

KIC 008590780

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})
008590780-01	OBS	6183.01	4.326982	132.185301	416036.5	3.500	37498.1	-1.0	1.50	6231	81.90	1138.85
008590780-02	OBS	No	6.490170	135.483608	2822.7	15.311	2150.4	149.8	1.50	6231	14.64	663.29
008590780-03	OBS	No	6.490356	134.126489	19156.9	15.000	1875.3	-1.0	1.50	6231	20.86	663.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008590780-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
008590780-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008590780-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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 008590780-01

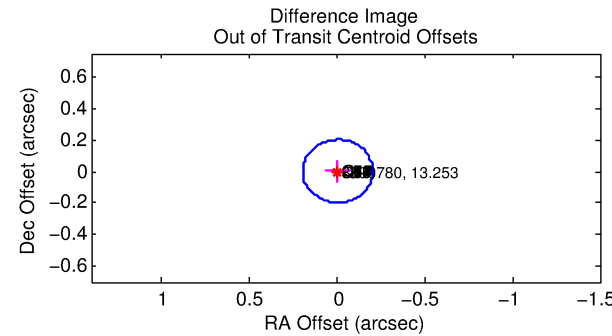
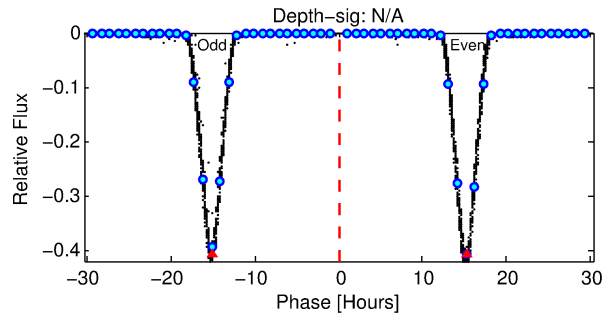
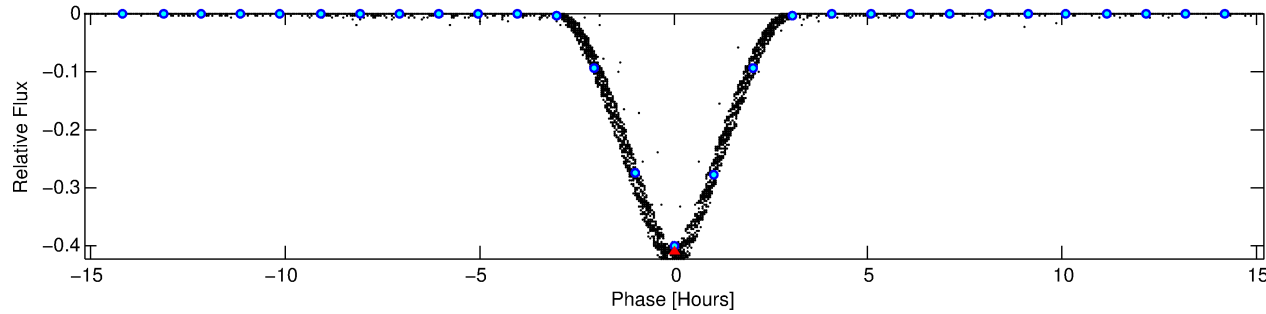
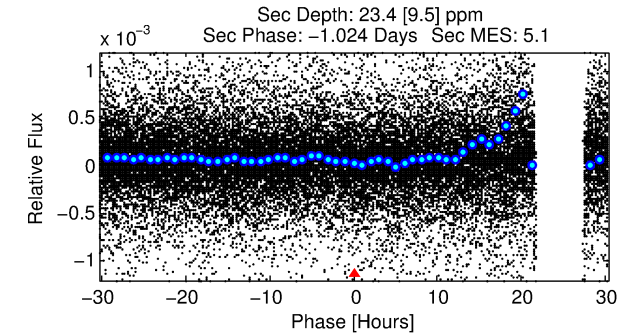
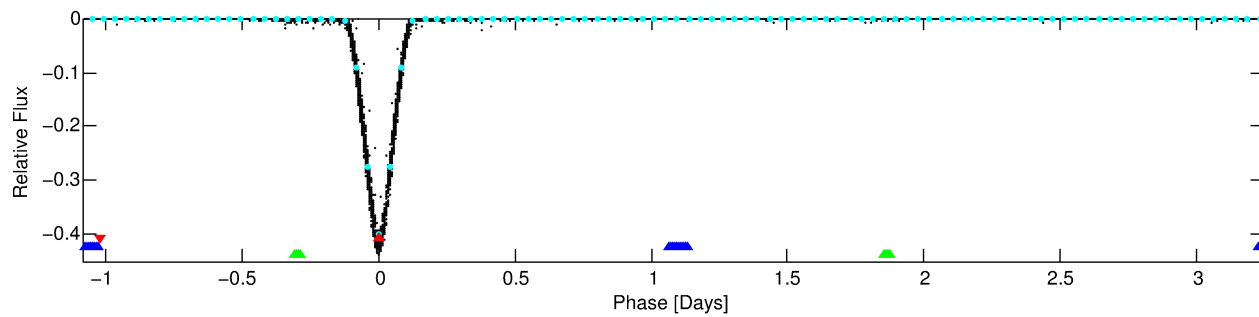
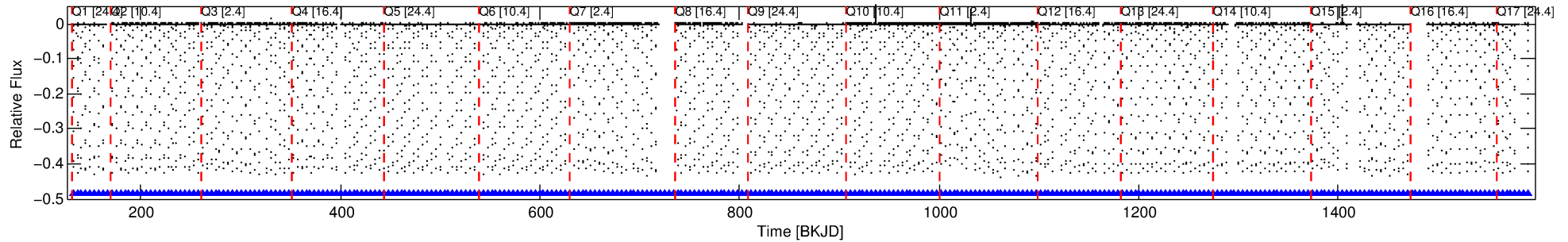
No Significant Match Found

DV One-Page Summary

KIC: 8590780 Candidate: 1 of 3 Period: 4.327 d

KOI: K06183.01 Corr: 0.795

Kp: 13.25 R*: 1.50 Rs Teff: 6231.0 K Logg: 4.08 Fe/H: -0.460



TPS TCE Results:

Period = 4.32698 d
Epoch = 132.1853 BKJD

DV fit results are unavailable

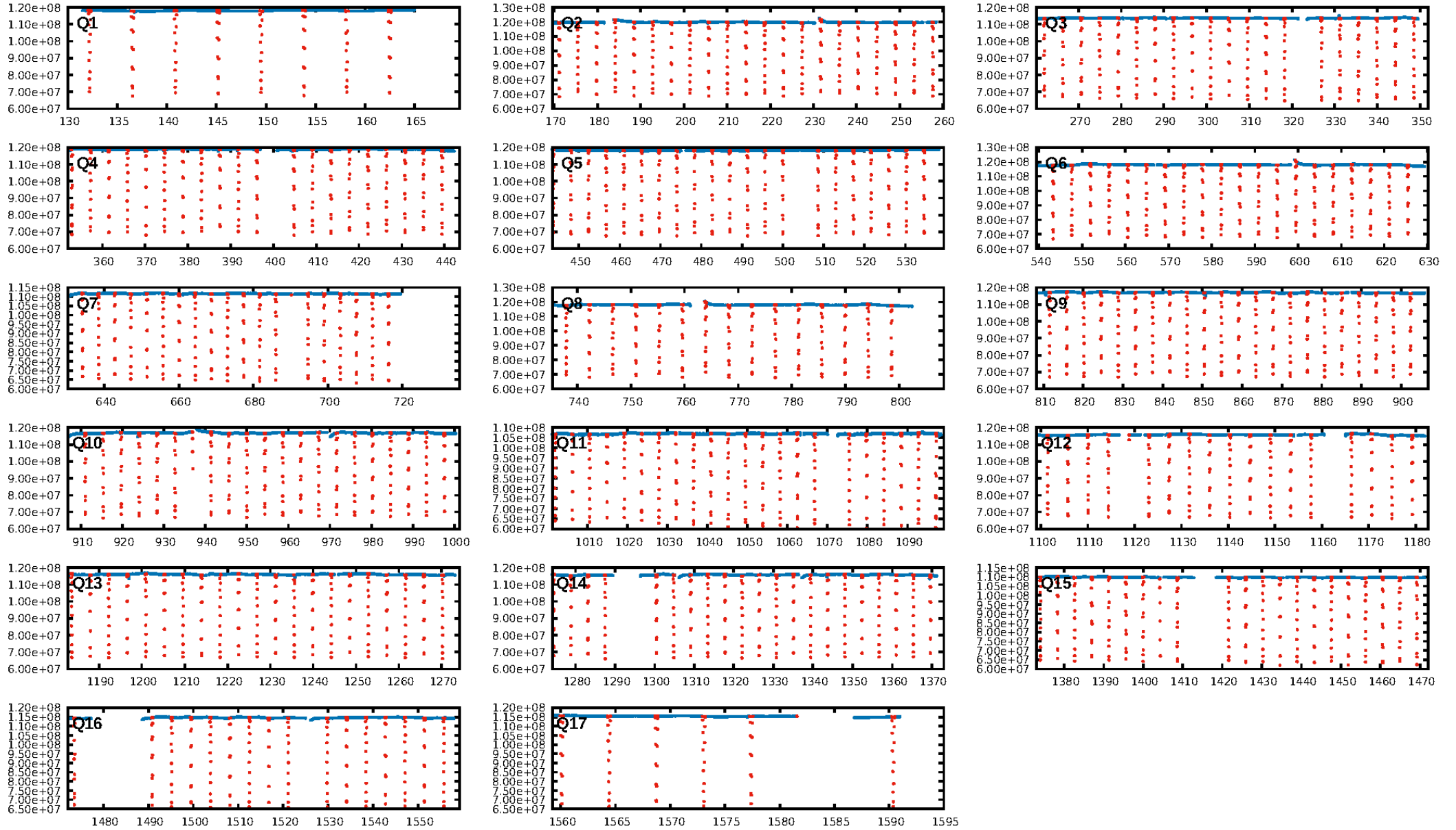
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.31 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [297/297]
GhostDiagnostic-chr: 0.8812
Centroid-sig: 0.0%
Centroid-so: 0.498 arcsec [1609.62 σ]
OotOffset-rm: 0.006 arcsec [0.09 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.205 arcsec [3.06 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

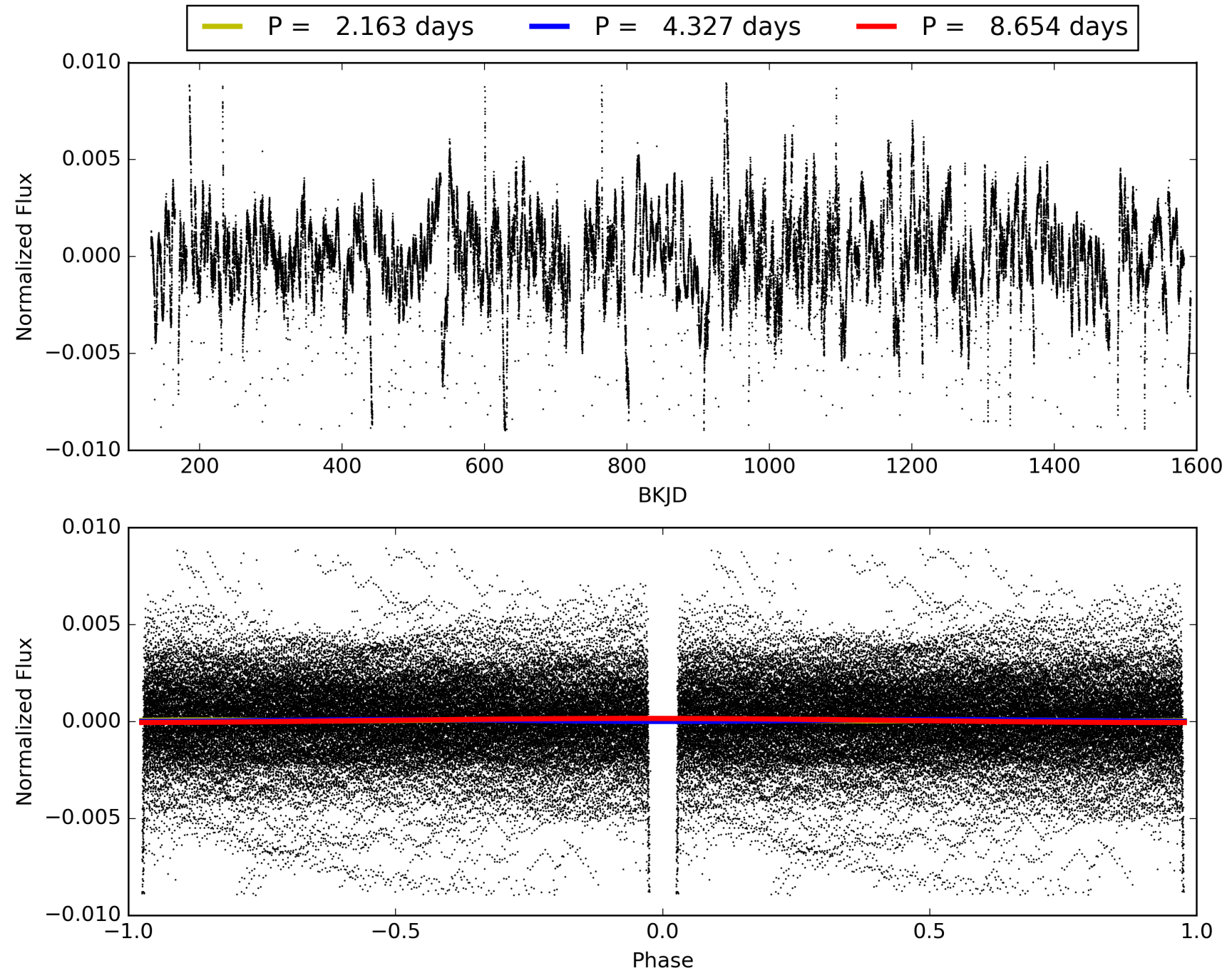
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:26:27 Z

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

TCE 008590780-01, PDC Light Curves

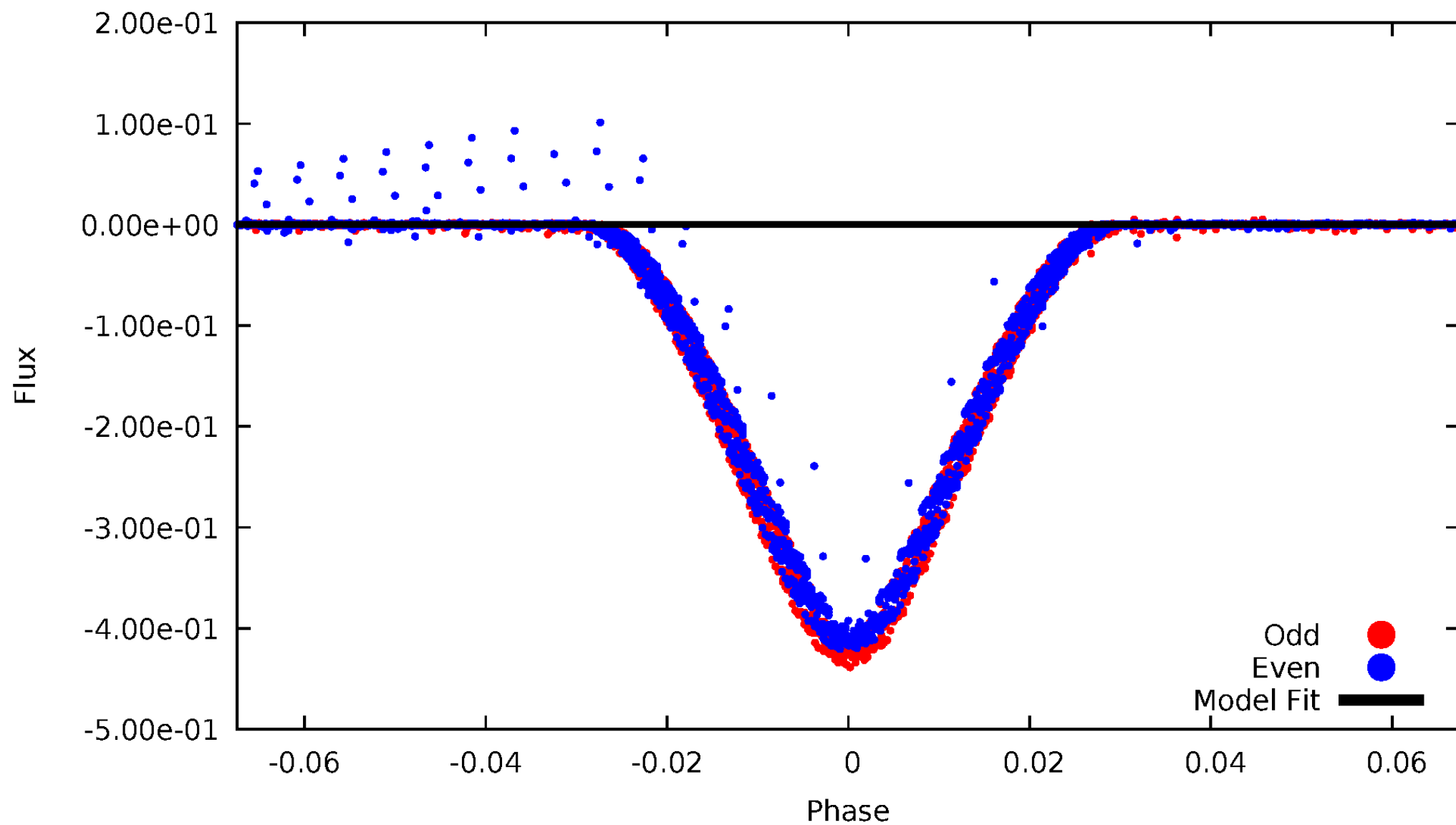


TCE 008590780-01



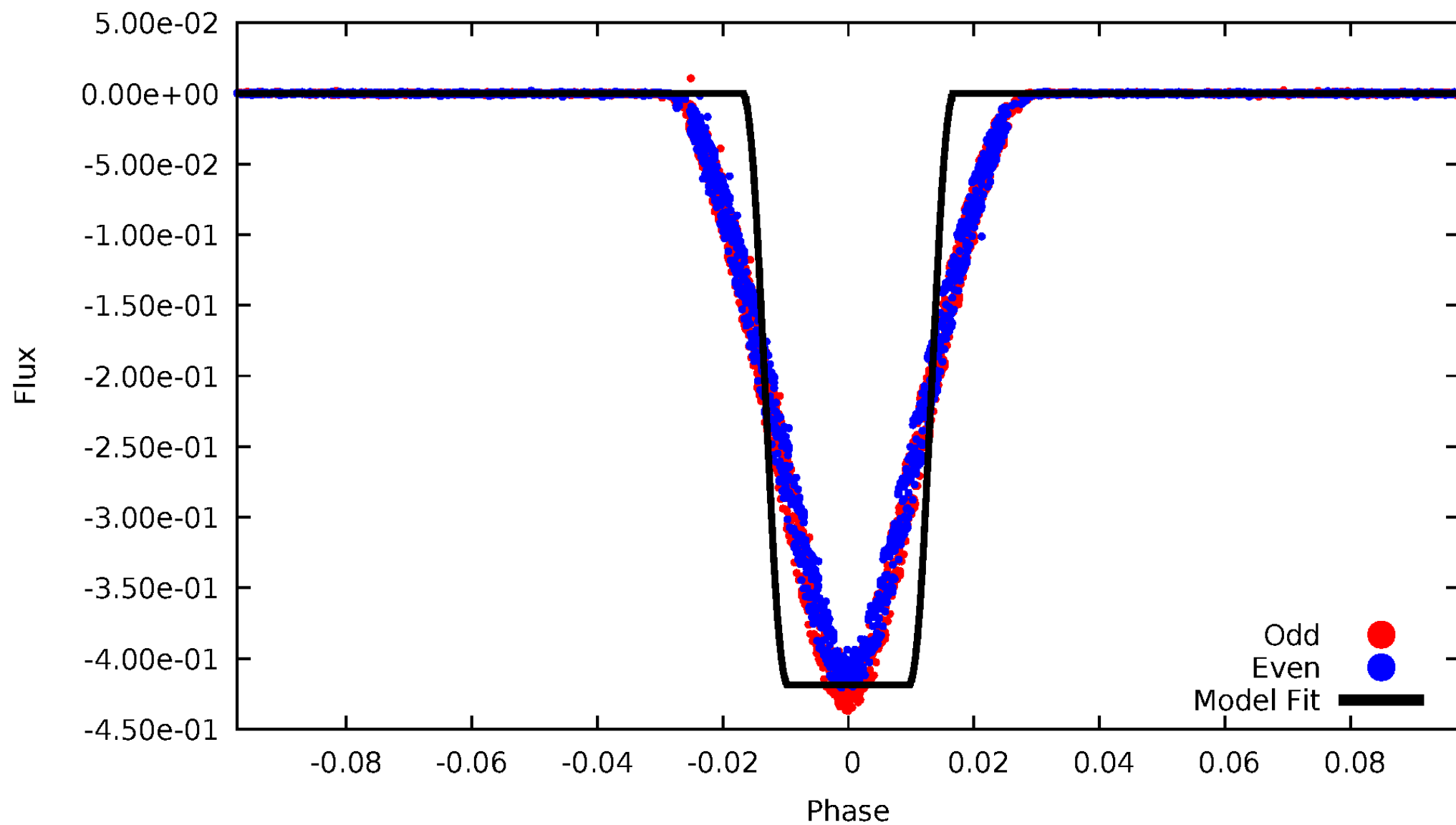
DV Odd/Even

TCE 008590780-01



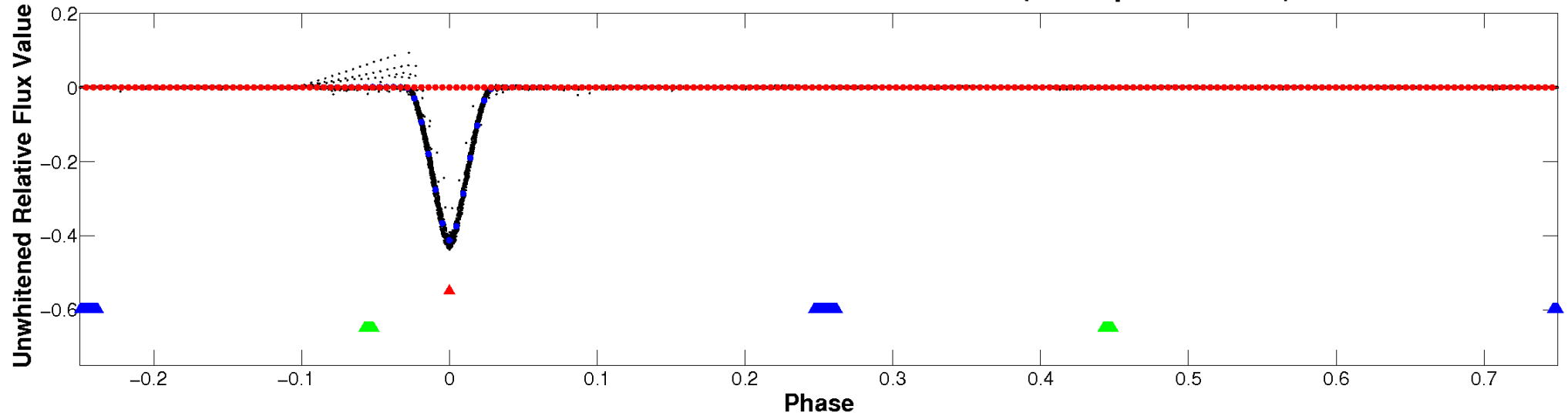
ALT Odd/Even

TCE 008590780-01



Non-Whitened Vs. Whitened Light Curve

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

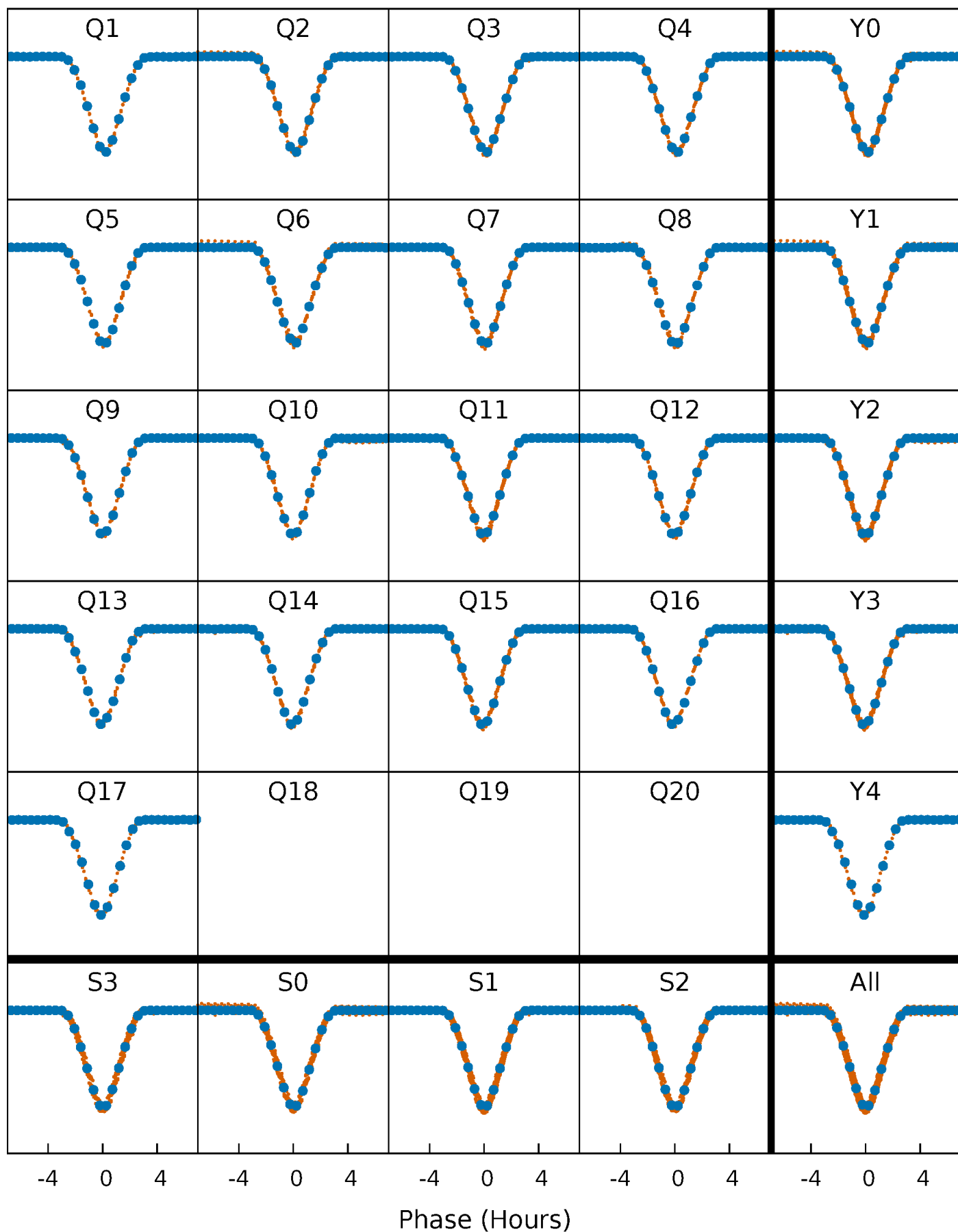


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



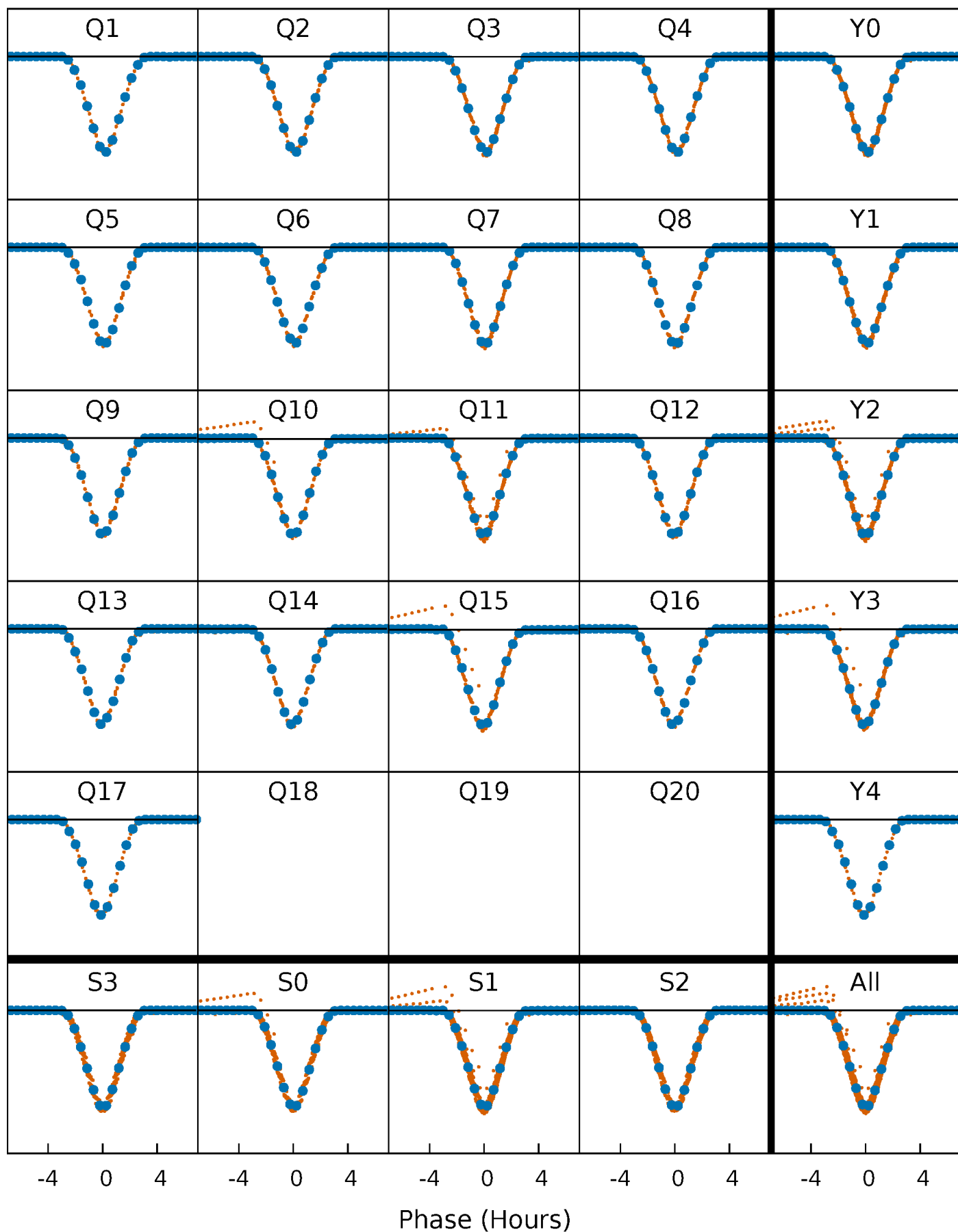
PDC Quarter-Phased Transit Curves

TCE 008590780-01 P= 4.326982 Days $T_0=132.185301$ (BKJD)



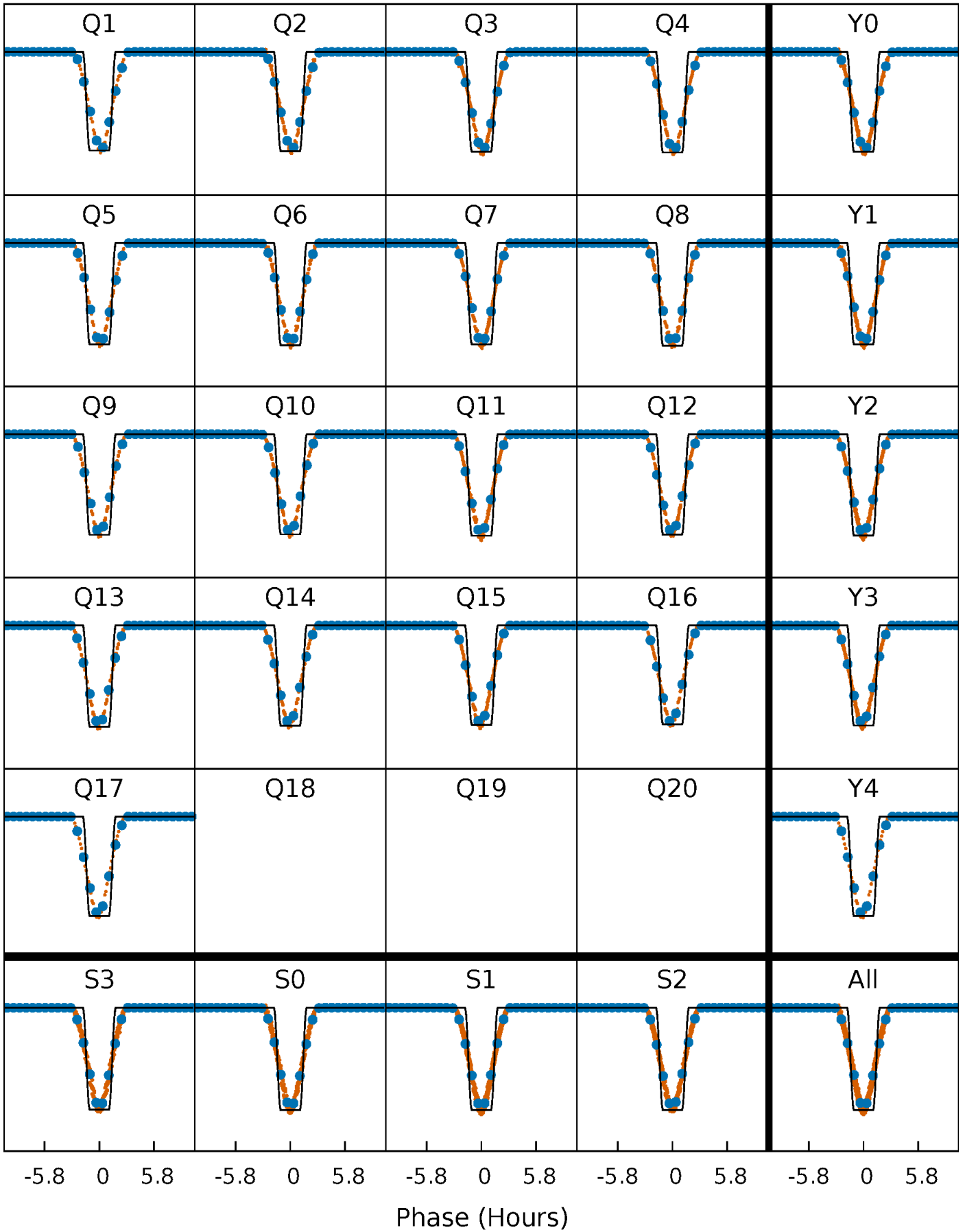
DV Quarter-Phased Transit Curves

TCE 008590780-01 P= 4.326982 Days $T_0=132.185301$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

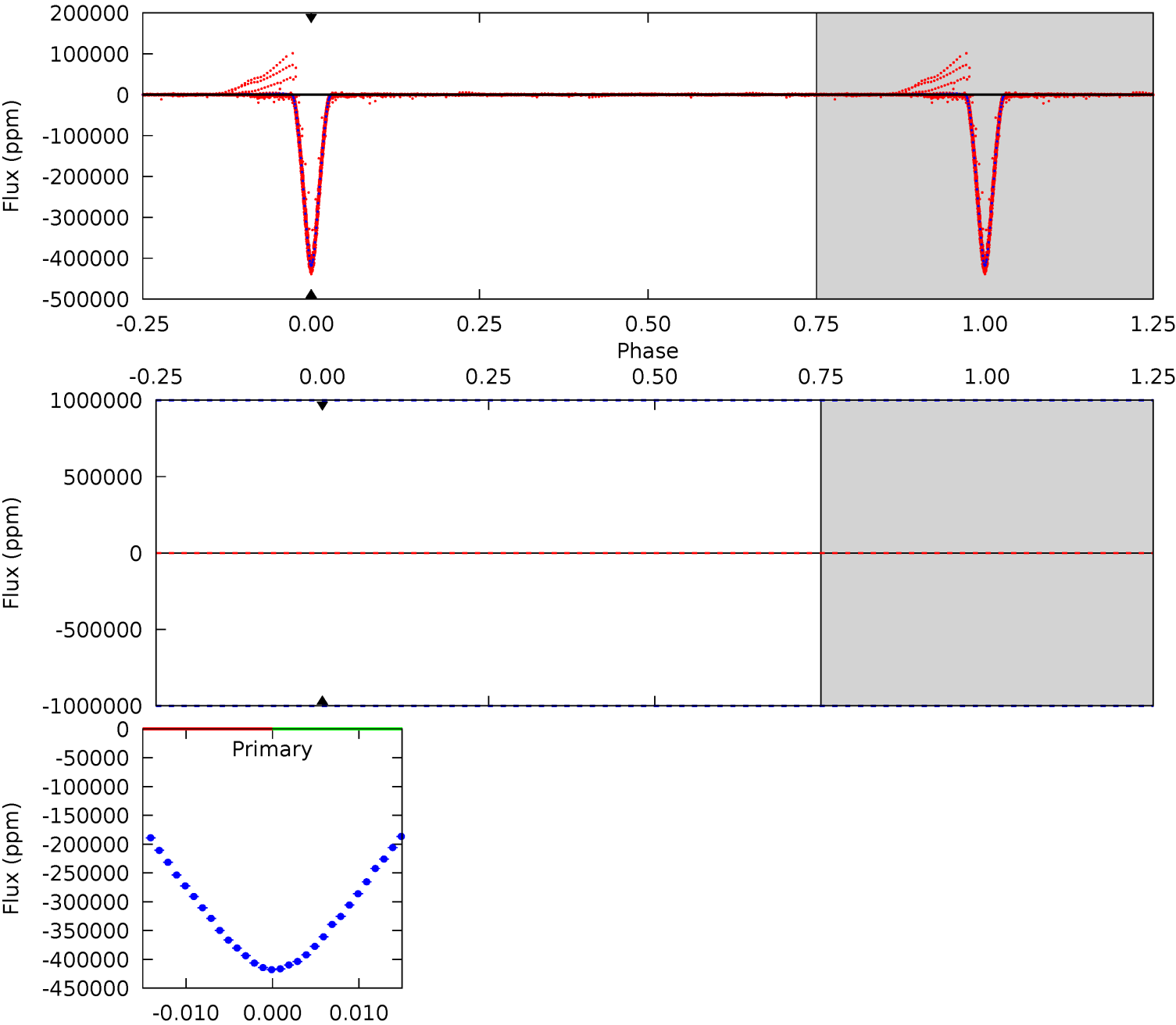
TCE 008590780-01 P= 4.326982 Days $T_0=132.186166$ (BKJD)



DV Model-Shift Uniqueness Test

008590780-01, P = 4.326982 Days, E = 127.858319 Days

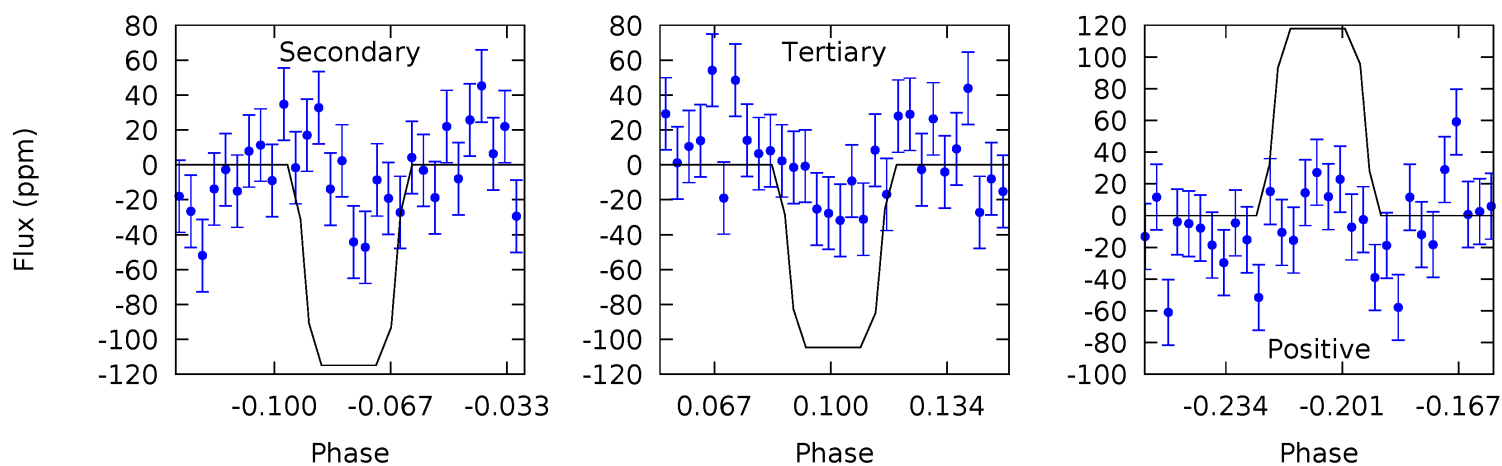
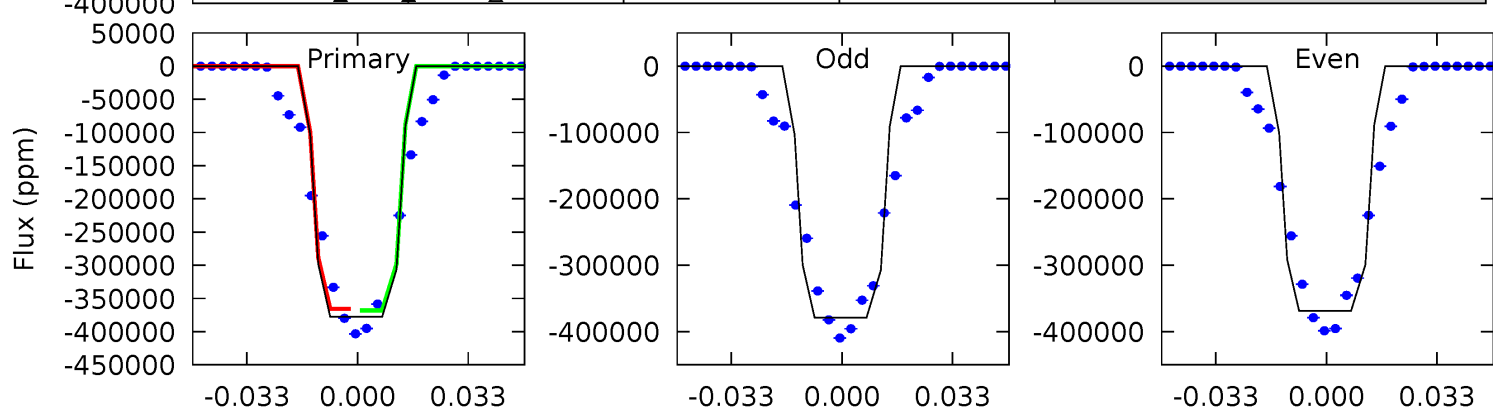
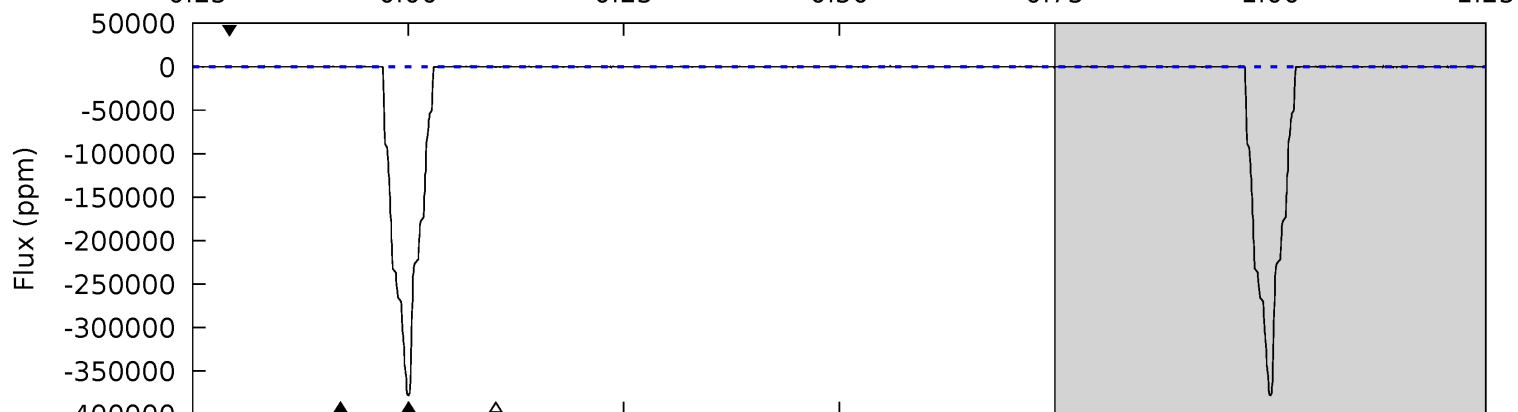
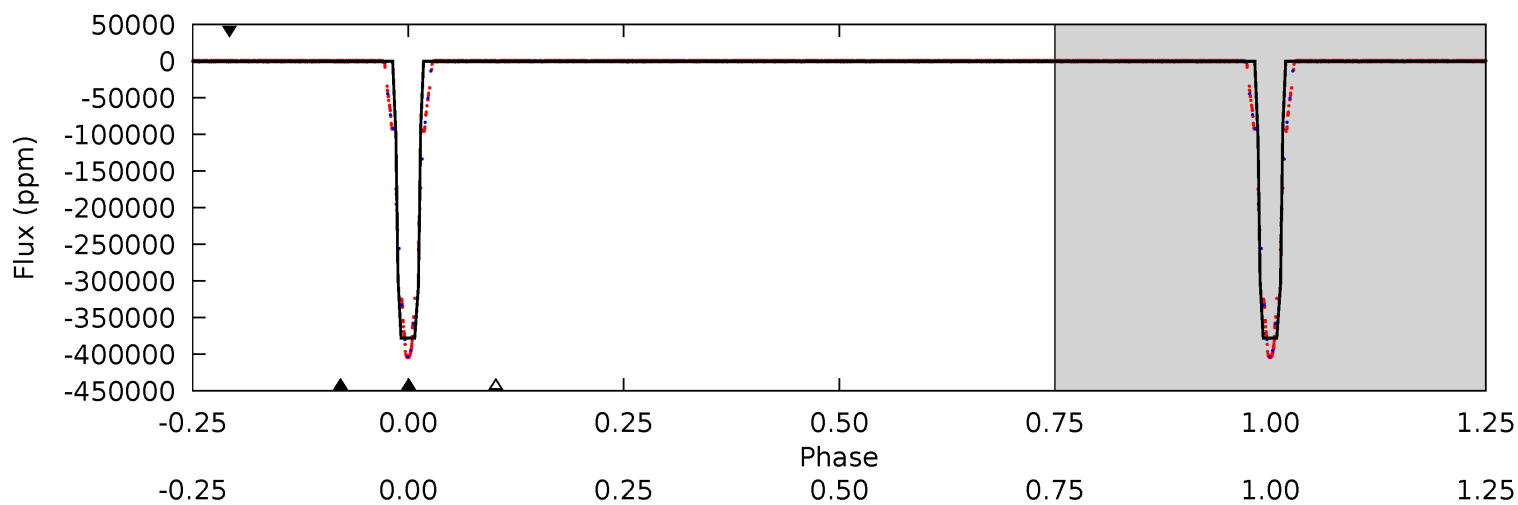
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008590780-01, P = 4.326982 Days, E = 127.859184 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12162	3.70	3.37	3.79	4.79	2.13	1.08	12159	12158	0.33	-0.10	197.7	1.00	0.00	0



Stellar Parameters For KIC 008590780

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6231^{+188}_{-207}	$4.078^{+0.350}_{-0.150}$	$-0.460^{+0.300}_{-0.300}$	$1.501^{+0.410}_{-0.501}$	$0.984^{+0.146}_{-0.133}$	$0.410^{+0.945}_{-0.199}$
	+3%/-3%	+9%/-4%	+65%/-65%	+27%/-33%	+15%/-14%	+231%/-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 008590780-01 / KOI 6183.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$77.19^{+24.61}_{-19.18}$	2037^{+171}_{-208}	2956^{+2325}_{-7896}	$1.496^{+30.004}_{-24.174}$
Alt.	-115 ± 31	$100.89^{+24.35}_{-22.37}$	2032^{+165}_{-190}	-2496^{+118}_{-102}	$0.017^{+0.012}_{-0.007}$

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 $A_{obs} \gg 1.0$

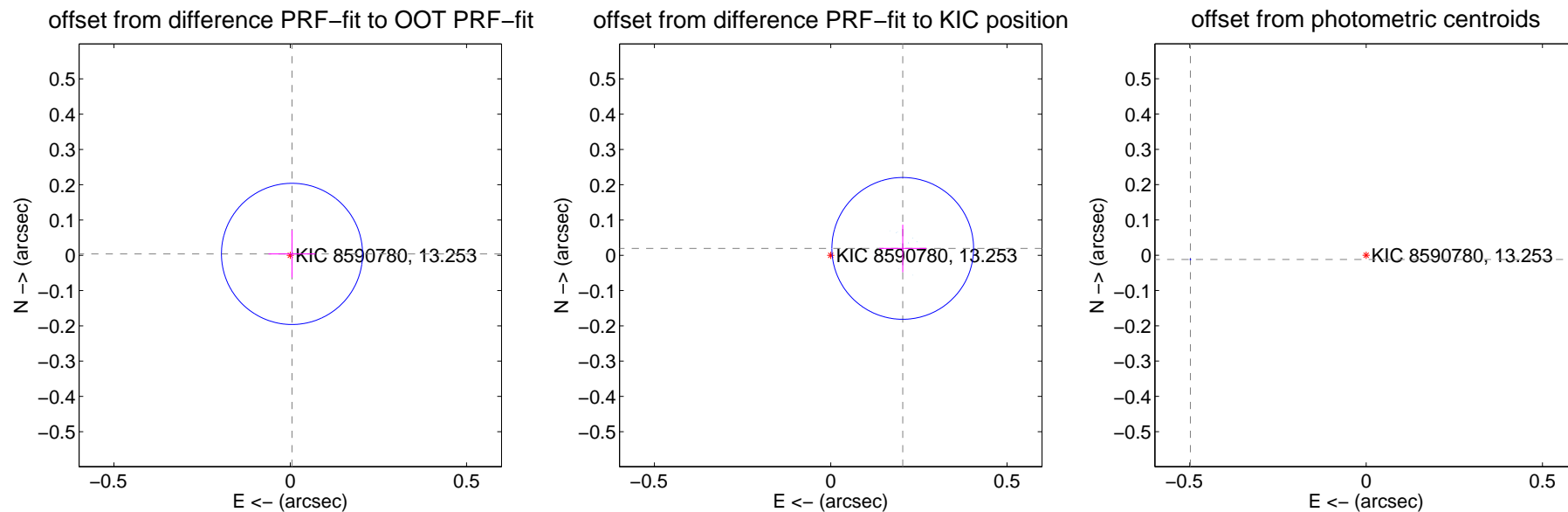
DV Centroid Data

Supplemental centroid analysis for 008590780-01. Kepler magnitude: 13.25. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

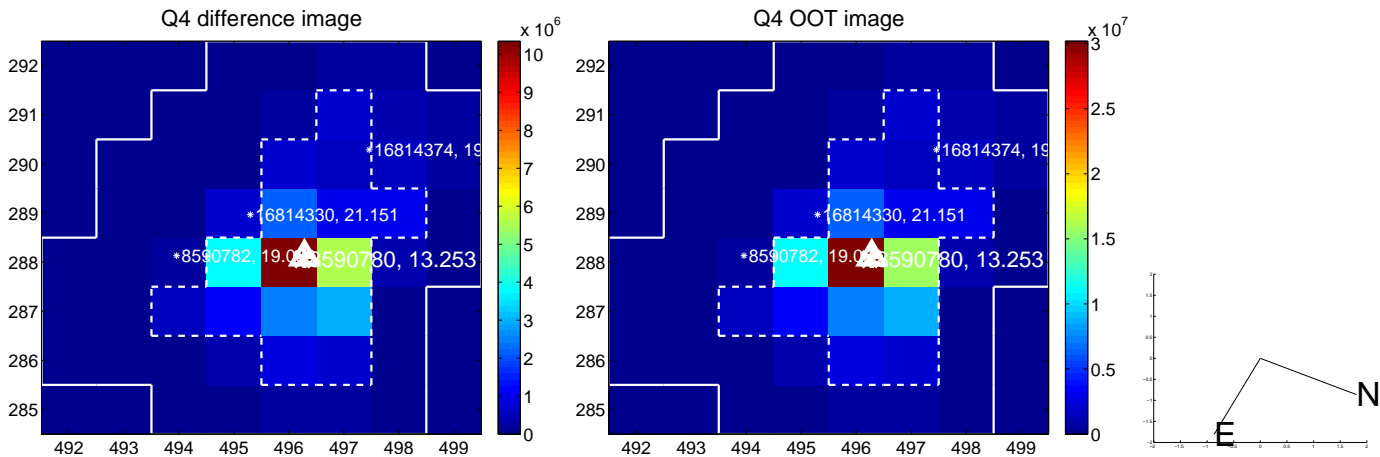
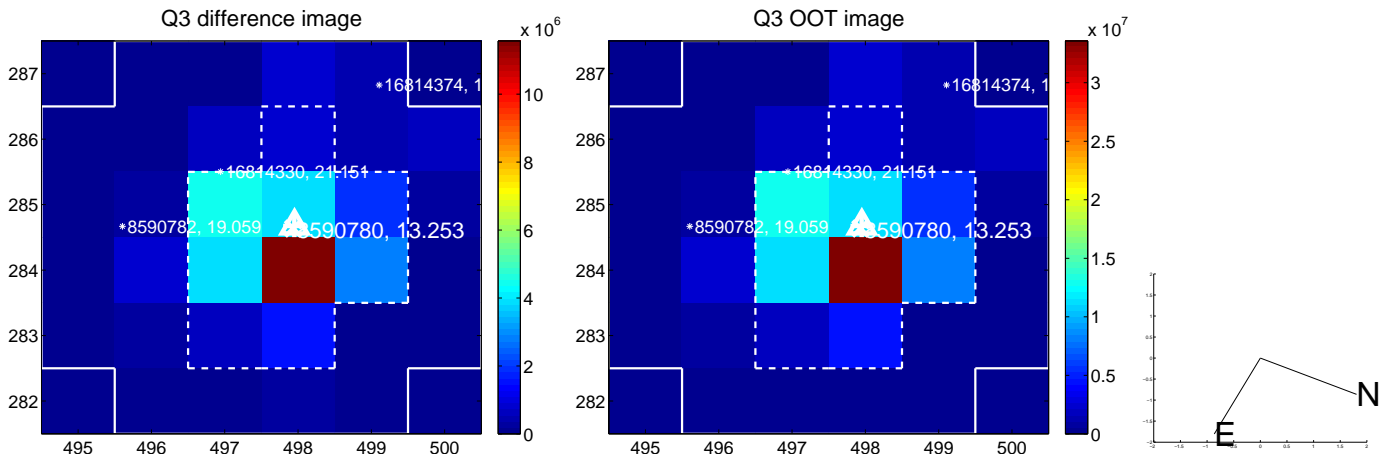
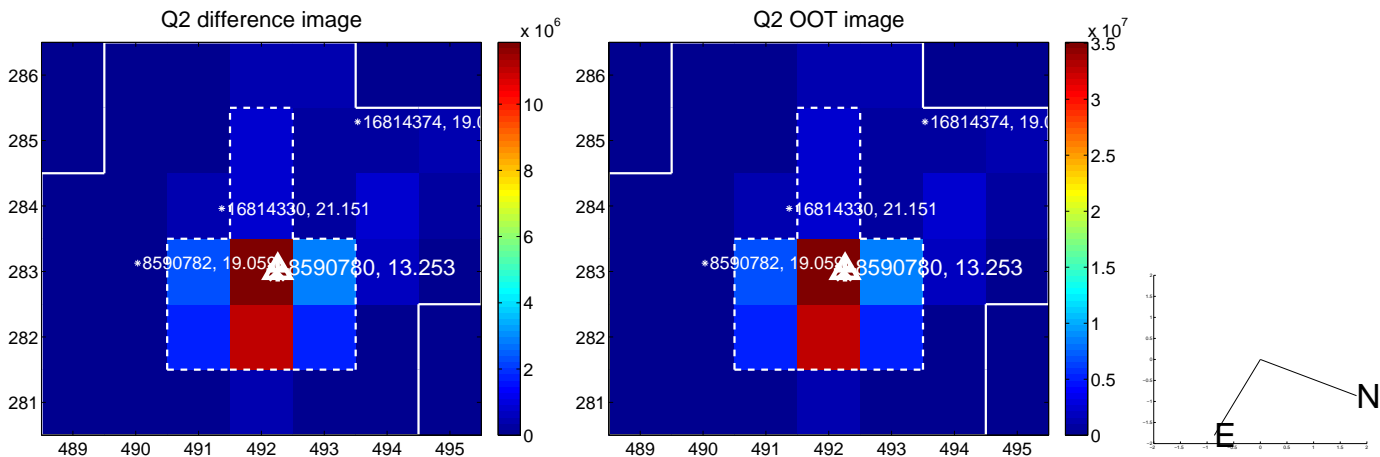
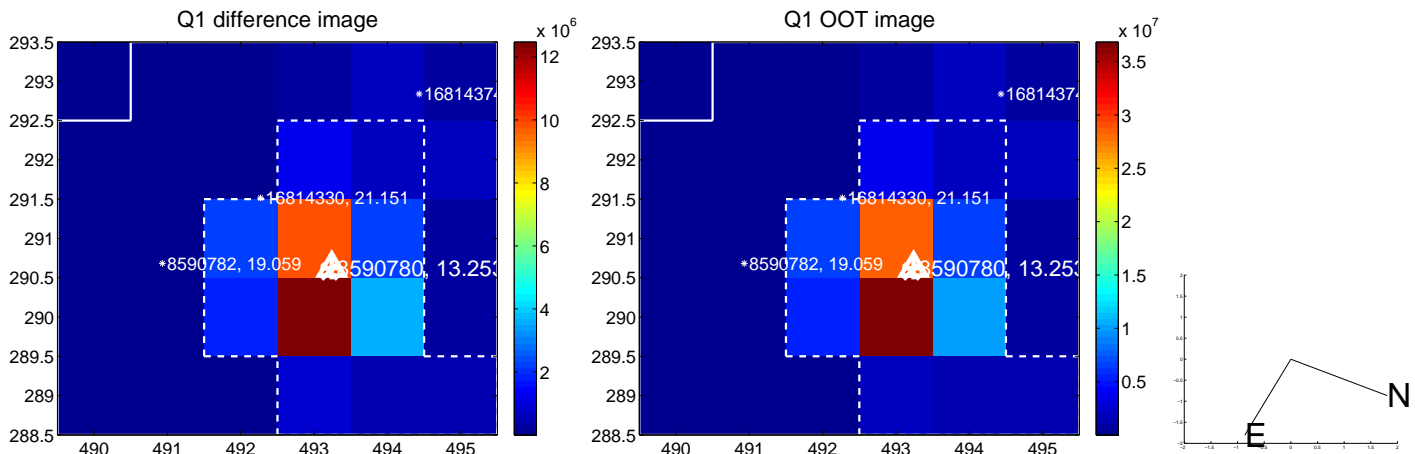
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.006 ± 0.067	0.09	-0.005 ± 0.067	0.004 ± 0.067
PRF-fit source offset from KIC position	0.205 ± 0.067	3.06	-0.204 ± 0.067	0.019 ± 0.067
photometric centroid source offset	0.50 ± 0.00	1609.62	0.50 ± 0.00	-0.01 ± 0.00

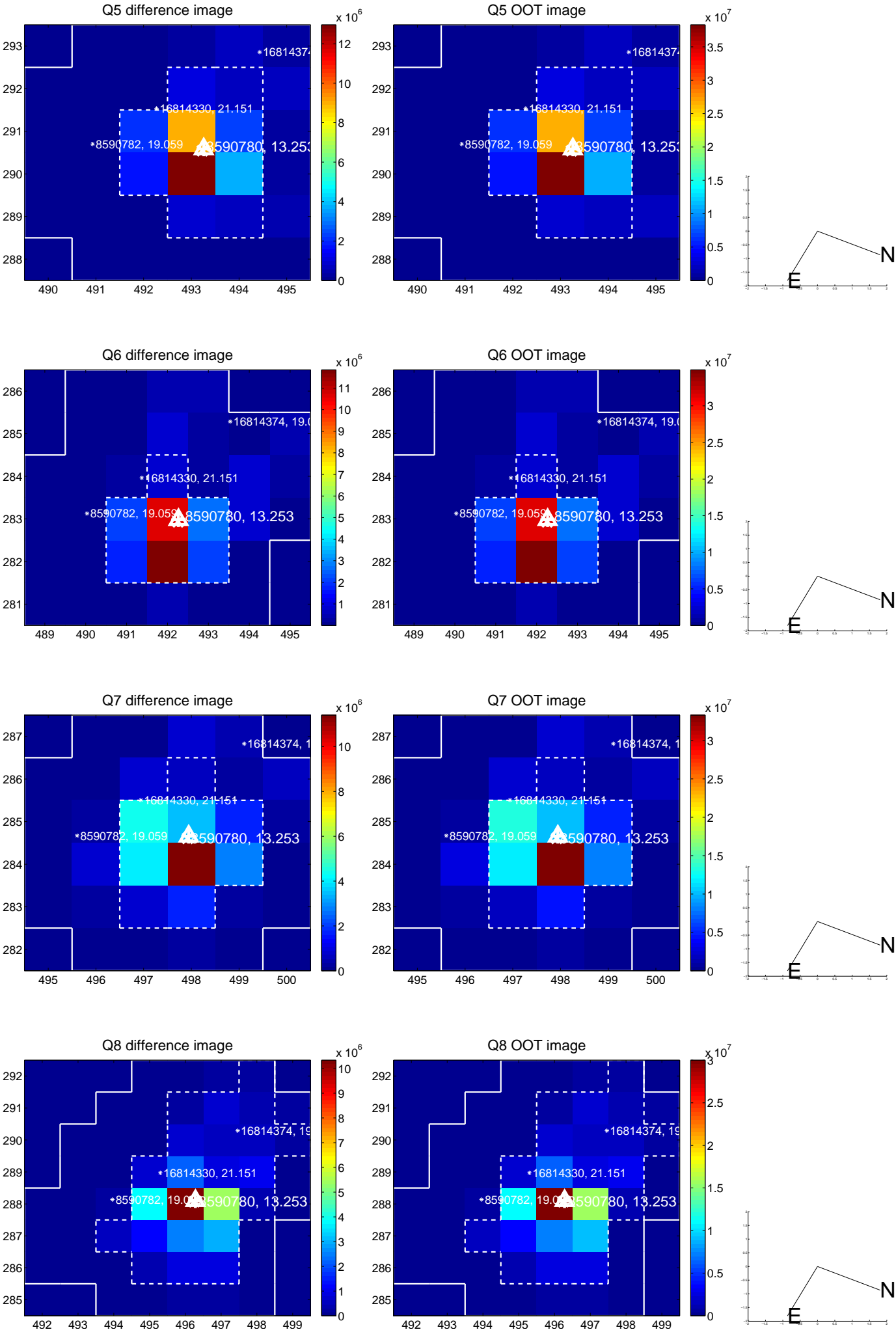


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

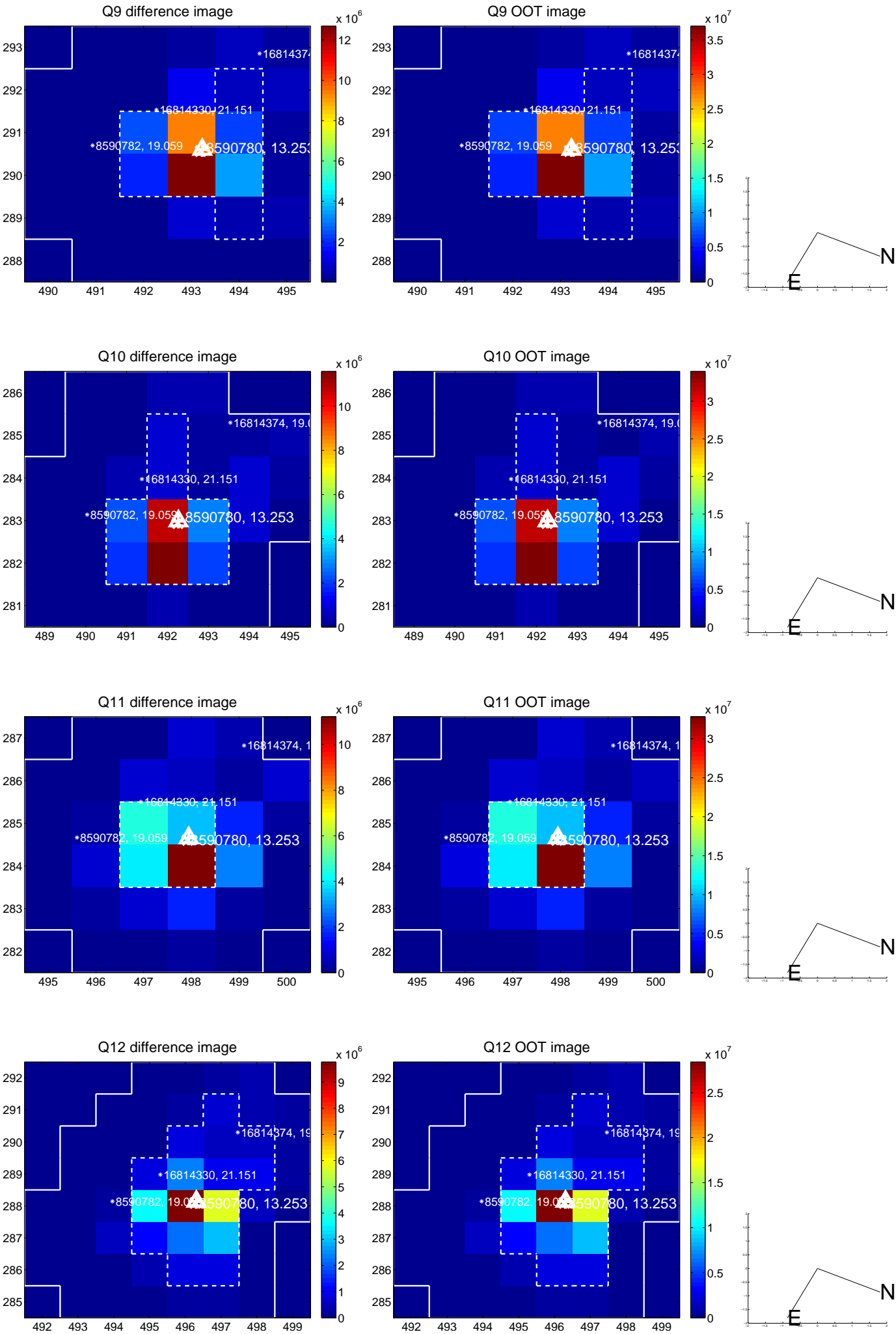
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



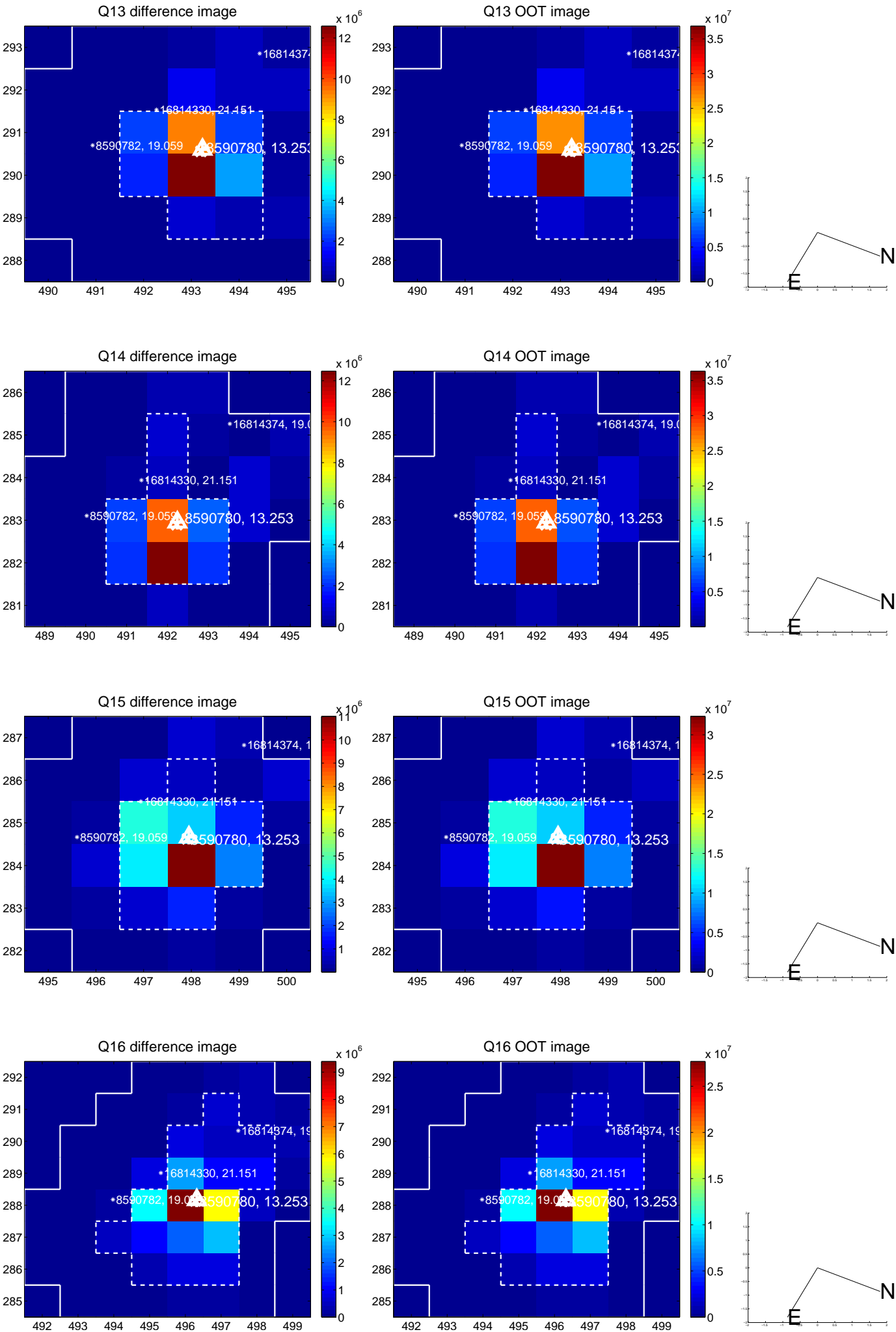
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



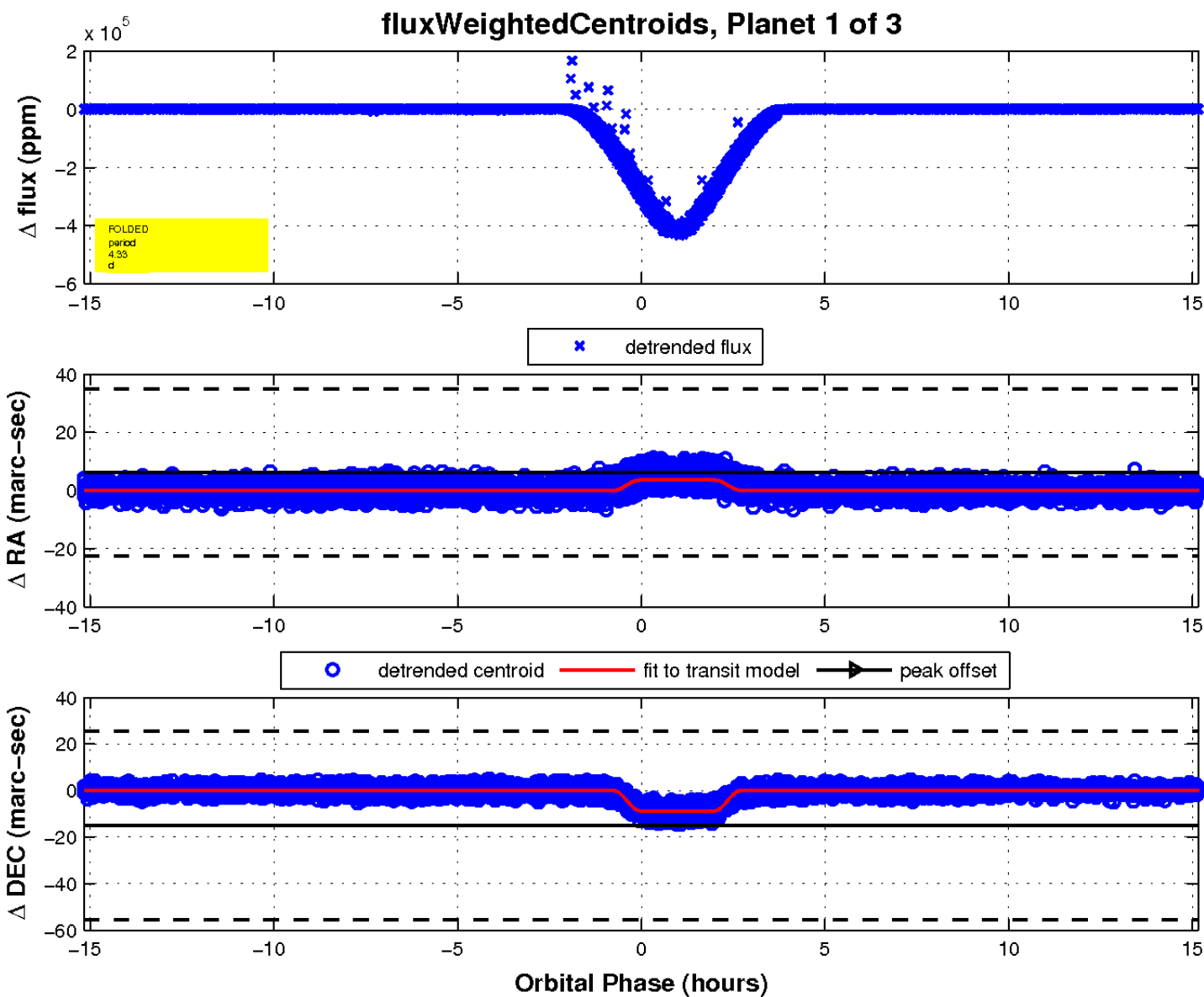
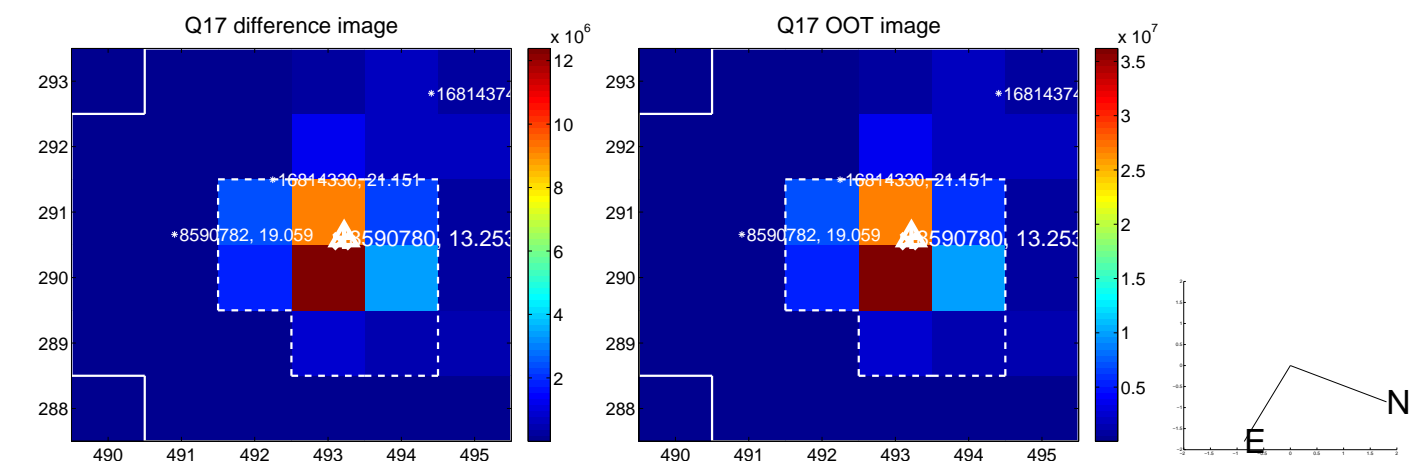
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

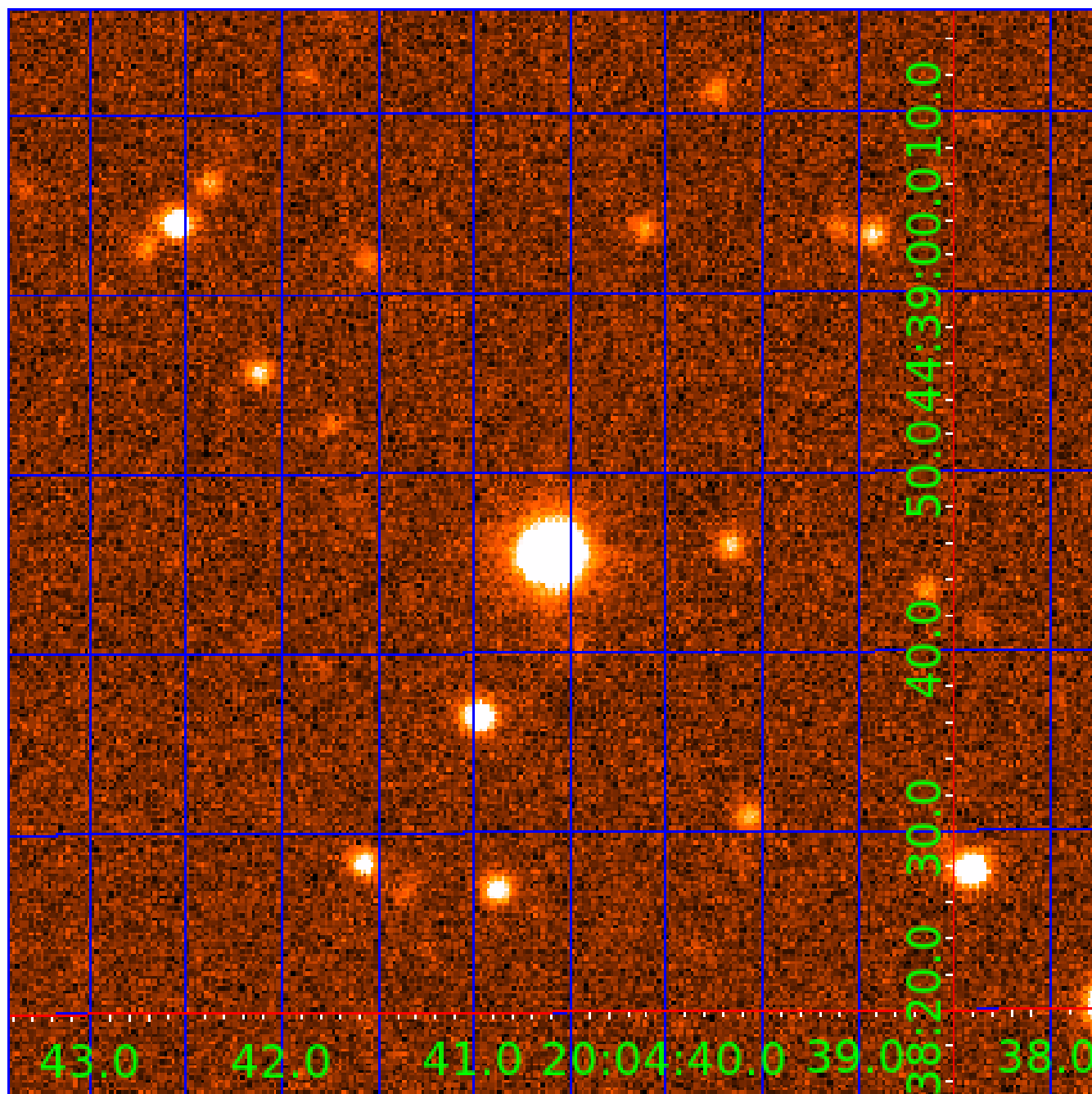


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008590780

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})
008590780-01	OBS	6183.01	4.326982	132.185301	416036.5	3.500	37498.1	-1.0	1.50	6231	81.90	1138.85
008590780-02	OBS	No	6.490170	135.483608	2822.7	15.311	2150.4	149.8	1.50	6231	14.64	663.29
008590780-03	OBS	No	6.490356	134.126489	19156.9	15.000	1875.3	-1.0	1.50	6231	20.86	663.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008590780-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
008590780-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008590780-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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.

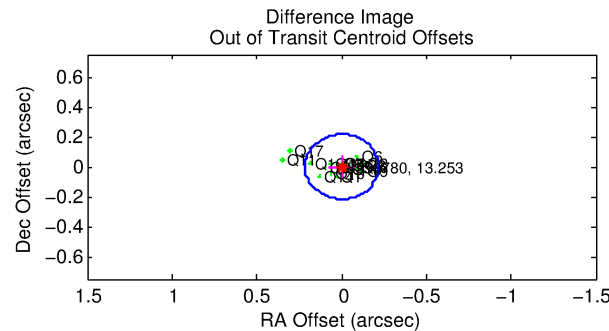
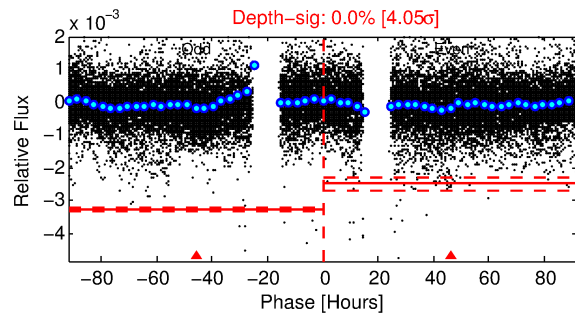
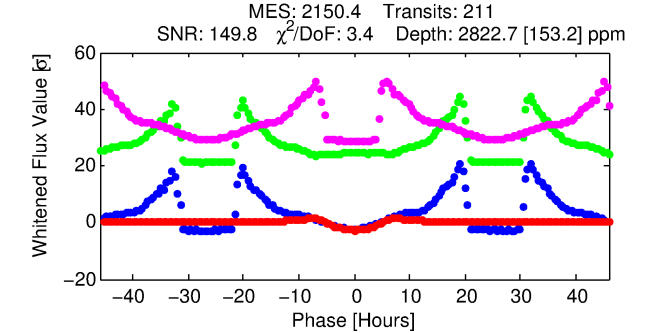
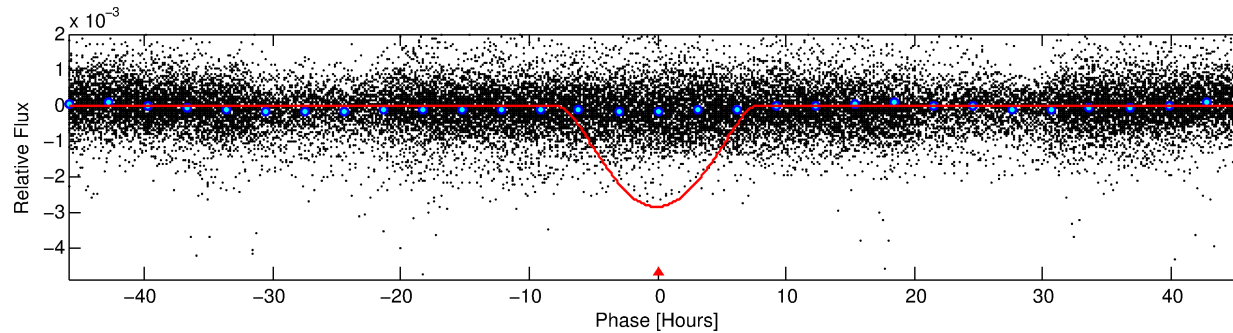
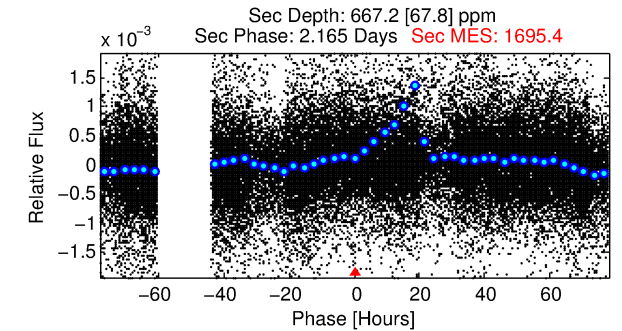
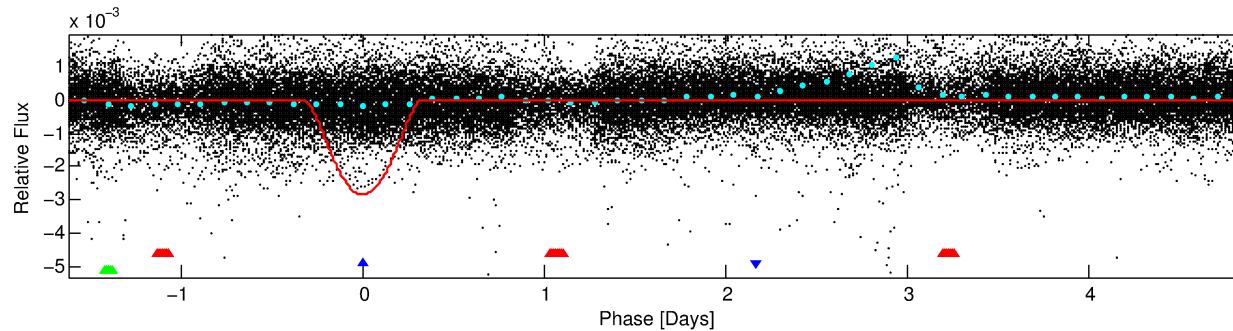
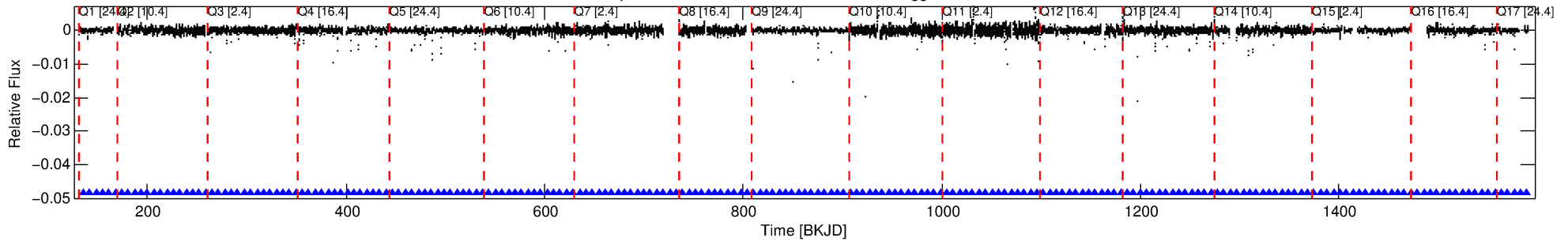
Ephemeris Match Information For 008590780-02

No Significant Match Found

DV One-Page Summary

KIC: 8590780 Candidate: 2 of 3 Period: 6.490 d
KOI: K06183 Corr: No Ephemeris Match

Kp: 13.25 R*: 1.50 Rs Teff: 6231.0 K Logg: 4.08 Fe/H: -0.460



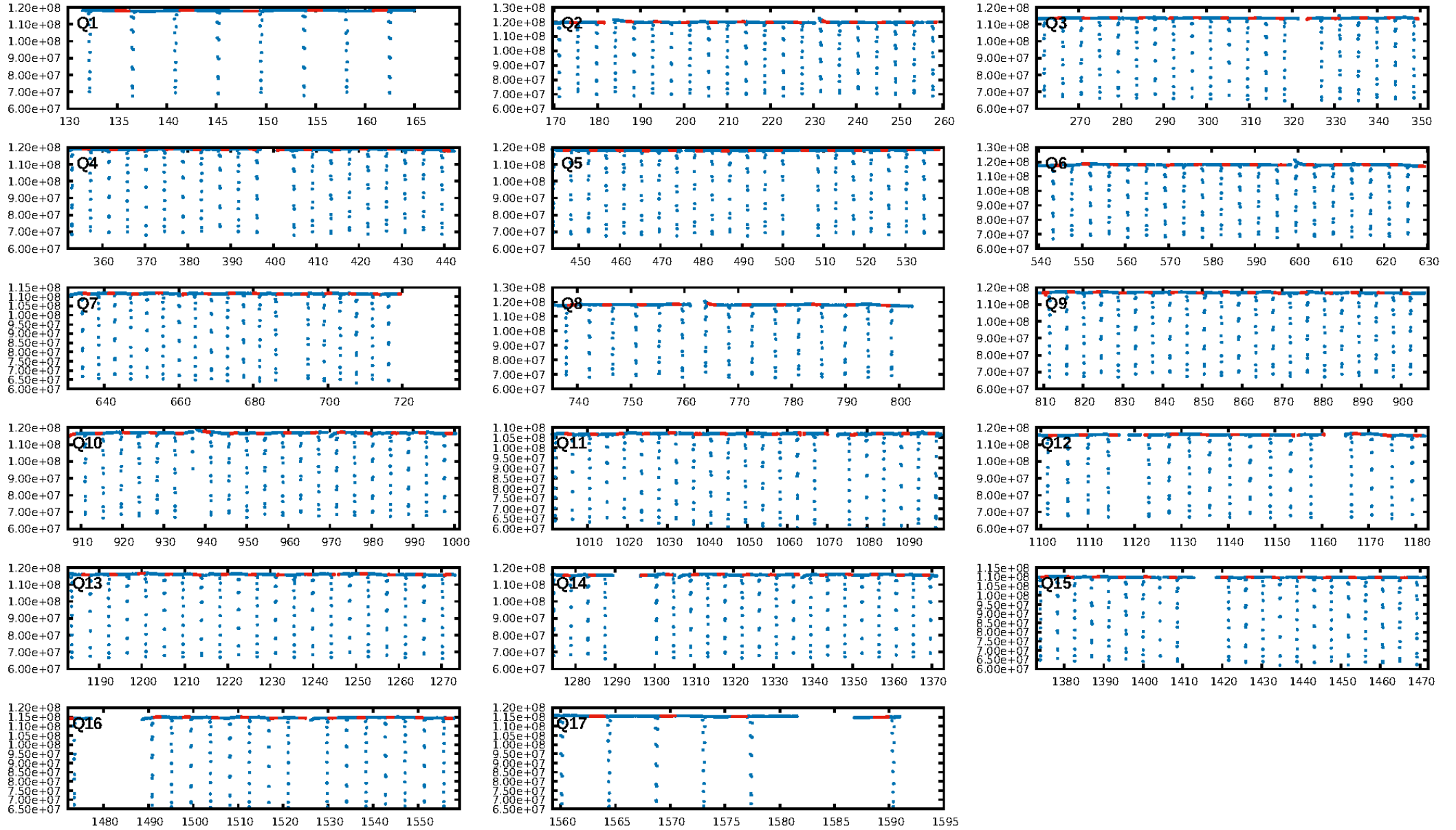
DV Fit Results:

Period = 6.49017 [0.00003] d
Epoch = 135.4836 [0.0040] BKJD
Rp/R* = 0.0894 [0.0222]
a/R* = 1.74 [0.04]
b = 1.00 [0.03]
Seff = 663.29 [395.66]
Teq = 1294 [193] K
Rp = 14.64 [6.09] Re
a = 0.0677 [0.0236] AU
Ag = 7.86 [6.06] [1.13σ]
Teff = 3350 [439] K [4.29σ]

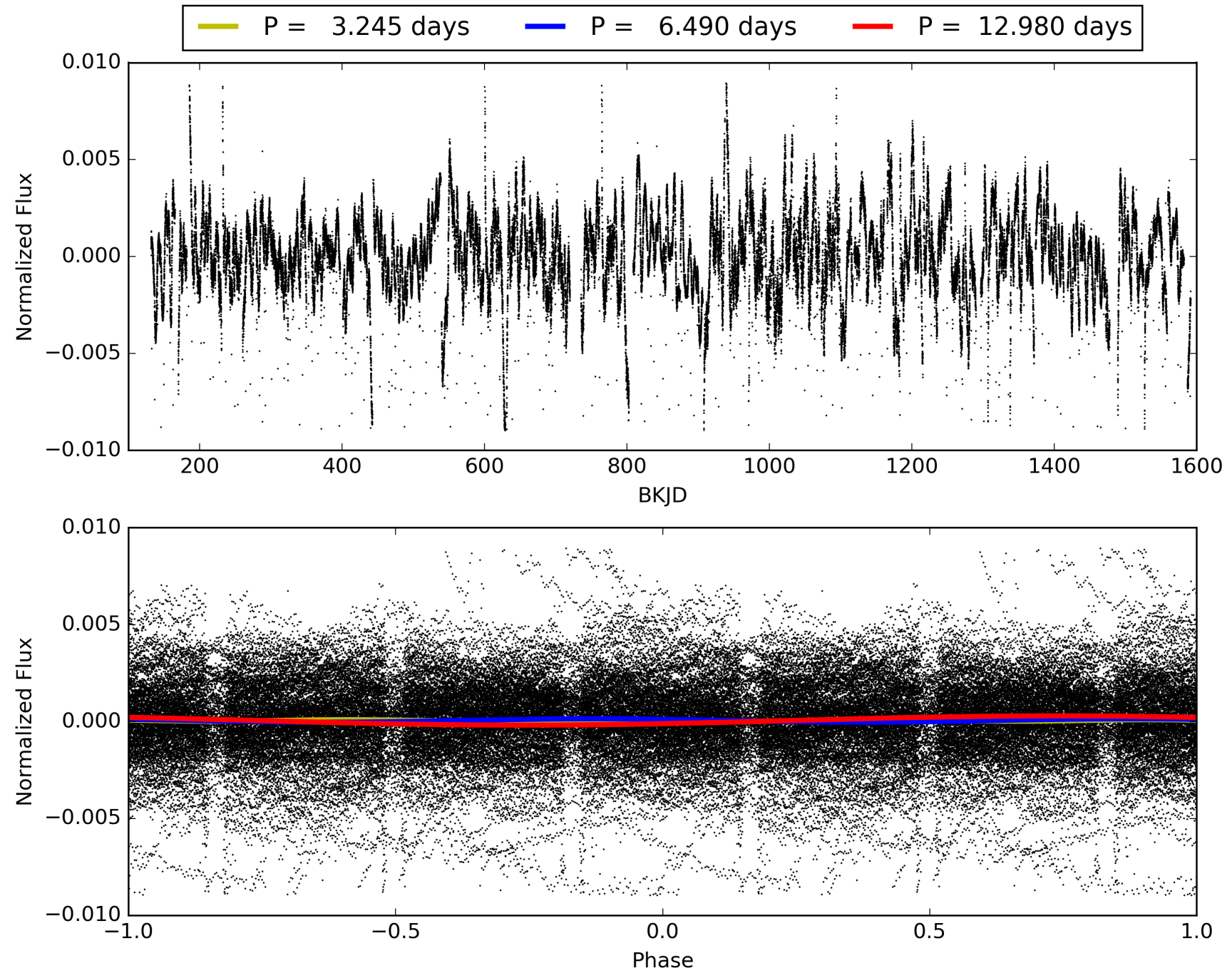
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.31σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [202/202]
GhostDiagnostic-chr: 3.67
Centroid-sig: 0.2%
Centroid-so: 0.498 arcsec [23.60σ]
OotOffset-rm: 0.001 arcsec [0.01σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.206 arcsec [2.81σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 008590780-02, PDC Light Curves

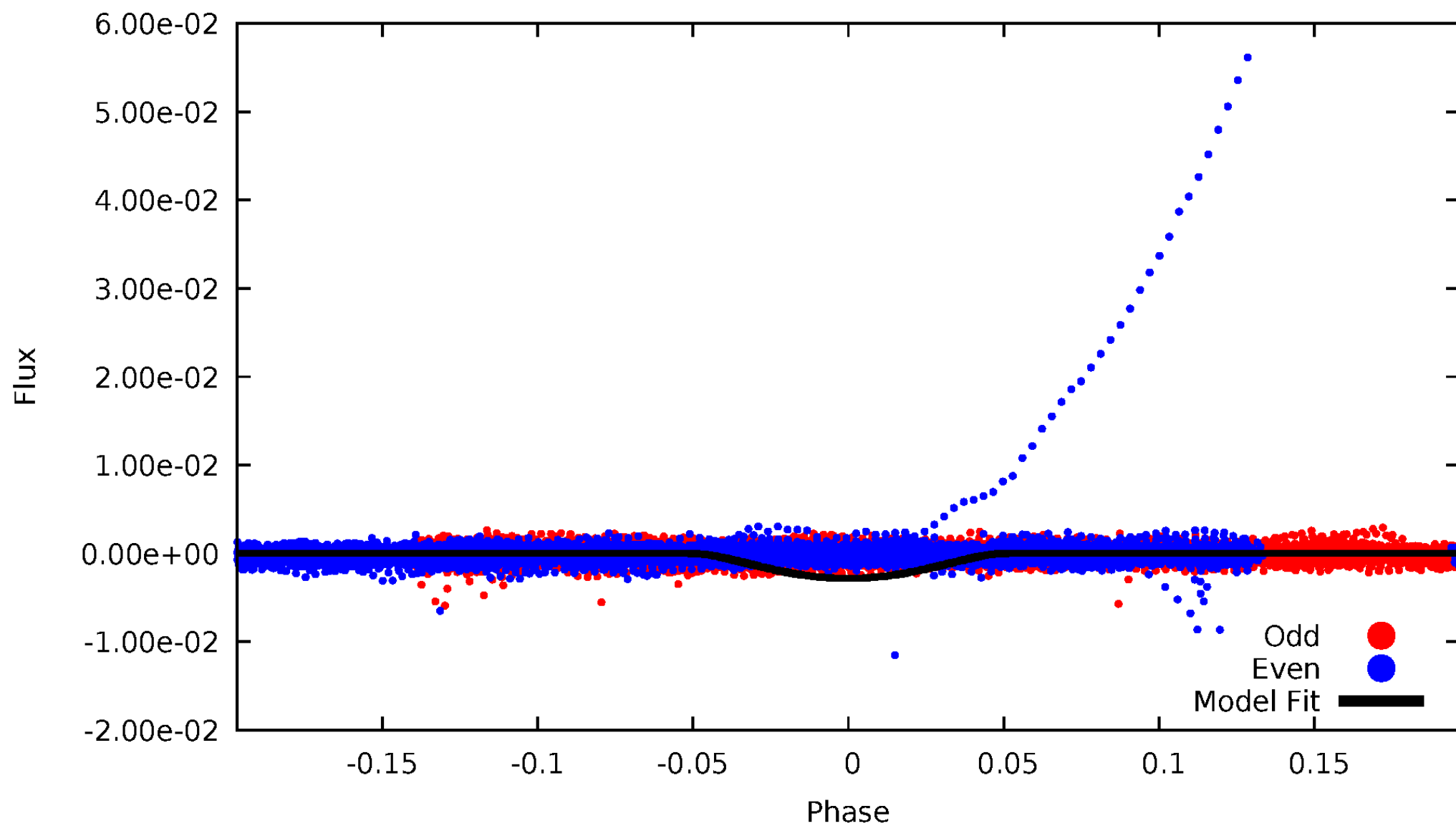


TCE 008590780-02



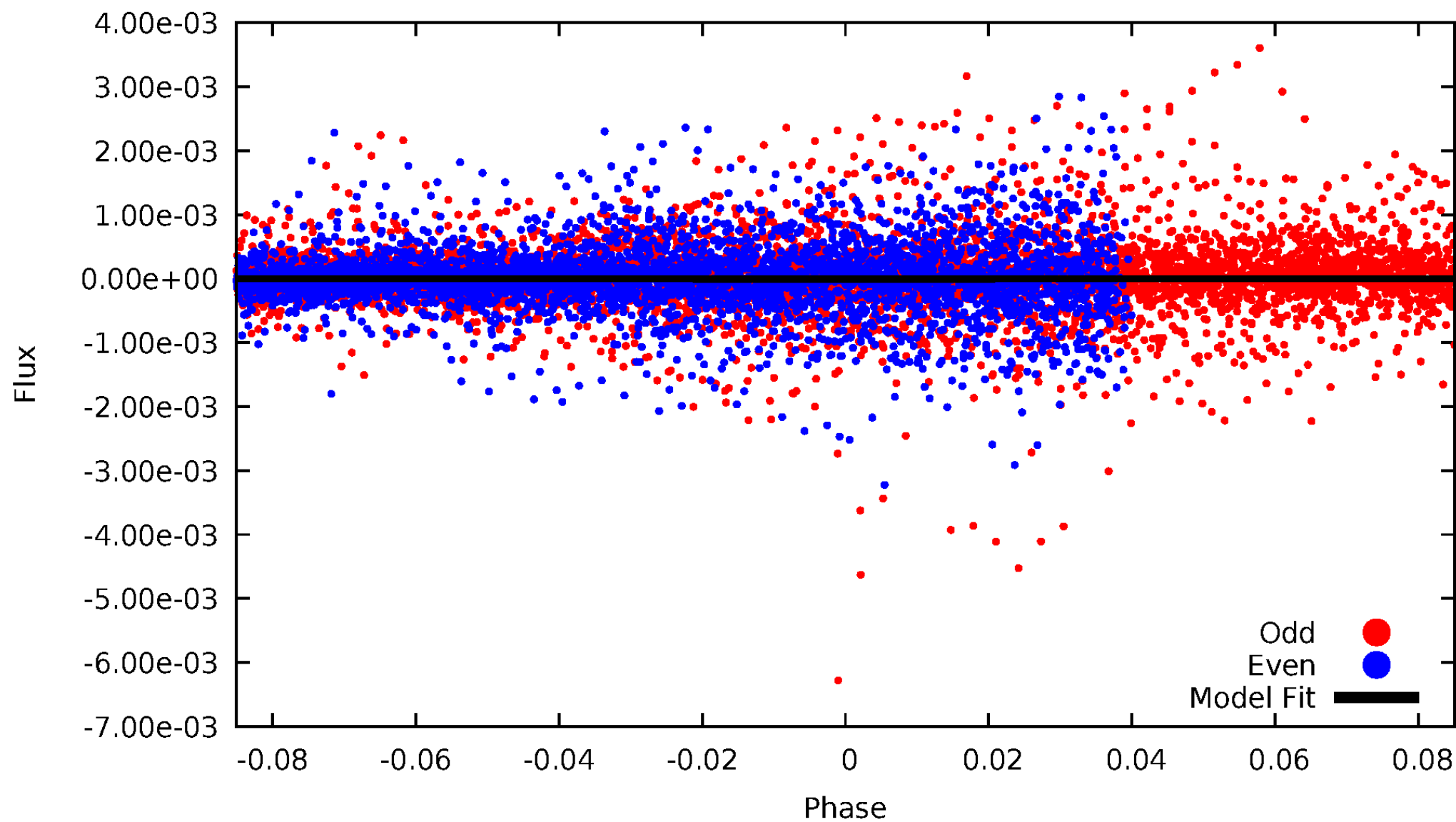
DV Odd/Even

TCE 008590780-02



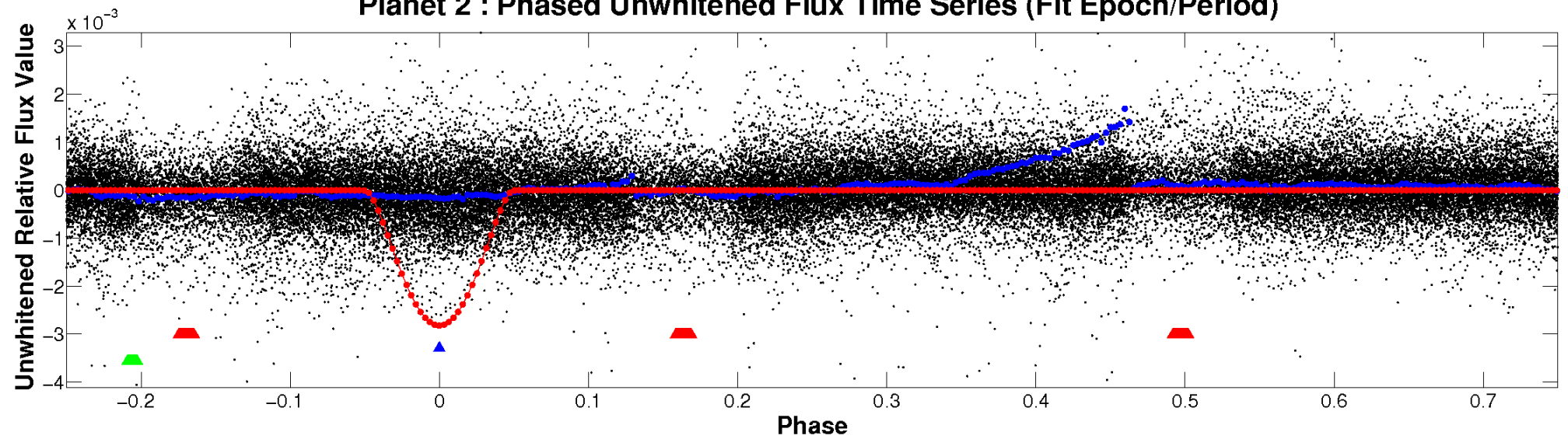
ALT Odd/Even

TCE 008590780-02

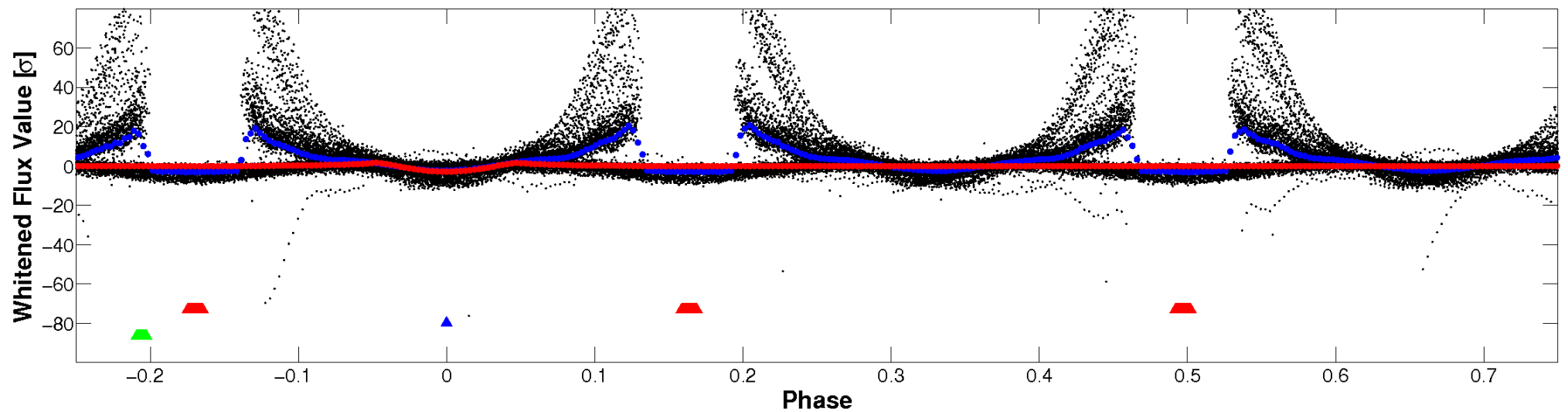


Non-Whitened Vs. Whitened Light Curve

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

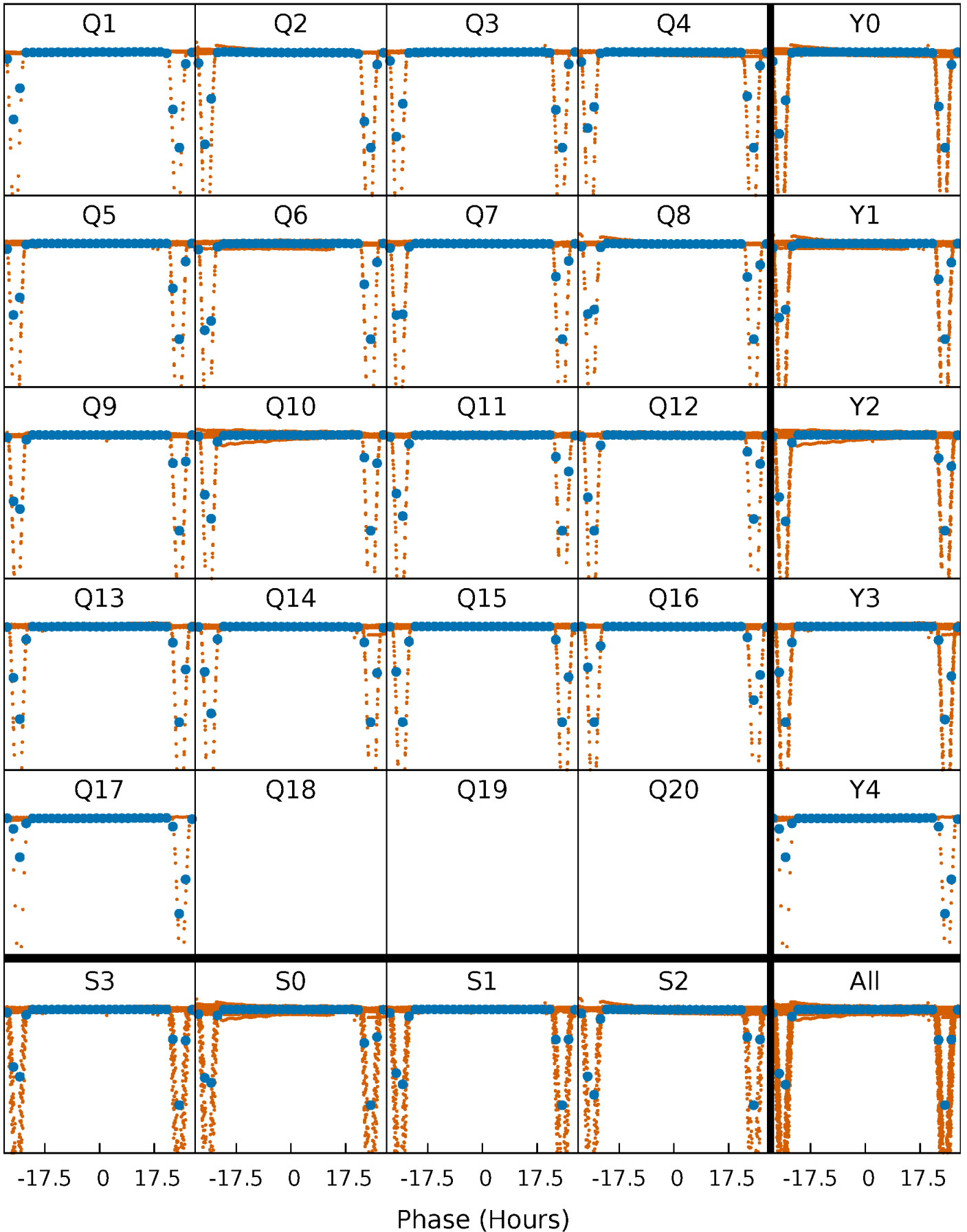


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



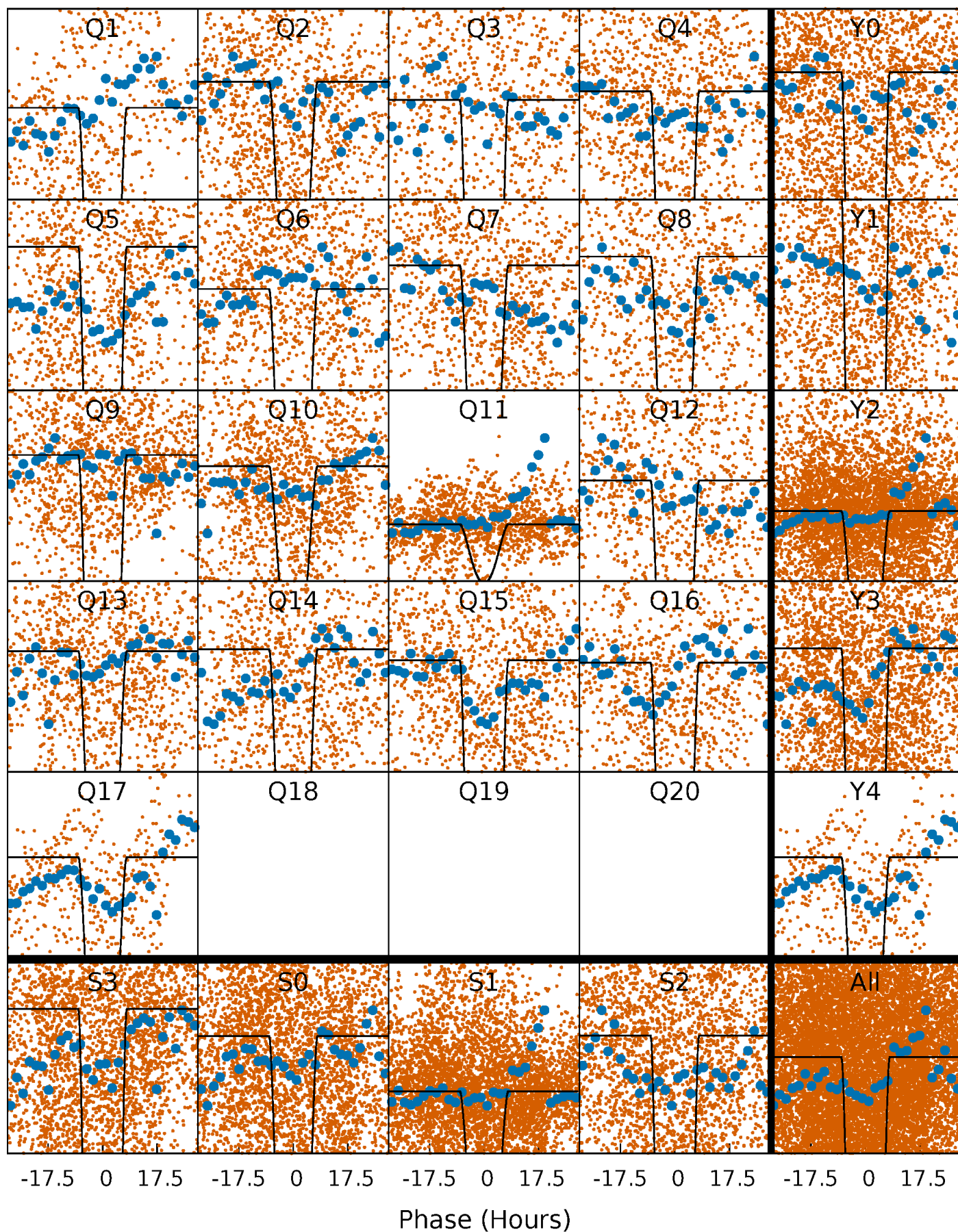
PDC Quarter-Phased Transit Curves

TCE 008590780-02 P= 6.490170 Days $T_0=135.483608$ (BKJD)



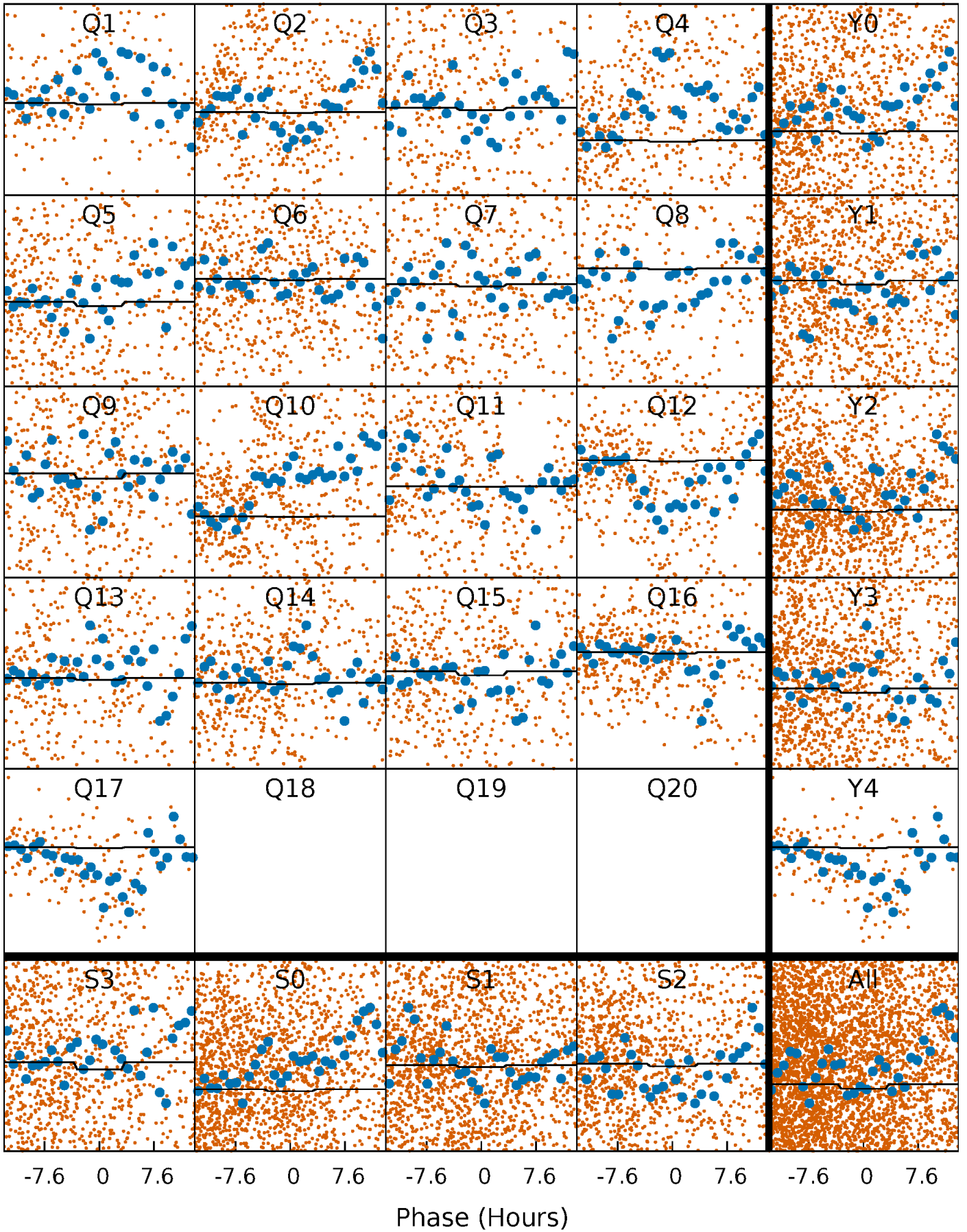
DV Quarter-Phased Transit Curves

TCE 008590780-02 P= 6.490170 Days $T_0=135.483608$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

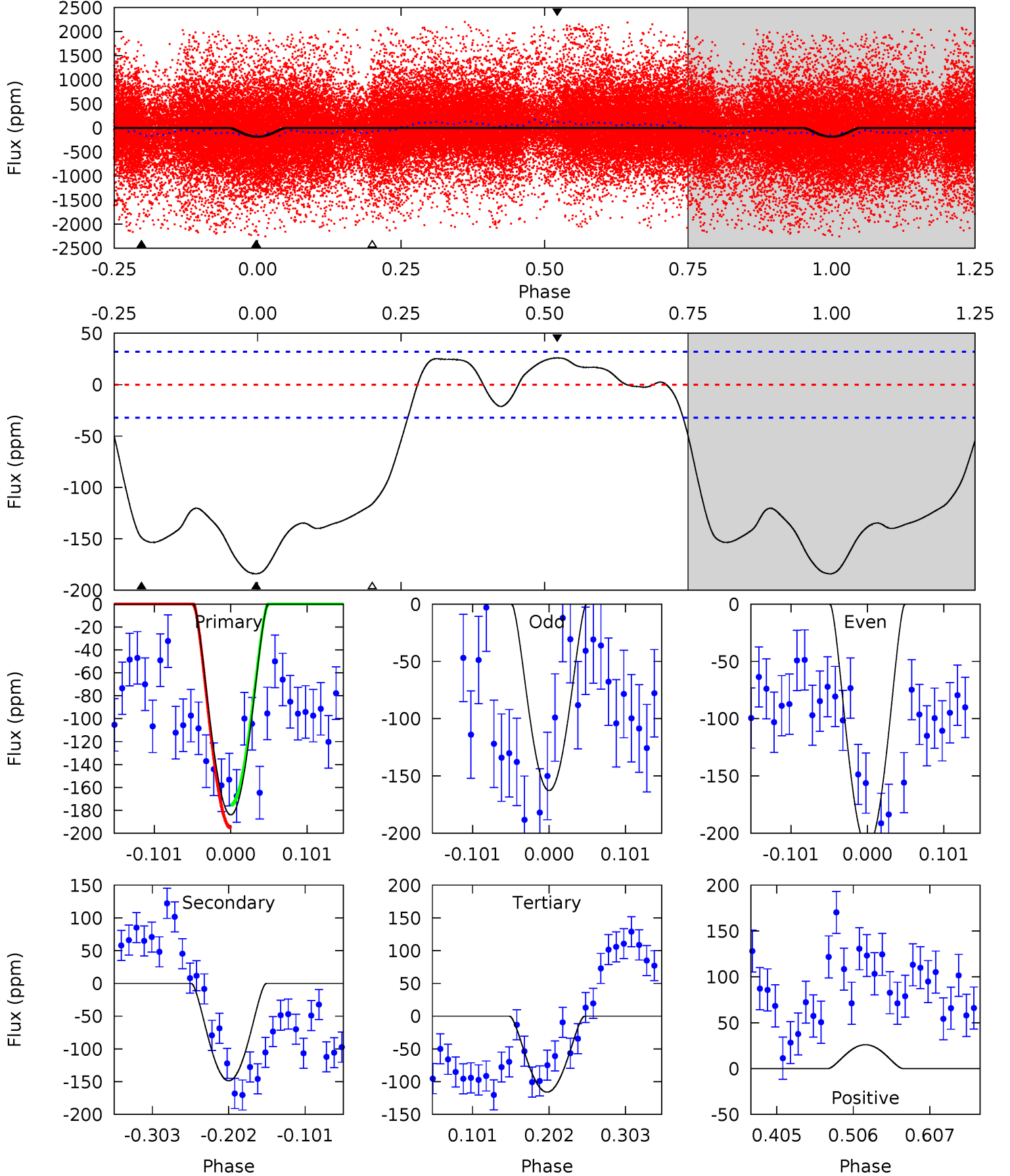
TCE 008590780-02 $P = 6.490356$ Days $T_0 = 136.048317$ (BKJD)



DV Model-Shift Uniqueness Test

008590780-02, P = 6.490170 Days, E = 128.993438 Days

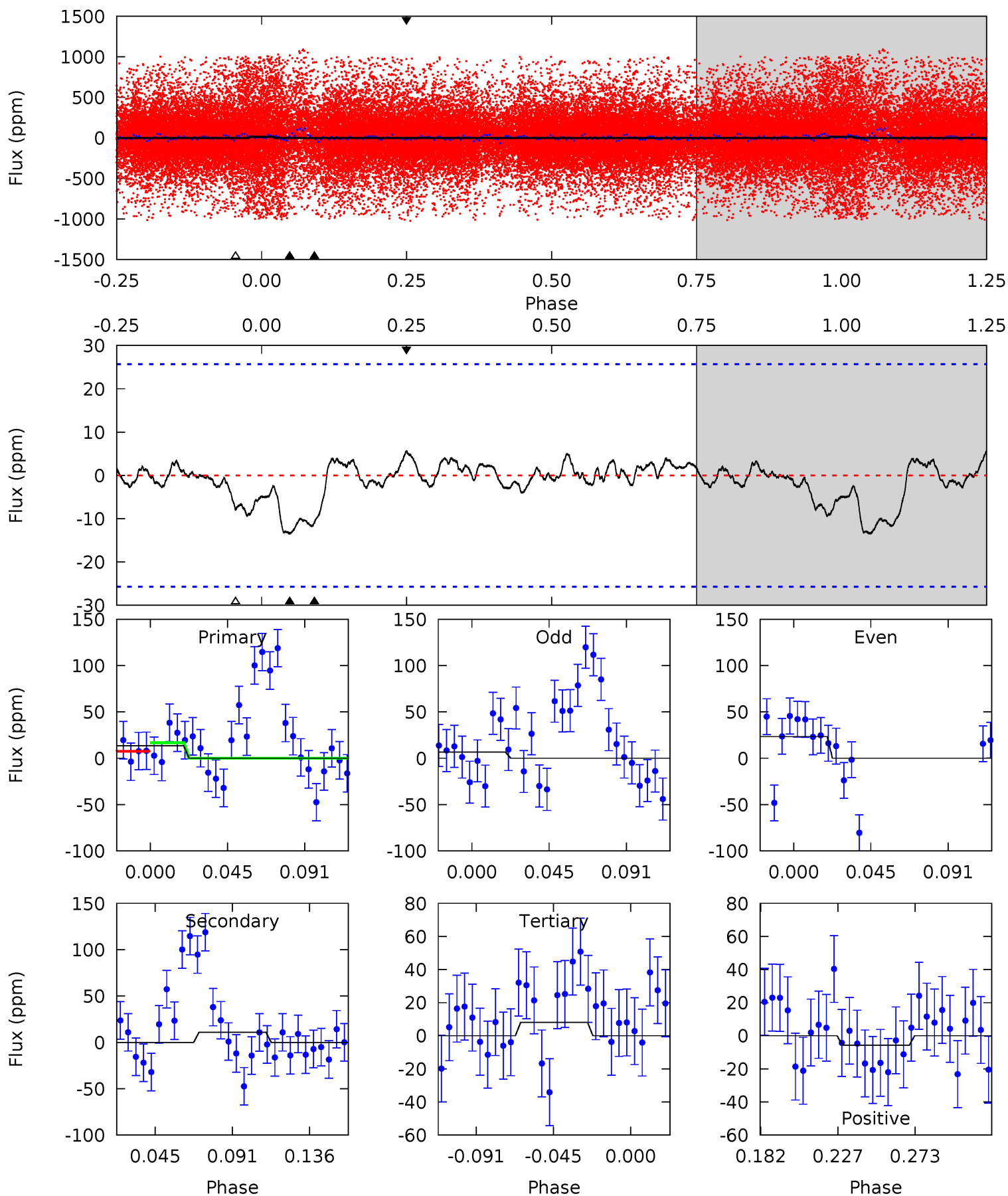
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.2	21.2	16.5	3.70	4.56	1.64	7.32	9.70	22.5	4.67	17.5	3.48	0.99	0.12	1.41



Alt Model-Shift Uniqueness Test

008590780-02, P = 6.490356 Days, E = 129.557961 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.48	2.00	1.47	1.04	4.73	2.00	0.50	1.00	1.43	0.52	0.95	1.54	-1.25	0.30	0.86



Stellar Parameters For KIC 008590780

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6231^{+188}_{-207}	$4.078^{+0.350}_{-0.150}$	$-0.460^{+0.300}_{-0.300}$	$1.501^{+0.410}_{-0.501}$	$0.984^{+0.146}_{-0.133}$	$0.410^{+0.945}_{-0.199}$
	+3%/-3%	+9%/-4%	+65%/-65%	+27%/-33%	+15%/-14%	+231%/-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 008590780-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-149 ± 7	$13.93^{+4.43}_{-4.42}$	1784^{+127}_{-181}	2910^{+305}_{-218}	$1.948^{+2.120}_{-0.811}$
Alt.	-11 ± 5	$2.57^{+2.83}_{-1.75}$	1774^{+152}_{-163}	3214^{+1730}_{-770}	$3.588^{+32.945}_{-2.882}$

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

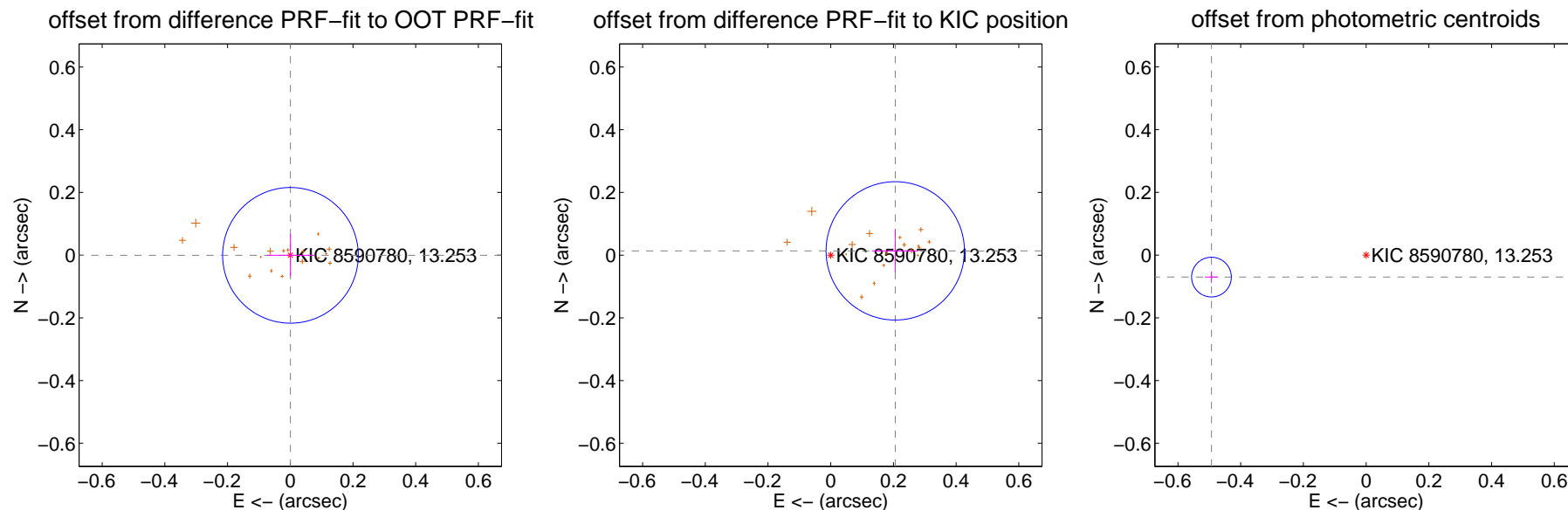
DV Centroid Data

Supplemental centroid analysis for 008590780-02. Kepler magnitude: 13.25. Transit SNR 149.77

There are 0 quarters with good PRF difference image offsets

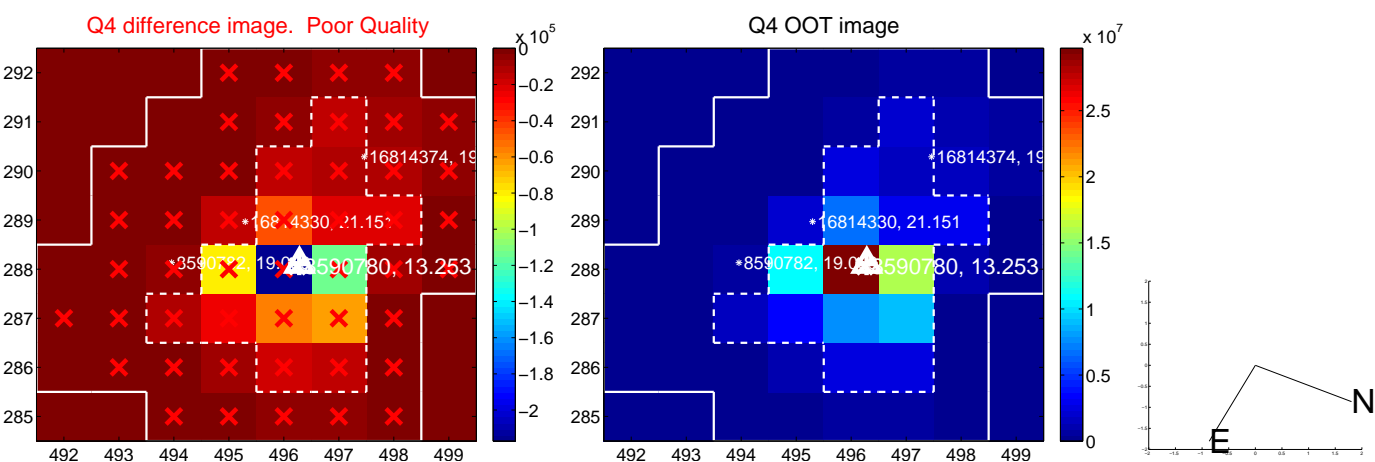
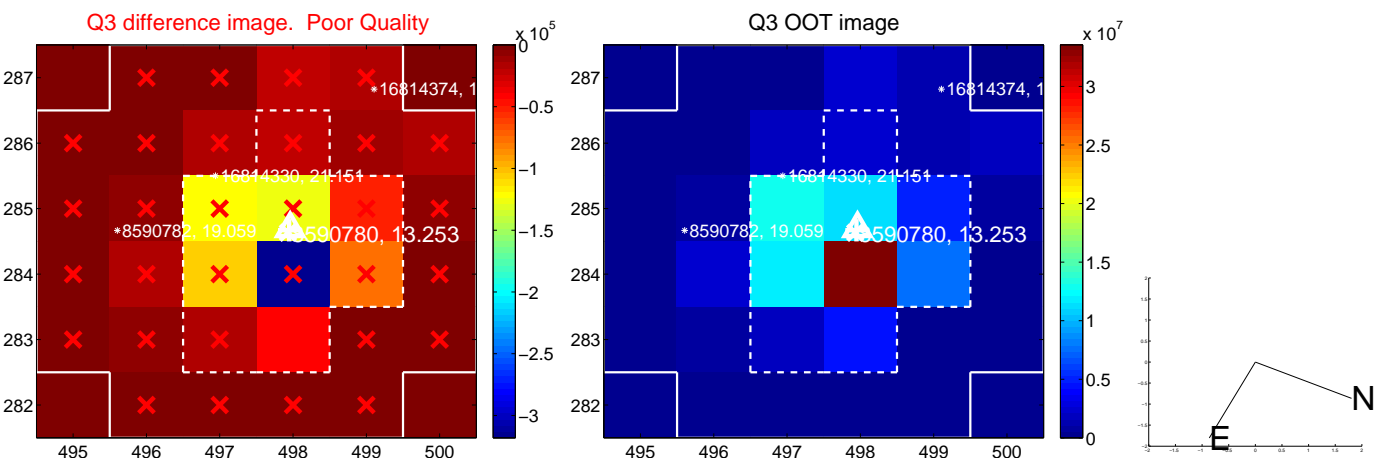
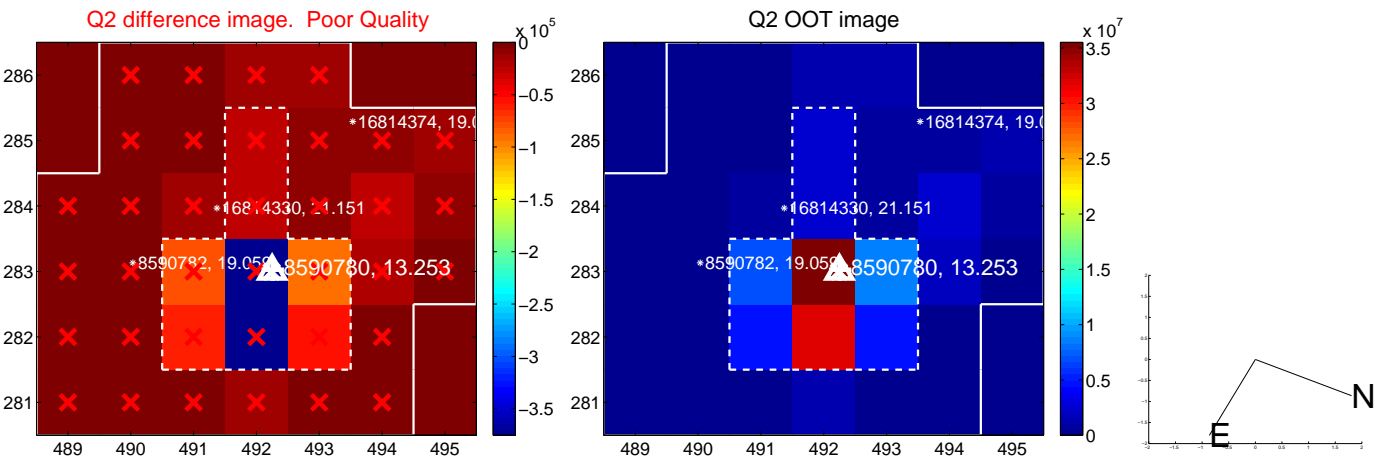
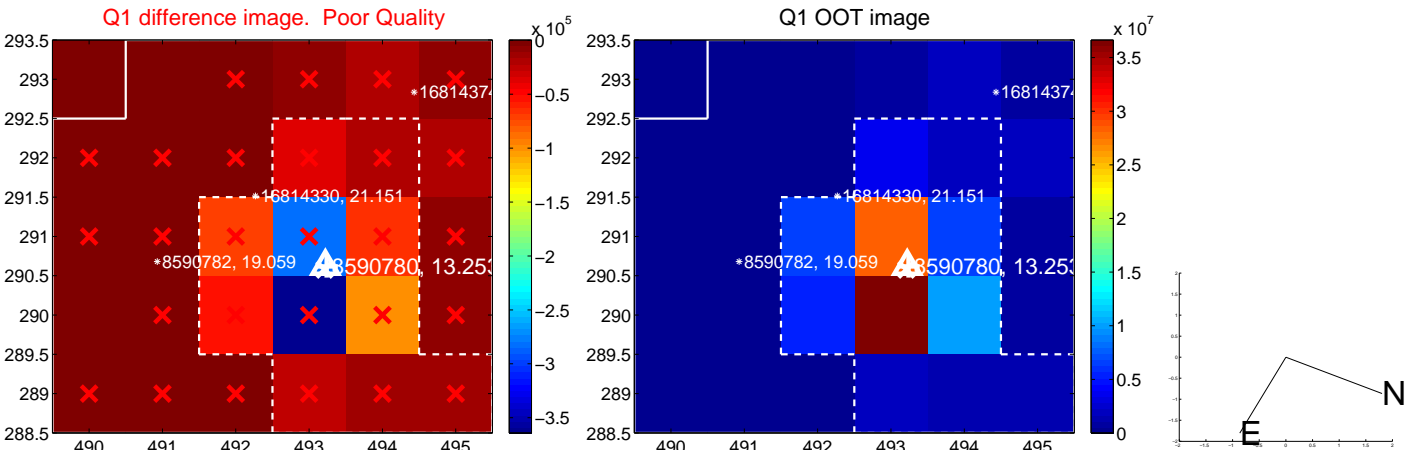
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.001 ± 0.072	0.01	-0.001 ± 0.075	-0.001 ± 0.067
PRF-fit source offset from KIC position	0.206 ± 0.074	2.81	-0.206 ± 0.074	0.014 ± 0.068
photometric centroid source offset	0.50 ± 0.02	23.60	0.49 ± 0.02	-0.07 ± 0.02

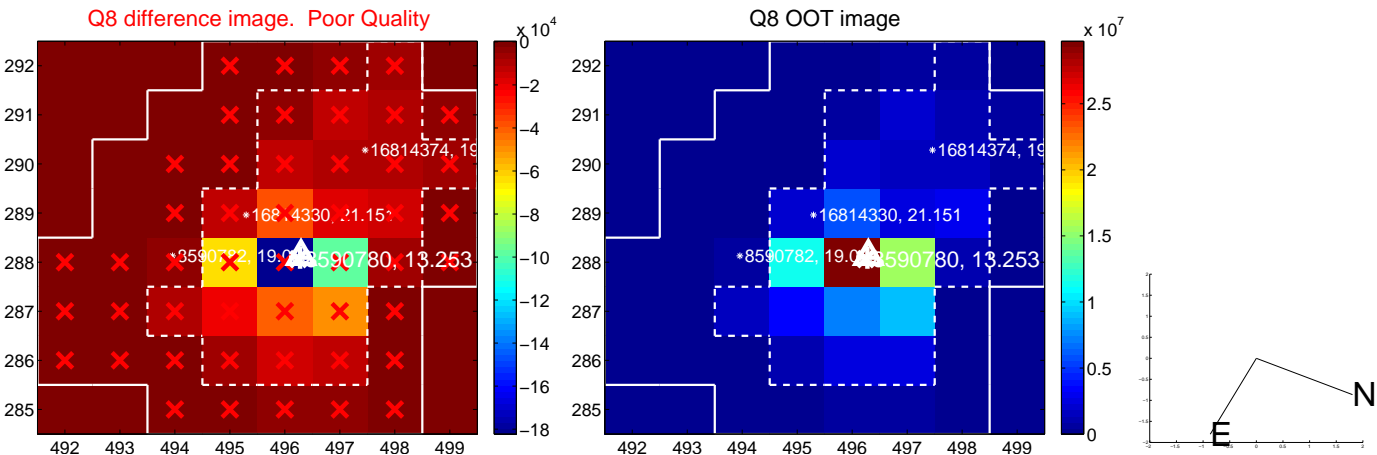
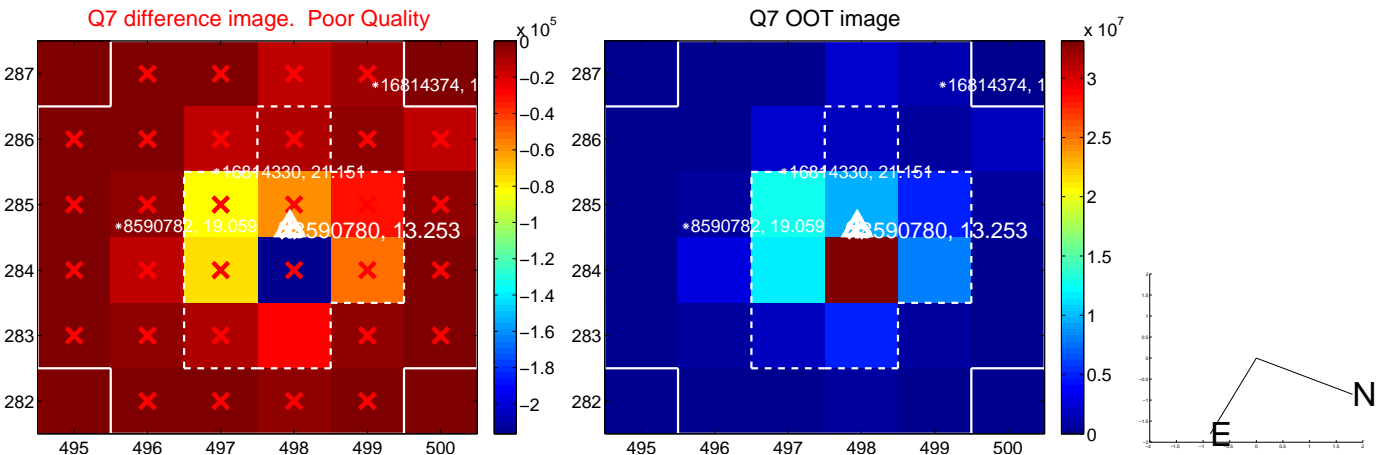
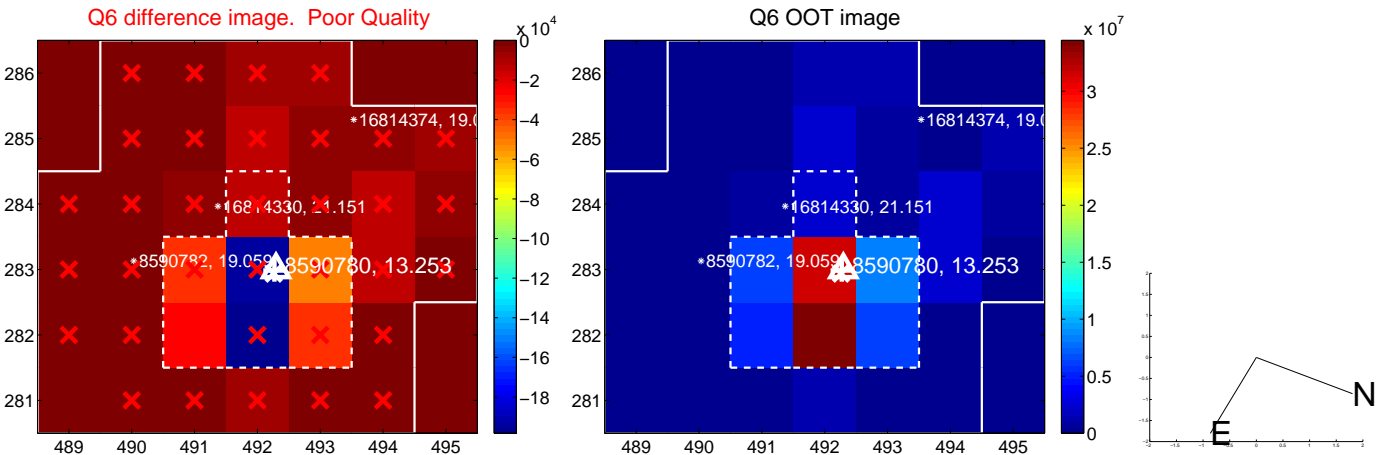
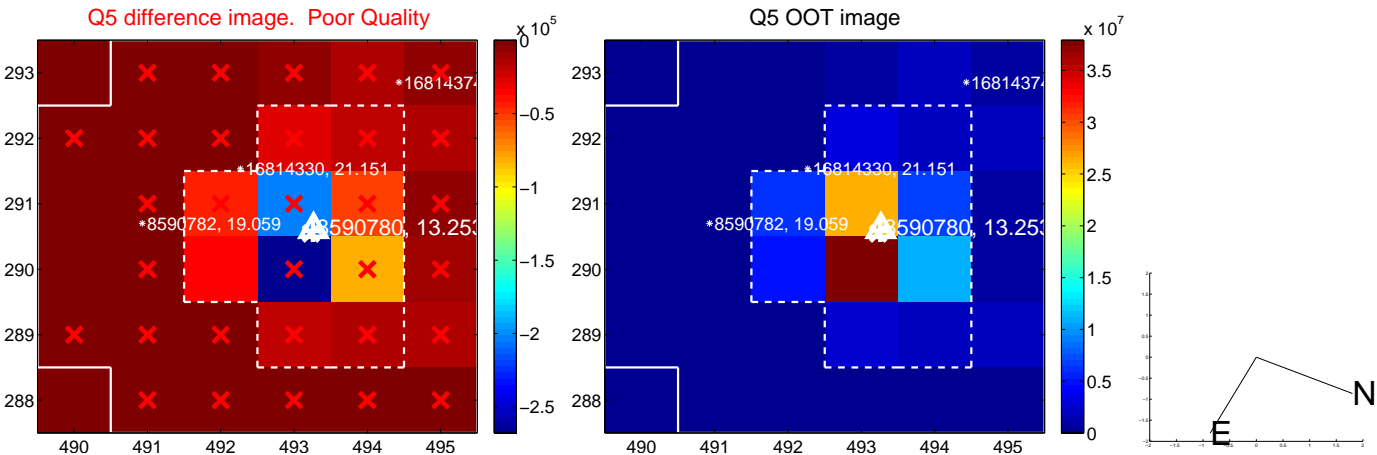


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

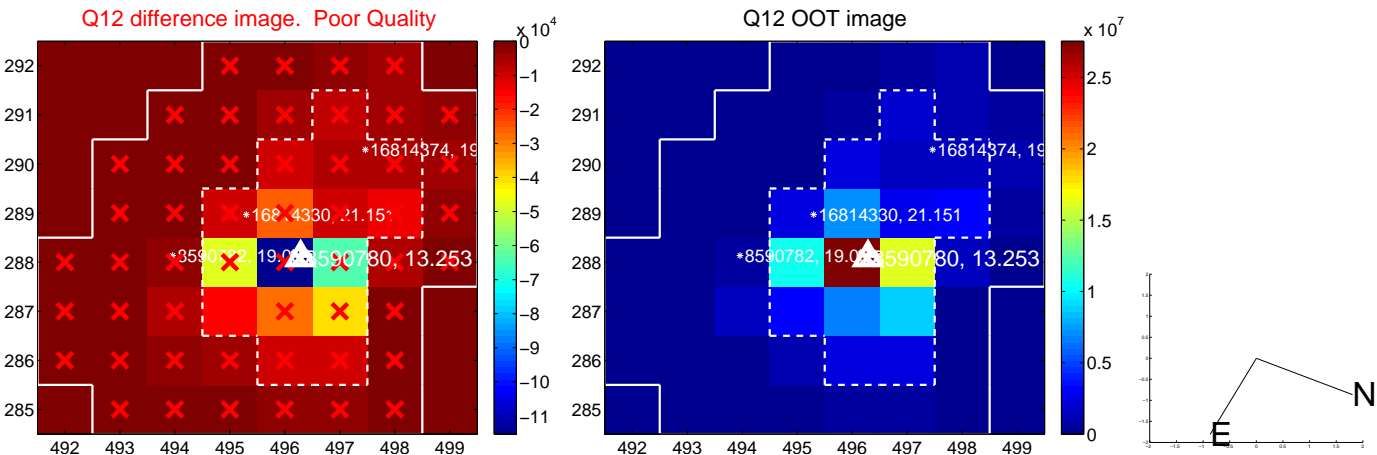
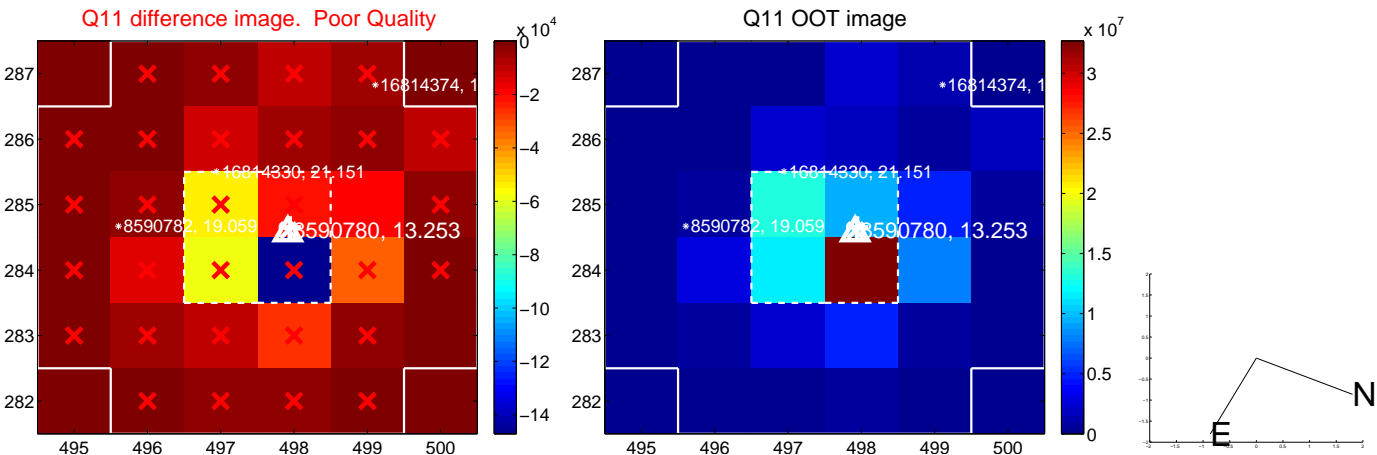
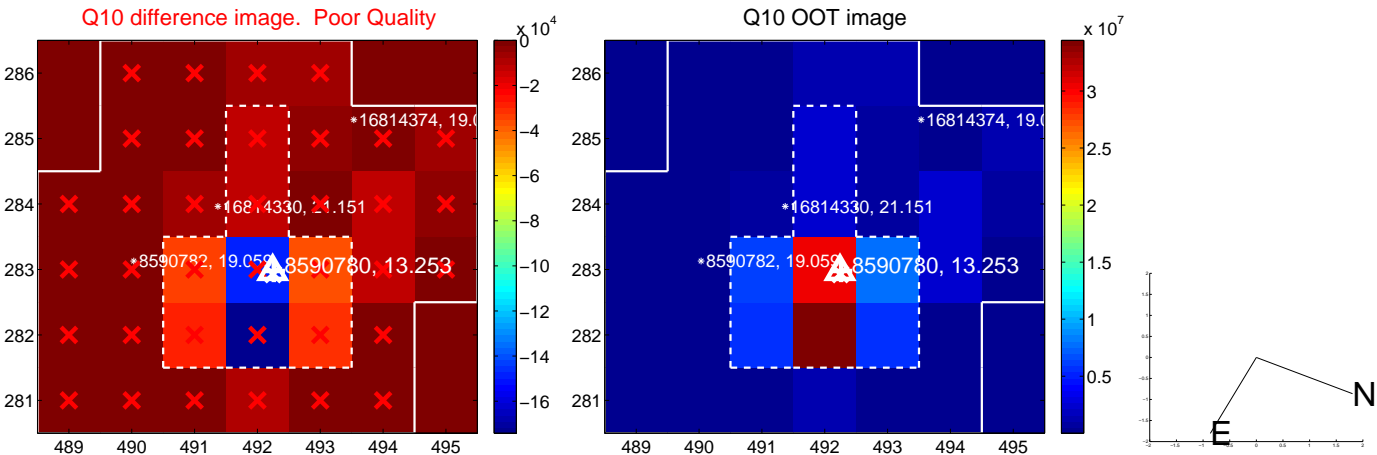
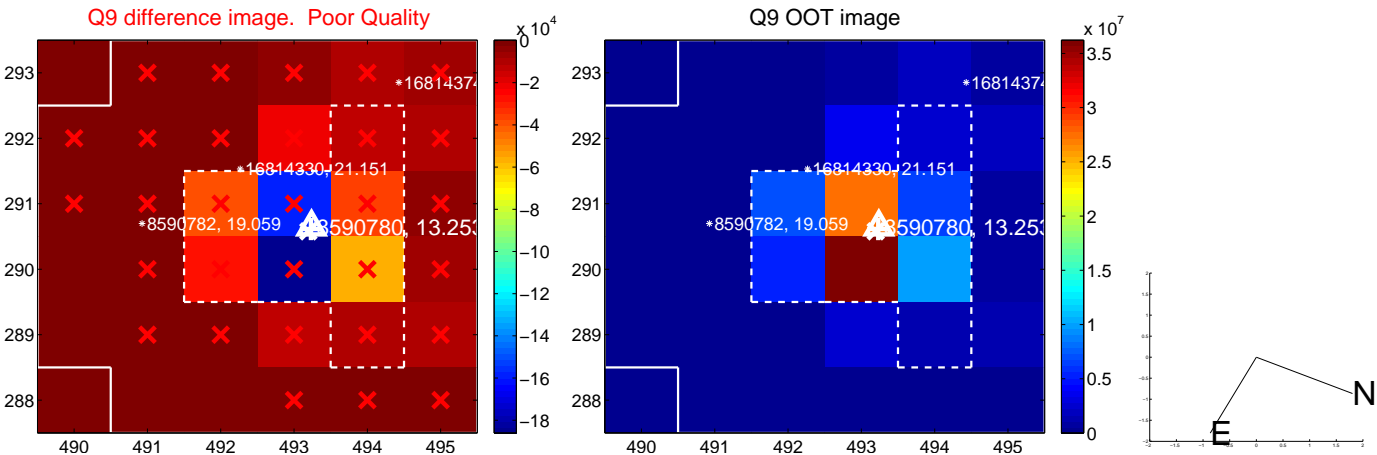
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



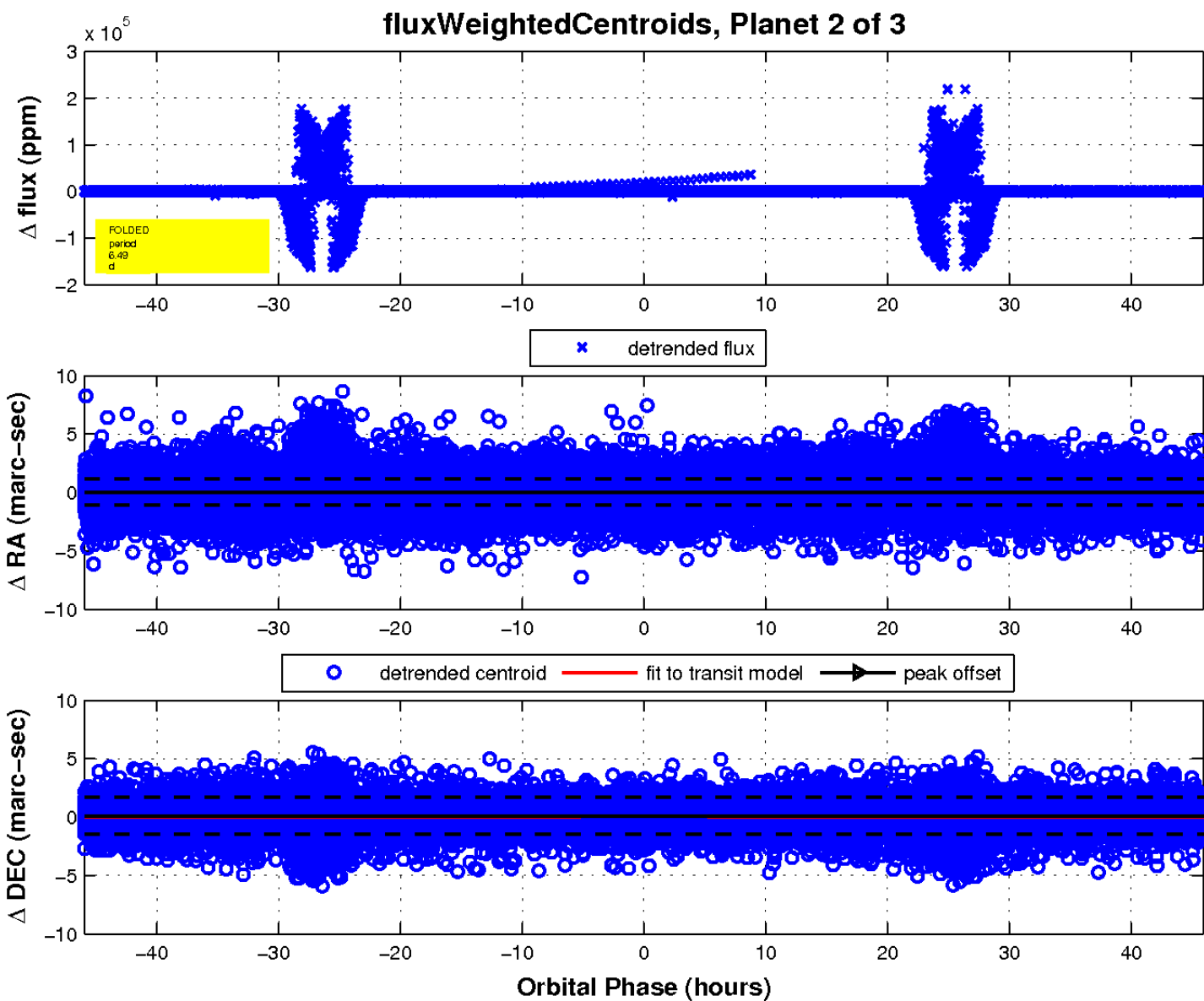
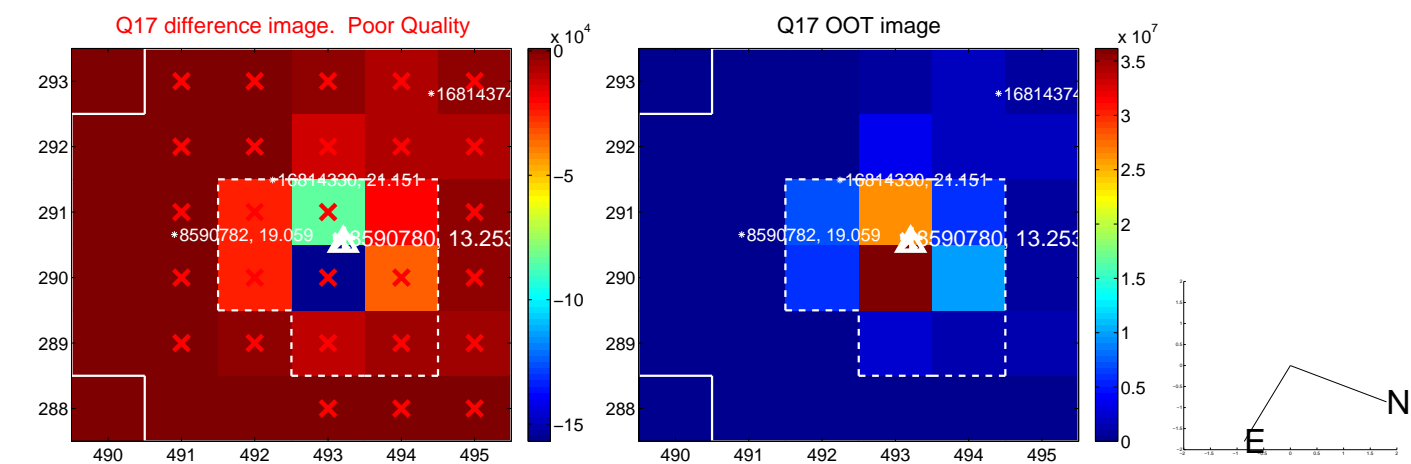
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

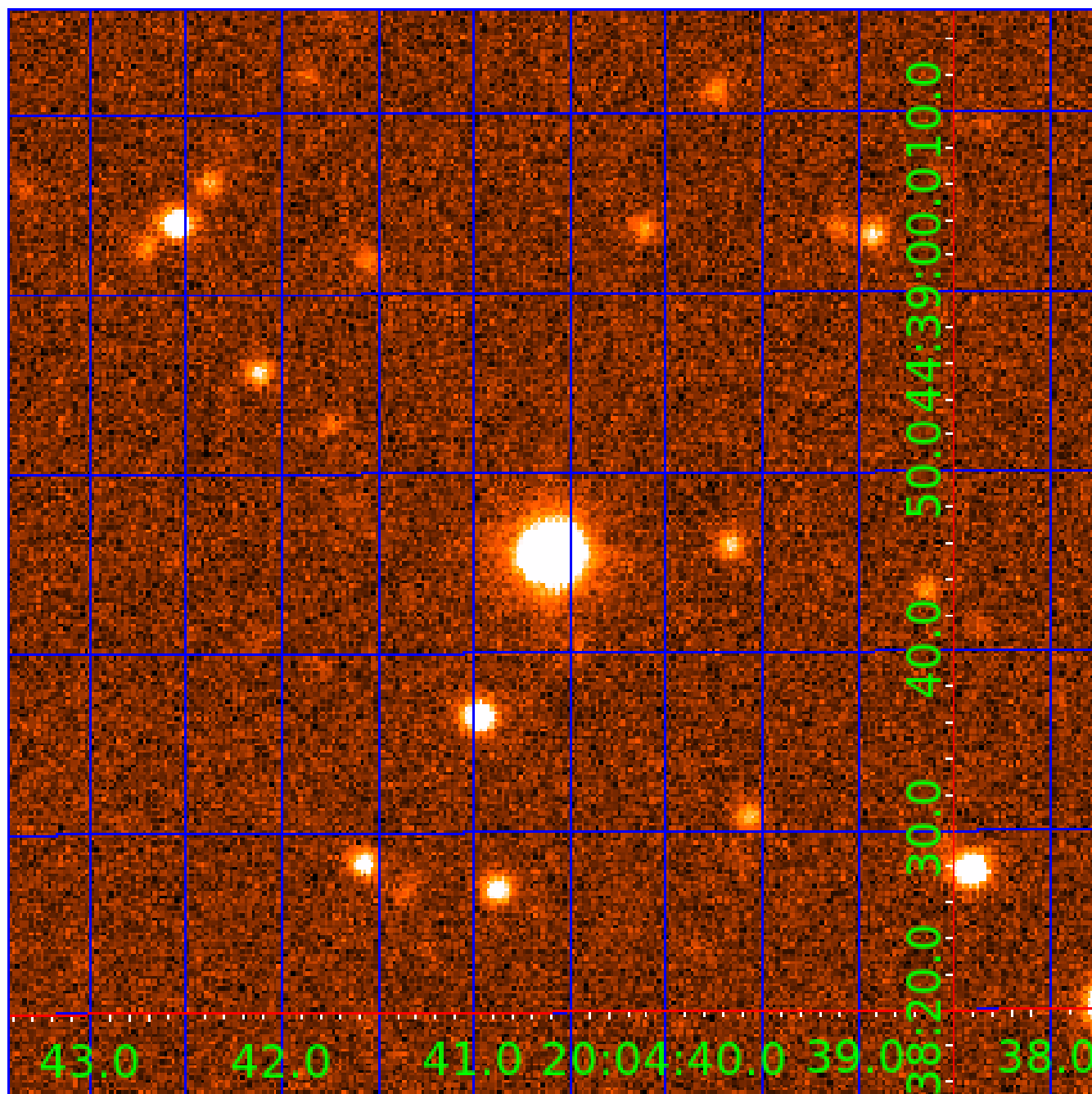


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008590780

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})
008590780-01	OBS	6183.01	4.326982	132.185301	416036.5	3.500	37498.1	-1.0	1.50	6231	81.90	1138.85
008590780-02	OBS	No	6.490170	135.483608	2822.7	15.311	2150.4	149.8	1.50	6231	14.64	663.29
008590780-03	OBS	No	6.490356	134.126489	19156.9	15.000	1875.3	-1.0	1.50	6231	20.86	663.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008590780-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
008590780-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008590780-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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 008590780-03

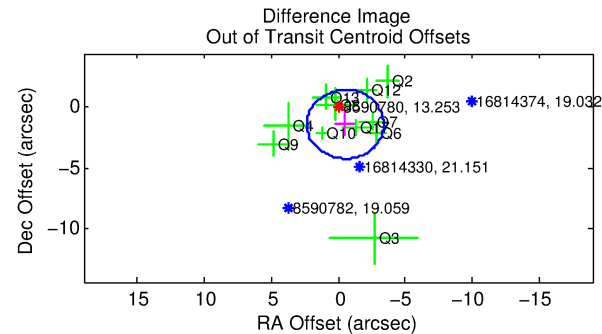
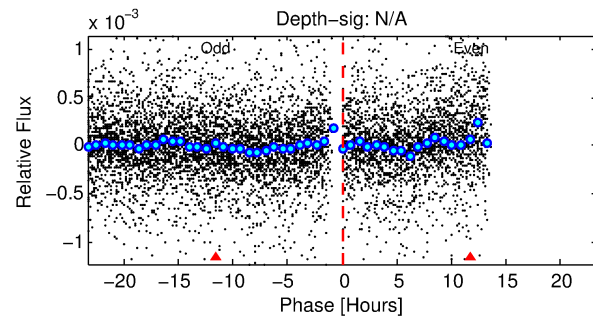
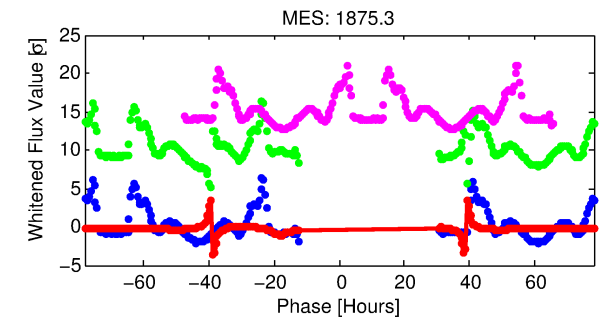
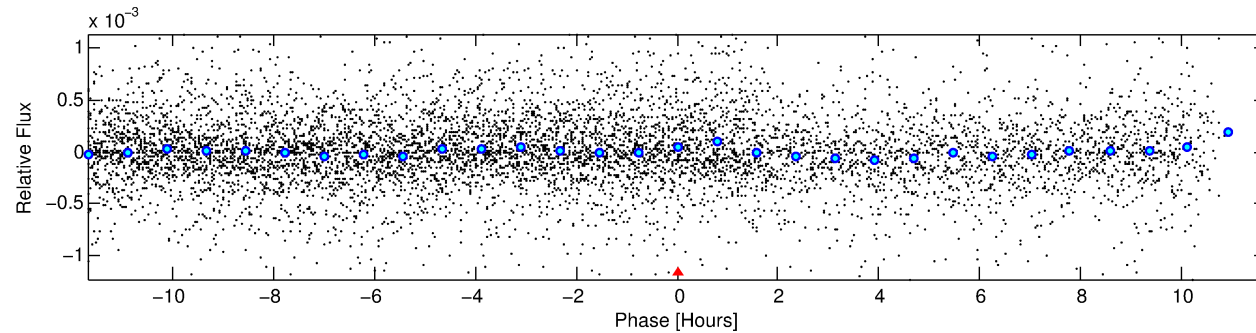
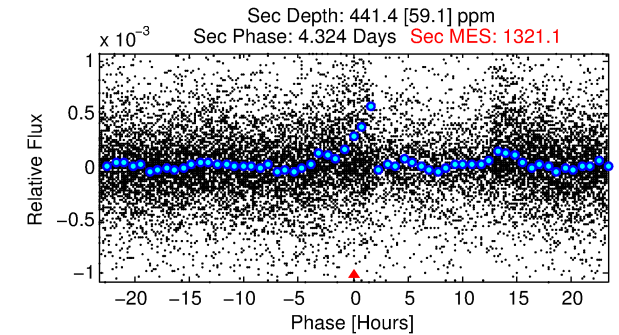
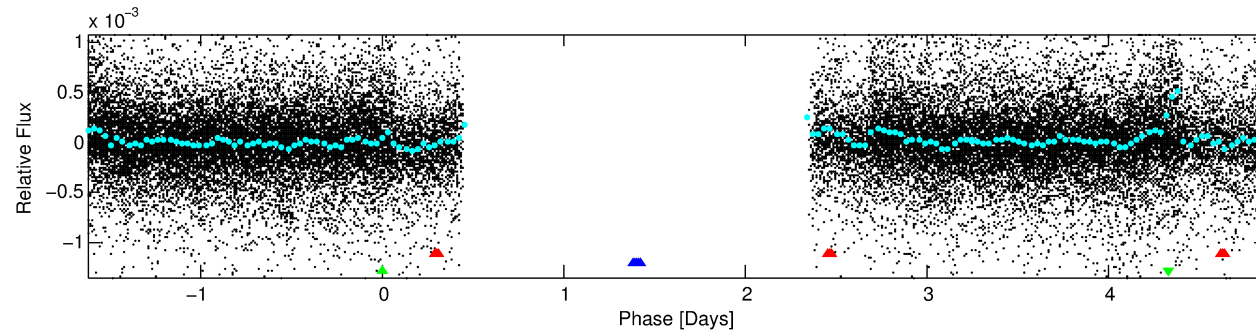
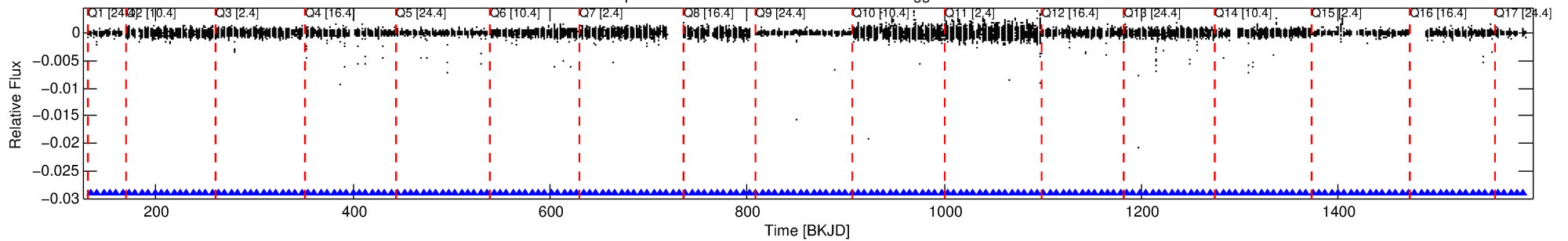
No Significant Match Found

DV One-Page Summary

KIC: 8590780 Candidate: 3 of 3 Period: 6.490 d

KOI: K06183 Corr: No Ephemeris Match

Kp: 13.25 R*: 1.50 Rs Teff: 6231.0 K Logg: 4.08 Fe/H: -0.460



TPS TCE Results:

Period = 6.49036 d

Epoch = 134.1265 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: 1.00 [201/201]

GhostDiagnostic-chr: -5.488

Centroid-sig: 17.8%

Centroid-so: 1.809 arcsec [2.28 σ]

OotOffset-rm: 1.475 arcsec [1.54 σ]

KicOffset-rm: 1.552 arcsec [1.62 σ]

OotOffset-st: 3/2/3/3 [11]

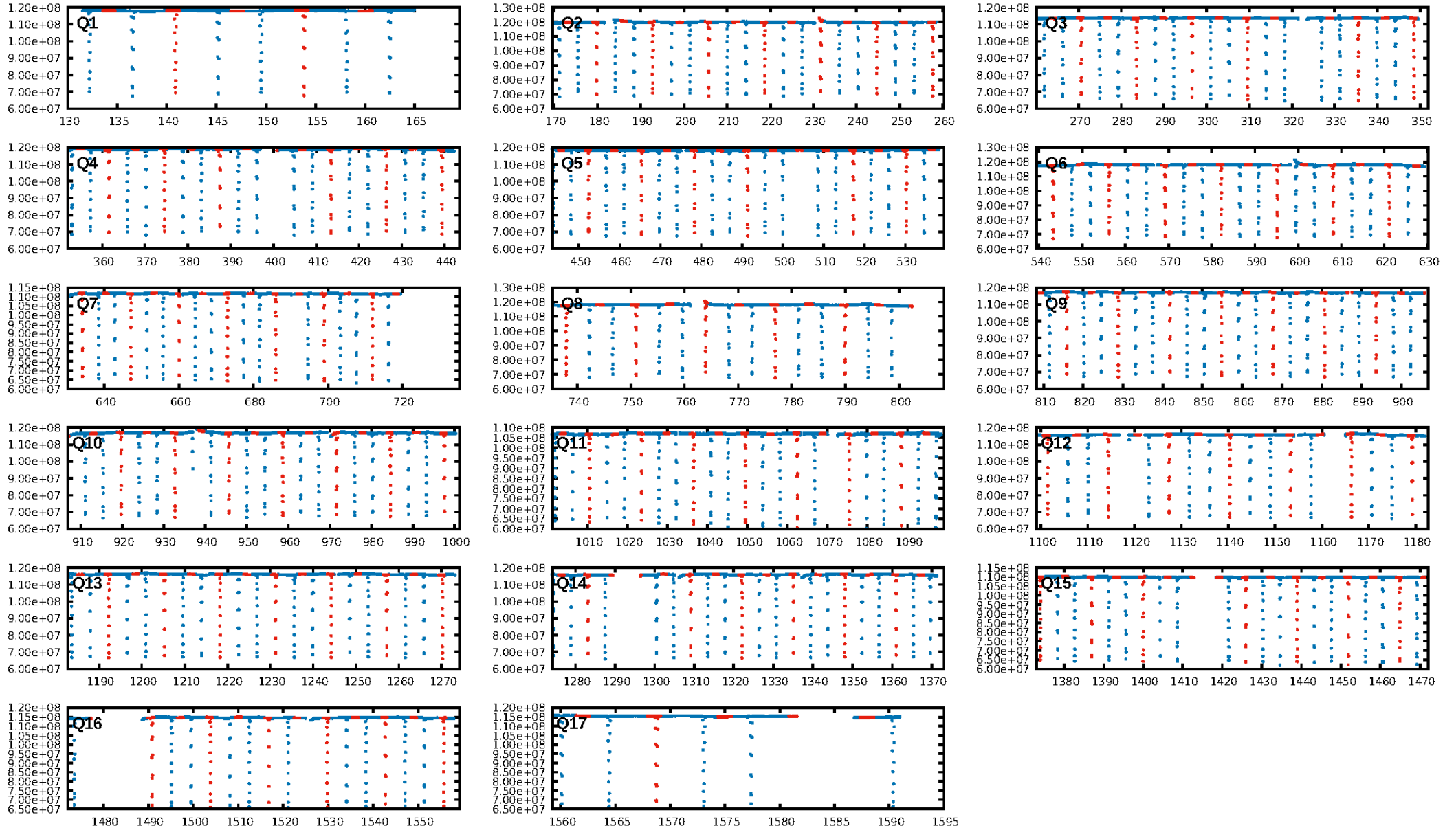
KicOffset-st: 3/2/3/3 [11]

DiffImageQuality-fgm: 0.09 [1/11]

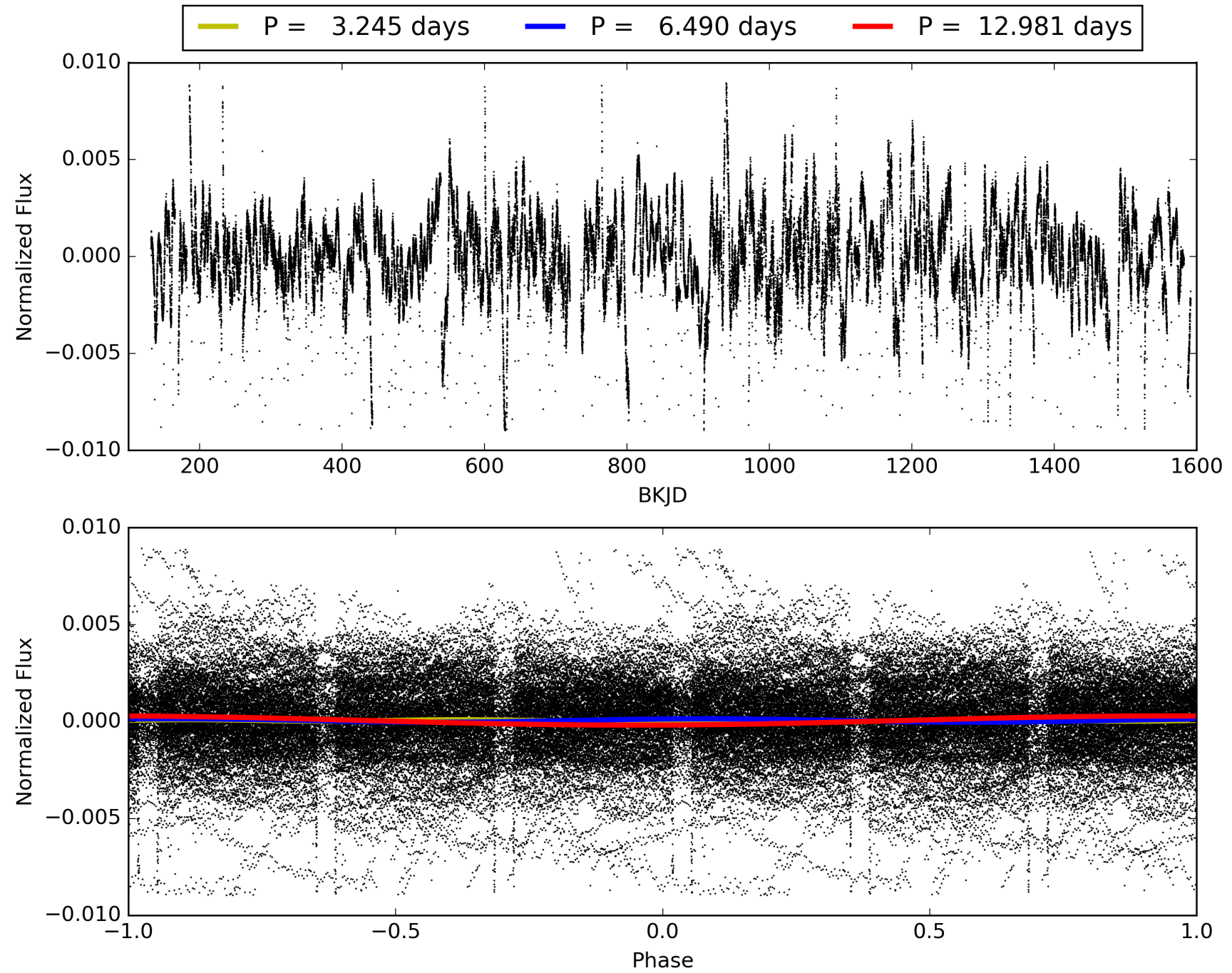
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:26:41 Z

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

TCE 008590780-03, PDC Light Curves

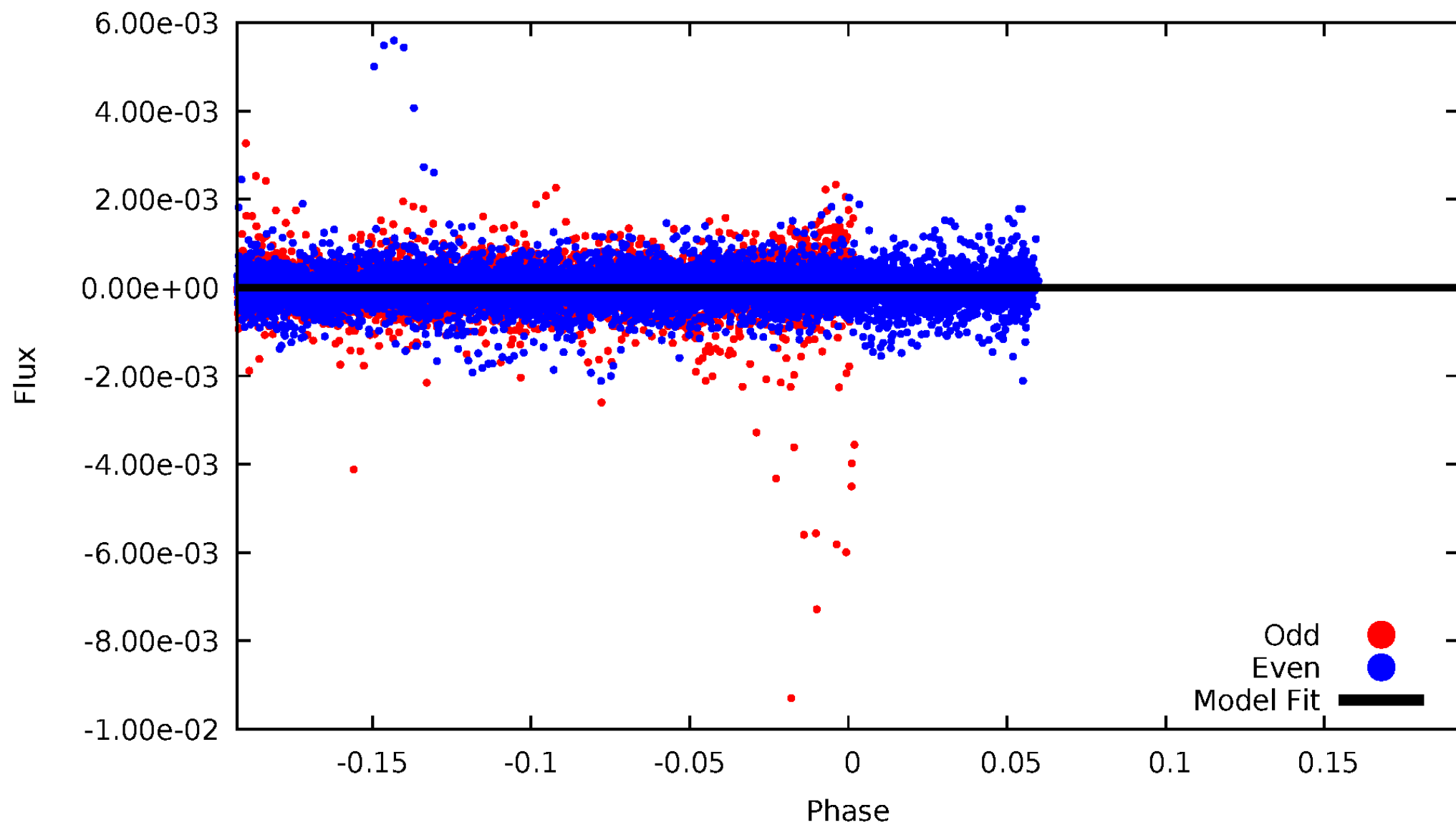


TCE 008590780-03



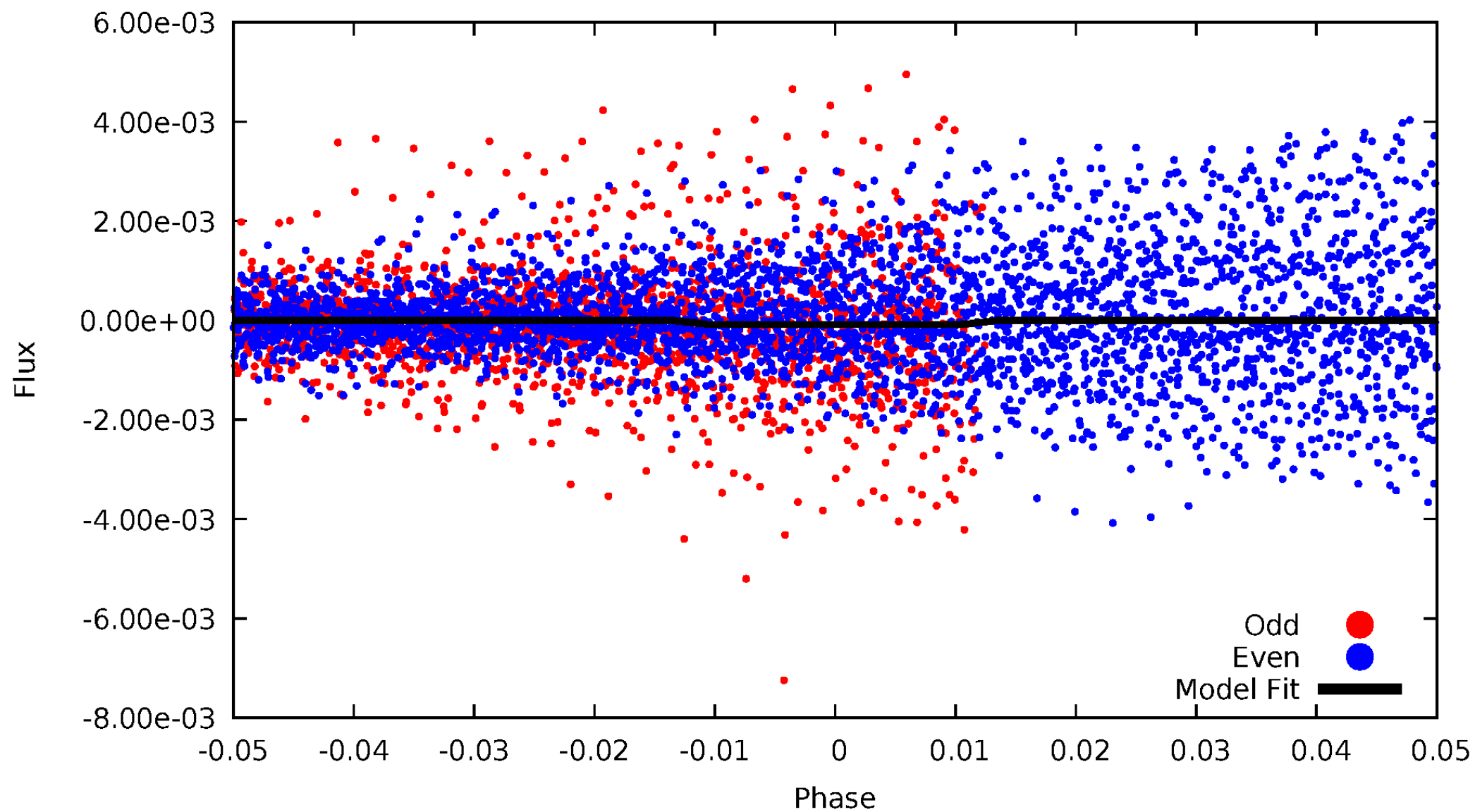
DV Odd/Even

TCE 008590780-03



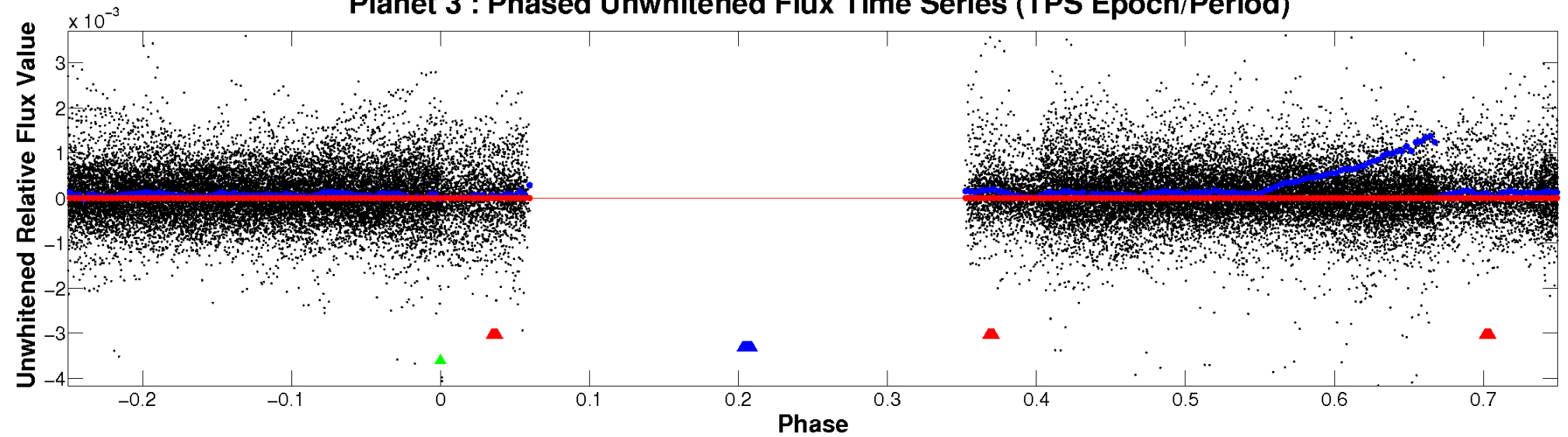
ALT Odd/Even

TCE 008590780-03

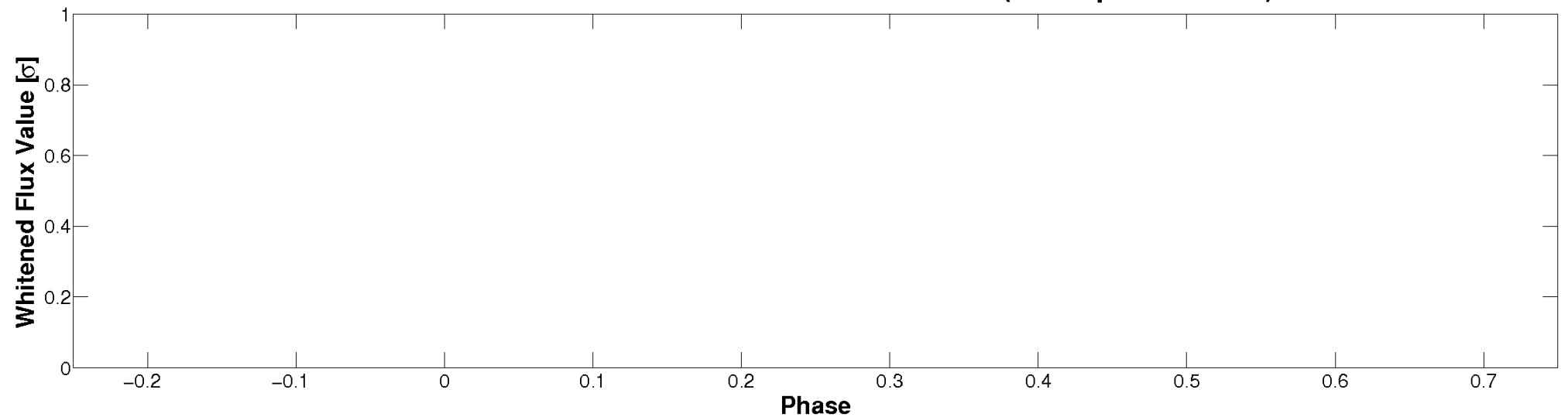


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

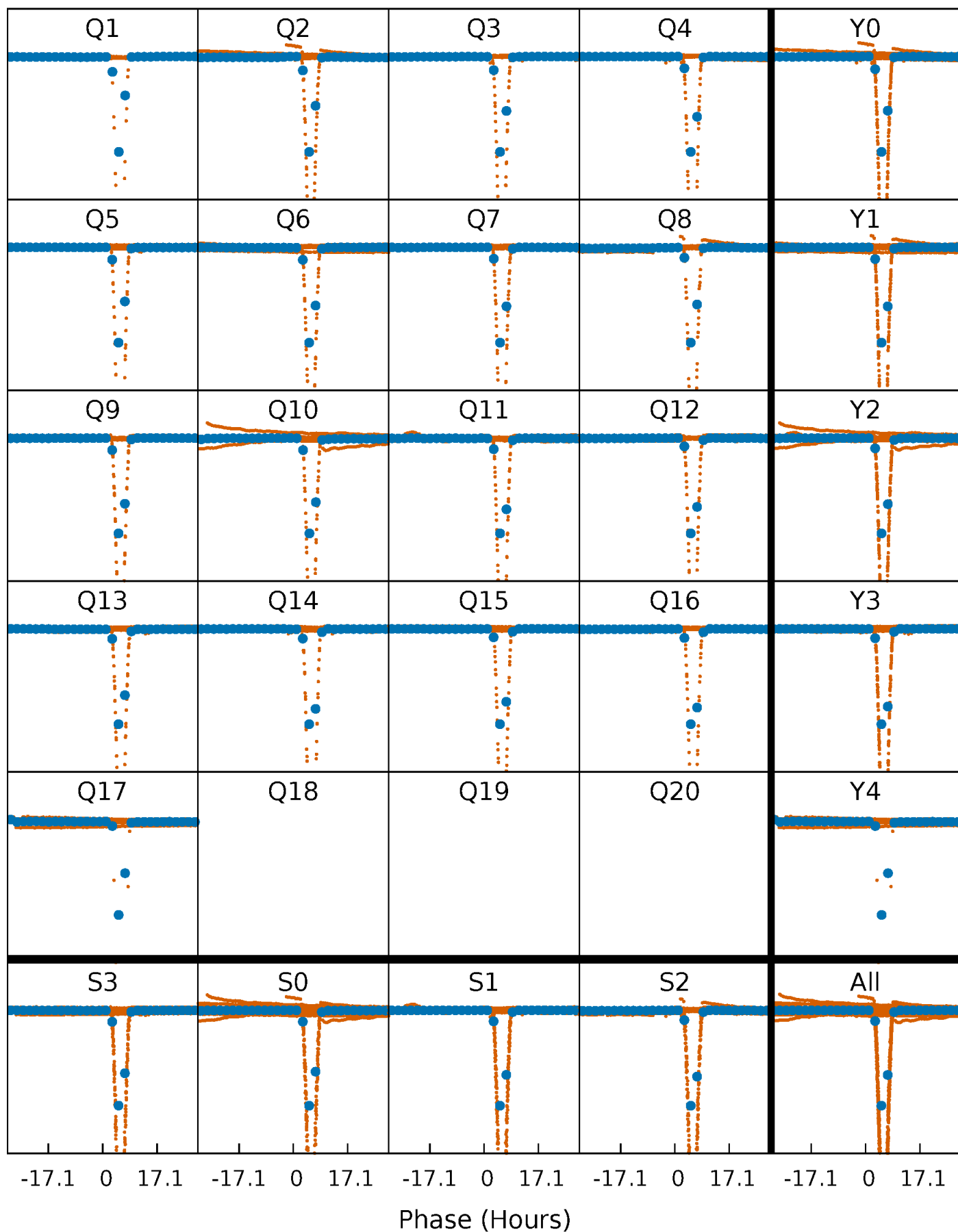


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



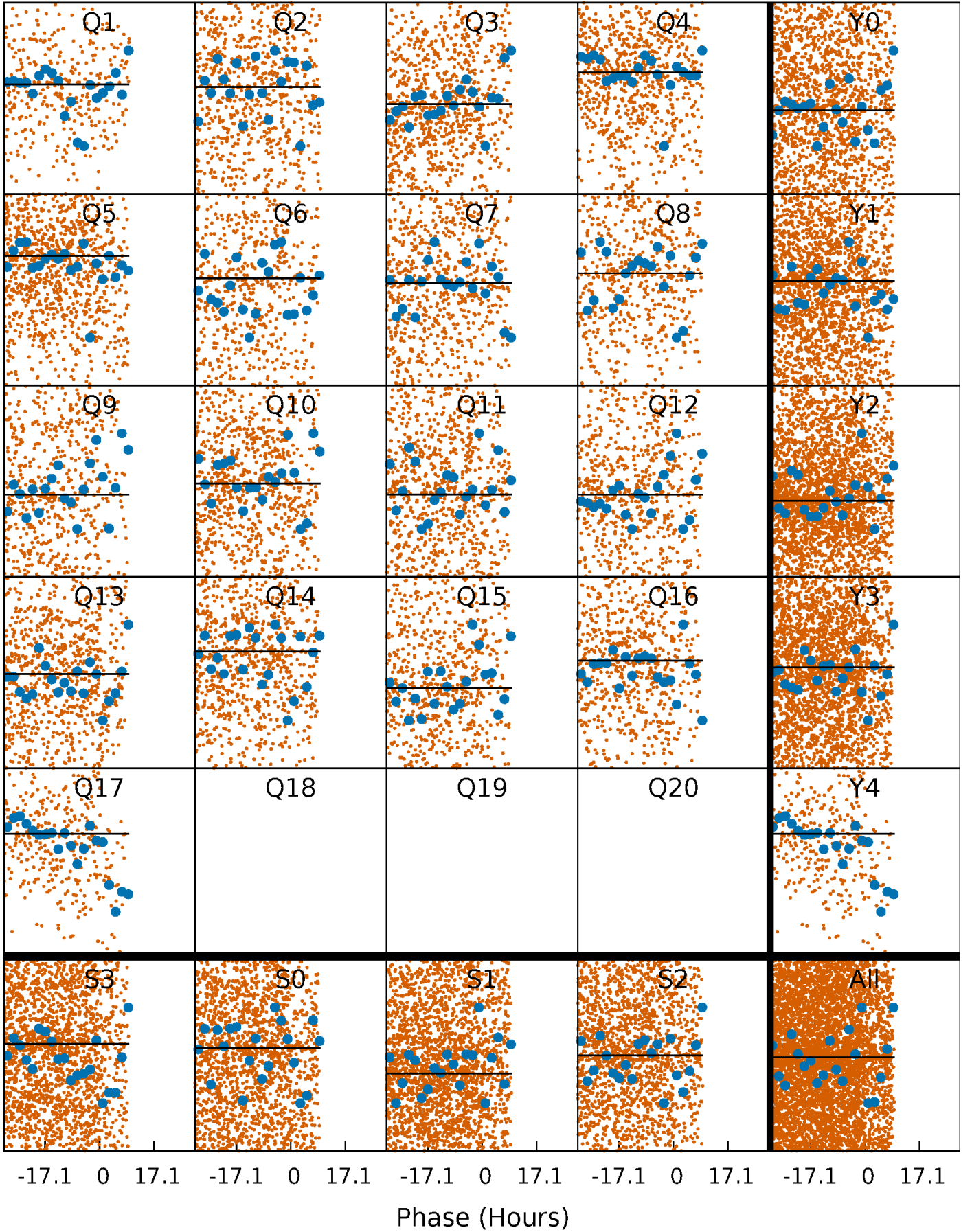
PDC Quarter-Phased Transit Curves

TCE 008590780-03 $P = 6.490356$ Days $T_0 = 134.126489$ (BKJD)



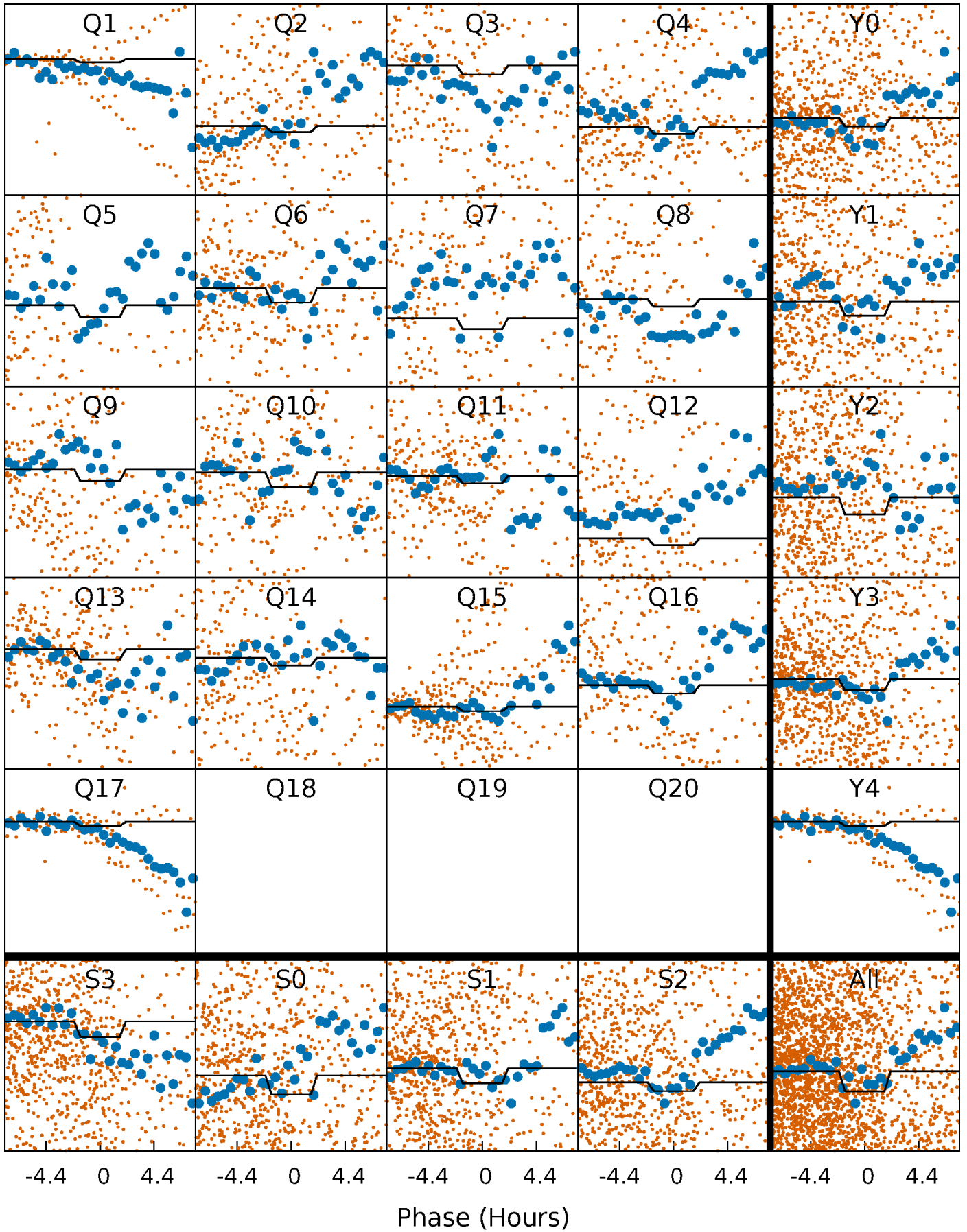
DV Quarter-Phased Transit Curves

TCE 008590780-03 P= 6.490356 Days $T_0=134.126489$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

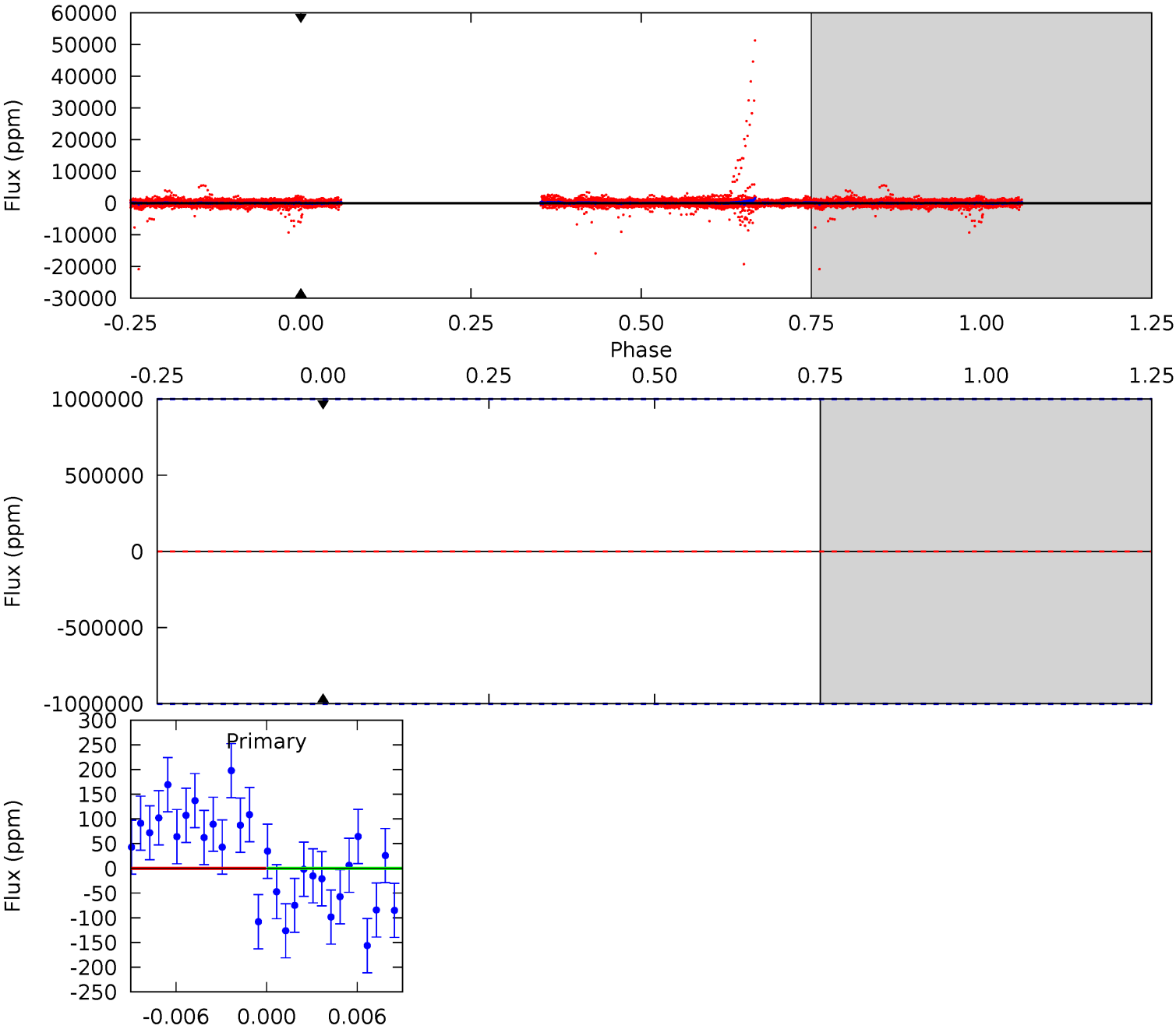
TCE 008590780-03 P= 6.490356 Days $T_0=134.063469$ (BKJD)



DV Model-Shift Uniqueness Test

008590780-03, P = 6.490356 Days, E = 127.636133 Days

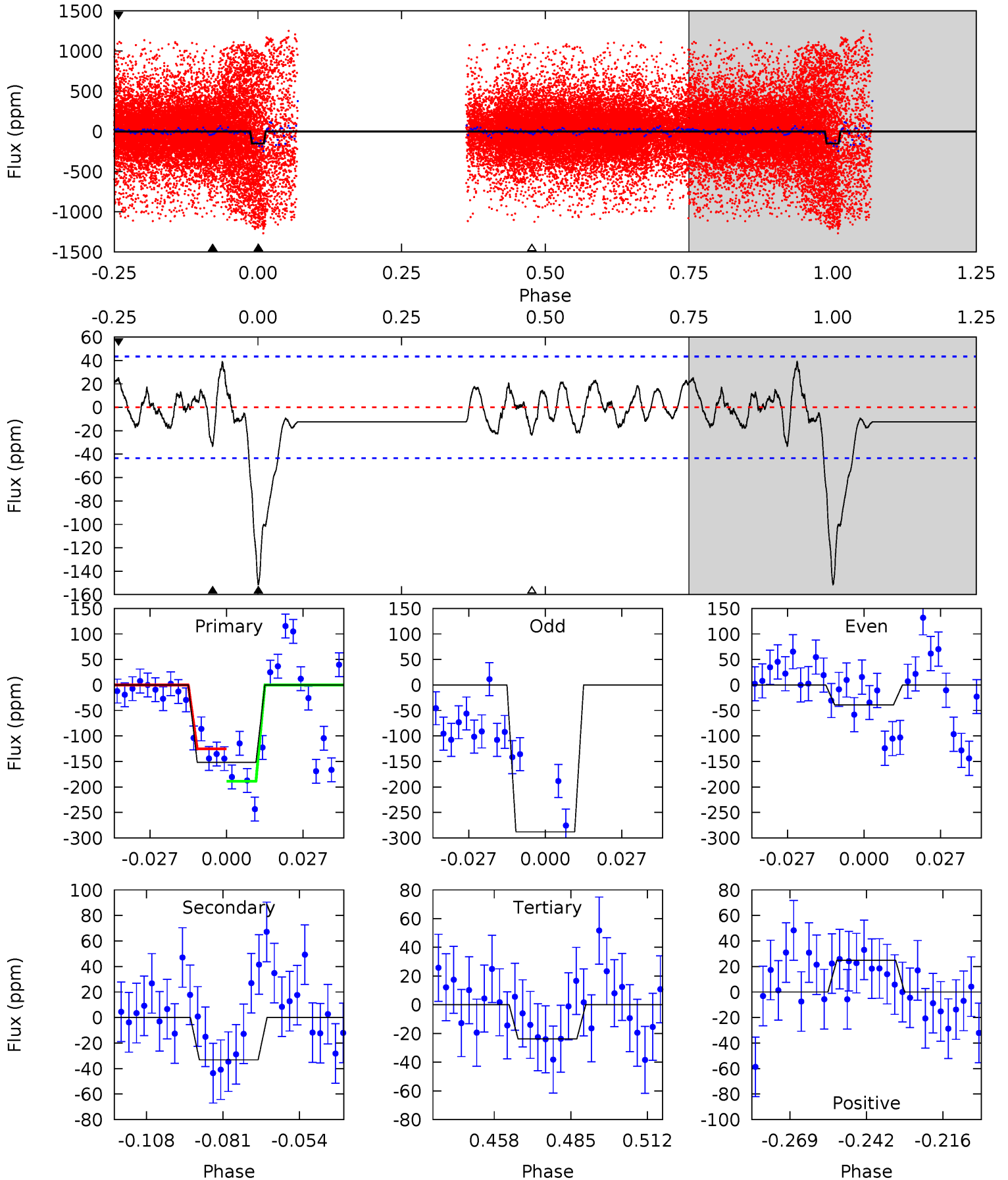
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008590780-03, P = 6.490356 Days, E = 127.573113 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	3.69	2.65	2.77	4.83	2.21	1.37	14.2	14.1	1.04	0.91	13.7	0.64	0.20	3.29



Stellar Parameters For KIC 008590780

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6231^{+188}_{-207}	$4.078^{+0.350}_{-0.150}$	$-0.460^{+0.300}_{-0.300}$	$1.501^{+0.410}_{-0.501}$	$0.984^{+0.146}_{-0.133}$	$0.410^{+0.945}_{-0.199}$
	+3%/-3%	+9%/-4%	+65%/-65%	+27%/-33%	+15%/-14%	+231%/-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 008590780-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$21.06^{+16.23}_{-12.31}$	1769^{+157}_{-171}	4263^{+9041}_{-15244}	19^{+1125}_{-681}
Alt.	-33 ± 9	$11.32^{+11.46}_{-8.00}$	1776^{+141}_{-177}	2370^{+1240}_{-4548}	$0.652^{+7.359}_{-0.499}$

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

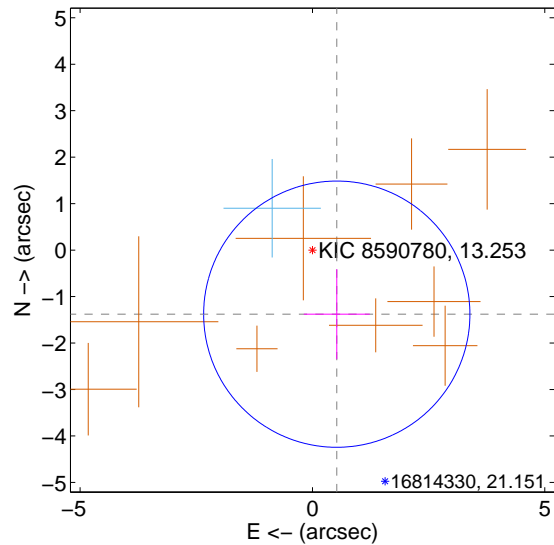
Supplemental centroid analysis for 008590780-03. Kepler magnitude: 13.25. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

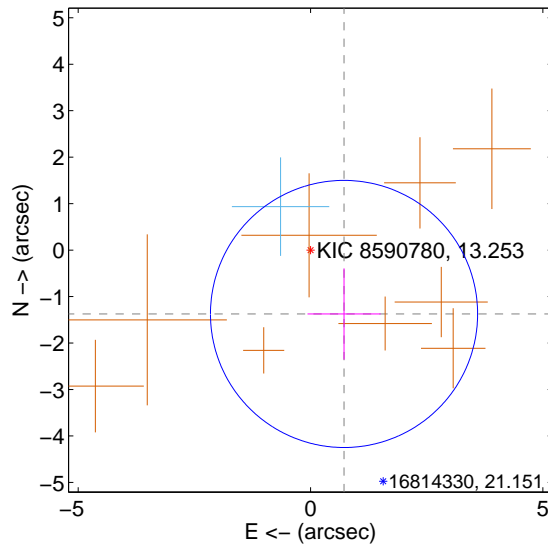
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.475 ± 0.955	1.54	-0.524 ± 0.710	-1.379 ± 0.969
PRF-fit source offset from KIC position	1.552 ± 0.958	1.62	-0.721 ± 0.786	-1.374 ± 0.981
photometric centroid source offset	1.81 ± 0.79	2.28	1.79 ± 0.80	-0.28 ± 0.70

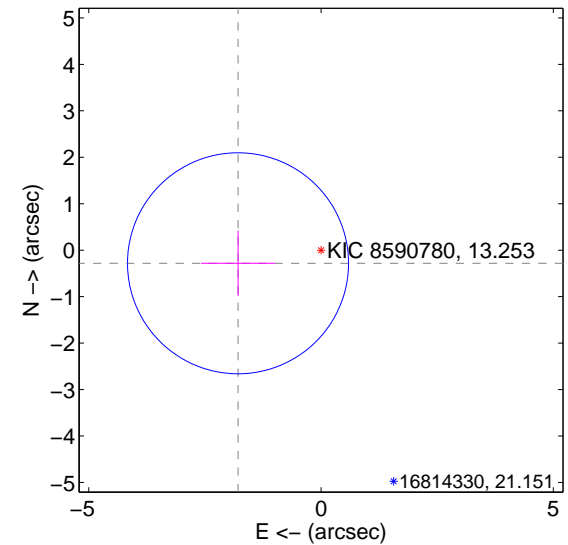
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

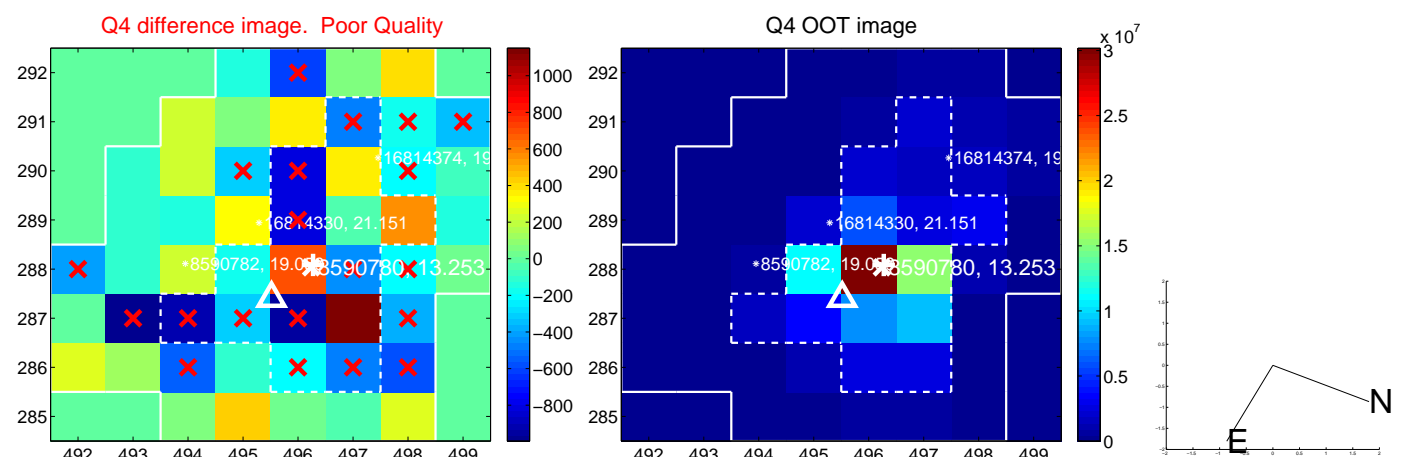
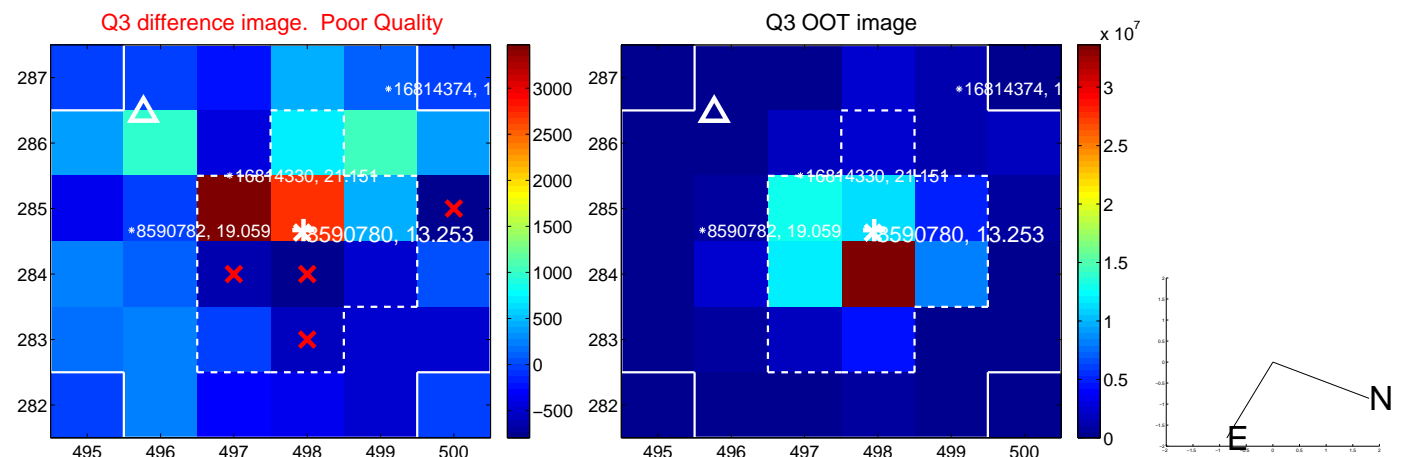
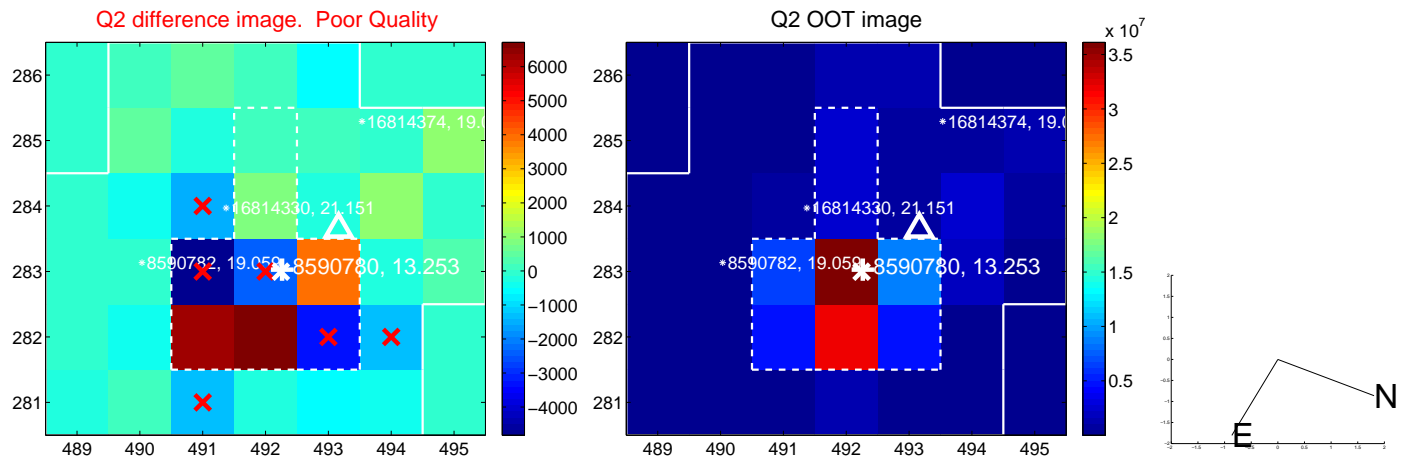
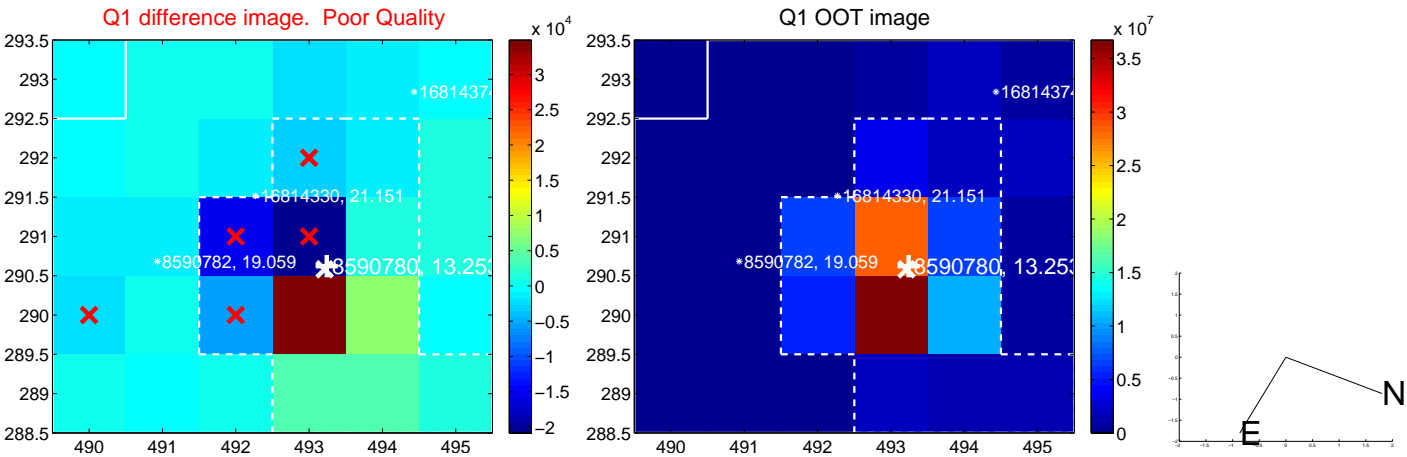


offset from photometric centroids

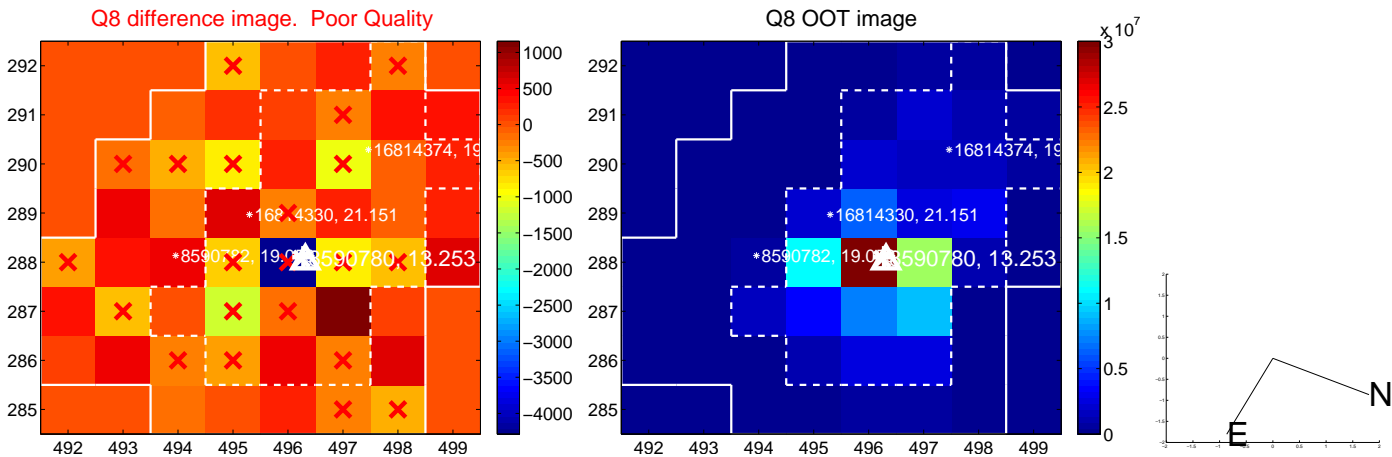
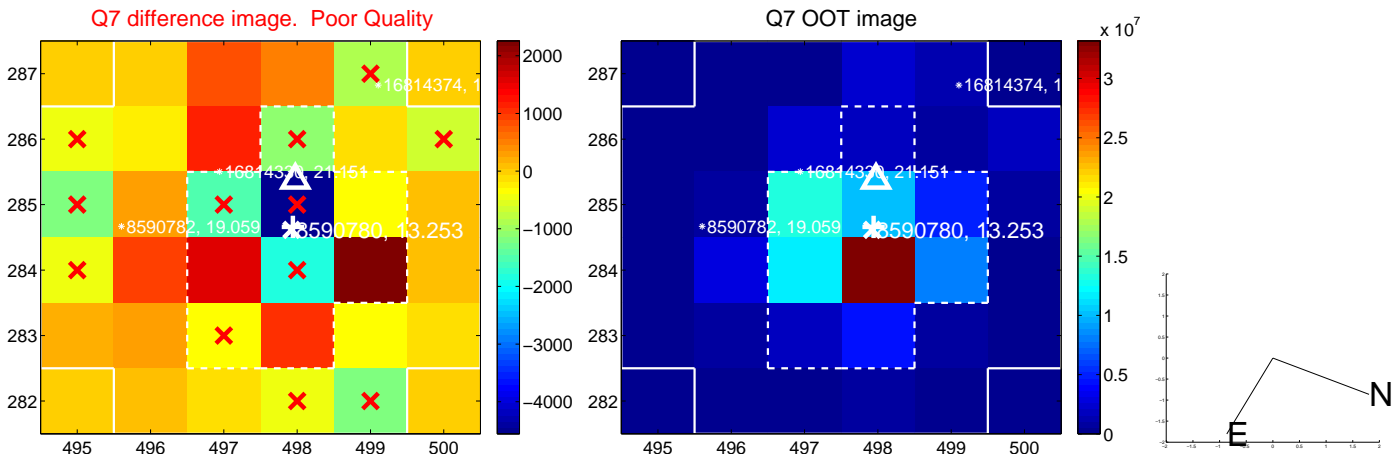
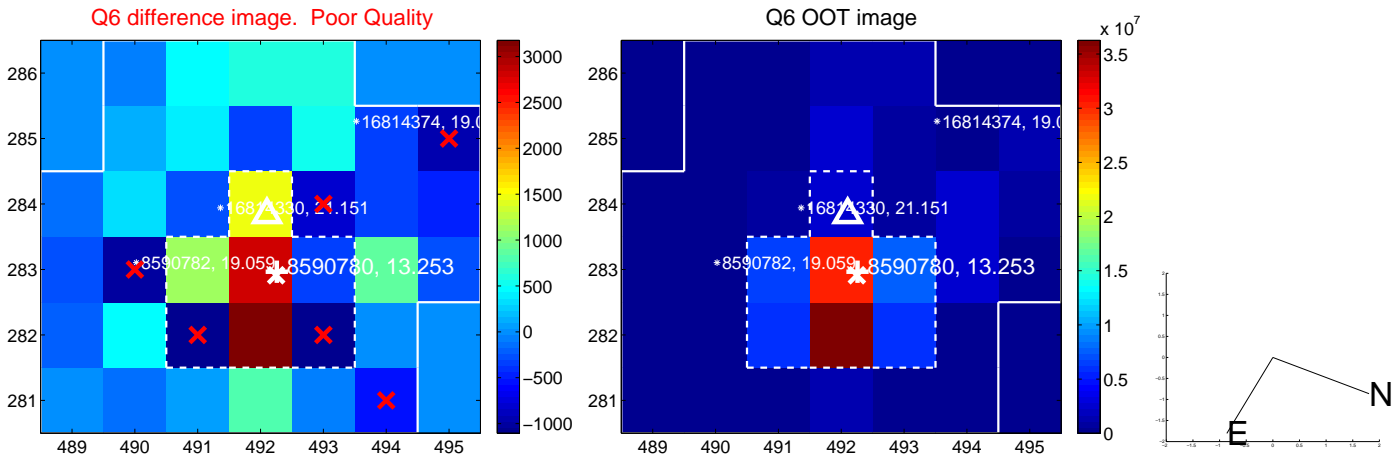
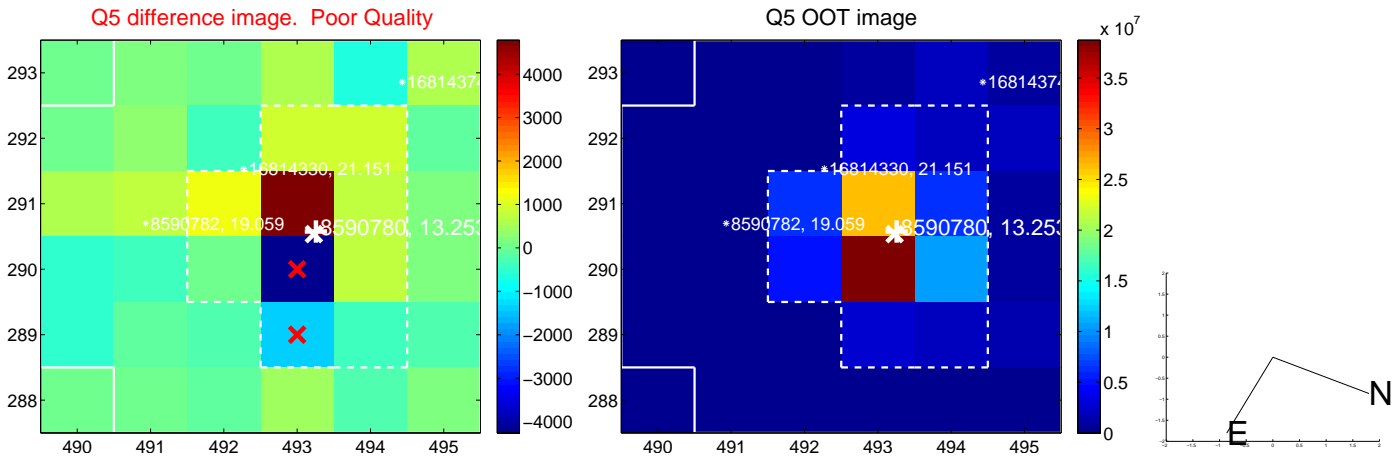


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

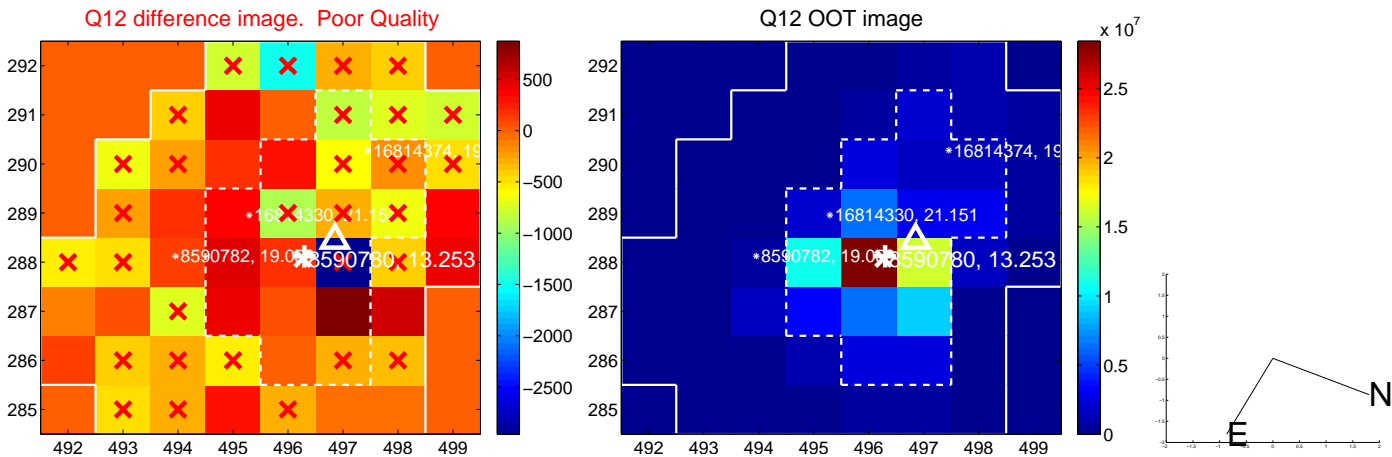
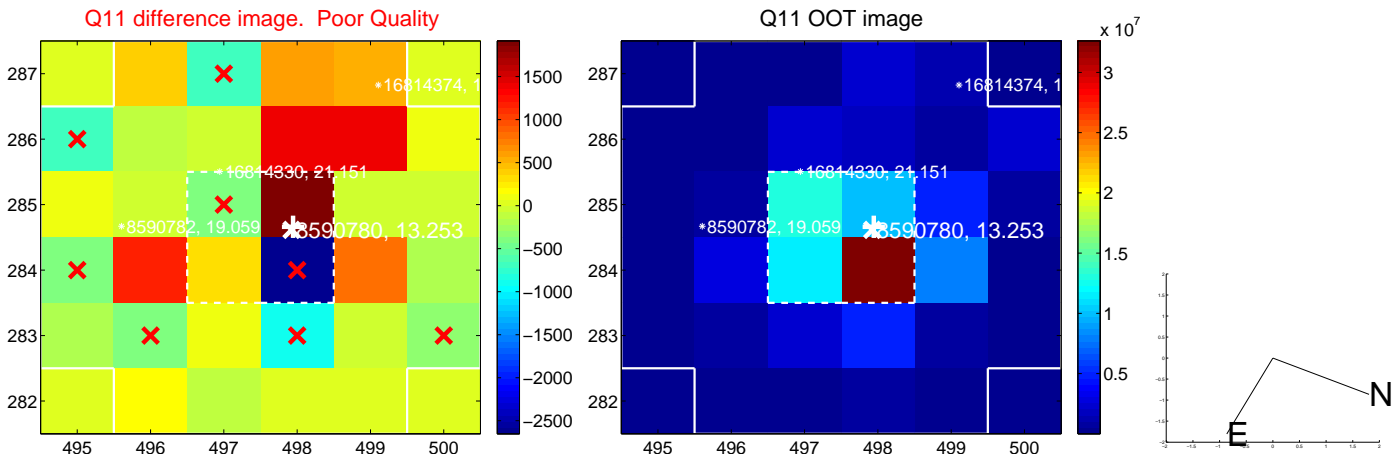
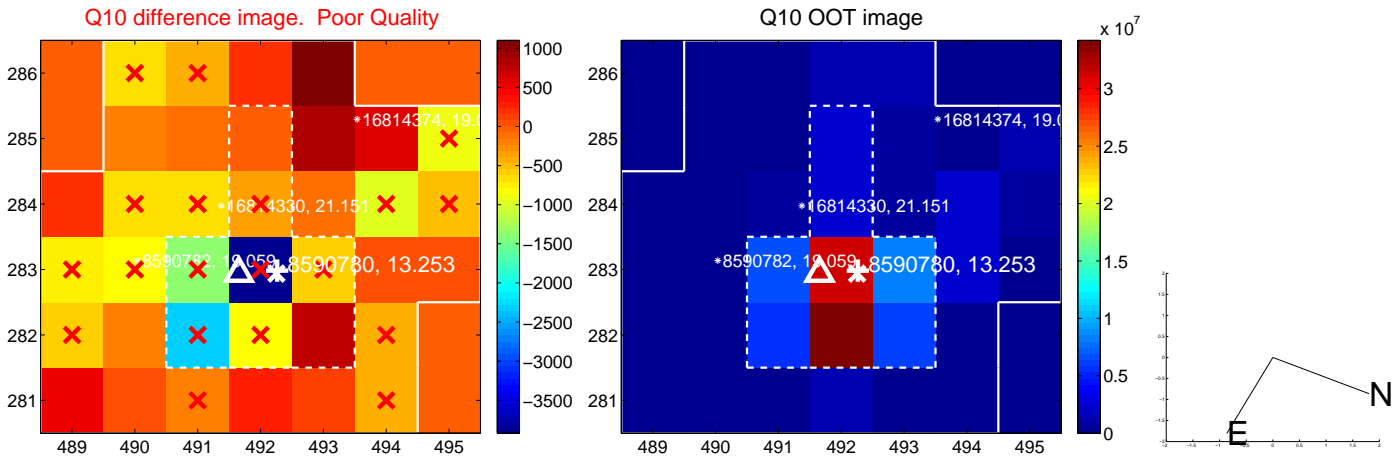
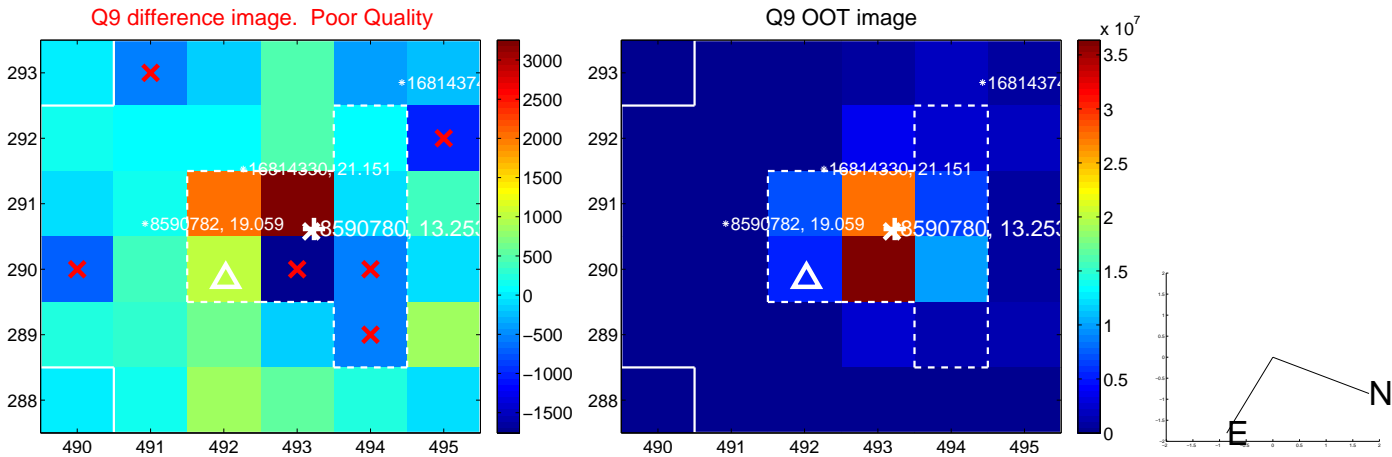
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



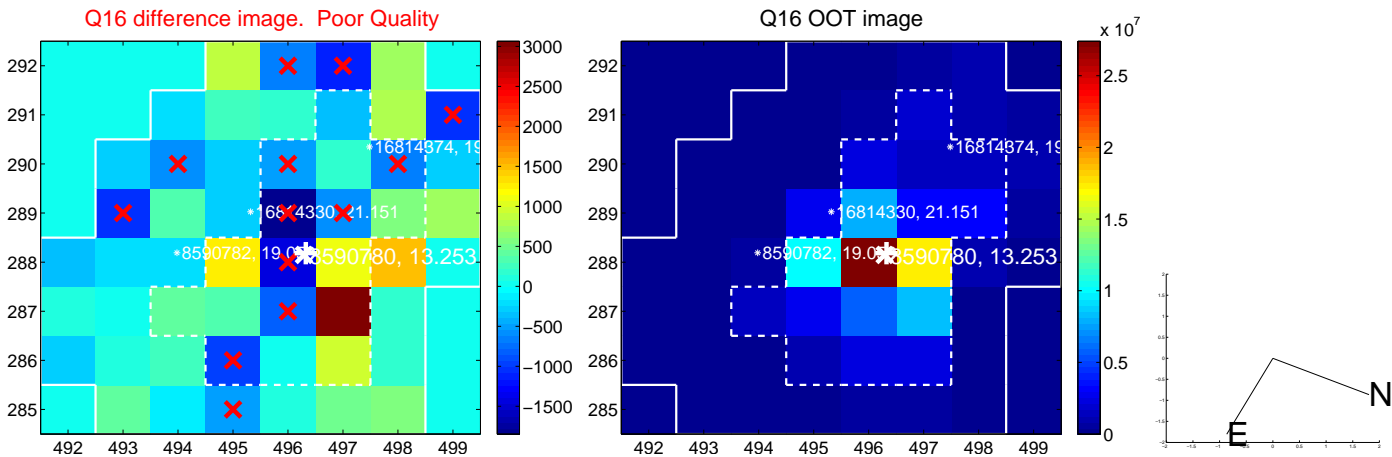
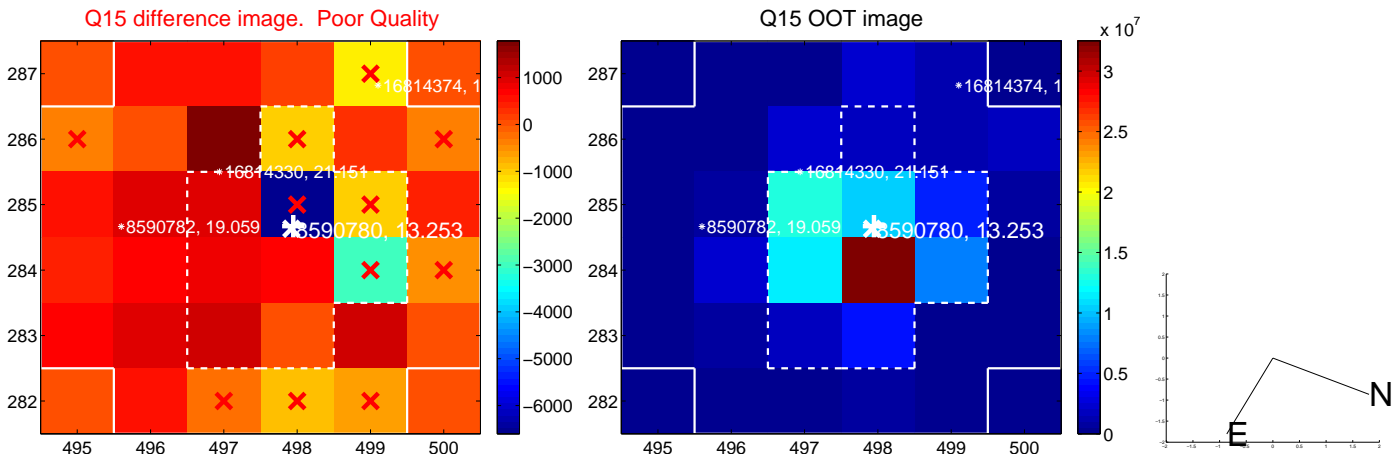
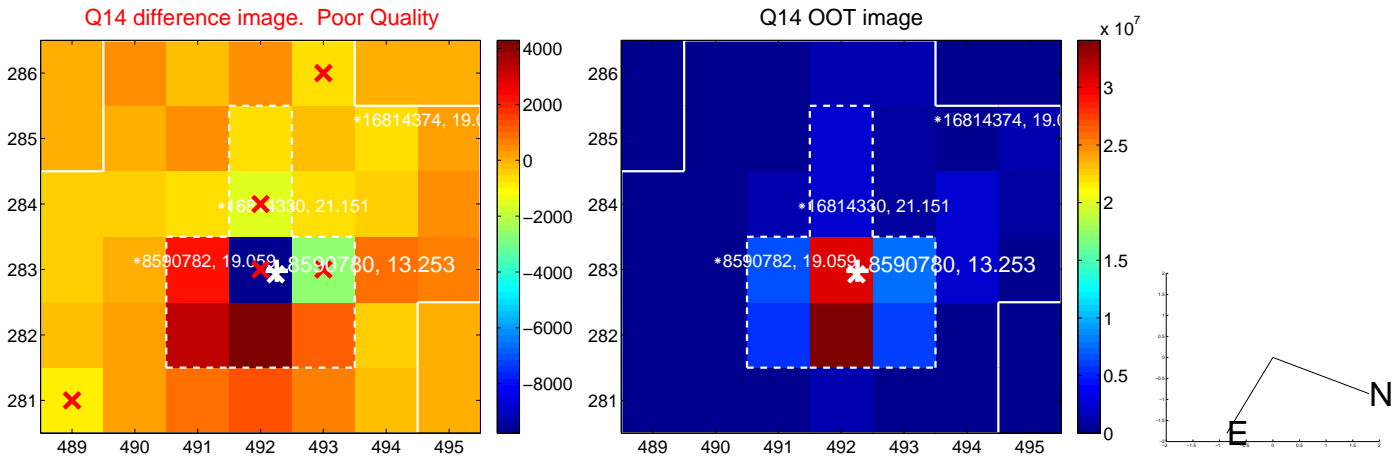
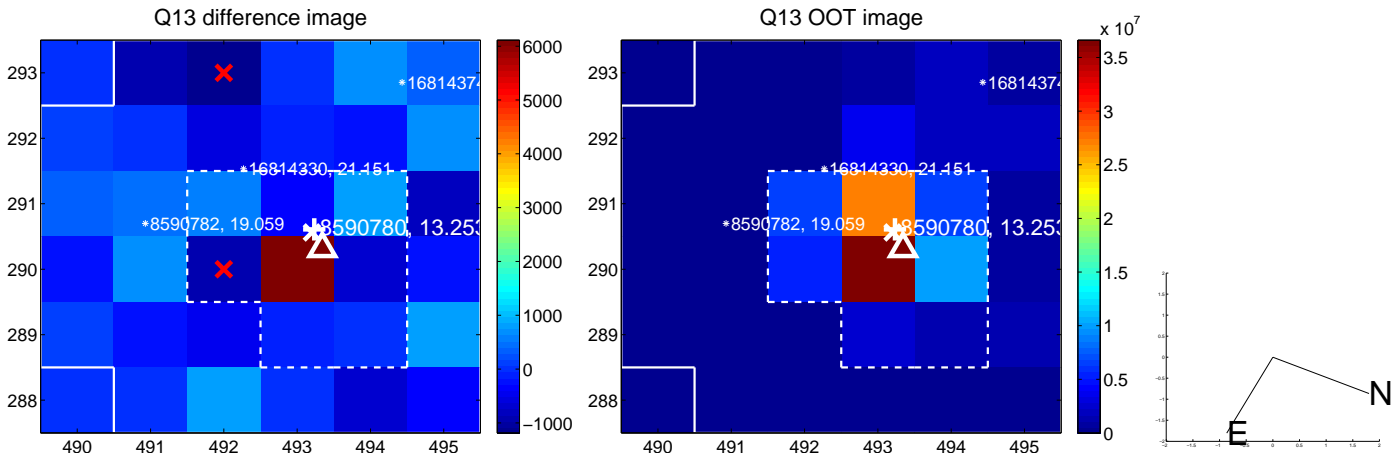
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



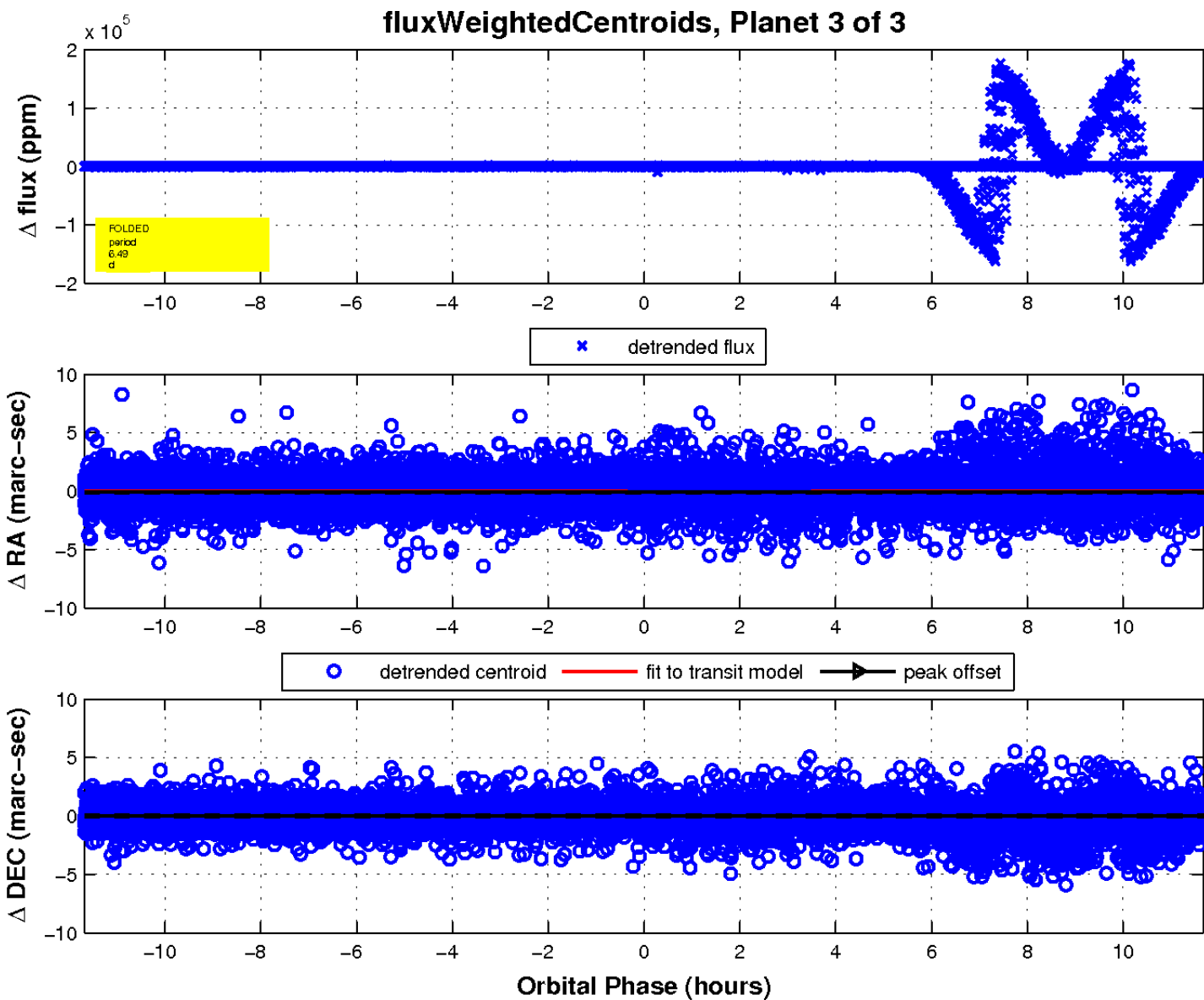
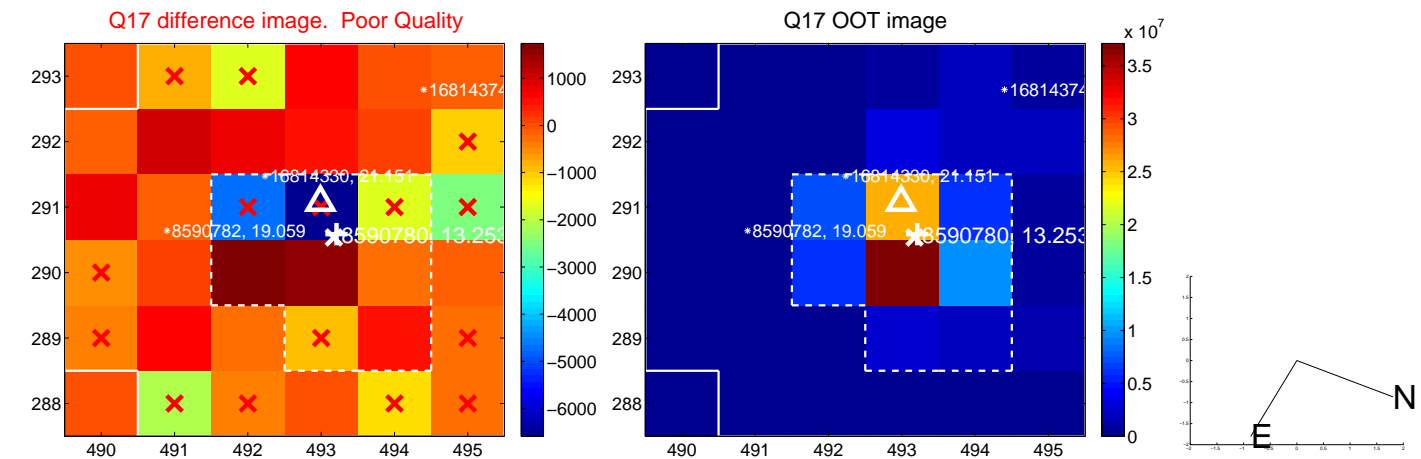
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

