

KIC 008777843

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})
008777843-01	OBS	No	0.854271	132.248166	134.1	1.207	11.8	9.2	2.87	6666	3.88	35615.93
008777843-02	OBS	No	0.778441	132.252801	106.7	4.754	11.1	10.5	2.87	6666	3.17	40315.43
008777843-03	OBS	No	175.554605	194.886462	1400.1	2.097	9.1	9.6	2.87	6666	10.82	29.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008777843-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008777843-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
008777843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

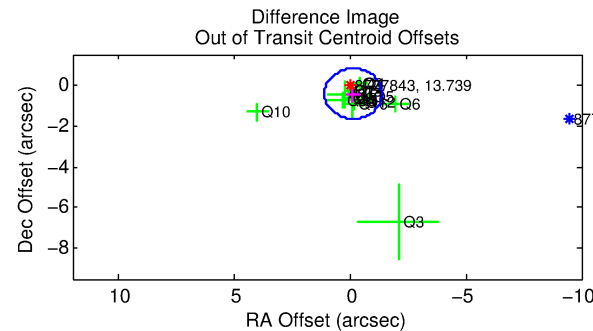
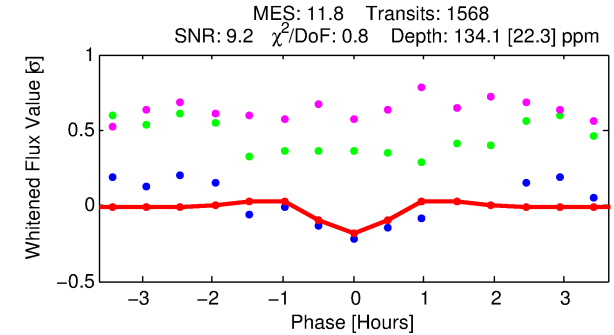
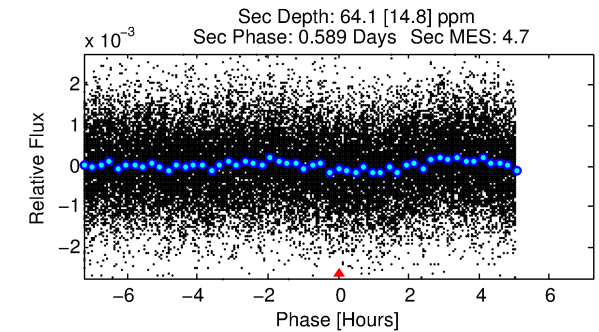
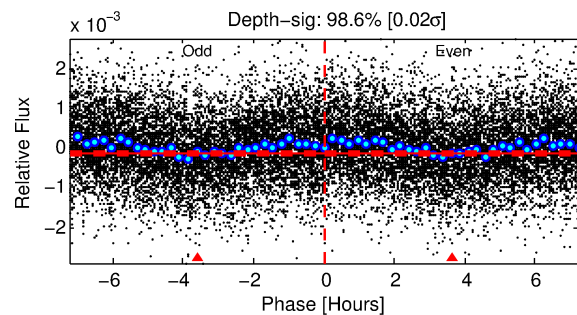
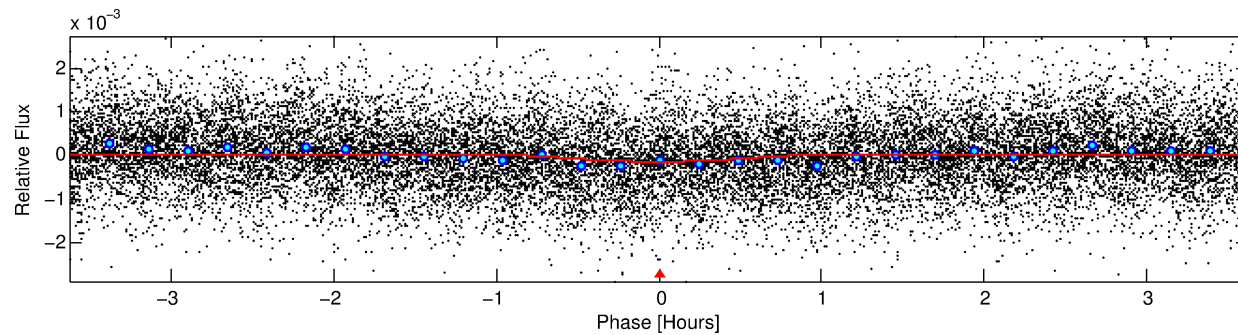
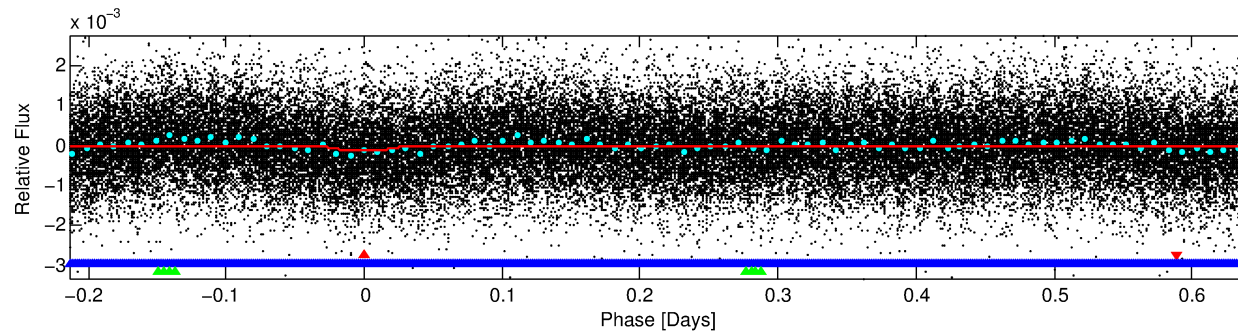
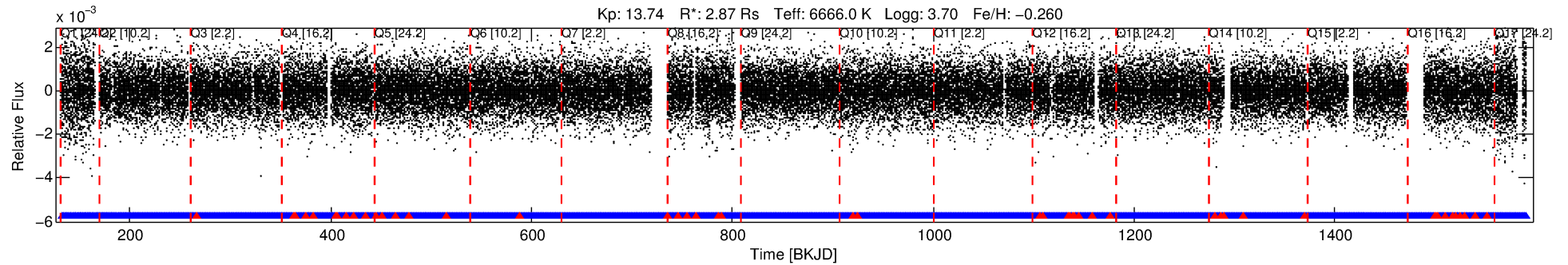
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008777843-01

No Significant Match Found

DV One-Page Summary

KIC: 8777843 Candidate: 1 of 3 Period: 0.854 d



DV Fit Results:

Period = 0.85427 [0.00001] d
Epoch = 132.2482 [0.0020] BKJD
Rp/R* = 0.0124 [0.0095]
a/R* = 2.70 [10.48]
b = 0.90 [0.99]
Seff = 35615.93 [31876.77]
Teq = 3503 [784] K
Rp = 3.88 [3.60] Re
a = 0.0202 [0.0108] AU
Ag = 0.96 [1.70] [-0.03σ]
Teffp = 5355 [2084] K [0.83σ]

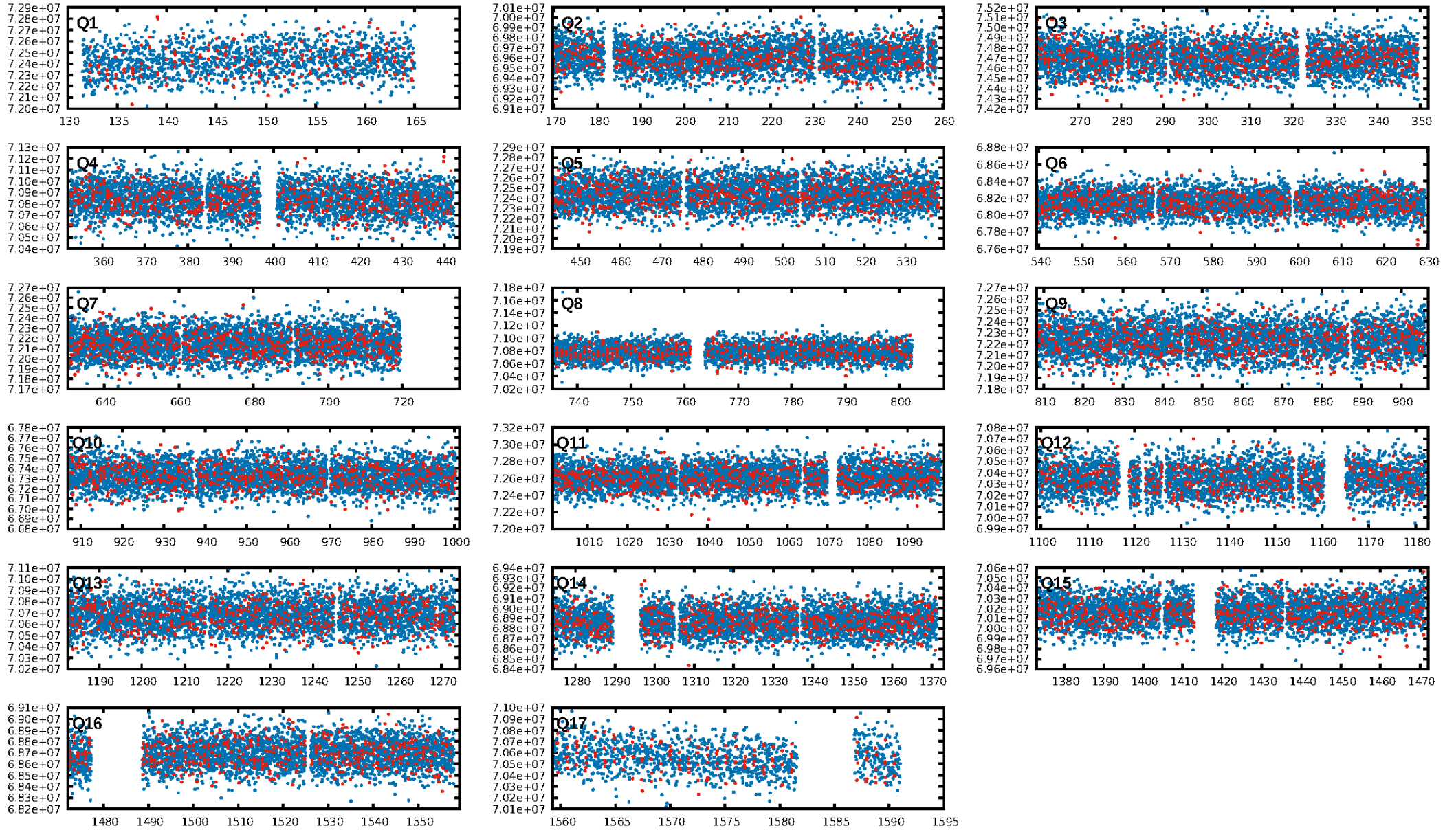
DV Diagnostic Results:

ShortPeriod-sig: 28.9% [0.37σ]
LongPeriod-sig: 100.0% [1732.60σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.26e-07
RollingBand-fgt: 0.97 [1449/1498]
GhostDiagnostic-chr: -12.07
Centroid-sig: 0.0%
Centroid-so: 0.595 arcsec [1.49σ]
OotOffset-rm: 0.445 arcsec [1.08σ]
KicOffset-rm: 0.177 arcsec [0.55σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

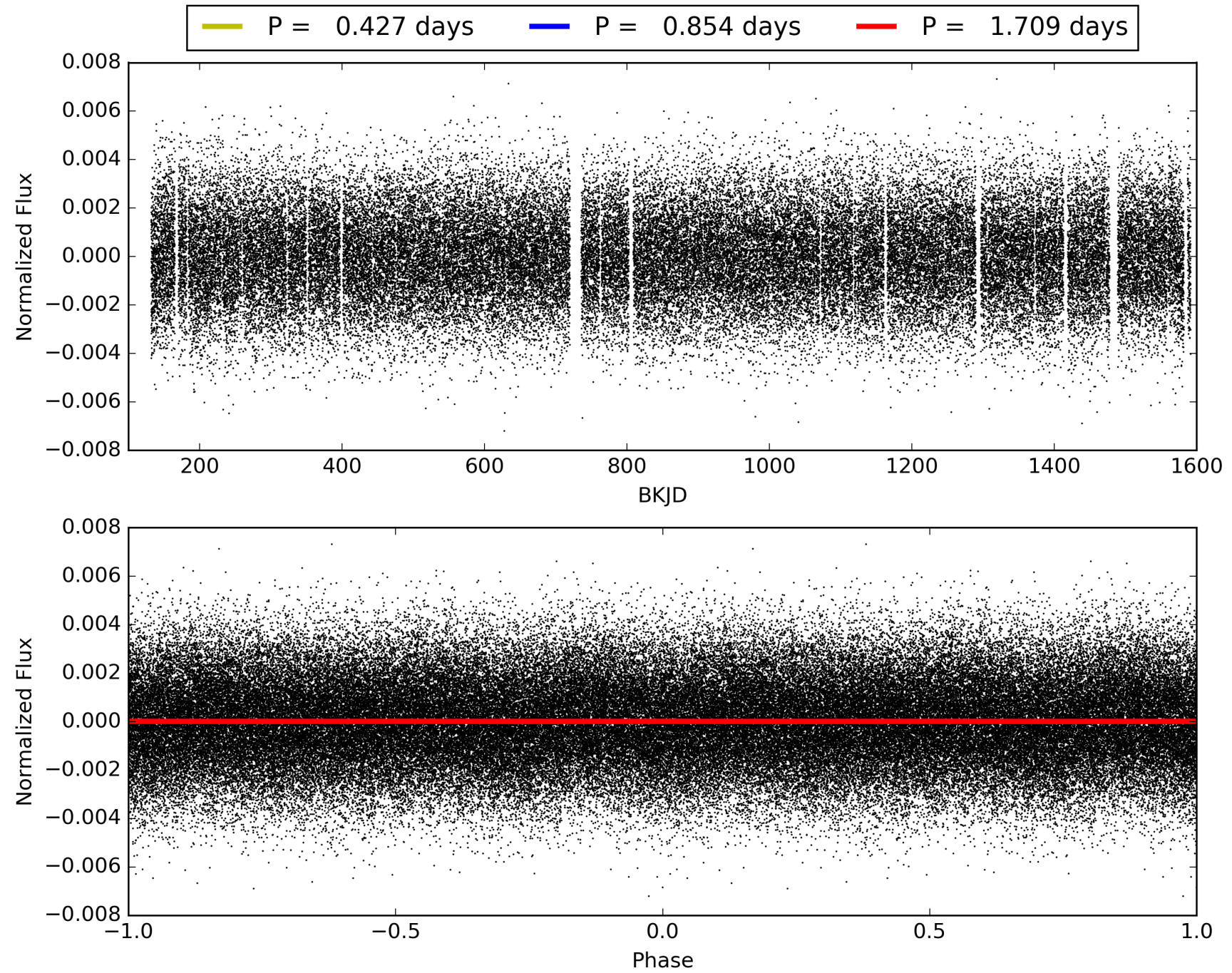
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:19:42 Z

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

TCE 008777843-01, PDC Light Curves

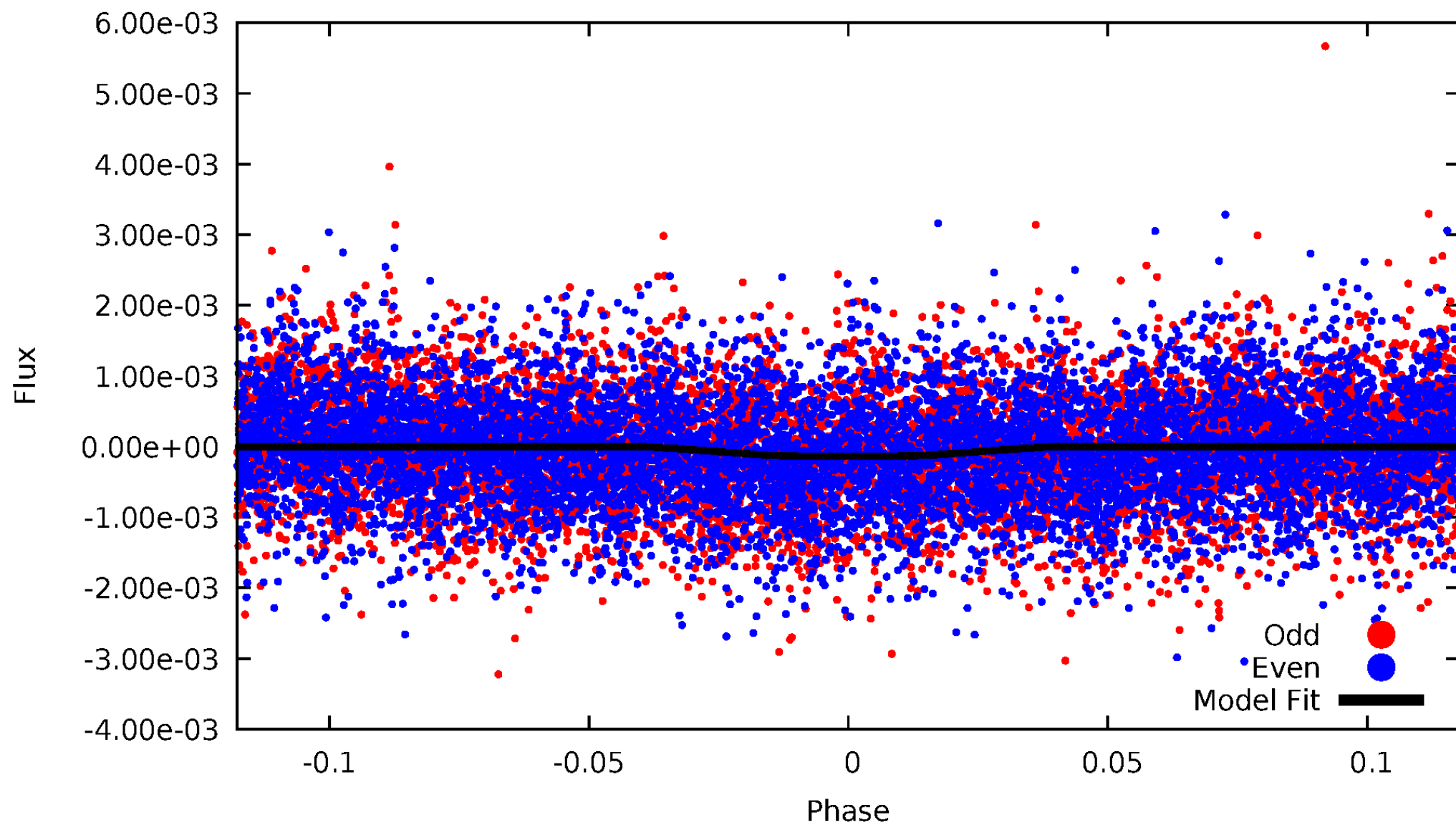


TCE 008777843-01



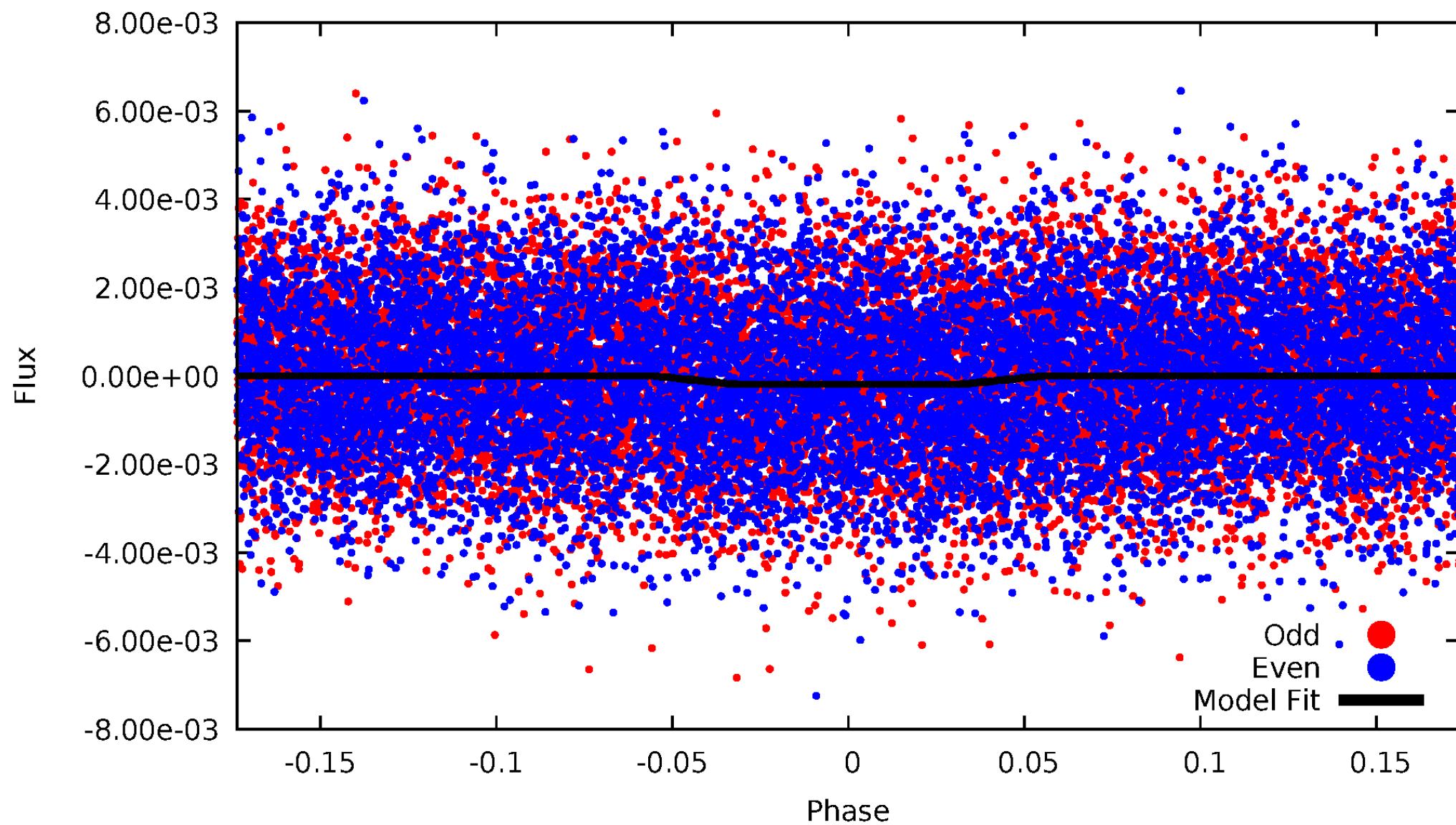
DV Odd/Even

TCE 008777843-01



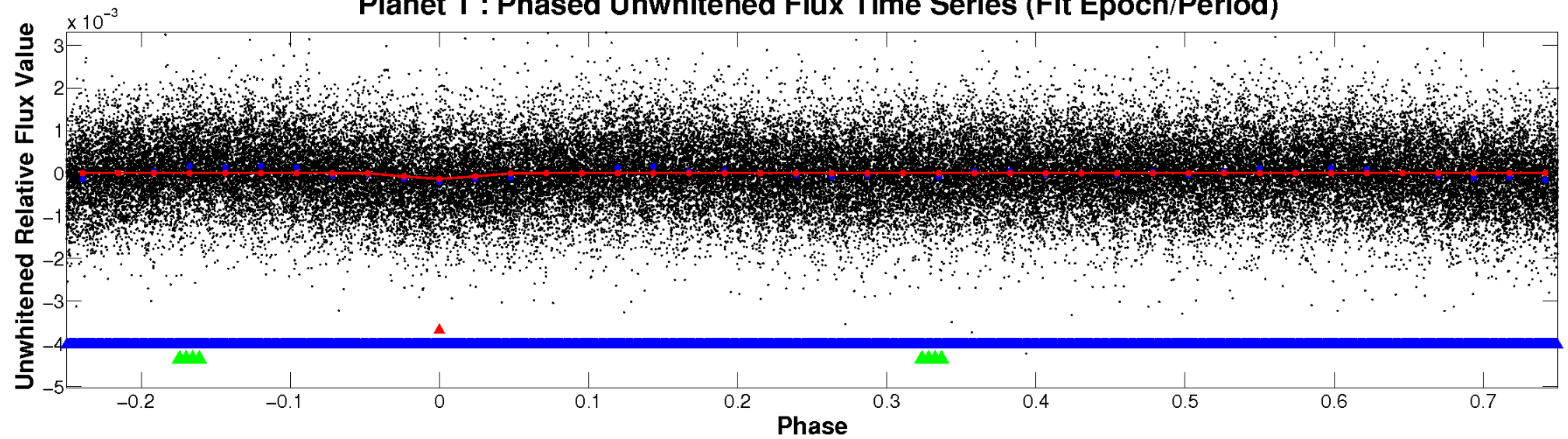
ALT Odd/Even

TCE 008777843-01

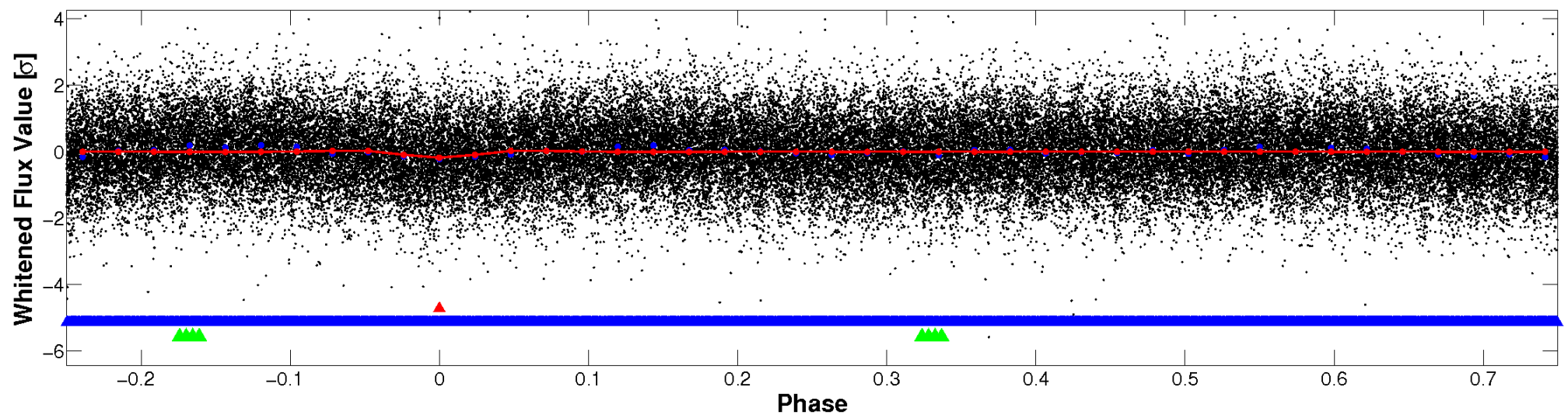


Non-Whitened Vs. Whitened Light Curve

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

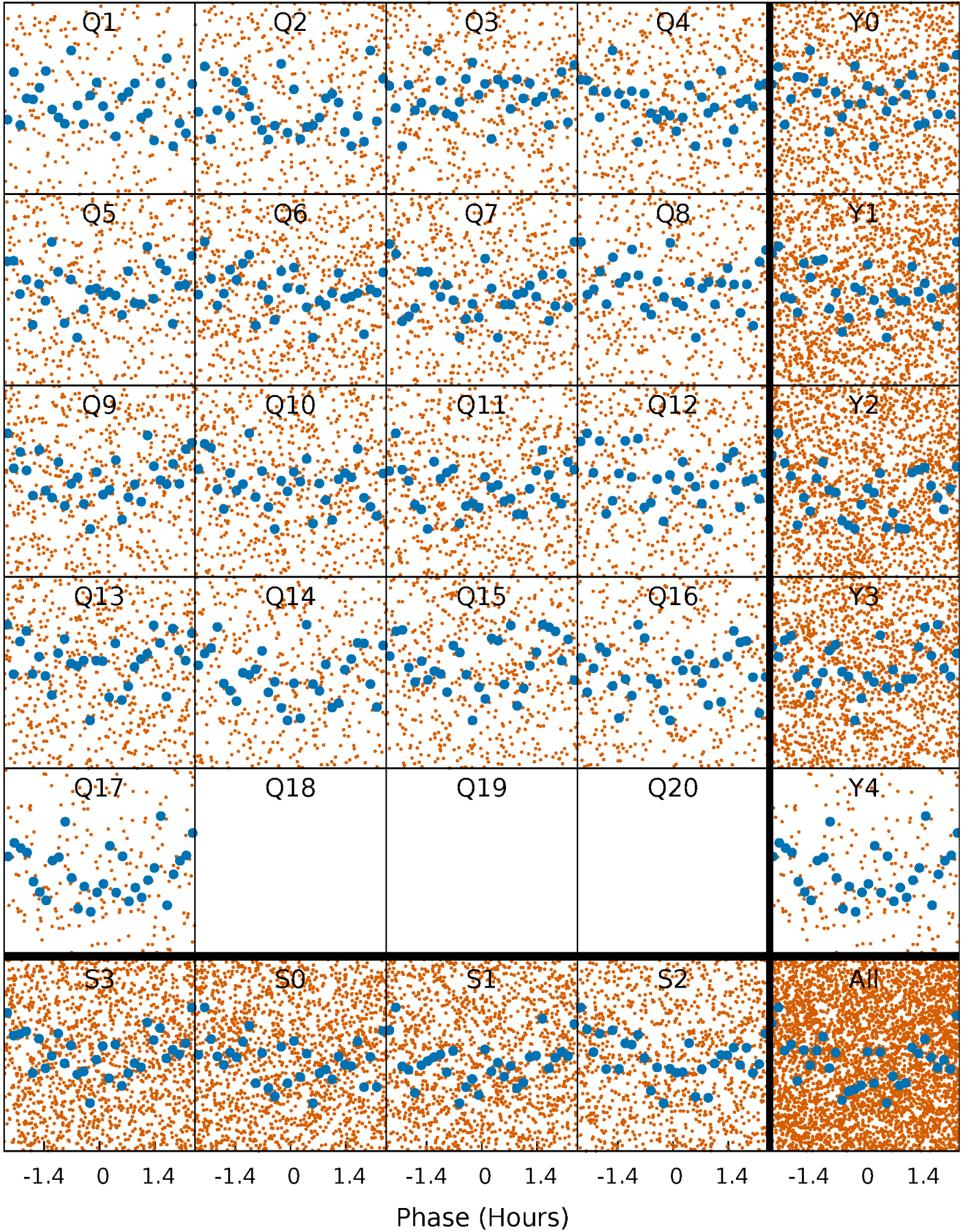


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



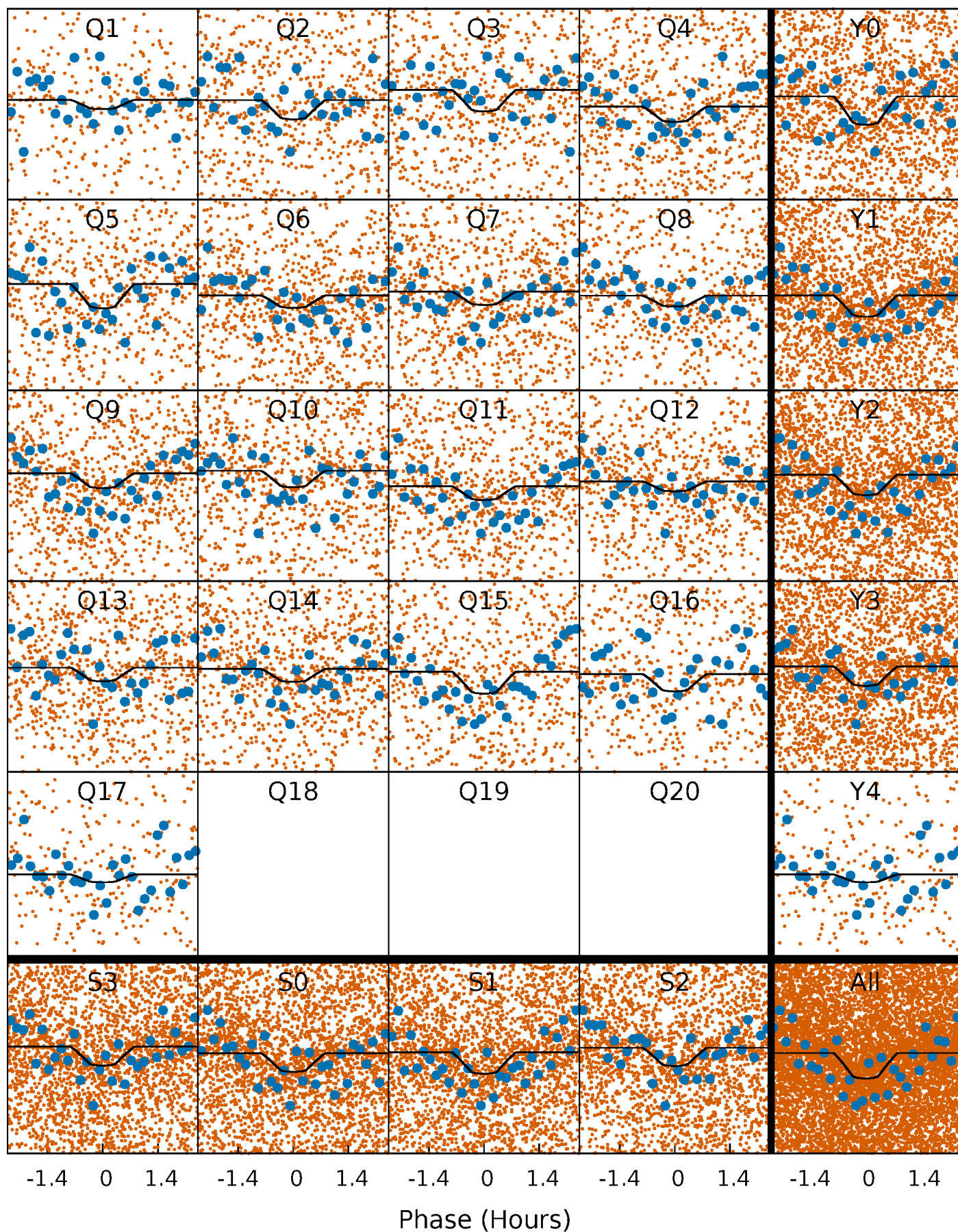
PDC Quarter-Phased Transit Curves

TCE 008777843-01 P= 0.854271 Days $T_0=132.248166$ (BKJD)



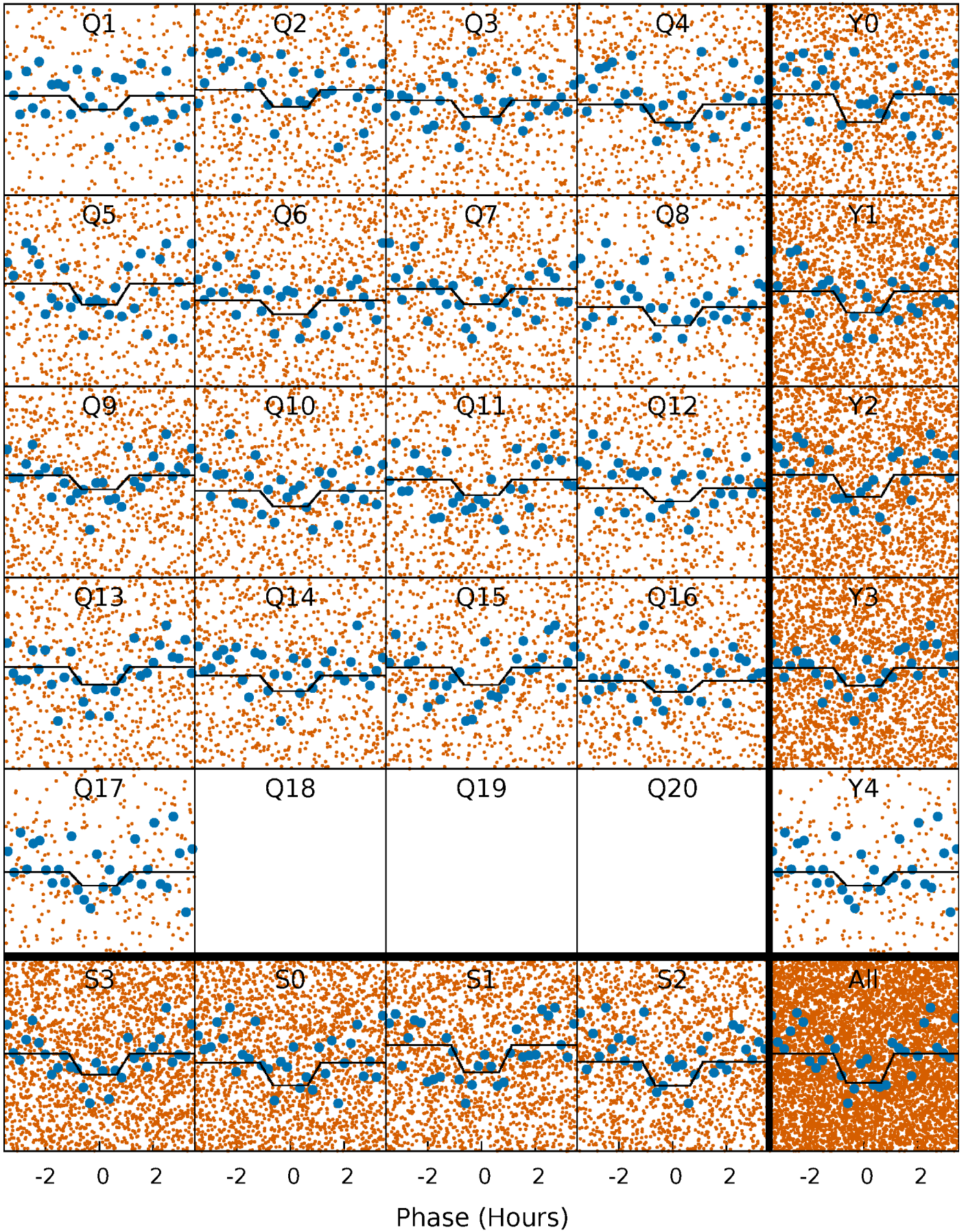
DV Quarter-Phased Transit Curves

TCE 008777843-01 P= 0.854271 Days $T_0=132.248166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

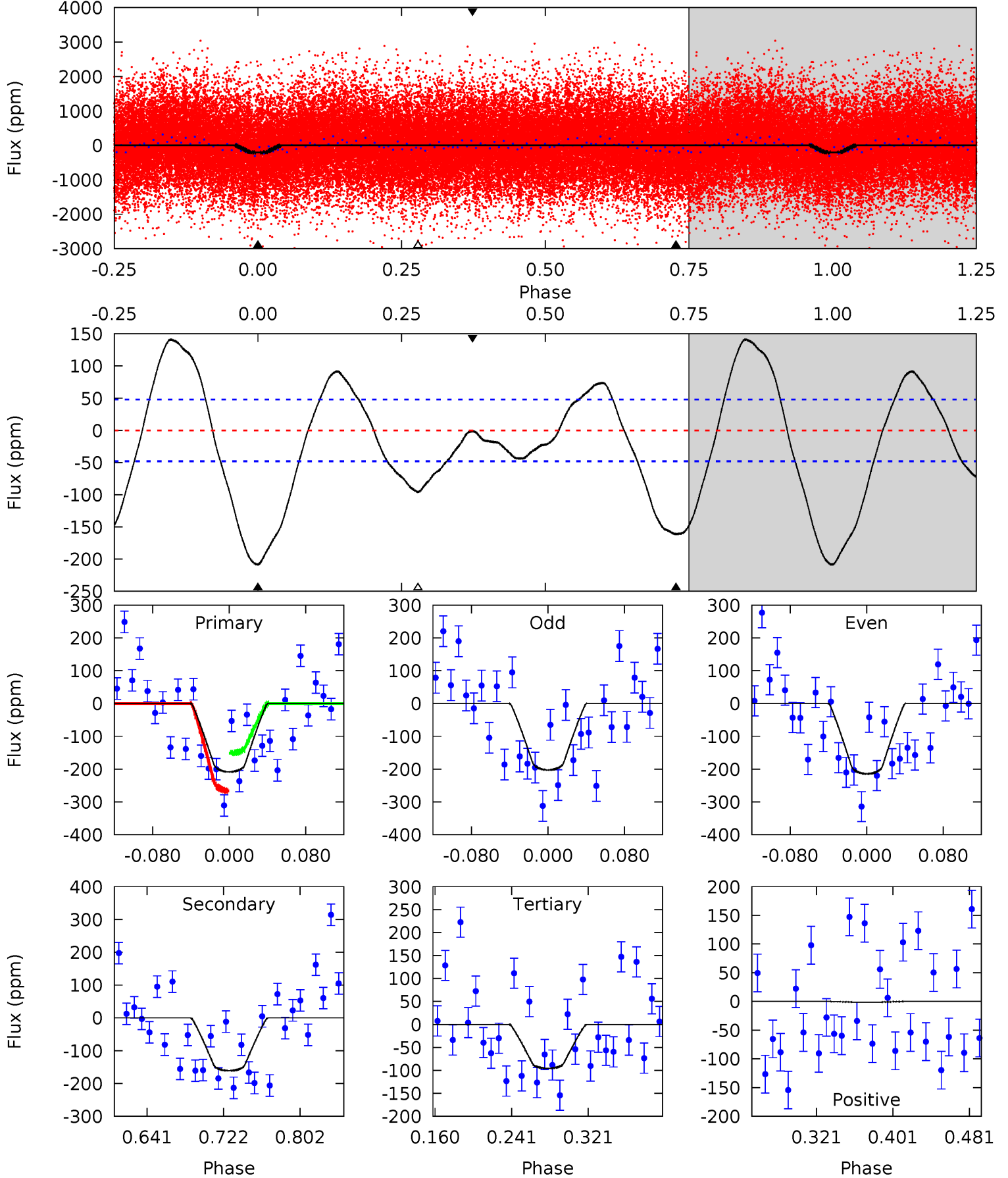
TCE 008777843-01 P= 0.854276 Days $T_0=132.249863$ (BKJD)



DV Model-Shift Uniqueness Test

008777843-01, P = 0.854271 Days, E = 131.393895 Days

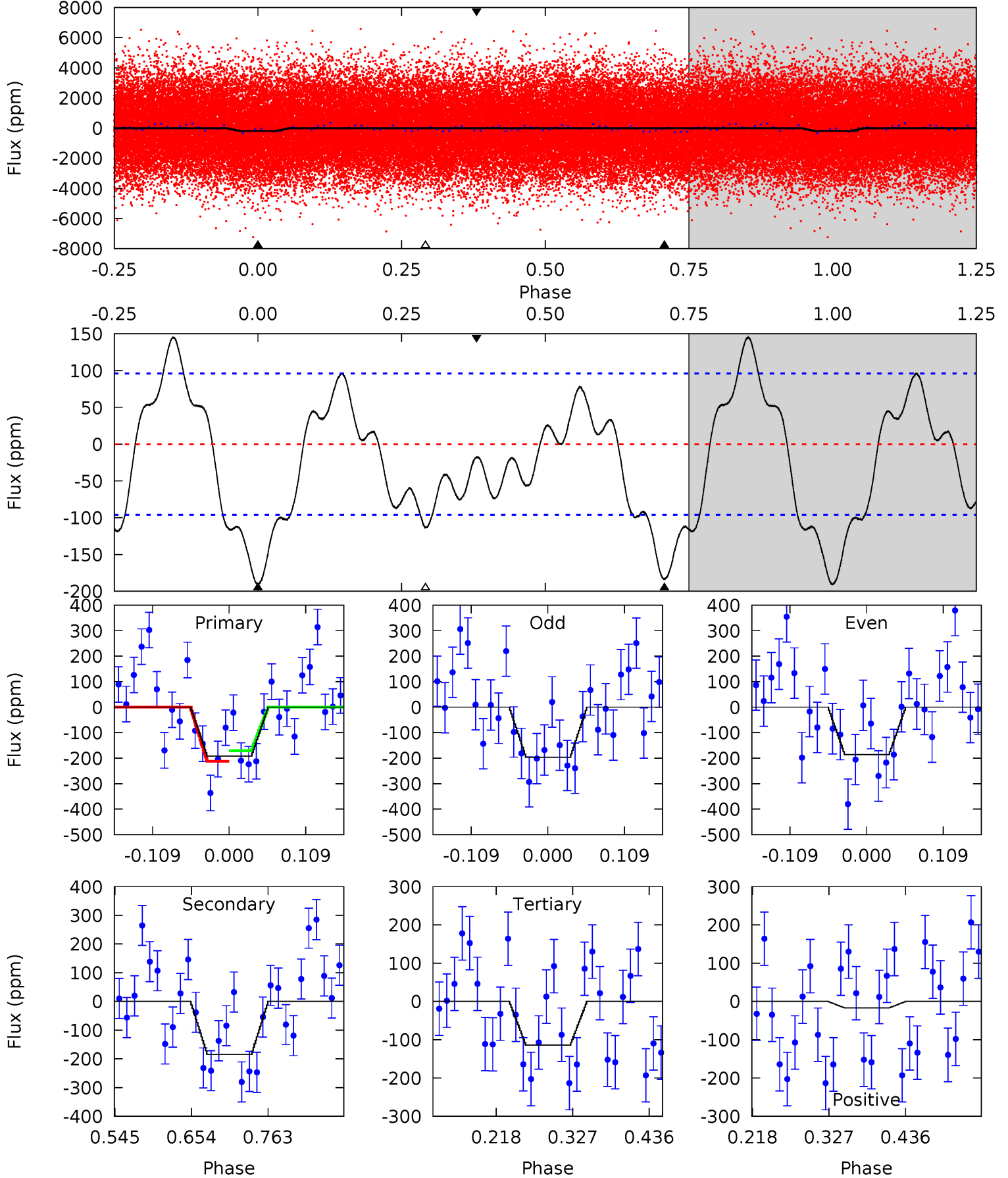
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	15.5	9.20	-0.12	4.61	1.75	5.93	10.8	20.1	6.28	15.6	0.56	0.96	0.40	5.53



Alt Model-Shift Uniqueness Test

008777843-01, P = 0.854276 Days, E = 131.395587 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.06	8.73	5.41	-0.80	4.55	1.60	3.02	3.65	9.86	3.32	9.53	0.24	0.91	0.43	0.99



Stellar Parameters For KIC 008777843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6666^{+211}_{-258}	$3.701^{+0.527}_{-0.093}$	$-0.260^{+0.300}_{-0.300}$	$2.865^{+0.502}_{-1.505}$	$1.506^{+0.212}_{-0.393}$	$0.090^{+0.551}_{-0.026}$
	+3%/-4%	+14%/-3%	+115%/-115%	+18%/-53%	+14%/-26%	+611%/-29%
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 008777843-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-161 ± 10	$3.63^{+2.67}_{-2.13}$	4737^{+352}_{-698}	6256^{+4529}_{-1549}	$2.620^{+12.162}_{-1.705}$
Alt.	-184 ± 21	$3.98^{+3.04}_{-2.34}$	4727^{+363}_{-631}	6043^{+4671}_{-1403}	$2.466^{+12.080}_{-1.615}$

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

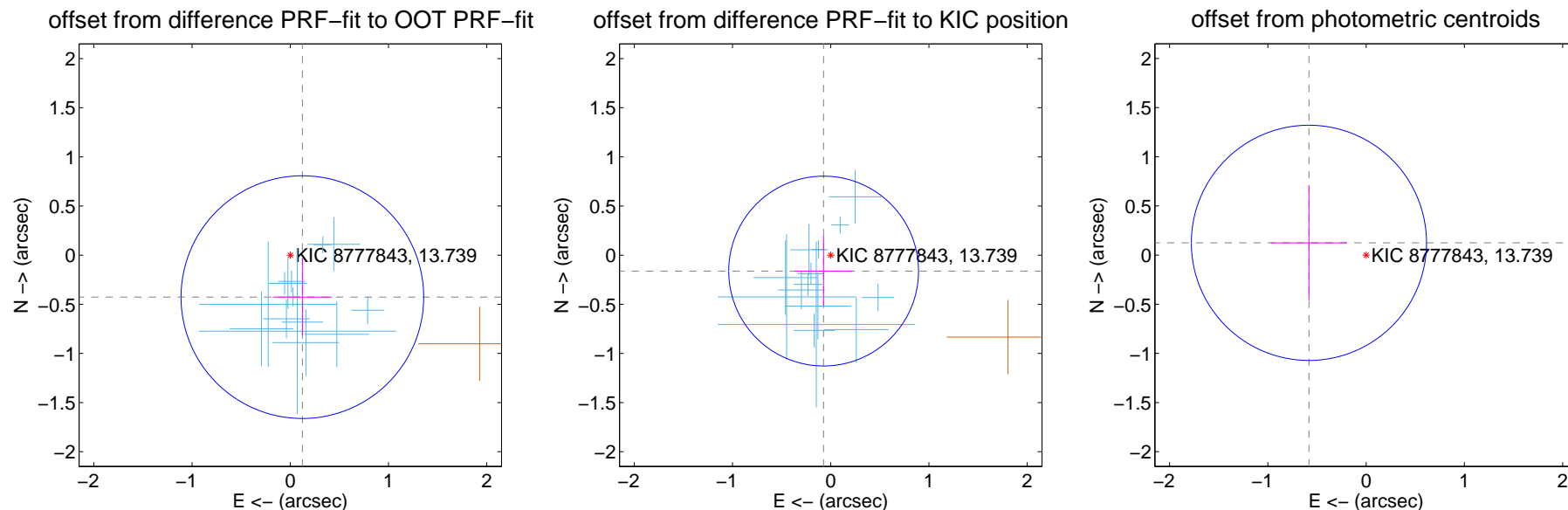
DV Centroid Data

Supplemental centroid analysis for 008777843-01. Kepler magnitude: 13.74. Transit SNR 9.16

There are 14 quarters with good PRF difference image offsets

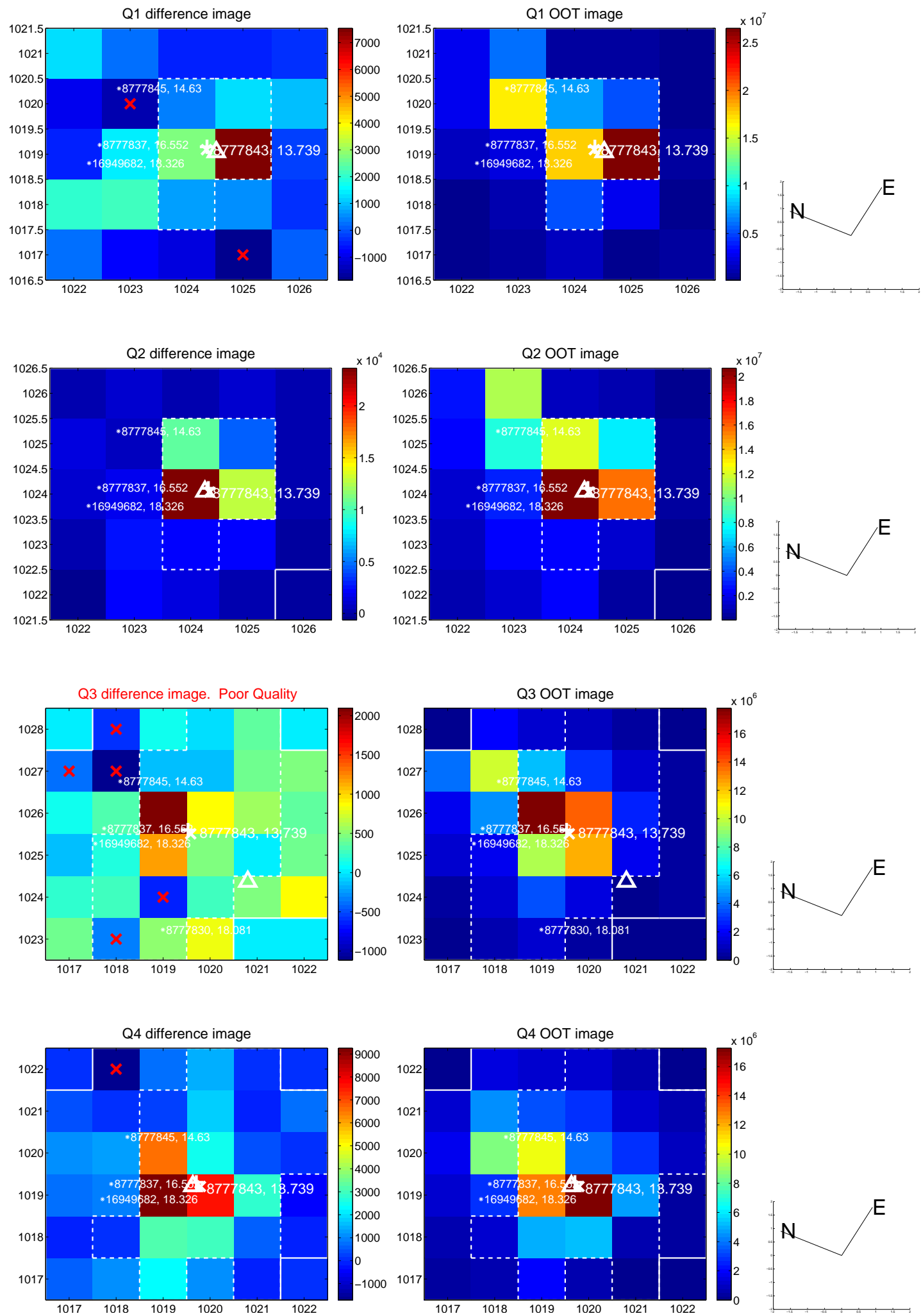
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.445 ± 0.412	1.08	-0.123 ± 0.299	-0.427 ± 0.392
PRF-fit source offset from KIC position	0.177 ± 0.322	0.55	0.072 ± 0.292	-0.162 ± 0.358
photometric centroid source offset	0.60 ± 0.40	1.49	0.58 ± 0.39	0.12 ± 0.58

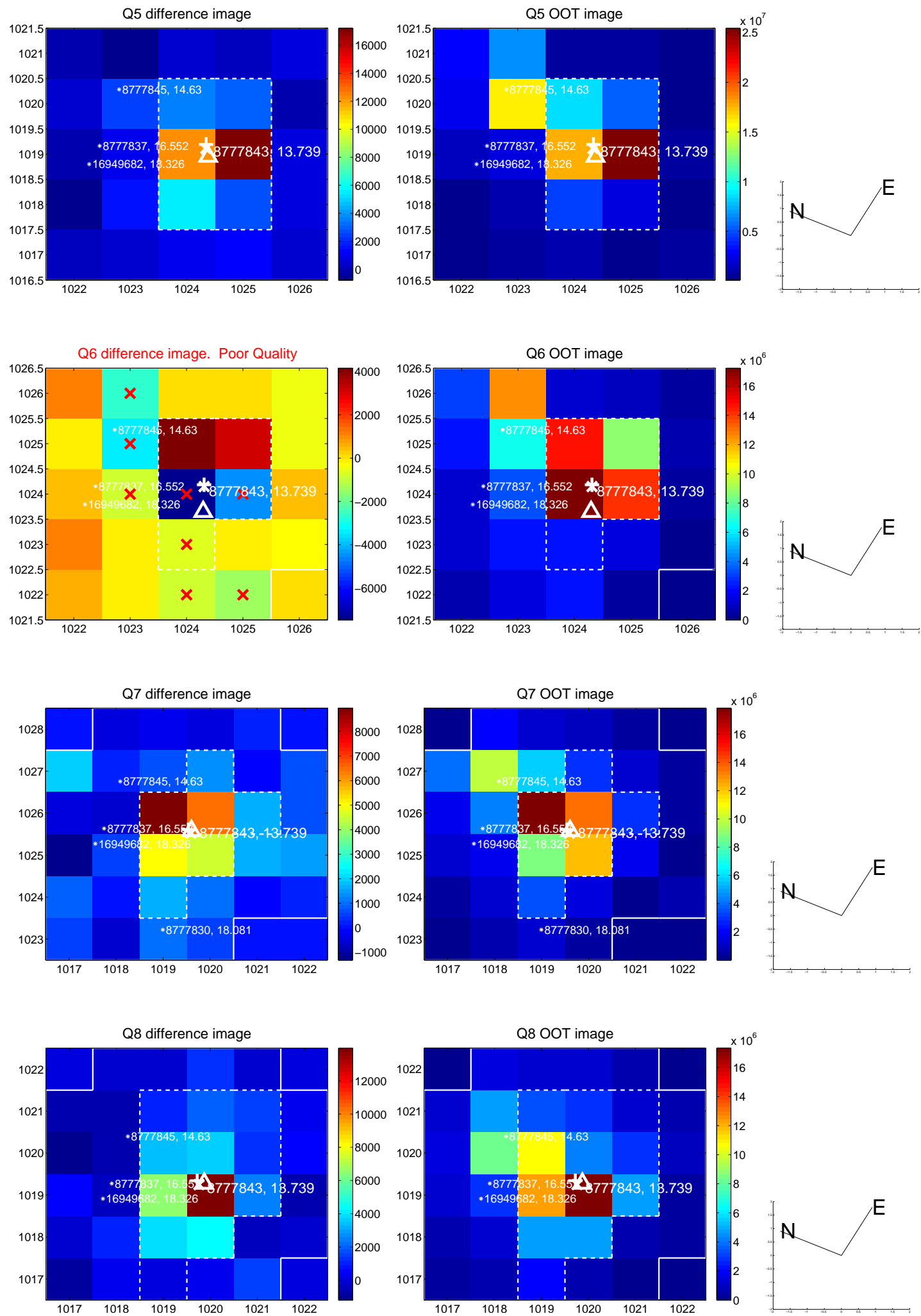


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

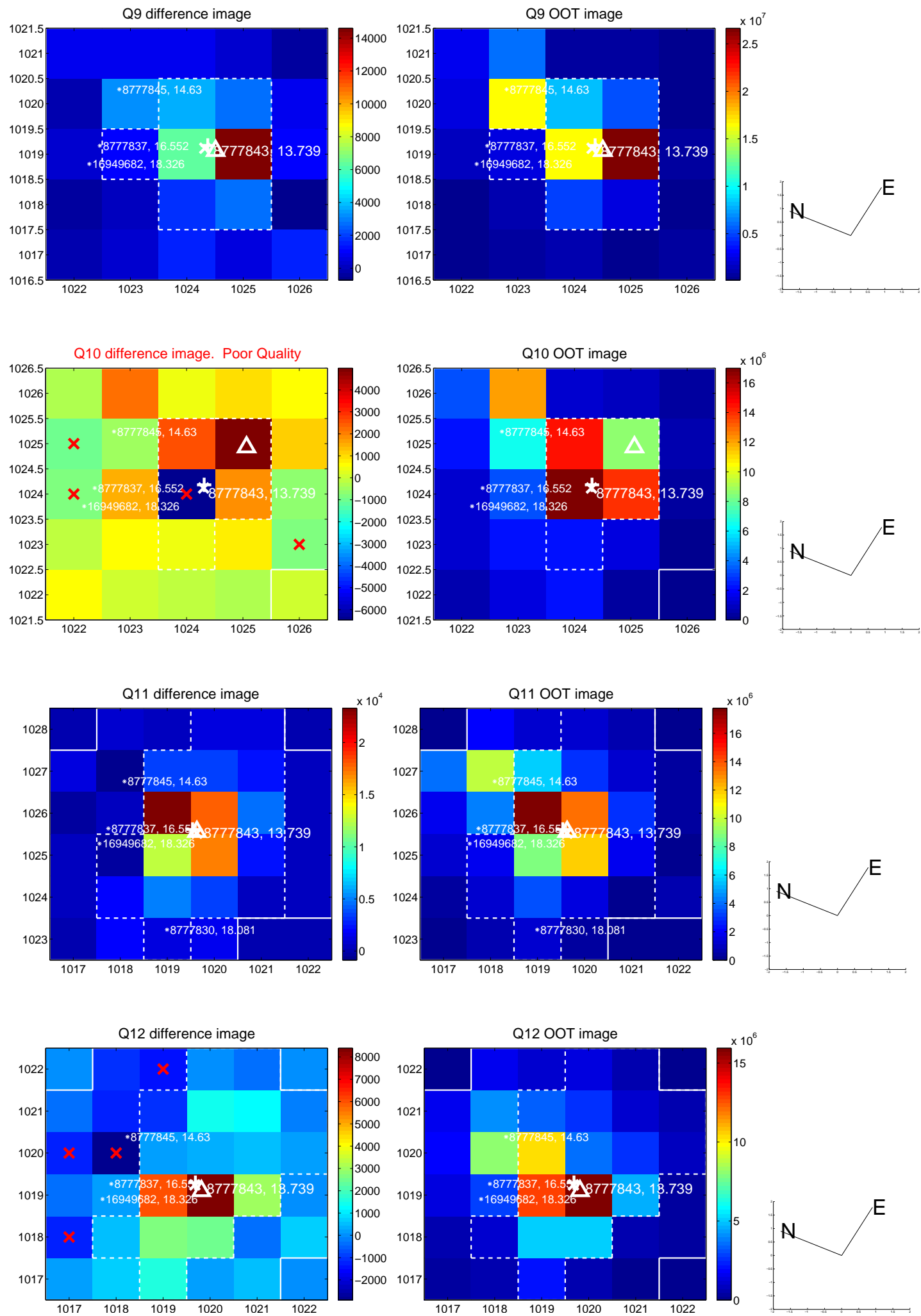
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



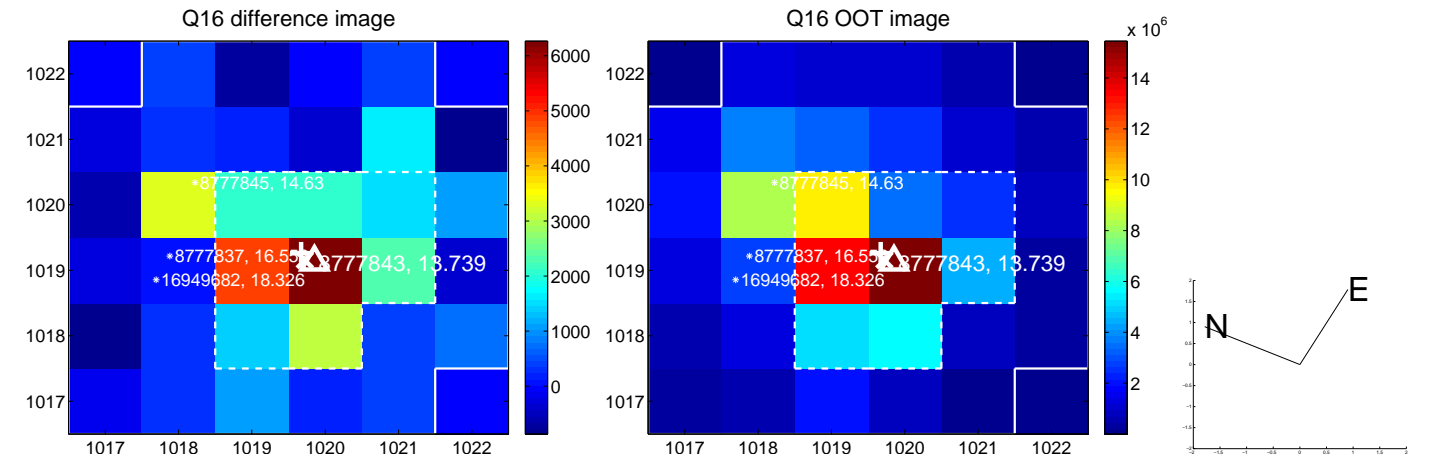
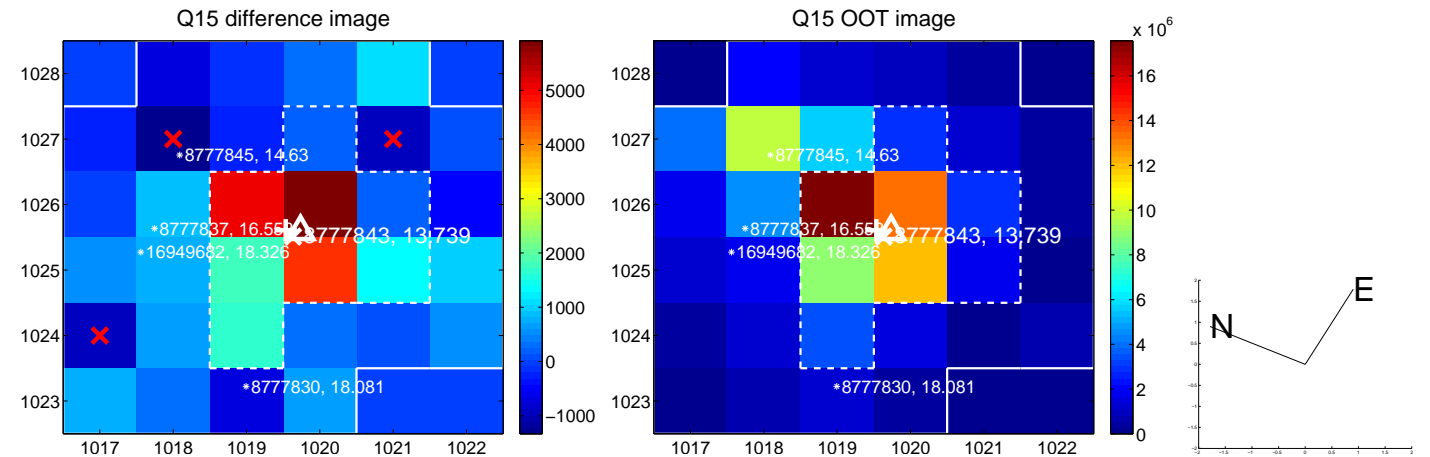
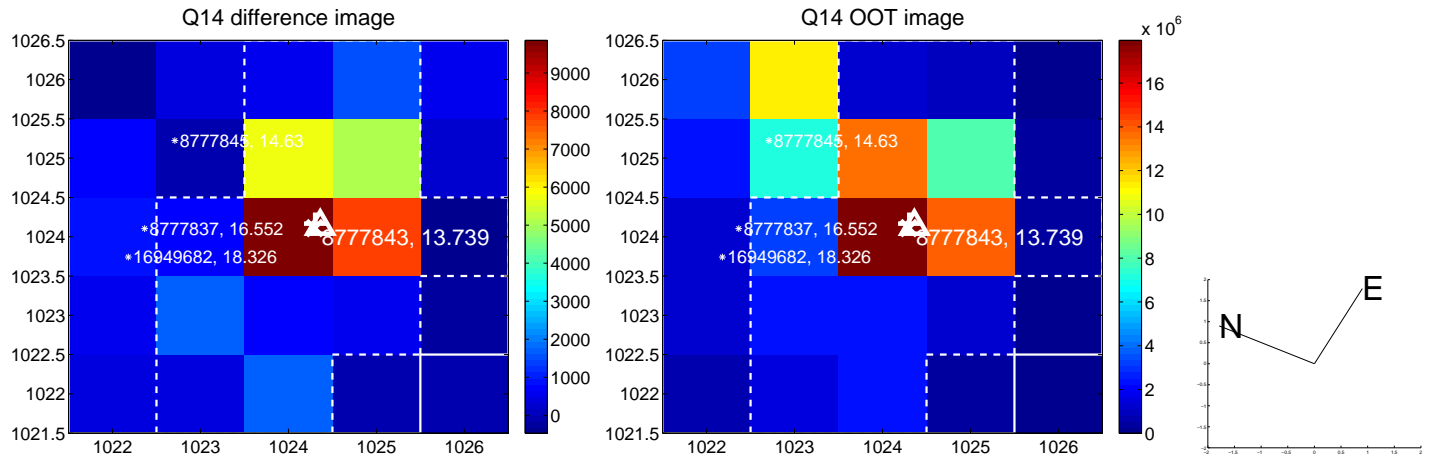
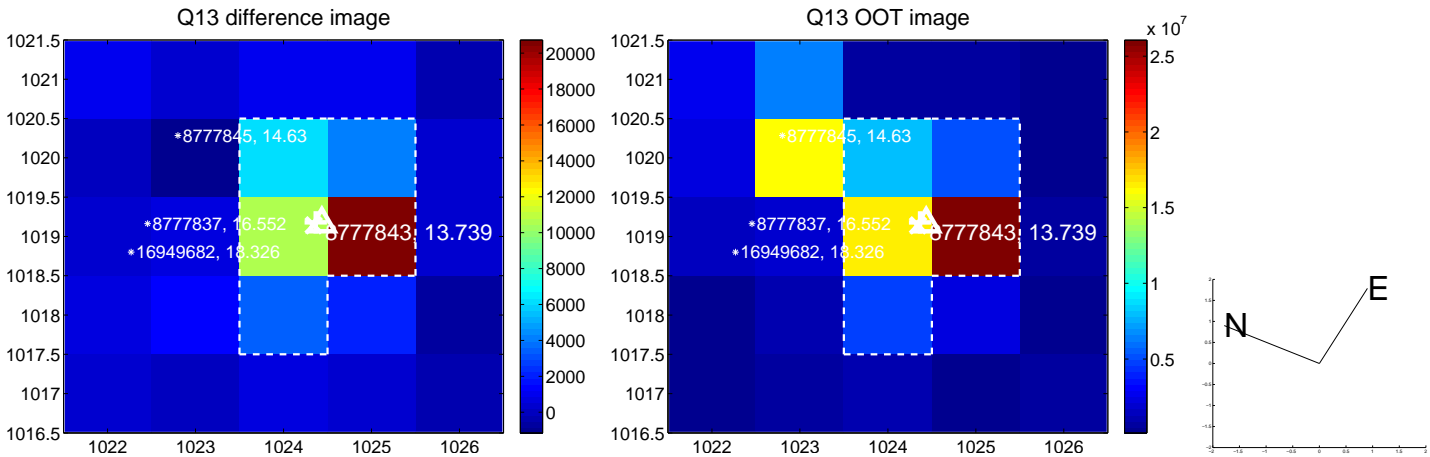
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



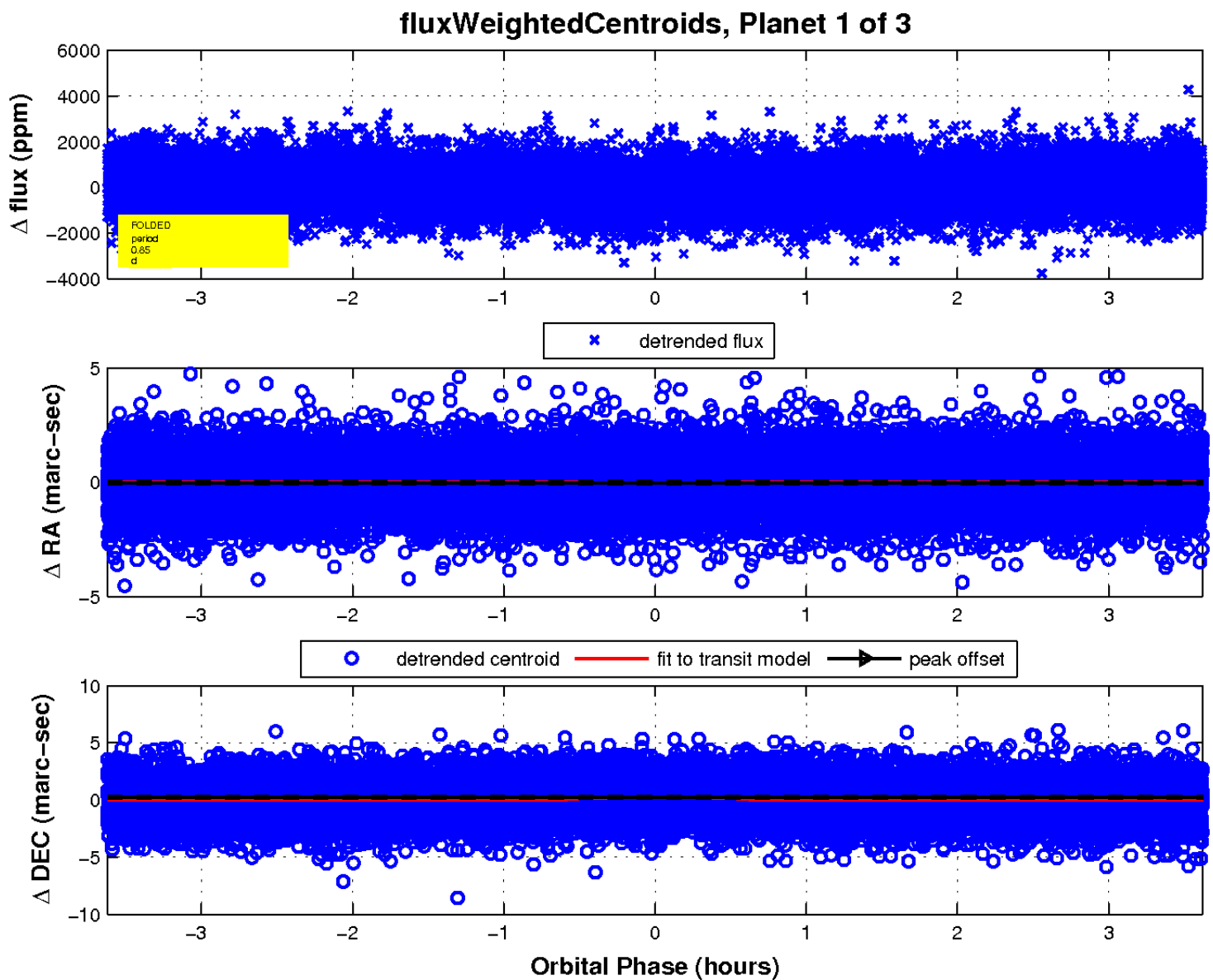
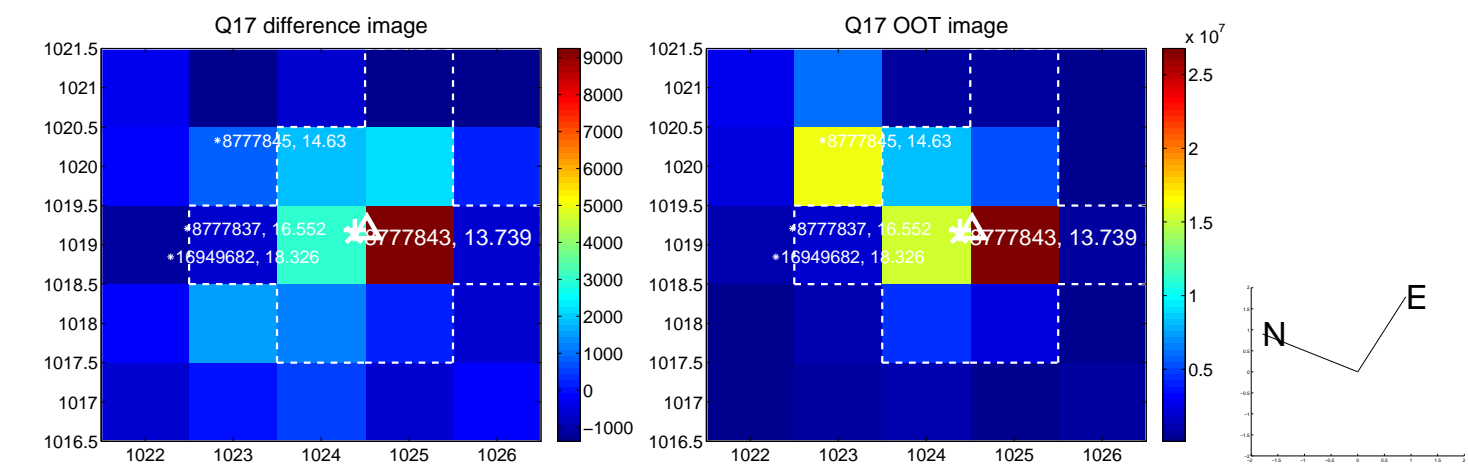
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

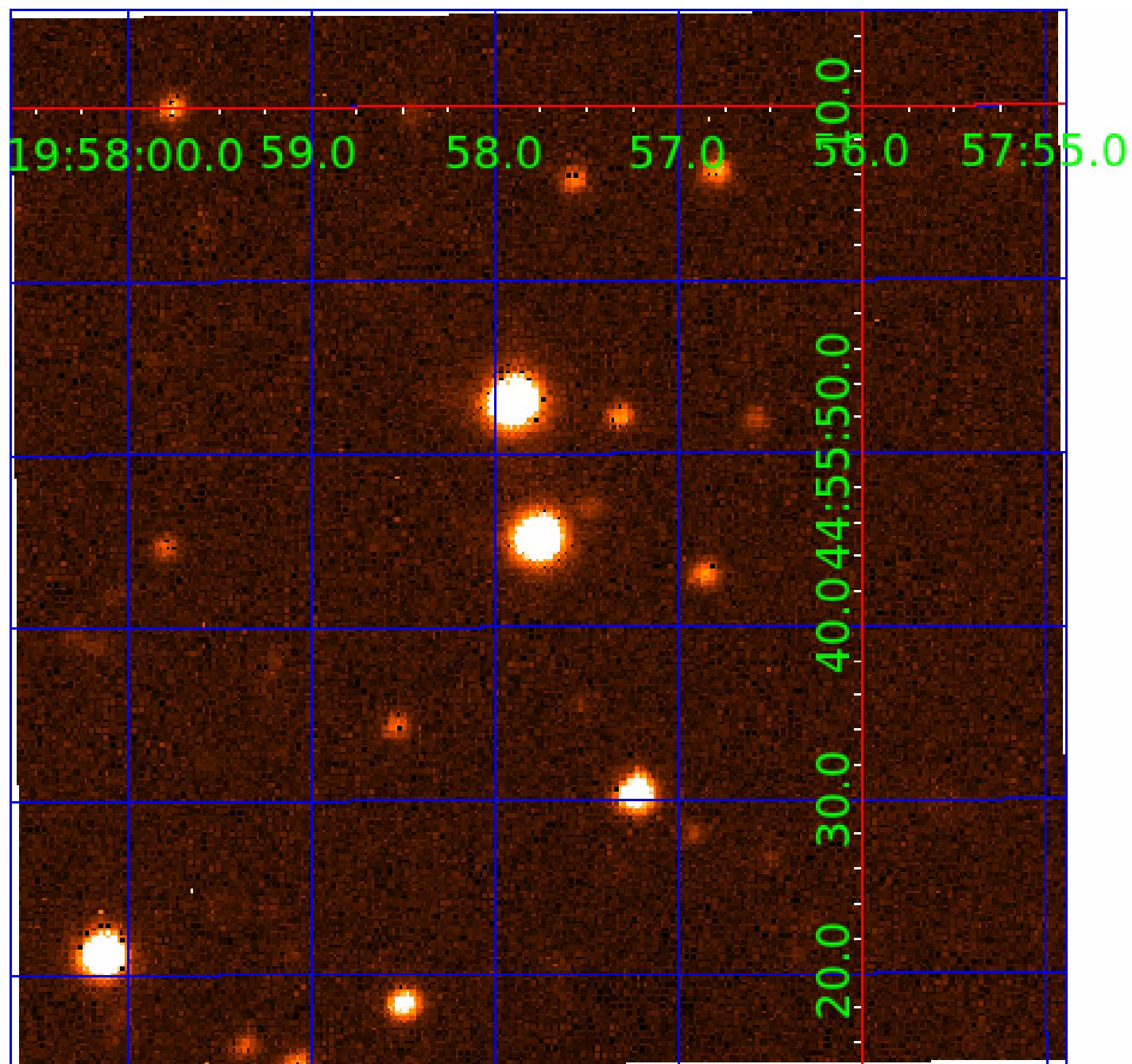


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008777843

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})
008777843-01	OBS	No	0.854271	132.248166	134.1	1.207	11.8	9.2	2.87	6666	3.88	35615.93
008777843-02	OBS	No	0.778441	132.252801	106.7	4.754	11.1	10.5	2.87	6666	3.17	40315.43
008777843-03	OBS	No	175.554605	194.886462	1400.1	2.097	9.1	9.6	2.87	6666	10.82	29.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008777843-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008777843-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
008777843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

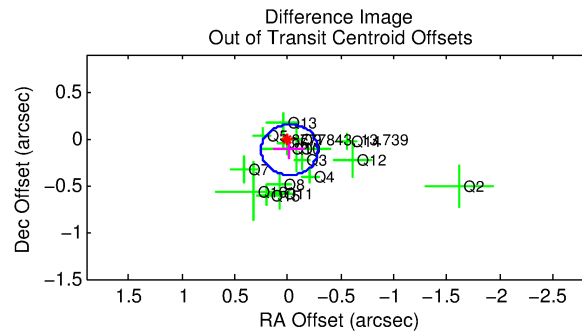
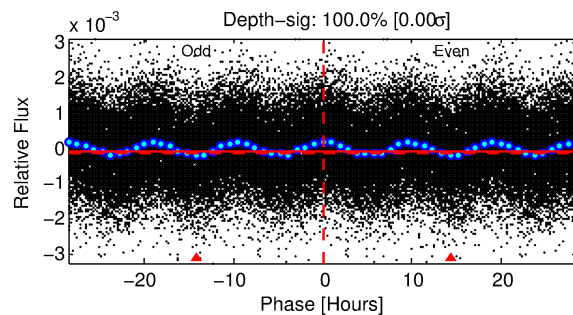
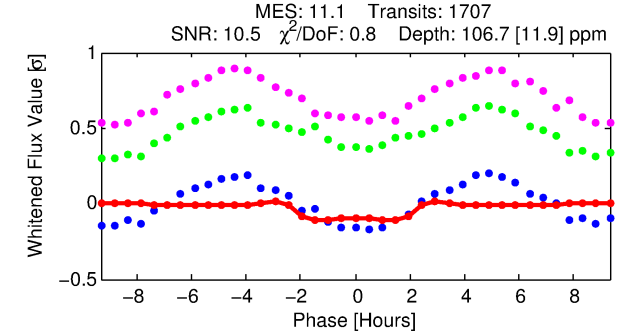
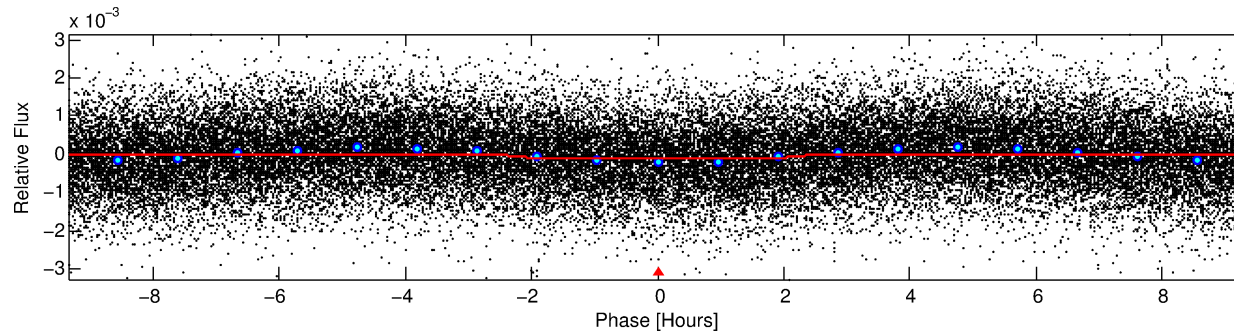
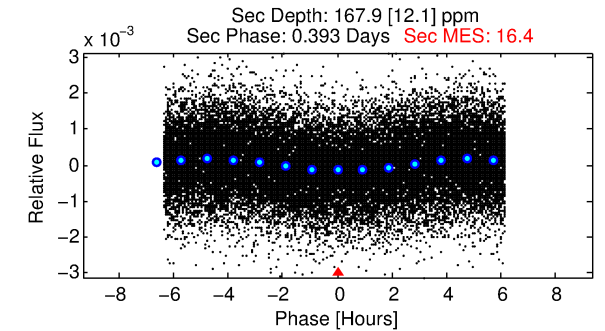
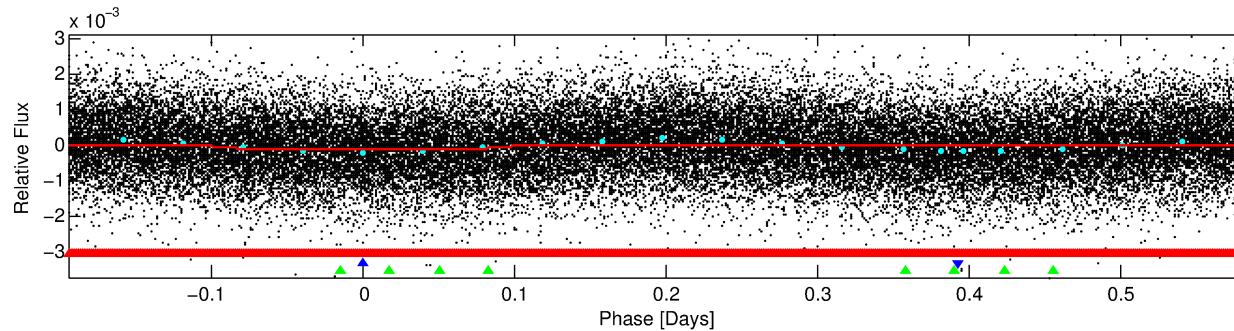
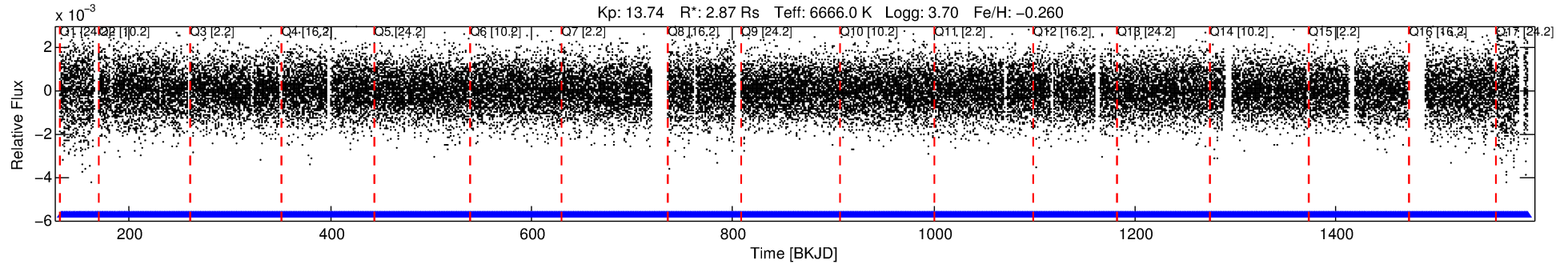
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008777843-02

No Significant Match Found

DV One-Page Summary

KIC: 8777843 Candidate: 2 of 3 Period: 0.778 d



DV Fit Results:

Period = 0.77844 [0.00001] d
Epoch = 132.2528 [0.0040] BKJD
Rp/R* = 0.0101 [0.0092]
a/R* = 1.23 [2.18]
b = 0.70 [3.80]
Seff = 40315.43 [36082.89]
Teff = 3613 [808] K
Rp = 3.17 [3.31] Re
a = 0.0190 [0.0102] AU
Ag = 3.31 [6.66] [0.35σ]
Teffp = 7536 [3419] K [1.12σ]

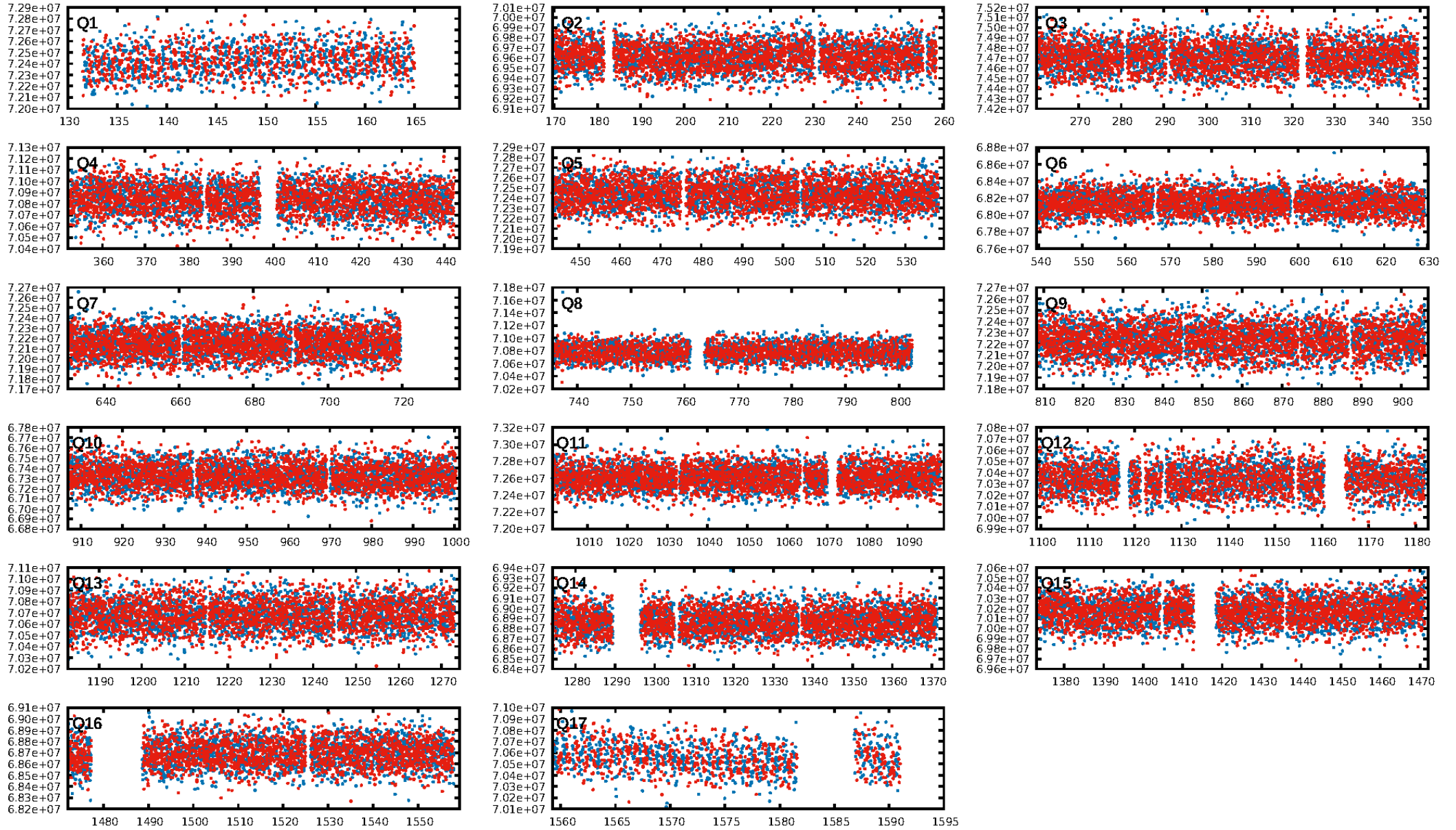
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 28.9% [0.37σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.02e-06
RollingBand-fgt: 1.00 [1631/1631]
GhostDiagnostic-chr: 1.322
Centroid-sig: 0.0%
Centroid-so: 0.760 arcsec [1.83σ]
OotOffset-rm: 0.121 arcsec [1.35σ]
KicOffset-rm: 0.187 arcsec [1.34σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 0.00 [0/17]

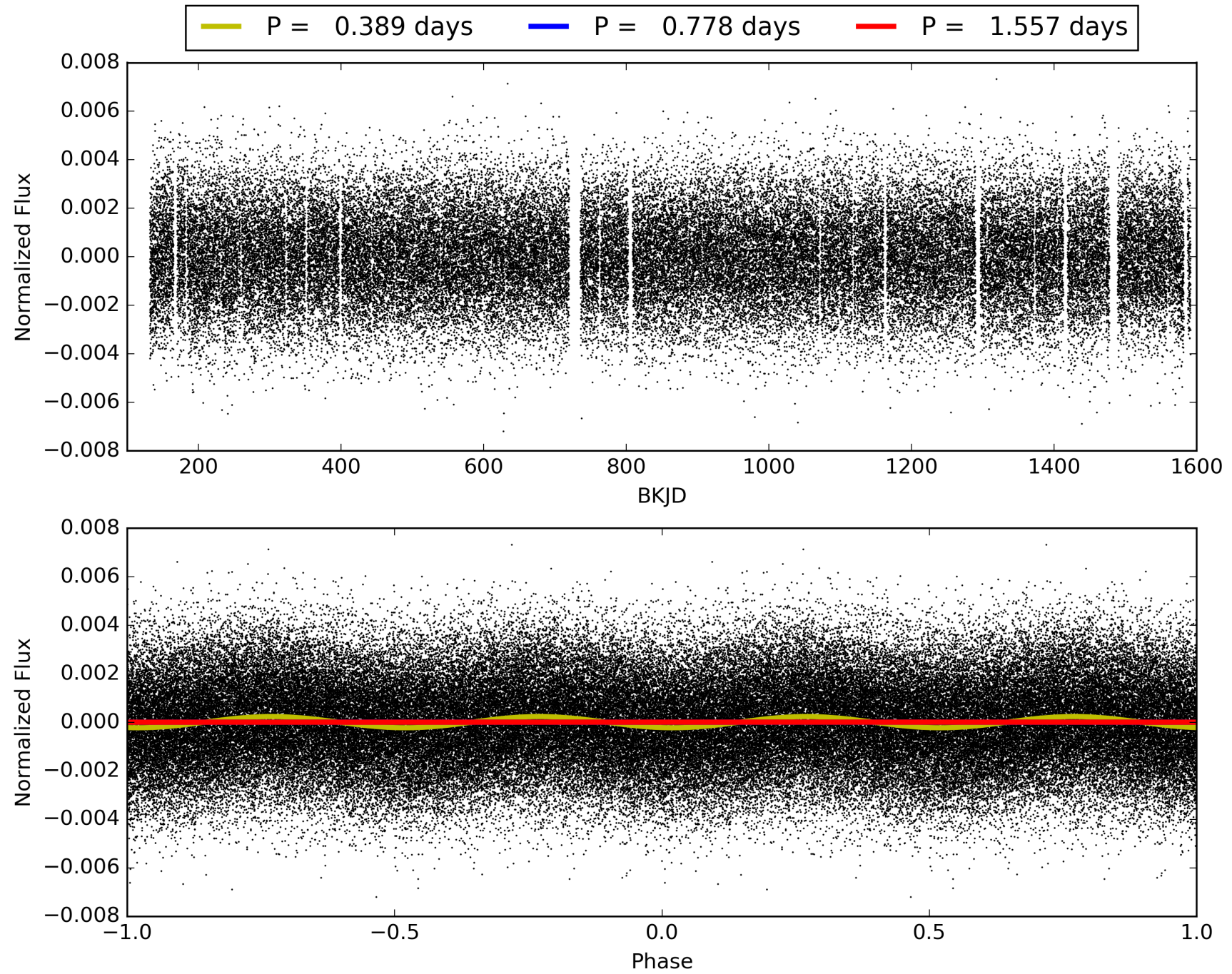
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:19:53 Z

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

TCE 008777843-02, PDC Light Curves

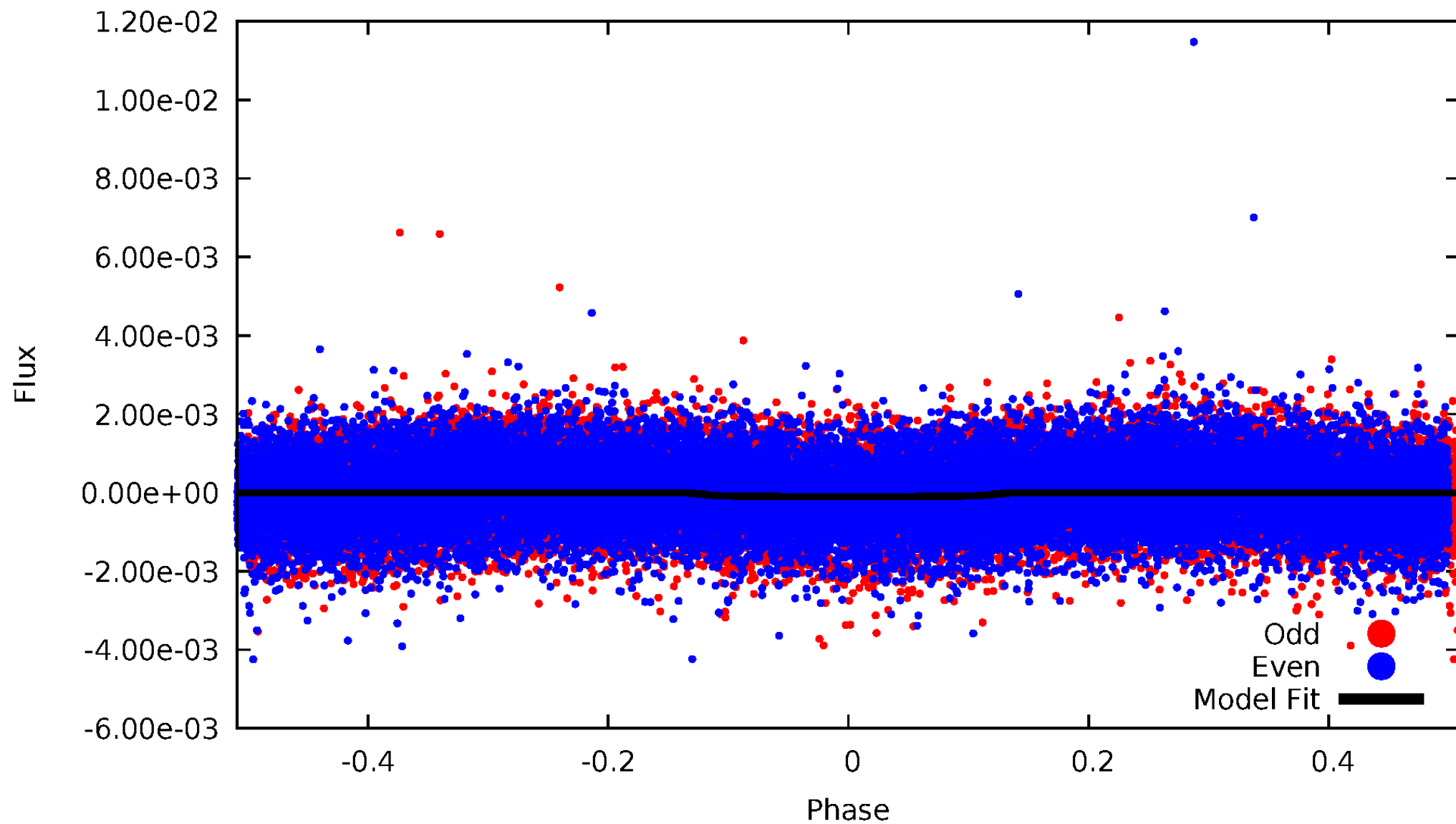


TCE 008777843-02



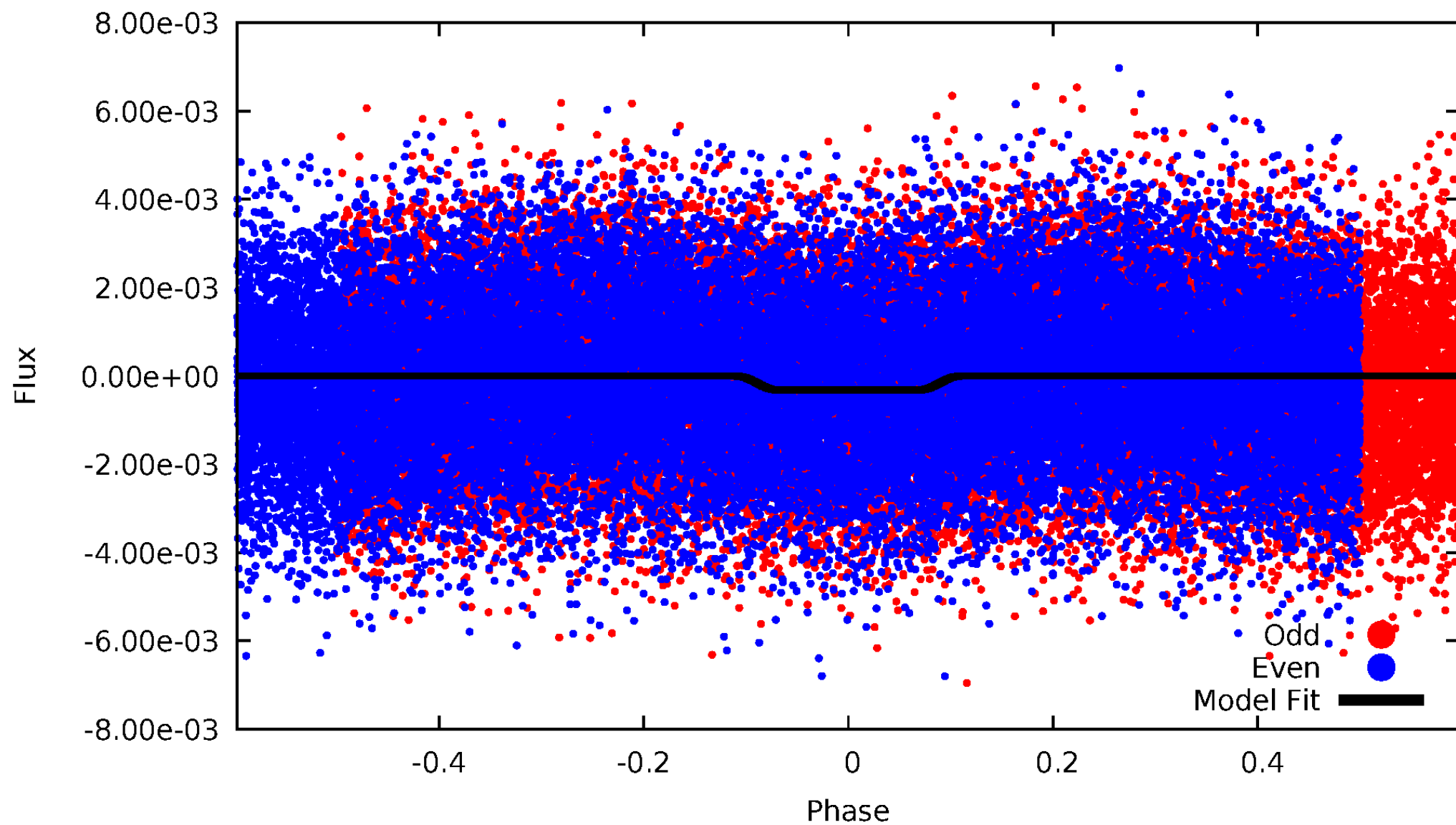
DV Odd/Even

TCE 008777843-02



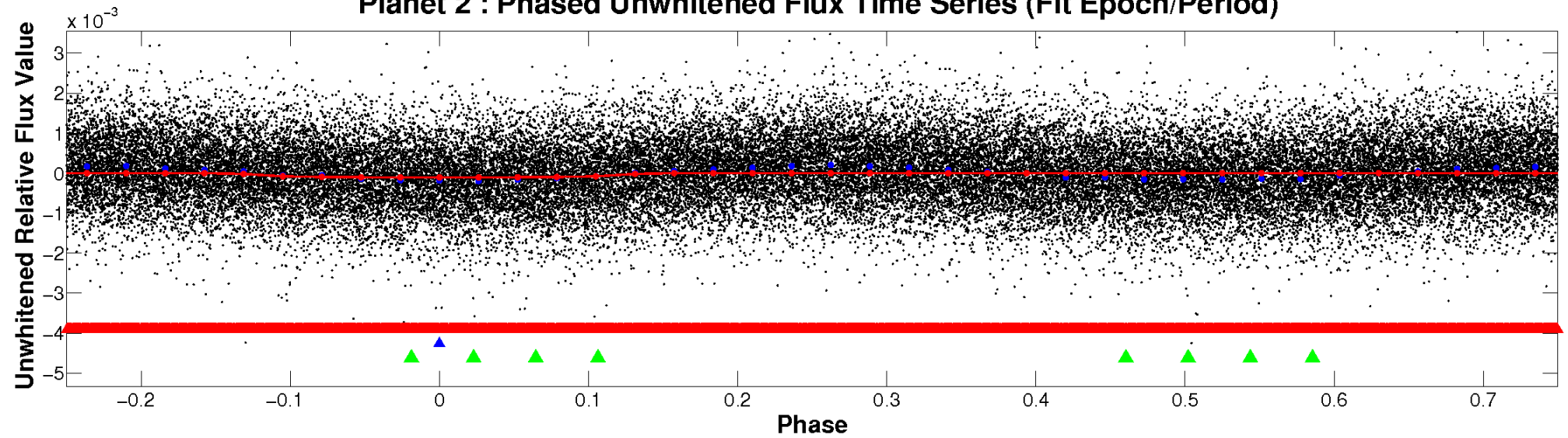
ALT Odd/Even

TCE 008777843-02

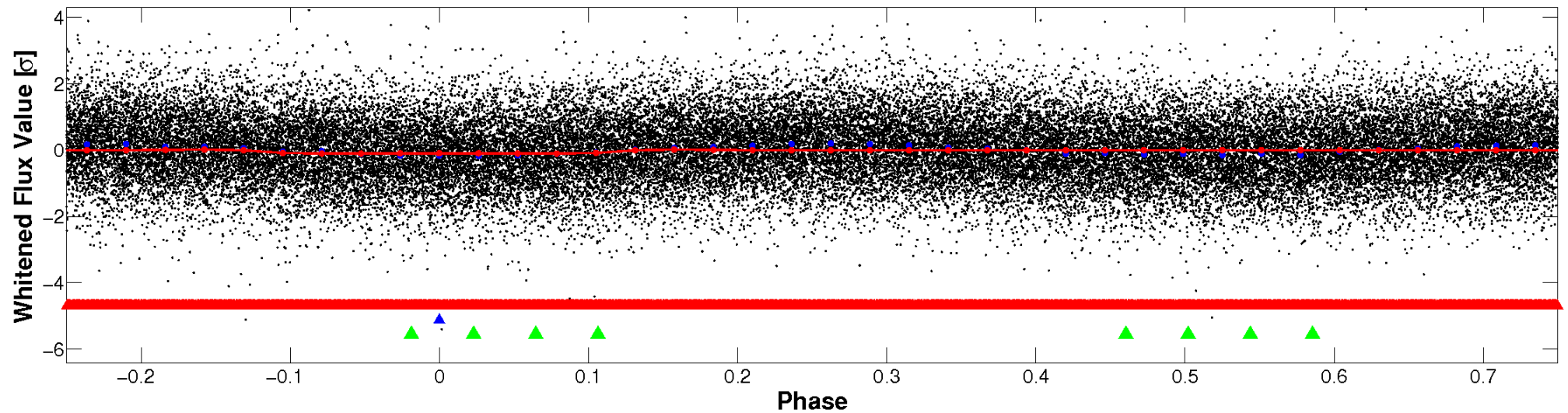


Non-Whitened Vs. Whitened Light Curve

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

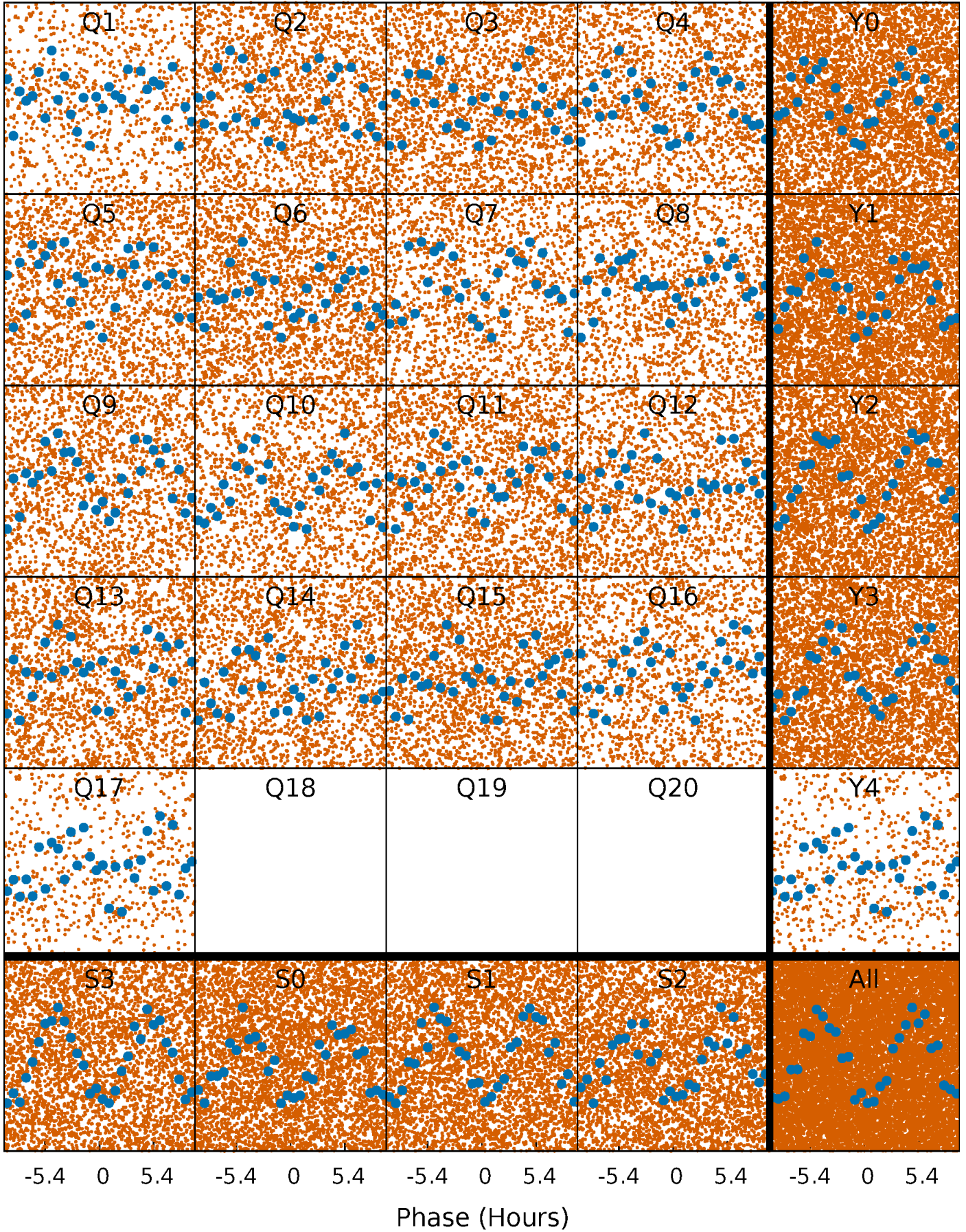


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



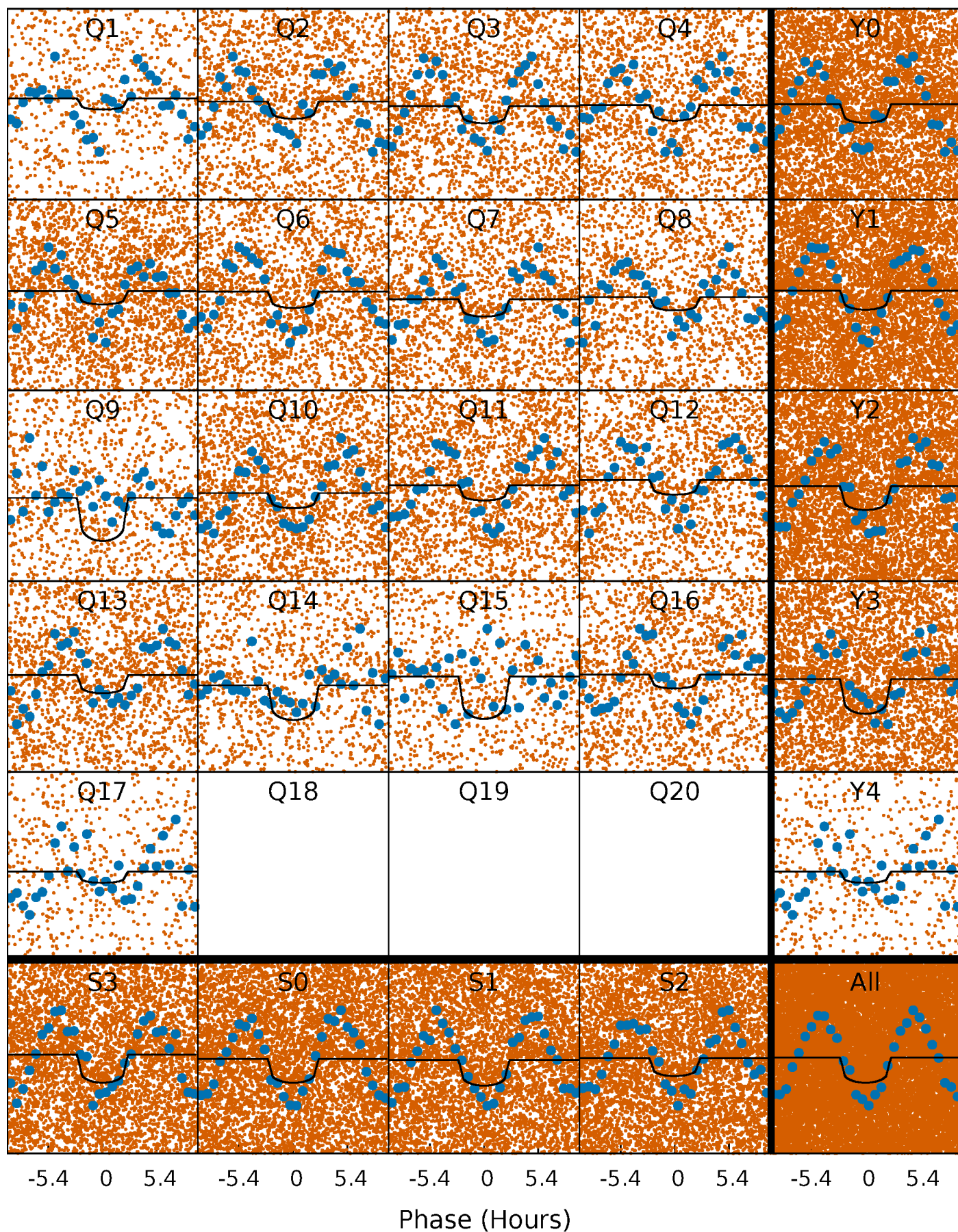
PDC Quarter-Phased Transit Curves

TCE 008777843-02 P= 0.778441 Days $T_0=132.252801$ (BKJD)



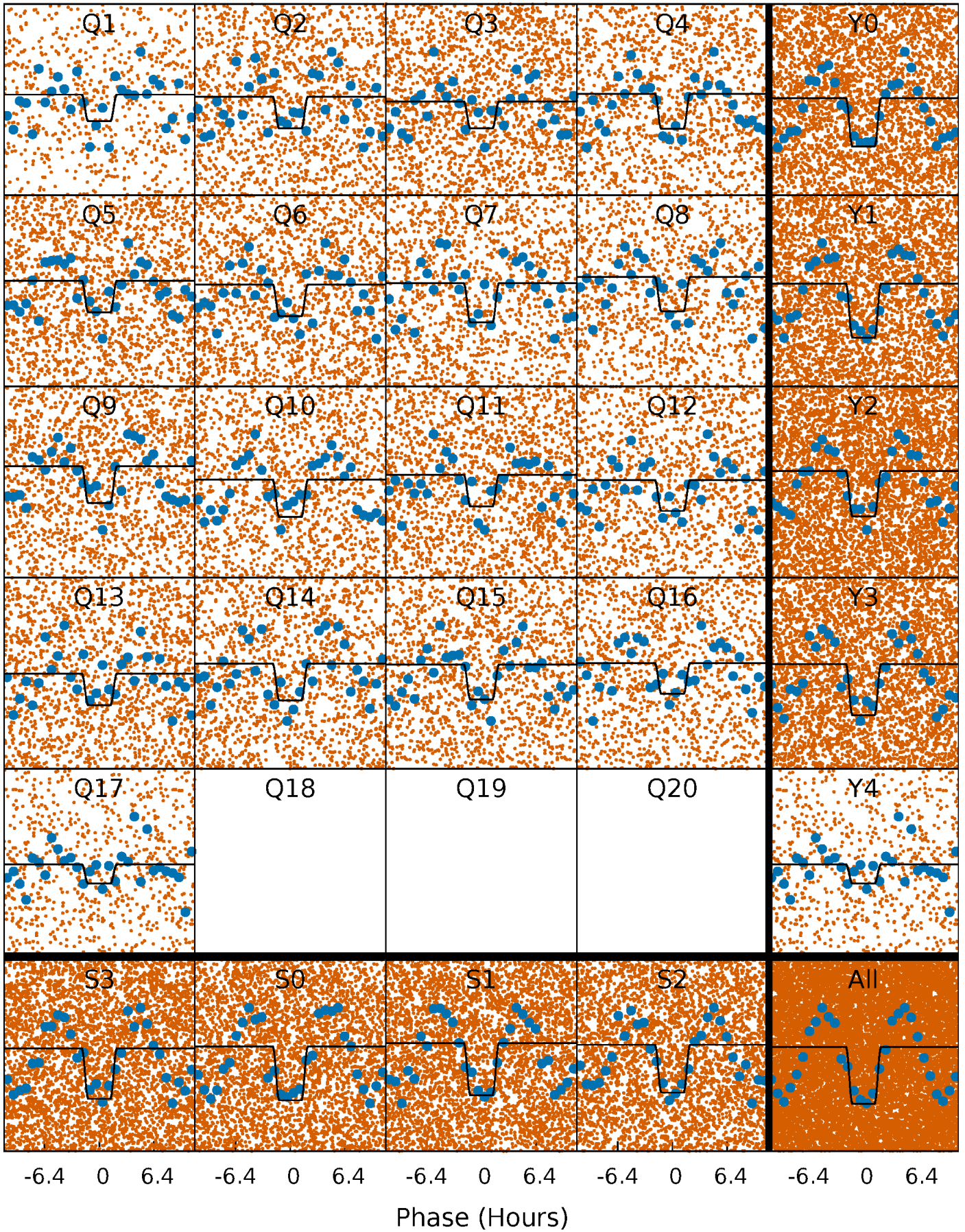
DV Quarter-Phased Transit Curves

TCE 008777843-02 P= 0.778441 Days $T_0=132.252801$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

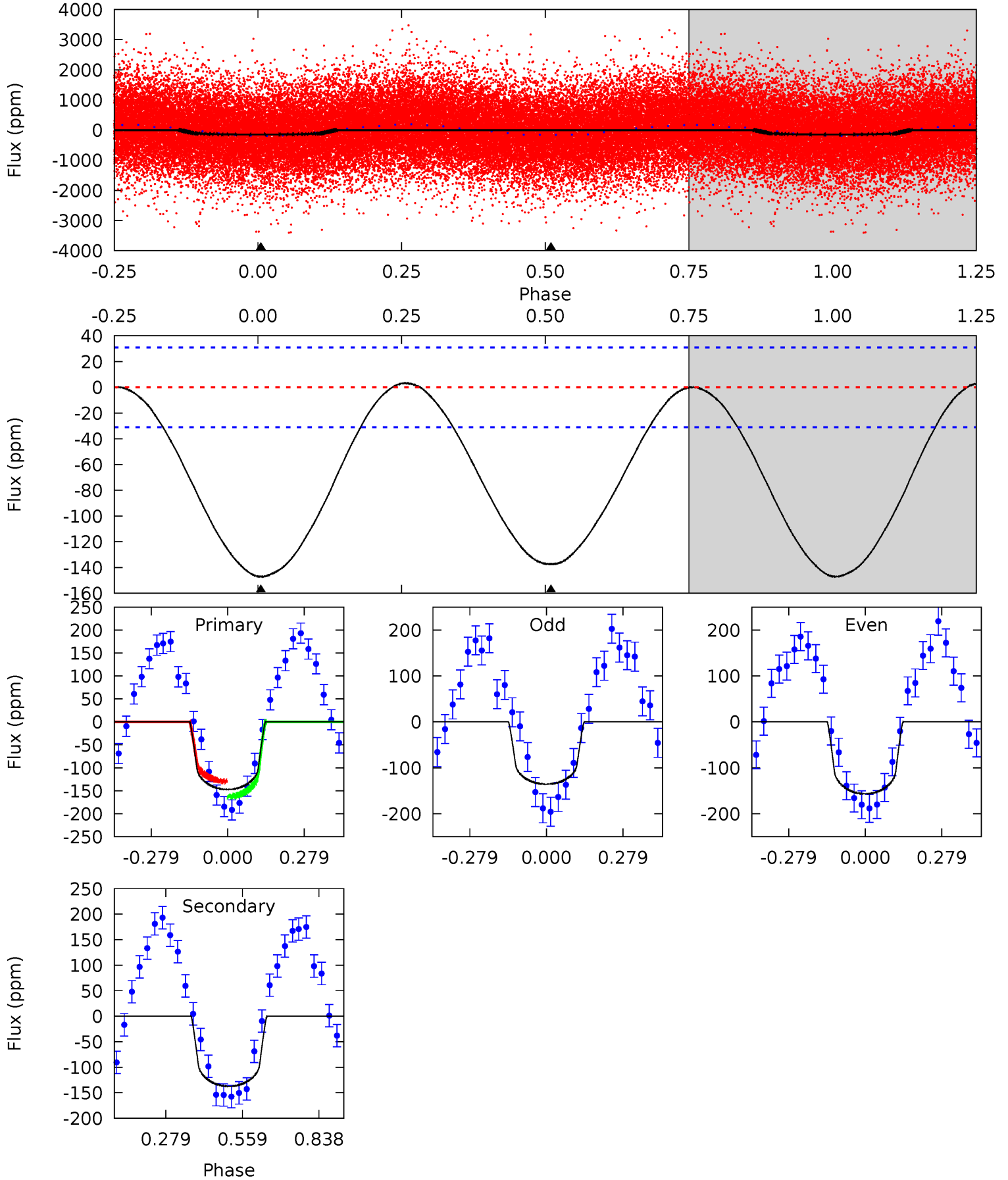
TCE 008777843-02 P= 0.778501 Days $T_0=132.213266$ (BKJD)



DV Model-Shift Uniqueness Test

008777843-02, P = 0.778441 Days, E = 131.474360 Days

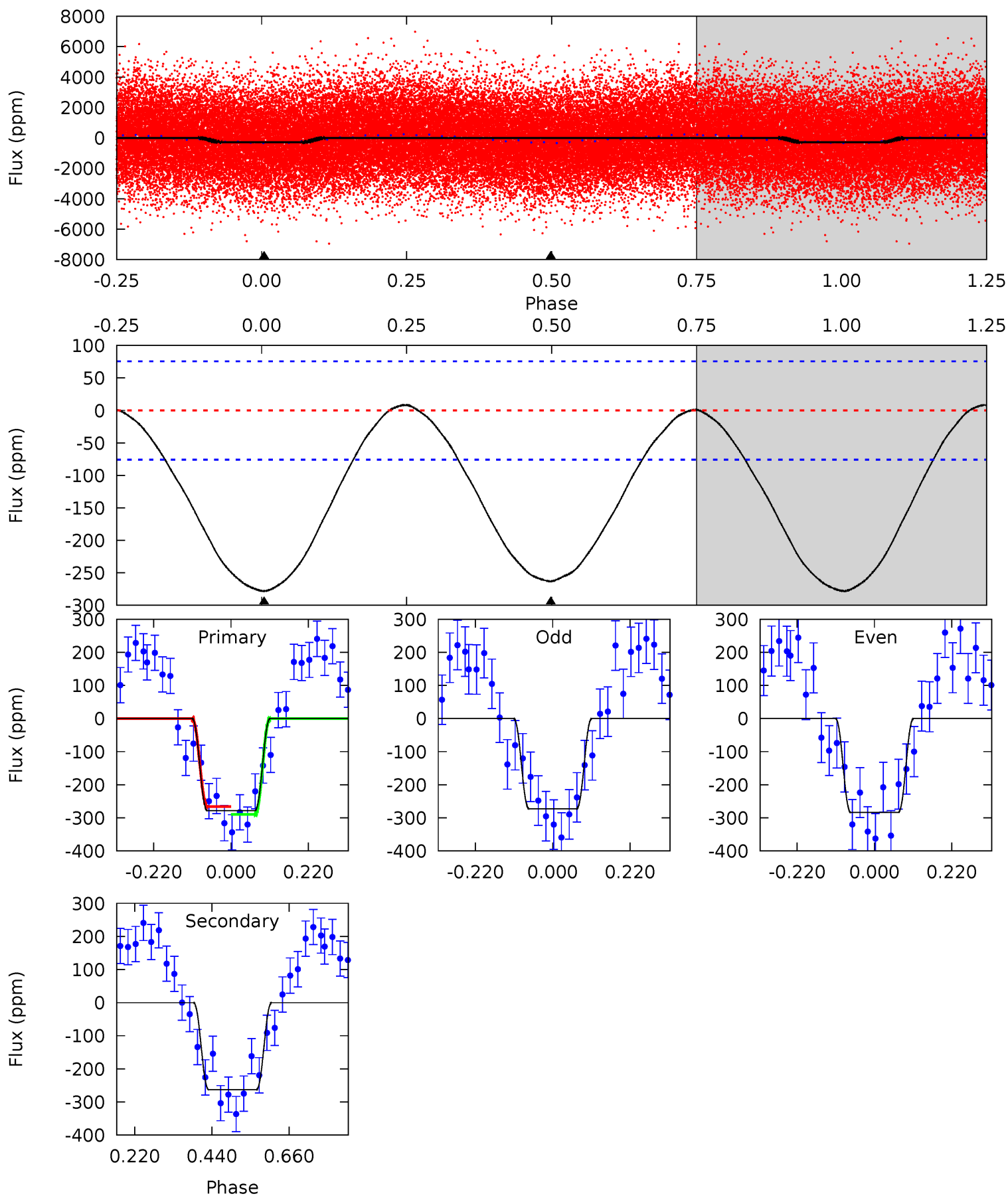
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	19.3	0	0	4.34	1.08	0.25	20.6	20.6	19.3	19.3	1.49	0.83	0.02	2.39



Alt Model-Shift Uniqueness Test

008777843-02, P = 0.778501 Days, E = 131.434765 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	15.3	0	0	4.40	1.23	0.37	16.1	16.1	15.3	15.3	0.31	0.98	0.03	0.69



Stellar Parameters For KIC 008777843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6666^{+211}_{-258}	$3.701^{+0.527}_{-0.093}$	$-0.260^{+0.300}_{-0.300}$	$2.865^{+0.502}_{-1.505}$	$1.506^{+0.212}_{-0.393}$	$0.090^{+0.551}_{-0.026}$
	+3%/-4%	+14%/-3%	+115%/-115%	+18%/-53%	+14%/-26%	+611%/-29%
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 008777843-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-137 ± 7	$3.13^{+2.62}_{-1.90}$	4883^{+361}_{-668}	6479^{+5866}_{-1832}	$2.667^{+15.972}_{-1.825}$
Alt.	-263 ± 17	$4.70^{+2.94}_{-2.41}$	4851^{+388}_{-682}	6197^{+3105}_{-1393}	$2.404^{+7.160}_{-1.510}$

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

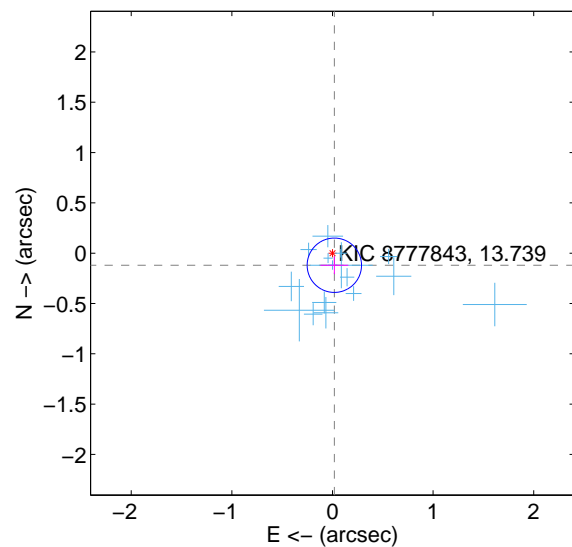
Supplemental centroid analysis for 008777843-02. Kepler magnitude: 13.74. Transit SNR 10.50

There are 16 quarters with good PRF difference image offsets

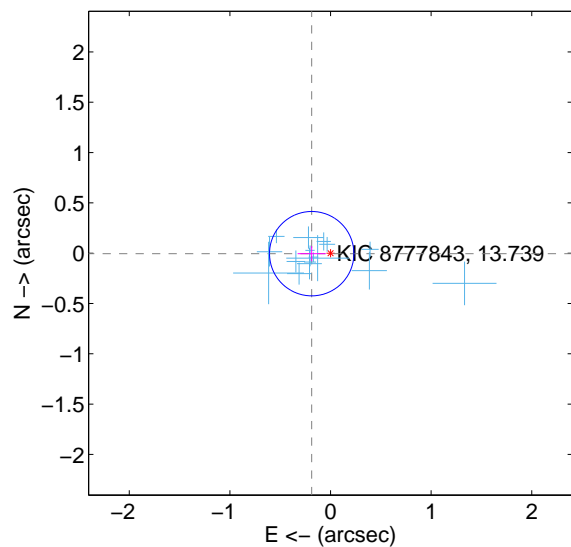
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.121 ± 0.090	1.35	-0.019 ± 0.139	-0.120 ± 0.087
PRF-fit source offset from KIC position	0.187 ± 0.140	1.34	0.187 ± 0.140	-0.005 ± 0.074
photometric centroid source offset	0.76 ± 0.41	1.83	-0.31 ± 0.24	-0.69 ± 0.44

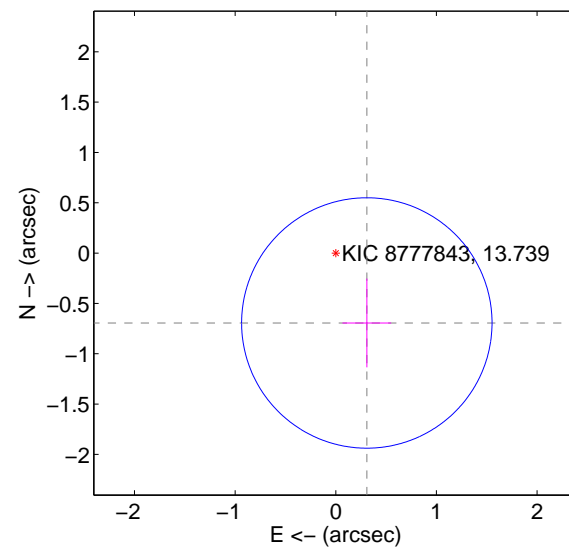
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

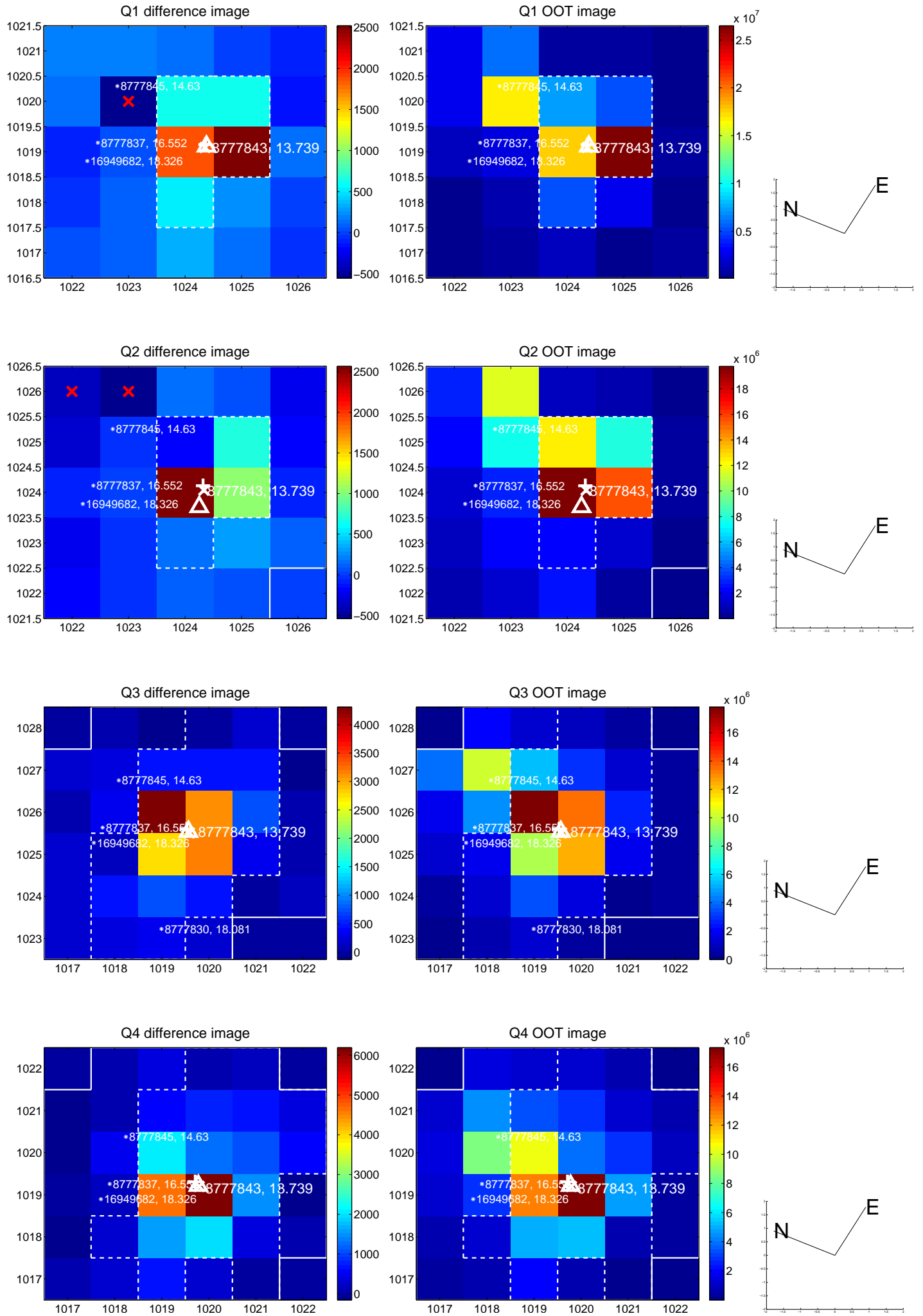


offset from photometric centroids

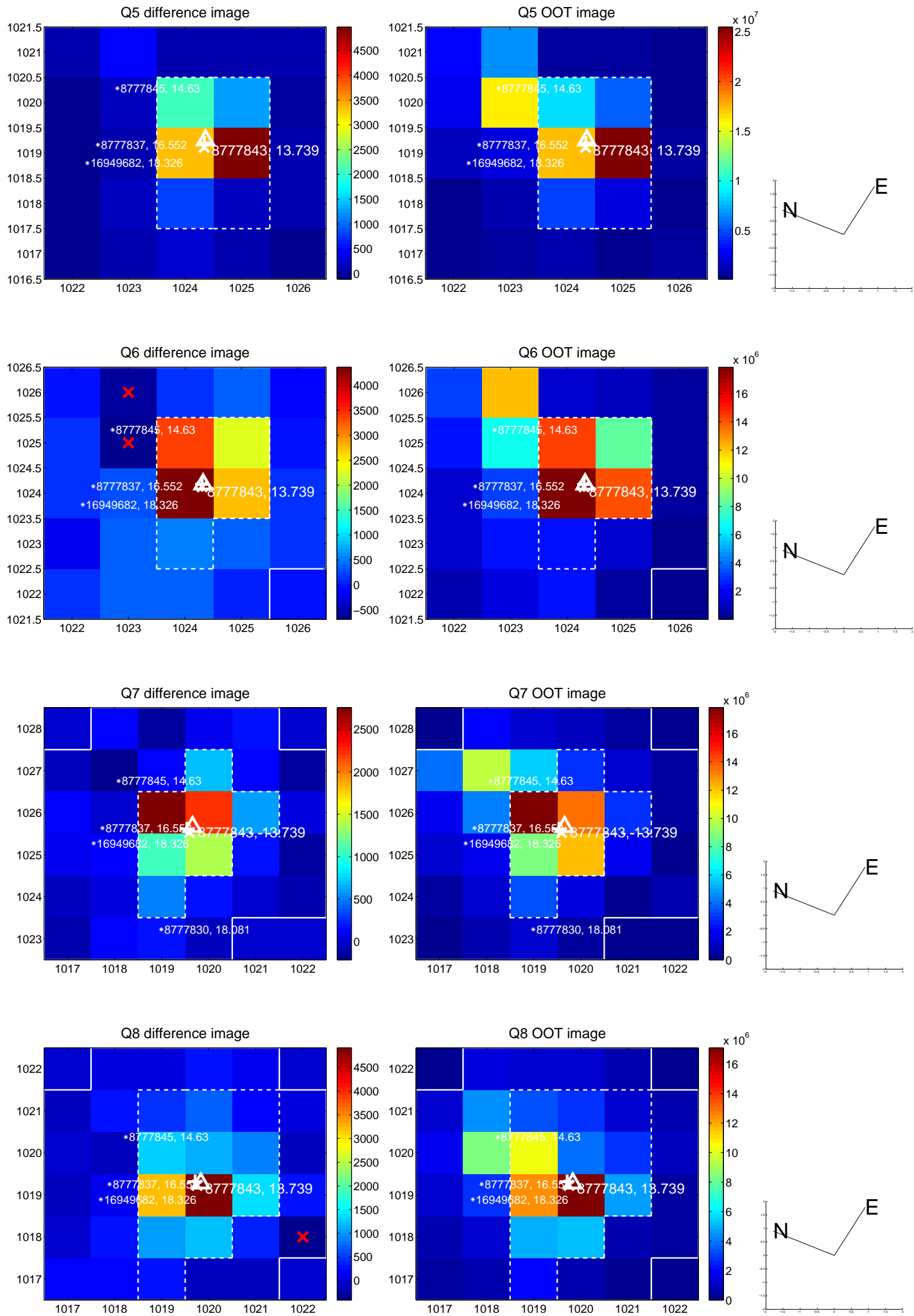


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

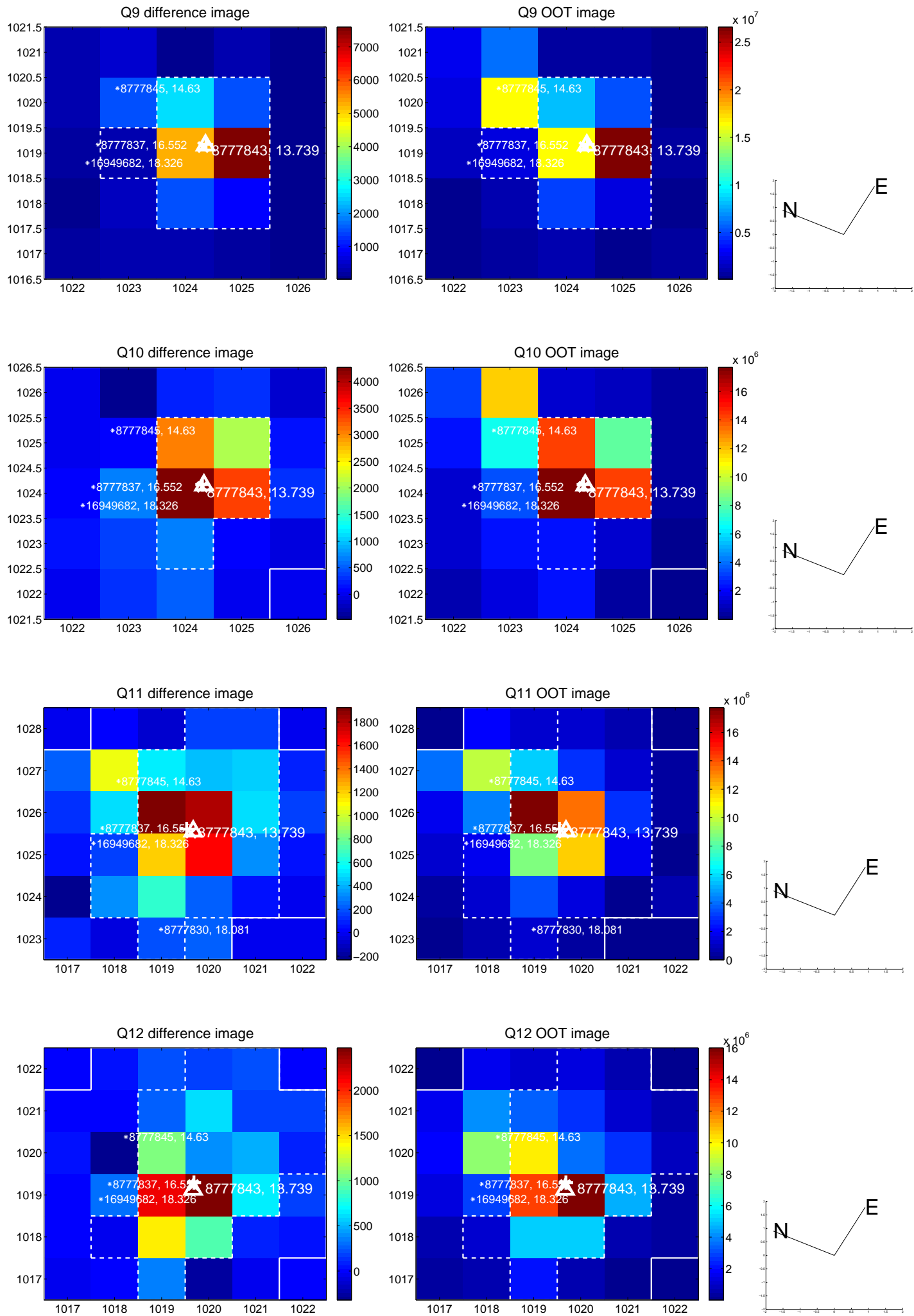
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



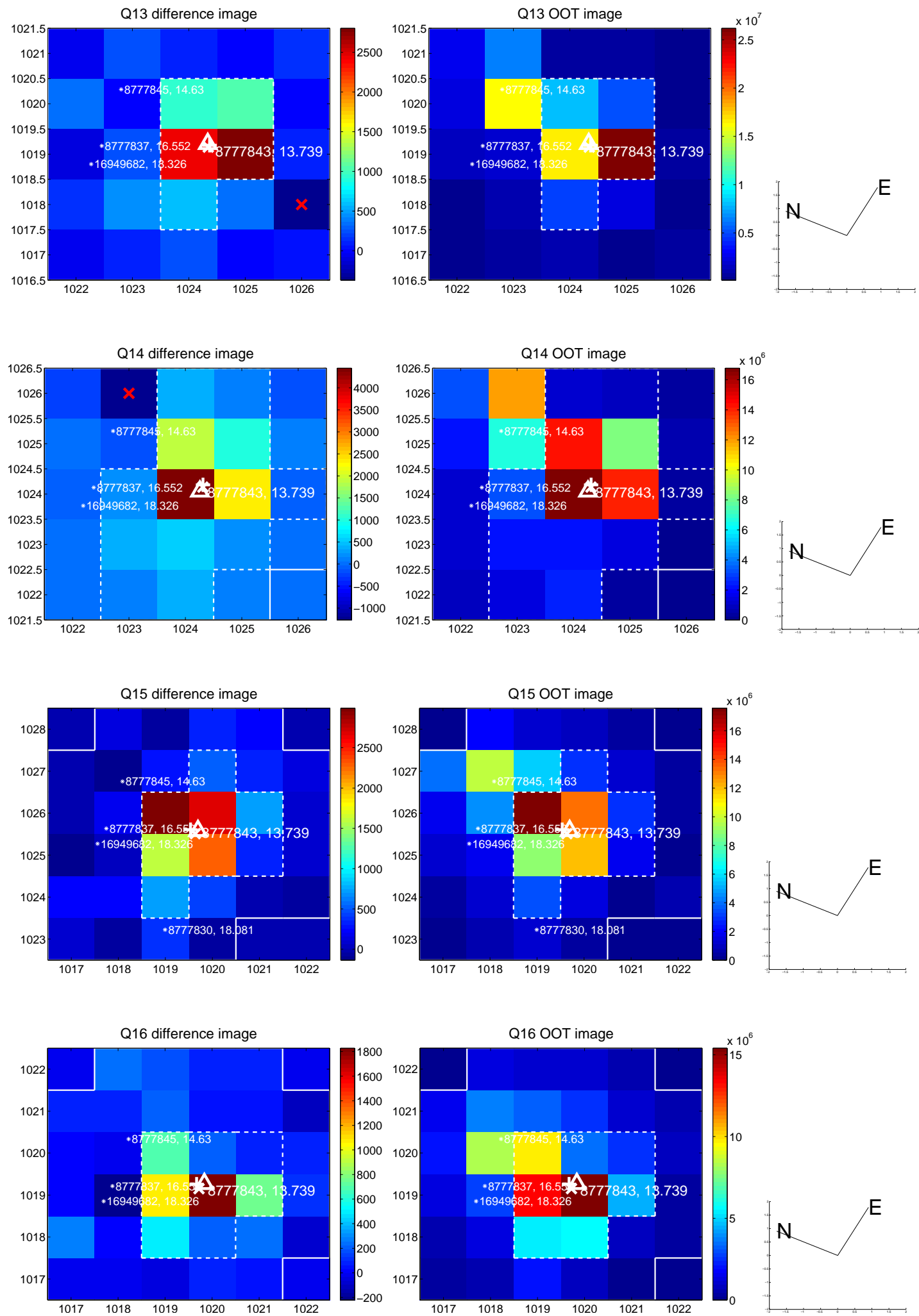
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



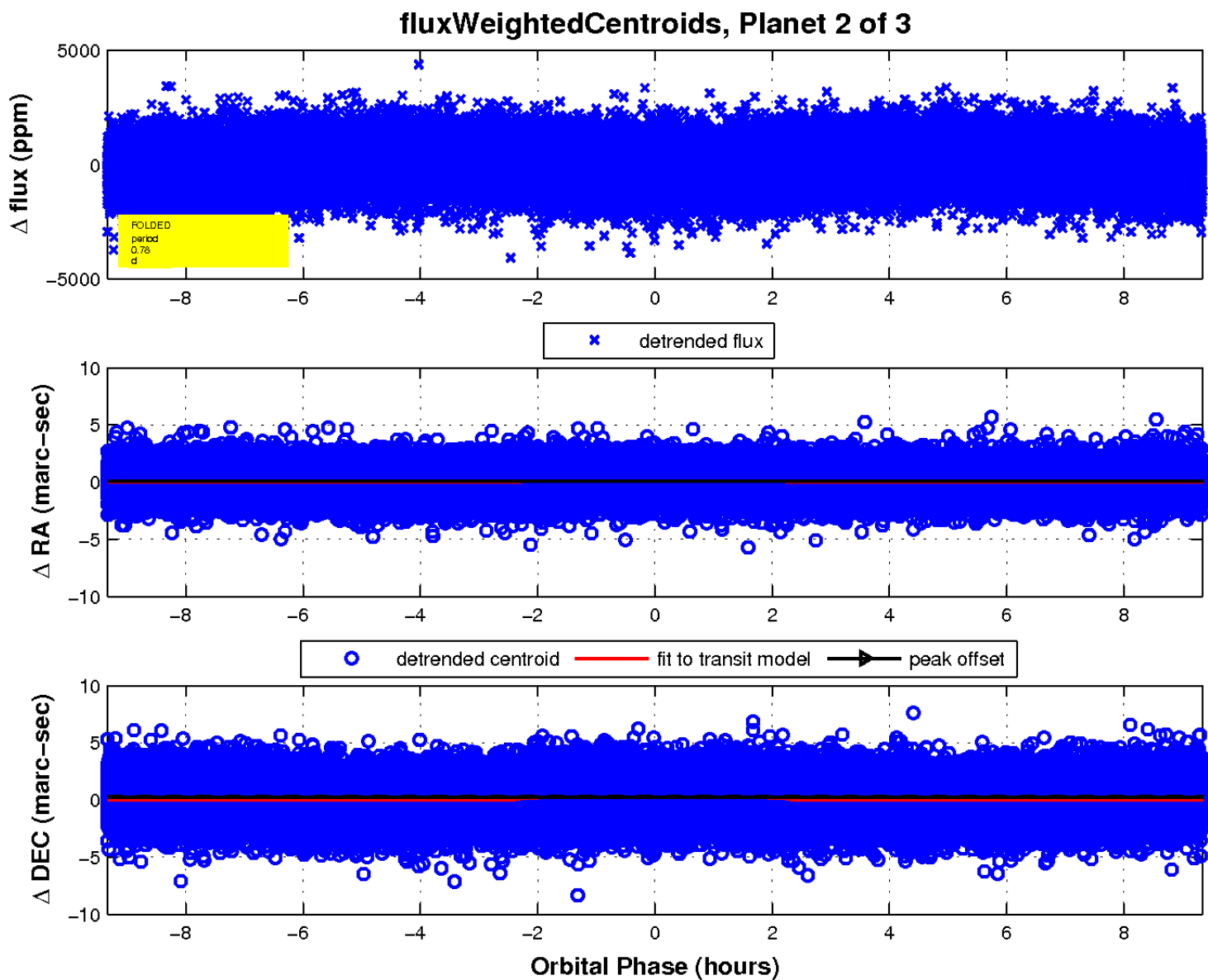
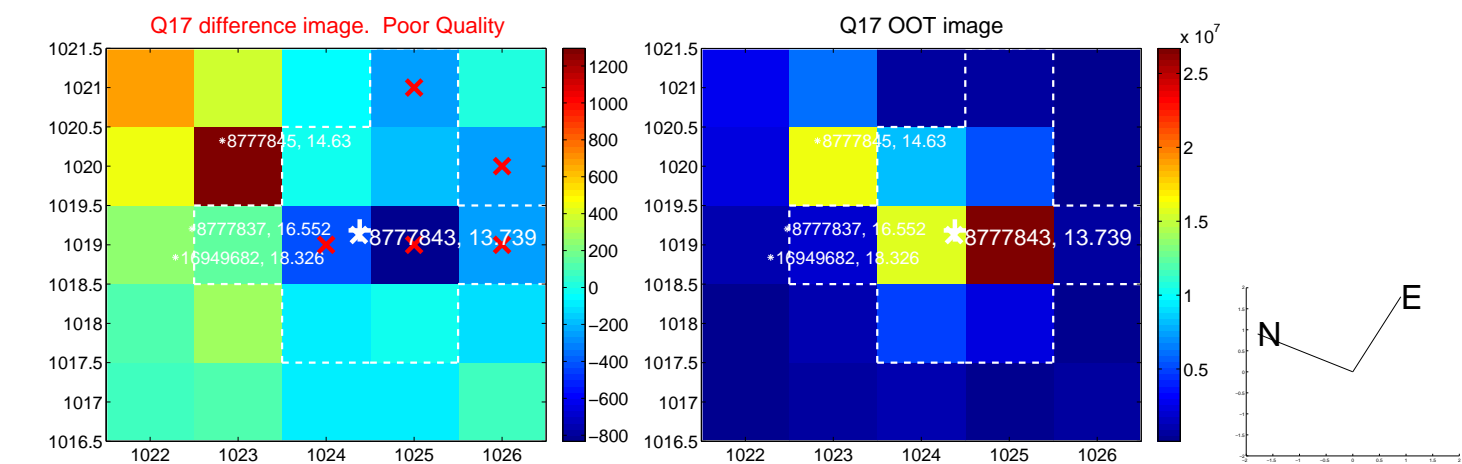
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

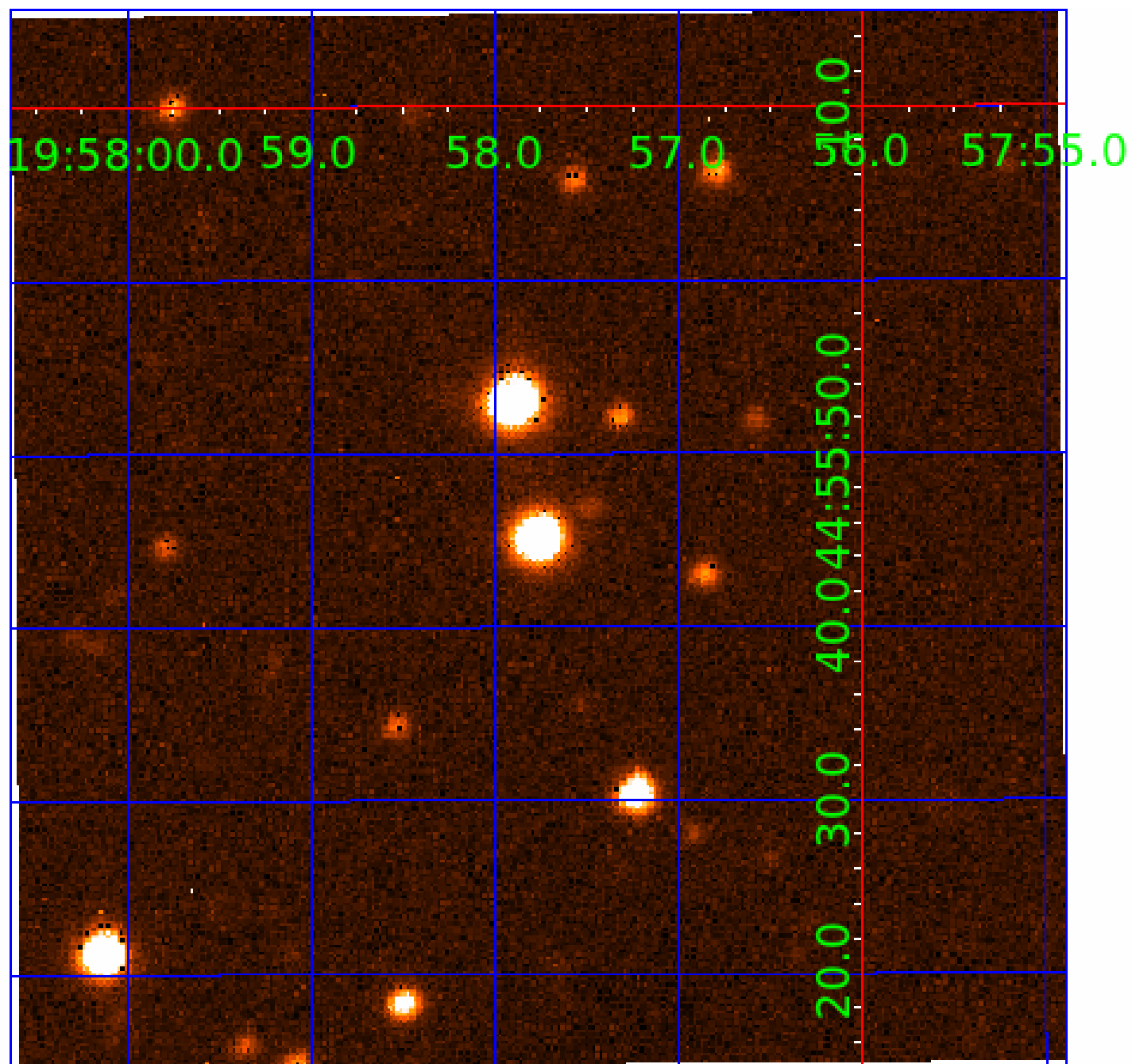


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008777843

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})
008777843-01	OBS	No	0.854271	132.248166	134.1	1.207	11.8	9.2	2.87	6666	3.88	35615.93
008777843-02	OBS	No	0.778441	132.252801	106.7	4.754	11.1	10.5	2.87	6666	3.17	40315.43
008777843-03	OBS	No	175.554605	194.886462	1400.1	2.097	9.1	9.6	2.87	6666	10.82	29.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008777843-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008777843-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
008777843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

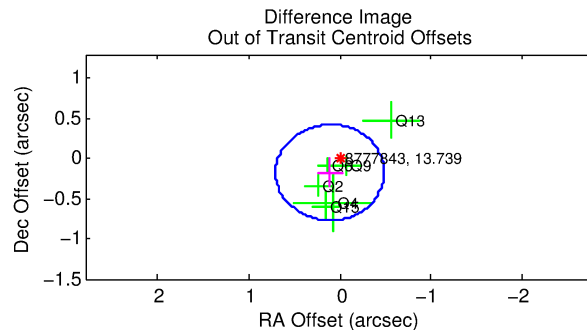
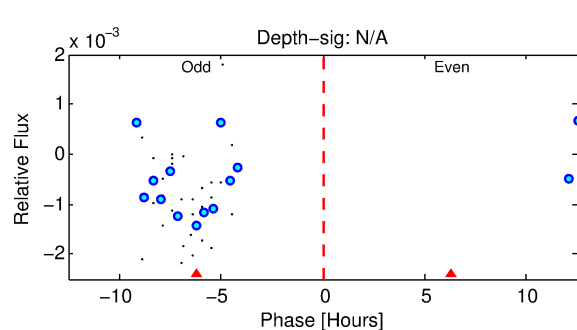
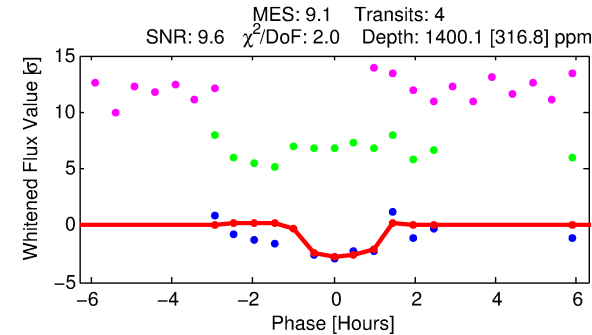
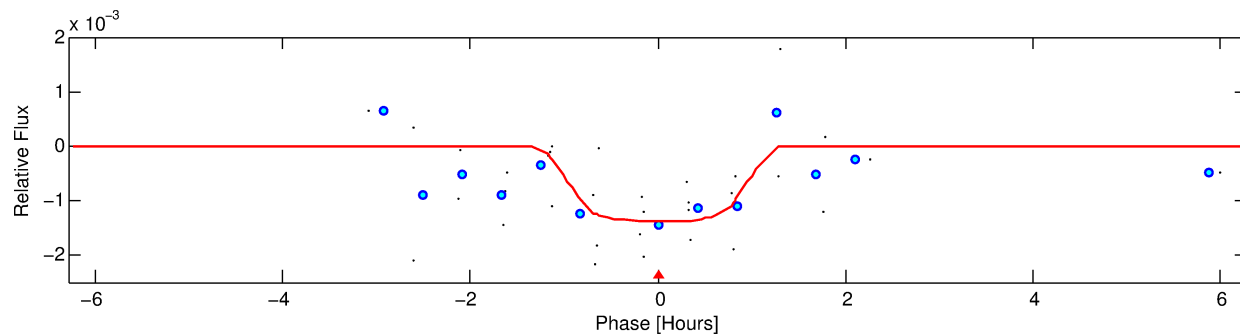
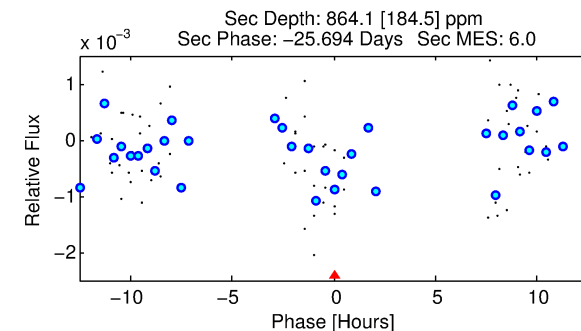
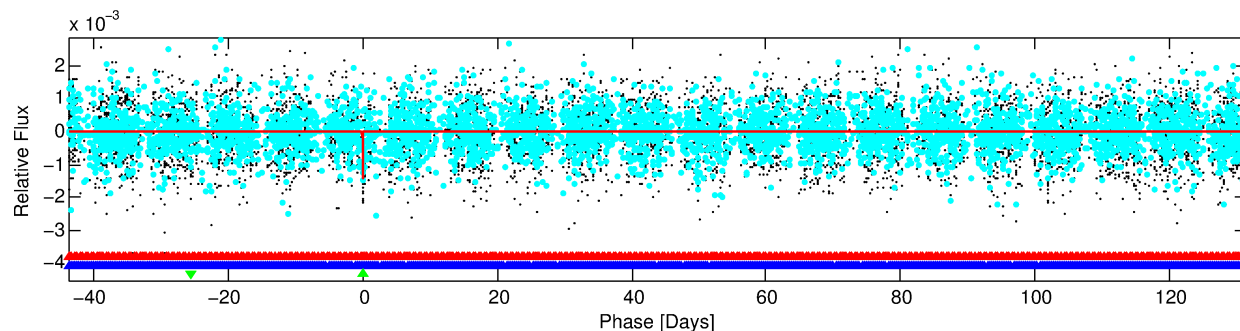
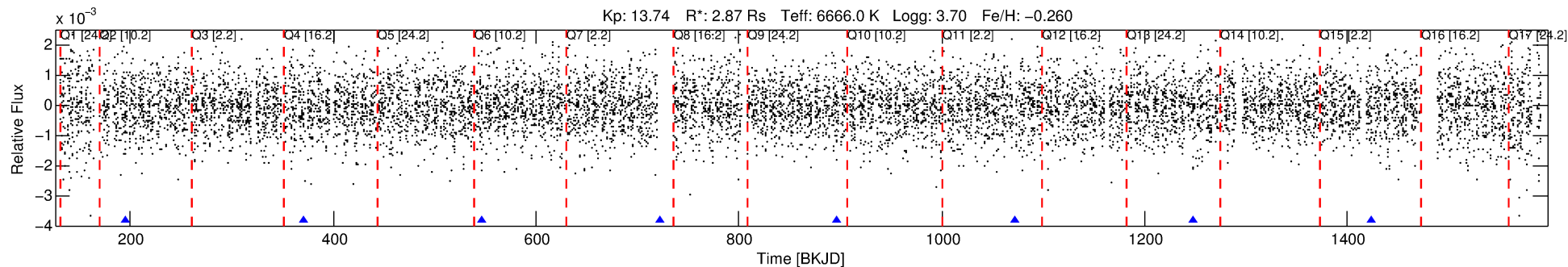
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008777843-03

No Significant Match Found

DV One-Page Summary

KIC: 8777843 Candidate: 3 of 3 Period: 175.555 d



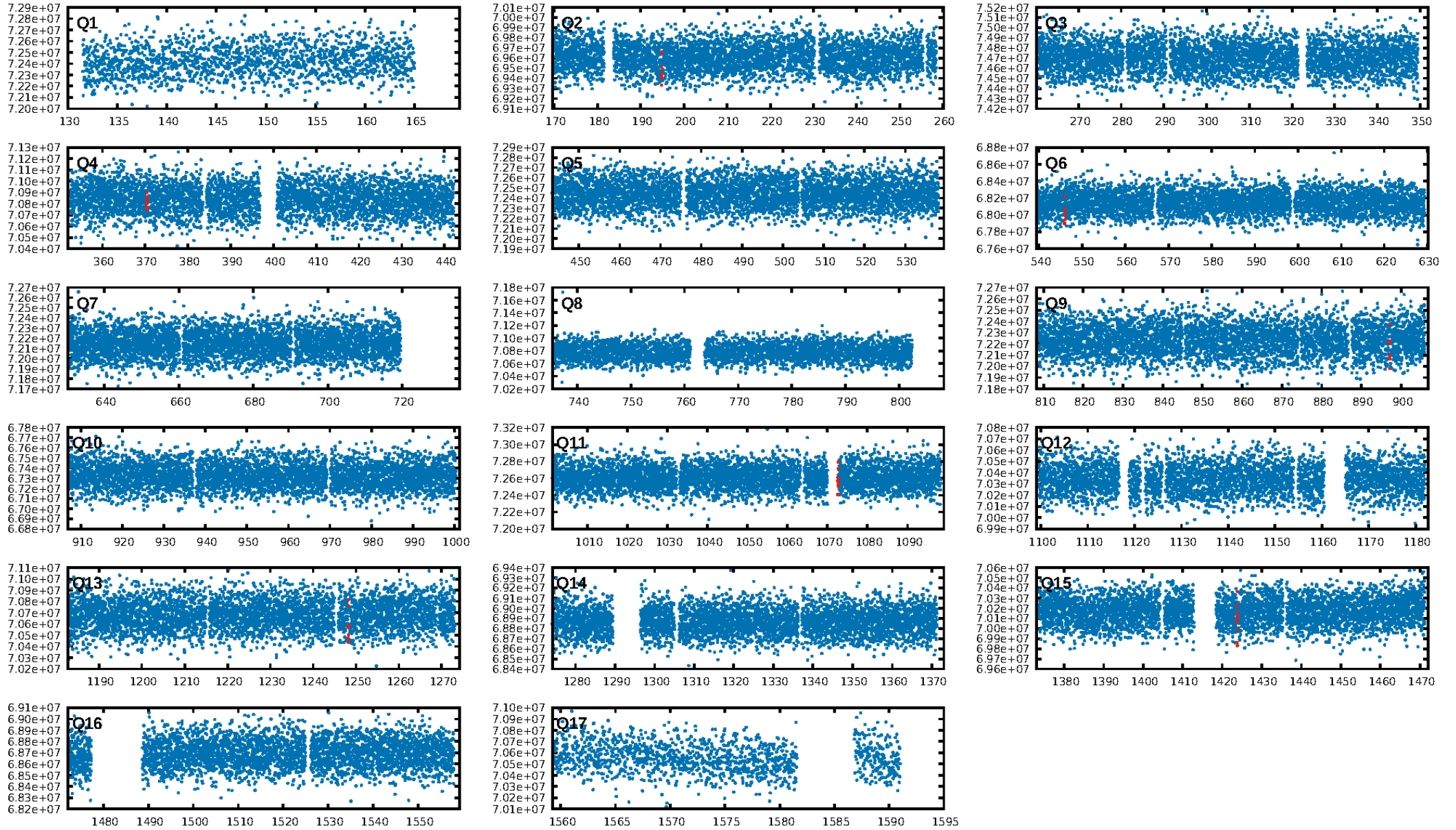
DV Fit Results:

Period = 175.55460 [0.00271] d
Epoch = 194.8865 [0.0109] BKJD
Rp/R* = 0.0346 [0.1095]
a/R* = 658.44 [11116.06]
b = 0.10 [166.64]
Seff = 29.37 [26.29]
Teq = 594 [133] K
Rp = 10.82 [34.71] Re
a = 0.7032 [0.3762] AU
Ag = 2006.27 [12821.93] [0.16σ]
Teff = 6142 [9723] K [0.57σ]

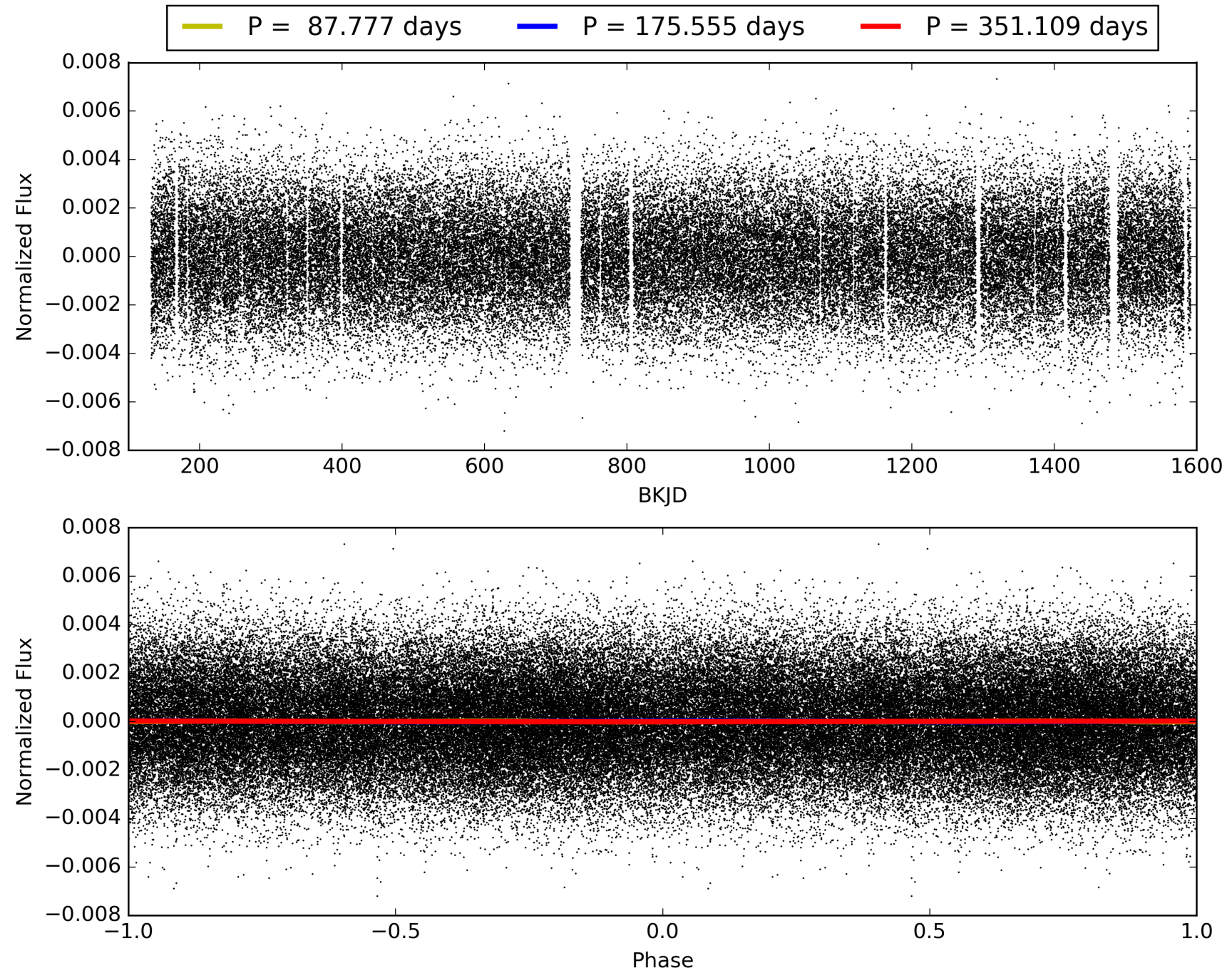
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1732.60σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.6%
ModelChiSquareGof-sig: 73.9%
Bootstrap-pfa: 8.93e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.921
Centroid-sig: 23.3%
Centroid-so: 2.125 arcsec [2.91σ]
OotOffset-rm: 0.205 arcsec [1.03σ]
OotOffset-st: 2/1/1/2 [6]
KicOffset-rm: 0.330 arcsec [1.88σ]
KicOffset-st: 2/1/1/2 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 0.00 [0/6]

TCE 008777843-03, PDC Light Curves

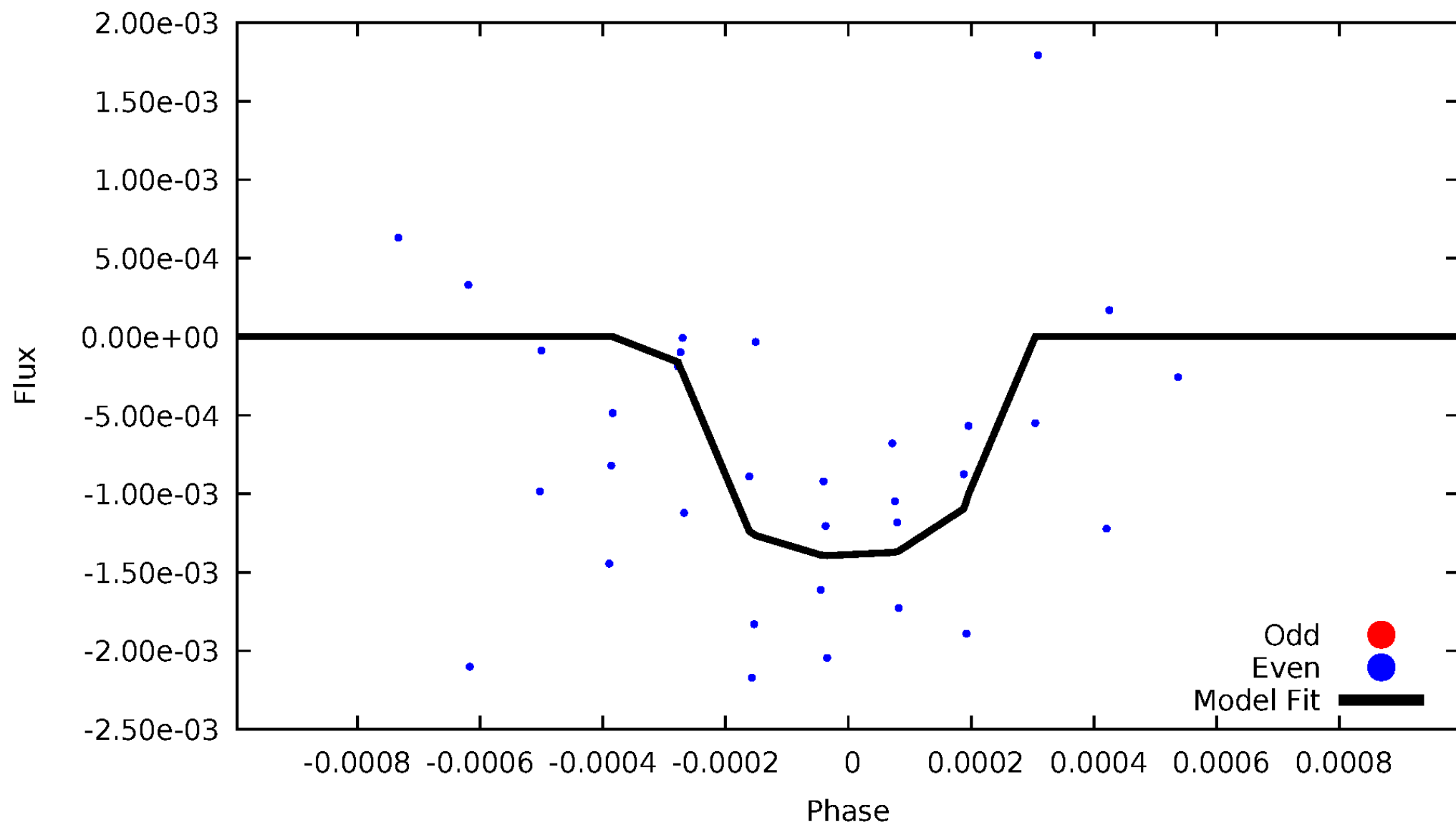


TCE 008777843-03



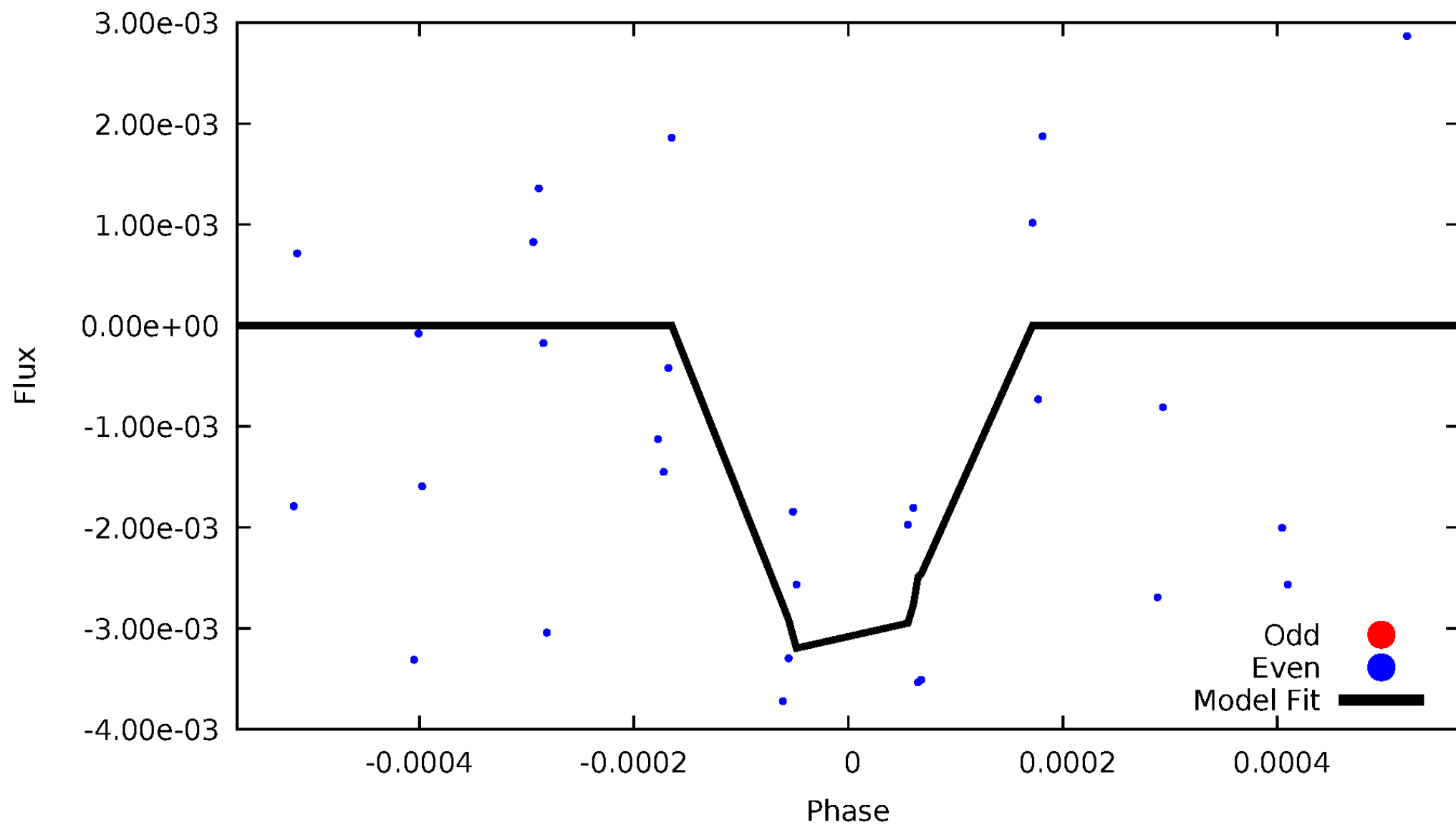
DV Odd/Even

TCE 008777843-03



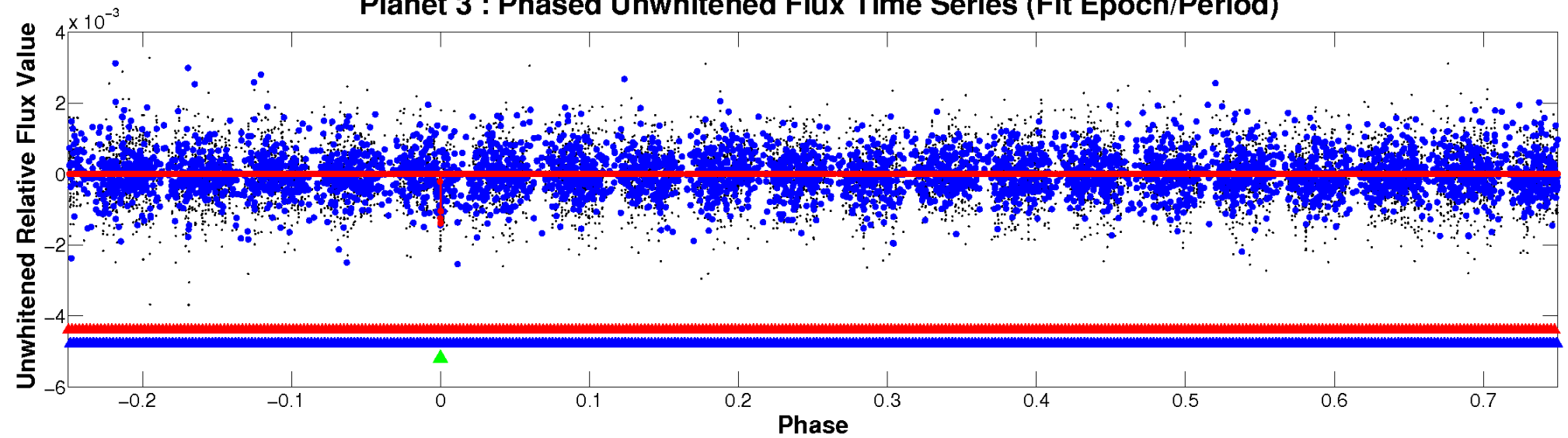
ALT Odd/Even

TCE 008777843-03

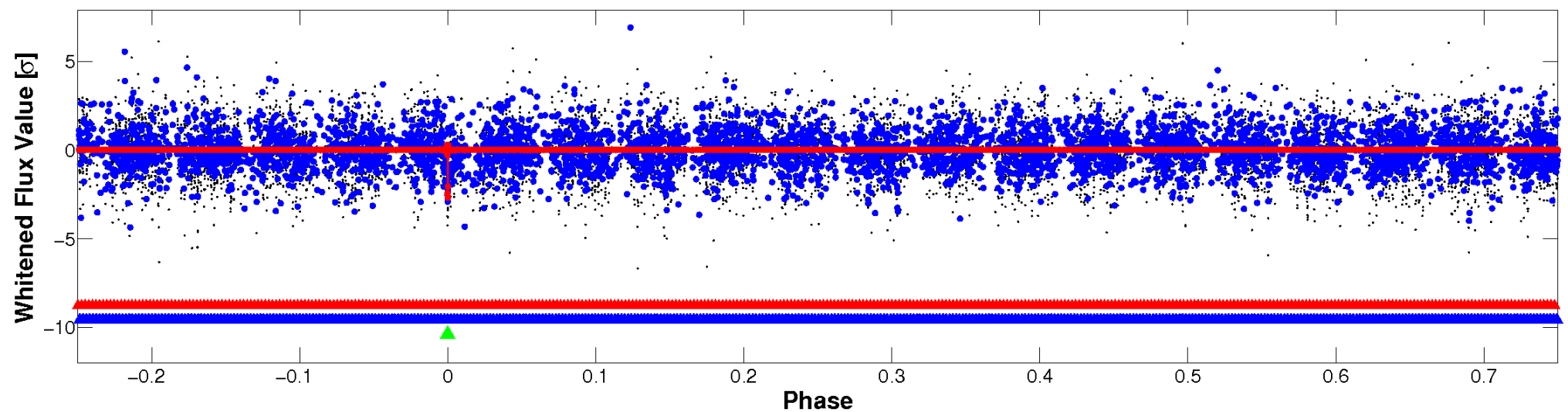


Non-Whitened Vs. Whitened Light Curve

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

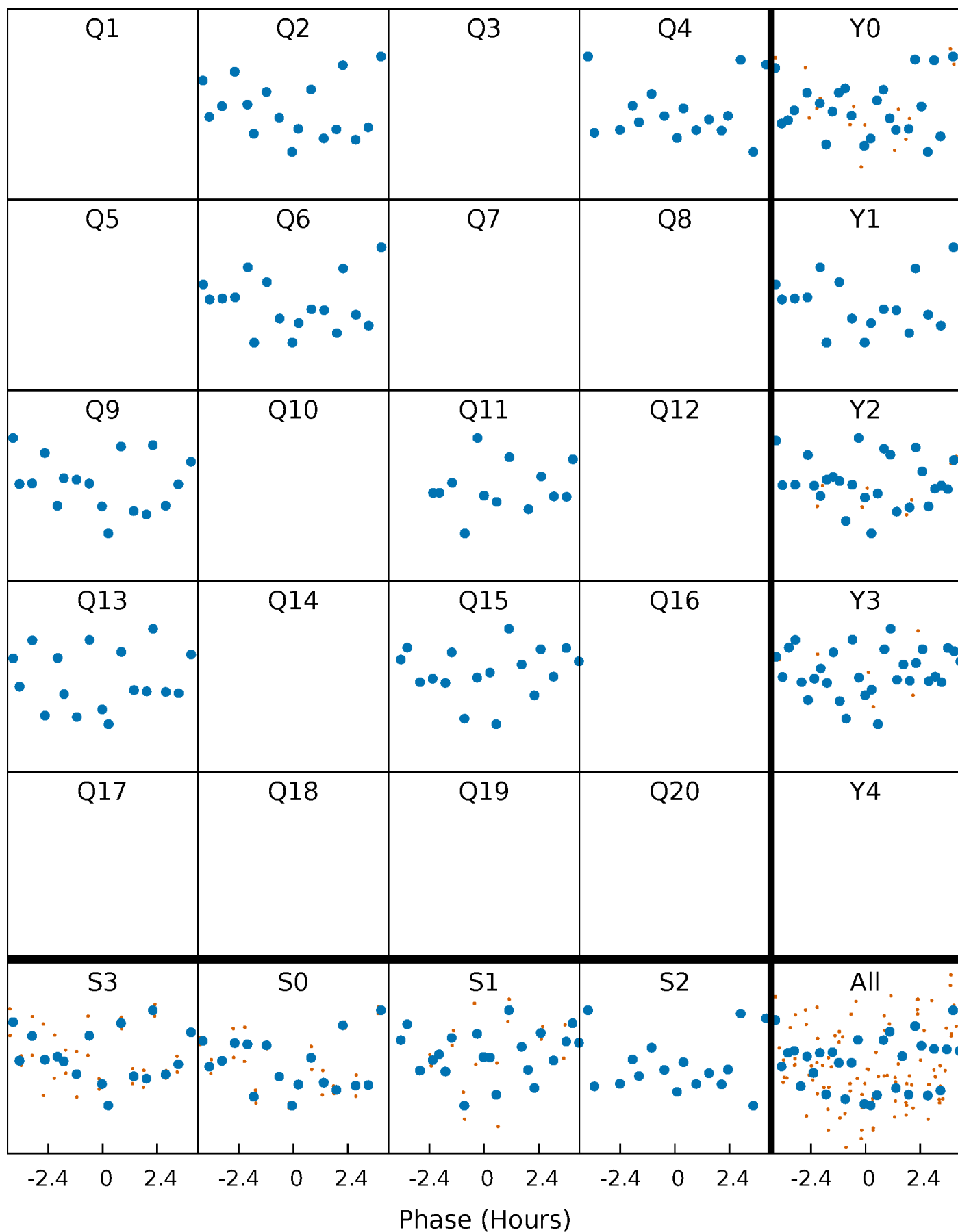


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



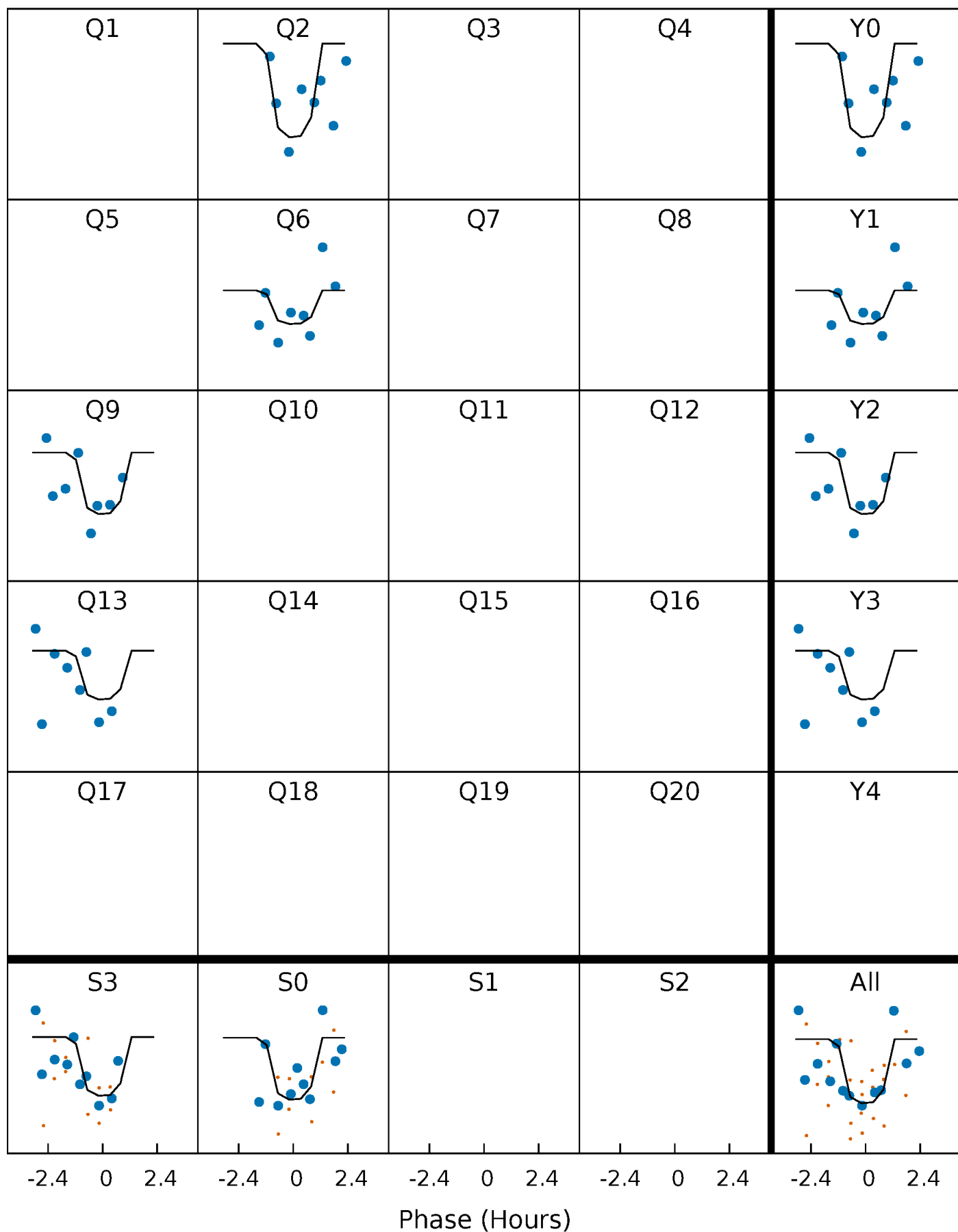
PDC Quarter-Phased Transit Curves

TCE 008777843-03 P=175.554605 Days $T_0=194.886462$ (BKJD)



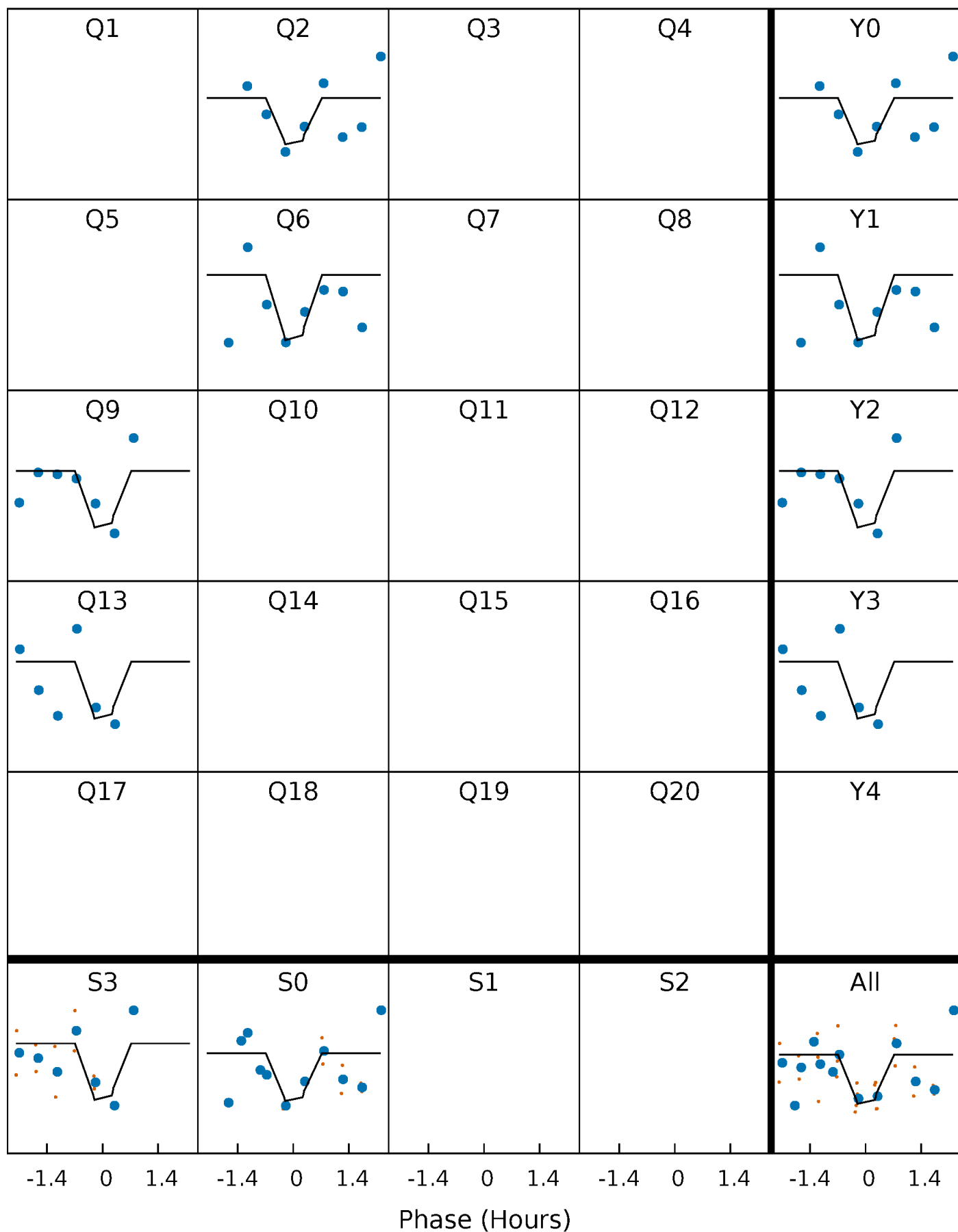
DV Quarter-Phased Transit Curves

TCE 008777843-03 P=175.554605 Days $T_0=194.886462$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

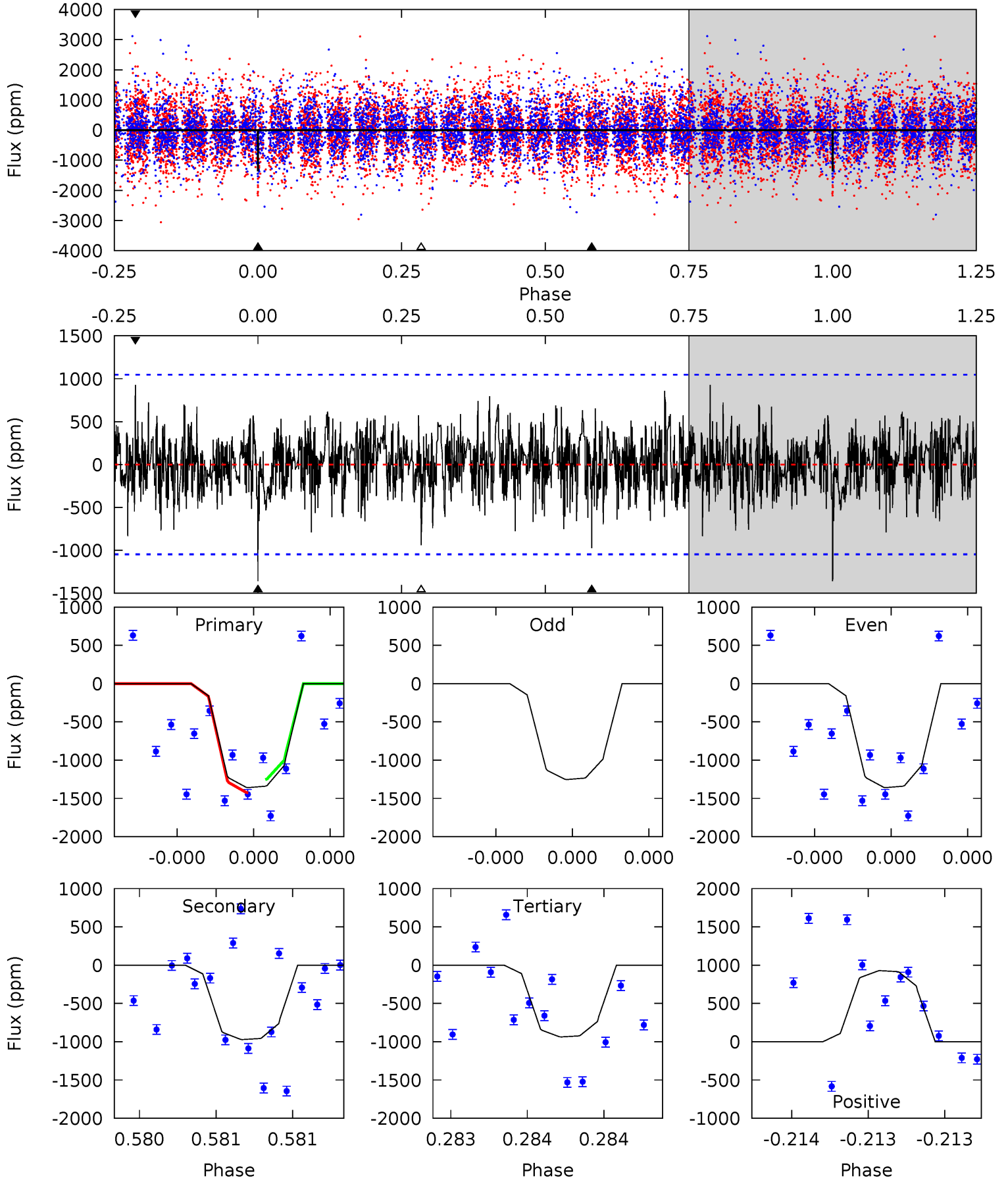
TCE 008777843-03 P=175.554530 Days $T_0=194.889304$ (BKJD)



DV Model-Shift Uniqueness Test

008777843-03, P = 175.554605 Days, E = 19.331857 Days

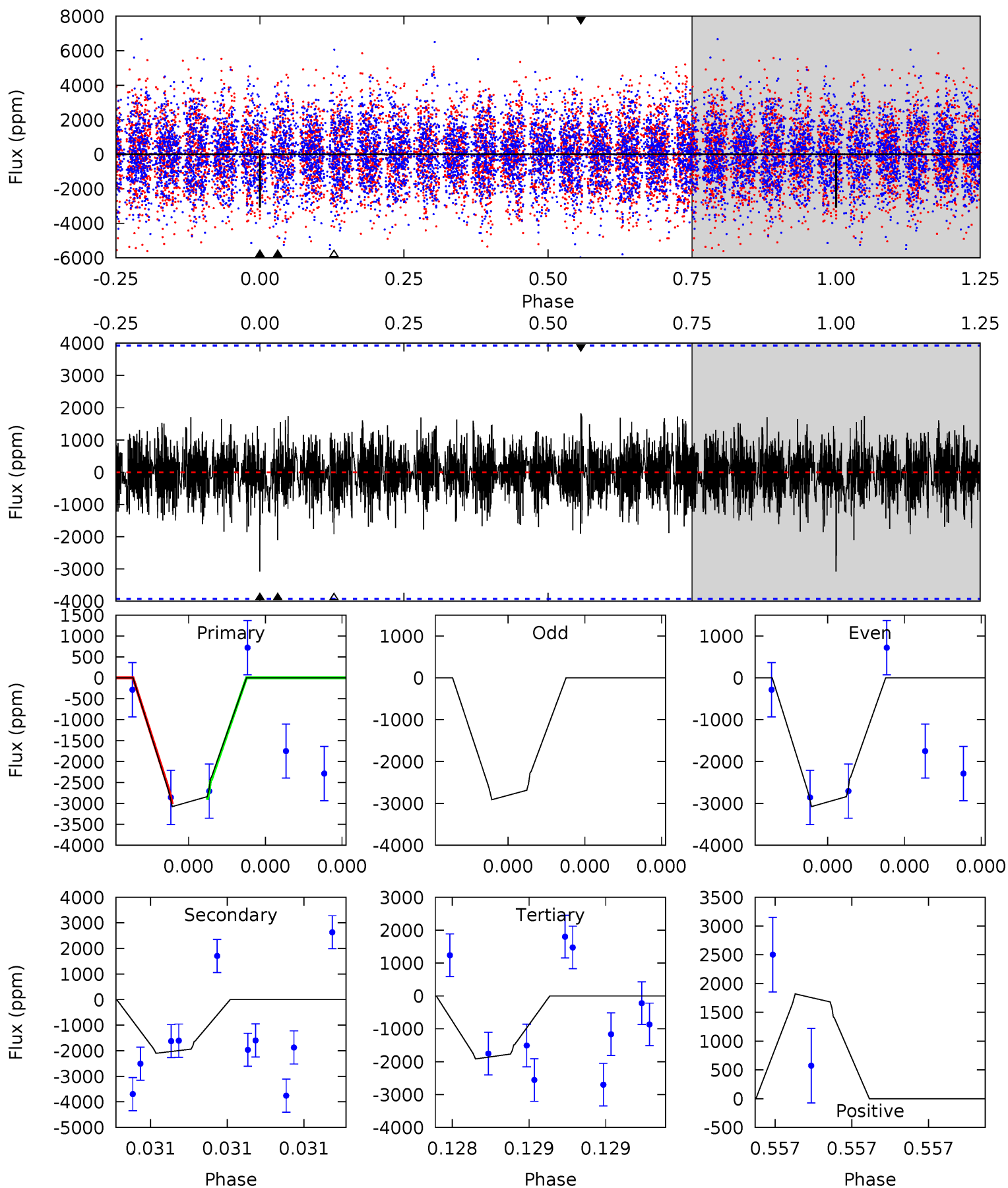
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.26	5.19	5.00	4.96	5.58	3.50	1.34	2.25	2.30	0.19	0.23	0.30	0.99	0.41	0.45



Alt Model-Shift Uniqueness Test

008777843-03, P = 175.554530 Days, E = 19.334774 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.47	3.06	2.79	2.65	5.71	3.69	0.76	1.69	1.82	0.27	0.41	0.15	1.01	0.37	0.07



Stellar Parameters For KIC 008777843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6666^{+211}_{-258}	$3.701^{+0.527}_{-0.093}$	$-0.260^{+0.300}_{-0.300}$	$2.865^{+0.502}_{-1.505}$	$1.506^{+0.212}_{-0.393}$	$0.090^{+0.551}_{-0.026}$
	+3%/-4%	+14%/-3%	+115%/-115%	+18%/-53%	+14%/-26%	+611%/-29%
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 008777843-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-972 ± 187	$23.39^{+26.64}_{-15.80}$	805^{+56}_{-107}	4253^{+2631}_{-891}	478^{+3961}_{-373}
Alt.	-2102 ± 688	$28.33^{+31.86}_{-19.01}$	802^{+59}_{-112}	4530^{+2949}_{-1000}	667^{+5242}_{-519}

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 $A_{obs} \gg 1.0$

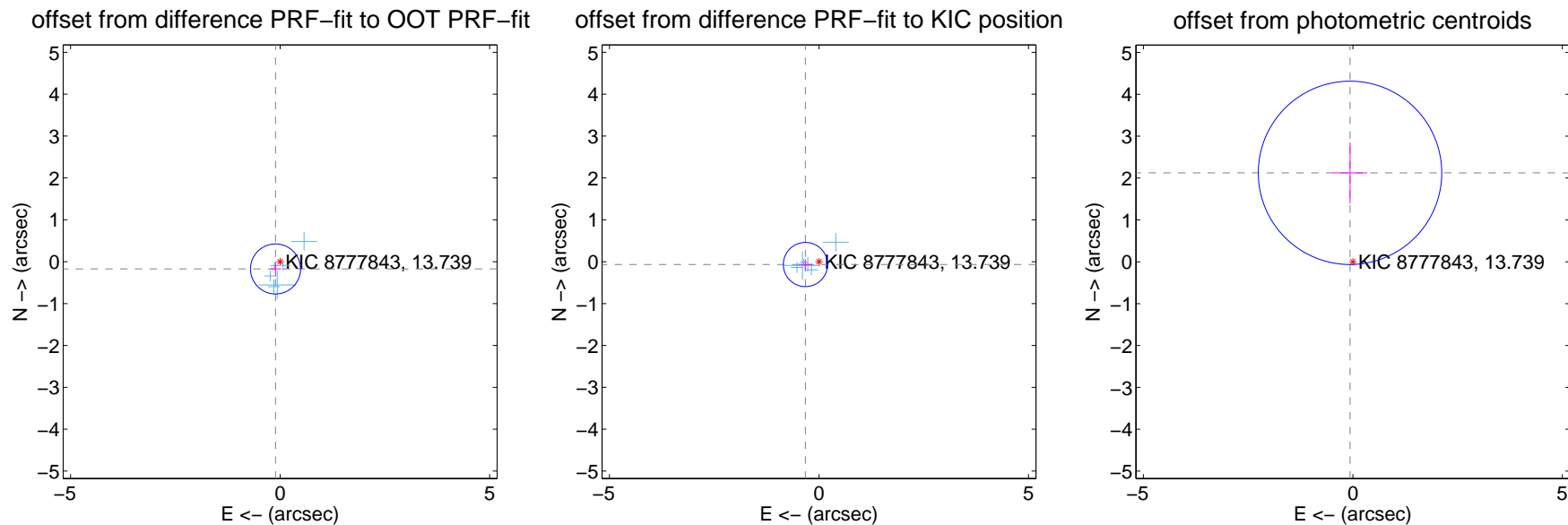
DV Centroid Data

Supplemental centroid analysis for 008777843-03. Kepler magnitude: 13.74. Transit SNR 9.62

There are 6 quarters with good PRF difference image offsets

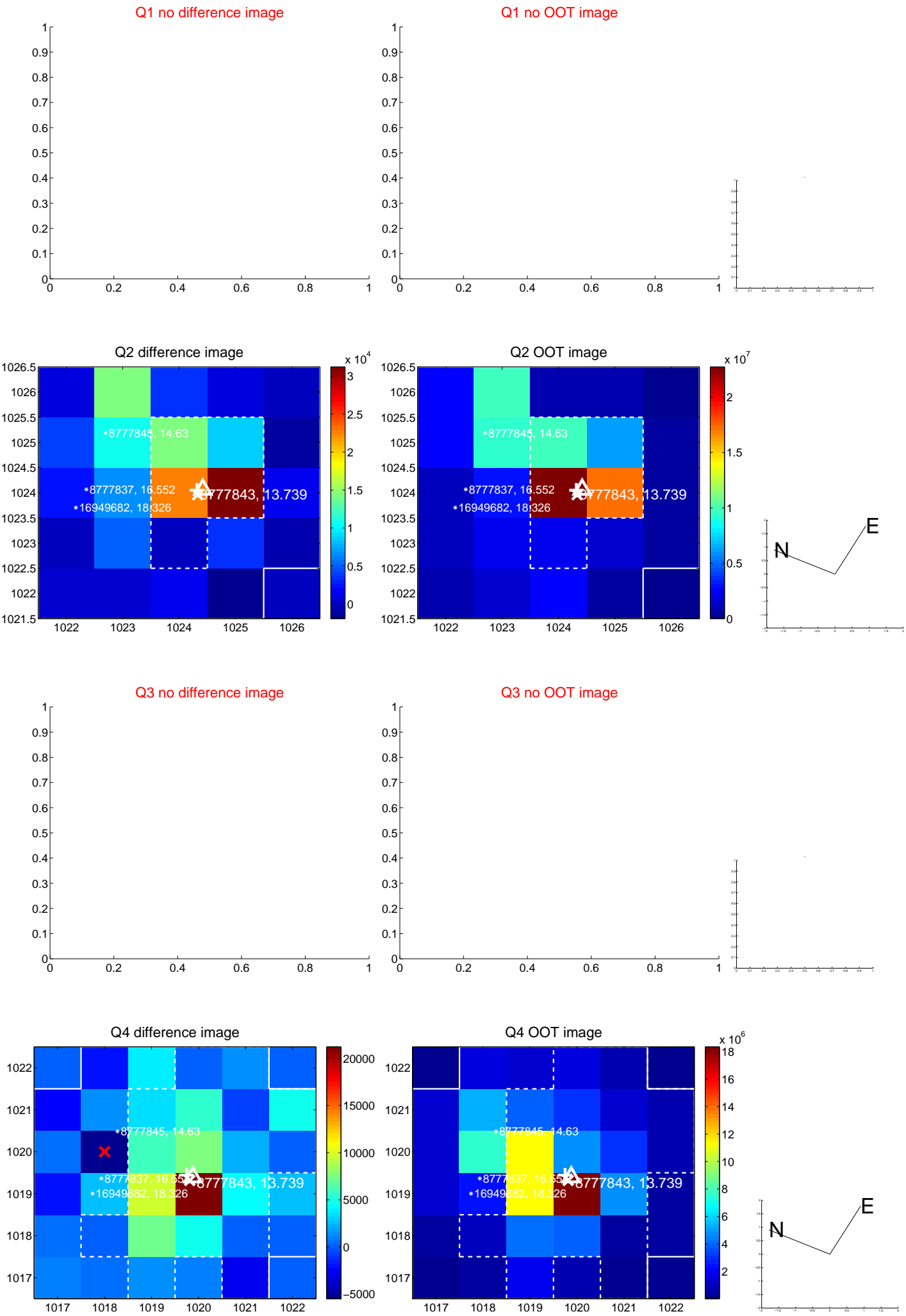
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.205 ± 0.199	1.03	0.109 ± 0.133	-0.173 ± 0.167
PRF-fit source offset from KIC position	0.330 ± 0.176	1.88	0.323 ± 0.160	-0.067 ± 0.125
photometric centroid source offset	2.12 ± 0.73	2.91	0.07 ± 0.41	2.12 ± 0.73

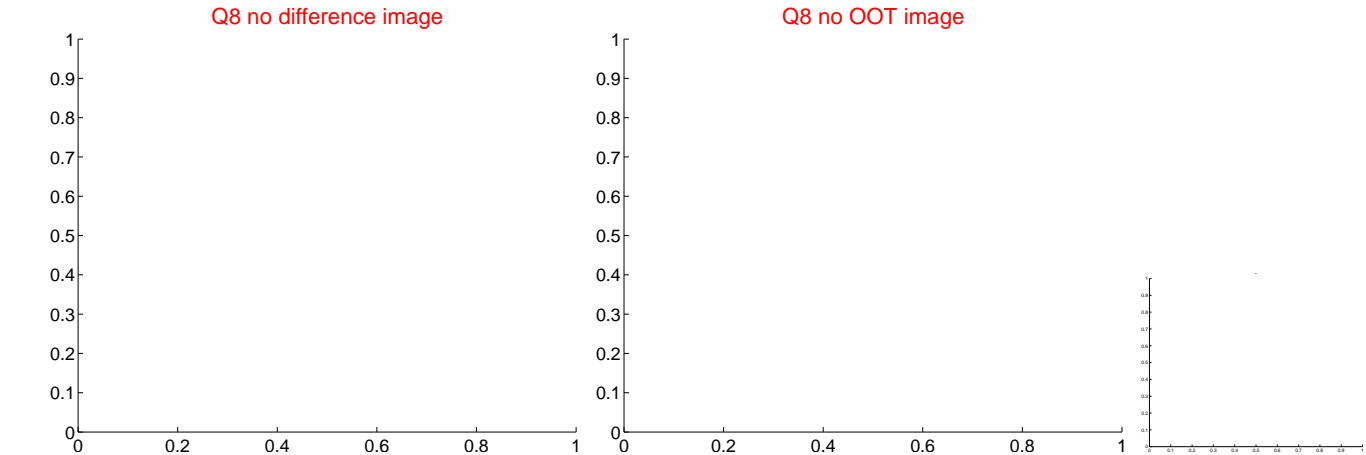
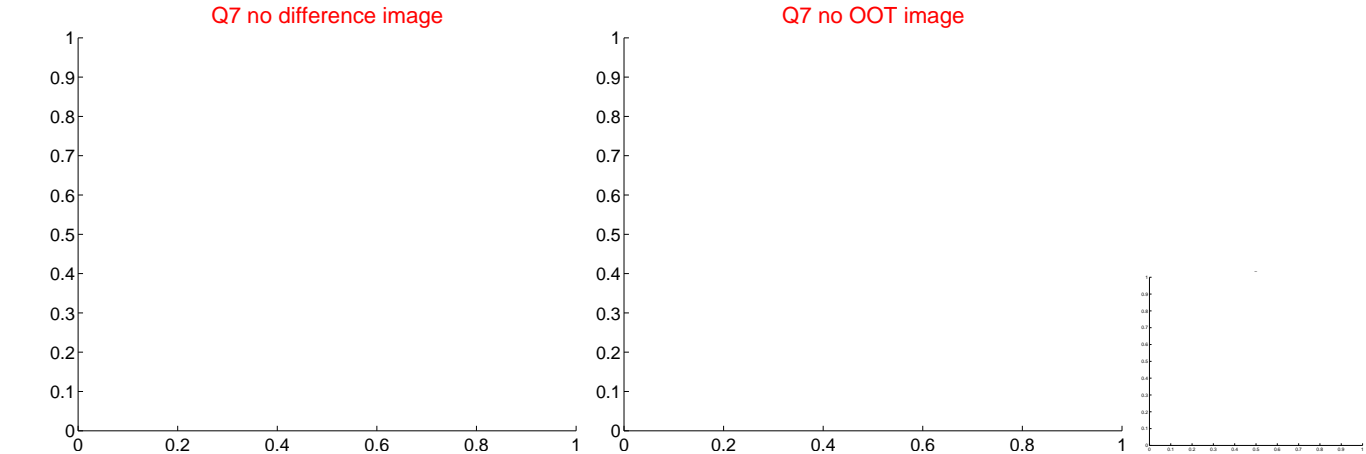
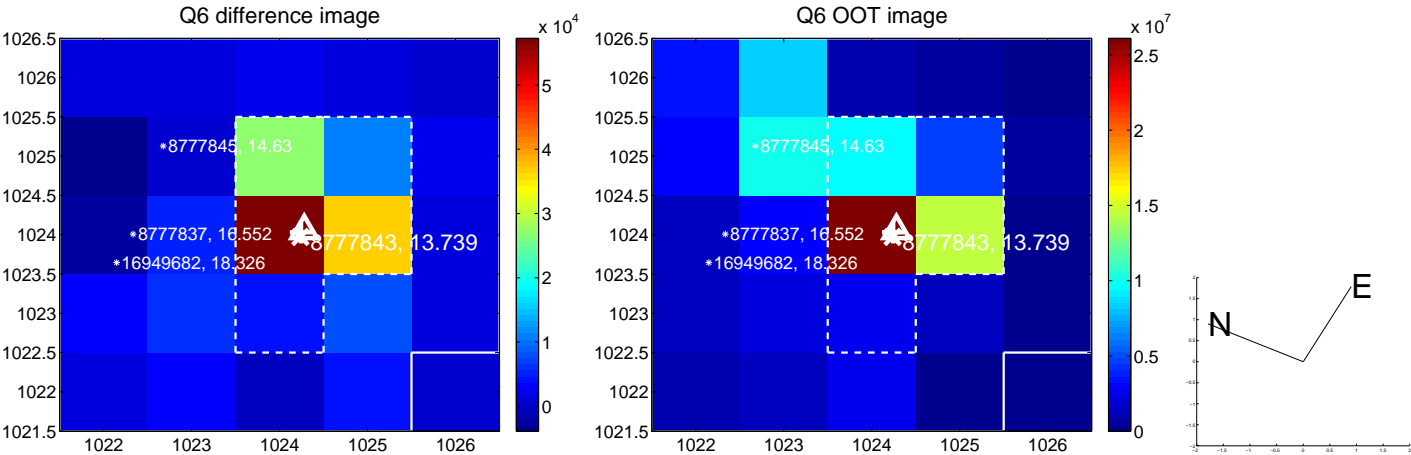
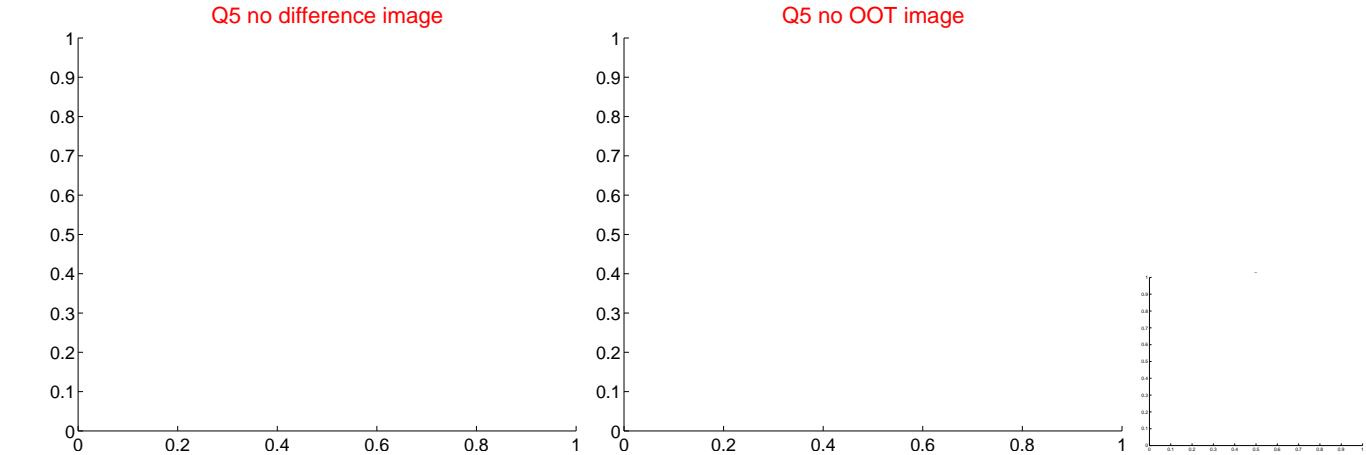


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

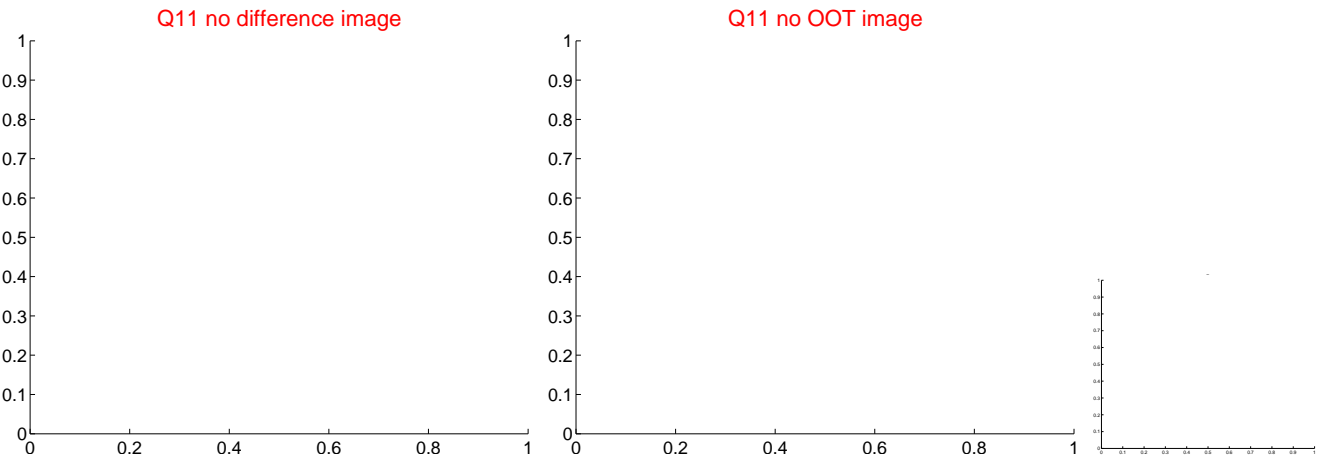
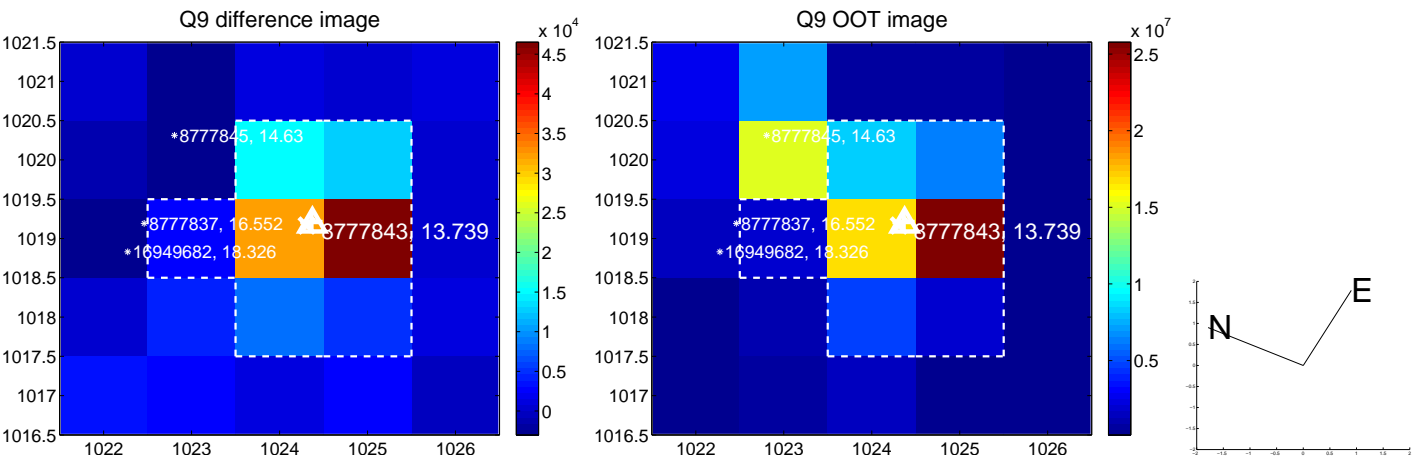
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



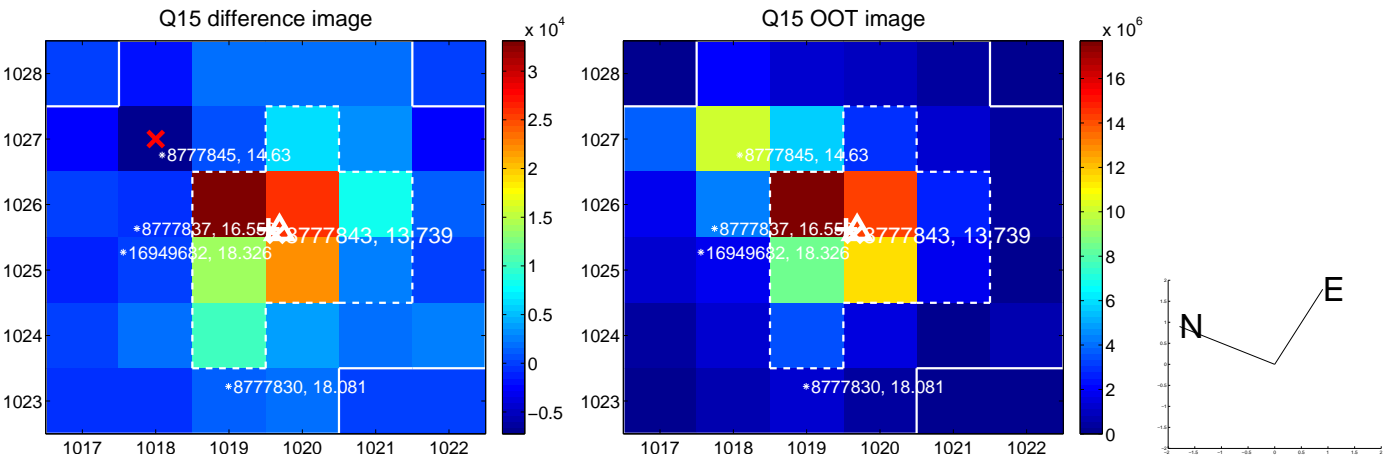
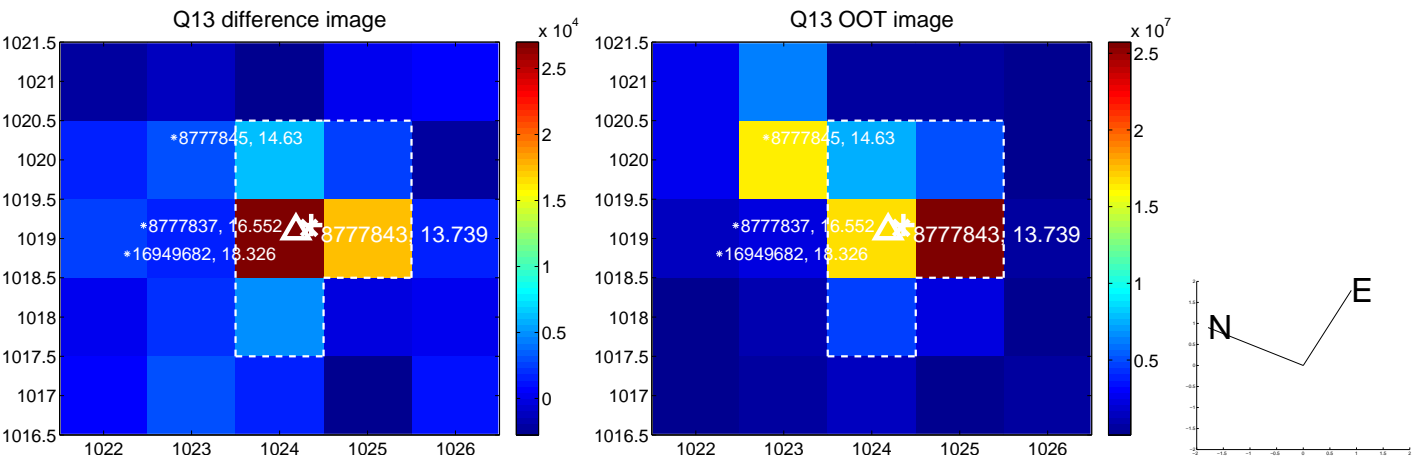
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



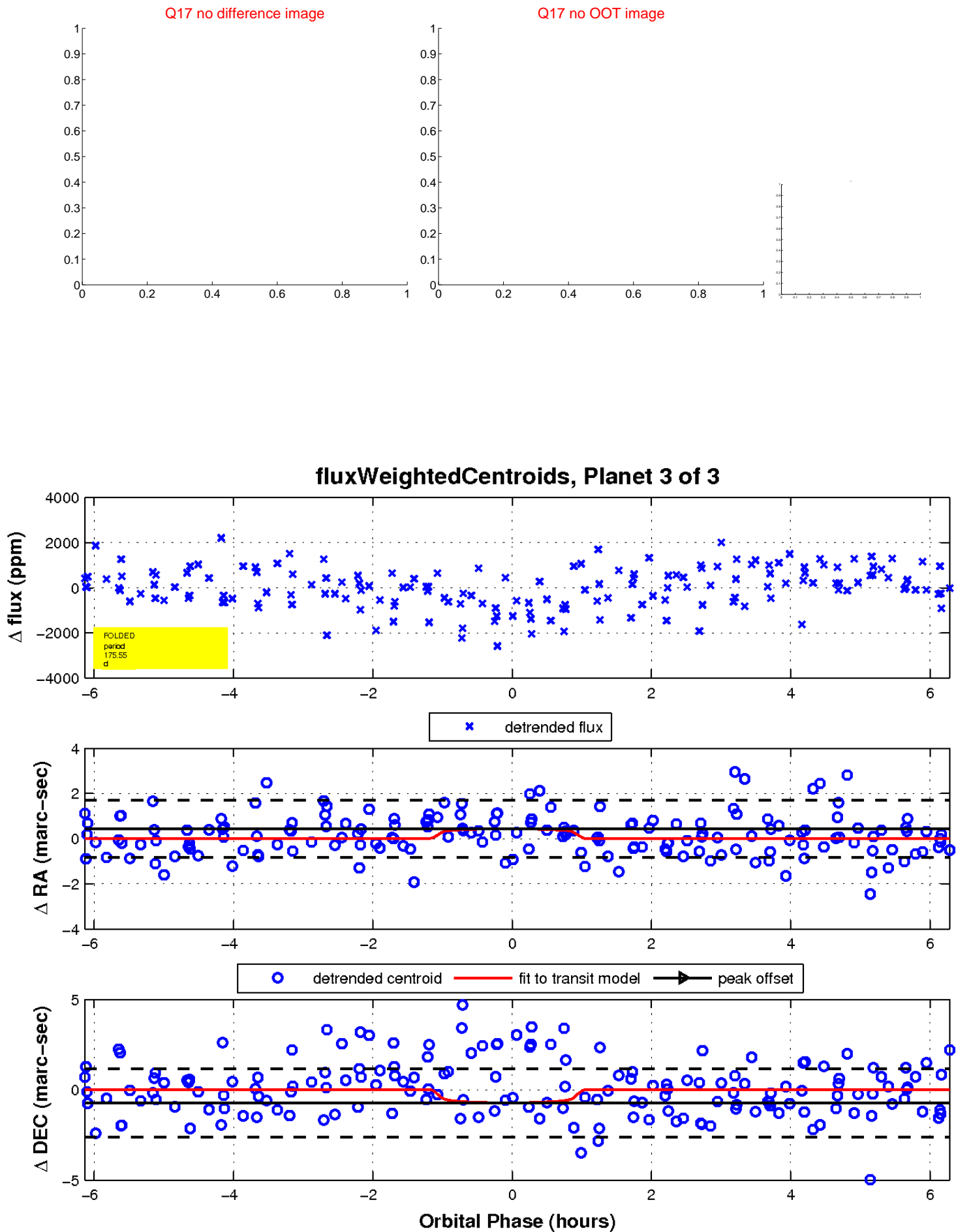
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

