

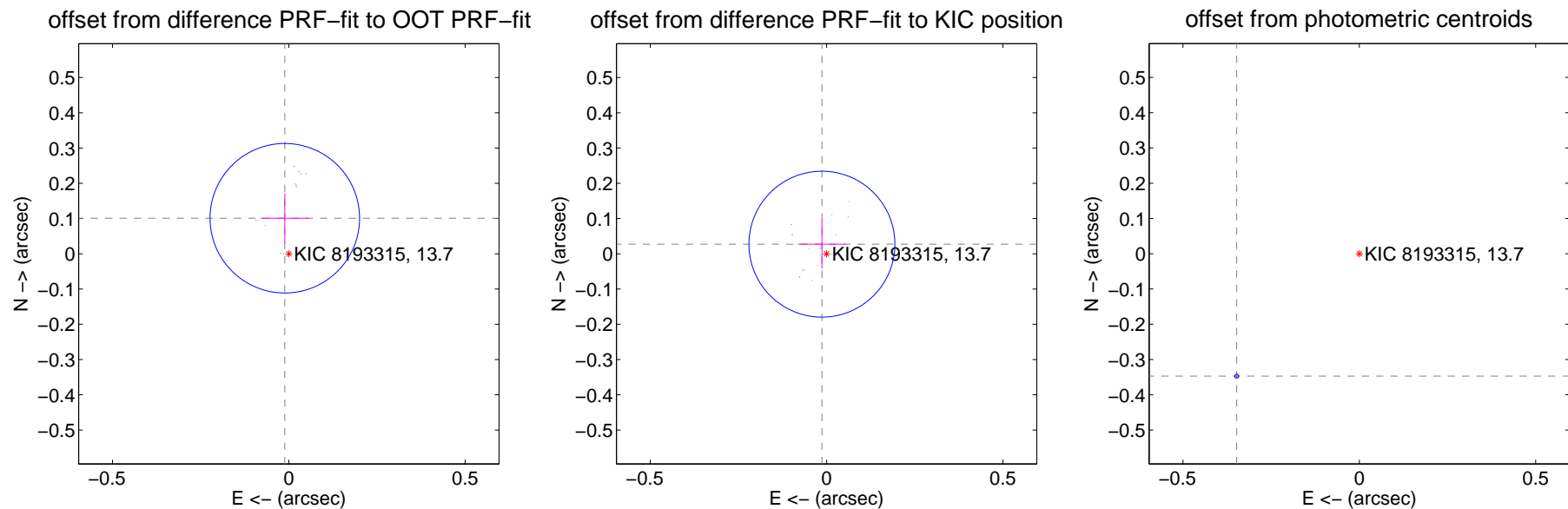
DV Centroid Data

Supplemental centroid analysis for 008193315-02. Kepler magnitude: 13.70. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

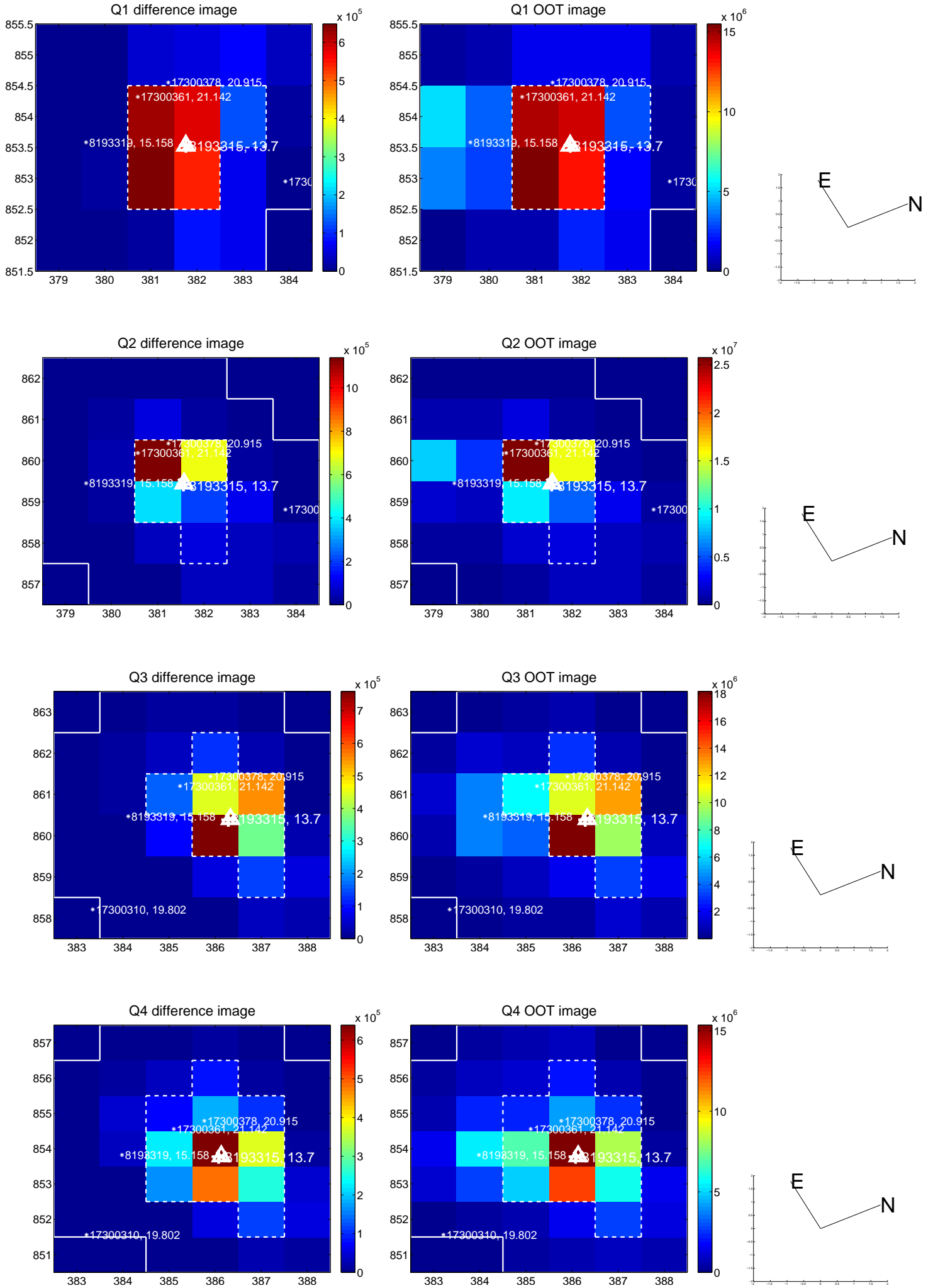
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.101 ± 0.071	1.44	0.011 ± 0.068	0.101 ± 0.071
PRF-fit source offset from KIC position	0.030 ± 0.069	0.44	0.013 ± 0.068	0.027 ± 0.069
photometric centroid source offset	0.49 ± 0.00	268.82	0.35 ± 0.00	-0.35 ± 0.00

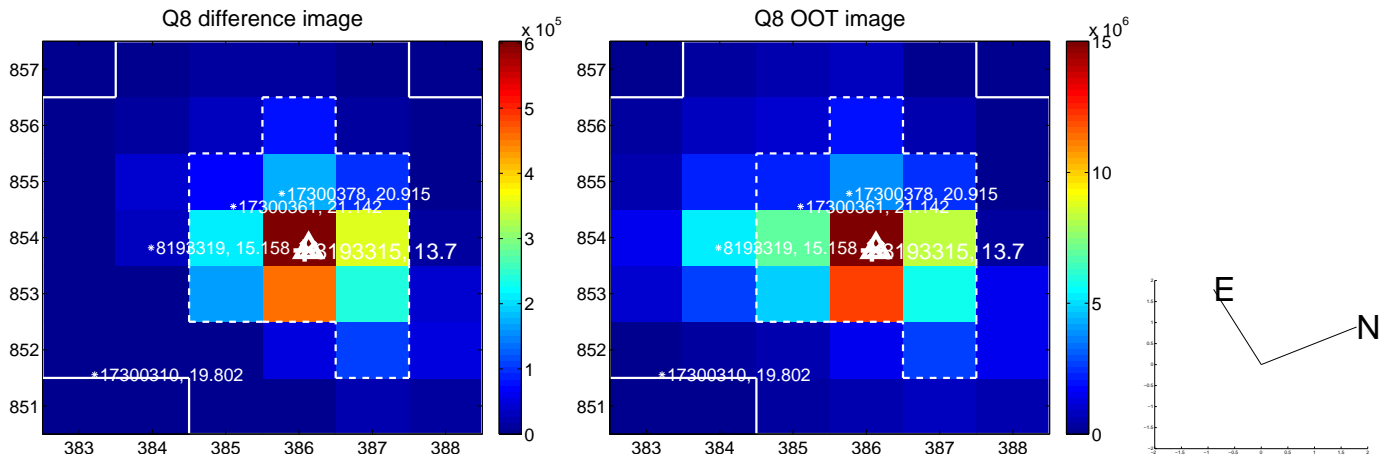
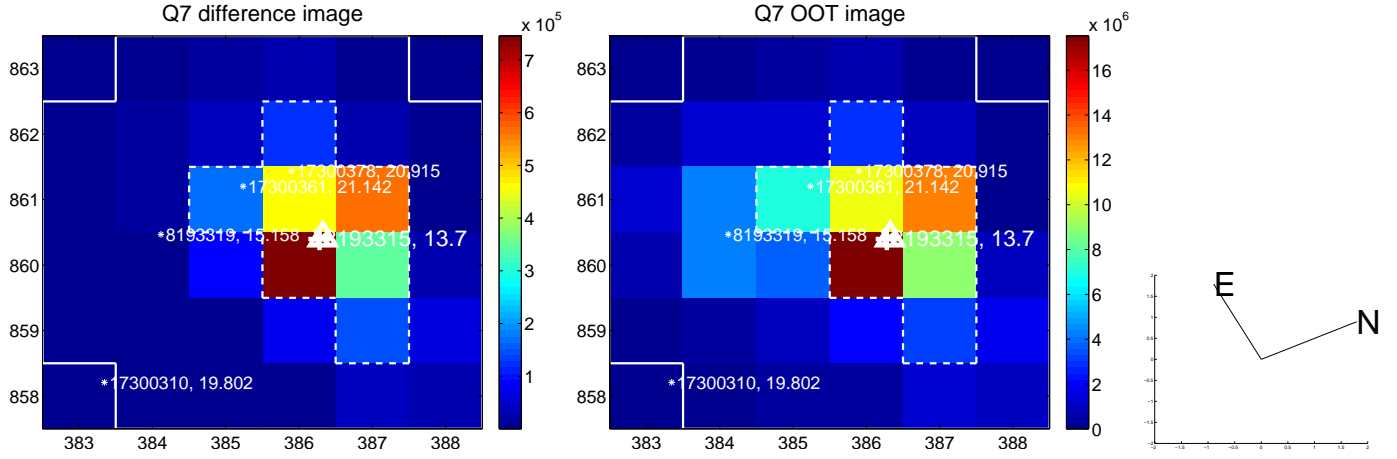
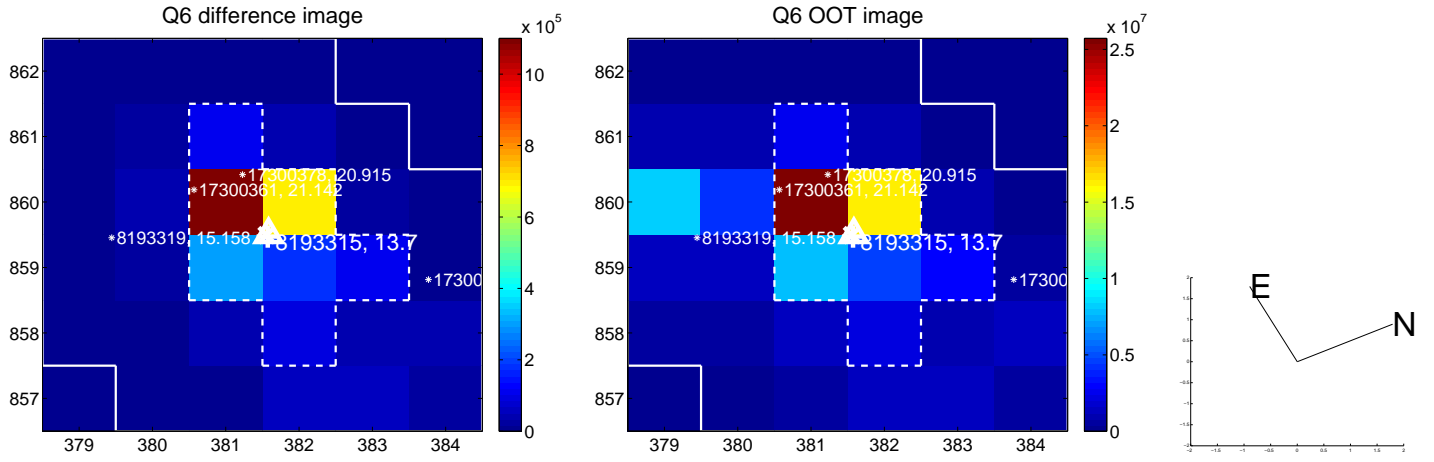
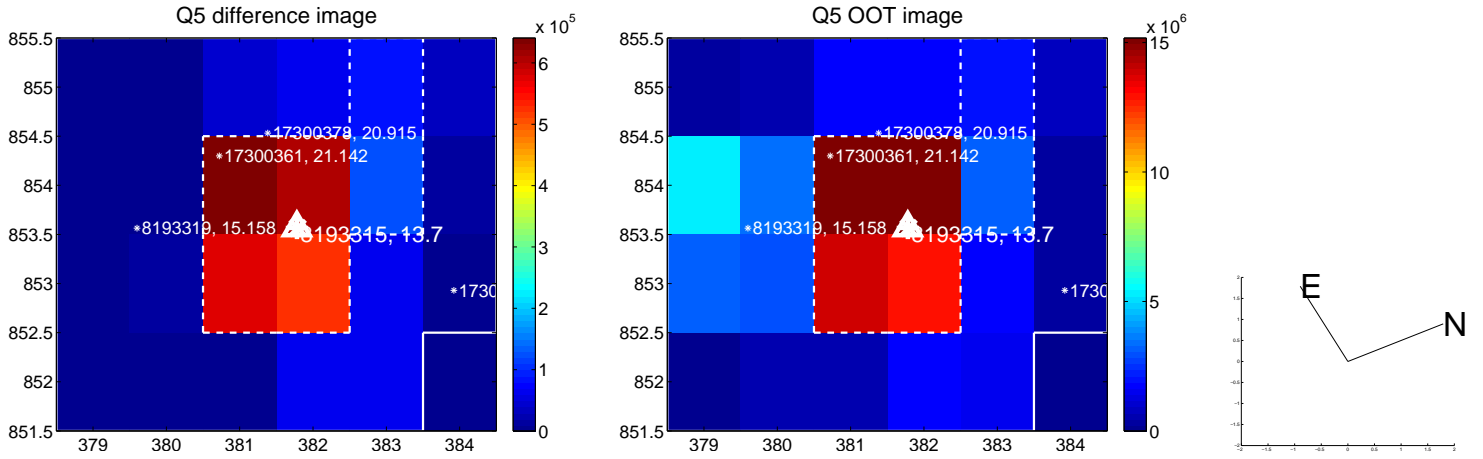


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

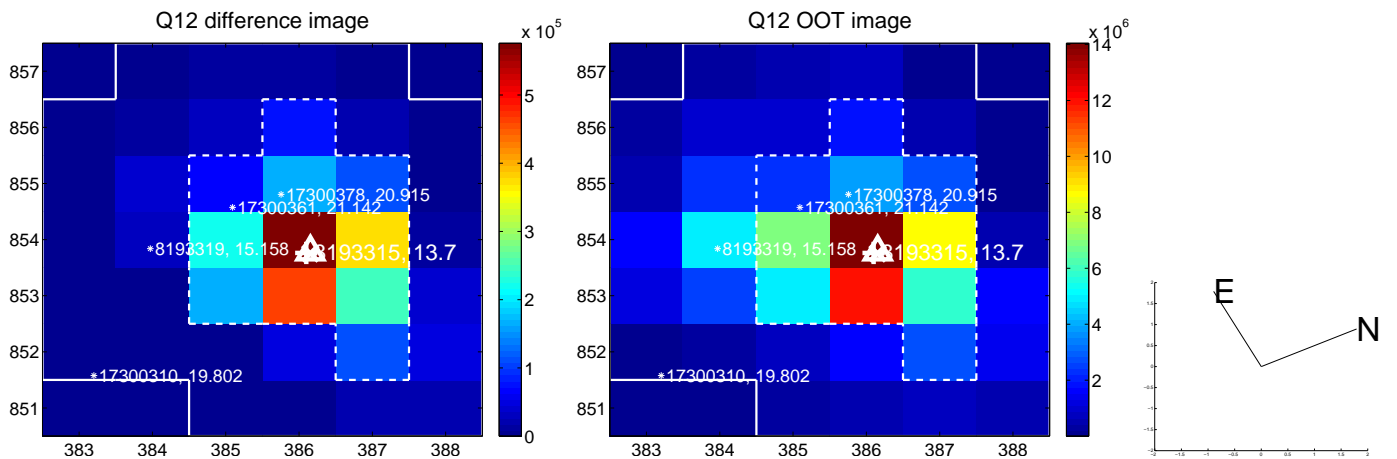
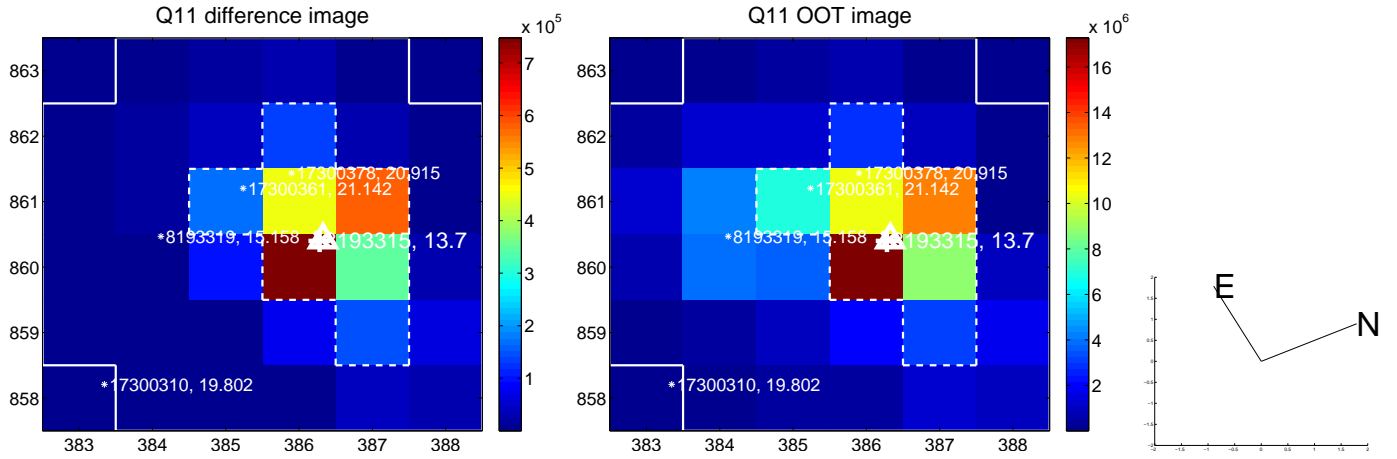
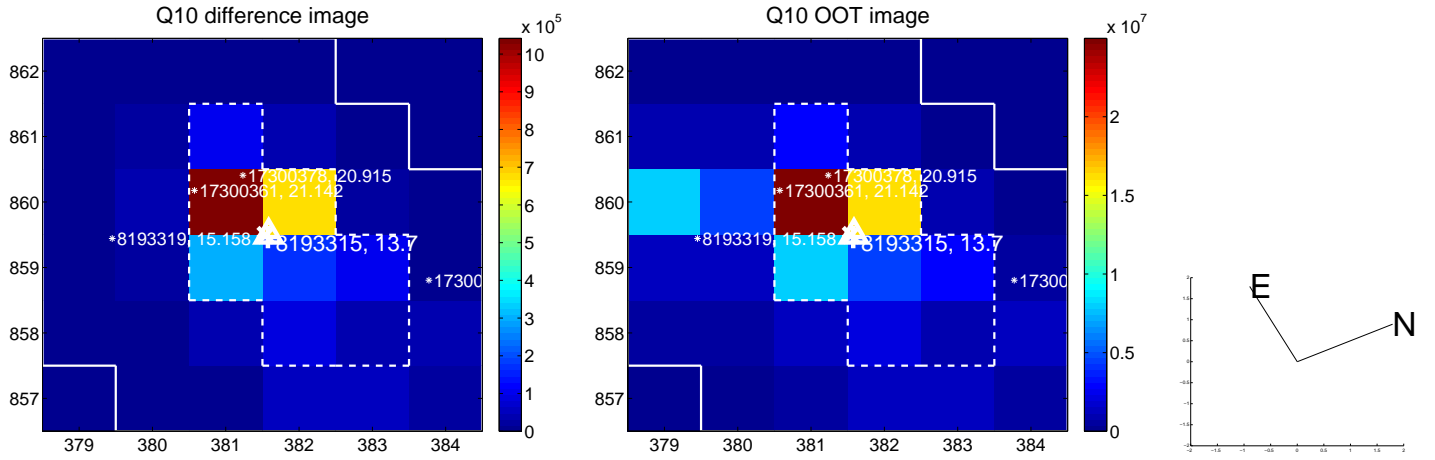
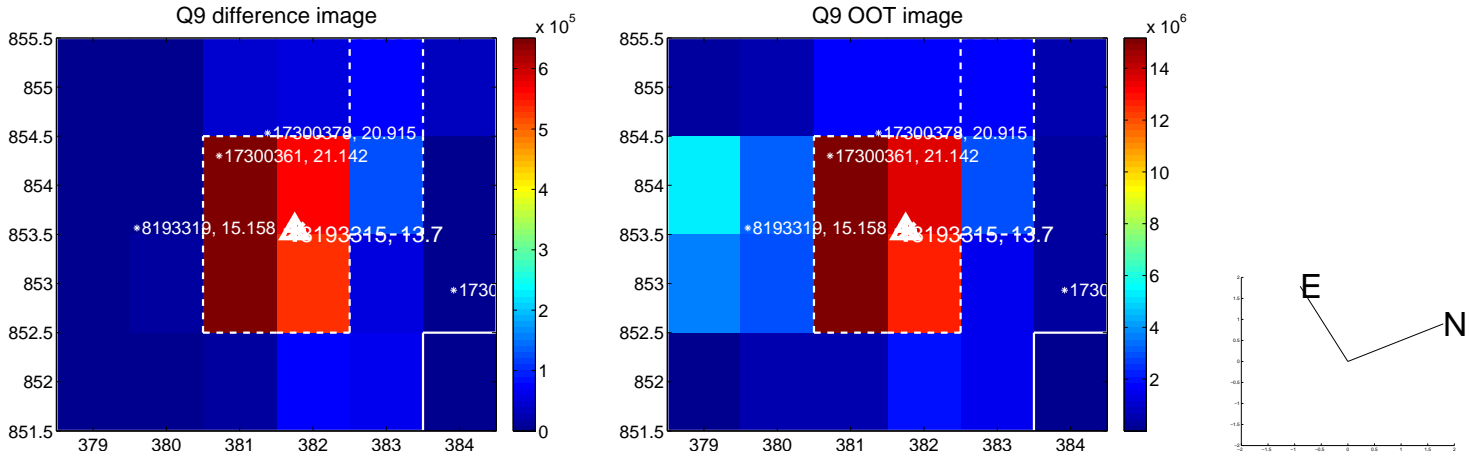
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



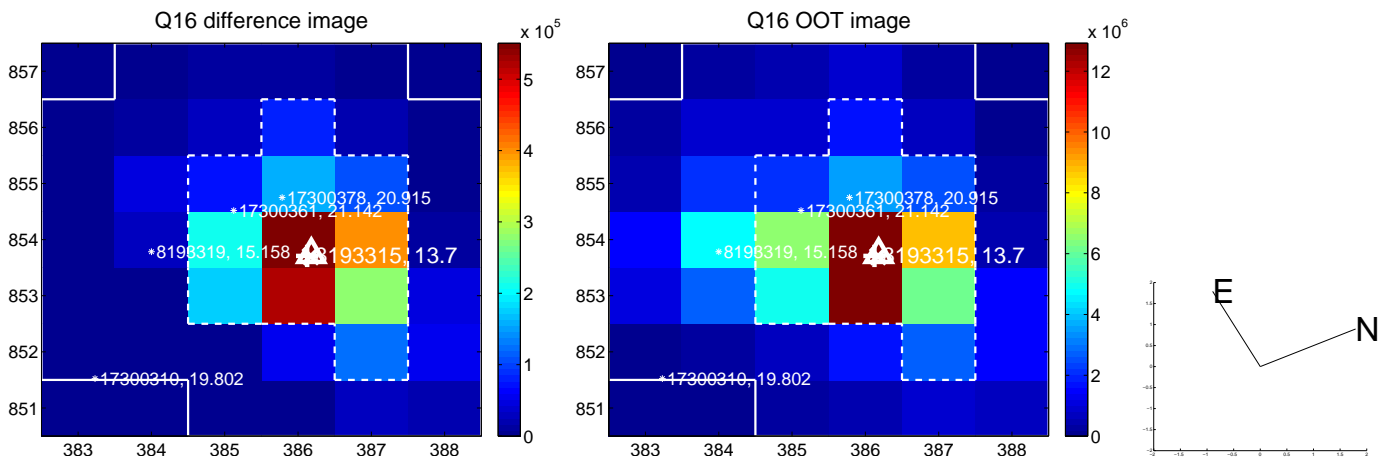
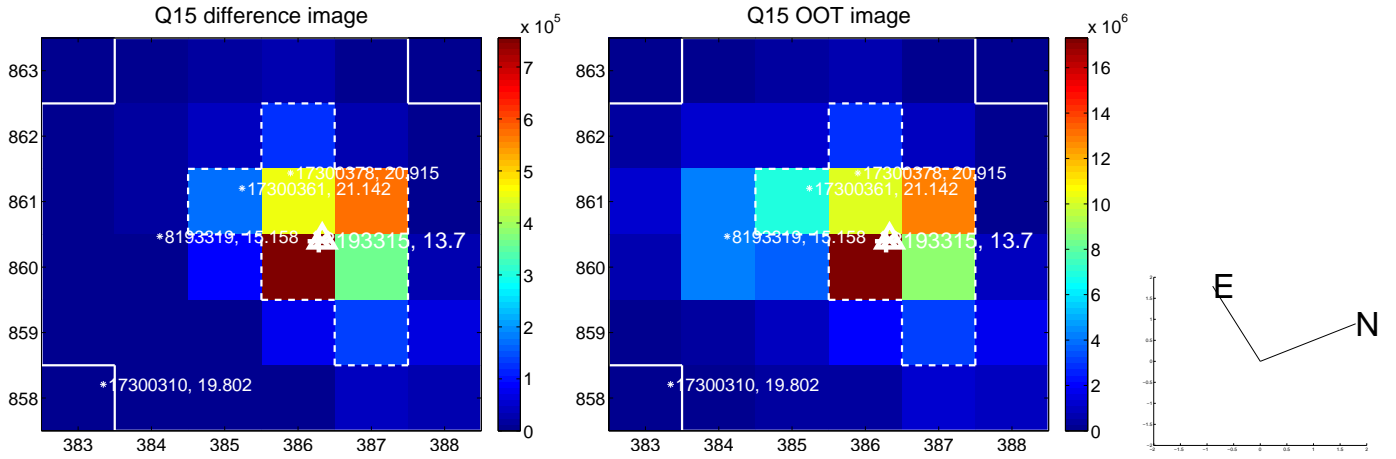
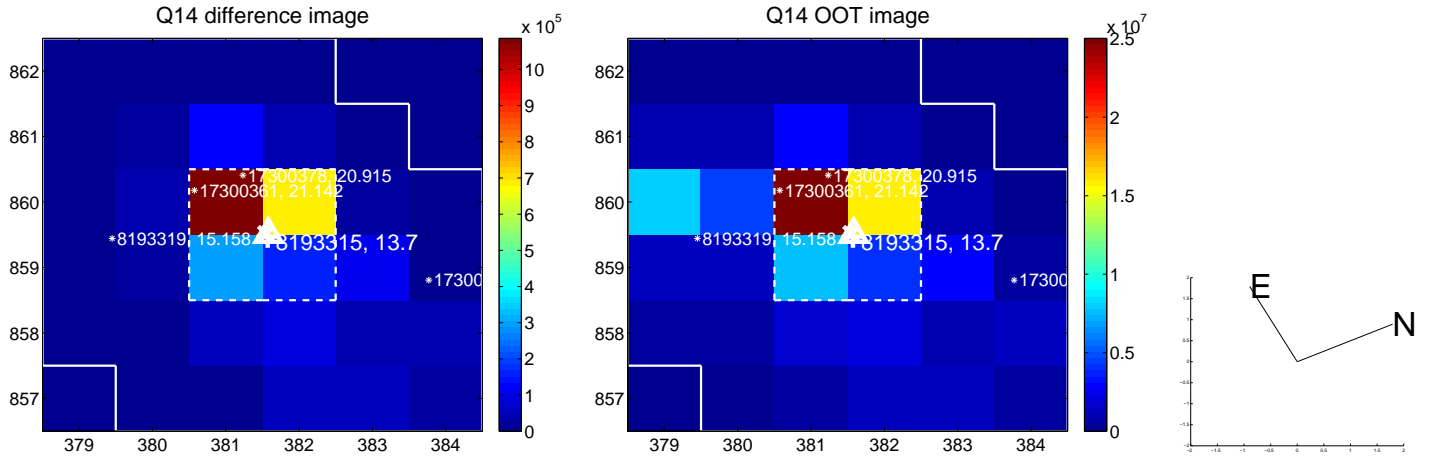
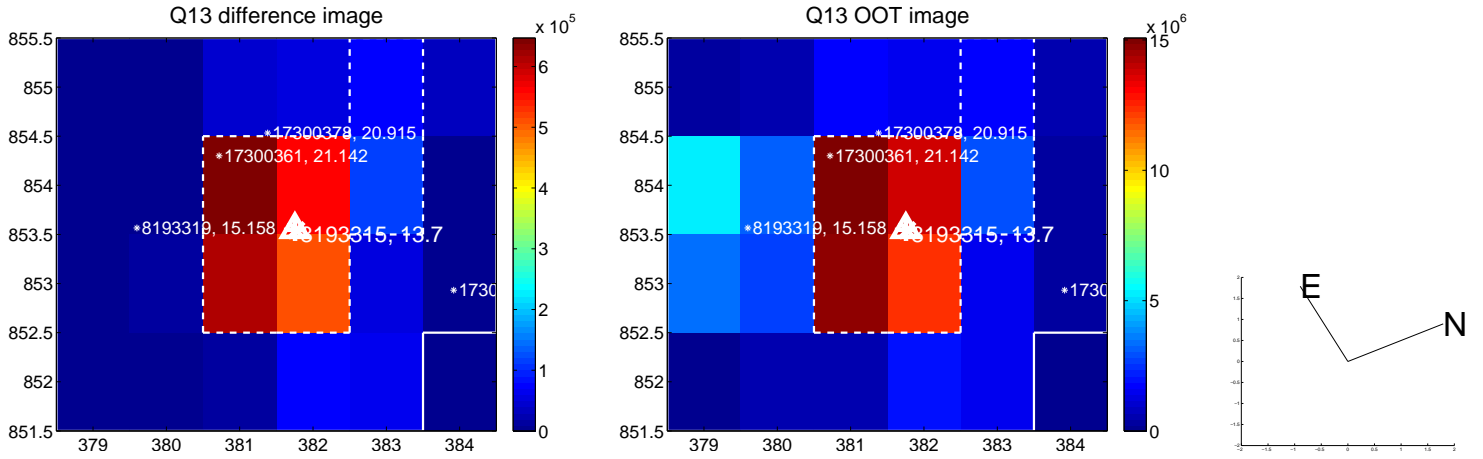
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



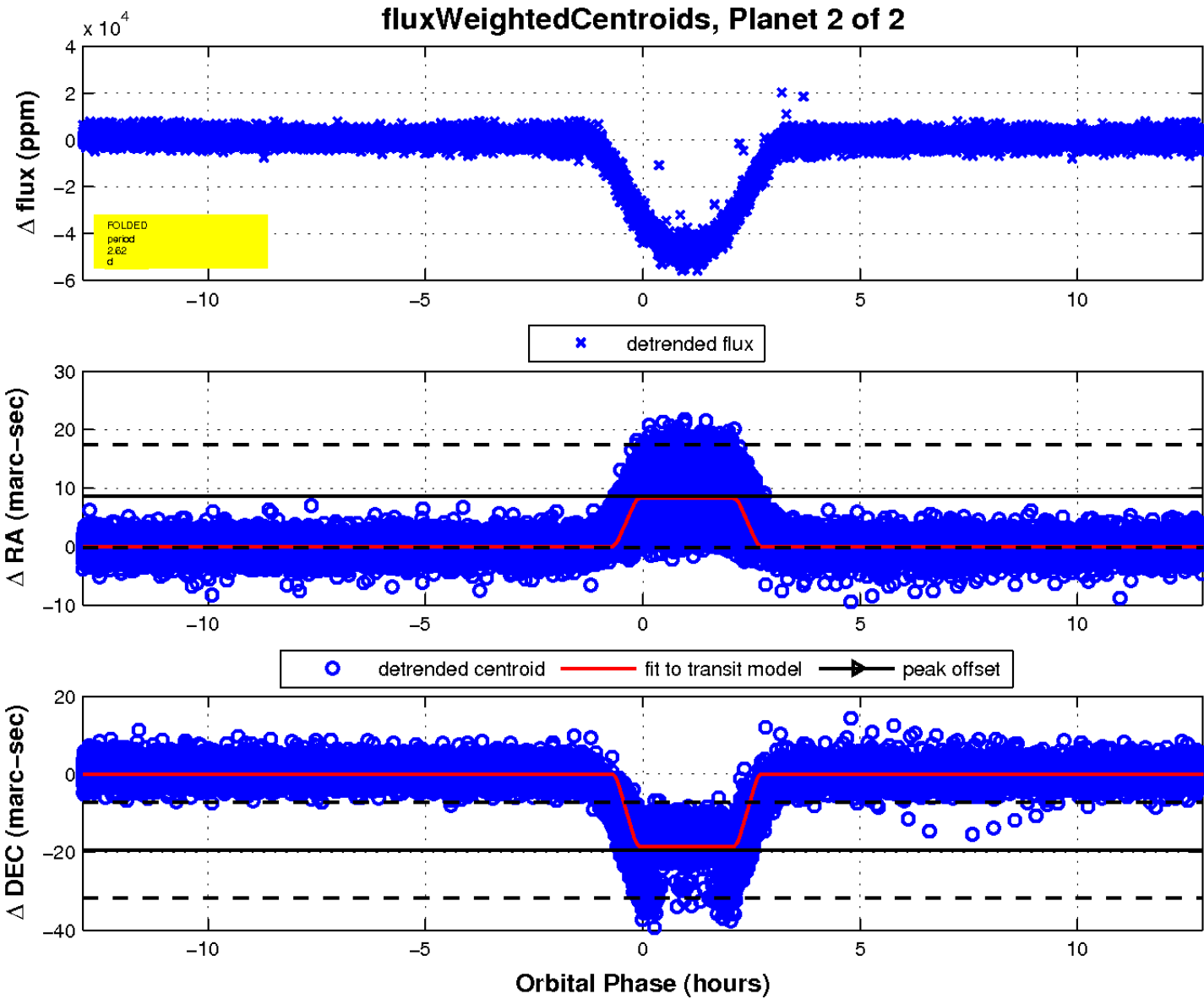
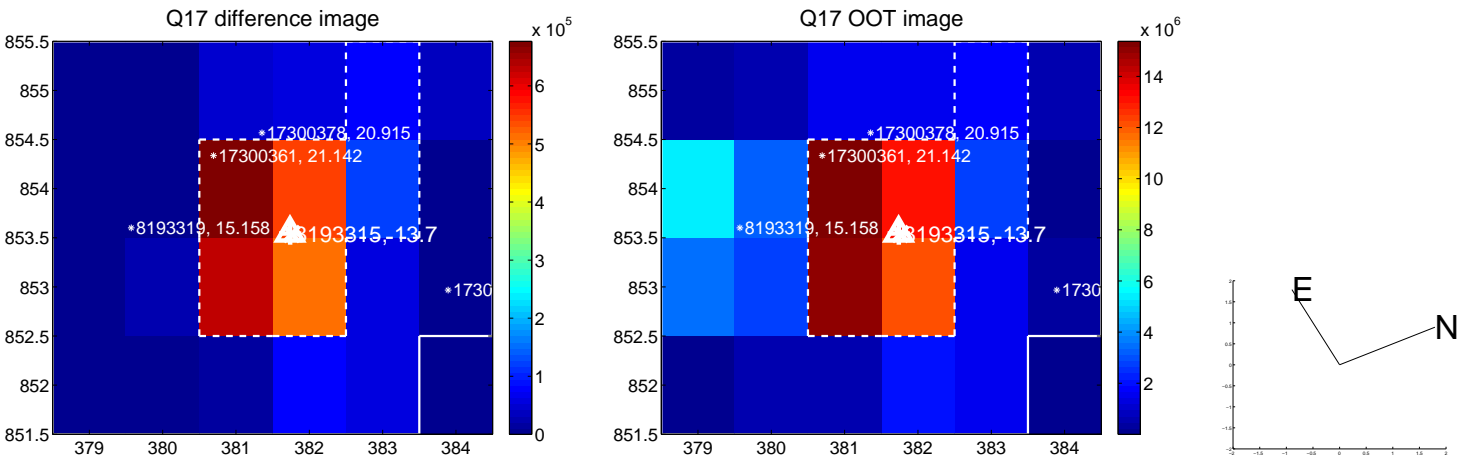
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

