

KIC 001433980

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})
001433980-01	OBS	3924.01	1.592721	132.263630	77634.0	5.000	3630.4	-1.0	1.77	6574	49.77	6123.72
001433980-02	OBS	No	1.592857	133.006049	91490.1	5.000	1076.4	-1.0	1.77	6574	54.06	6123.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001433980-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
001433980-02	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.

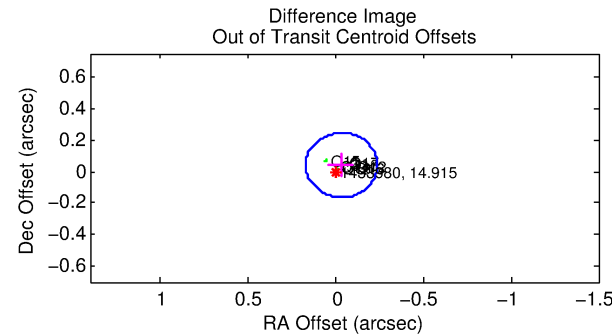
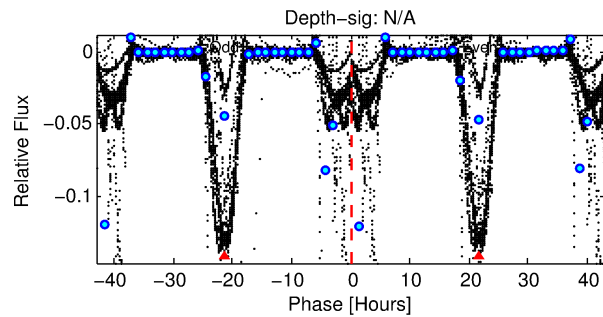
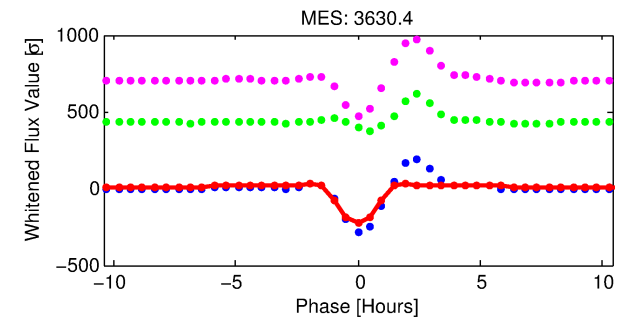
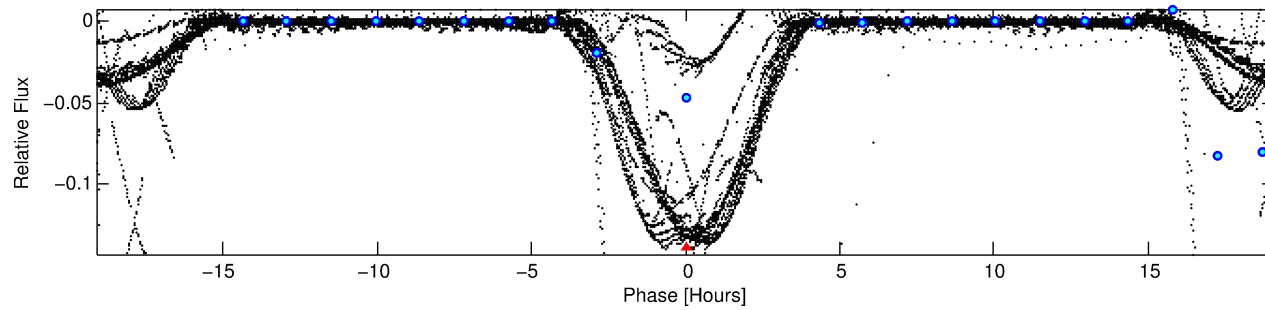
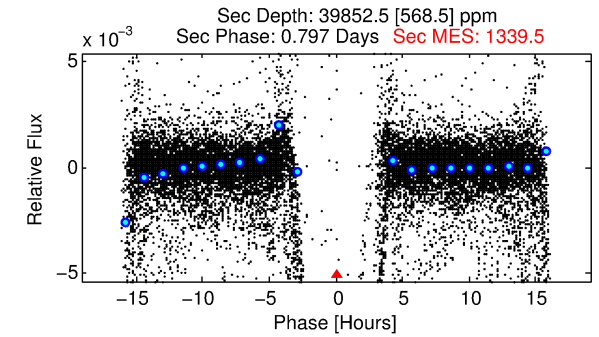
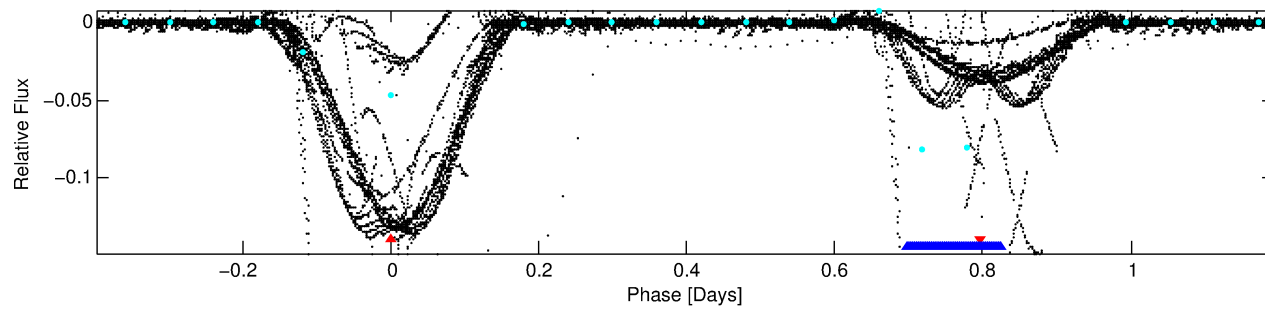
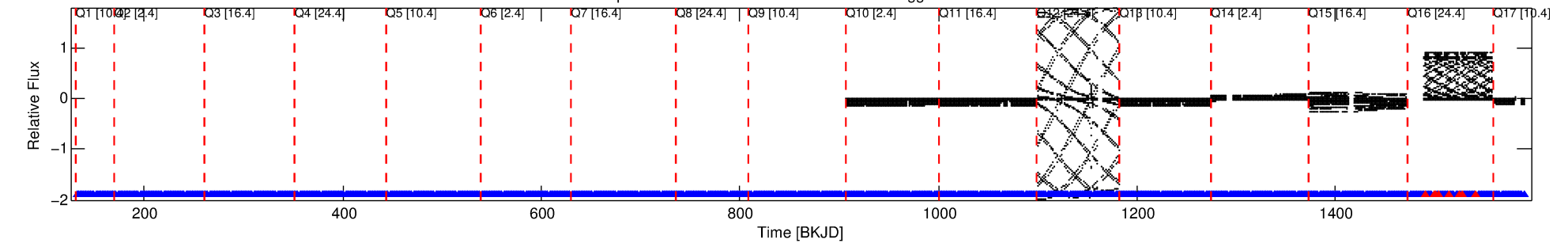
Ephemeris Match Information For 001433980-01

No Significant Match Found

DV One-Page Summary

KIC: 1433980 Candidate: 1 of 2 Period: 1.593 d
KOI: K03924.01 Corr: 0.809

Kp: 14.91 R*: 1.77 Rs Teff: 6574.0 K Logg: 4.06 Fe/H: -0.220



TPS TCE Results:

Period = 1.59272 d
Epoch = 132.2636 BKJD

DV fit results are unavailable

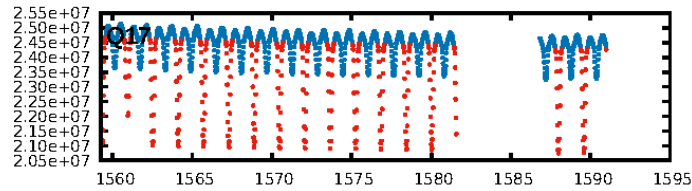
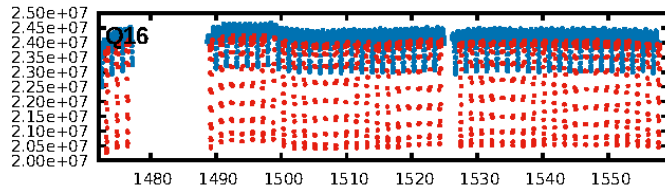
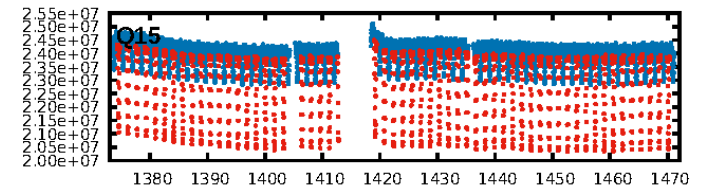
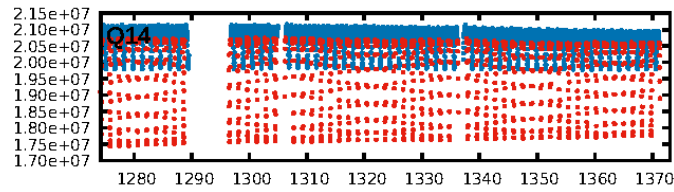
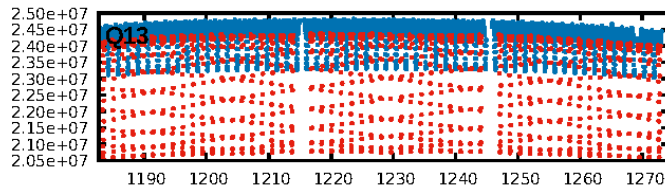
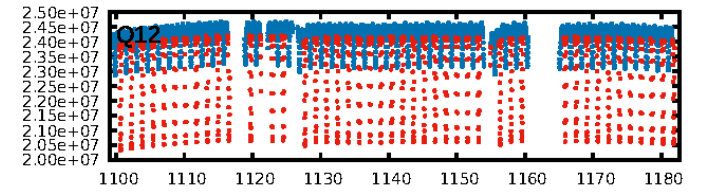
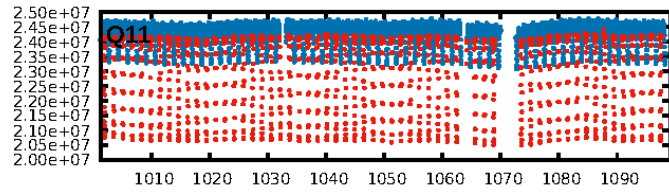
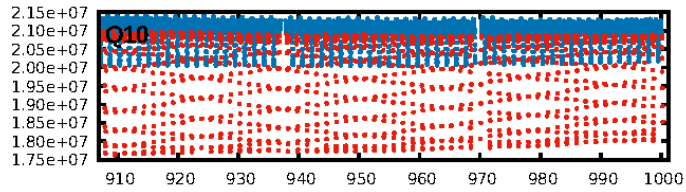
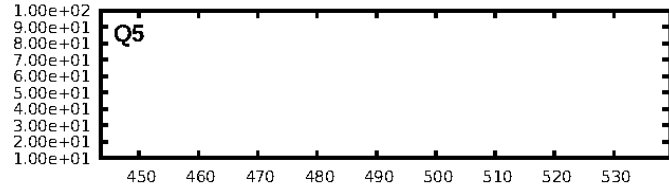
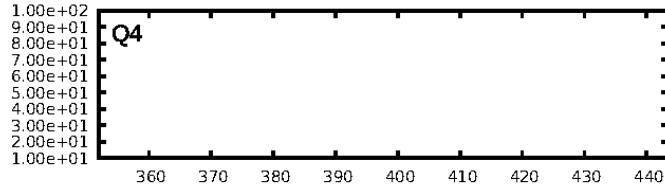
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [370/378]
GhostDiagnostic-chr: 0.4951
Centroid-sig: N/A
Centroid-so: 1.173 arcsec [958.78σ]
OotOffset-rm: 0.053 arcsec [0.78σ]
KicOffset-rm: 0.059 arcsec [0.78σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
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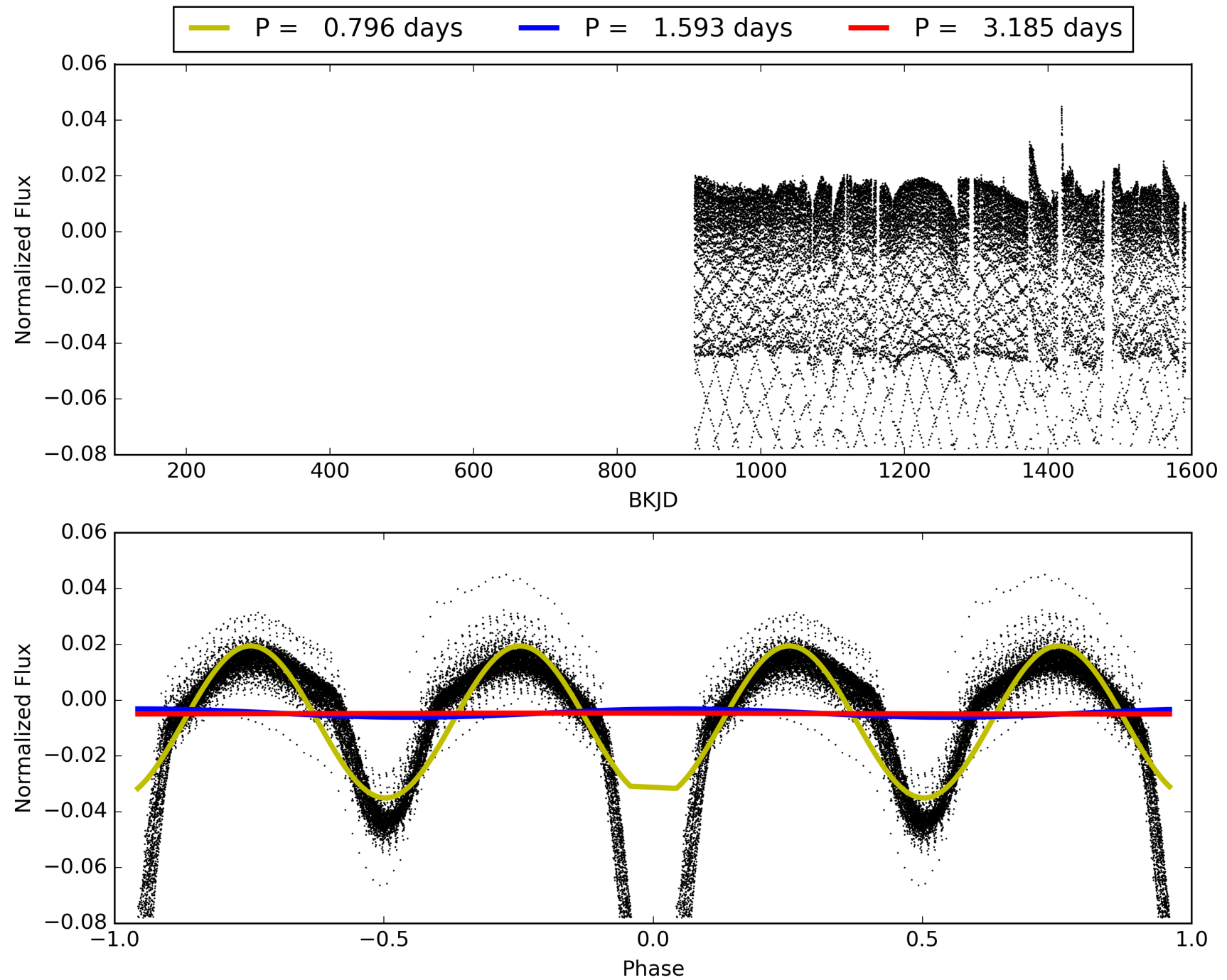
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:43:32 Z

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

TCE 001433980-01, PDC Light Curves

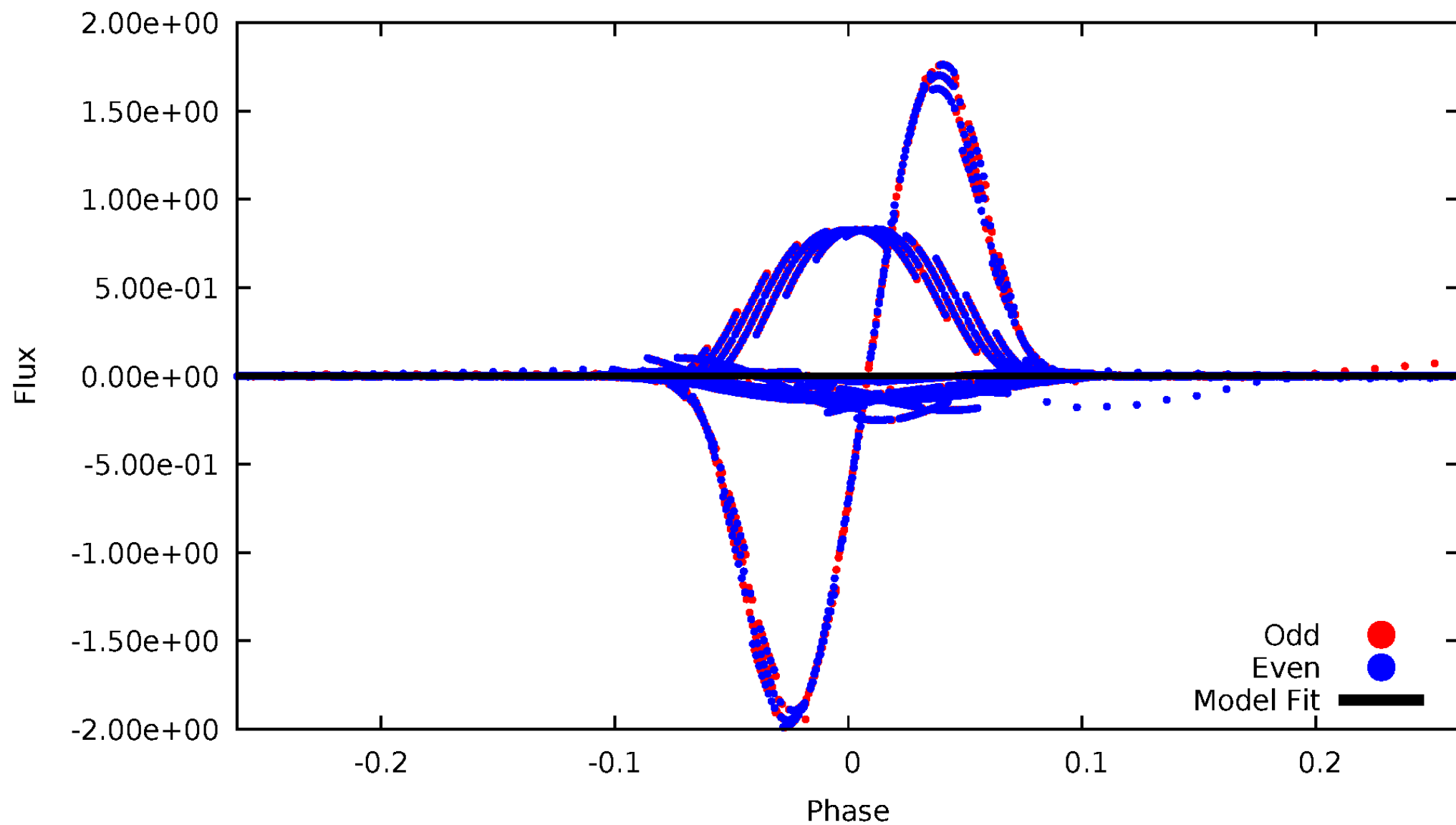


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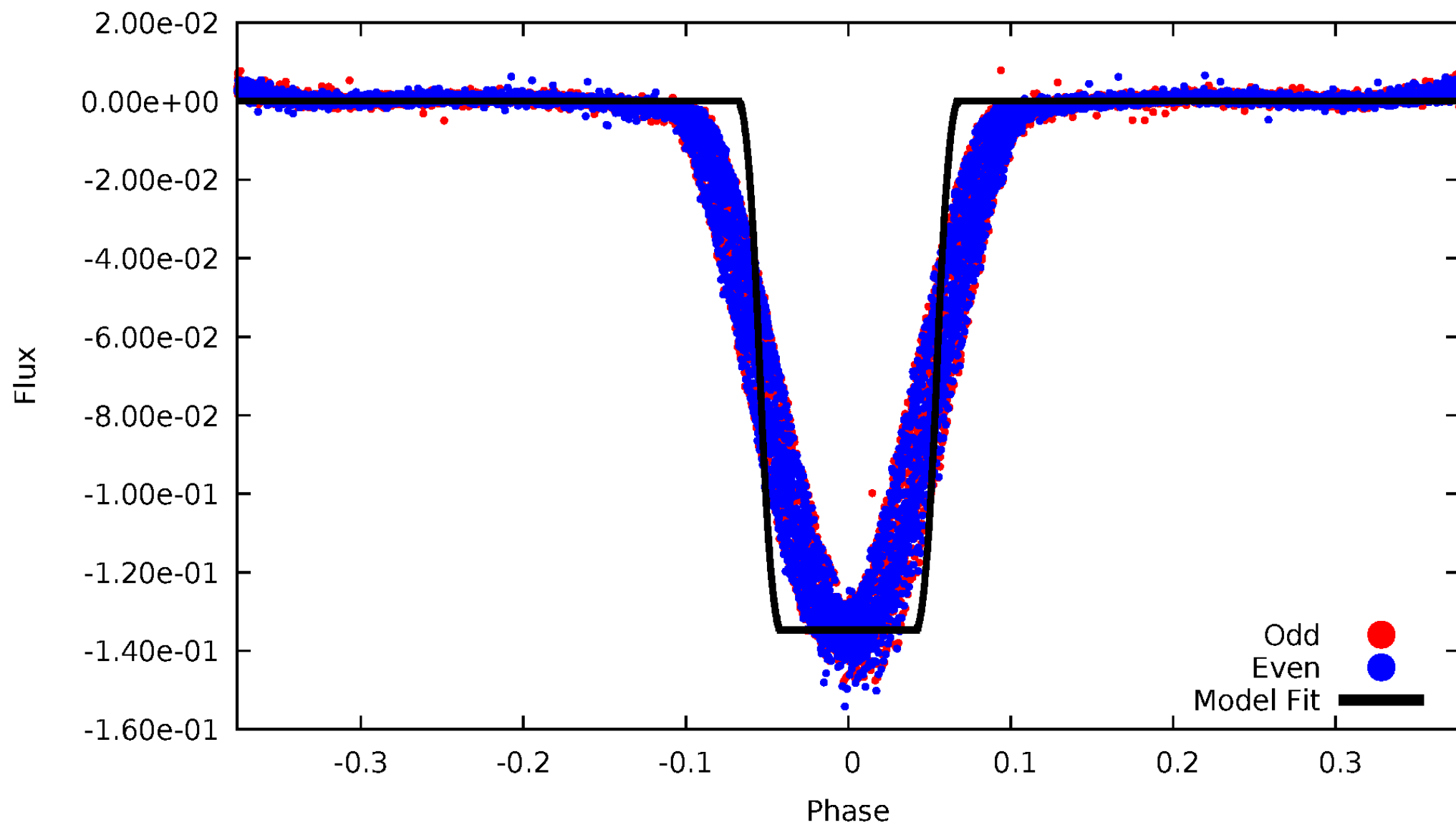
DV Odd/Even

TCE 001433980-01



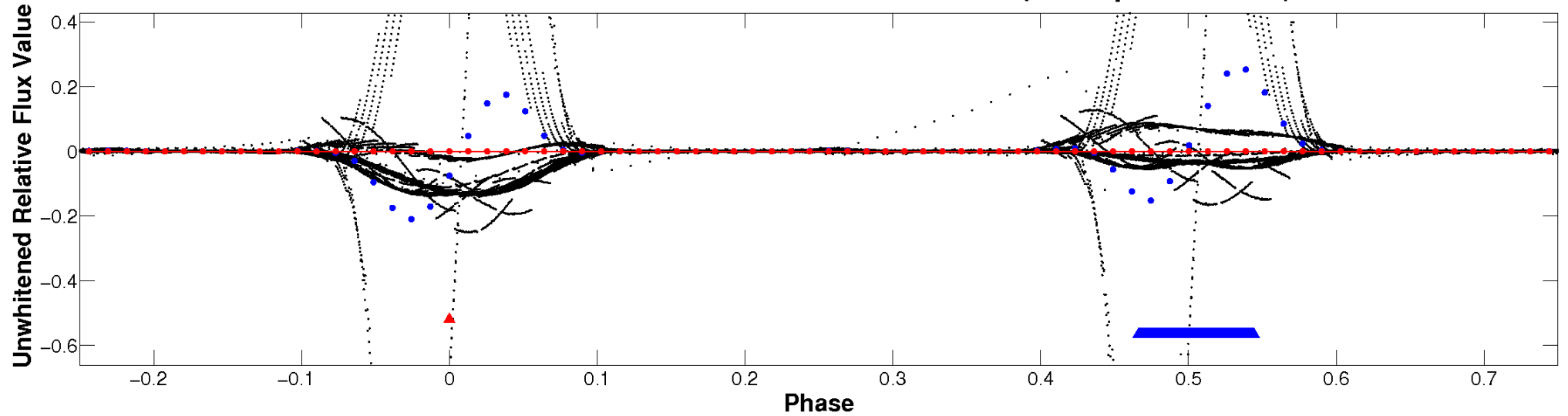
ALT Odd/Even

TCE 001433980-01



Non-Whitened Vs. Whitened Light Curve

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

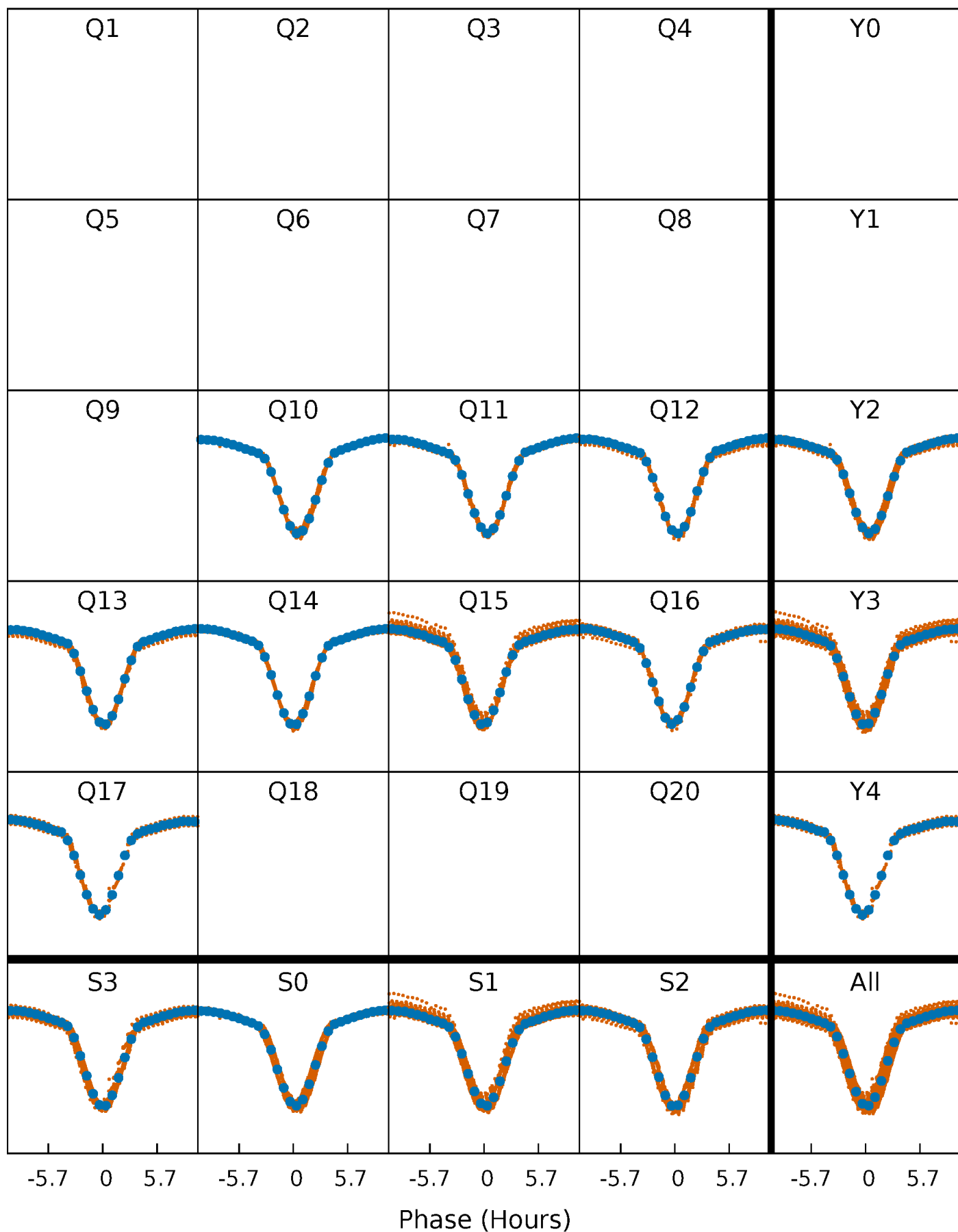


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



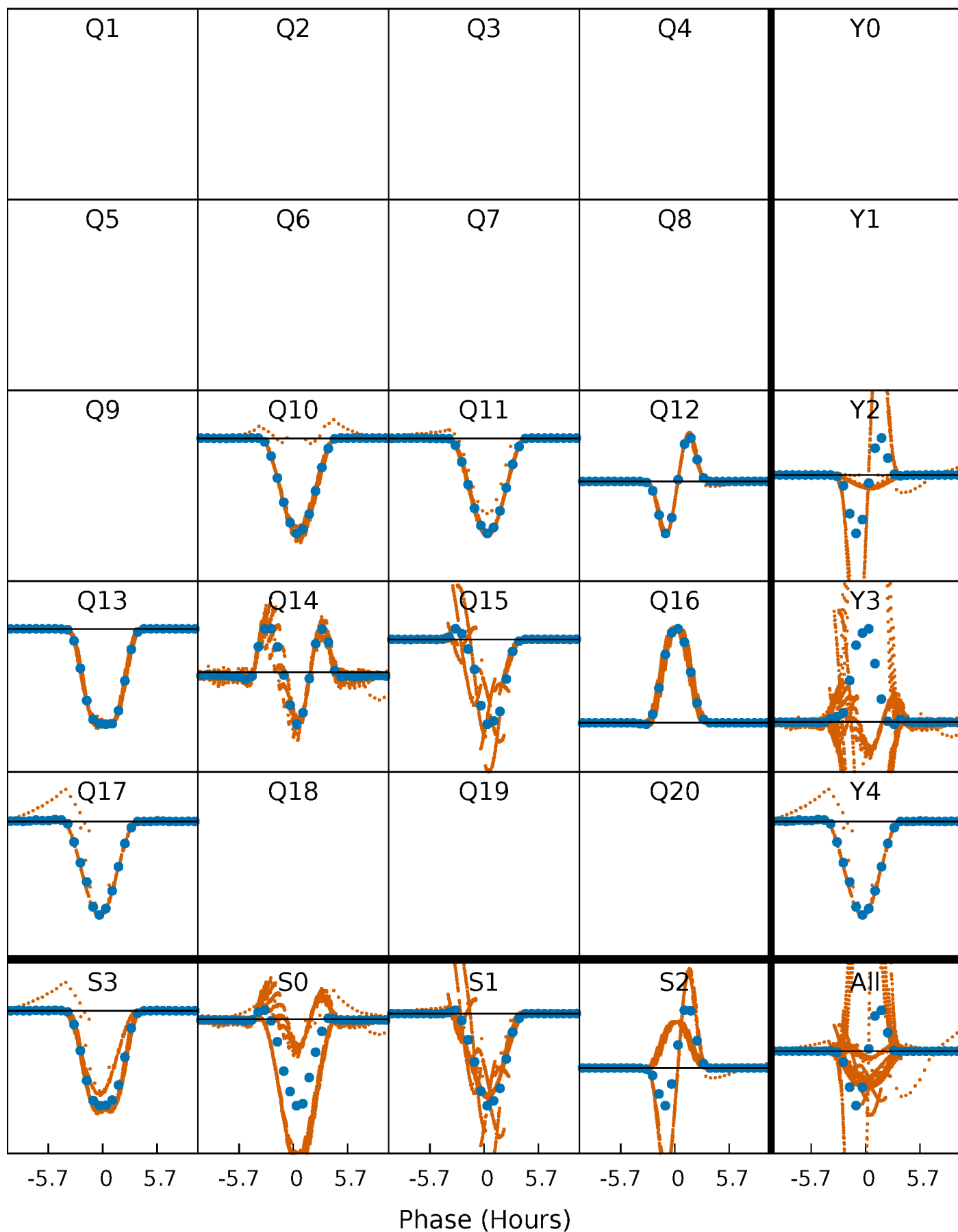
PDC Quarter-Phased Transit Curves

TCE 001433980-01 P= 1.592721 Days $T_0=132.263630$ (BKJD)



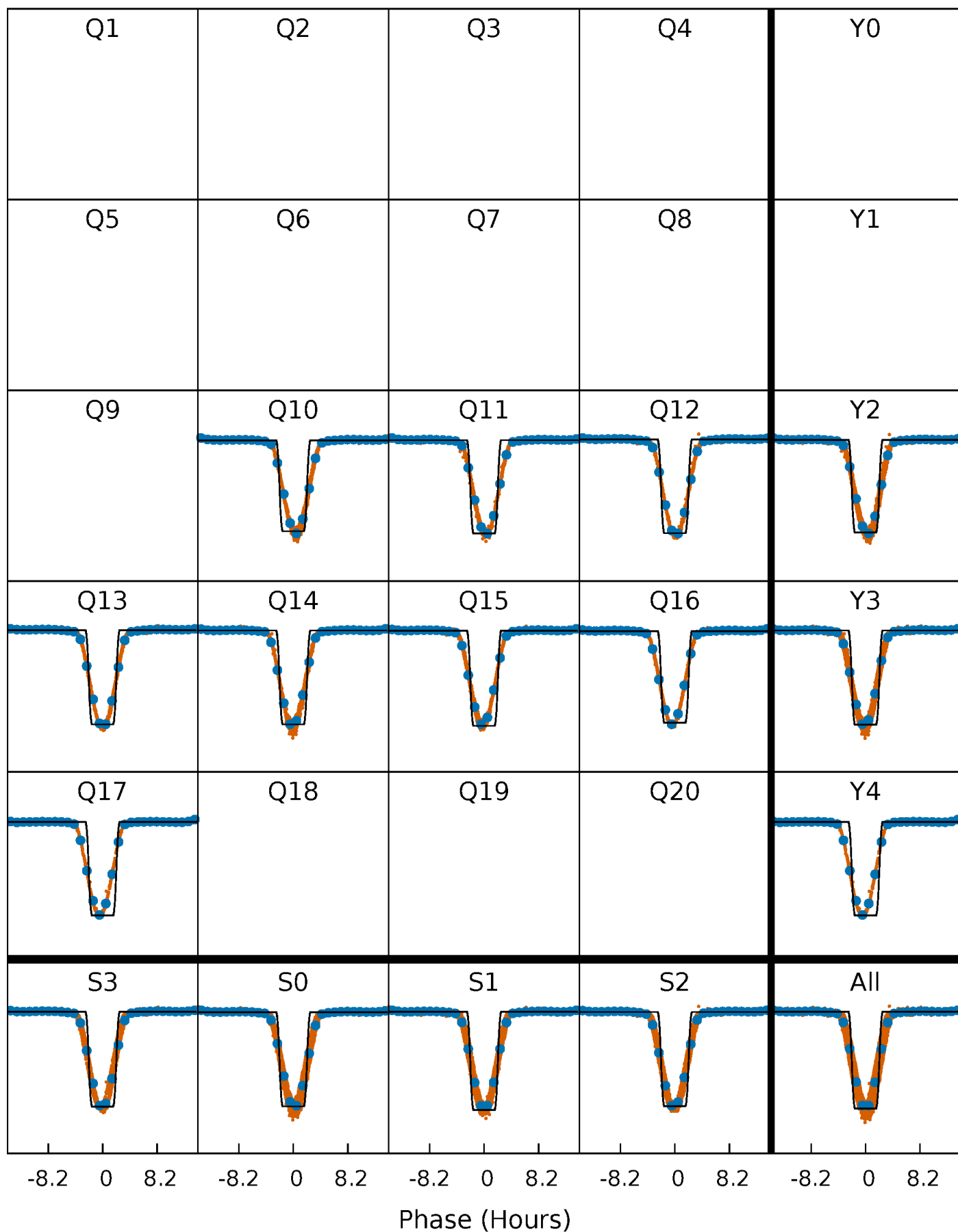
DV Quarter-Phased Transit Curves

TCE 001433980-01 P= 1.592721 Days $T_0=132.263630$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

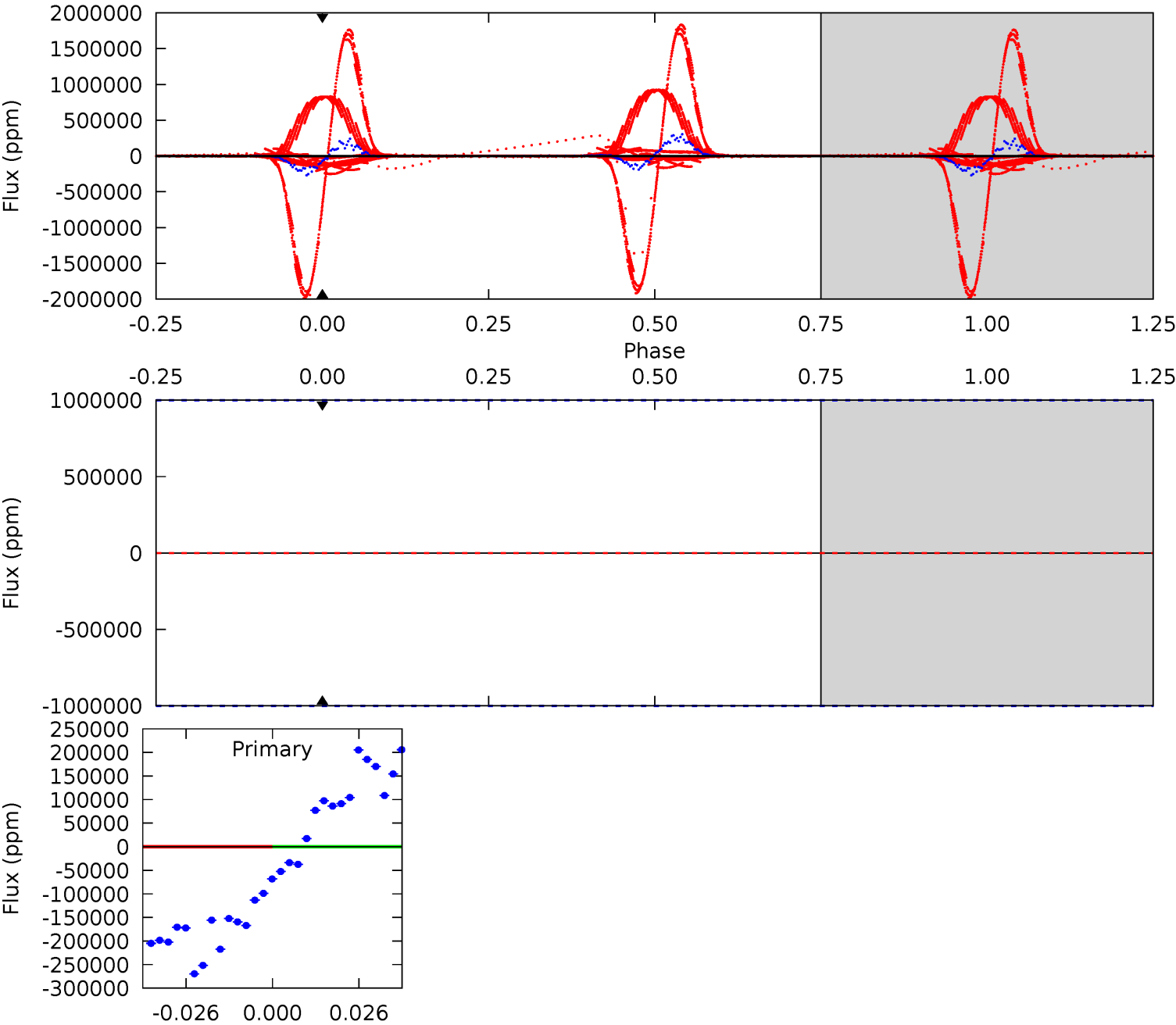
TCE 001433980-01 P= 1.592721 Days $T_0=132.268747$ (BKJD)



DV Model-Shift Uniqueness Test

001433980-01, P = 1.592721 Days, E = 132.263630 Days

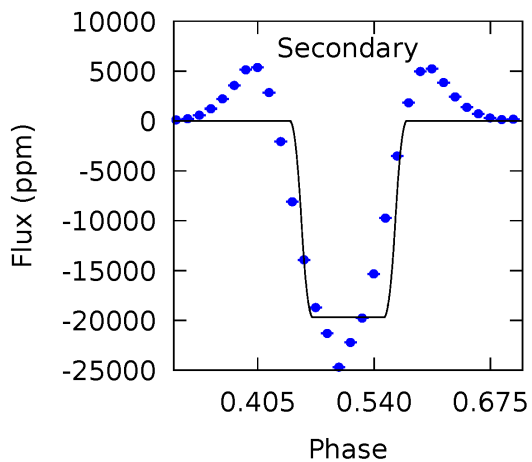
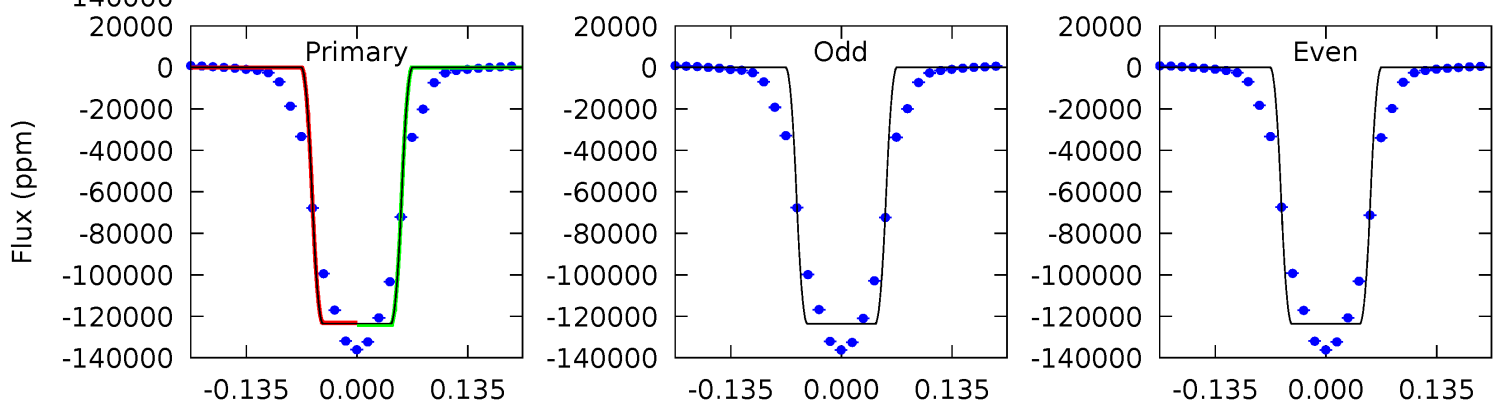
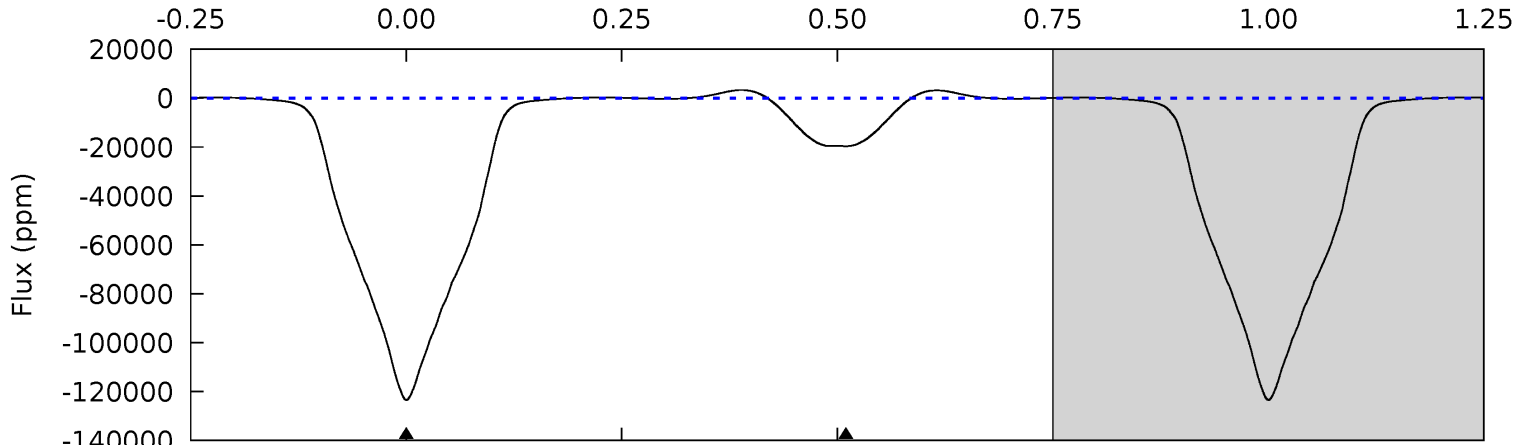
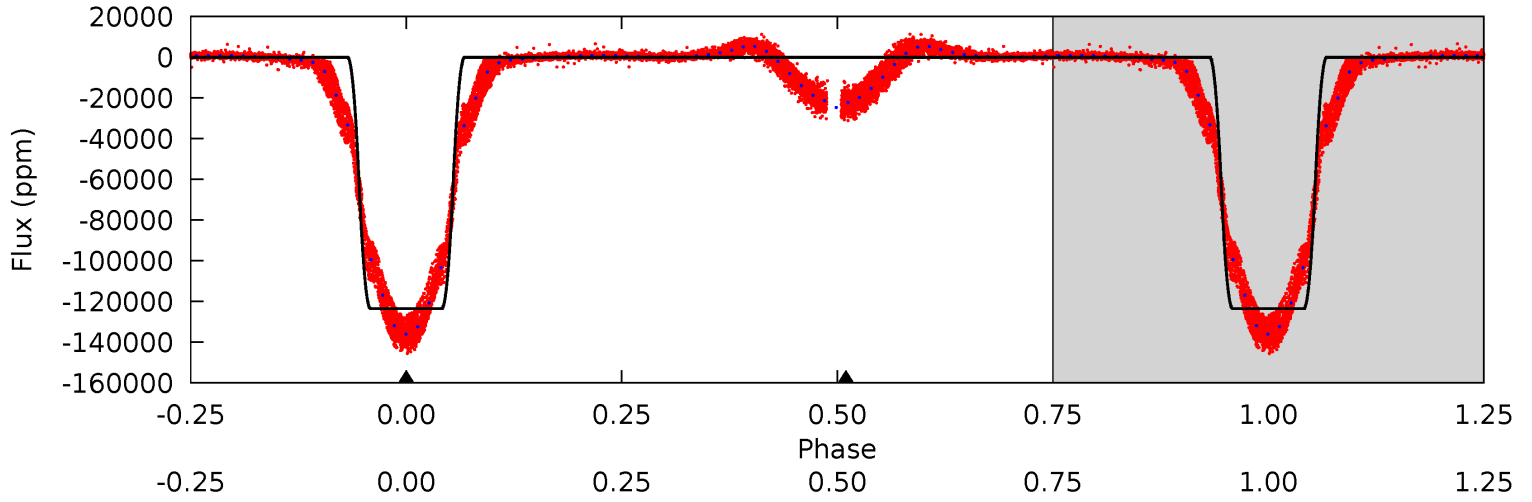
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

001433980-01, P = 1.592721 Days, E = 132.268747 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5976	952.3	0	0	4.50	1.50	32.6	5976	5976	952.3	952.3	1.88	1.00	0.03	24.4



Stellar Parameters For KIC 001433980

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6574^{+181}_{-227}	$4.061^{+0.264}_{-0.176}$	$-0.220^{+0.250}_{-0.300}$	$1.768^{+0.477}_{-0.583}$	$1.317^{+0.182}_{-0.251}$	$0.336^{+0.566}_{-0.163}$
	+3%/-3%	+7%/-4%	+114%/-136%	+27%/-33%	+14%/-19%	+169%/-49%
Source	KIC0	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 001433980-01 / KOI 3924.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$47.67^{+21.38}_{-18.43}$	3139^{+230}_{-270}	3659^{+4505}_{-10905}	$1.100^{+28.127}_{-19.720}$
Alt.	-19674 ± 21	$68.42^{+23.28}_{-20.84}$	3132^{+230}_{-264}	4189^{+638}_{-440}	$2.015^{+2.095}_{-0.903}$

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

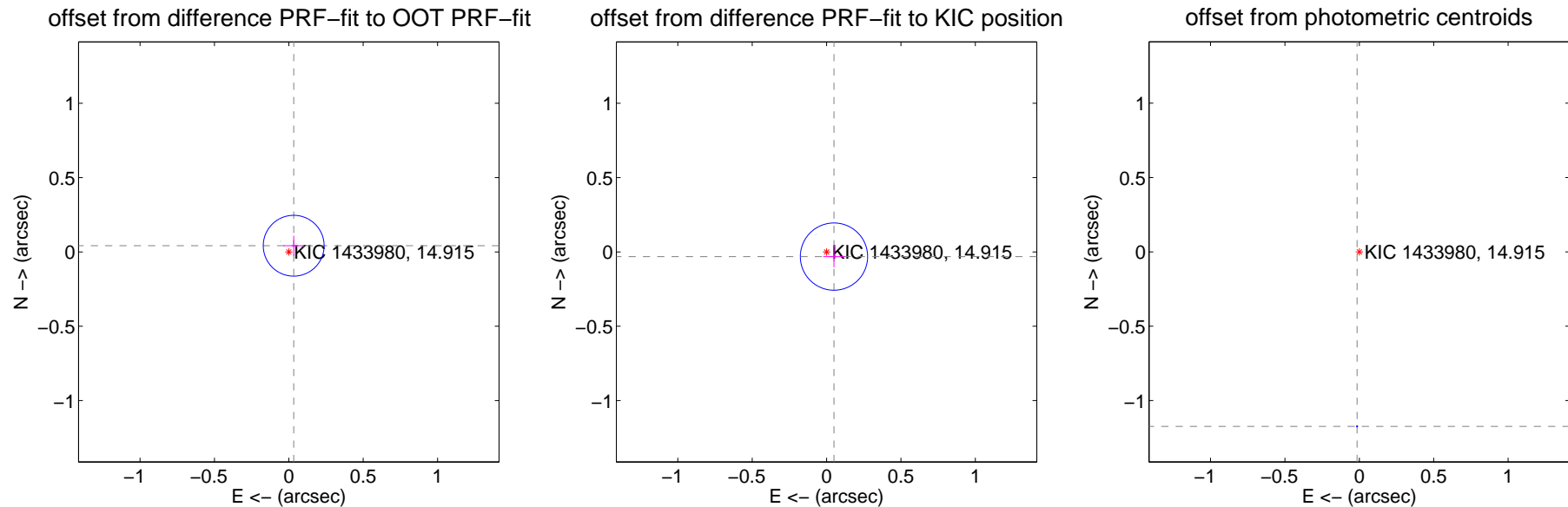
DV Centroid Data

Supplemental centroid analysis for 001433980-01. Kepler magnitude: 14.91. Transit SNR -1.00

There are 8 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	0.053 ± 0.068	0.78	-0.033 ± 0.070	0.042 ± 0.067
PRF-fit source offset from KIC position	0.059 ± 0.075	0.78	-0.050 ± 0.072	-0.031 ± 0.072
photometric centroid source offset	1.17 ± 0.00	958.78	0.01 ± 0.00	-1.17 ± 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.

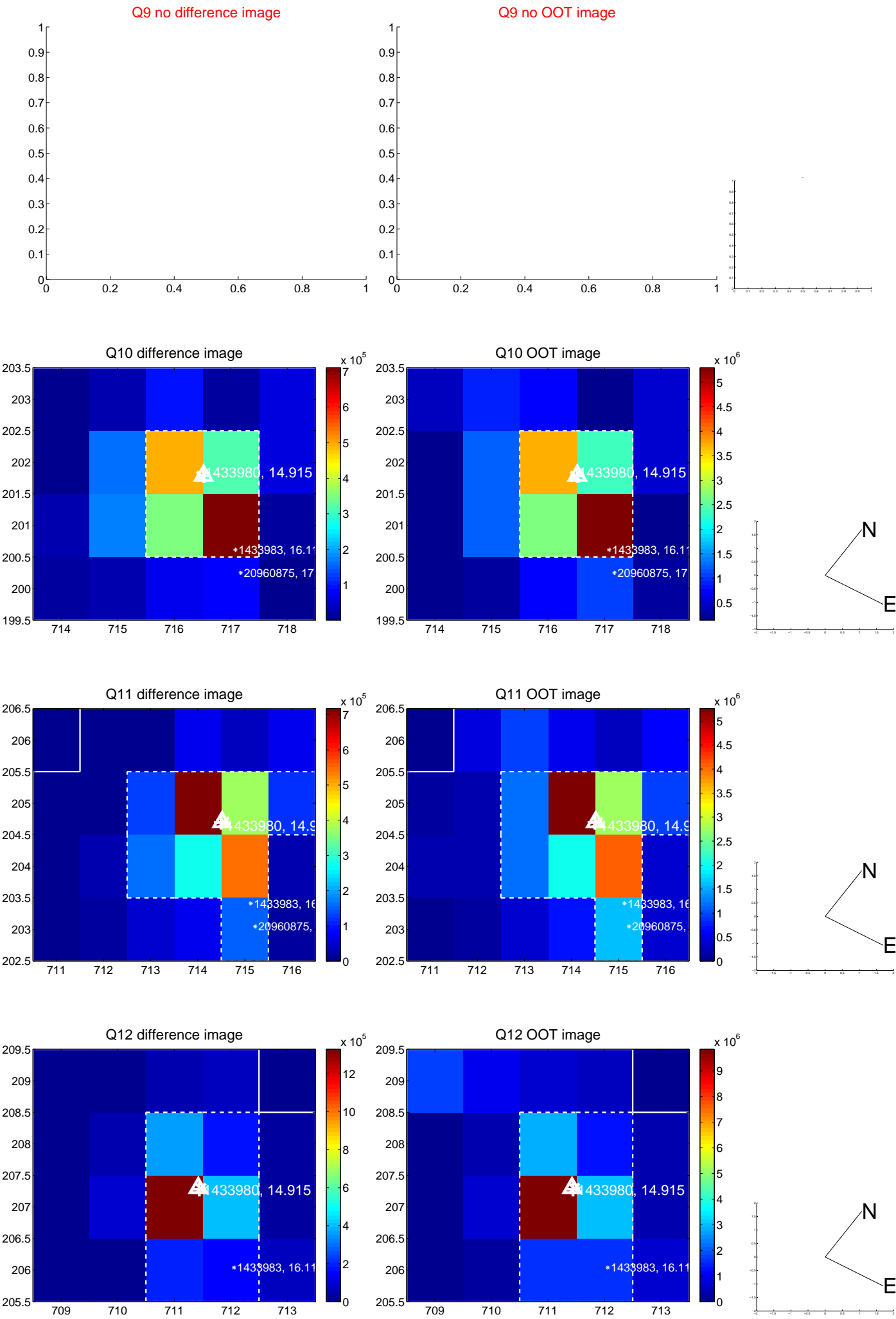
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



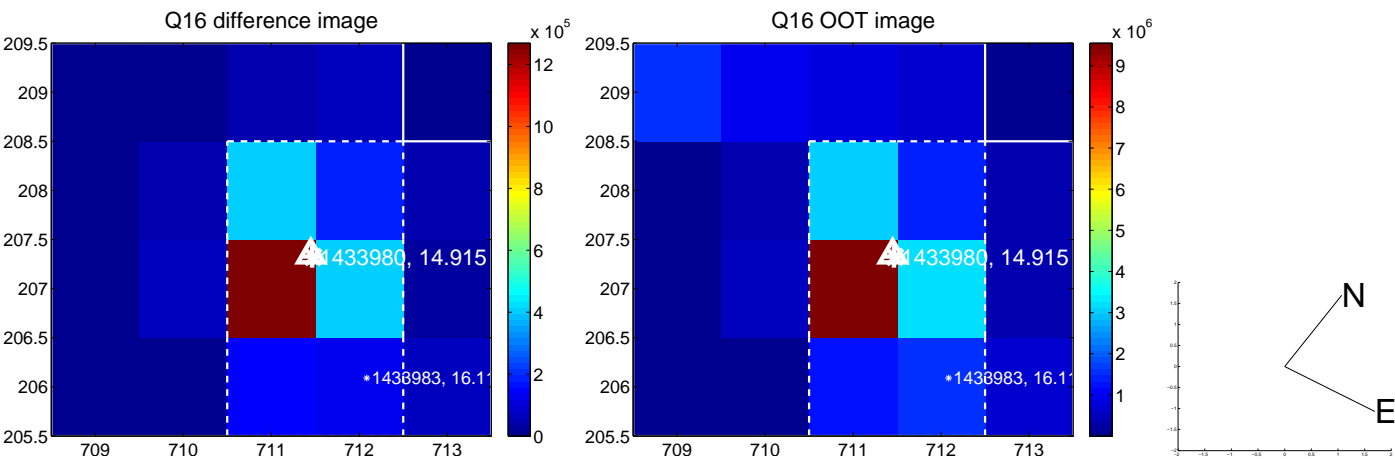
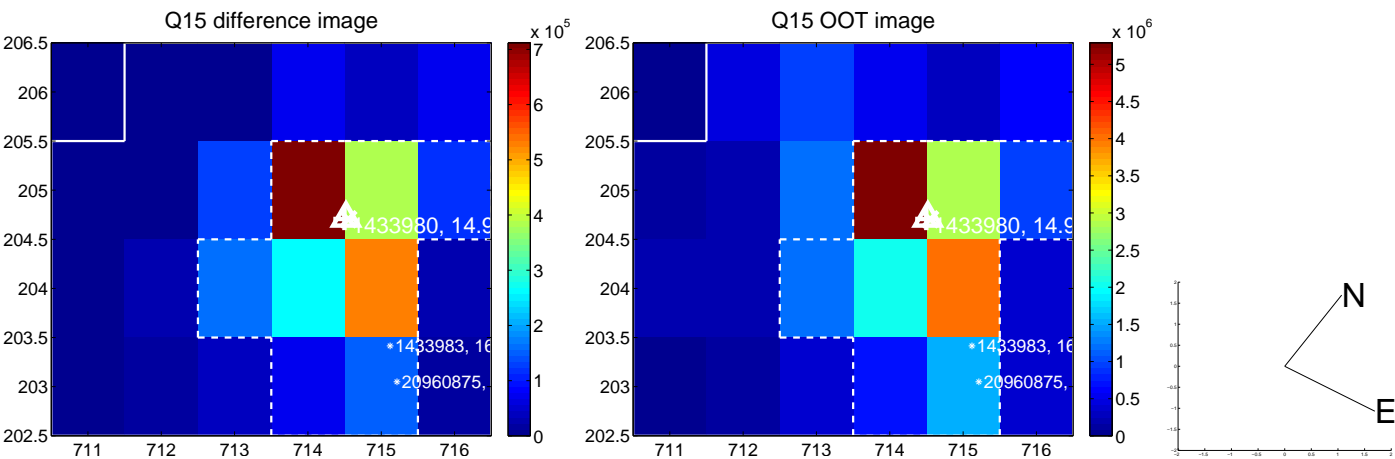
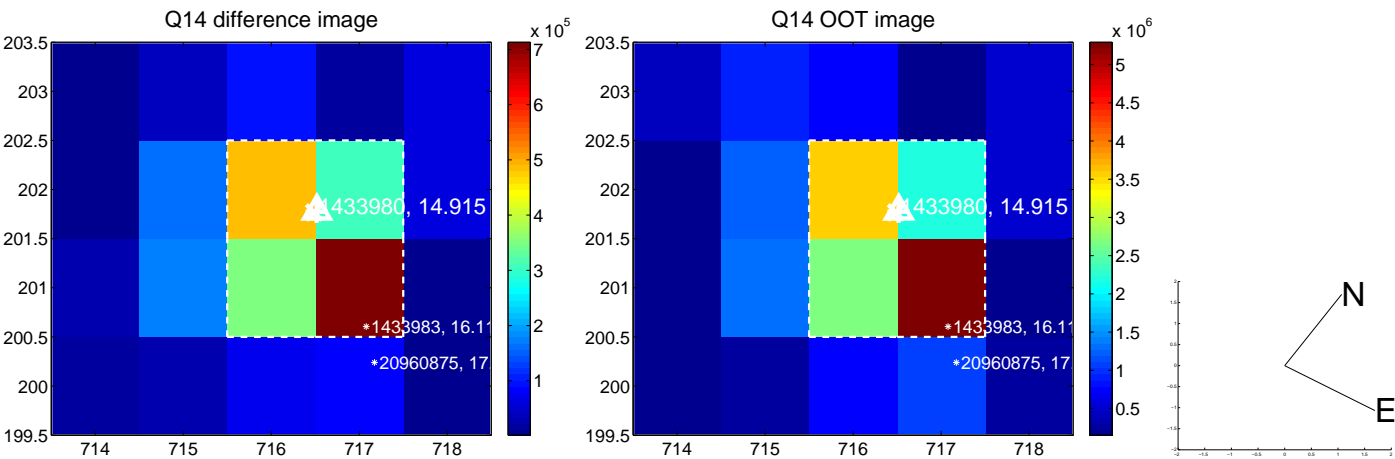
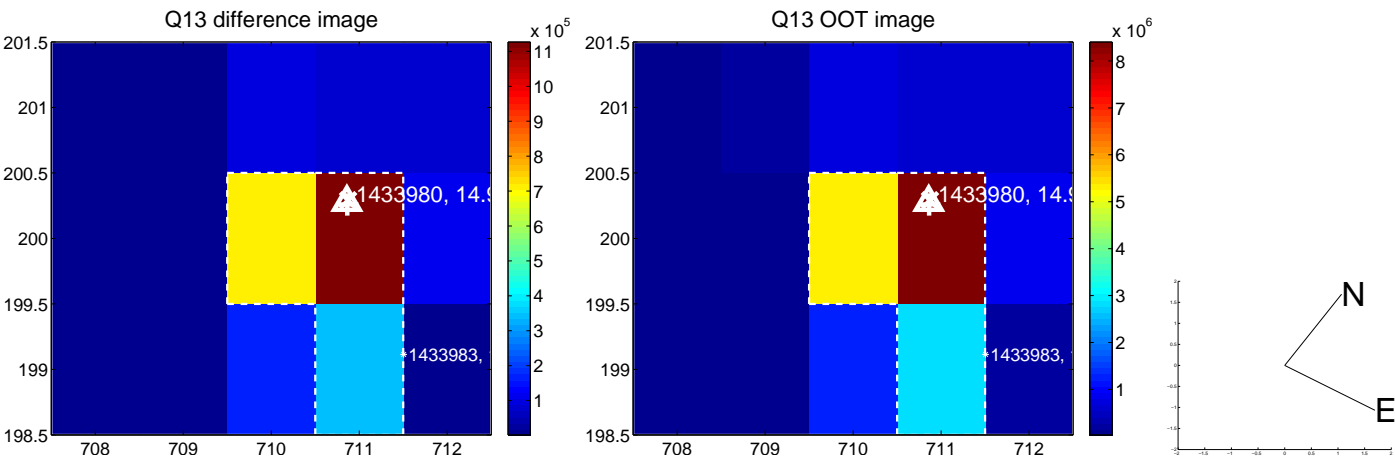
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



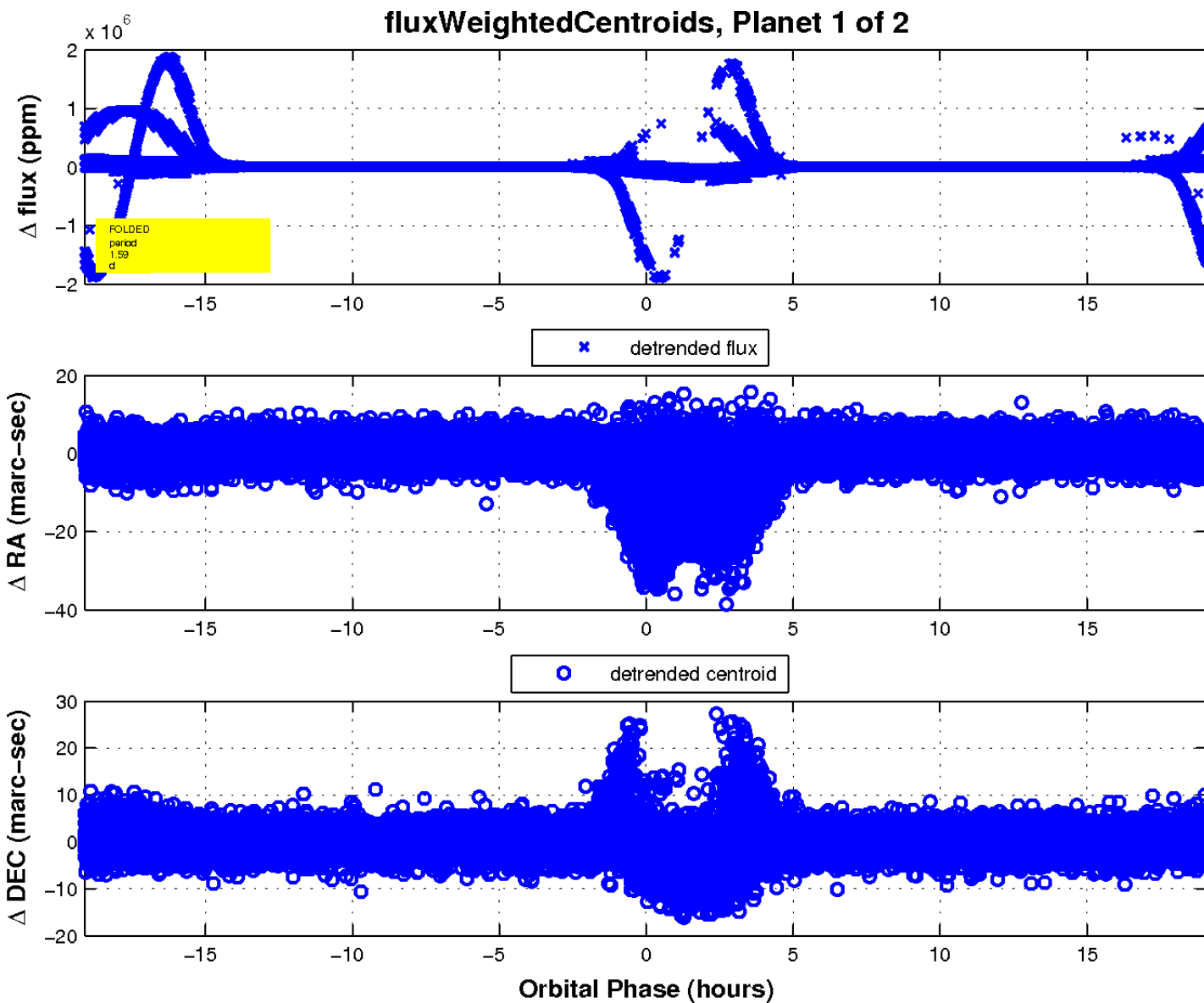
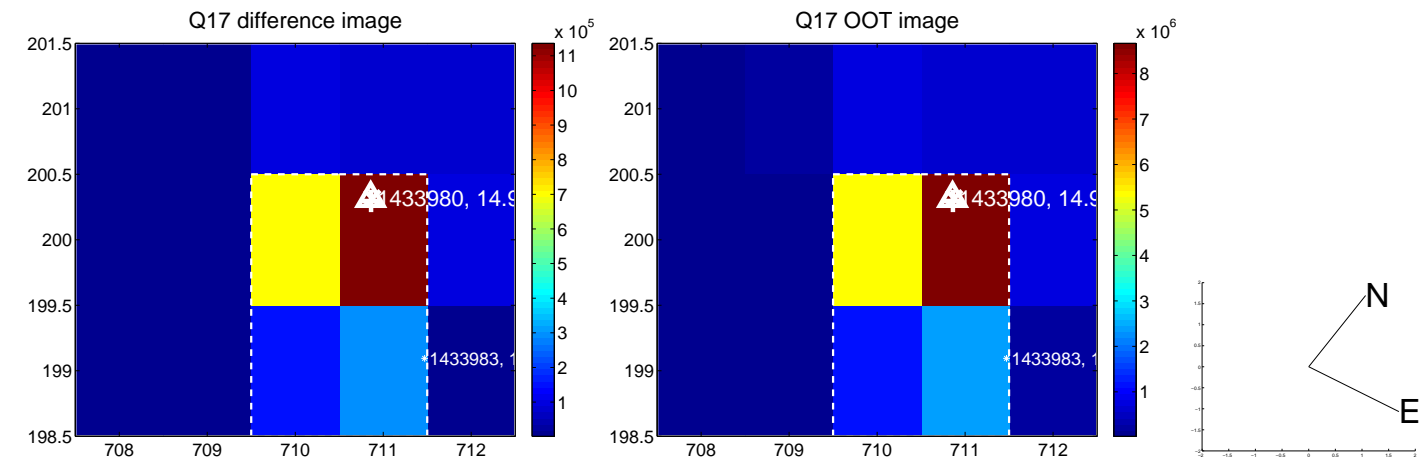
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

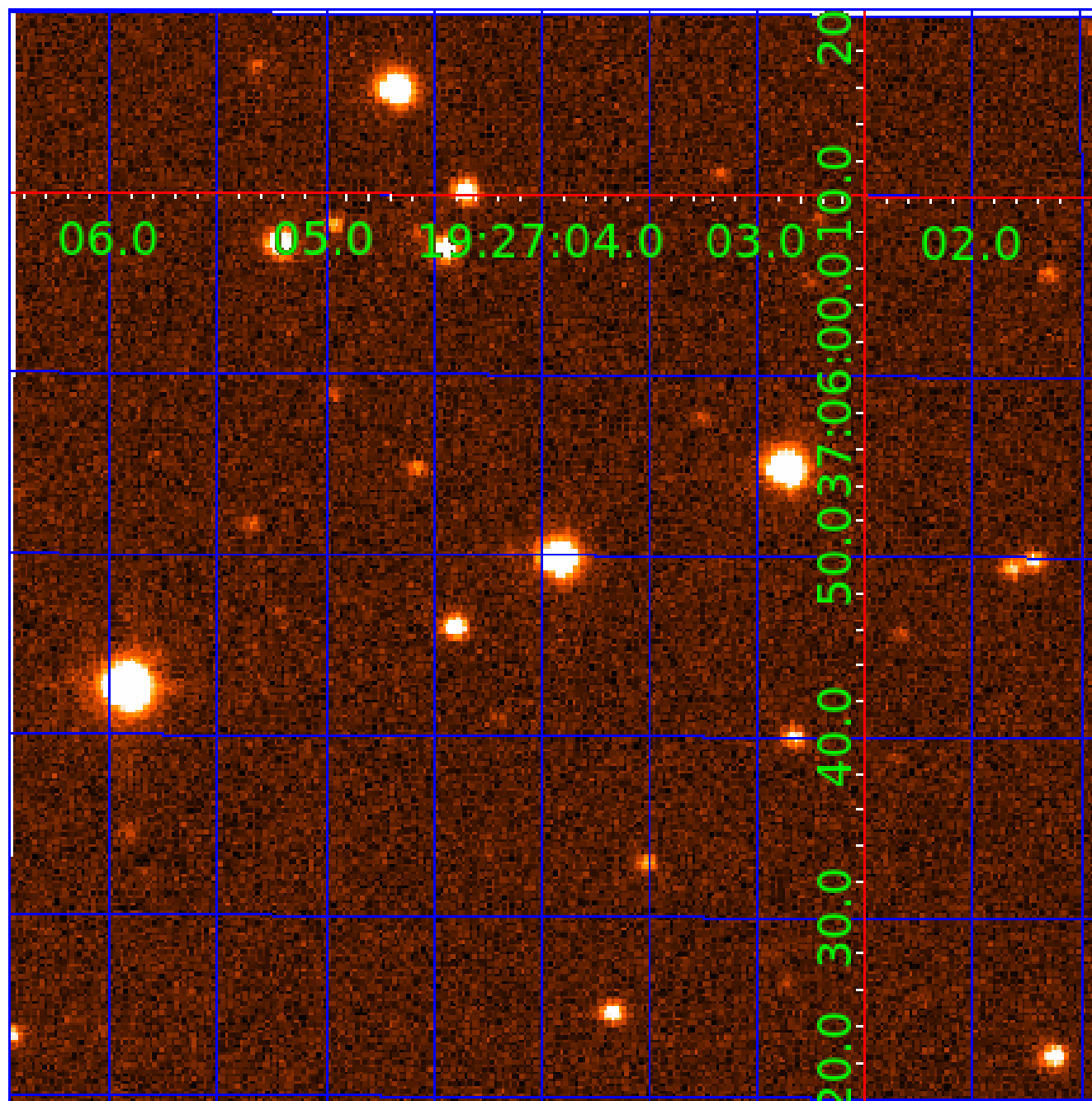


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 001433980

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})
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001433980-02	OBS	No	1.592857	133.006049	91490.1	5.000	1076.4	-1.0	1.77	6574	54.06	6123.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001433980-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
001433980-02	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.

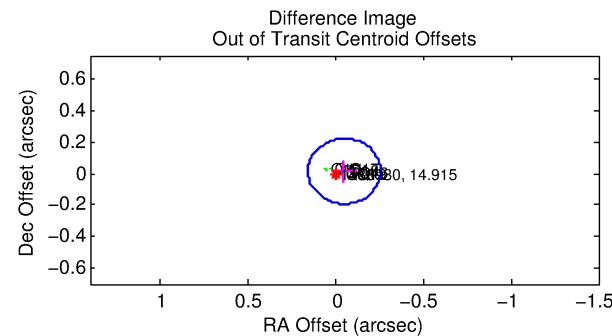
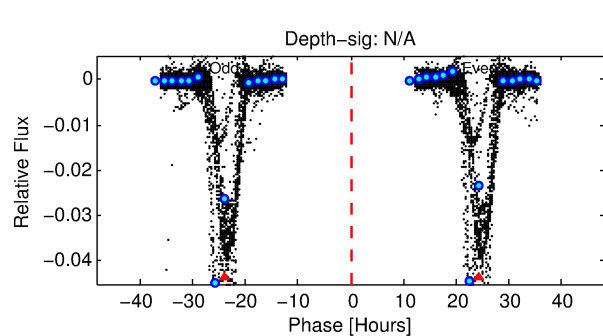
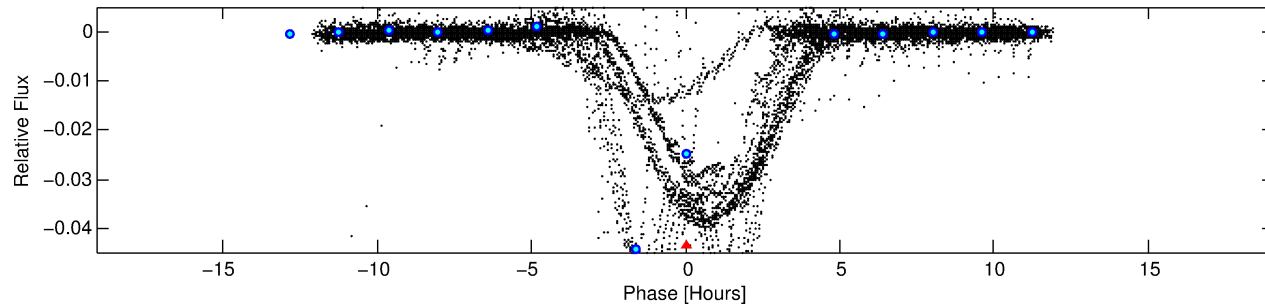
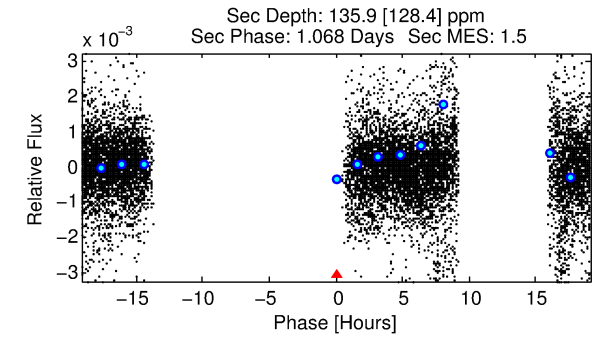
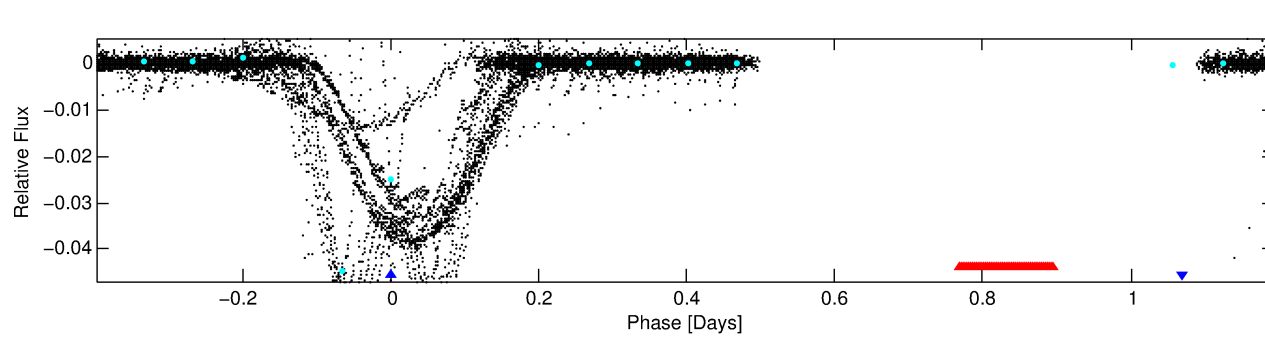
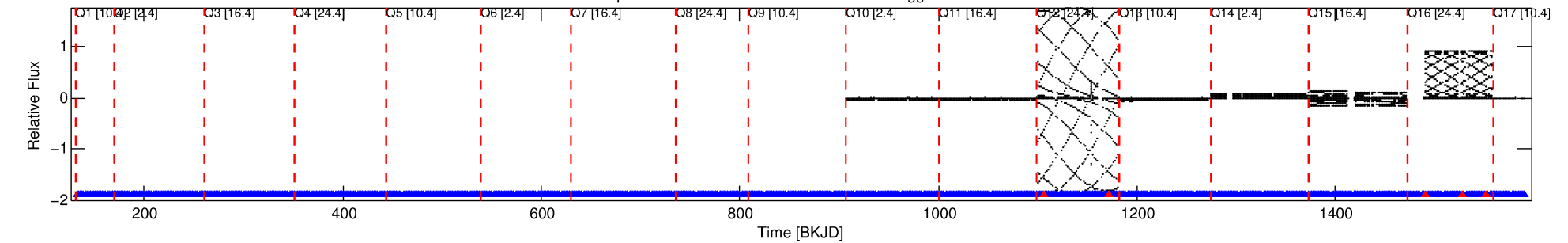
Ephemeris Match Information For 001433980-02

No Significant Match Found

DV One-Page Summary

KIC: 1433980 Candidate: 2 of 2 Period: 1.593 d
KOI: K03924 Corr: No Ephemeris Match

Kp: 14.91 R*: 1.77 Rs Teff: 6574.0 K Logg: 4.06 Fe/H: -0.220



TPS TCE Results:

Period = 1.59286 d
Epoch = 133.0060 BKJD

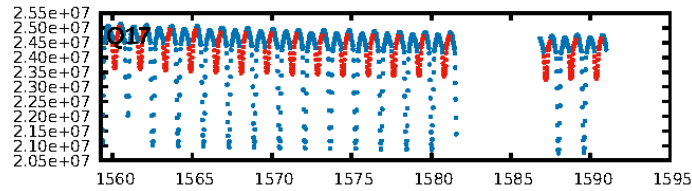
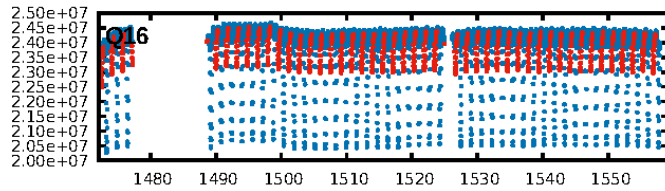
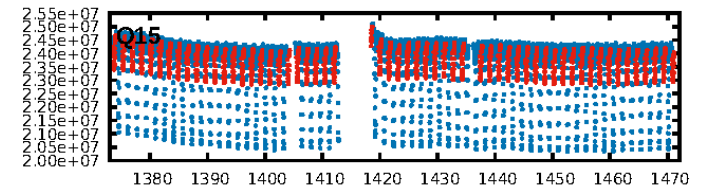
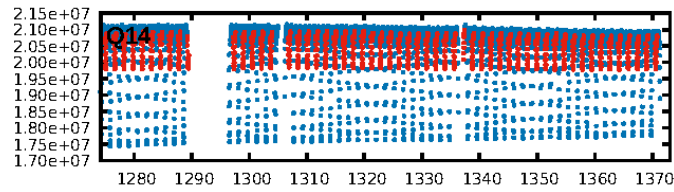
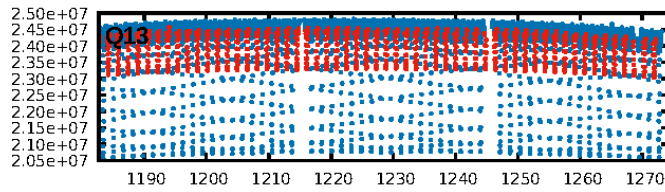
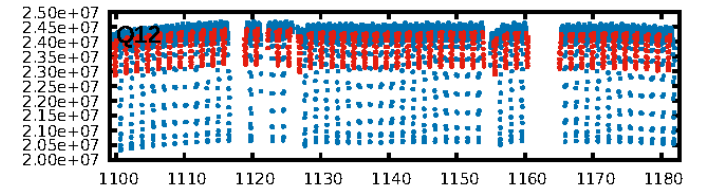
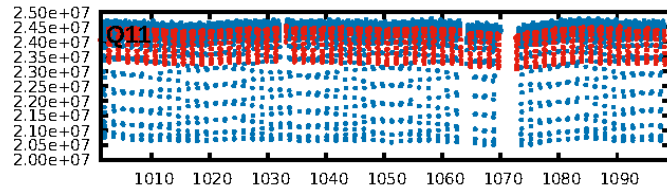
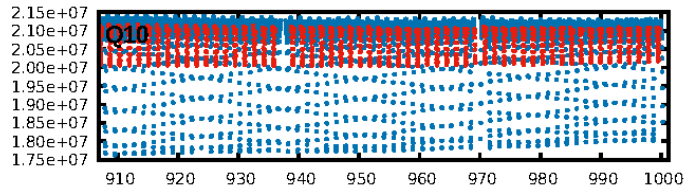
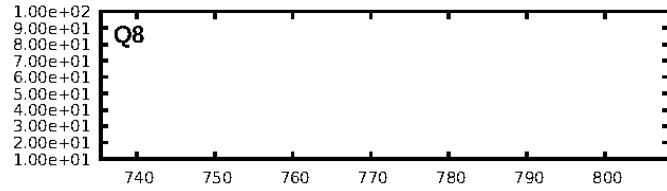
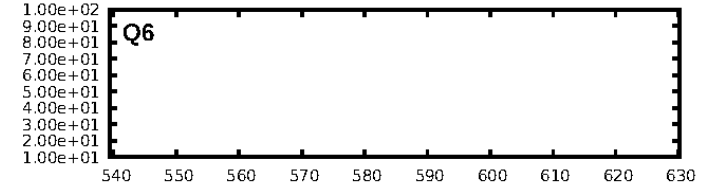
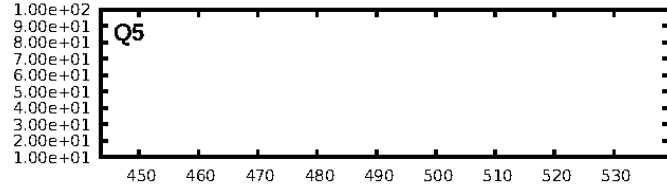
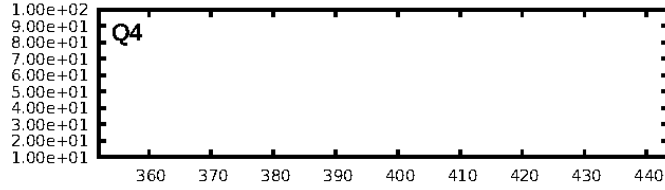
DV fit results are unavailable

DV Diagnostic Results:

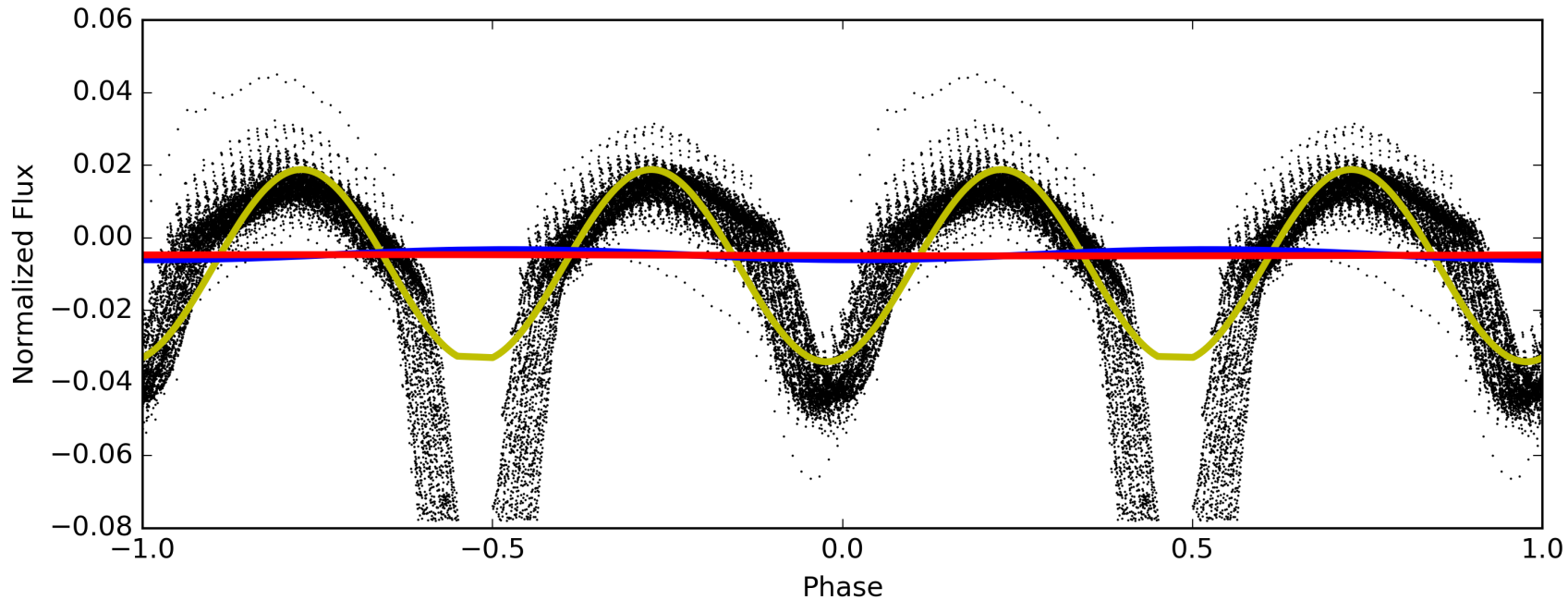
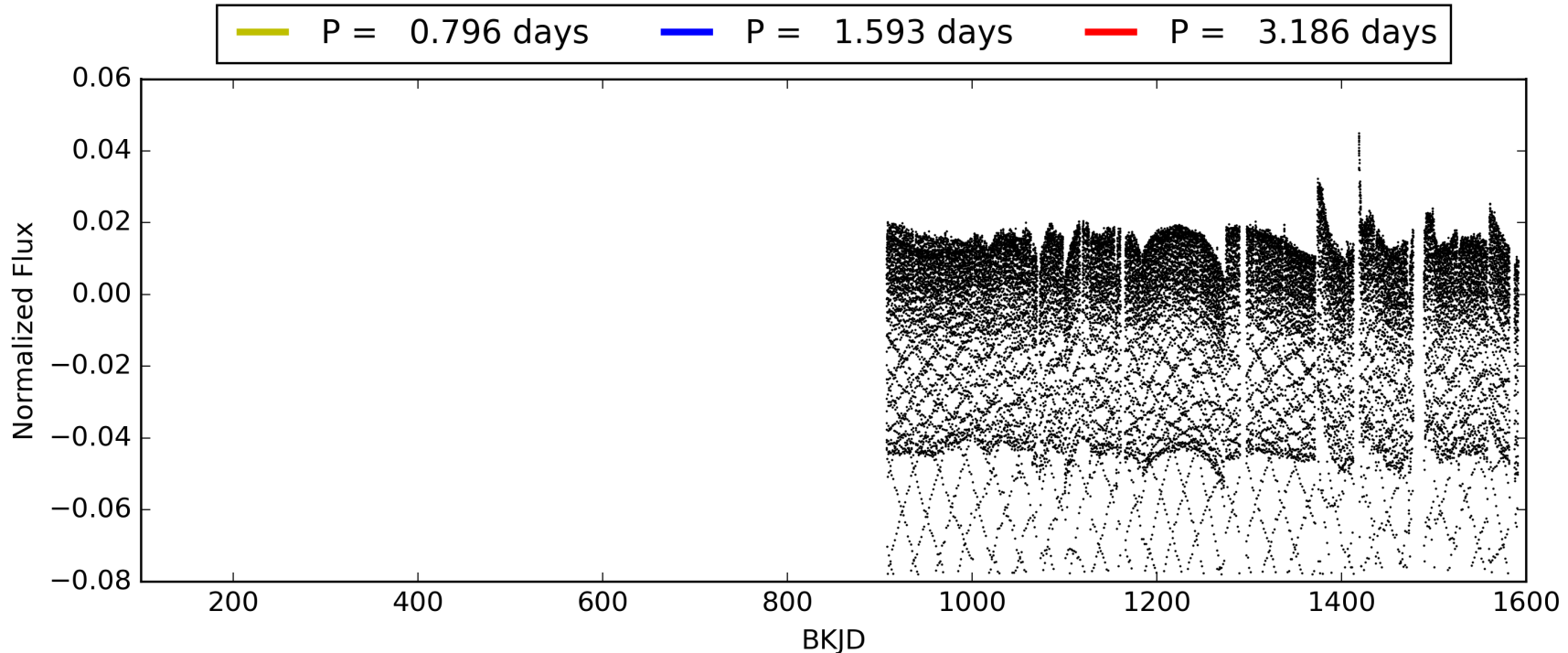
ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [377/382]
GhostDiagnostic-chr: 0.3426

Centroid-sig: N/A
Centroid-so: 1.187 arcsec [351.93σ]
OotOffset-rm: 0.051 arcsec [0.74σ]
KicOffset-rm: 0.097 arcsec [1.31σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 0.75 [6/8]

TCE 001433980-02, PDC Light Curves

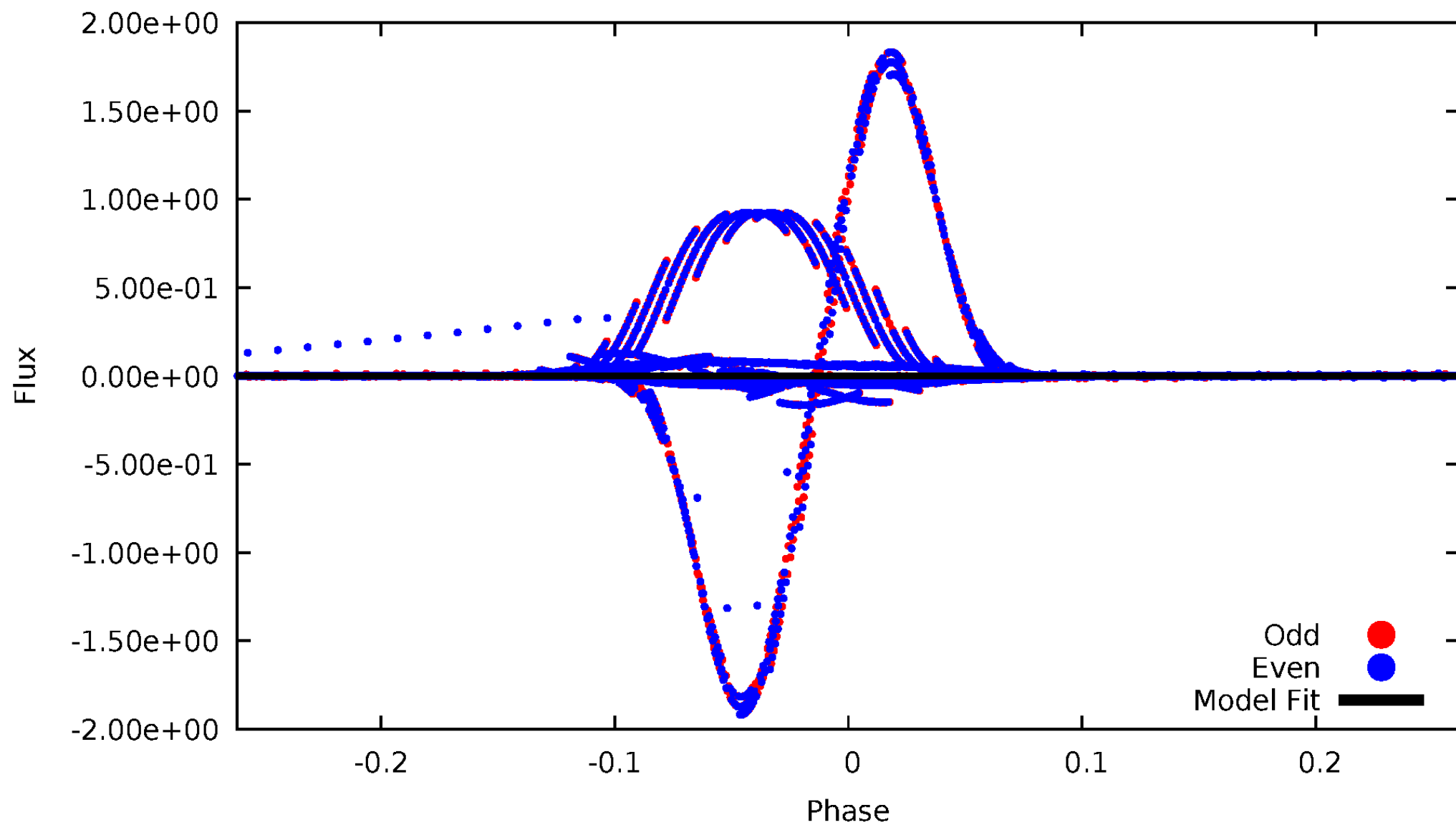


TCE 001433980-02



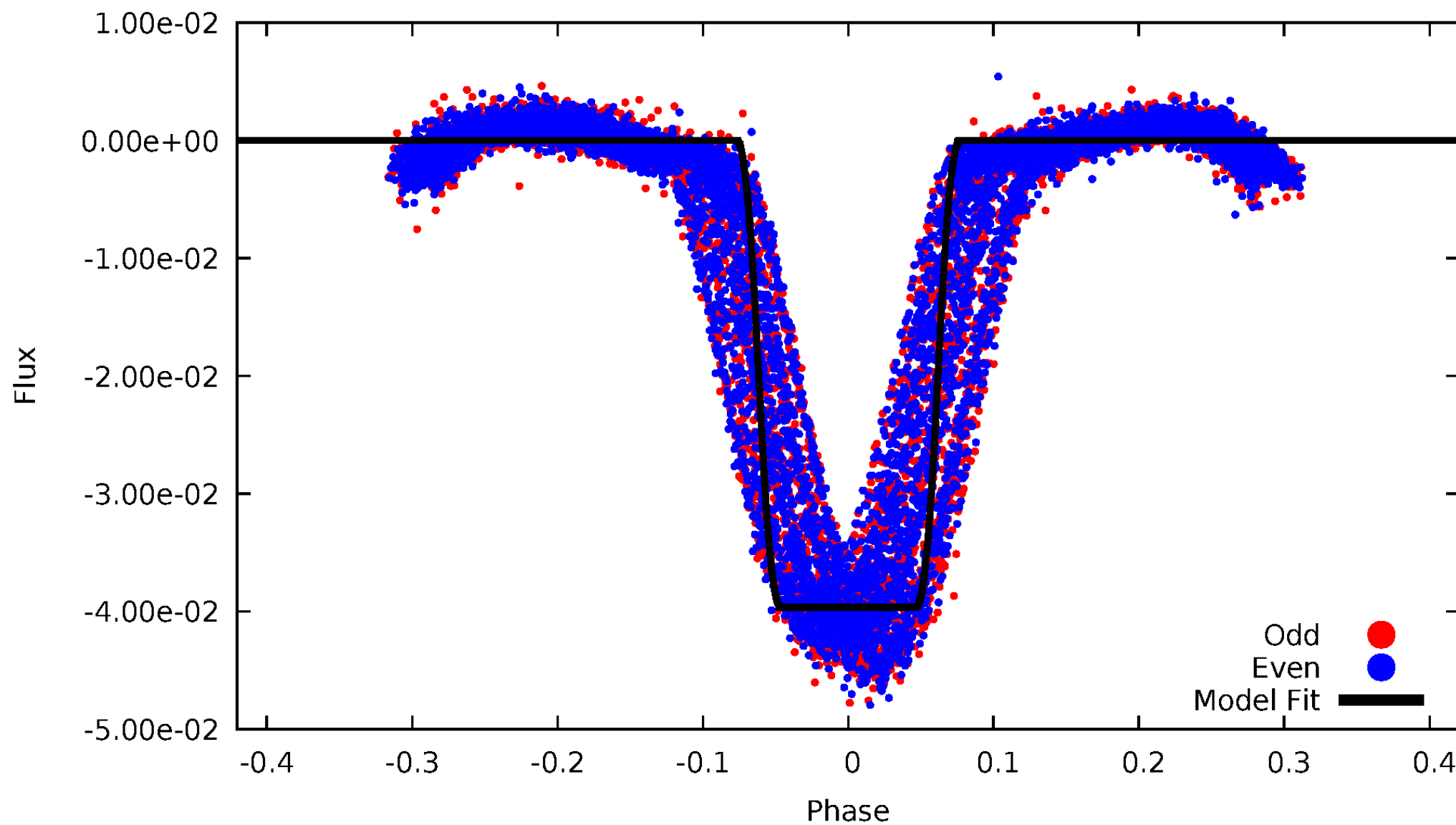
DV Odd/Even

TCE 001433980-02



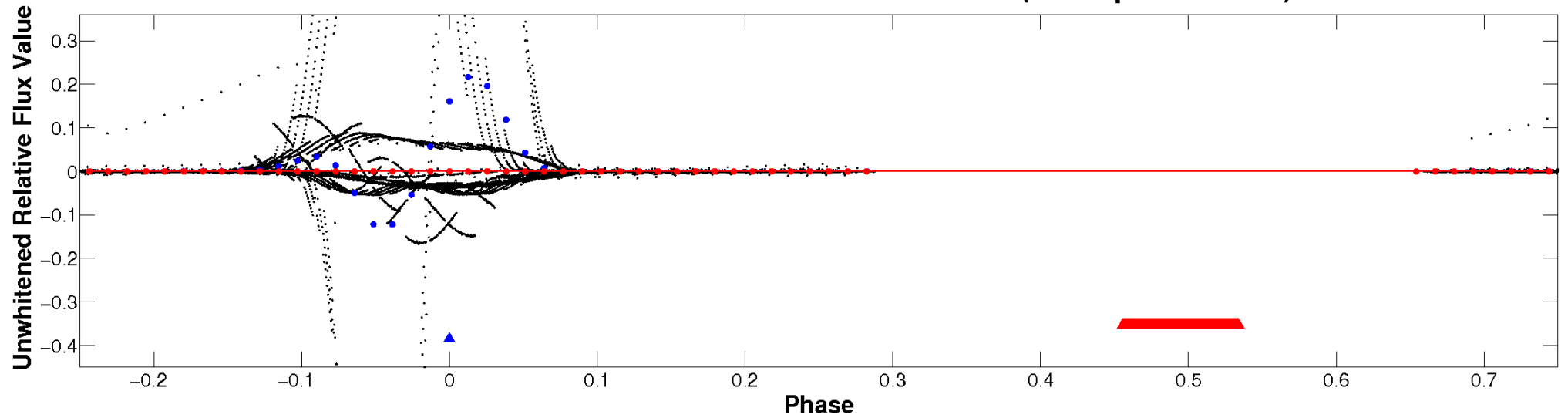
ALT Odd/Even

TCE 001433980-02

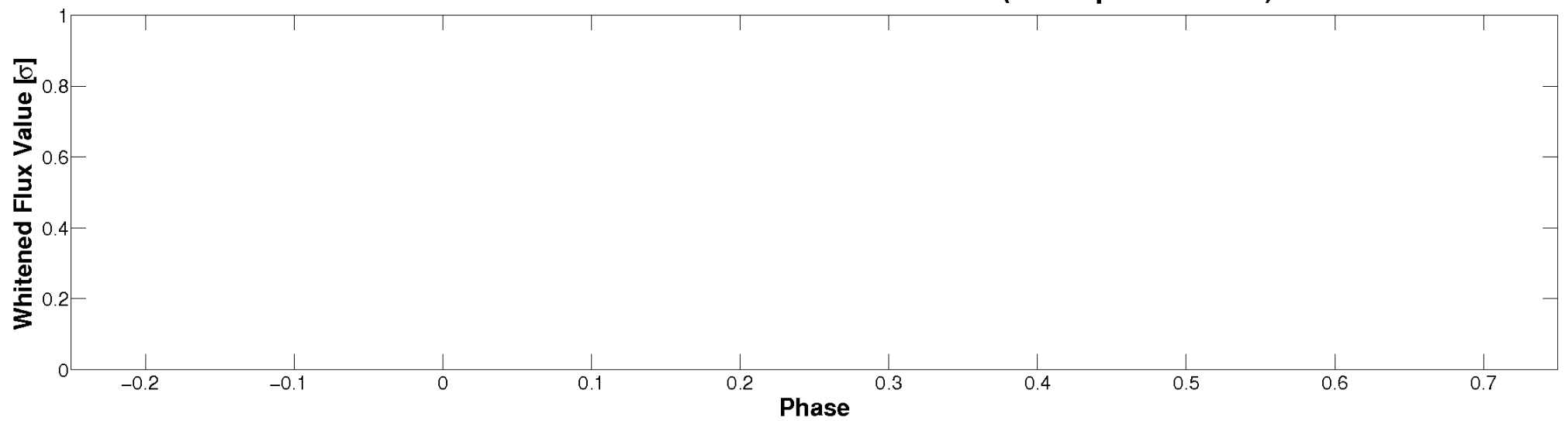


Non-Whitened Vs. Whitened Light Curve

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

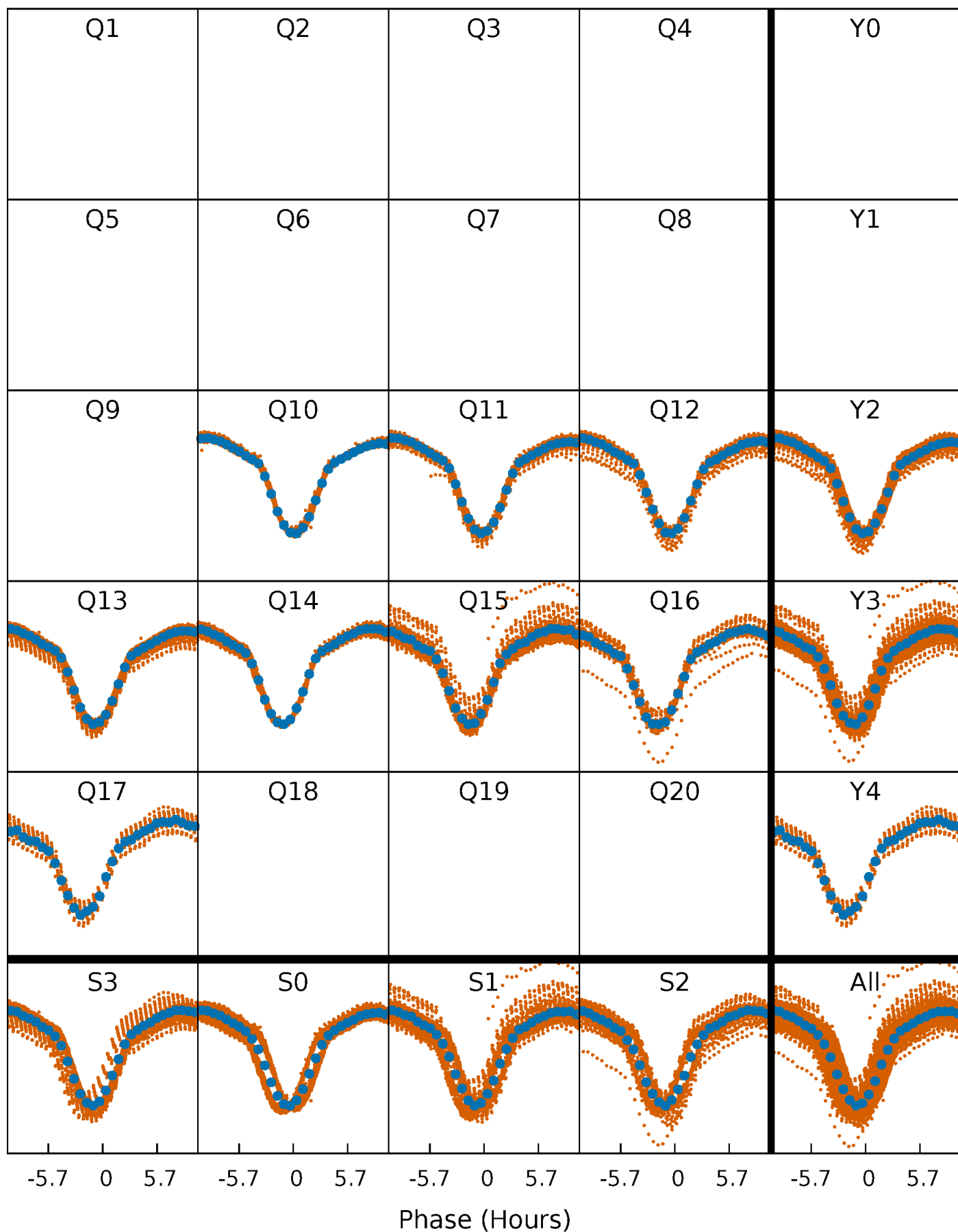


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



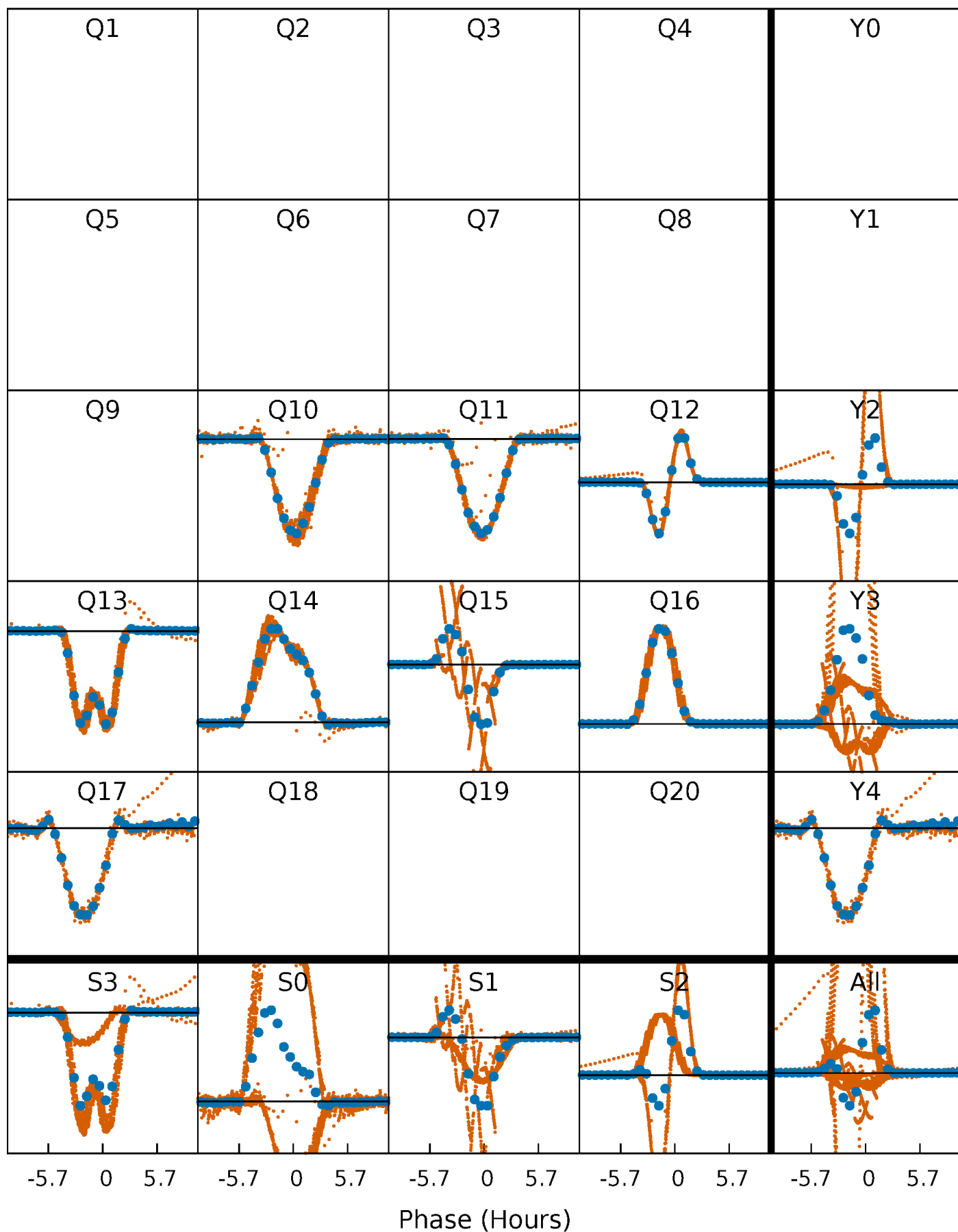
PDC Quarter-Phased Transit Curves

TCE 001433980-02 $P = 1.592857$ Days $T_0 = 133.006049$ (BKJD)



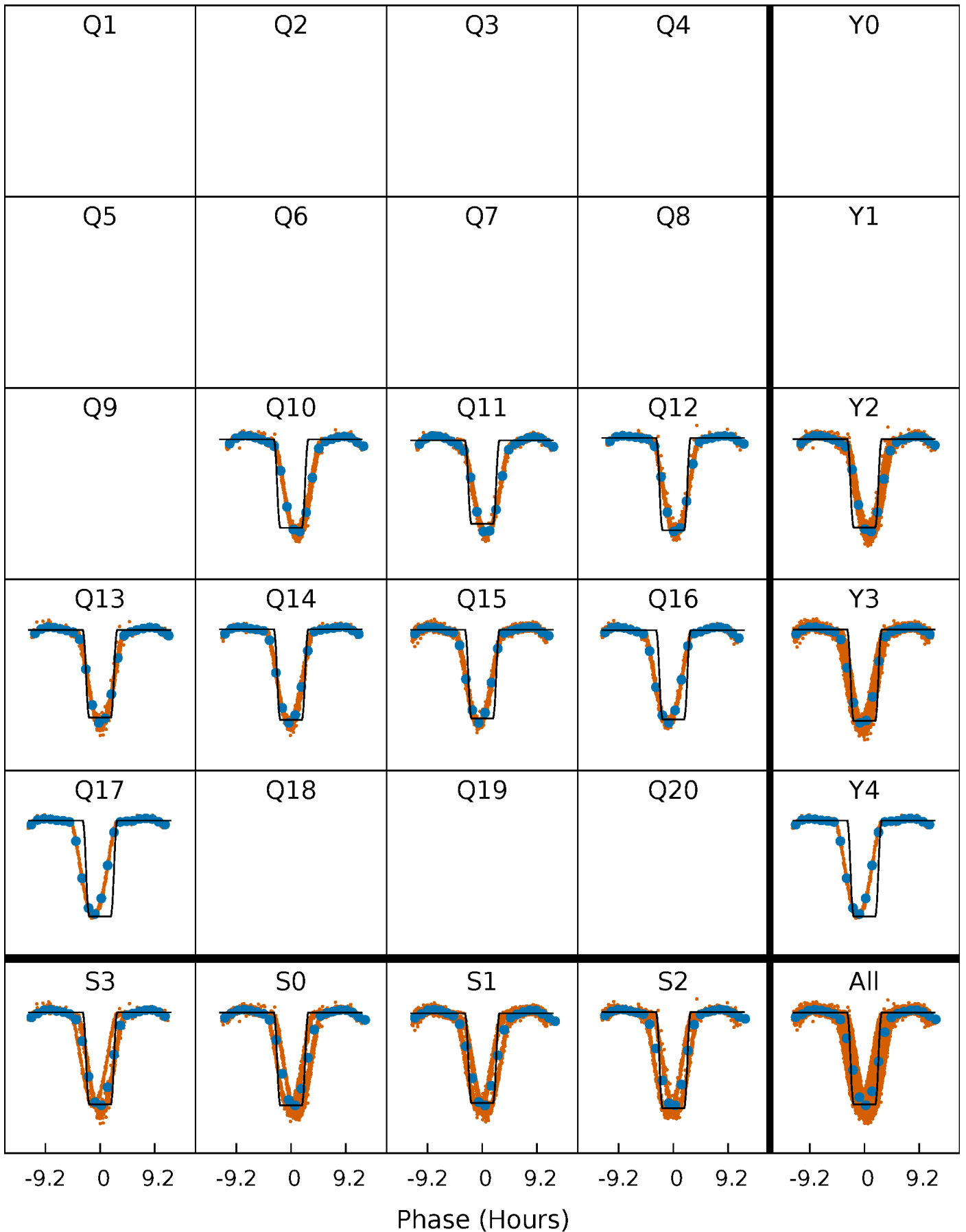
DV Quarter-Phased Transit Curves

TCE 001433980-02 P= 1.592857 Days $T_0=133.006049$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

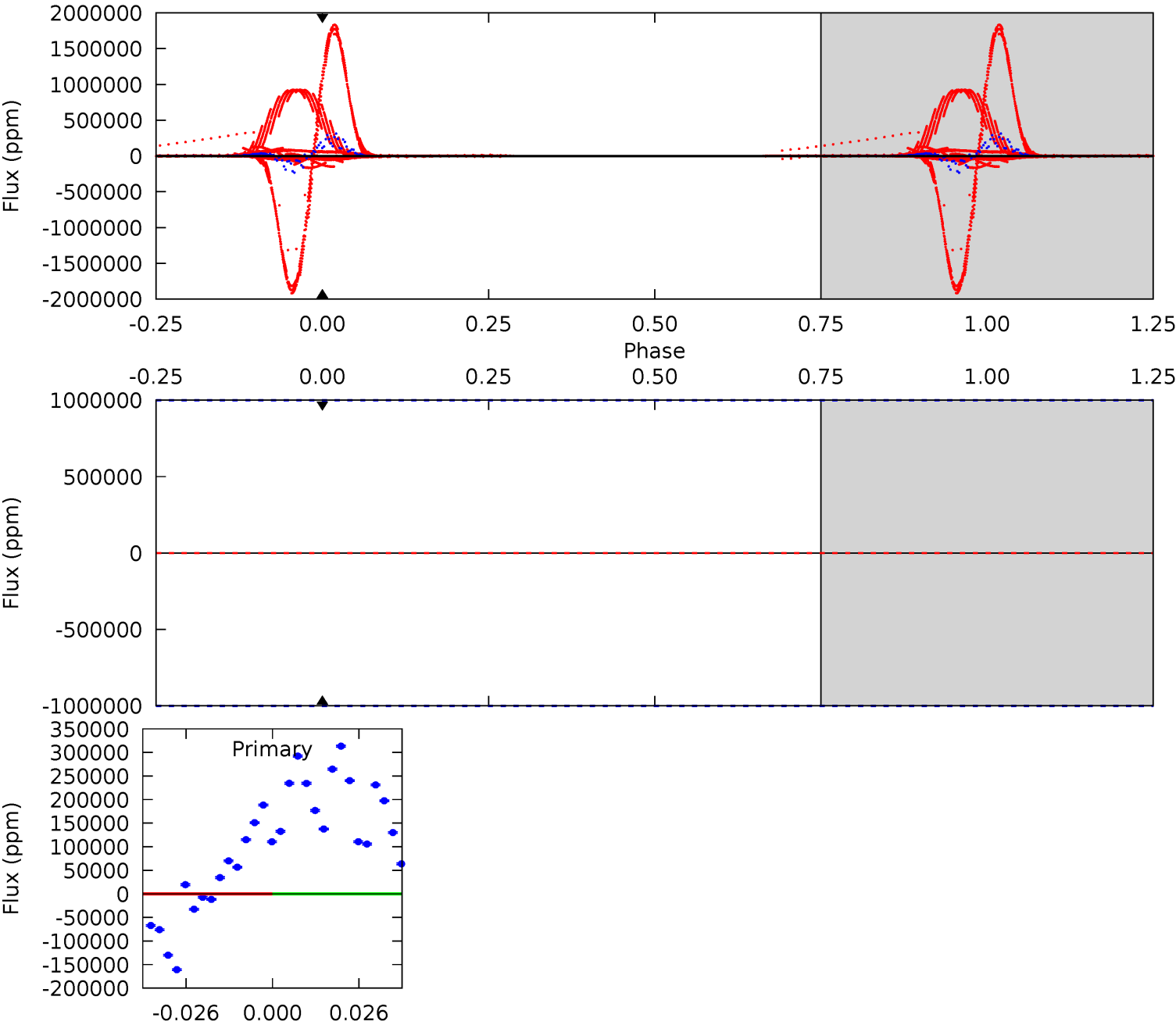
TCE 001433980-02 $P = 1.592857$ Days $T_0 = 132.967564$ (BKJD)



DV Model-Shift Uniqueness Test

001433980-02, P = 1.592857 Days, E = 133.006049 Days

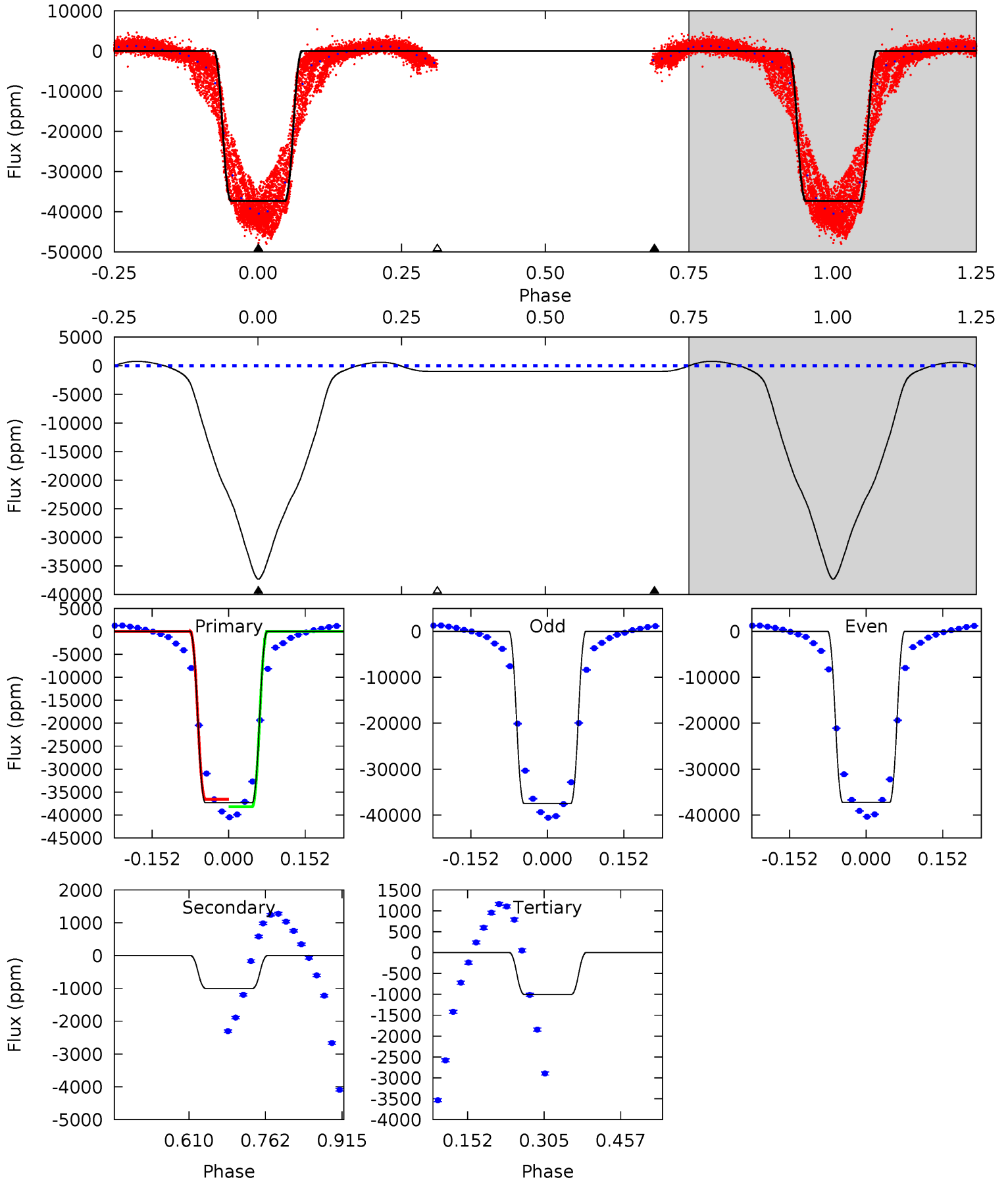
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

001433980-02, P = 1.592857 Days, E = 132.967564 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1667	44.9	44.9	0	4.48	1.43	23.9	1623	1667	0.01	44.9	4.61	1.00	0.02	55.2



Stellar Parameters For KIC 001433980

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6574^{+181}_{-227}	$4.061^{+0.264}_{-0.176}$	$-0.220^{+0.250}_{-0.300}$	$1.768^{+0.477}_{-0.583}$	$1.317^{+0.182}_{-0.251}$	$0.336^{+0.566}_{-0.163}$
	+3%/-3%	+7%/-4%	+114%/-136%	+27%/-33%	+14%/-19%	+169%/-49%
Source	KIC0	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 001433980-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$52.83^{+21.58}_{-18.49}$	3138^{+264}_{-300}	2583^{+5080}_{-9570}	$0.377^{+23.231}_{-16.838}$
Alt.	-1004 ± 22	$37.42^{+21.84}_{-16.70}$	3142^{+263}_{-286}	2351^{+1233}_{-5304}	$0.336^{+0.734}_{-0.203}$

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

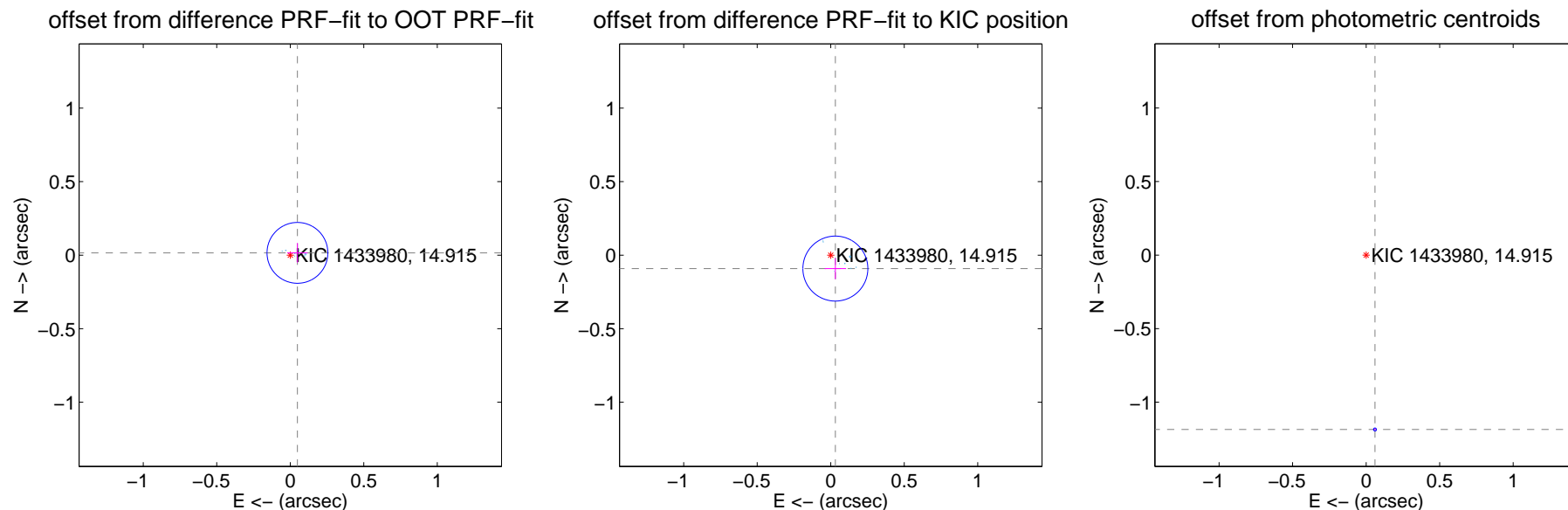
DV Centroid Data

Supplemental centroid analysis for 001433980-02. Kepler magnitude: 14.91. Transit SNR -1.00

There are 8 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	0.051 ± 0.069	0.74	-0.049 ± 0.069	0.016 ± 0.067
PRF-fit source offset from KIC position	0.097 ± 0.074	1.31	-0.032 ± 0.073	-0.091 ± 0.071
photometric centroid source offset	1.19 ± 0.00	351.93	-0.06 ± 0.00	-1.19 ± 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.

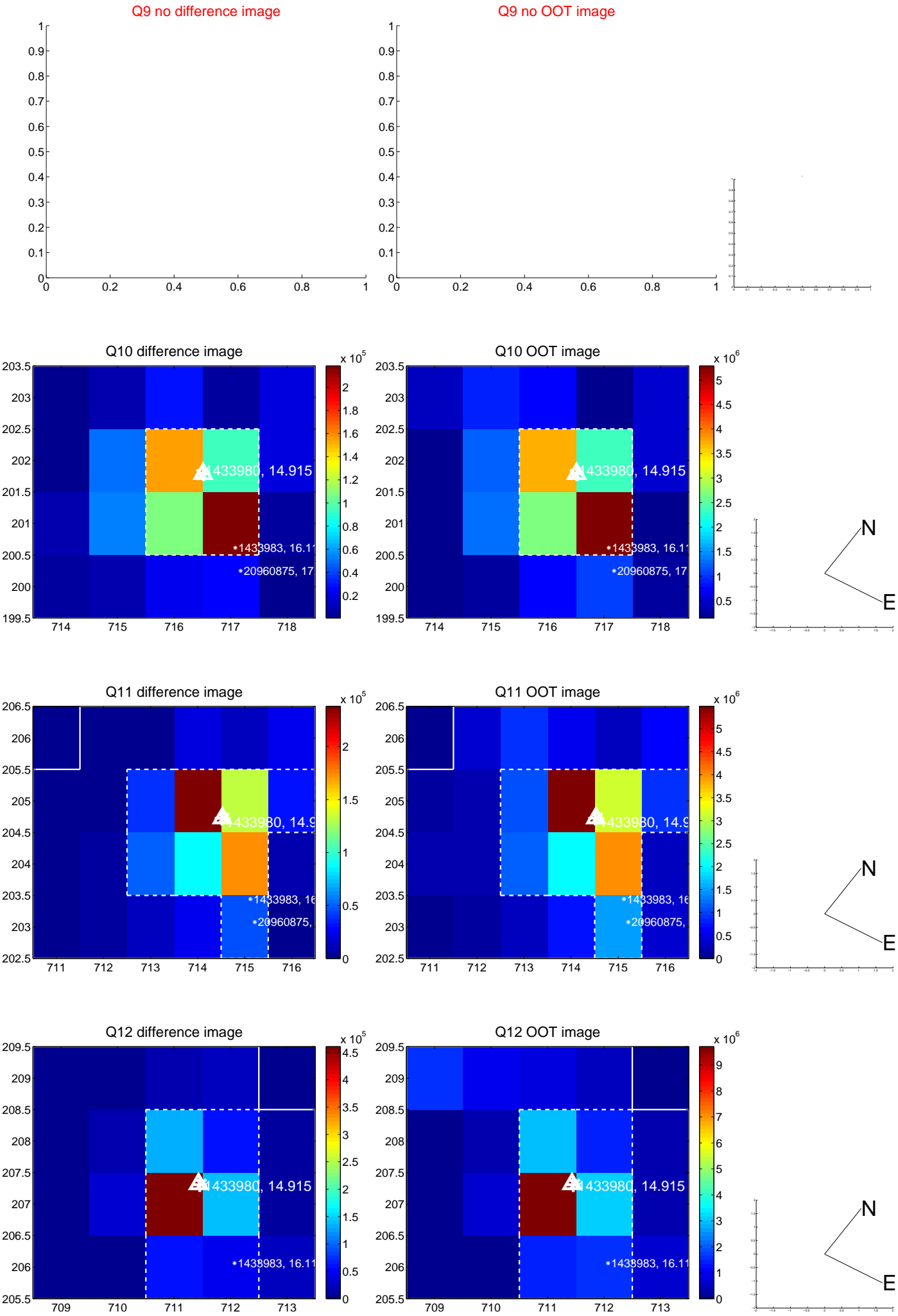
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



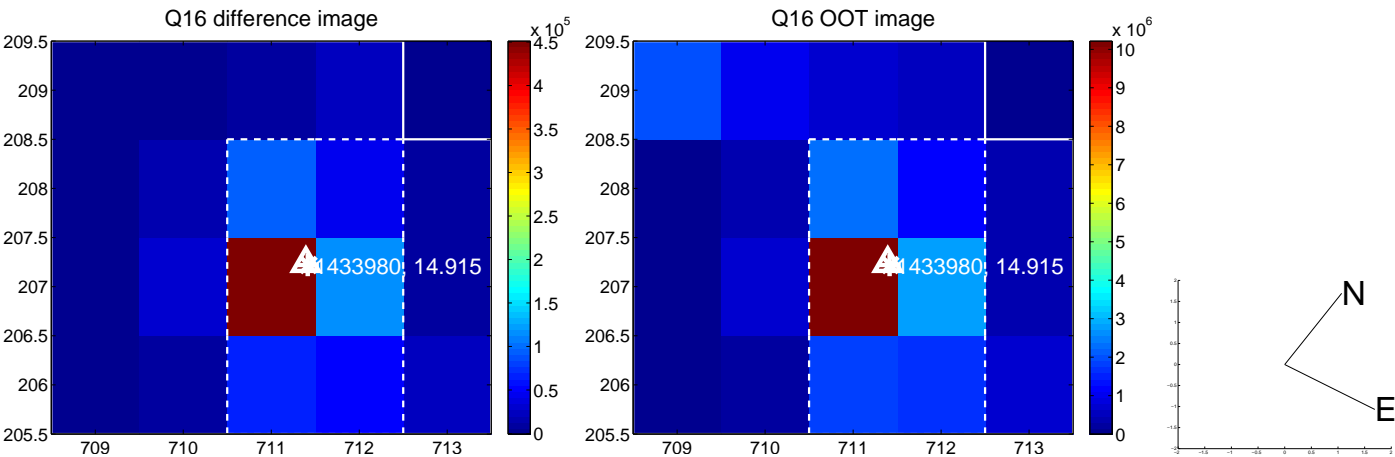
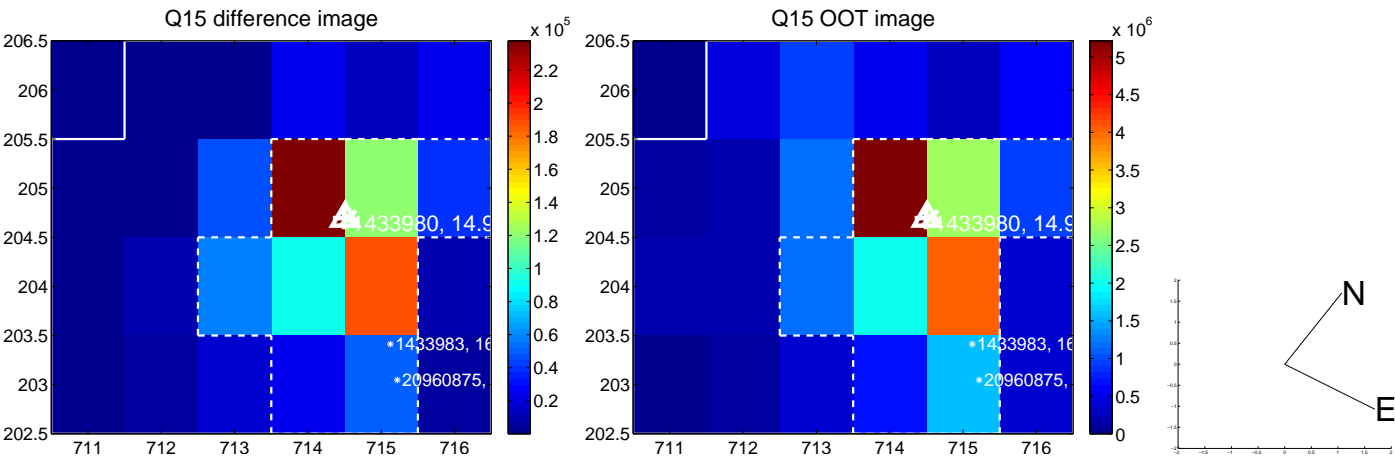
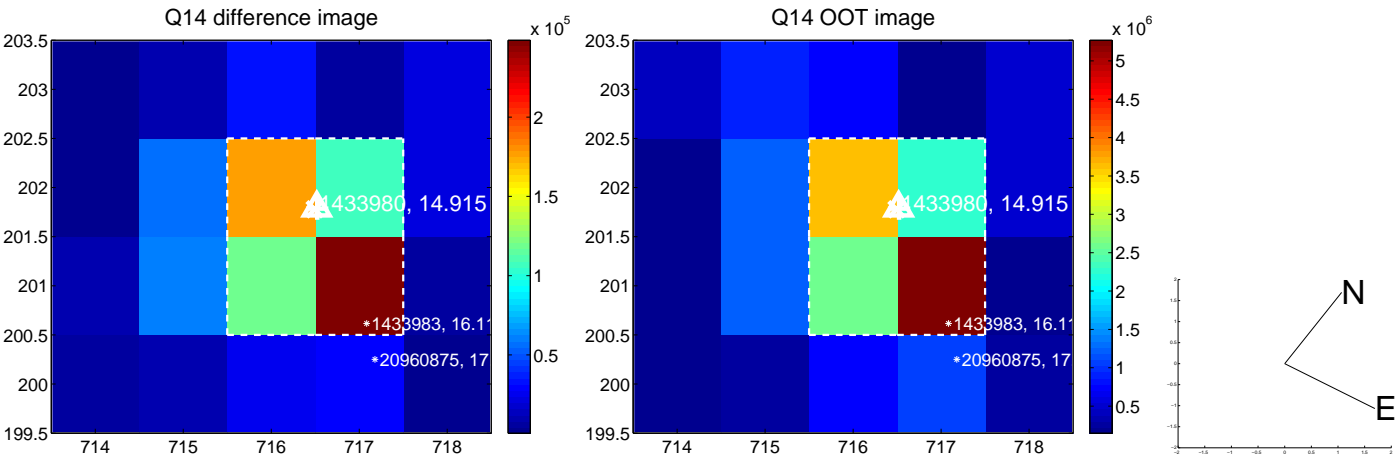
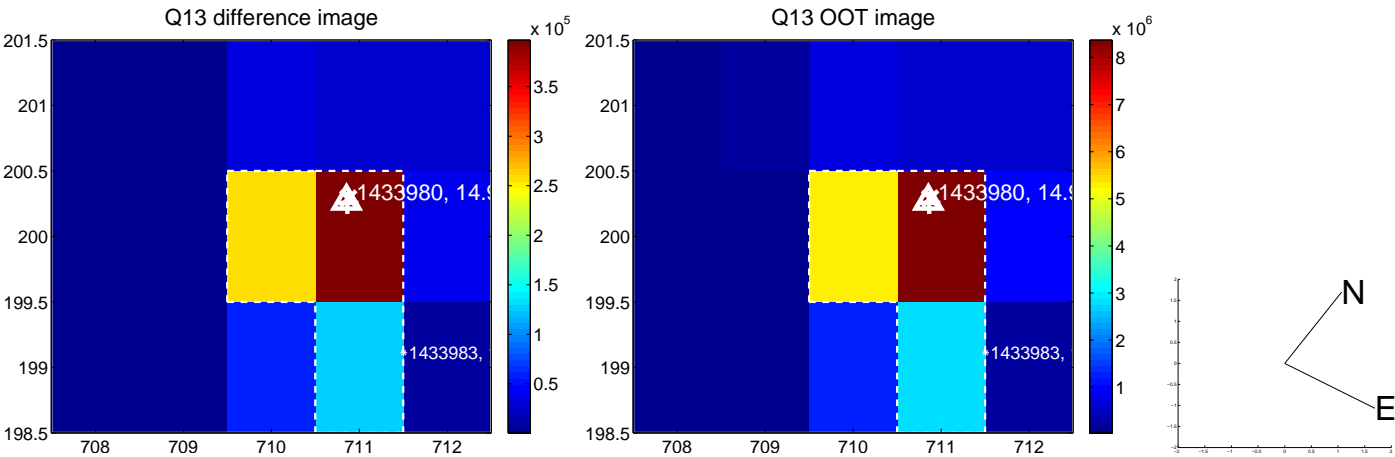
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



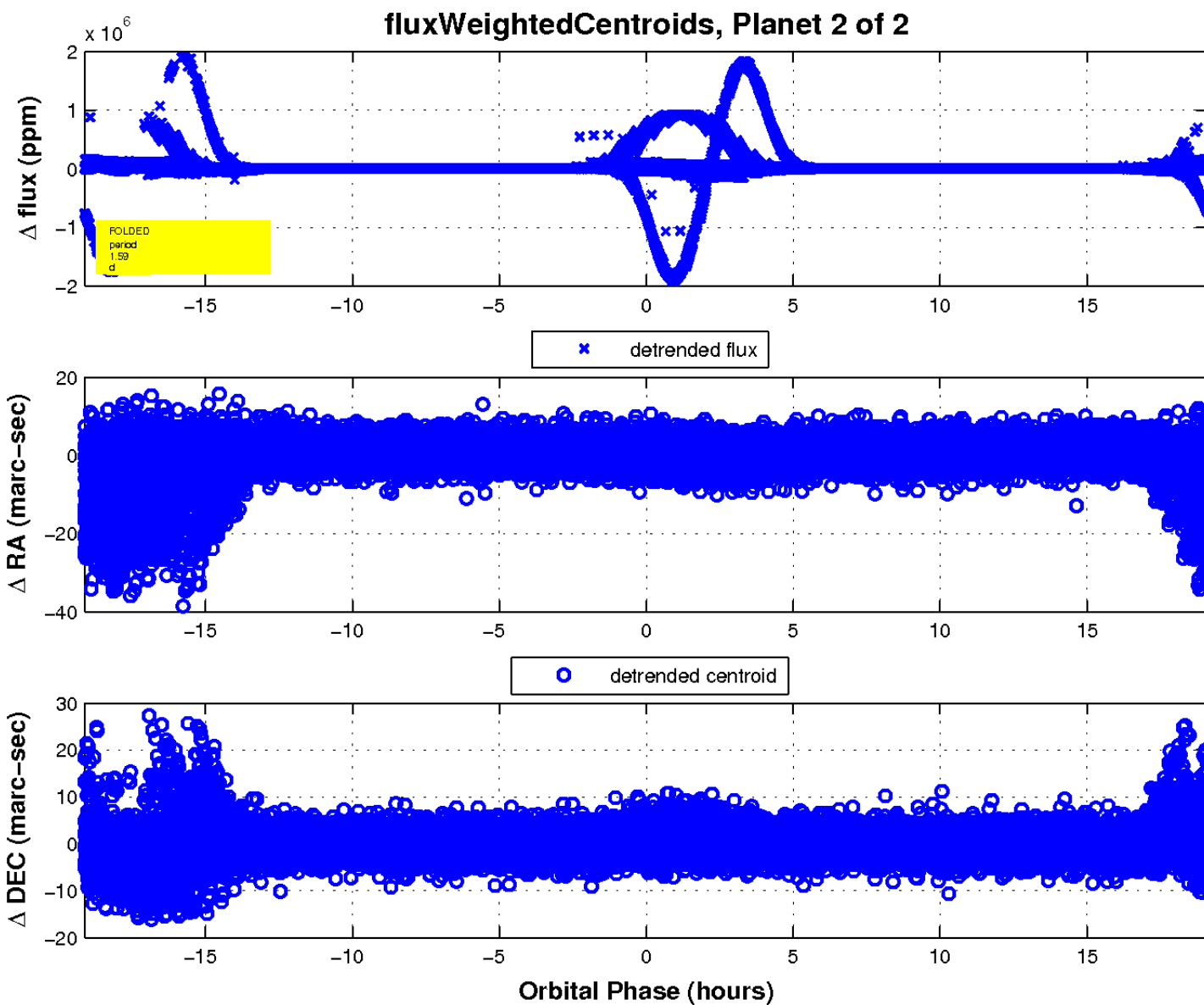
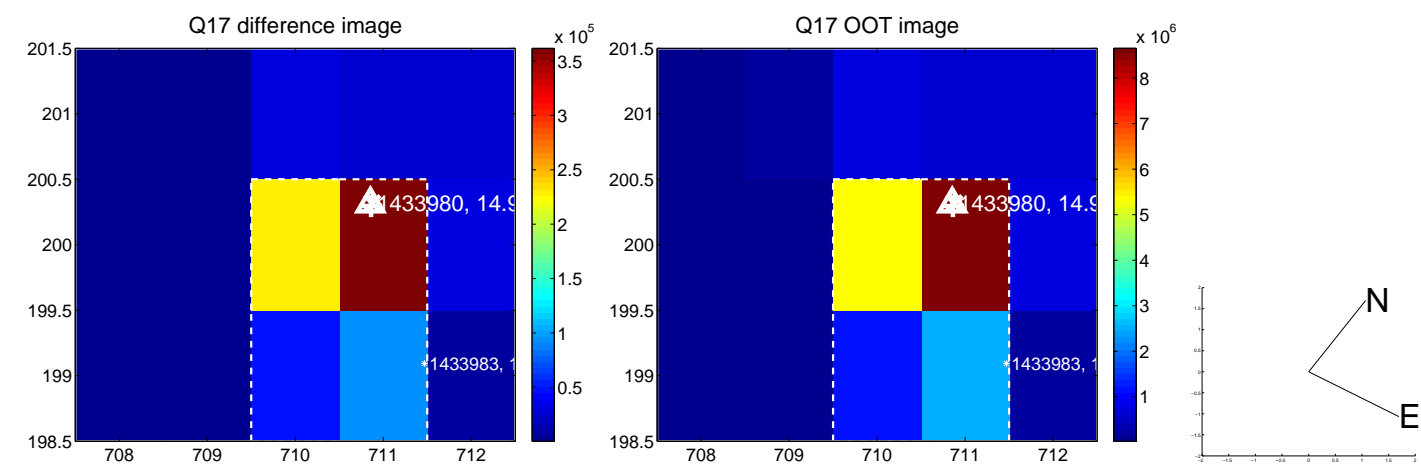
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

