

KIC 008803643

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})
008803643-01	OBS	No	375.155137	198.862108	1871.2	3.515	14.7	7.4	0.63	4735	3.10	0.24
008803643-02	OBS	No	500.544262	241.589580	2193.1	3.414	12.9	7.8	0.63	4735	2.94	0.16
008803643-03	OBS	No	348.225772	244.876830	1590.9	2.857	10.6	7.2	0.63	4735	2.61	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008803643-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS
008803643-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008803643-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—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.

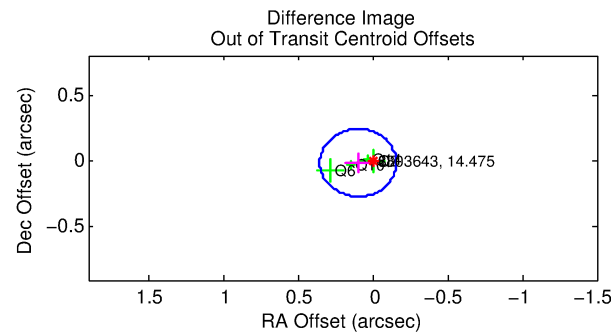
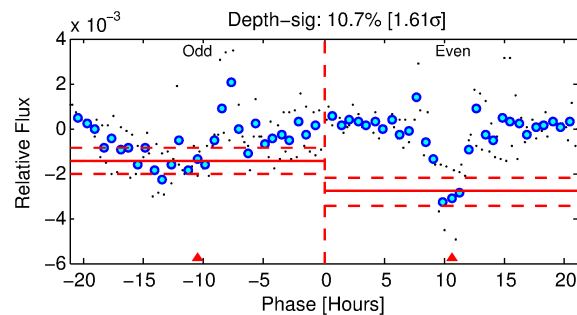
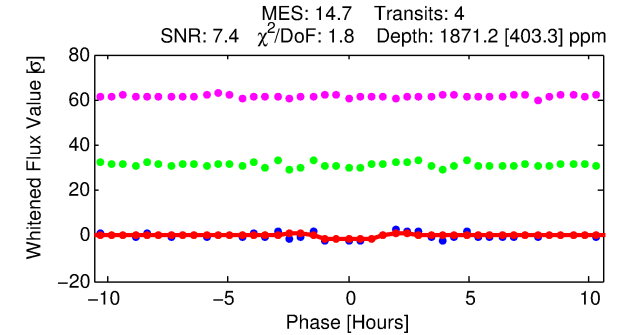
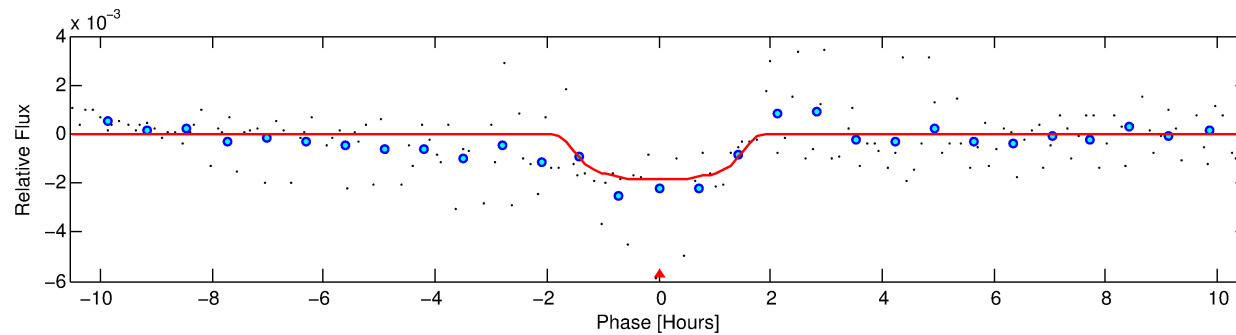
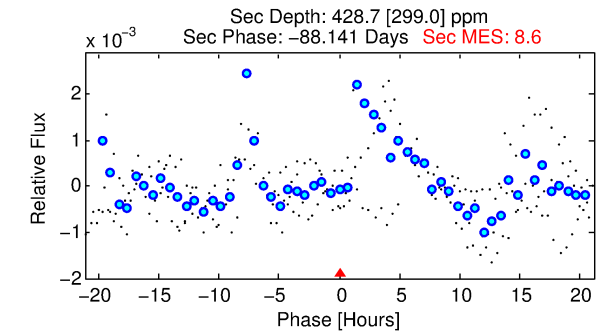
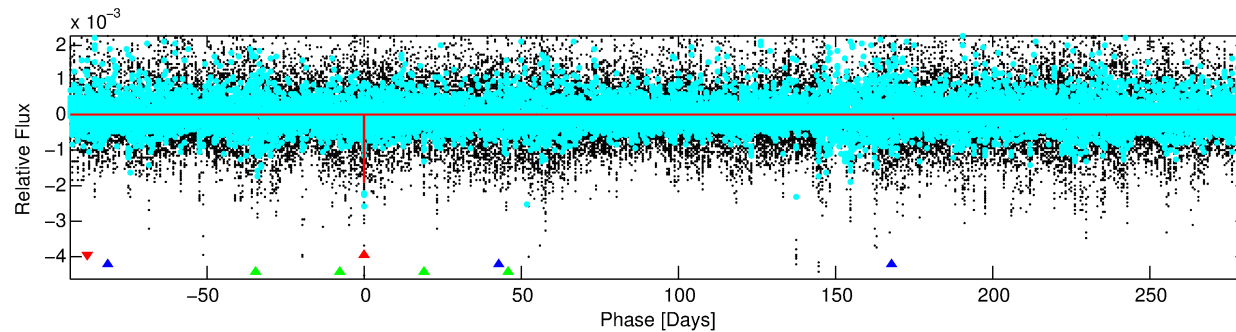
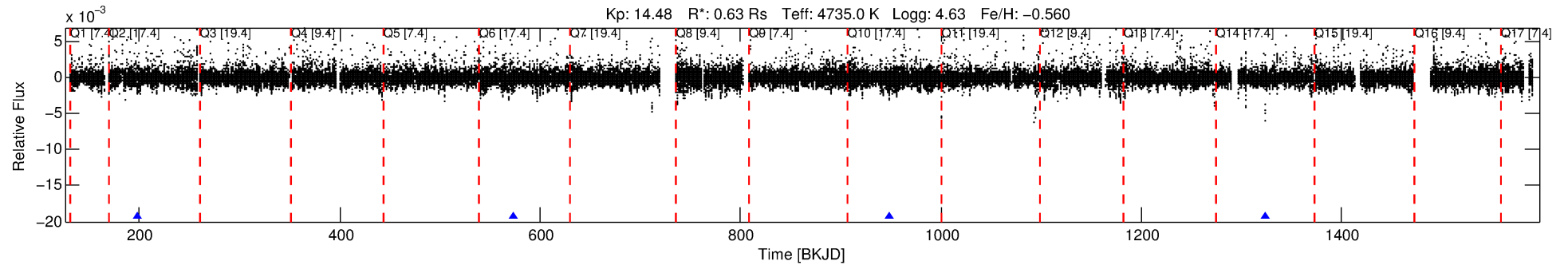
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008803643-01

No Significant Match Found

DV One-Page Summary

KIC: 8803643 Candidate: 1 of 3 Period: 375.155 d



DV Fit Results:

Period = 375.15514 [0.00353] d
Epoch = 198.8621 [0.0073] BKJD
Rp/R* = 0.0453 [0.0161]
a/R* = 520.46 [564.42]
b = 0.83 [0.42]
Seff = 0.24 [0.04]
Teq = 178 [7] K
Rp = 3.10 [1.13] Re
a = 0.8650 [0.0640] AU
Ag = 18359.07 [18380.83] [1.00 σ]
Teffp = 3201 [802] K [3.77 σ]

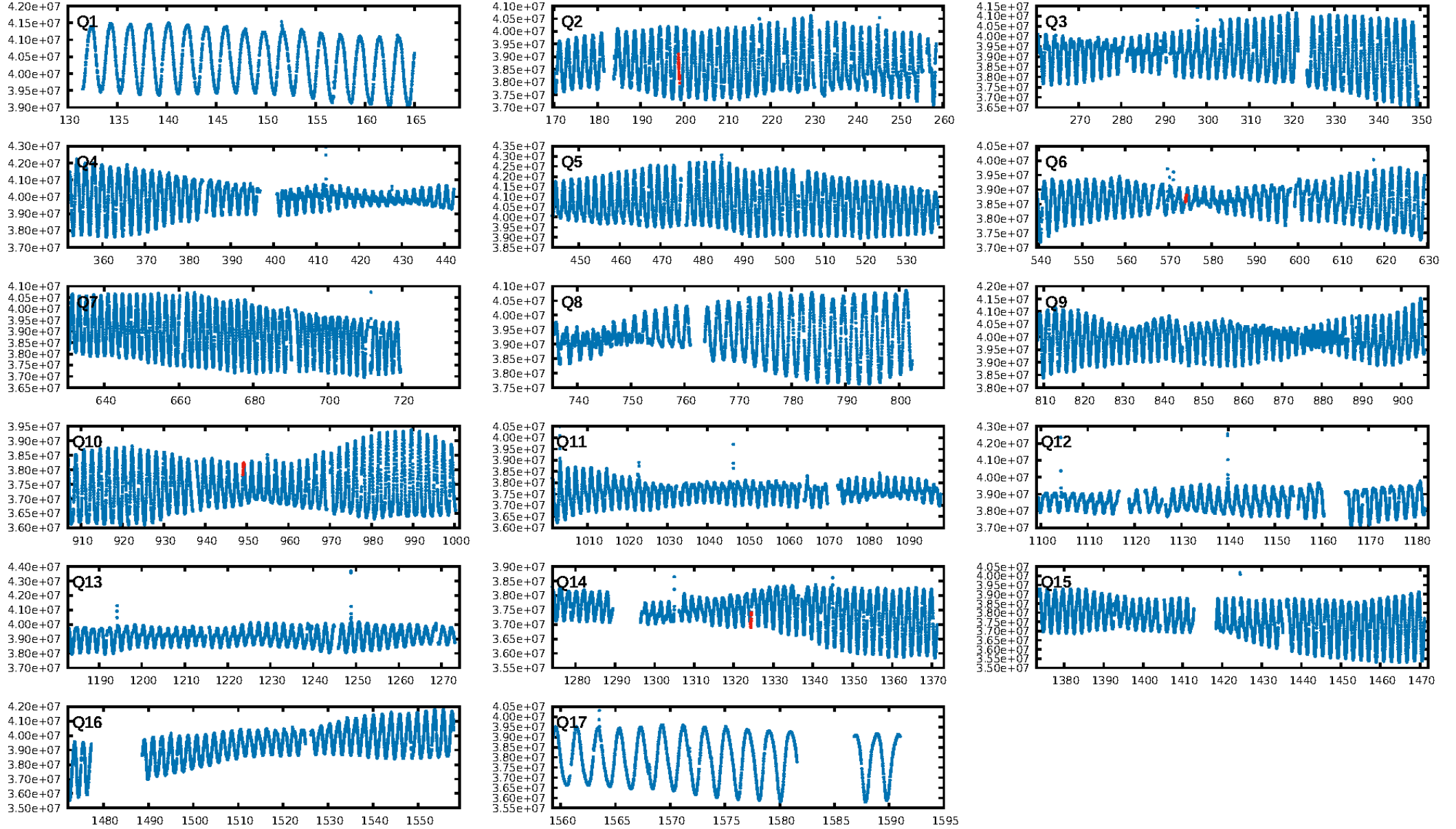
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [142.67 σ]
LongPeriod-sig: 100.0% [614.14 σ]
ModelChiSquare2-sig: 16.0%
ModelChiSquareGoF-sig: 48.6%
Bootstrap-pfa: 4.49e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 11.72
Centroid-sig: 99.3%
Centroid-so: 0.086 arcsec [0.17 σ]
OotOffset-rm: 0.098 arcsec [1.15 σ]
OotOffset-st: 4/0/0 [4]
KicOffset-rm: 0.237 arcsec [2.52 σ]
KicOffset-st: 4/0/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

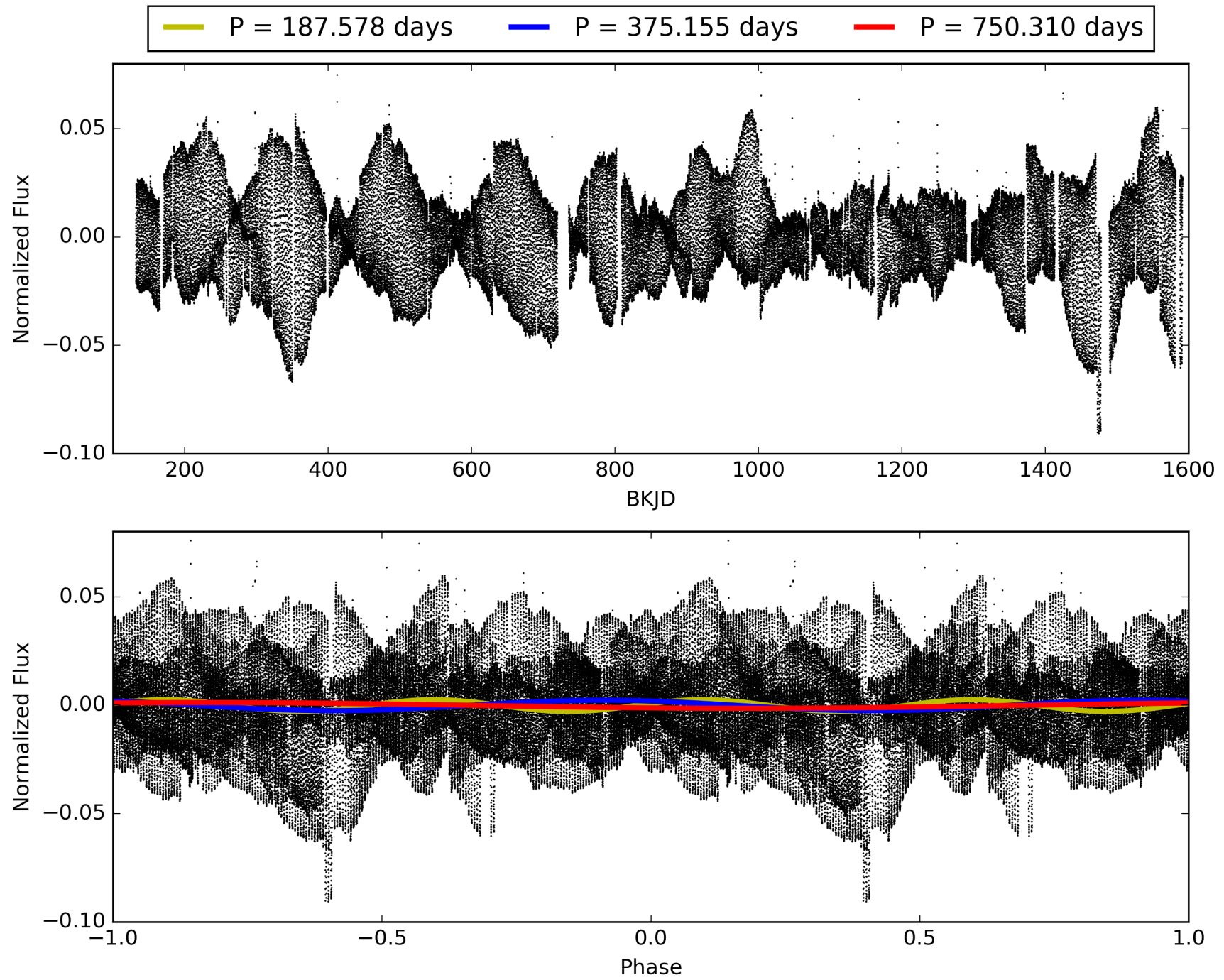
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:14:42 Z

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

TCE 008803643-01, PDC Light Curves

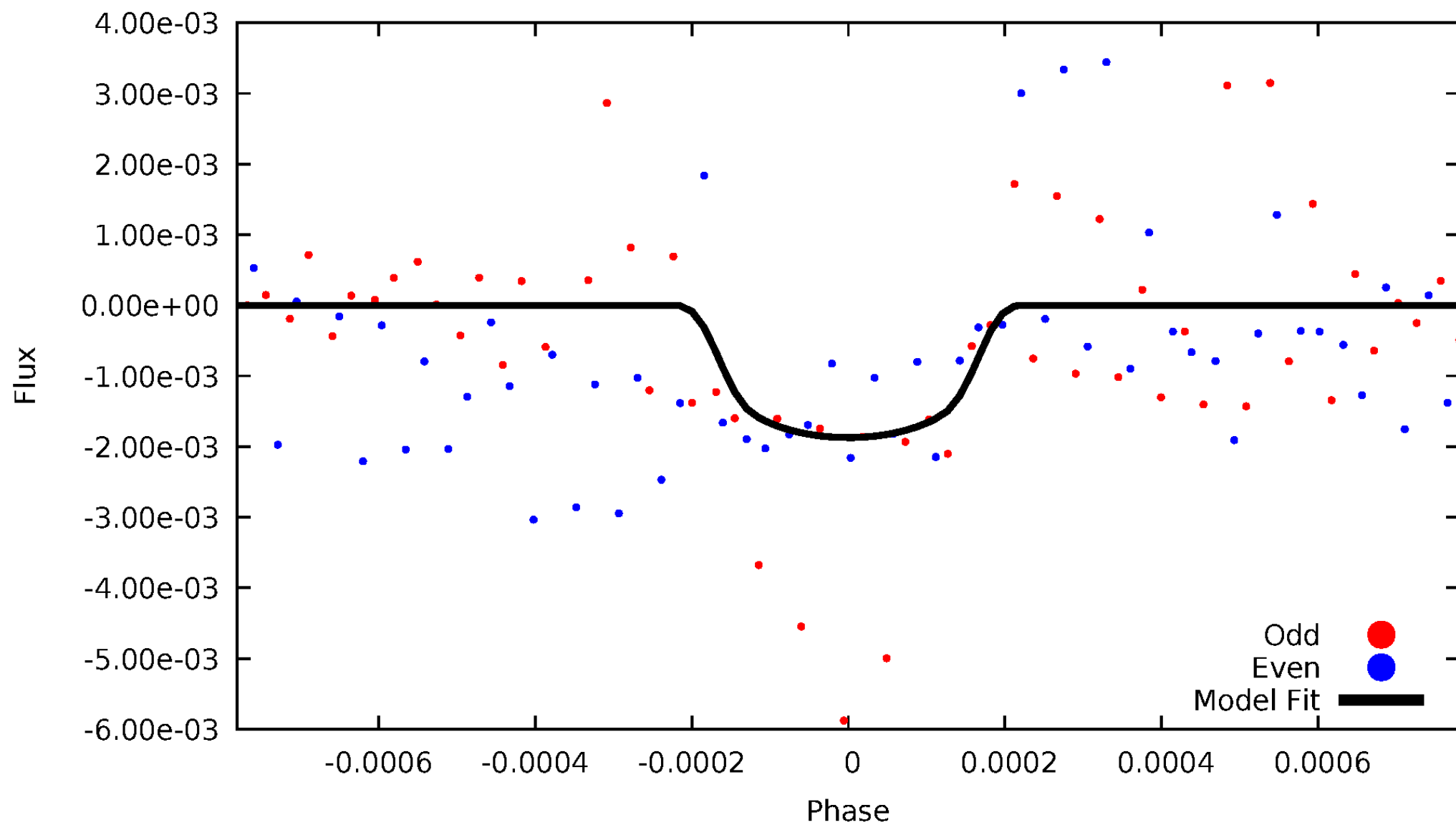


TCE 008803643-01



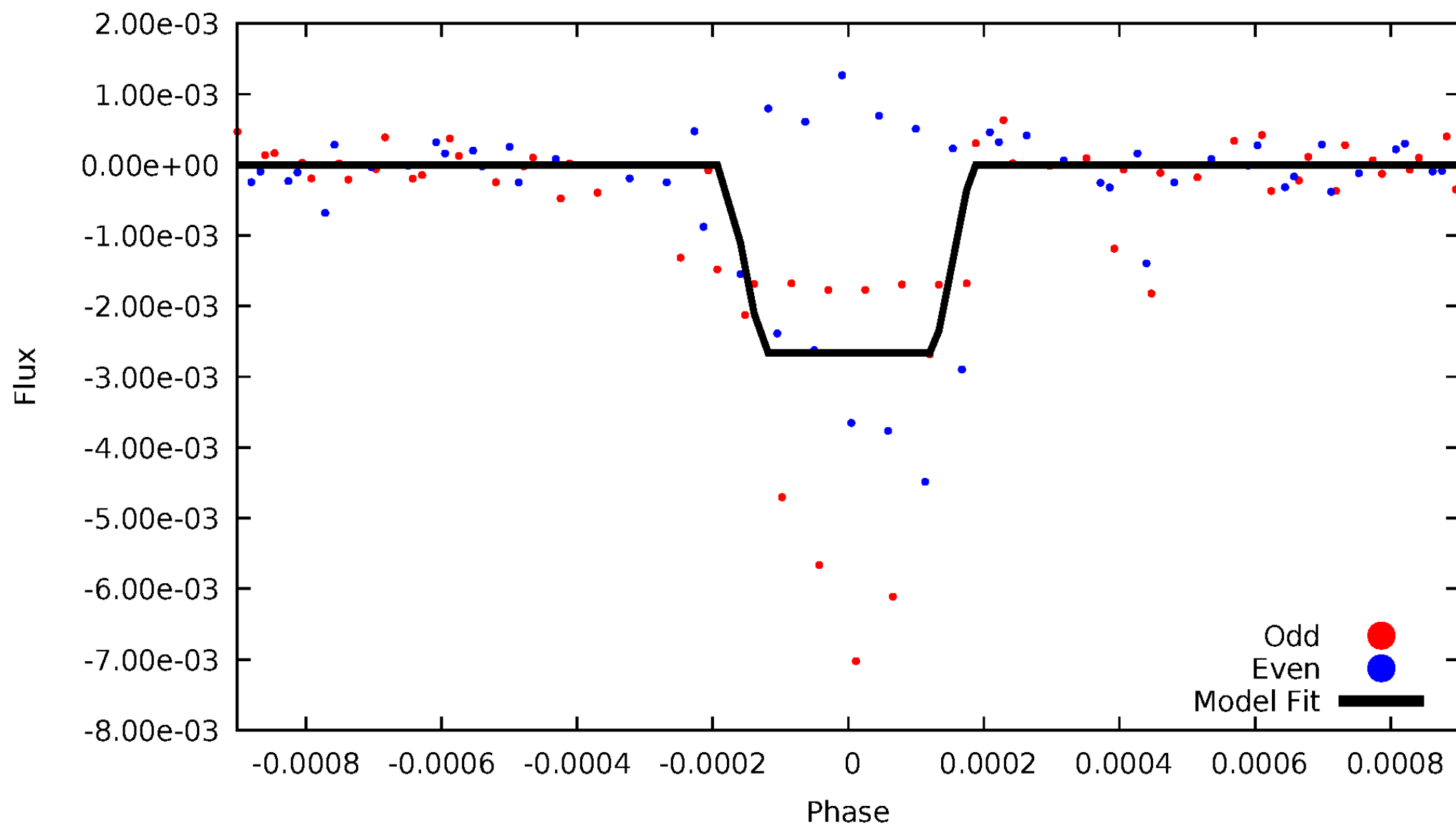
DV Odd/Even

TCE 008803643-01



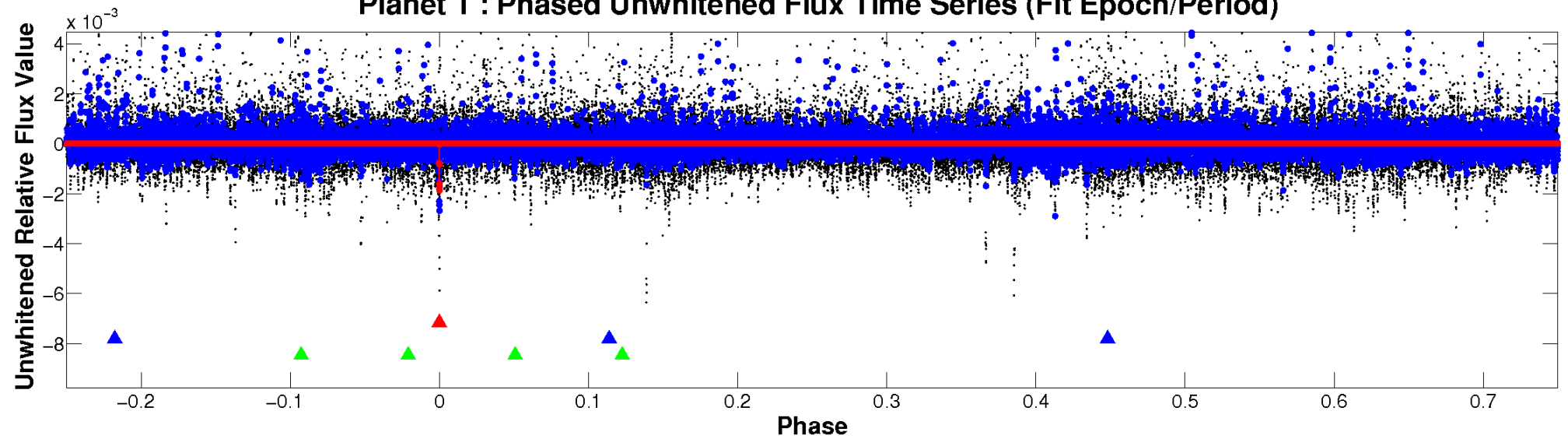
ALT Odd/Even

TCE 008803643-01

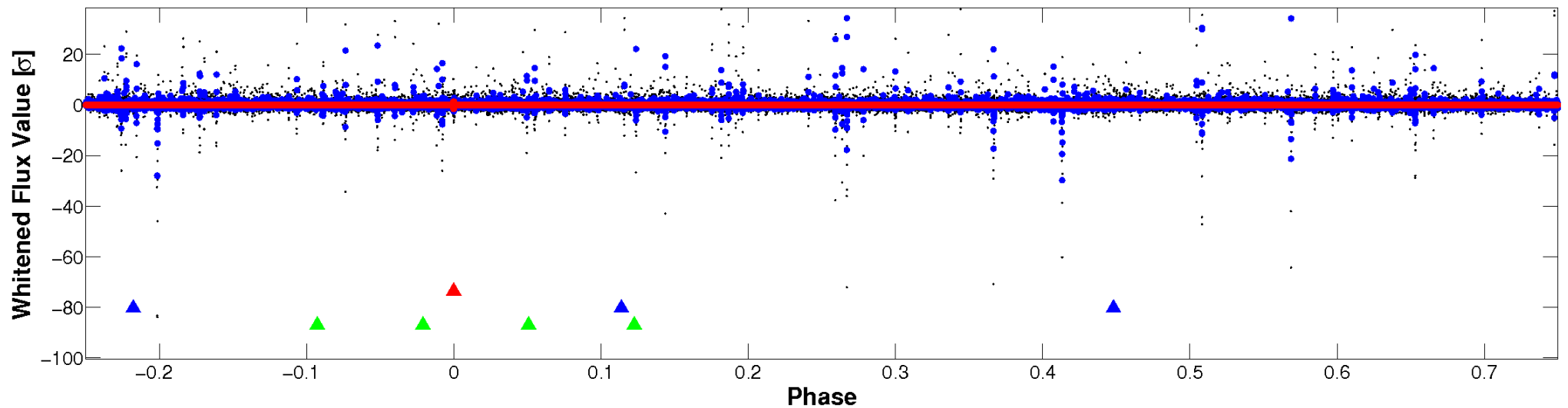


Non-Whitened Vs. Whitened Light Curve

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

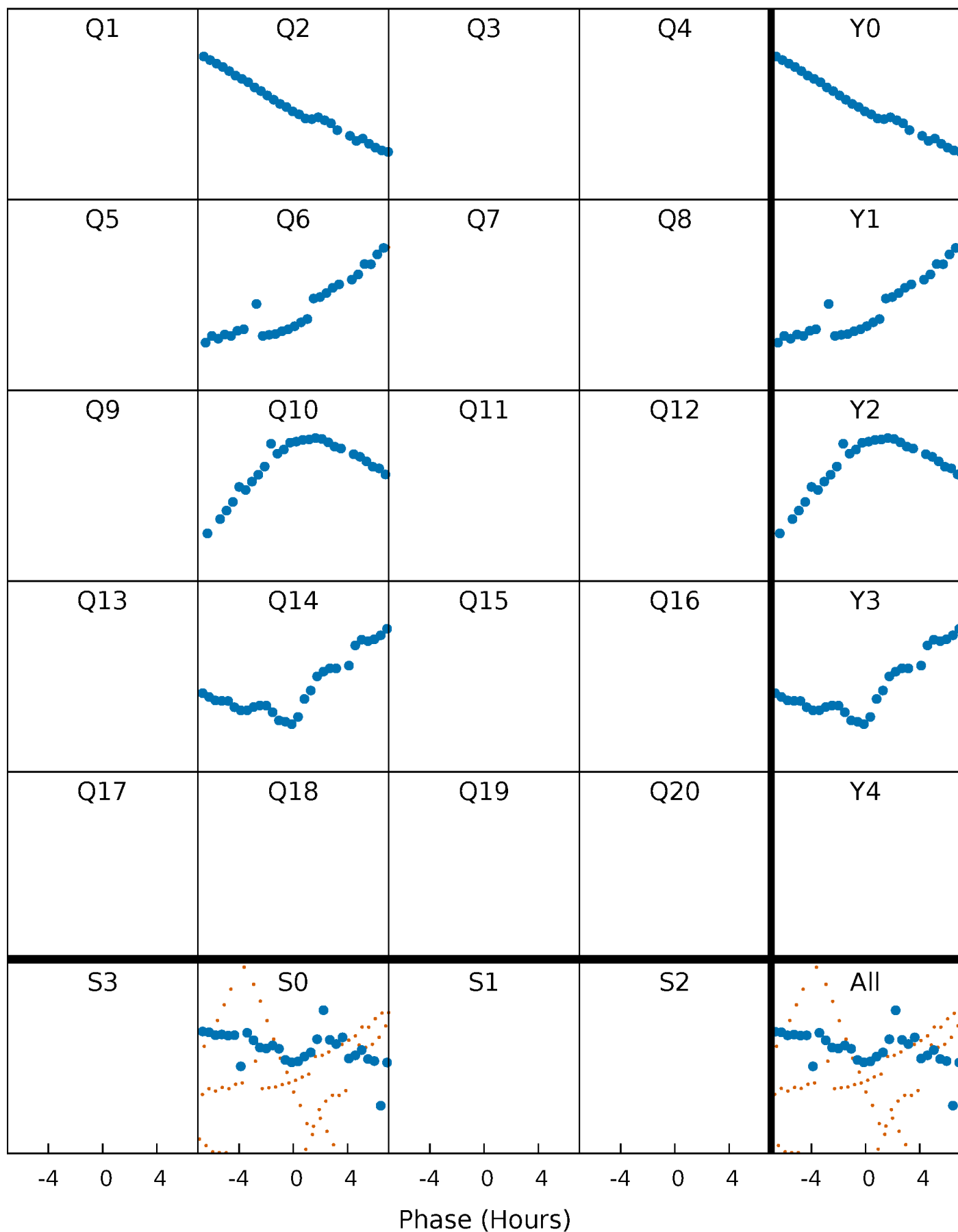


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



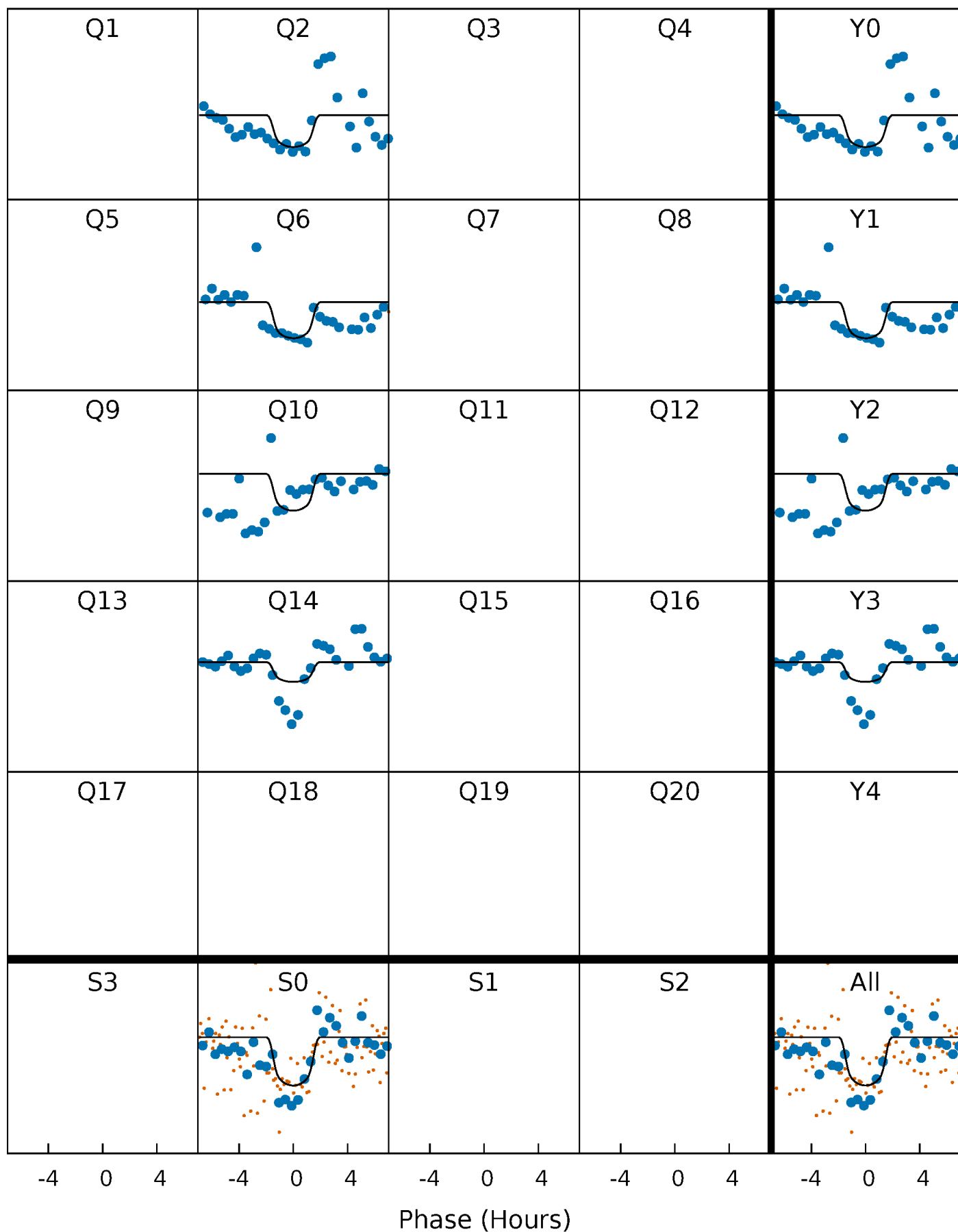
PDC Quarter-Phased Transit Curves

TCE 008803643-01 P=375.155137 Days $T_0=198.862108$ (BKJD)



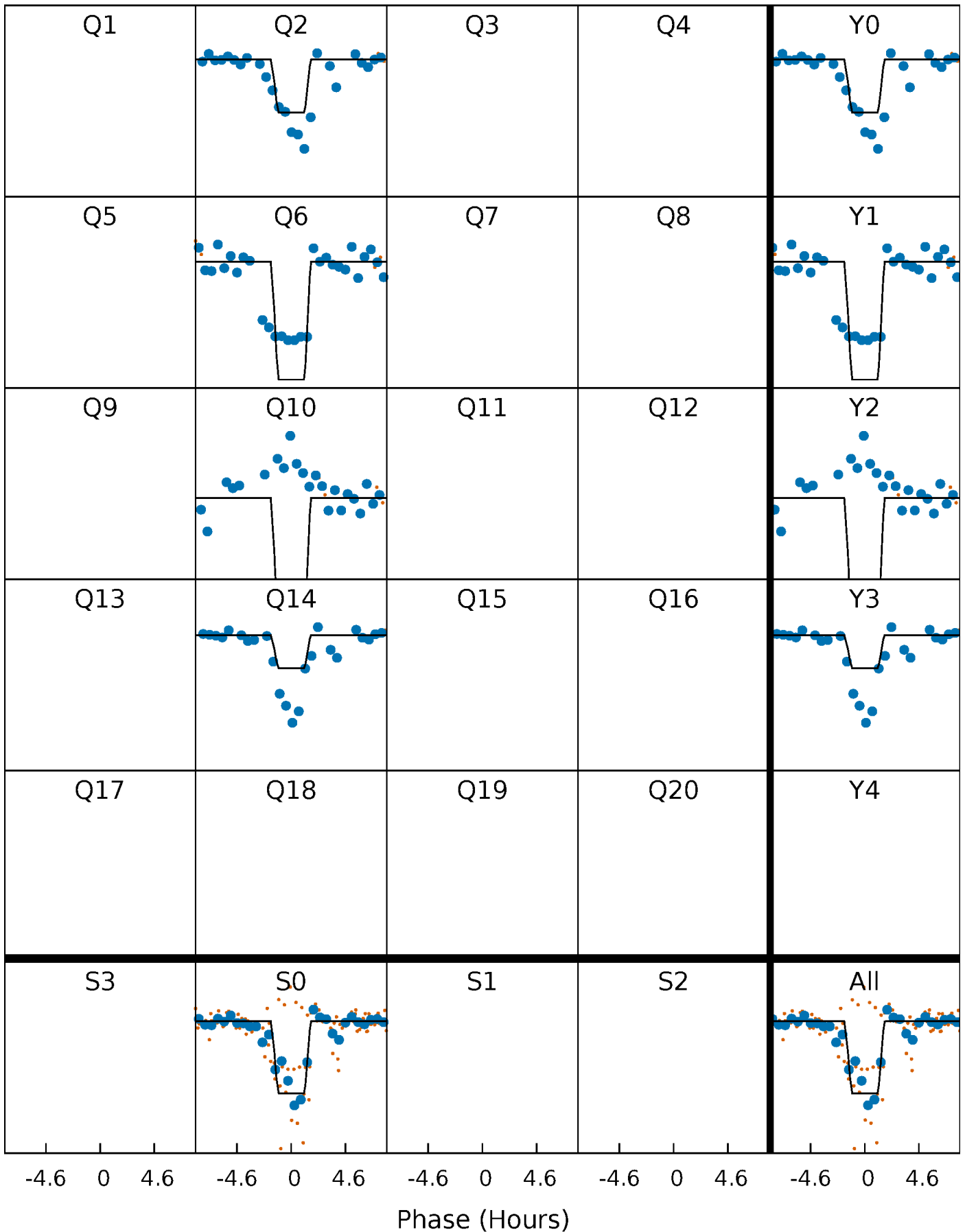
DV Quarter-Phased Transit Curves

TCE 008803643-01 P=375.155137 Days $T_0=198.862108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

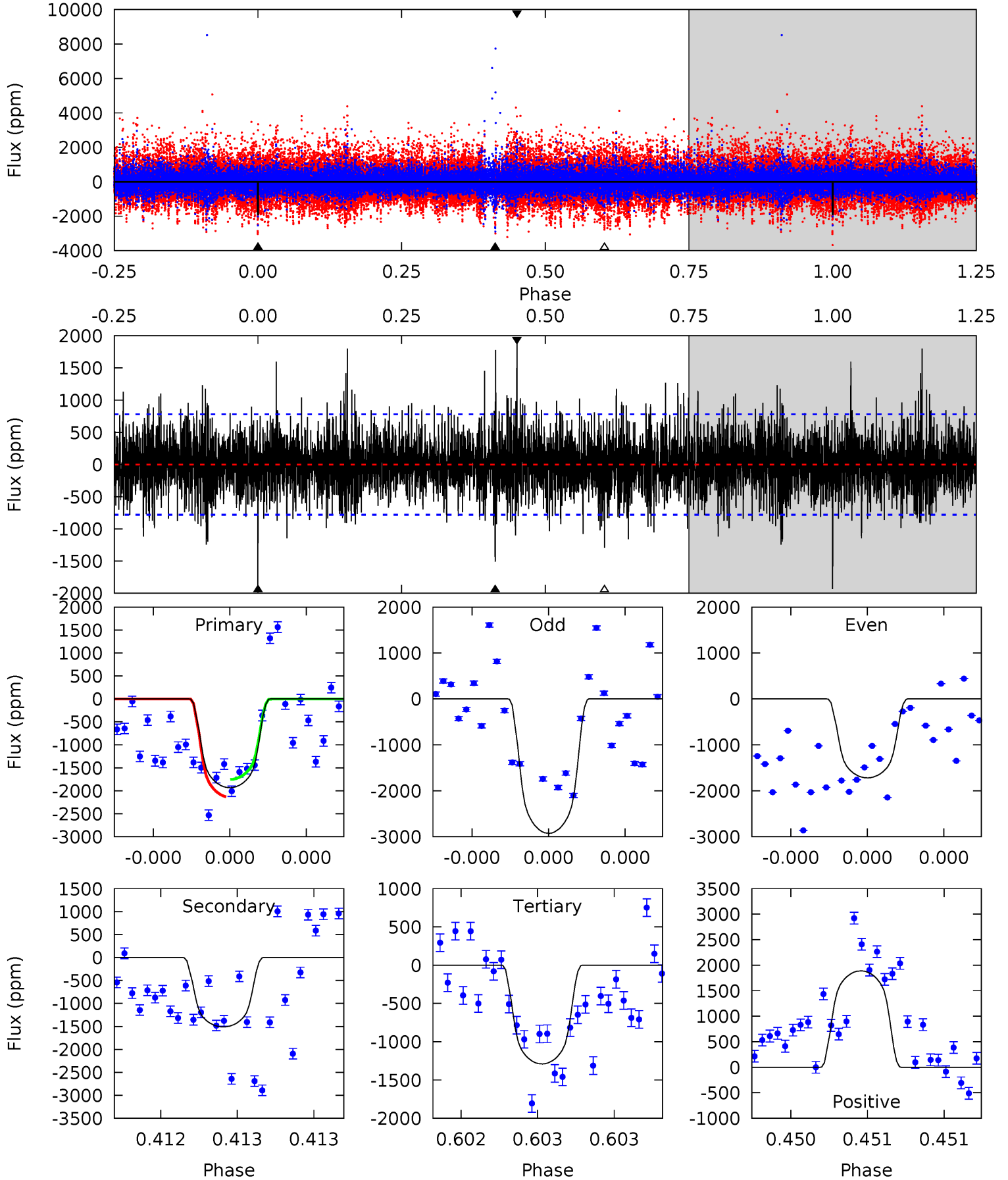
TCE 008803643-01 P=375.153189 Days $T_0=198.861619$ (BKJD)



DV Model-Shift Uniqueness Test

008803643-01, P = 375.155137 Days, E = 198.862108 Days

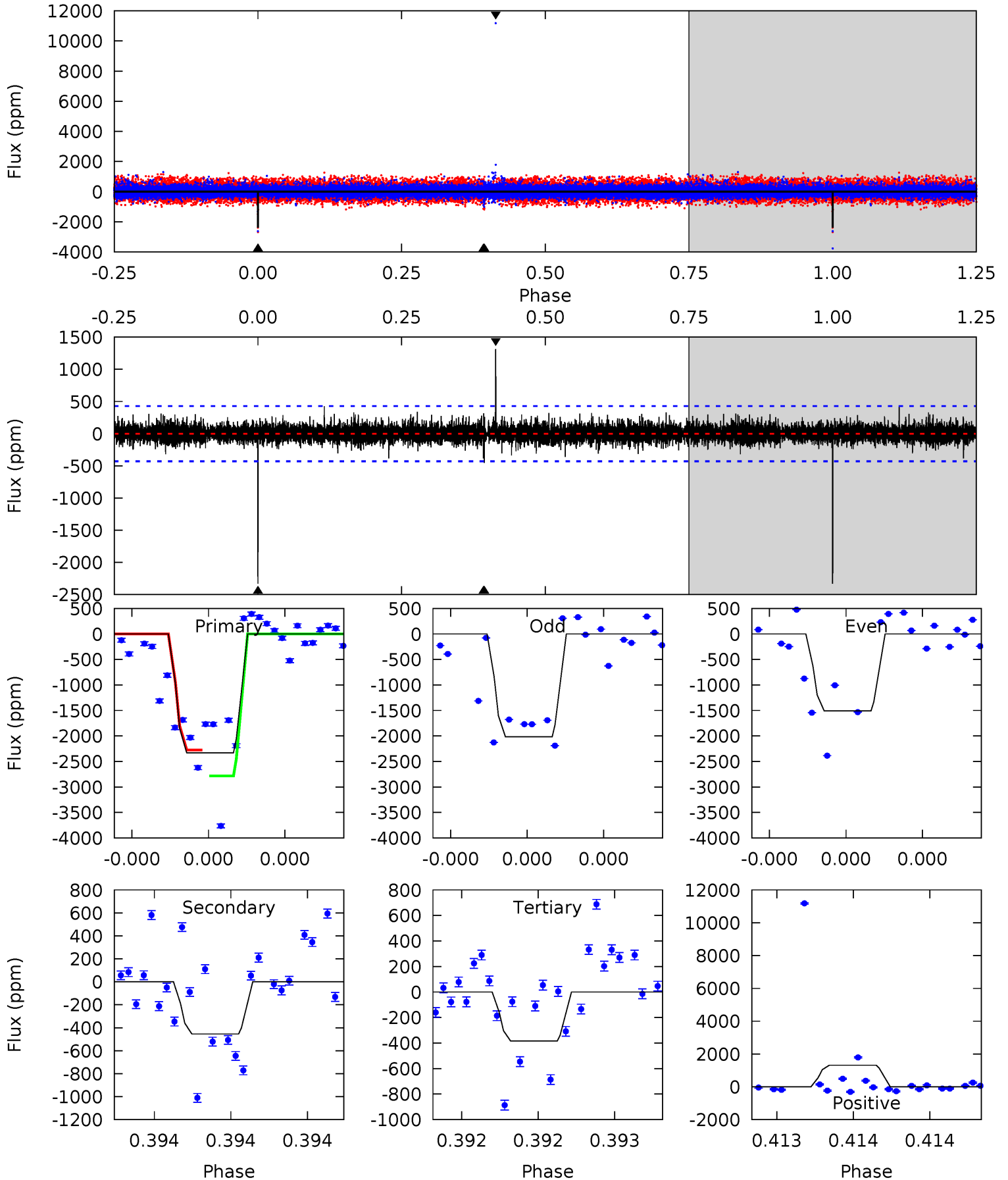
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	10.8	9.26	13.6	5.60	3.53	2.51	4.61	0.32	1.58	-2.71	3.90	1.17	0.49	0



Alt Model-Shift Uniqueness Test

008803643-01, P = 375.153189 Days, E = 198.861619 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.6	5.97	5.03	17.3	5.63	3.56	1.01	25.6	13.3	0.94	-11.3	3.90	0.92	0.36	0



Stellar Parameters For KIC 008803643

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4735^{+142}_{-128}	$4.631^{+0.059}_{-0.032}$	$-0.560^{+0.350}_{-0.300}$	$0.627^{+0.055}_{-0.050}$	$0.613^{+0.074}_{-0.034}$	$3.503^{+0.861}_{-0.477}$
	+3%/-3%	+1%/-1%	+62%/-54%	+9%/-8%	+12%/-6%	+25%/-14%
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 008803643-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1511 ± 139	$3.05^{+1.08}_{-1.10}$	247^{+9}_{-8}	4485^{+953}_{-470}	68662^{+99138}_{-31954}
Alt.	-454 ± 76	$3.53^{+1.09}_{-1.15}$	247^{+9}_{-8}	3445^{+489}_{-288}	15019^{+18472}_{-6257}

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

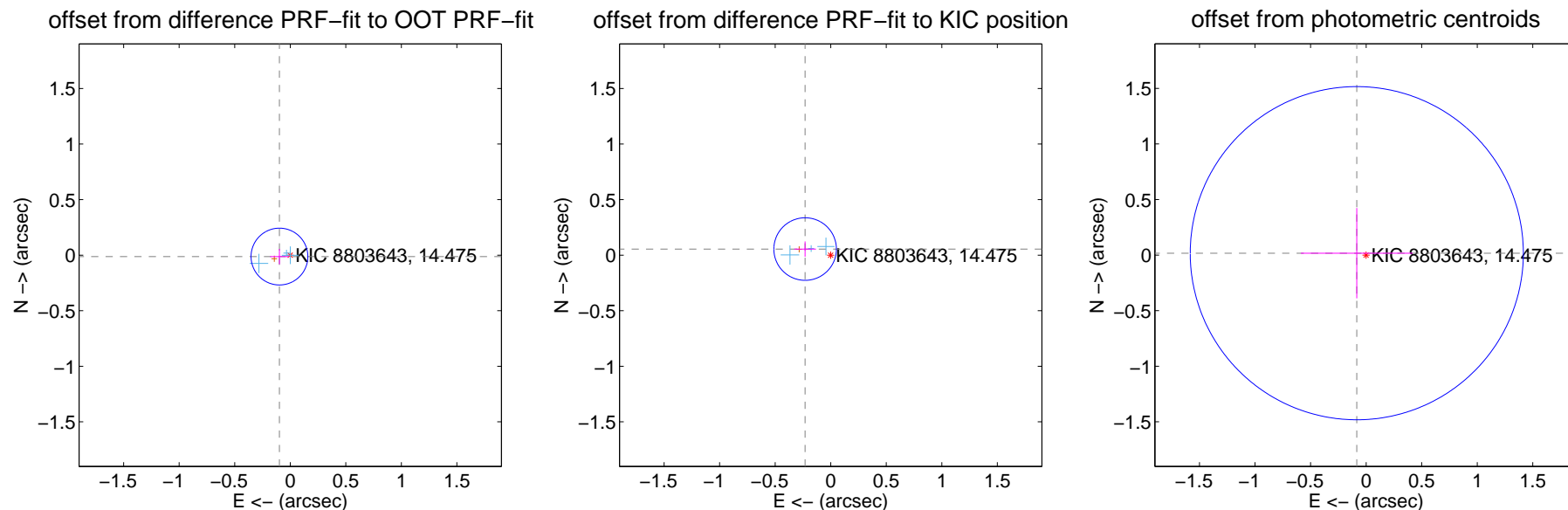
DV Centroid Data

Supplemental centroid analysis for 008803643-01. Kepler magnitude: 14.47. Transit SNR 7.41

There are 3 quarters with good PRF difference image offsets

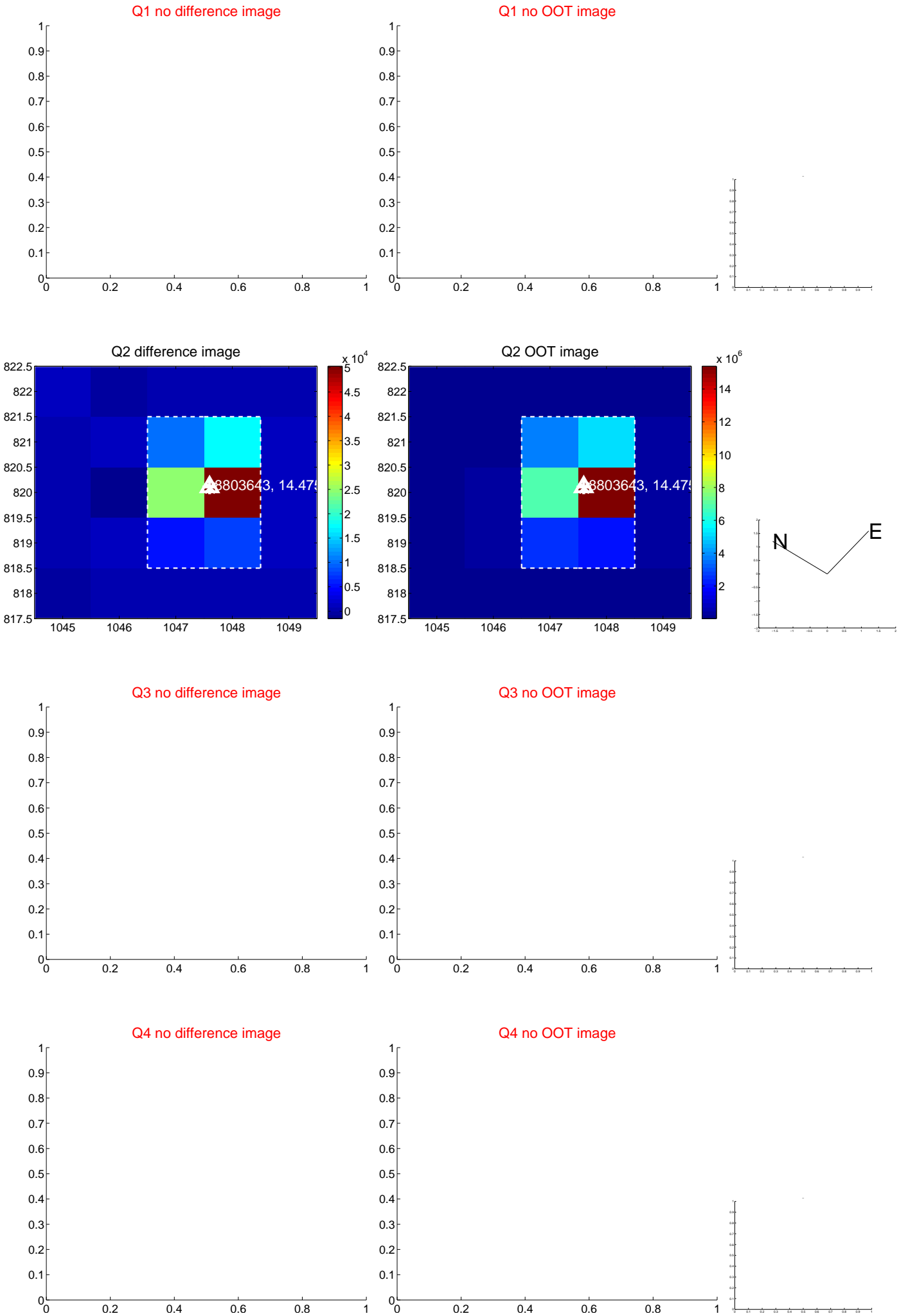
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.098 ± 0.085	1.15	0.097 ± 0.084	-0.013 ± 0.069
PRF-fit source offset from KIC position	0.237 ± 0.094	2.52	0.230 ± 0.098	0.055 ± 0.068
photometric centroid source offset	0.09 ± 0.50	0.17	0.08 ± 0.50	0.02 ± 0.41

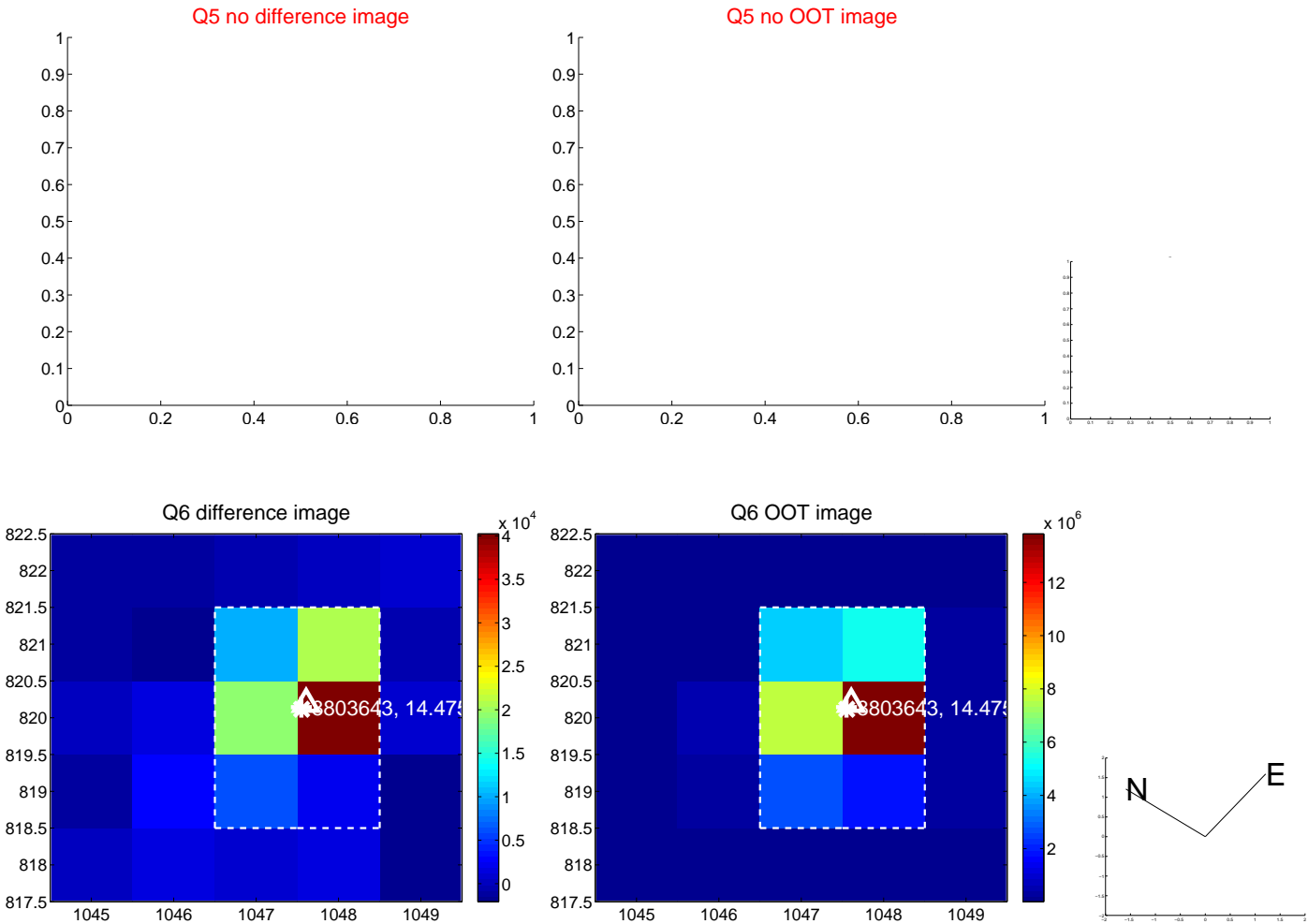


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

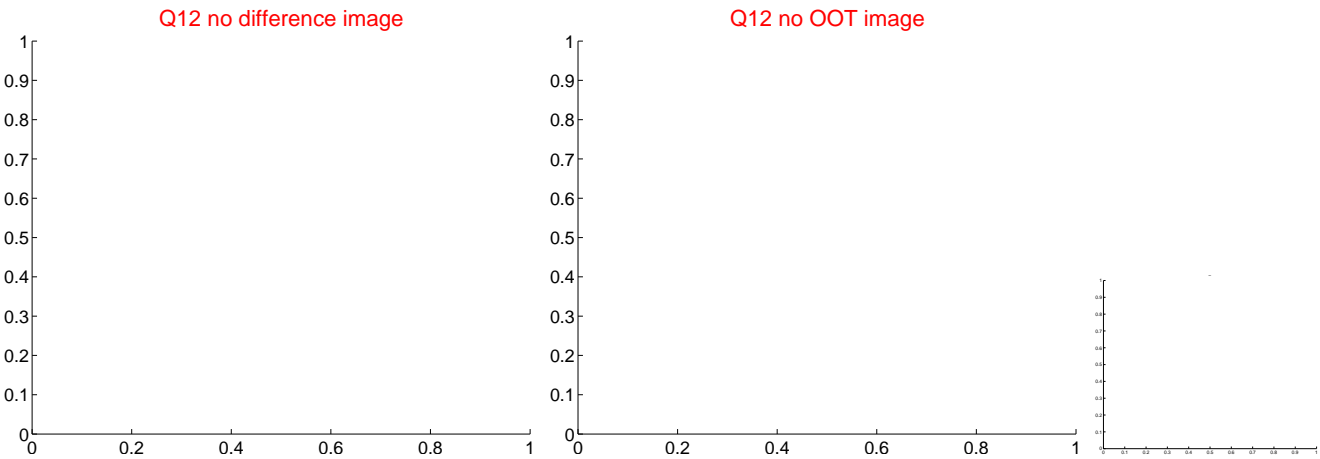
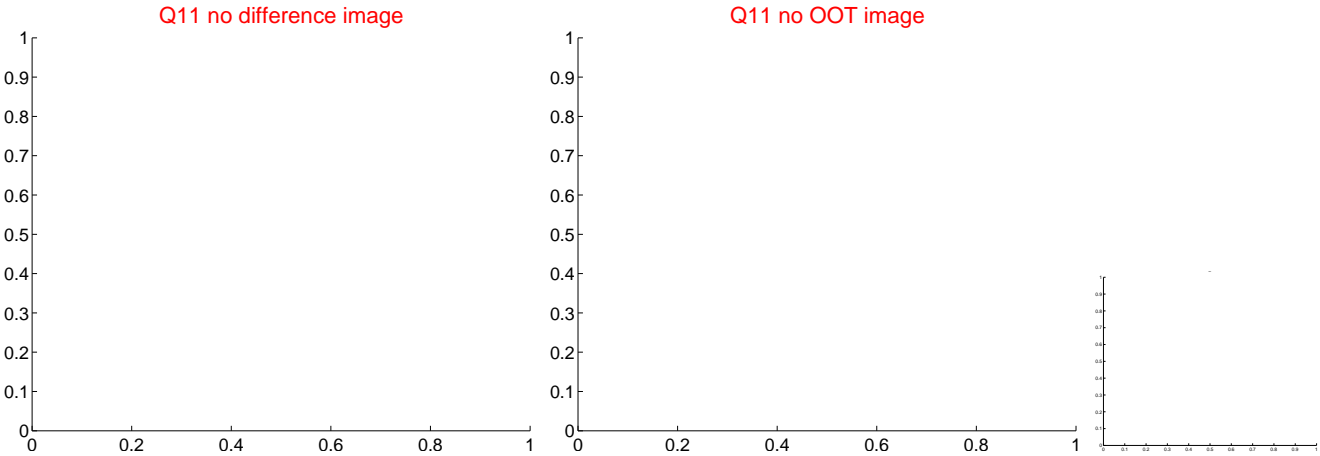
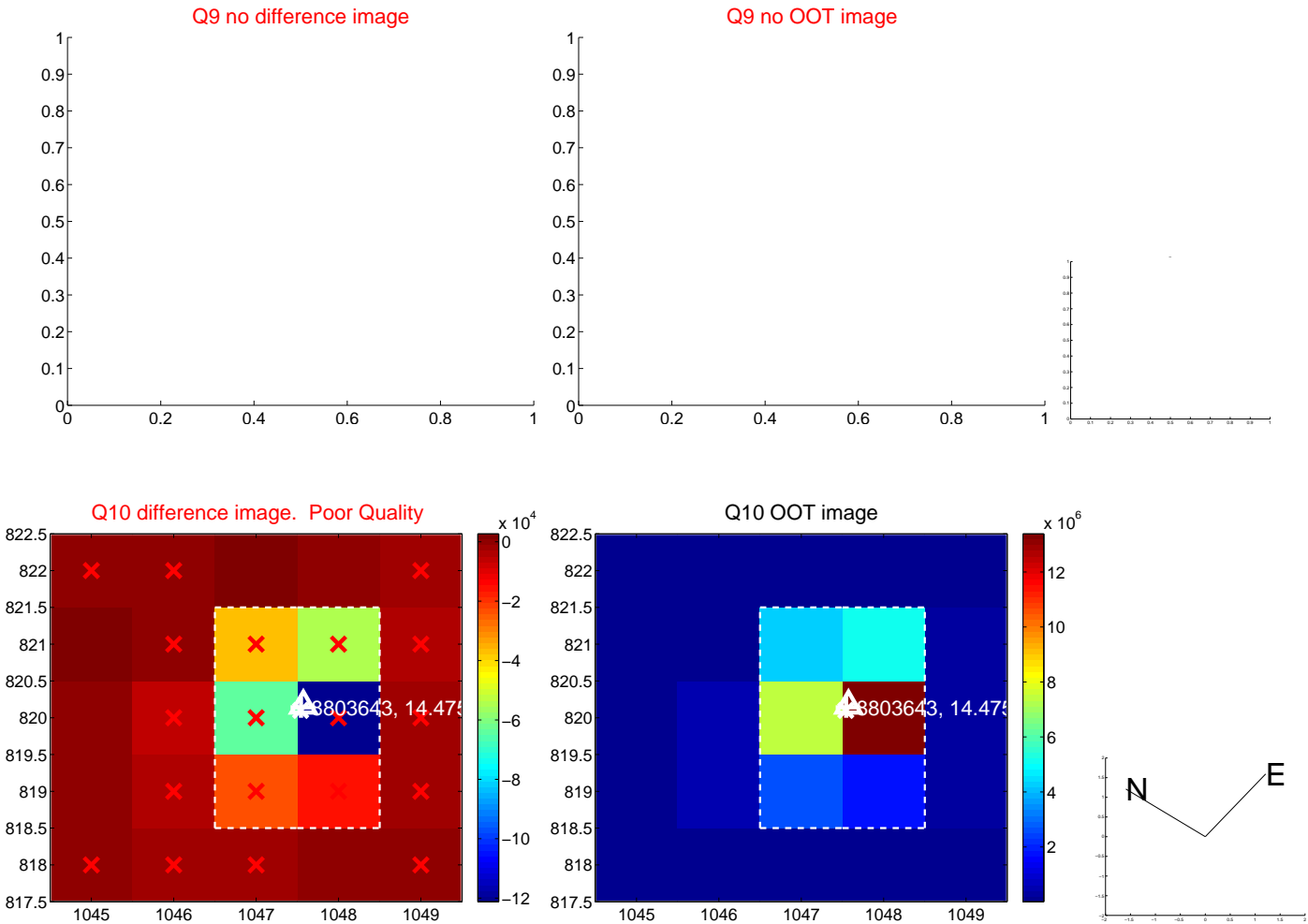
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

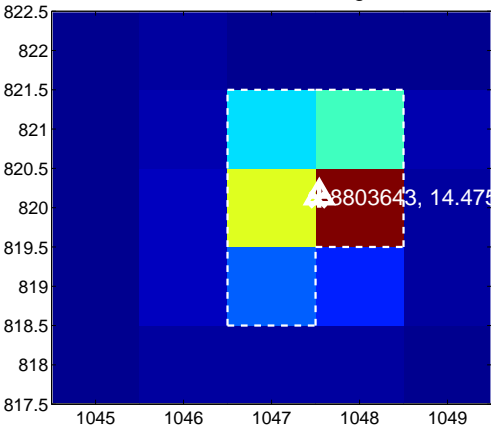
Q13 no difference image



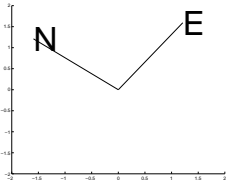
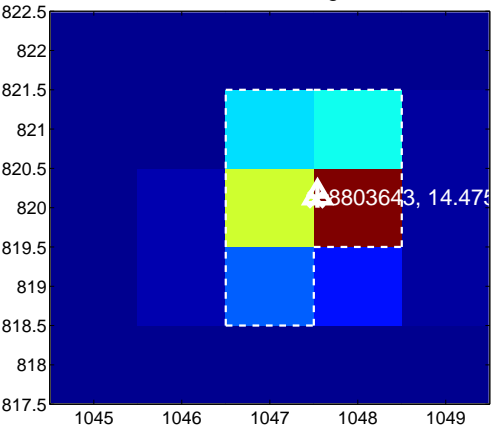
Q13 no OOT image



Q14 difference image



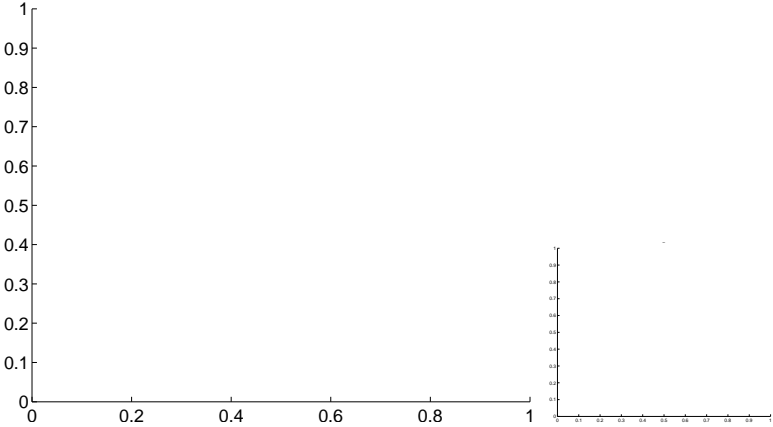
Q14 OOT image



Q15 no difference image



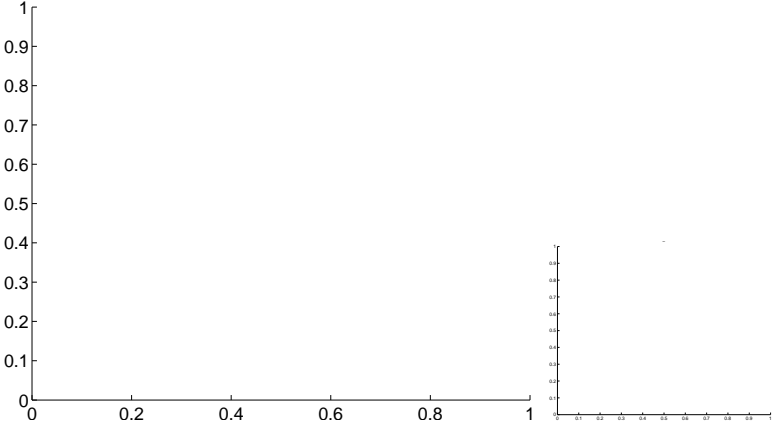
Q15 no OOT image



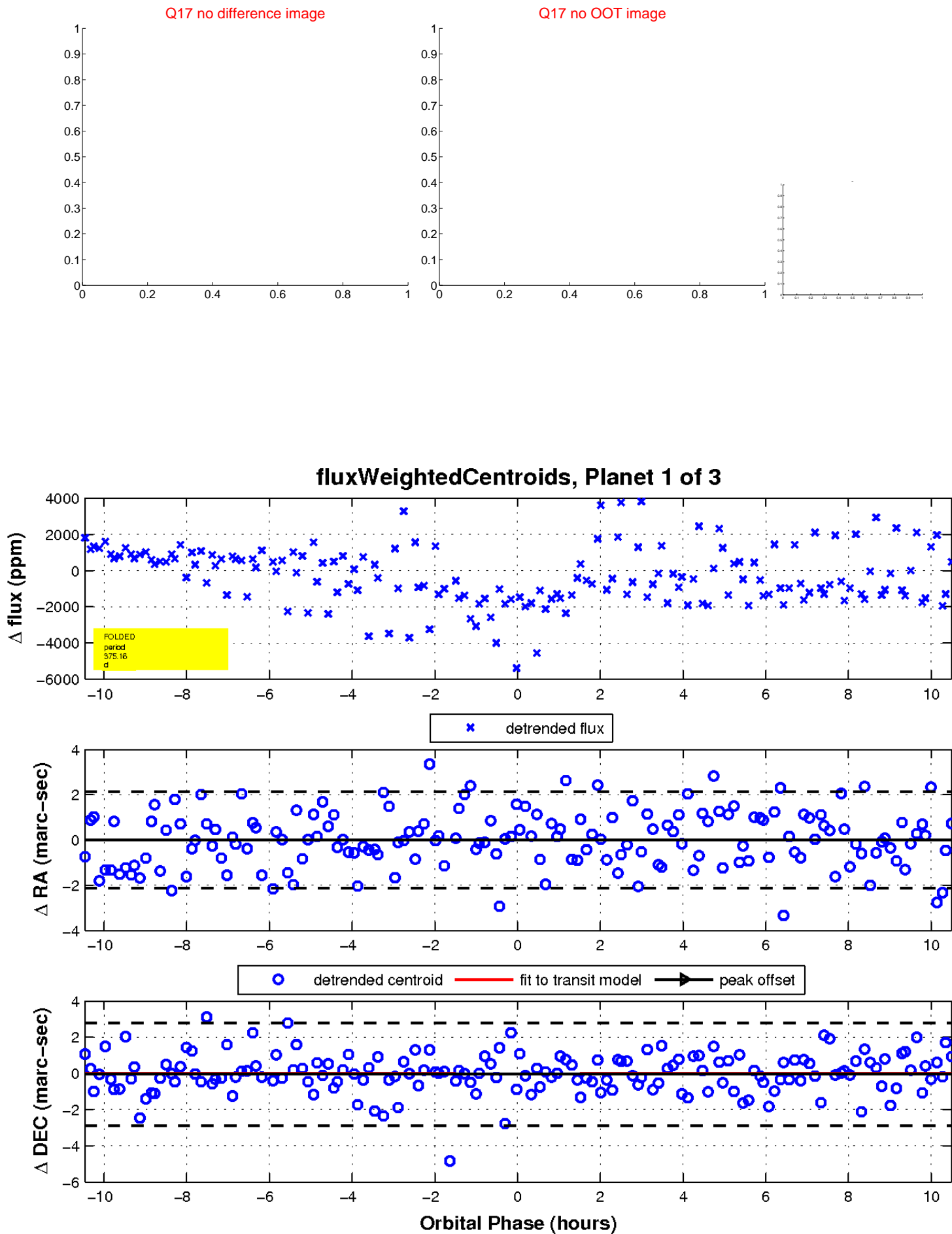
Q16 no difference image



Q16 no OOT image

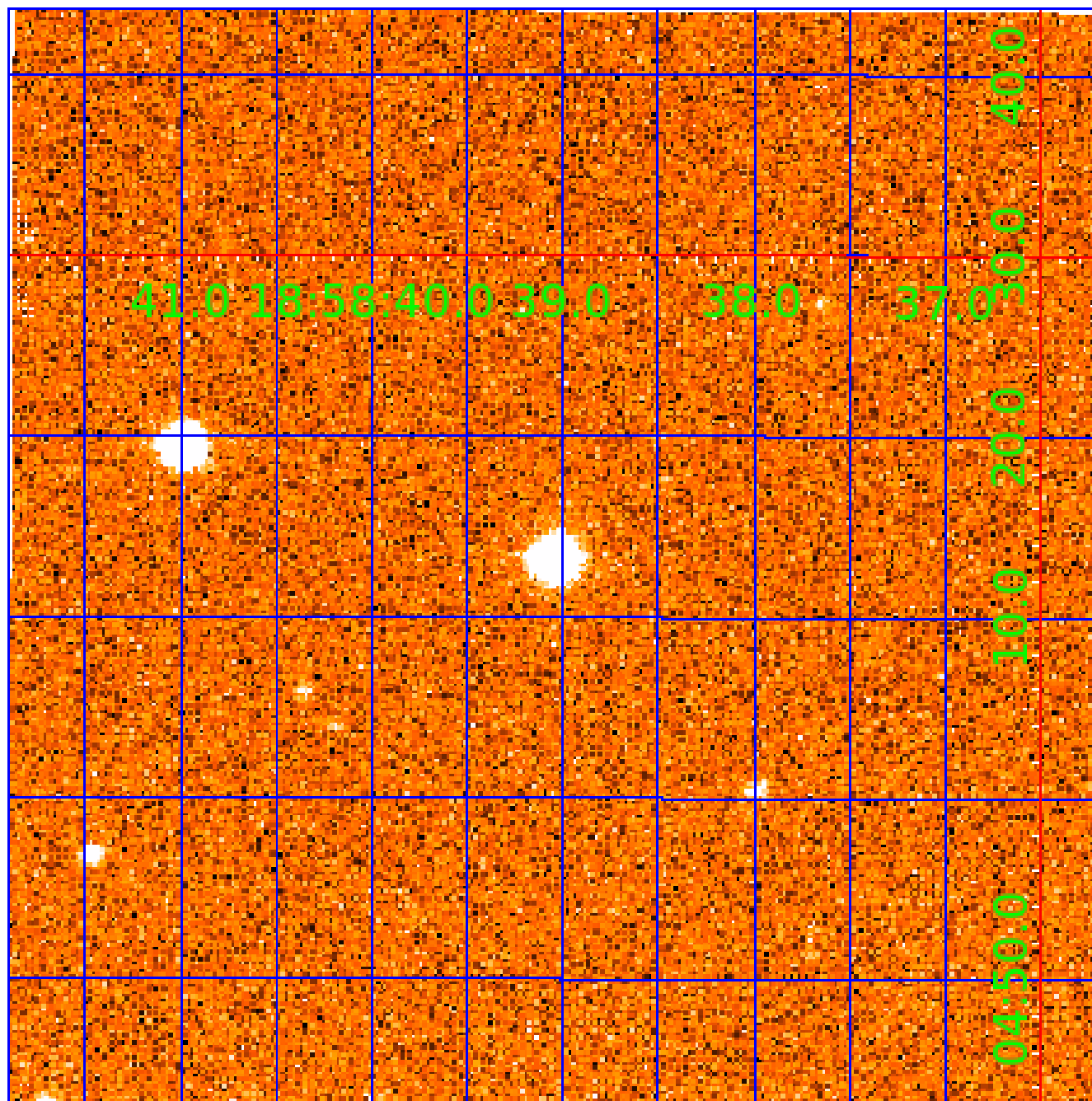


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008803643

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})
008803643-01	OBS	No	375.155137	198.862108	1871.2	3.515	14.7	7.4	0.63	4735	3.10	0.24
008803643-02	OBS	No	500.544262	241.589580	2193.1	3.414	12.9	7.8	0.63	4735	2.94	0.16
008803643-03	OBS	No	348.225772	244.876830	1590.9	2.857	10.6	7.2	0.63	4735	2.61	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008803643-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS
008803643-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008803643-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—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.

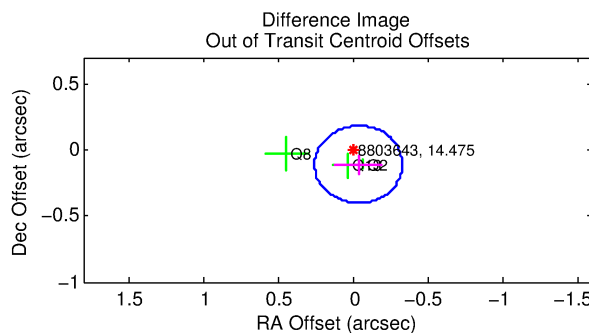
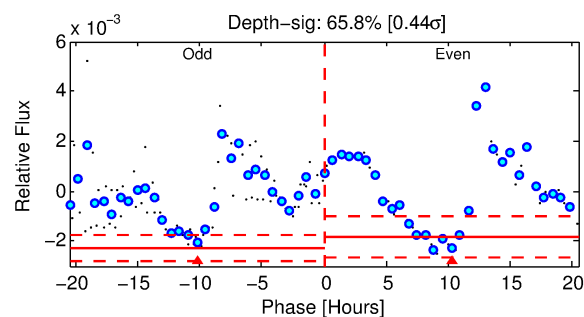
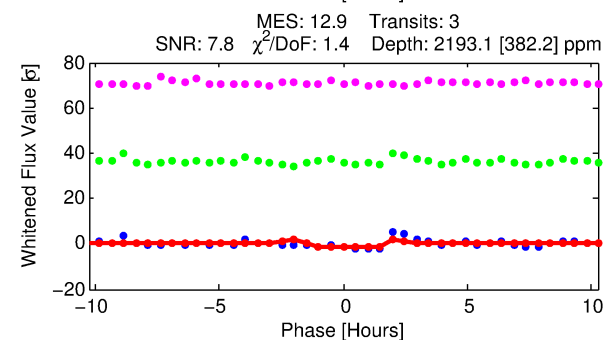
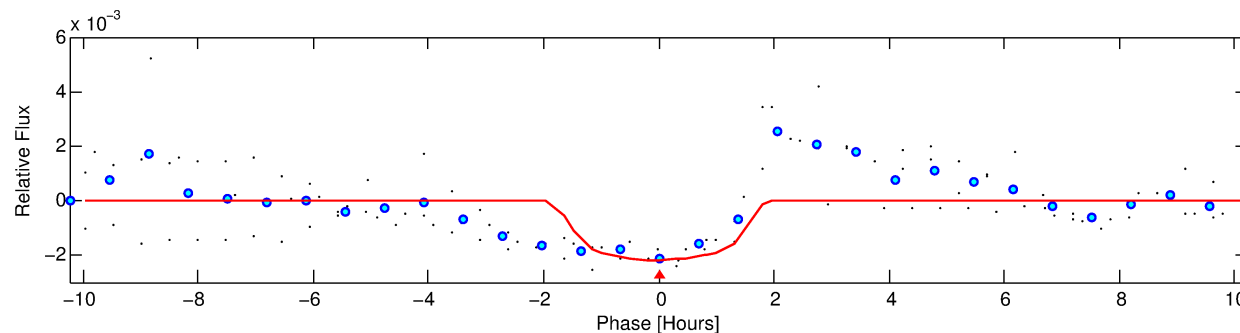
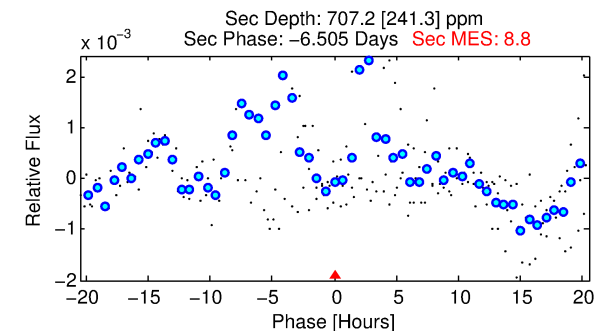
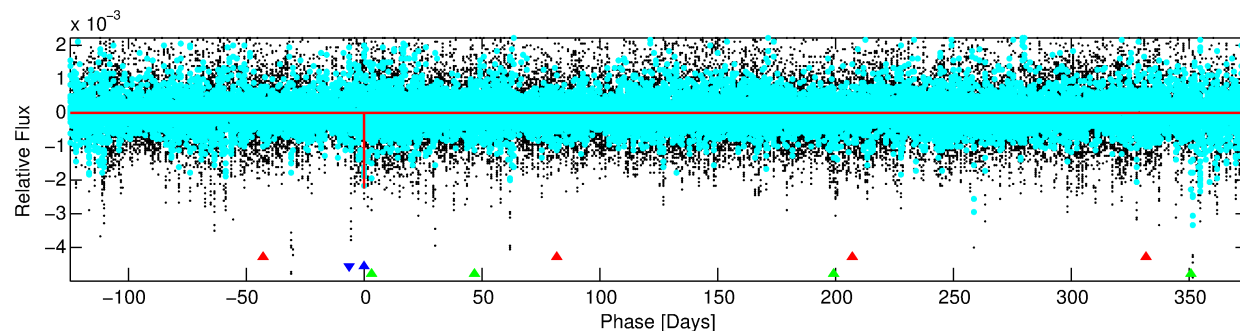
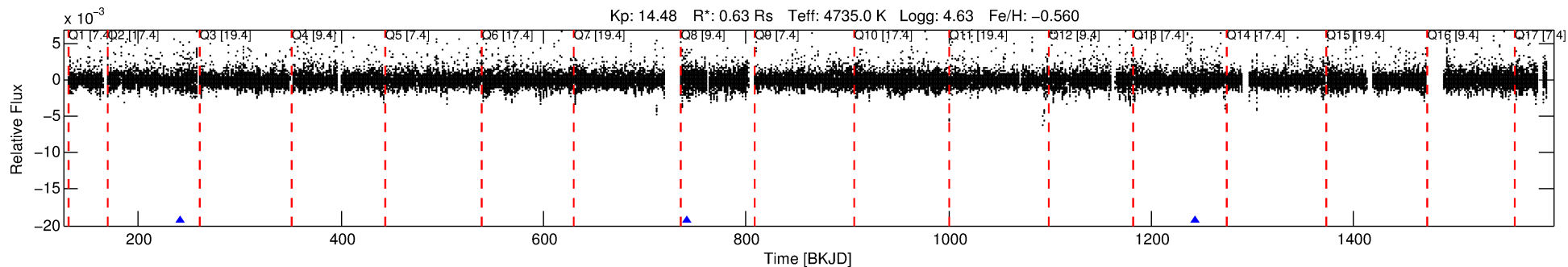
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008803643-02

No Significant Match Found

DV One-Page Summary

KIC: 8803643 Candidate: 2 of 3 Period: 500.544 d



DV Fit Results:

Period = 500.54426 [0.00440] d
Epoch = 241.5896 [0.0053] BKJD
Rp/R* = 0.0430 [0.1452]
a/R* = 1045.07 [11721.97]
b = 0.47 [19.26]
Seff = 0.16 [0.03]
Teq = 162 [7] K
Rp = 2.94 [9.94] Re
a = 1.0483 [0.0775] AU
Ag = 49408.39 [334177.82] [0.15 σ]
Teffp = 3724 [6297] K [0.57 σ]

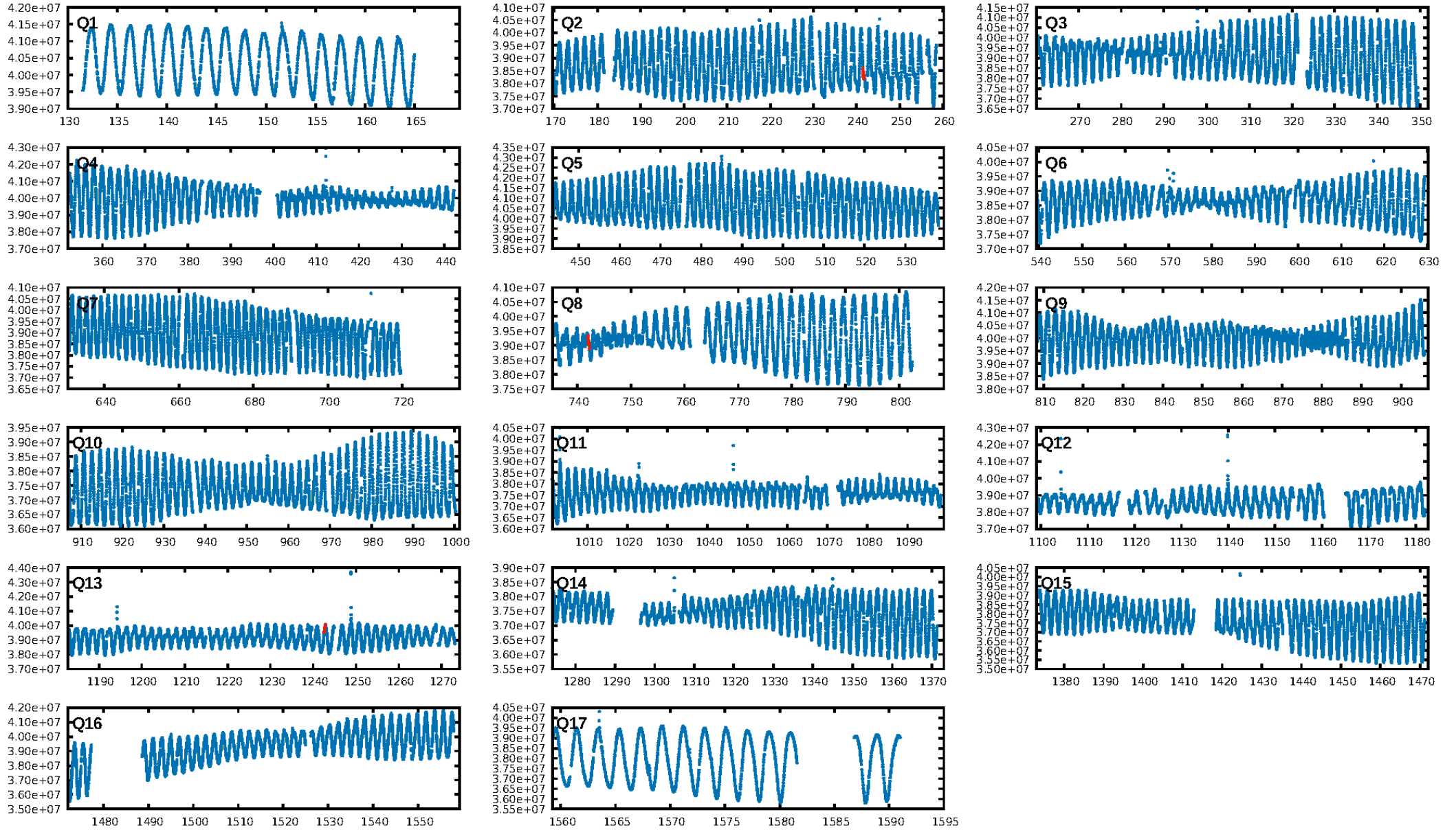
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [614.14 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.6%
ModelChiSquareGof-sig: 66.2%
Bootstrap-pfa: 3.88e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.78
Centroid-sig: 72.8%
Centroid-so: 0.201 arcsec [0.46 σ]
OotOffset-rm: 0.117 arcsec [1.20 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.098 arcsec [1.14 σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

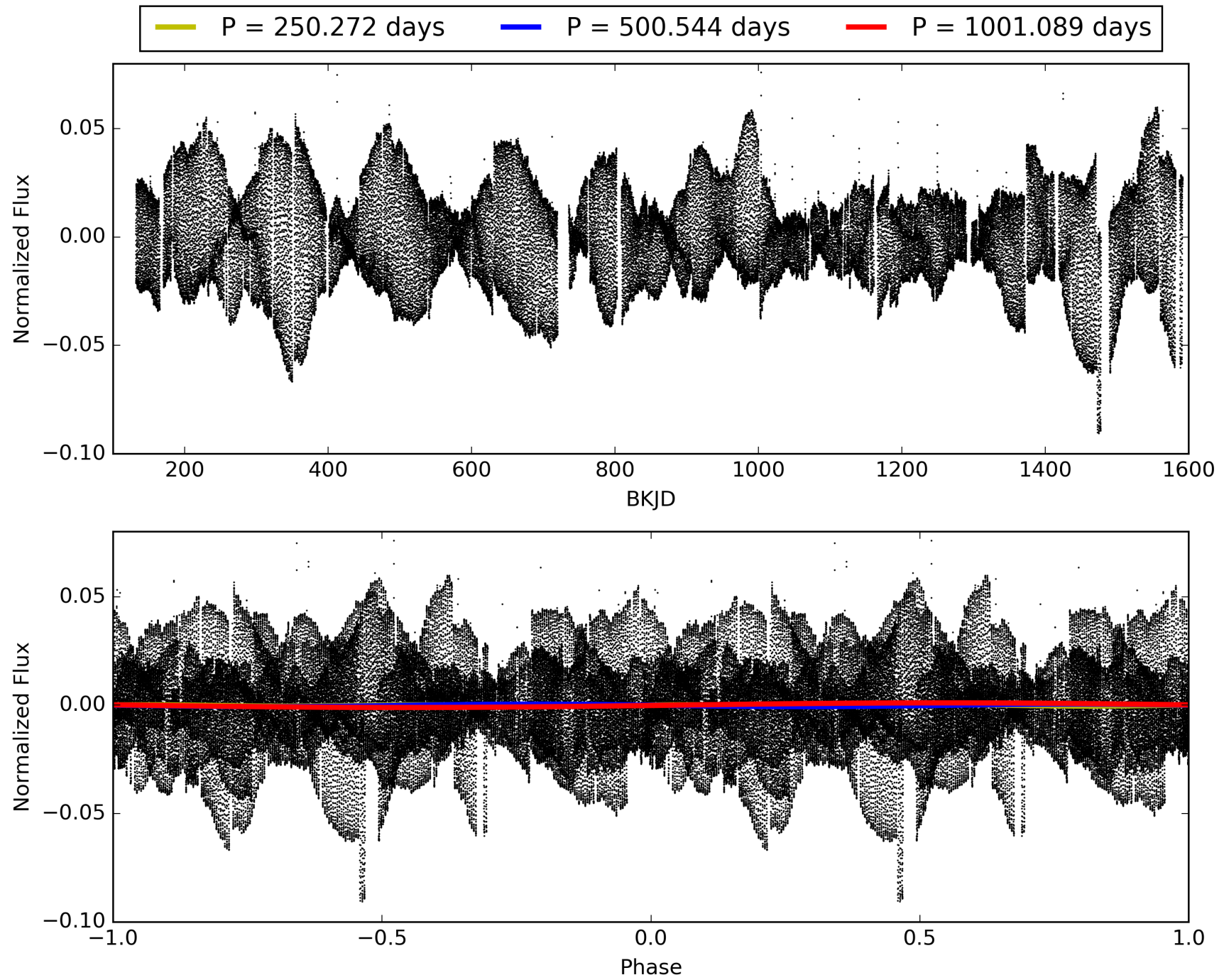
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:15:03 Z

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

TCE 008803643-02, PDC Light Curves

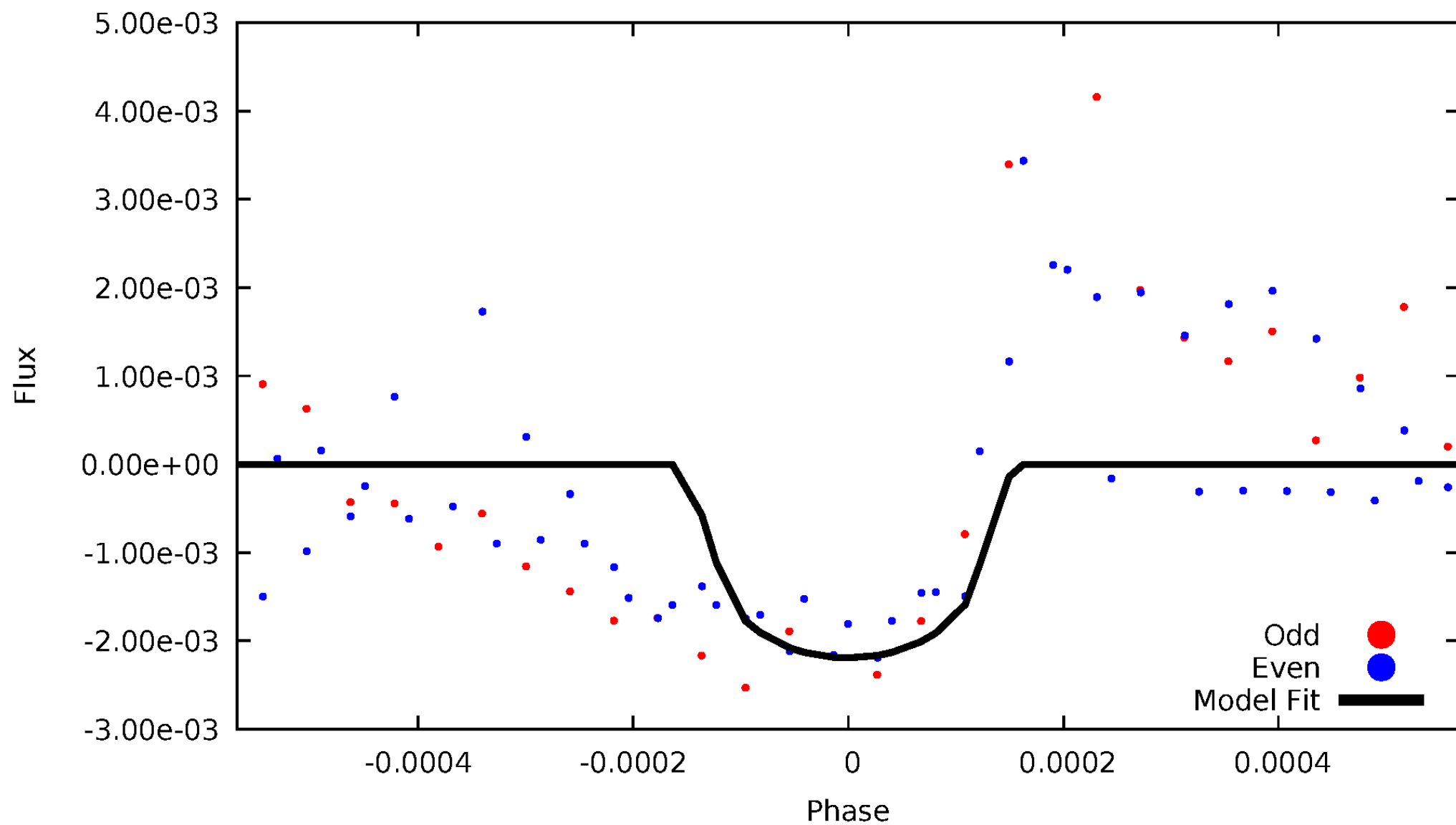


TCE 008803643-02



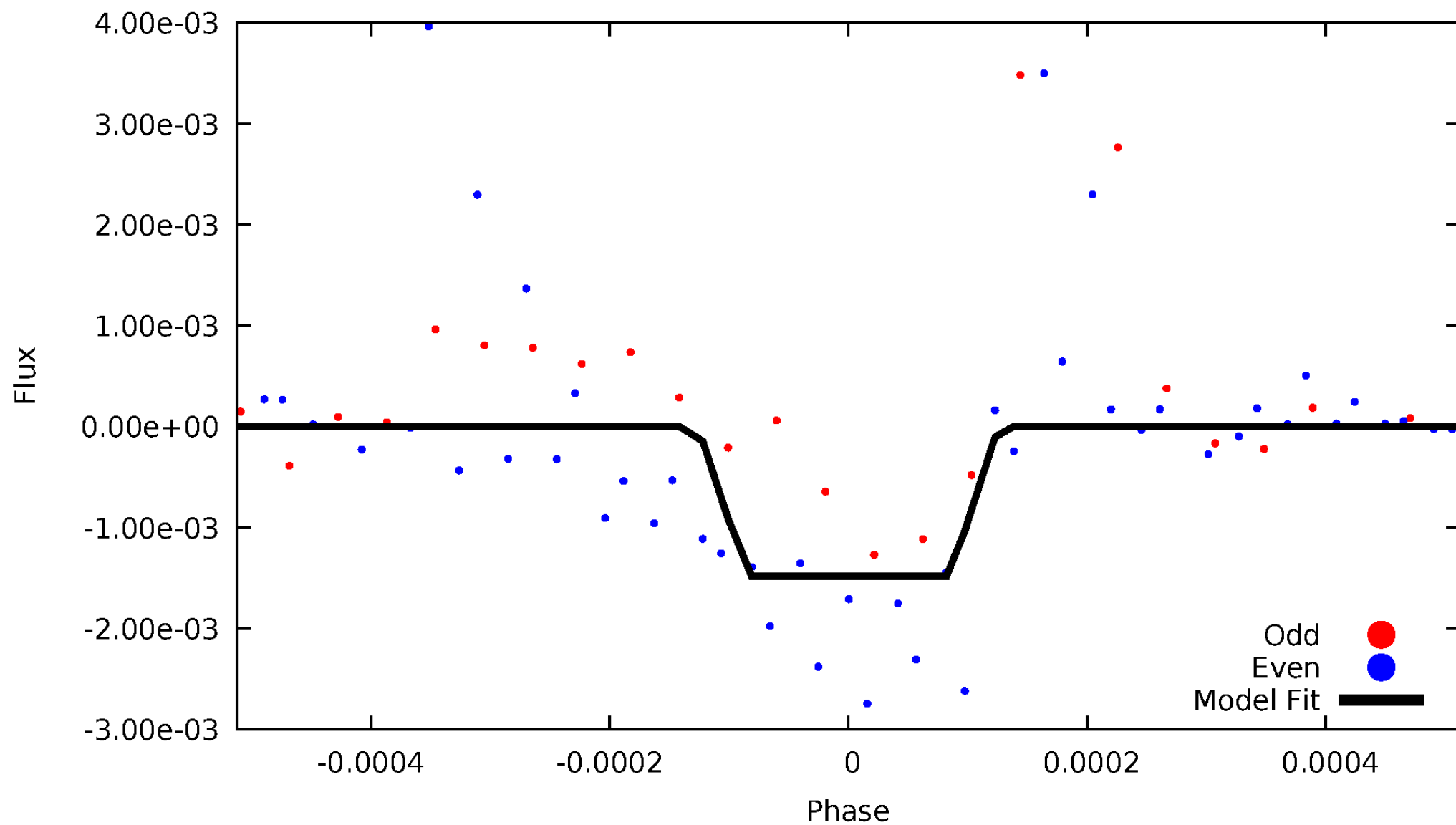
DV Odd/Even

TCE 008803643-02



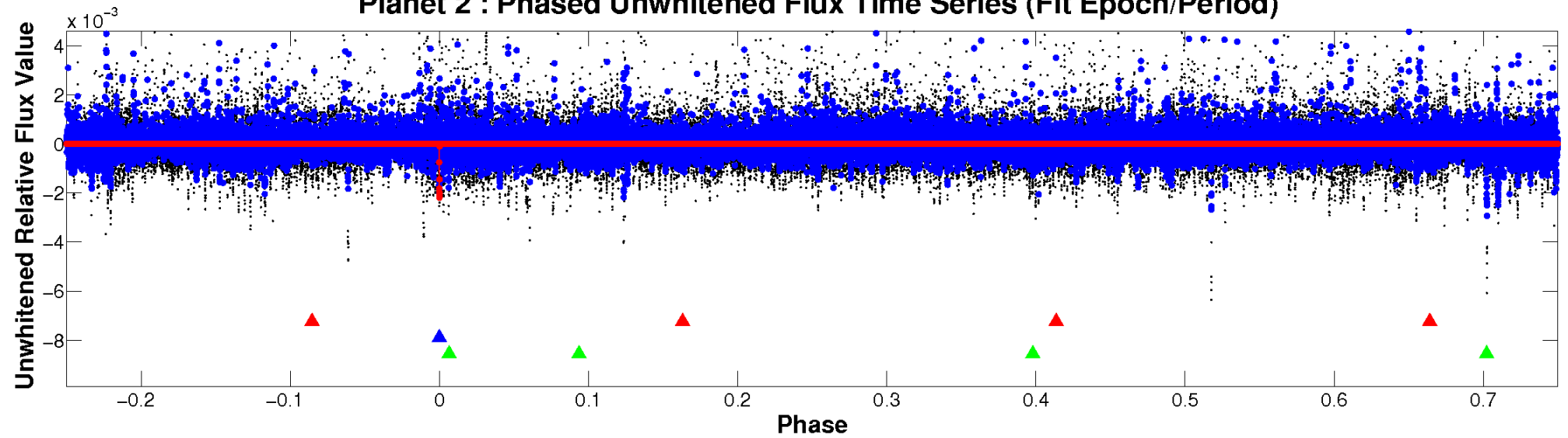
ALT Odd/Even

TCE 008803643-02

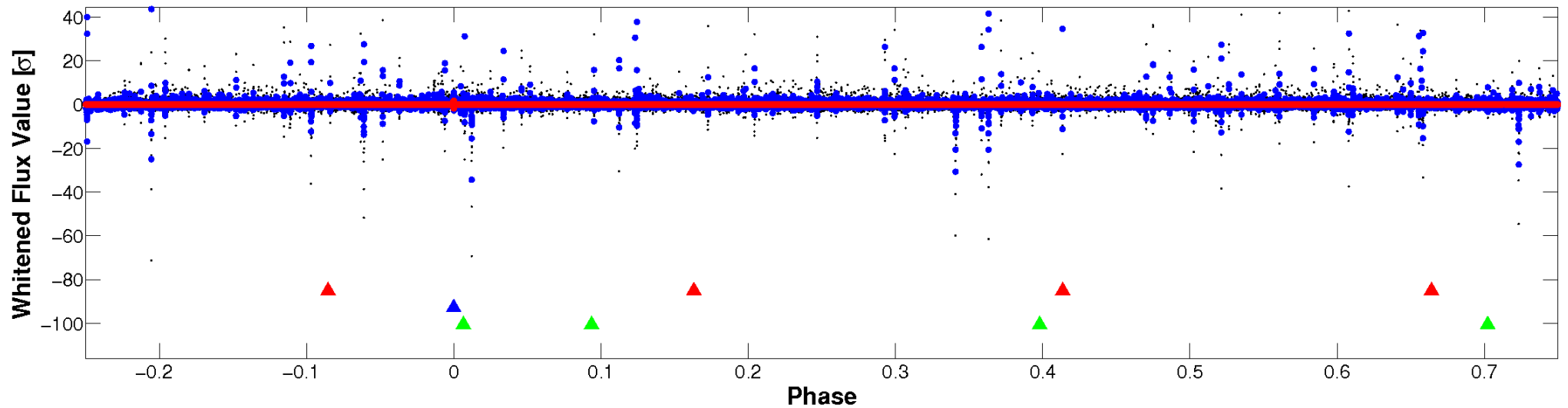


Non-Whitened Vs. Whitened Light Curve

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

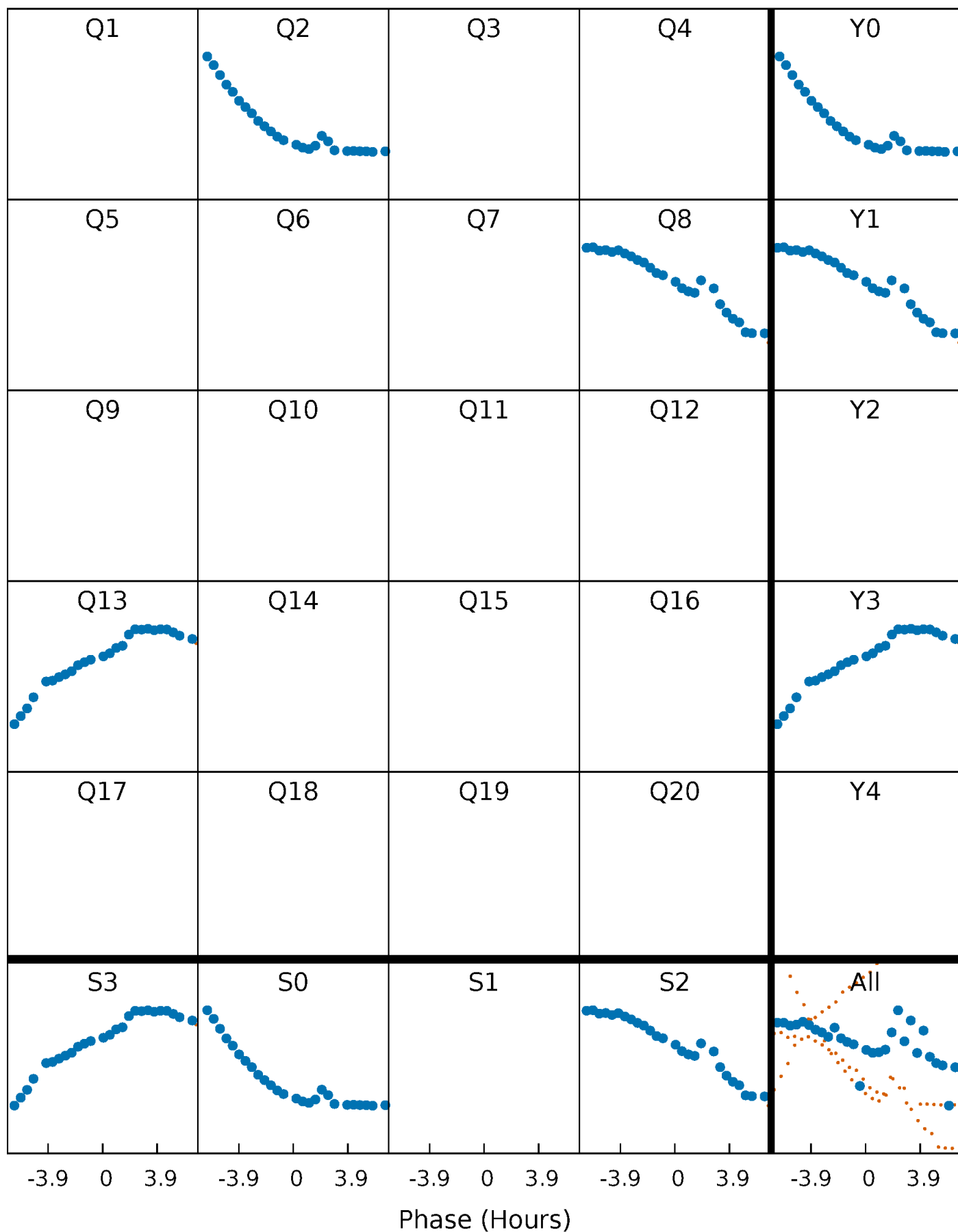


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



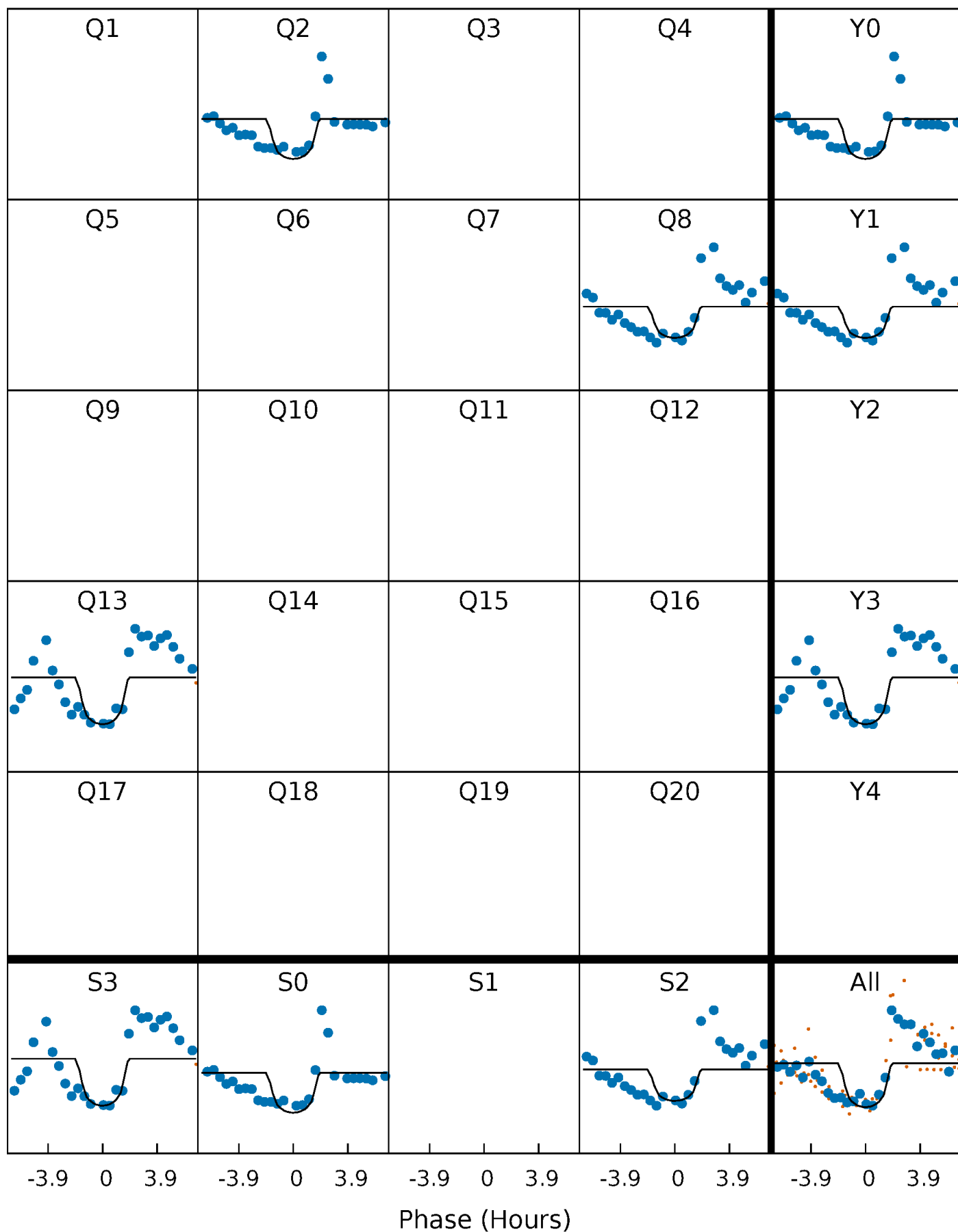
PDC Quarter-Phased Transit Curves

TCE 008803643-02 P=500.544263 Days $T_0=241.589580$ (BKJD)



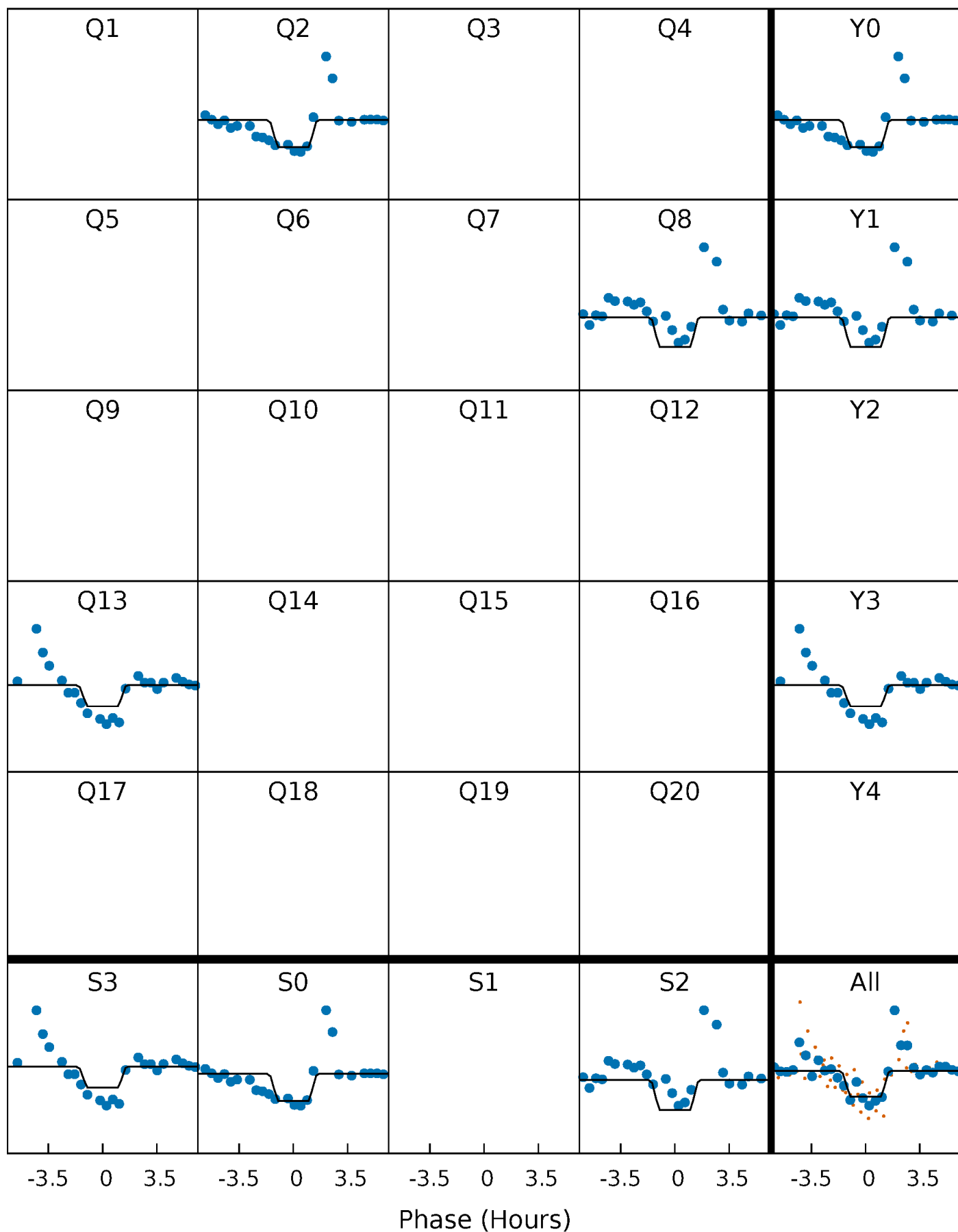
DV Quarter-Phased Transit Curves

TCE 008803643-02 P=500.544263 Days $T_0=241.589580$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

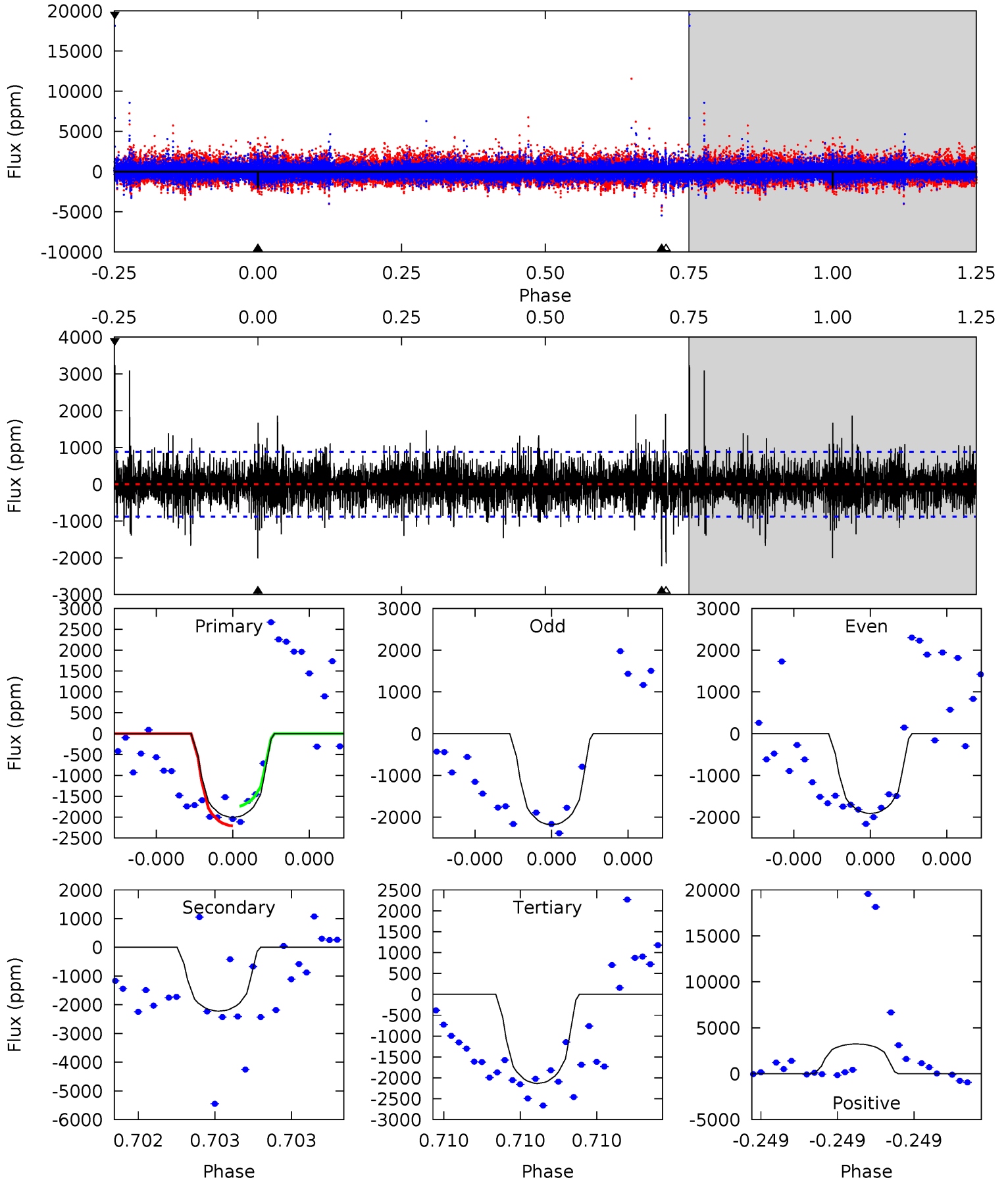
TCE 008803643-02 P=500.547297 Days $T_0=241.589126$ (BKJD)



DV Model-Shift Uniqueness Test

008803643-02, P = 500.544263 Days, E = 241.589580 Days

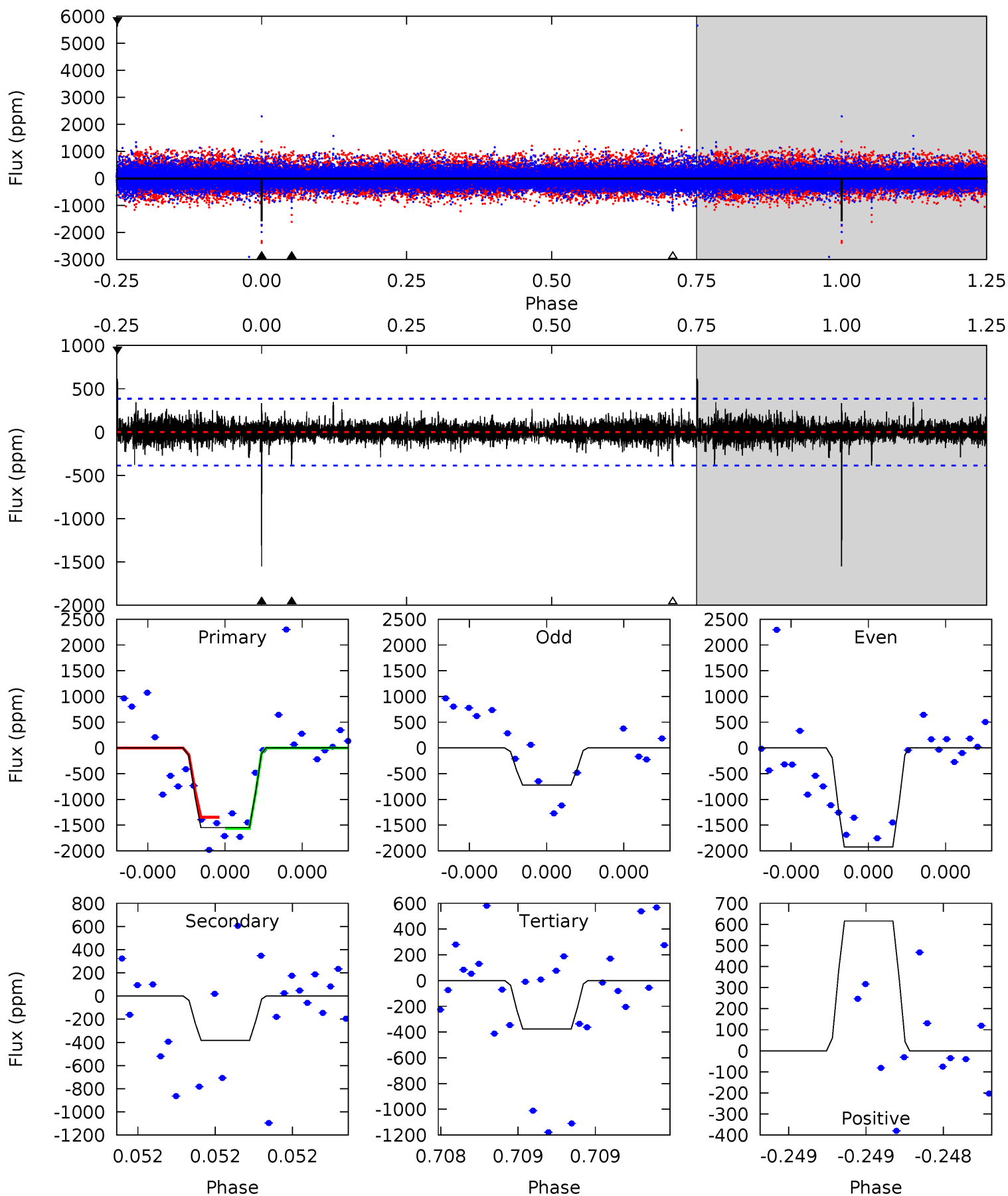
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	14.3	13.7	20.8	5.66	3.62	2.40	-0.82	-7.87	0.56	-6.49	0.64	0.95	0.59	1.51



Alt Model-Shift Uniqueness Test

008803643-02, P = 500.547297 Days, E = 241.589126 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	5.64	5.54	9.07	5.69	3.65	0.88	17.3	13.7	0.10	-3.43	8.94	1.03	0.28	1.51



Stellar Parameters For KIC 008803643

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4735^{+142}_{-128}	$4.631^{+0.059}_{-0.032}$	$-0.560^{+0.350}_{-0.300}$	$0.627^{+0.055}_{-0.050}$	$0.613^{+0.074}_{-0.034}$	$3.503^{+0.861}_{-0.477}$
	+3%/-3%	+1%/-1%	+62%/-54%	+9%/-8%	+12%/-6%	+25%/-14%
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 008803643-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2223 ± 156	$7.82^{+8.39}_{-5.27}$	225^{+8}_{-8}	3467^{+1736}_{-657}	$22446^{+191920}_{-17236}$
Alt.	-383 ± 68	$7.79^{+7.02}_{-5.48}$	225^{+8}_{-7}	2702^{+1177}_{-425}	3913^{+40429}_{-2909}

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

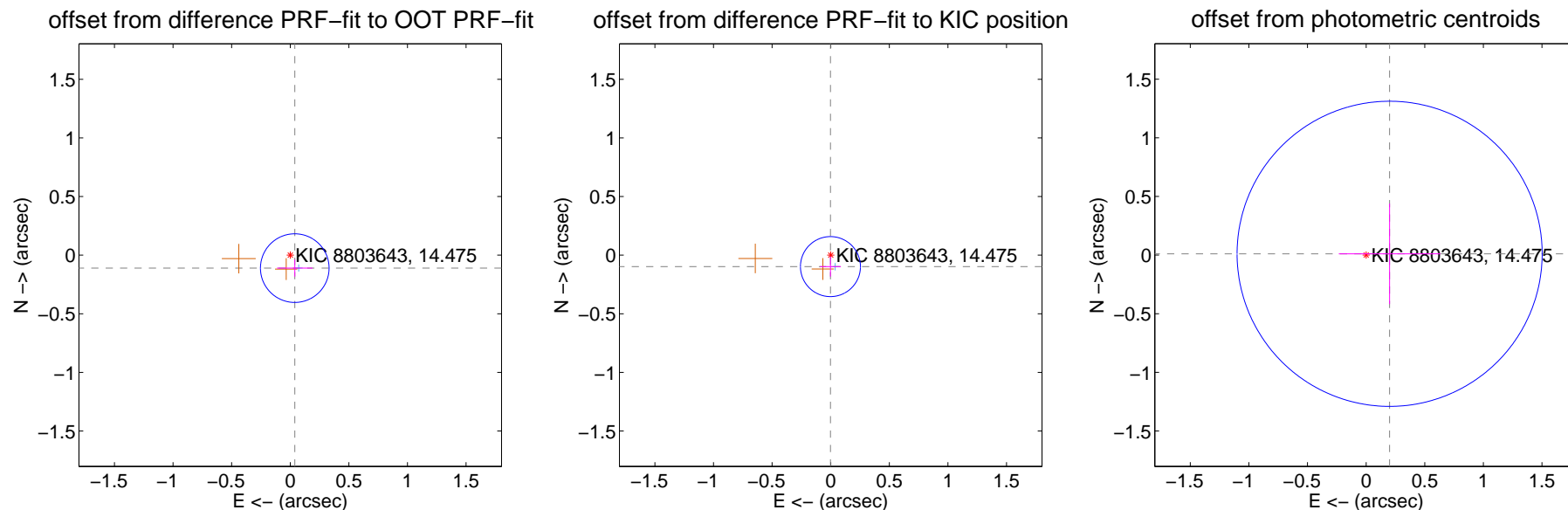
DV Centroid Data

Supplemental centroid analysis for 008803643-02. Kepler magnitude: 14.47. Transit SNR 7.75

There are 1 quarters with good PRF difference image offsets

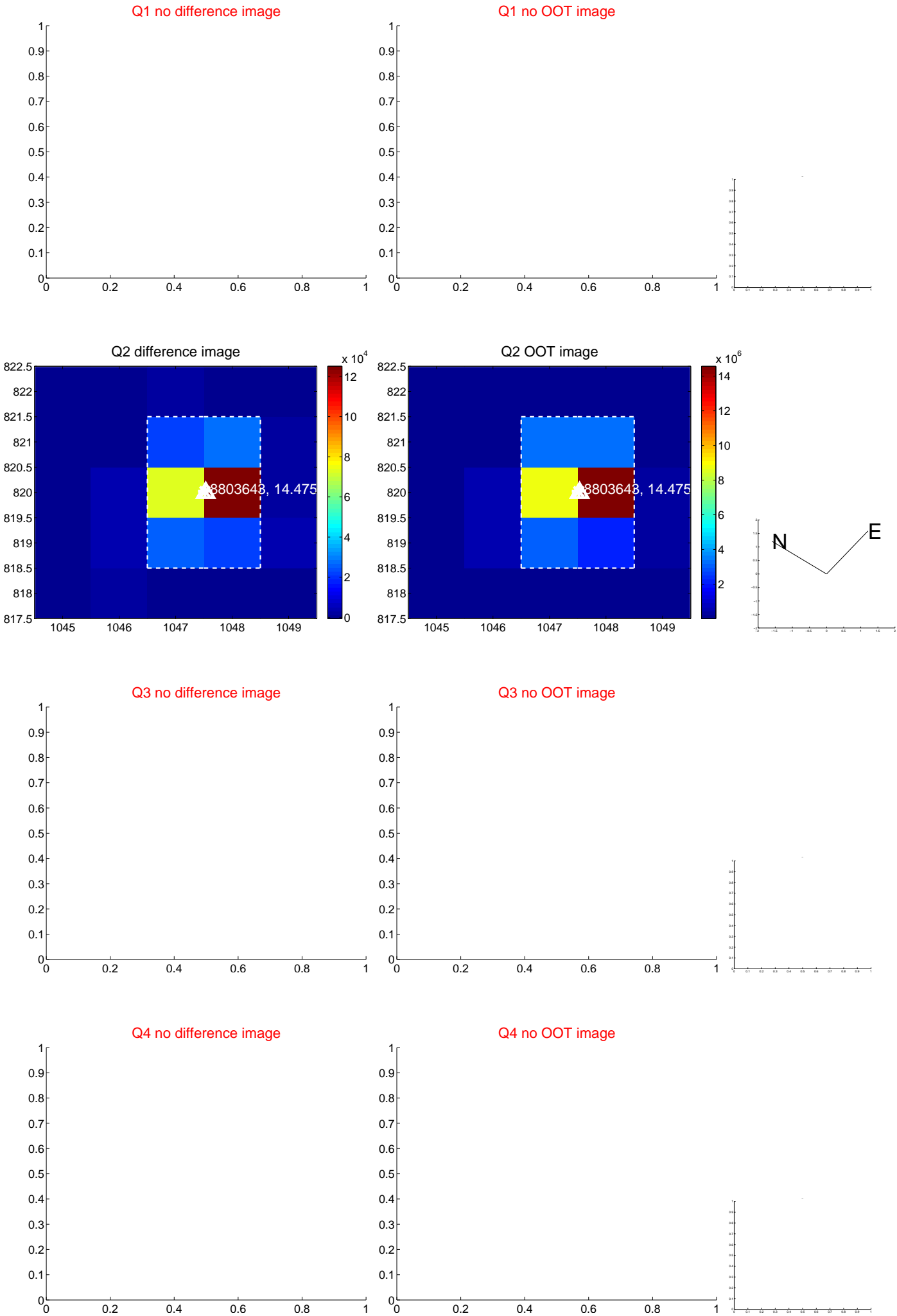
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.117 ± 0.098	1.20	-0.038 ± 0.152	-0.111 ± 0.073
PRF-fit source offset from KIC position	0.098 ± 0.085	1.14	0.002 ± 0.089	-0.098 ± 0.085
photometric centroid source offset	0.20 ± 0.43	0.46	-0.20 ± 0.43	0.01 ± 0.43

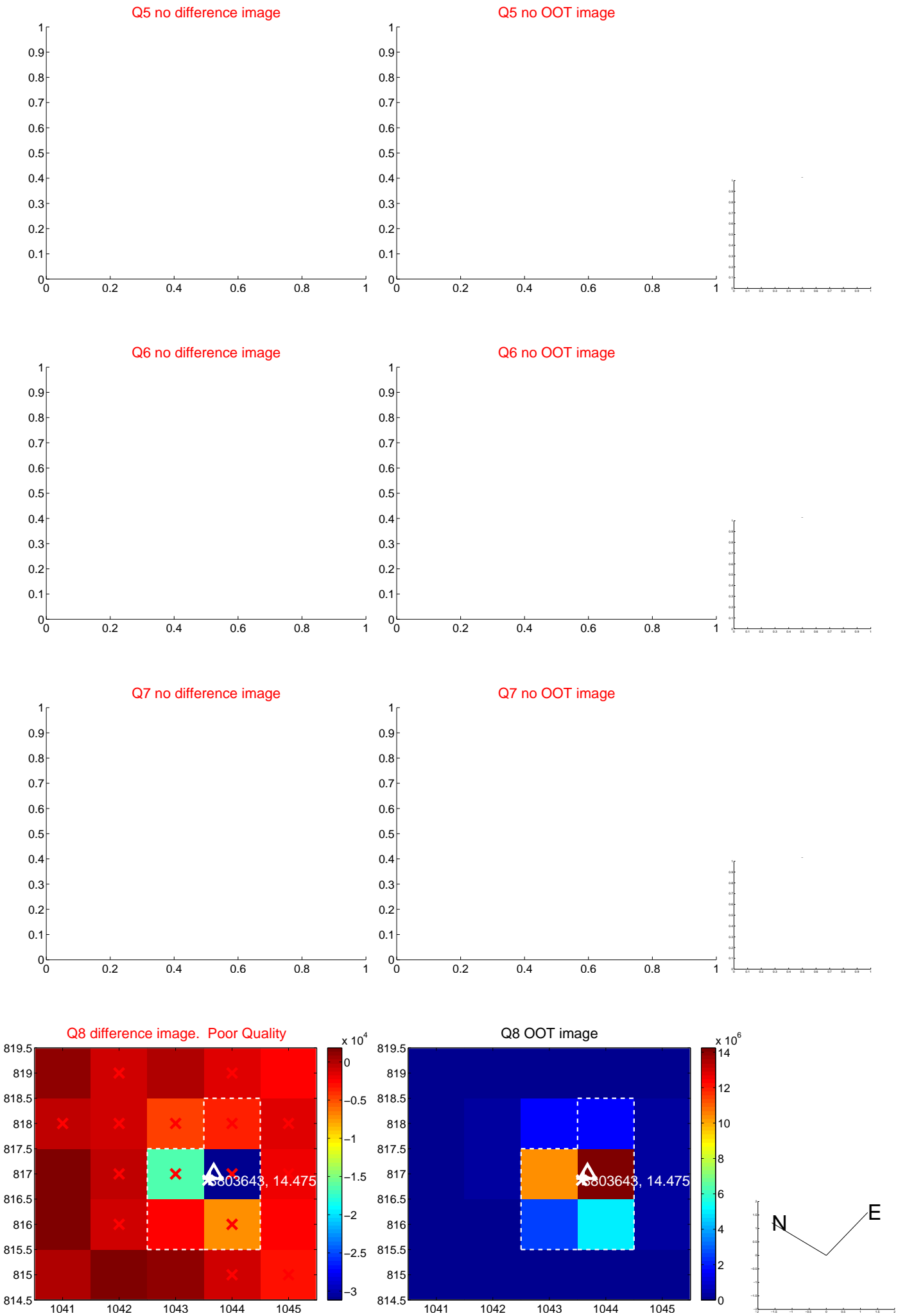


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



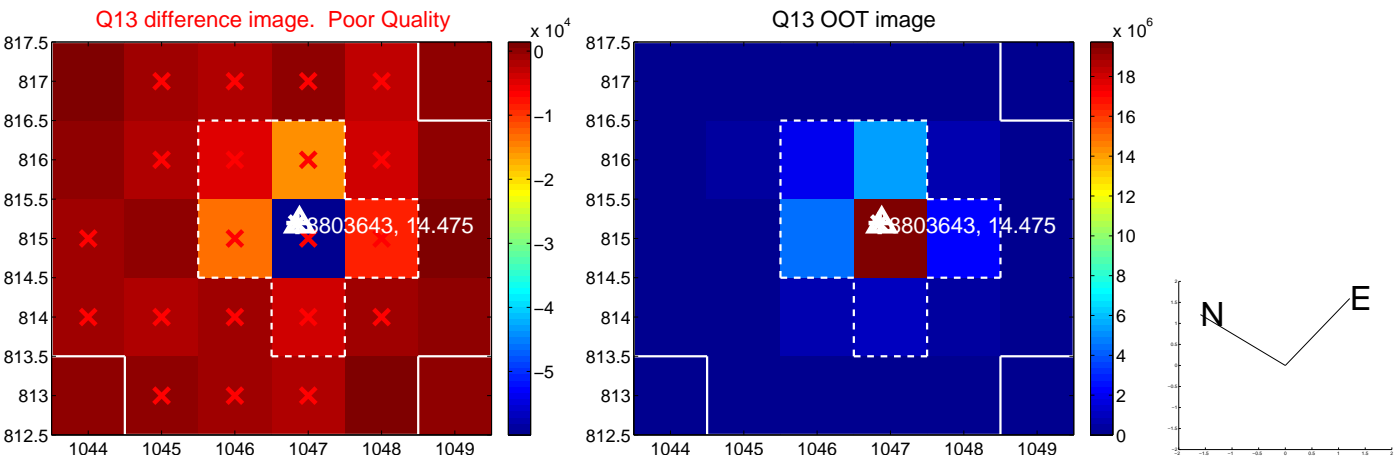
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



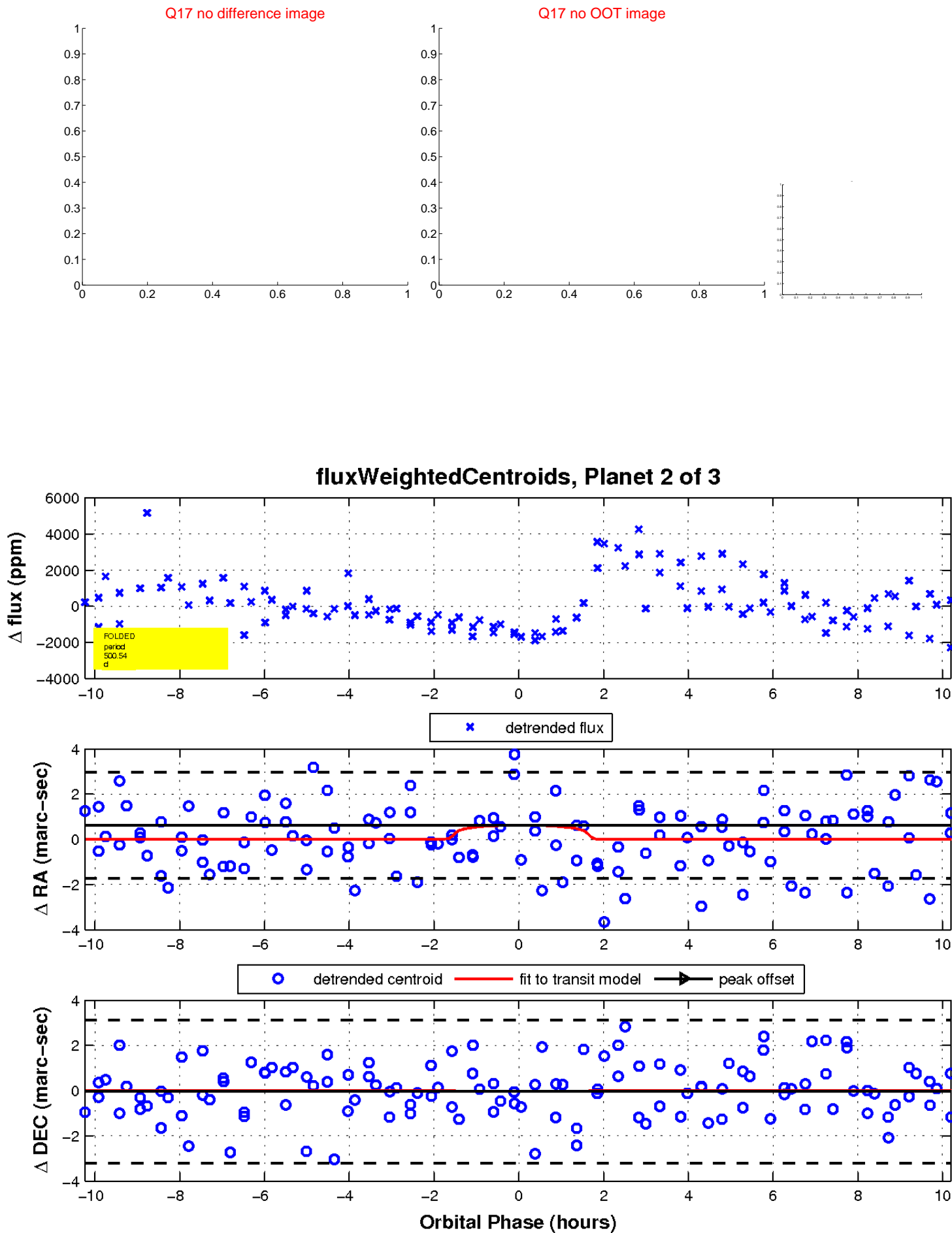
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

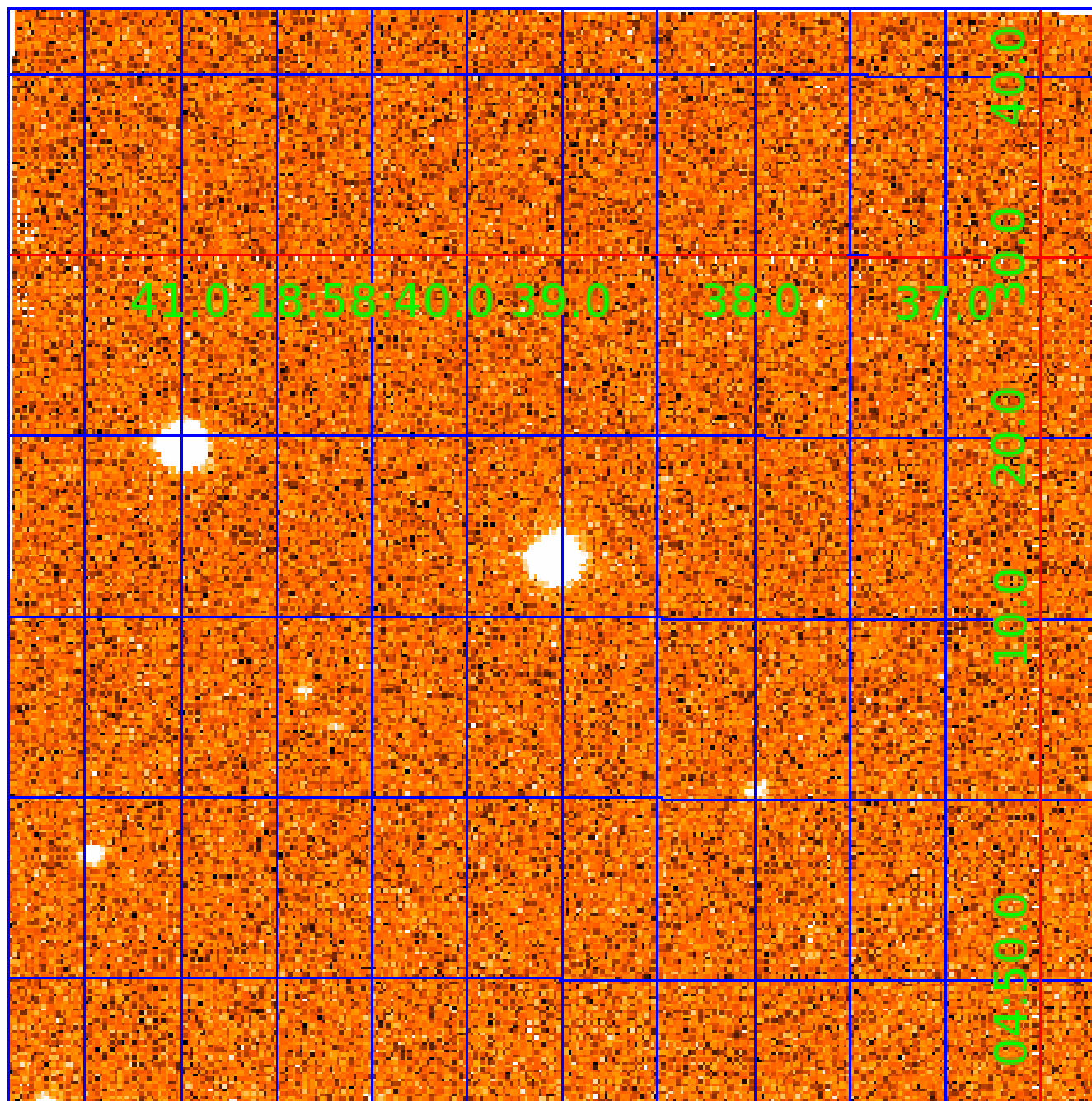


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008803643

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})
008803643-01	OBS	No	375.155137	198.862108	1871.2	3.515	14.7	7.4	0.63	4735	3.10	0.24
008803643-02	OBS	No	500.544262	241.589580	2193.1	3.414	12.9	7.8	0.63	4735	2.94	0.16
008803643-03	OBS	No	348.225772	244.876830	1590.9	2.857	10.6	7.2	0.63	4735	2.61	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008803643-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—INCONSISTENT_TRANS
008803643-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008803643-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—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.

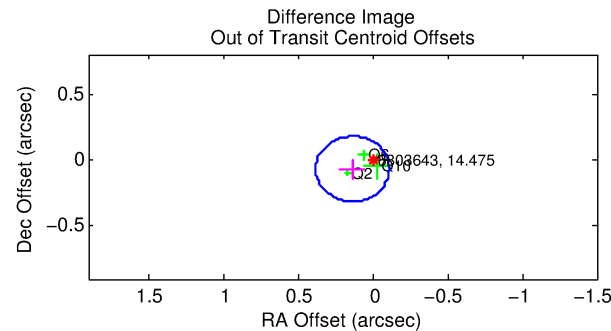
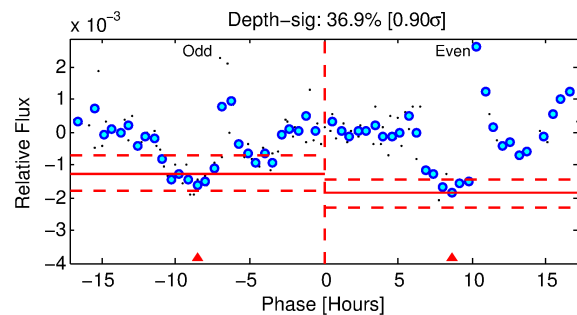
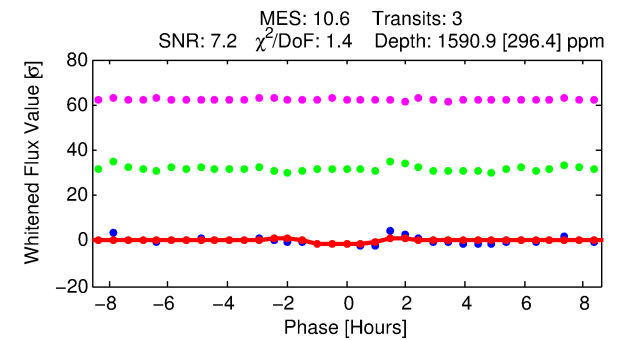
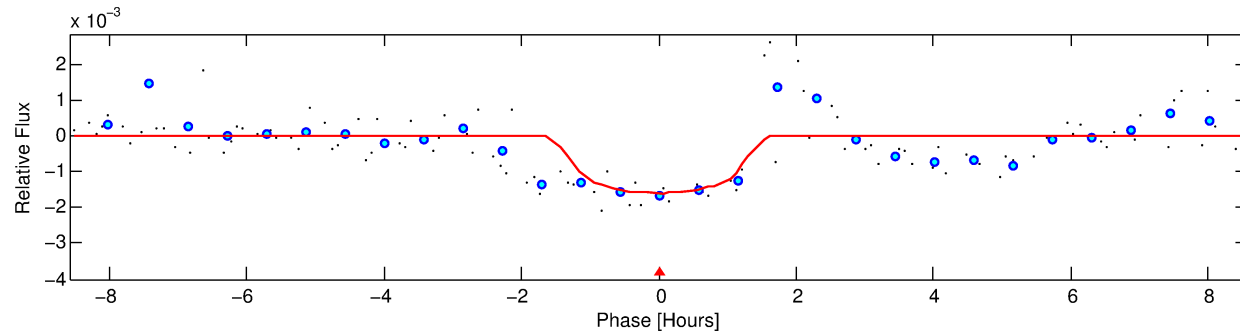
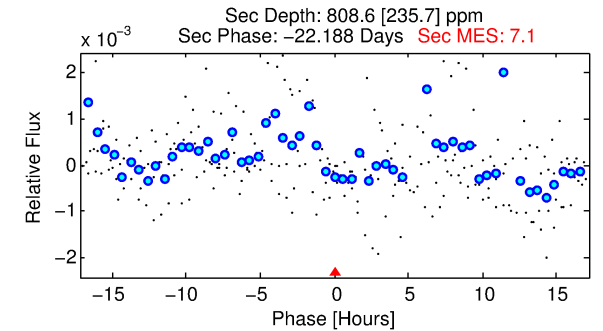
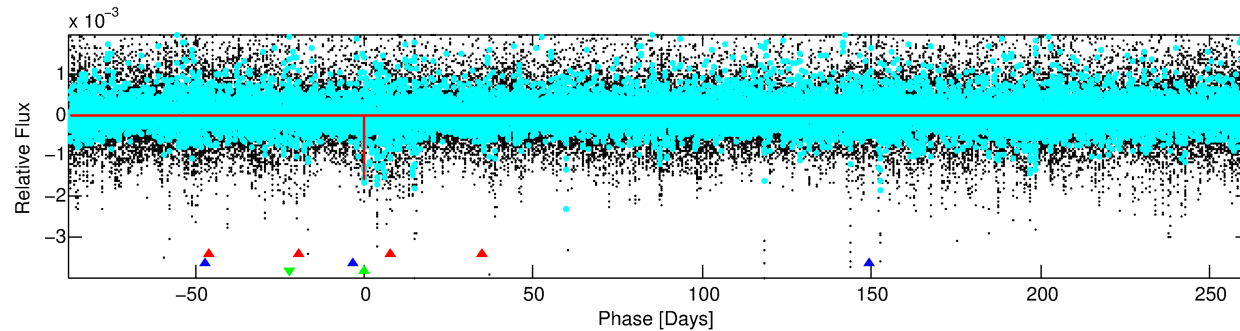
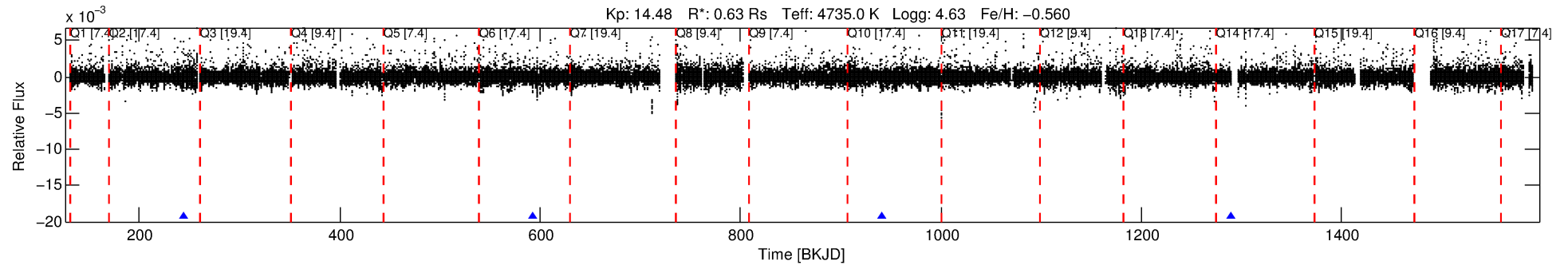
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008803643-03

No Significant Match Found

DV One-Page Summary

KIC: 8803643 Candidate: 3 of 3 Period: 348.226 d



DV Fit Results:

Period = 348.22577 [0.00517] d
Epoch = 244.8768 [0.0078] BKJD
Rp/R* = 0.0382 [0.0803]
a/R* = 760.59 [5316.29]
b = 0.64 [6.58]
Seff = 0.26 [0.04]
Teq = 182 [7] K
Rp = 2.61 [5.50] Re
a = 0.8231 [0.0609] AU
Ag = 44097.12 [185926.07] [0.24 σ]
Teffp = 4085 [4306] K [0.91 σ]

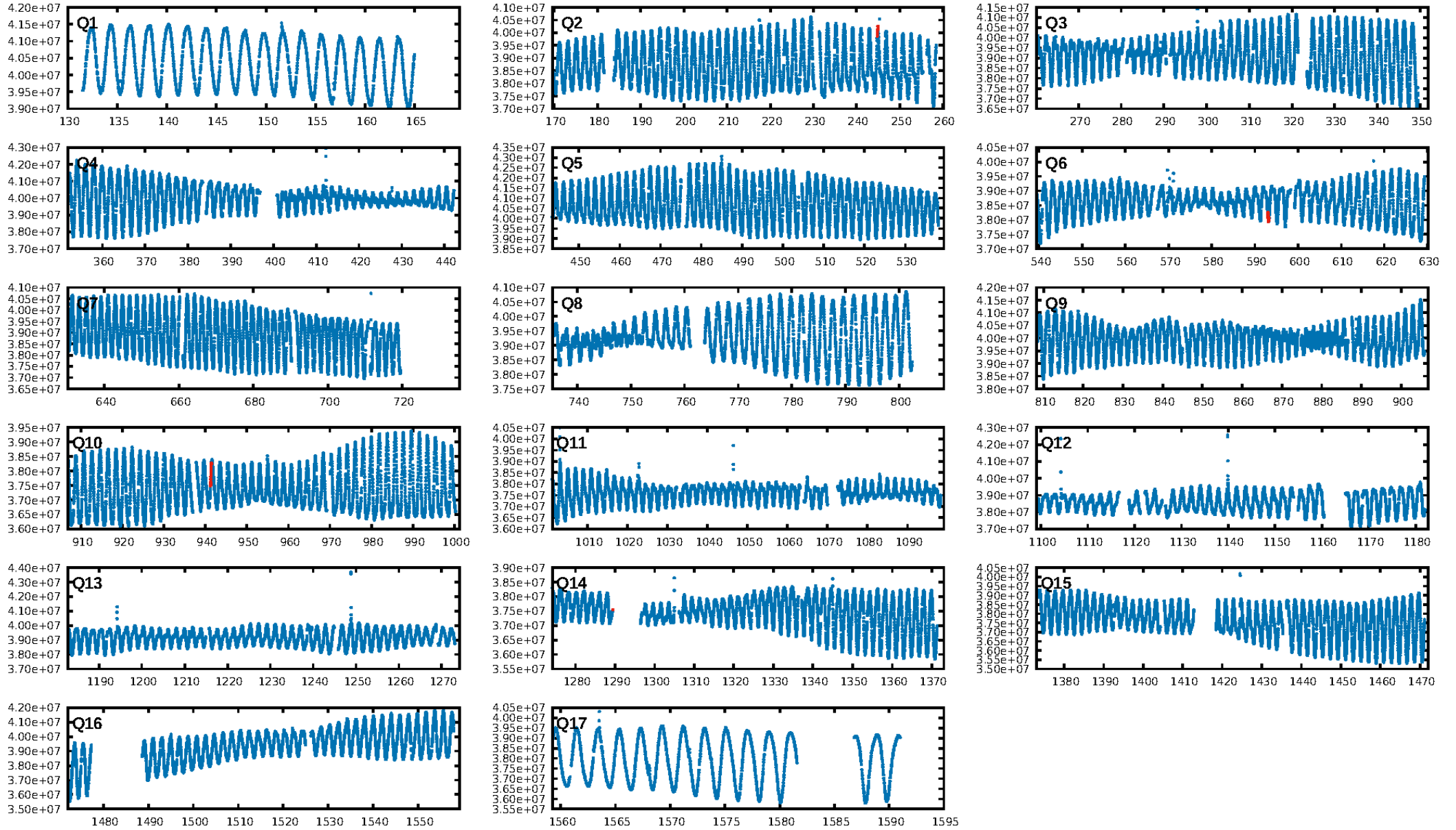
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [142.67 σ]
ModelChiSquare2-sig: 12.5%
ModelChiSquareGof-sig: 73.0%
Bootstrap-pfa: 3.69e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -7.015
Centroid-sig: 86.7%
Centroid-so: 0.173 arcsec [0.26 σ]
OotOffset-rm: 0.150 arcsec [1.82 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-rm: 0.186 arcsec [2.52 σ]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

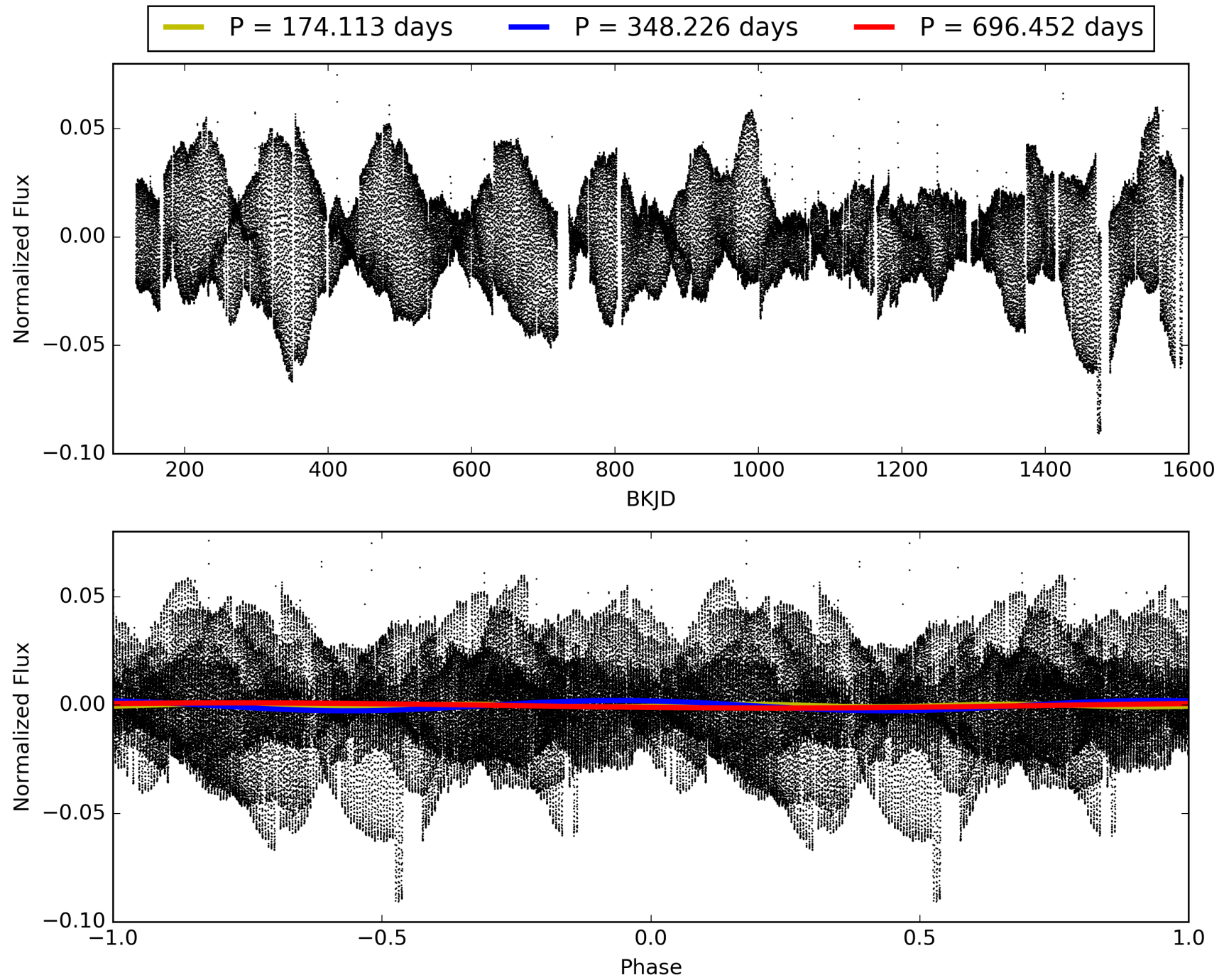
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:15:21 Z

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

TCE 008803643-03, PDC Light Curves

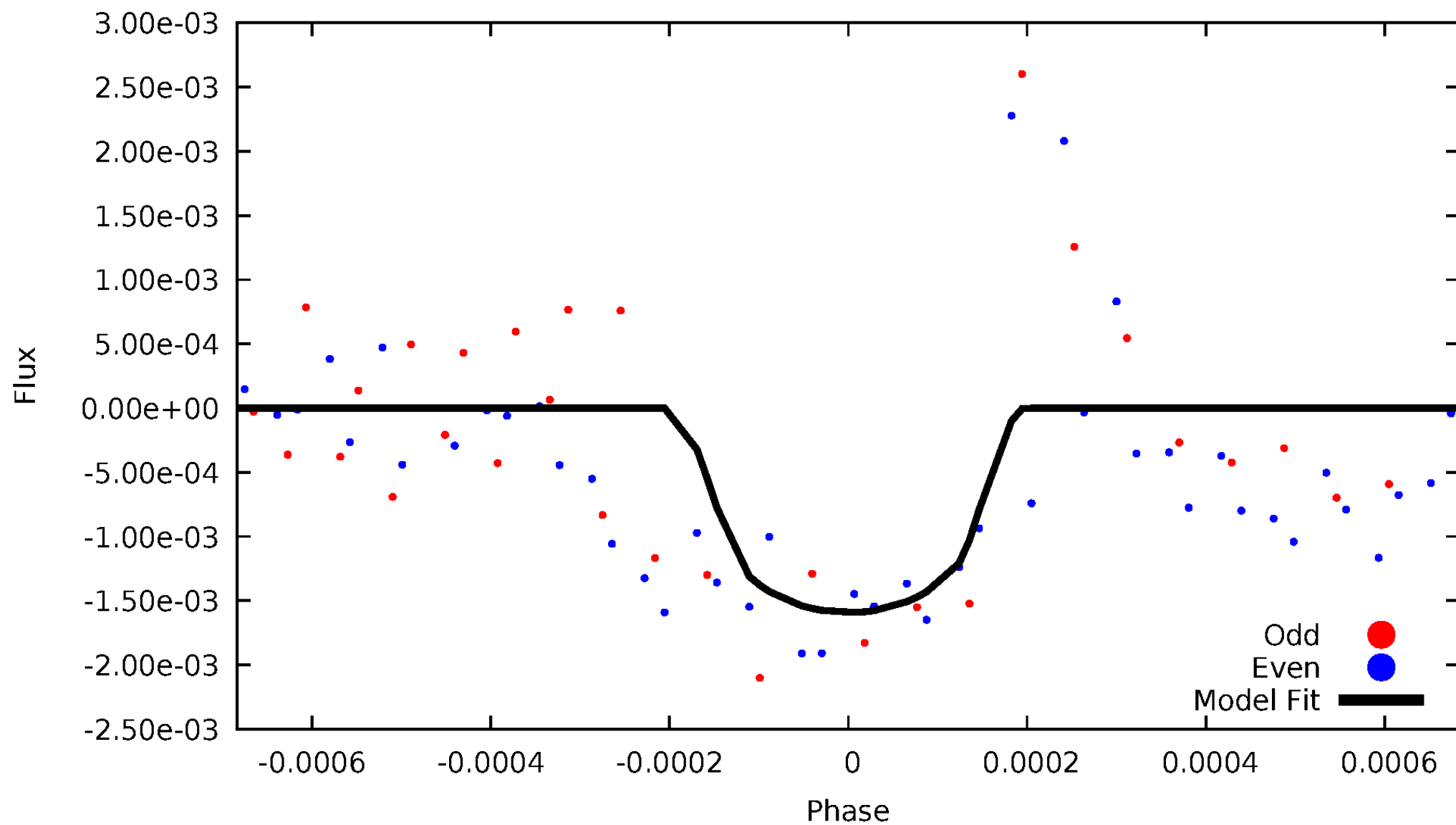


TCE 008803643-03



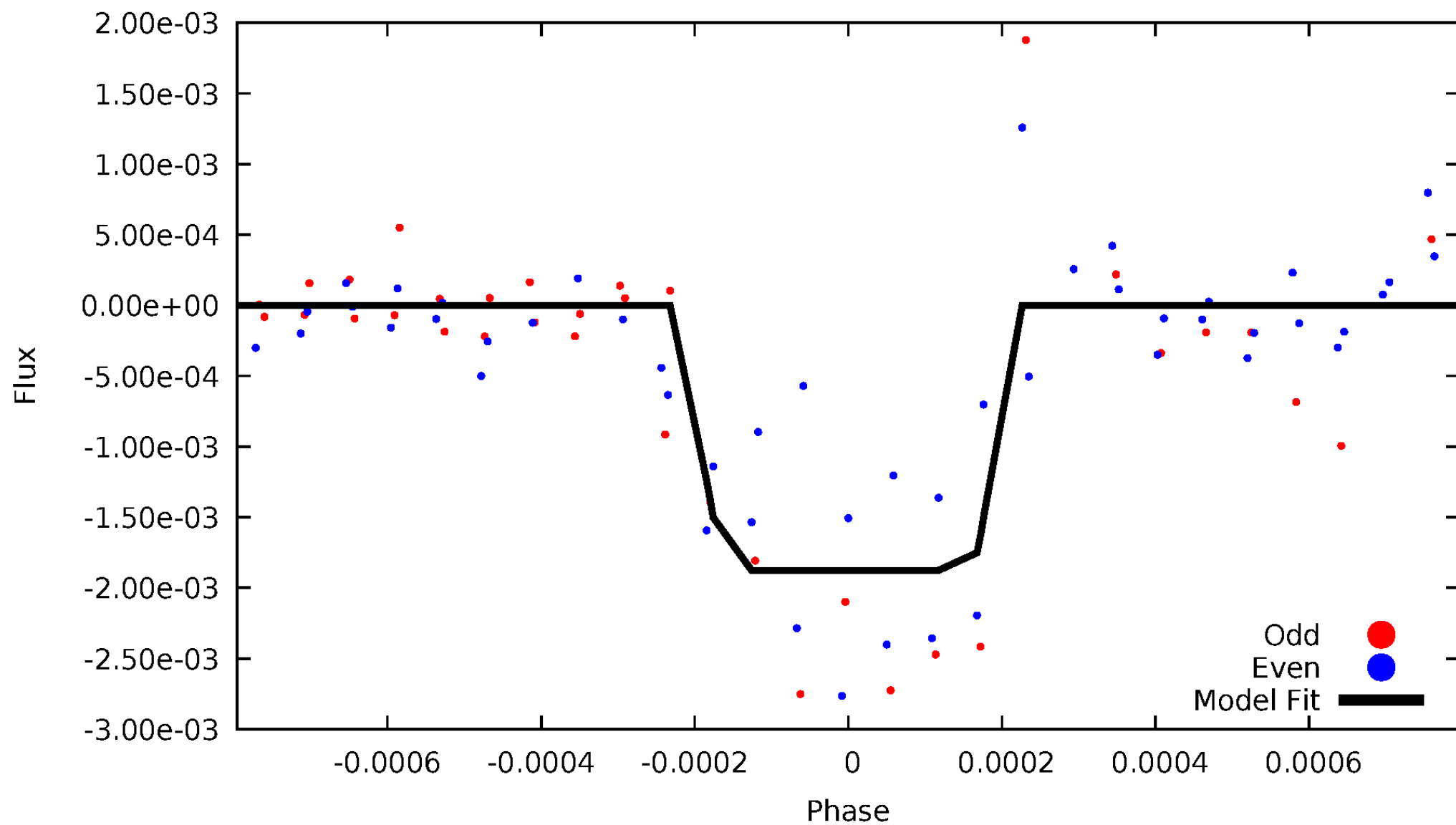
DV Odd/Even

TCE 008803643-03



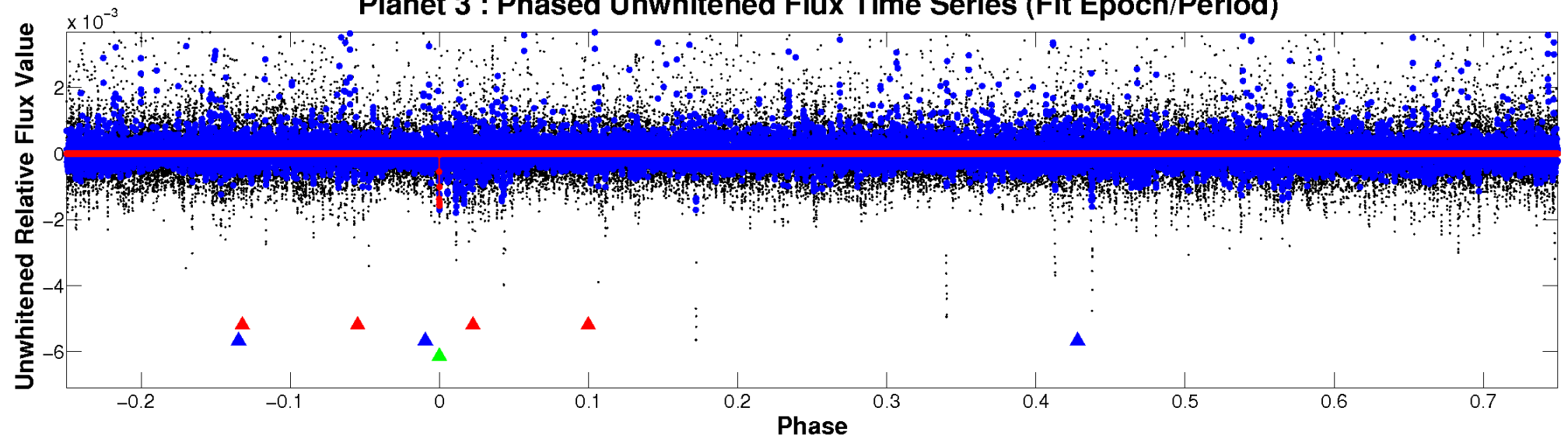
ALT Odd/Even

TCE 008803643-03

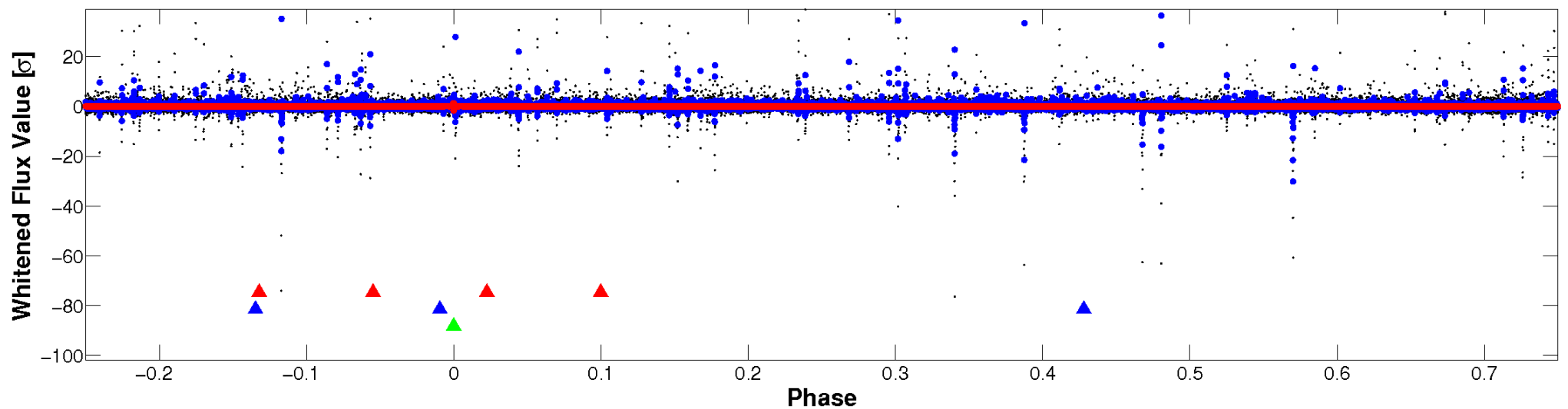


Non-Whitened Vs. Whitened Light Curve

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

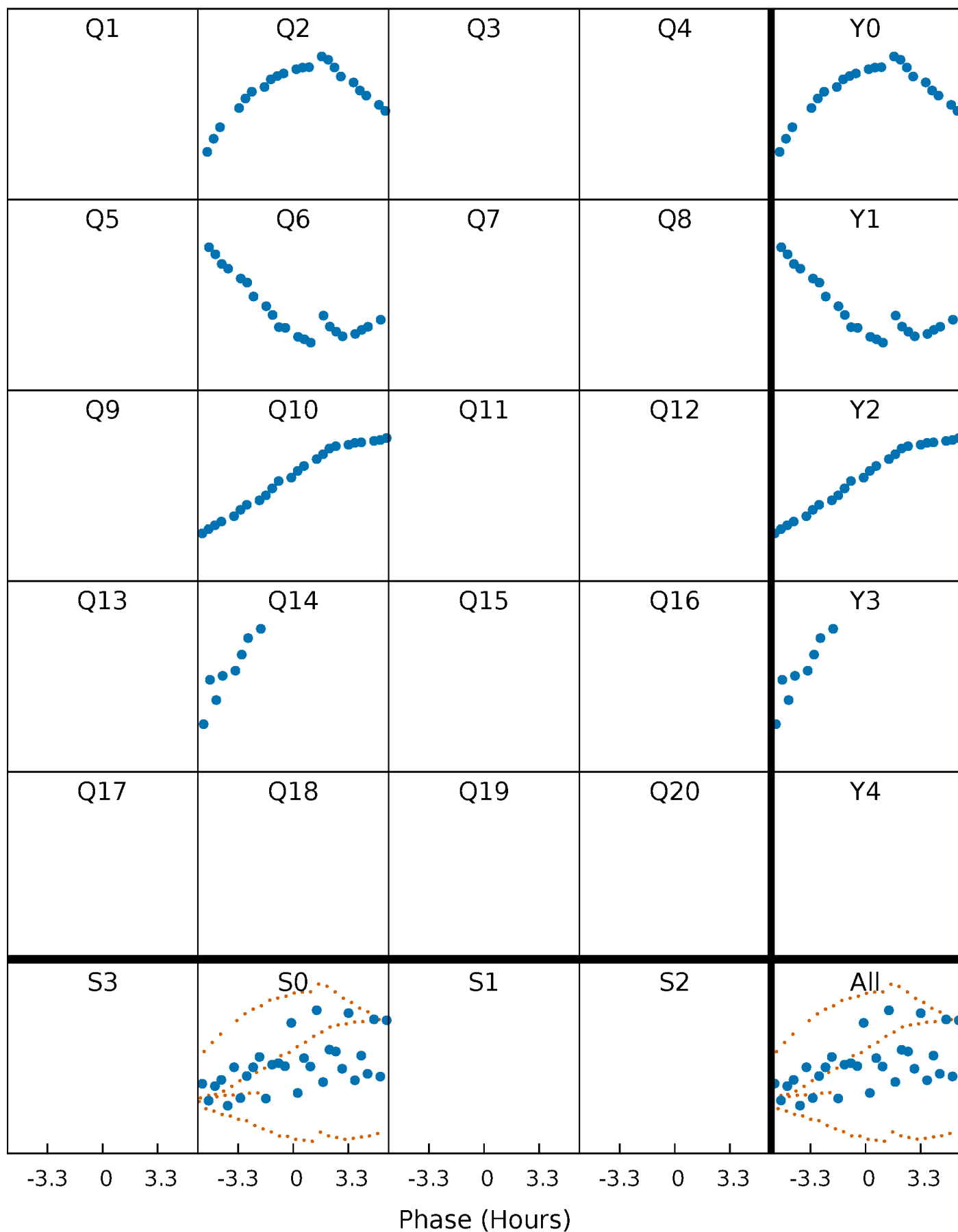


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



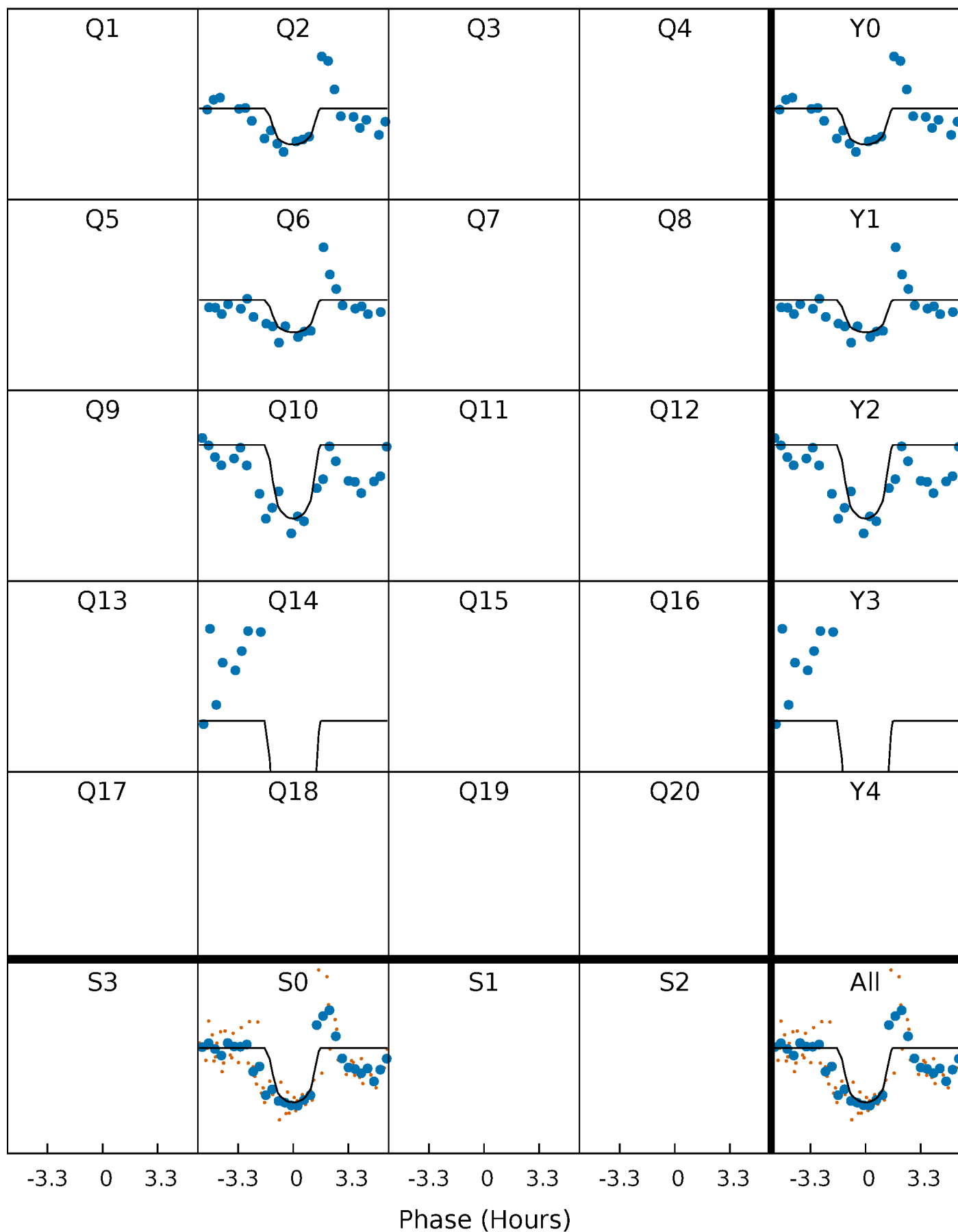
PDC Quarter-Phased Transit Curves

TCE 008803643-03 $P=348.225772$ Days $T_0=244.876830$ (BKJD)



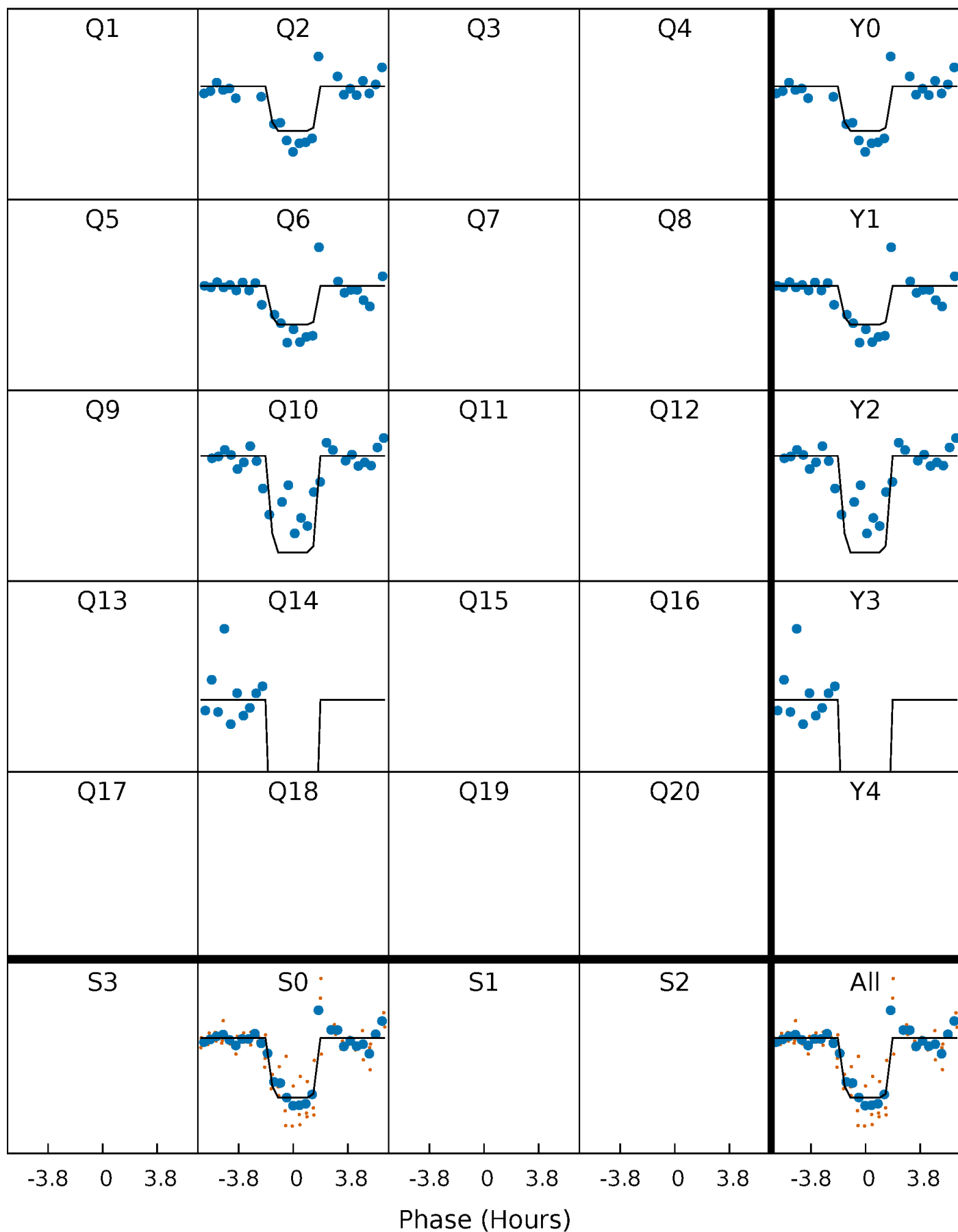
DV Quarter-Phased Transit Curves

TCE 008803643-03 P=348.225772 Days $T_0=244.876830$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

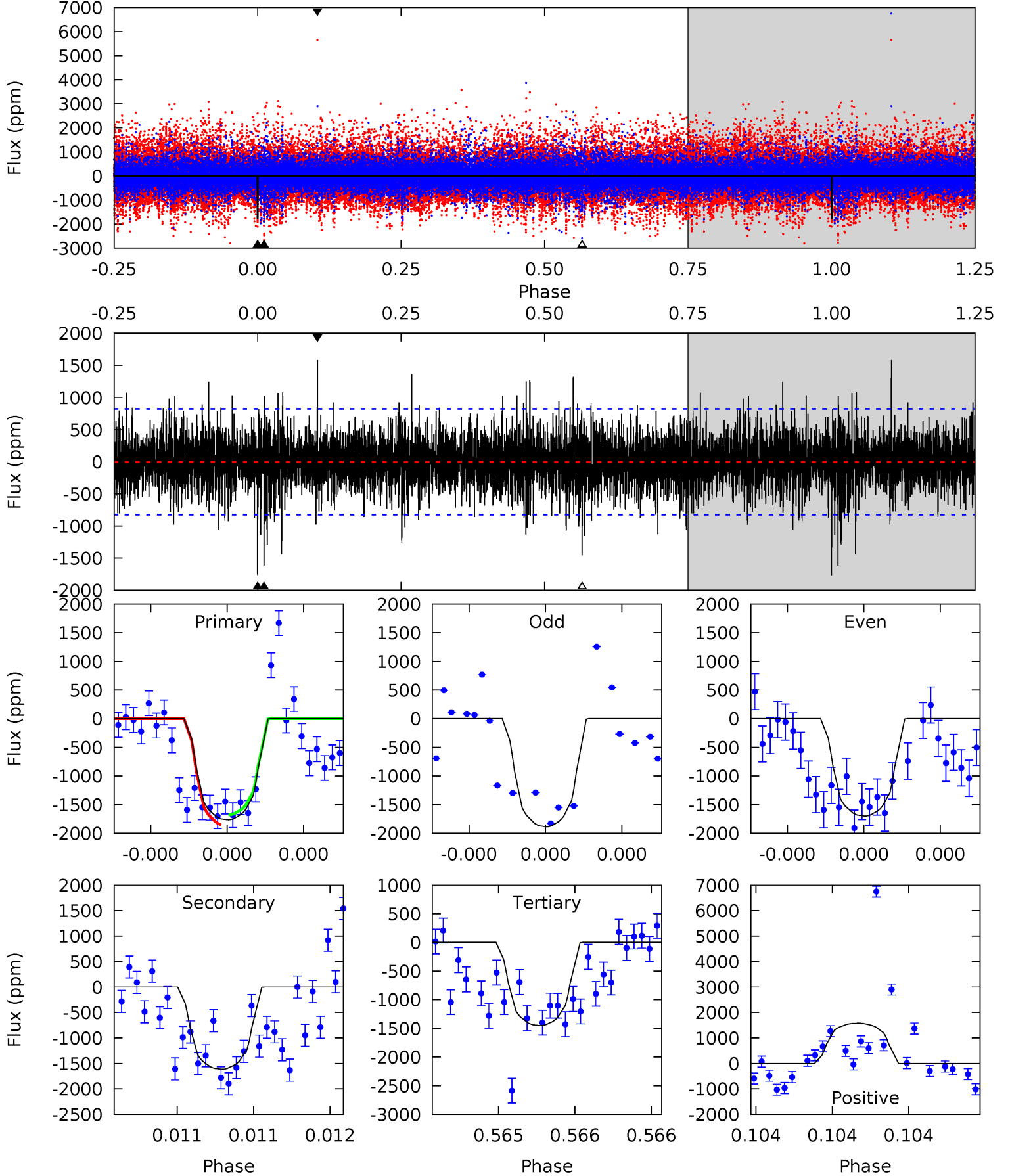
TCE 008803643-03 P=348.228183 Days $T_0=244.861661$ (BKJD)



DV Model-Shift Uniqueness Test

008803643-03, P = 348.225772 Days, E = 244.876830 Days

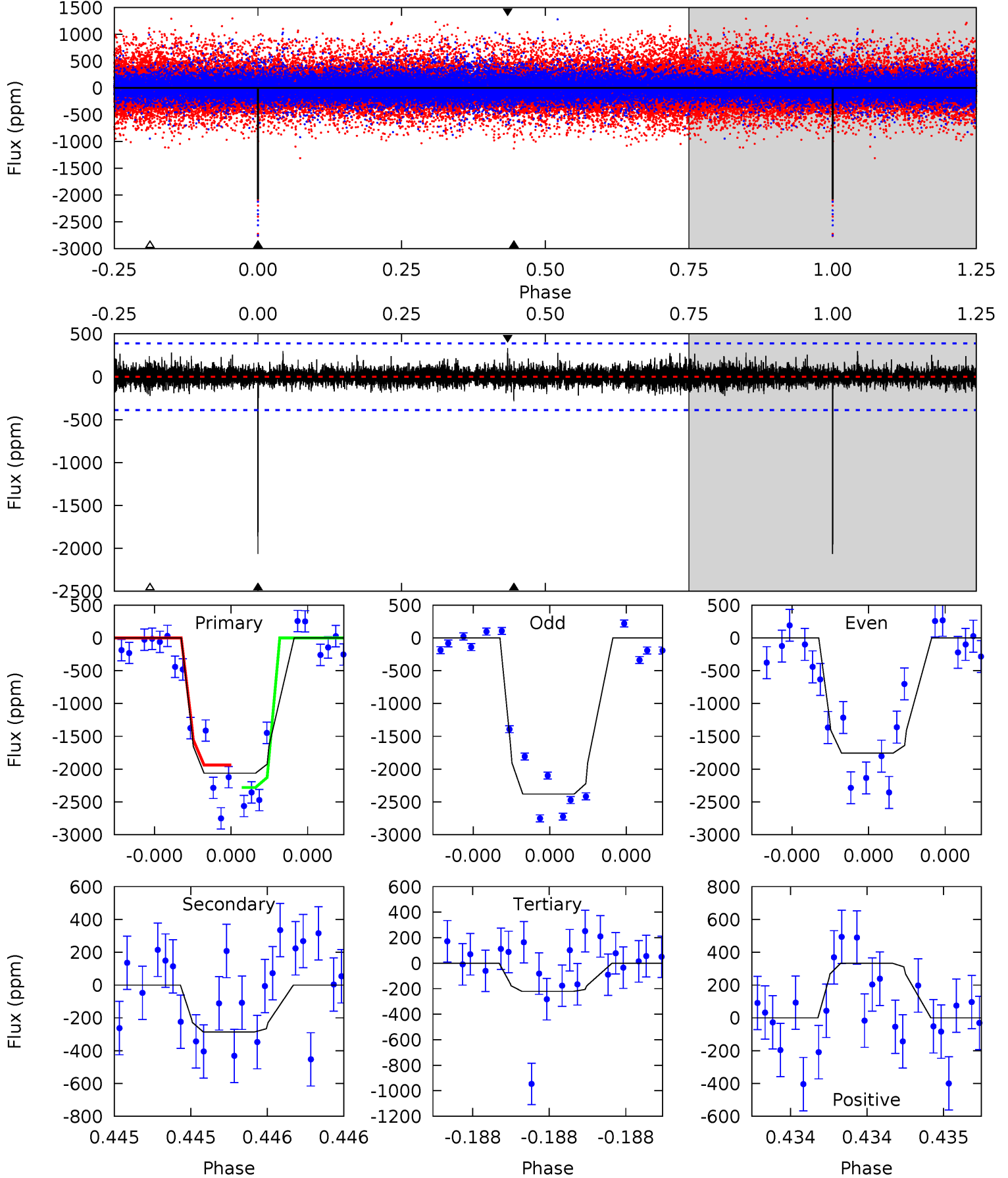
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	11.0	9.93	10.8	5.63	3.57	2.08	2.13	1.25	1.10	0.22	0.44	1.03	0.47	0.59



Alt Model-Shift Uniqueness Test

008803643-03, P = 348.228183 Days, E = 244.861661 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.8	4.12	3.20	4.82	5.63	3.57	0.82	26.6	25.0	0.93	-0.69	4.54	0.84	0.14	2.40



Stellar Parameters For KIC 008803643

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4735^{+142}_{-128}	$4.631^{+0.059}_{-0.032}$	$-0.560^{+0.350}_{-0.300}$	$0.627^{+0.055}_{-0.050}$	$0.613^{+0.074}_{-0.034}$	$3.503^{+0.861}_{-0.477}$
	+3%/-3%	+1%/-1%	+62%/-54%	+9%/-8%	+12%/-6%	+25%/-14%
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 008803643-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1614 ± 146	$4.86^{+4.66}_{-3.23}$	254^{+9}_{-9}	3809^{+2186}_{-713}	$25043^{+197895}_{-18421}$
Alt.	-285 ± 69	$5.07^{+4.64}_{-3.34}$	254^{+8}_{-9}	2890^{+1206}_{-452}	4071^{+33153}_{-2971}

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

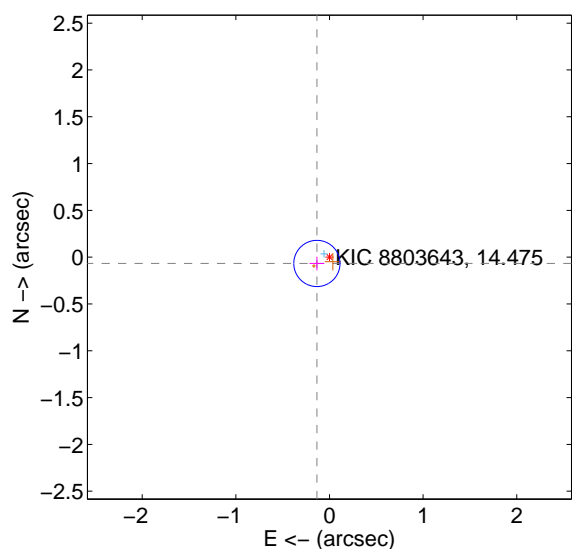
Supplemental centroid analysis for 008803643-03. Kepler magnitude: 14.47. Transit SNR 7.17

There are 1 quarters with good PRF difference image offsets

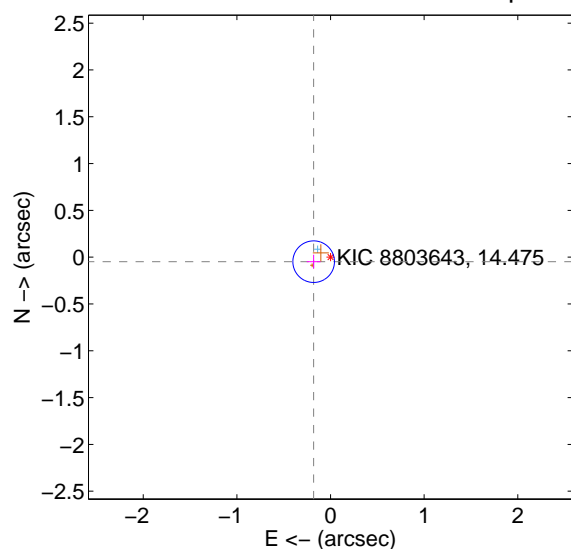
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.150 ± 0.082	1.82	0.134 ± 0.079	-0.067 ± 0.073
PRF-fit source offset from KIC position	0.186 ± 0.074	2.52	0.180 ± 0.074	-0.048 ± 0.075
photometric centroid source offset	0.17 ± 0.66	0.26	-0.08 ± 0.66	-0.15 ± 0.66

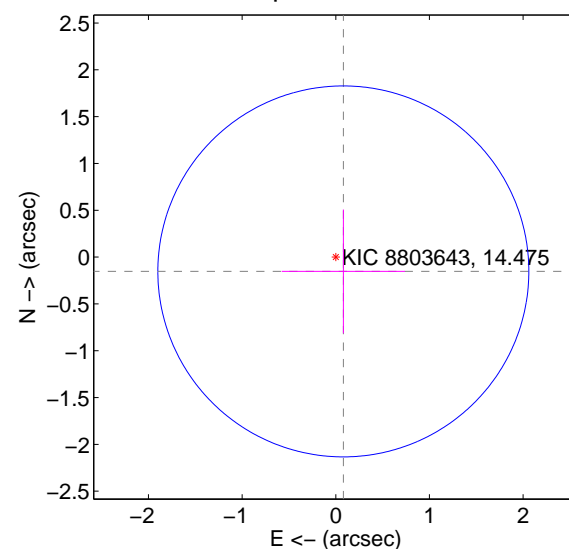
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

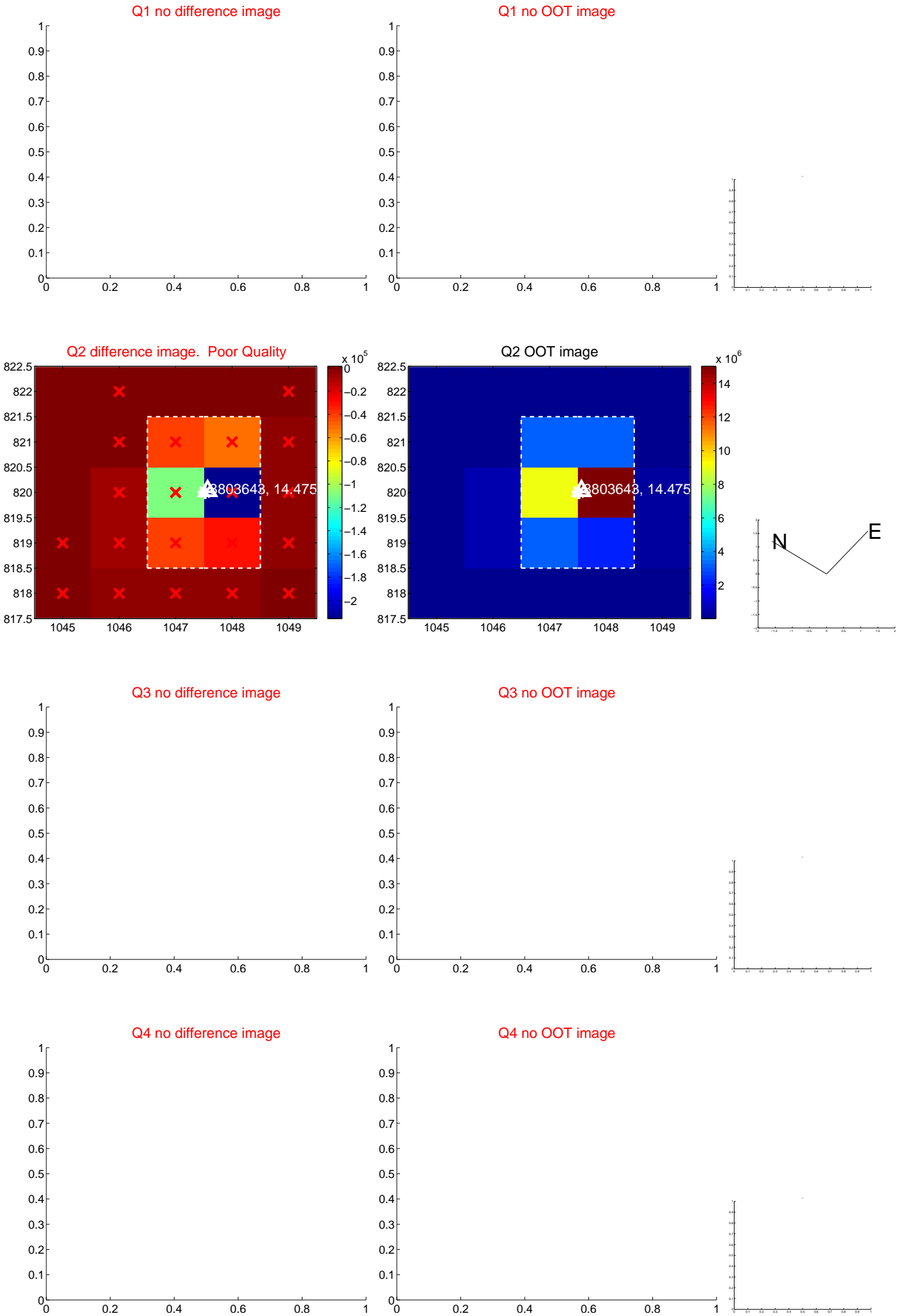


offset from photometric centroids

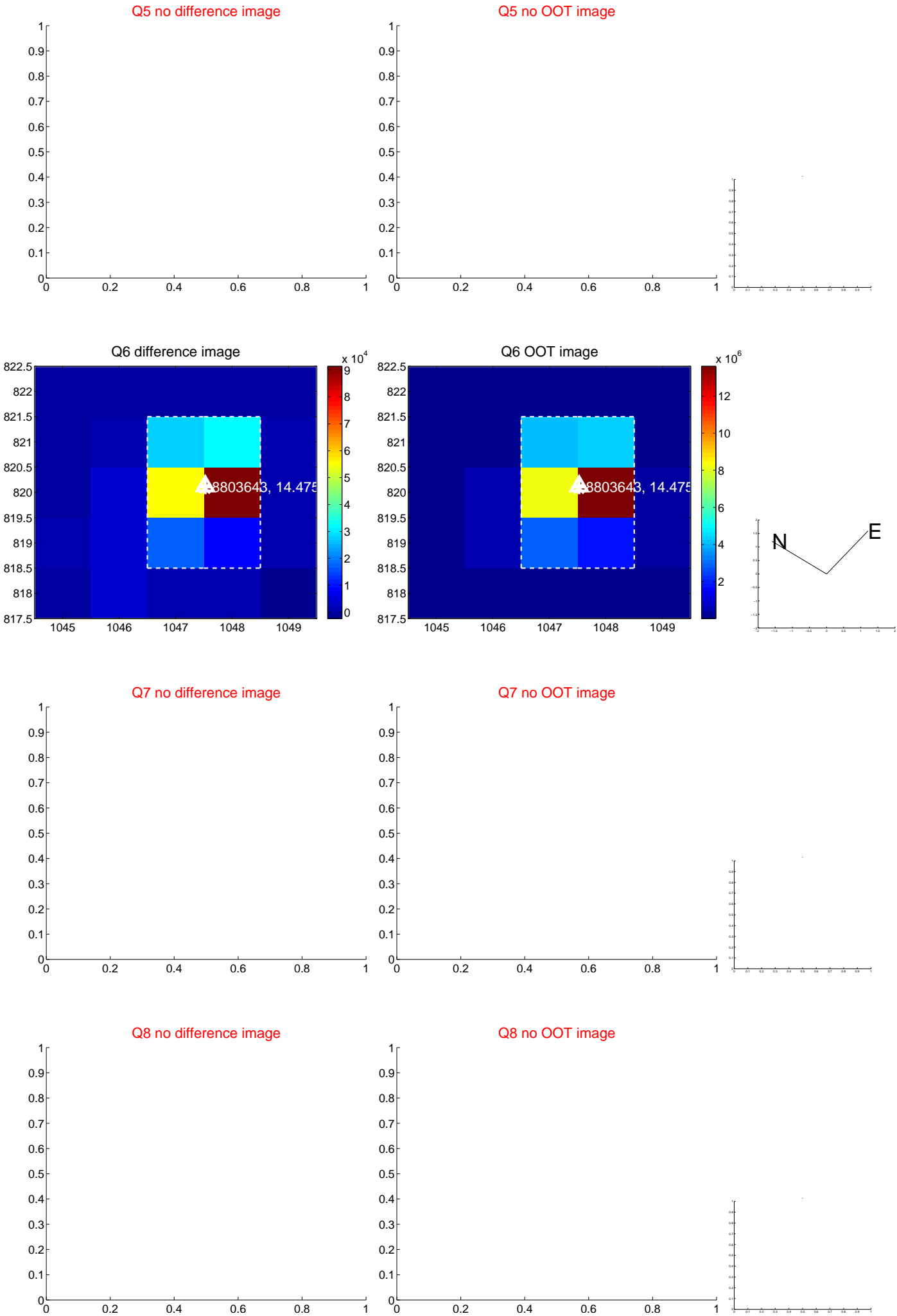


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

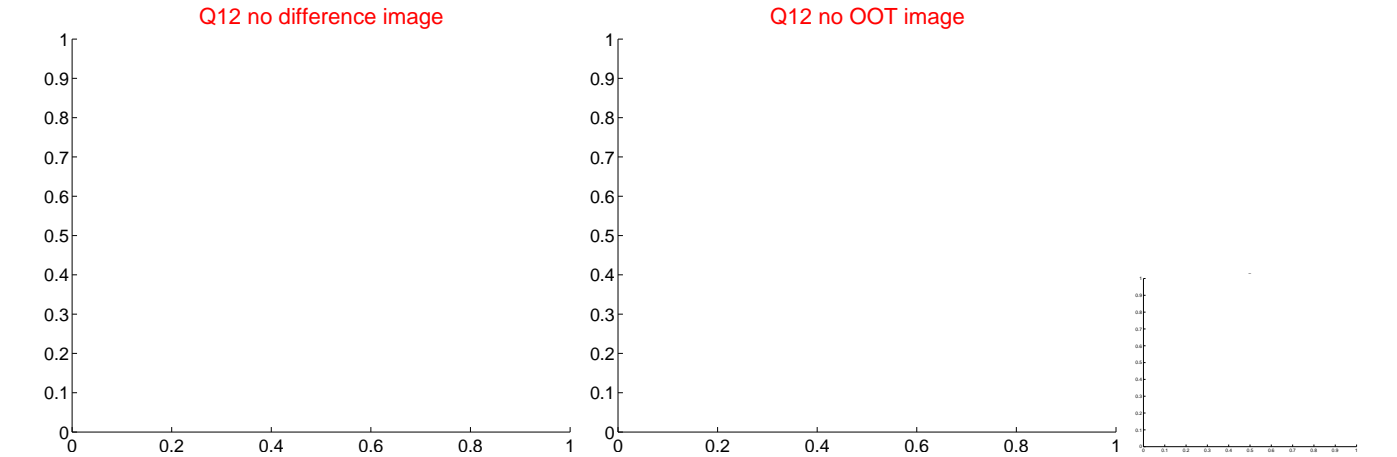
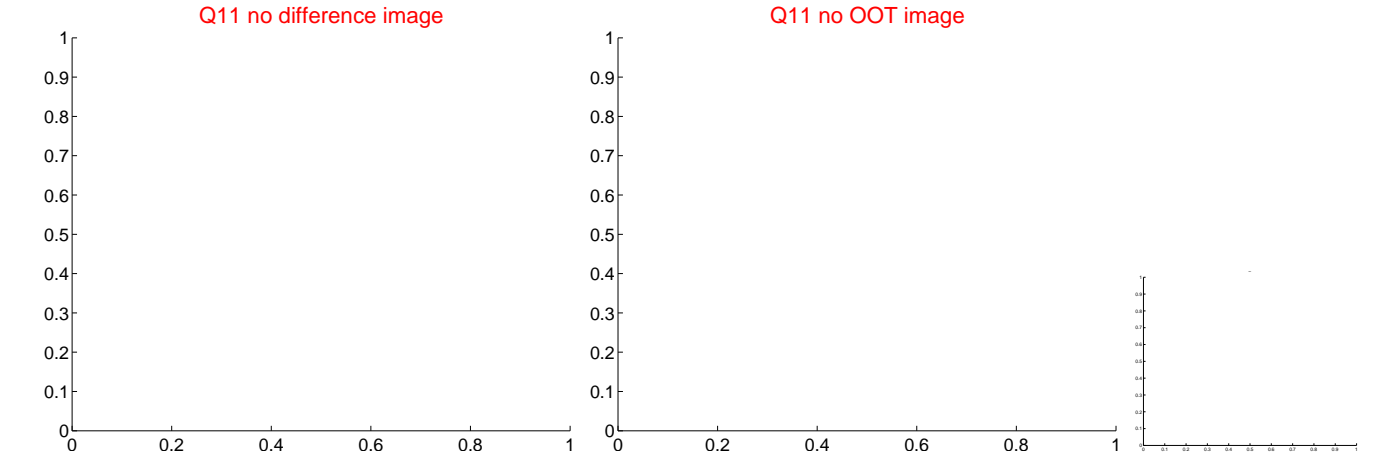
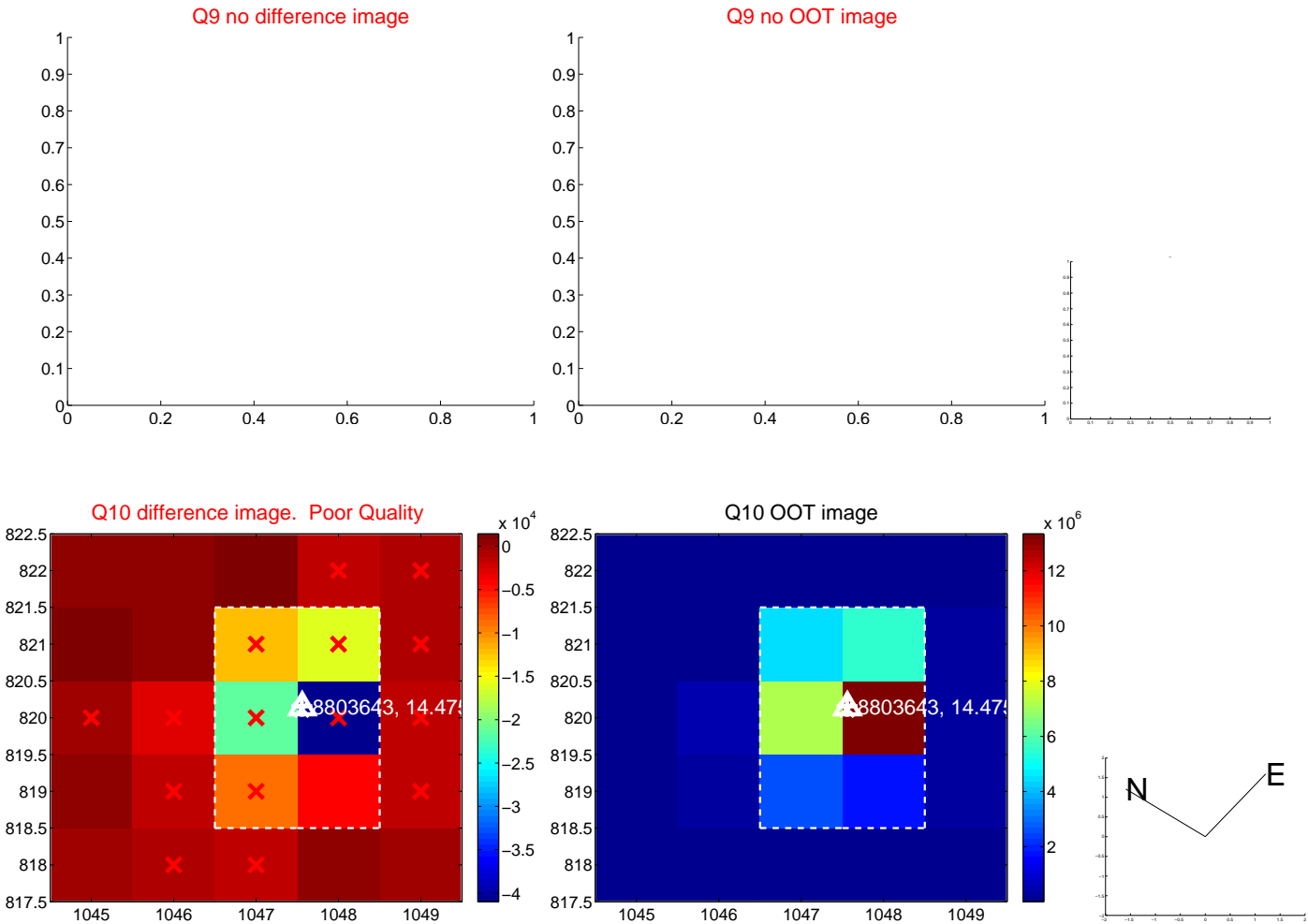
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



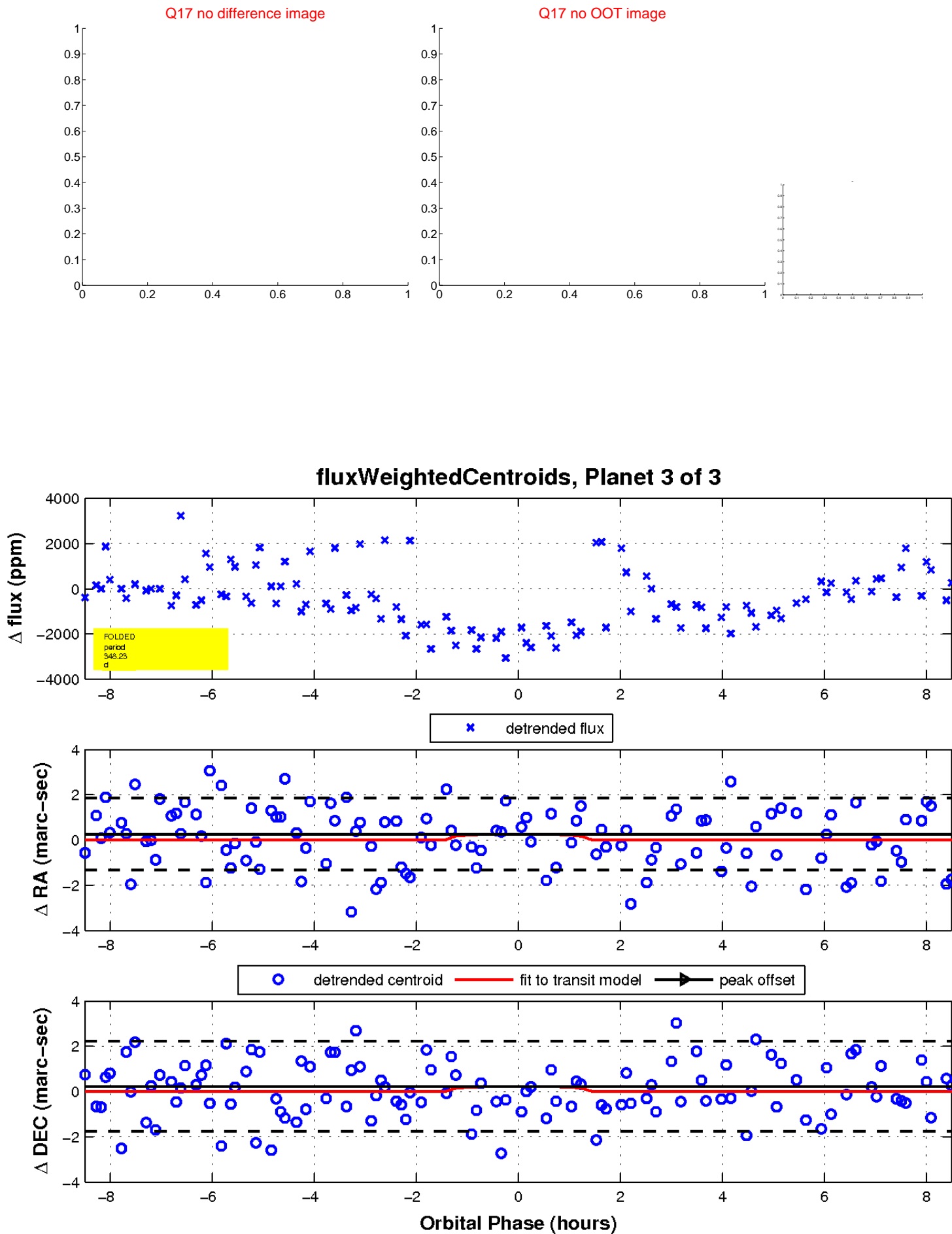
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

