

KIC 007848303

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})
007848303-01	OBS	No	1.675919	132.316765	22.0	3.227	10.4	9.9	2.28	8248	1.25	18824.92
007848303-02	OBS	No	0.516528	131.944726	26.6	1.428	13.6	15.2	2.28	8248	1.26	90422.85
007848303-03	OBS	No	0.516531	131.684861	24.4	0.944	11.9	12.8	2.28	8248	1.17	90422.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007848303-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007848303-02	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST—EPHEM_MATCH
007848303-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST

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

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

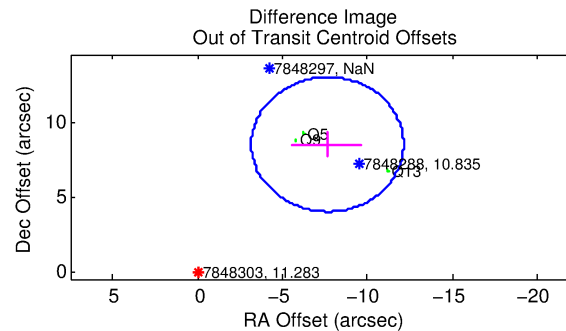
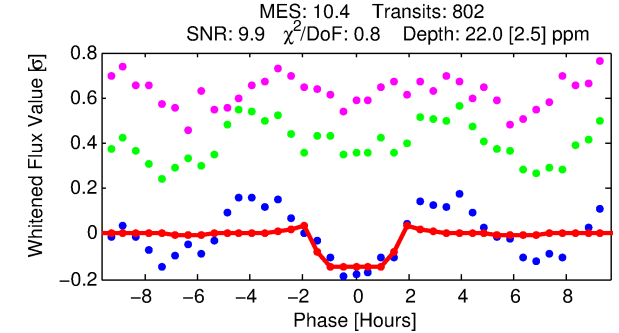
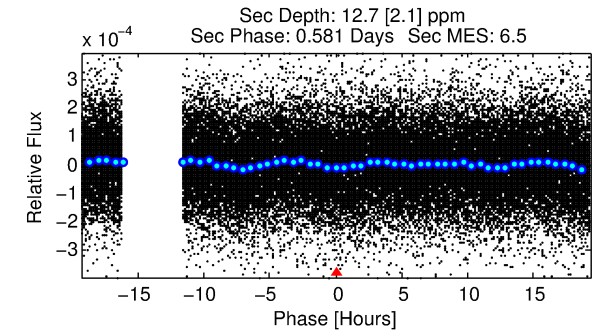
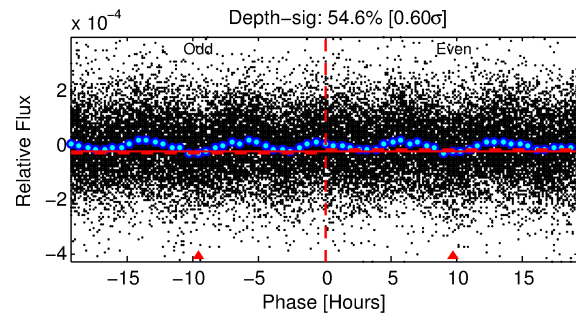
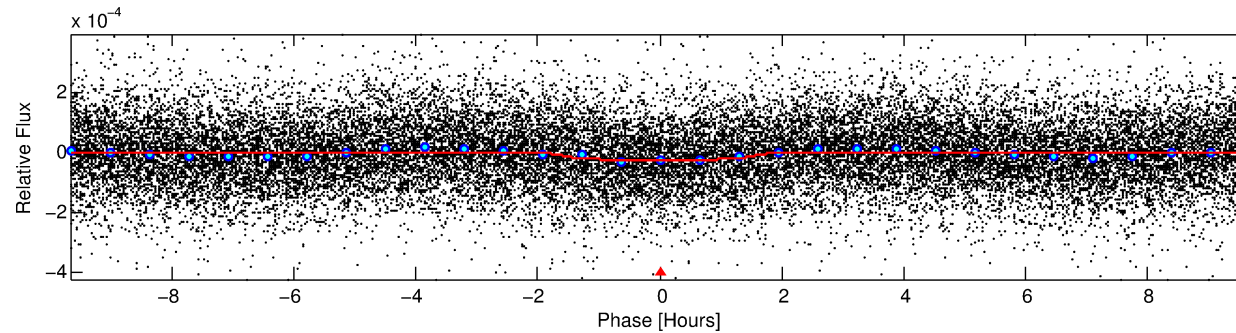
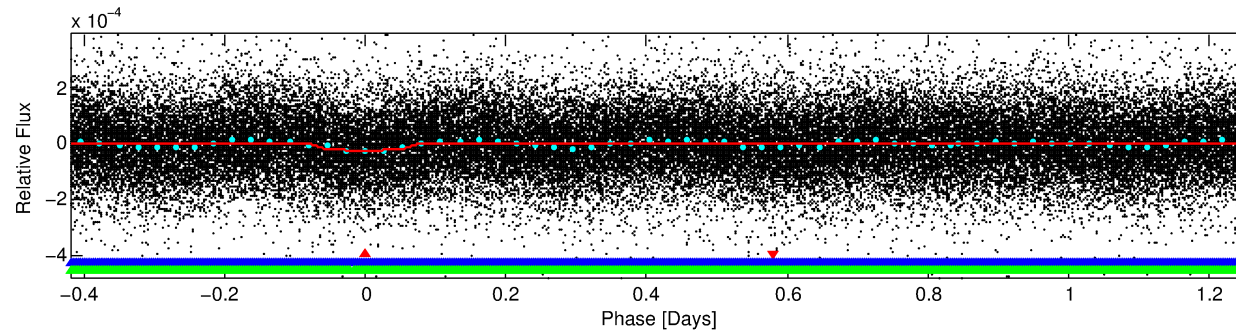
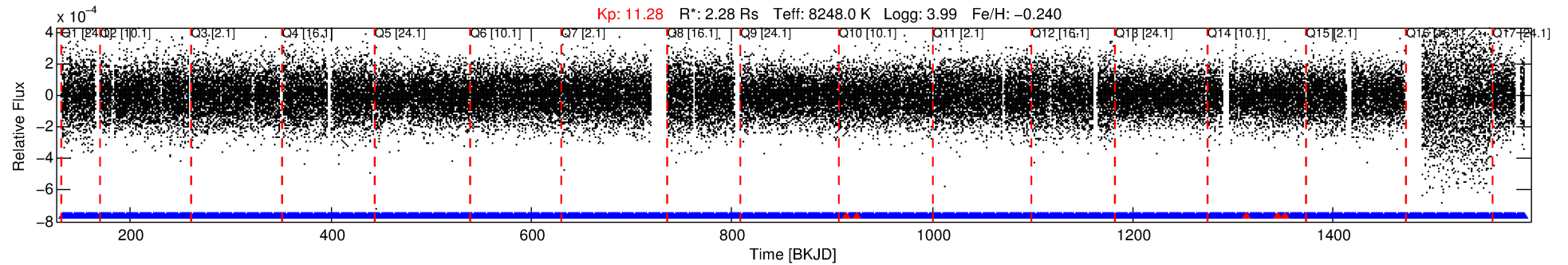
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007848303-01

No Significant Match Found

DV One-Page Summary

KIC: 7848303 Candidate: 1 of 3 Period: 1.676 d



DV Fit Results:

Period = 1.67592 [0.00001] d
Epoch = 132.3168 [0.0030] BKJD
 $R_p/R^* = 0.0050$ [0.0009]
 $a/R^* = 1.99$ [1.61]
 $b = 0.90$ [0.23]
 $\text{Seff} = 18824.92$ [8404.94]
 $T_{\text{eq}} = 2987$ [333] K
 $R_p = 1.24$ [0.45] R_{eq}
 $a = 0.0338$ [0.0093] AU
 $\text{Ag} = 5.12$ [2.93] [1.41 σ]
 $T_{\text{eff}} = 6948$ [741] K [4.88 σ]

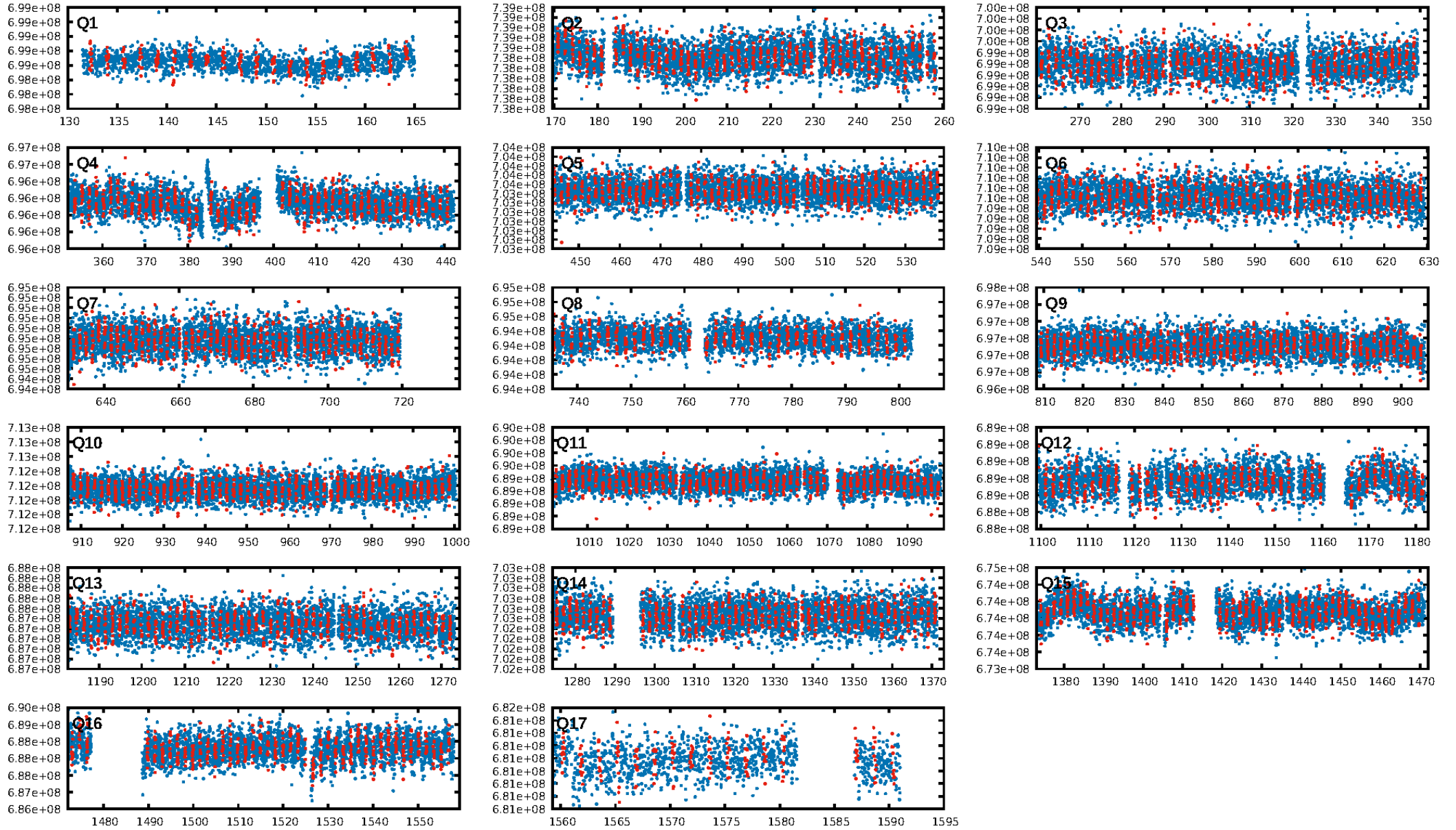
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.28 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 1.30e-12
RollingBand-fgt: 0.99 [761/766]
GhostDiagnostic-chr: 43.93
Centroid-sig: 42.7%
Centroid-so: 2.695 arcsec [2.54 σ]
OotOffset-rm: 11.430 arcsec [7.64 σ]
KicOffset-rm: 11.749 arcsec [7.81 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/17]

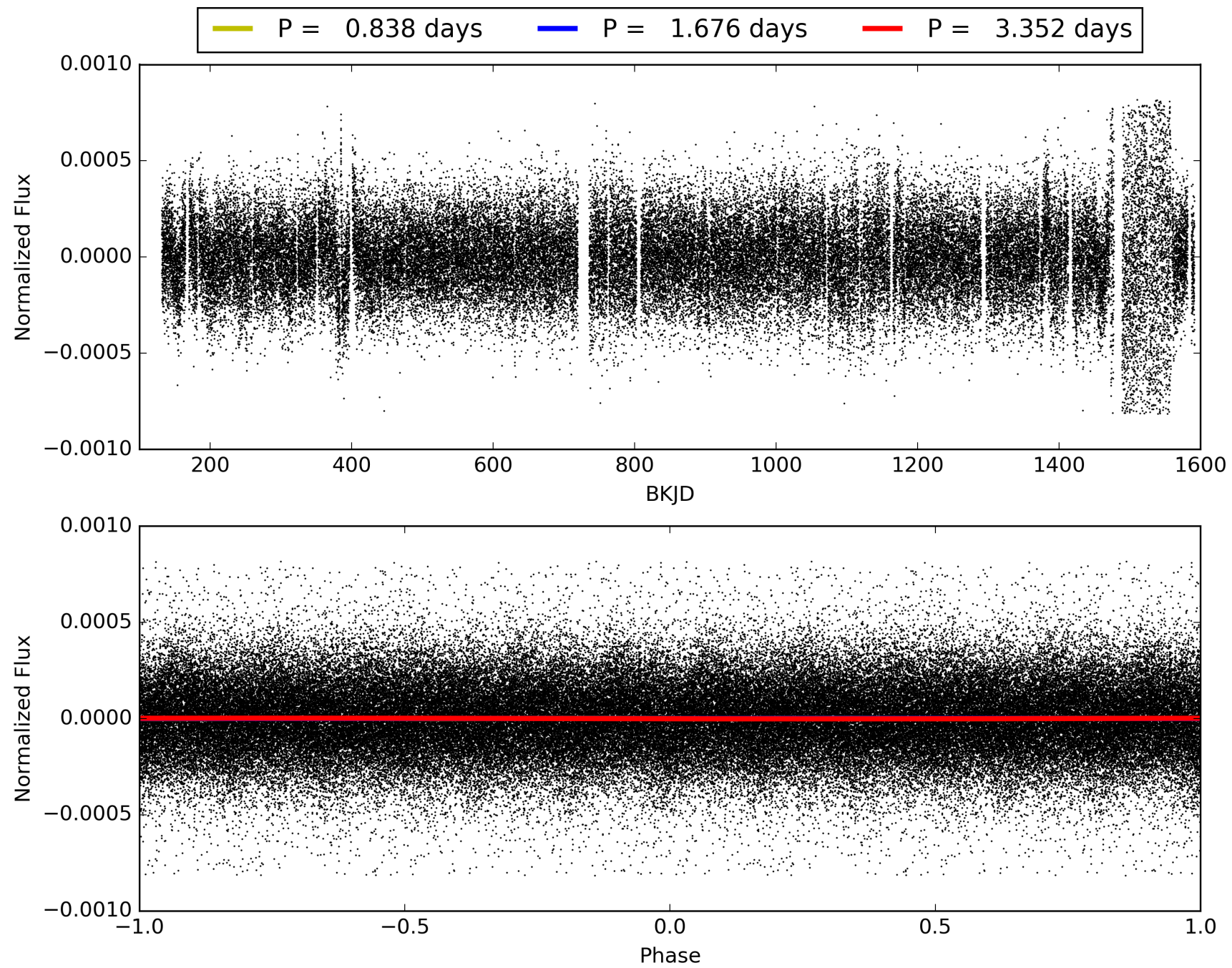
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:06:46 Z

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

TCE 007848303-01, PDC Light Curves

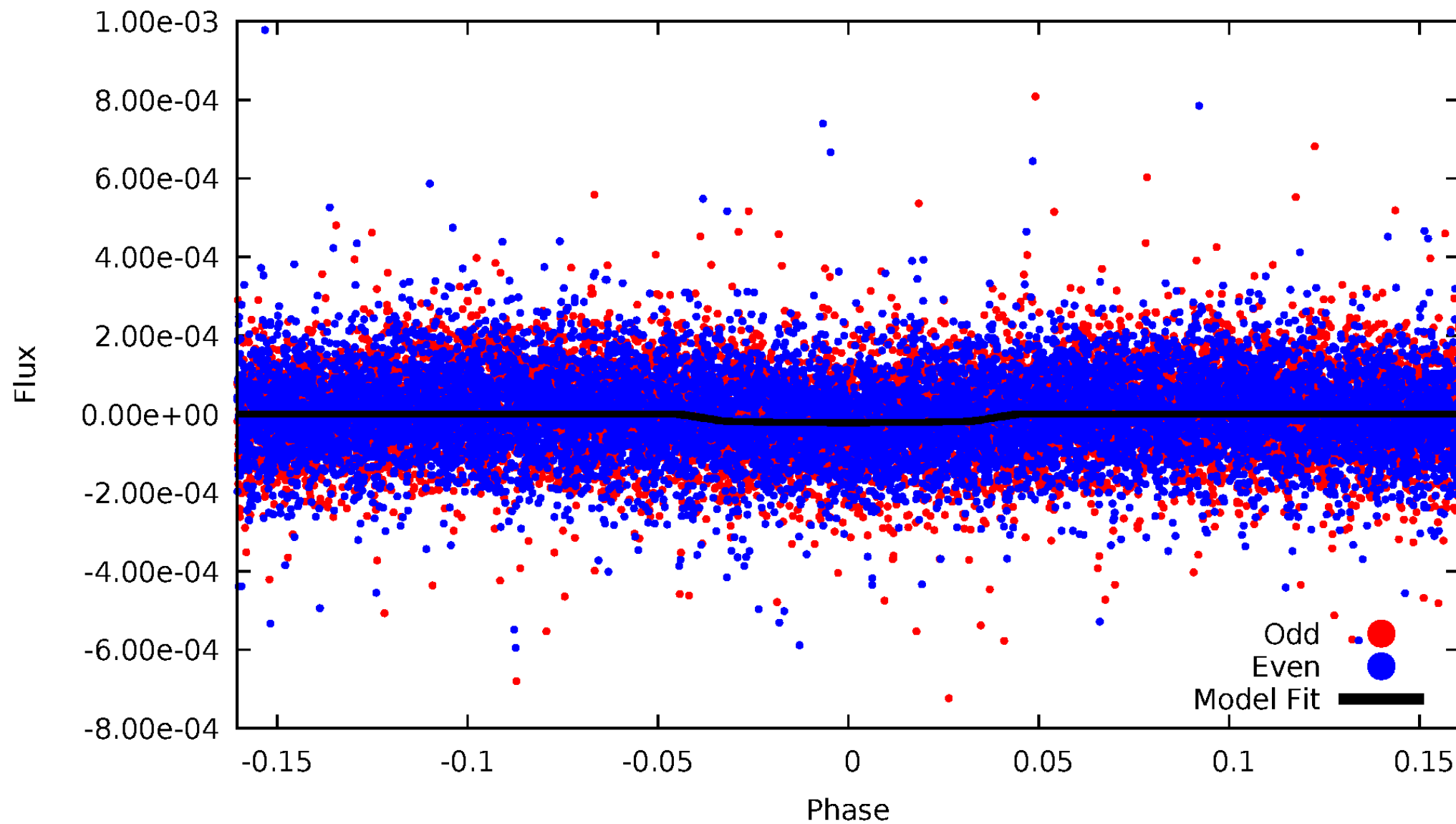


TCE 007848303-01



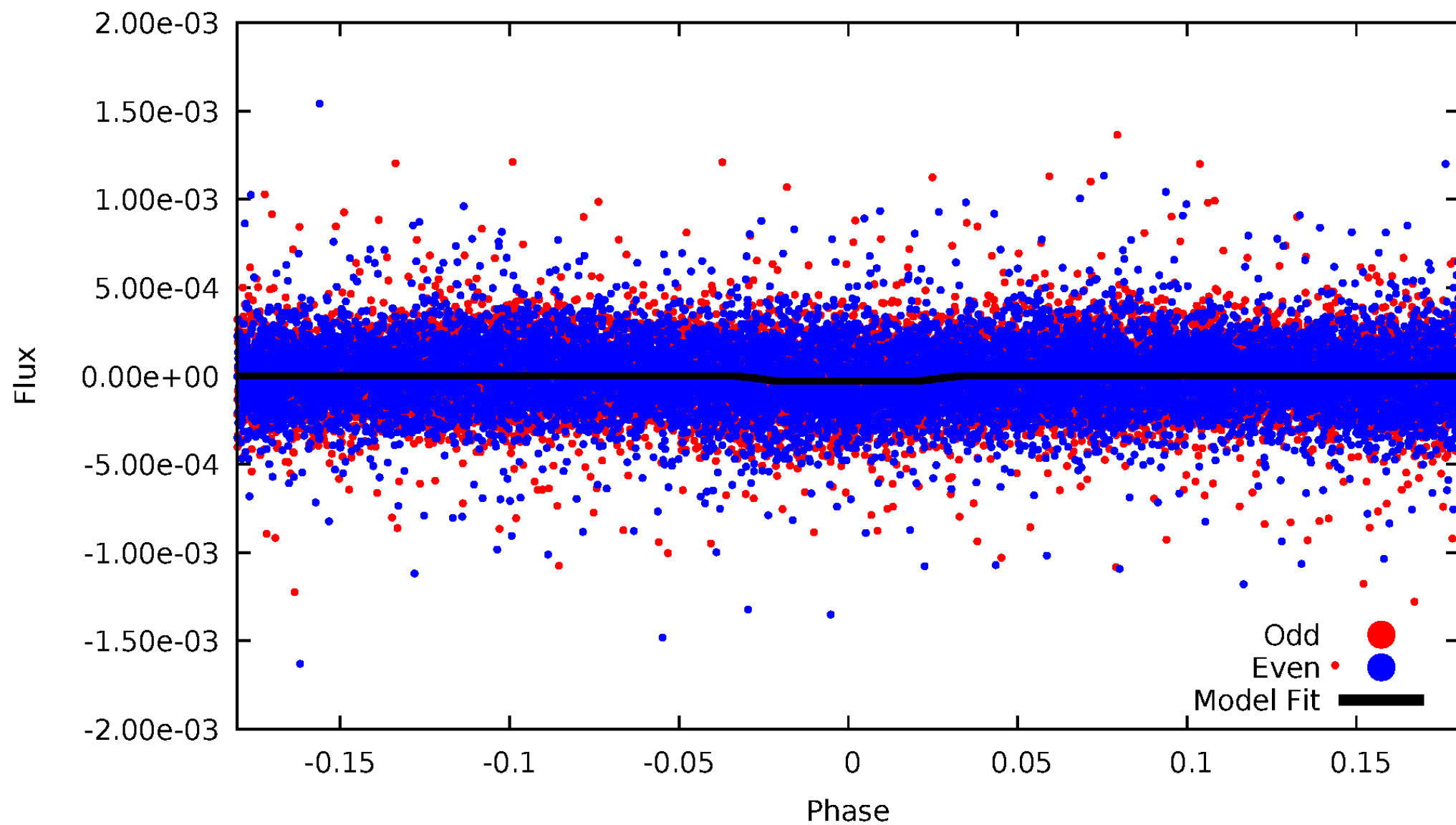
DV Odd/Even

TCE 007848303-01



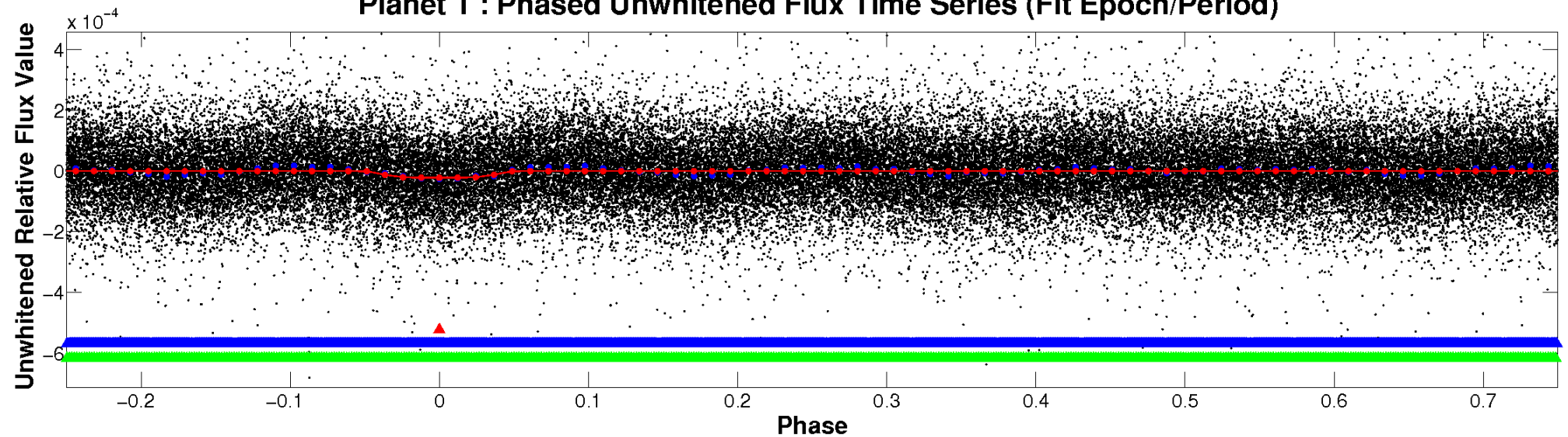
ALT Odd/Even

TCE 007848303-01

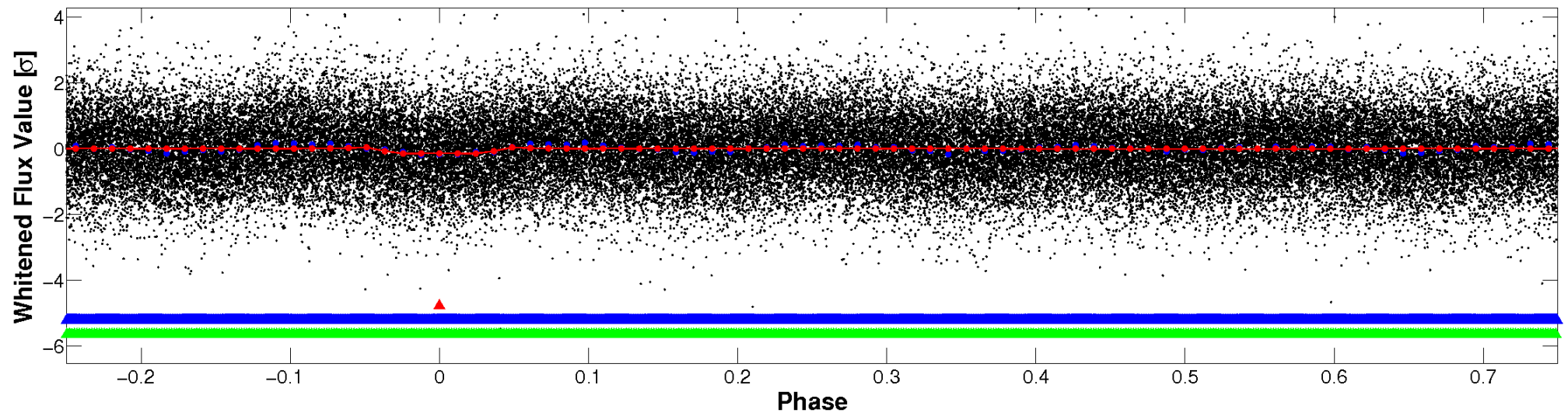


Non-Whitened Vs. Whitened Light Curve

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

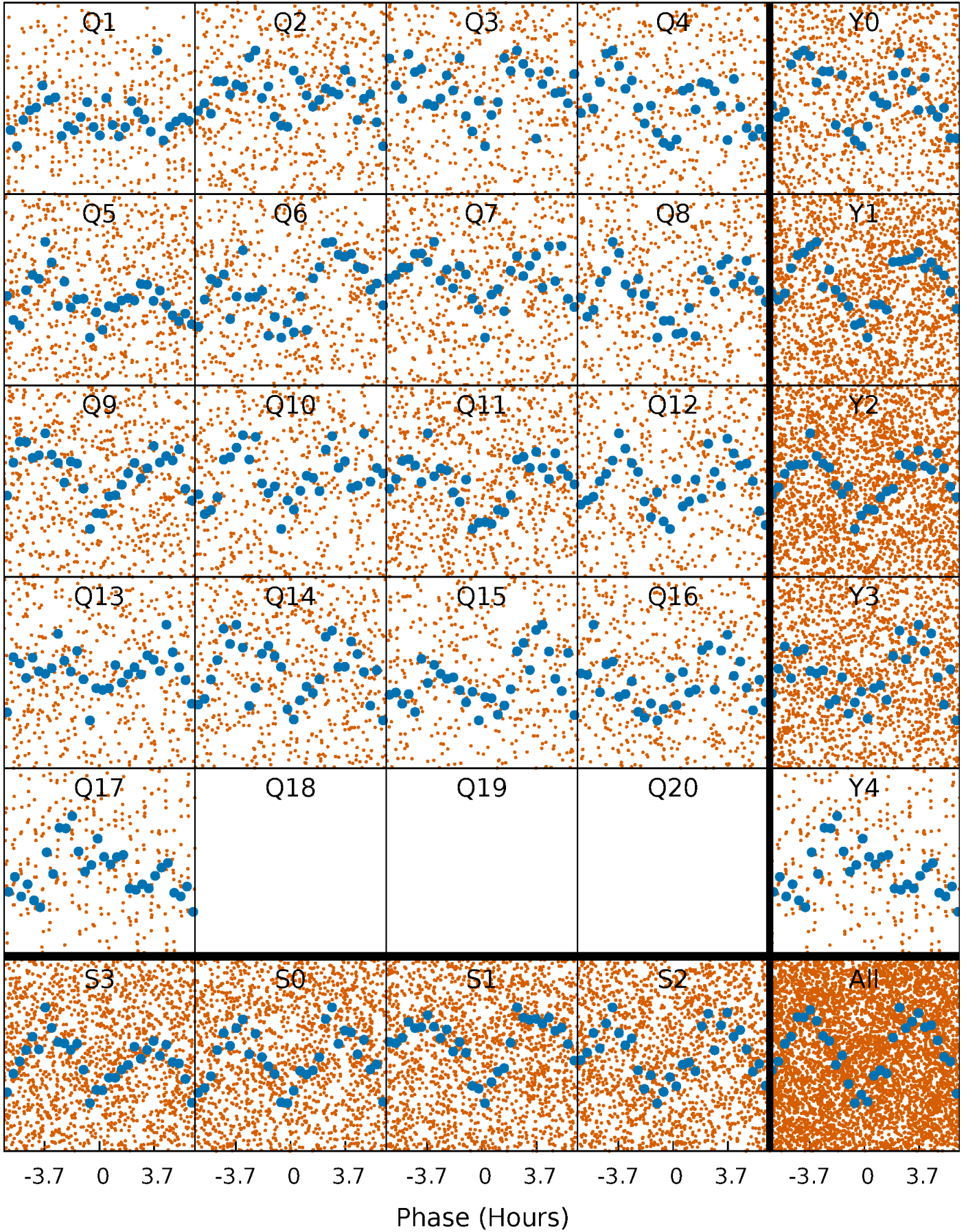


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



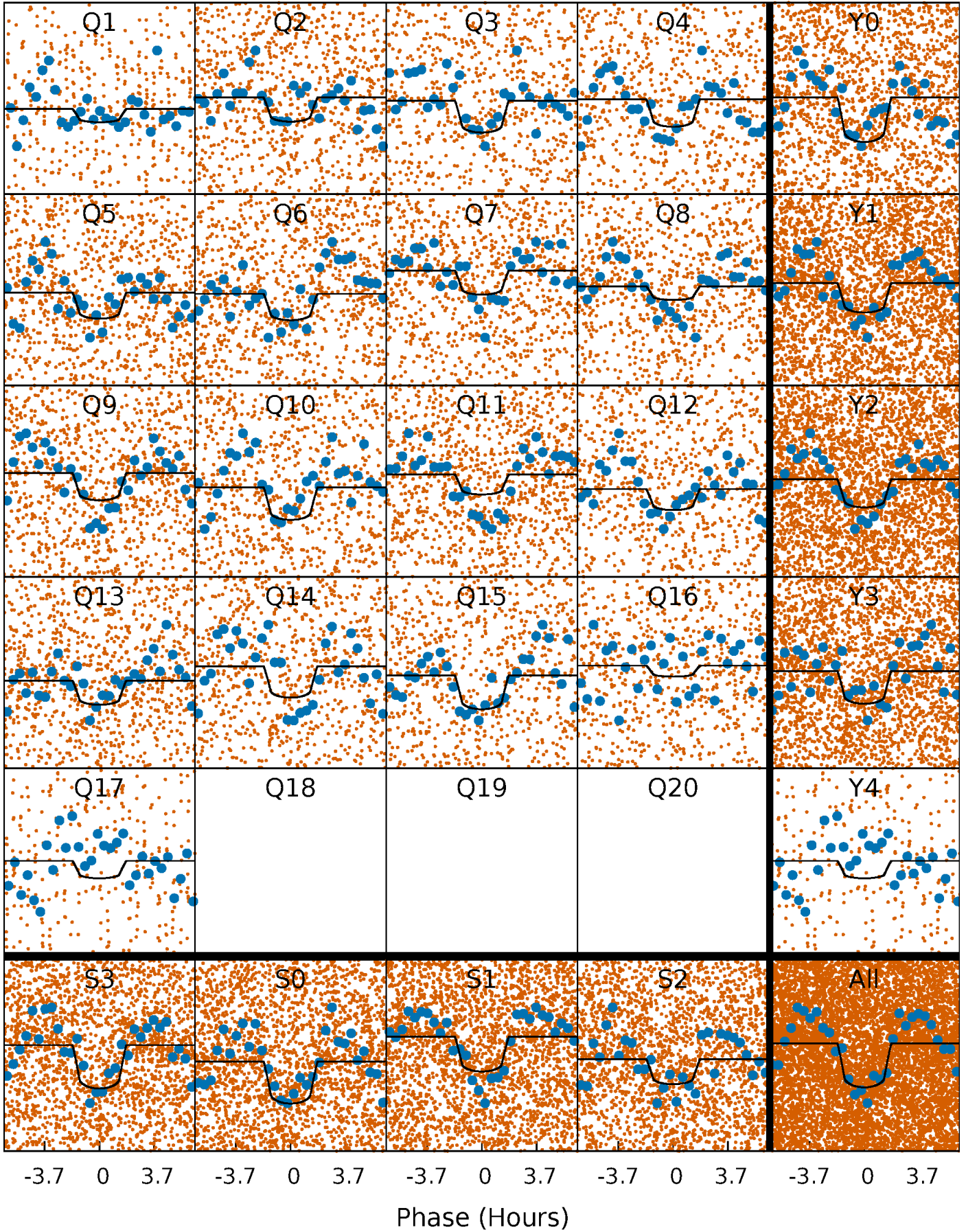
PDC Quarter-Phased Transit Curves

TCE 007848303-01 P= 1.675919 Days $T_0=132.316765$ (BKJD)



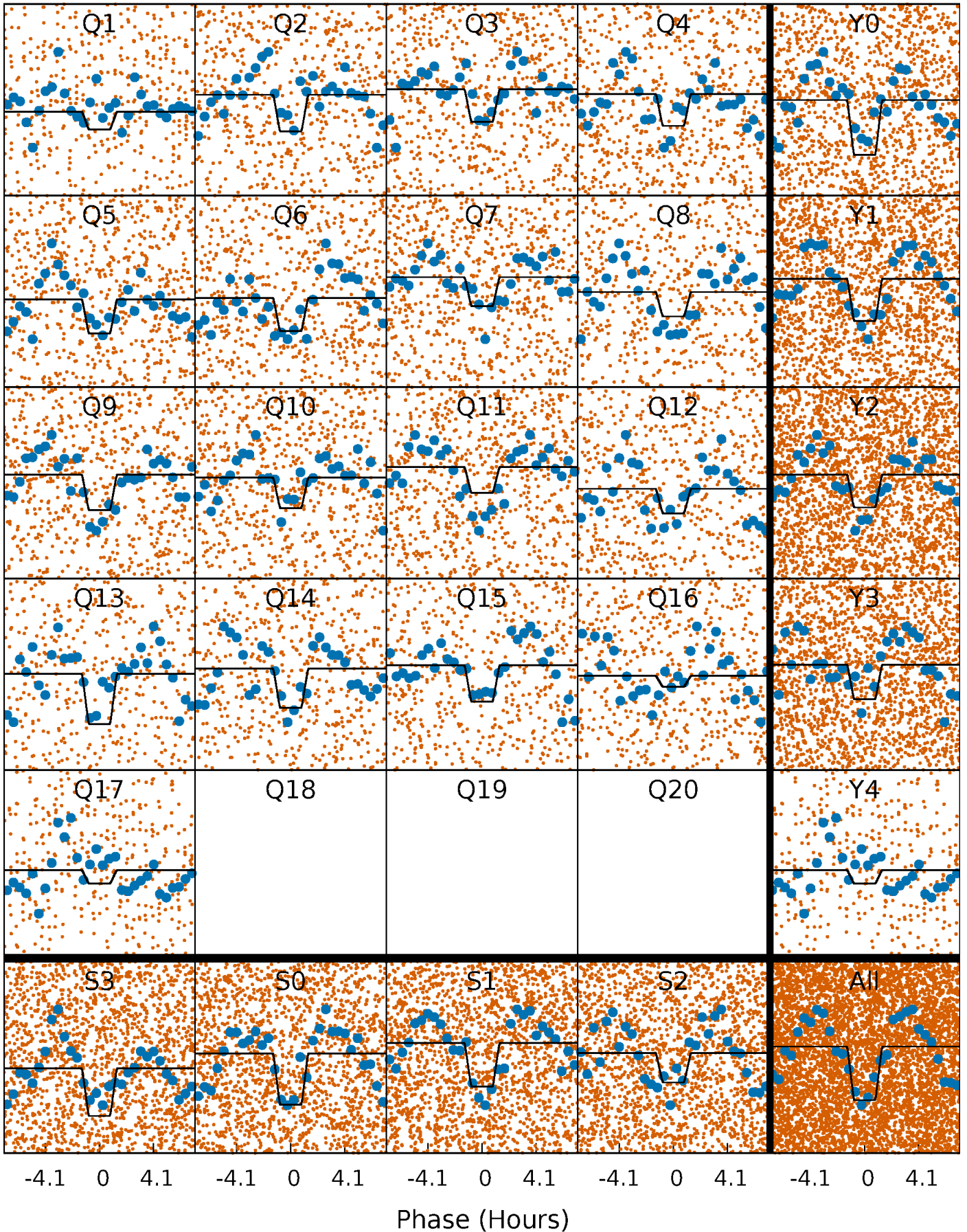
DV Quarter-Phased Transit Curves

TCE 007848303-01 P= 1.675919 Days $T_0=132.316765$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

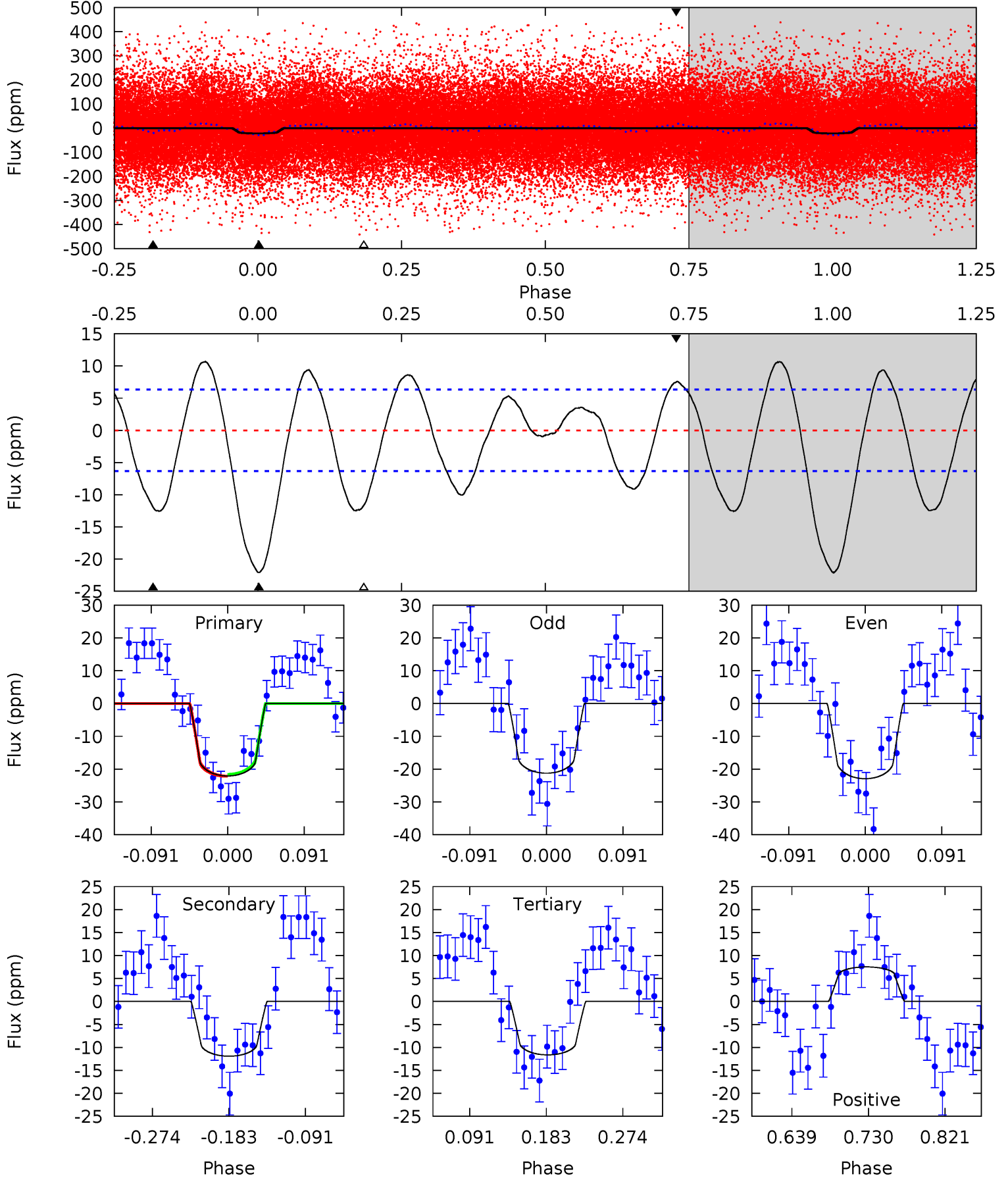
TCE 007848303-01 P= 1.675965 Days $T_0=132.297408$ (BKJD)



DV Model-Shift Uniqueness Test

007848303-01, P = 1.675919 Days, E = 130.640846 Days

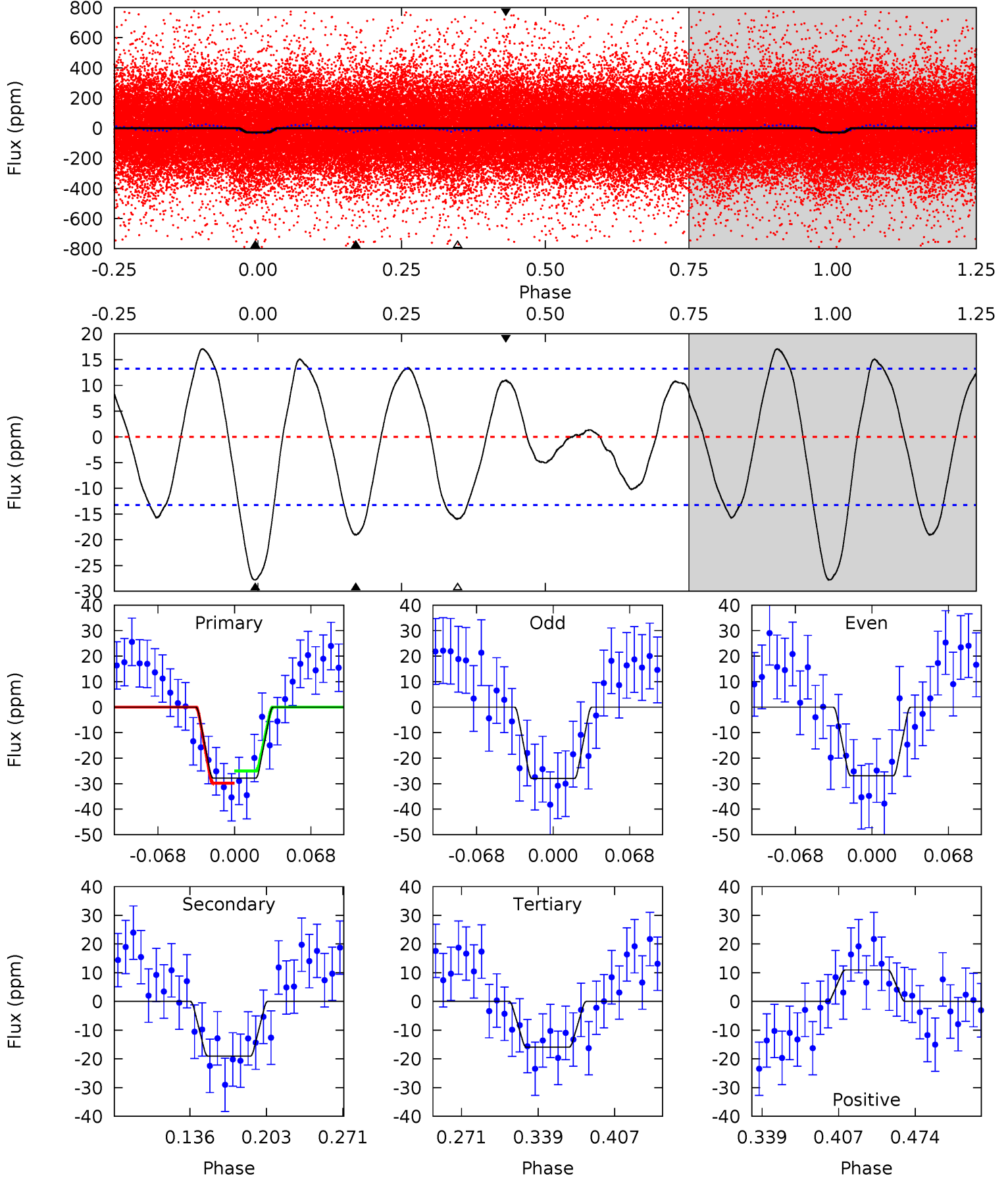
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	8.62	8.41	5.44	4.58	1.69	4.28	7.57	10.5	0.21	3.18	0.61	0.96	0.33	0.21



Alt Model-Shift Uniqueness Test

007848303-01, P = 1.675965 Days, E = 130.621443 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.75	6.67	5.60	3.85	4.65	1.83	3.24	4.15	5.90	1.08	2.82	0.19	1.20	0.38	0.85



Stellar Parameters For KIC 007848303

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8248^{+226}_{-340}	$3.986^{+0.234}_{-0.126}$	$-0.240^{+0.200}_{-0.350}$	$2.276^{+0.382}_{-0.709}$	$1.832^{+0.090}_{-0.359}$	$0.219^{+0.315}_{-0.074}$
	+3%/-4%	+6%/-3%	+83%/-146%	+17%/-31%	+5%/-20%	+144%/-34%
Source	KIC0	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 007848303-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 1	$1.19^{+0.28}_{-0.24}$	4117^{+263}_{-346}	6499^{+811}_{-624}	$5.092^{+3.147}_{-1.733}$
Alt.	-19 ± 3	$1.31^{+0.30}_{-0.29}$	4125^{+270}_{-349}	7026^{+923}_{-717}	$6.783^{+4.025}_{-2.525}$

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

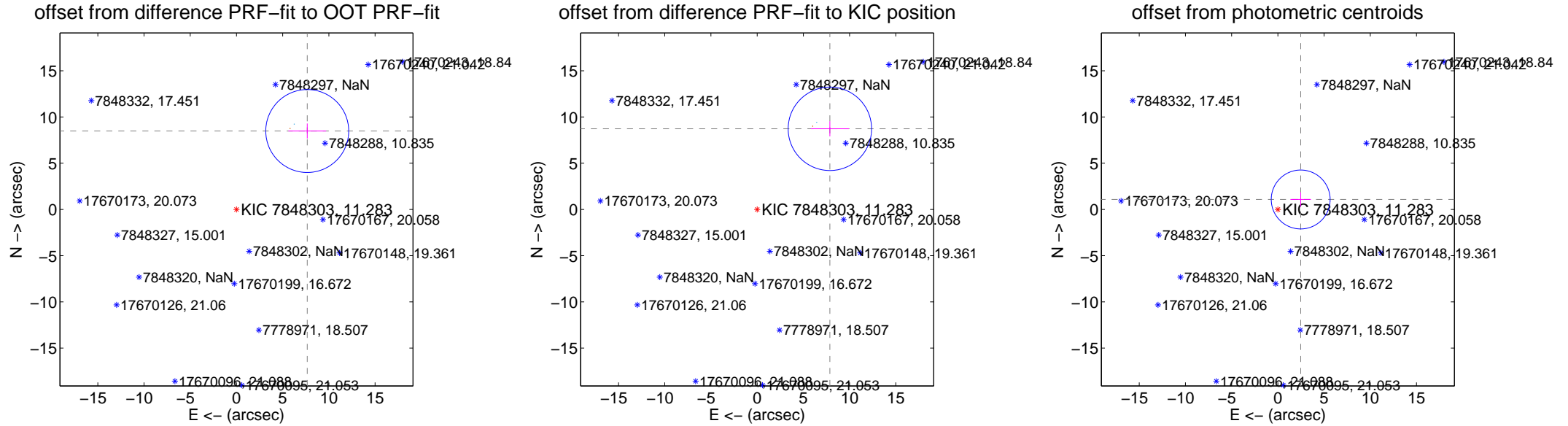
DV Centroid Data

Supplemental centroid analysis for 007848303-01. **Kepler magnitude: 11.28.** Transit SNR 9.93

There are 2 quarters with good PRF difference image offsets

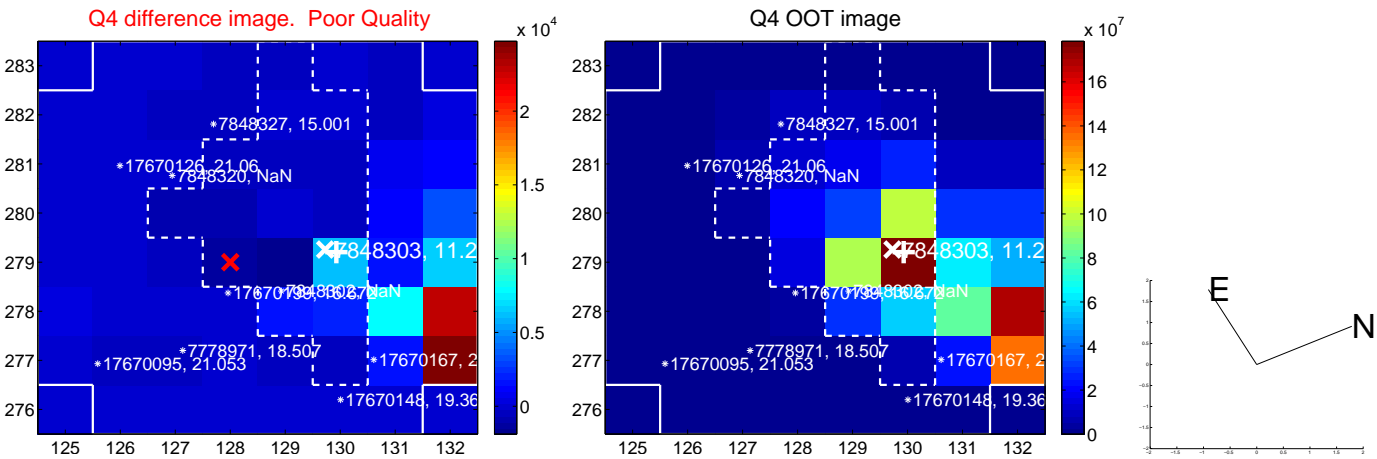
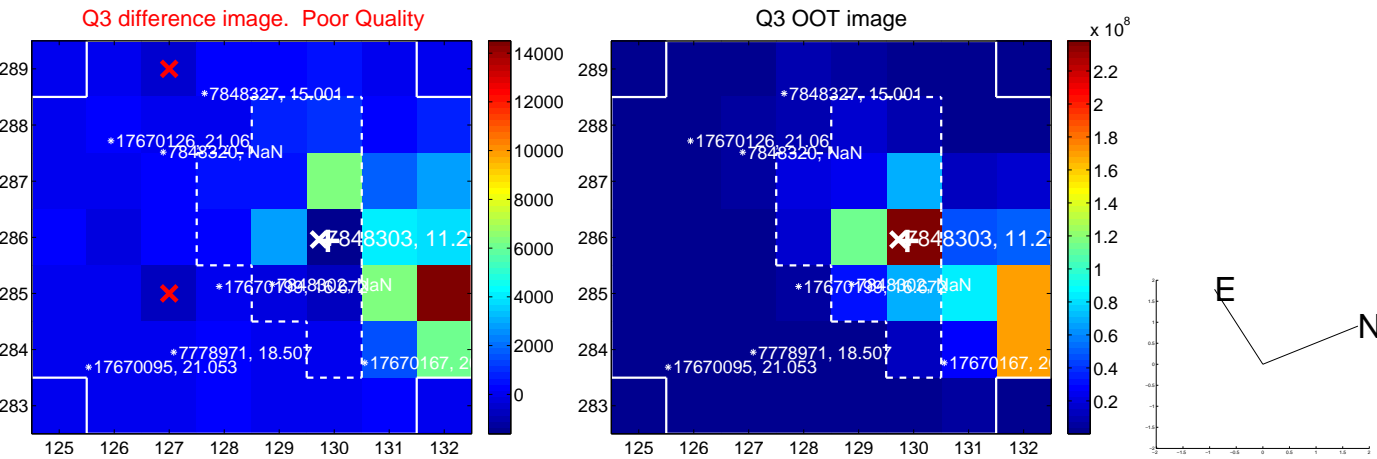
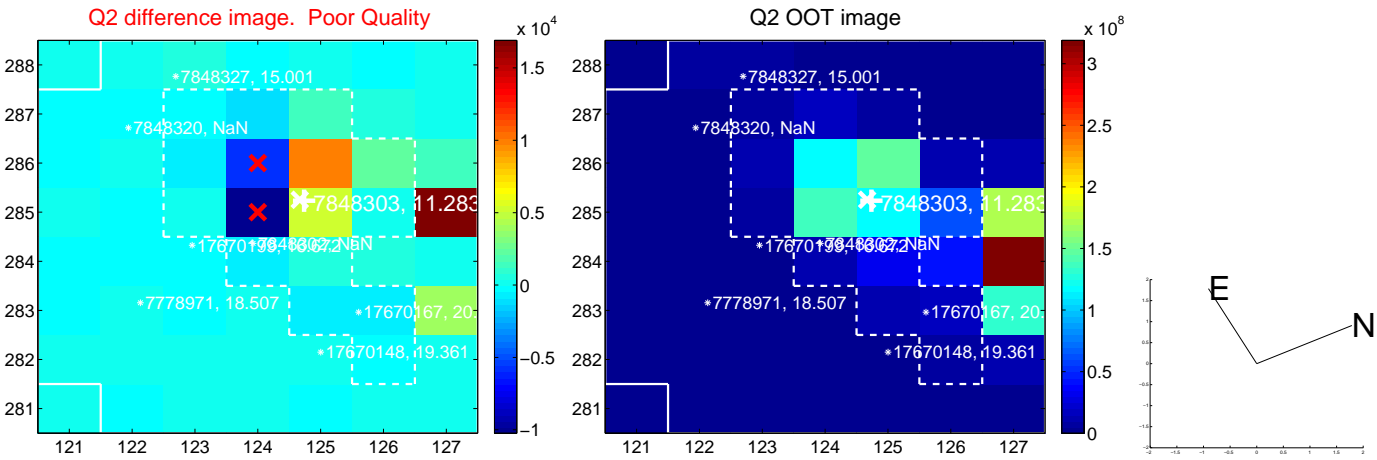
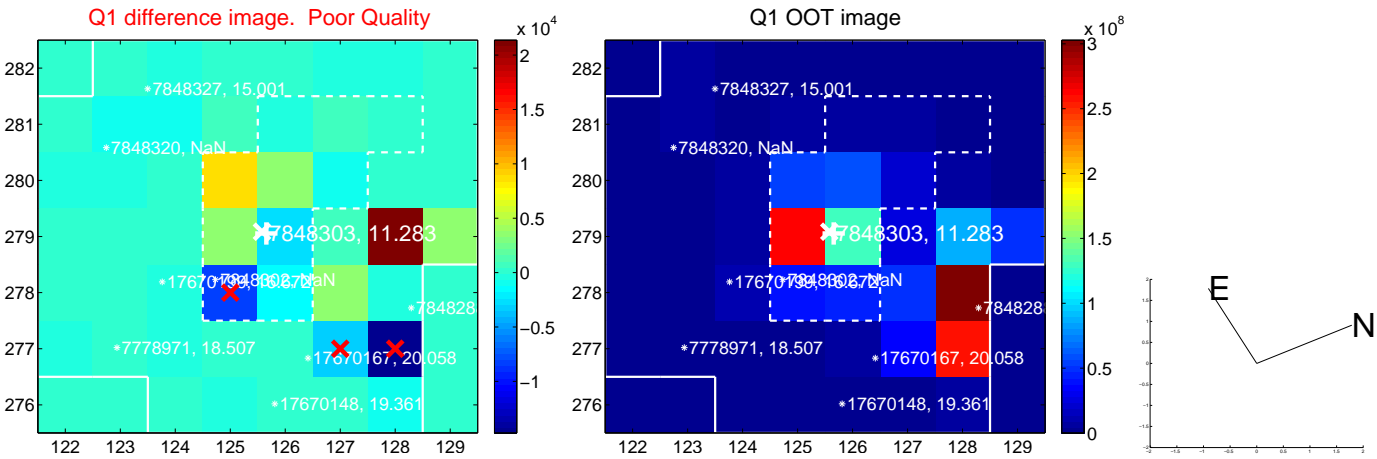
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.430 \pm 1.496	7.64	-7.660 \pm 2.044	8.484 \pm 0.810
PRF-fit source offset from KIC position	11.749 \pm 1.505	7.81	-7.870 \pm 2.057	8.724 \pm 0.815
photometric centroid source offset	2.70 \pm 1.06	2.54	-2.47 \pm 1.11	1.08 \pm 0.78

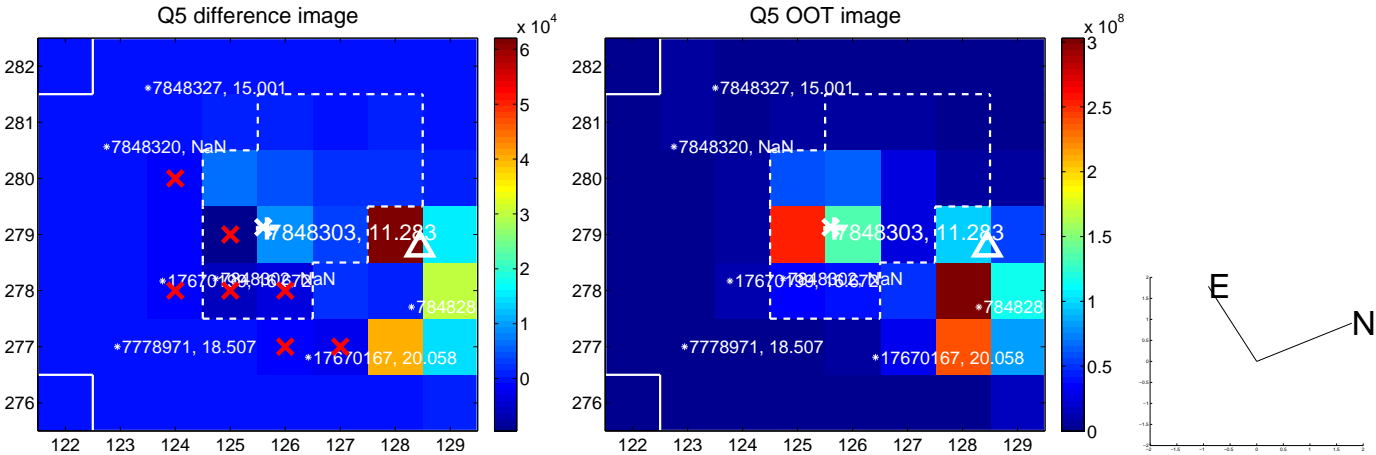


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

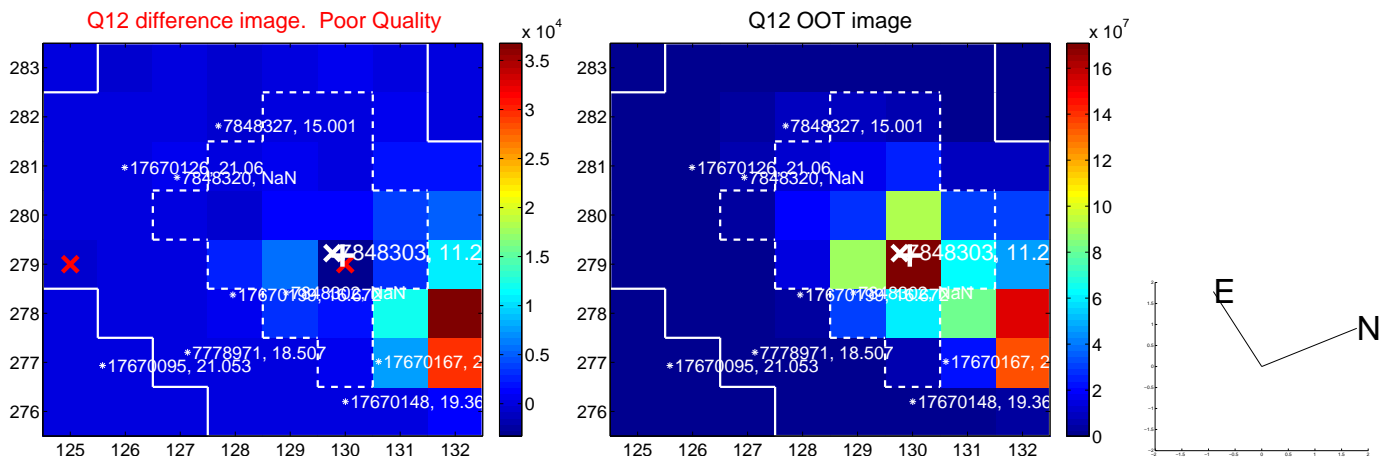
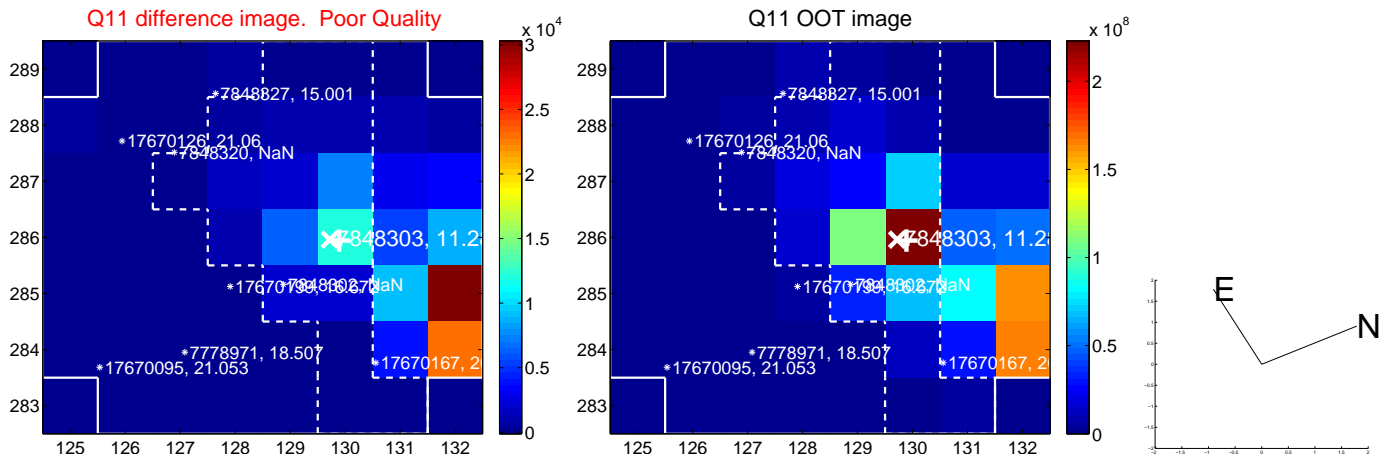
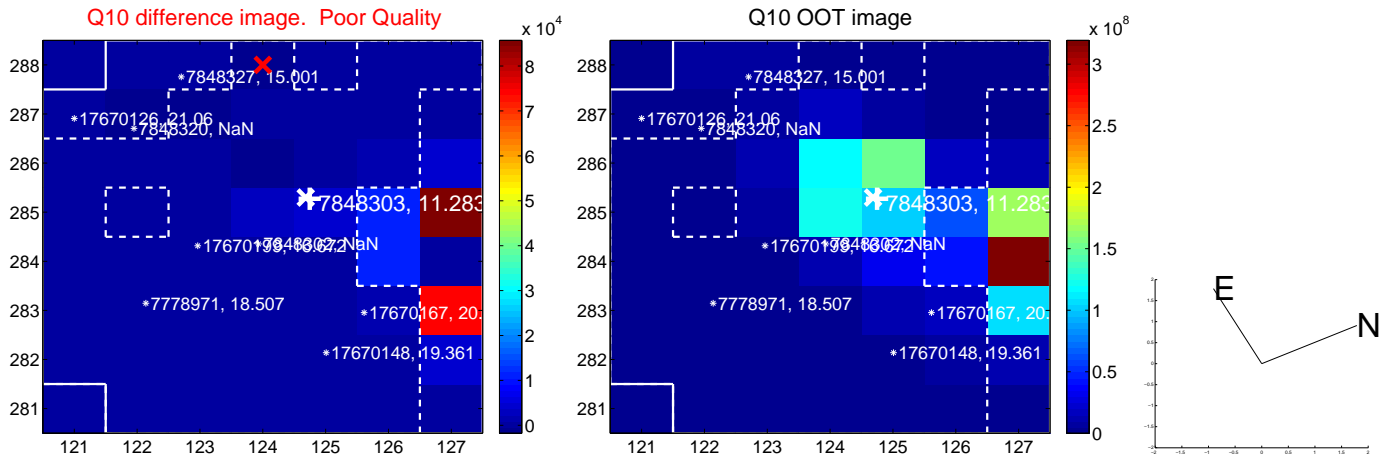
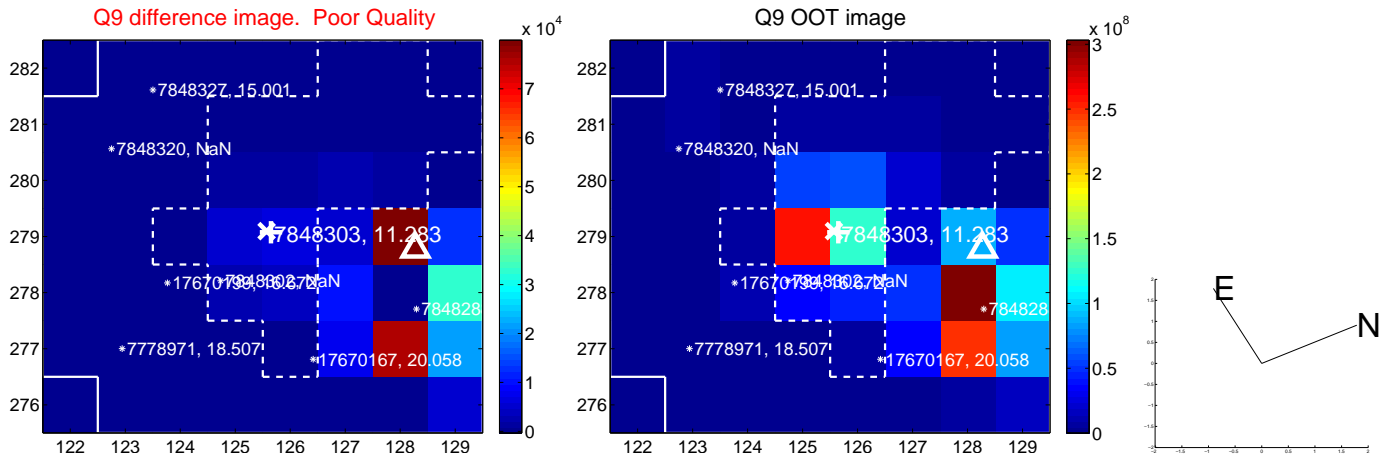
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



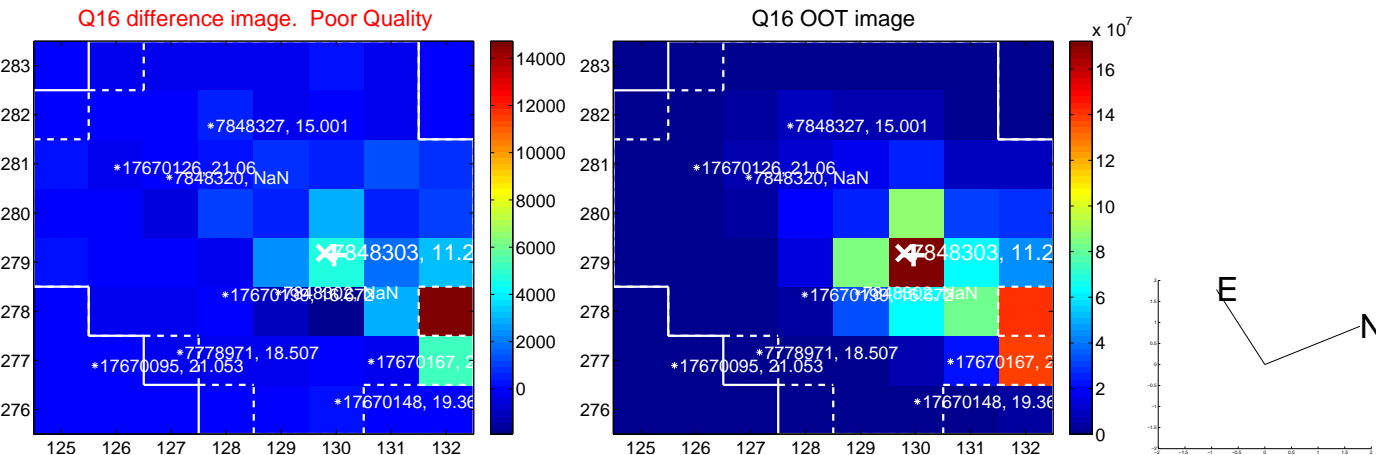
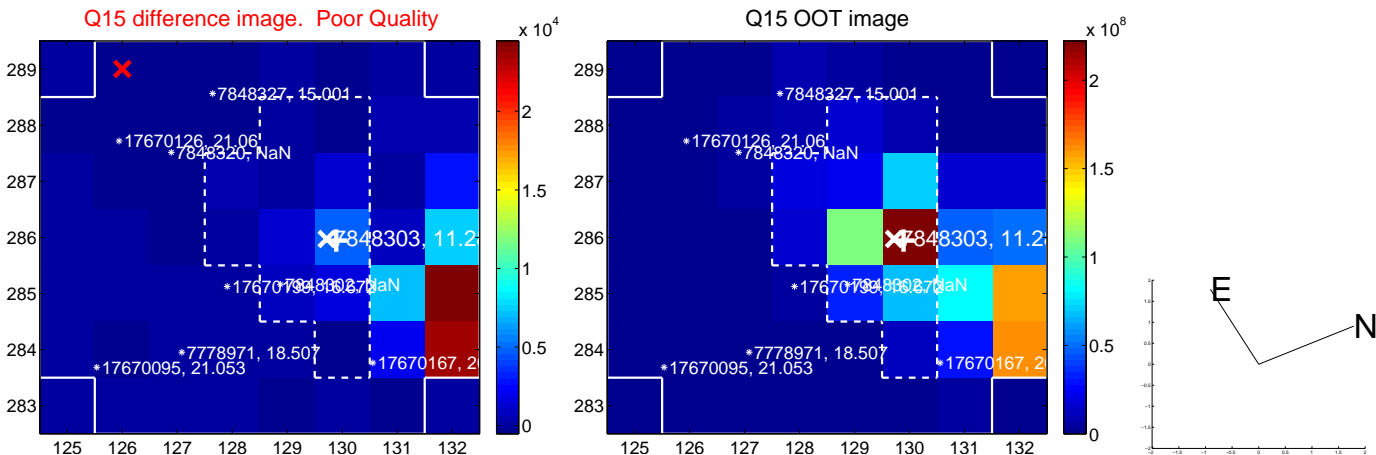
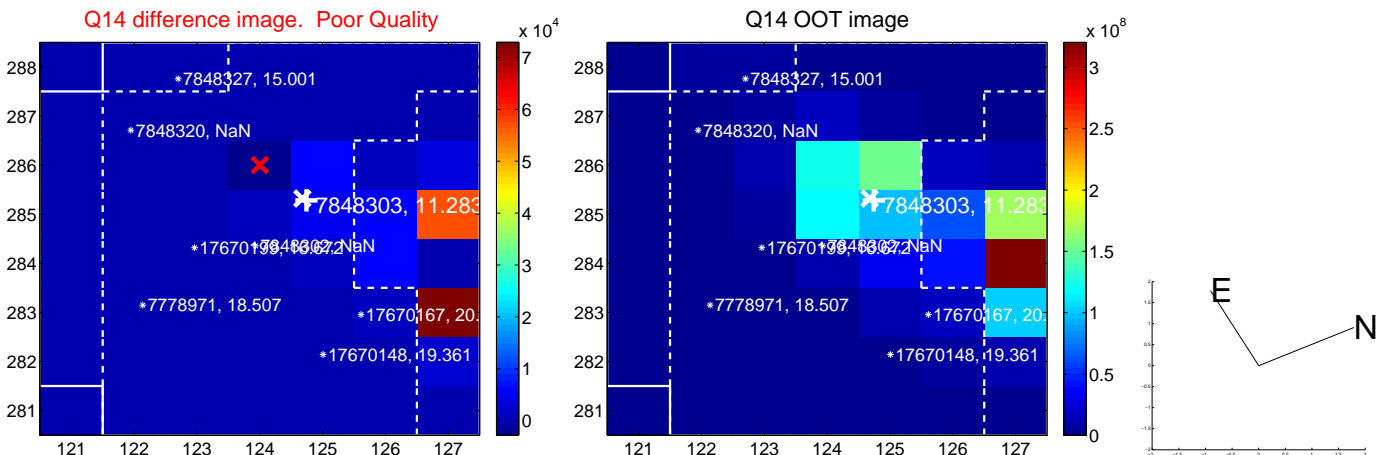
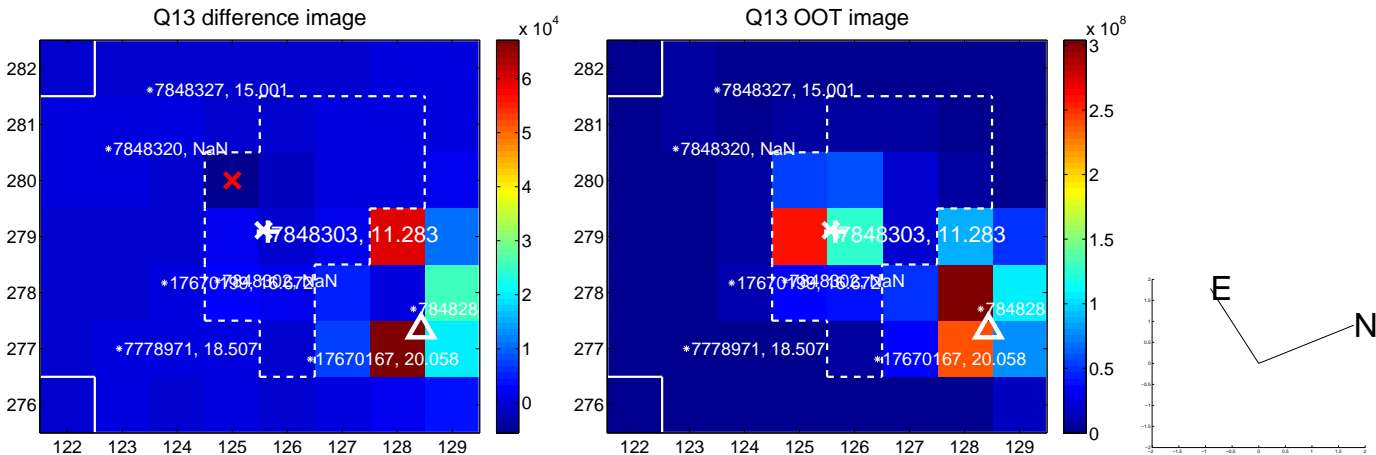
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



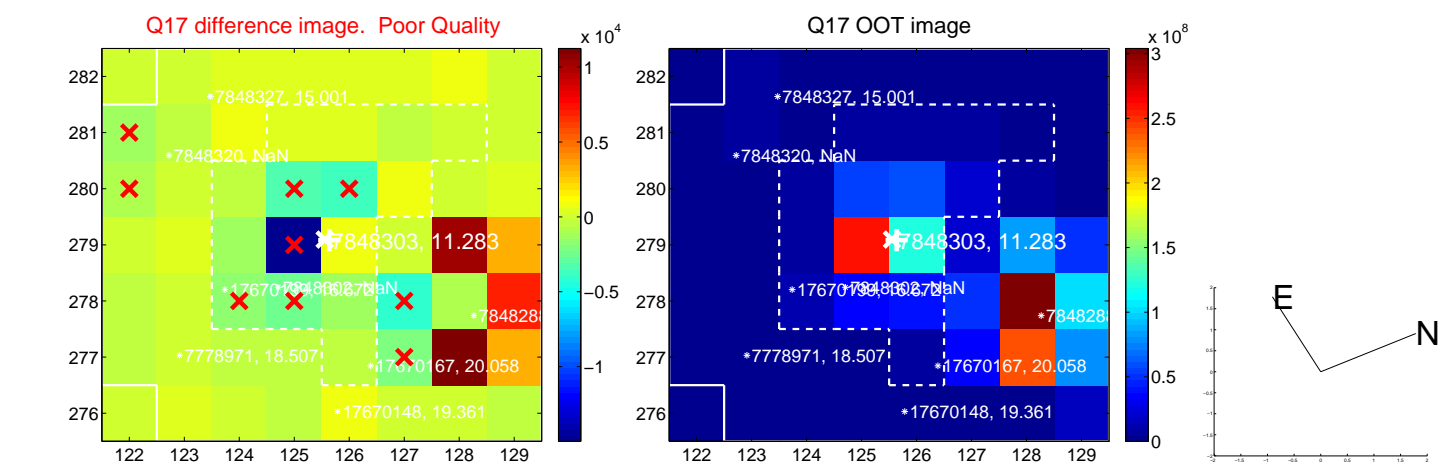
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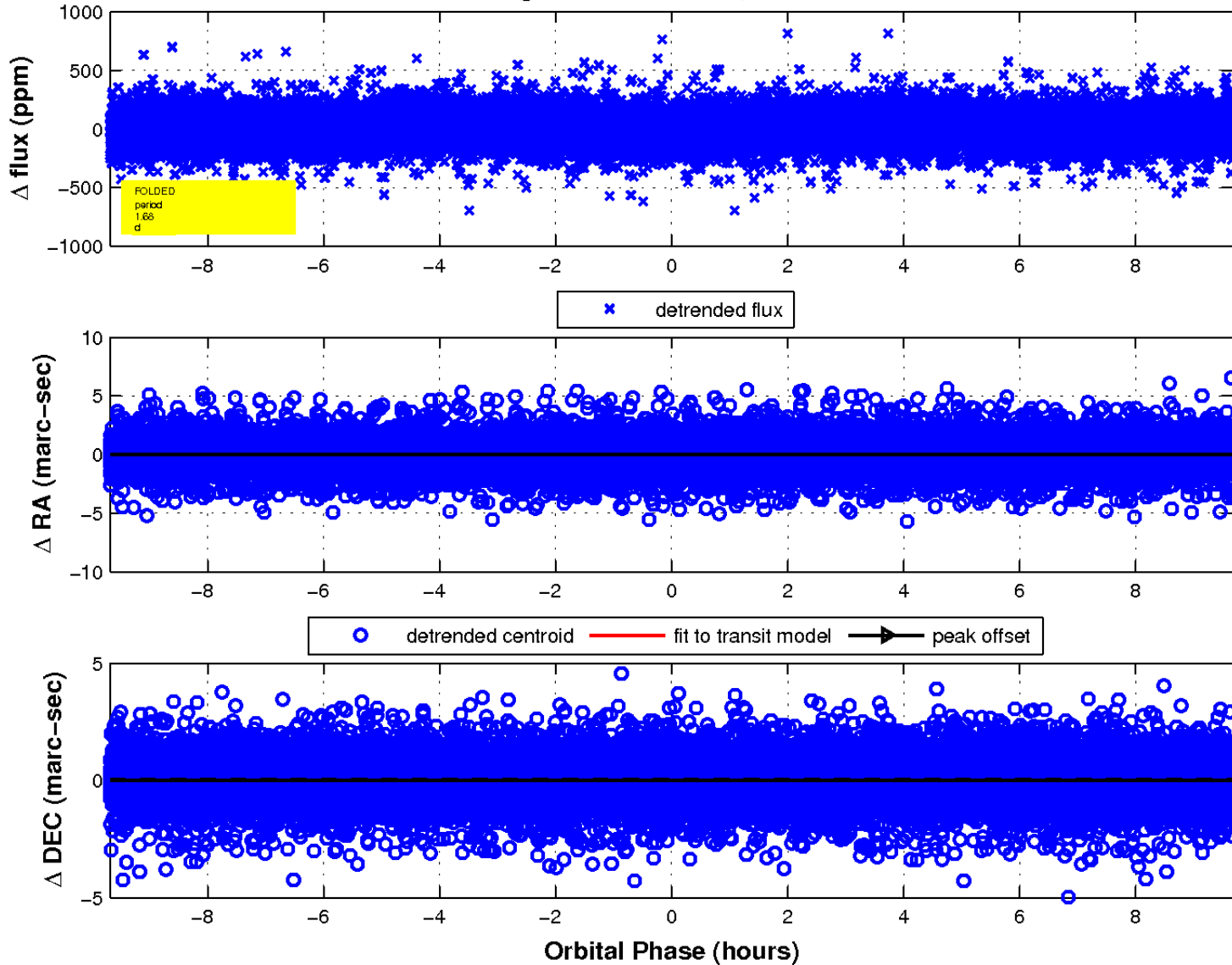
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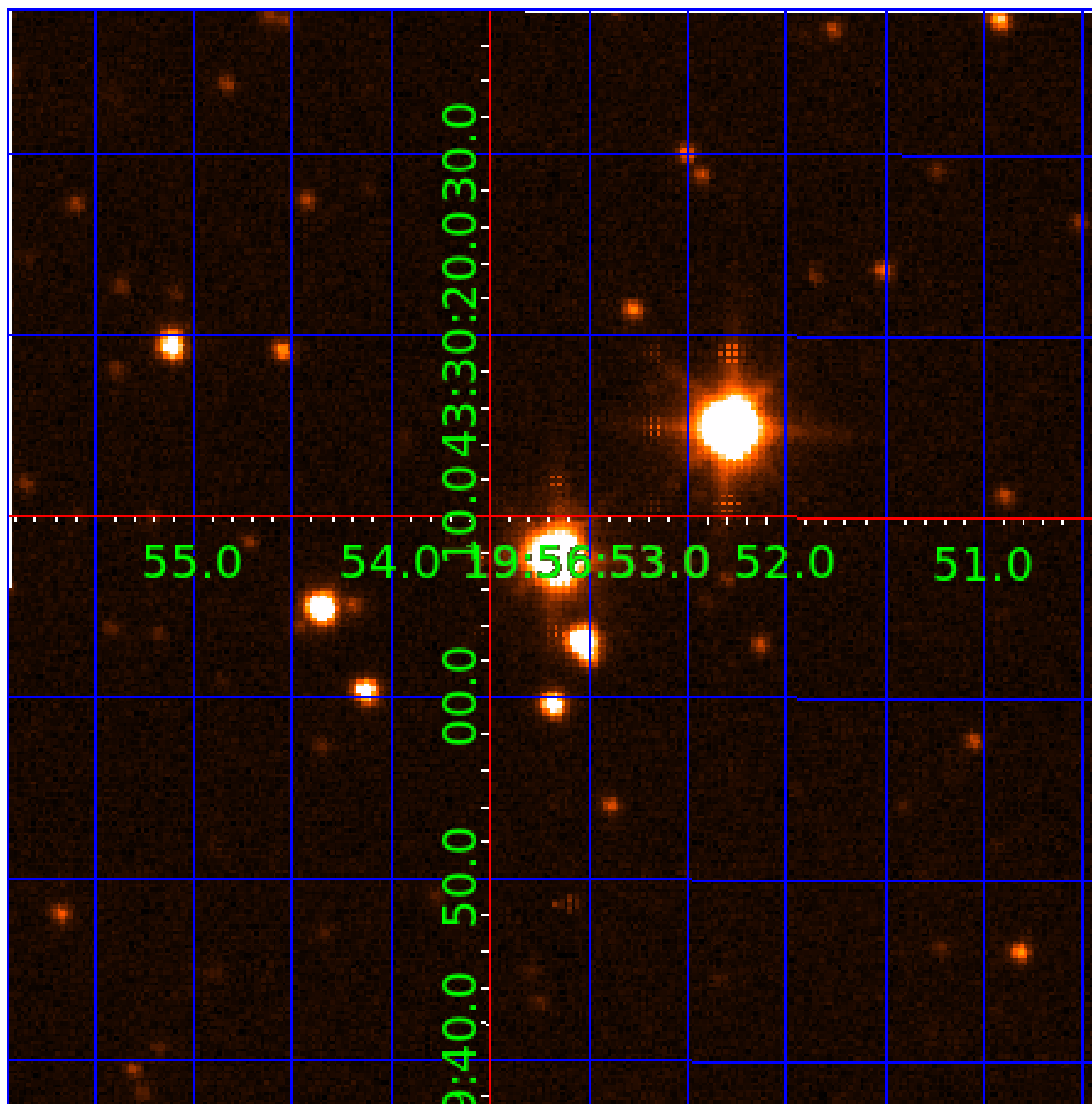


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 007848303

Q1-17 DR25 TCE Parameters

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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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007848303-02	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST—EPHEM_MATCH
007848303-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST

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.

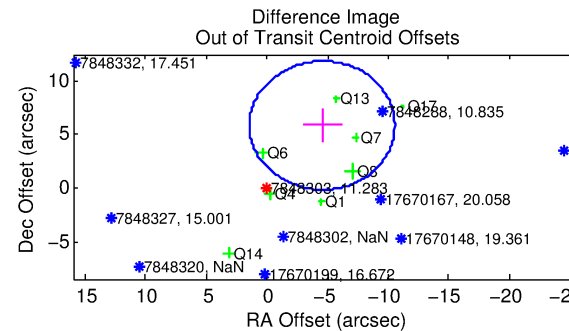
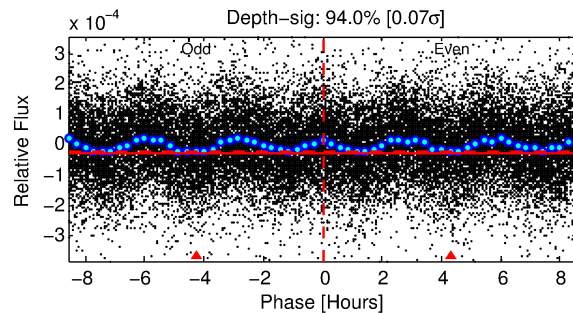
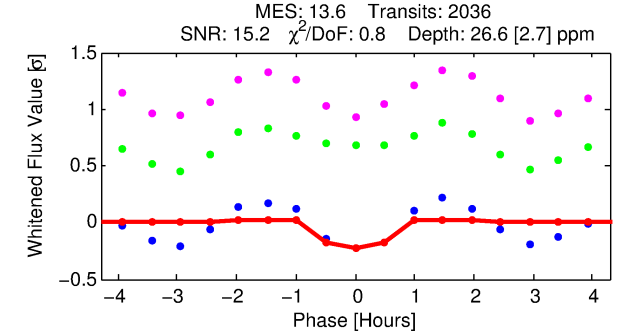
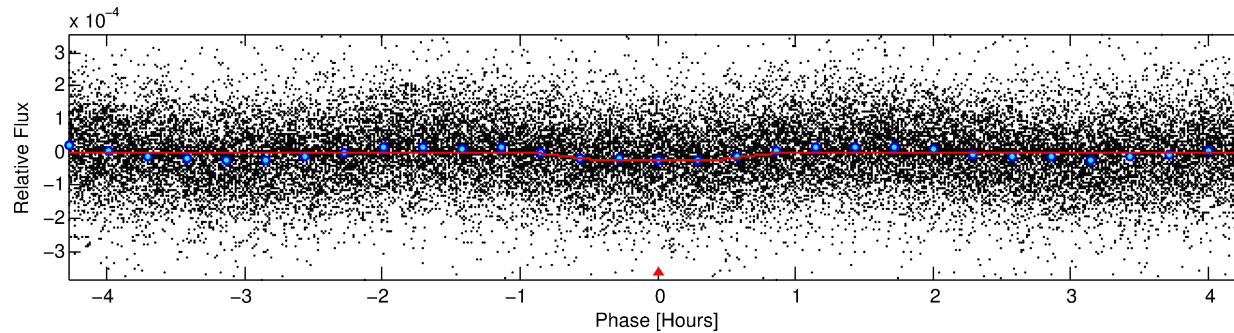
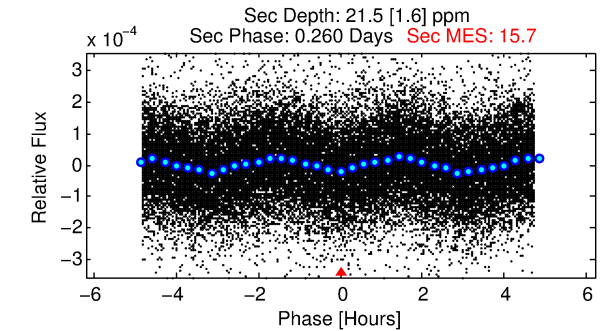
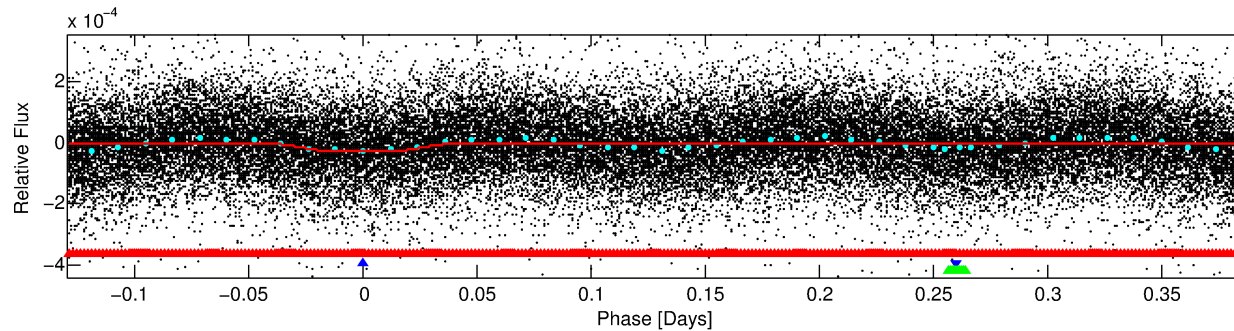
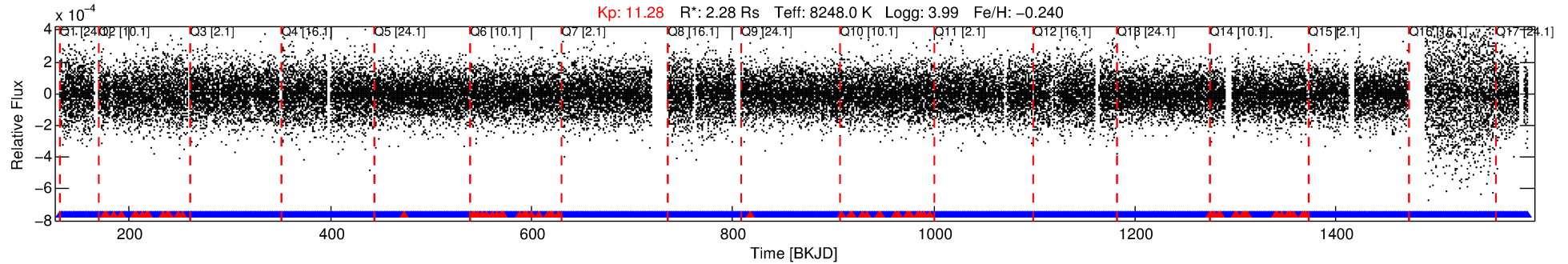
Ephemeris Match Information For 007848303-02

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007848303-02	7848303	009488426-01	9488426	1:4	9269.6	-340	-9	12.98	11.28	0.67	Col-Anomaly	1	3.24	1.95

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7848303 Candidate: 2 of 3 Period: 0.517 d



DV Fit Results:

Period = 0.51653 [0.00001] d
Epoch = 131.9447 [0.0012] BKJD
Rp/R* = 0.0051 [0.0006]
a/R* = 2.15 [1.11]
b = 0.70 [0.48]
Seff = 90422.85 [40371.94]
Teq = 4422 [494] K
Rp = 1.26 [0.42] Re
a = 0.0154 [0.0042] AU
Ag = 1.76 [0.86] [0.88σ]
Teffp = 7877 [605] K [4.42σ]

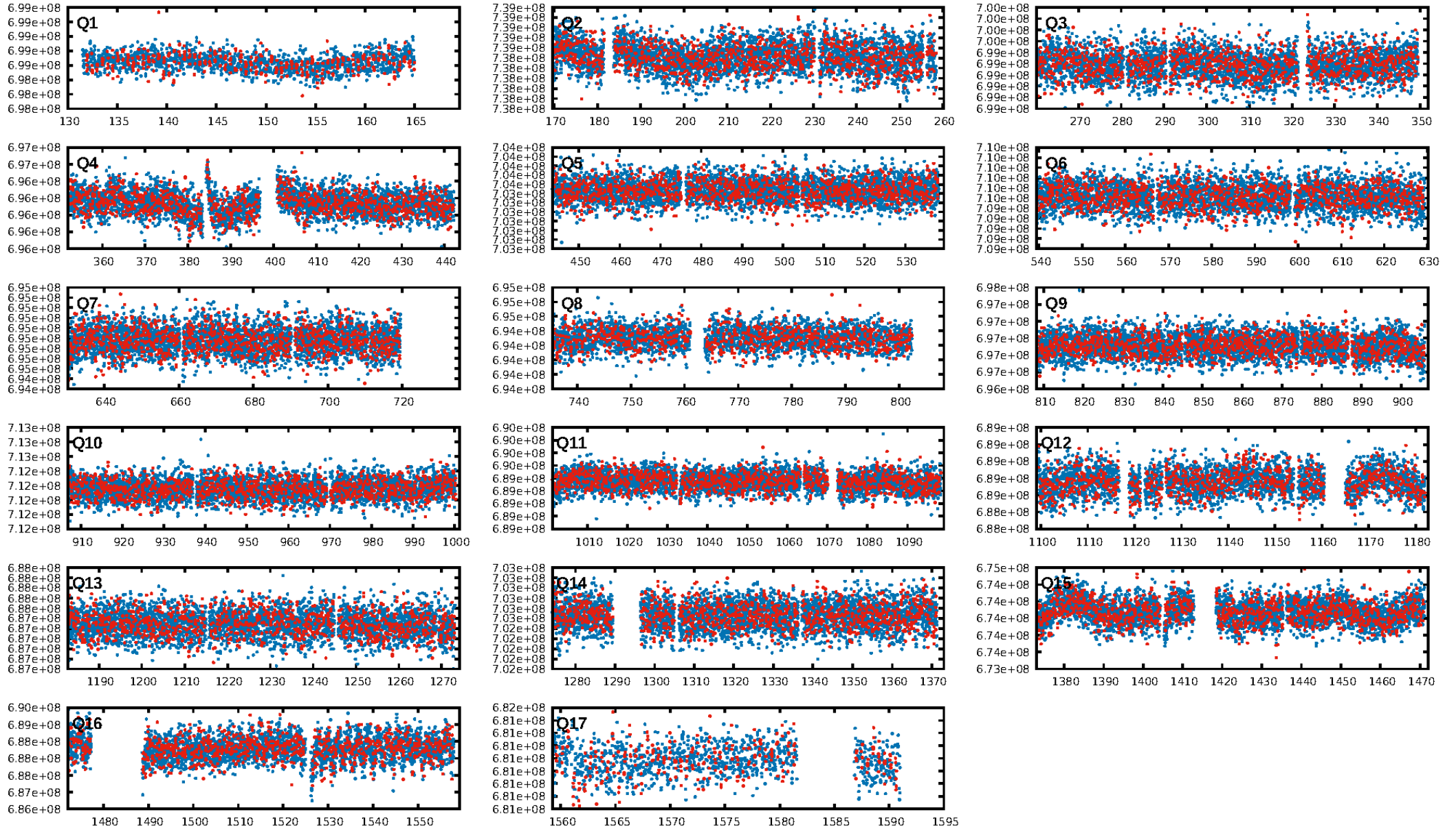
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.83e-09
RollingBand-fgt: 0.96 [1866/1944]
GhostDiagnostic-chr: 0.1622
Centroid-sig: 1.5%
Centroid-so: 1.537 arcsec [2.61σ]
OotOffset-rm: 7.421 arcsec [3.70σ]
KicOffset-rm: 7.863 arcsec [3.92σ]
OotOffset-st: 2/1/2/3 [8]
KicOffset-st: 2/1/2/3 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 1.00 [17/17]

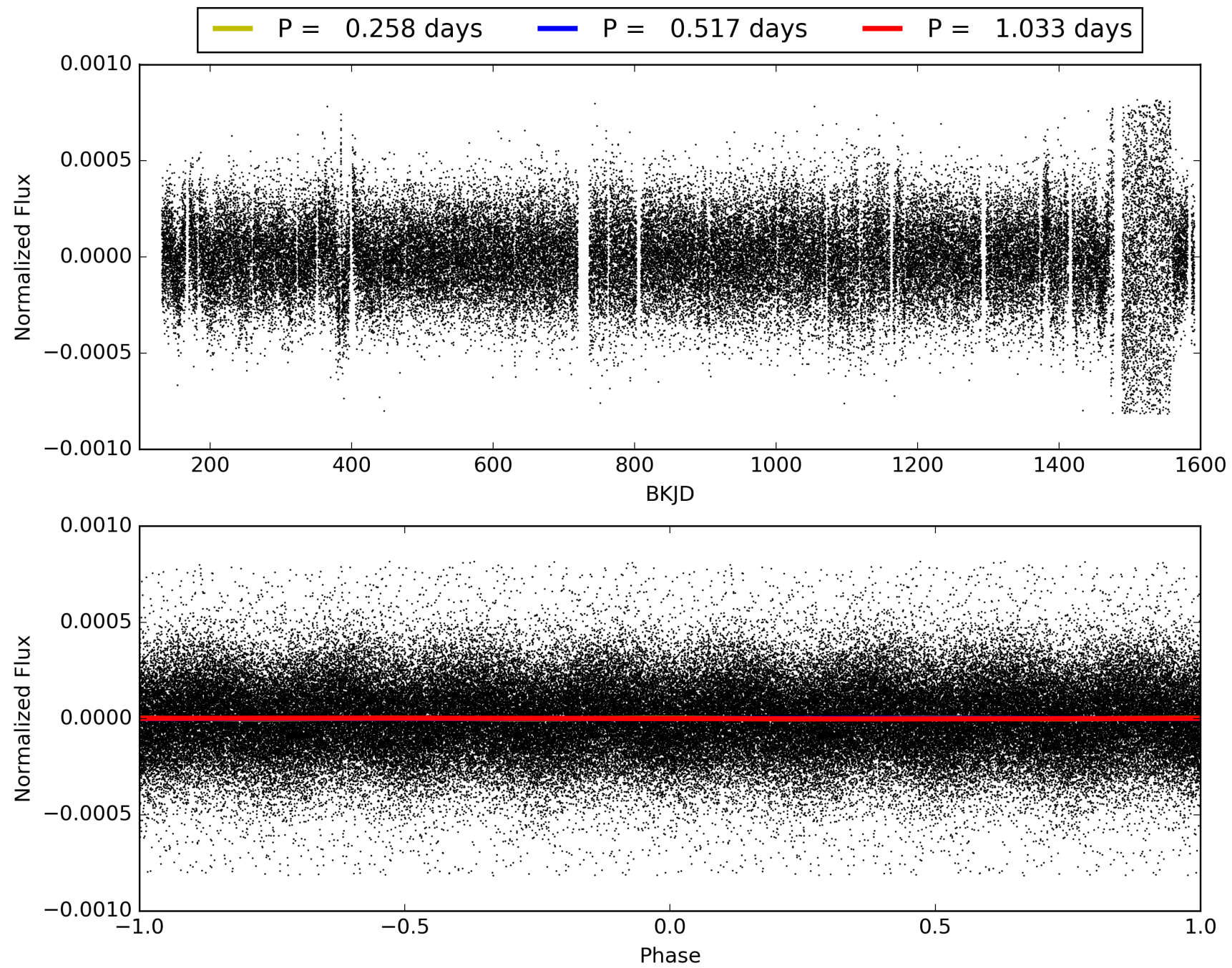
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:06:57 Z

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

TCE 007848303-02, PDC Light Curves

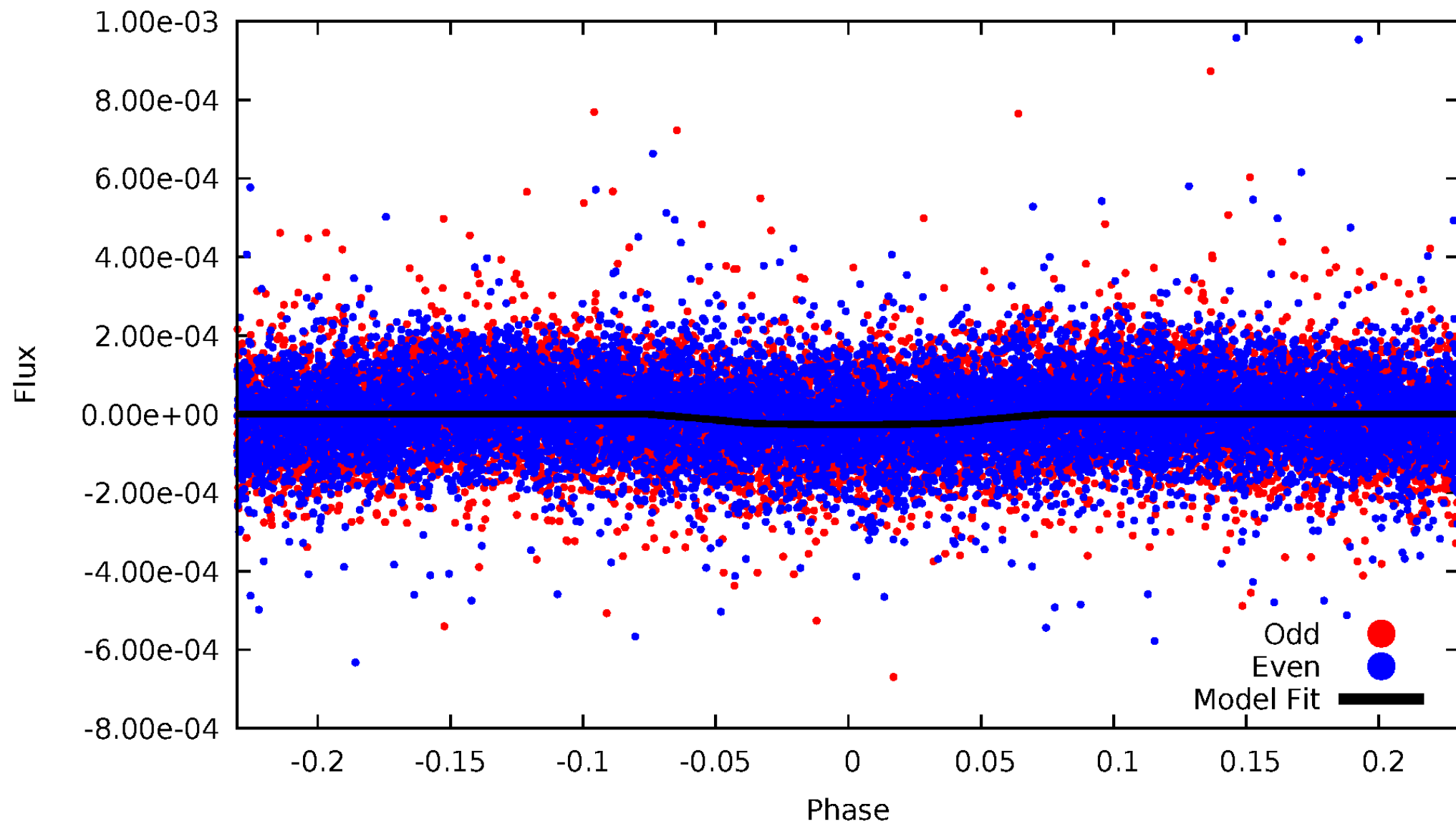


TCE 007848303-02



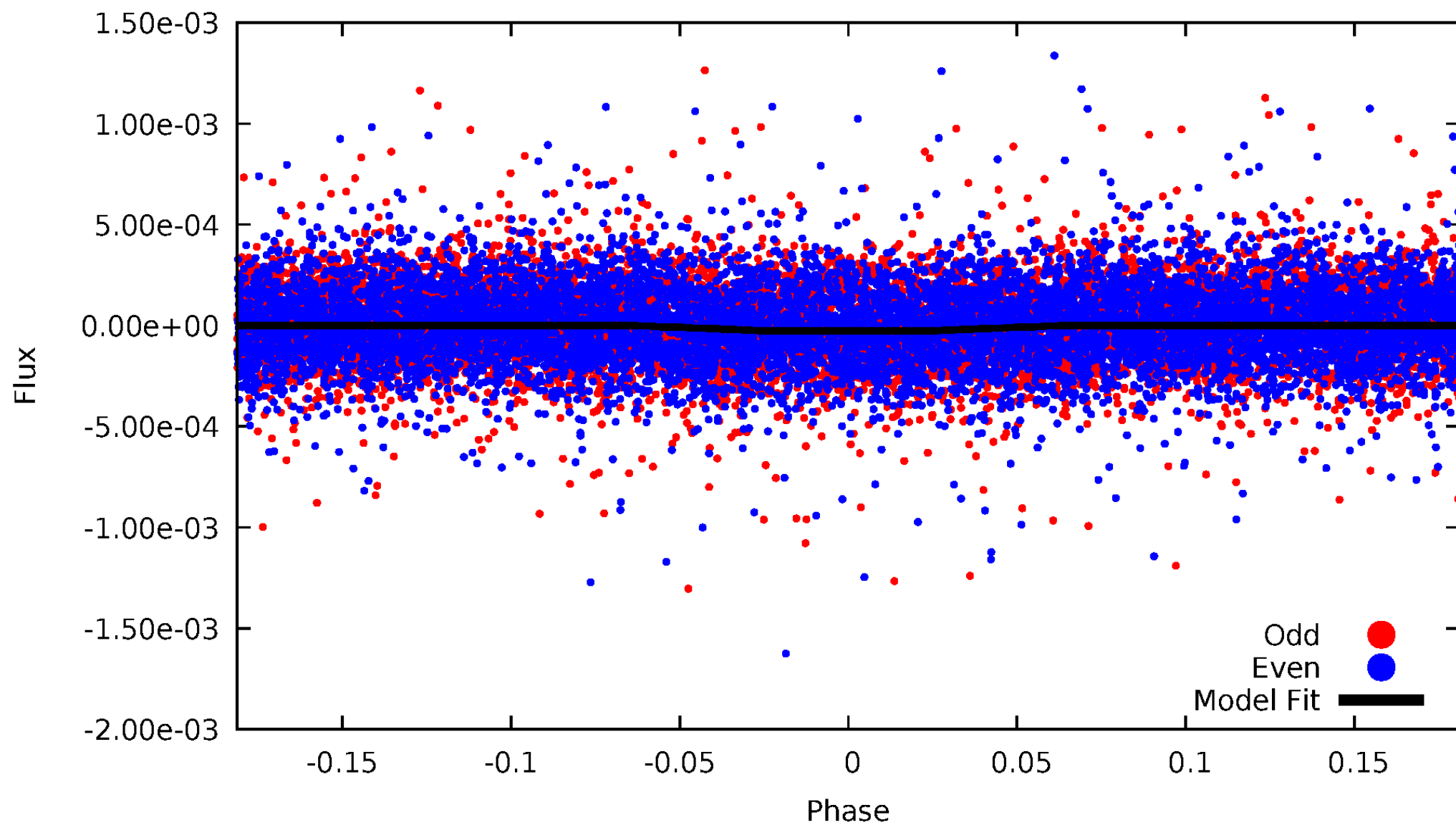
DV Odd/Even

TCE 007848303-02



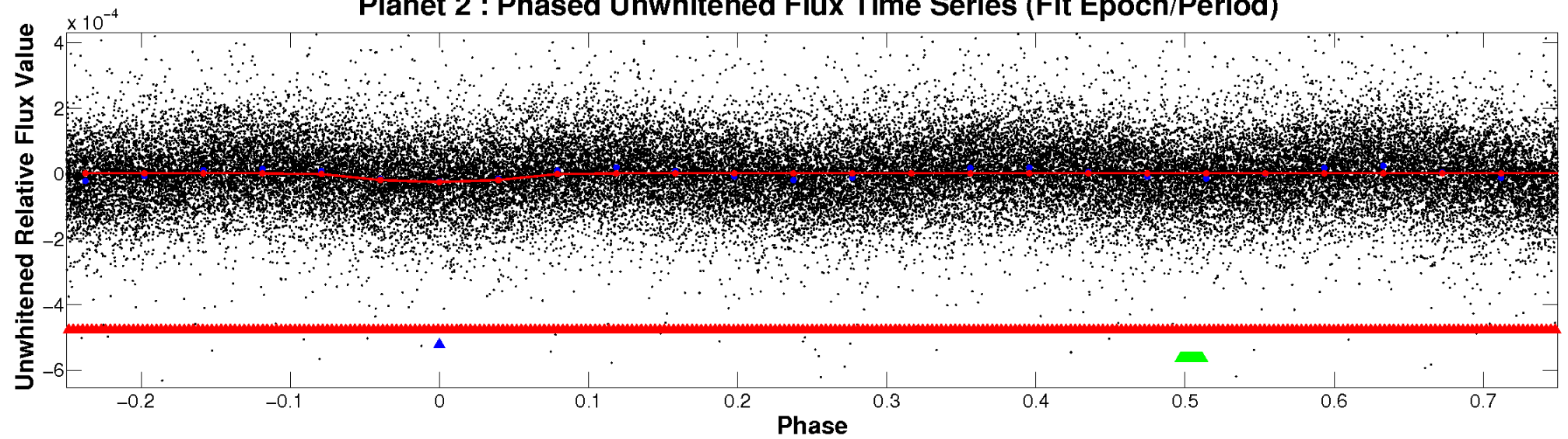
ALT Odd/Even

TCE 007848303-02

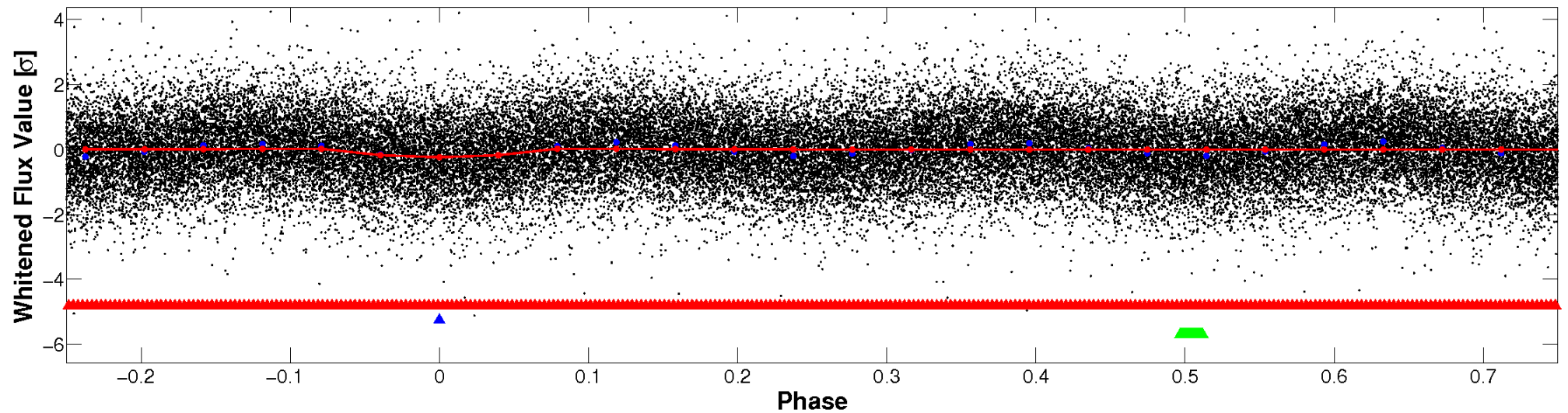


Non-Whitened Vs. Whitened Light Curve

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

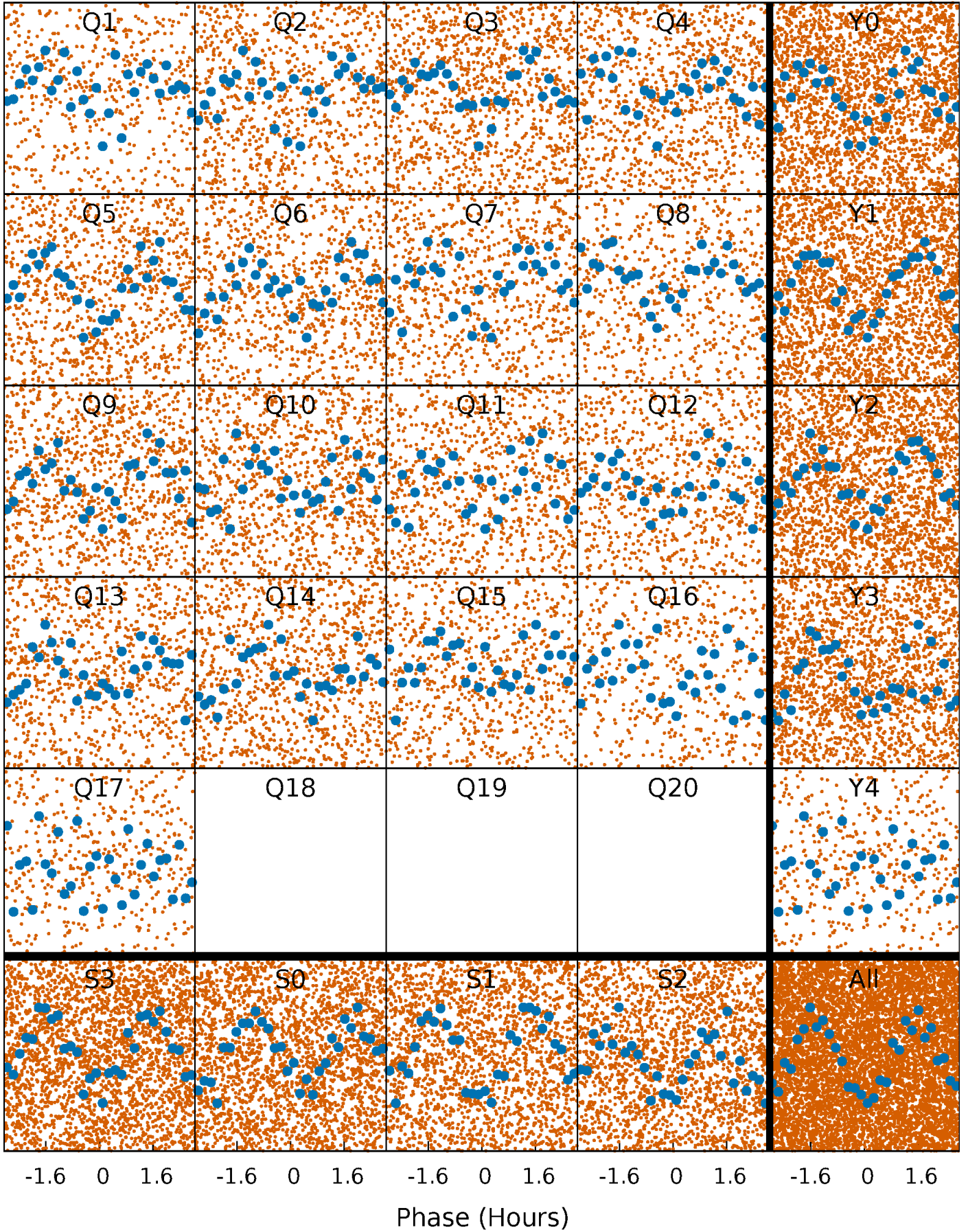


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



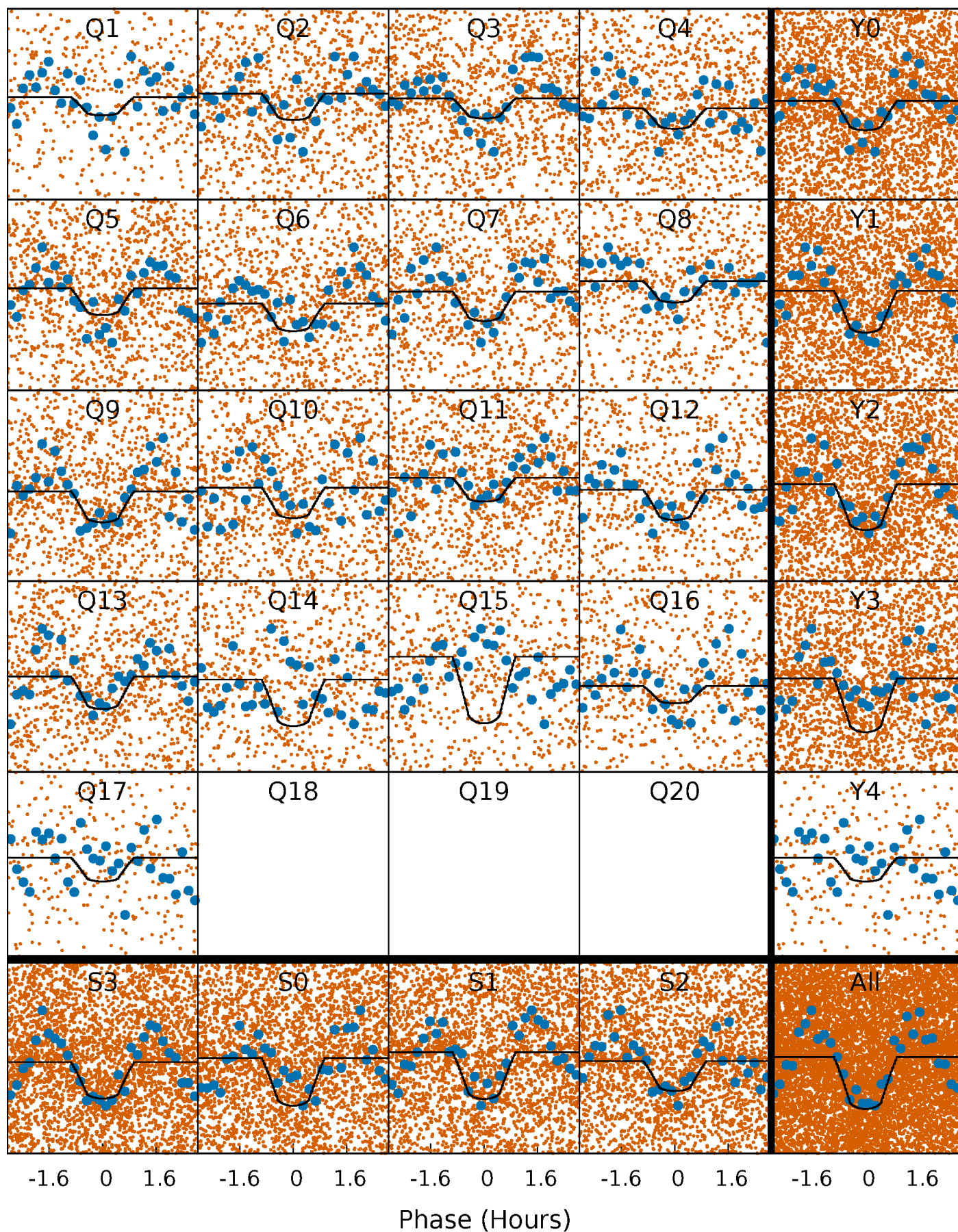
PDC Quarter-Phased Transit Curves

TCE 007848303-02 $P = 0.516528$ Days $T_0 = 131.944726$ (BKJD)



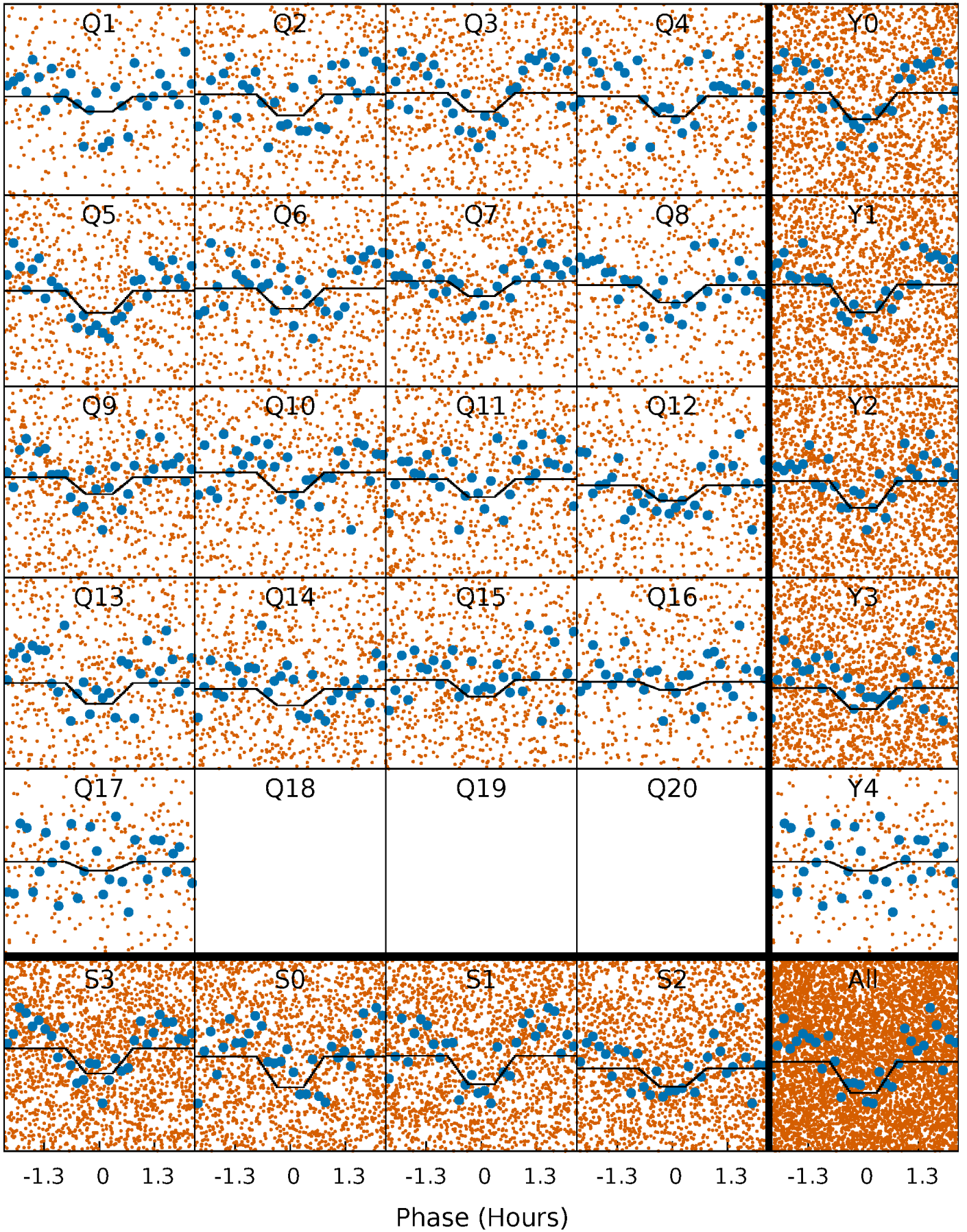
DV Quarter-Phased Transit Curves

TCE 007848303-02 P= 0.516528 Days $T_0=131.944726$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

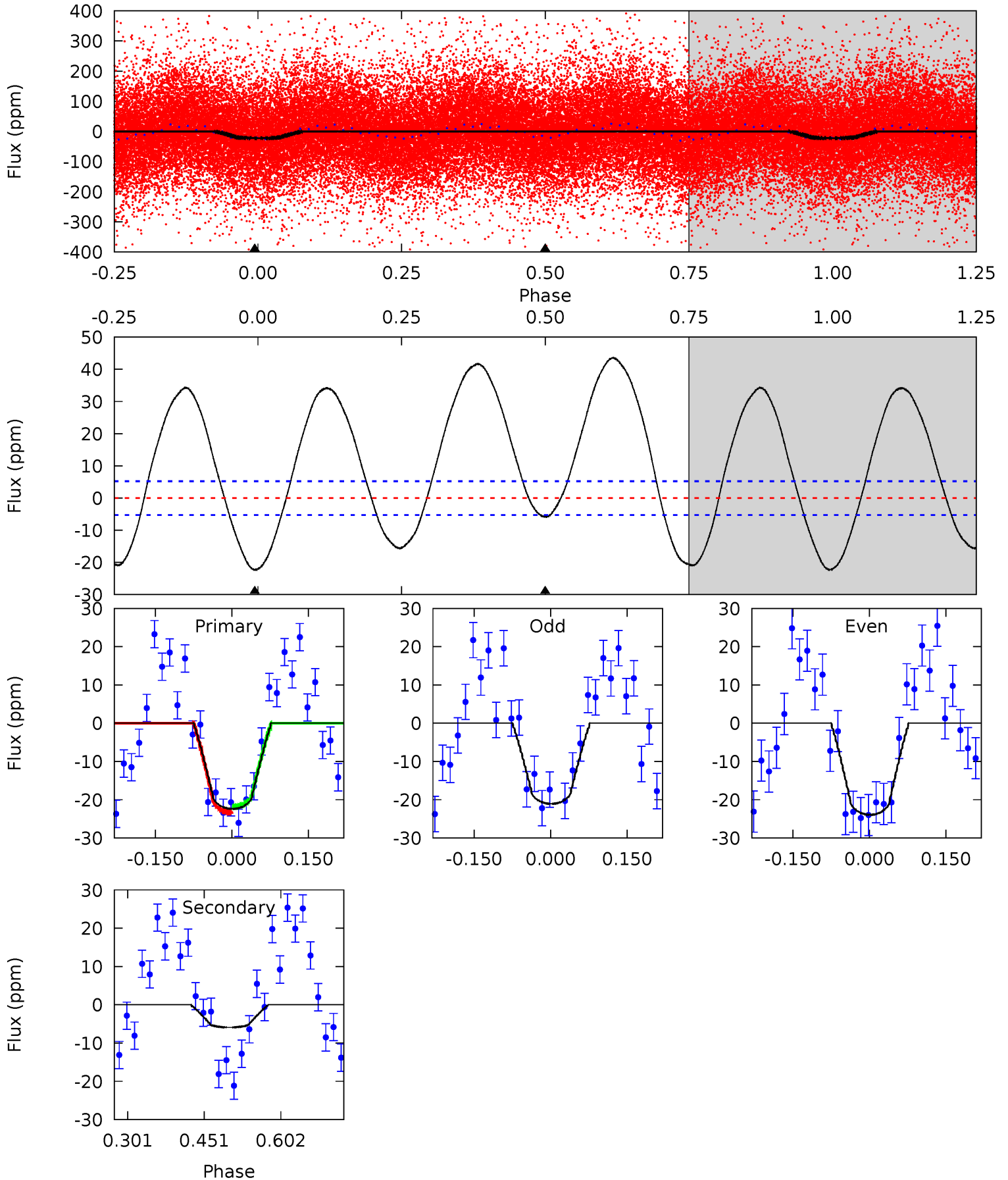
TCE 007848303-02 P= 0.516528 Days $T_0=131.944711$ (BKJD)



DV Model-Shift Uniqueness Test

007848303-02, P = 0.516528 Days, E = 131.428198 Days

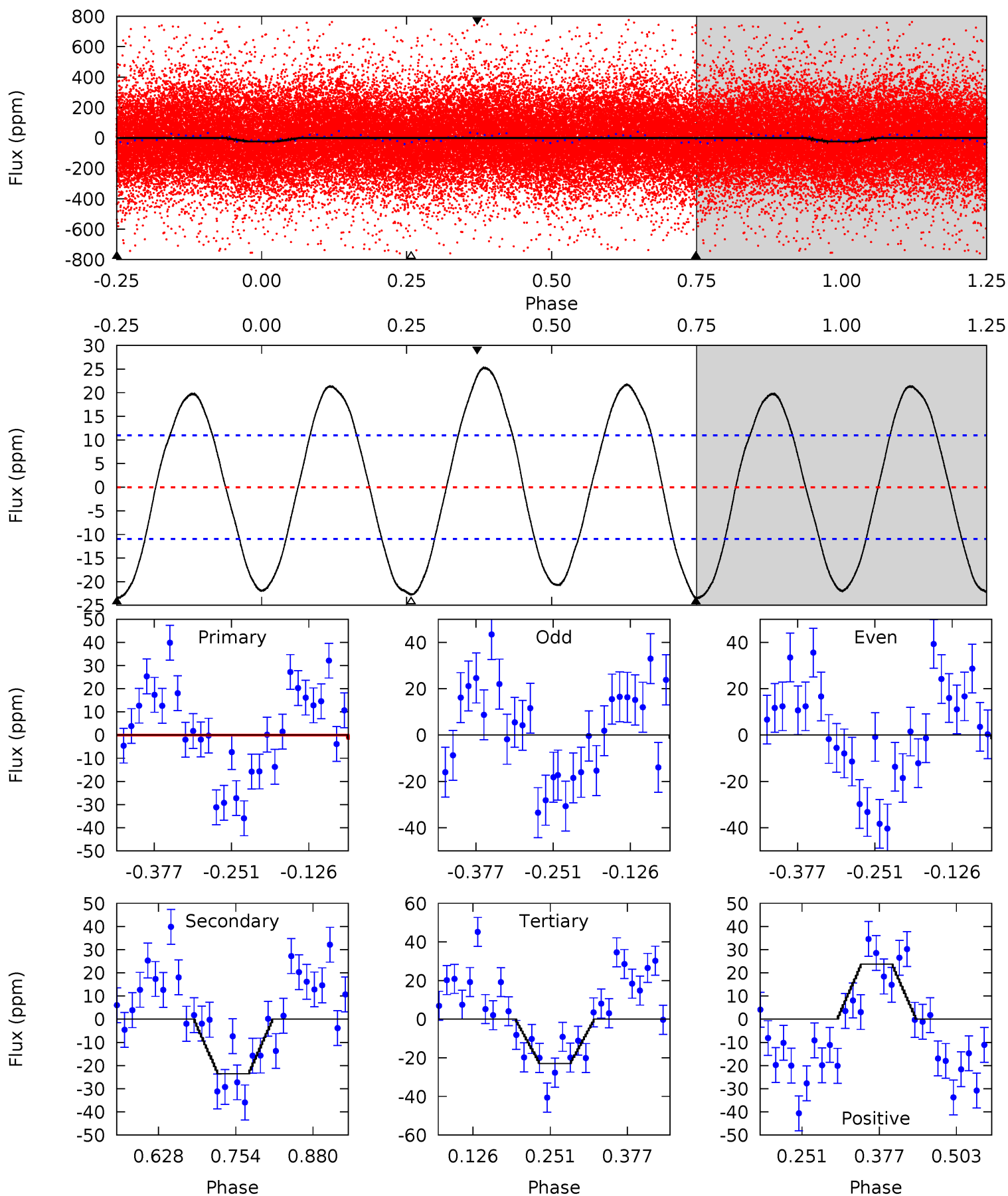
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	5.05	0	0	4.48	1.44	14.2	19.1	19.1	5.05	5.05	1.23	1.03	0.66	0.66



Alt Model-Shift Uniqueness Test

007848303-02, P = 0.516528 Days, E = 131.428183 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	9.69	9.43	9.76	4.52	1.53	6.40	0.29	-0.04	0.27	-0.07	0.42	0.89	0.52	0.85



Stellar Parameters For KIC 007848303

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8248^{+226}_{-340}	$3.986^{+0.234}_{-0.126}$	$-0.240^{+0.200}_{-0.350}$	$2.276^{+0.382}_{-0.709}$	$1.832^{+0.090}_{-0.359}$	$0.219^{+0.315}_{-0.074}$
	+3%/-4%	+6%/-3%	+83%/-146%	+17%/-31%	+5%/-20%	+144%/-34%
Source	KIC0	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 007848303-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-6 ± 1	$1.22^{+0.21}_{-0.24}$	6131^{+378}_{-489}	4545^{+761}_{-962}	$0.498^{+0.294}_{-0.150}$
Alt.	-24 ± 2	$1.22^{+0.23}_{-0.24}$	6099^{+432}_{-505}	7580^{+799}_{-715}	$1.983^{+1.021}_{-0.587}$

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

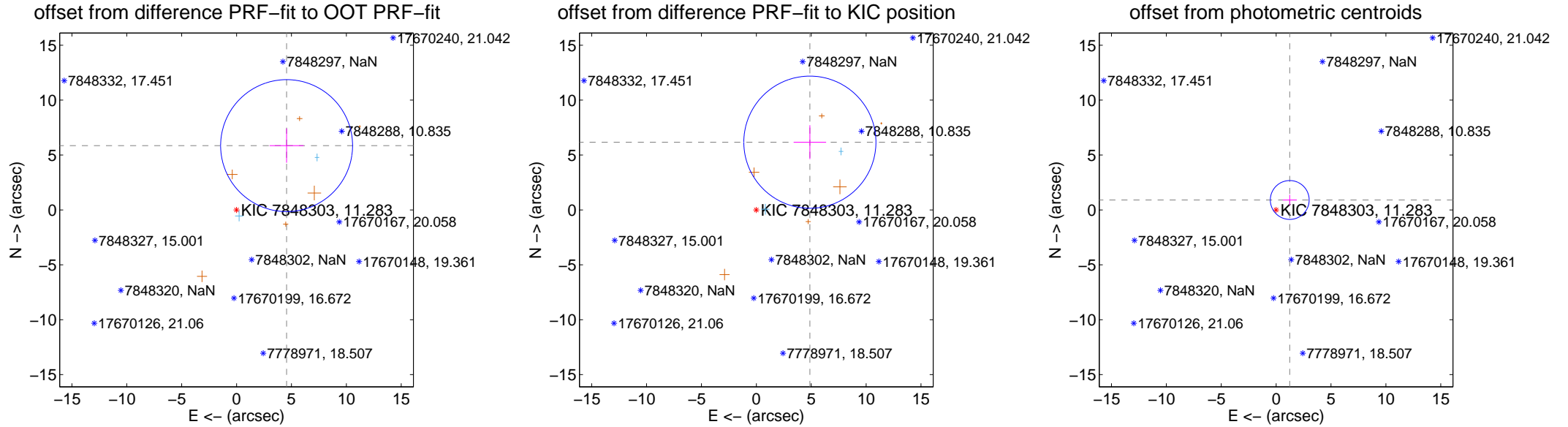
DV Centroid Data

Supplemental centroid analysis for 007848303-02. **Kepler magnitude: 11.28.** Transit SNR 15.25

There are 2 quarters with good PRF difference image offsets

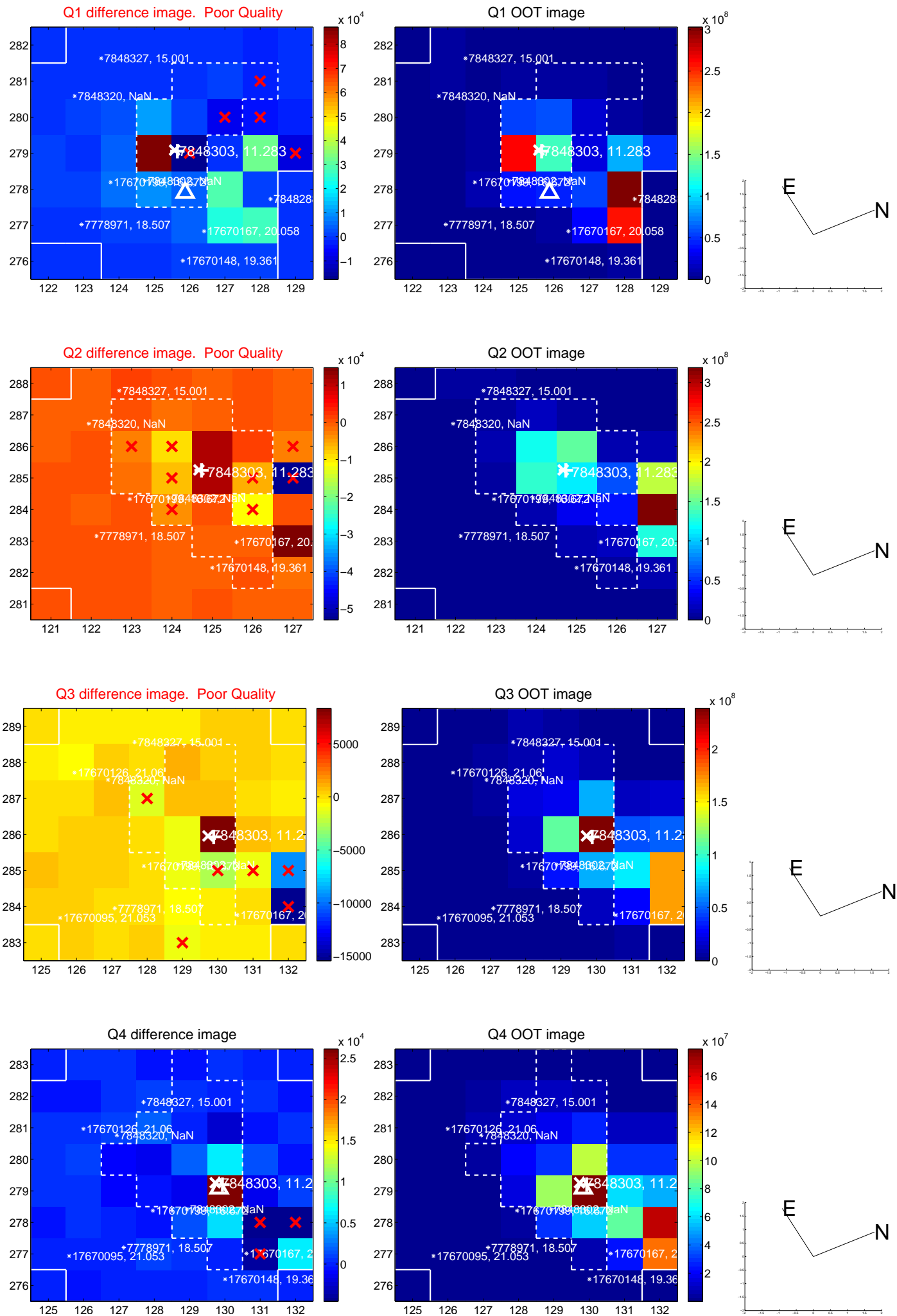
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.421 ± 2.003	3.70	-4.558 ± 1.548	5.856 ± 1.561
PRF-fit source offset from KIC position	7.863 ± 2.006	3.92	-4.877 ± 1.479	6.168 ± 1.546
photometric centroid source offset	1.54 ± 0.59	2.61	-1.24 ± 0.64	0.91 ± 0.47

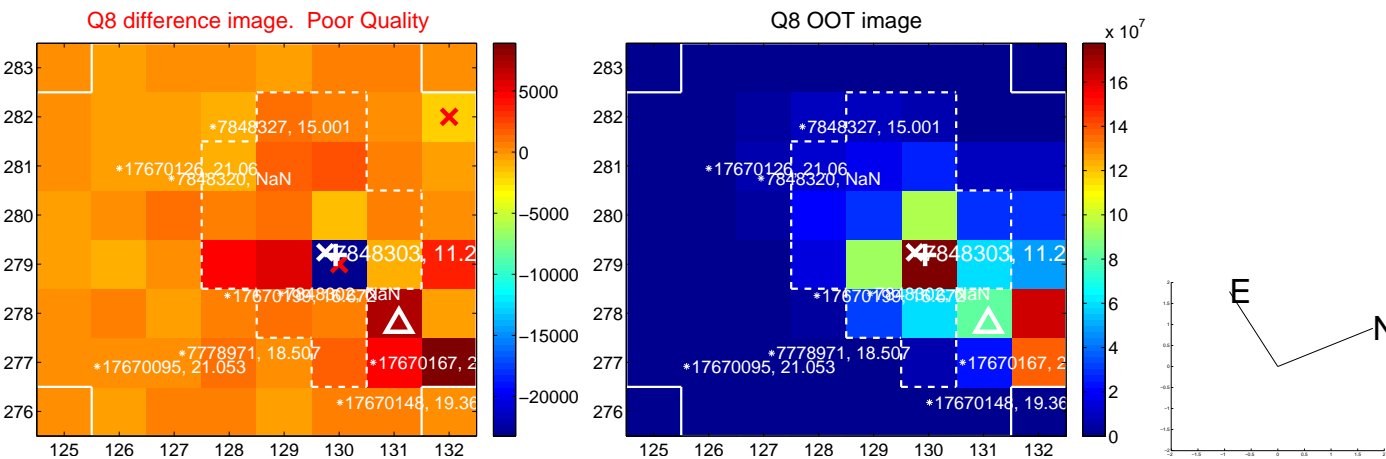
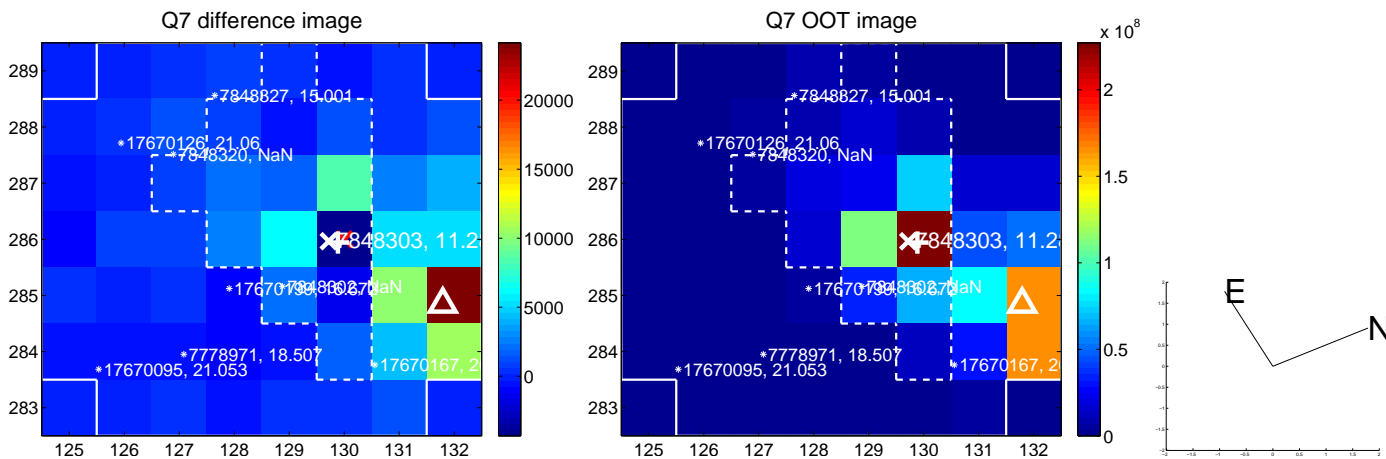
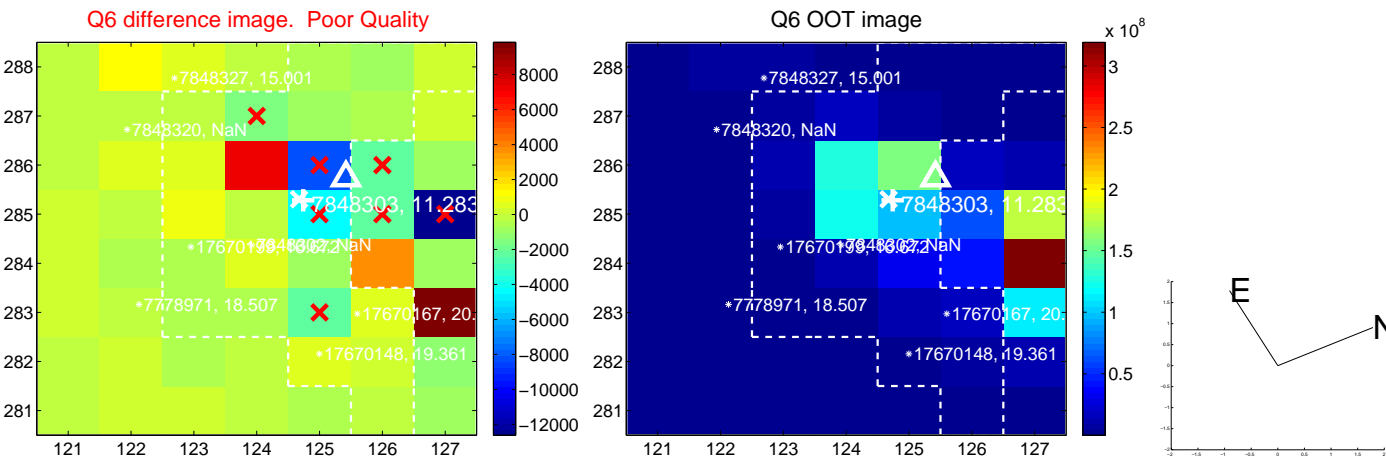
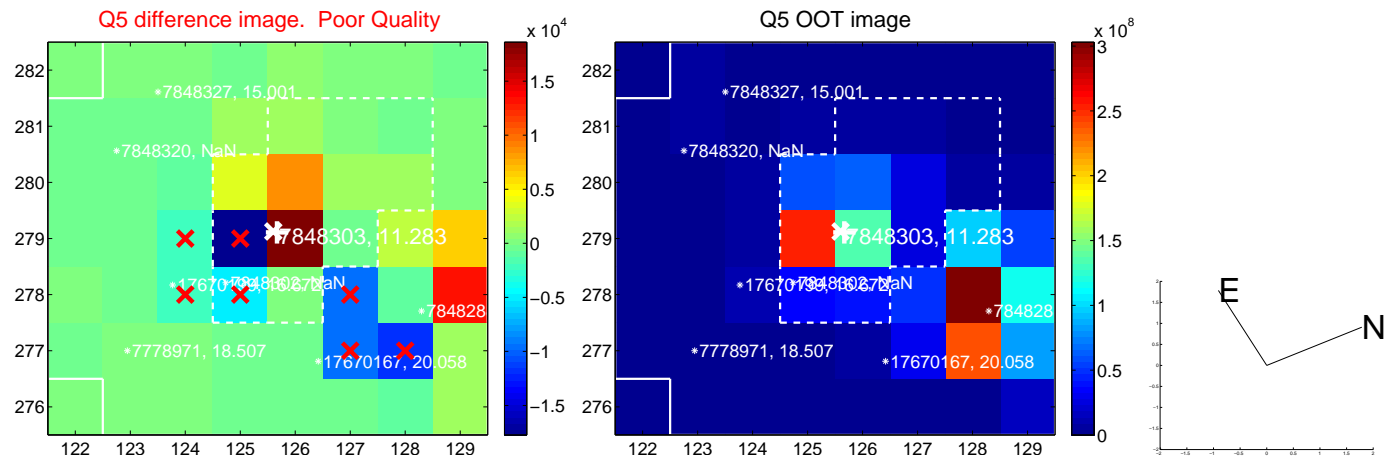


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

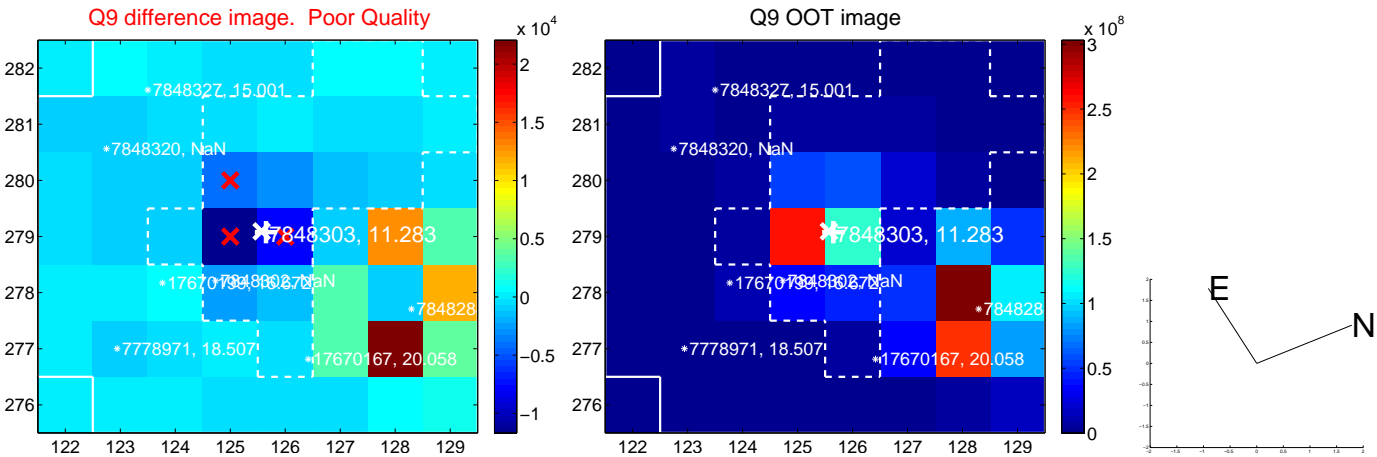
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



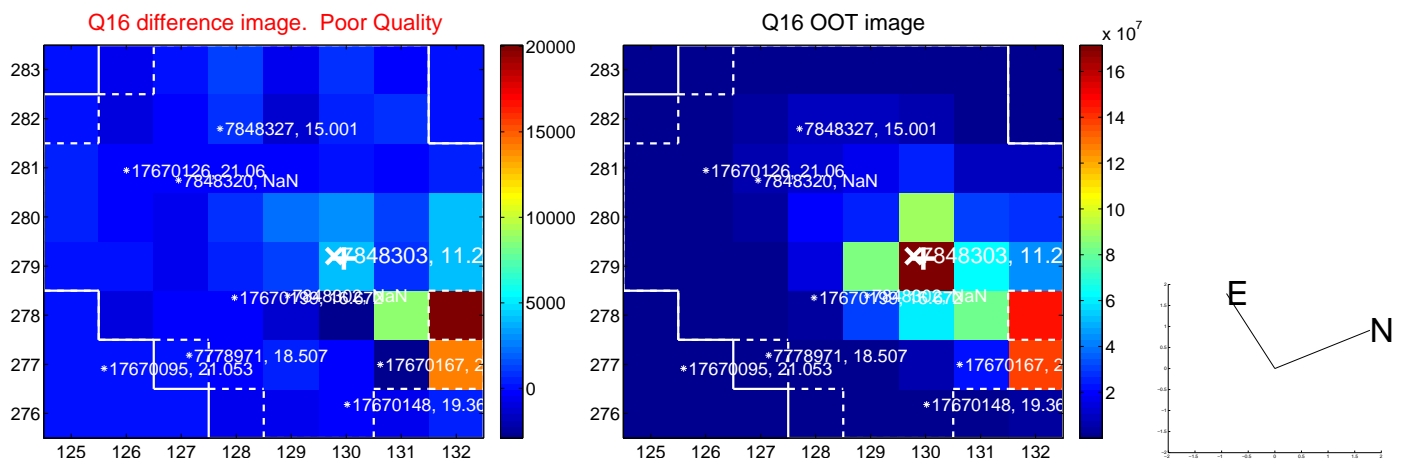
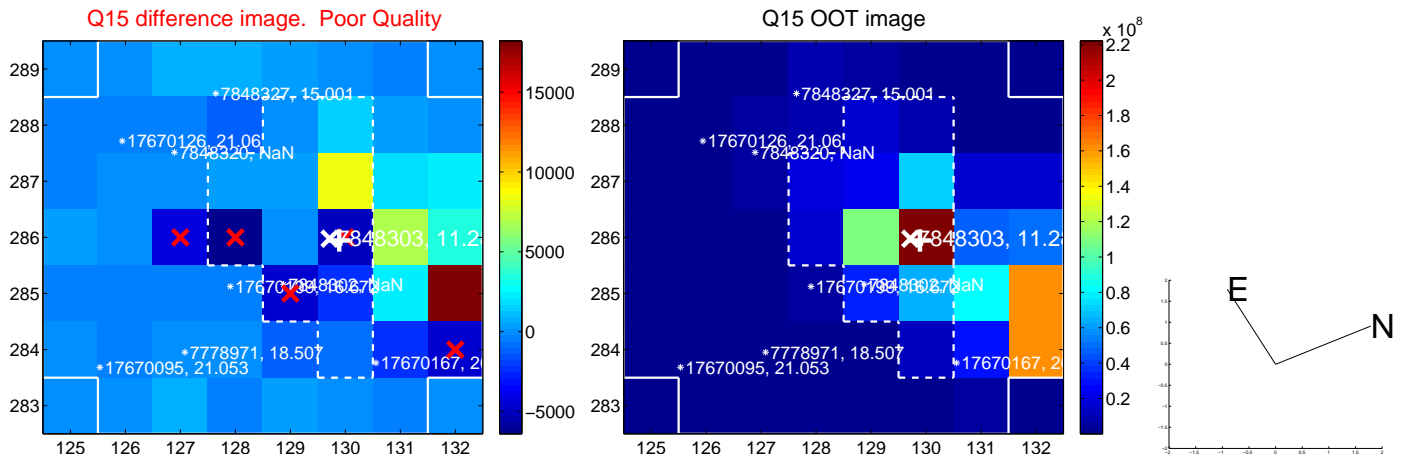
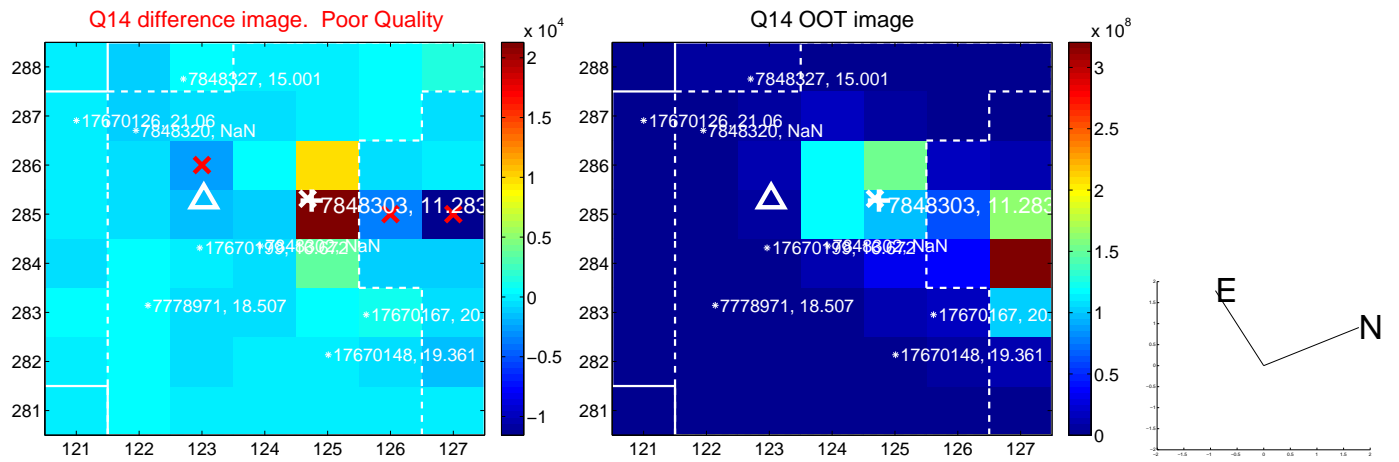
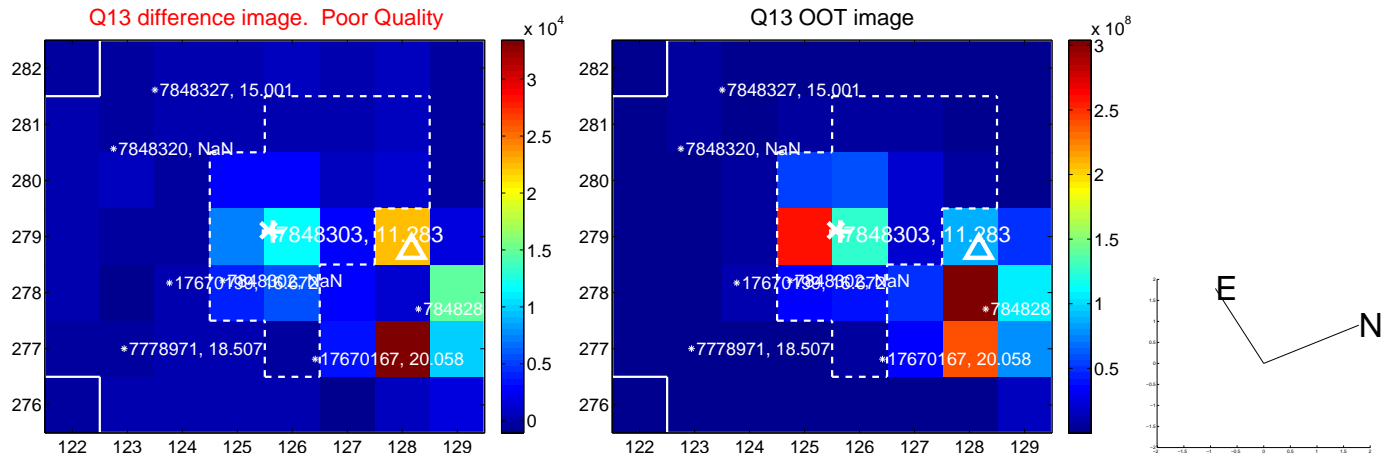
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



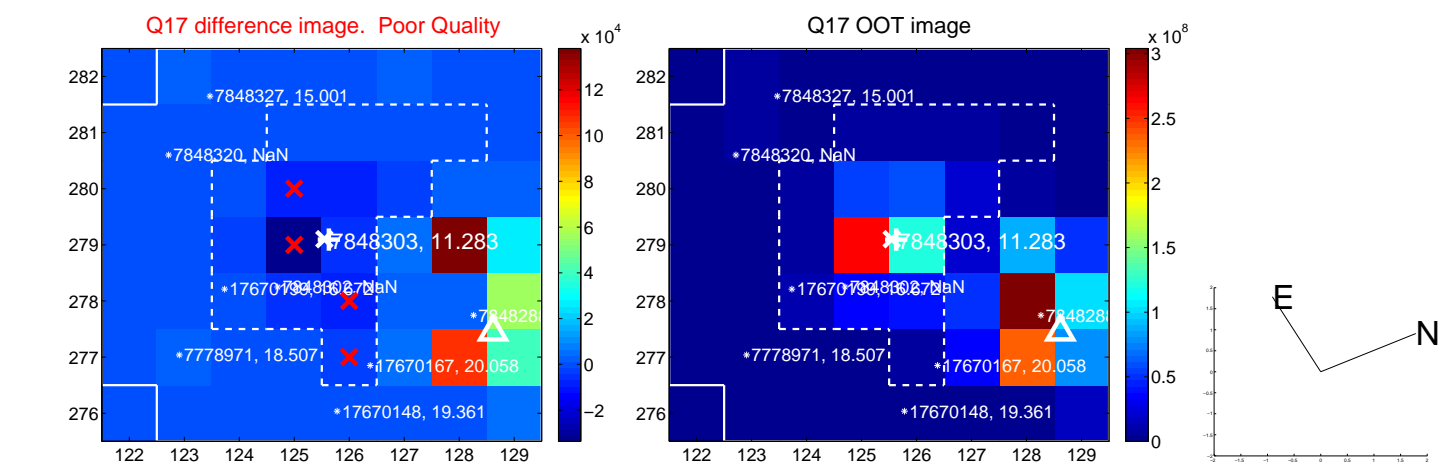
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



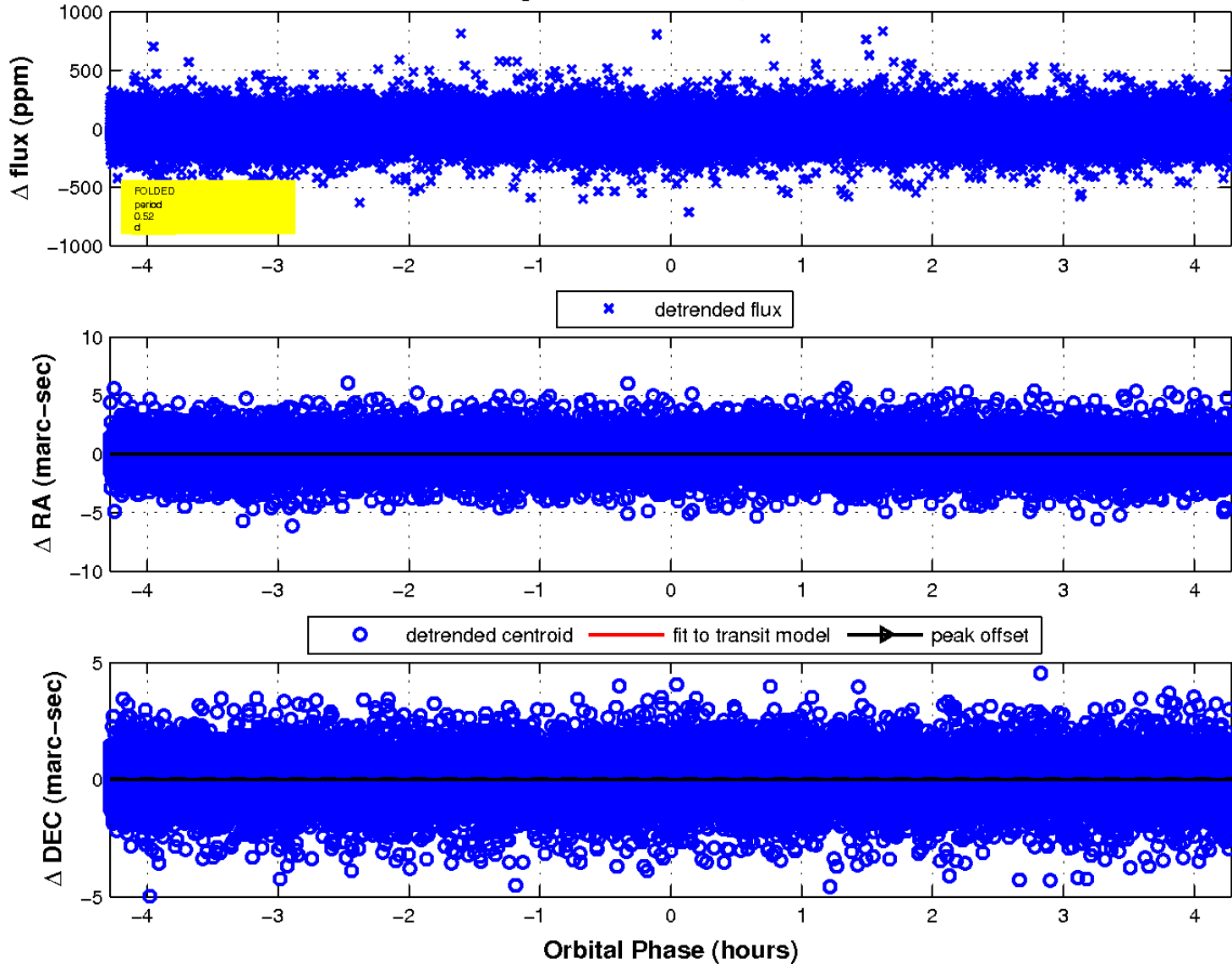
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

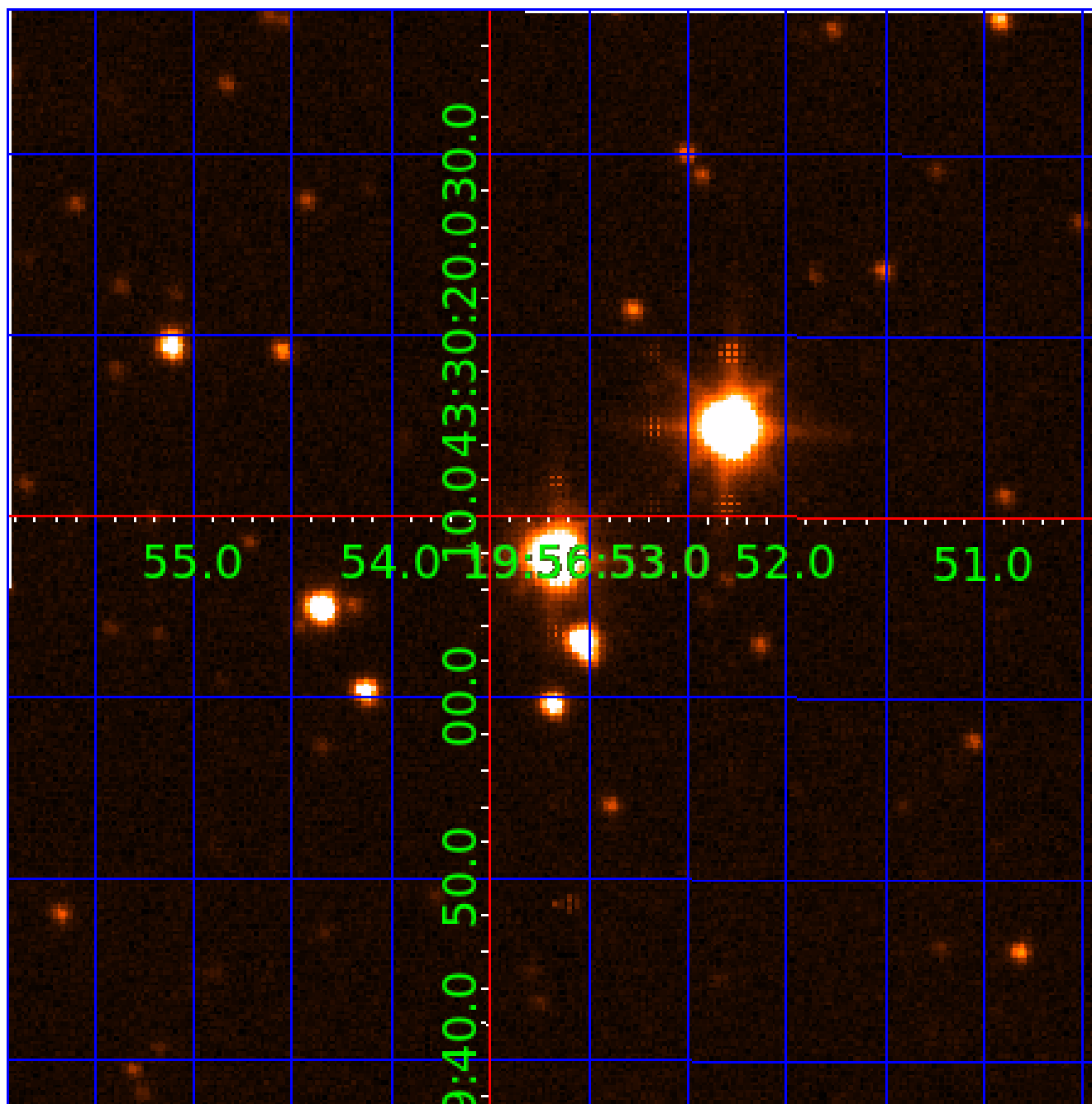


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 007848303

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})
007848303-01	OBS	No	1.675919	132.316765	22.0	3.227	10.4	9.9	2.28	8248	1.25	18824.92
007848303-02	OBS	No	0.516528	131.944726	26.6	1.428	13.6	15.2	2.28	8248	1.26	90422.85
007848303-03	OBS	No	0.516531	131.684861	24.4	0.944	11.9	12.8	2.28	8248	1.17	90422.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007848303-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007848303-02	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST—EPHEM_MATCH
007848303-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_SATURATED—HALO_GHOST

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

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

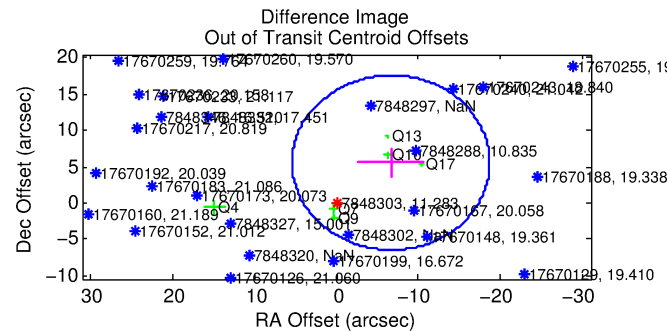
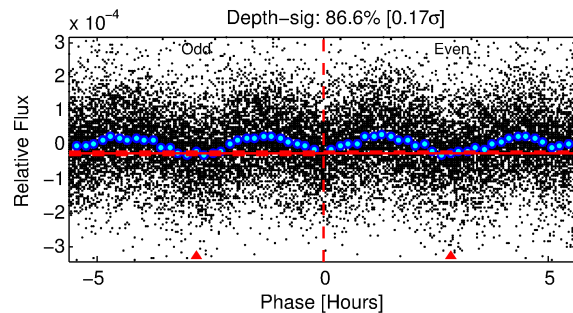
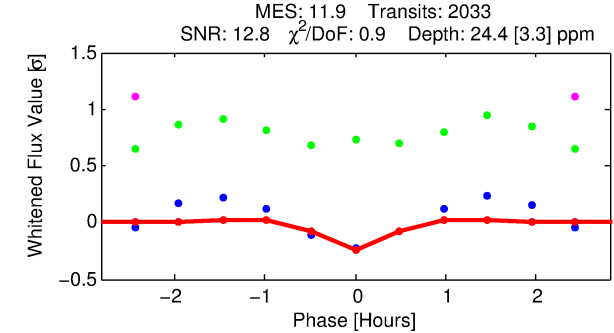
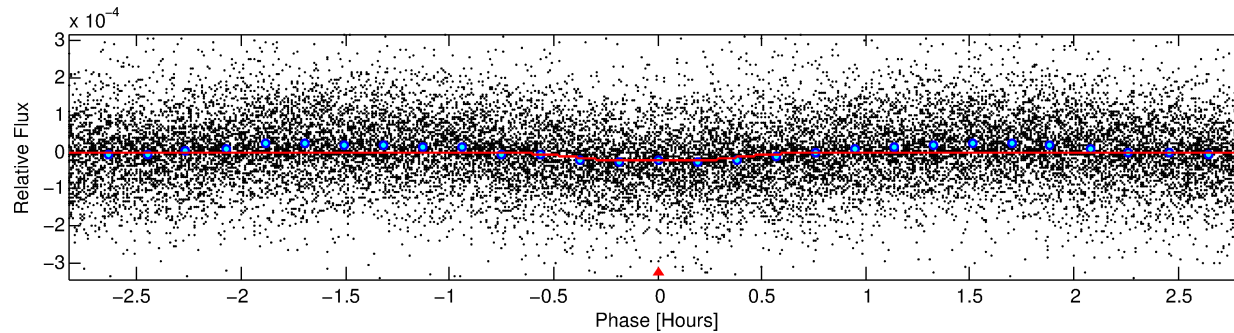
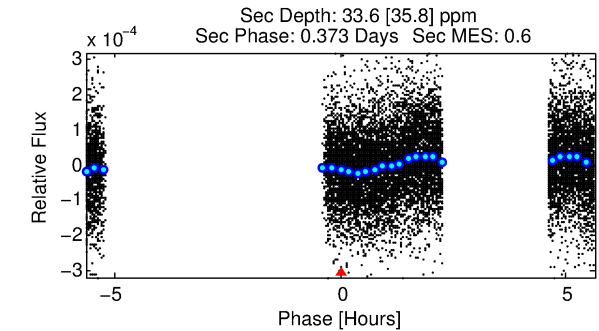
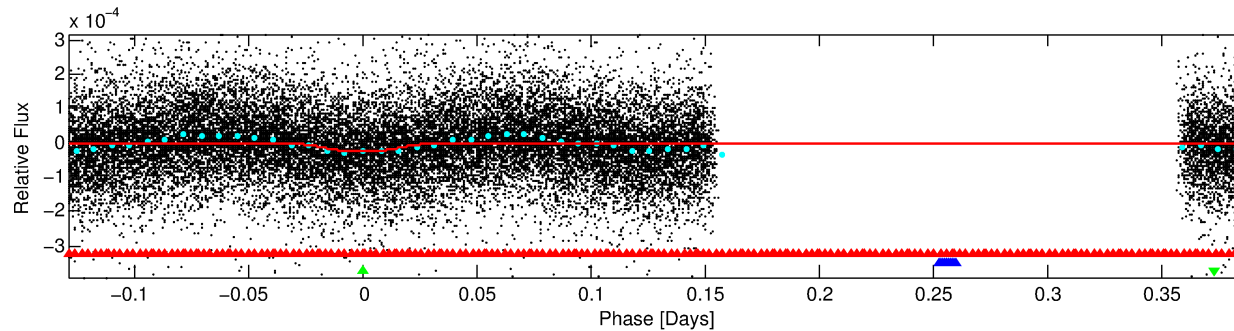
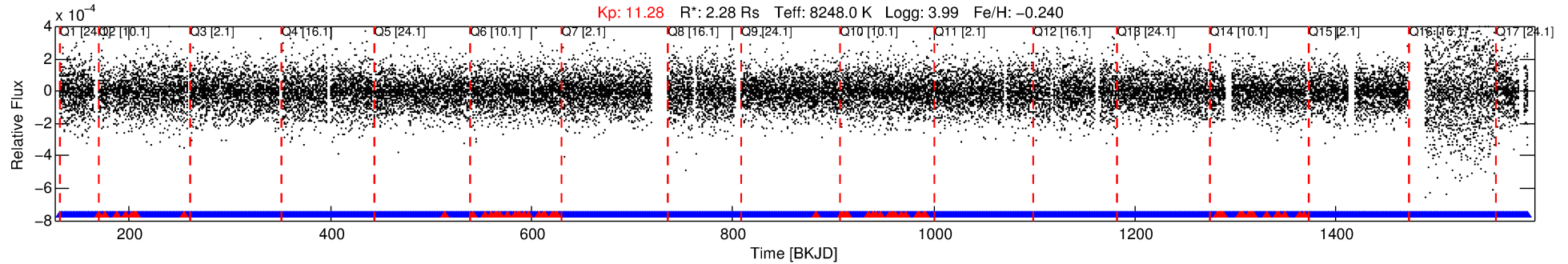
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007848303-03

No Significant Match Found

DV One-Page Summary

KIC: 7848303 Candidate: 3 of 3 Period: 0.517 d



DV Fit Results:

Period = 0.51653 [0.00001] d
Epoch = 131.6849 [0.0013] BKJD
Rp/R* = 0.0047 [0.0009]
a/R* = 3.72 [3.75]
b = 0.50 [1.65]
Seff = 90422.22 [40371.65]
Teq = 4422 [494] K
Rp = 1.17 [0.43] Re
a = 0.0154 [0.0042] AU
Ag = 3.18 [3.87] [0.57σ]
Teffp = 9132 [2632] K [1.76σ]

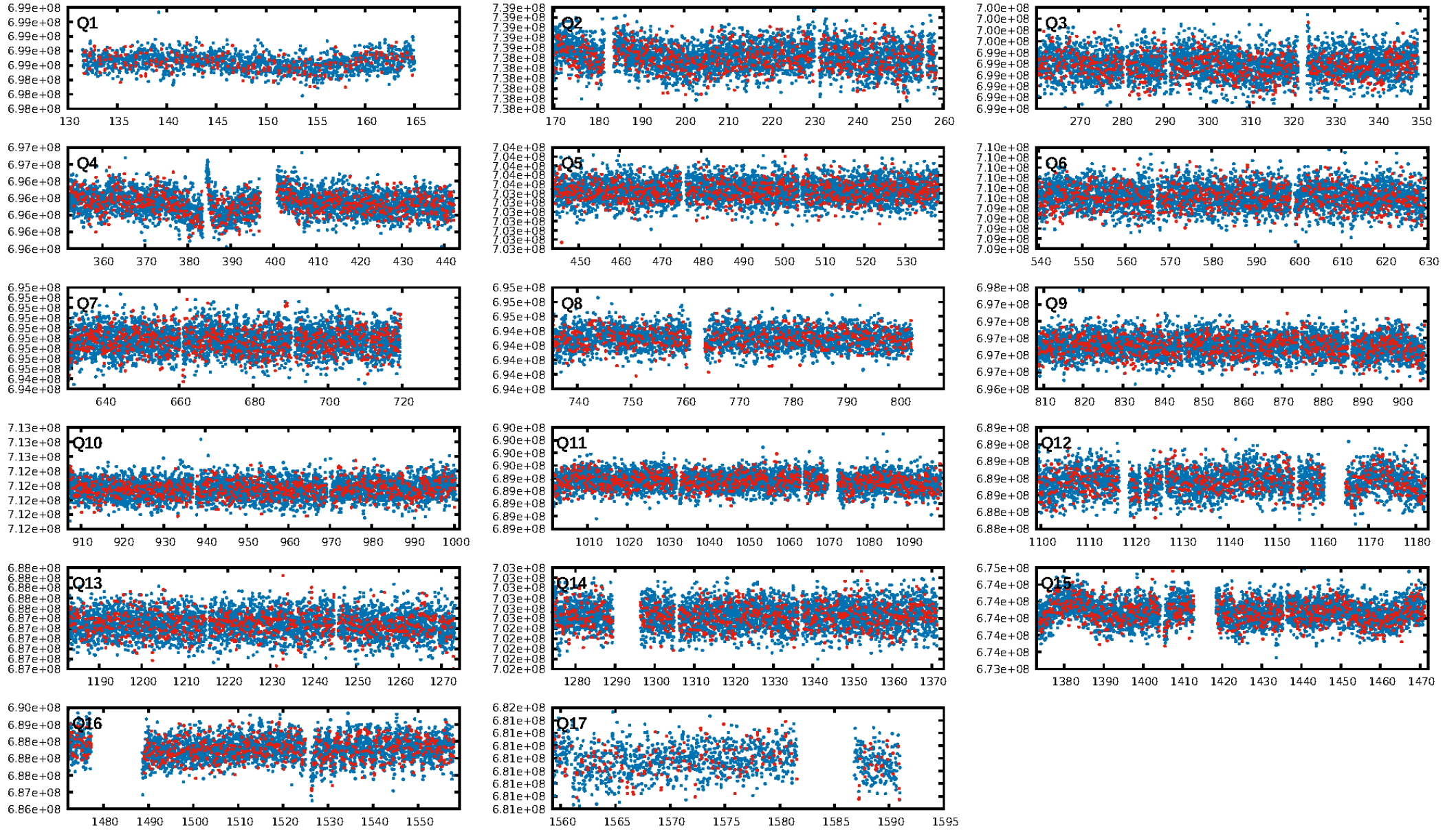
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [8.28σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.58e-06
RollingBand-fgt: 0.96 [1872/1940]
GhostDiagnostic-chr: -0.1399
Centroid-sig: 12.7%
Centroid-so: 1.438 arcsec [1.94σ]
OotOffset-rm: 8.636 arcsec [2.15σ]
OotOffset-st: 1/1/1/3 [6]
KicOffset-rm: 8.785 arcsec [2.63σ]
KicOffset-st: 1/1/1/3 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 1.00 [17/17]

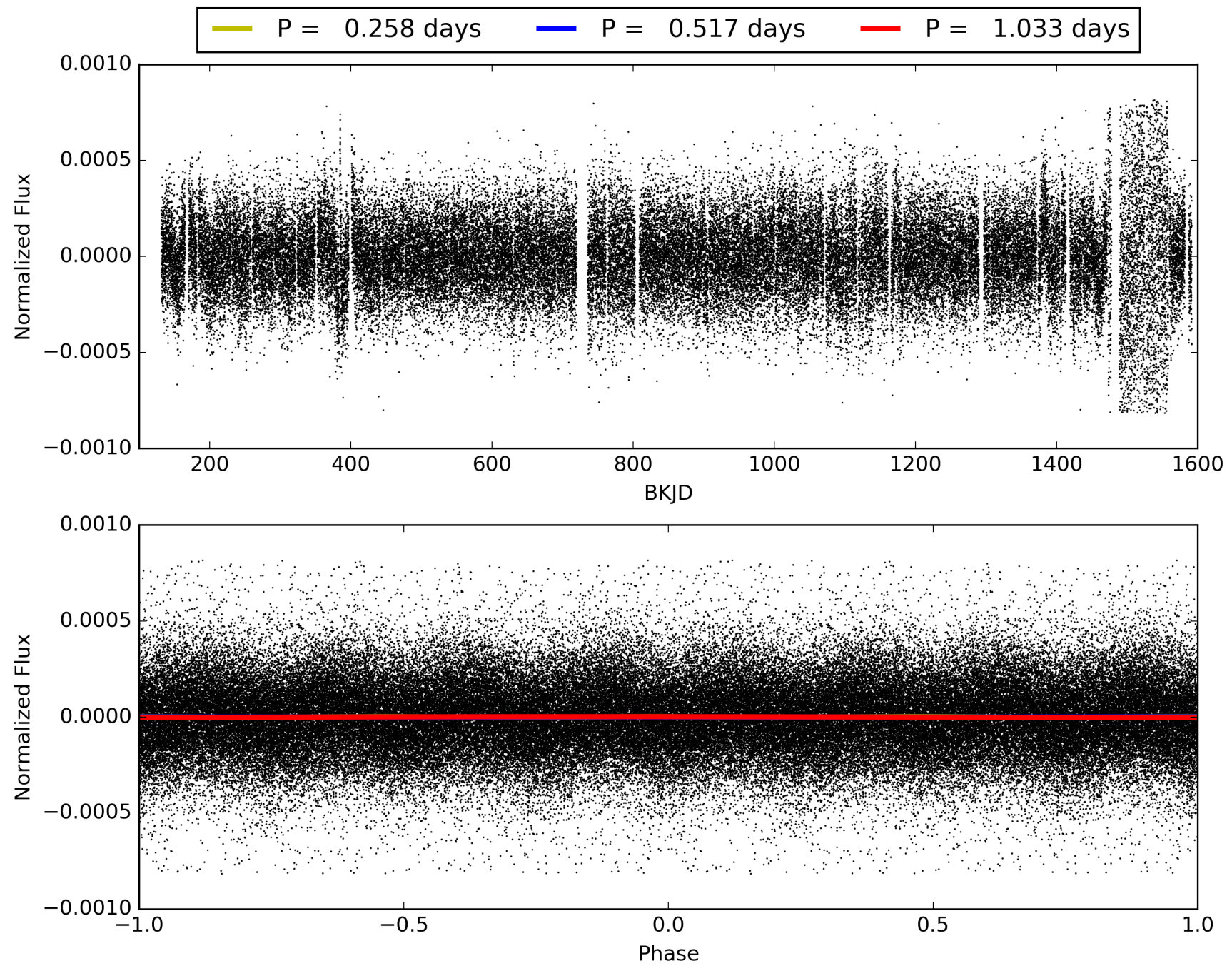
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:07:07 Z

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

TCE 007848303-03, PDC Light Curves

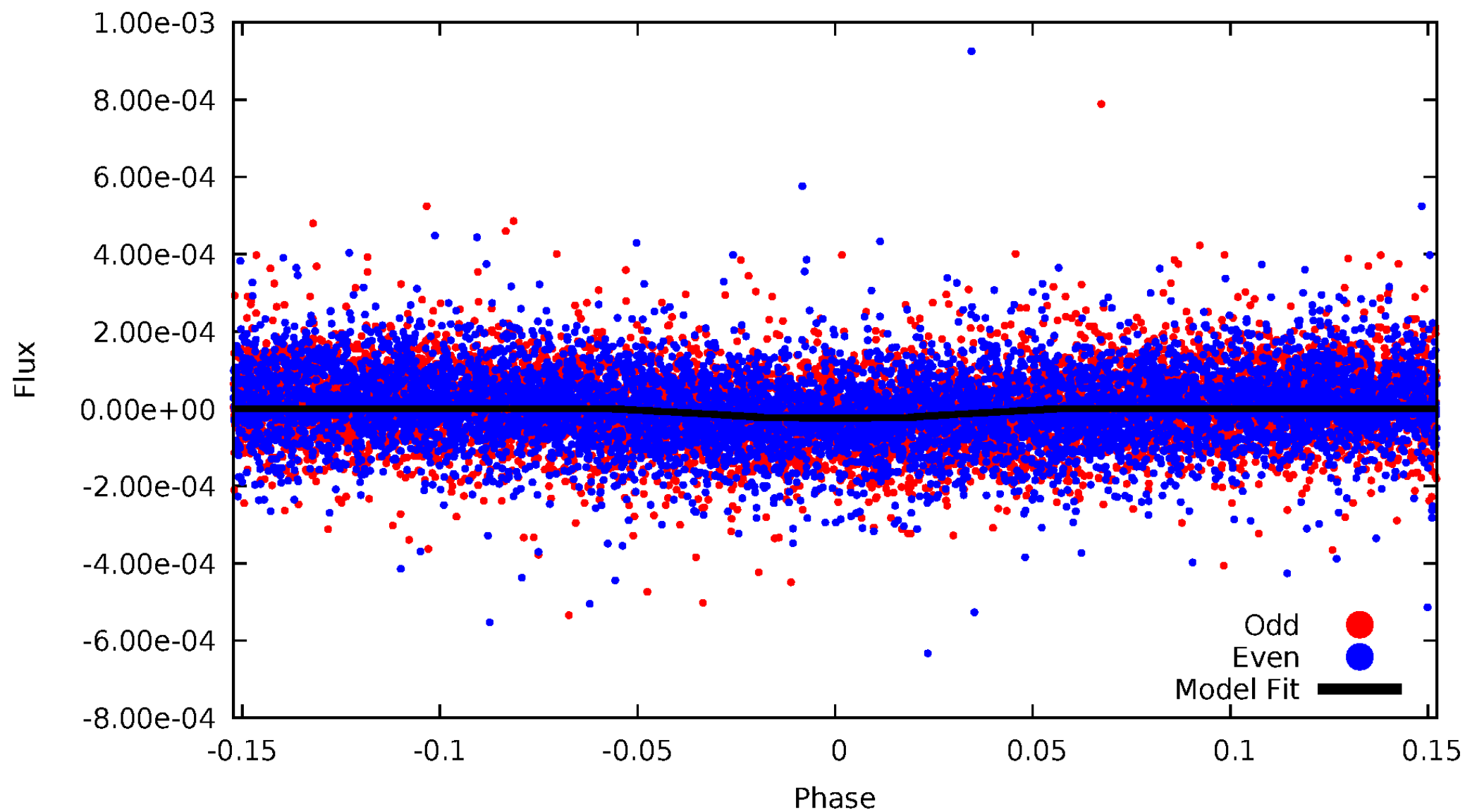


TCE 007848303-03



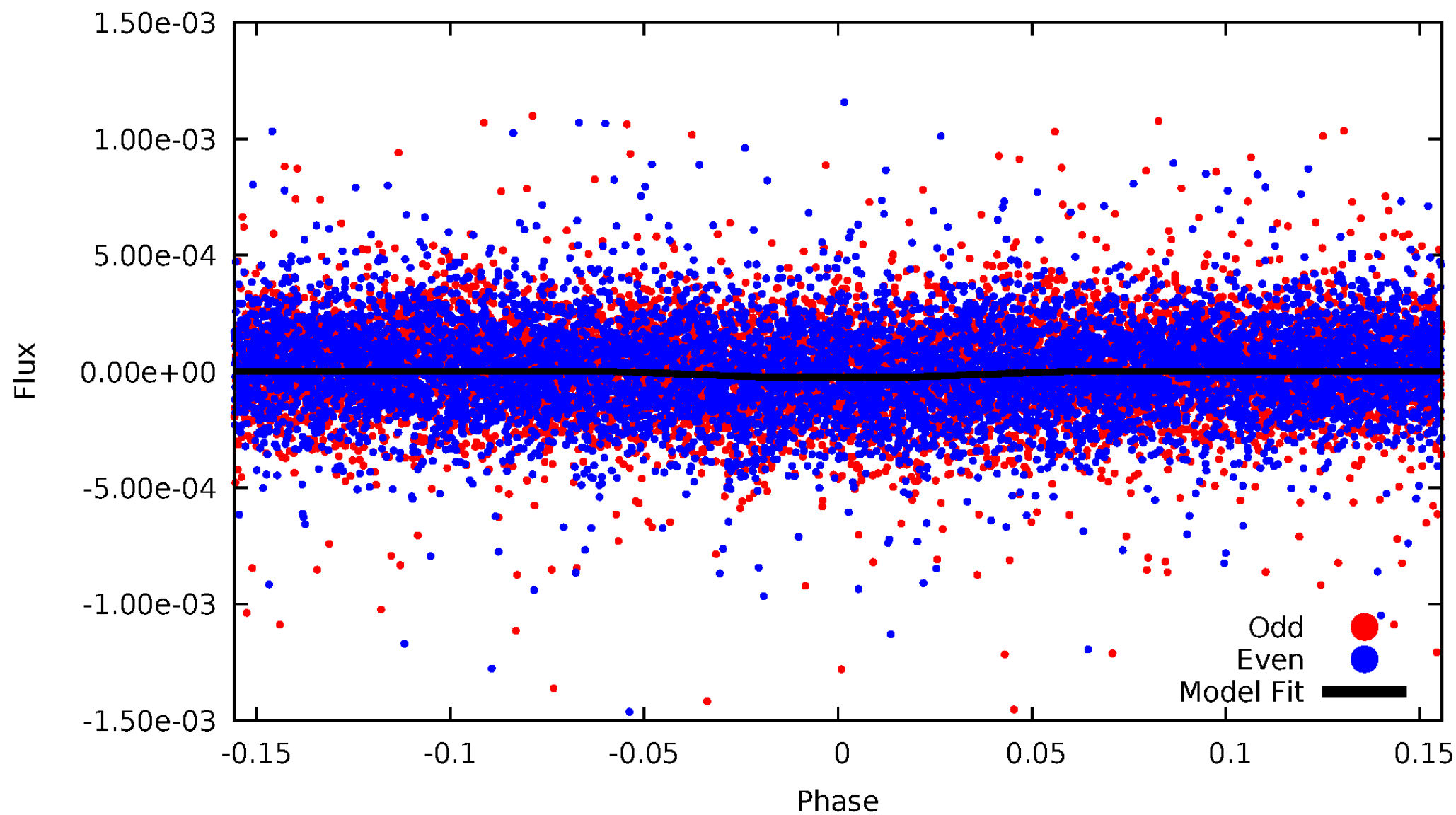
DV Odd/Even

TCE 007848303-03



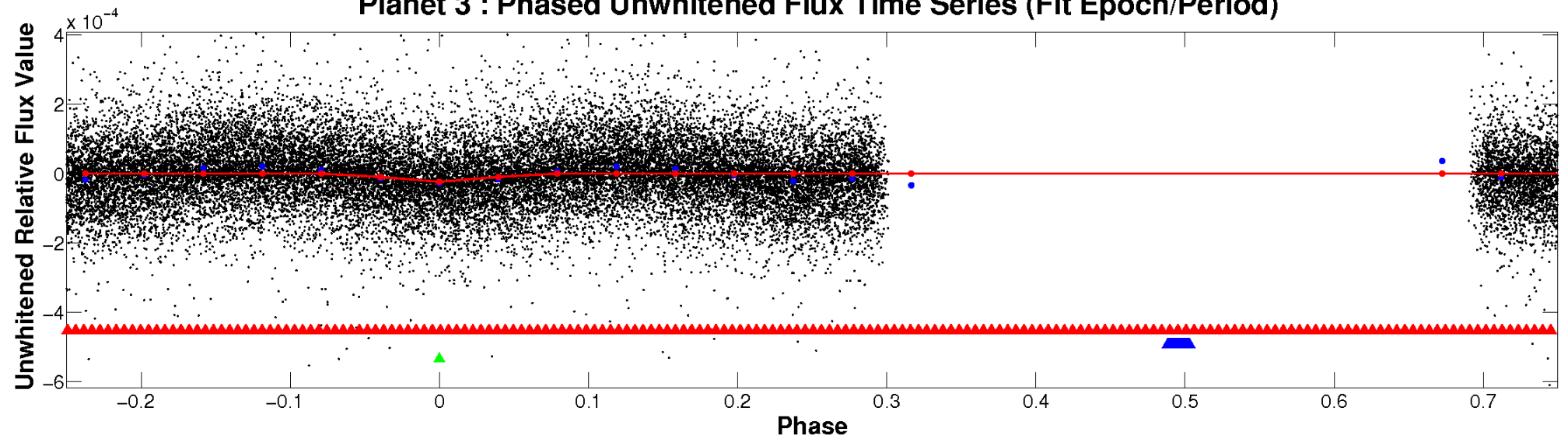
ALT Odd/Even

TCE 007848303-03

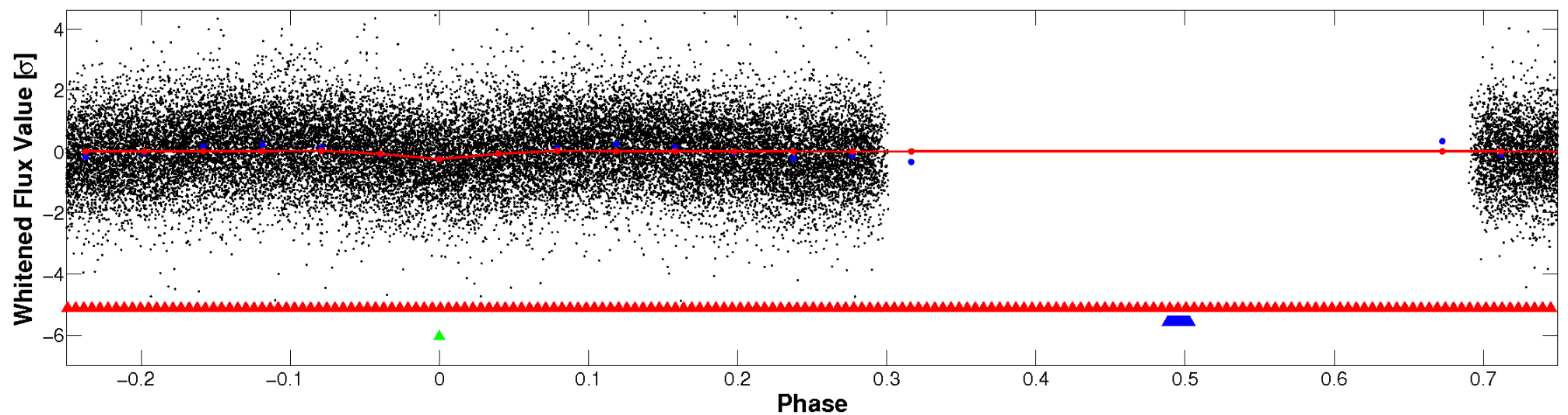


Non-Whitened Vs. Whitened Light Curve

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

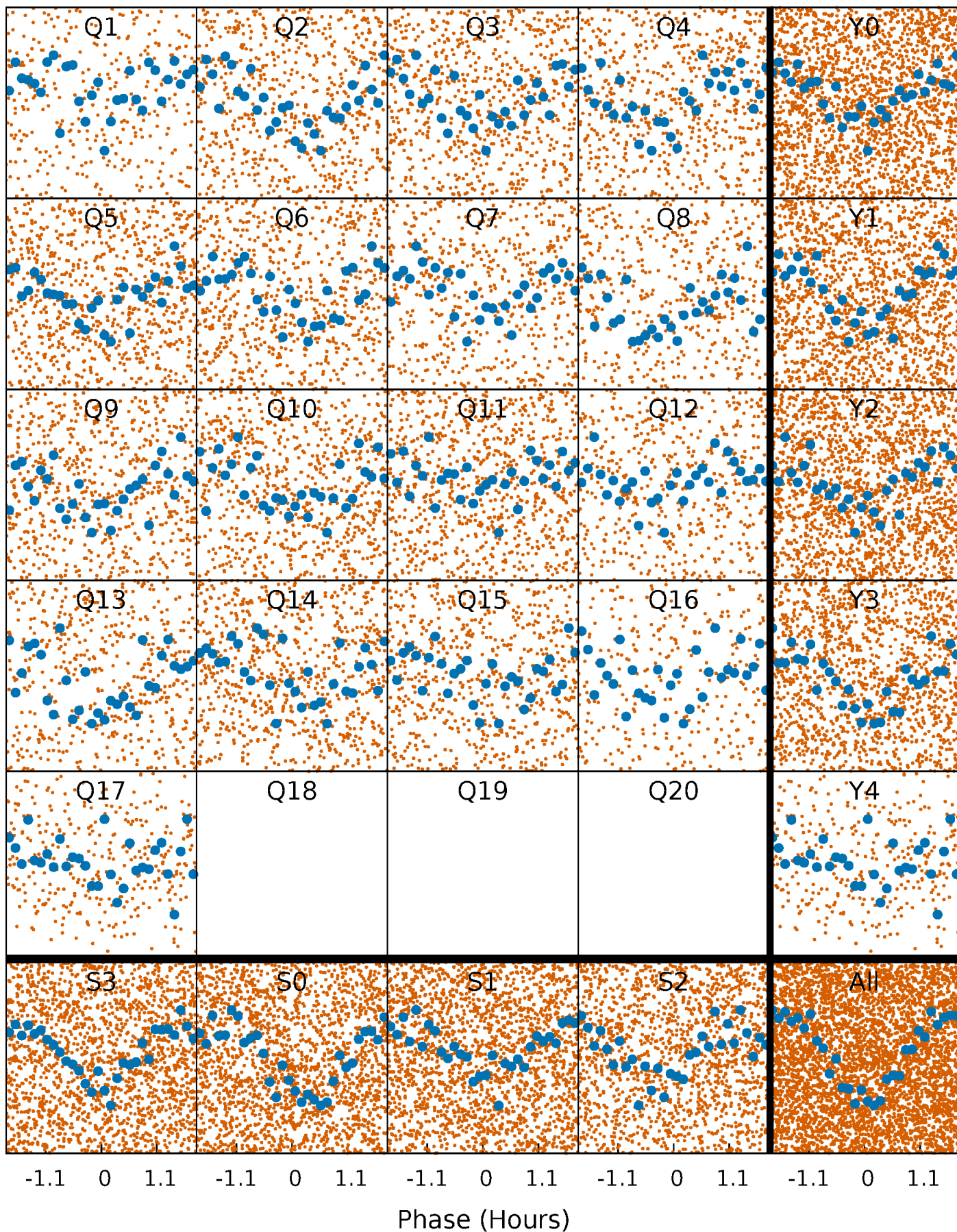


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



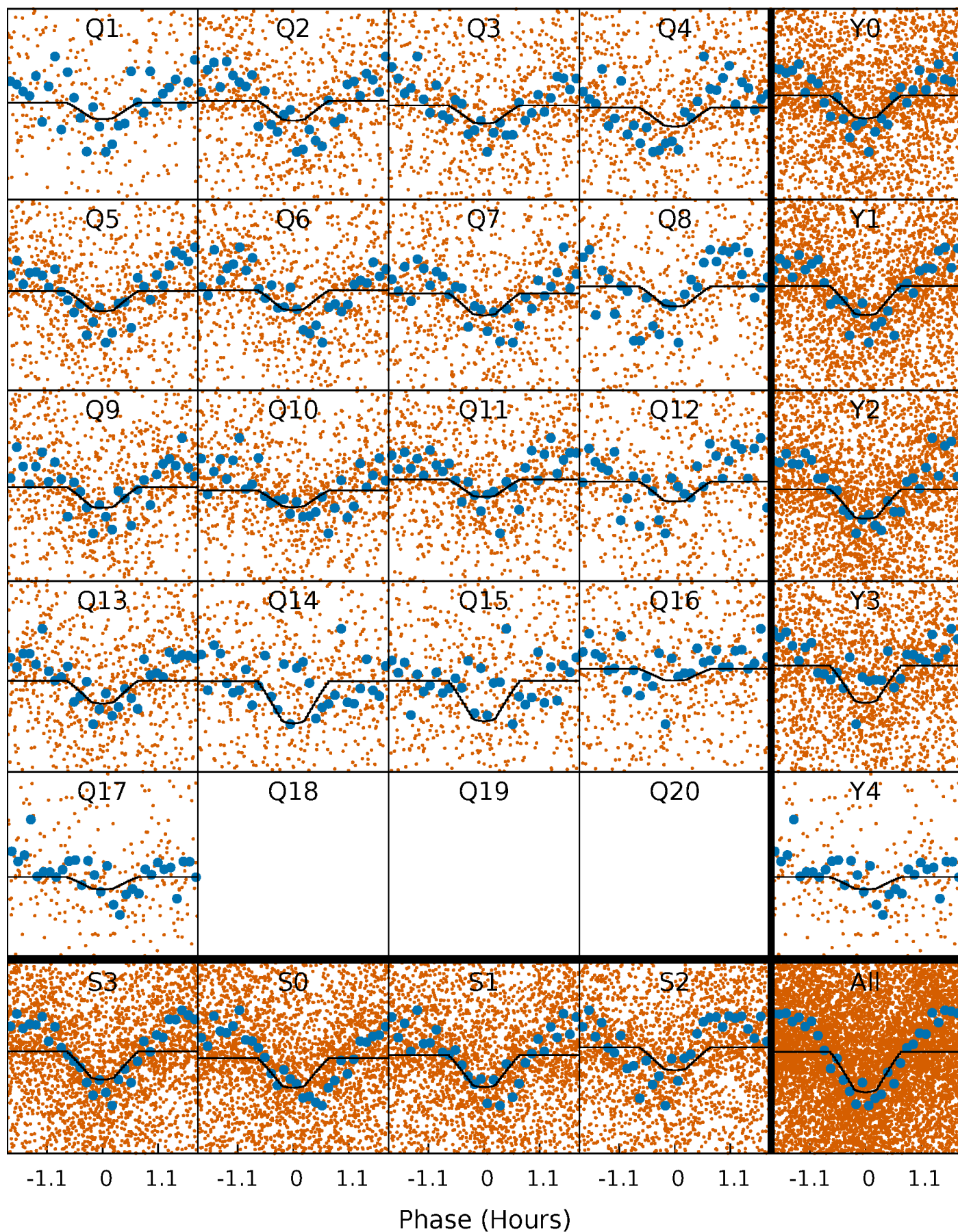
PDC Quarter-Phased Transit Curves

TCE 007848303-03 P= 0.516531 Days $T_0=131.684861$ (BKJD)



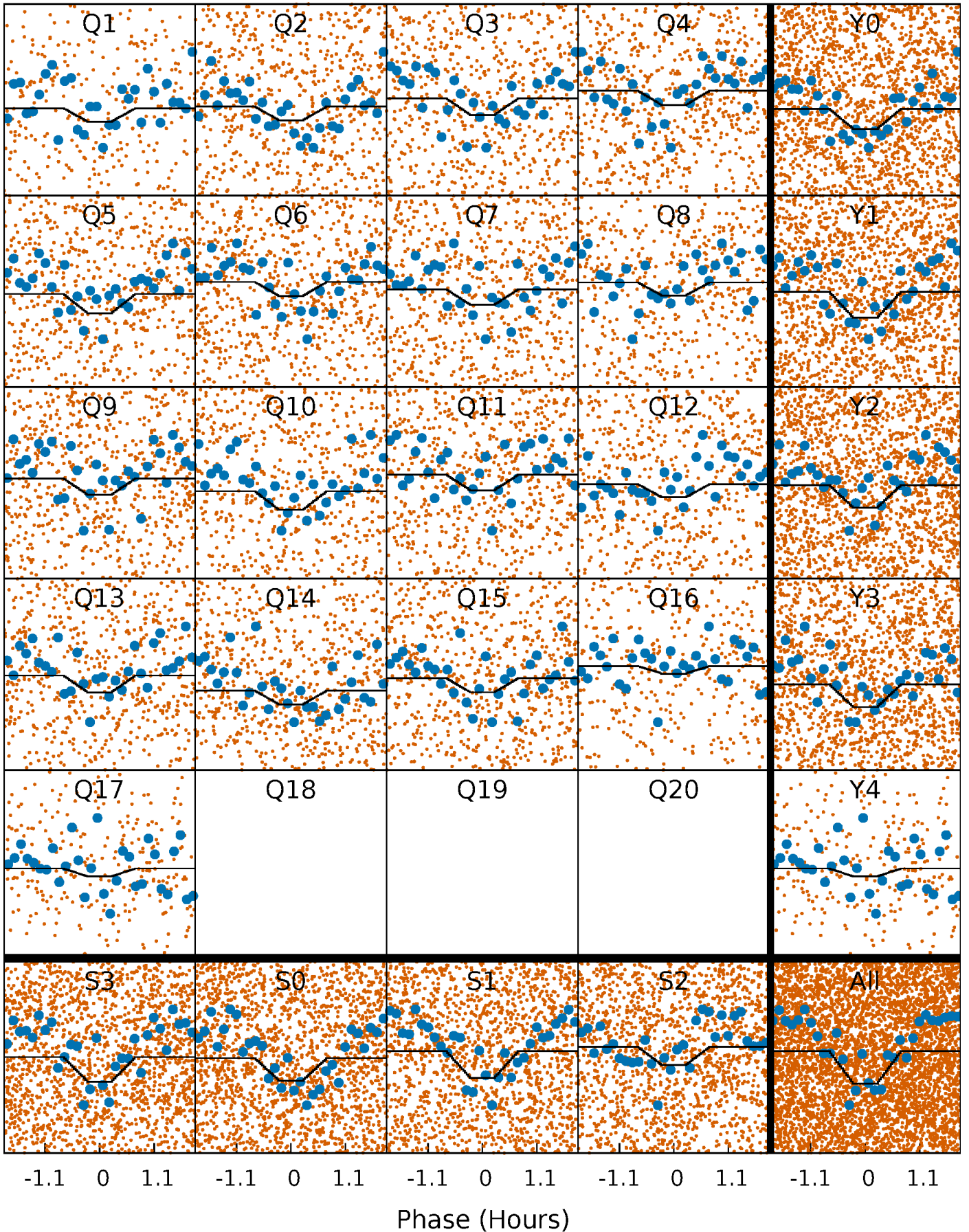
DV Quarter-Phased Transit Curves

TCE 007848303-03 P= 0.516531 Days $T_0=131.684861$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

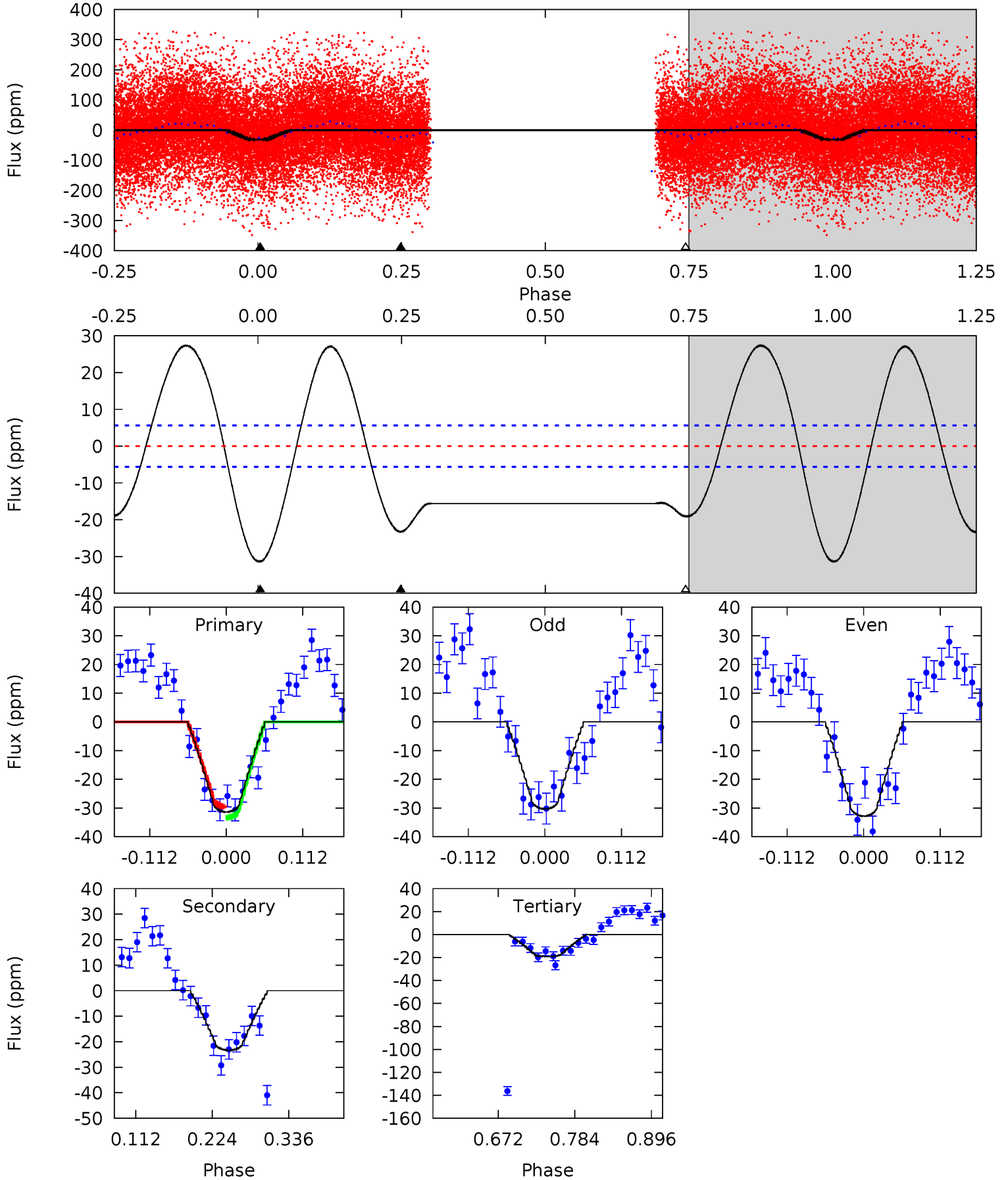
TCE 007848303-03 P= 0.516533 Days $T_0=131.685105$ (BKJD)



DV Model-Shift Uniqueness Test

007848303-03, P = 0.516531 Days, E = 131.168330 Days

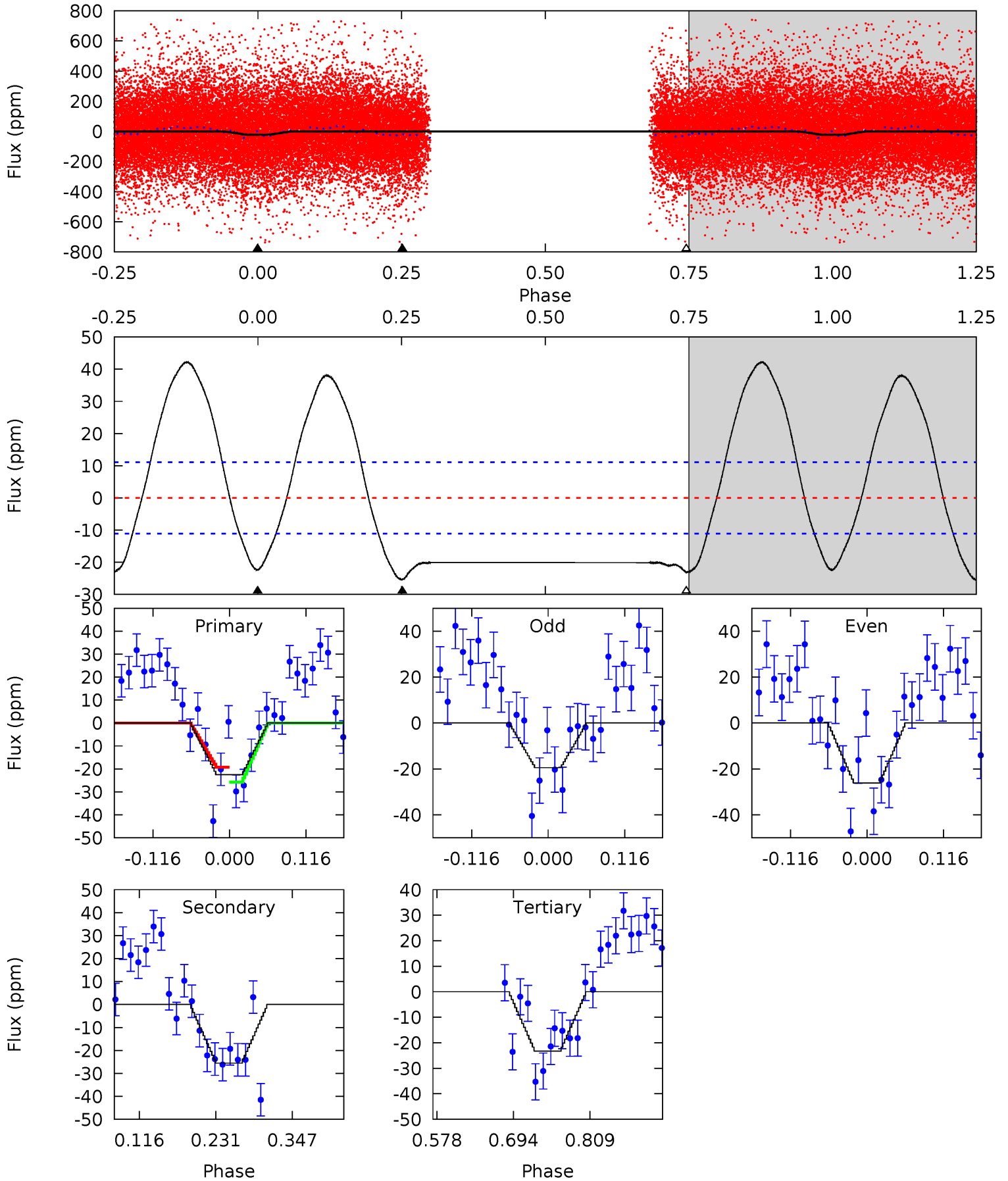
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.4	18.9	15.5	0	4.54	1.59	15.2	9.91	25.4	3.40	18.9	1.02	1.00	0.47	1.52



Alt Model-Shift Uniqueness Test

007848303-03, P = 0.516533 Days, E = 131.168572 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.21	10.4	9.50	0	4.53	1.57	10.5	-0.29	9.21	0.94	10.4	1.33	1.04	0.62	1.25



Stellar Parameters For KIC 007848303

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8248^{+226}_{-340}	$3.986^{+0.234}_{-0.126}$	$-0.240^{+0.200}_{-0.350}$	$2.276^{+0.382}_{-0.709}$	$1.832^{+0.090}_{-0.359}$	$0.219^{+0.315}_{-0.074}$
	+3%/-4%	+6%/-3%	+83%/-146%	+17%/-31%	+5%/-20%	+144%/-34%
Source	KIC0	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 007848303-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 1	$1.11^{+0.31}_{-0.26}$	6130^{+371}_{-543}	7944^{+1445}_{-1025}	$2.366^{+1.677}_{-0.891}$
Alt.	-26 ± 2	$1.15^{+0.29}_{-0.29}$	6123^{+357}_{-524}	8100^{+1578}_{-1107}	$2.470^{+1.926}_{-0.930}$

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

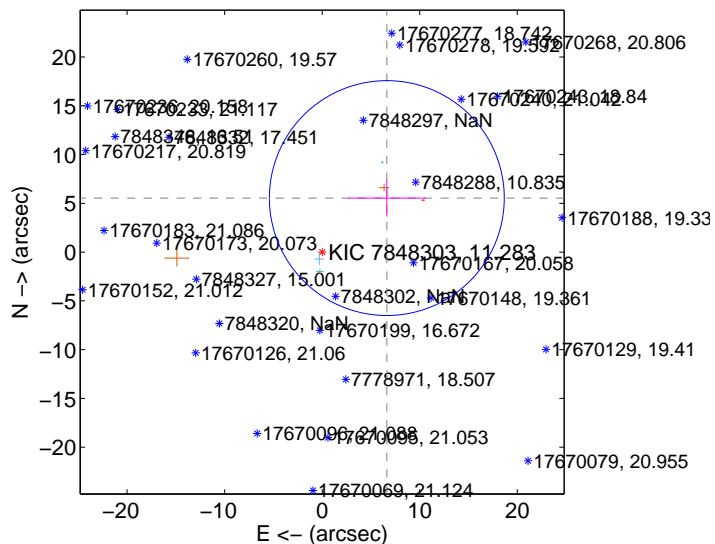
Supplemental centroid analysis for 007848303-03. **Kepler magnitude: 11.28.** Transit SNR 12.78

There are 3 quarters with good PRF difference image offsets

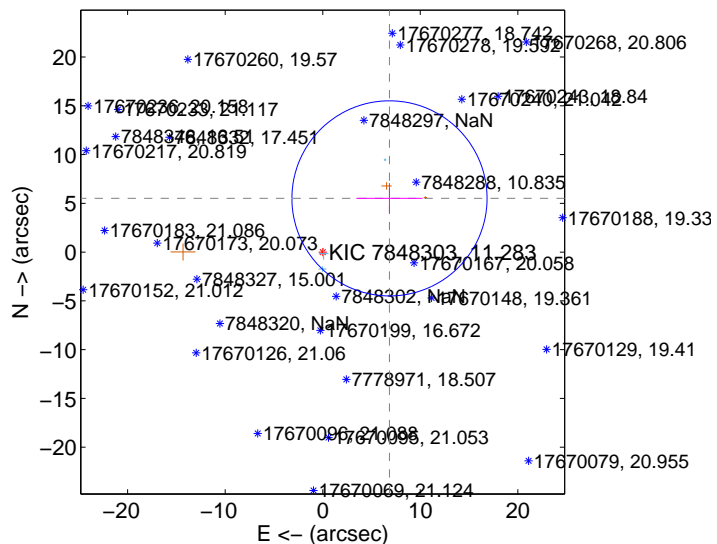
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.636 ± 4.013	2.15	-6.626 ± 3.980	5.539 ± 1.884
PRF-fit source offset from KIC position	8.785 ± 3.334	2.63	-6.844 ± 3.395	5.508 ± 1.567
photometric centroid source offset	1.44 ± 0.74	1.94	-0.96 ± 0.86	1.07 ± 0.63

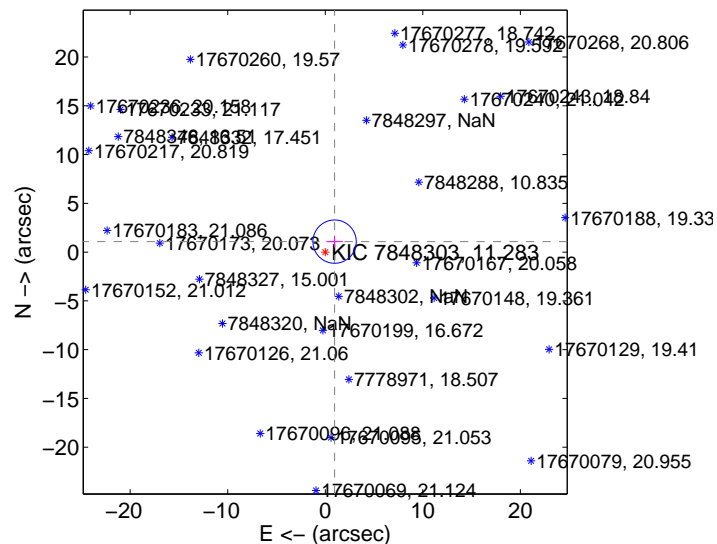
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

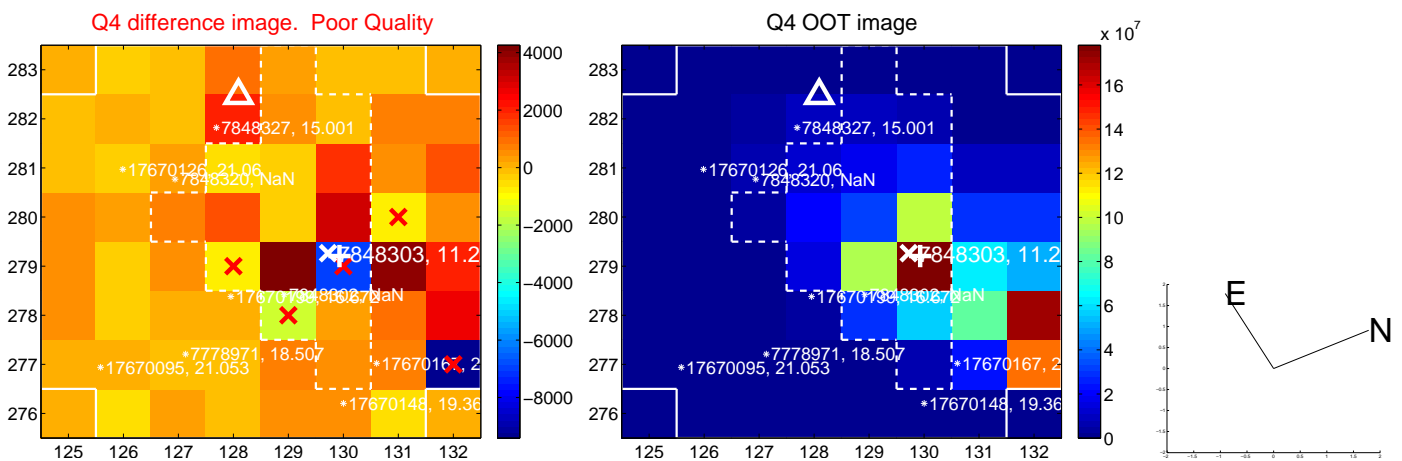
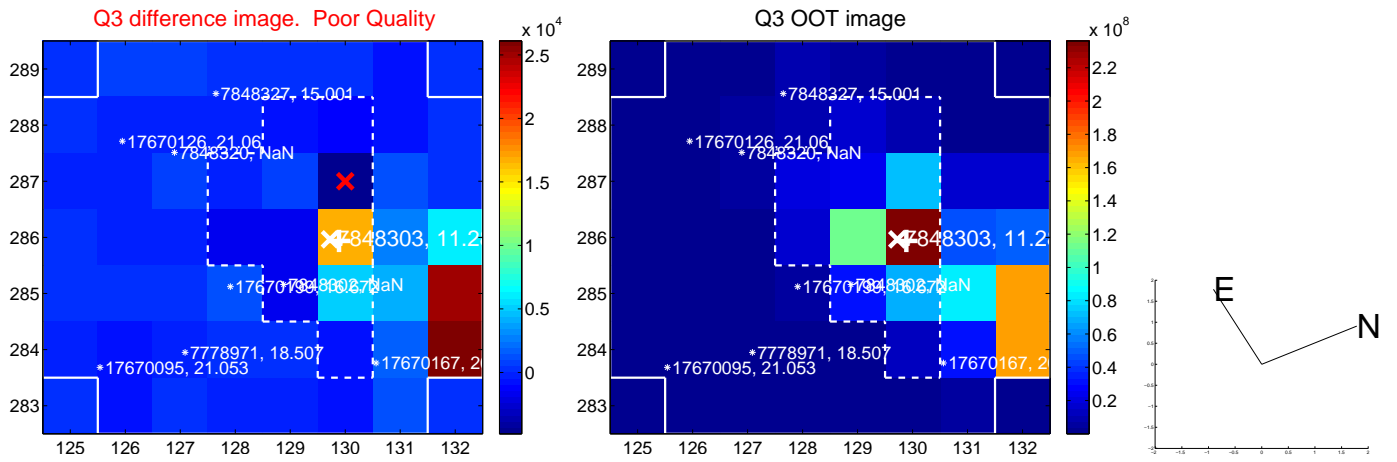
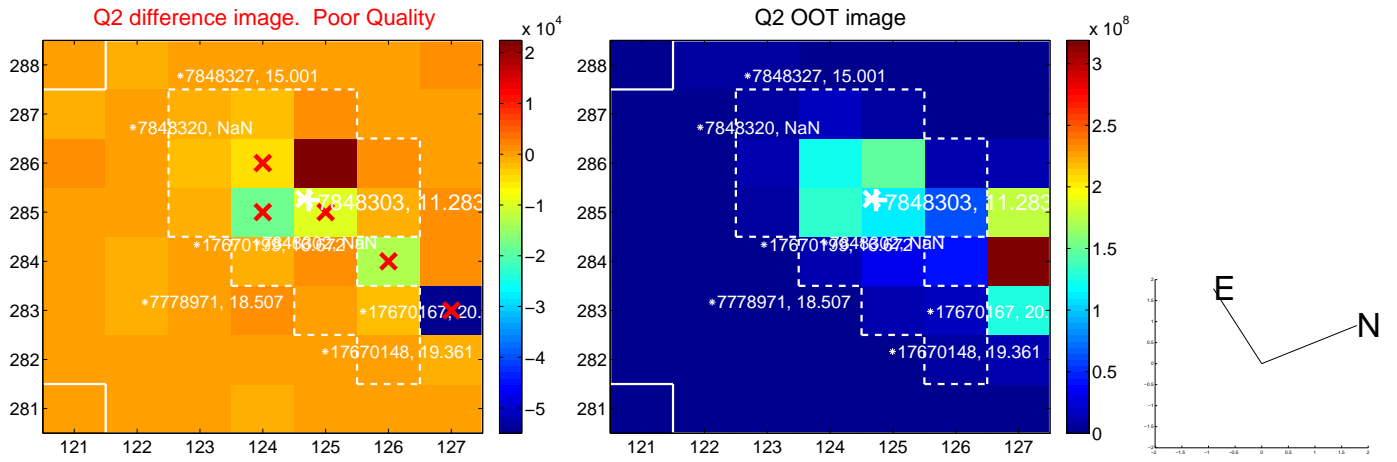
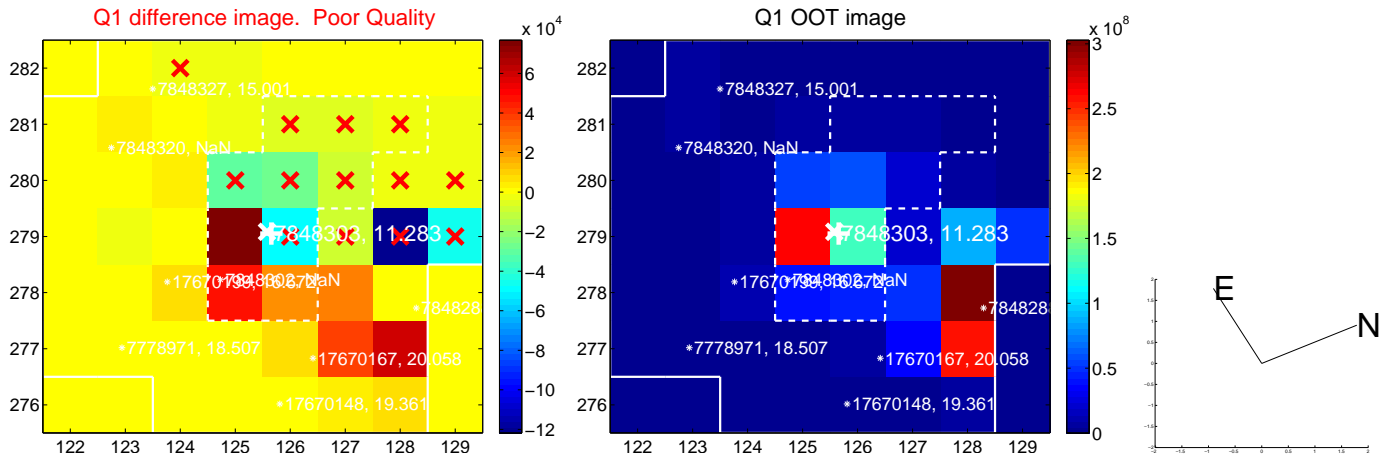


offset from photometric centroids

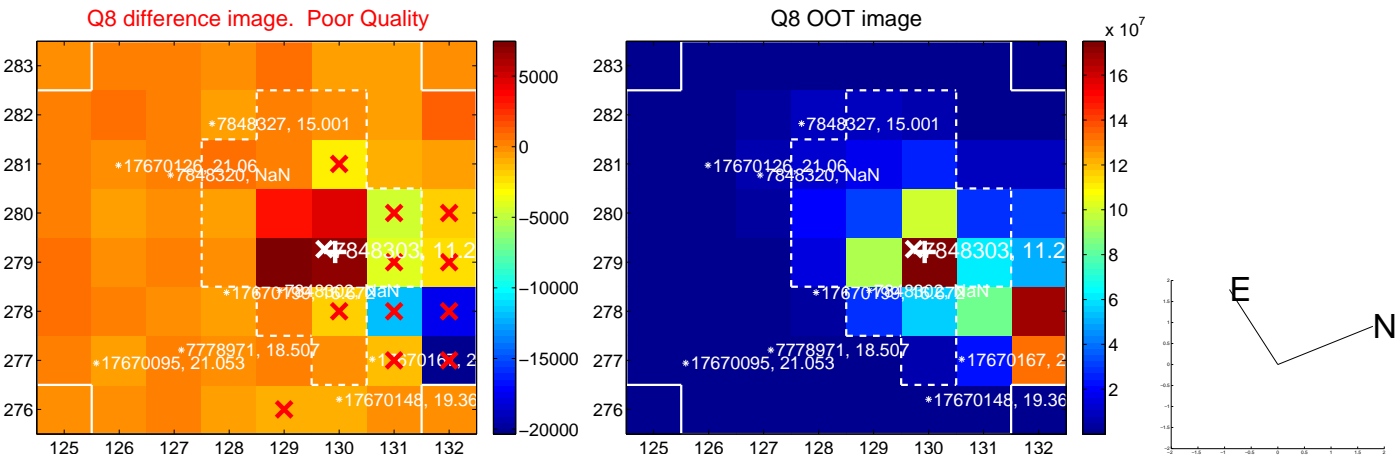
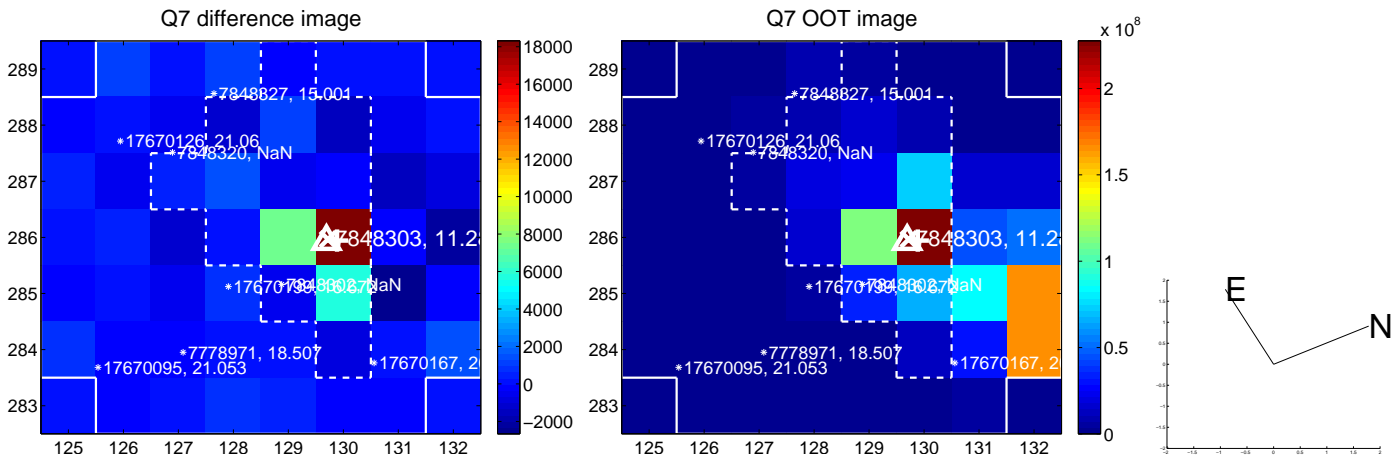
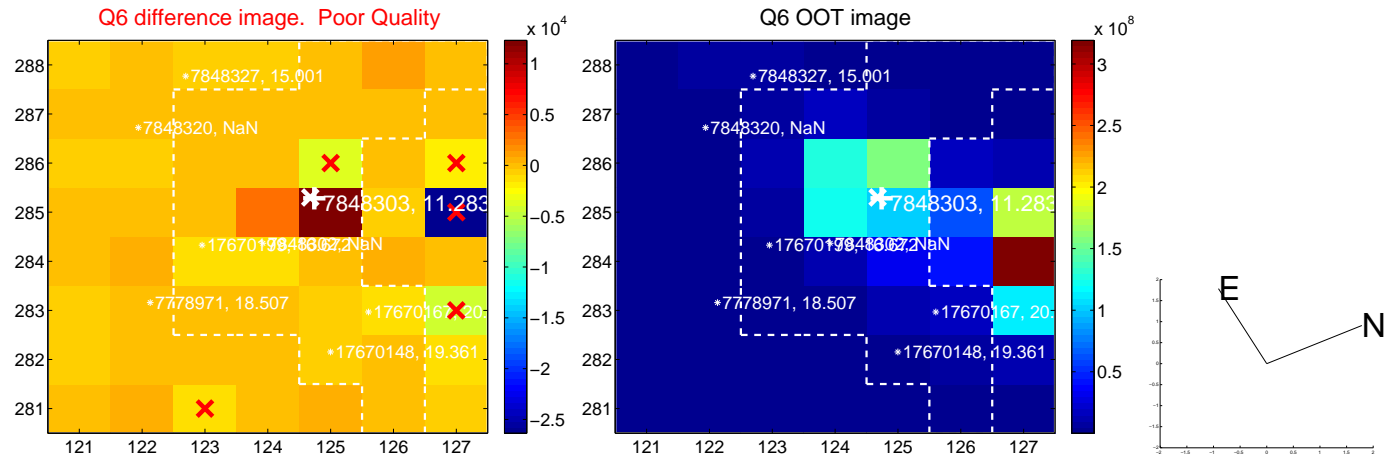
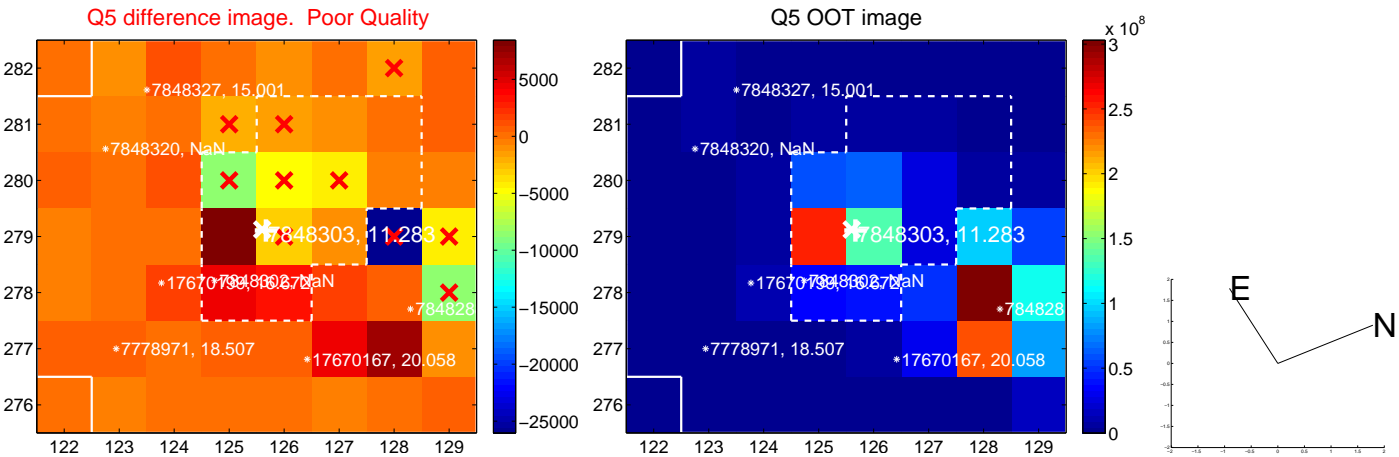


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

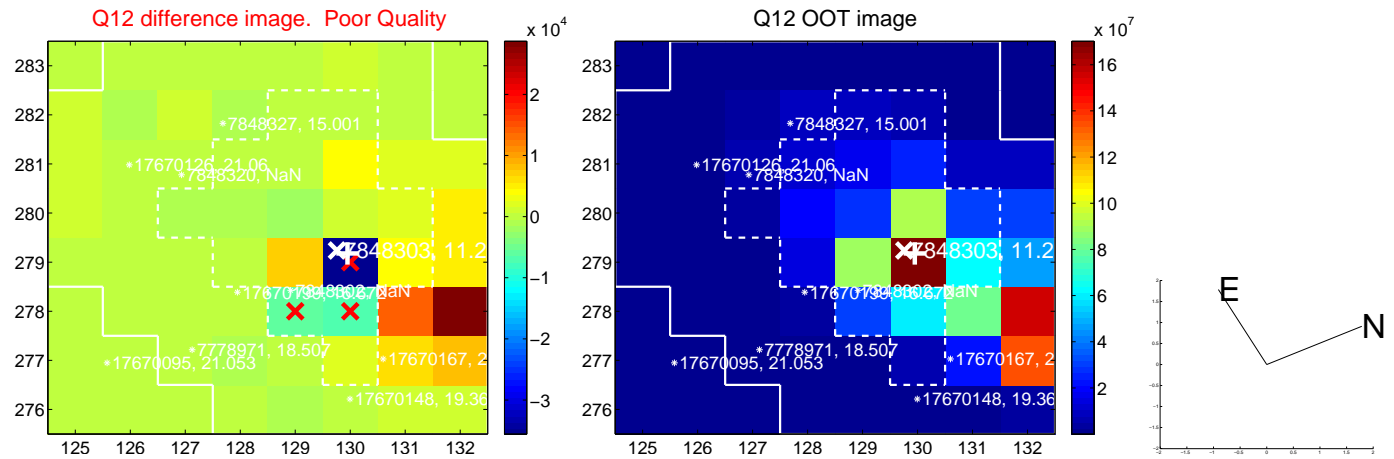
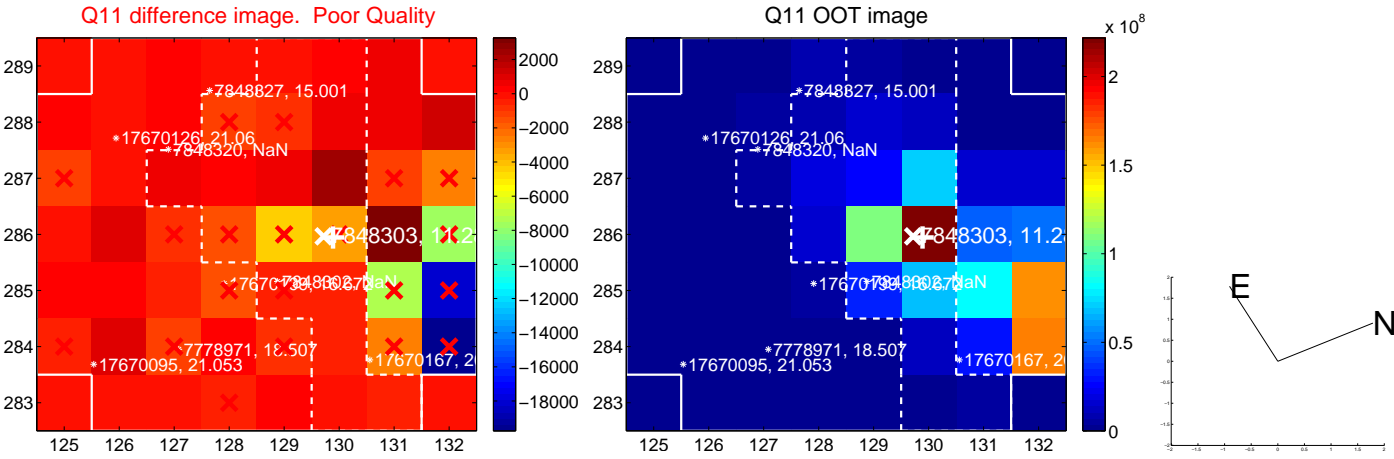
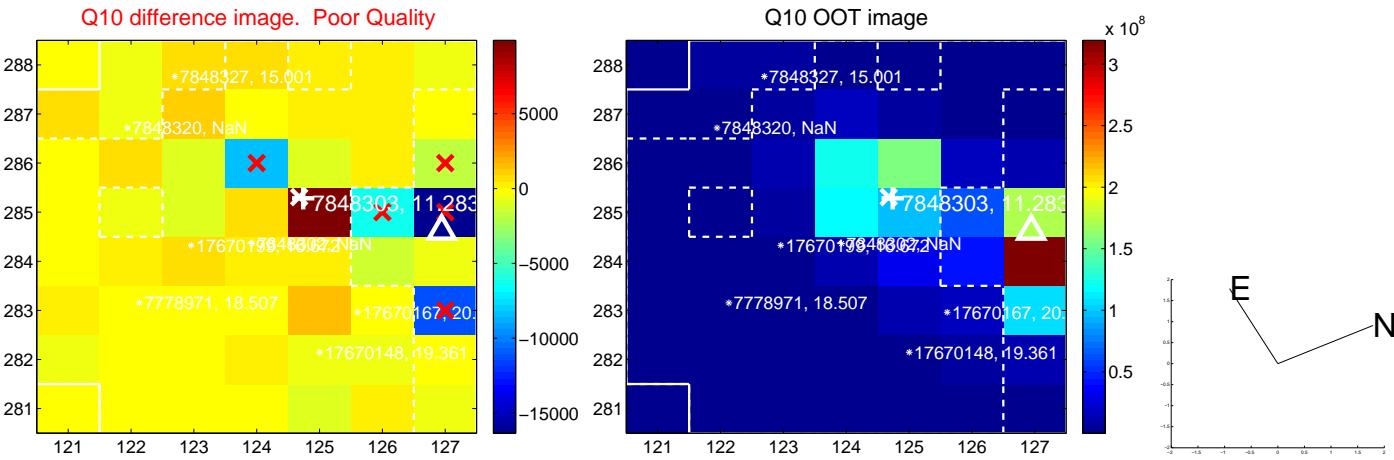
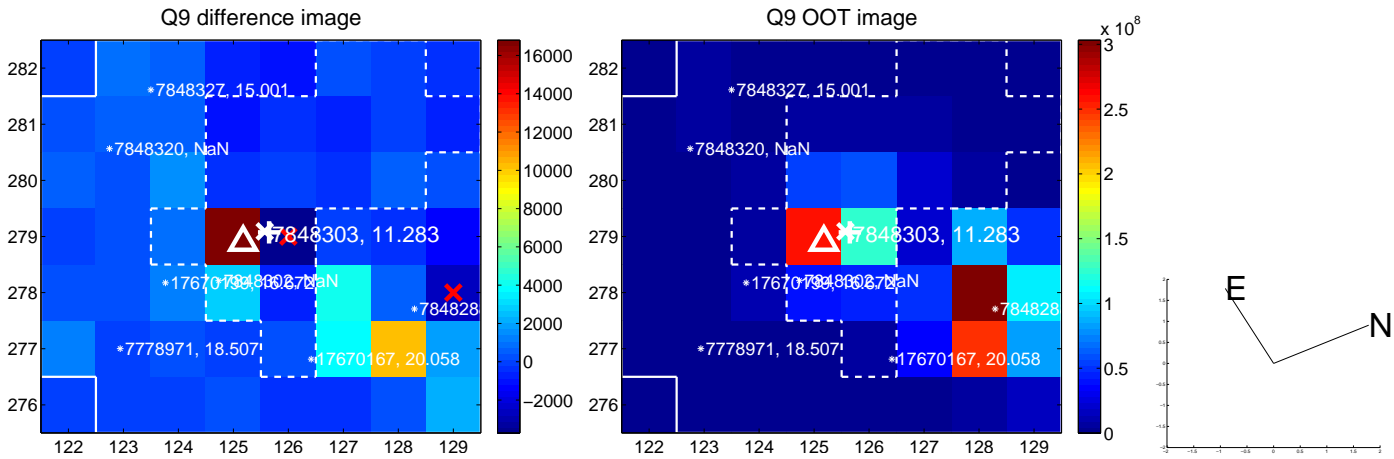
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



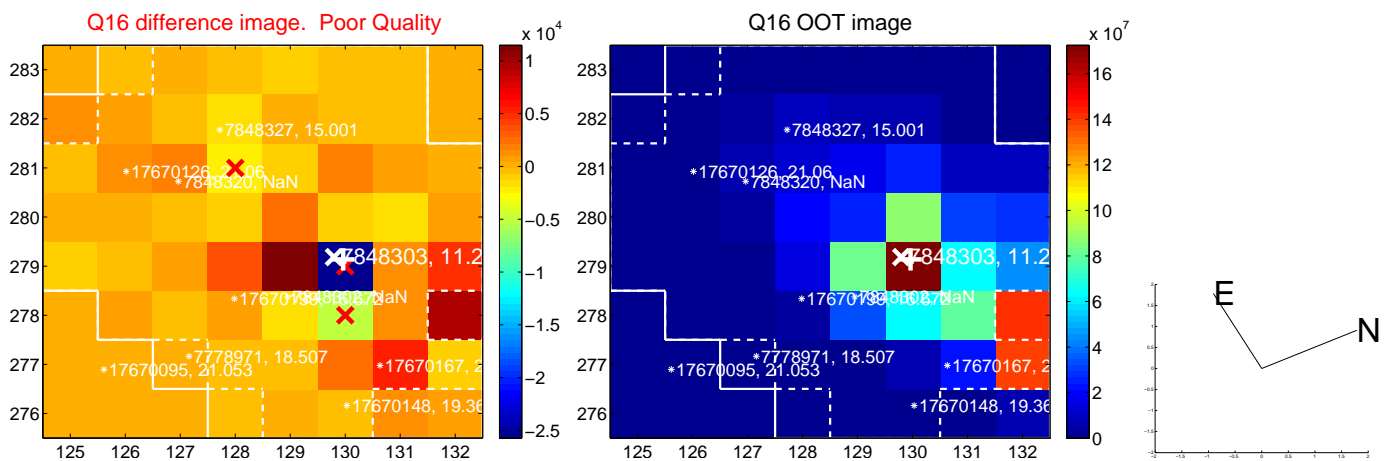
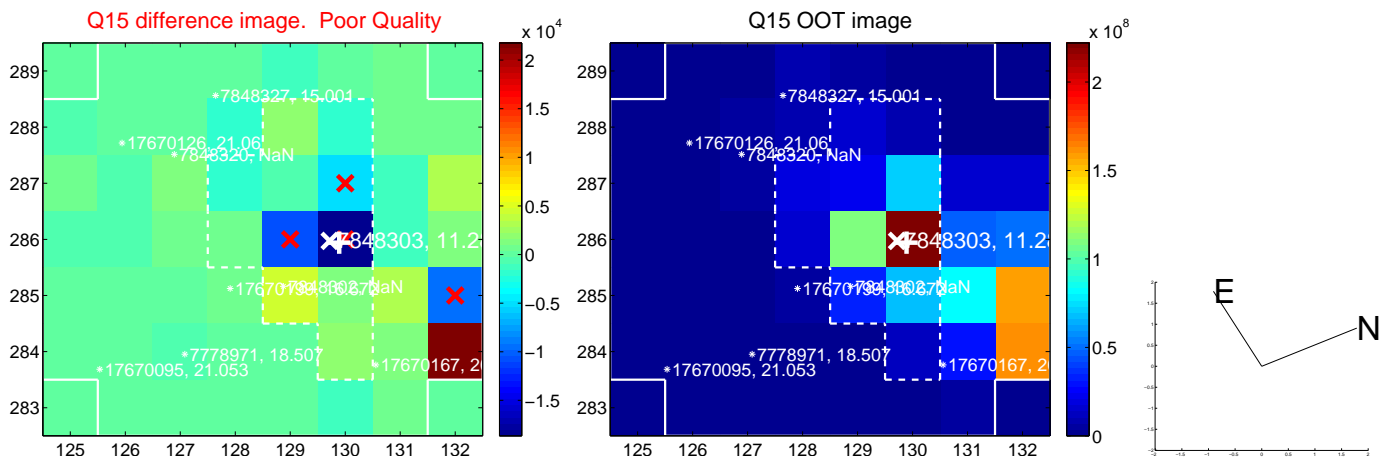
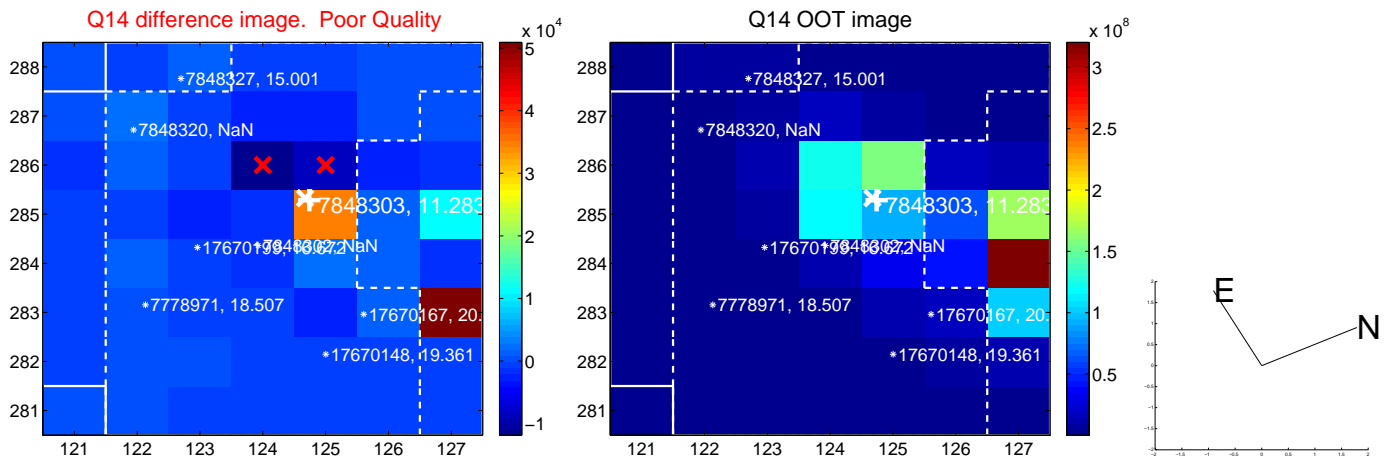
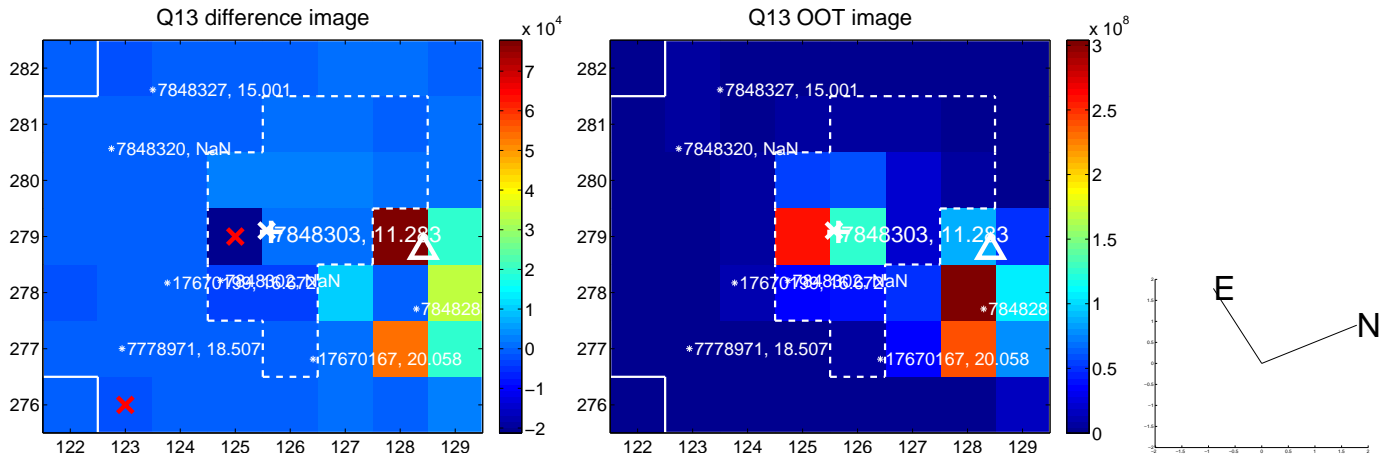
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



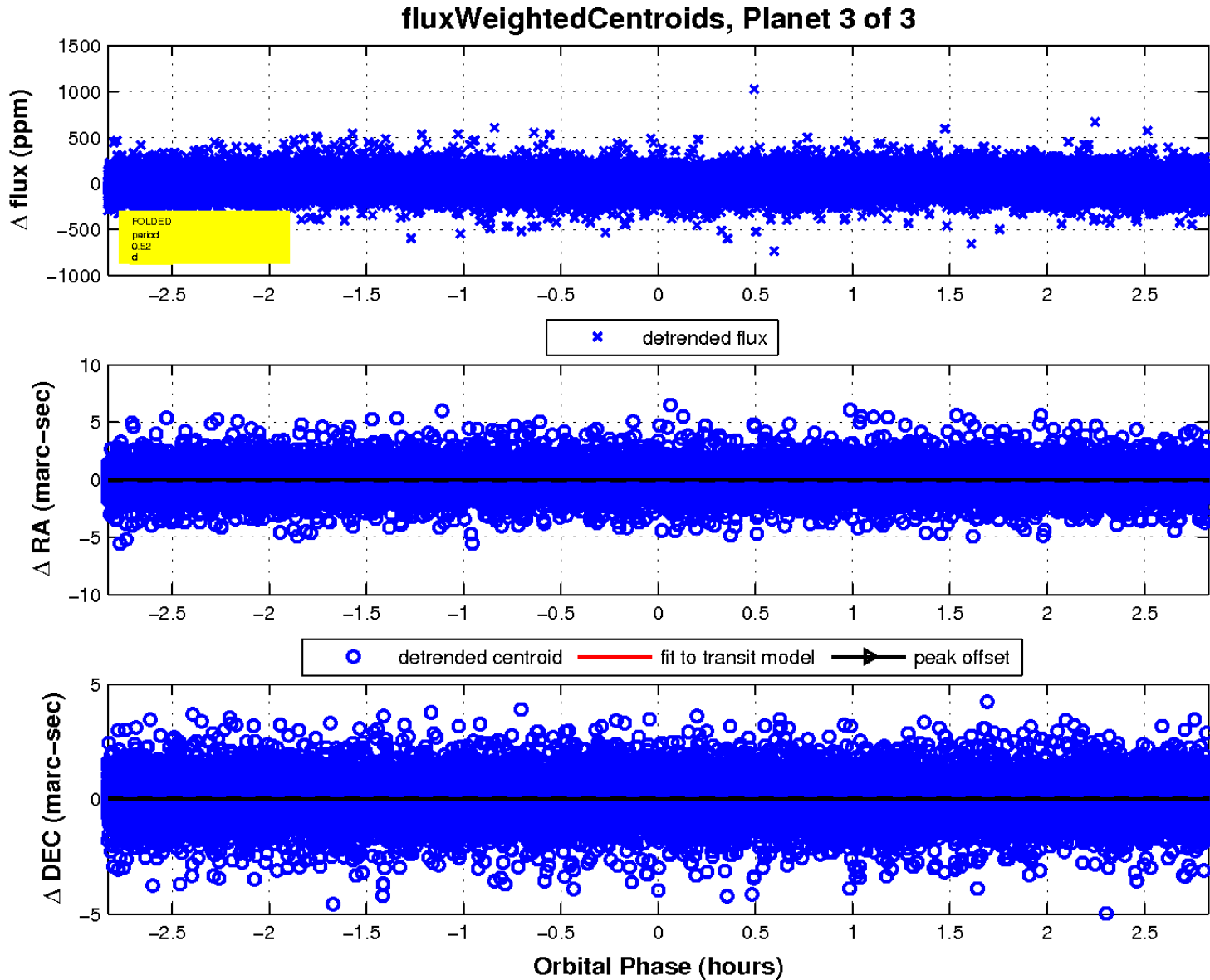
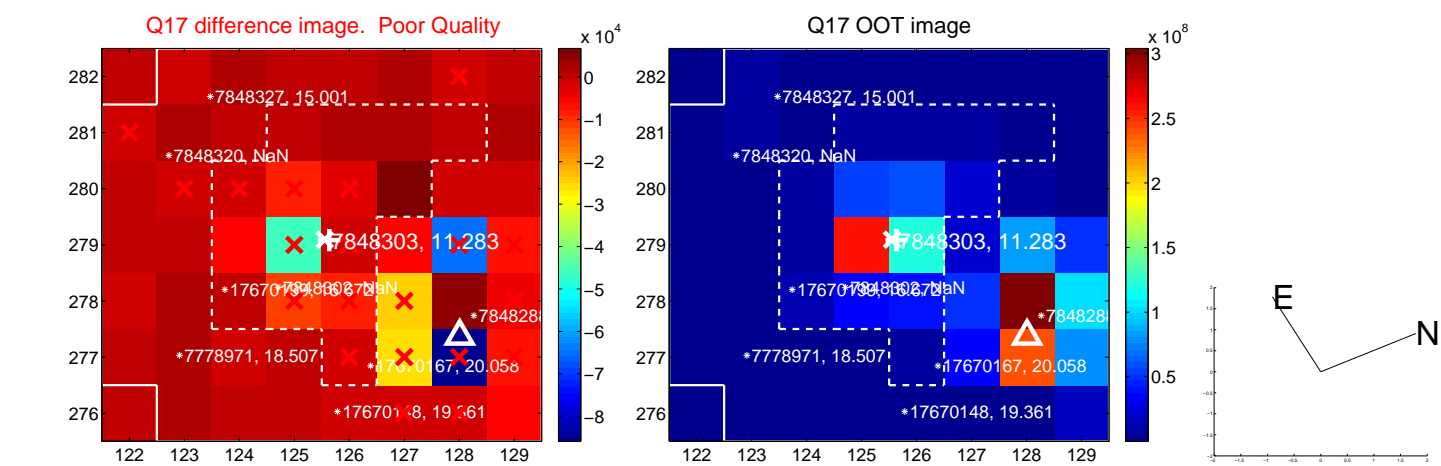
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

