

KIC 008841813

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})
008841813-01	OBS	No	0.779595	132.326346	99.3	0.921	11.0	4.2	2.86	6168	2.90	31037.77
008841813-02	OBS	No	0.779616	132.041015	162.2	0.870	8.2	6.0	2.86	6168	4.28	31036.65
008841813-03	OBS	No	0.779673	131.745327	134.8	1.752	7.6	7.5	2.86	6168	3.90	31033.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008841813-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008841813-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008841813-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

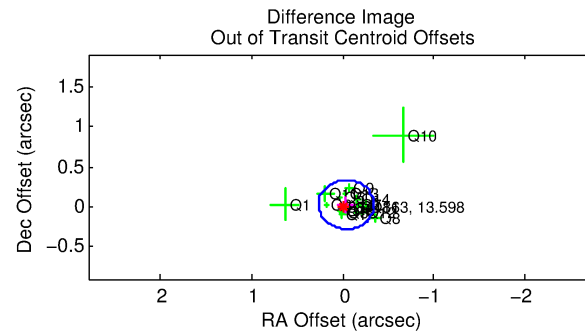
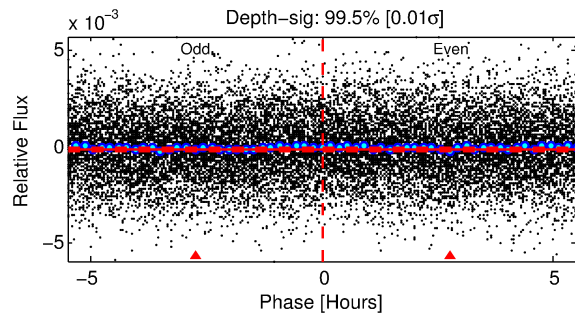
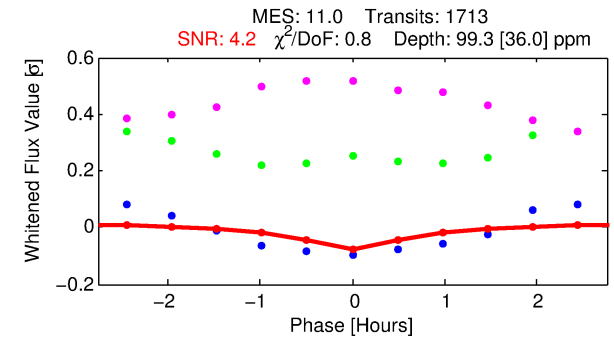
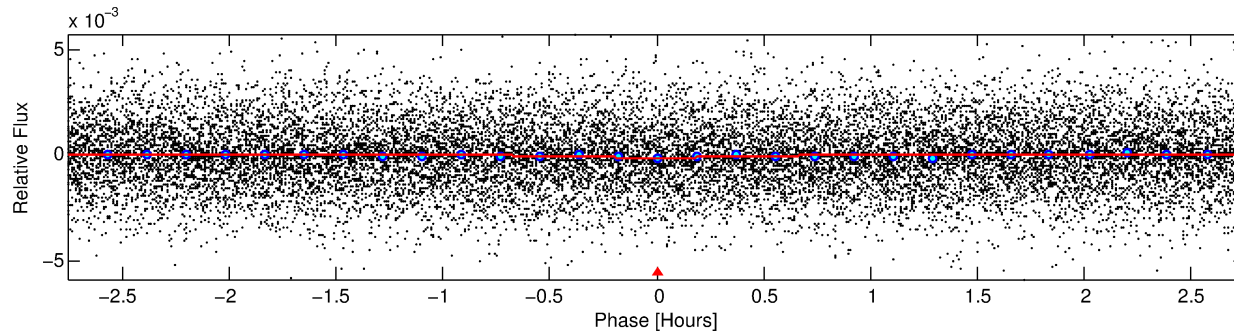
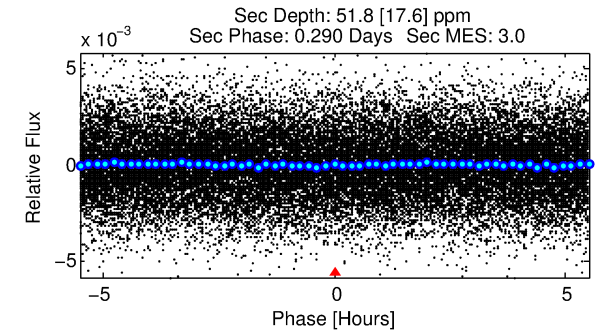
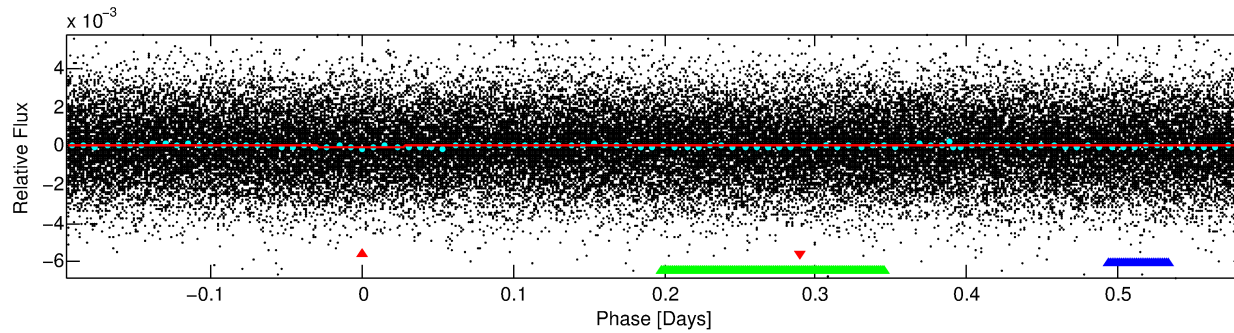
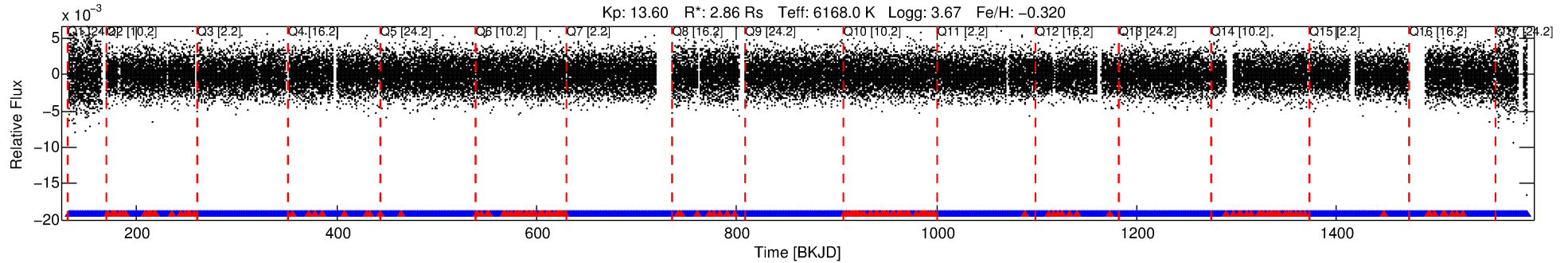
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008841813-01

No Significant Match Found

DV One-Page Summary

KIC: 8841813 Candidate: 1 of 3 Period: 0.780 d



DV Fit Results:

Period = 0.77959 [0.00002] d
Epoch = 132.3263 [0.0056] BKJD
Rp/R* = 0.0093 [0.0311]
a/R* = 6.37 [105.36]
b = 0.24 [66.65]
Seff = 31037.77 [32557.52]
Teq = 3385 [888] K
Rp = 2.90 [9.87] Re
a = 0.0185 [0.0115] AU
Ag = 1.16 [7.87] [0.02σ]
Teffp = 5429 [9113] K [0.22σ]

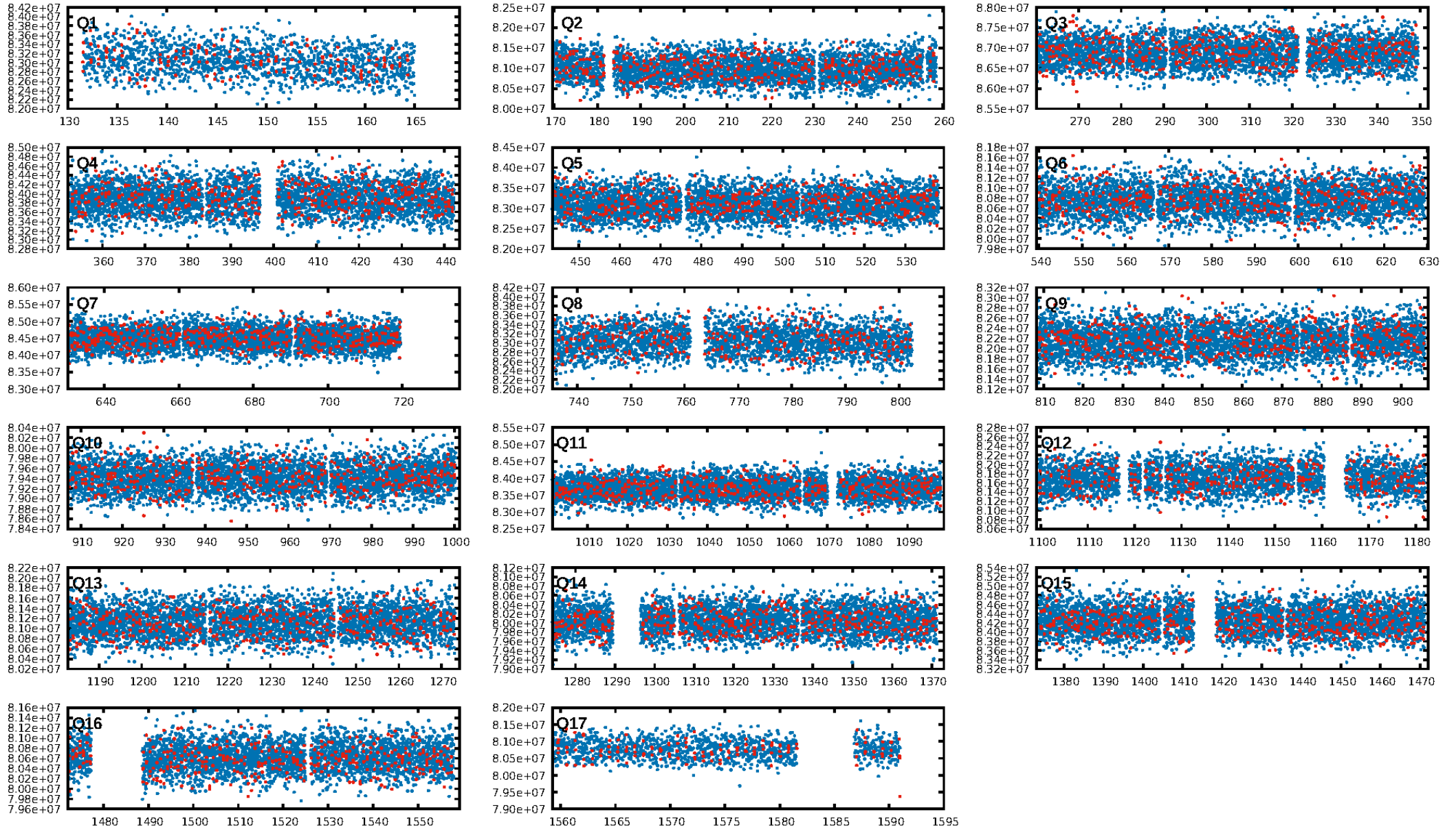
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.89e-52
RollingBand-fgt: 0.91 [1489/1635]
GhostDiagnostic-chr: 1.063
Centroid-sig: 42.6%
Centroid-so: 0.382 arcsec [0.70σ]
OotOffset-rm: 0.047 arcsec [0.46σ]
KicOffset-rm: 0.176 arcsec [1.78σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 0.59 [10/17]

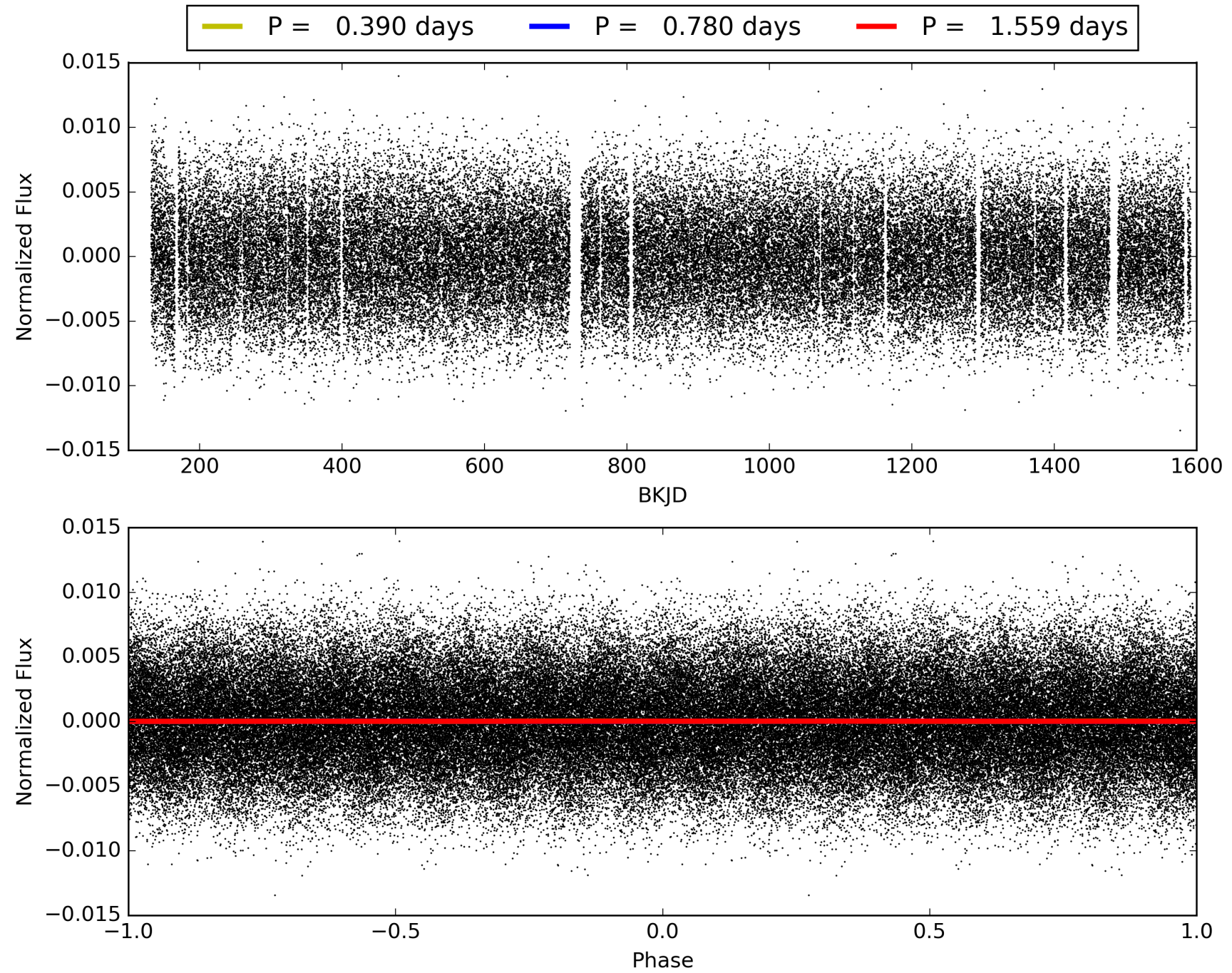
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:27:37 Z

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

TCE 008841813-01, PDC Light Curves

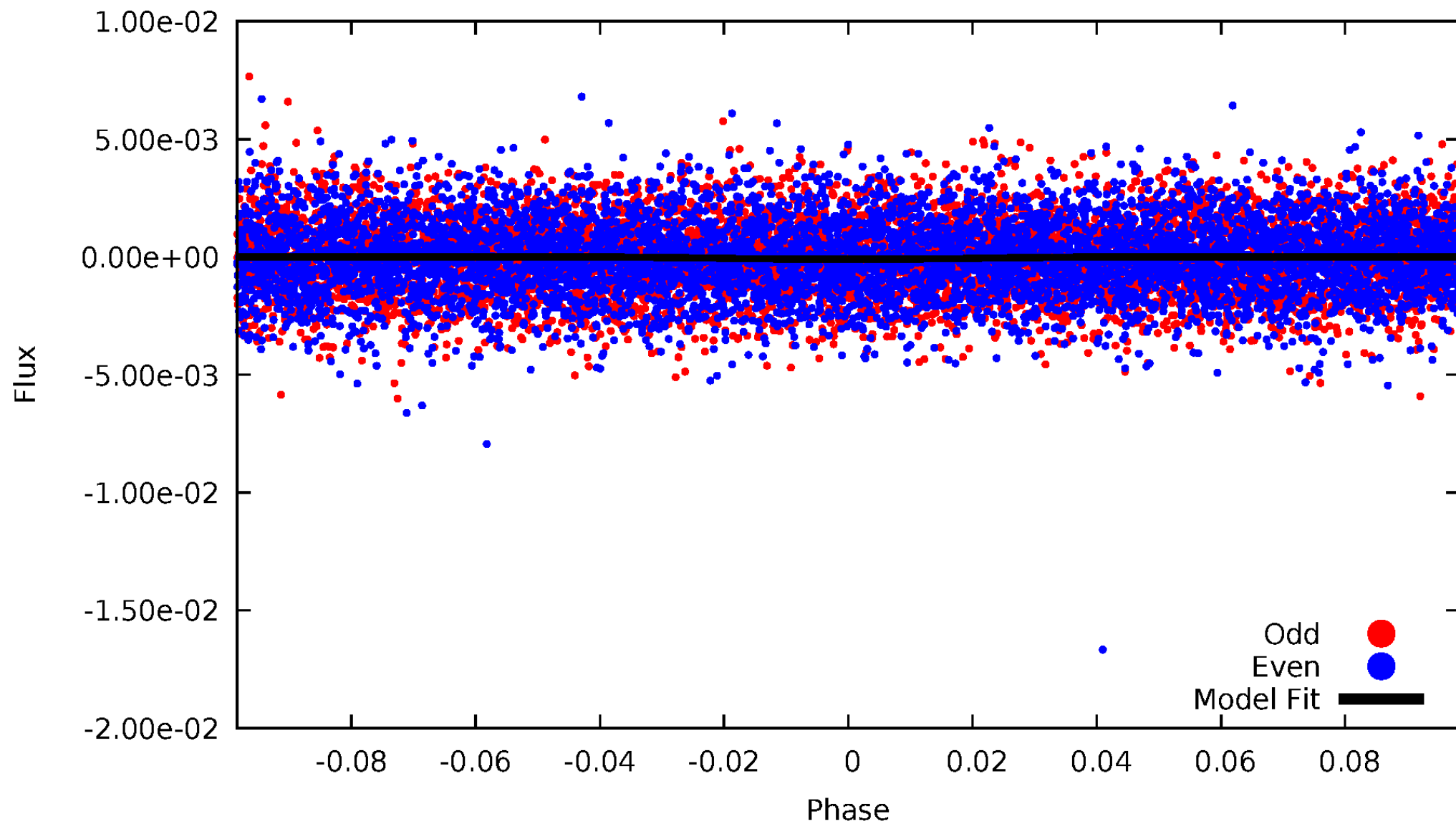


TCE 008841813-01



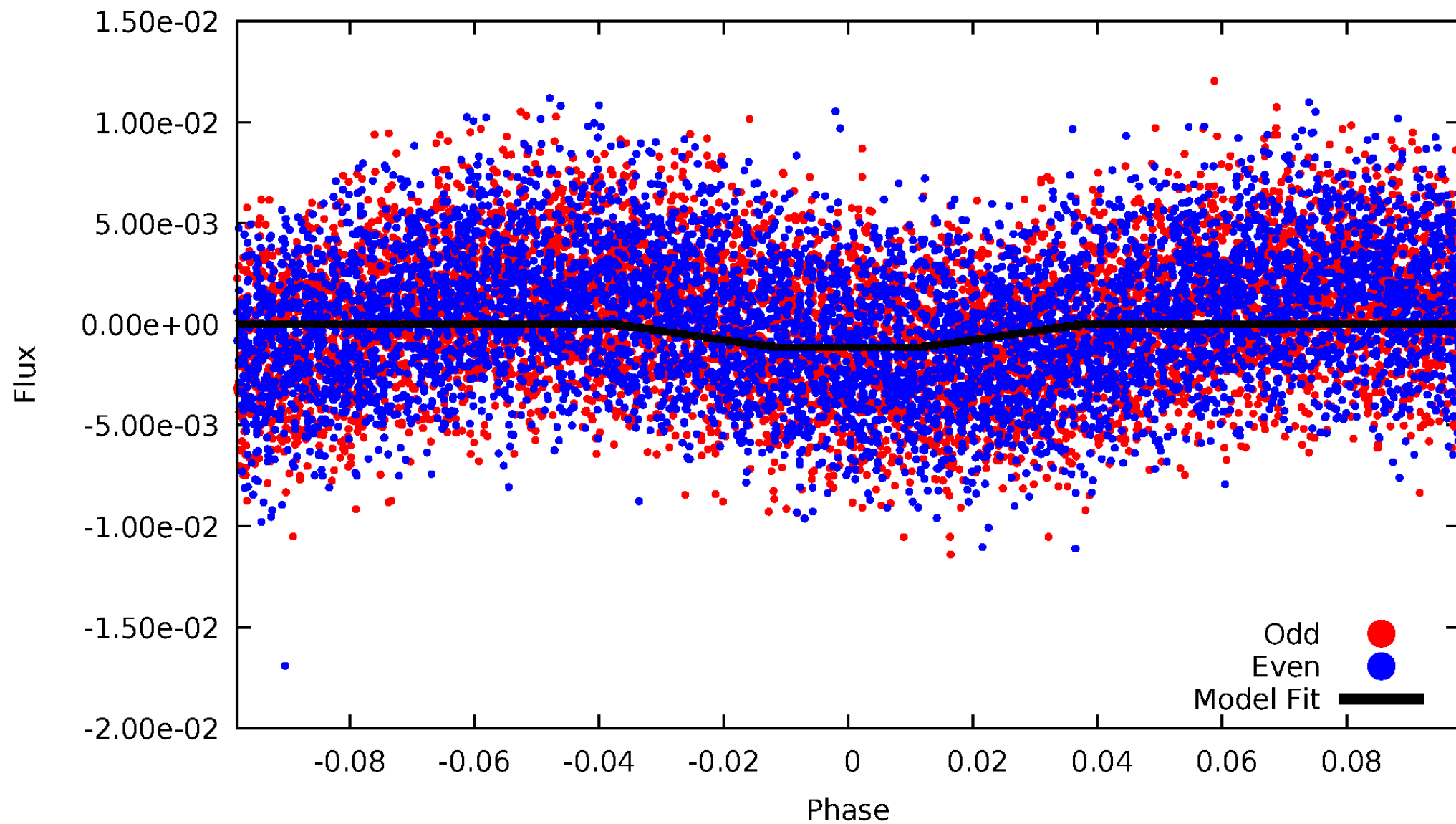
DV Odd/Even

TCE 008841813-01

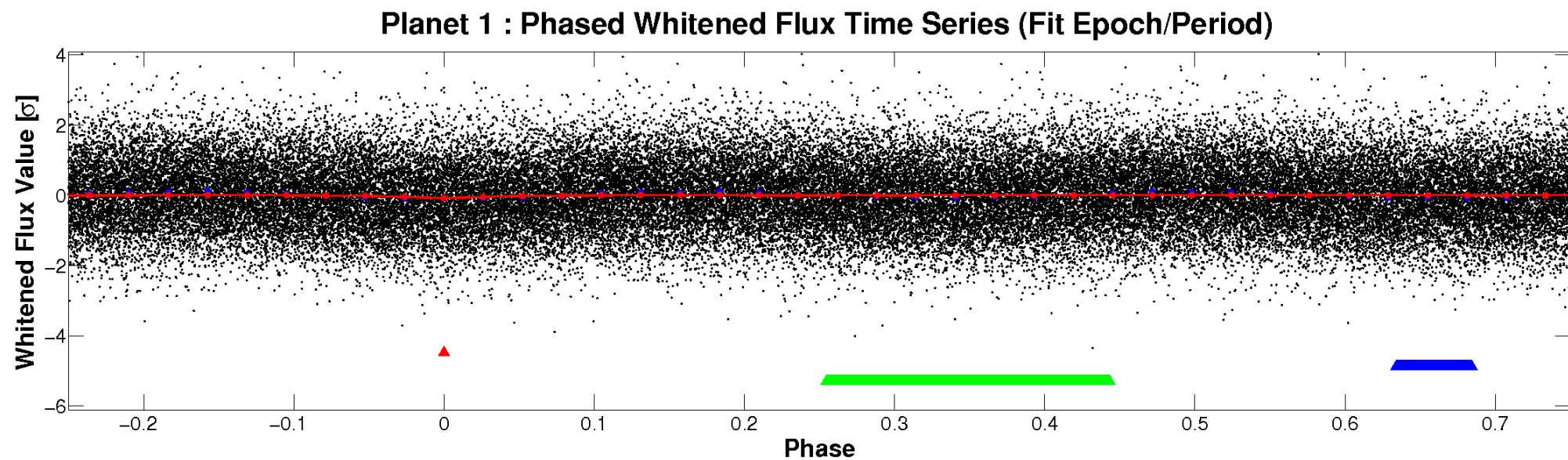
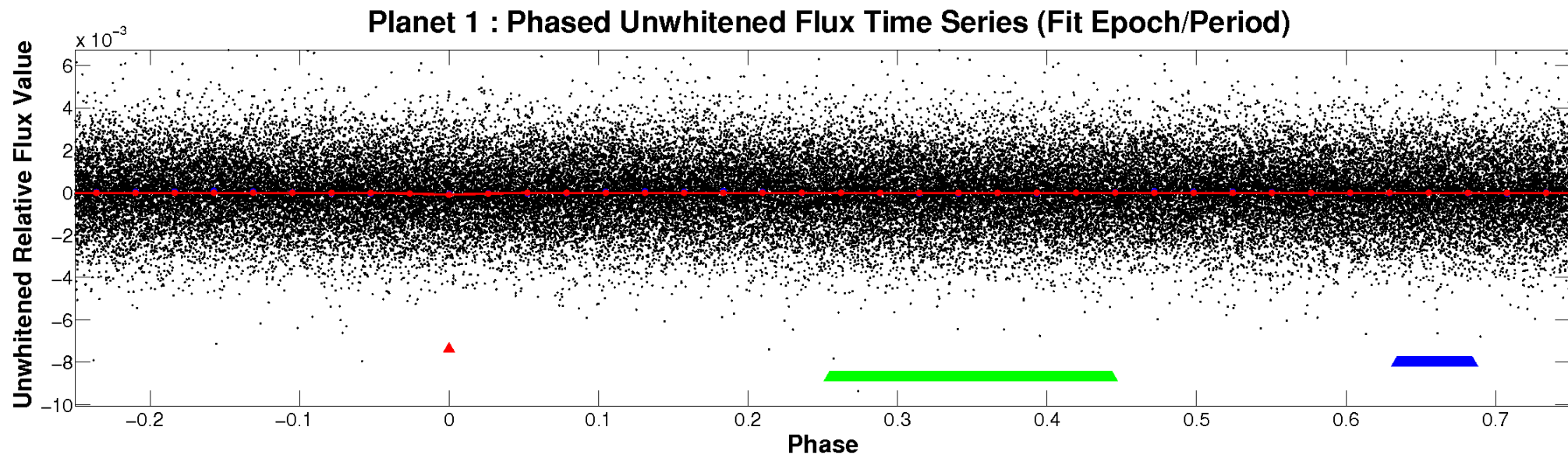


ALT Odd/Even

TCE 008841813-01

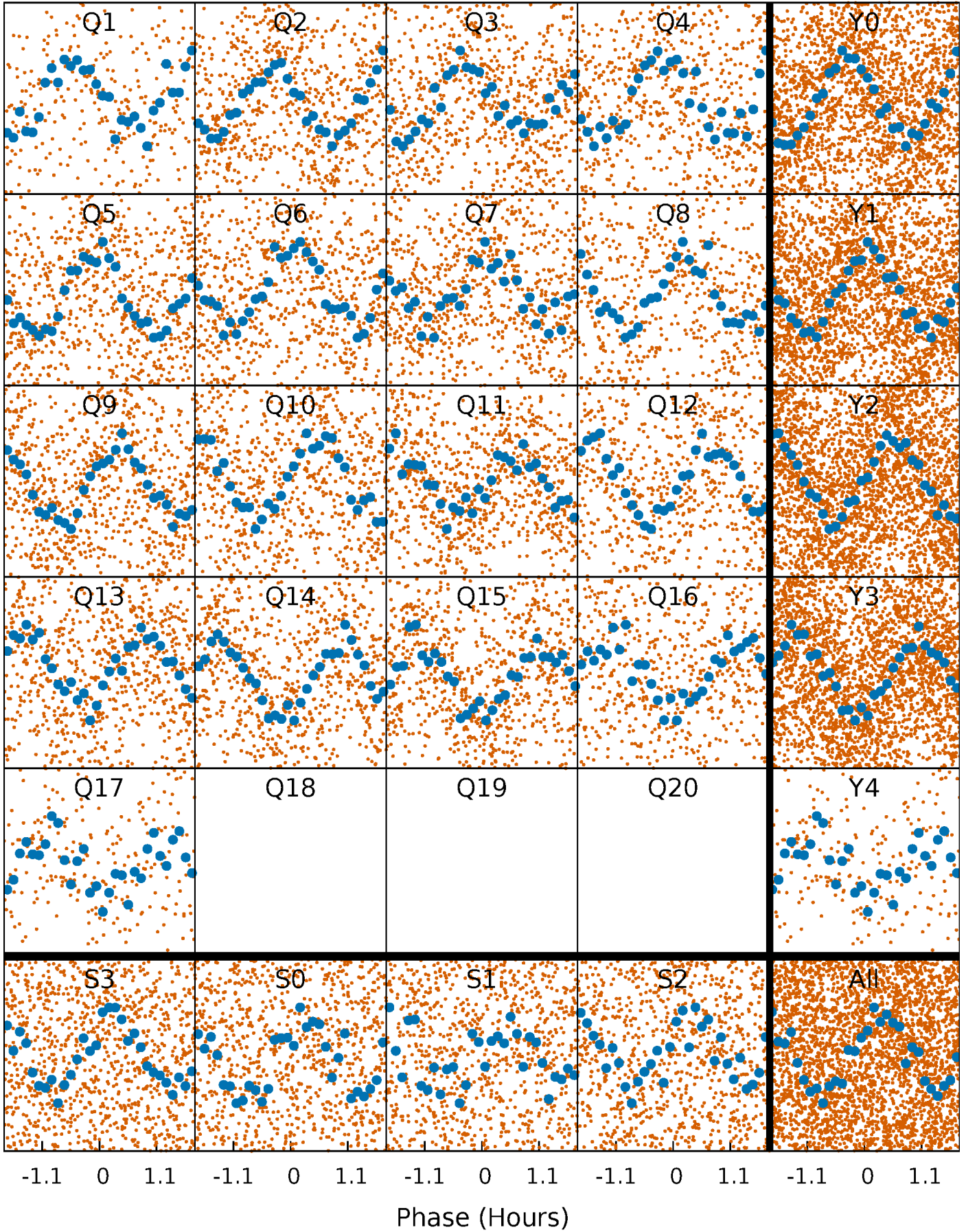


Non-Whitened Vs. Whitened Light Curve



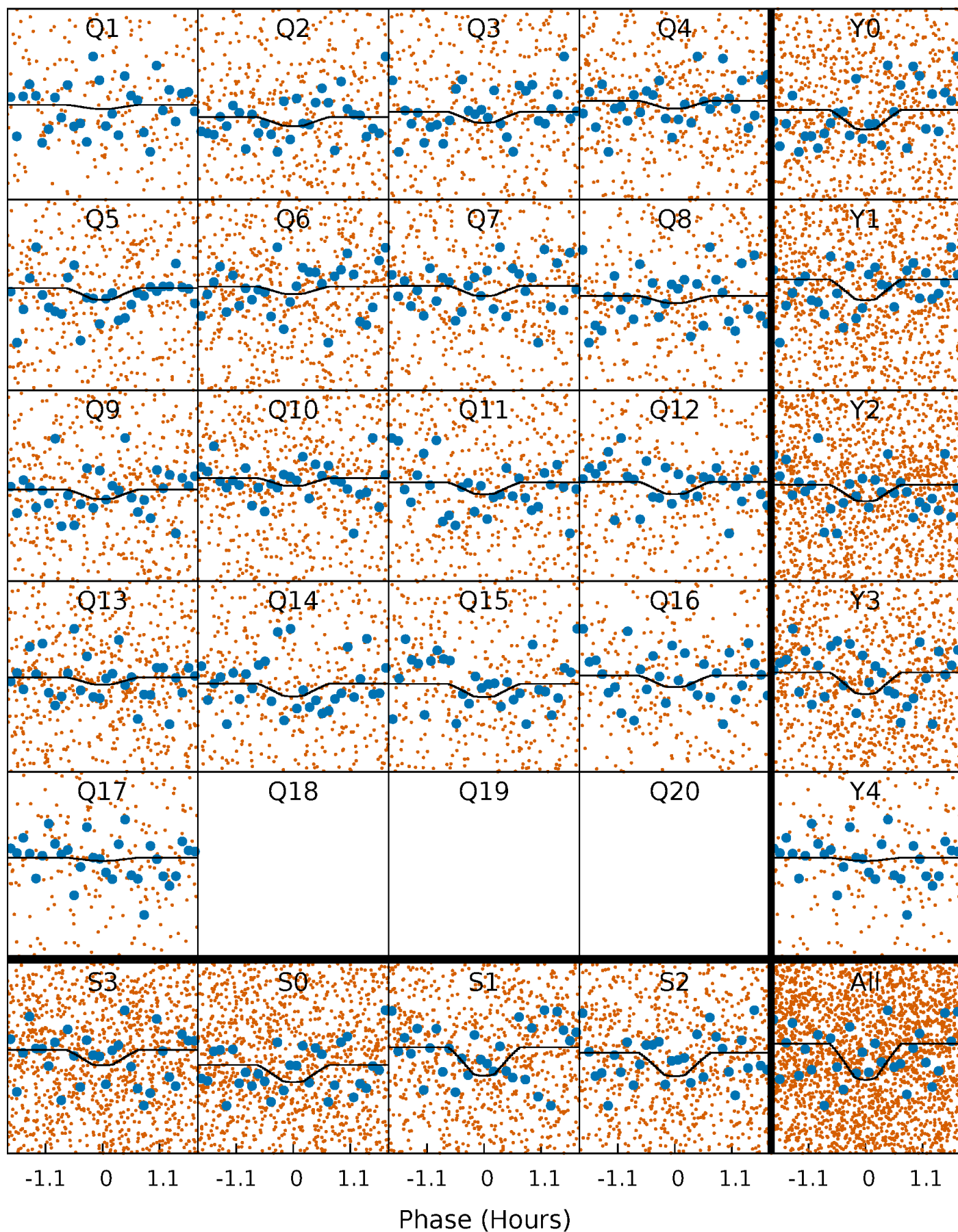
PDC Quarter-Phased Transit Curves

TCE 008841813-01 P= 0.779595 Days $T_0=132.326346$ (BKJD)



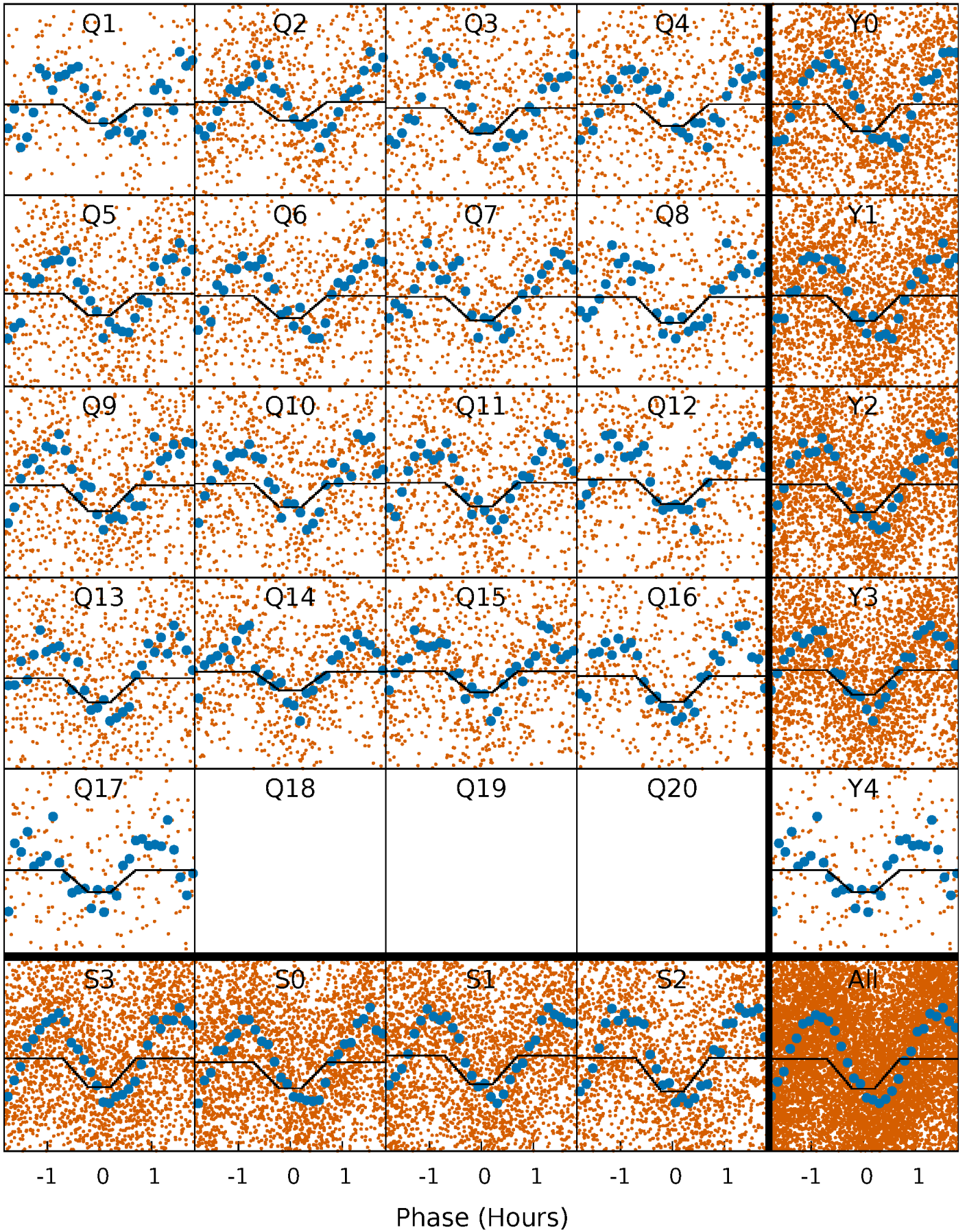
DV Quarter-Phased Transit Curves

TCE 008841813-01 P= 0.779595 Days $T_0=132.326346$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

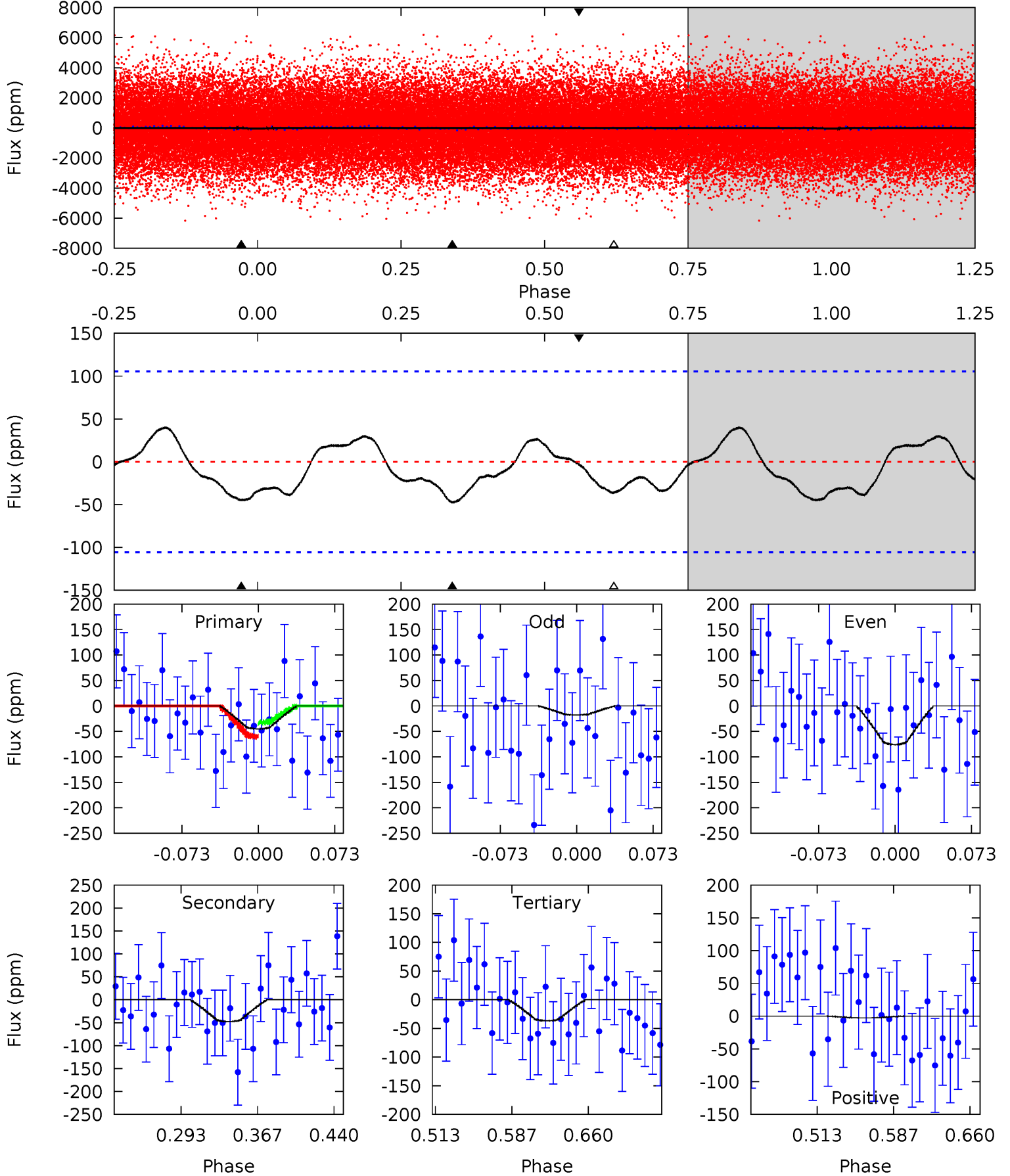
TCE 008841813-01 P= 0.779646 Days $T_0=132.332618$ (BKJD)



DV Model-Shift Uniqueness Test

008841813-01, P = 0.779595 Days, E = 130.767156 Days

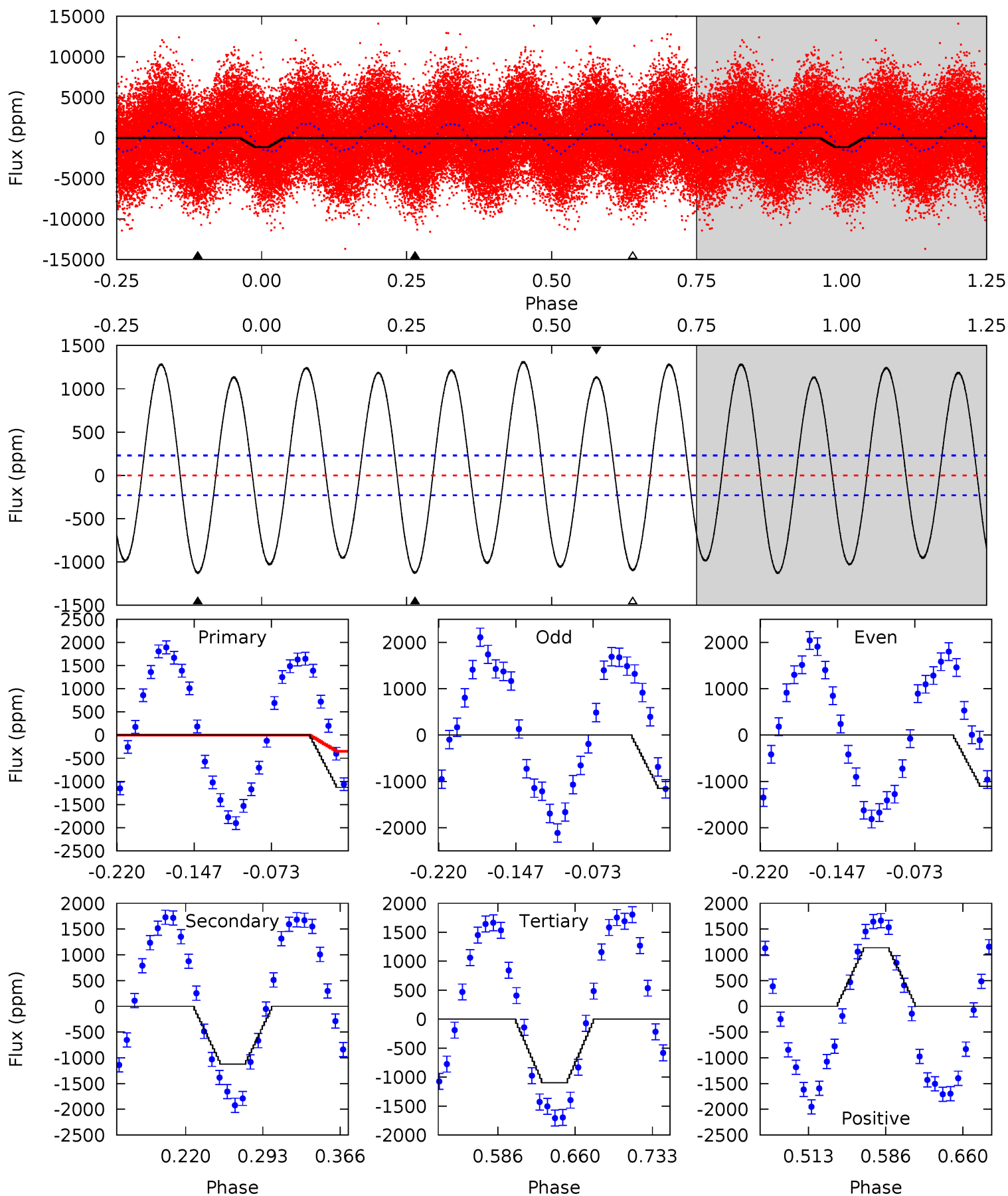
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.97	2.09	1.60	-0.12	4.63	1.79	0.95	0.37	2.09	0.48	2.20	1.28	0.77	0.46	0.61



Alt Model-Shift Uniqueness Test

008841813-01, P = 0.779646 Days, E = 130.773326 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	22.7	22.2	23.0	4.63	1.79	15.7	0.66	-0.16	0.59	-0.23	0.49	0.93	0.54	15.4



Stellar Parameters For KIC 008841813

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6168^{+210}_{-229}	$3.667^{+0.624}_{-0.117}$	$-0.320^{+0.300}_{-0.300}$	$2.860^{+0.573}_{-1.720}$	$1.386^{+0.188}_{-0.439}$	$0.084^{+0.892}_{-0.030}$
	+3%/-4%	+17%/-3%	+94%/-94%	+20%/-60%	+14%/-32%	+1068%/-35%
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 008841813-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-48 ± 23	$6.37^{+8.09}_{-4.49}$	4582^{+366}_{-745}	-3245^{+8839}_{-801}	$0.190^{+2.008}_{-0.157}$
Alt.	-1125 ± 49	$10.25^{+9.15}_{-6.11}$	4573^{+409}_{-709}	5415^{+3663}_{-1491}	$1.917^{+10.133}_{-1.354}$

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

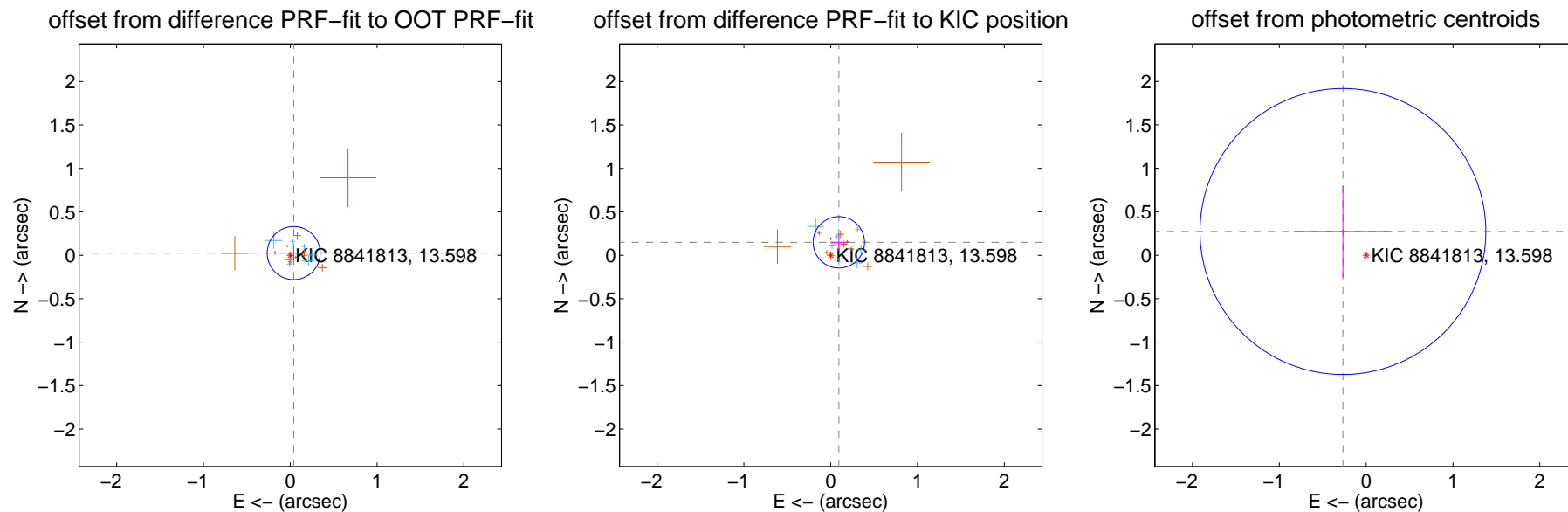
DV Centroid Data

Supplemental centroid analysis for 008841813-01. Kepler magnitude: 13.60. Transit SNR 4.18

There are 7 quarters with good PRF difference image offsets

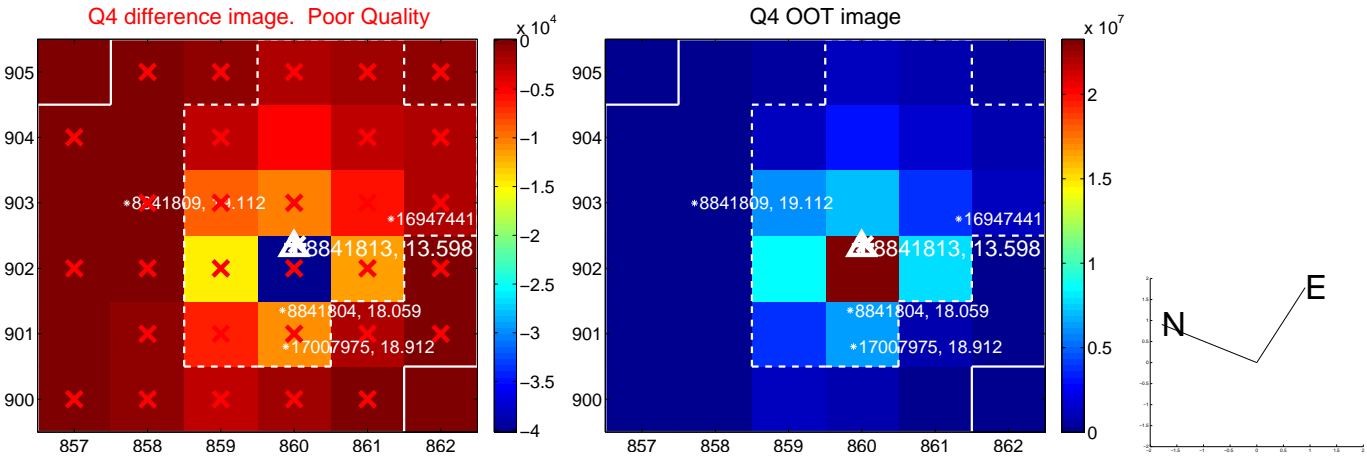
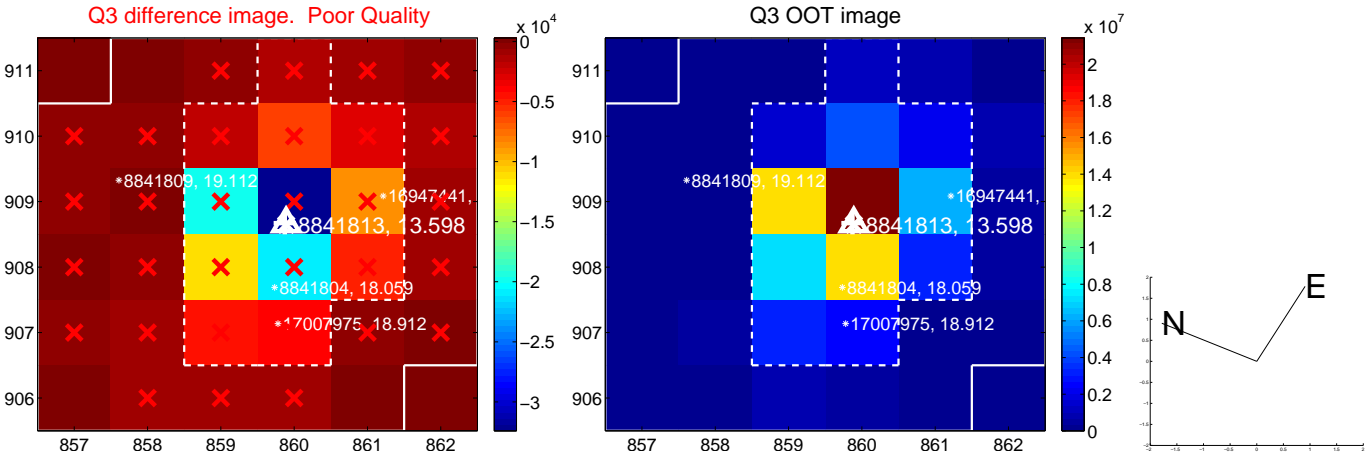
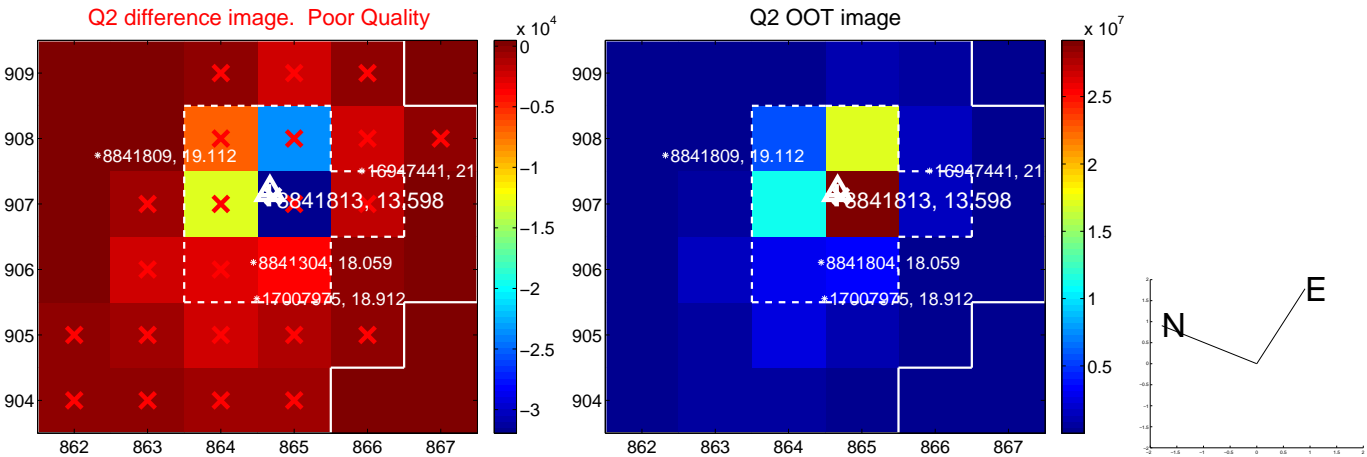
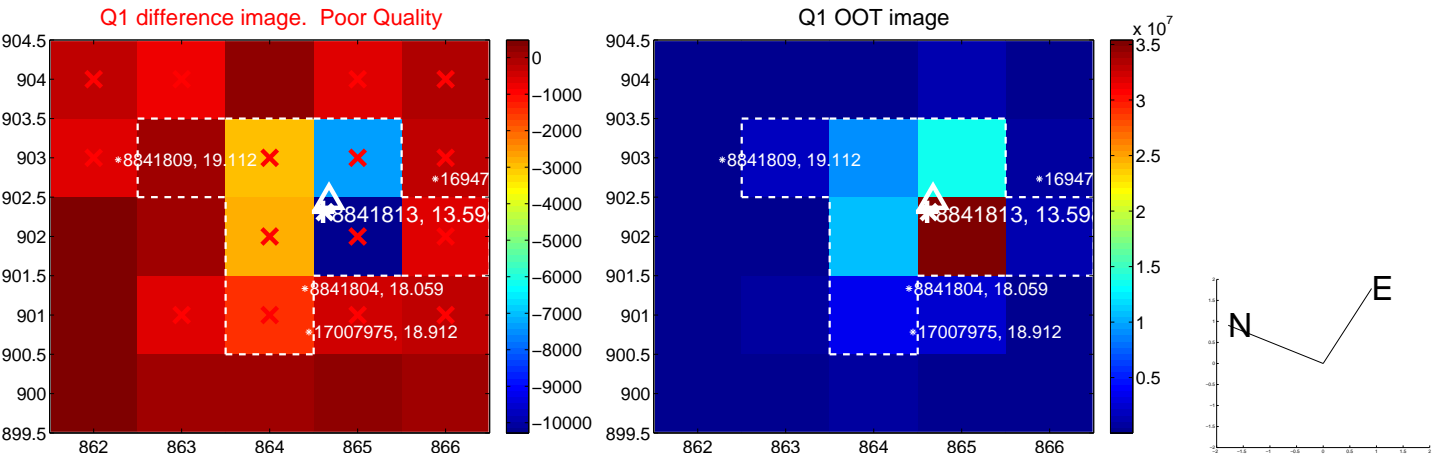
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.047 ± 0.102	0.46	-0.040 ± 0.096	0.025 ± 0.088
PRF-fit source offset from KIC position	0.176 ± 0.099	1.78	-0.093 ± 0.099	0.149 ± 0.089
photometric centroid source offset	0.38 ± 0.55	0.70	0.27 ± 0.57	0.27 ± 0.53

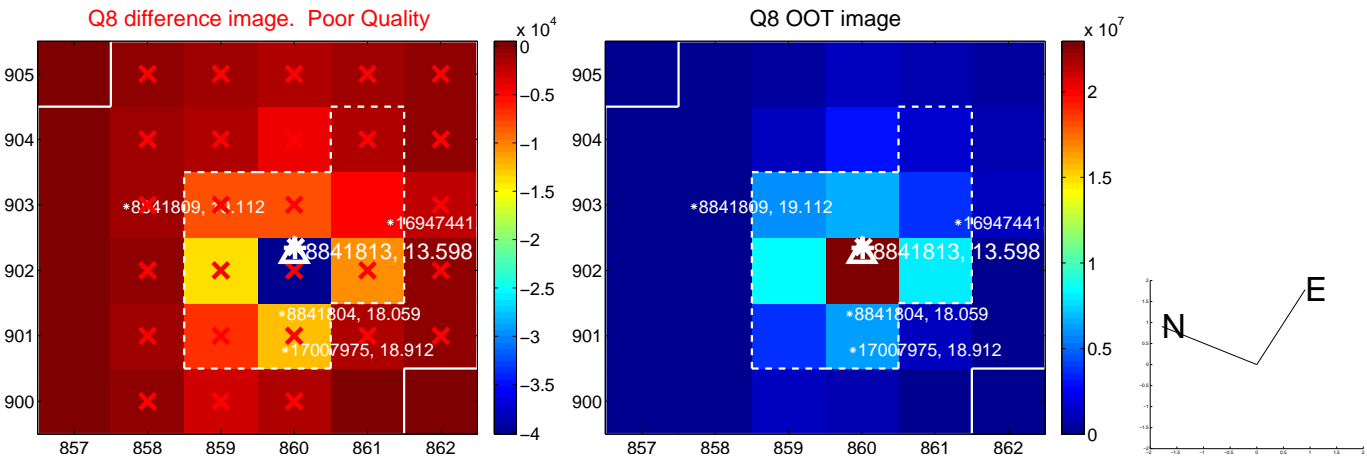
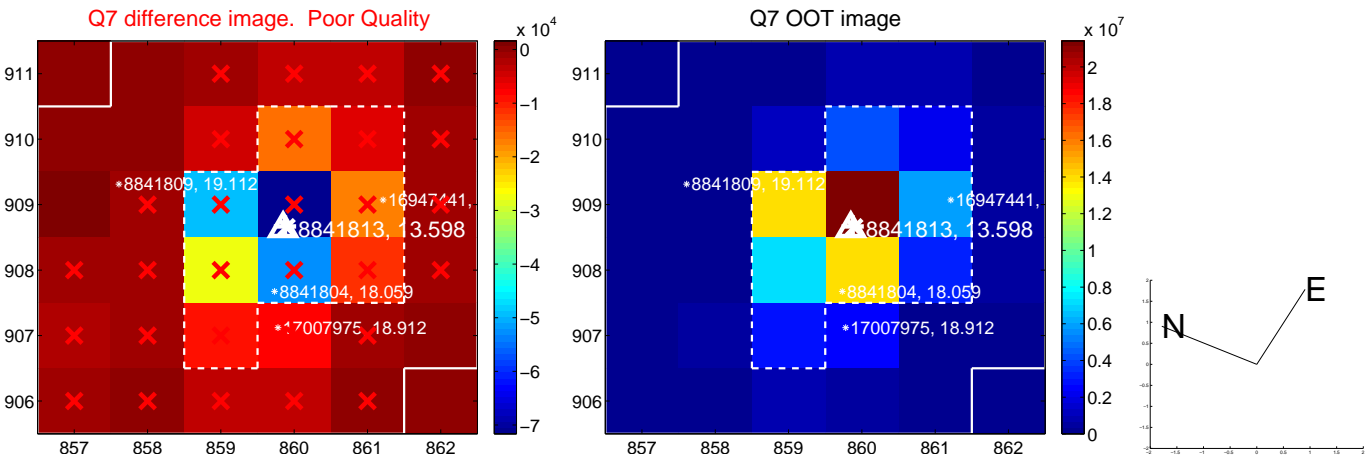
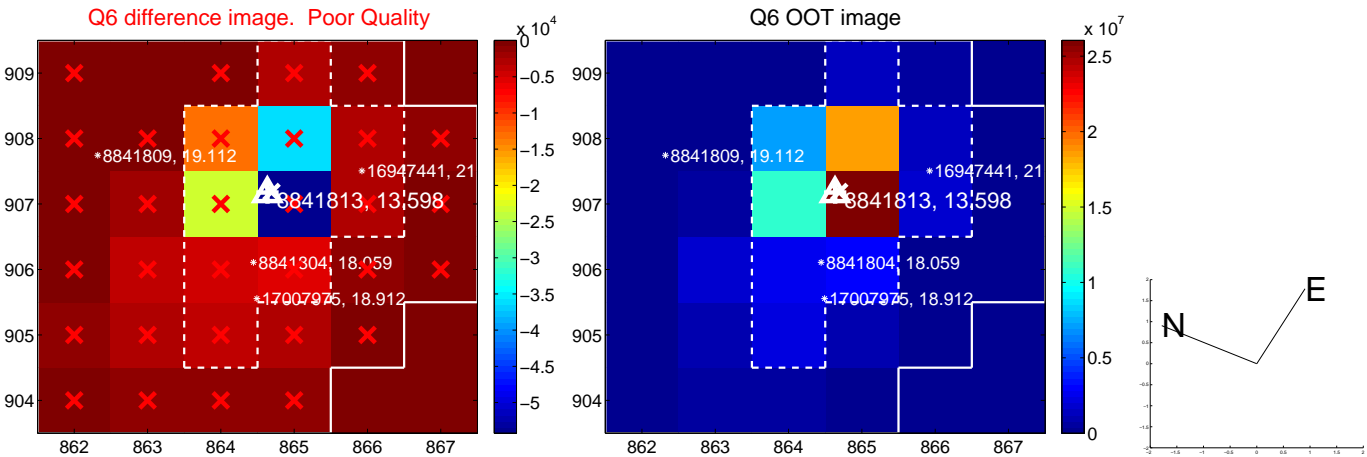
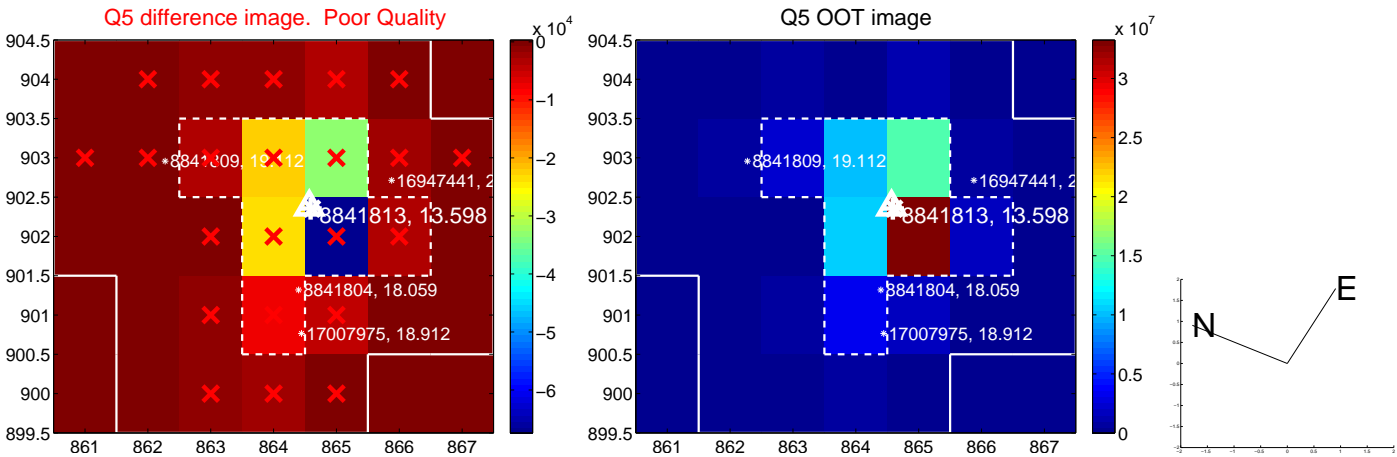


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

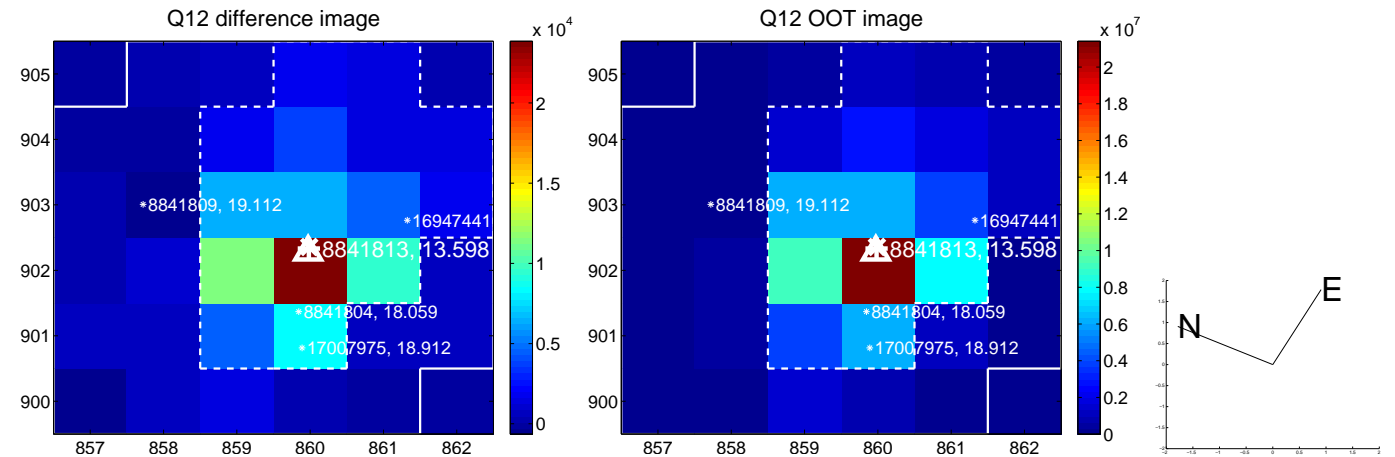
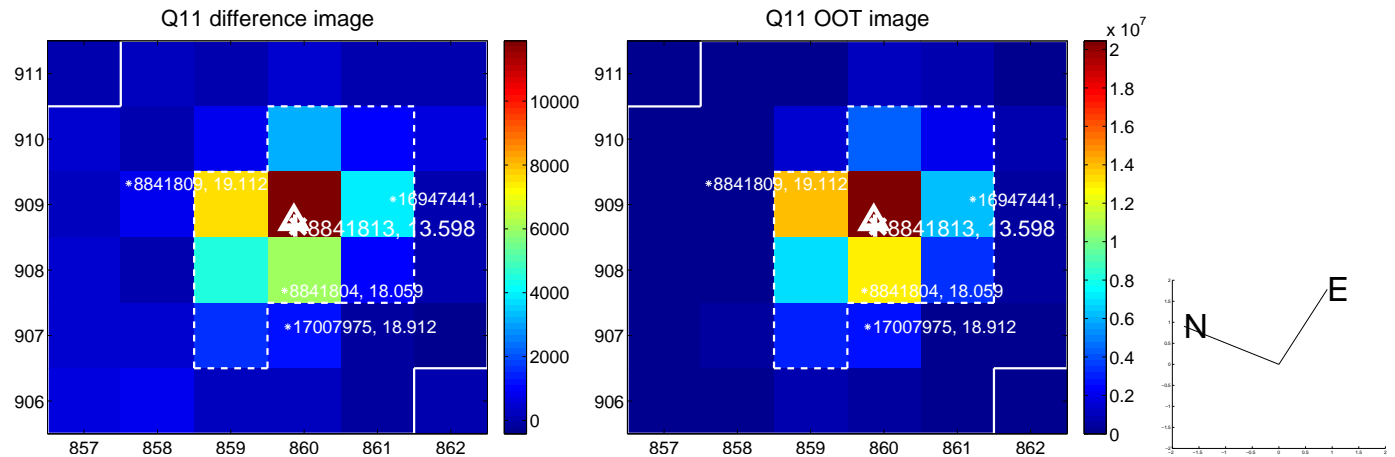
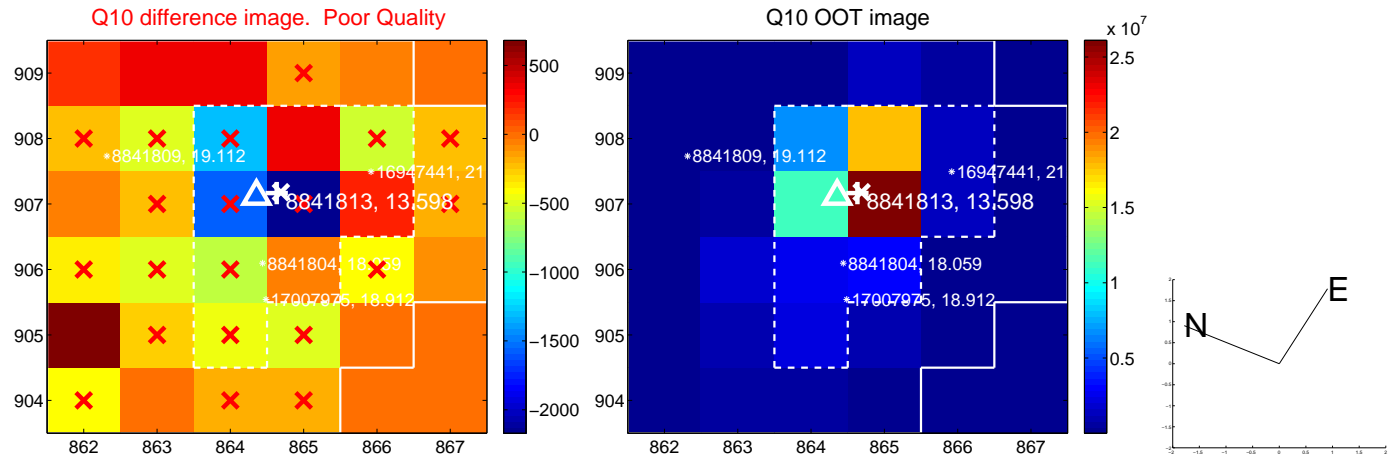
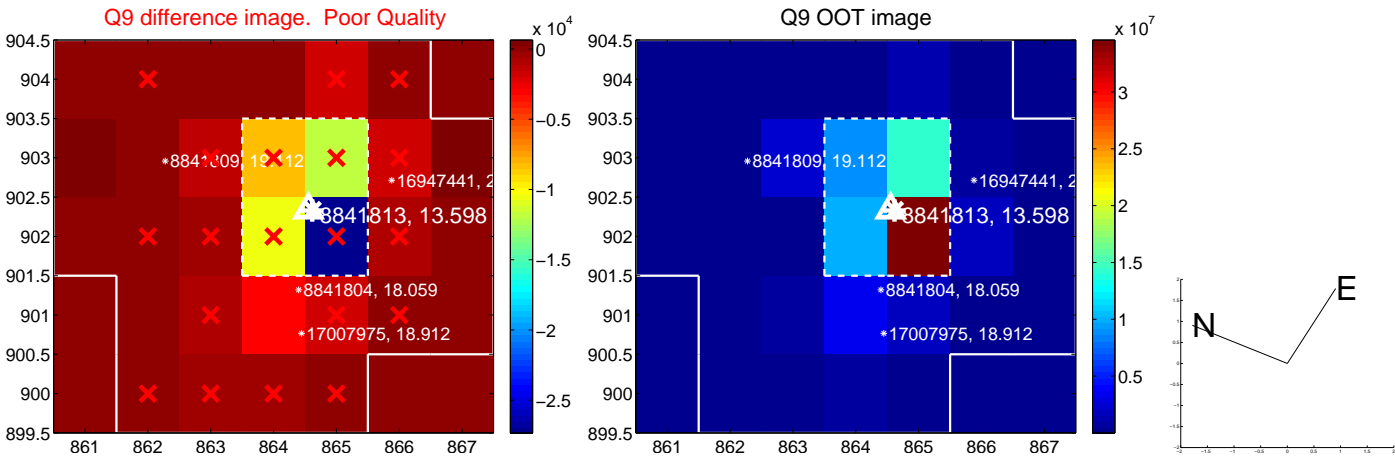
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



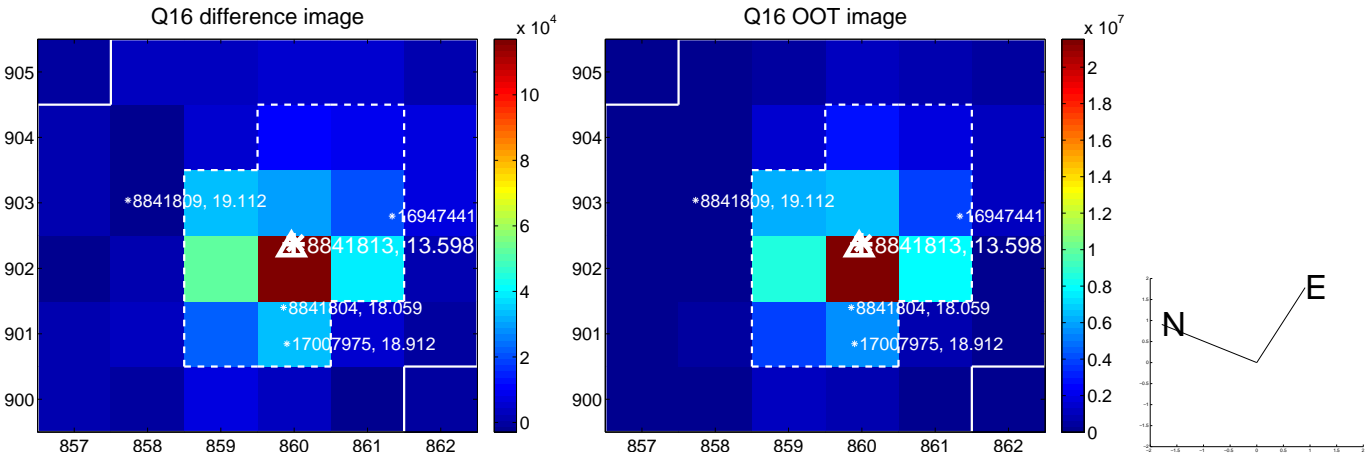
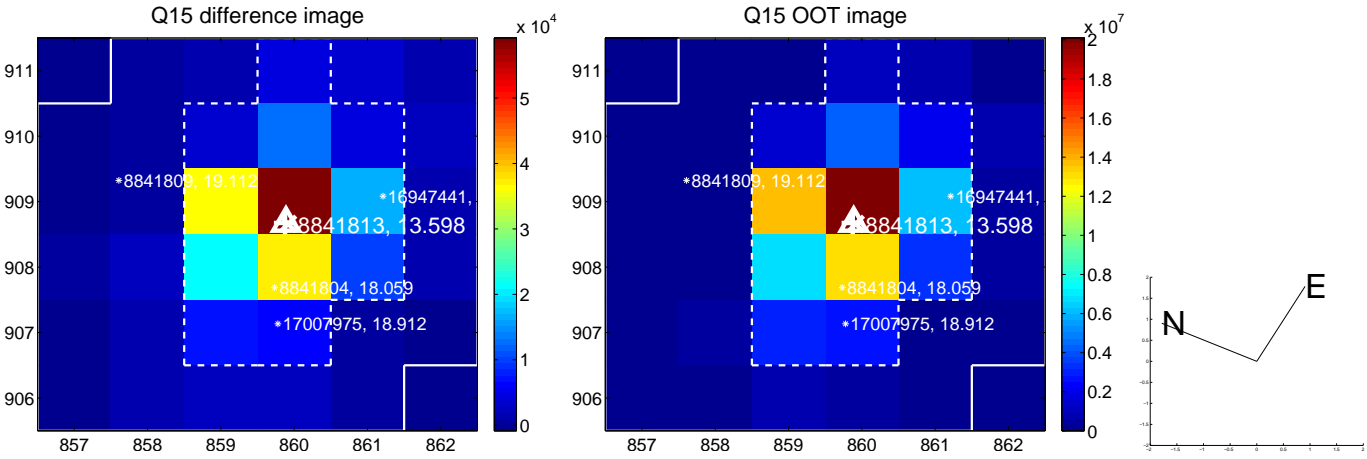
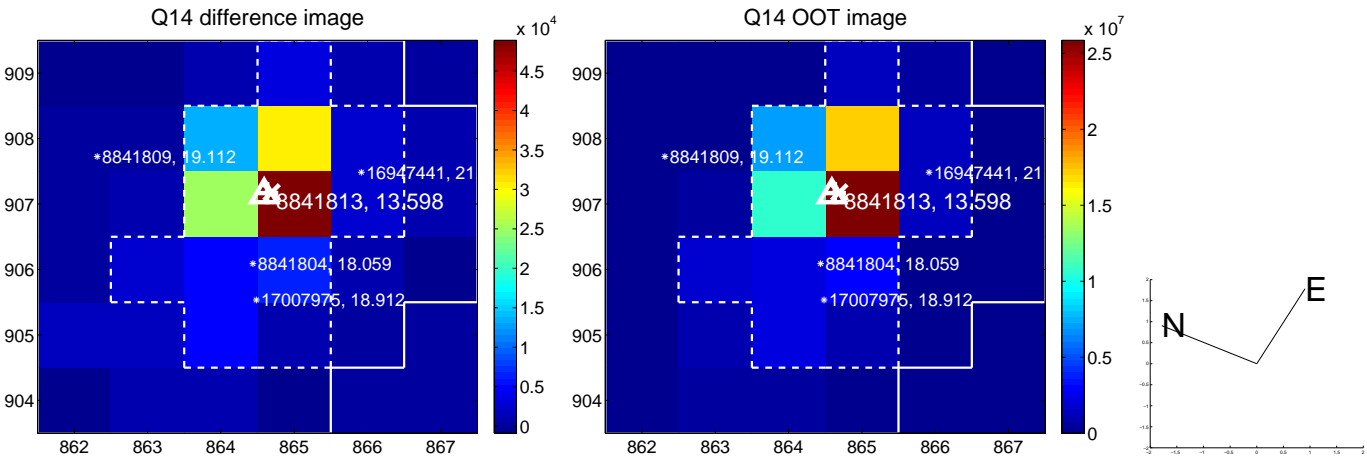
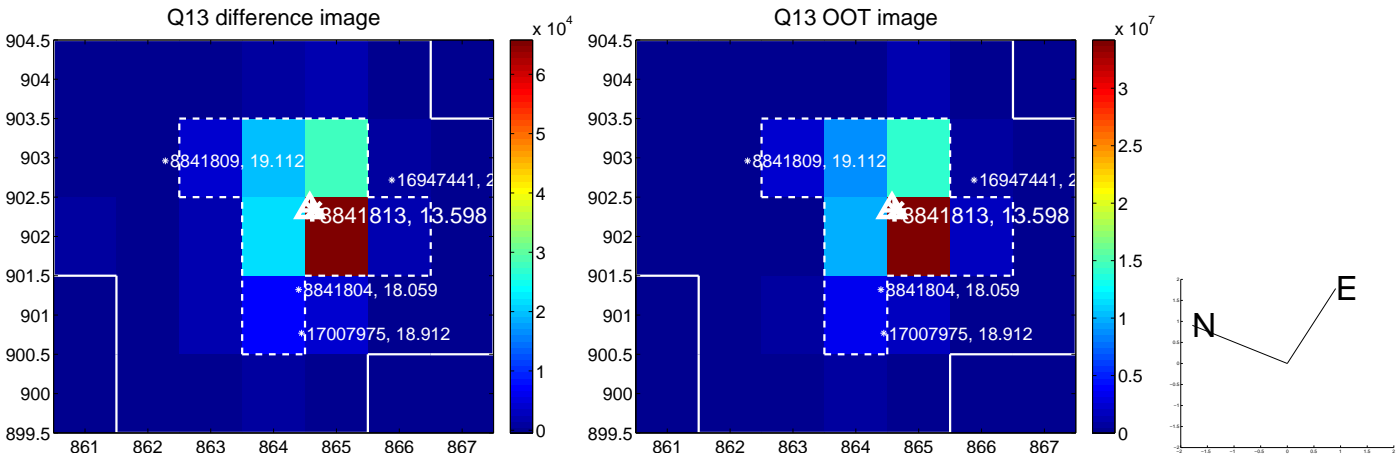
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



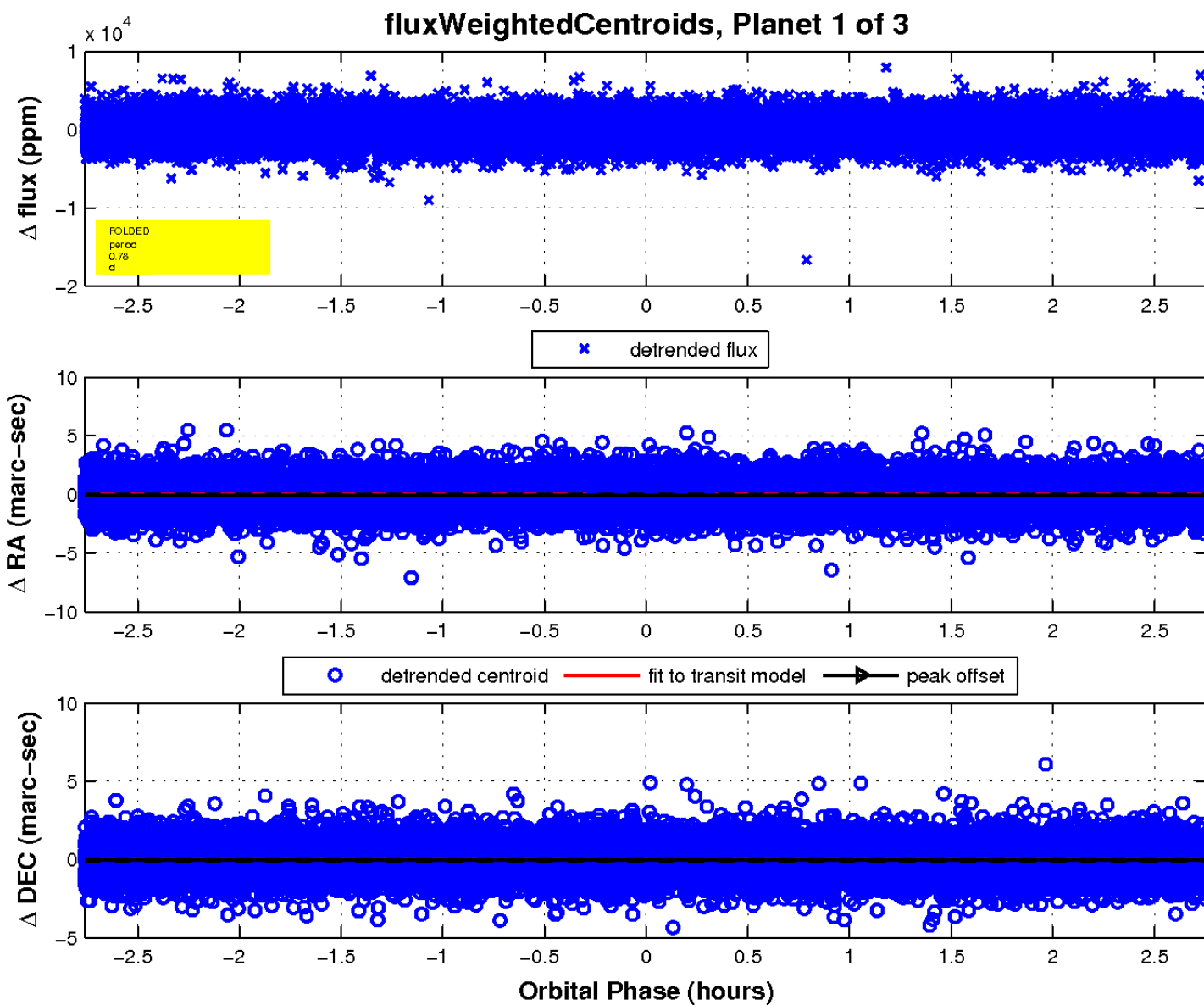
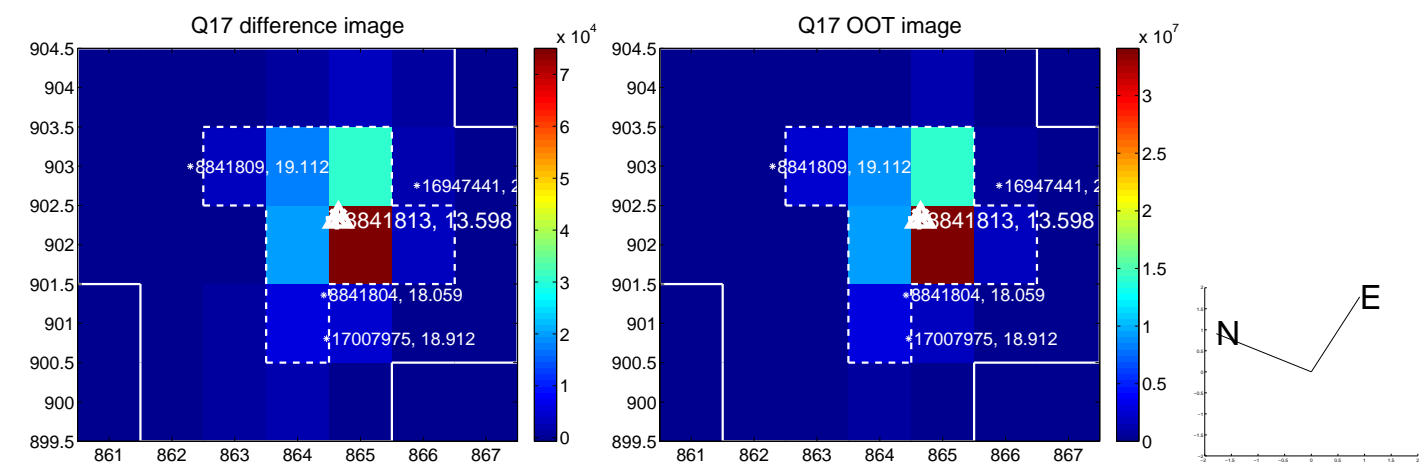
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



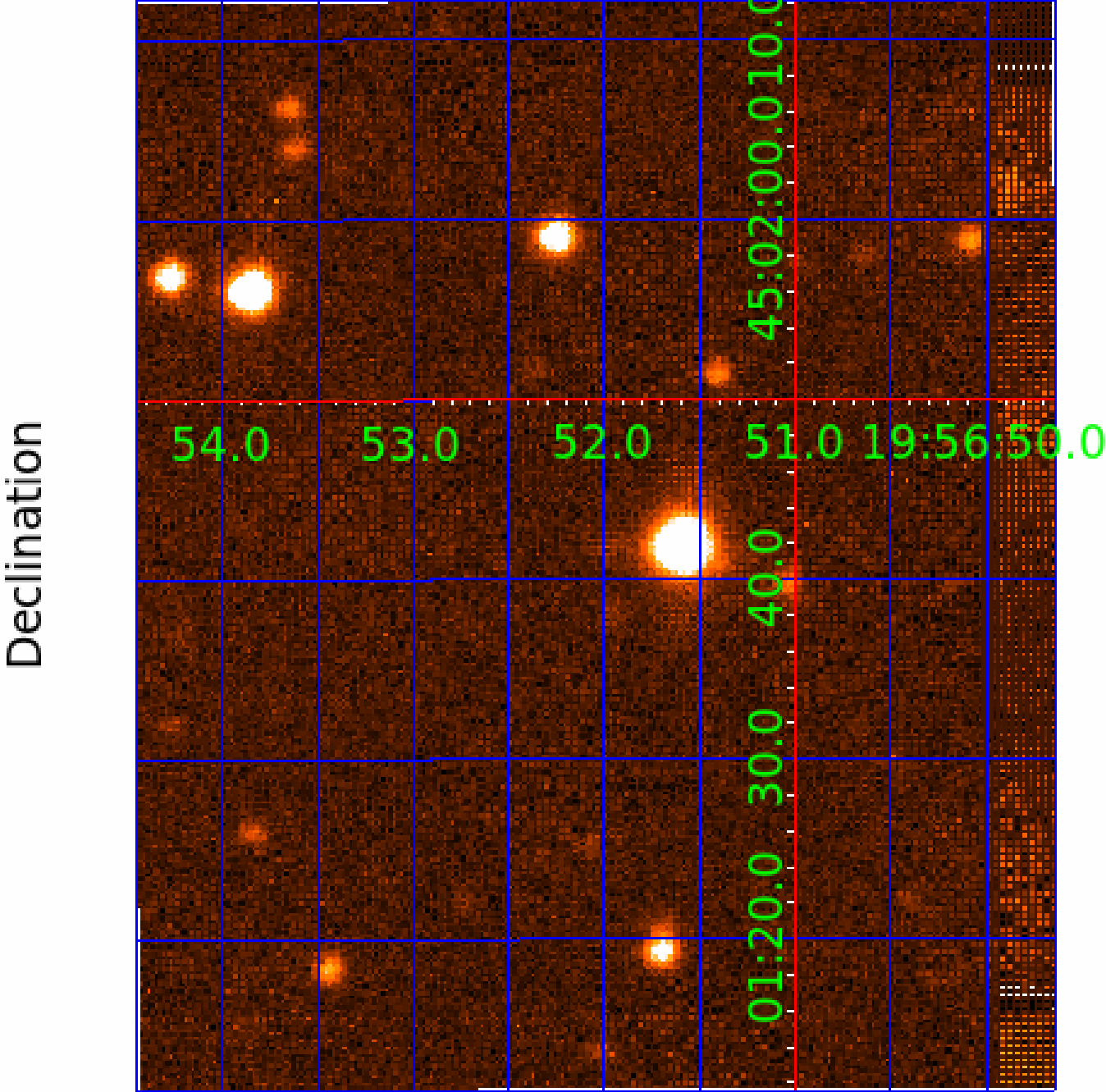
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008841813

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})
008841813-01	OBS	No	0.779595	132.326346	99.3	0.921	11.0	4.2	2.86	6168	2.90	31037.77
008841813-02	OBS	No	0.779616	132.041015	162.2	0.870	8.2	6.0	2.86	6168	4.28	31036.65
008841813-03	OBS	No	0.779673	131.745327	134.8	1.752	7.6	7.5	2.86	6168	3.90	31033.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008841813-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008841813-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008841813-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

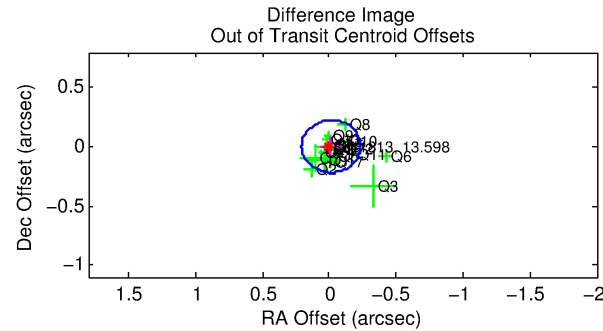
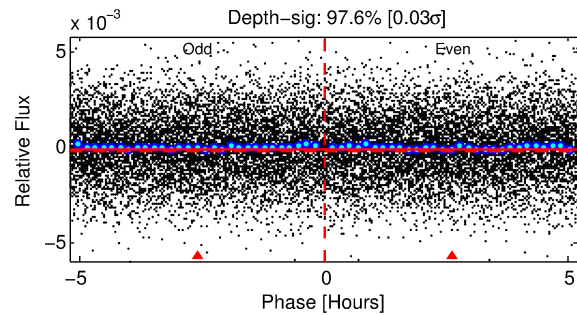
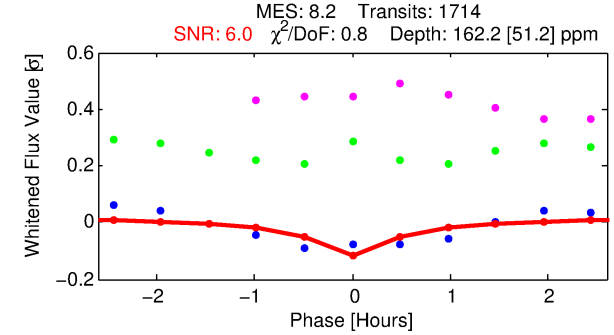
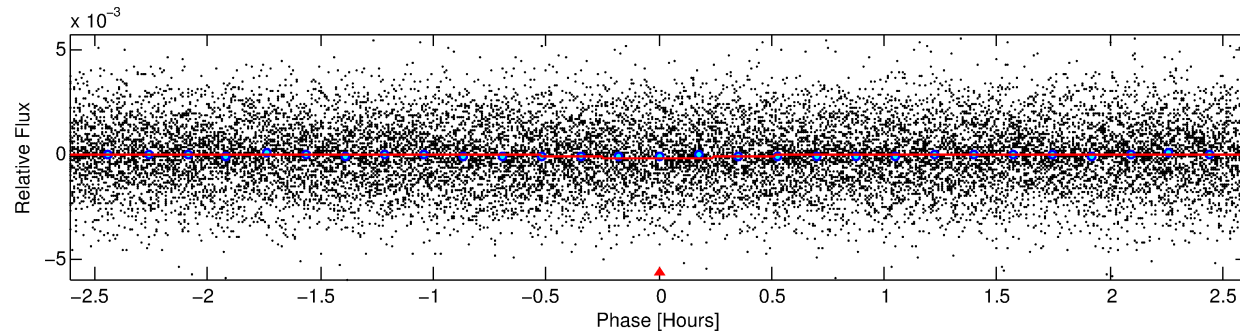
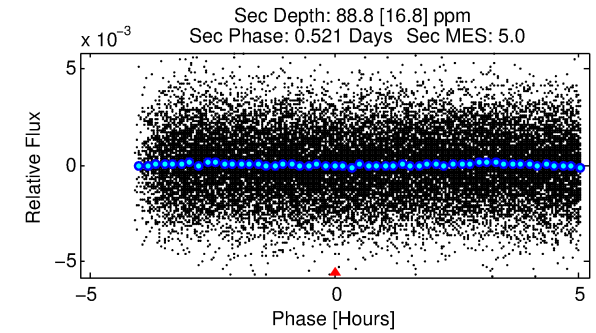
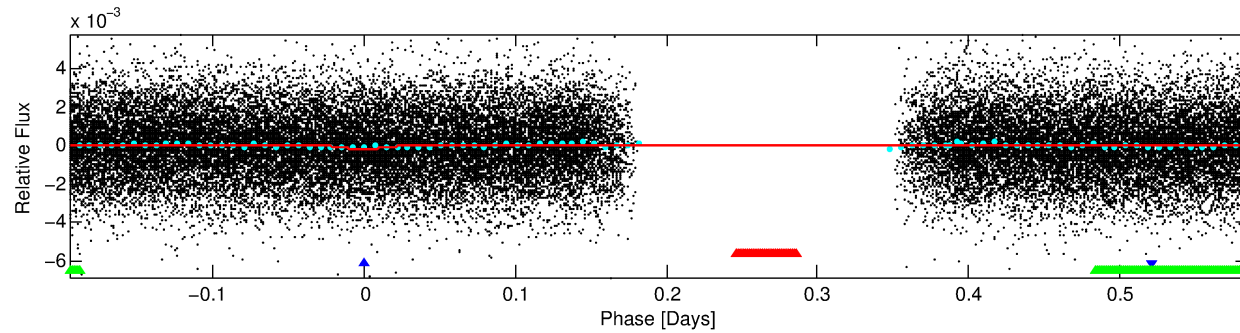
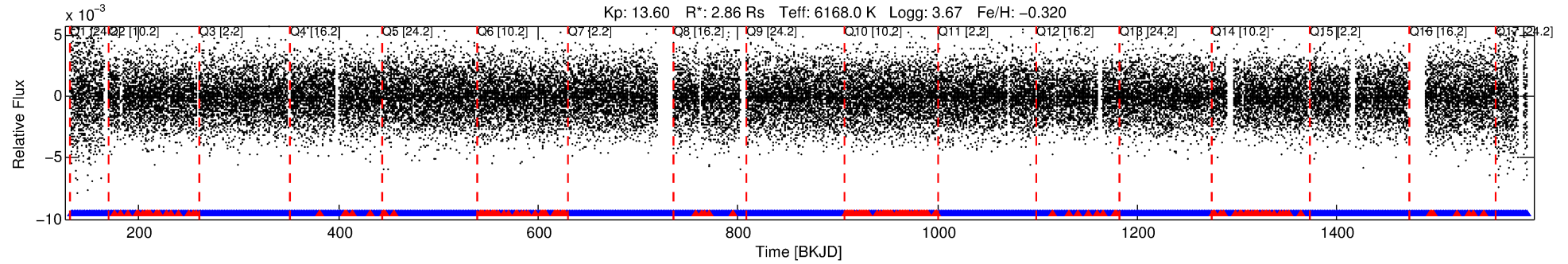
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008841813-02

No Significant Match Found

DV One-Page Summary

KIC: 8841813 Candidate: 2 of 3 Period: 0.780 d



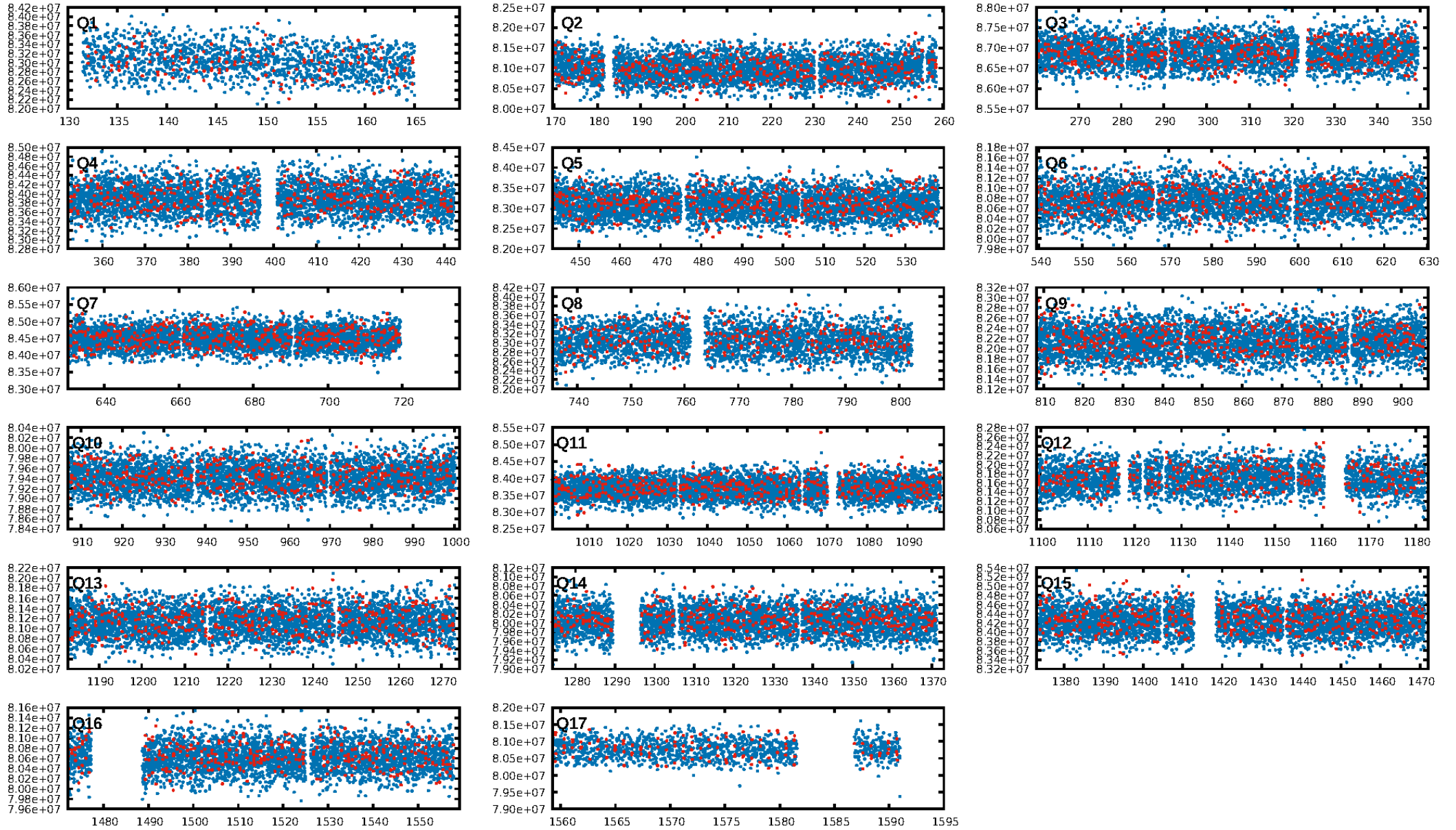
DV Fit Results:

Period = 0.77962 [0.00002] d
Epoch = 132.0410 [0.0035] BKJD
Rp/R* = 0.0137 [0.0135]
a/R* = 3.46 [16.79]
b = 0.89 [1.27]
Seff = 31036.65 [32556.35]
Teq = 3385 [888] K
Rp = 4.28 [4.95] Re
a = 0.0185 [0.0115] AU
Ag = 0.91 [2.04] [-0.04σ]
Teffp = 5111 [2541] K [0.64σ]

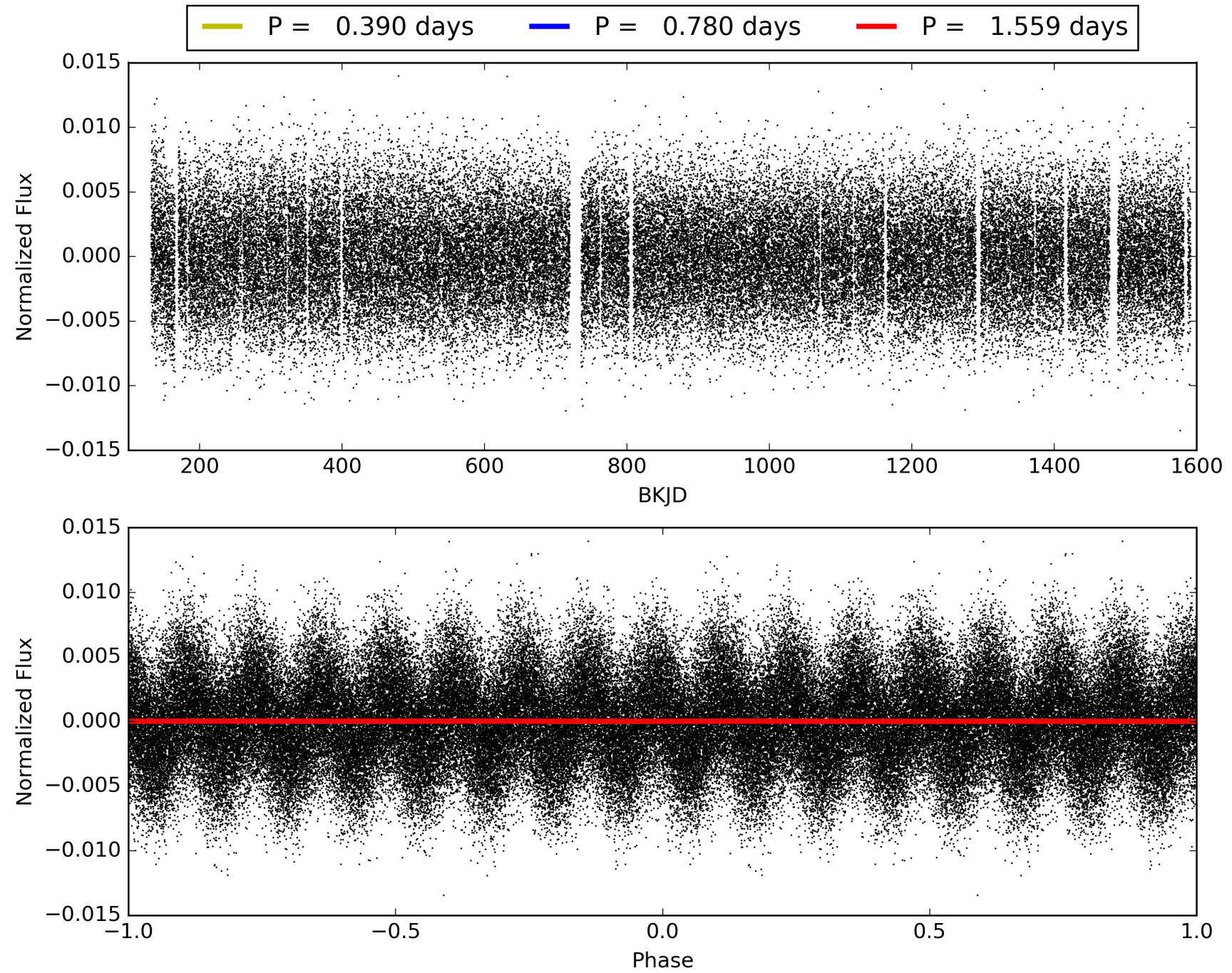
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.24e-33
RollingBand-fgt: 0.91 [1482/1636]
GhostDiagnostic-chr: 2.054
Centroid-sig: 0.2%
Centroid-so: 0.587 arcsec [1.69σ]
OotOffset-rm: 0.014 arcsec [0.19σ]
KicOffset-rm: 0.153 arcsec [2.08σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.18 [3/17]
DiffImageOverlap-fno: 0.41 [7/17]

TCE 008841813-02, PDC Light Curves

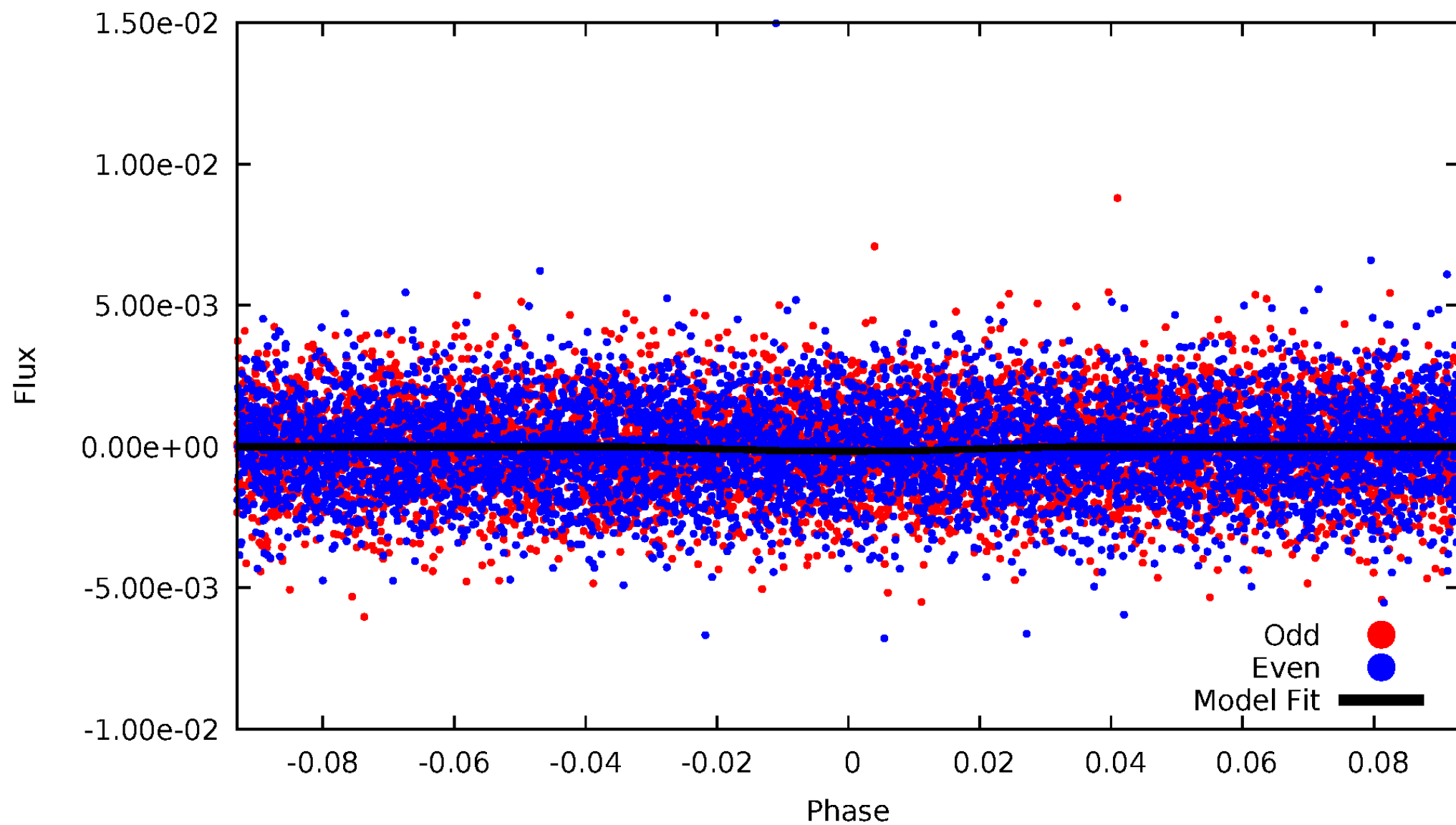


TCE 008841813-02



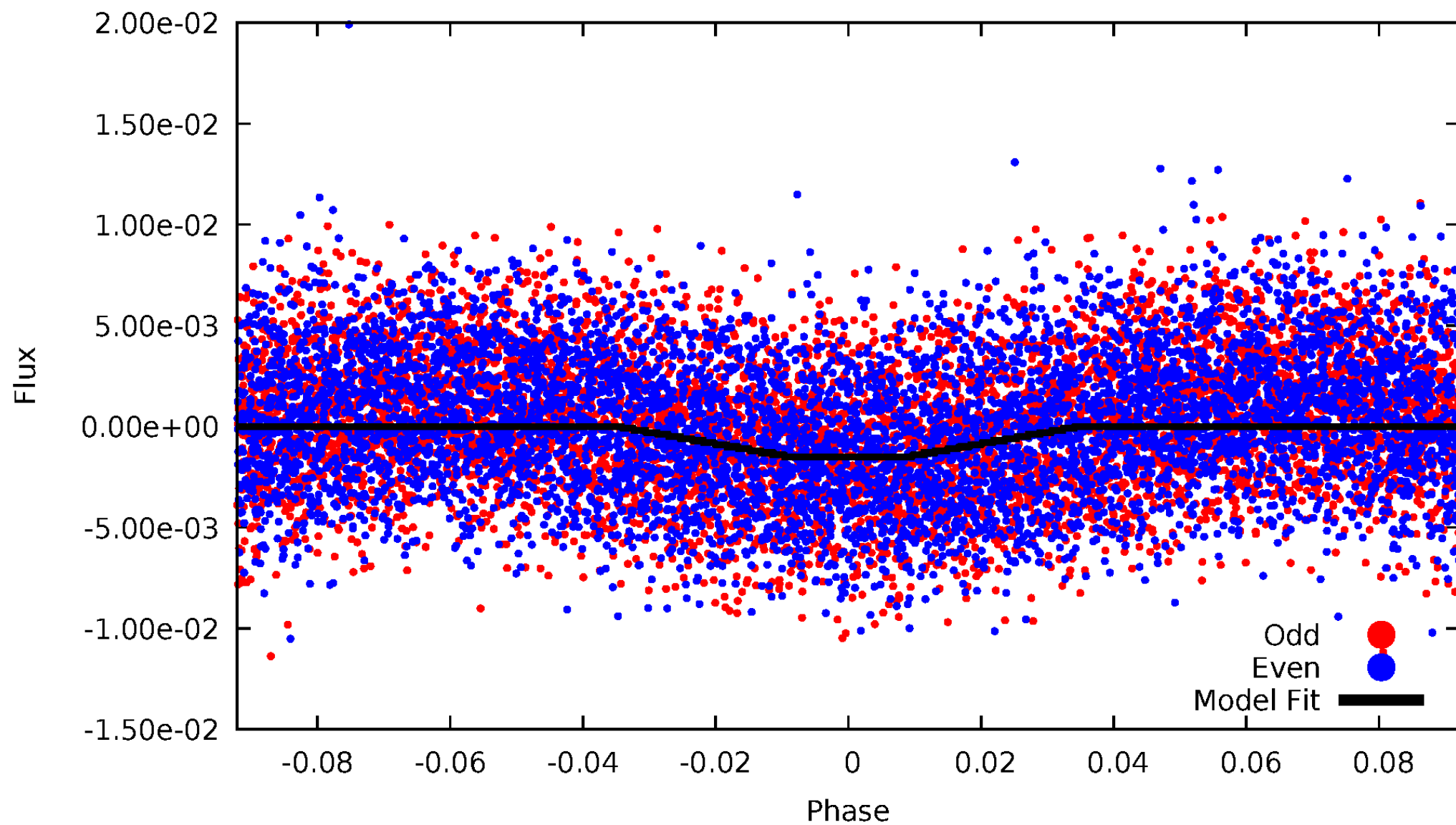
DV Odd/Even

TCE 008841813-02



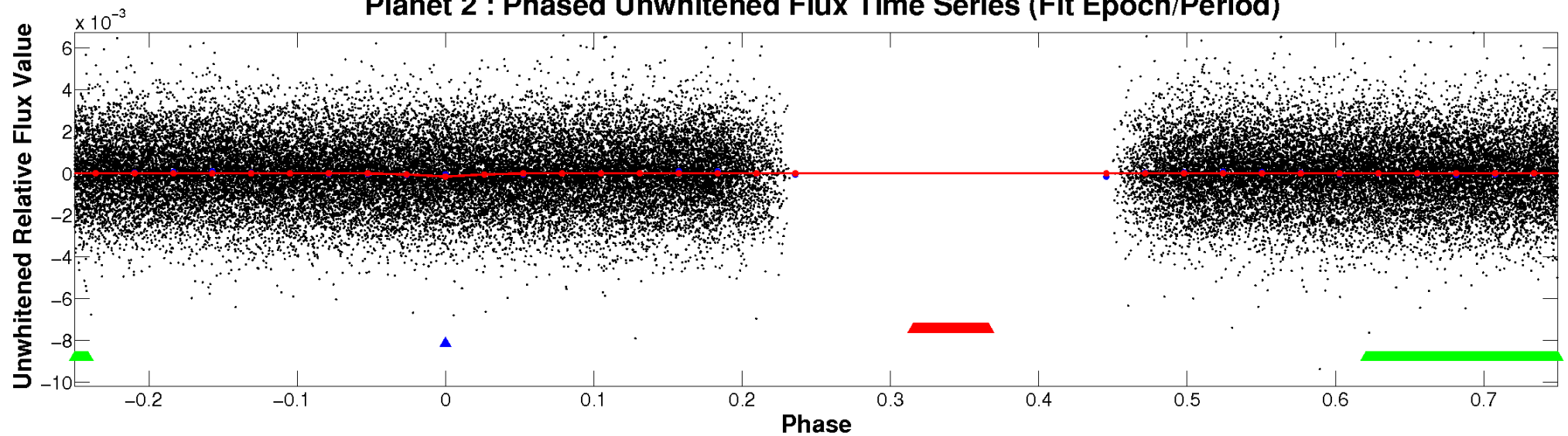
ALT Odd/Even

TCE 008841813-02

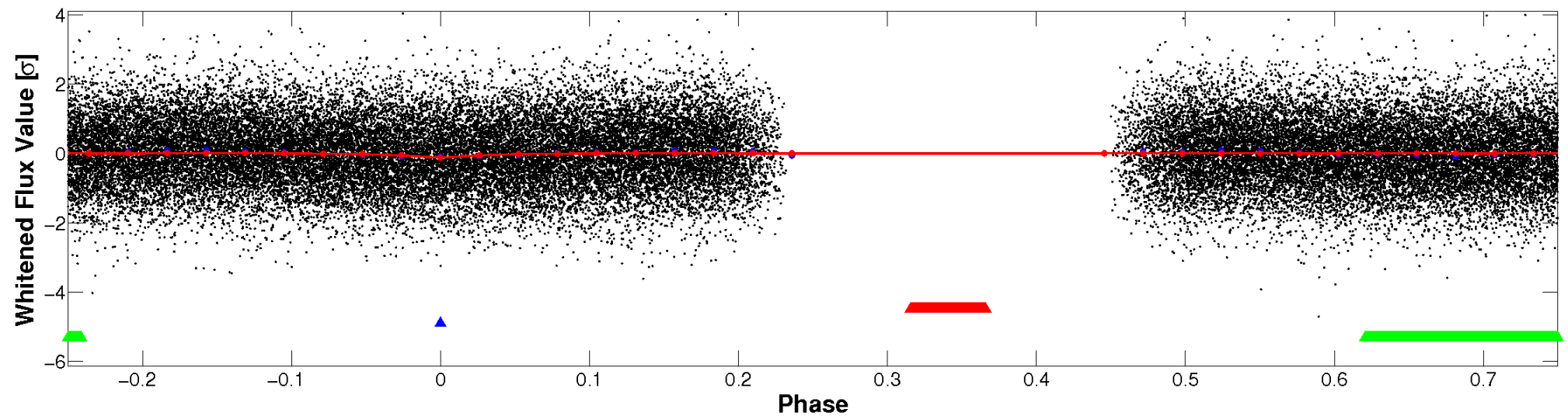


Non-Whitened Vs. Whitened Light Curve

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

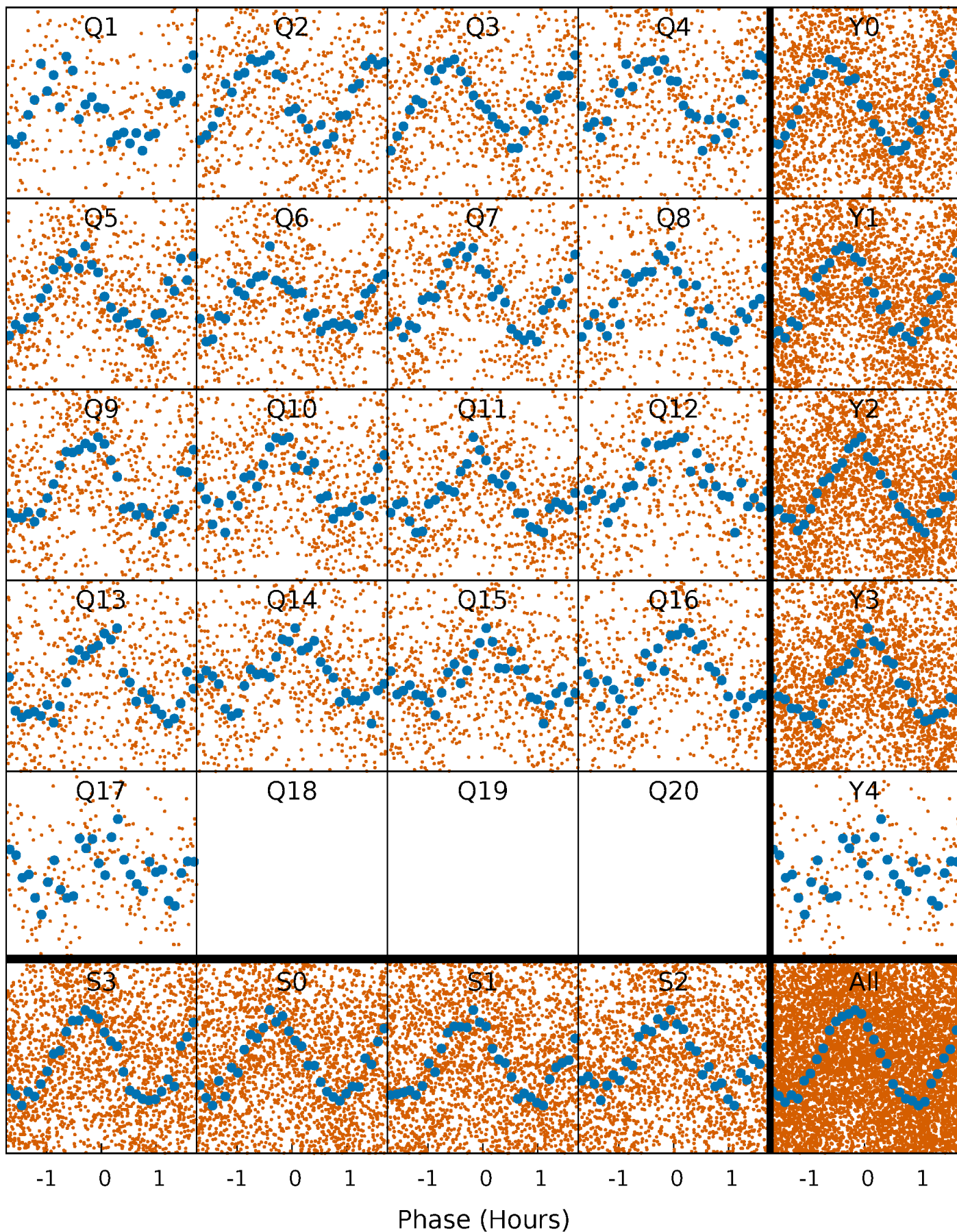


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



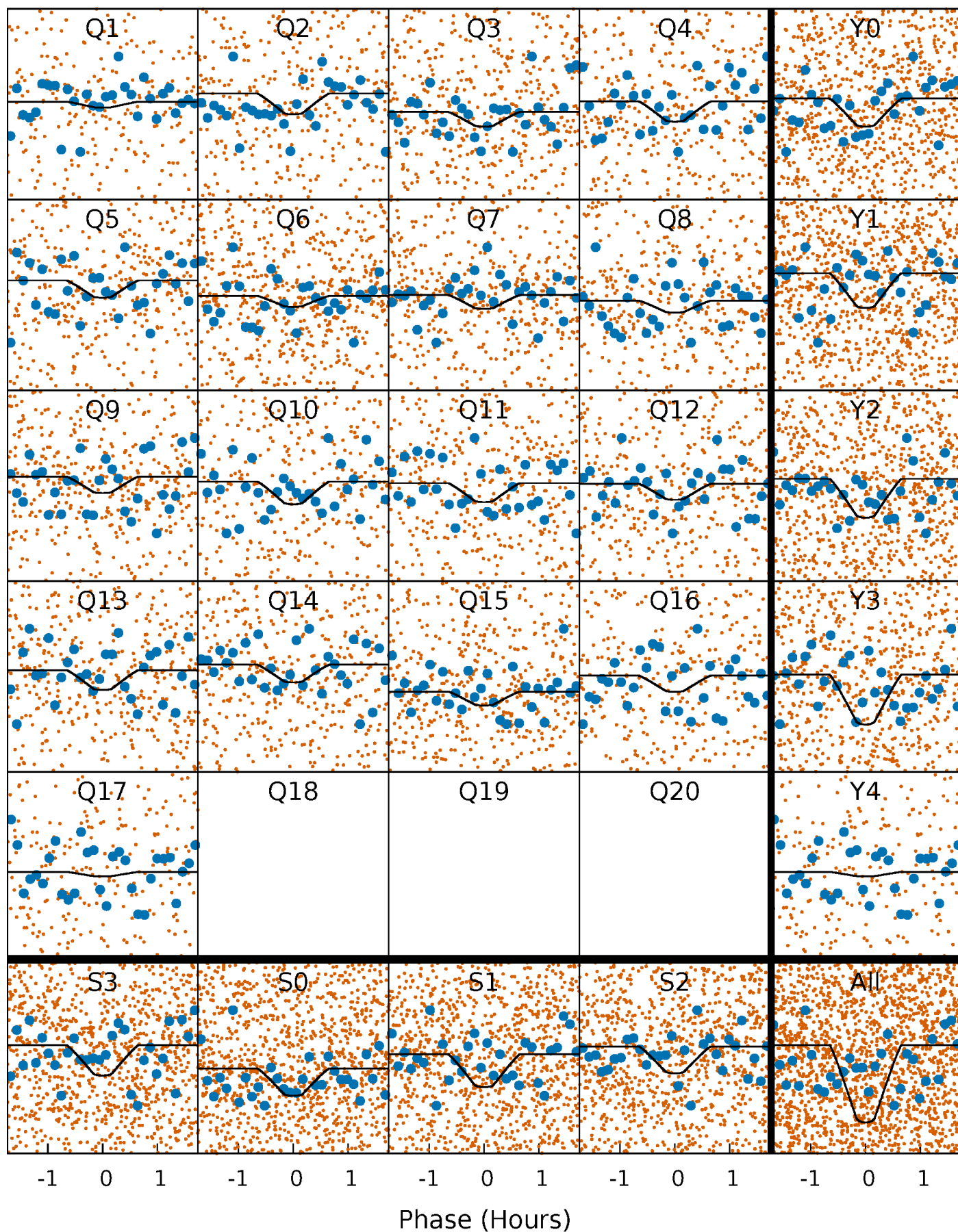
PDC Quarter-Phased Transit Curves

TCE 008841813-02 P= 0.779616 Days $T_0=132.041015$ (BKJD)



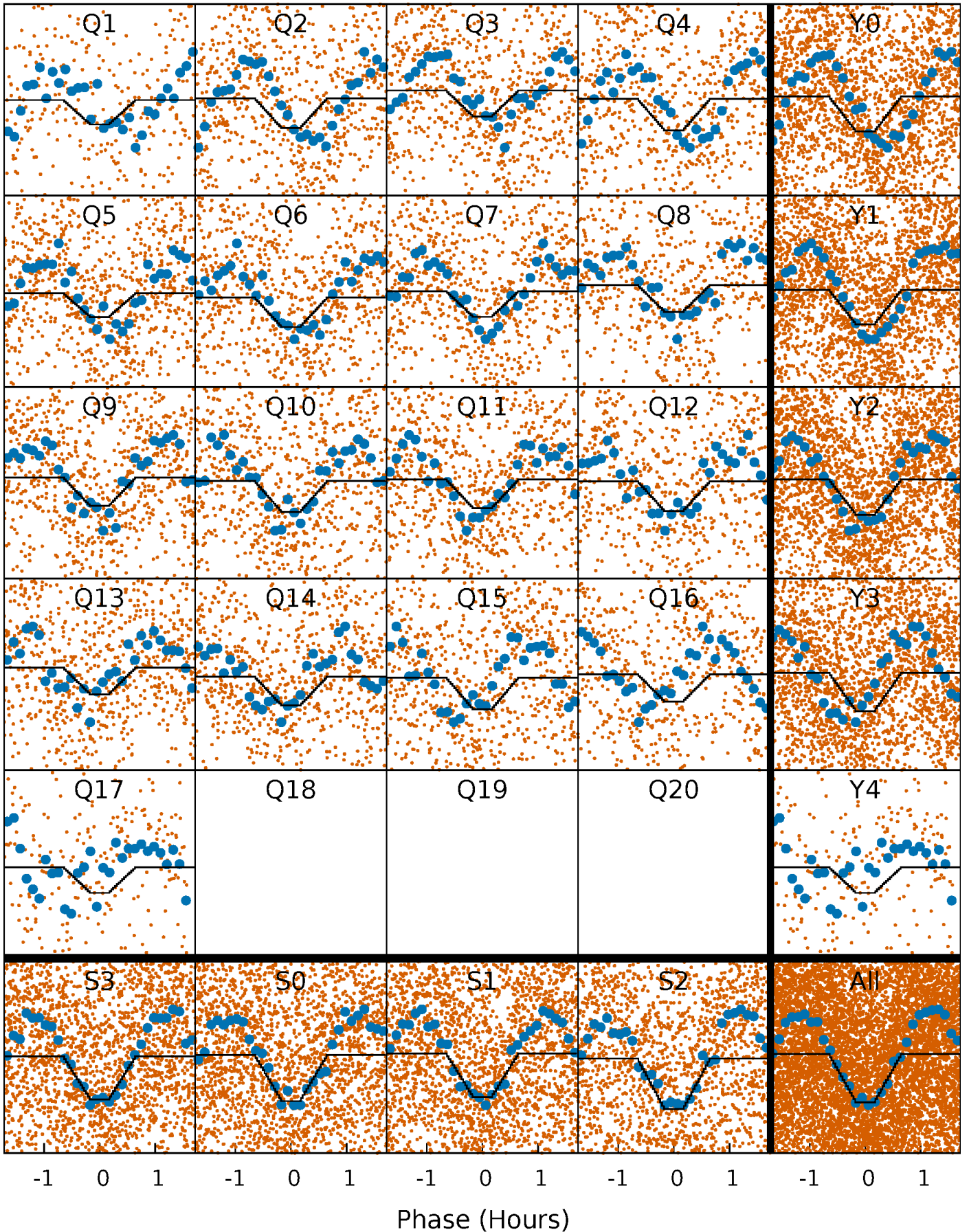
DV Quarter-Phased Transit Curves

TCE 008841813-02 P= 0.779616 Days $T_0=132.041015$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

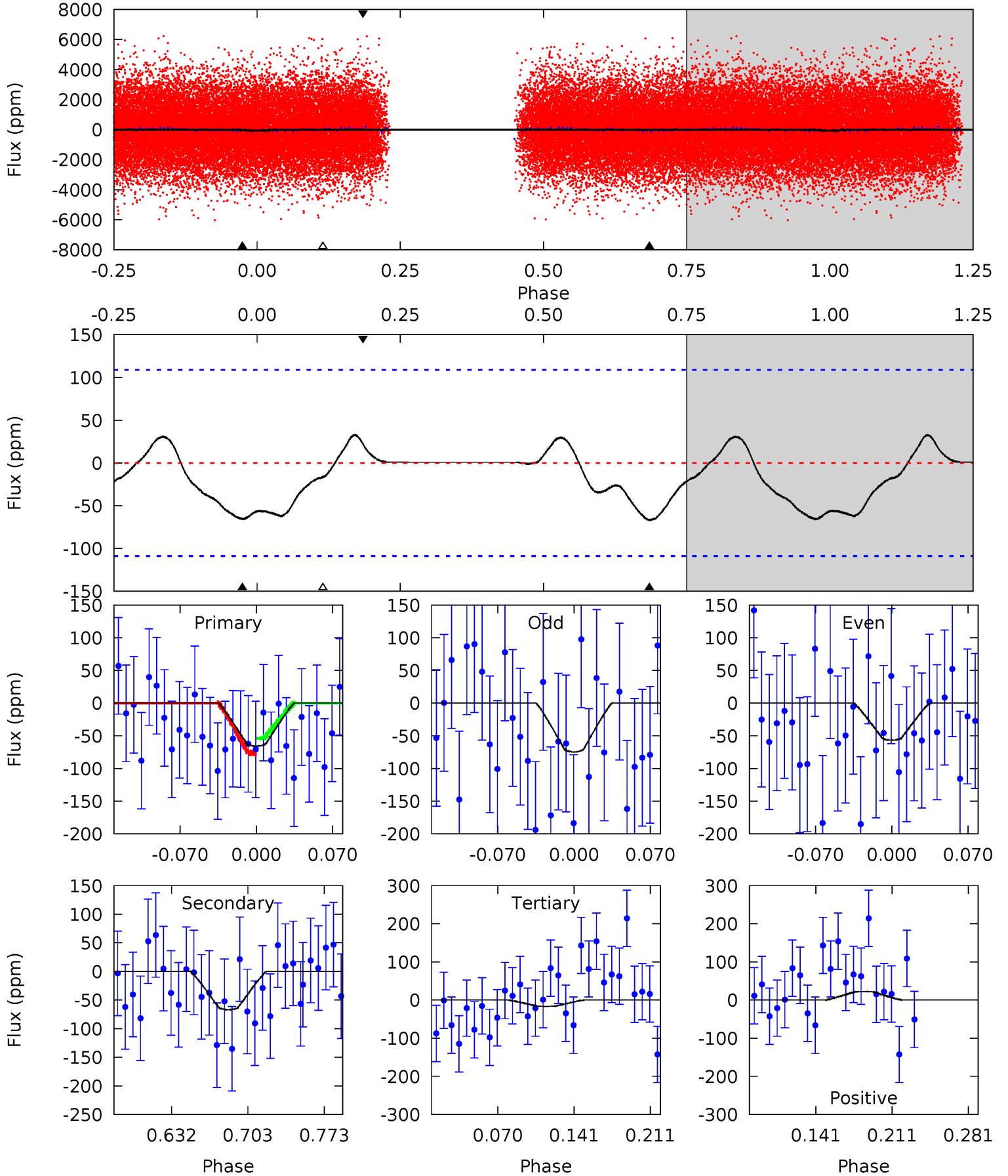
TCE 008841813-02 P= 0.779657 Days $T_0=132.041667$ (BKJD)



DV Model-Shift Uniqueness Test

008841813-02, P = 0.779616 Days, E = 131.261399 Days

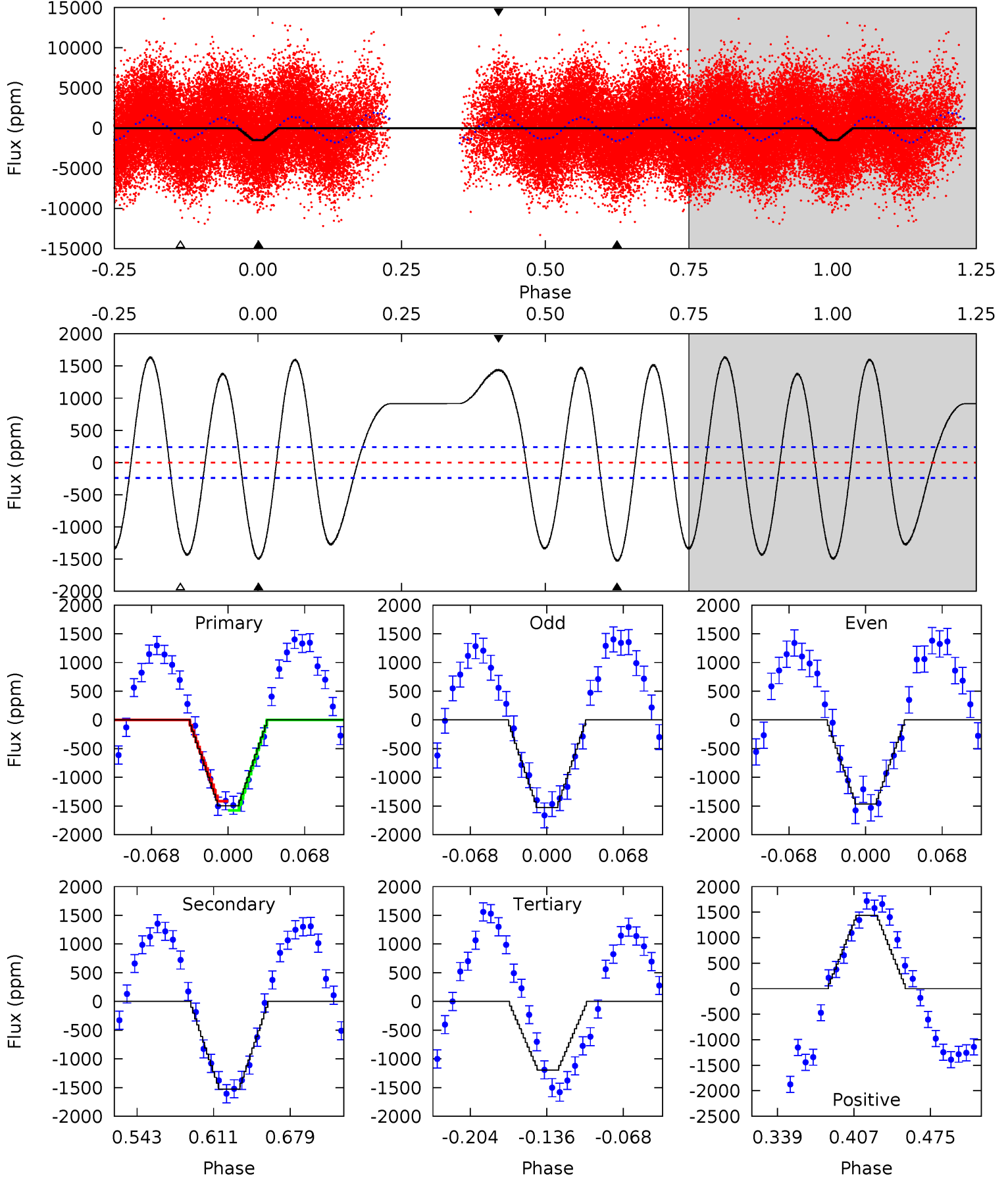
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.80	2.85	0.71	0.95	4.64	1.81	1.01	2.09	1.85	2.14	1.90	0.39	0.59	0.33	0.50



Alt Model-Shift Uniqueness Test

008841813-02, P = 0.779657 Days, E = 131.262010 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	29.5	23.1	27.9	4.65	1.83	19.2	5.87	1.09	6.43	1.65	0.58	0.95	0.52	1.56



Stellar Parameters For KIC 008841813

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6168^{+210}_{-229}	$3.667^{+0.624}_{-0.117}$	$-0.320^{+0.300}_{-0.300}$	$2.860^{+0.573}_{-1.720}$	$1.386^{+0.188}_{-0.439}$	$0.084^{+0.892}_{-0.030}$
	+3%/-4%	+17%/-3%	+94%/-94%	+20%/-60%	+14%/-32%	+1068%/-35%
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 008841813-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-67 ± 23	$4.45^{+3.81}_{-2.86}$	4577^{+380}_{-727}	3914^{+2712}_{-7499}	$0.621^{+3.836}_{-0.466}$
Alt.	-1526 ± 52	$10.56^{+5.09}_{-4.64}$	4560^{+411}_{-721}	5975^{+1807}_{-959}	$2.634^{+5.267}_{-1.466}$

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

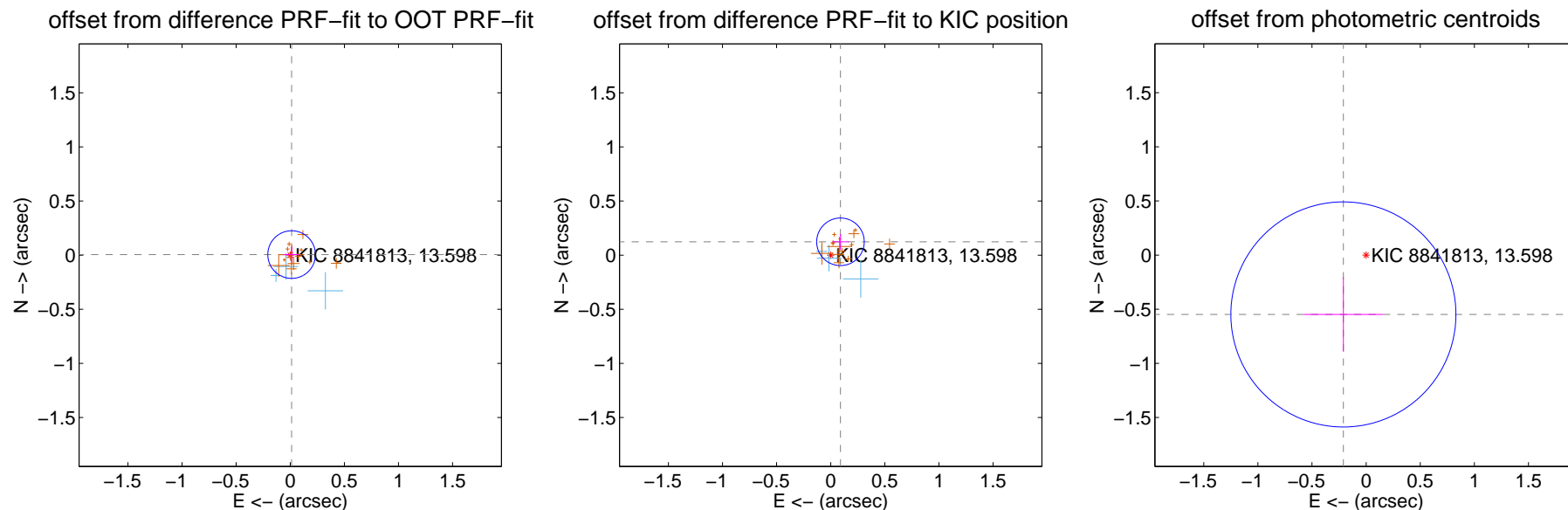
DV Centroid Data

Supplemental centroid analysis for 008841813-02. Kepler magnitude: 13.60. Transit SNR 5.98

There are 3 quarters with good PRF difference image offsets

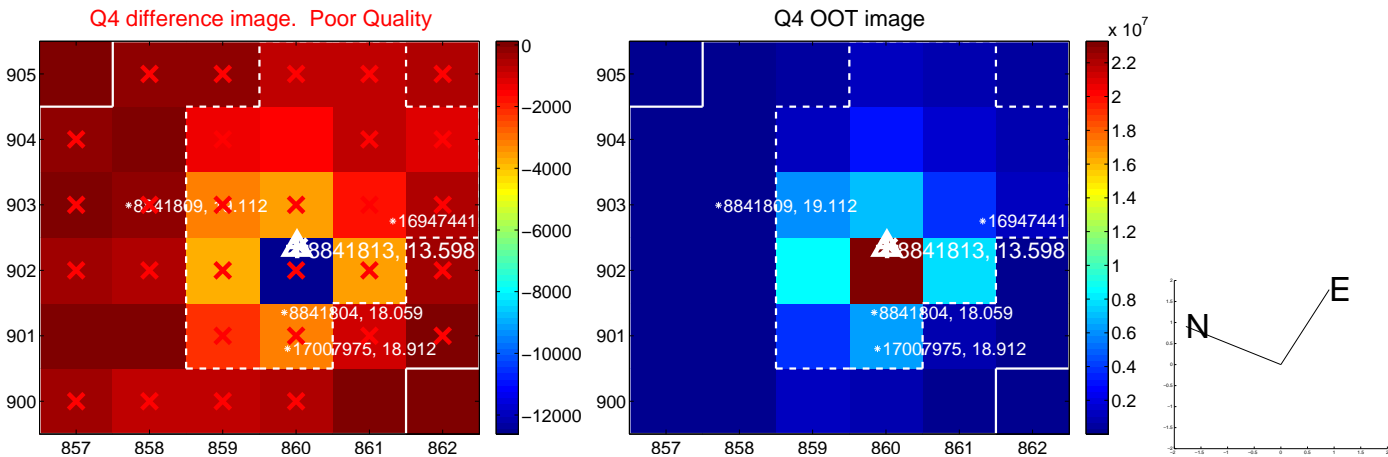
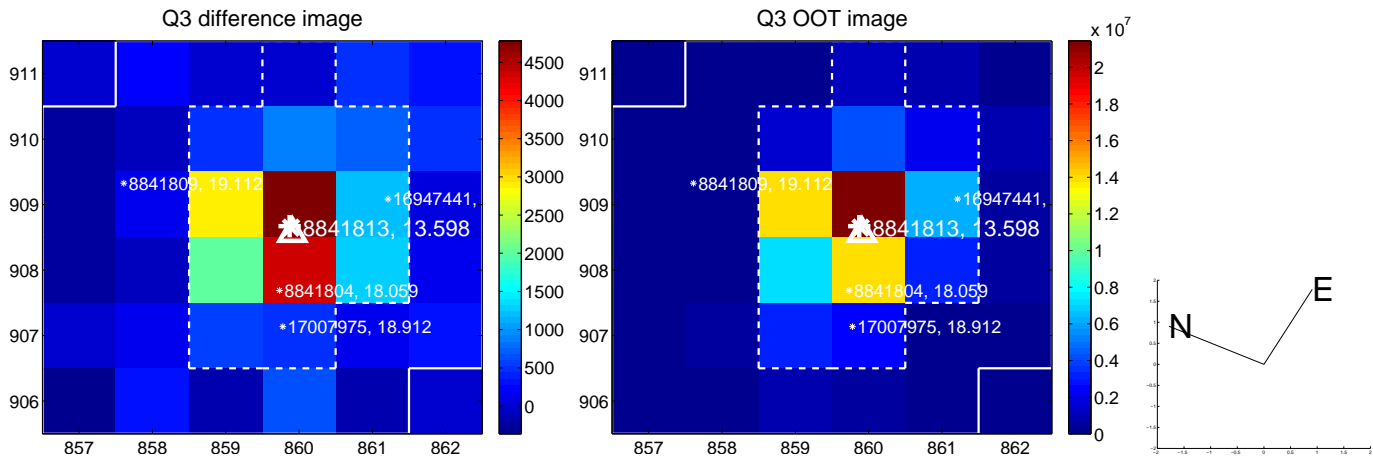
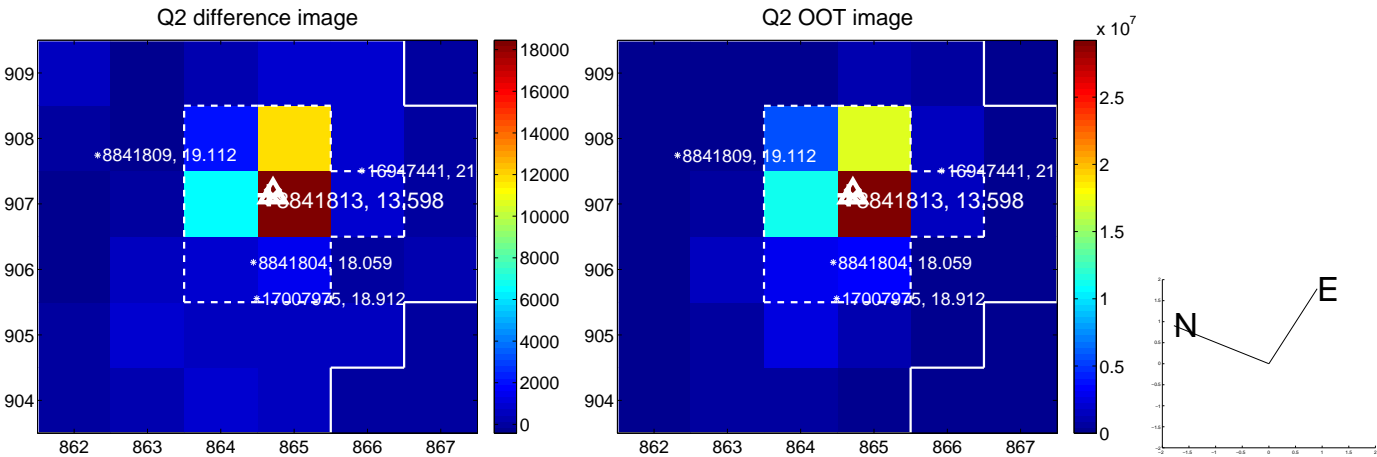
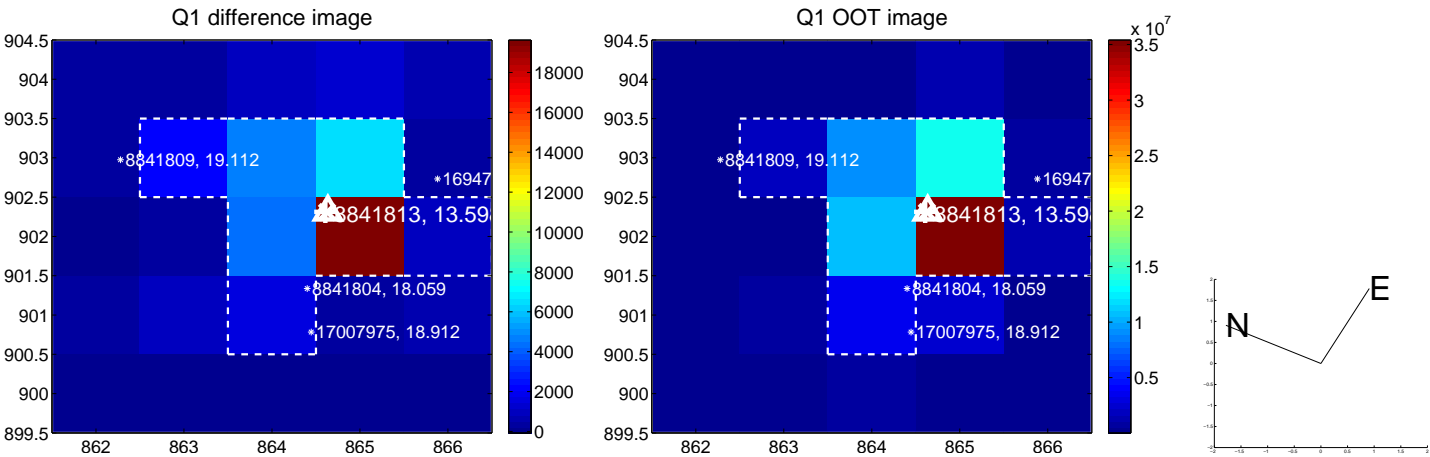
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.073	0.19	-0.013 ± 0.075	0.005 ± 0.071
PRF-fit source offset from KIC position	0.153 ± 0.073	2.08	-0.090 ± 0.076	0.123 ± 0.072
photometric centroid source offset	0.59 ± 0.35	1.69	0.21 ± 0.37	-0.55 ± 0.34

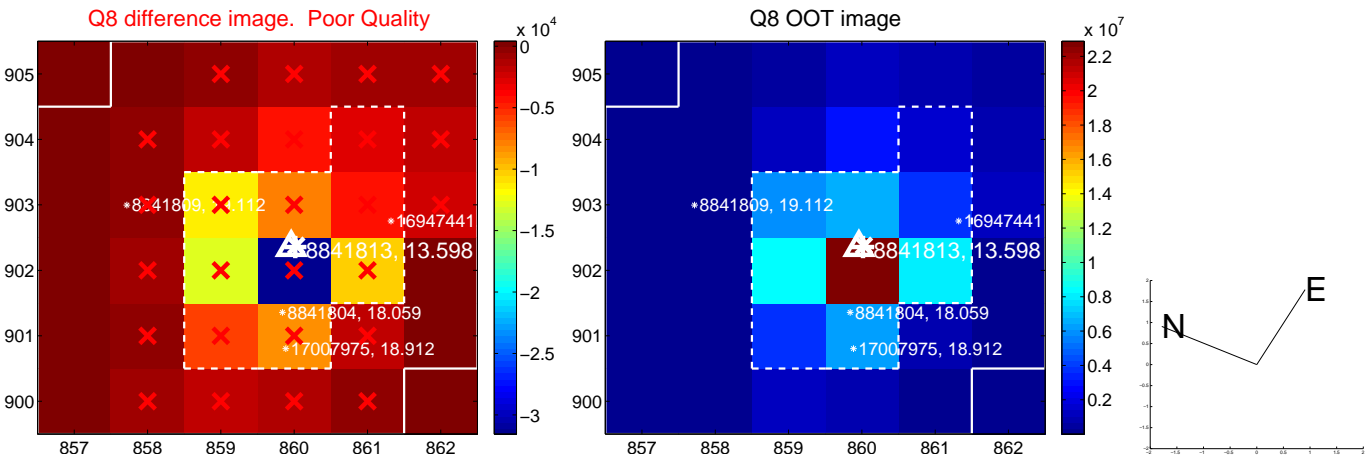
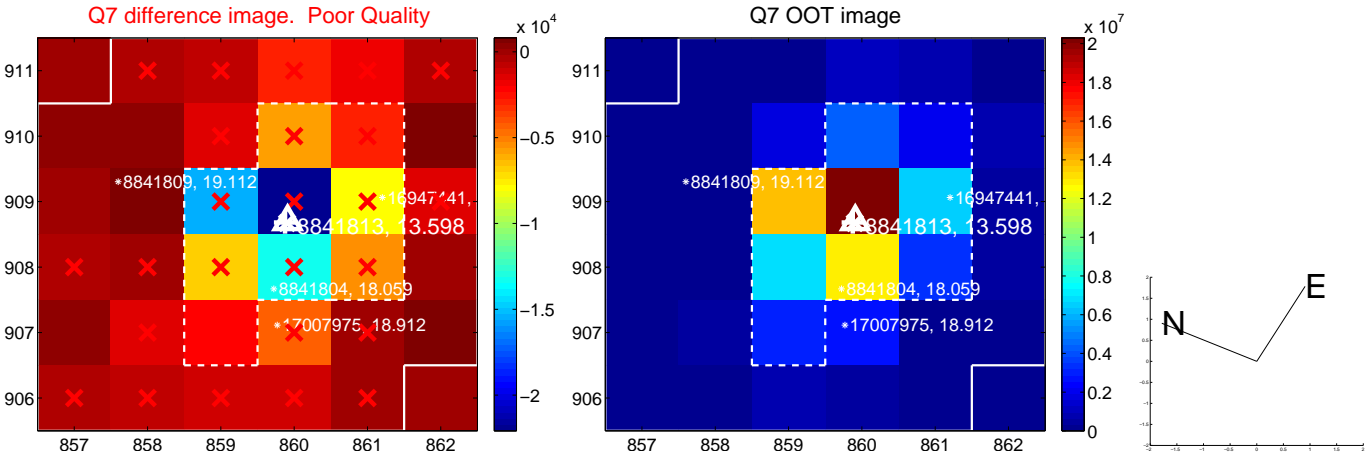
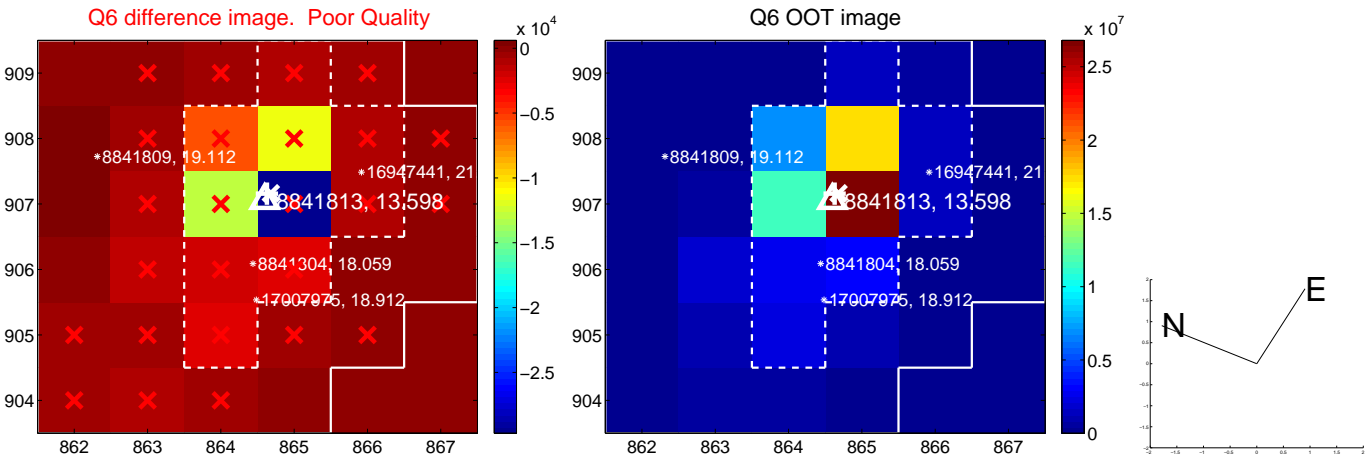
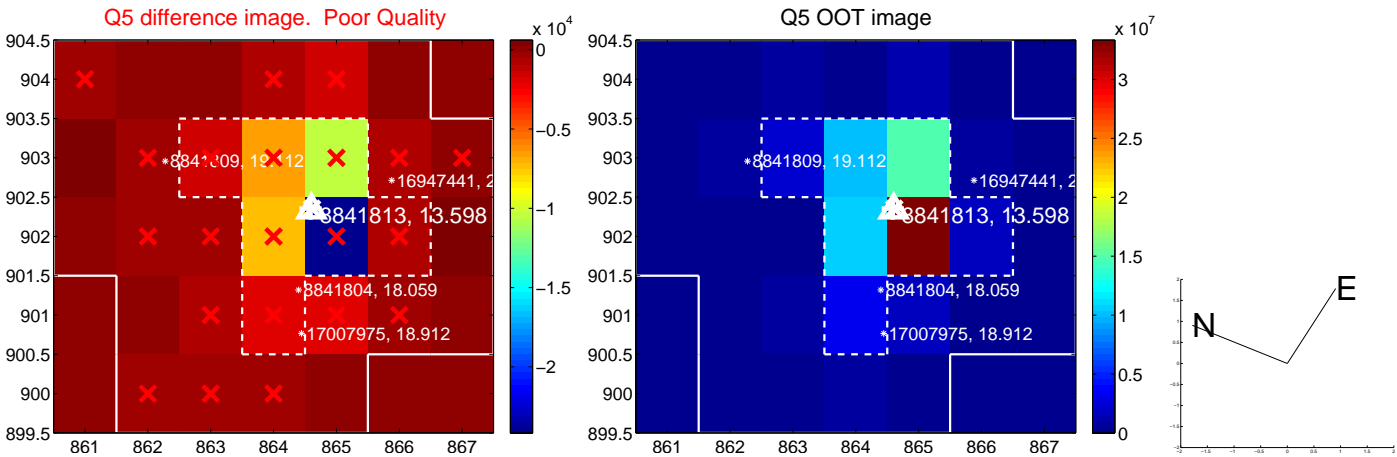


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

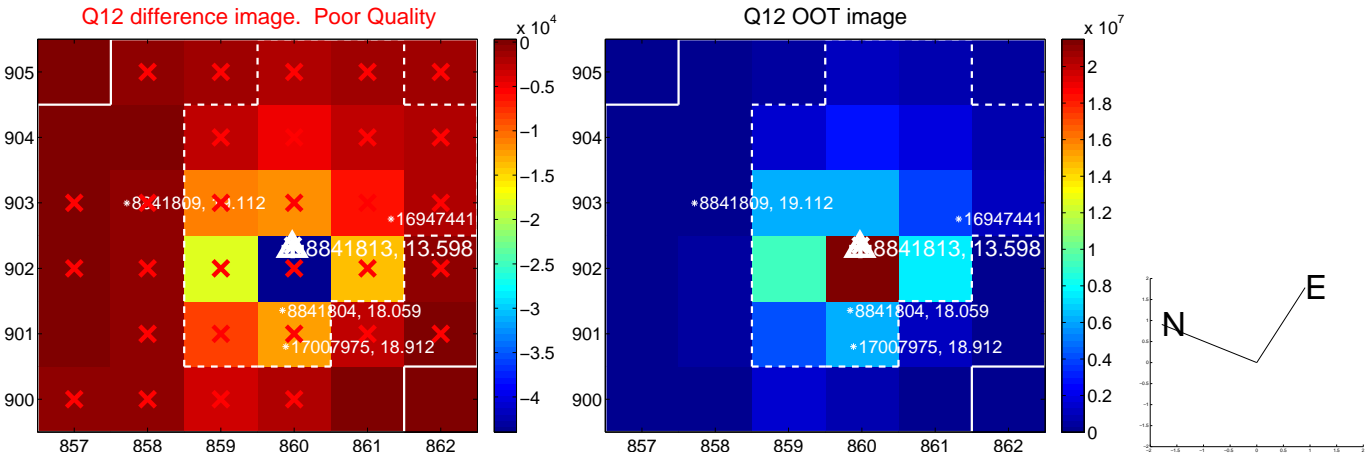
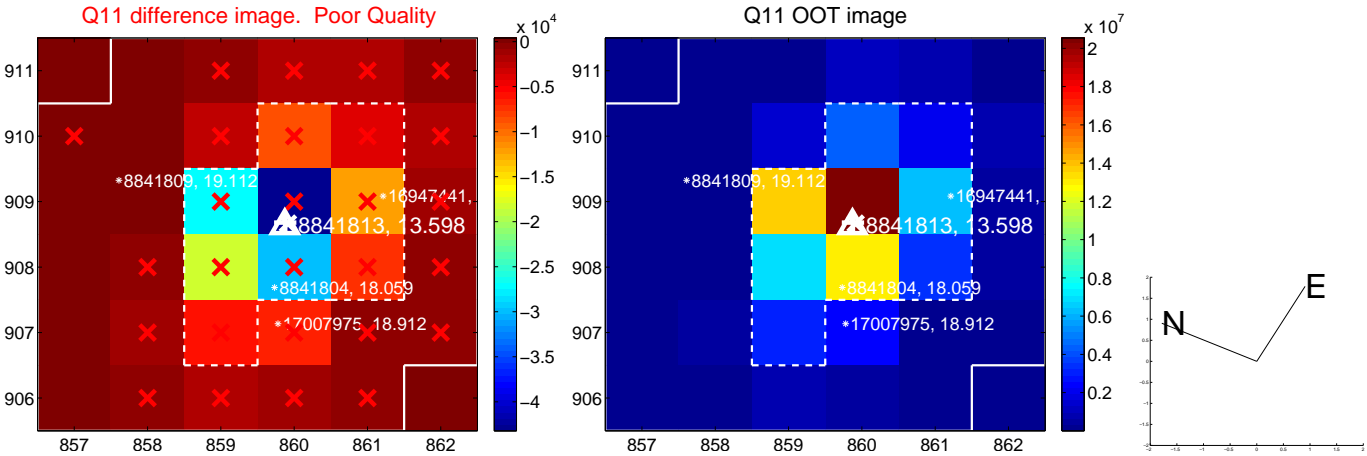
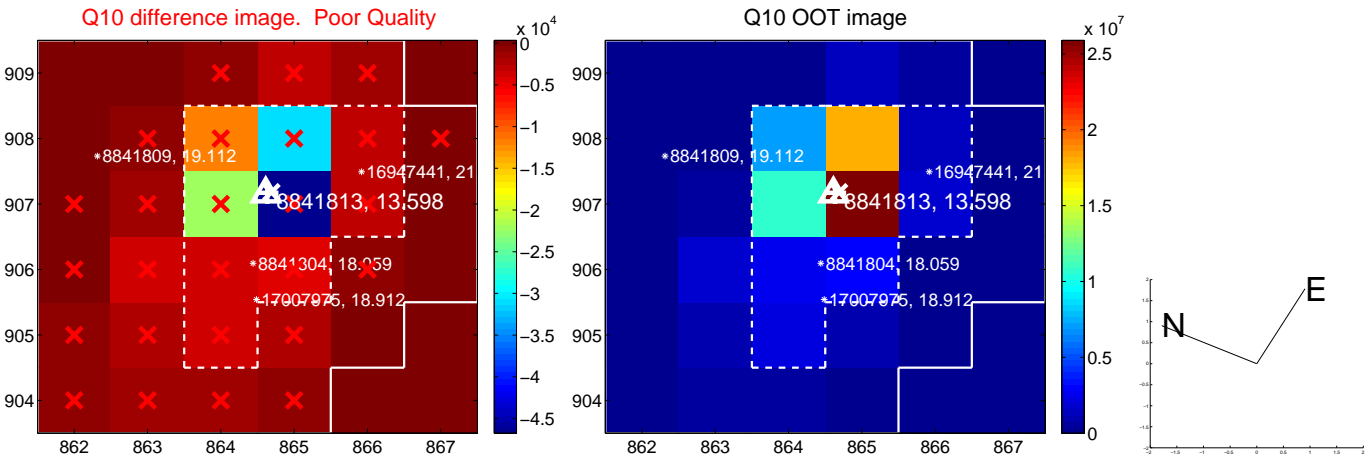
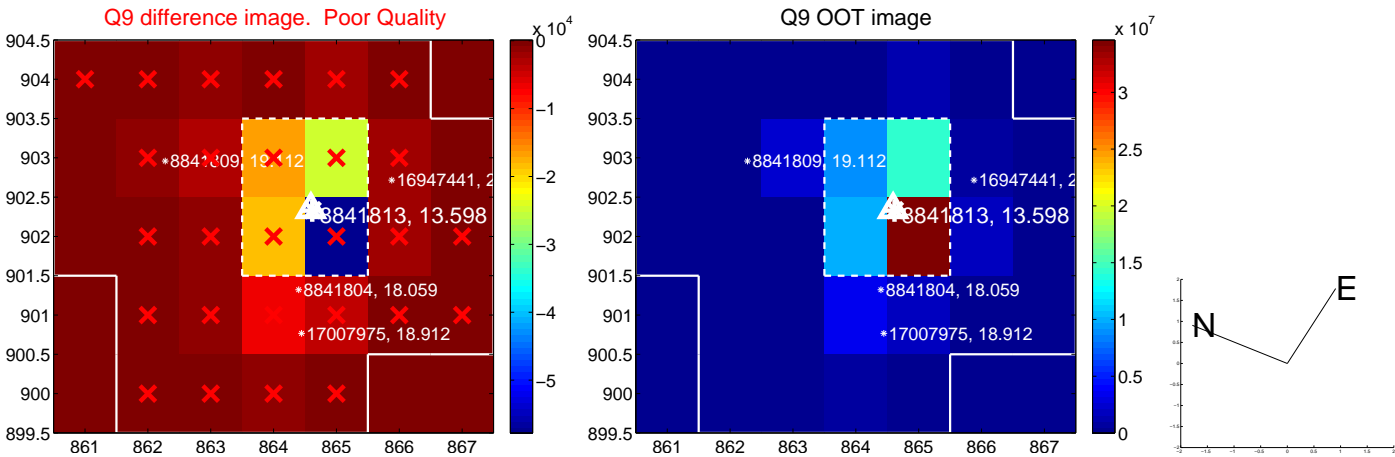
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



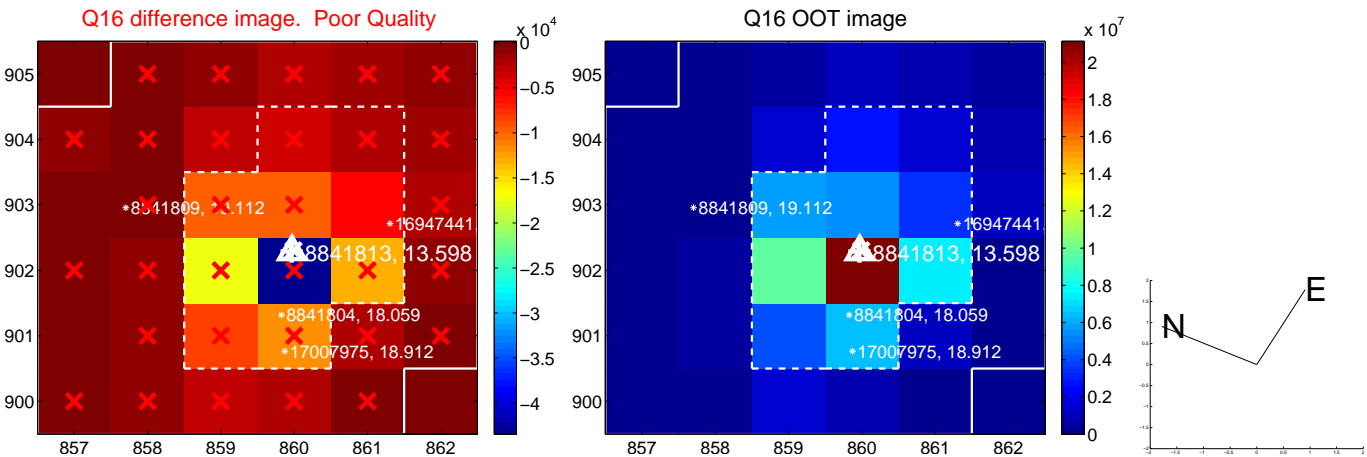
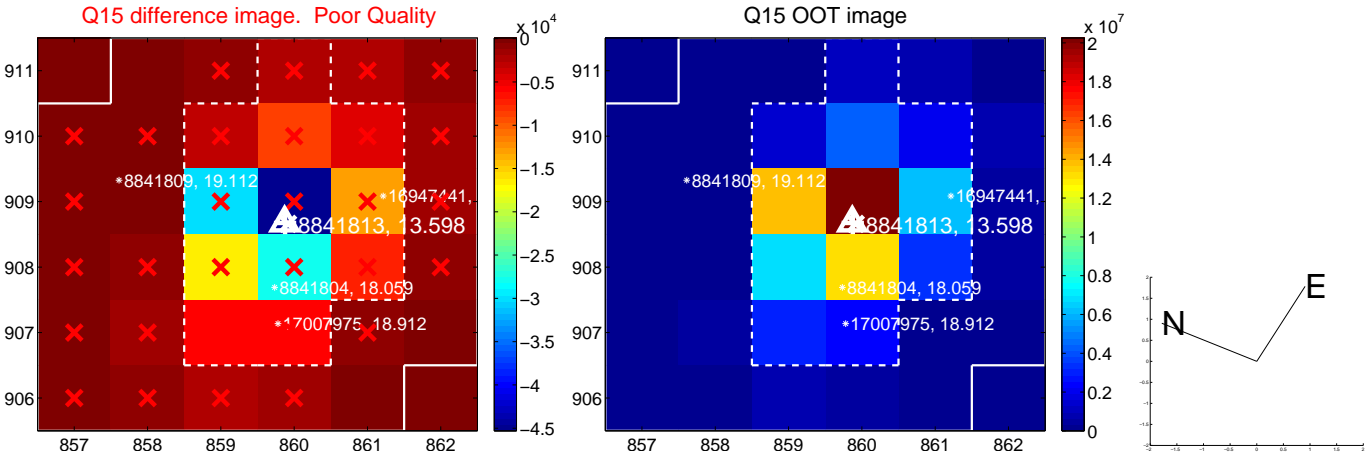
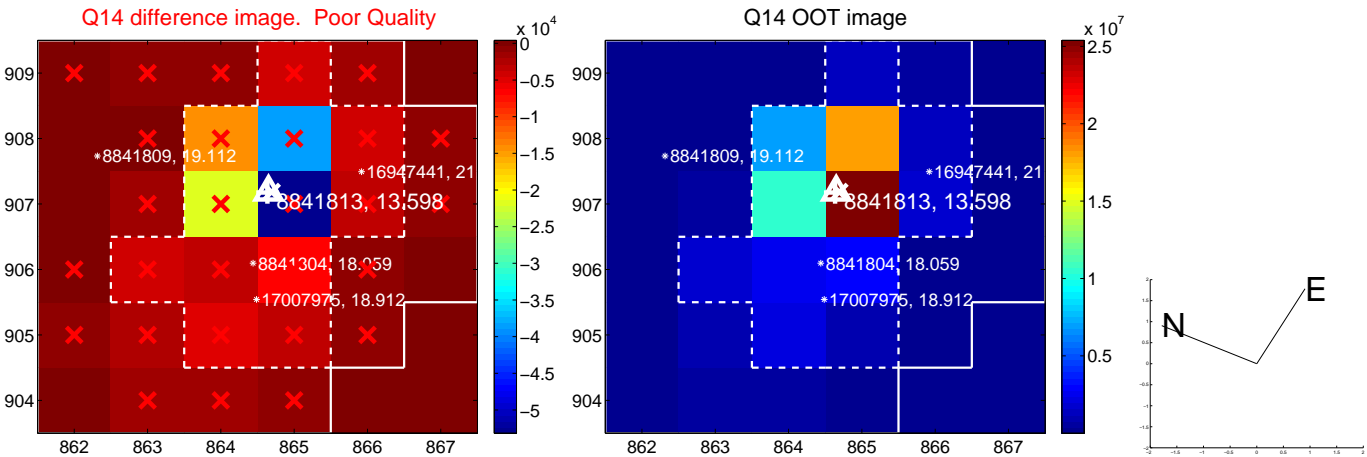
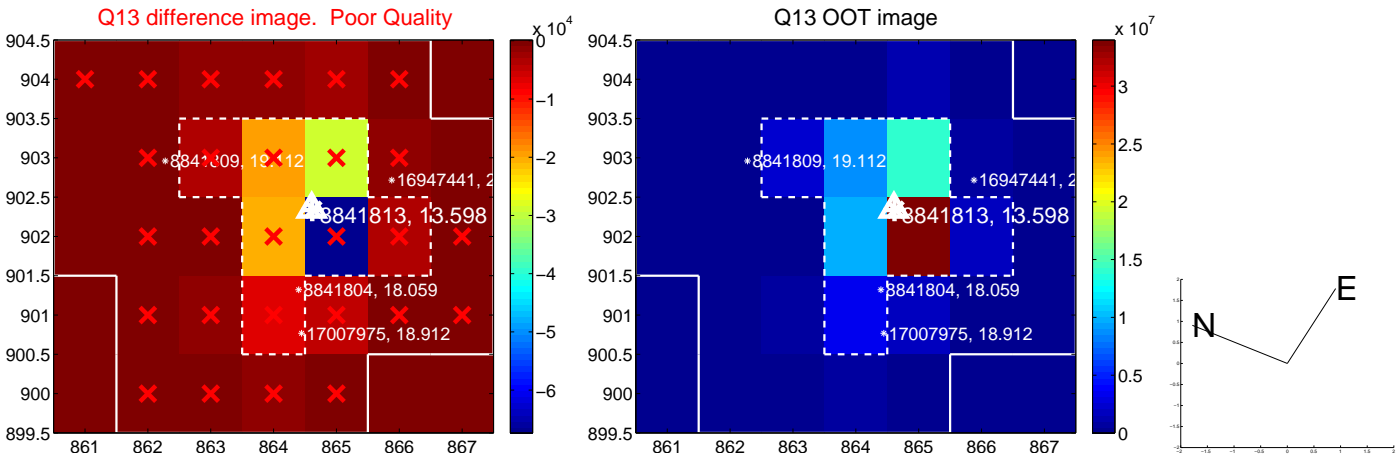
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



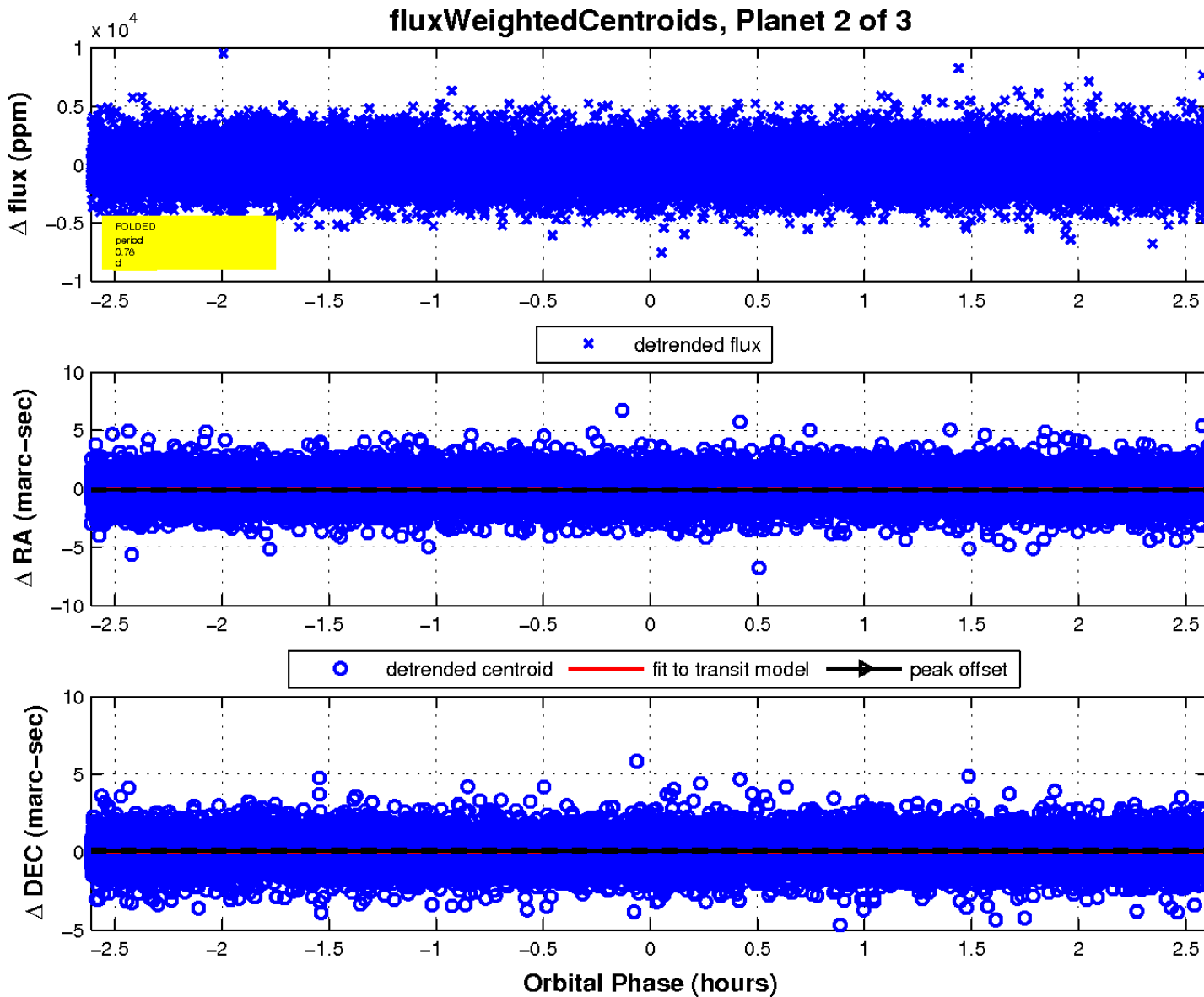
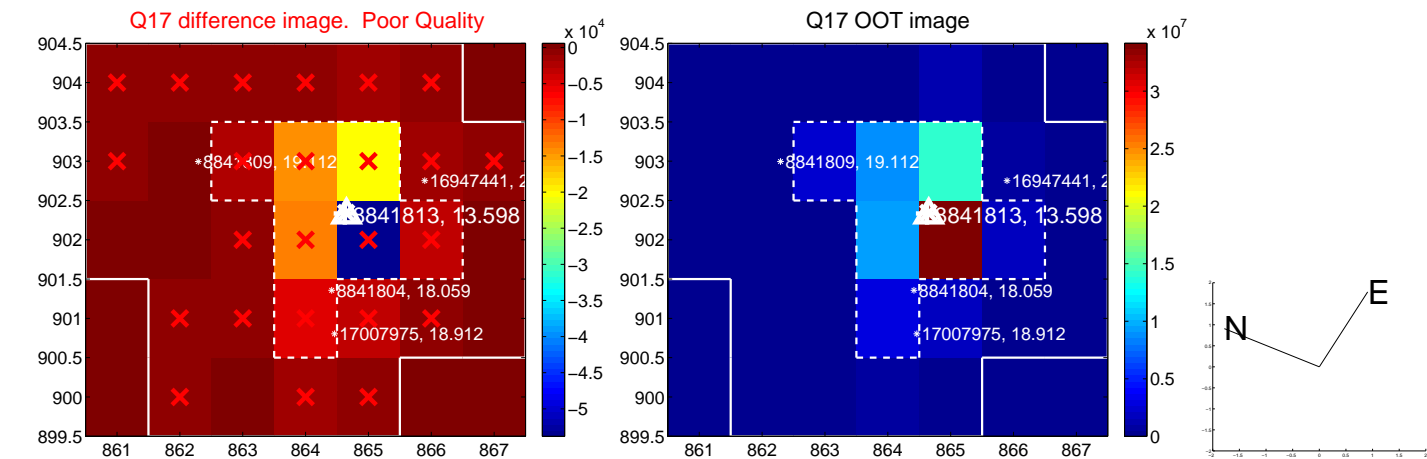
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



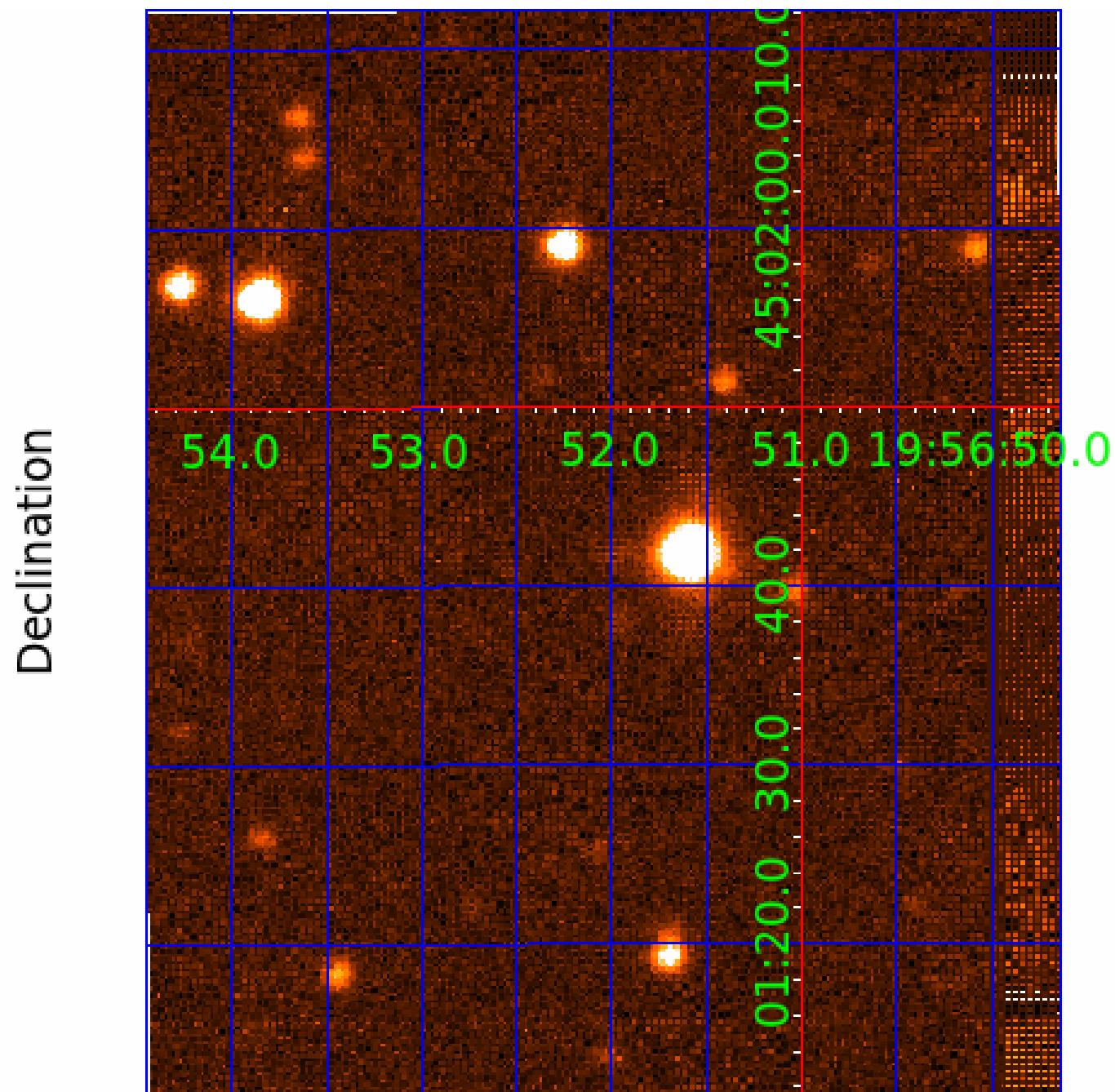
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008841813

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})
008841813-01	OBS	No	0.779595	132.326346	99.3	0.921	11.0	4.2	2.86	6168	2.90	31037.77
008841813-02	OBS	No	0.779616	132.041015	162.2	0.870	8.2	6.0	2.86	6168	4.28	31036.65
008841813-03	OBS	No	0.779673	131.745327	134.8	1.752	7.6	7.5	2.86	6168	3.90	31033.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008841813-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008841813-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008841813-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

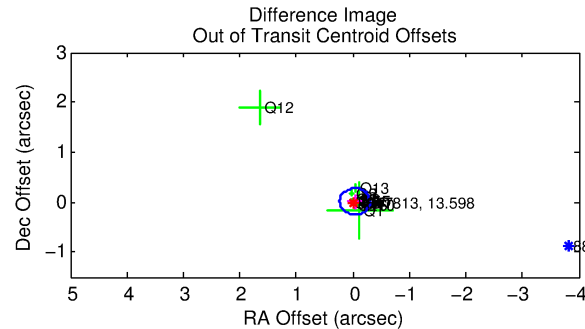
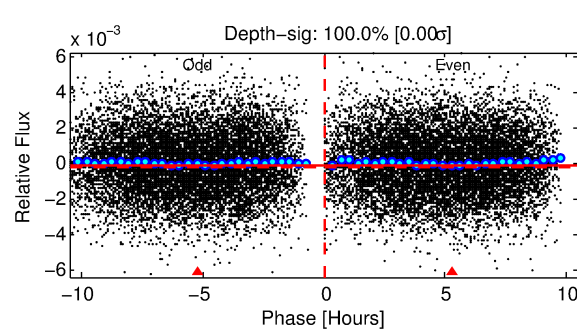
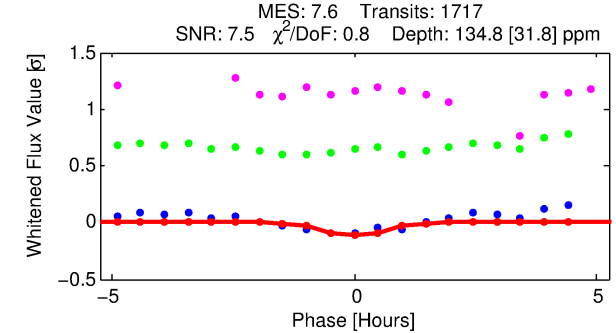
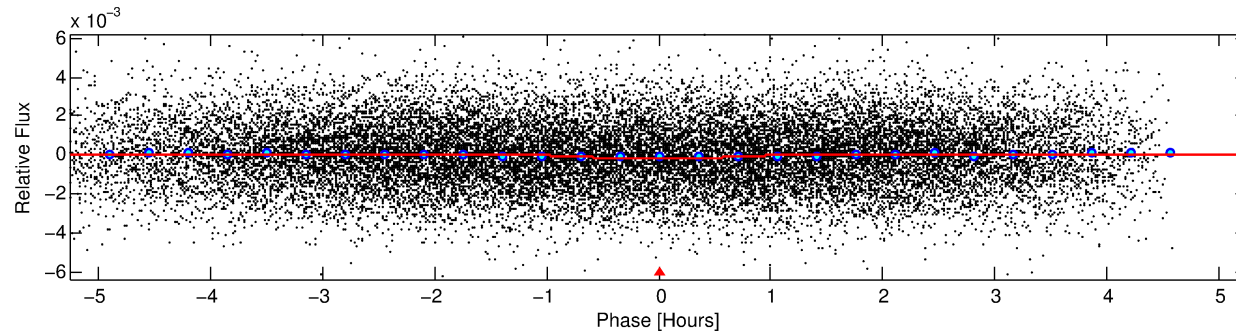
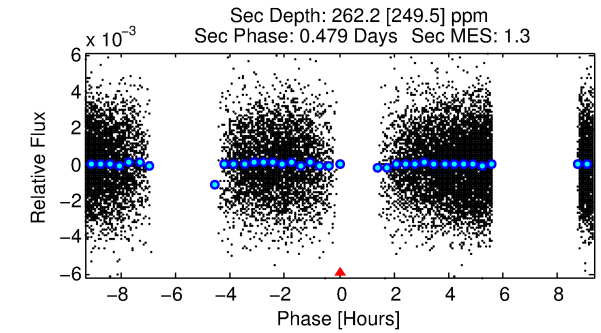
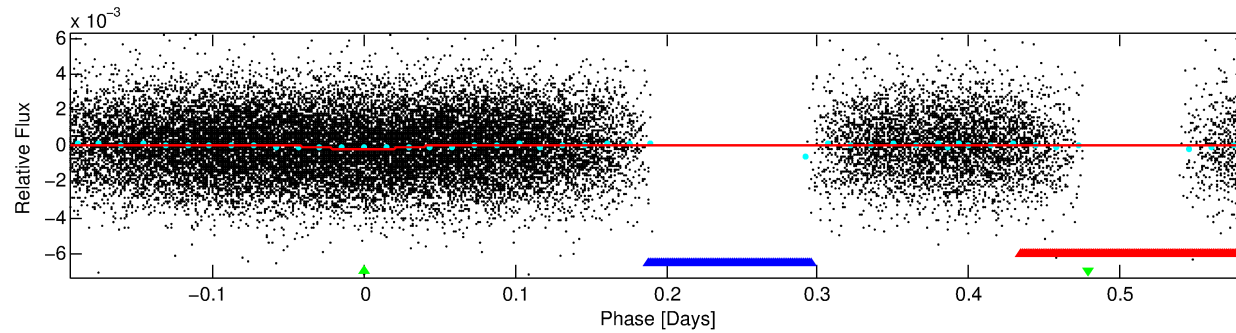
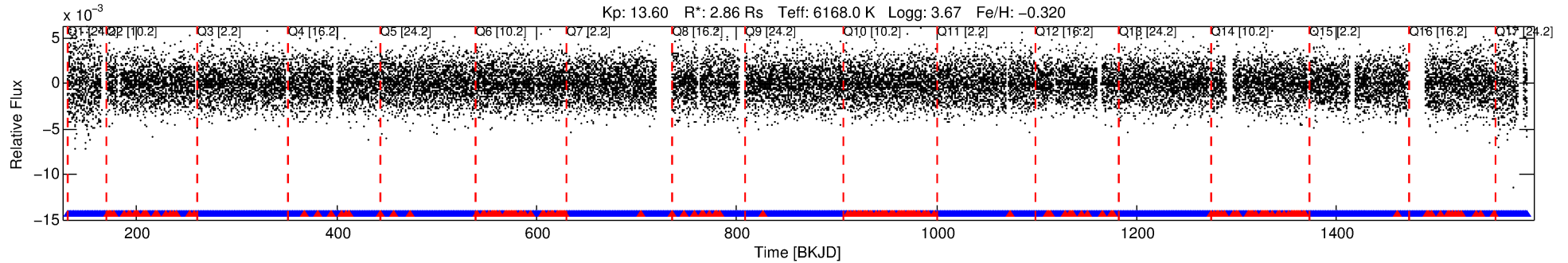
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008841813-03

No Significant Match Found

DV One-Page Summary

KIC: 8841813 Candidate: 3 of 3 Period: 0.780 d



DV Fit Results:

Period = 0.77967 [0.00002] d
Epoch = 131.7453 [0.0044] BKJD
Rp/R* = 0.0125 [0.0179]
a/R* = 1.84 [10.19]
b = 0.90 [1.69]
Seff = 31033.60 [32553.15]
Teq = 3384 [888] K
Rp = 3.90 [6.06] Re
a = 0.0185 [0.0115] AU
Ag = 3.24 [10.34] [0.22 σ]
Teffp = 7019 [5304] K [0.68 σ]

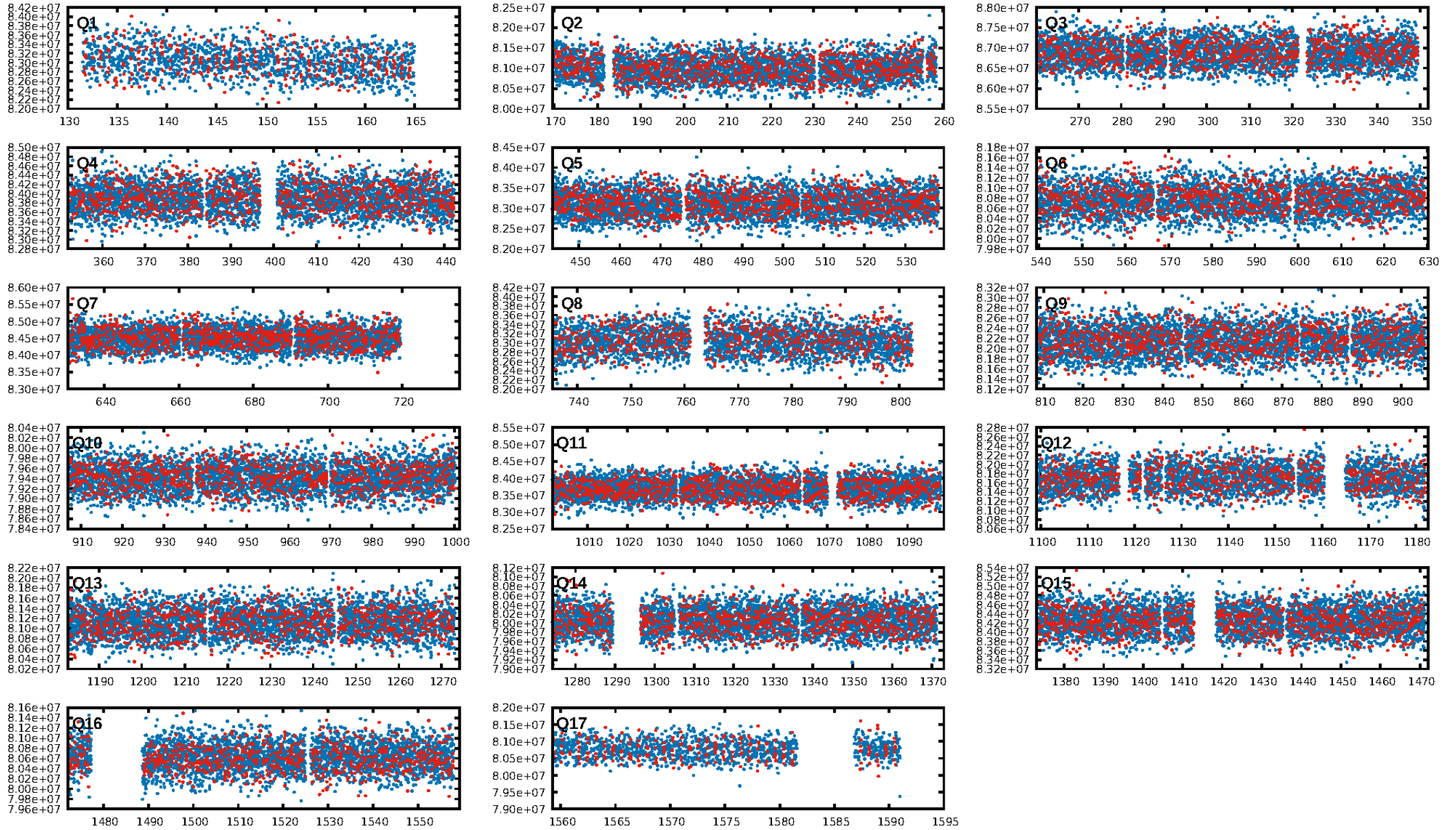
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 5.77e-29
RollingBand-fgt: 0.89 [1453/1641]
GhostDiagnostic-chr: 0.8394
Centroid-sig: 0.0%
Centroid-so: 0.808 arcsec [2.72 σ]
OotOffset-rm: 0.033 arcsec [0.36 σ]
KicOffset-rm: 0.166 arcsec [1.98 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

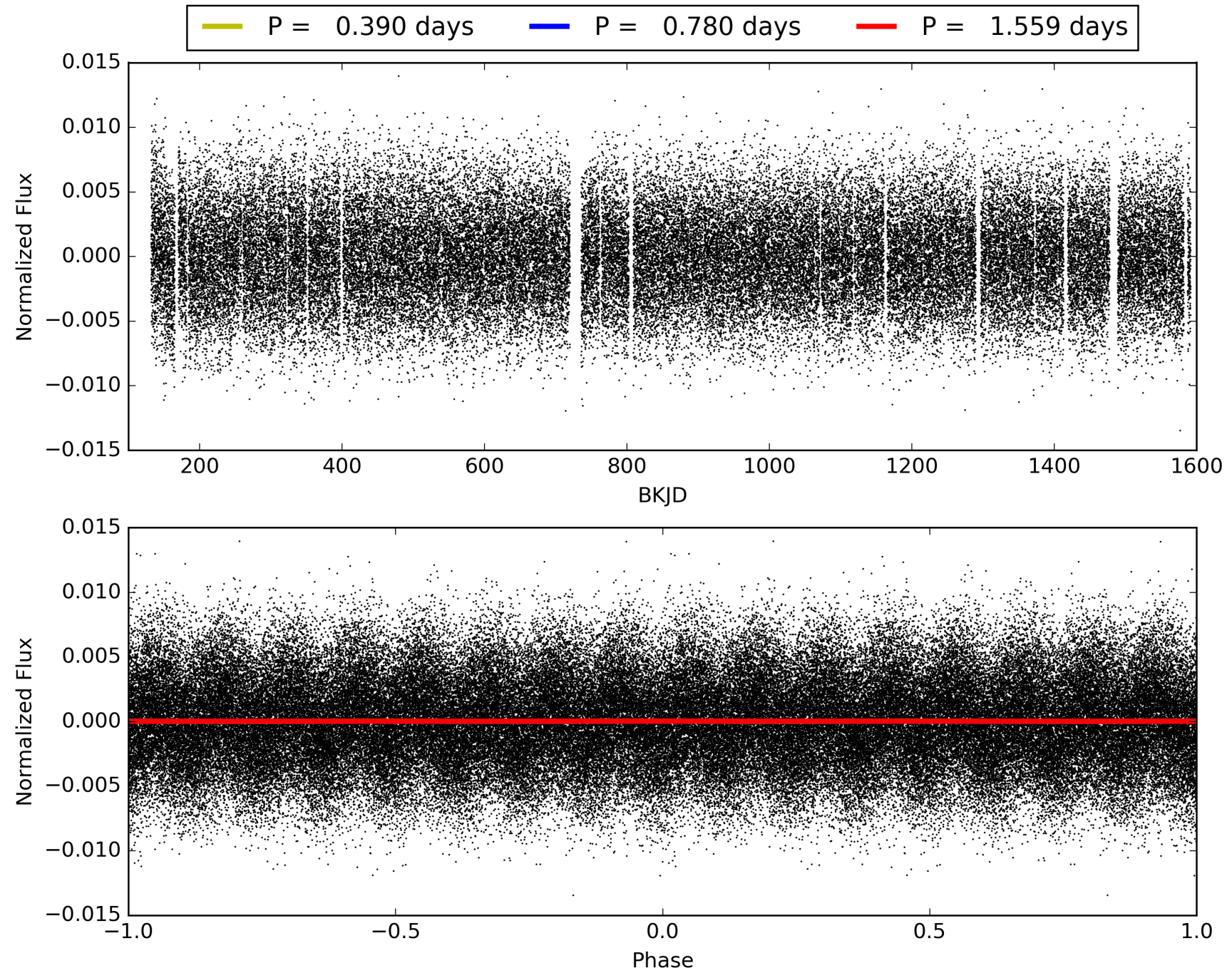
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:27:54 Z

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

TCE 008841813-03, PDC Light Curves

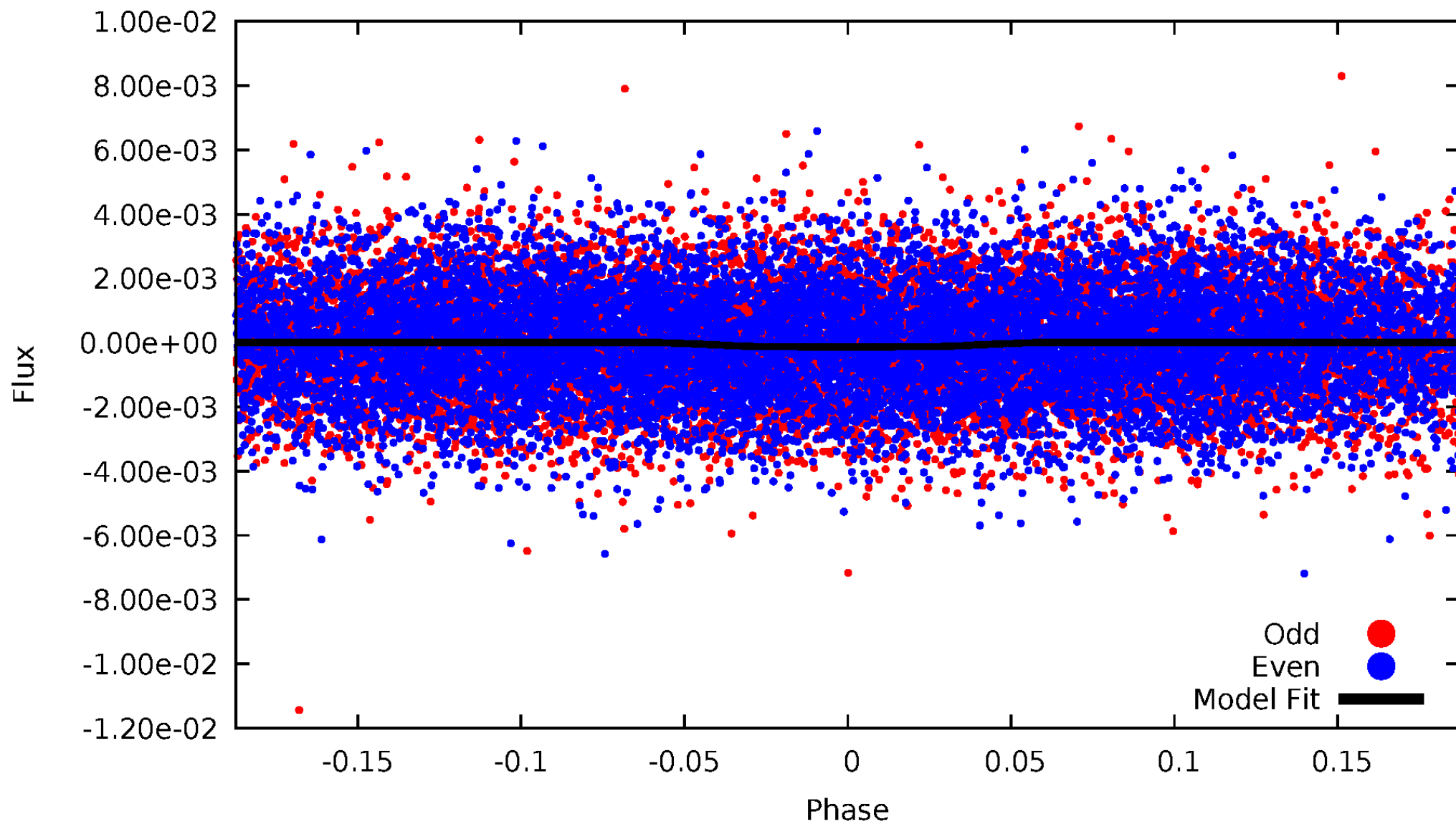


TCE 008841813-03



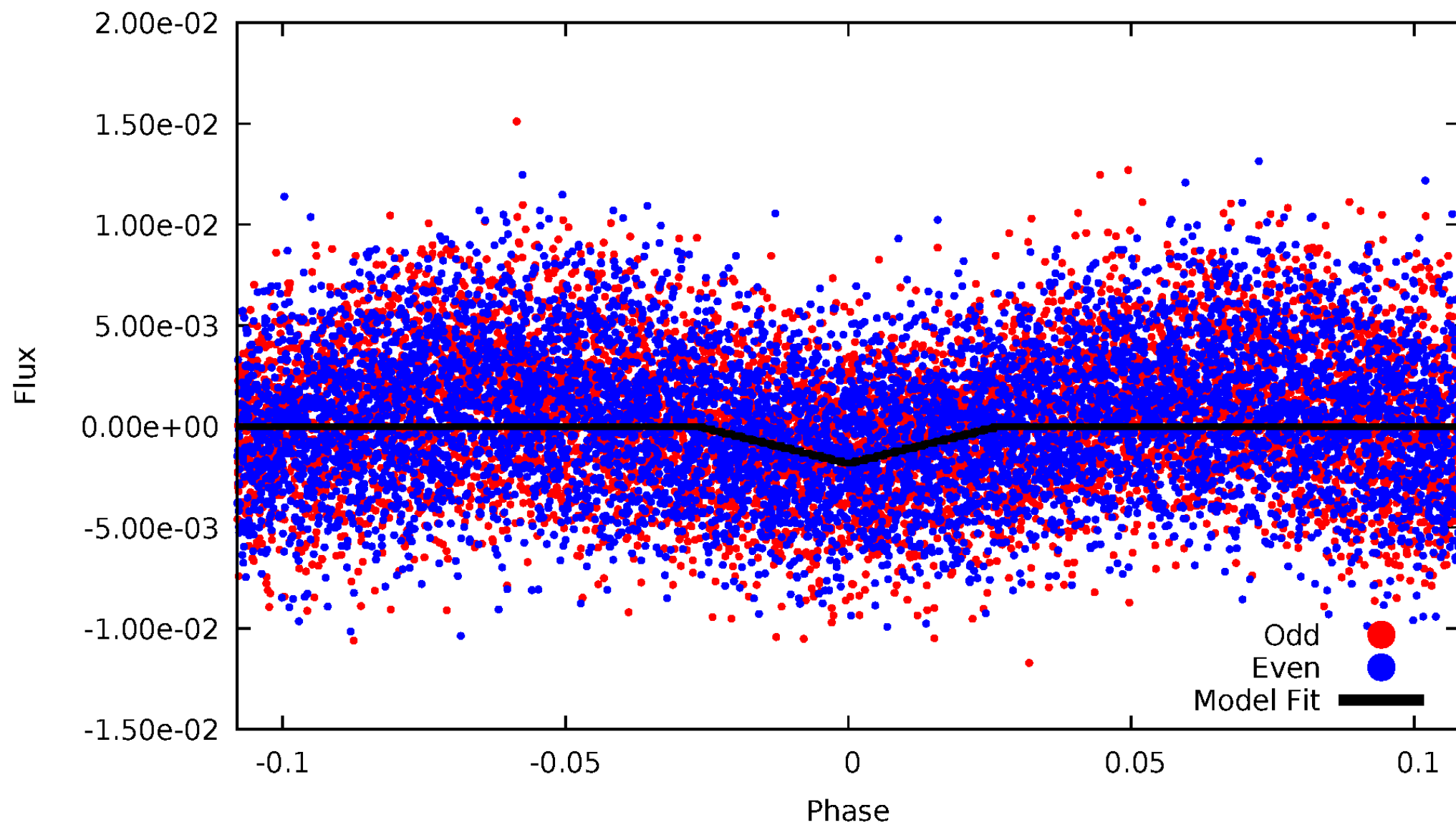
DV Odd/Even

TCE 008841813-03



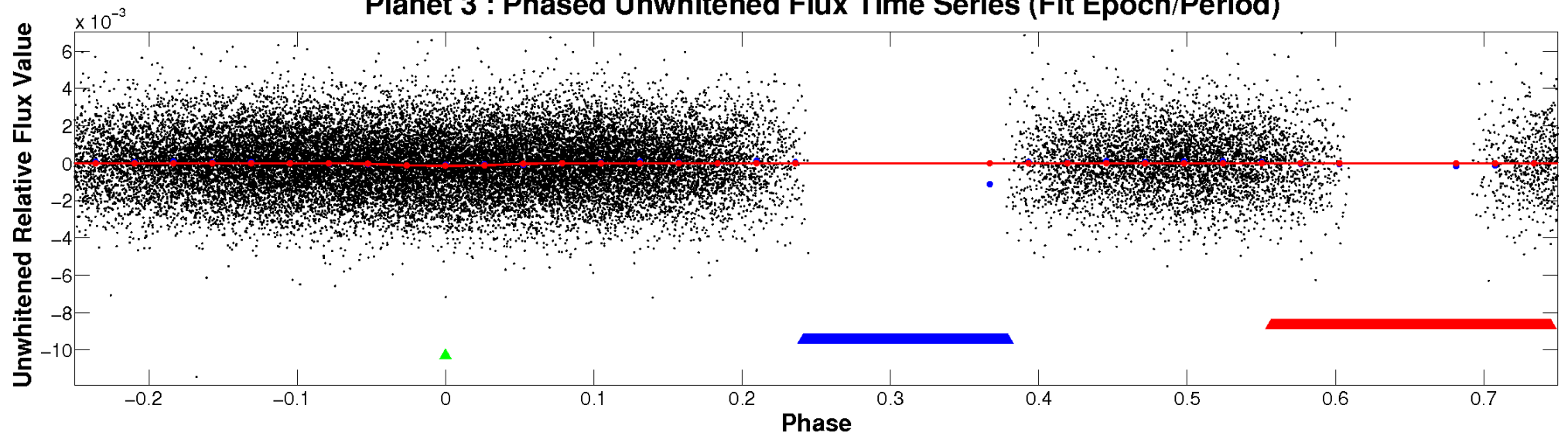
ALT Odd/Even

TCE 008841813-03

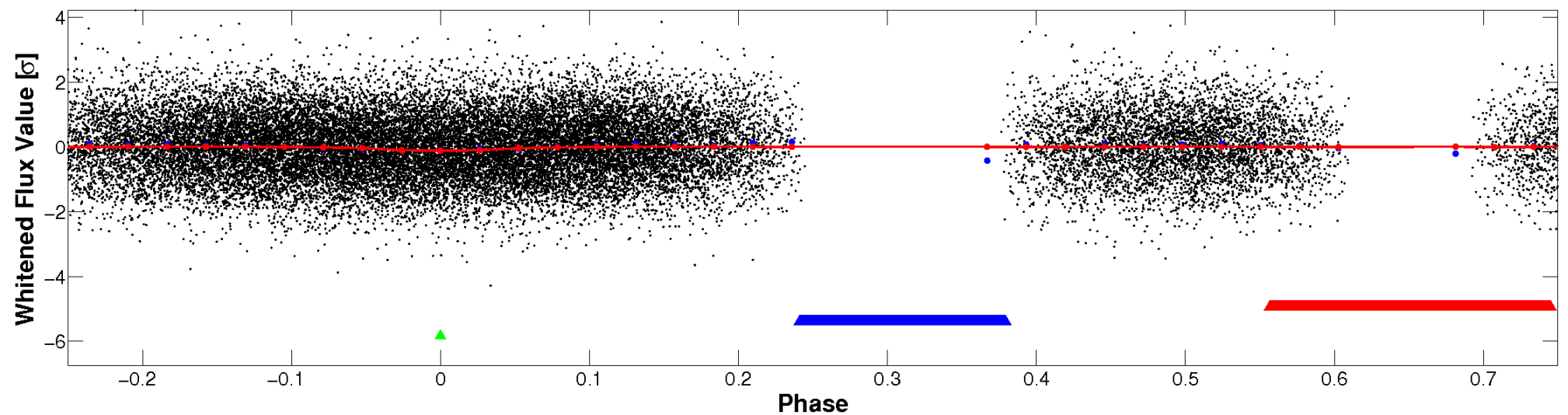


Non-Whitened Vs. Whitened Light Curve

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

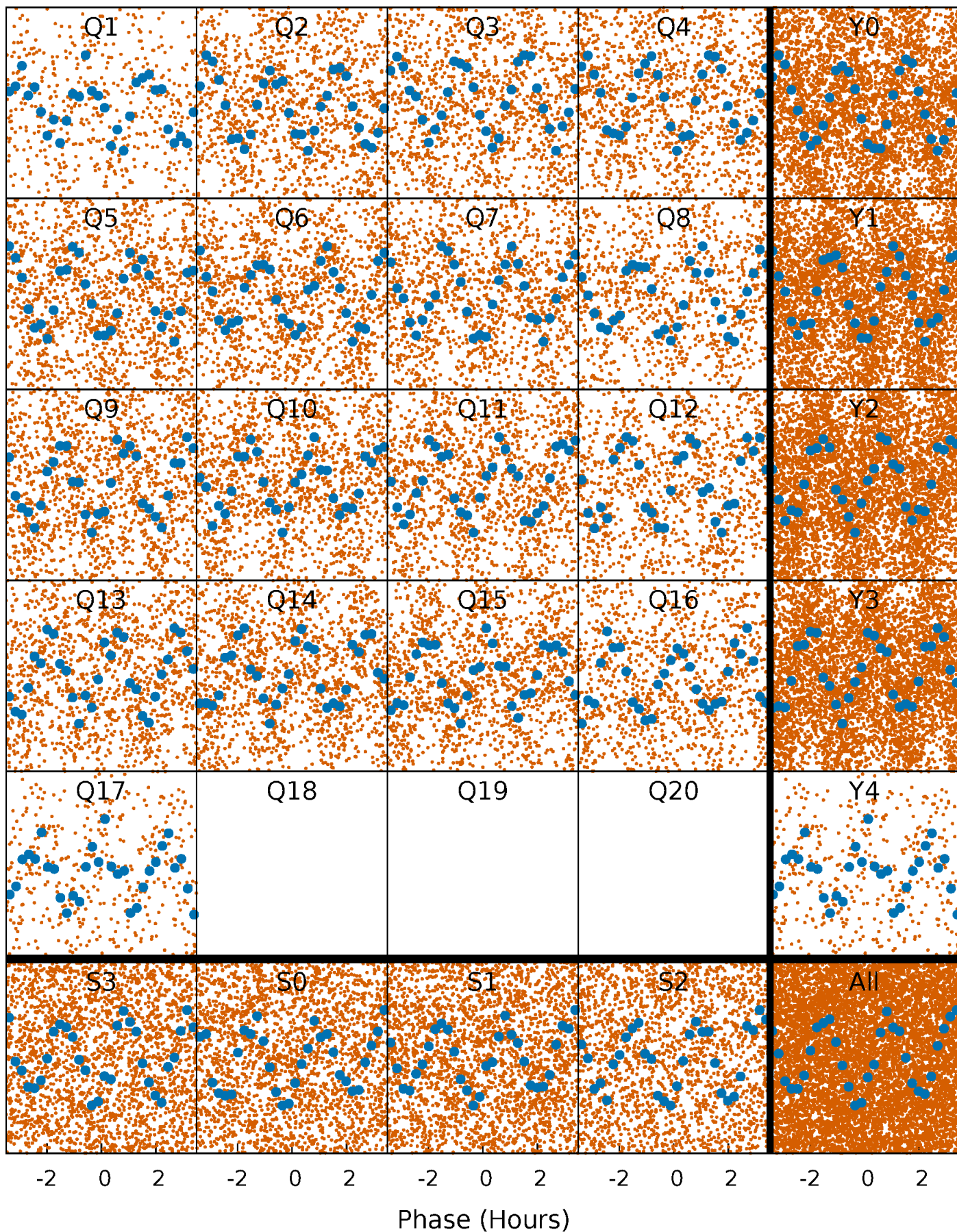


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



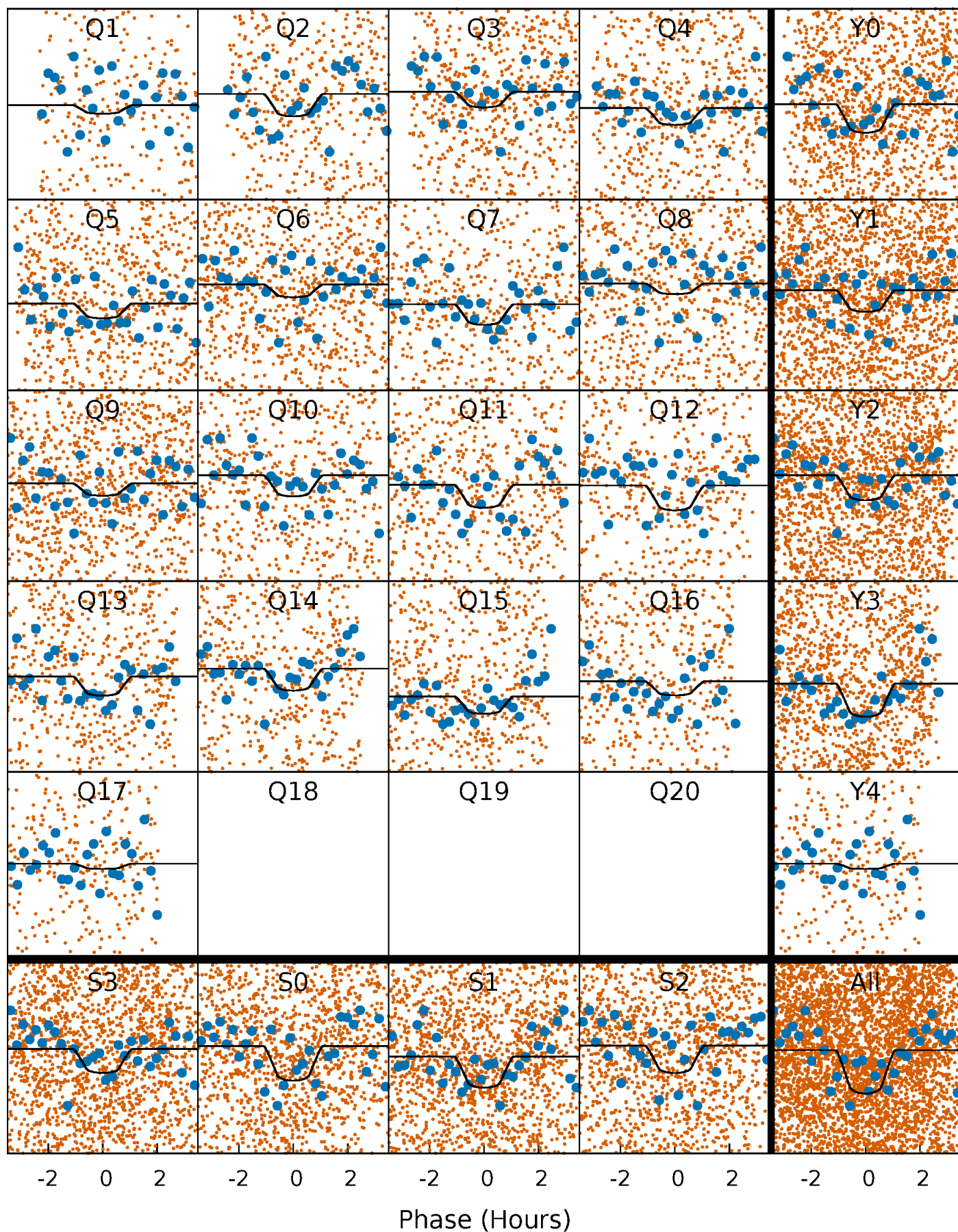
PDC Quarter-Phased Transit Curves

TCE 008841813-03 P= 0.779673 Days $T_0=131.745327$ (BKJD)



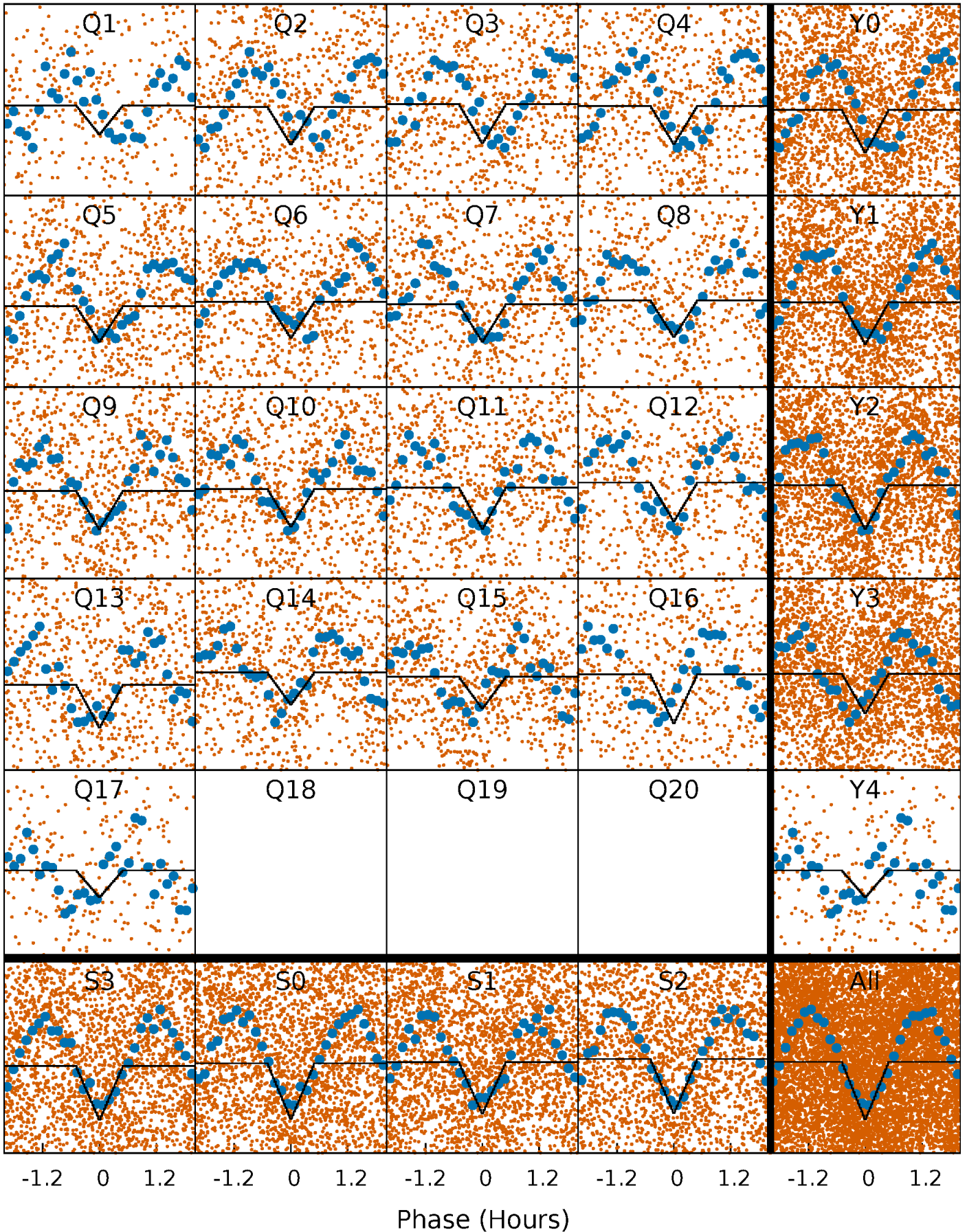
DV Quarter-Phased Transit Curves

TCE 008841813-03 P= 0.779673 Days $T_0=131.745327$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

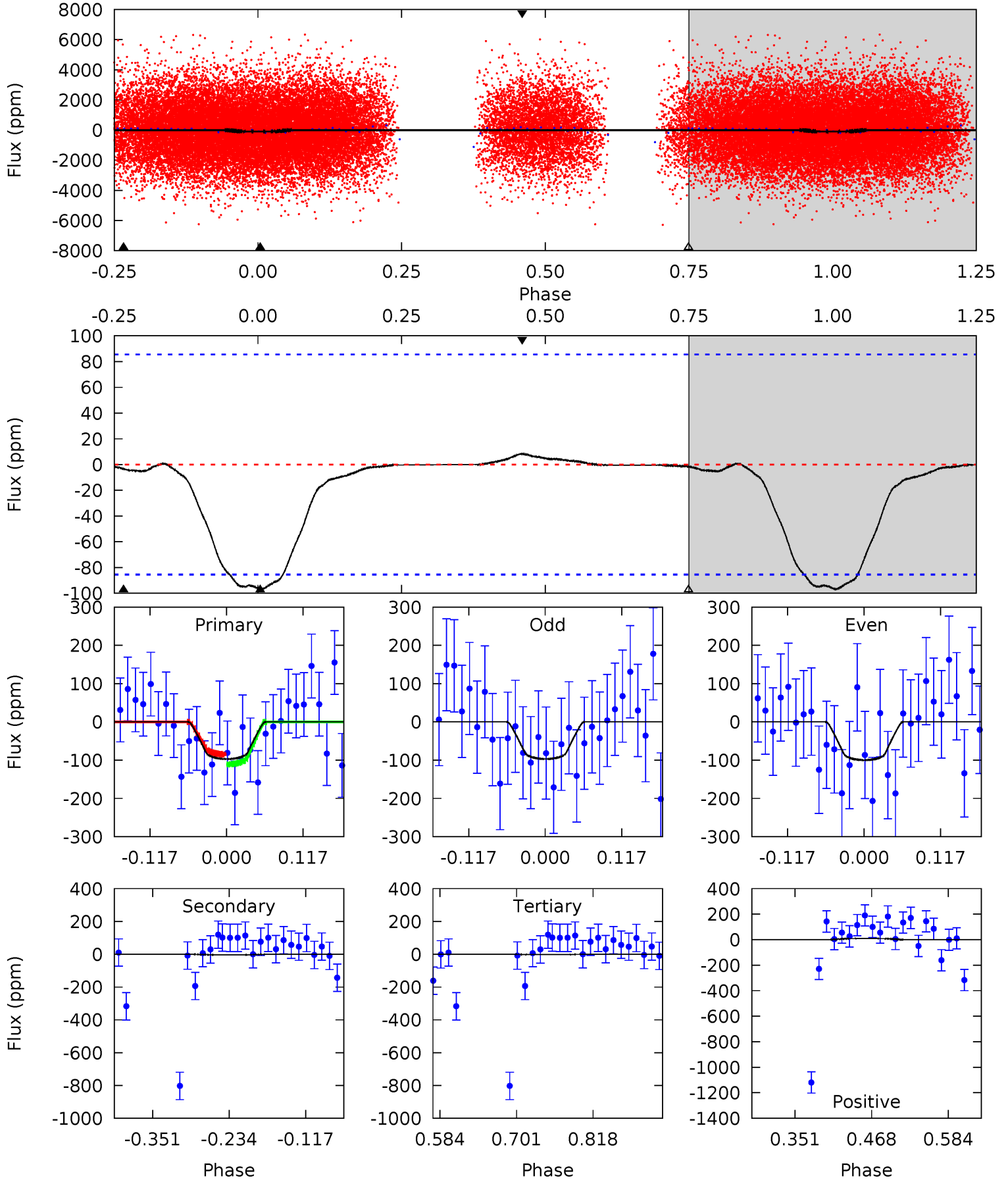
TCE 008841813-03 P= 0.779657 Days $T_0=131.748161$ (BKJD)



DV Model-Shift Uniqueness Test

008841813-03, P = 0.779673 Days, E = 130.965654 Days

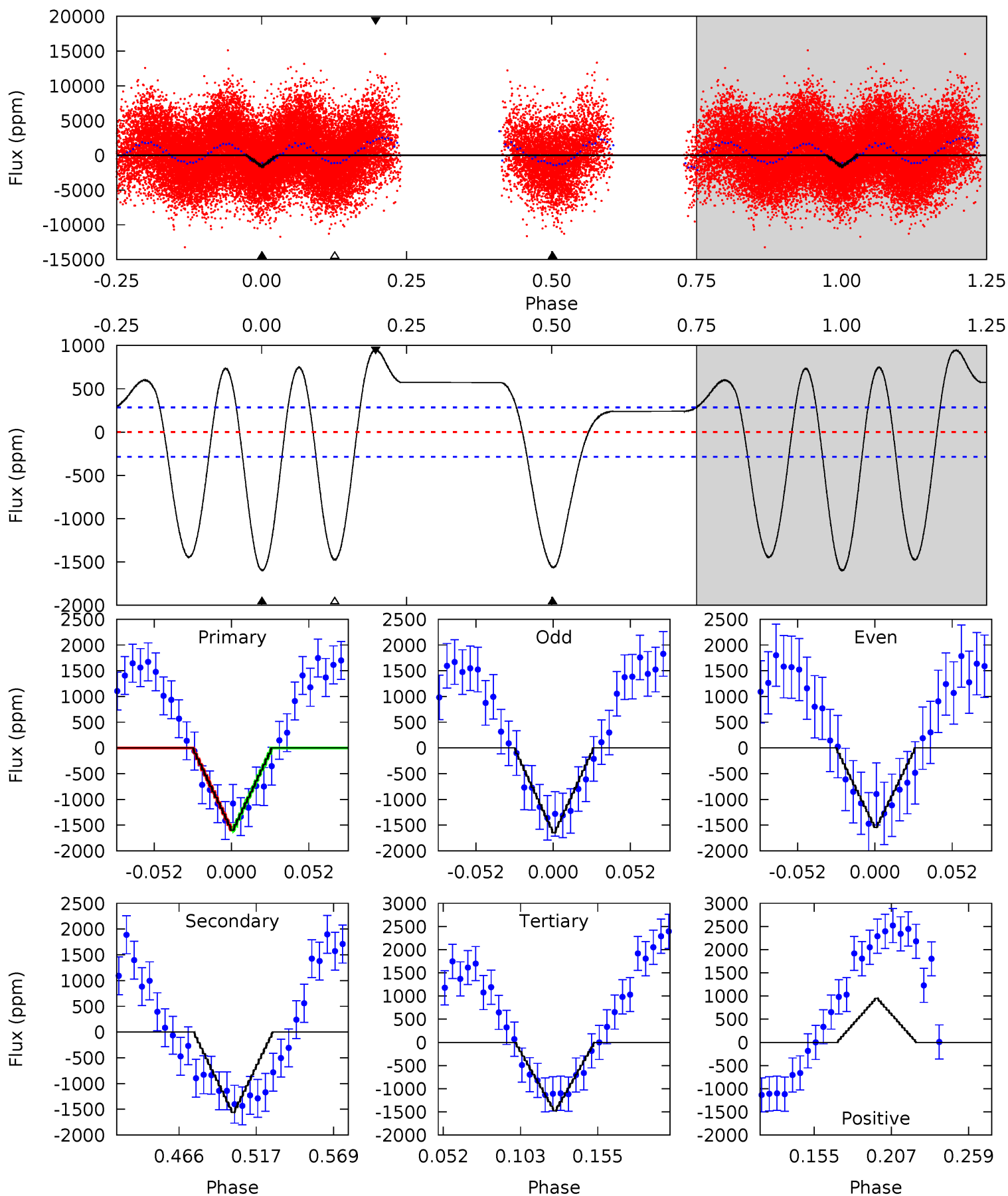
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.15	0.20	0.10	0.46	4.53	1.57	0.36	5.05	4.69	0.10	-0.26	0.08	1.06	0.08	0.69



Alt Model-Shift Uniqueness Test

008841813-03, P = 0.779657 Days, E = 130.968504 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	25.8	24.3	15.7	4.70	1.95	13.2	2.02	10.7	1.46	10.1	0.85	0.99	0.37	0.07



Stellar Parameters For KIC 008841813

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6168^{+210}_{-229}	$3.667^{+0.624}_{-0.117}$	$-0.320^{+0.300}_{-0.300}$	$2.860^{+0.573}_{-1.720}$	$1.386^{+0.188}_{-0.439}$	$0.084^{+0.892}_{-0.030}$
	+3%/-4%	+17%/-3%	+94%/-94%	+20%/-60%	+14%/-32%	+1068%/-35%
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 008841813-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 19	$4.83^{+4.72}_{-3.22}$	4593^{+368}_{-745}	-3956^{+7187}_{-484}	$0.019^{+0.402}_{-0.173}$
Alt.	-1565 ± 61	$11.87^{+6.06}_{-5.49}$	4579^{+388}_{-701}	5608^{+2021}_{-911}	$2.131^{+4.544}_{-1.203}$

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 $A_{obs} \gg 1.0$

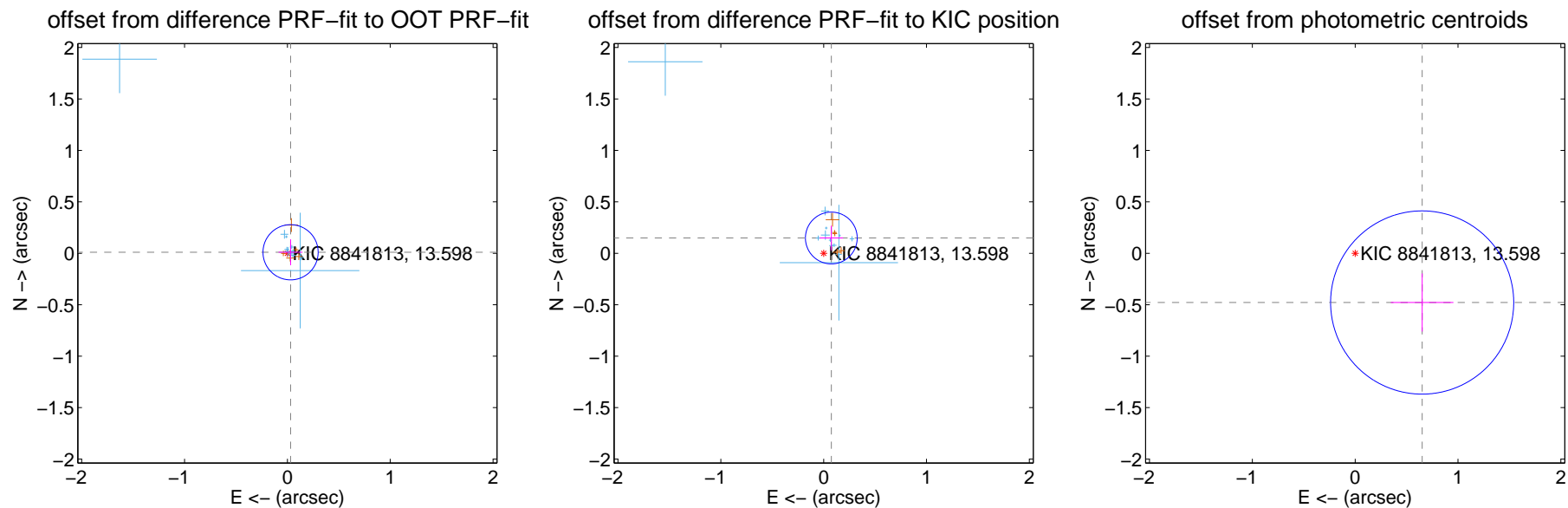
DV Centroid Data

Supplemental centroid analysis for 008841813-03. Kepler magnitude: 13.60. Transit SNR 7.49

There are 12 quarters with good PRF difference image offsets

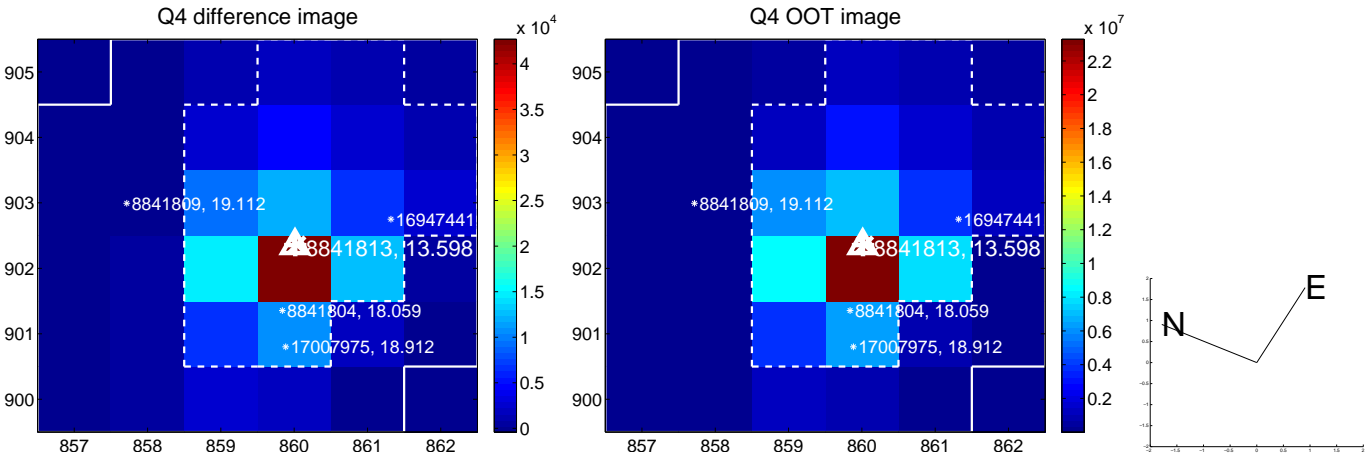
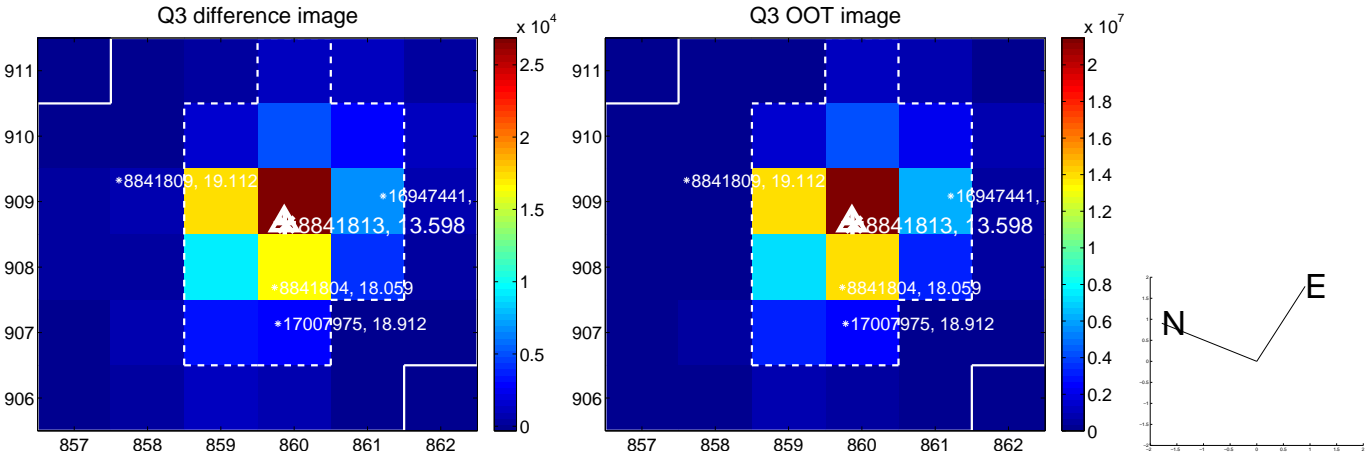
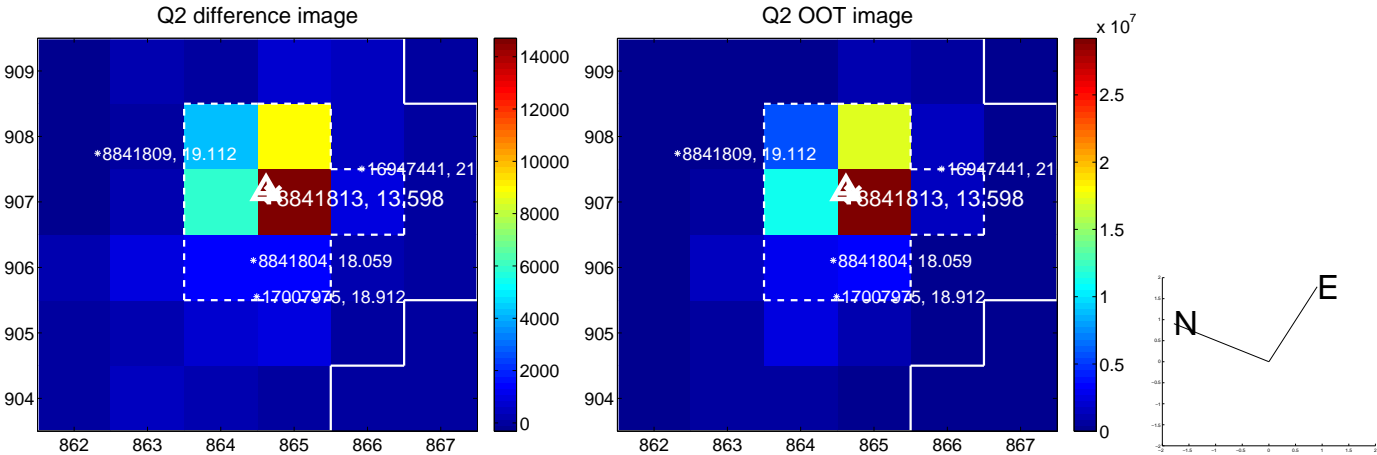
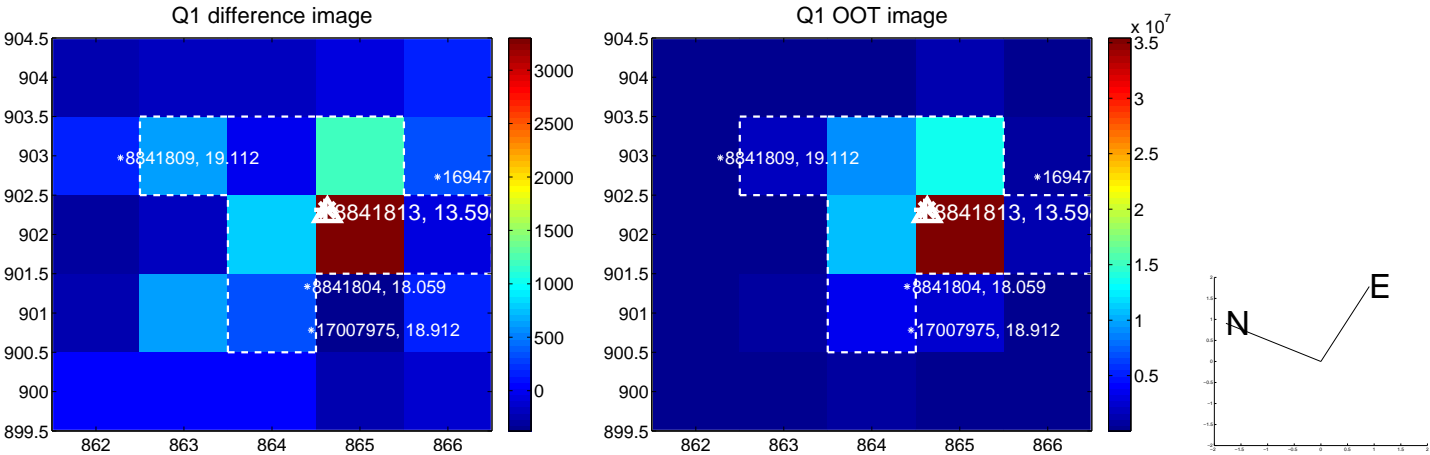
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.089	0.36	-0.031 ± 0.117	0.010 ± 0.126
PRF-fit source offset from KIC position	0.166 ± 0.084	1.98	-0.075 ± 0.114	0.149 ± 0.120
photometric centroid source offset	0.81 ± 0.30	2.72	-0.65 ± 0.30	-0.48 ± 0.28

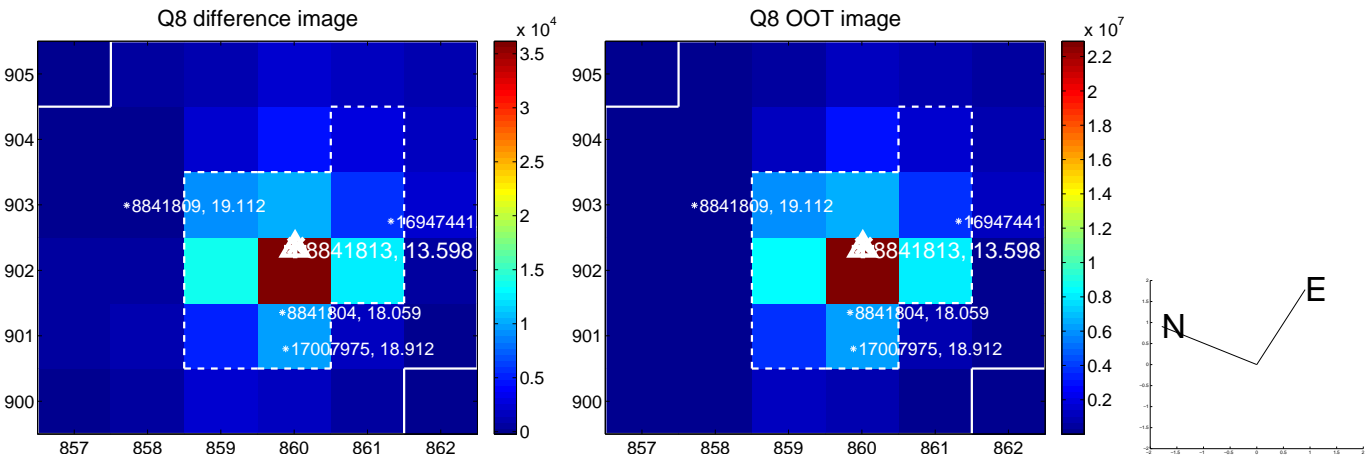
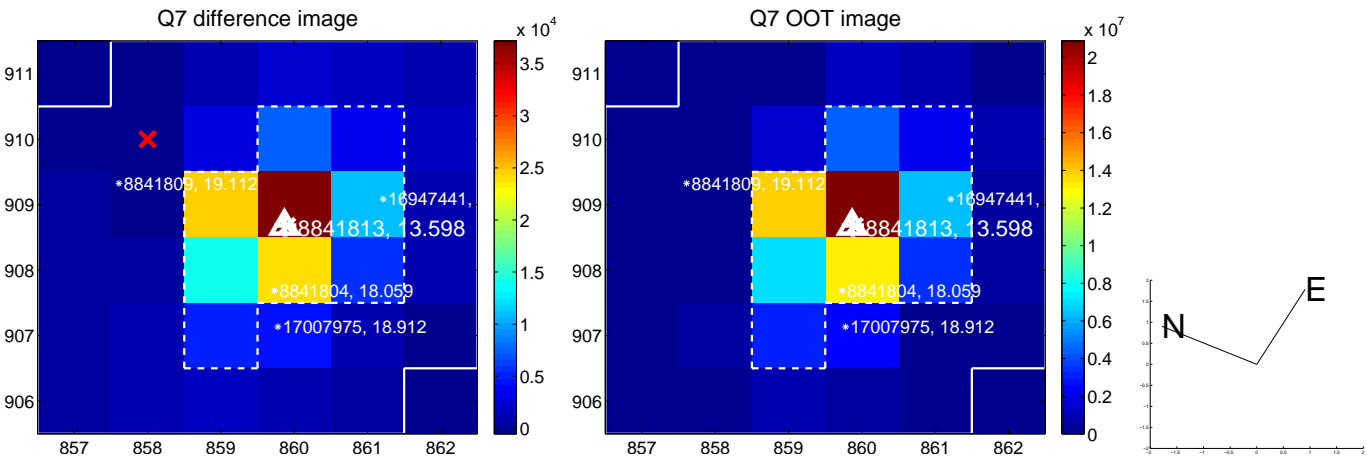
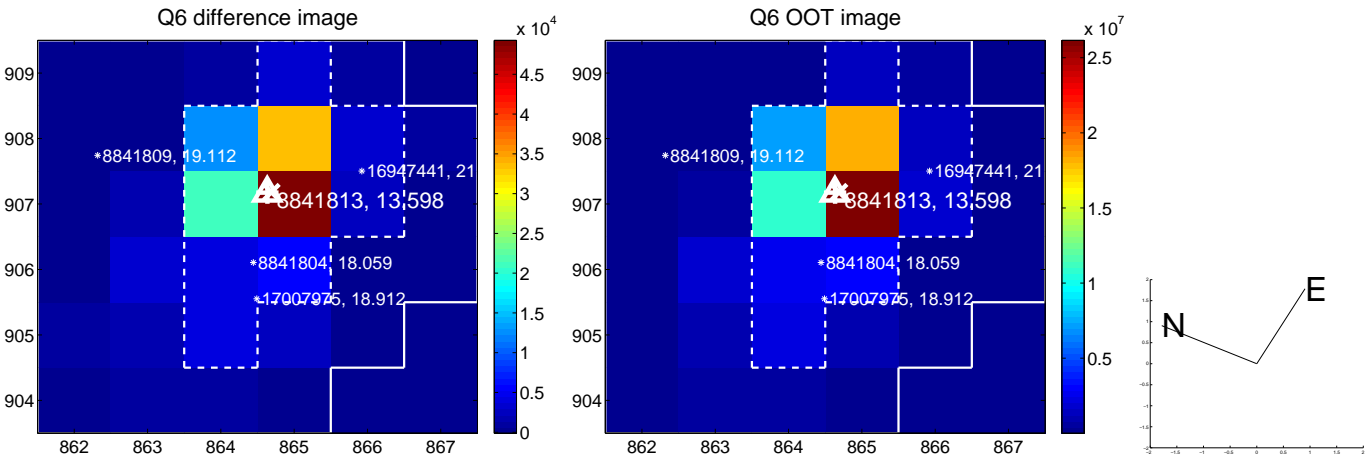
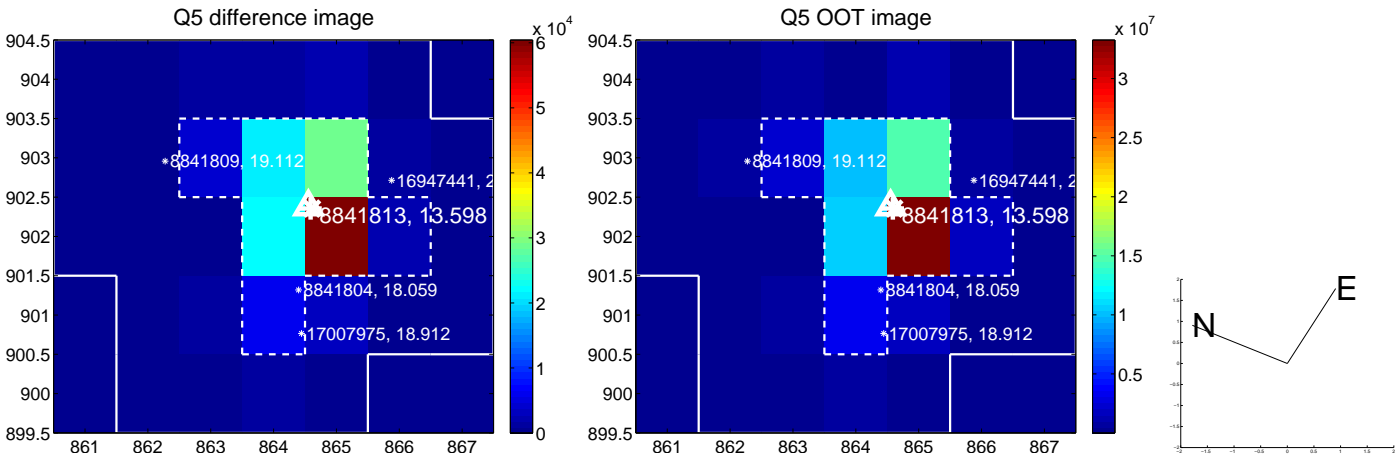


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

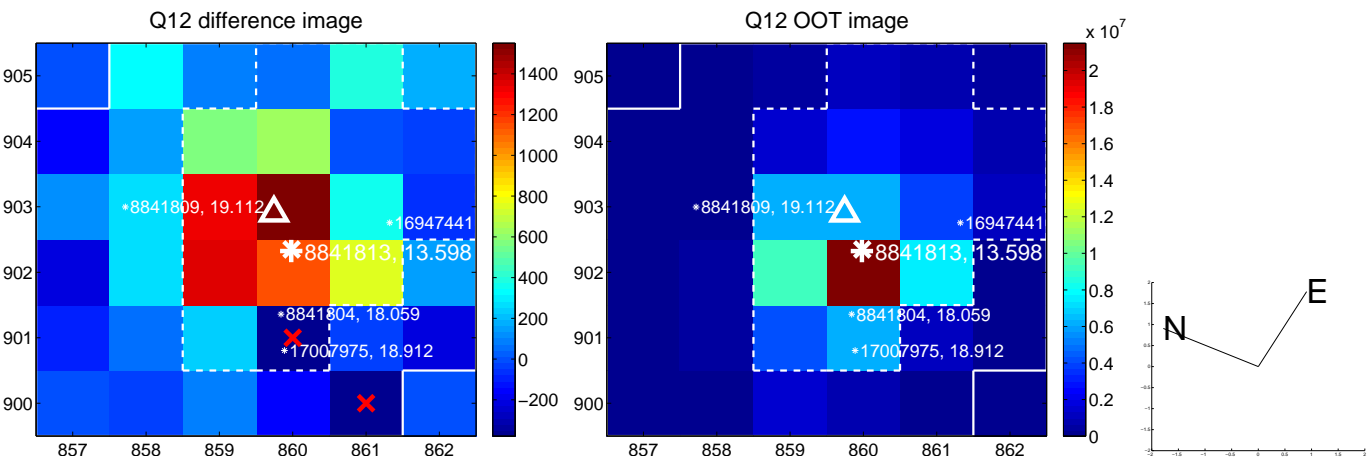
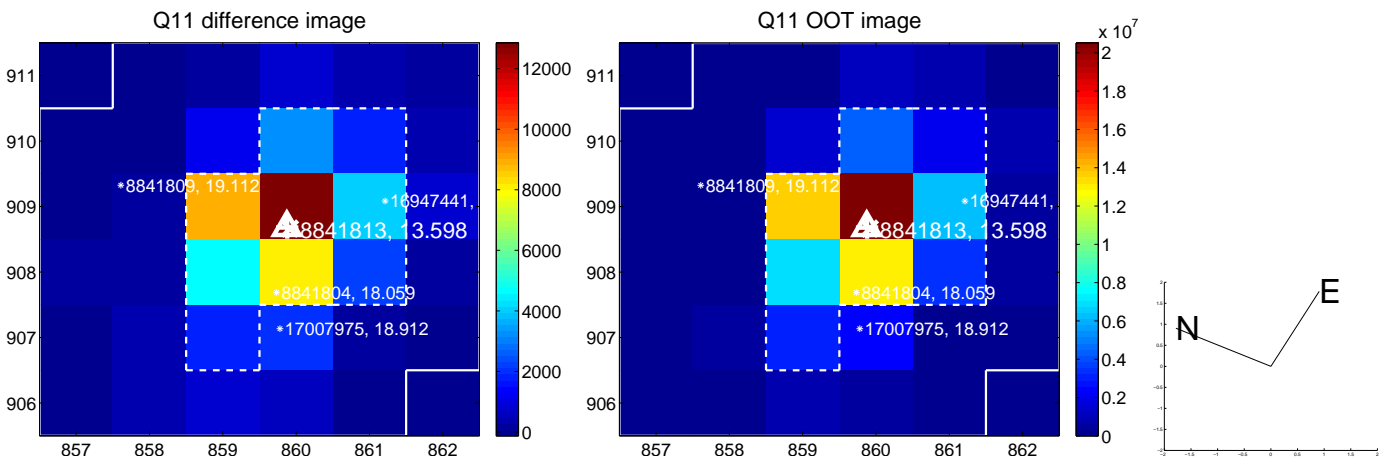
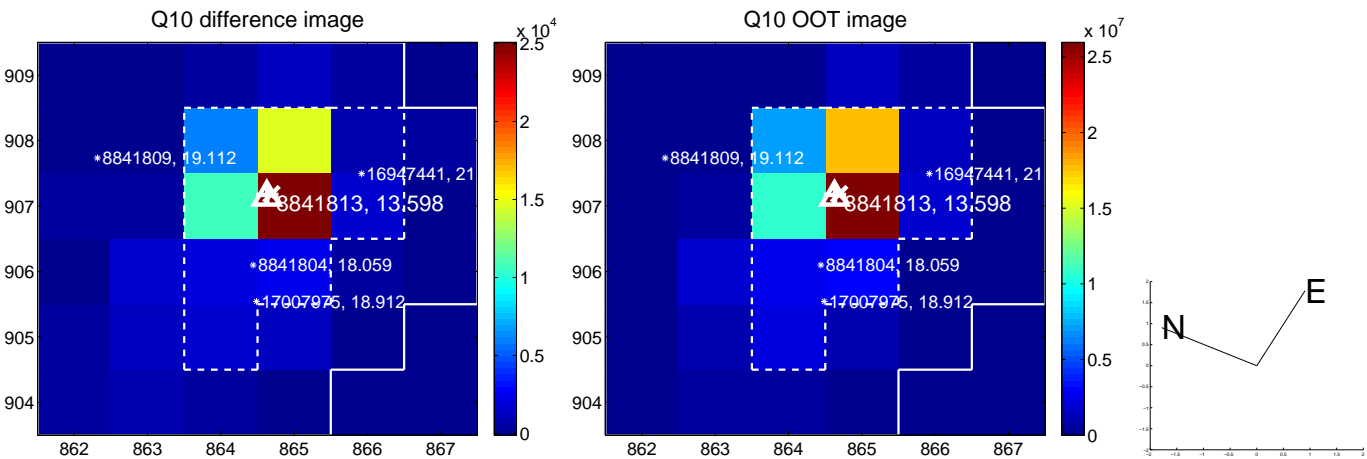
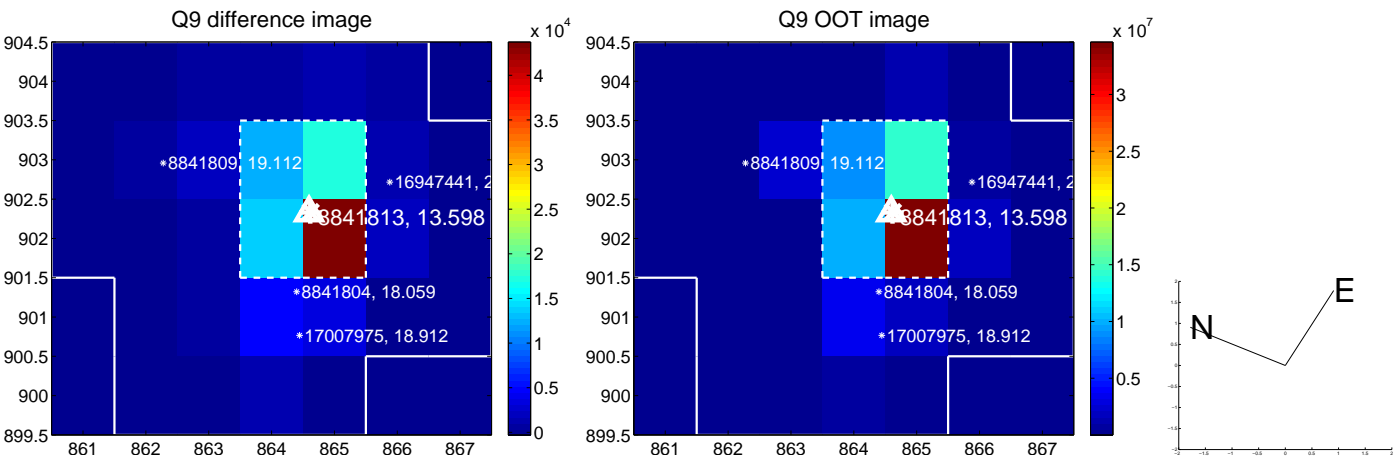
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



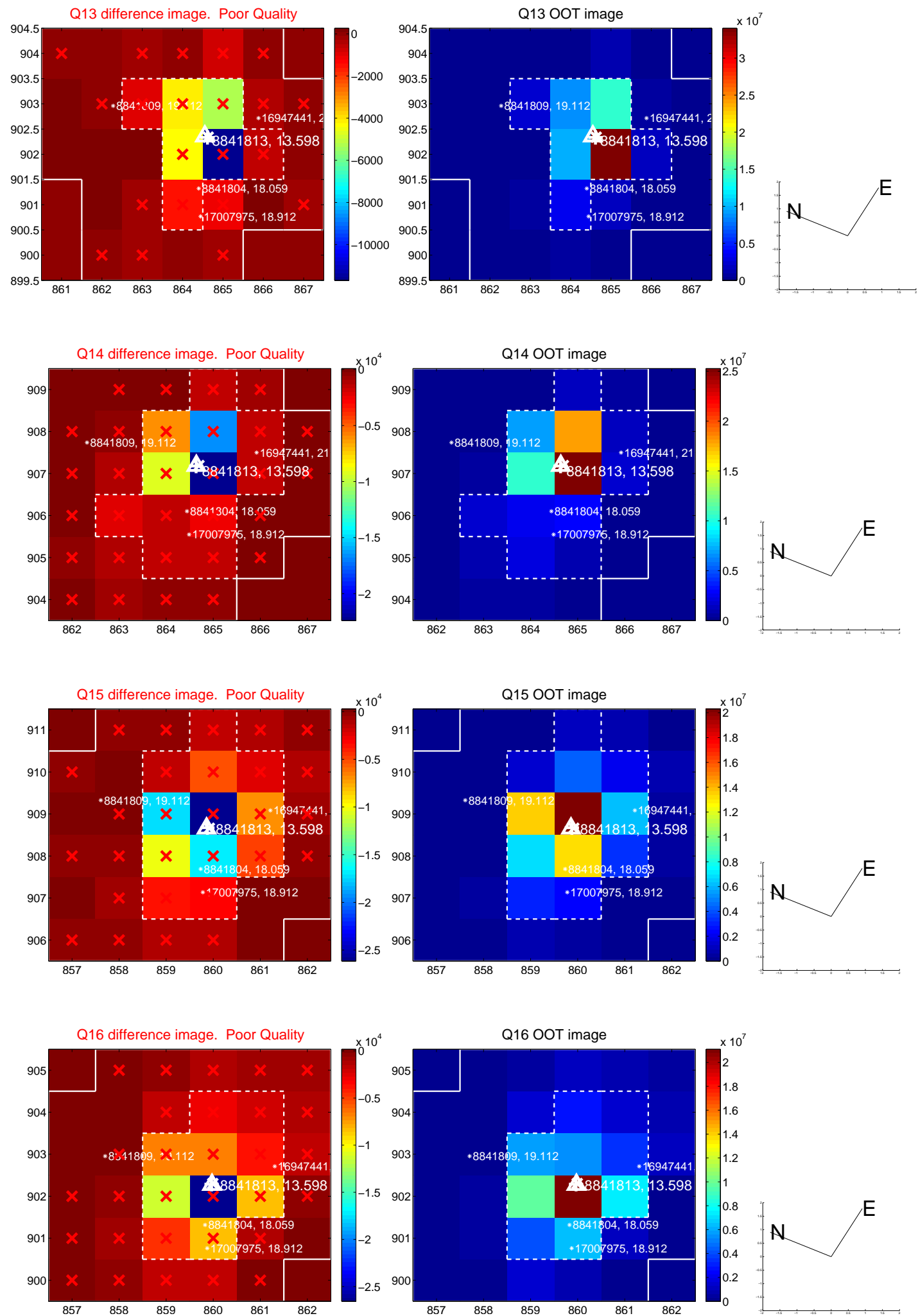
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



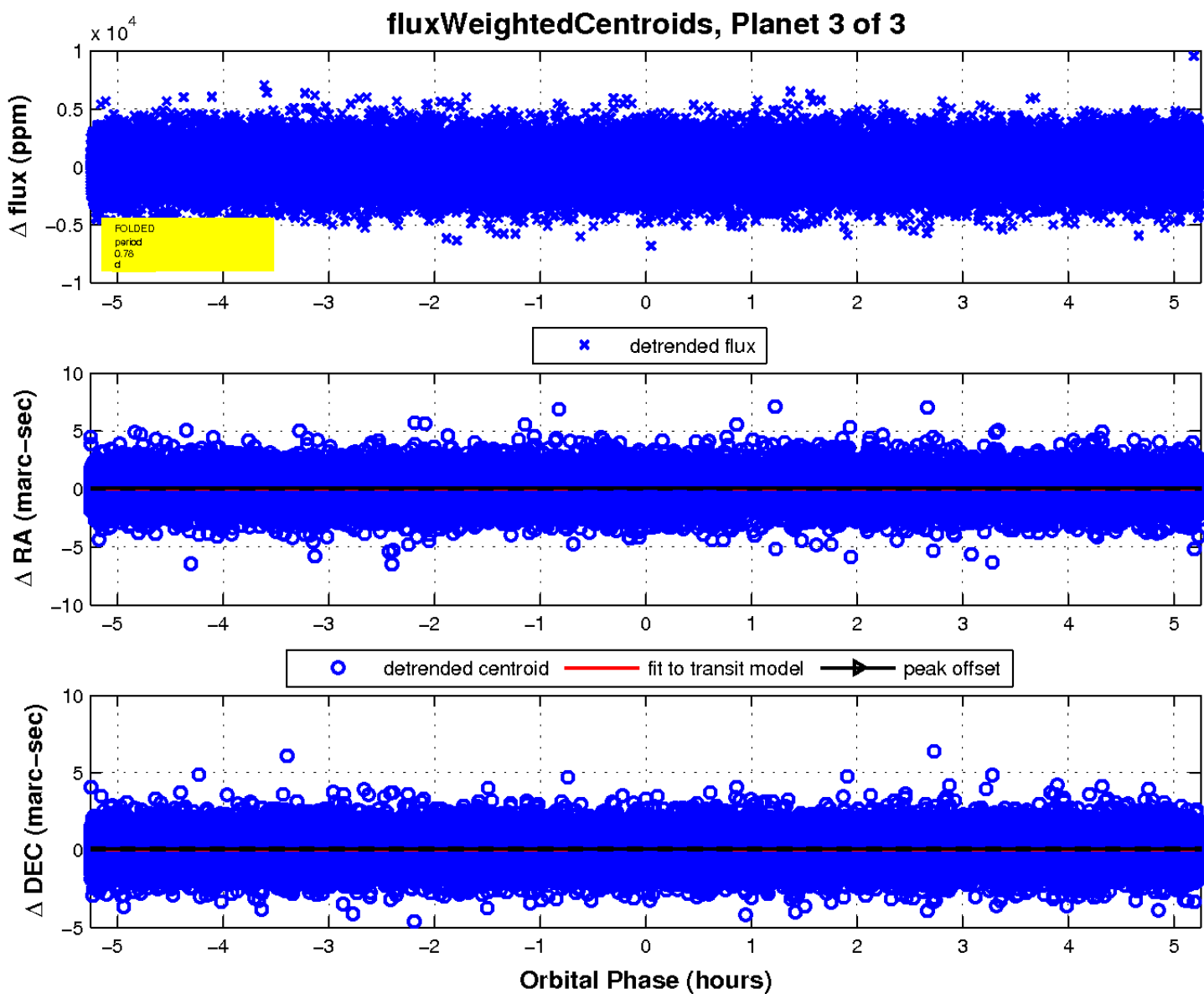
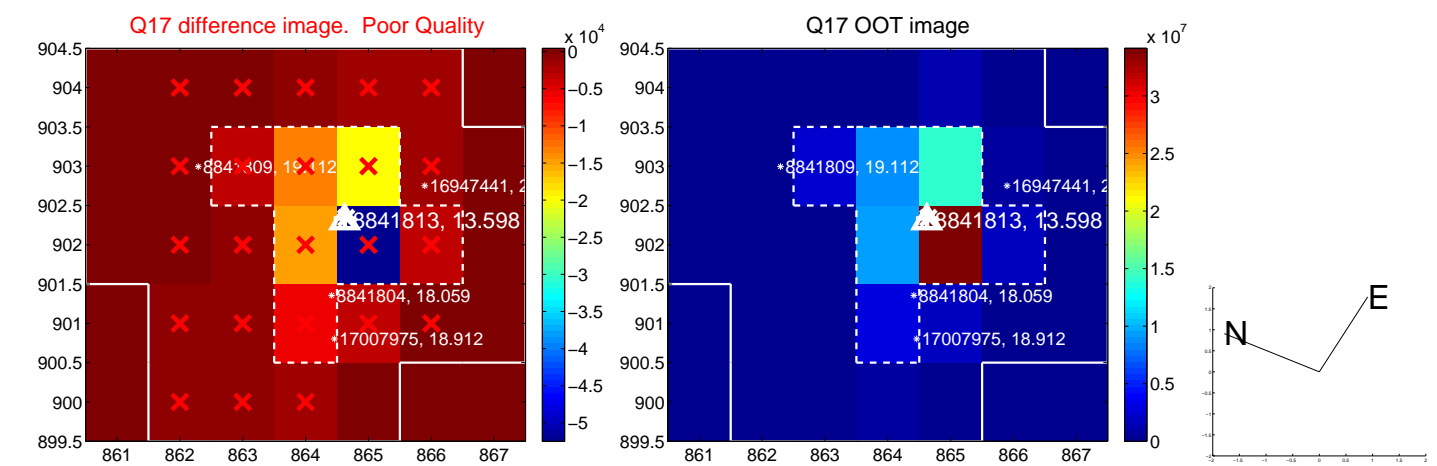
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

