

KIC 008235991

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})
008235991-01	OBS	No	1.099824	132.535920	1.5	3.769	7.8	0.3	6.39	4984	0.92	0.00
008235991-02	OBS	No	158.794298	282.842142	583.9	2.245	8.1	6.6	6.39	4984	17.11	56.35
008235991-04	OBS	No	60.303431	156.770267	474.9	3.111	7.6	8.0	6.39	4984	16.74	204.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008235991-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008235991-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT
008235991-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

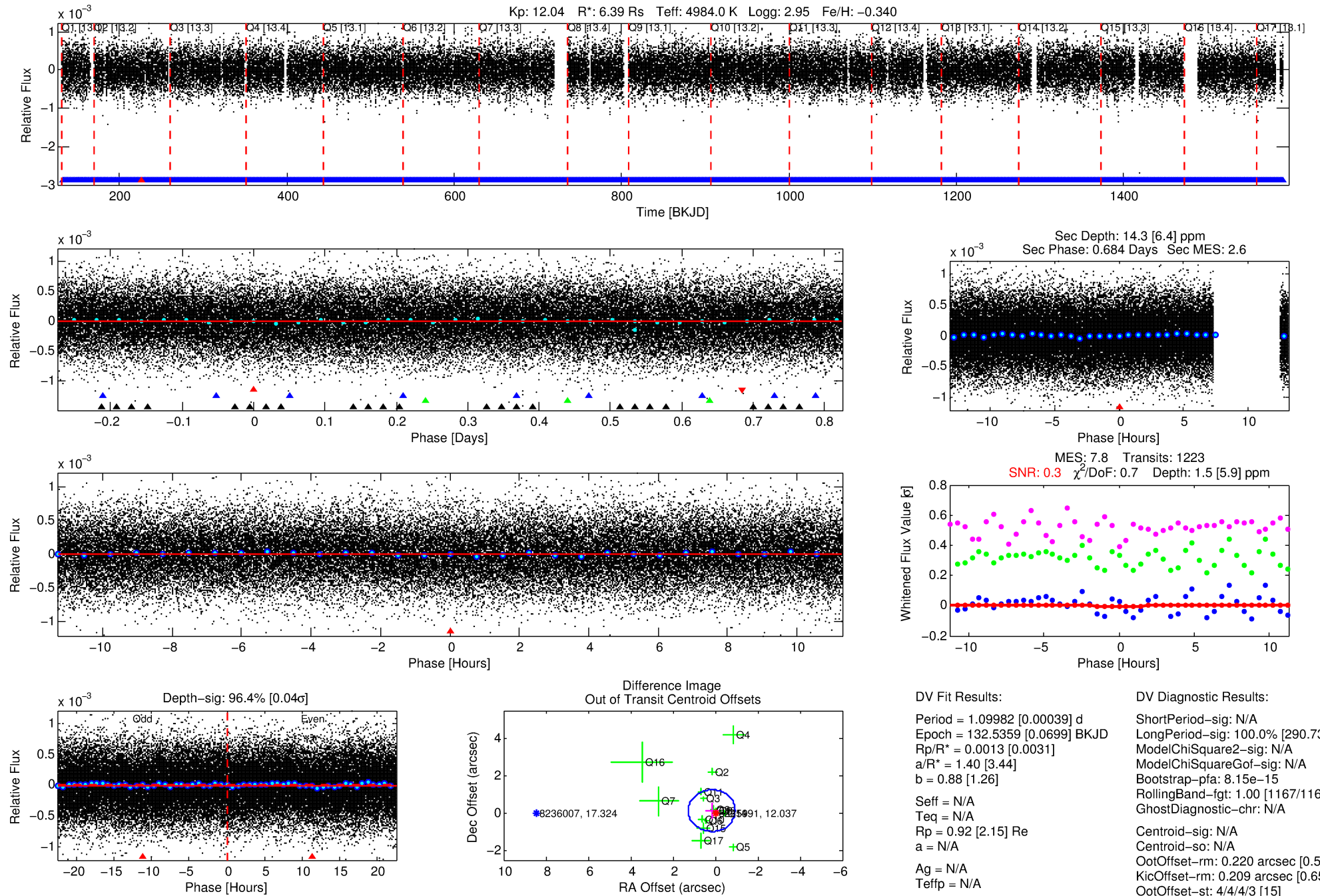
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008235991-01

No Significant Match Found

DV One-Page Summary

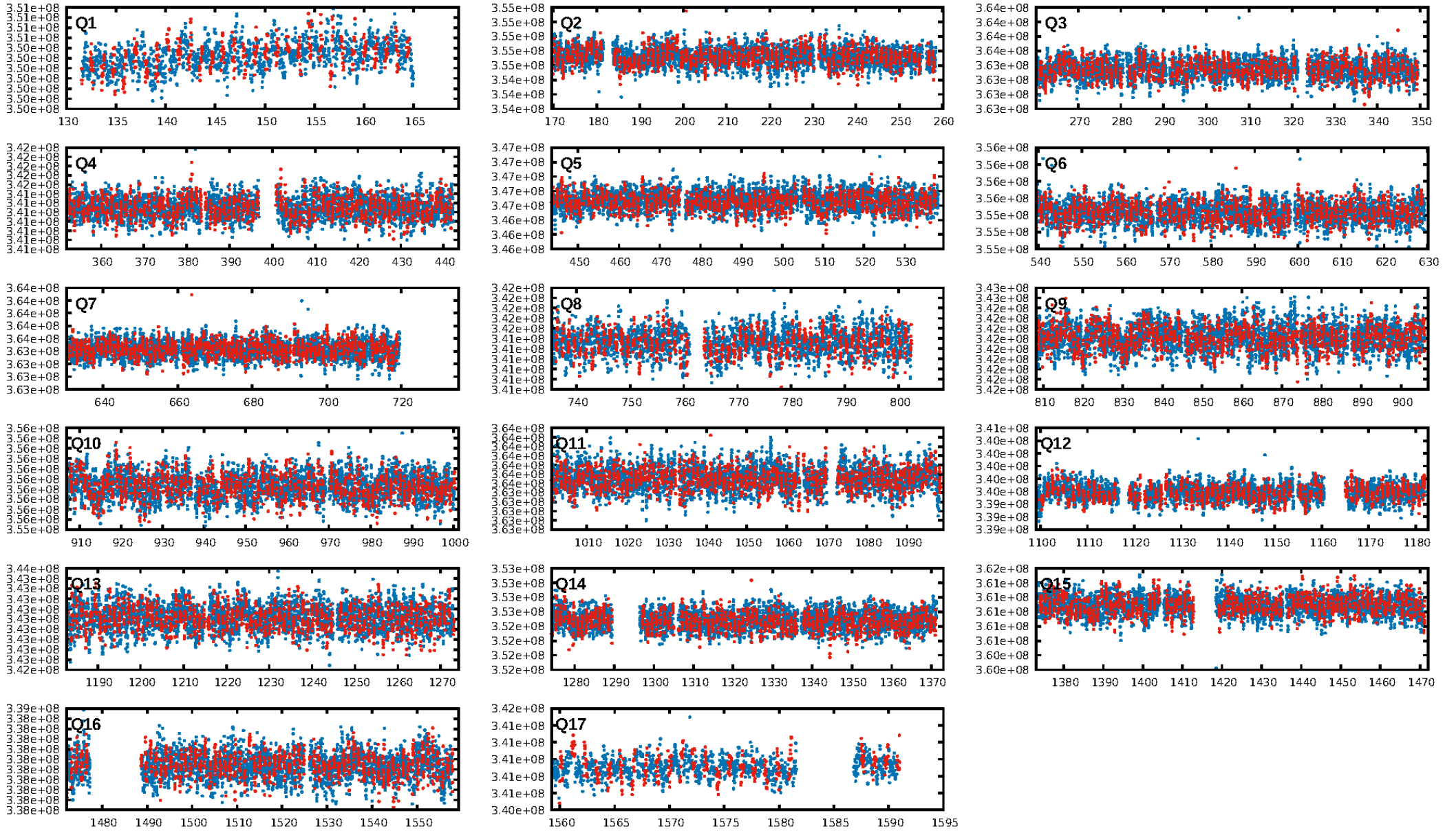
KIC: 8235991 Candidate: 1 of 4 Period: 1.100 d



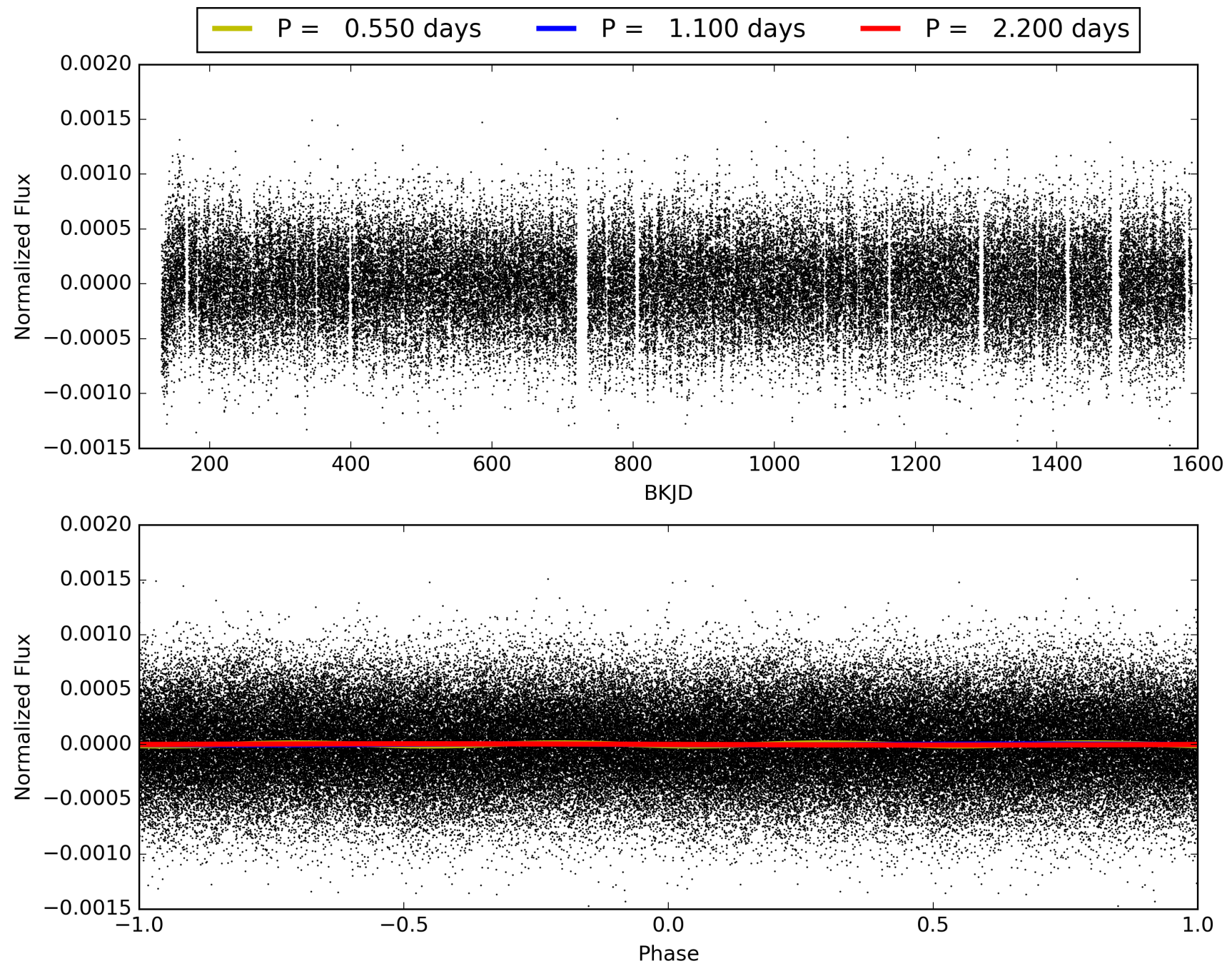
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008235991-01, PDC Light Curves

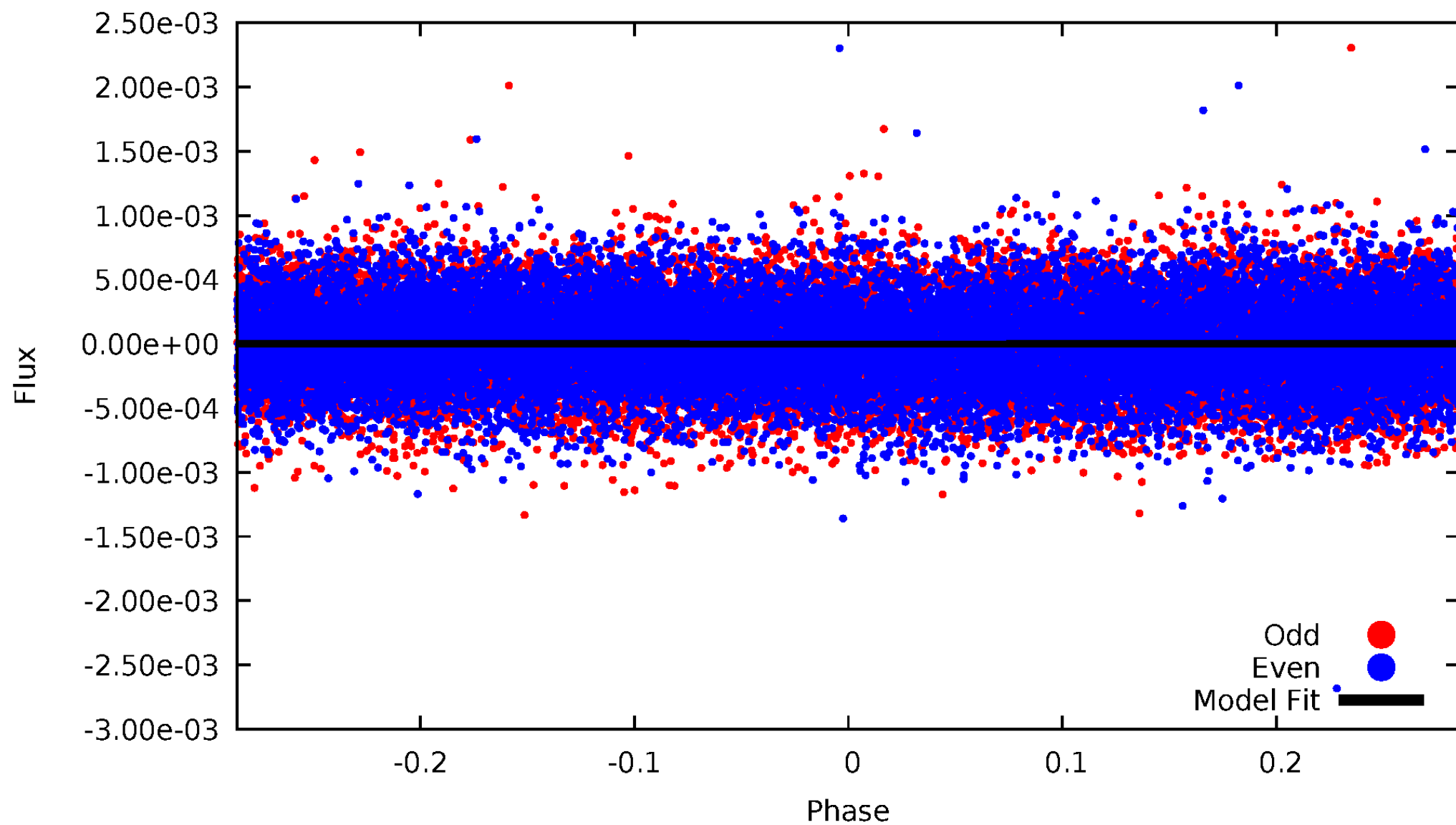


TCE 008235991-01



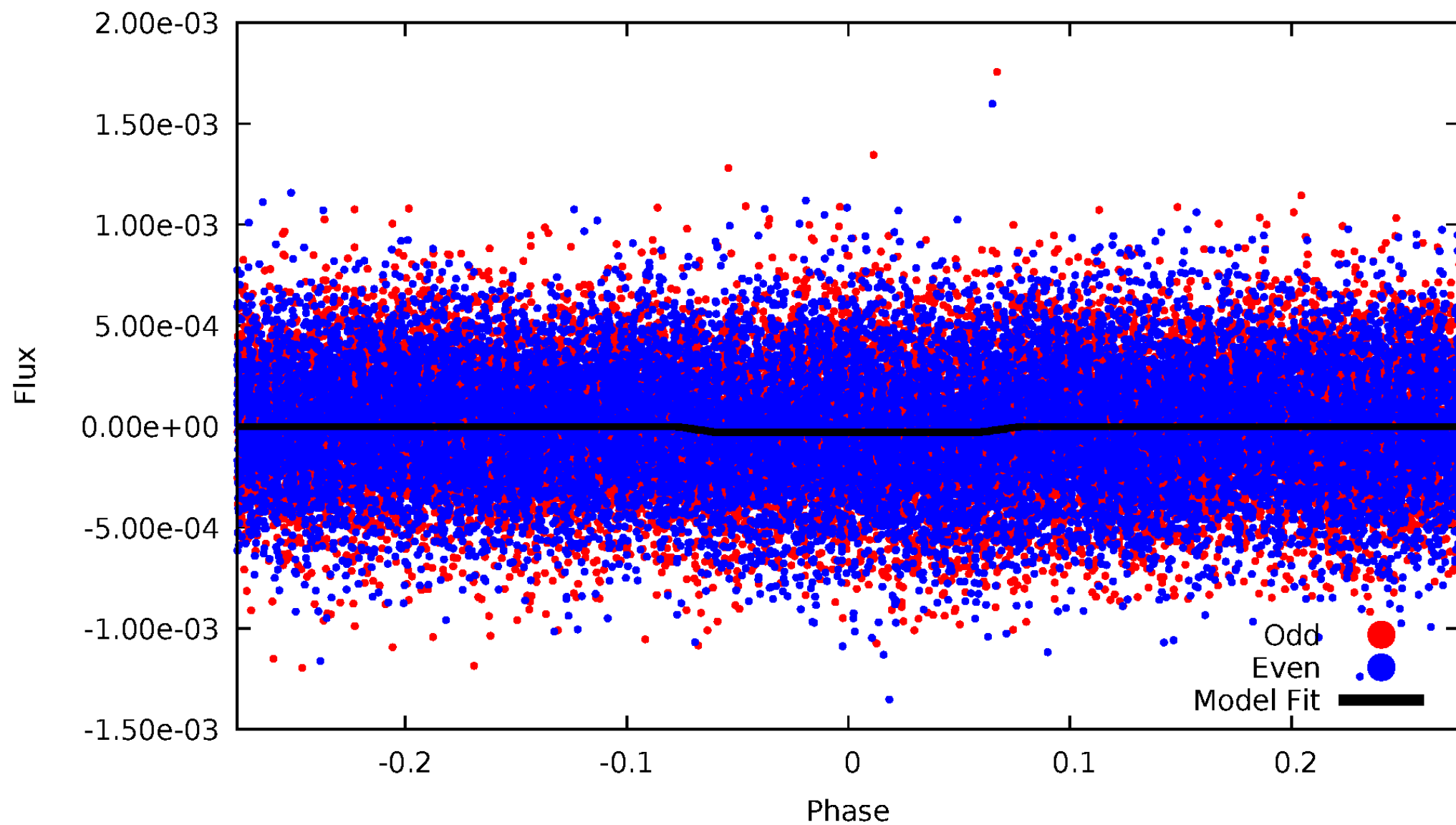
DV Odd/Even

TCE 008235991-01

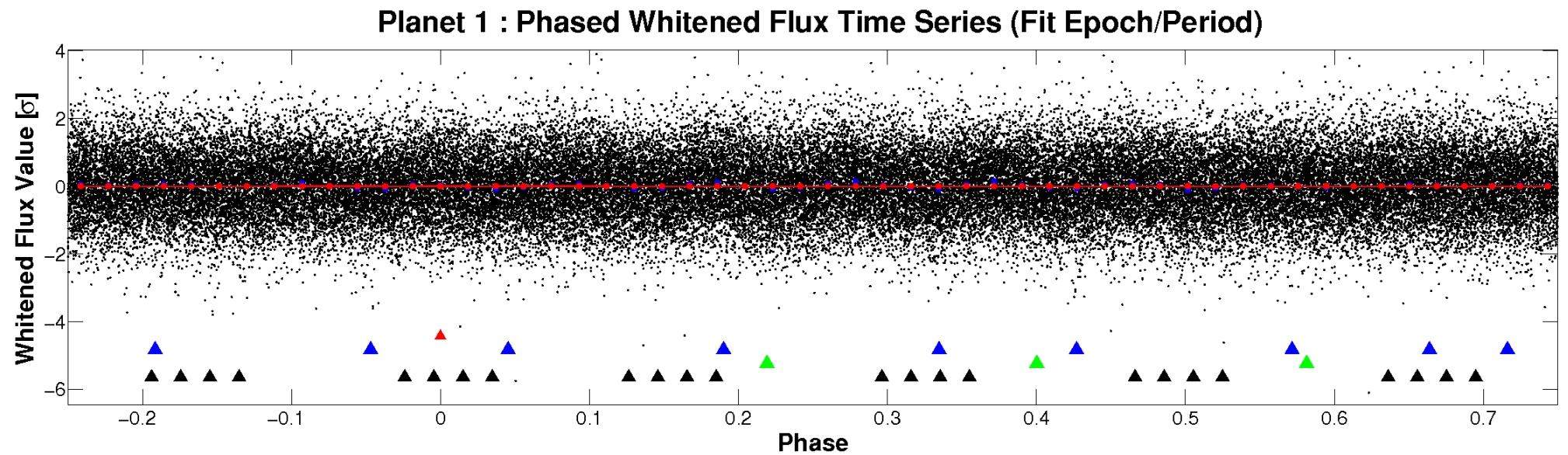
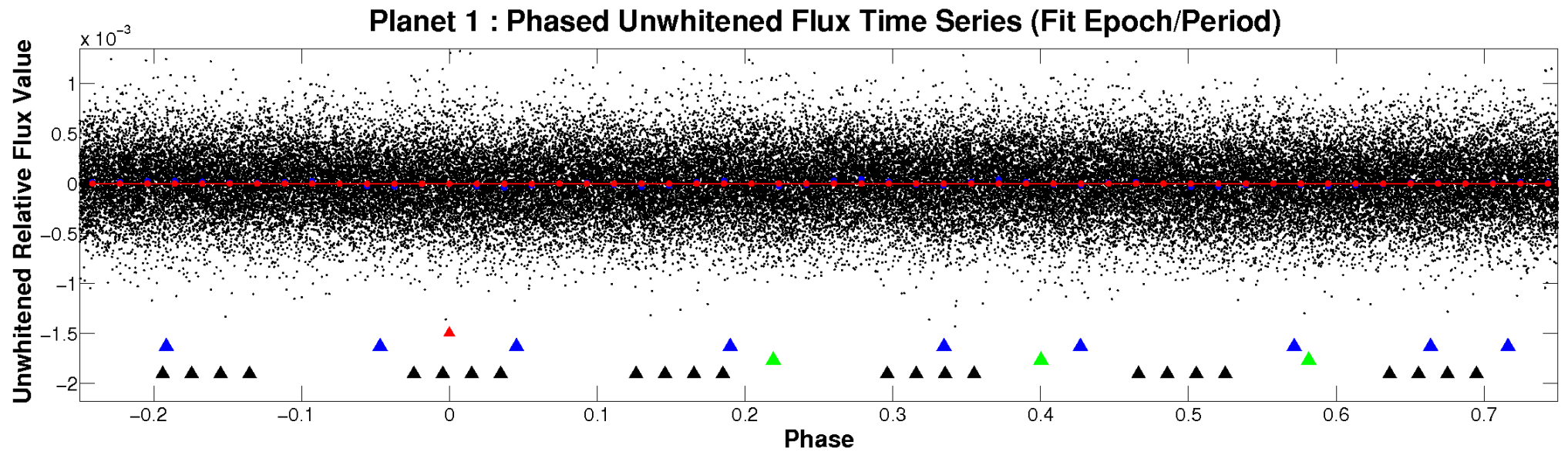


ALT Odd/Even

TCE 008235991-01

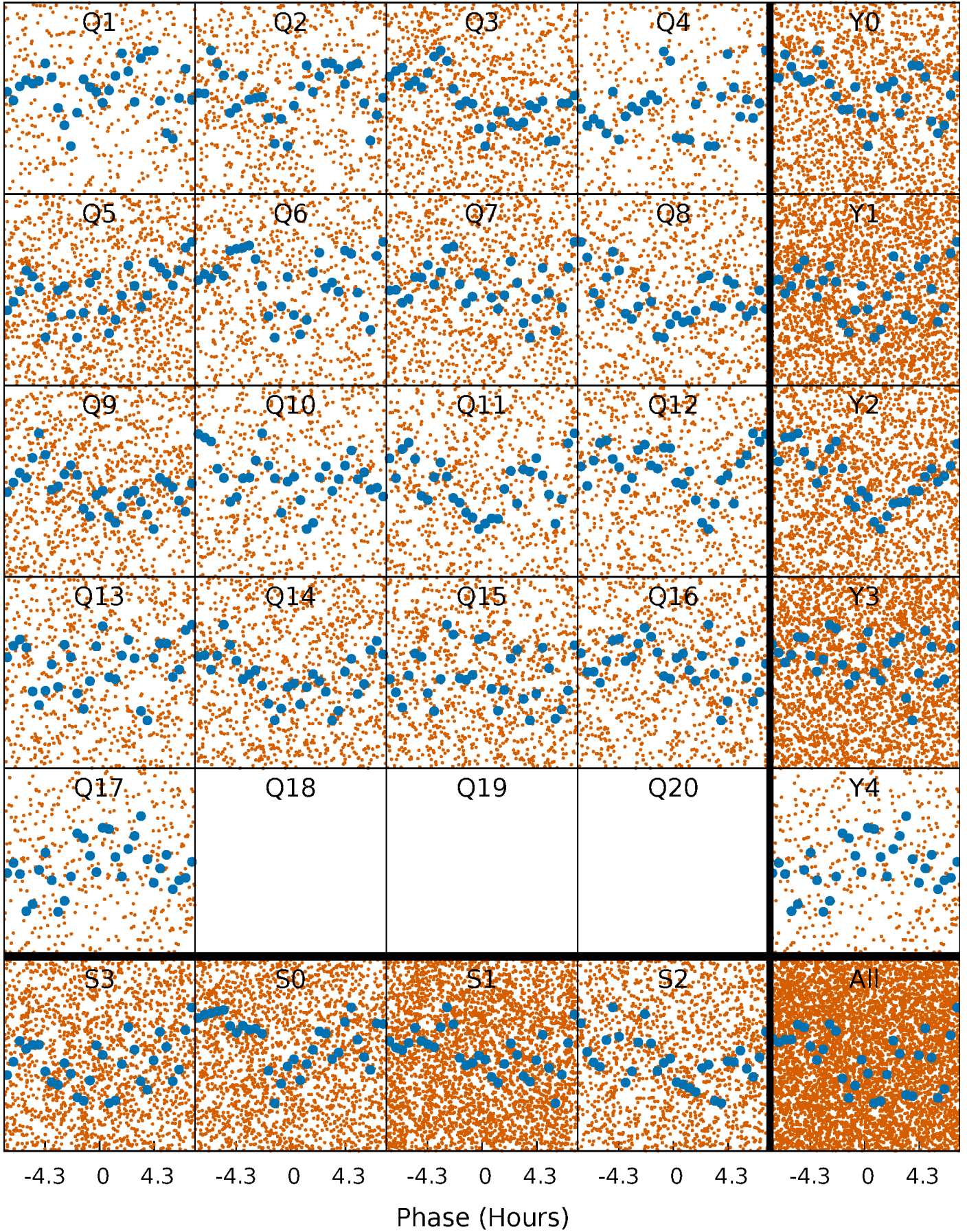


Non-Whitened Vs. Whitened Light Curve



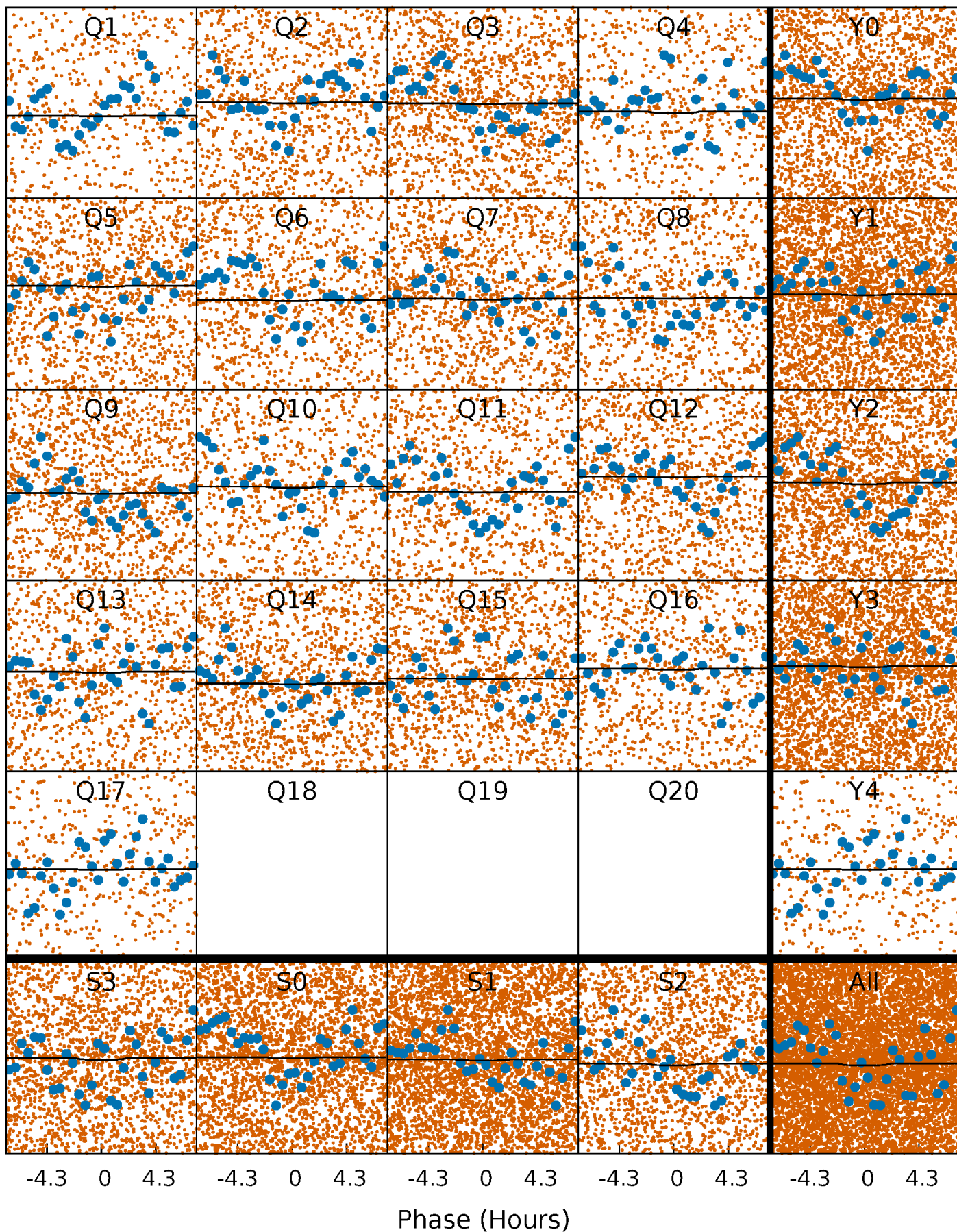
PDC Quarter-Phased Transit Curves

TCE 008235991-01 P= 1.099824 Days $T_0=132.535920$ (BKJD)



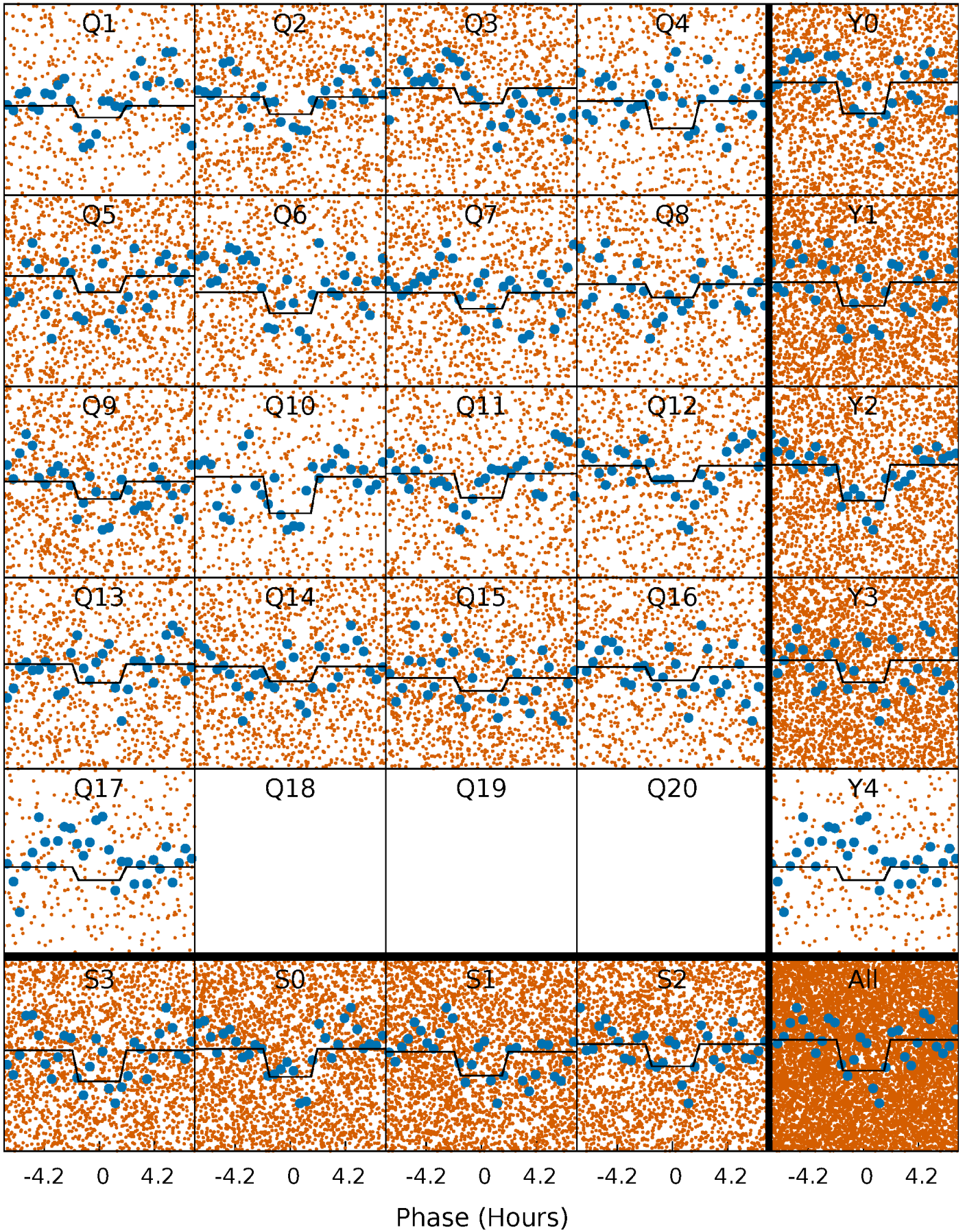
DV Quarter-Phased Transit Curves

TCE 008235991-01 P= 1.099824 Days $T_0=132.535920$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

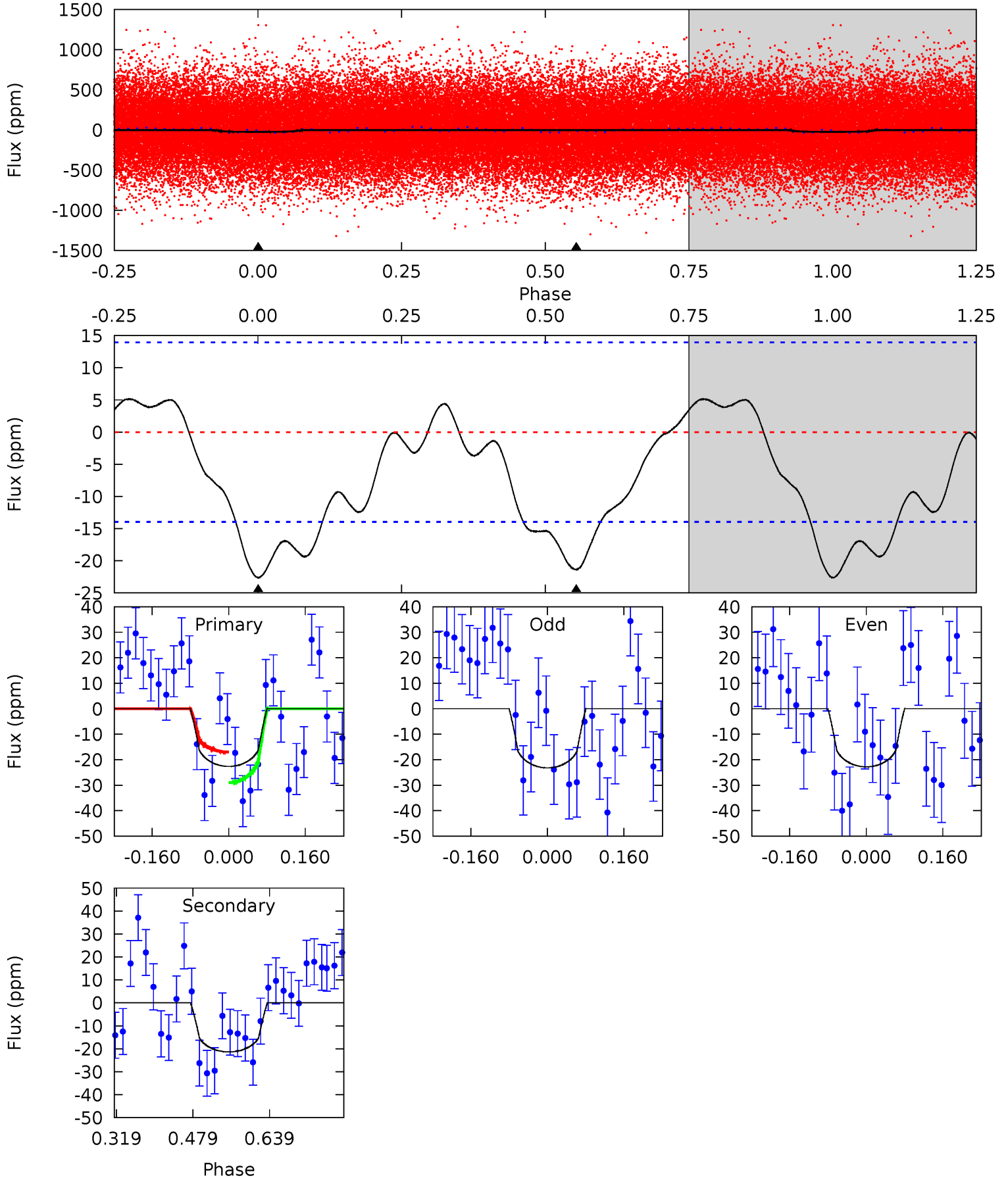
TCE 008235991-01 P= 1.099970 Days $T_0=132.471229$ (BKJD)



DV Model-Shift Uniqueness Test

008235991-01, P = 1.099824 Days, E = 131.436096 Days

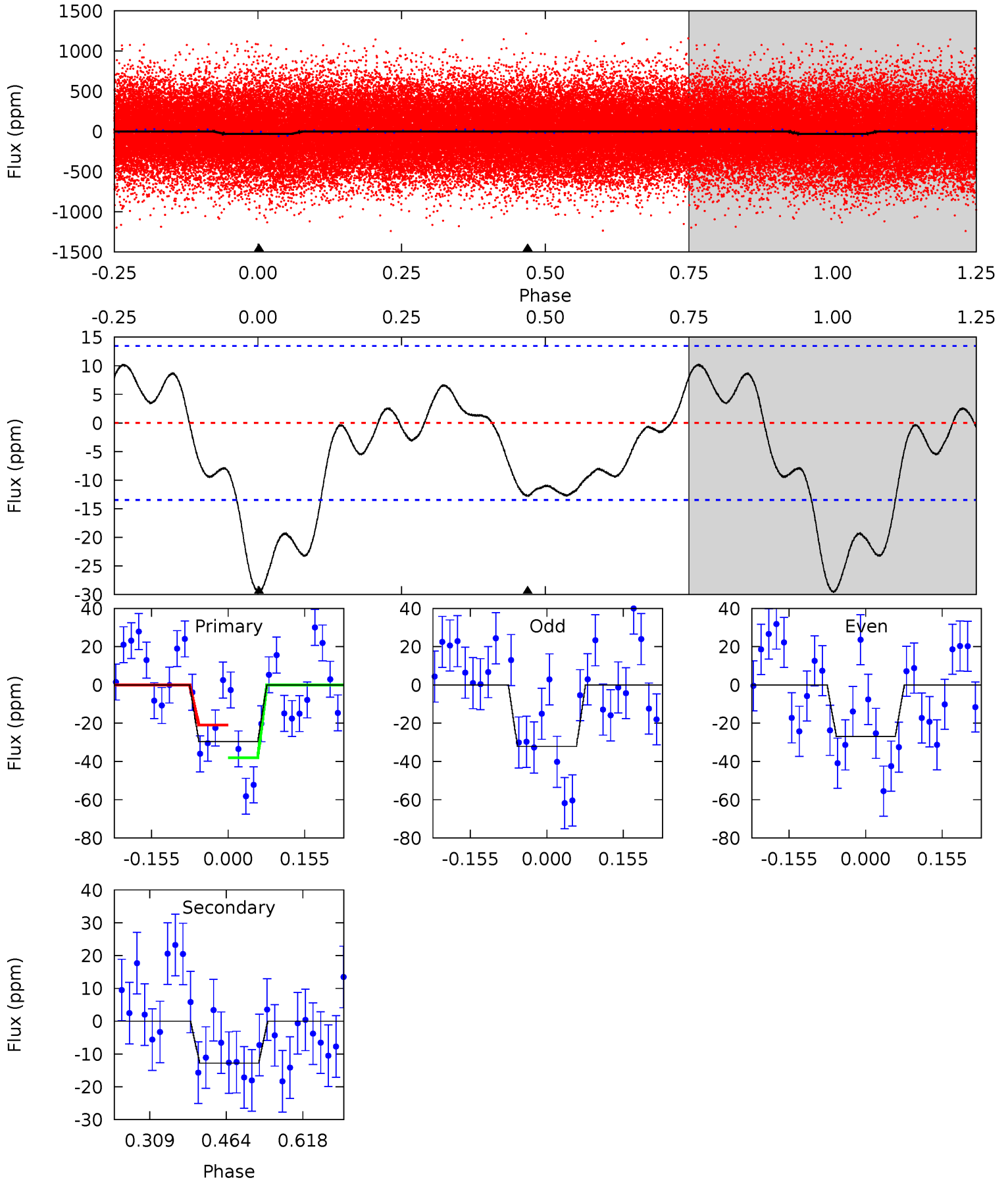
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.25	6.84	0	0	4.47	1.41	1.58	7.25	7.25	6.84	6.84	0.07	1.04	0.18	1.92



Alt Model-Shift Uniqueness Test

008235991-01, P = 1.099970 Days, E = 131.371259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	4.25	0	0	4.47	1.42	1.58	9.83	9.83	4.25	4.25	0.87	1.07	0.26	2.84



Stellar Parameters For KIC 008235991

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4984^{+99}_{-109}	$2.954^{+0.030}_{-0.030}$	$-0.340^{+0.200}_{-0.250}$	$6.386^{+0.531}_{-0.911}$	$1.339^{+0.219}_{-0.356}$	$0.007^{+0.001}_{-0.001}$
	+2%/-2%	+1%/-1%	+59%/-74%	+8%/-14%	+16%/-27%	+20%/-11%
Source	PHO1	AST9	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 008235991-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-21 ± 3	$1.79^{+1.86}_{-1.24}$	5123^{+131}_{-144}	6314^{+8896}_{-2404}	$1.983^{+17.792}_{-1.523}$
Alt.	-13 ± 3	$3.79^{+2.39}_{-1.86}$	5121^{+140}_{-145}	-3285^{+8356}_{-772}	$0.245^{+0.699}_{-0.147}$

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 $A_{obs} \gg 1.0$

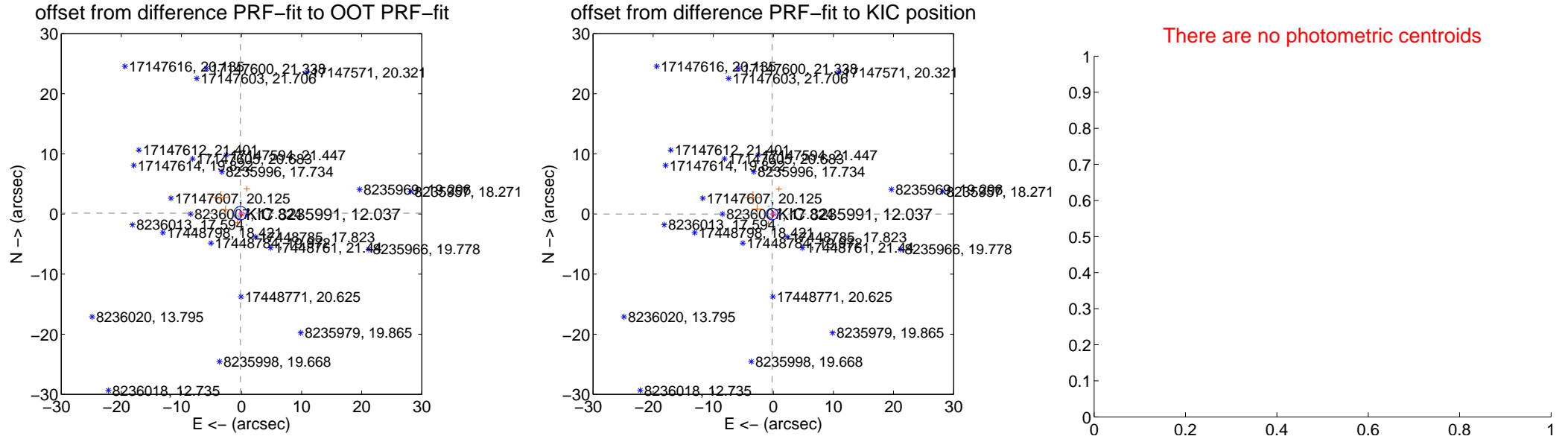
DV Centroid Data

Supplemental centroid analysis for 008235991-01. Kepler magnitude: 12.04. Transit SNR 0.27

There are 10 quarters with good PRF difference image offsets

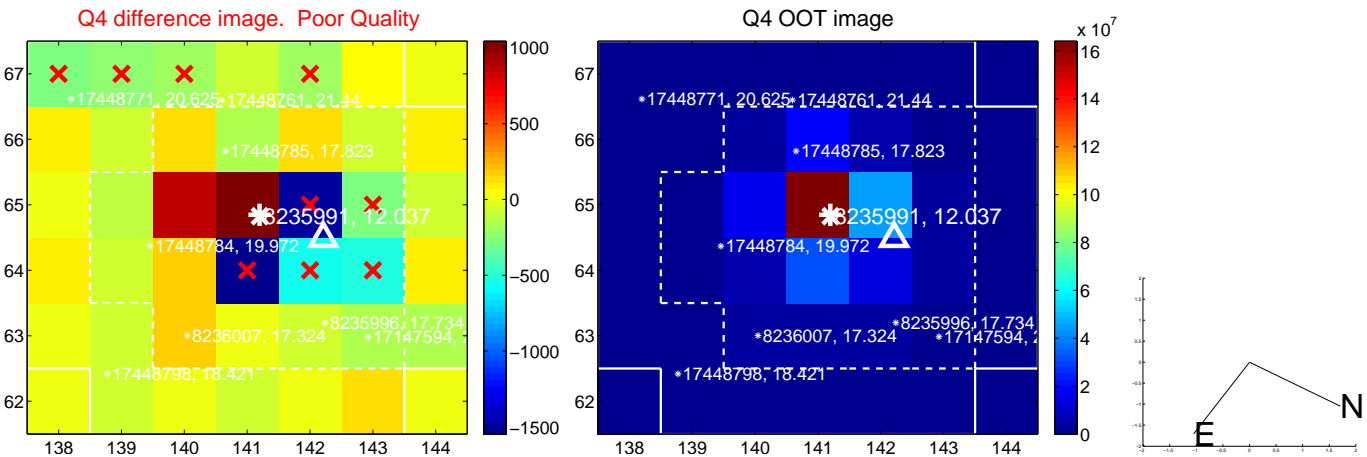
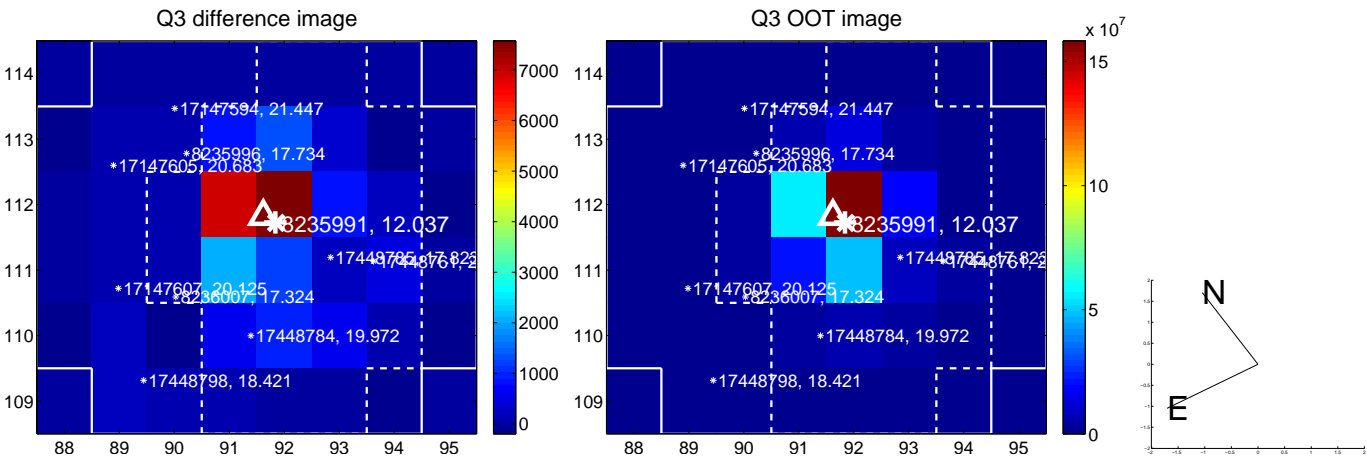
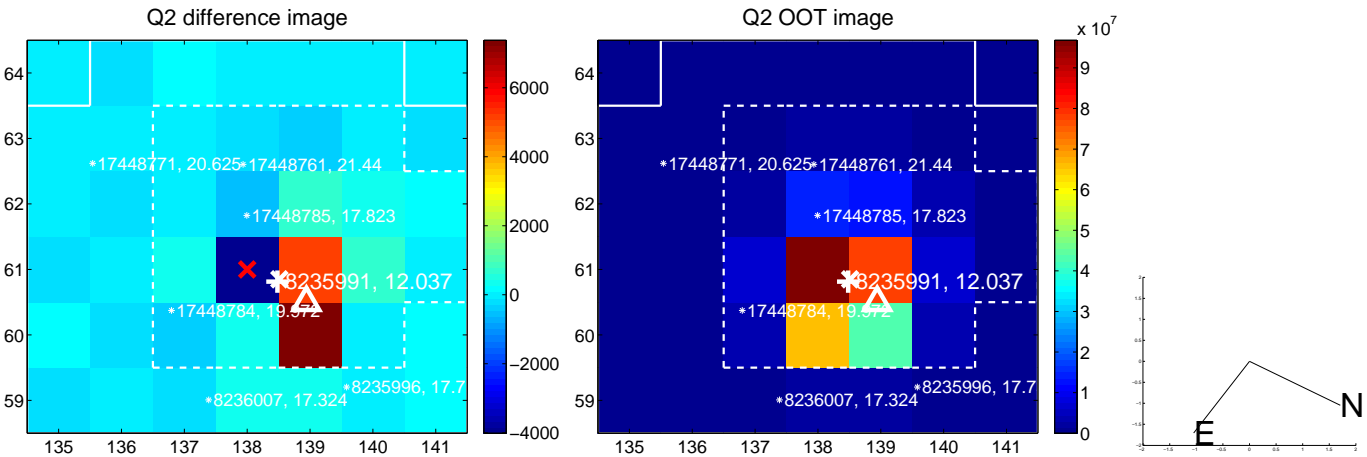
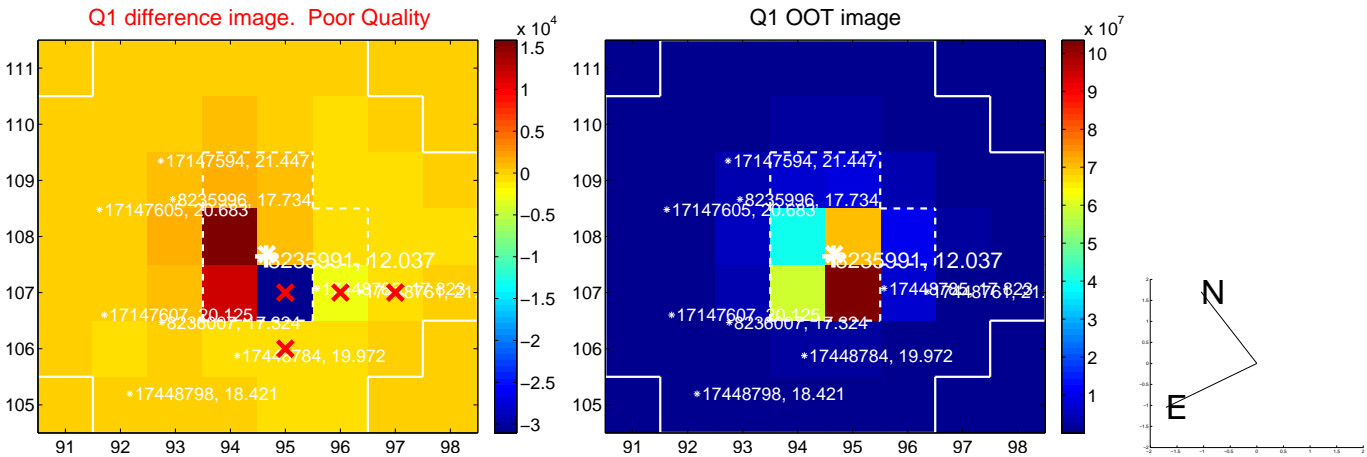
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.220 ± 0.371	0.59	0.171 ± 0.291	0.140 ± 0.382
PRF-fit source offset from KIC position	0.209 ± 0.324	0.65	0.209 ± 0.327	-0.007 ± 0.432
photometric centroid source offset	—	—	—	—

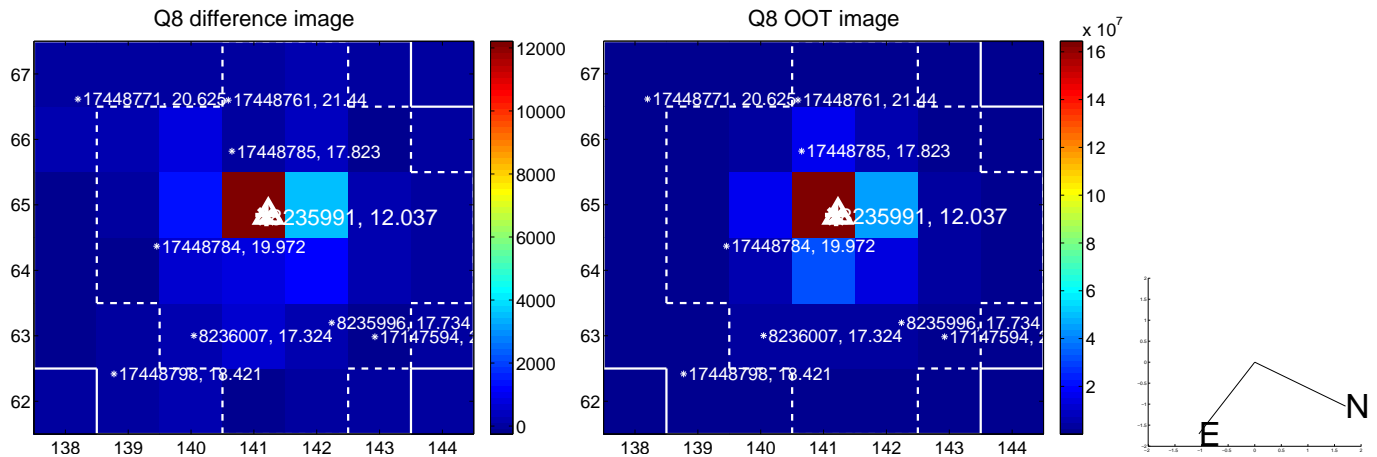
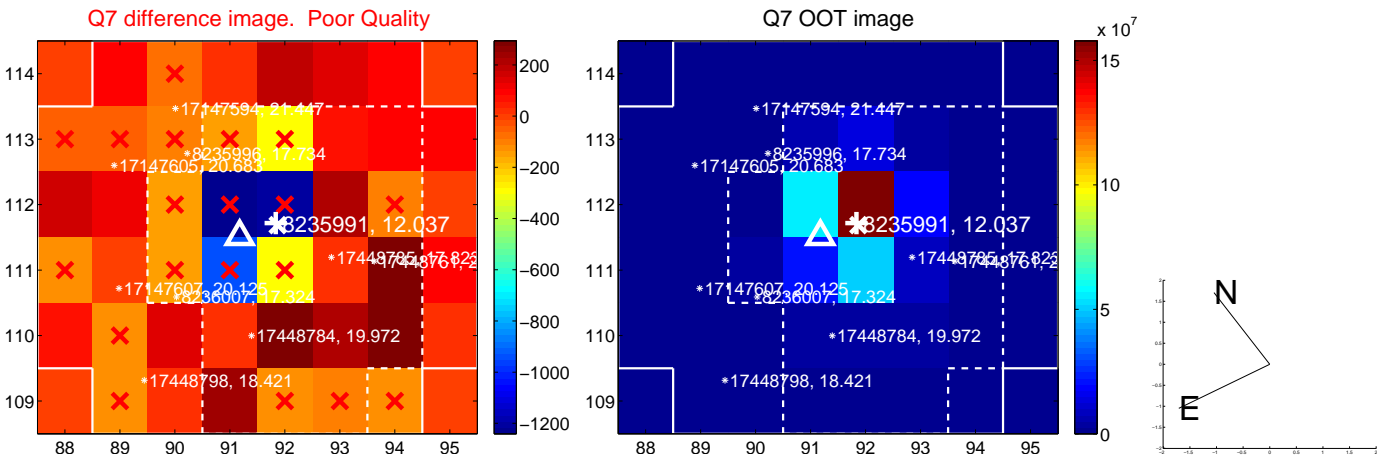
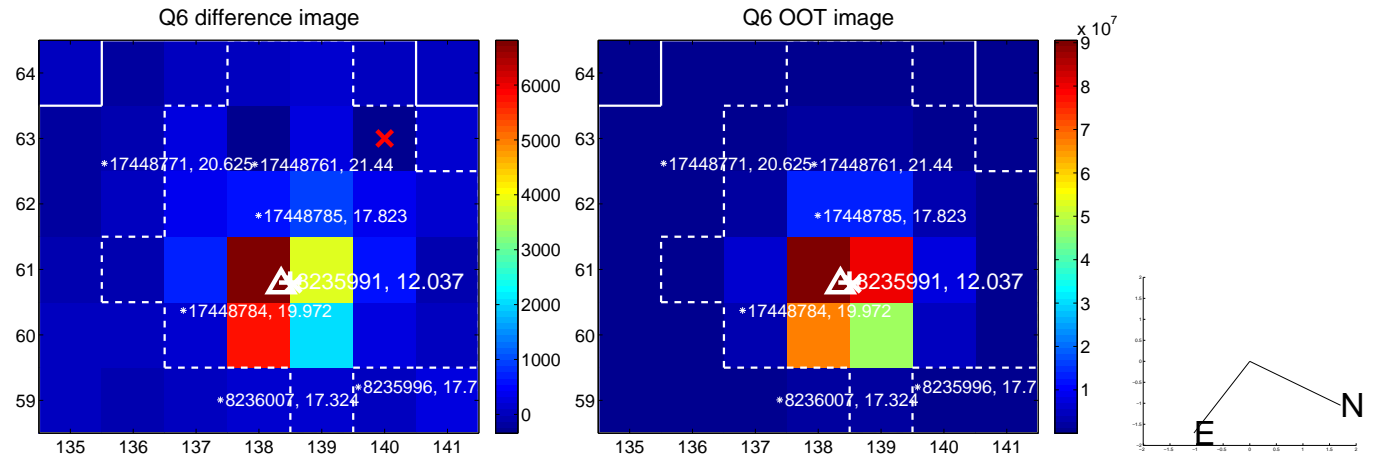
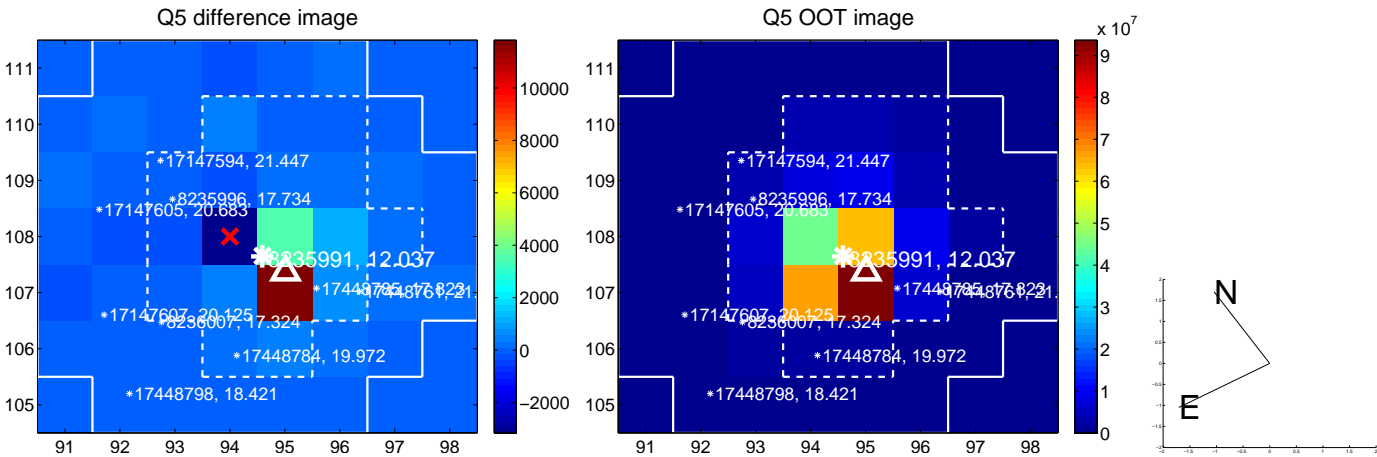


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

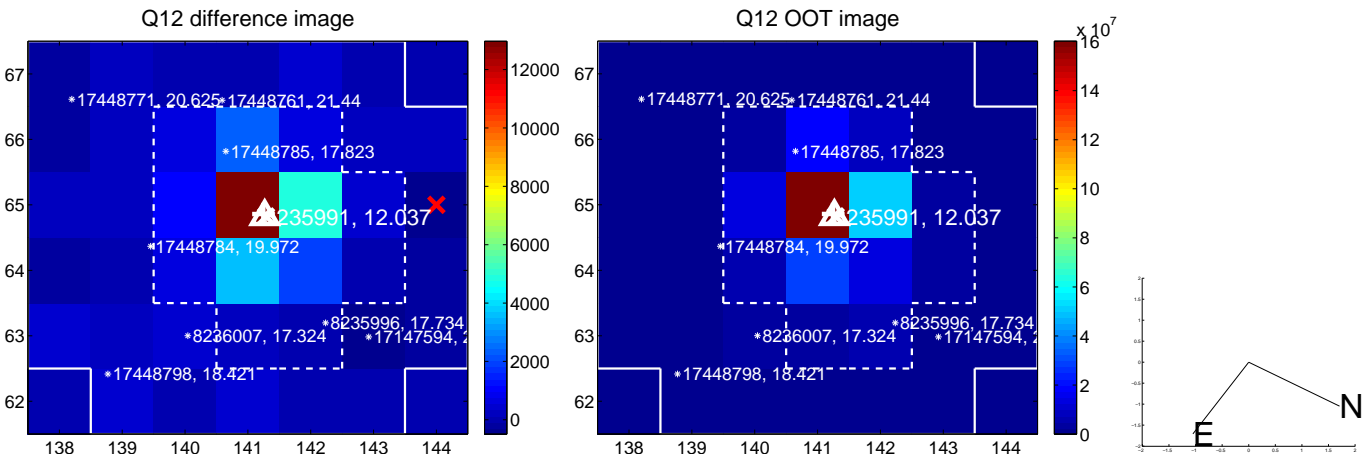
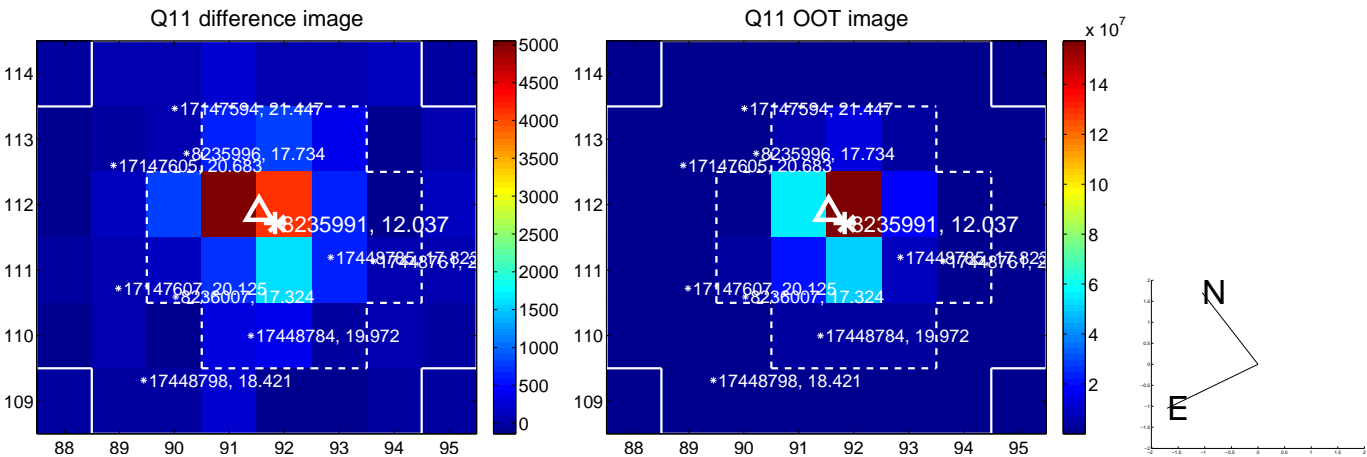
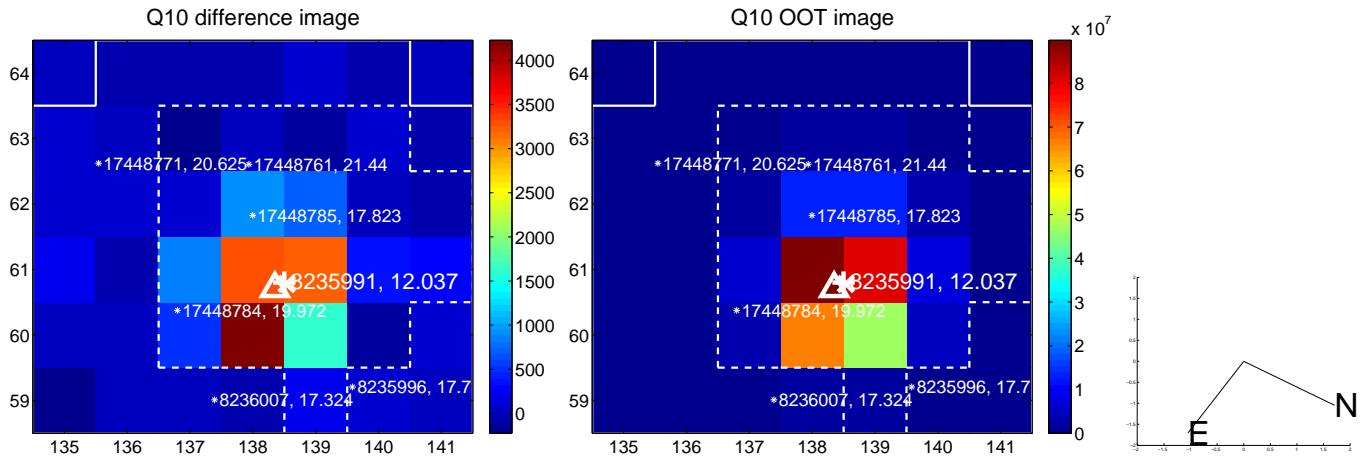
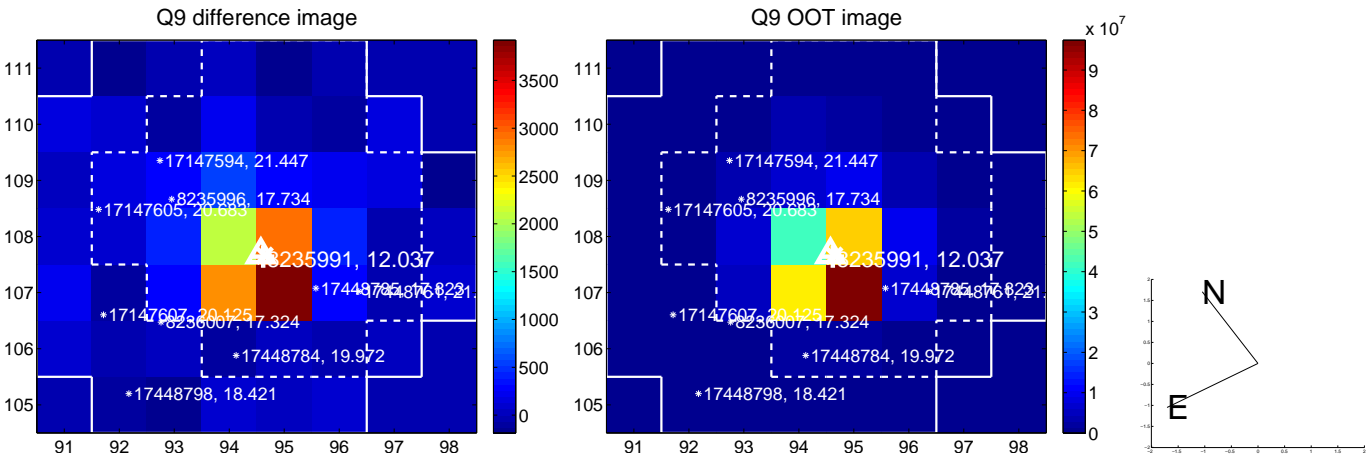
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



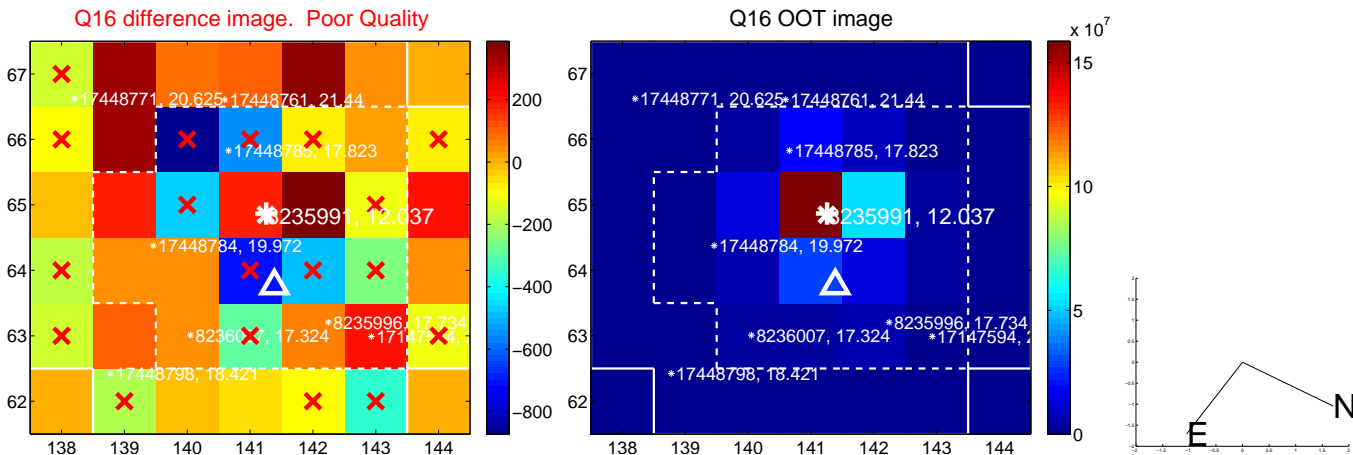
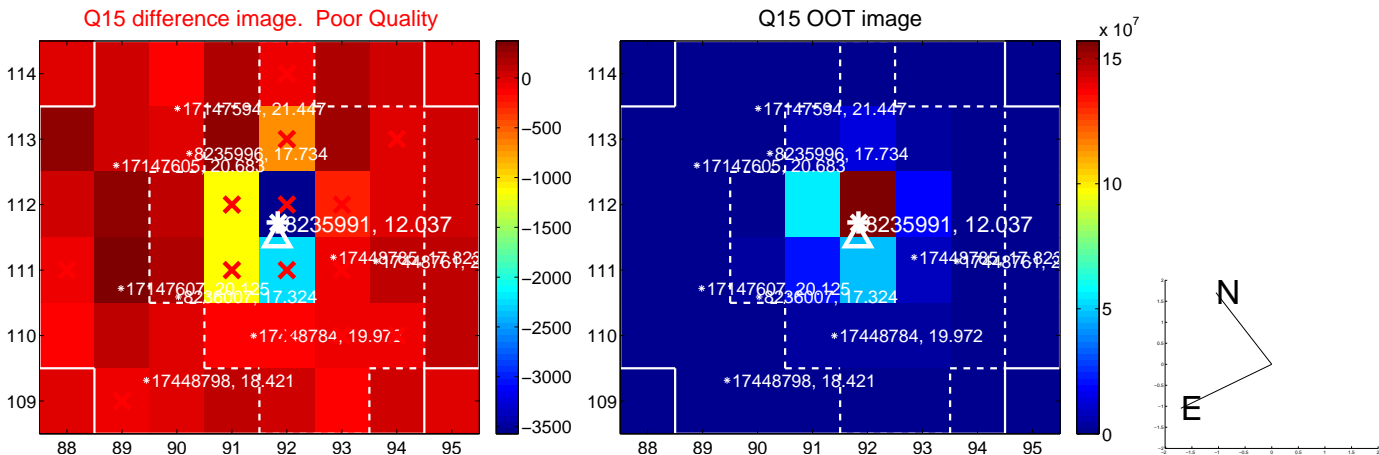
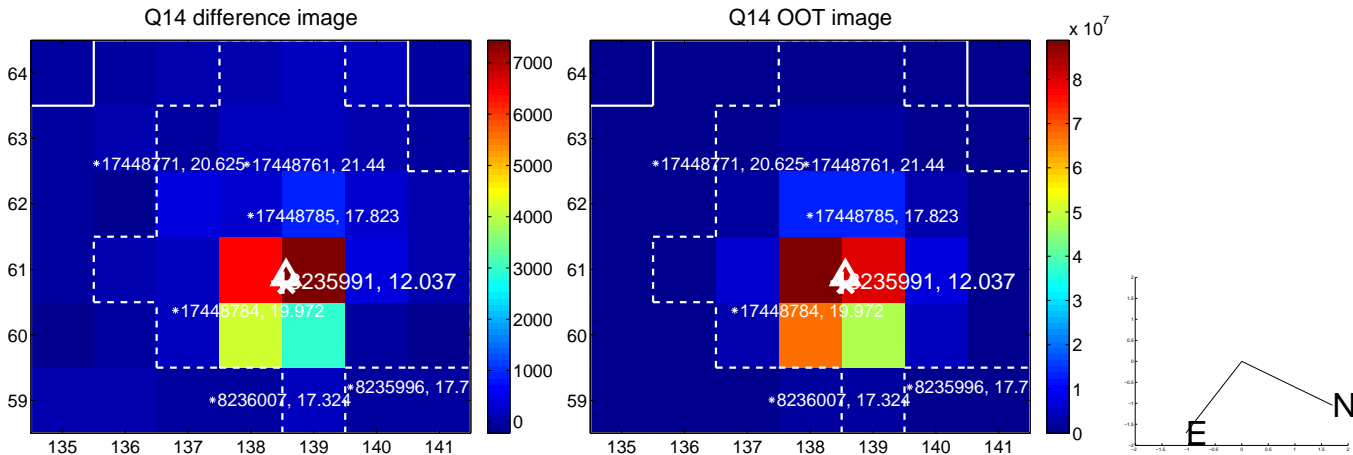
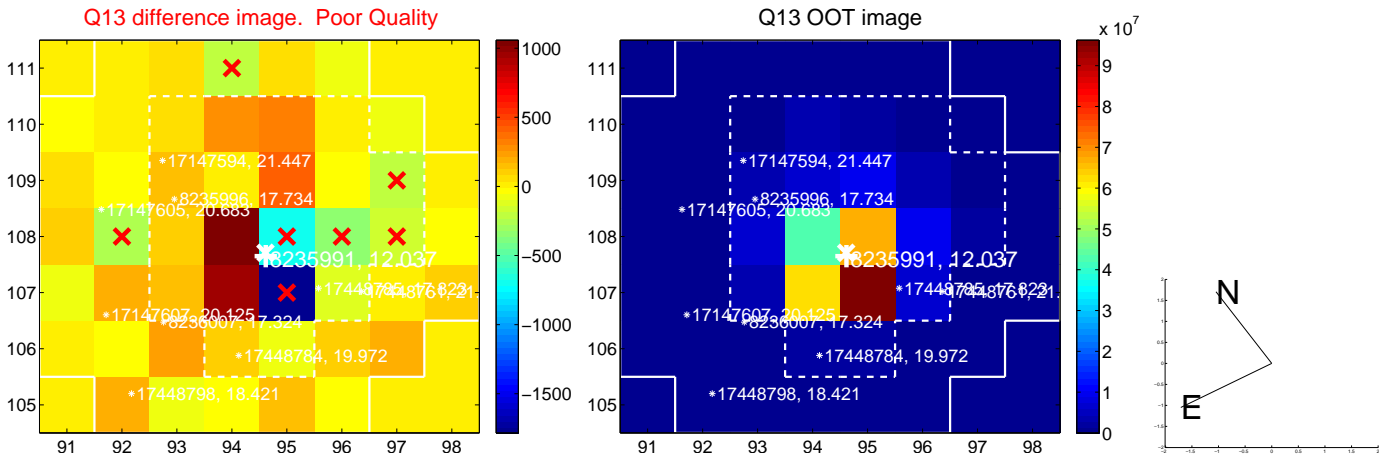
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



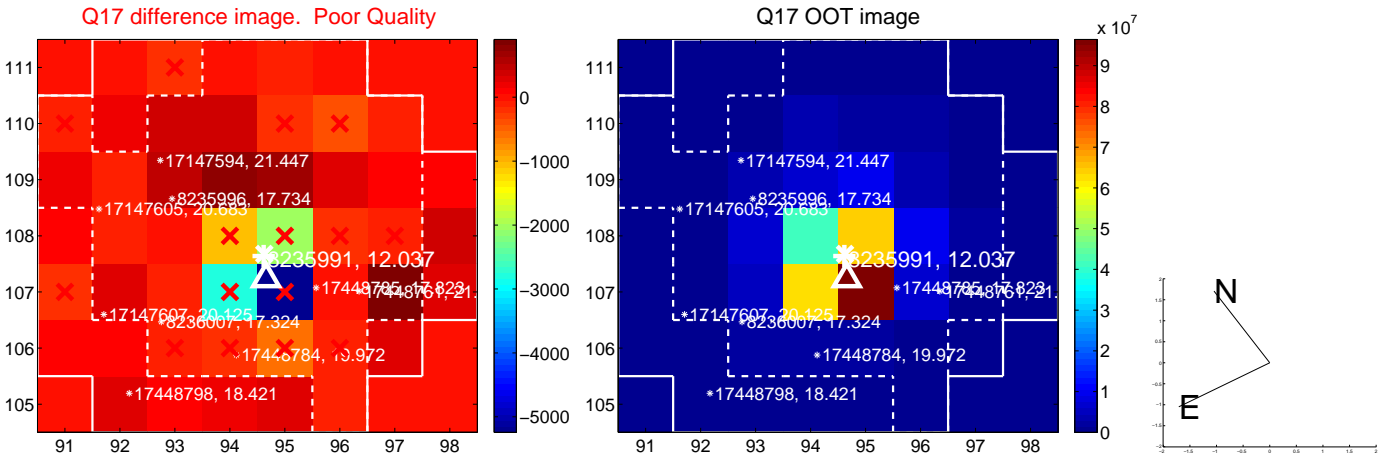
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



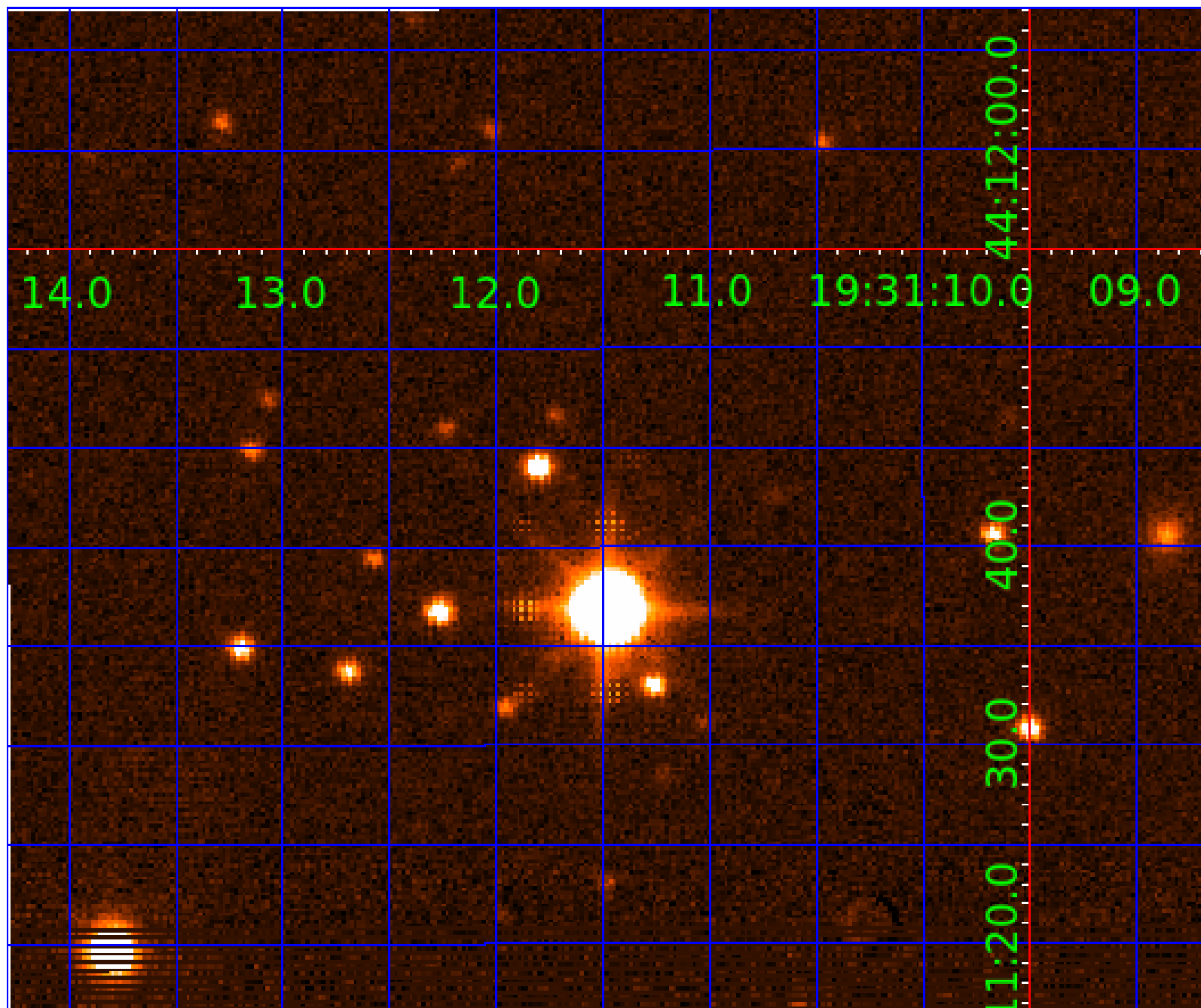
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008235991

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})
008235991-01	OBS	No	1.099824	132.535920	1.5	3.769	7.8	0.3	6.39	4984	0.92	0.00
008235991-02	OBS	No	158.794298	282.842142	583.9	2.245	8.1	6.6	6.39	4984	17.11	56.35
008235991-04	OBS	No	60.303431	156.770267	474.9	3.111	7.6	8.0	6.39	4984	16.74	204.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008235991-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008235991-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT
008235991-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

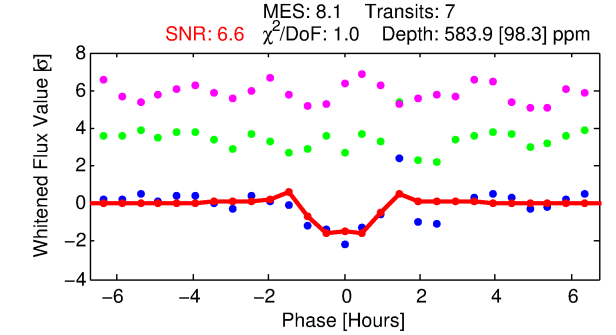
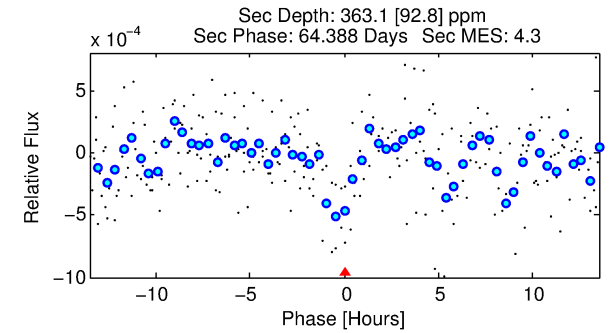
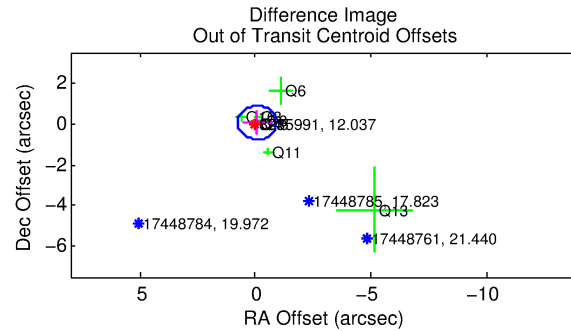
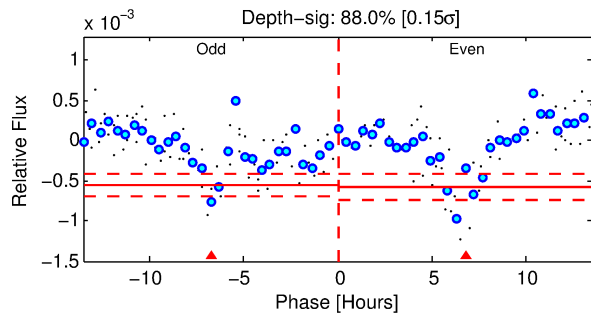
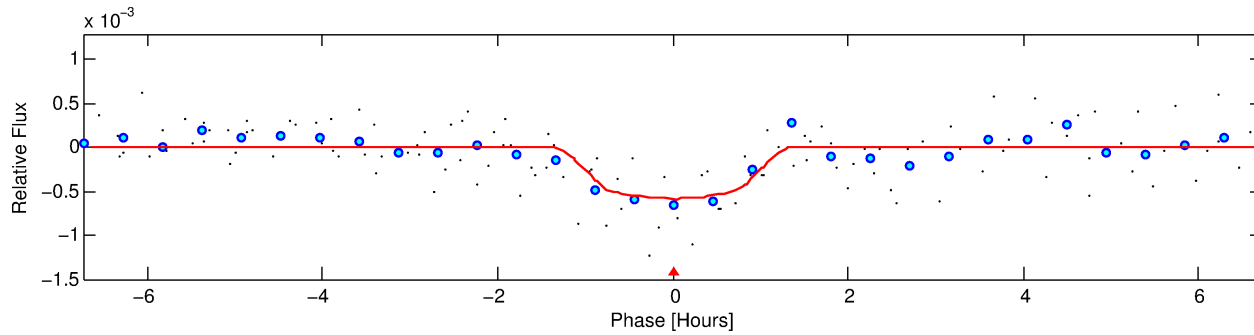
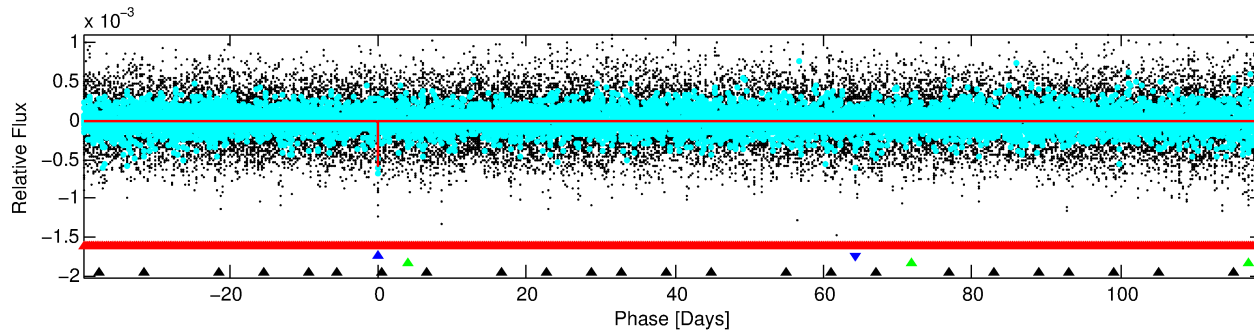
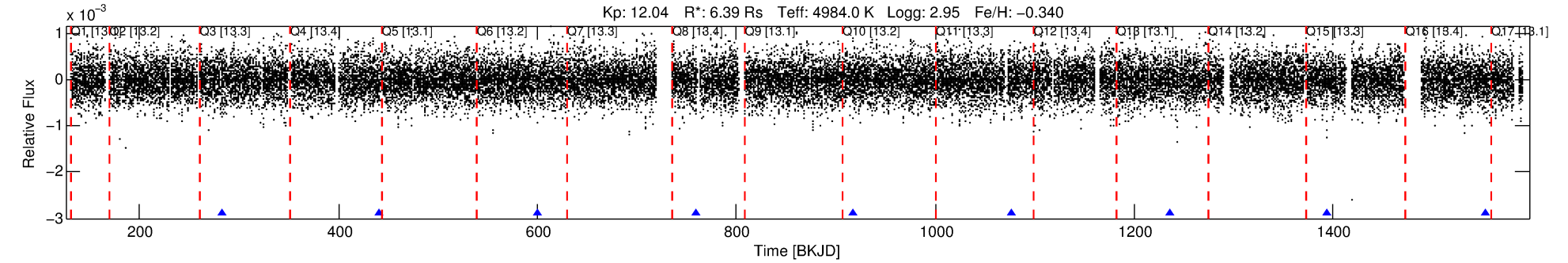
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008235991-02

No Significant Match Found

DV One-Page Summary

KIC: 8235991 Candidate: 2 of 4 Period: 158.794 d



DV Fit Results:

Period = 158.79430 [0.00095] d
Epoch = 282.8421 [0.0053] BKJD
Rp/R* = 0.0246 [0.0274]
a/R* = 357.02 [1478.07]
b = 0.78 [2.10]
Seff = 56.35 [7.73]
Teq = 699 [24] K
Rp = 17.11 [19.22] Re
a = 0.6325 [0.0619] AU
Ag = 272.89 [612.76] [0.44σ]
Teffp = 4390 [2464] K [1.50σ]

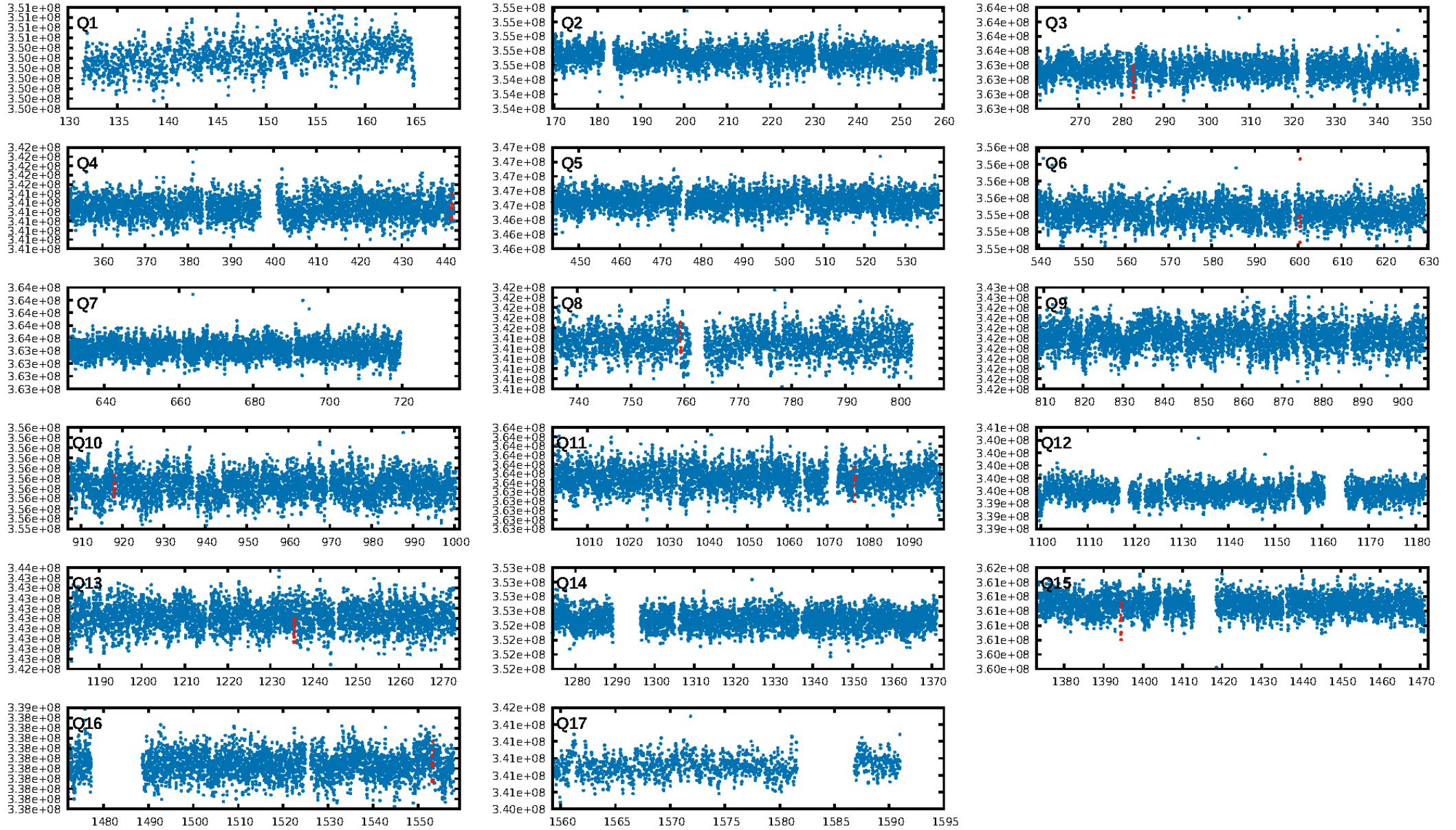
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [616.16σ]
LongPeriod-sig: 100.0% [1504.04σ]
ModelChiSquare2-sig: 40.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 6.25e-11
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -2.197
Centroid-sig: 68.8%
Centroid-so: 0.149 arcsec [0.44σ]
OotOffset-rm: 0.084 arcsec [0.30σ]
KicOffset-rm: 0.070 arcsec [0.23σ]
OotOffset-st: 1/3/3/1 [8]
KicOffset-st: 1/3/3/1 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 0.44 [4/9]

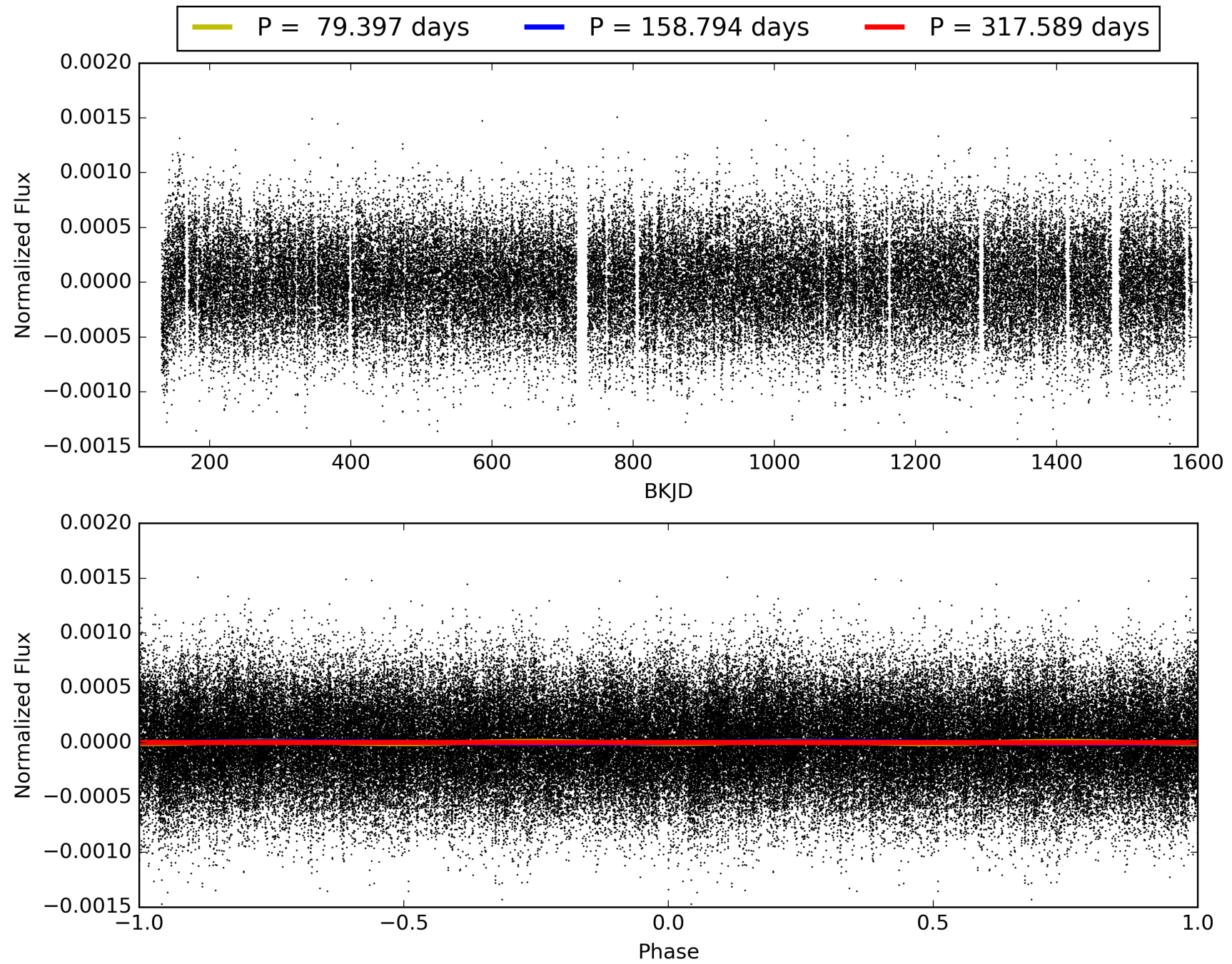
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:39:05 Z

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

TCE 008235991-02, PDC Light Curves

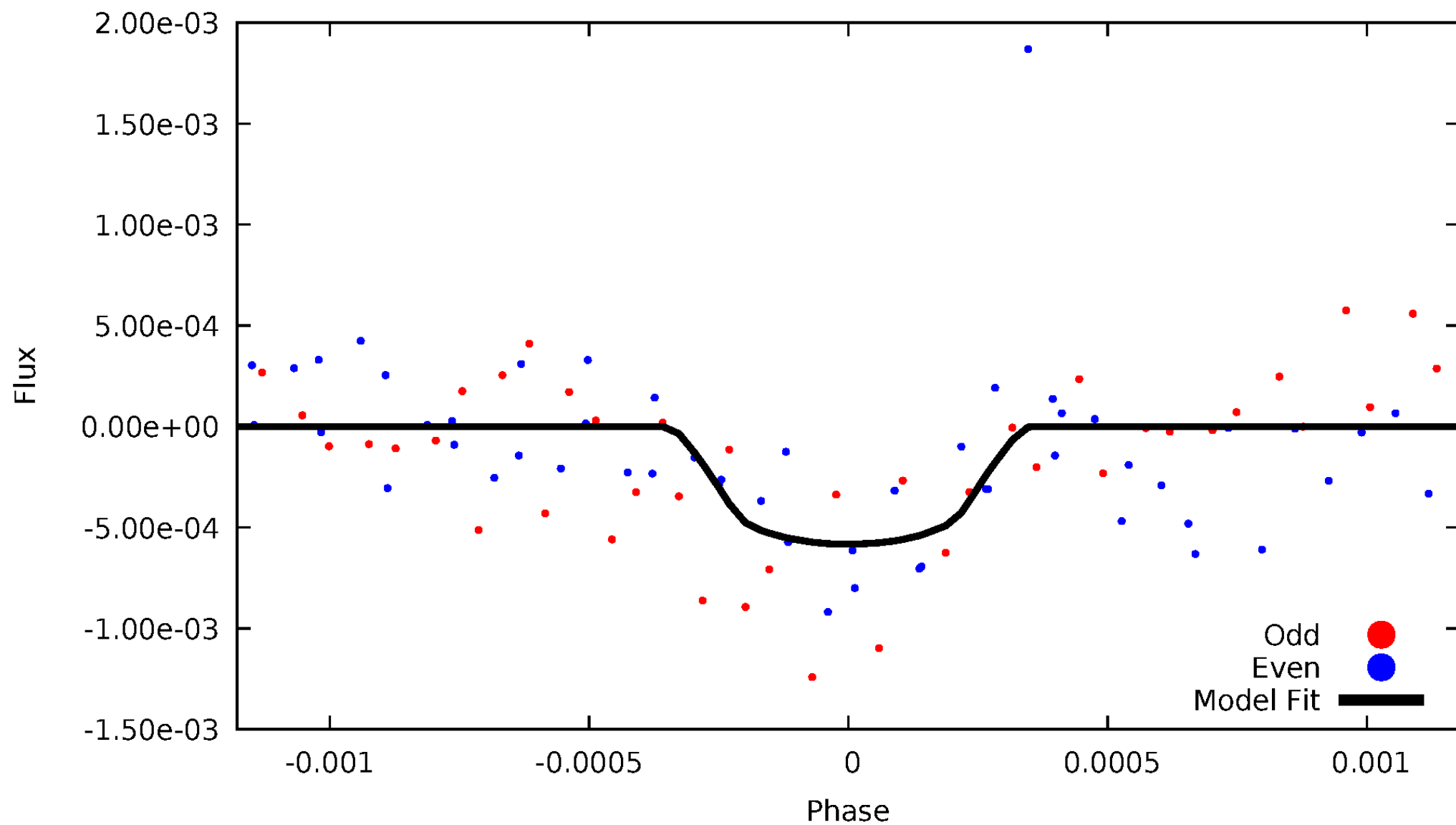


TCE 008235991-02



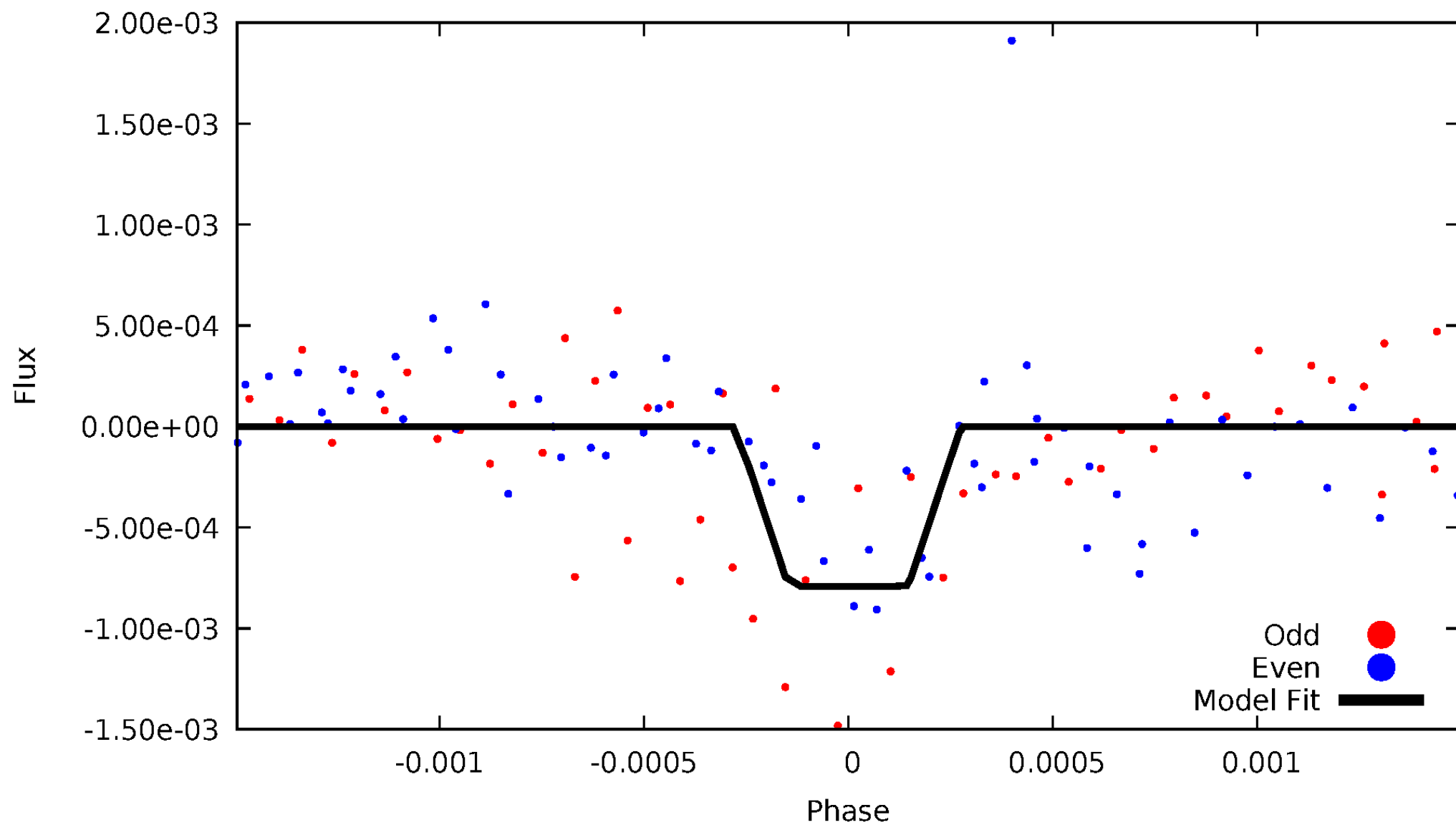
DV Odd/Even

TCE 008235991-02



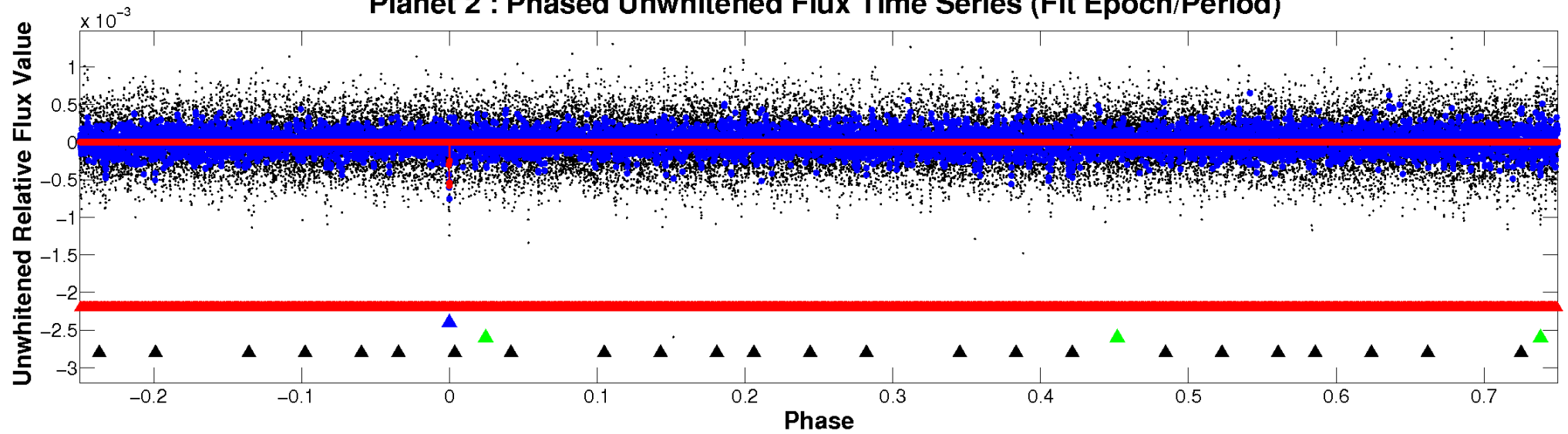
ALT Odd/Even

TCE 008235991-02

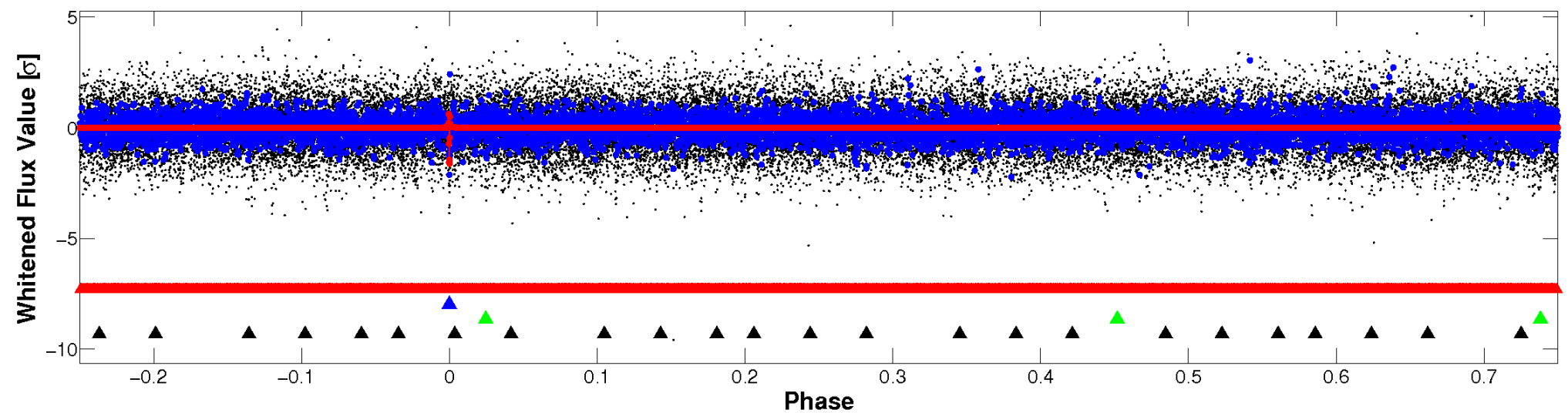


Non-Whitened Vs. Whitened Light Curve

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

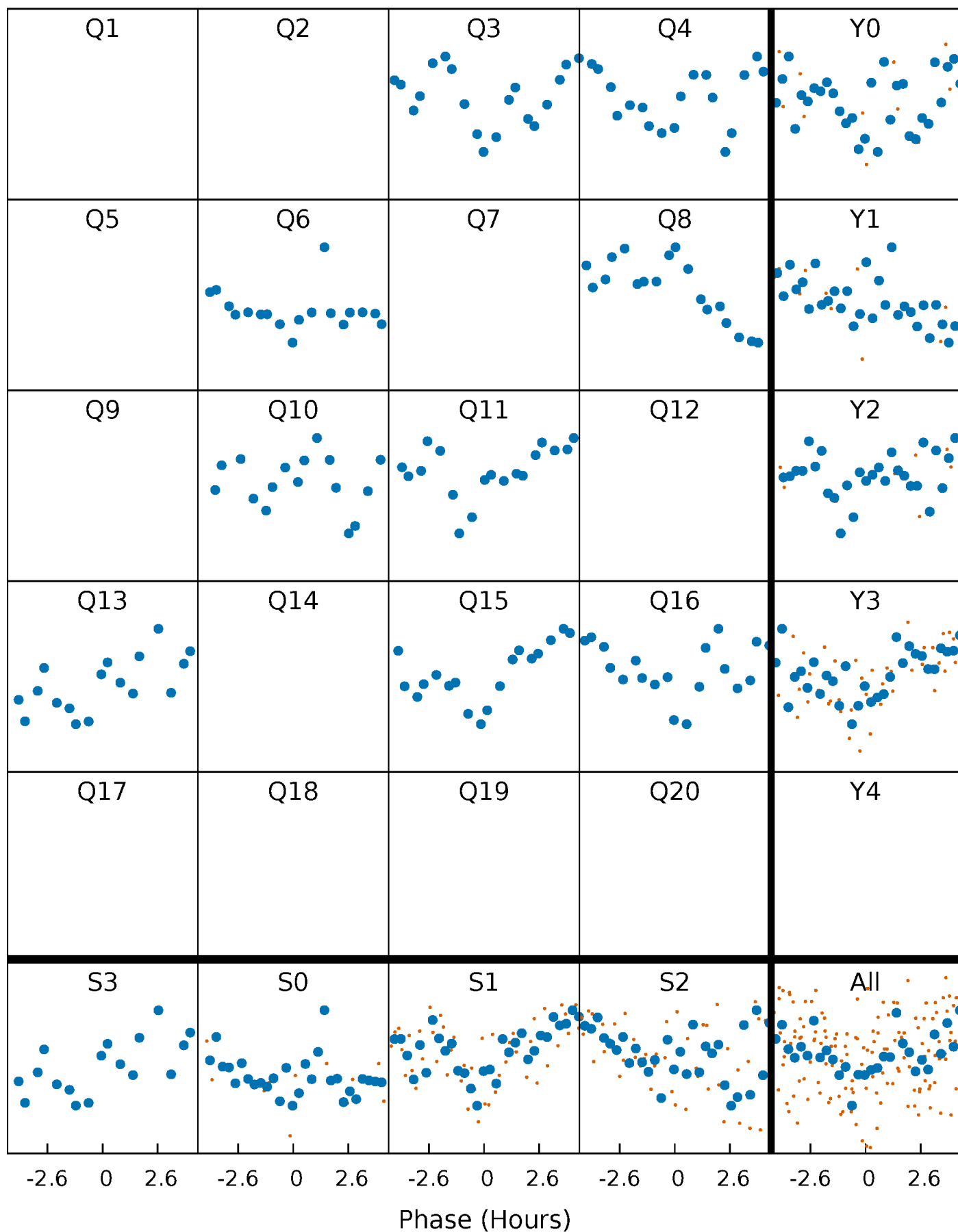


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



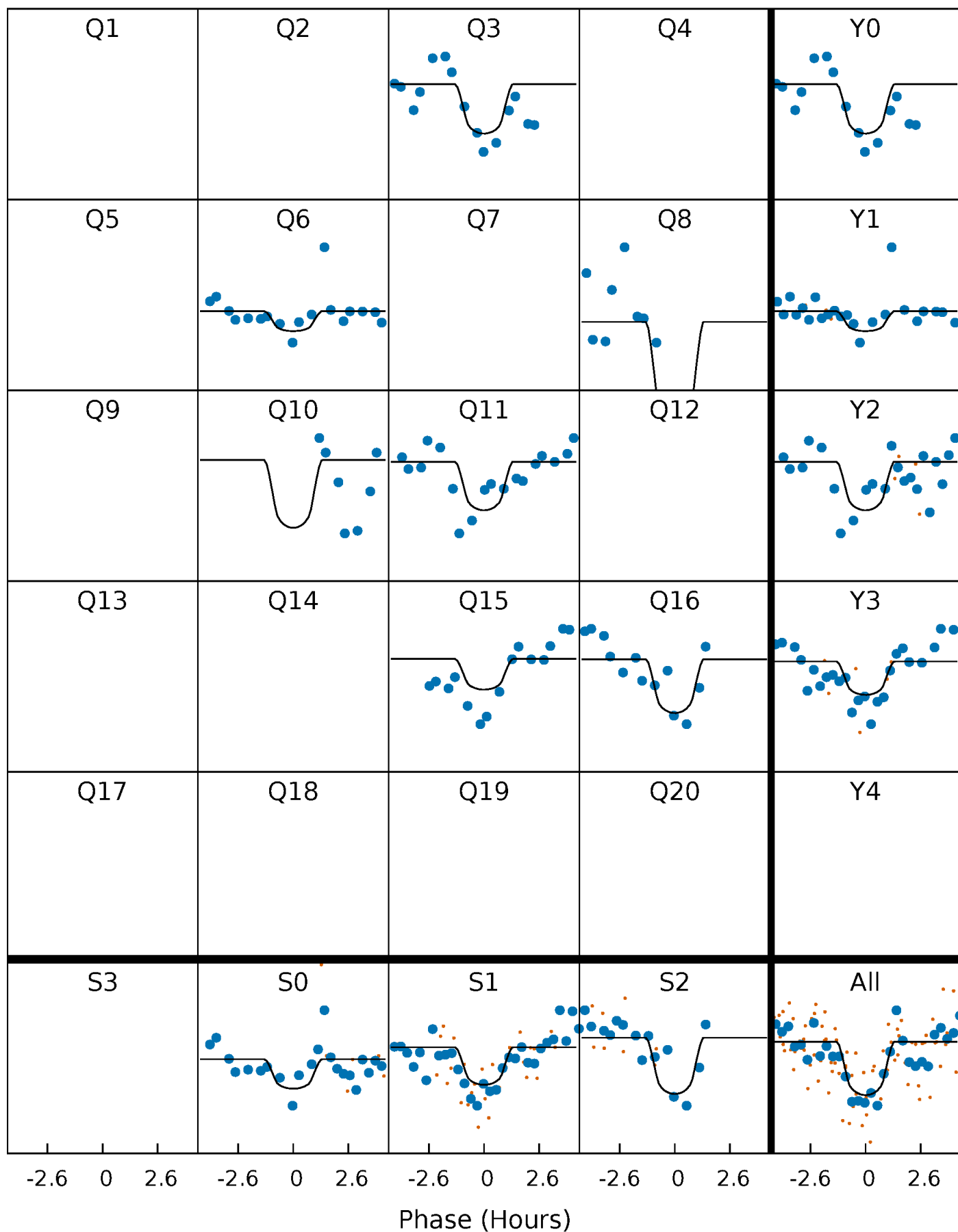
PDC Quarter-Phased Transit Curves

TCE 008235991-02 P=158.794298 Days $T_0=282.842142$ (BKJD)



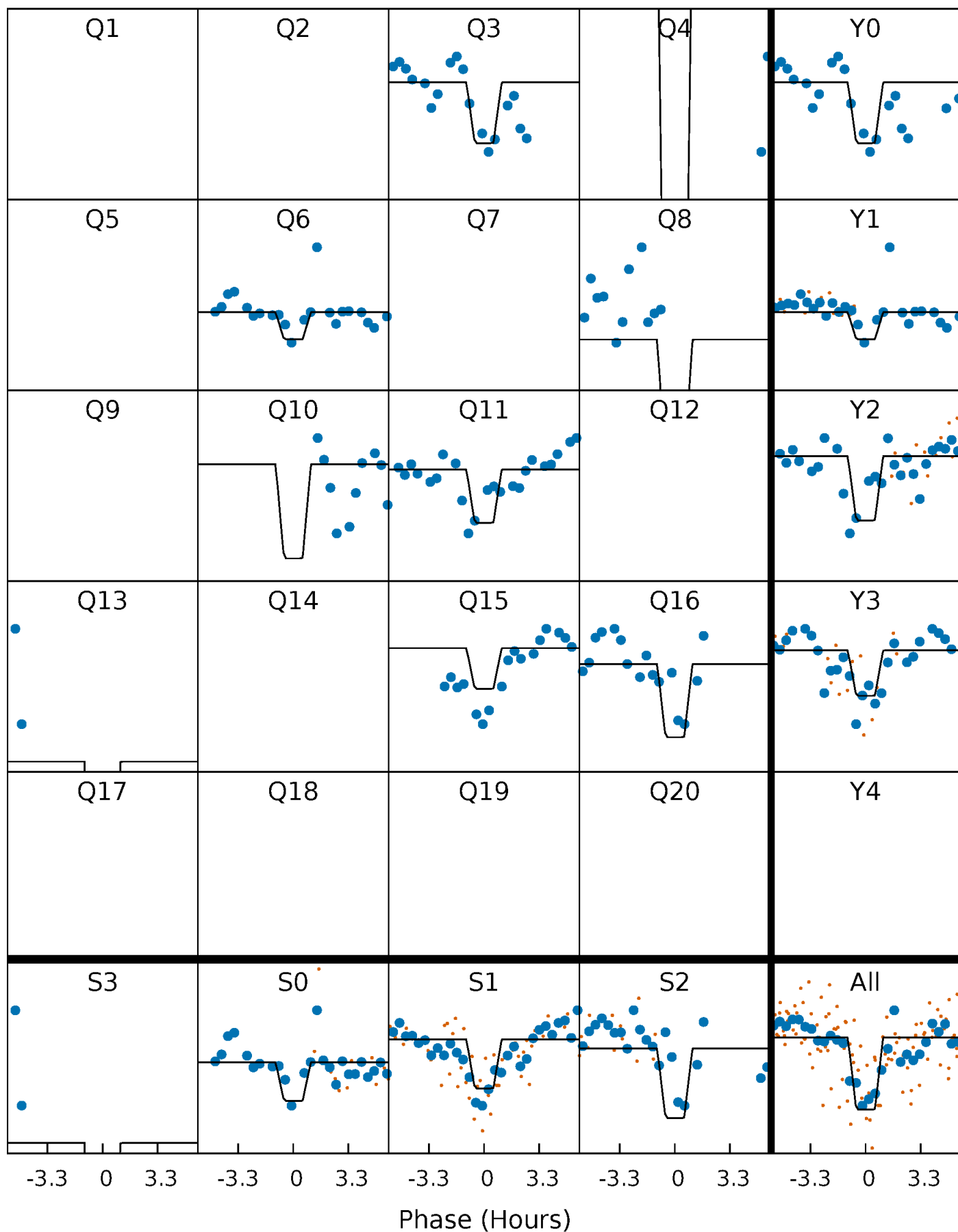
DV Quarter-Phased Transit Curves

TCE 008235991-02 P=158.794298 Days $T_0=282.842142$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

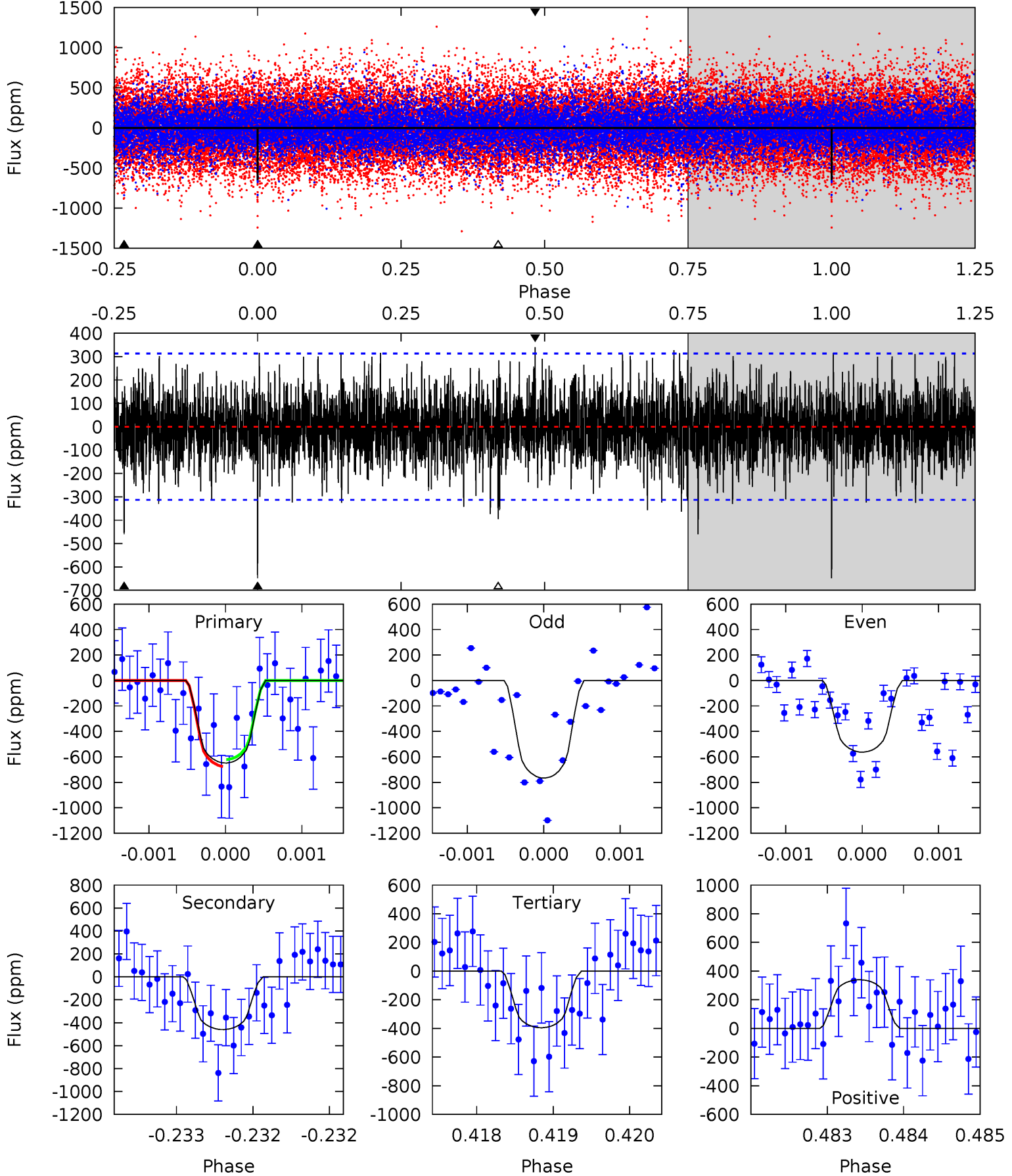
TCE 008235991-02 P=158.794586 Days $T_0=282.833119$ (BKJD)



DV Model-Shift Uniqueness Test

008235991-02, P = 158.794298 Days, E = 124.047844 Days

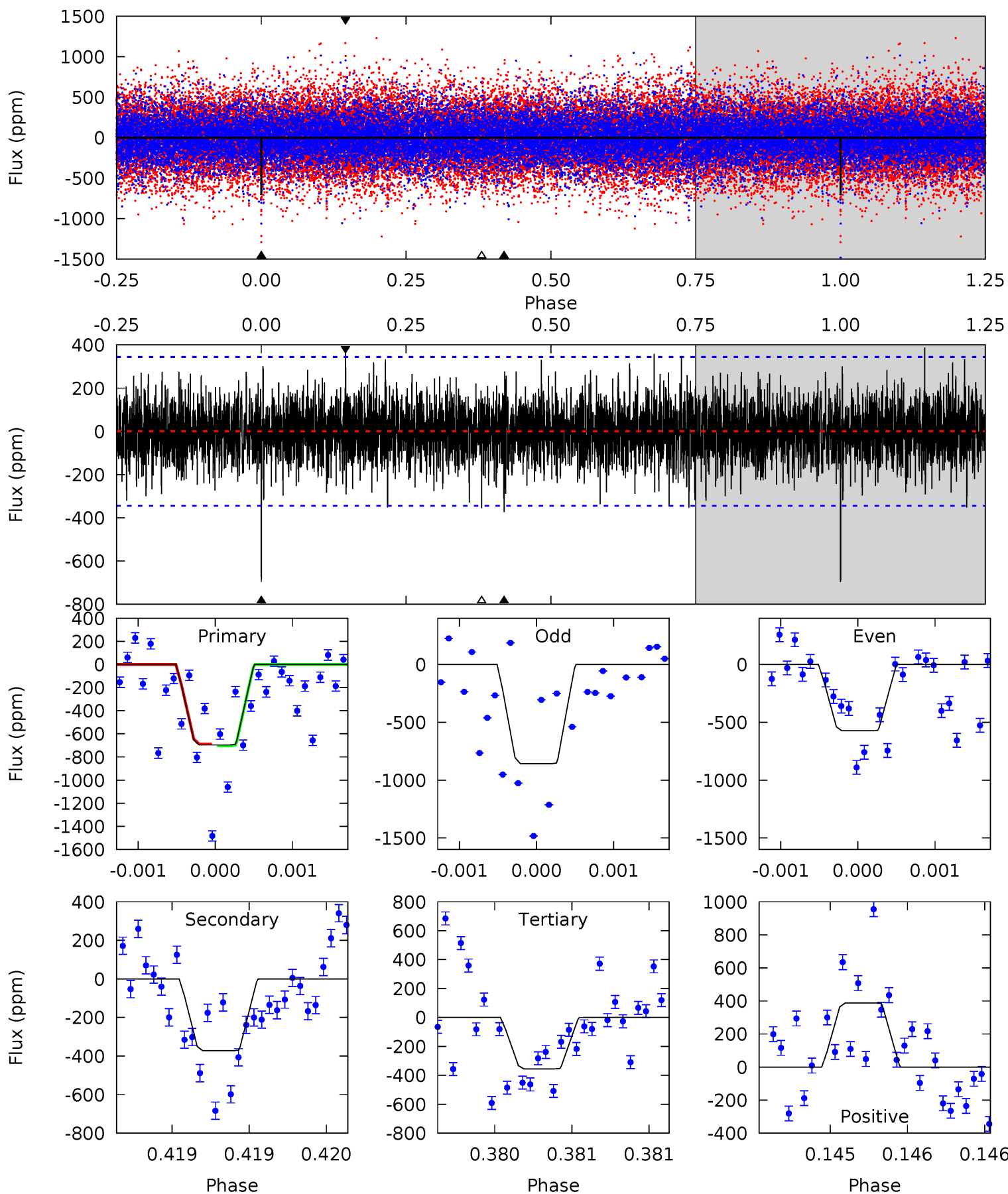
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	8.11	6.98	5.99	5.52	3.39	1.83	4.46	5.44	1.13	2.12	1.76	1.25	0.34	0.48



Alt Model-Shift Uniqueness Test

008235991-02, P = 158.794586 Days, E = 124.038533 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	6.01	5.73	6.25	5.56	3.45	1.61	5.50	4.98	0.28	-0.24	2.29	1.36	0.36	0.13



Stellar Parameters For KIC 008235991

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4984^{+99}_{-109}	$2.954^{+0.030}_{-0.030}$	$-0.340^{+0.200}_{-0.250}$	$6.386^{+0.531}_{-0.911}$	$1.339^{+0.219}_{-0.356}$	$0.007^{+0.001}_{-0.001}$
	+2%/-2%	+1%/-1%	+59%/-74%	+8%/-14%	+16%/-27%	+20%/-11%
Source	PHO1	AST9	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 008235991-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-460 ± 57	$21.79^{+16.74}_{-13.75}$	977^{+24}_{-27}	4292^{+2390}_{-790}	213^{+1393}_{-146}
Alt.	-373 ± 62	$22.84^{+18.38}_{-13.48}$	977^{+25}_{-27}	4085^{+1768}_{-737}	163^{+728}_{-114}

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 $A_{obs} \gg 1.0$

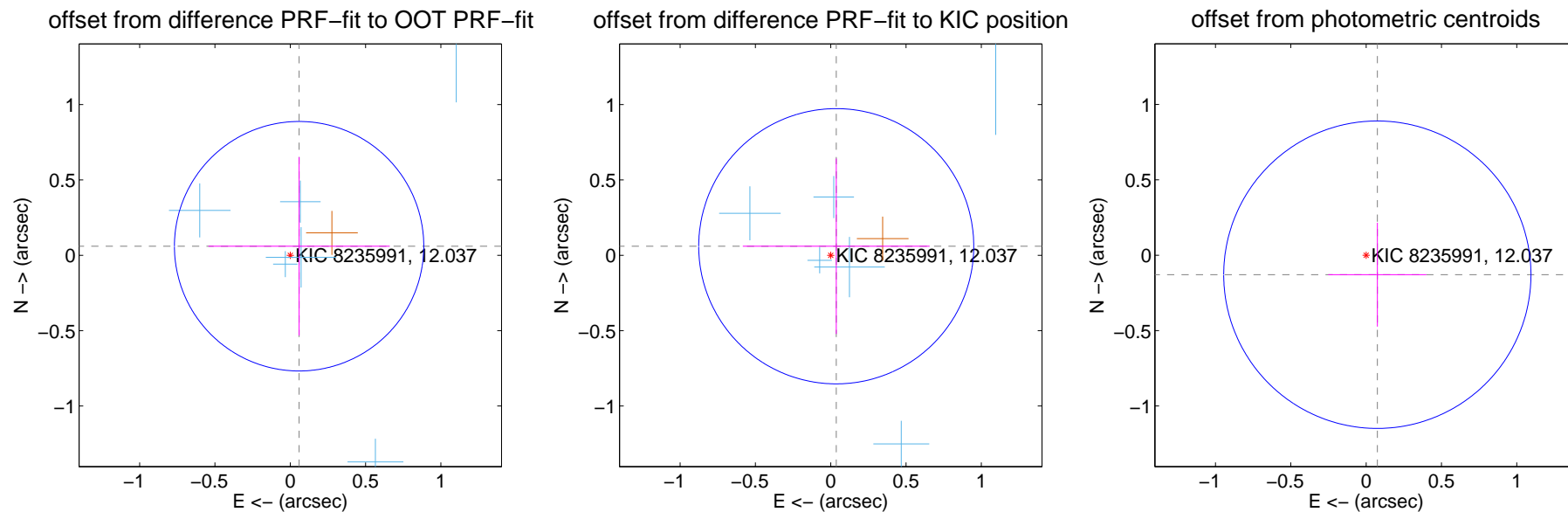
DV Centroid Data

Supplemental centroid analysis for 008235991-02. Kepler magnitude: 12.04. Transit SNR 6.64

There are 6 quarters with good PRF difference image offsets

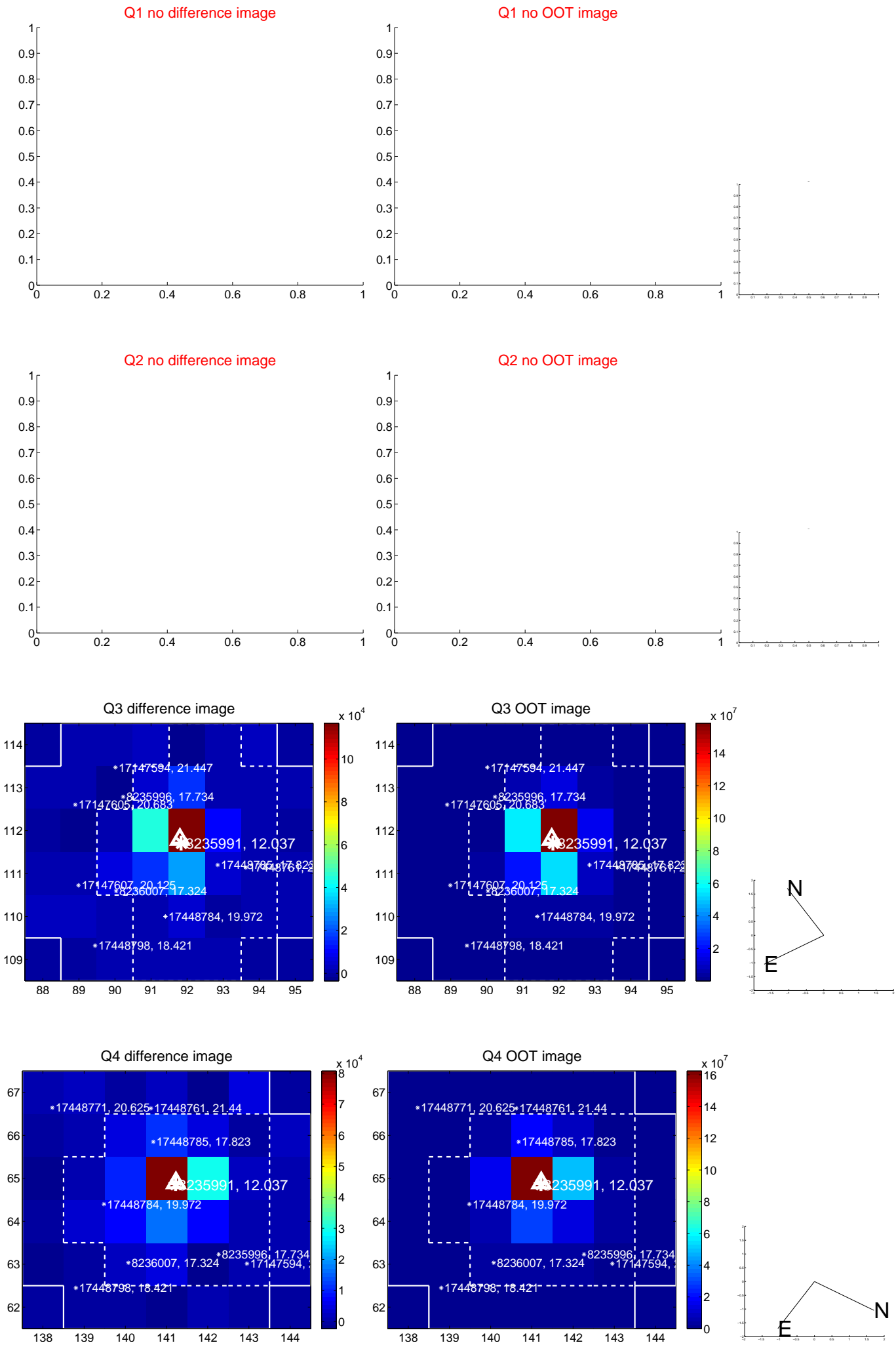
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.084 ± 0.276	0.30	-0.059 ± 0.602	0.060 ± 0.592
PRF-fit source offset from KIC position	0.070 ± 0.304	0.23	-0.037 ± 0.620	0.060 ± 0.582
photometric centroid source offset	0.15 ± 0.34	0.44	-0.07 ± 0.33	-0.13 ± 0.34

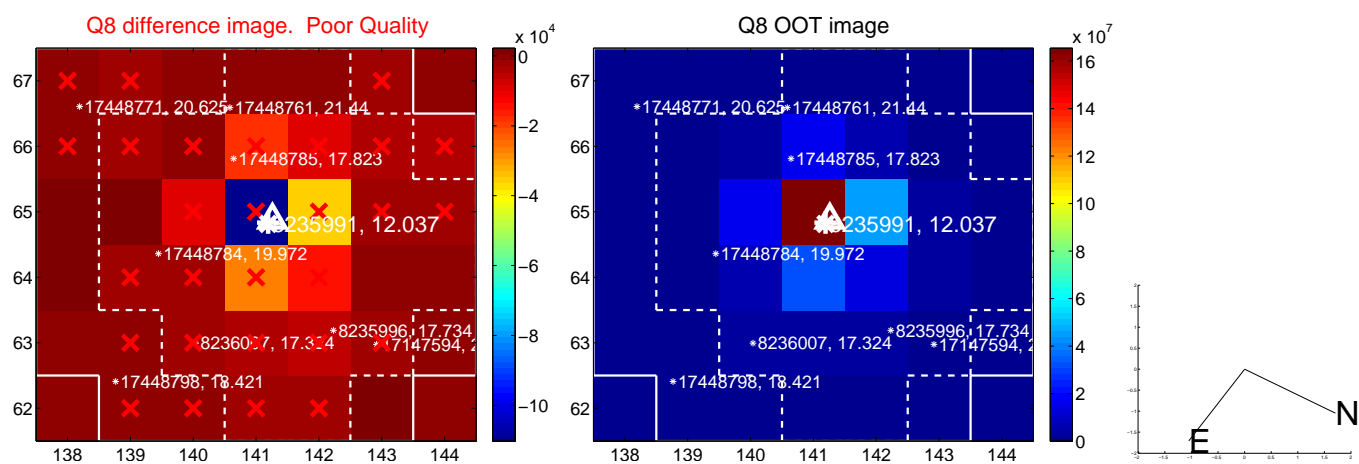
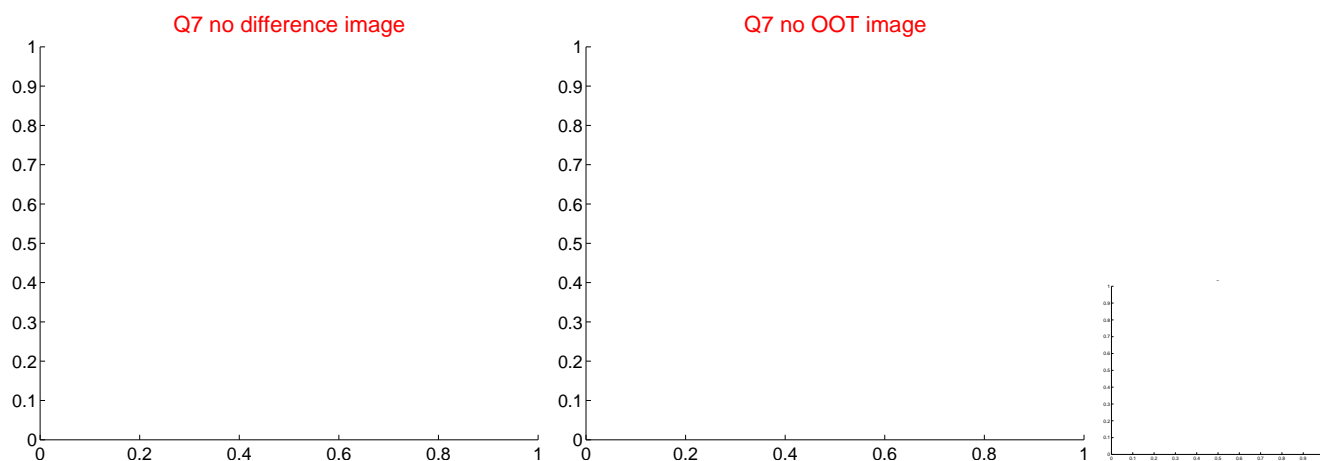
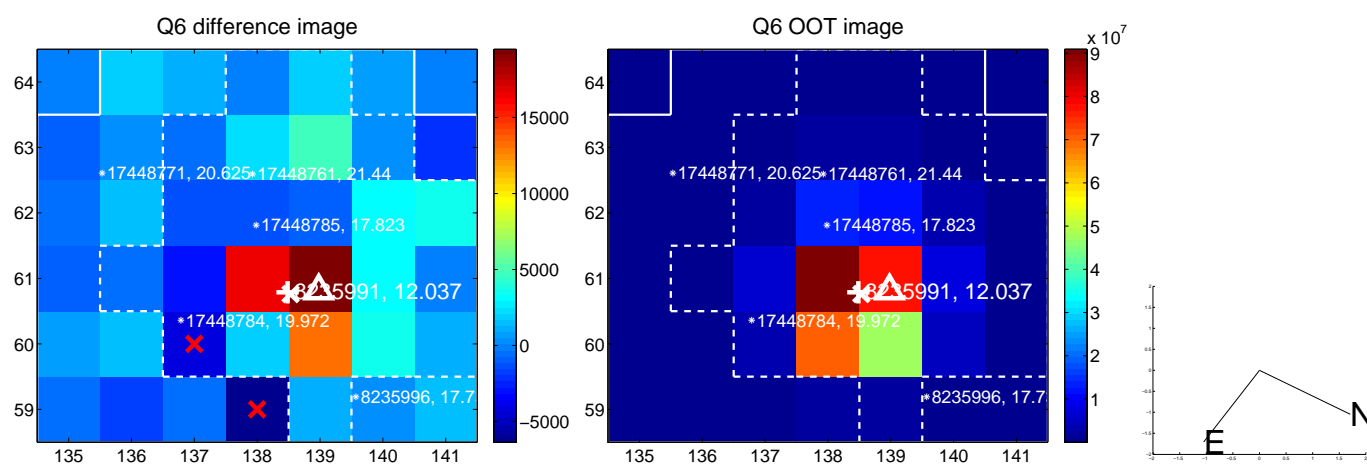
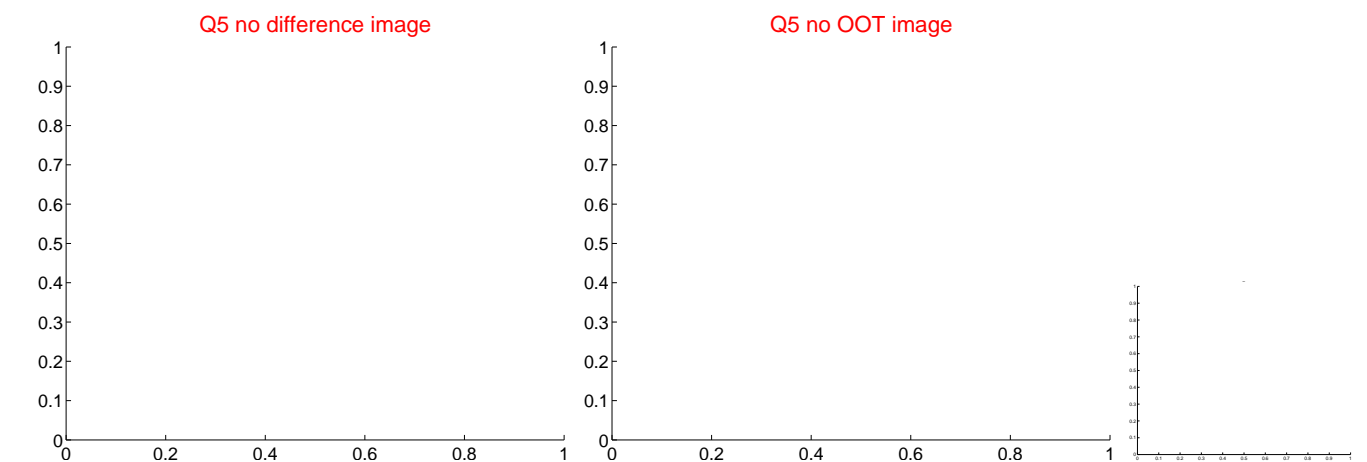


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

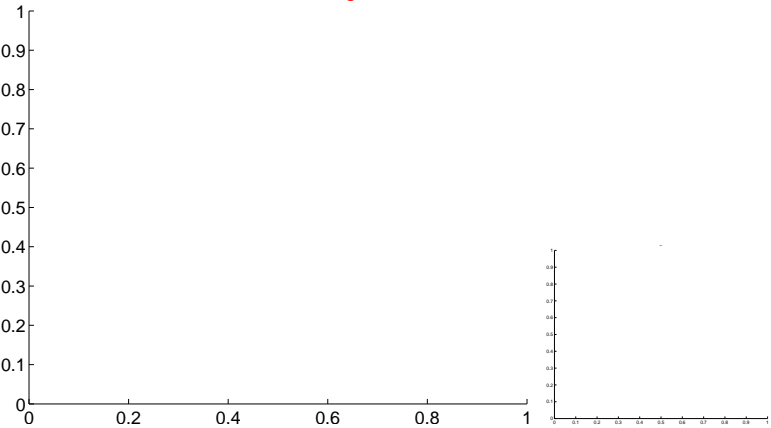


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

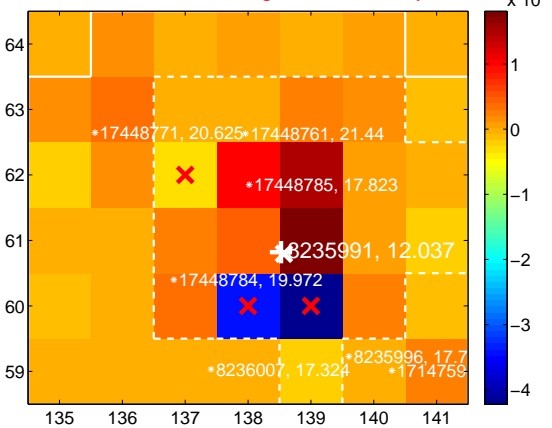
Q9 no difference image



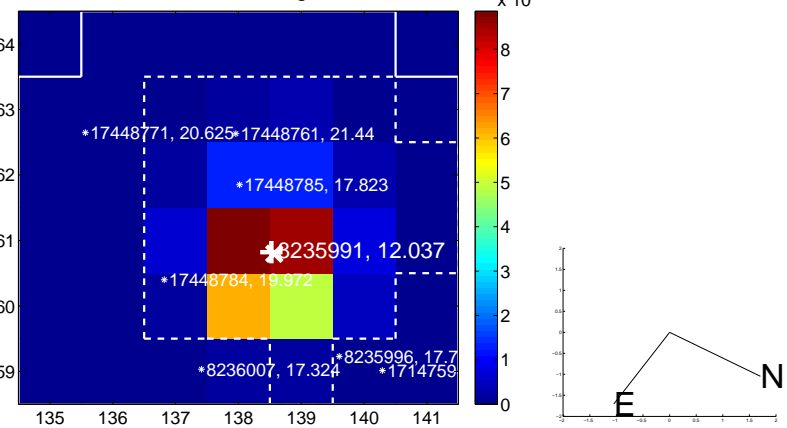
Q9 no OOT image



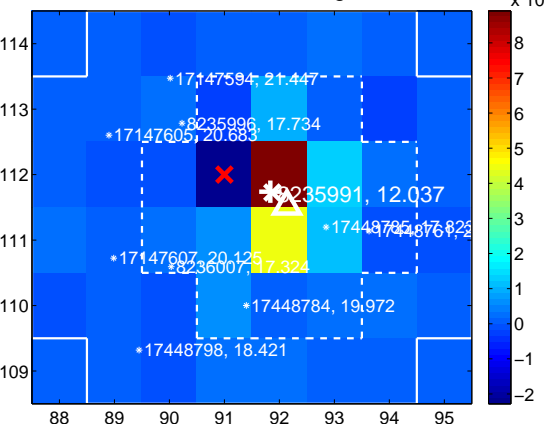
Q10 difference image. Poor Quality



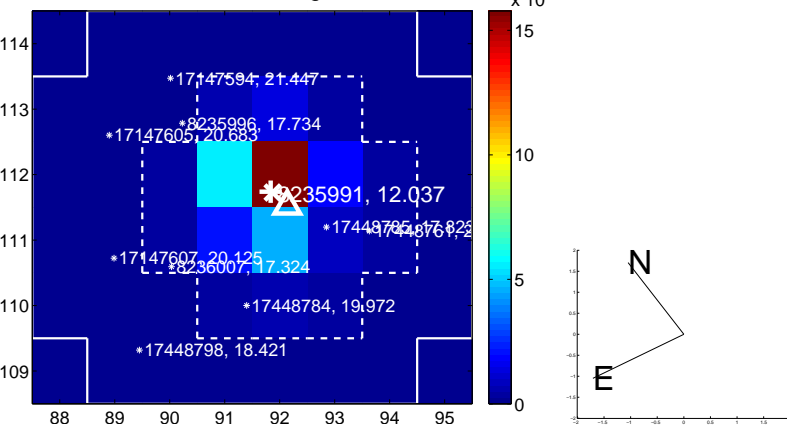
Q10 OOT image



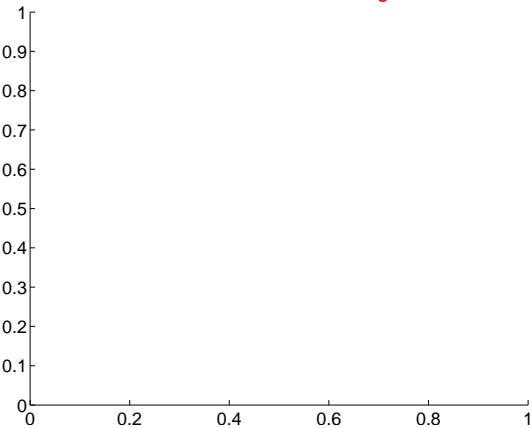
Q11 difference image



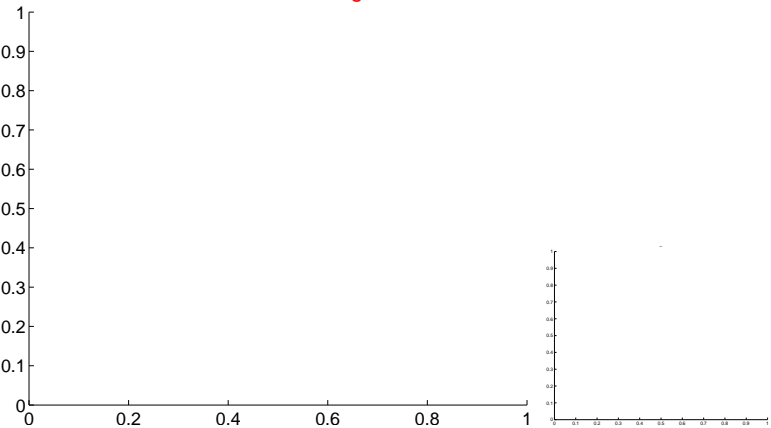
Q11 OOT image



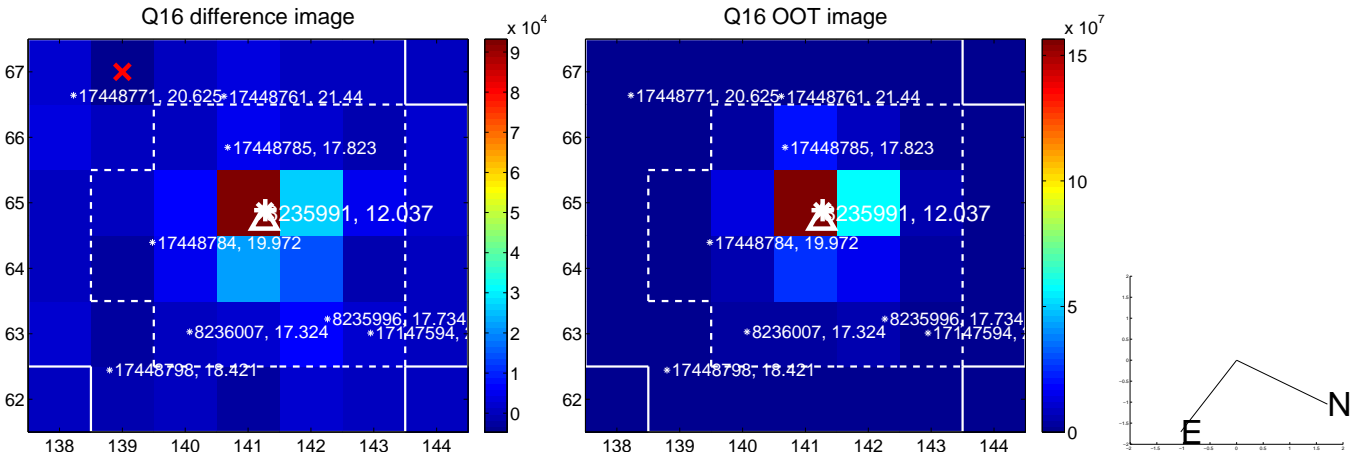
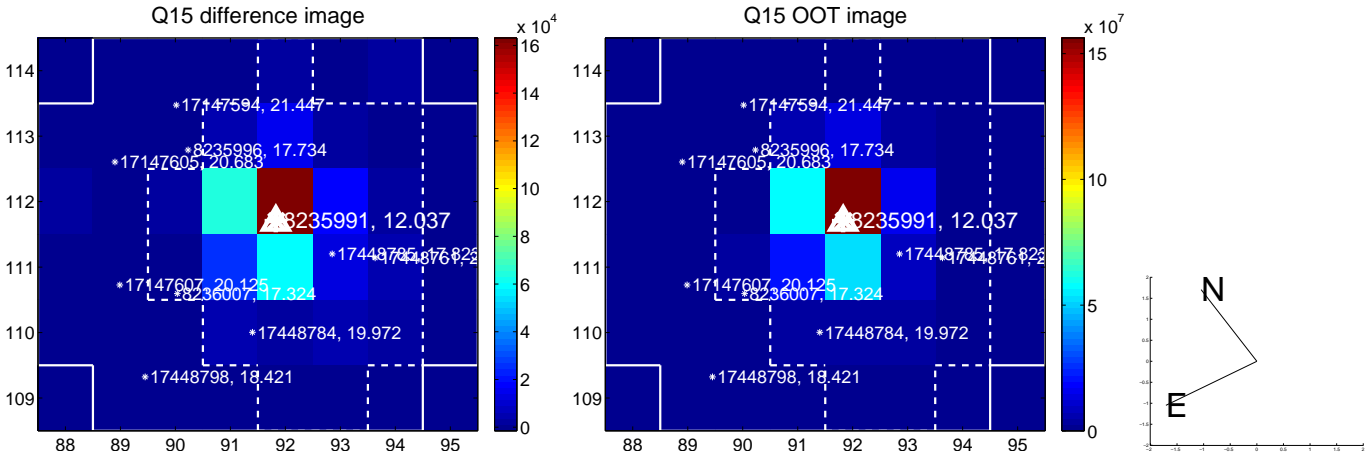
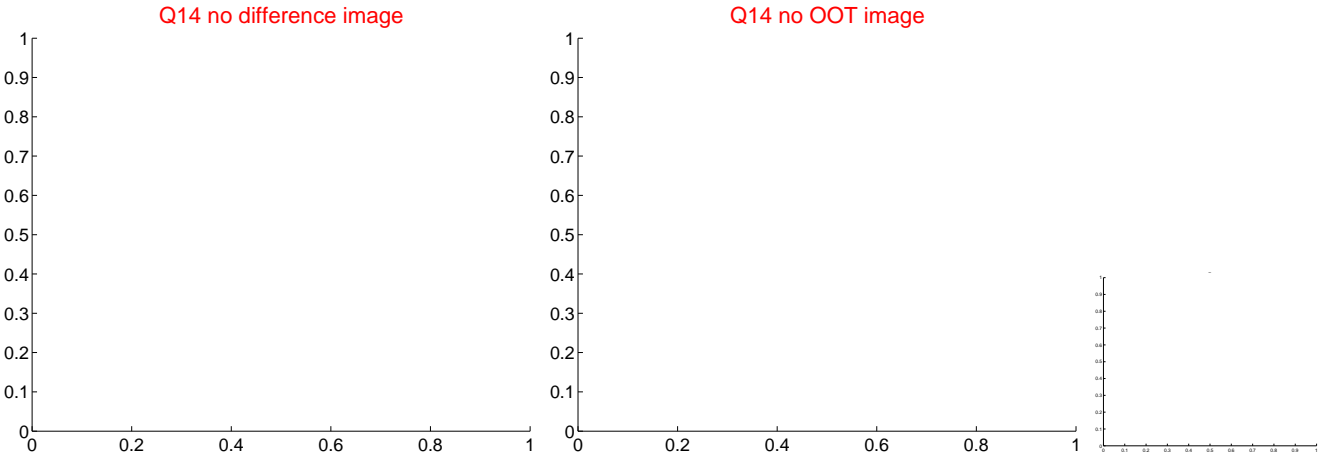
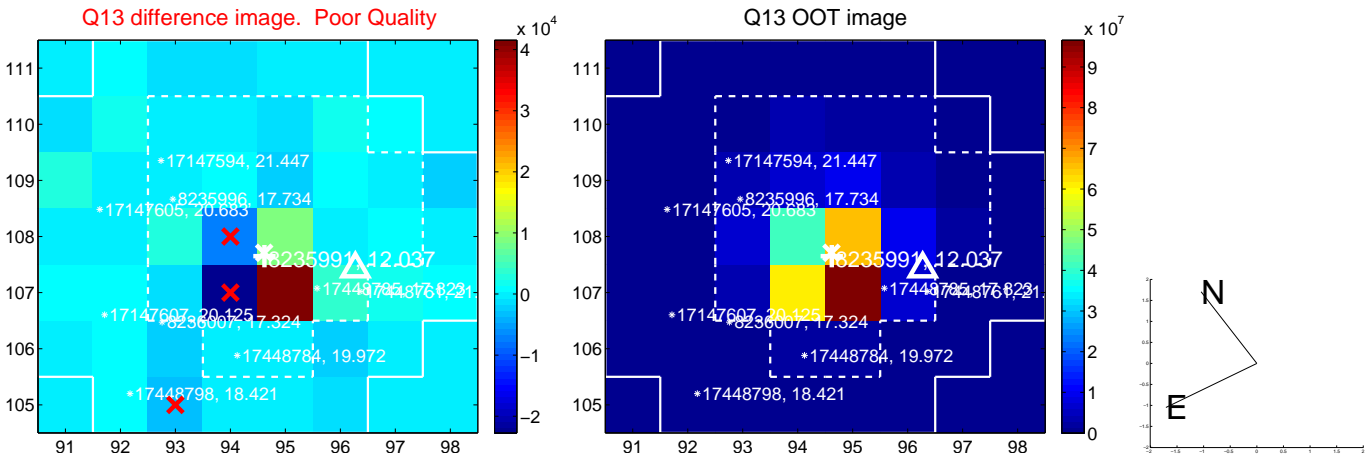
Q12 no difference image



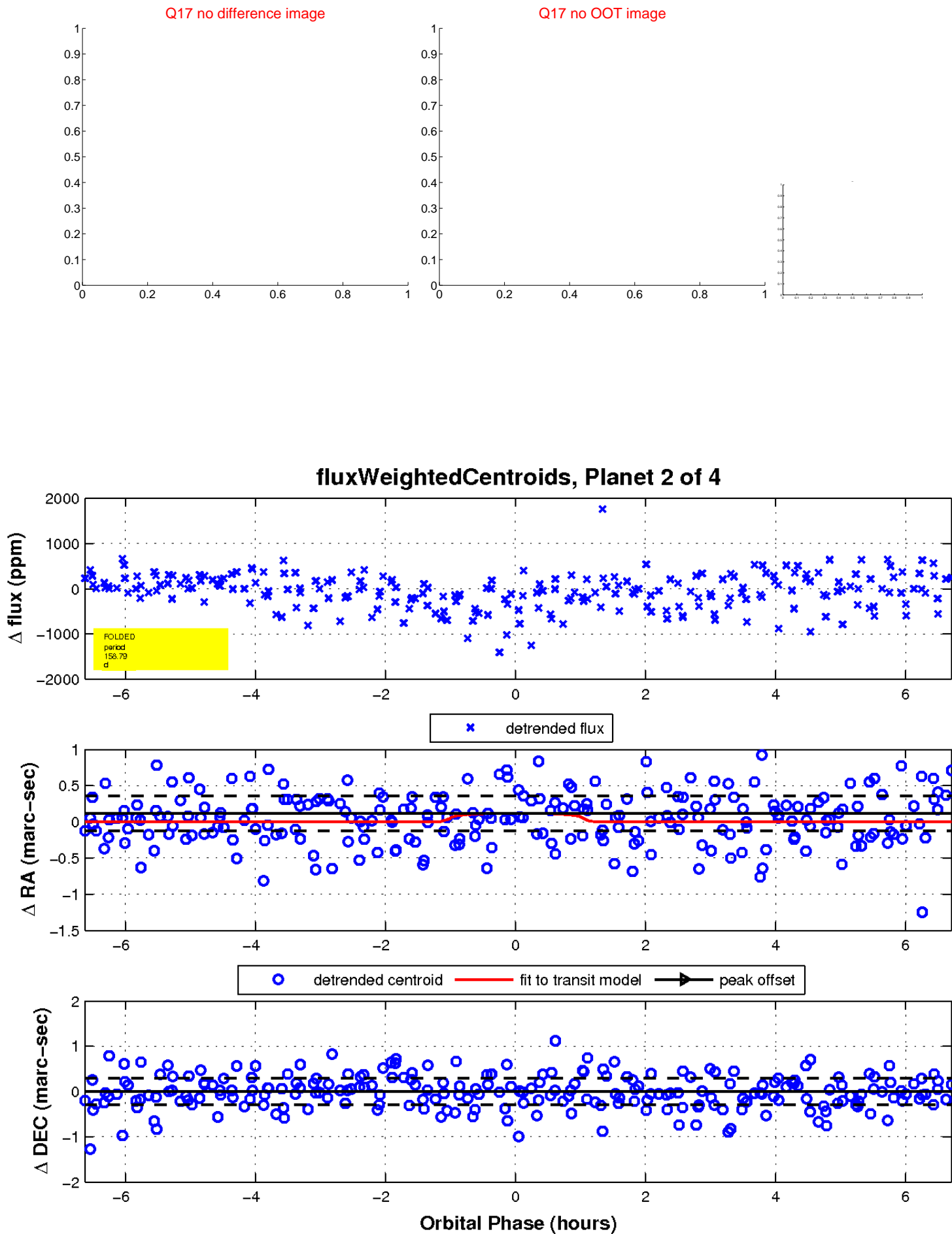
Q12 no OOT image



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

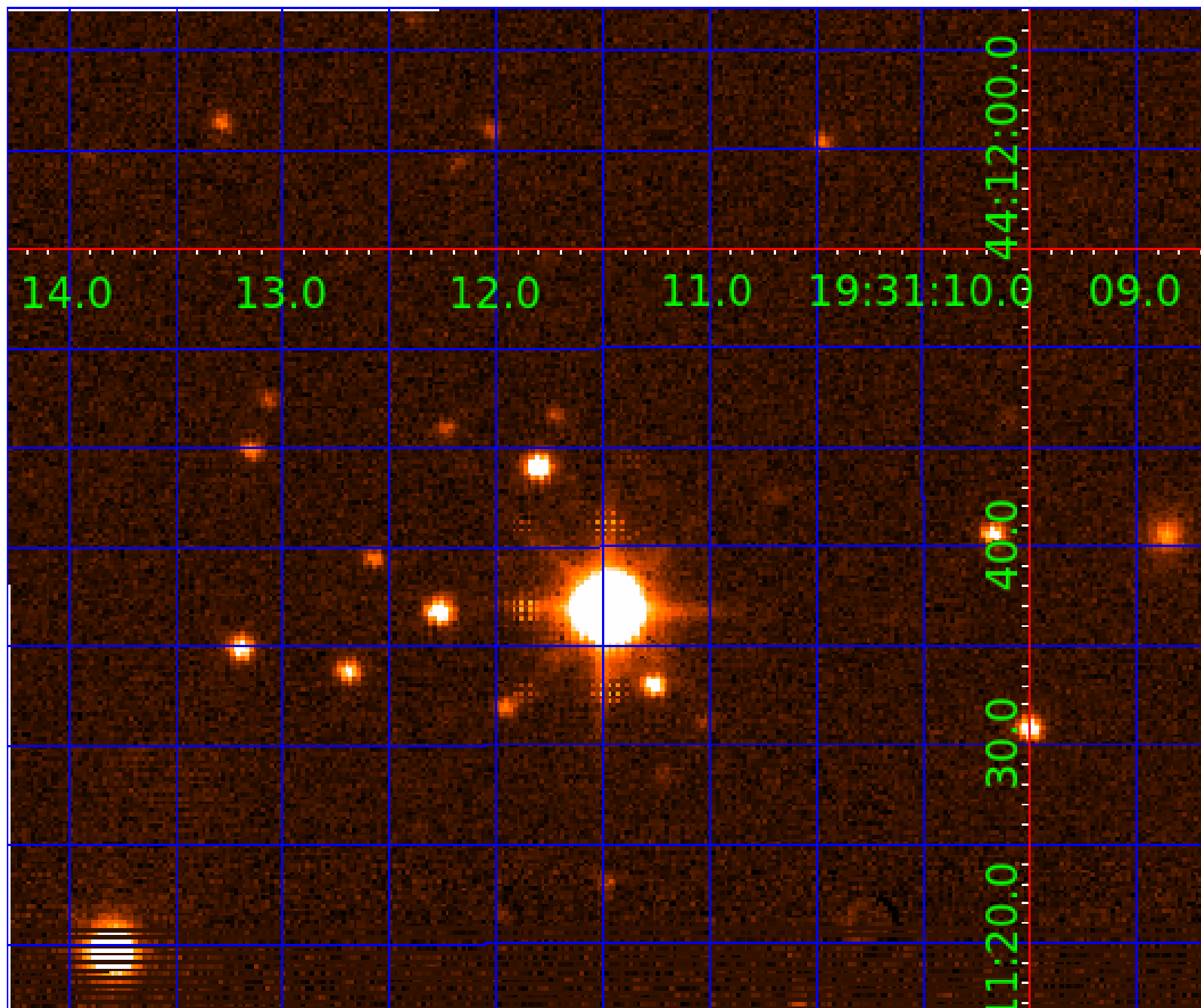


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008235991

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})
008235991-01	OBS	No	1.099824	132.535920	1.5	3.769	7.8	0.3	6.39	4984	0.92	0.00
008235991-02	OBS	No	158.794298	282.842142	583.9	2.245	8.1	6.6	6.39	4984	17.11	56.35
008235991-04	OBS	No	60.303431	156.770267	474.9	3.111	7.6	8.0	6.39	4984	16.74	204.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008235991-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008235991-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT
008235991-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

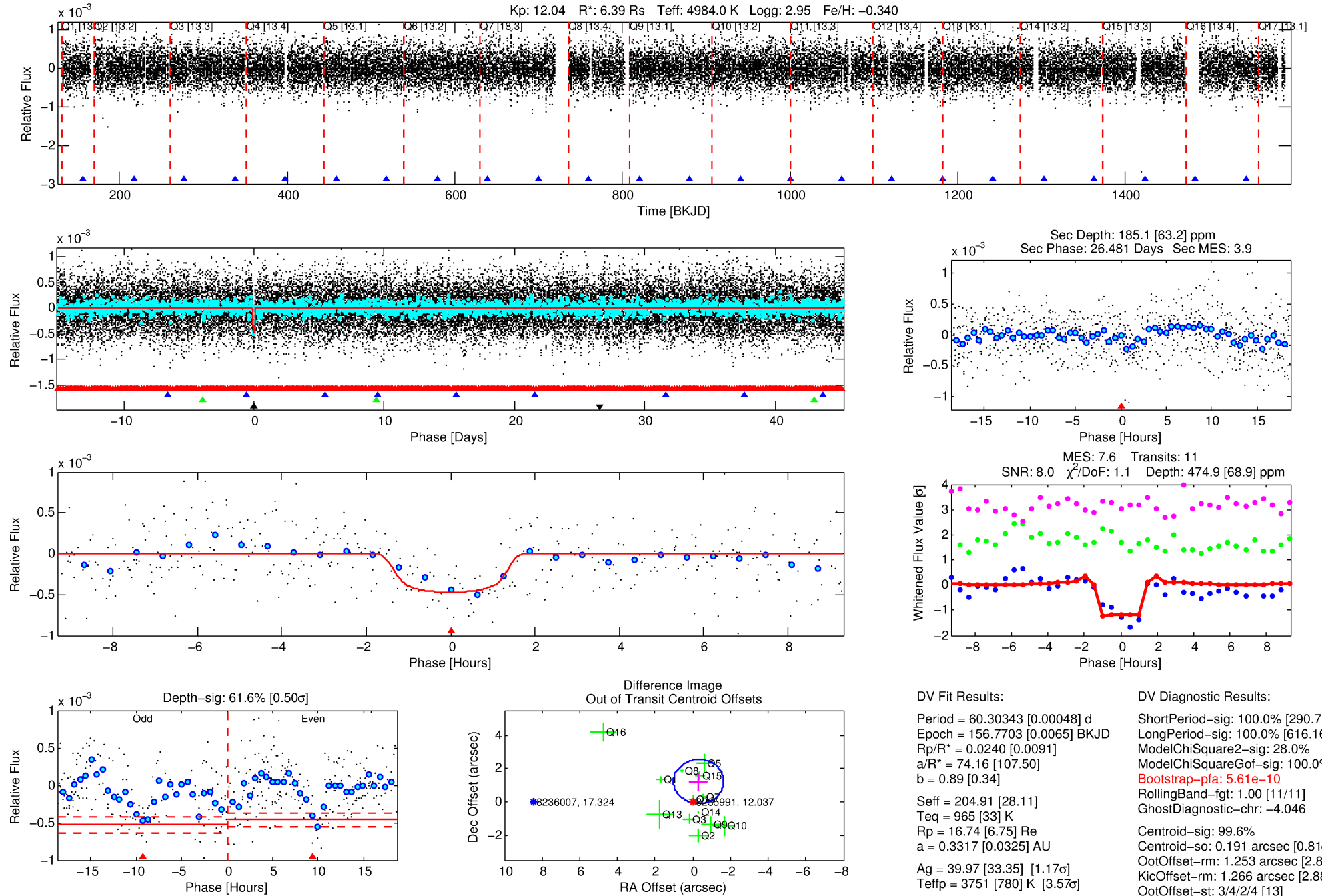
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008235991-04

No Significant Match Found

DV One-Page Summary

KIC: 8235991 Candidate: 4 of 4 Period: 60.303 d



DV Fit Results:

Period = 60.30343 [0.00048] d
Epoch = 156.7703 [0.0065] BKJD
Rp/R* = 0.0240 [0.0091]
a/R* = 74.16 [107.50]
b = 0.89 [0.34]
Seff = 204.91 [28.11]
Teff = 965 [33] K
Rp = 16.74 [6.75] Re
a = 0.3317 [0.0325] AU
Ag = 39.97 [33.35] [1.17 σ]
Teffp = 3751 [780] K [3.57 σ]

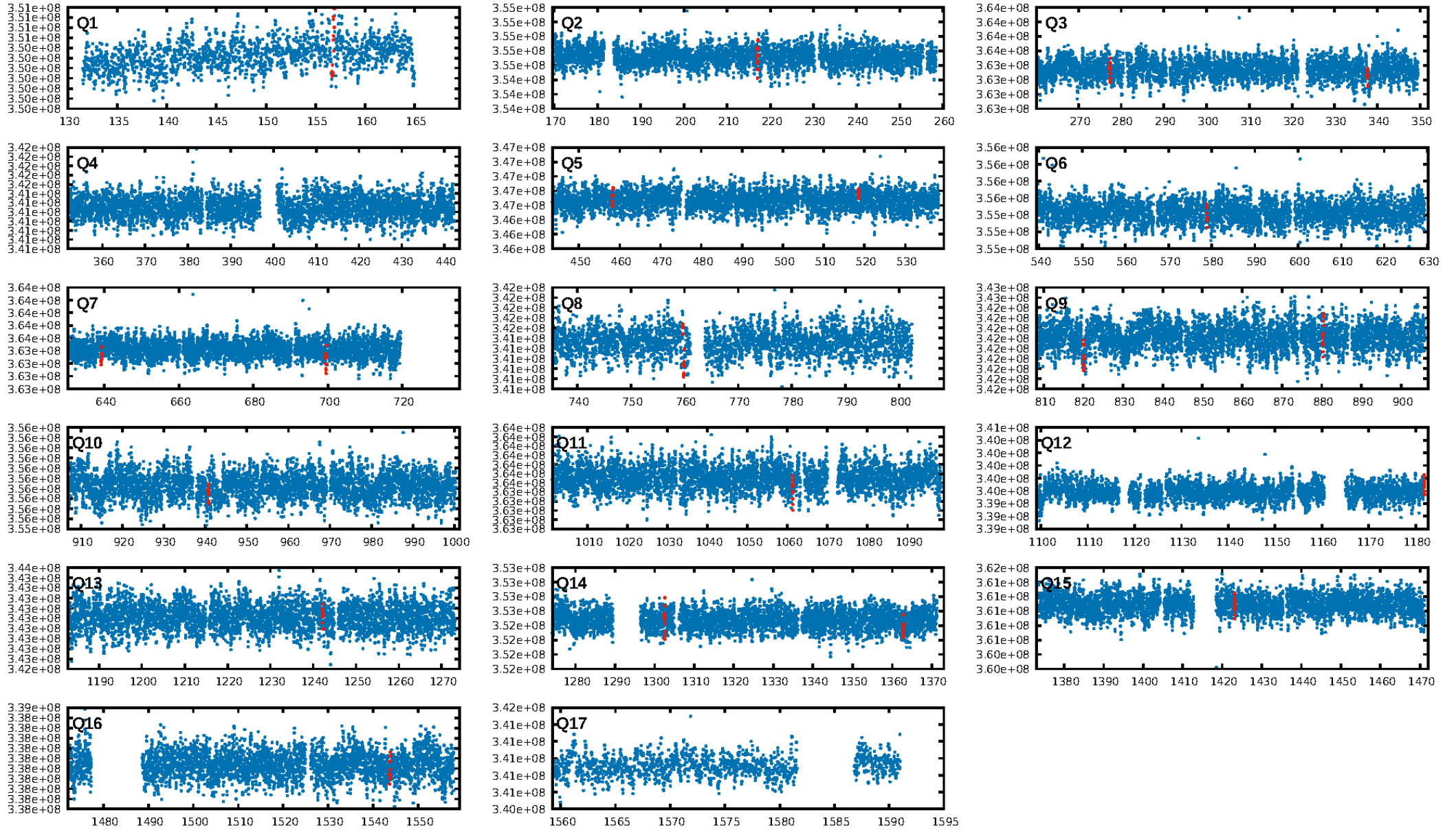
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [290.73 σ]
LongPeriod-sig: 100.0% [616.16 σ]
ModelChiSquare2-sig: 28.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.61e-10
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: -4.046
Centroid-sig: 99.6%
Centroid-so: 0.191 arcsec [0.81 σ]
OotOffset-rm: 1.253 arcsec [2.83 σ]
KicOffset-rm: 1.266 arcsec [2.88 σ]
OotOffset-st: 3/4/2/4 [13]
KicOffset-st: 3/4/2/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 0.36 [5/14]

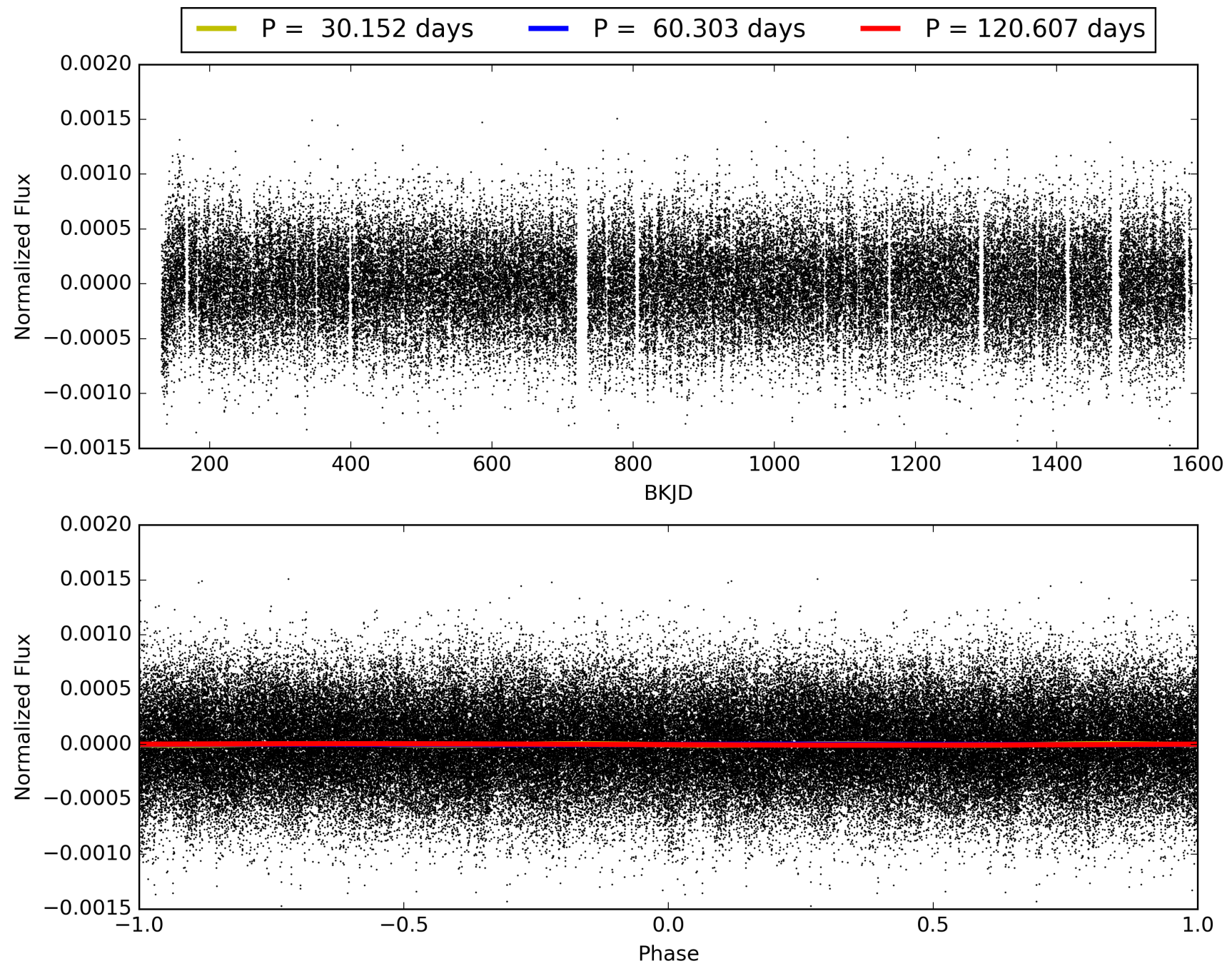
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:39:21 Z

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

TCE 008235991-04, PDC Light Curves

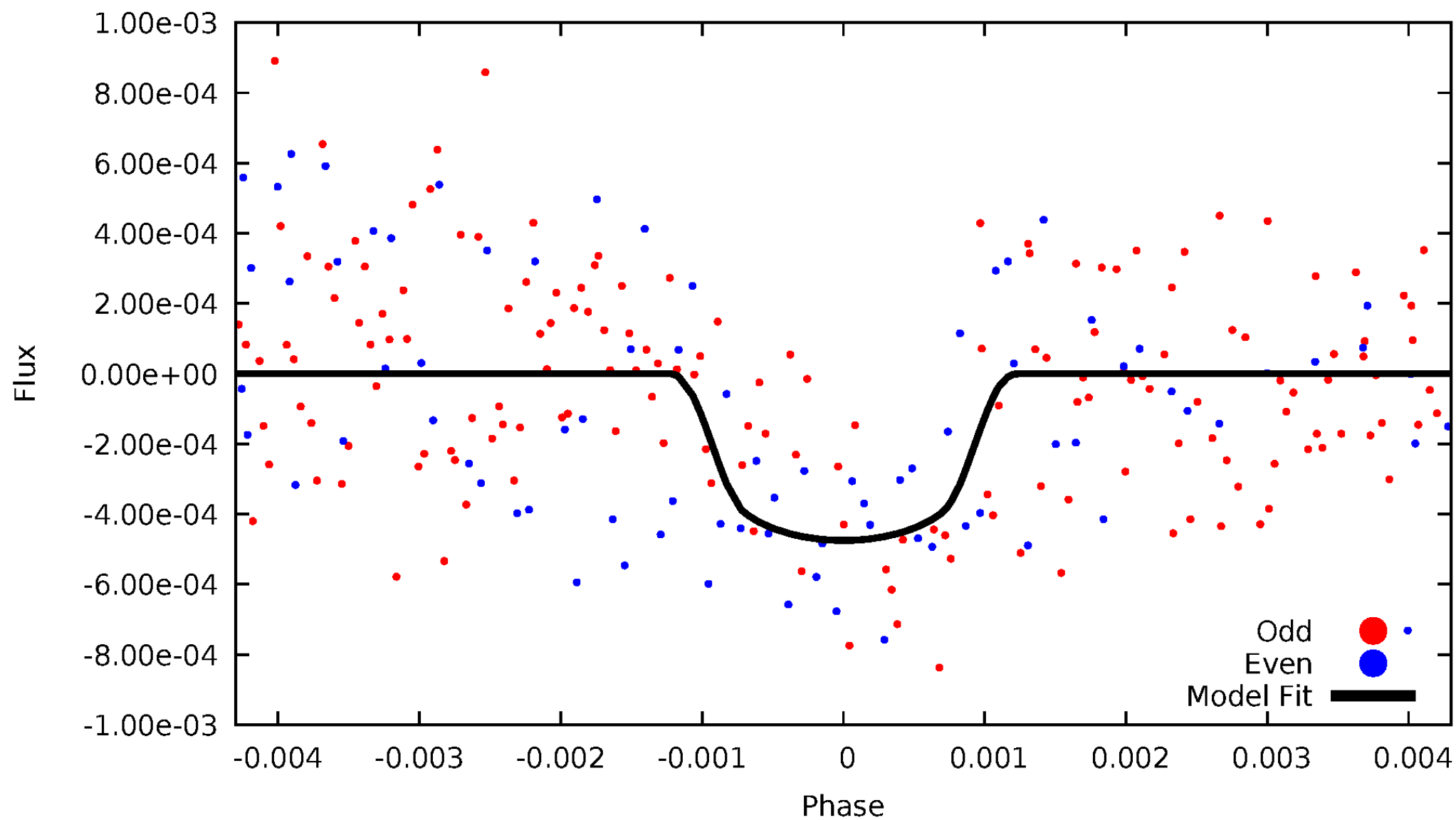


TCE 008235991-04



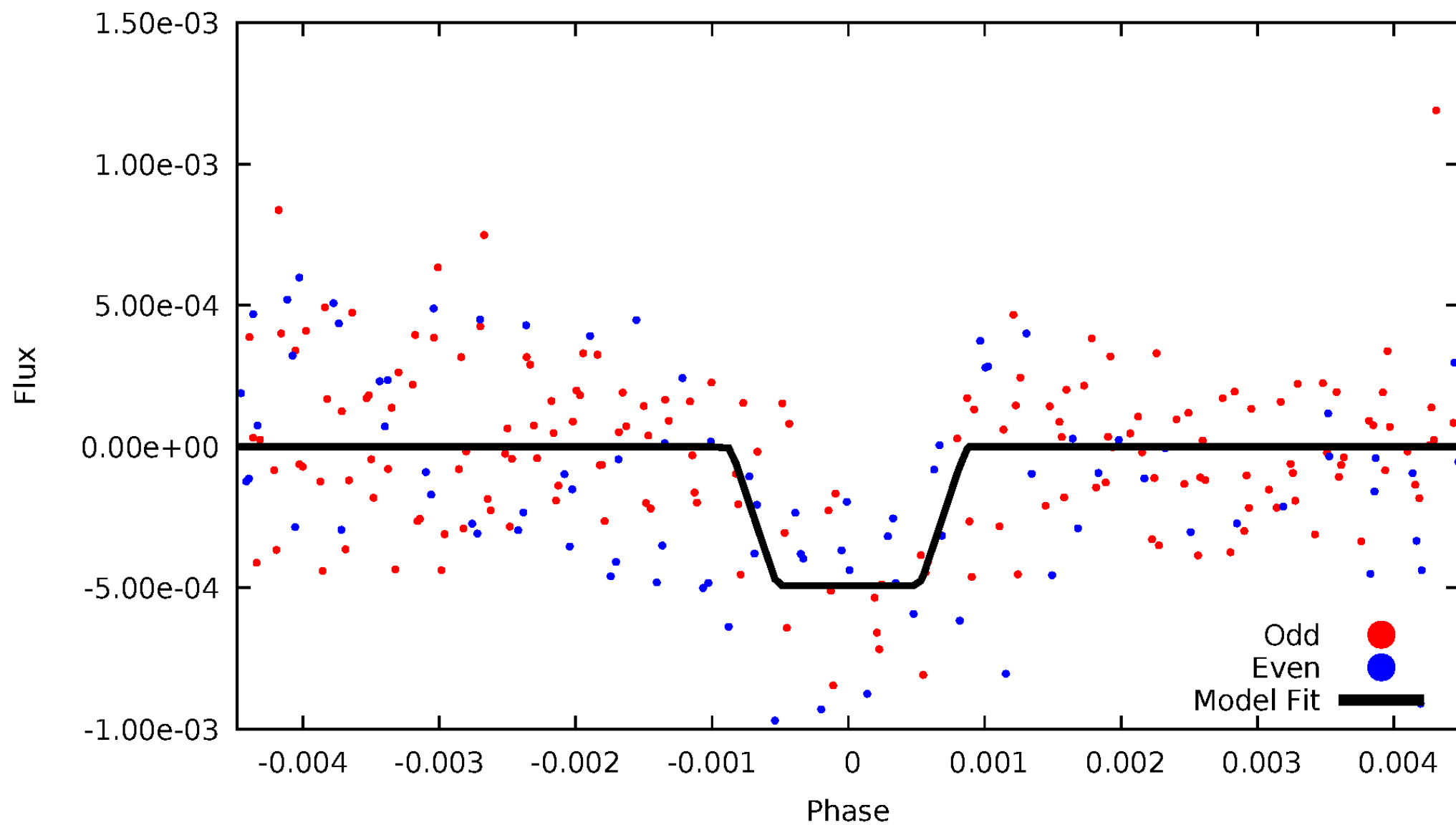
DV Odd/Even

TCE 008235991-04



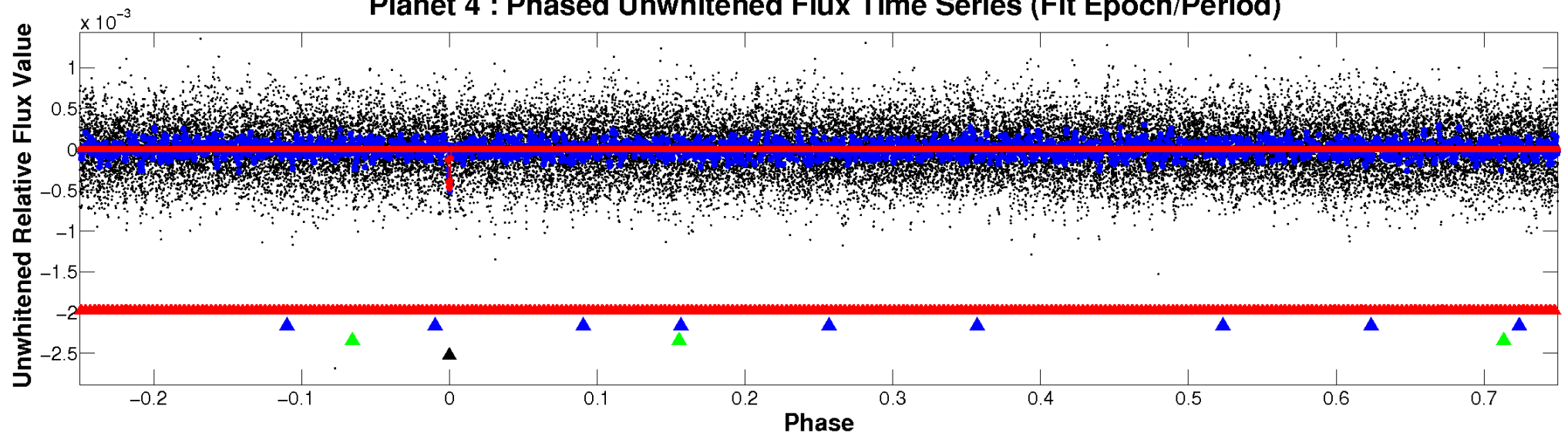
ALT Odd/Even

TCE 008235991-04

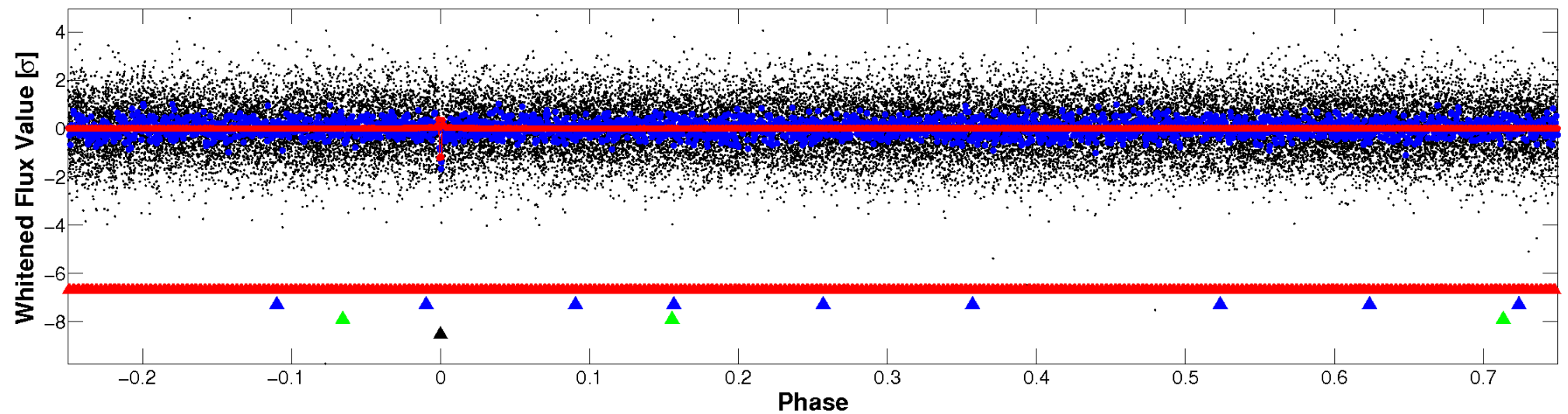


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

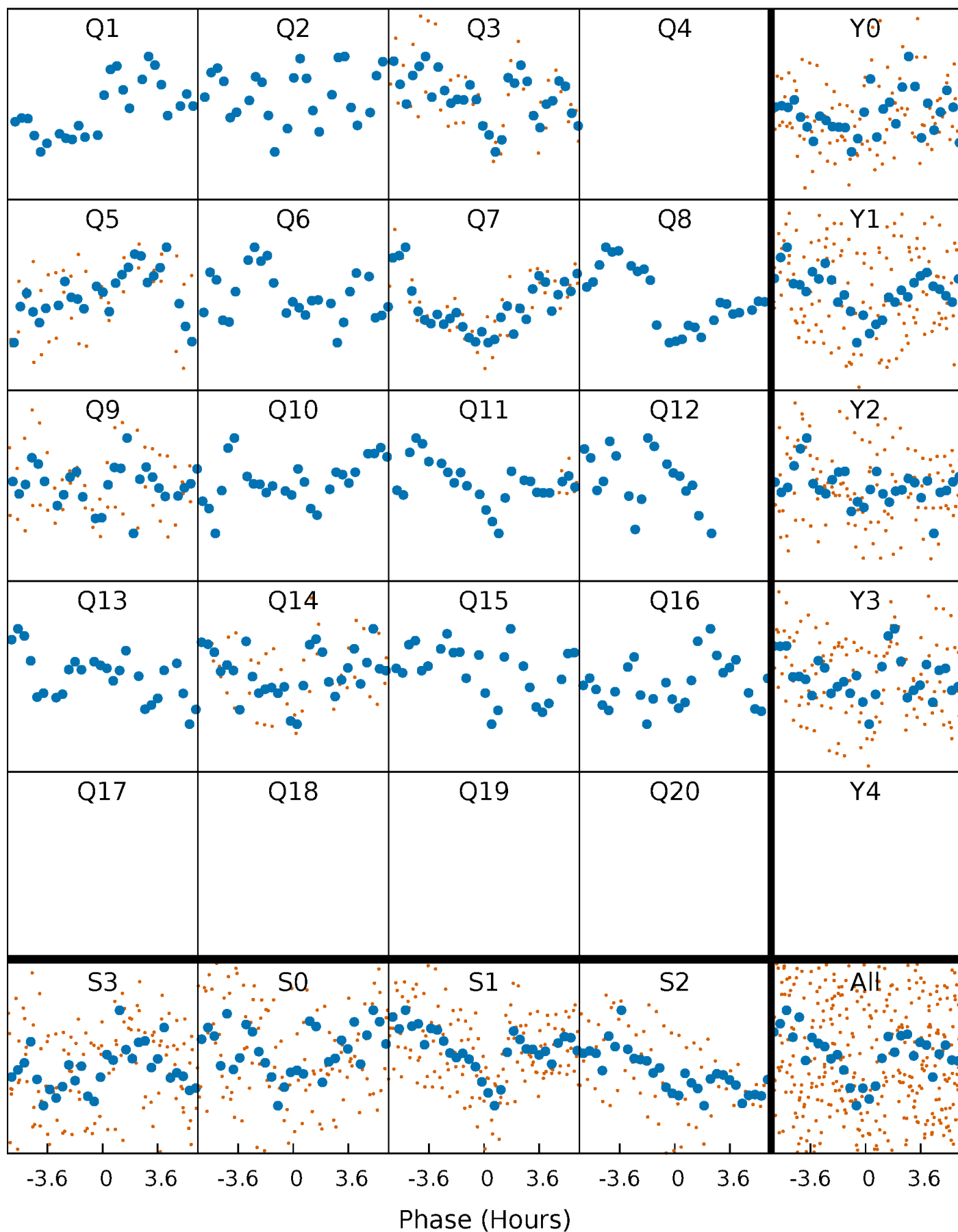


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



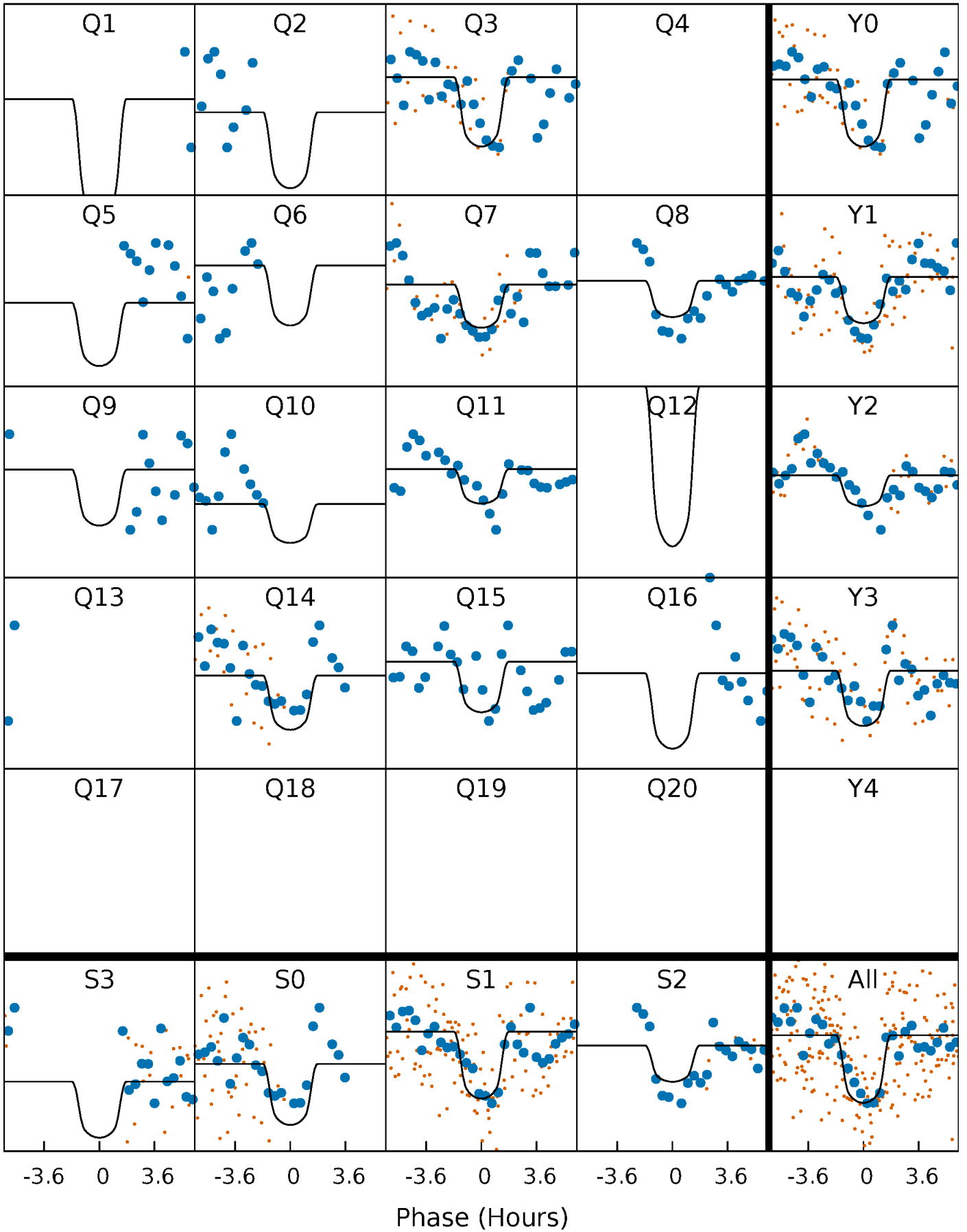
PDC Quarter-Phased Transit Curves

TCE 008235991-04 P= 60.303431 Days $T_0=156.770267$ (BKJD)



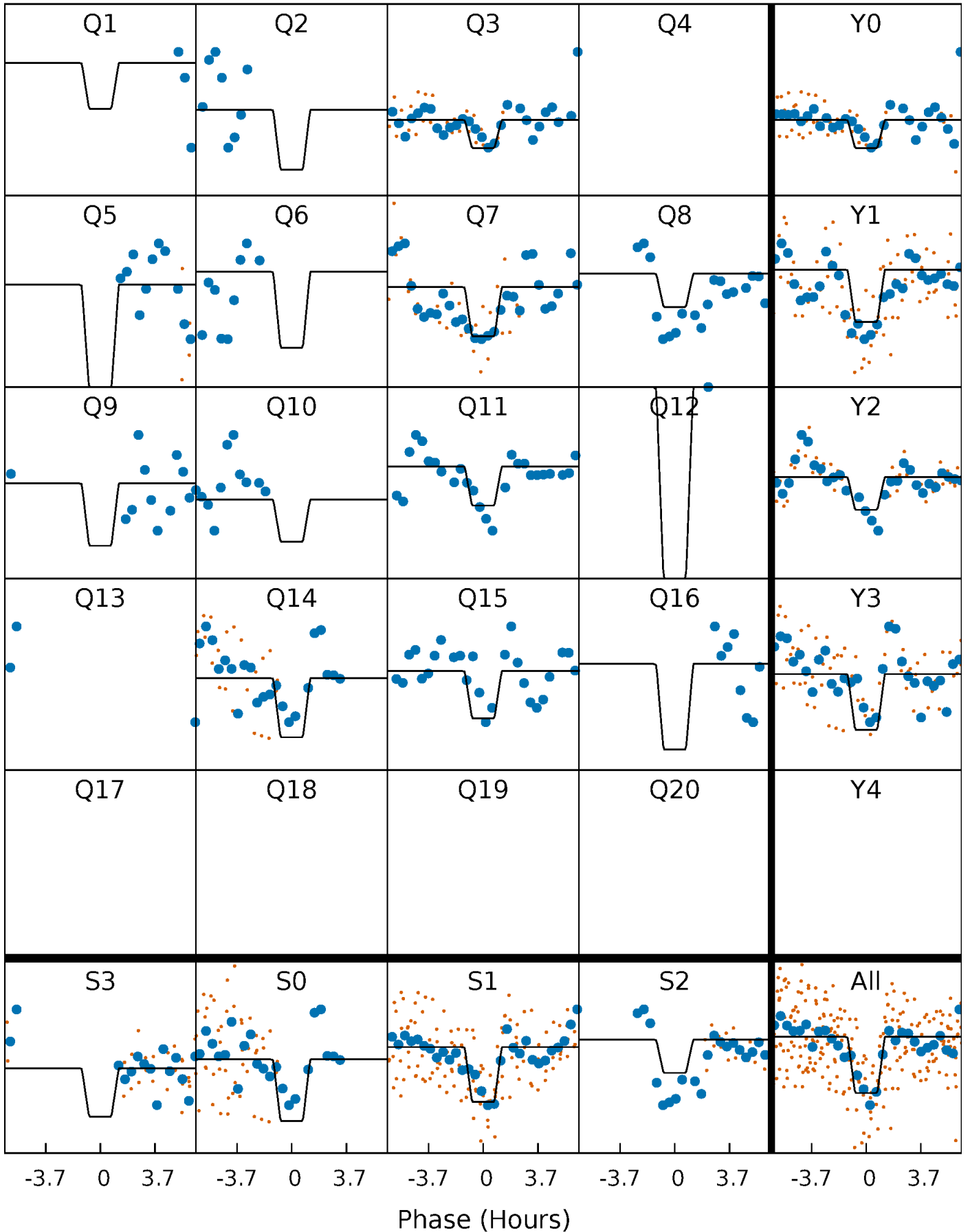
DV Quarter-Phased Transit Curves

TCE 008235991-04 P= 60.303431 Days $T_0=156.770267$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

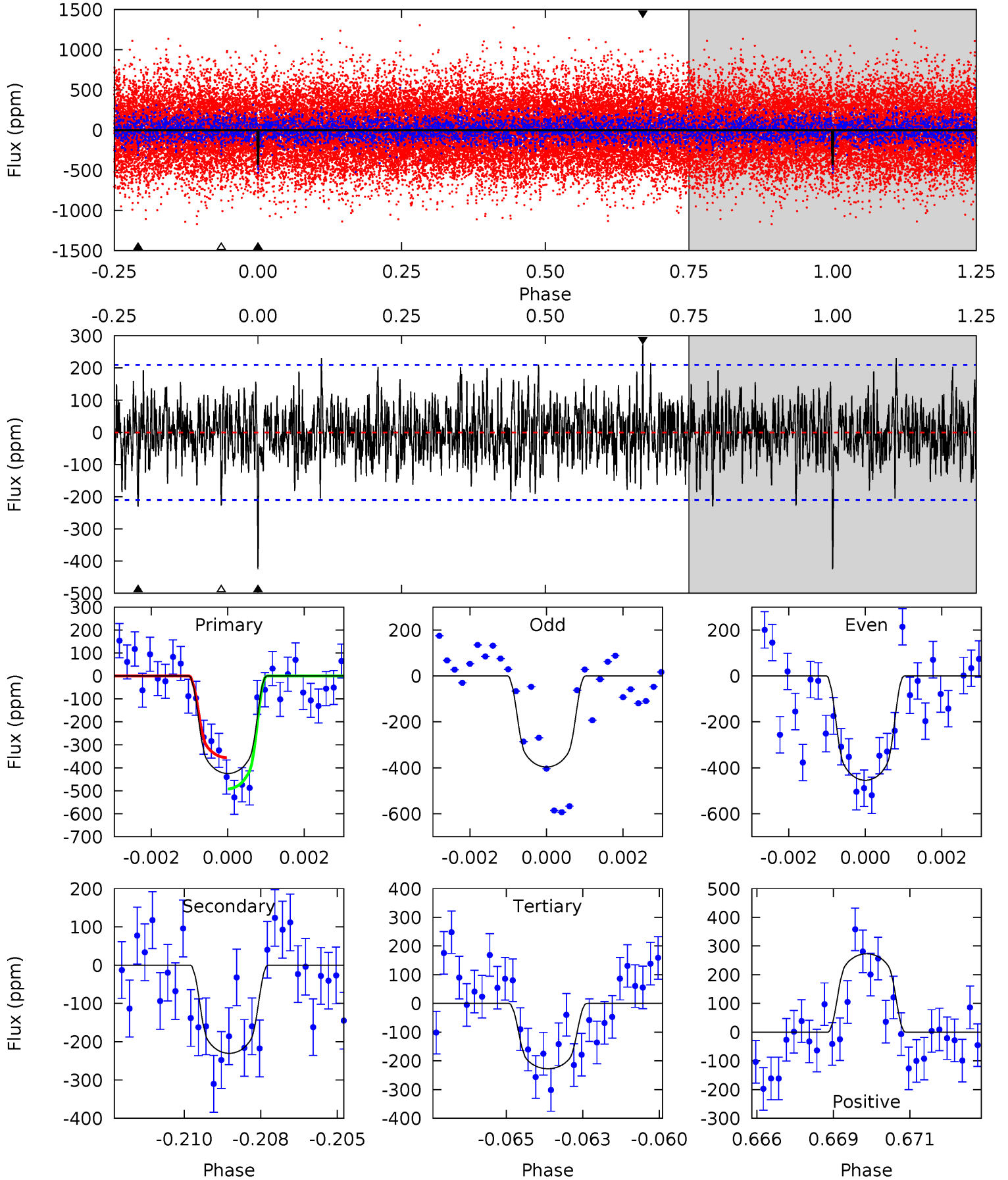
TCE 008235991-04 $P = 60.303198$ Days $T_0 = 156.781652$ (BKJD)



DV Model-Shift Uniqueness Test

008235991-04, P = 60.303431 Days, E = 96.466836 Days

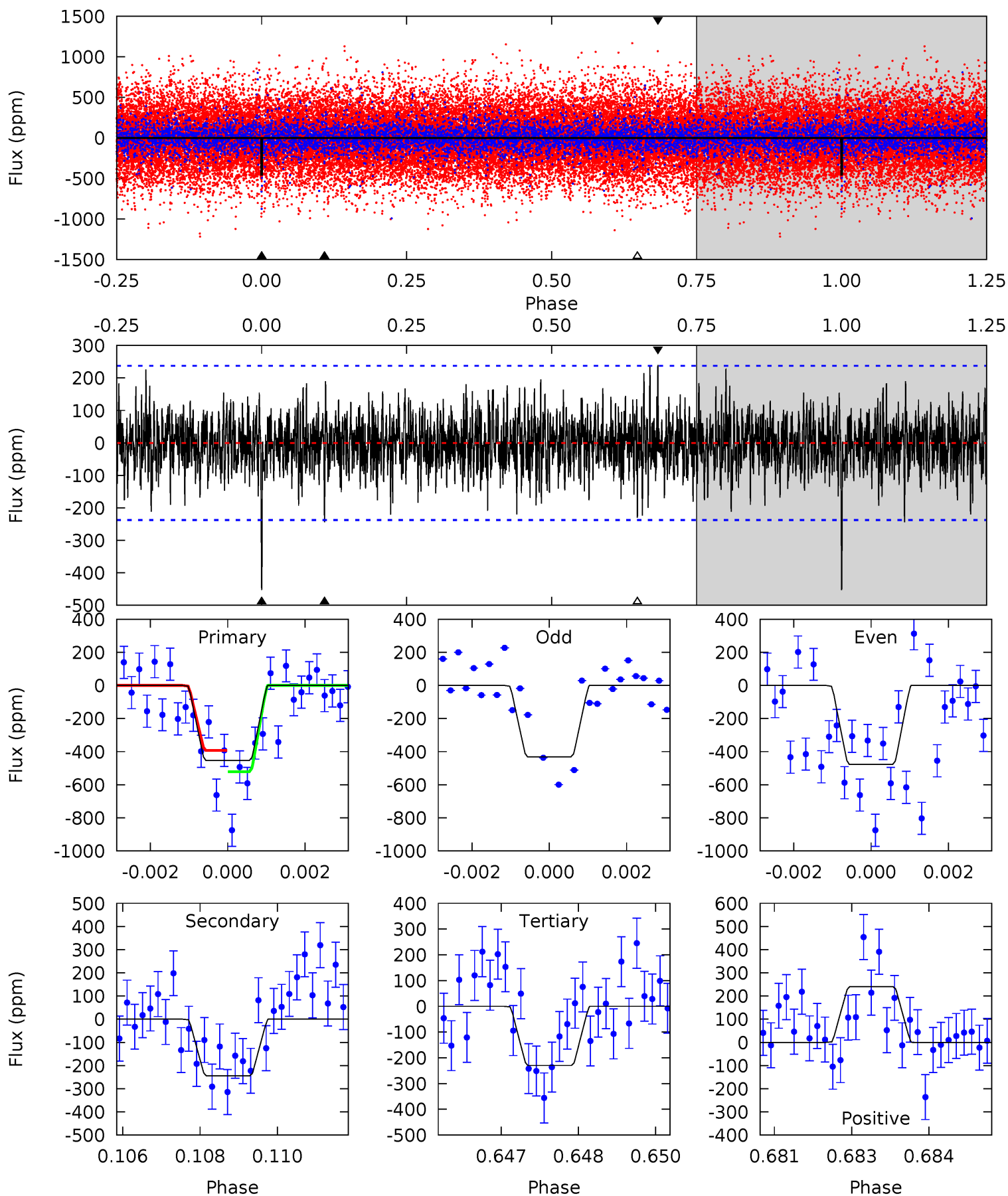
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	5.81	5.74	6.88	5.29	3.03	1.74	4.98	3.83	0.07	-1.08	0.73	1.00	0.39	1.71



Alt Model-Shift Uniqueness Test

008235991-04, P = 60.303198 Days, E = 96.478454 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	5.51	5.18	5.41	5.36	3.14	1.48	5.04	4.81	0.32	0.09	0.51	1.25	0.35	1.44



Stellar Parameters For KIC 008235991

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4984^{+99}_{-109}	$2.954^{+0.030}_{-0.030}$	$-0.340^{+0.200}_{-0.250}$	$6.386^{+0.531}_{-0.911}$	$1.339^{+0.219}_{-0.356}$	$0.007^{+0.001}_{-0.001}$
	+2%/-2%	+1%/-1%	+59%/-74%	+8%/-14%	+16%/-27%	+20%/-11%
Source	PHO1	AST9	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 008235991-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-230 ± 40	$16.84^{+6.44}_{-6.50}$	1349^{+35}_{-37}	4143^{+891}_{-455}	49^{+80}_{-24}
Alt.	-244 ± 44	$15.42^{+6.10}_{-6.56}$	1351^{+35}_{-36}	4333^{+1112}_{-490}	62^{+132}_{-30}

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 $A_{obs} \gg 1.0$

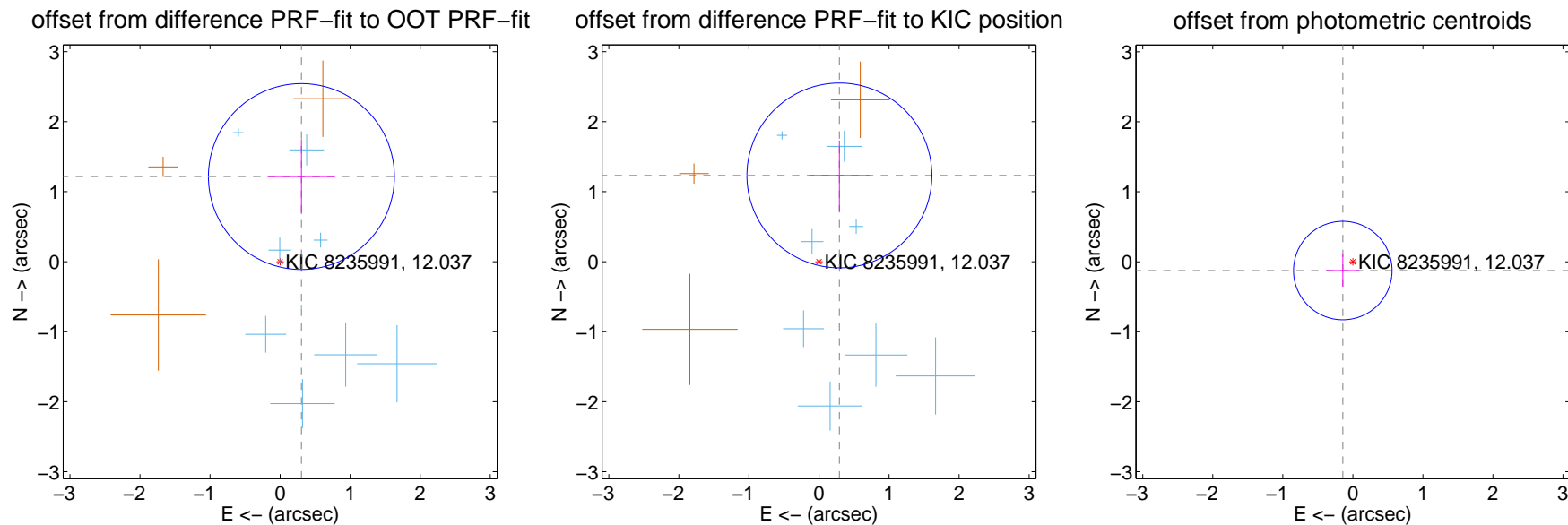
DV Centroid Data

Supplemental centroid analysis for 008235991-04. Kepler magnitude: 12.04. Transit SNR 7.96

There are 9 quarters with good PRF difference image offsets

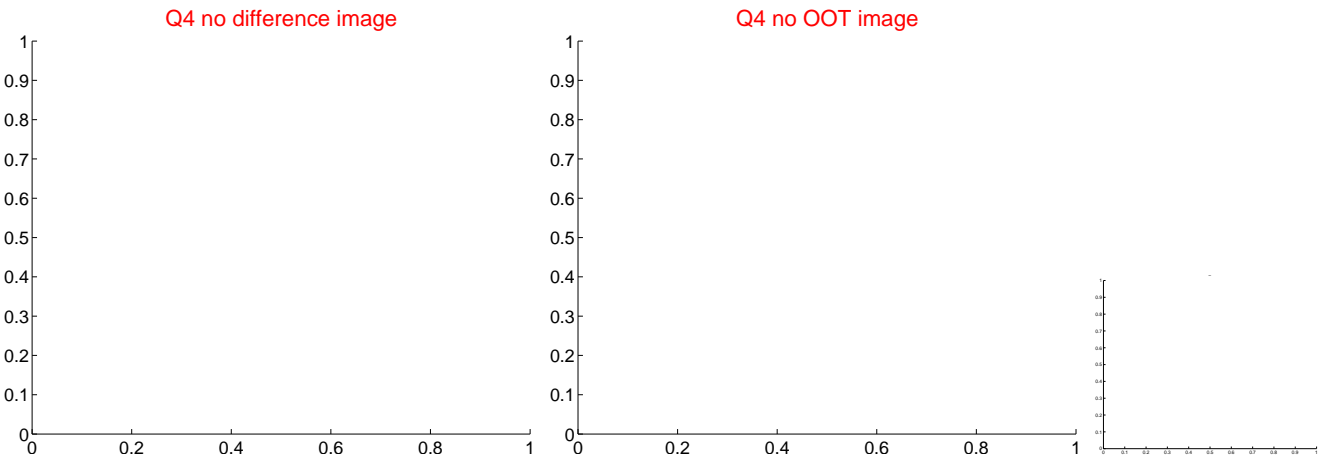
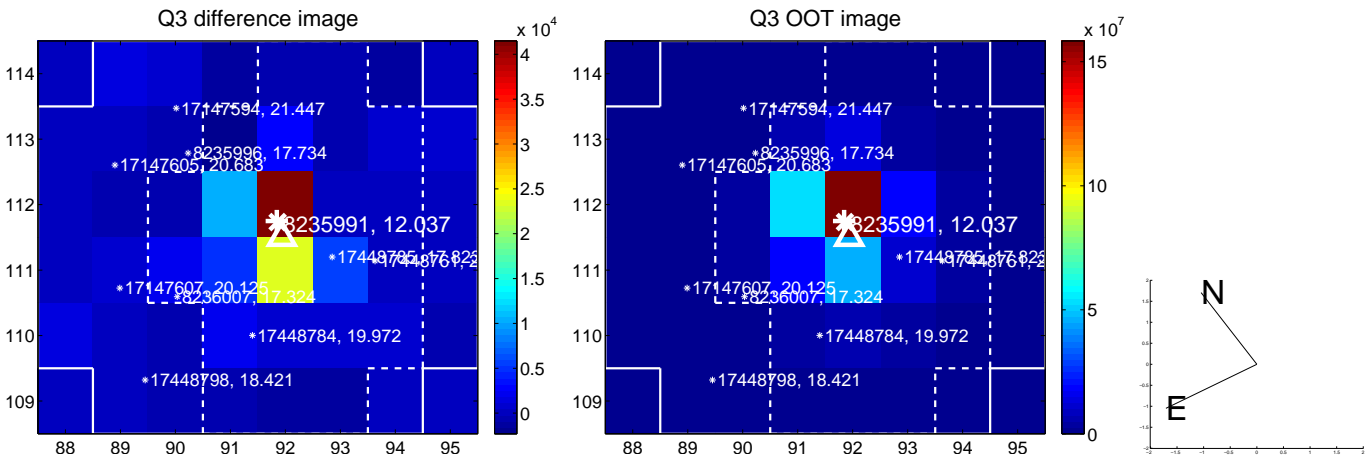
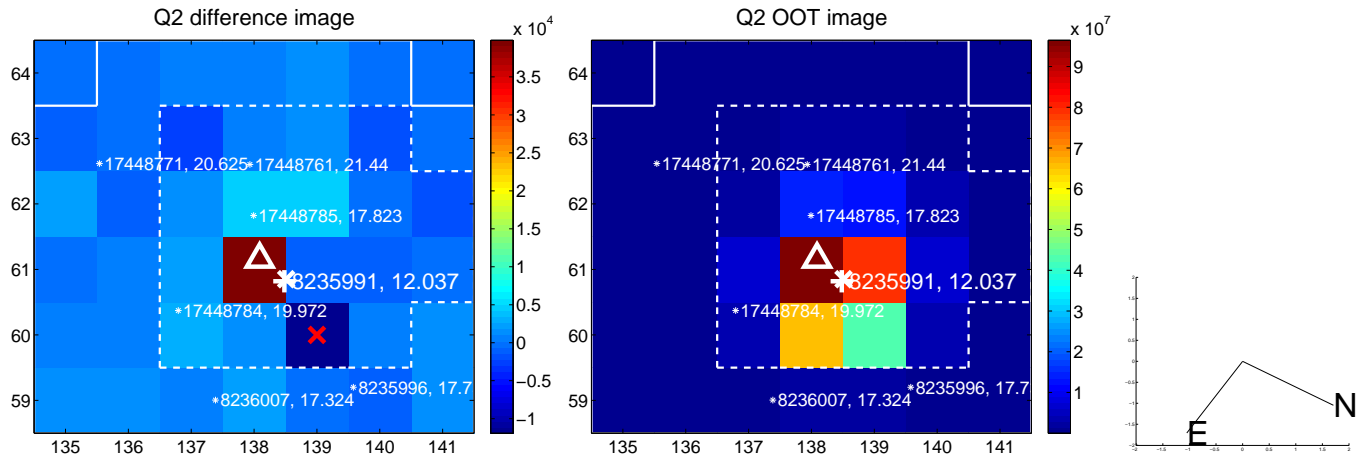
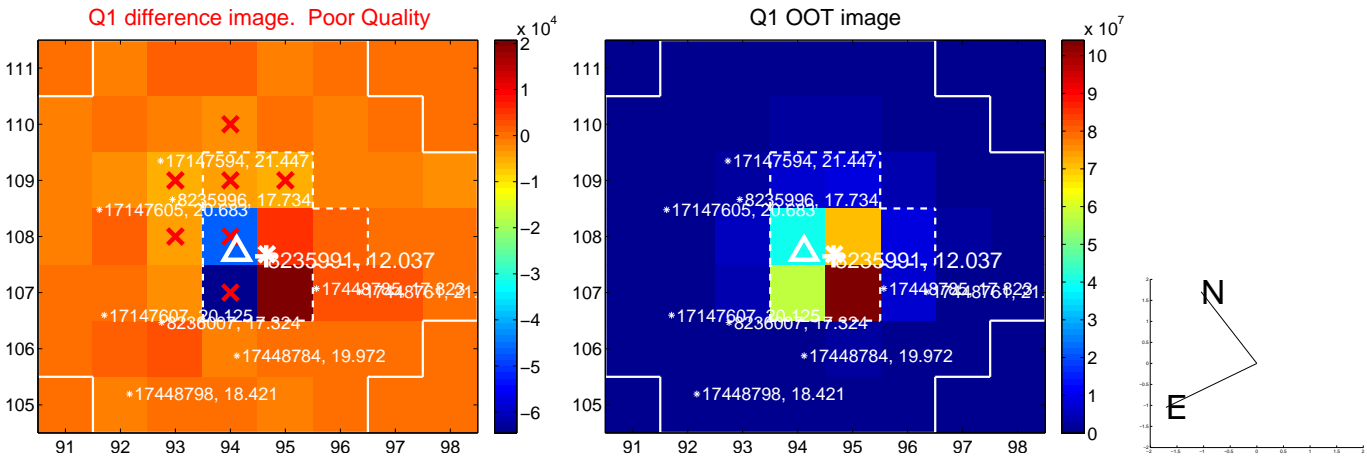
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.253 ± 0.442	2.83	-0.304 ± 0.483	1.216 ± 0.534
PRF-fit source offset from KIC position	1.266 ± 0.440	2.88	-0.292 ± 0.433	1.232 ± 0.501
photometric centroid source offset	0.19 ± 0.23	0.81	0.14 ± 0.24	-0.13 ± 0.23

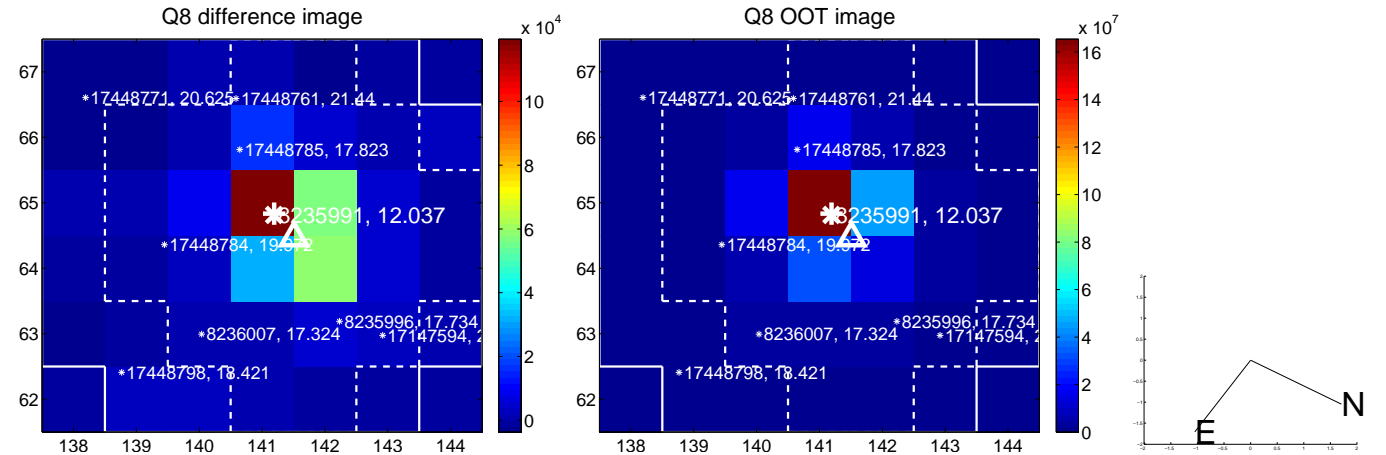
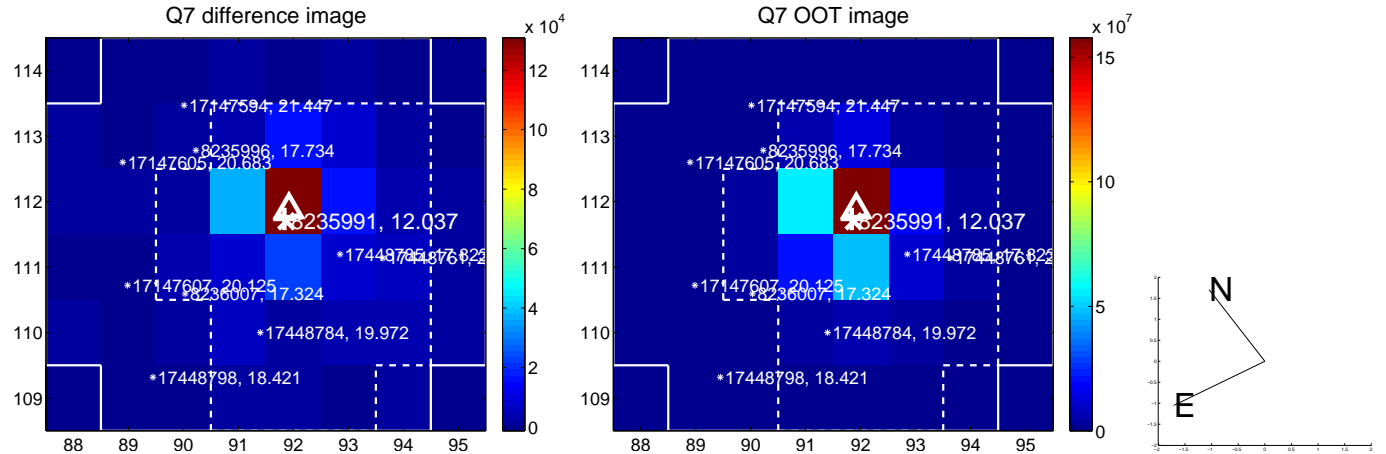
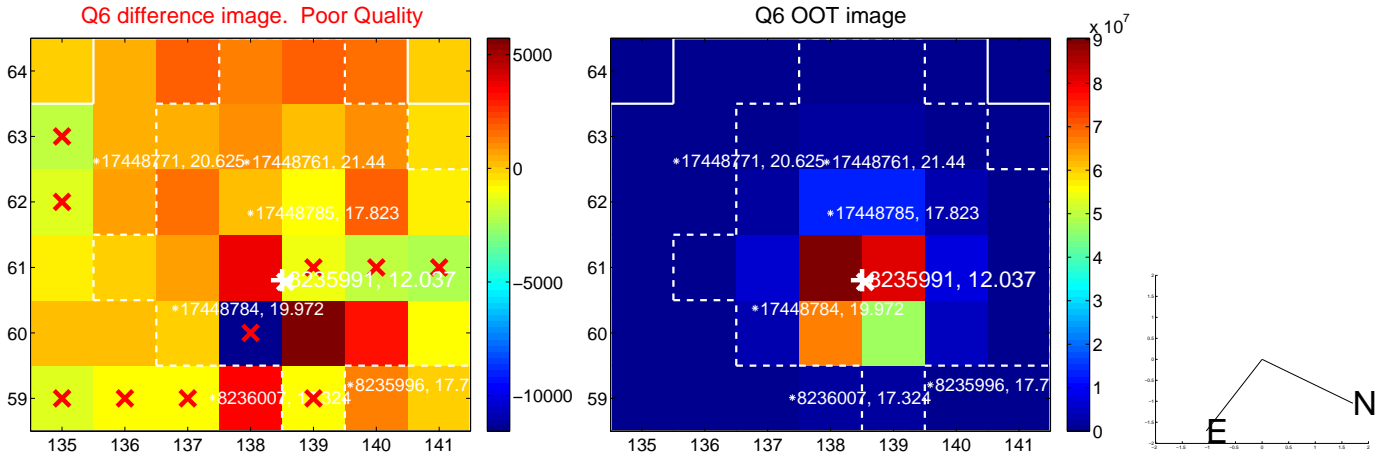
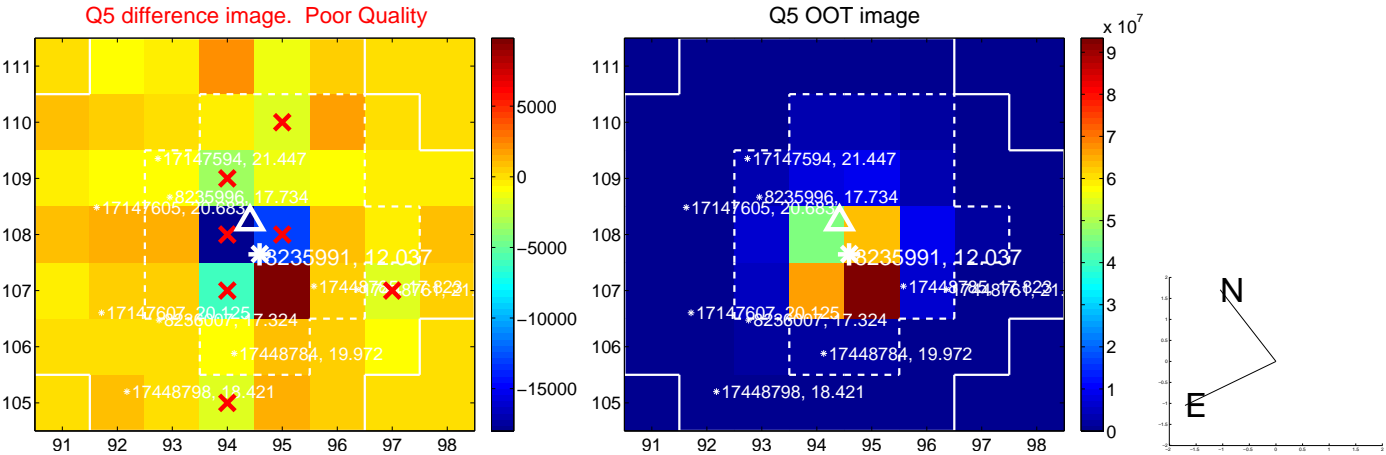


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

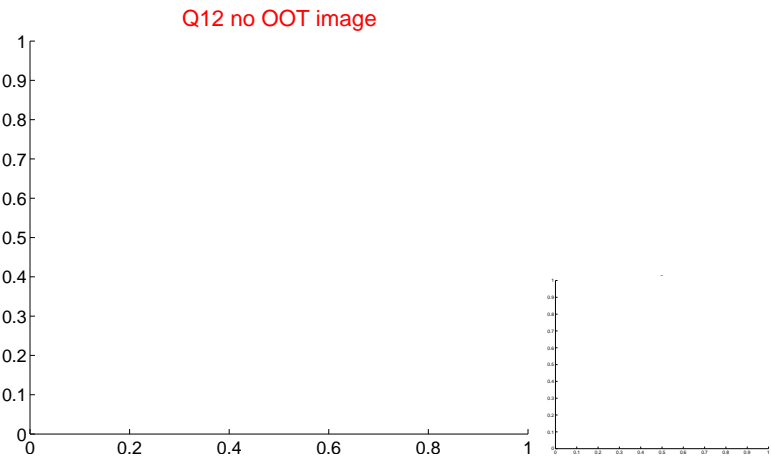
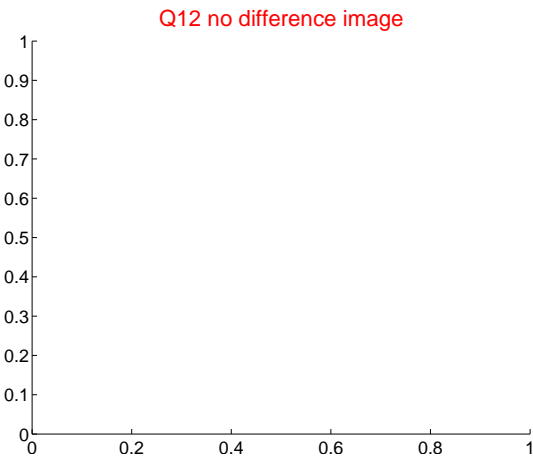
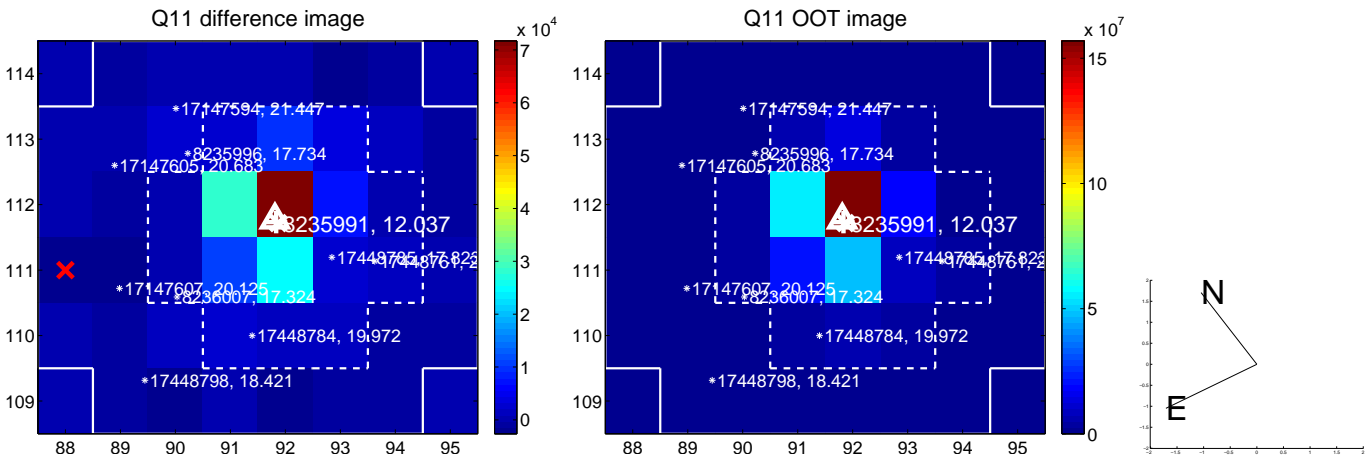
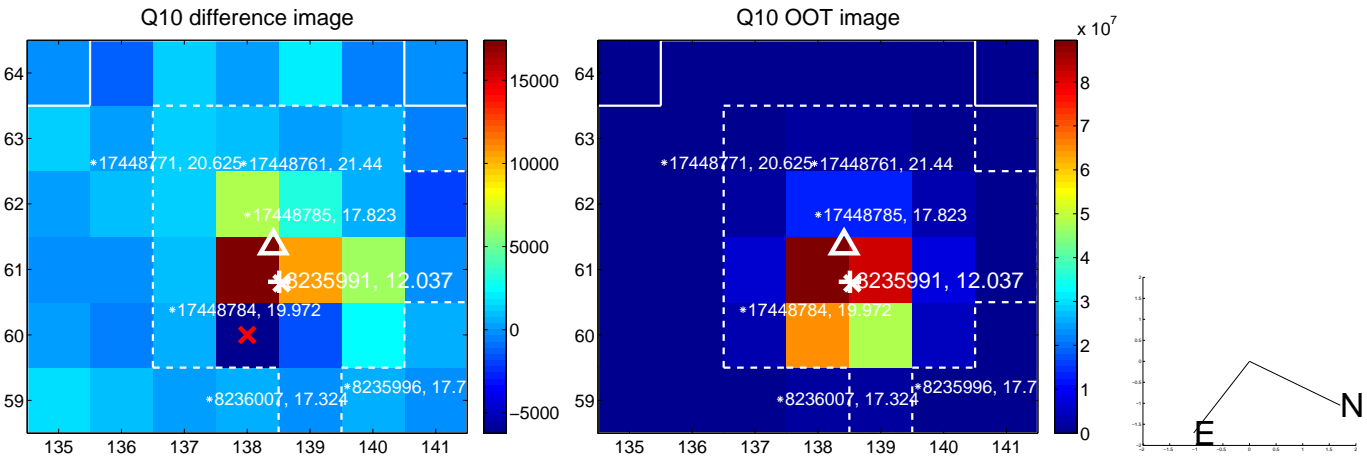
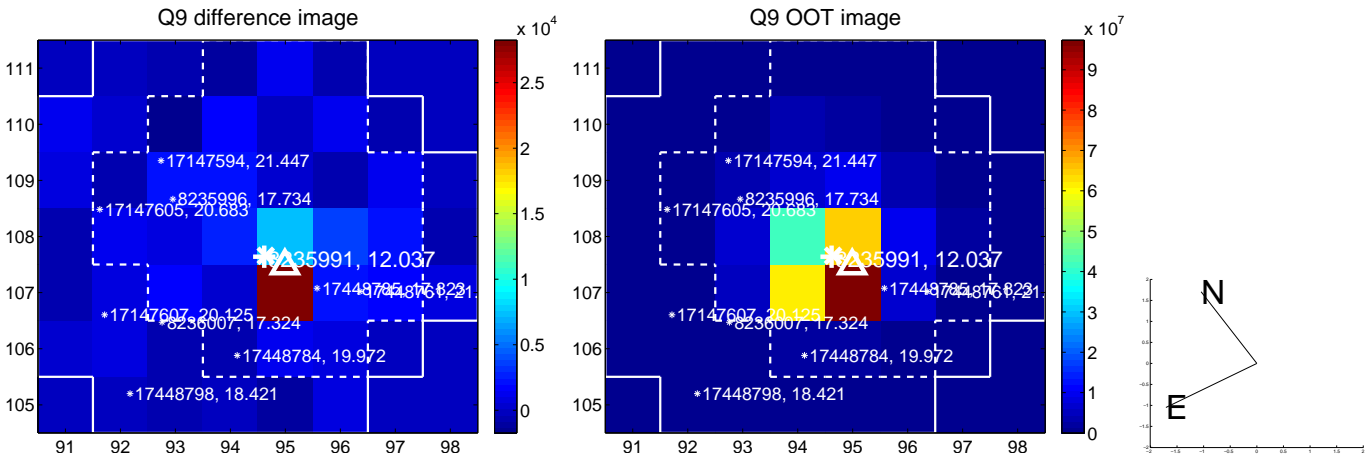
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



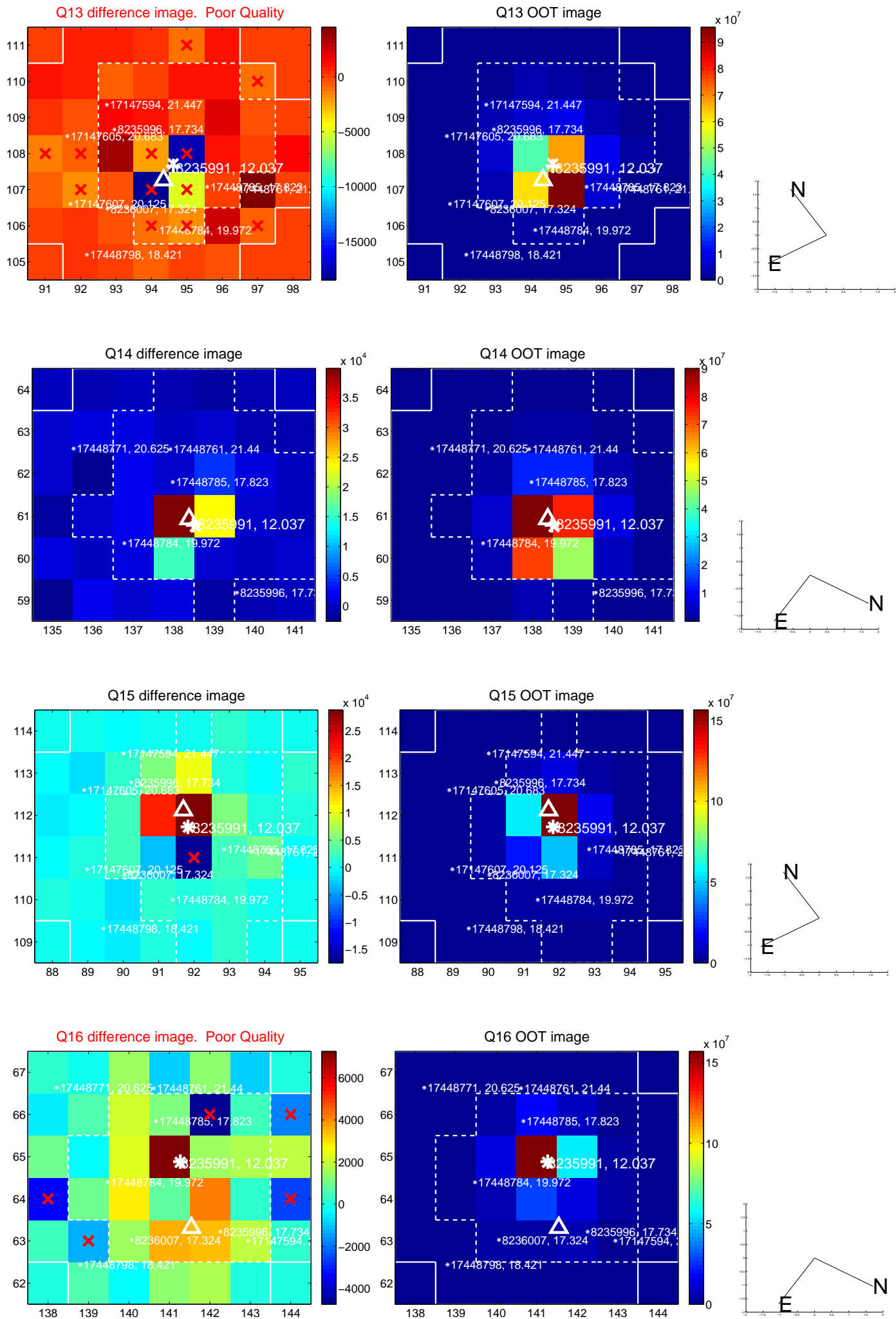
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



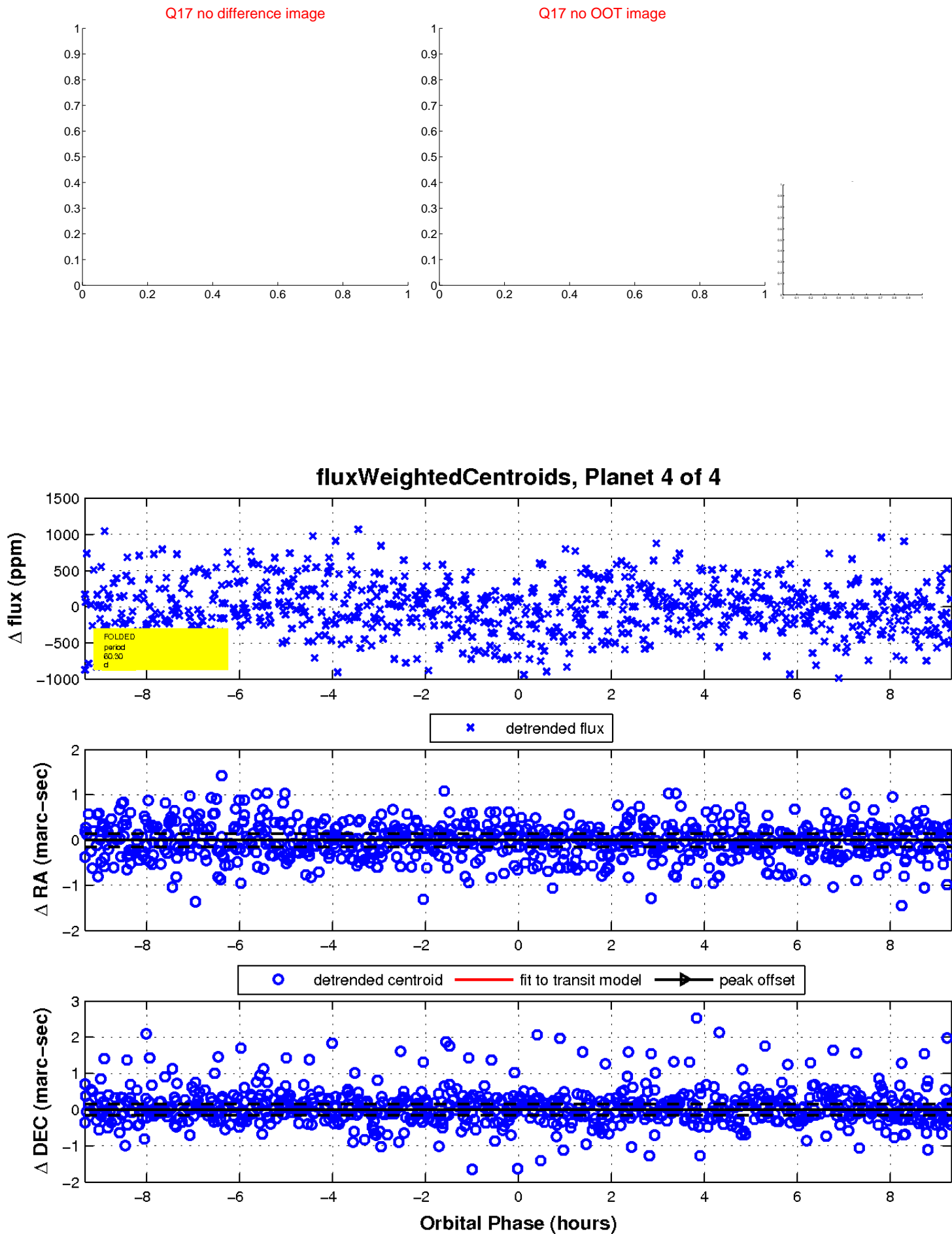
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

