

KIC 004847411

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})
004847411-01	OBS	No	2.275625	132.008173	87.3	8.537	10.1	10.6	0.90	7296	0.95	1841.67
004847411-02	OBS	No	244.842380	176.781315	585.0	13.583	13.2	5.8	0.90	7296	2.28	3.60
004847411-03	OBS	No	0.500309	131.704170	93.6	2.908	8.3	11.5	0.90	7296	1.03	13879.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004847411-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
004847411-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
004847411-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

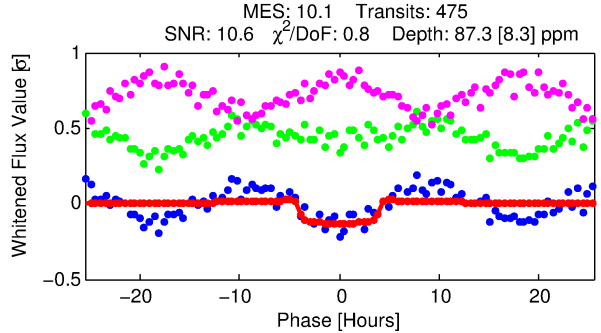
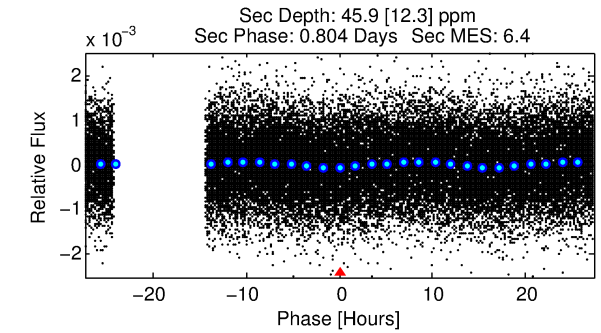
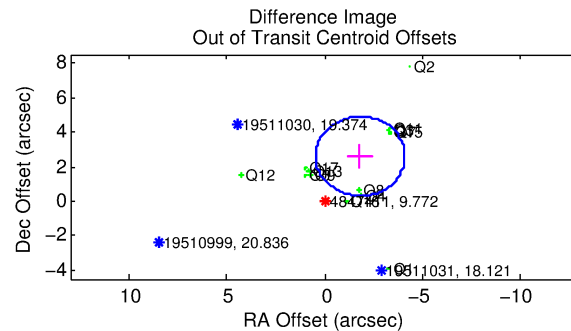
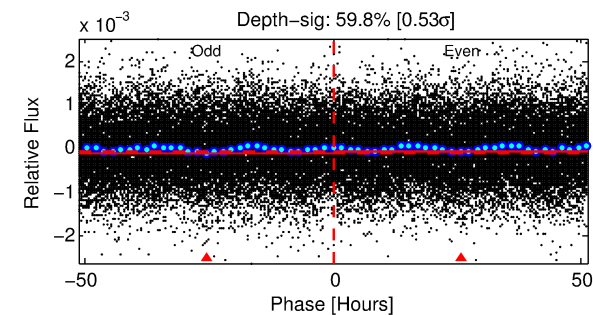
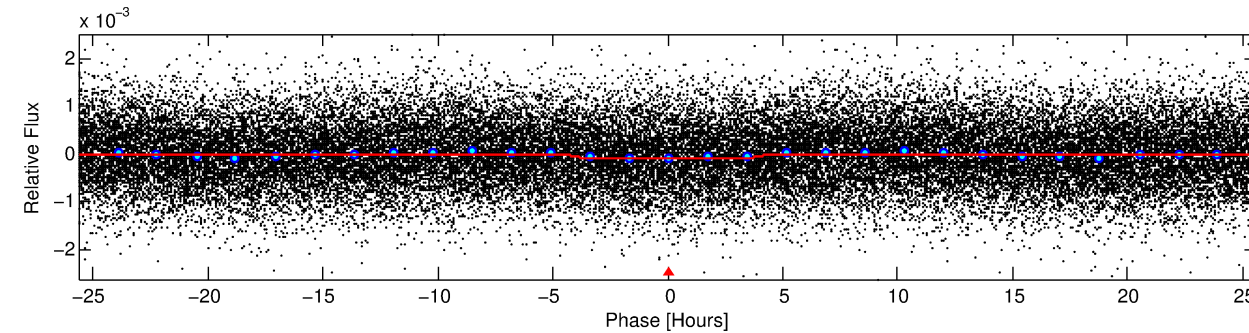
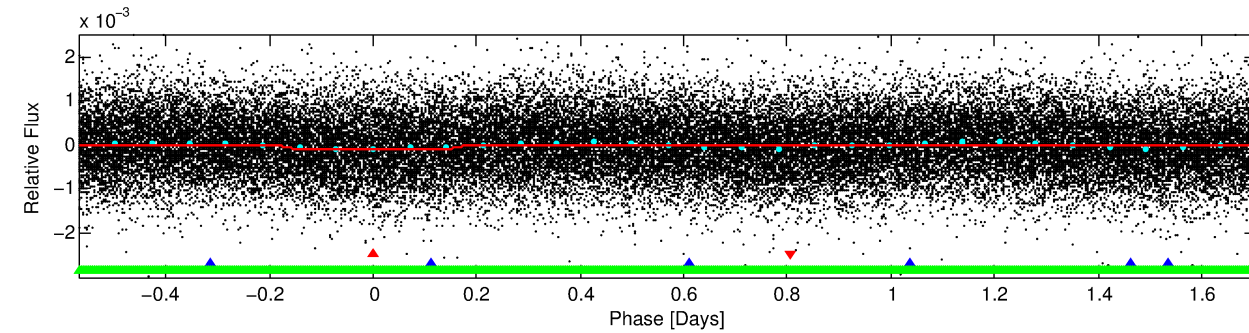
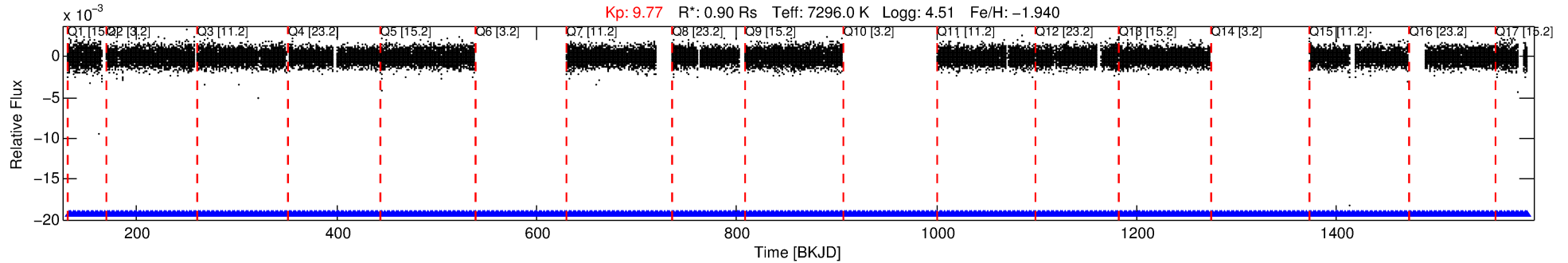
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004847411-01

No Significant Match Found

DV One-Page Summary

KIC: 4847411 Candidate: 1 of 3 Period: 2.276 d



DV Fit Results:

Period = 2.27562 [0.00003] d
Epoch = 132.0082 [0.0080] BKJD
Rp/R* = 0.0096 [0.0035]
a/R* = 1.43 [1.67]
b = 0.85 [0.74]
Seff = 1841.67 [569.12]
Teq = 1670 [129] K
Rp = 0.95 [0.39] Re
a = 0.0336 [0.0058] AU
Ag = 31.53 [26.03] [1.17 σ]
Teffp = 6120 [1211] K [3.65 σ]

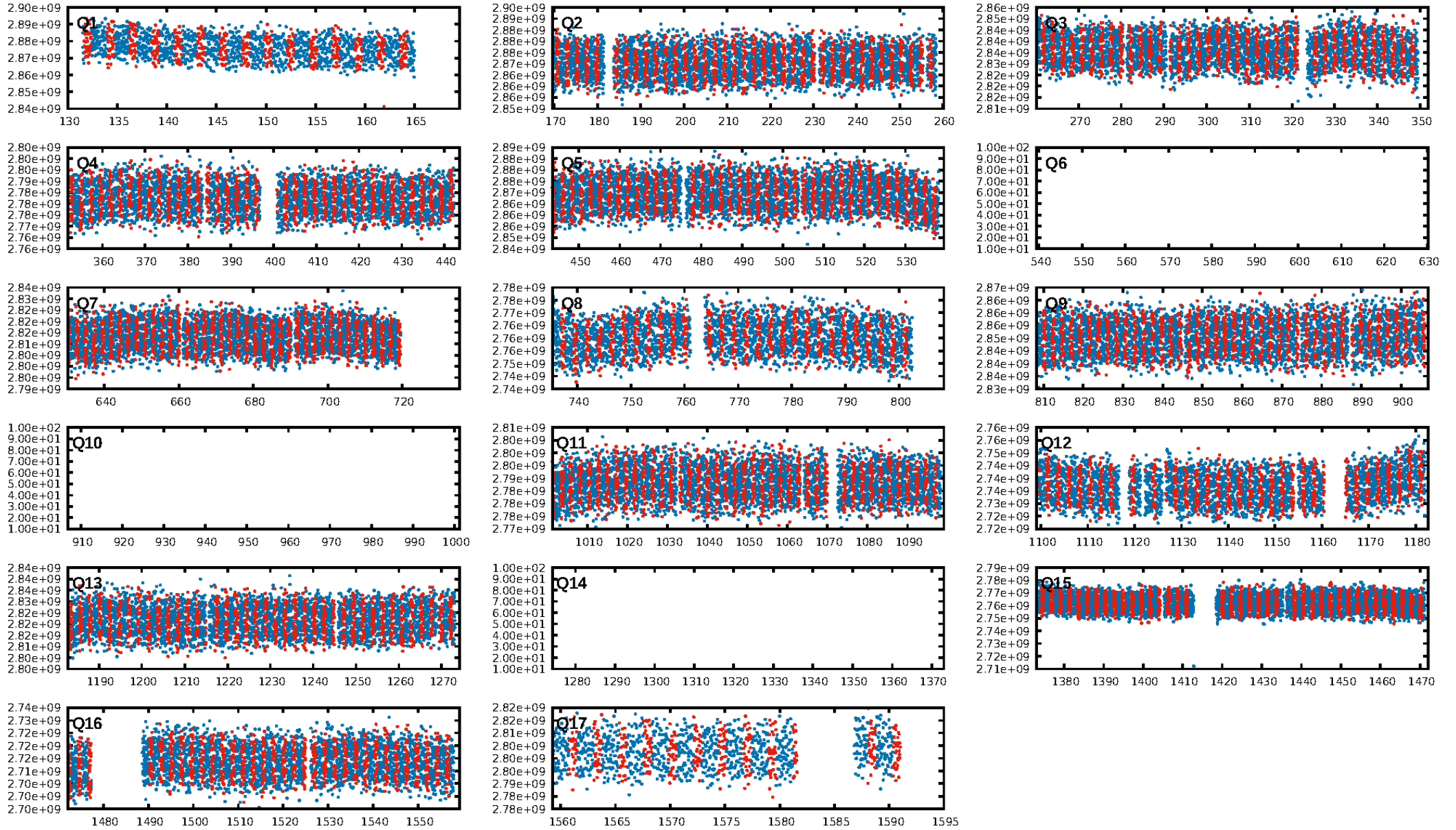
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.72 σ]
LongPeriod-sig: 100.0% [362.88 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.63e-20
RollingBand-fgt: 1.00 [448/448]
GhostDiagnostic-chr: N/A
Centroid-sig: 11.4%
Centroid-so: 1.325 arcsec [4.05 σ]
OotOffset-rm: 3.173 arcsec [4.16 σ]
KicOffset-rm: 4.097 arcsec [5.99 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 0.00 [0/14]

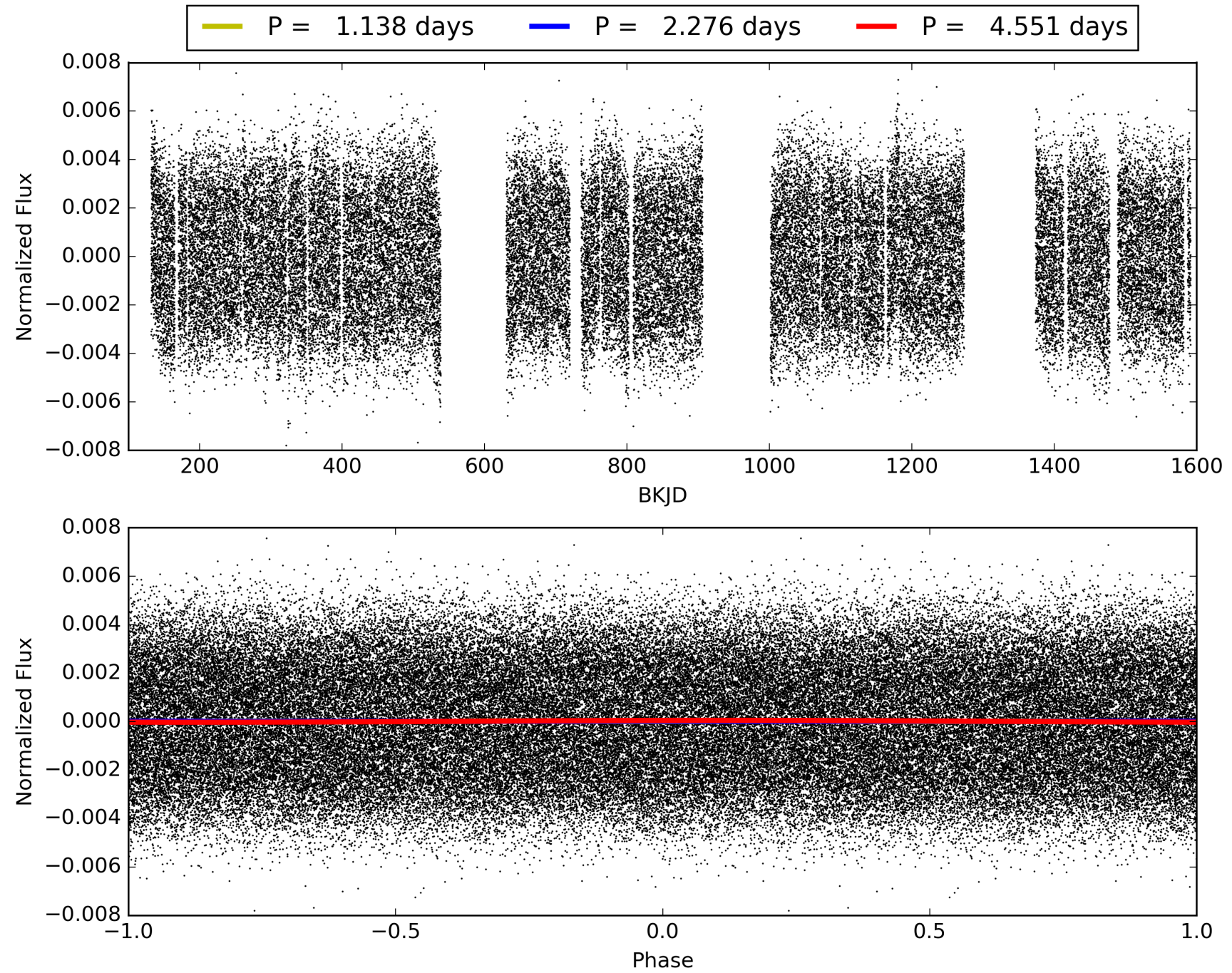
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:13:22 Z

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

TCE 004847411-01, PDC Light Curves

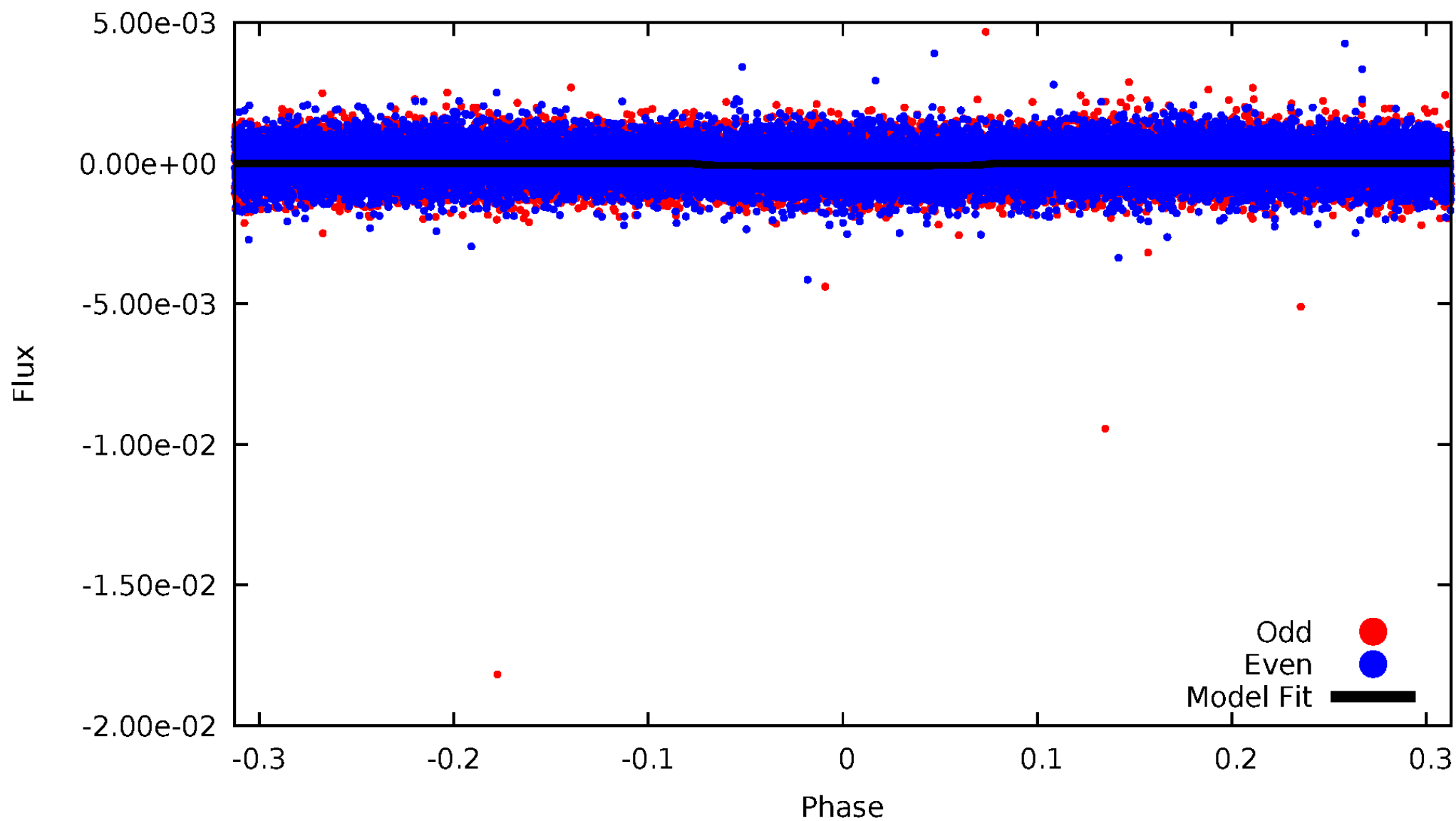


TCE 004847411-01



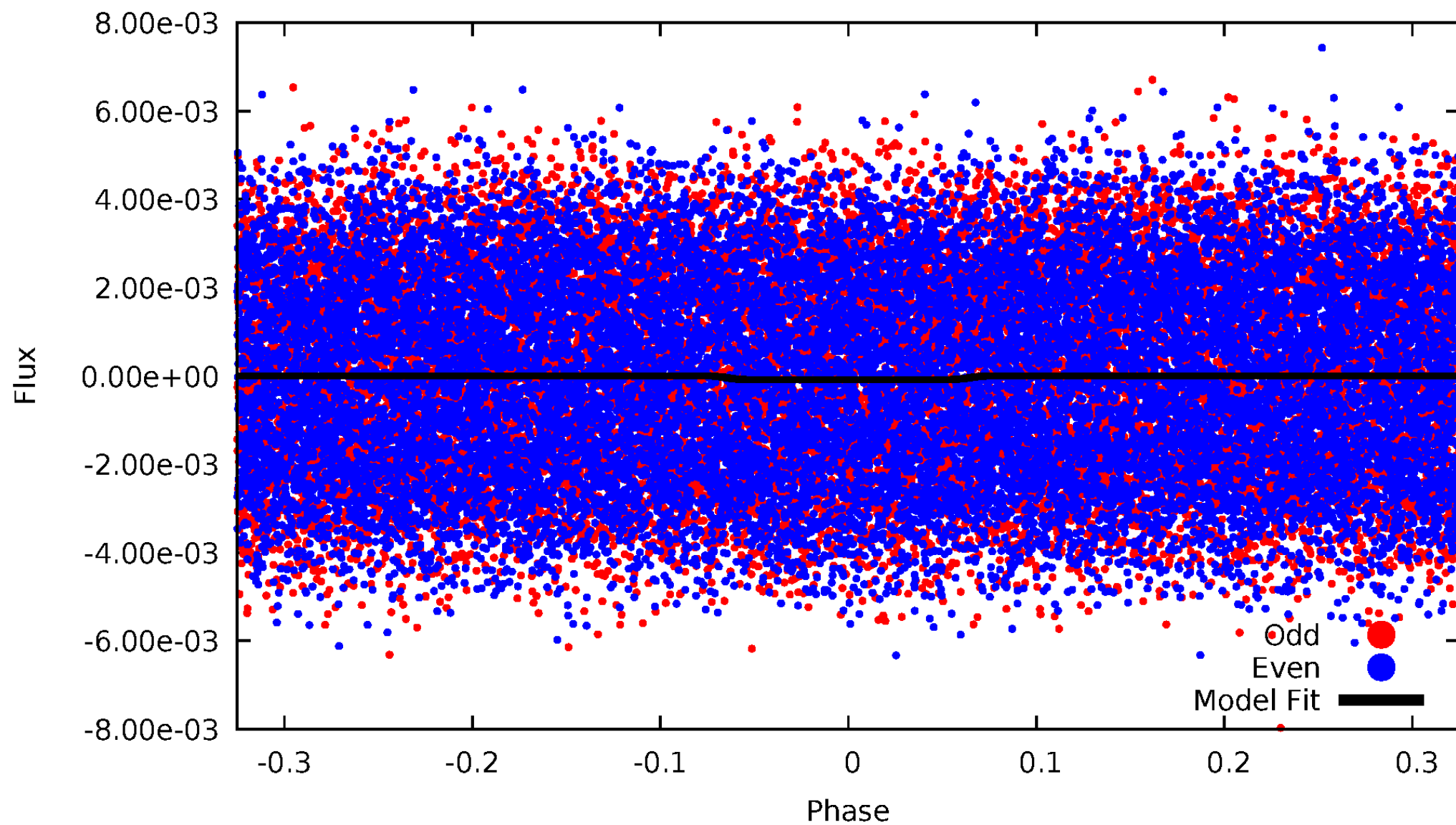
DV Odd/Even

TCE 004847411-01



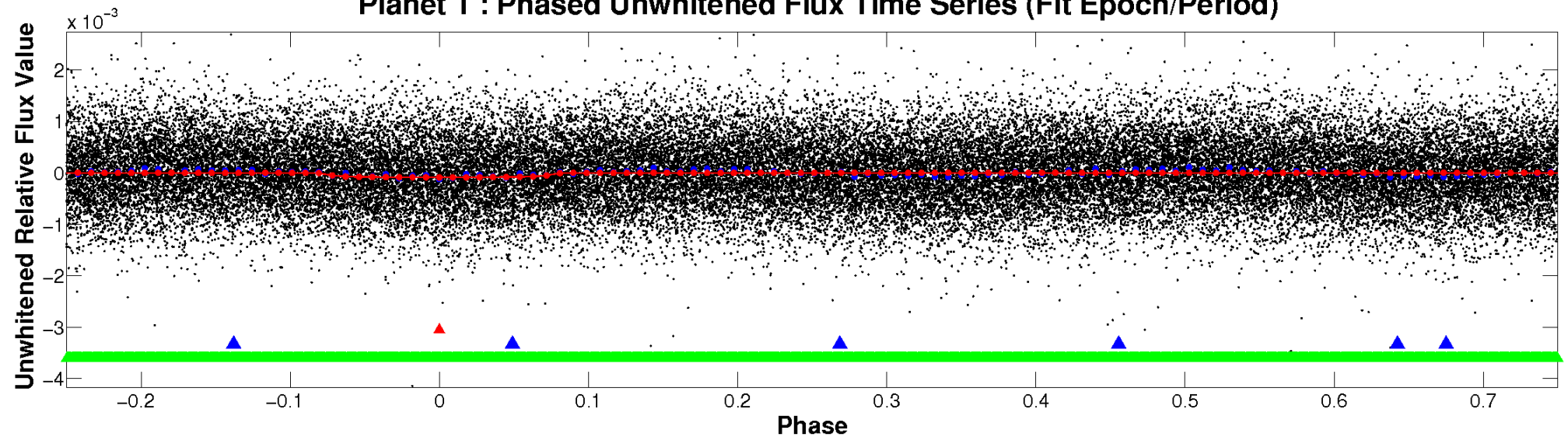
ALT Odd/Even

TCE 004847411-01

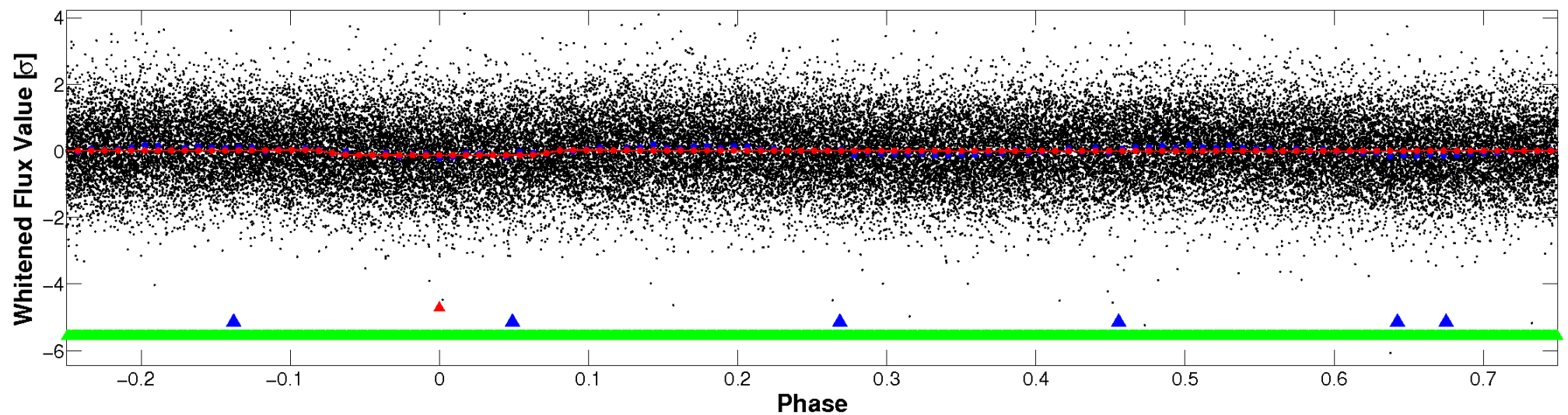


Non-Whitened Vs. Whitened Light Curve

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

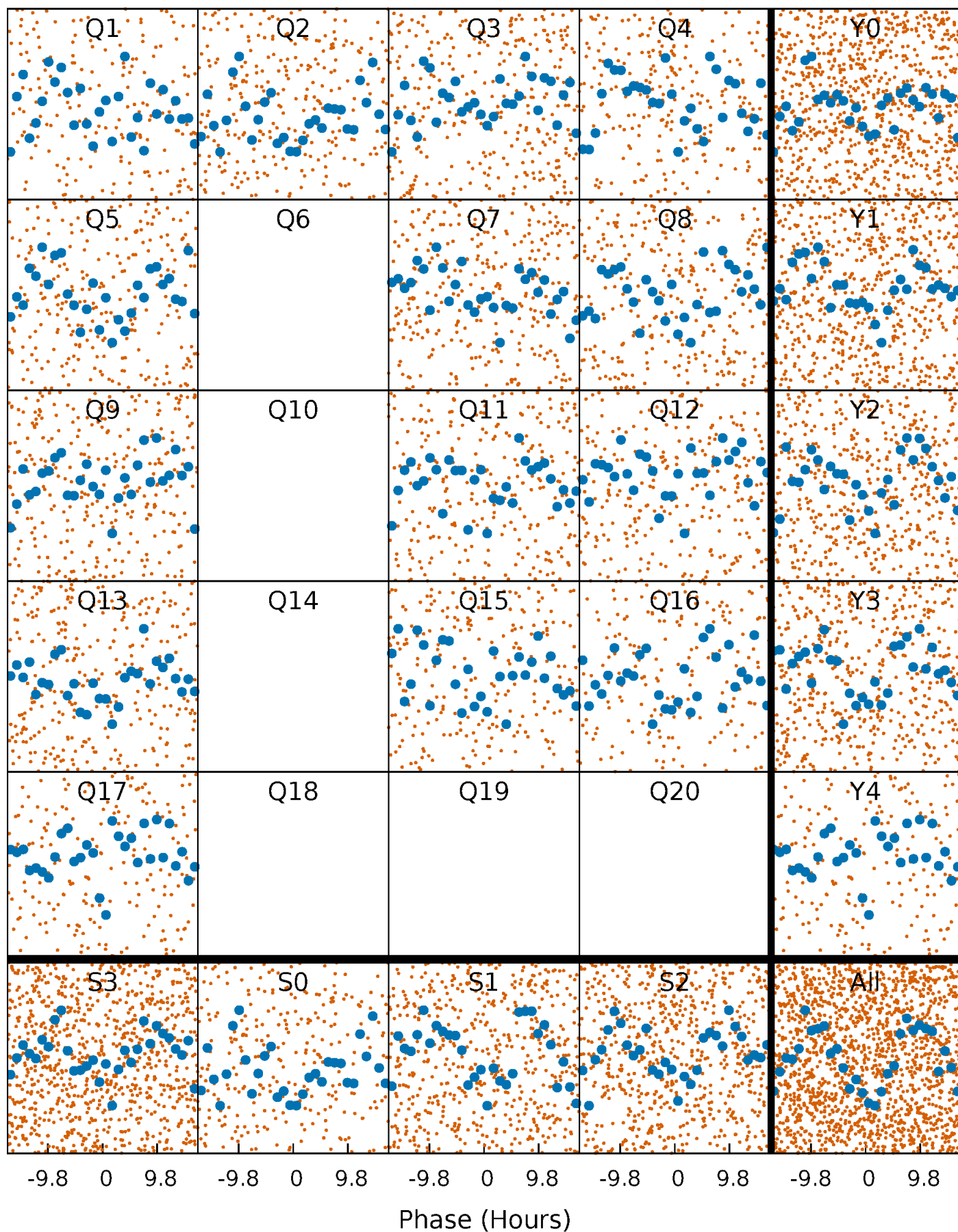


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



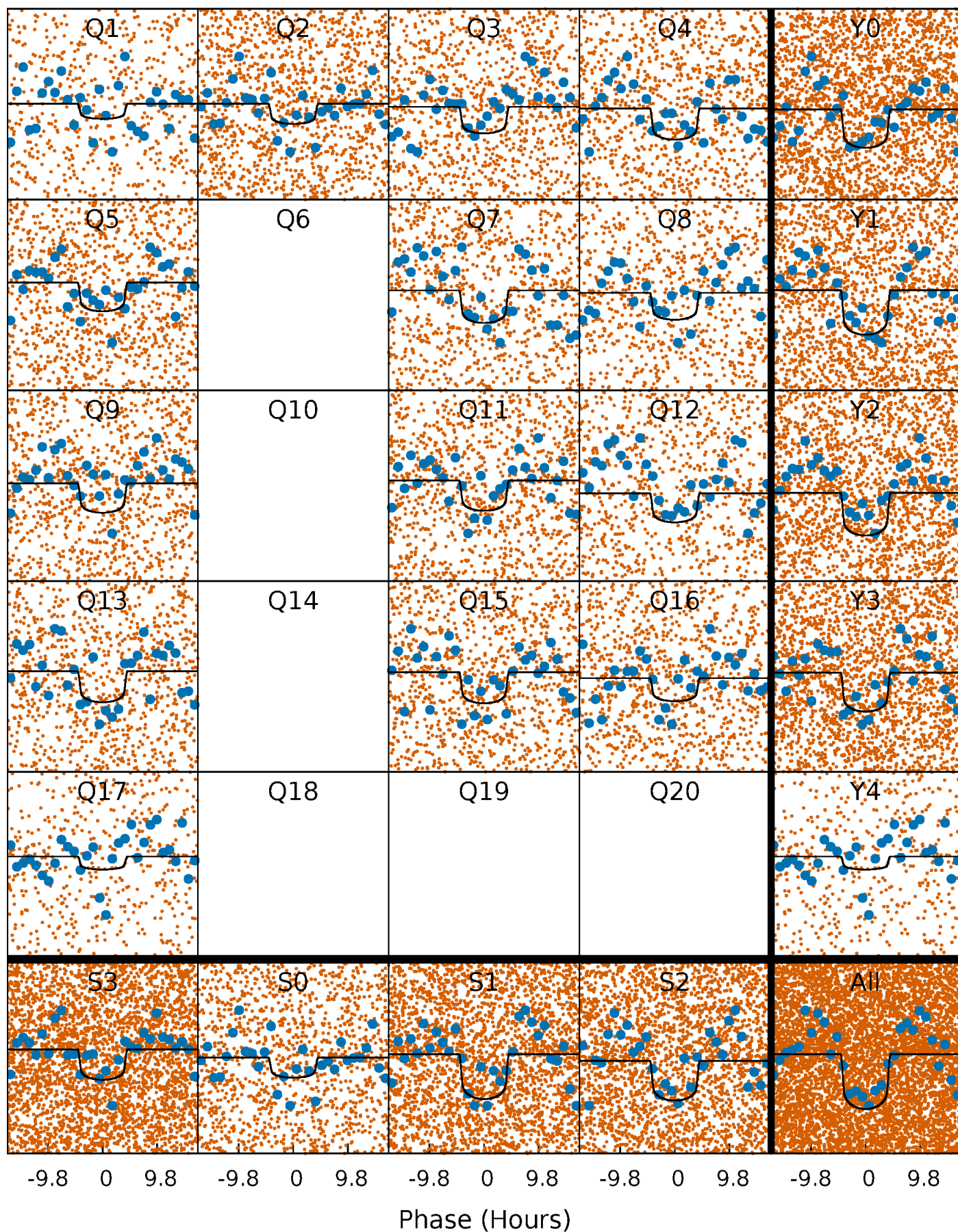
PDC Quarter-Phased Transit Curves

TCE 004847411-01 P= 2.275625 Days $T_0=132.008173$ (BKJD)



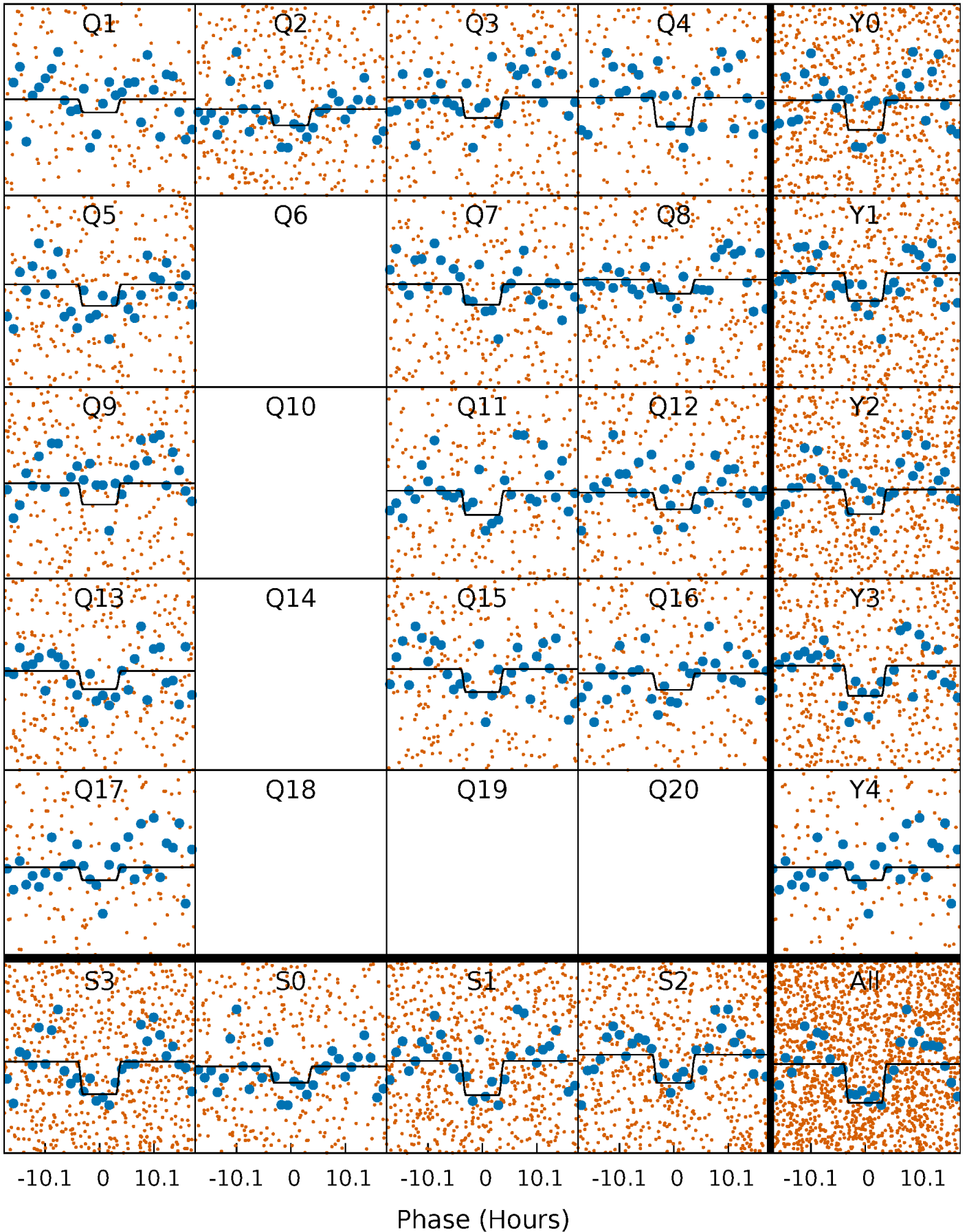
DV Quarter-Phased Transit Curves

TCE 004847411-01 P= 2.275625 Days $T_0=132.008173$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

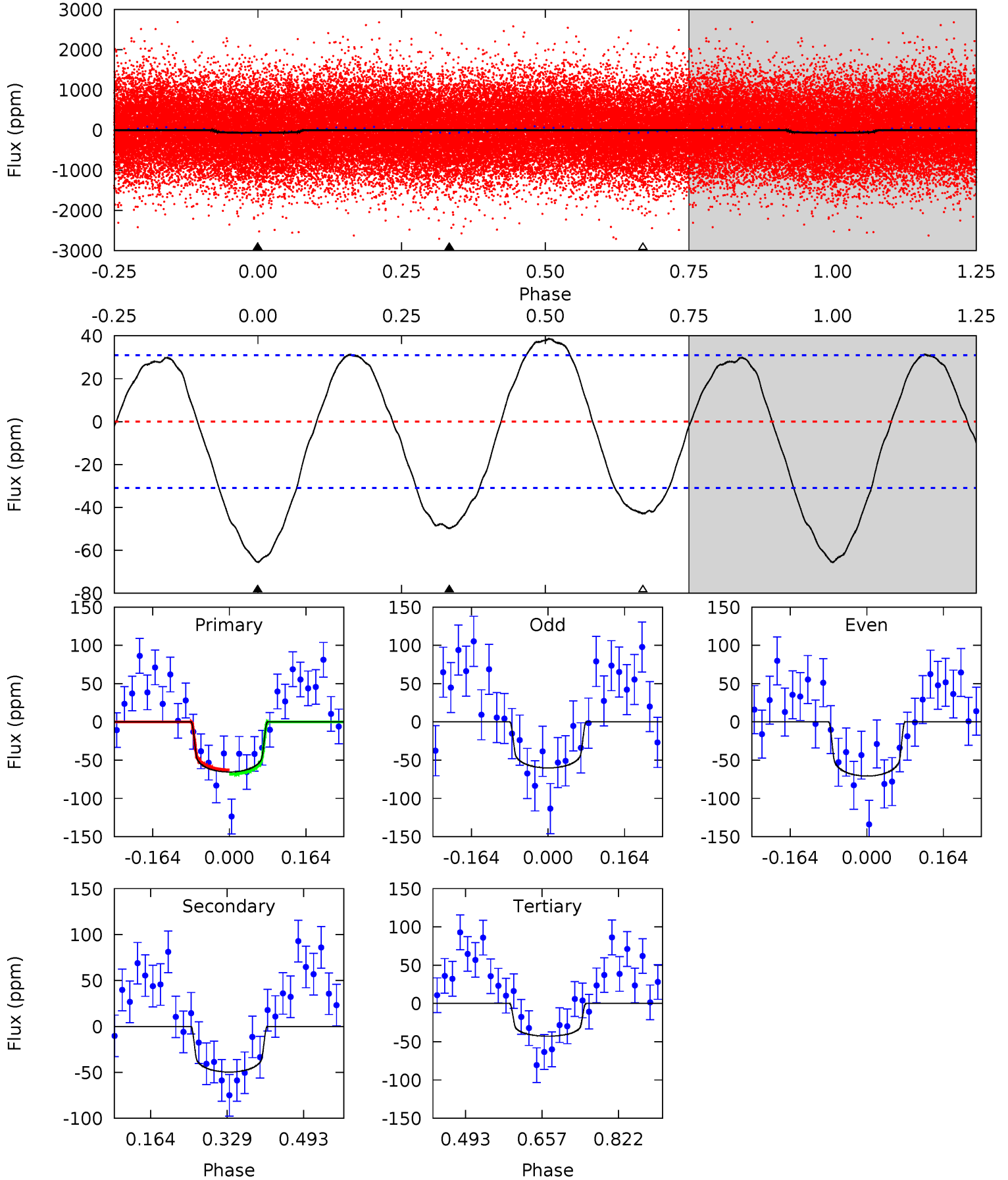
TCE 004847411-01 P= 2.275584 Days $T_0=132.024348$ (BKJD)



DV Model-Shift Uniqueness Test

004847411-01, P = 2.275625 Days, E = 129.732548 Days

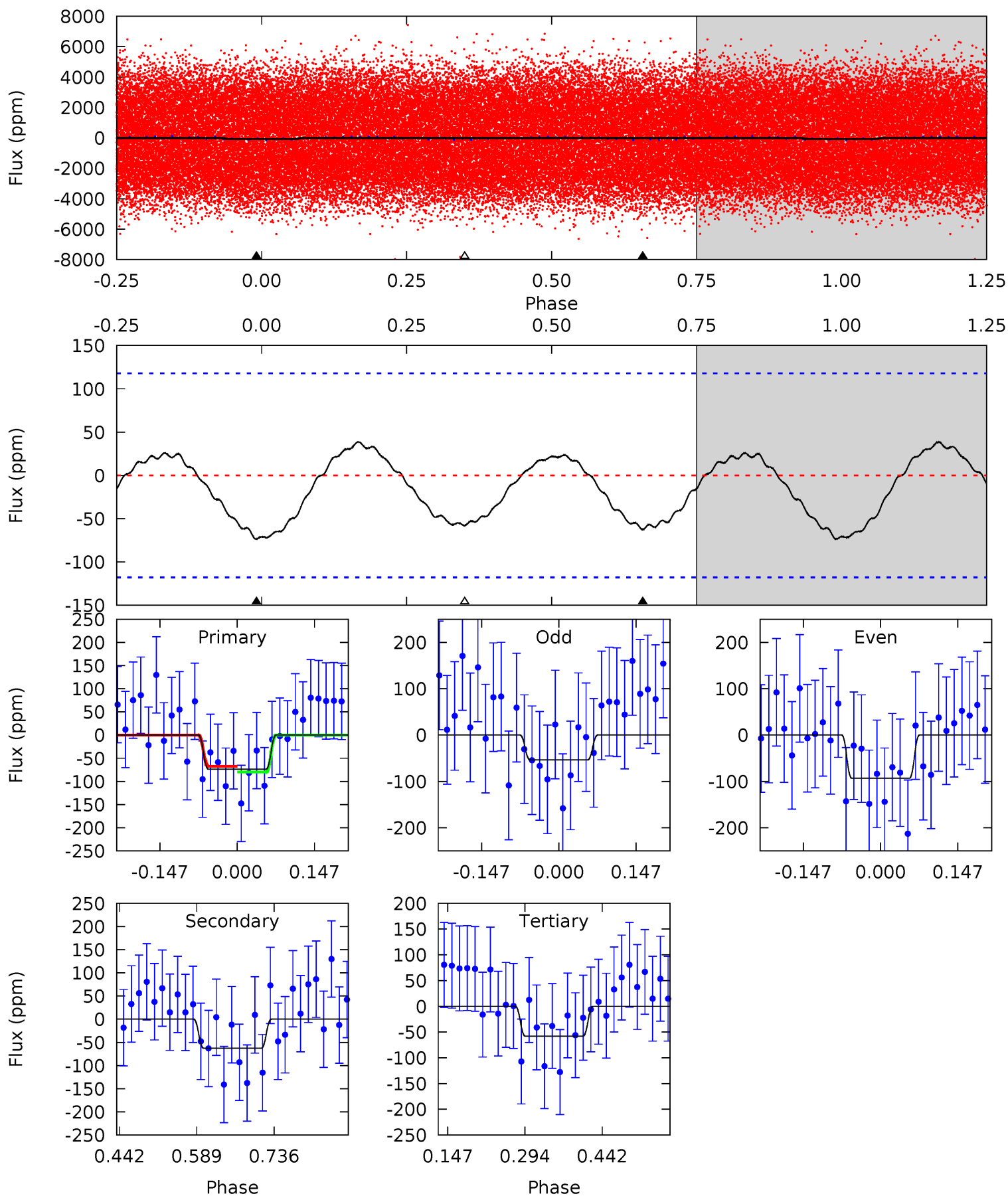
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.44	7.16	6.16	0	4.46	1.39	4.16	3.28	9.44	0.99	7.16	0.76	1.02	0.37	0.40



Alt Model-Shift Uniqueness Test

004847411-01, P = 2.275584 Days, E = 129.748764 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.80	2.38	2.20	0	4.48	1.45	1.22	0.59	2.80	0.18	2.38	0.76	0.75	0.34	0.23



Stellar Parameters For KIC 004847411

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+195}_{-260}	$4.514^{+0.028}_{-0.161}$	$-1.940^{+0.300}_{-0.050}$	$0.904^{+0.161}_{-0.040}$	$0.972^{+0.044}_{-0.066}$	$1.855^{+0.184}_{-0.771}$
	+3%/-4%	+1%/-4%	+15%/-3%	+18%/-4%	+5%/-7%	+10%/-42%
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 004847411-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-50 ± 7	$0.99^{+0.36}_{-0.35}$	2369^{+122}_{-89}	6120^{+1680}_{-865}	31^{+40}_{-15}
Alt.	-63 ± 26	$0.92^{+0.37}_{-0.34}$	2363^{+112}_{-92}	6689^{+2410}_{-1323}	43^{+76}_{-25}

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

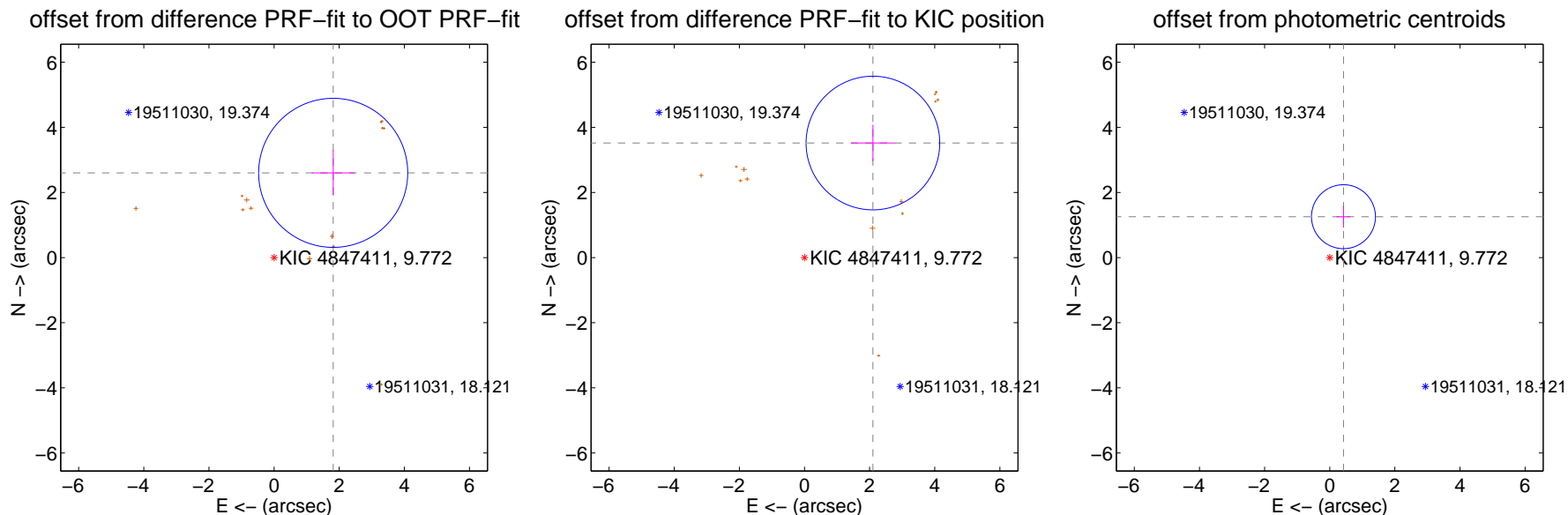
DV Centroid Data

Supplemental centroid analysis for 004847411-01. **Kepler magnitude: 9.77.** Transit SNR 10.60

There are 1 quarters with good PRF difference image offsets

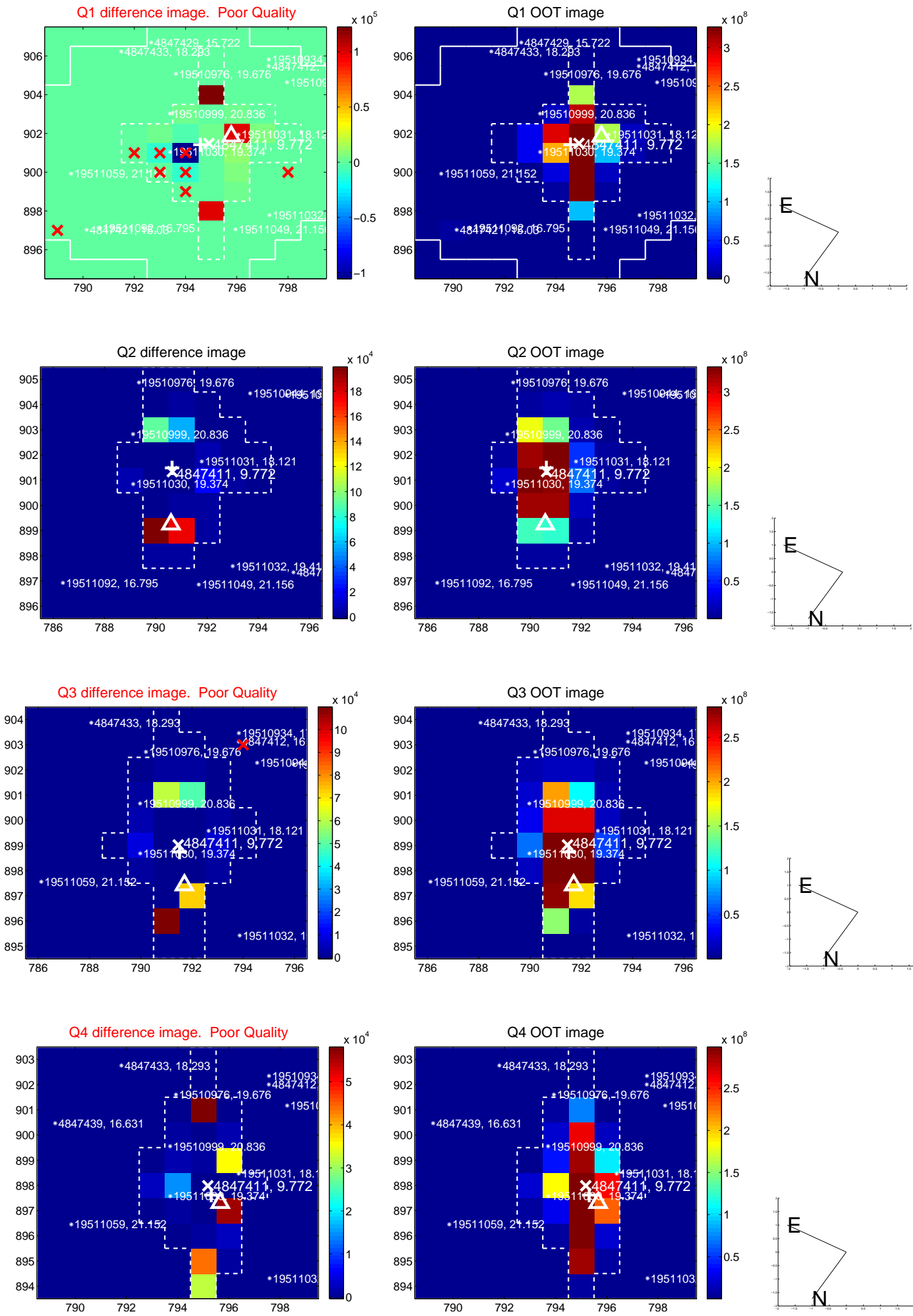
The direct PRF centroid is offset from the target star catalog position by about 1.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.173 ± 0.763	4.16	-1.815 ± 0.658	2.602 ± 0.697
PRF-fit source offset from KIC position	4.097 ± 0.684	5.99	-2.101 ± 0.674	3.518 ± 0.562
photometric centroid source offset	1.32 ± 0.33	4.05	-0.42 ± 0.22	1.26 ± 0.34

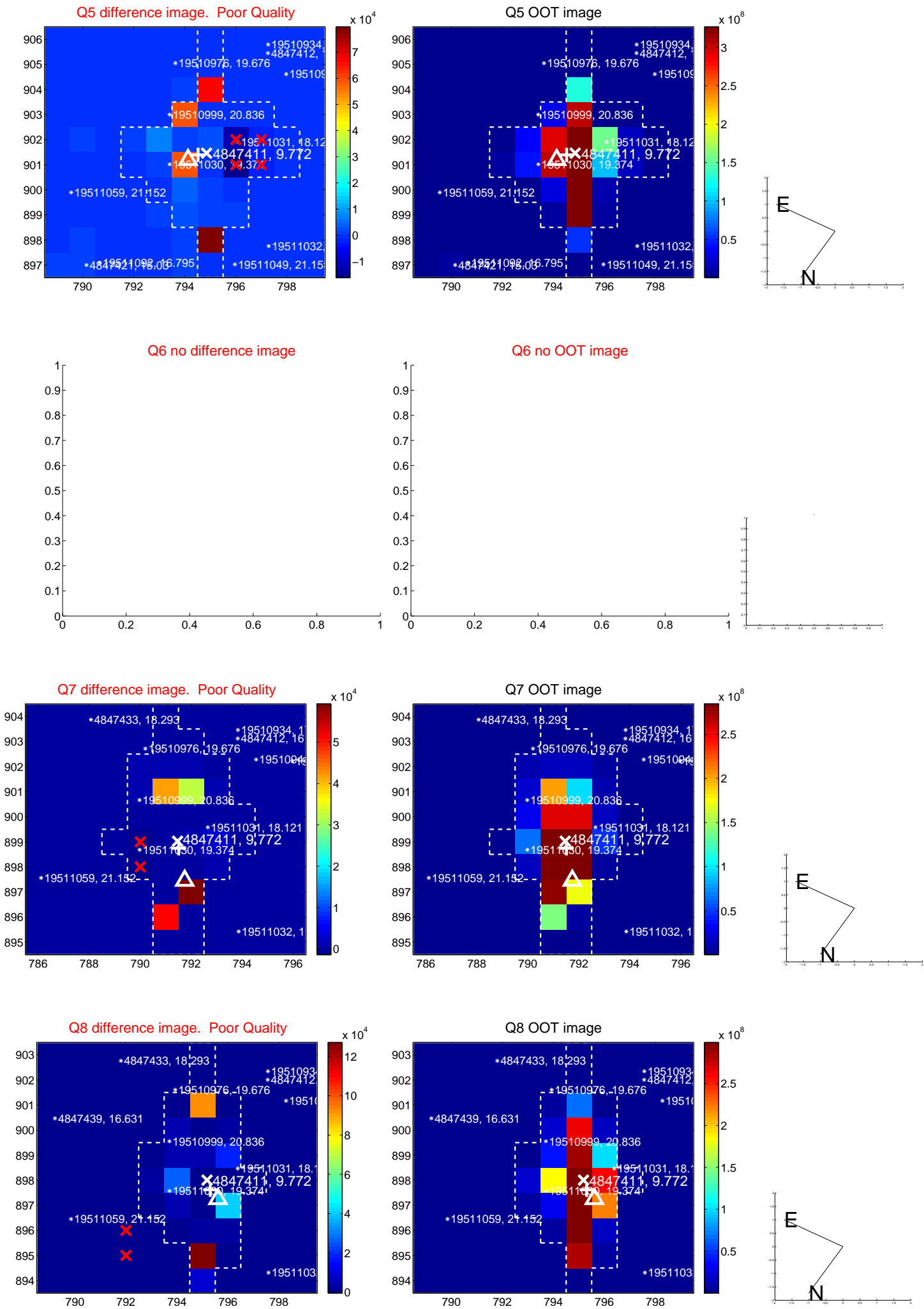


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

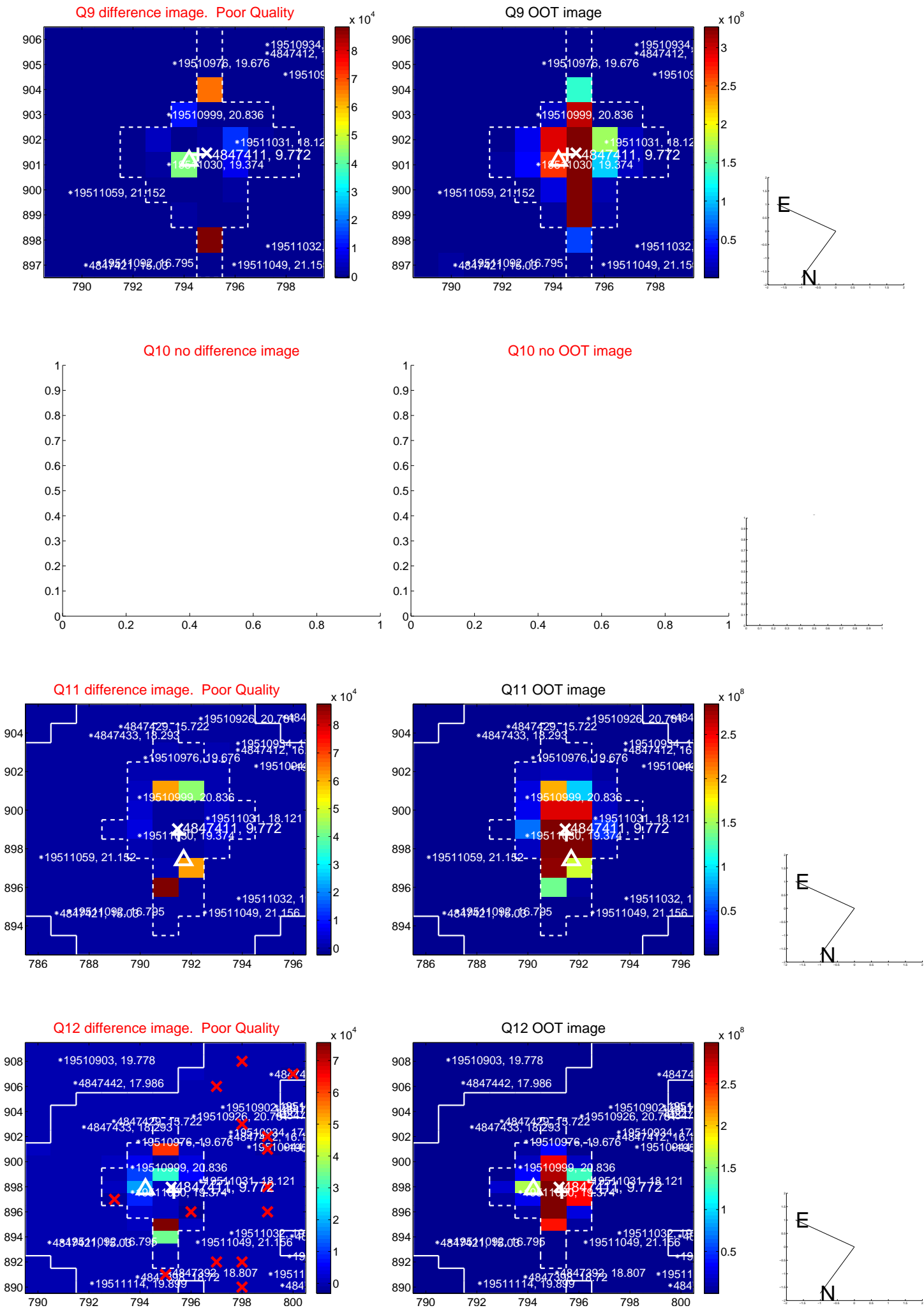
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



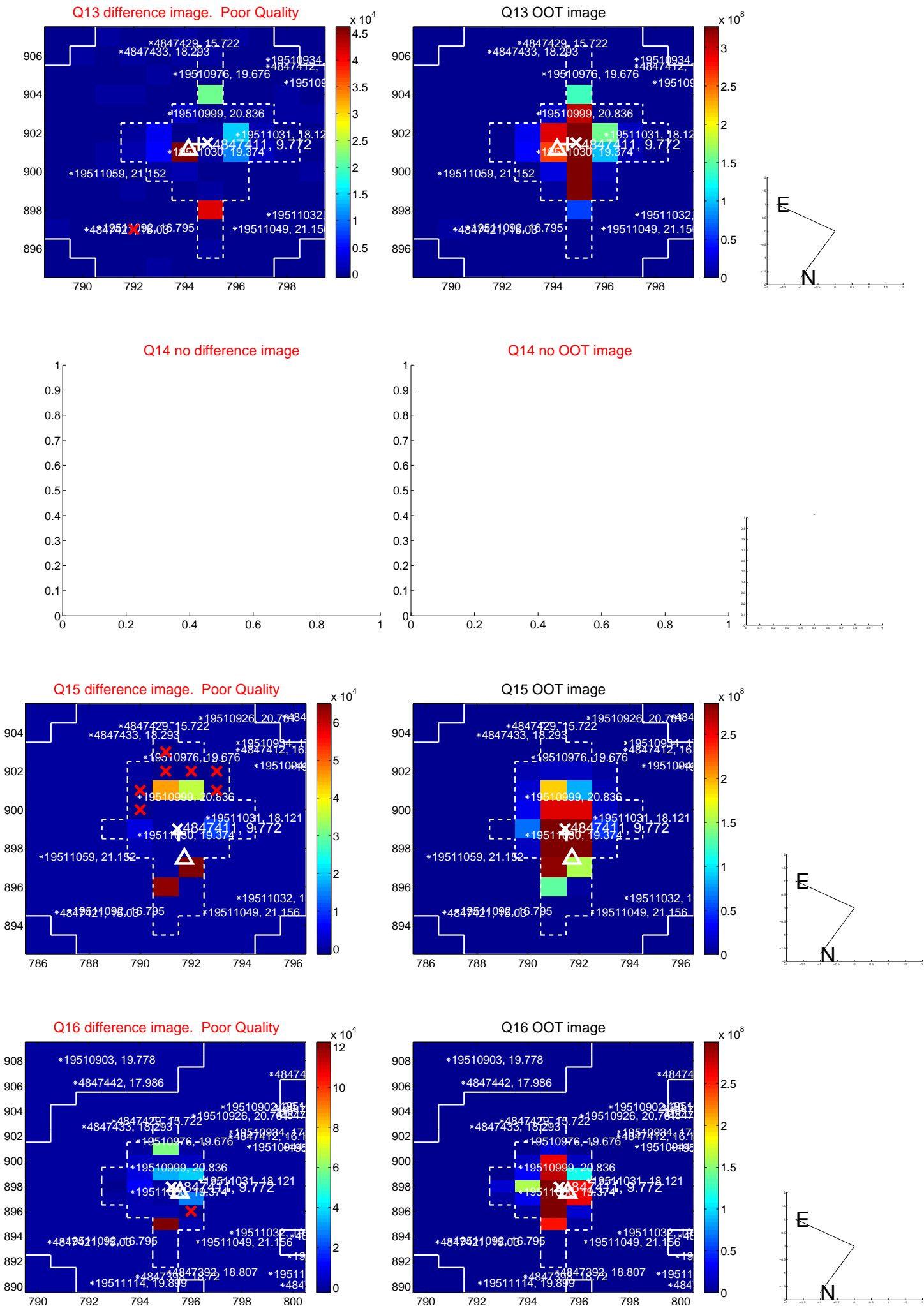
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



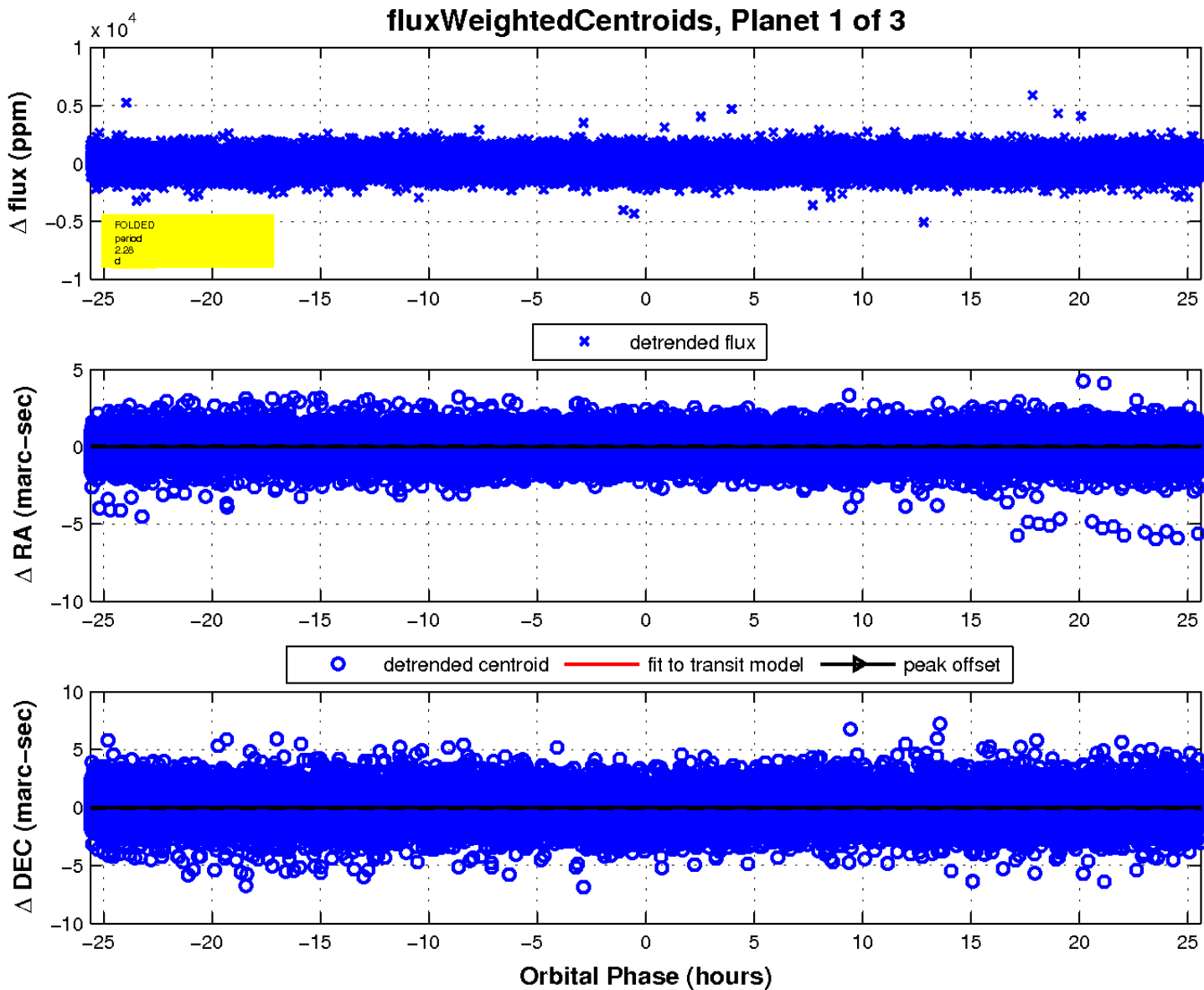
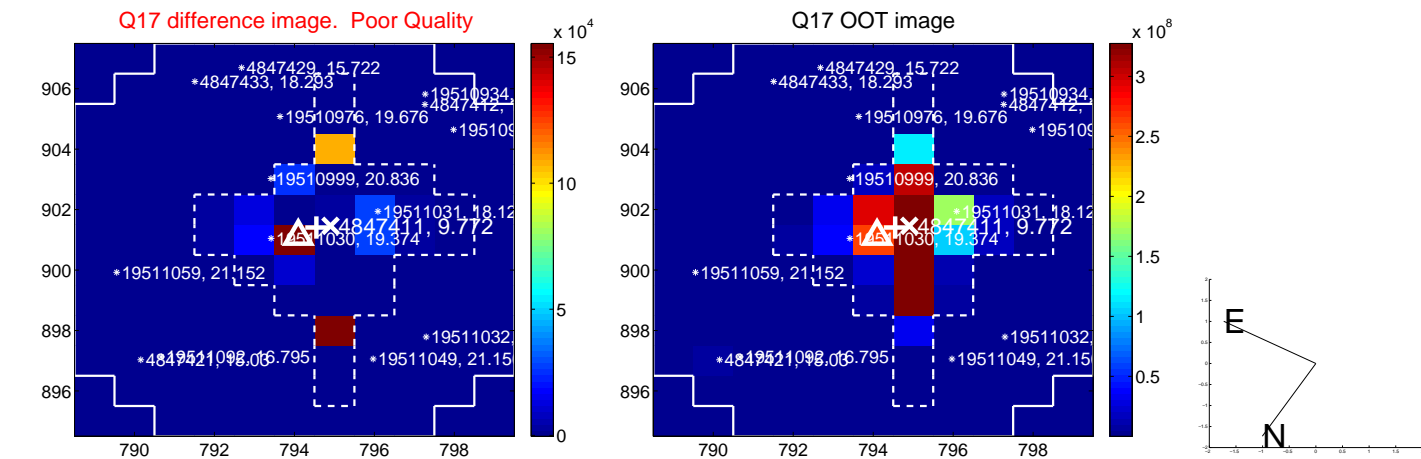
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

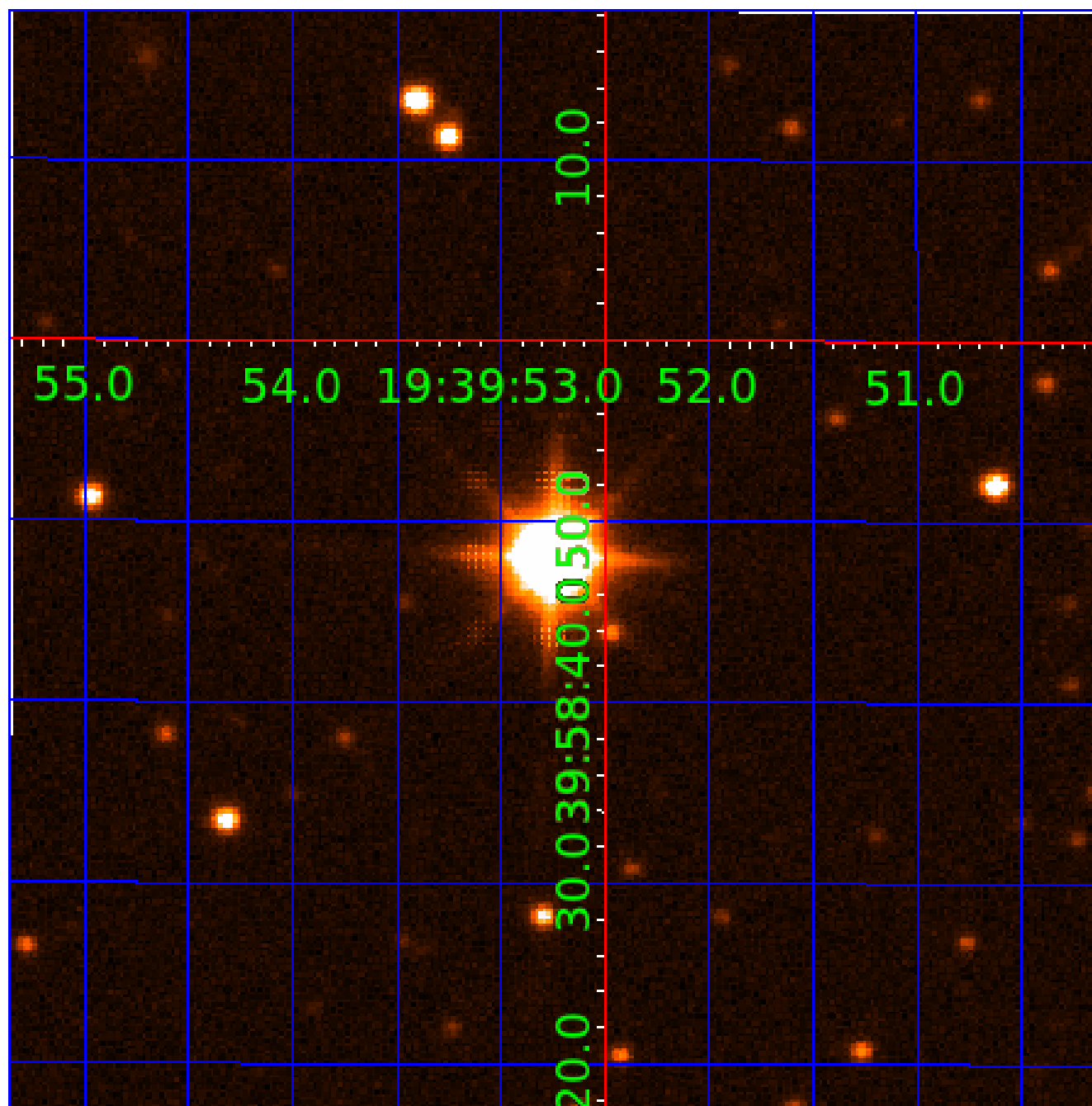


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004847411

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})
004847411-01	OBS	No	2.275625	132.008173	87.3	8.537	10.1	10.6	0.90	7296	0.95	1841.67
004847411-02	OBS	No	244.842380	176.781315	585.0	13.583	13.2	5.8	0.90	7296	2.28	3.60
004847411-03	OBS	No	0.500309	131.704170	93.6	2.908	8.3	11.5	0.90	7296	1.03	13879.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004847411-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
004847411-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
004847411-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

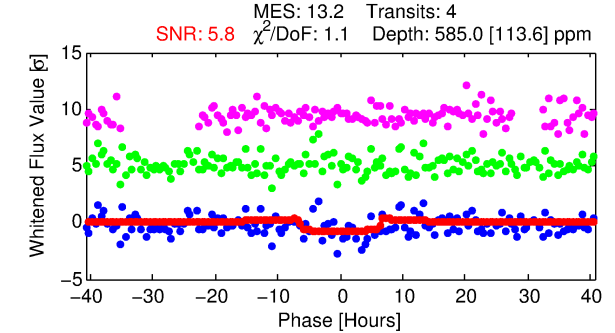
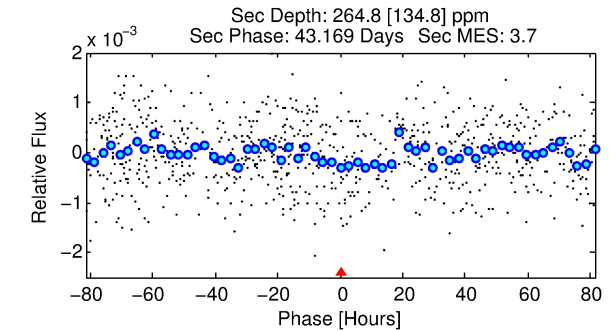
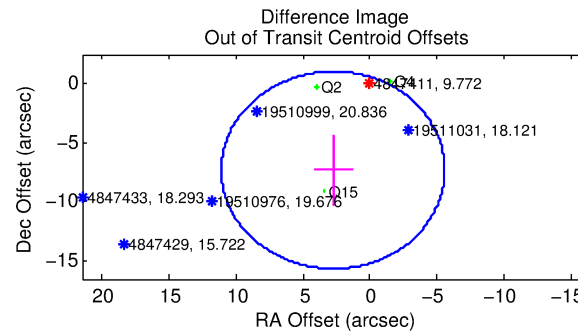
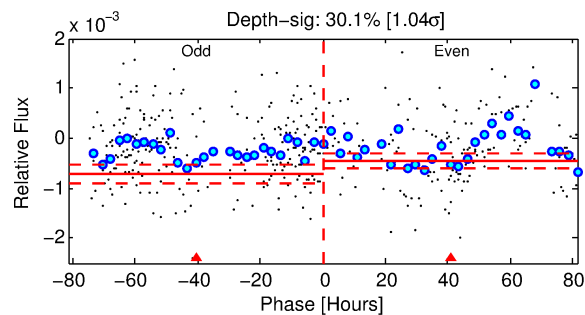
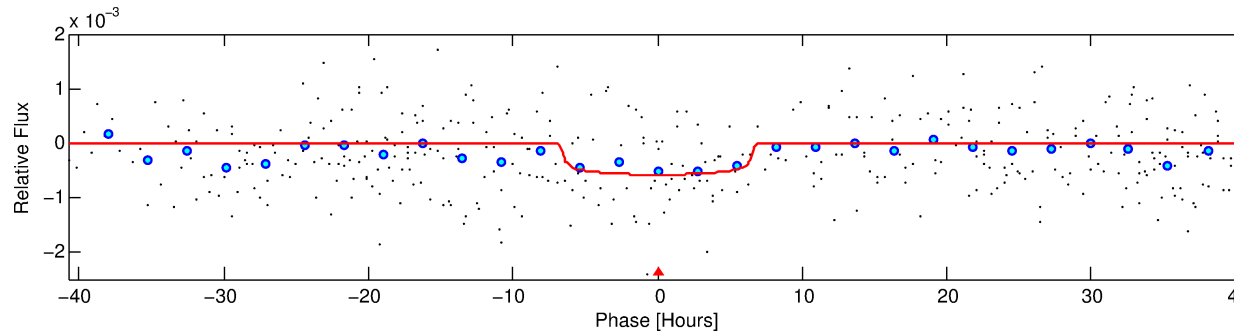
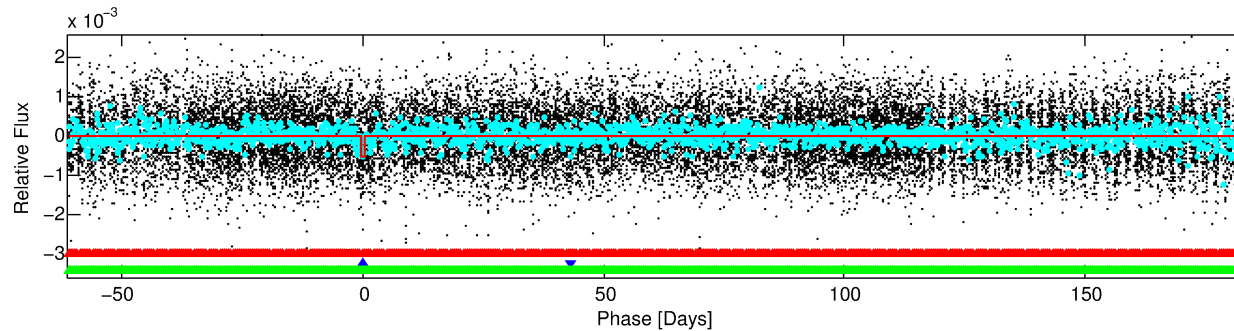
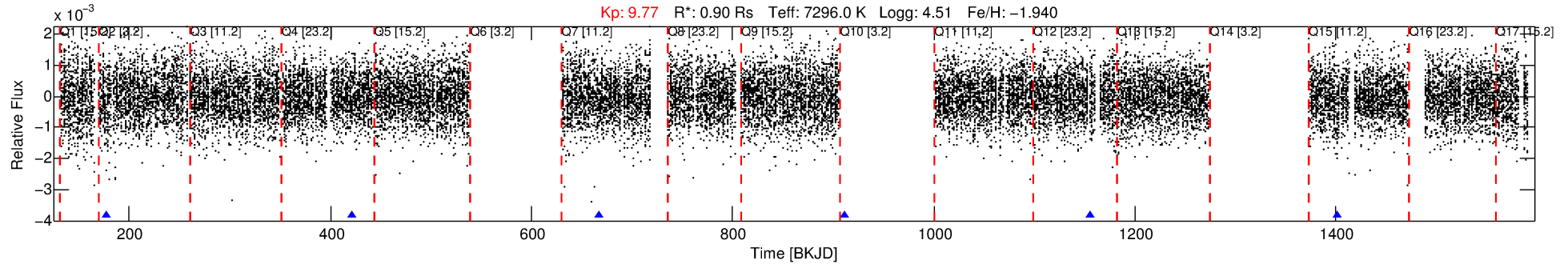
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004847411-02

No Significant Match Found

DV One-Page Summary

KIC: 4847411 Candidate: 2 of 3 Period: 244.842 d



DV Fit Results:

Period = 244.84238 [0.00837] d
Epoch = 176.7813 [0.0281] BKJD
Rp/R* = 0.0231 [0.0193]
a/R* = 119.23 [593.91]
b = 0.55 [6.41]
Seff = 3.60 [1.11]
Teq = 351 [27] K
Rp = 2.28 [1.95] Re
a = 0.7593 [0.1301] AU
Ag = 16133.99 [28560.31] [0.56 σ]
Teff = 6120 [2685] K [2.15 σ]

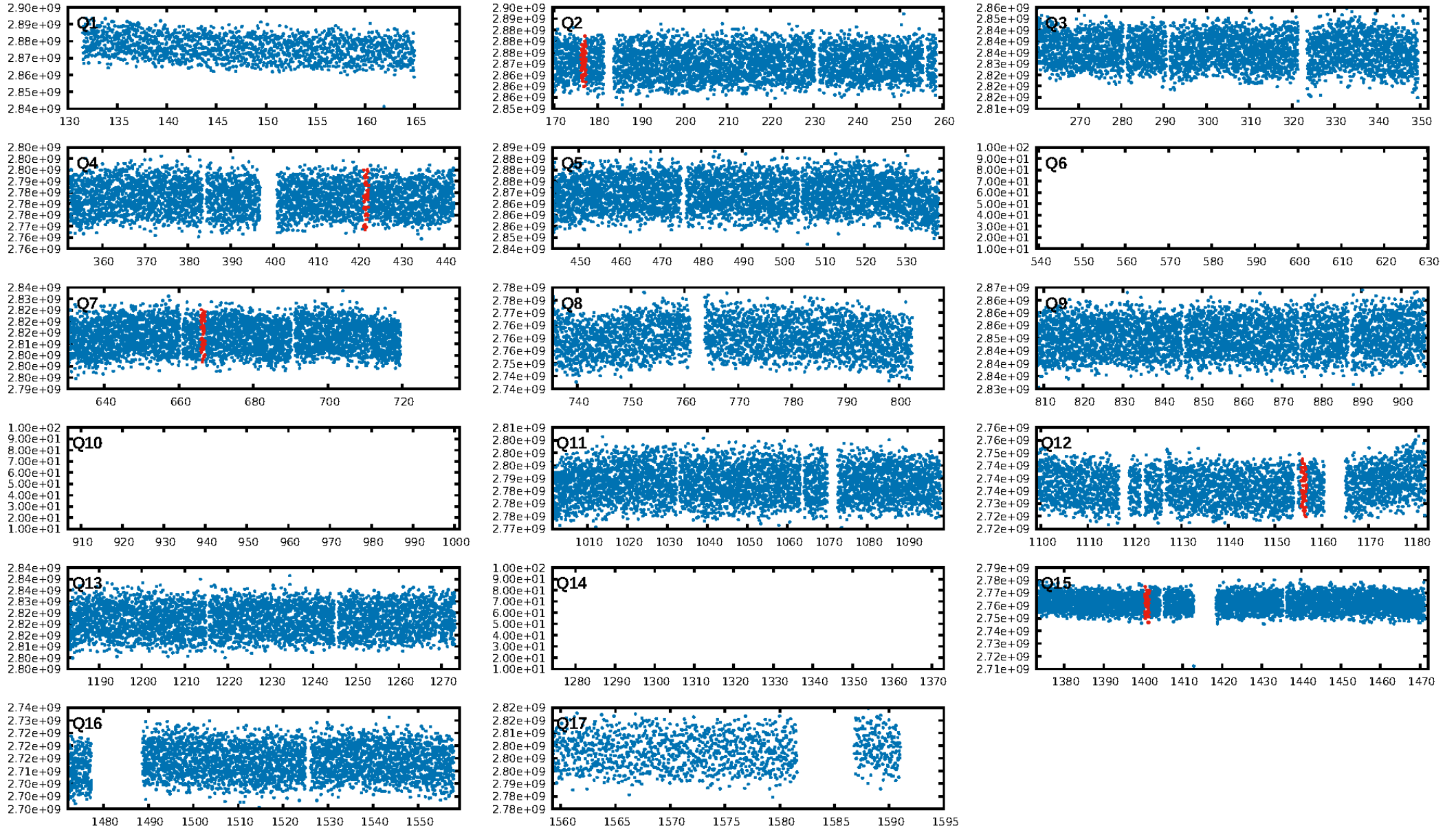
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [362.88 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.43e-27
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 1.4%
Centroid-so: 1.481 arcsec [2.95 σ]
OotOffset-rm: 7.801 arcsec [2.81 σ]
KicOffset-rm: 6.612 arcsec [2.16 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/4]

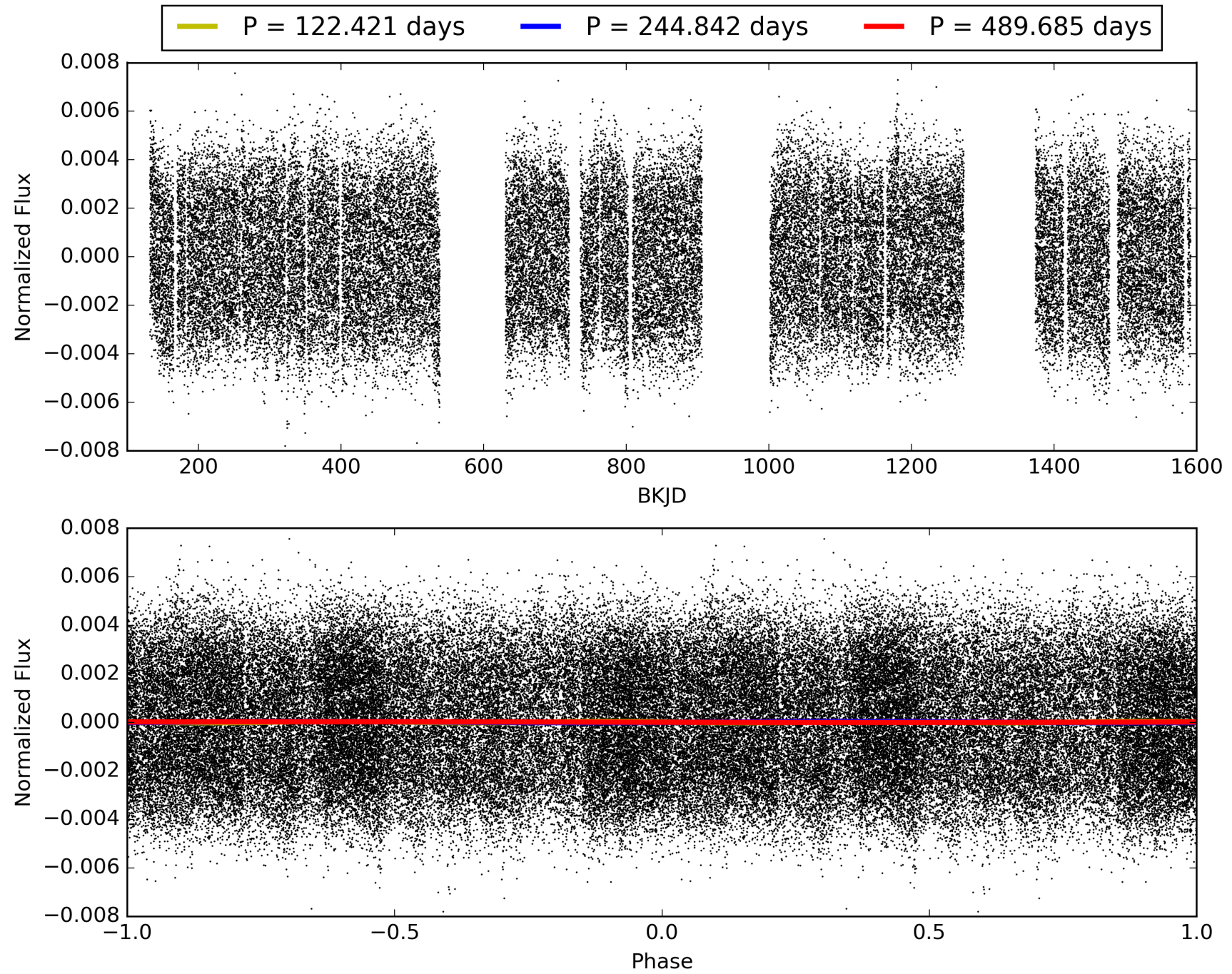
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:13:31 Z

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

TCE 004847411-02, PDC Light Curves

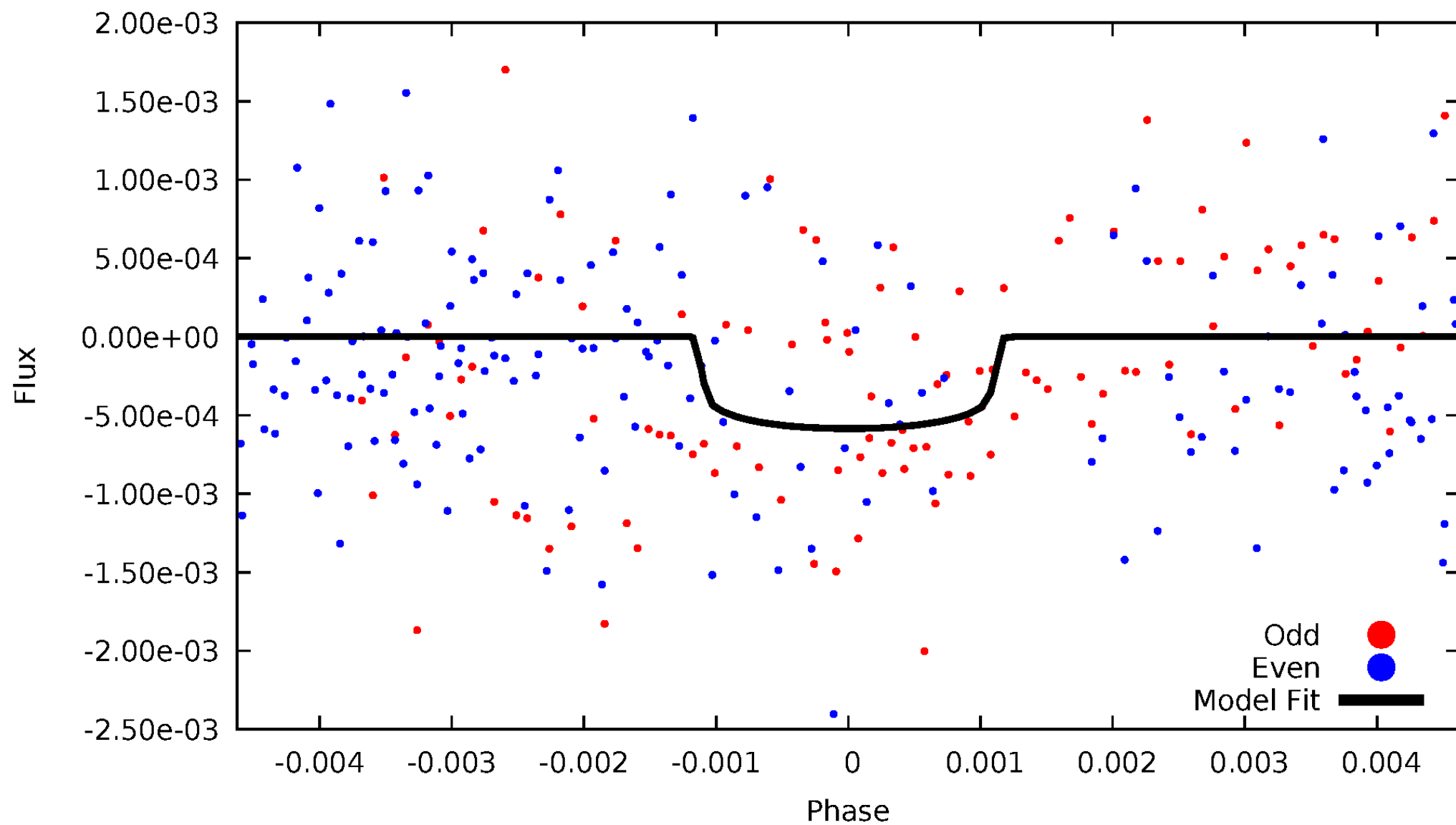


TCE 004847411-02



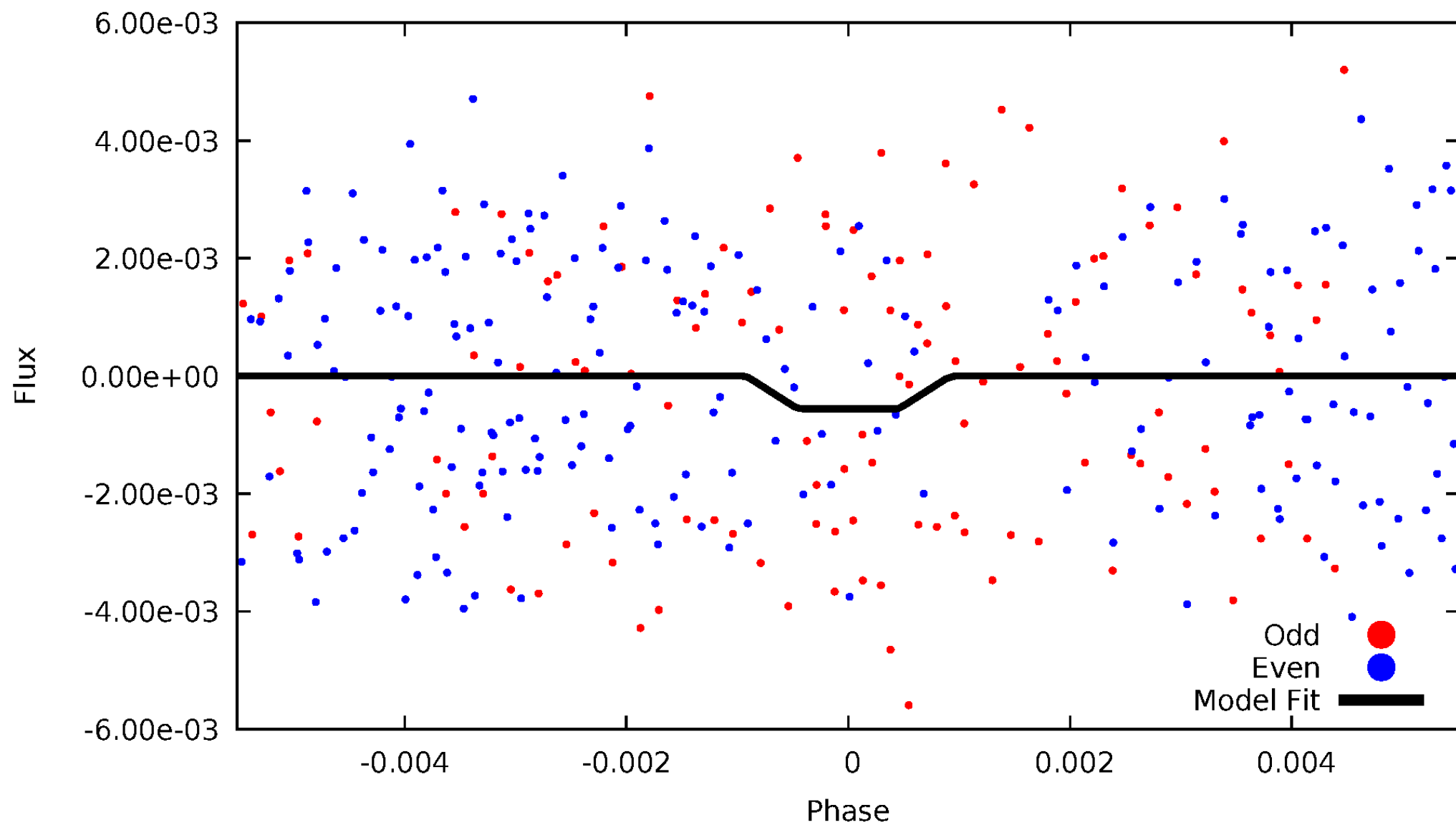
DV Odd/Even

TCE 004847411-02



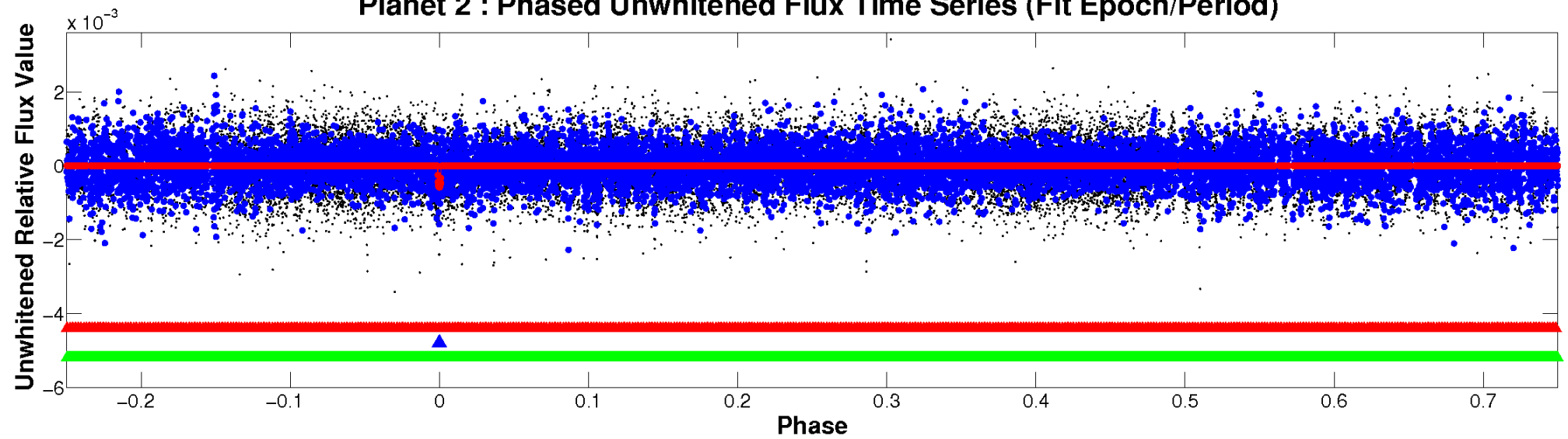
ALT Odd/Even

TCE 004847411-02

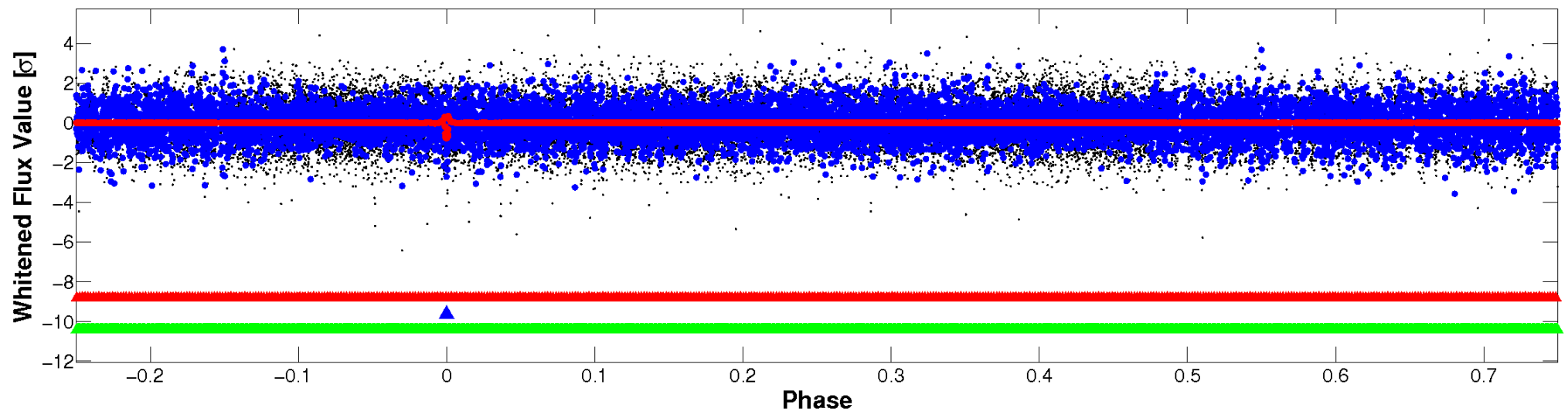


Non-Whitened Vs. Whitened Light Curve

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

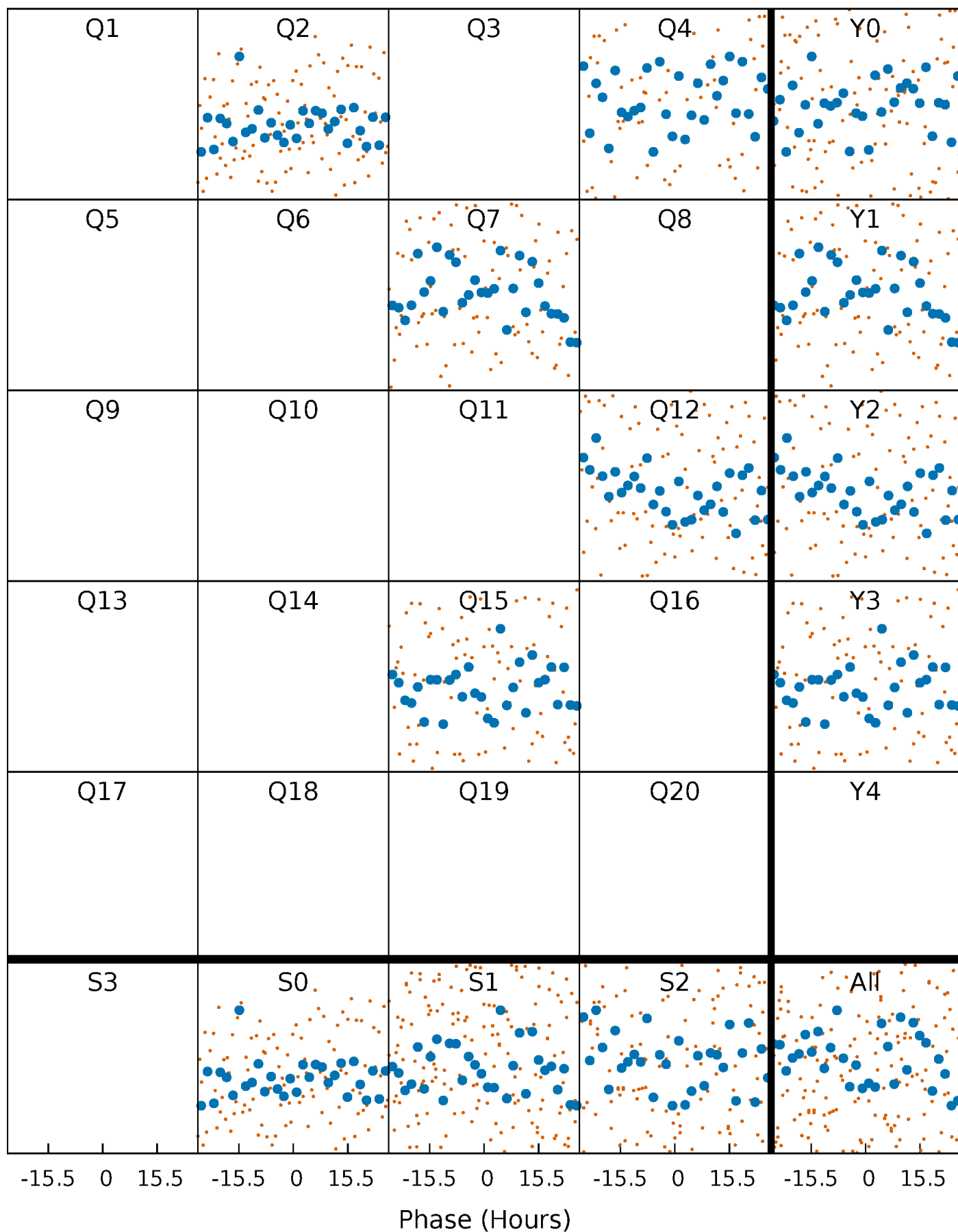


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



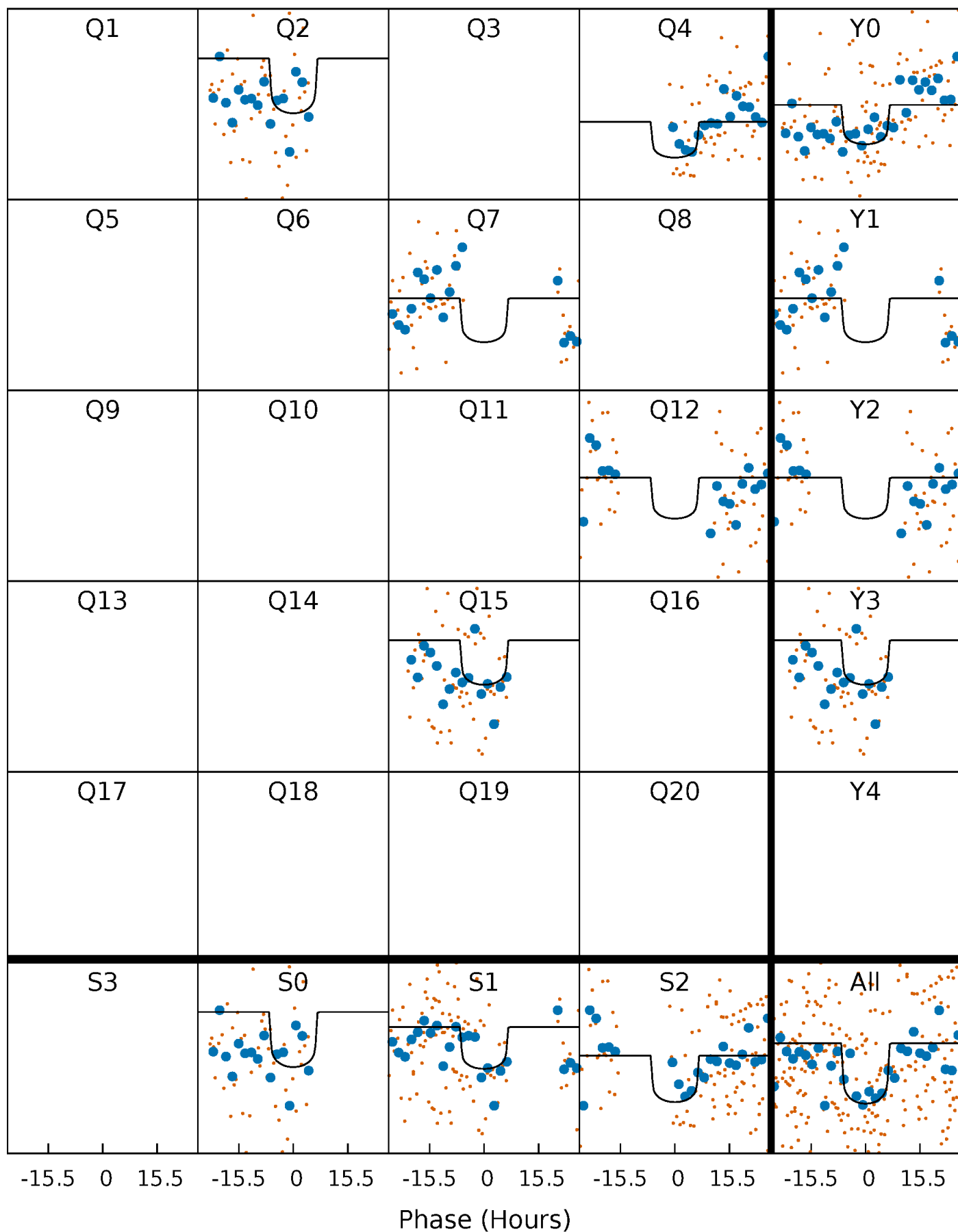
PDC Quarter-Phased Transit Curves

TCE 004847411-02 P=244.842380 Days $T_0=176.781315$ (BKJD)



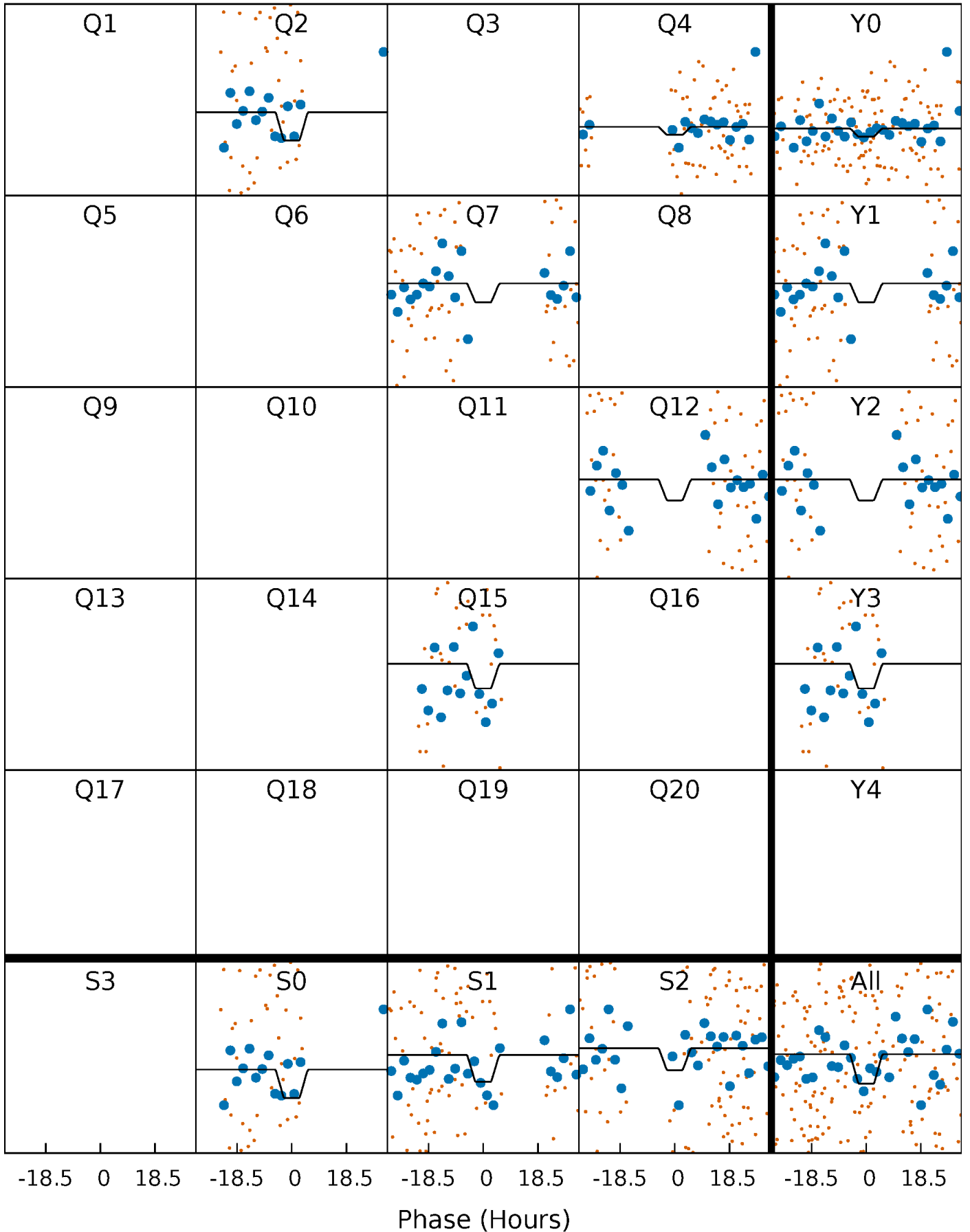
DV Quarter-Phased Transit Curves

TCE 004847411-02 P=244.842380 Days $T_0=176.781315$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

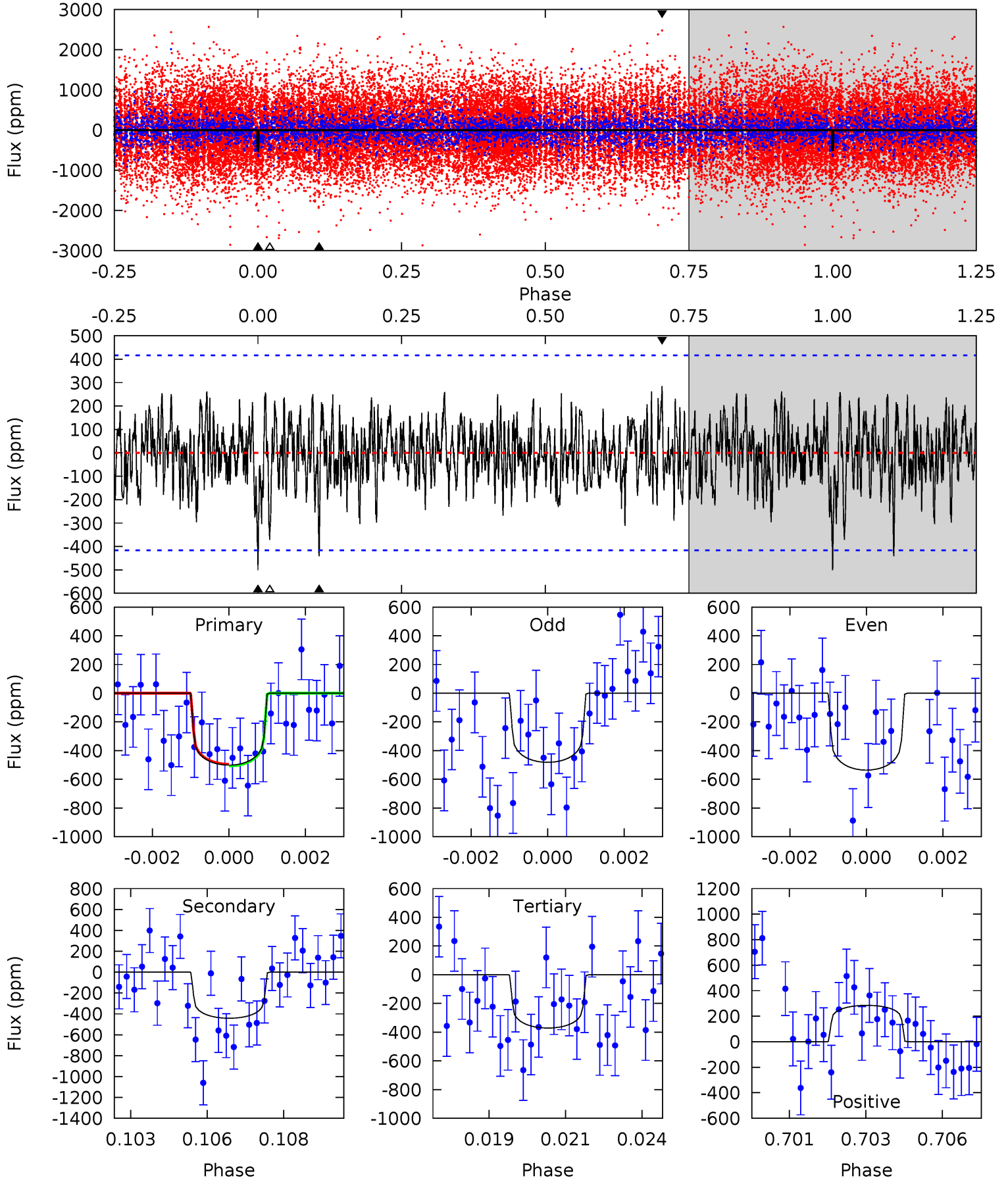
TCE 004847411-02 P=244.841727 Days $T_0=176.792244$ (BKJD)



DV Model-Shift Uniqueness Test

004847411-02, P = 244.842380 Days, E = 176.781315 Days

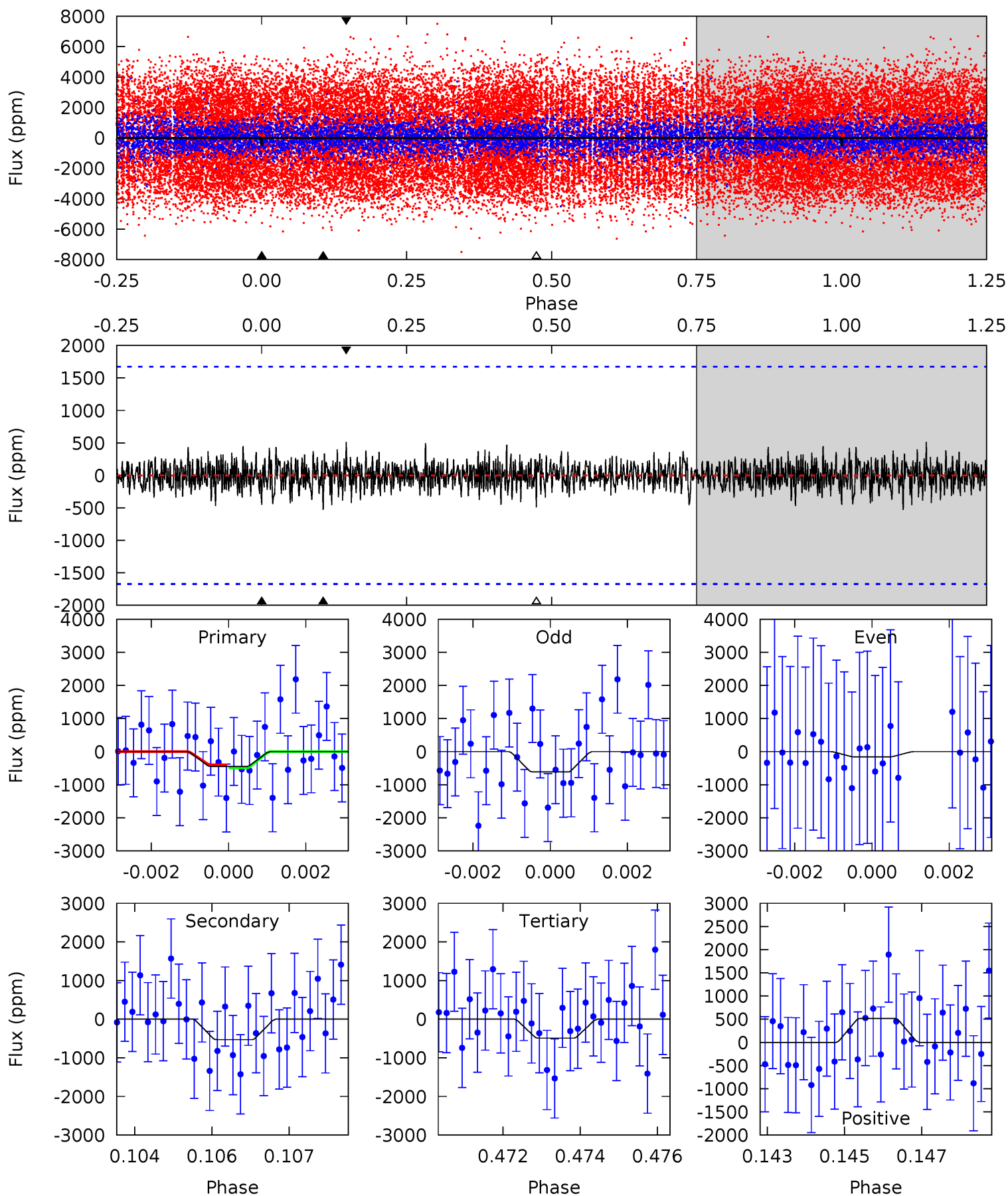
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.38	5.62	4.72	3.63	5.30	3.04	1.31	1.66	2.75	0.90	2.00	0.33	0.81	0.36	0.08



Alt Model-Shift Uniqueness Test

004847411-02, P = 244.841727 Days, E = 176.792244 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.44	1.70	1.57	1.64	5.35	3.12	0.49	-0.13	-0.21	0.12	0.05	0.70	0.82	0.49	0.15



Stellar Parameters For KIC 004847411

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+195}_{-260}	$4.514^{+0.028}_{-0.161}$	$-1.940^{+0.300}_{-0.050}$	$0.904^{+0.161}_{-0.040}$	$0.972^{+0.044}_{-0.066}$	$1.855^{+0.184}_{-0.771}$
	+3%/-4%	+1%/-4%	+15%/-3%	+18%/-4%	+5%/-7%	+10%/-42%
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 004847411-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-442 ± 79	$2.56^{+1.88}_{-1.56}$	497^{+23}_{-20}	6557^{+5281}_{-1519}	$20935^{+106706}_{-14235}$
Alt.	-530 ± 313	$2.63^{+1.92}_{-1.51}$	498^{+25}_{-20}	6569^{+5539}_{-1935}	$20705^{+107361}_{-16341}$

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 $A_{obs} \gg 1.0$

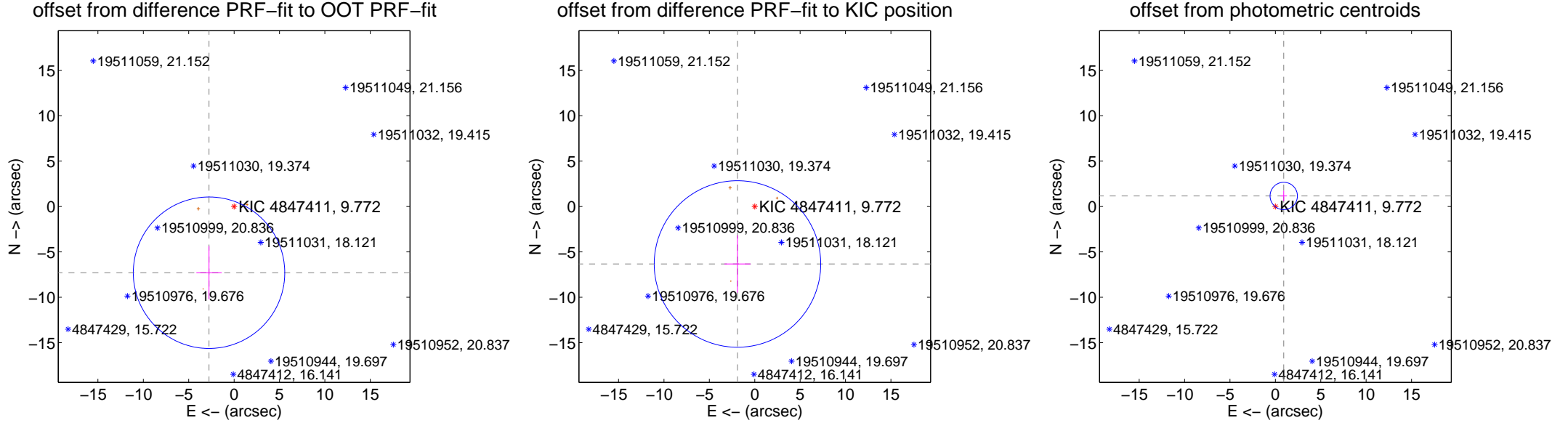
DV Centroid Data

Supplemental centroid analysis for 004847411-02. **Kepler magnitude: 9.77.** Transit SNR 5.83

There are 0 quarters with good PRF difference image offsets

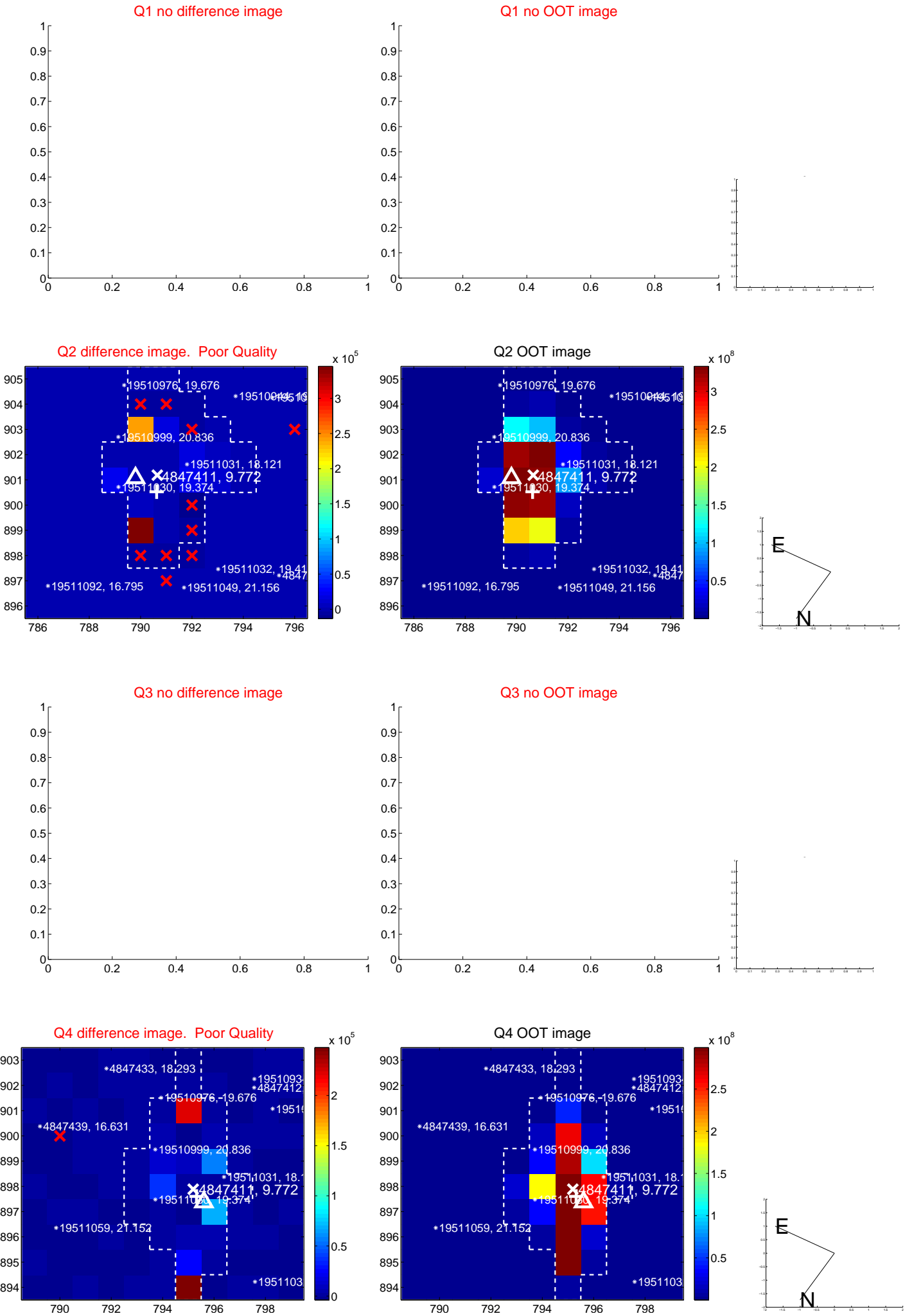
The direct PRF centroid is offset from the target star catalog position by about 1.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.801 ± 2.781	2.81	2.762 ± 1.396	-7.296 ± 2.926
PRF-fit source offset from KIC position	6.612 ± 3.057	2.16	1.902 ± 1.430	-6.332 ± 3.163
photometric centroid source offset	1.48 ± 0.50	2.95	-0.92 ± 0.36	1.16 ± 0.57



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.

Q5 no difference image



Q5 no OOT image



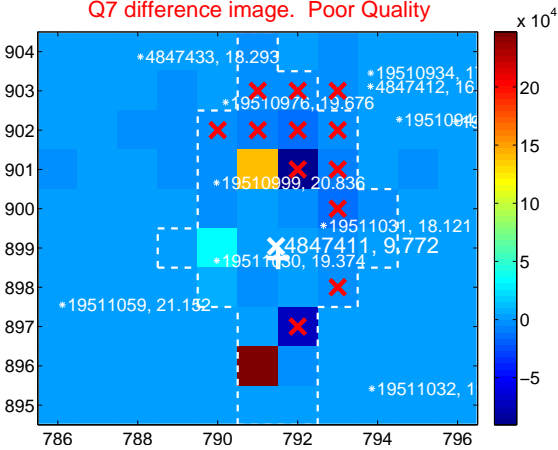
Q6 no difference image



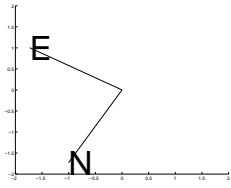
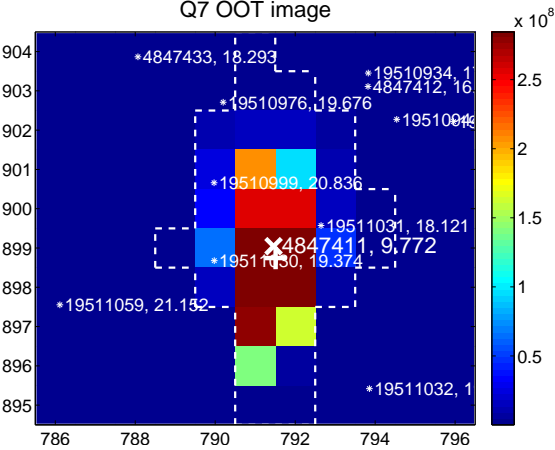
Q6 no OOT image



Q7 difference image. Poor Quality



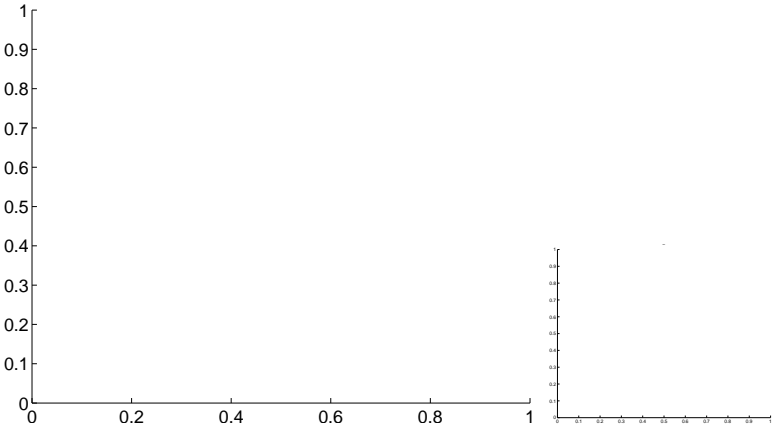
Q7 OOT image



Q8 no difference image



Q8 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.

Q13 no difference image



Q13 no OOT image



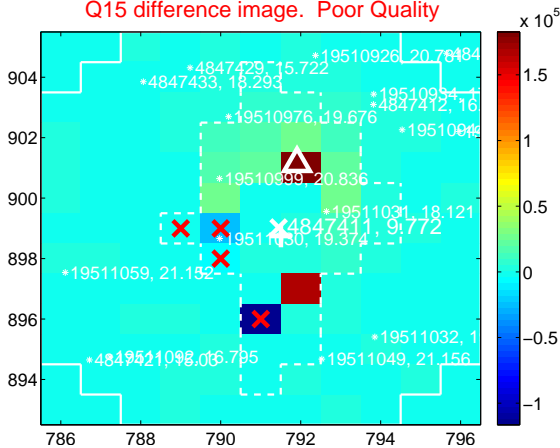
Q14 no difference image



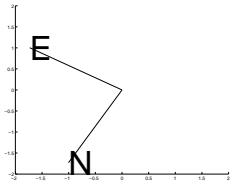
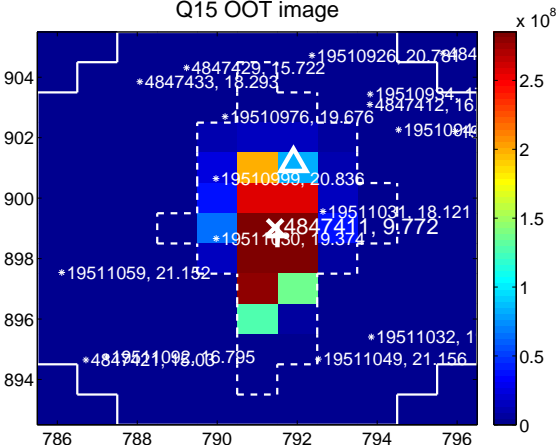
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



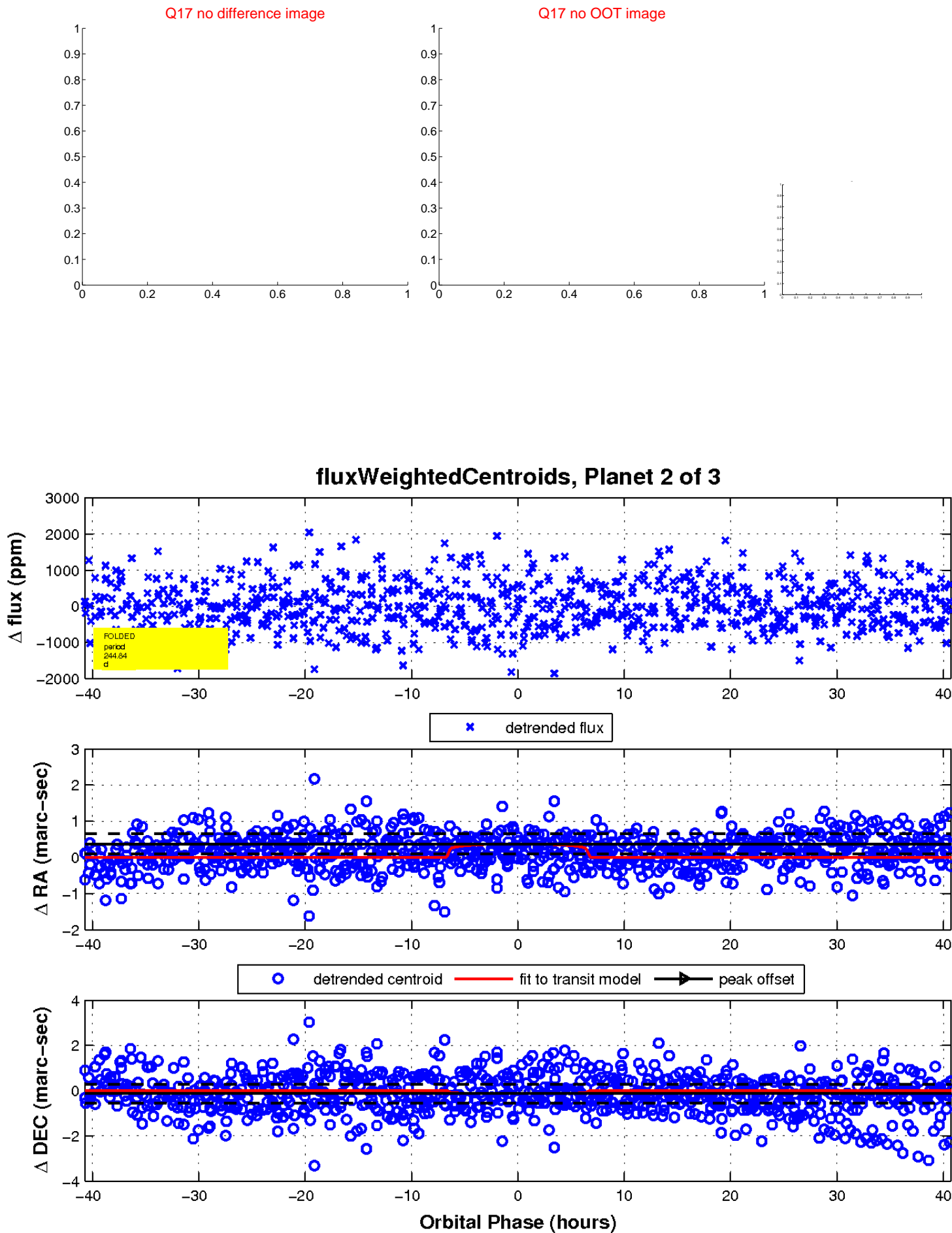
Q16 no difference image



Q16 no OOT image

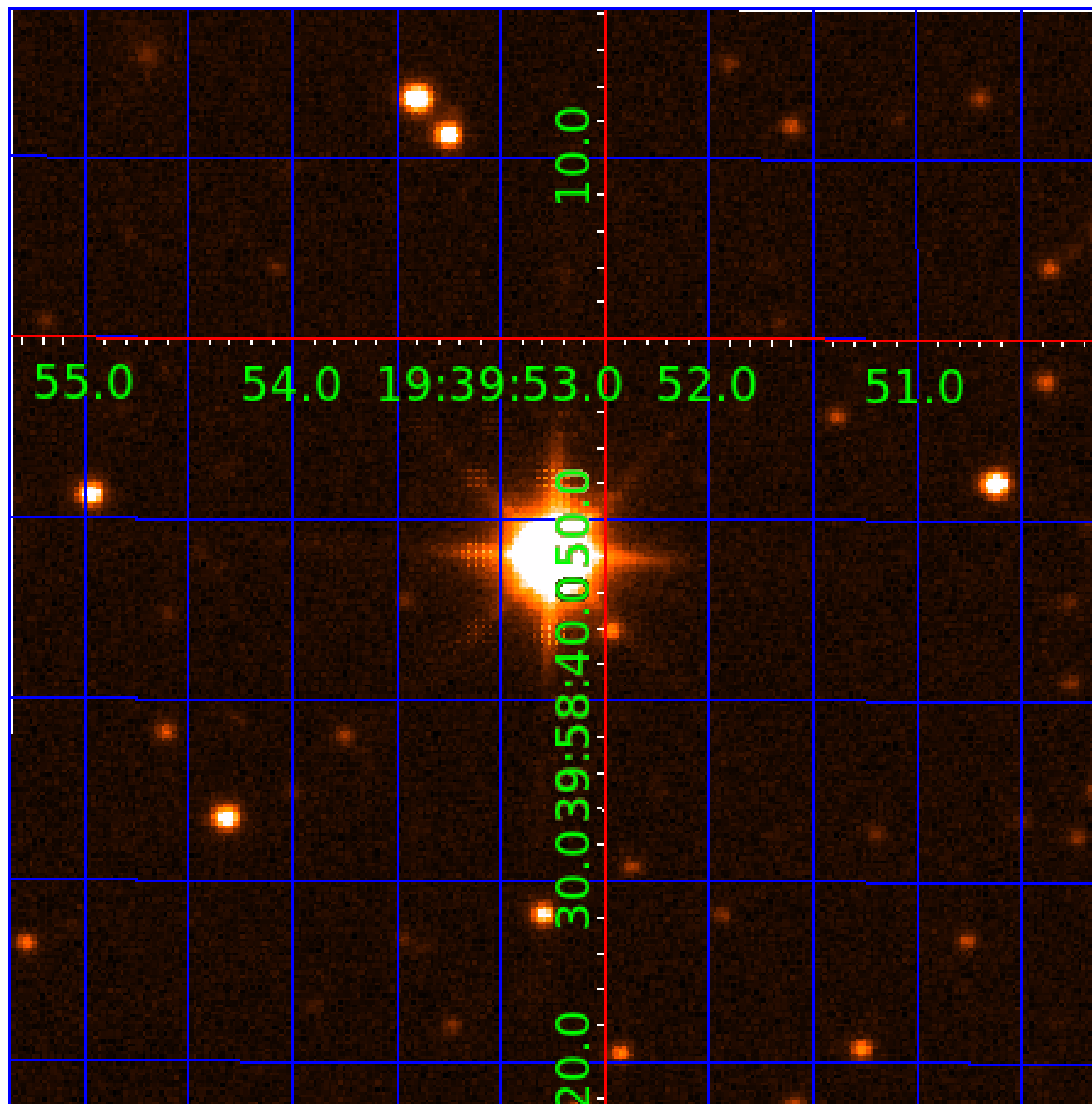


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004847411

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})
004847411-01	OBS	No	2.275625	132.008173	87.3	8.537	10.1	10.6	0.90	7296	0.95	1841.67
004847411-02	OBS	No	244.842380	176.781315	585.0	13.583	13.2	5.8	0.90	7296	2.28	3.60
004847411-03	OBS	No	0.500309	131.704170	93.6	2.908	8.3	11.5	0.90	7296	1.03	13879.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004847411-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
004847411-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
004847411-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

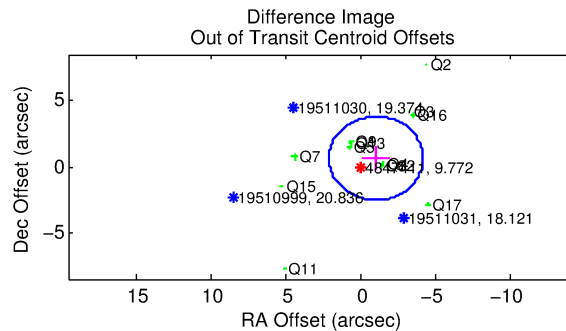
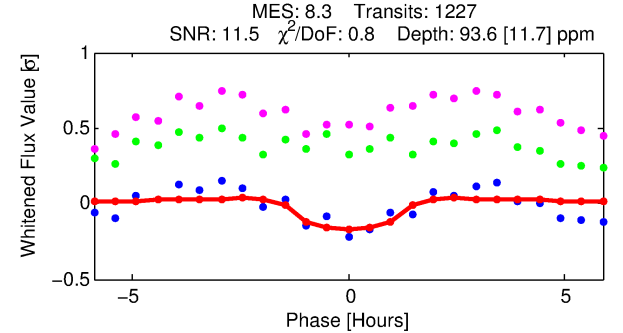
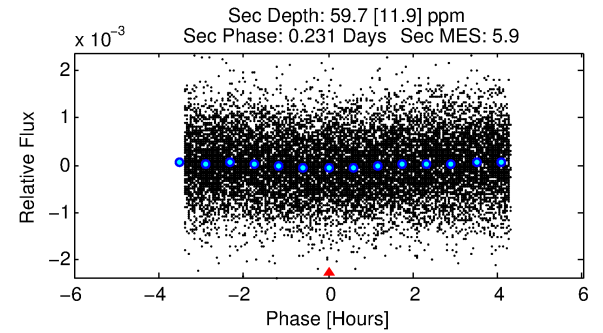
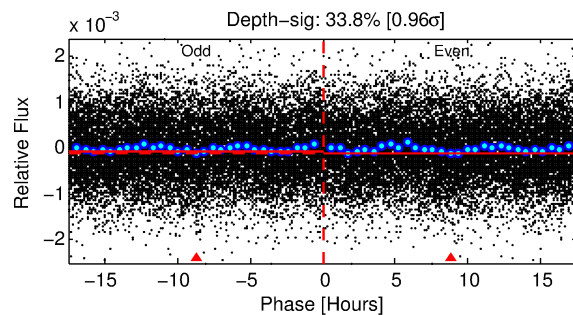
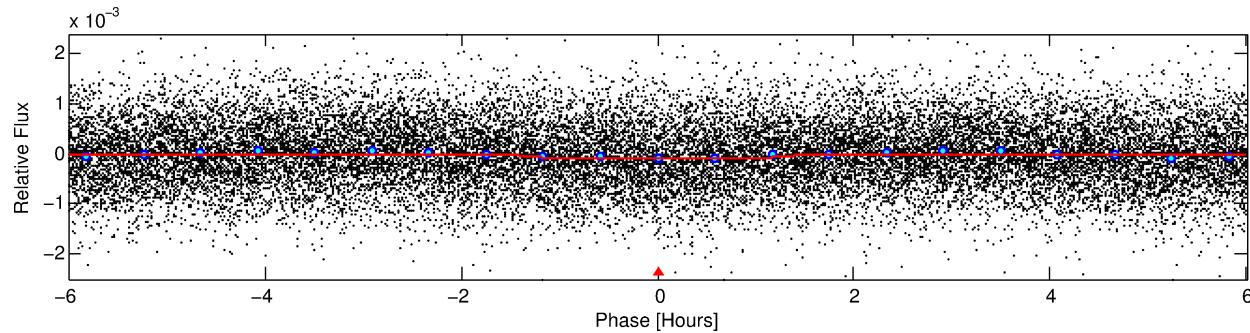
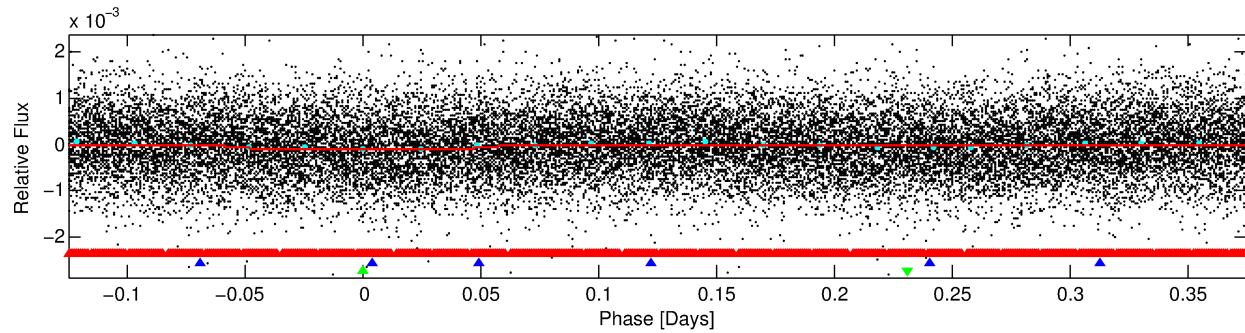
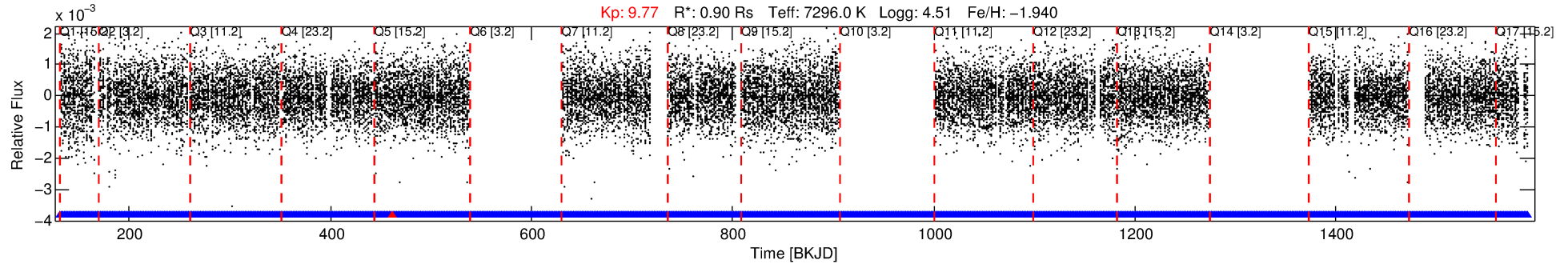
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004847411-03

No Significant Match Found

DV One-Page Summary

KIC: 4847411 Candidate: 3 of 3 Period: 0.500 d



DV Fit Results:

Period = 0.50031 [0.00001] d
Epoch = 131.7042 [0.0031] BKJD
 $R_p/R^* = 0.0104$ [0.0052]
 $a/R^* = 1.11$ [0.63]
 $b = 0.92$ [0.56]
 $\text{Seff} = 13879.09$ [4288.98]
 $T_{\text{eq}} = 2768$ [214] K
 $R_p = 1.03$ [0.54] R_e
 $a = 0.0122$ [0.0021] AU
 $A_g = 4.65$ [4.89] [0.75 σ]
 $T_{\text{eff}} = 6284$ [1609] K [2.17 σ]

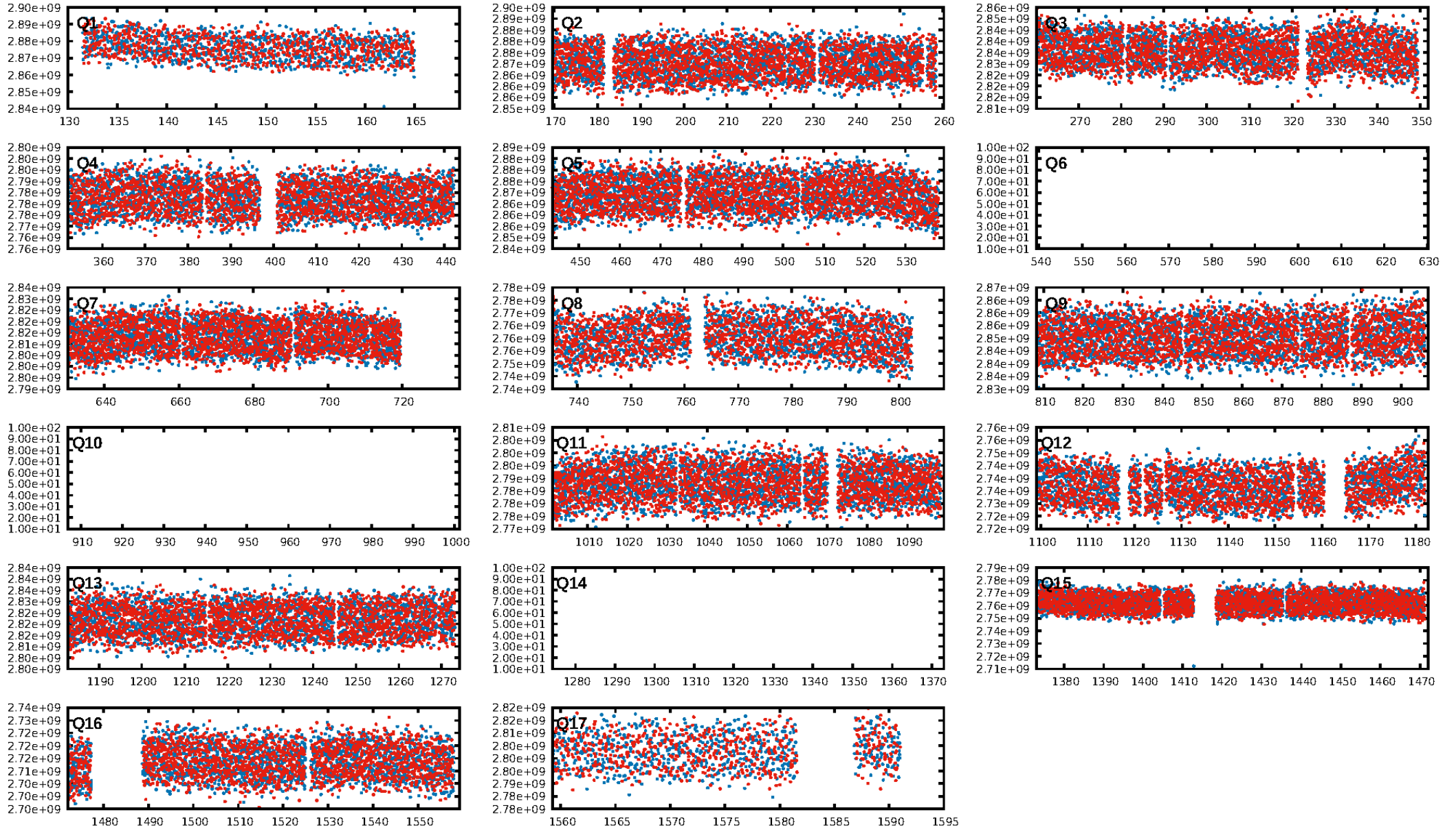
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.72 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.80e-07
RollingBand-fgt: 1.00 [1157/1158]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 1.869 arcsec [10.38 σ]
OotOffset-rm: 1.239 arcsec [1.18 σ]
KicOffset-rm: 2.130 arcsec [2.11 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [14/14]

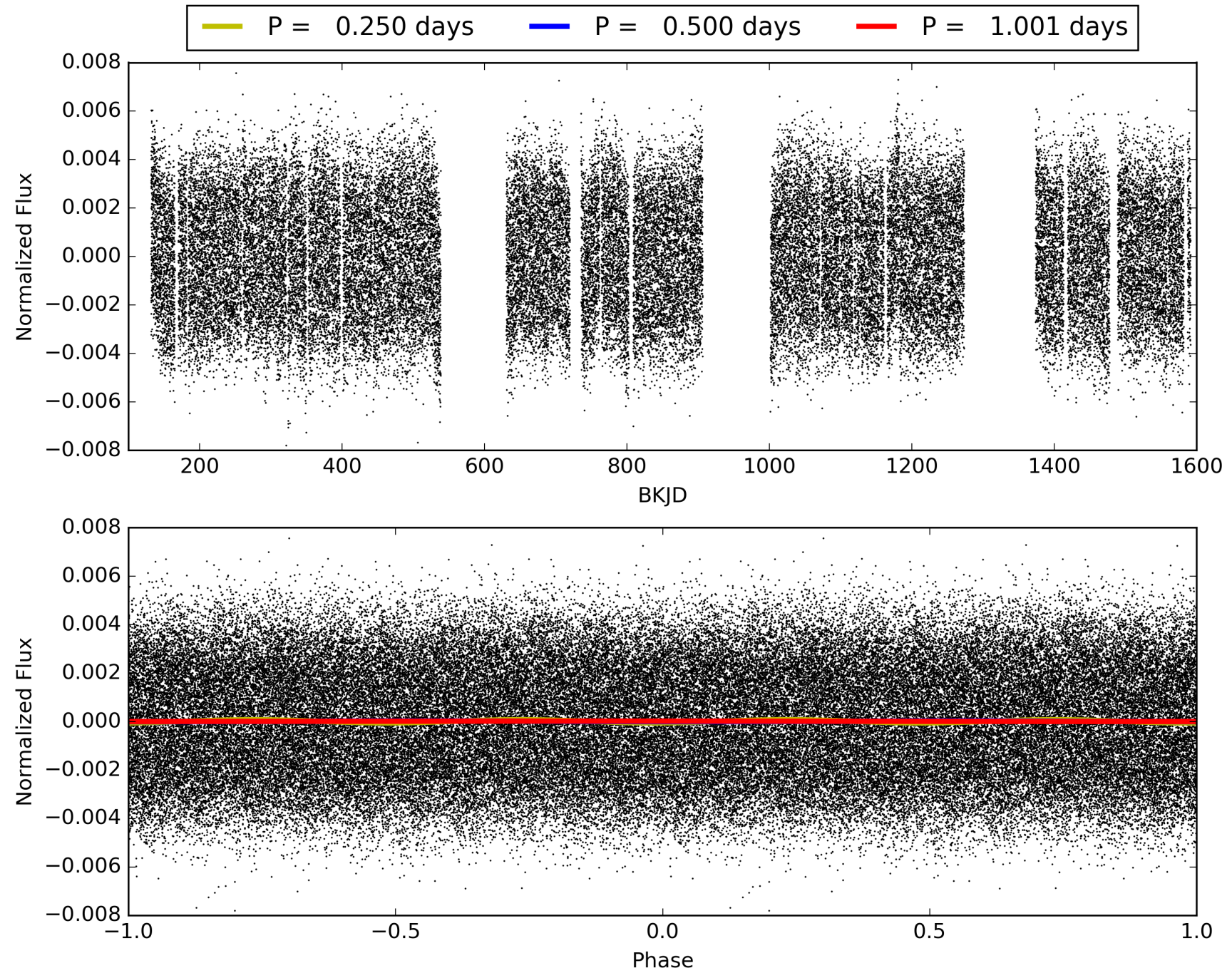
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:13:39 Z

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

TCE 004847411-03, PDC Light Curves

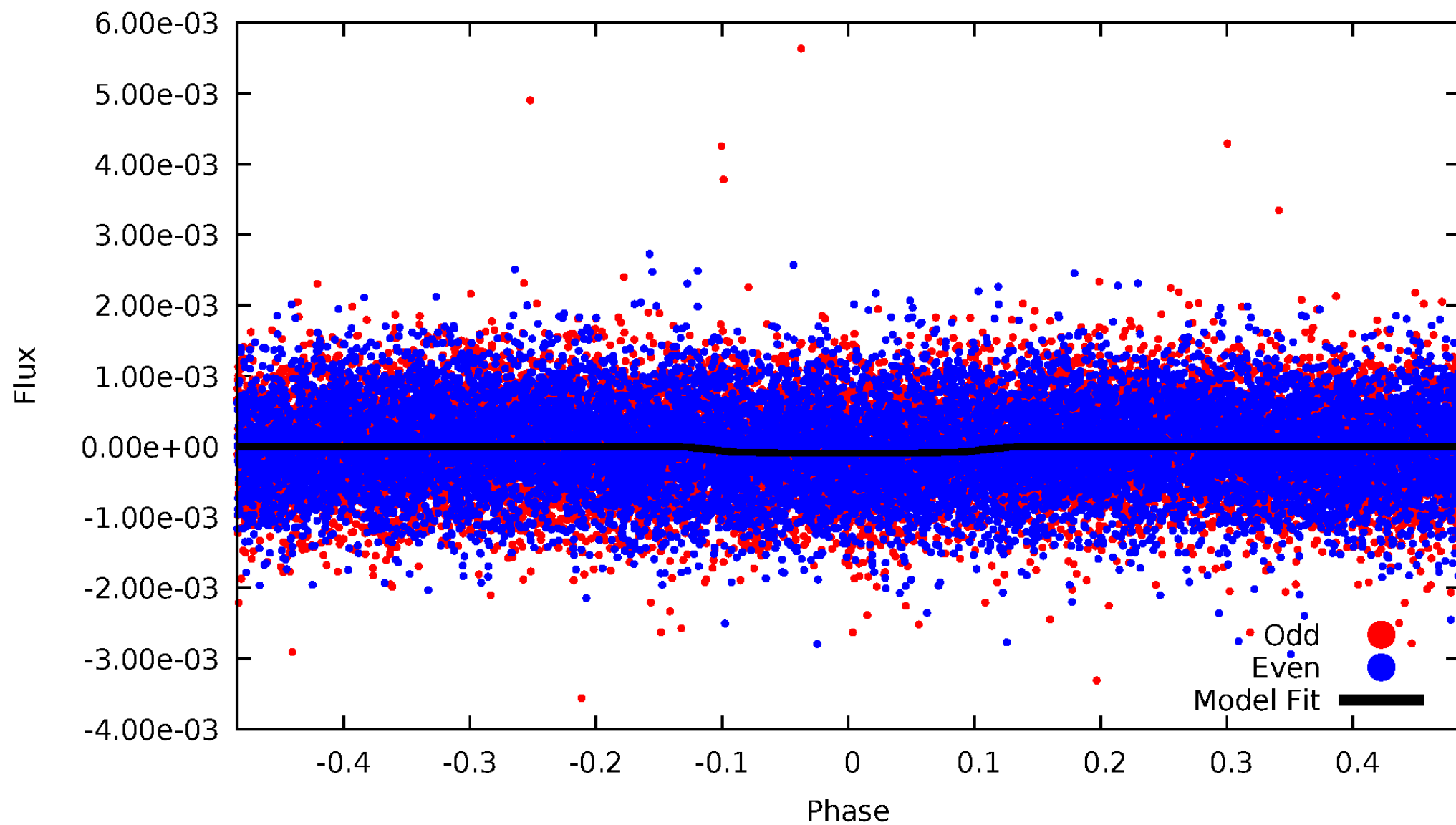


TCE 004847411-03



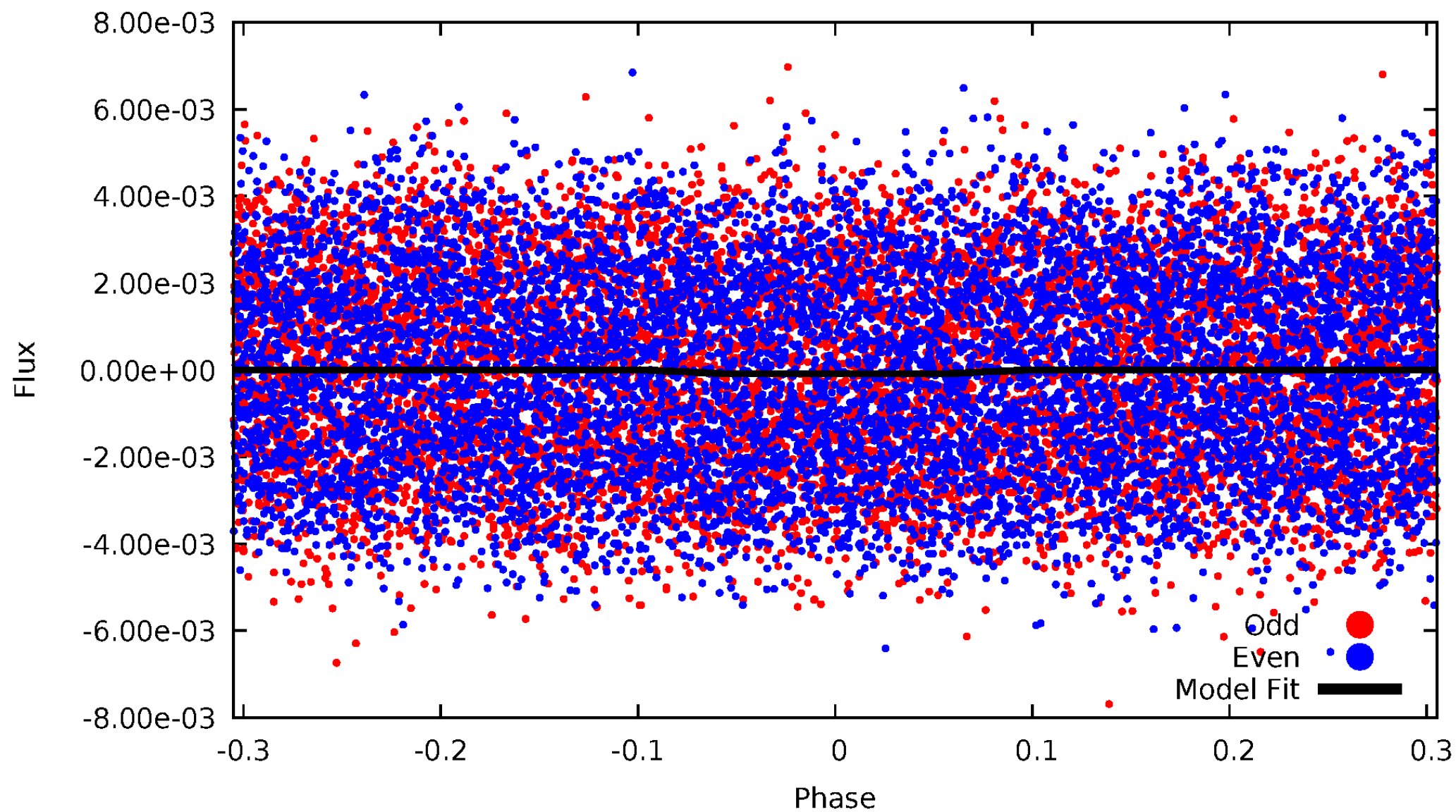
DV Odd/Even

TCE 004847411-03

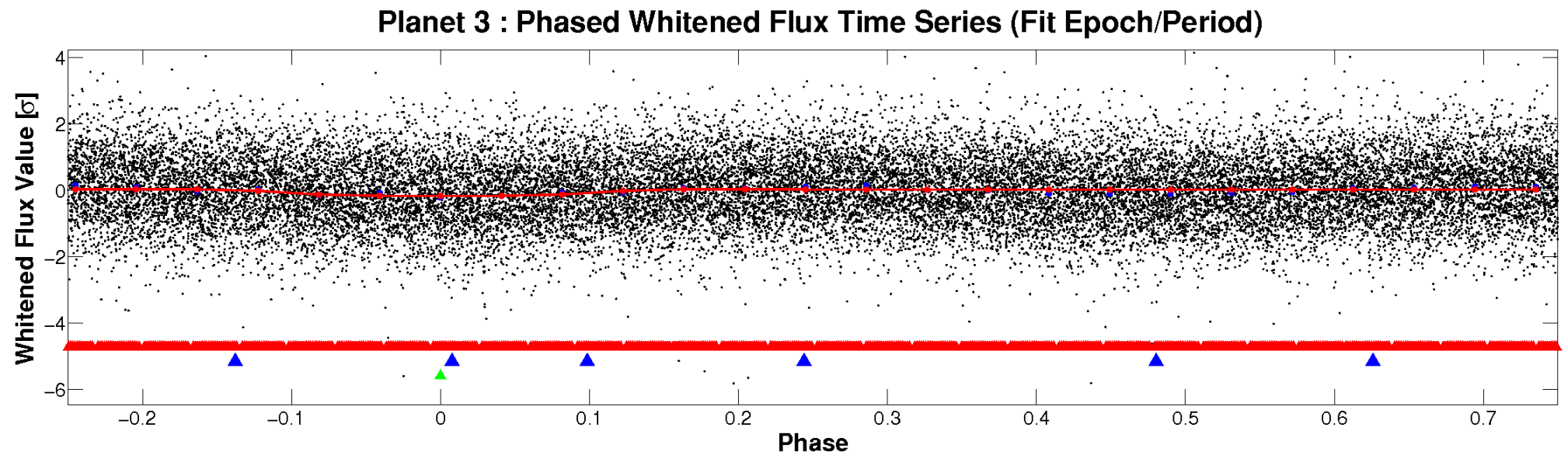
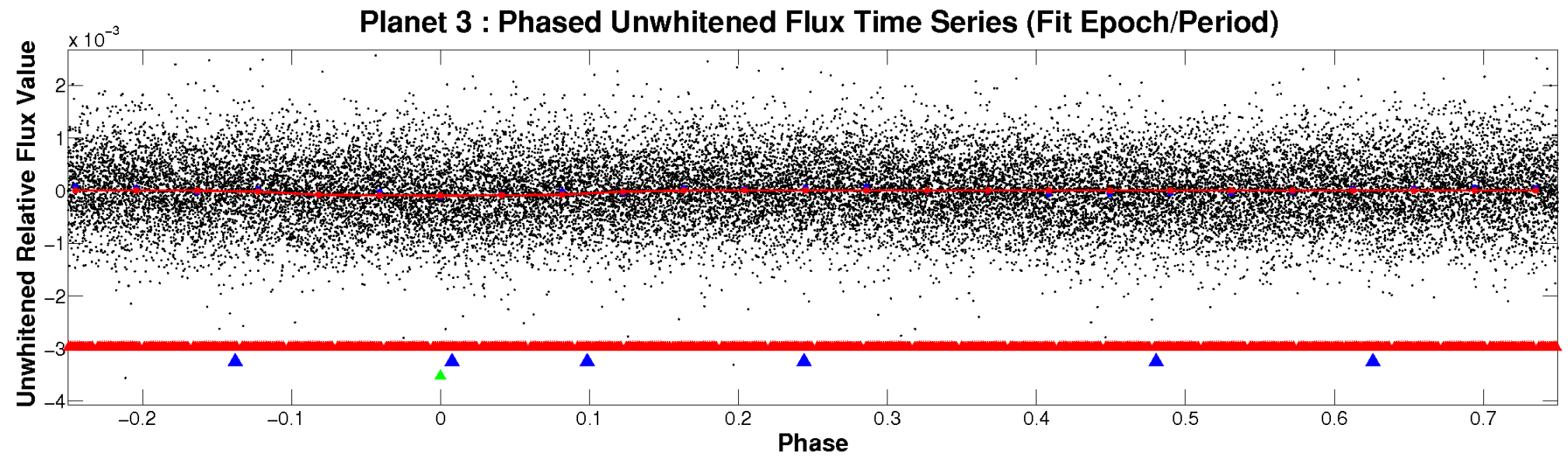


ALT Odd/Even

TCE 004847411-03

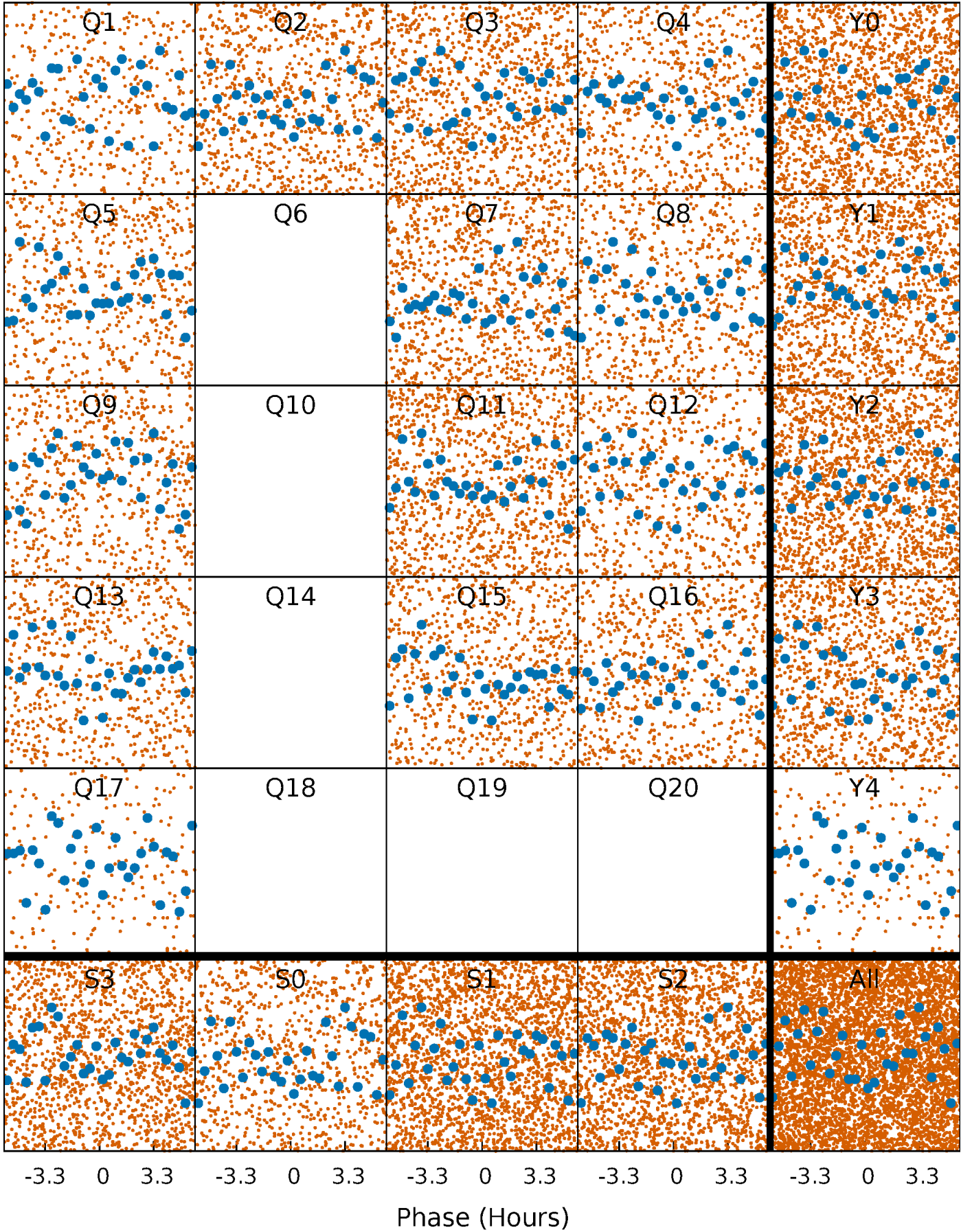


Non-Whitened Vs. Whitened Light Curve



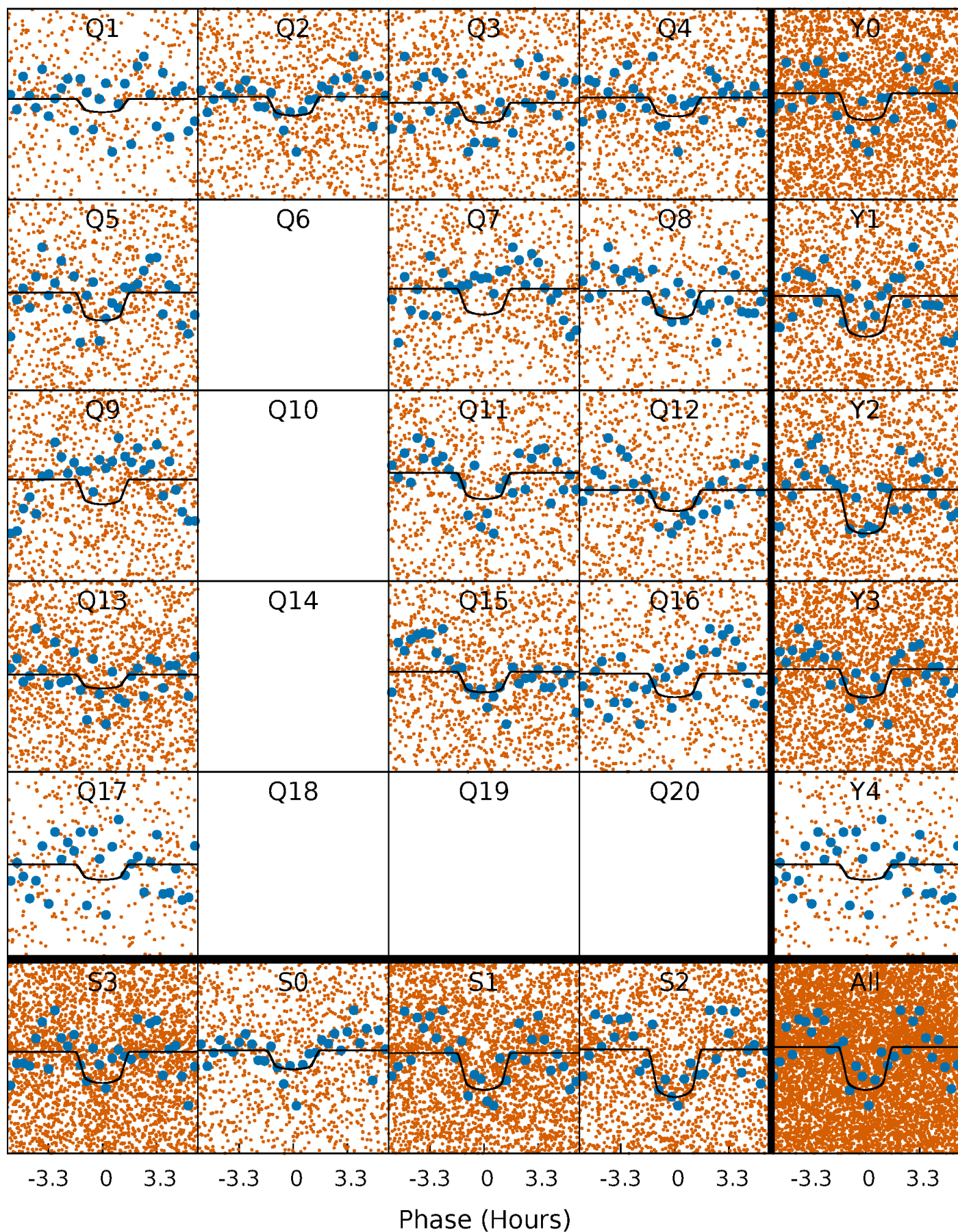
PDC Quarter-Phased Transit Curves

TCE 004847411-03 P= 0.500309 Days $T_0=131.704170$ (BKJD)



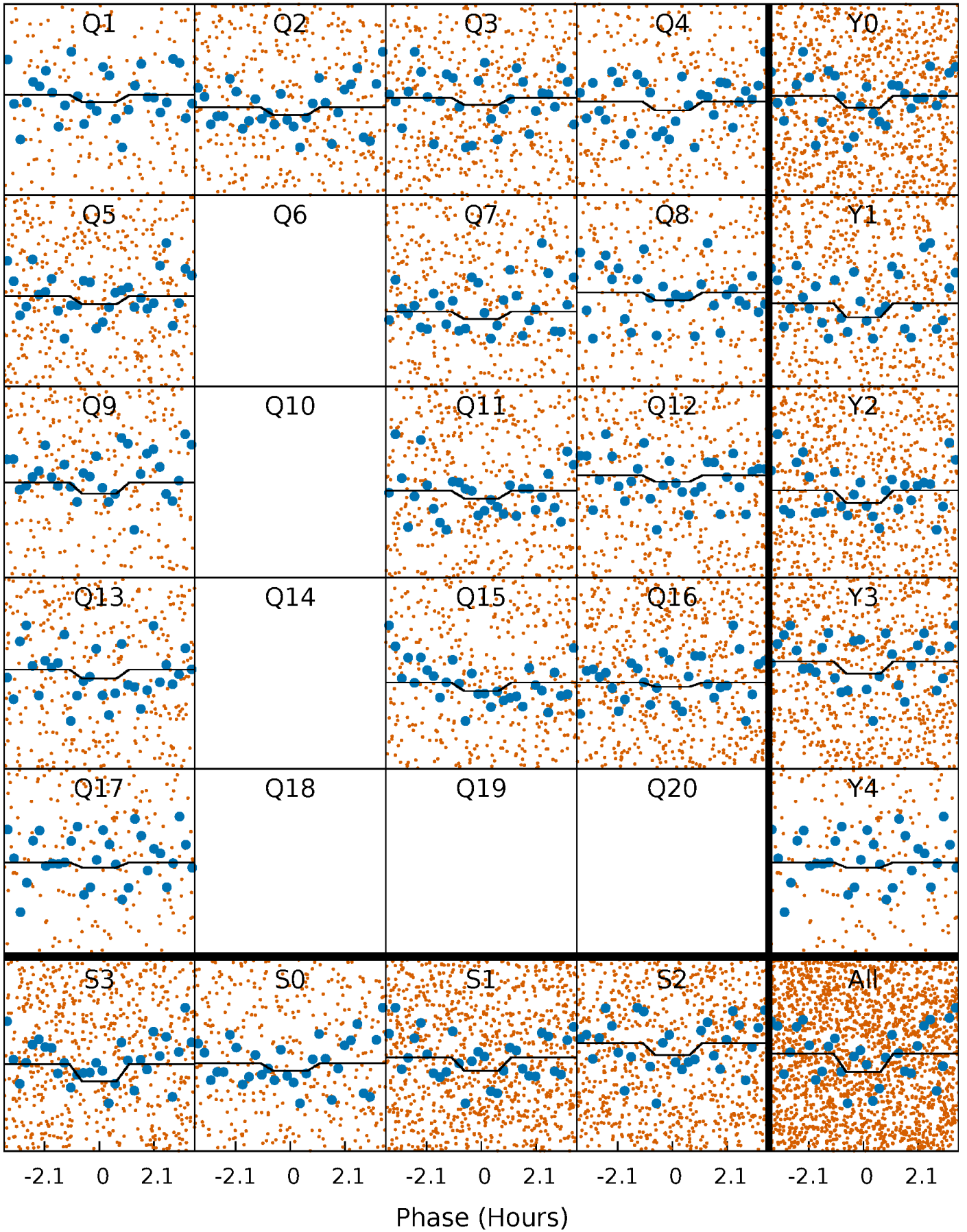
DV Quarter-Phased Transit Curves

TCE 004847411-03 P= 0.500309 Days $T_0=131.704170$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

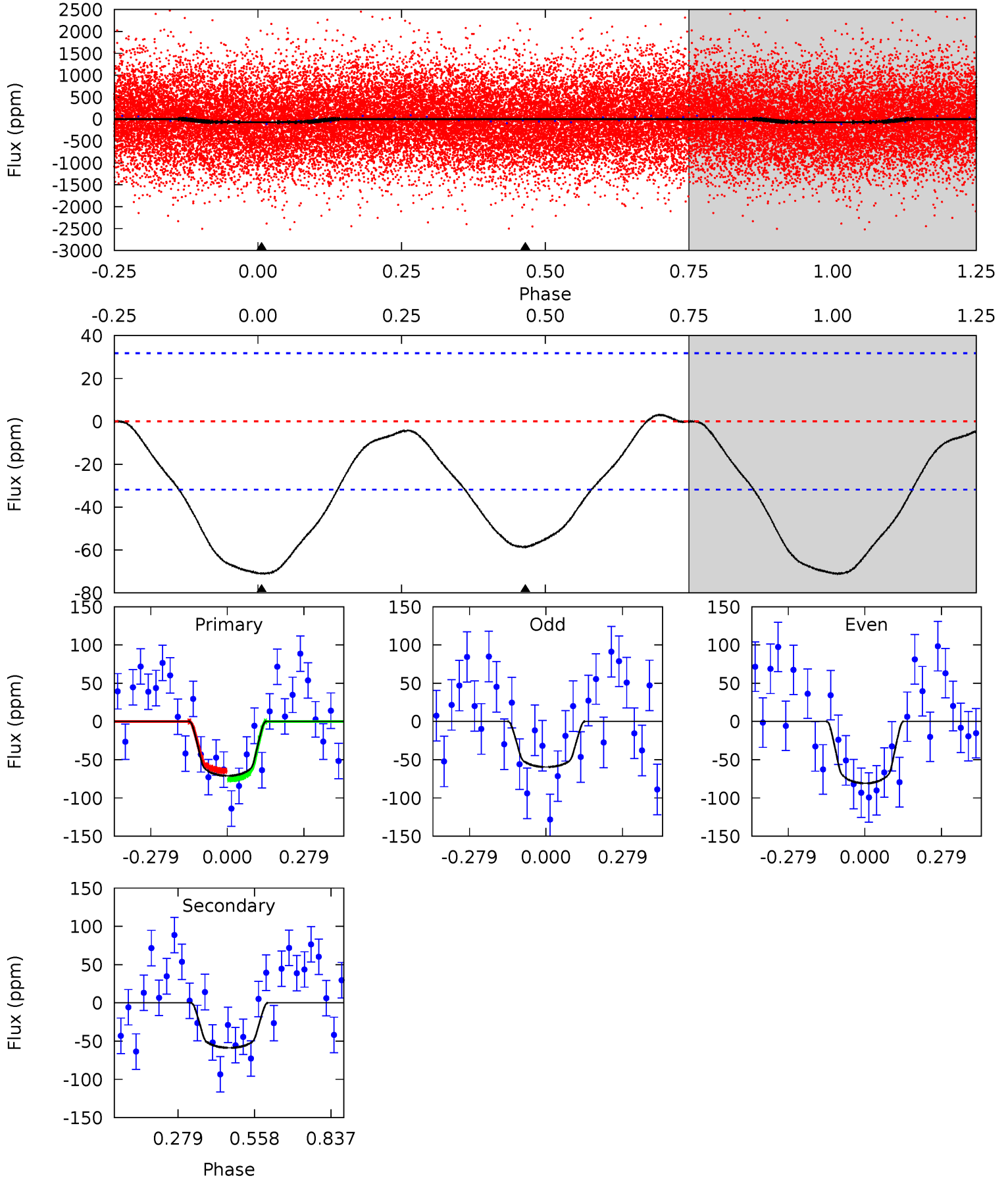
TCE 004847411-03 P= 0.500308 Days $T_0=131.698892$ (BKJD)



DV Model-Shift Uniqueness Test

004847411-03, P = 0.500309 Days, E = 131.704170 Days

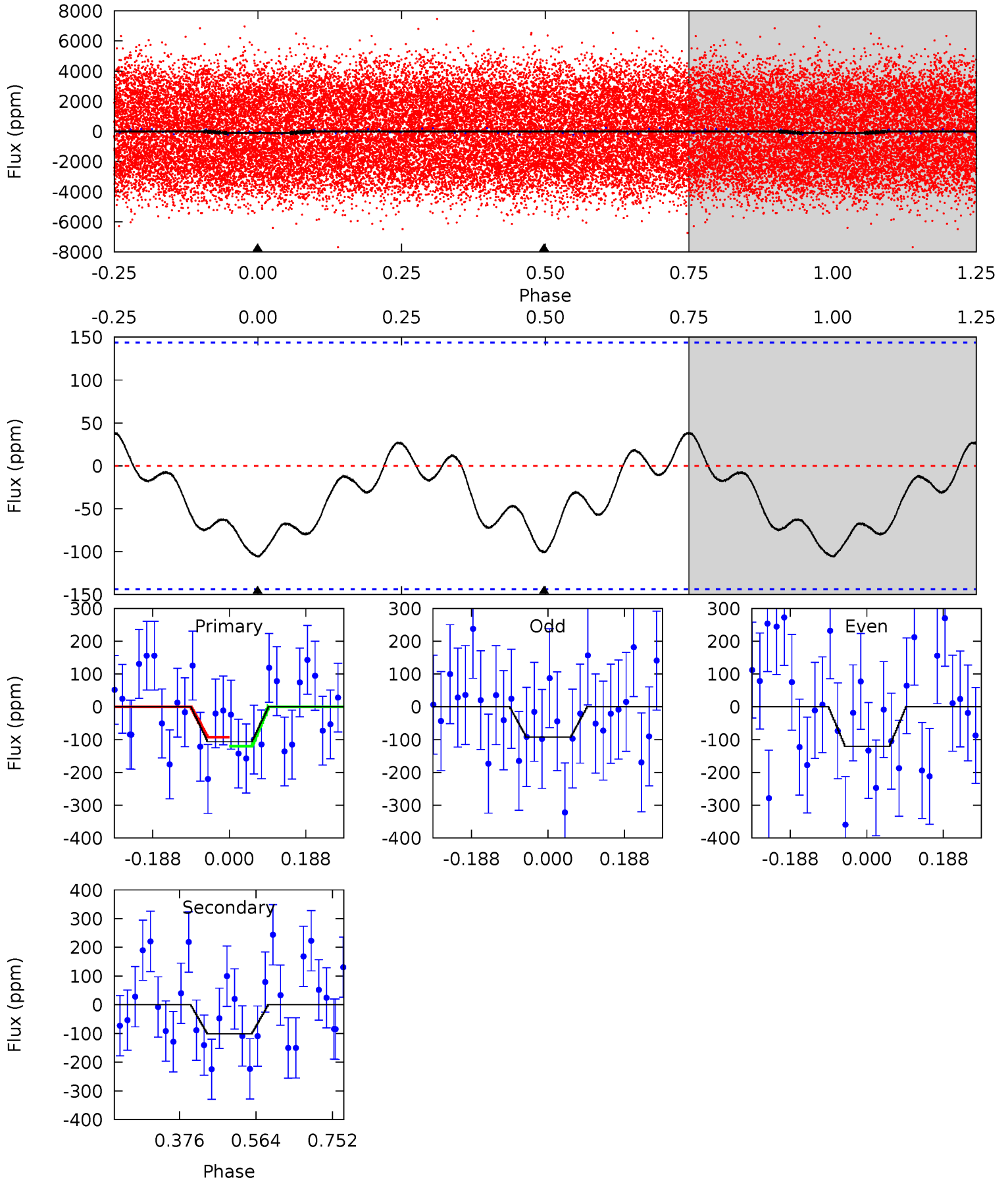
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	8.02	0	0	4.34	1.08	0.34	9.72	9.72	8.02	8.02	1.46	0.80	0.04	0.73



Alt Model-Shift Uniqueness Test

004847411-03, P = 0.500308 Days, E = 131.698892 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.28	3.13	0	0	4.43	1.32	0.60	3.28	3.28	3.13	3.13	0.43	1.14	0.27	0.41



Stellar Parameters For KIC 004847411

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+195}_{-260}	$4.514^{+0.028}_{-0.161}$	$-1.940^{+0.300}_{-0.050}$	$0.904^{+0.161}_{-0.040}$	$0.972^{+0.044}_{-0.066}$	$1.855^{+0.184}_{-0.771}$
	+3%/-4%	+1%/-4%	+15%/-3%	+18%/-4%	+5%/-7%	+10%/-42%
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 004847411-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-59 ± 7	$1.08^{+0.52}_{-0.49}$	3928^{+182}_{-162}	6024^{+2439}_{-1133}	$4.117^{+9.496}_{-2.298}$
Alt.	-101 ± 32	$0.98^{+0.49}_{-0.49}$	3946^{+217}_{-168}	7457^{+5008}_{-1767}	$8.783^{+26.972}_{-5.510}$

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

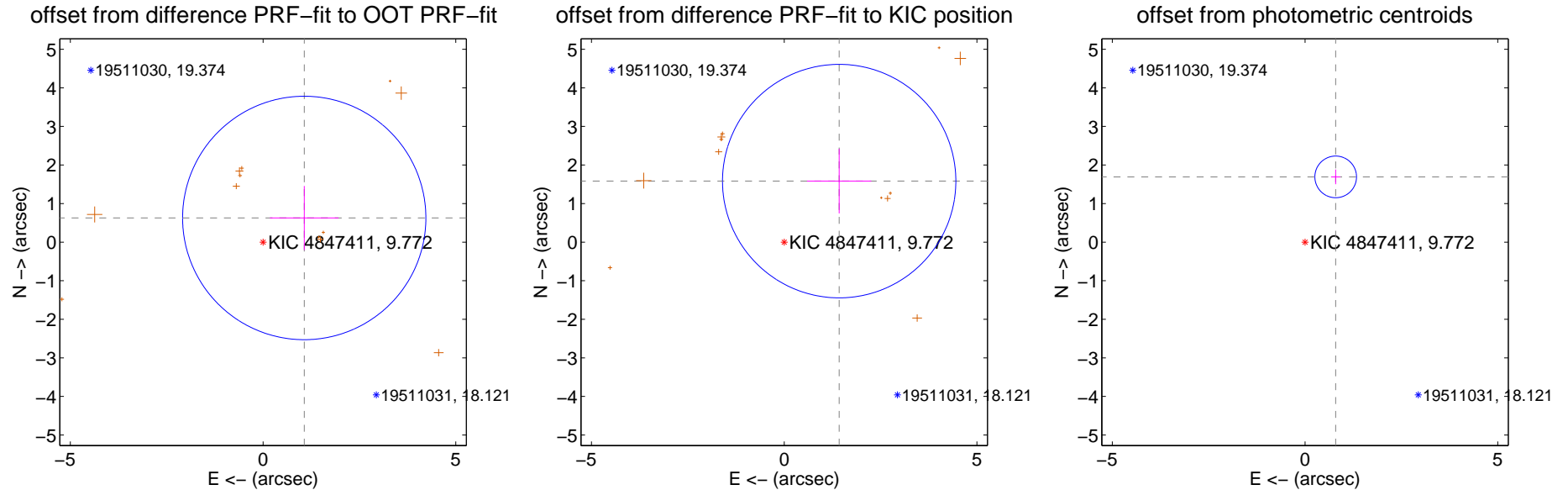
DV Centroid Data

Supplemental centroid analysis for 004847411-03. **Kepler magnitude: 9.77.** Transit SNR 11.49

There are 1 quarters with good PRF difference image offsets

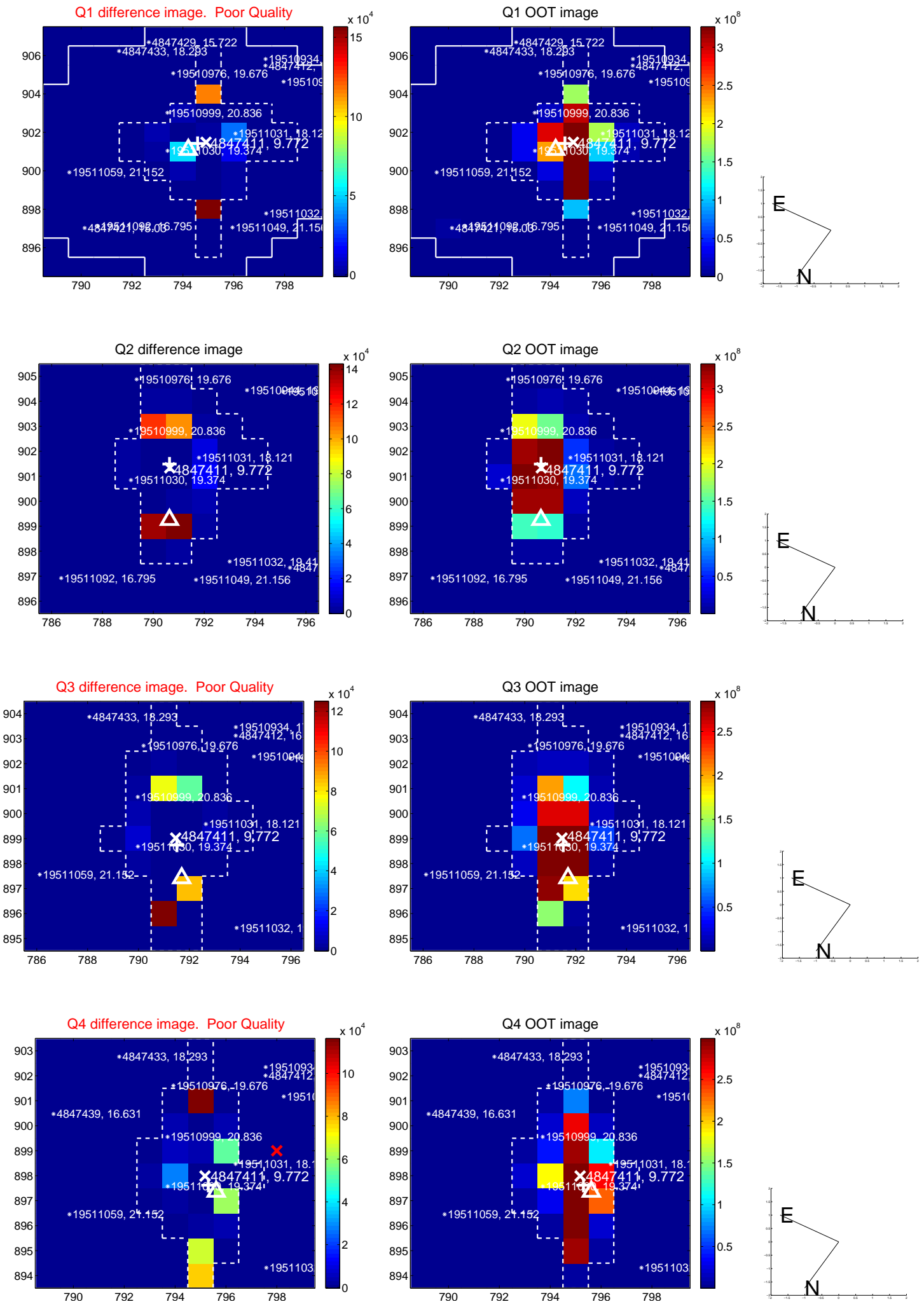
The direct PRF centroid is offset from the target star catalog position by about 1.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.239 ± 1.052	1.18	-1.068 ± 0.889	0.627 ± 0.829
PRF-fit source offset from KIC position	2.130 ± 1.009	2.11	-1.426 ± 0.834	1.582 ± 0.838
photometric centroid source offset	1.87 ± 0.18	10.38	-0.80 ± 0.12	1.69 ± 0.19

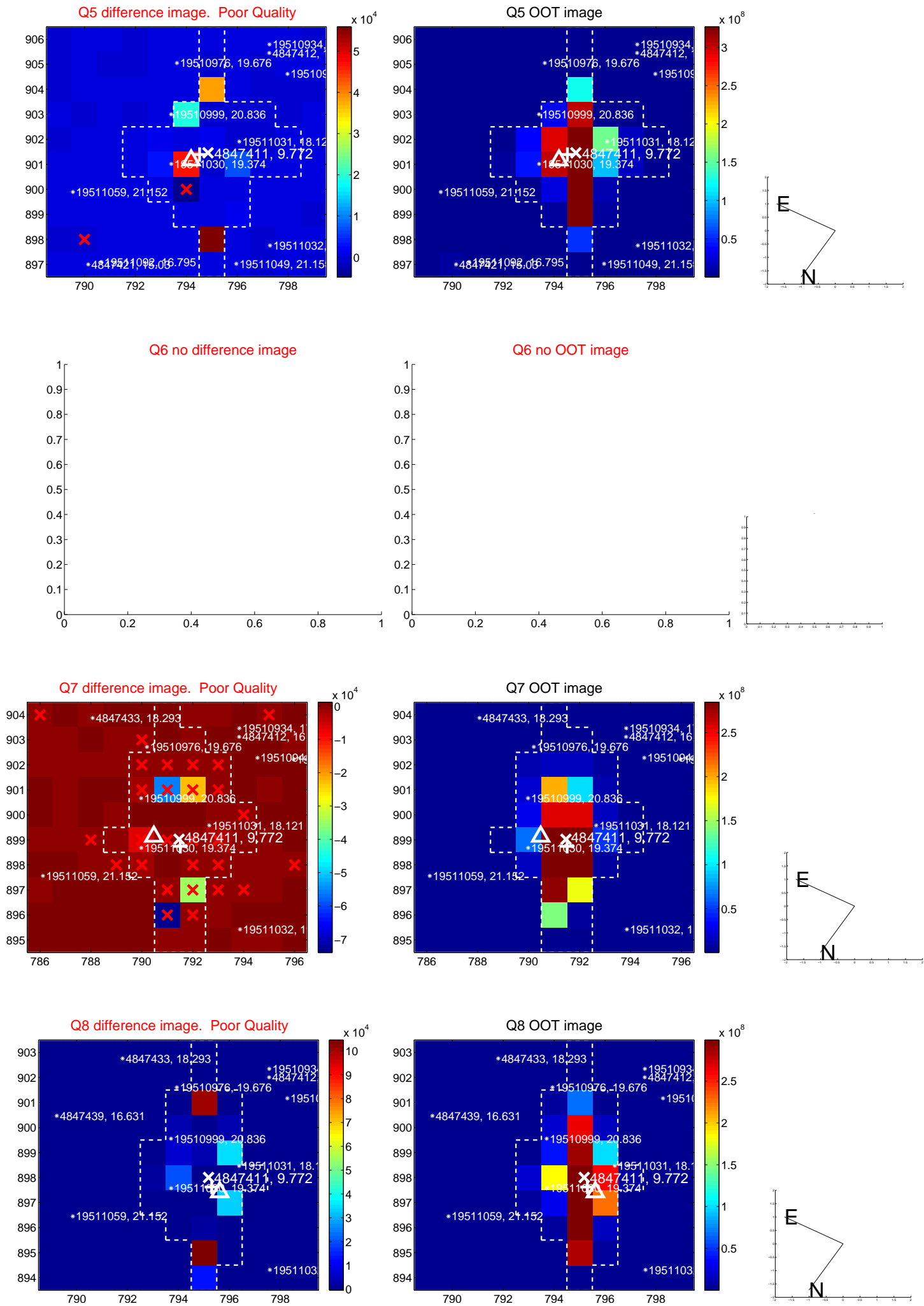


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

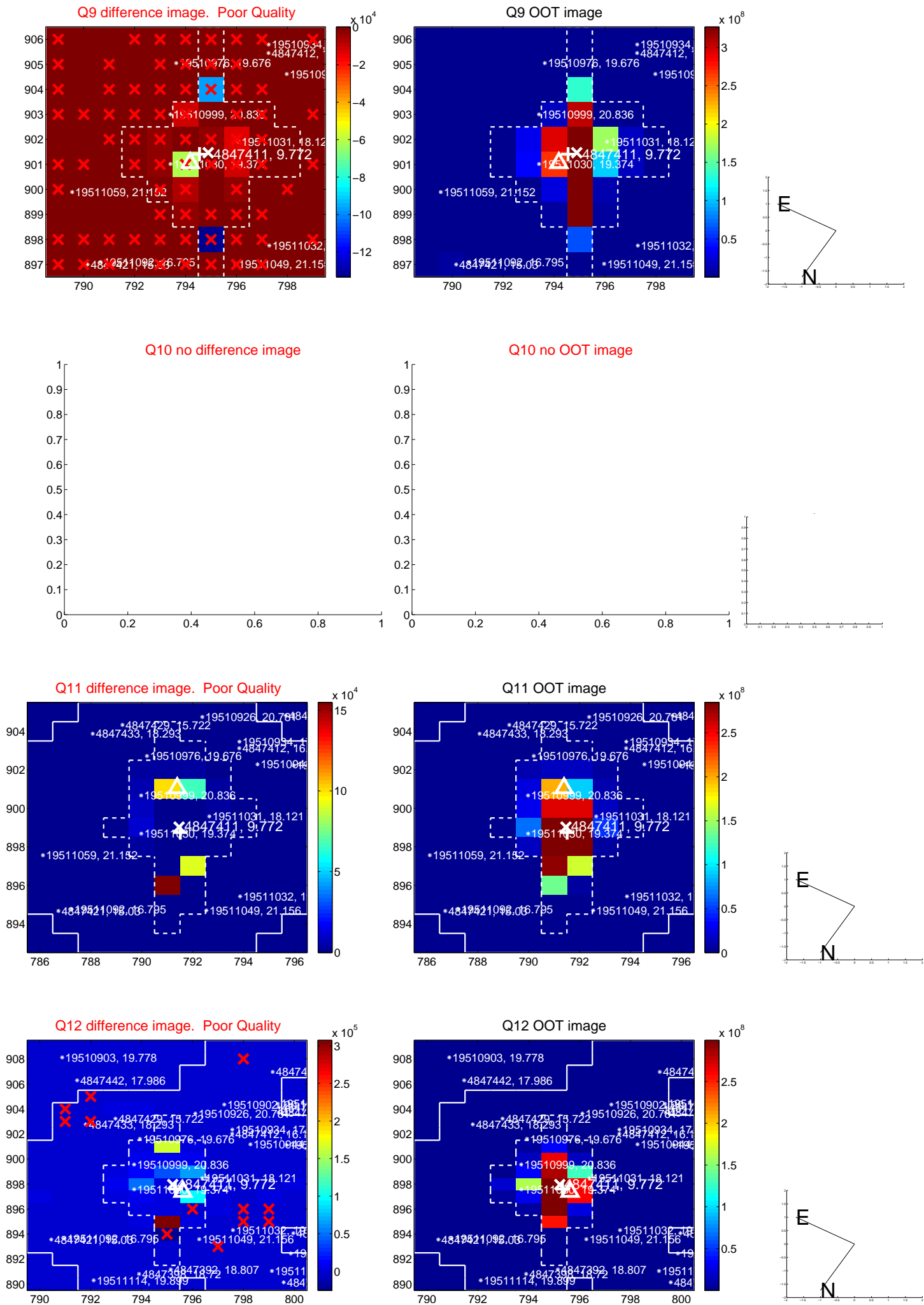
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



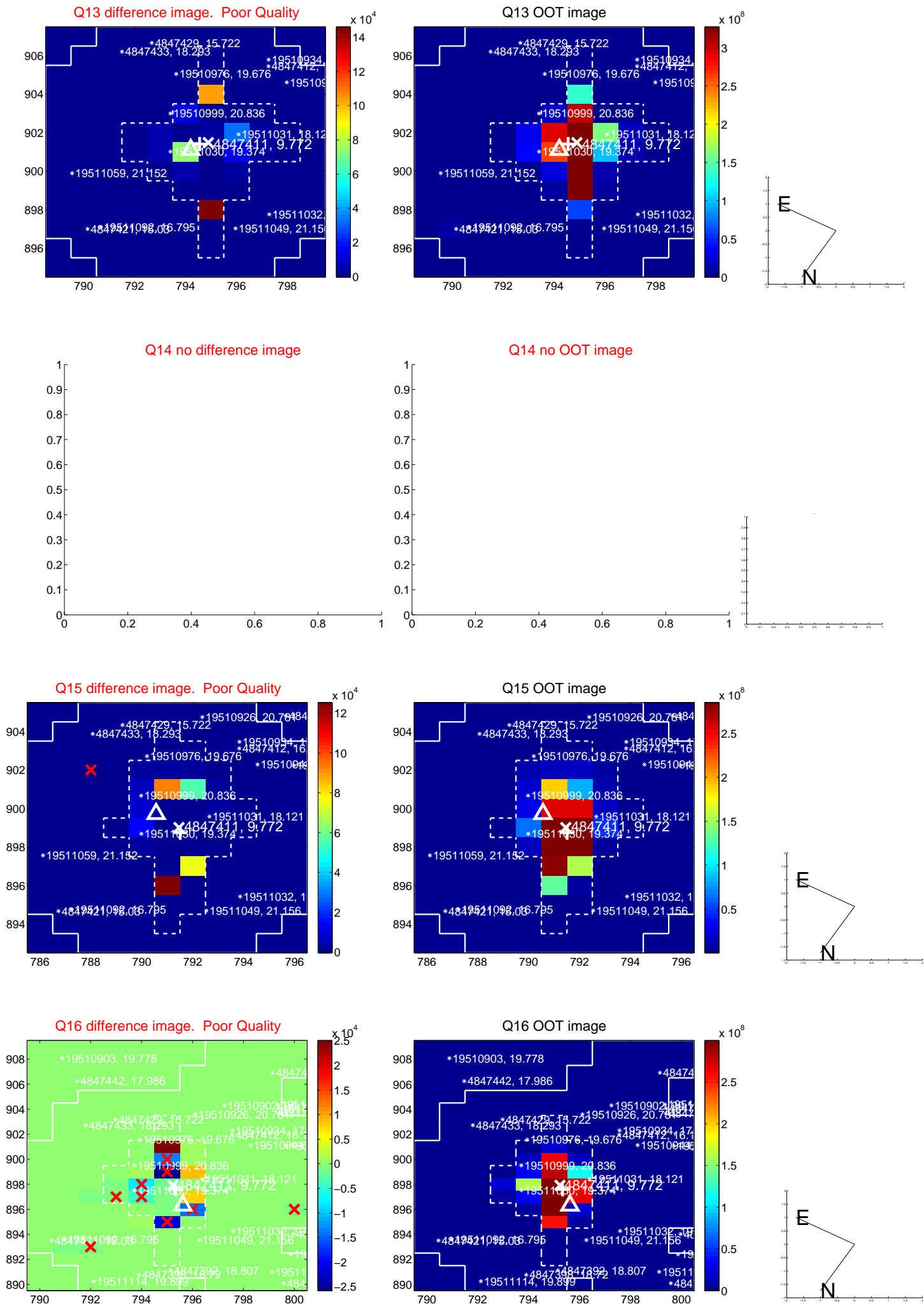
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



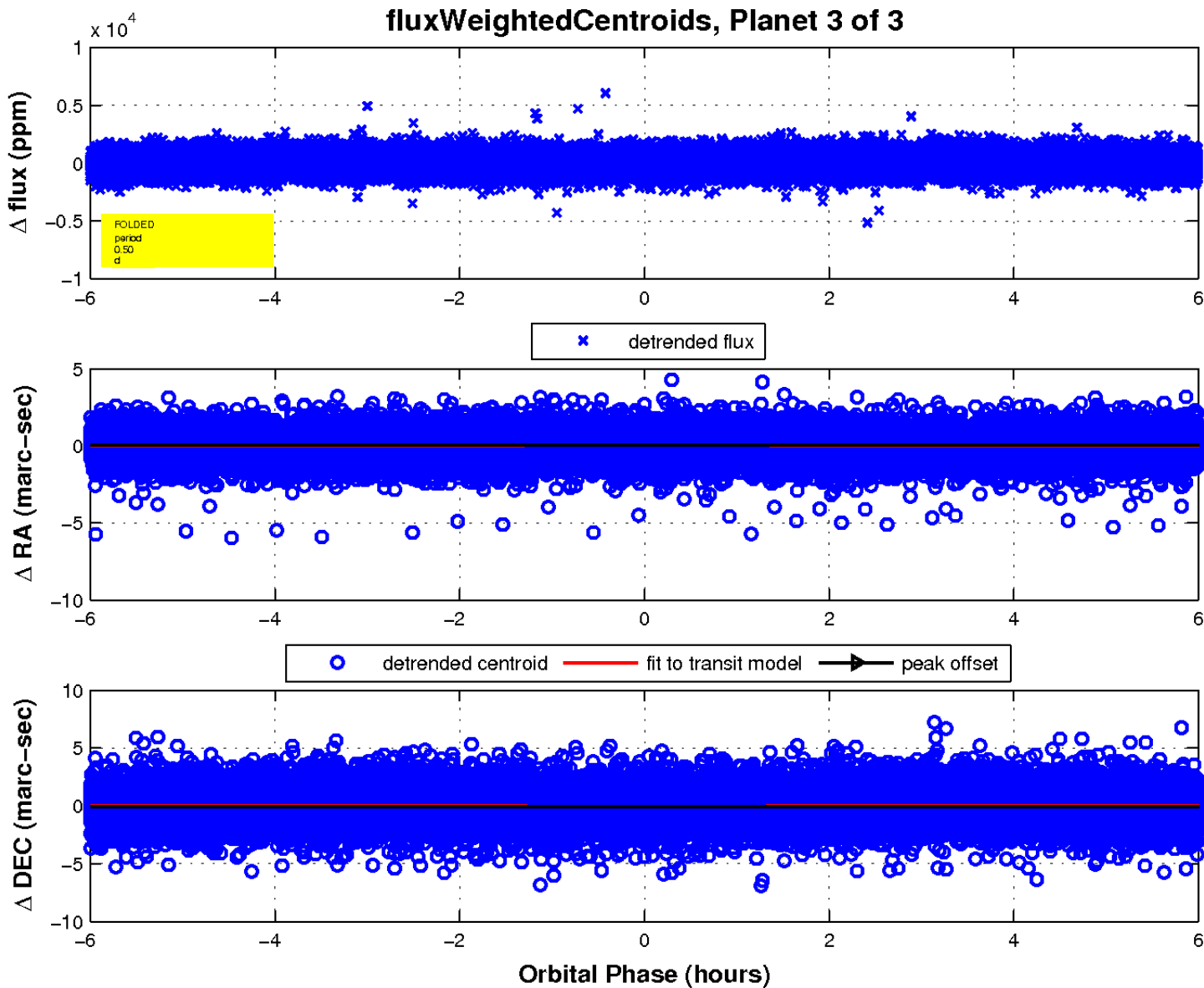
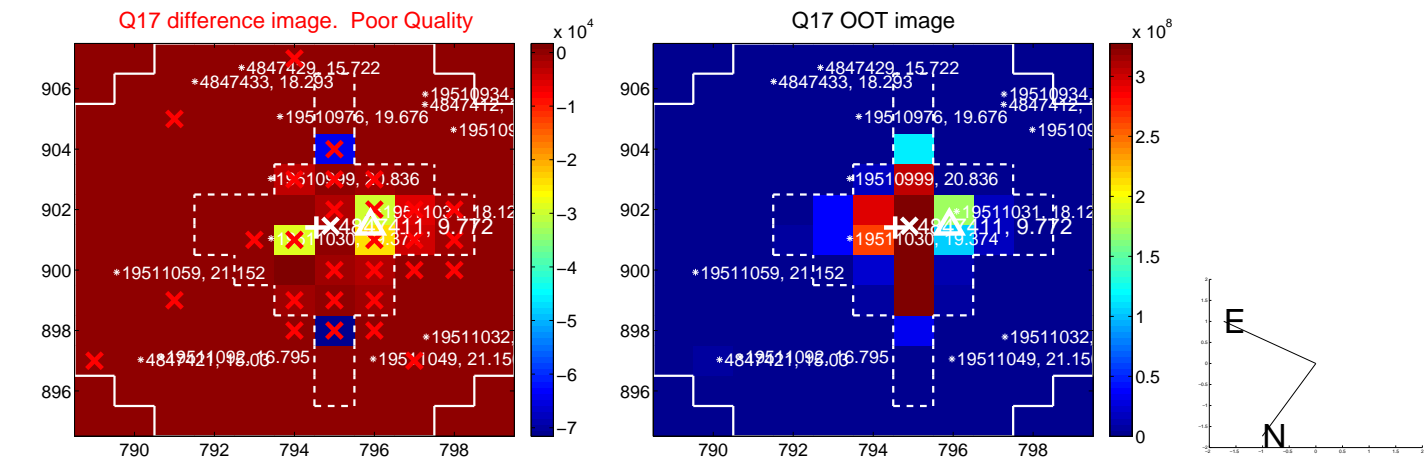
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

