

KIC 007898352

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})
007898352-01	OBS	1486.01	127.282615	163.888707	8093.3	7.187	116.6	118.8	1.18	5733	12.09	5.62
007898352-02	OBS	1486.02	30.183730	146.646988	949.5	6.126	29.3	30.7	1.18	5733	3.99	38.26
007898352-03	OBS	No	489.672319	483.357343	568.7	15.808	7.8	7.7	1.18	5733	2.95	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007898352-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007898352-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007898352-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—CENT_FEW_DIFFS

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.

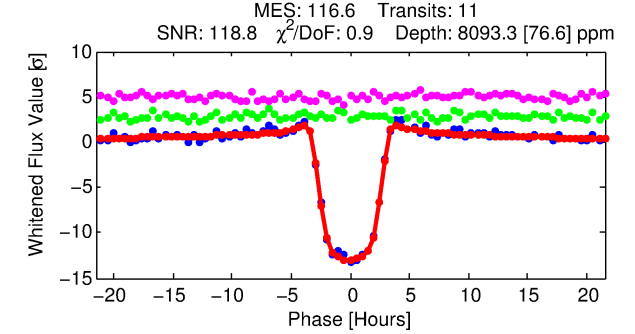
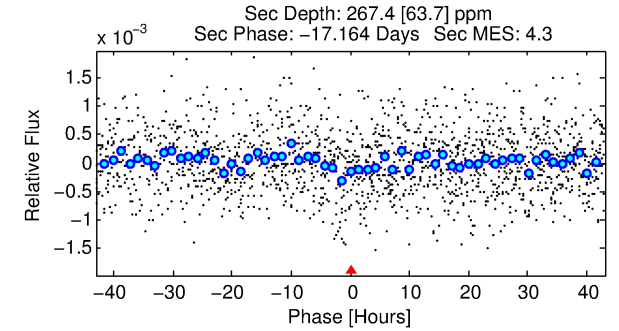
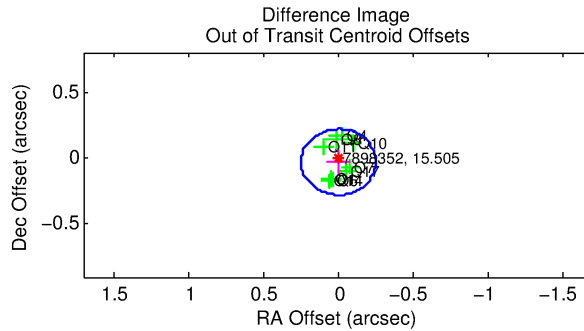
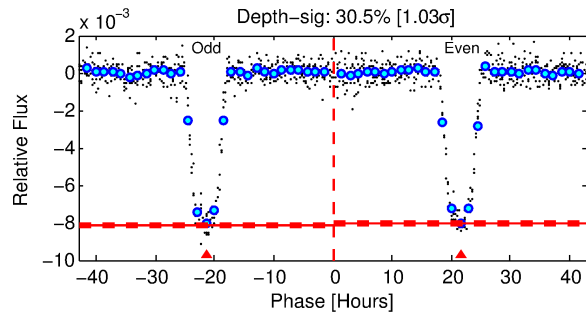
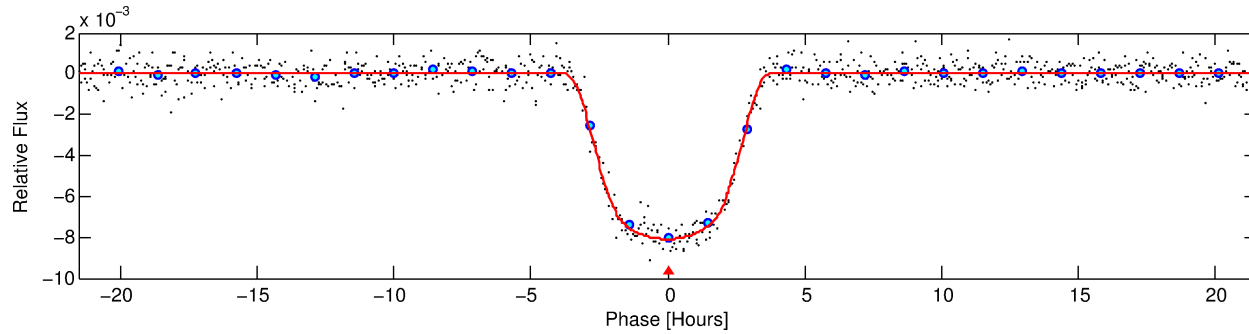
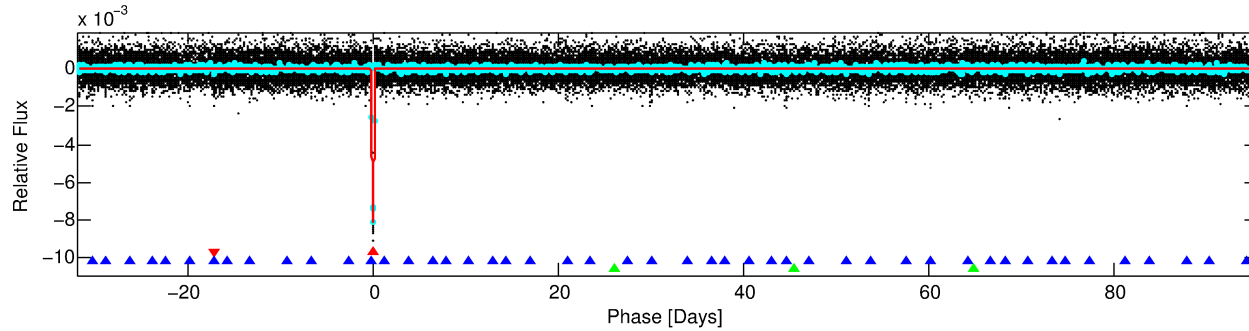
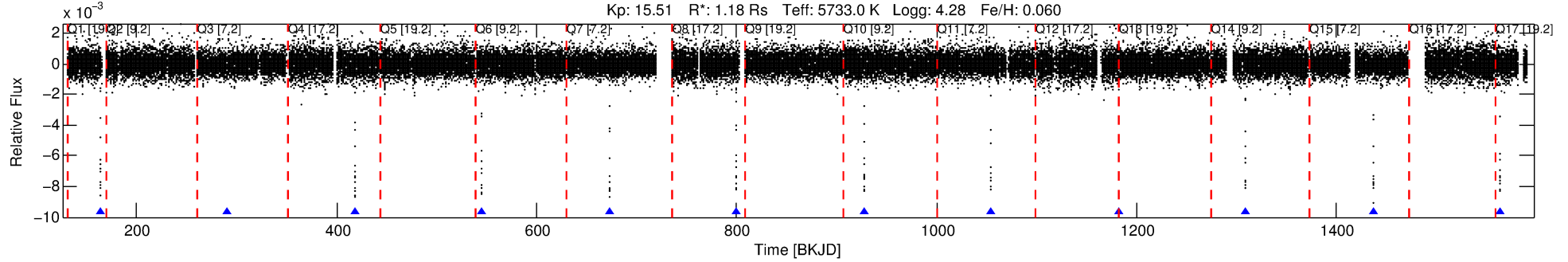
Ephemeris Match Information For 007898352-01

No Significant Match Found

DV One-Page Summary

KIC: 7898352 Candidate: 1 of 3 Period: 127.283 d
KOI: K01486.01 Name: Kepler-302c Corr: 0.998

Kp: 15.51 R*: 1.18 Rs Teff: 5733.0 K Logg: 4.28 Fe/H: 0.060



DV Fit Results:

Period = 127.28262 [0.00018] d
Epoch = 163.8887 [0.0013] BKJD
Rp/R* = 0.0937 [0.0008]
a/R* = 95.77 [2.15]
b = 0.83 [0.01]
Seff = 5.62 [1.46]
Teq = 393 [26] K
Rp = 12.09 [2.07] Re
a = 0.4911 [0.0777] AU
Ag = 242.77 [83.46] [2.90σ]
Teffp = 2396 [151] K [13.09σ]

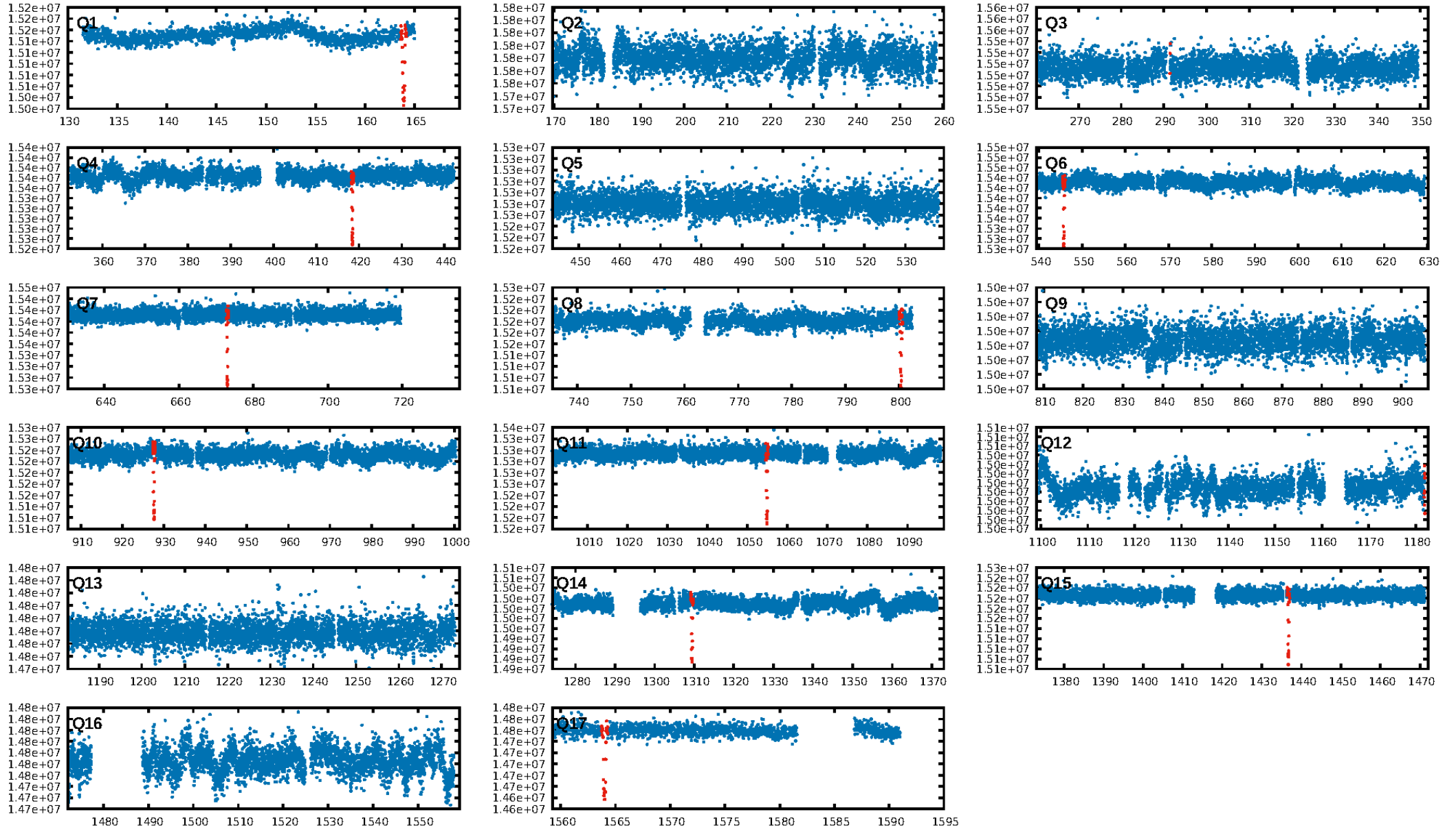
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [246.78σ]
LongPeriod-sig: 100.0% [500.86σ]
ModelChiSquare2-sig: 54.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 4.337
Centroid-sig: 0.0%
Centroid-so: 0.462 arcsec [3.85σ]
OotOffset-rm: 0.030 arcsec [0.36σ]
KicOffset-rm: 0.360 arcsec [3.91σ]
OotOffset-st: 3/2/2/2 [9]
KicOffset-st: 3/2/2/2 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 0.89 [8/9]

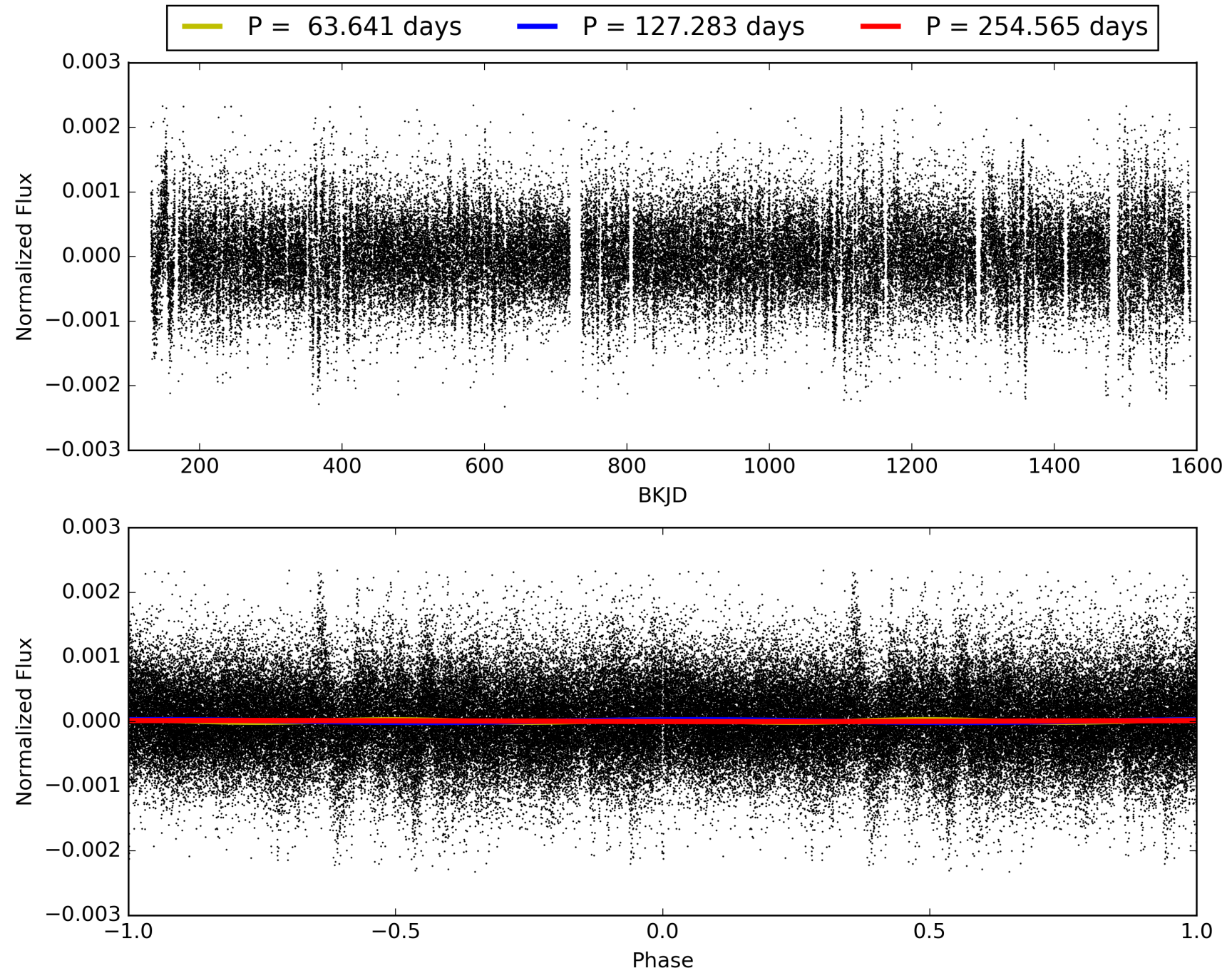
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:56:33 Z

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

TCE 007898352-01, PDC Light Curves

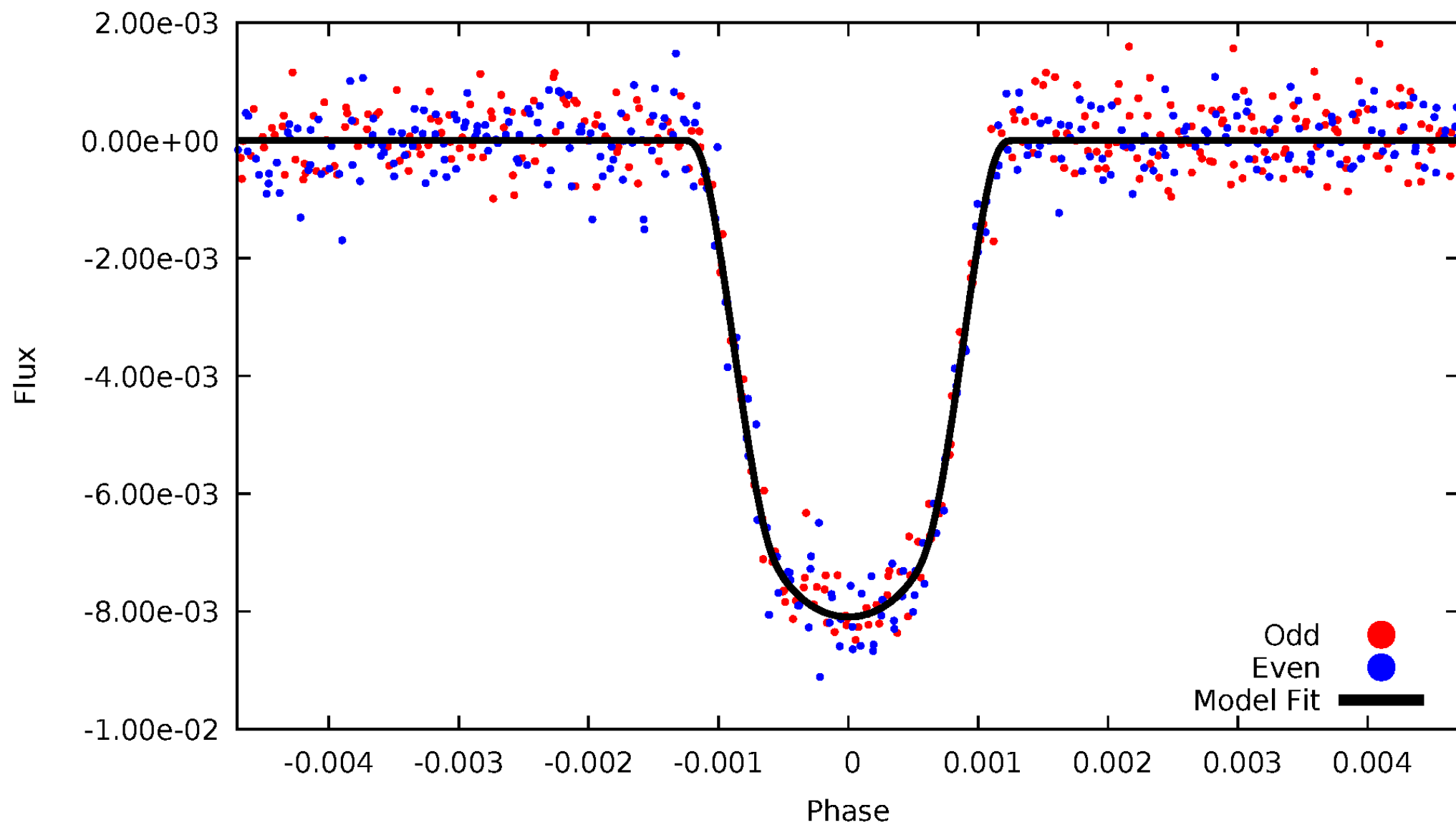


TCE 007898352-01



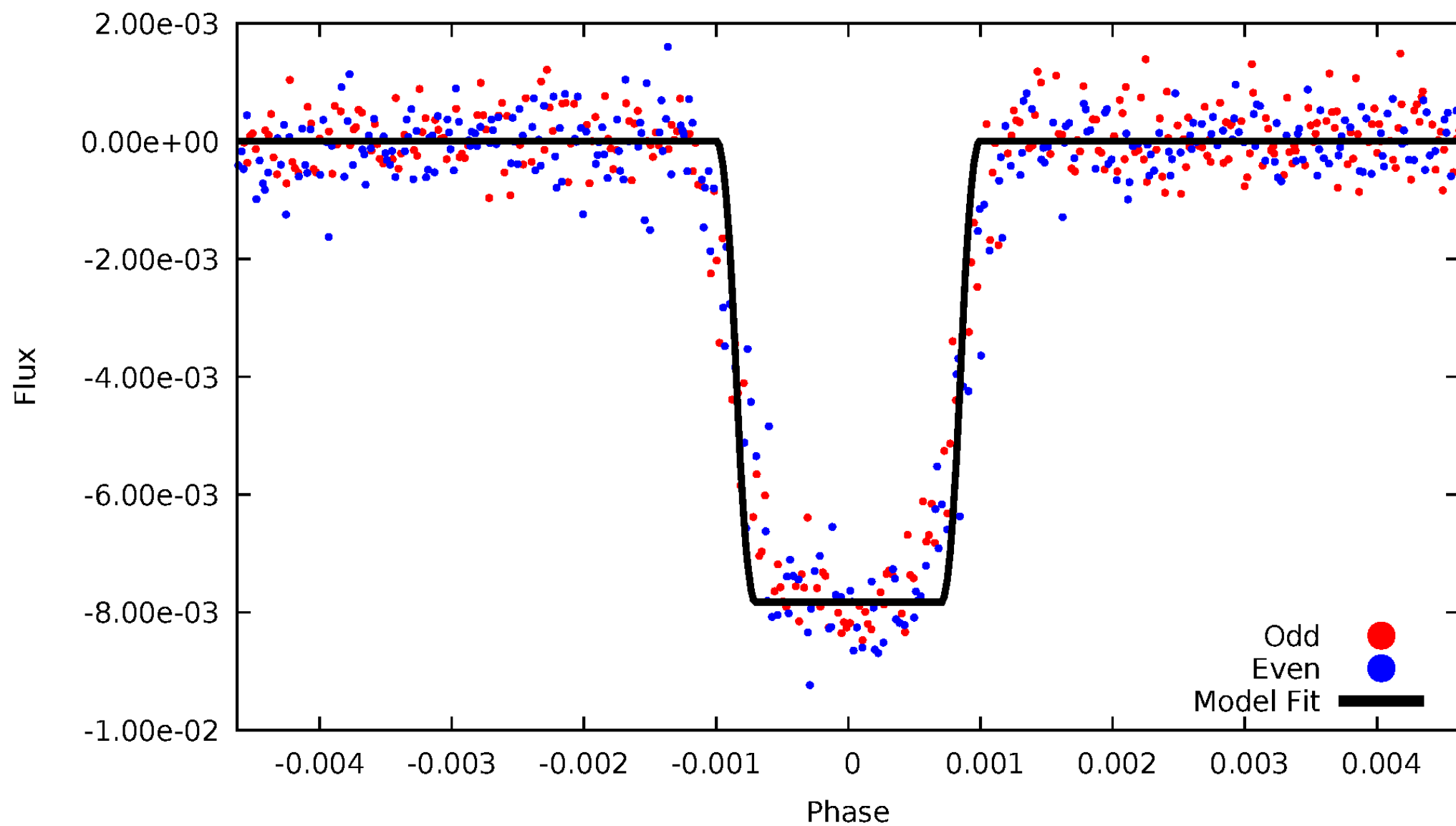
DV Odd/Even

TCE 007898352-01



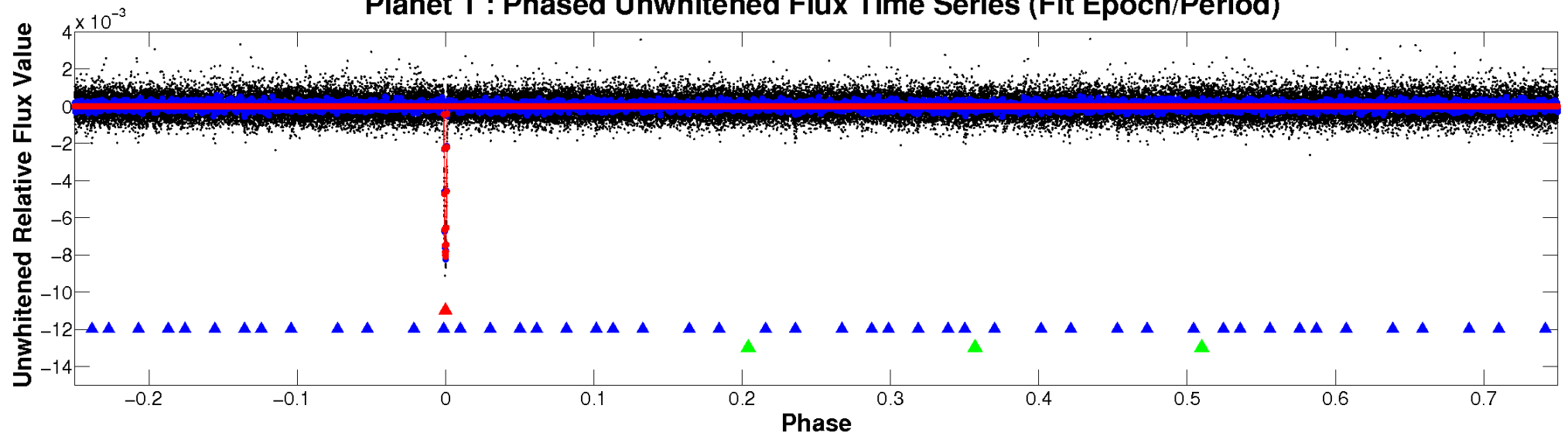
ALT Odd/Even

TCE 007898352-01

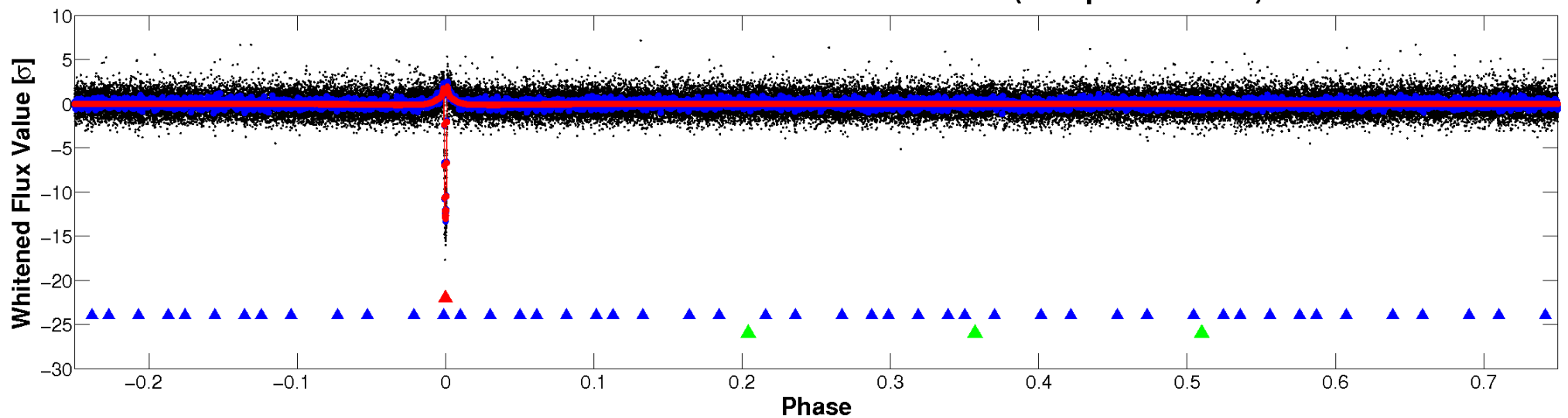


Non-Whitened Vs. Whitened Light Curve

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

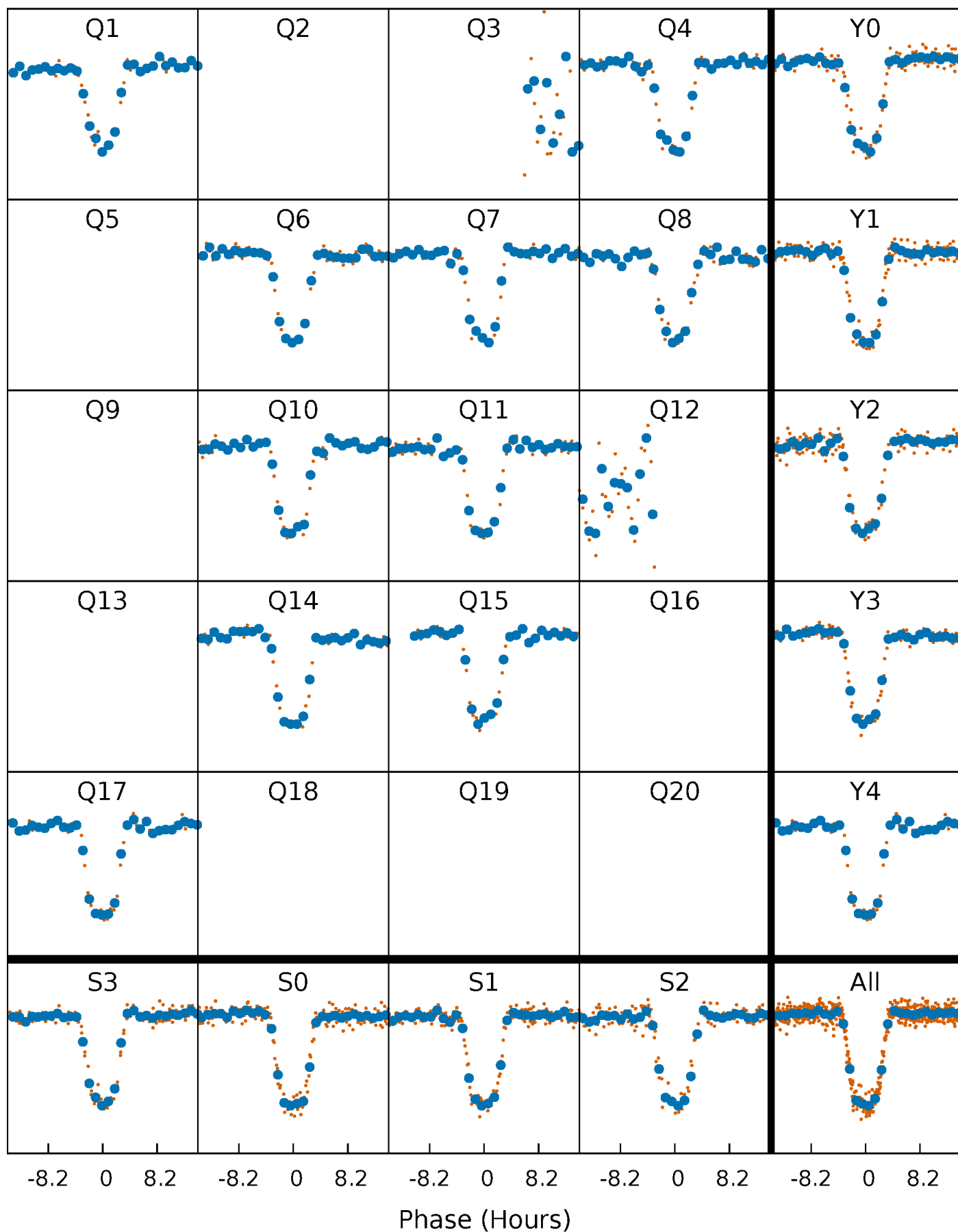


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



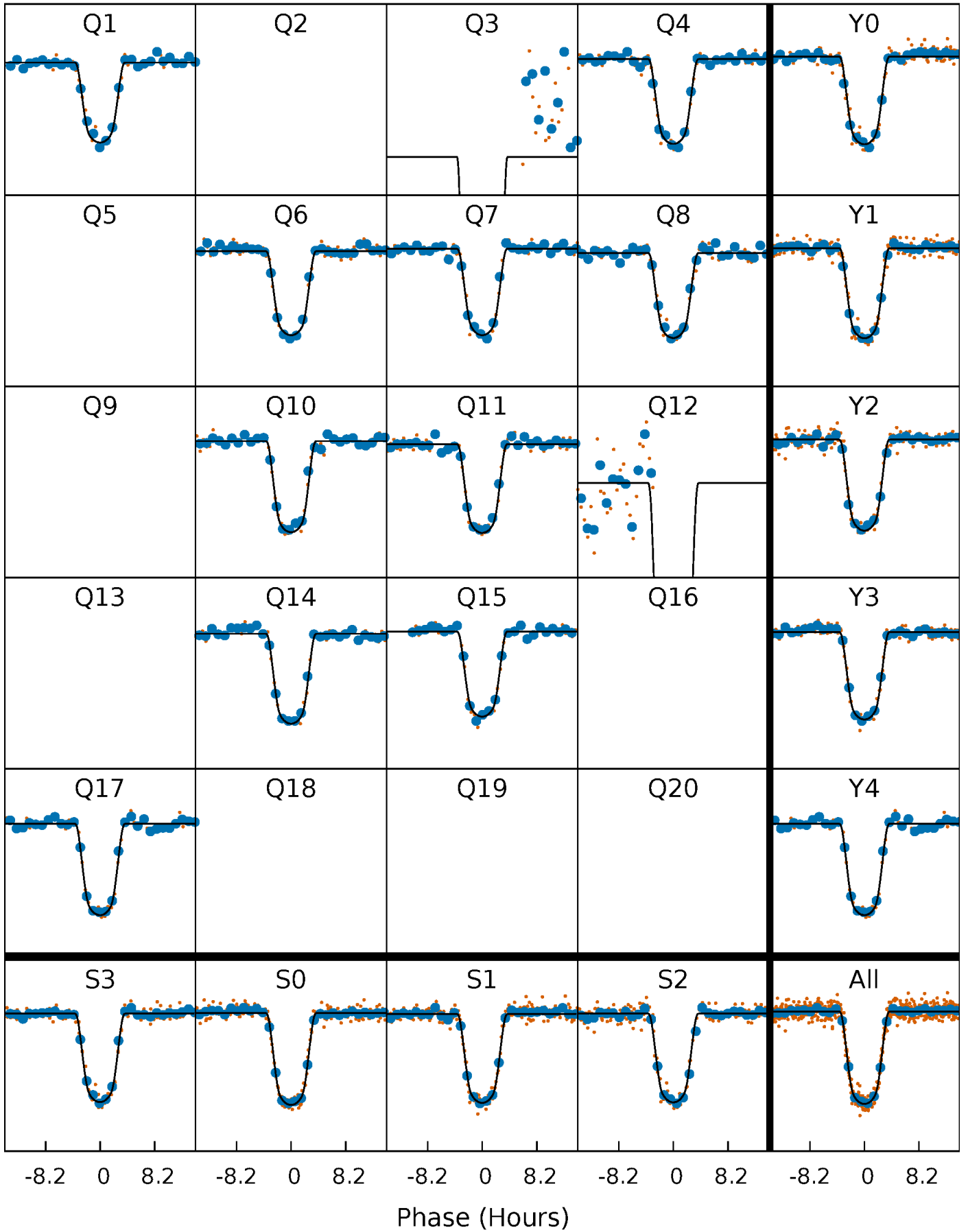
PDC Quarter-Phased Transit Curves

TCE 007898352-01 P=127.282615 Days $T_0=163.888707$ (BKJD)



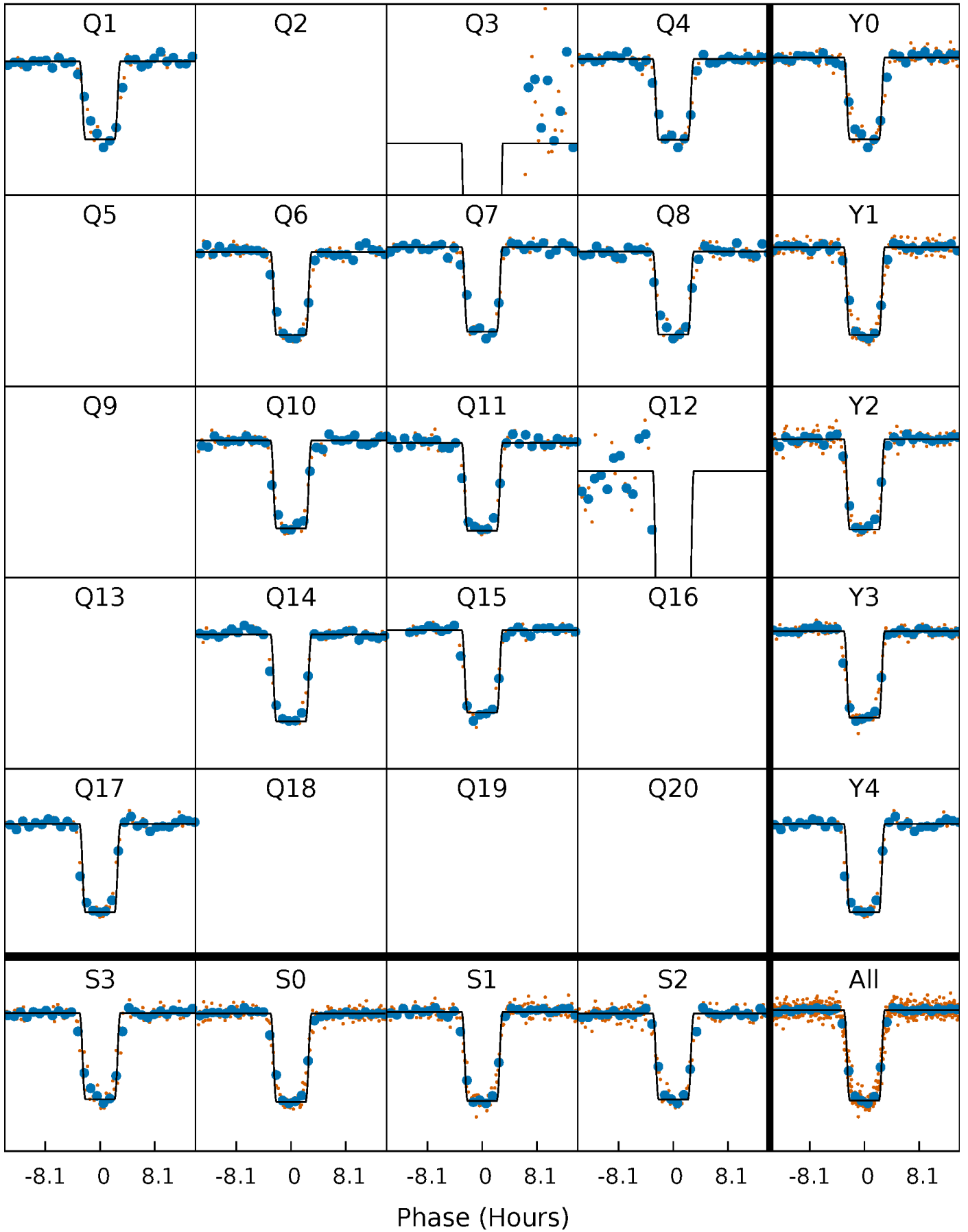
DV Quarter-Phased Transit Curves

TCE 007898352-01 P=127.282615 Days $T_0=163.888707$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

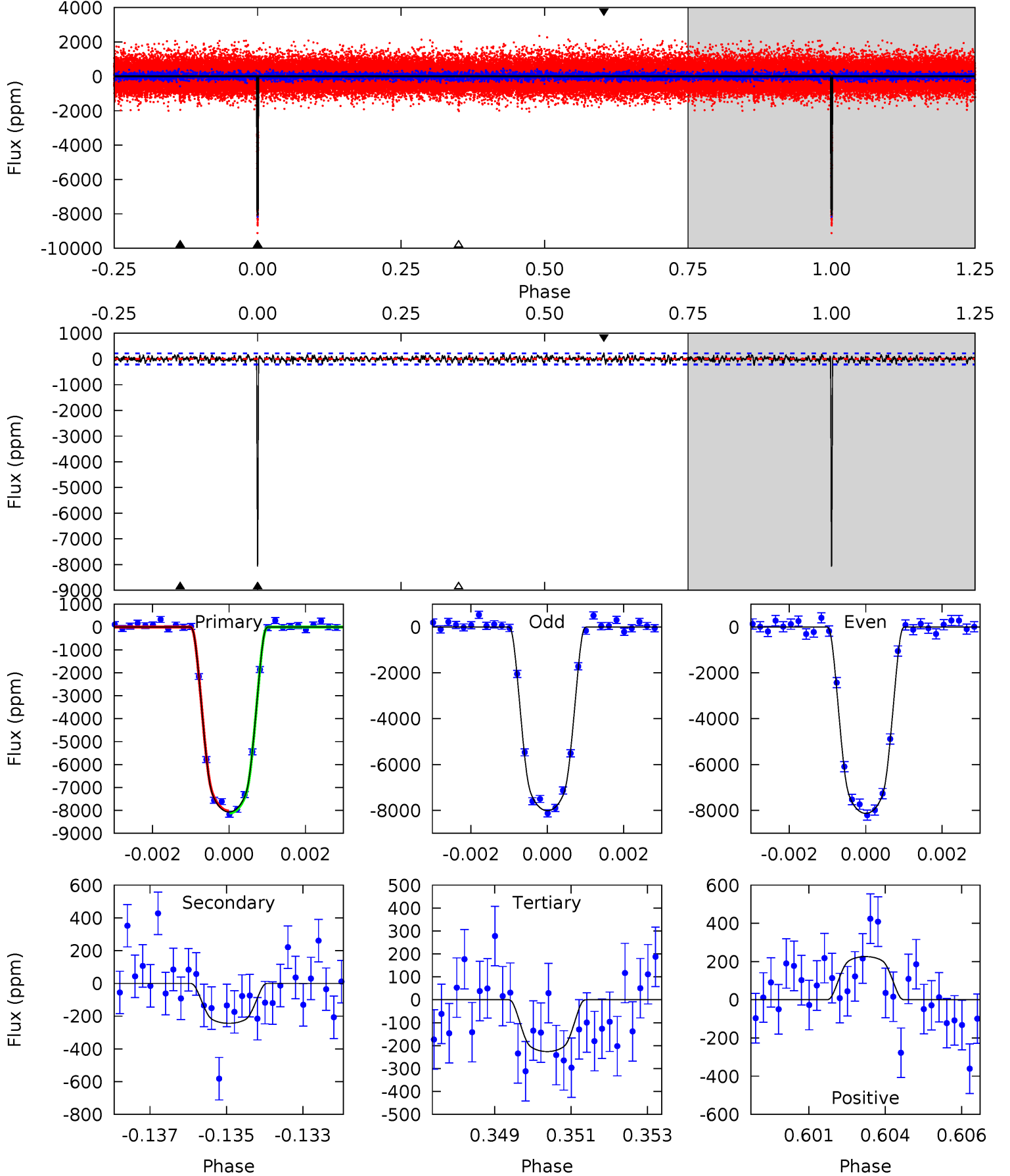
TCE 007898352-01 P=127.284900 Days $T_0=163.875102$ (BKJD)



DV Model-Shift Uniqueness Test

007898352-01, P = 127.282615 Days, E = 36.606092 Days

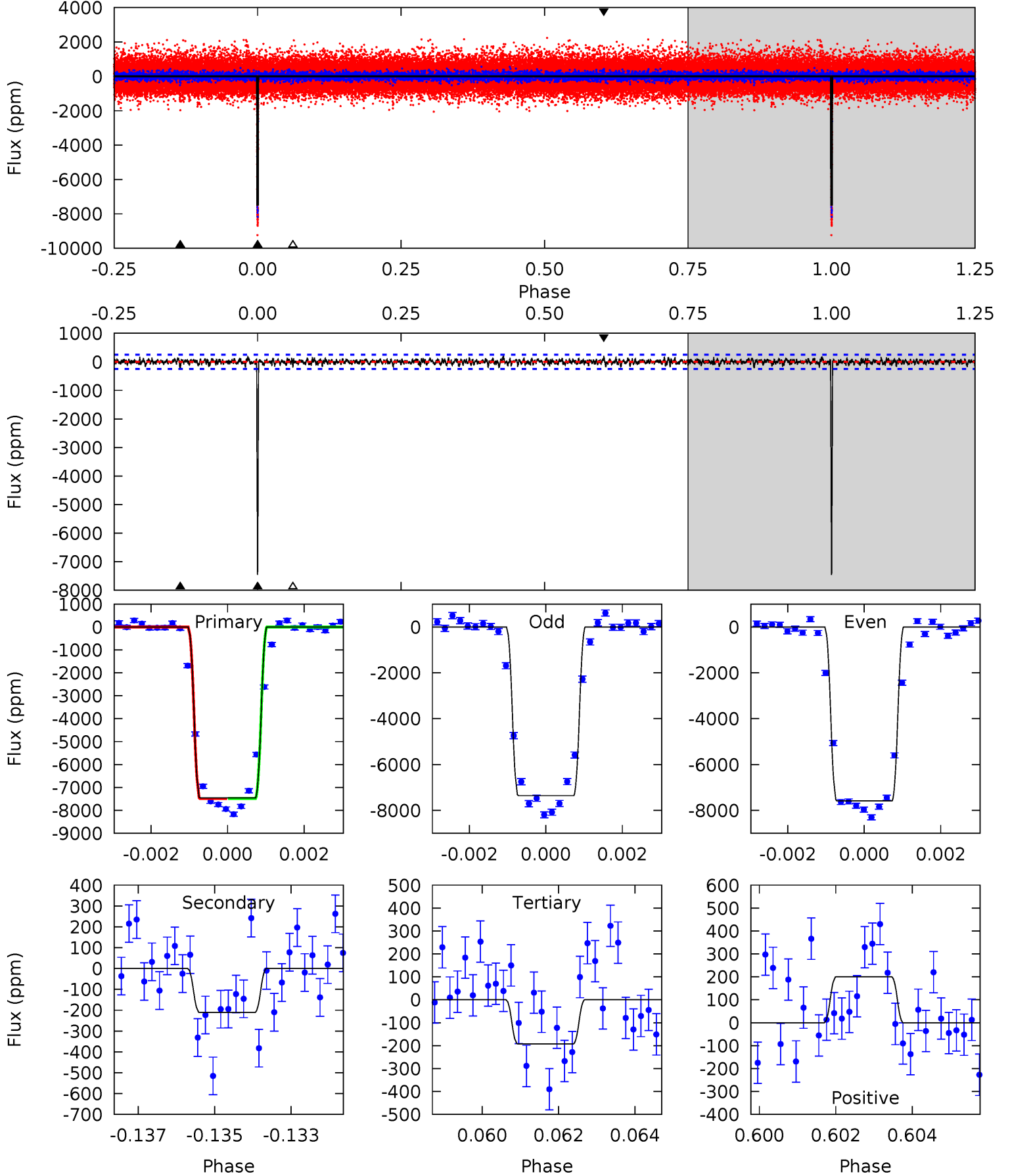
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
198.2	5.99	5.55	5.55	5.29	3.03	1.59	192.6	192.6	0.44	0.44	1.45	0.92	0.03	1.12



Alt Model-Shift Uniqueness Test

007898352-01, $P = 127.284900$ Days, $E = 36.590202$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
160.7	4.54	4.15	4.31	5.33	3.10	1.19	156.6	156.4	0.39	0.23	2.40	1.01	0.03	0.07



Stellar Parameters For KIC 007898352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5733^{+115}_{-104}	$4.281^{+0.143}_{-0.104}$	$0.060^{+0.150}_{-0.150}$	$1.183^{+0.184}_{-0.202}$	$0.974^{+0.079}_{-0.065}$	$0.829^{+0.598}_{-0.250}$
	+2%/-2%	+3%/-2%	+250%/-250%	+16%/-17%	+8%/-7%	+72%/-30%
Source	SPE58	SPE58	SPE58	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007898352-01 / KOI 1486.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-244±41	$12.15^{+1.02}_{-1.14}$	549^{+24}_{-28}	3012^{+81}_{-78}	225^{+65}_{-51}
Alt.	-211±46	$11.35^{+0.96}_{-1.06}$	546^{+24}_{-24}	2995^{+101}_{-107}	219^{+72}_{-54}

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 $A_{obs} \gg 1.0$

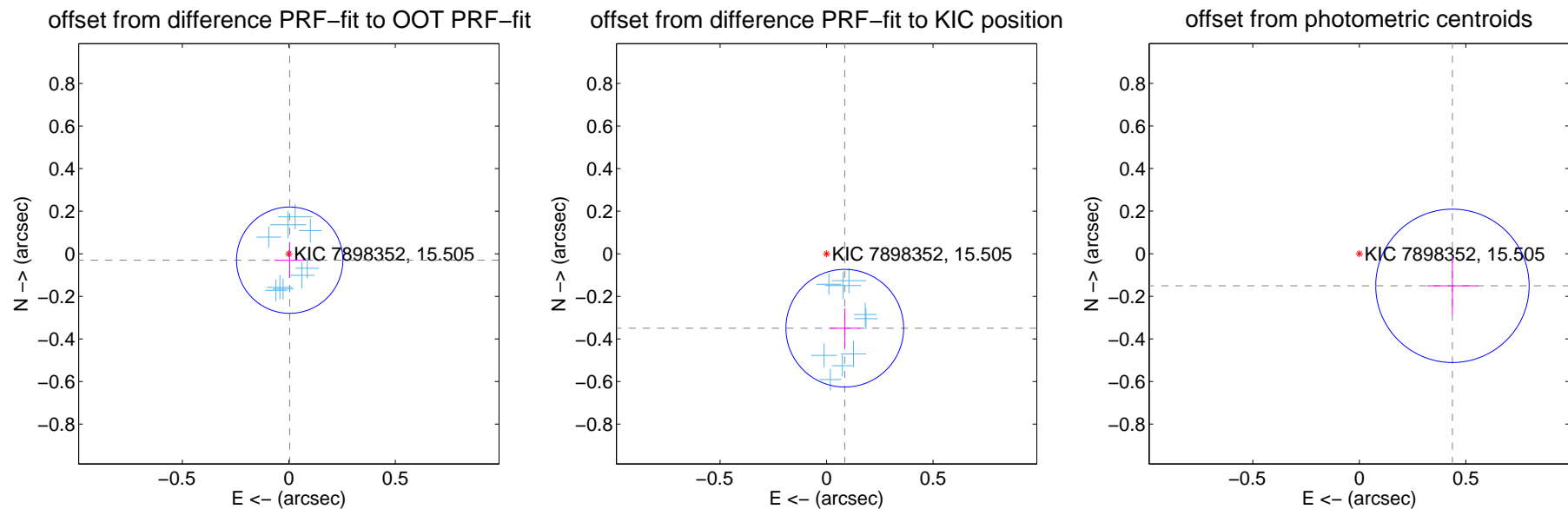
DV Centroid Data

Supplemental centroid analysis for 007898352-01. Kepler magnitude: 15.51. Transit SNR 118.80

There are 9 quarters with good PRF difference image offsets

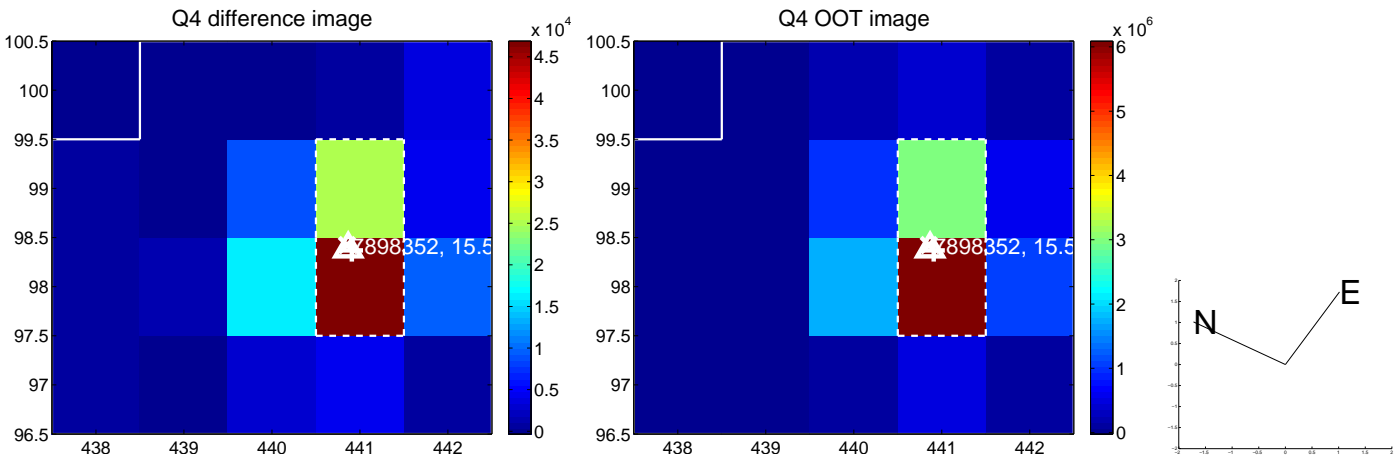
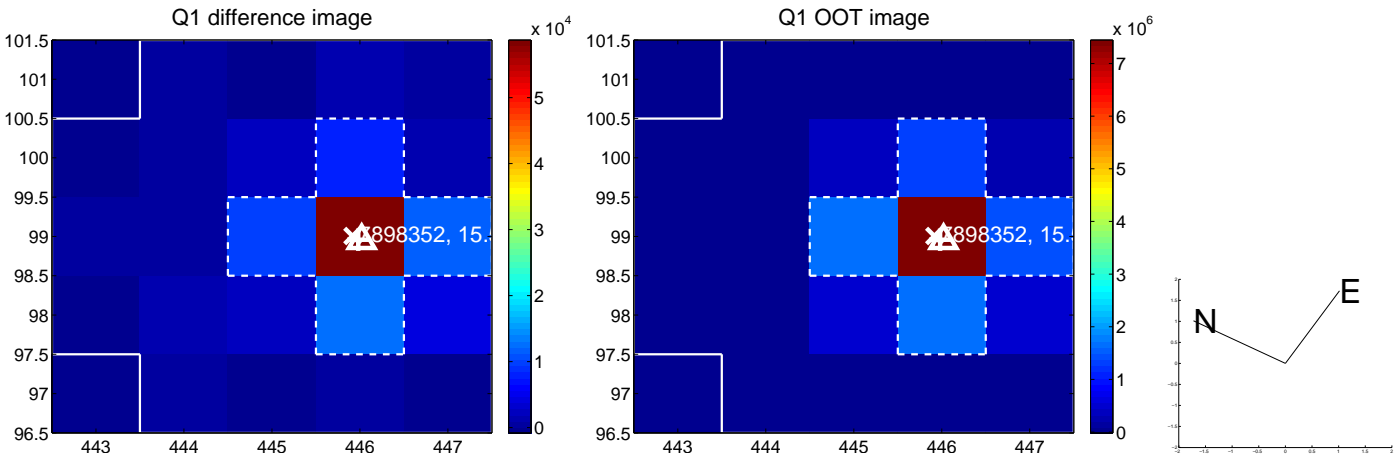
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.030 ± 0.083	0.36	-0.004 ± 0.072	-0.030 ± 0.083
PRF-fit source offset from KIC position	0.360 ± 0.092	3.91	-0.085 ± 0.072	-0.350 ± 0.093
photometric centroid source offset	0.46 ± 0.12	3.85	-0.44 ± 0.12	-0.15 ± 0.13

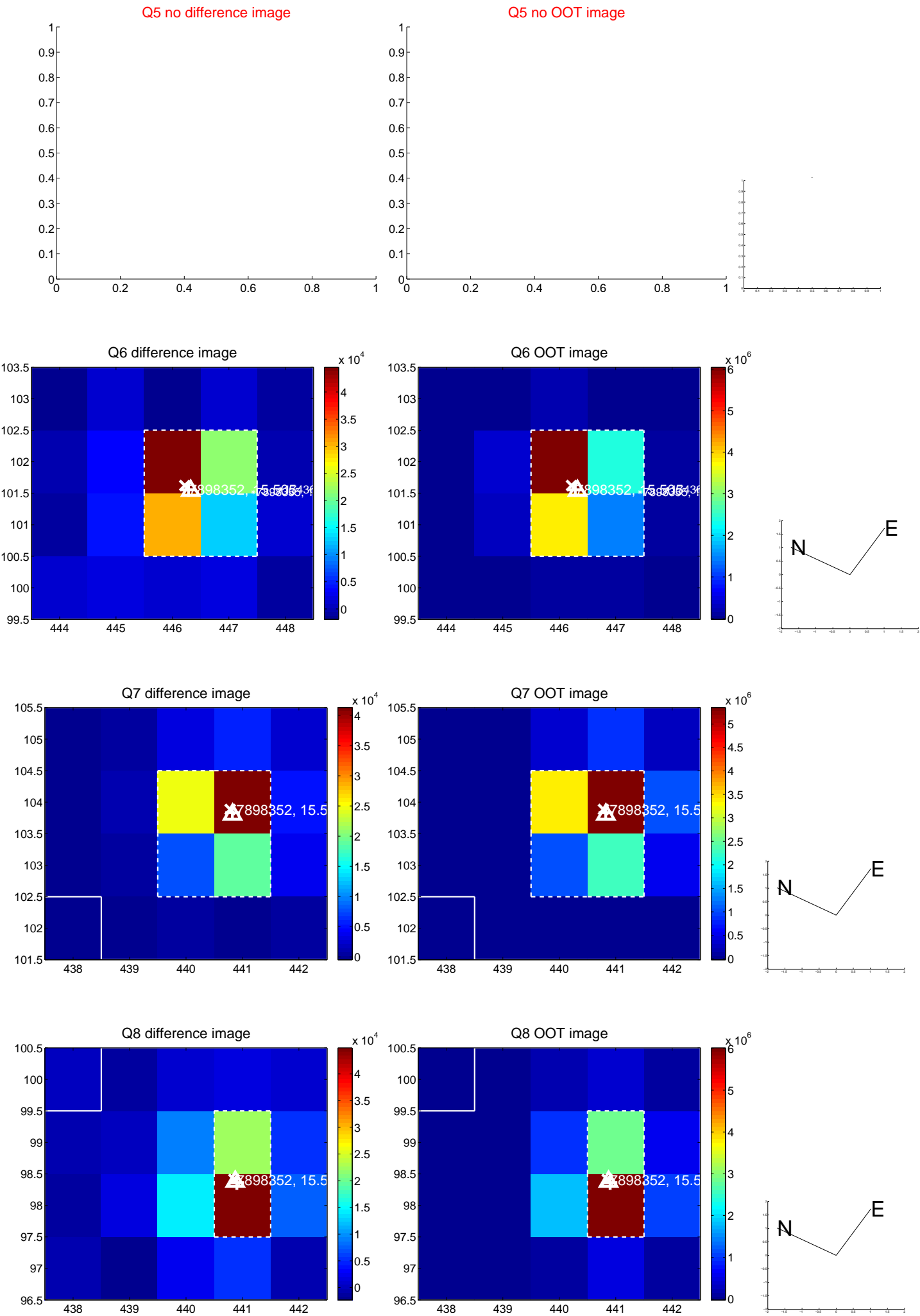


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

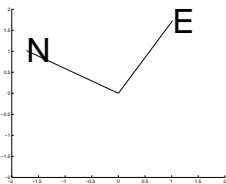
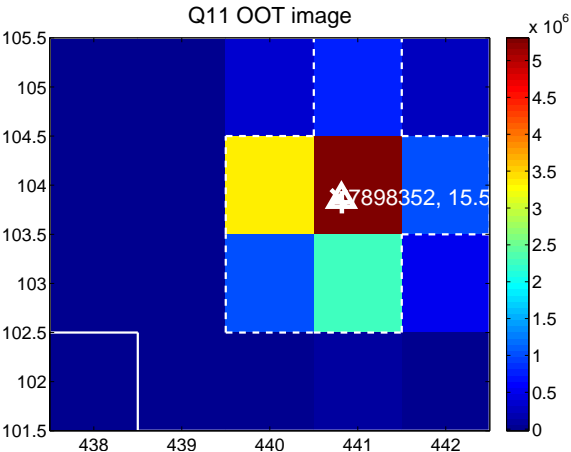
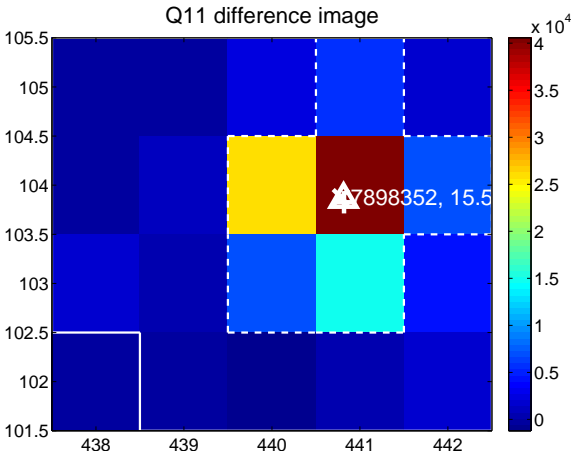
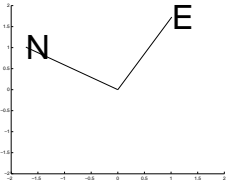
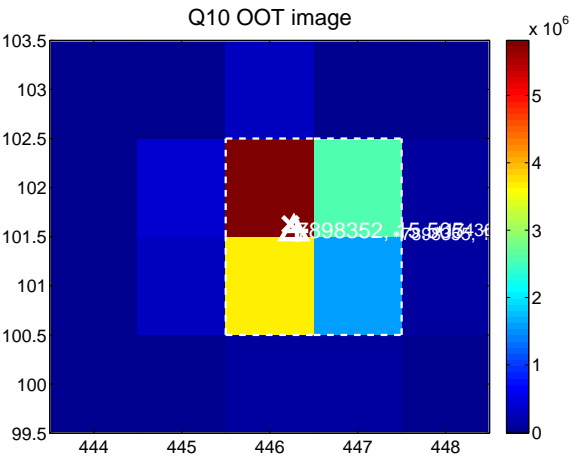
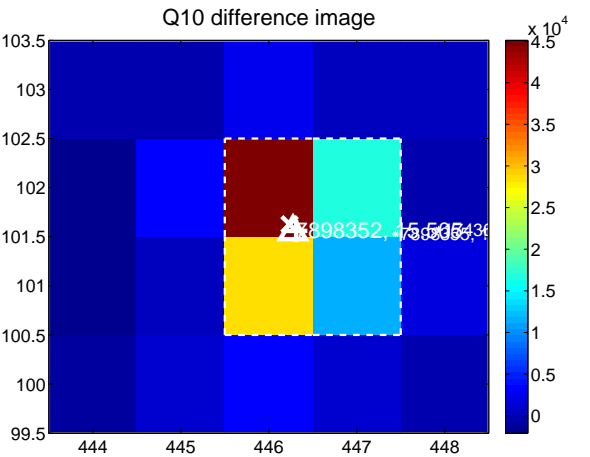


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

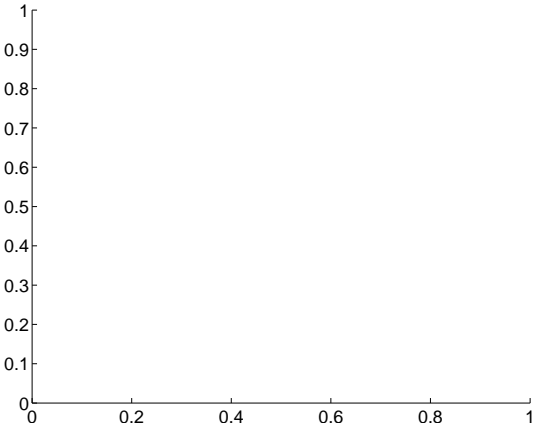
Q9 no difference image



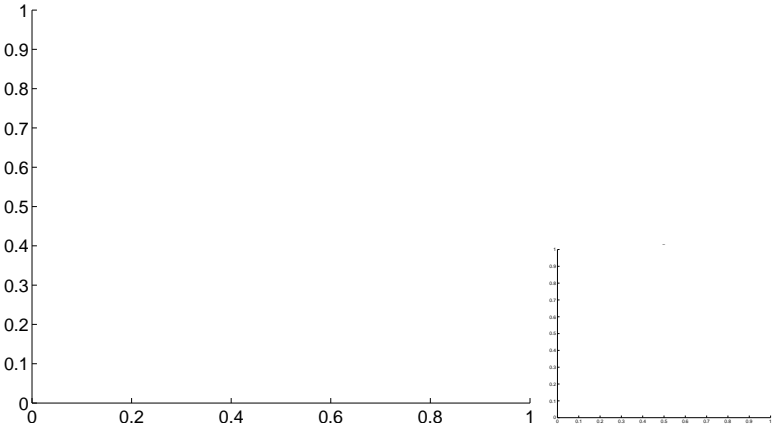
Q9 no OOT image



Q12 no difference image



Q12 no OOT image

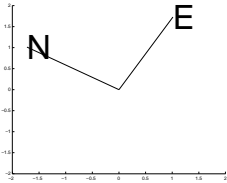
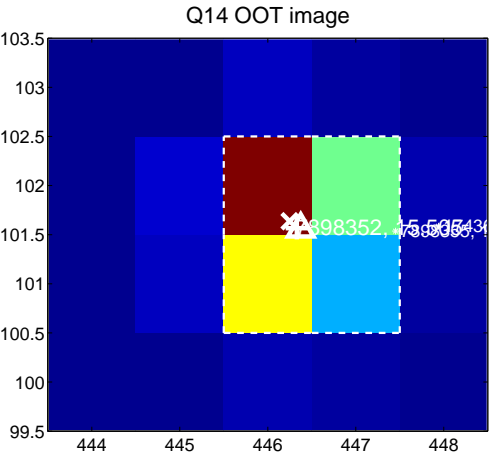
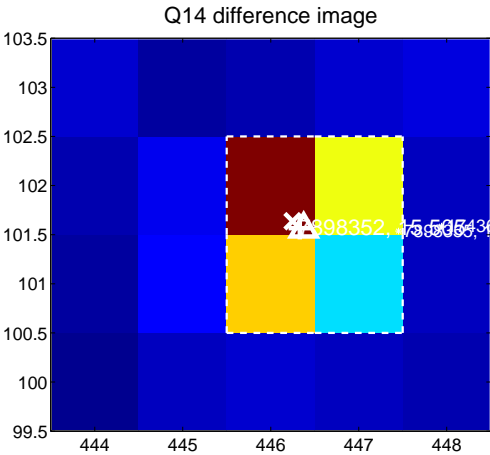


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

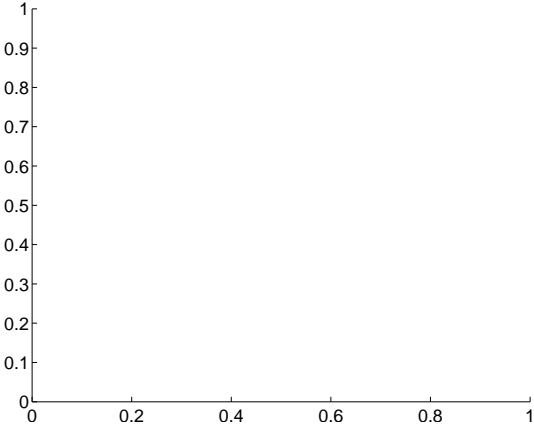
Q13 no difference image



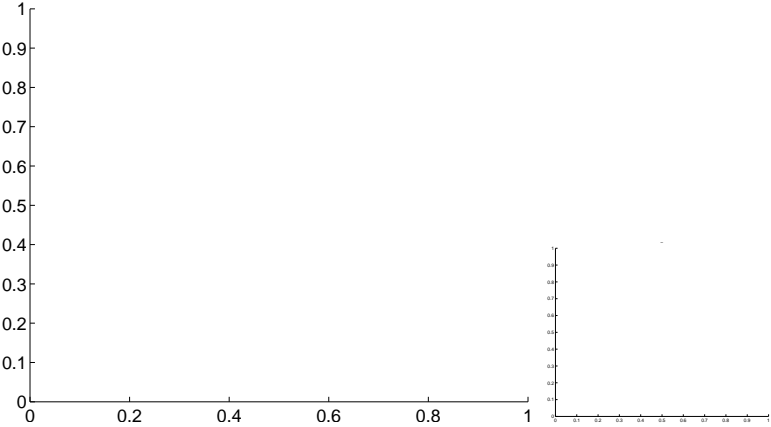
Q13 no OOT image



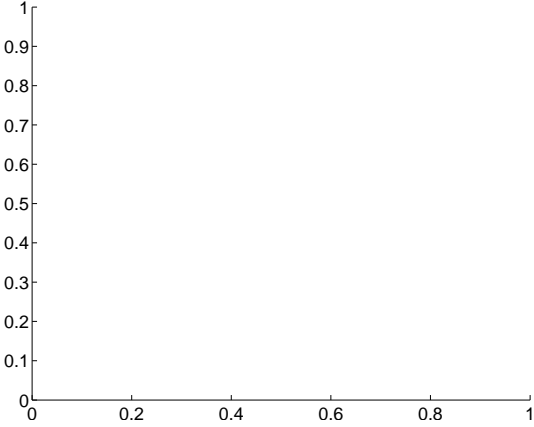
Q15 no difference image



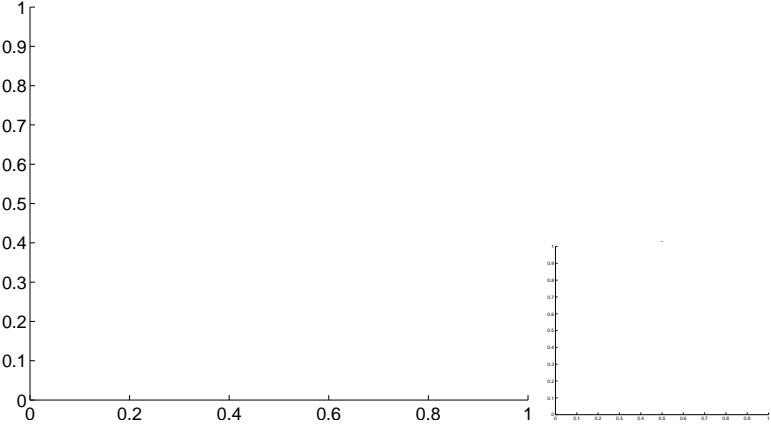
Q15 no OOT image



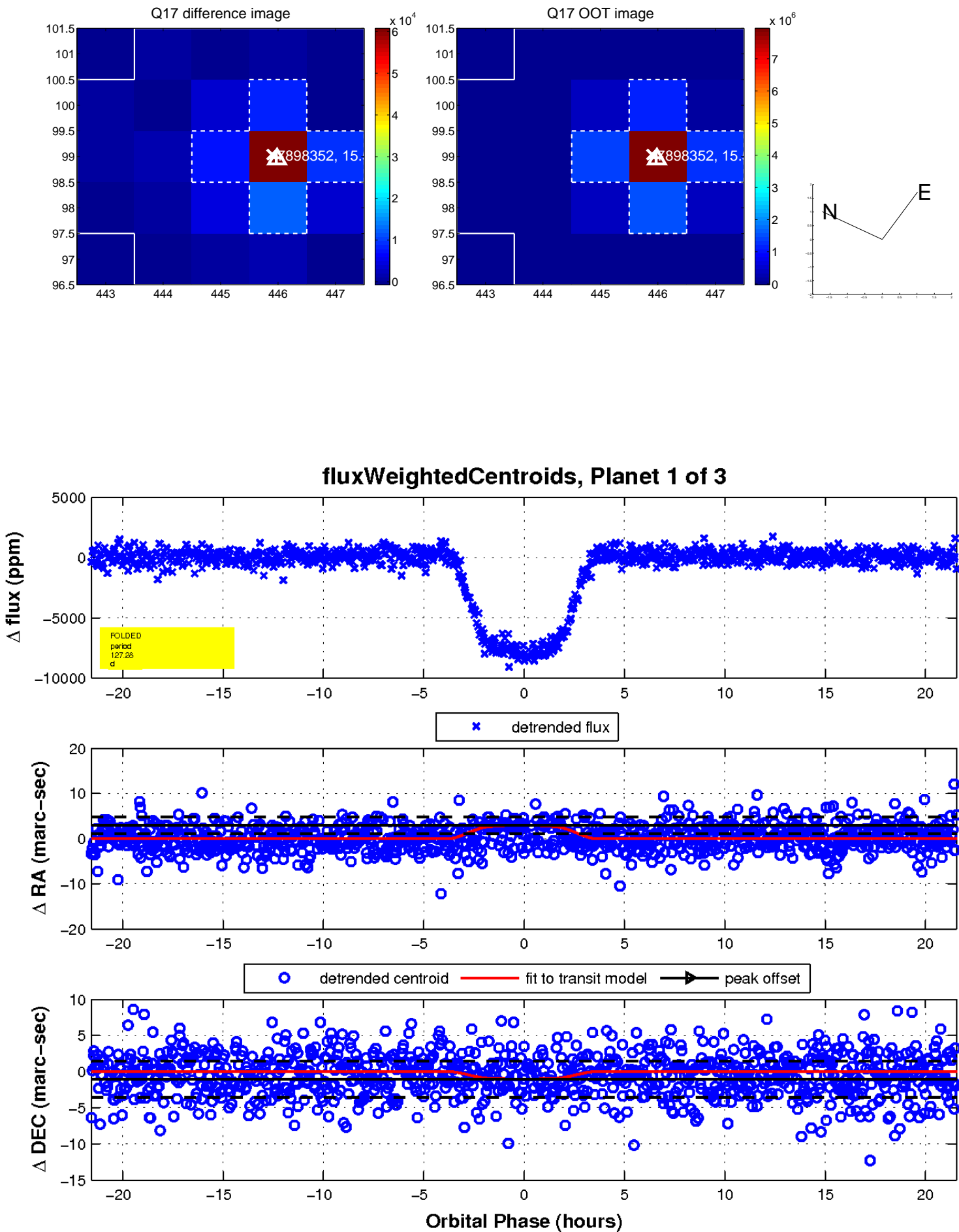
Q16 no difference image



Q16 no OOT image

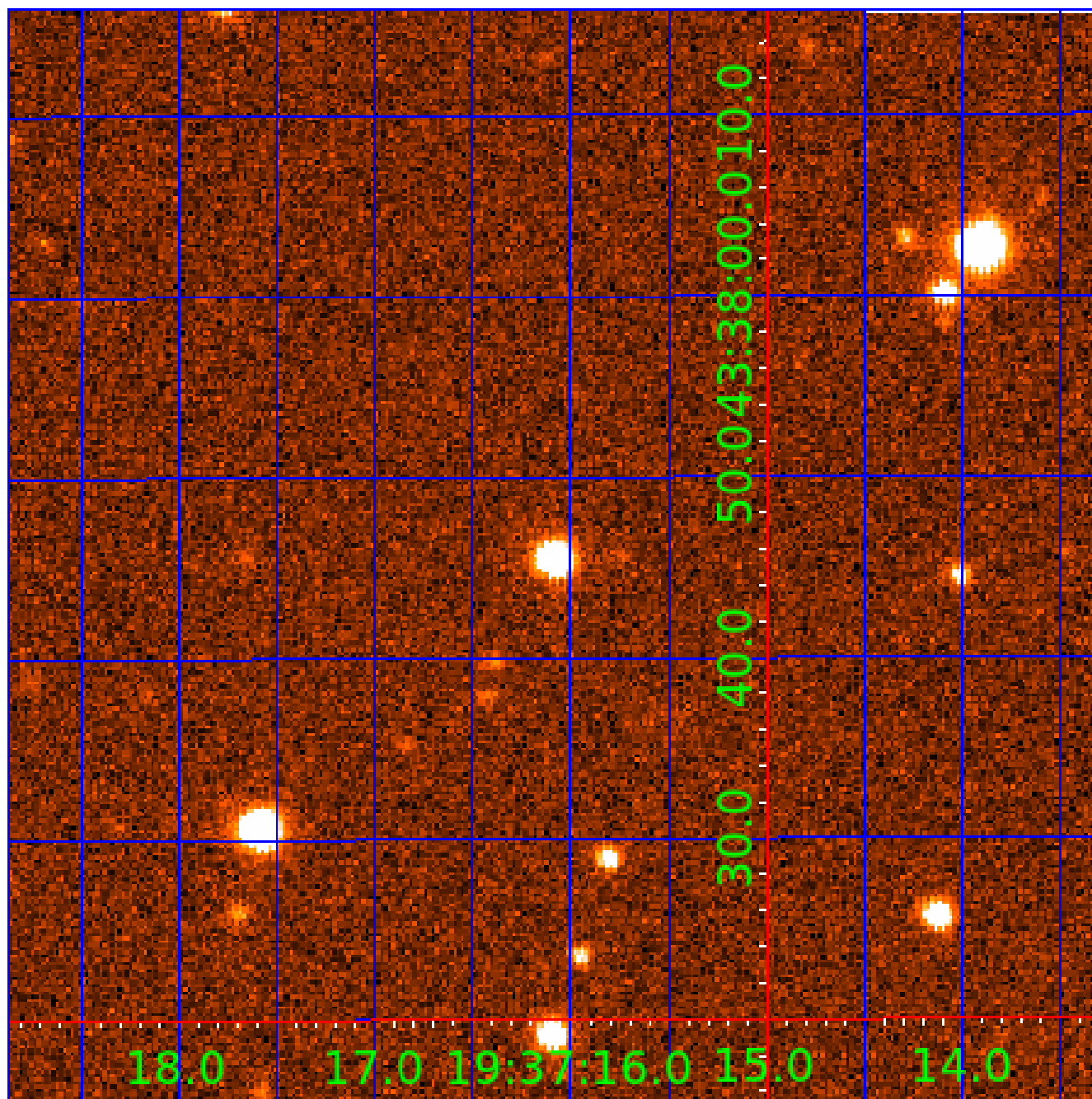


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007898352

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})
007898352-01	OBS	1486.01	127.282615	163.888707	8093.3	7.187	116.6	118.8	1.18	5733	12.09	5.62
007898352-02	OBS	1486.02	30.183730	146.646988	949.5	6.126	29.3	30.7	1.18	5733	3.99	38.26
007898352-03	OBS	No	489.672319	483.357343	568.7	15.808	7.8	7.7	1.18	5733	2.95	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007898352-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007898352-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007898352-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

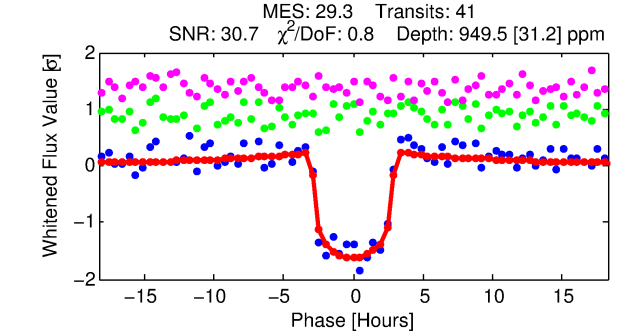
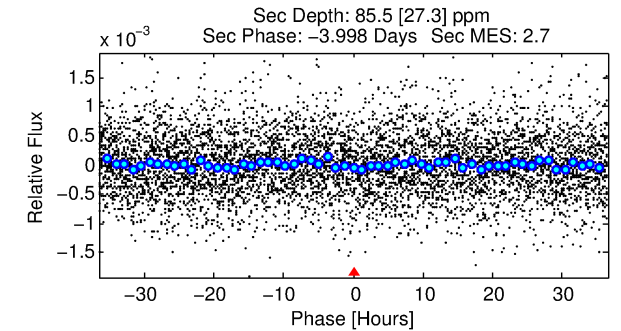
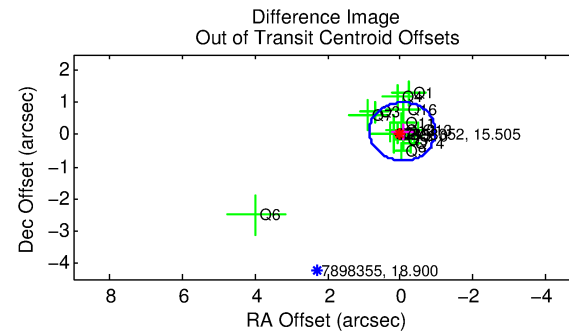
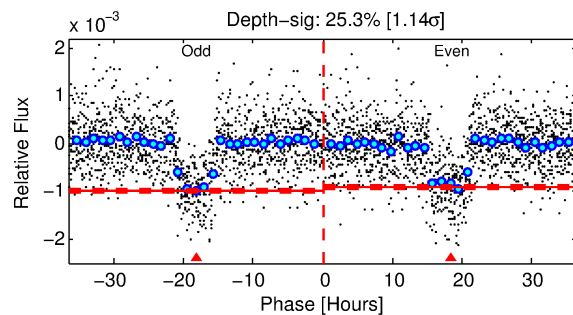
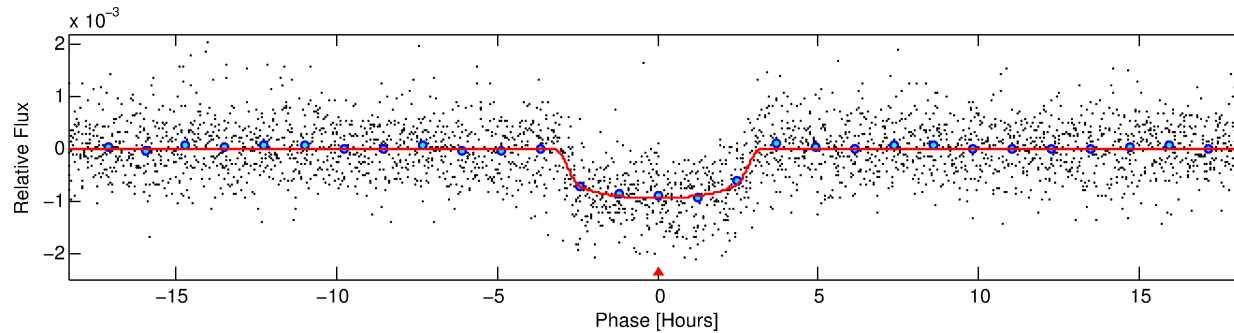
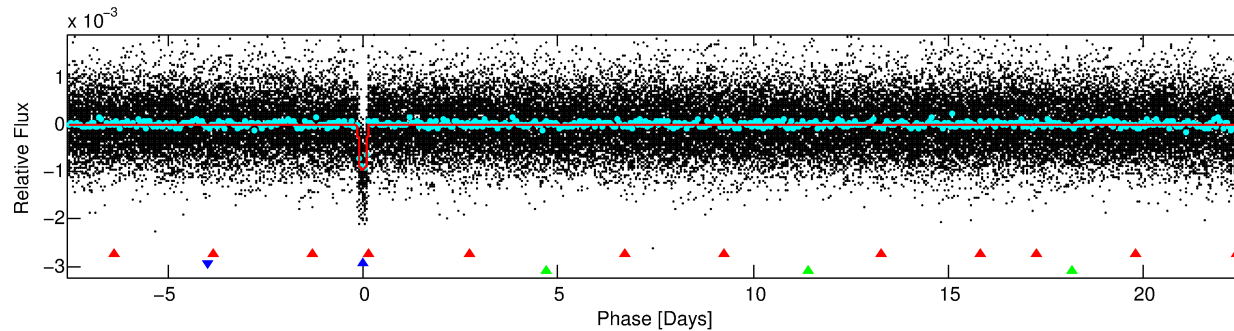
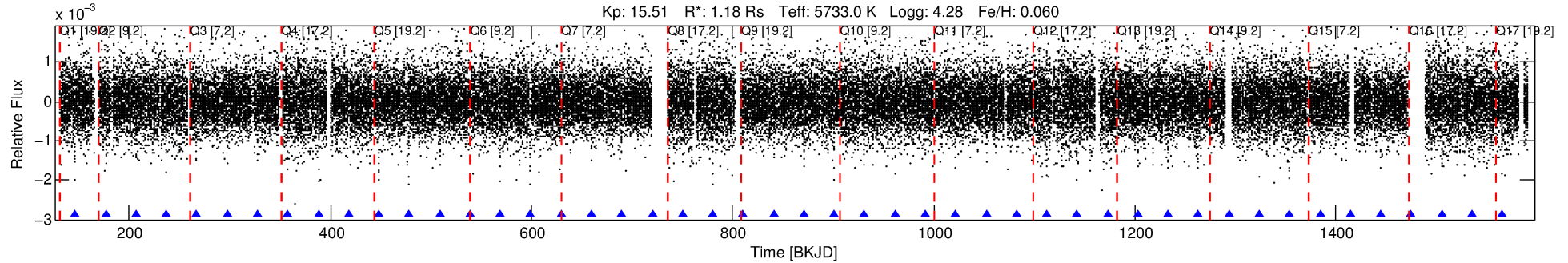
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007898352-02

No Significant Match Found

DV One-Page Summary

KIC: 7898352 Candidate: 2 of 3 Period: 30.184 d
KOI: K01486.02 Name: Kepler-302b Corr: 0.980



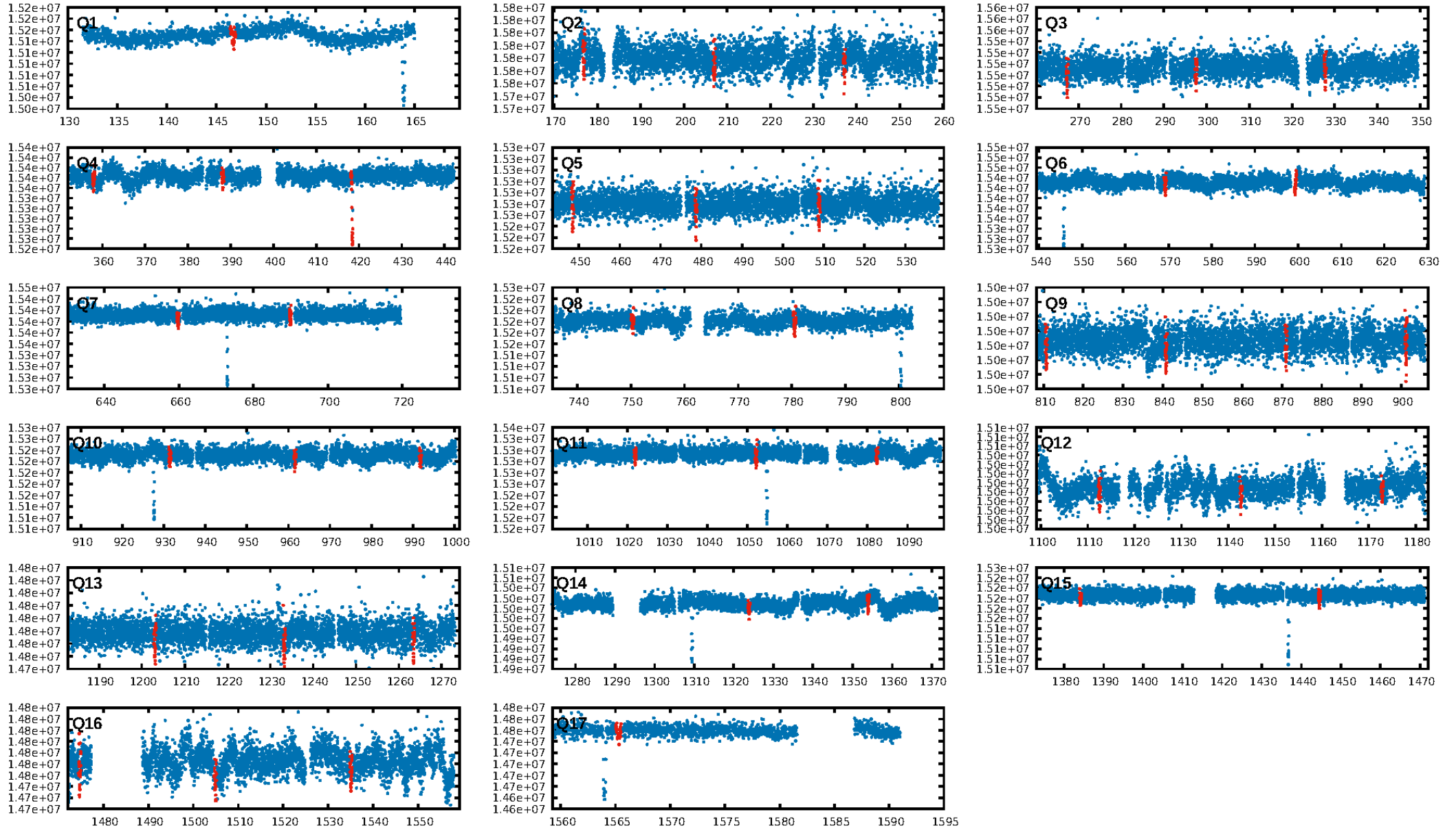
DV Fit Results:

Period = 30.18373 [0.00014] d
Epoch = 146.6470 [0.0037] BKJD
Rp/R* = 0.0309 [0.0038]
a/R* = 25.92 [13.64]
b = 0.77 [0.29]
Seff = 38.26 [9.95]
Teff = 634 [41] K
Rp = 3.99 [0.84] Re
a = 0.1882 [0.0298] AU
Ag = 104.59 [49.44] [2.10 σ]
Teffp = 3136 [322] K [7.71 σ]

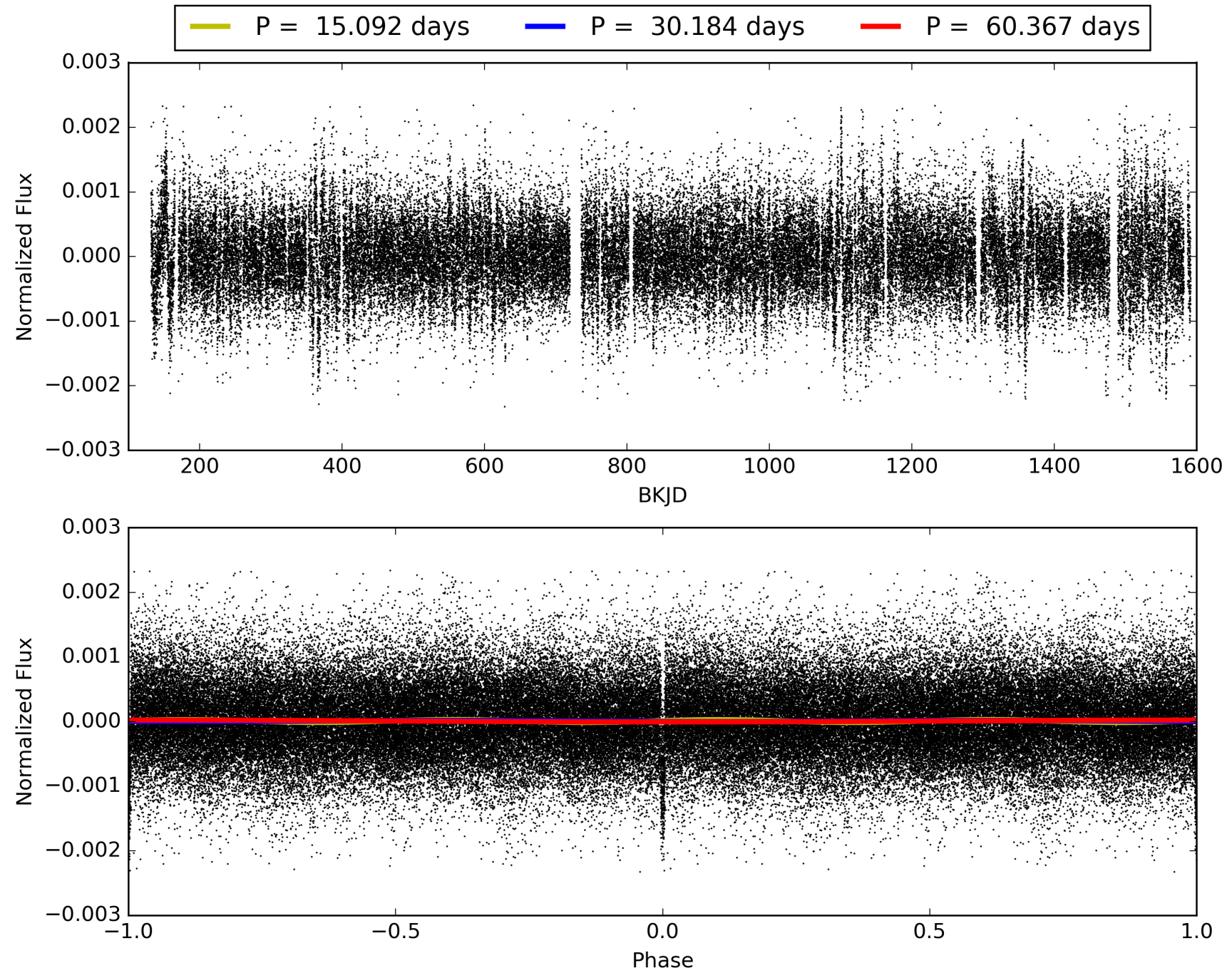
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [246.78 σ]
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.57e-176
RollingBand-fgt: 1.00 [39/39]
GhostDiagnostic-chr: 6.204
Centroid-sig: 23.9%
Centroid-so: 0.476 arcsec [0.96 σ]
OotOffset-rm: 0.114 arcsec [0.38 σ]
KicOffset-rm: 0.257 arcsec [1.52 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007898352-02, PDC Light Curves

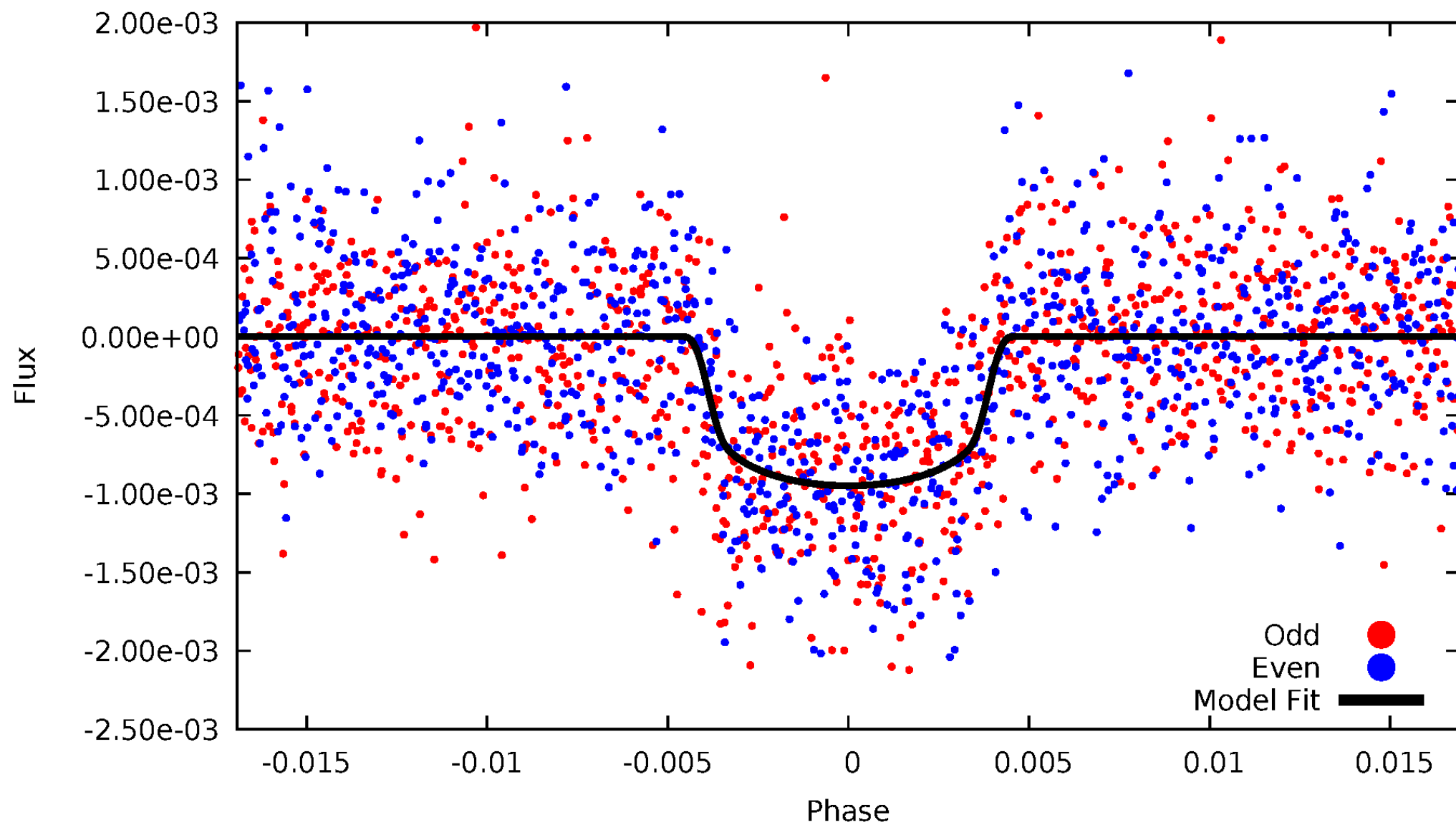


TCE 007898352-02



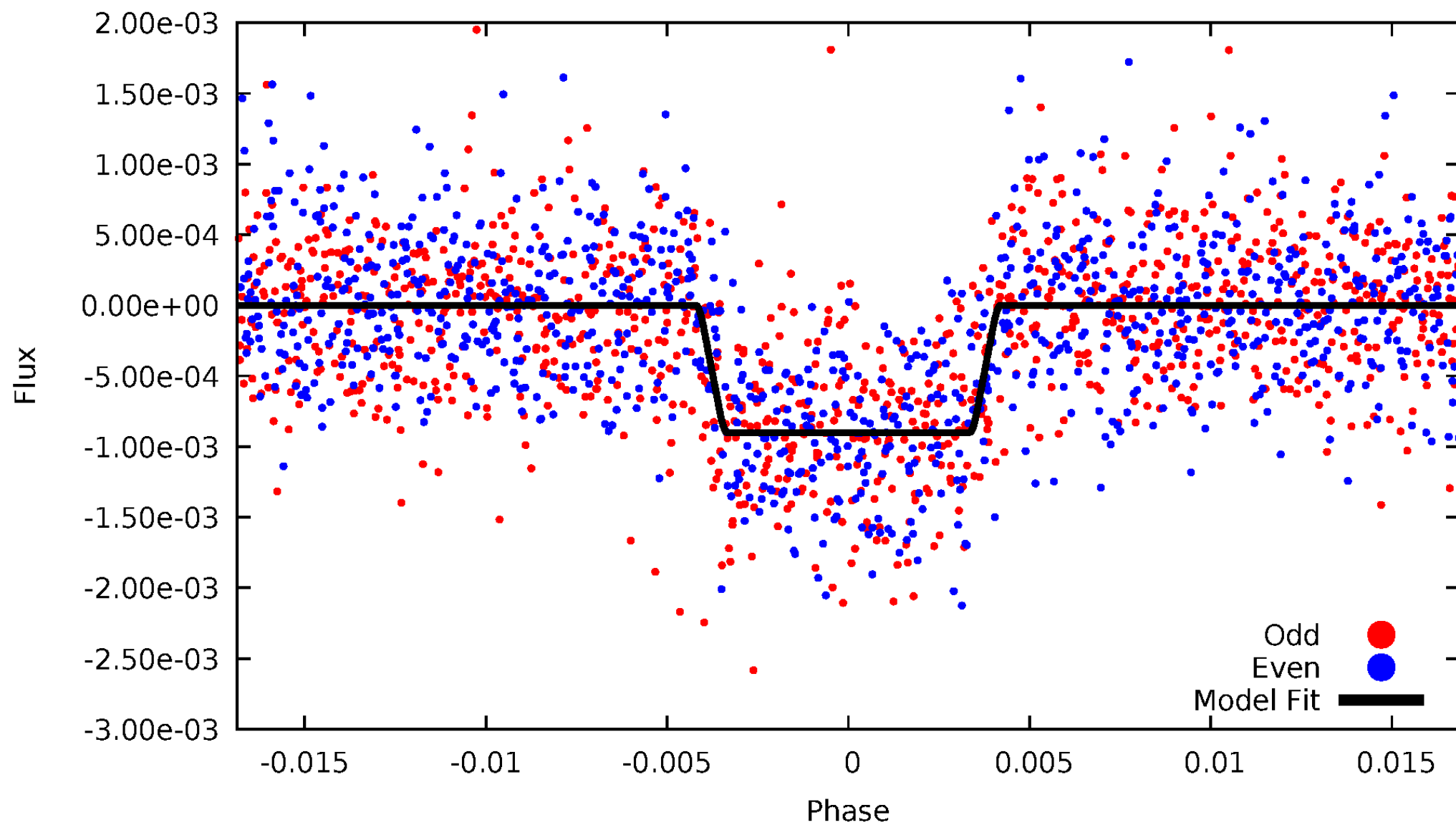
DV Odd/Even

TCE 007898352-02



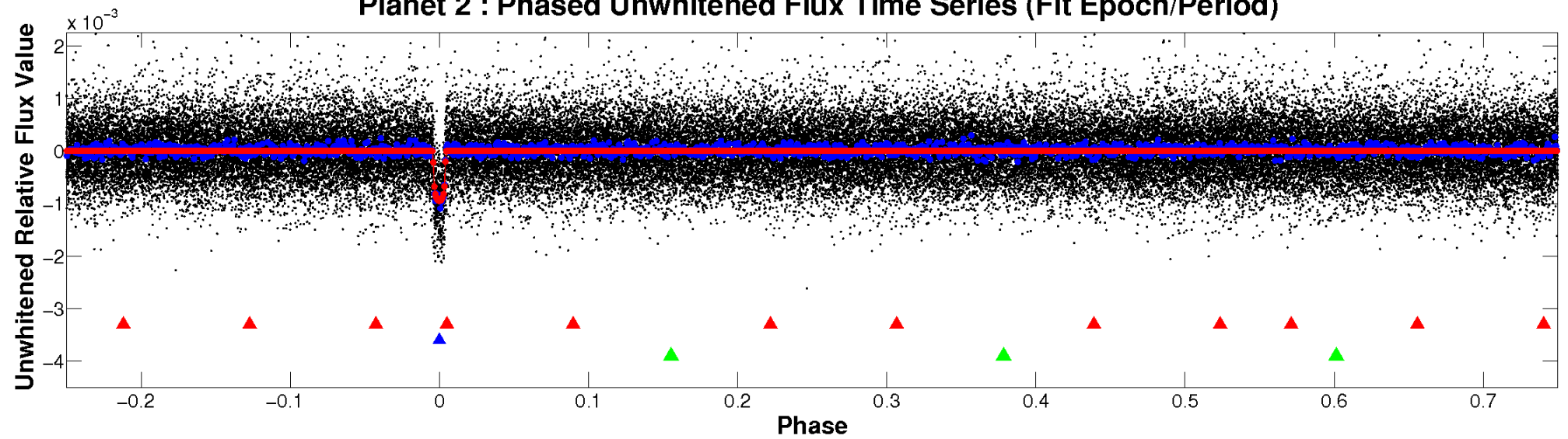
ALT Odd/Even

TCE 007898352-02

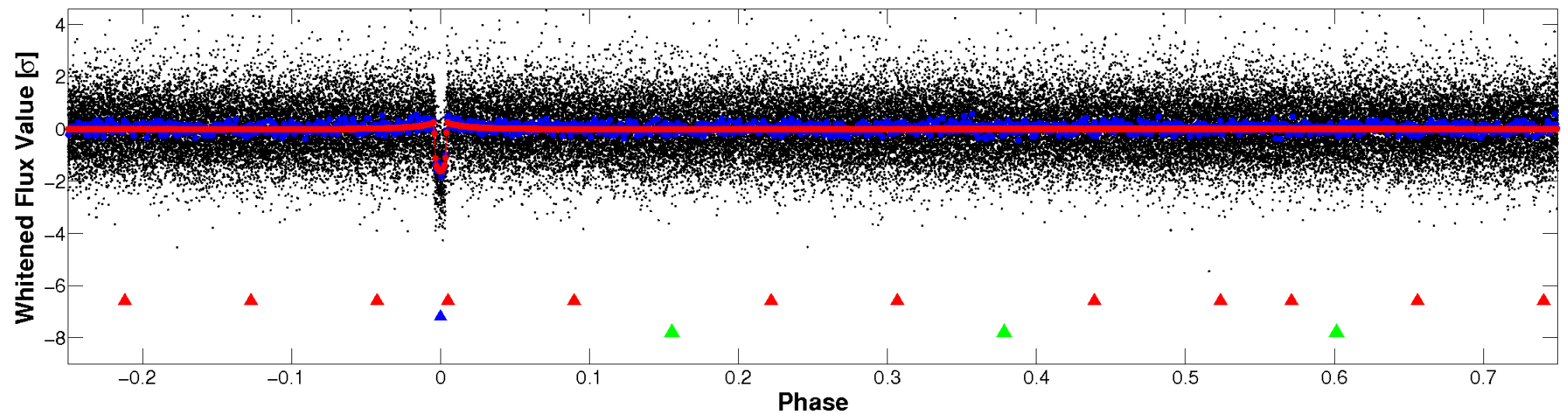


Non-Whitened Vs. Whitened Light Curve

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

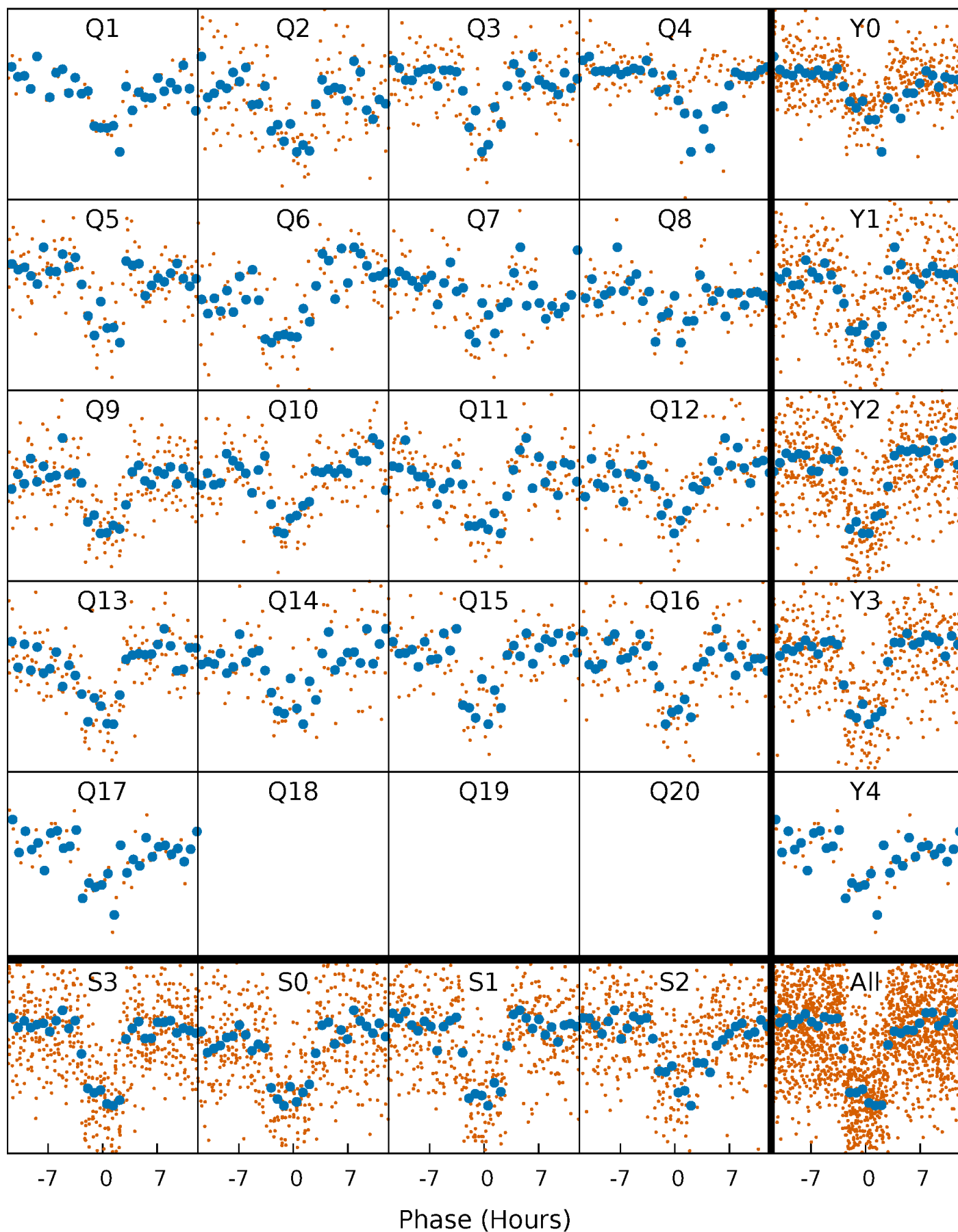


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



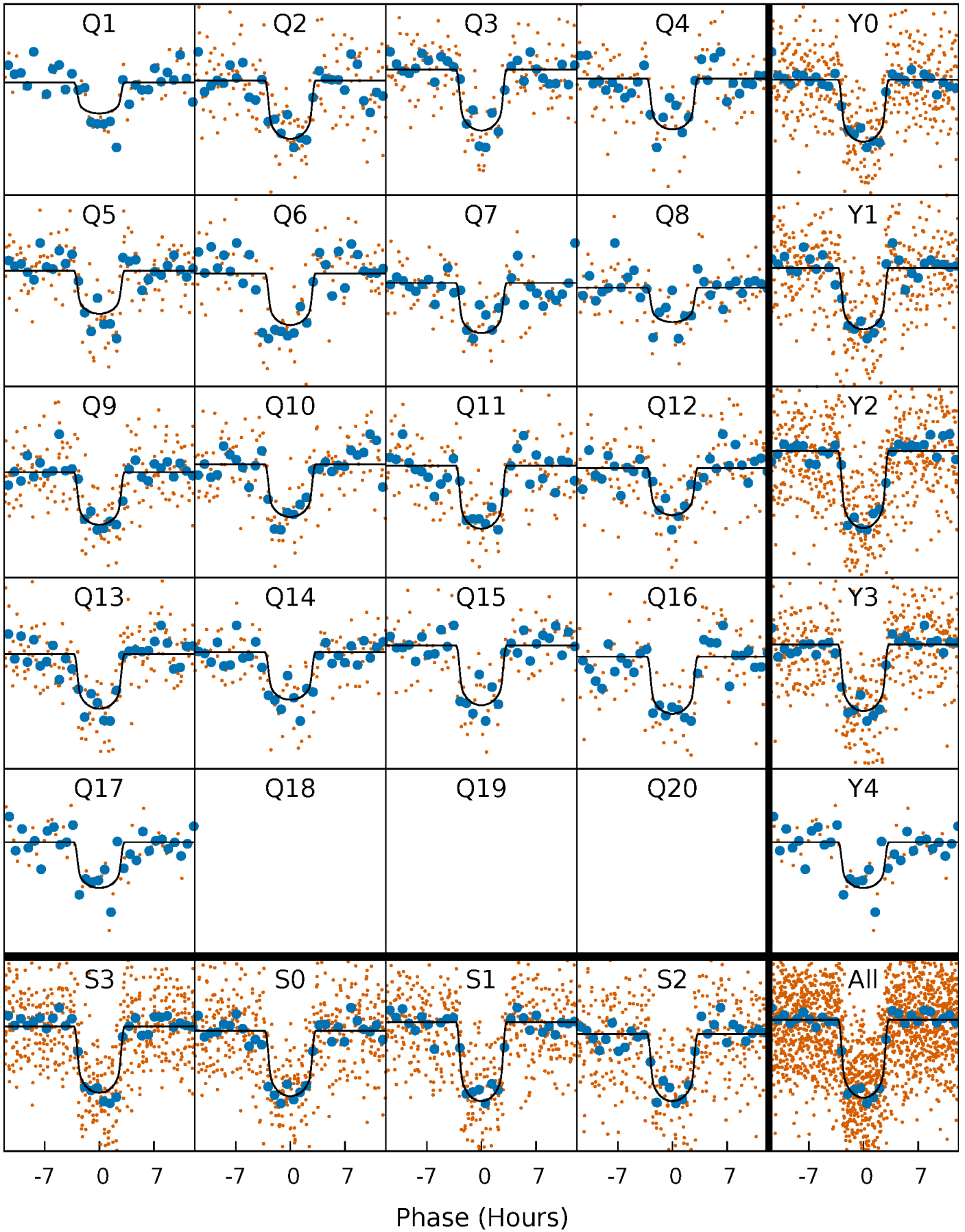
PDC Quarter-Phased Transit Curves

TCE 007898352-02 P= 30.183730 Days $T_0=146.646988$ (BKJD)



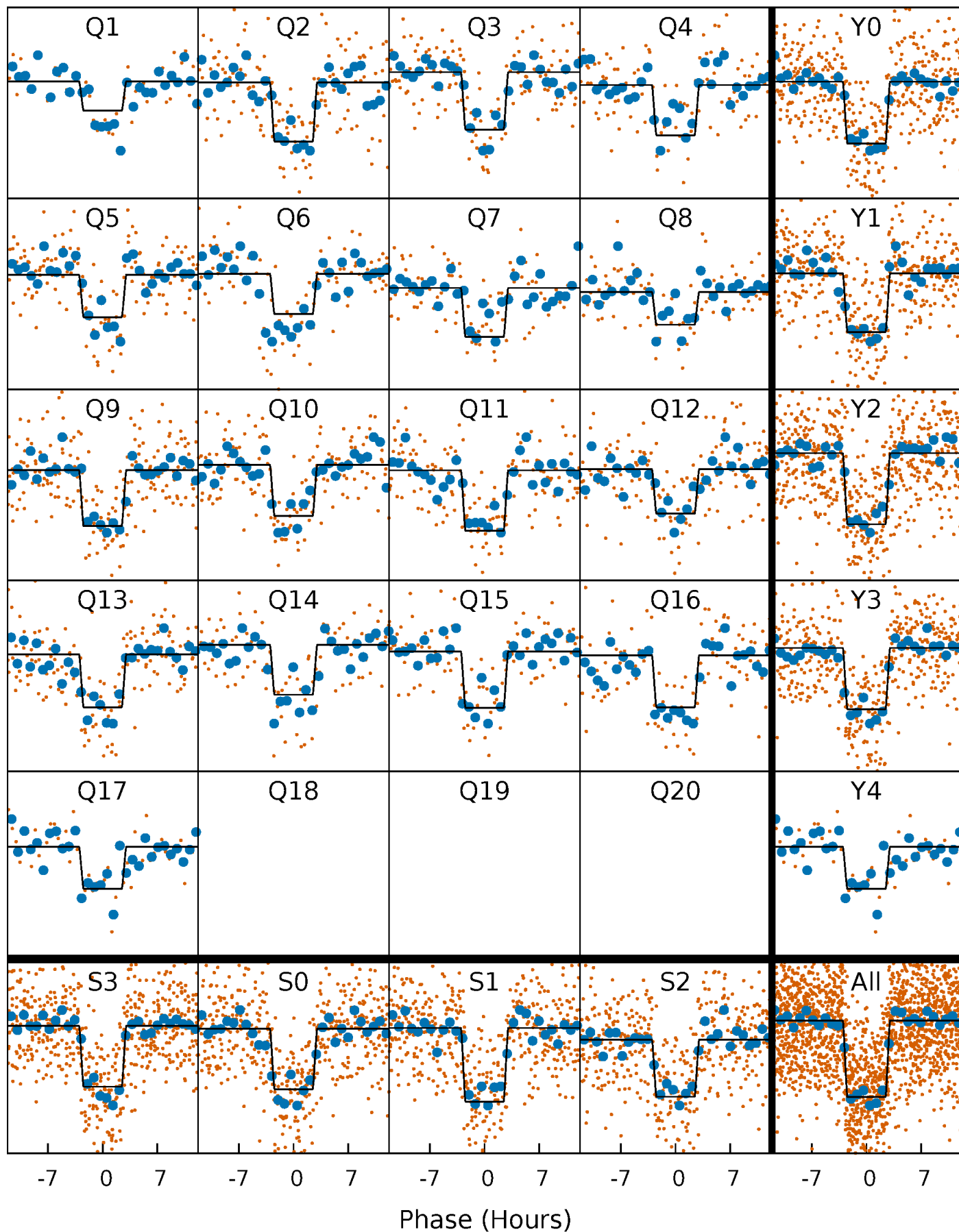
DV Quarter-Phased Transit Curves

TCE 007898352-02 P= 30.183730 Days $T_0=146.646988$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

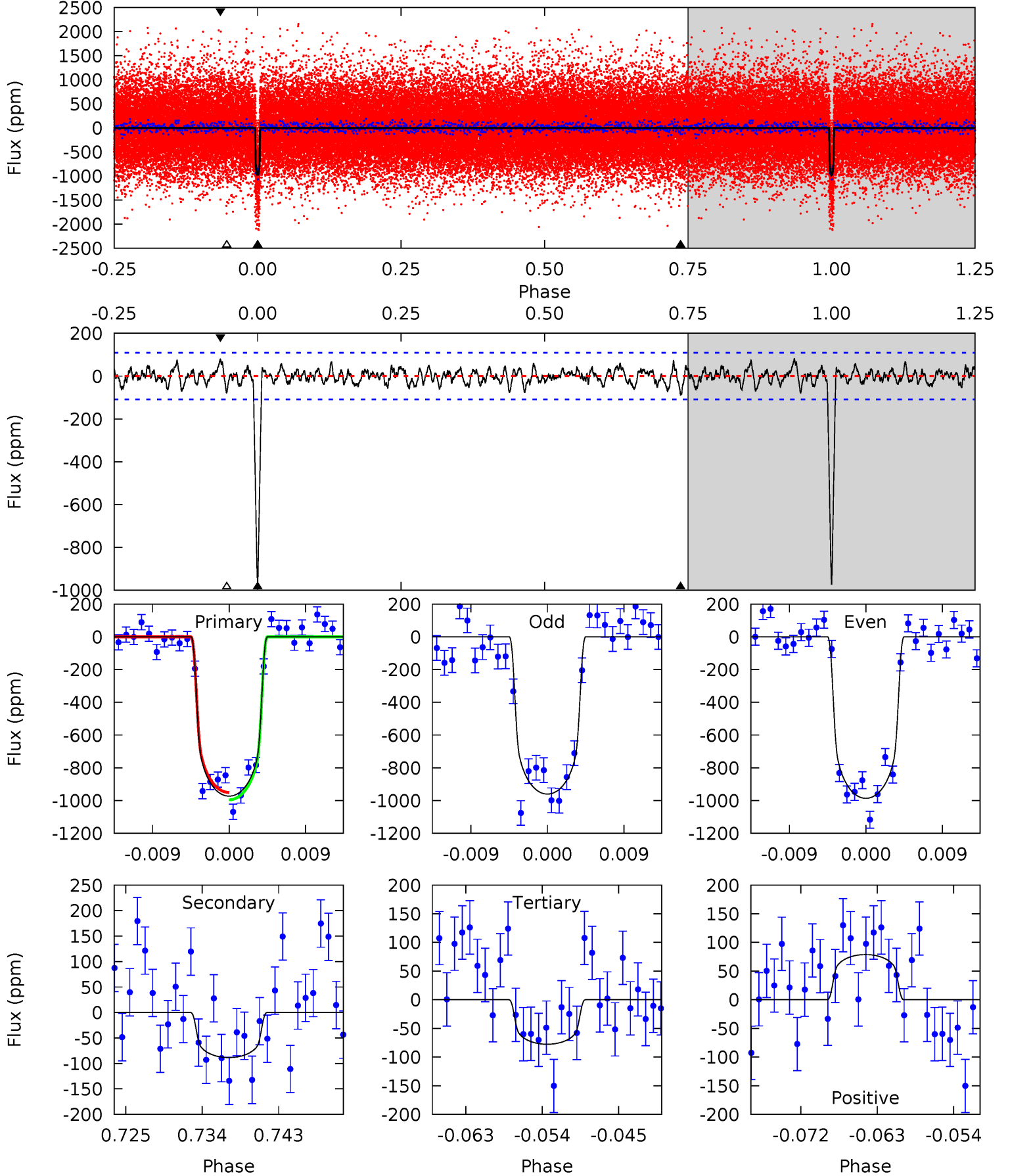
TCE 007898352-02 P= 30.183938 Days $T_0=146.641152$ (BKJD)



DV Model-Shift Uniqueness Test

007898352-02, $P = 30.183730$ Days, $E = 116.463258$ Days

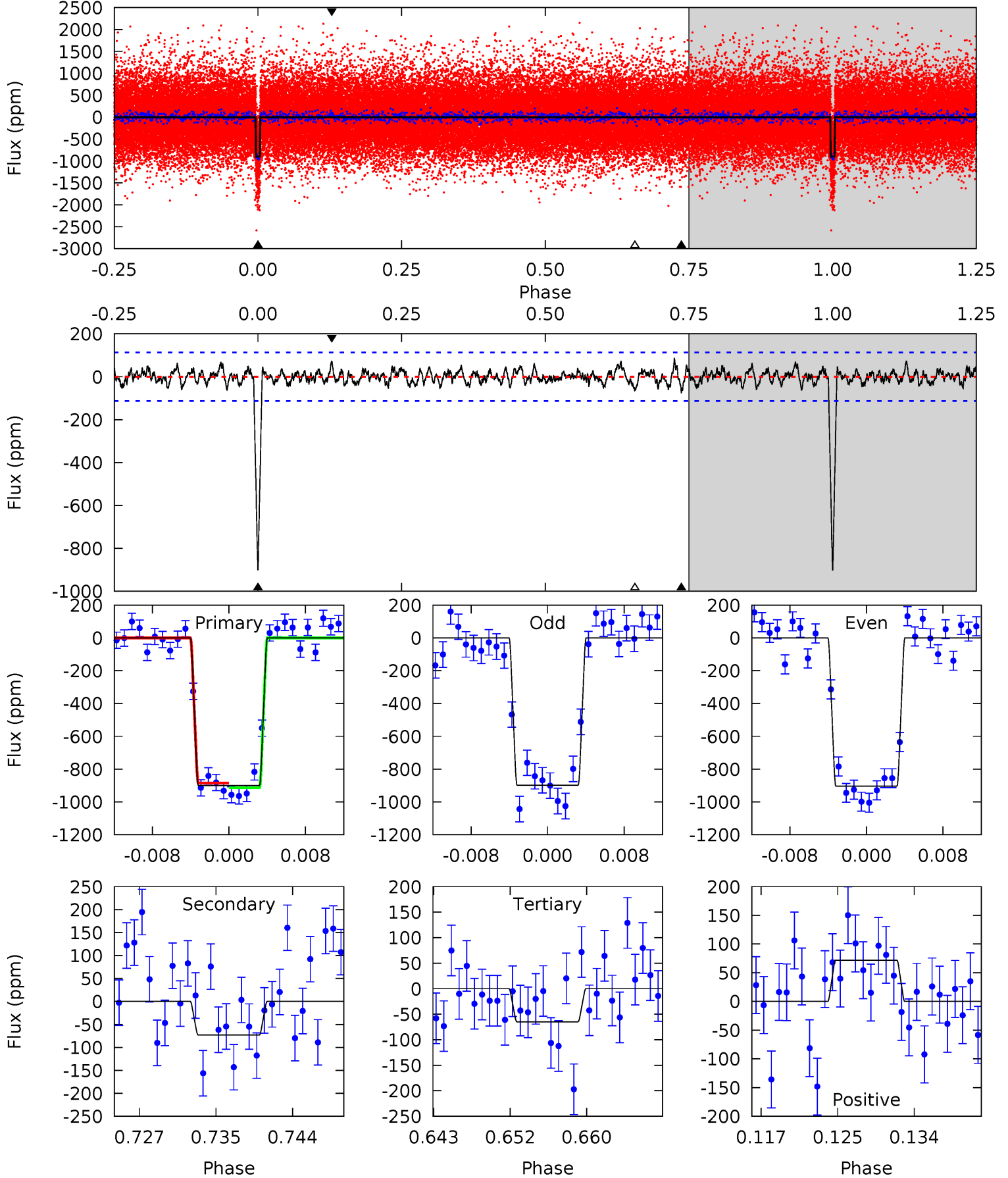
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.3	4.11	3.61	3.67	5.05	2.61	1.27	41.6	41.6	0.50	0.45	0.60	1.00	0.07	1.05



Alt Model-Shift Uniqueness Test

007898352-02, P = 30.183938 Days, E = 116.457214 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.2	3.27	2.89	3.21	5.06	2.64	1.10	37.3	37.0	0.37	0.05	0.13	1.01	0.09	0.65



Stellar Parameters For KIC 007898352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5733^{+115}_{-104}	$4.281^{+0.143}_{-0.104}$	$0.060^{+0.150}_{-0.150}$	$1.183^{+0.184}_{-0.202}$	$0.974^{+0.079}_{-0.065}$	$0.829^{+0.598}_{-0.250}$
	+2%/-2%	+3%/-2%	+250%/-250%	+16%/-17%	+8%/-7%	+72%/-30%
Source	SPE58	SPE58	SPE58	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007898352-02 / KOI 1486.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-88 ± 22	$3.95^{+0.66}_{-0.61}$	885^{+44}_{-43}	3602^{+214}_{-212}	108^{+52}_{-36}
Alt.	-73 ± 22	$3.83^{+0.57}_{-0.59}$	884^{+36}_{-43}	3524^{+218}_{-232}	96^{+47}_{-37}

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

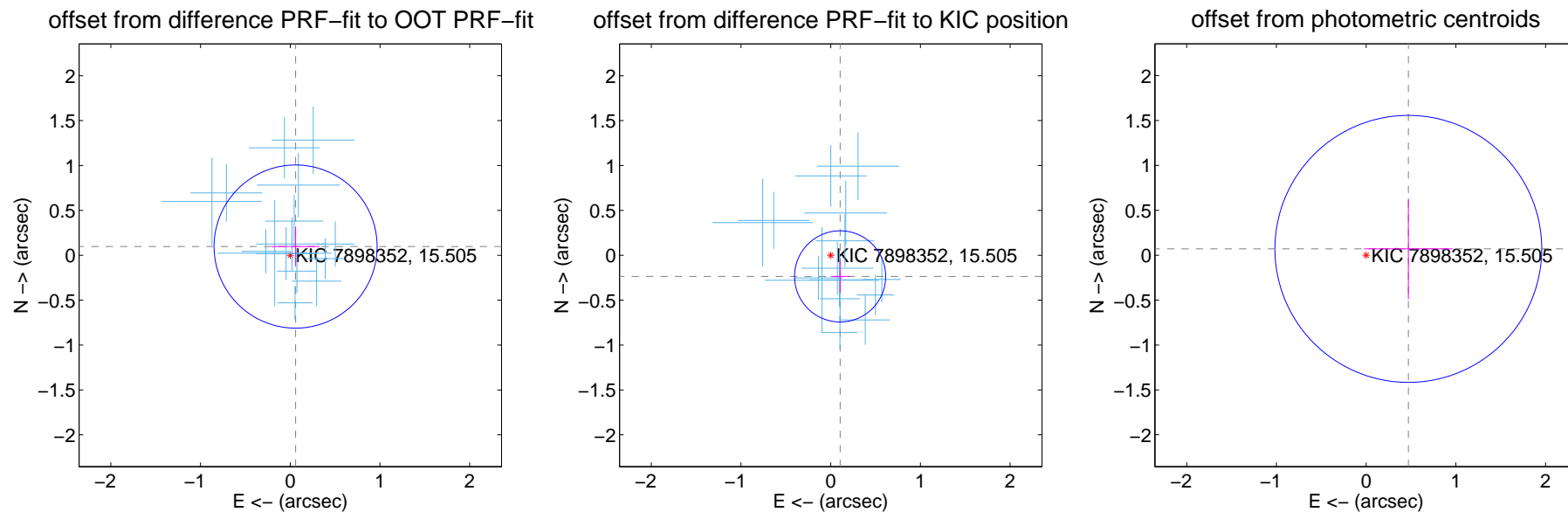
DV Centroid Data

Supplemental centroid analysis for 007898352-02. Kepler magnitude: 15.51. Transit SNR 30.70

There are 15 quarters with good PRF difference image offsets

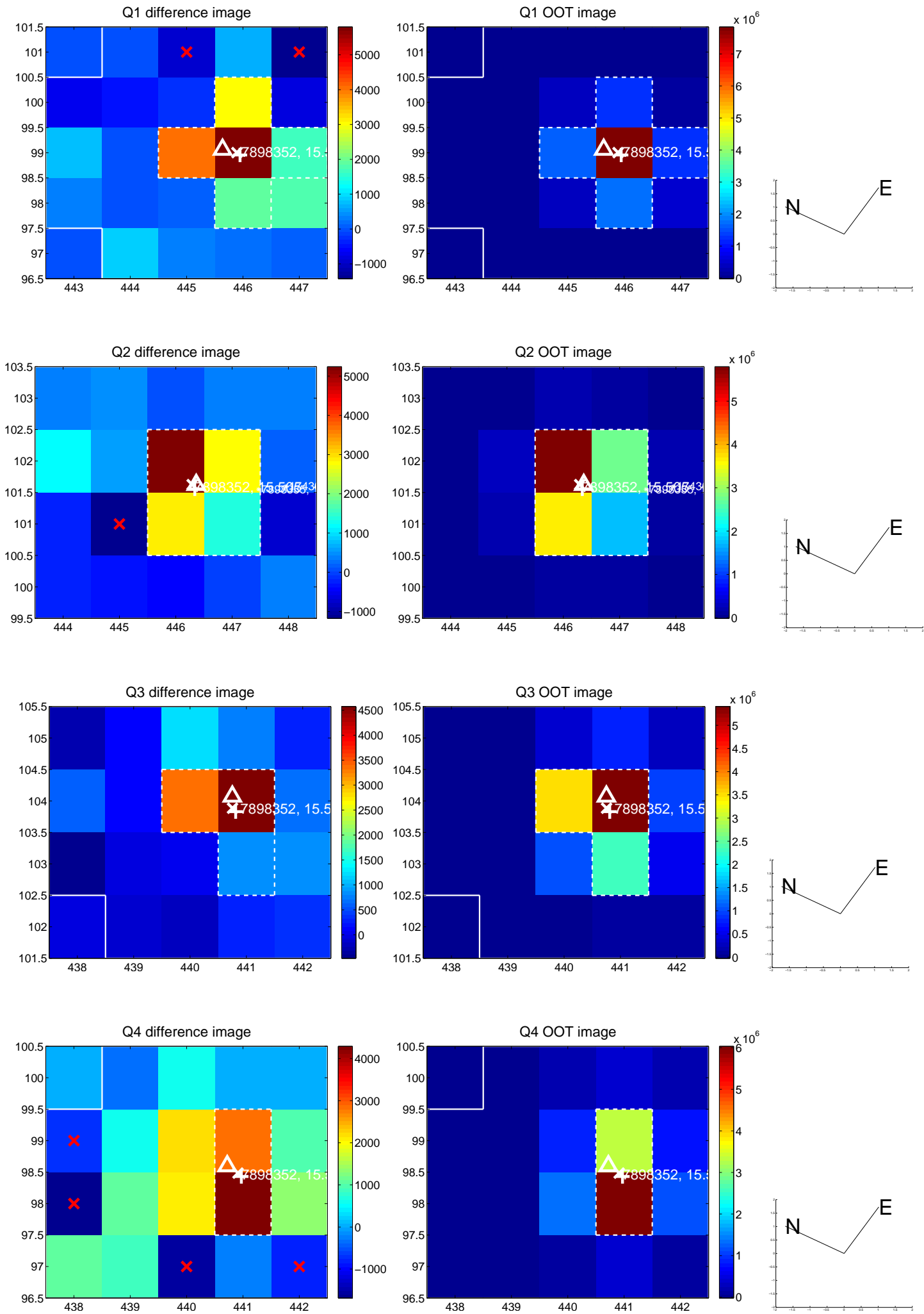
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.114 ± 0.303	0.38	-0.059 ± 0.270	0.097 ± 0.223
PRF-fit source offset from KIC position	0.257 ± 0.169	1.52	-0.105 ± 0.105	-0.235 ± 0.179
photometric centroid source offset	0.48 ± 0.50	0.96	-0.47 ± 0.49	0.07 ± 0.56

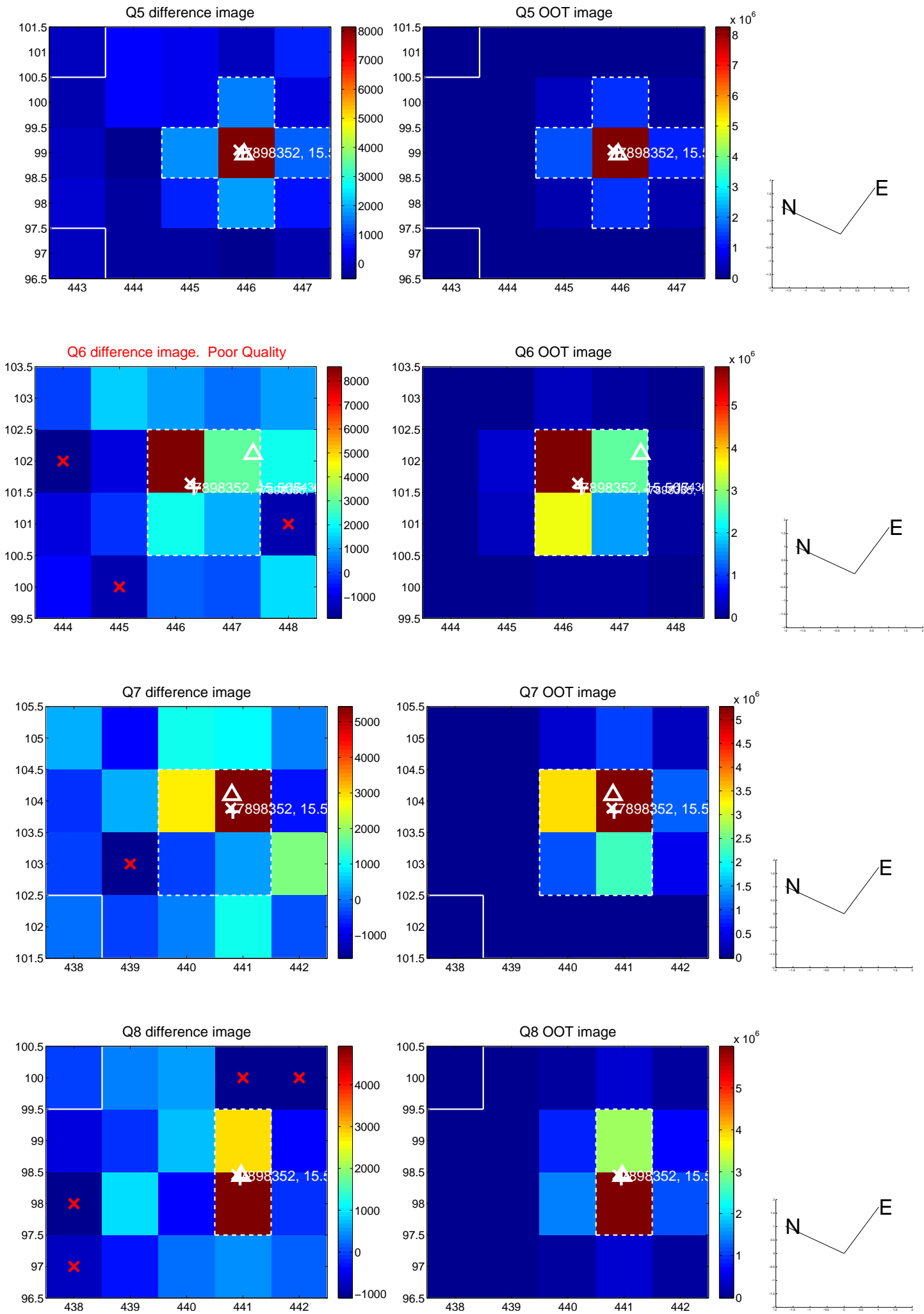


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

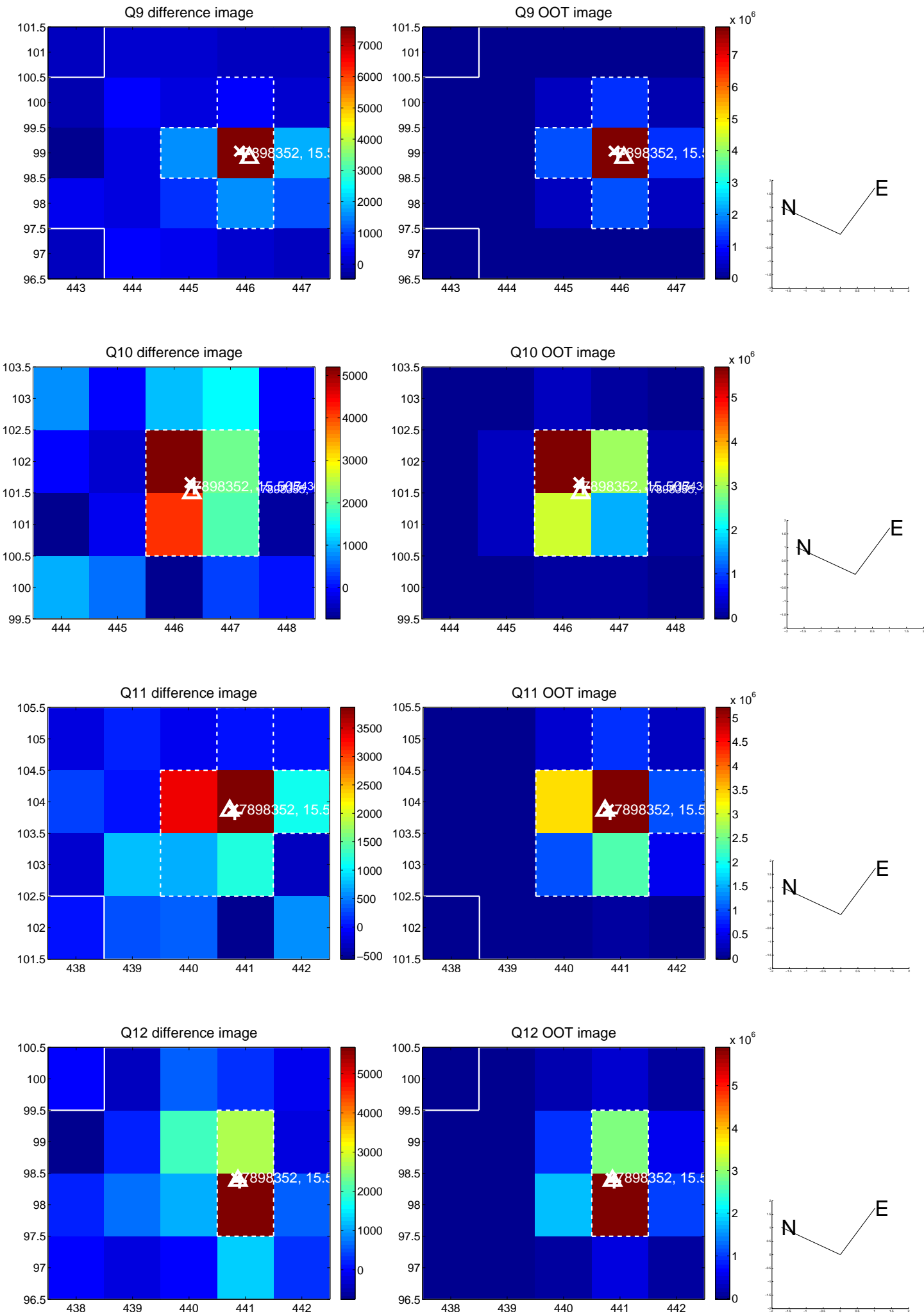
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



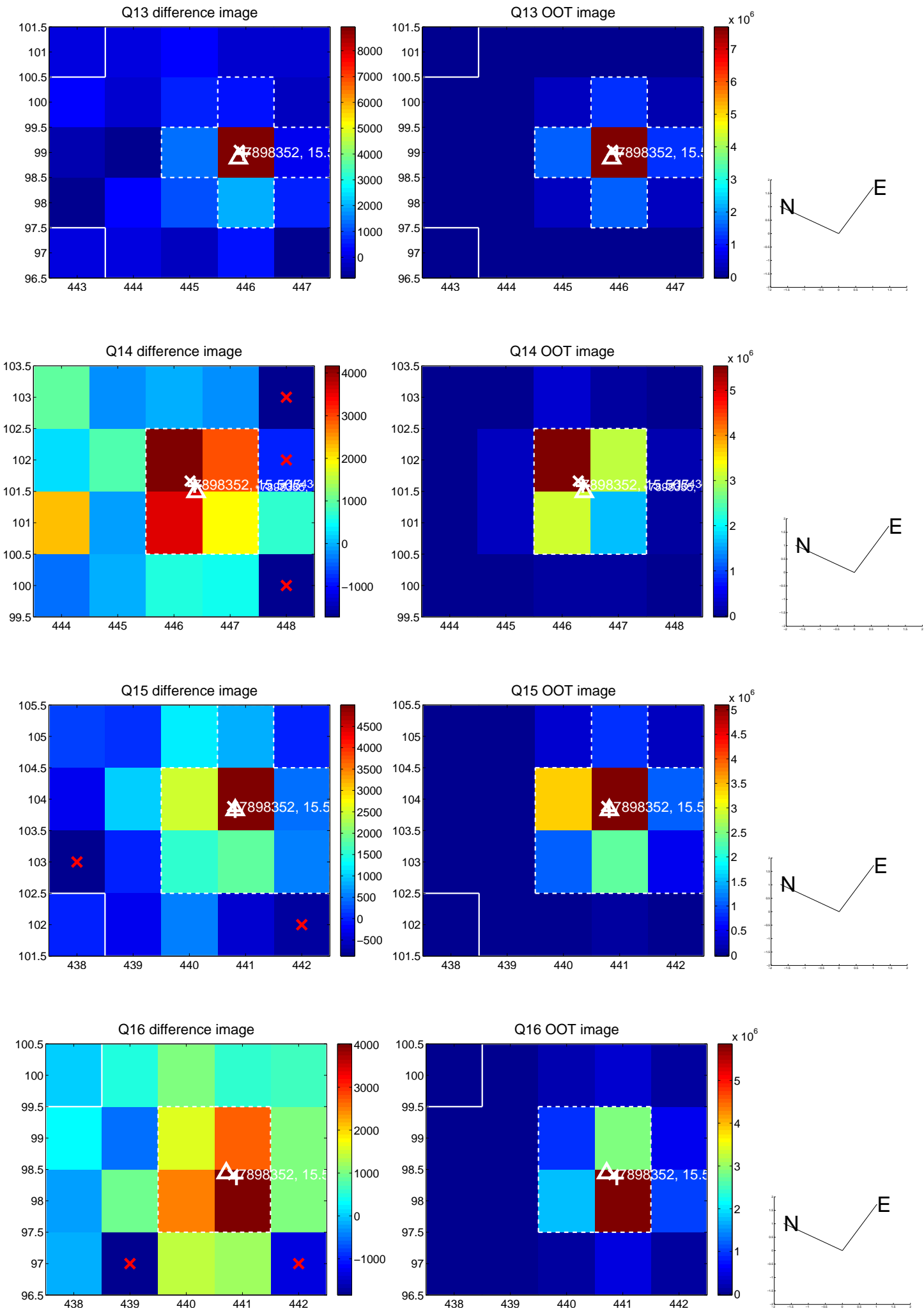
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



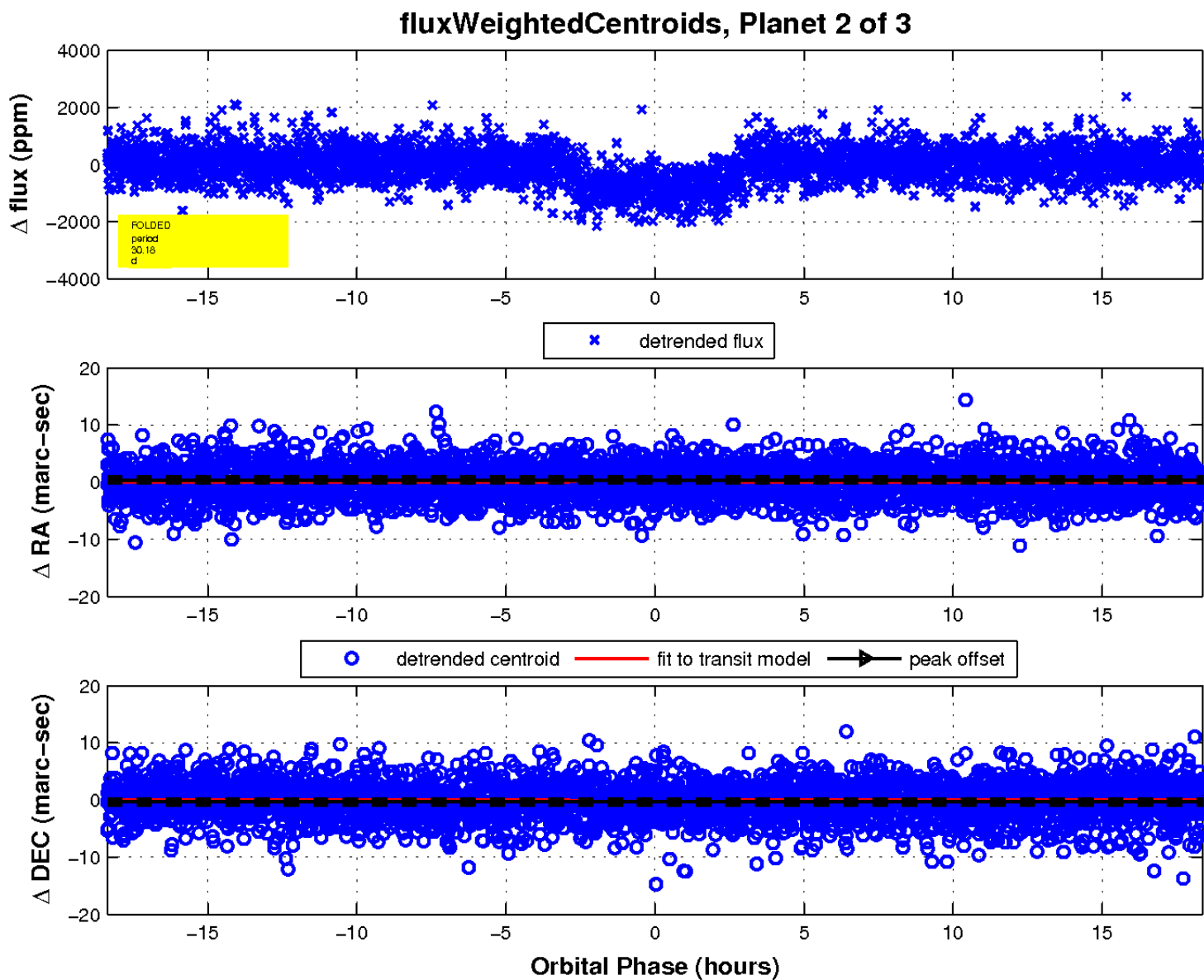
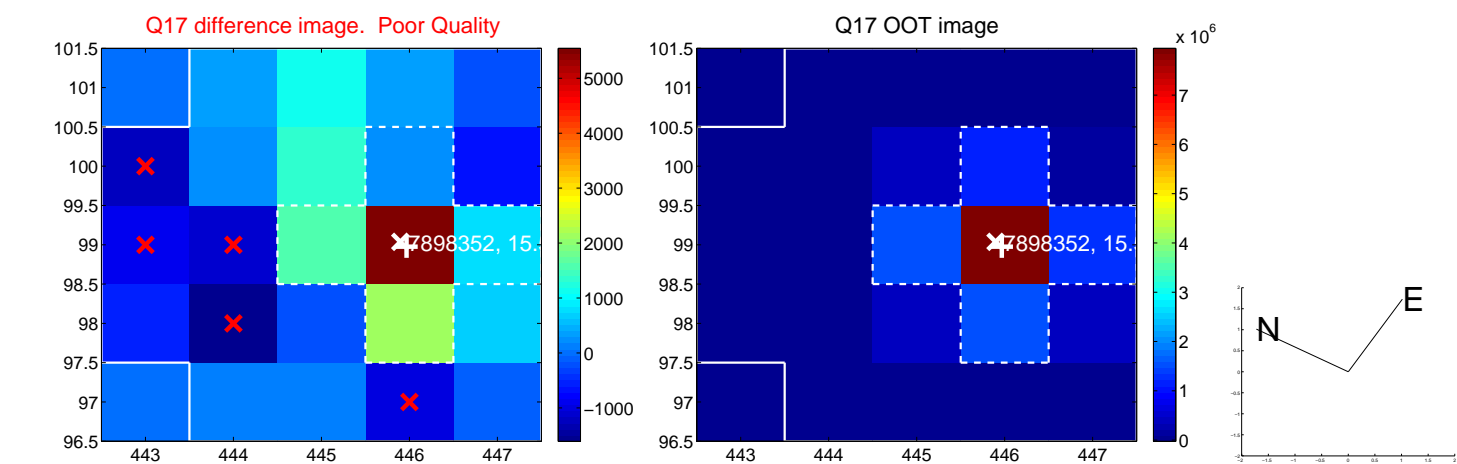
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

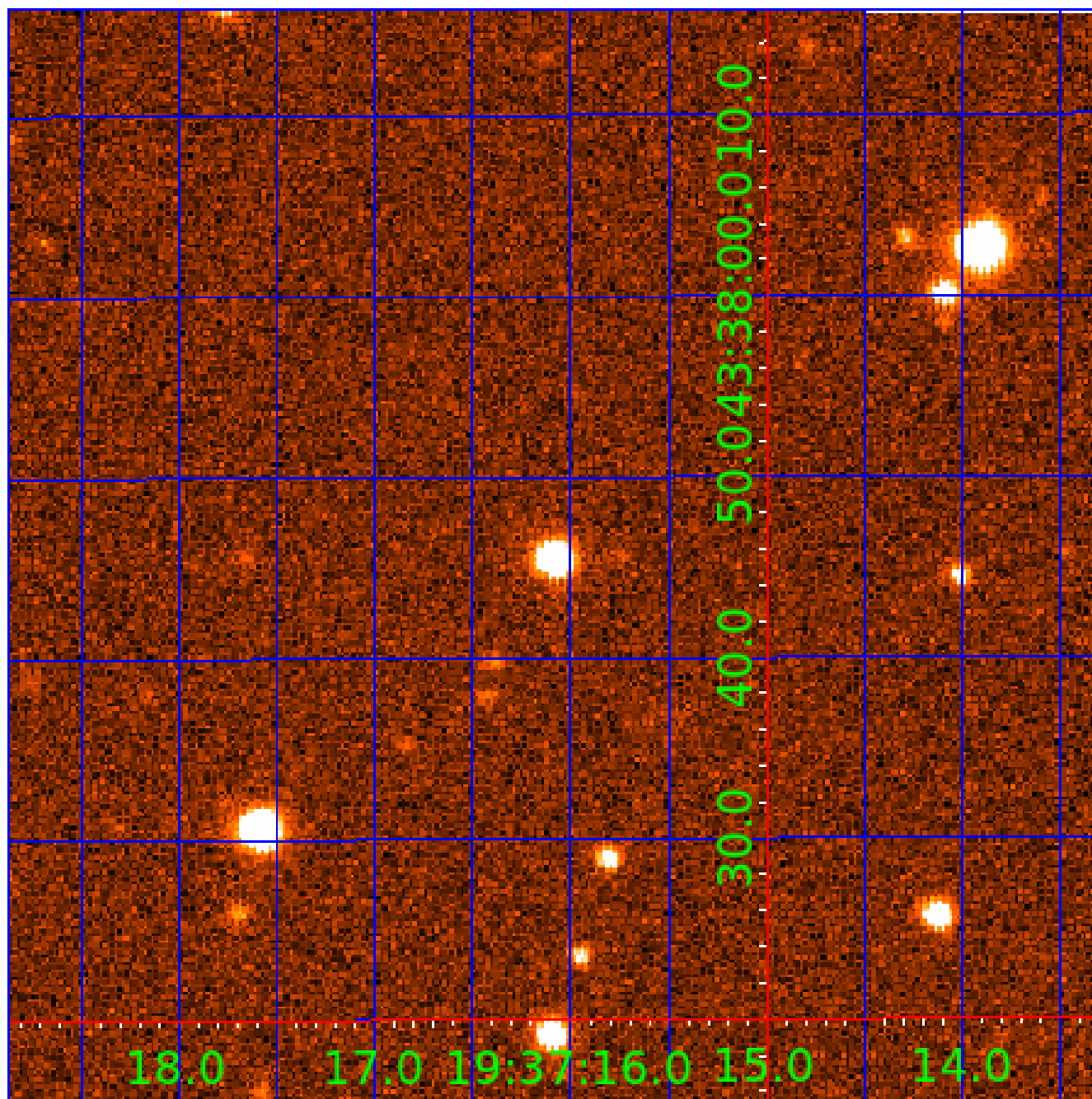


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007898352

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})
007898352-01	OBS	1486.01	127.282615	163.888707	8093.3	7.187	116.6	118.8	1.18	5733	12.09	5.62
007898352-02	OBS	1486.02	30.183730	146.646988	949.5	6.126	29.3	30.7	1.18	5733	3.99	38.26
007898352-03	OBS	No	489.672319	483.357343	568.7	15.808	7.8	7.7	1.18	5733	2.95	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007898352-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007898352-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007898352-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

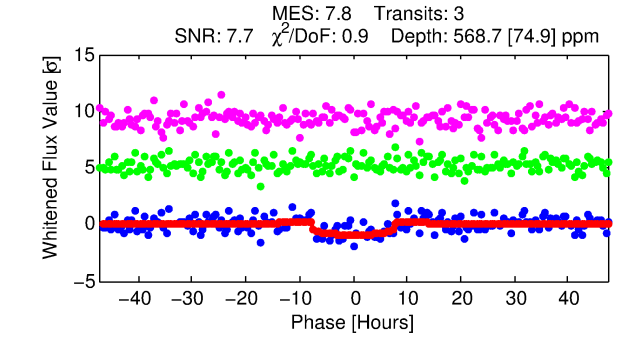
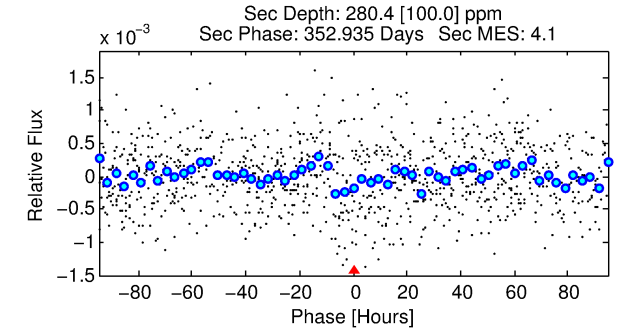
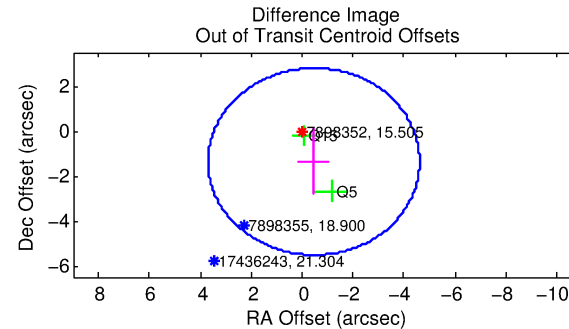
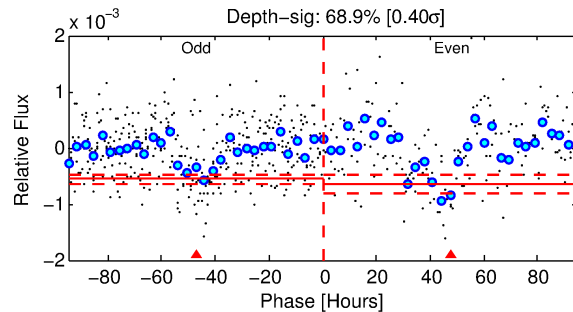
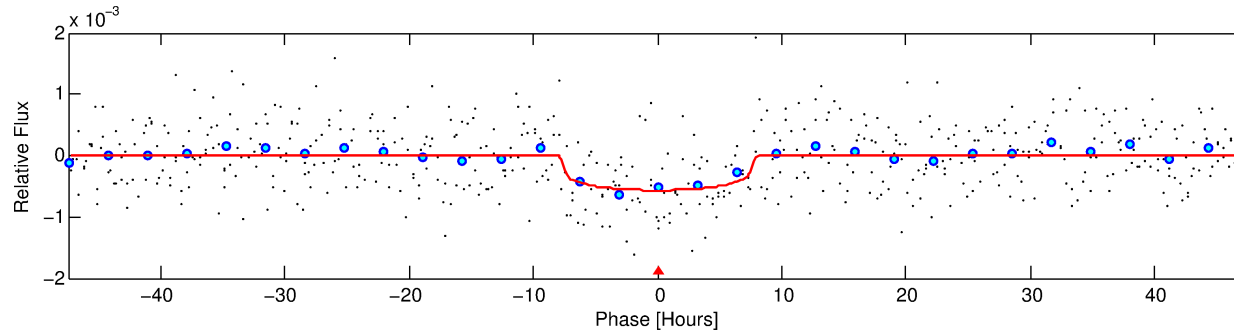
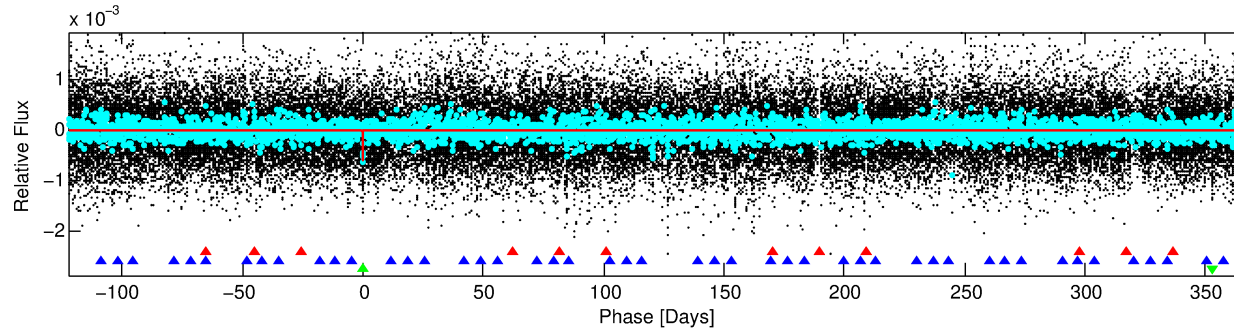
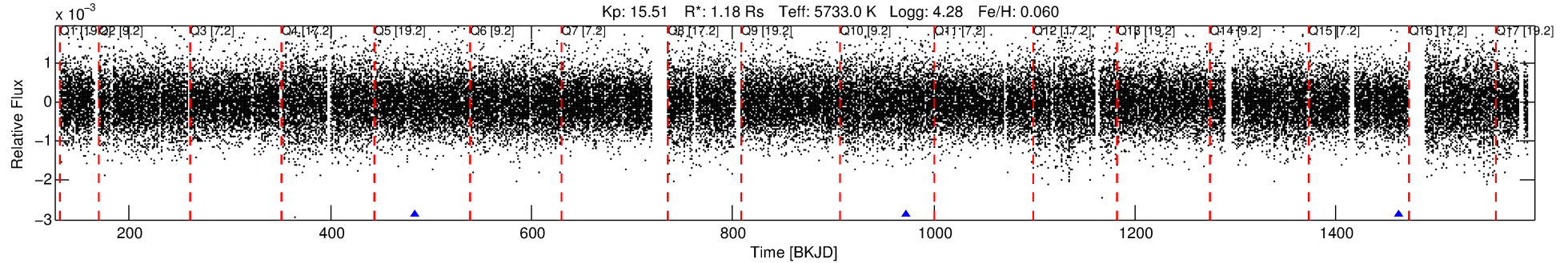
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007898352-03

No Significant Match Found

DV One-Page Summary

KIC: 7898352 Candidate: 3 of 3 Period: 489.672 d
KOI: K01486 Name: Kepler-302 Corr: No Ephemeris Match



DV Fit Results:

Period = 489.67232 [0.01844] d
Epoch = 483.3573 [0.0247] BKJD
Rp/R* = 0.0228 [0.0095]
a/R* = 192.53 [339.48]
b = 0.62 [1.77]
Seff = 0.93 [0.24]
Teq = 251 [16] K
Rp = 2.95 [1.33] Re
a = 1.2058 [0.1907] AU
Ag = 25841.42 [24283.31] [1.06 σ]
Teff = 4911 [1117] K [4.17 σ]

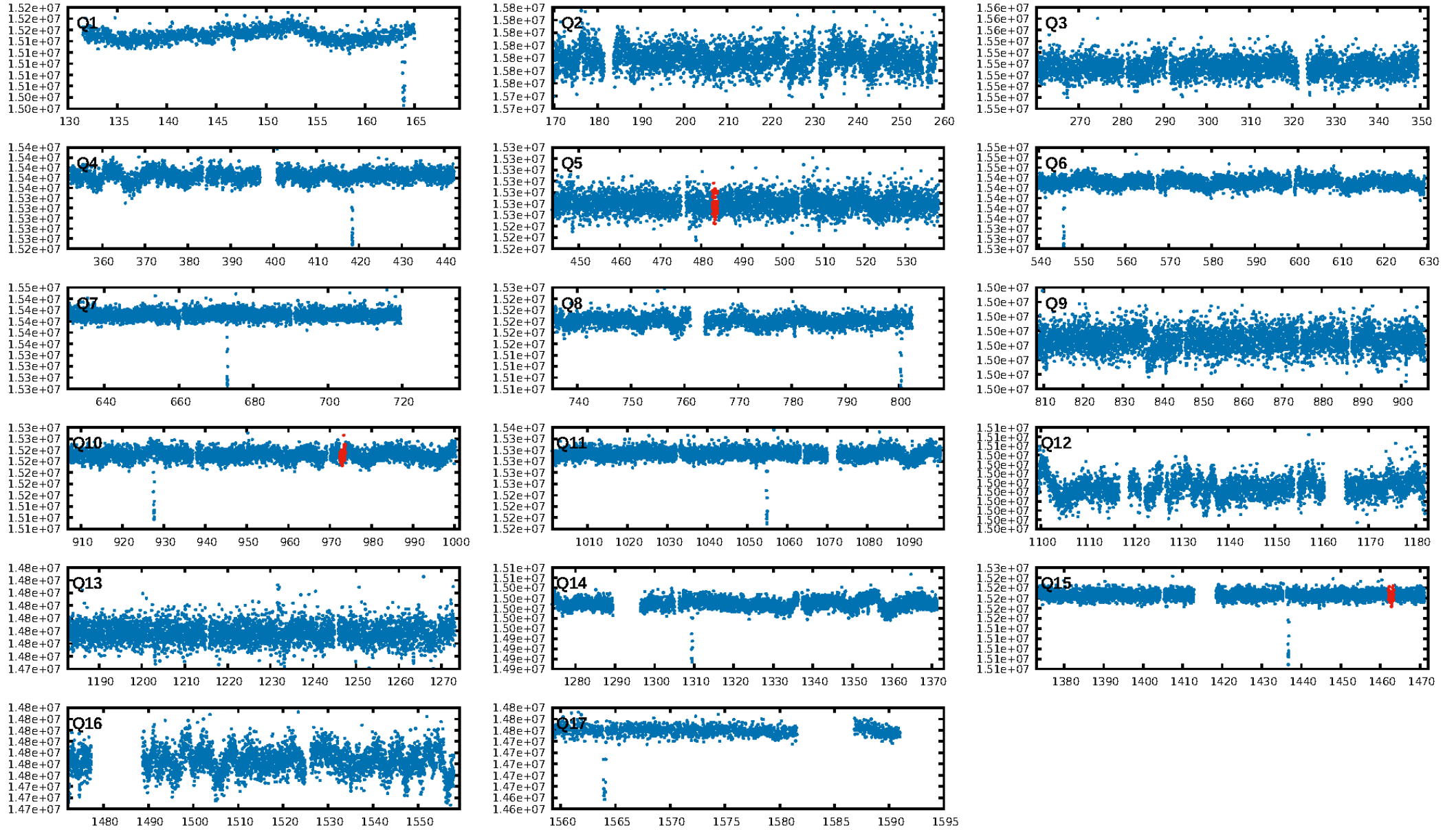
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [500.86 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.35e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -30.54
Centroid-sig: 1.1%
Centroid-so: 2.962 arcsec [1.36 σ]
OotOffset-rm: 1.442 arcsec [1.04 σ]
KicOffset-rm: 1.765 arcsec [1.27 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

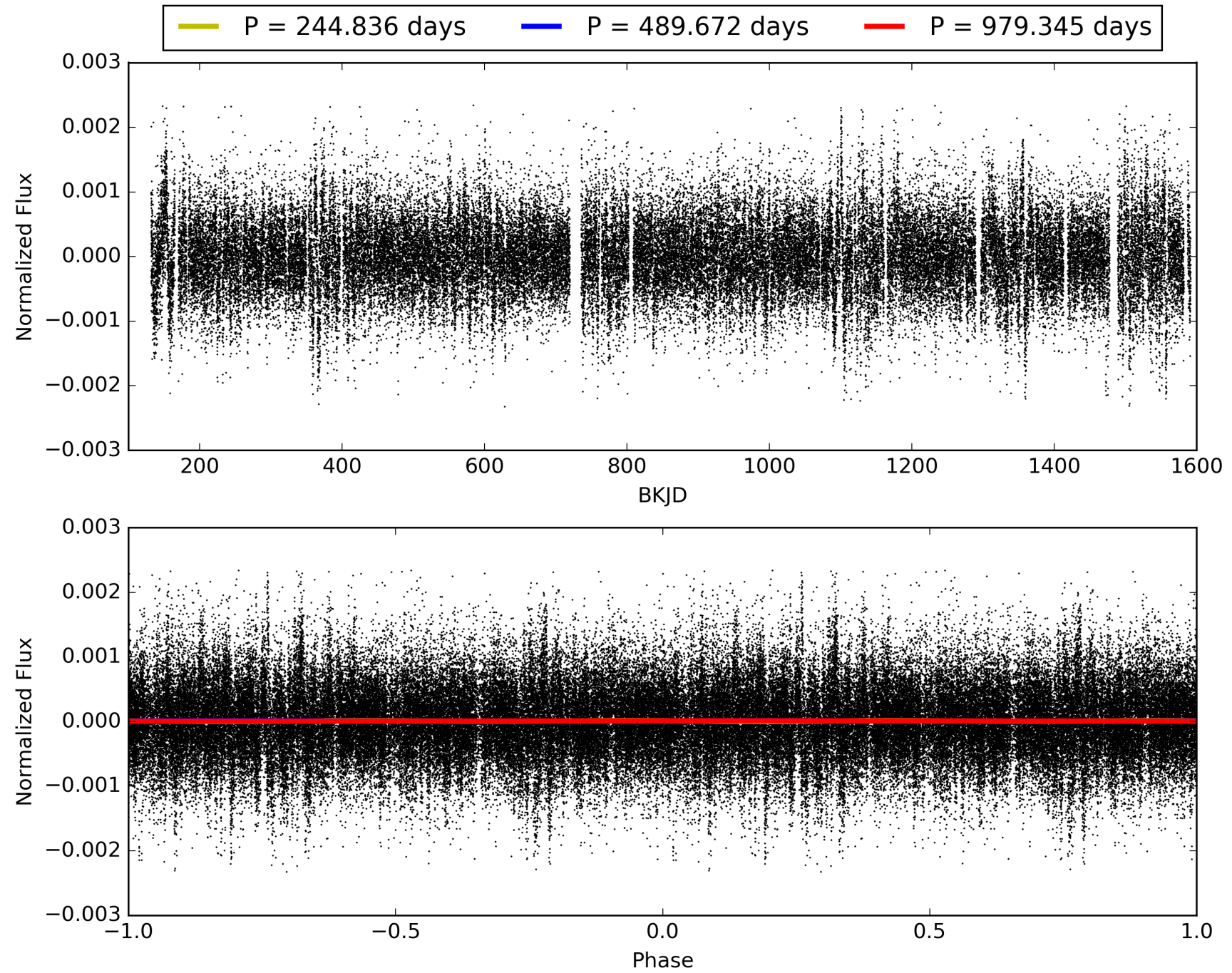
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:56:48 Z

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

TCE 007898352-03, PDC Light Curves

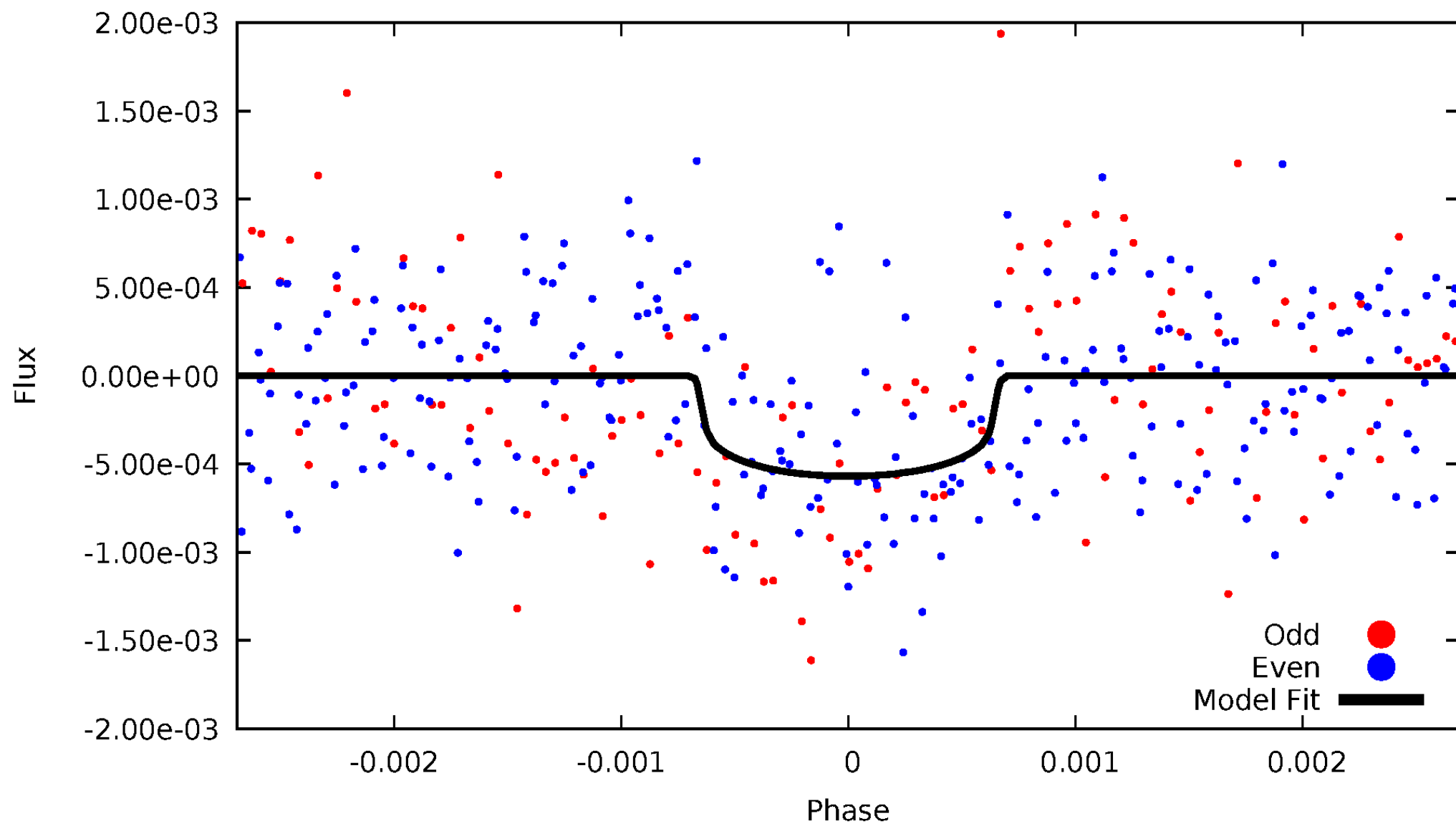


TCE 007898352-03



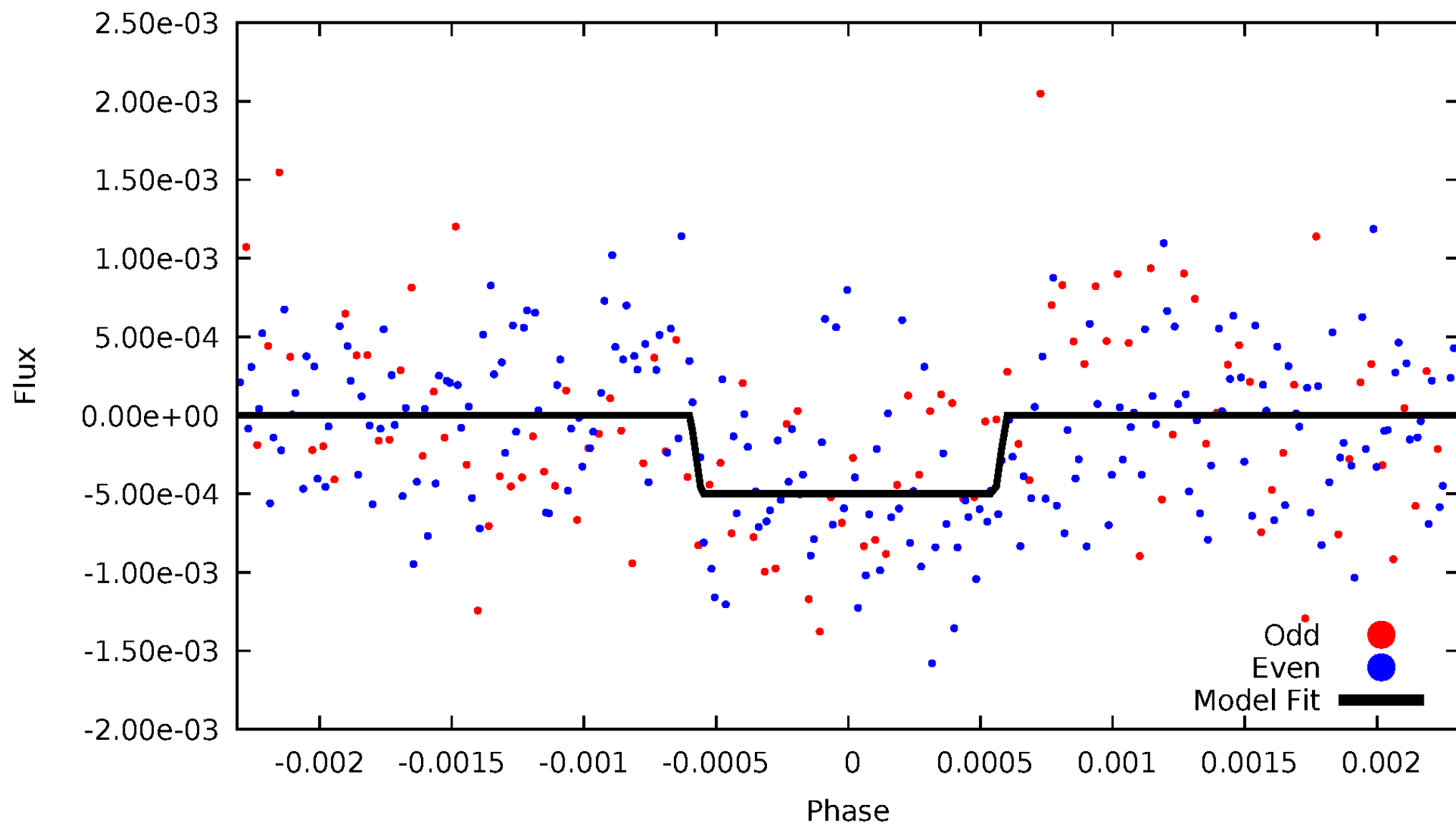
DV Odd/Even

TCE 007898352-03

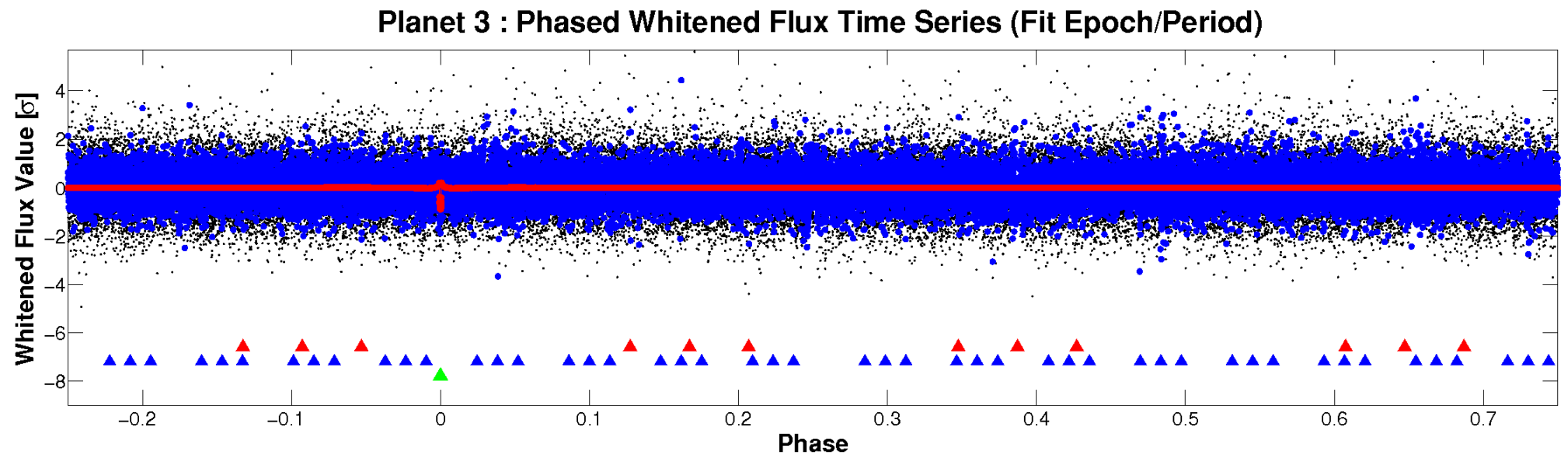
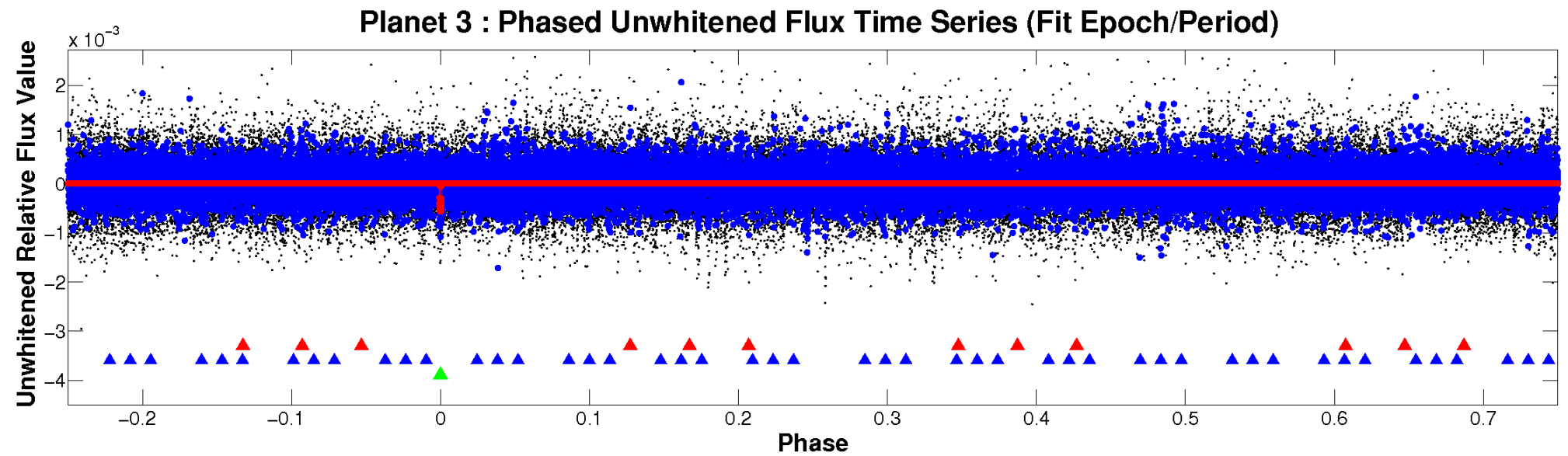


ALT Odd/Even

TCE 007898352-03



Non-Whitened Vs. Whitened Light Curve



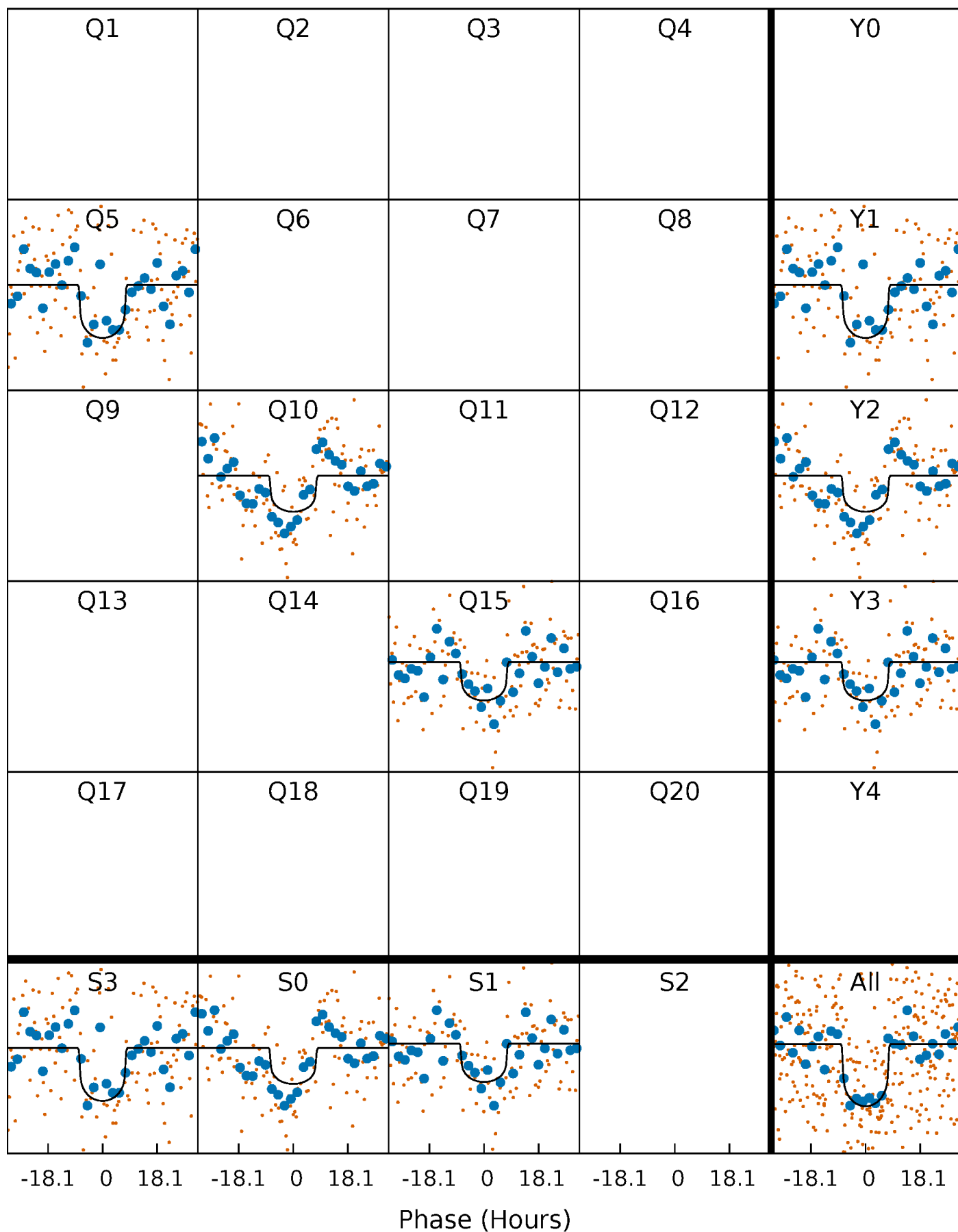
PDC Quarter-Phased Transit Curves

TCE 007898352-03 $P=489.672319$ Days $T_0=483.357343$ (BKJD)



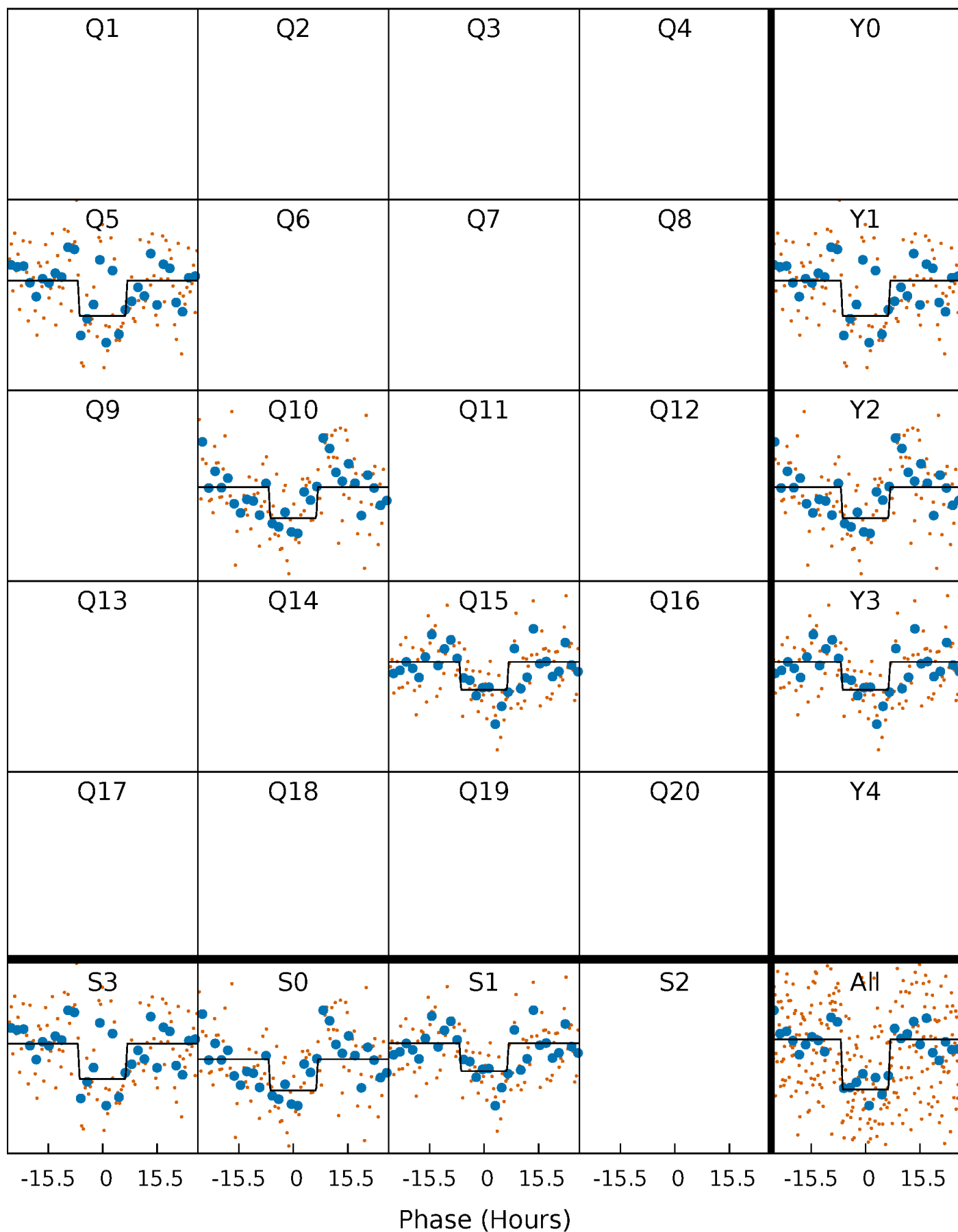
DV Quarter-Phased Transit Curves

TCE 007898352-03 $P=489.672319$ Days $T_0=483.357343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

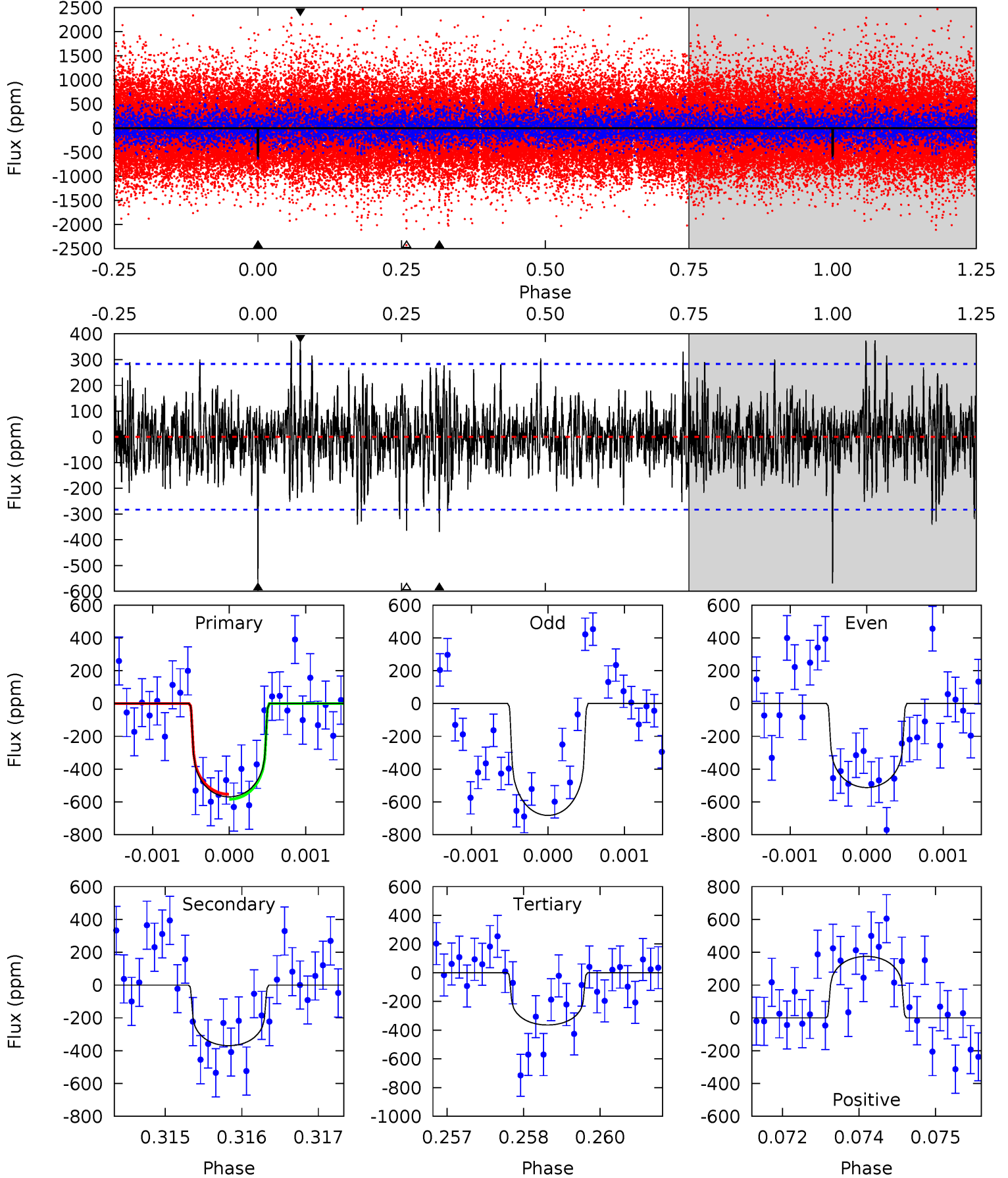
TCE 007898352-03 $P=489.663021$ Days $T_0=483.339372$ (BKJD)



DV Model-Shift Uniqueness Test

007898352-03, P = 489.672319 Days, E = 483.357343 Days

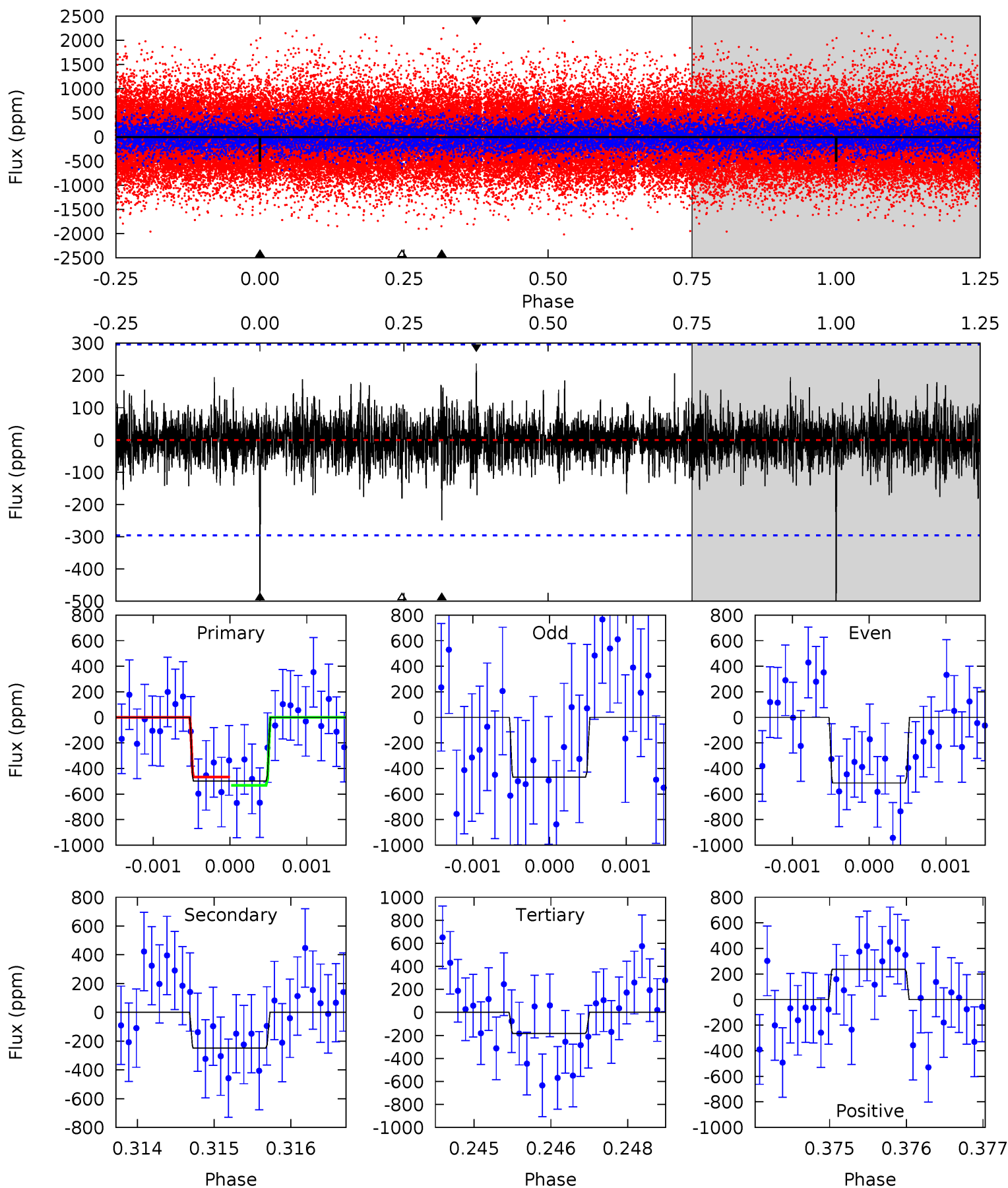
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	7.05	6.95	7.15	5.40	3.21	1.74	3.91	3.71	0.10	-0.10	1.52	0.93	0.40	0.29



Alt Model-Shift Uniqueness Test

007898352-03, P = 489.663021 Days, E = 483.339372 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.13	4.55	3.34	4.35	5.43	3.25	0.89	5.80	4.78	1.22	0.20	0.39	1.07	0.32	0.60



Stellar Parameters For KIC 007898352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5733^{+115}_{-104}	$4.281^{+0.143}_{-0.104}$	$0.060^{+0.150}_{-0.150}$	$1.183^{+0.184}_{-0.202}$	$0.974^{+0.079}_{-0.065}$	$0.829^{+0.598}_{-0.250}$
	+2%/-2%	+3%/-2%	+250%/-250%	+16%/-17%	+8%/-7%	+72%/-30%
Source	SPE58	SPE58	SPE58	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007898352-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-369 ± 52	$2.94^{+1.26}_{-1.21}$	349^{+16}_{-16}	5324^{+1504}_{-750}	35126^{+63942}_{-18519}
Alt.	-248 ± 55	$2.89^{+1.23}_{-1.27}$	350^{+16}_{-17}	4892^{+1458}_{-653}	23543^{+49005}_{-12372}

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

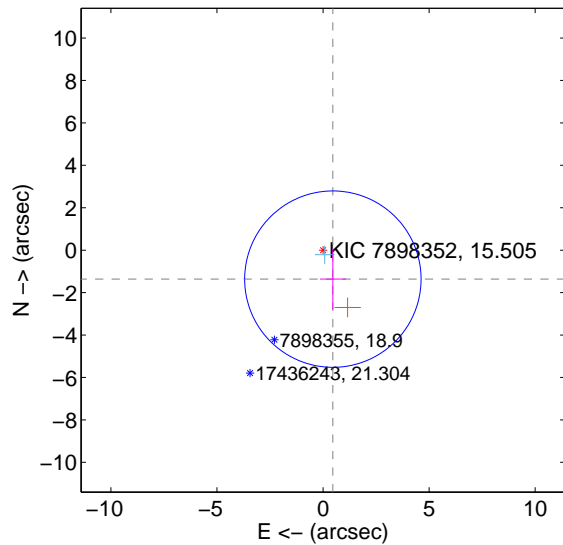
Supplemental centroid analysis for 007898352-03. Kepler magnitude: 15.51. Transit SNR 7.71

There are 1 quarters with good PRF difference image offsets

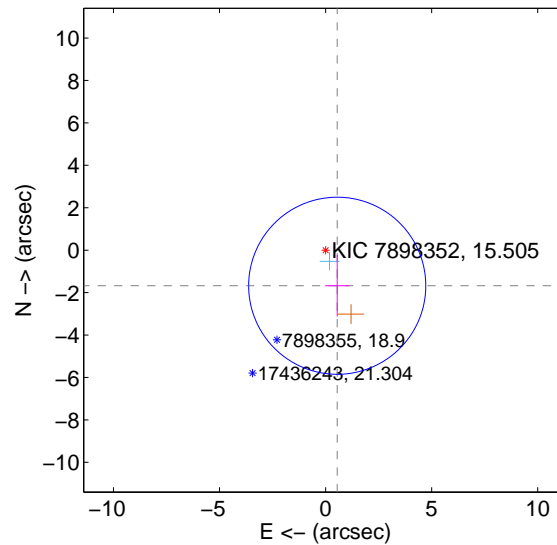
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.442 ± 1.386	1.04	-0.463 ± 0.609	-1.365 ± 1.449
PRF-fit source offset from KIC position	1.765 ± 1.392	1.27	-0.548 ± 0.570	-1.678 ± 1.452
photometric centroid source offset	2.96 ± 2.18	1.36	0.56 ± 1.92	2.91 ± 2.19

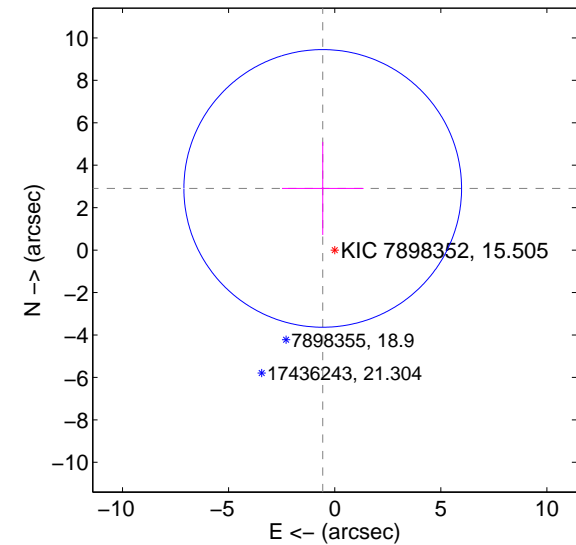
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

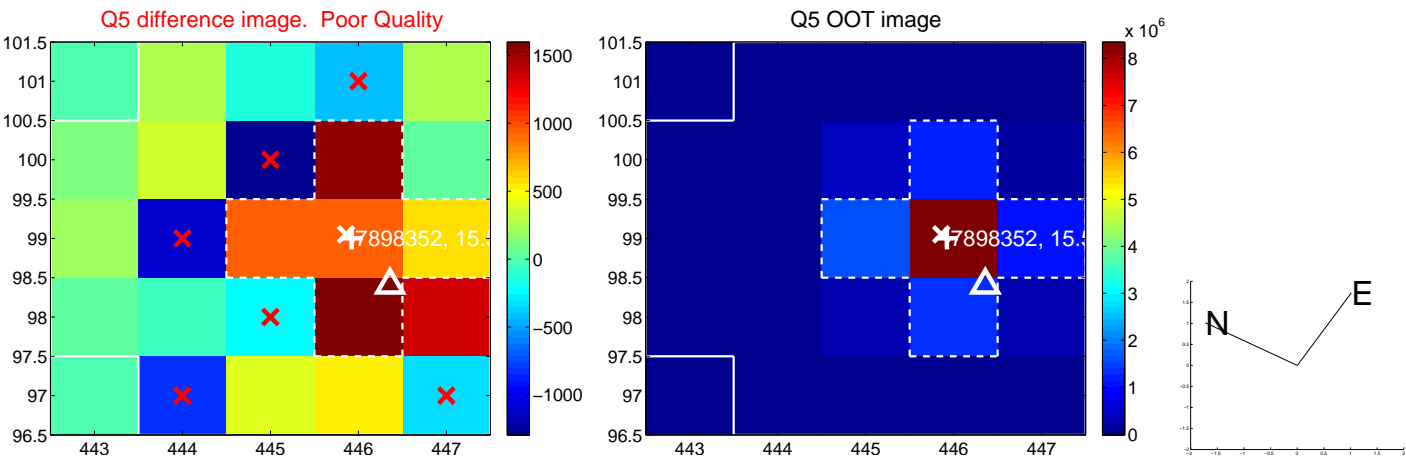


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

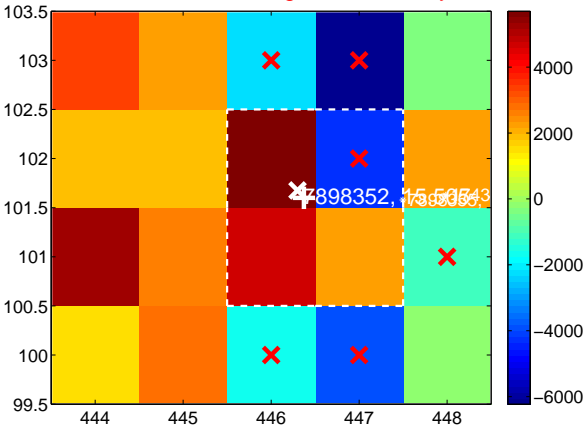
Q9 no difference image



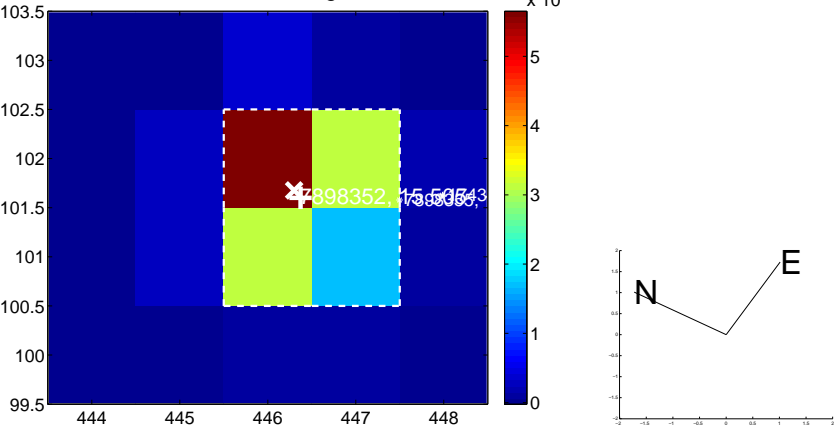
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



Q13 no OOT image



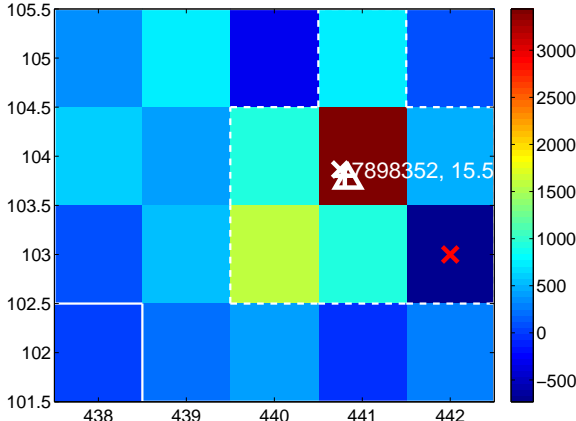
Q14 no difference image



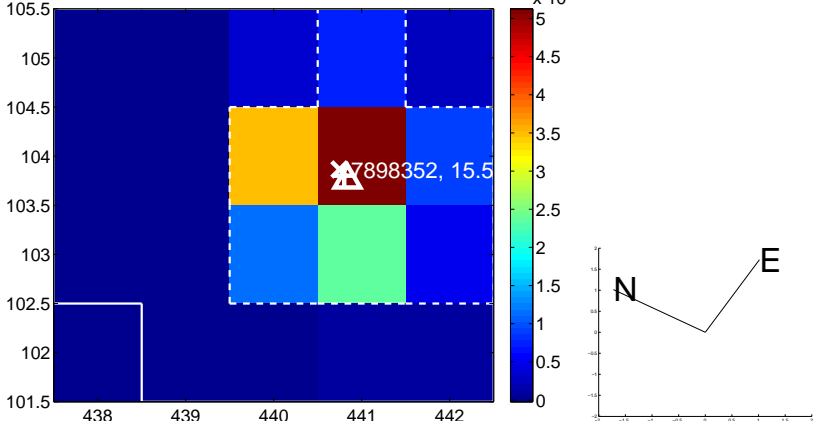
Q14 no OOT image



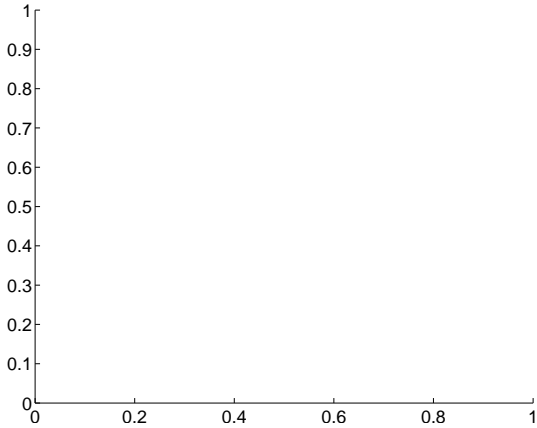
Q15 difference image



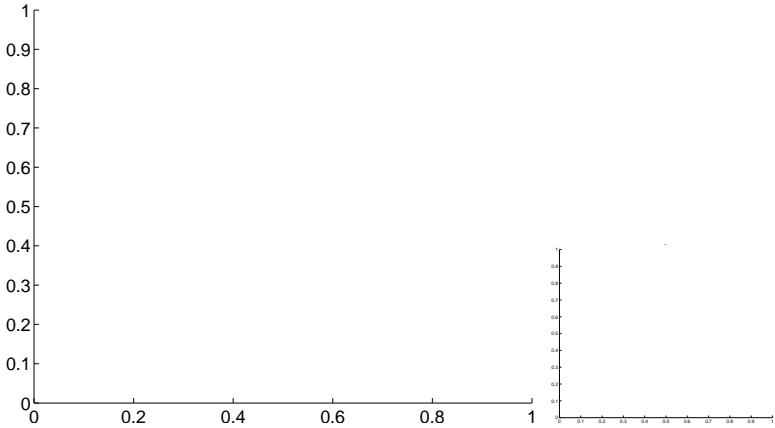
Q15 OOT image



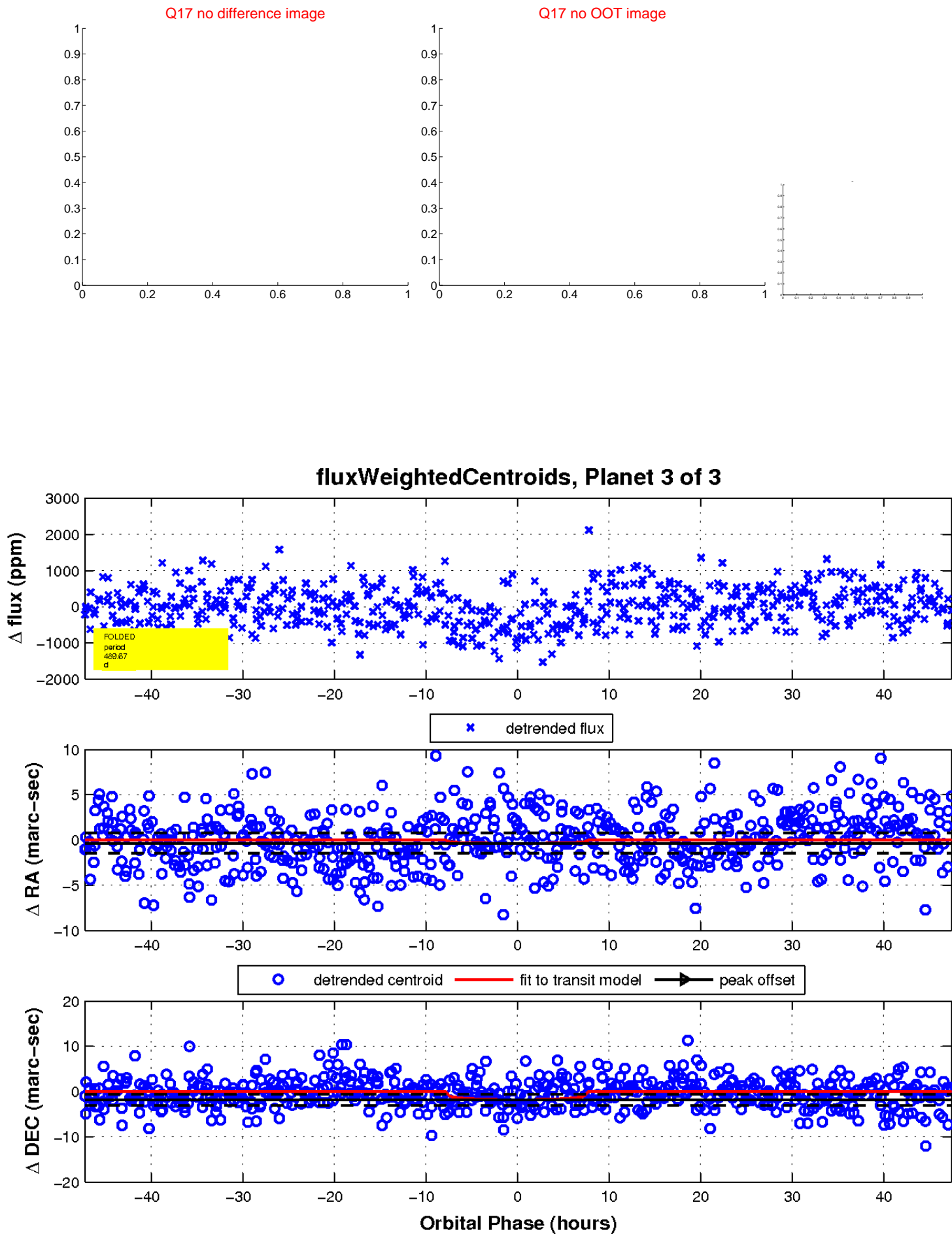
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

